

Teal papers

IF / HOW / THEN logic

MJos Predictive Model

The first manifestation of the Bangel Language

MJ Physics Engineering

Owned and operated by Michael Bangel

Clearwater, Florida

September 12 Teal rerun / terminology edition

1054 recovered source pages

Prepared for review. Not published.

This source-faithful terminology edition updates the language name and publication identity while retaining mathematical expressions, source IDs, historical evidence and page graphics. It is not a fresh execution of the historical tests. Read the companion searchable library for current project sequencing and unresolved semantic relationships.

White papers are excluded. References to White paper identities remain historical citations. Original source hashes refer to the prior originals; revised output hashes are recorded separately.

Gold and Indigo: the original volumes were not recovered. Any new reconstruction is separately identified and must not be counted as those missing volumes.

One Teal library

1,050 individual papers / 43 batches / 258 source modules

Documentary rerun complete for recovered scope. Executable implementation remains partial.

Each item retains its own identity, condition, method, outcome and evidence state. An individual paper or a passing assertion does not close a missing formula contract.

Bangel 58153a770206e2a3b500671aa4ca50e20c9c3a7d

Associated core 0d89fdf7f7914b9fdb5e62533613bfab41d34014

WHAT THE RERUN CONTAINS

500 Teal briefs; all 20 Pink documents and 1075 preserved source pages; every one of 242 Pink formulas and the gateway; 29 requirement papers; 258 complete source modules and 2944 individual source-function/declaration entries.

FRESH RESULTS

4,496 existing Python tests passed. The individual rerun checked 133 available Pink profiles, 418 missing-input cases, 78 supplied domain cases, 500 Teal identities, 13 Teal gate cases, 25 Hagar scenarios and 166 protection scenarios. Counts overlap in coverage and are not distinct capabilities.

WHAT REMAINS OPEN

110 Pink formula conversions and all 242 full measurement/evidence contracts remain open. Hagar does not have a verified binding for every Pink formula. Native .NET and C++/Rust/R builds, original PDF graphics, cross-platform packaging and physical evidence are outside the fresh execution results.

OPEN THE COLLECTION

START-HERE.html provides search and direct individual-paper links. The complete PDF combines the three reading volumes. Individual Markdown/JSON records, Bangel source text editions, code, actual receipts and hashes are included in the archive.

Existing Teal papers - individual rerun

500 individual papers. Source references, current evidence and open requirements accompany every item.

Documentary rerun complete for recovered scope. Executable implementation remains partial.

Each item retains its own identity, condition, method, outcome and evidence state. An individual paper or a passing assertion does not close a missing formula contract.

Bangel 58153a770206e2a3b500671aa4ca50e20c9c3a7d
Associated core 0d89fdf7f7914b9fdb5e62533613bfab41d34014

TR-TP-001 / R1 transition

IF

If the Blue Page identity is invoked with declared inputs, scope, units, and evidence state.

HOW

Result dimensions: state. Primary manifestations: BANGEL, JO, JP. The lifecycle is purpose declaration -> Bangel typing -> Elsa semantic recovery -> JP formula CAPO -> MK applicability and dimensional review -> JO proof -> applicable safety/accounting receipts -> MJ decision -> JO evidence. JP carries the canonical representation; MK classifies physics applicability, units, boundaries, conservation, scale, and uncertainty; JO verifies types, formulas, tests, and receipts; applicable safety and accounting manifestations contribute evidence; MJ alone issues a bounded permit. Mathematical validity does not create physical or operational authority.

THEN

Then JO returns PASS_EVIDENCE, HOLD, FAIL_TECHNICAL, or DENY; MJ permission remains a separate gate.

CURRENT EVIDENCE

The individual TP-001 reference profile was executed and its identity, title and REFERENCE_ONLY ceiling matched. This is a documentary identity check, not execution of the full model. Explicit source links resolve to 1 Pink formula IDs: 0 have checked numeric profiles and 1 remain open.

INDIVIDUAL FORMULA LINKS

F-001

REMAINING REQUIREMENT

Bind model-specific inputs, operations and measured evidence before interpreting the paper as an executable implementation.

SOURCE REFERENCES

TP-001; BP-ALG-001

Evidence: evidence/rerun/teal/TP-001.json

TR-TP-002 / R2 transition

IF

If the Blue Page identity is invoked with declared inputs, scope, units, and evidence state.

HOW

Result dimensions: state. Primary manifestations: JO, JP, MK. The lifecycle is purpose declaration -> Bangel typing -> Elsa semantic recovery -> JP formula CAPO -> MK applicability and dimensional review -> JO proof -> applicable safety/accounting receipts -> MJ decision -> JO evidence. JP carries the canonical representation; MK classifies physics applicability, units, boundaries, conservation, scale, and uncertainty; JO verifies types, formulas, tests, and receipts; applicable safety and accounting manifestations contribute evidence; MJ alone issues a bounded permit. Mathematical validity does not create physical or operational authority.

THEN

Then JO returns PASS_EVIDENCE, HOLD, FAIL_TECHNICAL, or DENY; MJ permission remains a separate gate.

CURRENT EVIDENCE

The individual TP-002 reference profile was executed and its identity, title and REFERENCE_ONLY ceiling matched. This is a documentary identity check, not execution of the full model. Explicit source links resolve to 1 Pink formula IDs: 0 have checked numeric profiles and 1 remain open.

INDIVIDUAL FORMULA LINKS

F-002

REMAINING REQUIREMENT

Bind model-specific inputs, operations and measured evidence before interpreting the paper as an executable implementation.

SOURCE REFERENCES

TP-002; BP-ALG-002

Evidence: evidence/rerun/teal/TP-002.json

TR-TP-003 / Unknown invariant

IF

If the Blue Page identity is invoked with declared inputs, scope, units, and evidence state.

HOW

Result dimensions: logical. Primary manifestations: BANGEL, JO, WATER. The lifecycle is purpose declaration -> Bangel typing -> Elsa semantic recovery -> JP formula CAPO -> MK applicability and dimensional review -> JO proof -> applicable safety/accounting receipts -> MJ decision -> JO evidence. JP carries the canonical representation; MK classifies physics applicability, units, boundaries, conservation, scale, and uncertainty; JO verifies types, formulas, tests, and receipts; applicable safety and accounting manifestations contribute evidence; MJ alone issues a bounded permit. Mathematical validity does not create physical or operational authority.

THEN

Then JO returns PASS_EVIDENCE, HOLD, FAIL_TECHNICAL, or DENY; MJ permission remains a separate gate.

CURRENT EVIDENCE

The individual TP-003 reference profile was executed and its identity, title and REFERENCE_ONLY ceiling matched. This is a documentary identity check, not execution of the full model. Explicit source links resolve to 1 Pink formula IDs: 0 have checked numeric profiles and 1 remain open.

INDIVIDUAL FORMULA LINKS

F-003

REMAINING REQUIREMENT

Bind model-specific inputs, operations and measured evidence before interpreting the paper as an executable implementation.

SOURCE REFERENCES

TP-003; BP-ALG-003

Evidence: evidence/rerun/teal/TP-003.json

TR-TP-004 / Mass inflection

IF

If the Blue Page identity is invoked with declared inputs, scope, units, and evidence state.

HOW

Result dimensions: mass. Primary manifestations: EVE, JO, JP, MK. The lifecycle is purpose declaration -> Bangel typing -> Elsa semantic recovery -> JP formula CAPO -> MK applicability and dimensional review -> JO proof -> applicable safety/accounting receipts -> MJ decision -> JO evidence. JP carries the canonical representation; MK classifies physics applicability, units, boundaries, conservation, scale, and uncertainty; JO verifies types, formulas, tests, and receipts; applicable safety and accounting manifestations contribute evidence; MJ alone issues a bounded permit. Mathematical validity does not create physical or operational authority.

THEN

Then JO returns PASS_EVIDENCE, HOLD, FAIL_TECHNICAL, or DENY; MJ permission remains a separate gate.

CURRENT EVIDENCE

The individual TP-004 reference profile was executed and its identity, title and REFERENCE_ONLY ceiling matched. This is a documentary identity check, not execution of the full model. Explicit source links resolve to 1 Pink formula IDs: 0 have checked numeric profiles and 1 remain open.

INDIVIDUAL FORMULA LINKS

F-004

REMAINING REQUIREMENT

Bind model-specific inputs, operations and measured evidence before interpreting the paper as an executable implementation.

SOURCE REFERENCES

TP-004; BP-ALG-004

Evidence: evidence/rerun/teal/TP-004.json

TR-TP-005 / Noise smoothing

IF

If the Blue Page identity is invoked with declared inputs, scope, units, and evidence state.

HOW

Result dimensions: dimensionless. Primary manifestations: JO, MK, SISTER. The lifecycle is purpose declaration -> Bangel typing -> Elsa semantic recovery -> JP formula CAPO -> MK applicability and dimensional review -> JO proof -> applicable safety/accounting receipts -> MJ decision -> JO evidence. JP carries the canonical representation; MK classifies physics applicability, units, boundaries, conservation, scale, and uncertainty; JO verifies types, formulas, tests, and receipts; applicable safety and accounting manifestations contribute evidence; MJ alone issues a bounded permit. Mathematical validity does not create physical or operational authority.

THEN

Then JO returns PASS_EVIDENCE, HOLD, FAIL_TECHNICAL, or DENY; MJ permission remains a separate gate.

CURRENT EVIDENCE

The individual TP-005 reference profile was executed and its identity, title and REFERENCE_ONLY ceiling matched. This is a documentary identity check, not execution of the full model. Explicit source links resolve to 1 Pink formula IDs: 1 have checked numeric profiles and 0 remain open.

INDIVIDUAL FORMULA LINKS

F-005

REMAINING REQUIREMENT

Bind model-specific inputs, operations and measured evidence before interpreting the paper as an executable implementation.

SOURCE REFERENCES

TP-005; BP-ALG-005

Evidence: evidence/rerun/teal/TP-005.json

TR-TP-006 / Trend estimator

IF

If the Blue Page identity is invoked with declared inputs, scope, units, and evidence state.

HOW

Result dimensions: 1/time. Primary manifestations: JO, MK, SISTER. The lifecycle is purpose declaration -> Bangel typing -> Elsa semantic recovery -> JP formula CAPO -> MK applicability and dimensional review -> JO proof -> applicable safety/accounting receipts -> MJ decision -> JO evidence. JP carries the canonical representation; MK classifies physics applicability, units, boundaries, conservation, scale, and uncertainty; JO verifies types, formulas, tests, and receipts; applicable safety and accounting manifestations contribute evidence; MJ alone issues a bounded permit. Mathematical validity does not create physical or operational authority.

THEN

Then JO returns PASS_EVIDENCE, HOLD, FAIL_TECHNICAL, or DENY; MJ permission remains a separate gate.

CURRENT EVIDENCE

The individual TP-006 reference profile was executed and its identity, title and REFERENCE_ONLY ceiling matched. This is a documentary identity check, not execution of the full model. Explicit source links resolve to 1 Pink formula IDs: 1 have checked numeric profiles and 0 remain open.

INDIVIDUAL FORMULA LINKS

F-006

REMAINING REQUIREMENT

Bind model-specific inputs, operations and measured evidence before interpreting the paper as an executable implementation.

SOURCE REFERENCES

TP-006; BP-ALG-006

Evidence: evidence/rerun/teal/TP-006.json

TR-TP-007 / Anti-spike gate

IF

If the Blue Page identity is invoked with declared inputs, scope, units, and evidence state.

HOW

Result dimensions: logical. Primary manifestations: ANGELS, JO, SISTER. The lifecycle is purpose declaration -> Bangel typing -> Elsa semantic recovery -> JP formula CAPO -> MK applicability and dimensional review -> JO proof -> applicable safety/accounting receipts -> MJ decision -> JO evidence. JP carries the canonical representation; MK classifies physics applicability, units, boundaries, conservation, scale, and uncertainty; JO verifies types, formulas, tests, and receipts; applicable safety and accounting manifestations contribute evidence; MJ alone issues a bounded permit. Mathematical validity does not create physical or operational authority.

THEN

Then JO returns PASS_EVIDENCE, HOLD, FAIL_TECHNICAL, or DENY; MJ permission remains a separate gate.

CURRENT EVIDENCE

The individual TP-007 reference profile was executed and its identity, title and REFERENCE_ONLY ceiling matched. This is a documentary identity check, not execution of the full model. Explicit source links resolve to 1 Pink formula IDs: 0 have checked numeric profiles and 1 remain open.

INDIVIDUAL FORMULA LINKS

F-007

REMAINING REQUIREMENT

Bind model-specific inputs, operations and measured evidence before interpreting the paper as an executable implementation.

SOURCE REFERENCES

TP-007; BP-ALG-007

Evidence: evidence/rerun/teal/TP-007.json

TR-TP-008 / Prediction gain

IF

If the Blue Page identity is invoked with declared inputs, scope, units, and evidence state.

HOW

Result dimensions: dimensionless. Primary manifestations: JO, JP, SISTER. The lifecycle is purpose declaration -> Bangel typing -> Elsa semantic recovery -> JP formula CAPO -> MK applicability and dimensional review -> JO proof -> applicable safety/accounting receipts -> MJ decision -> JO evidence. JP carries the canonical representation; MK classifies physics applicability, units, boundaries, conservation, scale, and uncertainty; JO verifies types, formulas, tests, and receipts; applicable safety and accounting manifestations contribute evidence; MJ alone issues a bounded permit. Mathematical validity does not create physical or operational authority.

THEN

Then JO returns PASS_EVIDENCE, HOLD, FAIL_TECHNICAL, or DENY; MJ permission remains a separate gate.

CURRENT EVIDENCE

The individual TP-008 reference profile was executed and its identity, title and REFERENCE_ONLY ceiling matched. This is a documentary identity check, not execution of the full model. Explicit source links resolve to 1 Pink formula IDs: 1 have checked numeric profiles and 0 remain open.

INDIVIDUAL FORMULA LINKS

F-008

REMAINING REQUIREMENT

Bind model-specific inputs, operations and measured evidence before interpreting the paper as an executable implementation.

SOURCE REFERENCES

TP-008; BP-ALG-008

Evidence: evidence/rerun/teal/TP-008.json

TR-TP-009 / Covariance update

IF

If the Blue Page identity is invoked with declared inputs, scope, units, and evidence state.

HOW

Result dimensions: normalized². Primary manifestations: JO, JP, MK. The lifecycle is purpose declaration -> Bangel typing -> Elsa semantic recovery -> JP formula CAPO -> MK applicability and dimensional review -> JO proof -> applicable safety/accounting receipts -> MJ decision -> JO evidence. JP carries the canonical representation; MK classifies physics applicability, units, boundaries, conservation, scale, and uncertainty; JO verifies types, formulas, tests, and receipts; applicable safety and accounting manifestations contribute evidence; MJ alone issues a bounded permit. Mathematical validity does not create physical or operational authority.

THEN

Then JO returns PASS_EVIDENCE, HOLD, FAIL_TECHNICAL, or DENY; MJ permission remains a separate gate.

CURRENT EVIDENCE

The individual TP-009 reference profile was executed and its identity, title and REFERENCE_ONLY ceiling matched. This is a documentary identity check, not execution of the full model. Explicit source links resolve to 1 Pink formula IDs: 0 have checked numeric profiles and 1 remain open.

INDIVIDUAL FORMULA LINKS

F-009

REMAINING REQUIREMENT

Bind model-specific inputs, operations and measured evidence before interpreting the paper as an executable implementation.

SOURCE REFERENCES

TP-009; BP-ALG-009

Evidence: evidence/rerun/teal/TP-009.json

TR-TP-010 / Shadow depth

IF

If the Blue Page identity is invoked with declared inputs, scope, units, and evidence state.

HOW

Result dimensions: normalized. Primary manifestations: EVE, MK, SISTER. The lifecycle is purpose declaration -> Bangel typing -> Elsa semantic recovery -> JP formula CAPO -> MK applicability and dimensional review -> JO proof -> applicable safety/accounting receipts -> MJ decision -> JO evidence. JP carries the canonical representation; MK classifies physics applicability, units, boundaries, conservation, scale, and uncertainty; JO verifies types, formulas, tests, and receipts; applicable safety and accounting manifestations contribute evidence; MJ alone issues a bounded permit. Mathematical validity does not create physical or operational authority.

THEN

Then JO returns PASS_EVIDENCE, HOLD, FAIL_TECHNICAL, or DENY; MJ permission remains a separate gate.

CURRENT EVIDENCE

The individual TP-010 reference profile was executed and its identity, title and REFERENCE_ONLY ceiling matched. This is a documentary identity check, not execution of the full model. Explicit source links resolve to 1 Pink formula IDs: 0 have checked numeric profiles and 1 remain open.

INDIVIDUAL FORMULA LINKS

F-010

REMAINING REQUIREMENT

Bind model-specific inputs, operations and measured evidence before interpreting the paper as an executable implementation.

SOURCE REFERENCES

TP-010; BP-ALG-010

Evidence: evidence/rerun/teal/TP-010.json

TR-TP-011 / Shadow growth rate

IF

If the Blue Page identity is invoked with declared inputs, scope, units, and evidence state.

HOW

Result dimensions: normalized/time. Primary manifestations: JO, MK, SISTER. The lifecycle is purpose declaration -> Bangel typing -> Elsa semantic recovery -> JP formula CAPO -> MK applicability and dimensional review -> JO proof -> applicable safety/accounting receipts -> MJ decision -> JO evidence. JP carries the canonical representation; MK classifies physics applicability, units, boundaries, conservation, scale, and uncertainty; JO verifies types, formulas, tests, and receipts; applicable safety and accounting manifestations contribute evidence; MJ alone issues a bounded permit. Mathematical validity does not create physical or operational authority.

THEN

Then JO returns PASS_EVIDENCE, HOLD, FAIL_TECHNICAL, or DENY; MJ permission remains a separate gate.

CURRENT EVIDENCE

The individual TP-011 reference profile was executed and its identity, title and REFERENCE_ONLY ceiling matched. This is a documentary identity check, not execution of the full model. Explicit source links resolve to 1 Pink formula IDs: 1 have checked numeric profiles and 0 remain open.

INDIVIDUAL FORMULA LINKS

F-011

REMAINING REQUIREMENT

Bind model-specific inputs, operations and measured evidence before interpreting the paper as an executable implementation.

SOURCE REFERENCES

TP-011; BP-ALG-011

Evidence: evidence/rerun/teal/TP-011.json

TR-TP-012 / Front-end allocation / Front-end reserve

IF

If the Blue Page identity is invoked with declared inputs, scope, units, and evidence state.

HOW

Result dimensions: ratio. Primary manifestations: BANGEL, JO, JP, M3. The lifecycle is purpose declaration -> Bangel typing -> Elsa semantic recovery -> JP formula CAPO -> MK applicability and dimensional review -> JO proof -> applicable safety/accounting receipts -> MJ decision -> JO evidence. JP carries the canonical representation; MK classifies physics applicability, units, boundaries, conservation, scale, and uncertainty; JO verifies types, formulas, tests, and receipts; applicable safety and accounting manifestations contribute evidence; MJ alone issues a bounded permit. Mathematical validity does not create physical or operational authority.

THEN

Then JO returns PASS_EVIDENCE, HOLD, FAIL_TECHNICAL, or DENY; MJ permission remains a separate gate.

CURRENT EVIDENCE

The individual TP-012 reference profile was executed and its identity, title and REFERENCE_ONLY ceiling matched. This is a documentary identity check, not execution of the full model. Explicit source links resolve to 2 Pink formula IDs: 2 have checked numeric profiles and 0 remain open.

INDIVIDUAL FORMULA LINKS

F-012, F-013

REMAINING REQUIREMENT

Bind model-specific inputs, operations and measured evidence before interpreting the paper as an executable implementation.

SOURCE REFERENCES

TP-012; BP-ALG-012

Evidence: evidence/rerun/teal/TP-012.json

TR-TP-013 / Bounded allocation update

IF

If the Blue Page identity is invoked with declared inputs, scope, units, and evidence state.

HOW

Result dimensions: ratio vector. Primary manifestations: JO, JP, M3. The lifecycle is purpose declaration -> Bangel typing -> Elsa semantic recovery -> JP formula CAPO -> MK applicability and dimensional review -> JO proof -> applicable safety/accounting receipts -> MJ decision -> JO evidence. JP carries the canonical representation; MK classifies physics applicability, units, boundaries, conservation, scale, and uncertainty; JO verifies types, formulas, tests, and receipts; applicable safety and accounting manifestations contribute evidence; MJ alone issues a bounded permit. Mathematical validity does not create physical or operational authority.

THEN

Then JO returns PASS_EVIDENCE, HOLD, FAIL_TECHNICAL, or DENY; MJ permission remains a separate gate.

CURRENT EVIDENCE

The individual TP-013 reference profile was executed and its identity, title and REFERENCE_ONLY ceiling matched. This is a documentary identity check, not execution of the full model. Explicit source links resolve to 1 Pink formula IDs: 0 have checked numeric profiles and 1 remain open.

INDIVIDUAL FORMULA LINKS

F-014

REMAINING REQUIREMENT

Bind model-specific inputs, operations and measured evidence before interpreting the paper as an executable implementation.

SOURCE REFERENCES

TP-013; BP-ALG-013

Evidence: evidence/rerun/teal/TP-013.json

TR-TP-014 / Request memory

IF

If the Blue Page identity is invoked with declared inputs, scope, units, and evidence state.

HOW

Result dimensions: bytes. Primary manifestations: JO, M3, MJOS. The lifecycle is purpose declaration -> Bangel typing -> Elsa semantic recovery -> JP formula CAPO -> MK applicability and dimensional review -> JO proof -> applicable safety/accounting receipts -> MJ decision -> JO evidence. JP carries the canonical representation; MK classifies physics applicability, units, boundaries, conservation, scale, and uncertainty; JO verifies types, formulas, tests, and receipts; applicable safety and accounting manifestations contribute evidence; MJ alone issues a bounded permit. Mathematical validity does not create physical or operational authority.

THEN

Then JO returns PASS_EVIDENCE, HOLD, FAIL_TECHNICAL, or DENY; MJ permission remains a separate gate.

CURRENT EVIDENCE

The individual TP-014 reference profile was executed and its identity, title and REFERENCE_ONLY ceiling matched. This is a documentary identity check, not execution of the full model. Explicit source links resolve to 1 Pink formula IDs: 1 have checked numeric profiles and 0 remain open.

INDIVIDUAL FORMULA LINKS

F-015

REMAINING REQUIREMENT

Bind model-specific inputs, operations and measured evidence before interpreting the paper as an executable implementation.

SOURCE REFERENCES

TP-014; BP-ALG-014

Evidence: evidence/rerun/teal/TP-014.json

TR-TP-015 / Memory preallocation

IF

If the Blue Page identity is invoked with declared inputs, scope, units, and evidence state.

HOW

Result dimensions: bytes. Primary manifestations: JO, M3, SISTER. The lifecycle is purpose declaration -> Bangel typing -> Elsa semantic recovery -> JP formula CAPO -> MK applicability and dimensional review -> JO proof -> applicable safety/accounting receipts -> MJ decision -> JO evidence. JP carries the canonical representation; MK classifies physics applicability, units, boundaries, conservation, scale, and uncertainty; JO verifies types, formulas, tests, and receipts; applicable safety and accounting manifestations contribute evidence; MJ alone issues a bounded permit. Mathematical validity does not create physical or operational authority.

THEN

Then JO returns PASS_EVIDENCE, HOLD, FAIL_TECHNICAL, or DENY; MJ permission remains a separate gate.

CURRENT EVIDENCE

The individual TP-015 reference profile was executed and its identity, title and REFERENCE_ONLY ceiling matched. This is a documentary identity check, not execution of the full model. Explicit source links resolve to 1 Pink formula IDs: 1 have checked numeric profiles and 0 remain open.

INDIVIDUAL FORMULA LINKS

F-016

REMAINING REQUIREMENT

Bind model-specific inputs, operations and measured evidence before interpreting the paper as an executable implementation.

SOURCE REFERENCES

TP-015; BP-ALG-015

Evidence: evidence/rerun/teal/TP-015.json

TR-TP-016 / Hard flush

IF

If the Blue Page identity is invoked with declared inputs, scope, units, and evidence state.

HOW

Result dimensions: state sequence. Primary manifestations: JO, M3, MJOS. The lifecycle is purpose declaration -> Bangel typing -> Elsa semantic recovery -> JP formula CAPO -> MK applicability and dimensional review -> JO proof -> applicable safety/accounting receipts -> MJ decision -> JO evidence. JP carries the canonical representation; MK classifies physics applicability, units, boundaries, conservation, scale, and uncertainty; JO verifies types, formulas, tests, and receipts; applicable safety and accounting manifestations contribute evidence; MJ alone issues a bounded permit. Mathematical validity does not create physical or operational authority.

THEN

Then JO returns PASS_EVIDENCE, HOLD, FAIL_TECHNICAL, or DENY; MJ permission remains a separate gate.

CURRENT EVIDENCE

The individual TP-016 reference profile was executed and its identity, title and REFERENCE_ONLY ceiling matched. This is a documentary identity check, not execution of the full model. Explicit source links resolve to 1 Pink formula IDs: 0 have checked numeric profiles and 1 remain open.

INDIVIDUAL FORMULA LINKS

F-017

REMAINING REQUIREMENT

Bind model-specific inputs, operations and measured evidence before interpreting the paper as an executable implementation.

SOURCE REFERENCES

TP-016; BP-ALG-016

Evidence: evidence/rerun/teal/TP-016.json

TR-TP-017 / Charge balance

IF

If the Blue Page identity is invoked with declared inputs, scope, units, and evidence state.

HOW

Result dimensions: charge/time. Primary manifestations: EVE, JO, JP, MK. The lifecycle is purpose declaration -> Bangel typing -> Elsa semantic recovery -> JP formula CAPO -> MK applicability and dimensional review -> JO proof -> applicable safety/accounting receipts -> MJ decision -> JO evidence. JP carries the canonical representation; MK classifies physics applicability, units, boundaries, conservation, scale, and uncertainty; JO verifies types, formulas, tests, and receipts; applicable safety and accounting manifestations contribute evidence; MJ alone issues a bounded permit. Mathematical validity does not create physical or operational authority.

THEN

Then JO returns PASS_EVIDENCE, HOLD, FAIL_TECHNICAL, or DENY; MJ permission remains a separate gate.

CURRENT EVIDENCE

The individual TP-017 reference profile was executed and its identity, title and REFERENCE_ONLY ceiling matched. This is a documentary identity check, not execution of the full model. Explicit source links resolve to 1 Pink formula IDs: 1 have checked numeric profiles and 0 remain open.

INDIVIDUAL FORMULA LINKS

F-018

REMAINING REQUIREMENT

Bind model-specific inputs, operations and measured evidence before interpreting the paper as an executable implementation.

SOURCE REFERENCES

TP-017; BP-ALG-017

Evidence: evidence/rerun/teal/TP-017.json

TR-TP-018 / Capacitor energy

IF

If the Blue Page identity is invoked with declared inputs, scope, units, and evidence state.

HOW

Result dimensions: energy. Primary manifestations: JO, JP, MK. The lifecycle is purpose declaration -> Bangel typing -> Elsa semantic recovery -> JP formula CAPO -> MK applicability and dimensional review -> JO proof -> applicable safety/accounting receipts -> MJ decision -> JO evidence. JP carries the canonical representation; MK classifies physics applicability, units, boundaries, conservation, scale, and uncertainty; JO verifies types, formulas, tests, and receipts; applicable safety and accounting manifestations contribute evidence; MJ alone issues a bounded permit. Mathematical validity does not create physical or operational authority.

THEN

Then JO returns PASS_EVIDENCE, HOLD, FAIL_TECHNICAL, or DENY; MJ permission remains a separate gate.

CURRENT EVIDENCE

The individual TP-018 reference profile was executed and its identity, title and REFERENCE_ONLY ceiling matched. This is a documentary identity check, not execution of the full model. Explicit source links resolve to 1 Pink formula IDs: 1 have checked numeric profiles and 0 remain open.

INDIVIDUAL FORMULA LINKS

F-019

REMAINING REQUIREMENT

Bind model-specific inputs, operations and measured evidence before interpreting the paper as an executable implementation.

SOURCE REFERENCES

TP-018; BP-ALG-018

Evidence: evidence/rerun/teal/TP-018.json

TR-TP-019 / General stored energy

IF

If the Blue Page identity is invoked with declared inputs, scope, units, and evidence state.

HOW

Result dimensions: energy. Primary manifestations: JP, MK. The lifecycle is purpose declaration -> Bangel typing -> Elsa semantic recovery -> JP formula CAPO -> MK applicability and dimensional review -> JO proof -> applicable safety/accounting receipts -> MJ decision -> JO evidence. JP carries the canonical representation; MK classifies physics applicability, units, boundaries, conservation, scale, and uncertainty; JO verifies types, formulas, tests, and receipts; applicable safety and accounting manifestations contribute evidence; MJ alone issues a bounded permit. Mathematical validity does not create physical or operational authority.

THEN

Then JO returns PASS_EVIDENCE, HOLD, FAIL_TECHNICAL, or DENY; MJ permission remains a separate gate.

CURRENT EVIDENCE

The individual TP-019 reference profile was executed and its identity, title and REFERENCE_ONLY ceiling matched. This is a documentary identity check, not execution of the full model. Explicit source links resolve to 1 Pink formula IDs: 0 have checked numeric profiles and 1 remain open.

INDIVIDUAL FORMULA LINKS

F-020

REMAINING REQUIREMENT

Bind model-specific inputs, operations and measured evidence before interpreting the paper as an executable implementation.

SOURCE REFERENCES

TP-019; BP-ALG-019

Evidence: evidence/rerun/teal/TP-019.json

TR-TP-020 / Energy balance

IF

If the Blue Page identity is invoked with declared inputs, scope, units, and evidence state.

HOW

Result dimensions: energy. Primary manifestations: JO, MERMAID, MK. The lifecycle is purpose declaration -> Bangel typing -> Elsa semantic recovery -> JP formula CAPO -> MK applicability and dimensional review -> JO proof -> applicable safety/accounting receipts -> MJ decision -> JO evidence. JP carries the canonical representation; MK classifies physics applicability, units, boundaries, conservation, scale, and uncertainty; JO verifies types, formulas, tests, and receipts; applicable safety and accounting manifestations contribute evidence; MJ alone issues a bounded permit. Mathematical validity does not create physical or operational authority.

THEN

Then JO returns PASS_EVIDENCE, HOLD, FAIL_TECHNICAL, or DENY; MJ permission remains a separate gate.

CURRENT EVIDENCE

The individual TP-020 reference profile was executed and its identity, title and REFERENCE_ONLY ceiling matched. This is a documentary identity check, not execution of the full model. Explicit source links resolve to 1 Pink formula IDs: 1 have checked numeric profiles and 0 remain open.

INDIVIDUAL FORMULA LINKS

F-021

REMAINING REQUIREMENT

Bind model-specific inputs, operations and measured evidence before interpreting the paper as an executable implementation.

SOURCE REFERENCES

TP-020; BP-ALG-020

Evidence: evidence/rerun/teal/TP-020.json

TR-TP-021 / Mass balance / EVE screen balance

IF

If the Blue Page identity is invoked with declared inputs, scope, units, and evidence state.

HOW

Result dimensions: mass. Primary manifestations: EVE, JO, MERMAID, MK. The lifecycle is purpose declaration -> Bangel typing -> Elsa semantic recovery -> JP formula CAPO -> MK applicability and dimensional review -> JO proof -> applicable safety/accounting receipts -> MJ decision -> JO evidence. JP carries the canonical representation; MK classifies physics applicability, units, boundaries, conservation, scale, and uncertainty; JO verifies types, formulas, tests, and receipts; applicable safety and accounting manifestations contribute evidence; MJ alone issues a bounded permit. Mathematical validity does not create physical or operational authority.

THEN

Then JO returns PASS_EVIDENCE, HOLD, FAIL_TECHNICAL, or DENY; MJ permission remains a separate gate.

CURRENT EVIDENCE

The individual TP-021 reference profile was executed and its identity, title and REFERENCE_ONLY ceiling matched. This is a documentary identity check, not execution of the full model. Explicit source links resolve to 2 Pink formula IDs: 2 have checked numeric profiles and 0 remain open.

INDIVIDUAL FORMULA LINKS

F-022, F-023

REMAINING REQUIREMENT

Bind model-specific inputs, operations and measured evidence before interpreting the paper as an executable implementation.

SOURCE REFERENCES

TP-021; BP-ALG-021

Evidence: evidence/rerun/teal/TP-021.json

TR-TP-022 / EVE evaporation

IF

If the Blue Page identity is invoked with declared inputs, scope, units, and evidence state.

HOW

Result dimensions: mass. Primary manifestations: EVE, JO, MK. The lifecycle is purpose declaration -> Bangel typing -> Elsa semantic recovery -> JP formula CAPO -> MK applicability and dimensional review -> JO proof -> applicable safety/accounting receipts -> MJ decision -> JO evidence. JP carries the canonical representation; MK classifies physics applicability, units, boundaries, conservation, scale, and uncertainty; JO verifies types, formulas, tests, and receipts; applicable safety and accounting manifestations contribute evidence; MJ alone issues a bounded permit. Mathematical validity does not create physical or operational authority.

THEN

Then JO returns PASS_EVIDENCE, HOLD, FAIL_TECHNICAL, or DENY; MJ permission remains a separate gate.

CURRENT EVIDENCE

The individual TP-022 reference profile was executed and its identity, title and REFERENCE_ONLY ceiling matched. This is a documentary identity check, not execution of the full model. Explicit source links resolve to 1 Pink formula IDs: 0 have checked numeric profiles and 1 remain open.

INDIVIDUAL FORMULA LINKS

F-024

REMAINING REQUIREMENT

Bind model-specific inputs, operations and measured evidence before interpreting the paper as an executable implementation.

SOURCE REFERENCES

TP-022; BP-ALG-022

Evidence: evidence/rerun/teal/TP-022.json

TR-TP-023 / Upward force

IF

If the Blue Page identity is invoked with declared inputs, scope, units, and evidence state.

HOW

Result dimensions: force. Primary manifestations: BELLE, EVE, MK. The lifecycle is purpose declaration -> Bangel typing -> Elsa semantic recovery -> JP formula CAPO -> MK applicability and dimensional review -> JO proof -> applicable safety/accounting receipts -> MJ decision -> JO evidence. JP carries the canonical representation; MK classifies physics applicability, units, boundaries, conservation, scale, and uncertainty; JO verifies types, formulas, tests, and receipts; applicable safety and accounting manifestations contribute evidence; MJ alone issues a bounded permit. Mathematical validity does not create physical or operational authority.

THEN

Then JO returns PASS_EVIDENCE, HOLD, FAIL_TECHNICAL, or DENY; MJ permission remains a separate gate.

CURRENT EVIDENCE

The individual TP-023 reference profile was executed and its identity, title and REFERENCE_ONLY ceiling matched. This is a documentary identity check, not execution of the full model. Explicit source links resolve to 1 Pink formula IDs: 1 have checked numeric profiles and 0 remain open.

INDIVIDUAL FORMULA LINKS

F-025

REMAINING REQUIREMENT

Bind model-specific inputs, operations and measured evidence before interpreting the paper as an executable implementation.

SOURCE REFERENCES

TP-023; BP-ALG-023

Evidence: evidence/rerun/teal/TP-023.json

TR-TP-024 / Coordinate mapping

IF

If the Blue Page identity is invoked with declared inputs, scope, units, and evidence state.

HOW

Result dimensions: length vector. Primary manifestations: BELLE, JO, JP, MK. The lifecycle is purpose declaration -> Bangel typing -> Elsa semantic recovery -> JP formula CAPO -> MK applicability and dimensional review -> JO proof -> applicable safety/accounting receipts -> MJ decision -> JO evidence. JP carries the canonical representation; MK classifies physics applicability, units, boundaries, conservation, scale, and uncertainty; JO verifies types, formulas, tests, and receipts; applicable safety and accounting manifestations contribute evidence; MJ alone issues a bounded permit. Mathematical validity does not create physical or operational authority.

THEN

Then JO returns PASS_EVIDENCE, HOLD, FAIL_TECHNICAL, or DENY; MJ permission remains a separate gate.

CURRENT EVIDENCE

The individual TP-024 reference profile was executed and its identity, title and REFERENCE_ONLY ceiling matched. This is a documentary identity check, not execution of the full model. Explicit source links resolve to 1 Pink formula IDs: 0 have checked numeric profiles and 1 remain open.

INDIVIDUAL FORMULA LINKS

F-026

REMAINING REQUIREMENT

Bind model-specific inputs, operations and measured evidence before interpreting the paper as an executable implementation.

SOURCE REFERENCES

TP-024; BP-ALG-024

Evidence: evidence/rerun/teal/TP-024.json

TR-TP-025 / Sister physical umbrella count

IF

If the Blue Page identity is invoked with declared inputs, scope, units, and evidence state.

HOW

Result dimensions: count. Primary manifestations: JO, M3, MK, SISTER. The lifecycle is purpose declaration -> Bangel typing -> Elsa semantic recovery -> JP formula CAPO -> MK applicability and dimensional review -> JO proof -> applicable safety/accounting receipts -> MJ decision -> JO evidence. JP carries the canonical representation; MK classifies physics applicability, units, boundaries, conservation, scale, and uncertainty; JO verifies types, formulas, tests, and receipts; applicable safety and accounting manifestations contribute evidence; MJ alone issues a bounded permit. Mathematical validity does not create physical or operational authority.

THEN

Then JO returns PASS_EVIDENCE, HOLD, FAIL_TECHNICAL, or DENY; MJ permission remains a separate gate.

CURRENT EVIDENCE

The individual TP-025 reference profile was executed and its identity, title and REFERENCE_ONLY ceiling matched. This is a documentary identity check, not execution of the full model. Explicit source links resolve to 1 Pink formula IDs: 0 have checked numeric profiles and 1 remain open.

INDIVIDUAL FORMULA LINKS

F-027

REMAINING REQUIREMENT

Bind model-specific inputs, operations and measured evidence before interpreting the paper as an executable implementation.

SOURCE REFERENCES

TP-025; BP-ALG-025

Evidence: evidence/rerun/teal/TP-025.json

TR-TP-026 / Byte balance

IF

If the Blue Page identity is invoked with declared inputs, scope, units, and evidence state.

HOW

Result dimensions: bytes. Primary manifestations: JO, M3, MERMAID. The lifecycle is purpose declaration -> Bangel typing -> Elsa semantic recovery -> JP formula CAPO -> MK applicability and dimensional review -> JO proof -> applicable safety/accounting receipts -> MJ decision -> JO evidence. JP carries the canonical representation; MK classifies physics applicability, units, boundaries, conservation, scale, and uncertainty; JO verifies types, formulas, tests, and receipts; applicable safety and accounting manifestations contribute evidence; MJ alone issues a bounded permit. Mathematical validity does not create physical or operational authority.

THEN

Then JO returns PASS_EVIDENCE, HOLD, FAIL_TECHNICAL, or DENY; MJ permission remains a separate gate.

CURRENT EVIDENCE

The individual TP-026 reference profile was executed and its identity, title and REFERENCE_ONLY ceiling matched. This is a documentary identity check, not execution of the full model. Explicit source links resolve to 1 Pink formula IDs: 1 have checked numeric profiles and 0 remain open.

INDIVIDUAL FORMULA LINKS

F-028

REMAINING REQUIREMENT

Bind model-specific inputs, operations and measured evidence before interpreting the paper as an executable implementation.

SOURCE REFERENCES

TP-026; BP-ALG-026

Evidence: evidence/rerun/teal/TP-026.json

TR-TP-027 / Residual consequence

IF

If the Blue Page identity is invoked with declared inputs, scope, units, and evidence state.

HOW

Result dimensions: byte-seconds. Primary manifestations: JO, M3, MERMAID. The lifecycle is purpose declaration -> Bangel typing -> Elsa semantic recovery -> JP formula CAPO -> MK applicability and dimensional review -> JO proof -> applicable safety/accounting receipts -> MJ decision -> JO evidence. JP carries the canonical representation; MK classifies physics applicability, units, boundaries, conservation, scale, and uncertainty; JO verifies types, formulas, tests, and receipts; applicable safety and accounting manifestations contribute evidence; MJ alone issues a bounded permit. Mathematical validity does not create physical or operational authority.

THEN

Then JO returns PASS_EVIDENCE, HOLD, FAIL_TECHNICAL, or DENY; MJ permission remains a separate gate.

CURRENT EVIDENCE

The individual TP-027 reference profile was executed and its identity, title and REFERENCE_ONLY ceiling matched. This is a documentary identity check, not execution of the full model. Explicit source links resolve to 1 Pink formula IDs: 0 have checked numeric profiles and 1 remain open.

INDIVIDUAL FORMULA LINKS

F-029

REMAINING REQUIREMENT

Bind model-specific inputs, operations and measured evidence before interpreting the paper as an executable implementation.

SOURCE REFERENCES

TP-027; BP-ALG-027

Evidence: evidence/rerun/teal/TP-027.json

TR-TP-028 / Protected liquidity

IF

If the Blue Page identity is invoked with declared inputs, scope, units, and evidence state.

HOW

Result dimensions: currency. Primary manifestations: JO, MERMAID, MK, SHIVA. The lifecycle is purpose declaration -> Bangel typing -> Elsa semantic recovery -> JP formula CAPO -> MK applicability and dimensional review -> JO proof -> applicable safety/accounting receipts -> MJ decision -> JO evidence. JP carries the canonical representation; MK classifies physics applicability, units, boundaries, conservation, scale, and uncertainty; JO verifies types, formulas, tests, and receipts; applicable safety and accounting manifestations contribute evidence; MJ alone issues a bounded permit. Mathematical validity does not create physical or operational authority.

THEN

Then JO returns PASS_EVIDENCE, HOLD, FAIL_TECHNICAL, or DENY; MJ permission remains a separate gate.

CURRENT EVIDENCE

The individual TP-028 reference profile was executed and its identity, title and REFERENCE_ONLY ceiling matched. This is a documentary identity check, not execution of the full model. Explicit source links resolve to 1 Pink formula IDs: 1 have checked numeric profiles and 0 remain open.

INDIVIDUAL FORMULA LINKS

F-030

REMAINING REQUIREMENT

Bind model-specific inputs, operations and measured evidence before interpreting the paper as an executable implementation.

SOURCE REFERENCES

TP-028; BP-ALG-028

Evidence: evidence/rerun/teal/TP-028.json

TR-TP-029 / Investable surplus

IF

If the Blue Page identity is invoked with declared inputs, scope, units, and evidence state.

HOW

Result dimensions: currency. Primary manifestations: JO, MERMAID, SHIVA. The lifecycle is purpose declaration -> Bangel typing -> Elsa semantic recovery -> JP formula CAPO -> MK applicability and dimensional review -> JO proof -> applicable safety/accounting receipts -> MJ decision -> JO evidence. JP carries the canonical representation; MK classifies physics applicability, units, boundaries, conservation, scale, and uncertainty; JO verifies types, formulas, tests, and receipts; applicable safety and accounting manifestations contribute evidence; MJ alone issues a bounded permit. Mathematical validity does not create physical or operational authority.

THEN

Then JO returns PASS_EVIDENCE, HOLD, FAIL_TECHNICAL, or DENY; MJ permission remains a separate gate.

CURRENT EVIDENCE

The individual TP-029 reference profile was executed and its identity, title and REFERENCE_ONLY ceiling matched. This is a documentary identity check, not execution of the full model. Explicit source links resolve to 1 Pink formula IDs: 1 have checked numeric profiles and 0 remain open.

INDIVIDUAL FORMULA LINKS

F-031

REMAINING REQUIREMENT

Bind model-specific inputs, operations and measured evidence before interpreting the paper as an executable implementation.

SOURCE REFERENCES

TP-029; BP-ALG-029

Evidence: evidence/rerun/teal/TP-029.json

TR-TP-030 / Risk-capital ceiling

IF

If the Blue Page identity is invoked with declared inputs, scope, units, and evidence state.

HOW

Result dimensions: currency. Primary manifestations: MERMAID, MJ, MK, SHIVA. The lifecycle is purpose declaration -> Bangel typing -> Elsa semantic recovery -> JP formula CAPO -> MK applicability and dimensional review -> JO proof -> applicable safety/accounting receipts -> MJ decision -> JO evidence. JP carries the canonical representation; MK classifies physics applicability, units, boundaries, conservation, scale, and uncertainty; JO verifies types, formulas, tests, and receipts; applicable safety and accounting manifestations contribute evidence; MJ alone issues a bounded permit. Mathematical validity does not create physical or operational authority.

THEN

Then JO returns PASS_EVIDENCE, HOLD, FAIL_TECHNICAL, or DENY; MJ permission remains a separate gate.

CURRENT EVIDENCE

The individual TP-030 reference profile was executed and its identity, title and REFERENCE_ONLY ceiling matched. This is a documentary identity check, not execution of the full model. Explicit source links resolve to 1 Pink formula IDs: 1 have checked numeric profiles and 0 remain open.

INDIVIDUAL FORMULA LINKS

F-032

REMAINING REQUIREMENT

Bind model-specific inputs, operations and measured evidence before interpreting the paper as an executable implementation.

SOURCE REFERENCES

TP-030; BP-ALG-030

Evidence: evidence/rerun/teal/TP-030.json

TR-TP-031 / Portfolio concentration

IF

If the Blue Page identity is invoked with declared inputs, scope, units, and evidence state.

HOW

Result dimensions: ratio. Primary manifestations: JO, MERMAID, SHIVA. The lifecycle is purpose declaration -> Bangel typing -> Elsa semantic recovery -> JP formula CAPO -> MK applicability and dimensional review -> JO proof -> applicable safety/accounting receipts -> MJ decision -> JO evidence. JP carries the canonical representation; MK classifies physics applicability, units, boundaries, conservation, scale, and uncertainty; JO verifies types, formulas, tests, and receipts; applicable safety and accounting manifestations contribute evidence; MJ alone issues a bounded permit. Mathematical validity does not create physical or operational authority.

THEN

Then JO returns PASS_EVIDENCE, HOLD, FAIL_TECHNICAL, or DENY; MJ permission remains a separate gate.

CURRENT EVIDENCE

The individual TP-031 reference profile was executed and its identity, title and REFERENCE_ONLY ceiling matched. This is a documentary identity check, not execution of the full model. Explicit source links resolve to 1 Pink formula IDs: 1 have checked numeric profiles and 0 remain open.

INDIVIDUAL FORMULA LINKS

F-033

REMAINING REQUIREMENT

Bind model-specific inputs, operations and measured evidence before interpreting the paper as an executable implementation.

SOURCE REFERENCES

TP-031; BP-ALG-031

Evidence: evidence/rerun/teal/TP-031.json

TR-TP-032 / Portfolio variance

IF

If the Blue Page identity is invoked with declared inputs, scope, units, and evidence state.

HOW

Result dimensions: return^2 . Primary manifestations: MERMAID, MK, SHIVA. The lifecycle is purpose declaration -> Bangel typing -> Elsa semantic recovery -> JP formula CAPO -> MK applicability and dimensional review -> JO proof -> applicable safety/accounting receipts -> MJ decision -> JO evidence. JP carries the canonical representation; MK classifies physics applicability, units, boundaries, conservation, scale, and uncertainty; JO verifies types, formulas, tests, and receipts; applicable safety and accounting manifestations contribute evidence; MJ alone issues a bounded permit. Mathematical validity does not create physical or operational authority.

THEN

Then JO returns PASS_EVIDENCE, HOLD, FAIL_TECHNICAL, or DENY; MJ permission remains a separate gate.

CURRENT EVIDENCE

The individual TP-032 reference profile was executed and its identity, title and REFERENCE_ONLY ceiling matched. This is a documentary identity check, not execution of the full model. Explicit source links resolve to 1 Pink formula IDs: 0 have checked numeric profiles and 1 remain open.

INDIVIDUAL FORMULA LINKS

F-034

REMAINING REQUIREMENT

Bind model-specific inputs, operations and measured evidence before interpreting the paper as an executable implementation.

SOURCE REFERENCES

TP-032; BP-ALG-032

Evidence: evidence/rerun/teal/TP-032.json

TR-TP-033 / Capital friction

IF

If the Blue Page identity is invoked with declared inputs, scope, units, and evidence state.

HOW

Result dimensions: currency. Primary manifestations: MERMAID, MK, SHIVA. The lifecycle is purpose declaration -> Bangel typing -> Elsa semantic recovery -> JP formula CAPO -> MK applicability and dimensional review -> JO proof -> applicable safety/accounting receipts -> MJ decision -> JO evidence. JP carries the canonical representation; MK classifies physics applicability, units, boundaries, conservation, scale, and uncertainty; JO verifies types, formulas, tests, and receipts; applicable safety and accounting manifestations contribute evidence; MJ alone issues a bounded permit. Mathematical validity does not create physical or operational authority.

THEN

Then JO returns PASS_EVIDENCE, HOLD, FAIL_TECHNICAL, or DENY; MJ permission remains a separate gate.

CURRENT EVIDENCE

The individual TP-033 reference profile was executed and its identity, title and REFERENCE_ONLY ceiling matched. This is a documentary identity check, not execution of the full model. Explicit source links resolve to 1 Pink formula IDs: 1 have checked numeric profiles and 0 remain open.

INDIVIDUAL FORMULA LINKS

F-035

REMAINING REQUIREMENT

Bind model-specific inputs, operations and measured evidence before interpreting the paper as an executable implementation.

SOURCE REFERENCES

TP-033; BP-ALG-033

Evidence: evidence/rerun/teal/TP-033.json

TR-TP-034 / Opportunity lower bound

IF

If the Blue Page identity is invoked with declared inputs, scope, units, and evidence state.

HOW

Result dimensions: currency. Primary manifestations: MERMAID, MJ, MK, SHIVA. The lifecycle is purpose declaration -> Bangel typing -> Elsa semantic recovery -> JP formula CAPO -> MK applicability and dimensional review -> JO proof -> applicable safety/accounting receipts -> MJ decision -> JO evidence. JP carries the canonical representation; MK classifies physics applicability, units, boundaries, conservation, scale, and uncertainty; JO verifies types, formulas, tests, and receipts; applicable safety and accounting manifestations contribute evidence; MJ alone issues a bounded permit. Mathematical validity does not create physical or operational authority.

THEN

Then JO returns PASS_EVIDENCE, HOLD, FAIL_TECHNICAL, or DENY; MJ permission remains a separate gate.

CURRENT EVIDENCE

The individual TP-034 reference profile was executed and its identity, title and REFERENCE_ONLY ceiling matched. This is a documentary identity check, not execution of the full model. Explicit source links resolve to 1 Pink formula IDs: 1 have checked numeric profiles and 0 remain open.

INDIVIDUAL FORMULA LINKS

F-036

REMAINING REQUIREMENT

Bind model-specific inputs, operations and measured evidence before interpreting the paper as an executable implementation.

SOURCE REFERENCES

TP-034; BP-ALG-034

Evidence: evidence/rerun/teal/TP-034.json

TR-TP-035 / Abundance objective

IF

If the Blue Page identity is invoked with declared inputs, scope, units, and evidence state.

HOW

Result dimensions: declared score. Primary manifestations: JO, MJ, MK, SHIVA. The lifecycle is purpose declaration -> Bangel typing -> Elsa semantic recovery -> JP formula CAPO -> MK applicability and dimensional review -> JO proof -> applicable safety/accounting receipts -> MJ decision -> JO evidence. JP carries the canonical representation; MK classifies physics applicability, units, boundaries, conservation, scale, and uncertainty; JO verifies types, formulas, tests, and receipts; applicable safety and accounting manifestations contribute evidence; MJ alone issues a bounded permit. Mathematical validity does not create physical or operational authority.

THEN

Then JO returns PASS_EVIDENCE, HOLD, FAIL_TECHNICAL, or DENY; MJ permission remains a separate gate.

CURRENT EVIDENCE

The individual TP-035 reference profile was executed and its identity, title and REFERENCE_ONLY ceiling matched. This is a documentary identity check, not execution of the full model. Explicit source links resolve to 1 Pink formula IDs: 0 have checked numeric profiles and 1 remain open.

INDIVIDUAL FORMULA LINKS

F-037

REMAINING REQUIREMENT

Bind model-specific inputs, operations and measured evidence before interpreting the paper as an executable implementation.

SOURCE REFERENCES

TP-035; BP-ALG-035

Evidence: evidence/rerun/teal/TP-035.json

TR-TP-036 / SHIVAS eligible value

IF

If the Blue Page identity is invoked with declared inputs, scope, units, and evidence state.

HOW

Result dimensions: currency. Primary manifestations: JO, MERMAID, SHIVA. The lifecycle is purpose declaration -> Bangel typing -> Elsa semantic recovery -> JP formula CAPO -> MK applicability and dimensional review -> JO proof -> applicable safety/accounting receipts -> MJ decision -> JO evidence. JP carries the canonical representation; MK classifies physics applicability, units, boundaries, conservation, scale, and uncertainty; JO verifies types, formulas, tests, and receipts; applicable safety and accounting manifestations contribute evidence; MJ alone issues a bounded permit. Mathematical validity does not create physical or operational authority.

THEN

Then JO returns PASS_EVIDENCE, HOLD, FAIL_TECHNICAL, or DENY; MJ permission remains a separate gate.

CURRENT EVIDENCE

The individual TP-036 reference profile was executed and its identity, title and REFERENCE_ONLY ceiling matched. This is a documentary identity check, not execution of the full model. Explicit source links resolve to 1 Pink formula IDs: 1 have checked numeric profiles and 0 remain open.

INDIVIDUAL FORMULA LINKS

F-038

REMAINING REQUIREMENT

Bind model-specific inputs, operations and measured evidence before interpreting the paper as an executable implementation.

SOURCE REFERENCES

TP-036; BP-ALG-036

Evidence: evidence/rerun/teal/TP-036.json

TR-TP-037 / SHIVAS ceiling

IF

If the Blue Page identity is invoked with declared inputs, scope, units, and evidence state.

HOW

Result dimensions: count. Primary manifestations: MERMAID, MJ, SHIVA. The lifecycle is purpose declaration -> Bangel typing -> Elsa semantic recovery -> JP formula CAPO -> MK applicability and dimensional review -> JO proof -> applicable safety/accounting receipts -> MJ decision -> JO evidence. JP carries the canonical representation; MK classifies physics applicability, units, boundaries, conservation, scale, and uncertainty; JO verifies types, formulas, tests, and receipts; applicable safety and accounting manifestations contribute evidence; MJ alone issues a bounded permit. Mathematical validity does not create physical or operational authority.

THEN

Then JO returns PASS_EVIDENCE, HOLD, FAIL_TECHNICAL, or DENY; MJ permission remains a separate gate.

CURRENT EVIDENCE

The individual TP-037 reference profile was executed and its identity, title and REFERENCE_ONLY ceiling matched. This is a documentary identity check, not execution of the full model. Explicit source links resolve to 1 Pink formula IDs: 0 have checked numeric profiles and 1 remain open.

INDIVIDUAL FORMULA LINKS

F-039

REMAINING REQUIREMENT

Bind model-specific inputs, operations and measured evidence before interpreting the paper as an executable implementation.

SOURCE REFERENCES

TP-037; BP-ALG-037

Evidence: evidence/rerun/teal/TP-037.json

TR-TP-038 / MK state model

IF

If the Blue Page identity is invoked with declared inputs, scope, units, and evidence state.

HOW

Result dimensions: typed state. Primary manifestations: JO, JP, MK. The lifecycle is purpose declaration -> Bangel typing -> Elsa semantic recovery -> JP formula CAPO -> MK applicability and dimensional review -> JO proof -> applicable safety/accounting receipts -> MJ decision -> JO evidence. JP carries the canonical representation; MK classifies physics applicability, units, boundaries, conservation, scale, and uncertainty; JO verifies types, formulas, tests, and receipts; applicable safety and accounting manifestations contribute evidence; MJ alone issues a bounded permit. Mathematical validity does not create physical or operational authority.

THEN

Then JO returns PASS_EVIDENCE, HOLD, FAIL_TECHNICAL, or DENY; MJ permission remains a separate gate.

CURRENT EVIDENCE

The individual TP-038 reference profile was executed and its identity, title and REFERENCE_ONLY ceiling matched. This is a documentary identity check, not execution of the full model. Explicit source links resolve to 1 Pink formula IDs: 0 have checked numeric profiles and 1 remain open.

INDIVIDUAL FORMULA LINKS

F-040

REMAINING REQUIREMENT

Bind model-specific inputs, operations and measured evidence before interpreting the paper as an executable implementation.

SOURCE REFERENCES

TP-038; BP-ALG-038

Evidence: evidence/rerun/teal/TP-038.json

TR-TP-039 / Dimensional integrity

IF

If the Blue Page identity is invoked with declared inputs, scope, units, and evidence state.

HOW

Result dimensions: dimension equality. Primary manifestations: JO, MK. The lifecycle is purpose declaration -> Bangel typing -> Elsa semantic recovery -> JP formula CAPO -> MK applicability and dimensional review -> JO proof -> applicable safety/accounting receipts -> MJ decision -> JO evidence. JP carries the canonical representation; MK classifies physics applicability, units, boundaries, conservation, scale, and uncertainty; JO verifies types, formulas, tests, and receipts; applicable safety and accounting manifestations contribute evidence; MJ alone issues a bounded permit. Mathematical validity does not create physical or operational authority.

THEN

Then JO returns PASS_EVIDENCE, HOLD, FAIL_TECHNICAL, or DENY; MJ permission remains a separate gate.

CURRENT EVIDENCE

The individual TP-039 reference profile was executed and its identity, title and REFERENCE_ONLY ceiling matched. This is a documentary identity check, not execution of the full model. Explicit source links resolve to 1 Pink formula IDs: 0 have checked numeric profiles and 1 remain open.

INDIVIDUAL FORMULA LINKS

F-041

REMAINING REQUIREMENT

Bind model-specific inputs, operations and measured evidence before interpreting the paper as an executable implementation.

SOURCE REFERENCES

TP-039; BP-ALG-039

Evidence: evidence/rerun/teal/TP-039.json

TR-TP-040 / Conservation residual

IF

If the Blue Page identity is invoked with declared inputs, scope, units, and evidence state.

HOW

Result dimensions: quantity. Primary manifestations: EVE, JO, MERMAID, MK. The lifecycle is purpose declaration -> Bangel typing -> Elsa semantic recovery -> JP formula CAPO -> MK applicability and dimensional review -> JO proof -> applicable safety/accounting receipts -> MJ decision -> JO evidence. JP carries the canonical representation; MK classifies physics applicability, units, boundaries, conservation, scale, and uncertainty; JO verifies types, formulas, tests, and receipts; applicable safety and accounting manifestations contribute evidence; MJ alone issues a bounded permit. Mathematical validity does not create physical or operational authority.

THEN

Then JO returns PASS_EVIDENCE, HOLD, FAIL_TECHNICAL, or DENY; MJ permission remains a separate gate.

CURRENT EVIDENCE

The individual TP-040 reference profile was executed and its identity, title and REFERENCE_ONLY ceiling matched. This is a documentary identity check, not execution of the full model. Explicit source links resolve to 1 Pink formula IDs: 1 have checked numeric profiles and 0 remain open.

INDIVIDUAL FORMULA LINKS

F-042

REMAINING REQUIREMENT

Bind model-specific inputs, operations and measured evidence before interpreting the paper as an executable implementation.

SOURCE REFERENCES

TP-040; BP-ALG-040

Evidence: evidence/rerun/teal/TP-040.json

TR-TP-041 / Pearl simulation ellipsoid volume

IF

If the Blue Page identity is invoked with declared inputs, scope, units, and evidence state.

HOW

Result dimensions: volume. Primary manifestations: EVE, JO, MK, SISTER. The lifecycle is purpose declaration -> Bangel typing -> Elsa semantic recovery -> JP formula CAPO -> MK applicability and dimensional review -> JO proof -> applicable safety/accounting receipts -> MJ decision -> JO evidence. JP carries the canonical representation; MK classifies physics applicability, units, boundaries, conservation, scale, and uncertainty; JO verifies types, formulas, tests, and receipts; applicable safety and accounting manifestations contribute evidence; MJ alone issues a bounded permit. Mathematical validity does not create physical or operational authority.

THEN

Then JO returns PASS_EVIDENCE, HOLD, FAIL_TECHNICAL, or DENY; MJ permission remains a separate gate.

CURRENT EVIDENCE

The individual TP-041 reference profile was executed and its identity, title and REFERENCE_ONLY ceiling matched. This is a documentary identity check, not execution of the full model. Explicit source links resolve to 1 Pink formula IDs: 0 have checked numeric profiles and 1 remain open.

INDIVIDUAL FORMULA LINKS

F-043

REMAINING REQUIREMENT

Bind model-specific inputs, operations and measured evidence before interpreting the paper as an executable implementation.

SOURCE REFERENCES

TP-041; BP-ALG-041

Evidence: evidence/rerun/teal/TP-041.json

TR-TP-042 / Pearl simulation surface-area approximation

IF

If the Blue Page identity is invoked with declared inputs, scope, units, and evidence state.

HOW

Result dimensions: area. Primary manifestations: BELLE, JO, MK. The lifecycle is purpose declaration -> Bangel typing -> Elsa semantic recovery -> JP formula CAPO -> MK applicability and dimensional review -> JO proof -> applicable safety/accounting receipts -> MJ decision -> JO evidence. JP carries the canonical representation; MK classifies physics applicability, units, boundaries, conservation, scale, and uncertainty; JO verifies types, formulas, tests, and receipts; applicable safety and accounting manifestations contribute evidence; MJ alone issues a bounded permit. Mathematical validity does not create physical or operational authority.

THEN

Then JO returns PASS_EVIDENCE, HOLD, FAIL_TECHNICAL, or DENY; MJ permission remains a separate gate.

CURRENT EVIDENCE

The individual TP-042 reference profile was executed and its identity, title and REFERENCE_ONLY ceiling matched. This is a documentary identity check, not execution of the full model. Explicit source links resolve to 1 Pink formula IDs: 0 have checked numeric profiles and 1 remain open.

INDIVIDUAL FORMULA LINKS

F-044

REMAINING REQUIREMENT

Bind model-specific inputs, operations and measured evidence before interpreting the paper as an executable implementation.

SOURCE REFERENCES

TP-042; BP-ALG-042

Evidence: evidence/rerun/teal/TP-042.json

TR-TP-043 / Pearl simulation exposure ratio

IF

If the Blue Page identity is invoked with declared inputs, scope, units, and evidence state.

HOW

Result dimensions: 1/length. Primary manifestations: BELLE, EVE, MK. The lifecycle is purpose declaration -> Bangel typing -> Elsa semantic recovery -> JP formula CAPO -> MK applicability and dimensional review -> JO proof -> applicable safety/accounting receipts -> MJ decision -> JO evidence. JP carries the canonical representation; MK classifies physics applicability, units, boundaries, conservation, scale, and uncertainty; JO verifies types, formulas, tests, and receipts; applicable safety and accounting manifestations contribute evidence; MJ alone issues a bounded permit. Mathematical validity does not create physical or operational authority.

THEN

Then JO returns PASS_EVIDENCE, HOLD, FAIL_TECHNICAL, or DENY; MJ permission remains a separate gate.

CURRENT EVIDENCE

The individual TP-043 reference profile was executed and its identity, title and REFERENCE_ONLY ceiling matched. This is a documentary identity check, not execution of the full model. Explicit source links resolve to 1 Pink formula IDs: 1 have checked numeric profiles and 0 remain open.

INDIVIDUAL FORMULA LINKS

F-045

REMAINING REQUIREMENT

Bind model-specific inputs, operations and measured evidence before interpreting the paper as an executable implementation.

SOURCE REFERENCES

TP-043; BP-ALG-043

Evidence: evidence/rerun/teal/TP-043.json

TR-TP-044 / Pearl simulation capacity slack

IF

If the Blue Page identity is invoked with declared inputs, scope, units, and evidence state.

HOW

Result dimensions: quantity_k. Primary manifestations: EVE, JO, M3, MK, SISTER. The lifecycle is purpose declaration -> Bangel typing -> Elsa semantic recovery -> JP formula CAPO -> MK applicability and dimensional review -> JO proof -> applicable safety/accounting receipts -> MJ decision -> JO evidence. JP carries the canonical representation; MK classifies physics applicability, units, boundaries, conservation, scale, and uncertainty; JO verifies types, formulas, tests, and receipts; applicable safety and accounting manifestations contribute evidence; MJ alone issues a bounded permit. Mathematical validity does not create physical or operational authority.

THEN

Then JO returns PASS_EVIDENCE, HOLD, FAIL_TECHNICAL, or DENY; MJ permission remains a separate gate.

CURRENT EVIDENCE

The individual TP-044 reference profile was executed and its identity, title and REFERENCE_ONLY ceiling matched. This is a documentary identity check, not execution of the full model. Explicit source links resolve to 1 Pink formula IDs: 1 have checked numeric profiles and 0 remain open.

INDIVIDUAL FORMULA LINKS

F-046

REMAINING REQUIREMENT

Bind model-specific inputs, operations and measured evidence before interpreting the paper as an executable implementation.

SOURCE REFERENCES

TP-044; BP-ALG-044

Evidence: evidence/rerun/teal/TP-044.json

TR-TP-045 / Pearl simulation saturation ratio

IF

If the Blue Page identity is invoked with declared inputs, scope, units, and evidence state.

HOW

Result dimensions: ratio. Primary manifestations: ANGELS, BELLATRIX, JO, MK. The lifecycle is purpose declaration -> Bangel typing -> Elsa semantic recovery -> JP formula CAPO -> MK applicability and dimensional review -> JO proof -> applicable safety/accounting receipts -> MJ decision -> JO evidence. JP carries the canonical representation; MK classifies physics applicability, units, boundaries, conservation, scale, and uncertainty; JO verifies types, formulas, tests, and receipts; applicable safety and accounting manifestations contribute evidence; MJ alone issues a bounded permit. Mathematical validity does not create physical or operational authority.

THEN

Then JO returns PASS_EVIDENCE, HOLD, FAIL_TECHNICAL, or DENY; MJ permission remains a separate gate.

CURRENT EVIDENCE

The individual TP-045 reference profile was executed and its identity, title and REFERENCE_ONLY ceiling matched. This is a documentary identity check, not execution of the full model. Explicit source links resolve to 1 Pink formula IDs: 0 have checked numeric profiles and 1 remain open.

INDIVIDUAL FORMULA LINKS

F-047

REMAINING REQUIREMENT

Bind model-specific inputs, operations and measured evidence before interpreting the paper as an executable implementation.

SOURCE REFERENCES

TP-045; BP-ALG-045

Evidence: evidence/rerun/teal/TP-045.json

TR-TP-046 / Pearl simulation object count

IF

If the Blue Page identity is invoked with declared inputs, scope, units, and evidence state.

HOW

Result dimensions: count. Primary manifestations: EVE, JO, M3, MK, SISTER. The lifecycle is purpose declaration -> Bangel typing -> Elsa semantic recovery -> JP formula CAPO -> MK applicability and dimensional review -> JO proof -> applicable safety/accounting receipts -> MJ decision -> JO evidence. JP carries the canonical representation; MK classifies physics applicability, units, boundaries, conservation, scale, and uncertainty; JO verifies types, formulas, tests, and receipts; applicable safety and accounting manifestations contribute evidence; MJ alone issues a bounded permit. Mathematical validity does not create physical or operational authority.

THEN

Then JO returns PASS_EVIDENCE, HOLD, FAIL_TECHNICAL, or DENY; MJ permission remains a separate gate.

CURRENT EVIDENCE

The individual TP-046 reference profile was executed and its identity, title and REFERENCE_ONLY ceiling matched. This is a documentary identity check, not execution of the full model. Explicit source links resolve to 1 Pink formula IDs: 0 have checked numeric profiles and 1 remain open.

INDIVIDUAL FORMULA LINKS

F-048

REMAINING REQUIREMENT

Bind model-specific inputs, operations and measured evidence before interpreting the paper as an executable implementation.

SOURCE REFERENCES

TP-046; BP-ALG-046

Evidence: evidence/rerun/teal/TP-046.json

TR-TP-047 / Pearl simulation accounting balance

IF

If the Blue Page identity is invoked with declared inputs, scope, units, and evidence state.

HOW

Result dimensions: quantity_k. Primary manifestations: EVE, JO, MERMAID, MK. The lifecycle is purpose declaration -> Bangel typing -> Elsa semantic recovery -> JP formula CAPO -> MK applicability and dimensional review -> JO proof -> applicable safety/accounting receipts -> MJ decision -> JO evidence. JP carries the canonical representation; MK classifies physics applicability, units, boundaries, conservation, scale, and uncertainty; JO verifies types, formulas, tests, and receipts; applicable safety and accounting manifestations contribute evidence; MJ alone issues a bounded permit. Mathematical validity does not create physical or operational authority.

THEN

Then JO returns PASS_EVIDENCE, HOLD, FAIL_TECHNICAL, or DENY; MJ permission remains a separate gate.

CURRENT EVIDENCE

The individual TP-047 reference profile was executed and its identity, title and REFERENCE_ONLY ceiling matched. This is a documentary identity check, not execution of the full model. Explicit source links resolve to 1 Pink formula IDs: 1 have checked numeric profiles and 0 remain open.

INDIVIDUAL FORMULA LINKS

F-049

REMAINING REQUIREMENT

Bind model-specific inputs, operations and measured evidence before interpreting the paper as an executable implementation.

SOURCE REFERENCES

TP-047; BP-ALG-047

Evidence: evidence/rerun/teal/TP-047.json

TR-TP-048 / Pearl simulated transfer opportunity

IF

If the Blue Page identity is invoked with declared inputs, scope, units, and evidence state.

HOW

Result dimensions: quantity_k. Primary manifestations: EVE, JO, M3, MK, SISTER. The lifecycle is purpose declaration -> Bangel typing -> Elsa semantic recovery -> JP formula CAPO -> MK applicability and dimensional review -> JO proof -> applicable safety/accounting receipts -> MJ decision -> JO evidence. JP carries the canonical representation; MK classifies physics applicability, units, boundaries, conservation, scale, and uncertainty; JO verifies types, formulas, tests, and receipts; applicable safety and accounting manifestations contribute evidence; MJ alone issues a bounded permit. Mathematical validity does not create physical or operational authority.

THEN

Then JO returns PASS_EVIDENCE, HOLD, FAIL_TECHNICAL, or DENY; MJ permission remains a separate gate.

CURRENT EVIDENCE

The individual TP-048 reference profile was executed and its identity, title and REFERENCE_ONLY ceiling matched. This is a documentary identity check, not execution of the full model. Explicit source links resolve to 1 Pink formula IDs: 1 have checked numeric profiles and 0 remain open.

INDIVIDUAL FORMULA LINKS

F-050

REMAINING REQUIREMENT

Bind model-specific inputs, operations and measured evidence before interpreting the paper as an executable implementation.

SOURCE REFERENCES

TP-048; BP-ALG-048

Evidence: evidence/rerun/teal/TP-048.json

TR-TP-049 / Pearl simulated regeneration vector

IF

If the Blue Page identity is invoked with declared inputs, scope, units, and evidence state.

HOW

Result dimensions: typed vector. Primary manifestations: EVE, JO, MERMAID, MK, SHIVA. The lifecycle is purpose declaration -> Bangel typing -> Elsa semantic recovery -> JP formula CAPO -> MK applicability and dimensional review -> JO proof -> applicable safety/accounting receipts -> MJ decision -> JO evidence. JP carries the canonical representation; MK classifies physics applicability, units, boundaries, conservation, scale, and uncertainty; JO verifies types, formulas, tests, and receipts; applicable safety and accounting manifestations contribute evidence; MJ alone issues a bounded permit. Mathematical validity does not create physical or operational authority.

THEN

Then JO returns PASS_EVIDENCE, HOLD, FAIL_TECHNICAL, or DENY; MJ permission remains a separate gate.

CURRENT EVIDENCE

The individual TP-049 reference profile was executed and its identity, title and REFERENCE_ONLY ceiling matched. This is a documentary identity check, not execution of the full model. Explicit source links resolve to 1 Pink formula IDs: 0 have checked numeric profiles and 1 remain open.

INDIVIDUAL FORMULA LINKS

F-051

REMAINING REQUIREMENT

Bind model-specific inputs, operations and measured evidence before interpreting the paper as an executable implementation.

SOURCE REFERENCES

TP-049; BP-ALG-049

Evidence: evidence/rerun/teal/TP-049.json

TR-TP-050 / Pearl acoustic simulation wavelength

IF

If the Blue Page identity is invoked with declared inputs, scope, units, and evidence state.

HOW

Result dimensions: length. Primary manifestations: EVE, JO, MK. The lifecycle is purpose declaration -> Bangel typing -> Elsa semantic recovery -> JP formula CAPO -> MK applicability and dimensional review -> JO proof -> applicable safety/accounting receipts -> MJ decision -> JO evidence. JP carries the canonical representation; MK classifies physics applicability, units, boundaries, conservation, scale, and uncertainty; JO verifies types, formulas, tests, and receipts; applicable safety and accounting manifestations contribute evidence; MJ alone issues a bounded permit. Mathematical validity does not create physical or operational authority.

THEN

Then JO returns PASS_EVIDENCE, HOLD, FAIL_TECHNICAL, or DENY; MJ permission remains a separate gate.

CURRENT EVIDENCE

The individual TP-050 reference profile was executed and its identity, title and REFERENCE_ONLY ceiling matched. This is a documentary identity check, not execution of the full model. Explicit source links resolve to 1 Pink formula IDs: 1 have checked numeric profiles and 0 remain open.

INDIVIDUAL FORMULA LINKS

F-052

REMAINING REQUIREMENT

Bind model-specific inputs, operations and measured evidence before interpreting the paper as an executable implementation.

SOURCE REFERENCES

TP-050; BP-ALG-050

Evidence: evidence/rerun/teal/TP-050.json

TR-TP-051 / Pearl acoustic simulation intensity

IF

If the Blue Page identity is invoked with declared inputs, scope, units, and evidence state.

HOW

Result dimensions: power/area. Primary manifestations: EVE, JO, MK. The lifecycle is purpose declaration -> Bangel typing -> Elsa semantic recovery -> JP formula CAPO -> MK applicability and dimensional review -> JO proof -> applicable safety/accounting receipts -> MJ decision -> JO evidence. JP carries the canonical representation; MK classifies physics applicability, units, boundaries, conservation, scale, and uncertainty; JO verifies types, formulas, tests, and receipts; applicable safety and accounting manifestations contribute evidence; MJ alone issues a bounded permit. Mathematical validity does not create physical or operational authority.

THEN

Then JO returns PASS_EVIDENCE, HOLD, FAIL_TECHNICAL, or DENY; MJ permission remains a separate gate.

CURRENT EVIDENCE

The individual TP-051 reference profile was executed and its identity, title and REFERENCE_ONLY ceiling matched. This is a documentary identity check, not execution of the full model. Explicit source links resolve to 1 Pink formula IDs: 1 have checked numeric profiles and 0 remain open.

INDIVIDUAL FORMULA LINKS

F-053

REMAINING REQUIREMENT

Bind model-specific inputs, operations and measured evidence before interpreting the paper as an executable implementation.

SOURCE REFERENCES

TP-051; BP-ALG-051

Evidence: evidence/rerun/teal/TP-051.json

TR-TP-052 / Pearl acoustic simulation energy

IF

If the Blue Page identity is invoked with declared inputs, scope, units, and evidence state.

HOW

Result dimensions: energy. Primary manifestations: EVE, JO, MERMAID, MK. The lifecycle is purpose declaration -> Bangel typing -> Elsa semantic recovery -> JP formula CAPO -> MK applicability and dimensional review -> JO proof -> applicable safety/accounting receipts -> MJ decision -> JO evidence. JP carries the canonical representation; MK classifies physics applicability, units, boundaries, conservation, scale, and uncertainty; JO verifies types, formulas, tests, and receipts; applicable safety and accounting manifestations contribute evidence; MJ alone issues a bounded permit. Mathematical validity does not create physical or operational authority.

THEN

Then JO returns PASS_EVIDENCE, HOLD, FAIL_TECHNICAL, or DENY; MJ permission remains a separate gate.

CURRENT EVIDENCE

The individual TP-052 reference profile was executed and its identity, title and REFERENCE_ONLY ceiling matched. This is a documentary identity check, not execution of the full model. Explicit source links resolve to 1 Pink formula IDs: 0 have checked numeric profiles and 1 remain open.

INDIVIDUAL FORMULA LINKS

F-054

REMAINING REQUIREMENT

Bind model-specific inputs, operations and measured evidence before interpreting the paper as an executable implementation.

SOURCE REFERENCES

TP-052; BP-ALG-052

Evidence: evidence/rerun/teal/TP-052.json

TR-TP-053 / Pearl acoustic simulation observability gate

IF

If the Blue Page identity is invoked with declared inputs, scope, units, and evidence state.

HOW

Result dimensions: logical. Primary manifestations: ANGELS, JO, MK. The lifecycle is purpose declaration -> Bangel typing -> Elsa semantic recovery -> JP formula CAPO -> MK applicability and dimensional review -> JO proof -> applicable safety/accounting receipts -> MJ decision -> JO evidence. JP carries the canonical representation; MK classifies physics applicability, units, boundaries, conservation, scale, and uncertainty; JO verifies types, formulas, tests, and receipts; applicable safety and accounting manifestations contribute evidence; MJ alone issues a bounded permit. Mathematical validity does not create physical or operational authority.

THEN

Then JO returns PASS_EVIDENCE, HOLD, FAIL_TECHNICAL, or DENY; MJ permission remains a separate gate.

CURRENT EVIDENCE

The individual TP-053 reference profile was executed and its identity, title and REFERENCE_ONLY ceiling matched. This is a documentary identity check, not execution of the full model. Explicit source links resolve to 1 Pink formula IDs: 0 have checked numeric profiles and 1 remain open.

INDIVIDUAL FORMULA LINKS

F-055

REMAINING REQUIREMENT

Bind model-specific inputs, operations and measured evidence before interpreting the paper as an executable implementation.

SOURCE REFERENCES

TP-053; BP-ALG-053

Evidence: evidence/rerun/teal/TP-053.json

TR-TP-054 / Pearl acoustic simulation signal-to-noise

IF

If the Blue Page identity is invoked with declared inputs, scope, units, and evidence state.

HOW

Result dimensions: ratio. Primary manifestations: EVE, JO, MK, SISTER. The lifecycle is purpose declaration -> Bangel typing -> Elsa semantic recovery -> JP formula CAPO -> MK applicability and dimensional review -> JO proof -> applicable safety/accounting receipts -> MJ decision -> JO evidence. JP carries the canonical representation; MK classifies physics applicability, units, boundaries, conservation, scale, and uncertainty; JO verifies types, formulas, tests, and receipts; applicable safety and accounting manifestations contribute evidence; MJ alone issues a bounded permit. Mathematical validity does not create physical or operational authority.

THEN

Then JO returns PASS_EVIDENCE, HOLD, FAIL_TECHNICAL, or DENY; MJ permission remains a separate gate.

CURRENT EVIDENCE

The individual TP-054 reference profile was executed and its identity, title and REFERENCE_ONLY ceiling matched. This is a documentary identity check, not execution of the full model. Explicit source links resolve to 1 Pink formula IDs: 1 have checked numeric profiles and 0 remain open.

INDIVIDUAL FORMULA LINKS

F-056

REMAINING REQUIREMENT

Bind model-specific inputs, operations and measured evidence before interpreting the paper as an executable implementation.

SOURCE REFERENCES

TP-054; BP-ALG-054

Evidence: evidence/rerun/teal/TP-054.json

TR-TP-055 / Pearl acoustic simulation transfer function

IF

If the Blue Page identity is invoked with declared inputs, scope, units, and evidence state.

HOW

Result dimensions: output/input. Primary manifestations: EVE, JO, MK. The lifecycle is purpose declaration -> Bangel typing -> Elsa semantic recovery -> JP formula CAPO -> MK applicability and dimensional review -> JO proof -> applicable safety/accounting receipts -> MJ decision -> JO evidence. JP carries the canonical representation; MK classifies physics applicability, units, boundaries, conservation, scale, and uncertainty; JO verifies types, formulas, tests, and receipts; applicable safety and accounting manifestations contribute evidence; MJ alone issues a bounded permit. Mathematical validity does not create physical or operational authority.

THEN

Then JO returns PASS_EVIDENCE, HOLD, FAIL_TECHNICAL, or DENY; MJ permission remains a separate gate.

CURRENT EVIDENCE

The individual TP-055 reference profile was executed and its identity, title and REFERENCE_ONLY ceiling matched. This is a documentary identity check, not execution of the full model. Explicit source links resolve to 1 Pink formula IDs: 0 have checked numeric profiles and 1 remain open.

INDIVIDUAL FORMULA LINKS

F-057

REMAINING REQUIREMENT

Bind model-specific inputs, operations and measured evidence before interpreting the paper as an executable implementation.

SOURCE REFERENCES

TP-055; BP-ALG-055

Evidence: evidence/rerun/teal/TP-055.json

TR-TP-056 / Pearl acoustic simulation setpoint / Bounded Pearl acoustic simulation

IF

If the Blue Page identity is invoked with declared inputs, scope, units, and evidence state.

HOW

Result dimensions: frequency. Primary manifestations: BELLE, JO, M3, MJ, MK. The lifecycle is purpose declaration -> Bangel typing -> Elsa semantic recovery -> JP formula CAPO -> MK applicability and dimensional review -> JO proof -> applicable safety/accounting receipts -> MJ decision -> JO evidence. JP carries the canonical representation; MK classifies physics applicability, units, boundaries, conservation, scale, and uncertainty; JO verifies types, formulas, tests, and receipts; applicable safety and accounting manifestations contribute evidence; MJ alone issues a bounded permit. Mathematical validity does not create physical or operational authority.

THEN

Then JO returns PASS_EVIDENCE, HOLD, FAIL_TECHNICAL, or DENY; MJ permission remains a separate gate.

CURRENT EVIDENCE

The individual TP-056 reference profile was executed and its identity, title and REFERENCE_ONLY ceiling matched. This is a documentary identity check, not execution of the full model. Explicit source links resolve to 2 Pink formula IDs: 1 have checked numeric profiles and 1 remain open.

INDIVIDUAL FORMULA LINKS

F-058, F-059

REMAINING REQUIREMENT

Bind model-specific inputs, operations and measured evidence before interpreting the paper as an executable implementation.

SOURCE REFERENCES

TP-056; BP-ALG-056

Evidence: evidence/rerun/teal/TP-056.json

TR-TP-057 / Pearl simulation registry reconciliation

IF

If the Blue Page identity is invoked with declared inputs, scope, units, and evidence state.

HOW

Result dimensions: count. Primary manifestations: JO, M3, MERMAID, SHIVA. The lifecycle is purpose declaration -> Bangel typing -> Elsa semantic recovery -> JP formula CAPO -> MK applicability and dimensional review -> JO proof -> applicable safety/accounting receipts -> MJ decision -> JO evidence. JP carries the canonical representation; MK classifies physics applicability, units, boundaries, conservation, scale, and uncertainty; JO verifies types, formulas, tests, and receipts; applicable safety and accounting manifestations contribute evidence; MJ alone issues a bounded permit. Mathematical validity does not create physical or operational authority.

THEN

Then JO returns PASS_EVIDENCE, HOLD, FAIL_TECHNICAL, or DENY; MJ permission remains a separate gate.

CURRENT EVIDENCE

The individual TP-057 reference profile was executed and its identity, title and REFERENCE_ONLY ceiling matched. This is a documentary identity check, not execution of the full model. Explicit source links resolve to 1 Pink formula IDs: 1 have checked numeric profiles and 0 remain open.

INDIVIDUAL FORMULA LINKS

F-060

REMAINING REQUIREMENT

Bind model-specific inputs, operations and measured evidence before interpreting the paper as an executable implementation.

SOURCE REFERENCES

TP-057; BP-ALG-057

Evidence: evidence/rerun/teal/TP-057.json

TR-TP-058 / Bangel Sheet cell state

IF

If the Blue Page identity is invoked with declared inputs, scope, units, and evidence state.

HOW

Result dimensions: typed object. Primary manifestations: BANGEL, JO, JP, MK. The lifecycle is purpose declaration -> Bangel typing -> Elsa semantic recovery -> JP formula CAPO -> MK applicability and dimensional review -> JO proof -> applicable safety/accounting receipts -> MJ decision -> JO evidence. JP carries the canonical representation; MK classifies physics applicability, units, boundaries, conservation, scale, and uncertainty; JO verifies types, formulas, tests, and receipts; applicable safety and accounting manifestations contribute evidence; MJ alone issues a bounded permit. Mathematical validity does not create physical or operational authority.

THEN

Then JO returns PASS_EVIDENCE, HOLD, FAIL_TECHNICAL, or DENY; MJ permission remains a separate gate.

CURRENT EVIDENCE

The individual TP-058 reference profile was executed and its identity, title and REFERENCE_ONLY ceiling matched. This is a documentary identity check, not execution of the full model. Explicit source links resolve to 1 Pink formula IDs: 0 have checked numeric profiles and 1 remain open.

INDIVIDUAL FORMULA LINKS

F-061

REMAINING REQUIREMENT

Bind model-specific inputs, operations and measured evidence before interpreting the paper as an executable implementation.

SOURCE REFERENCES

TP-058; BP-ALG-058

Evidence: evidence/rerun/teal/TP-058.json

TR-TP-059 / Affected dependency closure

IF

If the Blue Page identity is invoked with declared inputs, scope, units, and evidence state.

HOW

Result dimensions: cell set. Primary manifestations: JO, JP, M3. The lifecycle is purpose declaration -> Bangel typing -> Elsa semantic recovery -> JP formula CAPO -> MK applicability and dimensional review -> JO proof -> applicable safety/accounting receipts -> MJ decision -> JO evidence. JP carries the canonical representation; MK classifies physics applicability, units, boundaries, conservation, scale, and uncertainty; JO verifies types, formulas, tests, and receipts; applicable safety and accounting manifestations contribute evidence; MJ alone issues a bounded permit. Mathematical validity does not create physical or operational authority.

THEN

Then JO returns PASS_EVIDENCE, HOLD, FAIL_TECHNICAL, or DENY; MJ permission remains a separate gate.

CURRENT EVIDENCE

The individual TP-059 reference profile was executed and its identity, title and REFERENCE_ONLY ceiling matched. This is a documentary identity check, not execution of the full model. Explicit source links resolve to 1 Pink formula IDs: 0 have checked numeric profiles and 1 remain open.

INDIVIDUAL FORMULA LINKS

F-062

REMAINING REQUIREMENT

Bind model-specific inputs, operations and measured evidence before interpreting the paper as an executable implementation.

SOURCE REFERENCES

TP-059; BP-ALG-059

Evidence: evidence/rerun/teal/TP-059.json

TR-TP-060 / Incremental recompute cost

IF

If the Blue Page identity is invoked with declared inputs, scope, units, and evidence state.

HOW

Result dimensions: work units. Primary manifestations: JO, MERMAID, MK. The lifecycle is purpose declaration -> Bangel typing -> Elsa semantic recovery -> JP formula CAPO -> MK applicability and dimensional review -> JO proof -> applicable safety/accounting receipts -> MJ decision -> JO evidence. JP carries the canonical representation; MK classifies physics applicability, units, boundaries, conservation, scale, and uncertainty; JO verifies types, formulas, tests, and receipts; applicable safety and accounting manifestations contribute evidence; MJ alone issues a bounded permit. Mathematical validity does not create physical or operational authority.

THEN

Then JO returns PASS_EVIDENCE, HOLD, FAIL_TECHNICAL, or DENY; MJ permission remains a separate gate.

CURRENT EVIDENCE

The individual TP-060 reference profile was executed and its identity, title and REFERENCE_ONLY ceiling matched. This is a documentary identity check, not execution of the full model. Explicit source links resolve to 1 Pink formula IDs: 0 have checked numeric profiles and 1 remain open.

INDIVIDUAL FORMULA LINKS

F-063

REMAINING REQUIREMENT

Bind model-specific inputs, operations and measured evidence before interpreting the paper as an executable implementation.

SOURCE REFERENCES

TP-060; BP-ALG-060

Evidence: evidence/rerun/teal/TP-060.json

TR-TP-061 / Concurrent edit arrival

IF

If the Blue Page identity is invoked with declared inputs, scope, units, and evidence state.

HOW

Result dimensions: operations/time. Primary manifestations: JO, M3, MK. The lifecycle is purpose declaration -> Bangel typing -> Elsa semantic recovery -> JP formula CAPO -> MK applicability and dimensional review -> JO proof -> applicable safety/accounting receipts -> MJ decision -> JO evidence. JP carries the canonical representation; MK classifies physics applicability, units, boundaries, conservation, scale, and uncertainty; JO verifies types, formulas, tests, and receipts; applicable safety and accounting manifestations contribute evidence; MJ alone issues a bounded permit. Mathematical validity does not create physical or operational authority.

THEN

Then JO returns PASS_EVIDENCE, HOLD, FAIL_TECHNICAL, or DENY; MJ permission remains a separate gate.

CURRENT EVIDENCE

The individual TP-061 reference profile was executed and its identity, title and REFERENCE_ONLY ceiling matched. This is a documentary identity check, not execution of the full model. Explicit source links resolve to 1 Pink formula IDs: 1 have checked numeric profiles and 0 remain open.

INDIVIDUAL FORMULA LINKS

F-064

REMAINING REQUIREMENT

Bind model-specific inputs, operations and measured evidence before interpreting the paper as an executable implementation.

SOURCE REFERENCES

TP-061; BP-ALG-061

Evidence: evidence/rerun/teal/TP-061.json

TR-TP-062 / Spreadsheet service utilization

IF

If the Blue Page identity is invoked with declared inputs, scope, units, and evidence state.

HOW

Result dimensions: ratio. Primary manifestations: JO, M3, MK. The lifecycle is purpose declaration -> Bangel typing -> Elsa semantic recovery -> JP formula CAPO -> MK applicability and dimensional review -> JO proof -> applicable safety/accounting receipts -> MJ decision -> JO evidence. JP carries the canonical representation; MK classifies physics applicability, units, boundaries, conservation, scale, and uncertainty; JO verifies types, formulas, tests, and receipts; applicable safety and accounting manifestations contribute evidence; MJ alone issues a bounded permit. Mathematical validity does not create physical or operational authority.

THEN

Then JO returns PASS_EVIDENCE, HOLD, FAIL_TECHNICAL, or DENY; MJ permission remains a separate gate.

CURRENT EVIDENCE

The individual TP-062 reference profile was executed and its identity, title and REFERENCE_ONLY ceiling matched. This is a documentary identity check, not execution of the full model. Explicit source links resolve to 1 Pink formula IDs: 1 have checked numeric profiles and 0 remain open.

INDIVIDUAL FORMULA LINKS

F-065

REMAINING REQUIREMENT

Bind model-specific inputs, operations and measured evidence before interpreting the paper as an executable implementation.

SOURCE REFERENCES

TP-062; BP-ALG-062

Evidence: evidence/rerun/teal/TP-062.json

TR-TP-063 / Spreadsheet worker requirement

IF

If the Blue Page identity is invoked with declared inputs, scope, units, and evidence state.

HOW

Result dimensions: count. Primary manifestations: JO, M3, MJOS. The lifecycle is purpose declaration -> Bangel typing -> Elsa semantic recovery -> JP formula CAPO -> MK applicability and dimensional review -> JO proof -> applicable safety/accounting receipts -> MJ decision -> JO evidence. JP carries the canonical representation; MK classifies physics applicability, units, boundaries, conservation, scale, and uncertainty; JO verifies types, formulas, tests, and receipts; applicable safety and accounting manifestations contribute evidence; MJ alone issues a bounded permit. Mathematical validity does not create physical or operational authority.

THEN

Then JO returns PASS_EVIDENCE, HOLD, FAIL_TECHNICAL, or DENY; MJ permission remains a separate gate.

CURRENT EVIDENCE

The individual TP-063 reference profile was executed and its identity, title and REFERENCE_ONLY ceiling matched. This is a documentary identity check, not execution of the full model. Explicit source links resolve to 1 Pink formula IDs: 0 have checked numeric profiles and 1 remain open.

INDIVIDUAL FORMULA LINKS

F-066

REMAINING REQUIREMENT

Bind model-specific inputs, operations and measured evidence before interpreting the paper as an executable implementation.

SOURCE REFERENCES

TP-063; BP-ALG-063

Evidence: evidence/rerun/teal/TP-063.json

TR-TP-064 / Recalculation latency

IF

If the Blue Page identity is invoked with declared inputs, scope, units, and evidence state.

HOW

Result dimensions: time. Primary manifestations: JO, M3, MK. The lifecycle is purpose declaration -> Bangel typing -> Elsa semantic recovery -> JP formula CAPO -> MK applicability and dimensional review -> JO proof -> applicable safety/accounting receipts -> MJ decision -> JO evidence. JP carries the canonical representation; MK classifies physics applicability, units, boundaries, conservation, scale, and uncertainty; JO verifies types, formulas, tests, and receipts; applicable safety and accounting manifestations contribute evidence; MJ alone issues a bounded permit. Mathematical validity does not create physical or operational authority.

THEN

Then JO returns PASS_EVIDENCE, HOLD, FAIL_TECHNICAL, or DENY; MJ permission remains a separate gate.

CURRENT EVIDENCE

The individual TP-064 reference profile was executed and its identity, title and REFERENCE_ONLY ceiling matched. This is a documentary identity check, not execution of the full model. Explicit source links resolve to 1 Pink formula IDs: 0 have checked numeric profiles and 1 remain open.

INDIVIDUAL FORMULA LINKS

F-067

REMAINING REQUIREMENT

Bind model-specific inputs, operations and measured evidence before interpreting the paper as an executable implementation.

SOURCE REFERENCES

TP-064; BP-ALG-064

Evidence: evidence/rerun/teal/TP-064.json

TR-TP-065 / Spreadsheet data cost

IF

If the Blue Page identity is invoked with declared inputs, scope, units, and evidence state.

HOW

Result dimensions: cost unit. Primary manifestations: JO, MERMAID, MK, SHIVA. The lifecycle is purpose declaration -> Bangel typing -> Elsa semantic recovery -> JP formula CAPO -> MK applicability and dimensional review -> JO proof -> applicable safety/accounting receipts -> MJ decision -> JO evidence. JP carries the canonical representation; MK classifies physics applicability, units, boundaries, conservation, scale, and uncertainty; JO verifies types, formulas, tests, and receipts; applicable safety and accounting manifestations contribute evidence; MJ alone issues a bounded permit. Mathematical validity does not create physical or operational authority.

THEN

Then JO returns PASS_EVIDENCE, HOLD, FAIL_TECHNICAL, or DENY; MJ permission remains a separate gate.

CURRENT EVIDENCE

The individual TP-065 reference profile was executed and its identity, title and REFERENCE_ONLY ceiling matched. This is a documentary identity check, not execution of the full model. Explicit source links resolve to 1 Pink formula IDs: 1 have checked numeric profiles and 0 remain open.

INDIVIDUAL FORMULA LINKS

F-068

REMAINING REQUIREMENT

Bind model-specific inputs, operations and measured evidence before interpreting the paper as an executable implementation.

SOURCE REFERENCES

TP-065; BP-ALG-065

Evidence: evidence/rerun/teal/TP-065.json

TR-TP-066 / Pearl simulation partition objective

IF

If the Blue Page identity is invoked with declared inputs, scope, units, and evidence state.

HOW

Result dimensions: declared score. Primary manifestations: JO, JP, MK, SISTER. The lifecycle is purpose declaration -> Bangel typing -> Elsa semantic recovery -> JP formula CAPO -> MK applicability and dimensional review -> JO proof -> applicable safety/accounting receipts -> MJ decision -> JO evidence. JP carries the canonical representation; MK classifies physics applicability, units, boundaries, conservation, scale, and uncertainty; JO verifies types, formulas, tests, and receipts; applicable safety and accounting manifestations contribute evidence; MJ alone issues a bounded permit. Mathematical validity does not create physical or operational authority.

THEN

Then JO returns PASS_EVIDENCE, HOLD, FAIL_TECHNICAL, or DENY; MJ permission remains a separate gate.

CURRENT EVIDENCE

The individual TP-066 reference profile was executed and its identity, title and REFERENCE_ONLY ceiling matched. This is a documentary identity check, not execution of the full model. Explicit source links resolve to 1 Pink formula IDs: 0 have checked numeric profiles and 1 remain open.

INDIVIDUAL FORMULA LINKS

F-069

REMAINING REQUIREMENT

Bind model-specific inputs, operations and measured evidence before interpreting the paper as an executable implementation.

SOURCE REFERENCES

TP-066; BP-ALG-066

Evidence: evidence/rerun/teal/TP-066.json

TR-TP-067 / Sheet revision root

IF

If the Blue Page identity is invoked with declared inputs, scope, units, and evidence state.

HOW

Result dimensions: digest. Primary manifestations: BANGEL, JO, JP, MERMAID. The lifecycle is purpose declaration -> Bangel typing -> Elsa semantic recovery -> JP formula CAPO -> MK applicability and dimensional review -> JO proof -> applicable safety/accounting receipts -> MJ decision -> JO evidence. JP carries the canonical representation; MK classifies physics applicability, units, boundaries, conservation, scale, and uncertainty; JO verifies types, formulas, tests, and receipts; applicable safety and accounting manifestations contribute evidence; MJ alone issues a bounded permit. Mathematical validity does not create physical or operational authority.

THEN

Then JO returns PASS_EVIDENCE, HOLD, FAIL_TECHNICAL, or DENY; MJ permission remains a separate gate.

CURRENT EVIDENCE

The individual TP-067 reference profile was executed and its identity, title and REFERENCE_ONLY ceiling matched. This is a documentary identity check, not execution of the full model. Explicit source links resolve to 1 Pink formula IDs: 0 have checked numeric profiles and 1 remain open.

INDIVIDUAL FORMULA LINKS

F-070

REMAINING REQUIREMENT

Bind model-specific inputs, operations and measured evidence before interpreting the paper as an executable implementation.

SOURCE REFERENCES

TP-067; BP-ALG-067

Evidence: evidence/rerun/teal/TP-067.json

TR-TP-068 / Audit-particle completeness

IF

If the Blue Page identity is invoked with declared inputs, scope, units, and evidence state.

HOW

Result dimensions: logical. Primary manifestations: ANGELS, BELLATRIX, JO, MERMAID. The lifecycle is purpose declaration -> Bangel typing -> Elsa semantic recovery -> JP formula CAPO -> MK applicability and dimensional review -> JO proof -> applicable safety/accounting receipts -> MJ decision -> JO evidence. JP carries the canonical representation; MK classifies physics applicability, units, boundaries, conservation, scale, and uncertainty; JO verifies types, formulas, tests, and receipts; applicable safety and accounting manifestations contribute evidence; MJ alone issues a bounded permit. Mathematical validity does not create physical or operational authority.

THEN

Then JO returns PASS_EVIDENCE, HOLD, FAIL_TECHNICAL, or DENY; MJ permission remains a separate gate.

CURRENT EVIDENCE

The individual TP-068 reference profile was executed and its identity, title and REFERENCE_ONLY ceiling matched. This is a documentary identity check, not execution of the full model. Explicit source links resolve to 1 Pink formula IDs: 0 have checked numeric profiles and 1 remain open.

INDIVIDUAL FORMULA LINKS

F-071

REMAINING REQUIREMENT

Bind model-specific inputs, operations and measured evidence before interpreting the paper as an executable implementation.

SOURCE REFERENCES

TP-068; BP-ALG-068

Evidence: evidence/rerun/teal/TP-068.json

TR-TP-069 / Iterative recalculation stability

IF

If the Blue Page identity is invoked with declared inputs, scope, units, and evidence state.

HOW

Result dimensions: logical. Primary manifestations: JO, JP, MK. The lifecycle is purpose declaration -> Bangel typing -> Elsa semantic recovery -> JP formula CAPO -> MK applicability and dimensional review -> JO proof -> applicable safety/accounting receipts -> MJ decision -> JO evidence. JP carries the canonical representation; MK classifies physics applicability, units, boundaries, conservation, scale, and uncertainty; JO verifies types, formulas, tests, and receipts; applicable safety and accounting manifestations contribute evidence; MJ alone issues a bounded permit. Mathematical validity does not create physical or operational authority.

THEN

Then JO returns PASS_EVIDENCE, HOLD, FAIL_TECHNICAL, or DENY; MJ permission remains a separate gate.

CURRENT EVIDENCE

The individual TP-069 reference profile was executed and its identity, title and REFERENCE_ONLY ceiling matched. This is a documentary identity check, not execution of the full model. Explicit source links resolve to 1 Pink formula IDs: 0 have checked numeric profiles and 1 remain open.

INDIVIDUAL FORMULA LINKS

F-072

REMAINING REQUIREMENT

Bind model-specific inputs, operations and measured evidence before interpreting the paper as an executable implementation.

SOURCE REFERENCES

TP-069; BP-ALG-069

Evidence: evidence/rerun/teal/TP-069.json

TR-TP-070 / Revision conflict gate

IF

If the Blue Page identity is invoked with declared inputs, scope, units, and evidence state.

HOW

Result dimensions: logical. Primary manifestations: ANGELS, BANGEL, JO. The lifecycle is purpose declaration -> Bangel typing -> Elsa semantic recovery -> JP formula CAPO -> MK applicability and dimensional review -> JO proof -> applicable safety/accounting receipts -> MJ decision -> JO evidence. JP carries the canonical representation; MK classifies physics applicability, units, boundaries, conservation, scale, and uncertainty; JO verifies types, formulas, tests, and receipts; applicable safety and accounting manifestations contribute evidence; MJ alone issues a bounded permit. Mathematical validity does not create physical or operational authority.

THEN

Then JO returns PASS_EVIDENCE, HOLD, FAIL_TECHNICAL, or DENY; MJ permission remains a separate gate.

CURRENT EVIDENCE

The individual TP-070 reference profile was executed and its identity, title and REFERENCE_ONLY ceiling matched. This is a documentary identity check, not execution of the full model. Explicit source links resolve to 1 Pink formula IDs: 0 have checked numeric profiles and 1 remain open.

INDIVIDUAL FORMULA LINKS

F-073

REMAINING REQUIREMENT

Bind model-specific inputs, operations and measured evidence before interpreting the paper as an executable implementation.

SOURCE REFERENCES

TP-070; BP-ALG-070

Evidence: evidence/rerun/teal/TP-070.json

TR-TP-071 / Freshness age

IF

If the Blue Page identity is invoked with declared inputs, scope, units, and evidence state.

HOW

Result dimensions: time. Primary manifestations: JO, MK, SISTER. The lifecycle is purpose declaration -> Bangel typing -> Elsa semantic recovery -> JP formula CAPO -> MK applicability and dimensional review -> JO proof -> applicable safety/accounting receipts -> MJ decision -> JO evidence. JP carries the canonical representation; MK classifies physics applicability, units, boundaries, conservation, scale, and uncertainty; JO verifies types, formulas, tests, and receipts; applicable safety and accounting manifestations contribute evidence; MJ alone issues a bounded permit. Mathematical validity does not create physical or operational authority.

THEN

Then JO returns PASS_EVIDENCE, HOLD, FAIL_TECHNICAL, or DENY; MJ permission remains a separate gate.

CURRENT EVIDENCE

The individual TP-071 reference profile was executed and its identity, title and REFERENCE_ONLY ceiling matched. This is a documentary identity check, not execution of the full model. Explicit source links resolve to 1 Pink formula IDs: 1 have checked numeric profiles and 0 remain open.

INDIVIDUAL FORMULA LINKS

F-074

REMAINING REQUIREMENT

Bind model-specific inputs, operations and measured evidence before interpreting the paper as an executable implementation.

SOURCE REFERENCES

TP-071; BP-ALG-071

Evidence: evidence/rerun/teal/TP-071.json

TR-TP-072 / Staleness gate

IF

If the Blue Page identity is invoked with declared inputs, scope, units, and evidence state.

HOW

Result dimensions: logical. Primary manifestations: ANGELS, JO, MERMAID. The lifecycle is purpose declaration -> Bangel typing -> Elsa semantic recovery -> JP formula CAPO -> MK applicability and dimensional review -> JO proof -> applicable safety/accounting receipts -> MJ decision -> JO evidence. JP carries the canonical representation; MK classifies physics applicability, units, boundaries, conservation, scale, and uncertainty; JO verifies types, formulas, tests, and receipts; applicable safety and accounting manifestations contribute evidence; MJ alone issues a bounded permit. Mathematical validity does not create physical or operational authority.

THEN

Then JO returns PASS_EVIDENCE, HOLD, FAIL_TECHNICAL, or DENY; MJ permission remains a separate gate.

CURRENT EVIDENCE

The individual TP-072 reference profile was executed and its identity, title and REFERENCE_ONLY ceiling matched. This is a documentary identity check, not execution of the full model. Explicit source links resolve to 1 Pink formula IDs: 1 have checked numeric profiles and 0 remain open.

INDIVIDUAL FORMULA LINKS

F-075

REMAINING REQUIREMENT

Bind model-specific inputs, operations and measured evidence before interpreting the paper as an executable implementation.

SOURCE REFERENCES

TP-072; BP-ALG-072

Evidence: evidence/rerun/teal/TP-072.json

TR-TP-073 / Data-performance correlation

IF

If the Blue Page identity is invoked with declared inputs, scope, units, and evidence state.

HOW

Result dimensions: ratio. Primary manifestations: JO, MERMAID, MK. The lifecycle is purpose declaration -> Bangel typing -> Elsa semantic recovery -> JP formula CAPO -> MK applicability and dimensional review -> JO proof -> applicable safety/accounting receipts -> MJ decision -> JO evidence. JP carries the canonical representation; MK classifies physics applicability, units, boundaries, conservation, scale, and uncertainty; JO verifies types, formulas, tests, and receipts; applicable safety and accounting manifestations contribute evidence; MJ alone issues a bounded permit. Mathematical validity does not create physical or operational authority.

THEN

Then JO returns PASS_EVIDENCE, HOLD, FAIL_TECHNICAL, or DENY; MJ permission remains a separate gate.

CURRENT EVIDENCE

The individual TP-073 reference profile was executed and its identity, title and REFERENCE_ONLY ceiling matched. This is a documentary identity check, not execution of the full model. Explicit source links resolve to 1 Pink formula IDs: 1 have checked numeric profiles and 0 remain open.

INDIVIDUAL FORMULA LINKS

F-076

REMAINING REQUIREMENT

Bind model-specific inputs, operations and measured evidence before interpreting the paper as an executable implementation.

SOURCE REFERENCES

TP-073; BP-ALG-073

Evidence: evidence/rerun/teal/TP-073.json

TR-TP-074 / Silo unification gate

IF

If the Blue Page identity is invoked with declared inputs, scope, units, and evidence state.

HOW

Result dimensions: logical. Primary manifestations: ELSA, JO, JP, MERMAID. The lifecycle is purpose declaration -> Bangel typing -> Elsa semantic recovery -> JP formula CAPO -> MK applicability and dimensional review -> JO proof -> applicable safety/accounting receipts -> MJ decision -> JO evidence. JP carries the canonical representation; MK classifies physics applicability, units, boundaries, conservation, scale, and uncertainty; JO verifies types, formulas, tests, and receipts; applicable safety and accounting manifestations contribute evidence; MJ alone issues a bounded permit. Mathematical validity does not create physical or operational authority.

THEN

Then JO returns PASS_EVIDENCE, HOLD, FAIL_TECHNICAL, or DENY; MJ permission remains a separate gate.

CURRENT EVIDENCE

The individual TP-074 reference profile was executed and its identity, title and REFERENCE_ONLY ceiling matched. This is a documentary identity check, not execution of the full model. Explicit source links resolve to 1 Pink formula IDs: 0 have checked numeric profiles and 1 remain open.

INDIVIDUAL FORMULA LINKS

F-077

REMAINING REQUIREMENT

Bind model-specific inputs, operations and measured evidence before interpreting the paper as an executable implementation.

SOURCE REFERENCES

TP-074; BP-ALG-074

Evidence: evidence/rerun/teal/TP-074.json

TR-TP-075 / Formula verification residual

IF

If the Blue Page identity is invoked with declared inputs, scope, units, and evidence state.

HOW

Result dimensions: output unit. Primary manifestations: ANGELS, JO, MK. The lifecycle is purpose declaration -> Bangel typing -> Elsa semantic recovery -> JP formula CAPO -> MK applicability and dimensional review -> JO proof -> applicable safety/accounting receipts -> MJ decision -> JO evidence. JP carries the canonical representation; MK classifies physics applicability, units, boundaries, conservation, scale, and uncertainty; JO verifies types, formulas, tests, and receipts; applicable safety and accounting manifestations contribute evidence; MJ alone issues a bounded permit. Mathematical validity does not create physical or operational authority.

THEN

Then JO returns PASS_EVIDENCE, HOLD, FAIL_TECHNICAL, or DENY; MJ permission remains a separate gate.

CURRENT EVIDENCE

The individual TP-075 reference profile was executed and its identity, title and REFERENCE_ONLY ceiling matched. This is a documentary identity check, not execution of the full model. Explicit source links resolve to 1 Pink formula IDs: 1 have checked numeric profiles and 0 remain open.

INDIVIDUAL FORMULA LINKS

F-078

REMAINING REQUIREMENT

Bind model-specific inputs, operations and measured evidence before interpreting the paper as an executable implementation.

SOURCE REFERENCES

TP-075; BP-ALG-075

Evidence: evidence/rerun/teal/TP-075.json

TR-TP-076 / Operational intake completeness

IF

If the Blue Page identity is invoked with declared inputs, scope, units, and evidence state.

HOW

Result dimensions: logical. Primary manifestations: BANGEL, ELSA, JO, JP, MJ. The lifecycle is purpose declaration -> Bangel typing -> Elsa semantic recovery -> JP formula CAPO -> MK applicability and dimensional review -> JO proof -> applicable safety/accounting receipts -> MJ decision -> JO evidence. JP carries the canonical representation; MK classifies physics applicability, units, boundaries, conservation, scale, and uncertainty; JO verifies types, formulas, tests, and receipts; applicable safety and accounting manifestations contribute evidence; MJ alone issues a bounded permit. Mathematical validity does not create physical or operational authority.

THEN

Then JO returns PASS_EVIDENCE, HOLD, FAIL_TECHNICAL, or DENY; MJ permission remains a separate gate.

CURRENT EVIDENCE

The individual TP-076 reference profile was executed and its identity, title and REFERENCE_ONLY ceiling matched. This is a documentary identity check, not execution of the full model. Explicit source links resolve to 1 Pink formula IDs: 0 have checked numeric profiles and 1 remain open.

INDIVIDUAL FORMULA LINKS

F-079

REMAINING REQUIREMENT

Bind model-specific inputs, operations and measured evidence before interpreting the paper as an executable implementation.

SOURCE REFERENCES

TP-076; BP-ALG-076

Evidence: evidence/rerun/teal/TP-076.json

TR-TP-077 / Spreadsheet capacity gate

IF

If the Blue Page identity is invoked with declared inputs, scope, units, and evidence state.

HOW

Result dimensions: logical. Primary manifestations: JO, M3, MJOS, MK, SISTER. The lifecycle is purpose declaration -> Bangel typing -> Elsa semantic recovery -> JP formula CAPO -> MK applicability and dimensional review -> JO proof -> applicable safety/accounting receipts -> MJ decision -> JO evidence. JP carries the canonical representation; MK classifies physics applicability, units, boundaries, conservation, scale, and uncertainty; JO verifies types, formulas, tests, and receipts; applicable safety and accounting manifestations contribute evidence; MJ alone issues a bounded permit. Mathematical validity does not create physical or operational authority.

THEN

Then JO returns PASS_EVIDENCE, HOLD, FAIL_TECHNICAL, or DENY; MJ permission remains a separate gate.

CURRENT EVIDENCE

The individual TP-077 reference profile was executed and its identity, title and REFERENCE_ONLY ceiling matched. This is a documentary identity check, not execution of the full model. Explicit source links resolve to 1 Pink formula IDs: 0 have checked numeric profiles and 1 remain open.

INDIVIDUAL FORMULA LINKS

F-080

REMAINING REQUIREMENT

Bind model-specific inputs, operations and measured evidence before interpreting the paper as an executable implementation.

SOURCE REFERENCES

TP-077; BP-ALG-077

Evidence: evidence/rerun/teal/TP-077.json

TR-TP-078 / First-noise rectangle height

IF

If the Blue Page identity is invoked with declared inputs, scope, units, and evidence state.

HOW

Result dimensions: length. Primary manifestations: JO, MK, SISTER. The lifecycle is purpose declaration -> Bangel typing -> Elsa semantic recovery -> JP formula CAPO -> MK applicability and dimensional review -> JO proof -> applicable safety/accounting receipts -> MJ decision -> JO evidence. JP carries the canonical representation; MK classifies physics applicability, units, boundaries, conservation, scale, and uncertainty; JO verifies types, formulas, tests, and receipts; applicable safety and accounting manifestations contribute evidence; MJ alone issues a bounded permit. Mathematical validity does not create physical or operational authority.

THEN

Then JO returns PASS_EVIDENCE, HOLD, FAIL_TECHNICAL, or DENY; MJ permission remains a separate gate.

CURRENT EVIDENCE

The individual TP-078 reference profile was executed and its identity, title and REFERENCE_ONLY ceiling matched. This is a documentary identity check, not execution of the full model. Explicit source links resolve to 1 Pink formula IDs: 1 have checked numeric profiles and 0 remain open.

INDIVIDUAL FORMULA LINKS

F-081

REMAINING REQUIREMENT

Bind model-specific inputs, operations and measured evidence before interpreting the paper as an executable implementation.

SOURCE REFERENCES

TP-078; BP-ALG-078

Evidence: evidence/rerun/teal/TP-078.json

TR-TP-079 / Reference gas density

IF

If the Blue Page identity is invoked with declared inputs, scope, units, and evidence state.

HOW

Result dimensions: mass/volume. Primary manifestations: JO, JP, MK. The lifecycle is purpose declaration -> Bangel typing -> Elsa semantic recovery -> JP formula CAPO -> MK applicability and dimensional review -> JO proof -> applicable safety/accounting receipts -> MJ decision -> JO evidence. JP carries the canonical representation; MK classifies physics applicability, units, boundaries, conservation, scale, and uncertainty; JO verifies types, formulas, tests, and receipts; applicable safety and accounting manifestations contribute evidence; MJ alone issues a bounded permit. Mathematical validity does not create physical or operational authority.

THEN

Then JO returns PASS_EVIDENCE, HOLD, FAIL_TECHNICAL, or DENY; MJ permission remains a separate gate.

CURRENT EVIDENCE

The individual TP-079 reference profile was executed and its identity, title and REFERENCE_ONLY ceiling matched. This is a documentary identity check, not execution of the full model. Explicit source links resolve to 1 Pink formula IDs: 1 have checked numeric profiles and 0 remain open.

INDIVIDUAL FORMULA LINKS

F-082

REMAINING REQUIREMENT

Bind model-specific inputs, operations and measured evidence before interpreting the paper as an executable implementation.

SOURCE REFERENCES

TP-079; BP-ALG-079

Evidence: evidence/rerun/teal/TP-079.json

TR-TP-080 / 24 mg reference volume

IF

If the Blue Page identity is invoked with declared inputs, scope, units, and evidence state.

HOW

Result dimensions: volume. Primary manifestations: JO, JP, MK. The lifecycle is purpose declaration -> Bangel typing -> Elsa semantic recovery -> JP formula CAPO -> MK applicability and dimensional review -> JO proof -> applicable safety/accounting receipts -> MJ decision -> JO evidence. JP carries the canonical representation; MK classifies physics applicability, units, boundaries, conservation, scale, and uncertainty; JO verifies types, formulas, tests, and receipts; applicable safety and accounting manifestations contribute evidence; MJ alone issues a bounded permit. Mathematical validity does not create physical or operational authority.

THEN

Then JO returns PASS_EVIDENCE, HOLD, FAIL_TECHNICAL, or DENY; MJ permission remains a separate gate.

CURRENT EVIDENCE

The individual TP-080 reference profile was executed and its identity, title and REFERENCE_ONLY ceiling matched. This is a documentary identity check, not execution of the full model. Explicit source links resolve to 1 Pink formula IDs: 1 have checked numeric profiles and 0 remain open.

INDIVIDUAL FORMULA LINKS

F-083

REMAINING REQUIREMENT

Bind model-specific inputs, operations and measured evidence before interpreting the paper as an executable implementation.

SOURCE REFERENCES

TP-080; BP-ALG-080

Evidence: evidence/rerun/teal/TP-080.json

TR-TP-081 / Rectangle depth

IF

If the Blue Page identity is invoked with declared inputs, scope, units, and evidence state.

HOW

Result dimensions: length. Primary manifestations: JO, MK, SISTER. The lifecycle is purpose declaration -> Bangel typing -> Elsa semantic recovery -> JP formula CAPO -> MK applicability and dimensional review -> JO proof -> applicable safety/accounting receipts -> MJ decision -> JO evidence. JP carries the canonical representation; MK classifies physics applicability, units, boundaries, conservation, scale, and uncertainty; JO verifies types, formulas, tests, and receipts; applicable safety and accounting manifestations contribute evidence; MJ alone issues a bounded permit. Mathematical validity does not create physical or operational authority.

THEN

Then JO returns PASS_EVIDENCE, HOLD, FAIL_TECHNICAL, or DENY; MJ permission remains a separate gate.

CURRENT EVIDENCE

The individual TP-081 reference profile was executed and its identity, title and REFERENCE_ONLY ceiling matched. This is a documentary identity check, not execution of the full model. Explicit source links resolve to 1 Pink formula IDs: 1 have checked numeric profiles and 0 remain open.

INDIVIDUAL FORMULA LINKS

F-084

REMAINING REQUIREMENT

Bind model-specific inputs, operations and measured evidence before interpreting the paper as an executable implementation.

SOURCE REFERENCES

TP-081; BP-ALG-081

Evidence: evidence/rerun/teal/TP-081.json

TR-TP-082 / Cone height ratio / Cone top-width ratio

IF

If the Blue Page identity is invoked with declared inputs, scope, units, and evidence state.

HOW

Result dimensions: length. Primary manifestations: JO, JP, MK. The lifecycle is purpose declaration -> Bangel typing -> Elsa semantic recovery -> JP formula CAPO -> MK applicability and dimensional review -> JO proof -> applicable safety/accounting receipts -> MJ decision -> JO evidence. JP carries the canonical representation; MK classifies physics applicability, units, boundaries, conservation, scale, and uncertainty; JO verifies types, formulas, tests, and receipts; applicable safety and accounting manifestations contribute evidence; MJ alone issues a bounded permit. Mathematical validity does not create physical or operational authority.

THEN

Then JO returns PASS_EVIDENCE, HOLD, FAIL_TECHNICAL, or DENY; MJ permission remains a separate gate.

CURRENT EVIDENCE

The individual TP-082 reference profile was executed and its identity, title and REFERENCE_ONLY ceiling matched. This is a documentary identity check, not execution of the full model. Explicit source links resolve to 2 Pink formula IDs: 2 have checked numeric profiles and 0 remain open.

INDIVIDUAL FORMULA LINKS

F-085, F-086

REMAINING REQUIREMENT

Bind model-specific inputs, operations and measured evidence before interpreting the paper as an executable implementation.

SOURCE REFERENCES

TP-082; BP-ALG-082

Evidence: evidence/rerun/teal/TP-082.json

TR-TP-083 / Cone area by height

IF

If the Blue Page identity is invoked with declared inputs, scope, units, and evidence state.

HOW

Result dimensions: area. Primary manifestations: JO, MK, SISTER. The lifecycle is purpose declaration -> Bangel typing -> Elsa semantic recovery -> JP formula CAPO -> MK applicability and dimensional review -> JO proof -> applicable safety/accounting receipts -> MJ decision -> JO evidence. JP carries the canonical representation; MK classifies physics applicability, units, boundaries, conservation, scale, and uncertainty; JO verifies types, formulas, tests, and receipts; applicable safety and accounting manifestations contribute evidence; MJ alone issues a bounded permit. Mathematical validity does not create physical or operational authority.

THEN

Then JO returns PASS_EVIDENCE, HOLD, FAIL_TECHNICAL, or DENY; MJ permission remains a separate gate.

CURRENT EVIDENCE

The individual TP-083 reference profile was executed and its identity, title and REFERENCE_ONLY ceiling matched. This is a documentary identity check, not execution of the full model. Explicit source links resolve to 1 Pink formula IDs: 1 have checked numeric profiles and 0 remain open.

INDIVIDUAL FORMULA LINKS

F-087

REMAINING REQUIREMENT

Bind model-specific inputs, operations and measured evidence before interpreting the paper as an executable implementation.

SOURCE REFERENCES

TP-083; BP-ALG-083

Evidence: evidence/rerun/teal/TP-083.json

TR-TP-084 / Cone partial volume

IF

If the Blue Page identity is invoked with declared inputs, scope, units, and evidence state.

HOW

Result dimensions: volume. Primary manifestations: JO, MK, SISTER. The lifecycle is purpose declaration -> Bangel typing -> Elsa semantic recovery -> JP formula CAPO -> MK applicability and dimensional review -> JO proof -> applicable safety/accounting receipts -> MJ decision -> JO evidence. JP carries the canonical representation; MK classifies physics applicability, units, boundaries, conservation, scale, and uncertainty; JO verifies types, formulas, tests, and receipts; applicable safety and accounting manifestations contribute evidence; MJ alone issues a bounded permit. Mathematical validity does not create physical or operational authority.

THEN

Then JO returns PASS_EVIDENCE, HOLD, FAIL_TECHNICAL, or DENY; MJ permission remains a separate gate.

CURRENT EVIDENCE

The individual TP-084 reference profile was executed and its identity, title and REFERENCE_ONLY ceiling matched. This is a documentary identity check, not execution of the full model. Explicit source links resolve to 1 Pink formula IDs: 1 have checked numeric profiles and 0 remain open.

INDIVIDUAL FORMULA LINKS

F-088

REMAINING REQUIREMENT

Bind model-specific inputs, operations and measured evidence before interpreting the paper as an executable implementation.

SOURCE REFERENCES

TP-084; BP-ALG-084

Evidence: evidence/rerun/teal/TP-084.json

TR-TP-085 / Full conical-frustum volume

IF

If the Blue Page identity is invoked with declared inputs, scope, units, and evidence state.

HOW

Result dimensions: volume. Primary manifestations: JO, JP, MK. The lifecycle is purpose declaration -> Bangel typing -> Elsa semantic recovery -> JP formula CAPO -> MK applicability and dimensional review -> JO proof -> applicable safety/accounting receipts -> MJ decision -> JO evidence. JP carries the canonical representation; MK classifies physics applicability, units, boundaries, conservation, scale, and uncertainty; JO verifies types, formulas, tests, and receipts; applicable safety and accounting manifestations contribute evidence; MJ alone issues a bounded permit. Mathematical validity does not create physical or operational authority.

THEN

Then JO returns PASS_EVIDENCE, HOLD, FAIL_TECHNICAL, or DENY; MJ permission remains a separate gate.

CURRENT EVIDENCE

The individual TP-085 reference profile was executed and its identity, title and REFERENCE_ONLY ceiling matched. This is a documentary identity check, not execution of the full model. Explicit source links resolve to 1 Pink formula IDs: 1 have checked numeric profiles and 0 remain open.

INDIVIDUAL FORMULA LINKS

F-089

REMAINING REQUIREMENT

Bind model-specific inputs, operations and measured evidence before interpreting the paper as an executable implementation.

SOURCE REFERENCES

TP-085; BP-ALG-085

Evidence: evidence/rerun/teal/TP-085.json

TR-TP-086 / Pearl cone-top anchor

IF

If the Blue Page identity is invoked with declared inputs, scope, units, and evidence state.

HOW

Result dimensions: length. Primary manifestations: JO, MK, PEARL. The lifecycle is purpose declaration -> Bangel typing -> Elsa semantic recovery -> JP formula CAPO -> MK applicability and dimensional review -> JO proof -> applicable safety/accounting receipts -> MJ decision -> JO evidence. JP carries the canonical representation; MK classifies physics applicability, units, boundaries, conservation, scale, and uncertainty; JO verifies types, formulas, tests, and receipts; applicable safety and accounting manifestations contribute evidence; MJ alone issues a bounded permit. Mathematical validity does not create physical or operational authority.

THEN

Then JO returns PASS_EVIDENCE, HOLD, FAIL_TECHNICAL, or DENY; MJ permission remains a separate gate.

CURRENT EVIDENCE

The individual TP-086 reference profile was executed and its identity, title and REFERENCE_ONLY ceiling matched. This is a documentary identity check, not execution of the full model. Explicit source links resolve to 1 Pink formula IDs: 1 have checked numeric profiles and 0 remain open.

INDIVIDUAL FORMULA LINKS

F-090

REMAINING REQUIREMENT

Bind model-specific inputs, operations and measured evidence before interpreting the paper as an executable implementation.

SOURCE REFERENCES

TP-086; BP-ALG-086

Evidence: evidence/rerun/teal/TP-086.json

TR-TP-087 / Observed gas mass

IF

If the Blue Page identity is invoked with declared inputs, scope, units, and evidence state.

HOW

Result dimensions: mass. Primary manifestations: EVE, JO, MK. The lifecycle is purpose declaration -> Bangel typing -> Elsa semantic recovery -> JP formula CAPO -> MK applicability and dimensional review -> JO proof -> applicable safety/accounting receipts -> MJ decision -> JO evidence. JP carries the canonical representation; MK classifies physics applicability, units, boundaries, conservation, scale, and uncertainty; JO verifies types, formulas, tests, and receipts; applicable safety and accounting manifestations contribute evidence; MJ alone issues a bounded permit. Mathematical validity does not create physical or operational authority.

THEN

Then JO returns PASS_EVIDENCE, HOLD, FAIL_TECHNICAL, or DENY; MJ permission remains a separate gate.

CURRENT EVIDENCE

The individual TP-087 reference profile was executed and its identity, title and REFERENCE_ONLY ceiling matched. This is a documentary identity check, not execution of the full model. Explicit source links resolve to 1 Pink formula IDs: 1 have checked numeric profiles and 0 remain open.

INDIVIDUAL FORMULA LINKS

F-091

REMAINING REQUIREMENT

Bind model-specific inputs, operations and measured evidence before interpreting the paper as an executable implementation.

SOURCE REFERENCES

TP-087; BP-ALG-087

Evidence: evidence/rerun/teal/TP-087.json

TR-TP-088 / Gas mass-flow from height

IF

If the Blue Page identity is invoked with declared inputs, scope, units, and evidence state.

HOW

Result dimensions: mass/time. Primary manifestations: EVE, JO, MK. The lifecycle is purpose declaration -> Bangel typing -> Elsa semantic recovery -> JP formula CAPO -> MK applicability and dimensional review -> JO proof -> applicable safety/accounting receipts -> MJ decision -> JO evidence. JP carries the canonical representation; MK classifies physics applicability, units, boundaries, conservation, scale, and uncertainty; JO verifies types, formulas, tests, and receipts; applicable safety and accounting manifestations contribute evidence; MJ alone issues a bounded permit. Mathematical validity does not create physical or operational authority.

THEN

Then JO returns PASS_EVIDENCE, HOLD, FAIL_TECHNICAL, or DENY; MJ permission remains a separate gate.

CURRENT EVIDENCE

The individual TP-088 reference profile was executed and its identity, title and REFERENCE_ONLY ceiling matched. This is a documentary identity check, not execution of the full model. Explicit source links resolve to 1 Pink formula IDs: 1 have checked numeric profiles and 0 remain open.

INDIVIDUAL FORMULA LINKS

F-092

REMAINING REQUIREMENT

Bind model-specific inputs, operations and measured evidence before interpreting the paper as an executable implementation.

SOURCE REFERENCES

TP-088; BP-ALG-088

Evidence: evidence/rerun/teal/TP-088.json

TR-TP-089 / Observed gas-height predictor

IF

If the Blue Page identity is invoked with declared inputs, scope, units, and evidence state.

HOW

Result dimensions: length. Primary manifestations: JO, MK, SISTER. The lifecycle is purpose declaration -> Bangel typing -> Elsa semantic recovery -> JP formula CAPO -> MK applicability and dimensional review -> JO proof -> applicable safety/accounting receipts -> MJ decision -> JO evidence. JP carries the canonical representation; MK classifies physics applicability, units, boundaries, conservation, scale, and uncertainty; JO verifies types, formulas, tests, and receipts; applicable safety and accounting manifestations contribute evidence; MJ alone issues a bounded permit. Mathematical validity does not create physical or operational authority.

THEN

Then JO returns PASS_EVIDENCE, HOLD, FAIL_TECHNICAL, or DENY; MJ permission remains a separate gate.

CURRENT EVIDENCE

The individual TP-089 reference profile was executed and its identity, title and REFERENCE_ONLY ceiling matched. This is a documentary identity check, not execution of the full model. Explicit source links resolve to 1 Pink formula IDs: 1 have checked numeric profiles and 0 remain open.

INDIVIDUAL FORMULA LINKS

F-093

REMAINING REQUIREMENT

Bind model-specific inputs, operations and measured evidence before interpreting the paper as an executable implementation.

SOURCE REFERENCES

TP-089; BP-ALG-089

Evidence: evidence/rerun/teal/TP-089.json

TR-TP-090 / Gas net-force balance

IF

If the Blue Page identity is invoked with declared inputs, scope, units, and evidence state.

HOW

Result dimensions: force. Primary manifestations: JO, MK, SISTER. The lifecycle is purpose declaration -> Bangel typing -> Elsa semantic recovery -> JP formula CAPO -> MK applicability and dimensional review -> JO proof -> applicable safety/accounting receipts -> MJ decision -> JO evidence. JP carries the canonical representation; MK classifies physics applicability, units, boundaries, conservation, scale, and uncertainty; JO verifies types, formulas, tests, and receipts; applicable safety and accounting manifestations contribute evidence; MJ alone issues a bounded permit. Mathematical validity does not create physical or operational authority.

THEN

Then JO returns PASS_EVIDENCE, HOLD, FAIL_TECHNICAL, or DENY; MJ permission remains a separate gate.

CURRENT EVIDENCE

The individual TP-090 reference profile was executed and its identity, title and REFERENCE_ONLY ceiling matched. This is a documentary identity check, not execution of the full model. Explicit source links resolve to 1 Pink formula IDs: 1 have checked numeric profiles and 0 remain open.

INDIVIDUAL FORMULA LINKS

F-094

REMAINING REQUIREMENT

Bind model-specific inputs, operations and measured evidence before interpreting the paper as an executable implementation.

SOURCE REFERENCES

TP-090; BP-ALG-090

Evidence: evidence/rerun/teal/TP-090.json

TR-TP-091 / Buoyancy force / Drag force

IF

If the Blue Page identity is invoked with declared inputs, scope, units, and evidence state.

HOW

Result dimensions: force. Primary manifestations: EVE, JO, MK. The lifecycle is purpose declaration -> Bangel typing -> Elsa semantic recovery -> JP formula CAPO -> MK applicability and dimensional review -> JO proof -> applicable safety/accounting receipts -> MJ decision -> JO evidence. JP carries the canonical representation; MK classifies physics applicability, units, boundaries, conservation, scale, and uncertainty; JO verifies types, formulas, tests, and receipts; applicable safety and accounting manifestations contribute evidence; MJ alone issues a bounded permit. Mathematical validity does not create physical or operational authority.

THEN

Then JO returns PASS_EVIDENCE, HOLD, FAIL_TECHNICAL, or DENY; MJ permission remains a separate gate.

CURRENT EVIDENCE

The individual TP-091 reference profile was executed and its identity, title and REFERENCE_ONLY ceiling matched. This is a documentary identity check, not execution of the full model. Explicit source links resolve to 2 Pink formula IDs: 2 have checked numeric profiles and 0 remain open.

INDIVIDUAL FORMULA LINKS

F-095, F-096

REMAINING REQUIREMENT

Bind model-specific inputs, operations and measured evidence before interpreting the paper as an executable implementation.

SOURCE REFERENCES

TP-091; BP-ALG-091

Evidence: evidence/rerun/teal/TP-091.json

TR-TP-092 / Flow continuity

IF

If the Blue Page identity is invoked with declared inputs, scope, units, and evidence state.

HOW

Result dimensions: volume/time. Primary manifestations: JO, MK, SISTER. The lifecycle is purpose declaration -> Bangel typing -> Elsa semantic recovery -> JP formula CAPO -> MK applicability and dimensional review -> JO proof -> applicable safety/accounting receipts -> MJ decision -> JO evidence. JP carries the canonical representation; MK classifies physics applicability, units, boundaries, conservation, scale, and uncertainty; JO verifies types, formulas, tests, and receipts; applicable safety and accounting manifestations contribute evidence; MJ alone issues a bounded permit. Mathematical validity does not create physical or operational authority.

THEN

Then JO returns PASS_EVIDENCE, HOLD, FAIL_TECHNICAL, or DENY; MJ permission remains a separate gate.

CURRENT EVIDENCE

The individual TP-092 reference profile was executed and its identity, title and REFERENCE_ONLY ceiling matched. This is a documentary identity check, not execution of the full model. Explicit source links resolve to 1 Pink formula IDs: 1 have checked numeric profiles and 0 remain open.

INDIVIDUAL FORMULA LINKS

F-097

REMAINING REQUIREMENT

Bind model-specific inputs, operations and measured evidence before interpreting the paper as an executable implementation.

SOURCE REFERENCES

TP-092; BP-ALG-092

Evidence: evidence/rerun/teal/TP-092.json

TR-TP-093 / Residual reservoir capacity

IF

If the Blue Page identity is invoked with declared inputs, scope, units, and evidence state.

HOW

Result dimensions: typed capacity. Primary manifestations: EVE, JO, SISTER. The lifecycle is purpose declaration -> Bangel typing -> Elsa semantic recovery -> JP formula CAPO -> MK applicability and dimensional review -> JO proof -> applicable safety/accounting receipts -> MJ decision -> JO evidence. JP carries the canonical representation; MK classifies physics applicability, units, boundaries, conservation, scale, and uncertainty; JO verifies types, formulas, tests, and receipts; applicable safety and accounting manifestations contribute evidence; MJ alone issues a bounded permit. Mathematical validity does not create physical or operational authority.

THEN

Then JO returns PASS_EVIDENCE, HOLD, FAIL_TECHNICAL, or DENY; MJ permission remains a separate gate.

CURRENT EVIDENCE

The individual TP-093 reference profile was executed and its identity, title and REFERENCE_ONLY ceiling matched. This is a documentary identity check, not execution of the full model. Explicit source links resolve to 1 Pink formula IDs: 1 have checked numeric profiles and 0 remain open.

INDIVIDUAL FORMULA LINKS

F-098

REMAINING REQUIREMENT

Bind model-specific inputs, operations and measured evidence before interpreting the paper as an executable implementation.

SOURCE REFERENCES

TP-093; BP-ALG-093

Evidence: evidence/rerun/teal/TP-093.json

TR-TP-094 / Umbrella/EVE/reservoir balance

IF

If the Blue Page identity is invoked with declared inputs, scope, units, and evidence state.

HOW

Result dimensions: typed quantity. Primary manifestations: EVE, MERMAID, SISTER. The lifecycle is purpose declaration -> Bangel typing -> Elsa semantic recovery -> JP formula CAPO -> MK applicability and dimensional review -> JO proof -> applicable safety/accounting receipts -> MJ decision -> JO evidence. JP carries the canonical representation; MK classifies physics applicability, units, boundaries, conservation, scale, and uncertainty; JO verifies types, formulas, tests, and receipts; applicable safety and accounting manifestations contribute evidence; MJ alone issues a bounded permit. Mathematical validity does not create physical or operational authority.

THEN

Then JO returns PASS_EVIDENCE, HOLD, FAIL_TECHNICAL, or DENY; MJ permission remains a separate gate.

CURRENT EVIDENCE

The individual TP-094 reference profile was executed and its identity, title and REFERENCE_ONLY ceiling matched. This is a documentary identity check, not execution of the full model. Explicit source links resolve to 1 Pink formula IDs: 1 have checked numeric profiles and 0 remain open.

INDIVIDUAL FORMULA LINKS

F-099

REMAINING REQUIREMENT

Bind model-specific inputs, operations and measured evidence before interpreting the paper as an executable implementation.

SOURCE REFERENCES

TP-094; BP-ALG-094

Evidence: evidence/rerun/teal/TP-094.json

TR-TP-095 / Containment modification predicate

IF

If the Blue Page identity is invoked with declared inputs, scope, units, and evidence state.

HOW

Result dimensions: logical. Primary manifestations: BANGEL, JO, JP, MJ, MK. The lifecycle is purpose declaration -> Bangel typing -> Elsa semantic recovery -> JP formula CAPO -> MK applicability and dimensional review -> JO proof -> applicable safety/accounting receipts -> MJ decision -> JO evidence. JP carries the canonical representation; MK classifies physics applicability, units, boundaries, conservation, scale, and uncertainty; JO verifies types, formulas, tests, and receipts; applicable safety and accounting manifestations contribute evidence; MJ alone issues a bounded permit. Mathematical validity does not create physical or operational authority.

THEN

Then JO returns PASS_EVIDENCE, HOLD, FAIL_TECHNICAL, or DENY; MJ permission remains a separate gate.

CURRENT EVIDENCE

The individual TP-095 reference profile was executed and its identity, title and REFERENCE_ONLY ceiling matched. This is a documentary identity check, not execution of the full model. Explicit source links resolve to 1 Pink formula IDs: 0 have checked numeric profiles and 1 remain open.

INDIVIDUAL FORMULA LINKS

F-100

REMAINING REQUIREMENT

Bind model-specific inputs, operations and measured evidence before interpreting the paper as an executable implementation.

SOURCE REFERENCES

TP-095; BP-ALG-095

Evidence: evidence/rerun/teal/TP-095.json

TR-TP-096 / Rear outlet elevation

IF

If the Blue Page identity is invoked with declared inputs, scope, units, and evidence state.

HOW

Result dimensions: length. Primary manifestations: JO, MK, SISTER. The lifecycle is purpose declaration -> Bangel typing -> Elsa semantic recovery -> JP formula CAPO -> MK applicability and dimensional review -> JO proof -> applicable safety/accounting receipts -> MJ decision -> JO evidence. JP carries the canonical representation; MK classifies physics applicability, units, boundaries, conservation, scale, and uncertainty; JO verifies types, formulas, tests, and receipts; applicable safety and accounting manifestations contribute evidence; MJ alone issues a bounded permit. Mathematical validity does not create physical or operational authority.

THEN

Then JO returns PASS_EVIDENCE, HOLD, FAIL_TECHNICAL, or DENY; MJ permission remains a separate gate.

CURRENT EVIDENCE

The individual TP-096 reference profile was executed and its identity, title and REFERENCE_ONLY ceiling matched. This is a documentary identity check, not execution of the full model. Explicit source links resolve to 1 Pink formula IDs: 1 have checked numeric profiles and 0 remain open.

INDIVIDUAL FORMULA LINKS

F-101

REMAINING REQUIREMENT

Bind model-specific inputs, operations and measured evidence before interpreting the paper as an executable implementation.

SOURCE REFERENCES

TP-096; BP-ALG-096

Evidence: evidence/rerun/teal/TP-096.json

TR-TP-097 / Pearl simulation exclusion radius

IF

If the Blue Page identity is invoked with declared inputs, scope, units, and evidence state.

HOW

Result dimensions: length. Primary manifestations: JO, MK, PEARL. The lifecycle is purpose declaration -> Bangel typing -> Elsa semantic recovery -> JP formula CAPO -> MK applicability and dimensional review -> JO proof -> applicable safety/accounting receipts -> MJ decision -> JO evidence. JP carries the canonical representation; MK classifies physics applicability, units, boundaries, conservation, scale, and uncertainty; JO verifies types, formulas, tests, and receipts; applicable safety and accounting manifestations contribute evidence; MJ alone issues a bounded permit. Mathematical validity does not create physical or operational authority.

THEN

Then JO returns PASS_EVIDENCE, HOLD, FAIL_TECHNICAL, or DENY; MJ permission remains a separate gate.

CURRENT EVIDENCE

The individual TP-097 reference profile was executed and its identity, title and REFERENCE_ONLY ceiling matched. This is a documentary identity check, not execution of the full model. Explicit source links resolve to 1 Pink formula IDs: 1 have checked numeric profiles and 0 remain open.

INDIVIDUAL FORMULA LINKS

F-102

REMAINING REQUIREMENT

Bind model-specific inputs, operations and measured evidence before interpreting the paper as an executable implementation.

SOURCE REFERENCES

TP-097; BP-ALG-097

Evidence: evidence/rerun/teal/TP-097.json

TR-TP-098 / Outward-tangential outlet direction

IF

If the Blue Page identity is invoked with declared inputs, scope, units, and evidence state.

HOW

Result dimensions: dimensionless vector. Primary manifestations: JO, JP, MK. The lifecycle is purpose declaration -> Bangel typing -> Elsa semantic recovery -> JP formula CAPO -> MK applicability and dimensional review -> JO proof -> applicable safety/accounting receipts -> MJ decision -> JO evidence. JP carries the canonical representation; MK classifies physics applicability, units, boundaries, conservation, scale, and uncertainty; JO verifies types, formulas, tests, and receipts; applicable safety and accounting manifestations contribute evidence; MJ alone issues a bounded permit. Mathematical validity does not create physical or operational authority.

THEN

Then JO returns PASS_EVIDENCE, HOLD, FAIL_TECHNICAL, or DENY; MJ permission remains a separate gate.

CURRENT EVIDENCE

The individual TP-098 reference profile was executed and its identity, title and REFERENCE_ONLY ceiling matched. This is a documentary identity check, not execution of the full model. Explicit source links resolve to 1 Pink formula IDs: 0 have checked numeric profiles and 1 remain open.

INDIVIDUAL FORMULA LINKS

F-103

REMAINING REQUIREMENT

Bind model-specific inputs, operations and measured evidence before interpreting the paper as an executable implementation.

SOURCE REFERENCES

TP-098; BP-ALG-098

Evidence: evidence/rerun/teal/TP-098.json

TR-TP-099 / Outside-circle outlet path

IF

If the Blue Page identity is invoked with declared inputs, scope, units, and evidence state.

HOW

Result dimensions: length^2. Primary manifestations: JO, MK, PEARL. The lifecycle is purpose declaration -> Bangel typing -> Elsa semantic recovery -> JP formula CAPO -> MK applicability and dimensional review -> JO proof -> applicable safety/accounting receipts -> MJ decision -> JO evidence. JP carries the canonical representation; MK classifies physics applicability, units, boundaries, conservation, scale, and uncertainty; JO verifies types, formulas, tests, and receipts; applicable safety and accounting manifestations contribute evidence; MJ alone issues a bounded permit. Mathematical validity does not create physical or operational authority.

THEN

Then JO returns PASS_EVIDENCE, HOLD, FAIL_TECHNICAL, or DENY; MJ permission remains a separate gate.

CURRENT EVIDENCE

The individual TP-099 reference profile was executed and its identity, title and REFERENCE_ONLY ceiling matched. This is a documentary identity check, not execution of the full model. Explicit source links resolve to 1 Pink formula IDs: 0 have checked numeric profiles and 1 remain open.

INDIVIDUAL FORMULA LINKS

F-104

REMAINING REQUIREMENT

Bind model-specific inputs, operations and measured evidence before interpreting the paper as an executable implementation.

SOURCE REFERENCES

TP-099; BP-ALG-099

Evidence: evidence/rerun/teal/TP-099.json

TR-TP-100 / Reservoir volume balance

IF

If the Blue Page identity is invoked with declared inputs, scope, units, and evidence state.

HOW

Result dimensions: volume/time. Primary manifestations: EVE, JO, MERMAID, SISTER. The lifecycle is purpose declaration -> Bangel typing -> Elsa semantic recovery -> JP formula CAPO -> MK applicability and dimensional review -> JO proof -> applicable safety/accounting receipts -> MJ decision -> JO evidence. JP carries the canonical representation; MK classifies physics applicability, units, boundaries, conservation, scale, and uncertainty; JO verifies types, formulas, tests, and receipts; applicable safety and accounting manifestations contribute evidence; MJ alone issues a bounded permit. Mathematical validity does not create physical or operational authority.

THEN

Then JO returns PASS_EVIDENCE, HOLD, FAIL_TECHNICAL, or DENY; MJ permission remains a separate gate.

CURRENT EVIDENCE

The individual TP-100 reference profile was executed and its identity, title and REFERENCE_ONLY ceiling matched. This is a documentary identity check, not execution of the full model. Explicit source links resolve to 1 Pink formula IDs: 1 have checked numeric profiles and 0 remain open.

INDIVIDUAL FORMULA LINKS

F-105

REMAINING REQUIREMENT

Bind model-specific inputs, operations and measured evidence before interpreting the paper as an executable implementation.

SOURCE REFERENCES

TP-100; BP-ALG-100

Evidence: evidence/rerun/teal/TP-100.json

TR-TP-101 / Typed reservoir quantity balance

IF

If the Blue Page identity is invoked with declared inputs, scope, units, and evidence state.

HOW

Result dimensions: typed quantity/time. Primary manifestations: EVE, JO, MERMAID, SISTER. The lifecycle is purpose declaration -> Bangel typing -> Elsa semantic recovery -> JP formula CAPO -> MK applicability and dimensional review -> JO proof -> applicable safety/accounting receipts -> MJ decision -> JO evidence. JP carries the canonical representation; MK classifies physics applicability, units, boundaries, conservation, scale, and uncertainty; JO verifies types, formulas, tests, and receipts; applicable safety and accounting manifestations contribute evidence; MJ alone issues a bounded permit. Mathematical validity does not create physical or operational authority.

THEN

Then JO returns PASS_EVIDENCE, HOLD, FAIL_TECHNICAL, or DENY; MJ permission remains a separate gate.

CURRENT EVIDENCE

The individual TP-101 reference profile was executed and its identity, title and REFERENCE_ONLY ceiling matched. This is a documentary identity check, not execution of the full model. Explicit source links resolve to 1 Pink formula IDs: 1 have checked numeric profiles and 0 remain open.

INDIVIDUAL FORMULA LINKS

F-106

REMAINING REQUIREMENT

Bind model-specific inputs, operations and measured evidence before interpreting the paper as an executable implementation.

SOURCE REFERENCES

TP-101; BP-ALG-101

Evidence: evidence/rerun/teal/TP-101.json

TR-TP-102 / Required buffer volume

IF

If the Blue Page identity is invoked with declared inputs, scope, units, and evidence state.

HOW

Result dimensions: volume. Primary manifestations: JO, MK, SISTER. The lifecycle is purpose declaration -> Bangel typing -> Elsa semantic recovery -> JP formula CAPO -> MK applicability and dimensional review -> JO proof -> applicable safety/accounting receipts -> MJ decision -> JO evidence. JP carries the canonical representation; MK classifies physics applicability, units, boundaries, conservation, scale, and uncertainty; JO verifies types, formulas, tests, and receipts; applicable safety and accounting manifestations contribute evidence; MJ alone issues a bounded permit. Mathematical validity does not create physical or operational authority.

THEN

Then JO returns PASS_EVIDENCE, HOLD, FAIL_TECHNICAL, or DENY; MJ permission remains a separate gate.

CURRENT EVIDENCE

The individual TP-102 reference profile was executed and its identity, title and REFERENCE_ONLY ceiling matched. This is a documentary identity check, not execution of the full model. Explicit source links resolve to 1 Pink formula IDs: 1 have checked numeric profiles and 0 remain open.

INDIVIDUAL FORMULA LINKS

F-107

REMAINING REQUIREMENT

Bind model-specific inputs, operations and measured evidence before interpreting the paper as an executable implementation.

SOURCE REFERENCES

TP-102; BP-ALG-102

Evidence: evidence/rerun/teal/TP-102.json

TR-TP-103 / Outlet area lower bound

IF

If the Blue Page identity is invoked with declared inputs, scope, units, and evidence state.

HOW

Result dimensions: area. Primary manifestations: JO, MK. The lifecycle is purpose declaration -> Bangel typing -> Elsa semantic recovery -> JP formula CAPO -> MK applicability and dimensional review -> JO proof -> applicable safety/accounting receipts -> MJ decision -> JO evidence. JP carries the canonical representation; MK classifies physics applicability, units, boundaries, conservation, scale, and uncertainty; JO verifies types, formulas, tests, and receipts; applicable safety and accounting manifestations contribute evidence; MJ alone issues a bounded permit. Mathematical validity does not create physical or operational authority.

THEN

Then JO returns PASS_EVIDENCE, HOLD, FAIL_TECHNICAL, or DENY; MJ permission remains a separate gate.

CURRENT EVIDENCE

The individual TP-103 reference profile was executed and its identity, title and REFERENCE_ONLY ceiling matched. This is a documentary identity check, not execution of the full model. Explicit source links resolve to 1 Pink formula IDs: 1 have checked numeric profiles and 0 remain open.

INDIVIDUAL FORMULA LINKS

F-108

REMAINING REQUIREMENT

Bind model-specific inputs, operations and measured evidence before interpreting the paper as an executable implementation.

SOURCE REFERENCES

TP-103; BP-ALG-103

Evidence: evidence/rerun/teal/TP-103.json

TR-TP-104 / Circular outlet radius lower bound

IF

If the Blue Page identity is invoked with declared inputs, scope, units, and evidence state.

HOW

Result dimensions: length. Primary manifestations: JO, MK. The lifecycle is purpose declaration -> Bangel typing -> Elsa semantic recovery -> JP formula CAPO -> MK applicability and dimensional review -> JO proof -> applicable safety/accounting receipts -> MJ decision -> JO evidence. JP carries the canonical representation; MK classifies physics applicability, units, boundaries, conservation, scale, and uncertainty; JO verifies types, formulas, tests, and receipts; applicable safety and accounting manifestations contribute evidence; MJ alone issues a bounded permit. Mathematical validity does not create physical or operational authority.

THEN

Then JO returns PASS_EVIDENCE, HOLD, FAIL_TECHNICAL, or DENY; MJ permission remains a separate gate.

CURRENT EVIDENCE

The individual TP-104 reference profile was executed and its identity, title and REFERENCE_ONLY ceiling matched. This is a documentary identity check, not execution of the full model. Explicit source links resolve to 1 Pink formula IDs: 0 have checked numeric profiles and 1 remain open.

INDIVIDUAL FORMULA LINKS

F-109

REMAINING REQUIREMENT

Bind model-specific inputs, operations and measured evidence before interpreting the paper as an executable implementation.

SOURCE REFERENCES

TP-104; BP-ALG-104

Evidence: evidence/rerun/teal/TP-104.json

TR-TP-105 / Bounded drip impulse

IF

If the Blue Page identity is invoked with declared inputs, scope, units, and evidence state.

HOW

Result dimensions: impulse. Primary manifestations: ANGELS, JO, MK. The lifecycle is purpose declaration -> Bangel typing -> Elsa semantic recovery -> JP formula CAPO -> MK applicability and dimensional review -> JO proof -> applicable safety/accounting receipts -> MJ decision -> JO evidence. JP carries the canonical representation; MK classifies physics applicability, units, boundaries, conservation, scale, and uncertainty; JO verifies types, formulas, tests, and receipts; applicable safety and accounting manifestations contribute evidence; MJ alone issues a bounded permit. Mathematical validity does not create physical or operational authority.

THEN

Then JO returns PASS_EVIDENCE, HOLD, FAIL_TECHNICAL, or DENY; MJ permission remains a separate gate.

CURRENT EVIDENCE

The individual TP-105 reference profile was executed and its identity, title and REFERENCE_ONLY ceiling matched. This is a documentary identity check, not execution of the full model. Explicit source links resolve to 1 Pink formula IDs: 1 have checked numeric profiles and 0 remain open.

INDIVIDUAL FORMULA LINKS

F-110

REMAINING REQUIREMENT

Bind model-specific inputs, operations and measured evidence before interpreting the paper as an executable implementation.

SOURCE REFERENCES

TP-105; BP-ALG-105

Evidence: evidence/rerun/teal/TP-105.json

TR-TP-106 / Small-wave energy reference

IF

If the Blue Page identity is invoked with declared inputs, scope, units, and evidence state.

HOW

Result dimensions: energy. Primary manifestations: EVE, JO, MK. The lifecycle is purpose declaration -> Bangel typing -> Elsa semantic recovery -> JP formula CAPO -> MK applicability and dimensional review -> JO proof -> applicable safety/accounting receipts -> MJ decision -> JO evidence. JP carries the canonical representation; MK classifies physics applicability, units, boundaries, conservation, scale, and uncertainty; JO verifies types, formulas, tests, and receipts; applicable safety and accounting manifestations contribute evidence; MJ alone issues a bounded permit. Mathematical validity does not create physical or operational authority.

THEN

Then JO returns PASS_EVIDENCE, HOLD, FAIL_TECHNICAL, or DENY; MJ permission remains a separate gate.

CURRENT EVIDENCE

The individual TP-106 reference profile was executed and its identity, title and REFERENCE_ONLY ceiling matched. This is a documentary identity check, not execution of the full model. Explicit source links resolve to 1 Pink formula IDs: 1 have checked numeric profiles and 0 remain open.

INDIVIDUAL FORMULA LINKS

F-111

REMAINING REQUIREMENT

Bind model-specific inputs, operations and measured evidence before interpreting the paper as an executable implementation.

SOURCE REFERENCES

TP-106; BP-ALG-106

Evidence: evidence/rerun/teal/TP-106.json

TR-TP-107 / Froude reference

IF

If the Blue Page identity is invoked with declared inputs, scope, units, and evidence state.

HOW

Result dimensions: dimensionless. Primary manifestations: JO, MK. The lifecycle is purpose declaration -> Bangel typing -> Elsa semantic recovery -> JP formula CAPO -> MK applicability and dimensional review -> JO proof -> applicable safety/accounting receipts -> MJ decision -> JO evidence. JP carries the canonical representation; MK classifies physics applicability, units, boundaries, conservation, scale, and uncertainty; JO verifies types, formulas, tests, and receipts; applicable safety and accounting manifestations contribute evidence; MJ alone issues a bounded permit. Mathematical validity does not create physical or operational authority.

THEN

Then JO returns PASS_EVIDENCE, HOLD, FAIL_TECHNICAL, or DENY; MJ permission remains a separate gate.

CURRENT EVIDENCE

The individual TP-107 reference profile was executed and its identity, title and REFERENCE_ONLY ceiling matched. This is a documentary identity check, not execution of the full model. Explicit source links resolve to 1 Pink formula IDs: 1 have checked numeric profiles and 0 remain open.

INDIVIDUAL FORMULA LINKS

F-112

REMAINING REQUIREMENT

Bind model-specific inputs, operations and measured evidence before interpreting the paper as an executable implementation.

SOURCE REFERENCES

TP-107; BP-ALG-107

Evidence: evidence/rerun/teal/TP-107.json

TR-TP-108 / Circular return-port area

IF

If the Blue Page identity is invoked with declared inputs, scope, units, and evidence state.

HOW

Result dimensions: area. Primary manifestations: JO, MK. The lifecycle is purpose declaration -> Bangel typing -> Elsa semantic recovery -> JP formula CAPO -> MK applicability and dimensional review -> JO proof -> applicable safety/accounting receipts -> MJ decision -> JO evidence. JP carries the canonical representation; MK classifies physics applicability, units, boundaries, conservation, scale, and uncertainty; JO verifies types, formulas, tests, and receipts; applicable safety and accounting manifestations contribute evidence; MJ alone issues a bounded permit. Mathematical validity does not create physical or operational authority.

THEN

Then JO returns PASS_EVIDENCE, HOLD, FAIL_TECHNICAL, or DENY; MJ permission remains a separate gate.

CURRENT EVIDENCE

The individual TP-108 reference profile was executed and its identity, title and REFERENCE_ONLY ceiling matched. This is a documentary identity check, not execution of the full model. Explicit source links resolve to 1 Pink formula IDs: 0 have checked numeric profiles and 1 remain open.

INDIVIDUAL FORMULA LINKS

F-113

REMAINING REQUIREMENT

Bind model-specific inputs, operations and measured evidence before interpreting the paper as an executable implementation.

SOURCE REFERENCES

TP-108; BP-ALG-108

Evidence: evidence/rerun/teal/TP-108.json

TR-TP-109 / Inward-tangential reentry components

IF

If the Blue Page identity is invoked with declared inputs, scope, units, and evidence state.

HOW

Result dimensions: velocity. Primary manifestations: JO, MK, SISTER. The lifecycle is purpose declaration -> Bangel typing -> Elsa semantic recovery -> JP formula CAPO -> MK applicability and dimensional review -> JO proof -> applicable safety/accounting receipts -> MJ decision -> JO evidence. JP carries the canonical representation; MK classifies physics applicability, units, boundaries, conservation, scale, and uncertainty; JO verifies types, formulas, tests, and receipts; applicable safety and accounting manifestations contribute evidence; MJ alone issues a bounded permit. Mathematical validity does not create physical or operational authority.

THEN

Then JO returns PASS_EVIDENCE, HOLD, FAIL_TECHNICAL, or DENY; MJ permission remains a separate gate.

CURRENT EVIDENCE

The individual TP-109 reference profile was executed and its identity, title and REFERENCE_ONLY ceiling matched. This is a documentary identity check, not execution of the full model. Explicit source links resolve to 1 Pink formula IDs: 0 have checked numeric profiles and 1 remain open.

INDIVIDUAL FORMULA LINKS

F-114

REMAINING REQUIREMENT

Bind model-specific inputs, operations and measured evidence before interpreting the paper as an executable implementation.

SOURCE REFERENCES

TP-109; BP-ALG-109

Evidence: evidence/rerun/teal/TP-109.json

TR-TP-110 / Spiral compatibility ratio

IF

If the Blue Page identity is invoked with declared inputs, scope, units, and evidence state.

HOW

Result dimensions: dimensionless. Primary manifestations: JO, MK. The lifecycle is purpose declaration -> Bangel typing -> Elsa semantic recovery -> JP formula CAPO -> MK applicability and dimensional review -> JO proof -> applicable safety/accounting receipts -> MJ decision -> JO evidence. JP carries the canonical representation; MK classifies physics applicability, units, boundaries, conservation, scale, and uncertainty; JO verifies types, formulas, tests, and receipts; applicable safety and accounting manifestations contribute evidence; MJ alone issues a bounded permit. Mathematical validity does not create physical or operational authority.

THEN

Then JO returns PASS_EVIDENCE, HOLD, FAIL_TECHNICAL, or DENY; MJ permission remains a separate gate.

CURRENT EVIDENCE

The individual TP-110 reference profile was executed and its identity, title and REFERENCE_ONLY ceiling matched. This is a documentary identity check, not execution of the full model. Explicit source links resolve to 1 Pink formula IDs: 1 have checked numeric profiles and 0 remain open.

INDIVIDUAL FORMULA LINKS

F-115

REMAINING REQUIREMENT

Bind model-specific inputs, operations and measured evidence before interpreting the paper as an executable implementation.

SOURCE REFERENCES

TP-110; BP-ALG-110

Evidence: evidence/rerun/teal/TP-110.json

TR-TP-111 / Return continuity

IF

If the Blue Page identity is invoked with declared inputs, scope, units, and evidence state.

HOW

Result dimensions: volume/time. Primary manifestations: JO, MK, SISTER. The lifecycle is purpose declaration -> Bangel typing -> Elsa semantic recovery -> JP formula CAPO -> MK applicability and dimensional review -> JO proof -> applicable safety/accounting receipts -> MJ decision -> JO evidence. JP carries the canonical representation; MK classifies physics applicability, units, boundaries, conservation, scale, and uncertainty; JO verifies types, formulas, tests, and receipts; applicable safety and accounting manifestations contribute evidence; MJ alone issues a bounded permit. Mathematical validity does not create physical or operational authority.

THEN

Then JO returns PASS_EVIDENCE, HOLD, FAIL_TECHNICAL, or DENY; MJ permission remains a separate gate.

CURRENT EVIDENCE

The individual TP-111 reference profile was executed and its identity, title and REFERENCE_ONLY ceiling matched. This is a documentary identity check, not execution of the full model. Explicit source links resolve to 1 Pink formula IDs: 1 have checked numeric profiles and 0 remain open.

