

SG-10 — Claim Boundary + Scope Walls (GUT Gate 11): Per-Gate Closure-Attack Dossier — Fable_Version rendered package. Rendered from DOSSIER_SG10_CLAIM_BOUNDARY_CLOSURE_ATTACK.md ; frozen technical content unchanged by rendering.

SG-10 — Claim Boundary + Scope Walls (GUT Gate 11): Per-Gate Closure-Attack Dossier

What this is. The closure-attack packet for **SG-10 (Claim boundary / the scope walls)** on the **frozen 13D K6 branch ONLY**. SG-10 is the *disclosure* gate — the manuscript's outermost honesty layer. It closes no physics and translates to nothing geometric; its job is to name, completely and honestly, every sector the scoped GUT does **not** claim, and to enforce — by a mechanical lint, not authorial restraint — that **no required Gate 1–10 is rescued by narrowing scope** and **no excluded sector is leaned on to close a required gate**. This dossier recaps that mechanism concisely (it lives on the published site), verifies the DISCLOSED status is real, then mounts the attack that is *appropriate to a disclosure gate*: is the boundary **complete** (every excluded sector named with a falsifier), is it **honest** (no required gate closed by exclusion), and — the core — **where does each scope wall actually stand, and what would move it?** It is **not** a rival comparison (that is BATTLE_GATES/), **not** the one-line status ledger, **not** a reprint of the manuscript.

Binding discipline (carry verbatim). PROMOTIONS:0. Frozen branch dcc66f1b2685 / a5b1e6f9d951 READ-ONLY. Honest throughout: SG-10 is **DISCLOSED**, not a derivation; it carries **no certificate of correctness for the excluded sectors** and **adds no output**; its strength is **purely disclosure discipline**. The excluded sectors are **left entirely OPEN**. Every scope-wall disposition cited below is the *campaign's* conservative verdict and **moves no status**: Gap-01 stays Precisely-OPEN (a6 bulk is a labeled consistency coefficient, MO-12 necessary-not-sufficient), Gap-02 stays Precisely-OPEN [X], Λ stays **Weinberg-OPEN** (cancellation route theorem-refuted), BG-10 stays **o/4** (Rule A AXIOM-CLOSED $\neq$ proven), strong-CP stays observation-blocked. Closure paths must be **non-target-loaded** (the $\kappa^3 \cdot \pi^{-1}$ kill-test). **AXIOM_CLOSED $\neq$ proven; dissolved $\neq$ solved; given-E $\neq$ derivation of E; selection $\neq$ derivation.** A disclosure gate cannot be "promoted" by closing a wall — closing a wall is the *other gate's* event; SG-10's only movement is from *asserted-complete* to *machine-verified-complete*.

0. Header & Verdict

Field	Value
Gate id	SG-10 — Claim boundary + scope walls (the disclosure gate)
GUT manuscript gate	Gate 11 (§6.11 gate card; narrative §5.10; Section 9 boundary ledger; binding rule §1.2.1 / §1.7; certificate <code>certificates/G11_claim_boundary/</code>)
Status label (binding)	DISCLOSED
Manuscript card status	<i>Claimed certificate pass</i> — "the boundary holds; the listed sectors are <i>Outside scoped-GUT claim</i> " (§6.11). DISCLOSED is the honest scoped-roll-up: the gate <i>discloses</i> a non-claim; it does not certify the excluded physics.
What rides it	The Section-9 boundary ledger (16 rows); the two-clause scope-consistency lint; the §1.2.1 binding rule; the Downgrade-Rules row "Gate relies on an excluded sector to close → <i>Open / not claimed</i> ". It consumes the status outputs of Gates 1–10 and nothing consumes it — the outermost layer.
Frozen hashes it rides	Branch <code>dcc66f1b2685</code> / manifest meta <code>a5b1e6f9d951</code> . SG-10 introduces no geometric object and no new hash — it is a meta-constraint on the <i>text</i> . The walls it discloses are referenced by their owners' objects: <code>a₆</code> bulk <code>tr[a₆]=-2.817995812×10⁹⁴ GeV⁶</code> (Gap-01, consistency-coefficient label only, defect a₆ UNCOMPUTED — no total); Gap-02 engine <code>su3_lattice.py</code> (sha256-identical to corpus); Λ supertrace certificate (Paper IV, honest-negative, no hash promoted); <i>M_R</i> no hash — UNKNOWN (BG-10 / SG-8 cross-link).
Target anchor(s)	This is the disclosure gate: anchors are <i>per scope-wall</i> , each at its owner's conservative floor — Λ = measured (2.3 meV) ⁴ residue, <i>measured-but-irreducible</i> / <i>Weinberg-OPEN</i> ; Gap-02 = continuum Yang-Mills mass gap, NO witness → Precisely-OPEN [X] ; strong-CP = nEDM bound, <i>OPEN</i> / <i>observation-blocked</i> ; BG-10 = measured $\eta_B \approx 6.1 \times 10^{-10}$, <i>0/4</i> (Rule A AXIOM-CLOSED ≠ proven; M_R no witness → OPEN). The gate itself rides no anchor ; it terminates on the honest completeness of the boundary , not one invariant. PROMOTIONS:0 — no wall moves. (Detail: §A target-anchor block.)

0.1 Abstract — established / open / what would close it

Established (the disclosure mechanism, machine-checkable). SG-10 names every non-GUT sector the scoped GUT does not claim — **quantum-gravity UV completion, full cosmology, dark matter, dark energy, baryogenesis, strong CP, Theory-of-Everything** — each carried in the Section-9 boundary ledger with status *Outside scoped-GUT claim* and a per-sector reason (§9.3.1–§9.3.7, §9.4). It enforces **two binding clauses, both directions** (§9.1, §1.2.1): (i) no excluded sector may be cited to close a required Gate 1–10; (ii) no required scoped-GUT gate may be re-filed into the exclusion list. The enforcement is a **mechanical, scriptable two-clause text lint** (`certificates/G11_claim_boundary/`), with a **falsifier that downgrades the offending required gate, not SG-10** (§6.12 Gate-11 row; Downgrade Rules). This is the gate's genuine, defensible content: *the scope boundary is enforced by program, not by authorial restraint*, and it is structurally falsifiable.

Open (the honest deductions). (1) SG-10 **closes no physics** and **certifies nothing about the excluded sectors** — every wall it names is **entirely OPEN** and owned elsewhere. (2) The **completeness** of the exclusion list is an *auditable assertion*, not a theorem — "every relevant non-GUT sector is named" is a universal claim over an open-ended sector space. (3) The lint is **referenced but not independently re-run in this audit** — its machine-reality is the same AUDIT class flagged for SG-7's δ -harness and SG-8's J.6/K.5 harness. (4) Two boundary rows carry **cross-corpus tension that must not leak into a required gate**: the Λ exclusion has a *downstream computed-negative* in Paper IV, and the dark-matter / dark-energy rows point at *Diagnostic-only* modes inside Appendices F/I/K — both are correctly fenced, but the fence is the load-

bearing object and must be verified. (5) The walls themselves are at very different maturities — from *observation-locked-real* (Gap-02, BG-10) to *Weinberg-irreducible* (Λ) to *data-blocked* (strong-CP) — and the boundary's honesty depends on the per-wall disposition being stated at the correct conservatism.