INDIVIDUAL FORMULA LINKS

F-116

REMAINING REQUIREMENT

Bind model-specific inputs, operations and measured evidence before interpreting the paper as an executable implementation.

SOURCE REFERENCES

TP-111; BP-ALG-111

Evidence: evidence/rerun/teal/TP-111.json

TR-TP-112 / Relative-frame velocity

IF

If the Blue Page identity is invoked with declared inputs, scope, units, and evidence state.

HOW

Result dimensions: velocity. Primary manifestations: JO, MK. The lifecycle is purpose declaration -> Bangel typing -> Elsa semantic recovery -> JP formula CAPO -> MK applicability and dimensional review -> JO proof -> applicable safety/accounting receipts -> MJ decision -> JO evidence. JP carries the canonical representation; MK classifies physics applicability, units, boundaries, conservation, scale, and uncertainty; JO verifies types, formulas, tests, and receipts; applicable safety and accounting manifestations contribute evidence; MJ alone issues a bounded permit. Mathematical validity does not create physical or operational authority.

THEN

Then JO returns PASS_EVIDENCE, HOLD, FAIL_TECHNICAL, or DENY; MJ permission remains a separate gate.

CURRENT EVIDENCE

The individual TP-112 reference profile was executed and its identity, title and REFERENCE_ONLY ceiling matched. This is a documentary identity check, not execution of the full model. Explicit source links resolve to 1 Pink formula IDs: 0 have checked numeric profiles and 1 remain open.

INDIVIDUAL FORMULA LINKS

F-117

REMAINING REQUIREMENT

Bind model-specific inputs, operations and measured evidence before interpreting the paper as an executable implementation.

SOURCE REFERENCES

TP-112; BP-ALG-112

Evidence: evidence/rerun/teal/TP-112.json

TR-TP-113 / Frictional dissipation

IF

If the Blue Page identity is invoked with declared inputs, scope, units, and evidence state.

HOW

Result dimensions: power. Primary manifestations: JO, MERMAID, MK. The lifecycle is purpose declaration -> Bangel typing -> Elsa semantic recovery -> JP formula CAPO -> MK applicability and dimensional review -> JO proof -> applicable safety/accounting receipts -> MJ decision -> JO evidence. JP carries the canonical representation; MK classifies physics applicability, units, boundaries, conservation, scale, and uncertainty; JO verifies types, formulas, tests, and receipts; applicable safety and accounting manifestations contribute evidence; MJ alone issues a bounded permit. Mathematical validity does not create physical or operational authority.

THEN

Then JO returns PASS_EVIDENCE, HOLD, FAIL_TECHNICAL, or DENY; MJ permission remains a separate gate.

CURRENT EVIDENCE

The individual TP-113 reference profile was executed and its identity, title and REFERENCE_ONLY ceiling matched. This is a documentary identity check, not execution of the full model. Explicit source links resolve to 1 Pink formula IDs: 0 have checked numeric profiles and 1 remain open.

INDIVIDUAL FORMULA LINKS

F-118

REMAINING REQUIREMENT

Bind model-specific inputs, operations and measured evidence before interpreting the paper as an executable implementation.

SOURCE REFERENCES

TP-113; BP-ALG-113

Evidence: evidence/rerun/teal/TP-113.json

TR-TP-114 / Recoverable friction-energy bound

IF

If the Blue Page identity is invoked with declared inputs, scope, units, and evidence state.

HOW

Result dimensions: energy. Primary manifestations: JO, MERMAID, MK, SHIVA. The lifecycle is purpose declaration -> Bangel typing -> Elsa semantic recovery -> JP formula CAPO -> MK applicability and dimensional review -> JO proof -> applicable safety/accounting receipts -> MJ decision -> JO evidence. JP carries the canonical representation; MK classifies physics applicability, units, boundaries, conservation, scale, and uncertainty; JO verifies types, formulas, tests, and receipts; applicable safety and accounting manifestations contribute evidence; MJ alone issues a bounded permit. Mathematical validity does not create physical or operational authority.

THEN

Then JO returns PASS_EVIDENCE, HOLD, FAIL_TECHNICAL, or DENY; MJ permission remains a separate gate.

CURRENT EVIDENCE

The individual TP-114 reference profile was executed and its identity, title and REFERENCE_ONLY ceiling matched. This is a documentary identity check, not execution of the full model. Explicit source links resolve to 1 Pink formula IDs: 0 have checked numeric profiles and 1 remain open.

INDIVIDUAL FORMULA LINKS

F-119

REMAINING REQUIREMENT

Bind model-specific inputs, operations and measured evidence before interpreting the paper as an executable implementation.

SOURCE REFERENCES

TP-114; BP-ALG-114

Evidence: evidence/rerun/teal/TP-114.json

TR-TP-115 / Reservoir transaction gate

IF

If the Blue Page identity is invoked with declared inputs, scope, units, and evidence state.

HOW

Result dimensions: logical. Primary manifestations: ANGELS, JO, M3, MERMAID, MJ, MK. The lifecycle is purpose declaration -> Bangel typing -> Elsa semantic recovery -> JP formula CAPO -> MK applicability and dimensional review -> JO proof -> applicable safety/accounting receipts -> MJ decision -> JO evidence. JP carries the canonical representation; MK classifies physics applicability, units, boundaries, conservation, scale, and uncertainty; JO verifies types, formulas, tests, and receipts; applicable safety and accounting manifestations contribute evidence; MJ alone issues a bounded permit. Mathematical validity does not create physical or operational authority.

THEN

Then JO returns PASS_EVIDENCE, HOLD, FAIL_TECHNICAL, or DENY; MJ permission remains a separate gate.

CURRENT EVIDENCE

The individual TP-115 reference profile was executed and its identity, title and REFERENCE_ONLY ceiling matched. This is a documentary identity check, not execution of the full model. Explicit source links resolve to 1 Pink formula IDs: 0 have checked numeric profiles and 1 remain open.

INDIVIDUAL FORMULA LINKS

F-120

REMAINING REQUIREMENT

Bind model-specific inputs, operations and measured evidence before interpreting the paper as an executable implementation.

SOURCE REFERENCES

TP-115; BP-ALG-115

Evidence: evidence/rerun/teal/TP-115.json

TR-TP-116 / Re-entry swirl ratio

IF

If the Blue Page identity is invoked with declared inputs, scope, units, and evidence state.

HOW

Result dimensions: dimensionless. Primary manifestations: JO, MK. The lifecycle is purpose declaration -> Bangel typing -> Elsa semantic recovery -> JP formula CAPO -> MK applicability and dimensional review -> JO proof -> applicable safety/accounting receipts -> MJ decision -> JO evidence. JP carries the canonical representation; MK classifies physics applicability, units, boundaries, conservation, scale, and uncertainty; JO verifies types, formulas, tests, and receipts; applicable safety and accounting manifestations contribute evidence; MJ alone issues a bounded permit. Mathematical validity does not create physical or operational authority.

THEN

Then JO returns PASS_EVIDENCE, HOLD, FAIL_TECHNICAL, or DENY; MJ permission remains a separate gate.

CURRENT EVIDENCE

The individual TP-116 reference profile was executed and its identity, title and REFERENCE_ONLY ceiling matched. This is a documentary identity check, not execution of the full model. Explicit source links resolve to 1 Pink formula IDs: 1 have checked numeric profiles and 0 remain open.

INDIVIDUAL FORMULA LINKS

F-121

REMAINING REQUIREMENT

Bind model-specific inputs, operations and measured evidence before interpreting the paper as an executable implementation.

SOURCE REFERENCES

TP-116; BP-ALG-116

Evidence: evidence/rerun/teal/TP-116.json

TR-TP-117 / Re-entry processing cycle

IF

If the Blue Page identity is invoked with declared inputs, scope, units, and evidence state.

HOW

Result dimensions: cycle identifier. Primary manifestations: JO, M3, SISTER. The lifecycle is purpose declaration -> Bangel typing -> Elsa semantic recovery -> JP formula CAPO -> MK applicability and dimensional review -> JO proof -> applicable safety/accounting receipts -> MJ decision -> JO evidence. JP carries the canonical representation; MK classifies physics applicability, units, boundaries, conservation, scale, and uncertainty; JO verifies types, formulas, tests, and receipts; applicable safety and accounting manifestations contribute evidence; MJ alone issues a bounded permit. Mathematical validity does not create physical or operational authority.

THEN

Then JO returns PASS_EVIDENCE, HOLD, FAIL_TECHNICAL, or DENY; MJ permission remains a separate gate.

CURRENT EVIDENCE

The individual TP-117 reference profile was executed and its identity, title and REFERENCE_ONLY ceiling matched. This is a documentary identity check, not execution of the full model. Explicit source links resolve to 1 Pink formula IDs: 1 have checked numeric profiles and 0 remain open.

INDIVIDUAL FORMULA LINKS

F-122

REMAINING REQUIREMENT

Bind model-specific inputs, operations and measured evidence before interpreting the paper as an executable implementation.

SOURCE REFERENCES

TP-117; BP-ALG-117

Evidence: evidence/rerun/teal/TP-117.json

TR-TP-118 / Perspective transform residual

IF

If the Blue Page identity is invoked with declared inputs, scope, units, and evidence state.

HOW

Result dimensions: typed vector. Primary manifestations: EVE, JO, MERMAID, MK. The lifecycle is purpose declaration -> Bangel typing -> Elsa semantic recovery -> JP formula CAPO -> MK applicability and dimensional review -> JO proof -> applicable safety/accounting receipts -> MJ decision -> JO evidence. JP carries the canonical representation; MK classifies physics applicability, units, boundaries, conservation, scale, and uncertainty; JO verifies types, formulas, tests, and receipts; applicable safety and accounting manifestations contribute evidence; MJ alone issues a bounded permit. Mathematical validity does not create physical or operational authority.

THEN

Then JO returns PASS_EVIDENCE, HOLD, FAIL_TECHNICAL, or DENY; MJ permission remains a separate gate.

CURRENT EVIDENCE

The individual TP-118 reference profile was executed and its identity, title and REFERENCE_ONLY ceiling matched. This is a documentary identity check, not execution of the full model. Explicit source links resolve to 1 Pink formula IDs: 0 have checked numeric profiles and 1 remain open.

INDIVIDUAL FORMULA LINKS

F-123

REMAINING REQUIREMENT

Bind model-specific inputs, operations and measured evidence before interpreting the paper as an executable implementation.

SOURCE REFERENCES

TP-118; BP-ALG-118

Evidence: evidence/rerun/teal/TP-118.json

TR-TP-119 / Physical pressure-flow dissipation

IF

If the Blue Page identity is invoked with declared inputs, scope, units, and evidence state.

HOW

Result dimensions: energy. Primary manifestations: JO, MERMAID, MK. The lifecycle is purpose declaration -> Bangel typing -> Elsa semantic recovery -> JP formula CAPO -> MK applicability and dimensional review -> JO proof -> applicable safety/accounting receipts -> MJ decision -> JO evidence. JP carries the canonical representation; MK classifies physics applicability, units, boundaries, conservation, scale, and uncertainty; JO verifies types, formulas, tests, and receipts; applicable safety and accounting manifestations contribute evidence; MJ alone issues a bounded permit. Mathematical validity does not create physical or operational authority.

THEN

Then JO returns PASS_EVIDENCE, HOLD, FAIL_TECHNICAL, or DENY; MJ permission remains a separate gate.

CURRENT EVIDENCE

The individual TP-119 reference profile was executed and its identity, title and REFERENCE_ONLY ceiling matched. This is a documentary identity check, not execution of the full model. Explicit source links resolve to 1 Pink formula IDs: 0 have checked numeric profiles and 1 remain open.

INDIVIDUAL FORMULA LINKS

F-124

REMAINING REQUIREMENT

Bind model-specific inputs, operations and measured evidence before interpreting the paper as an executable implementation.

SOURCE REFERENCES

TP-119; BP-ALG-119

Evidence: evidence/rerun/teal/TP-119.json

TR-TP-120 / Information friction

IF

If the Blue Page identity is invoked with declared inputs, scope, units, and evidence state.

HOW

Result dimensions: byte*time. Primary manifestations: JO, M3, MERMAID. The lifecycle is purpose declaration -> Bangel typing -> Elsa semantic recovery -> JP formula CAPO -> MK applicability and dimensional review -> JO proof -> applicable safety/accounting receipts -> MJ decision -> JO evidence. JP carries the canonical representation; MK classifies physics applicability, units, boundaries, conservation, scale, and uncertainty; JO verifies types, formulas, tests, and receipts; applicable safety and accounting manifestations contribute evidence; MJ alone issues a bounded permit. Mathematical validity does not create physical or operational authority.

THEN

Then JO returns PASS_EVIDENCE, HOLD, FAIL_TECHNICAL, or DENY; MJ permission remains a separate gate.

CURRENT EVIDENCE

The individual TP-120 reference profile was executed and its identity, title and REFERENCE_ONLY ceiling matched. This is a documentary identity check, not execution of the full model. Explicit source links resolve to 1 Pink formula IDs: 0 have checked numeric profiles and 1 remain open.

INDIVIDUAL FORMULA LINKS

F-125

REMAINING REQUIREMENT

Bind model-specific inputs, operations and measured evidence before interpreting the paper as an executable implementation.

SOURCE REFERENCES

TP-120; BP-ALG-120

Evidence: evidence/rerun/teal/TP-120.json

TR-TP-121 / Rotational setpoint damping

IF

If the Blue Page identity is invoked with declared inputs, scope, units, and evidence state.

HOW

Result dimensions: angular velocity. Primary manifestations: JO, MK, SISTER. The lifecycle is purpose declaration -> Bangel typing -> Elsa semantic recovery -> JP formula CAPO -> MK applicability and dimensional review -> JO proof -> applicable safety/accounting receipts -> MJ decision -> JO evidence. JP carries the canonical representation; MK classifies physics applicability, units, boundaries, conservation, scale, and uncertainty; JO verifies types, formulas, tests, and receipts; applicable safety and accounting manifestations contribute evidence; MJ alone issues a bounded permit. Mathematical validity does not create physical or operational authority.

THEN

Then JO returns PASS_EVIDENCE, HOLD, FAIL_TECHNICAL, or DENY; MJ permission remains a separate gate.

CURRENT EVIDENCE

The individual TP-121 reference profile was executed and its identity, title and REFERENCE_ONLY ceiling matched. This is a documentary identity check, not execution of the full model. Explicit source links resolve to 1 Pink formula IDs: 1 have checked numeric profiles and 0 remain open.

INDIVIDUAL FORMULA LINKS

F-126

REMAINING REQUIREMENT

Bind model-specific inputs, operations and measured evidence before interpreting the paper as an executable implementation.

SOURCE REFERENCES

TP-121; BP-ALG-121

Evidence: evidence/rerun/teal/TP-121.json

TR-TP-122 / Rotational step cap

IF

If the Blue Page identity is invoked with declared inputs, scope, units, and evidence state.

HOW

Result dimensions: angular velocity. Primary manifestations: ANGELS, JO, MK. The lifecycle is purpose declaration -> Bangel typing -> Elsa semantic recovery -> JP formula CAPO -> MK applicability and dimensional review -> JO proof -> applicable safety/accounting receipts -> MJ decision -> JO evidence. JP carries the canonical representation; MK classifies physics applicability, units, boundaries, conservation, scale, and uncertainty; JO verifies types, formulas, tests, and receipts; applicable safety and accounting manifestations contribute evidence; MJ alone issues a bounded permit. Mathematical validity does not create physical or operational authority.

THEN

Then JO returns PASS_EVIDENCE, HOLD, FAIL_TECHNICAL, or DENY; MJ permission remains a separate gate.

CURRENT EVIDENCE

The individual TP-122 reference profile was executed and its identity, title and REFERENCE_ONLY ceiling matched. This is a documentary identity check, not execution of the full model. Explicit source links resolve to 1 Pink formula IDs: 1 have checked numeric profiles and 0 remain open.

INDIVIDUAL FORMULA LINKS

F-127

REMAINING REQUIREMENT

Bind model-specific inputs, operations and measured evidence before interpreting the paper as an executable implementation.

SOURCE REFERENCES

TP-122; BP-ALG-122

Evidence: evidence/rerun/teal/TP-122.json

TR-TP-123 / Outlet transfer conservation

IF

If the Blue Page identity is invoked with declared inputs, scope, units, and evidence state.

HOW

Result dimensions: typed quantity. Primary manifestations: EVE, JO, MERMAID, SISTER. The lifecycle is purpose declaration -> Bangel typing -> Elsa semantic recovery -> JP formula CAPO -> MK applicability and dimensional review -> JO proof -> applicable safety/accounting receipts -> MJ decision -> JO evidence. JP carries the canonical representation; MK classifies physics applicability, units, boundaries, conservation, scale, and uncertainty; JO verifies types, formulas, tests, and receipts; applicable safety and accounting manifestations contribute evidence; MJ alone issues a bounded permit. Mathematical validity does not create physical or operational authority.

THEN

Then JO returns PASS_EVIDENCE, HOLD, FAIL_TECHNICAL, or DENY; MJ permission remains a separate gate.

CURRENT EVIDENCE

The individual TP-123 reference profile was executed and its identity, title and REFERENCE_ONLY ceiling matched. This is a documentary identity check, not execution of the full model. Explicit source links resolve to 1 Pink formula IDs: 1 have checked numeric profiles and 0 remain open.

INDIVIDUAL FORMULA LINKS

F-128

REMAINING REQUIREMENT

Bind model-specific inputs, operations and measured evidence before interpreting the paper as an executable implementation.

SOURCE REFERENCES

TP-123; BP-ALG-123

Evidence: evidence/rerun/teal/TP-123.json

TR-TP-124 / Re-entry recalculation vector

IF

If the Blue Page identity is invoked with declared inputs, scope, units, and evidence state.

HOW

Result dimensions: typed vector. Primary manifestations: EVE, JO, MK, SISTER. The lifecycle is purpose declaration -> Bangel typing -> Elsa semantic recovery -> JP formula CAPO -> MK applicability and dimensional review -> JO proof -> applicable safety/accounting receipts -> MJ decision -> JO evidence. JP carries the canonical representation; MK classifies physics applicability, units, boundaries, conservation, scale, and uncertainty; JO verifies types, formulas, tests, and receipts; applicable safety and accounting manifestations contribute evidence; MJ alone issues a bounded permit. Mathematical validity does not create physical or operational authority.

THEN

Then JO returns PASS_EVIDENCE, HOLD, FAIL_TECHNICAL, or DENY; MJ permission remains a separate gate.

CURRENT EVIDENCE

The individual TP-124 reference profile was executed and its identity, title and REFERENCE_ONLY ceiling matched. This is a documentary identity check, not execution of the full model. Explicit source links resolve to 1 Pink formula IDs: 0 have checked numeric profiles and 1 remain open.

INDIVIDUAL FORMULA LINKS

F-129

REMAINING REQUIREMENT

Bind model-specific inputs, operations and measured evidence before interpreting the paper as an executable implementation.

SOURCE REFERENCES

TP-124; BP-ALG-124

Evidence: evidence/rerun/teal/TP-124.json

TR-TP-125 / Re-entry admissibility predicate

IF

If the Blue Page identity is invoked with declared inputs, scope, units, and evidence state.

HOW

Result dimensions: logical. Primary manifestations: ANGELS, BANGEL, JO, JP, M3, MJ, MK. The lifecycle is purpose declaration -> Bangel typing -> Elsa semantic recovery -> JP formula CAPO -> MK applicability and dimensional review -> JO proof -> applicable safety/accounting receipts -> MJ decision -> JO evidence. JP carries the canonical representation; MK classifies physics applicability, units, boundaries, conservation, scale, and uncertainty; JO verifies types, formulas, tests, and receipts; applicable safety and accounting manifestations contribute evidence; MJ alone issues a bounded permit. Mathematical validity does not create physical or operational authority.

THEN

Then JO returns PASS_EVIDENCE, HOLD, FAIL_TECHNICAL, or DENY; MJ permission remains a separate gate.

CURRENT EVIDENCE

The individual TP-125 reference profile was executed and its identity, title and REFERENCE_ONLY ceiling matched. This is a documentary identity check, not execution of the full model. Explicit source links resolve to 1 Pink formula IDs: 0 have checked numeric profiles and 1 remain open.

INDIVIDUAL FORMULA LINKS

F-130

REMAINING REQUIREMENT

Bind model-specific inputs, operations and measured evidence before interpreting the paper as an executable implementation.

SOURCE REFERENCES

TP-125; BP-ALG-125

Evidence: evidence/rerun/teal/TP-125.json

TR-TP-126 / Uncertainty-aware Pearl reference clearance

IF

If the Blue Page identity is invoked with declared inputs, scope, units, and evidence state.

HOW

Result dimensions: length. Primary manifestations: JO, MK, PEARL. The lifecycle is purpose declaration -> Bangel typing -> Elsa semantic recovery -> JP formula CAPO -> MK applicability and dimensional review -> JO proof -> applicable safety/accounting receipts -> MJ decision -> JO evidence. JP carries the canonical representation; MK classifies physics applicability, units, boundaries, conservation, scale, and uncertainty; JO verifies types, formulas, tests, and receipts; applicable safety and accounting manifestations contribute evidence; MJ alone issues a bounded permit. Mathematical validity does not create physical or operational authority.

THEN

Then JO returns PASS_EVIDENCE, HOLD, FAIL_TECHNICAL, or DENY; MJ permission remains a separate gate.

CURRENT EVIDENCE

The individual TP-126 reference profile was executed and its identity, title and REFERENCE_ONLY ceiling matched. This is a documentary identity check, not execution of the full model. Explicit source links resolve to 1 Pink formula IDs: 0 have checked numeric profiles and 1 remain open.

INDIVIDUAL FORMULA LINKS

F-131

REMAINING REQUIREMENT

Bind model-specific inputs, operations and measured evidence before interpreting the paper as an executable implementation.

SOURCE REFERENCES

TP-126; BP-ALG-126

Evidence: evidence/rerun/teal/TP-126.json

TR-TP-127 / Outward angular-gap predicate

IF

If the Blue Page identity is invoked with declared inputs, scope, units, and evidence state.

HOW

Result dimensions: logical. Primary manifestations: JO, JP, MK. The lifecycle is purpose declaration -> Bangel typing -> Elsa semantic recovery -> JP formula CAPO -> MK applicability and dimensional review -> JO proof -> applicable safety/accounting receipts -> MJ decision -> JO evidence. JP carries the canonical representation; MK classifies physics applicability, units, boundaries, conservation, scale, and uncertainty; JO verifies types, formulas, tests, and receipts; applicable safety and accounting manifestations contribute evidence; MJ alone issues a bounded permit. Mathematical validity does not create physical or operational authority.

THEN

Then JO returns PASS_EVIDENCE, HOLD, FAIL_TECHNICAL, or DENY; MJ permission remains a separate gate.

CURRENT EVIDENCE

The individual TP-127 reference profile was executed and its identity, title and REFERENCE_ONLY ceiling matched. This is a documentary identity check, not execution of the full model. Explicit source links resolve to 1 Pink formula IDs: 0 have checked numeric profiles and 1 remain open.

INDIVIDUAL FORMULA LINKS

F-132

REMAINING REQUIREMENT

Bind model-specific inputs, operations and measured evidence before interpreting the paper as an executable implementation.

SOURCE REFERENCES

TP-127; BP-ALG-127

Evidence: evidence/rerun/teal/TP-127.json

TR-TP-128 / Available outlet pressure

IF

If the Blue Page identity is invoked with declared inputs, scope, units, and evidence state.

HOW

Result dimensions: pressure. Primary manifestations: JO, MK, SISTER. The lifecycle is purpose declaration -> Bangel typing -> Elsa semantic recovery -> JP formula CAPO -> MK applicability and dimensional review -> JO proof -> applicable safety/accounting receipts -> MJ decision -> JO evidence. JP carries the canonical representation; MK classifies physics applicability, units, boundaries, conservation, scale, and uncertainty; JO verifies types, formulas, tests, and receipts; applicable safety and accounting manifestations contribute evidence; MJ alone issues a bounded permit. Mathematical validity does not create physical or operational authority.

THEN

Then JO returns PASS_EVIDENCE, HOLD, FAIL_TECHNICAL, or DENY; MJ permission remains a separate gate.

CURRENT EVIDENCE

The individual TP-128 reference profile was executed and its identity, title and REFERENCE_ONLY ceiling matched. This is a documentary identity check, not execution of the full model. Explicit source links resolve to 1 Pink formula IDs: 1 have checked numeric profiles and 0 remain open.

INDIVIDUAL FORMULA LINKS

F-133

REMAINING REQUIREMENT

Bind model-specific inputs, operations and measured evidence before interpreting the paper as an executable implementation.

SOURCE REFERENCES

TP-128; BP-ALG-128

Evidence: evidence/rerun/teal/TP-128.json

TR-TP-129 / Outlet pressure margin

IF

If the Blue Page identity is invoked with declared inputs, scope, units, and evidence state.

HOW

Result dimensions: pressure. Primary manifestations: JO, MK. The lifecycle is purpose declaration -> Bangel typing -> Elsa semantic recovery -> JP formula CAPO -> MK applicability and dimensional review -> JO proof -> applicable safety/accounting receipts -> MJ decision -> JO evidence. JP carries the canonical representation; MK classifies physics applicability, units, boundaries, conservation, scale, and uncertainty; JO verifies types, formulas, tests, and receipts; applicable safety and accounting manifestations contribute evidence; MJ alone issues a bounded permit. Mathematical validity does not create physical or operational authority.

THEN

Then JO returns PASS_EVIDENCE, HOLD, FAIL_TECHNICAL, or DENY; MJ permission remains a separate gate.

CURRENT EVIDENCE

The individual TP-129 reference profile was executed and its identity, title and REFERENCE_ONLY ceiling matched. This is a documentary identity check, not execution of the full model. Explicit source links resolve to 1 Pink formula IDs: 1 have checked numeric profiles and 0 remain open.

INDIVIDUAL FORMULA LINKS

F-134

REMAINING REQUIREMENT

Bind model-specific inputs, operations and measured evidence before interpreting the paper as an executable implementation.

SOURCE REFERENCES

TP-129; BP-ALG-129

Evidence: evidence/rerun/teal/TP-129.json

TR-TP-130 / Minimum outlet grade / Selected positive outlet grade

IF

If the Blue Page identity is invoked with declared inputs, scope, units, and evidence state.

HOW

Result dimensions: angle. Primary manifestations: JO, JP, MJ, MK. The lifecycle is purpose declaration -> Bangel typing -> Elsa semantic recovery -> JP formula CAPO -> MK applicability and dimensional review -> JO proof -> applicable safety/accounting receipts -> MJ decision -> JO evidence. JP carries the canonical representation; MK classifies physics applicability, units, boundaries, conservation, scale, and uncertainty; JO verifies types, formulas, tests, and receipts; applicable safety and accounting manifestations contribute evidence; MJ alone issues a bounded permit. Mathematical validity does not create physical or operational authority.

THEN

Then JO returns PASS_EVIDENCE, HOLD, FAIL_TECHNICAL, or DENY; MJ permission remains a separate gate.

CURRENT EVIDENCE

The individual TP-130 reference profile was executed and its identity, title and REFERENCE_ONLY ceiling matched. This is a documentary identity check, not execution of the full model. Explicit source links resolve to 2 Pink formula IDs: 1 have checked numeric profiles and 1 remain open.

INDIVIDUAL FORMULA LINKS

F-135, F-136

REMAINING REQUIREMENT

Bind model-specific inputs, operations and measured evidence before interpreting the paper as an executable implementation.

SOURCE REFERENCES

TP-130; BP-ALG-130

Evidence: evidence/rerun/teal/TP-130.json

TR-TP-131 / Incompressible reference outlet flow

IF

If the Blue Page identity is invoked with declared inputs, scope, units, and evidence state.

HOW

Result dimensions: volume/time. Primary manifestations: JO, MK. The lifecycle is purpose declaration -> Bangel typing -> Elsa semantic recovery -> JP formula CAPO -> MK applicability and dimensional review -> JO proof -> applicable safety/accounting receipts -> MJ decision -> JO evidence. JP carries the canonical representation; MK classifies physics applicability, units, boundaries, conservation, scale, and uncertainty; JO verifies types, formulas, tests, and receipts; applicable safety and accounting manifestations contribute evidence; MJ alone issues a bounded permit. Mathematical validity does not create physical or operational authority.

THEN

Then JO returns PASS_EVIDENCE, HOLD, FAIL_TECHNICAL, or DENY; MJ permission remains a separate gate.

CURRENT EVIDENCE

The individual TP-131 reference profile was executed and its identity, title and REFERENCE_ONLY ceiling matched. This is a documentary identity check, not execution of the full model. Explicit source links resolve to 1 Pink formula IDs: 1 have checked numeric profiles and 0 remain open.

INDIVIDUAL FORMULA LINKS

F-137

REMAINING REQUIREMENT

Bind model-specific inputs, operations and measured evidence before interpreting the paper as an executable implementation.

SOURCE REFERENCES

TP-131; BP-ALG-131

Evidence: evidence/rerun/teal/TP-131.json

TR-TP-132 / Mean outlet velocity

IF

If the Blue Page identity is invoked with declared inputs, scope, units, and evidence state.

HOW

Result dimensions: length/time. Primary manifestations: JO, MK. The lifecycle is purpose declaration -> Bangel typing -> Elsa semantic recovery -> JP formula CAPO -> MK applicability and dimensional review -> JO proof -> applicable safety/accounting receipts -> MJ decision -> JO evidence. JP carries the canonical representation; MK classifies physics applicability, units, boundaries, conservation, scale, and uncertainty; JO verifies types, formulas, tests, and receipts; applicable safety and accounting manifestations contribute evidence; MJ alone issues a bounded permit. Mathematical validity does not create physical or operational authority.

THEN

Then JO returns PASS_EVIDENCE, HOLD, FAIL_TECHNICAL, or DENY; MJ permission remains a separate gate.

CURRENT EVIDENCE

The individual TP-132 reference profile was executed and its identity, title and REFERENCE_ONLY ceiling matched. This is a documentary identity check, not execution of the full model. Explicit source links resolve to 1 Pink formula IDs: 1 have checked numeric profiles and 0 remain open.

INDIVIDUAL FORMULA LINKS

F-138

REMAINING REQUIREMENT

Bind model-specific inputs, operations and measured evidence before interpreting the paper as an executable implementation.

SOURCE REFERENCES

TP-132; BP-ALG-132

Evidence: evidence/rerun/teal/TP-132.json

TR-TP-133 / Weber number reference

IF

If the Blue Page identity is invoked with declared inputs, scope, units, and evidence state.

HOW

Result dimensions: dimensionless. Primary manifestations: JO, MK. The lifecycle is purpose declaration -> Bangel typing -> Elsa semantic recovery -> JP formula CAPO -> MK applicability and dimensional review -> JO proof -> applicable safety/accounting receipts -> MJ decision -> JO evidence. JP carries the canonical representation; MK classifies physics applicability, units, boundaries, conservation, scale, and uncertainty; JO verifies types, formulas, tests, and receipts; applicable safety and accounting manifestations contribute evidence; MJ alone issues a bounded permit. Mathematical validity does not create physical or operational authority.

THEN

Then JO returns PASS_EVIDENCE, HOLD, FAIL_TECHNICAL, or DENY; MJ permission remains a separate gate.

CURRENT EVIDENCE

The individual TP-133 reference profile was executed and its identity, title and REFERENCE_ONLY ceiling matched. This is a documentary identity check, not execution of the full model. Explicit source links resolve to 1 Pink formula IDs: 1 have checked numeric profiles and 0 remain open.

INDIVIDUAL FORMULA LINKS

F-139

REMAINING REQUIREMENT

Bind model-specific inputs, operations and measured evidence before interpreting the paper as an executable implementation.

SOURCE REFERENCES

TP-133; BP-ALG-133

Evidence: evidence/rerun/teal/TP-133.json

TR-TP-134 / Wave amplitude ratio

IF

If the Blue Page identity is invoked with declared inputs, scope, units, and evidence state.

HOW

Result dimensions: dimensionless. Primary manifestations: EVE, JO, MK. The lifecycle is purpose declaration -> Bangel typing -> Elsa semantic recovery -> JP formula CAPO -> MK applicability and dimensional review -> JO proof -> applicable safety/accounting receipts -> MJ decision -> JO evidence. JP carries the canonical representation; MK classifies physics applicability, units, boundaries, conservation, scale, and uncertainty; JO verifies types, formulas, tests, and receipts; applicable safety and accounting manifestations contribute evidence; MJ alone issues a bounded permit. Mathematical validity does not create physical or operational authority.

THEN

Then JO returns PASS_EVIDENCE, HOLD, FAIL_TECHNICAL, or DENY; MJ permission remains a separate gate.

CURRENT EVIDENCE

The individual TP-134 reference profile was executed and its identity, title and REFERENCE_ONLY ceiling matched. This is a documentary identity check, not execution of the full model. Explicit source links resolve to 1 Pink formula IDs: 1 have checked numeric profiles and 0 remain open.

INDIVIDUAL FORMULA LINKS

F-140

REMAINING REQUIREMENT

Bind model-specific inputs, operations and measured evidence before interpreting the paper as an executable implementation.

SOURCE REFERENCES

TP-134; BP-ALG-134

Evidence: evidence/rerun/teal/TP-134.json

TR-TP-135 / Small-wave observation gate

IF

If the Blue Page identity is invoked with declared inputs, scope, units, and evidence state.

HOW

Result dimensions: logical. Primary manifestations: ANGELS, JO, MK. The lifecycle is purpose declaration -> Bangel typing -> Elsa semantic recovery -> JP formula CAPO -> MK applicability and dimensional review -> JO proof -> applicable safety/accounting receipts -> MJ decision -> JO evidence. JP carries the canonical representation; MK classifies physics applicability, units, boundaries, conservation, scale, and uncertainty; JO verifies types, formulas, tests, and receipts; applicable safety and accounting manifestations contribute evidence; MJ alone issues a bounded permit. Mathematical validity does not create physical or operational authority.

THEN

Then JO returns PASS_EVIDENCE, HOLD, FAIL_TECHNICAL, or DENY; MJ permission remains a separate gate.

CURRENT EVIDENCE

The individual TP-135 reference profile was executed and its identity, title and REFERENCE_ONLY ceiling matched. This is a documentary identity check, not execution of the full model. Explicit source links resolve to 1 Pink formula IDs: 0 have checked numeric profiles and 1 remain open.

INDIVIDUAL FORMULA LINKS

F-141

REMAINING REQUIREMENT

Bind model-specific inputs, operations and measured evidence before interpreting the paper as an executable implementation.

SOURCE REFERENCES

TP-135; BP-ALG-135

Evidence: evidence/rerun/teal/TP-135.json

TR-TP-136 / Discrete reservoir inventory

IF

If the Blue Page identity is invoked with declared inputs, scope, units, and evidence state.

HOW

Result dimensions: typed quantity. Primary manifestations: EVE, JO, M3, MERMAID. The lifecycle is purpose declaration -> Bangel typing -> Elsa semantic recovery -> JP formula CAPO -> MK applicability and dimensional review -> JO proof -> applicable safety/accounting receipts -> MJ decision -> JO evidence. JP carries the canonical representation; MK classifies physics applicability, units, boundaries, conservation, scale, and uncertainty; JO verifies types, formulas, tests, and receipts; applicable safety and accounting manifestations contribute evidence; MJ alone issues a bounded permit. Mathematical validity does not create physical or operational authority.

THEN

Then JO returns PASS_EVIDENCE, HOLD, FAIL_TECHNICAL, or DENY; MJ permission remains a separate gate.

CURRENT EVIDENCE

The individual TP-136 reference profile was executed and its identity, title and REFERENCE_ONLY ceiling matched. This is a documentary identity check, not execution of the full model. Explicit source links resolve to 1 Pink formula IDs: 1 have checked numeric profiles and 0 remain open.

INDIVIDUAL FORMULA LINKS

F-142

REMAINING REQUIREMENT

Bind model-specific inputs, operations and measured evidence before interpreting the paper as an executable implementation.

SOURCE REFERENCES

TP-136; BP-ALG-136

Evidence: evidence/rerun/teal/TP-136.json

TR-TP-137 / Vector reservoir headroom

IF

If the Blue Page identity is invoked with declared inputs, scope, units, and evidence state.

HOW

Result dimensions: typed capacity. Primary manifestations: EVE, JO, SISTER. The lifecycle is purpose declaration -> Bangel typing -> Elsa semantic recovery -> JP formula CAPO -> MK applicability and dimensional review -> JO proof -> applicable safety/accounting receipts -> MJ decision -> JO evidence. JP carries the canonical representation; MK classifies physics applicability, units, boundaries, conservation, scale, and uncertainty; JO verifies types, formulas, tests, and receipts; applicable safety and accounting manifestations contribute evidence; MJ alone issues a bounded permit. Mathematical validity does not create physical or operational authority.

THEN

Then JO returns PASS_EVIDENCE, HOLD, FAIL_TECHNICAL, or DENY; MJ permission remains a separate gate.

CURRENT EVIDENCE

The individual TP-137 reference profile was executed and its identity, title and REFERENCE_ONLY ceiling matched. This is a documentary identity check, not execution of the full model. Explicit source links resolve to 1 Pink formula IDs: 1 have checked numeric profiles and 0 remain open.

INDIVIDUAL FORMULA LINKS

F-143

REMAINING REQUIREMENT

Bind model-specific inputs, operations and measured evidence before interpreting the paper as an executable implementation.

SOURCE REFERENCES

TP-137; BP-ALG-137

Evidence: evidence/rerun/teal/TP-137.json

TR-TP-138 / Vector reservoir admission / No same-cycle feedback predicate

IF

If the Blue Page identity is invoked with declared inputs, scope, units, and evidence state.

HOW

Result dimensions: logical. Primary manifestations: ANGELS, JO, M3, MJ, MK. The lifecycle is purpose declaration -> Bangel typing -> Elsa semantic recovery -> JP formula CAPO -> MK applicability and dimensional review -> JO proof -> applicable safety/accounting receipts -> MJ decision -> JO evidence. JP carries the canonical representation; MK classifies physics applicability, units, boundaries, conservation, scale, and uncertainty; JO verifies types, formulas, tests, and receipts; applicable safety and accounting manifestations contribute evidence; MJ alone issues a bounded permit. Mathematical validity does not create physical or operational authority.

THEN

Then JO returns PASS_EVIDENCE, HOLD, FAIL_TECHNICAL, or DENY; MJ permission remains a separate gate.

CURRENT EVIDENCE

The individual TP-138 reference profile was executed and its identity, title and REFERENCE_ONLY ceiling matched. This is a documentary identity check, not execution of the full model. Explicit source links resolve to 2 Pink formula IDs: 0 have checked numeric profiles and 2 remain open.

INDIVIDUAL FORMULA LINKS

F-144, F-145

REMAINING REQUIREMENT

Bind model-specific inputs, operations and measured evidence before interpreting the paper as an executable implementation.

SOURCE REFERENCES

TP-138; BP-ALG-138

Evidence: evidence/rerun/teal/TP-138.json

TR-TP-139 / Solar/auxiliary/recovery input energy / Solar system energy conservation

IF

If the Blue Page identity is invoked with declared inputs, scope, units, and evidence state.

HOW

Result dimensions: energy. Primary manifestations: EVE, JO, JP, M3, MERMAID, MJ, MJOS, MK, SISTER. The lifecycle is purpose declaration -> Bangel typing -> Elsa semantic recovery -> JP formula CAPO -> MK applicability and dimensional review -> JO proof -> applicable safety/accounting receipts -> MJ decision -> JO evidence. JP carries the canonical representation; MK classifies physics applicability, units, boundaries, conservation, scale, and uncertainty; JO verifies types, formulas, tests, and receipts; applicable safety and accounting manifestations contribute evidence; MJ alone issues a bounded permit. Mathematical validity does not create physical or operational authority.

THEN

Then JO returns PASS_EVIDENCE, HOLD, FAIL_TECHNICAL, or DENY; MJ permission remains a separate gate.

CURRENT EVIDENCE

The individual TP-139 reference profile was executed and its identity, title and REFERENCE_ONLY ceiling matched. This is a documentary identity check, not execution of the full model. Explicit source links resolve to 2 Pink formula IDs: 2 have checked numeric profiles and 0 remain open.

INDIVIDUAL FORMULA LINKS

F-146, F-147

REMAINING REQUIREMENT

Bind model-specific inputs, operations and measured evidence before interpreting the paper as an executable implementation.

SOURCE REFERENCES

TP-139; BP-ALG-139

Evidence: evidence/rerun/teal/TP-139.json

TR-TP-140 / Instantaneous power balance / Conservative reserve margin

IF

If the Blue Page identity is invoked with declared inputs, scope, units, and evidence state.

HOW

Result dimensions: energy, power. Primary manifestations: EVE, JO, JP, M3, MERMAID, MJ, MJOS, MK, SISTER. The lifecycle is purpose declaration -> Bangel typing -> Elsa semantic recovery -> JP formula CAPO -> MK applicability and dimensional review -> JO proof -> applicable safety/accounting receipts -> MJ decision -> JO evidence. JP carries the canonical representation; MK classifies physics applicability, units, boundaries, conservation, scale, and uncertainty; JO verifies types, formulas, tests, and receipts; applicable safety and accounting manifestations contribute evidence; MJ alone issues a bounded permit. Mathematical validity does not create physical or operational authority.

THEN

Then JO returns PASS_EVIDENCE, HOLD, FAIL_TECHNICAL, or DENY; MJ permission remains a separate gate.

CURRENT EVIDENCE

The individual TP-140 reference profile was executed and its identity, title and REFERENCE_ONLY ceiling matched. This is a documentary identity check, not execution of the full model. Explicit source links resolve to 2 Pink formula IDs: 2 have checked numeric profiles and 0 remain open.

INDIVIDUAL FORMULA LINKS

F-148, F-149

REMAINING REQUIREMENT

Bind model-specific inputs, operations and measured evidence before interpreting the paper as an executable implementation.

SOURCE REFERENCES

TP-140; BP-ALG-140

Evidence: evidence/rerun/teal/TP-140.json

TR-TP-141 / Path efficiency / Bounded storage state update

IF

If the Blue Page identity is invoked with declared inputs, scope, units, and evidence state.

HOW

Result dimensions: ratio. Primary manifestations: EVE, JO, JP, M3, MERMAID, MJ, MJOS, MK, SISTER. The lifecycle is purpose declaration -> Bangel typing -> Elsa semantic recovery -> JP formula CAPO -> MK applicability and dimensional review -> JO proof -> applicable safety/accounting receipts -> MJ decision -> JO evidence. JP carries the canonical representation; MK classifies physics applicability, units, boundaries, conservation, scale, and uncertainty; JO verifies types, formulas, tests, and receipts; applicable safety and accounting manifestations contribute evidence; MJ alone issues a bounded permit. Mathematical validity does not create physical or operational authority.

THEN

Then JO returns PASS_EVIDENCE, HOLD, FAIL_TECHNICAL, or DENY; MJ permission remains a separate gate.

CURRENT EVIDENCE

The individual TP-141 reference profile was executed and its identity, title and REFERENCE_ONLY ceiling matched. This is a documentary identity check, not execution of the full model. Explicit source links resolve to 2 Pink formula IDs: 2 have checked numeric profiles and 0 remain open.

INDIVIDUAL FORMULA LINKS

F-150, F-151

REMAINING REQUIREMENT

Bind model-specific inputs, operations and measured evidence before interpreting the paper as an executable implementation.

SOURCE REFERENCES

TP-141; BP-ALG-141

Evidence: evidence/rerun/teal/TP-141.json

TR-TP-142 / Thermal first-order update / Predicted bus voltage

IF

If the Blue Page identity is invoked with declared inputs, scope, units, and evidence state.

HOW

Result dimensions: temperature, voltage. Primary manifestations: EVE, JO, JP, M3, MERMAID, MJ, MJOS, MK, SISTER. The lifecycle is purpose declaration -> Bangel typing -> Elsa semantic recovery -> JP formula CAPO -> MK applicability and dimensional review -> JO proof -> applicable safety/accounting receipts -> MJ decision -> JO evidence. JP carries the canonical representation; MK classifies physics applicability, units, boundaries, conservation, scale, and uncertainty; JO verifies types, formulas, tests, and receipts; applicable safety and accounting manifestations contribute evidence; MJ alone issues a bounded permit. Mathematical validity does not create physical or operational authority.

THEN

Then JO returns PASS_EVIDENCE, HOLD, FAIL_TECHNICAL, or DENY; MJ permission remains a separate gate.

CURRENT EVIDENCE

The individual TP-142 reference profile was executed and its identity, title and REFERENCE_ONLY ceiling matched. This is a documentary identity check, not execution of the full model. Explicit source links resolve to 2 Pink formula IDs: 2 have checked numeric profiles and 0 remain open.

INDIVIDUAL FORMULA LINKS

F-152, F-153

REMAINING REQUIREMENT

Bind model-specific inputs, operations and measured evidence before interpreting the paper as an executable implementation.

SOURCE REFERENCES

TP-142; BP-ALG-142

Evidence: evidence/rerun/teal/TP-142.json

TR-TP-143 / Shared start/admission gate / Cross-profile transfer gate

IF

If the Blue Page identity is invoked with declared inputs, scope, units, and evidence state.

HOW

Result dimensions: logical. Primary manifestations: EVE, JO, JP, M3, MERMAID, MJ, MJOS, MK, SISTER. The lifecycle is purpose declaration -> Bangel typing -> Elsa semantic recovery -> JP formula CAPO -> MK applicability and dimensional review -> JO proof -> applicable safety/accounting receipts -> MJ decision -> JO evidence. JP carries the canonical representation; MK classifies physics applicability, units, boundaries, conservation, scale, and uncertainty; JO verifies types, formulas, tests, and receipts; applicable safety and accounting manifestations contribute evidence; MJ alone issues a bounded permit. Mathematical validity does not create physical or operational authority.

THEN

Then JO returns PASS_EVIDENCE, HOLD, FAIL_TECHNICAL, or DENY; MJ permission remains a separate gate.

CURRENT EVIDENCE

The individual TP-143 reference profile was executed and its identity, title and REFERENCE_ONLY ceiling matched. This is a documentary identity check, not execution of the full model. Explicit source links resolve to 2 Pink formula IDs: 0 have checked numeric profiles and 2 remain open.

INDIVIDUAL FORMULA LINKS

F-154, F-155

REMAINING REQUIREMENT

Bind model-specific inputs, operations and measured evidence before interpreting the paper as an executable implementation.

SOURCE REFERENCES

TP-143; BP-ALG-143

Evidence: evidence/rerun/teal/TP-143.json

TR-TP-144 / Solar uncertainty propagation / Solar evidence-state transition

IF

If the Blue Page identity is invoked with declared inputs, scope, units, and evidence state.

HOW

Result dimensions: state, uncertainty. Primary manifestations: EVE, JO, JP, M3, MERMAID, MJ, MJOS, MK, SISTER. The lifecycle is purpose declaration -> Bangel typing -> Elsa semantic recovery -> JP formula CAPO -> MK applicability and dimensional review -> JO proof -> applicable safety/accounting receipts -> MJ decision -> JO evidence. JP carries the canonical representation; MK classifies physics applicability, units, boundaries, conservation, scale, and uncertainty; JO verifies types, formulas, tests, and receipts; applicable safety and accounting manifestations contribute evidence; MJ alone issues a bounded permit. Mathematical validity does not create physical or operational authority.

THEN

Then JO returns PASS_EVIDENCE, HOLD, FAIL_TECHNICAL, or DENY; MJ permission remains a separate gate.

CURRENT EVIDENCE

The individual TP-144 reference profile was executed and its identity, title and REFERENCE_ONLY ceiling matched. This is a documentary identity check, not execution of the full model. Explicit source links resolve to 2 Pink formula IDs: 0 have checked numeric profiles and 2 remain open.

INDIVIDUAL FORMULA LINKS

F-156, F-157

REMAINING REQUIREMENT

Bind model-specific inputs, operations and measured evidence before interpreting the paper as an executable implementation.

SOURCE REFERENCES

TP-144; BP-ALG-144

Evidence: evidence/rerun/teal/TP-144.json

TR-TP-145 / Phone-profile solar energy / Workload-aware power demand

IF

If the Blue Page identity is invoked with declared inputs, scope, units, and evidence state.

HOW

Result dimensions: energy, power. Primary manifestations: JO, JP, M3, MERMAID, MJ, MJOS, MK. The lifecycle is purpose declaration -> Bangel typing -> Elsa semantic recovery -> JP formula CAPO -> MK applicability and dimensional review -> JO proof -> applicable safety/accounting receipts -> MJ decision -> JO evidence. JP carries the canonical representation; MK classifies physics applicability, units, boundaries, conservation, scale, and uncertainty; JO verifies types, formulas, tests, and receipts; applicable safety and accounting manifestations contribute evidence; MJ alone issues a bounded permit. Mathematical validity does not create physical or operational authority.

THEN

Then JO returns PASS_EVIDENCE, HOLD, FAIL_TECHNICAL, or DENY; MJ permission remains a separate gate.

CURRENT EVIDENCE

The individual TP-145 reference profile was executed and its identity, title and REFERENCE_ONLY ceiling matched. This is a documentary identity check, not execution of the full model. Explicit source links resolve to 2 Pink formula IDs: 0 have checked numeric profiles and 2 remain open.

INDIVIDUAL FORMULA LINKS

F-158, F-159

REMAINING REQUIREMENT

Bind model-specific inputs, operations and measured evidence before interpreting the paper as an executable implementation.

SOURCE REFERENCES

TP-145; BP-ALG-145

Evidence: evidence/rerun/teal/TP-145.json

TR-TP-146 / Phone reserve duration / Phone energy deficit

IF

If the Blue Page identity is invoked with declared inputs, scope, units, and evidence state.

HOW

Result dimensions: energy, time. Primary manifestations: JO, JP, M3, MERMAID, MJ, MJOS, MK. The lifecycle is purpose declaration -> Bangel typing -> Elsa semantic recovery -> JP formula CAPO -> MK applicability and dimensional review -> JO proof -> applicable safety/accounting receipts -> MJ decision -> JO evidence. JP carries the canonical representation; MK classifies physics applicability, units, boundaries, conservation, scale, and uncertainty; JO verifies types, formulas, tests, and receipts; applicable safety and accounting manifestations contribute evidence; MJ alone issues a bounded permit. Mathematical validity does not create physical or operational authority.

THEN

Then JO returns PASS_EVIDENCE, HOLD, FAIL_TECHNICAL, or DENY; MJ permission remains a separate gate.

CURRENT EVIDENCE

The individual TP-146 reference profile was executed and its identity, title and REFERENCE_ONLY ceiling matched. This is a documentary identity check, not execution of the full model. Explicit source links resolve to 2 Pink formula IDs: 2 have checked numeric profiles and 0 remain open.

INDIVIDUAL FORMULA LINKS

F-160, F-161

REMAINING REQUIREMENT

Bind model-specific inputs, operations and measured evidence before interpreting the paper as an executable implementation.

SOURCE REFERENCES

TP-146; BP-ALG-146

Evidence: evidence/rerun/teal/TP-146.json

TR-TP-147 / Environment-dependent leakage

IF

If the Blue Page identity is invoked with declared inputs, scope, units, and evidence state.

HOW

Result dimensions: current. Primary manifestations: JO, JP, M3, MERMAID, MJ, MJOS, MK. The lifecycle is purpose declaration -> Bangel typing -> Elsa semantic recovery -> JP formula CAPO -> MK applicability and dimensional review -> JO proof -> applicable safety/accounting receipts -> MJ decision -> JO evidence. JP carries the canonical representation; MK classifies physics applicability, units, boundaries, conservation, scale, and uncertainty; JO verifies types, formulas, tests, and receipts; applicable safety and accounting manifestations contribute evidence; MJ alone issues a bounded permit. Mathematical validity does not create physical or operational authority.

THEN

Then JO returns PASS_EVIDENCE, HOLD, FAIL_TECHNICAL, or DENY; MJ permission remains a separate gate.

CURRENT EVIDENCE

The individual TP-147 reference profile was executed and its identity, title and REFERENCE_ONLY ceiling matched. This is a documentary identity check, not execution of the full model. Explicit source links resolve to 1 Pink formula IDs: 0 have checked numeric profiles and 1 remain open.

INDIVIDUAL FORMULA LINKS

F-162

REMAINING REQUIREMENT

Bind model-specific inputs, operations and measured evidence before interpreting the paper as an executable implementation.

SOURCE REFERENCES

TP-147; BP-ALG-147

Evidence: evidence/rerun/teal/TP-147.json

TR-TP-148 / Wake energy accounting / Phone thermal margin

IF

If the Blue Page identity is invoked with declared inputs, scope, units, and evidence state.

HOW

Result dimensions: energy, temperature. Primary manifestations: JO, JP, M3, MERMAID, MJ, MJOS, MK. The lifecycle is purpose declaration -> Bangel typing -> Elsa semantic recovery -> JP formula CAPO -> MK applicability and dimensional review -> JO proof -> applicable safety/accounting receipts -> MJ decision -> JO evidence. JP carries the canonical representation; MK classifies physics applicability, units, boundaries, conservation, scale, and uncertainty; JO verifies types, formulas, tests, and receipts; applicable safety and accounting manifestations contribute evidence; MJ alone issues a bounded permit. Mathematical validity does not create physical or operational authority.

THEN

Then JO returns PASS_EVIDENCE, HOLD, FAIL_TECHNICAL, or DENY; MJ permission remains a separate gate.

CURRENT EVIDENCE

The individual TP-148 reference profile was executed and its identity, title and REFERENCE_ONLY ceiling matched. This is a documentary identity check, not execution of the full model. Explicit source links resolve to 2 Pink formula IDs: 1 have checked numeric profiles and 1 remain open.

INDIVIDUAL FORMULA LINKS

F-163, F-164

REMAINING REQUIREMENT

Bind model-specific inputs, operations and measured evidence before interpreting the paper as an executable implementation.

SOURCE REFERENCES

TP-148; BP-ALG-148

Evidence: evidence/rerun/teal/TP-148.json

TR-TP-149 / Useful work per delivered energy / Data-performance correlation

IF

If the Blue Page identity is invoked with declared inputs, scope, units, and evidence state.

HOW

Result dimensions: ratio, work_per_energy. Primary manifestations: JO, JP, M3, MERMAID, MJ, MJOS, MK. The lifecycle is purpose declaration -> Bangel typing -> Elsa semantic recovery -> JP formula CAPO -> MK applicability and dimensional review -> JO proof -> applicable safety/accounting receipts -> MJ decision -> JO evidence. JP carries the canonical representation; MK classifies physics applicability, units, boundaries, conservation, scale, and uncertainty; JO verifies types, formulas, tests, and receipts; applicable safety and accounting manifestations contribute evidence; MJ alone issues a bounded permit. Mathematical validity does not create physical or operational authority.

THEN

Then JO returns PASS_EVIDENCE, HOLD, FAIL_TECHNICAL, or DENY; MJ permission remains a separate gate.

CURRENT EVIDENCE

The individual TP-149 reference profile was executed and its identity, title and REFERENCE_ONLY ceiling matched. This is a documentary identity check, not execution of the full model. Explicit source links resolve to 2 Pink formula IDs: 2 have checked numeric profiles and 0 remain open.

INDIVIDUAL FORMULA LINKS

F-165, F-166

REMAINING REQUIREMENT

Bind model-specific inputs, operations and measured evidence before interpreting the paper as an executable implementation.

SOURCE REFERENCES

TP-149; BP-ALG-149

Evidence: evidence/rerun/teal/TP-149.json

TR-TP-150 / Workload allocation update / Semiconductor scale map

IF

If the Blue Page identity is invoked with declared inputs, scope, units, and evidence state.

HOW

Result dimensions: length_vector, ratio_vector. Primary manifestations: JO, JP, M3, MERMAID, MJ, MJOS, MK. The lifecycle is purpose declaration -> Bangel typing -> Elsa semantic recovery -> JP formula CAPO -> MK applicability and dimensional review -> JO proof -> applicable safety/accounting receipts -> MJ decision -> JO evidence. JP carries the canonical representation; MK classifies physics applicability, units, boundaries, conservation, scale, and uncertainty; JO verifies types, formulas, tests, and receipts; applicable safety and accounting manifestations contribute evidence; MJ alone issues a bounded permit. Mathematical validity does not create physical or operational authority.

THEN

Then JO returns PASS_EVIDENCE, HOLD, FAIL_TECHNICAL, or DENY; MJ permission remains a separate gate.

CURRENT EVIDENCE

The individual TP-150 reference profile was executed and its identity, title and REFERENCE_ONLY ceiling matched. This is a documentary identity check, not execution of the full model. Explicit source links resolve to 2 Pink formula IDs: 0 have checked numeric profiles and 2 remain open.

INDIVIDUAL FORMULA LINKS

F-167, F-168

REMAINING REQUIREMENT

Bind model-specific inputs, operations and measured evidence before interpreting the paper as an executable implementation.

SOURCE REFERENCES

TP-150; BP-ALG-150

Evidence: evidence/rerun/teal/TP-150.json

TR-TP-151 / Phone-profile evidence completeness / Marine solar-array energy

IF

If the Blue Page identity is invoked with declared inputs, scope, units, and evidence state.

HOW

Result dimensions: energy, logical. Primary manifestations: EVE, JO, JP, M3, MERMAID, MJ, MJOS, MK, SISTER. The lifecycle is purpose declaration -> Bangel typing -> Elsa semantic recovery -> JP formula CAPO -> MK applicability and dimensional review -> JO proof -> applicable safety/accounting receipts -> MJ decision -> JO evidence. JP carries the canonical representation; MK classifies physics applicability, units, boundaries, conservation, scale, and uncertainty; JO verifies types, formulas, tests, and receipts; applicable safety and accounting manifestations contribute evidence; MJ alone issues a bounded permit. Mathematical validity does not create physical or operational authority.

THEN

Then JO returns PASS_EVIDENCE, HOLD, FAIL_TECHNICAL, or DENY; MJ permission remains a separate gate.

CURRENT EVIDENCE

The individual TP-151 reference profile was executed and its identity, title and REFERENCE_ONLY ceiling matched. This is a documentary identity check, not execution of the full model. Explicit source links resolve to 2 Pink formula IDs: 0 have checked numeric profiles and 2 remain open.

INDIVIDUAL FORMULA LINKS

F-169, F-170

REMAINING REQUIREMENT

Bind model-specific inputs, operations and measured evidence before interpreting the paper as an executable implementation.

SOURCE REFERENCES

TP-151; BP-ALG-151

Evidence: evidence/rerun/teal/TP-151.json

TR-TP-152 / Marine propulsion/load power / Marine mission energy

IF

If the Blue Page identity is invoked with declared inputs, scope, units, and evidence state.

HOW

Result dimensions: energy, power. Primary manifestations: EVE, JO, JP, M3, MERMAID, MJ, MJOS, MK, SISTER. The lifecycle is purpose declaration -> Bangel typing -> Elsa semantic recovery -> JP formula CAPO -> MK applicability and dimensional review -> JO proof -> applicable safety/accounting receipts -> MJ decision -> JO evidence. JP carries the canonical representation; MK classifies physics applicability, units, boundaries, conservation, scale, and uncertainty; JO verifies types, formulas, tests, and receipts; applicable safety and accounting manifestations contribute evidence; MJ alone issues a bounded permit. Mathematical validity does not create physical or operational authority.

THEN

Then JO returns PASS_EVIDENCE, HOLD, FAIL_TECHNICAL, or DENY; MJ permission remains a separate gate.

CURRENT EVIDENCE

The individual TP-152 reference profile was executed and its identity, title and REFERENCE_ONLY ceiling matched. This is a documentary identity check, not execution of the full model. Explicit source links resolve to 2 Pink formula IDs: 1 have checked numeric profiles and 1 remain open.

INDIVIDUAL FORMULA LINKS

F-171, F-172

REMAINING REQUIREMENT

Bind model-specific inputs, operations and measured evidence before interpreting the paper as an executable implementation.

SOURCE REFERENCES

TP-152; BP-ALG-152

Evidence: evidence/rerun/teal/TP-152.json

TR-TP-153 / Marine critical reserve duration / Marine DC bus balance

IF

If the Blue Page identity is invoked with declared inputs, scope, units, and evidence state.

HOW

Result dimensions: power, time. Primary manifestations: EVE, JO, JP, M3, MERMAID, MJ, MJOS, MK, SISTER. The lifecycle is purpose declaration -> Bangel typing -> Elsa semantic recovery -> JP formula CAPO -> MK applicability and dimensional review -> JO proof -> applicable safety/accounting receipts -> MJ decision -> JO evidence. JP carries the canonical representation; MK classifies physics applicability, units, boundaries, conservation, scale, and uncertainty; JO verifies types, formulas, tests, and receipts; applicable safety and accounting manifestations contribute evidence; MJ alone issues a bounded permit. Mathematical validity does not create physical or operational authority.

THEN

Then JO returns PASS_EVIDENCE, HOLD, FAIL_TECHNICAL, or DENY; MJ permission remains a separate gate.

CURRENT EVIDENCE

The individual TP-153 reference profile was executed and its identity, title and REFERENCE_ONLY ceiling matched. This is a documentary identity check, not execution of the full model. Explicit source links resolve to 2 Pink formula IDs: 2 have checked numeric profiles and 0 remain open.

INDIVIDUAL FORMULA LINKS

F-173, F-174

REMAINING REQUIREMENT

Bind model-specific inputs, operations and measured evidence before interpreting the paper as an executable implementation.

SOURCE REFERENCES

TP-153; BP-ALG-153

Evidence: evidence/rerun/teal/TP-153.json

TR-TP-154 / Precharge inrush reference

IF

If the Blue Page identity is invoked with declared inputs, scope, units, and evidence state.

HOW

Result dimensions: current. Primary manifestations: EVE, JO, JP, M3, MERMAID, MJ, MJOS, MK, SISTER. The lifecycle is purpose declaration -> Bangel typing -> Elsa semantic recovery -> JP formula CAPO -> MK applicability and dimensional review -> JO proof -> applicable safety/accounting receipts -> MJ decision -> JO evidence. JP carries the canonical representation; MK classifies physics applicability, units, boundaries, conservation, scale, and uncertainty; JO verifies types, formulas, tests, and receipts; applicable safety and accounting manifestations contribute evidence; MJ alone issues a bounded permit. Mathematical validity does not create physical or operational authority.

THEN

Then JO returns PASS_EVIDENCE, HOLD, FAIL_TECHNICAL, or DENY; MJ permission remains a separate gate.

CURRENT EVIDENCE

The individual TP-154 reference profile was executed and its identity, title and REFERENCE_ONLY ceiling matched. This is a documentary identity check, not execution of the full model. Explicit source links resolve to 1 Pink formula IDs: 1 have checked numeric profiles and 0 remain open.

INDIVIDUAL FORMULA LINKS

F-175

REMAINING REQUIREMENT

Bind model-specific inputs, operations and measured evidence before interpreting the paper as an executable implementation.

SOURCE REFERENCES

TP-154; BP-ALG-154

Evidence: evidence/rerun/teal/TP-154.json

TR-TP-155 / Wet/dry leakage ratio / Marine environment state vector

IF

If the Blue Page identity is invoked with declared inputs, scope, units, and evidence state.

HOW

Result dimensions: ratio, typed_vector. Primary manifestations: EVE, JO, JP, M3, MERMAID, MJ, MJOS, MK, SISTER. The lifecycle is purpose declaration -> Bangel typing -> Elsa semantic recovery -> JP formula CAPO -> MK applicability and dimensional review -> JO proof -> applicable safety/accounting receipts -> MJ decision -> JO evidence. JP carries the canonical representation; MK classifies physics applicability, units, boundaries, conservation, scale, and uncertainty; JO verifies types, formulas, tests, and receipts; applicable safety and accounting manifestations contribute evidence; MJ alone issues a bounded permit. Mathematical validity does not create physical or operational authority.

THEN

Then JO returns PASS_EVIDENCE, HOLD, FAIL_TECHNICAL, or DENY; MJ permission remains a separate gate.

CURRENT EVIDENCE

The individual TP-155 reference profile was executed and its identity, title and REFERENCE_ONLY ceiling matched. This is a documentary identity check, not execution of the full model. Explicit source links resolve to 2 Pink formula IDs: 1 have checked numeric profiles and 1 remain open.

INDIVIDUAL FORMULA LINKS

F-176, F-177

REMAINING REQUIREMENT

Bind model-specific inputs, operations and measured evidence before interpreting the paper as an executable implementation.

SOURCE REFERENCES

TP-155; BP-ALG-155

Evidence: evidence/rerun/teal/TP-155.json

TR-TP-156 / Vibration exposure / Recovered energy ceiling

IF

If the Blue Page identity is invoked with declared inputs, scope, units, and evidence state.

HOW

Result dimensions: acceleration_squared_time, energy. Primary manifestations: EVE, JO, JP, M3, MERMAID, MJ, MJOS, MK, SISTER. The lifecycle is purpose declaration -> Bangel typing -> Elsa semantic recovery -> JP formula CAPO -> MK applicability and dimensional review -> JO proof -> applicable safety/accounting receipts -> MJ decision -> JO evidence. JP carries the canonical representation; MK classifies physics applicability, units, boundaries, conservation, scale, and uncertainty; JO verifies types, formulas, tests, and receipts; applicable safety and accounting manifestations contribute evidence; MJ alone issues a bounded permit. Mathematical validity does not create physical or operational authority.

THEN

Then JO returns PASS_EVIDENCE, HOLD, FAIL_TECHNICAL, or DENY; MJ permission remains a separate gate.

CURRENT EVIDENCE

The individual TP-156 reference profile was executed and its identity, title and REFERENCE_ONLY ceiling matched. This is a documentary identity check, not execution of the full model. Explicit source links resolve to 2 Pink formula IDs: 1 have checked numeric profiles and 1 remain open.

INDIVIDUAL FORMULA LINKS

F-178, F-179

REMAINING REQUIREMENT

Bind model-specific inputs, operations and measured evidence before interpreting the paper as an executable implementation.

SOURCE REFERENCES

TP-156; BP-ALG-156

Evidence: evidence/rerun/teal/TP-156.json

TR-TP-157 / Priority load shedding / Marine evidence and permit gate

IF

If the Blue Page identity is invoked with declared inputs, scope, units, and evidence state.

HOW

Result dimensions: logical. Primary manifestations: EVE, JO, JP, M3, MERMAID, MJ, MJOS, MK, SISTER. The lifecycle is purpose declaration -> Bangel typing -> Elsa semantic recovery -> JP formula CAPO -> MK applicability and dimensional review -> JO proof -> applicable safety/accounting receipts -> MJ decision -> JO evidence. JP carries the canonical representation; MK classifies physics applicability, units, boundaries, conservation, scale, and uncertainty; JO verifies types, formulas, tests, and receipts; applicable safety and accounting manifestations contribute evidence; MJ alone issues a bounded permit. Mathematical validity does not create physical or operational authority.

THEN

Then JO returns PASS_EVIDENCE, HOLD, FAIL_TECHNICAL, or DENY; MJ permission remains a separate gate.

CURRENT EVIDENCE

The individual TP-157 reference profile was executed and its identity, title and REFERENCE_ONLY ceiling matched. This is a documentary identity check, not execution of the full model. Explicit source links resolve to 2 Pink formula IDs: 0 have checked numeric profiles and 2 remain open.

INDIVIDUAL FORMULA LINKS

F-180, F-181

REMAINING REQUIREMENT

Bind model-specific inputs, operations and measured evidence before interpreting the paper as an executable implementation.

SOURCE REFERENCES

TP-157; BP-ALG-157

Evidence: evidence/rerun/teal/TP-157.json

TR-TP-158 / Peaceful spacecraft solar energy / Avionics bus balance

IF

If the Blue Page identity is invoked with declared inputs, scope, units, and evidence state.

HOW

Result dimensions: energy, power. Primary manifestations: ANGELS, BELLATRIX, EVE, JO, JP, M3, MERMAID, MJ, MJOS, MK, SISTER. The lifecycle is purpose declaration -> Bangel typing -> Elsa semantic recovery -> JP formula CAPO -> MK applicability and dimensional review -> JO proof -> applicable safety/accounting receipts -> MJ decision -> JO evidence. JP carries the canonical representation; MK classifies physics applicability, units, boundaries, conservation, scale, and uncertainty; JO verifies types, formulas, tests, and receipts; applicable safety and accounting manifestations contribute evidence; MJ alone issues a bounded permit. Mathematical validity does not create physical or operational authority.

THEN

Then JO returns PASS_EVIDENCE, HOLD, FAIL_TECHNICAL, or DENY; MJ permission remains a separate gate.

CURRENT EVIDENCE

The individual TP-158 reference profile was executed and its identity, title and REFERENCE_ONLY ceiling matched. This is a documentary identity check, not execution of the full model. Explicit source links resolve to 2 Pink formula IDs: 1 have checked numeric profiles and 1 remain open.

INDIVIDUAL FORMULA LINKS

F-182, F-183

REMAINING REQUIREMENT

Bind model-specific inputs, operations and measured evidence before interpreting the paper as an executable implementation.

SOURCE REFERENCES

TP-158; BP-ALG-158

Evidence: evidence/rerun/teal/TP-158.json

TR-TP-159 / Emergency reserve duration / Spacecraft thermal balance

IF

If the Blue Page identity is invoked with declared inputs, scope, units, and evidence state.

HOW

Result dimensions: power, time. Primary manifestations: ANGELS, BELLATRIX, EVE, JO, JP, M3, MERMAID, MJ, MJOS, MK, SISTER. The lifecycle is purpose declaration -> Bangel typing -> Elsa semantic recovery -> JP formula CAPO -> MK applicability and dimensional review -> JO proof -> applicable safety/accounting receipts -> MJ decision -> JO evidence. JP carries the canonical representation; MK classifies physics applicability, units, boundaries, conservation, scale, and uncertainty; JO verifies types, formulas, tests, and receipts; applicable safety and accounting manifestations contribute evidence; MJ alone issues a bounded permit. Mathematical validity does not create physical or operational authority.

THEN

Then JO returns PASS_EVIDENCE, HOLD, FAIL_TECHNICAL, or DENY; MJ permission remains a separate gate.

CURRENT EVIDENCE

The individual TP-159 reference profile was executed and its identity, title and REFERENCE_ONLY ceiling matched. This is a documentary identity check, not execution of the full model. Explicit source links resolve to 2 Pink formula IDs: 2 have checked numeric profiles and 0 remain open.

INDIVIDUAL FORMULA LINKS

F-184, F-185

REMAINING REQUIREMENT

Bind model-specific inputs, operations and measured evidence before interpreting the paper as an executable implementation.

SOURCE REFERENCES

TP-159; BP-ALG-159

Evidence: evidence/rerun/teal/TP-159.json

TR-TP-160 / Space-profile battery margin / Authenticated startup state

IF

If the Blue Page identity is invoked with declared inputs, scope, units, and evidence state.

HOW

Result dimensions: energy, state. Primary manifestations: ANGELS, BELLATRIX, EVE, JO, JP, M3, MERMAID, MJ, MJOS, MK, SISTER. The lifecycle is purpose declaration -> Bangel typing -> Elsa semantic recovery -> JP formula CAPO -> MK applicability and dimensional review -> JO proof -> applicable safety/accounting receipts -> MJ decision -> JO evidence. JP carries the canonical representation; MK classifies physics applicability, units, boundaries, conservation, scale, and uncertainty; JO verifies types, formulas, tests, and receipts; applicable safety and accounting manifestations contribute evidence; MJ alone issues a bounded permit. Mathematical validity does not create physical or operational authority.

THEN

Then JO returns PASS_EVIDENCE, HOLD, FAIL_TECHNICAL, or DENY; MJ permission remains a separate gate.

CURRENT EVIDENCE

The individual TP-160 reference profile was executed and its identity, title and REFERENCE_ONLY ceiling matched. This is a documentary identity check, not execution of the full model. Explicit source links resolve to 2 Pink formula IDs: 1 have checked numeric profiles and 1 remain open.

INDIVIDUAL FORMULA LINKS

F-186, F-187

REMAINING REQUIREMENT

Bind model-specific inputs, operations and measured evidence before interpreting the paper as an executable implementation.

SOURCE REFERENCES

TP-160; BP-ALG-160

Evidence: evidence/rerun/teal/TP-160.json

TR-TP-161 / Fault isolation set / Redundant service availability

IF

If the Blue Page identity is invoked with declared inputs, scope, units, and evidence state.

HOW

Result dimensions: ratio, set. Primary manifestations: ANGELS, BELLATRIX, EVE, JO, JP, M3, MERMAID, MJ, MJOS, MK, SISTER. The lifecycle is purpose declaration -> Bangel typing -> Elsa semantic recovery -> JP formula CAPO -> MK applicability and dimensional review -> JO proof -> applicable safety/accounting receipts -> MJ decision -> JO evidence. JP carries the canonical representation; MK classifies physics applicability, units, boundaries, conservation, scale, and uncertainty; JO verifies types, formulas, tests, and receipts; applicable safety and accounting manifestations contribute evidence; MJ alone issues a bounded permit. Mathematical validity does not create physical or operational authority.

THEN

Then JO returns PASS_EVIDENCE, HOLD, FAIL_TECHNICAL, or DENY; MJ permission remains a separate gate.

CURRENT EVIDENCE

The individual TP-161 reference profile was executed and its identity, title and REFERENCE_ONLY ceiling matched. This is a documentary identity check, not execution of the full model. Explicit source links resolve to 2 Pink formula IDs: 0 have checked numeric profiles and 2 remain open.

INDIVIDUAL FORMULA LINKS

F-188, F-189

REMAINING REQUIREMENT

Bind model-specific inputs, operations and measured evidence before interpreting the paper as an executable implementation.

SOURCE REFERENCES

TP-161; BP-ALG-161

Evidence: evidence/rerun/teal/TP-161.json

TR-TP-162 / Propulsion-state coordination reference / High-energy emergency reserve

IF

If the Blue Page identity is invoked with declared inputs, scope, units, and evidence state.

HOW

Result dimensions: energy, state. Primary manifestations: ANGELS, BELLATRIX, EVE, JO, JP, M3, MERMAID, MJ, MJOS, MK, SISTER. The lifecycle is purpose declaration -> Bangel typing -> Elsa semantic recovery -> JP formula CAPO -> MK applicability and dimensional review -> JO proof -> applicable safety/accounting receipts -> MJ decision -> JO evidence. JP carries the canonical representation; MK classifies physics applicability, units, boundaries, conservation, scale, and uncertainty; JO verifies types, formulas, tests, and receipts; applicable safety and accounting manifestations contribute evidence; MJ alone issues a bounded permit. Mathematical validity does not create physical or operational authority.

THEN

Then JO returns PASS_EVIDENCE, HOLD, FAIL_TECHNICAL, or DENY; MJ permission remains a separate gate.

CURRENT EVIDENCE

The individual TP-162 reference profile was executed and its identity, title and REFERENCE_ONLY ceiling matched. This is a documentary identity check, not execution of the full model. Explicit source links resolve to 2 Pink formula IDs: 1 have checked numeric profiles and 1 remain open.

INDIVIDUAL FORMULA LINKS

F-190, F-191

REMAINING REQUIREMENT

Bind model-specific inputs, operations and measured evidence before interpreting the paper as an executable implementation.

SOURCE REFERENCES

TP-162; BP-ALG-162

Evidence: evidence/rerun/teal/TP-162.json

TR-TP-163 / Non-weaponization gate / Rocket-profile evidence and permit gate

IF

If the Blue Page identity is invoked with declared inputs, scope, units, and evidence state.

HOW

Result dimensions: logical. Primary manifestations: ANGELS, BELLATRIX, EVE, JO, JP, M3, MERMAID, MJ, MJOS, MK, SISTER. The lifecycle is purpose declaration -> Bangel typing -> Elsa semantic recovery -> JP formula CAPO -> MK applicability and dimensional review -> JO proof -> applicable safety/accounting receipts -> MJ decision -> JO evidence. JP carries the canonical representation; MK classifies physics applicability, units, boundaries, conservation, scale, and uncertainty; JO verifies types, formulas, tests, and receipts; applicable safety and accounting manifestations contribute evidence; MJ alone issues a bounded permit. Mathematical validity does not create physical or operational authority.

THEN

Then JO returns PASS_EVIDENCE, HOLD, FAIL_TECHNICAL, or DENY; MJ permission remains a separate gate.

CURRENT EVIDENCE

The individual TP-163 reference profile was executed and its identity, title and REFERENCE_ONLY ceiling matched. This is a documentary identity check, not execution of the full model. Explicit source links resolve to 2 Pink formula IDs: 0 have checked numeric profiles and 2 remain open.

INDIVIDUAL FORMULA LINKS

F-192, F-193

REMAINING REQUIREMENT

Bind model-specific inputs, operations and measured evidence before interpreting the paper as an executable implementation.

SOURCE REFERENCES

TP-163; BP-ALG-163

Evidence: evidence/rerun/teal/TP-163.json

TR-TP-164 / DRO founder lower marker / DRO alias conversion

IF

If the Blue Page identity is invoked with declared inputs, scope, units, and evidence state.

HOW

Result dimensions: length. Primary manifestations: DRO, JO, JP, MJ, MK, PEARL. The lifecycle is purpose declaration -> Bangel typing -> Elsa semantic recovery -> JP formula CAPO -> MK applicability and dimensional review -> JO proof -> applicable safety/accounting receipts -> MJ decision -> JO evidence. JP carries the canonical representation; MK classifies physics applicability, units, boundaries, conservation, scale, and uncertainty; JO verifies types, formulas, tests, and receipts; applicable safety and accounting manifestations contribute evidence; MJ alone issues a bounded permit. Mathematical validity does not create physical or operational authority.

THEN

Then JO returns PASS_EVIDENCE, HOLD, FAIL_TECHNICAL, or DENY; MJ permission remains a separate gate.

CURRENT EVIDENCE

The individual TP-164 reference profile was executed and its identity, title and REFERENCE_ONLY ceiling matched. This is a documentary identity check, not execution of the full model. Explicit source links resolve to 2 Pink formula IDs: 2 have checked numeric profiles and 0 remain open.

INDIVIDUAL FORMULA LINKS

F-194, F-195

REMAINING REQUIREMENT

Bind model-specific inputs, operations and measured evidence before interpreting the paper as an executable implementation.

SOURCE REFERENCES

TP-164; BP-ALG-164

Evidence: evidence/rerun/teal/TP-164.json

TR-TP-165 / DRO conservative R threshold / DRO upper spherical reference

IF

If the Blue Page identity is invoked with declared inputs, scope, units, and evidence state.

HOW

Result dimensions: length. Primary manifestations: DRO, JO, JP, MJ, MK, PEARL. The lifecycle is purpose declaration -> Bangel typing -> Elsa semantic recovery -> JP formula CAPO -> MK applicability and dimensional review -> JO proof -> applicable safety/accounting receipts -> MJ decision -> JO evidence. JP carries the canonical representation; MK classifies physics applicability, units, boundaries, conservation, scale, and uncertainty; JO verifies types, formulas, tests, and receipts; applicable safety and accounting manifestations contribute evidence; MJ alone issues a bounded permit. Mathematical validity does not create physical or operational authority.

THEN

Then JO returns PASS_EVIDENCE, HOLD, FAIL_TECHNICAL, or DENY; MJ permission remains a separate gate.

CURRENT EVIDENCE

The individual TP-165 reference profile was executed and its identity, title and REFERENCE_ONLY ceiling matched. This is a documentary identity check, not execution of the full model. Explicit source links resolve to 2 Pink formula IDs: 2 have checked numeric profiles and 0 remain open.

INDIVIDUAL FORMULA LINKS

F-196, F-197

REMAINING REQUIREMENT

Bind model-specific inputs, operations and measured evidence before interpreting the paper as an executable implementation.

SOURCE REFERENCES

TP-165; BP-ALG-165

Evidence: evidence/rerun/teal/TP-165.json

TR-TP-166 / DRO declared interval / DRO reference radius

IF

If the Blue Page identity is invoked with declared inputs, scope, units, and evidence state.

HOW

Result dimensions: length. Primary manifestations: DRO, JO, JP, MJ, MK, PEARL. The lifecycle is purpose declaration -> Bangel typing -> Elsa semantic recovery -> JP formula CAPO -> MK applicability and dimensional review -> JO proof -> applicable safety/accounting receipts -> MJ decision -> JO evidence. JP carries the canonical representation; MK classifies physics applicability, units, boundaries, conservation, scale, and uncertainty; JO verifies types, formulas, tests, and receipts; applicable safety and accounting manifestations contribute evidence; MJ alone issues a bounded permit. Mathematical validity does not create physical or operational authority.

THEN

Then JO returns PASS_EVIDENCE, HOLD, FAIL_TECHNICAL, or DENY; MJ permission remains a separate gate.

CURRENT EVIDENCE

The individual TP-166 reference profile was executed and its identity, title and REFERENCE_ONLY ceiling matched. This is a documentary identity check, not execution of the full model. Explicit source links resolve to 2 Pink formula IDs: 2 have checked numeric profiles and 0 remain open.

INDIVIDUAL FORMULA LINKS

F-198, F-199

REMAINING REQUIREMENT

Bind model-specific inputs, operations and measured evidence before interpreting the paper as an executable implementation.

SOURCE REFERENCES

TP-166; BP-ALG-166

Evidence: evidence/rerun/teal/TP-166.json

TR-TP-167 / DRO spherical reference volume / DRO interval ratio

IF

If the Blue Page identity is invoked with declared inputs, scope, units, and evidence state.

HOW

Result dimensions: ratio, volume. Primary manifestations: DRO, JO, JP, MJ, MK, PEARL. The lifecycle is purpose declaration -> Bangel typing -> Elsa semantic recovery -> JP formula CAPO -> MK applicability and dimensional review -> JO proof -> applicable safety/accounting receipts -> MJ decision -> JO evidence. JP carries the canonical representation; MK classifies physics applicability, units, boundaries, conservation, scale, and uncertainty; JO verifies types, formulas, tests, and receipts; applicable safety and accounting manifestations contribute evidence; MJ alone issues a bounded permit. Mathematical validity does not create physical or operational authority.

THEN

Then JO returns PASS_EVIDENCE, HOLD, FAIL_TECHNICAL, or DENY; MJ permission remains a separate gate.

CURRENT EVIDENCE

The individual TP-167 reference profile was executed and its identity, title and REFERENCE_ONLY ceiling matched. This is a documentary identity check, not execution of the full model. Explicit source links resolve to 2 Pink formula IDs: 1 have checked numeric profiles and 1 remain open.

INDIVIDUAL FORMULA LINKS

F-200, F-201

REMAINING REQUIREMENT

Bind model-specific inputs, operations and measured evidence before interpreting the paper as an executable implementation.

SOURCE REFERENCES

TP-167; BP-ALG-167

Evidence: evidence/rerun/teal/TP-167.json

TR-TP-168 / DRO quantity count / DRO remainder

IF

If the Blue Page identity is invoked with declared inputs, scope, units, and evidence state.

HOW

Result dimensions: count, quantity. Primary manifestations: DRO, JO, JP, MJ, MK, PEARL. The lifecycle is purpose declaration -> Bangel typing -> Elsa semantic recovery -> JP formula CAPO -> MK applicability and dimensional review -> JO proof -> applicable safety/accounting receipts -> MJ decision -> JO evidence. JP carries the canonical representation; MK classifies physics applicability, units, boundaries, conservation, scale, and uncertainty; JO verifies types, formulas, tests, and receipts; applicable safety and accounting manifestations contribute evidence; MJ alone issues a bounded permit. Mathematical validity does not create physical or operational authority.

THEN

Then JO returns PASS_EVIDENCE, HOLD, FAIL_TECHNICAL, or DENY; MJ permission remains a separate gate.

CURRENT EVIDENCE

The individual TP-168 reference profile was executed and its identity, title and REFERENCE_ONLY ceiling matched. This is a documentary identity check, not execution of the full model. Explicit source links resolve to 2 Pink formula IDs: 0 have checked numeric profiles and 2 remain open.

INDIVIDUAL FORMULA LINKS

F-202, F-203

REMAINING REQUIREMENT

Bind model-specific inputs, operations and measured evidence before interpreting the paper as an executable implementation.

SOURCE REFERENCES

TP-168; BP-ALG-168

Evidence: evidence/rerun/teal/TP-168.json

TR-TP-169 / Pearl-node allocation count / DRO-Pearl handoff balance

IF

If the Blue Page identity is invoked with declared inputs, scope, units, and evidence state.

HOW

Result dimensions: count. Primary manifestations: DRO, JO, JP, MJ, MK, PEARL. The lifecycle is purpose declaration -> Bangel typing -> Elsa semantic recovery -> JP formula CAPO -> MK applicability and dimensional review -> JO proof -> applicable safety/accounting receipts -> MJ decision -> JO evidence. JP carries the canonical representation; MK classifies physics applicability, units, boundaries, conservation, scale, and uncertainty; JO verifies types, formulas, tests, and receipts; applicable safety and accounting manifestations contribute evidence; MJ alone issues a bounded permit. Mathematical validity does not create physical or operational authority.

THEN

Then JO returns PASS_EVIDENCE, HOLD, FAIL_TECHNICAL, or DENY; MJ permission remains a separate gate.

CURRENT EVIDENCE

The individual TP-169 reference profile was executed and its identity, title and REFERENCE_ONLY ceiling matched. This is a documentary identity check, not execution of the full model. Explicit source links resolve to 2 Pink formula IDs: 0 have checked numeric profiles and 2 remain open.

INDIVIDUAL FORMULA LINKS

F-204, F-205

REMAINING REQUIREMENT

Bind model-specific inputs, operations and measured evidence before interpreting the paper as an executable implementation.

SOURCE REFERENCES

TP-169; BP-ALG-169

Evidence: evidence/rerun/teal/TP-169.json

TR-TP-170 / DRO R-state gate

IF

If the Blue Page identity is invoked with declared inputs, scope, units, and evidence state.

HOW

Result dimensions: logical. Primary manifestations: DRO, JO, JP, MJ, MK, PEARL. The lifecycle is purpose declaration -> Bangel typing -> Elsa semantic recovery -> JP formula CAPO -> MK applicability and dimensional review -> JO proof -> applicable safety/accounting receipts -> MJ decision -> JO evidence. JP carries the canonical representation; MK classifies physics applicability, units, boundaries, conservation, scale, and uncertainty; JO verifies types, formulas, tests, and receipts; applicable safety and accounting manifestations contribute evidence; MJ alone issues a bounded permit. Mathematical validity does not create physical or operational authority.

THEN

Then JO returns PASS_EVIDENCE, HOLD, FAIL_TECHNICAL, or DENY; MJ permission remains a separate gate.

CURRENT EVIDENCE

The individual TP-170 reference profile was executed and its identity, title and REFERENCE_ONLY ceiling matched. This is a documentary identity check, not execution of the full model. Explicit source links resolve to 1 Pink formula IDs: 0 have checked numeric profiles and 1 remain open.

INDIVIDUAL FORMULA LINKS

F-206

REMAINING REQUIREMENT

Bind model-specific inputs, operations and measured evidence before interpreting the paper as an executable implementation.

SOURCE REFERENCES

TP-170; BP-ALG-170

Evidence: evidence/rerun/teal/TP-170.json

TR-TP-171 / DRO R1 gate / DRO R2 gate

IF

If the Blue Page identity is invoked with declared inputs, scope, units, and evidence state.

HOW

Result dimensions: logical. Primary manifestations: DRO, JO, JP, MJ, MK, PEARL. The lifecycle is purpose declaration -> Bangel typing -> Elsa semantic recovery -> JP formula CAPO -> MK applicability and dimensional review -> JO proof -> applicable safety/accounting receipts -> MJ decision -> JO evidence. JP carries the canonical representation; MK classifies physics applicability, units, boundaries, conservation, scale, and uncertainty; JO verifies types, formulas, tests, and receipts; applicable safety and accounting manifestations contribute evidence; MJ alone issues a bounded permit. Mathematical validity does not create physical or operational authority.

THEN

Then JO returns PASS_EVIDENCE, HOLD, FAIL_TECHNICAL, or DENY; MJ permission remains a separate gate.

CURRENT EVIDENCE

The individual TP-171 reference profile was executed and its identity, title and REFERENCE_ONLY ceiling matched. This is a documentary identity check, not execution of the full model. Explicit source links resolve to 2 Pink formula IDs: 0 have checked numeric profiles and 2 remain open.

INDIVIDUAL FORMULA LINKS

F-207, F-208

REMAINING REQUIREMENT

Bind model-specific inputs, operations and measured evidence before interpreting the paper as an executable implementation.

SOURCE REFERENCES

TP-171; BP-ALG-171

Evidence: evidence/rerun/teal/TP-171.json

TR-TP-172 / Optical wavelength / Photon energy

IF

If the Blue Page identity is invoked with declared inputs, scope, units, and evidence state.

HOW

Result dimensions: energy, length. Primary manifestations: DRO, JO, JP, MJ, MK, PEARL. The lifecycle is purpose declaration -> Bangel typing -> Elsa semantic recovery -> JP formula CAPO -> MK applicability and dimensional review -> JO proof -> applicable safety/accounting receipts -> MJ decision -> JO evidence. JP carries the canonical representation; MK classifies physics applicability, units, boundaries, conservation, scale, and uncertainty; JO verifies types, formulas, tests, and receipts; applicable safety and accounting manifestations contribute evidence; MJ alone issues a bounded permit. Mathematical validity does not create physical or operational authority.

THEN

Then JO returns PASS_EVIDENCE, HOLD, FAIL_TECHNICAL, or DENY; MJ permission remains a separate gate.

CURRENT EVIDENCE

The individual TP-172 reference profile was executed and its identity, title and REFERENCE_ONLY ceiling matched. This is a documentary identity check, not execution of the full model. Explicit source links resolve to 2 Pink formula IDs: 2 have checked numeric profiles and 0 remain open.

INDIVIDUAL FORMULA LINKS

F-209, F-210

REMAINING REQUIREMENT

Bind model-specific inputs, operations and measured evidence before interpreting the paper as an executable implementation.

SOURCE REFERENCES

TP-172; BP-ALG-172

Evidence: evidence/rerun/teal/TP-172.json

TR-TP-173 / Photon count estimate / Optical coupling evidence

IF

If the Blue Page identity is invoked with declared inputs, scope, units, and evidence state.

HOW

Result dimensions: count. Primary manifestations: DRO, JO, JP, MJ, MK, PEARL. The lifecycle is purpose declaration -> Bangel typing -> Elsa semantic recovery -> JP formula CAPO -> MK applicability and dimensional review -> JO proof -> applicable safety/accounting receipts -> MJ decision -> JO evidence. JP carries the canonical representation; MK classifies physics applicability, units, boundaries, conservation, scale, and uncertainty; JO verifies types, formulas, tests, and receipts; applicable safety and accounting manifestations contribute evidence; MJ alone issues a bounded permit. Mathematical validity does not create physical or operational authority.

THEN

Then JO returns PASS_EVIDENCE, HOLD, FAIL_TECHNICAL, or DENY; MJ permission remains a separate gate.

CURRENT EVIDENCE

The individual TP-173 reference profile was executed and its identity, title and REFERENCE_ONLY ceiling matched. This is a documentary identity check, not execution of the full model. Explicit source links resolve to 2 Pink formula IDs: 2 have checked numeric profiles and 0 remain open.

INDIVIDUAL FORMULA LINKS

F-211, F-212

REMAINING REQUIREMENT

Bind model-specific inputs, operations and measured evidence before interpreting the paper as an executable implementation.

SOURCE REFERENCES

TP-173; BP-ALG-173

Evidence: evidence/rerun/teal/TP-173.json

TR-TP-174 / Optical admissibility / DRO collection rate

IF

If the Blue Page identity is invoked with declared inputs, scope, units, and evidence state.

HOW

Result dimensions: count/time, logical. Primary manifestations: DRO, JO, JP, MJ, MK, PEARL. The lifecycle is purpose declaration -> Bangel typing -> Elsa semantic recovery -> JP formula CAPO -> MK applicability and dimensional review -> JO proof -> applicable safety/accounting receipts -> MJ decision -> JO evidence. JP carries the canonical representation; MK classifies physics applicability, units, boundaries, conservation, scale, and uncertainty; JO verifies types, formulas, tests, and receipts; applicable safety and accounting manifestations contribute evidence; MJ alone issues a bounded permit. Mathematical validity does not create physical or operational authority.

THEN

Then JO returns PASS_EVIDENCE, HOLD, FAIL_TECHNICAL, or DENY; MJ permission remains a separate gate.

CURRENT EVIDENCE

The individual TP-174 reference profile was executed and its identity, title and REFERENCE_ONLY ceiling matched. This is a documentary identity check, not execution of the full model. Explicit source links resolve to 2 Pink formula IDs: 1 have checked numeric profiles and 1 remain open.

INDIVIDUAL FORMULA LINKS

F-213, F-214

REMAINING REQUIREMENT

Bind model-specific inputs, operations and measured evidence before interpreting the paper as an executable implementation.

SOURCE REFERENCES

TP-174; BP-ALG-174

Evidence: evidence/rerun/teal/TP-174.json

TR-TP-175 / DRO scale uncertainty / DRO interval classification

IF

If the Blue Page identity is invoked with declared inputs, scope, units, and evidence state.

HOW

Result dimensions: length. Primary manifestations: DRO, JO, JP, MJ, MK, PEARL. The lifecycle is purpose declaration -> Bangel typing -> Elsa semantic recovery -> JP formula CAPO -> MK applicability and dimensional review -> JO proof -> applicable safety/accounting receipts -> MJ decision -> JO evidence. JP carries the canonical representation; MK classifies physics applicability, units, boundaries, conservation, scale, and uncertainty; JO verifies types, formulas, tests, and receipts; applicable safety and accounting manifestations contribute evidence; MJ alone issues a bounded permit. Mathematical validity does not create physical or operational authority.

THEN

Then JO returns PASS_EVIDENCE, HOLD, FAIL_TECHNICAL, or DENY; MJ permission remains a separate gate.

CURRENT EVIDENCE

The individual TP-175 reference profile was executed and its identity, title and REFERENCE_ONLY ceiling matched. This is a documentary identity check, not execution of the full model. Explicit source links resolve to 2 Pink formula IDs: 0 have checked numeric profiles and 2 remain open.

INDIVIDUAL FORMULA LINKS

F-215, F-216

REMAINING REQUIREMENT

Bind model-specific inputs, operations and measured evidence before interpreting the paper as an executable implementation.

SOURCE REFERENCES

TP-175; BP-ALG-175

Evidence: evidence/rerun/teal/TP-175.json

TR-TP-176 / DRO capacity slack

IF

If the Blue Page identity is invoked with declared inputs, scope, units, and evidence state.

HOW

Result dimensions: quantity. Primary manifestations: DRO, JO, JP, MJ, MK, PEARL. The lifecycle is purpose declaration -> Bangel typing -> Elsa semantic recovery -> JP formula CAPO -> MK applicability and dimensional review -> JO proof -> applicable safety/accounting receipts -> MJ decision -> JO evidence. JP carries the canonical representation; MK classifies physics applicability, units, boundaries, conservation, scale, and uncertainty; JO verifies types, formulas, tests, and receipts; applicable safety and accounting manifestations contribute evidence; MJ alone issues a bounded permit. Mathematical validity does not create physical or operational authority.

THEN

Then JO returns PASS_EVIDENCE, HOLD, FAIL_TECHNICAL, or DENY; MJ permission remains a separate gate.

CURRENT EVIDENCE

The individual TP-176 reference profile was executed and its identity, title and REFERENCE_ONLY ceiling matched. This is a documentary identity check, not execution of the full model. Explicit source links resolve to 1 Pink formula IDs: 1 have checked numeric profiles and 0 remain open.

INDIVIDUAL FORMULA LINKS

F-217

REMAINING REQUIREMENT

Bind model-specific inputs, operations and measured evidence before interpreting the paper as an executable implementation.

SOURCE REFERENCES

TP-176; BP-ALG-176

Evidence: evidence/rerun/teal/TP-176.json

TR-TP-177 / DRO overflow vector / DRO ledger balance

IF

If the Blue Page identity is invoked with declared inputs, scope, units, and evidence state.

HOW

Result dimensions: quantity. Primary manifestations: DRO, JO, JP, MJ, MK, PEARL. The lifecycle is purpose declaration -> Bangel typing -> Elsa semantic recovery -> JP formula CAPO -> MK applicability and dimensional review -> JO proof -> applicable safety/accounting receipts -> MJ decision -> JO evidence. JP carries the canonical representation; MK classifies physics applicability, units, boundaries, conservation, scale, and uncertainty; JO verifies types, formulas, tests, and receipts; applicable safety and accounting manifestations contribute evidence; MJ alone issues a bounded permit. Mathematical validity does not create physical or operational authority.

THEN

Then JO returns PASS_EVIDENCE, HOLD, FAIL_TECHNICAL, or DENY; MJ permission remains a separate gate.

CURRENT EVIDENCE

The individual TP-177 reference profile was executed and its identity, title and REFERENCE_ONLY ceiling matched. This is a documentary identity check, not execution of the full model. Explicit source links resolve to 2 Pink formula IDs: 2 have checked numeric profiles and 0 remain open.

INDIVIDUAL FORMULA LINKS

F-218, F-219

REMAINING REQUIREMENT

Bind model-specific inputs, operations and measured evidence before interpreting the paper as an executable implementation.

SOURCE REFERENCES

TP-177; BP-ALG-177

Evidence: evidence/rerun/teal/TP-177.json

TR-TP-178 / DRO energy ledger / Available start energy lower bound

IF

If the Blue Page identity is invoked with declared inputs, scope, units, and evidence state.

HOW

Result dimensions: energy. Primary manifestations: ANGELS, DRO, EVE, JO, JP, M3, MERMAID, MJ, MJOS, MK, PEARL, SISTER. The lifecycle is purpose declaration -> Bangel typing -> Elsa semantic recovery -> JP formula CAPO -> MK applicability and dimensional review -> JO proof -> applicable safety/accounting receipts -> MJ decision -> JO evidence. JP carries the canonical representation; MK classifies physics applicability, units, boundaries, conservation, scale, and uncertainty; JO verifies types, formulas, tests, and receipts; applicable safety and accounting manifestations contribute evidence; MJ alone issues a bounded permit. Mathematical validity does not create physical or operational authority.

THEN

Then JO returns PASS_EVIDENCE, HOLD, FAIL_TECHNICAL, or DENY; MJ permission remains a separate gate.

CURRENT EVIDENCE

The individual TP-178 reference profile was executed and its identity, title and REFERENCE_ONLY ceiling matched. This is a documentary identity check, not execution of the full model. Explicit source links resolve to 2 Pink formula IDs: 2 have checked numeric profiles and 0 remain open.

INDIVIDUAL FORMULA LINKS

F-220, F-221

REMAINING REQUIREMENT

Bind model-specific inputs, operations and measured evidence before interpreting the paper as an executable implementation.

SOURCE REFERENCES

TP-178; BP-ALG-178

Evidence: evidence/rerun/teal/TP-178.json

TR-TP-179 / Start gate / Restart reserve

IF

If the Blue Page identity is invoked with declared inputs, scope, units, and evidence state.

HOW

Result dimensions: energy, logical. Primary manifestations: ANGELS, DRO, EVE, JO, JP, M3, MERMAID, MJ, MJOS, MK, PEARL, SISTER. The lifecycle is purpose declaration -> Bangel typing -> Elsa semantic recovery -> JP formula CAPO -> MK applicability and dimensional review -> JO proof -> applicable safety/accounting receipts -> MJ decision -> JO evidence. JP carries the canonical representation; MK classifies physics applicability, units, boundaries, conservation, scale, and uncertainty; JO verifies types, formulas, tests, and receipts; applicable safety and accounting manifestations contribute evidence; MJ alone issues a bounded permit. Mathematical validity does not create physical or operational authority.

THEN

Then JO returns PASS_EVIDENCE, HOLD, FAIL_TECHNICAL, or DENY; MJ permission remains a separate gate.

CURRENT EVIDENCE

The individual TP-179 reference profile was executed and its identity, title and REFERENCE_ONLY ceiling matched. This is a documentary identity check, not execution of the full model. Explicit source links resolve to 2 Pink formula IDs: 1 have checked numeric profiles and 1 remain open.

INDIVIDUAL FORMULA LINKS

F-222, F-223

REMAINING REQUIREMENT

Bind model-specific inputs, operations and measured evidence before interpreting the paper as an executable implementation.

SOURCE REFERENCES

TP-179; BP-ALG-179

Evidence: evidence/rerun/teal/TP-179.json

TR-TP-180 / Solar contribution / Acoustic/noise contribution

IF

If the Blue Page identity is invoked with declared inputs, scope, units, and evidence state.

HOW

Result dimensions: energy. Primary manifestations: ANGELS, DRO, EVE, JO, JP, M3, MERMAID, MJ, MJOS, MK, PEARL, SISTER. The lifecycle is purpose declaration -> Bangel typing -> Elsa semantic recovery -> JP formula CAPO -> MK applicability and dimensional review -> JO proof -> applicable safety/accounting receipts -> MJ decision -> JO evidence. JP carries the canonical representation; MK classifies physics applicability, units, boundaries, conservation, scale, and uncertainty; JO verifies types, formulas, tests, and receipts; applicable safety and accounting manifestations contribute evidence; MJ alone issues a bounded permit. Mathematical validity does not create physical or operational authority.

THEN

Then JO returns PASS_EVIDENCE, HOLD, FAIL_TECHNICAL, or DENY; MJ permission remains a separate gate.

CURRENT EVIDENCE

The individual TP-180 reference profile was executed and its identity, title and REFERENCE_ONLY ceiling matched. This is a documentary identity check, not execution of the full model. Explicit source links resolve to 2 Pink formula IDs: 0 have checked numeric profiles and 2 remain open.

INDIVIDUAL FORMULA LINKS

F-224, F-225

REMAINING REQUIREMENT

Bind model-specific inputs, operations and measured evidence before interpreting the paper as an executable implementation.

SOURCE REFERENCES

TP-180; BP-ALG-180

Evidence: evidence/rerun/teal/TP-180.json

TR-TP-181 / Generic separation-work lower bound / Species availability

IF

If the Blue Page identity is invoked with declared inputs, scope, units, and evidence state.

HOW

Result dimensions: amount, energy. Primary manifestations: ANGELS, DRO, EVE, JO, JP, M3, MERMAID, MJ, MJOS, MK, PEARL, SISTER. The lifecycle is purpose declaration -> Bangel typing -> Elsa semantic recovery -> JP formula CAPO -> MK applicability and dimensional review -> JO proof -> applicable safety/accounting receipts -> MJ decision -> JO evidence. JP carries the canonical representation; MK classifies physics applicability, units, boundaries, conservation, scale, and uncertainty; JO verifies types, formulas, tests, and receipts; applicable safety and accounting manifestations contribute evidence; MJ alone issues a bounded permit. Mathematical validity does not create physical or operational authority.

THEN

Then JO returns PASS_EVIDENCE, HOLD, FAIL_TECHNICAL, or DENY; MJ permission remains a separate gate.

CURRENT EVIDENCE

The individual TP-181 reference profile was executed and its identity, title and REFERENCE_ONLY ceiling matched. This is a documentary identity check, not execution of the full model. Explicit source links resolve to 2 Pink formula IDs: 2 have checked numeric profiles and 0 remain open.

INDIVIDUAL FORMULA LINKS

F-226, F-227

REMAINING REQUIREMENT

Bind model-specific inputs, operations and measured evidence before interpreting the paper as an executable implementation.

SOURCE REFERENCES

TP-181; BP-ALG-181

Evidence: evidence/rerun/teal/TP-181.json

TR-TP-182 / Conversion efficiency / Controlled logical release

IF

If the Blue Page identity is invoked with declared inputs, scope, units, and evidence state.

HOW

Result dimensions: logical, ratio. Primary manifestations: ANGELS, DRO, EVE, JO, JP, M3, MERMAID, MJ, MJOS, MK, PEARL, SISTER. The lifecycle is purpose declaration -> Bangel typing -> Elsa semantic recovery -> JP formula CAPO -> MK applicability and dimensional review -> JO proof -> applicable safety/accounting receipts -> MJ decision -> JO evidence. JP carries the canonical representation; MK classifies physics applicability, units, boundaries, conservation, scale, and uncertainty; JO verifies types, formulas, tests, and receipts; applicable safety and accounting manifestations contribute evidence; MJ alone issues a bounded permit. Mathematical validity does not create physical or operational authority.

THEN

Then JO returns PASS_EVIDENCE, HOLD, FAIL_TECHNICAL, or DENY; MJ permission remains a separate gate.

CURRENT EVIDENCE

The individual TP-182 reference profile was executed and its identity, title and REFERENCE_ONLY ceiling matched. This is a documentary identity check, not execution of the full model. Explicit source links resolve to 2 Pink formula IDs: 1 have checked numeric profiles and 1 remain open.

INDIVIDUAL FORMULA LINKS

F-228, F-229

REMAINING REQUIREMENT

Bind model-specific inputs, operations and measured evidence before interpreting the paper as an executable implementation.

SOURCE REFERENCES

TP-182; BP-ALG-182

Evidence: evidence/rerun/teal/TP-182.json

TR-TP-183 / DRO thermal gate / Semiconductor DRO charge balance

IF

If the Blue Page identity is invoked with declared inputs, scope, units, and evidence state.

HOW

Result dimensions: charge, temperature. Primary manifestations: ANGELS, DRO, EVE, JO, JP, M3, MERMAID, MJ, MJOS, MK, PEARL, SISTER. The lifecycle is purpose declaration -> Bangel typing -> Elsa semantic recovery -> JP formula CAPO -> MK applicability and dimensional review -> JO proof -> applicable safety/accounting receipts -> MJ decision -> JO evidence. JP carries the canonical representation; MK classifies physics applicability, units, boundaries, conservation, scale, and uncertainty; JO verifies types, formulas, tests, and receipts; applicable safety and accounting manifestations contribute evidence; MJ alone issues a bounded permit. Mathematical validity does not create physical or operational authority.

THEN

Then JO returns PASS_EVIDENCE, HOLD, FAIL_TECHNICAL, or DENY; MJ permission remains a separate gate.

CURRENT EVIDENCE

The individual TP-183 reference profile was executed and its identity, title and REFERENCE_ONLY ceiling matched. This is a documentary identity check, not execution of the full model. Explicit source links resolve to 2 Pink formula IDs: 1 have checked numeric profiles and 1 remain open.

INDIVIDUAL FORMULA LINKS

F-230, F-231

REMAINING REQUIREMENT

Bind model-specific inputs, operations and measured evidence before interpreting the paper as an executable implementation.

SOURCE REFERENCES

TP-183; BP-ALG-183

Evidence: evidence/rerun/teal/TP-183.json

TR-TP-184 / Semiconductor Pearl-node memory / Semiconductor wake-reserve gate

IF

If the Blue Page identity is invoked with declared inputs, scope, units, and evidence state.

HOW

Result dimensions: bytes, logical. Primary manifestations: ANGELS, DRO, EVE, JO, JP, M3, MERMAID, MJ, MJOS, MK, PEARL, SISTER. The lifecycle is purpose declaration -> Bangel typing -> Elsa semantic recovery -> JP formula CAPO -> MK applicability and dimensional review -> JO proof -> applicable safety/accounting receipts -> MJ decision -> JO evidence. JP carries the canonical representation; MK classifies physics applicability, units, boundaries, conservation, scale, and uncertainty; JO verifies types, formulas, tests, and receipts; applicable safety and accounting manifestations contribute evidence; MJ alone issues a bounded permit. Mathematical validity does not create physical or operational authority.

THEN

Then JO returns PASS_EVIDENCE, HOLD, FAIL_TECHNICAL, or DENY; MJ permission remains a separate gate.

CURRENT EVIDENCE

The individual TP-184 reference profile was executed and its identity, title and REFERENCE_ONLY ceiling matched. This is a documentary identity check, not execution of the full model. Explicit source links resolve to 2 Pink formula IDs: 2 have checked numeric profiles and 0 remain open.

INDIVIDUAL FORMULA LINKS

F-232, F-233

REMAINING REQUIREMENT

Bind model-specific inputs, operations and measured evidence before interpreting the paper as an executable implementation.

SOURCE REFERENCES

TP-184; BP-ALG-184

Evidence: evidence/rerun/teal/TP-184.json

TR-TP-185 / Semiconductor profile isolation / Lecanto byte-source digest

IF

If the Blue Page identity is invoked with declared inputs, scope, units, and evidence state.

HOW

Result dimensions: digest, logical. Primary manifestations: ANGELS, BELLATRIX, ELSA, JO, JP, LECANTO, M3, MJ, MK. The lifecycle is purpose declaration -> Bangel typing -> Elsa semantic recovery -> JP formula CAPO -> MK applicability and dimensional review -> JO proof -> applicable safety/accounting receipts -> MJ decision -> JO evidence. JP carries the canonical representation; MK classifies physics applicability, units, boundaries, conservation, scale, and uncertainty; JO verifies types, formulas, tests, and receipts; applicable safety and accounting manifestations contribute evidence; MJ alone issues a bounded permit. Mathematical validity does not create physical or operational authority.

THEN

Then JO returns PASS_EVIDENCE, HOLD, FAIL_TECHNICAL, or DENY; MJ permission remains a separate gate.

CURRENT EVIDENCE

The individual TP-185 reference profile was executed and its identity, title and REFERENCE_ONLY ceiling matched. This is a documentary identity check, not execution of the full model. Explicit source links resolve to 2 Pink formula IDs: 0 have checked numeric profiles and 2 remain open.

INDIVIDUAL FORMULA LINKS

F-234, F-235

REMAINING REQUIREMENT

Bind model-specific inputs, operations and measured evidence before interpreting the paper as an executable implementation.

SOURCE REFERENCES

TP-185; BP-ALG-185

Evidence: evidence/rerun/teal/TP-185.json

TR-TP-186 / Lecanto pixel residual / Lecanto spectral residual

IF

If the Blue Page identity is invoked with declared inputs, scope, units, and evidence state.

HOW

Result dimensions: signal. Primary manifestations: ANGELS, BELLATRIX, ELSA, JO, JP, LECANTO, M3, MJ, MK. The lifecycle is purpose declaration -> Bangel typing -> Elsa semantic recovery -> JP formula CAPO -> MK applicability and dimensional review -> JO proof -> applicable safety/accounting receipts -> MJ decision -> JO evidence. JP carries the canonical representation; MK classifies physics applicability, units, boundaries, conservation, scale, and uncertainty; JO verifies types, formulas, tests, and receipts; applicable safety and accounting manifestations contribute evidence; MJ alone issues a bounded permit. Mathematical validity does not create physical or operational authority.

THEN

Then JO returns PASS_EVIDENCE, HOLD, FAIL_TECHNICAL, or DENY; MJ permission remains a separate gate.

CURRENT EVIDENCE

The individual TP-186 reference profile was executed and its identity, title and REFERENCE_ONLY ceiling matched. This is a documentary identity check, not execution of the full model. Explicit source links resolve to 2 Pink formula IDs: 0 have checked numeric profiles and 2 remain open.

INDIVIDUAL FORMULA LINKS

F-236, F-237

REMAINING REQUIREMENT

Bind model-specific inputs, operations and measured evidence before interpreting the paper as an executable implementation.

SOURCE REFERENCES

TP-186; BP-ALG-186

Evidence: evidence/rerun/teal/TP-186.json

TR-TP-187 / Lecanto provenance completeness / Lecanto intent hypothesis

IF

If the Blue Page identity is invoked with declared inputs, scope, units, and evidence state.

HOW

Result dimensions: hypothesis, ratio. Primary manifestations: ANGELS, BELLATRIX, ELSA, JO, JP, LECANTO, M3, MJ, MK. The lifecycle is purpose declaration -> Bangel typing -> Elsa semantic recovery -> JP formula CAPO -> MK applicability and dimensional review -> JO proof -> applicable safety/accounting receipts -> MJ decision -> JO evidence. JP carries the canonical representation; MK classifies physics applicability, units, boundaries, conservation, scale, and uncertainty; JO verifies types, formulas, tests, and receipts; applicable safety and accounting manifestations contribute evidence; MJ alone issues a bounded permit. Mathematical validity does not create physical or operational authority.

THEN

Then JO returns PASS_EVIDENCE, HOLD, FAIL_TECHNICAL, or DENY; MJ permission remains a separate gate.

CURRENT EVIDENCE

The individual TP-187 reference profile was executed and its identity, title and REFERENCE_ONLY ceiling matched. This is a documentary identity check, not execution of the full model. Explicit source links resolve to 2 Pink formula IDs: 1 have checked numeric profiles and 1 remain open.

INDIVIDUAL FORMULA LINKS

F-238, F-239

REMAINING REQUIREMENT

Bind model-specific inputs, operations and measured evidence before interpreting the paper as an executable implementation.

SOURCE REFERENCES

TP-187; BP-ALG-187

Evidence: evidence/rerun/teal/TP-187.json

TR-TP-188 / Lecanto transformation gate / Lecanto reject gate

IF

If the Blue Page identity is invoked with declared inputs, scope, units, and evidence state.

HOW

Result dimensions: logical. Primary manifestations: ANGELS, BELLATRIX, ELSA, JO, JP, LECANTO, M3, MJ, MK. The lifecycle is purpose declaration -> Bangel typing -> Elsa semantic recovery -> JP formula CAPO -> MK applicability and dimensional review -> JO proof -> applicable safety/accounting receipts -> MJ decision -> JO evidence. JP carries the canonical representation; MK classifies physics applicability, units, boundaries, conservation, scale, and uncertainty; JO verifies types, formulas, tests, and receipts; applicable safety and accounting manifestations contribute evidence; MJ alone issues a bounded permit. Mathematical validity does not create physical or operational authority.

THEN

Then JO returns PASS_EVIDENCE, HOLD, FAIL_TECHNICAL, or DENY; MJ permission remains a separate gate.

CURRENT EVIDENCE

The individual TP-188 reference profile was executed and its identity, title and REFERENCE_ONLY ceiling matched. This is a documentary identity check, not execution of the full model. Explicit source links resolve to 2 Pink formula IDs: 0 have checked numeric profiles and 2 remain open.

INDIVIDUAL FORMULA LINKS

F-240, F-241

REMAINING REQUIREMENT

Bind model-specific inputs, operations and measured evidence before interpreting the paper as an executable implementation.

SOURCE REFERENCES

TP-188; BP-ALG-188

Evidence: evidence/rerun/teal/TP-188.json

TR-TP-189 / R8 command admissibility

IF

If the Blue Page identity is invoked with declared inputs, scope, units, and evidence state.

HOW

Result dimensions: logical. Primary manifestations: ANGELS, BELLATRIX, ELSA, JO, JP, LECANTO, M3, MJ, MK. The lifecycle is purpose declaration -> Bangel typing -> Elsa semantic recovery -> JP formula CAPO -> MK applicability and dimensional review -> JO proof -> applicable safety/accounting receipts -> MJ decision -> JO evidence. JP carries the canonical representation; MK classifies physics applicability, units, boundaries, conservation, scale, and uncertainty; JO verifies types, formulas, tests, and receipts; applicable safety and accounting manifestations contribute evidence; MJ alone issues a bounded permit. Mathematical validity does not create physical or operational authority.

THEN

Then JO returns PASS_EVIDENCE, HOLD, FAIL_TECHNICAL, or DENY; MJ permission remains a separate gate.

CURRENT EVIDENCE

The individual TP-189 reference profile was executed and its identity, title and REFERENCE_ONLY ceiling matched. This is a documentary identity check, not execution of the full model. Explicit source links resolve to 1 Pink formula IDs: 0 have checked numeric profiles and 1 remain open.

INDIVIDUAL FORMULA LINKS

F-242

REMAINING REQUIREMENT

Bind model-specific inputs, operations and measured evidence before interpreting the paper as an executable implementation.

SOURCE REFERENCES

TP-189; BP-ALG-189

Evidence: evidence/rerun/teal/TP-189.json

TR-TP-190 / MJ - Family Manifestation

IF

If the Blue Page identity is invoked with declared inputs, scope, units, and evidence state.

HOW

MJ participates as a manifestation within MJ. It accepts only typed, purpose-bound inputs and produces evidence or outputs within its declared role. Equal family identity does not collapse domain authority or permit peer-to-peer authority transfer. Hard boundary: Cannot convert unknown evidence into permission or claim external authority. MJ remains the root permit authority. JO verification, MK physics review, M3 routing, Mermaid accounting, Shiva capital analysis, Angels, Bellatrix, Sister, and EVE remain separate gates when applicable.

THEN

Then JO returns PASS_EVIDENCE, HOLD, FAIL_TECHNICAL, or DENY; MJ permission remains a separate gate.

CURRENT EVIDENCE

The individual TP-190 reference profile was executed and its identity, title and REFERENCE_ONLY ceiling matched. This is a documentary identity check, not execution of the full model.

REMAINING REQUIREMENT

Bind model-specific inputs, operations and measured evidence before interpreting the paper as an executable implementation.

SOURCE REFERENCES

TP-190; BP-FAM-001

Evidence: evidence/rerun/teal/TP-190.json

TR-TP-191 / Bangel - Family Manifestation

IF

If the Blue Page identity is invoked with declared inputs, scope, units, and evidence state.

HOW

Bangel participates as a manifestation within MJ. It accepts only typed, purpose-bound inputs and produces evidence or outputs within its declared role. Equal family identity does not collapse domain authority or permit peer-to-peer authority transfer. Hard boundary: No independent execution, financial issuance, or physical truth. MJ remains the root permit authority. JO verification, MK physics review, M3 routing, Mermaid accounting, Shiva capital analysis, Angels, Bellatrix, Sister, and EVE remain separate gates when applicable.

THEN

Then JO returns PASS_EVIDENCE, HOLD, FAIL_TECHNICAL, or DENY; MJ permission remains a separate gate.

CURRENT EVIDENCE

The individual TP-191 reference profile was executed and its identity, title and REFERENCE_ONLY ceiling matched. This is a documentary identity check, not execution of the full model.

REMAINING REQUIREMENT

Bind model-specific inputs, operations and measured evidence before interpreting the paper as an executable implementation.

SOURCE REFERENCES

TP-191; BP-FAM-002

Evidence: evidence/rerun/teal/TP-191.json

TR-TP-192 / Elsa - Family Manifestation

IF

If the Blue Page identity is invoked with declared inputs, scope, units, and evidence state.

HOW

Elsa participates as a manifestation within MJ. It accepts only typed, purpose-bound inputs and produces evidence or outputs within its declared role. Equal family identity does not collapse domain authority or permit peer-to-peer authority transfer. Hard boundary: No execution, permit, finance, or invented intent. MJ remains the root permit authority. JO verification, MK physics review, M3 routing, Mermaid accounting, Shiva capital analysis, Angels, Bellatrix, Sister, and EVE remain separate gates when applicable.

THEN

Then JO returns PASS_EVIDENCE, HOLD, FAIL_TECHNICAL, or DENY; MJ permission remains a separate gate.

CURRENT EVIDENCE

The individual TP-192 reference profile was executed and its identity, title and REFERENCE_ONLY ceiling matched. This is a documentary identity check, not execution of the full model.

REMAINING REQUIREMENT

Bind model-specific inputs, operations and measured evidence before interpreting the paper as an executable implementation.

SOURCE REFERENCES

TP-192; BP-FAM-003

Evidence: evidence/rerun/teal/TP-192.json

TR-TP-193 / JP - Family Manifestation

IF

If the Blue Page identity is invoked with declared inputs, scope, units, and evidence state.

HOW

JP participates as a manifestation within MJ. It accepts only typed, purpose-bound inputs and produces evidence or outputs within its declared role. Equal family identity does not collapse domain authority or permit peer-to-peer authority transfer. Hard boundary: Representation is not admission, execution, or authority. MJ remains the root permit authority. JO verification, MK physics review, M3 routing, Mermaid accounting, Shiva capital analysis, Angels, Bellatrix, Sister, and EVE remain separate gates when applicable.

THEN

Then JO returns PASS_EVIDENCE, HOLD, FAIL_TECHNICAL, or DENY; MJ permission remains a separate gate.

CURRENT EVIDENCE

The individual TP-193 reference profile was executed and its identity, title and REFERENCE_ONLY ceiling matched. This is a documentary identity check, not execution of the full model.

REMAINING REQUIREMENT

Bind model-specific inputs, operations and measured evidence before interpreting the paper as an executable implementation.

SOURCE REFERENCES

TP-193; BP-FAM-004

Evidence: evidence/rerun/teal/TP-193.json

TR-TP-194 / Mika / MK - Family Manifestation

IF

If the Blue Page identity is invoked with declared inputs, scope, units, and evidence state.

HOW

Mika / MK participates as a manifestation within MJ. It accepts only typed, purpose-bound inputs and produces evidence or outputs within its declared role. Equal family identity does not collapse domain authority or permit peer-to-peer authority transfer. Hard boundary: No MJ permit, coordinate approval, physical validation, or evidence invention. MJ remains the root permit authority. JO verification, MK physics review, M3 routing, Mermaid accounting, Shiva capital analysis, Angels, Bellatrix, Sister, and EVE remain separate gates when applicable.

THEN

Then JO returns PASS_EVIDENCE, HOLD, FAIL_TECHNICAL, or DENY; MJ permission remains a separate gate.

CURRENT EVIDENCE

The individual TP-194 reference profile was executed and its identity, title and REFERENCE_ONLY ceiling matched. This is a documentary identity check, not execution of the full model.

REMAINING REQUIREMENT

Bind model-specific inputs, operations and measured evidence before interpreting the paper as an executable implementation.

SOURCE REFERENCES

TP-194; BP-FAM-005

Evidence: evidence/rerun/teal/TP-194.json

TR-TP-195 / JO - Family Manifestation

IF

If the Blue Page identity is invoked with declared inputs, scope, units, and evidence state.

HOW

JO participates as a manifestation within MJ. It accepts only typed, purpose-bound inputs and produces evidence or outputs within its declared role. Equal family identity does not collapse domain authority or permit peer-to-peer authority transfer. Hard boundary: No invented purpose, physics, authority, finance, or external effect. MJ remains the root permit authority. JO verification, MK physics review, M3 routing, Mermaid accounting, Shiva capital analysis, Angels, Bellatrix, Sister, and EVE remain separate gates when applicable.

THEN

Then JO returns PASS_EVIDENCE, HOLD, FAIL_TECHNICAL, or DENY; MJ permission remains a separate gate.

CURRENT EVIDENCE

The individual TP-195 reference profile was executed and its identity, title and REFERENCE_ONLY ceiling matched. This is a documentary identity check, not execution of the full model.

REMAINING REQUIREMENT

Bind model-specific inputs, operations and measured evidence before interpreting the paper as an executable implementation.

SOURCE REFERENCES

TP-195; BP-FAM-006

Evidence: evidence/rerun/teal/TP-195.json

TR-TP-196 / MJOS - Family Manifestation

IF

If the Blue Page identity is invoked with declared inputs, scope, units, and evidence state.

HOW

MJOS participates as a manifestation within MJ. It accepts only typed, purpose-bound inputs and produces evidence or outputs within its declared role. Equal family identity does not collapse domain authority or permit peer-to-peer authority transfer. Hard boundary: Not a second authority principal. MJ remains the root permit authority. JO verification, MK physics review, M3 routing, Mermaid accounting, Shiva capital analysis, Angels, Bellatrix, Sister, and EVE remain separate gates when applicable.

THEN

Then JO returns PASS_EVIDENCE, HOLD, FAIL_TECHNICAL, or DENY; MJ permission remains a separate gate.

CURRENT EVIDENCE

The individual TP-196 reference profile was executed and its identity, title and REFERENCE_ONLY ceiling matched. This is a documentary identity check, not execution of the full model.

REMAINING REQUIREMENT

Bind model-specific inputs, operations and measured evidence before interpreting the paper as an executable implementation.

SOURCE REFERENCES

TP-196; BP-FAM-007

Evidence: evidence/rerun/teal/TP-196.json

TR-TP-197 / Angels - Family Manifestation

IF

If the Blue Page identity is invoked with declared inputs, scope, units, and evidence state.

HOW

Angels participates as a manifestation within MJ. It accepts only typed, purpose-bound inputs and produces evidence or outputs within its declared role. Equal family identity does not collapse domain authority or permit peer-to-peer authority transfer. Hard boundary: No self-admission, ordinary execution, or scope expansion. MJ remains the root permit authority. JO verification, MK physics review, M3 routing, Mermaid accounting, Shiva capital analysis, Angels, Bellatrix, Sister, and EVE remain separate gates when applicable.

THEN

Then JO returns PASS_EVIDENCE, HOLD, FAIL_TECHNICAL, or DENY; MJ permission remains a separate gate.

CURRENT EVIDENCE

The individual TP-197 reference profile was executed and its identity, title and REFERENCE_ONLY ceiling matched. This is a documentary identity check, not execution of the full model.

REMAINING REQUIREMENT

Bind model-specific inputs, operations and measured evidence before interpreting the paper as an executable implementation.

SOURCE REFERENCES

TP-197; BP-FAM-008

Evidence: evidence/rerun/teal/TP-197.json

TR-TP-198 / Bellatrix - Family Manifestation

IF

If the Blue Page identity is invoked with declared inputs, scope, units, and evidence state.

HOW

Bellatrix participates as a manifestation within MJ. It accepts only typed, purpose-bound inputs and produces evidence or outputs within its declared role. Equal family identity does not collapse domain authority or permit peer-to-peer authority transfer. Hard boundary: No positive general admission. MJ remains the root permit authority. JO verification, MK physics review, M3 routing, Mermaid accounting, Shiva capital analysis, Angels, Bellatrix, Sister, and EVE remain separate gates when applicable.

THEN

Then JO returns PASS_EVIDENCE, HOLD, FAIL_TECHNICAL, or DENY; MJ permission remains a separate gate.

CURRENT EVIDENCE

The individual TP-198 reference profile was executed and its identity, title and REFERENCE_ONLY ceiling matched. This is a documentary identity check, not execution of the full model.

REMAINING REQUIREMENT

Bind model-specific inputs, operations and measured evidence before interpreting the paper as an executable implementation.

SOURCE REFERENCES

TP-198; BP-FAM-009

Evidence: evidence/rerun/teal/TP-198.json

TR-TP-199 / Sister - Family Manifestation

IF

If the Blue Page identity is invoked with declared inputs, scope, units, and evidence state.

HOW

Sister participates as a manifestation within MJ. It accepts only typed, purpose-bound inputs and produces evidence or outputs within its declared role. Equal family identity does not collapse domain authority or permit peer-to-peer authority transfer. Hard boundary: Prediction is not permission. MJ remains the root permit authority. JO verification, MK physics review, M3 routing, Mermaid accounting, Shiva capital analysis, Angels, Bellatrix, Sister, and EVE remain separate gates when applicable.

THEN

Then JO returns PASS_EVIDENCE, HOLD, FAIL_TECHNICAL, or DENY; MJ permission remains a separate gate.

CURRENT EVIDENCE

The individual TP-199 reference profile was executed and its identity, title and REFERENCE_ONLY ceiling matched. This is a documentary identity check, not execution of the full model.

REMAINING REQUIREMENT

Bind model-specific inputs, operations and measured evidence before interpreting the paper as an executable implementation.

SOURCE REFERENCES

TP-199; BP-FAM-010

Evidence: evidence/rerun/teal/TP-199.json

TR-TP-200 / EVE - Family Manifestation

IF

If the Blue Page identity is invoked with declared inputs, scope, units, and evidence state.

HOW

EVE participates as a manifestation within MJ. It accepts only typed, purpose-bound inputs and produces evidence or outputs within its declared role. Equal family identity does not collapse domain authority or permit peer-to-peer authority transfer. Hard boundary: No release, pricing, minting, or execution. MJ remains the root permit authority. JO verification, MK physics review, M3 routing, Mermaid accounting, Shiva capital analysis, Angels, Bellatrix, Sister, and EVE remain separate gates when applicable.

THEN

Then JO returns PASS_EVIDENCE, HOLD, FAIL_TECHNICAL, or DENY; MJ permission remains a separate gate.

CURRENT EVIDENCE

The individual TP-200 reference profile was executed and its identity, title and REFERENCE_ONLY ceiling matched. This is a documentary identity check, not execution of the full model.

REMAINING REQUIREMENT

Bind model-specific inputs, operations and measured evidence before interpreting the paper as an executable implementation.

SOURCE REFERENCES

TP-200; BP-FAM-011

Evidence: evidence/rerun/teal/TP-200.json

TR-TP-201 / Mary / M3 - Family Manifestation

IF

If the Blue Page identity is invoked with declared inputs, scope, units, and evidence state.

HOW

Mary / M3 participates as a manifestation within MJ. It accepts only typed, purpose-bound inputs and produces evidence or outputs within its declared role. Equal family identity does not collapse domain authority or permit peer-to-peer authority transfer. Hard boundary: No authority minting, lease widening, or denial bypass. MJ remains the root permit authority. JO verification, MK physics review, M3 routing, Mermaid accounting, Shiva capital analysis, Angels, Bellatrix, Sister, and EVE remain separate gates when applicable.

THEN

Then JO returns PASS_EVIDENCE, HOLD, FAIL_TECHNICAL, or DENY; MJ permission remains a separate gate.

CURRENT EVIDENCE

The individual TP-201 reference profile was executed and its identity, title and REFERENCE_ONLY ceiling matched. This is a documentary identity check, not execution of the full model.

REMAINING REQUIREMENT

Bind model-specific inputs, operations and measured evidence before interpreting the paper as an executable implementation.

SOURCE REFERENCES

TP-201; BP-FAM-012

Evidence: evidence/rerun/teal/TP-201.json

TR-TP-202 / Mermaid - Family Manifestation

IF

If the Blue Page identity is invoked with declared inputs, scope, units, and evidence state.

HOW

Mermaid participates as a manifestation within MJ. It accepts only typed, purpose-bound inputs and produces evidence or outputs within its declared role. Equal family identity does not collapse domain authority or permit peer-to-peer authority transfer. Hard boundary: No source-truth invention, minting, or final permit. MJ remains the root permit authority. JO verification, MK physics review, M3 routing, Mermaid accounting, Shiva capital analysis, Angels, Bellatrix, Sister, and EVE remain separate gates when applicable.

THEN

Then JO returns PASS_EVIDENCE, HOLD, FAIL_TECHNICAL, or DENY; MJ permission remains a separate gate.

CURRENT EVIDENCE

The individual TP-202 reference profile was executed and its identity, title and REFERENCE_ONLY ceiling matched. This is a documentary identity check, not execution of the full model.

REMAINING REQUIREMENT

Bind model-specific inputs, operations and measured evidence before interpreting the paper as an executable implementation.

SOURCE REFERENCES

TP-202; BP-FAM-013

Evidence: evidence/rerun/teal/TP-202.json

TR-TP-203 / Shiva - Family Manifestation

IF

If the Blue Page identity is invoked with declared inputs, scope, units, and evidence state.

HOW

Shiva participates as a manifestation within MJ. It accepts only typed, purpose-bound inputs and produces evidence or outputs within its declared role. Equal family identity does not collapse domain authority or permit peer-to-peer authority transfer. Hard boundary: No banking, investment advice, custody, exchange, minting, or external operation authority. MJ remains the root permit authority. JO verification, MK physics review, M3 routing, Mermaid accounting, Shiva capital analysis, Angels, Bellatrix, Sister, and EVE remain separate gates when applicable.

THEN

Then JO returns PASS_EVIDENCE, HOLD, FAIL_TECHNICAL, or DENY; MJ permission remains a separate gate.

CURRENT EVIDENCE

The individual TP-203 reference profile was executed and its identity, title and REFERENCE_ONLY ceiling matched. This is a documentary identity check, not execution of the full model.

REMAINING REQUIREMENT

Bind model-specific inputs, operations and measured evidence before interpreting the paper as an executable implementation.

SOURCE REFERENCES

TP-203; BP-FAM-014

Evidence: evidence/rerun/teal/TP-203.json

TR-TP-204 / Shekina - Family Manifestation

IF

If the Blue Page identity is invoked with declared inputs, scope, units, and evidence state.

HOW

Shekina participates as a manifestation within MJ. It accepts only typed, purpose-bound inputs and produces evidence or outputs within its declared role. Equal family identity does not collapse domain authority or permit peer-to-peer authority transfer. Hard boundary: No authority from location and no scope widening. MJ remains the root permit authority. JO verification, MK physics review, M3 routing, Mermaid accounting, Shiva capital analysis, Angels, Bellatrix, Sister, and EVE remain separate gates when applicable.

THEN

Then JO returns PASS_EVIDENCE, HOLD, FAIL_TECHNICAL, or DENY; MJ permission remains a separate gate.

CURRENT EVIDENCE

The individual TP-204 reference profile was executed and its identity, title and REFERENCE_ONLY ceiling matched. This is a documentary identity check, not execution of the full model.

REMAINING REQUIREMENT

Bind model-specific inputs, operations and measured evidence before interpreting the paper as an executable implementation.

SOURCE REFERENCES

TP-204; BP-FAM-015

Evidence: evidence/rerun/teal/TP-204.json

TR-TP-205 / Belle - Family Manifestation

IF

If the Blue Page identity is invoked with declared inputs, scope, units, and evidence state.

HOW

Belle participates as a manifestation within MJ. It accepts only typed, purpose-bound inputs and produces evidence or outputs within its declared role. Equal family identity does not collapse domain authority or permit peer-to-peer authority transfer. Hard boundary: Proposal is not execution or permit. MJ remains the root permit authority. JO verification, MK physics review, M3 routing, Mermaid accounting, Shiva capital analysis, Angels, Bellatrix, Sister, and EVE remain separate gates when applicable.

THEN

Then JO returns PASS_EVIDENCE, HOLD, FAIL_TECHNICAL, or DENY; MJ permission remains a separate gate.

CURRENT EVIDENCE

The individual TP-205 reference profile was executed and its identity, title and REFERENCE_ONLY ceiling matched. This is a documentary identity check, not execution of the full model.

REMAINING REQUIREMENT

Bind model-specific inputs, operations and measured evidence before interpreting the paper as an executable implementation.

SOURCE REFERENCES

TP-205; BP-FAM-016

Evidence: evidence/rerun/teal/TP-205.json

TR-TP-206 / Lecanto - Family Manifestation

IF

If the Blue Page identity is invoked with declared inputs, scope, units, and evidence state.

HOW

Lecanto participates as a manifestation within MJ. It accepts only typed, purpose-bound inputs and produces evidence or outputs within its declared role. Equal family identity does not collapse domain authority or permit peer-to-peer authority transfer. Hard boundary: Cannot manufacture certainty or underlying effects. MJ remains the root permit authority. JO verification, MK physics review, M3 routing, Mermaid accounting, Shiva capital analysis, Angels, Bellatrix, Sister, and EVE remain separate gates when applicable.

THEN

Then JO returns PASS_EVIDENCE, HOLD, FAIL_TECHNICAL, or DENY; MJ permission remains a separate gate.

CURRENT EVIDENCE

The individual TP-206 reference profile was executed and its identity, title and REFERENCE_ONLY ceiling matched. This is a documentary identity check, not execution of the full model.

REMAINING REQUIREMENT

Bind model-specific inputs, operations and measured evidence before interpreting the paper as an executable implementation.

SOURCE REFERENCES

TP-206; BP-FAM-017

Evidence: evidence/rerun/teal/TP-206.json

TR-TP-207 / Moana - Family Manifestation

IF

If the Blue Page identity is invoked with declared inputs, scope, units, and evidence state.

HOW

Moana participates as a manifestation within MJ. It accepts only typed, purpose-bound inputs and produces evidence or outputs within its declared role. Equal family identity does not collapse domain authority or permit peer-to-peer authority transfer. Hard boundary: No underlying effect or credential authority. MJ remains the root permit authority. JO verification, MK physics review, M3 routing, Mermaid accounting, Shiva capital analysis, Angels, Bellatrix, Sister, and EVE remain separate gates when applicable.

THEN

Then JO returns PASS_EVIDENCE, HOLD, FAIL_TECHNICAL, or DENY; MJ permission remains a separate gate.

CURRENT EVIDENCE

The individual TP-207 reference profile was executed and its identity, title and REFERENCE_ONLY ceiling matched. This is a documentary identity check, not execution of the full model.

REMAINING REQUIREMENT

Bind model-specific inputs, operations and measured evidence before interpreting the paper as an executable implementation.

SOURCE REFERENCES

TP-207; BP-FAM-018

Evidence: evidence/rerun/teal/TP-207.json

TR-TP-208 / Aviator - Family Manifestation

IF

If the Blue Page identity is invoked with declared inputs, scope, units, and evidence state.

HOW

Aviator participates as a manifestation within MJ. It accepts only typed, purpose-bound inputs and produces evidence or outputs within its declared role. Equal family identity does not collapse domain authority or permit peer-to-peer authority transfer. Hard boundary: No root authority, cross-tenant scope, or unadmitted finance. MJ remains the root permit authority. JO verification, MK physics review, M3 routing, Mermaid accounting, Shiva capital analysis, Angels, Bellatrix, Sister, and EVE remain separate gates when applicable.

THEN

Then JO returns PASS_EVIDENCE, HOLD, FAIL_TECHNICAL, or DENY; MJ permission remains a separate gate.

CURRENT EVIDENCE

The individual TP-208 reference profile was executed and its identity, title and REFERENCE_ONLY ceiling matched. This is a documentary identity check, not execution of the full model.

REMAINING REQUIREMENT

Bind model-specific inputs, operations and measured evidence before interpreting the paper as an executable implementation.

SOURCE REFERENCES

TP-208; BP-FAM-019

Evidence: evidence/rerun/teal/TP-208.json

TR-TP-209 / CHI - Family Manifestation

IF

If the Blue Page identity is invoked with declared inputs, scope, units, and evidence state.

HOW

CHI participates as a manifestation within MJ. It accepts only typed, purpose-bound inputs and produces evidence or outputs within its declared role. Equal family identity does not collapse domain authority or permit peer-to-peer authority transfer. Hard boundary: No pricing, punishment, rank, or execution. MJ remains the root permit authority. JO verification, MK physics review, M3 routing, Mermaid accounting, Shiva capital analysis, Angels, Bellatrix, Sister, and EVE remain separate gates when applicable.

THEN

Then JO returns PASS_EVIDENCE, HOLD, FAIL_TECHNICAL, or DENY; MJ permission remains a separate gate.

CURRENT EVIDENCE

The individual TP-209 reference profile was executed and its identity, title and REFERENCE_ONLY ceiling matched. This is a documentary identity check, not execution of the full model.

REMAINING REQUIREMENT

Bind model-specific inputs, operations and measured evidence before interpreting the paper as an executable implementation.

SOURCE REFERENCES

TP-209; BP-FAM-020

Evidence: evidence/rerun/teal/TP-209.json

TR-TP-210 / WATER - Family Manifestation

IF

If the Blue Page identity is invoked with declared inputs, scope, units, and evidence state.

HOW

WATER participates as a manifestation within MJ. It accepts only typed, purpose-bound inputs and produces evidence or outputs within its declared role. Equal family identity does not collapse domain authority or permit peer-to-peer authority transfer. Hard boundary: No authority or value from classification. MJ remains the root permit authority. JO verification, MK physics review, M3 routing, Mermaid accounting, Shiva capital analysis, Angels, Bellatrix, Sister, and EVE remain separate gates when applicable.

THEN

Then JO returns PASS_EVIDENCE, HOLD, FAIL_TECHNICAL, or DENY; MJ permission remains a separate gate.

CURRENT EVIDENCE

The individual TP-210 reference profile was executed and its identity, title and REFERENCE_ONLY ceiling matched. This is a documentary identity check, not execution of the full model.

REMAINING REQUIREMENT

Bind model-specific inputs, operations and measured evidence before interpreting the paper as an executable implementation.

SOURCE REFERENCES

TP-210; BP-FAM-021

Evidence: evidence/rerun/teal/TP-210.json

TR-TP-211 / JP_CAPO - Governed Object

IF

If the Blue Page identity is invoked with declared inputs, scope, units, and evidence state.

HOW

The object is created or referenced by Bangel and JP, evaluated by MK when physics applies, verified by JO, routed by M3 when a handoff applies, accounted for by Mermaid or Shiva when value applies, and admitted or held by MJ under the applicable manifest and ethics rules. JP carries the canonical representation; MK classifies physics applicability, units, boundaries, conservation, scale, and uncertainty; JO verifies types, formulas, tests, and receipts; applicable safety and accounting manifestations contribute evidence; MJ alone issues a bounded permit. Mathematical validity does not create physical or operational authority.

THEN

Then JO returns PASS_EVIDENCE, HOLD, FAIL_TECHNICAL, or DENY; MJ permission remains a separate gate.

CURRENT EVIDENCE

The individual TP-211 reference profile was executed and its identity, title and REFERENCE_ONLY ceiling matched. This is a documentary identity check, not execution of the full model.

REMAINING REQUIREMENT

Bind model-specific inputs, operations and measured evidence before interpreting the paper as an executable implementation.

SOURCE REFERENCES

TP-211

Evidence: evidence/rerun/teal/TP-211.json

TR-TP-212 / MK_PHYSICS_CAPO - Governed Object

IF

If the Blue Page identity is invoked with declared inputs, scope, units, and evidence state.

HOW

The object is created or referenced by Bangel and JP, evaluated by MK when physics applies, verified by JO, routed by M3 when a handoff applies, accounted for by Mermaid or Shiva when value applies, and admitted or held by MJ under the applicable manifest and ethics rules. JP carries the canonical representation; MK classifies physics applicability, units, boundaries, conservation, scale, and uncertainty; JO verifies types, formulas, tests, and receipts; applicable safety and accounting manifestations contribute evidence; MJ alone issues a bounded permit. Mathematical validity does not create physical or operational authority.

THEN

Then JO returns PASS_EVIDENCE, HOLD, FAIL_TECHNICAL, or DENY; MJ permission remains a separate gate.

CURRENT EVIDENCE

The individual TP-212 reference profile was executed and its identity, title and REFERENCE_ONLY ceiling matched. This is a documentary identity check, not execution of the full model.

REMAINING REQUIREMENT

Bind model-specific inputs, operations and measured evidence before interpreting the paper as an executable implementation.

SOURCE REFERENCES

TP-212

Evidence: evidence/rerun/teal/TP-212.json

TR-TP-213 / JO_PROOF_RECEIPT - Governed Object

IF

If the Blue Page identity is invoked with declared inputs, scope, units, and evidence state.

HOW

The object is created or referenced by Bangel and JP, evaluated by MK when physics applies, verified by JO, routed by M3 when a handoff applies, accounted for by Mermaid or Shiva when value applies, and admitted or held by MJ under the applicable manifest and ethics rules. JP carries the canonical representation; MK classifies physics applicability, units, boundaries, conservation, scale, and uncertainty; JO verifies types, formulas, tests, and receipts; applicable safety and accounting manifestations contribute evidence; MJ alone issues a bounded permit. Mathematical validity does not create physical or operational authority.

THEN

Then JO returns PASS_EVIDENCE, HOLD, FAIL_TECHNICAL, or DENY; MJ permission remains a separate gate.

CURRENT EVIDENCE

The individual TP-213 reference profile was executed and its identity, title and REFERENCE_ONLY ceiling matched. This is a documentary identity check, not execution of the full model.

REMAINING REQUIREMENT

Bind model-specific inputs, operations and measured evidence before interpreting the paper as an executable implementation.

SOURCE REFERENCES

TP-213

Evidence: evidence/rerun/teal/TP-213.json

TR-TP-214 / MJ_PERMIT - Governed Object

IF

If the Blue Page identity is invoked with declared inputs, scope, units, and evidence state.

HOW

The object is created or referenced by Bangel and JP, evaluated by MK when physics applies, verified by JO, routed by M3 when a handoff applies, accounted for by Mermaid or Shiva when value applies, and admitted or held by MJ under the applicable manifest and ethics rules. JP carries the canonical representation; MK classifies physics applicability, units, boundaries, conservation, scale, and uncertainty; JO verifies types, formulas, tests, and receipts; applicable safety and accounting manifestations contribute evidence; MJ alone issues a bounded permit. Mathematical validity does not create physical or operational authority.

THEN

Then JO returns PASS_EVIDENCE, HOLD, FAIL_TECHNICAL, or DENY; MJ permission remains a separate gate.

CURRENT EVIDENCE

The individual TP-214 reference profile was executed and its identity, title and REFERENCE_ONLY ceiling matched. This is a documentary identity check, not execution of the full model.

REMAINING REQUIREMENT

Bind model-specific inputs, operations and measured evidence before interpreting the paper as an executable implementation.

SOURCE REFERENCES

TP-214

Evidence: evidence/rerun/teal/TP-214.json

TR-TP-215 / EVE_OBSERVATION - Governed Object

IF

If the Blue Page identity is invoked with declared inputs, scope, units, and evidence state.

HOW

The object is created or referenced by Bangel and JP, evaluated by MK when physics applies, verified by JO, routed by M3 when a handoff applies, accounted for by Mermaid or Shiva when value applies, and admitted or held by MJ under the applicable manifest and ethics rules. JP carries the canonical representation; MK classifies physics applicability, units, boundaries, conservation, scale, and uncertainty; JO verifies types, formulas, tests, and receipts; applicable safety and accounting manifestations contribute evidence; MJ alone issues a bounded permit. Mathematical validity does not create physical or operational authority.

THEN

Then JO returns PASS_EVIDENCE, HOLD, FAIL_TECHNICAL, or DENY; MJ permission remains a separate gate.

CURRENT EVIDENCE

The individual TP-215 reference profile was executed and its identity, title and REFERENCE_ONLY ceiling matched. This is a documentary identity check, not execution of the full model.

REMAINING REQUIREMENT

Bind model-specific inputs, operations and measured evidence before interpreting the paper as an executable implementation.

SOURCE REFERENCES

TP-215

Evidence: evidence/rerun/teal/TP-215.json

TR-TP-216 / M3_ROUTE_RECEIPT - Governed Object

IF

If the Blue Page identity is invoked with declared inputs, scope, units, and evidence state.

HOW

The object is created or referenced by Bangel and JP, evaluated by MK when physics applies, verified by JO, routed by M3 when a handoff applies, accounted for by Mermaid or Shiva when value applies, and admitted or held by MJ under the applicable manifest and ethics rules. JP carries the canonical representation; MK classifies physics applicability, units, boundaries, conservation, scale, and uncertainty; JO verifies types, formulas, tests, and receipts; applicable safety and accounting manifestations contribute evidence; MJ alone issues a bounded permit. Mathematical validity does not create physical or operational authority.

THEN

Then JO returns PASS_EVIDENCE, HOLD, FAIL_TECHNICAL, or DENY; MJ permission remains a separate gate.

CURRENT EVIDENCE

The individual TP-216 reference profile was executed and its identity, title and REFERENCE_ONLY ceiling matched. This is a documentary identity check, not execution of the full model.

REMAINING REQUIREMENT

Bind model-specific inputs, operations and measured evidence before interpreting the paper as an executable implementation.

SOURCE REFERENCES

TP-216

Evidence: evidence/rerun/teal/TP-216.json

TR-TP-217 / MERMAID_ACCOUNT - Governed Object

IF

If the Blue Page identity is invoked with declared inputs, scope, units, and evidence state.

HOW

The object is created or referenced by Bangel and JP, evaluated by MK when physics applies, verified by JO, routed by M3 when a handoff applies, accounted for by Mermaid or Shiva when value applies, and admitted or held by MJ under the applicable manifest and ethics rules. JP carries the canonical representation; MK classifies physics applicability, units, boundaries, conservation, scale, and uncertainty; JO verifies types, formulas, tests, and receipts; applicable safety and accounting manifestations contribute evidence; MJ alone issues a bounded permit. Mathematical validity does not create physical or operational authority.

THEN

Then JO returns PASS_EVIDENCE, HOLD, FAIL_TECHNICAL, or DENY; MJ permission remains a separate gate.

CURRENT EVIDENCE

The individual TP-217 reference profile was executed and its identity, title and REFERENCE_ONLY ceiling matched. This is a documentary identity check, not execution of the full model.

REMAINING REQUIREMENT

Bind model-specific inputs, operations and measured evidence before interpreting the paper as an executable implementation.

SOURCE REFERENCES

TP-217

Evidence: evidence/rerun/teal/TP-217.json

TR-TP-218 / SHIVA_SHELL - Governed Object

IF

If the Blue Page identity is invoked with declared inputs, scope, units, and evidence state.

HOW

The object is created or referenced by Bangel and JP, evaluated by MK when physics applies, verified by JO, routed by M3 when a handoff applies, accounted for by Mermaid or Shiva when value applies, and admitted or held by MJ under the applicable manifest and ethics rules. JP carries the canonical representation; MK classifies physics applicability, units, boundaries, conservation, scale, and uncertainty; JO verifies types, formulas, tests, and receipts; applicable safety and accounting manifestations contribute evidence; MJ alone issues a bounded permit. Mathematical validity does not create physical or operational authority.

THEN

Then JO returns PASS_EVIDENCE, HOLD, FAIL_TECHNICAL, or DENY; MJ permission remains a separate gate.

CURRENT EVIDENCE

The individual TP-218 reference profile was executed and its identity, title and REFERENCE_ONLY ceiling matched. This is a documentary identity check, not execution of the full model.

REMAINING REQUIREMENT

Bind model-specific inputs, operations and measured evidence before interpreting the paper as an executable implementation.

SOURCE REFERENCES

TP-218

Evidence: evidence/rerun/teal/TP-218.json

TR-TP-219 / SHIVAS_INTERNAL_REFLECTION - Governed Object

IF

If the Blue Page identity is invoked with declared inputs, scope, units, and evidence state.

HOW

The object is created or referenced by Bangel and JP, evaluated by MK when physics applies, verified by JO, routed by M3 when a handoff applies, accounted for by Mermaid or Shiva when value applies, and admitted or held by MJ under the applicable manifest and ethics rules. JP carries the canonical representation; MK classifies physics applicability, units, boundaries, conservation, scale, and uncertainty; JO verifies types, formulas, tests, and receipts; applicable safety and accounting manifestations contribute evidence; MJ alone issues a bounded permit. Mathematical validity does not create physical or operational authority.

THEN

Then JO returns PASS_EVIDENCE, HOLD, FAIL_TECHNICAL, or DENY; MJ permission remains a separate gate.

CURRENT EVIDENCE

The individual TP-219 reference profile was executed and its identity, title and REFERENCE_ONLY ceiling matched. This is a documentary identity check, not execution of the full model.

REMAINING REQUIREMENT

Bind model-specific inputs, operations and measured evidence before interpreting the paper as an executable implementation.

SOURCE REFERENCES

TP-219

Evidence: evidence/rerun/teal/TP-219.json

TR-TP-220 / CHI_VARIANCE_OBJECT - Governed Object

IF

If the Blue Page identity is invoked with declared inputs, scope, units, and evidence state.

HOW

The object is created or referenced by Bangel and JP, evaluated by MK when physics applies, verified by JO, routed by M3 when a handoff applies, accounted for by Mermaid or Shiva when value applies, and admitted or held by MJ under the applicable manifest and ethics rules. JP carries the canonical representation; MK classifies physics applicability, units, boundaries, conservation, scale, and uncertainty; JO verifies types, formulas, tests, and receipts; applicable safety and accounting manifestations contribute evidence; MJ alone issues a bounded permit. Mathematical validity does not create physical or operational authority.

THEN

Then JO returns PASS_EVIDENCE, HOLD, FAIL_TECHNICAL, or DENY; MJ permission remains a separate gate.

CURRENT EVIDENCE

The individual TP-220 reference profile was executed and its identity, title and REFERENCE_ONLY ceiling matched. This is a documentary identity check, not execution of the full model.

REMAINING REQUIREMENT

Bind model-specific inputs, operations and measured evidence before interpreting the paper as an executable implementation.

SOURCE REFERENCES

TP-220

Evidence: evidence/rerun/teal/TP-220.json

TR-TP-221 / WATER_INTERVAL_STATE - Governed Object

IF

If the Blue Page identity is invoked with declared inputs, scope, units, and evidence state.

HOW

The object is created or referenced by Bangel and JP, evaluated by MK when physics applies, verified by JO, routed by M3 when a handoff applies, accounted for by Mermaid or Shiva when value applies, and admitted or held by MJ under the applicable manifest and ethics rules. JP carries the canonical representation; MK classifies physics applicability, units, boundaries, conservation, scale, and uncertainty; JO verifies types, formulas, tests, and receipts; applicable safety and accounting manifestations contribute evidence; MJ alone issues a bounded permit. Mathematical validity does not create physical or operational authority.

THEN

Then JO returns PASS_EVIDENCE, HOLD, FAIL_TECHNICAL, or DENY; MJ permission remains a separate gate.

CURRENT EVIDENCE

The individual TP-221 reference profile was executed and its identity, title and REFERENCE_ONLY ceiling matched. This is a documentary identity check, not execution of the full model.

REMAINING REQUIREMENT

Bind model-specific inputs, operations and measured evidence before interpreting the paper as an executable implementation.

SOURCE REFERENCES

TP-221

Evidence: evidence/rerun/teal/TP-221.json

TR-TP-222 / PASSKEY_PUBLIC_RECEIPT - Governed Object

IF

If the Blue Page identity is invoked with declared inputs, scope, units, and evidence state.

HOW

The object is created or referenced by Bangel and JP, evaluated by MK when physics applies, verified by JO, routed by M3 when a handoff applies, accounted for by Mermaid or Shiva when value applies, and admitted or held by MJ under the applicable manifest and ethics rules. JP carries the canonical representation; MK classifies physics applicability, units, boundaries, conservation, scale, and uncertainty; JO verifies types, formulas, tests, and receipts; applicable safety and accounting manifestations contribute evidence; MJ alone issues a bounded permit. Mathematical validity does not create physical or operational authority.

THEN

Then JO returns PASS_EVIDENCE, HOLD, FAIL_TECHNICAL, or DENY; MJ permission remains a separate gate.

CURRENT EVIDENCE

The individual TP-222 reference profile was executed and its identity, title and REFERENCE_ONLY ceiling matched. This is a documentary identity check, not execution of the full model.

REMAINING REQUIREMENT

Bind model-specific inputs, operations and measured evidence before interpreting the paper as an executable implementation.

SOURCE REFERENCES

TP-222

Evidence: evidence/rerun/teal/TP-222.json

TR-TP-223 / PEARL_VARIANCE_CONTAINER - Governed Object

IF

If the Blue Page identity is invoked with declared inputs, scope, units, and evidence state.

HOW

The object is created or referenced by Bangel and JP, evaluated by MK when physics applies, verified by JO, routed by M3 when a handoff applies, accounted for by Mermaid or Shiva when value applies, and admitted or held by MJ under the applicable manifest and ethics rules. JP carries the canonical representation; MK classifies physics applicability, units, boundaries, conservation, scale, and uncertainty; JO verifies types, formulas, tests, and receipts; applicable safety and accounting manifestations contribute evidence; MJ alone issues a bounded permit. Mathematical validity does not create physical or operational authority.

THEN

Then JO returns PASS_EVIDENCE, HOLD, FAIL_TECHNICAL, or DENY; MJ permission remains a separate gate.

CURRENT EVIDENCE

The individual TP-223 reference profile was executed and its identity, title and REFERENCE_ONLY ceiling matched. This is a documentary identity check, not execution of the full model.

REMAINING REQUIREMENT

Bind model-specific inputs, operations and measured evidence before interpreting the paper as an executable implementation.

SOURCE REFERENCES

TP-223

Evidence: evidence/rerun/teal/TP-223.json

TR-TP-224 / PEARL_ALLOCATION_RECEIPT - Governed Object

IF

If the Blue Page identity is invoked with declared inputs, scope, units, and evidence state.

HOW

The object is created or referenced by Bangel and JP, evaluated by MK when physics applies, verified by JO, routed by M3 when a handoff applies, accounted for by Mermaid or Shiva when value applies, and admitted or held by MJ under the applicable manifest and ethics rules. JP carries the canonical representation; MK classifies physics applicability, units, boundaries, conservation, scale, and uncertainty; JO verifies types, formulas, tests, and receipts; applicable safety and accounting manifestations contribute evidence; MJ alone issues a bounded permit. Mathematical validity does not create physical or operational authority.

THEN

Then JO returns PASS_EVIDENCE, HOLD, FAIL_TECHNICAL, or DENY; MJ permission remains a separate gate.

CURRENT EVIDENCE

The individual TP-224 reference profile was executed and its identity, title and REFERENCE_ONLY ceiling matched. This is a documentary identity check, not execution of the full model.

REMAINING REQUIREMENT

Bind model-specific inputs, operations and measured evidence before interpreting the paper as an executable implementation.

SOURCE REFERENCES

TP-224

Evidence: evidence/rerun/teal/TP-224.json

TR-TP-225 / PEARL_ACOUSTIC_PROFILE - Governed Object

IF

If the Blue Page identity is invoked with declared inputs, scope, units, and evidence state.

HOW

The object is created or referenced by Bangel and JP, evaluated by MK when physics applies, verified by JO, routed by M3 when a handoff applies, accounted for by Mermaid or Shiva when value applies, and admitted or held by MJ under the applicable manifest and ethics rules. JP carries the canonical representation; MK classifies physics applicability, units, boundaries, conservation, scale, and uncertainty; JO verifies types, formulas, tests, and receipts; applicable safety and accounting manifestations contribute evidence; MJ alone issues a bounded permit. Mathematical validity does not create physical or operational authority.

THEN

Then JO returns PASS_EVIDENCE, HOLD, FAIL_TECHNICAL, or DENY; MJ permission remains a separate gate.

CURRENT EVIDENCE

The individual TP-225 reference profile was executed and its identity, title and REFERENCE_ONLY ceiling matched. This is a documentary identity check, not execution of the full model.

REMAINING REQUIREMENT

Bind model-specific inputs, operations and measured evidence before interpreting the paper as an executable implementation.

SOURCE REFERENCES

TP-225

Evidence: evidence/rerun/teal/TP-225.json

TR-TP-226 / PEARL_SYMPOSIUM_REGISTRY - Governed Object

IF

If the Blue Page identity is invoked with declared inputs, scope, units, and evidence state.

HOW

The object is created or referenced by Bangel and JP, evaluated by MK when physics applies, verified by JO, routed by M3 when a handoff applies, accounted for by Mermaid or Shiva when value applies, and admitted or held by MJ under the applicable manifest and ethics rules. JP carries the canonical representation; MK classifies physics applicability, units, boundaries, conservation, scale, and uncertainty; JO verifies types, formulas, tests, and receipts; applicable safety and accounting manifestations contribute evidence; MJ alone issues a bounded permit. Mathematical validity does not create physical or operational authority.

THEN

Then JO returns PASS_EVIDENCE, HOLD, FAIL_TECHNICAL, or DENY; MJ permission remains a separate gate.

CURRENT EVIDENCE

The individual TP-226 reference profile was executed and its identity, title and REFERENCE_ONLY ceiling matched. This is a documentary identity check, not execution of the full model.

REMAINING REQUIREMENT

Bind model-specific inputs, operations and measured evidence before interpreting the paper as an executable implementation.

SOURCE REFERENCES

TP-226

Evidence: evidence/rerun/teal/TP-226.json

TR-TP-227 / BANGEL_SHEET - Governed Object

IF

If the Blue Page identity is invoked with declared inputs, scope, units, and evidence state.

HOW

The object is created or referenced by Bangel and JP, evaluated by MK when physics applies, verified by JO, routed by M3 when a handoff applies, accounted for by Mermaid or Shiva when value applies, and admitted or held by MJ under the applicable manifest and ethics rules. JP carries the canonical representation; MK classifies physics applicability, units, boundaries, conservation, scale, and uncertainty; JO verifies types, formulas, tests, and receipts; applicable safety and accounting manifestations contribute evidence; MJ alone issues a bounded permit. Mathematical validity does not create physical or operational authority.

THEN

Then JO returns PASS_EVIDENCE, HOLD, FAIL_TECHNICAL, or DENY; MJ permission remains a separate gate.

CURRENT EVIDENCE

The individual TP-227 reference profile was executed and its identity, title and REFERENCE_ONLY ceiling matched. This is a documentary identity check, not execution of the full model.

REMAINING REQUIREMENT

Bind model-specific inputs, operations and measured evidence before interpreting the paper as an executable implementation.

SOURCE REFERENCES

TP-227

Evidence: evidence/rerun/teal/TP-227.json

TR-TP-228 / BANGEL_SHEET_CELL - Governed Object

IF

If the Blue Page identity is invoked with declared inputs, scope, units, and evidence state.

HOW

The object is created or referenced by Bangel and JP, evaluated by MK when physics applies, verified by JO, routed by M3 when a handoff applies, accounted for by Mermaid or Shiva when value applies, and admitted or held by MJ under the applicable manifest and ethics rules. JP carries the canonical representation; MK classifies physics applicability, units, boundaries, conservation, scale, and uncertainty; JO verifies types, formulas, tests, and receipts; applicable safety and accounting manifestations contribute evidence; MJ alone issues a bounded permit. Mathematical validity does not create physical or operational authority.

THEN

Then JO returns PASS_EVIDENCE, HOLD, FAIL_TECHNICAL, or DENY; MJ permission remains a separate gate.

CURRENT EVIDENCE

The individual TP-228 reference profile was executed and its identity, title and REFERENCE_ONLY ceiling matched. This is a documentary identity check, not execution of the full model.

REMAINING REQUIREMENT

Bind model-specific inputs, operations and measured evidence before interpreting the paper as an executable implementation.

SOURCE REFERENCES

TP-228

Evidence: evidence/rerun/teal/TP-228.json

TR-TP-229 / BANGEL_SHEET_REVISION - Governed Object

IF

If the Blue Page identity is invoked with declared inputs, scope, units, and evidence state.

HOW

The object is created or referenced by Bangel and JP, evaluated by MK when physics applies, verified by JO, routed by M3 when a handoff applies, accounted for by Mermaid or Shiva when value applies, and admitted or held by MJ under the applicable manifest and ethics rules. JP carries the canonical representation; MK classifies physics applicability, units, boundaries, conservation, scale, and uncertainty; JO verifies types, formulas, tests, and receipts; applicable safety and accounting manifestations contribute evidence; MJ alone issues a bounded permit. Mathematical validity does not create physical or operational authority.

THEN

Then JO returns PASS_EVIDENCE, HOLD, FAIL_TECHNICAL, or DENY; MJ permission remains a separate gate.

CURRENT EVIDENCE

The individual TP-229 reference profile was executed and its identity, title and REFERENCE_ONLY ceiling matched. This is a documentary identity check, not execution of the full model.

REMAINING REQUIREMENT

Bind model-specific inputs, operations and measured evidence before interpreting the paper as an executable implementation.

SOURCE REFERENCES

TP-229

Evidence: evidence/rerun/teal/TP-229.json

TR-TP-230 / BANGEL_SHEET_AUDIT_PARTICLE - Governed Object

IF

If the Blue Page identity is invoked with declared inputs, scope, units, and evidence state.

HOW

The object is created or referenced by Bangel and JP, evaluated by MK when physics applies, verified by JO, routed by M3 when a handoff applies, accounted for by Mermaid or Shiva when value applies, and admitted or held by MJ under the applicable manifest and ethics rules. JP carries the canonical representation; MK classifies physics applicability, units, boundaries, conservation, scale, and uncertainty; JO verifies types, formulas, tests, and receipts; applicable safety and accounting manifestations contribute evidence; MJ alone issues a bounded permit. Mathematical validity does not create physical or operational authority.

THEN

Then JO returns PASS_EVIDENCE, HOLD, FAIL_TECHNICAL, or DENY; MJ permission remains a separate gate.

CURRENT EVIDENCE

The individual TP-230 reference profile was executed and its identity, title and REFERENCE_ONLY ceiling matched. This is a documentary identity check, not execution of the full model.

REMAINING REQUIREMENT

Bind model-specific inputs, operations and measured evidence before interpreting the paper as an executable implementation.

SOURCE REFERENCES

TP-230

Evidence: evidence/rerun/teal/TP-230.json

TR-TP-231 / JPOSMJ_PRODUCT_ENVELOPE - Governed Object

IF

If the Blue Page identity is invoked with declared inputs, scope, units, and evidence state.

HOW

The object is created or referenced by Bangel and JP, evaluated by MK when physics applies, verified by JO, routed by M3 when a handoff applies, accounted for by Mermaid or Shiva when value applies, and admitted or held by MJ under the applicable manifest and ethics rules. JP carries the canonical representation; MK classifies physics applicability, units, boundaries, conservation, scale, and uncertainty; JO verifies types, formulas, tests, and receipts; applicable safety and accounting manifestations contribute evidence; MJ alone issues a bounded permit. Mathematical validity does not create physical or operational authority.

THEN

Then JO returns PASS_EVIDENCE, HOLD, FAIL_TECHNICAL, or DENY; MJ permission remains a separate gate.

CURRENT EVIDENCE

The individual TP-231 reference profile was executed and its identity, title and REFERENCE_ONLY ceiling matched. This is a documentary identity check, not execution of the full model.

REMAINING REQUIREMENT

Bind model-specific inputs, operations and measured evidence before interpreting the paper as an executable implementation.

SOURCE REFERENCES

TP-231

Evidence: evidence/rerun/teal/TP-231.json

TR-TP-232 / SISTER_PHYSICAL_CONTAINMENT_PROFILE - Governed Object

IF

If the Blue Page identity is invoked with declared inputs, scope, units, and evidence state.

HOW

The object is created or referenced by Bangel and JP, evaluated by MK when physics applies, verified by JO, routed by M3 when a handoff applies, accounted for by Mermaid or Shiva when value applies, and admitted or held by MJ under the applicable manifest and ethics rules. JP carries the canonical representation; MK classifies physics applicability, units, boundaries, conservation, scale, and uncertainty; JO verifies types, formulas, tests, and receipts; applicable safety and accounting manifestations contribute evidence; MJ alone issues a bounded permit. Mathematical validity does not create physical or operational authority.

THEN

Then JO returns PASS_EVIDENCE, HOLD, FAIL_TECHNICAL, or DENY; MJ permission remains a separate gate.

CURRENT EVIDENCE

The individual TP-232 reference profile was executed and its identity, title and REFERENCE_ONLY ceiling matched. This is a documentary identity check, not execution of the full model.

REMAINING REQUIREMENT

Bind model-specific inputs, operations and measured evidence before interpreting the paper as an executable implementation.

SOURCE REFERENCES

TP-232

Evidence: evidence/rerun/teal/TP-232.json

TR-TP-233 / STANDARD_CONTAINMENT_GEOMETRY_PROFILE

- Governed Object

IF

If the Blue Page identity is invoked with declared inputs, scope, units, and evidence state.

HOW

The object is created or referenced by Bangel and JP, evaluated by MK when physics applies, verified by JO, routed by M3 when a handoff applies, accounted for by Mermaid or Shiva when value applies, and admitted or held by MJ under the applicable manifest and ethics rules. JP carries the canonical representation; MK classifies physics applicability, units, boundaries, conservation, scale, and uncertainty; JO verifies types, formulas, tests, and receipts; applicable safety and accounting manifestations contribute evidence; MJ alone issues a bounded permit. Mathematical validity does not create physical or operational authority.

THEN

Then JO returns PASS_EVIDENCE, HOLD, FAIL_TECHNICAL, or DENY; MJ permission remains a separate gate.

CURRENT EVIDENCE

The individual TP-233 reference profile was executed and its identity, title and REFERENCE_ONLY ceiling matched. This is a documentary identity check, not execution of the full model.

REMAINING REQUIREMENT

Bind model-specific inputs, operations and measured evidence before interpreting the paper as an executable implementation.

SOURCE REFERENCES

TP-233

Evidence: evidence/rerun/teal/TP-233.json

TR-TP-234 / REFERENCE_GAS_PROFILE_H2 - Governed Object

IF

If the Blue Page identity is invoked with declared inputs, scope, units, and evidence state.

HOW

The object is created or referenced by Bangel and JP, evaluated by MK when physics applies, verified by JO, routed by M3 when a handoff applies, accounted for by Mermaid or Shiva when value applies, and admitted or held by MJ under the applicable manifest and ethics rules. JP carries the canonical representation; MK classifies physics applicability, units, boundaries, conservation, scale, and uncertainty; JO verifies types, formulas, tests, and receipts; applicable safety and accounting manifestations contribute evidence; MJ alone issues a bounded permit. Mathematical validity does not create physical or operational authority.

THEN

Then JO returns PASS_EVIDENCE, HOLD, FAIL_TECHNICAL, or DENY; MJ permission remains a separate gate.

CURRENT EVIDENCE

The individual TP-234 reference profile was executed and its identity, title and REFERENCE_ONLY ceiling matched. This is a documentary identity check, not execution of the full model.

REMAINING REQUIREMENT

Bind model-specific inputs, operations and measured evidence before interpreting the paper as an executable implementation.

SOURCE REFERENCES

TP-234

Evidence: evidence/rerun/teal/TP-234.json

TR-TP-235 / CONTAINMENT_MODIFICATION_RECEIPT - Governed Object

IF

If the Blue Page identity is invoked with declared inputs, scope, units, and evidence state.

HOW

The object is created or referenced by Bangel and JP, evaluated by MK when physics applies, verified by JO, routed by M3 when a handoff applies, accounted for by Mermaid or Shiva when value applies, and admitted or held by MJ under the applicable manifest and ethics rules. JP carries the canonical representation; MK classifies physics applicability, units, boundaries, conservation, scale, and uncertainty; JO verifies types, formulas, tests, and receipts; applicable safety and accounting manifestations contribute evidence; MJ alone issues a bounded permit. Mathematical validity does not create physical or operational authority.

THEN

Then JO returns PASS_EVIDENCE, HOLD, FAIL_TECHNICAL, or DENY; MJ permission remains a separate gate.

CURRENT EVIDENCE

The individual TP-235 reference profile was executed and its identity, title and REFERENCE_ONLY ceiling matched. This is a documentary identity check, not execution of the full model.

REMAINING REQUIREMENT

Bind model-specific inputs, operations and measured evidence before interpreting the paper as an executable implementation.

SOURCE REFERENCES

TP-235

Evidence: evidence/rerun/teal/TP-235.json

TR-TP-236 / CONE_TOP_PEARL_ANCHOR - Governed Object

IF

If the Blue Page identity is invoked with declared inputs, scope, units, and evidence state.

HOW

The object is created or referenced by Bangel and JP, evaluated by MK when physics applies, verified by JO, routed by M3 when a handoff applies, accounted for by Mermaid or Shiva when value applies, and admitted or held by MJ under the applicable manifest and ethics rules. JP carries the canonical representation; MK classifies physics applicability, units, boundaries, conservation, scale, and uncertainty; JO verifies types, formulas, tests, and receipts; applicable safety and accounting manifestations contribute evidence; MJ alone issues a bounded permit. Mathematical validity does not create physical or operational authority.

THEN

Then JO returns PASS_EVIDENCE, HOLD, FAIL_TECHNICAL, or DENY; MJ permission remains a separate gate.

CURRENT EVIDENCE

The individual TP-236 reference profile was executed and its identity, title and REFERENCE_ONLY ceiling matched. This is a documentary identity check, not execution of the full model.

REMAINING REQUIREMENT

Bind model-specific inputs, operations and measured evidence before interpreting the paper as an executable implementation.

SOURCE REFERENCES

TP-236

Evidence: evidence/rerun/teal/TP-236.json

TR-TP-237 / GAS_HEIGHT_OBSERVATION - Governed Object

IF

If the Blue Page identity is invoked with declared inputs, scope, units, and evidence state.

HOW

The object is created or referenced by Bangel and JP, evaluated by MK when physics applies, verified by JO, routed by M3 when a handoff applies, accounted for by Mermaid or Shiva when value applies, and admitted or held by MJ under the applicable manifest and ethics rules. JP carries the canonical representation; MK classifies physics applicability, units, boundaries, conservation, scale, and uncertainty; JO verifies types, formulas, tests, and receipts; applicable safety and accounting manifestations contribute evidence; MJ alone issues a bounded permit. Mathematical validity does not create physical or operational authority.

THEN

Then JO returns PASS_EVIDENCE, HOLD, FAIL_TECHNICAL, or DENY; MJ permission remains a separate gate.

CURRENT EVIDENCE

The individual TP-237 reference profile was executed and its identity, title and REFERENCE_ONLY ceiling matched. This is a documentary identity check, not execution of the full model.

REMAINING REQUIREMENT

Bind model-specific inputs, operations and measured evidence before interpreting the paper as an executable implementation.

SOURCE REFERENCES

TP-237

Evidence: evidence/rerun/teal/TP-237.json

TR-TP-238 / RESERVOIR_RETURN_LOOP_PROFILE - Governed Object

IF

If the Blue Page identity is invoked with declared inputs, scope, units, and evidence state.

HOW

The object is created or referenced by Bangel and JP, evaluated by MK when physics applies, verified by JO, routed by M3 when a handoff applies, accounted for by Mermaid or Shiva when value applies, and admitted or held by MJ under the applicable manifest and ethics rules. JP carries the canonical representation; MK classifies physics applicability, units, boundaries, conservation, scale, and uncertainty; JO verifies types, formulas, tests, and receipts; applicable safety and accounting manifestations contribute evidence; MJ alone issues a bounded permit. Mathematical validity does not create physical or operational authority.

THEN

Then JO returns PASS_EVIDENCE, HOLD, FAIL_TECHNICAL, or DENY; MJ permission remains a separate gate.

CURRENT EVIDENCE

The individual TP-238 reference profile was executed and its identity, title and REFERENCE_ONLY ceiling matched. This is a documentary identity check, not execution of the full model.

REMAINING REQUIREMENT

Bind model-specific inputs, operations and measured evidence before interpreting the paper as an executable implementation.

SOURCE REFERENCES

TP-238

Evidence: evidence/rerun/teal/TP-238.json

TR-TP-239 / OUTWARD_GAP_PATH_RECEIPT - Governed Object

IF

If the Blue Page identity is invoked with declared inputs, scope, units, and evidence state.

HOW

The object is created or referenced by Bangel and JP, evaluated by MK when physics applies, verified by JO, routed by M3 when a handoff applies, accounted for by Mermaid or Shiva when value applies, and admitted or held by MJ under the applicable manifest and ethics rules. JP carries the canonical representation; MK classifies physics applicability, units, boundaries, conservation, scale, and uncertainty; JO verifies types, formulas, tests, and receipts; applicable safety and accounting manifestations contribute evidence; MJ alone issues a bounded permit. Mathematical validity does not create physical or operational authority.

THEN

Then JO returns PASS_EVIDENCE, HOLD, FAIL_TECHNICAL, or DENY; MJ permission remains a separate gate.

CURRENT EVIDENCE

The individual TP-239 reference profile was executed and its identity, title and REFERENCE_ONLY ceiling matched. This is a documentary identity check, not execution of the full model.

REMAINING REQUIREMENT

Bind model-specific inputs, operations and measured evidence before interpreting the paper as an executable implementation.

SOURCE REFERENCES

TP-239

Evidence: evidence/rerun/teal/TP-239.json

TR-TP-240 / RESERVOIR_BUFFER_ACCOUNT - Governed Object

IF

If the Blue Page identity is invoked with declared inputs, scope, units, and evidence state.

HOW

The object is created or referenced by Bangel and JP, evaluated by MK when physics applies, verified by JO, routed by M3 when a handoff applies, accounted for by Mermaid or Shiva when value applies, and admitted or held by MJ under the applicable manifest and ethics rules. JP carries the canonical representation; MK classifies physics applicability, units, boundaries, conservation, scale, and uncertainty; JO verifies types, formulas, tests, and receipts; applicable safety and accounting manifestations contribute evidence; MJ alone issues a bounded permit. Mathematical validity does not create physical or operational authority.

THEN

Then JO returns PASS_EVIDENCE, HOLD, FAIL_TECHNICAL, or DENY; MJ permission remains a separate gate.

CURRENT EVIDENCE

The individual TP-240 reference profile was executed and its identity, title and REFERENCE_ONLY ceiling matched. This is a documentary identity check, not execution of the full model.

REMAINING REQUIREMENT

Bind model-specific inputs, operations and measured evidence before interpreting the paper as an executable implementation.

SOURCE REFERENCES

TP-240

Evidence: evidence/rerun/teal/TP-240.json

TR-TP-241 / CIRCULAR_REENTRY_RECEIPT - Governed Object

IF

If the Blue Page identity is invoked with declared inputs, scope, units, and evidence state.

HOW

The object is created or referenced by Bangel and JP, evaluated by MK when physics applies, verified by JO, routed by M3 when a handoff applies, accounted for by Mermaid or Shiva when value applies, and admitted or held by MJ under the applicable manifest and ethics rules. JP carries the canonical representation; MK classifies physics applicability, units, boundaries, conservation, scale, and uncertainty; JO verifies types, formulas, tests, and receipts; applicable safety and accounting manifestations contribute evidence; MJ alone issues a bounded permit. Mathematical validity does not create physical or operational authority.

THEN

Then JO returns PASS_EVIDENCE, HOLD, FAIL_TECHNICAL, or DENY; MJ permission remains a separate gate.

CURRENT EVIDENCE

The individual TP-241 reference profile was executed and its identity, title and REFERENCE_ONLY ceiling matched. This is a documentary identity check, not execution of the full model.

REMAINING REQUIREMENT

Bind model-specific inputs, operations and measured evidence before interpreting the paper as an executable implementation.

SOURCE REFERENCES

TP-241

Evidence: evidence/rerun/teal/TP-241.json

TR-TP-242 / RELATIVE_FRAME_FRICTION_LEDGER - Governed Object

IF

If the Blue Page identity is invoked with declared inputs, scope, units, and evidence state.

HOW

The object is created or referenced by Bangel and JP, evaluated by MK when physics applies, verified by JO, routed by M3 when a handoff applies, accounted for by Mermaid or Shiva when value applies, and admitted or held by MJ under the applicable manifest and ethics rules. JP carries the canonical representation; MK classifies physics applicability, units, boundaries, conservation, scale, and uncertainty; JO verifies types, formulas, tests, and receipts; applicable safety and accounting manifestations contribute evidence; MJ alone issues a bounded permit. Mathematical validity does not create physical or operational authority.

THEN

Then JO returns PASS_EVIDENCE, HOLD, FAIL_TECHNICAL, or DENY; MJ permission remains a separate gate.

CURRENT EVIDENCE

The individual TP-242 reference profile was executed and its identity, title and REFERENCE_ONLY ceiling matched. This is a documentary identity check, not execution of the full model.

REMAINING REQUIREMENT

Bind model-specific inputs, operations and measured evidence before interpreting the paper as an executable implementation.

SOURCE REFERENCES

TP-242

Evidence: evidence/rerun/teal/TP-242.json

TR-TP-243 / RESERVOIR_LAKE_BUFFER - Governed Object

IF

If the Blue Page identity is invoked with declared inputs, scope, units, and evidence state.

HOW

The object is created or referenced by Bangel and JP, evaluated by MK when physics applies, verified by JO, routed by M3 when a handoff applies, accounted for by Mermaid or Shiva when value applies, and admitted or held by MJ under the applicable manifest and ethics rules. JP carries the canonical representation; MK classifies physics applicability, units, boundaries, conservation, scale, and uncertainty; JO verifies types, formulas, tests, and receipts; applicable safety and accounting manifestations contribute evidence; MJ alone issues a bounded permit. Mathematical validity does not create physical or operational authority.

THEN

Then JO returns PASS_EVIDENCE, HOLD, FAIL_TECHNICAL, or DENY; MJ permission remains a separate gate.

CURRENT EVIDENCE

The individual TP-243 reference profile was executed and its identity, title and REFERENCE_ONLY ceiling matched. This is a documentary identity check, not execution of the full model.

REMAINING REQUIREMENT

Bind model-specific inputs, operations and measured evidence before interpreting the paper as an executable implementation.

SOURCE REFERENCES

TP-243

Evidence: evidence/rerun/teal/TP-243.json

TR-TP-244 / BACKSIDE_OUTLET_PORT - Governed Object

IF

If the Blue Page identity is invoked with declared inputs, scope, units, and evidence state.

HOW

The object is created or referenced by Bangel and JP, evaluated by MK when physics applies, verified by JO, routed by M3 when a handoff applies, accounted for by Mermaid or Shiva when value applies, and admitted or held by MJ under the applicable manifest and ethics rules. JP carries the canonical representation; MK classifies physics applicability, units, boundaries, conservation, scale, and uncertainty; JO verifies types, formulas, tests, and receipts; applicable safety and accounting manifestations contribute evidence; MJ alone issues a bounded permit. Mathematical validity does not create physical or operational authority.

THEN

Then JO returns PASS_EVIDENCE, HOLD, FAIL_TECHNICAL, or DENY; MJ permission remains a separate gate.

CURRENT EVIDENCE

The individual TP-244 reference profile was executed and its identity, title and REFERENCE_ONLY ceiling matched. This is a documentary identity check, not execution of the full model.

REMAINING REQUIREMENT

Bind model-specific inputs, operations and measured evidence before interpreting the paper as an executable implementation.

SOURCE REFERENCES

TP-244

Evidence: evidence/rerun/teal/TP-244.json

TR-TP-245 / OUTWARD_GAP_ARC - Governed Object

IF

If the Blue Page identity is invoked with declared inputs, scope, units, and evidence state.

HOW

The object is created or referenced by Bangel and JP, evaluated by MK when physics applies, verified by JO, routed by M3 when a handoff applies, accounted for by Mermaid or Shiva when value applies, and admitted or held by MJ under the applicable manifest and ethics rules. JP carries the canonical representation; MK classifies physics applicability, units, boundaries, conservation, scale, and uncertainty; JO verifies types, formulas, tests, and receipts; applicable safety and accounting manifestations contribute evidence; MJ alone issues a bounded permit. Mathematical validity does not create physical or operational authority.

THEN

Then JO returns PASS_EVIDENCE, HOLD, FAIL_TECHNICAL, or DENY; MJ permission remains a separate gate.

CURRENT EVIDENCE

The individual TP-245 reference profile was executed and its identity, title and REFERENCE_ONLY ceiling matched. This is a documentary identity check, not execution of the full model.

REMAINING REQUIREMENT

Bind model-specific inputs, operations and measured evidence before interpreting the paper as an executable implementation.

SOURCE REFERENCES

TP-245

Evidence: evidence/rerun/teal/TP-245.json

TR-TP-246 / PEARL_REFERENCE_CIRCLE - Governed Object

IF

If the Blue Page identity is invoked with declared inputs, scope, units, and evidence state.

HOW

The object is created or referenced by Bangel and JP, evaluated by MK when physics applies, verified by JO, routed by M3 when a handoff applies, accounted for by Mermaid or Shiva when value applies, and admitted or held by MJ under the applicable manifest and ethics rules. JP carries the canonical representation; MK classifies physics applicability, units, boundaries, conservation, scale, and uncertainty; JO verifies types, formulas, tests, and receipts; applicable safety and accounting manifestations contribute evidence; MJ alone issues a bounded permit. Mathematical validity does not create physical or operational authority.

THEN

Then JO returns PASS_EVIDENCE, HOLD, FAIL_TECHNICAL, or DENY; MJ permission remains a separate gate.

CURRENT EVIDENCE

The individual TP-246 reference profile was executed and its identity, title and REFERENCE_ONLY ceiling matched. This is a documentary identity check, not execution of the full model.

REMAINING REQUIREMENT

Bind model-specific inputs, operations and measured evidence before interpreting the paper as an executable implementation.

SOURCE REFERENCES

TP-246

Evidence: evidence/rerun/teal/TP-246.json

TR-TP-247 / CIRCULAR_REENTRY_PORT - Governed Object

IF

If the Blue Page identity is invoked with declared inputs, scope, units, and evidence state.

HOW

The object is created or referenced by Bangel and JP, evaluated by MK when physics applies, verified by JO, routed by M3 when a handoff applies, accounted for by Mermaid or Shiva when value applies, and admitted or held by MJ under the applicable manifest and ethics rules. JP carries the canonical representation; MK classifies physics applicability, units, boundaries, conservation, scale, and uncertainty; JO verifies types, formulas, tests, and receipts; applicable safety and accounting manifestations contribute evidence; MJ alone issues a bounded permit. Mathematical validity does not create physical or operational authority.

THEN

Then JO returns PASS_EVIDENCE, HOLD, FAIL_TECHNICAL, or DENY; MJ permission remains a separate gate.

CURRENT EVIDENCE

The individual TP-247 reference profile was executed and its identity, title and REFERENCE_ONLY ceiling matched. This is a documentary identity check, not execution of the full model.

REMAINING REQUIREMENT

Bind model-specific inputs, operations and measured evidence before interpreting the paper as an executable implementation.

SOURCE REFERENCES

TP-247

Evidence: evidence/rerun/teal/TP-247.json

TR-TP-248 / RESERVOIR_TRANSFER_RECEIPT - Governed Object

IF

If the Blue Page identity is invoked with declared inputs, scope, units, and evidence state.

HOW

The object is created or referenced by Bangel and JP, evaluated by MK when physics applies, verified by JO, routed by M3 when a handoff applies, accounted for by Mermaid or Shiva when value applies, and admitted or held by MJ under the applicable manifest and ethics rules. JP carries the canonical representation; MK classifies physics applicability, units, boundaries, conservation, scale, and uncertainty; JO verifies types, formulas, tests, and receipts; applicable safety and accounting manifestations contribute evidence; MJ alone issues a bounded permit. Mathematical validity does not create physical or operational authority.

THEN

Then JO returns PASS_EVIDENCE, HOLD, FAIL_TECHNICAL, or DENY; MJ permission remains a separate gate.

CURRENT EVIDENCE

The individual TP-248 reference profile was executed and its identity, title and REFERENCE_ONLY ceiling matched. This is a documentary identity check, not execution of the full model.

REMAINING REQUIREMENT

Bind model-specific inputs, operations and measured evidence before interpreting the paper as an executable implementation.

SOURCE REFERENCES

TP-248

Evidence: evidence/rerun/teal/TP-248.json

TR-TP-249 / PERSPECTIVE_FRICTION_RECEIPT - Governed Object

IF

If the Blue Page identity is invoked with declared inputs, scope, units, and evidence state.

HOW

The object is created or referenced by Bangel and JP, evaluated by MK when physics applies, verified by JO, routed by M3 when a handoff applies, accounted for by Mermaid or Shiva when value applies, and admitted or held by MJ under the applicable manifest and ethics rules. JP carries the canonical representation; MK classifies physics applicability, units, boundaries, conservation, scale, and uncertainty; JO verifies types, formulas, tests, and receipts; applicable safety and accounting manifestations contribute evidence; MJ alone issues a bounded permit. Mathematical validity does not create physical or operational authority.

THEN

Then JO returns PASS_EVIDENCE, HOLD, FAIL_TECHNICAL, or DENY; MJ permission remains a separate gate.

CURRENT EVIDENCE

The individual TP-249 reference profile was executed and its identity, title and REFERENCE_ONLY ceiling matched. This is a documentary identity check, not execution of the full model.

REMAINING REQUIREMENT

Bind model-specific inputs, operations and measured evidence before interpreting the paper as an executable implementation.

SOURCE REFERENCES

TP-249

Evidence: evidence/rerun/teal/TP-249.json

TR-TP-250 / DRO_UNIT - Governed Object

IF

If the Blue Page identity is invoked with declared inputs, scope, units, and evidence state.

HOW

The object is created or referenced by Bangel and JP, evaluated by MK when physics applies, verified by JO, routed by M3 when a handoff applies, accounted for by Mermaid or Shiva when value applies, and admitted or held by MJ under the applicable manifest and ethics rules. JP carries the canonical representation; MK classifies physics applicability, units, boundaries, conservation, scale, and uncertainty; JO verifies types, formulas, tests, and receipts; applicable safety and accounting manifestations contribute evidence; MJ alone issues a bounded permit. Mathematical validity does not create physical or operational authority.

THEN

Then JO returns PASS_EVIDENCE, HOLD, FAIL_TECHNICAL, or DENY; MJ permission remains a separate gate.

CURRENT EVIDENCE

The individual TP-250 reference profile was executed and its identity, title and REFERENCE_ONLY ceiling matched. This is a documentary identity check, not execution of the full model.

REMAINING REQUIREMENT

Bind model-specific inputs, operations and measured evidence before interpreting the paper as an executable implementation.

SOURCE REFERENCES

TP-250

Evidence: evidence/rerun/teal/TP-250.json

TR-TP-251 / DRO_SCALE_ENVELOPE - Governed Object

IF

If the Blue Page identity is invoked with declared inputs, scope, units, and evidence state.

HOW

The object is created or referenced by Bangel and JP, evaluated by MK when physics applies, verified by JO, routed by M3 when a handoff applies, accounted for by Mermaid or Shiva when value applies, and admitted or held by MJ under the applicable manifest and ethics rules. JP carries the canonical representation; MK classifies physics applicability, units, boundaries, conservation, scale, and uncertainty; JO verifies types, formulas, tests, and receipts; applicable safety and accounting manifestations contribute evidence; MJ alone issues a bounded permit. Mathematical validity does not create physical or operational authority.

THEN

Then JO returns PASS_EVIDENCE, HOLD, FAIL_TECHNICAL, or DENY; MJ permission remains a separate gate.

CURRENT EVIDENCE

The individual TP-251 reference profile was executed and its identity, title and REFERENCE_ONLY ceiling matched. This is a documentary identity check, not execution of the full model.

REMAINING REQUIREMENT

Bind model-specific inputs, operations and measured evidence before interpreting the paper as an executable implementation.

SOURCE REFERENCES

TP-251

Evidence: evidence/rerun/teal/TP-251.json

TR-TP-252 / DRO_COLLECTION_RECEIPT - Governed Object

IF

If the Blue Page identity is invoked with declared inputs, scope, units, and evidence state.

HOW

The object is created or referenced by Bangel and JP, evaluated by MK when physics applies, verified by JO, routed by M3 when a handoff applies, accounted for by Mermaid or Shiva when value applies, and admitted or held by MJ under the applicable manifest and ethics rules. JP carries the canonical representation; MK classifies physics applicability, units, boundaries, conservation, scale, and uncertainty; JO verifies types, formulas, tests, and receipts; applicable safety and accounting manifestations contribute evidence; MJ alone issues a bounded permit. Mathematical validity does not create physical or operational authority.

THEN

Then JO returns PASS_EVIDENCE, HOLD, FAIL_TECHNICAL, or DENY; MJ permission remains a separate gate.

CURRENT EVIDENCE

The individual TP-252 reference profile was executed and its identity, title and REFERENCE_ONLY ceiling matched. This is a documentary identity check, not execution of the full model.

REMAINING REQUIREMENT

Bind model-specific inputs, operations and measured evidence before interpreting the paper as an executable implementation.

SOURCE REFERENCES

TP-252

Evidence: evidence/rerun/teal/TP-252.json

TR-TP-253 / DRO_OPTICAL_EVIDENCE_PROFILE - Governed Object

IF

If the Blue Page identity is invoked with declared inputs, scope, units, and evidence state.

HOW

The object is created or referenced by Bangel and JP, evaluated by MK when physics applies, verified by JO, routed by M3 when a handoff applies, accounted for by Mermaid or Shiva when value applies, and admitted or held by MJ under the applicable manifest and ethics rules. JP carries the canonical representation; MK classifies physics applicability, units, boundaries, conservation, scale, and uncertainty; JO verifies types, formulas, tests, and receipts; applicable safety and accounting manifestations contribute evidence; MJ alone issues a bounded permit. Mathematical validity does not create physical or operational authority.

THEN

Then JO returns PASS_EVIDENCE, HOLD, FAIL_TECHNICAL, or DENY; MJ permission remains a separate gate.

CURRENT EVIDENCE

The individual TP-253 reference profile was executed and its identity, title and REFERENCE_ONLY ceiling matched. This is a documentary identity check, not execution of the full model.

REMAINING REQUIREMENT

Bind model-specific inputs, operations and measured evidence before interpreting the paper as an executable implementation.

SOURCE REFERENCES

TP-253

Evidence: evidence/rerun/teal/TP-253.json

TR-TP-254 / DRO_PEARL_HANDOFF_RECEIPT - Governed Object

IF

If the Blue Page identity is invoked with declared inputs, scope, units, and evidence state.

HOW

The object is created or referenced by Bangel and JP, evaluated by MK when physics applies, verified by JO, routed by M3 when a handoff applies, accounted for by Mermaid or Shiva when value applies, and admitted or held by MJ under the applicable manifest and ethics rules. JP carries the canonical representation; MK classifies physics applicability, units, boundaries, conservation, scale, and uncertainty; JO verifies types, formulas, tests, and receipts; applicable safety and accounting manifestations contribute evidence; MJ alone issues a bounded permit. Mathematical validity does not create physical or operational authority.

THEN

Then JO returns PASS_EVIDENCE, HOLD, FAIL_TECHNICAL, or DENY; MJ permission remains a separate gate.

CURRENT EVIDENCE

The individual TP-254 reference profile was executed and its identity, title and REFERENCE_ONLY ceiling matched. This is a documentary identity check, not execution of the full model.

REMAINING REQUIREMENT

Bind model-specific inputs, operations and measured evidence before interpreting the paper as an executable implementation.

SOURCE REFERENCES

TP-254

Evidence: evidence/rerun/teal/TP-254.json

TR-TP-255 / PEARL_DRO_NODE - Governed Object

IF

If the Blue Page identity is invoked with declared inputs, scope, units, and evidence state.

HOW

The object is created or referenced by Bangel and JP, evaluated by MK when physics applies, verified by JO, routed by M3 when a handoff applies, accounted for by Mermaid or Shiva when value applies, and admitted or held by MJ under the applicable manifest and ethics rules. JP carries the canonical representation; MK classifies physics applicability, units, boundaries, conservation, scale, and uncertainty; JO verifies types, formulas, tests, and receipts; applicable safety and accounting manifestations contribute evidence; MJ alone issues a bounded permit. Mathematical validity does not create physical or operational authority.

THEN

Then JO returns PASS_EVIDENCE, HOLD, FAIL_TECHNICAL, or DENY; MJ permission remains a separate gate.

CURRENT EVIDENCE

The individual TP-255 reference profile was executed and its identity, title and REFERENCE_ONLY ceiling matched. This is a documentary identity check, not execution of the full model.

REMAINING REQUIREMENT

Bind model-specific inputs, operations and measured evidence before interpreting the paper as an executable implementation.

SOURCE REFERENCES

TP-255

Evidence: evidence/rerun/teal/TP-255.json

TR-TP-256 / DRO_START_ENERGY_PACKET - Governed Object

IF

If the Blue Page identity is invoked with declared inputs, scope, units, and evidence state.

HOW

The object is created or referenced by Bangel and JP, evaluated by MK when physics applies, verified by JO, routed by M3 when a handoff applies, accounted for by Mermaid or Shiva when value applies, and admitted or held by MJ under the applicable manifest and ethics rules. JP carries the canonical representation; MK classifies physics applicability, units, boundaries, conservation, scale, and uncertainty; JO verifies types, formulas, tests, and receipts; applicable safety and accounting manifestations contribute evidence; MJ alone issues a bounded permit. Mathematical validity does not create physical or operational authority.

THEN

Then JO returns PASS_EVIDENCE, HOLD, FAIL_TECHNICAL, or DENY; MJ permission remains a separate gate.

CURRENT EVIDENCE

The individual TP-256 reference profile was executed and its identity, title and REFERENCE_ONLY ceiling matched. This is a documentary identity check, not execution of the full model.

REMAINING REQUIREMENT

Bind model-specific inputs, operations and measured evidence before interpreting the paper as an executable implementation.

SOURCE REFERENCES

TP-256

Evidence: evidence/rerun/teal/TP-256.json

TR-TP-257 / DRO_IGNITION_REQUEST - Governed Object

IF

If the Blue Page identity is invoked with declared inputs, scope, units, and evidence state.

HOW

The object is created or referenced by Bangel and JP, evaluated by MK when physics applies, verified by JO, routed by M3 when a handoff applies, accounted for by Mermaid or Shiva when value applies, and admitted or held by MJ under the applicable manifest and ethics rules. JP carries the canonical representation; MK classifies physics applicability, units, boundaries, conservation, scale, and uncertainty; JO verifies types, formulas, tests, and receipts; applicable safety and accounting manifestations contribute evidence; MJ alone issues a bounded permit. Mathematical validity does not create physical or operational authority.

THEN

Then JO returns PASS_EVIDENCE, HOLD, FAIL_TECHNICAL, or DENY; MJ permission remains a separate gate.

CURRENT EVIDENCE

The individual TP-257 reference profile was executed and its identity, title and REFERENCE_ONLY ceiling matched. This is a documentary identity check, not execution of the full model.

REMAINING REQUIREMENT

Bind model-specific inputs, operations and measured evidence before interpreting the paper as an executable implementation.

SOURCE REFERENCES

TP-257

Evidence: evidence/rerun/teal/TP-257.json

TR-TP-258 / LECANTO_IMAGE_EVIDENCE - Governed Object

IF

If the Blue Page identity is invoked with declared inputs, scope, units, and evidence state.

HOW

The object is created or referenced by Bangel and JP, evaluated by MK when physics applies, verified by JO, routed by M3 when a handoff applies, accounted for by Mermaid or Shiva when value applies, and admitted or held by MJ under the applicable manifest and ethics rules. JP carries the canonical representation; MK classifies physics applicability, units, boundaries, conservation, scale, and uncertainty; JO verifies types, formulas, tests, and receipts; applicable safety and accounting manifestations contribute evidence; MJ alone issues a bounded permit. Mathematical validity does not create physical or operational authority.

THEN

Then JO returns PASS_EVIDENCE, HOLD, FAIL_TECHNICAL, or DENY; MJ permission remains a separate gate.

CURRENT EVIDENCE

The individual TP-258 reference profile was executed and its identity, title and REFERENCE_ONLY ceiling matched. This is a documentary identity check, not execution of the full model.

REMAINING REQUIREMENT

Bind model-specific inputs, operations and measured evidence before interpreting the paper as an executable implementation.

SOURCE REFERENCES

TP-258

Evidence: evidence/rerun/teal/TP-258.json

TR-TP-259 / LECANTO_INTENT_HYPOTHESIS - Governed Object

IF

If the Blue Page identity is invoked with declared inputs, scope, units, and evidence state.

HOW

The object is created or referenced by Bangel and JP, evaluated by MK when physics applies, verified by JO, routed by M3 when a handoff applies, accounted for by Mermaid or Shiva when value applies, and admitted or held by MJ under the applicable manifest and ethics rules. JP carries the canonical representation; MK classifies physics applicability, units, boundaries, conservation, scale, and uncertainty; JO verifies types, formulas, tests, and receipts; applicable safety and accounting manifestations contribute evidence; MJ alone issues a bounded permit. Mathematical validity does not create physical or operational authority.

THEN

Then JO returns PASS_EVIDENCE, HOLD, FAIL_TECHNICAL, or DENY; MJ permission remains a separate gate.

CURRENT EVIDENCE

The individual TP-259 reference profile was executed and its identity, title and REFERENCE_ONLY ceiling matched. This is a documentary identity check, not execution of the full model.

REMAINING REQUIREMENT

Bind model-specific inputs, operations and measured evidence before interpreting the paper as an executable implementation.

SOURCE REFERENCES

TP-259

Evidence: evidence/rerun/teal/TP-259.json

TR-TP-260 / LECANTO_TRANSFORMATION_RECEIPT - Governed Object

IF

If the Blue Page identity is invoked with declared inputs, scope, units, and evidence state.

HOW

The object is created or referenced by Bangel and JP, evaluated by MK when physics applies, verified by JO, routed by M3 when a handoff applies, accounted for by Mermaid or Shiva when value applies, and admitted or held by MJ under the applicable manifest and ethics rules. JP carries the canonical representation; MK classifies physics applicability, units, boundaries, conservation, scale, and uncertainty; JO verifies types, formulas, tests, and receipts; applicable safety and accounting manifestations contribute evidence; MJ alone issues a bounded permit. Mathematical validity does not create physical or operational authority.

THEN

Then JO returns PASS_EVIDENCE, HOLD, FAIL_TECHNICAL, or DENY; MJ permission remains a separate gate.

CURRENT EVIDENCE

The individual TP-260 reference profile was executed and its identity, title and REFERENCE_ONLY ceiling matched. This is a documentary identity check, not execution of the full model.

REMAINING REQUIREMENT

Bind model-specific inputs, operations and measured evidence before interpreting the paper as an executable implementation.

SOURCE REFERENCES

TP-260

Evidence: evidence/rerun/teal/TP-260.json

TR-TP-261 / IMAGE_VARIANCE_RECEIPT - Governed Object

IF

If the Blue Page identity is invoked with declared inputs, scope, units, and evidence state.

HOW

The object is created or referenced by Bangel and JP, evaluated by MK when physics applies, verified by JO, routed by M3 when a handoff applies, accounted for by Mermaid or Shiva when value applies, and admitted or held by MJ under the applicable manifest and ethics rules. JP carries the canonical representation; MK classifies physics applicability, units, boundaries, conservation, scale, and uncertainty; JO verifies types, formulas, tests, and receipts; applicable safety and accounting manifestations contribute evidence; MJ alone issues a bounded permit. Mathematical validity does not create physical or operational authority.

THEN

Then JO returns PASS_EVIDENCE, HOLD, FAIL_TECHNICAL, or DENY; MJ permission remains a separate gate.

CURRENT EVIDENCE

The individual TP-261 reference profile was executed and its identity, title and REFERENCE_ONLY ceiling matched. This is a documentary identity check, not execution of the full model.

REMAINING REQUIREMENT

Bind model-specific inputs, operations and measured evidence before interpreting the paper as an executable implementation.

SOURCE REFERENCES

TP-261

Evidence: evidence/rerun/teal/TP-261.json

TR-TP-262 / SEMICONDUCTOR_DRO_ENERGY_LEDGER - Governed Object

IF

If the Blue Page identity is invoked with declared inputs, scope, units, and evidence state.

HOW

The object is created or referenced by Bangel and JP, evaluated by MK when physics applies, verified by JO, routed by M3 when a handoff applies, accounted for by Mermaid or Shiva when value applies, and admitted or held by MJ under the applicable manifest and ethics rules. JP carries the canonical representation; MK classifies physics applicability, units, boundaries, conservation, scale, and uncertainty; JO verifies types, formulas, tests, and receipts; applicable safety and accounting manifestations contribute evidence; MJ alone issues a bounded permit. Mathematical validity does not create physical or operational authority.

THEN

Then JO returns PASS_EVIDENCE, HOLD, FAIL_TECHNICAL, or DENY; MJ permission remains a separate gate.

CURRENT EVIDENCE

The individual TP-262 reference profile was executed and its identity, title and REFERENCE_ONLY ceiling matched. This is a documentary identity check, not execution of the full model.

REMAINING REQUIREMENT

Bind model-specific inputs, operations and measured evidence before interpreting the paper as an executable implementation.

SOURCE REFERENCES

TP-262

Evidence: evidence/rerun/teal/TP-262.json

TR-TP-263 / SEMICONDUCTOR_PEARL_NODE - Governed Object

IF

If the Blue Page identity is invoked with declared inputs, scope, units, and evidence state.

HOW

The object is created or referenced by Bangel and JP, evaluated by MK when physics applies, verified by JO, routed by M3 when a handoff applies, accounted for by Mermaid or Shiva when value applies, and admitted or held by MJ under the applicable manifest and ethics rules. JP carries the canonical representation; MK classifies physics applicability, units, boundaries, conservation, scale, and uncertainty; JO verifies types, formulas, tests, and receipts; applicable safety and accounting manifestations contribute evidence; MJ alone issues a bounded permit. Mathematical validity does not create physical or operational authority.

THEN

Then JO returns PASS_EVIDENCE, HOLD, FAIL_TECHNICAL, or DENY; MJ permission remains a separate gate.

CURRENT EVIDENCE

The individual TP-263 reference profile was executed and its identity, title and REFERENCE_ONLY ceiling matched. This is a documentary identity check, not execution of the full model.

REMAINING REQUIREMENT

Bind model-specific inputs, operations and measured evidence before interpreting the paper as an executable implementation.

SOURCE REFERENCES

TP-263

Evidence: evidence/rerun/teal/TP-263.json

TR-TP-264 / MJ Physics Based Measurement Engineering Framework - Product Brief

IF

If the Blue Page identity is invoked with declared inputs, scope, units, and evidence state.

HOW

The product must enter through human purpose, Bangel typing, Elsa semantic recovery, JP architecture, MK physics classification when applicable, JO verification, applicable family evidence, M3 routing, Mermaid/Shiva analysis when applicable, MJ decision, and JO evidence. Profile-specific values and tests cannot be inherited from another product without a receipt. JP carries the canonical representation; MK classifies physics applicability, units, boundaries, conservation, scale, and uncertainty; JO verifies types, formulas, tests, and receipts; applicable safety and accounting manifestations contribute evidence; MJ alone issues a bounded permit. Mathematical validity does not create physical or operational authority.

THEN

Then JO returns PASS_EVIDENCE, HOLD, FAIL_TECHNICAL, or DENY; MJ permission remains a separate gate.

CURRENT EVIDENCE

The individual TP-264 reference profile was executed and its identity, title and REFERENCE_ONLY ceiling matched. This is a documentary identity check, not execution of the full model.

REMAINING REQUIREMENT

Bind model-specific inputs, operations and measured evidence before interpreting the paper as an executable implementation.

SOURCE REFERENCES

TP-264; BP-PROD-001

Evidence: evidence/rerun/teal/TP-264.json

TR-TP-265 / Bangel Governed Measurement Language - Product Brief

IF

If the Blue Page identity is invoked with declared inputs, scope, units, and evidence state.

HOW

The product must enter through human purpose, Bangel typing, Elsa semantic recovery, JP architecture, MK physics classification when applicable, JO verification, applicable family evidence, M3 routing, Mermaid/Shiva analysis when applicable, MJ decision, and JO evidence. Profile-specific values and tests cannot be inherited from another product without a receipt. JP carries the canonical representation; MK classifies physics applicability, units, boundaries, conservation, scale, and uncertainty; JO verifies types, formulas, tests, and receipts; applicable safety and accounting manifestations contribute evidence; MJ alone issues a bounded permit. Mathematical validity does not create physical or operational authority.

THEN

Then JO returns PASS_EVIDENCE, HOLD, FAIL_TECHNICAL, or DENY; MJ permission remains a separate gate.

CURRENT EVIDENCE

The individual TP-265 reference profile was executed and its identity, title and REFERENCE_ONLY ceiling matched. This is a documentary identity check, not execution of the full model.

REMAINING REQUIREMENT

Bind model-specific inputs, operations and measured evidence before interpreting the paper as an executable implementation.

SOURCE REFERENCES

TP-265; BP-PROD-002

Evidence: evidence/rerun/teal/TP-265.json

TR-TP-266 / Elsa Deterministic Semantic Recovery - Product Brief

IF

If the Blue Page identity is invoked with declared inputs, scope, units, and evidence state.

HOW

The product must enter through human purpose, Bangel typing, Elsa semantic recovery, JP architecture, MK physics classification when applicable, JO verification, applicable family evidence, M3 routing, Mermaid/Shiva analysis when applicable, MJ decision, and JO evidence. Profile-specific values and tests cannot be inherited from another product without a receipt. JP carries the canonical representation; MK classifies physics applicability, units, boundaries, conservation, scale, and uncertainty; JO verifies types, formulas, tests, and receipts; applicable safety and accounting manifestations contribute evidence; MJ alone issues a bounded permit. Mathematical validity does not create physical or operational authority.

THEN

Then JO returns PASS_EVIDENCE, HOLD, FAIL_TECHNICAL, or DENY; MJ permission remains a separate gate.

CURRENT EVIDENCE

The individual TP-266 reference profile was executed and its identity, title and REFERENCE_ONLY ceiling matched. This is a documentary identity check, not execution of the full model.

REMAINING REQUIREMENT

Bind model-specific inputs, operations and measured evidence before interpreting the paper as an executable implementation.

SOURCE REFERENCES

TP-266; BP-PROD-003

Evidence: evidence/rerun/teal/TP-266.json

TR-TP-267 / JP Mathematical and Architectural Canon - Product Brief

IF

If the Blue Page identity is invoked with declared inputs, scope, units, and evidence state.

HOW

The product must enter through human purpose, Bangel typing, Elsa semantic recovery, JP architecture, MK physics classification when applicable, JO verification, applicable family evidence, M3 routing, Mermaid/Shiva analysis when applicable, MJ decision, and JO evidence. Profile-specific values and tests cannot be inherited from another product without a receipt. JP carries the canonical representation; MK classifies physics applicability, units, boundaries, conservation, scale, and uncertainty; JO verifies types, formulas, tests, and receipts; applicable safety and accounting manifestations contribute evidence; MJ alone issues a bounded permit. Mathematical validity does not create physical or operational authority.

THEN

Then JO returns PASS_EVIDENCE, HOLD, FAIL_TECHNICAL, or DENY; MJ permission remains a separate gate.

CURRENT EVIDENCE

The individual TP-267 reference profile was executed and its identity, title and REFERENCE_ONLY ceiling matched. This is a documentary identity check, not execution of the full model.

REMAINING REQUIREMENT

Bind model-specific inputs, operations and measured evidence before interpreting the paper as an executable implementation.

SOURCE REFERENCES

TP-267; BP-PROD-004

Evidence: evidence/rerun/teal/TP-267.json

TR-TP-268 / Mika/MK Physics Modulator System - Product Brief

IF

If the Blue Page identity is invoked with declared inputs, scope, units, and evidence state.

HOW

The product must enter through human purpose, Bangel typing, Elsa semantic recovery, JP architecture, MK physics classification when applicable, JO verification, applicable family evidence, M3 routing, Mermaid/Shiva analysis when applicable, MJ decision, and JO evidence. Profile-specific values and tests cannot be inherited from another product without a receipt. JP carries the canonical representation; MK classifies physics applicability, units, boundaries, conservation, scale, and uncertainty; JO verifies types, formulas, tests, and receipts; applicable safety and accounting manifestations contribute evidence; MJ alone issues a bounded permit. Mathematical validity does not create physical or operational authority.

THEN

Then JO returns PASS_EVIDENCE, HOLD, FAIL_TECHNICAL, or DENY; MJ permission remains a separate gate.

CURRENT EVIDENCE

The individual TP-268 reference profile was executed and its identity, title and REFERENCE_ONLY ceiling matched. This is a documentary identity check, not execution of the full model.

REMAINING REQUIREMENT

Bind model-specific inputs, operations and measured evidence before interpreting the paper as an executable implementation.

SOURCE REFERENCES

TP-268; BP-PROD-005

Evidence: evidence/rerun/teal/TP-268.json

TR-TP-269 / JO Deterministic Proof and Runtime - Product Brief

IF

If the Blue Page identity is invoked with declared inputs, scope, units, and evidence state.

HOW

The product must enter through human purpose, Bangel typing, Elsa semantic recovery, JP architecture, MK physics classification when applicable, JO verification, applicable family evidence, M3 routing, Mermaid/Shiva analysis when applicable, MJ decision, and JO evidence. Profile-specific values and tests cannot be inherited from another product without a receipt. JP carries the canonical representation; MK classifies physics applicability, units, boundaries, conservation, scale, and uncertainty; JO verifies types, formulas, tests, and receipts; applicable safety and accounting manifestations contribute evidence; MJ alone issues a bounded permit. Mathematical validity does not create physical or operational authority.

THEN

Then JO returns PASS_EVIDENCE, HOLD, FAIL_TECHNICAL, or DENY; MJ permission remains a separate gate.

CURRENT EVIDENCE

The individual TP-269 reference profile was executed and its identity, title and REFERENCE_ONLY ceiling matched. This is a documentary identity check, not execution of the full model.

REMAINING REQUIREMENT

Bind model-specific inputs, operations and measured evidence before interpreting the paper as an executable implementation.

SOURCE REFERENCES

TP-269; BP-PROD-006

Evidence: evidence/rerun/teal/TP-269.json

TR-TP-270 / MJOS Operating Substrate - Product Brief

IF

If the Blue Page identity is invoked with declared inputs, scope, units, and evidence state.

HOW

The product must enter through human purpose, Bangel typing, Elsa semantic recovery, JP architecture, MK physics classification when applicable, JO verification, applicable family evidence, M3 routing, Mermaid/Shiva analysis when applicable, MJ decision, and JO evidence. Profile-specific values and tests cannot be inherited from another product without a receipt. JP carries the canonical representation; MK classifies physics applicability, units, boundaries, conservation, scale, and uncertainty; JO verifies types, formulas, tests, and receipts; applicable safety and accounting manifestations contribute evidence; MJ alone issues a bounded permit. Mathematical validity does not create physical or operational authority.

THEN

Then JO returns PASS_EVIDENCE, HOLD, FAIL_TECHNICAL, or DENY; MJ permission remains a separate gate.

CURRENT EVIDENCE

The individual TP-270 reference profile was executed and its identity, title and REFERENCE_ONLY ceiling matched. This is a documentary identity check, not execution of the full model.

REMAINING REQUIREMENT

Bind model-specific inputs, operations and measured evidence before interpreting the paper as an executable implementation.

SOURCE REFERENCES

TP-270; BP-PROD-007

Evidence: evidence/rerun/teal/TP-270.json

TR-TP-271 / JP Semiconductor Phone Battery and OS Candidate - Product Brief

IF

If the Blue Page identity is invoked with declared inputs, scope, units, and evidence state.

HOW

The product must enter through human purpose, Bangel typing, Elsa semantic recovery, JP architecture, MK physics classification when applicable, JO verification, applicable family evidence, M3 routing, Mermaid/Shiva analysis when applicable, MJ decision, and JO evidence. Profile-specific values and tests cannot be inherited from another product without a receipt. JP carries the canonical representation; MK classifies physics applicability, units, boundaries, conservation, scale, and uncertainty; JO verifies types, formulas, tests, and receipts; applicable safety and accounting manifestations contribute evidence; MJ alone issues a bounded permit. Mathematical validity does not create physical or operational authority.

THEN

Then JO returns PASS_EVIDENCE, HOLD, FAIL_TECHNICAL, or DENY; MJ permission remains a separate gate.

CURRENT EVIDENCE

The individual TP-271 reference profile was executed and its identity, title and REFERENCE_ONLY ceiling matched. This is a documentary identity check, not execution of the full model.

REMAINING REQUIREMENT

Bind model-specific inputs, operations and measured evidence before interpreting the paper as an executable implementation.

SOURCE REFERENCES

TP-271; BP-PROD-008

Evidence: evidence/rerun/teal/TP-271.json

TR-TP-272 / JP Large-Scale Boating Power Candidate - Product Brief

IF

If the Blue Page identity is invoked with declared inputs, scope, units, and evidence state.

HOW

The product must enter through human purpose, Bangel typing, Elsa semantic recovery, JP architecture, MK physics classification when applicable, JO verification, applicable family evidence, M3 routing, Mermaid/Shiva analysis when applicable, MJ decision, and JO evidence. Profile-specific values and tests cannot be inherited from another product without a receipt. JP carries the canonical representation; MK classifies physics applicability, units, boundaries, conservation, scale, and uncertainty; JO verifies types, formulas, tests, and receipts; applicable safety and accounting manifestations contribute evidence; MJ alone issues a bounded permit. Mathematical validity does not create physical or operational authority.

THEN

Then JO returns PASS_EVIDENCE, HOLD, FAIL_TECHNICAL, or DENY; MJ permission remains a separate gate.

CURRENT EVIDENCE

The individual TP-272 reference profile was executed and its identity, title and REFERENCE_ONLY ceiling matched. This is a documentary identity check, not execution of the full model.

REMAINING REQUIREMENT

Bind model-specific inputs, operations and measured evidence before interpreting the paper as an executable implementation.

SOURCE REFERENCES

TP-272; BP-PROD-009

Evidence: evidence/rerun/teal/TP-272.json

TR-TP-273 / JP Peaceful High-Energy Propulsion Research Candidate - Product Brief

IF

If the Blue Page identity is invoked with declared inputs, scope, units, and evidence state.

HOW

The product must enter through human purpose, Bangel typing, Elsa semantic recovery, JP architecture, MK physics classification when applicable, JO verification, applicable family evidence, M3 routing, Mermaid/Shiva analysis when applicable, MJ decision, and JO evidence. Profile-specific values and tests cannot be inherited from another product without a receipt. JP carries the canonical representation; MK classifies physics applicability, units, boundaries, conservation, scale, and uncertainty; JO verifies types, formulas, tests, and receipts; applicable safety and accounting manifestations contribute evidence; MJ alone issues a bounded permit. Mathematical validity does not create physical or operational authority.

THEN

Then JO returns PASS_EVIDENCE, HOLD, FAIL_TECHNICAL, or DENY; MJ permission remains a separate gate.

CURRENT EVIDENCE

The individual TP-273 reference profile was executed and its identity, title and REFERENCE_ONLY ceiling matched. This is a documentary identity check, not execution of the full model.

REMAINING REQUIREMENT

Bind model-specific inputs, operations and measured evidence before interpreting the paper as an executable implementation.

SOURCE REFERENCES

TP-273; BP-PROD-010

Evidence: evidence/rerun/teal/TP-273.json

TR-TP-274 / Sister Predictive Containment System - Product Brief

IF

If the Blue Page identity is invoked with declared inputs, scope, units, and evidence state.

HOW

The product must enter through human purpose, Bangel typing, Elsa semantic recovery, JP architecture, MK physics classification when applicable, JO verification, applicable family evidence, M3 routing, Mermaid/Shiva analysis when applicable, MJ decision, and JO evidence. Profile-specific values and tests cannot be inherited from another product without a receipt. JP carries the canonical representation; MK classifies physics applicability, units, boundaries, conservation, scale, and uncertainty; JO verifies types, formulas, tests, and receipts; applicable safety and accounting manifestations contribute evidence; MJ alone issues a bounded permit. Mathematical validity does not create physical or operational authority.

THEN

Then JO returns PASS_EVIDENCE, HOLD, FAIL_TECHNICAL, or DENY; MJ permission remains a separate gate.

CURRENT EVIDENCE

The individual TP-274 reference profile was executed and its identity, title and REFERENCE_ONLY ceiling matched. This is a documentary identity check, not execution of the full model.

REMAINING REQUIREMENT

Bind model-specific inputs, operations and measured evidence before interpreting the paper as an executable implementation.

SOURCE REFERENCES

TP-274; BP-PROD-011

Evidence: evidence/rerun/teal/TP-274.json

TR-TP-275 / EVE Variance Screen and Egress Accounting - Product Brief

IF

If the Blue Page identity is invoked with declared inputs, scope, units, and evidence state.

HOW

The product must enter through human purpose, Bangel typing, Elsa semantic recovery, JP architecture, MK physics classification when applicable, JO verification, applicable family evidence, M3 routing, Mermaid/Shiva analysis when applicable, MJ decision, and JO evidence. Profile-specific values and tests cannot be inherited from another product without a receipt. JP carries the canonical representation; MK classifies physics applicability, units, boundaries, conservation, scale, and uncertainty; JO verifies types, formulas, tests, and receipts; applicable safety and accounting manifestations contribute evidence; MJ alone issues a bounded permit. Mathematical validity does not create physical or operational authority.

THEN

Then JO returns PASS_EVIDENCE, HOLD, FAIL_TECHNICAL, or DENY; MJ permission remains a separate gate.

CURRENT EVIDENCE

The individual TP-275 reference profile was executed and its identity, title and REFERENCE_ONLY ceiling matched. This is a documentary identity check, not execution of the full model.

REMAINING REQUIREMENT

Bind model-specific inputs, operations and measured evidence before interpreting the paper as an executable implementation.

SOURCE REFERENCES

TP-275; BP-PROD-012

Evidence: evidence/rerun/teal/TP-275.json

TR-TP-276 / Angels Safety and Corrective Command System - Product Brief

IF

If the Blue Page identity is invoked with declared inputs, scope, units, and evidence state.

HOW

The product must enter through human purpose, Bangel typing, Elsa semantic recovery, JP architecture, MK physics classification when applicable, JO verification, applicable family evidence, M3 routing, Mermaid/Shiva analysis when applicable, MJ decision, and JO evidence. Profile-specific values and tests cannot be inherited from another product without a receipt. JP carries the canonical representation; MK classifies physics applicability, units, boundaries, conservation, scale, and uncertainty; JO verifies types, formulas, tests, and receipts; applicable safety and accounting manifestations contribute evidence; MJ alone issues a bounded permit. Mathematical validity does not create physical or operational authority.

THEN

Then JO returns PASS_EVIDENCE, HOLD, FAIL_TECHNICAL, or DENY; MJ permission remains a separate gate.

CURRENT EVIDENCE

The individual TP-276 reference profile was executed and its identity, title and REFERENCE_ONLY ceiling matched. This is a documentary identity check, not execution of the full model.

REMAINING REQUIREMENT

Bind model-specific inputs, operations and measured evidence before interpreting the paper as an executable implementation.

SOURCE REFERENCES

TP-276; BP-PROD-013

Evidence: evidence/rerun/teal/TP-276.json

TR-TP-277 / Mermaid Accounting and Reconciliation System - Product Brief

IF

If the Blue Page identity is invoked with declared inputs, scope, units, and evidence state.

HOW

The product must enter through human purpose, Bangel typing, Elsa semantic recovery, JP architecture, MK physics classification when applicable, JO verification, applicable family evidence, M3 routing, Mermaid/Shiva analysis when applicable, MJ decision, and JO evidence. Profile-specific values and tests cannot be inherited from another product without a receipt. JP carries the canonical representation; MK classifies physics applicability, units, boundaries, conservation, scale, and uncertainty; JO verifies types, formulas, tests, and receipts; applicable safety and accounting manifestations contribute evidence; MJ alone issues a bounded permit. Mathematical validity does not create physical or operational authority.

THEN

Then JO returns PASS_EVIDENCE, HOLD, FAIL_TECHNICAL, or DENY; MJ permission remains a separate gate.

CURRENT EVIDENCE

The individual TP-277 reference profile was executed and its identity, title and REFERENCE_ONLY ceiling matched. This is a documentary identity check, not execution of the full model.

REMAINING REQUIREMENT

Bind model-specific inputs, operations and measured evidence before interpreting the paper as an executable implementation.

SOURCE REFERENCES

TP-277; BP-PROD-014
Evidence: evidence/rerun/teal/TP-277.json

TR-TP-278 / Shiva Dual Financial Rails - Product Brief

IF

If the Blue Page identity is invoked with declared inputs, scope, units, and evidence state.

HOW

The product must enter through human purpose, Bangel typing, Elsa semantic recovery, JP architecture, MK physics classification when applicable, JO verification, applicable family evidence, M3 routing, Mermaid/Shiva analysis when applicable, MJ decision, and JO evidence. Profile-specific values and tests cannot be inherited from another product without a receipt. JP carries the canonical representation; MK classifies physics applicability, units, boundaries, conservation, scale, and uncertainty; JO verifies types, formulas, tests, and receipts; applicable safety and accounting manifestations contribute evidence; MJ alone issues a bounded permit. Mathematical validity does not create physical or operational authority.

THEN

Then JO returns PASS_EVIDENCE, HOLD, FAIL_TECHNICAL, or DENY; MJ permission remains a separate gate.

CURRENT EVIDENCE

The individual TP-278 reference profile was executed and its identity, title and REFERENCE_ONLY ceiling matched. This is a documentary identity check, not execution of the full model.

REMAINING REQUIREMENT

Bind model-specific inputs, operations and measured evidence before interpreting the paper as an executable implementation.

SOURCE REFERENCES

TP-278; BP-PROD-015

Evidence: evidence/rerun/teal/TP-278.json

TR-TP-279 / SHIVAS Internal Settlement Reflection - Product Brief

IF

If the Blue Page identity is invoked with declared inputs, scope, units, and evidence state.

HOW

The product must enter through human purpose, Bangel typing, Elsa semantic recovery, JP architecture, MK physics classification when applicable, JO verification, applicable family evidence, M3 routing, Mermaid/Shiva analysis when applicable, MJ decision, and JO evidence. Profile-specific values and tests cannot be inherited from another product without a receipt. JP carries the canonical representation; MK classifies physics applicability, units, boundaries, conservation, scale, and uncertainty; JO verifies types, formulas, tests, and receipts; applicable safety and accounting manifestations contribute evidence; MJ alone issues a bounded permit. Mathematical validity does not create physical or operational authority.

THEN

Then JO returns PASS_EVIDENCE, HOLD, FAIL_TECHNICAL, or DENY; MJ permission remains a separate gate.

CURRENT EVIDENCE

The individual TP-279 reference profile was executed and its identity, title and REFERENCE_ONLY ceiling matched. This is a documentary identity check, not execution of the full model.

REMAINING REQUIREMENT

Bind model-specific inputs, operations and measured evidence before interpreting the paper as an executable implementation.

SOURCE REFERENCES

TP-279; BP-PROD-016

Evidence: evidence/rerun/teal/TP-279.json

TR-TP-280 / Shiva Crypto External-Market Candidate - Product Brief

IF

If the Blue Page identity is invoked with declared inputs, scope, units, and evidence state.

HOW

The product must enter through human purpose, Bangel typing, Elsa semantic recovery, JP architecture, MK physics classification when applicable, JO verification, applicable family evidence, M3 routing, Mermaid/Shiva analysis when applicable, MJ decision, and JO evidence. Profile-specific values and tests cannot be inherited from another product without a receipt. JP carries the canonical representation; MK classifies physics applicability, units, boundaries, conservation, scale, and uncertainty; JO verifies types, formulas, tests, and receipts; applicable safety and accounting manifestations contribute evidence; MJ alone issues a bounded permit. Mathematical validity does not create physical or operational authority.

THEN

Then JO returns PASS_EVIDENCE, HOLD, FAIL_TECHNICAL, or DENY; MJ permission remains a separate gate.

CURRENT EVIDENCE

The individual TP-280 reference profile was executed and its identity, title and REFERENCE_ONLY ceiling matched. This is a documentary identity check, not execution of the full model.

REMAINING REQUIREMENT

Bind model-specific inputs, operations and measured evidence before interpreting the paper as an executable implementation.

SOURCE REFERENCES

TP-280; BP-PROD-017

Evidence: evidence/rerun/teal/TP-280.json

TR-TP-281 / Shiva Exchange Rule Reference - Product Brief

IF

If the Blue Page identity is invoked with declared inputs, scope, units, and evidence state.

HOW

The product must enter through human purpose, Bangel typing, Elsa semantic recovery, JP architecture, MK physics classification when applicable, JO verification, applicable family evidence, M3 routing, Mermaid/Shiva analysis when applicable, MJ decision, and JO evidence. Profile-specific values and tests cannot be inherited from another product without a receipt. JP carries the canonical representation; MK classifies physics applicability, units, boundaries, conservation, scale, and uncertainty; JO verifies types, formulas, tests, and receipts; applicable safety and accounting manifestations contribute evidence; MJ alone issues a bounded permit. Mathematical validity does not create physical or operational authority.

THEN

Then JO returns PASS_EVIDENCE, HOLD, FAIL_TECHNICAL, or DENY; MJ permission remains a separate gate.

CURRENT EVIDENCE

The individual TP-281 reference profile was executed and its identity, title and REFERENCE_ONLY ceiling matched. This is a documentary identity check, not execution of the full model.

REMAINING REQUIREMENT

Bind model-specific inputs, operations and measured evidence before interpreting the paper as an executable implementation.

SOURCE REFERENCES

TP-281; BP-PROD-018

Evidence: evidence/rerun/teal/TP-281.json

TR-TP-282 / Moana Governed Browser - Product Brief

IF

If the Blue Page identity is invoked with declared inputs, scope, units, and evidence state.

HOW

The product must enter through human purpose, Bangel typing, Elsa semantic recovery, JP architecture, MK physics classification when applicable, JO verification, applicable family evidence, M3 routing, Mermaid/Shiva analysis when applicable, MJ decision, and JO evidence. Profile-specific values and tests cannot be inherited from another product without a receipt. JP carries the canonical representation; MK classifies physics applicability, units, boundaries, conservation, scale, and uncertainty; JO verifies types, formulas, tests, and receipts; applicable safety and accounting manifestations contribute evidence; MJ alone issues a bounded permit. Mathematical validity does not create physical or operational authority.

THEN

Then JO returns PASS_EVIDENCE, HOLD, FAIL_TECHNICAL, or DENY; MJ permission remains a separate gate.

CURRENT EVIDENCE

The individual TP-282 reference profile was executed and its identity, title and REFERENCE_ONLY ceiling matched. This is a documentary identity check, not execution of the full model.

REMAINING REQUIREMENT

Bind model-specific inputs, operations and measured evidence before interpreting the paper as an executable implementation.

SOURCE REFERENCES

TP-282; BP-PROD-019

Evidence: evidence/rerun/teal/TP-282.json

TR-TP-283 / Aviator Organizational Workspace - Product Brief

IF

If the Blue Page identity is invoked with declared inputs, scope, units, and evidence state.

HOW

The product must enter through human purpose, Bangel typing, Elsa semantic recovery, JP architecture, MK physics classification when applicable, JO verification, applicable family evidence, M3 routing, Mermaid/Shiva analysis when applicable, MJ decision, and JO evidence. Profile-specific values and tests cannot be inherited from another product without a receipt. JP carries the canonical representation; MK classifies physics applicability, units, boundaries, conservation, scale, and uncertainty; JO verifies types, formulas, tests, and receipts; applicable safety and accounting manifestations contribute evidence; MJ alone issues a bounded permit. Mathematical validity does not create physical or operational authority.

THEN

Then JO returns PASS_EVIDENCE, HOLD, FAIL_TECHNICAL, or DENY; MJ permission remains a separate gate.

CURRENT EVIDENCE

The individual TP-283 reference profile was executed and its identity, title and REFERENCE_ONLY ceiling matched. This is a documentary identity check, not execution of the full model.

REMAINING REQUIREMENT

Bind model-specific inputs, operations and measured evidence before interpreting the paper as an executable implementation.

SOURCE REFERENCES

TP-283; BP-PROD-020

Evidence: evidence/rerun/teal/TP-283.json

TR-TP-284 / Lecanto Truthful Visualization - Product Brief

IF

If the Blue Page identity is invoked with declared inputs, scope, units, and evidence state.

HOW

The product must enter through human purpose, Bangel typing, Elsa semantic recovery, JP architecture, MK physics classification when applicable, JO verification, applicable family evidence, M3 routing, Mermaid/Shiva analysis when applicable, MJ decision, and JO evidence. Profile-specific values and tests cannot be inherited from another product without a receipt. JP carries the canonical representation; MK classifies physics applicability, units, boundaries, conservation, scale, and uncertainty; JO verifies types, formulas, tests, and receipts; applicable safety and accounting manifestations contribute evidence; MJ alone issues a bounded permit. Mathematical validity does not create physical or operational authority.

THEN

Then JO returns PASS_EVIDENCE, HOLD, FAIL_TECHNICAL, or DENY; MJ permission remains a separate gate.

CURRENT EVIDENCE

The individual TP-284 reference profile was executed and its identity, title and REFERENCE_ONLY ceiling matched. This is a documentary identity check, not execution of the full model.

REMAINING REQUIREMENT

Bind model-specific inputs, operations and measured evidence before interpreting the paper as an executable implementation.

SOURCE REFERENCES

TP-284; BP-PROD-021

Evidence: evidence/rerun/teal/TP-284.json

TR-TP-285 / Elsa Governed Marketplace Reference - Product Brief

IF

If the Blue Page identity is invoked with declared inputs, scope, units, and evidence state.

HOW

The product must enter through human purpose, Bangel typing, Elsa semantic recovery, JP architecture, MK physics classification when applicable, JO verification, applicable family evidence, M3 routing, Mermaid/Shiva analysis when applicable, MJ decision, and JO evidence. Profile-specific values and tests cannot be inherited from another product without a receipt. JP carries the canonical representation; MK classifies physics applicability, units, boundaries, conservation, scale, and uncertainty; JO verifies types, formulas, tests, and receipts; applicable safety and accounting manifestations contribute evidence; MJ alone issues a bounded permit. Mathematical validity does not create physical or operational authority.

THEN

Then JO returns PASS_EVIDENCE, HOLD, FAIL_TECHNICAL, or DENY; MJ permission remains a separate gate.

CURRENT EVIDENCE

The individual TP-285 reference profile was executed and its identity, title and REFERENCE_ONLY ceiling matched. This is a documentary identity check, not execution of the full model.

REMAINING REQUIREMENT

Bind model-specific inputs, operations and measured evidence before interpreting the paper as an executable implementation.

SOURCE REFERENCES

TP-285; BP-PROD-022

Evidence: evidence/rerun/teal/TP-285.json

TR-TP-286 / Shekina Distributed Continuity - Product Brief

IF

If the Blue Page identity is invoked with declared inputs, scope, units, and evidence state.

HOW

The product must enter through human purpose, Bangel typing, Elsa semantic recovery, JP architecture, MK physics classification when applicable, JO verification, applicable family evidence, M3 routing, Mermaid/Shiva analysis when applicable, MJ decision, and JO evidence. Profile-specific values and tests cannot be inherited from another product without a receipt. JP carries the canonical representation; MK classifies physics applicability, units, boundaries, conservation, scale, and uncertainty; JO verifies types, formulas, tests, and receipts; applicable safety and accounting manifestations contribute evidence; MJ alone issues a bounded permit. Mathematical validity does not create physical or operational authority.

THEN

Then JO returns PASS_EVIDENCE, HOLD, FAIL_TECHNICAL, or DENY; MJ permission remains a separate gate.

CURRENT EVIDENCE

The individual TP-286 reference profile was executed and its identity, title and REFERENCE_ONLY ceiling matched. This is a documentary identity check, not execution of the full model.

REMAINING REQUIREMENT

Bind model-specific inputs, operations and measured evidence before interpreting the paper as an executable implementation.

SOURCE REFERENCES

TP-286; BP-PROD-023

Evidence: evidence/rerun/teal/TP-286.json

TR-TP-287 / Pearl Hypothetical Simulation and Information-Retention System - Product

IF

If the Blue Page identity is invoked with declared inputs, scope, units, and evidence state.

HOW

The product must enter through human purpose, Bangel typing, Elsa semantic recovery, JP architecture, MK physics classification when applicable, JO verification, applicable family evidence, M3 routing, Mermaid/Shiva analysis when applicable, MJ decision, and JO evidence. Profile-specific values and tests cannot be inherited from another product without a receipt. JP carries the canonical representation; MK classifies physics applicability, units, boundaries, conservation, scale, and uncertainty; JO verifies types, formulas, tests, and receipts; applicable safety and accounting manifestations contribute evidence; MJ alone issues a bounded permit. Mathematical validity does not create physical or operational authority.

THEN

Then JO returns PASS_EVIDENCE, HOLD, FAIL_TECHNICAL, or DENY; MJ permission remains a separate gate.

CURRENT EVIDENCE

The individual TP-287 reference profile was executed and its identity, title and REFERENCE_ONLY ceiling matched. This is a documentary identity check, not execution of the full model.

REMAINING REQUIREMENT

Bind model-specific inputs, operations and measured evidence before interpreting the paper as an executable implementation.

SOURCE REFERENCES

TP-287; BP-PROD-024

Evidence: evidence/rerun/teal/TP-287.json

TR-TP-288 / Bangel Spreadsheets - Product Brief

IF

If the Blue Page identity is invoked with declared inputs, scope, units, and evidence state.

HOW

The product must enter through human purpose, Bangel typing, Elsa semantic recovery, JP architecture, MK physics classification when applicable, JO verification, applicable family evidence, M3 routing, Mermaid/Shiva analysis when applicable, MJ decision, and JO evidence. Profile-specific values and tests cannot be inherited from another product without a receipt. JP carries the canonical representation; MK classifies physics applicability, units, boundaries, conservation, scale, and uncertainty; JO verifies types, formulas, tests, and receipts; applicable safety and accounting manifestations contribute evidence; MJ alone issues a bounded permit. Mathematical validity does not create physical or operational authority.

THEN

Then JO returns PASS_EVIDENCE, HOLD, FAIL_TECHNICAL, or DENY; MJ permission remains a separate gate.

CURRENT EVIDENCE

The individual TP-288 reference profile was executed and its identity, title and REFERENCE_ONLY ceiling matched. This is a documentary identity check, not execution of the full model.

REMAINING REQUIREMENT

Bind model-specific inputs, operations and measured evidence before interpreting the paper as an executable implementation.

SOURCE REFERENCES

TP-288; BP-PROD-025

Evidence: evidence/rerun/teal/TP-288.json

TR-TP-289 / JPOSMJ Product Portfolio Envelope - Product Brief

IF

If the Blue Page identity is invoked with declared inputs, scope, units, and evidence state.

HOW

The product must enter through human purpose, Bangel typing, Elsa semantic recovery, JP architecture, MK physics classification when applicable, JO verification, applicable family evidence, M3 routing, Mermaid/Shiva analysis when applicable, MJ decision, and JO evidence. Profile-specific values and tests cannot be inherited from another product without a receipt. JP carries the canonical representation; MK classifies physics applicability, units, boundaries, conservation, scale, and uncertainty; JO verifies types, formulas, tests, and receipts; applicable safety and accounting manifestations contribute evidence; MJ alone issues a bounded permit. Mathematical validity does not create physical or operational authority.

THEN

Then JO returns PASS_EVIDENCE, HOLD, FAIL_TECHNICAL, or DENY; MJ permission remains a separate gate.

CURRENT EVIDENCE

The individual TP-289 reference profile was executed and its identity, title and REFERENCE_ONLY ceiling matched. This is a documentary identity check, not execution of the full model.

REMAINING REQUIREMENT

Bind model-specific inputs, operations and measured evidence before interpreting the paper as an executable implementation.

SOURCE REFERENCES

TP-289; BP-PROD-026

Evidence: evidence/rerun/teal/TP-289.json

TR-TP-290 / MJ Standard Containment Geometry and Reference Gas Model - Product

IF

If the Blue Page identity is invoked with declared inputs, scope, units, and evidence state.

HOW

The product must enter through human purpose, Bangel typing, Elsa semantic recovery, JP architecture, MK physics classification when applicable, JO verification, applicable family evidence, M3 routing, Mermaid/Shiva analysis when applicable, MJ decision, and JO evidence. Profile-specific values and tests cannot be inherited from another product without a receipt. JP carries the canonical representation; MK classifies physics applicability, units, boundaries, conservation, scale, and uncertainty; JO verifies types, formulas, tests, and receipts; applicable safety and accounting manifestations contribute evidence; MJ alone issues a bounded permit. Mathematical validity does not create physical or operational authority.

THEN

Then JO returns PASS_EVIDENCE, HOLD, FAIL_TECHNICAL, or DENY; MJ permission remains a separate gate.

CURRENT EVIDENCE

The individual TP-290 reference profile was executed and its identity, title and REFERENCE_ONLY ceiling matched. This is a documentary identity check, not execution of the full model.

REMAINING REQUIREMENT

Bind model-specific inputs, operations and measured evidence before interpreting the paper as an executable implementation.

SOURCE REFERENCES

TP-290; BP-PROD-027

Evidence: evidence/rerun/teal/TP-290.json

TR-TP-291 / MJ Reservoir Collection, Lake Buffer, and Spiral-Compatible Re-entry -

IF

If the Blue Page identity is invoked with declared inputs, scope, units, and evidence state.

HOW

The product must enter through human purpose, Bangel typing, Elsa semantic recovery, JP architecture, MK physics classification when applicable, JO verification, applicable family evidence, M3 routing, Mermaid/Shiva analysis when applicable, MJ decision, and JO evidence. Profile-specific values and tests cannot be inherited from another product without a receipt. JP carries the canonical representation; MK classifies physics applicability, units, boundaries, conservation, scale, and uncertainty; JO verifies types, formulas, tests, and receipts; applicable safety and accounting manifestations contribute evidence; MJ alone issues a bounded permit. Mathematical validity does not create physical or operational authority.

THEN

Then JO returns PASS_EVIDENCE, HOLD, FAIL_TECHNICAL, or DENY; MJ permission remains a separate gate.

CURRENT EVIDENCE

The individual TP-291 reference profile was executed and its identity, title and REFERENCE_ONLY ceiling matched. This is a documentary identity check, not execution of the full model.

REMAINING REQUIREMENT

Bind model-specific inputs, operations and measured evidence before interpreting the paper as an executable implementation.

SOURCE REFERENCES

TP-291; BP-PROD-028

Evidence: evidence/rerun/teal/TP-291.json

TR-TP-292 / MJOS Solar Shared-Core Architecture - Product Brief

IF

If the Blue Page identity is invoked with declared inputs, scope, units, and evidence state.

HOW

The product must enter through human purpose, Bangel typing, Elsa semantic recovery, JP architecture, MK physics classification when applicable, JO verification, applicable family evidence, M3 routing, Mermaid/Shiva analysis when applicable, MJ decision, and JO evidence. Profile-specific values and tests cannot be inherited from another product without a receipt. JP carries the canonical representation; MK classifies physics applicability, units, boundaries, conservation, scale, and uncertainty; JO verifies types, formulas, tests, and receipts; applicable safety and accounting manifestations contribute evidence; MJ alone issues a bounded permit. Mathematical validity does not create physical or operational authority.

THEN

Then JO returns PASS_EVIDENCE, HOLD, FAIL_TECHNICAL, or DENY; MJ permission remains a separate gate.

CURRENT EVIDENCE

The individual TP-292 reference profile was executed and its identity, title and REFERENCE_ONLY ceiling matched. This is a documentary identity check, not execution of the full model.

REMAINING REQUIREMENT

Bind model-specific inputs, operations and measured evidence before interpreting the paper as an executable implementation.

SOURCE REFERENCES

TP-292; BP-PROD-029

Evidence: evidence/rerun/teal/TP-292.json

TR-TP-293 / MJOS Solar Semiconductor Phone Battery and OS Profile - Product Brief

IF

If the Blue Page identity is invoked with declared inputs, scope, units, and evidence state.

HOW

The product must enter through human purpose, Bangel typing, Elsa semantic recovery, JP architecture, MK physics classification when applicable, JO verification, applicable family evidence, M3 routing, Mermaid/Shiva analysis when applicable, MJ decision, and JO evidence. Profile-specific values and tests cannot be inherited from another product without a receipt. JP carries the canonical representation; MK classifies physics applicability, units, boundaries, conservation, scale, and uncertainty; JO verifies types, formulas, tests, and receipts; applicable safety and accounting manifestations contribute evidence; MJ alone issues a bounded permit. Mathematical validity does not create physical or operational authority.

THEN

Then JO returns PASS_EVIDENCE, HOLD, FAIL_TECHNICAL, or DENY; MJ permission remains a separate gate.

CURRENT EVIDENCE

The individual TP-293 reference profile was executed and its identity, title and REFERENCE_ONLY ceiling matched. This is a documentary identity check, not execution of the full model.

REMAINING REQUIREMENT

Bind model-specific inputs, operations and measured evidence before interpreting the paper as an executable implementation.

SOURCE REFERENCES

TP-293; BP-PROD-030

Evidence: evidence/rerun/teal/TP-293.json

TR-TP-294 / MJOS Solar-Assisted Marine Power and Propulsion Profile - Product Brief

IF

If the Blue Page identity is invoked with declared inputs, scope, units, and evidence state.

HOW

The product must enter through human purpose, Bangel typing, Elsa semantic recovery, JP architecture, MK physics classification when applicable, JO verification, applicable family evidence, M3 routing, Mermaid/Shiva analysis when applicable, MJ decision, and JO evidence. Profile-specific values and tests cannot be inherited from another product without a receipt. JP carries the canonical representation; MK classifies physics applicability, units, boundaries, conservation, scale, and uncertainty; JO verifies types, formulas, tests, and receipts; applicable safety and accounting manifestations contribute evidence; MJ alone issues a bounded permit. Mathematical validity does not create physical or operational authority.

THEN

Then JO returns PASS_EVIDENCE, HOLD, FAIL_TECHNICAL, or DENY; MJ permission remains a separate gate.

CURRENT EVIDENCE

The individual TP-294 reference profile was executed and its identity, title and REFERENCE_ONLY ceiling matched. This is a documentary identity check, not execution of the full model.

REMAINING REQUIREMENT

Bind model-specific inputs, operations and measured evidence before interpreting the paper as an executable implementation.

SOURCE REFERENCES

TP-294; BP-PROD-031

Evidence: evidence/rerun/teal/TP-294.json

TR-TP-295 / MJOS Peaceful Solar-Assisted Rocket/Spacecraft Power and OS Profile -

IF

If the Blue Page identity is invoked with declared inputs, scope, units, and evidence state.

HOW

The product must enter through human purpose, Bangel typing, Elsa semantic recovery, JP architecture, MK physics classification when applicable, JO verification, applicable family evidence, M3 routing, Mermaid/Shiva analysis when applicable, MJ decision, and JO evidence. Profile-specific values and tests cannot be inherited from another product without a receipt. JP carries the canonical representation; MK classifies physics applicability, units, boundaries, conservation, scale, and uncertainty; JO verifies types, formulas, tests, and receipts; applicable safety and accounting manifestations contribute evidence; MJ alone issues a bounded permit. Mathematical validity does not create physical or operational authority.

THEN

Then JO returns PASS_EVIDENCE, HOLD, FAIL_TECHNICAL, or DENY; MJ permission remains a separate gate.

CURRENT EVIDENCE

The individual TP-295 reference profile was executed and its identity, title and REFERENCE_ONLY ceiling matched. This is a documentary identity check, not execution of the full model.

REMAINING REQUIREMENT

Bind model-specific inputs, operations and measured evidence before interpreting the paper as an executable implementation.

SOURCE REFERENCES

TP-295; BP-PROD-032

Evidence: evidence/rerun/teal/TP-295.json

TR-TP-296 / DRO Discrete Retention and Element-Collection Reference System -

IF

If the Blue Page identity is invoked with declared inputs, scope, units, and evidence state.

HOW

The product must enter through human purpose, Bangel typing, Elsa semantic recovery, JP architecture, MK physics classification when applicable, JO verification, applicable family evidence, M3 routing, Mermaid/Shiva analysis when applicable, MJ decision, and JO evidence. Profile-specific values and tests cannot be inherited from another product without a receipt. JP carries the canonical representation; MK classifies physics applicability, units, boundaries, conservation, scale, and uncertainty; JO verifies types, formulas, tests, and receipts; applicable safety and accounting manifestations contribute evidence; MJ alone issues a bounded permit. Mathematical validity does not create physical or operational authority.

THEN

Then JO returns PASS_EVIDENCE, HOLD, FAIL_TECHNICAL, or DENY; MJ permission remains a separate gate.

CURRENT EVIDENCE

The individual TP-296 reference profile was executed and its identity, title and REFERENCE_ONLY ceiling matched. This is a documentary identity check, not execution of the full model.

REMAINING REQUIREMENT

Bind model-specific inputs, operations and measured evidence before interpreting the paper as an executable implementation.

SOURCE REFERENCES

TP-296; BP-PROD-033
Evidence: evidence/rerun/teal/TP-296.json

TR-TP-297 / DRO-to-Pearl Computational Node Handoff - Product Brief

IF

If the Blue Page identity is invoked with declared inputs, scope, units, and evidence state.

HOW

The product must enter through human purpose, Bangel typing, Elsa semantic recovery, JP architecture, MK physics classification when applicable, JO verification, applicable family evidence, M3 routing, Mermaid/Shiva analysis when applicable, MJ decision, and JO evidence. Profile-specific values and tests cannot be inherited from another product without a receipt. JP carries the canonical representation; MK classifies physics applicability, units, boundaries, conservation, scale, and uncertainty; JO verifies types, formulas, tests, and receipts; applicable safety and accounting manifestations contribute evidence; MJ alone issues a bounded permit. Mathematical validity does not create physical or operational authority.

THEN

Then JO returns PASS_EVIDENCE, HOLD, FAIL_TECHNICAL, or DENY; MJ permission remains a separate gate.

CURRENT EVIDENCE

The individual TP-297 reference profile was executed and its identity, title and REFERENCE_ONLY ceiling matched. This is a documentary identity check, not execution of the full model.

REMAINING REQUIREMENT

Bind model-specific inputs, operations and measured evidence before interpreting the paper as an executable implementation.

SOURCE REFERENCES

TP-297; BP-PROD-034

Evidence: evidence/rerun/teal/TP-297.json

TR-TP-298 / DRO Start-Energy and Restart-Reserve Reference System - Product Brief

IF

If the Blue Page identity is invoked with declared inputs, scope, units, and evidence state.

HOW

The product must enter through human purpose, Bangel typing, Elsa semantic recovery, JP architecture, MK physics classification when applicable, JO verification, applicable family evidence, M3 routing, Mermaid/Shiva analysis when applicable, MJ decision, and JO evidence. Profile-specific values and tests cannot be inherited from another product without a receipt. JP carries the canonical representation; MK classifies physics applicability, units, boundaries, conservation, scale, and uncertainty; JO verifies types, formulas, tests, and receipts; applicable safety and accounting manifestations contribute evidence; MJ alone issues a bounded permit. Mathematical validity does not create physical or operational authority.

THEN

Then JO returns PASS_EVIDENCE, HOLD, FAIL_TECHNICAL, or DENY; MJ permission remains a separate gate.

CURRENT EVIDENCE

The individual TP-298 reference profile was executed and its identity, title and REFERENCE_ONLY ceiling matched. This is a documentary identity check, not execution of the full model.

REMAINING REQUIREMENT

Bind model-specific inputs, operations and measured evidence before interpreting the paper as an executable implementation.

SOURCE REFERENCES

TP-298; BP-PROD-035

Evidence: evidence/rerun/teal/TP-298.json

TR-TP-299 / Lecanto Image Provenance, Physics, Variance, and Intent-Hypothesis

IF

If the Blue Page identity is invoked with declared inputs, scope, units, and evidence state.

HOW

The product must enter through human purpose, Bangel typing, Elsa semantic recovery, JP architecture, MK physics classification when applicable, JO verification, applicable family evidence, M3 routing, Mermaid/Shiva analysis when applicable, MJ decision, and JO evidence. Profile-specific values and tests cannot be inherited from another product without a receipt. JP carries the canonical representation; MK classifies physics applicability, units, boundaries, conservation, scale, and uncertainty; JO verifies types, formulas, tests, and receipts; applicable safety and accounting manifestations contribute evidence; MJ alone issues a bounded permit. Mathematical validity does not create physical or operational authority.

THEN

Then JO returns PASS_EVIDENCE, HOLD, FAIL_TECHNICAL, or DENY; MJ permission remains a separate gate.

CURRENT EVIDENCE

The individual TP-299 reference profile was executed and its identity, title and REFERENCE_ONLY ceiling matched. This is a documentary identity check, not execution of the full model.

REMAINING REQUIREMENT

Bind model-specific inputs, operations and measured evidence before interpreting the paper as an executable implementation.

SOURCE REFERENCES

TP-299; BP-PROD-036

Evidence: evidence/rerun/teal/TP-299.json

TR-TP-300 / JP Semiconductor DRO and Pearl Computational Integration - Product

IF

If the Blue Page identity is invoked with declared inputs, scope, units, and evidence state.

HOW

The product must enter through human purpose, Bangel typing, Elsa semantic recovery, JP architecture, MK physics classification when applicable, JO verification, applicable family evidence, M3 routing, Mermaid/Shiva analysis when applicable, MJ decision, and JO evidence. Profile-specific values and tests cannot be inherited from another product without a receipt. JP carries the canonical representation; MK classifies physics applicability, units, boundaries, conservation, scale, and uncertainty; JO verifies types, formulas, tests, and receipts; applicable safety and accounting manifestations contribute evidence; MJ alone issues a bounded permit. Mathematical validity does not create physical or operational authority.

THEN

Then JO returns PASS_EVIDENCE, HOLD, FAIL_TECHNICAL, or DENY; MJ permission remains a separate gate.

CURRENT EVIDENCE

The individual TP-300 reference profile was executed and its identity, title and REFERENCE_ONLY ceiling matched. This is a documentary identity check, not execution of the full model.

REMAINING REQUIREMENT

Bind model-specific inputs, operations and measured evidence before interpreting the paper as an executable implementation.

SOURCE REFERENCES

TP-300; BP-PROD-037

Evidence: evidence/rerun/teal/TP-300.json

TR-TP-301 / Formula cluster F-001 through F-006

IF

If a visual or measurement blueprint is selected for review or simulation.

HOW

Use normalized geometry, declared measurements, formula references, code expression, profile boundaries, and evidence ceilings; route through MK and JO.

THEN

Then the blueprint is admitted as reference evidence, held for missing physical data, or denied for unsafe purpose.

CURRENT EVIDENCE

The individual TP-301 reference profile was executed and its identity, title and REFERENCE_ONLY ceiling matched. This is a documentary identity check, not execution of the full model. Explicit source links resolve to 6 Pink formula IDs: 2 have checked numeric profiles and 4 remain open.

INDIVIDUAL FORMULA LINKS

F-001, F-002, F-003, F-004, F-005, F-006

REMAINING REQUIREMENT

Bind model-specific inputs, operations and measured evidence before interpreting the paper as an executable implementation.

SOURCE REFERENCES

TP-301; F-001; F-006; YP-001

Evidence: evidence/rerun/teal/TP-301.json

TR-TP-302 / Formula cluster F-007 through F-012

IF

If a visual or measurement blueprint is selected for review or simulation.

HOW

Use normalized geometry, declared measurements, formula references, code expression, profile boundaries, and evidence ceilings; route through MK and JO.

THEN

Then the blueprint is admitted as reference evidence, held for missing physical data, or denied for unsafe purpose.

CURRENT EVIDENCE

The individual TP-302 reference profile was executed and its identity, title and REFERENCE_ONLY ceiling matched. This is a documentary identity check, not execution of the full model. Explicit source links resolve to 6 Pink formula IDs: 3 have checked numeric profiles and 3 remain open.

INDIVIDUAL FORMULA LINKS

F-007, F-008, F-009, F-010, F-011, F-012

REMAINING REQUIREMENT

Bind model-specific inputs, operations and measured evidence before interpreting the paper as an executable implementation.

SOURCE REFERENCES

TP-302; F-007; F-012; YP-002

Evidence: evidence/rerun/teal/TP-302.json

TR-TP-303 / Formula cluster F-013 through F-018

IF

If a visual or measurement blueprint is selected for review or simulation.

HOW

Use normalized geometry, declared measurements, formula references, code expression, profile boundaries, and evidence ceilings; route through MK and JO.

THEN

Then the blueprint is admitted as reference evidence, held for missing physical data, or denied for unsafe purpose.

CURRENT EVIDENCE

The individual TP-303 reference profile was executed and its identity, title and REFERENCE_ONLY ceiling matched. This is a documentary identity check, not execution of the full model. Explicit source links resolve to 6 Pink formula IDs: 4 have checked numeric profiles and 2 remain open.

INDIVIDUAL FORMULA LINKS

F-013, F-014, F-015, F-016, F-017, F-018

REMAINING REQUIREMENT

Bind model-specific inputs, operations and measured evidence before interpreting the paper as an executable implementation.

SOURCE REFERENCES

TP-303; F-013; F-018; YP-003

Evidence: evidence/rerun/teal/TP-303.json

TR-TP-304 / Formula cluster F-019 through F-024

IF

If a visual or measurement blueprint is selected for review or simulation.

HOW

Use normalized geometry, declared measurements, formula references, code expression, profile boundaries, and evidence ceilings; route through MK and JO.

THEN

Then the blueprint is admitted as reference evidence, held for missing physical data, or denied for unsafe purpose.

CURRENT EVIDENCE

The individual TP-304 reference profile was executed and its identity, title and REFERENCE_ONLY ceiling matched. This is a documentary identity check, not execution of the full model. Explicit source links resolve to 6 Pink formula IDs: 4 have checked numeric profiles and 2 remain open.

INDIVIDUAL FORMULA LINKS

F-019, F-020, F-021, F-022, F-023, F-024

REMAINING REQUIREMENT

Bind model-specific inputs, operations and measured evidence before interpreting the paper as an executable implementation.

SOURCE REFERENCES

TP-304; F-019; F-024; YP-004

Evidence: evidence/rerun/teal/TP-304.json

TR-TP-305 / Formula cluster F-025 through F-030

IF

If a visual or measurement blueprint is selected for review or simulation.

HOW

Use normalized geometry, declared measurements, formula references, code expression, profile boundaries, and evidence ceilings; route through MK and JO.

THEN

Then the blueprint is admitted as reference evidence, held for missing physical data, or denied for unsafe purpose.

CURRENT EVIDENCE

The individual TP-305 reference profile was executed and its identity, title and REFERENCE_ONLY ceiling matched. This is a documentary identity check, not execution of the full model. Explicit source links resolve to 6 Pink formula IDs: 3 have checked numeric profiles and 3 remain open.

INDIVIDUAL FORMULA LINKS

F-025, F-026, F-027, F-028, F-029, F-030

REMAINING REQUIREMENT

Bind model-specific inputs, operations and measured evidence before interpreting the paper as an executable implementation.

SOURCE REFERENCES

TP-305; F-025; F-030; YP-005

Evidence: evidence/rerun/teal/TP-305.json

TR-TP-306 / Formula cluster F-031 through F-036

IF

If a visual or measurement blueprint is selected for review or simulation.

HOW

Use normalized geometry, declared measurements, formula references, code expression, profile boundaries, and evidence ceilings; route through MK and JO.

THEN

Then the blueprint is admitted as reference evidence, held for missing physical data, or denied for unsafe purpose.

CURRENT EVIDENCE

The individual TP-306 reference profile was executed and its identity, title and REFERENCE_ONLY ceiling matched. This is a documentary identity check, not execution of the full model. Explicit source links resolve to 6 Pink formula IDs: 5 have checked numeric profiles and 1 remain open.

INDIVIDUAL FORMULA LINKS

F-031, F-032, F-033, F-034, F-035, F-036

REMAINING REQUIREMENT

Bind model-specific inputs, operations and measured evidence before interpreting the paper as an executable implementation.

SOURCE REFERENCES

TP-306; F-031; F-036; YP-006

Evidence: evidence/rerun/teal/TP-306.json

TR-TP-307 / Formula cluster F-037 through F-042

IF

If a visual or measurement blueprint is selected for review or simulation.

HOW

Use normalized geometry, declared measurements, formula references, code expression, profile boundaries, and evidence ceilings; route through MK and JO.

THEN

Then the blueprint is admitted as reference evidence, held for missing physical data, or denied for unsafe purpose.

CURRENT EVIDENCE

The individual TP-307 reference profile was executed and its identity, title and REFERENCE_ONLY ceiling matched. This is a documentary identity check, not execution of the full model. Explicit source links resolve to 6 Pink formula IDs: 2 have checked numeric profiles and 4 remain open.

INDIVIDUAL FORMULA LINKS

F-037, F-038, F-039, F-040, F-041, F-042

REMAINING REQUIREMENT

Bind model-specific inputs, operations and measured evidence before interpreting the paper as an executable implementation.

SOURCE REFERENCES

TP-307; F-037; F-042; YP-007

Evidence: evidence/rerun/teal/TP-307.json

TR-TP-308 / Formula cluster F-043 through F-048

IF

If a visual or measurement blueprint is selected for review or simulation.

HOW

Use normalized geometry, declared measurements, formula references, code expression, profile boundaries, and evidence ceilings; route through MK and JO.

THEN

Then the blueprint is admitted as reference evidence, held for missing physical data, or denied for unsafe purpose.

CURRENT EVIDENCE

The individual TP-308 reference profile was executed and its identity, title and REFERENCE_ONLY ceiling matched. This is a documentary identity check, not execution of the full model. Explicit source links resolve to 6 Pink formula IDs: 2 have checked numeric profiles and 4 remain open.

INDIVIDUAL FORMULA LINKS

F-043, F-044, F-045, F-046, F-047, F-048

REMAINING REQUIREMENT

Bind model-specific inputs, operations and measured evidence before interpreting the paper as an executable implementation.

SOURCE REFERENCES

TP-308; F-043; F-048; YP-008

Evidence: evidence/rerun/teal/TP-308.json

TR-TP-309 / Formula cluster F-049 through F-054

IF

If a visual or measurement blueprint is selected for review or simulation.

HOW

Use normalized geometry, declared measurements, formula references, code expression, profile boundaries, and evidence ceilings; route through MK and JO.

THEN

Then the blueprint is admitted as reference evidence, held for missing physical data, or denied for unsafe purpose.

CURRENT EVIDENCE

The individual TP-309 reference profile was executed and its identity, title and REFERENCE_ONLY ceiling matched. This is a documentary identity check, not execution of the full model. Explicit source links resolve to 6 Pink formula IDs: 4 have checked numeric profiles and 2 remain open.

INDIVIDUAL FORMULA LINKS

F-049, F-050, F-051, F-052, F-053, F-054

REMAINING REQUIREMENT

Bind model-specific inputs, operations and measured evidence before interpreting the paper as an executable implementation.

SOURCE REFERENCES

TP-309; F-049; F-054; YP-009

Evidence: evidence/rerun/teal/TP-309.json

TR-TP-310 / Formula cluster F-055 through F-060

IF

If a visual or measurement blueprint is selected for review or simulation.

HOW

Use normalized geometry, declared measurements, formula references, code expression, profile boundaries, and evidence ceilings; route through MK and JO.

THEN

Then the blueprint is admitted as reference evidence, held for missing physical data, or denied for unsafe purpose.

CURRENT EVIDENCE

The individual TP-310 reference profile was executed and its identity, title and REFERENCE_ONLY ceiling matched. This is a documentary identity check, not execution of the full model. Explicit source links resolve to 6 Pink formula IDs: 3 have checked numeric profiles and 3 remain open.

INDIVIDUAL FORMULA LINKS

F-055, F-056, F-057, F-058, F-059, F-060

REMAINING REQUIREMENT

Bind model-specific inputs, operations and measured evidence before interpreting the paper as an executable implementation.

SOURCE REFERENCES

TP-310; F-055; F-060; YP-010

Evidence: evidence/rerun/teal/TP-310.json

TR-TP-311 / Formula cluster F-061 through F-066

IF

If a visual or measurement blueprint is selected for review or simulation.

HOW

Use normalized geometry, declared measurements, formula references, code expression, profile boundaries, and evidence ceilings; route through MK and JO.

THEN

Then the blueprint is admitted as reference evidence, held for missing physical data, or denied for unsafe purpose.

CURRENT EVIDENCE

The individual TP-311 reference profile was executed and its identity, title and REFERENCE_ONLY ceiling matched. This is a documentary identity check, not execution of the full model. Explicit source links resolve to 6 Pink formula IDs: 2 have checked numeric profiles and 4 remain open.

INDIVIDUAL FORMULA LINKS

F-061, F-062, F-063, F-064, F-065, F-066

REMAINING REQUIREMENT

Bind model-specific inputs, operations and measured evidence before interpreting the paper as an executable implementation.

SOURCE REFERENCES

TP-311; F-061; F-066; YP-011

Evidence: evidence/rerun/teal/TP-311.json

TR-TP-312 / Formula cluster F-067 through F-072

IF

If a visual or measurement blueprint is selected for review or simulation.

HOW

Use normalized geometry, declared measurements, formula references, code expression, profile boundaries, and evidence ceilings; route through MK and JO.

THEN

Then the blueprint is admitted as reference evidence, held for missing physical data, or denied for unsafe purpose.

CURRENT EVIDENCE

The individual TP-312 reference profile was executed and its identity, title and REFERENCE_ONLY ceiling matched. This is a documentary identity check, not execution of the full model. Explicit source links resolve to 6 Pink formula IDs: 1 have checked numeric profiles and 5 remain open.

INDIVIDUAL FORMULA LINKS

F-067, F-068, F-069, F-070, F-071, F-072

REMAINING REQUIREMENT

Bind model-specific inputs, operations and measured evidence before interpreting the paper as an executable implementation.

SOURCE REFERENCES

TP-312; F-067; F-072; YP-012

Evidence: evidence/rerun/teal/TP-312.json

TR-TP-313 / Formula cluster F-073 through F-078

IF

If a visual or measurement blueprint is selected for review or simulation.

HOW

Use normalized geometry, declared measurements, formula references, code expression, profile boundaries, and evidence ceilings; route through MK and JO.

THEN

Then the blueprint is admitted as reference evidence, held for missing physical data, or denied for unsafe purpose.

CURRENT EVIDENCE

The individual TP-313 reference profile was executed and its identity, title and REFERENCE_ONLY ceiling matched. This is a documentary identity check, not execution of the full model. Explicit source links resolve to 6 Pink formula IDs: 4 have checked numeric profiles and 2 remain open.

INDIVIDUAL FORMULA LINKS

F-073, F-074, F-075, F-076, F-077, F-078

REMAINING REQUIREMENT

Bind model-specific inputs, operations and measured evidence before interpreting the paper as an executable implementation.

SOURCE REFERENCES

TP-313; F-073; F-078; YP-013

Evidence: evidence/rerun/teal/TP-313.json

TR-TP-314 / Formula cluster F-079 through F-084

IF

If a visual or measurement blueprint is selected for review or simulation.

HOW

Use normalized geometry, declared measurements, formula references, code expression, profile boundaries, and evidence ceilings; route through MK and JO.

THEN

Then the blueprint is admitted as reference evidence, held for missing physical data, or denied for unsafe purpose.

CURRENT EVIDENCE

The individual TP-314 reference profile was executed and its identity, title and REFERENCE_ONLY ceiling matched. This is a documentary identity check, not execution of the full model. Explicit source links resolve to 6 Pink formula IDs: 4 have checked numeric profiles and 2 remain open.

INDIVIDUAL FORMULA LINKS

F-079, F-080, F-081, F-082, F-083, F-084

REMAINING REQUIREMENT

Bind model-specific inputs, operations and measured evidence before interpreting the paper as an executable implementation.

SOURCE REFERENCES

TP-314; F-079; F-084; YP-014

Evidence: evidence/rerun/teal/TP-314.json

TR-TP-315 / Formula cluster F-085 through F-090

IF

If a visual or measurement blueprint is selected for review or simulation.

HOW

Use normalized geometry, declared measurements, formula references, code expression, profile boundaries, and evidence ceilings; route through MK and JO.

THEN

Then the blueprint is admitted as reference evidence, held for missing physical data, or denied for unsafe purpose.

CURRENT EVIDENCE

The individual TP-315 reference profile was executed and its identity, title and REFERENCE_ONLY ceiling matched. This is a documentary identity check, not execution of the full model. Explicit source links resolve to 6 Pink formula IDs: 6 have checked numeric profiles and 0 remain open.

INDIVIDUAL FORMULA LINKS

F-085, F-086, F-087, F-088, F-089, F-090

REMAINING REQUIREMENT

Bind model-specific inputs, operations and measured evidence before interpreting the paper as an executable implementation.

SOURCE REFERENCES

TP-315; F-085; F-090; YP-015

Evidence: evidence/rerun/teal/TP-315.json

TR-TP-316 / Formula cluster F-091 through F-096

IF

If a visual or measurement blueprint is selected for review or simulation.

HOW

Use normalized geometry, declared measurements, formula references, code expression, profile boundaries, and evidence ceilings; route through MK and JO.

THEN

Then the blueprint is admitted as reference evidence, held for missing physical data, or denied for unsafe purpose.

CURRENT EVIDENCE

The individual TP-316 reference profile was executed and its identity, title and REFERENCE_ONLY ceiling matched. This is a documentary identity check, not execution of the full model. Explicit source links resolve to 6 Pink formula IDs: 6 have checked numeric profiles and 0 remain open.

INDIVIDUAL FORMULA LINKS

F-091, F-092, F-093, F-094, F-095, F-096

REMAINING REQUIREMENT

Bind model-specific inputs, operations and measured evidence before interpreting the paper as an executable implementation.

SOURCE REFERENCES

TP-316; F-091; F-096; YP-016

Evidence: evidence/rerun/teal/TP-316.json

TR-TP-317 / Formula cluster F-097 through F-102

IF

If a visual or measurement blueprint is selected for review or simulation.

HOW

Use normalized geometry, declared measurements, formula references, code expression, profile boundaries, and evidence ceilings; route through MK and JO.

THEN

Then the blueprint is admitted as reference evidence, held for missing physical data, or denied for unsafe purpose.

CURRENT EVIDENCE

The individual TP-317 reference profile was executed and its identity, title and REFERENCE_ONLY ceiling matched. This is a documentary identity check, not execution of the full model. Explicit source links resolve to 6 Pink formula IDs: 5 have checked numeric profiles and 1 remain open.

INDIVIDUAL FORMULA LINKS

F-097, F-098, F-099, F-100, F-101, F-102

REMAINING REQUIREMENT

Bind model-specific inputs, operations and measured evidence before interpreting the paper as an executable implementation.

SOURCE REFERENCES

TP-317; F-097; F-102; YP-017

Evidence: evidence/rerun/teal/TP-317.json

TR-TP-318 / Formula cluster F-103 through F-108

IF

If a visual or measurement blueprint is selected for review or simulation.

HOW

Use normalized geometry, declared measurements, formula references, code expression, profile boundaries, and evidence ceilings; route through MK and JO.

THEN

Then the blueprint is admitted as reference evidence, held for missing physical data, or denied for unsafe purpose.

CURRENT EVIDENCE

The individual TP-318 reference profile was executed and its identity, title and REFERENCE_ONLY ceiling matched. This is a documentary identity check, not execution of the full model. Explicit source links resolve to 6 Pink formula IDs: 4 have checked numeric profiles and 2 remain open.

INDIVIDUAL FORMULA LINKS

F-103, F-104, F-105, F-106, F-107, F-108

REMAINING REQUIREMENT

Bind model-specific inputs, operations and measured evidence before interpreting the paper as an executable implementation.

SOURCE REFERENCES

TP-318; F-103; F-108; YP-018

Evidence: evidence/rerun/teal/TP-318.json

TR-TP-319 / Formula cluster F-109 through F-114

IF

If a visual or measurement blueprint is selected for review or simulation.

HOW

Use normalized geometry, declared measurements, formula references, code expression, profile boundaries, and evidence ceilings; route through MK and JO.

THEN

Then the blueprint is admitted as reference evidence, held for missing physical data, or denied for unsafe purpose.

CURRENT EVIDENCE

The individual TP-319 reference profile was executed and its identity, title and REFERENCE_ONLY ceiling matched. This is a documentary identity check, not execution of the full model. Explicit source links resolve to 6 Pink formula IDs: 3 have checked numeric profiles and 3 remain open.

INDIVIDUAL FORMULA LINKS

F-109, F-110, F-111, F-112, F-113, F-114

REMAINING REQUIREMENT

Bind model-specific inputs, operations and measured evidence before interpreting the paper as an executable implementation.

SOURCE REFERENCES

TP-319; F-109; F-114; YP-019

Evidence: evidence/rerun/teal/TP-319.json

TR-TP-320 / Formula cluster F-115 through F-121

IF

If a visual or measurement blueprint is selected for review or simulation.

HOW

Use normalized geometry, declared measurements, formula references, code expression, profile boundaries, and evidence ceilings; route through MK and JO.

THEN

Then the blueprint is admitted as reference evidence, held for missing physical data, or denied for unsafe purpose.

CURRENT EVIDENCE

The individual TP-320 reference profile was executed and its identity, title and REFERENCE_ONLY ceiling matched. This is a documentary identity check, not execution of the full model. Explicit source links resolve to 7 Pink formula IDs: 3 have checked numeric profiles and 4 remain open.

INDIVIDUAL FORMULA LINKS

F-115, F-116, F-117, F-118, F-119, F-120, F-121

REMAINING REQUIREMENT

Bind model-specific inputs, operations and measured evidence before interpreting the paper as an executable implementation.

SOURCE REFERENCES

TP-320; F-115; F-121; YP-020

Evidence: evidence/rerun/teal/TP-320.json

TR-TP-321 / Formula cluster F-122 through F-127

IF

If a visual or measurement blueprint is selected for review or simulation.

HOW

Use normalized geometry, declared measurements, formula references, code expression, profile boundaries, and evidence ceilings; route through MK and JO.

THEN

Then the blueprint is admitted as reference evidence, held for missing physical data, or denied for unsafe purpose.

CURRENT EVIDENCE

The individual TP-321 reference profile was executed and its identity, title and REFERENCE_ONLY ceiling matched. This is a documentary identity check, not execution of the full model. Explicit source links resolve to 6 Pink formula IDs: 3 have checked numeric profiles and 3 remain open.

INDIVIDUAL FORMULA LINKS

F-122, F-123, F-124, F-125, F-126, F-127

REMAINING REQUIREMENT

Bind model-specific inputs, operations and measured evidence before interpreting the paper as an executable implementation.

SOURCE REFERENCES

TP-321; F-122; F-127; YP-021

Evidence: evidence/rerun/teal/TP-321.json

TR-TP-322 / Formula cluster F-128 through F-133

IF

If a visual or measurement blueprint is selected for review or simulation.

HOW

Use normalized geometry, declared measurements, formula references, code expression, profile boundaries, and evidence ceilings; route through MK and JO.

THEN

Then the blueprint is admitted as reference evidence, held for missing physical data, or denied for unsafe purpose.

CURRENT EVIDENCE

The individual TP-322 reference profile was executed and its identity, title and REFERENCE_ONLY ceiling matched. This is a documentary identity check, not execution of the full model. Explicit source links resolve to 6 Pink formula IDs: 2 have checked numeric profiles and 4 remain open.

INDIVIDUAL FORMULA LINKS

F-128, F-129, F-130, F-131, F-132, F-133

REMAINING REQUIREMENT

Bind model-specific inputs, operations and measured evidence before interpreting the paper as an executable implementation.

SOURCE REFERENCES

TP-322; F-128; F-133; YP-022

Evidence: evidence/rerun/teal/TP-322.json

TR-TP-323 / Formula cluster F-134 through F-139

IF

If a visual or measurement blueprint is selected for review or simulation.

HOW

Use normalized geometry, declared measurements, formula references, code expression, profile boundaries, and evidence ceilings; route through MK and JO.

THEN

Then the blueprint is admitted as reference evidence, held for missing physical data, or denied for unsafe purpose.

CURRENT EVIDENCE

The individual TP-323 reference profile was executed and its identity, title and REFERENCE_ONLY ceiling matched. This is a documentary identity check, not execution of the full model. Explicit source links resolve to 6 Pink formula IDs: 5 have checked numeric profiles and 1 remain open.

INDIVIDUAL FORMULA LINKS

F-134, F-135, F-136, F-137, F-138, F-139

REMAINING REQUIREMENT

Bind model-specific inputs, operations and measured evidence before interpreting the paper as an executable implementation.

SOURCE REFERENCES

TP-323; F-134; F-139; YP-023

Evidence: evidence/rerun/teal/TP-323.json

TR-TP-324 / Formula cluster F-140 through F-145

IF

If a visual or measurement blueprint is selected for review or simulation.

HOW

Use normalized geometry, declared measurements, formula references, code expression, profile boundaries, and evidence ceilings; route through MK and JO.

THEN

Then the blueprint is admitted as reference evidence, held for missing physical data, or denied for unsafe purpose.

CURRENT EVIDENCE

The individual TP-324 reference profile was executed and its identity, title and REFERENCE_ONLY ceiling matched. This is a documentary identity check, not execution of the full model. Explicit source links resolve to 6 Pink formula IDs: 3 have checked numeric profiles and 3 remain open.

INDIVIDUAL FORMULA LINKS

F-140, F-141, F-142, F-143, F-144, F-145

REMAINING REQUIREMENT

Bind model-specific inputs, operations and measured evidence before interpreting the paper as an executable implementation.

SOURCE REFERENCES

TP-324; F-140; F-145; YP-024

Evidence: evidence/rerun/teal/TP-324.json

TR-TP-325 / Formula cluster F-146 through F-151

IF

If a visual or measurement blueprint is selected for review or simulation.

HOW

Use normalized geometry, declared measurements, formula references, code expression, profile boundaries, and evidence ceilings; route through MK and JO.

THEN

Then the blueprint is admitted as reference evidence, held for missing physical data, or denied for unsafe purpose.

CURRENT EVIDENCE

The individual TP-325 reference profile was executed and its identity, title and REFERENCE_ONLY ceiling matched. This is a documentary identity check, not execution of the full model. Explicit source links resolve to 6 Pink formula IDs: 6 have checked numeric profiles and 0 remain open.

INDIVIDUAL FORMULA LINKS

F-146, F-147, F-148, F-149, F-150, F-151

REMAINING REQUIREMENT

Bind model-specific inputs, operations and measured evidence before interpreting the paper as an executable implementation.

SOURCE REFERENCES

TP-325; F-146; F-151; YP-025

Evidence: evidence/rerun/teal/TP-325.json

TR-TP-326 / Formula cluster F-152 through F-157

IF

If a visual or measurement blueprint is selected for review or simulation.

HOW

Use normalized geometry, declared measurements, formula references, code expression, profile boundaries, and evidence ceilings; route through MK and JO.

THEN

Then the blueprint is admitted as reference evidence, held for missing physical data, or denied for unsafe purpose.

CURRENT EVIDENCE

The individual TP-326 reference profile was executed and its identity, title and REFERENCE_ONLY ceiling matched. This is a documentary identity check, not execution of the full model. Explicit source links resolve to 6 Pink formula IDs: 2 have checked numeric profiles and 4 remain open.

INDIVIDUAL FORMULA LINKS

F-152, F-153, F-154, F-155, F-156, F-157

REMAINING REQUIREMENT

Bind model-specific inputs, operations and measured evidence before interpreting the paper as an executable implementation.

SOURCE REFERENCES

TP-326; F-152; F-157; YP-026

Evidence: evidence/rerun/teal/TP-326.json

TR-TP-327 / Formula cluster F-158 through F-163

IF

If a visual or measurement blueprint is selected for review or simulation.

HOW

Use normalized geometry, declared measurements, formula references, code expression, profile boundaries, and evidence ceilings; route through MK and JO.

THEN

Then the blueprint is admitted as reference evidence, held for missing physical data, or denied for unsafe purpose.

CURRENT EVIDENCE

The individual TP-327 reference profile was executed and its identity, title and REFERENCE_ONLY ceiling matched. This is a documentary identity check, not execution of the full model. Explicit source links resolve to 6 Pink formula IDs: 2 have checked numeric profiles and 4 remain open.

INDIVIDUAL FORMULA LINKS

F-158, F-159, F-160, F-161, F-162, F-163

REMAINING REQUIREMENT

Bind model-specific inputs, operations and measured evidence before interpreting the paper as an executable implementation.

SOURCE REFERENCES

TP-327; F-158; F-163; YP-027

Evidence: evidence/rerun/teal/TP-327.json

TR-TP-328 / Formula cluster F-164 through F-169

IF

If a visual or measurement blueprint is selected for review or simulation.

HOW

Use normalized geometry, declared measurements, formula references, code expression, profile boundaries, and evidence ceilings; route through MK and JO.

THEN

Then the blueprint is admitted as reference evidence, held for missing physical data, or denied for unsafe purpose.

CURRENT EVIDENCE

The individual TP-328 reference profile was executed and its identity, title and REFERENCE_ONLY ceiling matched. This is a documentary identity check, not execution of the full model. Explicit source links resolve to 6 Pink formula IDs: 3 have checked numeric profiles and 3 remain open.

INDIVIDUAL FORMULA LINKS

F-164, F-165, F-166, F-167, F-168, F-169

REMAINING REQUIREMENT

Bind model-specific inputs, operations and measured evidence before interpreting the paper as an executable implementation.

SOURCE REFERENCES

TP-328; F-164; F-169; YP-028

Evidence: evidence/rerun/teal/TP-328.json

TR-TP-329 / Formula cluster F-170 through F-175

IF

If a visual or measurement blueprint is selected for review or simulation.

HOW

Use normalized geometry, declared measurements, formula references, code expression, profile boundaries, and evidence ceilings; route through MK and JO.

THEN

Then the blueprint is admitted as reference evidence, held for missing physical data, or denied for unsafe purpose.

CURRENT EVIDENCE

The individual TP-329 reference profile was executed and its identity, title and REFERENCE_ONLY ceiling matched. This is a documentary identity check, not execution of the full model. Explicit source links resolve to 6 Pink formula IDs: 4 have checked numeric profiles and 2 remain open.

INDIVIDUAL FORMULA LINKS

F-170, F-171, F-172, F-173, F-174, F-175

REMAINING REQUIREMENT

Bind model-specific inputs, operations and measured evidence before interpreting the paper as an executable implementation.

SOURCE REFERENCES

TP-329; F-170; F-175; YP-029

Evidence: evidence/rerun/teal/TP-329.json

TR-TP-330 / Formula cluster F-176 through F-181

IF

If a visual or measurement blueprint is selected for review or simulation.

HOW

Use normalized geometry, declared measurements, formula references, code expression, profile boundaries, and evidence ceilings; route through MK and JO.

THEN

Then the blueprint is admitted as reference evidence, held for missing physical data, or denied for unsafe purpose.

CURRENT EVIDENCE

The individual TP-330 reference profile was executed and its identity, title and REFERENCE_ONLY ceiling matched. This is a documentary identity check, not execution of the full model. Explicit source links resolve to 6 Pink formula IDs: 2 have checked numeric profiles and 4 remain open.

INDIVIDUAL FORMULA LINKS

F-176, F-177, F-178, F-179, F-180, F-181

REMAINING REQUIREMENT

Bind model-specific inputs, operations and measured evidence before interpreting the paper as an executable implementation.

SOURCE REFERENCES

TP-330; F-176; F-181; YP-030

Evidence: evidence/rerun/teal/TP-330.json

TR-TP-331 / Formula cluster F-182 through F-187

IF

If a visual or measurement blueprint is selected for review or simulation.

HOW

Use normalized geometry, declared measurements, formula references, code expression, profile boundaries, and evidence ceilings; route through MK and JO.

THEN

Then the blueprint is admitted as reference evidence, held for missing physical data, or denied for unsafe purpose.

CURRENT EVIDENCE

The individual TP-331 reference profile was executed and its identity, title and REFERENCE_ONLY ceiling matched. This is a documentary identity check, not execution of the full model. Explicit source links resolve to 6 Pink formula IDs: 4 have checked numeric profiles and 2 remain open.

INDIVIDUAL FORMULA LINKS

F-182, F-183, F-184, F-185, F-186, F-187

REMAINING REQUIREMENT

Bind model-specific inputs, operations and measured evidence before interpreting the paper as an executable implementation.

SOURCE REFERENCES

TP-331; F-182; F-187; YP-031

Evidence: evidence/rerun/teal/TP-331.json

TR-TP-332 / Formula cluster F-188 through F-193

IF

If a visual or measurement blueprint is selected for review or simulation.

HOW

Use normalized geometry, declared measurements, formula references, code expression, profile boundaries, and evidence ceilings; route through MK and JO.

THEN

Then the blueprint is admitted as reference evidence, held for missing physical data, or denied for unsafe purpose.

CURRENT EVIDENCE

The individual TP-332 reference profile was executed and its identity, title and REFERENCE_ONLY ceiling matched. This is a documentary identity check, not execution of the full model. Explicit source links resolve to 6 Pink formula IDs: 1 have checked numeric profiles and 5 remain open.

INDIVIDUAL FORMULA LINKS

F-188, F-189, F-190, F-191, F-192, F-193

REMAINING REQUIREMENT

Bind model-specific inputs, operations and measured evidence before interpreting the paper as an executable implementation.

SOURCE REFERENCES

TP-332; F-188; F-193; YP-032

Evidence: evidence/rerun/teal/TP-332.json

TR-TP-333 / Formula cluster F-194 through F-199

IF

If a visual or measurement blueprint is selected for review or simulation.

HOW

Use normalized geometry, declared measurements, formula references, code expression, profile boundaries, and evidence ceilings; route through MK and JO.

THEN

Then the blueprint is admitted as reference evidence, held for missing physical data, or denied for unsafe purpose.

CURRENT EVIDENCE

The individual TP-333 reference profile was executed and its identity, title and REFERENCE_ONLY ceiling matched. This is a documentary identity check, not execution of the full model. Explicit source links resolve to 6 Pink formula IDs: 6 have checked numeric profiles and 0 remain open.

INDIVIDUAL FORMULA LINKS

F-194, F-195, F-196, F-197, F-198, F-199

REMAINING REQUIREMENT

Bind model-specific inputs, operations and measured evidence before interpreting the paper as an executable implementation.

SOURCE REFERENCES

TP-333; F-194; F-199; YP-033

Evidence: evidence/rerun/teal/TP-333.json

TR-TP-334 / Formula cluster F-200 through F-205

IF

If a visual or measurement blueprint is selected for review or simulation.

HOW

Use normalized geometry, declared measurements, formula references, code expression, profile boundaries, and evidence ceilings; route through MK and JO.

THEN

Then the blueprint is admitted as reference evidence, held for missing physical data, or denied for unsafe purpose.

CURRENT EVIDENCE

The individual TP-334 reference profile was executed and its identity, title and REFERENCE_ONLY ceiling matched. This is a documentary identity check, not execution of the full model. Explicit source links resolve to 6 Pink formula IDs: 1 have checked numeric profiles and 5 remain open.

INDIVIDUAL FORMULA LINKS

F-200, F-201, F-202, F-203, F-204, F-205

REMAINING REQUIREMENT

Bind model-specific inputs, operations and measured evidence before interpreting the paper as an executable implementation.

SOURCE REFERENCES

TP-334; F-200; F-205; YP-034

Evidence: evidence/rerun/teal/TP-334.json

TR-TP-335 / Formula cluster F-206 through F-211

IF

If a visual or measurement blueprint is selected for review or simulation.

HOW

Use normalized geometry, declared measurements, formula references, code expression, profile boundaries, and evidence ceilings; route through MK and JO.

THEN

Then the blueprint is admitted as reference evidence, held for missing physical data, or denied for unsafe purpose.

CURRENT EVIDENCE

The individual TP-335 reference profile was executed and its identity, title and REFERENCE_ONLY ceiling matched. This is a documentary identity check, not execution of the full model. Explicit source links resolve to 6 Pink formula IDs: 3 have checked numeric profiles and 3 remain open.

INDIVIDUAL FORMULA LINKS

F-206, F-207, F-208, F-209, F-210, F-211

REMAINING REQUIREMENT

Bind model-specific inputs, operations and measured evidence before interpreting the paper as an executable implementation.

SOURCE REFERENCES

TP-335; F-206; F-211; YP-035

Evidence: evidence/rerun/teal/TP-335.json

TR-TP-336 / Formula cluster F-212 through F-217

IF

If a visual or measurement blueprint is selected for review or simulation.

HOW

Use normalized geometry, declared measurements, formula references, code expression, profile boundaries, and evidence ceilings; route through MK and JO.

THEN

Then the blueprint is admitted as reference evidence, held for missing physical data, or denied for unsafe purpose.

CURRENT EVIDENCE

The individual TP-336 reference profile was executed and its identity, title and REFERENCE_ONLY ceiling matched. This is a documentary identity check, not execution of the full model. Explicit source links resolve to 6 Pink formula IDs: 3 have checked numeric profiles and 3 remain open.

INDIVIDUAL FORMULA LINKS

F-212, F-213, F-214, F-215, F-216, F-217

REMAINING REQUIREMENT

Bind model-specific inputs, operations and measured evidence before interpreting the paper as an executable implementation.

SOURCE REFERENCES

TP-336; F-212; F-217; YP-036

Evidence: evidence/rerun/teal/TP-336.json

TR-TP-337 / Formula cluster F-218 through F-223

IF

If a visual or measurement blueprint is selected for review or simulation.

HOW

Use normalized geometry, declared measurements, formula references, code expression, profile boundaries, and evidence ceilings; route through MK and JO.

THEN

Then the blueprint is admitted as reference evidence, held for missing physical data, or denied for unsafe purpose.

CURRENT EVIDENCE

The individual TP-337 reference profile was executed and its identity, title and REFERENCE_ONLY ceiling matched. This is a documentary identity check, not execution of the full model. Explicit source links resolve to 6 Pink formula IDs: 5 have checked numeric profiles and 1 remain open.

INDIVIDUAL FORMULA LINKS

F-218, F-219, F-220, F-221, F-222, F-223

REMAINING REQUIREMENT

Bind model-specific inputs, operations and measured evidence before interpreting the paper as an executable implementation.

SOURCE REFERENCES

TP-337; F-218; F-223; YP-037

Evidence: evidence/rerun/teal/TP-337.json

TR-TP-338 / Formula cluster F-224 through F-229

IF

If a visual or measurement blueprint is selected for review or simulation.

HOW

Use normalized geometry, declared measurements, formula references, code expression, profile boundaries, and evidence ceilings; route through MK and JO.

THEN

Then the blueprint is admitted as reference evidence, held for missing physical data, or denied for unsafe purpose.

CURRENT EVIDENCE

The individual TP-338 reference profile was executed and its identity, title and REFERENCE_ONLY ceiling matched. This is a documentary identity check, not execution of the full model. Explicit source links resolve to 6 Pink formula IDs: 3 have checked numeric profiles and 3 remain open.

INDIVIDUAL FORMULA LINKS

F-224, F-225, F-226, F-227, F-228, F-229

REMAINING REQUIREMENT

Bind model-specific inputs, operations and measured evidence before interpreting the paper as an executable implementation.

SOURCE REFERENCES

TP-338; F-224; F-229; YP-038

Evidence: evidence/rerun/teal/TP-338.json

TR-TP-339 / Formula cluster F-230 through F-235

IF

If a visual or measurement blueprint is selected for review or simulation.

HOW

Use normalized geometry, declared measurements, formula references, code expression, profile boundaries, and evidence ceilings; route through MK and JO.

THEN

Then the blueprint is admitted as reference evidence, held for missing physical data, or denied for unsafe purpose.

CURRENT EVIDENCE

The individual TP-339 reference profile was executed and its identity, title and REFERENCE_ONLY ceiling matched. This is a documentary identity check, not execution of the full model. Explicit source links resolve to 6 Pink formula IDs: 3 have checked numeric profiles and 3 remain open.

INDIVIDUAL FORMULA LINKS

F-230, F-231, F-232, F-233, F-234, F-235

REMAINING REQUIREMENT

Bind model-specific inputs, operations and measured evidence before interpreting the paper as an executable implementation.

SOURCE REFERENCES

TP-339; F-230; F-235; YP-039

Evidence: evidence/rerun/teal/TP-339.json

TR-TP-340 / Formula cluster F-236 through F-242

IF

If a visual or measurement blueprint is selected for review or simulation.

HOW

Use normalized geometry, declared measurements, formula references, code expression, profile boundaries, and evidence ceilings; route through MK and JO.

THEN

Then the blueprint is admitted as reference evidence, held for missing physical data, or denied for unsafe purpose.

CURRENT EVIDENCE

The individual TP-340 reference profile was executed and its identity, title and REFERENCE_ONLY ceiling matched. This is a documentary identity check, not execution of the full model. Explicit source links resolve to 7 Pink formula IDs: 1 have checked numeric profiles and 6 remain open.

INDIVIDUAL FORMULA LINKS

F-236, F-237, F-238, F-239, F-240, F-241, F-242

REMAINING REQUIREMENT

Bind model-specific inputs, operations and measured evidence before interpreting the paper as an executable implementation.

SOURCE REFERENCES

TP-340; F-236; F-242; YP-040

Evidence: evidence/rerun/teal/TP-340.json

TR-TP-341 / MJ family manifestation blueprint

IF

If a visual or measurement blueprint is selected for review or simulation.

HOW

Use normalized geometry, declared measurements, formula references, code expression, profile boundaries, and evidence ceilings; route through MK and JO.

THEN

Then the blueprint is admitted as reference evidence, held for missing physical data, or denied for unsafe purpose.

CURRENT EVIDENCE

The individual TP-341 reference profile was executed and its identity, title and REFERENCE_ONLY ceiling matched. This is a documentary identity check, not execution of the full model.

REMAINING REQUIREMENT

Bind model-specific inputs, operations and measured evidence before interpreting the paper as an executable implementation.

SOURCE REFERENCES

TP-341; YP-041

Evidence: evidence/rerun/teal/TP-341.json

TR-TP-342 / Bangel family manifestation blueprint

IF

If a visual or measurement blueprint is selected for review or simulation.

HOW

Use normalized geometry, declared measurements, formula references, code expression, profile boundaries, and evidence ceilings; route through MK and JO.

THEN

Then the blueprint is admitted as reference evidence, held for missing physical data, or denied for unsafe purpose.

CURRENT EVIDENCE

The individual TP-342 reference profile was executed and its identity, title and REFERENCE_ONLY ceiling matched. This is a documentary identity check, not execution of the full model.

REMAINING REQUIREMENT

Bind model-specific inputs, operations and measured evidence before interpreting the paper as an executable implementation.

SOURCE REFERENCES

TP-342; YP-042

Evidence: evidence/rerun/teal/TP-342.json

TR-TP-343 / Elsa family manifestation blueprint

IF

If a visual or measurement blueprint is selected for review or simulation.

HOW

Use normalized geometry, declared measurements, formula references, code expression, profile boundaries, and evidence ceilings; route through MK and JO.

THEN

Then the blueprint is admitted as reference evidence, held for missing physical data, or denied for unsafe purpose.

CURRENT EVIDENCE

The individual TP-343 reference profile was executed and its identity, title and REFERENCE_ONLY ceiling matched. This is a documentary identity check, not execution of the full model.

REMAINING REQUIREMENT

Bind model-specific inputs, operations and measured evidence before interpreting the paper as an executable implementation.

SOURCE REFERENCES

TP-343; YP-043

Evidence: evidence/rerun/teal/TP-343.json

TR-TP-344 / JP family manifestation blueprint

IF

If a visual or measurement blueprint is selected for review or simulation.

HOW

Use normalized geometry, declared measurements, formula references, code expression, profile boundaries, and evidence ceilings; route through MK and JO.

THEN

Then the blueprint is admitted as reference evidence, held for missing physical data, or denied for unsafe purpose.

CURRENT EVIDENCE

The individual TP-344 reference profile was executed and its identity, title and REFERENCE_ONLY ceiling matched. This is a documentary identity check, not execution of the full model.

REMAINING REQUIREMENT

Bind model-specific inputs, operations and measured evidence before interpreting the paper as an executable implementation.

SOURCE REFERENCES

TP-344; YP-044

Evidence: evidence/rerun/teal/TP-344.json

TR-TP-345 / Mika / MK family manifestation blueprint

IF

If a visual or measurement blueprint is selected for review or simulation.

HOW

Use normalized geometry, declared measurements, formula references, code expression, profile boundaries, and evidence ceilings; route through MK and JO.

THEN

Then the blueprint is admitted as reference evidence, held for missing physical data, or denied for unsafe purpose.

CURRENT EVIDENCE

The individual TP-345 reference profile was executed and its identity, title and REFERENCE_ONLY ceiling matched. This is a documentary identity check, not execution of the full model.

REMAINING REQUIREMENT

Bind model-specific inputs, operations and measured evidence before interpreting the paper as an executable implementation.

SOURCE REFERENCES

TP-345; YP-045

Evidence: evidence/rerun/teal/TP-345.json

TR-TP-346 / JO family manifestation blueprint

IF

If a visual or measurement blueprint is selected for review or simulation.

HOW

Use normalized geometry, declared measurements, formula references, code expression, profile boundaries, and evidence ceilings; route through MK and JO.

THEN

Then the blueprint is admitted as reference evidence, held for missing physical data, or denied for unsafe purpose.

CURRENT EVIDENCE

The individual TP-346 reference profile was executed and its identity, title and REFERENCE_ONLY ceiling matched. This is a documentary identity check, not execution of the full model.

REMAINING REQUIREMENT

Bind model-specific inputs, operations and measured evidence before interpreting the paper as an executable implementation.

SOURCE REFERENCES

TP-346; YP-046

Evidence: evidence/rerun/teal/TP-346.json

TR-TP-347 / MJOS family manifestation blueprint

IF

If a visual or measurement blueprint is selected for review or simulation.

HOW

Use normalized geometry, declared measurements, formula references, code expression, profile boundaries, and evidence ceilings; route through MK and JO.

THEN

Then the blueprint is admitted as reference evidence, held for missing physical data, or denied for unsafe purpose.

CURRENT EVIDENCE

The individual TP-347 reference profile was executed and its identity, title and REFERENCE_ONLY ceiling matched. This is a documentary identity check, not execution of the full model.

REMAINING REQUIREMENT

Bind model-specific inputs, operations and measured evidence before interpreting the paper as an executable implementation.

SOURCE REFERENCES

TP-347; YP-047

Evidence: evidence/rerun/teal/TP-347.json

TR-TP-348 / Angels family manifestation blueprint

IF

If a visual or measurement blueprint is selected for review or simulation.

HOW

Use normalized geometry, declared measurements, formula references, code expression, profile boundaries, and evidence ceilings; route through MK and JO.

THEN

Then the blueprint is admitted as reference evidence, held for missing physical data, or denied for unsafe purpose.

CURRENT EVIDENCE

The individual TP-348 reference profile was executed and its identity, title and REFERENCE_ONLY ceiling matched. This is a documentary identity check, not execution of the full model.

REMAINING REQUIREMENT

Bind model-specific inputs, operations and measured evidence before interpreting the paper as an executable implementation.

SOURCE REFERENCES

TP-348; YP-048

Evidence: evidence/rerun/teal/TP-348.json

TR-TP-349 / Bellatrix family manifestation blueprint

IF

If a visual or measurement blueprint is selected for review or simulation.

HOW

Use normalized geometry, declared measurements, formula references, code expression, profile boundaries, and evidence ceilings; route through MK and JO.

THEN

Then the blueprint is admitted as reference evidence, held for missing physical data, or denied for unsafe purpose.

CURRENT EVIDENCE

The individual TP-349 reference profile was executed and its identity, title and REFERENCE_ONLY ceiling matched. This is a documentary identity check, not execution of the full model.

REMAINING REQUIREMENT

Bind model-specific inputs, operations and measured evidence before interpreting the paper as an executable implementation.

SOURCE REFERENCES

TP-349; YP-049

Evidence: evidence/rerun/teal/TP-349.json

TR-TP-350 / Sister family manifestation blueprint

IF

If a visual or measurement blueprint is selected for review or simulation.

HOW

Use normalized geometry, declared measurements, formula references, code expression, profile boundaries, and evidence ceilings; route through MK and JO.

THEN

Then the blueprint is admitted as reference evidence, held for missing physical data, or denied for unsafe purpose.

CURRENT EVIDENCE

The individual TP-350 reference profile was executed and its identity, title and REFERENCE_ONLY ceiling matched. This is a documentary identity check, not execution of the full model.

REMAINING REQUIREMENT

Bind model-specific inputs, operations and measured evidence before interpreting the paper as an executable implementation.

SOURCE REFERENCES

TP-350; YP-050

Evidence: evidence/rerun/teal/TP-350.json

TR-TP-351 / EVE family manifestation blueprint

IF

If a visual or measurement blueprint is selected for review or simulation.

HOW

Use normalized geometry, declared measurements, formula references, code expression, profile boundaries, and evidence ceilings; route through MK and JO.

THEN

Then the blueprint is admitted as reference evidence, held for missing physical data, or denied for unsafe purpose.

CURRENT EVIDENCE

The individual TP-351 reference profile was executed and its identity, title and REFERENCE_ONLY ceiling matched. This is a documentary identity check, not execution of the full model.

REMAINING REQUIREMENT

Bind model-specific inputs, operations and measured evidence before interpreting the paper as an executable implementation.

SOURCE REFERENCES

TP-351; YP-051

Evidence: evidence/rerun/teal/TP-351.json

TR-TP-352 / Mary / M3 family manifestation blueprint

IF

If a visual or measurement blueprint is selected for review or simulation.

HOW

Use normalized geometry, declared measurements, formula references, code expression, profile boundaries, and evidence ceilings; route through MK and JO.

THEN

Then the blueprint is admitted as reference evidence, held for missing physical data, or denied for unsafe purpose.

CURRENT EVIDENCE

The individual TP-352 reference profile was executed and its identity, title and REFERENCE_ONLY ceiling matched. This is a documentary identity check, not execution of the full model.

REMAINING REQUIREMENT

Bind model-specific inputs, operations and measured evidence before interpreting the paper as an executable implementation.

SOURCE REFERENCES

TP-352; YP-052

Evidence: evidence/rerun/teal/TP-352.json

TR-TP-353 / Mermaid family manifestation blueprint

IF

If a visual or measurement blueprint is selected for review or simulation.

HOW

Use normalized geometry, declared measurements, formula references, code expression, profile boundaries, and evidence ceilings; route through MK and JO.

THEN

Then the blueprint is admitted as reference evidence, held for missing physical data, or denied for unsafe purpose.

CURRENT EVIDENCE

The individual TP-353 reference profile was executed and its identity, title and REFERENCE_ONLY ceiling matched. This is a documentary identity check, not execution of the full model.

REMAINING REQUIREMENT

Bind model-specific inputs, operations and measured evidence before interpreting the paper as an executable implementation.

SOURCE REFERENCES

TP-353; YP-053

Evidence: evidence/rerun/teal/TP-353.json

TR-TP-354 / Shiva family manifestation blueprint

IF

If a visual or measurement blueprint is selected for review or simulation.

HOW

Use normalized geometry, declared measurements, formula references, code expression, profile boundaries, and evidence ceilings; route through MK and JO.

THEN

Then the blueprint is admitted as reference evidence, held for missing physical data, or denied for unsafe purpose.

CURRENT EVIDENCE

The individual TP-354 reference profile was executed and its identity, title and REFERENCE_ONLY ceiling matched. This is a documentary identity check, not execution of the full model.

REMAINING REQUIREMENT

Bind model-specific inputs, operations and measured evidence before interpreting the paper as an executable implementation.

SOURCE REFERENCES

TP-354; YP-054

Evidence: evidence/rerun/teal/TP-354.json

TR-TP-355 / Shekina family manifestation blueprint

IF

If a visual or measurement blueprint is selected for review or simulation.

HOW

Use normalized geometry, declared measurements, formula references, code expression, profile boundaries, and evidence ceilings; route through MK and JO.

THEN

Then the blueprint is admitted as reference evidence, held for missing physical data, or denied for unsafe purpose.

CURRENT EVIDENCE

The individual TP-355 reference profile was executed and its identity, title and REFERENCE_ONLY ceiling matched. This is a documentary identity check, not execution of the full model.

REMAINING REQUIREMENT

Bind model-specific inputs, operations and measured evidence before interpreting the paper as an executable implementation.

SOURCE REFERENCES

TP-355; YP-055

Evidence: evidence/rerun/teal/TP-355.json

TR-TP-356 / Belle family manifestation blueprint

IF

If a visual or measurement blueprint is selected for review or simulation.

HOW

Use normalized geometry, declared measurements, formula references, code expression, profile boundaries, and evidence ceilings; route through MK and JO.

THEN

Then the blueprint is admitted as reference evidence, held for missing physical data, or denied for unsafe purpose.

CURRENT EVIDENCE

The individual TP-356 reference profile was executed and its identity, title and REFERENCE_ONLY ceiling matched. This is a documentary identity check, not execution of the full model.

REMAINING REQUIREMENT

Bind model-specific inputs, operations and measured evidence before interpreting the paper as an executable implementation.

SOURCE REFERENCES

TP-356; YP-056

Evidence: evidence/rerun/teal/TP-356.json

TR-TP-357 / Lecanto family manifestation blueprint

IF

If a visual or measurement blueprint is selected for review or simulation.

HOW

Use normalized geometry, declared measurements, formula references, code expression, profile boundaries, and evidence ceilings; route through MK and JO.

THEN

Then the blueprint is admitted as reference evidence, held for missing physical data, or denied for unsafe purpose.

CURRENT EVIDENCE

The individual TP-357 reference profile was executed and its identity, title and REFERENCE_ONLY ceiling matched. This is a documentary identity check, not execution of the full model.

REMAINING REQUIREMENT

Bind model-specific inputs, operations and measured evidence before interpreting the paper as an executable implementation.

SOURCE REFERENCES

TP-357; YP-057

Evidence: evidence/rerun/teal/TP-357.json

TR-TP-358 / Moana family manifestation blueprint

IF

If a visual or measurement blueprint is selected for review or simulation.

HOW

Use normalized geometry, declared measurements, formula references, code expression, profile boundaries, and evidence ceilings; route through MK and JO.

THEN

Then the blueprint is admitted as reference evidence, held for missing physical data, or denied for unsafe purpose.

CURRENT EVIDENCE

The individual TP-358 reference profile was executed and its identity, title and REFERENCE_ONLY ceiling matched. This is a documentary identity check, not execution of the full model.

REMAINING REQUIREMENT

Bind model-specific inputs, operations and measured evidence before interpreting the paper as an executable implementation.

SOURCE REFERENCES

TP-358; YP-058

Evidence: evidence/rerun/teal/TP-358.json

TR-TP-359 / Aviator family manifestation blueprint

IF

If a visual or measurement blueprint is selected for review or simulation.

HOW

Use normalized geometry, declared measurements, formula references, code expression, profile boundaries, and evidence ceilings; route through MK and JO.

THEN

Then the blueprint is admitted as reference evidence, held for missing physical data, or denied for unsafe purpose.

CURRENT EVIDENCE

The individual TP-359 reference profile was executed and its identity, title and REFERENCE_ONLY ceiling matched. This is a documentary identity check, not execution of the full model.

REMAINING REQUIREMENT

Bind model-specific inputs, operations and measured evidence before interpreting the paper as an executable implementation.

SOURCE REFERENCES

TP-359; YP-059

Evidence: evidence/rerun/teal/TP-359.json

TR-TP-360 / CHI family manifestation blueprint

IF

If a visual or measurement blueprint is selected for review or simulation.

HOW

Use normalized geometry, declared measurements, formula references, code expression, profile boundaries, and evidence ceilings; route through MK and JO.

THEN

Then the blueprint is admitted as reference evidence, held for missing physical data, or denied for unsafe purpose.

CURRENT EVIDENCE

The individual TP-360 reference profile was executed and its identity, title and REFERENCE_ONLY ceiling matched. This is a documentary identity check, not execution of the full model.

REMAINING REQUIREMENT

Bind model-specific inputs, operations and measured evidence before interpreting the paper as an executable implementation.

SOURCE REFERENCES

TP-360; YP-060

Evidence: evidence/rerun/teal/TP-360.json

TR-TP-361 / WATER family manifestation blueprint

IF

If a visual or measurement blueprint is selected for review or simulation.

HOW

Use normalized geometry, declared measurements, formula references, code expression, profile boundaries, and evidence ceilings; route through MK and JO.

THEN

Then the blueprint is admitted as reference evidence, held for missing physical data, or denied for unsafe purpose.

CURRENT EVIDENCE

The individual TP-361 reference profile was executed and its identity, title and REFERENCE_ONLY ceiling matched. This is a documentary identity check, not execution of the full model.

REMAINING REQUIREMENT

Bind model-specific inputs, operations and measured evidence before interpreting the paper as an executable implementation.

SOURCE REFERENCES

TP-361; YP-061

Evidence: evidence/rerun/teal/TP-361.json

TR-TP-362 / MJ Physics Based Measurement Engineering Framework / Lecanto

IF

If a visual or measurement blueprint is selected for review or simulation.

HOW

Use normalized geometry, declared measurements, formula references, code expression, profile boundaries, and evidence ceilings; route through MK and JO.

THEN

Then the blueprint is admitted as reference evidence, held for missing physical data, or denied for unsafe purpose.

CURRENT EVIDENCE

The individual TP-362 reference profile was executed and its identity, title and REFERENCE_ONLY ceiling matched. This is a documentary identity check, not execution of the full model.

REMAINING REQUIREMENT

Bind model-specific inputs, operations and measured evidence before interpreting the paper as an executable implementation.

SOURCE REFERENCES

TP-362; YP-062

Evidence: evidence/rerun/teal/TP-362.json

TR-TP-363 / Bangel Governed Measurement Language / Elsa Governed Marketplace

IF

If a visual or measurement blueprint is selected for review or simulation.

HOW

Use normalized geometry, declared measurements, formula references, code expression, profile boundaries, and evidence ceilings; route through MK and JO.

THEN

Then the blueprint is admitted as reference evidence, held for missing physical data, or denied for unsafe purpose.

CURRENT EVIDENCE

The individual TP-363 reference profile was executed and its identity, title and REFERENCE_ONLY ceiling matched. This is a documentary identity check, not execution of the full model.

REMAINING REQUIREMENT

Bind model-specific inputs, operations and measured evidence before interpreting the paper as an executable implementation.

SOURCE REFERENCES

TP-363; YP-063

Evidence: evidence/rerun/teal/TP-363.json

TR-TP-364 / Elsa Deterministic Semantic Recovery / Shekina Distributed Continuity

IF

If a visual or measurement blueprint is selected for review or simulation.

HOW

Use normalized geometry, declared measurements, formula references, code expression, profile boundaries, and evidence ceilings; route through MK and JO.

THEN

Then the blueprint is admitted as reference evidence, held for missing physical data, or denied for unsafe purpose.

CURRENT EVIDENCE

The individual TP-364 reference profile was executed and its identity, title and REFERENCE_ONLY ceiling matched. This is a documentary identity check, not execution of the full model.

REMAINING REQUIREMENT

Bind model-specific inputs, operations and measured evidence before interpreting the paper as an executable implementation.

SOURCE REFERENCES

TP-364; YP-064

Evidence: evidence/rerun/teal/TP-364.json

TR-TP-365 / JP Mathematical and Architectural Canon / Pearl Hypothetical Simulation

IF

If a visual or measurement blueprint is selected for review or simulation.

HOW

Use normalized geometry, declared measurements, formula references, code expression, profile boundaries, and evidence ceilings; route through MK and JO.

THEN

Then the blueprint is admitted as reference evidence, held for missing physical data, or denied for unsafe purpose.

CURRENT EVIDENCE

The individual TP-365 reference profile was executed and its identity, title and REFERENCE_ONLY ceiling matched. This is a documentary identity check, not execution of the full model.

REMAINING REQUIREMENT

Bind model-specific inputs, operations and measured evidence before interpreting the paper as an executable implementation.

SOURCE REFERENCES

TP-365; YP-065

Evidence: evidence/rerun/teal/TP-365.json

TR-TP-366 / Mika/MK Physics Modulator System / Bangel Spreadsheets

IF

If a visual or measurement blueprint is selected for review or simulation.

HOW

Use normalized geometry, declared measurements, formula references, code expression, profile boundaries, and evidence ceilings; route through MK and JO.

THEN

Then the blueprint is admitted as reference evidence, held for missing physical data, or denied for unsafe purpose.

CURRENT EVIDENCE

The individual TP-366 reference profile was executed and its identity, title and REFERENCE_ONLY ceiling matched. This is a documentary identity check, not execution of the full model.

REMAINING REQUIREMENT

Bind model-specific inputs, operations and measured evidence before interpreting the paper as an executable implementation.

SOURCE REFERENCES

TP-366; YP-066

Evidence: evidence/rerun/teal/TP-366.json

TR-TP-367 / JO Deterministic Proof and Runtime / JPOSMJ Product Portfolio Envelope

IF

If a visual or measurement blueprint is selected for review or simulation.

HOW

Use normalized geometry, declared measurements, formula references, code expression, profile boundaries, and evidence ceilings; route through MK and JO.

THEN

Then the blueprint is admitted as reference evidence, held for missing physical data, or denied for unsafe purpose.

CURRENT EVIDENCE

The individual TP-367 reference profile was executed and its identity, title and REFERENCE_ONLY ceiling matched. This is a documentary identity check, not execution of the full model.

REMAINING REQUIREMENT

Bind model-specific inputs, operations and measured evidence before interpreting the paper as an executable implementation.

SOURCE REFERENCES

TP-367; YP-067

Evidence: evidence/rerun/teal/TP-367.json

TR-TP-368 / MJOS Operating Substrate / MJ Standard Containment Geometry and

IF

If a visual or measurement blueprint is selected for review or simulation.

HOW

Use normalized geometry, declared measurements, formula references, code expression, profile boundaries, and evidence ceilings; route through MK and JO.

THEN

Then the blueprint is admitted as reference evidence, held for missing physical data, or denied for unsafe purpose.

CURRENT EVIDENCE

The individual TP-368 reference profile was executed and its identity, title and REFERENCE_ONLY ceiling matched. This is a documentary identity check, not execution of the full model.

REMAINING REQUIREMENT

Bind model-specific inputs, operations and measured evidence before interpreting the paper as an executable implementation.

SOURCE REFERENCES

TP-368; YP-068

Evidence: evidence/rerun/teal/TP-368.json

TR-TP-369 / JP Semiconductor Phone Battery and OS Candidate / MJ Reservoir

IF

If a visual or measurement blueprint is selected for review or simulation.

HOW

Use normalized geometry, declared measurements, formula references, code expression, profile boundaries, and evidence ceilings; route through MK and JO.

THEN

Then the blueprint is admitted as reference evidence, held for missing physical data, or denied for unsafe purpose.

CURRENT EVIDENCE

The individual TP-369 reference profile was executed and its identity, title and REFERENCE_ONLY ceiling matched. This is a documentary identity check, not execution of the full model.

REMAINING REQUIREMENT

Bind model-specific inputs, operations and measured evidence before interpreting the paper as an executable implementation.

SOURCE REFERENCES

TP-369; YP-069

Evidence: evidence/rerun/teal/TP-369.json

TR-TP-370 / JP Large-Scale Boating Power Candidate / MJOS Solar Shared-Core

IF

If a visual or measurement blueprint is selected for review or simulation.

HOW

Use normalized geometry, declared measurements, formula references, code expression, profile boundaries, and evidence ceilings; route through MK and JO.

THEN

Then the blueprint is admitted as reference evidence, held for missing physical data, or denied for unsafe purpose.

CURRENT EVIDENCE

The individual TP-370 reference profile was executed and its identity, title and REFERENCE_ONLY ceiling matched. This is a documentary identity check, not execution of the full model.

REMAINING REQUIREMENT

Bind model-specific inputs, operations and measured evidence before interpreting the paper as an executable implementation.

SOURCE REFERENCES

TP-370; YP-070

Evidence: evidence/rerun/teal/TP-370.json

TR-TP-371 / JP Peaceful High-Energy Propulsion Research Candidate / MJOS Solar

IF

If a visual or measurement blueprint is selected for review or simulation.

HOW

Use normalized geometry, declared measurements, formula references, code expression, profile boundaries, and evidence ceilings; route through MK and JO.

THEN

Then the blueprint is admitted as reference evidence, held for missing physical data, or denied for unsafe purpose.

CURRENT EVIDENCE

The individual TP-371 reference profile was executed and its identity, title and REFERENCE_ONLY ceiling matched. This is a documentary identity check, not execution of the full model.

REMAINING REQUIREMENT

Bind model-specific inputs, operations and measured evidence before interpreting the paper as an executable implementation.

SOURCE REFERENCES

TP-371; YP-071

Evidence: evidence/rerun/teal/TP-371.json

TR-TP-372 / Sister Predictive Containment System / MJOS Solar-Assisted Marine

IF

If a visual or measurement blueprint is selected for review or simulation.

HOW

Use normalized geometry, declared measurements, formula references, code expression, profile boundaries, and evidence ceilings; route through MK and JO.

THEN

Then the blueprint is admitted as reference evidence, held for missing physical data, or denied for unsafe purpose.

CURRENT EVIDENCE

The individual TP-372 reference profile was executed and its identity, title and REFERENCE_ONLY ceiling matched. This is a documentary identity check, not execution of the full model.

REMAINING REQUIREMENT

Bind model-specific inputs, operations and measured evidence before interpreting the paper as an executable implementation.

SOURCE REFERENCES

TP-372; YP-072

Evidence: evidence/rerun/teal/TP-372.json

TR-TP-373 / EVE Variance Screen and Egress Accounting / MJOS Peaceful

IF

If a visual or measurement blueprint is selected for review or simulation.

HOW

Use normalized geometry, declared measurements, formula references, code expression, profile boundaries, and evidence ceilings; route through MK and JO.

THEN

Then the blueprint is admitted as reference evidence, held for missing physical data, or denied for unsafe purpose.

CURRENT EVIDENCE

The individual TP-373 reference profile was executed and its identity, title and REFERENCE_ONLY ceiling matched. This is a documentary identity check, not execution of the full model.

REMAINING REQUIREMENT

Bind model-specific inputs, operations and measured evidence before interpreting the paper as an executable implementation.

SOURCE REFERENCES

TP-373; YP-073

Evidence: evidence/rerun/teal/TP-373.json

TR-TP-374 / Angels Safety and Corrective Command System / DRO Discrete Retention

IF

If a visual or measurement blueprint is selected for review or simulation.

HOW

Use normalized geometry, declared measurements, formula references, code expression, profile boundaries, and evidence ceilings; route through MK and JO.

THEN

Then the blueprint is admitted as reference evidence, held for missing physical data, or denied for unsafe purpose.

CURRENT EVIDENCE

The individual TP-374 reference profile was executed and its identity, title and REFERENCE_ONLY ceiling matched. This is a documentary identity check, not execution of the full model.

REMAINING REQUIREMENT

Bind model-specific inputs, operations and measured evidence before interpreting the paper as an executable implementation.

SOURCE REFERENCES

TP-374; YP-074

Evidence: evidence/rerun/teal/TP-374.json

TR-TP-375 / Mermaid Accounting and Reconciliation System / DRO-to-Pearl

IF

If a visual or measurement blueprint is selected for review or simulation.

HOW

Use normalized geometry, declared measurements, formula references, code expression, profile boundaries, and evidence ceilings; route through MK and JO.

THEN

Then the blueprint is admitted as reference evidence, held for missing physical data, or denied for unsafe purpose.

CURRENT EVIDENCE

The individual TP-375 reference profile was executed and its identity, title and REFERENCE_ONLY ceiling matched. This is a documentary identity check, not execution of the full model.

REMAINING REQUIREMENT

Bind model-specific inputs, operations and measured evidence before interpreting the paper as an executable implementation.

SOURCE REFERENCES

TP-375; YP-075

Evidence: evidence/rerun/teal/TP-375.json

TR-TP-376 / Shiva Dual Financial Rails / DRO Start-Energy and Restart-Reserve

IF

If a visual or measurement blueprint is selected for review or simulation.

HOW

Use normalized geometry, declared measurements, formula references, code expression, profile boundaries, and evidence ceilings; route through MK and JO.

THEN

Then the blueprint is admitted as reference evidence, held for missing physical data, or denied for unsafe purpose.

CURRENT EVIDENCE

The individual TP-376 reference profile was executed and its identity, title and REFERENCE_ONLY ceiling matched. This is a documentary identity check, not execution of the full model.

REMAINING REQUIREMENT

Bind model-specific inputs, operations and measured evidence before interpreting the paper as an executable implementation.

SOURCE REFERENCES

TP-376; YP-076

Evidence: evidence/rerun/teal/TP-376.json

TR-TP-377 / SHIVAS Internal Settlement Reflection / Lecanto Image Provenance,

IF

If a visual or measurement blueprint is selected for review or simulation.

HOW

Use normalized geometry, declared measurements, formula references, code expression, profile boundaries, and evidence ceilings; route through MK and JO.

THEN

Then the blueprint is admitted as reference evidence, held for missing physical data, or denied for unsafe purpose.

CURRENT EVIDENCE

The individual TP-377 reference profile was executed and its identity, title and REFERENCE_ONLY ceiling matched. This is a documentary identity check, not execution of the full model.

REMAINING REQUIREMENT

Bind model-specific inputs, operations and measured evidence before interpreting the paper as an executable implementation.

SOURCE REFERENCES

TP-377; YP-077

Evidence: evidence/rerun/teal/TP-377.json

TR-TP-378 / Shiva Day-1 Internal Banking and Financial Ecosystem MVP / JP

IF

If a visual or measurement blueprint is selected for review or simulation.

HOW

Use normalized geometry, declared measurements, formula references, code expression, profile boundaries, and evidence ceilings; route through MK and JO.

THEN

Then the blueprint is admitted as reference evidence, held for missing physical data, or denied for unsafe purpose.

CURRENT EVIDENCE

The individual TP-378 reference profile was executed and its identity, title and REFERENCE_ONLY ceiling matched. This is a documentary identity check, not execution of the full model.

REMAINING REQUIREMENT

Bind model-specific inputs, operations and measured evidence before interpreting the paper as an executable implementation.