What would close it (the ladder). SG-10 cannot reach DERIVED-CLOSED — there is no physics to derive; a disclosure gate's ceiling is **machine-verified completeness + honesty**. The realistic endpoint is **DISCLOSED-VERIFIED**: (a) the two-clause lint mounted and re-run target-blind, confirming both directions hold across the frozen manuscript text; (b) a **completeness witness** — a checklist mapping every standard non-GUT sector to a ledger row or an explicit "subsumed-by" justification; (c) each scope wall's disposition re-stated at its campaign-verified conservatism with its *named falsifier*. None of (a)–(c) moves a wall's status; all three convert an *asserted* boundary into a *machine-checked* one. The walls move only in their own dossiers/campaigns — and this dossier is the **map** of where each stands and what would move it.

0.2 Website source-of-truth (link, don't duplicate)

The full boundary ledger, the binding-rule statement, the per-sector exclusion prose, and the gate card are the **published manuscript**, Paper I:

- **GUT.html §6.11** (Gate-11 card) — <https://physics.magflowmeters.com/articles/GUT.html>
- **§5.10** narrative module ("the one entry exempt from geometric translation"); **§9** *What Is Not Claimed* (§9.1 why boundaries matter; §9.2 what is claimed; §9.3.1–§9.3.7 per-sector exclusions; **§9.4 Boundary Ledger**; §9.4a historical long-form note; §9.5 why exclusions strengthen; §9.6 the "why these four values" remark, itself *Outside scoped-GUT claim*); **§1.2.1 / §1.7** the binding rule + scope-boundary statement; **§6.12** Gate-by-Gate Falsification Map (Gate-11 row); front-matter **Downgrade Rules + Known Weakest Links + Claim Boundary / Scope Ledger + Review Status Vocabulary + Claim Strength Ladder**; **Appendix CR module CR11** reader companion (explanatory only).
- **Paper IV, TOE.html** — <https://physics.magflowmeters.com/articles/TOE.html> — the Λ downstream computed-negative (the *reinforcement* of the §9.3.4 exclusion, never a lift) and the baryogenesis withdrawal record (the sibling-manuscript honesty event behind the §9.3.5 exclusion).

This dossier recaps only what is needed to attack the boundary; the site controls all common material.

1. How OUR geometry "closes" SG-10 — the disclosure claim (concise)

Full text: **GUT.html §6.11 + §5.10 + §9 + §1.2.1 + §6.12 + CR11**. This section is the attack-grade recap, not the manuscript.

1.1 What "closure" means for a disclosure gate

SG-10 is categorically different from SG-1...SG-9. Those gates assert that the *geometry* does something (recovers a group, fixes an index, generates Yukawas). SG-10 asserts that the *manuscript* does something: it **states its own boundary and enforces it**. So "closed" here is **not** a claim about nature — it is a claim about the **claim**:

Every non-GUT sector the scoped GUT does not address is named in the Section-9 ledger; and no required Gate 1–10 is closed by exclusion (neither by leaning on an excluded sector, nor by re-filing a

required gate as an exclusion). Both are checked by a mechanical lint over the manuscript text.

The manuscript card status is *Claimed certificate pass*; the honest scoped label is **DISCLOSED**, because the "pass" is a pass of a *disclosure/consistency* check, not a certificate of any excluded physics. The gate's own §5.10 line states it bluntly: "this gate translates to nothing geometric, and the table says so out loud ... Layer involvement: None."

1.2 The mechanism end-to-end, at attack-grade detail

The disclosure gate is a **two-clause text lint plus a binding rule**, with a downgrade that fires on the *offending* gate. Named so a reader can attack each part:

1. **The boundary ledger (§9.4)** — a 16-row table. Nine *Required Gate* rows (Yes/Claimed) and seven *Excluded* rows (No / *Outside scoped-GUT claim*), each excluded row carrying a **reason** (e.g. "No relic / detection / stability certificate" for dark matter; "No $\bar{\theta}$ alignment certificate" for strong CP). The excluded set: **quantum-gravity UV completion, full cosmology, dark matter, dark energy, baryogenesis, strong CP, Theory-of-Everything**. (Attack handle: is the set **complete**? A missing sector is the gate's named failure mode.)
2. **The two binding clauses, both directions (§9.1 blockquote; §1.2.1):** - *Excluded sectors may not be used to support required Gates 1–10. - Required scoped-GUT gates may not be moved into exclusions.* These are "the load-bearing content of this section" (§9.1). (Attack handle: each is a *universal* over the manuscript text — a single counterexample falsifies.)
3. **The scope-consistency lint (`certificates/G11_claim_boundary/`)** — §5.10's "prospective constraint": (i) every excluded sector appears explicitly in §9.4; (ii) no required-gate certificate (Gates 1–10, §6 cards + Appendices D–L) cites an excluded sector for closure or carries the status *Excluded from scope*. Both "mechanical, scriptable, falsifiable text checks — enforced by a program, not by authorial restraint." (Attack handle: the lint is *referenced*; has it been *run*? — this is the AUDIT residual R7 below.)
4. **The downgrade asymmetry (§6.12 Gate-11 row; Downgrade Rules).** Falsifying Gate 11 — "show any excluded sector is invoked to support a required gate output" — downgrades **the required gate that improperly invoked the excluded sector**, *Open / not claimed*. SG-10 itself is the guardrail; the penalty falls inward, on the gate that broke discipline. (Attack handle: this is what makes SG-10 *load-bearing without being a physics claim* — it has teeth on the other ten gates.)
5. **The fences against the two known leak paths.** Two excluded rows have live cross-references that *could* leak into a required gate and are explicitly fenced: - **Dark matter / dark energy ↔ candidate modes**. §9.3.3/§9.3.4 route any chamber or backbone-moduli mode that *could* play a dark-sector role to **Diagnostic only**, owned by the appendix that owns the mode (I/K for chamber, F for moduli), and recorded in §9.4 — never used to support a closure. - **Λ ↔ Paper IV**. §9.3.4 carries a downstream-corpus pointer that the cosmological-constant question has been carried to a *computed one-loop certificate* in Paper IV that is an **honest negative** (no structural cancellation; chamber-cancellation route theorem-refuted), and states explicitly: "This is a current cross-reference only; it adds no closure claim here and does not alter this section's exclusion." - **Section 11 (QC bridge) ↔ Gate support**. The QC engineering coda is fenced by the Gate-11 scope lint as *external/engineering, not GUT certificate support* (§11 closing; data-use firewall §4.9). (Attack handle: these three fences are the most attackable surface — a disclosure gate fails exactly where a *Diagnostic* or *downstream* object silently does load-bearing work.)

6. **The historical-material firewall (§9.4a).** Earlier long-form material that *did* once say "strong CP closes" or "reservoir is critical" (Wave 22/23; 26D parent reservoir) is declared **not used to support any required gate** unless "migrated, frozen, certified, and named in the current authority stack"; the full migration audit is Appendix A3 (§A3.18/§A3.19). (Attack handle: a stale "closes" wording surviving anywhere on the live claim path is a boundary violation.)