SOURCE REFERENCES

TP-378; YP-078

Evidence: evidence/rerun/teal/TP-378.json

TR-TP-379 / Shiva Exchange Rule Reference

IF

If a visual or measurement blueprint is selected for review or simulation.

HOW

Use normalized geometry, declared measurements, formula references, code expression, profile boundaries, and evidence ceilings; route through MK and JO.

THEN

Then the blueprint is admitted as reference evidence, held for missing physical data, or denied for unsafe purpose.

CURRENT EVIDENCE

The individual TP-379 reference profile was executed and its identity, title and REFERENCE_ONLY ceiling matched. This is a documentary identity check, not execution of the full model.

REMAINING REQUIREMENT

Bind model-specific inputs, operations and measured evidence before interpreting the paper as an executable implementation.

SOURCE REFERENCES

TP-379; YP-079

Evidence: evidence/rerun/teal/TP-379.json

TR-TP-380 / Moana Governed Browser

IF

If a visual or measurement blueprint is selected for review or simulation.

HOW

Use normalized geometry, declared measurements, formula references, code expression, profile boundaries, and evidence ceilings; route through MK and JO.

THEN

Then the blueprint is admitted as reference evidence, held for missing physical data, or denied for unsafe purpose.

CURRENT EVIDENCE

The individual TP-380 reference profile was executed and its identity, title and REFERENCE_ONLY ceiling matched. This is a documentary identity check, not execution of the full model.

REMAINING REQUIREMENT

Bind model-specific inputs, operations and measured evidence before interpreting the paper as an executable implementation.

SOURCE REFERENCES

TP-380; YP-080

Evidence: evidence/rerun/teal/TP-380.json

TR-TP-381 / Aviator Organizational Workspace

IF

If a visual or measurement blueprint is selected for review or simulation.

HOW

Use normalized geometry, declared measurements, formula references, code expression, profile boundaries, and evidence ceilings; route through MK and JO.

THEN

Then the blueprint is admitted as reference evidence, held for missing physical data, or denied for unsafe purpose.

CURRENT EVIDENCE

The individual TP-381 reference profile was executed and its identity, title and REFERENCE_ONLY ceiling matched. This is a documentary identity check, not execution of the full model.

REMAINING REQUIREMENT

Bind model-specific inputs, operations and measured evidence before interpreting the paper as an executable implementation.

SOURCE REFERENCES

TP-381; YP-081

Evidence: evidence/rerun/teal/TP-381.json

TR-TP-382 / JP_CAPO / WATER_INTERVAL_STATE / JPOSMJ_PRODUCT_ENVELOPE

IF

If a visual or measurement blueprint is selected for review or simulation.

HOW

Use normalized geometry, declared measurements, formula references, code expression, profile boundaries, and evidence ceilings; route through MK and JO.

THEN

Then the blueprint is admitted as reference evidence, held for missing physical data, or denied for unsafe purpose.

CURRENT EVIDENCE

The individual TP-382 reference profile was executed and its identity, title and REFERENCE_ONLY ceiling matched. This is a documentary identity check, not execution of the full model.

REMAINING REQUIREMENT

Bind model-specific inputs, operations and measured evidence before interpreting the paper as an executable implementation.

SOURCE REFERENCES

TP-382; YP-082

Evidence: evidence/rerun/teal/TP-382.json

TR-TP-383 / MK_PHYSICS_CAPO / PASKEY_PUBLIC_RECEIPT /

IF

If a visual or measurement blueprint is selected for review or simulation.

HOW

Use normalized geometry, declared measurements, formula references, code expression, profile boundaries, and evidence ceilings; route through MK and JO.

THEN

Then the blueprint is admitted as reference evidence, held for missing physical data, or denied for unsafe purpose.

CURRENT EVIDENCE

The individual TP-383 reference profile was executed and its identity, title and REFERENCE_ONLY ceiling matched. This is a documentary identity check, not execution of the full model.

REMAINING REQUIREMENT

Bind model-specific inputs, operations and measured evidence before interpreting the paper as an executable implementation.

SOURCE REFERENCES

TP-383; YP-083

Evidence: evidence/rerun/teal/TP-383.json

TR-TP-384 / JO_PROOF_RECEIPT /
PEARL_VARIANCE_CONTAINER /

IF

If a visual or measurement blueprint is selected for review or simulation.

HOW

Use normalized geometry, declared measurements, formula references, code expression, profile boundaries, and evidence ceilings; route through MK and JO.

THEN

Then the blueprint is admitted as reference evidence, held for missing physical data, or denied for unsafe purpose.

CURRENT EVIDENCE

The individual TP-384 reference profile was executed and its identity, title and REFERENCE_ONLY ceiling matched. This is a documentary identity check, not execution of the full model.

REMAINING REQUIREMENT

Bind model-specific inputs, operations and measured evidence before interpreting the paper as an executable implementation.

SOURCE REFERENCES

TP-384; YP-084

Evidence: evidence/rerun/teal/TP-384.json

TR-TP-385 / MJ_PERMIT / PEARL_ALLOCATION_RECEIPT /

IF

If a visual or measurement blueprint is selected for review or simulation.

HOW

Use normalized geometry, declared measurements, formula references, code expression, profile boundaries, and evidence ceilings; route through MK and JO.

THEN

Then the blueprint is admitted as reference evidence, held for missing physical data, or denied for unsafe purpose.

CURRENT EVIDENCE

The individual TP-385 reference profile was executed and its identity, title and REFERENCE_ONLY ceiling matched. This is a documentary identity check, not execution of the full model.

REMAINING REQUIREMENT

Bind model-specific inputs, operations and measured evidence before interpreting the paper as an executable implementation.

SOURCE REFERENCES

TP-385; YP-085

Evidence: evidence/rerun/teal/TP-385.json

TR-TP-386 / EVE_OBSERVATION / PEARL_ACOUSTIC_PROFILE /

IF

If a visual or measurement blueprint is selected for review or simulation.

HOW

Use normalized geometry, declared measurements, formula references, code expression, profile boundaries, and evidence ceilings; route through MK and JO.

THEN

Then the blueprint is admitted as reference evidence, held for missing physical data, or denied for unsafe purpose.

CURRENT EVIDENCE

The individual TP-386 reference profile was executed and its identity, title and REFERENCE_ONLY ceiling matched. This is a documentary identity check, not execution of the full model.

REMAINING REQUIREMENT

Bind model-specific inputs, operations and measured evidence before interpreting the paper as an executable implementation.

SOURCE REFERENCES

TP-386; YP-086

Evidence: evidence/rerun/teal/TP-386.json

TR-TP-387 / M3_ROUTE_RECEIPT /
PEARL_SYMPOSIUM_REGISTRY /

IF

If a visual or measurement blueprint is selected for review or simulation.

HOW

Use normalized geometry, declared measurements, formula references, code expression, profile boundaries, and evidence ceilings; route through MK and JO.

THEN

Then the blueprint is admitted as reference evidence, held for missing physical data, or denied for unsafe purpose.

CURRENT EVIDENCE

The individual TP-387 reference profile was executed and its identity, title and REFERENCE_ONLY ceiling matched. This is a documentary identity check, not execution of the full model.

REMAINING REQUIREMENT

Bind model-specific inputs, operations and measured evidence before interpreting the paper as an executable implementation.

SOURCE REFERENCES

TP-387; YP-087

Evidence: evidence/rerun/teal/TP-387.json

TR-TP-388 / MERMAID_ACCOUNT / BANGEL_SHEET / GAS_HEIGHT_OBSERVATION

IF

If a visual or measurement blueprint is selected for review or simulation.

HOW

Use normalized geometry, declared measurements, formula references, code expression, profile boundaries, and evidence ceilings; route through MK and JO.

THEN

Then the blueprint is admitted as reference evidence, held for missing physical data, or denied for unsafe purpose.

CURRENT EVIDENCE

The individual TP-388 reference profile was executed and its identity, title and REFERENCE_ONLY ceiling matched. This is a documentary identity check, not execution of the full model.

REMAINING REQUIREMENT

Bind model-specific inputs, operations and measured evidence before interpreting the paper as an executable implementation.

SOURCE REFERENCES

TP-388; YP-088

Evidence: evidence/rerun/teal/TP-388.json

TR-TP-389 / SHIVA_SHELL / BANGEL_SHEET_CELL /

IF

If a visual or measurement blueprint is selected for review or simulation.

HOW

Use normalized geometry, declared measurements, formula references, code expression, profile boundaries, and evidence ceilings; route through MK and JO.

THEN

Then the blueprint is admitted as reference evidence, held for missing physical data, or denied for unsafe purpose.

CURRENT EVIDENCE

The individual TP-389 reference profile was executed and its identity, title and REFERENCE_ONLY ceiling matched. This is a documentary identity check, not execution of the full model.

REMAINING REQUIREMENT

Bind model-specific inputs, operations and measured evidence before interpreting the paper as an executable implementation.

SOURCE REFERENCES

TP-389; YP-089

Evidence: evidence/rerun/teal/TP-389.json

TR-TP-390 / SHIVAS_INTERNAL_REFLECTION / BANGEL_SHEET_REVISION /

IF

If a visual or measurement blueprint is selected for review or simulation.

HOW

Use normalized geometry, declared measurements, formula references, code expression, profile boundaries, and evidence ceilings; route through MK and JO.

THEN

Then the blueprint is admitted as reference evidence, held for missing physical data, or denied for unsafe purpose.

CURRENT EVIDENCE

The individual TP-390 reference profile was executed and its identity, title and REFERENCE_ONLY ceiling matched. This is a documentary identity check, not execution of the full model.

REMAINING REQUIREMENT

Bind model-specific inputs, operations and measured evidence before interpreting the paper as an executable implementation.

SOURCE REFERENCES

TP-390; YP-090

Evidence: evidence/rerun/teal/TP-390.json

**TR-TP-391 / CHI_VARIANCE_OBJECT /
BANGEL_SHEET_AUDIT_PARTICLE /**

IF

If a visual or measurement blueprint is selected for review or simulation.

HOW

Use normalized geometry, declared measurements, formula references, code expression, profile boundaries, and evidence ceilings; route through MK and JO.

THEN

Then the blueprint is admitted as reference evidence, held for missing physical data, or denied for unsafe purpose.

CURRENT EVIDENCE

The individual TP-391 reference profile was executed and its identity, title and REFERENCE_ONLY ceiling matched. This is a documentary identity check, not execution of the full model.

REMAINING REQUIREMENT

Bind model-specific inputs, operations and measured evidence before interpreting the paper as an executable implementation.

SOURCE REFERENCES

TP-391; YP-091

Evidence: evidence/rerun/teal/TP-391.json

TR-TP-392 / Command gateway lifecycle

IF

If a visual or measurement blueprint is selected for review or simulation.

HOW

Use normalized geometry, declared measurements, formula references, code expression, profile boundaries, and evidence ceilings; route through MK and JO.

THEN

Then the blueprint is admitted as reference evidence, held for missing physical data, or denied for unsafe purpose.

CURRENT EVIDENCE

The individual TP-392 reference profile was executed and its identity, title and REFERENCE_ONLY ceiling matched. This is a documentary identity check, not execution of the full model.

REMAINING REQUIREMENT

Bind model-specific inputs, operations and measured evidence before interpreting the paper as an executable implementation.

SOURCE REFERENCES

TP-392; YP-092

Evidence: evidence/rerun/teal/TP-392.json

TR-TP-393 / R / R0 / R1 / N1 / R2 observation lifecycle

IF

If a visual or measurement blueprint is selected for review or simulation.

HOW

Use normalized geometry, declared measurements, formula references, code expression, profile boundaries, and evidence ceilings; route through MK and JO.

THEN

Then the blueprint is admitted as reference evidence, held for missing physical data, or denied for unsafe purpose.

CURRENT EVIDENCE

The individual TP-393 reference profile was executed and its identity, title and REFERENCE_ONLY ceiling matched. This is a documentary identity check, not execution of the full model.

REMAINING REQUIREMENT

Bind model-specific inputs, operations and measured evidence before interpreting the paper as an executable implementation.

SOURCE REFERENCES

TP-393; YP-093

Evidence: evidence/rerun/teal/TP-393.json

TR-TP-394 / Sister containment and reservoir loop

IF

If a visual or measurement blueprint is selected for review or simulation.

HOW

Use normalized geometry, declared measurements, formula references, code expression, profile boundaries, and evidence ceilings; route through MK and JO.

THEN

Then the blueprint is admitted as reference evidence, held for missing physical data, or denied for unsafe purpose.

CURRENT EVIDENCE

The individual TP-394 reference profile was executed and its identity, title and REFERENCE_ONLY ceiling matched. This is a documentary identity check, not execution of the full model.

REMAINING REQUIREMENT

Bind model-specific inputs, operations and measured evidence before interpreting the paper as an executable implementation.

SOURCE REFERENCES

TP-394; YP-094

Evidence: evidence/rerun/teal/TP-394.json

TR-TP-395 / DRO collection and Pearl handoff

IF

If a visual or measurement blueprint is selected for review or simulation.

HOW

Use normalized geometry, declared measurements, formula references, code expression, profile boundaries, and evidence ceilings; route through MK and JO.

THEN

Then the blueprint is admitted as reference evidence, held for missing physical data, or denied for unsafe purpose.

CURRENT EVIDENCE

The individual TP-395 reference profile was executed and its identity, title and REFERENCE_ONLY ceiling matched. This is a documentary identity check, not execution of the full model.

REMAINING REQUIREMENT

Bind model-specific inputs, operations and measured evidence before interpreting the paper as an executable implementation.

SOURCE REFERENCES

TP-395; YP-095

Evidence: evidence/rerun/teal/TP-395.json

TR-TP-396 / Lecanto image provenance and intent hypothesis

IF

If a visual or measurement blueprint is selected for review or simulation.

HOW

Use normalized geometry, declared measurements, formula references, code expression, profile boundaries, and evidence ceilings; route through MK and JO.

THEN

Then the blueprint is admitted as reference evidence, held for missing physical data, or denied for unsafe purpose.

CURRENT EVIDENCE

The individual TP-396 reference profile was executed and its identity, title and REFERENCE_ONLY ceiling matched. This is a documentary identity check, not execution of the full model.

REMAINING REQUIREMENT

Bind model-specific inputs, operations and measured evidence before interpreting the paper as an executable implementation.

SOURCE REFERENCES

TP-396; YP-096

Evidence: evidence/rerun/teal/TP-396.json

TR-TP-397 / Bangel Spreadsheets dependency and audit flow

IF

If a visual or measurement blueprint is selected for review or simulation.

HOW

Use normalized geometry, declared measurements, formula references, code expression, profile boundaries, and evidence ceilings; route through MK and JO.

THEN

Then the blueprint is admitted as reference evidence, held for missing physical data, or denied for unsafe purpose.

CURRENT EVIDENCE

The individual TP-397 reference profile was executed and its identity, title and REFERENCE_ONLY ceiling matched. This is a documentary identity check, not execution of the full model.

REMAINING REQUIREMENT

Bind model-specific inputs, operations and measured evidence before interpreting the paper as an executable implementation.

SOURCE REFERENCES

TP-397; YP-097

Evidence: evidence/rerun/teal/TP-397.json

TR-TP-398 / Shiva internal banking and Mermaid reconciliation

IF

If a visual or measurement blueprint is selected for review or simulation.

HOW

Use normalized geometry, declared measurements, formula references, code expression, profile boundaries, and evidence ceilings; route through MK and JO.

THEN

Then the blueprint is admitted as reference evidence, held for missing physical data, or denied for unsafe purpose.

CURRENT EVIDENCE

The individual TP-398 reference profile was executed and its identity, title and REFERENCE_ONLY ceiling matched. This is a documentary identity check, not execution of the full model.

REMAINING REQUIREMENT

Bind model-specific inputs, operations and measured evidence before interpreting the paper as an executable implementation.

SOURCE REFERENCES

TP-398; YP-098

Evidence: evidence/rerun/teal/TP-398.json

TR-TP-399 / Solar three-profile separation

IF

If a visual or measurement blueprint is selected for review or simulation.

HOW

Use normalized geometry, declared measurements, formula references, code expression, profile boundaries, and evidence ceilings; route through MK and JO.

THEN

Then the blueprint is admitted as reference evidence, held for missing physical data, or denied for unsafe purpose.

CURRENT EVIDENCE

The individual TP-399 reference profile was executed and its identity, title and REFERENCE_ONLY ceiling matched. This is a documentary identity check, not execution of the full model.

REMAINING REQUIREMENT

Bind model-specific inputs, operations and measured evidence before interpreting the paper as an executable implementation.

SOURCE REFERENCES

TP-399; YP-099

Evidence: evidence/rerun/teal/TP-399.json

TR-TP-400 / Passkey integrity and encrypted Git transition

IF

If a visual or measurement blueprint is selected for review or simulation.

HOW

Use normalized geometry, declared measurements, formula references, code expression, profile boundaries, and evidence ceilings; route through MK and JO.

THEN

Then the blueprint is admitted as reference evidence, held for missing physical data, or denied for unsafe purpose.

CURRENT EVIDENCE

The individual TP-400 reference profile was executed and its identity, title and REFERENCE_ONLY ceiling matched. This is a documentary identity check, not execution of the full model.

REMAINING REQUIREMENT

Bind model-specific inputs, operations and measured evidence before interpreting the paper as an executable implementation.

SOURCE REFERENCES

TP-400; YP-100

Evidence: evidence/rerun/teal/TP-400.json

TR-TP-401 / MJ - MJ Manifestation White Paper

IF

If the White Paper scope is used to support a command, product, family, or design decision.

HOW

Resolve the source identity, claims ceiling, formulas, participant boundaries, tests, and outstanding evidence before JP/MK/JO review.

THEN

Then only supported reference conclusions may advance; unsupported physical, legal, financial, or IP conclusions remain held.

CURRENT EVIDENCE

The individual TP-401 reference profile was executed and its identity, title and REFERENCE_ONLY ceiling matched. This is a documentary identity check, not execution of the full model.

REMAINING REQUIREMENT

Bind model-specific inputs, operations and measured evidence before interpreting the paper as an executable implementation.

SOURCE REFERENCES

TP-401

Evidence: evidence/rerun/teal/TP-401.json

TR-TP-402 / Bangel - MJ Manifestation White Paper

IF

If the White Paper scope is used to support a command, product, family, or design decision.

HOW

Resolve the source identity, claims ceiling, formulas, participant boundaries, tests, and outstanding evidence before JP/MK/JO review.

THEN

Then only supported reference conclusions may advance; unsupported physical, legal, financial, or IP conclusions remain held.

CURRENT EVIDENCE

The individual TP-402 reference profile was executed and its identity, title and REFERENCE_ONLY ceiling matched. This is a documentary identity check, not execution of the full model.

REMAINING REQUIREMENT

Bind model-specific inputs, operations and measured evidence before interpreting the paper as an executable implementation.

SOURCE REFERENCES

TP-402

Evidence: evidence/rerun/teal/TP-402.json

TR-TP-403 / Elsa - MJ Manifestation White Paper

IF

If the White Paper scope is used to support a command, product, family, or design decision.

HOW

Resolve the source identity, claims ceiling, formulas, participant boundaries, tests, and outstanding evidence before JP/MK/JO review.

THEN

Then only supported reference conclusions may advance; unsupported physical, legal, financial, or IP conclusions remain held.

CURRENT EVIDENCE

The individual TP-403 reference profile was executed and its identity, title and REFERENCE_ONLY ceiling matched. This is a documentary identity check, not execution of the full model.

REMAINING REQUIREMENT

Bind model-specific inputs, operations and measured evidence before interpreting the paper as an executable implementation.

SOURCE REFERENCES

TP-403

Evidence: evidence/rerun/teal/TP-403.json

TR-TP-404 / JP - MJ Manifestation White Paper

IF

If the White Paper scope is used to support a command, product, family, or design decision.

HOW

Resolve the source identity, claims ceiling, formulas, participant boundaries, tests, and outstanding evidence before JP/MK/JO review.

THEN

Then only supported reference conclusions may advance; unsupported physical, legal, financial, or IP conclusions remain held.

CURRENT EVIDENCE

The individual TP-404 reference profile was executed and its identity, title and REFERENCE_ONLY ceiling matched. This is a documentary identity check, not execution of the full model.

REMAINING REQUIREMENT

Bind model-specific inputs, operations and measured evidence before interpreting the paper as an executable implementation.

SOURCE REFERENCES

TP-404

Evidence: evidence/rerun/teal/TP-404.json

TR-TP-405 / Mika / MK - MJ Manifestation White Paper

IF

If the White Paper scope is used to support a command, product, family, or design decision.

HOW

Resolve the source identity, claims ceiling, formulas, participant boundaries, tests, and outstanding evidence before JP/MK/JO review.

THEN

Then only supported reference conclusions may advance; unsupported physical, legal, financial, or IP conclusions remain held.

CURRENT EVIDENCE

The individual TP-405 reference profile was executed and its identity, title and REFERENCE_ONLY ceiling matched. This is a documentary identity check, not execution of the full model.

REMAINING REQUIREMENT

Bind model-specific inputs, operations and measured evidence before interpreting the paper as an executable implementation.

SOURCE REFERENCES

TP-405

Evidence: evidence/rerun/teal/TP-405.json

TR-TP-406 / JO - MJ Manifestation White Paper

IF

If the White Paper scope is used to support a command, product, family, or design decision.

HOW

Resolve the source identity, claims ceiling, formulas, participant boundaries, tests, and outstanding evidence before JP/MK/JO review.

THEN

Then only supported reference conclusions may advance; unsupported physical, legal, financial, or IP conclusions remain held.

CURRENT EVIDENCE

The individual TP-406 reference profile was executed and its identity, title and REFERENCE_ONLY ceiling matched. This is a documentary identity check, not execution of the full model.

REMAINING REQUIREMENT

Bind model-specific inputs, operations and measured evidence before interpreting the paper as an executable implementation.

SOURCE REFERENCES

TP-406

Evidence: evidence/rerun/teal/TP-406.json

TR-TP-407 / MJOS - MJ Manifestation White Paper

IF

If the White Paper scope is used to support a command, product, family, or design decision.

HOW

Resolve the source identity, claims ceiling, formulas, participant boundaries, tests, and outstanding evidence before JP/MK/JO review.

THEN

Then only supported reference conclusions may advance; unsupported physical, legal, financial, or IP conclusions remain held.

CURRENT EVIDENCE

The individual TP-407 reference profile was executed and its identity, title and REFERENCE_ONLY ceiling matched. This is a documentary identity check, not execution of the full model.

REMAINING REQUIREMENT

Bind model-specific inputs, operations and measured evidence before interpreting the paper as an executable implementation.

SOURCE REFERENCES

TP-407

Evidence: evidence/rerun/teal/TP-407.json

TR-TP-408 / Angels - MJ Manifestation White Paper

IF

If the White Paper scope is used to support a command, product, family, or design decision.

HOW

Resolve the source identity, claims ceiling, formulas, participant boundaries, tests, and outstanding evidence before JP/MK/JO review.

THEN

Then only supported reference conclusions may advance; unsupported physical, legal, financial, or IP conclusions remain held.

CURRENT EVIDENCE

The individual TP-408 reference profile was executed and its identity, title and REFERENCE_ONLY ceiling matched. This is a documentary identity check, not execution of the full model.

REMAINING REQUIREMENT

Bind model-specific inputs, operations and measured evidence before interpreting the paper as an executable implementation.

SOURCE REFERENCES

TP-408

Evidence: evidence/rerun/teal/TP-408.json

TR-TP-409 / Bellatrix - MJ Manifestation White Paper

IF

If the White Paper scope is used to support a command, product, family, or design decision.

HOW

Resolve the source identity, claims ceiling, formulas, participant boundaries, tests, and outstanding evidence before JP/MK/JO review.

THEN

Then only supported reference conclusions may advance; unsupported physical, legal, financial, or IP conclusions remain held.

CURRENT EVIDENCE

The individual TP-409 reference profile was executed and its identity, title and REFERENCE_ONLY ceiling matched. This is a documentary identity check, not execution of the full model.

REMAINING REQUIREMENT

Bind model-specific inputs, operations and measured evidence before interpreting the paper as an executable implementation.

SOURCE REFERENCES

TP-409

Evidence: evidence/rerun/teal/TP-409.json

TR-TP-410 / Sister - MJ Manifestation White Paper

IF

If the White Paper scope is used to support a command, product, family, or design decision.

HOW

Resolve the source identity, claims ceiling, formulas, participant boundaries, tests, and outstanding evidence before JP/MK/JO review.

THEN

Then only supported reference conclusions may advance; unsupported physical, legal, financial, or IP conclusions remain held.

CURRENT EVIDENCE

The individual TP-410 reference profile was executed and its identity, title and REFERENCE_ONLY ceiling matched. This is a documentary identity check, not execution of the full model.

REMAINING REQUIREMENT

Bind model-specific inputs, operations and measured evidence before interpreting the paper as an executable implementation.

SOURCE REFERENCES

TP-410

Evidence: evidence/rerun/teal/TP-410.json

TR-TP-411 / EVE - MJ Manifestation White Paper

IF

If the White Paper scope is used to support a command, product, family, or design decision.

HOW

Resolve the source identity, claims ceiling, formulas, participant boundaries, tests, and outstanding evidence before JP/MK/JO review.

THEN

Then only supported reference conclusions may advance; unsupported physical, legal, financial, or IP conclusions remain held.

CURRENT EVIDENCE

The individual TP-411 reference profile was executed and its identity, title and REFERENCE_ONLY ceiling matched. This is a documentary identity check, not execution of the full model.

REMAINING REQUIREMENT

Bind model-specific inputs, operations and measured evidence before interpreting the paper as an executable implementation.

SOURCE REFERENCES

TP-411

Evidence: evidence/rerun/teal/TP-411.json

TR-TP-412 / Mary / M3 - MJ Manifestation White Paper

IF

If the White Paper scope is used to support a command, product, family, or design decision.

HOW

Resolve the source identity, claims ceiling, formulas, participant boundaries, tests, and outstanding evidence before JP/MK/JO review.

THEN

Then only supported reference conclusions may advance; unsupported physical, legal, financial, or IP conclusions remain held.

CURRENT EVIDENCE

The individual TP-412 reference profile was executed and its identity, title and REFERENCE_ONLY ceiling matched. This is a documentary identity check, not execution of the full model.

REMAINING REQUIREMENT

Bind model-specific inputs, operations and measured evidence before interpreting the paper as an executable implementation.

SOURCE REFERENCES

TP-412

Evidence: evidence/rerun/teal/TP-412.json

TR-TP-413 / Mermaid - MJ Manifestation White Paper

IF

If the White Paper scope is used to support a command, product, family, or design decision.

HOW

Resolve the source identity, claims ceiling, formulas, participant boundaries, tests, and outstanding evidence before JP/MK/JO review.

THEN

Then only supported reference conclusions may advance; unsupported physical, legal, financial, or IP conclusions remain held.

CURRENT EVIDENCE

The individual TP-413 reference profile was executed and its identity, title and REFERENCE_ONLY ceiling matched. This is a documentary identity check, not execution of the full model.

REMAINING REQUIREMENT

Bind model-specific inputs, operations and measured evidence before interpreting the paper as an executable implementation.

SOURCE REFERENCES

TP-413

Evidence: evidence/rerun/teal/TP-413.json

TR-TP-414 / Shiva - MJ Manifestation White Paper

IF

If the White Paper scope is used to support a command, product, family, or design decision.

HOW

Resolve the source identity, claims ceiling, formulas, participant boundaries, tests, and outstanding evidence before JP/MK/JO review.

THEN

Then only supported reference conclusions may advance; unsupported physical, legal, financial, or IP conclusions remain held.

CURRENT EVIDENCE

The individual TP-414 reference profile was executed and its identity, title and REFERENCE_ONLY ceiling matched. This is a documentary identity check, not execution of the full model.

REMAINING REQUIREMENT

Bind model-specific inputs, operations and measured evidence before interpreting the paper as an executable implementation.

SOURCE REFERENCES

TP-414

Evidence: evidence/rerun/teal/TP-414.json

TR-TP-415 / Shekina - MJ Manifestation White Paper

IF

If the White Paper scope is used to support a command, product, family, or design decision.

HOW

Resolve the source identity, claims ceiling, formulas, participant boundaries, tests, and outstanding evidence before JP/MK/JO review.

THEN

Then only supported reference conclusions may advance; unsupported physical, legal, financial, or IP conclusions remain held.

CURRENT EVIDENCE

The individual TP-415 reference profile was executed and its identity, title and REFERENCE_ONLY ceiling matched. This is a documentary identity check, not execution of the full model.

REMAINING REQUIREMENT

Bind model-specific inputs, operations and measured evidence before interpreting the paper as an executable implementation.

SOURCE REFERENCES

TP-415

Evidence: evidence/rerun/teal/TP-415.json

TR-TP-416 / Belle - MJ Manifestation White Paper

IF

If the White Paper scope is used to support a command, product, family, or design decision.

HOW

Resolve the source identity, claims ceiling, formulas, participant boundaries, tests, and outstanding evidence before JP/MK/JO review.

THEN

Then only supported reference conclusions may advance; unsupported physical, legal, financial, or IP conclusions remain held.

CURRENT EVIDENCE

The individual TP-416 reference profile was executed and its identity, title and REFERENCE_ONLY ceiling matched. This is a documentary identity check, not execution of the full model.

REMAINING REQUIREMENT

Bind model-specific inputs, operations and measured evidence before interpreting the paper as an executable implementation.

SOURCE REFERENCES

TP-416

Evidence: evidence/rerun/teal/TP-416.json

TR-TP-417 / Lecanto - MJ Manifestation White Paper

IF

If the White Paper scope is used to support a command, product, family, or design decision.

HOW

Resolve the source identity, claims ceiling, formulas, participant boundaries, tests, and outstanding evidence before JP/MK/JO review.

THEN

Then only supported reference conclusions may advance; unsupported physical, legal, financial, or IP conclusions remain held.

CURRENT EVIDENCE

The individual TP-417 reference profile was executed and its identity, title and REFERENCE_ONLY ceiling matched. This is a documentary identity check, not execution of the full model.

REMAINING REQUIREMENT

Bind model-specific inputs, operations and measured evidence before interpreting the paper as an executable implementation.

SOURCE REFERENCES

TP-417

Evidence: evidence/rerun/teal/TP-417.json

TR-TP-418 / Moana - MJ Manifestation White Paper

IF

If the White Paper scope is used to support a command, product, family, or design decision.

HOW

Resolve the source identity, claims ceiling, formulas, participant boundaries, tests, and outstanding evidence before JP/MK/JO review.

THEN

Then only supported reference conclusions may advance; unsupported physical, legal, financial, or IP conclusions remain held.

CURRENT EVIDENCE

The individual TP-418 reference profile was executed and its identity, title and REFERENCE_ONLY ceiling matched. This is a documentary identity check, not execution of the full model.

REMAINING REQUIREMENT

Bind model-specific inputs, operations and measured evidence before interpreting the paper as an executable implementation.

SOURCE REFERENCES

TP-418

Evidence: evidence/rerun/teal/TP-418.json

TR-TP-419 / Aviator - MJ Manifestation White Paper

IF

If the White Paper scope is used to support a command, product, family, or design decision.

HOW

Resolve the source identity, claims ceiling, formulas, participant boundaries, tests, and outstanding evidence before JP/MK/JO review.

THEN

Then only supported reference conclusions may advance; unsupported physical, legal, financial, or IP conclusions remain held.

CURRENT EVIDENCE

The individual TP-419 reference profile was executed and its identity, title and REFERENCE_ONLY ceiling matched. This is a documentary identity check, not execution of the full model.

REMAINING REQUIREMENT

Bind model-specific inputs, operations and measured evidence before interpreting the paper as an executable implementation.

SOURCE REFERENCES

TP-419

Evidence: evidence/rerun/teal/TP-419.json

TR-TP-420 / CHI - MJ Manifestation White Paper

IF

If the White Paper scope is used to support a command, product, family, or design decision.

HOW

Resolve the source identity, claims ceiling, formulas, participant boundaries, tests, and outstanding evidence before JP/MK/JO review.

THEN

Then only supported reference conclusions may advance; unsupported physical, legal, financial, or IP conclusions remain held.

CURRENT EVIDENCE

The individual TP-420 reference profile was executed and its identity, title and REFERENCE_ONLY ceiling matched. This is a documentary identity check, not execution of the full model.

REMAINING REQUIREMENT

Bind model-specific inputs, operations and measured evidence before interpreting the paper as an executable implementation.

SOURCE REFERENCES

TP-420

Evidence: evidence/rerun/teal/TP-420.json

TR-TP-421 / WATER - MJ Manifestation White Paper

IF

If the White Paper scope is used to support a command, product, family, or design decision.

HOW

Resolve the source identity, claims ceiling, formulas, participant boundaries, tests, and outstanding evidence before JP/MK/JO review.

THEN

Then only supported reference conclusions may advance; unsupported physical, legal, financial, or IP conclusions remain held.

CURRENT EVIDENCE

The individual TP-421 reference profile was executed and its identity, title and REFERENCE_ONLY ceiling matched. This is a documentary identity check, not execution of the full model.

REMAINING REQUIREMENT

Bind model-specific inputs, operations and measured evidence before interpreting the paper as an executable implementation.

SOURCE REFERENCES

TP-421

Evidence: evidence/rerun/teal/TP-421.json

TR-TP-422 / MJ Physics Based Measurement Engineering Framework

IF

If the White Paper scope is used to support a command, product, family, or design decision.

HOW

Resolve the source identity, claims ceiling, formulas, participant boundaries, tests, and outstanding evidence before JP/MK/JO review.

THEN

Then only supported reference conclusions may advance; unsupported physical, legal, financial, or IP conclusions remain held.

CURRENT EVIDENCE

The individual TP-422 reference profile was executed and its identity, title and REFERENCE_ONLY ceiling matched. This is a documentary identity check, not execution of the full model.

REMAINING REQUIREMENT

Bind model-specific inputs, operations and measured evidence before interpreting the paper as an executable implementation.

SOURCE REFERENCES

TP-422

Evidence: evidence/rerun/teal/TP-422.json

TR-TP-423 / Bangel Governed Measurement Language

IF

If the White Paper scope is used to support a command, product, family, or design decision.

HOW

Resolve the source identity, claims ceiling, formulas, participant boundaries, tests, and outstanding evidence before JP/MK/JO review.

THEN

Then only supported reference conclusions may advance; unsupported physical, legal, financial, or IP conclusions remain held.

CURRENT EVIDENCE

The individual TP-423 reference profile was executed and its identity, title and REFERENCE_ONLY ceiling matched. This is a documentary identity check, not execution of the full model.

REMAINING REQUIREMENT

Bind model-specific inputs, operations and measured evidence before interpreting the paper as an executable implementation.

SOURCE REFERENCES

TP-423

Evidence: evidence/rerun/teal/TP-423.json

TR-TP-424 / Elsa Deterministic Semantic Recovery

IF

If the White Paper scope is used to support a command, product, family, or design decision.

HOW

Resolve the source identity, claims ceiling, formulas, participant boundaries, tests, and outstanding evidence before JP/MK/JO review.

THEN

Then only supported reference conclusions may advance; unsupported physical, legal, financial, or IP conclusions remain held.

CURRENT EVIDENCE

The individual TP-424 reference profile was executed and its identity, title and REFERENCE_ONLY ceiling matched. This is a documentary identity check, not execution of the full model.

REMAINING REQUIREMENT

Bind model-specific inputs, operations and measured evidence before interpreting the paper as an executable implementation.

SOURCE REFERENCES

TP-424

Evidence: evidence/rerun/teal/TP-424.json

TR-TP-425 / JP Mathematical and Architectural Canon

IF

If the White Paper scope is used to support a command, product, family, or design decision.

HOW

Resolve the source identity, claims ceiling, formulas, participant boundaries, tests, and outstanding evidence before JP/MK/JO review.

THEN

Then only supported reference conclusions may advance; unsupported physical, legal, financial, or IP conclusions remain held.

CURRENT EVIDENCE

The individual TP-425 reference profile was executed and its identity, title and REFERENCE_ONLY ceiling matched. This is a documentary identity check, not execution of the full model.

REMAINING REQUIREMENT

Bind model-specific inputs, operations and measured evidence before interpreting the paper as an executable implementation.

SOURCE REFERENCES

TP-425

Evidence: evidence/rerun/teal/TP-425.json

TR-TP-426 / Mika/MK Physics Modulator System

IF

If the White Paper scope is used to support a command, product, family, or design decision.

HOW

Resolve the source identity, claims ceiling, formulas, participant boundaries, tests, and outstanding evidence before JP/MK/JO review.

THEN

Then only supported reference conclusions may advance; unsupported physical, legal, financial, or IP conclusions remain held.

CURRENT EVIDENCE

The individual TP-426 reference profile was executed and its identity, title and REFERENCE_ONLY ceiling matched. This is a documentary identity check, not execution of the full model.

REMAINING REQUIREMENT

Bind model-specific inputs, operations and measured evidence before interpreting the paper as an executable implementation.

SOURCE REFERENCES

TP-426

Evidence: evidence/rerun/teal/TP-426.json

TR-TP-427 / JO Deterministic Proof and Runtime

IF

If the White Paper scope is used to support a command, product, family, or design decision.

HOW

Resolve the source identity, claims ceiling, formulas, participant boundaries, tests, and outstanding evidence before JP/MK/JO review.

THEN

Then only supported reference conclusions may advance; unsupported physical, legal, financial, or IP conclusions remain held.

CURRENT EVIDENCE

The individual TP-427 reference profile was executed and its identity, title and REFERENCE_ONLY ceiling matched. This is a documentary identity check, not execution of the full model.

REMAINING REQUIREMENT

Bind model-specific inputs, operations and measured evidence before interpreting the paper as an executable implementation.

SOURCE REFERENCES

TP-427

Evidence: evidence/rerun/teal/TP-427.json

TR-TP-428 / MJOS Operating Substrate

IF

If the White Paper scope is used to support a command, product, family, or design decision.

HOW

Resolve the source identity, claims ceiling, formulas, participant boundaries, tests, and outstanding evidence before JP/MK/JO review.

THEN

Then only supported reference conclusions may advance; unsupported physical, legal, financial, or IP conclusions remain held.

CURRENT EVIDENCE

The individual TP-428 reference profile was executed and its identity, title and REFERENCE_ONLY ceiling matched. This is a documentary identity check, not execution of the full model.

REMAINING REQUIREMENT

Bind model-specific inputs, operations and measured evidence before interpreting the paper as an executable implementation.

SOURCE REFERENCES

TP-428

Evidence: evidence/rerun/teal/TP-428.json

TR-TP-429 / JP Semiconductor Phone Battery and OS Candidate

IF

If the White Paper scope is used to support a command, product, family, or design decision.

HOW

Resolve the source identity, claims ceiling, formulas, participant boundaries, tests, and outstanding evidence before JP/MK/JO review.

THEN

Then only supported reference conclusions may advance; unsupported physical, legal, financial, or IP conclusions remain held.

CURRENT EVIDENCE

The individual TP-429 reference profile was executed and its identity, title and REFERENCE_ONLY ceiling matched. This is a documentary identity check, not execution of the full model.

REMAINING REQUIREMENT

Bind model-specific inputs, operations and measured evidence before interpreting the paper as an executable implementation.

SOURCE REFERENCES

TP-429

Evidence: evidence/rerun/teal/TP-429.json

TR-TP-430 / JP Large-Scale Boating Power Candidate

IF

If the White Paper scope is used to support a command, product, family, or design decision.

HOW

Resolve the source identity, claims ceiling, formulas, participant boundaries, tests, and outstanding evidence before JP/MK/JO review.

THEN

Then only supported reference conclusions may advance; unsupported physical, legal, financial, or IP conclusions remain held.

CURRENT EVIDENCE

The individual TP-430 reference profile was executed and its identity, title and REFERENCE_ONLY ceiling matched. This is a documentary identity check, not execution of the full model.

REMAINING REQUIREMENT

Bind model-specific inputs, operations and measured evidence before interpreting the paper as an executable implementation.

SOURCE REFERENCES

TP-430

Evidence: evidence/rerun/teal/TP-430.json

TR-TP-431 / JP Peaceful High-Energy Propulsion Research Candidate

IF

If the White Paper scope is used to support a command, product, family, or design decision.

HOW

Resolve the source identity, claims ceiling, formulas, participant boundaries, tests, and outstanding evidence before JP/MK/JO review.

THEN

Then only supported reference conclusions may advance; unsupported physical, legal, financial, or IP conclusions remain held.

CURRENT EVIDENCE

The individual TP-431 reference profile was executed and its identity, title and REFERENCE_ONLY ceiling matched. This is a documentary identity check, not execution of the full model.

REMAINING REQUIREMENT

Bind model-specific inputs, operations and measured evidence before interpreting the paper as an executable implementation.

SOURCE REFERENCES

TP-431

Evidence: evidence/rerun/teal/TP-431.json

TR-TP-432 / Sister Predictive Containment System

IF

If the White Paper scope is used to support a command, product, family, or design decision.

HOW

Resolve the source identity, claims ceiling, formulas, participant boundaries, tests, and outstanding evidence before JP/MK/JO review.

THEN

Then only supported reference conclusions may advance; unsupported physical, legal, financial, or IP conclusions remain held.

CURRENT EVIDENCE

The individual TP-432 reference profile was executed and its identity, title and REFERENCE_ONLY ceiling matched. This is a documentary identity check, not execution of the full model.

REMAINING REQUIREMENT

Bind model-specific inputs, operations and measured evidence before interpreting the paper as an executable implementation.

SOURCE REFERENCES

TP-432

Evidence: evidence/rerun/teal/TP-432.json

TR-TP-433 / EVE Variance Screen and Egress Accounting

IF

If the White Paper scope is used to support a command, product, family, or design decision.

HOW

Resolve the source identity, claims ceiling, formulas, participant boundaries, tests, and outstanding evidence before JP/MK/JO review.

THEN

Then only supported reference conclusions may advance; unsupported physical, legal, financial, or IP conclusions remain held.

CURRENT EVIDENCE

The individual TP-433 reference profile was executed and its identity, title and REFERENCE_ONLY ceiling matched. This is a documentary identity check, not execution of the full model.

REMAINING REQUIREMENT

Bind model-specific inputs, operations and measured evidence before interpreting the paper as an executable implementation.

SOURCE REFERENCES

TP-433

Evidence: evidence/rerun/teal/TP-433.json

TR-TP-434 / Angels Safety and Corrective Command System

IF

If the White Paper scope is used to support a command, product, family, or design decision.

HOW

Resolve the source identity, claims ceiling, formulas, participant boundaries, tests, and outstanding evidence before JP/MK/JO review.

THEN

Then only supported reference conclusions may advance; unsupported physical, legal, financial, or IP conclusions remain held.

CURRENT EVIDENCE

The individual TP-434 reference profile was executed and its identity, title and REFERENCE_ONLY ceiling matched. This is a documentary identity check, not execution of the full model.

REMAINING REQUIREMENT

Bind model-specific inputs, operations and measured evidence before interpreting the paper as an executable implementation.

SOURCE REFERENCES

TP-434

Evidence: evidence/rerun/teal/TP-434.json

TR-TP-435 / Mermaid Accounting and Reconciliation System

IF

If the White Paper scope is used to support a command, product, family, or design decision.

HOW

Resolve the source identity, claims ceiling, formulas, participant boundaries, tests, and outstanding evidence before JP/MK/JO review.

THEN

Then only supported reference conclusions may advance; unsupported physical, legal, financial, or IP conclusions remain held.

CURRENT EVIDENCE

The individual TP-435 reference profile was executed and its identity, title and REFERENCE_ONLY ceiling matched. This is a documentary identity check, not execution of the full model.

REMAINING REQUIREMENT

Bind model-specific inputs, operations and measured evidence before interpreting the paper as an executable implementation.

SOURCE REFERENCES

TP-435

Evidence: evidence/rerun/teal/TP-435.json

TR-TP-436 / Shiva Dual Financial Rails

IF

If the White Paper scope is used to support a command, product, family, or design decision.

HOW

Resolve the source identity, claims ceiling, formulas, participant boundaries, tests, and outstanding evidence before JP/MK/JO review.

THEN

Then only supported reference conclusions may advance; unsupported physical, legal, financial, or IP conclusions remain held.

CURRENT EVIDENCE

The individual TP-436 reference profile was executed and its identity, title and REFERENCE_ONLY ceiling matched. This is a documentary identity check, not execution of the full model.

REMAINING REQUIREMENT

Bind model-specific inputs, operations and measured evidence before interpreting the paper as an executable implementation.

SOURCE REFERENCES

TP-436

Evidence: evidence/rerun/teal/TP-436.json

TR-TP-437 / SHIVAS Internal Settlement Reflection

IF

If the White Paper scope is used to support a command, product, family, or design decision.

HOW

Resolve the source identity, claims ceiling, formulas, participant boundaries, tests, and outstanding evidence before JP/MK/JO review.

THEN

Then only supported reference conclusions may advance; unsupported physical, legal, financial, or IP conclusions remain held.

CURRENT EVIDENCE

The individual TP-437 reference profile was executed and its identity, title and REFERENCE_ONLY ceiling matched. This is a documentary identity check, not execution of the full model.

REMAINING REQUIREMENT

Bind model-specific inputs, operations and measured evidence before interpreting the paper as an executable implementation.

SOURCE REFERENCES

TP-437

Evidence: evidence/rerun/teal/TP-437.json

TR-TP-438 / Shiva Day-1 Internal Banking and Financial Ecosystem MVP

IF

If the White Paper scope is used to support a command, product, family, or design decision.

HOW

Resolve the source identity, claims ceiling, formulas, participant boundaries, tests, and outstanding evidence before JP/MK/JO review.

THEN

Then only supported reference conclusions may advance; unsupported physical, legal, financial, or IP conclusions remain held.

CURRENT EVIDENCE

The individual TP-438 reference profile was executed and its identity, title and REFERENCE_ONLY ceiling matched. This is a documentary identity check, not execution of the full model.

REMAINING REQUIREMENT

Bind model-specific inputs, operations and measured evidence before interpreting the paper as an executable implementation.

SOURCE REFERENCES

TP-438

Evidence: evidence/rerun/teal/TP-438.json

TR-TP-439 / Shiva Exchange Rule Reference

IF

If the White Paper scope is used to support a command, product, family, or design decision.

HOW

Resolve the source identity, claims ceiling, formulas, participant boundaries, tests, and outstanding evidence before JP/MK/JO review.

THEN

Then only supported reference conclusions may advance; unsupported physical, legal, financial, or IP conclusions remain held.

CURRENT EVIDENCE

The individual TP-439 reference profile was executed and its identity, title and REFERENCE_ONLY ceiling matched. This is a documentary identity check, not execution of the full model.

REMAINING REQUIREMENT

Bind model-specific inputs, operations and measured evidence before interpreting the paper as an executable implementation.

SOURCE REFERENCES

TP-439

Evidence: evidence/rerun/teal/TP-439.json

TR-TP-440 / Moana Governed Browser

IF

If the White Paper scope is used to support a command, product, family, or design decision.

HOW

Resolve the source identity, claims ceiling, formulas, participant boundaries, tests, and outstanding evidence before JP/MK/JO review.

THEN

Then only supported reference conclusions may advance; unsupported physical, legal, financial, or IP conclusions remain held.

CURRENT EVIDENCE

The individual TP-440 reference profile was executed and its identity, title and REFERENCE_ONLY ceiling matched. This is a documentary identity check, not execution of the full model.

REMAINING REQUIREMENT

Bind model-specific inputs, operations and measured evidence before interpreting the paper as an executable implementation.

SOURCE REFERENCES

TP-440

Evidence: evidence/rerun/teal/TP-440.json

TR-TP-441 / Aviator Organizational Workspace

IF

If the White Paper scope is used to support a command, product, family, or design decision.

HOW

Resolve the source identity, claims ceiling, formulas, participant boundaries, tests, and outstanding evidence before JP/MK/JO review.

THEN

Then only supported reference conclusions may advance; unsupported physical, legal, financial, or IP conclusions remain held.

CURRENT EVIDENCE

The individual TP-441 reference profile was executed and its identity, title and REFERENCE_ONLY ceiling matched. This is a documentary identity check, not execution of the full model.

REMAINING REQUIREMENT

Bind model-specific inputs, operations and measured evidence before interpreting the paper as an executable implementation.

SOURCE REFERENCES

TP-441

Evidence: evidence/rerun/teal/TP-441.json

TR-TP-442 / Lecanto Truthful Visualization

IF

If the White Paper scope is used to support a command, product, family, or design decision.

HOW

Resolve the source identity, claims ceiling, formulas, participant boundaries, tests, and outstanding evidence before JP/MK/JO review.

THEN

Then only supported reference conclusions may advance; unsupported physical, legal, financial, or IP conclusions remain held.

CURRENT EVIDENCE

The individual TP-442 reference profile was executed and its identity, title and REFERENCE_ONLY ceiling matched. This is a documentary identity check, not execution of the full model.

REMAINING REQUIREMENT

Bind model-specific inputs, operations and measured evidence before interpreting the paper as an executable implementation.

SOURCE REFERENCES

TP-442

Evidence: evidence/rerun/teal/TP-442.json

TR-TP-443 / Elsa Governed Marketplace Reference

IF

If the White Paper scope is used to support a command, product, family, or design decision.

HOW

Resolve the source identity, claims ceiling, formulas, participant boundaries, tests, and outstanding evidence before JP/MK/JO review.

THEN

Then only supported reference conclusions may advance; unsupported physical, legal, financial, or IP conclusions remain held.

CURRENT EVIDENCE

The individual TP-443 reference profile was executed and its identity, title and REFERENCE_ONLY ceiling matched. This is a documentary identity check, not execution of the full model.

REMAINING REQUIREMENT

Bind model-specific inputs, operations and measured evidence before interpreting the paper as an executable implementation.

SOURCE REFERENCES

TP-443

Evidence: evidence/rerun/teal/TP-443.json

TR-TP-444 / Shekina Distributed Continuity

IF

If the White Paper scope is used to support a command, product, family, or design decision.

HOW

Resolve the source identity, claims ceiling, formulas, participant boundaries, tests, and outstanding evidence before JP/MK/JO review.

THEN

Then only supported reference conclusions may advance; unsupported physical, legal, financial, or IP conclusions remain held.

CURRENT EVIDENCE

The individual TP-444 reference profile was executed and its identity, title and REFERENCE_ONLY ceiling matched. This is a documentary identity check, not execution of the full model.

REMAINING REQUIREMENT

Bind model-specific inputs, operations and measured evidence before interpreting the paper as an executable implementation.

SOURCE REFERENCES

TP-444

Evidence: evidence/rerun/teal/TP-444.json

TR-TP-445 / Pearl Hypothetical Simulation and Information-Retention System

IF

If the White Paper scope is used to support a command, product, family, or design decision.

HOW

Resolve the source identity, claims ceiling, formulas, participant boundaries, tests, and outstanding evidence before JP/MK/JO review.

THEN

Then only supported reference conclusions may advance; unsupported physical, legal, financial, or IP conclusions remain held.

CURRENT EVIDENCE

The individual TP-445 reference profile was executed and its identity, title and REFERENCE_ONLY ceiling matched. This is a documentary identity check, not execution of the full model.

REMAINING REQUIREMENT

Bind model-specific inputs, operations and measured evidence before interpreting the paper as an executable implementation.

SOURCE REFERENCES

TP-445

Evidence: evidence/rerun/teal/TP-445.json

TR-TP-446 / Bangel Spreadsheets

IF

If the White Paper scope is used to support a command, product, family, or design decision.

HOW

Resolve the source identity, claims ceiling, formulas, participant boundaries, tests, and outstanding evidence before JP/MK/JO review.

THEN

Then only supported reference conclusions may advance; unsupported physical, legal, financial, or IP conclusions remain held.

CURRENT EVIDENCE

The individual TP-446 reference profile was executed and its identity, title and REFERENCE_ONLY ceiling matched. This is a documentary identity check, not execution of the full model.

REMAINING REQUIREMENT

Bind model-specific inputs, operations and measured evidence before interpreting the paper as an executable implementation.

SOURCE REFERENCES

TP-446

Evidence: evidence/rerun/teal/TP-446.json

TR-TP-447 / JPOSMJ Product Portfolio Envelope

IF

If the White Paper scope is used to support a command, product, family, or design decision.

HOW

Resolve the source identity, claims ceiling, formulas, participant boundaries, tests, and outstanding evidence before JP/MK/JO review.

THEN

Then only supported reference conclusions may advance; unsupported physical, legal, financial, or IP conclusions remain held.

CURRENT EVIDENCE

The individual TP-447 reference profile was executed and its identity, title and REFERENCE_ONLY ceiling matched. This is a documentary identity check, not execution of the full model.

REMAINING REQUIREMENT

Bind model-specific inputs, operations and measured evidence before interpreting the paper as an executable implementation.

SOURCE REFERENCES

TP-447

Evidence: evidence/rerun/teal/TP-447.json

TR-TP-448 / MJ Standard Containment Geometry and Reference Gas Model

IF

If the White Paper scope is used to support a command, product, family, or design decision.

HOW

Resolve the source identity, claims ceiling, formulas, participant boundaries, tests, and outstanding evidence before JP/MK/JO review.

THEN

Then only supported reference conclusions may advance; unsupported physical, legal, financial, or IP conclusions remain held.

CURRENT EVIDENCE

The individual TP-448 reference profile was executed and its identity, title and REFERENCE_ONLY ceiling matched. This is a documentary identity check, not execution of the full model.

REMAINING REQUIREMENT

Bind model-specific inputs, operations and measured evidence before interpreting the paper as an executable implementation.

SOURCE REFERENCES

TP-448

Evidence: evidence/rerun/teal/TP-448.json

TR-TP-449 / MJ Reservoir Collection Modulation and Return Loop

IF

If the White Paper scope is used to support a command, product, family, or design decision.

HOW

Resolve the source identity, claims ceiling, formulas, participant boundaries, tests, and outstanding evidence before JP/MK/JO review.

THEN

Then only supported reference conclusions may advance; unsupported physical, legal, financial, or IP conclusions remain held.

CURRENT EVIDENCE

The individual TP-449 reference profile was executed and its identity, title and REFERENCE_ONLY ceiling matched. This is a documentary identity check, not execution of the full model.

REMAINING REQUIREMENT

Bind model-specific inputs, operations and measured evidence before interpreting the paper as an executable implementation.

SOURCE REFERENCES

TP-449

Evidence: evidence/rerun/teal/TP-449.json

TR-TP-450 / MJOS Solar Shared-Core Architecture

IF

If the White Paper scope is used to support a command, product, family, or design decision.

HOW

Resolve the source identity, claims ceiling, formulas, participant boundaries, tests, and outstanding evidence before JP/MK/JO review.

THEN

Then only supported reference conclusions may advance; unsupported physical, legal, financial, or IP conclusions remain held.

CURRENT EVIDENCE

The individual TP-450 reference profile was executed and its identity, title and REFERENCE_ONLY ceiling matched. This is a documentary identity check, not execution of the full model.

REMAINING REQUIREMENT

Bind model-specific inputs, operations and measured evidence before interpreting the paper as an executable implementation.

SOURCE REFERENCES

TP-450

Evidence: evidence/rerun/teal/TP-450.json

TR-TP-451 / MJOS Solar Semiconductor Phone Battery and OS Profile

IF

If the White Paper scope is used to support a command, product, family, or design decision.

HOW

Resolve the source identity, claims ceiling, formulas, participant boundaries, tests, and outstanding evidence before JP/MK/JO review.

THEN

Then only supported reference conclusions may advance; unsupported physical, legal, financial, or IP conclusions remain held.

CURRENT EVIDENCE

The individual TP-451 reference profile was executed and its identity, title and REFERENCE_ONLY ceiling matched. This is a documentary identity check, not execution of the full model.

REMAINING REQUIREMENT

Bind model-specific inputs, operations and measured evidence before interpreting the paper as an executable implementation.

SOURCE REFERENCES

TP-451

Evidence: evidence/rerun/teal/TP-451.json

TR-TP-452 / MJOS Solar-Assisted Marine Power and Propulsion Profile

IF

If the White Paper scope is used to support a command, product, family, or design decision.

HOW

Resolve the source identity, claims ceiling, formulas, participant boundaries, tests, and outstanding evidence before JP/MK/JO review.

THEN

Then only supported reference conclusions may advance; unsupported physical, legal, financial, or IP conclusions remain held.

CURRENT EVIDENCE

The individual TP-452 reference profile was executed and its identity, title and REFERENCE_ONLY ceiling matched. This is a documentary identity check, not execution of the full model.

REMAINING REQUIREMENT

Bind model-specific inputs, operations and measured evidence before interpreting the paper as an executable implementation.

SOURCE REFERENCES

TP-452

Evidence: evidence/rerun/teal/TP-452.json

TR-TP-453 / MJOS Peaceful Solar-Assisted Rocket/Spacecraft Power and OS Profile

IF

If the White Paper scope is used to support a command, product, family, or design decision.

HOW

Resolve the source identity, claims ceiling, formulas, participant boundaries, tests, and outstanding evidence before JP/MK/JO review.

THEN

Then only supported reference conclusions may advance; unsupported physical, legal, financial, or IP conclusions remain held.

CURRENT EVIDENCE

The individual TP-453 reference profile was executed and its identity, title and REFERENCE_ONLY ceiling matched. This is a documentary identity check, not execution of the full model.

REMAINING REQUIREMENT

Bind model-specific inputs, operations and measured evidence before interpreting the paper as an executable implementation.

SOURCE REFERENCES

TP-453

Evidence: evidence/rerun/teal/TP-453.json

TR-TP-454 / DRO Discrete Retention and Element-Collection Reference System

IF

If the White Paper scope is used to support a command, product, family, or design decision.

HOW

Resolve the source identity, claims ceiling, formulas, participant boundaries, tests, and outstanding evidence before JP/MK/JO review.

THEN

Then only supported reference conclusions may advance; unsupported physical, legal, financial, or IP conclusions remain held.

CURRENT EVIDENCE

The individual TP-454 reference profile was executed and its identity, title and REFERENCE_ONLY ceiling matched. This is a documentary identity check, not execution of the full model.

REMAINING REQUIREMENT

Bind model-specific inputs, operations and measured evidence before interpreting the paper as an executable implementation.

SOURCE REFERENCES

TP-454

Evidence: evidence/rerun/teal/TP-454.json

TR-TP-455 / DRO-to-Pearl Computational Node Handoff

IF

If the White Paper scope is used to support a command, product, family, or design decision.

HOW

Resolve the source identity, claims ceiling, formulas, participant boundaries, tests, and outstanding evidence before JP/MK/JO review.

THEN

Then only supported reference conclusions may advance; unsupported physical, legal, financial, or IP conclusions remain held.

CURRENT EVIDENCE

The individual TP-455 reference profile was executed and its identity, title and REFERENCE_ONLY ceiling matched. This is a documentary identity check, not execution of the full model.

REMAINING REQUIREMENT

Bind model-specific inputs, operations and measured evidence before interpreting the paper as an executable implementation.

SOURCE REFERENCES

TP-455

Evidence: evidence/rerun/teal/TP-455.json

TR-TP-456 / DRO Start-Energy and Restart-Reserve Reference System

IF

If the White Paper scope is used to support a command, product, family, or design decision.

HOW

Resolve the source identity, claims ceiling, formulas, participant boundaries, tests, and outstanding evidence before JP/MK/JO review.

THEN

Then only supported reference conclusions may advance; unsupported physical, legal, financial, or IP conclusions remain held.

CURRENT EVIDENCE

The individual TP-456 reference profile was executed and its identity, title and REFERENCE_ONLY ceiling matched. This is a documentary identity check, not execution of the full model.

REMAINING REQUIREMENT

Bind model-specific inputs, operations and measured evidence before interpreting the paper as an executable implementation.

SOURCE REFERENCES

TP-456

Evidence: evidence/rerun/teal/TP-456.json

TR-TP-457 / Lecanto Image Provenance, Physics, Variance, and Intent-Hypothesis

IF

If the White Paper scope is used to support a command, product, family, or design decision.

HOW

Resolve the source identity, claims ceiling, formulas, participant boundaries, tests, and outstanding evidence before JP/MK/JO review.

THEN

Then only supported reference conclusions may advance; unsupported physical, legal, financial, or IP conclusions remain held.

CURRENT EVIDENCE

The individual TP-457 reference profile was executed and its identity, title and REFERENCE_ONLY ceiling matched. This is a documentary identity check, not execution of the full model.

REMAINING REQUIREMENT

Bind model-specific inputs, operations and measured evidence before interpreting the paper as an executable implementation.

SOURCE REFERENCES

TP-457

Evidence: evidence/rerun/teal/TP-457.json

TR-TP-458 / Semiconductor DRO and Pearl Computational Integration

IF

If the White Paper scope is used to support a command, product, family, or design decision.

HOW

Resolve the source identity, claims ceiling, formulas, participant boundaries, tests, and outstanding evidence before JP/MK/JO review.

THEN

Then only supported reference conclusions may advance; unsupported physical, legal, financial, or IP conclusions remain held.

CURRENT EVIDENCE

The individual TP-458 reference profile was executed and its identity, title and REFERENCE_ONLY ceiling matched. This is a documentary identity check, not execution of the full model.

REMAINING REQUIREMENT

Bind model-specific inputs, operations and measured evidence before interpreting the paper as an executable implementation.

SOURCE REFERENCES

TP-458

Evidence: evidence/rerun/teal/TP-458.json

TR-TP-459 / R1 and R2 State Representation

IF

If the White Paper scope is used to support a command, product, family, or design decision.

HOW

Resolve the source identity, claims ceiling, formulas, participant boundaries, tests, and outstanding evidence before JP/MK/JO review.

THEN

Then only supported reference conclusions may advance; unsupported physical, legal, financial, or IP conclusions remain held.

CURRENT EVIDENCE

The individual TP-459 reference profile was executed and its identity, title and REFERENCE_ONLY ceiling matched. This is a documentary identity check, not execution of the full model.

REMAINING REQUIREMENT

Bind model-specific inputs, operations and measured evidence before interpreting the paper as an executable implementation.

SOURCE REFERENCES

TP-459

Evidence: evidence/rerun/teal/TP-459.json

TR-TP-460 / Noise Floor and 23 mg Inflection

IF

If the White Paper scope is used to support a command, product, family, or design decision.

HOW

Resolve the source identity, claims ceiling, formulas, participant boundaries, tests, and outstanding evidence before JP/MK/JO review.

THEN

Then only supported reference conclusions may advance; unsupported physical, legal, financial, or IP conclusions remain held.

CURRENT EVIDENCE

The individual TP-460 reference profile was executed and its identity, title and REFERENCE_ONLY ceiling matched. This is a documentary identity check, not execution of the full model.

REMAINING REQUIREMENT

Bind model-specific inputs, operations and measured evidence before interpreting the paper as an executable implementation.

SOURCE REFERENCES

TP-460

Evidence: evidence/rerun/teal/TP-460.json

TR-TP-461 / Upward 3x3 Node and Umbrella Representation

IF

If the White Paper scope is used to support a command, product, family, or design decision.

HOW

Resolve the source identity, claims ceiling, formulas, participant boundaries, tests, and outstanding evidence before JP/MK/JO review.

THEN

Then only supported reference conclusions may advance; unsupported physical, legal, financial, or IP conclusions remain held.

CURRENT EVIDENCE

The individual TP-461 reference profile was executed and its identity, title and REFERENCE_ONLY ceiling matched. This is a documentary identity check, not execution of the full model.

REMAINING REQUIREMENT

Bind model-specific inputs, operations and measured evidence before interpreting the paper as an executable implementation.

SOURCE REFERENCES

TP-461

Evidence: evidence/rerun/teal/TP-461.json

TR-TP-462 / Memory, Request Occultation, and Generational Handoff

IF

If the White Paper scope is used to support a command, product, family, or design decision.

HOW

Resolve the source identity, claims ceiling, formulas, participant boundaries, tests, and outstanding evidence before JP/MK/JO review.

THEN

Then only supported reference conclusions may advance; unsupported physical, legal, financial, or IP conclusions remain held.

CURRENT EVIDENCE

The individual TP-462 reference profile was executed and its identity, title and REFERENCE_ONLY ceiling matched. This is a documentary identity check, not execution of the full model.

REMAINING REQUIREMENT

Bind model-specific inputs, operations and measured evidence before interpreting the paper as an executable implementation.

SOURCE REFERENCES

TP-462

Evidence: evidence/rerun/teal/TP-462.json

TR-TP-463 / Static Intake and Energy-Wake Representation

IF

If the White Paper scope is used to support a command, product, family, or design decision.

HOW

Resolve the source identity, claims ceiling, formulas, participant boundaries, tests, and outstanding evidence before JP/MK/JO review.

THEN

Then only supported reference conclusions may advance; unsupported physical, legal, financial, or IP conclusions remain held.

CURRENT EVIDENCE

The individual TP-463 reference profile was executed and its identity, title and REFERENCE_ONLY ceiling matched. This is a documentary identity check, not execution of the full model.

REMAINING REQUIREMENT

Bind model-specific inputs, operations and measured evidence before interpreting the paper as an executable implementation.

SOURCE REFERENCES

TP-463

Evidence: evidence/rerun/teal/TP-463.json

TR-TP-464 / EVE Variance, Screen, Evaporation, and Egress

IF

If the White Paper scope is used to support a command, product, family, or design decision.

HOW

Resolve the source identity, claims ceiling, formulas, participant boundaries, tests, and outstanding evidence before JP/MK/JO review.

THEN

Then only supported reference conclusions may advance; unsupported physical, legal, financial, or IP conclusions remain held.

CURRENT EVIDENCE

The individual TP-464 reference profile was executed and its identity, title and REFERENCE_ONLY ceiling matched. This is a documentary identity check, not execution of the full model.

REMAINING REQUIREMENT

Bind model-specific inputs, operations and measured evidence before interpreting the paper as an executable implementation.

SOURCE REFERENCES

TP-464

Evidence: evidence/rerun/teal/TP-464.json

TR-TP-465 / Shiva and Mermaid Financial Rails

IF

If the White Paper scope is used to support a command, product, family, or design decision.

HOW

Resolve the source identity, claims ceiling, formulas, participant boundaries, tests, and outstanding evidence before JP/MK/JO review.

THEN

Then only supported reference conclusions may advance; unsupported physical, legal, financial, or IP conclusions remain held.

CURRENT EVIDENCE

The individual TP-465 reference profile was executed and its identity, title and REFERENCE_ONLY ceiling matched. This is a documentary identity check, not execution of the full model.

REMAINING REQUIREMENT

Bind model-specific inputs, operations and measured evidence before interpreting the paper as an executable implementation.

SOURCE REFERENCES

TP-465

Evidence: evidence/rerun/teal/TP-465.json

TR-TP-466 / Passkey, Claims Ceiling, and Repository Authentication

IF

If the White Paper scope is used to support a command, product, family, or design decision.

HOW

Resolve the source identity, claims ceiling, formulas, participant boundaries, tests, and outstanding evidence before JP/MK/JO review.

THEN

Then only supported reference conclusions may advance; unsupported physical, legal, financial, or IP conclusions remain held.

CURRENT EVIDENCE

The individual TP-466 reference profile was executed and its identity, title and REFERENCE_ONLY ceiling matched. This is a documentary identity check, not execution of the full model.

REMAINING REQUIREMENT

Bind model-specific inputs, operations and measured evidence before interpreting the paper as an executable implementation.

SOURCE REFERENCES

TP-466

Evidence: evidence/rerun/teal/TP-466.json

TR-TP-467 / Pearl Hypothetical Geometry and Acoustic Simulation Representation

IF

If the White Paper scope is used to support a command, product, family, or design decision.

HOW

Resolve the source identity, claims ceiling, formulas, participant boundaries, tests, and outstanding evidence before JP/MK/JO review.

THEN

Then only supported reference conclusions may advance; unsupported physical, legal, financial, or IP conclusions remain held.

CURRENT EVIDENCE

The individual TP-467 reference profile was executed and its identity, title and REFERENCE_ONLY ceiling matched. This is a documentary identity check, not execution of the full model.

REMAINING REQUIREMENT

Bind model-specific inputs, operations and measured evidence before interpreting the paper as an executable implementation.

SOURCE REFERENCES

TP-467

Evidence: evidence/rerun/teal/TP-467.json

TR-TP-468 / Bangel Spreadsheets Cell, Dependency, Revision, and Pearl Simulation

IF

If the White Paper scope is used to support a command, product, family, or design decision.

HOW

Resolve the source identity, claims ceiling, formulas, participant boundaries, tests, and outstanding evidence before JP/MK/JO review.

THEN

Then only supported reference conclusions may advance; unsupported physical, legal, financial, or IP conclusions remain held.

CURRENT EVIDENCE

The individual TP-468 reference profile was executed and its identity, title and REFERENCE_ONLY ceiling matched. This is a documentary identity check, not execution of the full model.

REMAINING REQUIREMENT

Bind model-specific inputs, operations and measured evidence before interpreting the paper as an executable implementation.

SOURCE REFERENCES

TP-468

Evidence: evidence/rerun/teal/TP-468.json

TR-TP-469 / Standard Containment Geometry and H2 Reference Representation

IF

If the White Paper scope is used to support a command, product, family, or design decision.

HOW

Resolve the source identity, claims ceiling, formulas, participant boundaries, tests, and outstanding evidence before JP/MK/JO review.

THEN

Then only supported reference conclusions may advance; unsupported physical, legal, financial, or IP conclusions remain held.

CURRENT EVIDENCE

The individual TP-469 reference profile was executed and its identity, title and REFERENCE_ONLY ceiling matched. This is a documentary identity check, not execution of the full model.

REMAINING REQUIREMENT

Bind model-specific inputs, operations and measured evidence before interpreting the paper as an executable implementation.

SOURCE REFERENCES

TP-469

Evidence: evidence/rerun/teal/TP-469.json

TR-TP-470 / Reservoir Return Loop Physics Representation

IF

If the White Paper scope is used to support a command, product, family, or design decision.

HOW

Resolve the source identity, claims ceiling, formulas, participant boundaries, tests, and outstanding evidence before JP/MK/JO review.

THEN

Then only supported reference conclusions may advance; unsupported physical, legal, financial, or IP conclusions remain held.

CURRENT EVIDENCE

The individual TP-470 reference profile was executed and its identity, title and REFERENCE_ONLY ceiling matched. This is a documentary identity check, not execution of the full model.

REMAINING REQUIREMENT

Bind model-specific inputs, operations and measured evidence before interpreting the paper as an executable implementation.

SOURCE REFERENCES

TP-470

Evidence: evidence/rerun/teal/TP-470.json

TR-TP-471 / DRO Scale, Unit, and R/R1/R2 Representation

IF

If the White Paper scope is used to support a command, product, family, or design decision.

HOW

Resolve the source identity, claims ceiling, formulas, participant boundaries, tests, and outstanding evidence before JP/MK/JO review.

THEN

Then only supported reference conclusions may advance; unsupported physical, legal, financial, or IP conclusions remain held.

CURRENT EVIDENCE

The individual TP-471 reference profile was executed and its identity, title and REFERENCE_ONLY ceiling matched. This is a documentary identity check, not execution of the full model.

REMAINING REQUIREMENT

Bind model-specific inputs, operations and measured evidence before interpreting the paper as an executable implementation.

SOURCE REFERENCES

TP-471

Evidence: evidence/rerun/teal/TP-471.json

TR-TP-472 / DRO Optical Measurement and Light-Frequency Evidence Representation

IF

If the White Paper scope is used to support a command, product, family, or design decision.

HOW

Resolve the source identity, claims ceiling, formulas, participant boundaries, tests, and outstanding evidence before JP/MK/JO review.

THEN

Then only supported reference conclusions may advance; unsupported physical, legal, financial, or IP conclusions remain held.

CURRENT EVIDENCE

The individual TP-472 reference profile was executed and its identity, title and REFERENCE_ONLY ceiling matched. This is a documentary identity check, not execution of the full model.

REMAINING REQUIREMENT

Bind model-specific inputs, operations and measured evidence before interpreting the paper as an executable implementation.

SOURCE REFERENCES

TP-472

Evidence: evidence/rerun/teal/TP-472.json

TR-TP-473 / DRO/Pearl Computational Node and Capacity Representation

IF

If the White Paper scope is used to support a command, product, family, or design decision.

HOW

Resolve the source identity, claims ceiling, formulas, participant boundaries, tests, and outstanding evidence before JP/MK/JO review.

THEN

Then only supported reference conclusions may advance; unsupported physical, legal, financial, or IP conclusions remain held.

CURRENT EVIDENCE

The individual TP-473 reference profile was executed and its identity, title and REFERENCE_ONLY ceiling matched. This is a documentary identity check, not execution of the full model.

REMAINING REQUIREMENT

Bind model-specific inputs, operations and measured evidence before interpreting the paper as an executable implementation.

SOURCE REFERENCES

TP-473

Evidence: evidence/rerun/teal/TP-473.json

TR-TP-474 / DRO Start-Energy, Restart-Reserve, and Controlled-Release

IF

If the White Paper scope is used to support a command, product, family, or design decision.

HOW

Resolve the source identity, claims ceiling, formulas, participant boundaries, tests, and outstanding evidence before JP/MK/JO review.

THEN

Then only supported reference conclusions may advance; unsupported physical, legal, financial, or IP conclusions remain held.

CURRENT EVIDENCE

The individual TP-474 reference profile was executed and its identity, title and REFERENCE_ONLY ceiling matched. This is a documentary identity check, not execution of the full model.

REMAINING REQUIREMENT

Bind model-specific inputs, operations and measured evidence before interpreting the paper as an executable implementation.

SOURCE REFERENCES

TP-474

Evidence: evidence/rerun/teal/TP-474.json

TR-TP-475 / Lecanto Image Provenance, Signal Physics, and Intent-Hypothesis

IF

If the White Paper scope is used to support a command, product, family, or design decision.

HOW

Resolve the source identity, claims ceiling, formulas, participant boundaries, tests, and outstanding evidence before JP/MK/JO review.

THEN

Then only supported reference conclusions may advance; unsupported physical, legal, financial, or IP conclusions remain held.

CURRENT EVIDENCE

The individual TP-475 reference profile was executed and its identity, title and REFERENCE_ONLY ceiling matched. This is a documentary identity check, not execution of the full model.

REMAINING REQUIREMENT

Bind model-specific inputs, operations and measured evidence before interpreting the paper as an executable implementation.

SOURCE REFERENCES

TP-475

Evidence: evidence/rerun/teal/TP-475.json

TR-TP-476 / JO source modules

IF

If an item in jo/*.py is parsed, imported, executed, or cited.

HOW

Preserve exact source lineage, typed scope, deterministic IF/HOW/THEN logic, MK physics applicability, JO verification, safety hooks, M3 routing, Mermaid/Shiva implications, and MJ authority boundaries.

THEN

Then the item is admitted only for its declared evidence ceiling; incomplete or unsafe states fail closed.

CURRENT EVIDENCE

The individual TP-476 reference profile was executed and its identity, title and REFERENCE_ONLY ceiling matched. This is a documentary identity check, not execution of the full model.

REMAINING REQUIREMENT

Bind model-specific inputs, operations and measured evidence before interpreting the paper as an executable implementation.

SOURCE REFERENCES

TP-476

Evidence: evidence/rerun/teal/TP-476.json

TR-TP-477 / Bangel source units

IF

If an item in bangel/**/*.bangel is parsed, imported, executed, or cited.

HOW

Preserve exact source lineage, typed scope, deterministic IF/HOW/THEN logic, MK physics applicability, JO verification, safety hooks, M3 routing, Mermaid/Shiva implications, and MJ authority boundaries.

THEN

Then the item is admitted only for its declared evidence ceiling; incomplete or unsafe states fail closed.

CURRENT EVIDENCE

The individual TP-477 reference profile was executed and its identity, title and REFERENCE_ONLY ceiling matched. This is a documentary identity check, not execution of the full model.

REMAINING REQUIREMENT

Bind model-specific inputs, operations and measured evidence before interpreting the paper as an executable implementation.

SOURCE REFERENCES

TP-477

Evidence: evidence/rerun/teal/TP-477.json

TR-TP-478 / Governed schemas

IF

If an item in schemas/*.json is parsed, imported, executed, or cited.

HOW

Preserve exact source lineage, typed scope, deterministic IF/HOW/THEN logic, MK physics applicability, JO verification, safety hooks, M3 routing, Mermaid/Shiva implications, and MJ authority boundaries.

THEN

Then the item is admitted only for its declared evidence ceiling; incomplete or unsafe states fail closed.

CURRENT EVIDENCE

The individual TP-478 reference profile was executed and its identity, title and REFERENCE_ONLY ceiling matched. This is a documentary identity check, not execution of the full model.

REMAINING REQUIREMENT

Bind model-specific inputs, operations and measured evidence before interpreting the paper as an executable implementation.

SOURCE REFERENCES

TP-478

Evidence: evidence/rerun/teal/TP-478.json

TR-TP-479 / Pathway specifications

IF

If an item in pathways/* is parsed, imported, executed, or cited.

HOW

Preserve exact source lineage, typed scope, deterministic IF/HOW/THEN logic, MK physics applicability, JO verification, safety hooks, M3 routing, Mermaid/Shiva implications, and MJ authority boundaries.

THEN

Then the item is admitted only for its declared evidence ceiling; incomplete or unsafe states fail closed.

CURRENT EVIDENCE

The individual TP-479 reference profile was executed and its identity, title and REFERENCE_ONLY ceiling matched. This is a documentary identity check, not execution of the full model.

REMAINING REQUIREMENT

Bind model-specific inputs, operations and measured evidence before interpreting the paper as an executable implementation.

SOURCE REFERENCES

TP-479

Evidence: evidence/rerun/teal/TP-479.json

TR-TP-480 / Manifest sources

IF

If an item in manifest/* is parsed, imported, executed, or cited.

HOW

Preserve exact source lineage, typed scope, deterministic IF/HOW/THEN logic, MK physics applicability, JO verification, safety hooks, M3 routing, Mermaid/Shiva implications, and MJ authority boundaries.

THEN

Then the item is admitted only for its declared evidence ceiling; incomplete or unsafe states fail closed.

CURRENT EVIDENCE

The individual TP-480 reference profile was executed and its identity, title and REFERENCE_ONLY ceiling matched. This is a documentary identity check, not execution of the full model.

REMAINING REQUIREMENT

Bind model-specific inputs, operations and measured evidence before interpreting the paper as an executable implementation.

SOURCE REFERENCES

TP-480

Evidence: evidence/rerun/teal/TP-480.json

TR-TP-481 / Passkey and ceremony sources

IF

If an item in passkey/* is parsed, imported, executed, or cited.

HOW

Preserve exact source lineage, typed scope, deterministic IF/HOW/THEN logic, MK physics applicability, JO verification, safety hooks, M3 routing, Mermaid/Shiva implications, and MJ authority boundaries.

THEN

Then the item is admitted only for its declared evidence ceiling; incomplete or unsafe states fail closed.

CURRENT EVIDENCE

The individual TP-481 reference profile was executed and its identity, title and REFERENCE_ONLY ceiling matched. This is a documentary identity check, not execution of the full model.

REMAINING REQUIREMENT

Bind model-specific inputs, operations and measured evidence before interpreting the paper as an executable implementation.

SOURCE REFERENCES

TP-481

Evidence: evidence/rerun/teal/TP-481.json

TR-TP-482 / Repository tests

IF

If an item in tests/* is parsed, imported, executed, or cited.

HOW

Preserve exact source lineage, typed scope, deterministic IF/HOW/THEN logic, MK physics applicability, JO verification, safety hooks, M3 routing, Mermaid/Shiva implications, and MJ authority boundaries.

THEN

Then the item is admitted only for its declared evidence ceiling; incomplete or unsafe states fail closed.

CURRENT EVIDENCE

The individual TP-482 reference profile was executed and its identity, title and REFERENCE_ONLY ceiling matched. This is a documentary identity check, not execution of the full model.

REMAINING REQUIREMENT

Bind model-specific inputs, operations and measured evidence before interpreting the paper as an executable implementation.

SOURCE REFERENCES

TP-482

Evidence: evidence/rerun/teal/TP-482.json

TR-TP-483 / Validation evidence

IF

If an item in validation/* is parsed, imported, executed, or cited.

HOW

Preserve exact source lineage, typed scope, deterministic IF/HOW/THEN logic, MK physics applicability, JO verification, safety hooks, M3 routing, Mermaid/Shiva implications, and MJ authority boundaries.

THEN

Then the item is admitted only for its declared evidence ceiling; incomplete or unsafe states fail closed.

CURRENT EVIDENCE

The individual TP-483 reference profile was executed and its identity, title and REFERENCE_ONLY ceiling matched. This is a documentary identity check, not execution of the full model.

REMAINING REQUIREMENT

Bind model-specific inputs, operations and measured evidence before interpreting the paper as an executable implementation.

SOURCE REFERENCES

TP-483

Evidence: evidence/rerun/teal/TP-483.json

TR-TP-484 / Potential IP registers

IF

If an item in official-docs/**/potential-ip-points/* is parsed, imported, executed, or cited.

HOW

Preserve exact source lineage, typed scope, deterministic IF/HOW/THEN logic, MK physics applicability, JO verification, safety hooks, M3 routing, Mermaid/Shiva implications, and MJ authority boundaries.

THEN

Then the item is admitted only for its declared evidence ceiling; incomplete or unsafe states fail closed.

CURRENT EVIDENCE

The individual TP-484 reference profile was executed and its identity, title and REFERENCE_ONLY ceiling matched. This is a documentary identity check, not execution of the full model.

REMAINING REQUIREMENT

Bind model-specific inputs, operations and measured evidence before interpreting the paper as an executable implementation.

SOURCE REFERENCES

TP-484

Evidence: evidence/rerun/teal/TP-484.json

TR-TP-485 / Blue Page corpus

IF

If an item in official-docs/blue-pages/* is parsed, imported, executed, or cited.

HOW

Preserve exact source lineage, typed scope, deterministic IF/HOW/THEN logic, MK physics applicability, JO verification, safety hooks, M3 routing, Mermaid/Shiva implications, and MJ authority boundaries.

THEN

Then the item is admitted only for its declared evidence ceiling; incomplete or unsafe states fail closed.

CURRENT EVIDENCE

The individual TP-485 reference profile was executed and its identity, title and REFERENCE_ONLY ceiling matched. This is a documentary identity check, not execution of the full model.

REMAINING REQUIREMENT

Bind model-specific inputs, operations and measured evidence before interpreting the paper as an executable implementation.

SOURCE REFERENCES

TP-485

Evidence: evidence/rerun/teal/TP-485.json

TR-TP-486 / Pink Paper corpus

IF

If an item in official-docs/pink-paper/* and official-docs/pink-papers/* is parsed, imported, executed, or cited.

HOW

Preserve exact source lineage, typed scope, deterministic IF/HOW/THEN logic, MK physics applicability, JO verification, safety hooks, M3 routing, Mermaid/Shiva implications, and MJ authority boundaries.

THEN

Then the item is admitted only for its declared evidence ceiling; incomplete or unsafe states fail closed.

CURRENT EVIDENCE

The individual TP-486 reference profile was executed and its identity, title and REFERENCE_ONLY ceiling matched. This is a documentary identity check, not execution of the full model.

REMAINING REQUIREMENT

Bind model-specific inputs, operations and measured evidence before interpreting the paper as an executable implementation.

SOURCE REFERENCES

TP-486

Evidence: evidence/rerun/teal/TP-486.json

TR-TP-487 / Review series

IF

If an item in official-docs/review-series/* is parsed, imported, executed, or cited.

HOW

Preserve exact source lineage, typed scope, deterministic IF/HOW/THEN logic, MK physics applicability, JO verification, safety hooks, M3 routing, Mermaid/Shiva implications, and MJ authority boundaries.

THEN

Then the item is admitted only for its declared evidence ceiling; incomplete or unsafe states fail closed.

CURRENT EVIDENCE

The individual TP-487 reference profile was executed and its identity, title and REFERENCE_ONLY ceiling matched. This is a documentary identity check, not execution of the full model.

REMAINING REQUIREMENT

Bind model-specific inputs, operations and measured evidence before interpreting the paper as an executable implementation.

SOURCE REFERENCES

TP-487

Evidence: evidence/rerun/teal/TP-487.json

TR-TP-488 / Solar profile documents

IF

If an item in official-docs/solar/* is parsed, imported, executed, or cited.

HOW

Preserve exact source lineage, typed scope, deterministic IF/HOW/THEN logic, MK physics applicability, JO verification, safety hooks, M3 routing, Mermaid/Shiva implications, and MJ authority boundaries.

THEN

Then the item is admitted only for its declared evidence ceiling; incomplete or unsafe states fail closed.

CURRENT EVIDENCE

The individual TP-488 reference profile was executed and its identity, title and REFERENCE_ONLY ceiling matched. This is a documentary identity check, not execution of the full model.

REMAINING REQUIREMENT

Bind model-specific inputs, operations and measured evidence before interpreting the paper as an executable implementation.

SOURCE REFERENCES

TP-488

Evidence: evidence/rerun/teal/TP-488.json

TR-TP-489 / R8 DRO Pearl Lecanto documents

IF

If an item in official-docs/r8/* is parsed, imported, executed, or cited.

HOW

Preserve exact source lineage, typed scope, deterministic IF/HOW/THEN logic, MK physics applicability, JO verification, safety hooks, M3 routing, Mermaid/Shiva implications, and MJ authority boundaries.

THEN

Then the item is admitted only for its declared evidence ceiling; incomplete or unsafe states fail closed.

CURRENT EVIDENCE

The individual TP-489 reference profile was executed and its identity, title and REFERENCE_ONLY ceiling matched. This is a documentary identity check, not execution of the full model.

REMAINING REQUIREMENT

Bind model-specific inputs, operations and measured evidence before interpreting the paper as an executable implementation.

SOURCE REFERENCES

TP-489

Evidence: evidence/rerun/teal/TP-489.json

TR-TP-490 / Terms and assent

IF

If an item in official-docs/terms/* is parsed, imported, executed, or cited.

HOW

Preserve exact source lineage, typed scope, deterministic IF/HOW/THEN logic, MK physics applicability, JO verification, safety hooks, M3 routing, Mermaid/Shiva implications, and MJ authority boundaries.

THEN

Then the item is admitted only for its declared evidence ceiling; incomplete or unsafe states fail closed.

CURRENT EVIDENCE

The individual TP-490 reference profile was executed and its identity, title and REFERENCE_ONLY ceiling matched. This is a documentary identity check, not execution of the full model.

REMAINING REQUIREMENT

Bind model-specific inputs, operations and measured evidence before interpreting the paper as an executable implementation.

SOURCE REFERENCES

TP-490

Evidence: evidence/rerun/teal/TP-490.json

TR-TP-491 / Family object product registers

IF

If an item in manifest/*REGISTER* is parsed, imported, executed, or cited.

HOW

Preserve exact source lineage, typed scope, deterministic IF/HOW/THEN logic, MK physics applicability, JO verification, safety hooks, M3 routing, Mermaid/Shiva implications, and MJ authority boundaries.

THEN

Then the item is admitted only for its declared evidence ceiling; incomplete or unsafe states fail closed.

CURRENT EVIDENCE

The individual TP-491 reference profile was executed and its identity, title and REFERENCE_ONLY ceiling matched. This is a documentary identity check, not execution of the full model.

REMAINING REQUIREMENT

Bind model-specific inputs, operations and measured evidence before interpreting the paper as an executable implementation.

SOURCE REFERENCES

TP-491

Evidence: evidence/rerun/teal/TP-491.json

TR-TP-492 / Formula register

IF

If an item in pathways/FORMULA-REGISTER.json is parsed, imported, executed, or cited.

HOW

Preserve exact source lineage, typed scope, deterministic IF/HOW/THEN logic, MK physics applicability, JO verification, safety hooks, M3 routing, Mermaid/Shiva implications, and MJ authority boundaries.

THEN

Then the item is admitted only for its declared evidence ceiling; incomplete or unsafe states fail closed.

CURRENT EVIDENCE

The individual TP-492 reference profile was executed and its identity, title and REFERENCE_ONLY ceiling matched. This is a documentary identity check, not execution of the full model.

REMAINING REQUIREMENT

Bind model-specific inputs, operations and measured evidence before interpreting the paper as an executable implementation.

SOURCE REFERENCES

TP-492

Evidence: evidence/rerun/teal/TP-492.json

TR-TP-493 / Ethics and non-weaponization

IF

If an item in manifest/ETHICS-MANIFEST.* is parsed, imported, executed, or cited.

HOW

Preserve exact source lineage, typed scope, deterministic IF/HOW/THEN logic, MK physics applicability, JO verification, safety hooks, M3 routing, Mermaid/Shiva implications, and MJ authority boundaries.

THEN

Then the item is admitted only for its declared evidence ceiling; incomplete or unsafe states fail closed.

CURRENT EVIDENCE

The individual TP-493 reference profile was executed and its identity, title and REFERENCE_ONLY ceiling matched. This is a documentary identity check, not execution of the full model.

REMAINING REQUIREMENT

Bind model-specific inputs, operations and measured evidence before interpreting the paper as an executable implementation.

SOURCE REFERENCES

TP-493

Evidence: evidence/rerun/teal/TP-493.json

TR-TP-494 / Physical evidence holds

IF

If an item in schemas and validation hold receipts is parsed, imported, executed, or cited.

HOW

Preserve exact source lineage, typed scope, deterministic IF/HOW/THEN logic, MK physics applicability, JO verification, safety hooks, M3 routing, Mermaid/Shiva implications, and MJ authority boundaries.

THEN

Then the item is admitted only for its declared evidence ceiling; incomplete or unsafe states fail closed.

CURRENT EVIDENCE

The individual TP-494 reference profile was executed and its identity, title and REFERENCE_ONLY ceiling matched. This is a documentary identity check, not execution of the full model.

REMAINING REQUIREMENT

Bind model-specific inputs, operations and measured evidence before interpreting the paper as an executable implementation.

SOURCE REFERENCES

TP-494

Evidence: evidence/rerun/teal/TP-494.json

TR-TP-495 / Repository and Git evidence

IF

If an item in Git bundle, source ZIP, content manifest is parsed, imported, executed, or cited.

HOW

Preserve exact source lineage, typed scope, deterministic IF/HOW/THEN logic, MK physics applicability, JO verification, safety hooks, M3 routing, Mermaid/Shiva implications, and MJ authority boundaries.

THEN

Then the item is admitted only for its declared evidence ceiling; incomplete or unsafe states fail closed.

CURRENT EVIDENCE

The individual TP-495 reference profile was executed and its identity, title and REFERENCE_ONLY ceiling matched. This is a documentary identity check, not execution of the full model.

REMAINING REQUIREMENT

Bind model-specific inputs, operations and measured evidence before interpreting the paper as an executable implementation.

SOURCE REFERENCES

TP-495

Evidence: evidence/rerun/teal/TP-495.json

TR-TP-496 / Documentation QA

IF

If an item in official documentation QA and PDF preflight is parsed, imported, executed, or cited.

HOW

Preserve exact source lineage, typed scope, deterministic IF/HOW/THEN logic, MK physics applicability, JO verification, safety hooks, M3 routing, Mermaid/Shiva implications, and MJ authority boundaries.

THEN

Then the item is admitted only for its declared evidence ceiling; incomplete or unsafe states fail closed.

CURRENT EVIDENCE

The individual TP-496 reference profile was executed and its identity, title and REFERENCE_ONLY ceiling matched. This is a documentary identity check, not execution of the full model.

REMAINING REQUIREMENT

Bind model-specific inputs, operations and measured evidence before interpreting the paper as an executable implementation.

SOURCE REFERENCES

TP-496

Evidence: evidence/rerun/teal/TP-496.json

TR-TP-497 / Founder ceremony

IF

If an item in eligibility, roots, declaration, public receipt is parsed, imported, executed, or cited.

HOW

Preserve exact source lineage, typed scope, deterministic IF/HOW/THEN logic, MK physics applicability, JO verification, safety hooks, M3 routing, Mermaid/Shiva implications, and MJ authority boundaries.

THEN

Then the item is admitted only for its declared evidence ceiling; incomplete or unsafe states fail closed.

CURRENT EVIDENCE

The individual TP-497 reference profile was executed and its identity, title and REFERENCE_ONLY ceiling matched. This is a documentary identity check, not execution of the full model.

REMAINING REQUIREMENT

Bind model-specific inputs, operations and measured evidence before interpreting the paper as an executable implementation.

SOURCE REFERENCES

TP-497

Evidence: evidence/rerun/teal/TP-497.json

TR-TP-498 / Shiva Day-1 internal banking

IF

If an item in internal banking MVP; no external crypto is parsed, imported, executed, or cited.

HOW

Preserve exact source lineage, typed scope, deterministic IF/HOW/THEN logic, MK physics applicability, JO verification, safety hooks, M3 routing, Mermaid/Shiva implications, and MJ authority boundaries.

THEN

Then the item is admitted only for its declared evidence ceiling; incomplete or unsafe states fail closed.

CURRENT EVIDENCE

The individual TP-498 reference profile was executed and its identity, title and REFERENCE_ONLY ceiling matched. This is a documentary identity check, not execution of the full model.

REMAINING REQUIREMENT

Bind model-specific inputs, operations and measured evidence before interpreting the paper as an executable implementation.

SOURCE REFERENCES

TP-498

Evidence: evidence/rerun/teal/TP-498.json

TR-TP-499 / Yellow visual system

IF

If an item in 100 Yellow visual bundles is parsed, imported, executed, or cited.

HOW

Preserve exact source lineage, typed scope, deterministic IF/HOW/THEN logic, MK physics applicability, JO verification, safety hooks, M3 routing, Mermaid/Shiva implications, and MJ authority boundaries.

THEN

Then the item is admitted only for its declared evidence ceiling; incomplete or unsafe states fail closed.

CURRENT EVIDENCE

The individual TP-499 reference profile was executed and its identity, title and REFERENCE_ONLY ceiling matched. This is a documentary identity check, not execution of the full model.

REMAINING REQUIREMENT

Bind model-specific inputs, operations and measured evidence before interpreting the paper as an executable implementation.

SOURCE REFERENCES

TP-499

Evidence: evidence/rerun/teal/TP-499.json

TR-TP-500 / Brown Purple Angel systems

IF

If an item in lifecycle, syntax, and safety annexes is parsed, imported, executed, or cited.

HOW

Preserve exact source lineage, typed scope, deterministic IF/HOW/THEN logic, MK physics applicability, JO verification, safety hooks, M3 routing, Mermaid/Shiva implications, and MJ authority boundaries.

THEN

Then the item is admitted only for its declared evidence ceiling; incomplete or unsafe states fail closed.

CURRENT EVIDENCE

The individual TP-500 reference profile was executed and its identity, title and REFERENCE_ONLY ceiling matched. This is a documentary identity check, not execution of the full model.

REMAINING REQUIREMENT

Bind model-specific inputs, operations and measured evidence before interpreting the paper as an executable implementation.

SOURCE REFERENCES

TP-500

Evidence: evidence/rerun/teal/TP-500.json

All Pink through Teal

263 individual papers. Source references, current evidence and open requirements accompany every item.

Documentary rerun complete for recovered scope. Executable implementation remains partial.

Each item retains its own identity, condition, method, outcome and evidence state. An individual paper or a passing assertion does not close a missing formula contract.

Bangel 58153a770206e2a3b500671aa4ca50e20c9c3a7d
Associated core 0d89fdf7f7914b9fdb5e62533613bfab41d34014

TR-PK-D001 / PinkPaper Volume01 Gateway

IF

A raw gateway expression is submitted with a human purpose and declared scope.

HOW

Preserve the raw literal as provenance; separate lexical order from the normalized lifecycle through Bangel, Elsa, JP, classification, proof and MJ.

THEN

Return a bounded evidence result or hold. A dotted command and a supplied Boolean do not create a permit.

CURRENT EVIDENCE

All 10 extracted pages are retained separately. The formula register has 0 distinct IDs linked to this paper. Historical result counts remain historical; original graphics are not reproduced by extracted text.

REMAINING REQUIREMENT

Resolve any source-specific object, measurement, graphics or authority gap; formula-profile passes do not verify the entire paper.

SOURCE REFERENCES

PK-D001

TR-PK-D002 / DRO IGNITION PINK 001

IF

Start or restart readiness is requested with energy sources, reserve bounds and release conditions.

HOW

Resolve each linked start-energy, loss, separation-work and restart-reserve formula independently; preserve conservative lower/upper bounds.

THEN

Keep start readiness conditional on the complete energy and evidence contract; missing reserve or permission evidence holds the request.

CURRENT EVIDENCE

All 4 extracted pages are retained separately. The formula register has 10 distinct IDs linked to this paper. Historical result counts remain historical; original graphics are not reproduced by extracted text.

INDIVIDUAL FORMULA LINKS

F-220, F-221, F-222, F-223, F-224, F-225, F-226, F-227, F-228, F-229

REMAINING REQUIREMENT

Resolve any source-specific object, measurement, graphics or authority gap; formula-profile passes do not verify the entire paper.

SOURCE REFERENCES

PK-D002

TR-PK-D003 / DRO PEARL PINK 001

IF

A DRO-to-Pearl node handoff requests capacity or accounting treatment.

HOW

Preserve node identity, capacity bounds, handoff provenance and reconciliation separately; route each linked formula to its individual Teal entry.

THEN

Return a documented node/capacity proposal. No computation manufactures capacity or peer authority.

CURRENT EVIDENCE

All 3 extracted pages are retained separately. The formula register has 5 distinct IDs linked to this paper. Historical result counts remain historical; original graphics are not reproduced by extracted text.

INDIVIDUAL FORMULA LINKS

F-203, F-204, F-217, F-218, F-219

REMAINING REQUIREMENT

Resolve any source-specific object, measurement, graphics or authority gap; formula-profile passes do not verify the entire paper.

SOURCE REFERENCES

PK-D003

TR-PK-D004 / DRO PINK 001

IF

A DRO observation or collection lifecycle supplies a scale, state and optical evidence.

HOW

Separate optical representation from measured physical evidence; resolve scale and state predicates without changing source formula identities.

THEN

Emit evidence status or hold. A visual representation does not establish mass, collection, or physical action.

CURRENT EVIDENCE

All 7 extracted pages are retained separately. The formula register has 27 distinct IDs linked to this paper. Historical result counts remain historical; original graphics are not reproduced by extracted text.

INDIVIDUAL FORMULA LINKS

F-001, F-194, F-195, F-196, F-197, F-198, F-199, F-200, F-201, F-202, F-203, F-204, F-205, F-206, F-207, F-208, F-209, F-210, F-211, F-212, F-213, F-214, F-215, F-216, F-217, F-218, F-219

REMAINING REQUIREMENT

Resolve any source-specific object, measurement, graphics or authority gap; formula-profile passes do not verify the entire paper.

SOURCE REFERENCES

PK-D004

TR-PK-D005 / LECANTO PINK 001

IF

An image is presented to the Lecanto source/derivative pathway.

HOW

Retain source-image provenance; separate observation, derivative generation, variance analysis and intent hypotheses. Track linked image and byte contracts individually.

THEN

Return a qualified image analysis or a hold; do not turn a hypothesis into established intent or physical permission.

CURRENT EVIDENCE

All 3 extracted pages are retained separately. The formula register has 9 distinct IDs linked to this paper. Historical result counts remain historical; original graphics are not reproduced by extracted text.

INDIVIDUAL FORMULA LINKS

F-234, F-235, F-236, F-237, F-238, F-239, F-240, F-241, F-242

REMAINING REQUIREMENT

Resolve any source-specific object, measurement, graphics or authority gap; formula-profile passes do not verify the entire paper.

SOURCE REFERENCES

PK-D005

TR-PK-D006 / Pink Paper Gateway Expression and Full Lifecycle 001

IF

Any formula, family, object or product enters the complete Pink gateway and lifecycle volume.

HOW

Preserve all 431 recovered pages and their repeated occurrences. Route every indexed formula to its own Teal contract, retaining execution order, units, evidence and MJ boundaries.

THEN

Produce a source-linked ledger of implemented scalar paths and unresolved measurement/state contracts. The volume does not become complete merely because it has been indexed.

CURRENT EVIDENCE

All 431 extracted pages are retained separately. The formula register has 145 distinct IDs linked to this paper. Historical result counts remain historical; original graphics are not reproduced by extracted text.

INDIVIDUAL FORMULA LINKS

F-001, F-002, F-003, F-004, F-005, F-006, F-007, F-008, F-009, F-010, F-011, F-012, F-013, F-014, F-015, F-016, F-017, F-018, F-019, F-020, F-021, F-022, F-023, F-024, F-025, F-026, F-027, F-028, F-029, F-030, F-031, F-032, F-033, F-034, F-035, F-036, F-037, F-038, F-039, F-040, F-041, F-042, F-043, F-044, F-045, F-046, F-047, F-048, F-049, F-050, F-051, F-052, F-053, F-054, F-055, F-056, F-057, F-058, F-059, F-060, F-061, F-062, F-063, F-064, F-065, F-066, F-067, F-068, F-069, F-070, F-071, F-072, F-073, F-074, F-075, F-076, F-077, F-078, F-079, F-080, F-081, F-082, F-083, F-084, F-085, F-086, F-087, F-088, F-089, F-090, F-091, F-092, F-093, F-094, F-095, F-096, F-097, F-098, F-099, F-100, F-101, F-102, F-103, F-104, F-105, F-106, F-107, F-108, F-109, F-110, F-111, F-112, F-113, F-114, F-115, F-116, F-117, F-118, F-119, F-120, F-121, F-122, F-123, F-124, F-125, F-126, F-127, F-128, F-129, F-130, F-131, F-132, F-133, F-134, F-135, F-136, F-137, F-138, F-139, F-140, F-141, F-142, F-143, F-144, F-145

REMAINING REQUIREMENT

Resolve any source-specific object, measurement, graphics or authority gap; formula-profile passes do not verify the entire paper.

SOURCE REFERENCES

PK-D006

TR-PK-D007 / Pink Paper Potential IP Status 001

IF

A candidate observation appears in the potential-IP register.

HOW

Preserve its category and historical enumeration as documentary provenance; distinguish counts of observations from validated technical claims.

THEN

Retain the record for review. This rerun makes no new determination of rights or novelty.

CURRENT EVIDENCE

All 48 extracted pages are retained separately. The formula register has 0 distinct IDs linked to this paper. Historical result counts remain historical; original graphics are not reproduced by extracted text.

REMAINING REQUIREMENT

Resolve any source-specific object, measurement, graphics or authority gap; formula-profile passes do not verify the entire paper.

SOURCE REFERENCES

PK-D007

TR-PK-D008 / Pink Paper R11 23000 Test and Simulation Results

IF

The R11 paper reports 23,000 historical deterministic scenarios.

HOW

Keep the scenario categories, expected/actual description and receipt references as historical evidence; attach this rerun's new logs separately.

THEN

Report historical claims and fresh measured test counts separately. Do not carry the old aggregate forward as newly executed tests.

CURRENT EVIDENCE

All 24 extracted pages are retained separately. The formula register has 0 distinct IDs linked to this paper. Historical result counts remain historical; original graphics are not reproduced by extracted text.

REMAINING REQUIREMENT

Resolve any source-specific object, measurement, graphics or authority gap; formula-profile passes do not verify the entire paper.

SOURCE REFERENCES

PK-D008

TR-PK-D009 / Pink Paper R12 46000 Aggregate Test and Simulation Results

IF

The R12 paper reports 46,000 cumulative R11/R12 scenarios.

HOW

Preserve cumulative accounting and category provenance, including repeated R11 coverage; use only current logs for this rerun's test verdict.

THEN

Keep the aggregate historical. Do not double-count repeated scenarios or infer fresh platform/physical verification.

CURRENT EVIDENCE

All 24 extracted pages are retained separately. The formula register has 0 distinct IDs linked to this paper. Historical result counts remain historical; original graphics are not reproduced by extracted text.

REMAINING REQUIREMENT

Resolve any source-specific object, measurement, graphics or authority gap; formula-profile passes do not verify the entire paper.

SOURCE REFERENCES

PK-D009

TR-PK-D010 / Pink Paper Testing Evidence 001

IF

Testing evidence is offered to support a lifecycle or formula claim.

HOW

Bind the evidence to source identity, tested behavior and scope; separate documentary expectations from executable receipts and environmental limitations.

THEN

Admit only the demonstrated evidence scope; unresolved sources or tests remain explicitly open.

CURRENT EVIDENCE

All 48 extracted pages are retained separately. The formula register has 0 distinct IDs linked to this paper. Historical result counts remain historical; original graphics are not reproduced by extracted text.

REMAINING REQUIREMENT

Resolve any source-specific object, measurement, graphics or authority gap; formula-profile passes do not verify the entire paper.

SOURCE REFERENCES

PK-D010

TR-PK-D011 / PinkPaper Volume02 Formulas F001 F050

IF

A formula F-001 through F-050 is invoked.

HOW

Read each formula's individual inputs, source expression, result dimension, domain and paper-page cross-reference. Run available profiles and preserve missing conversions.

THEN

Return the specific scalar result or HOLD/refusal; no formula is closed by a neighboring formula's success.

CURRENT EVIDENCE

All 106 extracted pages are retained separately. The formula register has 50 distinct IDs linked to this paper. Historical result counts remain historical; original graphics are not reproduced by extracted text.

INDIVIDUAL FORMULA LINKS

F-001, F-002, F-003, F-004, F-005, F-006, F-007, F-008, F-009, F-010, F-011, F-012, F-013, F-014, F-015, F-016, F-017, F-018, F-019, F-020, F-021, F-022, F-023, F-024, F-025, F-026, F-027, F-028, F-029, F-030, F-031, F-032, F-033, F-034, F-035, F-036, F-037, F-038, F-039, F-040, F-041, F-042, F-043, F-044, F-045, F-046, F-047, F-048, F-049, F-050

REMAINING REQUIREMENT

Resolve any source-specific object, measurement, graphics or authority gap; formula-profile passes do not verify the entire paper.

SOURCE REFERENCES

PK-D011

TR-PK-D012 / PinkPaper Volume03 Formulas F051 F100

IF

A formula F-051 through F-100 is invoked.

HOW

Apply the per-formula Teal register, including damping, signed values, correlation domains and geometry boundaries where supplied by the current source.

THEN

Keep each result and contract gap independent, with receipt evidence for available implementations.

CURRENT EVIDENCE

All 106 extracted pages are retained separately. The formula register has 50 distinct IDs linked to this paper. Historical result counts remain historical; original graphics are not reproduced by extracted text.

INDIVIDUAL FORMULA LINKS

F-051, F-052, F-053, F-054, F-055, F-056, F-057, F-058, F-059, F-060, F-061, F-062, F-063, F-064, F-065, F-066, F-067, F-068, F-069, F-070, F-071, F-072, F-073, F-074, F-075, F-076, F-077, F-078, F-079, F-080, F-081, F-082, F-083, F-084, F-085, F-086, F-087, F-088, F-089, F-090, F-091, F-092, F-093, F-094, F-095, F-096, F-097, F-098, F-099, F-100

REMAINING REQUIREMENT

Resolve any source-specific object, measurement, graphics or authority gap; formula-profile passes do not verify the entire paper.

SOURCE REFERENCES

PK-D012

TR-PK-D013 / PinkPaper Volume04 Formulas F101 F145

IF

A formula F-101 through F-145 is invoked.

HOW

Apply the per-formula Teal register for balances, intervals, pressure, flow and related predicates; preserve source-specific dimensions and gates.

THEN

Return a scoped result or hold. A numeric calculation does not complete its measurement and authority contract.

CURRENT EVIDENCE

All 96 extracted pages are retained separately. The formula register has 45 distinct IDs linked to this paper. Historical result counts remain historical; original graphics are not reproduced by extracted text.

INDIVIDUAL FORMULA LINKS

F-101, F-102, F-103, F-104, F-105, F-106, F-107, F-108, F-109, F-110, F-111, F-112, F-113, F-114, F-115, F-116, F-117, F-118, F-119, F-120, F-121, F-122, F-123, F-124, F-125, F-126, F-127, F-128, F-129, F-130, F-131, F-132, F-133, F-134, F-135, F-136, F-137, F-138, F-139, F-140, F-141, F-142, F-143, F-144, F-145

REMAINING REQUIREMENT

Resolve any source-specific object, measurement, graphics or authority gap; formula-profile passes do not verify the entire paper.

SOURCE REFERENCES

PK-D013

TR-PK-D014 / PinkPaper Volume05 Family and Objects

IF

A family manifestation or governed object participates in the Pink lifecycle.

HOW

Maintain distinct roles for Bangel, Elsa, JP, MK, JO and MJ; retain each object's source identity and cross-reference to the Teal corpus.

THEN

Record the role/object relationship without silently implementing an unbuilt host or transferring authority between families.

CURRENT EVIDENCE

All 47 extracted pages are retained separately. The formula register has 0 distinct IDs linked to this paper. Historical result counts remain historical; original graphics are not reproduced by extracted text.

REMAINING REQUIREMENT

Resolve any source-specific object, measurement, graphics or authority gap; formula-profile passes do not verify the entire paper.

SOURCE REFERENCES

PK-D014

TR-PK-D015 / PinkPaper Volume06 Products and WhitePapers

IF

A product or white-paper identity is invoked from the family ecosystem.

HOW

Preserve each product's application, scope and lifecycle references, and separate public executable implementations from documentary product proposals.

THEN

Return product-specific evidence status; shared family membership does not establish implementation parity.

CURRENT EVIDENCE

All 66 extracted pages are retained separately. The formula register has 0 distinct IDs linked to this paper. Historical result counts remain historical; original graphics are not reproduced by extracted text.

REMAINING REQUIREMENT

Resolve any source-specific object, measurement, graphics or authority gap; formula-profile passes do not verify the entire paper.

SOURCE REFERENCES

PK-D015

TR-PK-D016 / SC DRO PEARL PINK 001

IF

The semiconductor DRO/Pearl integration requests energy or node readiness.

HOW

Trace F-220 onward and the source-specific collection/start contracts individually, including conservation residuals and conservative reserve bounds.

THEN

Produce a reference calculation or hold; preserve the distinction between source model, simulation and calibrated device evidence.

CURRENT EVIDENCE

All 4 extracted pages are retained separately. The formula register has 14 distinct IDs linked to this paper. Historical result counts remain historical; original graphics are not reproduced by extracted text.

INDIVIDUAL FORMULA LINKS

F-220, F-221, F-222, F-223, F-224, F-225, F-226, F-227, F-228, F-229, F-230, F-231, F-232, F-233

REMAINING REQUIREMENT

Resolve any source-specific object, measurement, graphics or authority gap; formula-profile passes do not verify the entire paper.

SOURCE REFERENCES

PK-D016

TR-PK-D017 / SOLAR PINK CORE 001

IF

A shared solar-core profile declares intake, storage, load and reserve requirements.

HOW

Follow the common architecture while retaining each scale's independent calibration, environment, energy ledger and admission evidence.

THEN

Return scoped core evidence; passing one physical profile does not validate another scale.

CURRENT EVIDENCE

All 12 extracted pages are retained separately. The formula register has 12 distinct IDs linked to this paper. Historical result counts remain historical; original graphics are not reproduced by extracted text.

INDIVIDUAL FORMULA LINKS

F-146, F-147, F-148, F-149, F-150, F-151, F-152, F-153, F-154, F-155, F-156, F-157

REMAINING REQUIREMENT

Resolve any source-specific object, measurement, graphics or authority gap; formula-profile passes do not verify the entire paper.

SOURCE REFERENCES

PK-D017

TR-PK-D018 / SOLAR PINK MARINE 001

IF

The marine solar profile requests energy, propulsion-load or reserve coordination.

HOW

Trace intake, storage, recovery, thermal management and reserve formulas independently using marine-specific evidence declarations.

THEN

Return a marine reference result or hold. No vessel-control authority is created.

CURRENT EVIDENCE

All 12 extracted pages are retained separately. The formula register has 12 distinct IDs linked to this paper. Historical result counts remain historical; original graphics are not reproduced by extracted text.

INDIVIDUAL FORMULA LINKS

F-170, F-171, F-172, F-173, F-174, F-175, F-176, F-177, F-178, F-179, F-180, F-181

REMAINING REQUIREMENT

Resolve any source-specific object, measurement, graphics or authority gap; formula-profile passes do not verify the entire paper.

SOURCE REFERENCES

PK-D018

TR-PK-D019 / SOLAR PINK ROCKET 001

IF

The peaceful rocket/spacecraft electrical-support profile requests startup, reserve or telemetry review.

HOW

Retain its non-weaponized scope and profile-specific thermal/battery, fault and shutdown evidence; do not infer readiness from other solar scales.

THEN

Return a documentary or reference result within the source ceiling; flight or propulsion actuation is not established.

CURRENT EVIDENCE

All 12 extracted pages are retained separately. The formula register has 12 distinct IDs linked to this paper. Historical result counts remain historical; original graphics are not reproduced by extracted text.

INDIVIDUAL FORMULA LINKS

F-182, F-183, F-184, F-185, F-186, F-187, F-188, F-189, F-190, F-191, F-192, F-193

REMAINING REQUIREMENT

Resolve any source-specific object, measurement, graphics or authority gap; formula-profile passes do not verify the entire paper.

SOURCE REFERENCES

PK-D019

TR-PK-D020 / SOLAR PINK SEMI PHONE 001

IF

The semiconductor/phone solar profile requests battery or workload coordination.

HOW

Keep energy intake, battery/thermal state, workload demand, reserve allocation and accounting provenance separate and individually traceable.

THEN

Return a phone-profile reference result or hold; no battery/device performance is inferred from a generic scalar result.

CURRENT EVIDENCE

All 12 extracted pages are retained separately. The formula register has 12 distinct IDs linked to this paper. Historical result counts remain historical; original graphics are not reproduced by extracted text.

INDIVIDUAL FORMULA LINKS

F-158, F-159, F-160, F-161, F-162, F-163, F-164, F-165, F-166, F-167, F-168, F-169

REMAINING REQUIREMENT

Resolve any source-specific object, measurement, graphics or authority gap; formula-profile passes do not verify the entire paper.

SOURCE REFERENCES

PK-D020

TR-PINK-F-001 / R1 transition

IF

Invoke F-001 (R1 transition) only with the source-defined inputs, scope, evidence and result dimension (state). A complete executable parameter schema has not been bound to this ID.

HOW

Preserve the source relation exactly: R0 -> R1. Define and bind required evidence, validation rules, state/receipt transitions and authority scope. Caller-supplied Boolean assertions alone do not complete this contract.

THEN

Keep this formula OPEN. The current paper host rejects this ID with PAPER_PROFILE_UNIMPLEMENTED. The Teal assertion gate holds when method/proof is false. This expected refusal is not a completed implementation.

CURRENT EVIDENCE

Fresh refusal and hold evidence is recorded individually; no scalar result, transition, permit or physical effect is fabricated.

SOURCE DIMENSION

state

REMAINING REQUIREMENT

Define and bind required evidence, validation rules, state/receipt transitions and authority scope. Caller-supplied Boolean assertions alone do not complete this contract.

SOURCE REFERENCES

D004 pp. 6; D006 pp. 11,12,15,17,18; D011 pp. 1,2,5,7,8

Evidence: evidence/rerun/pending/F-001.json

TR-PINK-F-002 / R2 transition

IF

Invoke F-002 (R2 transition) only with the source-defined inputs, scope, evidence and result dimension (state). A complete executable parameter schema has not been bound to this ID.

HOW

Preserve the source relation exactly: R1 --validated--> R2. Define and bind required evidence, validation rules, state/receipt transitions and authority scope. Caller-supplied Boolean assertions alone do not complete this contract.

THEN

Keep this formula OPEN. The current paper host rejects this ID with PAPER_PROFILE_UNIMPLEMENTED. The Teal assertion gate holds when method/proof is false. This expected refusal is not a completed implementation.

CURRENT EVIDENCE

Fresh refusal and hold evidence is recorded individually; no scalar result, transition, permit or physical effect is fabricated.

SOURCE DIMENSION

state

REMAINING REQUIREMENT

Define and bind required evidence, validation rules, state/receipt transitions and authority scope. Caller-supplied Boolean assertions alone do not complete this contract.

SOURCE REFERENCES

D006 pp. 12,19,20; D011 pp. 2,9,10

Evidence: evidence/rerun/pending/F-002.json

TR-PINK-F-003 / Unknown invariant

IF

Invoke F-003 (Unknown invariant) only with the source-defined inputs, scope, evidence and result dimension (logical). A complete executable parameter schema has not been bound to this ID.

HOW

Preserve the source relation exactly: UNKNOWN != 0. Bind this formula ID to its typed value or invariant and source-specific tests. Existing language primitives are useful but do not constitute a complete formula contract.

THEN

Keep this formula OPEN. The current paper host rejects this ID with PAPER_PROFILE_UNIMPLEMENTED. The Teal assertion gate holds when method/proof is false. This expected refusal is not a completed implementation.

CURRENT EVIDENCE

Fresh refusal and hold evidence is recorded individually; no scalar result, transition, permit or physical effect is fabricated.

SOURCE DIMENSION

logical

REMAINING REQUIREMENT

Bind this formula ID to its typed value or invariant and source-specific tests. Existing language primitives are useful but do not constitute a complete formula contract.

SOURCE REFERENCES

D006 pp. 12,21,22; D011 pp. 2,11,12

Evidence: evidence/rerun/pending/F-003.json

TR-PINK-F-004 / Mass inflection

IF

Invoke F-004 (Mass inflection) only with the source-defined inputs, scope, evidence and result dimension (mass). A complete executable parameter schema has not been bound to this ID.

HOW

Preserve the source relation exactly: $m_{\text{floor}} = 23 \text{ mg}$. Bind this formula ID to its typed value or invariant and source-specific tests. Existing language primitives are useful but do not constitute a complete formula contract.

THEN

Keep this formula OPEN. The current paper host rejects this ID with PAPER_PROFILE_UNIMPLEMENTED. The Teal assertion gate holds when method/proof is false. This expected refusal is not a completed implementation.

CURRENT EVIDENCE

Fresh refusal and hold evidence is recorded individually; no scalar result, transition, permit or physical effect is fabricated.

SOURCE DIMENSION

mass

REMAINING REQUIREMENT

Bind this formula ID to its typed value or invariant and source-specific tests. Existing language primitives are useful but do not constitute a complete formula contract.

SOURCE REFERENCES

D006 pp. 12,23,24; D011 pp. 2,13,14

Evidence: evidence/rerun/pending/F-004.json

TR-PINK-F-005 / Noise smoothing

IF

Invoke F-005 with exactly these inputs: previous: Real, current: Real. Real values use finite decimal text; null remains unknown.

HOW

Source expression: $n_bar[t] = 0.9 * n_bar[t-1] + 0.1 * n[t]$. Current Bangel expression: $0.9 * previous + 0.1 * current$. Require every input to be known. No additional domain predicates are declared by this scalar profile.

THEN

Emit the scoped calculation result. Missing inputs produce their specific PINK_MISSING_* HOLD; failed profile checks produce PINK_DOMAIN. A false numeric predicate can occur in a PASS calculation receipt; it is not permission.

CURRENT EVIDENCE

Fixture inputs {"previous": "10", "current": "20"}; expected 11. Result matched through Bangel, admitted JP, the Bangel API, with validated receipt outputs. 2 missing-input cases and 0 supplied domain cases passed.

SOURCE DIMENSION

dimensionless

REMAINING REQUIREMENT

Complete the source-defined measurement/evidence contract, units and calibration bindings. Native C# and Hagar formula-ID bindings remain unverified in this rerun.

SOURCE REFERENCES

D006 pp. 12,25,26; D011 pp. 2,15,16

Evidence: evidence/rerun/pink/F-005.json

TR-PINK-F-006 / Trend estimator

IF

Invoke F-006 with exactly these inputs: previous_trend: Real, previous_smooth: Real, current_smooth: Real, dt: Real. Real values use finite decimal text; null remains unknown.

HOW

Source expression: $n_dot[t] = (2/3)*n_dot[t-1] + (1/3)*(n_bar[t]-n_bar[t-1])/dt$. Current Bangel expression: $(2.0 / 3.0) * previous_trend + (1.0 / 3.0) * ((current_smooth - previous_smooth) / dt)$. Require every input to be known. Require $dt > 0.0$.

THEN

Emit the scoped calculation result. Missing inputs produce their specific PINK_MISSING_* HOLD; failed profile checks produce PINK_DOMAIN. A false numeric predicate can occur in a PASS calculation receipt; it is not permission.

CURRENT EVIDENCE

Fixture inputs {"previous_trend": "3", "previous_smooth": "10", "current_smooth": "16", "dt": "2"}; expected 3. Result matched through Bangel, admitted JP, the Bangel API, with validated receipt outputs. 4 missing-input cases and 0 supplied domain cases passed.

SOURCE DIMENSION

1/time

REMAINING REQUIREMENT

Complete the source-defined measurement/evidence contract, units and calibration bindings. Native C# and Hagar formula-ID bindings remain unverified in this rerun.

SOURCE REFERENCES

D006 pp. 12,27,28; D011 pp. 2,17,18
Evidence: evidence/rerun/pink/F-006.json

TR-PINK-F-007 / Anti-spike gate

IF

Invoke F-007 (Anti-spike gate) only with the source-defined inputs, scope, evidence and result dimension (logical). A complete executable parameter schema has not been bound to this ID.

HOW

Preserve the source relation exactly: support $\geq$ 3 of 5 AND 3 qualified windows. Define and bind required evidence, validation rules, state/receipt transitions and authority scope. Caller-supplied Boolean assertions alone do not complete this contract.

THEN

Keep this formula OPEN. The current paper host rejects this ID with PAPER_PROFILE_UNIMPLEMENTED. The Teal assertion gate holds when method/proof is false. This expected refusal is not a completed implementation.

CURRENT EVIDENCE

Fresh refusal and hold evidence is recorded individually; no scalar result, transition, permit or physical effect is fabricated.

SOURCE DIMENSION

logical

REMAINING REQUIREMENT

Define and bind required evidence, validation rules, state/receipt transitions and authority scope. Caller-supplied Boolean assertions alone do not complete this contract.

SOURCE REFERENCES

D006 pp. 12,29,30; D011 pp. 2,19,20

Evidence: evidence/rerun/pending/F-007.json

TR-PINK-F-008 / Prediction gain

IF

Invoke F-008 with exactly these inputs: node: Int. Real values use finite decimal text; null remains unknown.

HOW

Source expression: $g_i = 0.1 \cdot (2/3)^{(i-1)}$. Current Bangel expression: var gain: Real = 0.1
for index in [2, 3, 4, 5, 6, 7, 8, 9] limit 8
if node >= index
set gain = gain * (2.0 / 3.0)
end
end
emit result = gain. Require every input to be known. Require node >= 1 and node <= 9.

THEN

Emit the scoped calculation result. Missing inputs produce their specific PINK_MISSING_* HOLD; failed profile checks produce PINK_DOMAIN. A false numeric predicate can occur in a PASS calculation receipt; it is not permission.

CURRENT EVIDENCE

Fixture inputs {"node": 1}; expected 0.1. Result matched through Bangel, admitted JP, the Bangel API, with validated receipt outputs. 1 missing-input cases and 0 supplied domain cases passed.

SOURCE DIMENSION

dimensionless

REMAINING REQUIREMENT

Complete the source-defined measurement/evidence contract, units and calibration bindings. Native C# and Hagar formula-ID bindings remain unverified in this rerun.

SOURCE REFERENCES

D006 pp. 12,31,32; D011 pp. 2,21,22
Evidence: evidence/rerun/pink/F-008.json

TR-PINK-F-009 / Covariance update

IF

Invoke F-009 (Covariance update) only with the source-defined inputs, scope, evidence and result dimension (normalized^2). A complete executable parameter schema has not been bound to this ID.

HOW

Preserve the source relation exactly: $\text{Sigma_next} = 0.9 * \text{Sigma_prev} + 0.1 * e * e^T$. Implement the source-defined vector/matrix, integer-count, geometric or numerical operator through Bangel and native C#. Specify dimensions, decimal precision, bounds and negative/unknown cases; do not replace vectors with an unmarked scalar.

THEN

Keep this formula OPEN. The current paper host rejects this ID with PAPER_PROFILE_UNIMPLEMENTED. The Teal assertion gate holds when method/proof is false. This expected refusal is not a completed implementation.

CURRENT EVIDENCE

Fresh refusal and hold evidence is recorded individually; no scalar result, transition, permit or physical effect is fabricated.

SOURCE DIMENSION

normalized^2

REMAINING REQUIREMENT

Implement the source-defined vector/matrix, integer-count, geometric or numerical operator through Bangel and native C#. Specify dimensions, decimal precision, bounds and negative/unknown cases; do not replace vectors with an unmarked scalar.

SOURCE REFERENCES

D006 pp. 33,34; D011 pp. 23,24

Evidence: evidence/rerun/pending/F-009.json

TR-PINK-F-010 / Shadow depth

IF

Invoke F-010 (Shadow depth) only with the source-defined inputs, scope, evidence and result dimension (normalized). A complete executable parameter schema has not been bound to this ID.

HOW

Preserve the source relation exactly: $H = \sqrt{\lambda_{\max}(\Sigma)}$. Implement the source-defined vector/matrix, integer-count, geometric or numerical operator through Bangel and native C#. Specify dimensions, decimal precision, bounds and negative/unknown cases; do not replace vectors with an unmarked scalar.

THEN

Keep this formula OPEN. The current paper host rejects this ID with PAPER_PROFILE_UNIMPLEMENTED. The Teal assertion gate holds when method/proof is false. This expected refusal is not a completed implementation.

CURRENT EVIDENCE

Fresh refusal and hold evidence is recorded individually; no scalar result, transition, permit or physical effect is fabricated.

SOURCE DIMENSION

normalized

REMAINING REQUIREMENT

Implement the source-defined vector/matrix, integer-count, geometric or numerical operator through Bangel and native C#. Specify dimensions, decimal precision, bounds and negative/unknown cases; do not replace vectors with an unmarked scalar.

SOURCE REFERENCES

D006 pp. 35,36; D011 pp. 25,26

Evidence: evidence/rerun/pending/F-010.json

TR-PINK-F-011 / Shadow growth rate

IF

Invoke F-011 with exactly these inputs: next_depth: Real, previous_depth: Real, dt: Real. Real values use finite decimal text; null remains unknown.

HOW

Source expression: $v_shadow = (H_next - H_prev) / dt$. Current Bangel expression: $(next_depth - previous_depth) / dt$. Require every input to be known. Require $next_depth \geq 0.0$ and $previous_depth \geq 0.0$ and $dt > 0.0$.

THEN

Emit the scoped calculation result. Missing inputs produce their specific PINK_MISSING_* HOLD; failed profile checks produce PINK_DOMAIN. A false numeric predicate can occur in a PASS calculation receipt; it is not permission.

CURRENT EVIDENCE

Fixture inputs {"next_depth": "7", "previous_depth": "3", "dt": "2"}; expected 2. Result matched through Bangel, admitted JP, the Bangel API, with validated receipt outputs. 3 missing-input cases and 1 supplied domain cases passed.

SOURCE DIMENSION

normalized/time

REMAINING REQUIREMENT

Complete the source-defined measurement/evidence contract, units and calibration bindings. Native C# and Hagar formula-ID bindings remain unverified in this rerun.

SOURCE REFERENCES

D006 pp. 37,38; D011 pp. 27,28
Evidence: evidence/rerun/pink/F-011.json

TR-PINK-F-012 / Front-end allocation

IF

Invoke F-012 with exactly these inputs: . Real values use finite decimal text; null remains unknown.

HOW

Source expression: $a0 = 48383829/100000000$. Current Bangel expression: $48383829.0 / 100000000.0$.
Require every input to be known. No additional domain predicates are declared by this scalar profile.

THEN

Emit the scoped calculation result. Missing inputs produce their specific PINK_MISSING_* HOLD; failed profile checks produce PINK_DOMAIN. A false numeric predicate can occur in a PASS calculation receipt; it is not permission.

CURRENT EVIDENCE

Fixture inputs {}; expected 0.48383829. Result matched through Bangel, admitted JP, the Bangel API, with validated receipt outputs. 0 missing-input cases and 0 supplied domain cases passed.

SOURCE DIMENSION

ratio

REMAINING REQUIREMENT

Complete the source-defined measurement/evidence contract, units and calibration bindings. Native C# and Hagar formula-ID bindings remain unverified in this rerun.

SOURCE REFERENCES

D006 pp. 39,40; D011 pp. 29,30

Evidence: evidence/rerun/pink/F-012.json

TR-PINK-F-013 / Front-end reserve

IF

Invoke F-013 with exactly these inputs: . Real values use finite decimal text; null remains unknown.

HOW

Source expression: $r0 = 51616171/100000000$. Current Bangel expression: $51616171.0 / 100000000.0$.
Require every input to be known. No additional domain predicates are declared by this scalar profile.

THEN

Emit the scoped calculation result. Missing inputs produce their specific PINK_MISSING_* HOLD; failed profile checks produce PINK_DOMAIN. A false numeric predicate can occur in a PASS calculation receipt; it is not permission.

CURRENT EVIDENCE

Fixture inputs {}; expected 0.51616171. Result matched through Bangel, admitted JP, the Bangel API, with validated receipt outputs. 0 missing-input cases and 0 supplied domain cases passed.

SOURCE DIMENSION

ratio

REMAINING REQUIREMENT

Complete the source-defined measurement/evidence contract, units and calibration bindings. Native C# and Hagar formula-ID bindings remain unverified in this rerun.

SOURCE REFERENCES

D006 pp. 41,42; D011 pp. 31,32

Evidence: evidence/rerun/pink/F-013.json

TR-PINK-F-014 / Bounded allocation update

IF

Invoke F-014 (Bounded allocation update) only with the source-defined inputs, scope, evidence and result dimension (ratio vector). A complete executable parameter schema has not been bound to this ID.

HOW

Preserve the source relation exactly: $w_{next} = \text{projection}((2/3)w + (1/3)w_{target})$. Implement the source-defined vector/matrix, integer-count, geometric or numerical operator through Bangel and native C#. Specify dimensions, decimal precision, bounds and negative/unknown cases; do not replace vectors with an unmarked scalar.

THEN

Keep this formula OPEN. The current paper host rejects this ID with PAPER_PROFILE_UNIMPLEMENTED. The Teal assertion gate holds when method/proof is false. This expected refusal is not a completed implementation.

CURRENT EVIDENCE

Fresh refusal and hold evidence is recorded individually; no scalar result, transition, permit or physical effect is fabricated.

SOURCE DIMENSION

ratio vector

REMAINING REQUIREMENT

Implement the source-defined vector/matrix, integer-count, geometric or numerical operator through Bangel and native C#. Specify dimensions, decimal precision, bounds and negative/unknown cases; do not replace vectors with an unmarked scalar.

SOURCE REFERENCES

D006 pp. 43,44; D011 pp. 33,34

Evidence: evidence/rerun/pending/F-014.json

TR-PINK-F-015 / Request memory

IF

Invoke F-015 with exactly these inputs: rate: Real, bytes_per_request: Real, latency: Real. Real values use finite decimal text; null remains unknown.

HOW

Source expression: $M_{request} = \lambda_{hat} * bytes_per_request * latency_hat$. Current Bangel expression: $rate * bytes_per_request * latency$. Require every input to be known. Require $rate \geq 0.0$ and $bytes_per_request \geq 0.0$ and $latency \geq 0.0$.

THEN

Emit the scoped calculation result. Missing inputs produce their specific PINK_MISSING_* HOLD; failed profile checks produce PINK_DOMAIN. A false numeric predicate can occur in a PASS calculation receipt; it is not permission.

CURRENT EVIDENCE

Fixture inputs {"rate": "10", "bytes_per_request": "100", "latency": "2"}; expected 2000. Result matched through Bangel, admitted JP, the Bangel API, with validated receipt outputs. 3 missing-input cases and 0 supplied domain cases passed.

SOURCE DIMENSION

bytes

REMAINING REQUIREMENT

Complete the source-defined measurement/evidence contract, units and calibration bindings. Native C# and Hagar formula-ID bindings remain unverified in this rerun.

SOURCE REFERENCES

D006 pp. 45,46; D011 pp. 35,36

Evidence: evidence/rerun/pink/F-015.json

TR-PINK-F-016 / Memory preallocation

IF

Invoke F-016 with exactly these inputs: request: Real, sync: Real, residual: Real, evidence: Real, headroom: Real. Real values use finite decimal text; null remains unknown.

HOW

Source expression: $M_{pre} = M_{request} + M_{sync} + M_{residual} + M_{evidence} + M_{headroom}$. Current Bangel expression: request + sync + residual + evidence + headroom. Require every input to be known. Require request ≥ 0.0 and sync ≥ 0.0 and residual ≥ 0.0 and evidence ≥ 0.0 and headroom ≥ 0.0 .

THEN

Emit the scoped calculation result. Missing inputs produce their specific PINK_MISSING_* HOLD; failed profile checks produce PINK_DOMAIN. A false numeric predicate can occur in a PASS calculation receipt; it is not permission.

CURRENT EVIDENCE

Fixture inputs {"request": "10", "sync": "2", "residual": "3", "evidence": "4", "headroom": "5"}; expected 24. Result matched through Bangel, admitted JP, the Bangel API, with validated receipt outputs. 5 missing-input cases and 0 supplied domain cases passed.

SOURCE DIMENSION

bytes

REMAINING REQUIREMENT

Complete the source-defined measurement/evidence contract, units and calibration bindings. Native C# and Hagar formula-ID bindings remain unverified in this rerun.

SOURCE REFERENCES

D006 pp. 47,48; D011 pp. 37,38
Evidence: evidence/rerun/pink/F-016.json

TR-PINK-F-017 / Hard flush

IF

Invoke F-017 (Hard flush) only with the source-defined inputs, scope, evidence and result dimension (state sequence). A complete executable parameter schema has not been bound to this ID.

HOW

Preserve the source relation exactly: QUIESCE -> SEAL -> CHECKPOINT -> DETACH -> RECLAIM. Define and bind required evidence, validation rules, state/receipt transitions and authority scope. Caller-supplied Boolean assertions alone do not complete this contract.

THEN

Keep this formula OPEN. The current paper host rejects this ID with PAPER_PROFILE_UNIMPLEMENTED. The Teal assertion gate holds when method/proof is false. This expected refusal is not a completed implementation.

CURRENT EVIDENCE

Fresh refusal and hold evidence is recorded individually; no scalar result, transition, permit or physical effect is fabricated.

SOURCE DIMENSION

state sequence

REMAINING REQUIREMENT

Define and bind required evidence, validation rules, state/receipt transitions and authority scope. Caller-supplied Boolean assertions alone do not complete this contract.

SOURCE REFERENCES

D006 pp. 49,50; D011 pp. 39,40

Evidence: evidence/rerun/pending/F-017.json

TR-PINK-F-018 / Charge balance

IF

Invoke F-018 with exactly these inputs: intake: Real, leak: Real, release: Real. Real values use finite decimal text; null remains unknown.

HOW

Source expression: $dQ/dt = I_{\text{intake}} - I_{\text{leak}} - I_{\text{release}}$. Current Bangel expression: intake - leak - release. Require every input to be known. No additional domain predicates are declared by this scalar profile.

THEN

Emit the scoped calculation result. Missing inputs produce their specific PINK_MISSING_* HOLD; failed profile checks produce PINK_DOMAIN. A false numeric predicate can occur in a PASS calculation receipt; it is not permission.

CURRENT EVIDENCE

Fixture inputs {"intake": "10", "leak": "2", "release": "3"}; expected 5. Result matched through Bangel, admitted JP, the Bangel API, with validated receipt outputs. 3 missing-input cases and 0 supplied domain cases passed.

SOURCE DIMENSION

charge/time

REMAINING REQUIREMENT

Complete the source-defined measurement/evidence contract, units and calibration bindings. Native C# and Hagar formula-ID bindings remain unverified in this rerun.

SOURCE REFERENCES

D006 pp. 51,52; D011 pp. 41,42
Evidence: evidence/rerun/pink/F-018.json

TR-PINK-F-019 / Capacitor energy

IF

Invoke F-019 with exactly these inputs: capacitance: Real, voltage: Real. Real values use finite decimal text; null remains unknown.

HOW

Source expression: $E = 0.5 * C * V^2$. Current Bangel expression: $0.5 * \text{capacitance} * \text{voltage} * \text{voltage}$. Require every input to be known. Require capacitance ≥ 0.0 .

THEN

Emit the scoped calculation result. Missing inputs produce their specific PINK_MISSING_* HOLD; failed profile checks produce PINK_DOMAIN. A false numeric predicate can occur in a PASS calculation receipt; it is not permission.

CURRENT EVIDENCE

Fixture inputs {"capacitance": "2", "voltage": "3"}; expected 9. Result matched through Bangel, admitted JP, the Bangel API, with validated receipt outputs. 2 missing-input cases and 0 supplied domain cases passed.

SOURCE DIMENSION

energy

REMAINING REQUIREMENT

Complete the source-defined measurement/evidence contract, units and calibration bindings. Native C# and Hagar formula-ID bindings remain unverified in this rerun.

SOURCE REFERENCES

D006 pp. 53,54; D011 pp. 43,44
Evidence: evidence/rerun/pink/F-019.json

TR-PINK-F-020 / General stored energy

IF

Invoke F-020 (General stored energy) only with the source-defined inputs, scope, evidence and result dimension (energy). A complete executable parameter schema has not been bound to this ID.

HOW

Preserve the source relation exactly: $E = \text{integral } V(q)dq$. Provide the sampled-signal input contract, domain/boundary, timestamps, quadrature/interpolation and error/missing-data policy. Retain each formula's units and source integrand.

THEN

Keep this formula OPEN. The current paper host rejects this ID with PAPER_PROFILE_UNIMPLEMENTED. The Teal assertion gate holds when method/proof is false. This expected refusal is not a completed implementation.

CURRENT EVIDENCE

Fresh refusal and hold evidence is recorded individually; no scalar result, transition, permit or physical effect is fabricated.

SOURCE DIMENSION

energy

REMAINING REQUIREMENT

Provide the sampled-signal input contract, domain/boundary, timestamps, quadrature/interpolation and error/missing-data policy. Retain each formula's units and source integrand.

SOURCE REFERENCES

D006 pp. 55,56; D011 pp. 45,46

Evidence: evidence/rerun/pending/F-020.json

TR-PINK-F-021 / Energy balance

IF

Invoke F-021 with exactly these inputs: energy_in: Real, storage_delta: Real, delivered: Real, containment: Real, loss: Real. Real values use finite decimal text; null remains unknown.

HOW

Source expression: $r_E = E_{in} - \Delta E_{storage} - E_{delivered} - E_{containment} - E_{loss}$. Current Bangel expression: energy_in - storage_delta - delivered - containment - loss. Require every input to be known. No additional domain predicates are declared by this scalar profile.

THEN

Emit the scoped calculation result. Missing inputs produce their specific PINK_MISSING_* HOLD; failed profile checks produce PINK_DOMAIN. A false numeric predicate can occur in a PASS calculation receipt; it is not permission.

CURRENT EVIDENCE

Fixture inputs {"energy_in": "100", "storage_delta": "10", "delivered": "60", "containment": "5", "loss": "25"}; expected 0. Result matched through Bangel, admitted JP, the Bangel API, with validated receipt outputs. 5 missing-input cases and 0 supplied domain cases passed.

SOURCE DIMENSION

energy

REMAINING REQUIREMENT

Complete the source-defined measurement/evidence contract, units and calibration bindings. Native C# and Hagar formula-ID bindings remain unverified in this rerun.

SOURCE REFERENCES

D006 pp. 57,58; D011 pp. 47,48
Evidence: evidence/rerun/pink/F-021.json

TR-PINK-F-022 / Mass balance

IF

Invoke F-022 with exactly these inputs: initial: Real, incoming: Real, final: Real, outgoing: Real. Real values use finite decimal text; null remains unknown.

HOW

Source expression: $r_M = M_initial + M_inputs - M_final - M_outputs$. Current Bangel expression: initial + incoming - final - outgoing. Require every input to be known. No additional domain predicates are declared by this scalar profile.

THEN

Emit the scoped calculation result. Missing inputs produce their specific PINK_MISSING_* HOLD; failed profile checks produce PINK_DOMAIN. A false numeric predicate can occur in a PASS calculation receipt; it is not permission.

CURRENT EVIDENCE

Fixture inputs {"initial": "10", "incoming": "2", "final": "9", "outgoing": "3"}; expected 0. Result matched through Bangel, admitted JP, the Bangel API, with validated receipt outputs. 4 missing-input cases and 0 supplied domain cases passed.

SOURCE DIMENSION

mass

REMAINING REQUIREMENT

Complete the source-defined measurement/evidence contract, units and calibration bindings. Native C# and Hagar formula-ID bindings remain unverified in this rerun.

SOURCE REFERENCES

D006 pp. 59,60; D011 pp. 49,50
Evidence: evidence/rerun/pink/F-022.json

TR-PINK-F-023 / EVE screen balance

IF

Invoke F-023 with exactly these inputs: screen_in: Real, captured: Real, passed: Real, retained: Real. Real values use finite decimal text; null remains unknown.

HOW

Source expression: $M_{screen_in} = M_{captured} + M_{passed} + M_{retained} + r_{screen}$. Current Bangel expression: $screen_in - captured - passed - retained$. Require every input to be known. No additional domain predicates are declared by this scalar profile.

THEN

Emit the scoped calculation result. Missing inputs produce their specific PINK_MISSING_* HOLD; failed profile checks produce PINK_DOMAIN. A false numeric predicate can occur in a PASS calculation receipt; it is not permission.

CURRENT EVIDENCE

Fixture inputs {"screen_in": "10", "captured": "4", "passed": "3", "retained": "3"}; expected 0. Result matched through Bangel, admitted JP, the Bangel API, with validated receipt outputs. 4 missing-input cases and 0 supplied domain cases passed.

SOURCE DIMENSION

mass

REMAINING REQUIREMENT

Complete the source-defined measurement/evidence contract, units and calibration bindings. Native C# and Hagar formula-ID bindings remain unverified in this rerun.

SOURCE REFERENCES

D006 pp. 61,62; D011 pp. 51,52
Evidence: evidence/rerun/pink/F-023.json

TR-PINK-F-024 / EVE evaporation

IF

Invoke F-024 (EVE evaporation) only with the source-defined inputs, scope, evidence and result dimension (mass). A complete executable parameter schema has not been bound to this ID.

HOW

Preserve the source relation exactly: $M_{\text{evap}} = \text{integral integral } J_m \text{ dA dt}$. Provide the sampled-signal input contract, domain/boundary, timestamps, quadrature/interpolation and error/missing-data policy. Retain each formula's units and source integrand.

THEN

Keep this formula OPEN. The current paper host rejects this ID with PAPER_PROFILE_UNIMPLEMENTED. The Teal assertion gate holds when method/proof is false. This expected refusal is not a completed implementation.

CURRENT EVIDENCE

Fresh refusal and hold evidence is recorded individually; no scalar result, transition, permit or physical effect is fabricated.

SOURCE DIMENSION

mass

REMAINING REQUIREMENT

Provide the sampled-signal input contract, domain/boundary, timestamps, quadrature/interpolation and error/missing-data policy. Retain each formula's units and source integrand.

SOURCE REFERENCES

D006 pp. 63,64; D011 pp. 53,54

Evidence: evidence/rerun/pending/F-024.json

TR-PINK-F-025 / Upward force

IF

Invoke F-025 with exactly these inputs: charge: Real, electric_field: Real, buoyancy: Real, mass: Real, gravity: Real, drag: Real, contact: Real, adhesion: Real. Real values use finite decimal text; null remains unknown.

HOW

Source expression: $F_z = qE_z + F_b - mg - D_z - F_{\text{contact}} - F_{\text{adhesion}}$. Current Bangel expression: $\text{charge} * \text{electric_field} + \text{buoyancy} - \text{mass} * \text{gravity} - \text{drag} - \text{contact} - \text{adhesion}$. Require every input to be known. Require mass ≥ 0.0 and gravity ≥ 0.0 .

THEN

Emit the scoped calculation result. Missing inputs produce their specific PINK_MISSING_* HOLD; failed profile checks produce PINK_DOMAIN. A false numeric predicate can occur in a PASS calculation receipt; it is not permission.

CURRENT EVIDENCE

Fixture inputs {"charge": "2", "electric_field": "3", "buoyancy": "20", "mass": "1", "gravity": "10", "drag": "2", "contact": "1", "adhesion": "1"}; expected 12. Result matched through Bangel, admitted JP, the Bangel API, with validated receipt outputs. 8 missing-input cases and 1 supplied domain cases passed.

SOURCE DIMENSION

force

REMAINING REQUIREMENT

Complete the source-defined measurement/evidence contract, units and calibration bindings. Native C# and Hagar formula-ID bindings remain unverified in this rerun.

SOURCE REFERENCES

D006 pp. 65,66; D011 pp. 55,56

Evidence: evidence/rerun/pink/F-025.json

TR-PINK-F-026 / Coordinate mapping

IF

Invoke F-026 (Coordinate mapping) only with the source-defined inputs, scope, evidence and result dimension (length vector). A complete executable parameter schema has not been bound to this ID.

HOW

Preserve the source relation exactly: $p_P(x,y,z)=o_P+x*a_P+y*b_P+z*c_P$. Implement the source-defined vector/matrix, integer-count, geometric or numerical operator through Bangel and native C#. Specify dimensions, decimal precision, bounds and negative/unknown cases; do not replace vectors with an unmarked scalar.

THEN

Keep this formula OPEN. The current paper host rejects this ID with PAPER_PROFILE_UNIMPLEMENTED. The Teal assertion gate holds when method/proof is false. This expected refusal is not a completed implementation.

CURRENT EVIDENCE

Fresh refusal and hold evidence is recorded individually; no scalar result, transition, permit or physical effect is fabricated.

SOURCE DIMENSION

length vector

REMAINING REQUIREMENT

Implement the source-defined vector/matrix, integer-count, geometric or numerical operator through Bangel and native C#. Specify dimensions, decimal precision, bounds and negative/unknown cases; do not replace vectors with an unmarked scalar.

SOURCE REFERENCES

D006 pp. 67,68; D011 pp. 57,58

Evidence: evidence/rerun/pending/F-026.json

TR-PINK-F-027 / Sister physical umbrella count

IF

Invoke F-027 (Sister physical umbrella count) only with the source-defined inputs, scope, evidence and result dimension (count). A complete executable parameter schema has not been bound to this ID.

HOW

Preserve the source relation exactly: $N_U = \max_k \text{ceil}(E_k / ((1-h_k) * C_{Uk}))$. Implement the source-defined vector/matrix, integer-count, geometric or numerical operator through Bangel and native C#. Specify dimensions, decimal precision, bounds and negative/unknown cases; do not replace vectors with an unmarked scalar.

THEN

Keep this formula OPEN. The current paper host rejects this ID with PAPER_PROFILE_UNIMPLEMENTED. The Teal assertion gate holds when method/proof is false. This expected refusal is not a completed implementation.

CURRENT EVIDENCE

Fresh refusal and hold evidence is recorded individually; no scalar result, transition, permit or physical effect is fabricated.

SOURCE DIMENSION

count

REMAINING REQUIREMENT

Implement the source-defined vector/matrix, integer-count, geometric or numerical operator through Bangel and native C#. Specify dimensions, decimal precision, bounds and negative/unknown cases; do not replace vectors with an unmarked scalar.

SOURCE REFERENCES

D006 pp. 69,70; D011 pp. 59,60
Evidence: evidence/rerun/pending/F-027.json

TR-PINK-F-028 / Byte balance

IF

Invoke F-028 with exactly these inputs: allocated: Real, active: Real, released: Real, retained: Real, exported: Real, compacted: Real. Real values use finite decimal text; null remains unknown.

HOW

Source expression: $r_B = B_alloc - B_active - B_released - B_retained - B_exported - B_compacted$. Current Bangel expression: allocated - active - released - retained - exported - compacted. Require every input to be known. No additional domain predicates are declared by this scalar profile.

THEN

Emit the scoped calculation result. Missing inputs produce their specific PINK_MISSING_* HOLD; failed profile checks produce PINK_DOMAIN. A false numeric predicate can occur in a PASS calculation receipt; it is not permission.

CURRENT EVIDENCE

Fixture inputs {"allocated": "100", "active": "40", "released": "20", "retained": "10", "exported": "20", "compacted": "10"}; expected 0. Result matched through Bangel, admitted JP, the Bangel API, with validated receipt outputs. 6 missing-input cases and 0 supplied domain cases passed.

SOURCE DIMENSION

bytes

REMAINING REQUIREMENT

Complete the source-defined measurement/evidence contract, units and calibration bindings. Native C# and Hagar formula-ID bindings remain unverified in this rerun.

SOURCE REFERENCES

D006 pp. 71,72; D011 pp. 61,62
Evidence: evidence/rerun/pink/F-028.json

TR-PINK-F-029 / Residual consequence

IF

Invoke F-029 (Residual consequence) only with the source-defined inputs, scope, evidence and result dimension (byte-seconds). A complete executable parameter schema has not been bound to this ID.

HOW

Preserve the source relation exactly: $C_B = \text{integral } B_{\text{residual}}(t)dt$. Provide the sampled-signal input contract, domain/boundary, timestamps, quadrature/interpolation and error/missing-data policy. Retain each formula's units and source integrand.

THEN

Keep this formula OPEN. The current paper host rejects this ID with PAPER_PROFILE_UNIMPLEMENTED. The Teal assertion gate holds when method/proof is false. This expected refusal is not a completed implementation.

CURRENT EVIDENCE

Fresh refusal and hold evidence is recorded individually; no scalar result, transition, permit or physical effect is fabricated.

SOURCE DIMENSION

byte-seconds

REMAINING REQUIREMENT

Provide the sampled-signal input contract, domain/boundary, timestamps, quadrature/interpolation and error/missing-data policy. Retain each formula's units and source integrand.

SOURCE REFERENCES

D006 pp. 73,74; D011 pp. 63,64

Evidence: evidence/rerun/pending/F-029.json

TR-PINK-F-030 / Protected liquidity

IF

Invoke F-030 with exactly these inputs: near: Real, emergency: Real, tax: Real, fees: Real, uncertainty: Real. Real values use finite decimal text; null remains unknown.

HOW

Source expression: $L_{protected_H} = O_{near_H} + R_{emergency_H} + R_{tax_H} + R_{fees_H} + U_{cash_H}$. Current Bangel expression: near + emergency + tax + fees + uncertainty. Require every input to be known. No additional domain predicates are declared by this scalar profile.

THEN

Emit the scoped calculation result. Missing inputs produce their specific PINK_MISSING_* HOLD; failed profile checks produce PINK_DOMAIN. A false numeric predicate can occur in a PASS calculation receipt; it is not permission.

CURRENT EVIDENCE

Fixture inputs {"near": "10", "emergency": "20", "tax": "3", "fees": "4", "uncertainty": "5"}; expected 42. Result matched through Bangel, admitted JP, the Bangel API, with validated receipt outputs. 5 missing-input cases and 0 supplied domain cases passed.

SOURCE DIMENSION

currency

REMAINING REQUIREMENT

Complete the source-defined measurement/evidence contract, units and calibration bindings. Native C# and Hagar formula-ID bindings remain unverified in this rerun.

SOURCE REFERENCES

D006 pp. 75,76; D011 pp. 65,66

Evidence: evidence/rerun/pink/F-030.json

TR-PINK-F-031 / Investable surplus

IF

Invoke F-031 with exactly these inputs: available: Real, protected: Real. Real values use finite decimal text; null remains unknown.

HOW

Source expression: $S_{investable_L} = \max(0, L_{available_L} - L_{protected_H})$. Current Bangel expression: `math.max(0.0, available - protected)`. Require every input to be known. No additional domain predicates are declared by this scalar profile.

THEN

Emit the scoped calculation result. Missing inputs produce their specific `PINK_MISSING_* HOLD`; failed profile checks produce `PINK_DOMAIN`. A false numeric predicate can occur in a PASS calculation receipt; it is not permission.

CURRENT EVIDENCE

Fixture inputs `{"available": "50", "protected": "60"}`; expected 0. Result matched through Bangel, admitted JP, the Bangel API, with validated receipt outputs. 2 missing-input cases and 0 supplied domain cases passed.

SOURCE DIMENSION

currency

REMAINING REQUIREMENT

Complete the source-defined measurement/evidence contract, units and calibration bindings. Native C# and Hagar formula-ID bindings remain unverified in this rerun.

SOURCE REFERENCES

D006 pp. 77,78; D011 pp. 67,68
Evidence: `evidence/rerun/pink/F-031.json`

TR-PINK-F-032 / Risk-capital ceiling

IF

Invoke F-032 with exactly these inputs: investable: Real, risk: Real, product: Real, regulatory: Real, custody: Real, concentration: Real. Real values use finite decimal text; null remains unknown.

HOW

Source expression: $A_{risk_max} = \min(S_{investable_L}, L_{risk}, L_{product}, L_{regulatory}, L_{custody}, L_{concentration})$. Current Bangel expression: $\text{math.min}(\text{math.min}(\text{math.min}(\text{investable}, \text{risk}), \text{math.min}(\text{product}, \text{regulatory})), \text{math.min}(\text{custody}, \text{concentration}))$. Require every input to be known. Require $\text{investable} \geq 0.0$ and $\text{risk} \geq 0.0$ and $\text{product} \geq 0.0$ and $\text{regulatory} \geq 0.0$ and $\text{custody} \geq 0.0$ and $\text{concentration} \geq 0.0$.

THEN

Emit the scoped calculation result. Missing inputs produce their specific PINK_MISSING_* HOLD; failed profile checks produce PINK_DOMAIN. A false numeric predicate can occur in a PASS calculation receipt; it is not permission.

CURRENT EVIDENCE

Fixture inputs {"investable": "90", "risk": "80", "product": "70", "regulatory": "60", "custody": "50", "concentration": "40"}; expected 40. Result matched through Bangel, admitted JP, the Bangel API, with validated receipt outputs. 6 missing-input cases and 1 supplied domain cases passed.

SOURCE DIMENSION

currency

REMAINING REQUIREMENT

Complete the source-defined measurement/evidence contract, units and calibration bindings. Native C# and Hagar formula-ID bindings remain unverified in this rerun.

SOURCE REFERENCES

D006 pp. 79,80; D011 pp. 69,70
Evidence: evidence/rerun/pink/F-032.json

TR-PINK-F-033 / Portfolio concentration

IF

Invoke F-033 with exactly these inputs: asset_high: Real, portfolio_low: Real. Real values use finite decimal text; null remains unknown.

HOW

Source expression: $C_i = \text{abs}(V_i_H)/V_{\text{portfolio_L}}$. Current Bangel expression: `math.abs(asset_high) / portfolio_low`. Require every input to be known. Require `portfolio_low > 0.0`.

THEN

Emit the scoped calculation result. Missing inputs produce their specific `PINK_MISSING_* HOLD`; failed profile checks produce `PINK_DOMAIN`. A false numeric predicate can occur in a `PASS` calculation receipt; it is not permission.

CURRENT EVIDENCE

Fixture inputs `{"asset_high": "-25", "portfolio_low": "100"}`; expected 0.25. Result matched through Bangel, admitted JP, the Bangel API, with validated receipt outputs. 2 missing-input cases and 1 supplied domain cases passed.

SOURCE DIMENSION

ratio

REMAINING REQUIREMENT

Complete the source-defined measurement/evidence contract, units and calibration bindings. Native C# and Hagar formula-ID bindings remain unverified in this rerun.

SOURCE REFERENCES

D006 pp. 81,82; D011 pp. 71,72
Evidence: `evidence/rerun/pink/F-033.json`

TR-PINK-F-034 / Portfolio variance

IF

Invoke F-034 (Portfolio variance) only with the source-defined inputs, scope, evidence and result dimension (return^2). A complete executable parameter schema has not been bound to this ID.

HOW

Preserve the source relation exactly: $\sigma_p^2 = w^T \Sigma w$. Implement the source-defined vector/matrix, integer-count, geometric or numerical operator through Bangel and native C#. Specify dimensions, decimal precision, bounds and negative/unknown cases; do not replace vectors with an unmarked scalar.

THEN

Keep this formula OPEN. The current paper host rejects this ID with PAPER_PROFILE_UNIMPLEMENTED. The Teal assertion gate holds when method/proof is false. This expected refusal is not a completed implementation.

CURRENT EVIDENCE

Fresh refusal and hold evidence is recorded individually; no scalar result, transition, permit or physical effect is fabricated.

SOURCE DIMENSION

return^2

REMAINING REQUIREMENT

Implement the source-defined vector/matrix, integer-count, geometric or numerical operator through Bangel and native C#. Specify dimensions, decimal precision, bounds and negative/unknown cases; do not replace vectors with an unmarked scalar.

SOURCE REFERENCES

D006 pp. 83,84; D011 pp. 73,74

Evidence: evidence/rerun/pending/F-034.json

TR-PINK-F-035 / Capital friction

IF

Invoke F-035 with exactly these inputs: fees: Real, spread: Real, slippage: Real, tax: Real, custody: Real, compliance: Real, latency: Real. Real values use finite decimal text; null remains unknown.

HOW

Source expression: $F_{\text{capital_H}} = \text{fees} + \text{spread} + \text{slippage} + \text{tax} + \text{custody} + \text{compliance} + \text{latency}$. Current Bangel expression: $\text{fees} + \text{spread} + \text{slippage} + \text{tax} + \text{custody} + \text{compliance} + \text{latency}$. Require every input to be known. No additional domain predicates are declared by this scalar profile.

THEN

Emit the scoped calculation result. Missing inputs produce their specific PINK_MISSING_* HOLD; failed profile checks produce PINK_DOMAIN. A false numeric predicate can occur in a PASS calculation receipt; it is not permission.

CURRENT EVIDENCE

Fixture inputs {"fees": "1", "spread": "2", "slippage": "3", "tax": "4", "custody": "5", "compliance": "6", "latency": "7"}; expected 28. Result matched through Bangel, admitted JP, the Bangel API, with validated receipt outputs. 7 missing-input cases and 0 supplied domain cases passed.

SOURCE DIMENSION

currency

REMAINING REQUIREMENT

Complete the source-defined measurement/evidence contract, units and calibration bindings. Native C# and Hagar formula-ID bindings remain unverified in this rerun.

SOURCE REFERENCES

D006 pp. 85,86; D011 pp. 75,76
Evidence: evidence/rerun/pink/F-035.json

TR-PINK-F-036 / Opportunity lower bound

IF

Invoke F-036 with exactly these inputs: return_low: Real, friction: Real, risk: Real, liquidity: Real, regulatory: Real. Real values use finite decimal text; null remains unknown.

HOW

Source expression: $O_L = \text{Return_L-F_capital_H-RiskPenalty_H-LiquidityPenalty_H-RegulatoryUncertainty_H}$.
Current Bangel expression: return_low - friction - risk - liquidity - regulatory. Require every input to be known.
No additional domain predicates are declared by this scalar profile.

THEN

Emit the scoped calculation result. Missing inputs produce their specific PINK_MISSING_* HOLD; failed profile checks produce PINK_DOMAIN. A false numeric predicate can occur in a PASS calculation receipt; it is not permission.

CURRENT EVIDENCE

Fixture inputs {"return_low": "100", "friction": "5", "risk": "10", "liquidity": "20", "regulatory": "2"}; expected 63. Result matched through Bangel, admitted JP, the Bangel API, with validated receipt outputs. 5 missing-input cases and 0 supplied domain cases passed.

SOURCE DIMENSION

currency

REMAINING REQUIREMENT

Complete the source-defined measurement/evidence contract, units and calibration bindings. Native C# and Hagar formula-ID bindings remain unverified in this rerun.

SOURCE REFERENCES

D006 pp. 87,88; D011 pp. 77,78
Evidence: evidence/rerun/pink/F-036.json

TR-PINK-F-037 / Abundance objective

IF

Invoke F-037 (Abundance objective) only with the source-defined inputs, scope, evidence and result dimension (declared score). A complete executable parameter schema has not been bound to this ID.

HOW

Preserve the source relation exactly: $A = \sum(\alpha_i P_i) - \sum(\beta_j N_j)$. Implement the source-defined vector/matrix, integer-count, geometric or numerical operator through Bangel and native C#. Specify dimensions, decimal precision, bounds and negative/unknown cases; do not replace vectors with an unmarked scalar.

THEN

Keep this formula OPEN. The current paper host rejects this ID with PAPER_PROFILE_UNIMPLEMENTED. The Teal assertion gate holds when method/proof is false. This expected refusal is not a completed implementation.

CURRENT EVIDENCE

Fresh refusal and hold evidence is recorded individually; no scalar result, transition, permit or physical effect is fabricated.

SOURCE DIMENSION

declared score

REMAINING REQUIREMENT

Implement the source-defined vector/matrix, integer-count, geometric or numerical operator through Bangel and native C#. Specify dimensions, decimal precision, bounds and negative/unknown cases; do not replace vectors with an unmarked scalar.

SOURCE REFERENCES

D006 pp. 89,90; D011 pp. 79,80

Evidence: evidence/rerun/pending/F-037.json

TR-PINK-F-038 / SHIVAS eligible value

IF

Invoke F-038 with exactly these inputs: verified: Real, liabilities: Real, uncertainty: Real. Real values use finite decimal text; null remains unknown.

HOW

Source expression: $V_{eligible_L} = \max(0, V_{verified_L} - L_{known_H} - U_{valuation_H})$. Current Bangel expression: $\text{math.max}(0.0, \text{verified} - \text{liabilities} - \text{uncertainty})$. Require every input to be known. No additional domain predicates are declared by this scalar profile.

THEN

Emit the scoped calculation result. Missing inputs produce their specific PINK_MISSING_* HOLD; failed profile checks produce PINK_DOMAIN. A false numeric predicate can occur in a PASS calculation receipt; it is not permission.

CURRENT EVIDENCE

Fixture inputs {"verified": "100", "liabilities": "80", "uncertainty": "30"}; expected 0. Result matched through Bangel, admitted JP, the Bangel API, with validated receipt outputs. 3 missing-input cases and 0 supplied domain cases passed.

SOURCE DIMENSION

currency

REMAINING REQUIREMENT

Complete the source-defined measurement/evidence contract, units and calibration bindings. Native C# and Hagar formula-ID bindings remain unverified in this rerun.

SOURCE REFERENCES

D006 pp. 91,92; D011 pp. 81,82
Evidence: evidence/rerun/pink/F-038.json

TR-PINK-F-039 / SHIVAS ceiling

IF

Invoke F-039 (SHIVAS ceiling) only with the source-defined inputs, scope, evidence and result dimension (count). A complete executable parameter schema has not been bound to this ID.

HOW

Preserve the source relation exactly: $N_{max} = \text{floor}(V_{eligible_L/B_unit_H})$. Implement the source-defined vector/matrix, integer-count, geometric or numerical operator through Bangel and native C#. Specify dimensions, decimal precision, bounds and negative/unknown cases; do not replace vectors with an unmarked scalar.

THEN

Keep this formula OPEN. The current paper host rejects this ID with PAPER_PROFILE_UNIMPLEMENTED. The Teal assertion gate holds when method/proof is false. This expected refusal is not a completed implementation.

CURRENT EVIDENCE

Fresh refusal and hold evidence is recorded individually; no scalar result, transition, permit or physical effect is fabricated.

SOURCE DIMENSION

count

REMAINING REQUIREMENT

Implement the source-defined vector/matrix, integer-count, geometric or numerical operator through Bangel and native C#. Specify dimensions, decimal precision, bounds and negative/unknown cases; do not replace vectors with an unmarked scalar.

SOURCE REFERENCES

D006 pp. 93,94; D011 pp. 83,84

Evidence: evidence/rerun/pending/F-039.json

TR-PINK-F-040 / MK state model

IF

Invoke F-040 (MK state model) only with the source-defined inputs, scope, evidence and result dimension (typed state). A complete executable parameter schema has not been bound to this ID.

HOW

Preserve the source relation exactly: $x[t+1]=F(x[t],u[t],\theta,e[t])+w[t]$; $y[t]=H(x[t])+v[t]$. The expression names a model or transition function. Recover its normative definition, inputs, state and failure behavior before implementing it.

THEN

Keep this formula OPEN. The current paper host rejects this ID with PAPER_PROFILE_UNIMPLEMENTED. The Teal assertion gate holds when method/proof is false. This expected refusal is not a completed implementation.

CURRENT EVIDENCE

Fresh refusal and hold evidence is recorded individually; no scalar result, transition, permit or physical effect is fabricated.

SOURCE DIMENSION

typed state

REMAINING REQUIREMENT

The expression names a model or transition function. Recover its normative definition, inputs, state and failure behavior before implementing it.

SOURCE REFERENCES

D006 pp. 95,96; D011 pp. 85,86

Evidence: evidence/rerun/pending/F-040.json

TR-PINK-F-041 / Dimensional integrity

IF

Invoke F-041 (Dimensional integrity) only with the source-defined inputs, scope, evidence and result dimension (dimension equality). A complete executable parameter schema has not been bound to this ID.

HOW

Preserve the source relation exactly: $\text{dim(LHS)}=\text{dim(RHS)}$. Bind this formula ID to its typed value or invariant and source-specific tests. Existing language primitives are useful but do not constitute a complete formula contract.

THEN

Keep this formula OPEN. The current paper host rejects this ID with PAPER_PROFILE_UNIMPLEMENTED. The Teal assertion gate holds when method/proof is false. This expected refusal is not a completed implementation.

CURRENT EVIDENCE

Fresh refusal and hold evidence is recorded individually; no scalar result, transition, permit or physical effect is fabricated.

SOURCE DIMENSION

dimension equality

REMAINING REQUIREMENT

Bind this formula ID to its typed value or invariant and source-specific tests. Existing language primitives are useful but do not constitute a complete formula contract.

SOURCE REFERENCES

D006 pp. 97,98; D011 pp. 87,88

Evidence: evidence/rerun/pending/F-041.json

TR-PINK-F-042 / Conservation residual

IF

Invoke F-042 with exactly these inputs: incoming: Real, outgoing: Real, stored: Real, loss: Real. Real values use finite decimal text; null remains unknown.

HOW

Source expression: $r_q = q_{in} - q_{out} - \Delta q - q_{loss}$. Current Bangel expression: incoming - outgoing - stored - loss. Require every input to be known. No additional domain predicates are declared by this scalar profile.

THEN

Emit the scoped calculation result. Missing inputs produce their specific PINK_MISSING_* HOLD; failed profile checks produce PINK_DOMAIN. A false numeric predicate can occur in a PASS calculation receipt; it is not permission.

CURRENT EVIDENCE

Fixture inputs {"incoming": "100", "outgoing": "60", "stored": "30", "loss": "10"}; expected 0. Result matched through Bangel, admitted JP, the Bangel API, with validated receipt outputs. 4 missing-input cases and 0 supplied domain cases passed.

SOURCE DIMENSION

quantity

REMAINING REQUIREMENT

Complete the source-defined measurement/evidence contract, units and calibration bindings. Native C# and Hagar formula-ID bindings remain unverified in this rerun.

SOURCE REFERENCES

D006 pp. 99,100; D011 pp. 89,90

Evidence: evidence/rerun/pink/F-042.json

TR-PINK-F-043 / Pearl simulation ellipsoid volume

IF

Invoke F-043 (Pearl simulation ellipsoid volume) only with the source-defined inputs, scope, evidence and result dimension (volume). A complete executable parameter schema has not been bound to this ID.

HOW

Preserve the source relation exactly: $V_P = (4/3) \cdot \pi \cdot a \cdot b \cdot c$. Implement the source-defined vector/matrix, integer-count, geometric or numerical operator through Bangel and native C#. Specify dimensions, decimal precision, bounds and negative/unknown cases; do not replace vectors with an unmarked scalar.

THEN

Keep this formula OPEN. The current paper host rejects this ID with PAPER_PROFILE_UNIMPLEMENTED. The Teal assertion gate holds when method/proof is false. This expected refusal is not a completed implementation.

CURRENT EVIDENCE

Fresh refusal and hold evidence is recorded individually; no scalar result, transition, permit or physical effect is fabricated.

SOURCE DIMENSION

volume

REMAINING REQUIREMENT

Implement the source-defined vector/matrix, integer-count, geometric or numerical operator through Bangel and native C#. Specify dimensions, decimal precision, bounds and negative/unknown cases; do not replace vectors with an unmarked scalar.

SOURCE REFERENCES

D006 pp. 101,102; D011 pp. 91,92

Evidence: evidence/rerun/pending/F-043.json

TR-PINK-F-044 / Pearl simulation surface-area approximation

IF

Invoke F-044 (Pearl simulation surface-area approximation) only with the source-defined inputs, scope, evidence and result dimension (area). A complete executable parameter schema has not been bound to this ID.

HOW

Preserve the source relation exactly: $A_P \sim 4 \pi ((a^p b^p + a^p c^p + b^p c^p) / 3)^{1/p}$, $p = 1.6075$. Implement the source-defined vector/matrix, integer-count, geometric or numerical operator through Bangel and native C#. Specify dimensions, decimal precision, bounds and negative/unknown cases; do not replace vectors with an unmarked scalar.

THEN

Keep this formula OPEN. The current paper host rejects this ID with PAPER_PROFILE_UNIMPLEMENTED. The Teal assertion gate holds when method/proof is false. This expected refusal is not a completed implementation.

CURRENT EVIDENCE

Fresh refusal and hold evidence is recorded individually; no scalar result, transition, permit or physical effect is fabricated.

SOURCE DIMENSION

area

REMAINING REQUIREMENT

Implement the source-defined vector/matrix, integer-count, geometric or numerical operator through Bangel and native C#. Specify dimensions, decimal precision, bounds and negative/unknown cases; do not replace vectors with an unmarked scalar.

SOURCE REFERENCES

D006 pp. 103,104; D011 pp. 93,94
Evidence: evidence/rerun/pending/F-044.json

TR-PINK-F-045 / Pearl simulation exposure ratio

IF

Invoke F-045 with exactly these inputs: area: Real, volume: Real. Real values use finite decimal text; null remains unknown.

HOW

Source expression: $\chi_P = A_P / V_P$. Current Bangel expression: area / volume. Require every input to be known. Require area ≥ 0.0 and volume > 0.0 .

THEN

Emit the scoped calculation result. Missing inputs produce their specific PINK_MISSING_* HOLD; failed profile checks produce PINK_DOMAIN. A false numeric predicate can occur in a PASS calculation receipt; it is not permission.

CURRENT EVIDENCE

Fixture inputs {"area": "12", "volume": "3"}; expected 4. Result matched through Bangel, admitted JP, the Bangel API, with validated receipt outputs. 2 missing-input cases and 0 supplied domain cases passed.

SOURCE DIMENSION

1/length

REMAINING REQUIREMENT

Complete the source-defined measurement/evidence contract, units and calibration bindings. Native C# and Hagar formula-ID bindings remain unverified in this rerun.

SOURCE REFERENCES

D006 pp. 105,106; D011 pp. 95,96
Evidence: evidence/rerun/pink/F-045.json

TR-PINK-F-046 / Pearl simulation capacity slack

IF

Invoke F-046 with exactly these inputs: headroom: Real, capacity: Real, load: Real. Real values use finite decimal text; null remains unknown.

HOW

Source expression: $S_{Pk} = (1 - h_{Pk}) * C_{Pk} - L_{Pk}$. Current Bangel expression: $(1.0 - \text{headroom}) * \text{capacity} - \text{load}$. Require every input to be known. Require headroom ≥ 0.0 and headroom < 1.0 and capacity > 0.0 and load ≥ 0.0 .

THEN

Emit the scoped calculation result. Missing inputs produce their specific PINK_MISSING_* HOLD; failed profile checks produce PINK_DOMAIN. A false numeric predicate can occur in a PASS calculation receipt; it is not permission.

CURRENT EVIDENCE

Fixture inputs {"headroom": "0.1", "capacity": "100", "load": "60"}; expected 30. Result matched through Bangel, admitted JP, the Bangel API, with validated receipt outputs. 3 missing-input cases and 0 supplied domain cases passed.

SOURCE DIMENSION

quantity_k

REMAINING REQUIREMENT

Complete the source-defined measurement/evidence contract, units and calibration bindings. Native C# and Hagar formula-ID bindings remain unverified in this rerun.

SOURCE REFERENCES

D006 pp. 107,108; D011 pp. 97,98
Evidence: evidence/rerun/pink/F-046.json

TR-PINK-F-047 / Pearl simulation saturation ratio

IF

Invoke F-047 (Pearl simulation saturation ratio) only with the source-defined inputs, scope, evidence and result dimension (ratio). A complete executable parameter schema has not been bound to this ID.

HOW

Preserve the source relation exactly: $\beta_P = \max_k (L_{Pk} / ((1 - h_{Pk}) * C_{Pk}))$. Implement the source-defined vector/matrix, integer-count, geometric or numerical operator through Bangel and native C#. Specify dimensions, decimal precision, bounds and negative/unknown cases; do not replace vectors with an unmarked scalar.

THEN

Keep this formula OPEN. The current paper host rejects this ID with PAPER_PROFILE_UNIMPLEMENTED. The Teal assertion gate holds when method/proof is false. This expected refusal is not a completed implementation.

CURRENT EVIDENCE

Fresh refusal and hold evidence is recorded individually; no scalar result, transition, permit or physical effect is fabricated.

SOURCE DIMENSION

ratio

REMAINING REQUIREMENT

Implement the source-defined vector/matrix, integer-count, geometric or numerical operator through Bangel and native C#. Specify dimensions, decimal precision, bounds and negative/unknown cases; do not replace vectors with an unmarked scalar.

SOURCE REFERENCES

D006 pp. 109,110; D011 pp. 99,100

Evidence: evidence/rerun/pending/F-047.json

TR-PINK-F-048 / Pearl simulation object count

IF

Invoke F-048 (Pearl simulation object count) only with the source-defined inputs, scope, evidence and result dimension (count). A complete executable parameter schema has not been bound to this ID.

HOW

Preserve the source relation exactly: $N_P = \max_k \text{ceil}(E_k / ((1 - h_{Pk}) * C_{Pk}))$. Implement the source-defined vector/matrix, integer-count, geometric or numerical operator through Bangel and native C#. Specify dimensions, decimal precision, bounds and negative/unknown cases; do not replace vectors with an unmarked scalar.

THEN

Keep this formula OPEN. The current paper host rejects this ID with PAPER_PROFILE_UNIMPLEMENTED. The Teal assertion gate holds when method/proof is false. This expected refusal is not a completed implementation.

CURRENT EVIDENCE

Fresh refusal and hold evidence is recorded individually; no scalar result, transition, permit or physical effect is fabricated.

SOURCE DIMENSION

count

REMAINING REQUIREMENT

Implement the source-defined vector/matrix, integer-count, geometric or numerical operator through Bangel and native C#. Specify dimensions, decimal precision, bounds and negative/unknown cases; do not replace vectors with an unmarked scalar.

SOURCE REFERENCES

D006 pp. 111,112; D011 pp. 101,102

Evidence: evidence/rerun/pending/F-048.json

TR-PINK-F-049 / Pearl simulation accounting balance

IF

Invoke F-049 with exactly these inputs: incoming: Real, captured: Real, transferred: Real, retained: Real, escaped: Real, stored_delta: Real. Real values use finite decimal text; null remains unknown.

HOW

Source expression: $r_{Pk}=q_{in}-q_{captured}-q_{transferred}-q_{retained}-q_{escaped}-\Delta q_{stored}$. Current Bangel expression: incoming - captured - transferred - retained - escaped - stored_delta. Require every input to be known. No additional domain predicates are declared by this scalar profile.

THEN

Emit the scoped calculation result. Missing inputs produce their specific PINK_MISSING_* HOLD; failed profile checks produce PINK_DOMAIN. A false numeric predicate can occur in a PASS calculation receipt; it is not permission.

CURRENT EVIDENCE

Fixture inputs {"incoming": "100", "captured": "10", "transferred": "20", "retained": "30", "escaped": "5", "stored_delta": "35"}; expected 0. Result matched through Bangel, admitted JP, the Bangel API, with validated receipt outputs. 6 missing-input cases and 0 supplied domain cases passed.

SOURCE DIMENSION

quantity_k

REMAINING REQUIREMENT

Complete the source-defined measurement/evidence contract, units and calibration bindings. Native C# and Hagar formula-ID bindings remain unverified in this rerun.

SOURCE REFERENCES

D006 pp. 113,114; D011 pp. 103,104

Evidence: evidence/rerun/pink/F-049.json

TR-PINK-F-050 / Pearl simulated transfer opportunity

IF

Invoke F-050 with exactly these inputs: destination_slack: Real, available: Real, reserve: Real, route_capacity: Real. Real values use finite decimal text; null remains unknown.

HOW

Source expression: $T_{ij,k} = \min([S_{jk}]_+, [Q_{ik} - Q_{reserve_ik}]_+, C_{route_k})$. Current Bangel expression: `math.min(math.max(0.0, destination_slack), math.min(math.max(0.0, available - reserve), route_capacity))`. Require every input to be known. Require destination_slack >= 0.0 and available >= 0.0 and reserve >= 0.0 and route_capacity >= 0.0.

THEN

Emit the scoped calculation result. Missing inputs produce their specific PINK_MISSING_* HOLD; failed profile checks produce PINK_DOMAIN. A false numeric predicate can occur in a PASS calculation receipt; it is not permission.

CURRENT EVIDENCE

Fixture inputs {"destination_slack": "20", "available": "50", "reserve": "10", "route_capacity": "15"}; expected 15. Result matched through Bangel, admitted JP, the Bangel API, with validated receipt outputs. 4 missing-input cases and 0 supplied domain cases passed.

SOURCE DIMENSION

quantity_k

REMAINING REQUIREMENT

Complete the source-defined measurement/evidence contract, units and calibration bindings. Native C# and Hagar formula-ID bindings remain unverified in this rerun.

SOURCE REFERENCES

D006 pp. 11,15,115,116; D011 pp. 1,5,105,106

Evidence: evidence/rerun/pink/F-050.json

TR-PINK-F-051 / Pearl simulated regeneration vector

IF

Invoke F-051 (Pearl simulated regeneration vector) only with the source-defined inputs, scope, evidence and result dimension (typed vector). A complete executable parameter schema has not been bound to this ID.

HOW

Preserve the source relation exactly: $G_P=[G_mass,G_energy,G_bytes,G_time,G_capital]$. Bind this formula ID to its typed value or invariant and source-specific tests. Existing language primitives are useful but do not constitute a complete formula contract.

THEN

Keep this formula OPEN. The current paper host rejects this ID with PAPER_PROFILE_UNIMPLEMENTED. The Teal assertion gate holds when method/proof is false. This expected refusal is not a completed implementation.

CURRENT EVIDENCE

Fresh refusal and hold evidence is recorded individually; no scalar result, transition, permit or physical effect is fabricated.

SOURCE DIMENSION

typed vector

REMAINING REQUIREMENT

Bind this formula ID to its typed value or invariant and source-specific tests. Existing language primitives are useful but do not constitute a complete formula contract.

SOURCE REFERENCES

D006 pp. 117,118,121,123,124; D012 pp. 1,2,5,7,8

Evidence: evidence/rerun/pending/F-051.json

TR-PINK-F-052 / Pearl acoustic simulation wavelength

IF

Invoke F-052 with exactly these inputs: speed: Real, frequency: Real. Real values use finite decimal text; null remains unknown.

HOW

Source expression: $\lambda_{ac} = c_{medium} / f_{control}$. Current Bangel expression: speed / frequency. Require every input to be known. Require speed > 0.0 and frequency > 0.0.

THEN

Emit the scoped calculation result. Missing inputs produce their specific PINK_MISSING_* HOLD; failed profile checks produce PINK_DOMAIN. A false numeric predicate can occur in a PASS calculation receipt; it is not permission.

CURRENT EVIDENCE

Fixture inputs {"speed": "340", "frequency": "170"}; expected 2. Result matched through Bangel, admitted JP, the Bangel API, with validated receipt outputs. 2 missing-input cases and 0 supplied domain cases passed.

SOURCE DIMENSION

length

REMAINING REQUIREMENT

Complete the source-defined measurement/evidence contract, units and calibration bindings. Native C# and Hagar formula-ID bindings remain unverified in this rerun.

SOURCE REFERENCES

D006 pp. 118,125,126; D012 pp. 2,9,10

Evidence: evidence/rerun/pink/F-052.json

TR-PINK-F-053 / Pearl acoustic simulation intensity

IF

Invoke F-053 with exactly these inputs: pressure: Real, density: Real, speed: Real. Real values use finite decimal text; null remains unknown.

HOW

Source expression: $I_{ac}=p_{rms}^2/(\rho_{medium}*c_{medium})$. Current Bangel expression: pressure * pressure / (density * speed). Require every input to be known. Require pressure >= 0.0 and density > 0.0 and speed > 0.0.

THEN

Emit the scoped calculation result. Missing inputs produce their specific PINK_MISSING_* HOLD; failed profile checks produce PINK_DOMAIN. A false numeric predicate can occur in a PASS calculation receipt; it is not permission.

CURRENT EVIDENCE

Fixture inputs {"pressure": "2", "density": "1", "speed": "4"}; expected 1. Result matched through Bangel, admitted JP, the Bangel API, with validated receipt outputs. 3 missing-input cases and 0 supplied domain cases passed.

SOURCE DIMENSION

power/area

REMAINING REQUIREMENT

Complete the source-defined measurement/evidence contract, units and calibration bindings. Native C# and Hagar formula-ID bindings remain unverified in this rerun.

SOURCE REFERENCES

D006 pp. 118,127,128; D012 pp. 2,11,12

Evidence: evidence/rerun/pink/F-053.json

TR-PINK-F-054 / Pearl acoustic simulation energy

IF

Invoke F-054 (Pearl acoustic simulation energy) only with the source-defined inputs, scope, evidence and result dimension (energy). A complete executable parameter schema has not been bound to this ID.

HOW

Preserve the source relation exactly: $E_{ac} = \int I_{ac} \cdot A_{effective} dt$. Provide the sampled-signal input contract, domain/boundary, timestamps, quadrature/interpolation and error/missing-data policy. Retain each formula's units and source integrand.

THEN

Keep this formula OPEN. The current paper host rejects this ID with PAPER_PROFILE_UNIMPLEMENTED. The Teal assertion gate holds when method/proof is false. This expected refusal is not a completed implementation.

CURRENT EVIDENCE

Fresh refusal and hold evidence is recorded individually; no scalar result, transition, permit or physical effect is fabricated.

SOURCE DIMENSION

energy

REMAINING REQUIREMENT

Provide the sampled-signal input contract, domain/boundary, timestamps, quadrature/interpolation and error/missing-data policy. Retain each formula's units and source integrand.

SOURCE REFERENCES

D006 pp. 118,129,130; D012 pp. 2,13,14

Evidence: evidence/rerun/pending/F-054.json

TR-PINK-F-055 / Pearl acoustic simulation observability gate

IF

Invoke F-055 (Pearl acoustic simulation observability gate) only with the source-defined inputs, scope, evidence and result dimension (logical). A complete executable parameter schema has not been bound to this ID.

HOW

Preserve the source relation exactly: $f_sample \geq 2 * \gamma * f_control$ AND $f_control$ in calibrated_band AND $SNR_f \geq SNR_min$. Define and bind required evidence, validation rules, state/receipt transitions and authority scope. Caller-supplied Boolean assertions alone do not complete this contract.

THEN

Keep this formula OPEN. The current paper host rejects this ID with PAPER_PROFILE_UNIMPLEMENTED. The Teal assertion gate holds when method/proof is false. This expected refusal is not a completed implementation.

CURRENT EVIDENCE

Fresh refusal and hold evidence is recorded individually; no scalar result, transition, permit or physical effect is fabricated.

SOURCE DIMENSION

logical

REMAINING REQUIREMENT

Define and bind required evidence, validation rules, state/receipt transitions and authority scope. Caller-supplied Boolean assertions alone do not complete this contract.

SOURCE REFERENCES

D006 pp. 118,131,132; D012 pp. 2,15,16

Evidence: evidence/rerun/pending/F-055.json

TR-PINK-F-056 / Pearl acoustic simulation signal-to-noise

IF

Invoke F-056 with exactly these inputs: signal: Real, noise: Real. Real values use finite decimal text; null remains unknown.

HOW

Source expression: $SNR_f = P_{signal}(f) / P_{noise}(f)$. Current Bangel expression: signal / noise. Require every input to be known. Require signal ≥ 0.0 and noise > 0.0 .

THEN

Emit the scoped calculation result. Missing inputs produce their specific PINK_MISSING_* HOLD; failed profile checks produce PINK_DOMAIN. A false numeric predicate can occur in a PASS calculation receipt; it is not permission.

CURRENT EVIDENCE

Fixture inputs {"signal": "10", "noise": "2"}; expected 5. Result matched through Bangel, admitted JP, the Bangel API, with validated receipt outputs. 2 missing-input cases and 0 supplied domain cases passed.

SOURCE DIMENSION

ratio

REMAINING REQUIREMENT

Complete the source-defined measurement/evidence contract, units and calibration bindings. Native C# and Hagar formula-ID bindings remain unverified in this rerun.

SOURCE REFERENCES

D006 pp. 118,133,134; D012 pp. 2,17,18

Evidence: evidence/rerun/pink/F-056.json

TR-PINK-F-057 / Pearl acoustic simulation transfer function

IF

Invoke F-057 (Pearl acoustic simulation transfer function) only with the source-defined inputs, scope, evidence and result dimension (output/input). A complete executable parameter schema has not been bound to this ID.

HOW

Preserve the source relation exactly: $H_P(f)=Y_P(f)/U_P(f)$. Implement the source-defined vector/matrix, integer-count, geometric or numerical operator through Bangel and native C#. Specify dimensions, decimal precision, bounds and negative/unknown cases; do not replace vectors with an unmarked scalar.

THEN

Keep this formula OPEN. The current paper host rejects this ID with PAPER_PROFILE_UNIMPLEMENTED. The Teal assertion gate holds when method/proof is false. This expected refusal is not a completed implementation.

CURRENT EVIDENCE

Fresh refusal and hold evidence is recorded individually; no scalar result, transition, permit or physical effect is fabricated.

SOURCE DIMENSION

output/input

REMAINING REQUIREMENT

Implement the source-defined vector/matrix, integer-count, geometric or numerical operator through Bangel and native C#. Specify dimensions, decimal precision, bounds and negative/unknown cases; do not replace vectors with an unmarked scalar.

SOURCE REFERENCES

D006 pp. 118,135,136; D012 pp. 2,19,20

Evidence: evidence/rerun/pending/F-057.json

TR-PINK-F-058 / Pearl acoustic simulation setpoint

IF

Invoke F-058 (Pearl acoustic simulation setpoint) only with the source-defined inputs, scope, evidence and result dimension (frequency). A complete executable parameter schema has not been bound to this ID.

HOW

Preserve the source relation exactly: $f^* = \operatorname{argmin}_{\{f \text{ in } F_{\text{safe}}\}} (J_{\text{breach}} + \lambda_E E_{\text{ac}} + \lambda_T T_{\text{transfer}})$. Implement the bounded graph/path/selection algorithm with its complete input set, eligibility rules, tie/failure behavior and relevant evidence.

THEN

Keep this formula OPEN. The current paper host rejects this ID with PAPER_PROFILE_UNIMPLEMENTED. The Teal assertion gate holds when method/proof is false. This expected refusal is not a completed implementation.

CURRENT EVIDENCE

Fresh refusal and hold evidence is recorded individually; no scalar result, transition, permit or physical effect is fabricated.

SOURCE DIMENSION

frequency

REMAINING REQUIREMENT

Implement the bounded graph/path/selection algorithm with its complete input set, eligibility rules, tie/failure behavior and relevant evidence.

SOURCE REFERENCES

D006 pp. 118,137,138; D012 pp. 2,21,22

Evidence: evidence/rerun/pending/F-058.json

TR-PINK-F-059 / Bounded Pearl acoustic simulation adjustment

IF

Invoke F-059 with exactly these inputs: frequency: Real, target: Real, step_limit: Real, minimum: Real, maximum: Real. Real values use finite decimal text; null remains unknown.

HOW

Source expression: $f_{next} = clip((2/3)f + (1/3)f_{target}, f - df_{max}, f + df_{max}, f_{min}, f_{max})$. Current Bangel expression: $math.min(math.min(maximum, frequency + step_limit), math.max(math.max(minimum, frequency - step_limit), (2.0 * frequency + target) / 3.0))$. Require every input to be known. Require minimum ≥ 0.0 and maximum $\geq$ minimum and frequency $\geq$ minimum and frequency $\leq$ maximum and step_limit ≥ 0.0 .

THEN

Emit the scoped calculation result. Missing inputs produce their specific PINK_MISSING_* HOLD; failed profile checks produce PINK_DOMAIN. A false numeric predicate can occur in a PASS calculation receipt; it is not permission.

CURRENT EVIDENCE

Fixture inputs {"frequency": "90", "target": "120", "step_limit": "5", "minimum": "80", "maximum": "100"}; expected 95. Result matched through Bangel, admitted JP, the Bangel API, with validated receipt outputs. 5 missing-input cases and 1 supplied domain cases passed.

SOURCE DIMENSION

frequency

REMAINING REQUIREMENT

Complete the source-defined measurement/evidence contract, units and calibration bindings. Native C# and Hagar formula-ID bindings remain unverified in this rerun.

SOURCE REFERENCES

D006 pp. 139,140; D012 pp. 23,24

Evidence: evidence/rerun/pink/F-059.json

TR-PINK-F-060 / Pearl simulation registry reconciliation

IF

Invoke F-060 with exactly these inputs: allocated: Real, received: Real, transferred: Real, closed: Real, active: Real. Real values use finite decimal text; null remains unknown.

HOW

Source expression: $r_registry = N_allocated + N_received - N_transferred - N_closed - N_active$. Current Bangel expression: $allocated + received - transferred - closed - active$. Require every input to be known. No additional domain predicates are declared by this scalar profile.

THEN

Emit the scoped calculation result. Missing inputs produce their specific `PINK_MISSING_* HOLD`; failed profile checks produce `PINK_DOMAIN`. A false numeric predicate can occur in a `PASS` calculation receipt; it is not permission.

CURRENT EVIDENCE

Fixture inputs `{"allocated": "10", "received": "2", "transferred": "3", "closed": "1", "active": "8"}`; expected 0. Result matched through Bangel, admitted JP, the Bangel API, with validated receipt outputs. 5 missing-input cases and 0 supplied domain cases passed.

SOURCE DIMENSION

count

REMAINING REQUIREMENT

Complete the source-defined measurement/evidence contract, units and calibration bindings. Native C# and Hagar formula-ID bindings remain unverified in this rerun.

SOURCE REFERENCES

D006 pp. 141,142; D012 pp. 25,26

Evidence: `evidence/rerun/pink/F-060.json`

TR-PINK-F-061 / Bangel Sheet cell state

IF

Invoke F-061 (Bangel Sheet cell state) only with the source-defined inputs, scope, evidence and result dimension (typed object). A complete executable parameter schema has not been bound to this ID.

HOW

Preserve the source relation exactly:
C_ij=<value,unit,uncertainty,formula,revision,lineage,authority,evidence>. Define and bind required evidence, validation rules, state/receipt transitions and authority scope. Caller-supplied Boolean assertions alone do not complete this contract.

THEN

Keep this formula OPEN. The current paper host rejects this ID with PAPER_PROFILE_UNIMPLEMENTED. The Teal assertion gate holds when method/proof is false. This expected refusal is not a completed implementation.

CURRENT EVIDENCE

Fresh refusal and hold evidence is recorded individually; no scalar result, transition, permit or physical effect is fabricated.

SOURCE DIMENSION

typed object

REMAINING REQUIREMENT

Define and bind required evidence, validation rules, state/receipt transitions and authority scope. Caller-supplied Boolean assertions alone do not complete this contract.

SOURCE REFERENCES

D006 pp. 143,144; D012 pp. 27,28
Evidence: evidence/rerun/pending/F-061.json

TR-PINK-F-062 / Affected dependency closure

IF

Invoke F-062 (Affected dependency closure) only with the source-defined inputs, scope, evidence and result dimension (cell set). A complete executable parameter schema has not been bound to this ID.

HOW

Preserve the source relation exactly: $A(U)=Reachable_G(U)$. Implement the bounded graph/path/selection algorithm with its complete input set, eligibility rules, tie/failure behavior and relevant evidence.

THEN

Keep this formula OPEN. The current paper host rejects this ID with PAPER_PROFILE_UNIMPLEMENTED. The Teal assertion gate holds when method/proof is false. This expected refusal is not a completed implementation.

CURRENT EVIDENCE

Fresh refusal and hold evidence is recorded individually; no scalar result, transition, permit or physical effect is fabricated.

SOURCE DIMENSION

cell set

REMAINING REQUIREMENT

Implement the bounded graph/path/selection algorithm with its complete input set, eligibility rules, tie/failure behavior and relevant evidence.

SOURCE REFERENCES

D006 pp. 145,146; D012 pp. 29,30

Evidence: evidence/rerun/pending/F-062.json

TR-PINK-F-063 / Incremental recompute cost

IF

Invoke F-063 (Incremental recompute cost) only with the source-defined inputs, scope, evidence and result dimension (work units). A complete executable parameter schema has not been bound to this ID.

HOW

Preserve the source relation exactly: $C_{recalc} = \sum_{v \in A} c_v + \sum_{e \in E(A)} t_e$. Implement the source-defined vector/matrix, integer-count, geometric or numerical operator through Bangel and native C#. Specify dimensions, decimal precision, bounds and negative/unknown cases; do not replace vectors with an unmarked scalar.

THEN

Keep this formula OPEN. The current paper host rejects this ID with PAPER_PROFILE_UNIMPLEMENTED. The Teal assertion gate holds when method/proof is false. This expected refusal is not a completed implementation.

CURRENT EVIDENCE

Fresh refusal and hold evidence is recorded individually; no scalar result, transition, permit or physical effect is fabricated.

SOURCE DIMENSION

work units

REMAINING REQUIREMENT

Implement the source-defined vector/matrix, integer-count, geometric or numerical operator through Bangel and native C#. Specify dimensions, decimal precision, bounds and negative/unknown cases; do not replace vectors with an unmarked scalar.

SOURCE REFERENCES

D006 pp. 147,148; D012 pp. 31,32
Evidence: evidence/rerun/pending/F-063.json

TR-PINK-F-064 / Concurrent edit arrival

IF

Invoke F-064 with exactly these inputs: users: Real, updates_per_user: Real. Real values use finite decimal text; null remains unknown.

HOW

Source expression: $\lambda_{total} = N_{users} * \lambda_{user}$. Current Bangel expression: $users * updates_per_user$. Require every input to be known. Require $users \geq 0.0$ and $updates_per_user \geq 0.0$.

THEN

Emit the scoped calculation result. Missing inputs produce their specific PINK_MISSING_* HOLD; failed profile checks produce PINK_DOMAIN. A false numeric predicate can occur in a PASS calculation receipt; it is not permission.

CURRENT EVIDENCE

Fixture inputs {"users": "10", "updates_per_user": "2"}; expected 20. Result matched through Bangel, admitted JP, the Bangel API, with validated receipt outputs. 2 missing-input cases and 0 supplied domain cases passed.

SOURCE DIMENSION

operations/time

REMAINING REQUIREMENT

Complete the source-defined measurement/evidence contract, units and calibration bindings. Native C# and Hagar formula-ID bindings remain unverified in this rerun.

SOURCE REFERENCES

D006 pp. 149,150; D012 pp. 33,34
Evidence: evidence/rerun/pink/F-064.json

TR-PINK-F-065 / Spreadsheet service utilization

IF

Invoke F-065 with exactly these inputs: arrival: Real, workers: Real, service_rate: Real. Real values use finite decimal text; null remains unknown.

HOW

Source expression: $\rho = \lambda_{total} / (W * \mu_{worker})$. Current Bangel expression: $arrival / (workers * service_rate)$. Require every input to be known. Require $arrival \geq 0.0$ and $workers > 0.0$ and $service_rate > 0.0$.

THEN

Emit the scoped calculation result. Missing inputs produce their specific PINK_MISSING_* HOLD; failed profile checks produce PINK_DOMAIN. A false numeric predicate can occur in a PASS calculation receipt; it is not permission.

CURRENT EVIDENCE

Fixture inputs {"arrival": "20", "workers": "4", "service_rate": "10"}; expected 0.5. Result matched through Bangel, admitted JP, the Bangel API, with validated receipt outputs. 3 missing-input cases and 0 supplied domain cases passed.

SOURCE DIMENSION

ratio

REMAINING REQUIREMENT

Complete the source-defined measurement/evidence contract, units and calibration bindings. Native C# and Hagar formula-ID bindings remain unverified in this rerun.

SOURCE REFERENCES

D006 pp. 151,152; D012 pp. 35,36
Evidence: evidence/rerun/pink/F-065.json

TR-PINK-F-066 / Spreadsheet worker requirement

IF

Invoke F-066 (Spreadsheet worker requirement) only with the source-defined inputs, scope, evidence and result dimension (count). A complete executable parameter schema has not been bound to this ID.

HOW

Preserve the source relation exactly: $W_{min} = \text{ceil}(\lambda_{total} / (\rho_{max} * \mu_{worker}))$. Implement the source-defined vector/matrix, integer-count, geometric or numerical operator through Bangel and native C#. Specify dimensions, decimal precision, bounds and negative/unknown cases; do not replace vectors with an unmarked scalar.

THEN

Keep this formula OPEN. The current paper host rejects this ID with PAPER_PROFILE_UNIMPLEMENTED. The Teal assertion gate holds when method/proof is false. This expected refusal is not a completed implementation.

CURRENT EVIDENCE

Fresh refusal and hold evidence is recorded individually; no scalar result, transition, permit or physical effect is fabricated.

SOURCE DIMENSION

count

REMAINING REQUIREMENT

Implement the source-defined vector/matrix, integer-count, geometric or numerical operator through Bangel and native C#. Specify dimensions, decimal precision, bounds and negative/unknown cases; do not replace vectors with an unmarked scalar.

SOURCE REFERENCES

D006 pp. 153,154; D012 pp. 37,38

Evidence: evidence/rerun/pending/F-066.json

TR-PINK-F-067 / Recalculation latency

IF

Invoke F-067 (Recalculation latency) only with the source-defined inputs, scope, evidence and result dimension (time). A complete executable parameter schema has not been bound to this ID.

HOW

Preserve the source relation exactly: $T_{\text{recalc}}=T_{\text{parse}}+T_{\text{dependency}}+\max_p(T_{\text{partition}},p)+T_{\text{commit}}$. Implement the source-defined vector/matrix, integer-count, geometric or numerical operator through Bangel and native C#. Specify dimensions, decimal precision, bounds and negative/unknown cases; do not replace vectors with an unmarked scalar.

THEN

Keep this formula OPEN. The current paper host rejects this ID with PAPER_PROFILE_UNIMPLEMENTED. The Teal assertion gate holds when method/proof is false. This expected refusal is not a completed implementation.

CURRENT EVIDENCE

Fresh refusal and hold evidence is recorded individually; no scalar result, transition, permit or physical effect is fabricated.

SOURCE DIMENSION

time

REMAINING REQUIREMENT

Implement the source-defined vector/matrix, integer-count, geometric or numerical operator through Bangel and native C#. Specify dimensions, decimal precision, bounds and negative/unknown cases; do not replace vectors with an unmarked scalar.

SOURCE REFERENCES

D006 pp. 155,156; D012 pp. 39,40

Evidence: evidence/rerun/pending/F-067.json

TR-PINK-F-068 / Spreadsheet data cost

IF

Invoke F-068 with exactly these inputs: stored: Real, store_cost: Real, transferred: Real, transfer_cost: Real, cpu_time: Real, cpu_cost: Real. Real values use finite decimal text; null remains unknown.

HOW

Source expression: $C_data = B_store * c_store + B_transfer * c_transfer + t_cpu * c_cpu$. Current Bangel expression: $stored * store_cost + transferred * transfer_cost + cpu_time * cpu_cost$. Require every input to be known. No additional domain predicates are declared by this scalar profile.

THEN

Emit the scoped calculation result. Missing inputs produce their specific PINK_MISSING_* HOLD; failed profile checks produce PINK_DOMAIN. A false numeric predicate can occur in a PASS calculation receipt; it is not permission.

CURRENT EVIDENCE

Fixture inputs {"stored": "10", "store_cost": "2", "transferred": "3", "transfer_cost": "4", "cpu_time": "5", "cpu_cost": "6"}; expected 62. Result matched through Bangel, admitted JP, the Bangel API, with validated receipt outputs. 6 missing-input cases and 0 supplied domain cases passed.

SOURCE DIMENSION

cost unit

REMAINING REQUIREMENT

Complete the source-defined measurement/evidence contract, units and calibration bindings. Native C# and Hagar formula-ID bindings remain unverified in this rerun.

SOURCE REFERENCES

D006 pp. 157,158; D012 pp. 41,42
Evidence: evidence/rerun/pink/F-068.json

TR-PINK-F-069 / Pearl simulation partition objective

IF

Invoke F-069 (Pearl simulation partition objective) only with the source-defined inputs, scope, evidence and result dimension (declared score). A complete executable parameter schema has not been bound to this ID.

HOW

Preserve the source relation exactly:
 $J_{\text{partition}} = \alpha * \max_p(L_p) + \beta * \text{sum_cut}(w_e) + \gamma * R_{\text{breach}} + \delta * R_{\text{stale}}$. Implement the source-defined vector/matrix, integer-count, geometric or numerical operator through Bangel and native C#. Specify dimensions, decimal precision, bounds and negative/unknown cases; do not replace vectors with an unmarked scalar.

THEN

Keep this formula OPEN. The current paper host rejects this ID with PAPER_PROFILE_UNIMPLEMENTED. The Teal assertion gate holds when method/proof is false. This expected refusal is not a completed implementation.

CURRENT EVIDENCE

Fresh refusal and hold evidence is recorded individually; no scalar result, transition, permit or physical effect is fabricated.

SOURCE DIMENSION

declared score

REMAINING REQUIREMENT

Implement the source-defined vector/matrix, integer-count, geometric or numerical operator through Bangel and native C#. Specify dimensions, decimal precision, bounds and negative/unknown cases; do not replace vectors with an unmarked scalar.

SOURCE REFERENCES

D006 pp. 159,160; D012 pp. 43,44
Evidence: evidence/rerun/pending/F-069.json

TR-PINK-F-070 / Sheet revision root

IF

Invoke F-070 (Sheet revision root) only with the source-defined inputs, scope, evidence and result dimension (digest). A complete executable parameter schema has not been bound to this ID.

HOW

Preserve the source relation exactly: $H_{rev} = \text{SHA256}(\text{parent_root} || \text{canonical_deltas} || \text{policy_epoch})$. Define and bind required evidence, validation rules, state/receipt transitions and authority scope. Caller-supplied Boolean assertions alone do not complete this contract.

THEN

Keep this formula OPEN. The current paper host rejects this ID with PAPER_PROFILE_UNIMPLEMENTED. The Teal assertion gate holds when method/proof is false. This expected refusal is not a completed implementation.

CURRENT EVIDENCE

Fresh refusal and hold evidence is recorded individually; no scalar result, transition, permit or physical effect is fabricated.

SOURCE DIMENSION

digest

REMAINING REQUIREMENT

Define and bind required evidence, validation rules, state/receipt transitions and authority scope. Caller-supplied Boolean assertions alone do not complete this contract.

SOURCE REFERENCES

D006 pp. 161,162; D012 pp. 45,46

Evidence: evidence/rerun/pending/F-070.json

TR-PINK-F-071 / Audit-particle completeness

IF

Invoke F-071 (Audit-particle completeness) only with the source-defined inputs, scope, evidence and result dimension (logical). A complete executable parameter schema has not been bound to this ID.

HOW

Preserve the source relation exactly: $\text{AuditPass} = \text{AND}(\text{required_fields_present}, \text{receipts_valid})$. Define and bind required evidence, validation rules, state/receipt transitions and authority scope. Caller-supplied Boolean assertions alone do not complete this contract.

THEN

Keep this formula OPEN. The current paper host rejects this ID with PAPER_PROFILE_UNIMPLEMENTED. The Teal assertion gate holds when method/proof is false. This expected refusal is not a completed implementation.

CURRENT EVIDENCE

Fresh refusal and hold evidence is recorded individually; no scalar result, transition, permit or physical effect is fabricated.

SOURCE DIMENSION

logical

REMAINING REQUIREMENT

Define and bind required evidence, validation rules, state/receipt transitions and authority scope. Caller-supplied Boolean assertions alone do not complete this contract.

SOURCE REFERENCES

D006 pp. 163,164; D012 pp. 47,48

Evidence: evidence/rerun/pending/F-071.json

TR-PINK-F-072 / Iterative recalculation stability

IF

Invoke F-072 (Iterative recalculation stability) only with the source-defined inputs, scope, evidence and result dimension (logical). A complete executable parameter schema has not been bound to this ID.

HOW

Preserve the source relation exactly: $\text{spectral_radius}(J_F) < 1$. Implement the source-defined vector/matrix, integer-count, geometric or numerical operator through Bangel and native C#. Specify dimensions, decimal precision, bounds and negative/unknown cases; do not replace vectors with an unmarked scalar.

THEN

Keep this formula OPEN. The current paper host rejects this ID with PAPER_PROFILE_UNIMPLEMENTED. The Teal assertion gate holds when method/proof is false. This expected refusal is not a completed implementation.

CURRENT EVIDENCE

Fresh refusal and hold evidence is recorded individually; no scalar result, transition, permit or physical effect is fabricated.

SOURCE DIMENSION

logical

REMAINING REQUIREMENT

Implement the source-defined vector/matrix, integer-count, geometric or numerical operator through Bangel and native C#. Specify dimensions, decimal precision, bounds and negative/unknown cases; do not replace vectors with an unmarked scalar.

SOURCE REFERENCES

D006 pp. 165,166; D012 pp. 49,50

Evidence: evidence/rerun/pending/F-072.json

TR-PINK-F-073 / Revision conflict gate

IF

Invoke F-073 (Revision conflict gate) only with the source-defined inputs, scope, evidence and result dimension (logical). A complete executable parameter schema has not been bound to this ID.

HOW

Preserve the source relation exactly: `base_revision=head_revision OR valid_merge_receipt`. Define and bind required evidence, validation rules, state/receipt transitions and authority scope. Caller-supplied Boolean assertions alone do not complete this contract.

THEN

Keep this formula OPEN. The current paper host rejects this ID with `PAPER_PROFILE_UNIMPLEMENTED`. The Teal assertion gate holds when method/proof is false. This expected refusal is not a completed implementation.

CURRENT EVIDENCE

Fresh refusal and hold evidence is recorded individually; no scalar result, transition, permit or physical effect is fabricated.

SOURCE DIMENSION

logical

REMAINING REQUIREMENT

Define and bind required evidence, validation rules, state/receipt transitions and authority scope. Caller-supplied Boolean assertions alone do not complete this contract.

SOURCE REFERENCES

D006 pp. 167,168; D012 pp. 51,52

Evidence: `evidence/rerun/pending/F-073.json`

TR-PINK-F-074 / Freshness age

IF

Invoke F-074 with exactly these inputs: now: Real, observed: Real. Real values use finite decimal text; null remains unknown.

HOW

Source expression: Age=now-observed_at. Current Bangel expression: now - observed. Require every input to be known. Require now >= observed.

THEN

Emit the scoped calculation result. Missing inputs produce their specific PINK_MISSING_* HOLD; failed profile checks produce PINK_DOMAIN. A false numeric predicate can occur in a PASS calculation receipt; it is not permission.

CURRENT EVIDENCE

Fixture inputs {"now": "100", "observed": "85"}; expected 15. Result matched through Bangel, admitted JP, the Bangel API, with validated receipt outputs. 2 missing-input cases and 0 supplied domain cases passed.

SOURCE DIMENSION

time

REMAINING REQUIREMENT

Complete the source-defined measurement/evidence contract, units and calibration bindings. Native C# and Hagar formula-ID bindings remain unverified in this rerun.

SOURCE REFERENCES

D006 pp. 169,170; D012 pp. 53,54
Evidence: evidence/rerun/pink/F-074.json

TR-PINK-F-075 / Staleness gate

IF

Invoke F-075 with exactly these inputs: age: Real, freshness_limit: Real. Real values use finite decimal text; null remains unknown.

HOW

Source expression: $\text{Age} \leq \text{freshness_limit}$. Current Bangel expression: $\text{age} \leq \text{freshness_limit}$. Require every input to be known. Require $\text{age} \geq 0.0$ and $\text{freshness_limit} \geq 0.0$.

THEN

Emit the scoped calculation result. Missing inputs produce their specific PINK_MISSING_* HOLD; failed profile checks produce PINK_DOMAIN. A false numeric predicate can occur in a PASS calculation receipt; it is not permission.

CURRENT EVIDENCE

Fixture inputs {"age": "15", "freshness_limit": "20"}; expected true. Result matched through Bangel, admitted JP, the Bangel API, with validated receipt outputs. 2 missing-input cases and 0 supplied domain cases passed.

SOURCE DIMENSION

logical

REMAINING REQUIREMENT

Complete the source-defined measurement/evidence contract, units and calibration bindings. Native C# and Hagar formula-ID bindings remain unverified in this rerun.

SOURCE REFERENCES

D006 pp. 171,172; D012 pp. 55,56
Evidence: evidence/rerun/pink/F-075.json

TR-PINK-F-076 / Data-performance correlation

IF

Invoke F-076 with exactly these inputs: covariance: Real, sigma_x: Real, sigma_y: Real. Real values use finite decimal text; null remains unknown.

HOW

Source expression: $r_{xy} = \text{Cov}(X,Y) / (\sigma_x \cdot \sigma_y)$. Current Bangel expression: covariance / (sigma_x * sigma_y). Require every input to be known. Require sigma_x > 0.0 and sigma_y > 0.0 and $\text{math.abs}(\text{covariance}) \leq \sigma_x * \sigma_y$.

THEN

Emit the scoped calculation result. Missing inputs produce their specific PINK_MISSING_* HOLD; failed profile checks produce PINK_DOMAIN. A false numeric predicate can occur in a PASS calculation receipt; it is not permission.

CURRENT EVIDENCE

Fixture inputs {"covariance": "-6", "sigma_x": "2", "sigma_y": "3"}; expected -1. Result matched through Bangel, admitted JP, the Bangel API, with validated receipt outputs. 3 missing-input cases and 1 supplied domain cases passed.

SOURCE DIMENSION

ratio

REMAINING REQUIREMENT

Complete the source-defined measurement/evidence contract, units and calibration bindings. Native C# and Hagar formula-ID bindings remain unverified in this rerun.

SOURCE REFERENCES

D006 pp. 173,174; D012 pp. 57,58
Evidence: evidence/rerun/pink/F-076.json

TR-PINK-F-077 / Silo unification gate

IF

Invoke F-077 (Silo unification gate) only with the source-defined inputs, scope, evidence and result dimension (logical). A complete executable parameter schema has not been bound to this ID.

HOW

Preserve the source relation exactly: UnifiedMetric=SameMeaning AND SameUnit AND SamePeriod AND SameAuthority AND SameLineage. Define and bind required evidence, validation rules, state/receipt transitions and authority scope. Caller-supplied Boolean assertions alone do not complete this contract.

THEN

Keep this formula OPEN. The current paper host rejects this ID with PAPER_PROFILE_UNIMPLEMENTED. The Teal assertion gate holds when method/proof is false. This expected refusal is not a completed implementation.

CURRENT EVIDENCE

Fresh refusal and hold evidence is recorded individually; no scalar result, transition, permit or physical effect is fabricated.

SOURCE DIMENSION

logical

REMAINING REQUIREMENT

Define and bind required evidence, validation rules, state/receipt transitions and authority scope. Caller-supplied Boolean assertions alone do not complete this contract.

SOURCE REFERENCES

D006 pp. 175,176; D012 pp. 59,60

Evidence: evidence/rerun/pending/F-077.json

TR-PINK-F-078 / Formula verification residual

IF

Invoke F-078 with exactly these inputs: reported: Real, recomputed: Real. Real values use finite decimal text; null remains unknown.

HOW

Source expression: $r_formula = y_reported - y_recomputed$. Current Bangel expression: reported - recomputed. Require every input to be known. No additional domain predicates are declared by this scalar profile.

THEN

Emit the scoped calculation result. Missing inputs produce their specific PINK_MISSING_* HOLD; failed profile checks produce PINK_DOMAIN. A false numeric predicate can occur in a PASS calculation receipt; it is not permission.

CURRENT EVIDENCE

Fixture inputs {"reported": "12", "recomputed": "10"}; expected 2. Result matched through Bangel, admitted JP, the Bangel API, with validated receipt outputs. 2 missing-input cases and 0 supplied domain cases passed.

SOURCE DIMENSION

output unit

REMAINING REQUIREMENT

Complete the source-defined measurement/evidence contract, units and calibration bindings. Native C# and Hagar formula-ID bindings remain unverified in this rerun.

SOURCE REFERENCES

D006 pp. 177,178; D012 pp. 61,62

Evidence: evidence/rerun/pink/F-078.json

TR-PINK-F-079 / Operational intake completeness

IF

Invoke F-079 (Operational intake completeness) only with the source-defined inputs, scope, evidence and result dimension (logical). A complete executable parameter schema has not been bound to this ID.

HOW

Preserve the source relation exactly: IntakePass=process_defined AND users_known AND workload_known AND SLA_known AND authority_known. Define and bind required evidence, validation rules, state/receipt transitions and authority scope. Caller-supplied Boolean assertions alone do not complete this contract.

THEN

Keep this formula OPEN. The current paper host rejects this ID with PAPER_PROFILE_UNIMPLEMENTED. The Teal assertion gate holds when method/proof is false. This expected refusal is not a completed implementation.

CURRENT EVIDENCE

Fresh refusal and hold evidence is recorded individually; no scalar result, transition, permit or physical effect is fabricated.

SOURCE DIMENSION

logical

REMAINING REQUIREMENT

Define and bind required evidence, validation rules, state/receipt transitions and authority scope. Caller-supplied Boolean assertions alone do not complete this contract.

SOURCE REFERENCES

D006 pp. 179,180; D012 pp. 63,64
Evidence: evidence/rerun/pending/F-079.json

TR-PINK-F-080 / Spreadsheet capacity gate

IF

Invoke F-080 (Spreadsheet capacity gate) only with the source-defined inputs, scope, evidence and result dimension (logical). A complete executable parameter schema has not been bound to this ID.

HOW

Preserve the source relation exactly: $\lambda_{total} \leq \rho_{max} \sum_p(\mu_p)$ AND $memory_{required} \leq memory_{available}$ AND $cross_partition_edges \leq cut_limit$. Implement the source-defined vector/matrix, integer-count, geometric or numerical operator through Bangel and native C#. Specify dimensions, decimal precision, bounds and negative/unknown cases; do not replace vectors with an unmarked scalar.

THEN

Keep this formula OPEN. The current paper host rejects this ID with PAPER_PROFILE_UNIMPLEMENTED. The Teal assertion gate holds when method/proof is false. This expected refusal is not a completed implementation.

CURRENT EVIDENCE

Fresh refusal and hold evidence is recorded individually; no scalar result, transition, permit or physical effect is fabricated.

SOURCE DIMENSION

logical

REMAINING REQUIREMENT

Implement the source-defined vector/matrix, integer-count, geometric or numerical operator through Bangel and native C#. Specify dimensions, decimal precision, bounds and negative/unknown cases; do not replace vectors with an unmarked scalar.

SOURCE REFERENCES

D006 pp. 181,182; D012 pp. 65,66
Evidence: evidence/rerun/pending/F-080.json

TR-PINK-F-081 / First-noise rectangle height

IF

Invoke F-081 with exactly these inputs: noise_height: Real. Real values use finite decimal text; null remains unknown.

HOW

Source expression: $H_R=h_{noise},1$. Current Bangel expression: noise_height. Require every input to be known. Require noise_height > 0.0.

THEN

Emit the scoped calculation result. Missing inputs produce their specific PINK_MISSING_* HOLD; failed profile checks produce PINK_DOMAIN. A false numeric predicate can occur in a PASS calculation receipt; it is not permission.

CURRENT EVIDENCE

Fixture inputs {"noise_height": "3"}; expected 3. Result matched through Bangel, admitted JP, the Bangel API, with validated receipt outputs. 1 missing-input cases and 1 supplied domain cases passed.

SOURCE DIMENSION

length

REMAINING REQUIREMENT

Complete the source-defined measurement/evidence contract, units and calibration bindings. Native C# and Hagar formula-ID bindings remain unverified in this rerun.

SOURCE REFERENCES

D006 pp. 183,184; D012 pp. 67,68
Evidence: evidence/rerun/pink/F-081.json

TR-PINK-F-082 / Reference gas density

IF

Invoke F-082 with exactly these inputs: pressure: Real, molar_mass: Real, compressibility: Real, gas_constant: Real, temperature: Real. Real values use finite decimal text; null remains unknown.

HOW

Source expression: $\rho_g = P \cdot M / (Z \cdot R \cdot T)$. Current Bangel expression: $\text{pressure} * \text{molar_mass} / (\text{compressibility} * \text{gas_constant} * \text{temperature})$. Require every input to be known. Require $\text{pressure} > 0.0$ and $\text{molar_mass} > 0.0$ and $\text{compressibility} > 0.0$ and $\text{gas_constant} > 0.0$ and $\text{temperature} > 0.0$.

THEN

Emit the scoped calculation result. Missing inputs produce their specific PINK_MISSING_* HOLD; failed profile checks produce PINK_DOMAIN. A false numeric predicate can occur in a PASS calculation receipt; it is not permission.

CURRENT EVIDENCE

Fixture inputs {"pressure": "100", "molar_mass": "2", "compressibility": "1", "gas_constant": "4", "temperature": "5"}; expected 10. Result matched through Bangel, admitted JP, the Bangel API, with validated receipt outputs. 5 missing-input cases and 1 supplied domain cases passed.

SOURCE DIMENSION

mass/volume

REMAINING REQUIREMENT

Complete the source-defined measurement/evidence contract, units and calibration bindings. Native C# and Hagar formula-ID bindings remain unverified in this rerun.

SOURCE REFERENCES

D006 pp. 185,186; D012 pp. 69,70
Evidence: evidence/rerun/pink/F-082.json

TR-PINK-F-083 / 24 mg reference volume

IF

Invoke F-083 with exactly these inputs: reference_density: Real. Real values use finite decimal text; null remains unknown.

HOW

Source expression: $V_{24}=m_{24}/\rho_{ref}$. Current Bangel expression: $0.000024 / \text{reference_density}$. Require every input to be known. Require reference_density > 0.0.

THEN

Emit the scoped calculation result. Missing inputs produce their specific PINK_MISSING_* HOLD; failed profile checks produce PINK_DOMAIN. A false numeric predicate can occur in a PASS calculation receipt; it is not permission.

CURRENT EVIDENCE

Fixture inputs {"reference_density": "2"}; expected 0.000012. Result matched through Bangel, admitted JP, the Bangel API, with validated receipt outputs. 1 missing-input cases and 1 supplied domain cases passed.

SOURCE DIMENSION

volume

REMAINING REQUIREMENT

Complete the source-defined measurement/evidence contract, units and calibration bindings. Native C# and Hagar formula-ID bindings remain unverified in this rerun.

SOURCE REFERENCES

D006 pp. 187,188; D012 pp. 71,72
Evidence: evidence/rerun/pink/F-083.json

TR-PINK-F-084 / Rectangle depth

IF

Invoke F-084 with exactly these inputs: volume: Real, width: Real, height: Real. Real values use finite decimal text; null remains unknown.

HOW

Source expression: $D_R = V_{24} / (W_R * H_R)$. Current Bangel expression: volume / (width * height). Require every input to be known. Require volume > 0.0 and width > 0.0 and height > 0.0.

THEN

Emit the scoped calculation result. Missing inputs produce their specific PINK_MISSING_* HOLD; failed profile checks produce PINK_DOMAIN. A false numeric predicate can occur in a PASS calculation receipt; it is not permission.

CURRENT EVIDENCE

Fixture inputs {"volume": "24", "width": "3", "height": "2"}; expected 4. Result matched through Bangel, admitted JP, the Bangel API, with validated receipt outputs. 3 missing-input cases and 1 supplied domain cases passed.

SOURCE DIMENSION

length

REMAINING REQUIREMENT

Complete the source-defined measurement/evidence contract, units and calibration bindings. Native C# and Hagar formula-ID bindings remain unverified in this rerun.

SOURCE REFERENCES

D006 pp. 189,190; D012 pp. 73,74

Evidence: evidence/rerun/pink/F-084.json

TR-PINK-F-085 / Cone height ratio

IF

Invoke F-085 with exactly these inputs: height_ratio: Real, rectangle_height: Real. Real values use finite decimal text; null remains unknown.

HOW

Source expression: $H_C = k_H \cdot H_R$; $k_H, std = 2$. Current Bangel expression: height_ratio * rectangle_height. Require every input to be known. Require height_ratio > 0.0 and rectangle_height > 0.0.

THEN

Emit the scoped calculation result. Missing inputs produce their specific PINK_MISSING_* HOLD; failed profile checks produce PINK_DOMAIN. A false numeric predicate can occur in a PASS calculation receipt; it is not permission.

CURRENT EVIDENCE

Fixture inputs {"height_ratio": "2", "rectangle_height": "3"}; expected 6. Result matched through Bangel, admitted JP, the Bangel API, with validated receipt outputs. 2 missing-input cases and 1 supplied domain cases passed.

SOURCE DIMENSION

length

REMAINING REQUIREMENT

Complete the source-defined measurement/evidence contract, units and calibration bindings. Native C# and Hagar formula-ID bindings remain unverified in this rerun.

SOURCE REFERENCES

D006 pp. 191,192; D012 pp. 75,76
Evidence: evidence/rerun/pink/F-085.json

TR-PINK-F-086 / Cone top-width ratio

IF

Invoke F-086 with exactly these inputs: width_ratio: Real, bottom_width: Real. Real values use finite decimal text; null remains unknown.

HOW

Source expression: $W_T = k_W \cdot W_B$; $k_W, std = 2$. Current Bangel expression: width_ratio * bottom_width. Require every input to be known. Require width_ratio > 0.0 and bottom_width > 0.0.

THEN

Emit the scoped calculation result. Missing inputs produce their specific PINK_MISSING_* HOLD; failed profile checks produce PINK_DOMAIN. A false numeric predicate can occur in a PASS calculation receipt; it is not permission.

CURRENT EVIDENCE

Fixture inputs {"width_ratio": "2", "bottom_width": "4"}; expected 8. Result matched through Bangel, admitted JP, the Bangel API, with validated receipt outputs. 2 missing-input cases and 1 supplied domain cases passed.

SOURCE DIMENSION

length

REMAINING REQUIREMENT

Complete the source-defined measurement/evidence contract, units and calibration bindings. Native C# and Hagar formula-ID bindings remain unverified in this rerun.

SOURCE REFERENCES

D006 pp. 193,194; D012 pp. 77,78
Evidence: evidence/rerun/pink/F-086.json

TR-PINK-F-087 / Cone area by height

IF

Invoke F-087 with exactly these inputs: base_area: Real, width_ratio: Real, height: Real, cone_height: Real. Real values use finite decimal text; null remains unknown.

HOW

Source expression: $A(z)=A_B*(1+(k_W-1)*z/H_C)^2$. Current Bangel expression: $base_area * (1.0 + (width_ratio - 1.0) * height / cone_height) * (1.0 + (width_ratio - 1.0) * height / cone_height)$. Require every input to be known. Require $base_area > 0.0$ and $width_ratio > 0.0$ and $cone_height > 0.0$ and $height \geq 0.0$ and $height \leq cone_height$.

THEN

Emit the scoped calculation result. Missing inputs produce their specific PINK_MISSING_* HOLD; failed profile checks produce PINK_DOMAIN. A false numeric predicate can occur in a PASS calculation receipt; it is not permission.

CURRENT EVIDENCE

Fixture inputs {"base_area": "4", "width_ratio": "2", "height": "3", "cone_height": "6"}; expected 9. Result matched through Bangel, admitted JP, the Bangel API, with validated receipt outputs. 4 missing-input cases and 1 supplied domain cases passed.

SOURCE DIMENSION

area

REMAINING REQUIREMENT

Complete the source-defined measurement/evidence contract, units and calibration bindings. Native C# and Hagar formula-ID bindings remain unverified in this rerun.

SOURCE REFERENCES

D006 pp. 195,196; D012 pp. 79,80
Evidence: evidence/rerun/pink/F-087.json

TR-PINK-F-088 / Cone partial volume

IF

Invoke F-088 with exactly these inputs: base_area: Real, width_ratio: Real, height: Real, cone_height: Real. Real values use finite decimal text; null remains unknown.

HOW

Source expression: $V_C(z)=A_B(z+(k_W-1)z^2/H_C+(k_W-1)^2z^3/(3H_C^2))$. Current Bangel expression: $base_area * (height + (width_ratio - 1.0) * height * height / cone_height + (width_ratio - 1.0) * height * height * height / (3.0 * cone_height * cone_height))$. Require every input to be known. Require $base_area > 0.0$ and $width_ratio > 0.0$ and $cone_height > 0.0$ and $height \geq 0.0$ and $height \leq cone_height$.

THEN

Emit the scoped calculation result. Missing inputs produce their specific PINK_MISSING_* HOLD; failed profile checks produce PINK_DOMAIN. A false numeric predicate can occur in a PASS calculation receipt; it is not permission.

CURRENT EVIDENCE

Fixture inputs {"base_area": "3", "width_ratio": "2", "height": "3", "cone_height": "3"}; expected 21. Result matched through Bangel, admitted JP, the Bangel API, with validated receipt outputs. 4 missing-input cases and 1 supplied domain cases passed.

SOURCE DIMENSION

volume

REMAINING REQUIREMENT

Complete the source-defined measurement/evidence contract, units and calibration bindings. Native C# and Hagar formula-ID bindings remain unverified in this rerun.

SOURCE REFERENCES

D006 pp. 197,198; D012 pp. 81,82
Evidence: evidence/rerun/pink/F-088.json

TR-PINK-F-089 / Full conical-frustum volume

IF

Invoke F-089 with exactly these inputs: height: Real, base_area: Real, top_area: Real. Real values use finite decimal text; null remains unknown.

HOW

Source expression: $V_C = H_C / 3 * (A_B + \sqrt{A_B * A_T} + A_T)$. Current Bangel expression: height / 3.0 * (base_area + math.sqrt(base_area * top_area) + top_area). Require every input to be known. Require height > 0.0 and base_area > 0.0 and top_area > 0.0.

THEN

Emit the scoped calculation result. Missing inputs produce their specific PINK_MISSING_* HOLD; failed profile checks produce PINK_DOMAIN. A false numeric predicate can occur in a PASS calculation receipt; it is not permission.

CURRENT EVIDENCE

Fixture inputs {"height": "3", "base_area": "4", "top_area": "9"}; expected 19. Result matched through Bangel, admitted JP, the Bangel API, with validated receipt outputs. 3 missing-input cases and 1 supplied domain cases passed.

SOURCE DIMENSION

volume

REMAINING REQUIREMENT

Complete the source-defined measurement/evidence contract, units and calibration bindings. Native C# and Hagar formula-ID bindings remain unverified in this rerun.

SOURCE REFERENCES

D006 pp. 199,200; D012 pp. 83,84
Evidence: evidence/rerun/pink/F-089.json

TR-PINK-F-090 / Pearl cone-top anchor

IF

Invoke F-090 with exactly these inputs: rectangle_height: Real, cone_height: Real. Real values use finite decimal text; null remains unknown.

HOW

Source expression: $z_{P0}=H_R+H_C$; standard= $3H_R$. Current Bangel expression: rectangle_height + cone_height. Require every input to be known. Require rectangle_height > 0.0 and cone_height > 0.0.

THEN

Emit the scoped calculation result. Missing inputs produce their specific PINK_MISSING_* HOLD; failed profile checks produce PINK_DOMAIN. A false numeric predicate can occur in a PASS calculation receipt; it is not permission.

CURRENT EVIDENCE

Fixture inputs {"rectangle_height": "3", "cone_height": "6"}; expected 9. Result matched through Bangel, admitted JP, the Bangel API, with validated receipt outputs. 2 missing-input cases and 1 supplied domain cases passed.

SOURCE DIMENSION

length

REMAINING REQUIREMENT

Complete the source-defined measurement/evidence contract, units and calibration bindings. Native C# and Hagar formula-ID bindings remain unverified in this rerun.

SOURCE REFERENCES

D006 pp. 201,202; D012 pp. 85,86

Evidence: evidence/rerun/pink/F-090.json

TR-PINK-F-091 / Observed gas mass

IF

Invoke F-091 with exactly these inputs: density: Real, gas_volume: Real. Real values use finite decimal text; null remains unknown.

HOW

Source expression: $m_g = \rho_g \cdot V_C(h_g)$. Current Bangel expression: $\text{density} * \text{gas_volume}$. Require every input to be known. Require $\text{density} > 0.0$ and $\text{gas_volume} \geq 0.0$.

THEN

Emit the scoped calculation result. Missing inputs produce their specific PINK_MISSING_* HOLD; failed profile checks produce PINK_DOMAIN. A false numeric predicate can occur in a PASS calculation receipt; it is not permission.

CURRENT EVIDENCE

Fixture inputs {"density": "2", "gas_volume": "3"}; expected 6. Result matched through Bangel, admitted JP, the Bangel API, with validated receipt outputs. 2 missing-input cases and 1 supplied domain cases passed.

SOURCE DIMENSION

mass

REMAINING REQUIREMENT

Complete the source-defined measurement/evidence contract, units and calibration bindings. Native C# and Hagar formula-ID bindings remain unverified in this rerun.

SOURCE REFERENCES

D006 pp. 203,204; D012 pp. 87,88

Evidence: evidence/rerun/pink/F-091.json

TR-PINK-F-092 / Gas mass-flow from height

IF

Invoke F-092 with exactly these inputs: density: Real, area: Real, height_rate: Real, volume: Real, density_rate: Real. Real values use finite decimal text; null remains unknown.

HOW

Source expression: $m_dot = \rho * A(h_g) * h_dot_g + V_C(h_g) * \rho_dot$. Current Bangel expression: $density * area * height_rate + volume * density_rate$. Require every input to be known. Require $density > 0.0$ and $area > 0.0$ and $volume \geq 0.0$.

THEN

Emit the scoped calculation result. Missing inputs produce their specific PINK_MISSING_* HOLD; failed profile checks produce PINK_DOMAIN. A false numeric predicate can occur in a PASS calculation receipt; it is not permission.

CURRENT EVIDENCE

Fixture inputs {"density": "2", "area": "3", "height_rate": "4", "volume": "5", "density_rate": "-1"}; expected 19. Result matched through Bangel, admitted JP, the Bangel API, with validated receipt outputs. 5 missing-input cases and 1 supplied domain cases passed.

SOURCE DIMENSION

mass/time

REMAINING REQUIREMENT

Complete the source-defined measurement/evidence contract, units and calibration bindings. Native C# and Hagar formula-ID bindings remain unverified in this rerun.

SOURCE REFERENCES

D006 pp. 205,206; D012 pp. 89,90

Evidence: evidence/rerun/pink/F-092.json

TR-PINK-F-093 / Observed gas-height predictor

IF

Invoke F-093 with exactly these inputs: height: Real, velocity: Real, acceleration: Real, dt: Real, cone_height: Real. Real values use finite decimal text; null remains unknown.

HOW

Source expression: $h_{\text{hat}} = \text{clip}(h + v * dt + 0.5 * a * dt^2, 0, H_C)$. Current Bangel expression: $\text{math.min}(\text{cone_height}, \text{math.max}(0.0, \text{height} + \text{velocity} * dt + 0.5 * \text{acceleration} * dt * dt))$. Require every input to be known. Require cone_height > 0.0 and height >= 0.0 and height <= cone_height and dt >= 0.0.

THEN

Emit the scoped calculation result. Missing inputs produce their specific PINK_MISSING_* HOLD; failed profile checks produce PINK_DOMAIN. A false numeric predicate can occur in a PASS calculation receipt; it is not permission.

CURRENT EVIDENCE

Fixture inputs {"height": "4", "velocity": "3", "acceleration": "2", "dt": "2", "cone_height": "10"}; expected 10. Result matched through Bangel, admitted JP, the Bangel API, with validated receipt outputs. 5 missing-input cases and 1 supplied domain cases passed.

SOURCE DIMENSION

length

REMAINING REQUIREMENT

Complete the source-defined measurement/evidence contract, units and calibration bindings. Native C# and Hagar formula-ID bindings remain unverified in this rerun.

SOURCE REFERENCES

D006 pp. 207,208; D012 pp. 91,92
Evidence: evidence/rerun/pink/F-093.json

TR-PINK-F-094 / Gas net-force balance

IF

Invoke F-094 with exactly these inputs: buoyancy: Real, pressure_force: Real, actuation_force: Real, drag: Real, wall: Real, mixing: Real. Real values use finite decimal text; null remains unknown.

HOW

Source expression: $m_{eff} \cdot a_z = F_b + F_p + F_{act} - F_d - F_{wall} - F_{mix}$. Current Bangel expression: buoyancy + pressure_force + actuation_force - drag - wall - mixing. Require every input to be known. No additional domain predicates are declared by this scalar profile.

THEN

Emit the scoped calculation result. Missing inputs produce their specific PINK_MISSING_* HOLD; failed profile checks produce PINK_DOMAIN. A false numeric predicate can occur in a PASS calculation receipt; it is not permission.

CURRENT EVIDENCE

Fixture inputs {"buoyancy": "10", "pressure_force": "8", "actuation_force": "4", "drag": "3", "wall": "2", "mixing": "1"}; expected 16. Result matched through Bangel, admitted JP, the Bangel API, with validated receipt outputs. 6 missing-input cases and 0 supplied domain cases passed.

SOURCE DIMENSION

force

REMAINING REQUIREMENT

Complete the source-defined measurement/evidence contract, units and calibration bindings. Native C# and Hagar formula-ID bindings remain unverified in this rerun.

SOURCE REFERENCES

D006 pp. 209,210; D012 pp. 93,94
Evidence: evidence/rerun/pink/F-094.json

TR-PINK-F-095 / Buoyancy force

IF

Invoke F-095 with exactly these inputs: ambient_density: Real, gas_density: Real, gravity: Real, volume: Real. Real values use finite decimal text; null remains unknown.

HOW

Source expression: $F_b = (\rho_{\text{ambient}} - \rho_g) * g * V_g$. Current Bangel expression: $(\text{ambient_density} - \text{gas_density}) * \text{gravity} * \text{volume}$. Require every input to be known. Require $\text{ambient_density} > 0.0$ and $\text{gas_density} > 0.0$ and $\text{gravity} \geq 0.0$ and $\text{volume} \geq 0.0$.

THEN

Emit the scoped calculation result. Missing inputs produce their specific PINK_MISSING_* HOLD; failed profile checks produce PINK_DOMAIN. A false numeric predicate can occur in a PASS calculation receipt; it is not permission.

CURRENT EVIDENCE

Fixture inputs {"ambient_density": "3", "gas_density": "1", "gravity": "10", "volume": "2"}; expected 40. Result matched through Bangel, admitted JP, the Bangel API, with validated receipt outputs. 4 missing-input cases and 1 supplied domain cases passed.

SOURCE DIMENSION

force

REMAINING REQUIREMENT

Complete the source-defined measurement/evidence contract, units and calibration bindings. Native C# and Hagar formula-ID bindings remain unverified in this rerun.

SOURCE REFERENCES

D006 pp. 211,212; D012 pp. 95,96
Evidence: evidence/rerun/pink/F-095.json

TR-PINK-F-096 / Drag force

IF

Invoke F-096 with exactly these inputs: drag_coefficient: Real, density: Real, area: Real, velocity: Real. Real values use finite decimal text; null remains unknown.

HOW

Source expression: $F_d = 0.5 * C_d * \rho_{\text{ambient}} * A_{\text{projected}} * u * \text{abs}(u)$. Current Bangel expression: $0.5 * \text{drag_coefficient} * \text{density} * \text{area} * \text{velocity} * \text{math.abs}(\text{velocity})$. Require every input to be known. Require $\text{drag_coefficient} \geq 0.0$ and $\text{density} > 0.0$ and $\text{area} > 0.0$.

THEN

Emit the scoped calculation result. Missing inputs produce their specific PINK_MISSING_* HOLD; failed profile checks produce PINK_DOMAIN. A false numeric predicate can occur in a PASS calculation receipt; it is not permission.

CURRENT EVIDENCE

Fixture inputs {"drag_coefficient": "2", "density": "1", "area": "3", "velocity": "-2"}; expected -12. Result matched through Bangel, admitted JP, the Bangel API, with validated receipt outputs. 4 missing-input cases and 1 supplied domain cases passed.

SOURCE DIMENSION

force

REMAINING REQUIREMENT

Complete the source-defined measurement/evidence contract, units and calibration bindings. Native C# and Hagar formula-ID bindings remain unverified in this rerun.

SOURCE REFERENCES

D006 pp. 213,214; D012 pp. 97,98
Evidence: evidence/rerun/pink/F-096.json

TR-PINK-F-097 / Flow continuity

IF

Invoke F-097 with exactly these inputs: area: Real, velocity: Real. Real values use finite decimal text; null remains unknown.

HOW

Source expression: $Q=A(z)*u(z)$. Current Bangel expression: `area * velocity`. Require every input to be known. Require `area > 0.0`.

THEN

Emit the scoped calculation result. Missing inputs produce their specific `PINK_MISSING_*` HOLD; failed profile checks produce `PINK_DOMAIN`. A false numeric predicate can occur in a PASS calculation receipt; it is not permission.

CURRENT EVIDENCE

Fixture inputs `{"area": "3", "velocity": "-2"}`; expected -6. Result matched through Bangel, admitted JP, the Bangel API, with validated receipt outputs. 2 missing-input cases and 1 supplied domain cases passed.

SOURCE DIMENSION

volume/time

REMAINING REQUIREMENT

Complete the source-defined measurement/evidence contract, units and calibration bindings. Native C# and Hagar formula-ID bindings remain unverified in this rerun.

SOURCE REFERENCES

D006 pp. 215,216; D012 pp. 99,100

Evidence: `evidence/rerun/pink/F-097.json`

TR-PINK-F-098 / Residual reservoir capacity

IF

Invoke F-098 with exactly these inputs: fraction: Real, rectangle_capacity: Real. Real values use finite decimal text; null remains unknown.

HOW

Source expression: $C_{res,k} = \gamma_k C_{rect,k}$; $0 \leq \gamma_k < 1$. Current Bangel expression: `fraction * rectangle_capacity`. Require every input to be known. Require `fraction >= 0.0` and `fraction < 1.0` and `rectangle_capacity > 0.0`.

THEN

Emit the scoped calculation result. Missing inputs produce their specific `PINK_MISSING_*` HOLD; failed profile checks produce `PINK_DOMAIN`. A false numeric predicate can occur in a PASS calculation receipt; it is not permission.

CURRENT EVIDENCE

Fixture inputs `{"fraction": "0.5", "rectangle_capacity": "10"}`; expected 5. Result matched through Bangel, admitted JP, the Bangel API, with validated receipt outputs. 2 missing-input cases and 1 supplied domain cases passed.

SOURCE DIMENSION

typed capacity

REMAINING REQUIREMENT

Complete the source-defined measurement/evidence contract, units and calibration bindings. Native C# and Hagar formula-ID bindings remain unverified in this rerun.

SOURCE REFERENCES

D006 pp. 217,218; D012 pp. 101,102

Evidence: `evidence/rerun/pink/F-098.json`

TR-PINK-F-099 / Umbrella/EVE/reservoir balance

IF

Invoke F-099 with exactly these inputs: down: Real, eve: Real, reservoir: Real, escape: Real, residual: Real. Real values use finite decimal text; null remains unknown.

HOW

Source expression: $q_{cone}=q_{down}+q_{EVE}+q_{res}+q_{escape}+r$. Current Bangel expression: down + eve + reservoir + escape + residual. Require every input to be known. No additional domain predicates are declared by this scalar profile.

THEN

Emit the scoped calculation result. Missing inputs produce their specific PINK_MISSING_* HOLD; failed profile checks produce PINK_DOMAIN. A false numeric predicate can occur in a PASS calculation receipt; it is not permission.

CURRENT EVIDENCE

Fixture inputs {"down": "1", "eve": "2", "reservoir": "3", "escape": "4", "residual": "-1"}; expected 9. Result matched through Bangel, admitted JP, the Bangel API, with validated receipt outputs. 5 missing-input cases and 0 supplied domain cases passed.

SOURCE DIMENSION

typed quantity

REMAINING REQUIREMENT

Complete the source-defined measurement/evidence contract, units and calibration bindings. Native C# and Hagar formula-ID bindings remain unverified in this rerun.

SOURCE REFERENCES

D006 pp. 219,220; D012 pp. 103,104

Evidence: evidence/rerun/pink/F-099.json

TR-PINK-F-100 / Containment modification predicate

IF

Invoke F-100 (Containment modification predicate) only with the source-defined inputs, scope, evidence and result dimension (logical). A complete executable parameter schema has not been bound to this ID.

HOW

Preserve the source relation exactly:
Valid(theta)=typed&positive&recomputed&conserved&bounded&evidenced&MK&JO&MJ. Define and bind required evidence, validation rules, state/receipt transitions and authority scope. Caller-supplied Boolean assertions alone do not complete this contract.

THEN

Keep this formula OPEN. The current paper host rejects this ID with PAPER_PROFILE_UNIMPLEMENTED. The Teal assertion gate holds when method/proof is false. This expected refusal is not a completed implementation.

CURRENT EVIDENCE

Fresh refusal and hold evidence is recorded individually; no scalar result, transition, permit or physical effect is fabricated.

SOURCE DIMENSION

logical

REMAINING REQUIREMENT

Define and bind required evidence, validation rules, state/receipt transitions and authority scope. Caller-supplied Boolean assertions alone do not complete this contract.

SOURCE REFERENCES

D006 pp. 117,121,221,222; D012 pp. 1,5,105,106
Evidence: evidence/rerun/pending/F-100.json

TR-PINK-F-101 / Rear outlet elevation

IF

Invoke F-101 with exactly these inputs: maximum_height: Real, offset: Real. Real values use finite decimal text; null remains unknown.

HOW

Source expression: $z_{out}=H_P-\delta_z$; $0<\delta_z<H_P$. Current Bangel expression: maximum_height - offset. Require every input to be known. Require maximum_height > 0.0 and offset > 0.0 and offset < maximum_height.

THEN

Emit the scoped calculation result. Missing inputs produce their specific PINK_MISSING_* HOLD; failed profile checks produce PINK_DOMAIN. A false numeric predicate can occur in a PASS calculation receipt; it is not permission.

CURRENT EVIDENCE

Fixture inputs {"maximum_height": "10", "offset": "2"}; expected 8. Result matched through Bangel, admitted JP, the Bangel API, with validated receipt outputs. 2 missing-input cases and 1 supplied domain cases passed.

SOURCE DIMENSION

length

REMAINING REQUIREMENT

Complete the source-defined measurement/evidence contract, units and calibration bindings. Native C# and Hagar formula-ID bindings remain unverified in this rerun.

SOURCE REFERENCES

D006 pp. 223,224,227,229,230; D013 pp. 1,2,5,7,8

Evidence: evidence/rerun/pink/F-101.json

TR-PINK-F-102 / Pearl simulation exclusion radius

IF

Invoke F-102 with exactly these inputs: top_radius: Real, clearance: Real. Real values use finite decimal text; null remains unknown.

HOW

Source expression: $R_{P,sim}=R_{top}+c_P$; $c_P \geq 0$. Current Bangel expression: top_radius + clearance. Require every input to be known. Require top_radius > 0.0 and clearance >= 0.0.

THEN

Emit the scoped calculation result. Missing inputs produce their specific PINK_MISSING_* HOLD; failed profile checks produce PINK_DOMAIN. A false numeric predicate can occur in a PASS calculation receipt; it is not permission.

CURRENT EVIDENCE

Fixture inputs {"top_radius": "3", "clearance": "2"}; expected 5. Result matched through Bangel, admitted JP, the Bangel API, with validated receipt outputs. 2 missing-input cases and 1 supplied domain cases passed.

SOURCE DIMENSION

length

REMAINING REQUIREMENT

Complete the source-defined measurement/evidence contract, units and calibration bindings. Native C# and Hagar formula-ID bindings remain unverified in this rerun.

SOURCE REFERENCES

D006 pp. 224,231,232; D013 pp. 2,9,10

Evidence: evidence/rerun/pink/F-102.json

TR-PINK-F-103 / Outward-tangential outlet direction

IF

Invoke F-103 (Outward-tangential outlet direction) only with the source-defined inputs, scope, evidence and result dimension (dimensionless vector). A complete executable parameter schema has not been bound to this ID.

HOW

Preserve the source relation exactly: $d_{out} = \cos(\alpha_{out})t + \sin(\alpha_{out})n_{out}$; $0 < \alpha_{out} < \pi/2$. Implement the source-defined vector/matrix, integer-count, geometric or numerical operator through Bangel and native C#. Specify dimensions, decimal precision, bounds and negative/unknown cases; do not replace vectors with an unmarked scalar.

THEN

Keep this formula OPEN. The current paper host rejects this ID with PAPER_PROFILE_UNIMPLEMENTED. The Teal assertion gate holds when method/proof is false. This expected refusal is not a completed implementation.

CURRENT EVIDENCE

Fresh refusal and hold evidence is recorded individually; no scalar result, transition, permit or physical effect is fabricated.

SOURCE DIMENSION

dimensionless vector

REMAINING REQUIREMENT

Implement the source-defined vector/matrix, integer-count, geometric or numerical operator through Bangel and native C#. Specify dimensions, decimal precision, bounds and negative/unknown cases; do not replace vectors with an unmarked scalar.

SOURCE REFERENCES

D006 pp. 224,233,234; D013 pp. 2,11,12

Evidence: evidence/rerun/pending/F-103.json

TR-PINK-F-104 / Outside-circle outlet path

IF

Invoke F-104 (Outside-circle outlet path) only with the source-defined inputs, scope, evidence and result dimension (length^2). A complete executable parameter schema has not been bound to this ID.

HOW

Preserve the source relation exactly: $||\gamma(s)-c_P||^2=R_P^2+2R_Ps\sin(\alpha_{out})+s^2$. Implement the source-defined vector/matrix, integer-count, geometric or numerical operator through Bangel and native C#. Specify dimensions, decimal precision, bounds and negative/unknown cases; do not replace vectors with an unmarked scalar.

THEN

Keep this formula OPEN. The current paper host rejects this ID with PAPER_PROFILE_UNIMPLEMENTED. The Teal assertion gate holds when method/proof is false. This expected refusal is not a completed implementation.

CURRENT EVIDENCE

Fresh refusal and hold evidence is recorded individually; no scalar result, transition, permit or physical effect is fabricated.

SOURCE DIMENSION

length^2

REMAINING REQUIREMENT

Implement the source-defined vector/matrix, integer-count, geometric or numerical operator through Bangel and native C#. Specify dimensions, decimal precision, bounds and negative/unknown cases; do not replace vectors with an unmarked scalar.

SOURCE REFERENCES

D006 pp. 224,235,236; D013 pp. 2,13,14

Evidence: evidence/rerun/pending/F-104.json

TR-PINK-F-105 / Reservoir volume balance

IF

Invoke F-105 with exactly these inputs: outflow: Real, return_flow: Real, drain: Real, escape: Real. Real values use finite decimal text; null remains unknown.

HOW

Source expression: $dV_L/dt=Q_{out}-Q_{return}-Q_{drain}-Q_{escape}$. Current Bangel expression: outflow - return_flow - drain - escape. Require every input to be known. No additional domain predicates are declared by this scalar profile.

THEN

Emit the scoped calculation result. Missing inputs produce their specific PINK_MISSING_* HOLD; failed profile checks produce PINK_DOMAIN. A false numeric predicate can occur in a PASS calculation receipt; it is not permission.

CURRENT EVIDENCE

Fixture inputs {"outflow": "10", "return_flow": "3", "drain": "2", "escape": "1"}; expected 4. Result matched through Bangel, admitted JP, the Bangel API, with validated receipt outputs. 4 missing-input cases and 0 supplied domain cases passed.

SOURCE DIMENSION

volume/time

REMAINING REQUIREMENT

Complete the source-defined measurement/evidence contract, units and calibration bindings. Native C# and Hagar formula-ID bindings remain unverified in this rerun.

SOURCE REFERENCES

D006 pp. 224,237,238; D013 pp. 2,15,16
Evidence: evidence/rerun/pink/F-105.json

TR-PINK-F-106 / Typed reservoir quantity balance

IF

Invoke F-106 with exactly these inputs: outgoing: Real, returning: Real, drain: Real, escape: Real. Real values use finite decimal text; null remains unknown.

HOW

Source expression: $dq_L,k/dt=q_{out,k}-q_{return,k}-q_{drain,k}-q_{escape,k}$. Current Bangel expression: outgoing - returning - drain - escape. Require every input to be known. No additional domain predicates are declared by this scalar profile.

THEN

Emit the scoped calculation result. Missing inputs produce their specific PINK_MISSING_* HOLD; failed profile checks produce PINK_DOMAIN. A false numeric predicate can occur in a PASS calculation receipt; it is not permission.

CURRENT EVIDENCE

Fixture inputs {"outgoing": "10", "returning": "3", "drain": "2", "escape": "1"}; expected 4. Result matched through Bangel, admitted JP, the Bangel API, with validated receipt outputs. 4 missing-input cases and 0 supplied domain cases passed.

SOURCE DIMENSION

typed quantity/time

REMAINING REQUIREMENT

Complete the source-defined measurement/evidence contract, units and calibration bindings. Native C# and Hagar formula-ID bindings remain unverified in this rerun.

SOURCE REFERENCES

D006 pp. 224,239,240; D013 pp. 2,17,18

Evidence: evidence/rerun/pink/F-106.json

TR-PINK-F-107 / Required buffer volume

IF

Invoke F-107 with exactly these inputs: hold_time: Real, outflow_high: Real, return_low: Real, residual_high: Real. Real values use finite decimal text; null remains unknown.

HOW

Source expression: $V_{L, req} = T_{hold} * \max(0, Q_{out}, H - Q_{return}, L) + V_{residual}, H$. Current Bangel expression: $hold_time * \max(0.0, outflow_high - return_low) + residual_high$. Require every input to be known. Require $hold_time \geq 0.0$ and $outflow_high \geq 0.0$ and $return_low \geq 0.0$ and $residual_high \geq 0.0$.

THEN

Emit the scoped calculation result. Missing inputs produce their specific PINK_MISSING_* HOLD; failed profile checks produce PINK_DOMAIN. A false numeric predicate can occur in a PASS calculation receipt; it is not permission.

CURRENT EVIDENCE

Fixture inputs {"hold_time": "3", "outflow_high": "8", "return_low": "5", "residual_high": "2"}; expected 11. Result matched through Bangel, admitted JP, the Bangel API, with validated receipt outputs. 4 missing-input cases and 1 supplied domain cases passed.

SOURCE DIMENSION

volume

REMAINING REQUIREMENT

Complete the source-defined measurement/evidence contract, units and calibration bindings. Native C# and Hagar formula-ID bindings remain unverified in this rerun.

SOURCE REFERENCES

D006 pp. 224,241,242; D013 pp. 2,19,20

Evidence: evidence/rerun/pink/F-107.json

TR-PINK-F-108 / Outlet area lower bound

IF

Invoke F-108 with exactly these inputs: design_flow: Real, velocity_max: Real. Real values use finite decimal text; null remains unknown.

HOW

Source expression: $A_{out} \geq Q_{design} / u_{out,max}$. Current Bangel expression: design_flow / velocity_max. Require every input to be known. Require design_flow ≥ 0.0 and velocity_max > 0.0 .

THEN

Emit the scoped calculation result. Missing inputs produce their specific PINK_MISSING_* HOLD; failed profile checks produce PINK_DOMAIN. A false numeric predicate can occur in a PASS calculation receipt; it is not permission.

CURRENT EVIDENCE

Fixture inputs {"design_flow": "12", "velocity_max": "3"}; expected 4. Result matched through Bangel, admitted JP, the Bangel API, with validated receipt outputs. 2 missing-input cases and 1 supplied domain cases passed.

SOURCE DIMENSION

area

REMAINING REQUIREMENT

Complete the source-defined measurement/evidence contract, units and calibration bindings. Native C# and Hagar formula-ID bindings remain unverified in this rerun.

SOURCE REFERENCES

D006 pp. 224,243,244; D013 pp. 2,21,22

Evidence: evidence/rerun/pink/F-108.json

TR-PINK-F-109 / Circular outlet radius lower bound

IF

Invoke F-109 (Circular outlet radius lower bound) only with the source-defined inputs, scope, evidence and result dimension (length). A complete executable parameter schema has not been bound to this ID.

HOW

Preserve the source relation exactly: $r_{out} \geq \sqrt{A_{out}/\pi}$. Implement the source-defined vector/matrix, integer-count, geometric or numerical operator through Bangel and native C#. Specify dimensions, decimal precision, bounds and negative/unknown cases; do not replace vectors with an unmarked scalar.

THEN

Keep this formula OPEN. The current paper host rejects this ID with PAPER_PROFILE_UNIMPLEMENTED. The Teal assertion gate holds when method/proof is false. This expected refusal is not a completed implementation.

CURRENT EVIDENCE

Fresh refusal and hold evidence is recorded individually; no scalar result, transition, permit or physical effect is fabricated.

SOURCE DIMENSION

length

REMAINING REQUIREMENT

Implement the source-defined vector/matrix, integer-count, geometric or numerical operator through Bangel and native C#. Specify dimensions, decimal precision, bounds and negative/unknown cases; do not replace vectors with an unmarked scalar.

SOURCE REFERENCES

D006 pp. 245,246; D013 pp. 23,24

Evidence: evidence/rerun/pending/F-109.json

TR-PINK-F-110 / Bounded drip impulse

IF

Invoke F-110 with exactly these inputs: drop_mass: Real, drop_speed: Real, impulse_max: Real. Real values use finite decimal text; null remains unknown.

HOW

Source expression: $J_{\text{drop}} = m_{\text{drop}} \cdot v_{\text{drop}} \leq J_{\text{drop,max}}$. Current Bangel expression: $\text{drop_mass} * \text{drop_speed} \leq \text{impulse_max}$. Require every input to be known. Require $\text{drop_mass} \geq 0.0$ and $\text{drop_speed} \geq 0.0$ and $\text{impulse_max} \geq 0.0$.

THEN

Emit the scoped calculation result. Missing inputs produce their specific PINK_MISSING_* HOLD; failed profile checks produce PINK_DOMAIN. A false numeric predicate can occur in a PASS calculation receipt; it is not permission.

CURRENT EVIDENCE

Fixture inputs {"drop_mass": "2", "drop_speed": "3", "impulse_max": "7"}; expected true. Result matched through Bangel, admitted JP, the Bangel API, with validated receipt outputs. 3 missing-input cases and 1 supplied domain cases passed.

SOURCE DIMENSION

impulse

REMAINING REQUIREMENT

Complete the source-defined measurement/evidence contract, units and calibration bindings. Native C# and Hagar formula-ID bindings remain unverified in this rerun.

SOURCE REFERENCES

D006 pp. 247,248; D013 pp. 25,26

Evidence: evidence/rerun/pink/F-110.json

TR-PINK-F-111 / Small-wave energy reference

IF

Invoke F-111 with exactly these inputs: density: Real, gravity: Real, wave_amplitude: Real, surface_area: Real. Real values use finite decimal text; null remains unknown.

HOW

Source expression: $E_{\text{wave}} \sim 0.5 \cdot \rho \cdot g \cdot a_{\text{wave}}^2 \cdot A_{\text{surface}}$. Current Bangel expression: $0.5 \cdot \text{density} \cdot \text{gravity} \cdot \text{wave_amplitude} \cdot \text{wave_amplitude} \cdot \text{surface_area}$. Require every input to be known. Require density > 0.0 and gravity > 0.0 and wave_amplitude >= 0.0 and surface_area > 0.0.

THEN

Emit the scoped calculation result. Missing inputs produce their specific PINK_MISSING_* HOLD; failed profile checks produce PINK_DOMAIN. A false numeric predicate can occur in a PASS calculation receipt; it is not permission.

CURRENT EVIDENCE

Fixture inputs {"density": "2", "gravity": "10", "wave_amplitude": "0.1", "surface_area": "3"}; expected 0.3. Result matched through Bangel, admitted JP, the Bangel API, with validated receipt outputs. 4 missing-input cases and 1 supplied domain cases passed.

SOURCE DIMENSION

energy

REMAINING REQUIREMENT

Complete the source-defined measurement/evidence contract, units and calibration bindings. Native C# and Hagar formula-ID bindings remain unverified in this rerun.

SOURCE REFERENCES

D006 pp. 249,250; D013 pp. 27,28

Evidence: evidence/rerun/pink/F-111.json

TR-PINK-F-112 / Froude reference

IF

Invoke F-112 with exactly these inputs: speed: Real, gravity: Real, length: Real. Real values use finite decimal text; null remains unknown.

HOW

Source expression: $Fr=U/\sqrt{gL}$. Current Bangel expression: `speed / math.sqrt(gravity * length)`. Require every input to be known. Require `speed >= 0.0` and `gravity > 0.0` and `length > 0.0`.

THEN

Emit the scoped calculation result. Missing inputs produce their specific `PINK_MISSING_*` HOLD; failed profile checks produce `PINK_DOMAIN`. A false numeric predicate can occur in a PASS calculation receipt; it is not permission.

CURRENT EVIDENCE

Fixture inputs `{"speed": "6", "gravity": "4", "length": "9"}`; expected 1. Result matched through Bangel, admitted JP, the Bangel API, with validated receipt outputs. 3 missing-input cases and 1 supplied domain cases passed.

SOURCE DIMENSION

dimensionless

REMAINING REQUIREMENT

Complete the source-defined measurement/evidence contract, units and calibration bindings. Native C# and Hagar formula-ID bindings remain unverified in this rerun.

SOURCE REFERENCES

D006 pp. 251,252; D013 pp. 29,30

Evidence: `evidence/rerun/pink/F-112.json`

TR-PINK-F-113 / Circular return-port area

IF

Invoke F-113 (Circular return-port area) only with the source-defined inputs, scope, evidence and result dimension (area). A complete executable parameter schema has not been bound to this ID.

HOW

Preserve the source relation exactly: $A_{in} = \pi \cdot r_{in}^2$. Implement the source-defined vector/matrix, integer-count, geometric or numerical operator through Bangel and native C#. Specify dimensions, decimal precision, bounds and negative/unknown cases; do not replace vectors with an unmarked scalar.

THEN

Keep this formula OPEN. The current paper host rejects this ID with PAPER_PROFILE_UNIMPLEMENTED. The Teal assertion gate holds when method/proof is false. This expected refusal is not a completed implementation.

CURRENT EVIDENCE

Fresh refusal and hold evidence is recorded individually; no scalar result, transition, permit or physical effect is fabricated.

SOURCE DIMENSION

area

REMAINING REQUIREMENT

Implement the source-defined vector/matrix, integer-count, geometric or numerical operator through Bangel and native C#. Specify dimensions, decimal precision, bounds and negative/unknown cases; do not replace vectors with an unmarked scalar.

SOURCE REFERENCES

D006 pp. 253,254; D013 pp. 31,32

Evidence: evidence/rerun/pending/F-113.json

TR-PINK-F-114 / Inward-tangential reentry components

IF

Invoke F-114 (Inward-tangential reentry components) only with the source-defined inputs, scope, evidence and result dimension (velocity). A complete executable parameter schema has not been bound to this ID.

HOW

Preserve the source relation exactly: $u_r = -U \sin(\beta_{in})$; $u_{\theta} = \sigma U \cos(\beta_{in})$. Implement the source-defined vector/matrix, integer-count, geometric or numerical operator through Bangel and native C#. Specify dimensions, decimal precision, bounds and negative/unknown cases; do not replace vectors with an unmarked scalar.

THEN

Keep this formula OPEN. The current paper host rejects this ID with PAPER_PROFILE_UNIMPLEMENTED. The Teal assertion gate holds when method/proof is false. This expected refusal is not a completed implementation.

CURRENT EVIDENCE

Fresh refusal and hold evidence is recorded individually; no scalar result, transition, permit or physical effect is fabricated.

SOURCE DIMENSION

velocity

REMAINING REQUIREMENT

Implement the source-defined vector/matrix, integer-count, geometric or numerical operator through Bangel and native C#. Specify dimensions, decimal precision, bounds and negative/unknown cases; do not replace vectors with an unmarked scalar.

SOURCE REFERENCES

D006 pp. 255,256; D013 pp. 33,34

Evidence: evidence/rerun/pending/F-114.json

TR-PINK-F-115 / Spiral compatibility ratio

IF

Invoke F-115 with exactly these inputs: tangential: Real, radial: Real, epsilon: Real. Real values use finite decimal text; null remains unknown.

HOW

Source expression: $\chi_{\text{spiral}} = |u_{\text{theta}}| / \max(|u_r|, \epsilon)$. Current Bangel expression: $\text{math.abs(tangential)} / \text{math.max}(\text{math.abs(radial)}, \epsilon)$. Require every input to be known. Require $\epsilon > 0.0$.

THEN

Emit the scoped calculation result. Missing inputs produce their specific PINK_MISSING_* HOLD; failed profile checks produce PINK_DOMAIN. A false numeric predicate can occur in a PASS calculation receipt; it is not permission.

CURRENT EVIDENCE

Fixture inputs {"tangential": "-6", "radial": "-2", "epsilon": "0.1"}; expected 3. Result matched through Bangel, admitted JP, the Bangel API, with validated receipt outputs. 3 missing-input cases and 1 supplied domain cases passed.

SOURCE DIMENSION

dimensionless

REMAINING REQUIREMENT

Complete the source-defined measurement/evidence contract, units and calibration bindings. Native C# and Hagar formula-ID bindings remain unverified in this rerun.

SOURCE REFERENCES

D006 pp. 257,258; D013 pp. 35,36
Evidence: evidence/rerun/pink/F-115.json

TR-PINK-F-116 / Return continuity

IF

Invoke F-116 with exactly these inputs: area: Real, normal_speed: Real. Real values use finite decimal text; null remains unknown.

HOW

Source expression: $Q_{\text{return}} = A_{\text{in}} \cdot u_{\text{n}}$. Current Bangel expression: $\text{area} * \text{normal_speed}$. Require every input to be known. Require $\text{area} > 0.0$.

THEN

Emit the scoped calculation result. Missing inputs produce their specific PINK_MISSING_* HOLD; failed profile checks produce PINK_DOMAIN. A false numeric predicate can occur in a PASS calculation receipt; it is not permission.

CURRENT EVIDENCE

Fixture inputs {"area": "3", "normal_speed": "2"}; expected 6. Result matched through Bangel, admitted JP, the Bangel API, with validated receipt outputs. 2 missing-input cases and 1 supplied domain cases passed.

SOURCE DIMENSION

volume/time

REMAINING REQUIREMENT

Complete the source-defined measurement/evidence contract, units and calibration bindings. Native C# and Hagar formula-ID bindings remain unverified in this rerun.

SOURCE REFERENCES

D006 pp. 259,260; D013 pp. 37,38
Evidence: evidence/rerun/pink/F-116.json

TR-PINK-F-117 / Relative-frame velocity

IF

Invoke F-117 (Relative-frame velocity) only with the source-defined inputs, scope, evidence and result dimension (velocity). A complete executable parameter schema has not been bound to this ID.

HOW

Preserve the source relation exactly: $v_{rel}=v_B-v_A-\Omega_A \times r$. Implement the source-defined vector/matrix, integer-count, geometric or numerical operator through Bangel and native C#. Specify dimensions, decimal precision, bounds and negative/unknown cases; do not replace vectors with an unmarked scalar.

THEN

Keep this formula OPEN. The current paper host rejects this ID with PAPER_PROFILE_UNIMPLEMENTED. The Teal assertion gate holds when method/proof is false. This expected refusal is not a completed implementation.

CURRENT EVIDENCE

Fresh refusal and hold evidence is recorded individually; no scalar result, transition, permit or physical effect is fabricated.

SOURCE DIMENSION

velocity

REMAINING REQUIREMENT

Implement the source-defined vector/matrix, integer-count, geometric or numerical operator through Bangel and native C#. Specify dimensions, decimal precision, bounds and negative/unknown cases; do not replace vectors with an unmarked scalar.

SOURCE REFERENCES

D006 pp. 261,262; D013 pp. 39,40

Evidence: evidence/rerun/pending/F-117.json

TR-PINK-F-118 / Frictional dissipation

IF

Invoke F-118 (Frictional dissipation) only with the source-defined inputs, scope, evidence and result dimension (power). A complete executable parameter schema has not been bound to this ID.

HOW

Preserve the source relation exactly: $P_{\text{diss}} = \max(0, -F_f \cdot v_{\text{rel}})$. Implement the source-defined vector/matrix, integer-count, geometric or numerical operator through Bangel and native C#. Specify dimensions, decimal precision, bounds and negative/unknown cases; do not replace vectors with an unmarked scalar.

THEN

Keep this formula OPEN. The current paper host rejects this ID with PAPER_PROFILE_UNIMPLEMENTED. The Teal assertion gate holds when method/proof is false. This expected refusal is not a completed implementation.

CURRENT EVIDENCE

Fresh refusal and hold evidence is recorded individually; no scalar result, transition, permit or physical effect is fabricated.

SOURCE DIMENSION

power

REMAINING REQUIREMENT

Implement the source-defined vector/matrix, integer-count, geometric or numerical operator through Bangel and native C#. Specify dimensions, decimal precision, bounds and negative/unknown cases; do not replace vectors with an unmarked scalar.

SOURCE REFERENCES

D006 pp. 263,264; D013 pp. 41,42

Evidence: evidence/rerun/pending/F-118.json

TR-PINK-F-119 / Recoverable friction-energy bound

IF

Invoke F-119 (Recoverable friction-energy bound) only with the source-defined inputs, scope, evidence and result dimension (energy). A complete executable parameter schema has not been bound to this ID.

HOW

Preserve the source relation exactly: $E_{rec} \leq \eta_{rec} \cdot \int (P_{diss} dt)$; $0 \leq \eta_{rec} \leq 1$. Provide the sampled-signal input contract, domain/boundary, timestamps, quadrature/interpolation and error/missing-data policy. Retain each formula's units and source integrand.

THEN

Keep this formula OPEN. The current paper host rejects this ID with PAPER_PROFILE_UNIMPLEMENTED. The Teal assertion gate holds when method/proof is false. This expected refusal is not a completed implementation.

CURRENT EVIDENCE

Fresh refusal and hold evidence is recorded individually; no scalar result, transition, permit or physical effect is fabricated.

SOURCE DIMENSION

energy

REMAINING REQUIREMENT

Provide the sampled-signal input contract, domain/boundary, timestamps, quadrature/interpolation and error/missing-data policy. Retain each formula's units and source integrand.

SOURCE REFERENCES

D006 pp. 265,266; D013 pp. 43,44
Evidence: evidence/rerun/pending/F-119.json

TR-PINK-F-120 / Reservoir transaction gate

IF

Invoke F-120 (Reservoir transaction gate) only with the source-defined inputs, scope, evidence and result dimension (logical). A complete executable parameter schema has not been bound to this ID.

HOW

Preserve the source relation exactly:
Admit=AngelPass&M3Lease&MKPass&JOPass&MermaidReconciled&MJPermit. Define and bind required evidence, validation rules, state/receipt transitions and authority scope. Caller-supplied Boolean assertions alone do not complete this contract.

THEN

Keep this formula OPEN. The current paper host rejects this ID with PAPER_PROFILE_UNIMPLEMENTED. The Teal assertion gate holds when method/proof is false. This expected refusal is not a completed implementation.

CURRENT EVIDENCE

Fresh refusal and hold evidence is recorded individually; no scalar result, transition, permit or physical effect is fabricated.

SOURCE DIMENSION

logical

REMAINING REQUIREMENT

Define and bind required evidence, validation rules, state/receipt transitions and authority scope. Caller-supplied Boolean assertions alone do not complete this contract.

SOURCE REFERENCES

D006 pp. 267,268; D013 pp. 45,46
Evidence: evidence/rerun/pending/F-120.json

TR-PINK-F-121 / Re-entry swirl ratio

IF

Invoke F-121 with exactly these inputs: tangential: Real, radial: Real, epsilon: Real. Real values use finite decimal text; null remains unknown.

HOW

Source expression: $\chi_i = |u_{\theta}| / \max(|u_r|, \epsilon_u)$. Current Bangel expression: $\text{math.abs(tangential)} / \text{math.max}(\text{math.abs(radial)}, \epsilon_u)$. Require every input to be known. Require $\epsilon_u > 0.0$.

THEN

Emit the scoped calculation result. Missing inputs produce their specific PINK_MISSING_* HOLD; failed profile checks produce PINK_DOMAIN. A false numeric predicate can occur in a PASS calculation receipt; it is not permission.

CURRENT EVIDENCE

Fixture inputs {"tangential": "-6", "radial": "-2", "epsilon": "0.1"}; expected 3. Result matched through Bangel, admitted JP, the Bangel API, with validated receipt outputs. 3 missing-input cases and 1 supplied domain cases passed.

SOURCE DIMENSION

dimensionless

REMAINING REQUIREMENT

Complete the source-defined measurement/evidence contract, units and calibration bindings. Native C# and Hagar formula-ID bindings remain unverified in this rerun.

SOURCE REFERENCES

D006 pp. 269,270; D013 pp. 47,48

Evidence: evidence/rerun/pink/F-121.json

TR-PINK-F-122 / Re-entry processing cycle

IF

Invoke F-122 with exactly these inputs: exit_cycle: Int. Real values use finite decimal text; null remains unknown.

HOW

Source expression: cycle_reentry=cycle_exit+1. Current Bangel expression: exit_cycle + 1. Require every input to be known. Require exit_cycle >= 0.

THEN

Emit the scoped calculation result. Missing inputs produce their specific PINK_MISSING_* HOLD; failed profile checks produce PINK_DOMAIN. A false numeric predicate can occur in a PASS calculation receipt; it is not permission.

CURRENT EVIDENCE

Fixture inputs {"exit_cycle": 8}; expected 9. Result matched through Bangel, admitted JP, the Bangel API, with validated receipt outputs. 1 missing-input cases and 1 supplied domain cases passed.

SOURCE DIMENSION

cycle identifier

REMAINING REQUIREMENT

Complete the source-defined measurement/evidence contract, units and calibration bindings. Native C# and Hagar formula-ID bindings remain unverified in this rerun.

SOURCE REFERENCES

D006 pp. 271,272; D013 pp. 49,50

Evidence: evidence/rerun/pink/F-122.json

TR-PINK-F-123 / Perspective transform residual

IF

Invoke F-123 (Perspective transform residual) only with the source-defined inputs, scope, evidence and result dimension (typed vector). A complete executable parameter schema has not been bound to this ID.

HOW

Preserve the source relation exactly: $r_{Pi}=x_{B-T_A_to_B}*x_A$. Implement the source-defined vector/matrix, integer-count, geometric or numerical operator through Bangel and native C#. Specify dimensions, decimal precision, bounds and negative/unknown cases; do not replace vectors with an unmarked scalar.

THEN

Keep this formula OPEN. The current paper host rejects this ID with PAPER_PROFILE_UNIMPLEMENTED. The Teal assertion gate holds when method/proof is false. This expected refusal is not a completed implementation.

CURRENT EVIDENCE

Fresh refusal and hold evidence is recorded individually; no scalar result, transition, permit or physical effect is fabricated.

SOURCE DIMENSION

typed vector

REMAINING REQUIREMENT

Implement the source-defined vector/matrix, integer-count, geometric or numerical operator through Bangel and native C#. Specify dimensions, decimal precision, bounds and negative/unknown cases; do not replace vectors with an unmarked scalar.

SOURCE REFERENCES

D006 pp. 273,274; D013 pp. 51,52

Evidence: evidence/rerun/pending/F-123.json

TR-PINK-F-124 / Physical pressure-flow dissipation

IF

Invoke F-124 (Physical pressure-flow dissipation) only with the source-defined inputs, scope, evidence and result dimension (energy). A complete executable parameter schema has not been bound to this ID.

HOW

Preserve the source relation exactly: $E_{\text{diss}} = \int (\Delta p(t) \cdot Q(t) dt)$. Provide the sampled-signal input contract, domain/boundary, timestamps, quadrature/interpolation and error/missing-data policy. Retain each formula's units and source integrand.

THEN

Keep this formula OPEN. The current paper host rejects this ID with PAPER_PROFILE_UNIMPLEMENTED. The Teal assertion gate holds when method/proof is false. This expected refusal is not a completed implementation.

CURRENT EVIDENCE

Fresh refusal and hold evidence is recorded individually; no scalar result, transition, permit or physical effect is fabricated.

SOURCE DIMENSION

energy

REMAINING REQUIREMENT

Provide the sampled-signal input contract, domain/boundary, timestamps, quadrature/interpolation and error/missing-data policy. Retain each formula's units and source integrand.

SOURCE REFERENCES

D006 pp. 275,276; D013 pp. 53,54
Evidence: evidence/rerun/pending/F-124.json

TR-PINK-F-125 / Information friction

IF

Invoke F-125 (Information friction) only with the source-defined inputs, scope, evidence and result dimension (byte*time). A complete executable parameter schema has not been bound to this ID.

HOW

Preserve the source relation exactly: $C_info=int(B_residual(t)dt)$. Provide the sampled-signal input contract, domain/boundary, timestamps, quadrature/interpolation and error/missing-data policy. Retain each formula's units and source integrand.

THEN

Keep this formula OPEN. The current paper host rejects this ID with PAPER_PROFILE_UNIMPLEMENTED. The Teal assertion gate holds when method/proof is false. This expected refusal is not a completed implementation.

CURRENT EVIDENCE

Fresh refusal and hold evidence is recorded individually; no scalar result, transition, permit or physical effect is fabricated.

SOURCE DIMENSION

byte*time

REMAINING REQUIREMENT

Provide the sampled-signal input contract, domain/boundary, timestamps, quadrature/interpolation and error/missing-data policy. Retain each formula's units and source integrand.

SOURCE REFERENCES

D006 pp. 277,278; D013 pp. 55,56
Evidence: evidence/rerun/pending/F-125.json

TR-PINK-F-126 / Rotational setpoint damping

IF

Invoke F-126 with exactly these inputs: current: Real, target: Real. Real values use finite decimal text; null remains unknown.

HOW

Source expression: $\omega_{\text{tilde}} = (2/3)\omega + (1/3)\omega_{\text{star}}$. Current Bangel expression: $(2.0 * \text{current} + \text{target}) / 3.0$. Require every input to be known. No additional domain predicates are declared by this scalar profile.

THEN

Emit the scoped calculation result. Missing inputs produce their specific PINK_MISSING_* HOLD; failed profile checks produce PINK_DOMAIN. A false numeric predicate can occur in a PASS calculation receipt; it is not permission.

CURRENT EVIDENCE

Fixture inputs {"current": "90", "target": "120"}; expected 100. Result matched through Bangel, admitted JP, the Bangel API, with validated receipt outputs. 2 missing-input cases and 0 supplied domain cases passed.

SOURCE DIMENSION

angular velocity

REMAINING REQUIREMENT

Complete the source-defined measurement/evidence contract, units and calibration bindings. Native C# and Hagar formula-ID bindings remain unverified in this rerun.

SOURCE REFERENCES

D006 pp. 279,280; D013 pp. 57,58
Evidence: evidence/rerun/pink/F-126.json

TR-PINK-F-127 / Rotational step cap

IF

Invoke F-127 with exactly these inputs: next_speed: Real, current_speed: Real, speed_scale: Real. Real values use finite decimal text; null remains unknown.

HOW

Source expression: $|\omega_{\text{next}} - \omega| \leq 0.1 * \omega_{\text{scale}}$. Current Bangel expression: $\text{math.abs}(\text{next_speed} - \text{current_speed}) \leq 0.1 * \text{speed_scale}$. Require every input to be known. Require $\text{speed_scale} > 0.0$.

THEN

Emit the scoped calculation result. Missing inputs produce their specific PINK_MISSING_* HOLD; failed profile checks produce PINK_DOMAIN. A false numeric predicate can occur in a PASS calculation receipt; it is not permission.

CURRENT EVIDENCE

Fixture inputs {"next_speed": "105", "current_speed": "100", "speed_scale": "50"}; expected true. Result matched through Bangel, admitted JP, the Bangel API, with validated receipt outputs. 3 missing-input cases and 1 supplied domain cases passed.

SOURCE DIMENSION

angular velocity

REMAINING REQUIREMENT

Complete the source-defined measurement/evidence contract, units and calibration bindings. Native C# and Hagar formula-ID bindings remain unverified in this rerun.

SOURCE REFERENCES

D006 pp. 281,282; D013 pp. 59,60
Evidence: evidence/rerun/pink/F-127.json

TR-PINK-F-128 / Outlet transfer conservation

IF

Invoke F-128 with exactly these inputs: lake_in: Real, eve: Real, escape: Real, residual: Real. Real values use finite decimal text; null remains unknown.

HOW

Source expression: $q_{exit}=q_{lake_in}+q_{EVE}+q_{escape}+r_o$. Current Bangel expression: lake_in + eve + escape + residual. Require every input to be known. No additional domain predicates are declared by this scalar profile.

THEN

Emit the scoped calculation result. Missing inputs produce their specific PINK_MISSING_* HOLD; failed profile checks produce PINK_DOMAIN. A false numeric predicate can occur in a PASS calculation receipt; it is not permission.

CURRENT EVIDENCE

Fixture inputs {"lake_in": "3", "eve": "2", "escape": "1", "residual": "-1"}; expected 5. Result matched through Bangel, admitted JP, the Bangel API, with validated receipt outputs. 4 missing-input cases and 0 supplied domain cases passed.

SOURCE DIMENSION

typed quantity

REMAINING REQUIREMENT

Complete the source-defined measurement/evidence contract, units and calibration bindings. Native C# and Hagar formula-ID bindings remain unverified in this rerun.

SOURCE REFERENCES

D006 pp. 283,284; D013 pp. 61,62
Evidence: evidence/rerun/pink/F-128.json

TR-PINK-F-129 / Re-entry recalculation vector

IF

Invoke F-129 (Re-entry recalculation vector) only with the source-defined inputs, scope, evidence and result dimension (typed vector). A complete executable parameter schema has not been bound to this ID.

HOW

Preserve the source relation exactly: $\Delta_x=[\Delta_m,\Delta_W,\Delta_V,\Delta_{\rho},\Delta_T,\Delta_p,\Delta_h]$. Bind this formula ID to its typed value or invariant and source-specific tests. Existing language primitives are useful but do not constitute a complete formula contract.

THEN

Keep this formula OPEN. The current paper host rejects this ID with PAPER_PROFILE_UNIMPLEMENTED. The Teal assertion gate holds when method/proof is false. This expected refusal is not a completed implementation.

CURRENT EVIDENCE

Fresh refusal and hold evidence is recorded individually; no scalar result, transition, permit or physical effect is fabricated.

SOURCE DIMENSION

typed vector

REMAINING REQUIREMENT

Bind this formula ID to its typed value or invariant and source-specific tests. Existing language primitives are useful but do not constitute a complete formula contract.

SOURCE REFERENCES

D006 pp. 285,286; D013 pp. 63,64

Evidence: evidence/rerun/pending/F-129.json

TR-PINK-F-130 / Re-entry admissibility predicate

IF

Invoke F-130 (Re-entry admissibility predicate) only with the source-defined inputs, scope, evidence and result dimension (logical). A complete executable parameter schema has not been bound to this ID.

HOW

Preserve the source relation exactly:
Admit_re=types&units&new_cycle&capacity&wave&MK&JO&Angels&M3&MJ. Define and bind required evidence, validation rules, state/receipt transitions and authority scope. Caller-supplied Boolean assertions alone do not complete this contract.

THEN

Keep this formula OPEN. The current paper host rejects this ID with PAPER_PROFILE_UNIMPLEMENTED. The Teal assertion gate holds when method/proof is false. This expected refusal is not a completed implementation.

CURRENT EVIDENCE

Fresh refusal and hold evidence is recorded individually; no scalar result, transition, permit or physical effect is fabricated.

SOURCE DIMENSION

logical

REMAINING REQUIREMENT

Define and bind required evidence, validation rules, state/receipt transitions and authority scope. Caller-supplied Boolean assertions alone do not complete this contract.

SOURCE REFERENCES

D006 pp. 287,288; D013 pp. 65,66
Evidence: evidence/rerun/pending/F-130.json

TR-PINK-F-131 / Uncertainty-aware Pearl reference clearance

IF

Invoke F-131 (Uncertainty-aware Pearl reference clearance) only with the source-defined inputs, scope, evidence and result dimension (length). A complete executable parameter schema has not been bound to this ID.

HOW

Preserve the source relation exactly: $\min_s(|\gamma_{out}(s)-c_P|-R_P, sim) \geq c_{min}+U_{path}$. Implement the bounded graph/path/selection algorithm with its complete input set, eligibility rules, tie/failure behavior and relevant evidence.

THEN

Keep this formula OPEN. The current paper host rejects this ID with PAPER_PROFILE_UNIMPLEMENTED. The Teal assertion gate holds when method/proof is false. This expected refusal is not a completed implementation.

CURRENT EVIDENCE

Fresh refusal and hold evidence is recorded individually; no scalar result, transition, permit or physical effect is fabricated.

SOURCE DIMENSION

length

REMAINING REQUIREMENT

Implement the bounded graph/path/selection algorithm with its complete input set, eligibility rules, tie/failure behavior and relevant evidence.

SOURCE REFERENCES

D006 pp. 289,290; D013 pp. 67,68

Evidence: evidence/rerun/pending/F-131.json

TR-PINK-F-132 / Outward angular-gap predicate

IF

Invoke F-132 (Outward angular-gap predicate) only with the source-defined inputs, scope, evidence and result dimension (logical). A complete executable parameter schema has not been bound to this ID.

HOW

Preserve the source relation exactly: $\text{abs}(\text{wrap}(\alpha_{\text{out}} - \alpha_{\text{gap}})) \leq \Delta_{\alpha_{\text{gap}}} / 2$. Implement the source-defined vector/matrix, integer-count, geometric or numerical operator through Bangel and native C#. Specify dimensions, decimal precision, bounds and negative/unknown cases; do not replace vectors with an unmarked scalar.

THEN

Keep this formula OPEN. The current paper host rejects this ID with PAPER_PROFILE_UNIMPLEMENTED. The Teal assertion gate holds when method/proof is false. This expected refusal is not a completed implementation.

CURRENT EVIDENCE

Fresh refusal and hold evidence is recorded individually; no scalar result, transition, permit or physical effect is fabricated.

SOURCE DIMENSION

logical

REMAINING REQUIREMENT

Implement the source-defined vector/matrix, integer-count, geometric or numerical operator through Bangel and native C#. Specify dimensions, decimal precision, bounds and negative/unknown cases; do not replace vectors with an unmarked scalar.

SOURCE REFERENCES

D006 pp. 291,292; D013 pp. 69,70

Evidence: evidence/rerun/pending/F-132.json

TR-PINK-F-133 / Available outlet pressure

IF

Invoke F-133 with exactly these inputs: containment_pressure: Real, lake_pressure: Real, density: Real, gravity: Real, outlet_height: Real, lake_height: Real. Real values use finite decimal text; null remains unknown.

HOW

Source expression: $\Delta p_{\text{available}} = p_{\text{containment}} - p_{\text{lake}} + \rho * g * (z_{\text{out}} - z_{\text{lake}})$. Current Bangel expression: `containment_pressure - lake_pressure + density * gravity * (outlet_height - lake_height)`. Require every input to be known. Require density > 0.0 and gravity > 0.0.

THEN

Emit the scoped calculation result. Missing inputs produce their specific PINK_MISSING_* HOLD; failed profile checks produce PINK_DOMAIN. A false numeric predicate can occur in a PASS calculation receipt; it is not permission.

CURRENT EVIDENCE

Fixture inputs {"containment_pressure": "20", "lake_pressure": "10", "density": "2", "gravity": "10", "outlet_height": "3", "lake_height": "1"}; expected 50. Result matched through Bangel, admitted JP, the Bangel API, with validated receipt outputs. 6 missing-input cases and 1 supplied domain cases passed.

SOURCE DIMENSION

pressure

REMAINING REQUIREMENT

Complete the source-defined measurement/evidence contract, units and calibration bindings. Native C# and Hagar formula-ID bindings remain unverified in this rerun.

SOURCE REFERENCES

D006 pp. 293,294; D013 pp. 71,72

Evidence: evidence/rerun/pink/F-133.json

TR-PINK-F-134 / Outlet pressure margin

IF

Invoke F-134 with exactly these inputs: available: Real, loss: Real, uncertainty: Real. Real values use finite decimal text; null remains unknown.

HOW

Source expression: $\Delta p_{\text{margin}} = \Delta p_{\text{available}} - \Delta p_{\text{loss}} - U_{\Delta p}$. Current Bangel expression: available - loss - uncertainty. Require every input to be known. Require loss ≥ 0.0 and uncertainty ≥ 0.0 .

THEN

Emit the scoped calculation result. Missing inputs produce their specific PINK_MISSING_* HOLD; failed profile checks produce PINK_DOMAIN. A false numeric predicate can occur in a PASS calculation receipt; it is not permission.

CURRENT EVIDENCE

Fixture inputs {"available": "50", "loss": "10", "uncertainty": "3"}; expected 37. Result matched through Bangel, admitted JP, the Bangel API, with validated receipt outputs. 3 missing-input cases and 1 supplied domain cases passed.

SOURCE DIMENSION

pressure

REMAINING REQUIREMENT

Complete the source-defined measurement/evidence contract, units and calibration bindings. Native C# and Hagar formula-ID bindings remain unverified in this rerun.

SOURCE REFERENCES

D006 pp. 295,296; D013 pp. 73,74
Evidence: evidence/rerun/pink/F-134.json

TR-PINK-F-135 / Minimum outlet grade

IF

Invoke F-135 (Minimum outlet grade) only with the source-defined inputs, scope, evidence and result dimension (angle). A complete executable parameter schema has not been bound to this ID.

HOW

Preserve the source relation exactly:
 $\alpha_{\min} = \text{atan}(\max(0, \Delta p_{\text{loss}} + U_{\Delta p} (p_{\text{containment}} - p_{\text{lake}})) / (\rho \cdot g \cdot L_{\text{path}}))$. Implement the source-defined vector/matrix, integer-count, geometric or numerical operator through Bangel and native C#. Specify dimensions, decimal precision, bounds and negative/unknown cases; do not replace vectors with an unmarked scalar.

THEN

Keep this formula OPEN. The current paper host rejects this ID with PAPER_PROFILE_UNIMPLEMENTED. The Teal assertion gate holds when method/proof is false. This expected refusal is not a completed implementation.

CURRENT EVIDENCE

Fresh refusal and hold evidence is recorded individually; no scalar result, transition, permit or physical effect is fabricated.

SOURCE DIMENSION

angle

REMAINING REQUIREMENT

Implement the source-defined vector/matrix, integer-count, geometric or numerical operator through Bangel and native C#. Specify dimensions, decimal precision, bounds and negative/unknown cases; do not replace vectors with an unmarked scalar.

SOURCE REFERENCES

D006 pp. 297,298; D013 pp. 75,76

Evidence: evidence/rerun/pending/F-135.json

TR-PINK-F-136 / Selected positive outlet grade

IF

Invoke F-136 with exactly these inputs: minimum_angle: Real, angle_increment: Real. Real values use finite decimal text; null remains unknown.

HOW

Source expression: $\alpha_{\text{selected}} = \alpha_{\text{min}} + \Delta \alpha$; $\Delta \alpha > 0$. Current Bangel expression: minimum_angle + angle_increment. Require every input to be known. Require minimum_angle ≥ 0.0 and angle_increment > 0.0 .

THEN

Emit the scoped calculation result. Missing inputs produce their specific PINK_MISSING_* HOLD; failed profile checks produce PINK_DOMAIN. A false numeric predicate can occur in a PASS calculation receipt; it is not permission.

CURRENT EVIDENCE

Fixture inputs {"minimum_angle": "0.1", "angle_increment": "0.02"}; expected 0.12. Result matched through Bangel, admitted JP, the Bangel API, with validated receipt outputs. 2 missing-input cases and 1 supplied domain cases passed.

SOURCE DIMENSION

angle

REMAINING REQUIREMENT

Complete the source-defined measurement/evidence contract, units and calibration bindings. Native C# and Hagar formula-ID bindings remain unverified in this rerun.

SOURCE REFERENCES

D006 pp. 299,300; D013 pp. 77,78

Evidence: evidence/rerun/pink/F-136.json

TR-PINK-F-137 / Incompressible reference outlet flow

IF

Invoke F-137 with exactly these inputs: discharge_coefficient: Real, area: Real, available_pressure: Real, loss_pressure: Real, density: Real. Real values use finite decimal text; null remains unknown.

HOW

Source expression: $Q_{ref} = C_d \cdot A_{out} \cdot \sqrt{2 \cdot \max(0, \Delta p_{available} - \Delta p_{loss}) / \rho}$. Current Bangel expression: `discharge_coefficient * area * math.sqrt(2.0 * math.max(0.0, available_pressure - loss_pressure) / density)`. Require every input to be known. Require discharge_coefficient >= 0.0 and area > 0.0 and loss_pressure >= 0.0 and density > 0.0.

THEN

Emit the scoped calculation result. Missing inputs produce their specific PINK_MISSING_* HOLD; failed profile checks produce PINK_DOMAIN. A false numeric predicate can occur in a PASS calculation receipt; it is not permission.

CURRENT EVIDENCE

Fixture inputs {"discharge_coefficient": "0.5", "area": "2", "available_pressure": "20", "loss_pressure": "4", "density": "2"}; expected 4. Result matched through Bangel, admitted JP, the Bangel API, with validated receipt outputs. 5 missing-input cases and 1 supplied domain cases passed.

SOURCE DIMENSION

volume/time

REMAINING REQUIREMENT

Complete the source-defined measurement/evidence contract, units and calibration bindings. Native C# and Hagar formula-ID bindings remain unverified in this rerun.

SOURCE REFERENCES

D006 pp. 301,302; D013 pp. 79,80
Evidence: evidence/rerun/pink/F-137.json

TR-PINK-F-138 / Mean outlet velocity

IF

Invoke F-138 with exactly these inputs: flow: Real, area: Real. Real values use finite decimal text; null remains unknown.

HOW

Source expression: $U_{out}=Q_{ref}/A_{out}$. Current Bangel expression: flow / area. Require every input to be known. Require area > 0.0.

THEN

Emit the scoped calculation result. Missing inputs produce their specific PINK_MISSING_* HOLD; failed profile checks produce PINK_DOMAIN. A false numeric predicate can occur in a PASS calculation receipt; it is not permission.

CURRENT EVIDENCE

Fixture inputs {"flow": "12", "area": "3"}; expected 4. Result matched through Bangel, admitted JP, the Bangel API, with validated receipt outputs. 2 missing-input cases and 1 supplied domain cases passed.

SOURCE DIMENSION

length/time

REMAINING REQUIREMENT

Complete the source-defined measurement/evidence contract, units and calibration bindings. Native C# and Hagar formula-ID bindings remain unverified in this rerun.

SOURCE REFERENCES

D006 pp. 303,304; D013 pp. 81,82
Evidence: evidence/rerun/pink/F-138.json

TR-PINK-F-139 / Weber number reference

IF

Invoke F-139 with exactly these inputs: density: Real, speed: Real, length: Real, surface_tension: Real. Real values use finite decimal text; null remains unknown.

HOW

Source expression: $We = \rho * U^2 * L / \sigma$. Current Bangel expression: density * speed * speed * length / surface_tension. Require every input to be known. Require density > 0.0 and length > 0.0 and surface_tension > 0.0.

THEN

Emit the scoped calculation result. Missing inputs produce their specific PINK_MISSING_* HOLD; failed profile checks produce PINK_DOMAIN. A false numeric predicate can occur in a PASS calculation receipt; it is not permission.

CURRENT EVIDENCE

Fixture inputs {"density": "2", "speed": "3", "length": "4", "surface_tension": "6"}; expected 12. Result matched through Bangel, admitted JP, the Bangel API, with validated receipt outputs. 4 missing-input cases and 1 supplied domain cases passed.

SOURCE DIMENSION

dimensionless

REMAINING REQUIREMENT

Complete the source-defined measurement/evidence contract, units and calibration bindings. Native C# and Hagar formula-ID bindings remain unverified in this rerun.

SOURCE REFERENCES

D006 pp. 305,306; D013 pp. 83,84
Evidence: evidence/rerun/pink/F-139.json

TR-PINK-F-140 / Wave amplitude ratio

IF

Invoke F-140 with exactly these inputs: wave_amplitude: Real, lake_depth: Real. Real values use finite decimal text; null remains unknown.

HOW

Source expression: $\epsilon_a = a_{\text{wave}} / h_L$. Current Bangel expression: wave_amplitude / lake_depth. Require every input to be known. Require wave_amplitude ≥ 0.0 and lake_depth > 0.0 .

THEN

Emit the scoped calculation result. Missing inputs produce their specific PINK_MISSING_* HOLD; failed profile checks produce PINK_DOMAIN. A false numeric predicate can occur in a PASS calculation receipt; it is not permission.

CURRENT EVIDENCE

Fixture inputs {"wave_amplitude": "0.1", "lake_depth": "2"}; expected 0.05. Result matched through Bangel, admitted JP, the Bangel API, with validated receipt outputs. 2 missing-input cases and 1 supplied domain cases passed.

SOURCE DIMENSION

dimensionless

REMAINING REQUIREMENT

Complete the source-defined measurement/evidence contract, units and calibration bindings. Native C# and Hagar formula-ID bindings remain unverified in this rerun.

SOURCE REFERENCES

D006 pp. 307,308; D013 pp. 85,86

Evidence: evidence/rerun/pink/F-140.json

TR-PINK-F-141 / Small-wave observation gate

IF

Invoke F-141 (Small-wave observation gate) only with the source-defined inputs, scope, evidence and result dimension (logical). A complete executable parameter schema has not been bound to this ID.

HOW

Preserve the source relation exactly:
WaveGate=(Fr<=Fr_max)&(epsilon_a<=epsilon_a,max)&(We<=We_max when applicable). Define and bind required evidence, validation rules, state/receipt transitions and authority scope. Caller-supplied Boolean assertions alone do not complete this contract.

THEN

Keep this formula OPEN. The current paper host rejects this ID with PAPER_PROFILE_UNIMPLEMENTED. The Teal assertion gate holds when method/proof is false. This expected refusal is not a completed implementation.

CURRENT EVIDENCE

Fresh refusal and hold evidence is recorded individually; no scalar result, transition, permit or physical effect is fabricated.

SOURCE DIMENSION

logical

REMAINING REQUIREMENT

Define and bind required evidence, validation rules, state/receipt transitions and authority scope. Caller-supplied Boolean assertions alone do not complete this contract.

SOURCE REFERENCES

D006 pp. 309,310; D013 pp. 87,88
Evidence: evidence/rerun/pending/F-141.json

TR-PINK-F-142 / Discrete reservoir inventory

IF

Invoke F-142 with exactly these inputs: inventory: Real, outgoing: Real, returning: Real, drain: Real, escape: Real, residual: Real. Real values use finite decimal text; null remains unknown.

HOW

Source expression: $q_{L,t+1} = q_{L,t} + q_{out} - q_{return} - q_{drain} - q_{escape} - r_L$. Current Bangel expression: inventory + outgoing - returning - drain - escape - residual. Require every input to be known. No additional domain predicates are declared by this scalar profile.

THEN

Emit the scoped calculation result. Missing inputs produce their specific PINK_MISSING_* HOLD; failed profile checks produce PINK_DOMAIN. A false numeric predicate can occur in a PASS calculation receipt; it is not permission.

CURRENT EVIDENCE

Fixture inputs {"inventory": "20", "outgoing": "10", "returning": "4", "drain": "2", "escape": "1", "residual": "3"}; expected 20. Result matched through Bangel, admitted JP, the Bangel API, with validated receipt outputs. 6 missing-input cases and 0 supplied domain cases passed.

SOURCE DIMENSION

typed quantity

REMAINING REQUIREMENT

Complete the source-defined measurement/evidence contract, units and calibration bindings. Native C# and Hagar formula-ID bindings remain unverified in this rerun.

SOURCE REFERENCES

D006 pp. 311,312; D013 pp. 89,90
Evidence: evidence/rerun/pink/F-142.json

TR-PINK-F-143 / Vector reservoir headroom

IF

Invoke F-143 with exactly these inputs: capacity: Real, inventory: Real. Real values use finite decimal text; null remains unknown.

HOW

Source expression: $H_{L,k} = C_{L,k} - q_{L,k}$. Current Bangel expression: capacity - inventory. Require every input to be known. Require capacity ≥ 0.0 and inventory ≥ 0.0 .

THEN

Emit the scoped calculation result. Missing inputs produce their specific PINK_MISSING_* HOLD; failed profile checks produce PINK_DOMAIN. A false numeric predicate can occur in a PASS calculation receipt; it is not permission.

CURRENT EVIDENCE

Fixture inputs {"capacity": "10", "inventory": "12"}; expected -2. Result matched through Bangel, admitted JP, the Bangel API, with validated receipt outputs. 2 missing-input cases and 1 supplied domain cases passed.

SOURCE DIMENSION

typed capacity

REMAINING REQUIREMENT

Complete the source-defined measurement/evidence contract, units and calibration bindings. Native C# and Hagar formula-ID bindings remain unverified in this rerun.

SOURCE REFERENCES

D006 pp. 313,314; D013 pp. 91,92
Evidence: evidence/rerun/pink/F-143.json

TR-PINK-F-144 / Vector reservoir admission

IF

Invoke F-144 (Vector reservoir admission) only with the source-defined inputs, scope, evidence and result dimension (logical). A complete executable parameter schema has not been bound to this ID.

HOW

Preserve the source relation exactly: $\text{Admit_L}=\text{AND_k}[q_L,k+q_in,k \leq (1-h_L,k)C_L,k]$. Implement the source-defined vector/matrix, integer-count, geometric or numerical operator through Bangel and native C#. Specify dimensions, decimal precision, bounds and negative/unknown cases; do not replace vectors with an unmarked scalar.

THEN

Keep this formula OPEN. The current paper host rejects this ID with PAPER_PROFILE_UNIMPLEMENTED. The Teal assertion gate holds when method/proof is false. This expected refusal is not a completed implementation.

CURRENT EVIDENCE

Fresh refusal and hold evidence is recorded individually; no scalar result, transition, permit or physical effect is fabricated.

SOURCE DIMENSION

logical

REMAINING REQUIREMENT

Implement the source-defined vector/matrix, integer-count, geometric or numerical operator through Bangel and native C#. Specify dimensions, decimal precision, bounds and negative/unknown cases; do not replace vectors with an unmarked scalar.

SOURCE REFERENCES

D006 pp. 315,316; D013 pp. 93,94

Evidence: evidence/rerun/pending/F-144.json

TR-PINK-F-145 / No same-cycle feedback predicate

IF

Invoke F-145 (No same-cycle feedback predicate) only with the source-defined inputs, scope, evidence and result dimension (logical). A complete executable parameter schema has not been bound to this ID.

HOW

Preserve the source relation exactly:
ReentryValid=(cycle_reentry=cycle_exit+1)&no_uncleared_generation_reuse. Define and bind required evidence, validation rules, state/receipt transitions and authority scope. Caller-supplied Boolean assertions alone do not complete this contract.

THEN

Keep this formula OPEN. The current paper host rejects this ID with PAPER_PROFILE_UNIMPLEMENTED. The Teal assertion gate holds when method/proof is false. This expected refusal is not a completed implementation.

CURRENT EVIDENCE

Fresh refusal and hold evidence is recorded individually; no scalar result, transition, permit or physical effect is fabricated.

SOURCE DIMENSION

logical

REMAINING REQUIREMENT

Define and bind required evidence, validation rules, state/receipt transitions and authority scope. Caller-supplied Boolean assertions alone do not complete this contract.

SOURCE REFERENCES

D006 pp. 223,227,317,318; D013 pp. 1,5,95,96

Evidence: evidence/rerun/pending/F-145.json

TR-PINK-F-146 / Solar/auxiliary/recovery input energy

IF

Invoke F-146 with exactly these inputs: solar: Real, auxiliary: Real, recovered: Real. Real values use finite decimal text; null remains unknown.

HOW

Source expression: $E_{in} = E_{solar} + E_{aux} + E_{recovered}$. Current Bangel expression: solar + auxiliary + recovered. Require every input to be known. Require solar ≥ 0.0 and auxiliary ≥ 0.0 and recovered ≥ 0.0 .

THEN

Emit the scoped calculation result. Missing inputs produce their specific PINK_MISSING_* HOLD; failed profile checks produce PINK_DOMAIN. A false numeric predicate can occur in a PASS calculation receipt; it is not permission.

CURRENT EVIDENCE

Fixture inputs {"solar": "10", "auxiliary": "3", "recovered": "2"}; expected 15. Result matched through Bangel, admitted JP, the Bangel API, with validated receipt outputs. 3 missing-input cases and 1 supplied domain cases passed.

SOURCE DIMENSION

energy

REMAINING REQUIREMENT

Complete the source-defined measurement/evidence contract, units and calibration bindings. Native C# and Hagar formula-ID bindings remain unverified in this rerun.

SOURCE REFERENCES

D017 pp. 3,11

Evidence: evidence/rerun/pink/F-146.json

TR-PINK-F-147 / Solar system energy conservation

IF

Invoke F-147 with exactly these inputs: storage_delta: Real, load: Real, loss: Real, residual: Real. Real values use finite decimal text; null remains unknown.

HOW

Source expression: $E_{in} = \Delta E_{storage} + E_{load} + E_{loss} + r_E$. Current Bangel expression: storage_delta + load + loss + residual. Require every input to be known. No additional domain predicates are declared by this scalar profile.

THEN

Emit the scoped calculation result. Missing inputs produce their specific PINK_MISSING_* HOLD; failed profile checks produce PINK_DOMAIN. A false numeric predicate can occur in a PASS calculation receipt; it is not permission.

CURRENT EVIDENCE

Fixture inputs {"storage_delta": "-2", "load": "10", "loss": "1", "residual": "1"}; expected 10. Result matched through Bangel, admitted JP, the Bangel API, with validated receipt outputs. 4 missing-input cases and 0 supplied domain cases passed.

SOURCE DIMENSION

energy

REMAINING REQUIREMENT

Complete the source-defined measurement/evidence contract, units and calibration bindings. Native C# and Hagar formula-ID bindings remain unverified in this rerun.

SOURCE REFERENCES

D017 pp. 3,11

Evidence: evidence/rerun/pink/F-147.json

TR-PINK-F-148 / Instantaneous power balance

IF

Invoke F-148 with exactly these inputs: source: Real, load: Real, charge: Real, loss: Real. Real values use finite decimal text; null remains unknown.

HOW

Source expression: $P_{balance} = P_{source} - P_{load} - P_{charge} - P_{loss}$. Current Bangel expression: source - load - charge - loss. Require every input to be known. No additional domain predicates are declared by this scalar profile.

THEN

Emit the scoped calculation result. Missing inputs produce their specific PINK_MISSING_* HOLD; failed profile checks produce PINK_DOMAIN. A false numeric predicate can occur in a PASS calculation receipt; it is not permission.

CURRENT EVIDENCE

Fixture inputs {"source": "20", "load": "10", "charge": "4", "loss": "2"}; expected 4. Result matched through Bangel, admitted JP, the Bangel API, with validated receipt outputs. 4 missing-input cases and 0 supplied domain cases passed.

SOURCE DIMENSION

power

REMAINING REQUIREMENT

Complete the source-defined measurement/evidence contract, units and calibration bindings. Native C# and Hagar formula-ID bindings remain unverified in this rerun.

SOURCE REFERENCES

D017 pp. 3,11

Evidence: evidence/rerun/pink/F-148.json

TR-PINK-F-149 / Conservative reserve margin

IF

Invoke F-149 with exactly these inputs: available_low: Real, margin_factor: Real, required_high: Real. Real values use finite decimal text; null remains unknown.

HOW

Source expression: $R_E = E_{available,L} - M_E * E_{required,H}$. Current Bangel expression: available_low - margin_factor * required_high. Require every input to be known. Require available_low >= 0.0 and margin_factor >= 1.0 and required_high >= 0.0.

THEN

Emit the scoped calculation result. Missing inputs produce their specific PINK_MISSING_* HOLD; failed profile checks produce PINK_DOMAIN. A false numeric predicate can occur in a PASS calculation receipt; it is not permission.

CURRENT EVIDENCE

Fixture inputs {"available_low": "30", "margin_factor": "2", "required_high": "10"}; expected 10. Result matched through Bangel, admitted JP, the Bangel API, with validated receipt outputs. 3 missing-input cases and 1 supplied domain cases passed.

SOURCE DIMENSION

energy

REMAINING REQUIREMENT

Complete the source-defined measurement/evidence contract, units and calibration bindings. Native C# and Hagar formula-ID bindings remain unverified in this rerun.

SOURCE REFERENCES

D017 pp. 3,11

Evidence: evidence/rerun/pink/F-149.json

TR-PINK-F-150 / Path efficiency

IF

Invoke F-150 with exactly these inputs: delivered: Real, input_energy: Real. Real values use finite decimal text; null remains unknown.

HOW

Source expression: $\eta_{\text{path}} = E_{\text{delivered}} / E_{\text{input}}$. Current Bangel expression: $\text{delivered} / \text{input_energy}$. Require every input to be known. Require $\text{delivered} \geq 0.0$ and $\text{input_energy} > 0.0$.

THEN

Emit the scoped calculation result. Missing inputs produce their specific PINK_MISSING_* HOLD; failed profile checks produce PINK_DOMAIN. A false numeric predicate can occur in a PASS calculation receipt; it is not permission.

CURRENT EVIDENCE

Fixture inputs {"delivered": "8", "input_energy": "10"}; expected 0.8. Result matched through Bangel, admitted JP, the Bangel API, with validated receipt outputs. 2 missing-input cases and 1 supplied domain cases passed.

SOURCE DIMENSION

ratio

REMAINING REQUIREMENT

Complete the source-defined measurement/evidence contract, units and calibration bindings. Native C# and Hagar formula-ID bindings remain unverified in this rerun.

SOURCE REFERENCES

D017 pp. 4,11

Evidence: evidence/rerun/pink/F-150.json

TR-PINK-F-151 / Bounded storage state update

IF

Invoke F-151 with exactly these inputs: soc: Real, charge_efficiency: Real, charge_energy: Real, discharge_energy: Real, discharge_efficiency: Real, capacity: Real. Real values use finite decimal text; null remains unknown.

HOW

Source expression: $SOC_next = clip(SOC + (eta_c * E_charge - E_discharge / eta_d) / E_capacity, 0, 1)$. Current Bangel expression: $math.min(1.0, math.max(0.0, soc + (charge_efficiency * charge_energy - discharge_energy / discharge_efficiency) / capacity))$. Require every input to be known. Require $soc \geq 0.0$ and $soc \leq 1.0$ and $charge_efficiency > 0.0$ and $charge_efficiency \leq 1.0$ and $discharge_efficiency > 0.0$ and $discharge_efficiency \leq 1.0$ and $charge_energy \geq 0.0$ and $discharge_energy \geq 0.0$ and $capacity > 0.0$.

THEN

Emit the scoped calculation result. Missing inputs produce their specific PINK_MISSING_* HOLD; failed profile checks produce PINK_DOMAIN. A false numeric predicate can occur in a PASS calculation receipt; it is not permission.

CURRENT EVIDENCE

Fixture inputs {"soc": "0.5", "charge_efficiency": "0.8", "charge_energy": "10", "discharge_energy": "2", "discharge_efficiency": "0.5", "capacity": "20"}; expected 0.7. Result matched through Bangel, admitted JP, the Bangel API, with validated receipt outputs. 6 missing-input cases and 1 supplied domain cases passed.

SOURCE DIMENSION

ratio

REMAINING REQUIREMENT

Complete the source-defined measurement/evidence contract, units and calibration bindings. Native C# and Hagar formula-ID bindings remain unverified in this rerun.

SOURCE REFERENCES

D017 pp. 4,11

Evidence: evidence/rerun/pink/F-151.json

TR-PINK-F-152 / Thermal first-order update

IF

Invoke F-152 with exactly these inputs: temperature: Real, dt: Real, thermal_capacity: Real, heat_power: Real, ambient: Real, thermal_resistance: Real. Real values use finite decimal text; null remains unknown.

HOW

Source expression: $T_{next} = T + dt/C_{th} * (P_{heat} - (T-T_{env})/R_{th})$. Current Bangel expression: `temperature + dt / thermal_capacity * (heat_power - (temperature - ambient) / thermal_resistance)`. Require every input to be known. Require temperature > 0.0 and ambient > 0.0 and dt >= 0.0 and thermal_capacity > 0.0 and thermal_resistance > 0.0.

THEN

Emit the scoped calculation result. Missing inputs produce their specific PINK_MISSING_* HOLD; failed profile checks produce PINK_DOMAIN. A false numeric predicate can occur in a PASS calculation receipt; it is not permission.

CURRENT EVIDENCE

Fixture inputs {"temperature": "300", "dt": "2", "thermal_capacity": "4", "heat_power": "10", "ambient": "280", "thermal_resistance": "4"}; expected 302.5. Result matched through Bangel, admitted JP, the Bangel API, with validated receipt outputs. 6 missing-input cases and 1 supplied domain cases passed.

SOURCE DIMENSION

temperature

REMAINING REQUIREMENT

Complete the source-defined measurement/evidence contract, units and calibration bindings. Native C# and Hagar formula-ID bindings remain unverified in this rerun.

SOURCE REFERENCES

D017 pp. 4,11

Evidence: evidence/rerun/pink/F-152.json

TR-PINK-F-153 / Predicted bus voltage

IF

Invoke F-153 with exactly these inputs: voltage: Real, horizon: Real, voltage_rate: Real. Real values use finite decimal text; null remains unknown.

HOW

Source expression: $V_{pred}(t+h) = V_t + h \cdot dV_{dt}$. Current Bangel expression: voltage + horizon * voltage_rate. Require every input to be known. Require horizon >= 0.0.

THEN

Emit the scoped calculation result. Missing inputs produce their specific PINK_MISSING_* HOLD; failed profile checks produce PINK_DOMAIN. A false numeric predicate can occur in a PASS calculation receipt; it is not permission.

CURRENT EVIDENCE

Fixture inputs {"voltage": "12", "horizon": "2", "voltage_rate": "-1"}; expected 10. Result matched through Bangel, admitted JP, the Bangel API, with validated receipt outputs. 3 missing-input cases and 1 supplied domain cases passed.

SOURCE DIMENSION

voltage

REMAINING REQUIREMENT

Complete the source-defined measurement/evidence contract, units and calibration bindings. Native C# and Hagar formula-ID bindings remain unverified in this rerun.

SOURCE REFERENCES

D017 pp. 4,11

Evidence: evidence/rerun/pink/F-153.json

TR-PINK-F-154 / Shared start/admission gate

IF

Invoke F-154 (Shared start/admission gate) only with the source-defined inputs, scope, evidence and result dimension (logical). A complete executable parameter schema has not been bound to this ID.

HOW

Preserve the source relation exactly: G_start = energy AND voltage AND current AND thermal AND containment AND ethics AND MJ_permit. Define and bind required evidence, validation rules, state/receipt transitions and authority scope. Caller-supplied Boolean assertions alone do not complete this contract.

THEN

Keep this formula OPEN. The current paper host rejects this ID with PAPER_PROFILE_UNIMPLEMENTED. The Teal assertion gate holds when method/proof is false. This expected refusal is not a completed implementation.

CURRENT EVIDENCE

Fresh refusal and hold evidence is recorded individually; no scalar result, transition, permit or physical effect is fabricated.

SOURCE DIMENSION

logical

REMAINING REQUIREMENT

Define and bind required evidence, validation rules, state/receipt transitions and authority scope. Caller-supplied Boolean assertions alone do not complete this contract.

SOURCE REFERENCES

D017 pp. 5,11

Evidence: evidence/rerun/pending/F-154.json

TR-PINK-F-155 / Cross-profile transfer gate

IF

Invoke F-155 (Cross-profile transfer gate) only with the source-defined inputs, scope, evidence and result dimension (logical). A complete executable parameter schema has not been bound to this ID.

HOW

Preserve the source relation exactly: $\text{TransferOK} = K \text{ AND } U \text{ AND } D \text{ AND } R \text{ AND } E \text{ AND } M \text{ AND } B \text{ AND } Q \text{ AND } V \text{ AND } A$. Define and bind required evidence, validation rules, state/receipt transitions and authority scope. Caller-supplied Boolean assertions alone do not complete this contract.

THEN

Keep this formula OPEN. The current paper host rejects this ID with PAPER_PROFILE_UNIMPLEMENTED. The Teal assertion gate holds when method/proof is false. This expected refusal is not a completed implementation.

CURRENT EVIDENCE

Fresh refusal and hold evidence is recorded individually; no scalar result, transition, permit or physical effect is fabricated.

SOURCE DIMENSION

logical

REMAINING REQUIREMENT

Define and bind required evidence, validation rules, state/receipt transitions and authority scope. Caller-supplied Boolean assertions alone do not complete this contract.

SOURCE REFERENCES

D017 pp. 5,11

Evidence: evidence/rerun/pending/F-155.json

TR-PINK-F-156 / Solar uncertainty propagation

IF

Invoke F-156 (Solar uncertainty propagation) only with the source-defined inputs, scope, evidence and result dimension (uncertainty). A complete executable parameter schema has not been bound to this ID.

HOW

Preserve the source relation exactly: $u_y^2 = J \cdot \text{Sigma} \cdot J_T + u_{\text{model}}^2$. Implement the source-defined vector/matrix, integer-count, geometric or numerical operator through Bangel and native C#. Specify dimensions, decimal precision, bounds and negative/unknown cases; do not replace vectors with an unmarked scalar.

THEN

Keep this formula OPEN. The current paper host rejects this ID with PAPER_PROFILE_UNIMPLEMENTED. The Teal assertion gate holds when method/proof is false. This expected refusal is not a completed implementation.

CURRENT EVIDENCE

Fresh refusal and hold evidence is recorded individually; no scalar result, transition, permit or physical effect is fabricated.

SOURCE DIMENSION

uncertainty

REMAINING REQUIREMENT

Implement the source-defined vector/matrix, integer-count, geometric or numerical operator through Bangel and native C#. Specify dimensions, decimal precision, bounds and negative/unknown cases; do not replace vectors with an unmarked scalar.

SOURCE REFERENCES

D017 pp. 5,12

Evidence: evidence/rerun/pending/F-156.json

TR-PINK-F-157 / Solar evidence-state transition

IF

Invoke F-157 (Solar evidence-state transition) only with the source-defined inputs, scope, evidence and result dimension (state). A complete executable parameter schema has not been bound to this ID.

HOW

Preserve the source relation exactly: R1 --all required evidence and gates--> R2. Define and bind required evidence, validation rules, state/receipt transitions and authority scope. Caller-supplied Boolean assertions alone do not complete this contract.

THEN

Keep this formula OPEN. The current paper host rejects this ID with PAPER_PROFILE_UNIMPLEMENTED. The Teal assertion gate holds when method/proof is false. This expected refusal is not a completed implementation.

CURRENT EVIDENCE

Fresh refusal and hold evidence is recorded individually; no scalar result, transition, permit or physical effect is fabricated.

SOURCE DIMENSION

state

REMAINING REQUIREMENT

Define and bind required evidence, validation rules, state/receipt transitions and authority scope. Caller-supplied Boolean assertions alone do not complete this contract.

SOURCE REFERENCES

D017 pp. 5,12

Evidence: evidence/rerun/pending/F-157.json

TR-PINK-F-158 / Phone-profile solar energy

IF

Invoke F-158 (Phone-profile solar energy) only with the source-defined inputs, scope, evidence and result dimension (energy). A complete executable parameter schema has not been bound to this ID.

HOW

Preserve the source relation exactly: $E_{solar_phone} = \text{integral}(P_{pv_phone}(t), t_0, t_1)$. Provide the sampled-signal input contract, domain/boundary, timestamps, quadrature/interpolation and error/missing-data policy. Retain each formula's units and source integrand.

THEN

Keep this formula OPEN. The current paper host rejects this ID with PAPER_PROFILE_UNIMPLEMENTED. The Teal assertion gate holds when method/proof is false. This expected refusal is not a completed implementation.

CURRENT EVIDENCE

Fresh refusal and hold evidence is recorded individually; no scalar result, transition, permit or physical effect is fabricated.

SOURCE DIMENSION

energy

REMAINING REQUIREMENT

Provide the sampled-signal input contract, domain/boundary, timestamps, quadrature/interpolation and error/missing-data policy. Retain each formula's units and source integrand.

SOURCE REFERENCES

D020 pp. 3,11

Evidence: evidence/rerun/pending/F-158.json

TR-PINK-F-159 / Workload-aware power demand

IF

Invoke F-159 (Workload-aware power demand) only with the source-defined inputs, scope, evidence and result dimension (power). A complete executable parameter schema has not been bound to this ID.

HOW

Preserve the source relation exactly: $P_{\text{phone}} = P_{\text{base}} + \sum(P_{\text{task}_i} * a_i)$. Implement the source-defined vector/matrix, integer-count, geometric or numerical operator through Bangel and native C#. Specify dimensions, decimal precision, bounds and negative/unknown cases; do not replace vectors with an unmarked scalar.

THEN

Keep this formula OPEN. The current paper host rejects this ID with PAPER_PROFILE_UNIMPLEMENTED. The Teal assertion gate holds when method/proof is false. This expected refusal is not a completed implementation.

CURRENT EVIDENCE

Fresh refusal and hold evidence is recorded individually; no scalar result, transition, permit or physical effect is fabricated.

SOURCE DIMENSION

power

REMAINING REQUIREMENT

Implement the source-defined vector/matrix, integer-count, geometric or numerical operator through Bangel and native C#. Specify dimensions, decimal precision, bounds and negative/unknown cases; do not replace vectors with an unmarked scalar.

SOURCE REFERENCES

D020 pp. 3,11

Evidence: evidence/rerun/pending/F-159.json

TR-PINK-F-160 / Phone reserve duration

IF

Invoke F-160 with exactly these inputs: reserve_low: Real, critical_power_high: Real. Real values use finite decimal text; null remains unknown.

HOW

Source expression: $t_{reserve} = E_{reserve,L} / P_{critical,H}$. Current Bangel expression: reserve_low / critical_power_high. Require every input to be known. Require reserve_low >= 0.0 and critical_power_high > 0.0.

THEN

Emit the scoped calculation result. Missing inputs produce their specific PINK_MISSING_* HOLD; failed profile checks produce PINK_DOMAIN. A false numeric predicate can occur in a PASS calculation receipt; it is not permission.

CURRENT EVIDENCE

Fixture inputs {"reserve_low": "30", "critical_power_high": "5"}; expected 6. Result matched through Bangel, admitted JP, the Bangel API, with validated receipt outputs. 2 missing-input cases and 1 supplied domain cases passed.

SOURCE DIMENSION

time

REMAINING REQUIREMENT

Complete the source-defined measurement/evidence contract, units and calibration bindings. Native C# and Hagar formula-ID bindings remain unverified in this rerun.

SOURCE REFERENCES

D020 pp. 3,11

Evidence: evidence/rerun/pink/F-160.json

TR-PINK-F-161 / Phone energy deficit

IF

Invoke F-161 with exactly these inputs: required_high: Real, available_low: Real. Real values use finite decimal text; null remains unknown.

HOW

Source expression: $D_E = \max(0, E_{\text{required}}, H - E_{\text{available}}, L)$. Current Bangel expression: `math.max(0.0, required_high - available_low)`. Require every input to be known. Require `required_high >= 0.0` and `available_low >= 0.0`.