1.3 What "closed" means here, and its conditionality

"Closed" for SG-10 is **disclosure-consistency under a mechanical lint** — strictly **not** a certificate of any excluded physics, **not** a claim that the walls are small/solvable, **not** a TOE. It is conditional on:

- **the lint actually running** — "enforced by a program" is the claim; the program being mounted and re-run target-blind is the verification (R7).
- **the exclusion list being complete** — a universal over non-GUT sector space, asserted not proven (R1).
- **the fences holding** — Diagnostic-only modes, the Λ downstream pointer, and the §11 bridge must never do load-bearing work on a required gate (R2).
- **given-Gates-1–10** — SG-10 consumes the *status outputs* of the other gates; if a required gate's status is itself wrong, SG-10 cannot detect it (SG-10 checks *scope hygiene*, not *physics correctness*).

The genuine, defensible content (survives the honest accounting):

Genuine SG-10 content	Mechanism
The boundary is stated in public as a strength , not hidden	§9.1, §9.5, Objection-3 steelman
Both-direction binding rule with teeth on Gates 1–10	§1.2.1 + §6.12 downgrade-the-offender
Enforcement is mechanical/scriptable , not authorial	§5.10 prospective constraint + certificates/G11_claim_boundary/
Every excluded row carries a named reason / missing-certificate	§9.4 reason column
Known leak paths are explicitly fenced (Diagnostic-only, downstream-only, external-bridge)	§9.3.3/§9.3.4, §9.4a, §11

The conditional / non-genuine content (what SG-10 does NOT deliver):

Quantity	Honest reality
Any excluded-sector result	Not claimed — every wall is entirely OPEN, owned elsewhere
Completeness of the exclusion list	Auditable assertion , not a theorem
"The lint passes"	AUDIT — referenced, not independently re-run here
Λ / baryogenesis / strong-CP <i>dispositions</i>	Owned by their campaigns; SG-10 only <i>names</i> them and fences them

So the precise statement of closure: **SG-10 genuinely delivers a complete-as-asserted, both-direction, machine-enforceable scope boundary that keeps the scoped-GUT closure honest — and it delivers nothing about the excluded physics. Its only available upgrade is from *asserted* to *machine-verified* disclosure-consistency.**

2. Verify the status — is DISCLOSED real?

The verification a skeptic would run. Each witness gets a grade — **hand-checkable** / **symbolic** / **machine-lane** — and an honest **reproduces?** flag.

2.1 The witness ledger

#	Witness	What it asserts	Grade	Reproduces?
W1	§9.4 boundary ledger (16 rows; 7 excluded + reason column)	every named non-GUT sector is excluded with a stated reason	hand-checkable	Yes — the table is present and self-consistent; each excluded row has a reason and a <i>Outside scoped-GUT claim</i> status
W2	Two binding clauses, both directions (§9.1 blockquote; §1.2.1)	excluded→required AND required→excluded	hand-checkable	Yes — the clauses are stated verbatim and load-bearing; falsifiable by a single counterexample
W3	Downgrade asymmetry (§6.12 Gate-11 row; Downgrade Rules row "relies on excluded sector")	falsifying Gate 11 downgrades the <i>offending required gate</i> , not Gate 11	hand-checkable	Yes — the §6.12 row and the front-matter Downgrade Rule are consistent and point inward
W4	The scope-consistency lint certificates/G11_claim_boundary/	both lint clauses hold across the manuscript text	machine-lane	AUDIT — the lint is <i>referenced</i> in §5.10/§6.11; the executable run (the two clauses checked target-blind over the frozen manuscript) is not independently re-run here
W5	§9.6 "why these four values" remark carries status <i>Outside scoped-GUT claim</i>	the anthropic/deeper-principle/brute-fact reading is <i>not</i> a backed claim	hand-checkable	Yes — the remark explicitly self-labels Outside scope and "appears in this section rather than in any gate"
W6	§9.3.4 $\wedge$ downstream pointer ("adds no closure claim here; does not alter this section's exclusion")	the Paper-IV $\wedge$ negative <i>reinforces</i> , never <i>lifts</i> , the exclusion	symbolic/audit	Conditional — an auditable <i>claim</i> that the cross-reference is inert; verified by reading, not by the lint
W7	§9.3.3/§9.3.4 Diagnostic-only fences for dark-sector candidate modes	candidate modes are owned by F//K as <i>Diagnostic only</i> , never gate support	symbolic/audit	Conditional — the fence is stated; that <i>no</i> required gate certificate actually cites a Diagnostic mode is the W4 lint's job
W8	§9.4a historical-material firewall + A3 migration ledger	no stale "strong CP closes" / "reservoir critical" wording supports a current gate	symbolic/audit	Conditional — asserted; the A3 migration audit (§A3.18/§A3.19) is the backing, not re-run here
W9	§11 QC-bridge fence ("not used to support Gates 1–11"; data-use firewall §4.9)	the engineering coda changes no gate status and supports no gate	hand-checkable	Yes — §11 closing states "zero GUT gate statuses changed; zero promotions" verbatim
W10	Battle-of-the-Geometries note (carried in the SG-10 ledger line)	SG-10 is one of only two Fable-WIN gates because most rivals silently omit the exclusion list	interpretation	Disclosure-only — a <i>meta</i> -observation about disclosure practice, NOT a physics win; carried as interpretation, not certificate

2.2 What reproduces, plainly

- **The boundary ledger reproduces by hand.** The §9.4 table is present, the seven excluded rows each carry a reason, and the *Required Gate* rows match the §6 gate cards. This is the strongest, most defensible leg.
- **The both-direction binding rule reproduces by hand.** §9.1's blockquote and §1.2.1 state the two clauses verbatim; §6.12 and the Downgrade Rules implement the inward-falling penalty. A reader can confirm the logic in minutes.
- **The self-labeling of the soft spots reproduces.** §9.6 (the "why four values" remark) and §11 (the QC bridge) both *self-declare* Outside-scope / non-supporting — exactly the move a disclosure gate should make.

2.3 What does NOT yet reproduce (honest gaps in the status)

- **W4 lint is AUDIT.** "Enforced by a program, not authorial restraint" is the gate's signature claim, but the program (`certificates/G11_claim_boundary/`) is *referenced*, not independently re-run in this audit. Until the two clauses are mounted and executed target-blind over the frozen manuscript text, "the boundary is machine-enforced" is **declared-not-independently-verified here** — the same class as SG-7's absent δ -harness and SG-8's J.6/K.5 harness.
- **Completeness does not "reproduce" — it is a universal.** "Every relevant non-GUT sector is named" cannot be reproduced by inspection of a finite table; it is a claim *about everything the table omits*. The honest status is *asserted-complete*, with a named completeness-witness as the closure path (R1 below).
- **The fences are asserted, not lint-proven.** W6/W7/W8 are *conditional*: the Δ pointer's inertness, the Diagnostic-only modes' non-citation, and the historical firewall are stated in prose. The W4 lint is exactly the instrument that would *prove* them; absent the run, they are airtight-by-reading but not airtight-by-program.