THEN

Emit the scoped calculation result. Missing inputs produce their specific `PINK_MISSING_* HOLD`; failed profile checks produce `PINK_DOMAIN`. A false numeric predicate can occur in a PASS calculation receipt; it is not permission.

CURRENT EVIDENCE

Fixture inputs `{"required_high": "10", "available_low": "12"}`; expected 0. Result matched through Bangel, admitted JP, the Bangel API, with validated receipt outputs. 2 missing-input cases and 1 supplied domain cases passed.

SOURCE DIMENSION

energy

REMAINING REQUIREMENT

Complete the source-defined measurement/evidence contract, units and calibration bindings. Native C# and Hagar formula-ID bindings remain unverified in this rerun.

SOURCE REFERENCES

D020 pp. 3,11

Evidence: `evidence/rerun/pink/F-161.json`

TR-PINK-F-162 / Environment-dependent leakage

IF

Invoke F-162 (Environment-dependent leakage) only with the source-defined inputs, scope, evidence and result dimension (current). A complete executable parameter schema has not been bound to this ID.

HOW

Preserve the source relation exactly: $I_{leak} = f(V,T,RH,time,material_state)$. The expression names a model or transition function. Recover its normative definition, inputs, state and failure behavior before implementing it.

THEN

Keep this formula OPEN. The current paper host rejects this ID with PAPER_PROFILE_UNIMPLEMENTED. The Teal assertion gate holds when method/proof is false. This expected refusal is not a completed implementation.

CURRENT EVIDENCE

Fresh refusal and hold evidence is recorded individually; no scalar result, transition, permit or physical effect is fabricated.

SOURCE DIMENSION

current

REMAINING REQUIREMENT

The expression names a model or transition function. Recover its normative definition, inputs, state and failure behavior before implementing it.

SOURCE REFERENCES

D020 pp. 4,11

Evidence: evidence/rerun/pending/F-162.json

TR-PINK-F-163 / Wake energy accounting

IF

Invoke F-163 (Wake energy accounting) only with the source-defined inputs, scope, evidence and result dimension (energy). A complete executable parameter schema has not been bound to this ID.

HOW

Preserve the source relation exactly: $E_wake = \text{integral}(V_wake(t)*I_wake(t),t0,t1)$. Provide the sampled-signal input contract, domain/boundary, timestamps, quadrature/interpolation and error/missing-data policy. Retain each formula's units and source integrand.

THEN

Keep this formula OPEN. The current paper host rejects this ID with PAPER_PROFILE_UNIMPLEMENTED. The Teal assertion gate holds when method/proof is false. This expected refusal is not a completed implementation.

CURRENT EVIDENCE

Fresh refusal and hold evidence is recorded individually; no scalar result, transition, permit or physical effect is fabricated.

SOURCE DIMENSION

energy

REMAINING REQUIREMENT

Provide the sampled-signal input contract, domain/boundary, timestamps, quadrature/interpolation and error/missing-data policy. Retain each formula's units and source integrand.

SOURCE REFERENCES

D020 pp. 4,11

Evidence: evidence/rerun/pending/F-163.json

TR-PINK-F-164 / Phone thermal margin

IF

Invoke F-164 with exactly these inputs: allowable_temperature: Real, observed_temperature: Real, temperature_uncertainty: Real. Real values use finite decimal text; null remains unknown.

HOW

Source expression: $M_T = T_{allowable} - (T_{observed} + U_T)$. Current Bangel expression: allowable_temperature - (observed_temperature + temperature_uncertainty). Require every input to be known. Require allowable_temperature > 0.0 and observed_temperature > 0.0 and temperature_uncertainty >= 0.0.

THEN

Emit the scoped calculation result. Missing inputs produce their specific PINK_MISSING_* HOLD; failed profile checks produce PINK_DOMAIN. A false numeric predicate can occur in a PASS calculation receipt; it is not permission.

CURRENT EVIDENCE

Fixture inputs {"allowable_temperature": "320", "observed_temperature": "300", "temperature_uncertainty": "3"}; expected 17. Result matched through Bangel, admitted JP, the Bangel API, with validated receipt outputs. 3 missing-input cases and 1 supplied domain cases passed.

SOURCE DIMENSION

temperature

REMAINING REQUIREMENT

Complete the source-defined measurement/evidence contract, units and calibration bindings. Native C# and Hagar formula-ID bindings remain unverified in this rerun.

SOURCE REFERENCES

D020 pp. 4,11

Evidence: evidence/rerun/pink/F-164.json

TR-PINK-F-165 / Useful work per delivered energy

IF

Invoke F-165 with exactly these inputs: verified_work: Real, delivered_energy: Real. Real values use finite decimal text; null remains unknown.

HOW

Source expression: $\eta_{work} = W_{verified} / E_{delivered}$. Current Bangel expression: $verified_work / delivered_energy$. Require every input to be known. Require $verified_work \geq 0.0$ and $delivered_energy > 0.0$.

THEN

Emit the scoped calculation result. Missing inputs produce their specific PINK_MISSING_* HOLD; failed profile checks produce PINK_DOMAIN. A false numeric predicate can occur in a PASS calculation receipt; it is not permission.

CURRENT EVIDENCE

Fixture inputs {"verified_work": "12", "delivered_energy": "3"}; expected 4. Result matched through Bangel, admitted JP, the Bangel API, with validated receipt outputs. 2 missing-input cases and 1 supplied domain cases passed.

SOURCE DIMENSION

work_per_energy

REMAINING REQUIREMENT

Complete the source-defined measurement/evidence contract, units and calibration bindings. Native C# and Hagar formula-ID bindings remain unverified in this rerun.

SOURCE REFERENCES

D020 pp. 4,11

Evidence: evidence/rerun/pink/F-165.json

TR-PINK-F-166 / Data-performance correlation

IF

Invoke F-166 with exactly these inputs: covariance: Real, sigma_data: Real, sigma_performance: Real. Real values use finite decimal text; null remains unknown.

HOW

Source expression: $\rho_{DP} = \text{cov}(D,P)/(\sigma_D \sigma_P)$. Current Bangel expression: $\text{covariance} / (\sigma_data * \sigma_performance)$. Require every input to be known. Require $\sigma_data > 0.0$ and $\sigma_performance > 0.0$ and $\text{math.abs}(\text{covariance}) \leq \sigma_data * \sigma_performance$.

THEN

Emit the scoped calculation result. Missing inputs produce their specific PINK_MISSING_* HOLD; failed profile checks produce PINK_DOMAIN. A false numeric predicate can occur in a PASS calculation receipt; it is not permission.

CURRENT EVIDENCE

Fixture inputs {"covariance": "6", "sigma_data": "2", "sigma_performance": "3"}; expected 1. Result matched through Bangel, admitted JP, the Bangel API, with validated receipt outputs. 3 missing-input cases and 1 supplied domain cases passed.

SOURCE DIMENSION

ratio

REMAINING REQUIREMENT

Complete the source-defined measurement/evidence contract, units and calibration bindings. Native C# and Hagar formula-ID bindings remain unverified in this rerun.

SOURCE REFERENCES

D020 pp. 5,11

Evidence: evidence/rerun/pink/F-166.json

TR-PINK-F-167 / Workload allocation update

IF

Invoke F-167 (Workload allocation update) only with the source-defined inputs, scope, evidence and result dimension (ratio_vector). A complete executable parameter schema has not been bound to this ID.

HOW

Preserve the source relation exactly: $w_{next} = bounded_simplex((2/3)w + (1/3)w_{target}, step \leq 0.1)$. Implement the source-defined vector/matrix, integer-count, geometric or numerical operator through Bangel and native C#. Specify dimensions, decimal precision, bounds and negative/unknown cases; do not replace vectors with an unmarked scalar.

THEN

Keep this formula OPEN. The current paper host rejects this ID with PAPER_PROFILE_UNIMPLEMENTED. The Teal assertion gate holds when method/proof is false. This expected refusal is not a completed implementation.

CURRENT EVIDENCE

Fresh refusal and hold evidence is recorded individually; no scalar result, transition, permit or physical effect is fabricated.

SOURCE DIMENSION

ratio_vector

REMAINING REQUIREMENT

Implement the source-defined vector/matrix, integer-count, geometric or numerical operator through Bangel and native C#. Specify dimensions, decimal precision, bounds and negative/unknown cases; do not replace vectors with an unmarked scalar.

SOURCE REFERENCES

D020 pp. 5,11

Evidence: evidence/rerun/pending/F-167.json

TR-PINK-F-168 / Semiconductor scale map

IF

Invoke F-168 (Semiconductor scale map) only with the source-defined inputs, scope, evidence and result dimension (length_vector). A complete executable parameter schema has not been bound to this ID.

HOW

Preserve the source relation exactly: $p_SC(x,y,z) = o_SC + x*a_SC + y*b_SC + z*c_SC$. Implement the source-defined vector/matrix, integer-count, geometric or numerical operator through Bangel and native C#. Specify dimensions, decimal precision, bounds and negative/unknown cases; do not replace vectors with an unmarked scalar.

THEN

Keep this formula OPEN. The current paper host rejects this ID with PAPER_PROFILE_UNIMPLEMENTED. The Teal assertion gate holds when method/proof is false. This expected refusal is not a completed implementation.

CURRENT EVIDENCE

Fresh refusal and hold evidence is recorded individually; no scalar result, transition, permit or physical effect is fabricated.

SOURCE DIMENSION

length_vector

REMAINING REQUIREMENT

Implement the source-defined vector/matrix, integer-count, geometric or numerical operator through Bangel and native C#. Specify dimensions, decimal precision, bounds and negative/unknown cases; do not replace vectors with an unmarked scalar.

SOURCE REFERENCES

D020 pp. 5,12

Evidence: evidence/rerun/pending/F-168.json

TR-PINK-F-169 / Phone-profile evidence completeness

IF

Invoke F-169 (Phone-profile evidence completeness) only with the source-defined inputs, scope, evidence and result dimension (logical). A complete executable parameter schema has not been bound to this ID.

HOW

Preserve the source relation exactly: E_SC = min_required(article,calibration,baseline,energy,thermal,geometry,JO,MK,MJ). Define and bind required evidence, validation rules, state/receipt transitions and authority scope. Caller-supplied Boolean assertions alone do not complete this contract.

THEN

Keep this formula OPEN. The current paper host rejects this ID with PAPER_PROFILE_UNIMPLEMENTED. The Teal assertion gate holds when method/proof is false. This expected refusal is not a completed implementation.

CURRENT EVIDENCE

Fresh refusal and hold evidence is recorded individually; no scalar result, transition, permit or physical effect is fabricated.

SOURCE DIMENSION

logical

REMAINING REQUIREMENT

Define and bind required evidence, validation rules, state/receipt transitions and authority scope. Caller-supplied Boolean assertions alone do not complete this contract.

SOURCE REFERENCES

D020 pp. 5,12

Evidence: evidence/rerun/pending/F-169.json

TR-PINK-F-170 / Marine solar-array energy

IF

Invoke F-170 (Marine solar-array energy) only with the source-defined inputs, scope, evidence and result dimension (energy). A complete executable parameter schema has not been bound to this ID.

HOW

Preserve the source relation exactly: $E_{array} = \text{integral}(P_{array}(t), t_0, t_1)$. Provide the sampled-signal input contract, domain/boundary, timestamps, quadrature/interpolation and error/missing-data policy. Retain each formula's units and source integrand.

THEN

Keep this formula OPEN. The current paper host rejects this ID with PAPER_PROFILE_UNIMPLEMENTED. The Teal assertion gate holds when method/proof is false. This expected refusal is not a completed implementation.

CURRENT EVIDENCE

Fresh refusal and hold evidence is recorded individually; no scalar result, transition, permit or physical effect is fabricated.

SOURCE DIMENSION

energy

REMAINING REQUIREMENT

Provide the sampled-signal input contract, domain/boundary, timestamps, quadrature/interpolation and error/missing-data policy. Retain each formula's units and source integrand.

SOURCE REFERENCES

D018 pp. 3,11

Evidence: evidence/rerun/pending/F-170.json

TR-PINK-F-171 / Marine propulsion/load power

IF

Invoke F-171 with exactly these inputs: torque: Real, angular_speed: Real. Real values use finite decimal text; null remains unknown.

HOW

Source expression: $P_{prop} = \tau * \omega$. Current Bangel expression: $\text{torque} * \text{angular_speed}$. Require every input to be known. No additional domain predicates are declared by this scalar profile.

THEN

Emit the scoped calculation result. Missing inputs produce their specific PINK_MISSING_* HOLD; failed profile checks produce PINK_DOMAIN. A false numeric predicate can occur in a PASS calculation receipt; it is not permission.

CURRENT EVIDENCE

Fixture inputs {"torque": "3", "angular_speed": "4"}; expected 12. Result matched through Bangel, admitted JP, the Bangel API, with validated receipt outputs. 2 missing-input cases and 0 supplied domain cases passed.

SOURCE DIMENSION

power

REMAINING REQUIREMENT

Complete the source-defined measurement/evidence contract, units and calibration bindings. Native C# and Hagar formula-ID bindings remain unverified in this rerun.

SOURCE REFERENCES

D018 pp. 3,11

Evidence: evidence/rerun/pink/F-171.json

TR-PINK-F-172 / Marine mission energy

IF

Invoke F-172 (Marine mission energy) only with the source-defined inputs, scope, evidence and result dimension (energy). A complete executable parameter schema has not been bound to this ID.

HOW

Preserve the source relation exactly: $E_{mission} = \text{integral}(P_{prop} + P_{critical} + P_{aux}, t_0, t_1)$. Provide the sampled-signal input contract, domain/boundary, timestamps, quadrature/interpolation and error/missing-data policy. Retain each formula's units and source integrand.

THEN

Keep this formula OPEN. The current paper host rejects this ID with PAPER_PROFILE_UNIMPLEMENTED. The Teal assertion gate holds when method/proof is false. This expected refusal is not a completed implementation.

CURRENT EVIDENCE

Fresh refusal and hold evidence is recorded individually; no scalar result, transition, permit or physical effect is fabricated.

SOURCE DIMENSION

energy

REMAINING REQUIREMENT

Provide the sampled-signal input contract, domain/boundary, timestamps, quadrature/interpolation and error/missing-data policy. Retain each formula's units and source integrand.

SOURCE REFERENCES

D018 pp. 3,11

Evidence: evidence/rerun/pending/F-172.json

TR-PINK-F-173 / Marine critical reserve duration

IF

Invoke F-173 with exactly these inputs: reserve_low: Real, critical_power_high: Real. Real values use finite decimal text; null remains unknown.

HOW

Source expression: $t_{critical} = E_{reserve,L} / P_{critical,H}$. Current Bangel expression: reserve_low / critical_power_high. Require every input to be known. Require reserve_low >= 0.0 and critical_power_high > 0.0.

THEN

Emit the scoped calculation result. Missing inputs produce their specific PINK_MISSING_* HOLD; failed profile checks produce PINK_DOMAIN. A false numeric predicate can occur in a PASS calculation receipt; it is not permission.

CURRENT EVIDENCE

Fixture inputs {"reserve_low": "30", "critical_power_high": "5"}; expected 6. Result matched through Bangel, admitted JP, the Bangel API, with validated receipt outputs. 2 missing-input cases and 1 supplied domain cases passed.

SOURCE DIMENSION

time

REMAINING REQUIREMENT

Complete the source-defined measurement/evidence contract, units and calibration bindings. Native C# and Hagar formula-ID bindings remain unverified in this rerun.

SOURCE REFERENCES

D018 pp. 4,11

Evidence: evidence/rerun/pink/F-173.json

TR-PINK-F-174 / Marine DC bus balance

IF

Invoke F-174 with exactly these inputs: propulsion: Real, critical: Real, auxiliary: Real, charge: Real, loss: Real, residual: Real. Real values use finite decimal text; null remains unknown.

HOW

Source expression: $P_{sources} = P_{prop} + P_{critical} + P_{aux} + P_{charge} + P_{loss} + r_P$. Current Bangel expression: propulsion + critical + auxiliary + charge + loss + residual. Require every input to be known. No additional domain predicates are declared by this scalar profile.

THEN

Emit the scoped calculation result. Missing inputs produce their specific PINK_MISSING_* HOLD; failed profile checks produce PINK_DOMAIN. A false numeric predicate can occur in a PASS calculation receipt; it is not permission.

CURRENT EVIDENCE

Fixture inputs {"propulsion": "10", "critical": "4", "auxiliary": "3", "charge": "2", "loss": "1", "residual": "-1"}; expected 19. Result matched through Bangel, admitted JP, the Bangel API, with validated receipt outputs. 6 missing-input cases and 0 supplied domain cases passed.

SOURCE DIMENSION

power

REMAINING REQUIREMENT

Complete the source-defined measurement/evidence contract, units and calibration bindings. Native C# and Hagar formula-ID bindings remain unverified in this rerun.

SOURCE REFERENCES

D018 pp. 4,11

Evidence: evidence/rerun/pink/F-174.json

TR-PINK-F-175 / Precharge inrush reference

IF

Invoke F-175 with exactly these inputs: source_voltage: Real, bus_voltage: Real, precharge_resistance: Real. Real values use finite decimal text; null remains unknown.

HOW

Source expression: $I_{pre}(t) = (V_{source} - V_{bus}(t))/R_{pre}$. Current Bangel expression: $(source_voltage - bus_voltage) / precharge_resistance$. Require every input to be known. Require precharge_resistance > 0.0.

THEN

Emit the scoped calculation result. Missing inputs produce their specific PINK_MISSING_* HOLD; failed profile checks produce PINK_DOMAIN. A false numeric predicate can occur in a PASS calculation receipt; it is not permission.

CURRENT EVIDENCE

Fixture inputs {"source_voltage": "20", "bus_voltage": "12", "precharge_resistance": "4"}; expected 2. Result matched through Bangel, admitted JP, the Bangel API, with validated receipt outputs. 3 missing-input cases and 1 supplied domain cases passed.

SOURCE DIMENSION

current

REMAINING REQUIREMENT

Complete the source-defined measurement/evidence contract, units and calibration bindings. Native C# and Hagar formula-ID bindings remain unverified in this rerun.

SOURCE REFERENCES

D018 pp. 4,11

Evidence: evidence/rerun/pink/F-175.json

TR-PINK-F-176 / Wet/dry leakage ratio

IF

Invoke F-176 with exactly these inputs: wet_leakage: Real, dry_leakage: Real, epsilon: Real. Real values use finite decimal text; null remains unknown.

HOW

Source expression: $K_{leak} = I_{leak,wet} / \max(I_{leak,dry}, \epsilon)$. Current Bangel expression: $wet_leakage / \max(dry_leakage, \epsilon)$. Require every input to be known. Require $wet_leakage \geq 0.0$ and $dry_leakage \geq 0.0$ and $\epsilon > 0.0$.

THEN

Emit the scoped calculation result. Missing inputs produce their specific PINK_MISSING_* HOLD; failed profile checks produce PINK_DOMAIN. A false numeric predicate can occur in a PASS calculation receipt; it is not permission.

CURRENT EVIDENCE

Fixture inputs {"wet_leakage": "6", "dry_leakage": "0", "epsilon": "2"}; expected 3. Result matched through Bangel, admitted JP, the Bangel API, with validated receipt outputs. 3 missing-input cases and 1 supplied domain cases passed.

SOURCE DIMENSION

ratio

REMAINING REQUIREMENT

Complete the source-defined measurement/evidence contract, units and calibration bindings. Native C# and Hagar formula-ID bindings remain unverified in this rerun.

SOURCE REFERENCES

D018 pp. 4,11

Evidence: evidence/rerun/pink/F-176.json

TR-PINK-F-177 / Marine environment state vector

IF

Invoke F-177 (Marine environment state vector) only with the source-defined inputs, scope, evidence and result dimension (typed_vector). A complete executable parameter schema has not been bound to this ID.

HOW

Preserve the source relation exactly: $X_{env} = [T,RH,salt,water,vibration,roll,pitch]$. Bind this formula ID to its typed value or invariant and source-specific tests. Existing language primitives are useful but do not constitute a complete formula contract.

THEN

Keep this formula OPEN. The current paper host rejects this ID with PAPER_PROFILE_UNIMPLEMENTED. The Teal assertion gate holds when method/proof is false. This expected refusal is not a completed implementation.

CURRENT EVIDENCE

Fresh refusal and hold evidence is recorded individually; no scalar result, transition, permit or physical effect is fabricated.

SOURCE DIMENSION

typed_vector

REMAINING REQUIREMENT

Bind this formula ID to its typed value or invariant and source-specific tests. Existing language primitives are useful but do not constitute a complete formula contract.

SOURCE REFERENCES

D018 pp. 4,11

Evidence: evidence/rerun/pending/F-177.json

TR-PINK-F-178 / Vibration exposure

IF

Invoke F-178 (Vibration exposure) only with the source-defined inputs, scope, evidence and result dimension (acceleration_squared_time). A complete executable parameter schema has not been bound to this ID.

HOW

Preserve the source relation exactly: $D_{vib} = \text{integral}(a_{rms}(t)^2, t_0, t_1)$. Provide the sampled-signal input contract, domain/boundary, timestamps, quadrature/interpolation and error/missing-data policy. Retain each formula's units and source integrand.

THEN

Keep this formula OPEN. The current paper host rejects this ID with PAPER_PROFILE_UNIMPLEMENTED. The Teal assertion gate holds when method/proof is false. This expected refusal is not a completed implementation.

CURRENT EVIDENCE

Fresh refusal and hold evidence is recorded individually; no scalar result, transition, permit or physical effect is fabricated.

SOURCE DIMENSION

acceleration_squared_time

REMAINING REQUIREMENT

Provide the sampled-signal input contract, domain/boundary, timestamps, quadrature/interpolation and error/missing-data policy. Retain each formula's units and source integrand.

SOURCE REFERENCES

D018 pp. 5,11

Evidence: evidence/rerun/pending/F-178.json

TR-PINK-F-179 / Recovered energy ceiling

IF

Invoke F-179 with exactly these inputs: recovered: Real, recovery_efficiency: Real, available_loss: Real. Real values use finite decimal text; null remains unknown.

HOW

Source expression: $E_{\text{recovered}} \leq \eta_{\text{recovery}} * E_{\text{available_loss}}$. Current Bangel expression: $\text{recovered} \leq \text{recovery_efficiency} * \text{available_loss}$. Require every input to be known. Require recovered ≥ 0.0 and recovery_efficiency ≥ 0.0 and recovery_efficiency ≤ 1.0 and available_loss ≥ 0.0 .

THEN

Emit the scoped calculation result. Missing inputs produce their specific PINK_MISSING_* HOLD; failed profile checks produce PINK_DOMAIN. A false numeric predicate can occur in a PASS calculation receipt; it is not permission.

CURRENT EVIDENCE

Fixture inputs {"recovered": "4", "recovery_efficiency": "0.5", "available_loss": "10"}; expected true. Result matched through Bangel, admitted JP, the Bangel API, with validated receipt outputs. 3 missing-input cases and 1 supplied domain cases passed.

SOURCE DIMENSION

energy

REMAINING REQUIREMENT

Complete the source-defined measurement/evidence contract, units and calibration bindings. Native C# and Hagar formula-ID bindings remain unverified in this rerun.

SOURCE REFERENCES

D018 pp. 5,12

Evidence: evidence/rerun/pink/F-179.json

TR-PINK-F-180 / Priority load shedding

IF

Invoke F-180 (Priority load shedding) only with the source-defined inputs, scope, evidence and result dimension (logical). A complete executable parameter schema has not been bound to this ID.

HOW

Preserve the source relation exactly: $shed = lowest_priority_loads_until(P_source, L \geq P_critical, H + margin)$. Implement the bounded graph/path/selection algorithm with its complete input set, eligibility rules, tie/failure behavior and relevant evidence.

THEN

Keep this formula OPEN. The current paper host rejects this ID with PAPER_PROFILE_UNIMPLEMENTED. The Teal assertion gate holds when method/proof is false. This expected refusal is not a completed implementation.

CURRENT EVIDENCE

Fresh refusal and hold evidence is recorded individually; no scalar result, transition, permit or physical effect is fabricated.

SOURCE DIMENSION

logical

REMAINING REQUIREMENT

Implement the bounded graph/path/selection algorithm with its complete input set, eligibility rules, tie/failure behavior and relevant evidence.

SOURCE REFERENCES

D018 pp. 5,12

Evidence: evidence/rerun/pending/F-180.json

TR-PINK-F-181 / Marine evidence and permit gate

IF

Invoke F-181 (Marine evidence and permit gate) only with the source-defined inputs, scope, evidence and result dimension (logical). A complete executable parameter schema has not been bound to this ID.

HOW

Preserve the source relation exactly: G_marine = class AND environment AND energy AND structure AND containment AND ethics AND MJ_permit. Define and bind required evidence, validation rules, state/receipt transitions and authority scope. Caller-supplied Boolean assertions alone do not complete this contract.

THEN

Keep this formula OPEN. The current paper host rejects this ID with PAPER_PROFILE_UNIMPLEMENTED. The Teal assertion gate holds when method/proof is false. This expected refusal is not a completed implementation.

CURRENT EVIDENCE

Fresh refusal and hold evidence is recorded individually; no scalar result, transition, permit or physical effect is fabricated.

SOURCE DIMENSION

logical

REMAINING REQUIREMENT

Define and bind required evidence, validation rules, state/receipt transitions and authority scope. Caller-supplied Boolean assertions alone do not complete this contract.

SOURCE REFERENCES

D018 pp. 5,12

Evidence: evidence/rerun/pending/F-181.json

TR-PINK-F-182 / Peaceful spacecraft solar energy

IF

Invoke F-182 (Peaceful spacecraft solar energy) only with the source-defined inputs, scope, evidence and result dimension (energy). A complete executable parameter schema has not been bound to this ID.

HOW

Preserve the source relation exactly: $E_{space_solar} = \text{integral}(P_{solar_space}(t), t_0, t_1)$. Provide the sampled-signal input contract, domain/boundary, timestamps, quadrature/interpolation and error/missing-data policy. Retain each formula's units and source integrand.

THEN

Keep this formula OPEN. The current paper host rejects this ID with PAPER_PROFILE_UNIMPLEMENTED. The Teal assertion gate holds when method/proof is false. This expected refusal is not a completed implementation.

CURRENT EVIDENCE

Fresh refusal and hold evidence is recorded individually; no scalar result, transition, permit or physical effect is fabricated.

SOURCE DIMENSION

energy

REMAINING REQUIREMENT

Provide the sampled-signal input contract, domain/boundary, timestamps, quadrature/interpolation and error/missing-data policy. Retain each formula's units and source integrand.

SOURCE REFERENCES

D019 pp. 3,11

Evidence: evidence/rerun/pending/F-182.json

TR-PINK-F-183 / Avionics bus balance

IF

Invoke F-183 with exactly these inputs: avionics: Real, thermal: Real, communications: Real, charge: Real, loss: Real, residual: Real. Real values use finite decimal text; null remains unknown.

HOW

Source expression: $P_{av_source} = P_{avionics} + P_{thermal} + P_{comms} + P_{charge} + P_{loss} + r_P$. Current Bangel expression: $avionics + thermal + communications + charge + loss + residual$. Require every input to be known. No additional domain predicates are declared by this scalar profile.

THEN

Emit the scoped calculation result. Missing inputs produce their specific `PINK_MISSING_* HOLD`; failed profile checks produce `PINK_DOMAIN`. A false numeric predicate can occur in a `PASS` calculation receipt; it is not permission.

CURRENT EVIDENCE

Fixture inputs `{"avionics": "10", "thermal": "4", "communications": "3", "charge": "2", "loss": "1", "residual": "-1"}`; expected 19. Result matched through Bangel, admitted JP, the Bangel API, with validated receipt outputs. 6 missing-input cases and 0 supplied domain cases passed.

SOURCE DIMENSION

power

REMAINING REQUIREMENT

Complete the source-defined measurement/evidence contract, units and calibration bindings. Native C# and Hagar formula-ID bindings remain unverified in this rerun.

SOURCE REFERENCES

D019 pp. 3,11

Evidence: `evidence/rerun/pink/F-183.json`

TR-PINK-F-184 / Emergency reserve duration

IF

Invoke F-184 with exactly these inputs: emergency_reserve_low: Real, emergency_power_high: Real. Real values use finite decimal text; null remains unknown.

HOW

Source expression: $t_{\text{emergency}} = E_{\text{emergency,L}} / P_{\text{emergency,H}}$. Current Bangel expression: emergency_reserve_low / emergency_power_high. Require every input to be known. Require emergency_reserve_low >= 0.0 and emergency_power_high > 0.0.

THEN

Emit the scoped calculation result. Missing inputs produce their specific PINK_MISSING_* HOLD; failed profile checks produce PINK_DOMAIN. A false numeric predicate can occur in a PASS calculation receipt; it is not permission.

CURRENT EVIDENCE

Fixture inputs {"emergency_reserve_low": "30", "emergency_power_high": "5"}; expected 6. Result matched through Bangel, admitted JP, the Bangel API, with validated receipt outputs. 2 missing-input cases and 1 supplied domain cases passed.

SOURCE DIMENSION

time

REMAINING REQUIREMENT

Complete the source-defined measurement/evidence contract, units and calibration bindings. Native C# and Hagar formula-ID bindings remain unverified in this rerun.

SOURCE REFERENCES

D019 pp. 3,11

Evidence: evidence/rerun/pink/F-184.json

TR-PINK-F-185 / Spacecraft thermal balance

IF

Invoke F-185 with exactly these inputs: internal_power: Real, absorbed_solar: Real, rejected_power: Real. Real values use finite decimal text; null remains unknown.

HOW

Source expression: $C_{th} \cdot dT/dt = P_{internal} + P_{solar_absorbed} - P_{rejected}$. Current Bangel expression: internal_power + absorbed_solar - rejected_power. Require every input to be known. No additional domain predicates are declared by this scalar profile.

THEN

Emit the scoped calculation result. Missing inputs produce their specific PINK_MISSING_* HOLD; failed profile checks produce PINK_DOMAIN. A false numeric predicate can occur in a PASS calculation receipt; it is not permission.

CURRENT EVIDENCE

Fixture inputs {"internal_power": "10", "absorbed_solar": "4", "rejected_power": "7"}; expected 7. Result matched through Bangel, admitted JP, the Bangel API, with validated receipt outputs. 3 missing-input cases and 0 supplied domain cases passed.

SOURCE DIMENSION

power

REMAINING REQUIREMENT

Complete the source-defined measurement/evidence contract, units and calibration bindings. Native C# and Hagar formula-ID bindings remain unverified in this rerun.

SOURCE REFERENCES

D019 pp. 3,11

Evidence: evidence/rerun/pink/F-185.json

TR-PINK-F-186 / Space-profile battery margin

IF

Invoke F-186 with exactly these inputs: battery_low: Real, required_high: Real. Real values use finite decimal text; null remains unknown.

HOW

Source expression: $M_{batt} = E_{battery,L} - E_{required,H}$. Current Bangel expression: battery_low - required_high. Require every input to be known. Require battery_low >= 0.0 and required_high >= 0.0.

THEN

Emit the scoped calculation result. Missing inputs produce their specific PINK_MISSING_* HOLD; failed profile checks produce PINK_DOMAIN. A false numeric predicate can occur in a PASS calculation receipt; it is not permission.

CURRENT EVIDENCE

Fixture inputs {"battery_low": "30", "required_high": "20"}; expected 10. Result matched through Bangel, admitted JP, the Bangel API, with validated receipt outputs. 2 missing-input cases and 1 supplied domain cases passed.

SOURCE DIMENSION

energy

REMAINING REQUIREMENT

Complete the source-defined measurement/evidence contract, units and calibration bindings. Native C# and Hagar formula-ID bindings remain unverified in this rerun.

SOURCE REFERENCES

D019 pp. 4,11

Evidence: evidence/rerun/pink/F-186.json

TR-PINK-F-187 / Authenticated startup state

IF

Invoke F-187 (Authenticated startup state) only with the source-defined inputs, scope, evidence and result dimension (state). A complete executable parameter schema has not been bound to this ID.

HOW

Preserve the source relation exactly: $S_{next} = transition(S_{current}, command, authority, evidence, ethics)$. The expression names a model or transition function. Recover its normative definition, inputs, state and failure behavior before implementing it.

THEN

Keep this formula OPEN. The current paper host rejects this ID with PAPER_PROFILE_UNIMPLEMENTED. The Teal assertion gate holds when method/proof is false. This expected refusal is not a completed implementation.

CURRENT EVIDENCE

Fresh refusal and hold evidence is recorded individually; no scalar result, transition, permit or physical effect is fabricated.

SOURCE DIMENSION

state

REMAINING REQUIREMENT

The expression names a model or transition function. Recover its normative definition, inputs, state and failure behavior before implementing it.

SOURCE REFERENCES

D019 pp. 4,11

Evidence: evidence/rerun/pending/F-187.json

TR-PINK-F-188 / Fault isolation set

IF

Invoke F-188 (Fault isolation set) only with the source-defined inputs, scope, evidence and result dimension (set). A complete executable parameter schema has not been bound to this ID.

HOW

Preserve the source relation exactly: $F_isolated = isolate(F_detected, affected_boundaries, receipts)$. The expression names a model or transition function. Recover its normative definition, inputs, state and failure behavior before implementing it.

THEN

Keep this formula OPEN. The current paper host rejects this ID with PAPER_PROFILE_UNIMPLEMENTED. The Teal assertion gate holds when method/proof is false. This expected refusal is not a completed implementation.

CURRENT EVIDENCE

Fresh refusal and hold evidence is recorded individually; no scalar result, transition, permit or physical effect is fabricated.

SOURCE DIMENSION

set

REMAINING REQUIREMENT

The expression names a model or transition function. Recover its normative definition, inputs, state and failure behavior before implementing it.

SOURCE REFERENCES

D019 pp. 4,11

Evidence: evidence/rerun/pending/F-188.json

TR-PINK-F-189 / Redundant service availability

IF

Invoke F-189 (Redundant service availability) only with the source-defined inputs, scope, evidence and result dimension (ratio). A complete executable parameter schema has not been bound to this ID.

HOW

Preserve the source relation exactly: $A_{\text{service}} = 1 - \text{product}(1 - A_i)$ for independent admitted channels. Implement the source-defined vector/matrix, integer-count, geometric or numerical operator through Bangel and native C#. Specify dimensions, decimal precision, bounds and negative/unknown cases; do not replace vectors with an unmarked scalar.

THEN

Keep this formula OPEN. The current paper host rejects this ID with PAPER_PROFILE_UNIMPLEMENTED. The Teal assertion gate holds when method/proof is false. This expected refusal is not a completed implementation.

CURRENT EVIDENCE

Fresh refusal and hold evidence is recorded individually; no scalar result, transition, permit or physical effect is fabricated.

SOURCE DIMENSION

ratio

REMAINING REQUIREMENT

Implement the source-defined vector/matrix, integer-count, geometric or numerical operator through Bangel and native C#. Specify dimensions, decimal precision, bounds and negative/unknown cases; do not replace vectors with an unmarked scalar.

SOURCE REFERENCES

D019 pp. 4,11

Evidence: evidence/rerun/pending/F-189.json

TR-PINK-F-190 / Propulsion-state coordination reference

IF

Invoke F-190 (Propulsion-state coordination reference) only with the source-defined inputs, scope, evidence and result dimension (state). A complete executable parameter schema has not been bound to this ID.

HOW

Preserve the source relation exactly: $S_{prop_next} = governed_state_update(S_{prop}, telemetry, limits, authority)$. The expression names a model or transition function. Recover its normative definition, inputs, state and failure behavior before implementing it.

THEN

Keep this formula OPEN. The current paper host rejects this ID with PAPER_PROFILE_UNIMPLEMENTED. The Teal assertion gate holds when method/proof is false. This expected refusal is not a completed implementation.

CURRENT EVIDENCE

Fresh refusal and hold evidence is recorded individually; no scalar result, transition, permit or physical effect is fabricated.

SOURCE DIMENSION

state

REMAINING REQUIREMENT

The expression names a model or transition function. Recover its normative definition, inputs, state and failure behavior before implementing it.

SOURCE REFERENCES

D019 pp. 5,11

Evidence: evidence/rerun/pending/F-190.json

TR-PINK-F-191 / High-energy emergency reserve

IF

Invoke F-191 with exactly these inputs: shutdown_available_low: Real, shutdown_required_high: Real. Real values use finite decimal text; null remains unknown.

HOW

Source expression: $R_{HE} = E_{safe_shutdown,L} - E_{shutdown_required,H}$. Current Bangel expression: shutdown_available_low - shutdown_required_high. Require every input to be known. Require shutdown_available_low >= 0.0 and shutdown_required_high >= 0.0.

THEN

Emit the scoped calculation result. Missing inputs produce their specific PINK_MISSING_* HOLD; failed profile checks produce PINK_DOMAIN. A false numeric predicate can occur in a PASS calculation receipt; it is not permission.

CURRENT EVIDENCE

Fixture inputs {"shutdown_available_low": "30", "shutdown_required_high": "20"}; expected 10. Result matched through Bangel, admitted JP, the Bangel API, with validated receipt outputs. 2 missing-input cases and 1 supplied domain cases passed.

SOURCE DIMENSION

energy

REMAINING REQUIREMENT

Complete the source-defined measurement/evidence contract, units and calibration bindings. Native C# and Hagar formula-ID bindings remain unverified in this rerun.

SOURCE REFERENCES

D019 pp. 5,11

Evidence: evidence/rerun/pink/F-191.json

TR-PINK-F-192 / Non-weaponization gate

IF

Invoke F-192 (Non-weaponization gate) only with the source-defined inputs, scope, evidence and result dimension (logical). A complete executable parameter schema has not been bound to this ID.

HOW

Preserve the source relation exactly: G_ethics = peaceful_research AND no_targeting AND no_destructive_payload AND no_evasion_for_harm. Define and bind required evidence, validation rules, state/receipt transitions and authority scope. Caller-supplied Boolean assertions alone do not complete this contract.

THEN

Keep this formula OPEN. The current paper host rejects this ID with PAPER_PROFILE_UNIMPLEMENTED. The Teal assertion gate holds when method/proof is false. This expected refusal is not a completed implementation.

CURRENT EVIDENCE

Fresh refusal and hold evidence is recorded individually; no scalar result, transition, permit or physical effect is fabricated.

SOURCE DIMENSION

logical

REMAINING REQUIREMENT

Define and bind required evidence, validation rules, state/receipt transitions and authority scope. Caller-supplied Boolean assertions alone do not complete this contract.

SOURCE REFERENCES

D019 pp. 5,12

Evidence: evidence/rerun/pending/F-192.json

TR-PINK-F-193 / Rocket-profile evidence and permit gate

IF

Invoke F-193 (Rocket-profile evidence and permit gate) only with the source-defined inputs, scope, evidence and result dimension (logical). A complete executable parameter schema has not been bound to this ID.

HOW

Preserve the source relation exactly: $G_{rocket} = peaceful_scope \text{ AND } profile_evidence \text{ AND } safety \text{ AND } regulatory_hold_resolved \text{ AND } MJ_permit$. Define and bind required evidence, validation rules, state/receipt transitions and authority scope. Caller-supplied Boolean assertions alone do not complete this contract.

THEN

Keep this formula OPEN. The current paper host rejects this ID with PAPER_PROFILE_UNIMPLEMENTED. The Teal assertion gate holds when method/proof is false. This expected refusal is not a completed implementation.

CURRENT EVIDENCE

Fresh refusal and hold evidence is recorded individually; no scalar result, transition, permit or physical effect is fabricated.

SOURCE DIMENSION

logical

REMAINING REQUIREMENT

Define and bind required evidence, validation rules, state/receipt transitions and authority scope. Caller-supplied Boolean assertions alone do not complete this contract.

SOURCE REFERENCES

D019 pp. 5,12

Evidence: evidence/rerun/pending/F-193.json

TR-PINK-F-194 / DRO founder lower marker

IF

Invoke F-194 with exactly these inputs: . Real values use finite decimal text; null remains unknown.

HOW

Source expression: $d_A = 5e-22$ m. Current Bangel expression: 0.000000000000000000000005. Require every input to be known. No additional domain predicates are declared by this scalar profile.

THEN

Emit the scoped calculation result. Missing inputs produce their specific PINK_MISSING_* HOLD; failed profile checks produce PINK_DOMAIN. A false numeric predicate can occur in a PASS calculation receipt; it is not permission.

CURRENT EVIDENCE

Fixture inputs {}; expected 0.000000000000000000000005. Result matched through Bangel, admitted JP, the Bangel API, with validated receipt outputs. 0 missing-input cases and 0 supplied domain cases passed.

SOURCE DIMENSION

length

REMAINING REQUIREMENT

Complete the source-defined measurement/evidence contract, units and calibration bindings. Native C# and Hagar formula-ID bindings remain unverified in this rerun.

SOURCE REFERENCES

D004 pp. 2,6

Evidence: evidence/rerun/pink/F-194.json

TR-PINK-F-195 / DRO alias conversion

IF

Invoke F-195 with exactly these inputs: . Real values use finite decimal text; null remains unknown.

HOW

Source expression: $d_B = 3e-12 \text{ nm} * 1e-9 \text{ m/nm} = 3e-21 \text{ m}$. Current Bangel expression: $0.000000000003 * 0.000000001$. Require every input to be known. No additional domain predicates are declared by this scalar profile.

THEN

Emit the scoped calculation result. Missing inputs produce their specific PINK_MISSING_* HOLD; failed profile checks produce PINK_DOMAIN. A false numeric predicate can occur in a PASS calculation receipt; it is not permission.

CURRENT EVIDENCE

Fixture inputs {}; expected 0.00000000000000000003. Result matched through Bangel, admitted JP, the Bangel API, with validated receipt outputs. 0 missing-input cases and 0 supplied domain cases passed.

SOURCE DIMENSION

length

REMAINING REQUIREMENT

Complete the source-defined measurement/evidence contract, units and calibration bindings. Native C# and Hagar formula-ID bindings remain unverified in this rerun.

SOURCE REFERENCES

D004 pp. 2,6

Evidence: evidence/rerun/pink/F-195.json

TR-PINK-F-196 / DRO conservative R threshold

IF

Invoke F-196 with exactly these inputs: . Real values use finite decimal text; null remains unknown.

HOW

Source expression: $d_R = \max(d_A, d_B) = 3e-21 \text{ m}$. Current Bangel expression: `math.max(0.0000000000000000000005, 0.0000000000000000000003)`. Require every input to be known. No additional domain predicates are declared by this scalar profile.

THEN

Emit the scoped calculation result. Missing inputs produce their specific `PINK_MISSING_*` HOLD; failed profile checks produce `PINK_DOMAIN`. A false numeric predicate can occur in a PASS calculation receipt; it is not permission.

CURRENT EVIDENCE

Fixture inputs `{}`; expected `0.0000000000000000000003`. Result matched through Bangel, admitted JP, the Bangel API, with validated receipt outputs. 0 missing-input cases and 0 supplied domain cases passed.

SOURCE DIMENSION

length

REMAINING REQUIREMENT

Complete the source-defined measurement/evidence contract, units and calibration bindings. Native C# and Hagar formula-ID bindings remain unverified in this rerun.

SOURCE REFERENCES

D004 pp. 2,7

Evidence: `evidence/rerun/pink/F-196.json`

TR-PINK-F-197 / DRO upper spherical reference

IF

Invoke F-197 with exactly these inputs: . Real values use finite decimal text; null remains unknown.

HOW

Source expression: $d_U = 0.15 \text{ nm} = 1.5e-10 \text{ m}$. Current Bangel expression: $0.15 * 0.000000001$. Require every input to be known. No additional domain predicates are declared by this scalar profile.

THEN

Emit the scoped calculation result. Missing inputs produce their specific PINK_MISSING_* HOLD; failed profile checks produce PINK_DOMAIN. A false numeric predicate can occur in a PASS calculation receipt; it is not permission.

CURRENT EVIDENCE

Fixture inputs {}; expected 0.0000000015. Result matched through Bangel, admitted JP, the Bangel API, with validated receipt outputs. 0 missing-input cases and 0 supplied domain cases passed.

SOURCE DIMENSION

length

REMAINING REQUIREMENT

Complete the source-defined measurement/evidence contract, units and calibration bindings. Native C# and Hagar formula-ID bindings remain unverified in this rerun.

SOURCE REFERENCES

D004 pp. 2,7

Evidence: evidence/rerun/pink/F-197.json

TR-PINK-F-198 / DRO declared interval

IF

Invoke F-198 with exactly these inputs: diameter: Real. Real values use finite decimal text; null remains unknown.

HOW

Source expression: d in $[d_R, d_U]$. Current Bangel expression: $diameter \geq 0.000000000000000000000003$ and $diameter \leq 0.00000000015$. Require every input to be known. Require $diameter \geq 0.0$.

THEN

Emit the scoped calculation result. Missing inputs produce their specific PINK_MISSING_* HOLD; failed profile checks produce PINK_DOMAIN. A false numeric predicate can occur in a PASS calculation receipt; it is not permission.

CURRENT EVIDENCE

Fixture inputs {"diameter": "0.0000000001"}; expected true. Result matched through Bangel, admitted JP, the Bangel API, with validated receipt outputs. 1 missing-input cases and 1 supplied domain cases passed.

SOURCE DIMENSION

length

REMAINING REQUIREMENT

Complete the source-defined measurement/evidence contract, units and calibration bindings. Native C# and Hagar formula-ID bindings remain unverified in this rerun.

SOURCE REFERENCES

D004 pp. 2,7

Evidence: evidence/rerun/pink/F-198.json

TR-PINK-F-199 / DRO reference radius

IF

Invoke F-199 with exactly these inputs: diameter: Real. Real values use finite decimal text; null remains unknown.

HOW

Source expression: $r_{DRO} = d/2$. Current Bangel expression: $diameter / 2.0$. Require every input to be known. Require $diameter \geq 0.0$.

THEN

Emit the scoped calculation result. Missing inputs produce their specific PINK_MISSING_* HOLD; failed profile checks produce PINK_DOMAIN. A false numeric predicate can occur in a PASS calculation receipt; it is not permission.

CURRENT EVIDENCE

Fixture inputs {"diameter": "0.0000000001"}; expected 0.00000000005. Result matched through Bangel, admitted JP, the Bangel API, with validated receipt outputs. 1 missing-input cases and 1 supplied domain cases passed.

SOURCE DIMENSION

length

REMAINING REQUIREMENT

Complete the source-defined measurement/evidence contract, units and calibration bindings. Native C# and Hagar formula-ID bindings remain unverified in this rerun.

SOURCE REFERENCES

D004 pp. 2,7

Evidence: evidence/rerun/pink/F-199.json

TR-PINK-F-200 / DRO spherical reference volume

IF

Invoke F-200 (DRO spherical reference volume) only with the source-defined inputs, scope, evidence and result dimension (volume). A complete executable parameter schema has not been bound to this ID.

HOW

Preserve the source relation exactly: $V_{DRO} = 4 \cdot \pi \cdot r_{DRO}^3 / 3$. Implement the source-defined vector/matrix, integer-count, geometric or numerical operator through Bangel and native C#. Specify dimensions, decimal precision, bounds and negative/unknown cases; do not replace vectors with an unmarked scalar.

THEN

Keep this formula OPEN. The current paper host rejects this ID with PAPER_PROFILE_UNIMPLEMENTED. The Teal assertion gate holds when method/proof is false. This expected refusal is not a completed implementation.

CURRENT EVIDENCE

Fresh refusal and hold evidence is recorded individually; no scalar result, transition, permit or physical effect is fabricated.

SOURCE DIMENSION

volume

REMAINING REQUIREMENT

Implement the source-defined vector/matrix, integer-count, geometric or numerical operator through Bangel and native C#. Specify dimensions, decimal precision, bounds and negative/unknown cases; do not replace vectors with an unmarked scalar.

SOURCE REFERENCES

D004 pp. 3,7

Evidence: evidence/rerun/pending/F-200.json

TR-PINK-F-201 / DRO interval ratio

IF

Invoke F-201 with exactly these inputs: . Real values use finite decimal text; null remains unknown.

HOW

Source expression: $\text{Gamma_D} = d_U/d_R$. Current Bangel expression: 0.00000000015 / 0.00000000000000000003. Require every input to be known. No additional domain predicates are declared by this scalar profile.

THEN

Emit the scoped calculation result. Missing inputs produce their specific PINK_MISSING_* HOLD; failed profile checks produce PINK_DOMAIN. A false numeric predicate can occur in a PASS calculation receipt; it is not permission.

CURRENT EVIDENCE

Fixture inputs {}; expected 500000000000. Result matched through Bangel, admitted JP, the Bangel API, with validated receipt outputs. 0 missing-input cases and 0 supplied domain cases passed.

SOURCE DIMENSION

ratio

REMAINING REQUIREMENT

Complete the source-defined measurement/evidence contract, units and calibration bindings. Native C# and Hagar formula-ID bindings remain unverified in this rerun.

SOURCE REFERENCES

D004 pp. 3,7

Evidence: evidence/rerun/pink/F-201.json

TR-PINK-F-202 / DRO quantity count

IF

Invoke F-202 (DRO quantity count) only with the source-defined inputs, scope, evidence and result dimension (count). A complete executable parameter schema has not been bound to this ID.

HOW

Preserve the source relation exactly: $N_{DRO} = \text{floor}(Q_{\text{observed}}/q_{\text{unit}})$. Implement the source-defined vector/matrix, integer-count, geometric or numerical operator through Bangel and native C#. Specify dimensions, decimal precision, bounds and negative/unknown cases; do not replace vectors with an unmarked scalar.

THEN

Keep this formula OPEN. The current paper host rejects this ID with PAPER_PROFILE_UNIMPLEMENTED. The Teal assertion gate holds when method/proof is false. This expected refusal is not a completed implementation.

CURRENT EVIDENCE

Fresh refusal and hold evidence is recorded individually; no scalar result, transition, permit or physical effect is fabricated.

SOURCE DIMENSION

count

REMAINING REQUIREMENT

Implement the source-defined vector/matrix, integer-count, geometric or numerical operator through Bangel and native C#. Specify dimensions, decimal precision, bounds and negative/unknown cases; do not replace vectors with an unmarked scalar.

SOURCE REFERENCES

D004 pp. 3,7

Evidence: evidence/rerun/pending/F-202.json

TR-PINK-F-203 / DRO remainder

IF

Invoke F-203 (DRO remainder) only with the source-defined inputs, scope, evidence and result dimension (quantity). A complete executable parameter schema has not been bound to this ID.

HOW

Preserve the source relation exactly: $Q_{rem} = Q_{observed} - N_{DRO} \cdot q_{unit}$. Implement the source-defined vector/matrix, integer-count, geometric or numerical operator through Bangel and native C#. Specify dimensions, decimal precision, bounds and negative/unknown cases; do not replace vectors with an unmarked scalar.

THEN

Keep this formula OPEN. The current paper host rejects this ID with PAPER_PROFILE_UNIMPLEMENTED. The Teal assertion gate holds when method/proof is false. This expected refusal is not a completed implementation.

CURRENT EVIDENCE

Fresh refusal and hold evidence is recorded individually; no scalar result, transition, permit or physical effect is fabricated.

SOURCE DIMENSION

quantity

REMAINING REQUIREMENT

Implement the source-defined vector/matrix, integer-count, geometric or numerical operator through Bangel and native C#. Specify dimensions, decimal precision, bounds and negative/unknown cases; do not replace vectors with an unmarked scalar.

SOURCE REFERENCES

D003 pp. 2; D004 pp. 3,7

Evidence: evidence/rerun/pending/F-203.json

TR-PINK-F-204 / Pearl-node allocation count

IF

Invoke F-204 (Pearl-node allocation count) only with the source-defined inputs, scope, evidence and result dimension (count). A complete executable parameter schema has not been bound to this ID.

HOW

Preserve the source relation exactly: $N_P = \text{ceil}(N_{DRO}/C_P)$. Implement the source-defined vector/matrix, integer-count, geometric or numerical operator through Bangel and native C#. Specify dimensions, decimal precision, bounds and negative/unknown cases; do not replace vectors with an unmarked scalar.

THEN

Keep this formula OPEN. The current paper host rejects this ID with PAPER_PROFILE_UNIMPLEMENTED. The Teal assertion gate holds when method/proof is false. This expected refusal is not a completed implementation.

CURRENT EVIDENCE

Fresh refusal and hold evidence is recorded individually; no scalar result, transition, permit or physical effect is fabricated.

SOURCE DIMENSION

count

REMAINING REQUIREMENT

Implement the source-defined vector/matrix, integer-count, geometric or numerical operator through Bangel and native C#. Specify dimensions, decimal precision, bounds and negative/unknown cases; do not replace vectors with an unmarked scalar.

SOURCE REFERENCES

D003 pp. 2; D004 pp. 3,7

Evidence: evidence/rerun/pending/F-204.json

TR-PINK-F-205 / DRO-Pearl handoff balance

IF

Invoke F-205 (DRO-Pearl handoff balance) only with the source-defined inputs, scope, evidence and result dimension (count). A complete executable parameter schema has not been bound to this ID.

HOW

Preserve the source relation exactly: $N_{DRO,in} = N_{DRO,pearl} + N_{DRO,held} + N_{DRO,escaped} + r_{DRO}$. Implement the source-defined vector/matrix, integer-count, geometric or numerical operator through Bangel and native C#. Specify dimensions, decimal precision, bounds and negative/unknown cases; do not replace vectors with an unmarked scalar.

THEN

Keep this formula OPEN. The current paper host rejects this ID with PAPER_PROFILE_UNIMPLEMENTED. The Teal assertion gate holds when method/proof is false. This expected refusal is not a completed implementation.

CURRENT EVIDENCE

Fresh refusal and hold evidence is recorded individually; no scalar result, transition, permit or physical effect is fabricated.

SOURCE DIMENSION

count

REMAINING REQUIREMENT

Implement the source-defined vector/matrix, integer-count, geometric or numerical operator through Bangel and native C#. Specify dimensions, decimal precision, bounds and negative/unknown cases; do not replace vectors with an unmarked scalar.

SOURCE REFERENCES

D004 pp. 3,7

Evidence: evidence/rerun/pending/F-205.json

TR-PINK-F-206 / DRO R-state gate

IF

Invoke F-206 (DRO R-state gate) only with the source-defined inputs, scope, evidence and result dimension (logical). A complete executable parameter schema has not been bound to this ID.

HOW

Preserve the source relation exactly: $G_R = \text{scale_interval_valid} \text{ AND } \text{source_bound} \text{ AND } \text{units_valid}$. Define and bind required evidence, validation rules, state/receipt transitions and authority scope. Caller-supplied Boolean assertions alone do not complete this contract.

THEN

Keep this formula OPEN. The current paper host rejects this ID with PAPER_PROFILE_UNIMPLEMENTED. The Teal assertion gate holds when method/proof is false. This expected refusal is not a completed implementation.

CURRENT EVIDENCE

Fresh refusal and hold evidence is recorded individually; no scalar result, transition, permit or physical effect is fabricated.

SOURCE DIMENSION

logical

REMAINING REQUIREMENT

Define and bind required evidence, validation rules, state/receipt transitions and authority scope. Caller-supplied Boolean assertions alone do not complete this contract.

SOURCE REFERENCES

D004 pp. 3,7

Evidence: evidence/rerun/pending/F-206.json

TR-PINK-F-207 / DRO R1 gate

IF

Invoke F-207 (DRO R1 gate) only with the source-defined inputs, scope, evidence and result dimension (logical). A complete executable parameter schema has not been bound to this ID.

HOW

Preserve the source relation exactly: $G_{R1} = G_R \text{ AND observed AND unresolved_items} > 0$. Define and bind required evidence, validation rules, state/receipt transitions and authority scope. Caller-supplied Boolean assertions alone do not complete this contract.

THEN

Keep this formula OPEN. The current paper host rejects this ID with PAPER_PROFILE_UNIMPLEMENTED. The Teal assertion gate holds when method/proof is false. This expected refusal is not a completed implementation.

CURRENT EVIDENCE

Fresh refusal and hold evidence is recorded individually; no scalar result, transition, permit or physical effect is fabricated.

SOURCE DIMENSION

logical

REMAINING REQUIREMENT

Define and bind required evidence, validation rules, state/receipt transitions and authority scope. Caller-supplied Boolean assertions alone do not complete this contract.

SOURCE REFERENCES

D004 pp. 4,7

Evidence: evidence/rerun/pending/F-207.json

TR-PINK-F-208 / DRO R2 gate

IF

Invoke F-208 (DRO R2 gate) only with the source-defined inputs, scope, evidence and result dimension (logical). A complete executable parameter schema has not been bound to this ID.

HOW

Preserve the source relation exactly: $G_{R2} = G_R \text{ AND observed AND all_required_evidence_pass}$. Define and bind required evidence, validation rules, state/receipt transitions and authority scope. Caller-supplied Boolean assertions alone do not complete this contract.

THEN

Keep this formula OPEN. The current paper host rejects this ID with PAPER_PROFILE_UNIMPLEMENTED. The Teal assertion gate holds when method/proof is false. This expected refusal is not a completed implementation.

CURRENT EVIDENCE

Fresh refusal and hold evidence is recorded individually; no scalar result, transition, permit or physical effect is fabricated.

SOURCE DIMENSION

logical

REMAINING REQUIREMENT

Define and bind required evidence, validation rules, state/receipt transitions and authority scope. Caller-supplied Boolean assertions alone do not complete this contract.

SOURCE REFERENCES

D004 pp. 4,7

Evidence: evidence/rerun/pending/F-208.json

TR-PINK-F-209 / Optical wavelength

IF

Invoke F-209 with exactly these inputs: wave_speed: Real, frequency: Real. Real values use finite decimal text; null remains unknown.

HOW

Source expression: $\lambda = c/f$. Current Bangel expression: wave_speed / frequency. Require every input to be known. Require wave_speed > 0.0 and frequency > 0.0.

THEN

Emit the scoped calculation result. Missing inputs produce their specific PINK_MISSING_* HOLD; failed profile checks produce PINK_DOMAIN. A false numeric predicate can occur in a PASS calculation receipt; it is not permission.

CURRENT EVIDENCE

Fixture inputs {"wave_speed": "300", "frequency": "100"}; expected 3. Result matched through Bangel, admitted JP, the Bangel API, with validated receipt outputs. 2 missing-input cases and 1 supplied domain cases passed.

SOURCE DIMENSION

length

REMAINING REQUIREMENT

Complete the source-defined measurement/evidence contract, units and calibration bindings. Native C# and Hagar formula-ID bindings remain unverified in this rerun.

SOURCE REFERENCES

D004 pp. 4,7

Evidence: evidence/rerun/pink/F-209.json

Invoke F-210 with exactly these inputs: planck_constant: Real, frequency: Real. Real values use finite decimal text; null remains unknown.

Source expression: $E_{\gamma} = h \cdot f$. Current Bangle expression: `planck_constant * frequency`. Require every input to be known. Require `planck_constant > 0.0` and `frequency > 0.0`.

Emit the scoped calculation result. Missing inputs produce their specific PINK_MISSING_* HOLD; failed profile checks produce PINK_DOMAIN. A false numeric predicate can occur in a PASS calculation receipt; it is not permission.

[illegible]

energy

Complete the source-defined measurement/evidence contract, units and calibration bindings. Native C# and Hagar formula-ID bindings remain unverified in this rerun.

D004 pp. 4,7

Evidence: evidence/rerun/pink/F-210.json

TR-PINK-F-211 / Photon count estimate

IF

Invoke F-211 with exactly these inputs: power: Real, duration: Real, planck_constant: Real, frequency: Real. Real values use finite decimal text; null remains unknown.

HOW

Source expression: $N_{\gamma} = P \cdot \Delta t / (h \cdot f)$. Current Bangel expression: $\text{power} * \text{duration} / (\text{planck_constant} * \text{frequency})$. Require every input to be known. Require power ≥ 0.0 and duration ≥ 0.0 and planck_constant > 0.0 and frequency > 0.0 .

THEN

Emit the scoped calculation result. Missing inputs produce their specific PINK_MISSING_* HOLD; failed profile checks produce PINK_DOMAIN. A false numeric predicate can occur in a PASS calculation receipt; it is not permission.

CURRENT EVIDENCE

Fixture inputs {"power": "6", "duration": "2", "planck_constant": "2", "frequency": "3"}; expected 2. Result matched through Bangel, admitted JP, the Bangel API, with validated receipt outputs. 4 missing-input cases and 1 supplied domain cases passed.

SOURCE DIMENSION

count

REMAINING REQUIREMENT

Complete the source-defined measurement/evidence contract, units and calibration bindings. Native C# and Hagar formula-ID bindings remain unverified in this rerun.

SOURCE REFERENCES

D004 pp. 4,7

Evidence: evidence/rerun/pink/F-211.json

TR-PINK-F-212 / Optical coupling evidence

IF

Invoke F-212 with exactly these inputs: coupling_efficiency: Real, photon_estimate: Real. Real values use finite decimal text; null remains unknown.

HOW

Source expression: $N_{couple} = \eta_c \cdot N_{gamma}$. Current Bangel expression: coupling_efficiency * photon_estimate. Require every input to be known. Require coupling_efficiency >= 0.0 and coupling_efficiency <= 1.0 and photon_estimate >= 0.0.

THEN

Emit the scoped calculation result. Missing inputs produce their specific PINK_MISSING_* HOLD; failed profile checks produce PINK_DOMAIN. A false numeric predicate can occur in a PASS calculation receipt; it is not permission.

CURRENT EVIDENCE

Fixture inputs {"coupling_efficiency": "0.25", "photon_estimate": "12"}; expected 3. Result matched through Bangel, admitted JP, the Bangel API, with validated receipt outputs. 2 missing-input cases and 1 supplied domain cases passed.

SOURCE DIMENSION

count

REMAINING REQUIREMENT

Complete the source-defined measurement/evidence contract, units and calibration bindings. Native C# and Hagar formula-ID bindings remain unverified in this rerun.

SOURCE REFERENCES

D004 pp. 4,7

Evidence: evidence/rerun/pink/F-212.json

TR-PINK-F-213 / Optical admissibility

IF

Invoke F-213 (Optical admissibility) only with the source-defined inputs, scope, evidence and result dimension (logical). A complete executable parameter schema has not been bound to this ID.

HOW

Preserve the source relation exactly: $G_{opt} = calibrated_band \text{ AND } measured_power \text{ AND } eta_c_evidenced \text{ AND } uncertainty_valid$. Define and bind required evidence, validation rules, state/receipt transitions and authority scope. Caller-supplied Boolean assertions alone do not complete this contract.

THEN

Keep this formula OPEN. The current paper host rejects this ID with PAPER_PROFILE_UNIMPLEMENTED. The Teal assertion gate holds when method/proof is false. This expected refusal is not a completed implementation.

CURRENT EVIDENCE

Fresh refusal and hold evidence is recorded individually; no scalar result, transition, permit or physical effect is fabricated.

SOURCE DIMENSION

logical

REMAINING REQUIREMENT

Define and bind required evidence, validation rules, state/receipt transitions and authority scope. Caller-supplied Boolean assertions alone do not complete this contract.

SOURCE REFERENCES

D004 pp. 5,7

Evidence: evidence/rerun/pending/F-213.json

TR-PINK-F-214 / DRO collection rate

IF

Invoke F-214 with exactly these inputs: count_delta: Real, time_delta: Real. Real values use finite decimal text; null remains unknown.

HOW

Source expression: $R_{DRO} = \Delta N_{DRO} / \Delta t$. Current Bangel expression: count_delta / time_delta. Require every input to be known. Require time_delta > 0.0.

THEN

Emit the scoped calculation result. Missing inputs produce their specific PINK_MISSING_* HOLD; failed profile checks produce PINK_DOMAIN. A false numeric predicate can occur in a PASS calculation receipt; it is not permission.

CURRENT EVIDENCE

Fixture inputs {"count_delta": "-6", "time_delta": "2"}; expected -3. Result matched through Bangel, admitted JP, the Bangel API, with validated receipt outputs. 2 missing-input cases and 1 supplied domain cases passed.

SOURCE DIMENSION

count/time

REMAINING REQUIREMENT

Complete the source-defined measurement/evidence contract, units and calibration bindings. Native C# and Hagar formula-ID bindings remain unverified in this rerun.

SOURCE REFERENCES

D004 pp. 5,7

Evidence: evidence/rerun/pink/F-214.json

TR-PINK-F-215 / DRO scale uncertainty

IF

Invoke F-215 (DRO scale uncertainty) only with the source-defined inputs, scope, evidence and result dimension (length). A complete executable parameter schema has not been bound to this ID.

HOW

Preserve the source relation exactly: $U_d = k \cdot \sqrt{J \cdot \text{Sigma} \cdot J^T + u_{\text{model}}^2}$. Implement the source-defined vector/matrix, integer-count, geometric or numerical operator through Bangel and native C#. Specify dimensions, decimal precision, bounds and negative/unknown cases; do not replace vectors with an unmarked scalar.

THEN

Keep this formula OPEN. The current paper host rejects this ID with PAPER_PROFILE_UNIMPLEMENTED. The Teal assertion gate holds when method/proof is false. This expected refusal is not a completed implementation.

CURRENT EVIDENCE

Fresh refusal and hold evidence is recorded individually; no scalar result, transition, permit or physical effect is fabricated.

SOURCE DIMENSION

length

REMAINING REQUIREMENT

Implement the source-defined vector/matrix, integer-count, geometric or numerical operator through Bangel and native C#. Specify dimensions, decimal precision, bounds and negative/unknown cases; do not replace vectors with an unmarked scalar.

SOURCE REFERENCES

D004 pp. 5,7

Evidence: evidence/rerun/pending/F-215.json

TR-PINK-F-216 / DRO interval classification

IF

Invoke F-216 (DRO interval classification) only with the source-defined inputs, scope, evidence and result dimension (length). A complete executable parameter schema has not been bound to this ID.

HOW

Preserve the source relation exactly: $I_d = [d_{\text{hat}} - U_d, d_{\text{hat}} + U_d]$. Bind this formula ID to its typed value or invariant and source-specific tests. Existing language primitives are useful but do not constitute a complete formula contract.

THEN

Keep this formula OPEN. The current paper host rejects this ID with PAPER_PROFILE_UNIMPLEMENTED. The Teal assertion gate holds when method/proof is false. This expected refusal is not a completed implementation.

CURRENT EVIDENCE

Fresh refusal and hold evidence is recorded individually; no scalar result, transition, permit or physical effect is fabricated.

SOURCE DIMENSION

length

REMAINING REQUIREMENT

Bind this formula ID to its typed value or invariant and source-specific tests. Existing language primitives are useful but do not constitute a complete formula contract.

SOURCE REFERENCES

D004 pp. 5,7

Evidence: evidence/rerun/pending/F-216.json

TR-PINK-F-217 / DRO capacity slack

IF

Invoke F-217 with exactly these inputs: headroom_fraction: Real, capacity: Real, load: Real. Real values use finite decimal text; null remains unknown.

HOW

Source expression: $S_k = (1-h_k)C_k - L_k$. Current Bangel expression: $(1.0 - \text{headroom_fraction}) * \text{capacity} - \text{load}$. Require every input to be known. Require headroom_fraction ≥ 0.0 and headroom_fraction < 1.0 and capacity > 0.0 and load ≥ 0.0 .

THEN

Emit the scoped calculation result. Missing inputs produce their specific PINK_MISSING_* HOLD; failed profile checks produce PINK_DOMAIN. A false numeric predicate can occur in a PASS calculation receipt; it is not permission.

CURRENT EVIDENCE

Fixture inputs {"headroom_fraction": "0.1", "capacity": "100", "load": "95"}; expected -5. Result matched through Bangel, admitted JP, the Bangel API, with validated receipt outputs. 3 missing-input cases and 1 supplied domain cases passed.

SOURCE DIMENSION

quantity

REMAINING REQUIREMENT

Complete the source-defined measurement/evidence contract, units and calibration bindings. Native C# and Hagar formula-ID bindings remain unverified in this rerun.

SOURCE REFERENCES

D003 pp. 2; D004 pp. 5,7

Evidence: evidence/rerun/pink/F-217.json

TR-PINK-F-218 / DRO overflow vector

IF

Invoke F-218 with exactly these inputs: headroom_fraction: Real, capacity: Real, load: Real. Real values use finite decimal text; null remains unknown.

HOW

Source expression: $E_k = \max(0, L_k - (1 - h_k)C_k)$. Current Bangel expression: `math.max(0.0, load - (1.0 - headroom_fraction) * capacity)`. Require every input to be known. Require `headroom_fraction >= 0.0` and `headroom_fraction < 1.0` and `capacity > 0.0` and `load >= 0.0`.

THEN

Emit the scoped calculation result. Missing inputs produce their specific `PINK_MISSING_* HOLD`; failed profile checks produce `PINK_DOMAIN`. A false numeric predicate can occur in a `PASS` calculation receipt; it is not permission.

CURRENT EVIDENCE

Fixture inputs `{"headroom_fraction": "0.1", "capacity": "100", "load": "95"}`; expected 5. Result matched through Bangel, admitted JP, the Bangel API, with validated receipt outputs. 3 missing-input cases and 1 supplied domain cases passed.

SOURCE DIMENSION

quantity

REMAINING REQUIREMENT

Complete the source-defined measurement/evidence contract, units and calibration bindings. Native C# and Hagar formula-ID bindings remain unverified in this rerun.

SOURCE REFERENCES

D003 pp. 2; D004 pp. 5,7

Evidence: `evidence/rerun/pink/F-218.json`

TR-PINK-F-219 / DRO ledger balance

IF

Invoke F-219 with exactly these inputs: incoming: Real, allocated: Real, retained: Real, transferred: Real, escaped: Real, stored_delta: Real. Real values use finite decimal text; null remains unknown.

HOW

Source expression: $r_Q = Q_{in} - Q_{alloc} - Q_{retained} - Q_{transferred} - Q_{escaped} - \Delta Q_{stored}$. Current Bangel expression: incoming - allocated - retained - transferred - escaped - stored_delta. Require every input to be known. No additional domain predicates are declared by this scalar profile.

THEN

Emit the scoped calculation result. Missing inputs produce their specific PINK_MISSING_* HOLD; failed profile checks produce PINK_DOMAIN. A false numeric predicate can occur in a PASS calculation receipt; it is not permission.

CURRENT EVIDENCE

Fixture inputs {"incoming": "100", "allocated": "10", "retained": "20", "transferred": "30", "escaped": "5", "stored_delta": "35"}; expected 0. Result matched through Bangel, admitted JP, the Bangel API, with validated receipt outputs. 6 missing-input cases and 0 supplied domain cases passed.

SOURCE DIMENSION

quantity

REMAINING REQUIREMENT

Complete the source-defined measurement/evidence contract, units and calibration bindings. Native C# and Hagar formula-ID bindings remain unverified in this rerun.

SOURCE REFERENCES

D003 pp. 2; D004 pp. 5,7
Evidence: evidence/rerun/pink/F-219.json

TR-PINK-F-220 / DRO energy ledger

IF

Invoke F-220 with exactly these inputs: incoming: Real, stored: Real, start: Real, restart: Real, loss: Real, containment: Real. Real values use finite decimal text; null remains unknown.

HOW

Source expression: $r_E = E_{in} - E_{stored} - E_{start} - E_{restart} - E_{loss} - E_{containment}$. Current Bangel expression: incoming - stored - start - restart - loss - containment. Require every input to be known. No additional domain predicates are declared by this scalar profile.

THEN

Emit the scoped calculation result. Missing inputs produce their specific PINK_MISSING_* HOLD; failed profile checks produce PINK_DOMAIN. A false numeric predicate can occur in a PASS calculation receipt; it is not permission.

CURRENT EVIDENCE

Fixture inputs {"incoming": "100", "stored": "40", "start": "20", "restart": "10", "loss": "20", "containment": "10"}; expected 0. Result matched through Bangel, admitted JP, the Bangel API, with validated receipt outputs. 6 missing-input cases and 0 supplied domain cases passed.

SOURCE DIMENSION

energy

REMAINING REQUIREMENT

Complete the source-defined measurement/evidence contract, units and calibration bindings. Native C# and Hagar formula-ID bindings remain unverified in this rerun.

SOURCE REFERENCES

D002 pp. 2,3; D016 pp. 2,4
Evidence: evidence/rerun/pink/F-220.json

TR-PINK-F-221 / Available start energy lower bound

IF

Invoke F-221 with exactly these inputs: solar_low: Real, acoustic_low: Real, other_low: Real, loss_high: Real. Real values use finite decimal text; null remains unknown.

HOW

Source expression: $E_{avail,L} = E_{solar,L} + E_{acoustic,L} + E_{other,L} - E_{loss,H}$. Current Bangel expression: solar_low + acoustic_low + other_low - loss_high. Require every input to be known. Require solar_low >= 0.0 and acoustic_low >= 0.0 and other_low >= 0.0 and loss_high >= 0.0.

THEN

Emit the scoped calculation result. Missing inputs produce their specific PINK_MISSING_* HOLD; failed profile checks produce PINK_DOMAIN. A false numeric predicate can occur in a PASS calculation receipt; it is not permission.

CURRENT EVIDENCE

Fixture inputs {"solar_low": "10", "acoustic_low": "3", "other_low": "2", "loss_high": "4"}; expected 11. Result matched through Bangel, admitted JP, the Bangel API, with validated receipt outputs. 4 missing-input cases and 1 supplied domain cases passed.

SOURCE DIMENSION

energy

REMAINING REQUIREMENT

Complete the source-defined measurement/evidence contract, units and calibration bindings. Native C# and Hagar formula-ID bindings remain unverified in this rerun.

SOURCE REFERENCES

D002 pp. 2,3; D016 pp. 2,4
Evidence: evidence/rerun/pink/F-221.json

TR-PINK-F-222 / Start gate

IF

Invoke F-222 (Start gate) only with the source-defined inputs, scope, evidence and result dimension (logical). A complete executable parameter schema has not been bound to this ID.

HOW

Preserve the source relation exactly: $G_start = E_avail, L \geq M_E * (E_start, H + E_restart, H)$ AND all_safety_gates. Define and bind required evidence, validation rules, state/receipt transitions and authority scope. Caller-supplied Boolean assertions alone do not complete this contract.

THEN

Keep this formula OPEN. The current paper host rejects this ID with PAPER_PROFILE_UNIMPLEMENTED. The Teal assertion gate holds when method/proof is false. This expected refusal is not a completed implementation.

CURRENT EVIDENCE

Fresh refusal and hold evidence is recorded individually; no scalar result, transition, permit or physical effect is fabricated.

SOURCE DIMENSION

logical

REMAINING REQUIREMENT

Define and bind required evidence, validation rules, state/receipt transitions and authority scope. Caller-supplied Boolean assertions alone do not complete this contract.

SOURCE REFERENCES

D002 pp. 2,3; D016 pp. 2,4

Evidence: evidence/rerun/pending/F-222.json

TR-PINK-F-223 / Restart reserve

IF

Invoke F-223 with exactly these inputs: reserve_low: Real, critical_high: Real. Real values use finite decimal text; null remains unknown.

HOW

Source expression: $E_{\text{restart},L} = E_{\text{reserve},L} - E_{\text{critical},H}$. Current Bangel expression: reserve_low - critical_high. Require every input to be known. Require reserve_low >= 0.0 and critical_high >= 0.0.

THEN

Emit the scoped calculation result. Missing inputs produce their specific PINK_MISSING_* HOLD; failed profile checks produce PINK_DOMAIN. A false numeric predicate can occur in a PASS calculation receipt; it is not permission.

CURRENT EVIDENCE

Fixture inputs {"reserve_low": "30", "critical_high": "20"}; expected 10. Result matched through Bangel, admitted JP, the Bangel API, with validated receipt outputs. 2 missing-input cases and 1 supplied domain cases passed.

SOURCE DIMENSION

energy

REMAINING REQUIREMENT

Complete the source-defined measurement/evidence contract, units and calibration bindings. Native C# and Hagar formula-ID bindings remain unverified in this rerun.

SOURCE REFERENCES

D002 pp. 2,3; D016 pp. 2,4
Evidence: evidence/rerun/pink/F-223.json

TR-PINK-F-224 / Solar contribution

IF

Invoke F-224 (Solar contribution) only with the source-defined inputs, scope, evidence and result dimension (energy). A complete executable parameter schema has not been bound to this ID.

HOW

Preserve the source relation exactly: $E_{\text{solar}} = \text{integral}(P_{\text{solar}}(t) dt)$. Provide the sampled-signal input contract, domain/boundary, timestamps, quadrature/interpolation and error/missing-data policy. Retain each formula's units and source integrand.

THEN

Keep this formula OPEN. The current paper host rejects this ID with PAPER_PROFILE_UNIMPLEMENTED. The Teal assertion gate holds when method/proof is false. This expected refusal is not a completed implementation.

CURRENT EVIDENCE

Fresh refusal and hold evidence is recorded individually; no scalar result, transition, permit or physical effect is fabricated.

SOURCE DIMENSION

energy

REMAINING REQUIREMENT

Provide the sampled-signal input contract, domain/boundary, timestamps, quadrature/interpolation and error/missing-data policy. Retain each formula's units and source integrand.

SOURCE REFERENCES

D002 pp. 2,3; D016 pp. 2,4

Evidence: evidence/rerun/pending/F-224.json

TR-PINK-F-225 / Acoustic/noise contribution

IF

Invoke F-225 (Acoustic/noise contribution) only with the source-defined inputs, scope, evidence and result dimension (energy). A complete executable parameter schema has not been bound to this ID.

HOW

Preserve the source relation exactly: $E_{\text{acoustic}} = \text{integral}(\eta_a(t) I(t) A(t) dt)$. Provide the sampled-signal input contract, domain/boundary, timestamps, quadrature/interpolation and error/missing-data policy. Retain each formula's units and source integrand.

THEN

Keep this formula OPEN. The current paper host rejects this ID with PAPER_PROFILE_UNIMPLEMENTED. The Teal assertion gate holds when method/proof is false. This expected refusal is not a completed implementation.

CURRENT EVIDENCE

Fresh refusal and hold evidence is recorded individually; no scalar result, transition, permit or physical effect is fabricated.

SOURCE DIMENSION

energy

REMAINING REQUIREMENT

Provide the sampled-signal input contract, domain/boundary, timestamps, quadrature/interpolation and error/missing-data policy. Retain each formula's units and source integrand.

SOURCE REFERENCES

D002 pp. 2,3; D016 pp. 2,4

Evidence: evidence/rerun/pending/F-225.json

TR-PINK-F-226 / Generic separation-work lower bound

IF

Invoke F-226 with exactly these inputs: separation_work: Real, free_energy_change: Real. Real values use finite decimal text; null remains unknown.

HOW

Source expression: $W_{sep} \geq \Delta G_{sep}$. Current Bangel expression: $separation_work \geq free_energy_change$. Require every input to be known. No additional domain predicates are declared by this scalar profile.

THEN

Emit the scoped calculation result. Missing inputs produce their specific PINK_MISSING_* HOLD; failed profile checks produce PINK_DOMAIN. A false numeric predicate can occur in a PASS calculation receipt; it is not permission.

CURRENT EVIDENCE

Fixture inputs {"separation_work": "12", "free_energy_change": "10"}; expected true. Result matched through Bangel, admitted JP, the Bangel API, with validated receipt outputs. 2 missing-input cases and 0 supplied domain cases passed.

SOURCE DIMENSION

energy

REMAINING REQUIREMENT

Complete the source-defined measurement/evidence contract, units and calibration bindings. Native C# and Hagar formula-ID bindings remain unverified in this rerun.

SOURCE REFERENCES

D002 pp. 2,3; D016 pp. 2,4

Evidence: evidence/rerun/pink/F-226.json

TR-PINK-F-227 / Species availability

IF

Invoke F-227 with exactly these inputs: species_fraction: Real, source_amount: Real. Real values use finite decimal text; null remains unknown.

HOW

Source expression: $n_species = x_species * n_source$. Current Bangel expression: $species_fraction * source_amount$. Require every input to be known. Require $species_fraction \geq 0.0$ and $species_fraction \leq 1.0$ and $source_amount \geq 0.0$.

THEN

Emit the scoped calculation result. Missing inputs produce their specific PINK_MISSING_* HOLD; failed profile checks produce PINK_DOMAIN. A false numeric predicate can occur in a PASS calculation receipt; it is not permission.

CURRENT EVIDENCE

Fixture inputs {"species_fraction": "0.25", "source_amount": "12"}; expected 3. Result matched through Bangel, admitted JP, the Bangel API, with validated receipt outputs. 2 missing-input cases and 1 supplied domain cases passed.

SOURCE DIMENSION

amount

REMAINING REQUIREMENT

Complete the source-defined measurement/evidence contract, units and calibration bindings. Native C# and Hagar formula-ID bindings remain unverified in this rerun.

SOURCE REFERENCES

D002 pp. 3; D016 pp. 3,4

Evidence: evidence/rerun/pink/F-227.json

TR-PINK-F-228 / Conversion efficiency

IF

Invoke F-228 with exactly these inputs: output_energy: Real, input_energy: Real. Real values use finite decimal text; null remains unknown.

HOW

Source expression: $\eta = E_{out}/E_{in}$, $0 \leq \eta \leq 1$. Current Bangel expression: output_energy / input_energy. Require every input to be known. Require output_energy >= 0.0 and input_energy > 0.0 and output_energy <= input_energy.

THEN

Emit the scoped calculation result. Missing inputs produce their specific PINK_MISSING_* HOLD; failed profile checks produce PINK_DOMAIN. A false numeric predicate can occur in a PASS calculation receipt; it is not permission.

CURRENT EVIDENCE

Fixture inputs {"output_energy": "8", "input_energy": "10"}; expected 0.8. Result matched through Bangel, admitted JP, the Bangel API, with validated receipt outputs. 2 missing-input cases and 1 supplied domain cases passed.

SOURCE DIMENSION

ratio

REMAINING REQUIREMENT

Complete the source-defined measurement/evidence contract, units and calibration bindings. Native C# and Hagar formula-ID bindings remain unverified in this rerun.

SOURCE REFERENCES

D002 pp. 3; D016 pp. 3,4
Evidence: evidence/rerun/pink/F-228.json

TR-PINK-F-229 / Controlled logical release

IF

Invoke F-229 (Controlled logical release) only with the source-defined inputs, scope, evidence and result dimension (logical). A complete executable parameter schema has not been bound to this ID.

HOW

Preserve the source relation exactly: $G_{\text{release}} = \text{authorization AND destination_capacity AND conservation AND safety}$. Define and bind required evidence, validation rules, state/receipt transitions and authority scope. Caller-supplied Boolean assertions alone do not complete this contract.

THEN

Keep this formula OPEN. The current paper host rejects this ID with PAPER_PROFILE_UNIMPLEMENTED. The Teal assertion gate holds when method/proof is false. This expected refusal is not a completed implementation.

CURRENT EVIDENCE

Fresh refusal and hold evidence is recorded individually; no scalar result, transition, permit or physical effect is fabricated.

SOURCE DIMENSION

logical

REMAINING REQUIREMENT

Define and bind required evidence, validation rules, state/receipt transitions and authority scope. Caller-supplied Boolean assertions alone do not complete this contract.

SOURCE REFERENCES

D002 pp. 3; D016 pp. 3,4

Evidence: evidence/rerun/pending/F-229.json

TR-PINK-F-230 / DRO thermal gate

IF

Invoke F-230 with exactly these inputs: temperature_high: Real, allowable_temperature: Real, temperature_margin: Real. Real values use finite decimal text; null remains unknown.

HOW

Source expression: $T_H \leq T_{allow} - \Delta T_{margin}$. Current Bangel expression: $temperature_high \leq allowable_temperature - temperature_margin$. Require every input to be known. Require $temperature_high > 0.0$ and $allowable_temperature > 0.0$ and $temperature_margin \geq 0.0$.

THEN

Emit the scoped calculation result. Missing inputs produce their specific PINK_MISSING_* HOLD; failed profile checks produce PINK_DOMAIN. A false numeric predicate can occur in a PASS calculation receipt; it is not permission.

CURRENT EVIDENCE

Fixture inputs {"temperature_high": "300", "allowable_temperature": "320", "temperature_margin": "10"}; expected true. Result matched through Bangel, admitted JP, the Bangel API, with validated receipt outputs. 3 missing-input cases and 1 supplied domain cases passed.

SOURCE DIMENSION

temperature

REMAINING REQUIREMENT

Complete the source-defined measurement/evidence contract, units and calibration bindings. Native C# and Hagar formula-ID bindings remain unverified in this rerun.

SOURCE REFERENCES

D016 pp. 3,4

Evidence: evidence/rerun/pink/F-230.json

TR-PINK-F-231 / Semiconductor DRO charge balance

IF

Invoke F-231 (Semiconductor DRO charge balance) only with the source-defined inputs, scope, evidence and result dimension (charge). A complete executable parameter schema has not been bound to this ID.

HOW

Preserve the source relation exactly: $\Delta Q = \int (I_{\text{intake}} - I_{\text{leak}} - I_{\text{release}}) dt + r_Q$. Provide the sampled-signal input contract, domain/boundary, timestamps, quadrature/interpolation and error/missing-data policy. Retain each formula's units and source integrand.

THEN

Keep this formula OPEN. The current paper host rejects this ID with PAPER_PROFILE_UNIMPLEMENTED. The Teal assertion gate holds when method/proof is false. This expected refusal is not a completed implementation.

CURRENT EVIDENCE

Fresh refusal and hold evidence is recorded individually; no scalar result, transition, permit or physical effect is fabricated.

SOURCE DIMENSION

charge

REMAINING REQUIREMENT

Provide the sampled-signal input contract, domain/boundary, timestamps, quadrature/interpolation and error/missing-data policy. Retain each formula's units and source integrand.

SOURCE REFERENCES

D016 pp. 3,4

Evidence: evidence/rerun/pending/F-231.json

TR-PINK-F-232 / Semiconductor Pearl-node memory

IF

Invoke F-232 with exactly these inputs: objects: Real, lineage: Real, uncertainty: Real, receipts: Real, headroom: Real. Real values use finite decimal text; null remains unknown.

HOW

Source expression: $B_P = B_DRO + B_lineage + B_uncertainty + B_receipts + B_headroom$. Current Bangel expression: `objects + lineage + uncertainty + receipts + headroom`. Require every input to be known. Require `objects >= 0.0` and `lineage >= 0.0` and `uncertainty >= 0.0` and `receipts >= 0.0` and `headroom >= 0.0`.

THEN

Emit the scoped calculation result. Missing inputs produce their specific `PINK_MISSING_* HOLD`; failed profile checks produce `PINK_DOMAIN`. A false numeric predicate can occur in a `PASS` calculation receipt; it is not permission.

CURRENT EVIDENCE

Fixture inputs `{"objects": "10", "lineage": "2", "uncertainty": "3", "receipts": "4", "headroom": "5"}`; expected 24. Result matched through Bangel, admitted JP, the Bangel API, with validated receipt outputs. 5 missing-input cases and 1 supplied domain cases passed.

SOURCE DIMENSION

bytes

REMAINING REQUIREMENT

Complete the source-defined measurement/evidence contract, units and calibration bindings. Native C# and Hagar formula-ID bindings remain unverified in this rerun.

SOURCE REFERENCES

D016 pp. 3,4

Evidence: `evidence/rerun/pink/F-232.json`

TR-PINK-F-233 / Semiconductor wake-reserve gate

IF

Invoke F-233 with exactly these inputs: node_energy_low: Real, margin_factor: Real, wake_high: Real, restart_high: Real. Real values use finite decimal text; null remains unknown.

HOW

Source expression: $E_{node,L} \geq M_E \cdot (E_{wake,H} + E_{restart,H})$. Current Bangel expression: $node_energy_low \geq margin_factor * (wake_high + restart_high)$. Require every input to be known. Require node_energy_low ≥ 0.0 and margin_factor ≥ 1.0 and wake_high ≥ 0.0 and restart_high ≥ 0.0 .

THEN

Emit the scoped calculation result. Missing inputs produce their specific PINK_MISSING_* HOLD; failed profile checks produce PINK_DOMAIN. A false numeric predicate can occur in a PASS calculation receipt; it is not permission.

CURRENT EVIDENCE

Fixture inputs {"node_energy_low": "30", "margin_factor": "2", "wake_high": "10", "restart_high": "5"}; expected true. Result matched through Bangel, admitted JP, the Bangel API, with validated receipt outputs. 4 missing-input cases and 1 supplied domain cases passed.

SOURCE DIMENSION

logical

REMAINING REQUIREMENT

Complete the source-defined measurement/evidence contract, units and calibration bindings. Native C# and Hagar formula-ID bindings remain unverified in this rerun.

SOURCE REFERENCES

D016 pp. 4

Evidence: evidence/rerun/pink/F-233.json

TR-PINK-F-234 / Semiconductor profile isolation

IF

Invoke F-234 (Semiconductor profile isolation) only with the source-defined inputs, scope, evidence and result dimension (logical). A complete executable parameter schema has not been bound to this ID.

HOW

Preserve the source relation exactly: $G_SC = profile == SC \text{ AND } no_LS_value_inheritance$. Define and bind required evidence, validation rules, state/receipt transitions and authority scope. Caller-supplied Boolean assertions alone do not complete this contract.

THEN

Keep this formula OPEN. The current paper host rejects this ID with PAPER_PROFILE_UNIMPLEMENTED. The Teal assertion gate holds when method/proof is false. This expected refusal is not a completed implementation.

CURRENT EVIDENCE

Fresh refusal and hold evidence is recorded individually; no scalar result, transition, permit or physical effect is fabricated.

SOURCE DIMENSION

logical

REMAINING REQUIREMENT

Define and bind required evidence, validation rules, state/receipt transitions and authority scope. Caller-supplied Boolean assertions alone do not complete this contract.

SOURCE REFERENCES

D005 pp. 2,3

Evidence: evidence/rerun/pending/F-234.json

TR-PINK-F-235 / Lecanto byte-source digest

IF

Invoke F-235 (Lecanto byte-source digest) only with the source-defined inputs, scope, evidence and result dimension (digest). A complete executable parameter schema has not been bound to this ID.

HOW

Preserve the source relation exactly: $H_{src} = \text{SHA256}(\text{source_bytes})$. Define exact input bytes, image dimensions/channels and numerical normalization where applicable, then implement hashing or image residuals without discarding original provenance.

THEN

Keep this formula OPEN. The current paper host rejects this ID with PAPER_PROFILE_UNIMPLEMENTED. The Teal assertion gate holds when method/proof is false. This expected refusal is not a completed implementation.

CURRENT EVIDENCE

Fresh refusal and hold evidence is recorded individually; no scalar result, transition, permit or physical effect is fabricated.

SOURCE DIMENSION

digest

REMAINING REQUIREMENT

Define exact input bytes, image dimensions/channels and numerical normalization where applicable, then implement hashing or image residuals without discarding original provenance.

SOURCE REFERENCES

D005 pp. 2,3

Evidence: evidence/rerun/pending/F-235.json

TR-PINK-F-236 / Lecanto pixel residual

IF

Invoke F-236 (Lecanto pixel residual) only with the source-defined inputs, scope, evidence and result dimension (signal). A complete executable parameter schema has not been bound to this ID.

HOW

Preserve the source relation exactly: $D_{px} = (1/N) \sum ||I_{test}-I_{ref}||_2$. Define exact input bytes, image dimensions/channels and numerical normalization where applicable, then implement hashing or image residuals without discarding original provenance.

THEN

Keep this formula OPEN. The current paper host rejects this ID with PAPER_PROFILE_UNIMPLEMENTED. The Teal assertion gate holds when method/proof is false. This expected refusal is not a completed implementation.

CURRENT EVIDENCE

Fresh refusal and hold evidence is recorded individually; no scalar result, transition, permit or physical effect is fabricated.

SOURCE DIMENSION

signal

REMAINING REQUIREMENT

Define exact input bytes, image dimensions/channels and numerical normalization where applicable, then implement hashing or image residuals without discarding original provenance.

SOURCE REFERENCES

D005 pp. 2,3

Evidence: evidence/rerun/pending/F-236.json

TR-PINK-F-237 / Lecanto spectral residual

IF

Invoke F-237 (Lecanto spectral residual) only with the source-defined inputs, scope, evidence and result dimension (signal). A complete executable parameter schema has not been bound to this ID.

HOW

Preserve the source relation exactly: $D_{fft} = ||FFT(I_{test}) - FFT(I_{ref})||_2$. Define exact input bytes, image dimensions/channels and numerical normalization where applicable, then implement hashing or image residuals without discarding original provenance.

THEN

Keep this formula OPEN. The current paper host rejects this ID with PAPER_PROFILE_UNIMPLEMENTED. The Teal assertion gate holds when method/proof is false. This expected refusal is not a completed implementation.

CURRENT EVIDENCE

Fresh refusal and hold evidence is recorded individually; no scalar result, transition, permit or physical effect is fabricated.

SOURCE DIMENSION

signal

REMAINING REQUIREMENT

Define exact input bytes, image dimensions/channels and numerical normalization where applicable, then implement hashing or image residuals without discarding original provenance.

SOURCE REFERENCES

D005 pp. 2,3

Evidence: evidence/rerun/pending/F-237.json

TR-PINK-F-238 / Lecanto provenance completeness

IF

Invoke F-238 with exactly these inputs: complete_links: Int, required_links: Int. Real values use finite decimal text; null remains unknown.

HOW

Source expression: $P_{prov} = \frac{complete_links}{required_links}$. Current Bangel expression: complete_links / required_links. Require every input to be known. Require required_links > 0 and complete_links >= 0 and complete_links <= required_links.

THEN

Emit the scoped calculation result. Missing inputs produce their specific PINK_MISSING_* HOLD; failed profile checks produce PINK_DOMAIN. A false numeric predicate can occur in a PASS calculation receipt; it is not permission.

CURRENT EVIDENCE

Fixture inputs {"complete_links": 3, "required_links": 4}; expected 0.75. Result matched through Bangel, admitted JP, the Bangel API, with validated receipt outputs. 2 missing-input cases and 1 supplied domain cases passed.

SOURCE DIMENSION

ratio

REMAINING REQUIREMENT

Complete the source-defined measurement/evidence contract, units and calibration bindings. Native C# and Hagar formula-ID bindings remain unverified in this rerun.

SOURCE REFERENCES

D005 pp. 2,3

Evidence: evidence/rerun/pink/F-238.json

TR-PINK-F-239 / Lecanto intent hypothesis

IF

Invoke F-239 (Lecanto intent hypothesis) only with the source-defined inputs, scope, evidence and result dimension (hypothesis). A complete executable parameter schema has not been bound to this ID.

HOW

Preserve the source relation exactly: $H_{\text{intent}} = f(\text{words}, \text{context}, \text{declared_purpose}, \text{provenance})$. The expression names a model or transition function. Recover its normative definition, inputs, state and failure behavior before implementing it.

THEN

Keep this formula OPEN. The current paper host rejects this ID with PAPER_PROFILE_UNIMPLEMENTED. The Teal assertion gate holds when method/proof is false. This expected refusal is not a completed implementation.

CURRENT EVIDENCE

Fresh refusal and hold evidence is recorded individually; no scalar result, transition, permit or physical effect is fabricated.

SOURCE DIMENSION

hypothesis

REMAINING REQUIREMENT

The expression names a model or transition function. Recover its normative definition, inputs, state and failure behavior before implementing it.

SOURCE REFERENCES

D005 pp. 2,3

Evidence: evidence/rerun/pending/F-239.json

TR-PINK-F-240 / Lecanto transformation gate

IF

Invoke F-240 (Lecanto transformation gate) only with the source-defined inputs, scope, evidence and result dimension (logical). A complete executable parameter schema has not been bound to this ID.

HOW

Preserve the source relation exactly: $G_edit = source_preserved \text{ AND } modification_disclosed \text{ AND } purpose_allowed \text{ AND } safety_pass$. Define and bind required evidence, validation rules, state/receipt transitions and authority scope. Caller-supplied Boolean assertions alone do not complete this contract.

THEN

Keep this formula OPEN. The current paper host rejects this ID with PAPER_PROFILE_UNIMPLEMENTED. The Teal assertion gate holds when method/proof is false. This expected refusal is not a completed implementation.

CURRENT EVIDENCE

Fresh refusal and hold evidence is recorded individually; no scalar result, transition, permit or physical effect is fabricated.

SOURCE DIMENSION

logical

REMAINING REQUIREMENT

Define and bind required evidence, validation rules, state/receipt transitions and authority scope. Caller-supplied Boolean assertions alone do not complete this contract.

SOURCE REFERENCES

D005 pp. 3

Evidence: evidence/rerun/pending/F-240.json

TR-PINK-F-241 / Lecanto reject gate

IF

Invoke F-241 (Lecanto reject gate) only with the source-defined inputs, scope, evidence and result dimension (logical). A complete executable parameter schema has not been bound to this ID.

HOW

Preserve the source relation exactly: $G_{reject} = provenance_{fail} \text{ OR } harmful_{purpose} \text{ OR } undeclared_{transform}$. Define and bind required evidence, validation rules, state/receipt transitions and authority scope. Caller-supplied Boolean assertions alone do not complete this contract.

THEN

Keep this formula OPEN. The current paper host rejects this ID with PAPER_PROFILE_UNIMPLEMENTED. The Teal assertion gate holds when method/proof is false. This expected refusal is not a completed implementation.

CURRENT EVIDENCE

Fresh refusal and hold evidence is recorded individually; no scalar result, transition, permit or physical effect is fabricated.

SOURCE DIMENSION

logical

REMAINING REQUIREMENT

Define and bind required evidence, validation rules, state/receipt transitions and authority scope. Caller-supplied Boolean assertions alone do not complete this contract.

SOURCE REFERENCES

D005 pp. 3

Evidence: evidence/rerun/pending/F-241.json

TR-PINK-F-242 / R8 command admissibility

IF

Invoke F-242 (R8 command admissibility) only with the source-defined inputs, scope, evidence and result dimension (logical). A complete executable parameter schema has not been bound to this ID.

HOW

Preserve the source relation exactly: $G_{R8} = DRO_valid \wedge Pearl_node_valid \wedge Lecanto_when_image \wedge MK_pass \wedge JO_pass \wedge ethics \wedge MJ_permit$. Define and bind required evidence, validation rules, state/receipt transitions and authority scope. Caller-supplied Boolean assertions alone do not complete this contract.

THEN

Keep this formula OPEN. The current paper host rejects this ID with PAPER_PROFILE_UNIMPLEMENTED. The Teal assertion gate holds when method/proof is false. This expected refusal is not a completed implementation.

CURRENT EVIDENCE

Fresh refusal and hold evidence is recorded individually; no scalar result, transition, permit or physical effect is fabricated.

SOURCE DIMENSION

logical

REMAINING REQUIREMENT

Define and bind required evidence, validation rules, state/receipt transitions and authority scope. Caller-supplied Boolean assertions alone do not complete this contract.

SOURCE REFERENCES

D005 pp. 3

Evidence: evidence/rerun/pending/F-242.json

TR-PINK-GATEWAY / Pink gateway through Teal

IF

The recovered gateway profile receives its exact declared Boolean evidence assertions; every field must be known.

HOW

```
{ "inputs": { "purpose_known": "Bool", "semantics_pass": "Bool", "physics_pass": "Bool", "proof_pass": "Bool", "safety_pass": "Bool", "resources_reconciled": "Bool", "permit_pass": "Bool"}, "checks": [ "purpose_known", "semantics_pass", "physics_pass", "proof_pass", "safety_pass", "resources_reconciled", "permit_pass"], "body": "emit state = \"R2\"\\nemit allocation = 48383829.0 / 100000000.0\\nemit reserve = 51616171.0 / 100000000.0", "notes": "Software gate evaluation over supplied assertions. It does not authenticate evidence or permissions and is not the complete Pink declaration compiler." }
```

THEN

Treat the emitted gateway state and the Teal PASS_EVIDENCE value as supplied-assertion results. They authenticate neither the observations nor an MJ permit.

CURRENT EVIDENCE

The gateway fixture, each missing Boolean input, both language paths and both in-process APIs were run. Teal all-true, each-false and each-missing conditions were also run independently.

REMAINING REQUIREMENT

Bind assertions to independently checked evidence and an actual authority contract before treating them as authenticated facts.

SOURCE REFERENCES

Pink GATEWAY; Teal IF-HOW-THEN

Evidence: evidence/rerun/pink/GATEWAY.json

Fundamental core logic

287 individual papers. Source references, current evidence and open requirements accompany every item.

Documentary rerun complete for recovered scope. Executable implementation remains partial.

Each item retains its own identity, condition, method, outcome and evidence state. An individual paper or a passing assertion does not close a missing formula contract.

Bangel 58153a770206e2a3b500671aa4ca50e20c9c3a7d
Associated core 0d89fdf7f7914b9fdb5e62533613bfab41d34014

TR-CORE-IDENTITY / Bangel and member identities

IF

A source, IR or API object declares its language and version.

HOW

Preserve Bangel .bangel / Elsa compiler / Joanna runtime / JP representation / MJ boundary, and preserve historical Bangel contracts in their separate target.

THEN

Reject mismatched identities or use only an explicit compatibility profile. Do not infer grammar equivalence from shared lineage.

CURRENT EVIDENCE

Fresh related language/paper/water checks are in the evidence ledger. The test count is suite evidence, not proof of every branch in this requirement.

REMAINING REQUIREMENT

Use the source and recorded case evidence to close remaining per-branch, native-host and full-contract coverage gaps.

SOURCE REFERENCES

bangel:language/python/src/bangel/identity.py; bangel:language/python/src/bangel/compiler.py;
associated-core:reference/src/bangel/identity.py; associated-core:reference/src/bangel/compiler.py

TR-CORE-UNKNOWN / Known zero and typed unknown

IF

A value is absent, disputed or explicitly zero.

HOW

Carry missingness in the declared type; preserve zero as a known numeric value. Propagate unknown through arithmetic and hold required unknown conditions.

THEN

A missing measurement remains missing. No default numeric zero may become observed evidence.

CURRENT EVIDENCE

Fresh related language/paper/water checks are in the evidence ledger. The test count is suite evidence, not proof of every branch in this requirement.

REMAINING REQUIREMENT

Use the source and recorded case evidence to close remaining per-branch, native-host and full-contract coverage gaps.

SOURCE REFERENCES

bangel:language/python/src/bangel/values.py; bangel:language/python/src/bangel/strict_runtime.py;
bangel:language/python/src/bangel/ir_types.py; associated-core:reference/src/bangel/values.py;
associated-core:reference/src/bangel/strict_runtime.py; associated-core:reference/src/bangel/ir_types.py

TR-CORE-UNITS / Dimensions and measurement uncertainty

IF

Typed quantities or measurements participate in an operation.

HOW

Check compatible dimensions and explicit conversion rules. Preserve absolute uncertainty; reject unsupported measurement propagation rather than inventing its policy.

THEN

Return the supported typed quantity or the precise diagnostic/HOLD.

CURRENT EVIDENCE

Fresh related language/paper/water checks are in the evidence ledger. The test count is suite evidence, not proof of every branch in this requirement.

REMAINING REQUIREMENT

Use the source and recorded case evidence to close remaining per-branch, native-host and full-contract coverage gaps.

SOURCE REFERENCES

bangel:language/python/src/bangel/units.py; bangel:language/python/src/bangel/values.py;
bangel:language/python/src/bangel/ir_types.py; associated-core:reference/src/bangel/units.py;
associated-core:reference/src/bangel/values.py; associated-core:reference/src/bangel/ir_types.py

TR-CORE-MASS / Mass floor and signed mass change

IF

A mass, mass delta or sub-floor R2 claim is supplied.

HOW

Keep nonnegative mass separate from signed mass delta, and apply the source profile's 23 mg floor and challenge-receipt obligations where that profile defines them.

THEN

Reject negative mass while preserving valid signed deltas; a scalar 23 mg reference does not complete F-004.

CURRENT EVIDENCE

Fresh related language/paper/water checks are in the evidence ledger. The test count is suite evidence, not proof of every branch in this requirement.

REMAINING REQUIREMENT

Use the source and recorded case evidence to close remaining per-branch, native-host and full-contract coverage gaps.

SOURCE REFERENCES

bangel:language/python/src/bangel/evaluator.py; bangel:language/python/src/bangel/values.py;
bangel:language/python/src/bangel/ir_types.py; associated-core:reference/src/bangel/evaluator.py;
associated-core:reference/src/bangel/values.py; associated-core:reference/src/bangel/ir_types.py

TR-CORE-GRAMMAR / Grammar and source recovery

IF

Strict source reaches the compiler.

HOW

Tokenize and parse the frozen grammar, retain source spans and recover semantics before lowering. Distinguish legacy and general source profiles.

THEN

Return a typed source model or source-located diagnostics; parsing success does not authorize execution.

CURRENT EVIDENCE

Fresh related language/paper/water checks are in the evidence ledger. The test count is suite evidence, not proof of every branch in this requirement.

REMAINING REQUIREMENT

Use the source and recorded case evidence to close remaining per-branch, native-host and full-contract coverage gaps.

SOURCE REFERENCES

bangel:language/python/src/bangel/frontend/lexer.py; bangel:language/python/src/bangel/frontend/semantics.py;
bangel:language/python/src/bangel/frontend/parser.py; associated-core:reference/src/bangel/frontend/lexer.py;
associated-core:reference/src/bangel/frontend/semantics.py; associated-core:reference/src/bangel/frontend/parser.py

TR-CORE-BINDINGS / Names, scopes and bindings

IF

Declarations, references and assignments enter semantic analysis.

HOW

Check duplicate/shadowed names, visibility after declaration, annotation requirements and immutable versus mutable bindings.

THEN

Unresolved or invalid bindings fail semantic validation before typed IR is emitted.

CURRENT EVIDENCE

Fresh related language/paper/water checks are in the evidence ledger. The test count is suite evidence, not proof of every branch in this requirement.

REMAINING REQUIREMENT

Use the source and recorded case evidence to close remaining per-branch, native-host and full-contract coverage gaps.

SOURCE REFERENCES

bangel:language/python/src/bangel/semantics.py; bangel:language/python/src/bangel/frontend/semantics.py;
associated-core:reference/src/bangel/semantics.py; associated-core:reference/src/bangel/frontend/semantics.py

TR-CORE-EFFECTS / Effects and bounded calls

IF

A function, module or loop declares work.

HOW

Validate declared/inferred effects, bounded loop behavior and permitted call structure; carry admitted resource limits into execution.

THEN

Reject unsupported effect or recursion/resource behavior rather than treating it as an implicit host capability.

CURRENT EVIDENCE

Fresh related language/paper/water checks are in the evidence ledger. The test count is suite evidence, not proof of every branch in this requirement.

REMAINING REQUIREMENT

Use the source and recorded case evidence to close remaining per-branch, native-host and full-contract coverage gaps.

SOURCE REFERENCES

bangel:language/python/src/bangel/compiler.py; bangel:language/python/src/bangel/strict_runtime.py;
bangel:language/python/src/bangel/frontend/semantics.py; associated-core:reference/src/bangel/compiler.py;
associated-core:reference/src/bangel/strict_runtime.py; associated-core:reference/src/bangel/frontend/semantics.py

TR-CORE-LOWERING / Elsa lowering into JP

IF

A source/project passes semantic validation.

HOW

Lower symbols, types, expressions, modules and source provenance into digest-bound JP-IR using the declared registry.

THEN

Produce a verifiable representation; independent admission must still check it.

CURRENT EVIDENCE

Fresh related language/paper/water checks are in the evidence ledger. The test count is suite evidence, not proof of every branch in this requirement.

REMAINING REQUIREMENT

Use the source and recorded case evidence to close remaining per-branch, native-host and full-contract coverage gaps.

SOURCE REFERENCES

bangel:language/python/src/bangel/compiler.py; bangel:language/python/src/bangel/frontend/lower.py;
associated-core:reference/src/bangel/compiler.py; associated-core:reference/src/bangel/frontend/lower.py

TR-CORE-ADMISSION / Independent JP admission

IF

An IR object arrives from any caller.

HOW

Check closed schema, version identities, types, units, provenance, registry and cross-field consistency before execution. Rehashing a malformed object must not make it valid.

THEN

Reject mismatched or forged structure with an IR diagnostic; only admitted IR reaches Joanna.

CURRENT EVIDENCE

Fresh related language/paper/water checks are in the evidence ledger. The test count is suite evidence, not proof of every branch in this requirement.

REMAINING REQUIREMENT

Use the source and recorded case evidence to close remaining per-branch, native-host and full-contract coverage gaps.

SOURCE REFERENCES

bangel:language/python/src/bangel/ir_contract.py; bangel:language/python/src/bangel/ir_registry.py;
bangel:language/python/src/bangel/ir.py; bangel:language/python/src/bangel/ir_types.py;
bangel:language/python/src/bangel/ir_crossfields.py; associated-core:reference/src/bangel/ir_contract.py;
associated-core:reference/src/bangel/ir_registry.py; associated-core:reference/src/bangel/ir.py;
associated-core:reference/src/bangel/ir_types.py; associated-core:reference/src/bangel/ir_crossfields.py

TR-CORE-RUNTIME / Joanna execution and hold behavior

IF

A verified program is submitted with bounded resources.

HOW

Execute admitted instructions and propagate typed values; distinguish a policy HOLD from a transport/tool error. Inspect receipt status even if a CLI exits zero.

THEN

Emit bounded outputs and a receipt with explicit status and effect flags.

CURRENT EVIDENCE

Fresh related language/paper/water checks are in the evidence ledger. The test count is suite evidence, not proof of every branch in this requirement.

REMAINING REQUIREMENT

Use the source and recorded case evidence to close remaining per-branch, native-host and full-contract coverage gaps.

SOURCE REFERENCES

bangel:components/thermoelectric-reference/src/mjps/runtime.py; bangel:language/python/src/bangel/evaluator.py;
bangel:language/python/src/bangel/strict_runtime.py; bangel:language/python/src/bangel/runtime.py;
associated-core:reference/src/bangel/evaluator.py; associated-core:reference/src/bangel/strict_runtime.py;
associated-core:reference/src/bangel/runtime.py

TR-CORE-RECEIPTS / Receipt binding and replay

IF

A receipt is presented for inspection, comparison or replay.

HOW

Verify schema, roots, source/program linkage, resource usage and cross-linked evidence. Replay must bind the same program and compare the complete outcome.

THEN

Reject tampering, incorrect program linkage or a replay mismatch. A digest is integrity evidence, not authentication by itself.

CURRENT EVIDENCE

Fresh related language/paper/water checks are in the evidence ledger. The test count is suite evidence, not proof of every branch in this requirement.

REMAINING REQUIREMENT

Use the source and recorded case evidence to close remaining per-branch, native-host and full-contract coverage gaps.

SOURCE REFERENCES

bangel:language/python/src/bangel/receipts.py; bangel:language/python/src/bangel/inspector.py;
bangel:language/python/src/bangel/receipt_contract.py; associated-core:reference/src/bangel/receipts.py;
associated-core:reference/src/bangel/inspector.py; associated-core:reference/src/bangel/receipt_contract.py;
associated-core:products/water/legacy/quantum-security-python/src/mjos_qs/receipts.py

TR-CORE-NODES / R lifecycle, nodes and variance

IF

A model enters R/R1, prediction nodes and an R2/evidence stage.

HOW

Keep lifecycle order and source-specific node rules explicit. The language topology model, Pink node gain and water-risk node decay are distinct equations; do not replace them with one generic damping rule.

THEN

Retain each model's bounded result, provenance and missingness. A traversal marker is not proof of physical observation.

CURRENT EVIDENCE

Fresh related language/paper/water checks are in the evidence ledger. The test count is suite evidence, not proof of every branch in this requirement.

REMAINING REQUIREMENT

Use the source and recorded case evidence to close remaining per-branch, native-host and full-contract coverage gaps.

SOURCE REFERENCES

bangel:language/python/src/bangel/topology.py; bangel:language/python/src/bangel/state.py;
associated-core:reference/src/bangel/topology.py; associated-core:reference/src/bangel/state.py

TR-CORE-GIN-INTERVAL / GIN interval arithmetic

IF

Temporal endpoints are submitted for arithmetic or comparison.

HOW

Validate interval shape, integer bounds and clock identity; compute only admitted interval operations and preserve outward bounds.

THEN

Known zero duration stays known; unknown or incomparable values do not become a numeric latency saving.

CURRENT EVIDENCE

Fresh related language/paper/water checks are in the evidence ledger. The test count is suite evidence, not proof of every branch in this requirement.

REMAINING REQUIREMENT

Use the source and recorded case evidence to close remaining per-branch, native-host and full-contract coverage gaps.

SOURCE REFERENCES

bangel:components/thermoelectric-reference/src/mjps/gin.py; bangel:language/python/src/bangel/gin.py

TR-CORE-GIN-CLOCK / Admitted clock transformation

IF

Two times use different clock domains.

HOW

Require an admitted transformation with calibration references, validity window and error interval. Normalize with exact outward rounding.

THEN

Reject missing/stale/unbound transforms; uncertainty must not silently shrink.

CURRENT EVIDENCE

Fresh related language/paper/water checks are in the evidence ledger. The test count is suite evidence, not proof of every branch in this requirement.

REMAINING REQUIREMENT

Use the source and recorded case evidence to close remaining per-branch, native-host and full-contract coverage gaps.

SOURCE REFERENCES

bangel:language/python/src/bangel/gin_clock.py

TR-CORE-GIN-STATES / Typed temporal states and evidence

IF

Known, bounded, unknown, inapplicable, disputed or incomparable temporal evidence is supplied.

HOW

Preserve nominal state, lineage and evidence atoms. Only the permitted states participate in interval arithmetic; empty conflicting intersections remain disputed.

THEN

Return typed results or HOLD. The broader GIN lifecycle and MJ host remain distinct open work.

CURRENT EVIDENCE

Fresh related language/paper/water checks are in the evidence ledger. The test count is suite evidence, not proof of every branch in this requirement.

REMAINING REQUIREMENT

Use the source and recorded case evidence to close remaining per-branch, native-host and full-contract coverage gaps.

SOURCE REFERENCES

bangel:language/python/src/bangel/gin_models.py

TR-CORE-API-SCHEMA / API request and response contracts

IF

A caller submits an API frame.

HOW

Require exact API/stack identities, closed fields and supported operations; reject duplicate keys, nonfinite values, capability tokens and invalid source shapes. Validate the returned receipt binding.

THEN

Return a structured result or diagnostic with the matching request ID. Transport success is not automatically an evidence PASS.

CURRENT EVIDENCE

Fresh related language/paper/water checks are in the evidence ledger. The test count is suite evidence, not proof of every branch in this requirement.

REMAINING REQUIREMENT

Use the source and recorded case evidence to close remaining per-branch, native-host and full-contract coverage gaps.

SOURCE REFERENCES

bangel:language/python/src/bangel/api.py; bangel:language/python/src/bangel/client.py; associated-core:reference/src/bangel/api.py; associated-core:reference/src/bangel/client.py; associated-core:products/water/legacy/hagar-python/src/mjos_hagar/api.py

TR-CORE-API-LIMITS / API process and resource boundaries

IF

A service request declares limits or cancellation.

HOW

Allow only bounded attenuation of defaults; distinguish the trusted in-process facade from the isolated/stdio host that enforces wall time and process handling.

THEN

Report cancellation or resource refusal explicitly. In-process fixture success does not establish hostile-host isolation.

CURRENT EVIDENCE

Fresh related language/paper/water checks are in the evidence ledger. The test count is suite evidence, not proof of every branch in this requirement.

REMAINING REQUIREMENT

Use the source and recorded case evidence to close remaining per-branch, native-host and full-contract coverage gaps.

SOURCE REFERENCES

bangel:language/python/src/bangel/api.py; bangel:language/python/src/bangel/client.py; associated-core:reference/src/bangel/api.py; associated-core:reference/src/bangel/client.py; associated-core:products/water/legacy/hagar-python/src/mjos_hagar/api.py

TR-CORE-SDK / Service adapters and native subset

IF

C++, Rust, R or a managed client requests language work.

HOW

Retain the exact service protocol and value representation. Separate adapters calling the Python service from the smaller native decimal kernel and independently managed .NET stack.

THEN

State the actual execution host and supported subset. No automatic whole-language optimization or complete cross-language parity follows.

CURRENT EVIDENCE

This requirement paper is source-grounded. Native .NET, C++/Rust/R host checks and physical execution were not rerun.

REMAINING REQUIREMENT

Use the source and recorded case evidence to close remaining per-branch, native-host and full-contract coverage gaps.

SOURCE REFERENCES

adapters native dotnet

TR-CORE-HAGAR-INPUT / Hagar probe admission

IF

Exactly three independently named sensor slots and prior controller state are submitted.

HOW

Reject duplicate identities and stale sequences; exclude missing, invalid, stale or uncalibrated probes; require at least two usable probes after robust filtering.

THEN

Return ADVISE only for the bounded model; otherwise HOLD preserves previous state and explicit missing salinity/variance.

CURRENT EVIDENCE

Fresh related language/paper/water checks are in the evidence ledger. The test count is suite evidence, not proof of every branch in this requirement.

REMAINING REQUIREMENT

Use the source and recorded case evidence to close remaining per-branch, native-host and full-contract coverage gaps.

SOURCE REFERENCES

associated-core:products/water/bangel/hagar.bangel

TR-CORE-HAGAR-STATS / Hagar robust salinity and population variance

IF

Two or three probes survive input qualification.

HOW

Use the median/MAD threshold $\max(0.25, 4.5 * \text{MAD})$; recompute accepted count, mean and squared deviations. Divide variance by the accepted population count.

THEN

For the supplied demo, mean 35.01 and variance 0.0014 match. This variance is distinct from a between-node difference.

CURRENT EVIDENCE

Fresh related language/paper/water checks are in the evidence ledger. The test count is suite evidence, not proof of every branch in this requirement.

REMAINING REQUIREMENT

Use the source and recorded case evidence to close remaining per-branch, native-host and full-contract coverage gaps.

SOURCE REFERENCES

associated-core:products/water/bangel/hagar.bangel

TR-CORE-HAGAR-ADVICE / Hagar pressure and speed bounds

IF

Valid probes and a valid configuration allow an advisory calculation.

HOW

Compute the inherited NaCl-equivalent osmotic estimate; add margin/variance guard, reduce the pressure step with uncertainty, and clamp pressure and speed changes.

THEN

Return bounded suggestions with `authorized_to_actuate=false`. The simulator equation is not a membrane-design validation.

CURRENT EVIDENCE

Fresh related language/paper/water checks are in the evidence ledger. The test count is suite evidence, not proof of every branch in this requirement.

REMAINING REQUIREMENT

Use the source and recorded case evidence to close remaining per-branch, native-host and full-contract coverage gaps.

SOURCE REFERENCES

associated-core:products/water/bangel/hagar.bangel

TR-CORE-WATER-RISK / Water protection risk and persistence

IF

Risk values, trusted telemetry facts and up to two prior accepted scores are supplied.

HOW

Compute $0.35 \times \text{entropy} + 0.25 \times \text{authentication} + 0.40 \times \text{traffic}$. Select ELEVATED at score ≥ 0.80 or three scores ≥ 0.55 ; integrity/key compromise has immediate containment precedence.

THEN

NORMAL/ELEVATED/HOLD/CONTAINMENT remain distinct. Node one is $0.1 \times \text{score}$ and each following node divides by three.

CURRENT EVIDENCE

Fresh related language/paper/water checks are in the evidence ledger. The test count is suite evidence, not proof of every branch in this requirement.

REMAINING REQUIREMENT

Use the source and recorded case evidence to close remaining per-branch, native-host and full-contract coverage gaps.

SOURCE REFERENCES

associated-core:products/water/bangel/protection.bangel

TR-CORE-WATER-RELEASE / Water release-evidence conjunction

IF

Water release evidence is assessed.

HOW

Require authenticated/allowed telemetry and the applicable sequence, policy, calibration, quality, permit, operator and interlock terms. Keep a supplied fact distinct from its authentication.

THEN

release_evidence_complete records the supplied conjunction; physical_release_authorized and founder_root_touched remain false.

CURRENT EVIDENCE

Fresh related language/paper/water checks are in the evidence ledger. The test count is suite evidence, not proof of every branch in this requirement.

REMAINING REQUIREMENT

Use the source and recorded case evidence to close remaining per-branch, native-host and full-contract coverage gaps.

SOURCE REFERENCES

associated-core:products/water/bangel/protection.bangel

TR-CORE-WATER-GATEWAY / Authenticated telemetry gateway

IF

A Water-Telemetry/1 packet reaches the C# host.

HOW

Check HMAC, identity, firmware/configuration roots, positive monotonic sequence and freshness before state advancement. The host owns risk history and ignores caller-supplied history.

THEN

Reject replay or policy mismatch; record accepted frames before returning. HMAC is the current implementation, not a completed post-quantum transport.

CURRENT EVIDENCE

This requirement paper is source-grounded. Native .NET, C++/Rust/R host checks and physical execution were not rerun.

REMAINING REQUIREMENT

Use the source and recorded case evidence to close remaining per-branch, native-host and full-contract coverage gaps.

SOURCE REFERENCES

associated-core:products/water/dotnet/Water.Core/AuthenticatedGateway.cs

TR-CORE-WATER-RESTART / Journal and restart evidence

IF

The water gateway restarts from a durable journal.

HOW

Verify links, HMAC, counters and the externally retained final root; reject a partial final line. Keep the journal and trusted external checkpoint as distinct evidence.

THEN

Fail closed on detected corruption/rollback. Losing both local history and its trusted checkpoint cannot be detected by the local chain alone.

CURRENT EVIDENCE

This requirement paper is source-grounded. Native .NET, C++/Rust/R host checks and physical execution were not rerun.

REMAINING REQUIREMENT

Use the source and recorded case evidence to close remaining per-branch, native-host and full-contract coverage gaps.

SOURCE REFERENCES

associated-core:products/water/dotnet/Water.Core/AuthenticatedGateway.cs

TR-CORE-EGO-ENERGY / MJ-EGO-REV energy ledgers

IF

A vehicle-model energy, battery, thermal or mechanical input is supplied.

HOW

Reconcile input, stored, load and loss terms with source-defined bounds and missingness. Keep the P2 direct mechanical path and bidirectional motor-generator as separate modeled paths.

THEN

Return a simulation/accounting decision and residual. Source example values and physical vehicle performance are distinct.

CURRENT EVIDENCE

This requirement paper is source-grounded. Native .NET, C++/Rust/R host checks and physical execution were not rerun.

REMAINING REQUIREMENT

Use the source and recorded case evidence to close remaining per-branch, native-host and full-contract coverage gaps.

SOURCE REFERENCES

associated-core:products/ego-rev/bangel/ego.bangel

TR-CORE-EGO-STATE / MJ-EGO-REV transition evidence

IF

A candidate vehicle state transition is requested.

HOW

Apply the declared 13-state evidence model and journal linkage, including required transition evidence and held/missing conditions.

THEN

Produce an offline decision; no vehicle actuator or road/bench qualification is established by these records.

CURRENT EVIDENCE

This requirement paper is source-grounded. Native .NET, C++/Rust/R host checks and physical execution were not rerun.

REMAINING REQUIREMENT

Use the source and recorded case evidence to close remaining per-branch, native-host and full-contract coverage gaps.

SOURCE REFERENCES

associated-core:products/ego-rev/bangel/ego.bangel

TR-CORE-MJ-BOUNDARY / MJ root and permit boundary

IF

A family result proposes an external or resource effect.

HOW

Keep proposed root admission, family compilation, CAPO handoff, resource lease and current proof gates distinct. Current general-language MJ metadata does not implement the complete proposed root host.

THEN

A calculation receipt cannot mint capacity, transfer a lease to a peer, or grant physical authority. Unbound host contracts remain open.

CURRENT EVIDENCE

This requirement paper is source-grounded. Native .NET, C++/Rust/R host checks and physical execution were not rerun.

REMAINING REQUIREMENT

Use the source and recorded case evidence to close remaining per-branch, native-host and full-contract coverage gaps.

SOURCE REFERENCES

bangel:specs/roles/ROLE-CONTRACT-RECONCILIATION.md

TR-CORE-TEAL-BRIDGE / Pink-to-Teal evidence bridge

IF

A Pink source/profile is submitted to the Teal review sequence.

HOW

Resolve its original ID, inputs, domain, output and evidence. Execute available profiles; preserve each unimplemented formula as an expected refusal. Apply IF/HOW/THEN as an explicit supplied-assertion gate.

THEN

Emit an individual documentary verdict and evidence link. PASS_EVIDENCE is not an MJ permit or a full measurement-contract completion.

CURRENT EVIDENCE

Fresh related language/paper/water checks are in the evidence ledger. The test count is suite evidence, not proof of every branch in this requirement.

REMAINING REQUIREMENT

Use the source and recorded case evidence to close remaining per-branch, native-host and full-contract coverage gaps.

SOURCE REFERENCES

bangel:papers/python/src/bangel_papers/host.py

TR-MOD-BANGEL-1EA7E9D427 / Bangel / components/thermoelectric-reference/src/jp/_init_.py

IF

This Runtime / supporting core module is imported or its declared interface is invoked. This module contains shared declarations or constants; the complete source is retained.

HOW

Use the complete terminology-edited module and its declared types, call paths, state and error behavior; preserve program/evidence boundaries. The complete 9-line source is preserved with SHA-256 d1b4d83e0724d8e1187077b1bf67f32a655ffa83f52ff34111098fb40a56ad28. 0 extracted function/declaration entries are separately indexed, including exact Python bodies and guards where available.

THEN

Follow the exact returned values, diagnostics and state effects in the preserved implementation. Module inclusion and syntax extraction are documentary coverage; they do not prove every branch or cross-host behavior.

CURRENT EVIDENCE

Fresh related Python suites and per-profile/water results are included. Native C#/.NET, C++/Rust/R compilation and physical devices were not executed in this environment.

REMAINING REQUIREMENT

Map unverified branches and native-host behavior to source-specific evidence before assigning a complete verification verdict.

SOURCE REFERENCES

bangel:components/thermoelectric-reference/src/jp/_init_.py

TR-MOD-BANGEL-73568028E6 / Bangel / components/thermoelectric-reference/src/jp/canonical.py

IF

This Receipt / evidence module is imported or its declared interface is invoked. Declared surface includes: decimal_text(value: Decimal); to_primitive(value: Any); _primitive_json_bytes(value: Any); canonical_json_bytes(value: Any); sha256_hex(value: Any)

HOW

Preserve exact serialization, digest binding, linkage and inspection/replay behavior without promoting integrity metadata into authority. The complete terminology-edited 77-line source is preserved with SHA-256 999a5da8039137e8f1de8108904469c2f59f17f68220227695c6cb99ebabd8c5. 6 extracted function/declaration entries are separately indexed, including exact Python bodies and guards where available.

THEN

Follow the exact returned values, diagnostics and state effects in the preserved implementation. Module inclusion and syntax extraction are documentary coverage; they do not prove every branch or cross-host behavior.

CURRENT EVIDENCE

Fresh related Python suites and per-profile/water results are included. Native C#/.NET, C++/Rust/R compilation and physical devices were not executed in this environment.

REMAINING REQUIREMENT

Map unverified branches and native-host behavior to source-specific evidence before assigning a complete verification verdict.

SOURCE REFERENCES

bangel:components/thermoelectric-reference/src/jp/canonical.py

TR-MOD-BANGEL-8BFB07F668 / Bangel / components/thermoelectric-reference/src/mjps/_init_.py

IF

This Runtime / supporting core module is imported or its declared interface is invoked. This module contains shared declarations or constants; the complete source is retained.

HOW

Use the complete terminology-edited module and its declared types, call paths, state and error behavior; preserve program/evidence boundaries. The complete 27-line source is preserved with SHA-256 4c02561c825310c46e35a7d25ee205f91bd1f2838651ef10c005a61d46c1f24f. 0 extracted function/declaration entries are separately indexed, including exact Python bodies and guards where available.

THEN

Follow the exact returned values, diagnostics and state effects in the preserved implementation. Module inclusion and syntax extraction are documentary coverage; they do not prove every branch or cross-host behavior.

CURRENT EVIDENCE

Fresh related Python suites and per-profile/water results are included. Native C#/.NET, C++/Rust/R compilation and physical devices were not executed in this environment.

REMAINING REQUIREMENT

Map unverified branches and native-host behavior to source-specific evidence before assigning a complete verification verdict.

SOURCE REFERENCES

bangel:components/thermoelectric-reference/src/mjps/_init_.py

TR-MOD-BANGEL-E35924FCC7 / Bangel / components/thermoelectric-reference/src/mjps/__main__.py

IF

This Runtime / supporting core module is imported or its declared interface is invoked. This module contains shared declarations or constants; the complete source is retained.

HOW

Use the complete terminology-edited module and its declared types, call paths, state and error behavior; preserve program/evidence boundaries. The complete 4-line source is preserved with SHA-256 76fa916e93e0ae1a6c1bb51dcc0bcf289c014e9f760a47165f8a84401ccf41d7. 0 extracted function/declaration entries are separately indexed, including exact Python bodies and guards where available.

THEN

Follow the exact returned values, diagnostics and state effects in the preserved implementation. Module inclusion and syntax extraction are documentary coverage; they do not prove every branch or cross-host behavior.

CURRENT EVIDENCE

Fresh related Python suites and per-profile/water results are included. Native C#/.NET, C++/Rust/R compilation and physical devices were not executed in this environment.

REMAINING REQUIREMENT

Map unverified branches and native-host behavior to source-specific evidence before assigning a complete verification verdict.

SOURCE REFERENCES

bangel:components/thermoelectric-reference/src/mjps/__main__.py

TR-MOD-BANGEL-893FDF6D2F / Bangel / components/thermoelectric-reference/src/mjps/adapters.py

IF

This API / SDK module is imported or its declared interface is invoked. Declared surface includes: to_dict(self); describe(self); observe(self); describe(self); observe(self)

HOW

Validate the exact host/protocol contract and preserve request, response, value and effect boundaries across this interface. The complete terminology-edited 47-line source is preserved with SHA-256 e8441697a296294b624c55116965d9e29fbfd160477c8c8f68581d844fb799af. 5 extracted function/declaration entries are separately indexed, including exact Python bodies and guards where available.

THEN

Follow the exact returned values, diagnostics and state effects in the preserved implementation. Module inclusion and syntax extraction are documentary coverage; they do not prove every branch or cross-host behavior.

CURRENT EVIDENCE

Fresh related Python suites and per-profile/water results are included. Native C#/.NET, C++/Rust/R compilation and physical devices were not executed in this environment.

REMAINING REQUIREMENT

Map unverified branches and native-host behavior to source-specific evidence before assigning a complete verification verdict.

SOURCE REFERENCES

bangel:components/thermoelectric-reference/src/mjps/adapters.py

TR-MOD-BANGEL-6CC2115FE9 / Bangel / components/thermoelectric-reference/src/mjps/bangel.py

IF

This Runtime / supporting core module is imported or its declared interface is invoked. Declared surface includes: `_fail(message: str, *, line: int | None=None); _parse_number(token: str, *, name: str, line: int); _parse_optional_temperature(token: str, *, name: str, line: int); _validate_ir_decimal_text(value: Any, *, name: str, nullable: bool=False); _identifier(token: str, *, name: str, line: int)`

HOW

Use the complete terminology-edited module and its declared types, call paths, state and error behavior; preserve program/evidence boundaries. The complete 906-line source is preserved with SHA-256 `a4b20a954cba3dd7989bdb7d766b0b1a649b05eae9260e5eb895f7d40b1e048d`. 13 extracted function/declaration entries are separately indexed, including exact Python bodies and guards where available.

THEN

Follow the exact returned values, diagnostics and state effects in the preserved implementation. Module inclusion and syntax extraction are documentary coverage; they do not prove every branch or cross-host behavior.

CURRENT EVIDENCE

Fresh related Python suites and per-profile/water results are included. Native C#/.NET, C++/Rust/R compilation and physical devices were not executed in this environment.

REMAINING REQUIREMENT

Map unverified branches and native-host behavior to source-specific evidence before assigning a complete verification verdict.

SOURCE REFERENCES

`bangel:components/thermoelectric-reference/src/mjps/bangel.py`

TR-MOD-BANGEL-4FD788F2B8 / Bangel / components/thermoelectric-reference/src/mjps/canonical.py

IF

This Receipt / evidence module is imported or its declared interface is invoked. This module contains shared declarations or constants; the complete source is retained.

HOW

Preserve exact serialization, digest binding, linkage and inspection/replay behavior without promoting integrity metadata into authority. The complete terminology-edited 15-line source is preserved with SHA-256 88f7a39fe79d3b47318187fcb2b3dea8fa4e668b45b72c318ed789c2631a7854. 0 extracted function/declaration entries are separately indexed, including exact Python bodies and guards where available.

THEN

Follow the exact returned values, diagnostics and state effects in the preserved implementation. Module inclusion and syntax extraction are documentary coverage; they do not prove every branch or cross-host behavior.

CURRENT EVIDENCE

Fresh related Python suites and per-profile/water results are included. Native C#/.NET, C++/Rust/R compilation and physical devices were not executed in this environment.

REMAINING REQUIREMENT

Map unverified branches and native-host behavior to source-specific evidence before assigning a complete verification verdict.

SOURCE REFERENCES

bangel:components/thermoelectric-reference/src/mjps/canonical.py

TR-MOD-BANGEL-6B9E7669C2 / Bangel / components/thermoelectric-reference/src/mjps/cli.py

IF

This Runtime / supporting core module is imported or its declared interface is invoked. Declared surface includes: `_render(value: Any); _write_or_print(value: Any, output: str | None, *, force: bool); build_parser(); main(argv: list[str] | None=None)`

HOW

Use the complete terminology-edited module and its declared types, call paths, state and error behavior; preserve program/evidence boundaries. The complete 96-line source is preserved with SHA-256 138d9af92201238e7c15971da407cd5f2f8bc6fe406f8d2732fe23aa967238b2. 4 extracted function/declaration entries are separately indexed, including exact Python bodies and guards where available.

THEN

Follow the exact returned values, diagnostics and state effects in the preserved implementation. Module inclusion and syntax extraction are documentary coverage; they do not prove every branch or cross-host behavior.

CURRENT EVIDENCE

Fresh related Python suites and per-profile/water results are included. Native C#/.NET, C++/Rust/R compilation and physical devices were not executed in this environment.

REMAINING REQUIREMENT

Map unverified branches and native-host behavior to source-specific evidence before assigning a complete verification verdict.

SOURCE REFERENCES

bangel:components/thermoelectric-reference/src/mjps/cli.py

TR-MOD-BANGEL-8F2607357D / Bangel / components/thermoelectric-reference/src/mjps/domain.py

IF

This Runtime / supporting core module is imported or its declared interface is invoked. Declared surface includes: fixed_decimal_context(function: Callable[P, T]); wrapped(*args: P.args, **kwargs: P.kwargs); decimal(value: Any, *, name: str='value'); require_identifier(value: str, *, name: str); __post_init__(self)

HOW

Use the complete terminology-edited module and its declared types, call paths, state and error behavior; preserve program/evidence boundaries. The complete 331-line source is preserved with SHA-256 e193f7439d7db3d4ca256327c4689821ed3c235553074016a48fee3d411a08f8. 18 extracted function/declaration entries are separately indexed, including exact Python bodies and guards where available.

THEN

Follow the exact returned values, diagnostics and state effects in the preserved implementation. Module inclusion and syntax extraction are documentary coverage; they do not prove every branch or cross-host behavior.

CURRENT EVIDENCE

Fresh related Python suites and per-profile/water results are included. Native C#/.NET, C++/Rust/R compilation and physical devices were not executed in this environment.

REMAINING REQUIREMENT

Map unverified branches and native-host behavior to source-specific evidence before assigning a complete verification verdict.

SOURCE REFERENCES

bangel:components/thermoelectric-reference/src/mjps/domain.py

TR-MOD-BANGEL-A1FFA67593 / Bangel / components/thermoelectric-reference/src/mjps/errors.py

IF

This Runtime / supporting core module is imported or its declared interface is invoked. This module contains shared declarations or constants; the complete source is retained.

HOW

Use the complete terminology-edited module and its declared types, call paths, state and error behavior; preserve program/evidence boundaries. The complete 23-line source is preserved with SHA-256 05d51ee6e9738d8f2113b8d98f36dcf7a91d209310f6580de75230d98d4b09d3. 0 extracted function/declaration entries are separately indexed, including exact Python bodies and guards where available.

THEN

Follow the exact returned values, diagnostics and state effects in the preserved implementation. Module inclusion and syntax extraction are documentary coverage; they do not prove every branch or cross-host behavior.

CURRENT EVIDENCE

Fresh related Python suites and per-profile/water results are included. Native C#/.NET, C++/Rust/R compilation and physical devices were not executed in this environment.

REMAINING REQUIREMENT

Map unverified branches and native-host behavior to source-specific evidence before assigning a complete verification verdict.

SOURCE REFERENCES

bangel:components/thermoelectric-reference/src/mjps/errors.py

TR-MOD-BANGEL-B023BB9027 / Bangel / components/thermoelectric-reference/src/mjps/gin.py

IF

This GIN module is imported or its declared interface is invoked. Declared surface includes: expected_to_anticipated(self); anticipated_to_delivered(self); expected_to_delivered(self); to_dict(self); observation_variance(observation: ThermalObservation)

HOW

Preserve interval bounds, clock/evidence identity and typed temporal states; do not infer physical energy or authority from a temporal result. The complete terminology-edited 72-line source is preserved with SHA-256 fc48ff6ee0d3e3386985d7ebf16587166a240ff3b7a2f88c0a12edc87ea3b708. 5 extracted function/declaration entries are separately indexed, including exact Python bodies and guards where available.

THEN

Follow the exact returned values, diagnostics and state effects in the preserved implementation. Module inclusion and syntax extraction are documentary coverage; they do not prove every branch or cross-host behavior.

CURRENT EVIDENCE

Fresh related Python suites and per-profile/water results are included. Native C#/.NET, C++/Rust/R compilation and physical devices were not executed in this environment.

REMAINING REQUIREMENT

Map unverified branches and native-host behavior to source-specific evidence before assigning a complete verification verdict.

SOURCE REFERENCES

bangel:components/thermoelectric-reference/src/mjps/gin.py

TR-MOD-BANGEL-4E4DEBB1D4 / Bangel / components/thermoelectric-reference/src/mjps/optimizer.py

IF

This Runtime / supporting core module is imported or its declared interface is invoked. Declared surface includes: enumerate_candidates(module: ThermoelectricModule, observation: ThermalObservation, demand: MissionDemand); optimize_fleet(modules: tuple[ThermoelectricModule, ...], observations: tuple[ThermalObservation, ...], demand: MissionDemand, *, max_combinations: int=MAX_COMBINATIONS)

HOW

Use the complete terminology-edited module and its declared types, call paths, state and error behavior; preserve program/evidence boundaries. The complete 222-line source is preserved with SHA-256 cdf840098c00d8823c293a40521c26899f027546ff3f8e6d164df11b83a876bd. 2 extracted function/declaration entries are separately indexed, including exact Python bodies and guards where available.

THEN

Follow the exact returned values, diagnostics and state effects in the preserved implementation. Module inclusion and syntax extraction are documentary coverage; they do not prove every branch or cross-host behavior.

CURRENT EVIDENCE

Fresh related Python suites and per-profile/water results are included. Native C#/.NET, C++/Rust/R compilation and physical devices were not executed in this environment.

REMAINING REQUIREMENT

Map unverified branches and native-host behavior to source-specific evidence before assigning a complete verification verdict.

SOURCE REFERENCES

bangel:components/thermoelectric-reference/src/mjps/optimizer.py

TR-MOD-BANGEL-203DF302D0 / Bangel / components/thermoelectric-reference/src/mjps/physics.py

IF

This Runtime / supporting core module is imported or its declared interface is invoked. Declared surface includes: `_append_reason(reasons: list[str], reason: str)`; `validate_envelope(module: ThermoelectricModule, observation: ThermalObservation)`; `_kernel_at(module: ThermoelectricModule, th: Decimal, tc: Decimal, current_a: Decimal)`; `coupled_kernel(module: ThermoelectricModule, observation: ThermalObservation, current_a: Decimal)`; `_temperature_corners(module: ThermoelectricModule, observation: ThermalObservation)`

HOW

Use the complete terminology-edited module and its declared types, call paths, state and error behavior; preserve program/evidence boundaries. The complete 409-line source is preserved with SHA-256 `c1e0ee73d26b494b4ca4cbd3c88fbfc38cecc2d573b22cf3248f212628e3fc03`. 10 extracted function/declaration entries are separately indexed, including exact Python bodies and guards where available.

THEN

Follow the exact returned values, diagnostics and state effects in the preserved implementation. Module inclusion and syntax extraction are documentary coverage; they do not prove every branch or cross-host behavior.

CURRENT EVIDENCE

Fresh related Python suites and per-profile/water results are included. Native C#/.NET, C++/Rust/R compilation and physical devices were not executed in this environment.

REMAINING REQUIREMENT

Map unverified branches and native-host behavior to source-specific evidence before assigning a complete verification verdict.

SOURCE REFERENCES

`bangel:components/thermoelectric-reference/src/mjps/physics.py`

TR-MOD-BANGEL-97815B5B72 / Bangel / components/thermoelectric-reference/src/mjps/runtime.py

IF

This Runtime / supporting core module is imported or its declared interface is invoked. Declared surface includes: `_module_from_dict(value: dict[str, Any]); _observation_from_dict(value: dict[str, Any]); _demand_from_dict(value: dict[str, Any]); execute(self, ir: dict[str, Any]); record(state: str, status: str, details: dict[str, Any])`

HOW

Use the complete terminology-edited module and its declared types, call paths, state and error behavior; preserve program/evidence boundaries. The complete 344-line source is preserved with SHA-256 151134b920378b8224c31aee684075026374c9e47de3c48073e3cf6a7882c897. 5 extracted function/declaration entries are separately indexed, including exact Python bodies and guards where available.

THEN

Follow the exact returned values, diagnostics and state effects in the preserved implementation. Module inclusion and syntax extraction are documentary coverage; they do not prove every branch or cross-host behavior.

CURRENT EVIDENCE

Fresh related Python suites and per-profile/water results are included. Native C#/.NET, C++/Rust/R compilation and physical devices were not executed in this environment.

REMAINING REQUIREMENT

Map unverified branches and native-host behavior to source-specific evidence before assigning a complete verification verdict.

SOURCE REFERENCES

bangel:components/thermoelectric-reference/src/mjps/runtime.py

TR-MOD-BANGEL-2FA63DFCB9 / Bangel / components/thermoelectric-reference/src/mjps/safety.py

IF

This Runtime / supporting core module is imported or its declared interface is invoked. Declared surface includes: `__init__(self); state(self); history(self); transition(self, after: AdvisoryState, reason: str); close_from_receipt(cls, receipt: dict[str, object])`

HOW

Use the complete terminology-edited module and its declared types, call paths, state and error behavior; preserve program/evidence boundaries. The complete 105-line source is preserved with SHA-256 84f980f1064264eef1293c222bdebf8da0f9937dd980bf527fb155b60aa31f7d. 5 extracted function/declaration entries are separately indexed, including exact Python bodies and guards where available.

THEN

Follow the exact returned values, diagnostics and state effects in the preserved implementation. Module inclusion and syntax extraction are documentary coverage; they do not prove every branch or cross-host behavior.

CURRENT EVIDENCE

Fresh related Python suites and per-profile/water results are included. Native C#/.NET, C++/Rust/R compilation and physical devices were not executed in this environment.

REMAINING REQUIREMENT

Map unverified branches and native-host behavior to source-specific evidence before assigning a complete verification verdict.

SOURCE REFERENCES

bangel:components/thermoelectric-reference/src/mjps/safety.py

TR-MOD-BANGEL-9E05B894FB / Bangel / language/dotnet/Bangel.Admission/AdmissionDecimal.cs

IF

This JP / admission module is imported or its declared interface is invoked. Declared surface includes: private AdmissionDecimal(BigInteger coefficient, long exponent); internal static AdmissionDecimal Zero { get; } = new(BigInteger.Zero, 0);; internal static AdmissionDecimal Parse(string validCanonicalText); public static AdmissionDecimal operator -(AdmissionDecimal value) => Round(-value.coefficient, value.exponent);; public static AdmissionDecimal operator +(AdmissionDecimal left, AdmissionDecimal right) => Add(left, right, false);

HOW

Preserve the representation schema, value types, provenance, registry and independent admission checks encoded here. The complete terminology-edited 189-line source is preserved with SHA-256 0de3f188de1faa40363c9fe655aafd7ad76417f433da712ce2f9a9bfee6436b6. 13 extracted function/declaration entries are separately indexed, including exact Python bodies and guards where available.

THEN

Follow the exact returned values, diagnostics and state effects in the preserved implementation. Module inclusion and syntax extraction are documentary coverage; they do not prove every branch or cross-host behavior.

CURRENT EVIDENCE

Fresh related Python suites and per-profile/water results are included. Native C#/.NET, C++/Rust/R compilation and physical devices were not executed in this environment.

REMAINING REQUIREMENT

Map unverified branches and native-host behavior to source-specific evidence before assigning a complete verification verdict.

SOURCE REFERENCES

bangel:language/dotnet/Bangel.Admission/AdmissionDecimal.cs

TR-MOD-BANGEL-1A6FC6F2E7 / Bangel / language/dotnet/Bangel.Admission/ContractVerifier.cs

IF

This JP / admission module is imported or its declared interface is invoked. Declared surface includes: internal sealed class ContractVerifier(JsonObject root, CancellationToken cancellationToken); private static readonly HashSet<string> ReferenceKinds = new("let derive var measure evidence parameter capture loop pattern refinement function intrinsic record enum_variant type".Split(' '), StringComparer.Ordinal);; private readonly Dictionary<string, JsonObject> definitions = new(StringComparer.Ordinal);; private readonly Dictionary<string, HashSet<string>> units = new(StringComparer.Ordinal);; private readonly Dictionary<JsonNode, (HashSet<string> References, HashSet<string> Conversions)> ... [continued in source]

HOW

Preserve the representation schema, value types, provenance, registry and independent admission checks encoded here. The complete terminology-edited 282-line source is preserved with SHA-256 ca08f0443270c78a0f9ce5a0349ef08d29574f17606ec0345a4d98318d91586a. 17 extracted function/declaration entries are separately indexed, including exact Python bodies and guards where available.

THEN

Follow the exact returned values, diagnostics and state effects in the preserved implementation. Module inclusion and syntax extraction are documentary coverage; they do not prove every branch or cross-host behavior.

CURRENT EVIDENCE

Fresh related Python suites and per-profile/water results are included. Native C#/.NET, C++/Rust/R compilation and physical devices were not executed in this environment.

REMAINING REQUIREMENT

Map unverified branches and native-host behavior to source-specific evidence before assigning a complete verification verdict.

SOURCE REFERENCES

bangel:language/dotnet/Bangel.Admission/ContractVerifier.cs

TR-MOD-BANGEL-E47F884546 / Bangel / language/dotnet/Bangel.Admission/Contracts.cs

IF

This JP / admission module is imported or its declared interface is invoked. Declared surface includes: public sealed record AdmissionSpan(int Line, int Column = 1, int? EndColumn = null); public JsonElement ToJson() => JsonSerializer.SerializeToElement(new { line = Line, column = Column, end_column = EndColumn }); public AdmissionException(string code, string message, AdmissionSpan? span = null, JsonElement? details = null); internal AdmittedIr(string irJson, string programRoot, string program); internal static void Require(bool condition, string code, string message)

HOW

Preserve the representation schema, value types, provenance, registry and independent admission checks encoded here. The complete terminology-edited 95-line source is preserved with SHA-256 19e6cbcb69034bb54ea7d0ba542ca5ba5fa1a6bd68637e0b65da9e5b6bd74839. 28 extracted function/declaration entries are separately indexed, including exact Python bodies and guards where available.

THEN

Follow the exact returned values, diagnostics and state effects in the preserved implementation. Module inclusion and syntax extraction are documentary coverage; they do not prove every branch or cross-host behavior.

CURRENT EVIDENCE

Fresh related Python suites and per-profile/water results are included. Native C#/.NET, C++/Rust/R compilation and physical devices were not executed in this environment.

REMAINING REQUIREMENT

Map unverified branches and native-host behavior to source-specific evidence before assigning a complete verification verdict.

SOURCE REFERENCES

bangel:language/dotnet/Bangel.Admission/Contracts.cs

TR-MOD-BANGEL-5EDD494169 / Bangel / language/dotnet/Bangel.Admission/CrossFields.cs

IF

This JP / admission module is imported or its declared interface is invoked. Declared surface includes: internal sealed partial class CrossFields(JsonObject root, CancellationToken cancellationToken); private readonly Dictionary<string, JsonObject> modules = new(StringComparer.Ordinal);; private readonly Dictionary<string, JsonObject> definitions = new(StringComparer.Ordinal);; private readonly Dictionary<string, JsonObject> functions = new(StringComparer.Ordinal);; private readonly Dictionary<string, Dictionary<string, Symbol>> exports = new(StringComparer.Ordinal);

HOW

Preserve the representation schema, value types, provenance, registry and independent admission checks encoded here. The complete terminology-edited 407-line source is preserved with SHA-256 51d35223fb58e17aff263411030e61d62d9d2c0db5d2464b30dd3a47e10a66c8. 31 extracted function/declaration entries are separately indexed, including exact Python bodies and guards where available.

THEN

Follow the exact returned values, diagnostics and state effects in the preserved implementation. Module inclusion and syntax extraction are documentary coverage; they do not prove every branch or cross-host behavior.

CURRENT EVIDENCE

Fresh related Python suites and per-profile/water results are included. Native C#/.NET, C++/Rust/R compilation and physical devices were not executed in this environment.

REMAINING REQUIREMENT

Map unverified branches and native-host behavior to source-specific evidence before assigning a complete verification verdict.

SOURCE REFERENCES

bangel:language/dotnet/Bangel.Admission/CrossFields.cs

TR-MOD-BANGEL-70C52632D4 / Bangel / language/dotnet/Bangel.Admission/IrAdmission.cs

IF

This JP / admission module is imported or its declared interface is invoked. Declared surface includes: public static AdmittedIr Verify(string irJson, CancellationToken cancellationToken = default); private static JsonObject ReadCanonical(string source, CancellationToken cancellationToken); private static void VerifyEnvelopedIdentity(JsonObject root)

HOW

Preserve the representation schema, value types, provenance, registry and independent admission checks encoded here. The complete terminology-edited 140-line source is preserved with SHA-256 f46dbd5ebd1ddad901515677ff3535de9dc2362b9889e1a5d763dc57b1954d01. 3 extracted function/declaration entries are separately indexed, including exact Python bodies and guards where available.

THEN

Follow the exact returned values, diagnostics and state effects in the preserved implementation. Module inclusion and syntax extraction are documentary coverage; they do not prove every branch or cross-host behavior.

CURRENT EVIDENCE

Fresh related Python suites and per-profile/water results are included. Native C#/.NET, C++/Rust/R compilation and physical devices were not executed in this environment.

REMAINING REQUIREMENT

Map unverified branches and native-host behavior to source-specific evidence before assigning a complete verification verdict.

SOURCE REFERENCES

bangel:language/dotnet/Bangel.Admission/IrAdmission.cs

TR-MOD-BANGEL-4B8EFFF8B5 / Bangel / language/dotnet/Bangel.Admission/Registry.cs

IF

This JP / admission module is imported or its declared interface is invoked. Declared surface includes: private static readonly JsonObject Document = Load();; private static readonly IReadOnlyDictionary<string, JsonObject> Instructions = Objects(Document["instruction_entries"]).ToDictionary(entry => S(entry["kind"]), StringComparer.Ordinal);; private static readonly IReadOnlyDictionary<string, JsonObject> Values = Objects(Document["value_entries"]).ToDictionary(entry => S(entry["kind"]), StringComparer.Ordinal);; private static JsonObject Load(); internal static void Instruction(JsonObject instruction, bool strict)

HOW

Preserve the representation schema, value types, provenance, registry and independent admission checks encoded here. The complete terminology-edited 187-line source is preserved with SHA-256 3f1ede2a4be854838cfe7f9875e003098849ec03ca06b71c2a3d1817018651df. 12 extracted function/declaration entries are separately indexed, including exact Python bodies and guards where available.

THEN

Follow the exact returned values, diagnostics and state effects in the preserved implementation. Module inclusion and syntax extraction are documentary coverage; they do not prove every branch or cross-host behavior.

CURRENT EVIDENCE

Fresh related Python suites and per-profile/water results are included. Native C#/.NET, C++/Rust/R compilation and physical devices were not executed in this environment.

REMAINING REQUIREMENT

Map unverified branches and native-host behavior to source-specific evidence before assigning a complete verification verdict.

SOURCE REFERENCES

bangel:language/dotnet/Bangel.Admission/Registry.cs

TR-MOD-BANGEL-DCDC1D07D0 / Bangel / language/dotnet/Bangel.Admission/TypeVerifier.Numeric.cs

IF

This JP / admission module is imported or its declared interface is invoked. Declared surface includes: private static readonly Regex NumberPattern = new(@"\A-?(?:0|[1-9][0-9]*)?(?:\.[0-9]+)?(?:E[+-][1-9][0-9]*)?\z", RegexOptions.NonBacktracking); private readonly record struct SourceNumber(bool Negative, bool Zero); private SourceNumber Numeric(JsonNode? node)

HOW

Preserve the representation schema, value types, provenance, registry and independent admission checks encoded here. The complete terminology-edited 66-line source is preserved with SHA-256 f5aede2c16b281391546feb2b150e55045d49decc882472fc153071fec935e5f. 3 extracted function/declaration entries are separately indexed, including exact Python bodies and guards where available.

THEN

Follow the exact returned values, diagnostics and state effects in the preserved implementation. Module inclusion and syntax extraction are documentary coverage; they do not prove every branch or cross-host behavior.

CURRENT EVIDENCE

Fresh related Python suites and per-profile/water results are included. Native C#/.NET, C++/Rust/R compilation and physical devices were not executed in this environment.

REMAINING REQUIREMENT

Map unverified branches and native-host behavior to source-specific evidence before assigning a complete verification verdict.

SOURCE REFERENCES

bangel:language/dotnet/Bangel.Admission/TypeVerifier.Numeric.cs

TR-MOD-BANGEL-184FE82900 / Bangel / language/dotnet/Bangel.Admission/TypeVerifier.Operations.cs

IF

This JP / admission module is imported or its declared interface is invoked. Declared surface includes: private static void Comparison(JsonNode left, JsonNode right, string op); private static JsonNode BinaryType(string op, JsonNode left, JsonNode right, IReadOnlyList<JsonObject>? operands = null); private static JsonNode IntrinsicType(string target, IReadOnlyList<JsonObject> arguments)

HOW

Preserve the representation schema, value types, provenance, registry and independent admission checks encoded here. The complete terminology-edited 207-line source is preserved with SHA-256 712661627635a7ce1c9943772d6f0cbe12c93bb57675f38202190fdd50824ed6. 3 extracted function/declaration entries are separately indexed, including exact Python bodies and guards where available.

THEN

Follow the exact returned values, diagnostics and state effects in the preserved implementation. Module inclusion and syntax extraction are documentary coverage; they do not prove every branch or cross-host behavior.

CURRENT EVIDENCE

Fresh related Python suites and per-profile/water results are included. Native C#/.NET, C++/Rust/R compilation and physical devices were not executed in this environment.

REMAINING REQUIREMENT

Map unverified branches and native-host behavior to source-specific evidence before assigning a complete verification verdict.

SOURCE REFERENCES

bangel:language/dotnet/Bangel.Admission/TypeVerifier.Operations.cs

TR-MOD-BANGEL-E5EBA825E7 / Bangel / language/dotnet/Bangel.Admission/TypeVerifier.Units.cs

IF

This JP / admission module is imported or its declared interface is invoked. Declared surface includes: private static readonly Regex TermPattern = new(@"\A(1|[A-Za-z]+)(?:\^(-?[1-9][0-9]*)?)?z", RegexOptions.NonBacktracking); private static readonly Regex FixedScalePattern = new(@"\A(?:10*|0\.\d*)z", RegexOptions.NonBacktracking); private readonly record struct Signature(BigInteger Mass, BigInteger Length, BigInteger Time,; internal static Signature Combine(Signature left, Signature right, bool divide) => new(; internal Signature Multiply(BigInteger n) => new(Mass * n, Length * n, Time * n, Current * n, Temperature * n, Power * n);

HOW

Preserve the representation schema, value types, provenance, registry and independent admission checks encoded here. The complete terminology-edited 160-line source is preserved with SHA-256 96f103a8574a21d272146003a60bd468609cf763e19674ff544c564b72998a65. 13 extracted function/declaration entries are separately indexed, including exact Python bodies and guards where available.

THEN

Follow the exact returned values, diagnostics and state effects in the preserved implementation. Module inclusion and syntax extraction are documentary coverage; they do not prove every branch or cross-host behavior.

CURRENT EVIDENCE

Fresh related Python suites and per-profile/water results are included. Native C#/.NET, C++/Rust/R compilation and physical devices were not executed in this environment.

REMAINING REQUIREMENT

Map unverified branches and native-host behavior to source-specific evidence before assigning a complete verification verdict.

SOURCE REFERENCES

bangel:language/dotnet/Bangel.Admission/TypeVerifier.Units.cs

TR-MOD-BANGEL-BC28E08877 / Bangel / language/dotnet/Bangel.Admission/TypeVerifier.Values.cs

IF

This JP / admission module is imported or its declared interface is invoked. Declared surface includes: internal void VerifyValueTypes(JsonObject expression); internal static UnicodeScalarComparer Instance { get; } = new();; public int Compare(string? left, string? right)

HOW

Preserve the representation schema, value types, provenance, registry and independent admission checks encoded here. The complete terminology-edited 223-line source is preserved with SHA-256 ff8ead63cd540cad13f6cb30a87e2ef4471704ed619513948d76319041bf93cc. 3 extracted function/declaration entries are separately indexed, including exact Python bodies and guards where available.

THEN

Follow the exact returned values, diagnostics and state effects in the preserved implementation. Module inclusion and syntax extraction are documentary coverage; they do not prove every branch or cross-host behavior.

CURRENT EVIDENCE

Fresh related Python suites and per-profile/water results are included. Native C#/.NET, C++/Rust/R compilation and physical devices were not executed in this environment.

REMAINING REQUIREMENT

Map unverified branches and native-host behavior to source-specific evidence before assigning a complete verification verdict.

SOURCE REFERENCES

bangel:language/dotnet/Bangel.Admission/TypeVerifier.Values.cs

TR-MOD-BANGEL-10BBAA7740 / Bangel / language/dotnet/Bangel.Admission/TypeVerifier.cs

IF

This JP / admission module is imported or its declared interface is invoked. Declared surface includes: internal sealed partial class TypeVerifier(; private static readonly Regex NamePattern = new(@"\A[A-Za-z_][A-Za-z_0-9]*(?:\.[A-Za-z_][A-Za-z_0-9]*)*\z", RegexOptions.NonBacktracking);; private static readonly Regex IntegerPattern = new(@"\A-?(?:0|[1-9][0-9]*)\z", RegexOptions.NonBacktracking);; private static void Check(bool condition, string message, string code = "IR_TYPE"); private static JsonObject Object(JsonNode? node) => node as JsonObject

HOW

Preserve the representation schema, value types, provenance, registry and independent admission checks encoded here. The complete terminology-edited 146-line source is preserved with SHA-256 b16e62e6a30f30ef97ca57432de4eb1112e84cfd108a8cde078bdbf33b68aeb. 24 extracted function/declaration entries are separately indexed, including exact Python bodies and guards where available.

THEN

Follow the exact returned values, diagnostics and state effects in the preserved implementation. Module inclusion and syntax extraction are documentary coverage; they do not prove every branch or cross-host behavior.

CURRENT EVIDENCE

Fresh related Python suites and per-profile/water results are included. Native C#/.NET, C++/Rust/R compilation and physical devices were not executed in this environment.

REMAINING REQUIREMENT

Map unverified branches and native-host behavior to source-specific evidence before assigning a complete verification verdict.