2.4 Why DISCLOSED (not higher, not lower)

- **Not DERIVED / PARTIAL** (a physics tier): SG-10 derives nothing and certifies nothing about the excluded sectors. It cannot be a DERIVED-GIVEN-E or PARTIAL gate because it produces **no output** and **no geometry**. Calling it PARTIAL would falsely imply it *partly closes some physics*.
- **Not OPEN:** the disclosure mechanism is real, present, and falsifiable — the boundary ledger exists, the binding rule has teeth, the lint is specified. The gate is not "not claimed"; it is a *claimed and standing* disclosure discipline.
- **DISCLOSED is exactly right:** it names a complete-as-asserted, both-direction, machine-enforceable non-claim, with the excluded sectors left entirely OPEN and the lint at AUDIT. This matches the SCOPED_GUT ledger SG-10 line verbatim ("a DISCLOSED non-claim, not a derivation ... its strength is purely disclosure discipline ... leaving the excluded sectors themselves entirely OPEN").

3. The attack surface — what to attack (ranked by leverage)

For a disclosure gate the "attack" is not "find the missing physics" — it is **find the dishonesty or the incompleteness in the boundary**, and **map where each disclosed wall actually stands**. Every

residual is a named object with its precise obstruction. **Leverage** = how much closing it strengthens the *honesty/ machine-reality* of the boundary (NOT how much physics it closes — closing physics is the other gates' event).

3.1 The residual register

ID	Residual (named object)	Precise obstruction	Status	Leverage
R1	Completeness of the exclusion list	"Every relevant non-GUT sector is named" is a <i>universal</i> over open-ended sector space — an auditable assertion, not a theorem. A reviewer who names an un-listed required-or-relevant sector (e.g. neutrino <i>absolute</i> mass scale, flavor of dark sector, gravitational-wave / inflationary-tensor) tests whether it is (a) subsumed by a listed row, (b) genuinely a required gate hiding in exclusions, or (c) a true gap.	OPEN (the meta-residual)	HIGHEST — completeness is the whole point of a disclosure gate
R2	The three fences (Diagnostic-only modes · Λ downstream pointer · §11 QC bridge)	Each is a live cross-reference that <i>could</i> do load-bearing work on a required gate; the §9.3.3/§9.3.4 + §9.4a + §11 fences are stated in prose, not lint-proven. The most attackable surface of any disclosure gate is exactly where a <i>Diagnostic</i> or <i>downstream</i> object silently supports a closure.	OPEN (fences asserted; lint would prove)	HIGH — a leaking fence is a real Gate-11 falsification (downgrades the offending gate)
R3	The W4 scope-consistency lint is AUDIT	"Machine-enforced, not authorial" is the gate's signature; the program is referenced, not independently re-run. Same class as SG-7/SG-8 absent harnesses.	AUDIT	HIGH — converts the gate's central claim from asserted to machine-real; cheapest physics-free win
R4	Each scope wall's disposition stated at correct conservatism	The boundary's honesty depends on each wall being labeled at its campaign-verified standing — not stronger. Gap-01 (a _e consistency-coefficient, MO-12), Gap-02 (Precisely-OPEN [X], the $D \leq 0$ negative is a <i>proxy</i> not the target), Λ (Weinberg-OPEN + theorem-refuted cancellation), BG-10 (0/4; Rule A AXIOM-CLOSED $\neq$ proven), strong-CP (observation-blocked). A wall mislabeled <i>more closed than it is</i> is a boundary-honesty violation.	DISCLOSED (dispositions known, staged)	MEDIUM-HIGH — honesty/claim-boundary; this dossier IS the map
R5	The "binding rule cannot be gamed" claim	The §1.2.1 rule forbids closing a required gate by narrowing scope — but does it forbid <i>re-defining</i> a required gate's <i>target</i> to be weaker (a subtler scope-narrowing)? The Downgrade Rules have a "Claim exceeds proven operator class $\rightarrow$ narrow + Diagnostic" row (the SG-9 pattern) — is <i>operator-class narrowing</i> a permitted move that the binding rule should also fence?	OPEN (rule-completeness question)	MEDIUM — tests whether the binding rule covers <i>all</i> scope-narrowing, not just sector-relocation
R6	Cross-paper boundary coherence (GUT vs TOE/Quantum)	SG-10 lives in Paper I, but Λ (Paper IV) and the Born-rule / mass-gap walls (Paper III/IV) carry <i>their own</i> claim boundaries. A sector excluded in Paper I but <i>claimed</i> in a sibling under a different label would be a corpus-level boundary incoherence. (e.g. the §9.4a strong-CP "historical closes" wording.)	OPEN (corpus-level)	MEDIUM — the boundary is only as honest as its weakest sibling cross-reference
R7	§9.6 "why these four values" is honest but unfalsifiable	The anthropic / deeper-principle / brute-fact trichotomy is correctly self-labeled <i>Outside scoped-GUT claim</i> , but it carries no falsifier — by construction ("the framework supplies no experiment, certificate, or falsifier that separates these readings"). A disclosure gate that	DISCLOSED (correctly fenced)	LOW-MEDIUM — already correctly outside scope; the residual is "keep it there"

ID	Residual (named object)	Precise obstruction	Status	Leverage
		names an un-falsifiable remark must keep it <i>strictly</i> outside every gate.		
R8	Battle-WIN framing must not inflate	The SG-10 line notes the gate is "one of only two Fable-WIN gates" because rivals omit exclusion lists. This is a <i>disclosure-practice</i> observation, not a physics win — a hostile reviewer could read it as the manuscript scoring itself.	DISCLOSED (interpretation-labeled)	LOW — keep it labeled interpretation, never certificate

3.2 Leverage ranking (attack order)

1. **R1** (completeness) — the single highest-value target; a disclosure gate *is* its completeness.
2. **R2** (the three fences) — a leaking fence is a genuine Gate-11 falsification with a real downgrade.
3. **R3** (lint AUDIT) — cheapest to close (owner artifact); makes "machine-enforced" machine-real.
4. **R4** (per-wall conservatism) — the map of where each wall stands; this dossier's core §4 content.
5. **R5 / R6** (rule-completeness · cross-paper coherence) — subtler scope-narrowing + corpus-level honesty.
6. **R7 / R8** (the §9.6 remark · Battle-WIN framing) — already correctly fenced; keep them fenced.

The cardinal honest point. SG-10 has **no input to shrink and no number to derive** — so the $\kappa^3 \cdot \pi^{-1}$ kill-test applies here in a *negative* form: **the failure mode of a disclosure gate is the opposite of target-loading — it is *quiet scope creep* (a wall labeled more-closed-than-it-is, a Diagnostic mode doing load-bearing work, a sibling paper claiming what Paper I excludes).** Every closure path below must therefore be checked for *deflation honesty*: does it state each wall at its **campaign-conservative** disposition, or does it let an attractive partial result (a₆ computed; Rule A AXIOM-CLOSED; the Gap-02 $D \leq 0$ negative) read as more than it is? **Stating a wall as more closed than its owner's campaign verified it is the SG-10-specific $\kappa^3 \cdot \pi^{-1}$ violation.**

4. THE ATTACK PLAN — closure paths (the core)

For each residual: the **technique** (closure playbook T1 axiom-floor / T4 no-go / T5 firewall / T6 all-operator-conditional / T7 eliminative / T10 selector), the **named axiom or owner artifact**, the **specialist/owner target**, the **work to attempt**, and the **success ladder** (DISCLOSED-VERIFIED is the ceiling here — there is no DERIVED-CLOSED for a disclosure gate). Folded in: the closure-campaign dispositions (CLOSURE_CAMPAIGN_RESULT_2026-06-24.md + Round 2) and the OPEN_WALLS_REGISTER re-tiering.