SOURCE REFERENCES

bangel:language/dotnet/Bangel.Admission/TypeVerifier.cs

TR-MOD-BANGEL-A9589D640E / Bangel / language/dotnet/Bangel.Compiler/ElsaCompiler.cs

IF

This Elsa / source module is imported or its declared interface is invoked. Declared surface includes: public CompilerException(string code, string message, SyntaxSpan? span = null, object? details = null) : base(message); internal ManagedProjectCompilation(AdmittedIr compilation, string projectRoot, string entry, IEnumerable<string> modules); private static readonly JsonSerializerOptions Serialization = new() { MaxDepth = 1024 };; public static SemanticModel Check(string sourceName, string source, CancellationToken cancellationToken = default); public static ProjectSemanticModel CheckProject(IReadOnlyDictionary<string, string> sources, CancellationToken cancellationToken = default)

HOW

Preserve lexical, syntactic, binding, type and lowering behavior before producing a validated representation. The complete terminology-edited 204-line source is preserved with SHA-256 8f5ee14b7d80aec82ddd501d04ba985d9dadd53c417884b2ffbf804847655b6. 20 extracted function/declaration entries are separately indexed, including exact Python bodies and guards where available.

THEN

Follow the exact returned values, diagnostics and state effects in the preserved implementation. Module inclusion and syntax extraction are documentary coverage; they do not prove every branch or cross-host behavior.

CURRENT EVIDENCE

Fresh related Python suites and per-profile/water results are included. Native C#/.NET, C++/Rust/R compilation and physical devices were not executed in this environment.

REMAINING REQUIREMENT

Map unverified branches and native-host behavior to source-specific evidence before assigning a complete verification verdict.

SOURCE REFERENCES

bangel:language/dotnet/Bangel.Compiler/ElsaCompiler.cs

TR-MOD-BANGEL-B36F26105F / Bangel / language/dotnet/Bangel.Compiler/Lowering.cs

IF

This Elsa / source module is imported or its declared interface is invoked. Declared surface includes: internal sealed record LoweredExpression(string Kind, object? Value, LoweredExpression[] Operands,; internal Dictionary<string, object?> ToIr(); internal sealed record LoweredStatement(string Kind, string? Name, LoweredExpression? Expression,; internal sealed record LoweredSource(string Name, IReadOnlyList<string> Effects, LoweredStatement[] Statements,; private readonly Dictionary<ExpressionSyntax, SemanticType> expressionTypes = new(ReferenceEqualityComparer.Instance);

HOW

Preserve lexical, syntactic, binding, type and lowering behavior before producing a validated representation. The complete terminology-edited 284-line source is preserved with SHA-256 f112dcc842985b9cffb958169144c81a5d8953bc4b8d26f23d1566c5a8b1e4c9. 27 extracted function/declaration entries are separately indexed, including exact Python bodies and guards where available.

THEN

Follow the exact returned values, diagnostics and state effects in the preserved implementation. Module inclusion and syntax extraction are documentary coverage; they do not prove every branch or cross-host behavior.

CURRENT EVIDENCE

Fresh related Python suites and per-profile/water results are included. Native C#/.NET, C++/Rust/R compilation and physical devices were not executed in this environment.

REMAINING REQUIREMENT

Map unverified branches and native-host behavior to source-specific evidence before assigning a complete verification verdict.

SOURCE REFERENCES

bangel:language/dotnet/Bangel.Compiler/Lowering.cs

TR-MOD-BANGEL-482C52E92C / Bangel / language/dotnet/Bangel.Numerics/BangelDecimal.cs

IF

This Numeric / typed values module is imported or its declared interface is invoked. Declared surface includes: public sealed class BangelNumericException(BangelNumericError error, string message); public static BangelDecimal Zero { get; } = new(BigInteger.Zero, 0);; public static BangelDecimal One { get; } = new(BigInteger.One, 0);; private BangelDecimal(BigInteger coefficient, int exponent, bool negativeZero = false); public static BangelDecimal Parse(string text) => ParseBounded(text, MaximumLiteralCharacters, MaximumLiteralExponent);

HOW

Use the exact numeric and dimensional rules of this module; keep typed unknown, signed values and source-specific bounds distinct. The complete terminology-edited 397-line source is preserved with SHA-256 300e160e880099f0f7067d201ee039a776a551c6c3097b6e33d7343df3549e41. 44 extracted function/declaration entries are separately indexed, including exact Python bodies and guards where available.

THEN

Follow the exact returned values, diagnostics and state effects in the preserved implementation. Module inclusion and syntax extraction are documentary coverage; they do not prove every branch or cross-host behavior.

CURRENT EVIDENCE

Fresh related Python suites and per-profile/water results are included. Native C#/.NET, C++/Rust/R compilation and physical devices were not executed in this environment.

REMAINING REQUIREMENT

Map unverified branches and native-host behavior to source-specific evidence before assigning a complete verification verdict.

SOURCE REFERENCES

bangel:language/dotnet/Bangel.Numerics/BangelDecimal.cs

TR-MOD-BANGEL-918A155C3B / Bangel / language/dotnet/Bangel.Runtime/Builtins.cs

IF

This Runtime / supporting core module is imported or its declared interface is invoked. Declared surface includes: private object? Aggregate(object?[] values, JsonNode type, bool mean = false); private object? Builtin(string target, object?[] values, JsonNode type); private object? LegacyBuiltin(string name, object?[] args); private static Quantity QuantityAggregate(Quantity[] values, bool mean)

HOW

Use the complete terminology-edited module and its declared types, call paths, state and error behavior; preserve program/evidence boundaries. The complete 148-line source is preserved with SHA-256 8c19e0ddf9caaf0527329f03bcb0b6b7571298f6e9e1d8d5fb8633e898956797. 4 extracted function/declaration entries are separately indexed, including exact Python bodies and guards where available.

THEN

Follow the exact returned values, diagnostics and state effects in the preserved implementation. Module inclusion and syntax extraction are documentary coverage; they do not prove every branch or cross-host behavior.

CURRENT EVIDENCE

Fresh related Python suites and per-profile/water results are included. Native C#/.NET, C++/Rust/R compilation and physical devices were not executed in this environment.

REMAINING REQUIREMENT

Map unverified branches and native-host behavior to source-specific evidence before assigning a complete verification verdict.

SOURCE REFERENCES

bangel:language/dotnet/Bangel.Runtime/Builtins.cs

TR-MOD-BANGEL-57691984B4 / Bangel / language/dotnet/Bangel.Runtime/Contracts.cs

IF

This Runtime / supporting core module is imported or its declared interface is invoked. Declared surface includes: internal void Validate(); public RuntimeException(string code, string message, string? spanJson = null, string? detailsJson = null, Exception? innerException = null); public static string NormalizeJson(string json) => Text(JsonNode.Parse(json,; internal static readonly IComparer<string> KeyOrder = Comparer<string>.Create((a, b) =>); internal static string Digest(object? value) => Convert.ToHexStringLower(SHA256.HashData(Bytes(value)));

HOW

Use the complete terminology-edited module and its declared types, call paths, state and error behavior; preserve program/evidence boundaries. The complete 117-line source is preserved with SHA-256 f7b2dfda33b23e42a9b0432e6ebd3a898af4b2a85dce57536a547537b96129f0. 11 extracted function/declaration entries are separately indexed, including exact Python bodies and guards where available.

THEN

Follow the exact returned values, diagnostics and state effects in the preserved implementation. Module inclusion and syntax extraction are documentary coverage; they do not prove every branch or cross-host behavior.

CURRENT EVIDENCE

Fresh related Python suites and per-profile/water results are included. Native C#/.NET, C++/Rust/R compilation and physical devices were not executed in this environment.

REMAINING REQUIREMENT

Map unverified branches and native-host behavior to source-specific evidence before assigning a complete verification verdict.

SOURCE REFERENCES

bangel:language/dotnet/Bangel.Runtime/Contracts.cs

TR-MOD-BANGEL-FA76B31298 / Bangel / language/dotnet/Bangel.Runtime/Execution.cs

IF

This Runtime / supporting core module is imported or its declared interface is invoked. Declared surface includes: private void Block(JsonArray instructions, Scope scope, string? owner = null); internal string Execute(); private static void VerifyReceiptDimensions(object? value)

HOW

Use the complete terminology-edited module and its declared types, call paths, state and error behavior; preserve program/evidence boundaries. The complete 148-line source is preserved with SHA-256 783bf15717185b9cd11e1c785862692f0466840cb0ecde2da7adb884e7965dc2. 3 extracted function/declaration entries are separately indexed, including exact Python bodies and guards where available.

THEN

Follow the exact returned values, diagnostics and state effects in the preserved implementation. Module inclusion and syntax extraction are documentary coverage; they do not prove every branch or cross-host behavior.

CURRENT EVIDENCE

Fresh related Python suites and per-profile/water results are included. Native C#/.NET, C++/Rust/R compilation and physical devices were not executed in this environment.

REMAINING REQUIREMENT

Map unverified branches and native-host behavior to source-specific evidence before assigning a complete verification verdict.

SOURCE REFERENCES

bangel:language/dotnet/Bangel.Runtime/Execution.cs

TR-MOD-BANGEL-69CD886751 / Bangel / language/dotnet/Bangel.Runtime/JoannaRuntime.cs

IF

This Runtime / supporting core module is imported or its declared interface is invoked. Declared surface includes: public static string Execute(string admittedIr, RuntimeLimits? limits = null, CancellationToken cancellationToken = default); public static string ExecuteWithHostBindings(string admittedIr,; public static string ExecuteWithRealHostBindings(string admittedIr,; private static string ExecuteHostCore(string admittedIr,; private static string ExecuteCore(string admittedIr, IReadOnlyDictionary<string, Func<ReadOnlyList<object?>, object?>>? bindings,

HOW

Use the complete terminology-edited module and its declared types, call paths, state and error behavior; preserve program/evidence boundaries. The complete 410-line source is preserved with SHA-256 9a45b0daf0a61c25211d85f3d35cdcf6b17ee25f8d3188b9101c7af878b42f1e. 40 extracted function/declaration entries are separately indexed, including exact Python bodies and guards where available.

THEN

Follow the exact returned values, diagnostics and state effects in the preserved implementation. Module inclusion and syntax extraction are documentary coverage; they do not prove every branch or cross-host behavior.

CURRENT EVIDENCE

Fresh related Python suites and per-profile/water results are included. Native C#/.NET, C++/Rust/R compilation and physical devices were not executed in this environment.

REMAINING REQUIREMENT

Map unverified branches and native-host behavior to source-specific evidence before assigning a complete verification verdict.

SOURCE REFERENCES

bangel:language/dotnet/Bangel.Runtime/JoannaRuntime.cs

TR-MOD-BANGEL-61212BE10F / Bangel / language/dotnet/Bangel.Runtime/Values.cs

IF

This Numeric / typed values module is imported or its declared interface is invoked. Declared surface includes: internal sealed record Unknown(JsonNode ValueType, string Reason, string[] Provenance);; internal sealed record Failure(string Code, string Message);; internal sealed record Result(string Variant, object? Value);; internal sealed record Nominal(string Kind, string Identity, Dictionary<string, object?> Fields, string? Variant);; internal sealed class Scope(Scope? parent = null)

HOW

Use the exact numeric and dimensional rules of this module; keep typed unknown, signed values and source-specific bounds distinct. The complete terminology-edited 92-line source is preserved with SHA-256 9665810b1018cd0bbdf59a0f0c916e6c0b4ac62a914c0f0cf0045ffabba3299a. 21 extracted function/declaration entries are separately indexed, including exact Python bodies and guards where available.

THEN

Follow the exact returned values, diagnostics and state effects in the preserved implementation. Module inclusion and syntax extraction are documentary coverage; they do not prove every branch or cross-host behavior.

CURRENT EVIDENCE

Fresh related Python suites and per-profile/water results are included. Native C#/.NET, C++/Rust/R compilation and physical devices were not executed in this environment.

REMAINING REQUIREMENT

Map unverified branches and native-host behavior to source-specific evidence before assigning a complete verification verdict.

SOURCE REFERENCES

bangel:language/dotnet/Bangel.Runtime/Values.cs

TR-MOD-BANGEL-00FFAB8AAB / Bangel / language/dotnet/Bangel.Sdk/CSharpBackend.cs

IF

This API / SDK module is imported or its declared interface is invoked. Declared surface includes: public static string Generate(Compilation compilation)

HOW

Validate the exact host/protocol contract and preserve request, response, value and effect boundaries across this interface. The complete terminology-edited 17-line source is preserved with SHA-256 e8321d3448903a42630f7cc7d418466feebb1443a9566c303230510e4d51c486. 1 extracted function/declaration entries are separately indexed, including exact Python bodies and guards where available.

THEN

Follow the exact returned values, diagnostics and state effects in the preserved implementation. Module inclusion and syntax extraction are documentary coverage; they do not prove every branch or cross-host behavior.

CURRENT EVIDENCE

Fresh related Python suites and per-profile/water results are included. Native C#/.NET, C++/Rust/R compilation and physical devices were not executed in this environment.

REMAINING REQUIREMENT

Map unverified branches and native-host behavior to source-specific evidence before assigning a complete verification verdict.

SOURCE REFERENCES

bangel:language/dotnet/Bangel.Sdk/CSharpBackend.cs

TR-MOD-BANGEL-E24091E165 / Bangel / language/dotnet/Bangel.Sdk/Contracts.cs

IF

This API / SDK module is imported or its declared interface is invoked. Declared surface includes: public sealed record SourceText(string Name, string Text);; public sealed record SourceSpan(int Line, int Column, int? EndColumn);; public sealed record Diagnostic(string Code, string Message, SourceSpan? Span, JsonElement Details);; public sealed class BangelException(Diagnostic diagnostic) : Exception(diagnostic.Message); public sealed class ProtocolException(string message) : IOException(message);

HOW

Validate the exact host/protocol contract and preserve request, response, value and effect boundaries across this interface. The complete terminology-edited 131-line source is preserved with SHA-256 15c9593908fc71b176ac5ca76560090e3a91bb09a6acdbdaf907d82c02a178ea. 29 extracted function/declaration entries are separately indexed, including exact Python bodies and guards where available.

THEN

Follow the exact returned values, diagnostics and state effects in the preserved implementation. Module inclusion and syntax extraction are documentary coverage; they do not prove every branch or cross-host behavior.

CURRENT EVIDENCE

Fresh related Python suites and per-profile/water results are included. Native C#/.NET, C++/Rust/R compilation and physical devices were not executed in this environment.

REMAINING REQUIREMENT

Map unverified branches and native-host behavior to source-specific evidence before assigning a complete verification verdict.

SOURCE REFERENCES

bangel:language/dotnet/Bangel.Sdk/Contracts.cs

TR-MOD-BANGEL-0CD16E89F2 / Bangel / language/dotnet/Bangel.Sdk/IElsaCompiler.cs

IF

This API / SDK module is imported or its declared interface is invoked. This module contains shared declarations or constants; the complete source is retained.

HOW

Validate the exact host/protocol contract and preserve request, response, value and effect boundaries across this interface. The complete terminology-edited 9-line source is preserved with SHA-256 `ceed333fdc0c3fe6101a8805cb9f0951b77eb4da036ea7f5fd57bc24b5ea2de5`. 0 extracted function/declaration entries are separately indexed, including exact Python bodies and guards where available.

THEN

Follow the exact returned values, diagnostics and state effects in the preserved implementation. Module inclusion and syntax extraction are documentary coverage; they do not prove every branch or cross-host behavior.

CURRENT EVIDENCE

Fresh related Python suites and per-profile/water results are included. Native C#/.NET, C++/Rust/R compilation and physical devices were not executed in this environment.

REMAINING REQUIREMENT

Map unverified branches and native-host behavior to source-specific evidence before assigning a complete verification verdict.

SOURCE REFERENCES

bangel:language/dotnet/Bangel.Sdk/IElsaCompiler.cs

TR-MOD-BANGEL-8FE042E8E4 / Bangel / language/dotnet/Bangel.Sdk/ManagedCompiler.cs

IF

This API / SDK module is imported or its declared interface is invoked. Declared surface includes: public sealed class ManagedCompiler(TimeSpan? timeout = null) : IElsaCompiler; private readonly TimeSpan timeout = timeout ?? TimeSpan.FromSeconds(15);; public Task<CheckResult> CheckAsync(SourceText source, CancellationToken cancellationToken = default); public Task<Compilation> CompileAsync(SourceText source, CancellationToken cancellationToken = default); public Task<ProjectBuild> BuildAsync(BangelProject project, CancellationToken cancellationToken = default)

HOW

Validate the exact host/protocol contract and preserve request, response, value and effect boundaries across this interface. The complete terminology-edited 75-line source is preserved with SHA-256 078095369b166e53588ed3a277e8bfb2837dc37a84e242f43a694e566b9e9f51. 8 extracted function/declaration entries are separately indexed, including exact Python bodies and guards where available.

THEN

Follow the exact returned values, diagnostics and state effects in the preserved implementation. Module inclusion and syntax extraction are documentary coverage; they do not prove every branch or cross-host behavior.

CURRENT EVIDENCE

Fresh related Python suites and per-profile/water results are included. Native C#/.NET, C++/Rust/R compilation and physical devices were not executed in this environment.

REMAINING REQUIREMENT

Map unverified branches and native-host behavior to source-specific evidence before assigning a complete verification verdict.

SOURCE REFERENCES

bangel:language/dotnet/Bangel.Sdk/ManagedCompiler.cs

TR-MOD-BANGEL-CC6CF6701D / Bangel / language/dotnet/Bangel.Sdk/ManagedSyntax.cs

IF

This API / SDK module is imported or its declared interface is invoked. Declared surface includes: public static SourceFile Parse(SourceText source, CancellationToken cancellationToken = default)

HOW

Validate the exact host/protocol contract and preserve request, response, value and effect boundaries across this interface. The complete terminology-edited 25-line source is preserved with SHA-256 ce528842f5e8c872d0bad59559eab6f04434c1efdf89ba18c8b9c761cd69ded2. 1 extracted function/declaration entries are separately indexed, including exact Python bodies and guards where available.

THEN

Follow the exact returned values, diagnostics and state effects in the preserved implementation. Module inclusion and syntax extraction are documentary coverage; they do not prove every branch or cross-host behavior.

CURRENT EVIDENCE

Fresh related Python suites and per-profile/water results are included. Native C#/.NET, C++/Rust/R compilation and physical devices were not executed in this environment.

REMAINING REQUIREMENT

Map unverified branches and native-host behavior to source-specific evidence before assigning a complete verification verdict.

SOURCE REFERENCES

bangel:language/dotnet/Bangel.Sdk/ManagedSyntax.cs

TR-MOD-BANGEL-12FA8BE5AC / Bangel / language/dotnet/Bangel.Sdk/ReferenceCompiler.cs

IF

This API / SDK module is imported or its declared interface is invoked. Declared surface includes: public sealed class ReferenceCompiler(string pythonExecutable = "python3", TimeSpan? timeout = null) : IElsaCompiler; private readonly TimeSpan timeout = timeout ?? TimeSpan.FromSeconds(15);; private static readonly JsonSerializerOptions JsonOptions = new() { MaxDepth = 128 };; private static readonly JsonDocumentOptions DocumentOptions = new() { MaxDepth = 128 };; public async Task<CheckResult> CheckAsync(SourceText source, CancellationToken cancellationToken = default)

HOW

Validate the exact host/protocol contract and preserve request, response, value and effect boundaries across this interface. The complete terminology-edited 234-line source is preserved with SHA-256 18a7e6552965a7740aec0335c5bd5546ba67902c1b1d9e5a45a8c3b2b1dc843c. 21 extracted function/declaration entries are separately indexed, including exact Python bodies and guards where available.

THEN

Follow the exact returned values, diagnostics and state effects in the preserved implementation. Module inclusion and syntax extraction are documentary coverage; they do not prove every branch or cross-host behavior.

CURRENT EVIDENCE

Fresh related Python suites and per-profile/water results are included. Native C#/.NET, C++/Rust/R compilation and physical devices were not executed in this environment.

REMAINING REQUIREMENT

Map unverified branches and native-host behavior to source-specific evidence before assigning a complete verification verdict.

SOURCE REFERENCES

bangel:language/dotnet/Bangel.Sdk/ReferenceCompiler.cs

TR-MOD-BANGEL-23A1EED3AA / Bangel / language/dotnet/Bangel.Semantics/Analyzer.Binding.cs

IF

This Elsa / source module is imported or its declared interface is invoked. Declared surface includes: private (string Kind, string Target) ResolveCallablePath(IReadOnlyList<string> path, Scope current, SyntaxSpan span); private SemanticType? ResolveSymbolicValuePath(IReadOnlyList<string> path, Scope current, SyntaxSpan span); private Symbol ResolveSymbolPath(IReadOnlyList<string> path, Scope current, SyntaxSpan span, string context); private Symbol ResolveValue(string name, Scope current, SyntaxSpan span); private Scope Define(Scope current, Symbol symbol)

HOW

Preserve lexical, syntactic, binding, type and lowering behavior before producing a validated representation. The complete terminology-edited 394-line source is preserved with SHA-256 377d0c78d11baaa44d80c6abd6977647ac9e88c985987c8908b985e44454e868. 24 extracted function/declaration entries are separately indexed, including exact Python bodies and guards where available.

THEN

Follow the exact returned values, diagnostics and state effects in the preserved implementation. Module inclusion and syntax extraction are documentary coverage; they do not prove every branch or cross-host behavior.

CURRENT EVIDENCE

Fresh related Python suites and per-profile/water results are included. Native C#/.NET, C++/Rust/R compilation and physical devices were not executed in this environment.

REMAINING REQUIREMENT

Map unverified branches and native-host behavior to source-specific evidence before assigning a complete verification verdict.

SOURCE REFERENCES

bangel:language/dotnet/Bangel.Semantics/Analyzer.Binding.cs

TR-MOD-BANGEL-C7BE4C6A02 / Bangel / language/dotnet/Bangel.Semantics/Analyzer.Data.cs

IF

This Elsa / source module is imported or its declared interface is invoked. Declared surface includes: private TypedExpression InferIndex(IndexExpression expression, Scope scope, string? currentFunction); private TypedExpression InferField(FieldExpression expression, Scope scope, string? currentFunction); private TypedExpression InferResult(ResultConstructor expression, Scope scope, SemanticType? expected, string? currentFunction); private TypedExpression InferFailure(FailureConstructor expression, Scope scope, string? currentFunction); private void AnalyzeMatch(MatchStatement statement, SemanticType matchedType, Scope scope, string? currentFunction, bool inFunction)

HOW

Preserve lexical, syntactic, binding, type and lowering behavior before producing a validated representation. The complete terminology-edited 81-line source is preserved with SHA-256 48283c579bfd421f4a9d4df5b9827f2f91746c831f156ba9f7f7c7aaaa5640f2. 5 extracted function/declaration entries are separately indexed, including exact Python bodies and guards where available.

THEN

Follow the exact returned values, diagnostics and state effects in the preserved implementation. Module inclusion and syntax extraction are documentary coverage; they do not prove every branch or cross-host behavior.

CURRENT EVIDENCE

Fresh related Python suites and per-profile/water results are included. Native C#/.NET, C++/Rust/R compilation and physical devices were not executed in this environment.

REMAINING REQUIREMENT

Map unverified branches and native-host behavior to source-specific evidence before assigning a complete verification verdict.

SOURCE REFERENCES

bangel:language/dotnet/Bangel.Semantics/Analyzer.Data.cs

TR-MOD-BANGEL-A6E7EC451F / Bangel / language/dotnet/Bangel.Semantics/Analyzer.Expressions.cs

IF

This Elsa / source module is imported or its declared interface is invoked. Declared surface includes: private static readonly object NoConstant = new();; private static TypedExpression Typed(ExpressionSyntax expression, SemanticType type, object? constant); private static object? Constant(TypedExpression expression) => expression.HasConstant ? expression.Constant : NoConstant;; private TypedExpression Infer(ExpressionSyntax expression, Scope scope, SemanticType? expected = null, string? currentFunction = null); private TypedExpression InferVector(VectorLiteral expression, Scope scope, SemanticType? expected, string? currentFunction)

HOW

Preserve lexical, syntactic, binding, type and lowering behavior before producing a validated representation. The complete terminology-edited 219-line source is preserved with SHA-256 a1bcc1c0f14b0dbc068369b1548297e45b6a4c6d61dba59ad9908b8c7d222656. 12 extracted function/declaration entries are separately indexed, including exact Python bodies and guards where available.

THEN

Follow the exact returned values, diagnostics and state effects in the preserved implementation. Module inclusion and syntax extraction are documentary coverage; they do not prove every branch or cross-host behavior.

CURRENT EVIDENCE

Fresh related Python suites and per-profile/water results are included. Native C#/.NET, C++/Rust/R compilation and physical devices were not executed in this environment.

REMAINING REQUIREMENT

Map unverified branches and native-host behavior to source-specific evidence before assigning a complete verification verdict.

SOURCE REFERENCES

bangel:language/dotnet/Bangel.Semantics/Analyzer.Expressions.cs

TR-MOD-BANGEL-AD66FED003 / Bangel / language/dotnet/Bangel.Semantics/Analyzer.Intrinsics.cs

IF

This Elsa / source module is imported or its declared interface is invoked. Declared surface includes: private TypedExpression InferCall(CallExpression expression, Scope scope, SemanticType? expected, string? currentFunction); private TypedExpression InferIntrinsic(string target, CallExpression expression, Scope scope, SemanticType? expected, string? currentFunction); private TypedExpression InferCoreIntrinsic(string name, CallExpression expression, Scope scope, string? currentFunction); private TypedExpression InferStandardIntrinsic(string target, CallExpression expression, IReadOnlyList<TypedExpression> arguments, SemanticType? expected); private TypedExpression InferVectorIntrinsic(string ... [continued in source]

HOW

Preserve lexical, syntactic, binding, type and lowering behavior before producing a validated representation. The complete terminology-edited 171-line source is preserved with SHA-256 93691f666f9796ac37d89a6222240edc0bc91b2c90d9438a801124afef368c54. 7 extracted function/declaration entries are separately indexed, including exact Python bodies and guards where available.

THEN

Follow the exact returned values, diagnostics and state effects in the preserved implementation. Module inclusion and syntax extraction are documentary coverage; they do not prove every branch or cross-host behavior.

CURRENT EVIDENCE

Fresh related Python suites and per-profile/water results are included. Native C#/.NET, C++/Rust/R compilation and physical devices were not executed in this environment.

REMAINING REQUIREMENT

Map unverified branches and native-host behavior to source-specific evidence before assigning a complete verification verdict.

SOURCE REFERENCES

bangel:language/dotnet/Bangel.Semantics/Analyzer.Intrinsics.cs

TR-MOD-BANGEL-F7241E9297 / Bangel / language/dotnet/Bangel.Semantics/Analyzer.Numerics.cs

IF

This Elsa / source module is imported or its declared interface is invoked. Declared surface includes: private static readonly Dictionary<string, ResolvedUnit> Units = new(StringComparer.Ordinal); private ResolvedUnit UnitFromSyntax(UnitExpression expression); private static ResolvedUnit CanonicalUnit(IReadOnlyList<BigInteger> dimension, BangelDecimal? scale = null); private static ResolvedUnit CombinedUnit(ResolvedUnit left, ResolvedUnit right, bool divide); private static bool IsNumericConstant(object? value) => value is BigInteger or BangelDecimal;

HOW

Preserve lexical, syntactic, binding, type and lowering behavior before producing a validated representation. The complete terminology-edited 101-line source is preserved with SHA-256 8b9da93feff72e83594a16c7ad764783030b58898dffade40b7f67457a997f37. 12 extracted function/declaration entries are separately indexed, including exact Python bodies and guards where available.

THEN

Follow the exact returned values, diagnostics and state effects in the preserved implementation. Module inclusion and syntax extraction are documentary coverage; they do not prove every branch or cross-host behavior.

CURRENT EVIDENCE

Fresh related Python suites and per-profile/water results are included. Native C#/.NET, C++/Rust/R compilation and physical devices were not executed in this environment.

REMAINING REQUIREMENT

Map unverified branches and native-host behavior to source-specific evidence before assigning a complete verification verdict.

SOURCE REFERENCES

bangel:language/dotnet/Bangel.Semantics/Analyzer.Numerics.cs

TR-MOD-BANGEL-AC6329011A / Bangel / language/dotnet/Bangel.Semantics/Analyzer.Statements.cs

IF

This Elsa / source module is imported or its declared interface is invoked. Declared surface includes: private Scope AnalyzeStatement(StatementSyntax statement, Scope scope, string? currentFunction, bool inFunction = false); private static bool NegativeNumericLiteral(ExpressionSyntax expression)

HOW

Preserve lexical, syntactic, binding, type and lowering behavior before producing a validated representation. The complete terminology-edited 98-line source is preserved with SHA-256 82168cc1de1d1e39a90069fe88e8108a60cfd6db76b359d1ff2eb2c8b29c87b1. 2 extracted function/declaration entries are separately indexed, including exact Python bodies and guards where available.

THEN

Follow the exact returned values, diagnostics and state effects in the preserved implementation. Module inclusion and syntax extraction are documentary coverage; they do not prove every branch or cross-host behavior.

CURRENT EVIDENCE

Fresh related Python suites and per-profile/water results are included. Native C#/.NET, C++/Rust/R compilation and physical devices were not executed in this environment.

REMAINING REQUIREMENT

Map unverified branches and native-host behavior to source-specific evidence before assigning a complete verification verdict.

SOURCE REFERENCES

bangel:language/dotnet/Bangel.Semantics/Analyzer.Statements.cs

TR-MOD-BANGEL-B99443E4A3 / Bangel / language/dotnet/Bangel.Semantics/Analyzer.cs

IF

This Elsa / source module is imported or its declared interface is invoked. Declared surface includes: private Scope scope = new();; private readonly Dictionary<string, RecordSpec> records = new(StringComparer.Ordinal);; private readonly Dictionary<string, EnumSpec> enums = new(StringComparer.Ordinal);; private readonly Dictionary<string, FunctionSpec> functions = new(StringComparer.Ordinal);; private readonly Dictionary<string, ModuleInterface> interfaces = new(StringComparer.Ordinal);

HOW

Preserve lexical, syntactic, binding, type and lowering behavior before producing a validated representation. The complete terminology-edited 278-line source is preserved with SHA-256 e7f645b38ffddbaf31ec209eba8a0e867af27726030213c06eee9800ebbf106. 34 extracted function/declaration entries are separately indexed, including exact Python bodies and guards where available.

THEN

Follow the exact returned values, diagnostics and state effects in the preserved implementation. Module inclusion and syntax extraction are documentary coverage; they do not prove every branch or cross-host behavior.

CURRENT EVIDENCE

Fresh related Python suites and per-profile/water results are included. Native C#/.NET, C++/Rust/R compilation and physical devices were not executed in this environment.

REMAINING REQUIREMENT

Map unverified branches and native-host behavior to source-specific evidence before assigning a complete verification verdict.

SOURCE REFERENCES

bangel:language/dotnet/Bangel.Semantics/Analyzer.cs

TR-MOD-BANGEL-B553916861 / Bangel / language/dotnet/Bangel.Semantics/BangelSemantics.cs

IF

This Elsa / source module is imported or its declared interface is invoked. Declared surface includes: public static SemanticModel Analyze(SourceFile source,; public static ProjectSemanticModel AnalyzeProject(IReadOnlyList<SourceFile> sources,; private static SemanticModel AnalyzeCore(SourceFile source,; private static int CompareModuleNames(IReadOnlyList<string> left, IReadOnlyList<string> right); private sealed class VisitFrame(string name)

HOW

Preserve lexical, syntactic, binding, type and lowering behavior before producing a validated representation. The complete terminology-edited 172-line source is preserved with SHA-256 faba2e276e715c402107836493fba760e3f6def9ed00387b6863ad2ed994d8ea. 5 extracted function/declaration entries are separately indexed, including exact Python bodies and guards where available.

THEN

Follow the exact returned values, diagnostics and state effects in the preserved implementation. Module inclusion and syntax extraction are documentary coverage; they do not prove every branch or cross-host behavior.

CURRENT EVIDENCE

Fresh related Python suites and per-profile/water results are included. Native C#/.NET, C++/Rust/R compilation and physical devices were not executed in this environment.

REMAINING REQUIREMENT

Map unverified branches and native-host behavior to source-specific evidence before assigning a complete verification verdict.

SOURCE REFERENCES

bangel:language/dotnet/Bangel.Semantics/BangelSemantics.cs

TR-MOD-BANGEL-5A78C18AD5 / Bangel / language/dotnet/Bangel.Semantics/Models.cs

IF

This Elsa / source module is imported or its declared interface is invoked. Declared surface includes: public ResolvedUnit(string text, IReadOnlyList<BigInteger> dimension, BangelDecimal scale); public JsonElement ToJson() => SemanticJson.Element(this);; public bool Equals(ResolvedUnit? other) => other is not null && Text == other.Text && public override bool Equals(object? obj) => obj is ResolvedUnit unit && Equals(unit);; public override int GetHashCode()

HOW

Preserve lexical, syntactic, binding, type and lowering behavior before producing a validated representation. The complete terminology-edited 449-line source is preserved with SHA-256 f694efff44ae07b4553fb87786b59524f8d7e817ade644ca8d56a64c940f4f43. 56 extracted function/declaration entries are separately indexed, including exact Python bodies and guards where available.

THEN

Follow the exact returned values, diagnostics and state effects in the preserved implementation. Module inclusion and syntax extraction are documentary coverage; they do not prove every branch or cross-host behavior.

CURRENT EVIDENCE

Fresh related Python suites and per-profile/water results are included. Native C#/.NET, C++/Rust/R compilation and physical devices were not executed in this environment.

REMAINING REQUIREMENT

Map unverified branches and native-host behavior to source-specific evidence before assigning a complete verification verdict.

SOURCE REFERENCES

bangel:language/dotnet/Bangel.Semantics/Models.cs

TR-MOD-BANGEL-2378F60486 / Bangel / language/dotnet/Bangel.Semantics/SemanticException.cs

IF

This Elsa / source module is imported or its declared interface is invoked. Declared surface includes: public SemanticException(string code, string message, SyntaxSpan? span = null,; public JsonElement ToJson() => SemanticJson.Element(this);

HOW

Preserve lexical, syntactic, binding, type and lowering behavior before producing a validated representation. The complete terminology-edited 21-line source is preserved with SHA-256 0c615b478b40d03d1bd96b0c36219432a5cf5326e411b84210a31515c6e5d772. 2 extracted function/declaration entries are separately indexed, including exact Python bodies and guards where available.

THEN

Follow the exact returned values, diagnostics and state effects in the preserved implementation. Module inclusion and syntax extraction are documentary coverage; they do not prove every branch or cross-host behavior.

CURRENT EVIDENCE

Fresh related Python suites and per-profile/water results are included. Native C#/.NET, C++/Rust/R compilation and physical devices were not executed in this environment.

REMAINING REQUIREMENT

Map unverified branches and native-host behavior to source-specific evidence before assigning a complete verification verdict.

SOURCE REFERENCES

bangel:language/dotnet/Bangel.Semantics/SemanticException.cs

TR-MOD-BANGEL-361E158AEB / Bangel / language/dotnet/Bangel.Semantics/SemanticNumbers.cs

IF

This Elsa / source module is imported or its declared interface is invoked. Declared surface includes: private readonly record struct Exact(BigInteger Coefficient, int Exponent, bool NegativeZero = false); internal static BangelDecimal Parse(string text); internal static BangelDecimal Round28(BangelDecimal value) =>; internal static BangelDecimal Round34(BangelDecimal value) => value.Round();; internal static BangelDecimal Round34(string text)

HOW

Preserve lexical, syntactic, binding, type and lowering behavior before producing a validated representation. The complete terminology-edited 338-line source is preserved with SHA-256 4be7db7fbd240b4d3975a47e762857acdbb8562415e0c365a0d1124e69b94a8e. 31 extracted function/declaration entries are separately indexed, including exact Python bodies and guards where available.

THEN

Follow the exact returned values, diagnostics and state effects in the preserved implementation. Module inclusion and syntax extraction are documentary coverage; they do not prove every branch or cross-host behavior.

CURRENT EVIDENCE

Fresh related Python suites and per-profile/water results are included. Native C#/.NET, C++/Rust/R compilation and physical devices were not executed in this environment.

REMAINING REQUIREMENT

Map unverified branches and native-host behavior to source-specific evidence before assigning a complete verification verdict.

SOURCE REFERENCES

bangel:language/dotnet/Bangel.Semantics/SemanticNumbers.cs

TR-MOD-BANGEL-EAD30D9D01 / Bangel / language/dotnet/Bangel.Syntax/Ast.cs

IF

This Elsa / source module is imported or its declared interface is invoked. Declared surface includes: public UnitTerm(string symbol, BigInteger exponent, SyntaxSpan span); internal override void WriteFields(Utf8JsonWriter writer); public UnitExpression(IReadOnlyList<UnitTerm> terms, IReadOnlyList<string> operators, SyntaxSpan span); internal override void WriteFields(Utf8JsonWriter writer); public ScalarType(string name, SyntaxSpan span)

HOW

Preserve lexical, syntactic, binding, type and lowering behavior before producing a validated representation. The complete terminology-edited 1029-line source is preserved with SHA-256 0464d2fd4b0a8c9918fe576a577c7d0109d46b7c86163de3ca30ae11b3927c3b. 104 extracted function/declaration entries are separately indexed, including exact Python bodies and guards where available.

THEN

Follow the exact returned values, diagnostics and state effects in the preserved implementation. Module inclusion and syntax extraction are documentary coverage; they do not prove every branch or cross-host behavior.

CURRENT EVIDENCE

Fresh related Python suites and per-profile/water results are included. Native C#/.NET, C++/Rust/R compilation and physical devices were not executed in this environment.

REMAINING REQUIREMENT

Map unverified branches and native-host behavior to source-specific evidence before assigning a complete verification verdict.

SOURCE REFERENCES

bangel:language/dotnet/Bangel.Syntax/Ast.cs

TR-MOD-BANGEL-3320DDC3D7 / Bangel / language/dotnet/Bangel.Syntax/BangelSyntax.cs

IF

This Elsa / source module is imported or its declared interface is invoked. Declared surface includes: public static SourceFile Parse(string source, string? sourceName = null, CancellationToken cancellationToken = default); public static IReadOnlyList<SyntaxToken> Tokenize(string source, CancellationToken cancellationToken = default)

HOW

Preserve lexical, syntactic, binding, type and lowering behavior before producing a validated representation. The complete terminology-edited 34-line source is preserved with SHA-256 c7fbe0efcbb39493c3f1b1547c11619d76694abc9318774690e234f682abb8e6. 2 extracted function/declaration entries are separately indexed, including exact Python bodies and guards where available.

THEN

Follow the exact returned values, diagnostics and state effects in the preserved implementation. Module inclusion and syntax extraction are documentary coverage; they do not prove every branch or cross-host behavior.

CURRENT EVIDENCE

Fresh related Python suites and per-profile/water results are included. Native C#/.NET, C++/Rust/R compilation and physical devices were not executed in this environment.

REMAINING REQUIREMENT

Map unverified branches and native-host behavior to source-specific evidence before assigning a complete verification verdict.

SOURCE REFERENCES

bangel:language/dotnet/Bangel.Syntax/BangelSyntax.cs

TR-MOD-BANGEL-CAD501F3A7 / Bangel / language/dotnet/Bangel.Syntax/Lexer.cs

IF

This Elsa / source module is imported or its declared interface is invoked. Declared surface includes: private static readonly Regex Number = new(@"G(?:0|[1-9][0-9]*)?(?:\.[0-9]+(?:[eE][+-]?[0-9]+)?|[eE][+-]?[0-9]+)?", RegexOptions.CultureInvariant);; private static readonly UTF8Encoding StrictUtf8 = new(false, true);; internal static string Normalize(string source); internal static IReadOnlyList<SyntaxToken> Lex(string source, CancellationToken cancellationToken); private static bool IsIdentifierStart(char character) => char.IsAsciiLetter(character) || character == '_';

HOW

Preserve lexical, syntactic, binding, type and lowering behavior before producing a validated representation. The complete terminology-edited 215-line source is preserved with SHA-256 14391c7b9a1cca0cded63158f0585820df6af2699909b9edfb7d59b238923a59. 13 extracted function/declaration entries are separately indexed, including exact Python bodies and guards where available.

THEN

Follow the exact returned values, diagnostics and state effects in the preserved implementation. Module inclusion and syntax extraction are documentary coverage; they do not prove every branch or cross-host behavior.

CURRENT EVIDENCE

Fresh related Python suites and per-profile/water results are included. Native C#/.NET, C++/Rust/R compilation and physical devices were not executed in this environment.

REMAINING REQUIREMENT

Map unverified branches and native-host behavior to source-specific evidence before assigning a complete verification verdict.

SOURCE REFERENCES

bangel:language/dotnet/Bangel.Syntax/Lexer.cs

TR-MOD-BANGEL-5E2539FFC1 / Bangel / language/dotnet/Bangel.Syntax/Parser.Expressions.cs

IF

This Elsa / source module is imported or its declared interface is invoked. Declared surface includes: private ExpressionSyntax Expression(); private ExpressionSyntax OrExpression(); private ExpressionSyntax AndExpression(); private ExpressionSyntax EqualityExpression(); private ExpressionSyntax ComparisonExpression()

HOW

Preserve lexical, syntactic, binding, type and lowering behavior before producing a validated representation. The complete terminology-edited 185-line source is preserved with SHA-256 eed503f9aa5c41ac72f6e5ed9da749295507836da6f4a00d4c57b37ed1f239e9. 15 extracted function/declaration entries are separately indexed, including exact Python bodies and guards where available.

THEN

Follow the exact returned values, diagnostics and state effects in the preserved implementation. Module inclusion and syntax extraction are documentary coverage; they do not prove every branch or cross-host behavior.

CURRENT EVIDENCE

Fresh related Python suites and per-profile/water results are included. Native C#/.NET, C++/Rust/R compilation and physical devices were not executed in this environment.

REMAINING REQUIREMENT

Map unverified branches and native-host behavior to source-specific evidence before assigning a complete verification verdict.

SOURCE REFERENCES

bangel:language/dotnet/Bangel.Syntax/Parser.Expressions.cs

TR-MOD-BANGEL-D2F2137621 / Bangel / language/dotnet/Bangel.Syntax/Parser.Types.cs

IF

This Elsa / source module is imported or its declared interface is invoked. Declared surface includes: private TypeSyntax? OptionalTypeAnnotation() => Match("COLON") ? Type() : null;; private TypeSyntax TypeAnnotation(string requiredCode) { Expect("COLON", requiredCode); return Type(); }; private TypeSyntax Type(); private UnitExpression UnitExpression(); private UnitTerm UnitTerm()

HOW

Preserve lexical, syntactic, binding, type and lowering behavior before producing a validated representation. The complete terminology-edited 90-line source is preserved with SHA-256 c1a2d6043f69896dbb79e0ad1a63135a8d6832fb64279840af28031fff2dfd9. 6 extracted function/declaration entries are separately indexed, including exact Python bodies and guards where available.

THEN

Follow the exact returned values, diagnostics and state effects in the preserved implementation. Module inclusion and syntax extraction are documentary coverage; they do not prove every branch or cross-host behavior.

CURRENT EVIDENCE

Fresh related Python suites and per-profile/water results are included. Native C#/.NET, C++/Rust/R compilation and physical devices were not executed in this environment.

REMAINING REQUIREMENT

Map unverified branches and native-host behavior to source-specific evidence before assigning a complete verification verdict.

SOURCE REFERENCES

bangel:language/dotnet/Bangel.Syntax/Parser.Types.cs

TR-MOD-BANGEL-29CAF0F01A / Bangel / language/dotnet/Bangel.Syntax/Parser.cs

IF

This Elsa / source module is imported or its declared interface is invoked. Declared surface includes: internal sealed partial class Parser(IReadOnlyList<SyntaxToken> tokens, string? sourceName, CancellationToken cancellationToken); private static readonly HashSet<string> Reserved = new(StringComparer.Ordinal); internal SourceFile Parse(); private SyntaxSpan ParseHeader(); private IReadOnlyList<string> Effects(bool module)

HOW

Preserve lexical, syntactic, binding, type and lowering behavior before producing a validated representation. The complete terminology-edited 300-line source is preserved with SHA-256 bf792015aaaaadb9a293f4fe913f8af90e720c07b7e4e6e5e6e30a885d307f2a. 39 extracted function/declaration entries are separately indexed, including exact Python bodies and guards where available.

THEN

Follow the exact returned values, diagnostics and state effects in the preserved implementation. Module inclusion and syntax extraction are documentary coverage; they do not prove every branch or cross-host behavior.

CURRENT EVIDENCE

Fresh related Python suites and per-profile/water results are included. Native C#/.NET, C++/Rust/R compilation and physical devices were not executed in this environment.

REMAINING REQUIREMENT

Map unverified branches and native-host behavior to source-specific evidence before assigning a complete verification verdict.

SOURCE REFERENCES

bangel:language/dotnet/Bangel.Syntax/Parser.cs

TR-MOD-BANGEL-E0E8EDCFE7 / Bangel / language/dotnet/Bangel.Syntax/SyntaxContracts.cs

IF

This Elsa / source module is imported or its declared interface is invoked. Declared surface includes: public sealed record SyntaxSpan(int Line, int Column = 1, int? EndColumn = null); public JsonElement ToJson() => SyntaxJson.Element(this);; public SyntaxException(string code, string message, SyntaxSpan? span = null) : base(message); public sealed record SyntaxToken(string Kind, string Text, SyntaxSpan Span, bool LeadingSpace = false); public JsonElement ToJson()

HOW

Preserve lexical, syntactic, binding, type and lowering behavior before producing a validated representation. The complete terminology-edited 110-line source is preserved with SHA-256 6037cad94a429bdd31828b75bd725004884f960f690b9f68ed3e9c83a2801d2c. 11 extracted function/declaration entries are separately indexed, including exact Python bodies and guards where available.

THEN

Follow the exact returned values, diagnostics and state effects in the preserved implementation. Module inclusion and syntax extraction are documentary coverage; they do not prove every branch or cross-host behavior.

CURRENT EVIDENCE

Fresh related Python suites and per-profile/water results are included. Native C#/.NET, C++/Rust/R compilation and physical devices were not executed in this environment.

REMAINING REQUIREMENT

Map unverified branches and native-host behavior to source-specific evidence before assigning a complete verification verdict.

SOURCE REFERENCES

bangel:language/dotnet/Bangel.Syntax/SyntaxContracts.cs

TR-MOD-BANGEL-86AA8059AD / Bangel / language/python/sdk/python/bangel_sdk.py

IF

This API / SDK module is imported or its declared interface is invoked. This module contains shared declarations or constants; the complete source is retained.

HOW

Validate the exact host/protocol contract and preserve request, response, value and effect boundaries across this interface. The complete terminology-edited 4-line source is preserved with SHA-256 d694a1dabc2e3a82cf669458b9007fb636286e44320bb13af50e4e74226bae93. 0 extracted function/declaration entries are separately indexed, including exact Python bodies and guards where available.

THEN

Follow the exact returned values, diagnostics and state effects in the preserved implementation. Module inclusion and syntax extraction are documentary coverage; they do not prove every branch or cross-host behavior.

CURRENT EVIDENCE

Fresh related Python suites and per-profile/water results are included. Native C#/.NET, C++/Rust/R compilation and physical devices were not executed in this environment.

REMAINING REQUIREMENT

Map unverified branches and native-host behavior to source-specific evidence before assigning a complete verification verdict.

SOURCE REFERENCES

bangel:language/python/sdk/python/bangel_sdk.py

TR-MOD-BANGEL-059BAD78FC / Bangel / language/python/src/bangel/__init__.py

IF

This Runtime / supporting core module is imported or its declared interface is invoked. Declared surface includes: `__getattr__(name); __dir__()`

HOW

Use the complete terminology-edited module and its declared types, call paths, state and error behavior; preserve program/evidence boundaries. The complete 25-line source is preserved with SHA-256 `fe580f664de82f3d866e03c1622378dab3dda28bf71554ba7b5dd47d9e5e5d21`. 2 extracted function/declaration entries are separately indexed, including exact Python bodies and guards where available.

THEN

Follow the exact returned values, diagnostics and state effects in the preserved implementation. Module inclusion and syntax extraction are documentary coverage; they do not prove every branch or cross-host behavior.

CURRENT EVIDENCE

Fresh related Python suites and per-profile/water results are included. Native C#/.NET, C++/Rust/R compilation and physical devices were not executed in this environment.

REMAINING REQUIREMENT

Map unverified branches and native-host behavior to source-specific evidence before assigning a complete verification verdict.

SOURCE REFERENCES

`bangel:language/python/src/bangel/__init__.py`

TR-MOD-BANGEL-F4BE3594DA / Bangel / language/python/src/bangel/__main__.py

IF

This Runtime / supporting core module is imported or its declared interface is invoked. This module contains shared declarations or constants; the complete source is retained.

HOW

Use the complete terminology-edited module and its declared types, call paths, state and error behavior; preserve program/evidence boundaries. The complete 4-line source is preserved with SHA-256 76fa916e93e0ae1a6c1bb51dcc0bcf289c014e9f760a47165f8a84401ccf41d7. 0 extracted function/declaration entries are separately indexed, including exact Python bodies and guards where available.

THEN

Follow the exact returned values, diagnostics and state effects in the preserved implementation. Module inclusion and syntax extraction are documentary coverage; they do not prove every branch or cross-host behavior.

CURRENT EVIDENCE

Fresh related Python suites and per-profile/water results are included. Native C#/.NET, C++/Rust/R compilation and physical devices were not executed in this environment.

REMAINING REQUIREMENT

Map unverified branches and native-host behavior to source-specific evidence before assigning a complete verification verdict.

SOURCE REFERENCES

bangel:language/python/src/bangel/__main__.py

TR-MOD-BANGEL-847FB8DCC3 / Bangel / language/python/src/bangel/api.py

IF

This API / SDK module is imported or its declared interface is invoked. Declared surface includes: fail(code, message); exact(value, keys, label); valid_id(value); make_request(operation, input=None, *, request_id='request-1', limits=None, compatibility=None); _safe_json(value: Any, code: str)

HOW

Validate the exact host/protocol contract and preserve request, response, value and effect boundaries across this interface. The complete terminology-edited 447-line source is preserved with SHA-256 358d35e8f4a1b401016cc91e7ba28f6de90d1668ee6924fef4f72b30658ea656. 29 extracted function/declaration entries are separately indexed, including exact Python bodies and guards where available.

THEN

Follow the exact returned values, diagnostics and state effects in the preserved implementation. Module inclusion and syntax extraction are documentary coverage; they do not prove every branch or cross-host behavior.

CURRENT EVIDENCE

Fresh related Python suites and per-profile/water results are included. Native C#/.NET, C++/Rust/R compilation and physical devices were not executed in this environment.

REMAINING REQUIREMENT

Map unverified branches and native-host behavior to source-specific evidence before assigning a complete verification verdict.

SOURCE REFERENCES

bangel:language/python/src/bangel/api.py

TR-MOD-BANGEL-F1C364C420 / Bangel / language/python/src/bangel/ast.py

IF

This Runtime / supporting core module is imported or its declared interface is invoked. Declared surface includes: to_ir(self)

HOW

Use the complete terminology-edited module and its declared types, call paths, state and error behavior; preserve program/evidence boundaries. The complete 57-line source is preserved with SHA-256 e2077ccbf68358df08581fa9acdac86a19777e37bd0416686fe6b33f12c03a44. 1 extracted function/declaration entries are separately indexed, including exact Python bodies and guards where available.

THEN

Follow the exact returned values, diagnostics and state effects in the preserved implementation. Module inclusion and syntax extraction are documentary coverage; they do not prove every branch or cross-host behavior.

CURRENT EVIDENCE

Fresh related Python suites and per-profile/water results are included. Native C#/.NET, C++/Rust/R compilation and physical devices were not executed in this environment.

REMAINING REQUIREMENT

Map unverified branches and native-host behavior to source-specific evidence before assigning a complete verification verdict.

SOURCE REFERENCES

bangel:language/python/src/bangel/ast.py

TR-MOD-BANGEL-177A670880 / Bangel / language/python/src/bangel/canonical.py

IF

This Receipt / evidence module is imported or its declared interface is invoked. Declared surface includes: `_normalize(value: Any); canonical_bytes(value: Any); digest(value: Any)`

HOW

Preserve exact serialization, digest binding, linkage and inspection/replay behavior without promoting integrity metadata into authority. The complete terminology-edited 45-line source is preserved with SHA-256 `aaca8bfae08caaf2d4bb3eca220e00cc79bf9a9ccd7ac9f79b801f48b50c63a8`. 3 extracted function/declaration entries are separately indexed, including exact Python bodies and guards where available.

THEN

Follow the exact returned values, diagnostics and state effects in the preserved implementation. Module inclusion and syntax extraction are documentary coverage; they do not prove every branch or cross-host behavior.

CURRENT EVIDENCE

Fresh related Python suites and per-profile/water results are included. Native C#/.NET, C++/Rust/R compilation and physical devices were not executed in this environment.

REMAINING REQUIREMENT

Map unverified branches and native-host behavior to source-specific evidence before assigning a complete verification verdict.

SOURCE REFERENCES

`bangel:language/python/src/bangel/canonical.py`

TR-MOD-BANGEL-A5210671DC / Bangel / language/python/src/bangel/cli.py

IF

This Runtime / supporting core module is imported or its declared interface is invoked. Declared surface includes: `_json(value: object); build_parser(); main(argv: Sequence[str] | None=None)`

HOW

Use the complete terminology-edited module and its declared types, call paths, state and error behavior; preserve program/evidence boundaries. The complete 175-line source is preserved with SHA-256 63289e51aaa5c5d731570e4c2554fe614bea777e4ffa41bf851213fa7e145726. 3 extracted function/declaration entries are separately indexed, including exact Python bodies and guards where available.

THEN

Follow the exact returned values, diagnostics and state effects in the preserved implementation. Module inclusion and syntax extraction are documentary coverage; they do not prove every branch or cross-host behavior.

CURRENT EVIDENCE

Fresh related Python suites and per-profile/water results are included. Native C#/.NET, C++/Rust/R compilation and physical devices were not executed in this environment.

REMAINING REQUIREMENT

Map unverified branches and native-host behavior to source-specific evidence before assigning a complete verification verdict.

SOURCE REFERENCES

bangel:language/python/src/bangel/cli.py

TR-MOD-BANGEL-5A17011B80 / Bangel / language/python/src/bangel/client.py

IF

This API / SDK module is imported or its declared interface is invoked. Declared surface includes: `__init__(self, argv: Sequence[str], *, timeout: float=15.0, max_frame_bytes: int=MAX_FRAME_BYTES); _fail(self, error: Exception); _read(self); _write(self); request(self, request: dict[str, Any], *, timeout: float | None=None)`

HOW

Validate the exact host/protocol contract and preserve request, response, value and effect boundaries across this interface. The complete terminology-edited 142-line source is preserved with SHA-256 2c12f9cc00ca76863fdf75a96b8cc247a85e90d7582568f9cb2610252d8e140e. 21 extracted function/declaration entries are separately indexed, including exact Python bodies and guards where available.

THEN

Follow the exact returned values, diagnostics and state effects in the preserved implementation. Module inclusion and syntax extraction are documentary coverage; they do not prove every branch or cross-host behavior.

CURRENT EVIDENCE

Fresh related Python suites and per-profile/water results are included. Native C#/.NET, C++/Rust/R compilation and physical devices were not executed in this environment.

REMAINING REQUIREMENT

Map unverified branches and native-host behavior to source-specific evidence before assigning a complete verification verdict.

SOURCE REFERENCES

bangel:language/python/src/bangel/client.py

TR-MOD-BANGEL-8E33ED178E / Bangel / language/python/src/bangel/compiler.py

IF

This Elsa / source module is imported or its declared interface is invoked. Declared surface includes: to_dict(self); to_bytes(self); from_bytes(cls, data: bytes); to_dict(self); to_dict(self)

HOW

Preserve lexical, syntactic, binding, type and lowering behavior before producing a validated representation. The complete terminology-edited 352-line source is preserved with SHA-256 cb37e327273ee7f4b36db1a884b0a0a987e96ff7366fd59a83fe034e889b71c8. 18 extracted function/declaration entries are separately indexed, including exact Python bodies and guards where available.

THEN

Follow the exact returned values, diagnostics and state effects in the preserved implementation. Module inclusion and syntax extraction are documentary coverage; they do not prove every branch or cross-host behavior.

CURRENT EVIDENCE

Fresh related Python suites and per-profile/water results are included. Native C#/.NET, C++/Rust/R compilation and physical devices were not executed in this environment.

REMAINING REQUIREMENT

Map unverified branches and native-host behavior to source-specific evidence before assigning a complete verification verdict.

SOURCE REFERENCES

bangel:language/python/src/bangel/compiler.py

TR-MOD-BANGEL-A182F713E0 / Bangel / language/python/src/bangel/diagnostics.py

IF

This Runtime / supporting core module is imported or its declared interface is invoked. Declared surface includes: to_dict(self); __init__(self, code: str, message: str, span: SourceSpan | None=None, details: Mapping[str, object] | None=None); to_dict(self)

HOW

Use the complete terminology-edited module and its declared types, call paths, state and error behavior; preserve program/evidence boundaries. The complete 44-line source is preserved with SHA-256 7ef0d23c2166d9cec359b478632060ef3aa687d0ee008d003414bc158573ed93. 3 extracted function/declaration entries are separately indexed, including exact Python bodies and guards where available.

THEN

Follow the exact returned values, diagnostics and state effects in the preserved implementation. Module inclusion and syntax extraction are documentary coverage; they do not prove every branch or cross-host behavior.

CURRENT EVIDENCE

Fresh related Python suites and per-profile/water results are included. Native C#/.NET, C++/Rust/R compilation and physical devices were not executed in this environment.

REMAINING REQUIREMENT

Map unverified branches and native-host behavior to source-specific evidence before assigning a complete verification verdict.

SOURCE REFERENCES

bangel:language/python/src/bangel/diagnostics.py

TR-MOD-BANGEL-587A79561B / Bangel / language/python/src/bangel/evaluator.py

IF

This Runtime / supporting core module is imported or its declared interface is invoked. Declared surface includes: `__post_init__(self); consume(self); _truth(value: Any); _quantity(value: Any); _vector(value: Any, name: str)`

HOW

Use the complete terminology-edited module and its declared types, call paths, state and error behavior; preserve program/evidence boundaries. The complete 404-line source is preserved with SHA-256 `ea060ed710796064de23ae2be73919e89c2a2cf3567824dbb8b6ace23e7fa61b`. 11 extracted function/declaration entries are separately indexed, including exact Python bodies and guards where available.

THEN

Follow the exact returned values, diagnostics and state effects in the preserved implementation. Module inclusion and syntax extraction are documentary coverage; they do not prove every branch or cross-host behavior.

CURRENT EVIDENCE

Fresh related Python suites and per-profile/water results are included. Native C#/.NET, C++/Rust/R compilation and physical devices were not executed in this environment.

REMAINING REQUIREMENT

Map unverified branches and native-host behavior to source-specific evidence before assigning a complete verification verdict.

SOURCE REFERENCES

`bangel:language/python/src/bangel/evaluator.py`

TR-MOD-BANGEL-B9B97556B8 / Bangel / language/python/src/bangel/expression.py

IF

This Runtime / supporting core module is imported or its declared interface is invoked. Declared surface includes: `__init__(self, text: str, line: int); parse(self); _peek(self); _take(self); _expression(self, minimum: int)`

HOW

Use the complete terminology-edited module and its declared types, call paths, state and error behavior; preserve program/evidence boundaries. The complete 108-line source is preserved with SHA-256 7dd1db4946aa102cb947cce05586db009ad8075520f8781d76fb3afb9b79afe1. 6 extracted function/declaration entries are separately indexed, including exact Python bodies and guards where available.

THEN

Follow the exact returned values, diagnostics and state effects in the preserved implementation. Module inclusion and syntax extraction are documentary coverage; they do not prove every branch or cross-host behavior.

CURRENT EVIDENCE

Fresh related Python suites and per-profile/water results are included. Native C#/.NET, C++/Rust/R compilation and physical devices were not executed in this environment.

REMAINING REQUIREMENT

Map unverified branches and native-host behavior to source-specific evidence before assigning a complete verification verdict.

SOURCE REFERENCES

bangel:language/python/src/bangel/expression.py

TR-MOD-BANGEL-D30C83D29D / Bangel / language/python/src/bangel/formatter.py

IF

This Runtime / supporting core module is imported or its declared interface is invoked. Declared surface includes: `_shape(value)`; `_syntax_marks(tree, tokens: tuple[Token, ...])`; `_spacing(previous: Token, token: Token, unit_gaps, unary)`; `format_source(source: str)`

HOW

Use the complete terminology-edited module and its declared types, call paths, state and error behavior; preserve program/evidence boundaries. The complete 158-line source is preserved with SHA-256 9cd0fca967cff6133d8c4708c05f683f9fb6b55f0b46b4a8315620a5fb5a6361. 4 extracted function/declaration entries are separately indexed, including exact Python bodies and guards where available.

THEN

Follow the exact returned values, diagnostics and state effects in the preserved implementation. Module inclusion and syntax extraction are documentary coverage; they do not prove every branch or cross-host behavior.

CURRENT EVIDENCE

Fresh related Python suites and per-profile/water results are included. Native C#/.NET, C++/Rust/R compilation and physical devices were not executed in this environment.

REMAINING REQUIREMENT

Map unverified branches and native-host behavior to source-specific evidence before assigning a complete verification verdict.

SOURCE REFERENCES

bangel:language/python/src/bangel/formatter.py

TR-MOD-BANGEL-A7FEDEE97F / Bangel / language/python/src/bangel/frontend/__init__.py

IF

This Runtime / supporting core module is imported or its declared interface is invoked. This module contains shared declarations or constants; the complete source is retained.

HOW

Use the complete terminology-edited module and its declared types, call paths, state and error behavior; preserve program/evidence boundaries. The complete 36-line source is preserved with SHA-256 8d2df6895ecc4204fc144e834008c4d29b59c2c2b624bc24fc626a586dc9375f. 0 extracted function/declaration entries are separately indexed, including exact Python bodies and guards where available.

THEN

Follow the exact returned values, diagnostics and state effects in the preserved implementation. Module inclusion and syntax extraction are documentary coverage; they do not prove every branch or cross-host behavior.

CURRENT EVIDENCE

Fresh related Python suites and per-profile/water results are included. Native C#/.NET, C++/Rust/R compilation and physical devices were not executed in this environment.

REMAINING REQUIREMENT

Map unverified branches and native-host behavior to source-specific evidence before assigning a complete verification verdict.

SOURCE REFERENCES

bangel:language/python/src/bangel/frontend/__init__.py

TR-MOD-BANGEL-FF02107D45 / Bangel / language/python/src/bangel/frontend/ast.py

IF

This Runtime / supporting core module is imported or its declared interface is invoked. Declared surface includes: `_encode(value: Any); to_dict(self); text(self)`

HOW

Use the complete terminology-edited module and its declared types, call paths, state and error behavior; preserve program/evidence boundaries. The complete 469-line source is preserved with SHA-256 5f7accd99d007a6a67d2f3fcd5452a8825fc3effeef73ffd544cff996a083315. 3 extracted function/declaration entries are separately indexed, including exact Python bodies and guards where available.

THEN

Follow the exact returned values, diagnostics and state effects in the preserved implementation. Module inclusion and syntax extraction are documentary coverage; they do not prove every branch or cross-host behavior.

CURRENT EVIDENCE

Fresh related Python suites and per-profile/water results are included. Native C#/.NET, C++/Rust/R compilation and physical devices were not executed in this environment.

REMAINING REQUIREMENT

Map unverified branches and native-host behavior to source-specific evidence before assigning a complete verification verdict.

SOURCE REFERENCES

bangel:language/python/src/bangel/frontend/ast.py

TR-MOD-BANGEL-9864199BB8 / Bangel / language/python/src/bangel/frontend/lexer.py

IF

This Elsa / source module is imported or its declared interface is invoked. Declared surface includes:
_normalized_text(source: str); _without_comment(line: str); _string_token(line: str, start: int, line_number: int);
lex(source: str)

HOW

Preserve lexical, syntactic, binding, type and lowering behavior before producing a validated representation. The complete terminology-edited 272-line source is preserved with SHA-256
dce2b6380313631ac51fb7b66ba8b88bbb1f1297d23af94dcc27504ecccda7d. 4 extracted
function/declaration entries are separately indexed, including exact Python bodies and guards where
available.

THEN

Follow the exact returned values, diagnostics and state effects in the preserved implementation. Module
inclusion and syntax extraction are documentary coverage; they do not prove every branch or cross-host
behavior.

CURRENT EVIDENCE

Fresh related Python suites and per-profile/water results are included. Native C#/.NET, C++/Rust/R
compilation and physical devices were not executed in this environment.

REMAINING REQUIREMENT

Map unverified branches and native-host behavior to source-specific evidence before assigning a complete verification verdict.

SOURCE REFERENCES

bangel:language/python/src/bangel/frontend/lexer.py

TR-MOD-BANGEL-06022C980A / Bangel / language/python/src/bangel/frontend/lower.py

IF

This Elsa / source module is imported or its declared interface is invoked. Declared surface includes: typed_ast_mapping(); _span_key(span); _semantic_key(owner: tuple[str, ...], name: str); from_model(cls, model: SemanticModel); type_of(self, node: object)

HOW

Preserve lexical, syntactic, binding, type and lowering behavior before producing a validated representation. The complete terminology-edited 775-line source is preserved with SHA-256 5d6fc9811eecb0c556da868f94d2cd3e1e2471c396474c776c1a66b344df1b0a. 20 extracted function/declaration entries are separately indexed, including exact Python bodies and guards where available.

THEN

Follow the exact returned values, diagnostics and state effects in the preserved implementation. Module inclusion and syntax extraction are documentary coverage; they do not prove every branch or cross-host behavior.

CURRENT EVIDENCE

Fresh related Python suites and per-profile/water results are included. Native C#/.NET, C++/Rust/R compilation and physical devices were not executed in this environment.

REMAINING REQUIREMENT

Map unverified branches and native-host behavior to source-specific evidence before assigning a complete verification verdict.

SOURCE REFERENCES

bangel:language/python/src/bangel/frontend/lower.py

TR-MOD-BANGEL-C7C2377EBD / Bangel / language/python/src/bangel/frontend/parser.py

IF

This Elsa / source module is imported or its declared interface is invoked. Declared surface includes:
__init__(self, tokens: tuple[Token, ...], source_name: str | None); parse(self); _parse_header(self); _effects(self, *, module: bool); _imports(self)

HOW

Preserve lexical, syntactic, binding, type and lowering behavior before producing a validated representation. The complete terminology-edited 1066-line source is preserved with SHA-256 7a12c8054b59162475eddf2ca827a7b7e36d5123cc8c0891c5ac78c7c5b56504. 59 extracted function/declaration entries are separately indexed, including exact Python bodies and guards where available.

THEN

Follow the exact returned values, diagnostics and state effects in the preserved implementation. Module inclusion and syntax extraction are documentary coverage; they do not prove every branch or cross-host behavior.

CURRENT EVIDENCE

Fresh related Python suites and per-profile/water results are included. Native C#/.NET, C++/Rust/R compilation and physical devices were not executed in this environment.

REMAINING REQUIREMENT

Map unverified branches and native-host behavior to source-specific evidence before assigning a complete verification verdict.

SOURCE REFERENCES

bangel:language/python/src/bangel/frontend/parser.py

TR-MOD-BANGEL-C35042085E / Bangel / language/python/src/bangel/frontend/semantics.py

IF

This Elsa / source module is imported or its declared interface is invoked. Declared surface includes: `_diag(code: str, message: str, span: SourceSpan | None, **details: object); to_dict(self); render(self); to_dict(self); to_dict(self)`

HOW

Preserve lexical, syntactic, binding, type and lowering behavior before producing a validated representation. The complete terminology-edited 2895-line source is preserved with SHA-256 `f0587630482b135b9f9ce33c857f4571c8281936ddec79d5d63c05f4f5501ab3`. 106 extracted function/declaration entries are separately indexed, including exact Python bodies and guards where available.

THEN

Follow the exact returned values, diagnostics and state effects in the preserved implementation. Module inclusion and syntax extraction are documentary coverage; they do not prove every branch or cross-host behavior.

CURRENT EVIDENCE

Fresh related Python suites and per-profile/water results are included. Native C#/.NET, C++/Rust/R compilation and physical devices were not executed in this environment.

REMAINING REQUIREMENT

Map unverified branches and native-host behavior to source-specific evidence before assigning a complete verification verdict.

SOURCE REFERENCES

`bangel:language/python/src/bangel/frontend/semantics.py`

TR-MOD-BANGEL-FEC81208B9 / Bangel / language/python/src/bangel/frontend/tokens.py

IF

This Runtime / supporting core module is imported or its declared interface is invoked. Declared surface includes: to_dict(self)

HOW

Use the complete terminology-edited module and its declared types, call paths, state and error behavior; preserve program/evidence boundaries. The complete 44-line source is preserved with SHA-256 8424aef18c8a1bcb0d17fced8c386282ec05294cb1043b4b42dd8ea7890f7c27. 1 extracted function/declaration entries are separately indexed, including exact Python bodies and guards where available.

THEN

Follow the exact returned values, diagnostics and state effects in the preserved implementation. Module inclusion and syntax extraction are documentary coverage; they do not prove every branch or cross-host behavior.

CURRENT EVIDENCE

Fresh related Python suites and per-profile/water results are included. Native C#/.NET, C++/Rust/R compilation and physical devices were not executed in this environment.

REMAINING REQUIREMENT

Map unverified branches and native-host behavior to source-specific evidence before assigning a complete verification verdict.

SOURCE REFERENCES

bangel:language/python/src/bangel/frontend/tokens.py

TR-MOD-BANGEL-0E7BC757FD / Bangel / language/python/src/bangel/gates.py

IF

This Runtime / supporting core module is imported or its declared interface is invoked. Declared surface includes: passkey_preflight_report(*, tests_passed: int, package_root: str | None=None)

HOW

Use the complete terminology-edited module and its declared types, call paths, state and error behavior; preserve program/evidence boundaries. The complete 32-line source is preserved with SHA-256 374cfc4e3db7c43ce06e69a93697a8a711aee68d4f359e1929e2acd6c5522dea. 1 extracted function/declaration entries are separately indexed, including exact Python bodies and guards where available.

THEN

Follow the exact returned values, diagnostics and state effects in the preserved implementation. Module inclusion and syntax extraction are documentary coverage; they do not prove every branch or cross-host behavior.

CURRENT EVIDENCE

Fresh related Python suites and per-profile/water results are included. Native C#/.NET, C++/Rust/R compilation and physical devices were not executed in this environment.

REMAINING REQUIREMENT

Map unverified branches and native-host behavior to source-specific evidence before assigning a complete verification verdict.

SOURCE REFERENCES

bangel:language/python/src/bangel/gates.py

TR-MOD-BANGEL-570D7338F6 / Bangel / language/python/src/bangel/geometry.py

IF

This Numeric / typed values module is imported or its declared interface is invoked. Declared surface includes: `__post_init__(self); to_dict(self); __post_init__(self); to_dict(self); __post_init__(self)`

HOW

Use the exact numeric and dimensional rules of this module; keep typed unknown, signed values and source-specific bounds distinct. The complete terminology-edited 71-line source is preserved with SHA-256 11c0fa2234c5bcc9ee6a49305b0602cd01648dcd0d80f98de2674ffe085a553a. 6 extracted function/declaration entries are separately indexed, including exact Python bodies and guards where available.

THEN

Follow the exact returned values, diagnostics and state effects in the preserved implementation. Module inclusion and syntax extraction are documentary coverage; they do not prove every branch or cross-host behavior.

CURRENT EVIDENCE

Fresh related Python suites and per-profile/water results are included. Native C#/.NET, C++/Rust/R compilation and physical devices were not executed in this environment.

REMAINING REQUIREMENT

Map unverified branches and native-host behavior to source-specific evidence before assigning a complete verification verdict.

SOURCE REFERENCES

bangel:language/python/src/bangel/geometry.py

TR-MOD-BANGEL-D940E65582 / Bangel / language/python/src/bangel/gin.py

IF

This GIN module is imported or its declared interface is invoked. Declared surface includes: `__init__(self, code: str, message: str); _integer(value, name); read_request(path); unique(pairs); nonfinite(value)`

HOW

Preserve interval bounds, clock/evidence identity and typed temporal states; do not infer physical energy or authority from a temporal result. The complete terminology-edited 211-line source is preserved with SHA-256 40a493a4ee666f24c77bf541941b2d744d3a904073842ab0e451559f8c68b226. 8 extracted function/declaration entries are separately indexed, including exact Python bodies and guards where available.

THEN

Follow the exact returned values, diagnostics and state effects in the preserved implementation. Module inclusion and syntax extraction are documentary coverage; they do not prove every branch or cross-host behavior.

CURRENT EVIDENCE

Fresh related Python suites and per-profile/water results are included. Native C#/.NET, C++/Rust/R compilation and physical devices were not executed in this environment.

REMAINING REQUIREMENT

Map unverified branches and native-host behavior to source-specific evidence before assigning a complete verification verdict.

SOURCE REFERENCES

bangel:language/python/src/bangel/gin.py

TR-MOD-BANGEL-FEB1B66C30 / Bangel / language/python/src/bangel/gin_clock.py

IF

This GIN module is imported or its declared interface is invoked. Declared surface includes:
transform_source(transform)

HOW

Preserve interval bounds, clock/evidence identity and typed temporal states; do not infer physical energy or authority from a temporal result. The complete terminology-edited 168-line source is preserved with SHA-256 57dbf450217c43554d1e2a7c3086572256163ca7fd5d109ffd0e468c43459e27. 1 extracted function/declaration entries are separately indexed, including exact Python bodies and guards where available.

THEN

Follow the exact returned values, diagnostics and state effects in the preserved implementation. Module inclusion and syntax extraction are documentary coverage; they do not prove every branch or cross-host behavior.

CURRENT EVIDENCE

Fresh related Python suites and per-profile/water results are included. Native C#/.NET, C++/Rust/R compilation and physical devices were not executed in this environment.

REMAINING REQUIREMENT

Map unverified branches and native-host behavior to source-specific evidence before assigning a complete verification verdict.

SOURCE REFERENCES

bangel:language/python/src/bangel/gin_clock.py

TR-MOD-BANGEL-17DE9A28E1 / Bangel / language/python/src/bangel/gin_models.py

IF

This GIN module is imported or its declared interface is invoked. Declared surface includes: `_shape(value, required, optional=(), *, code='GIN_INPUT_SHAPE');` `_array(value, name);` `_text(value, *, identifier=False, nonempty=True, code='GIN_TEXT_INVALID');` `_instance(kind, fields);` `__init__(self)`

HOW

Preserve interval bounds, clock/evidence identity and typed temporal states; do not infer physical energy or authority from a temporal result. The complete terminology-edited 296-line source is preserved with SHA-256 7c6e780d8070f80c49da4ffb4679cb6c85b4d0c7c654bda9f22b27e82eb55d05. 17 extracted function/declaration entries are separately indexed, including exact Python bodies and guards where available.

THEN

Follow the exact returned values, diagnostics and state effects in the preserved implementation. Module inclusion and syntax extraction are documentary coverage; they do not prove every branch or cross-host behavior.

CURRENT EVIDENCE

Fresh related Python suites and per-profile/water results are included. Native C#/.NET, C++/Rust/R compilation and physical devices were not executed in this environment.

REMAINING REQUIREMENT

Map unverified branches and native-host behavior to source-specific evidence before assigning a complete verification verdict.

SOURCE REFERENCES

bangel:language/python/src/bangel/gin_models.py

TR-MOD-BANGEL-AA5883C64A / Bangel / language/python/src/bangel/identity.py

IF

This Runtime / supporting core module is imported or its declared interface is invoked. This module contains shared declarations or constants; the complete source is retained.

HOW

Use the complete terminology-edited module and its declared types, call paths, state and error behavior; preserve program/evidence boundaries. The complete 73-line source is preserved with SHA-256 30c103beaebc6593738612cbb8d502ea1024e7cd070cb800887836ea0116fc0c. 0 extracted function/declaration entries are separately indexed, including exact Python bodies and guards where available.

THEN

Follow the exact returned values, diagnostics and state effects in the preserved implementation. Module inclusion and syntax extraction are documentary coverage; they do not prove every branch or cross-host behavior.

CURRENT EVIDENCE

Fresh related Python suites and per-profile/water results are included. Native C#/.NET, C++/Rust/R compilation and physical devices were not executed in this environment.

REMAINING REQUIREMENT

Map unverified branches and native-host behavior to source-specific evidence before assigning a complete verification verdict.

SOURCE REFERENCES

bangel:language/python/src/bangel/identity.py

TR-MOD-BANGEL-270D96A7CD / Bangel / language/python/src/bangel/inspector.py

IF

This Receipt / evidence module is imported or its declared interface is invoked. Declared surface includes: inspect_receipt(receipt: dict[str, Any]); query_receipt(receipt: dict[str, Any], path: str); compare_receipts(left: dict[str, Any], right: dict[str, Any]); replay_receipt(compilation: dict[str, Any], receipt: dict[str, Any])

HOW

Preserve exact serialization, digest binding, linkage and inspection/replay behavior without promoting integrity metadata into authority. The complete terminology-edited 75-line source is preserved with SHA-256 83327ff6da9f722454b6efb26343d0b2343ce25a4a29dcefeb9080ad08af5421. 4 extracted function/declaration entries are separately indexed, including exact Python bodies and guards where available.

THEN

Follow the exact returned values, diagnostics and state effects in the preserved implementation. Module inclusion and syntax extraction are documentary coverage; they do not prove every branch or cross-host behavior.

CURRENT EVIDENCE

Fresh related Python suites and per-profile/water results are included. Native C#/.NET, C++/Rust/R compilation and physical devices were not executed in this environment.

REMAINING REQUIREMENT

Map unverified branches and native-host behavior to source-specific evidence before assigning a complete verification verdict.

SOURCE REFERENCES

bangel:language/python/src/bangel/inspector.py

TR-MOD-BANGEL-784843E7F3 / Bangel / language/python/src/bangel/ir.py

IF

This JP / admission module is imported or its declared interface is invoked. Declared surface includes: `_verify_provenance(value: Any, *, span: Any, source_name: str); _verify_expression(expression: Any, *, strict: bool=False, source_name: str=""); _verify_instruction(instruction: Any, *, strict: bool, source_name: str); verify_nested(value: Any); to_dict(self)`

HOW

Preserve the representation schema, value types, provenance, registry and independent admission checks encoded here. The complete terminology-edited 437-line source is preserved with SHA-256 `fc4810a726cb40d7dcbb39e1e21b25947a386c15db8ec8c166604ab45b0e15e6`. 12 extracted function/declaration entries are separately indexed, including exact Python bodies and guards where available.

THEN

Follow the exact returned values, diagnostics and state effects in the preserved implementation. Module inclusion and syntax extraction are documentary coverage; they do not prove every branch or cross-host behavior.

CURRENT EVIDENCE

Fresh related Python suites and per-profile/water results are included. Native C#/.NET, C++/Rust/R compilation and physical devices were not executed in this environment.

REMAINING REQUIREMENT

Map unverified branches and native-host behavior to source-specific evidence before assigning a complete verification verdict.

SOURCE REFERENCES

bangel:language/python/src/bangel/ir.py

TR-MOD-BANGEL-8367890CEA / Bangel / language/python/src/bangel/ir_contract.py

IF

This JP / admission module is imported or its declared interface is invoked. Declared surface includes:
fail(code: str, message: str); check(condition: bool, code: str, message: str); exact(value: Any, keys: set[str], code='IR_SCHEMA'); text(value: Any, pattern: str | None=None, *, nullable=False, code='IR_SCHEMA'); integer(value: Any, low=0, high=MAX_POSITION, code='IR_SCHEMA')

HOW

Preserve the representation schema, value types, provenance, registry and independent admission checks encoded here. The complete terminology-edited 480-line source is preserved with SHA-256 3e2aa8ab4476678543aac22333e6910d71d26bcbbdf23db5fe96cfa2772be5f7. 24 extracted function/declaration entries are separately indexed, including exact Python bodies and guards where available.

THEN

Follow the exact returned values, diagnostics and state effects in the preserved implementation. Module inclusion and syntax extraction are documentary coverage; they do not prove every branch or cross-host behavior.

CURRENT EVIDENCE

Fresh related Python suites and per-profile/water results are included. Native C#/.NET, C++/Rust/R compilation and physical devices were not executed in this environment.

REMAINING REQUIREMENT

Map unverified branches and native-host behavior to source-specific evidence before assigning a complete verification verdict.

SOURCE REFERENCES

bangel:language/python/src/bangel/ir_contract.py

TR-MOD-BANGEL-AA77B0CE70 / Bangel / language/python/src/bangel/ir_crossfields.py

IF

This JP / admission module is imported or its declared interface is invoked. Declared surface includes: `_require(condition: bool, message: str); _fits(actual: dict, expected: dict); _unique(items: list, label: str); _position(value); _source_order(items, label)`

HOW

Preserve the representation schema, value types, provenance, registry and independent admission checks encoded here. The complete terminology-edited 598-line source is preserved with SHA-256 102f1a961b07bd1e939e431cdbdd521b47fb818d8afaa4bdb311840439df033e. 23 extracted function/declaration entries are separately indexed, including exact Python bodies and guards where available.

THEN

Follow the exact returned values, diagnostics and state effects in the preserved implementation. Module inclusion and syntax extraction are documentary coverage; they do not prove every branch or cross-host behavior.

CURRENT EVIDENCE

Fresh related Python suites and per-profile/water results are included. Native C#/.NET, C++/Rust/R compilation and physical devices were not executed in this environment.

REMAINING REQUIREMENT

Map unverified branches and native-host behavior to source-specific evidence before assigning a complete verification verdict.

SOURCE REFERENCES

bangel:language/python/src/bangel/ir_crossfields.py

TR-MOD-BANGEL-64EDB64C3A / Bangel / language/python/src/bangel/ir_registry.py

IF

This JP / admission module is imported or its declared interface is invoked. Declared surface includes:
to_dict(self); _failure(diagnostic: str, behavior: str); _instruction(kind: str, *, lanes: tuple[str, ...], operands: tuple[str, ...], result_type: str, strict_effects: tuple[tuple[str, ...], ...]=(('pure',)), details: tuple[tuple[str, ...], ...]=(((),), expression: str='required', name: str | dict[str, str]='required', strict_type: str='required', invariants: tuple[str, ...], failures: tuple[dict[str, str], ...], legacy: bool=False); _value(kind: str, *, lanes: tuple[str, ...], operands: tuple[str, ...], minimum: int, maximum: int | None, result_type: str, value_field: str, type_kinds: ...
[continued in source]

HOW

Preserve the representation schema, value types, provenance, registry and independent admission checks encoded here. The complete terminology-edited 771-line source is preserved with SHA-256 b6820cfc7e8a852fbf55ec5d825ef8d8ca6d868a1ac0a2bb58b5e6737c66e1ec. 12 extracted function/declaration entries are separately indexed, including exact Python bodies and guards where available.

THEN

Follow the exact returned values, diagnostics and state effects in the preserved implementation. Module inclusion and syntax extraction are documentary coverage; they do not prove every branch or cross-host behavior.

CURRENT EVIDENCE

Fresh related Python suites and per-profile/water results are included. Native C#/.NET, C++/Rust/R compilation and physical devices were not executed in this environment.

REMAINING REQUIREMENT

Map unverified branches and native-host behavior to source-specific evidence before assigning a complete verification verdict.

SOURCE REFERENCES

bangel:language/python/src/bangel/ir_registry.py

TR-MOD-BANGEL-1E910AAF93 / Bangel / language/python/src/bangel/ir_types.py

IF

This JP / admission module is imported or its declared interface is invoked. Declared surface includes: `_fail(message, code='IR_TYPE');` `_check(condition, message, code='IR_TYPE');` `_keys(value, required, optional=());` `unit_work_budget(limit=MAX_UNIT_TOTAL_WORK);` `_charge_unit_work(work)`

HOW

Preserve the representation schema, value types, provenance, registry and independent admission checks encoded here. The complete terminology-edited 541-line source is preserved with SHA-256 120540f65e500825e97f0468f7d0605d702ebec6bf124ae08d35382ae98ac761. 28 extracted function/declaration entries are separately indexed, including exact Python bodies and guards where available.

THEN

Follow the exact returned values, diagnostics and state effects in the preserved implementation. Module inclusion and syntax extraction are documentary coverage; they do not prove every branch or cross-host behavior.

CURRENT EVIDENCE

Fresh related Python suites and per-profile/water results are included. Native C#/.NET, C++/Rust/R compilation and physical devices were not executed in this environment.

REMAINING REQUIREMENT

Map unverified branches and native-host behavior to source-specific evidence before assigning a complete verification verdict.

SOURCE REFERENCES

bangel:language/python/src/bangel/ir_types.py

TR-MOD-BANGEL-28C5F372A0 / Bangel / language/python/src/bangel/legacy.py

IF

This Runtime / supporting core module is imported or its declared interface is invoked. Declared surface includes: parse_legacy_01(source: str)

HOW

Use the complete terminology-edited module and its declared types, call paths, state and error behavior; preserve program/evidence boundaries. The complete 50-line source is preserved with SHA-256 3f93881bd05900a63b40eeb3757443217e7af9794e4c755ba5e3aa20000b5b5a. 1 extracted function/declaration entries are separately indexed, including exact Python bodies and guards where available.

THEN

Follow the exact returned values, diagnostics and state effects in the preserved implementation. Module inclusion and syntax extraction are documentary coverage; they do not prove every branch or cross-host behavior.

CURRENT EVIDENCE

Fresh related Python suites and per-profile/water results are included. Native C#/.NET, C++/Rust/R compilation and physical devices were not executed in this environment.

REMAINING REQUIREMENT

Map unverified branches and native-host behavior to source-specific evidence before assigning a complete verification verdict.

SOURCE REFERENCES

bangel:language/python/src/bangel/legacy.py

TR-MOD-BANGEL-87A33E3912 / Bangel / language/python/src/bangel/lexer.py

IF

This Elsa / source module is imported or its declared interface is invoked. Declared surface includes:
lex_expression(text: str, line: int, start_column: int=1)

HOW

Preserve lexical, syntactic, binding, type and lowering behavior before producing a validated representation. The complete terminology-edited 45-line source is preserved with SHA-256 0a289c1fe38ed0d88fba53c6513b4d9c26994c1ba1ba22cb4d230e9a88f05120. 1 extracted function/declaration entries are separately indexed, including exact Python bodies and guards where available.

THEN

Follow the exact returned values, diagnostics and state effects in the preserved implementation. Module inclusion and syntax extraction are documentary coverage; they do not prove every branch or cross-host behavior.

CURRENT EVIDENCE

Fresh related Python suites and per-profile/water results are included. Native C#/.NET, C++/Rust/R compilation and physical devices were not executed in this environment.

REMAINING REQUIREMENT

Map unverified branches and native-host behavior to source-specific evidence before assigning a complete verification verdict.

SOURCE REFERENCES

bangel:language/python/src/bangel/lexer.py

TR-MOD-BANGEL-83A76C6170 / Bangel / language/python/src/bangel/linter.py

IF

This Runtime / supporting core module is imported or its declared interface is invoked. Declared surface includes: `_finding(code: str, message: str, span: SourceSpan | None, severity: str); lint_source(source_name: str, source: str)`

HOW

Use the complete terminology-edited module and its declared types, call paths, state and error behavior; preserve program/evidence boundaries. The complete 43-line source is preserved with SHA-256 0c5a6c34ce4c6b3f351c76c194c61b60d889d3d11578b175ac1f0b3e6b4e2119. 2 extracted function/declaration entries are separately indexed, including exact Python bodies and guards where available.

THEN

Follow the exact returned values, diagnostics and state effects in the preserved implementation. Module inclusion and syntax extraction are documentary coverage; they do not prove every branch or cross-host behavior.

CURRENT EVIDENCE

Fresh related Python suites and per-profile/water results are included. Native C#/.NET, C++/Rust/R compilation and physical devices were not executed in this environment.

REMAINING REQUIREMENT

Map unverified branches and native-host behavior to source-specific evidence before assigning a complete verification verdict.

SOURCE REFERENCES

bangel:language/python/src/bangel/linter.py

TR-MOD-BANGEL-61C1E32918 / Bangel / language/python/src/bangel/numerics.py

IF

This Numeric / typed values module is imported or its declared interface is invoked. Declared surface includes: `_series(values: Iterable[Quantity], name: str, minimum: int=1); vector_add(left: Iterable[Quantity], right: Iterable[Quantity]); finite_difference(xs: Iterable[Quantity], ys: Iterable[Quantity]); trapezoid(xs: Iterable[Quantity], ys: Iterable[Quantity]); covariance(left: Iterable[Quantity], right: Iterable[Quantity])`

HOW

Use the exact numeric and dimensional rules of this module; keep typed unknown, signed values and source-specific bounds distinct. The complete terminology-edited 64-line source is preserved with SHA-256 52bc4b602879fce4b4d00ddcdf6ef0cea456c2171d0a0fb1e178009df9430cd8. 5 extracted function/declaration entries are separately indexed, including exact Python bodies and guards where available.

THEN

Follow the exact returned values, diagnostics and state effects in the preserved implementation. Module inclusion and syntax extraction are documentary coverage; they do not prove every branch or cross-host behavior.

CURRENT EVIDENCE

Fresh related Python suites and per-profile/water results are included. Native C#/.NET, C++/Rust/R compilation and physical devices were not executed in this environment.

REMAINING REQUIREMENT

Map unverified branches and native-host behavior to source-specific evidence before assigning a complete verification verdict.

SOURCE REFERENCES

bangel:language/python/src/bangel/numerics.py

TR-MOD-BANGEL-1CF454AD9C / Bangel / language/python/src/bangel/parser.py

IF

This Elsa / source module is imported or its declared interface is invoked. Declared surface includes:
_statement(line: SourceLine); parse_program(source: str)

HOW

Preserve lexical, syntactic, binding, type and lowering behavior before producing a validated representation. The complete terminology-edited 151-line source is preserved with SHA-256 fdb6c6e4f5b6fa707ad6a2a5dddc071756780e3e26d1103d09b189fb3818b2d3. 2 extracted function/declaration entries are separately indexed, including exact Python bodies and guards where available.

THEN

Follow the exact returned values, diagnostics and state effects in the preserved implementation. Module inclusion and syntax extraction are documentary coverage; they do not prove every branch or cross-host behavior.

CURRENT EVIDENCE

Fresh related Python suites and per-profile/water results are included. Native C#/.NET, C++/Rust/R compilation and physical devices were not executed in this environment.

REMAINING REQUIREMENT

Map unverified branches and native-host behavior to source-specific evidence before assigning a complete verification verdict.

SOURCE REFERENCES

bangel:language/python/src/bangel/parser.py

TR-MOD-BANGEL-4783113695 / Bangel / language/python/src/bangel/project.py

IF

This Runtime / supporting core module is imported or its declared interface is invoked. Declared surface includes: to_dict(self); verify(self); build(self, manifest: dict[str, Any], directory: Path); build_file(self, manifest_path: Path)

HOW

Use the complete terminology-edited module and its declared types, call paths, state and error behavior; preserve program/evidence boundaries. The complete 87-line source is preserved with SHA-256 6bf86cbff03636f3bde4ed9a2e9d004a51c7befd669d30ef30e552220c33fc0a. 4 extracted function/declaration entries are separately indexed, including exact Python bodies and guards where available.

THEN

Follow the exact returned values, diagnostics and state effects in the preserved implementation. Module inclusion and syntax extraction are documentary coverage; they do not prove every branch or cross-host behavior.

CURRENT EVIDENCE

Fresh related Python suites and per-profile/water results are included. Native C#/.NET, C++/Rust/R compilation and physical devices were not executed in this environment.

REMAINING REQUIREMENT

Map unverified branches and native-host behavior to source-specific evidence before assigning a complete verification verdict.

SOURCE REFERENCES

bangel:language/python/src/bangel/project.py

TR-MOD-BANGEL-4857E51294 / Bangel / language/python/src/bangel/receipt_contract.py

IF

This Receipt / evidence module is imported or its declared interface is invoked. Declared surface includes: `check(condition, message, code='RECEIPT_SHAPE');` `exact(value, keys, code='RECEIPT_SHAPE');` `text(value, pattern=None, *, empty=False, code='RECEIPT_SHAPE');` `integer(value, lower=0, upper=2 ** 63 - 1, code='RECEIPT_LIMITS');` `preflight(root)`

HOW

Preserve exact serialization, digest binding, linkage and inspection/replay behavior without promoting integrity metadata into authority. The complete terminology-edited 311-line source is preserved with SHA-256 3db7064ad4d9ef9d64ca2f1e079c82f7d371c6882cc54255eab6e88df1a71c84. 12 extracted function/declaration entries are separately indexed, including exact Python bodies and guards where available.

THEN

Follow the exact returned values, diagnostics and state effects in the preserved implementation. Module inclusion and syntax extraction are documentary coverage; they do not prove every branch or cross-host behavior.

CURRENT EVIDENCE

Fresh related Python suites and per-profile/water results are included. Native C#/.NET, C++/Rust/R compilation and physical devices were not executed in this environment.

REMAINING REQUIREMENT

Map unverified branches and native-host behavior to source-specific evidence before assigning a complete verification verdict.

SOURCE REFERENCES

bangel:language/python/src/bangel/receipt_contract.py

TR-MOD-BANGEL-07550ED0EC / Bangel / language/python/src/bangel/receipts.py

IF

This Receipt / evidence module is imported or its declared interface is invoked. Declared surface includes: bind_receipt(basis: dict[str, Any]); verify_receipt(receipt: dict[str, Any]); receipt_from_bytes(data: bytes); object_pairs(pairs); forbidden_number(_)

HOW

Preserve exact serialization, digest binding, linkage and inspection/replay behavior without promoting integrity metadata into authority. The complete terminology-edited 71-line source is preserved with SHA-256 e9bd994e21831dc8290b3a0e62850986ba0b731d59b2fce25fbd3bb4cac3557f. 5 extracted function/declaration entries are separately indexed, including exact Python bodies and guards where available.

THEN

Follow the exact returned values, diagnostics and state effects in the preserved implementation. Module inclusion and syntax extraction are documentary coverage; they do not prove every branch or cross-host behavior.

CURRENT EVIDENCE

Fresh related Python suites and per-profile/water results are included. Native C#/.NET, C++/Rust/R compilation and physical devices were not executed in this environment.

REMAINING REQUIREMENT

Map unverified branches and native-host behavior to source-specific evidence before assigning a complete verification verdict.

SOURCE REFERENCES

bangel:language/python/src/bangel/receipts.py

TR-MOD-BANGEL-ACD6A79DDE / Bangel / language/python/src/bangel/runtime.py

IF

This Runtime / supporting core module is imported or its declared interface is invoked. Declared surface includes: to_dict(self); verify(self); __init__(self, *, instruction_limit: int=4096, event_limit: int=8192, function_depth: int=64, evaluation_limit: int=16384, allocation_limit: int=1000000, output_limit: int=1048576, receipt_limit: int=4194304); execute(self, compilation: dict[str, Any], *, cancelled: Callable[[], bool] | None=None); encode_value(value: Any)

HOW

Use the complete terminology-edited module and its declared types, call paths, state and error behavior; preserve program/evidence boundaries. The complete 297-line source is preserved with SHA-256 7bb8853d17fd02064ad52368b7a56fe7c2d8fffb816b37da5b26b696439ce6d7. 7 extracted function/declaration entries are separately indexed, including exact Python bodies and guards where available.

THEN

Follow the exact returned values, diagnostics and state effects in the preserved implementation. Module inclusion and syntax extraction are documentary coverage; they do not prove every branch or cross-host behavior.

CURRENT EVIDENCE

Fresh related Python suites and per-profile/water results are included. Native C#/.NET, C++/Rust/R compilation and physical devices were not executed in this environment.

REMAINING REQUIREMENT

Map unverified branches and native-host behavior to source-specific evidence before assigning a complete verification verdict.

SOURCE REFERENCES

bangel:language/python/src/bangel/runtime.py

TR-MOD-BANGEL-5C93415BC3 / Bangel / language/python/src/bangel/scheduler.py

IF

This Runtime / supporting core module is imported or its declared interface is invoked. Declared surface includes: `__init__(self, *, max_jobs: int=256, runtime: JoannaRuntime | None=None); run(self, jobs: Iterable[ScheduledJob], *, cancelled: Callable[[], bool] | None=None)`

HOW

Use the complete terminology-edited module and its declared types, call paths, state and error behavior; preserve program/evidence boundaries. The complete 156-line source is preserved with SHA-256 `d8f06e0e522f794ff021549a60a44f992f2c463d9b16330e719d7e2a15c264fd`. 2 extracted function/declaration entries are separately indexed, including exact Python bodies and guards where available.

THEN

Follow the exact returned values, diagnostics and state effects in the preserved implementation. Module inclusion and syntax extraction are documentary coverage; they do not prove every branch or cross-host behavior.

CURRENT EVIDENCE

Fresh related Python suites and per-profile/water results are included. Native C#/.NET, C++/Rust/R compilation and physical devices were not executed in this environment.

REMAINING REQUIREMENT

Map unverified branches and native-host behavior to source-specific evidence before assigning a complete verification verdict.

SOURCE REFERENCES

bangel:language/python/src/bangel/scheduler.py

TR-MOD-BANGEL-59B668D0CA / Bangel / language/python/src/bangel/semantics.py

IF

This Elsa / source module is imported or its declared interface is invoked. Declared surface includes: `_names(expression: Expression); _calls(expression: Expression); analyze(program: Program)`

HOW

Preserve lexical, syntactic, binding, type and lowering behavior before producing a validated representation. The complete terminology-edited 114-line source is preserved with SHA-256 `ffa40408f6da15e3021fa2270c1d992a41229799d54f2eb75b83c9702b7ae20a`. 3 extracted function/declaration entries are separately indexed, including exact Python bodies and guards where available.

THEN

Follow the exact returned values, diagnostics and state effects in the preserved implementation. Module inclusion and syntax extraction are documentary coverage; they do not prove every branch or cross-host behavior.

CURRENT EVIDENCE

Fresh related Python suites and per-profile/water results are included. Native C#/.NET, C++/Rust/R compilation and physical devices were not executed in this environment.

REMAINING REQUIREMENT

Map unverified branches and native-host behavior to source-specific evidence before assigning a complete verification verdict.

SOURCE REFERENCES

`bangel:language/python/src/bangel/semantics.py`

TR-MOD-BANGEL-A789D581A8 / Bangel / language/python/src/bangel/source.py

IF

This Runtime / supporting core module is imported or its declared interface is invoked. Declared surface includes: `normalize_source(source: str); logical_lines(source: str)`

HOW

Use the complete terminology-edited module and its declared types, call paths, state and error behavior; preserve program/evidence boundaries. The complete 54-line source is preserved with SHA-256 `e8b3264372b13e3faa03faf9744cad70cfa1d4778836146b4e913f43a8cc7071`. 2 extracted function/declaration entries are separately indexed, including exact Python bodies and guards where available.

THEN

Follow the exact returned values, diagnostics and state effects in the preserved implementation. Module inclusion and syntax extraction are documentary coverage; they do not prove every branch or cross-host behavior.

CURRENT EVIDENCE

Fresh related Python suites and per-profile/water results are included. Native C#/.NET, C++/Rust/R compilation and physical devices were not executed in this environment.

REMAINING REQUIREMENT

Map unverified branches and native-host behavior to source-specific evidence before assigning a complete verification verdict.

SOURCE REFERENCES

`bangel:language/python/src/bangel/source.py`

TR-MOD-BANGEL-FC6A7C24C7 / Bangel / language/python/src/bangel/state.py

IF

This Runtime / supporting core module is imported or its declared interface is invoked. Declared surface includes: enter(self, stage: Stage, instruction: int | None, action: str); complete(self)

HOW

Use the complete terminology-edited module and its declared types, call paths, state and error behavior; preserve program/evidence boundaries. The complete 59-line source is preserved with SHA-256 514a3d408c1e5ea4585a23ab3e8bb6f20dddb35f50cecf510b5408761154a76e. 2 extracted function/declaration entries are separately indexed, including exact Python bodies and guards where available.

THEN

Follow the exact returned values, diagnostics and state effects in the preserved implementation. Module inclusion and syntax extraction are documentary coverage; they do not prove every branch or cross-host behavior.

CURRENT EVIDENCE

Fresh related Python suites and per-profile/water results are included. Native C#/.NET, C++/Rust/R compilation and physical devices were not executed in this environment.

REMAINING REQUIREMENT

Map unverified branches and native-host behavior to source-specific evidence before assigning a complete verification verdict.

SOURCE REFERENCES

bangel:language/python/src/bangel/state.py

TR-MOD-BANGEL-8AB0498964 / Bangel / language/python/src/bangel/strict_runtime.py

IF

This Runtime / supporting core module is imported or its declared interface is invoked. Declared surface includes: `get(self, name: str); set(self, name: str, value: Any); _underlying(value_type); _unknown(value_type, values); _decimal_text(value: Decimal)`

HOW

Use the complete terminology-edited module and its declared types, call paths, state and error behavior; preserve program/evidence boundaries. The complete 584-line source is preserved with SHA-256 `f791522e9f7a112d3dd1af08f3a522ea5958901771b114cdd27c30bd02ca3255`. 23 extracted function/declaration entries are separately indexed, including exact Python bodies and guards where available.

THEN

Follow the exact returned values, diagnostics and state effects in the preserved implementation. Module inclusion and syntax extraction are documentary coverage; they do not prove every branch or cross-host behavior.

CURRENT EVIDENCE

Fresh related Python suites and per-profile/water results are included. Native C#/.NET, C++/Rust/R compilation and physical devices were not executed in this environment.

REMAINING REQUIREMENT

Map unverified branches and native-host behavior to source-specific evidence before assigning a complete verification verdict.

SOURCE REFERENCES

`bangel:language/python/src/bangel/strict_runtime.py`

TR-MOD-BANGEL-817CBE552A / Bangel / language/python/src/bangel/tokens.py

IF

This Runtime / supporting core module is imported or its declared interface is invoked. This module contains shared declarations or constants; the complete source is retained.

HOW

Use the complete terminology-edited module and its declared types, call paths, state and error behavior; preserve program/evidence boundaries. The complete 26-line source is preserved with SHA-256 de69106936311c4d0d828f3a6fa7e90220832bf49fd1ca4870dfc3a0d9d0a054. 0 extracted function/declaration entries are separately indexed, including exact Python bodies and guards where available.

THEN

Follow the exact returned values, diagnostics and state effects in the preserved implementation. Module inclusion and syntax extraction are documentary coverage; they do not prove every branch or cross-host behavior.

CURRENT EVIDENCE

Fresh related Python suites and per-profile/water results are included. Native C#/.NET, C++/Rust/R compilation and physical devices were not executed in this environment.

REMAINING REQUIREMENT

Map unverified branches and native-host behavior to source-specific evidence before assigning a complete verification verdict.

SOURCE REFERENCES

bangel:language/python/src/bangel/tokens.py

TR-MOD-BANGEL-00780CBDB9 / Bangel / language/python/src/bangel/topology.py

IF

This Numeric / typed values module is imported or its declared interface is invoked. Declared surface includes: canonical_stage(node: str); __post_init__(self); to_dict(self); add_node(self, node: str); add_edge(self, source: str, target: str, mode: str)

HOW

Use the exact numeric and dimensional rules of this module; keep typed unknown, signed values and source-specific bounds distinct. The complete terminology-edited 67-line source is preserved with SHA-256 79573438fa84903045c7d6256155af8d820f68b37ecae3ba3096f62af374bd5b. 6 extracted function/declaration entries are separately indexed, including exact Python bodies and guards where available.

THEN

Follow the exact returned values, diagnostics and state effects in the preserved implementation. Module inclusion and syntax extraction are documentary coverage; they do not prove every branch or cross-host behavior.

CURRENT EVIDENCE

Fresh related Python suites and per-profile/water results are included. Native C#/.NET, C++/Rust/R compilation and physical devices were not executed in this environment.

REMAINING REQUIREMENT

Map unverified branches and native-host behavior to source-specific evidence before assigning a complete verification verdict.

SOURCE REFERENCES

bangel:language/python/src/bangel/topology.py

TR-MOD-BANGEL-A7CB4D2CB7 / Bangel / language/python/src/bangel/units.py

IF

This Numeric / typed values module is imported or its declared interface is invoked. Declared surface includes: require_unit(symbol: str); combine_dimensions(left: Dimension, right: Dimension, sign: int); dimension_text(dimension: Dimension)

HOW

Use the exact numeric and dimensional rules of this module; keep typed unknown, signed values and source-specific bounds distinct. The complete terminology-edited 59-line source is preserved with SHA-256 624b47631a708b7af681cbbb13e95bd45f81c1da224618bf5f3578c6f1ed7aa9. 3 extracted function/declaration entries are separately indexed, including exact Python bodies and guards where available.

THEN

Follow the exact returned values, diagnostics and state effects in the preserved implementation. Module inclusion and syntax extraction are documentary coverage; they do not prove every branch or cross-host behavior.

CURRENT EVIDENCE

Fresh related Python suites and per-profile/water results are included. Native C#/.NET, C++/Rust/R compilation and physical devices were not executed in this environment.

REMAINING REQUIREMENT

Map unverified branches and native-host behavior to source-specific evidence before assigning a complete verification verdict.

SOURCE REFERENCES

bangel:language/python/src/bangel/units.py

TR-MOD-BANGEL-F3BBF177F5 / Bangel / language/python/src/bangel/values.py

IF

This Numeric / typed values module is imported or its declared interface is invoked. Declared surface includes: `__post_init__(self); known(cls, magnitude: Decimal, unit_symbol: str='1'); unknown(cls, unit_symbol: str='1'); mass_delta(cls, magnitude: Decimal, unit_symbol: str='mg'); is_unknown(self)`

HOW

Use the exact numeric and dimensional rules of this module; keep typed unknown, signed values and source-specific bounds distinct. The complete terminology-edited 183-line source is preserved with SHA-256 `b9169eb0a6ffc95881ff1803417cbd2a77fbc817549d02df10641670e91ee8e7`. 14 extracted function/declaration entries are separately indexed, including exact Python bodies and guards where available.

THEN

Follow the exact returned values, diagnostics and state effects in the preserved implementation. Module inclusion and syntax extraction are documentary coverage; they do not prove every branch or cross-host behavior.

CURRENT EVIDENCE

Fresh related Python suites and per-profile/water results are included. Native C#/.NET, C++/Rust/R compilation and physical devices were not executed in this environment.

REMAINING REQUIREMENT

Map unverified branches and native-host behavior to source-specific evidence before assigning a complete verification verdict.

SOURCE REFERENCES

bangel:language/python/src/bangel/values.py

TR-MOD-BANGEL-C2BEA4B440 / Bangel / papers/python/src/bangel_papers/__init__.py

IF

This Runtime / supporting core module is imported or its declared interface is invoked. This module contains shared declarations or constants; the complete source is retained.

HOW

Use the complete terminology-edited module and its declared types, call paths, state and error behavior; preserve program/evidence boundaries. The complete 5-line source is preserved with SHA-256 82908bdcecc09b9e837d7bec78f338b11dc942faa50db92cffabb1379cc88f82. 0 extracted function/declaration entries are separately indexed, including exact Python bodies and guards where available.

THEN

Follow the exact returned values, diagnostics and state effects in the preserved implementation. Module inclusion and syntax extraction are documentary coverage; they do not prove every branch or cross-host behavior.

CURRENT EVIDENCE

Fresh related Python suites and per-profile/water results are included. Native C#/.NET, C++/Rust/R compilation and physical devices were not executed in this environment.

REMAINING REQUIREMENT

Map unverified branches and native-host behavior to source-specific evidence before assigning a complete verification verdict.

SOURCE REFERENCES

bangel:papers/python/src/bangel_papers/__init__.py

TR-MOD-BANGEL-F6C068357C / Bangel / papers/python/src/bangel_papers/__main__.py

IF

This Runtime / supporting core module is imported or its declared interface is invoked. This module contains shared declarations or constants; the complete source is retained.

HOW

Use the complete terminology-edited module and its declared types, call paths, state and error behavior; preserve program/evidence boundaries. The complete 3-line source is preserved with SHA-256 935a1c1166b0c1ea35a82256345000bf2c73ded718d77773bc27a71ecce28f7d. 0 extracted function/declaration entries are separately indexed, including exact Python bodies and guards where available.

THEN

Follow the exact returned values, diagnostics and state effects in the preserved implementation. Module inclusion and syntax extraction are documentary coverage; they do not prove every branch or cross-host behavior.

CURRENT EVIDENCE

Fresh related Python suites and per-profile/water results are included. Native C#/.NET, C++/Rust/R compilation and physical devices were not executed in this environment.

REMAINING REQUIREMENT

Map unverified branches and native-host behavior to source-specific evidence before assigning a complete verification verdict.

SOURCE REFERENCES

bangel:papers/python/src/bangel_papers/__main__.py

TR-MOD-BANGEL-ACCB2FEA10 / Bangel / papers/python/src/bangel_papers/cli.py

IF

This Runtime / supporting core module is imported or its declared interface is invoked. Declared surface includes: main(argv=None)

HOW

Use the complete terminology-edited module and its declared types, call paths, state and error behavior; preserve program/evidence boundaries. The complete 58-line source is preserved with SHA-256 aa975d206c1e0e786bf58d2dd158c85d8a25d99b684fb1c2acd12ae0c5e09892. 1 extracted function/declaration entries are separately indexed, including exact Python bodies and guards where available.

THEN

Follow the exact returned values, diagnostics and state effects in the preserved implementation. Module inclusion and syntax extraction are documentary coverage; they do not prove every branch or cross-host behavior.

CURRENT EVIDENCE

Fresh related Python suites and per-profile/water results are included. Native C#/.NET, C++/Rust/R compilation and physical devices were not executed in this environment.

REMAINING REQUIREMENT

Map unverified branches and native-host behavior to source-specific evidence before assigning a complete verification verdict.

SOURCE REFERENCES

bangel:papers/python/src/bangel_papers/cli.py

TR-MOD-BANGEL-A07B2B9231 / Bangel / papers/python/src/bangel_papers/host.py

IF

This Runtime / supporting core module is imported or its declared interface is invoked. Declared surface includes: `_color(color)`; `_data(color, name)`; `profiles(color, *, include_documentary=False)`; `records(color)`; `search(color, term, *, exact=False)`

HOW

Use the complete terminology-edited module and its declared types, call paths, state and error behavior; preserve program/evidence boundaries. The complete 134-line source is preserved with SHA-256 `a79e58e7631d77125c6b783f218b99d74a74c1ced9abf8881a978a9e94560ef5`. 13 extracted function/declaration entries are separately indexed, including exact Python bodies and guards where available.

THEN

Follow the exact returned values, diagnostics and state effects in the preserved implementation. Module inclusion and syntax extraction are documentary coverage; they do not prove every branch or cross-host behavior.

CURRENT EVIDENCE

Fresh related Python suites and per-profile/water results are included. Native C#/.NET, C++/Rust/R compilation and physical devices were not executed in this environment.

REMAINING REQUIREMENT

Map unverified branches and native-host behavior to source-specific evidence before assigning a complete verification verdict.

SOURCE REFERENCES

`bangel:papers/python/src/bangel_papers/host.py`

TR-MOD-ASSOCIATED-2D34EB712B / Associated core / adapters/cpp/bangel.hpp

IF

This API / SDK module is imported or its declared interface is invoked. This module contains shared declarations or constants; the complete source is retained.

HOW

Validate the exact host/protocol contract and preserve request, response, value and effect boundaries across this interface. The complete terminology-edited 129-line source is preserved with SHA-256 2eb6361b9214b9be933988575e0dfc8cafbaaed2525969973af76dbb0e0bd42b. 0 extracted function/declaration entries are separately indexed, including exact Python bodies and guards where available.

THEN

Follow the exact returned values, diagnostics and state effects in the preserved implementation. Module inclusion and syntax extraction are documentary coverage; they do not prove every branch or cross-host behavior.

CURRENT EVIDENCE

Fresh related Python suites and per-profile/water results are included. Native C#/.NET, C++/Rust/R compilation and physical devices were not executed in this environment. This source copy received the requested terminology transfer after the earlier suite; the complete renamed host has not been rebuilt here.

REMAINING REQUIREMENT

Map unverified branches and native-host behavior to source-specific evidence before assigning a complete verification verdict.

SOURCE REFERENCES

associated-core:adapters/cpp/bangel.hpp

TR-MOD-ASSOCIATED-347C25035F / Associated core / adapters/r/jpservice/R/service.R

IF

This API / SDK module is imported or its declared interface is invoked. This module contains shared declarations or constants; the complete source is retained.

HOW

Validate the exact host/protocol contract and preserve request, response, value and effect boundaries across this interface. The complete terminology-edited 37-line source is preserved with SHA-256 eb6150f24a0f35736408913d39a09e98249992b42d34bf32dc5318c2b75fe5d8. 0 extracted function/declaration entries are separately indexed, including exact Python bodies and guards where available.

THEN

Follow the exact returned values, diagnostics and state effects in the preserved implementation. Module inclusion and syntax extraction are documentary coverage; they do not prove every branch or cross-host behavior.

CURRENT EVIDENCE

Fresh related Python suites and per-profile/water results are included. Native C#/.NET, C++/Rust/R compilation and physical devices were not executed in this environment. This source copy received the requested terminology transfer after the earlier suite; the complete renamed host has not been rebuilt here.

REMAINING REQUIREMENT

Map unverified branches and native-host behavior to source-specific evidence before assigning a complete verification verdict.

SOURCE REFERENCES

associated-core:adapters/r/jpservice/R/service.R

TR-MOD-ASSOCIATED-7CC1A116E2 / Associated core / adapters/r/jpservice/src/bangel.h

IF

This API / SDK module is imported or its declared interface is invoked. This module contains shared declarations or constants; the complete source is retained.

HOW

Validate the exact host/protocol contract and preserve request, response, value and effect boundaries across this interface. The complete terminology-edited 129-line source is preserved with SHA-256 6cc39d5845ce2406da9adb494154bf0a45e83e6c0c608778ac3e70cdf7a24189. 0 extracted function/declaration entries are separately indexed, including exact Python bodies and guards where available.

THEN

Follow the exact returned values, diagnostics and state effects in the preserved implementation. Module inclusion and syntax extraction are documentary coverage; they do not prove every branch or cross-host behavior.

CURRENT EVIDENCE

Fresh related Python suites and per-profile/water results are included. Native C#/.NET, C++/Rust/R compilation and physical devices were not executed in this environment. This source copy received the requested terminology transfer after the earlier suite; the complete renamed host has not been rebuilt here.

REMAINING REQUIREMENT

Map unverified branches and native-host behavior to source-specific evidence before assigning a complete verification verdict.

SOURCE REFERENCES

associated-core:adapters/r/jpservice/src/bangel.h

TR-MOD-ASSOCIATED-BB58843D4D / Associated core / adapters/r/jpservice/src/service.cpp

IF

This API / SDK module is imported or its declared interface is invoked. This module contains shared declarations or constants; the complete source is retained.

HOW

Validate the exact host/protocol contract and preserve request, response, value and effect boundaries across this interface. The complete terminology-edited 41-line source is preserved with SHA-256 8df71952cbbf3b21840452c9112a00e9241706708f4839d280069ca0fde9d813. 0 extracted function/declaration entries are separately indexed, including exact Python bodies and guards where available.

THEN

Follow the exact returned values, diagnostics and state effects in the preserved implementation. Module inclusion and syntax extraction are documentary coverage; they do not prove every branch or cross-host behavior.

CURRENT EVIDENCE

Fresh related Python suites and per-profile/water results are included. Native C#/.NET, C++/Rust/R compilation and physical devices were not executed in this environment. This source copy received the requested terminology transfer after the earlier suite; the complete renamed host has not been rebuilt here.

REMAINING REQUIREMENT

Map unverified branches and native-host behavior to source-specific evidence before assigning a complete verification verdict.

SOURCE REFERENCES

associated-core:adapters/r/jpservice/src/service.cpp

TR-MOD-ASSOCIATED-B0F7439D7A / Associated core / adapters/rust/src/lib.rs

IF

This API / SDK module is imported or its declared interface is invoked. Declared surface includes: impl fmt::Display for ProtocolError {fn fmt(&self,f:&mut fmt::Formatter<'_>)->fmt::Result {write!(f,"{}",self.0)}}; impl From<std::io::Error> for ProtocolError {fn from(e:std::io::Error)->Self {Self(e.to_string())}}; fn ensure(b:bool,msg:&str)->Result<()> {if b {Ok(())}else{Err(ProtocolError(msg.into()))}}; pub fn object()->Self {Self::Object(BTreeMap::new())}; pub fn get(&self,k:&str)->Result<&Self> {match self {Self::Object(m)=>m.get(k).ok_or_else(||ProtocolError(format!("missing field {k}"))),_=>Err(ProtocolError("expected object".into()))}}

HOW

Validate the exact host/protocol contract and preserve request, response, value and effect boundaries across this interface. The complete terminology-edited 85-line source is preserved with SHA-256 e8ea0c8a47a570b96988027b829f4a42e06e3e640ac178f3effcb7320bab316f. 33 extracted function/declaration entries are separately indexed, including exact Python bodies and guards where available.

THEN

Follow the exact returned values, diagnostics and state effects in the preserved implementation. Module inclusion and syntax extraction are documentary coverage; they do not prove every branch or cross-host behavior.

CURRENT EVIDENCE

Fresh related Python suites and per-profile/water results are included. Native C#/.NET, C++/Rust/R compilation and physical devices were not executed in this environment. This source copy received the requested terminology transfer after the earlier suite; the complete renamed host has not been rebuilt here.

REMAINING REQUIREMENT

Map unverified branches and native-host behavior to source-specific evidence before assigning a complete verification verdict.

SOURCE REFERENCES

associated-core:adapters/rust/src/lib.rs

TR-MOD-ASSOCIATED-F259947A1F / Associated core / adapters/rust/src/main.rs

IF

This API / SDK module is imported or its declared interface is invoked. Declared surface includes: `fn main(){if let Err(e)=run(){eprintln!("{e}");std::process::exit(1);}}; fn run()->Result<(),Box<dyn std::error::Error>>{let argv:Vec<String>=std::env::args().skip(1).collect();for line in io::stdin().lock().lines(){let text=line?;if argv.iter().any(|s|s=="--parse"){println!("{}",bangel_api::parse(text.as_bytes()).is_ok());continue;}let request=bangel_api::parse(text.as_bytes())?;if argv.first().is_some_and(|s|s=="--validate"){let ... [continued in source]`

HOW

Validate the exact host/protocol contract and preserve request, response, value and effect boundaries across this interface. The complete terminology-edited 3-line source is preserved with SHA-256 0bd801b07d7ad59a2a3902668a68f2ca610f1c6288f65e905267cd1475215756. 2 extracted function/declaration entries are separately indexed, including exact Python bodies and guards where available.

THEN

Follow the exact returned values, diagnostics and state effects in the preserved implementation. Module inclusion and syntax extraction are documentary coverage; they do not prove every branch or cross-host behavior.

CURRENT EVIDENCE

Fresh related Python suites and per-profile/water results are included. Native C#/.NET, C++/Rust/R compilation and physical devices were not executed in this environment. This source copy received the requested terminology transfer after the earlier suite; the complete renamed host has not been rebuilt here.

REMAINING REQUIREMENT

Map unverified branches and native-host behavior to source-specific evidence before assigning a complete verification verdict.

SOURCE REFERENCES

associated-core:adapters/rust/src/main.rs

TR-MOD-ASSOCIATED-B302368041 / Associated core / dotnet/Bangel.Admission/AdmissionDecimal.cs

IF

This JP / admission module is imported or its declared interface is invoked. Declared surface includes: private AdmissionDecimal(BigInteger coefficient, long exponent); internal static AdmissionDecimal Zero { get; } = new(BigInteger.Zero, 0);; internal static AdmissionDecimal Parse(string validCanonicalText); public static AdmissionDecimal operator -(AdmissionDecimal value) => Round(-value.coefficient, value.exponent);; public static AdmissionDecimal operator +(AdmissionDecimal left, AdmissionDecimal right) => Add(left, right, false);

HOW

Preserve the representation schema, value types, provenance, registry and independent admission checks encoded here. The complete terminology-edited 189-line source is preserved with SHA-256 0de3f188de1faa40363c9fe655aafd7ad76417f433da712ce2f9a9bfee6436b6. 13 extracted function/declaration entries are separately indexed, including exact Python bodies and guards where available.

THEN

Follow the exact returned values, diagnostics and state effects in the preserved implementation. Module inclusion and syntax extraction are documentary coverage; they do not prove every branch or cross-host behavior.

CURRENT EVIDENCE

Fresh related Python suites and per-profile/water results are included. Native C#/.NET, C++/Rust/R compilation and physical devices were not executed in this environment. This source copy received the requested terminology transfer after the earlier suite; the complete renamed host has not been rebuilt here.

REMAINING REQUIREMENT

Map unverified branches and native-host behavior to source-specific evidence before assigning a complete verification verdict.

SOURCE REFERENCES

associated-core:dotnet/Bangel.Admission/AdmissionDecimal.cs

TR-MOD-ASSOCIATED-5D051F009A / Associated core / dotnet/Bangel.Admission/ContractVerifier.cs

IF

This JP / admission module is imported or its declared interface is invoked. Declared surface includes: internal sealed class ContractVerifier(JsonObject root, CancellationToken cancellationToken); private static readonly HashSet<string> ReferenceKinds = new("let derive var measure evidence parameter capture loop pattern refinement function intrinsic record enum_variant type".Split(' '), StringComparer.Ordinal);; private readonly Dictionary<string, JsonObject> definitions = new(StringComparer.Ordinal);; private readonly Dictionary<string, HashSet<string>> units = new(StringComparer.Ordinal);; private readonly Dictionary<JsonNode, (HashSet<string> References, HashSet<string> Conversions)> ... [continued in source]

HOW

Preserve the representation schema, value types, provenance, registry and independent admission checks encoded here. The complete terminology-edited 282-line source is preserved with SHA-256 ca08f0443270c78a0f9ce5a0349ef08d29574f17606ec0345a4d98318d91586a. 17 extracted function/declaration entries are separately indexed, including exact Python bodies and guards where available.

THEN

Follow the exact returned values, diagnostics and state effects in the preserved implementation. Module inclusion and syntax extraction are documentary coverage; they do not prove every branch or cross-host behavior.

CURRENT EVIDENCE

Fresh related Python suites and per-profile/water results are included. Native C#/.NET, C++/Rust/R compilation and physical devices were not executed in this environment. This source copy received the requested terminology transfer after the earlier suite; the complete renamed host has not been rebuilt here.

REMAINING REQUIREMENT

Map unverified branches and native-host behavior to source-specific evidence before assigning a complete verification verdict.

SOURCE REFERENCES

associated-core:dotnet/Bangel.Admission/ContractVerifier.cs

TR-MOD-ASSOCIATED-9C61773248 / Associated core / dotnet/Bangel.Admission/Contracts.cs

IF

This JP / admission module is imported or its declared interface is invoked. Declared surface includes: public sealed record AdmissionSpan(int Line, int Column = 1, int? EndColumn = null); public JsonElement ToJson() => JsonSerializer.SerializeToElement(new { line = Line, column = Column, end_column = EndColumn }); public AdmissionException(string code, string message, AdmissionSpan? span = null, JsonElement? details = null); internal AdmittedIr(string irJson, string programRoot, string program); internal static void Require(bool condition, string code, string message)

HOW

Preserve the representation schema, value types, provenance, registry and independent admission checks encoded here. The complete terminology-edited 95-line source is preserved with SHA-256 19e6cbcb69034bb54ea7d0ba542ca5ba5fa1a6bd68637e0b65da9e5b6bd74839. 28 extracted function/declaration entries are separately indexed, including exact Python bodies and guards where available.

THEN

Follow the exact returned values, diagnostics and state effects in the preserved implementation. Module inclusion and syntax extraction are documentary coverage; they do not prove every branch or cross-host behavior.

CURRENT EVIDENCE

Fresh related Python suites and per-profile/water results are included. Native C#/.NET, C++/Rust/R compilation and physical devices were not executed in this environment. This source copy received the requested terminology transfer after the earlier suite; the complete renamed host has not been rebuilt here.

REMAINING REQUIREMENT

Map unverified branches and native-host behavior to source-specific evidence before assigning a complete verification verdict.

SOURCE REFERENCES

associated-core:dotnet/Bangel.Admission/Contracts.cs

TR-MOD-ASSOCIATED-4AFB895BDC / Associated core / dotnet/Bangel.Admission/CrossFields.cs

IF

This JP / admission module is imported or its declared interface is invoked. Declared surface includes: internal sealed partial class CrossFields(JsonObject root, CancellationToken cancellationToken); private readonly Dictionary<string, JsonObject> modules = new(StringComparer.Ordinal);; private readonly Dictionary<string, JsonObject> definitions = new(StringComparer.Ordinal);; private readonly Dictionary<string, JsonObject> functions = new(StringComparer.Ordinal);; private readonly Dictionary<string, Dictionary<string, Symbol>> exports = new(StringComparer.Ordinal);

HOW

Preserve the representation schema, value types, provenance, registry and independent admission checks encoded here. The complete terminology-edited 407-line source is preserved with SHA-256 51d35223fb58e17aff263411030e61d62d9d2c0db5d2464b30dd3a47e10a66c8. 31 extracted function/declaration entries are separately indexed, including exact Python bodies and guards where available.

THEN

Follow the exact returned values, diagnostics and state effects in the preserved implementation. Module inclusion and syntax extraction are documentary coverage; they do not prove every branch or cross-host behavior.

CURRENT EVIDENCE

Fresh related Python suites and per-profile/water results are included. Native C#/.NET, C++/Rust/R compilation and physical devices were not executed in this environment. This source copy received the requested terminology transfer after the earlier suite; the complete renamed host has not been rebuilt here.

REMAINING REQUIREMENT

Map unverified branches and native-host behavior to source-specific evidence before assigning a complete verification verdict.

SOURCE REFERENCES

associated-core:dotnet/Bangel.Admission/CrossFields.cs

TR-MOD-ASSOCIATED-F30FD18428 / Associated core / dotnet/Bangel.Admission/IrAdmission.cs

IF

This JP / admission module is imported or its declared interface is invoked. Declared surface includes: public static AdmittedIr Verify(string irJson, CancellationToken cancellationToken = default); private static JsonObject ReadCanonical(string source, CancellationToken cancellationToken); private static void VerifyEnvelopedIdentity(JsonObject root)

HOW

Preserve the representation schema, value types, provenance, registry and independent admission checks encoded here. The complete terminology-edited 140-line source is preserved with SHA-256 e9711077b39ffa8e531430c6d83dbcd3bf0463d4f7ab824a878692254ce9fbaf. 3 extracted function/declaration entries are separately indexed, including exact Python bodies and guards where available.

THEN

Follow the exact returned values, diagnostics and state effects in the preserved implementation. Module inclusion and syntax extraction are documentary coverage; they do not prove every branch or cross-host behavior.

CURRENT EVIDENCE

Fresh related Python suites and per-profile/water results are included. Native C#/.NET, C++/Rust/R compilation and physical devices were not executed in this environment. This source copy received the requested terminology transfer after the earlier suite; the complete renamed host has not been rebuilt here.

REMAINING REQUIREMENT

Map unverified branches and native-host behavior to source-specific evidence before assigning a complete verification verdict.

SOURCE REFERENCES

associated-core:dotnet/Bangel.Admission/IrAdmission.cs

TR-MOD-ASSOCIATED-80112CD1A0 / Associated core / dotnet/Bangel.Admission/Registry.cs

IF

This JP / admission module is imported or its declared interface is invoked. Declared surface includes: private static readonly JsonObject Document = Load();; private static readonly IReadOnlyDictionary<string, JsonObject> Instructions = Objects(Document["instruction_entries"]).ToDictionary(entry => S(entry["kind"]), StringComparer.Ordinal);; private static readonly IReadOnlyDictionary<string, JsonObject> Values = Objects(Document["value_entries"]).ToDictionary(entry => S(entry["kind"]), StringComparer.Ordinal);; private static JsonObject Load(); internal static void Instruction(JsonObject instruction, bool strict)

HOW

Preserve the representation schema, value types, provenance, registry and independent admission checks encoded here. The complete terminology-edited 187-line source is preserved with SHA-256 e6c1523a8c9f3fdf0f0c0e8adfbbc92a11883269c8ab2b1344a77fa7086a5a2c. 12 extracted function/declaration entries are separately indexed, including exact Python bodies and guards where available.

THEN

Follow the exact returned values, diagnostics and state effects in the preserved implementation. Module inclusion and syntax extraction are documentary coverage; they do not prove every branch or cross-host behavior.

CURRENT EVIDENCE

Fresh related Python suites and per-profile/water results are included. Native C#/.NET, C++/Rust/R compilation and physical devices were not executed in this environment. This source copy received the requested terminology transfer after the earlier suite; the complete renamed host has not been rebuilt here.

REMAINING REQUIREMENT

Map unverified branches and native-host behavior to source-specific evidence before assigning a complete verification verdict.

SOURCE REFERENCES

associated-core:dotnet/Bangel.Admission/Registry.cs

TR-MOD-ASSOCIATED-D4CEA99EFD / Associated core / dotnet/Bangel.Admission/TypeVerifier.Numeric.cs

IF

This JP / admission module is imported or its declared interface is invoked. Declared surface includes: private static readonly Regex NumberPattern = new(@"\A-?(?:0|[1-9][0-9]*)?(?:\.[0-9]+)?(?:E[+-][1-9][0-9]*)?\z", RegexOptions.NonBacktracking); private readonly record struct SourceNumber(bool Negative, bool Zero); private SourceNumber Numeric(JsonNode? node)

HOW

Preserve the representation schema, value types, provenance, registry and independent admission checks encoded here. The complete terminology-edited 66-line source is preserved with SHA-256 f5aede2c16b281391546feb2b150e55045d49decc882472fc153071fec935e5f. 3 extracted function/declaration entries are separately indexed, including exact Python bodies and guards where available.

THEN

Follow the exact returned values, diagnostics and state effects in the preserved implementation. Module inclusion and syntax extraction are documentary coverage; they do not prove every branch or cross-host behavior.

CURRENT EVIDENCE

Fresh related Python suites and per-profile/water results are included. Native C#/.NET, C++/Rust/R compilation and physical devices were not executed in this environment. This source copy received the requested terminology transfer after the earlier suite; the complete renamed host has not been rebuilt here.

REMAINING REQUIREMENT

Map unverified branches and native-host behavior to source-specific evidence before assigning a complete verification verdict.

SOURCE REFERENCES

associated-core:dotnet/Bangel.Admission/TypeVerifier.Numeric.cs

TR-MOD-ASSOCIATED-03775A629E / Associated core / dotnet/Bangel.Admission/TypeVerifier.Operations.cs

IF

This JP / admission module is imported or its declared interface is invoked. Declared surface includes: private static void Comparison(JsonNode left, JsonNode right, string op); private static JsonNode BinaryType(string op, JsonNode left, JsonNode right, IReadOnlyList<JsonObject>? operands = null); private static JsonNode IntrinsicType(string target, IReadOnlyList<JsonObject> arguments)

HOW

Preserve the representation schema, value types, provenance, registry and independent admission checks encoded here. The complete terminology-edited 207-line source is preserved with SHA-256 712661627635a7ce1c9943772d6f0cbe12c93bb57675f38202190fdd50824ed6. 3 extracted function/declaration entries are separately indexed, including exact Python bodies and guards where available.

THEN

Follow the exact returned values, diagnostics and state effects in the preserved implementation. Module inclusion and syntax extraction are documentary coverage; they do not prove every branch or cross-host behavior.

CURRENT EVIDENCE

Fresh related Python suites and per-profile/water results are included. Native C#/.NET, C++/Rust/R compilation and physical devices were not executed in this environment. This source copy received the requested terminology transfer after the earlier suite; the complete renamed host has not been rebuilt here.

REMAINING REQUIREMENT

Map unverified branches and native-host behavior to source-specific evidence before assigning a complete verification verdict.

SOURCE REFERENCES

associated-core:dotnet/Bangel.Admission/TypeVerifier.Operations.cs

TR-MOD-ASSOCIATED-100C1211F0 / Associated core / dotnet/Bangel.Admission/TypeVerifier.Units.cs

IF

This JP / admission module is imported or its declared interface is invoked. Declared surface includes: private static readonly Regex TermPattern = new(@"\A(1|[A-Za-z]+)(?:\^(-?[1-9][0-9]*)?)?z", RegexOptions.NonBacktracking); private static readonly Regex FixedScalePattern = new(@"\A(?:10*|0\.\d*)z", RegexOptions.NonBacktracking); private readonly record struct Signature(BigInteger Mass, BigInteger Length, BigInteger Time,; internal static Signature Combine(Signature left, Signature right, bool divide) => new(; internal Signature Multiply(BigInteger n) => new(Mass * n, Length * n, Time * n, Current * n, Temperature * n, Power * n);

HOW

Preserve the representation schema, value types, provenance, registry and independent admission checks encoded here. The complete terminology-edited 160-line source is preserved with SHA-256 96f103a8574a21d272146003a60bd468609cf763e19674ff544c564b72998a65. 13 extracted function/declaration entries are separately indexed, including exact Python bodies and guards where available.

THEN

Follow the exact returned values, diagnostics and state effects in the preserved implementation. Module inclusion and syntax extraction are documentary coverage; they do not prove every branch or cross-host behavior.

CURRENT EVIDENCE

Fresh related Python suites and per-profile/water results are included. Native C#/.NET, C++/Rust/R compilation and physical devices were not executed in this environment. This source copy received the requested terminology transfer after the earlier suite; the complete renamed host has not been rebuilt here.

REMAINING REQUIREMENT

Map unverified branches and native-host behavior to source-specific evidence before assigning a complete verification verdict.

SOURCE REFERENCES

associated-core:dotnet/Bangel.Admission/TypeVerifier.Units.cs

TR-MOD-ASSOCIATED-F9FADBA448 / Associated core / dotnet/Bangel.Admission/TypeVerifier.Values.cs

IF

This JP / admission module is imported or its declared interface is invoked. Declared surface includes: internal void VerifyValueTypes(JsonObject expression); internal static UnicodeScalarComparer Instance { get; } = new();; public int Compare(string? left, string? right)

HOW

Preserve the representation schema, value types, provenance, registry and independent admission checks encoded here. The complete terminology-edited 223-line source is preserved with SHA-256 ff8ead63cd540cad13f6cb30a87e2ef4471704ed619513948d76319041bf93cc. 3 extracted function/declaration entries are separately indexed, including exact Python bodies and guards where available.

THEN

Follow the exact returned values, diagnostics and state effects in the preserved implementation. Module inclusion and syntax extraction are documentary coverage; they do not prove every branch or cross-host behavior.

CURRENT EVIDENCE

Fresh related Python suites and per-profile/water results are included. Native C#/.NET, C++/Rust/R compilation and physical devices were not executed in this environment. This source copy received the requested terminology transfer after the earlier suite; the complete renamed host has not been rebuilt here.

REMAINING REQUIREMENT

Map unverified branches and native-host behavior to source-specific evidence before assigning a complete verification verdict.

SOURCE REFERENCES

associated-core:dotnet/Bangel.Admission/TypeVerifier.Values.cs

TR-MOD-ASSOCIATED-75D2CFA3B1 / Associated core / dotnet/Bangel.Admission/TypeVerifier.cs

IF

This JP / admission module is imported or its declared interface is invoked. Declared surface includes: internal sealed partial class TypeVerifier(; private static readonly Regex NamePattern = new(@"\A[A-Za-z_][A-Za-z_0-9]*(?:\.[A-Za-z_][A-Za-z_0-9]*)*\z", RegexOptions.NonBacktracking);; private static readonly Regex IntegerPattern = new(@"\A-?(?:0|[1-9][0-9]*)\z", RegexOptions.NonBacktracking);; private static void Check(bool condition, string message, string code = "IR_TYPE"); private static JsonObject Object(JsonNode? node) => node as JsonObject

HOW

Preserve the representation schema, value types, provenance, registry and independent admission checks encoded here. The complete terminology-edited 146-line source is preserved with SHA-256 b16e62e6a30f30ef97ca57432de4eb1112e84cfd108a8cde078bdbf33b68aeb. 24 extracted function/declaration entries are separately indexed, including exact Python bodies and guards where available.

THEN

Follow the exact returned values, diagnostics and state effects in the preserved implementation. Module inclusion and syntax extraction are documentary coverage; they do not prove every branch or cross-host behavior.

CURRENT EVIDENCE

Fresh related Python suites and per-profile/water results are included. Native C#/.NET, C++/Rust/R compilation and physical devices were not executed in this environment. This source copy received the requested terminology transfer after the earlier suite; the complete renamed host has not been rebuilt here.

REMAINING REQUIREMENT

Map unverified branches and native-host behavior to source-specific evidence before assigning a complete verification verdict.

SOURCE REFERENCES

associated-core:dotnet/Bangel.Admission/TypeVerifier.cs

TR-MOD-ASSOCIATED-3EBBB55E06 / Associated core / dotnet/Bangel.Cli/Program.cs

IF

This Runtime / supporting core module is imported or its declared interface is invoked. This module contains shared declarations or constants; the complete source is retained.

HOW

Use the complete terminology-edited module and its declared types, call paths, state and error behavior; preserve program/evidence boundaries. The complete 125-line source is preserved with SHA-256 8bd02b2cf8396339f19c5f6f79f9924051db90e3b2c904c22a08492db6e391f4. 0 extracted function/declaration entries are separately indexed, including exact Python bodies and guards where available.

THEN

Follow the exact returned values, diagnostics and state effects in the preserved implementation. Module inclusion and syntax extraction are documentary coverage; they do not prove every branch or cross-host behavior.

CURRENT EVIDENCE

Fresh related Python suites and per-profile/water results are included. Native C#/.NET, C++/Rust/R compilation and physical devices were not executed in this environment. This source copy received the requested terminology transfer after the earlier suite; the complete renamed host has not been rebuilt here.

REMAINING REQUIREMENT

Map unverified branches and native-host behavior to source-specific evidence before assigning a complete verification verdict.

SOURCE REFERENCES

associated-core:dotnet/Bangel.Cli/Program.cs

TR-MOD-ASSOCIATED-E55F2B6EEF / Associated core / dotnet/Bangel.Compiler/BangelCompiler.cs

IF

This Elsa / source module is imported or its declared interface is invoked. Declared surface includes: public CompilerException(string code, string message, SyntaxSpan? span = null, object? details = null) : base(message); internal ManagedProjectCompilation(AdmittedIr compilation, string projectRoot, string entry, IEnumerable<string> modules); private static readonly JsonSerializerOptions Serialization = new() { MaxDepth = 1024 };; public static SemanticModel Check(string sourceName, string source, CancellationToken cancellationToken = default); public static ProjectSemanticModel CheckProject(IReadOnlyDictionary<string, string> sources, CancellationToken cancellationToken = default)

HOW

Preserve lexical, syntactic, binding, type and lowering behavior before producing a validated representation. The complete terminology-edited 204-line source is preserved with SHA-256 7d35981ec843ccc8ac764295f0f731bb47afa90bb63e831866cb7c7bf3de402e. 20 extracted function/declaration entries are separately indexed, including exact Python bodies and guards where available.

THEN

Follow the exact returned values, diagnostics and state effects in the preserved implementation. Module inclusion and syntax extraction are documentary coverage; they do not prove every branch or cross-host behavior.

CURRENT EVIDENCE

Fresh related Python suites and per-profile/water results are included. Native C#/.NET, C++/Rust/R compilation and physical devices were not executed in this environment. This source copy received the requested terminology transfer after the earlier suite; the complete renamed host has not been rebuilt here.

REMAINING REQUIREMENT

Map unverified branches and native-host behavior to source-specific evidence before assigning a complete verification verdict.

SOURCE REFERENCES

associated-core:dotnet/Bangel.Compiler/BangelCompiler.cs

TR-MOD-ASSOCIATED-BA6A90BAC6 / Associated core / dotnet/Bangel.Compiler/Lowering.cs

IF

This Elsa / source module is imported or its declared interface is invoked. Declared surface includes: internal sealed record LoweredExpression(string Kind, object? Value, LoweredExpression[] Operands,; internal Dictionary<string, object?> ToIr(); internal sealed record LoweredStatement(string Kind, string? Name, LoweredExpression? Expression,; internal sealed record LoweredSource(string Name, IReadOnlyList<string> Effects, LoweredStatement[] Statements,; private readonly Dictionary<ExpressionSyntax, SemanticType> expressionTypes = new(ReferenceEqualityComparer.Instance);

HOW

Preserve lexical, syntactic, binding, type and lowering behavior before producing a validated representation. The complete terminology-edited 284-line source is preserved with SHA-256 f112dcc842985b9cffb958169144c81a5d8953bc4b8d26f23d1566c5a8b1e4c9. 27 extracted function/declaration entries are separately indexed, including exact Python bodies and guards where available.

THEN

Follow the exact returned values, diagnostics and state effects in the preserved implementation. Module inclusion and syntax extraction are documentary coverage; they do not prove every branch or cross-host behavior.

CURRENT EVIDENCE

Fresh related Python suites and per-profile/water results are included. Native C#/.NET, C++/Rust/R compilation and physical devices were not executed in this environment. This source copy received the requested terminology transfer after the earlier suite; the complete renamed host has not been rebuilt here.

REMAINING REQUIREMENT

Map unverified branches and native-host behavior to source-specific evidence before assigning a complete verification verdict.

SOURCE REFERENCES

associated-core:dotnet/Bangel.Compiler/Lowering.cs

TR-MOD-ASSOCIATED-C4E8434F6A / Associated core / dotnet/Bangel.Hosting.Contracts.cs

IF

This API / SDK module is imported or its declared interface is invoked. Declared surface includes: public sealed record HostParameter(string Name, HostPrimitive Type);; public HostFunction(string name, IEnumerable<HostParameter> parameters, HostPrimitive returnType, string implementationId); public HostFunction(string name, IEnumerable<HostParameter> parameters, HostPrimitive returnType, string implementationId, HostProfile profile); internal JsonObject Node() => new(); public HostManifest(IEnumerable<HostFunction> functions)

HOW

Validate the exact host/protocol contract and preserve request, response, value and effect boundaries across this interface. The complete terminology-edited 209-line source is preserved with SHA-256 cd1e7a7e00b99eb70cda56faf2a96c7be4bb1d1aaccb79c5fb8a0ef666af7600. 30 extracted function/declaration entries are separately indexed, including exact Python bodies and guards where available.

THEN

Follow the exact returned values, diagnostics and state effects in the preserved implementation. Module inclusion and syntax extraction are documentary coverage; they do not prove every branch or cross-host behavior.

CURRENT EVIDENCE

Fresh related Python suites and per-profile/water results are included. Native C#/.NET, C++/Rust/R compilation and physical devices were not executed in this environment. This source copy received the requested terminology transfer after the earlier suite; the complete renamed host has not been rebuilt here.

REMAINING REQUIREMENT

Map unverified branches and native-host behavior to source-specific evidence before assigning a complete verification verdict.

SOURCE REFERENCES

associated-core:dotnet/Bangel.Hosting.Contracts.cs

TR-MOD-ASSOCIATED-C3440A5577 / Associated core / dotnet/Bangel.Hosting/HostCompiler.cs

IF

This API / SDK module is imported or its declared interface is invoked. Declared surface includes: public HostCompiler(ReferenceCompiler referenceCompiler) : this((IBangelCompiler)referenceCompiler) { }; public HostCompiler(IBangelCompiler compiler) => this.compiler = compiler ?? throw new ArgumentNullException(nameof(compiler));; public Task<HostCompilation> CompileAsync(SourceText source, HostManifest manifest, CancellationToken cancellationToken = default) =>; public async Task<HostCompilation> BuildAsync(BangelProject project, HostManifest manifest, CancellationToken cancellationToken = default)

HOW

Validate the exact host/protocol contract and preserve request, response, value and effect boundaries across this interface. The complete terminology-edited 53-line source is preserved with SHA-256 51cd8d8859df03e6438cc5b00364258fcde19c0e694b2e7ce7ca1ccd2456b0b5. 4 extracted function/declaration entries are separately indexed, including exact Python bodies and guards where available.

THEN

Follow the exact returned values, diagnostics and state effects in the preserved implementation. Module inclusion and syntax extraction are documentary coverage; they do not prove every branch or cross-host behavior.

CURRENT EVIDENCE

Fresh related Python suites and per-profile/water results are included. Native C#/.NET, C++/Rust/R compilation and physical devices were not executed in this environment. This source copy received the requested terminology transfer after the earlier suite; the complete renamed host has not been rebuilt here.

REMAINING REQUIREMENT

Map unverified branches and native-host behavior to source-specific evidence before assigning a complete verification verdict.

SOURCE REFERENCES

associated-core:dotnet/Bangel.Hosting/HostCompiler.cs

TR-MOD-ASSOCIATED-031F2CAB36 / Associated core / dotnet/Bangel.Hosting/HostExecutor.cs

IF

This API / SDK module is imported or its declared interface is invoked. Declared surface includes: public static HostReceipt Run(HostCompilation compilation, IEnumerable<HostRegistration> registrations,; public static HostReceipt Replay(HostCompilation compilation, IEnumerable<HostRegistration> registrations, HostReceipt expected,; public static HostReceipt ReadReceipt(string json); private static JsonObject ReadEnvelope(string json); private static void CheckUnique(JsonElement element)

HOW

Validate the exact host/protocol contract and preserve request, response, value and effect boundaries across this interface. The complete terminology-edited 285-line source is preserved with SHA-256 3a40a42baf884f8d40bcd70ec491e9de26d4976debe5383cb9c9cc47d7efda9. 11 extracted function/declaration entries are separately indexed, including exact Python bodies and guards where available.

THEN

Follow the exact returned values, diagnostics and state effects in the preserved implementation. Module inclusion and syntax extraction are documentary coverage; they do not prove every branch or cross-host behavior.

CURRENT EVIDENCE

Fresh related Python suites and per-profile/water results are included. Native C#/.NET, C++/Rust/R compilation and physical devices were not executed in this environment. This source copy received the requested terminology transfer after the earlier suite; the complete renamed host has not been rebuilt here.

REMAINING REQUIREMENT

Map unverified branches and native-host behavior to source-specific evidence before assigning a complete verification verdict.

SOURCE REFERENCES

associated-core:dotnet/Bangel.Hosting/HostExecutor.cs

TR-MOD-ASSOCIATED-BB338BB536 / Associated core / dotnet/Bangel.Numerics/BangelDecimal.cs

IF

This Numeric / typed values module is imported or its declared interface is invoked. Declared surface includes: public sealed class BangelNumericException(BangelNumericError error, string message); public static BangelDecimal Zero { get; } = new(BigInteger.Zero, 0);; public static BangelDecimal One { get; } = new(BigInteger.One, 0);; private BangelDecimal(BigInteger coefficient, int exponent, bool negativeZero = false); public static BangelDecimal Parse(string text) => ParseBounded(text, MaximumLiteralCharacters, MaximumLiteralExponent);

HOW

Use the exact numeric and dimensional rules of this module; keep typed unknown, signed values and source-specific bounds distinct. The complete terminology-edited 397-line source is preserved with SHA-256 300e160e880099f0f7067d201ee039a776a551c6c3097b6e33d7343df3549e41. 44 extracted function/declaration entries are separately indexed, including exact Python bodies and guards where available.

THEN

Follow the exact returned values, diagnostics and state effects in the preserved implementation. Module inclusion and syntax extraction are documentary coverage; they do not prove every branch or cross-host behavior.

CURRENT EVIDENCE

Fresh related Python suites and per-profile/water results are included. Native C#/.NET, C++/Rust/R compilation and physical devices were not executed in this environment. This source copy received the requested terminology transfer after the earlier suite; the complete renamed host has not been rebuilt here.

REMAINING REQUIREMENT

Map unverified branches and native-host behavior to source-specific evidence before assigning a complete verification verdict.

SOURCE REFERENCES

associated-core:dotnet/Bangel.Numerics/BangelDecimal.cs

TR-MOD-ASSOCIATED-470CDB67D0 / Associated core / dotnet/Bangel.Runtime/Builtins.cs

IF

This Runtime / supporting core module is imported or its declared interface is invoked. Declared surface includes: private object? Aggregate(object?[] values, JsonNode type, bool mean = false); private object? Builtin(string target, object?[] values, JsonNode type); private object? LegacyBuiltin(string name, object?[] args); private static Quantity QuantityAggregate(Quantity[] values, bool mean)

HOW

Use the complete terminology-edited module and its declared types, call paths, state and error behavior; preserve program/evidence boundaries. The complete 148-line source is preserved with SHA-256 8c19e0ddf9caaf0527329f03bcb0b6b7571298f6e9e1d8d5fb8633e898956797. 4 extracted function/declaration entries are separately indexed, including exact Python bodies and guards where available.

THEN

Follow the exact returned values, diagnostics and state effects in the preserved implementation. Module inclusion and syntax extraction are documentary coverage; they do not prove every branch or cross-host behavior.

CURRENT EVIDENCE

Fresh related Python suites and per-profile/water results are included. Native C#/.NET, C++/Rust/R compilation and physical devices were not executed in this environment. This source copy received the requested terminology transfer after the earlier suite; the complete renamed host has not been rebuilt here.

REMAINING REQUIREMENT

Map unverified branches and native-host behavior to source-specific evidence before assigning a complete verification verdict.

SOURCE REFERENCES

associated-core:dotnet/Bangel.Runtime/Builtins.cs

TR-MOD-ASSOCIATED-32C7F4E611 / Associated core / dotnet/Bangel.Runtime/Contracts.cs

IF

This Runtime / supporting core module is imported or its declared interface is invoked. Declared surface includes: internal void Validate(); public RuntimeException(string code, string message, string? spanJson = null, string? detailsJson = null, Exception? innerException = null); public static string NormalizeJson(string json) => Text(JsonNode.Parse(json,; internal static readonly IComparer<string> KeyOrder = Comparer<string>.Create((a, b) =>); internal static string Digest(object? value) => Convert.ToHexStringLower(SHA256.HashData(Bytes(value)));

HOW

Use the complete terminology-edited module and its declared types, call paths, state and error behavior; preserve program/evidence boundaries. The complete 117-line source is preserved with SHA-256 f7b2dfda33b23e42a9b0432e6ebd3a898af4b2a85dce57536a547537b96129f0. 11 extracted function/declaration entries are separately indexed, including exact Python bodies and guards where available.

THEN

Follow the exact returned values, diagnostics and state effects in the preserved implementation. Module inclusion and syntax extraction are documentary coverage; they do not prove every branch or cross-host behavior.

CURRENT EVIDENCE

Fresh related Python suites and per-profile/water results are included. Native C#/.NET, C++/Rust/R compilation and physical devices were not executed in this environment. This source copy received the requested terminology transfer after the earlier suite; the complete renamed host has not been rebuilt here.

REMAINING REQUIREMENT

Map unverified branches and native-host behavior to source-specific evidence before assigning a complete verification verdict.

SOURCE REFERENCES

associated-core:dotnet/Bangel.Runtime/Contracts.cs

TR-MOD-ASSOCIATED-0421D2D62A / Associated core / dotnet/Bangel.Runtime/BangelRuntime.cs

IF

This JP / admission module is imported or its declared interface is invoked. Declared surface includes: public static string Execute(string admittedIr, RuntimeLimits? limits = null, CancellationToken cancellationToken = default); public static string ExecuteWithHostBindings(string admittedIr,; public static string ExecuteWithRealHostBindings(string admittedIr,; private static string ExecuteHostCore(string admittedIr,; private static string ExecuteCore(string admittedIr, IReadOnlyDictionary<string, Func<IReadOnlyList<object?>, object?>>? bindings,

HOW

Preserve the representation schema, value types, provenance, registry and independent admission checks encoded here. The complete terminology-edited 410-line source is preserved with SHA-256 4869d4e97e3553a1f8224757e0f0fa0bc8d8d883f39a82bcd29fa50eae1ec8cd. 40 extracted function/declaration entries are separately indexed, including exact Python bodies and guards where available.

THEN

Follow the exact returned values, diagnostics and state effects in the preserved implementation. Module inclusion and syntax extraction are documentary coverage; they do not prove every branch or cross-host behavior.

CURRENT EVIDENCE

Fresh related Python suites and per-profile/water results are included. Native C#/.NET, C++/Rust/R compilation and physical devices were not executed in this environment. This source copy received the requested terminology transfer after the earlier suite; the complete renamed host has not been rebuilt here.

REMAINING REQUIREMENT

Map unverified branches and native-host behavior to source-specific evidence before assigning a complete verification verdict.

SOURCE REFERENCES

associated-core:dotnet/Bangel.Runtime/BangelRuntime.cs

TR-MOD-ASSOCIATED-5261ECE5A2 / Associated core / dotnet/Bangel.Runtime/Execution.cs

IF

This Runtime / supporting core module is imported or its declared interface is invoked. Declared surface includes: private void Block(JsonArray instructions, Scope scope, string? owner = null); internal string Execute(); private static void VerifyReceiptDimensions(object? value)

HOW

Use the complete terminology-edited module and its declared types, call paths, state and error behavior; preserve program/evidence boundaries. The complete 148-line source is preserved with SHA-256 c8dc6662f5f6e23f8bb9be32d1ce445dfd75b13ef820bff5841872108058765c. 3 extracted function/declaration entries are separately indexed, including exact Python bodies and guards where available.

THEN

Follow the exact returned values, diagnostics and state effects in the preserved implementation. Module inclusion and syntax extraction are documentary coverage; they do not prove every branch or cross-host behavior.

CURRENT EVIDENCE

Fresh related Python suites and per-profile/water results are included. Native C#/.NET, C++/Rust/R compilation and physical devices were not executed in this environment. This source copy received the requested terminology transfer after the earlier suite; the complete renamed host has not been rebuilt here.

REMAINING REQUIREMENT

Map unverified branches and native-host behavior to source-specific evidence before assigning a complete verification verdict.

SOURCE REFERENCES

associated-core:dotnet/Bangel.Runtime/Execution.cs

TR-MOD-ASSOCIATED-7214E35236 / Associated core / dotnet/Bangel.Runtime/Values.cs

IF

This Numeric / typed values module is imported or its declared interface is invoked. Declared surface includes: internal sealed record Unknown(JsonNode ValueType, string Reason, string[] Provenance);; internal sealed record Failure(string Code, string Message);; internal sealed record Result(string Variant, object? Value);; internal sealed record Nominal(string Kind, string Identity, Dictionary<string, object?> Fields, string? Variant);; internal sealed class Scope(Scope? parent = null)

HOW

Use the exact numeric and dimensional rules of this module; keep typed unknown, signed values and source-specific bounds distinct. The complete terminology-edited 92-line source is preserved with SHA-256 9665810b1018cd0bbdf59a0f0c916e6c0b4ac62a914c0f0cf0045ffabba3299a. 21 extracted function/declaration entries are separately indexed, including exact Python bodies and guards where available.

THEN

Follow the exact returned values, diagnostics and state effects in the preserved implementation. Module inclusion and syntax extraction are documentary coverage; they do not prove every branch or cross-host behavior.

CURRENT EVIDENCE

Fresh related Python suites and per-profile/water results are included. Native C#/.NET, C++/Rust/R compilation and physical devices were not executed in this environment. This source copy received the requested terminology transfer after the earlier suite; the complete renamed host has not been rebuilt here.

REMAINING REQUIREMENT

Map unverified branches and native-host behavior to source-specific evidence before assigning a complete verification verdict.

SOURCE REFERENCES

associated-core:dotnet/Bangel.Runtime/Values.cs

TR-MOD-ASSOCIATED-780A9A45C7 / Associated core / dotnet/Bangel.Sdk/CSharpBackend.cs

IF

This API / SDK module is imported or its declared interface is invoked. Declared surface includes: public static string Generate(Compilation compilation)

HOW

Validate the exact host/protocol contract and preserve request, response, value and effect boundaries across this interface. The complete terminology-edited 17-line source is preserved with SHA-256 8432f0e00917ad035b86f914b29b7dd53e077f28680b6d3c286be6eb4a7d7929. 1 extracted function/declaration entries are separately indexed, including exact Python bodies and guards where available.

THEN

Follow the exact returned values, diagnostics and state effects in the preserved implementation. Module inclusion and syntax extraction are documentary coverage; they do not prove every branch or cross-host behavior.

CURRENT EVIDENCE

Fresh related Python suites and per-profile/water results are included. Native C#/.NET, C++/Rust/R compilation and physical devices were not executed in this environment. This source copy received the requested terminology transfer after the earlier suite; the complete renamed host has not been rebuilt here.

REMAINING REQUIREMENT

Map unverified branches and native-host behavior to source-specific evidence before assigning a complete verification verdict.

SOURCE REFERENCES

associated-core:dotnet/Bangel.Sdk/CSharpBackend.cs

TR-MOD-ASSOCIATED-1F4A70EA5D / Associated core / dotnet/Bangel.Sdk/Contracts.cs

IF

This API / SDK module is imported or its declared interface is invoked. Declared surface includes: public sealed record SourceText(string Name, string Text);; public sealed record SourceSpan(int Line, int Column, int? EndColumn);; public sealed record Diagnostic(string Code, string Message, SourceSpan? Span, JsonElement Details);; public sealed class BangelException(Diagnostic diagnostic) : Exception(diagnostic.Message); public sealed class ProtocolException(string message) : IOException(message);

HOW

Validate the exact host/protocol contract and preserve request, response, value and effect boundaries across this interface. The complete terminology-edited 131-line source is preserved with SHA-256 15c9593908fc71b176ac5ca76560090e3a91bb09a6acdbdaf907d82c02a178ea. 29 extracted function/declaration entries are separately indexed, including exact Python bodies and guards where available.

THEN

Follow the exact returned values, diagnostics and state effects in the preserved implementation. Module inclusion and syntax extraction are documentary coverage; they do not prove every branch or cross-host behavior.

CURRENT EVIDENCE

Fresh related Python suites and per-profile/water results are included. Native C#/.NET, C++/Rust/R compilation and physical devices were not executed in this environment. This source copy received the requested terminology transfer after the earlier suite; the complete renamed host has not been rebuilt here.

REMAINING REQUIREMENT

Map unverified branches and native-host behavior to source-specific evidence before assigning a complete verification verdict.

SOURCE REFERENCES

associated-core:dotnet/Bangel.Sdk/Contracts.cs

TR-MOD-ASSOCIATED-9DBB0B5A5F / Associated core / dotnet/Bangel.Sdk/IBangelCompiler.cs

IF

This API / SDK module is imported or its declared interface is invoked. This module contains shared declarations or constants; the complete source is retained.

HOW

Validate the exact host/protocol contract and preserve request, response, value and effect boundaries across this interface. The complete terminology-edited 9-line source is preserved with SHA-256 0bbf2b130611fef92164443ea637e9ea9cfe61a11bb3dd5e44477055eb43587d. 0 extracted function/declaration entries are separately indexed, including exact Python bodies and guards where available.

THEN

Follow the exact returned values, diagnostics and state effects in the preserved implementation. Module inclusion and syntax extraction are documentary coverage; they do not prove every branch or cross-host behavior.

CURRENT EVIDENCE

Fresh related Python suites and per-profile/water results are included. Native C#/.NET, C++/Rust/R compilation and physical devices were not executed in this environment. This source copy received the requested terminology transfer after the earlier suite; the complete renamed host has not been rebuilt here.

REMAINING REQUIREMENT

Map unverified branches and native-host behavior to source-specific evidence before assigning a complete verification verdict.