4.1 R1 — Completeness of the exclusion list (the highest-value target)

Why first. A disclosure gate's entire force is its **completeness**. If a relevant non-GUT sector is *missing* from §9.4, the boundary is incomplete and SG-10's "I name everything I don't claim" claim fails — and worse, a *required* gate could be silently hiding in the unnamed gap.

Technique: T7 (eliminative) + T5 (firewall). Build a **completeness witness**: enumerate the standard non-GUT sectors and, for each, assign it to (a) a §9.4 ledger row, (b) an explicit "subsumed-by" justification, or

(c) a true gap to be added. The firewall test for each candidate sector: *is it a required scoped-GUT gate (then it belongs in Gates 1–10, not in exclusions), or a genuinely non-GUT sector (then it belongs in §9.4)?*

The completeness sweep, sector by sector:

Candidate non-GUT sector	In §9.4?	Disposition
Quantum-gravity UV completion	Yes	named; reason "no nonperturbative gravity certificate"; routed to R2.5 search-category scoping
Full cosmology (inflation, reheating, CMB, structure)	Yes	named; §9.3.2
Dark matter	Yes	named; §9.3.3; candidate modes Diagnostic-only (→ R2)
Dark energy / Λ	Yes	named; §9.3.4; Paper-IV downstream-negative (→ R2/R4)
Baryogenesis / η_B	Yes	named; §9.3.5; BG-10 owns it (→ R4)
Strong CP / $\bar{\theta}$	Yes	named; §9.3.6; observation-blocked (→ R4)
Theory of Everything (all-sector)	Yes	named; §9.3.7
Neutrino absolute mass scale / M_R	partial	<i>Not a §9.4 row</i> — it is a residual inside required Gate 9 (SG-8) : M_R UNKNOWN makes the <i>absolute</i> v-scale an anchor-consistency check. Firewall verdict: belongs to SG-8, not SG-10 — it is a required-gate residual, correctly NOT relocated into exclusions (the binding rule forbids that relocation).
Gravitational waves / inflationary tensors	No	subsumed by "full cosmology" (§9.3.2 names "the CMB spectrum, structure formation") — defensible subsumption
Flavor of a dark sector / dark-sector gates	No	subsumed by "dark matter" (§9.3.3 explicitly: "A dark-sector certificate would require its own gates (relic abundance, stability, coupling, ...)") — defensible
Matter-antimatter / CP in cosmology beyond η_B	No	subsumed by baryogenesis (§9.3.5) — defensible
Thermodynamic arrow of time	Yes (named)	§9.3.7 names "the thermodynamic arrow" as not a required gate; Appendix O is illustrative only

Named axiom it could reduce to ($\kappa^3 \cdot \pi^{-1}$ -clean). Completeness reduces to a *declared scope-universe* axiom:

AXIOM-SCOPE-UNIVERSE (target-blind form): *"The relevant non-GUT sector universe is the closed list {quantum-gravity UV completion, full cosmology (with its sub-sectors), dark matter, dark energy, baryogenesis, strong CP, ToE-completion}; every other physics sector is either a required Gate 1–10 or a sub-sector subsumed by one of these seven."*

This is writable with no physics result in sight — it is a statement about *which sectors exist outside the GUT*, not about any of their values. It **PASSES** the kill-test. **But it is a declared universe, not a proven one** — so the honest endpoint is **AXIOM-CLOSED** at the declared scope-universe, with the completeness witness as its evidence, *not* a theorem that the list is exhaustive over all conceivable physics.

Specialist/owner target. Hand a reviewer the completeness witness table above and ask: *name one relevant non-GUT sector that is neither a §9.4 row, nor a defensible subsumption, nor a required Gate 1–10.* If none

exists, the boundary is complete-relative-to-the-declared-universe. If one exists, it is added (a true gap closed) or it is shown to be a required gate hiding in exclusions (a binding-rule violation — the *worse* finding).

Math/work to attempt. Cross-check every §6 gate card and every Appendix D–L certificate against the §9.4 exclusion reasons: confirm no *required* gate's mechanism quietly depends on an excluded sector (that is the R2 fence test), and confirm no excluded sector is actually a *renamed required gate* (e.g. is "stabilization of the *downstream-used* moduli" a sneaky scope-narrowing of "stabilization"? — see R5).

Success ladder. - DISCLOSED-VERIFIED: completeness witness built, every standard sector assigned, no true gap → boundary complete-relative-to-declared-universe. **Realistic and high-value.** - AXIOM-CLOSED: AXIOM-SCOPE-UNIVERSE named; completeness conceded as *relative to the declared seven-sector universe*, not proven exhaustive. **The honest ceiling.** - sharper-OPEN: a candidate sector resists clean assignment → named as a true gap to add. - REFUTED: a *required* gate is found hiding in the exclusion list → §1.2.1 binding-rule violation → the offending gate downgrades to *Open / not claimed* (this is the catastrophic outcome the gate is built to catch).

Honest disposition: AXIOM-CLOSED at AXIOM-SCOPE-UNIVERSE; the completeness witness above finds NO true gap and NO required-gate-in-exclusions (M_R correctly stays an SG-8 residual, not an SG-10 exclusion). The boundary is **complete relative to the declared non-GUT universe** — and saying *that* precisely (not "complete over all possible physics") is the closure.

4.2 R2 — The three fences (the most attackable surface)

Why second. A leaking fence is a *genuine* Gate-11 falsification: if a Diagnostic-only mode, the Λ downstream pointer, or the §11 QC bridge does load-bearing work on a required gate, the §6.12 Gate-11 row fires and the **offending required gate** downgrades. This is where a disclosure gate actually dies.

Technique: T5 (no-target-loading / no-scope-leak firewall). For each fence, test whether any required-gate certificate *cites* the fenced object for closure.

The firewall, fence by fence:

Fence	Leak test	Verdict
Diagnostic-only dark-sector modes (§9.3.3/§9.3.4; owned by F//K)	Does any Gate 1–10 certificate cite a chamber/moduli candidate mode as <i>support</i> ?	PASS by design — the modes are labeled Diagnostic only and recorded in §9.4; the W4 lint clause (ii) is exactly "no required-gate certificate cites an excluded sector." <i>Conditional on the lint run (R3).</i>
Λ downstream pointer (§9.3.4 → Paper IV)	Does the Paper-IV Λ <i>negative</i> get used to support any GUT gate?	PASS — §9.3.4 states verbatim "adds no closure claim here and does not alter this section's exclusion." The pointer <i>reinforces</i> the exclusion (Λ stays excluded; the downstream result is itself a <i>negative</i>). A negative result cannot be leaned on to <i>close</i> anything — there is nothing to lean on.
§11 QC bridge (engineering coda)	Does §11 support any Gate 1–11?	PASS — §11 closing: "not used to support Gates 1–11 ... zero GUT gate statuses changed"; the data-use firewall (§4.9, freeze-before-compare) forbids any feedback from the bridge into the certificates.
§9.4a historical "strong CP closes" wording	Does any <i>live</i> claim-path object carry a stale "closes/critical" status?	PASS-conditional — §9.4a declares historical material non-supporting unless migrated+frozen+certified; the A3 audit (§A3.18/§A3.19) is the backing. <i>The residual is R6 (cross-paper coherence): confirm no sibling paper resurrects the closed wording.</i>

Named axiom ($\kappa^3 \cdot \pi^1$ -clean). The fences reduce to one firewall posit:

AXIOM-NO-DIAGNOSTIC-SUPPORT (target-blind): *"No object carrying status Diagnostic only, Outside scoped-GUT claim, downstream-corpus, or external-engineering may appear in the support set of any required Gate 1–10 certificate."*

Writable with no physics value — it references only *status labels*, not results. PASSES the kill-test. It is the precise statement the W4 lint clause (ii) *implements*; naming it makes the fence a *rule*, not a habit.

Owner artifact / specialist target. Mount the W4 lint and have it emit, for every Gate 1–10 certificate, its *support set* (cited objects + their status labels); assert AXIOM-NO-DIAGNOSTIC-SUPPORT holds. Any violation is a concrete Gate-11 falsification with a named offending gate.

Math/work to attempt. None new — this is lint execution over the frozen manuscript + a grep-grade scan of every certificate's citation list for Diagnostic/Outside/downstream/external-labeled objects. Fail-closed: a single hit downgrades the offending gate.

Success ladder. - DISCLOSED-VERIFIED: lint run, no fence leak → all three fences machine-proven; AXIOM-NO-DIAGNOSTIC-SUPPORT upheld. **Best realistic outcome; cheap.** - AXIOM-CLOSED: AXIOM-NO-DIAGNOSTIC-SUPPORT named, fences asserted-consistent pending the run. - sharper-OPEN: a fence is found *plausibly* leaking (e.g. a Diagnostic mode cited in prose near a gate argument) → flagged for the lint to adjudicate. - REFUTED: a required gate certificate cites a fenced object for closure → Gate-11 falsified → offending gate *Open / not claimed*.

Honest disposition: AXIOM-CLOSED at AXIOM-NO-DIAGNOSTIC-SUPPORT; all three fences PASS by reading, pending the W4 lint run (R3) to make them machine-proven. The fences are the gate's real attack surface and they hold — *conditional on the lint*.

4.3 R3 — The scope-consistency lint is AUDIT (cheapest physics-free win)

The obstruction. "Enforced by a program, not authorial restraint" (§5.10) is SG-10's signature claim, but `certificates/G11_claim_boundary/` is *referenced*, not independently re-run in this audit — the same class as SG-7's absent δ -harness and SG-8's J.6/K.5 harness.

Technique: owner artifact (machine-lane), not an axiom. A fail-closed reproducibility task.

Owner artifact needed. (1) Mount the lint script + its rule set. (2) Run it target-blind over the frozen manuscript text: **clause (i)** every excluded sector appears in §9.4; **clause (ii)** no Gate 1–10 certificate cites an excluded sector for closure or carries *Excluded from scope*. (3) Confirm both clauses PASS. (4) Emit the per-gate support-set report (this is also the R2 artifact).

Math/work to attempt. None new — execution + verification. Mechanical and fail-closed: any clause failure downgrades the *offending required gate* (clause ii) or flags an incomplete ledger (clause i).

Success ladder. **BLOCKED_INPUTS until the lint is mounted** → then either **VERIFIED** (both clauses pass; "machine-enforced boundary" becomes machine-real) or **REFUTED** (a clause fails → a gate downgrades or the ledger is patched). **Highest value-per-effort closeable item** — converts the gate's central asserted claim into a machine-checked one with zero new physics.

Honest disposition: AUDIT → VERIFIED is the target; do this first among the machine tasks. It simultaneously discharges W4, R2's "pending the run," and R1's "no required-gate-in-exclusions" cross-check.

4.4 R4 — Each scope wall at its campaign-verified conservatism (this dossier IS the map)

The obstruction. The boundary's honesty depends on each disclosed wall being stated at *exactly* its campaign-verified standing — never more closed. This is the SG-10-specific $\kappa^3 \cdot \pi^{-1}$ failure mode (§3.2). Below is the **map of where each wall stands and what would move it** — the reason this dossier exists. Each row is a *pointer to the owning campaign/dossier*, stated at the conservative floor.

Technique: T6 (all-status-conditional restatement) — no relocation, no promotion. For each wall: the owner, the conservative disposition, the named falsifier/closer, and the deflation-honesty check.

4.4.1 Gap-01 — Quantum-gravity UV completion / the a_6 heat-kernel coefficient

- **Owner:** Gap-01 campaign (GAP01_A6_RECONCILIATION_2026-06-24.md).
- **Conservative disposition: Precisely-OPEN at field grade.** The bulk $\text{tr}[a_6] = -2.817995812 \times 10^{94} \text{ GeV}^6$ is independently reproduced and may be STATED as a **labeled consistency coefficient** (max label GAP01-A6 computed (consistency coefficient)), **MO-12 binding:** a_6 is ONE coefficient in the unbounded $a_8/a_{10}/\dots$ Seeley–DeWitt tower — a CONSISTENCY CHECK, **NOT** a UV completion and **NOT** a mass-gap proof. **The Z_2 orbifold-defect a_6 is UNCOMPUTED** (order-6 mixed Neumann $\oplus$ Dirichlet boundary coefficient, absent from the literature; boundary tower stops at a_5) — **TOTAL = bulk + defect is NOT emitted and must never be implied.**
- **Named closer/falsifier:** computing the defect a_6 + showing the full a_6 -and-beyond tower is UV-finite — a research program, not a single step.
- **Deflation-honesty check for SG-10:** the §9.3.1 exclusion says "not a complete nonperturbative theory of Planck-scale gravity"; SG-10 must NOT let the *computed bulk a_6* read as a UV-completion partial win. **PASS: the bulk is a consistency coefficient; the exclusion stands; MO-12 caveats must travel.** *Hazard flagged: the stale failing orphan `a6_sphere_crosscheck.py` ("DO NOT EMIT $d=13$ NUMBER") must be removed/marked SUPERSEDED before any release — an audit/housekeeping risk, not a physics one.*

4.4.2 Gap-02 — Yang–Mills mass gap (observation-locked real wall)

- **Owner:** Gap-02 campaign (PROOF_HANDOFF_YANG_MILLS_MASS_GAP.md , GAP02_B2_COSTFLOOR_ZSTAR_DISPOSITION).
- **Conservative disposition: Precisely-OPEN [X],** co-gated by SL-3 (continuum kernel positivity). The Clay problem reduces to **one exponent** — does the large-field RG step contract at $\delta > 0$ uniformly through the $d = 4$ marginal band where $g = O(1)$ — **and** does the physical kernel stay positive as $a \rightarrow 0$. Granularity makes the gap's *finiteness* natural (a finite lattice is gapped) but crosses **neither gate**. The B1/B2 cost-floor work is **EMPIRICAL/PARTIAL** (one finite $L=4$, $\beta=6.0$ anchor; plaquette HARD GATE PASS), **never a Clay solution; continuum/Clay out of scope.**
- **The $D \leq 0$ negative is a PROXY, not the target (the key honesty point).** The recorded "robust $\sim 66\sigma$ negative" via $D = s_{\text{block}} - \log(E_{\text{conn}} \cdot A_{\text{fluc}} \cdot N_{\text{cert}})$ tests the KP *worst-case upper bound* $z_* \leq N_{\text{cert}} \max_{\gamma} w(\gamma)$, **NOT** the boxed target $z_* := \sum_{\gamma \neq 0} w(\gamma)$ itself. The boxed target is **convention-underdetermined:** per-site/single-activity readings PASS ($z_* = 0.109/0.353 < 0.998$), the per-distinct-letter reading FAILS and is binning-divergent. Picking the PASS convention would be naked

target-loading → declined. This is a **target-specification defect** routed to the spec owner; it **STRENGTHENS** the OPEN standing.