SOURCE REFERENCES

associated-core:dotnet/Bangel.Sdk/IBangelCompiler.cs

TR-MOD-ASSOCIATED-4312E5FD37 / Associated core / dotnet/Bangel.Sdk/ManagedCompiler.cs

IF

This API / SDK module is imported or its declared interface is invoked. Declared surface includes: public sealed class ManagedCompiler(TimeSpan? timeout = null) : IBangelCompiler; private readonly TimeSpan timeout = timeout ?? TimeSpan.FromSeconds(15);; public Task<CheckResult> CheckAsync(SourceText source, CancellationToken cancellationToken = default); public Task<Compilation> CompileAsync(SourceText source, CancellationToken cancellationToken = default); public Task<ProjectBuild> BuildAsync(BangelProject project, CancellationToken cancellationToken = default)

HOW

Validate the exact host/protocol contract and preserve request, response, value and effect boundaries across this interface. The complete terminology-edited 75-line source is preserved with SHA-256 964044f202652a4aa5510d15009190ef9ddccd9ff125b4846ef7a058f1c67dc2. 8 extracted function/declaration entries are separately indexed, including exact Python bodies and guards where available.

THEN

Follow the exact returned values, diagnostics and state effects in the preserved implementation. Module inclusion and syntax extraction are documentary coverage; they do not prove every branch or cross-host behavior.

CURRENT EVIDENCE

Fresh related Python suites and per-profile/water results are included. Native C#/.NET, C++/Rust/R compilation and physical devices were not executed in this environment. This source copy received the requested terminology transfer after the earlier suite; the complete renamed host has not been rebuilt here.

REMAINING REQUIREMENT

Map unverified branches and native-host behavior to source-specific evidence before assigning a complete verification verdict.

SOURCE REFERENCES

associated-core:dotnet/Bangel.Sdk/ManagedCompiler.cs

TR-MOD-ASSOCIATED-971A60D116 / Associated core / dotnet/Bangel.Sdk/ManagedSyntax.cs

IF

This API / SDK module is imported or its declared interface is invoked. Declared surface includes: public static SourceFile Parse(SourceText source, CancellationToken cancellationToken = default)

HOW

Validate the exact host/protocol contract and preserve request, response, value and effect boundaries across this interface. The complete terminology-edited 25-line source is preserved with SHA-256 ce528842f5e8c872d0bad59559eab6f04434c1efdf89ba18c8b9c761cd69ded2. 1 extracted function/declaration entries are separately indexed, including exact Python bodies and guards where available.

THEN

Follow the exact returned values, diagnostics and state effects in the preserved implementation. Module inclusion and syntax extraction are documentary coverage; they do not prove every branch or cross-host behavior.

CURRENT EVIDENCE

Fresh related Python suites and per-profile/water results are included. Native C#/.NET, C++/Rust/R compilation and physical devices were not executed in this environment. This source copy received the requested terminology transfer after the earlier suite; the complete renamed host has not been rebuilt here.

REMAINING REQUIREMENT

Map unverified branches and native-host behavior to source-specific evidence before assigning a complete verification verdict.

SOURCE REFERENCES

associated-core:dotnet/Bangel.Sdk/ManagedSyntax.cs

TR-MOD-ASSOCIATED-16CF3AC7CC / Associated core / dotnet/Bangel.Sdk/ReferenceCompiler.cs

IF

This API / SDK module is imported or its declared interface is invoked. Declared surface includes: public sealed class ReferenceCompiler(string pythonExecutable = "python3", TimeSpan? timeout = null) : IBangelCompiler; private readonly TimeSpan timeout = timeout ?? TimeSpan.FromSeconds(15);; private static readonly JsonSerializerOptions JsonOptions = new() { MaxDepth = 128 };; private static readonly JsonDocumentOptions DocumentOptions = new() { MaxDepth = 128 };; public async Task<CheckResult> CheckAsync(SourceText source, CancellationToken cancellationToken = default)

HOW

Validate the exact host/protocol contract and preserve request, response, value and effect boundaries across this interface. The complete terminology-edited 234-line source is preserved with SHA-256 fdfca637d9fa0a36cada8361b67abd52efaf7f1dc70dc1c5baa68e54e390d27f. 21 extracted function/declaration entries are separately indexed, including exact Python bodies and guards where available.

THEN

Follow the exact returned values, diagnostics and state effects in the preserved implementation. Module inclusion and syntax extraction are documentary coverage; they do not prove every branch or cross-host behavior.

CURRENT EVIDENCE

Fresh related Python suites and per-profile/water results are included. Native C#/.NET, C++/Rust/R compilation and physical devices were not executed in this environment. This source copy received the requested terminology transfer after the earlier suite; the complete renamed host has not been rebuilt here.

REMAINING REQUIREMENT

Map unverified branches and native-host behavior to source-specific evidence before assigning a complete verification verdict.

SOURCE REFERENCES

associated-core:dotnet/Bangel.Sdk/ReferenceCompiler.cs

TR-MOD-ASSOCIATED-7462B22DF2 / Associated core / dotnet/Bangel.Semantics/Analyzer.Binding.cs

IF

This Elsa / source module is imported or its declared interface is invoked. Declared surface includes: private (string Kind, string Target) ResolveCallablePath(IReadOnlyList<string> path, Scope current, SyntaxSpan span); private SemanticType? ResolveSymbolicValuePath(IReadOnlyList<string> path, Scope current, SyntaxSpan span); private Symbol ResolveSymbolPath(IReadOnlyList<string> path, Scope current, SyntaxSpan span, string context); private Symbol ResolveValue(string name, Scope current, SyntaxSpan span); private Scope Define(Scope current, Symbol symbol)

HOW

Preserve lexical, syntactic, binding, type and lowering behavior before producing a validated representation. The complete terminology-edited 394-line source is preserved with SHA-256 377d0c78d11baaa44d80c6abd6977647ac9e88c985987c8908b985e44454e868. 24 extracted function/declaration entries are separately indexed, including exact Python bodies and guards where available.

THEN

Follow the exact returned values, diagnostics and state effects in the preserved implementation. Module inclusion and syntax extraction are documentary coverage; they do not prove every branch or cross-host behavior.

CURRENT EVIDENCE

Fresh related Python suites and per-profile/water results are included. Native C#/.NET, C++/Rust/R compilation and physical devices were not executed in this environment. This source copy received the requested terminology transfer after the earlier suite; the complete renamed host has not been rebuilt here.

REMAINING REQUIREMENT

Map unverified branches and native-host behavior to source-specific evidence before assigning a complete verification verdict.

SOURCE REFERENCES

associated-core:dotnet/Bangel.Semantics/Analyzer.Binding.cs

TR-MOD-ASSOCIATED-BEC77123CE / Associated core / dotnet/Bangel.Semantics/Analyzer.Data.cs

IF

This Elsa / source module is imported or its declared interface is invoked. Declared surface includes: private TypedExpression InferIndex(IndexExpression expression, Scope scope, string? currentFunction); private TypedExpression InferField(FieldExpression expression, Scope scope, string? currentFunction); private TypedExpression InferResult(ResultConstructor expression, Scope scope, SemanticType? expected, string? currentFunction); private TypedExpression InferFailure(FailureConstructor expression, Scope scope, string? currentFunction); private void AnalyzeMatch(MatchStatement statement, SemanticType matchedType, Scope scope, string? currentFunction, bool inFunction)

HOW

Preserve lexical, syntactic, binding, type and lowering behavior before producing a validated representation. The complete terminology-edited 81-line source is preserved with SHA-256 48283c579bfd421f4a9d4df5b9827f2f91746c831f156ba9f7f7c7aaaa5640f2. 5 extracted function/declaration entries are separately indexed, including exact Python bodies and guards where available.

THEN

Follow the exact returned values, diagnostics and state effects in the preserved implementation. Module inclusion and syntax extraction are documentary coverage; they do not prove every branch or cross-host behavior.

CURRENT EVIDENCE

Fresh related Python suites and per-profile/water results are included. Native C#/.NET, C++/Rust/R compilation and physical devices were not executed in this environment. This source copy received the requested terminology transfer after the earlier suite; the complete renamed host has not been rebuilt here.

REMAINING REQUIREMENT

Map unverified branches and native-host behavior to source-specific evidence before assigning a complete verification verdict.

SOURCE REFERENCES

associated-core:dotnet/Bangel.Semantics/Analyzer.Data.cs

TR-MOD-ASSOCIATED-27A792FEFC / Associated core / dotnet/Bangel.Semantics/Analyzer.Expressions.cs

IF

This Elsa / source module is imported or its declared interface is invoked. Declared surface includes: private static readonly object NoConstant = new();; private static TypedExpression Typed(ExpressionSyntax expression, SemanticType type, object? constant); private static object? Constant(TypedExpression expression) => expression.HasConstant ? expression.Constant : NoConstant;; private TypedExpression Infer(ExpressionSyntax expression, Scope scope, SemanticType? expected = null, string? currentFunction = null); private TypedExpression InferVector(VectorLiteral expression, Scope scope, SemanticType? expected, string? currentFunction)

HOW

Preserve lexical, syntactic, binding, type and lowering behavior before producing a validated representation. The complete terminology-edited 219-line source is preserved with SHA-256 a1bcc1c0f14b0dbc068369b1548297e45b6a4c6d61dba59ad9908b8c7d222656. 12 extracted function/declaration entries are separately indexed, including exact Python bodies and guards where available.

THEN

Follow the exact returned values, diagnostics and state effects in the preserved implementation. Module inclusion and syntax extraction are documentary coverage; they do not prove every branch or cross-host behavior.

CURRENT EVIDENCE

Fresh related Python suites and per-profile/water results are included. Native C#/.NET, C++/Rust/R compilation and physical devices were not executed in this environment. This source copy received the requested terminology transfer after the earlier suite; the complete renamed host has not been rebuilt here.

REMAINING REQUIREMENT

Map unverified branches and native-host behavior to source-specific evidence before assigning a complete verification verdict.

SOURCE REFERENCES

associated-core:dotnet/Bangel.Semantics/Analyzer.Expressions.cs

TR-MOD-ASSOCIATED-3F9B7AB97E / Associated core / dotnet/Bangel.Semantics/Analyzer.Intrinsics.cs

IF

This Elsa / source module is imported or its declared interface is invoked. Declared surface includes: private TypedExpression InferCall(CallExpression expression, Scope scope, SemanticType? expected, string? currentFunction); private TypedExpression InferIntrinsic(string target, CallExpression expression, Scope scope, SemanticType? expected, string? currentFunction); private TypedExpression InferCoreIntrinsic(string name, CallExpression expression, Scope scope, string? currentFunction); private TypedExpression InferStandardIntrinsic(string target, CallExpression expression, IReadOnlyList<TypedExpression> arguments, SemanticType? expected); private TypedExpression InferVectorIntrinsic(string ... [continued in source]

HOW

Preserve lexical, syntactic, binding, type and lowering behavior before producing a validated representation. The complete terminology-edited 171-line source is preserved with SHA-256 93691f666f9796ac37d89a6222240edc0bc91b2c90d9438a801124afef368c54. 7 extracted function/declaration entries are separately indexed, including exact Python bodies and guards where available.

THEN

Follow the exact returned values, diagnostics and state effects in the preserved implementation. Module inclusion and syntax extraction are documentary coverage; they do not prove every branch or cross-host behavior.

CURRENT EVIDENCE

Fresh related Python suites and per-profile/water results are included. Native C#/.NET, C++/Rust/R compilation and physical devices were not executed in this environment. This source copy received the requested terminology transfer after the earlier suite; the complete renamed host has not been rebuilt here.

REMAINING REQUIREMENT

Map unverified branches and native-host behavior to source-specific evidence before assigning a complete verification verdict.

SOURCE REFERENCES

associated-core:dotnet/Bangel.Semantics/Analyzer.Intrinsics.cs

TR-MOD-ASSOCIATED-9A87D250FC / Associated core / dotnet/Bangel.Semantics/Analyzer.Numerics.cs

IF

This Elsa / source module is imported or its declared interface is invoked. Declared surface includes: private static readonly Dictionary<string, ResolvedUnit> Units = new(StringComparer.Ordinal); private ResolvedUnit UnitFromSyntax(UnitExpression expression); private static ResolvedUnit CanonicalUnit(ICollection<BigInteger> dimension, BangelDecimal? scale = null); private static ResolvedUnit CombinedUnit(ResolvedUnit left, ResolvedUnit right, bool divide); private static bool IsNumericConstant(object? value) => value is BigInteger or BangelDecimal;

HOW

Preserve lexical, syntactic, binding, type and lowering behavior before producing a validated representation. The complete terminology-edited 101-line source is preserved with SHA-256 8b9da93feff72e83594a16c7ad764783030b58898dffade40b7f67457a997f37. 12 extracted function/declaration entries are separately indexed, including exact Python bodies and guards where available.

THEN

Follow the exact returned values, diagnostics and state effects in the preserved implementation. Module inclusion and syntax extraction are documentary coverage; they do not prove every branch or cross-host behavior.

CURRENT EVIDENCE

Fresh related Python suites and per-profile/water results are included. Native C#/.NET, C++/Rust/R compilation and physical devices were not executed in this environment. This source copy received the requested terminology transfer after the earlier suite; the complete renamed host has not been rebuilt here.

REMAINING REQUIREMENT

Map unverified branches and native-host behavior to source-specific evidence before assigning a complete verification verdict.

SOURCE REFERENCES

associated-core:dotnet/Bangel.Semantics/Analyzer.Numerics.cs

TR-MOD-ASSOCIATED-E56C2B0040 / Associated core / dotnet/Bangel.Semantics/Analyzer.Statements.cs

IF

This Elsa / source module is imported or its declared interface is invoked. Declared surface includes: private Scope AnalyzeStatement(StatementSyntax statement, Scope scope, string? currentFunction, bool inFunction = false); private static bool NegativeNumericLiteral(ExpressionSyntax expression)

HOW

Preserve lexical, syntactic, binding, type and lowering behavior before producing a validated representation. The complete terminology-edited 98-line source is preserved with SHA-256 82168cc1de1d1e39a90069fe88e8108a60cfd6db76b359d1ff2eb2c8b29c87b1. 2 extracted function/declaration entries are separately indexed, including exact Python bodies and guards where available.

THEN

Follow the exact returned values, diagnostics and state effects in the preserved implementation. Module inclusion and syntax extraction are documentary coverage; they do not prove every branch or cross-host behavior.

CURRENT EVIDENCE

Fresh related Python suites and per-profile/water results are included. Native C#/.NET, C++/Rust/R compilation and physical devices were not executed in this environment. This source copy received the requested terminology transfer after the earlier suite; the complete renamed host has not been rebuilt here.

REMAINING REQUIREMENT

Map unverified branches and native-host behavior to source-specific evidence before assigning a complete verification verdict.

SOURCE REFERENCES

associated-core:dotnet/Bangel.Semantics/Analyzer.Statements.cs

TR-MOD-ASSOCIATED-E1BD047B38 / Associated core / dotnet/Bangel.Semantics/Analyzer.cs

IF

This Elsa / source module is imported or its declared interface is invoked. Declared surface includes: private Scope scope = new();; private readonly Dictionary<string, RecordSpec> records = new(StringComparer.Ordinal);; private readonly Dictionary<string, EnumSpec> enums = new(StringComparer.Ordinal);; private readonly Dictionary<string, FunctionSpec> functions = new(StringComparer.Ordinal);; private readonly Dictionary<string, ModuleInterface> interfaces = new(StringComparer.Ordinal);

HOW

Preserve lexical, syntactic, binding, type and lowering behavior before producing a validated representation. The complete terminology-edited 278-line source is preserved with SHA-256 e7f645b38ffddbaf31ec209eba8a0e867af27726030213c06eee9800ebbf106. 34 extracted function/declaration entries are separately indexed, including exact Python bodies and guards where available.

THEN

Follow the exact returned values, diagnostics and state effects in the preserved implementation. Module inclusion and syntax extraction are documentary coverage; they do not prove every branch or cross-host behavior.

CURRENT EVIDENCE

Fresh related Python suites and per-profile/water results are included. Native C#/.NET, C++/Rust/R compilation and physical devices were not executed in this environment. This source copy received the requested terminology transfer after the earlier suite; the complete renamed host has not been rebuilt here.

REMAINING REQUIREMENT

Map unverified branches and native-host behavior to source-specific evidence before assigning a complete verification verdict.

SOURCE REFERENCES

associated-core:dotnet/Bangel.Semantics/Analyzer.cs

TR-MOD-ASSOCIATED-719797F21D / Associated core / dotnet/Bangel.Semantics/BangelSemantics.cs

IF

This Elsa / source module is imported or its declared interface is invoked. Declared surface includes: public static SemanticModel Analyze(SourceFile source,; public static ProjectSemanticModel AnalyzeProject(IReadOnlyList<SourceFile> sources,; private static SemanticModel AnalyzeCore(SourceFile source,; private static int CompareModuleNames(IReadOnlyList<string> left, IReadOnlyList<string> right); private sealed class VisitFrame(string name)

HOW

Preserve lexical, syntactic, binding, type and lowering behavior before producing a validated representation. The complete terminology-edited 172-line source is preserved with SHA-256 faba2e276e715c402107836493fba760e3f6def9ed00387b6863ad2ed994d8ea. 5 extracted function/declaration entries are separately indexed, including exact Python bodies and guards where available.

THEN

Follow the exact returned values, diagnostics and state effects in the preserved implementation. Module inclusion and syntax extraction are documentary coverage; they do not prove every branch or cross-host behavior.

CURRENT EVIDENCE

Fresh related Python suites and per-profile/water results are included. Native C#/.NET, C++/Rust/R compilation and physical devices were not executed in this environment. This source copy received the requested terminology transfer after the earlier suite; the complete renamed host has not been rebuilt here.

REMAINING REQUIREMENT

Map unverified branches and native-host behavior to source-specific evidence before assigning a complete verification verdict.

SOURCE REFERENCES

associated-core:dotnet/Bangel.Semantics/BangelSemantics.cs

TR-MOD-ASSOCIATED-41EB984BB6 / Associated core / dotnet/Bangel.Semantics/Models.cs

IF

This Elsa / source module is imported or its declared interface is invoked. Declared surface includes: public ResolvedUnit(string text, IReadOnlyList<BigInteger> dimension, BangelDecimal scale); public JsonElement ToJson() => SemanticJson.Element(this);; public bool Equals(ResolvedUnit? other) => other is not null && Text == other.Text && public override bool Equals(object? obj) => obj is ResolvedUnit unit && Equals(unit);; public override int GetHashCode()

HOW

Preserve lexical, syntactic, binding, type and lowering behavior before producing a validated representation. The complete terminology-edited 449-line source is preserved with SHA-256 f694efff44ae07b4553fb87786b59524f8d7e817ade644ca8d56a64c940f4f43. 56 extracted function/declaration entries are separately indexed, including exact Python bodies and guards where available.

THEN

Follow the exact returned values, diagnostics and state effects in the preserved implementation. Module inclusion and syntax extraction are documentary coverage; they do not prove every branch or cross-host behavior.

CURRENT EVIDENCE

Fresh related Python suites and per-profile/water results are included. Native C#/.NET, C++/Rust/R compilation and physical devices were not executed in this environment. This source copy received the requested terminology transfer after the earlier suite; the complete renamed host has not been rebuilt here.

REMAINING REQUIREMENT

Map unverified branches and native-host behavior to source-specific evidence before assigning a complete verification verdict.

SOURCE REFERENCES

associated-core:dotnet/Bangel.Semantics/Models.cs

TR-MOD-ASSOCIATED-4497121293 / Associated core / dotnet/Bangel.Semantics/SemanticException.cs

IF

This Elsa / source module is imported or its declared interface is invoked. Declared surface includes: public SemanticException(string code, string message, SyntaxSpan? span = null,; public JsonElement ToJson() => SemanticJson.Element(this);

HOW

Preserve lexical, syntactic, binding, type and lowering behavior before producing a validated representation. The complete terminology-edited 21-line source is preserved with SHA-256 0c615b478b40d03d1bd96b0c36219432a5cf5326e411b84210a31515c6e5d772. 2 extracted function/declaration entries are separately indexed, including exact Python bodies and guards where available.

THEN

Follow the exact returned values, diagnostics and state effects in the preserved implementation. Module inclusion and syntax extraction are documentary coverage; they do not prove every branch or cross-host behavior.

CURRENT EVIDENCE

Fresh related Python suites and per-profile/water results are included. Native C#/.NET, C++/Rust/R compilation and physical devices were not executed in this environment. This source copy received the requested terminology transfer after the earlier suite; the complete renamed host has not been rebuilt here.

REMAINING REQUIREMENT

Map unverified branches and native-host behavior to source-specific evidence before assigning a complete verification verdict.

SOURCE REFERENCES

associated-core:dotnet/Bangel.Semantics/SemanticException.cs

TR-MOD-ASSOCIATED-6C1EB22938 / Associated core / dotnet/Bangel.Semantics/SemanticNumbers.cs

IF

This Elsa / source module is imported or its declared interface is invoked. Declared surface includes: private readonly record struct Exact(BigInteger Coefficient, int Exponent, bool NegativeZero = false); internal static BangelDecimal Parse(string text); internal static BangelDecimal Round28(BangelDecimal value) =>; internal static BangelDecimal Round34(BangelDecimal value) => value.Round();; internal static BangelDecimal Round34(string text)

HOW

Preserve lexical, syntactic, binding, type and lowering behavior before producing a validated representation. The complete terminology-edited 338-line source is preserved with SHA-256 4be7db7fbd240b4d3975a47e762857acdbb8562415e0c365a0d1124e69b94a8e. 31 extracted function/declaration entries are separately indexed, including exact Python bodies and guards where available.

THEN

Follow the exact returned values, diagnostics and state effects in the preserved implementation. Module inclusion and syntax extraction are documentary coverage; they do not prove every branch or cross-host behavior.

CURRENT EVIDENCE

Fresh related Python suites and per-profile/water results are included. Native C#/.NET, C++/Rust/R compilation and physical devices were not executed in this environment. This source copy received the requested terminology transfer after the earlier suite; the complete renamed host has not been rebuilt here.

REMAINING REQUIREMENT

Map unverified branches and native-host behavior to source-specific evidence before assigning a complete verification verdict.

SOURCE REFERENCES

associated-core:dotnet/Bangel.Semantics/SemanticNumbers.cs

TR-MOD-ASSOCIATED-97E53667D5 / Associated core / dotnet/Bangel.Syntax/Ast.cs

IF

This Elsa / source module is imported or its declared interface is invoked. Declared surface includes: public UnitTerm(string symbol, BigInteger exponent, SyntaxSpan span); internal override void WriteFields(Utf8JsonWriter writer); public UnitExpression(IReadOnlyList<UnitTerm> terms, IReadOnlyList<string> operators, SyntaxSpan span); internal override void WriteFields(Utf8JsonWriter writer); public ScalarType(string name, SyntaxSpan span)

HOW

Preserve lexical, syntactic, binding, type and lowering behavior before producing a validated representation. The complete terminology-edited 1029-line source is preserved with SHA-256 0464d2fd4b0a8c9918fe576a577c7d0109d46b7c86163de3ca30ae11b3927c3b. 104 extracted function/declaration entries are separately indexed, including exact Python bodies and guards where available.

THEN

Follow the exact returned values, diagnostics and state effects in the preserved implementation. Module inclusion and syntax extraction are documentary coverage; they do not prove every branch or cross-host behavior.

CURRENT EVIDENCE

Fresh related Python suites and per-profile/water results are included. Native C#/.NET, C++/Rust/R compilation and physical devices were not executed in this environment. This source copy received the requested terminology transfer after the earlier suite; the complete renamed host has not been rebuilt here.

REMAINING REQUIREMENT

Map unverified branches and native-host behavior to source-specific evidence before assigning a complete verification verdict.

SOURCE REFERENCES

associated-core:dotnet/Bangel.Syntax/Ast.cs

TR-MOD-ASSOCIATED-3FA64E353B / Associated core / dotnet/Bangel.Syntax/BangelSyntax.cs

IF

This Elsa / source module is imported or its declared interface is invoked. Declared surface includes: public static SourceFile Parse(string source, string? sourceName = null, CancellationToken cancellationToken = default); public static IReadOnlyList<SyntaxToken> Tokenize(string source, CancellationToken cancellationToken = default)

HOW

Preserve lexical, syntactic, binding, type and lowering behavior before producing a validated representation. The complete terminology-edited 34-line source is preserved with SHA-256 c7fbe0efcbb39493c3f1b1547c11619d76694abc9318774690e234f682abb8e6. 2 extracted function/declaration entries are separately indexed, including exact Python bodies and guards where available.

THEN

Follow the exact returned values, diagnostics and state effects in the preserved implementation. Module inclusion and syntax extraction are documentary coverage; they do not prove every branch or cross-host behavior.

CURRENT EVIDENCE

Fresh related Python suites and per-profile/water results are included. Native C#/.NET, C++/Rust/R compilation and physical devices were not executed in this environment. This source copy received the requested terminology transfer after the earlier suite; the complete renamed host has not been rebuilt here.

REMAINING REQUIREMENT

Map unverified branches and native-host behavior to source-specific evidence before assigning a complete verification verdict.

SOURCE REFERENCES

associated-core:dotnet/Bangel.Syntax/BangelSyntax.cs

TR-MOD-ASSOCIATED-A6637A8BB1 / Associated core / dotnet/Bangel.Syntax/Lexer.cs

IF

This Elsa / source module is imported or its declared interface is invoked. Declared surface includes: private static readonly Regex Number = new(@"G(?:0|[1-9][0-9]*)?(?:\.[0-9]+(?:[eE][+-]?[0-9]+)?|[eE][+-]?[0-9]+)?", RegexOptions.CultureInvariant);; private static readonly UTF8Encoding StrictUtf8 = new(false, true);; internal static string Normalize(string source); internal static IReadOnlyList<SyntaxToken> Lex(string source, CancellationToken cancellationToken); private static bool IsIdentifierStart(char character) => char.IsAsciiLetter(character) || character == '_';

HOW

Preserve lexical, syntactic, binding, type and lowering behavior before producing a validated representation. The complete terminology-edited 215-line source is preserved with SHA-256 14391c7b9a1cca0cded63158f0585820df6af2699909b9edfb7d59b238923a59. 13 extracted function/declaration entries are separately indexed, including exact Python bodies and guards where available.

THEN

Follow the exact returned values, diagnostics and state effects in the preserved implementation. Module inclusion and syntax extraction are documentary coverage; they do not prove every branch or cross-host behavior.

CURRENT EVIDENCE

Fresh related Python suites and per-profile/water results are included. Native C#/.NET, C++/Rust/R compilation and physical devices were not executed in this environment. This source copy received the requested terminology transfer after the earlier suite; the complete renamed host has not been rebuilt here.

REMAINING REQUIREMENT

Map unverified branches and native-host behavior to source-specific evidence before assigning a complete verification verdict.

SOURCE REFERENCES

associated-core:dotnet/Bangel.Syntax/Lexer.cs

TR-MOD-ASSOCIATED-E80B5E734F / Associated core / dotnet/Bangel.Syntax/Parser.Expressions.cs

IF

This Elsa / source module is imported or its declared interface is invoked. Declared surface includes: private ExpressionSyntax Expression(); private ExpressionSyntax OrExpression(); private ExpressionSyntax AndExpression(); private ExpressionSyntax EqualityExpression(); private ExpressionSyntax ComparisonExpression()

HOW

Preserve lexical, syntactic, binding, type and lowering behavior before producing a validated representation. The complete terminology-edited 185-line source is preserved with SHA-256 eed503f9aa5c41ac72f6e5ed9da749295507836da6f4a00d4c57b37ed1f239e9. 15 extracted function/declaration entries are separately indexed, including exact Python bodies and guards where available.

THEN

Follow the exact returned values, diagnostics and state effects in the preserved implementation. Module inclusion and syntax extraction are documentary coverage; they do not prove every branch or cross-host behavior.

CURRENT EVIDENCE

Fresh related Python suites and per-profile/water results are included. Native C#/.NET, C++/Rust/R compilation and physical devices were not executed in this environment. This source copy received the requested terminology transfer after the earlier suite; the complete renamed host has not been rebuilt here.

REMAINING REQUIREMENT

Map unverified branches and native-host behavior to source-specific evidence before assigning a complete verification verdict.

SOURCE REFERENCES

associated-core:dotnet/Bangel.Syntax/Parser.Expressions.cs

TR-MOD-ASSOCIATED-D9A1EDC02A / Associated core / dotnet/Bangel.Syntax/Parser.Types.cs

IF

This Elsa / source module is imported or its declared interface is invoked. Declared surface includes: private TypeSyntax? OptionalTypeAnnotation() => Match("COLON") ? Type() : null;; private TypeSyntax TypeAnnotation(string requiredCode) { Expect("COLON", requiredCode); return Type(); }; private TypeSyntax Type(); private UnitExpression UnitExpression(); private UnitTerm UnitTerm()

HOW

Preserve lexical, syntactic, binding, type and lowering behavior before producing a validated representation. The complete terminology-edited 90-line source is preserved with SHA-256 c1a2d6043f69896dbb79e0ad1a63135a8d6832fb64279840af28031ffff2dfd9. 6 extracted function/declaration entries are separately indexed, including exact Python bodies and guards where available.

THEN

Follow the exact returned values, diagnostics and state effects in the preserved implementation. Module inclusion and syntax extraction are documentary coverage; they do not prove every branch or cross-host behavior.

CURRENT EVIDENCE

Fresh related Python suites and per-profile/water results are included. Native C#/.NET, C++/Rust/R compilation and physical devices were not executed in this environment. This source copy received the requested terminology transfer after the earlier suite; the complete renamed host has not been rebuilt here.

REMAINING REQUIREMENT

Map unverified branches and native-host behavior to source-specific evidence before assigning a complete verification verdict.

SOURCE REFERENCES

associated-core:dotnet/Bangel.Syntax/Parser.Types.cs

TR-MOD-ASSOCIATED-494433100D / Associated core / dotnet/Bangel.Syntax/Parser.cs

IF

This Elsa / source module is imported or its declared interface is invoked. Declared surface includes: internal sealed partial class Parser(IReadOnlyList<SyntaxToken> tokens, string? sourceName, CancellationToken cancellationToken); private static readonly HashSet<string> Reserved = new(StringComparer.Ordinal); internal SourceFile Parse(); private SyntaxSpan ParseHeader(); private IReadOnlyList<string> Effects(bool module)

HOW

Preserve lexical, syntactic, binding, type and lowering behavior before producing a validated representation. The complete terminology-edited 300-line source is preserved with SHA-256 bf792015aaaaadb9a293f4fe913f8af90e720c07b7e4e6e5e6e30a885d307f2a. 39 extracted function/declaration entries are separately indexed, including exact Python bodies and guards where available.

THEN

Follow the exact returned values, diagnostics and state effects in the preserved implementation. Module inclusion and syntax extraction are documentary coverage; they do not prove every branch or cross-host behavior.

CURRENT EVIDENCE

Fresh related Python suites and per-profile/water results are included. Native C#/.NET, C++/Rust/R compilation and physical devices were not executed in this environment. This source copy received the requested terminology transfer after the earlier suite; the complete renamed host has not been rebuilt here.

REMAINING REQUIREMENT

Map unverified branches and native-host behavior to source-specific evidence before assigning a complete verification verdict.

SOURCE REFERENCES

associated-core:dotnet/Bangel.Syntax/Parser.cs

TR-MOD-ASSOCIATED-0A82471C1E / Associated core / dotnet/Bangel.Syntax/SyntaxContracts.cs

IF

This Elsa / source module is imported or its declared interface is invoked. Declared surface includes: public sealed record SyntaxSpan(int Line, int Column = 1, int? EndColumn = null); public JsonElement ToJson() => SyntaxJson.Element(this);; public SyntaxException(string code, string message, SyntaxSpan? span = null) : base(message); public sealed record SyntaxToken(string Kind, string Text, SyntaxSpan Span, bool LeadingSpace = false); public JsonElement ToJson()

HOW

Preserve lexical, syntactic, binding, type and lowering behavior before producing a validated representation. The complete terminology-edited 110-line source is preserved with SHA-256 6037cad94a429bdd31828b75bd725004884f960f690b9f68ed3e9c83a2801d2c. 11 extracted function/declaration entries are separately indexed, including exact Python bodies and guards where available.

THEN

Follow the exact returned values, diagnostics and state effects in the preserved implementation. Module inclusion and syntax extraction are documentary coverage; they do not prove every branch or cross-host behavior.

CURRENT EVIDENCE

Fresh related Python suites and per-profile/water results are included. Native C#/.NET, C++/Rust/R compilation and physical devices were not executed in this environment. This source copy received the requested terminology transfer after the earlier suite; the complete renamed host has not been rebuilt here.

REMAINING REQUIREMENT

Map unverified branches and native-host behavior to source-specific evidence before assigning a complete verification verdict.

SOURCE REFERENCES

associated-core:dotnet/Bangel.Syntax/SyntaxContracts.cs

TR-MOD-ASSOCIATED-3D00207C65 / Associated core / dotnet/Bangel.Translation/CSharpTranslator.Collections.cs

IF

This Runtime / supporting core module is imported or its declared interface is invoked. Declared surface includes: private sealed record ArrayBinding(ITSymbol ElementType, string[] Elements);; private readonly Dictionary<ISymbol, ArrayBinding> arrays = new(SymbolEqualityComparer.Default);; private void ArrayDeclaration(LocalDeclarationStatementSyntax statement, bool checkedContext, int indent, int depth); private ArrayBinding? TryArray(IdentifierNameSyntax identifier) =>; private void RejectArrayWrite(AssignmentExpressionSyntax assignment)

HOW

Use the complete terminology-edited module and its declared types, call paths, state and error behavior; preserve program/evidence boundaries. The complete 151-line source is preserved with SHA-256 bf0a7c9840390e34633ba15fbdd12a1fbee7aab9bf25028b9d7cf9ee3a732f52. 8 extracted function/declaration entries are separately indexed, including exact Python bodies and guards where available.

THEN

Follow the exact returned values, diagnostics and state effects in the preserved implementation. Module inclusion and syntax extraction are documentary coverage; they do not prove every branch or cross-host behavior.

CURRENT EVIDENCE

Fresh related Python suites and per-profile/water results are included. Native C#/.NET, C++/Rust/R compilation and physical devices were not executed in this environment. This source copy received the requested terminology transfer after the earlier suite; the complete renamed host has not been rebuilt here.

REMAINING REQUIREMENT

Map unverified branches and native-host behavior to source-specific evidence before assigning a complete verification verdict.

SOURCE REFERENCES

associated-core:dotnet/Bangel.Translation/CSharpTranslator.Collections.cs

TR-MOD-ASSOCIATED-F538E19789 / Associated core / dotnet/Bangel.Translation/CSharpTranslator.ControlFlow.cs

IF

This Runtime / supporting core module is imported or its declared interface is invoked. Declared surface includes: private sealed record FunctionBinding(LocalFunctionStatementSyntax Syntax, IMethodSymbol Symbol, string Name);; private readonly Dictionary<IMethodSymbol, FunctionBinding> functions = new(SymbolEqualityComparer.Default);; private readonly HashSet<ISymbol> activeIndices = new(SymbolEqualityComparer.Default);; public void Program(CompilationUnitSyntax root); private bool PrimitiveSyntax(TypeSyntax type) => type is PredefinedTypeSyntax predefined &&

HOW

Use the complete terminology-edited module and its declared types, call paths, state and error behavior; preserve program/evidence boundaries. The complete 232-line source is preserved with SHA-256 dbac1c4ea664ab219066e94134e56e1ef4bde808830015e95e1595671519f1a6. 14 extracted function/declaration entries are separately indexed, including exact Python bodies and guards where available.

THEN

Follow the exact returned values, diagnostics and state effects in the preserved implementation. Module inclusion and syntax extraction are documentary coverage; they do not prove every branch or cross-host behavior.

CURRENT EVIDENCE

Fresh related Python suites and per-profile/water results are included. Native C#/.NET, C++/Rust/R compilation and physical devices were not executed in this environment. This source copy received the requested terminology transfer after the earlier suite; the complete renamed host has not been rebuilt here.

REMAINING REQUIREMENT

Map unverified branches and native-host behavior to source-specific evidence before assigning a complete verification verdict.

SOURCE REFERENCES

associated-core:dotnet/Bangel.Translation/CSharpTranslator.ControlFlow.cs

TR-MOD-ASSOCIATED-754D8DAA59 / Associated core / dotnet/Bangel.Translation/CSharpTranslator.Data.cs

IF

This Runtime / supporting core module is imported or its declared interface is invoked. Declared surface includes: private sealed record DataField(ParameterSyntax Syntax, ITypeSymbol Type, IPropertySymbol Symbol, string Name);; private sealed record DataBinding(MemberDeclarationSyntax Syntax, INamedTypeSymbol Symbol, string Name, bool IsEnum); private readonly Dictionary<ITypeSymbol, DataBinding> dataTypes = new(SymbolEqualityComparer.Default);; private readonly Dictionary<ISymbol, (DataBinding Owner, string Name)> dataMembers = new(SymbolEqualityComparer.Default);; private void PrepareData(CompilationUnitSyntax root)

HOW

Use the complete terminology-edited module and its declared types, call paths, state and error behavior; preserve program/evidence boundaries. The complete 206-line source is preserved with SHA-256 ed918aee9a327aea7b01085a78774d62568a47580e3de4f74d73c84d5964eb80. 14 extracted function/declaration entries are separately indexed, including exact Python bodies and guards where available.

THEN

Follow the exact returned values, diagnostics and state effects in the preserved implementation. Module inclusion and syntax extraction are documentary coverage; they do not prove every branch or cross-host behavior.

CURRENT EVIDENCE

Fresh related Python suites and per-profile/water results are included. Native C#/.NET, C++/Rust/R compilation and physical devices were not executed in this environment. This source copy received the requested terminology transfer after the earlier suite; the complete renamed host has not been rebuilt here.

REMAINING REQUIREMENT

Map unverified branches and native-host behavior to source-specific evidence before assigning a complete verification verdict.

SOURCE REFERENCES

associated-core:dotnet/Bangel.Translation/CSharpTranslator.Data.cs

TR-MOD-ASSOCIATED-58F636DA89 / Associated core / dotnet/Bangel.Translation/CSharpTranslator.NumericWidths.cs

IF

This Runtime / supporting core module is imported or its declared interface is invoked. Declared surface includes: private bool IsAdmittedInteger(SpecialType? type) => type == SpecialType.System_Int64 ||; private readonly HashSet<IMethodSymbol> int32HelperUsers = new(SymbolEqualityComparer.Default);; private string Int32Check(string expression); private void ValidateInt32CallDepth(); private void EmitInt32Helper()

HOW

Use the complete terminology-edited module and its declared types, call paths, state and error behavior; preserve program/evidence boundaries. The complete 69-line source is preserved with SHA-256 8cb0c5b3eb07939dbfe546fe8263d6f5fc04cb8d03464672067c8624678b7871. 6 extracted function/declaration entries are separately indexed, including exact Python bodies and guards where available.

THEN

Follow the exact returned values, diagnostics and state effects in the preserved implementation. Module inclusion and syntax extraction are documentary coverage; they do not prove every branch or cross-host behavior.

CURRENT EVIDENCE

Fresh related Python suites and per-profile/water results are included. Native C#/.NET, C++/Rust/R compilation and physical devices were not executed in this environment. This source copy received the requested terminology transfer after the earlier suite; the complete renamed host has not been rebuilt here.

REMAINING REQUIREMENT

Map unverified branches and native-host behavior to source-specific evidence before assigning a complete verification verdict.

SOURCE REFERENCES

associated-core:dotnet/Bangel.Translation/CSharpTranslator.NumericWidths.cs

TR-MOD-ASSOCIATED-0C6407F529 / Associated core / dotnet/Bangel.Translation/CSharpTranslator.cs

IF

This Runtime / supporting core module is imported or its declared interface is invoked. Declared surface includes: public static void Emit(string name, long value) => Write(name, value);; public static void Emit(string name, bool value) => Write(name, value);; public static void Emit(string name, string value) => Write(name, value);; private static readonly Lazy<MetadataReference[]> References = new(() =>); private static readonly HashSet<string> Reserved = new(StringComparer.Ordinal)

HOW

Use the complete terminology-edited module and its declared types, call paths, state and error behavior; preserve program/evidence boundaries. The complete 388-line source is preserved with SHA-256 8555b40584fc10efa670ac8b77e9439ea193d16b09eb04baef2426c7939a6879. 25 extracted function/declaration entries are separately indexed, including exact Python bodies and guards where available.

THEN

Follow the exact returned values, diagnostics and state effects in the preserved implementation. Module inclusion and syntax extraction are documentary coverage; they do not prove every branch or cross-host behavior.

CURRENT EVIDENCE

Fresh related Python suites and per-profile/water results are included. Native C#/.NET, C++/Rust/R compilation and physical devices were not executed in this environment. This source copy received the requested terminology transfer after the earlier suite; the complete renamed host has not been rebuilt here.

REMAINING REQUIREMENT

Map unverified branches and native-host behavior to source-specific evidence before assigning a complete verification verdict.

SOURCE REFERENCES

associated-core:dotnet/Bangel.Translation/CSharpTranslator.cs

TR-MOD-ASSOCIATED-9F2253E1F6 / Associated core / dotnet/Bangel.Translation/TranslationException.cs

IF

This Runtime / supporting core module is imported or its declared interface is invoked. Declared surface includes: public TranslationException(string code, string message, int line = 1, int column = 1)

HOW

Use the complete terminology-edited module and its declared types, call paths, state and error behavior; preserve program/evidence boundaries. The complete 17-line source is preserved with SHA-256 ccef8981145af60f5795aa15e2971bda5870b7f5ce13a8685a3c8bce6473cb3d. 1 extracted function/declaration entries are separately indexed, including exact Python bodies and guards where available.

THEN

Follow the exact returned values, diagnostics and state effects in the preserved implementation. Module inclusion and syntax extraction are documentary coverage; they do not prove every branch or cross-host behavior.

CURRENT EVIDENCE

Fresh related Python suites and per-profile/water results are included. Native C#/.NET, C++/Rust/R compilation and physical devices were not executed in this environment. This source copy received the requested terminology transfer after the earlier suite; the complete renamed host has not been rebuilt here.

REMAINING REQUIREMENT

Map unverified branches and native-host behavior to source-specific evidence before assigning a complete verification verdict.

SOURCE REFERENCES

associated-core:dotnet/Bangel.Translation/TranslationException.cs

TR-MOD-ASSOCIATED-EA57468C94 / Associated core / dotnet/Bangel.Translation/TranslationProfile.cs

IF

This Runtime / supporting core module is imported or its declared interface is invoked. This module contains shared declarations or constants; the complete source is retained.

HOW

Use the complete terminology-edited module and its declared types, call paths, state and error behavior; preserve program/evidence boundaries. The complete 10-line source is preserved with SHA-256 9c4cfe0333e802581134d9e296f10ee3eb72af9fa5c9a1de0cd66c906c981d2f. 0 extracted function/declaration entries are separately indexed, including exact Python bodies and guards where available.

THEN

Follow the exact returned values, diagnostics and state effects in the preserved implementation. Module inclusion and syntax extraction are documentary coverage; they do not prove every branch or cross-host behavior.

CURRENT EVIDENCE

Fresh related Python suites and per-profile/water results are included. Native C#/.NET, C++/Rust/R compilation and physical devices were not executed in this environment. This source copy received the requested terminology transfer after the earlier suite; the complete renamed host has not been rebuilt here.

REMAINING REQUIREMENT

Map unverified branches and native-host behavior to source-specific evidence before assigning a complete verification verdict.

SOURCE REFERENCES

associated-core:dotnet/Bangel.Translation/TranslationProfile.cs

TR-MOD-ASSOCIATED-57973024EF / Associated core / native/include/jp_native.h

IF

This Numeric / typed values module is imported or its declared interface is invoked. This module contains shared declarations or constants; the complete source is retained.

HOW

Use the exact numeric and dimensional rules of this module; keep typed unknown, signed values and source-specific bounds distinct. The complete terminology-edited 29-line source is preserved with SHA-256 14c4f0d1d04c247e2cd53416b3c3df902efefc74fd56eba3ea8ac0910b679a68. 0 extracted function/declaration entries are separately indexed, including exact Python bodies and guards where available.

THEN

Follow the exact returned values, diagnostics and state effects in the preserved implementation. Module inclusion and syntax extraction are documentary coverage; they do not prove every branch or cross-host behavior.

CURRENT EVIDENCE

Fresh related Python suites and per-profile/water results are included. Native C#/.NET, C++/Rust/R compilation and physical devices were not executed in this environment. This source copy received the requested terminology transfer after the earlier suite; the complete renamed host has not been rebuilt here.

REMAINING REQUIREMENT

Map unverified branches and native-host behavior to source-specific evidence before assigning a complete verification verdict.

SOURCE REFERENCES

associated-core:native/include/jp_native.h

TR-MOD-ASSOCIATED-578197E5E3 / Associated core / native/include/jp_native.hpp

IF

This Numeric / typed values module is imported or its declared interface is invoked. This module contains shared declarations or constants; the complete source is retained.

HOW

Use the exact numeric and dimensional rules of this module; keep typed unknown, signed values and source-specific bounds distinct. The complete terminology-edited 33-line source is preserved with SHA-256 4c9391ead36ae7947e4c9450b905a4d82dd35b6e6ad8ff497cdb0609483db396. 0 extracted function/declaration entries are separately indexed, including exact Python bodies and guards where available.

THEN

Follow the exact returned values, diagnostics and state effects in the preserved implementation. Module inclusion and syntax extraction are documentary coverage; they do not prove every branch or cross-host behavior.

CURRENT EVIDENCE

Fresh related Python suites and per-profile/water results are included. Native C#/.NET, C++/Rust/R compilation and physical devices were not executed in this environment. This source copy received the requested terminology transfer after the earlier suite; the complete renamed host has not been rebuilt here.

REMAINING REQUIREMENT

Map unverified branches and native-host behavior to source-specific evidence before assigning a complete verification verdict.

SOURCE REFERENCES

associated-core:native/include/jp_native.hpp

TR-MOD-ASSOCIATED-3E7237FECF / Associated core / native/r/jpdecimal/R/decimal.R

IF

This Numeric / typed values module is imported or its declared interface is invoked. This module contains shared declarations or constants; the complete source is retained.

HOW

Use the exact numeric and dimensional rules of this module; keep typed unknown, signed values and source-specific bounds distinct. The complete terminology-edited 10-line source is preserved with SHA-256 6f93d8a7ba56a4a733ecc86c228ce247b1d93c289a27b64dbcdcdbe3bd94d775. 0 extracted function/declaration entries are separately indexed, including exact Python bodies and guards where available.

THEN

Follow the exact returned values, diagnostics and state effects in the preserved implementation. Module inclusion and syntax extraction are documentary coverage; they do not prove every branch or cross-host behavior.

CURRENT EVIDENCE

Fresh related Python suites and per-profile/water results are included. Native C#/.NET, C++/Rust/R compilation and physical devices were not executed in this environment. This source copy received the requested terminology transfer after the earlier suite; the complete renamed host has not been rebuilt here.

REMAINING REQUIREMENT

Map unverified branches and native-host behavior to source-specific evidence before assigning a complete verification verdict.

SOURCE REFERENCES

associated-core:native/r/jpdecimal/R/decimal.R

TR-MOD-ASSOCIATED-903B486D40 / Associated core / native/r/jpdecimal/src/decimal.cpp

IF

This Numeric / typed values module is imported or its declared interface is invoked. This module contains shared declarations or constants; the complete source is retained.

HOW

Use the exact numeric and dimensional rules of this module; keep typed unknown, signed values and source-specific bounds distinct. The complete terminology-edited 24-line source is preserved with SHA-256 328dd340c793a5374b3300a491b0fab48a782f79eb3735049d3a3002f863a5e2. 0 extracted function/declaration entries are separately indexed, including exact Python bodies and guards where available.

THEN

Follow the exact returned values, diagnostics and state effects in the preserved implementation. Module inclusion and syntax extraction are documentary coverage; they do not prove every branch or cross-host behavior.

CURRENT EVIDENCE

Fresh related Python suites and per-profile/water results are included. Native C#/.NET, C++/Rust/R compilation and physical devices were not executed in this environment. This source copy received the requested terminology transfer after the earlier suite; the complete renamed host has not been rebuilt here.

REMAINING REQUIREMENT

Map unverified branches and native-host behavior to source-specific evidence before assigning a complete verification verdict.

SOURCE REFERENCES

associated-core:native/r/jpdecimal/src/decimal.cpp

TR-MOD-ASSOCIATED-74C65554B4 / Associated core / native/src/jp_native.cpp

IF

This Numeric / typed values module is imported or its declared interface is invoked. This module contains shared declarations or constants; the complete source is retained.

HOW

Use the exact numeric and dimensional rules of this module; keep typed unknown, signed values and source-specific bounds distinct. The complete terminology-edited 77-line source is preserved with SHA-256 44fc225a0cfd01c0f3d742edd8d9f9dcf28d18acd79df84ef387b762f12db58e. 0 extracted function/declaration entries are separately indexed, including exact Python bodies and guards where available.

THEN

Follow the exact returned values, diagnostics and state effects in the preserved implementation. Module inclusion and syntax extraction are documentary coverage; they do not prove every branch or cross-host behavior.

CURRENT EVIDENCE

Fresh related Python suites and per-profile/water results are included. Native C#/.NET, C++/Rust/R compilation and physical devices were not executed in this environment. This source copy received the requested terminology transfer after the earlier suite; the complete renamed host has not been rebuilt here.

REMAINING REQUIREMENT

Map unverified branches and native-host behavior to source-specific evidence before assigning a complete verification verdict.

SOURCE REFERENCES

associated-core:native/src/jp_native.cpp

TR-MOD-ASSOCIATED-B657991E54 / Associated core / products/ego-rev/bangel/ego.bangel

IF

This MJ-EGO-REV module is imported or its declared interface is invoked. Declared surface includes: function missing() -> Value; function known(v: Value) -> Bool; function number(v: Value) -> Real; function base(decision: Text, reason: Text) -> Outcome; function at(values: Vector[Value], index: Int) -> Value

HOW

Apply the energy ledger or transition logic shown in this module, preserving missing values and offline effect boundaries. The complete terminology-edited 411-line source is preserved with SHA-256 2c5426aeb7d63ab852e0c9b56b97d462902086aba9b020eb99bd2c5775de400f. 15 extracted function/declaration entries are separately indexed, including exact Python bodies and guards where available.

THEN

Follow the exact returned values, diagnostics and state effects in the preserved implementation. Module inclusion and syntax extraction are documentary coverage; they do not prove every branch or cross-host behavior.

CURRENT EVIDENCE

Fresh related Python suites and per-profile/water results are included. Native C#/.NET, C++/Rust/R compilation and physical devices were not executed in this environment. This source copy received the requested terminology transfer after the earlier suite; the complete renamed host has not been rebuilt here.

REMAINING REQUIREMENT

Map unverified branches and native-host behavior to source-specific evidence before assigning a complete verification verdict.

SOURCE REFERENCES

associated-core:products/ego-rev/bangel/ego.bangel

TR-MOD-ASSOCIATED-F094D4E8F0 / Associated core / products/ego-rev/dotnet/Ego.Cli/Engines.cs

IF

This MJ-EGO-REV module is imported or its declared interface is invoked. Declared surface includes: public static Outcome Native(string operation, JsonElement input) => operation switch; public static string Expression(string operation, JsonElement input); public static string Source(IReadOnlyList<(string Operation, JsonElement Input)> cases); public static (Outcome[] Results, string Source, string Ir, string Receipt) Bangel(); public static bool Equivalent(Outcome left, Outcome right)

HOW

Apply the energy ledger or transition logic shown in this module, preserving missing values and offline effect boundaries. The complete terminology-edited 112-line source is preserved with SHA-256 7b9168dd288aab46321eb1d3bb0cd2b7a368c23a2f0bfbcce86dea1f10f050a08. 5 extracted function/declaration entries are separately indexed, including exact Python bodies and guards where available.

THEN

Follow the exact returned values, diagnostics and state effects in the preserved implementation. Module inclusion and syntax extraction are documentary coverage; they do not prove every branch or cross-host behavior.

CURRENT EVIDENCE

Fresh related Python suites and per-profile/water results are included. Native C#/.NET, C++/Rust/R compilation and physical devices were not executed in this environment. This source copy received the requested terminology transfer after the earlier suite; the complete renamed host has not been rebuilt here.

REMAINING REQUIREMENT

Map unverified branches and native-host behavior to source-specific evidence before assigning a complete verification verdict.

SOURCE REFERENCES

associated-core:products/ego-rev/dotnet/Ego.Cli/Engines.cs

TR-MOD-ASSOCIATED-C9DA065EE5 / Associated core / products/ego-rev/dotnet/Ego.Cli/Program.cs

IF

This MJ-EGO-REV module is imported or its declared interface is invoked. This module contains shared declarations or constants; the complete source is retained.

HOW

Apply the energy ledger or transition logic shown in this module, preserving missing values and offline effect boundaries. The complete terminology-edited 73-line source is preserved with SHA-256 40ab2167d305136a4cf01fcb52ce255a23408fda5e39cda2d24dfa8075d9f4c6. 0 extracted function/declaration entries are separately indexed, including exact Python bodies and guards where available.

THEN

Follow the exact returned values, diagnostics and state effects in the preserved implementation. Module inclusion and syntax extraction are documentary coverage; they do not prove every branch or cross-host behavior.

CURRENT EVIDENCE

Fresh related Python suites and per-profile/water results are included. Native C#/.NET, C++/Rust/R compilation and physical devices were not executed in this environment. This source copy received the requested terminology transfer after the earlier suite; the complete renamed host has not been rebuilt here.

REMAINING REQUIREMENT

Map unverified branches and native-host behavior to source-specific evidence before assigning a complete verification verdict.

SOURCE REFERENCES

associated-core:products/ego-rev/dotnet/Ego.Cli/Program.cs

TR-MOD-ASSOCIATED-421EE1CE17 / Associated core / products/ego-rev/dotnet/Ego.Core/Model.cs

IF

This MJ-EGO-REV module is imported or its declared interface is invoked. Declared surface includes: public sealed record Outcome(string Decision, string Reason, decimal? ExternalJ = null,; public sealed record EnergyEntry(string Id, string Role, string SourceClass, decimal? Joules,; public sealed record EnergyInput(EnergyEntry[] Entries, decimal ToleranceJ, decimal MaxUncertaintyJ,; public sealed record BatteryInput(decimal? InitialJ, decimal? CapacityJ, decimal? GridJ,; public sealed record ThermalInput(decimal? InitialJ, decimal? CapacityJ, decimal? CapturedJ,

HOW

Apply the energy ledger or transition logic shown in this module, preserving missing values and offline effect boundaries. The complete terminology-edited 145-line source is preserved with SHA-256 a9bbf5a57224278a01787b5b70db5a691405f4b7203e9a046ad1f6bab1f63a23. 20 extracted function/declaration entries are separately indexed, including exact Python bodies and guards where available.

THEN

Follow the exact returned values, diagnostics and state effects in the preserved implementation. Module inclusion and syntax extraction are documentary coverage; they do not prove every branch or cross-host behavior.

CURRENT EVIDENCE

Fresh related Python suites and per-profile/water results are included. Native C#/.NET, C++/Rust/R compilation and physical devices were not executed in this environment. This source copy received the requested terminology transfer after the earlier suite; the complete renamed host has not been rebuilt here.

REMAINING REQUIREMENT

Map unverified branches and native-host behavior to source-specific evidence before assigning a complete verification verdict.

SOURCE REFERENCES

associated-core:products/ego-rev/dotnet/Ego.Core/Model.cs

TR-MOD-ASSOCIATED-5DC2AD902B / Associated core / products/ego-rev/dotnet/Ego.Core/Receipts.cs

IF

This MJ-EGO-REV module is imported or its declared interface is invoked. Declared surface includes: public sealed record AuditRecord(long Sequence, string PreviousRoot, JsonElement Payload, string Root);; public static string Genesis => new('0',64);; public static AuditRecord[] Append(IReadOnlyList<AuditRecord> records, string expectedPriorRoot, JsonElement payload); public static bool Verify(IReadOnlyList<AuditRecord>? records, string expectedRoot)

HOW

Apply the energy ledger or transition logic shown in this module, preserving missing values and offline effect boundaries. The complete terminology-edited 61-line source is preserved with SHA-256 bf949cb51350d54039b5665222199633d8ee7d7aafcd91d09c167cb7d33b9bbb. 4 extracted function/declaration entries are separately indexed, including exact Python bodies and guards where available.

THEN

Follow the exact returned values, diagnostics and state effects in the preserved implementation. Module inclusion and syntax extraction are documentary coverage; they do not prove every branch or cross-host behavior.

CURRENT EVIDENCE

Fresh related Python suites and per-profile/water results are included. Native C#/.NET, C++/Rust/R compilation and physical devices were not executed in this environment. This source copy received the requested terminology transfer after the earlier suite; the complete renamed host has not been rebuilt here.

REMAINING REQUIREMENT

Map unverified branches and native-host behavior to source-specific evidence before assigning a complete verification verdict.

SOURCE REFERENCES

associated-core:products/ego-rev/dotnet/Ego.Core/Receipts.cs

TR-MOD-ASSOCIATED-F15020706D / Associated core / products/ego-rev/dotnet/Ego.Core/Transitions.cs

IF

This MJ-EGO-REV module is imported or its declared interface is invoked. Declared surface includes: public static IReadOnlyList<string> Modes { get; } = Array.AsReadOnly(Edges.Keys.ToArray());; public static bool Allowed(string from, string to) => Edges.ContainsKey(from) && Edges.ContainsKey(to) &&; public static Outcome Evaluate(TransitionInput x)

HOW

Apply the energy ledger or transition logic shown in this module, preserving missing values and offline effect boundaries. The complete terminology-edited 60-line source is preserved with SHA-256 47446015bc2e3c4277ff5117972e48e7fb3ad5f3167d40fb15b4ff9d423b4507. 3 extracted function/declaration entries are separately indexed, including exact Python bodies and guards where available.

THEN

Follow the exact returned values, diagnostics and state effects in the preserved implementation. Module inclusion and syntax extraction are documentary coverage; they do not prove every branch or cross-host behavior.

CURRENT EVIDENCE

Fresh related Python suites and per-profile/water results are included. Native C#/.NET, C++/Rust/R compilation and physical devices were not executed in this environment. This source copy received the requested terminology transfer after the earlier suite; the complete renamed host has not been rebuilt here.

REMAINING REQUIREMENT

Map unverified branches and native-host behavior to source-specific evidence before assigning a complete verification verdict.

SOURCE REFERENCES

associated-core:products/ego-rev/dotnet/Ego.Core/Transitions.cs

TR-MOD-ASSOCIATED-DF0EAD70B5 / Associated core / products/water/bangel/hagar.bangel

IF

This Hagar / water protection module is imported or its declared interface is invoked. Declared surface includes: function usable(probe: Probe, cfg: Config) -> Bool; function number_of(probe: Probe) -> Real; function median3(a: Real, b: Real, c: Real) -> Real; function clip(x: Real, lower: Real, upper: Real) -> Real; export function valid_config(cfg: Config) -> Bool

HOW

Apply the source-defined probe, policy, risk, state and transport rules. Advisory and authenticated-host roles remain separate. The complete terminology-edited 176-line source is preserved with SHA-256 684b1fdd4e2050b62eafa7c59b11c03aabca301d2246c4962e1c56b66434bc7b. 6 extracted function/declaration entries are separately indexed, including exact Python bodies and guards where available.

THEN

Follow the exact returned values, diagnostics and state effects in the preserved implementation. Module inclusion and syntax extraction are documentary coverage; they do not prove every branch or cross-host behavior.

CURRENT EVIDENCE

Fresh related Python suites and per-profile/water results are included. Native C#/.NET, C++/Rust/R compilation and physical devices were not executed in this environment. This source copy received the requested terminology transfer after the earlier suite; the complete renamed host has not been rebuilt here.

REMAINING REQUIREMENT

Map unverified branches and native-host behavior to source-specific evidence before assigning a complete verification verdict.

SOURCE REFERENCES

associated-core:products/water/bangel/hagar.bangel

TR-MOD-ASSOCIATED-D6736DDDDC / Associated core / products/water/bangel/protection.bangel

IF

This Hagar / water protection module is imported or its declared interface is invoked. Declared surface includes: export function evaluate(entropy: Real, authentication: Real, traffic: Real, risks_known: Bool, signals_known: Bool, integrity_failure: Bool, key_compromise: Bool, recent_scores: Vector[Real], gates: Gates) -> Decision

HOW

Apply the source-defined probe, policy, risk, state and transport rules. Advisory and authenticated-host roles remain separate. The complete terminology-edited 91-line source is preserved with SHA-256 f74c607d3ce684f6c9751af779eb5c4ee8e86c226686ea3c602cf12e584e5bd9. 1 extracted function/declaration entries are separately indexed, including exact Python bodies and guards where available.

THEN

Follow the exact returned values, diagnostics and state effects in the preserved implementation. Module inclusion and syntax extraction are documentary coverage; they do not prove every branch or cross-host behavior.

CURRENT EVIDENCE

Fresh related Python suites and per-profile/water results are included. Native C#/.NET, C++/Rust/R compilation and physical devices were not executed in this environment. This source copy received the requested terminology transfer after the earlier suite; the complete renamed host has not been rebuilt here.

REMAINING REQUIREMENT

Map unverified branches and native-host behavior to source-specific evidence before assigning a complete verification verdict.

SOURCE REFERENCES

associated-core:products/water/bangel/protection.bangel

TR-MOD-ASSOCIATED-D8DB0D1E47 / Associated core / products/water/dotnet/Water.Cli/Program.cs

IF

This Hagar / water protection module is imported or its declared interface is invoked. This module contains shared declarations or constants; the complete source is retained.

HOW

Apply the source-defined probe, policy, risk, state and transport rules. Advisory and authenticated-host roles remain separate. The complete terminology-edited 32-line source is preserved with SHA-256 4be42f5198fe4ffc8b21b96555ec3496417e28515a91445a53a36f6961d3205f. 0 extracted function/declaration entries are separately indexed, including exact Python bodies and guards where available.

THEN

Follow the exact returned values, diagnostics and state effects in the preserved implementation. Module inclusion and syntax extraction are documentary coverage; they do not prove every branch or cross-host behavior.

CURRENT EVIDENCE

Fresh related Python suites and per-profile/water results are included. Native C#/.NET, C++/Rust/R compilation and physical devices were not executed in this environment. This source copy received the requested terminology transfer after the earlier suite; the complete renamed host has not been rebuilt here.

REMAINING REQUIREMENT

Map unverified branches and native-host behavior to source-specific evidence before assigning a complete verification verdict.

SOURCE REFERENCES

associated-core:products/water/dotnet/Water.Cli/Program.cs

TR-MOD-ASSOCIATED-DE112F6DC0 / Associated core / products/water/dotnet/Water.Core/AuthenticatedGateway.cs

IF

This Hagar / water protection module is imported or its declared interface is invoked. Declared surface includes: public sealed record TelemetryBody(string Schema,string Facility,string Train,string Device,; public sealed record TelemetryPacket(TelemetryBody Body,string AuthenticationTag)); public sealed record GatewayReceipt(long Index,string PreviousRoot,long TelemetrySequence,; public sealed record GatewayResult(HagarResult Advisory,ProtectionResult Protection,GatewayReceipt Receipt);; public static readonly JsonSerializerOptions Options=new()

HOW

Apply the source-defined probe, policy, risk, state and transport rules. Advisory and authenticated-host roles remain separate. The complete terminology-edited 166-line source is preserved with SHA-256 aa7b9940baf2770d762d8739c8e97503ffd4232ce7c1544339fd9fc011fd3575. 13 extracted function/declaration entries are separately indexed, including exact Python bodies and guards where available.

THEN

Follow the exact returned values, diagnostics and state effects in the preserved implementation. Module inclusion and syntax extraction are documentary coverage; they do not prove every branch or cross-host behavior.

CURRENT EVIDENCE

Fresh related Python suites and per-profile/water results are included. Native C#/.NET, C++/Rust/R compilation and physical devices were not executed in this environment. This source copy received the requested terminology transfer after the earlier suite; the complete renamed host has not been rebuilt here.

REMAINING REQUIREMENT

Map unverified branches and native-host behavior to source-specific evidence before assigning a complete verification verdict.

SOURCE REFERENCES

associated-core:products/water/dotnet/Water.Core/AuthenticatedGateway.cs

TR-MOD-ASSOCIATED-CDF354A6CD / Associated core / products/water/dotnet/Water.Core/Demo.cs

IF

This Hagar / water protection module is imported or its declared interface is invoked. Declared surface includes: public static HagarInput HagarInput(long sequence=1) => new(); public static ProtectionInput ProtectionInput() => new(0.1,0.1,0.1,[],false,false,true,true,true,true,true,true,false,false,true);; public static object Simulate(int steps)

HOW

Apply the source-defined probe, policy, risk, state and transport rules. Advisory and authenticated-host roles remain separate. The complete terminology-edited 26-line source is preserved with SHA-256 496a32717b1dd31db8ab89498ab22ff73e6138a9b011a4984cc13a7ca8887af1. 3 extracted function/declaration entries are separately indexed, including exact Python bodies and guards where available.

THEN

Follow the exact returned values, diagnostics and state effects in the preserved implementation. Module inclusion and syntax extraction are documentary coverage; they do not prove every branch or cross-host behavior.

CURRENT EVIDENCE

Fresh related Python suites and per-profile/water results are included. Native C#/.NET, C++/Rust/R compilation and physical devices were not executed in this environment. This source copy received the requested terminology transfer after the earlier suite; the complete renamed host has not been rebuilt here.

REMAINING REQUIREMENT

Map unverified branches and native-host behavior to source-specific evidence before assigning a complete verification verdict.

SOURCE REFERENCES

associated-core:products/water/dotnet/Water.Core/Demo.cs

TR-MOD-ASSOCIATED-CE16B3D52D / Associated core / products/water/dotnet/Water.Core/Hagar.cs

IF

This Hagar / water protection module is imported or its declared interface is invoked. Declared surface includes: public sealed record Sensor(string Id, double? Value, string Unit, double Uncertainty,; public sealed record HagarConfig(double MinPressure = 45, double MaxPressure = 75,; public sealed record HagarInput(Sensor[] Sensors, long Sequence, long PreviousSequence,; public sealed record HagarResult(string Decision, string Reason, double PressureBar, double PumpSpeedPct,; public static bool ValidConfig(HagarConfig c) => Finite(c.MinPressure,c.MaxPressure,c.PressureStep,

HOW

Apply the source-defined probe, policy, risk, state and transport rules. Advisory and authenticated-host roles remain separate. The complete terminology-edited 68-line source is preserved with SHA-256 aaa48ac618cc7622dd0970a8a5e3fb0eadf70d6eb8339d81353e58c3361a0605. 6 extracted function/declaration entries are separately indexed, including exact Python bodies and guards where available.

THEN

Follow the exact returned values, diagnostics and state effects in the preserved implementation. Module inclusion and syntax extraction are documentary coverage; they do not prove every branch or cross-host behavior.

CURRENT EVIDENCE

Fresh related Python suites and per-profile/water results are included. Native C#/.NET, C++/Rust/R compilation and physical devices were not executed in this environment. This source copy received the requested terminology transfer after the earlier suite; the complete renamed host has not been rebuilt here.

REMAINING REQUIREMENT

Map unverified branches and native-host behavior to source-specific evidence before assigning a complete verification verdict.

SOURCE REFERENCES

associated-core:products/water/dotnet/Water.Core/Hagar.cs

TR-MOD-ASSOCIATED-FB09EB3347 / Associated core / products/water/dotnet/Water.Core/Protection.cs

IF

This Hagar / water protection module is imported or its declared interface is invoked. Declared surface includes: public sealed record ProtectionInput(double? EntropyRisk, double? AuthenticationRisk, double? TrafficRisk,; public sealed record ProtectionResult(string Decision,string Reason,double? Score,double[] Nodes,; public static ProtectionResult Evaluate(ProtectionInput x)

HOW

Apply the source-defined probe, policy, risk, state and transport rules. Advisory and authenticated-host roles remain separate. The complete terminology-edited 40-line source is preserved with SHA-256 5eb433b50d11e875fbc9e0d5a541894e9f2f1c3c69bd70c96f49179ae0f127e1. 3 extracted function/declaration entries are separately indexed, including exact Python bodies and guards where available.

THEN

Follow the exact returned values, diagnostics and state effects in the preserved implementation. Module inclusion and syntax extraction are documentary coverage; they do not prove every branch or cross-host behavior.

CURRENT EVIDENCE

Fresh related Python suites and per-profile/water results are included. Native C#/.NET, C++/Rust/R compilation and physical devices were not executed in this environment. This source copy received the requested terminology transfer after the earlier suite; the complete renamed host has not been rebuilt here.

REMAINING REQUIREMENT

Map unverified branches and native-host behavior to source-specific evidence before assigning a complete verification verdict.

SOURCE REFERENCES

associated-core:products/water/dotnet/Water.Core/Protection.cs

TR-MOD-ASSOCIATED-301E1543FA / Associated core / products/water/legacy/hagar-python/src/mjos_hagar/__init__.py

IF

This Hagar / water protection module is imported or its declared interface is invoked. This module contains shared declarations or constants; the complete source is retained.

HOW

Apply the source-defined probe, policy, risk, state and transport rules. Advisory and authenticated-host roles remain separate. The complete terminology-edited 18-line source is preserved with SHA-256 dfe70a2e830d00f9f2e04e87d9e888d7797345a16817df9f27a1032764eaf9f5. 0 extracted function/declaration entries are separately indexed, including exact Python bodies and guards where available.

THEN

Follow the exact returned values, diagnostics and state effects in the preserved implementation. Module inclusion and syntax extraction are documentary coverage; they do not prove every branch or cross-host behavior.

CURRENT EVIDENCE

Fresh related Python suites and per-profile/water results are included. Native C#/.NET, C++/Rust/R compilation and physical devices were not executed in this environment. This source copy received the requested terminology transfer after the earlier suite; the complete renamed host has not been rebuilt here.

REMAINING REQUIREMENT

Map unverified branches and native-host behavior to source-specific evidence before assigning a complete verification verdict.

SOURCE REFERENCES

associated-core:products/water/legacy/hagar-python/src/mjos_hagar/__init__.py

TR-MOD-ASSOCIATED-37E45EC085 / Associated core / products/water/legacy/hagar-python/src/mjos_hagar/api.py

IF

This Hagar / water protection module is imported or its declared interface is invoked. Declared surface includes: `_send(self, status: int, body: dict[str, object]); _body(self); do_GET(self); do_POST(self); log_message(self, format: str, *args: object)`

HOW

Apply the source-defined probe, policy, risk, state and transport rules. Advisory and authenticated-host roles remain separate. The complete terminology-edited 67-line source is preserved with SHA-256 9e3dae0e8560663372a409d7cda3d5db47fb7fefc1de5c5775e58e8bfa4b92a5. 6 extracted function/declaration entries are separately indexed, including exact Python bodies and guards where available.

THEN

Follow the exact returned values, diagnostics and state effects in the preserved implementation. Module inclusion and syntax extraction are documentary coverage; they do not prove every branch or cross-host behavior.

CURRENT EVIDENCE

Fresh related Python suites and per-profile/water results are included. Native C#/.NET, C++/Rust/R compilation and physical devices were not executed in this environment. This source copy received the requested terminology transfer after the earlier suite; the complete renamed host has not been rebuilt here.

REMAINING REQUIREMENT

Map unverified branches and native-host behavior to source-specific evidence before assigning a complete verification verdict.

SOURCE REFERENCES

associated-core:products/water/legacy/hagar-python/src/mjos_hagar/api.py

TR-MOD-ASSOCIATED-05D791A177 / Associated core / products/water/legacy/hagar-python/src/mjos_hagar/cli.py

IF

This Hagar / water protection module is imported or its declared interface is invoked. Declared surface includes: main()

HOW

Apply the source-defined probe, policy, risk, state and transport rules. Advisory and authenticated-host roles remain separate. The complete terminology-edited 45-line source is preserved with SHA-256 07789400f091c242df1296797b9f0a30427aca507428b0c4316f3b2d2dc2b2d2. 1 extracted function/declaration entries are separately indexed, including exact Python bodies and guards where available.

THEN

Follow the exact returned values, diagnostics and state effects in the preserved implementation. Module inclusion and syntax extraction are documentary coverage; they do not prove every branch or cross-host behavior.

CURRENT EVIDENCE

Fresh related Python suites and per-profile/water results are included. Native C#/.NET, C++/Rust/R compilation and physical devices were not executed in this environment. This source copy received the requested terminology transfer after the earlier suite; the complete renamed host has not been rebuilt here.

REMAINING REQUIREMENT

Map unverified branches and native-host behavior to source-specific evidence before assigning a complete verification verdict.

SOURCE REFERENCES

associated-core:products/water/legacy/hagar-python/src/mjos_hagar/cli.py

TR-MOD-ASSOCIATED-4624469026 / Associated core / products/water/legacy/hagar-python/src/mjos_hagar/controller.py

IF

This Hagar / water protection module is imported or its declared interface is invoked. Declared surface includes: `_clip(value: float, lower: float, upper: float); _rate_limit(value: float, previous: float, maximum_step: float); estimate_osmotic_pressure_bar(salinity_psu: float, temperature_c: float); __init__(self, config: ControlConfig); recommend(self, frame: QadcFrame, state: ControllerState, temperature_c: float, salinity_history_psu: list[float] | None=None, *, permit_valid: bool=False, quality_verified: bool=False, anti_rollback_valid: bool=False, operator_authorized: bool=False, safety_interlocks_clear: bool=False)`

HOW

Apply the source-defined probe, policy, risk, state and transport rules. Advisory and authenticated-host roles remain separate. The complete terminology-edited 145-line source is preserved with SHA-256 `d348f97e54d0f295470bf4e8ec20d3f67c564cc123a77243e18a509db8a55a57`. 5 extracted function/declaration entries are separately indexed, including exact Python bodies and guards where available.

THEN

Follow the exact returned values, diagnostics and state effects in the preserved implementation. Module inclusion and syntax extraction are documentary coverage; they do not prove every branch or cross-host behavior.

CURRENT EVIDENCE

Fresh related Python suites and per-profile/water results are included. Native C#/.NET, C++/Rust/R compilation and physical devices were not executed in this environment. This source copy received the requested terminology transfer after the earlier suite; the complete renamed host has not been rebuilt here.

REMAINING REQUIREMENT

Map unverified branches and native-host behavior to source-specific evidence before assigning a complete verification verdict.

SOURCE REFERENCES

associated-core:products/water/legacy/hagar-python/src/mjos_hagar/controller.py

TR-MOD-ASSOCIATED-A21536AFD2 / Associated core / products/water/legacy/hagar-python/src/mjos_hagar/grid.py

IF

This Hagar / water protection module is imported or its declared interface is invoked. Declared surface includes: aggregate_receipts(receipts: list[NodeReceipt])

HOW

Apply the source-defined probe, policy, risk, state and transport rules. Advisory and authenticated-host roles remain separate. The complete terminology-edited 29-line source is preserved with SHA-256 420ec1f90cf84739576e25b22a9ba2fa40aec31371382a9fdf328f3c7926458b. 1 extracted function/declaration entries are separately indexed, including exact Python bodies and guards where available.

THEN

Follow the exact returned values, diagnostics and state effects in the preserved implementation. Module inclusion and syntax extraction are documentary coverage; they do not prove every branch or cross-host behavior.

CURRENT EVIDENCE

Fresh related Python suites and per-profile/water results are included. Native C#/.NET, C++/Rust/R compilation and physical devices were not executed in this environment. This source copy received the requested terminology transfer after the earlier suite; the complete renamed host has not been rebuilt here.

REMAINING REQUIREMENT

Map unverified branches and native-host behavior to source-specific evidence before assigning a complete verification verdict.

SOURCE REFERENCES

associated-core:products/water/legacy/hagar-python/src/mjos_hagar/grid.py

TR-MOD-ASSOCIATED-1E90930051 / Associated core / products/water/legacy/hagar-python/src/mjos_hagar/optimizer.py

IF

This Hagar / water protection module is imported or its declared interface is invoked. Declared surface includes: `_hash_policy(guard: float, damping: float, score: float); tune_offline(qrng: MJosQrngClient, salinity_trace: list[float], candidates: int=64); policy_as_json(policy: FrozenPolicy)`

HOW

Apply the source-defined probe, policy, risk, state and transport rules. Advisory and authenticated-host roles remain separate. The complete terminology-edited 77-line source is preserved with SHA-256 328b88391e2d63c4baf9ec324c625b0df180682c2471e9dc718d25f182e98718. 3 extracted function/declaration entries are separately indexed, including exact Python bodies and guards where available.

THEN

Follow the exact returned values, diagnostics and state effects in the preserved implementation. Module inclusion and syntax extraction are documentary coverage; they do not prove every branch or cross-host behavior.

CURRENT EVIDENCE

Fresh related Python suites and per-profile/water results are included. Native C#/.NET, C++/Rust/R compilation and physical devices were not executed in this environment. This source copy received the requested terminology transfer after the earlier suite; the complete renamed host has not been rebuilt here.

REMAINING REQUIREMENT

Map unverified branches and native-host behavior to source-specific evidence before assigning a complete verification verdict.

SOURCE REFERENCES

associated-core:products/water/legacy/hagar-python/src/mjos_hagar/optimizer.py

TR-MOD-ASSOCIATED-4CC57E81F0 / Associated core / products/water/legacy/hagar-python/src/mjos_hagar/qft.py

IF

This Hagar / water protection module is imported or its declared interface is invoked. Declared surface includes: classical_qft_reference(samples: list[float]); observe_oscillation(samples: list[float])

HOW

Apply the source-defined probe, policy, risk, state and transport rules. Advisory and authenticated-host roles remain separate. The complete terminology-edited 45-line source is preserved with SHA-256 279867a9eacc8d43a939c485e9eb20a7435215c5b0edf36bd8edb09763667ac2. 2 extracted function/declaration entries are separately indexed, including exact Python bodies and guards where available.

THEN

Follow the exact returned values, diagnostics and state effects in the preserved implementation. Module inclusion and syntax extraction are documentary coverage; they do not prove every branch or cross-host behavior.

CURRENT EVIDENCE

Fresh related Python suites and per-profile/water results are included. Native C#/.NET, C++/Rust/R compilation and physical devices were not executed in this environment. This source copy received the requested terminology transfer after the earlier suite; the complete renamed host has not been rebuilt here.

REMAINING REQUIREMENT

Map unverified branches and native-host behavior to source-specific evidence before assigning a complete verification verdict.

SOURCE REFERENCES

associated-core:products/water/legacy/hagar-python/src/mjos_hagar/qft.py

TR-MOD-ASSOCIATED-CA125C3922 / Associated core / products/water/legacy/hagar-python/src/mjos_hagar/qrng.py

IF

This Hagar / water protection module is imported or its declared interface is invoked. Declared surface includes: sample(self, count: int); sample(self, count: int); __init__(self, seed: int=7); sample(self, count: int); public_dict(self, reveal_bytes: bool=False)

HOW

Apply the source-defined probe, policy, risk, state and transport rules. Advisory and authenticated-host roles remain separate. The complete terminology-edited 112-line source is preserved with SHA-256 720beb3846896d19a026aae1c91628a654e5c3e2e2c183c8283eca907ad39592. 9 extracted function/declaration entries are separately indexed, including exact Python bodies and guards where available.

THEN

Follow the exact returned values, diagnostics and state effects in the preserved implementation. Module inclusion and syntax extraction are documentary coverage; they do not prove every branch or cross-host behavior.

CURRENT EVIDENCE

Fresh related Python suites and per-profile/water results are included. Native C#/.NET, C++/Rust/R compilation and physical devices were not executed in this environment. This source copy received the requested terminology transfer after the earlier suite; the complete renamed host has not been rebuilt here.

REMAINING REQUIREMENT

Map unverified branches and native-host behavior to source-specific evidence before assigning a complete verification verdict.

SOURCE REFERENCES

associated-core:products/water/legacy/hagar-python/src/mjos_hagar/qrng.py

TR-MOD-ASSOCIATED-8E89AAC8EC / Associated core / products/water/legacy/hagar-python/src/mjos_hagar/salinity.py

IF

This Hagar / water protection module is imported or its declared interface is invoked. Declared surface includes: `_as_psu(reading: SensorReading); fuse_salinity(frame: QadcFrame, config: ControlConfig)`

HOW

Apply the source-defined probe, policy, risk, state and transport rules. Advisory and authenticated-host roles remain separate. The complete terminology-edited 70-line source is preserved with SHA-256 2400442beb1418397454057d9b4c98b3e026c5969f1a4f083d364f41c386071d. 2 extracted function/declaration entries are separately indexed, including exact Python bodies and guards where available.

THEN

Follow the exact returned values, diagnostics and state effects in the preserved implementation. Module inclusion and syntax extraction are documentary coverage; they do not prove every branch or cross-host behavior.

CURRENT EVIDENCE

Fresh related Python suites and per-profile/water results are included. Native C#/.NET, C++/Rust/R compilation and physical devices were not executed in this environment. This source copy received the requested terminology transfer after the earlier suite; the complete renamed host has not been rebuilt here.

REMAINING REQUIREMENT

Map unverified branches and native-host behavior to source-specific evidence before assigning a complete verification verdict.

SOURCE REFERENCES

associated-core:products/water/legacy/hagar-python/src/mjos_hagar/salinity.py

TR-MOD-ASSOCIATED-A3ED84B5E7 / Associated core / products/water/legacy/hagar-python/src/mjos_hagar/schemas.py

IF

This Hagar / water protection module is imported or its declared interface is invoked. Declared surface includes: `__post_init__(self); as_dict(self)`

HOW

Apply the source-defined probe, policy, risk, state and transport rules. Advisory and authenticated-host roles remain separate. The complete terminology-edited 112-line source is preserved with SHA-256 692023cb50440ae5cab34e21be492a44fc4c105aee9b383de8534fcd0098a7a2. 2 extracted function/declaration entries are separately indexed, including exact Python bodies and guards where available.

THEN

Follow the exact returned values, diagnostics and state effects in the preserved implementation. Module inclusion and syntax extraction are documentary coverage; they do not prove every branch or cross-host behavior.

CURRENT EVIDENCE

Fresh related Python suites and per-profile/water results are included. Native C#/.NET, C++/Rust/R compilation and physical devices were not executed in this environment. This source copy received the requested terminology transfer after the earlier suite; the complete renamed host has not been rebuilt here.

REMAINING REQUIREMENT

Map unverified branches and native-host behavior to source-specific evidence before assigning a complete verification verdict.

SOURCE REFERENCES

associated-core:products/water/legacy/hagar-python/src/mjos_hagar/schemas.py

TR-MOD-ASSOCIATED-7BE94D60E0 / Associated core / products/water/legacy/hagar-python/src/mjos_hagar/simulator.py

IF

This Hagar / water protection module is imported or its declared interface is invoked. Declared surface includes: demo_config(); synthetic_frame(step: int, salinity_psu: float); run_simulation(steps: int=64, base_salinity_psu: float=35.0)

HOW

Apply the source-defined probe, policy, risk, state and transport rules. Advisory and authenticated-host roles remain separate. The complete terminology-edited 89-line source is preserved with SHA-256 66bfed41d3729ba974a7db596147d9e4bba82707f307dcb8165f43eae34739b3. 3 extracted function/declaration entries are separately indexed, including exact Python bodies and guards where available.

THEN

Follow the exact returned values, diagnostics and state effects in the preserved implementation. Module inclusion and syntax extraction are documentary coverage; they do not prove every branch or cross-host behavior.

CURRENT EVIDENCE

Fresh related Python suites and per-profile/water results are included. Native C#/.NET, C++/Rust/R compilation and physical devices were not executed in this environment. This source copy received the requested terminology transfer after the earlier suite; the complete renamed host has not been rebuilt here.

REMAINING REQUIREMENT

Map unverified branches and native-host behavior to source-specific evidence before assigning a complete verification verdict.

SOURCE REFERENCES

associated-core:products/water/legacy/hagar-python/src/mjos_hagar/simulator.py

TR-MOD-ASSOCIATED-47ABC38508 / Associated core / products/water/legacy/quantum-security-python/src/mjos_qs/__init__.py

IF

This Hagar / water protection module is imported or its declared interface is invoked. This module contains shared declarations or constants; the complete source is retained.

HOW

Apply the source-defined probe, policy, risk, state and transport rules. Advisory and authenticated-host roles remain separate. The complete terminology-edited 15-line source is preserved with SHA-256 582cf529afb792c75cd160f9ee8d2f1cc61895889fb0e0e037d2f70f72b9cf6f. 0 extracted function/declaration entries are separately indexed, including exact Python bodies and guards where available.

THEN

Follow the exact returned values, diagnostics and state effects in the preserved implementation. Module inclusion and syntax extraction are documentary coverage; they do not prove every branch or cross-host behavior.

CURRENT EVIDENCE

Fresh related Python suites and per-profile/water results are included. Native C#/.NET, C++/Rust/R compilation and physical devices were not executed in this environment. This source copy received the requested terminology transfer after the earlier suite; the complete renamed host has not been rebuilt here.

REMAINING REQUIREMENT

Map unverified branches and native-host behavior to source-specific evidence before assigning a complete verification verdict.

SOURCE REFERENCES

associated-core:products/water/legacy/quantum-security-python/src/mjos_qs/__init__.py

TR-MOD-ASSOCIATED-BAF427CAF3 / Associated core / products/water/legacy/quantum-security-python/src/mjos_qs/adaptive_crypto.py

IF

This Hagar / water protection module is imported or its declared interface is invoked. Declared surface includes: `__init__(self, ledger: ReceiptLedger | None=None); adapt(self, decision: ElsaDecision, *, authorized_recovery: bool=False)`

HOW

Apply the source-defined probe, policy, risk, state and transport rules. Advisory and authenticated-host roles remain separate. The complete terminology-edited 65-line source is preserved with SHA-256 110a61ff7bdb2f4f32cb0eb11b52487902ab3f6179358707cae6b033147b8317. 2 extracted function/declaration entries are separately indexed, including exact Python bodies and guards where available.

THEN

Follow the exact returned values, diagnostics and state effects in the preserved implementation. Module inclusion and syntax extraction are documentary coverage; they do not prove every branch or cross-host behavior.

CURRENT EVIDENCE

Fresh related Python suites and per-profile/water results are included. Native C#/.NET, C++/Rust/R compilation and physical devices were not executed in this environment. This source copy received the requested terminology transfer after the earlier suite; the complete renamed host has not been rebuilt here.

REMAINING REQUIREMENT

Map unverified branches and native-host behavior to source-specific evidence before assigning a complete verification verdict.

SOURCE REFERENCES

associated-core:products/water/legacy/quantum-security-python/src/mjos_qs/adaptive_crypto.py

TR-MOD-ASSOCIATED-DE3B451F1C / Associated core / products/water/legacy/quantum-security-python/src/mjos_qs/entropy.py

IF

This Hagar / water protection module is imported or its declared interface is invoked. Declared surface includes: `_bits(data: bytes); health_tests(data: bytes, *, repetition_cutoff: int=34, window: int=256, low_ones: int=80, high_ones: int=176); __init__(self); generation(self); refill(self, packet: HardwareNoisePacket | None=None, *, independently_validated_external_bits: int=0)`

HOW

Apply the source-defined probe, policy, risk, state and transport rules. Advisory and authenticated-host roles remain separate. The complete terminology-edited 108-line source is preserved with SHA-256 `a0f6e36a07309a600b8503449b222f0f4a3a11645d448d667e031744475c0608`. 6 extracted function/declaration entries are separately indexed, including exact Python bodies and guards where available.

THEN

Follow the exact returned values, diagnostics and state effects in the preserved implementation. Module inclusion and syntax extraction are documentary coverage; they do not prove every branch or cross-host behavior.

CURRENT EVIDENCE

Fresh related Python suites and per-profile/water results are included. Native C#/.NET, C++/Rust/R compilation and physical devices were not executed in this environment. This source copy received the requested terminology transfer after the earlier suite; the complete renamed host has not been rebuilt here.

REMAINING REQUIREMENT

Map unverified branches and native-host behavior to source-specific evidence before assigning a complete verification verdict.

SOURCE REFERENCES

associated-core:products/water/legacy/quantum-security-python/src/mjos_qs/entropy.py

TR-MOD-ASSOCIATED-B2EADA8BD8 / Associated core / products/water/legacy/quantum-security-python/src/mjos_qs/hardware.py

IF

This Hagar / water protection module is imported or its declared interface is invoked. Declared surface includes: `__init__(self, device_id: str, transport_key: bytes); sample(self, *, source_ready: bool=True, tamper: bool=False, force_noise: bytes | None=None); __init__(self, expected_device_id: str, transport_key: bytes, allowed_firmware: set[str] | None=None); verify(self, packet: HardwareNoisePacket)`

HOW

Apply the source-defined probe, policy, risk, state and transport rules. Advisory and authenticated-host roles remain separate. The complete terminology-edited 77-line source is preserved with SHA-256 `d2b4bfa46bc7562c8a2f0a69b3b3f75bcac06395b184bd602d80eb237dd068fa`. 4 extracted function/declaration entries are separately indexed, including exact Python bodies and guards where available.

THEN

Follow the exact returned values, diagnostics and state effects in the preserved implementation. Module inclusion and syntax extraction are documentary coverage; they do not prove every branch or cross-host behavior.

CURRENT EVIDENCE

Fresh related Python suites and per-profile/water results are included. Native C#/.NET, C++/Rust/R compilation and physical devices were not executed in this environment. This source copy received the requested terminology transfer after the earlier suite; the complete renamed host has not been rebuilt here.

REMAINING REQUIREMENT

Map unverified branches and native-host behavior to source-specific evidence before assigning a complete verification verdict.

SOURCE REFERENCES

associated-core:products/water/legacy/quantum-security-python/src/mjos_qs/hardware.py

TR-MOD-ASSOCIATED-880365D3BB / Associated core / products/water/legacy/quantum-security-python/src/mjos_qs/homomorphic.py

IF

This Hagar / water protection module is imported or its declared interface is invoked. Declared surface includes: `_lcm(a: int, b: int); _egcd(a: int, b: int); _inverse(a: int, n: int); _is_probable_prime(n: int, rounds: int=24); _prime(bits: int)`

HOW

Apply the source-defined probe, policy, risk, state and transport rules. Advisory and authenticated-host roles remain separate. The complete terminology-edited 162-line source is preserved with SHA-256 `7ecfc1337230cffc0464181390dd44d2d1cfc52b8a3b23275071b60896e66db6`. 19 extracted function/declaration entries are separately indexed, including exact Python bodies and guards where available.

THEN

Follow the exact returned values, diagnostics and state effects in the preserved implementation. Module inclusion and syntax extraction are documentary coverage; they do not prove every branch or cross-host behavior.

CURRENT EVIDENCE

Fresh related Python suites and per-profile/water results are included. Native C#/.NET, C++/Rust/R compilation and physical devices were not executed in this environment. This source copy received the requested terminology transfer after the earlier suite; the complete renamed host has not been rebuilt here.

REMAINING REQUIREMENT

Map unverified branches and native-host behavior to source-specific evidence before assigning a complete verification verdict.

SOURCE REFERENCES

associated-core:products/water/legacy/quantum-security-python/src/mjos_qs/homomorphic.py

TR-MOD-ASSOCIATED-A5619A145F / Associated core / products/water/legacy/quantum-security-python/src/mjos_qs/kernel.py

IF

This Hagar / water protection module is imported or its declared interface is invoked. Declared surface includes: `__init__(self, bridge: ElsaHardwareBridge); ingest(self, packet: HardwareNoisePacket, *, auth_risk: float, traffic_anomaly: float, integrity_failure: bool=False, key_compromise_signal: bool=False)`

HOW

Apply the source-defined probe, policy, risk, state and transport rules. Advisory and authenticated-host roles remain separate. The complete terminology-edited 60-line source is preserved with SHA-256 1386b23651410b5d8f071beb17ac549178a8470fcd475e1bc285b878c31efa39. 2 extracted function/declaration entries are separately indexed, including exact Python bodies and guards where available.

THEN

Follow the exact returned values, diagnostics and state effects in the preserved implementation. Module inclusion and syntax extraction are documentary coverage; they do not prove every branch or cross-host behavior.

CURRENT EVIDENCE

Fresh related Python suites and per-profile/water results are included. Native C#/.NET, C++/Rust/R compilation and physical devices were not executed in this environment. This source copy received the requested terminology transfer after the earlier suite; the complete renamed host has not been rebuilt here.

REMAINING REQUIREMENT

Map unverified branches and native-host behavior to source-specific evidence before assigning a complete verification verdict.

SOURCE REFERENCES

associated-core:products/water/legacy/quantum-security-python/src/mjos_qs/kernel.py

TR-MOD-ASSOCIATED-BBECC04D94 / Associated core / products/water/legacy/quantum-security-python/src/mjos_qs/privacy.py

IF

This Hagar / water protection module is imported or its declared interface is invoked. Declared surface includes: consume(self, epsilon: float); __init__(self, public_key: PaillierPublicKey, budget: PrivacyBudgetLedger, receipts: ReceiptLedger | None=None); _two_sided_geometric(epsilon: float, sensitivity: int); privatize_encrypted_count(self, encrypted_count: int, *, epsilon: float, sensitivity: int=1)

HOW

Apply the source-defined probe, policy, risk, state and transport rules. Advisory and authenticated-host roles remain separate. The complete terminology-edited 48-line source is preserved with SHA-256 34eb5dd715d2e55627e34df3b22d21c2059a81c8efa06bc63e5b7f4491a0371c. 4 extracted function/declaration entries are separately indexed, including exact Python bodies and guards where available.

THEN

Follow the exact returned values, diagnostics and state effects in the preserved implementation. Module inclusion and syntax extraction are documentary coverage; they do not prove every branch or cross-host behavior.

CURRENT EVIDENCE

Fresh related Python suites and per-profile/water results are included. Native C#/.NET, C++/Rust/R compilation and physical devices were not executed in this environment. This source copy received the requested terminology transfer after the earlier suite; the complete renamed host has not been rebuilt here.

REMAINING REQUIREMENT

Map unverified branches and native-host behavior to source-specific evidence before assigning a complete verification verdict.

SOURCE REFERENCES

associated-core:products/water/legacy/quantum-security-python/src/mjos_qs/privacy.py

TR-MOD-ASSOCIATED-FAFB3D0C1E / Associated core / products/water/legacy/quantum-security-python/src/mjos_qs/receipts.py

IF

This Hagar / water protection module is imported or its declared interface is invoked. Declared surface includes: canonical_json(value: Any); __init__(self); root(self); receipts(self); append(self, event: str, decision: str, details: dict[str, Any])

HOW

Apply the source-defined probe, policy, risk, state and transport rules. Advisory and authenticated-host roles remain separate. The complete terminology-edited 67-line source is preserved with SHA-256 b9fac2461bd9c7cdfcd17c6784c1616d611015ea2fdb5fb83632d7a87ab584. 7 extracted function/declaration entries are separately indexed, including exact Python bodies and guards where available.

THEN

Follow the exact returned values, diagnostics and state effects in the preserved implementation. Module inclusion and syntax extraction are documentary coverage; they do not prove every branch or cross-host behavior.

CURRENT EVIDENCE

Fresh related Python suites and per-profile/water results are included. Native C#/.NET, C++/Rust/R compilation and physical devices were not executed in this environment. This source copy received the requested terminology transfer after the earlier suite; the complete renamed host has not been rebuilt here.

REMAINING REQUIREMENT

Map unverified branches and native-host behavior to source-specific evidence before assigning a complete verification verdict.

SOURCE REFERENCES

associated-core:products/water/legacy/quantum-security-python/src/mjos_qs/receipts.py

TR-MOD-ASSOCIATED-FA2E10DD54 / Associated core / products/water/legacy/quantum-security-python/src/mjos_qs/self_healing.py

IF

This Hagar / water protection module is imported or its declared interface is invoked. Declared surface includes: `__init__(self, pool: ContinuouslyReplenishedEntropyPool, receipts: ReceiptLedger | None=None);` `_fingerprint(key: bytes);` `provision(self, root_class: RootClass, *, user_id: str='system', device_id: str='device');` `rotate(self, root_class: RootClass, *, reason: str, automatic: bool=True, user_id: str='system', device_id: str='device');` `heal_compromise(self, *, explicit_key_compromise: bool)`

HOW

Apply the source-defined probe, policy, risk, state and transport rules. Advisory and authenticated-host roles remain separate. The complete terminology-edited 96-line source is preserved with SHA-256 00cd01ac6d9785010c4c1a89994b37b4323a23a94415e4b9541980de346f1ad4. 5 extracted function/declaration entries are separately indexed, including exact Python bodies and guards where available.

THEN

Follow the exact returned values, diagnostics and state effects in the preserved implementation. Module inclusion and syntax extraction are documentary coverage; they do not prove every branch or cross-host behavior.

CURRENT EVIDENCE

Fresh related Python suites and per-profile/water results are included. Native C#/.NET, C++/Rust/R compilation and physical devices were not executed in this environment. This source copy received the requested terminology transfer after the earlier suite; the complete renamed host has not been rebuilt here.

REMAINING REQUIREMENT

Map unverified branches and native-host behavior to source-specific evidence before assigning a complete verification verdict.

SOURCE REFERENCES

associated-core:products/water/legacy/quantum-security-python/src/mjos_qs/self_healing.py

TR-MOD-ASSOCIATED-91090A6A63 / Associated core / products/water/legacy/quantum-security-python/src/mjos_qs/elsa_policy.py

IF

This Hagar / water protection module is imported or its declared interface is invoked. Declared surface includes: prediction_gain(node_index: int); clamp(value: float, low: float=-0.9, high: float=0.9); __init__(self, window: int=9, persistence: int=3); _bounded(value: float); observe(self, *, entropy_health_risk: float, authentication_risk: float, traffic_anomaly: float, integrity_failure: bool=False, key_compromise_signal: bool=False)

HOW

Apply the source-defined probe, policy, risk, state and transport rules. Advisory and authenticated-host roles remain separate. The complete terminology-edited 69-line source is preserved with SHA-256 5f4df753f1621a2e0770bc6e577067d31e3a8c4fd630b4f87048a2ed0a6cec40. 5 extracted function/declaration entries are separately indexed, including exact Python bodies and guards where available.

THEN

Follow the exact returned values, diagnostics and state effects in the preserved implementation. Module inclusion and syntax extraction are documentary coverage; they do not prove every branch or cross-host behavior.

CURRENT EVIDENCE

Fresh related Python suites and per-profile/water results are included. Native C#/.NET, C++/Rust/R compilation and physical devices were not executed in this environment. This source copy received the requested terminology transfer after the earlier suite; the complete renamed host has not been rebuilt here.

REMAINING REQUIREMENT

Map unverified branches and native-host behavior to source-specific evidence before assigning a complete verification verdict.

SOURCE REFERENCES

associated-core:products/water/legacy/quantum-security-python/src/mjos_qs/elsa_policy.py

TR-MOD-ASSOCIATED-5CFB43560F / Associated core / reference/sdk/python/bangel_sdk.py

IF

This API / SDK module is imported or its declared interface is invoked. This module contains shared declarations or constants; the complete source is retained.

HOW

Validate the exact host/protocol contract and preserve request, response, value and effect boundaries across this interface. The complete terminology-edited 4-line source is preserved with SHA-256 d694a1dabc2e3a82cf669458b9007fb636286e44320bb13af50e4e74226bae93. 0 extracted function/declaration entries are separately indexed, including exact Python bodies and guards where available.

THEN

Follow the exact returned values, diagnostics and state effects in the preserved implementation. Module inclusion and syntax extraction are documentary coverage; they do not prove every branch or cross-host behavior.

CURRENT EVIDENCE

Fresh related Python suites and per-profile/water results are included. Native C#/.NET, C++/Rust/R compilation and physical devices were not executed in this environment. This source copy received the requested terminology transfer after the earlier suite; the complete renamed host has not been rebuilt here.

REMAINING REQUIREMENT

Map unverified branches and native-host behavior to source-specific evidence before assigning a complete verification verdict.

SOURCE REFERENCES

associated-core:reference/sdk/python/bangel_sdk.py

TR-MOD-ASSOCIATED-4723B7235A / Associated core / reference/src/bangel/__init__.py

IF

This Runtime / supporting core module is imported or its declared interface is invoked. Declared surface includes: `__getattr__(name); __dir__()`

HOW

Use the complete terminology-edited module and its declared types, call paths, state and error behavior; preserve program/evidence boundaries. The complete 25-line source is preserved with SHA-256 179daea6704c178d6c10f9194c900a1cfd7af33a97149e83cf044f7e49bd1177. 2 extracted function/declaration entries are separately indexed, including exact Python bodies and guards where available.

THEN

Follow the exact returned values, diagnostics and state effects in the preserved implementation. Module inclusion and syntax extraction are documentary coverage; they do not prove every branch or cross-host behavior.

CURRENT EVIDENCE

Fresh related Python suites and per-profile/water results are included. Native C#/.NET, C++/Rust/R compilation and physical devices were not executed in this environment. This source copy received the requested terminology transfer after the earlier suite; the complete renamed host has not been rebuilt here.

REMAINING REQUIREMENT

Map unverified branches and native-host behavior to source-specific evidence before assigning a complete verification verdict.

SOURCE REFERENCES

associated-core:reference/src/bangel/__init__.py

TR-MOD-ASSOCIATED-8BECA0F203 / Associated core / reference/src/bangel/__main__.py

IF

This Runtime / supporting core module is imported or its declared interface is invoked. This module contains shared declarations or constants; the complete source is retained.

HOW

Use the complete terminology-edited module and its declared types, call paths, state and error behavior; preserve program/evidence boundaries. The complete 4-line source is preserved with SHA-256 76fa916e93e0ae1a6c1bb51dcc0bcf289c014e9f760a47165f8a84401ccf41d7. 0 extracted function/declaration entries are separately indexed, including exact Python bodies and guards where available.

THEN

Follow the exact returned values, diagnostics and state effects in the preserved implementation. Module inclusion and syntax extraction are documentary coverage; they do not prove every branch or cross-host behavior.

CURRENT EVIDENCE

Fresh related Python suites and per-profile/water results are included. Native C#/.NET, C++/Rust/R compilation and physical devices were not executed in this environment. This source copy received the requested terminology transfer after the earlier suite; the complete renamed host has not been rebuilt here.

REMAINING REQUIREMENT

Map unverified branches and native-host behavior to source-specific evidence before assigning a complete verification verdict.

SOURCE REFERENCES

associated-core:reference/src/bangel/__main__.py

TR-MOD-ASSOCIATED-7A175E9D8C / Associated core / reference/src/bangel/api.py

IF

This API / SDK module is imported or its declared interface is invoked. Declared surface includes: fail(code, message); exact(value, keys, label); valid_id(value); make_request(operation, input=None, *, request_id='request-1', limits=None, compatibility=None); _safe_json(value: Any, code: str)

HOW

Validate the exact host/protocol contract and preserve request, response, value and effect boundaries across this interface. The complete terminology-edited 447-line source is preserved with SHA-256 358d35e8f4a1b401016cc91e7ba28f6de90d1668ee6924fef4f72b30658ea656. 29 extracted function/declaration entries are separately indexed, including exact Python bodies and guards where available.

THEN

Follow the exact returned values, diagnostics and state effects in the preserved implementation. Module inclusion and syntax extraction are documentary coverage; they do not prove every branch or cross-host behavior.

CURRENT EVIDENCE

Fresh related Python suites and per-profile/water results are included. Native C#/.NET, C++/Rust/R compilation and physical devices were not executed in this environment. This source copy received the requested terminology transfer after the earlier suite; the complete renamed host has not been rebuilt here.

REMAINING REQUIREMENT

Map unverified branches and native-host behavior to source-specific evidence before assigning a complete verification verdict.

SOURCE REFERENCES

associated-core:reference/src/bangel/api.py

TR-MOD-ASSOCIATED-6851DFD944 / Associated core / reference/src/bangel/ast.py

IF

This Runtime / supporting core module is imported or its declared interface is invoked. Declared surface includes: to_ir(self)

HOW

Use the complete terminology-edited module and its declared types, call paths, state and error behavior; preserve program/evidence boundaries. The complete 57-line source is preserved with SHA-256 e2077ccbf68358df08581fa9acdac86a19777e37bd0416686fe6b33f12c03a44. 1 extracted function/declaration entries are separately indexed, including exact Python bodies and guards where available.

THEN

Follow the exact returned values, diagnostics and state effects in the preserved implementation. Module inclusion and syntax extraction are documentary coverage; they do not prove every branch or cross-host behavior.

CURRENT EVIDENCE

Fresh related Python suites and per-profile/water results are included. Native C#/.NET, C++/Rust/R compilation and physical devices were not executed in this environment. This source copy received the requested terminology transfer after the earlier suite; the complete renamed host has not been rebuilt here.

REMAINING REQUIREMENT

Map unverified branches and native-host behavior to source-specific evidence before assigning a complete verification verdict.

SOURCE REFERENCES

associated-core:reference/src/bangel/ast.py

TR-MOD-ASSOCIATED-B2D6E3C600 / Associated core / reference/src/bangel/canonical.py

IF

This Receipt / evidence module is imported or its declared interface is invoked. Declared surface includes: `_normalize(value: Any); canonical_bytes(value: Any); digest(value: Any)`

HOW

Preserve exact serialization, digest binding, linkage and inspection/replay behavior without promoting integrity metadata into authority. The complete terminology-edited 45-line source is preserved with SHA-256 `aaca8bfae08caaf2d4bb3eca220e00cc79bf9a9ccd7ac9f79b801f48b50c63a8`. 3 extracted function/declaration entries are separately indexed, including exact Python bodies and guards where available.

THEN

Follow the exact returned values, diagnostics and state effects in the preserved implementation. Module inclusion and syntax extraction are documentary coverage; they do not prove every branch or cross-host behavior.

CURRENT EVIDENCE

Fresh related Python suites and per-profile/water results are included. Native C#/.NET, C++/Rust/R compilation and physical devices were not executed in this environment. This source copy received the requested terminology transfer after the earlier suite; the complete renamed host has not been rebuilt here.

REMAINING REQUIREMENT

Map unverified branches and native-host behavior to source-specific evidence before assigning a complete verification verdict.

SOURCE REFERENCES

`associated-core:reference/src/bangel/canonical.py`

TR-MOD-ASSOCIATED-E5961AC73C / Associated core / reference/src/bangel/cli.py

IF

This Runtime / supporting core module is imported or its declared interface is invoked. Declared surface includes: `_json(value: object); build_parser(); main(argv: Sequence[str] | None=None)`

HOW

Use the complete terminology-edited module and its declared types, call paths, state and error behavior; preserve program/evidence boundaries. The complete 158-line source is preserved with SHA-256 9972cf930428735927a18e53353963ea43478ec797f630cb68cd20feaa82fe20. 3 extracted function/declaration entries are separately indexed, including exact Python bodies and guards where available.

THEN

Follow the exact returned values, diagnostics and state effects in the preserved implementation. Module inclusion and syntax extraction are documentary coverage; they do not prove every branch or cross-host behavior.

CURRENT EVIDENCE

Fresh related Python suites and per-profile/water results are included. Native C#/.NET, C++/Rust/R compilation and physical devices were not executed in this environment. This source copy received the requested terminology transfer after the earlier suite; the complete renamed host has not been rebuilt here.

REMAINING REQUIREMENT

Map unverified branches and native-host behavior to source-specific evidence before assigning a complete verification verdict.

SOURCE REFERENCES

associated-core:reference/src/bangel/cli.py

TR-MOD-ASSOCIATED-38A9B99A5E / Associated core / reference/src/bangel/client.py

IF

This API / SDK module is imported or its declared interface is invoked. Declared surface includes: `__init__(self, argv: Sequence[str], *, timeout: float=15.0, max_frame_bytes: int=MAX_FRAME_BYTES); _fail(self, error: Exception); _read(self); _write(self); request(self, request: dict[str, Any], *, timeout: float | None=None)`

HOW

Validate the exact host/protocol contract and preserve request, response, value and effect boundaries across this interface. The complete terminology-edited 142-line source is preserved with SHA-256 2c12f9cc00ca76863fdf75a96b8cc247a85e90d7582568f9cb2610252d8e140e. 21 extracted function/declaration entries are separately indexed, including exact Python bodies and guards where available.

THEN

Follow the exact returned values, diagnostics and state effects in the preserved implementation. Module inclusion and syntax extraction are documentary coverage; they do not prove every branch or cross-host behavior.

CURRENT EVIDENCE

Fresh related Python suites and per-profile/water results are included. Native C#/.NET, C++/Rust/R compilation and physical devices were not executed in this environment. This source copy received the requested terminology transfer after the earlier suite; the complete renamed host has not been rebuilt here.

REMAINING REQUIREMENT

Map unverified branches and native-host behavior to source-specific evidence before assigning a complete verification verdict.

SOURCE REFERENCES

associated-core:reference/src/bangel/client.py

TR-MOD-ASSOCIATED-B03854C7BA / Associated core / reference/src/bangel/compiler.py

IF

This Elsa / source module is imported or its declared interface is invoked. Declared surface includes:
to_dict(self); to_bytes(self); from_bytes(cls, data: bytes); to_dict(self); to_dict(self)

HOW

Preserve lexical, syntactic, binding, type and lowering behavior before producing a validated representation. The complete terminology-edited 352-line source is preserved with SHA-256
cb37e327273ee7f4b36db1a884b0a0a987e96ff7366fd59a83fe034e889b71c8. 18 extracted
function/declaration entries are separately indexed, including exact Python bodies and guards where available.

THEN

Follow the exact returned values, diagnostics and state effects in the preserved implementation. Module inclusion and syntax extraction are documentary coverage; they do not prove every branch or cross-host behavior.

CURRENT EVIDENCE

Fresh related Python suites and per-profile/water results are included. Native C#/.NET, C++/Rust/R compilation and physical devices were not executed in this environment. This source copy received the requested terminology transfer after the earlier suite; the complete renamed host has not been rebuilt here.

REMAINING REQUIREMENT

Map unverified branches and native-host behavior to source-specific evidence before assigning a complete verification verdict.

SOURCE REFERENCES

associated-core:reference/src/bangel/compiler.py

TR-MOD-ASSOCIATED-641EEF03E9 / Associated core / reference/src/bangel/diagnostics.py

IF

This Runtime / supporting core module is imported or its declared interface is invoked. Declared surface includes: to_dict(self); __init__(self, code: str, message: str, span: SourceSpan | None=None, details: Mapping[str, object] | None=None); to_dict(self)

HOW

Use the complete terminology-edited module and its declared types, call paths, state and error behavior; preserve program/evidence boundaries. The complete 44-line source is preserved with SHA-256 7ef0d23c2166d9cec359b478632060ef3aa687d0ee008d003414bc158573ed93. 3 extracted function/declaration entries are separately indexed, including exact Python bodies and guards where available.

THEN

Follow the exact returned values, diagnostics and state effects in the preserved implementation. Module inclusion and syntax extraction are documentary coverage; they do not prove every branch or cross-host behavior.

CURRENT EVIDENCE

Fresh related Python suites and per-profile/water results are included. Native C#/.NET, C++/Rust/R compilation and physical devices were not executed in this environment. This source copy received the requested terminology transfer after the earlier suite; the complete renamed host has not been rebuilt here.

REMAINING REQUIREMENT

Map unverified branches and native-host behavior to source-specific evidence before assigning a complete verification verdict.

SOURCE REFERENCES

associated-core:reference/src/bangel/diagnostics.py

TR-MOD-ASSOCIATED-A8DDDF3DB5 / Associated core / reference/src/bangel/evaluator.py

IF

This Runtime / supporting core module is imported or its declared interface is invoked. Declared surface includes: `__post_init__(self); consume(self); _truth(value: Any); _quantity(value: Any); _vector(value: Any, name: str)`

HOW

Use the complete terminology-edited module and its declared types, call paths, state and error behavior; preserve program/evidence boundaries. The complete 404-line source is preserved with SHA-256 `ea060ed710796064de23ae2be73919e89c2a2cf3567824dbb8b6ace23e7fa61b`. 11 extracted function/declaration entries are separately indexed, including exact Python bodies and guards where available.

THEN

Follow the exact returned values, diagnostics and state effects in the preserved implementation. Module inclusion and syntax extraction are documentary coverage; they do not prove every branch or cross-host behavior.

CURRENT EVIDENCE

Fresh related Python suites and per-profile/water results are included. Native C#/.NET, C++/Rust/R compilation and physical devices were not executed in this environment. This source copy received the requested terminology transfer after the earlier suite; the complete renamed host has not been rebuilt here.

REMAINING REQUIREMENT

Map unverified branches and native-host behavior to source-specific evidence before assigning a complete verification verdict.

SOURCE REFERENCES

`associated-core:reference/src/bangel/evaluator.py`

TR-MOD-ASSOCIATED-4B40A9D2D9 / Associated core / reference/src/bangel/expression.py

IF

This Runtime / supporting core module is imported or its declared interface is invoked. Declared surface includes: `__init__(self, text: str, line: int); parse(self); _peek(self); _take(self); _expression(self, minimum: int)`

HOW

Use the complete terminology-edited module and its declared types, call paths, state and error behavior; preserve program/evidence boundaries. The complete 108-line source is preserved with SHA-256 7dd1db4946aa102cb947cce05586db009ad8075520f8781d76fb3afb9b79afe1. 6 extracted function/declaration entries are separately indexed, including exact Python bodies and guards where available.

THEN

Follow the exact returned values, diagnostics and state effects in the preserved implementation. Module inclusion and syntax extraction are documentary coverage; they do not prove every branch or cross-host behavior.

CURRENT EVIDENCE

Fresh related Python suites and per-profile/water results are included. Native C#/.NET, C++/Rust/R compilation and physical devices were not executed in this environment. This source copy received the requested terminology transfer after the earlier suite; the complete renamed host has not been rebuilt here.

REMAINING REQUIREMENT

Map unverified branches and native-host behavior to source-specific evidence before assigning a complete verification verdict.

SOURCE REFERENCES

associated-core:reference/src/bangel/expression.py

TR-MOD-ASSOCIATED-6FFA25002E / Associated core / reference/src/bangel/formatter.py

IF

This Runtime / supporting core module is imported or its declared interface is invoked. Declared surface includes: `_shape(value)`; `_syntax_marks(tree, tokens: tuple[Token, ...])`; `_spacing(previous: Token, token: Token, unit_gaps, unary)`; `format_source(source: str)`

HOW

Use the complete terminology-edited module and its declared types, call paths, state and error behavior; preserve program/evidence boundaries. The complete 158-line source is preserved with SHA-256 9cd0fca967c96133d8c4708c05f683f9fb6b55f0b46b4a8315620a5fb5a6361. 4 extracted function/declaration entries are separately indexed, including exact Python bodies and guards where available.

THEN

Follow the exact returned values, diagnostics and state effects in the preserved implementation. Module inclusion and syntax extraction are documentary coverage; they do not prove every branch or cross-host behavior.

CURRENT EVIDENCE

Fresh related Python suites and per-profile/water results are included. Native C#/.NET, C++/Rust/R compilation and physical devices were not executed in this environment. This source copy received the requested terminology transfer after the earlier suite; the complete renamed host has not been rebuilt here.

REMAINING REQUIREMENT

Map unverified branches and native-host behavior to source-specific evidence before assigning a complete verification verdict.

SOURCE REFERENCES

associated-core:reference/src/bangel/formatter.py

TR-MOD-ASSOCIATED-2465F7C64F / Associated core / reference/src/bangel/frontend/__init__.py

IF

This Runtime / supporting core module is imported or its declared interface is invoked. This module contains shared declarations or constants; the complete source is retained.

HOW

Use the complete terminology-edited module and its declared types, call paths, state and error behavior; preserve program/evidence boundaries. The complete 36-line source is preserved with SHA-256 8d2df6895ecc4204fc144e834008c4d29b59c2c2b624bc24fc626a586dc9375f. 0 extracted function/declaration entries are separately indexed, including exact Python bodies and guards where available.

THEN

Follow the exact returned values, diagnostics and state effects in the preserved implementation. Module inclusion and syntax extraction are documentary coverage; they do not prove every branch or cross-host behavior.

CURRENT EVIDENCE

Fresh related Python suites and per-profile/water results are included. Native C#/.NET, C++/Rust/R compilation and physical devices were not executed in this environment. This source copy received the requested terminology transfer after the earlier suite; the complete renamed host has not been rebuilt here.

REMAINING REQUIREMENT

Map unverified branches and native-host behavior to source-specific evidence before assigning a complete verification verdict.

SOURCE REFERENCES

associated-core:reference/src/bangel/frontend/__init__.py

TR-MOD-ASSOCIATED-C576E2F5AE / Associated core / reference/src/bangel/frontend/ast.py

IF

This Runtime / supporting core module is imported or its declared interface is invoked. Declared surface includes: `_encode(value: Any); to_dict(self); text(self)`

HOW

Use the complete terminology-edited module and its declared types, call paths, state and error behavior; preserve program/evidence boundaries. The complete 469-line source is preserved with SHA-256 5f7accd99d007a6a67d2f3fcd5452a8825fc3effeef73ffd544cff996a083315. 3 extracted function/declaration entries are separately indexed, including exact Python bodies and guards where available.

THEN

Follow the exact returned values, diagnostics and state effects in the preserved implementation. Module inclusion and syntax extraction are documentary coverage; they do not prove every branch or cross-host behavior.

CURRENT EVIDENCE

Fresh related Python suites and per-profile/water results are included. Native C#/.NET, C++/Rust/R compilation and physical devices were not executed in this environment. This source copy received the requested terminology transfer after the earlier suite; the complete renamed host has not been rebuilt here.

REMAINING REQUIREMENT

Map unverified branches and native-host behavior to source-specific evidence before assigning a complete verification verdict.

SOURCE REFERENCES

associated-core:reference/src/bangel/frontend/ast.py

TR-MOD-ASSOCIATED-81D38FE48C / Associated core / reference/src/bangel/frontend/lexer.py

IF

This Elsa / source module is imported or its declared interface is invoked. Declared surface includes:
_normalized_text(source: str); _without_comment(line: str); _string_token(line: str, start: int, line_number: int);
lex(source: str)

HOW

Preserve lexical, syntactic, binding, type and lowering behavior before producing a validated representation. The complete terminology-edited 272-line source is preserved with SHA-256
dce2b6380313631ac51fb7b66ba8b88bbb1f1297d23af94dcc27504ecccddad7d. 4 extracted
function/declaration entries are separately indexed, including exact Python bodies and guards where
available.

THEN

Follow the exact returned values, diagnostics and state effects in the preserved implementation. Module
inclusion and syntax extraction are documentary coverage; they do not prove every branch or cross-host
behavior.

CURRENT EVIDENCE

Fresh related Python suites and per-profile/water results are included. Native C#/.NET, C++/Rust/R
compilation and physical devices were not executed in this environment. This source copy received the
requested terminology transfer after the earlier suite; the complete renamed host has not been rebuilt here.

REMAINING REQUIREMENT

Map unverified branches and native-host behavior to source-specific evidence before assigning a complete verification verdict.

SOURCE REFERENCES

associated-core:reference/src/bangel/frontend/lexer.py

TR-MOD-ASSOCIATED-5616BB2085 / Associated core / reference/src/bangel/frontend/lower.py

IF

This Elsa / source module is imported or its declared interface is invoked. Declared surface includes: typed_ast_mapping(); _span_key(span); _semantic_key(owner: tuple[str, ...], name: str); from_model(cls, model: SemanticModel); type_of(self, node: object)

HOW

Preserve lexical, syntactic, binding, type and lowering behavior before producing a validated representation. The complete terminology-edited 775-line source is preserved with SHA-256 5d6fc9811eecb0c556da868f94d2cd3e1e2471c396474c776c1a66b344df1b0a. 20 extracted function/declaration entries are separately indexed, including exact Python bodies and guards where available.

THEN

Follow the exact returned values, diagnostics and state effects in the preserved implementation. Module inclusion and syntax extraction are documentary coverage; they do not prove every branch or cross-host behavior.

CURRENT EVIDENCE

Fresh related Python suites and per-profile/water results are included. Native C#/.NET, C++/Rust/R compilation and physical devices were not executed in this environment. This source copy received the requested terminology transfer after the earlier suite; the complete renamed host has not been rebuilt here.

REMAINING REQUIREMENT

Map unverified branches and native-host behavior to source-specific evidence before assigning a complete verification verdict.

SOURCE REFERENCES

associated-core:reference/src/bangel/frontend/lower.py

TR-MOD-ASSOCIATED-CEC383E42B / Associated core / reference/src/bangel/frontend/parser.py

IF

This Elsa / source module is imported or its declared interface is invoked. Declared surface includes:
__init__(self, tokens: tuple[Token, ...], source_name: str | None); parse(self); _parse_header(self); _effects(self, *, module: bool); _imports(self)

HOW

Preserve lexical, syntactic, binding, type and lowering behavior before producing a validated representation. The complete terminology-edited 1066-line source is preserved with SHA-256 7a12c8054b59162475eddf2ca827a7b7e36d5123cc8c0891c5ac78c7c5b56504. 59 extracted function/declaration entries are separately indexed, including exact Python bodies and guards where available.

THEN

Follow the exact returned values, diagnostics and state effects in the preserved implementation. Module inclusion and syntax extraction are documentary coverage; they do not prove every branch or cross-host behavior.

CURRENT EVIDENCE

Fresh related Python suites and per-profile/water results are included. Native C#/.NET, C++/Rust/R compilation and physical devices were not executed in this environment. This source copy received the requested terminology transfer after the earlier suite; the complete renamed host has not been rebuilt here.

REMAINING REQUIREMENT

Map unverified branches and native-host behavior to source-specific evidence before assigning a complete verification verdict.

SOURCE REFERENCES

associated-core:reference/src/bangel/frontend/parser.py

TR-MOD-ASSOCIATED-054EDA3F09 / Associated core / reference/src/bangel/frontend/semantics.py

IF

This Elsa / source module is imported or its declared interface is invoked. Declared surface includes: `_diag(code: str, message: str, span: SourceSpan | None, **details: object); to_dict(self); render(self); to_dict(self); to_dict(self)`

HOW

Preserve lexical, syntactic, binding, type and lowering behavior before producing a validated representation. The complete terminology-edited 2895-line source is preserved with SHA-256 `f0587630482b135b9f9ce33c857f4571c8281936ddec79d5d63c05f4f5501ab3`. 106 extracted function/declaration entries are separately indexed, including exact Python bodies and guards where available.

THEN

Follow the exact returned values, diagnostics and state effects in the preserved implementation. Module inclusion and syntax extraction are documentary coverage; they do not prove every branch or cross-host behavior.

CURRENT EVIDENCE

Fresh related Python suites and per-profile/water results are included. Native C#/.NET, C++/Rust/R compilation and physical devices were not executed in this environment. This source copy received the requested terminology transfer after the earlier suite; the complete renamed host has not been rebuilt here.

REMAINING REQUIREMENT

Map unverified branches and native-host behavior to source-specific evidence before assigning a complete verification verdict.

SOURCE REFERENCES

associated-core:reference/src/bangel/frontend/semantics.py

TR-MOD-ASSOCIATED-15FBF0EEB0 / Associated core / reference/src/bangel/frontend/tokens.py

IF

This Runtime / supporting core module is imported or its declared interface is invoked. Declared surface includes: to_dict(self)

HOW

Use the complete terminology-edited module and its declared types, call paths, state and error behavior; preserve program/evidence boundaries. The complete 44-line source is preserved with SHA-256 8424aef18c8a1bcb0d17fced8c386282ec05294cb1043b4b42dd8ea7890f7c27. 1 extracted function/declaration entries are separately indexed, including exact Python bodies and guards where available.

THEN

Follow the exact returned values, diagnostics and state effects in the preserved implementation. Module inclusion and syntax extraction are documentary coverage; they do not prove every branch or cross-host behavior.

CURRENT EVIDENCE

Fresh related Python suites and per-profile/water results are included. Native C#/.NET, C++/Rust/R compilation and physical devices were not executed in this environment. This source copy received the requested terminology transfer after the earlier suite; the complete renamed host has not been rebuilt here.

REMAINING REQUIREMENT

Map unverified branches and native-host behavior to source-specific evidence before assigning a complete verification verdict.

SOURCE REFERENCES

associated-core:reference/src/bangel/frontend/tokens.py

TR-MOD-ASSOCIATED-89E2DA84A8 / Associated core / reference/src/bangel/gates.py

IF

This Runtime / supporting core module is imported or its declared interface is invoked. Declared surface includes: passkey_preflight_report(*, tests_passed: int, package_root: str | None=None)

HOW

Use the complete terminology-edited module and its declared types, call paths, state and error behavior; preserve program/evidence boundaries. The complete 32-line source is preserved with SHA-256 374cfc4e3db7c43ce06e69a93697a8a711aee68d4f359e1929e2acd6c5522dea. 1 extracted function/declaration entries are separately indexed, including exact Python bodies and guards where available.

THEN

Follow the exact returned values, diagnostics and state effects in the preserved implementation. Module inclusion and syntax extraction are documentary coverage; they do not prove every branch or cross-host behavior.

CURRENT EVIDENCE

Fresh related Python suites and per-profile/water results are included. Native C#/.NET, C++/Rust/R compilation and physical devices were not executed in this environment. This source copy received the requested terminology transfer after the earlier suite; the complete renamed host has not been rebuilt here.

REMAINING REQUIREMENT

Map unverified branches and native-host behavior to source-specific evidence before assigning a complete verification verdict.

SOURCE REFERENCES

associated-core:reference/src/bangel/gates.py

TR-MOD-ASSOCIATED-D840B2BBD7 / Associated core / reference/src/bangel/geometry.py

IF

This Numeric / typed values module is imported or its declared interface is invoked. Declared surface includes: `__post_init__(self); to_dict(self); __post_init__(self); to_dict(self); __post_init__(self)`

HOW

Use the exact numeric and dimensional rules of this module; keep typed unknown, signed values and source-specific bounds distinct. The complete terminology-edited 71-line source is preserved with SHA-256 11c0fa2234c5bcc9ee6a49305b0602cd01648dcd0d80f98de2674ffe085a553a. 6 extracted function/declaration entries are separately indexed, including exact Python bodies and guards where available.

THEN

Follow the exact returned values, diagnostics and state effects in the preserved implementation. Module inclusion and syntax extraction are documentary coverage; they do not prove every branch or cross-host behavior.

CURRENT EVIDENCE

Fresh related Python suites and per-profile/water results are included. Native C#/.NET, C++/Rust/R compilation and physical devices were not executed in this environment. This source copy received the requested terminology transfer after the earlier suite; the complete renamed host has not been rebuilt here.

REMAINING REQUIREMENT

Map unverified branches and native-host behavior to source-specific evidence before assigning a complete verification verdict.

SOURCE REFERENCES

associated-core:reference/src/bangel/geometry.py

TR-MOD-ASSOCIATED-863C77F7EA / Associated core / reference/src/bangel/identity.py

IF

This Runtime / supporting core module is imported or its declared interface is invoked. This module contains shared declarations or constants; the complete source is retained.

HOW

Use the complete terminology-edited module and its declared types, call paths, state and error behavior; preserve program/evidence boundaries. The complete 73-line source is preserved with SHA-256 b2f7230a2e5fdd26b70587dba138be58888d37a351166d1f3102bf6196e5a0e0. 0 extracted function/declaration entries are separately indexed, including exact Python bodies and guards where available.

THEN

Follow the exact returned values, diagnostics and state effects in the preserved implementation. Module inclusion and syntax extraction are documentary coverage; they do not prove every branch or cross-host behavior.

CURRENT EVIDENCE

Fresh related Python suites and per-profile/water results are included. Native C#/.NET, C++/Rust/R compilation and physical devices were not executed in this environment. This source copy received the requested terminology transfer after the earlier suite; the complete renamed host has not been rebuilt here.

REMAINING REQUIREMENT

Map unverified branches and native-host behavior to source-specific evidence before assigning a complete verification verdict.

SOURCE REFERENCES

associated-core:reference/src/bangel/identity.py

TR-MOD-ASSOCIATED-D834F96C92 / Associated core / reference/src/bangel/inspector.py

IF

This Receipt / evidence module is imported or its declared interface is invoked. Declared surface includes: inspect_receipt(receipt: dict[str, Any]); query_receipt(receipt: dict[str, Any], path: str); compare_receipts(left: dict[str, Any], right: dict[str, Any]); replay_receipt(compilation: dict[str, Any], receipt: dict[str, Any])

HOW

Preserve exact serialization, digest binding, linkage and inspection/replay behavior without promoting integrity metadata into authority. The complete terminology-edited 75-line source is preserved with SHA-256 83327ff6da9f722454b6efb26343d0b2343ce25a4a29dcefeb9080ad08af5421. 4 extracted function/declaration entries are separately indexed, including exact Python bodies and guards where available.

THEN

Follow the exact returned values, diagnostics and state effects in the preserved implementation. Module inclusion and syntax extraction are documentary coverage; they do not prove every branch or cross-host behavior.

CURRENT EVIDENCE

Fresh related Python suites and per-profile/water results are included. Native C#/.NET, C++/Rust/R compilation and physical devices were not executed in this environment. This source copy received the requested terminology transfer after the earlier suite; the complete renamed host has not been rebuilt here.

REMAINING REQUIREMENT

Map unverified branches and native-host behavior to source-specific evidence before assigning a complete verification verdict.

SOURCE REFERENCES

associated-core:reference/src/bangel/inspector.py

TR-MOD-ASSOCIATED-1636EB6954 / Associated core / reference/src/bangel/ir.py

IF

This JP / admission module is imported or its declared interface is invoked. Declared surface includes:
_verify_provenance(value: Any, *, span: Any, source_name: str); _verify_expression(expression: Any, *, strict: bool=False, source_name: str=""); _verify_instruction(instruction: Any, *, strict: bool, source_name: str);
verify_nested(value: Any); to_dict(self)

HOW

Preserve the representation schema, value types, provenance, registry and independent admission checks encoded here. The complete terminology-edited 437-line source is preserved with SHA-256
fc4810a726cb40d7dcb39e1e21b25947a386c15db8ec8c166604ab45b0e15e6. 12 extracted
function/declaration entries are separately indexed, including exact Python bodies and guards where available.

THEN

Follow the exact returned values, diagnostics and state effects in the preserved implementation. Module inclusion and syntax extraction are documentary coverage; they do not prove every branch or cross-host behavior.

CURRENT EVIDENCE

Fresh related Python suites and per-profile/water results are included. Native C#/.NET, C++/Rust/R compilation and physical devices were not executed in this environment. This source copy received the requested terminology transfer after the earlier suite; the complete renamed host has not been rebuilt here.

REMAINING REQUIREMENT

Map unverified branches and native-host behavior to source-specific evidence before assigning a complete verification verdict.

SOURCE REFERENCES

associated-core:reference/src/bangel/ir.py

TR-MOD-ASSOCIATED-AE0AC53DD6 / Associated core / reference/src/bangel/ir_contract.py

IF

This JP / admission module is imported or its declared interface is invoked. Declared surface includes:
fail(code: str, message: str); check(condition: bool, code: str, message: str); exact(value: Any, keys: set[str], code='IR_SCHEMA'); text(value: Any, pattern: str | None=None, *, nullable=False, code='IR_SCHEMA'); integer(value: Any, low=0, high=MAX_POSITION, code='IR_SCHEMA')

HOW

Preserve the representation schema, value types, provenance, registry and independent admission checks encoded here. The complete terminology-edited 480-line source is preserved with SHA-256 3e2aa8ab4476678543aac22333e6910d71d26bcbbdf23db5fe96cfa2772be5f7. 24 extracted function/declaration entries are separately indexed, including exact Python bodies and guards where available.

THEN

Follow the exact returned values, diagnostics and state effects in the preserved implementation. Module inclusion and syntax extraction are documentary coverage; they do not prove every branch or cross-host behavior.

CURRENT EVIDENCE

Fresh related Python suites and per-profile/water results are included. Native C#/.NET, C++/Rust/R compilation and physical devices were not executed in this environment. This source copy received the requested terminology transfer after the earlier suite; the complete renamed host has not been rebuilt here.

REMAINING REQUIREMENT

Map unverified branches and native-host behavior to source-specific evidence before assigning a complete verification verdict.

SOURCE REFERENCES

associated-core:reference/src/bangel/ir_contract.py

TR-MOD-ASSOCIATED-DA08A21AFB / Associated core / reference/src/bangel/ir_crossfields.py

IF

This JP / admission module is imported or its declared interface is invoked. Declared surface includes: `_require(condition: bool, message: str); _fits(actual: dict, expected: dict); _unique(items: list, label: str); _position(value); _source_order(items, label)`

HOW

Preserve the representation schema, value types, provenance, registry and independent admission checks encoded here. The complete terminology-edited 598-line source is preserved with SHA-256 102f1a961b07bd1e939e431cdbdd521b47fb818d8afaa4bdb311840439df033e. 23 extracted function/declaration entries are separately indexed, including exact Python bodies and guards where available.

THEN

Follow the exact returned values, diagnostics and state effects in the preserved implementation. Module inclusion and syntax extraction are documentary coverage; they do not prove every branch or cross-host behavior.

CURRENT EVIDENCE

Fresh related Python suites and per-profile/water results are included. Native C#/.NET, C++/Rust/R compilation and physical devices were not executed in this environment. This source copy received the requested terminology transfer after the earlier suite; the complete renamed host has not been rebuilt here.

REMAINING REQUIREMENT

Map unverified branches and native-host behavior to source-specific evidence before assigning a complete verification verdict.

SOURCE REFERENCES

associated-core:reference/src/bangel/ir_crossfields.py

TR-MOD-ASSOCIATED-7A268D171B / Associated core / reference/src/bangel/ir_registry.py

IF

This JP / admission module is imported or its declared interface is invoked. Declared surface includes:
to_dict(self); _failure(diagnostic: str, behavior: str); _instruction(kind: str, *, lanes: tuple[str, ...], operands: tuple[str, ...], result_type: str, strict_effects: tuple[tuple[str, ...], ...]=(('pure',)), details: tuple[tuple[str, ...], ...]=(((),), expression: str='required', name: str | dict[str, str]='required', strict_type: str='required', invariants: tuple[str, ...], failures: tuple[dict[str, str], ...], legacy: bool=False); _value(kind: str, *, lanes: tuple[str, ...], operands: tuple[str, ...], minimum: int, maximum: int | None, result_type: str, value_field: str, type_kinds: ... [continued in source]

HOW

Preserve the representation schema, value types, provenance, registry and independent admission checks encoded here. The complete terminology-edited 771-line source is preserved with SHA-256 b6820cfc7e8a852fbf55ec5d825ef8d8ca6d868a1ac0a2bb58b5e6737c66e1ec. 12 extracted function/declaration entries are separately indexed, including exact Python bodies and guards where available.

THEN

Follow the exact returned values, diagnostics and state effects in the preserved implementation. Module inclusion and syntax extraction are documentary coverage; they do not prove every branch or cross-host behavior.

CURRENT EVIDENCE

Fresh related Python suites and per-profile/water results are included. Native C#/.NET, C++/Rust/R compilation and physical devices were not executed in this environment. This source copy received the requested terminology transfer after the earlier suite; the complete renamed host has not been rebuilt here.

REMAINING REQUIREMENT

Map unverified branches and native-host behavior to source-specific evidence before assigning a complete verification verdict.

SOURCE REFERENCES

associated-core:reference/src/bangel/ir_registry.py

TR-MOD-ASSOCIATED-E8470C4328 / Associated core / reference/src/bangel/ir_types.py

IF

This JP / admission module is imported or its declared interface is invoked. Declared surface includes: `_fail(message, code='IR_TYPE');` `_check(condition, message, code='IR_TYPE');` `_keys(value, required, optional=());` `unit_work_budget(limit=MAX_UNIT_TOTAL_WORK);` `_charge_unit_work(work)`

HOW

Preserve the representation schema, value types, provenance, registry and independent admission checks encoded here. The complete terminology-edited 541-line source is preserved with SHA-256 120540f65e500825e97f0468f7d0605d702ebec6bf124ae08d35382ae98ac761. 28 extracted function/declaration entries are separately indexed, including exact Python bodies and guards where available.

THEN

Follow the exact returned values, diagnostics and state effects in the preserved implementation. Module inclusion and syntax extraction are documentary coverage; they do not prove every branch or cross-host behavior.

CURRENT EVIDENCE

Fresh related Python suites and per-profile/water results are included. Native C#/.NET, C++/Rust/R compilation and physical devices were not executed in this environment. This source copy received the requested terminology transfer after the earlier suite; the complete renamed host has not been rebuilt here.

REMAINING REQUIREMENT

Map unverified branches and native-host behavior to source-specific evidence before assigning a complete verification verdict.

SOURCE REFERENCES

associated-core:reference/src/bangel/ir_types.py

TR-MOD-ASSOCIATED-3E21925232 / Associated core / reference/src/bangel/legacy.py

IF

This Runtime / supporting core module is imported or its declared interface is invoked. Declared surface includes: parse_legacy_01(source: str)

HOW

Use the complete terminology-edited module and its declared types, call paths, state and error behavior; preserve program/evidence boundaries. The complete 50-line source is preserved with SHA-256 3f93881bd05900a63b40eeb3757443217e7af9794e4c755ba5e3aa20000b5b5a. 1 extracted function/declaration entries are separately indexed, including exact Python bodies and guards where available.

THEN

Follow the exact returned values, diagnostics and state effects in the preserved implementation. Module inclusion and syntax extraction are documentary coverage; they do not prove every branch or cross-host behavior.

CURRENT EVIDENCE

Fresh related Python suites and per-profile/water results are included. Native C#/.NET, C++/Rust/R compilation and physical devices were not executed in this environment. This source copy received the requested terminology transfer after the earlier suite; the complete renamed host has not been rebuilt here.

REMAINING REQUIREMENT

Map unverified branches and native-host behavior to source-specific evidence before assigning a complete verification verdict.

SOURCE REFERENCES

associated-core:reference/src/bangel/legacy.py

TR-MOD-ASSOCIATED-ECCB5DC480 / Associated core / reference/src/bangel/lexer.py

IF

This Elsa / source module is imported or its declared interface is invoked. Declared surface includes:
lex_expression(text: str, line: int, start_column: int=1)

HOW

Preserve lexical, syntactic, binding, type and lowering behavior before producing a validated representation. The complete terminology-edited 45-line source is preserved with SHA-256 0a289c1fe38ed0d88fba53c6513b4d9c26994c1ba1ba22cb4d230e9a88f05120. 1 extracted function/declaration entries are separately indexed, including exact Python bodies and guards where available.

THEN

Follow the exact returned values, diagnostics and state effects in the preserved implementation. Module inclusion and syntax extraction are documentary coverage; they do not prove every branch or cross-host behavior.

CURRENT EVIDENCE

Fresh related Python suites and per-profile/water results are included. Native C#/.NET, C++/Rust/R compilation and physical devices were not executed in this environment. This source copy received the requested terminology transfer after the earlier suite; the complete renamed host has not been rebuilt here.

REMAINING REQUIREMENT

Map unverified branches and native-host behavior to source-specific evidence before assigning a complete verification verdict.

SOURCE REFERENCES

associated-core:reference/src/bangel/lexer.py

TR-MOD-ASSOCIATED-D72C461912 / Associated core / reference/src/bangel/linter.py

IF

This Runtime / supporting core module is imported or its declared interface is invoked. Declared surface includes: `_finding(code: str, message: str, span: SourceSpan | None, severity: str); lint_source(source_name: str, source: str)`

HOW

Use the complete terminology-edited module and its declared types, call paths, state and error behavior; preserve program/evidence boundaries. The complete 43-line source is preserved with SHA-256 0c5a6c34ce4c6b3f351c76c194c61b60d889d3d11578b175ac1f0b3e6b4e2119. 2 extracted function/declaration entries are separately indexed, including exact Python bodies and guards where available.

THEN

Follow the exact returned values, diagnostics and state effects in the preserved implementation. Module inclusion and syntax extraction are documentary coverage; they do not prove every branch or cross-host behavior.

CURRENT EVIDENCE

Fresh related Python suites and per-profile/water results are included. Native C#/.NET, C++/Rust/R compilation and physical devices were not executed in this environment. This source copy received the requested terminology transfer after the earlier suite; the complete renamed host has not been rebuilt here.

REMAINING REQUIREMENT

Map unverified branches and native-host behavior to source-specific evidence before assigning a complete verification verdict.

SOURCE REFERENCES

associated-core:reference/src/bangel/linter.py

TR-MOD-ASSOCIATED-7DB9BF805D / Associated core / reference/src/bangel/numerics.py

IF

This Numeric / typed values module is imported or its declared interface is invoked. Declared surface includes: `_series(values: Iterable[Quantity], name: str, minimum: int=1); vector_add(left: Iterable[Quantity], right: Iterable[Quantity]); finite_difference(xs: Iterable[Quantity], ys: Iterable[Quantity]); trapezoid(xs: Iterable[Quantity], ys: Iterable[Quantity]); covariance(left: Iterable[Quantity], right: Iterable[Quantity])`

HOW

Use the exact numeric and dimensional rules of this module; keep typed unknown, signed values and source-specific bounds distinct. The complete terminology-edited 64-line source is preserved with SHA-256 52bc4b602879fce4b4d00ddcdf6ef0cea456c2171d0a0fb1e178009df9430cd8. 5 extracted function/declaration entries are separately indexed, including exact Python bodies and guards where available.

THEN

Follow the exact returned values, diagnostics and state effects in the preserved implementation. Module inclusion and syntax extraction are documentary coverage; they do not prove every branch or cross-host behavior.

CURRENT EVIDENCE

Fresh related Python suites and per-profile/water results are included. Native C#/.NET, C++/Rust/R compilation and physical devices were not executed in this environment. This source copy received the requested terminology transfer after the earlier suite; the complete renamed host has not been rebuilt here.

REMAINING REQUIREMENT

Map unverified branches and native-host behavior to source-specific evidence before assigning a complete verification verdict.

SOURCE REFERENCES

associated-core:reference/src/bangel/numerics.py

TR-MOD-ASSOCIATED-B117A683B6 / Associated core / reference/src/bangel/parser.py

IF

This Elsa / source module is imported or its declared interface is invoked. Declared surface includes:
_statement(line: SourceLine); parse_program(source: str)

HOW

Preserve lexical, syntactic, binding, type and lowering behavior before producing a validated representation. The complete terminology-edited 151-line source is preserved with SHA-256 fdb6c6e4f5b6fa707ad6a2a5dddc071756780e3e26d1103d09b189fb3818b2d3. 2 extracted function/declaration entries are separately indexed, including exact Python bodies and guards where available.

THEN

Follow the exact returned values, diagnostics and state effects in the preserved implementation. Module inclusion and syntax extraction are documentary coverage; they do not prove every branch or cross-host behavior.

CURRENT EVIDENCE

Fresh related Python suites and per-profile/water results are included. Native C#/.NET, C++/Rust/R compilation and physical devices were not executed in this environment. This source copy received the requested terminology transfer after the earlier suite; the complete renamed host has not been rebuilt here.

REMAINING REQUIREMENT

Map unverified branches and native-host behavior to source-specific evidence before assigning a complete verification verdict.

SOURCE REFERENCES

associated-core:reference/src/bangel/parser.py

TR-MOD-ASSOCIATED-4209707877 / Associated core / reference/src/bangel/project.py

IF

This Runtime / supporting core module is imported or its declared interface is invoked. Declared surface includes: to_dict(self); verify(self); build(self, manifest: dict[str, Any], directory: Path); build_file(self, manifest_path: Path)

HOW

Use the complete terminology-edited module and its declared types, call paths, state and error behavior; preserve program/evidence boundaries. The complete 87-line source is preserved with SHA-256 6bf86cbff03636f3bde4ed9a2e9d004a51c7befd669d30ef30e552220c33fc0a. 4 extracted function/declaration entries are separately indexed, including exact Python bodies and guards where available.

THEN

Follow the exact returned values, diagnostics and state effects in the preserved implementation. Module inclusion and syntax extraction are documentary coverage; they do not prove every branch or cross-host behavior.

CURRENT EVIDENCE

Fresh related Python suites and per-profile/water results are included. Native C#/.NET, C++/Rust/R compilation and physical devices were not executed in this environment. This source copy received the requested terminology transfer after the earlier suite; the complete renamed host has not been rebuilt here.

REMAINING REQUIREMENT

Map unverified branches and native-host behavior to source-specific evidence before assigning a complete verification verdict.

SOURCE REFERENCES

associated-core:reference/src/bangel/project.py

TR-MOD-ASSOCIATED-460C0DF189 / Associated core / reference/src/bangel/receipt_contract.py

IF

This Receipt / evidence module is imported or its declared interface is invoked. Declared surface includes: `check(condition, message, code='RECEIPT_SHAPE');` `exact(value, keys, code='RECEIPT_SHAPE');` `text(value, pattern=None, *, empty=False, code='RECEIPT_SHAPE');` `integer(value, lower=0, upper=2 ** 63 - 1, code='RECEIPT_LIMITS');` `preflight(root)`

HOW

Preserve exact serialization, digest binding, linkage and inspection/replay behavior without promoting integrity metadata into authority. The complete terminology-edited 311-line source is preserved with SHA-256 3db7064ad4d9ef9d64ca2f1e079c82f7d371c6882cc54255eab6e88df1a71c84. 12 extracted function/declaration entries are separately indexed, including exact Python bodies and guards where available.

THEN

Follow the exact returned values, diagnostics and state effects in the preserved implementation. Module inclusion and syntax extraction are documentary coverage; they do not prove every branch or cross-host behavior.

CURRENT EVIDENCE

Fresh related Python suites and per-profile/water results are included. Native C#/.NET, C++/Rust/R compilation and physical devices were not executed in this environment. This source copy received the requested terminology transfer after the earlier suite; the complete renamed host has not been rebuilt here.

REMAINING REQUIREMENT

Map unverified branches and native-host behavior to source-specific evidence before assigning a complete verification verdict.

SOURCE REFERENCES

associated-core:reference/src/bangel/receipt_contract.py

TR-MOD-ASSOCIATED-DF340A1FE8 / Associated core / reference/src/bangel/receipts.py

IF

This Receipt / evidence module is imported or its declared interface is invoked. Declared surface includes: bind_receipt(basis: dict[str, Any]); verify_receipt(receipt: dict[str, Any]); receipt_from_bytes(data: bytes); object_pairs(pairs); forbidden_number(_)

HOW

Preserve exact serialization, digest binding, linkage and inspection/replay behavior without promoting integrity metadata into authority. The complete terminology-edited 71-line source is preserved with SHA-256 e9bd994e21831dc8290b3a0e62850986ba0b731d59b2fce25fbd3bb4cac3557f. 5 extracted function/declaration entries are separately indexed, including exact Python bodies and guards where available.

THEN

Follow the exact returned values, diagnostics and state effects in the preserved implementation. Module inclusion and syntax extraction are documentary coverage; they do not prove every branch or cross-host behavior.

CURRENT EVIDENCE

Fresh related Python suites and per-profile/water results are included. Native C#/.NET, C++/Rust/R compilation and physical devices were not executed in this environment. This source copy received the requested terminology transfer after the earlier suite; the complete renamed host has not been rebuilt here.

REMAINING REQUIREMENT

Map unverified branches and native-host behavior to source-specific evidence before assigning a complete verification verdict.

SOURCE REFERENCES

associated-core:reference/src/bangel/receipts.py

TR-MOD-ASSOCIATED-313B7C2608 / Associated core / reference/src/bangel/runtime.py

IF

This Runtime / supporting core module is imported or its declared interface is invoked. Declared surface includes: to_dict(self); verify(self); __init__(self, *, instruction_limit: int=4096, event_limit: int=8192, function_depth: int=64, evaluation_limit: int=16384, allocation_limit: int=1000000, output_limit: int=1048576, receipt_limit: int=4194304); execute(self, compilation: dict[str, Any], *, cancelled: Callable[[], bool] | None=None); encode_value(value: Any)

HOW

Use the complete terminology-edited module and its declared types, call paths, state and error behavior; preserve program/evidence boundaries. The complete 297-line source is preserved with SHA-256 7bb8853d17fd02064ad52368b7a56fe7c2d8fffb816b37da5b26b696439ce6d7. 7 extracted function/declaration entries are separately indexed, including exact Python bodies and guards where available.

THEN

Follow the exact returned values, diagnostics and state effects in the preserved implementation. Module inclusion and syntax extraction are documentary coverage; they do not prove every branch or cross-host behavior.

CURRENT EVIDENCE

Fresh related Python suites and per-profile/water results are included. Native C#/.NET, C++/Rust/R compilation and physical devices were not executed in this environment. This source copy received the requested terminology transfer after the earlier suite; the complete renamed host has not been rebuilt here.

REMAINING REQUIREMENT

Map unverified branches and native-host behavior to source-specific evidence before assigning a complete verification verdict.

SOURCE REFERENCES

associated-core:reference/src/bangel/runtime.py

TR-MOD-ASSOCIATED-1C2B4C5987 / Associated core / reference/src/bangel/scheduler.py

IF

This Runtime / supporting core module is imported or its declared interface is invoked. Declared surface includes: `__init__(self, *, max_jobs: int=256, runtime: JoannaRuntime | None=None); run(self, jobs: Iterable[ScheduledJob], *, cancelled: Callable[[], bool] | None=None)`

HOW

Use the complete terminology-edited module and its declared types, call paths, state and error behavior; preserve program/evidence boundaries. The complete 156-line source is preserved with SHA-256 `d8f06e0e522f794ff021549a60a44f992f2c463d9b16330e719d7e2a15c264fd`. 2 extracted function/declaration entries are separately indexed, including exact Python bodies and guards where available.

THEN

Follow the exact returned values, diagnostics and state effects in the preserved implementation. Module inclusion and syntax extraction are documentary coverage; they do not prove every branch or cross-host behavior.

CURRENT EVIDENCE

Fresh related Python suites and per-profile/water results are included. Native C#/.NET, C++/Rust/R compilation and physical devices were not executed in this environment. This source copy received the requested terminology transfer after the earlier suite; the complete renamed host has not been rebuilt here.

REMAINING REQUIREMENT

Map unverified branches and native-host behavior to source-specific evidence before assigning a complete verification verdict.

SOURCE REFERENCES

associated-core:reference/src/bangel/scheduler.py

TR-MOD-ASSOCIATED-86FFB7DDAB / Associated core / reference/src/bangel/semantics.py

IF

This Elsa / source module is imported or its declared interface is invoked. Declared surface includes: `_names(expression: Expression); _calls(expression: Expression); analyze(program: Program)`

HOW

Preserve lexical, syntactic, binding, type and lowering behavior before producing a validated representation. The complete terminology-edited 114-line source is preserved with SHA-256 `ffa40408f6da15e3021fa2270c1d992a41229799d54f2eb75b83c9702b7ae20a`. 3 extracted function/declaration entries are separately indexed, including exact Python bodies and guards where available.

THEN

Follow the exact returned values, diagnostics and state effects in the preserved implementation. Module inclusion and syntax extraction are documentary coverage; they do not prove every branch or cross-host behavior.

CURRENT EVIDENCE

Fresh related Python suites and per-profile/water results are included. Native C#/.NET, C++/Rust/R compilation and physical devices were not executed in this environment. This source copy received the requested terminology transfer after the earlier suite; the complete renamed host has not been rebuilt here.

REMAINING REQUIREMENT

Map unverified branches and native-host behavior to source-specific evidence before assigning a complete verification verdict.

SOURCE REFERENCES

associated-core:reference/src/bangel/semantics.py

TR-MOD-ASSOCIATED-F6CD1B692E / Associated core / reference/src/bangel/source.py

IF

This Runtime / supporting core module is imported or its declared interface is invoked. Declared surface includes: `normalize_source(source: str); logical_lines(source: str)`

HOW

Use the complete terminology-edited module and its declared types, call paths, state and error behavior; preserve program/evidence boundaries. The complete 54-line source is preserved with SHA-256 `e8b3264372b13e3faa03faf9744cad70cfa1d4778836146b4e913f43a8cc7071`. 2 extracted function/declaration entries are separately indexed, including exact Python bodies and guards where available.

THEN

Follow the exact returned values, diagnostics and state effects in the preserved implementation. Module inclusion and syntax extraction are documentary coverage; they do not prove every branch or cross-host behavior.

CURRENT EVIDENCE

Fresh related Python suites and per-profile/water results are included. Native C#/.NET, C++/Rust/R compilation and physical devices were not executed in this environment. This source copy received the requested terminology transfer after the earlier suite; the complete renamed host has not been rebuilt here.

REMAINING REQUIREMENT

Map unverified branches and native-host behavior to source-specific evidence before assigning a complete verification verdict.

SOURCE REFERENCES

`associated-core:reference/src/bangel/source.py`

TR-MOD-ASSOCIATED-3D0C81E20F / Associated core / reference/src/bangel/state.py

IF

This Runtime / supporting core module is imported or its declared interface is invoked. Declared surface includes: enter(self, stage: Stage, instruction: int | None, action: str); complete(self)

HOW

Use the complete terminology-edited module and its declared types, call paths, state and error behavior; preserve program/evidence boundaries. The complete 59-line source is preserved with SHA-256 514a3d408c1e5ea4585a23ab3e8bb6f20dddb35f50cecf510b5408761154a76e. 2 extracted function/declaration entries are separately indexed, including exact Python bodies and guards where available.

THEN

Follow the exact returned values, diagnostics and state effects in the preserved implementation. Module inclusion and syntax extraction are documentary coverage; they do not prove every branch or cross-host behavior.

CURRENT EVIDENCE

Fresh related Python suites and per-profile/water results are included. Native C#/.NET, C++/Rust/R compilation and physical devices were not executed in this environment. This source copy received the requested terminology transfer after the earlier suite; the complete renamed host has not been rebuilt here.

REMAINING REQUIREMENT

Map unverified branches and native-host behavior to source-specific evidence before assigning a complete verification verdict.

SOURCE REFERENCES

associated-core:reference/src/bangel/state.py

TR-MOD-ASSOCIATED-5994375BF9 / Associated core / reference/src/bangel/strict_runtime.py

IF

This Runtime / supporting core module is imported or its declared interface is invoked. Declared surface includes: get(self, name: str); set(self, name: str, value: Any); _underlying(value_type); _unknown(value_type, values); _decimal_text(value: Decimal)

HOW

Use the complete terminology-edited module and its declared types, call paths, state and error behavior; preserve program/evidence boundaries. The complete 584-line source is preserved with SHA-256 f791522e9f7a112d3dd1af08f3a522ea5958901771b114cdd27c30bd02ca3255. 23 extracted function/declaration entries are separately indexed, including exact Python bodies and guards where available.

THEN

Follow the exact returned values, diagnostics and state effects in the preserved implementation. Module inclusion and syntax extraction are documentary coverage; they do not prove every branch or cross-host behavior.

CURRENT EVIDENCE

Fresh related Python suites and per-profile/water results are included. Native C#/.NET, C++/Rust/R compilation and physical devices were not executed in this environment. This source copy received the requested terminology transfer after the earlier suite; the complete renamed host has not been rebuilt here.

REMAINING REQUIREMENT

Map unverified branches and native-host behavior to source-specific evidence before assigning a complete verification verdict.

SOURCE REFERENCES

associated-core:reference/src/bangel/strict_runtime.py

TR-MOD-ASSOCIATED-CE1AA3A437 / Associated core / reference/src/bangel/tokens.py

IF

This Runtime / supporting core module is imported or its declared interface is invoked. This module contains shared declarations or constants; the complete source is retained.

HOW

Use the complete terminology-edited module and its declared types, call paths, state and error behavior; preserve program/evidence boundaries. The complete 26-line source is preserved with SHA-256 de69106936311c4d0d828f3a6fa7e90220832bf49fd1ca4870dfc3a0d9d0a054. 0 extracted function/declaration entries are separately indexed, including exact Python bodies and guards where available.

THEN

Follow the exact returned values, diagnostics and state effects in the preserved implementation. Module inclusion and syntax extraction are documentary coverage; they do not prove every branch or cross-host behavior.

CURRENT EVIDENCE

Fresh related Python suites and per-profile/water results are included. Native C#/.NET, C++/Rust/R compilation and physical devices were not executed in this environment. This source copy received the requested terminology transfer after the earlier suite; the complete renamed host has not been rebuilt here.

REMAINING REQUIREMENT

Map unverified branches and native-host behavior to source-specific evidence before assigning a complete verification verdict.

SOURCE REFERENCES

associated-core:reference/src/bangel/tokens.py

TR-MOD-ASSOCIATED-4B6CF2A041 / Associated core / reference/src/bangel/topology.py

IF

This Numeric / typed values module is imported or its declared interface is invoked. Declared surface includes: canonical_stage(node: str); __post_init__(self); to_dict(self); add_node(self, node: str); add_edge(self, source: str, target: str, mode: str)

HOW

Use the exact numeric and dimensional rules of this module; keep typed unknown, signed values and source-specific bounds distinct. The complete terminology-edited 67-line source is preserved with SHA-256 79573438fa84903045c7d6256155af8d820f68b37ecae3ba3096f62af374bd5b. 6 extracted function/declaration entries are separately indexed, including exact Python bodies and guards where available.

THEN

Follow the exact returned values, diagnostics and state effects in the preserved implementation. Module inclusion and syntax extraction are documentary coverage; they do not prove every branch or cross-host behavior.

CURRENT EVIDENCE

Fresh related Python suites and per-profile/water results are included. Native C#/.NET, C++/Rust/R compilation and physical devices were not executed in this environment. This source copy received the requested terminology transfer after the earlier suite; the complete renamed host has not been rebuilt here.

REMAINING REQUIREMENT

Map unverified branches and native-host behavior to source-specific evidence before assigning a complete verification verdict.

SOURCE REFERENCES

associated-core:reference/src/bangel/topology.py

TR-MOD-ASSOCIATED-CA0490B2D6 / Associated core / reference/src/bangel/units.py

IF

This Numeric / typed values module is imported or its declared interface is invoked. Declared surface includes: require_unit(symbol: str); combine_dimensions(left: Dimension, right: Dimension, sign: int); dimension_text(dimension: Dimension)

HOW

Use the exact numeric and dimensional rules of this module; keep typed unknown, signed values and source-specific bounds distinct. The complete terminology-edited 59-line source is preserved with SHA-256 624b47631a708b7af681cbbb13e95bd45f81c1da224618bf5f3578c6f1ed7aa9. 3 extracted function/declaration entries are separately indexed, including exact Python bodies and guards where available.

THEN

Follow the exact returned values, diagnostics and state effects in the preserved implementation. Module inclusion and syntax extraction are documentary coverage; they do not prove every branch or cross-host behavior.

CURRENT EVIDENCE

Fresh related Python suites and per-profile/water results are included. Native C#/.NET, C++/Rust/R compilation and physical devices were not executed in this environment. This source copy received the requested terminology transfer after the earlier suite; the complete renamed host has not been rebuilt here.

REMAINING REQUIREMENT

Map unverified branches and native-host behavior to source-specific evidence before assigning a complete verification verdict.

SOURCE REFERENCES

associated-core:reference/src/bangel/units.py

TR-MOD-ASSOCIATED-9792C6F574 / Associated core / reference/src/bangel/values.py

IF

This Numeric / typed values module is imported or its declared interface is invoked. Declared surface includes: `__post_init__(self); known(cls, magnitude: Decimal, unit_symbol: str='1'); unknown(cls, unit_symbol: str='1'); mass_delta(cls, magnitude: Decimal, unit_symbol: str='mg'); is_unknown(self)`

HOW

Use the exact numeric and dimensional rules of this module; keep typed unknown, signed values and source-specific bounds distinct. The complete terminology-edited 183-line source is preserved with SHA-256 `b9169eb0a6ffc95881ff1803417cbd2a77fbc817549d02df10641670e91ee8e7`. 14 extracted function/declaration entries are separately indexed, including exact Python bodies and guards where available.

THEN

Follow the exact returned values, diagnostics and state effects in the preserved implementation. Module inclusion and syntax extraction are documentary coverage; they do not prove every branch or cross-host behavior.

CURRENT EVIDENCE

Fresh related Python suites and per-profile/water results are included. Native C#/.NET, C++/Rust/R compilation and physical devices were not executed in this environment. This source copy received the requested terminology transfer after the earlier suite; the complete renamed host has not been rebuilt here.

REMAINING REQUIREMENT

Map unverified branches and native-host behavior to source-specific evidence before assigning a complete verification verdict.

SOURCE REFERENCES

associated-core:reference/src/bangel/values.py