- **Named closer/falsifier:** a proof of $\delta > 0$ uniform across the marginal band **and** SL-3 positivity survival as $a \rightarrow 0$ — both, or the gap collapses.
- **Deflation-honesty check for SG-10:** Gap-02 must read **Precisely-OPEN [X]**, never "floored/PASS." **PASS: the wall is observation-locked-real (short-ranged strong force, massive hadrons, measured α_s running) and stays OPEN; the proxy-negative must not be cited as a target-negative.** *Discriminator anchor: any pure-glue projection is of the FROZEN 13D branch carrying the UV package, NOT generic SU(3).*

4.4.3 Λ — Dark energy / cosmological constant (Weinberg-irreducible)

- **Owner:** Paper IV / TOE.html §III; Irreducible Ledger.
- **Conservative disposition: Weinberg-OPEN / irreducible.** Paper IV carries a *computed one-loop certificate* that is an **honest negative**: the exact-weight graded supertrace shows **no structural cancellation at any coefficient order** (v12), and the chamber-cancellation route is **theorem-refuted** (v14; the Λ operator is grading-even / label-blind). The downstream conclusion: " Λ remains Weinberg-open, with a computed elimination map."
- **The Λ -PROOF TEST (the real-vs-fake-wall discriminator).** Λ 's *value* problem rested on the **absolute** vacuum energy, which is **unmeasured** (every ZPE effect ever measured probes only *differences*) — so the catastrophe-half was a **fake wall** that dissolved when the unmeasured premise was dropped; the *observed* small Λ is a separate, Weinberg-irreducible residue. **This is the cleanest application of the audit-the- implicit-assumption method in the whole corpus.**
- **Named closer/falsifier:** none internal — Λ 's value is in the Irreducible Ledger; a closer would require a new principle outside the framework.
- **Deflation-honesty check for SG-10:** the §9.3.4 exclusion + downstream pointer must read as *exclusion-reinforced-by-a-negative*, never *progress toward solving Λ* . **PASS: the cancellation route is theorem-refuted; the pointer adds no closure claim; Λ stays excluded and Weinberg-open.**

4.4.4 BG-10 — Baryogenesis / η_B (observation-locked real wall)

- **Owner:** BG-10 campaign (HANDOFF_SPECIALIST_2_BG10.md , BG10_*_DISPOSITION files).
- **Conservative disposition: 0/4 at certificate grade.** Round 1: **Rule A is AXIOM-CLOSED** — the continuum CP phase shrinks to **one mod-8 spin-c/Pin $\pm$ bit** (BG10-Axiom-SpinC-QP), and the geometry's DEFAULT $\chi=-3$ ($=5 \bmod 8$) gives $\arg=-135^\circ$ = the **WRONG sign**, so the axiom **DEPARTS from the target** (a structure-first datum, not a fit) — a genuine reduction of Rule A, **NOT** a closure of BG-10. Round 2: **Rule B OPEN** (candidate norm= $1 \Leftrightarrow \lambda=1$ is **RELABEL_FAIL** — keystone $\lambda=1$ is *identically* the value putting $I_{BG} = \lambda \kappa^3 / \pi$ in the η_B window → writable only by knowing the target → killed); **Rule C BLOCKED_INPUTS** (the S_3 -permutation commutant on $\mathbb{C}^3$ is exactly 2-dim, so an S_3 -equivariant operator has ≤ 2 distinct eigenvalues, but frozen O_ν has 3 distinct eigenvalues and does **not** commute with S_3 — the flavor-democracy axiom is in *tension* with frozen data; M_R RECIPE-ABSENT, $D_N = \text{diag}(1, 0, 0)$ is the by-construction manifest entry).
- **The κ^3/π cautionary anchor (carried verbatim).** The κ^3/π four-fix manifest ($\eta_B = 6.05 \times 10^{-10}$ in-window) is **TRUE BY CONSTRUCTION** (keystone reverse-engineered) — the no-target-loading cautionary example; $M_R = \kappa M_U$ is a candidate-in-tension ($\sim 231\times$ off corpus κ^0).

- **Named closer/falsifier:** advancing any of Rules B/C with a structure-first (not reverse-engineered) anchor
- a computed M_R .
- **Deflation-honesty check for SG-10:** BG-10 must read **o/4**, with Rule A as **AXIOM-CLOSED $\neq$ proven** (a named posit, no gap closed). **PASS: o/4 stands; "Rule A reduced" must never read as "BG-10 advanced."**

4.4.5 Strong CP — $\bar{\theta}$ alignment (observation-blocked)

- **Owner:** §9.3.6 exclusion; §9.4a historical firewall; A3 migration (§A3.18).
- **Conservative disposition: Excluded / observation-blocked.** No $\bar{\theta}$ alignment certificate; no statement about $\bar{\theta}$ supports any closure claim. The falsifier is the **nEDM** measurement (OBSERVATION-BLOCKED tier — theory done elsewhere, awaiting apparatus; the corpus lists " $\bar{\theta}$ (nEDM)" as an observation-blocked falsifier).
- **Named closer/falsifier:** an nEDM measurement + a structural $\bar{\theta}$ -smallness certificate (its own gate) — explicitly NOT in this submission.
- **Deflation-honesty check for SG-10:** the historical "**strong CP closes**" (Wave 22/23) wording **must NOT appear on any live claim path** (§9.4a). **PASS by §9.4a + A3; the residual is R6 — confirm no sibling paper resurrects it.**

R4 named principle ($\kappa^3 \cdot \pi^{-1}$ -clean): AXIOM-WALL-CONSERVATISM — *"every disclosed scope wall is stated at its owning campaign's most conservative verified disposition, with its named falsifier; an attractive partial result on a wall (a computed coefficient, a reduced rule, a proxy-negative) is carried with its caveats and never as wall progress."* Carries no target value; it is a labeling discipline.

Success ladder for R4. DISCLOSED-CONSISTENT — the map above states every wall at its conservative floor with its falsifier; the residual is a consistency sweep that no boundary row over-states. (Note: this is the *dependent* of the owning campaigns — if a campaign's disposition changes, this map updates; SG-10 never leads.)

Honest disposition: DISCLOSED-CONSISTENT; this §4.4 IS the closure artifact for R4 — the per-wall map at campaign-verified conservatism, with each wall's named closer/falsifier and each deflation-honesty check PASS.

4.5 R5 — Does the binding rule cover *all* scope-narrowing (not just sector-relocation)?

The obstruction. §1.2.1 forbids closing a required gate by *moving it into the exclusion list*. But a subtler scope-narrowing exists: **redefining a required gate's target to a weaker one** — e.g. "stabilization" narrowed to "stabilization of the *downstream-used* moduli" (SG-6); "proton safety" narrowed to "operator-class safety, lifetime Diagnostic only" (SG-9); "flavor closure" narrowed to "ratios + mixings; absolute scales Diagnostic" (SG-8). Each is a *legitimate disclosed scoping* — but is it fenced by the *same* binding rule, or only by the per-gate Downgrade Rules?

Technique: T4 (no-go completeness audit on the rule itself). Test whether the Downgrade Rules already cover target-narrowing: the row "*Claim exceeds proven operator class $\rightarrow$ Gate narrows to the proven operator class; remainder becomes Diagnostic only or Open / not claimed*" is **exactly** the operator-class-narrowing fence (the SG-9 pattern), and "*Formula depends on a target observable not declared as calibration*

→ *Post-hoc / not claimed*" fences the SG-8-style calibration-narrowing. So target-narrowing **is** fenced — but by the *Downgrade Rules table*, not by the §1.2.1 *binding rule*.

Named axiom ($\kappa^3 \cdot \pi^{-1}$ -clean): AXIOM-NO-SILENT-NARROWING — "*a required gate may not be closed by narrowing its target (sector, operator class, or observable set) unless the narrowing is declared in the gate card and the remainder is labeled Diagnostic only or Open / not claimed.*" This generalizes §1.2.1 from sector-relocation to all scope-narrowing. Writable with no physics value. PASSES the kill-test.

Specialist/owner target. Confirm the §1.2.1 binding rule + the Downgrade Rules table *together* cover the three target-narrowing patterns (SG-6 downstream-moduli, SG-8 ratios-only, SG-9 operator-class) — and that each narrowing is *declared in the gate card* (it is: SG-6 F.9.4/F.10.1; SG-8 I.0a.2; SG-9 L.2a/L.4). If so, the rule-system is complete against silent narrowing.

Success ladder. - AXIOM-CLOSED: AXIOM-NO-SILENT-NARROWING named; the rule-system shown complete (binding rule + Downgrade Rules jointly fence all three narrowing types). **Realistic — the fences already exist; this names them as one rule.** - sharper-OPEN: a narrowing pattern found *un*-fenced → add a Downgrade Rule row. - REFUTED: a required gate found narrowed *without* card declaration → that gate's narrowing is silent → downgrade.

Honest disposition: AXIOM-CLOSED at AXIOM-NO-SILENT-NARROWING; the three target-narrowings (SG-6/8/9) are each card-declared and remainder-labeled, so the rule-system already fences silent narrowing — naming it as one generalized rule is the closure. (This is a genuine *strengthening* of SG-10: it widens the binding rule from "don't relocate sectors" to "don't silently narrow targets.")

4.6 R6 — Cross-paper boundary coherence (GUT vs TOE/Quantum)

The obstruction. SG-10 lives in Paper I, but Λ (Paper IV), the Born rule (Paper III), and the mass gap (Paper IV) carry *their own* boundaries. A sector **excluded** in Paper I but **claimed** in a sibling under a different label — or a §9.4a "historical closes" wording resurrected downstream — would be a corpus-level boundary incoherence that Paper I's lint cannot see.

Technique: T5 (firewall) across papers. For each Paper-I exclusion, check the sibling papers do not silently claim it:

Paper-I exclusion	Sibling treatment	Coherence verdict
Λ (dark energy)	Paper IV: computed negative , Weinberg-OPEN, cancellation theorem-refuted	COHERENT — sibling <i>a/so</i> excludes/negatives; no claim
Baryogenesis	Paper IV §IV: withdrawal record (the honesty event behind §9.3.5) + BG-10 0/4	COHERENT — sibling withdrew the claim; no resurrection
Strong CP	§9.4a historical "closes" (Wave 22/23) declared non-supporting unless migrated	COHERENT-conditional — confirm no sibling re-asserts "strong CP closes" on a live path
Yang–Mills mass gap	Paper IV / Gap-02: Precisely-OPEN [X]	COHERENT — sibling holds OPEN
Quantum-gravity UV	a _g bulk consistency-coefficient only; MO-12	COHERENT — no sibling claims UV completion

Named axiom ($\kappa^3 \cdot \pi^1$ -clean): AXIOM-CORPUS-BOUNDARY-COHERENCE — "*a sector excluded by any paper's claim boundary is not claimed-closed by any sibling paper except via that sibling's own declared, frozen, certified gate.*" No physics value. PASSES the kill-test.

Owner artifact. A cross-paper grep for each excluded sector's name + a status-label scan: confirm no sibling carries *Claimed certificate pass* / "closes" / "solved" for a Paper-I-excluded sector outside its own gate.

Success ladder. AXIOM-CLOSED at AXIOM-CORPUS-BOUNDARY-COHERENCE (the table above is COHERENT, one row conditional on the strong-CP cross-paper grep); sharper-OPEN if a sibling resurrects a closed wording; REFUTED if a sibling *claims* a Paper-I-excluded sector. **Honest disposition: AXIOM-CLOSED, one conditional row (strong-CP) pending the cross-paper grep.**

4.7 R7 — The §9.6 "why these four values" remark (honest but unfalsifiable)

The obstruction. The anthropic / deeper-principle / brute-fact trichotomy carries **no falsifier** by construction. A disclosure gate that names an un-falsifiable remark must keep it *strictly* outside every gate.

Technique: T6 (status-conditional) — it is already correctly fenced. §9.6 self-labels *Outside scoped-GUT claim* and states "appears in this section rather than in any gate: it is an observation about what the result means, not a claim the certificates back," and "The framework supplies no experiment, certificate, or falsifier that separates these readings."

Named principle ($\kappa^3 \cdot \pi^1$ -clean): AXIOM-UNFALSIFIABLE-REMARK-FENCED — "*any reading that the framework supplies no falsifier to separate is carried as Outside scoped-GUT claim and never as gate support.*" No value.

Action. Confirm §9.6 is not cited by any gate certificate (it is not — it is a §9 remark) and that the "reduced two-dozen to four" framing is stated as a *reduction*, not an *answer* ("the construction converts 'why these nineteen-plus numbers' into 'why these four,' and stops there, on purpose").

Success ladder. DISCLOSED-CONSISTENT — already in place; the residual is "keep it outside every gate." **Honest disposition: DISCLOSED-CONSISTENT.**

4.8 R8 — Battle-WIN framing must not inflate

The obstruction. The SG-10 ledger line notes the gate is "one of only two Fable-WIN gates" because rivals silently omit exclusion lists. A hostile reviewer could read this as the manuscript scoring itself a win on a gate that closes no physics.

Technique: T6 (status-conditional) — label it interpretation, not certificate. The "win" is a **disclosure-practice** observation (Fable names its boundary; most rivals do not), NOT a physics determination. The Claim Strength Ladder reserves "win" language for nothing — the honest label is *interpretation* ("suggests," "is consistent with"). The Battle-of-the-Geometries verdict lives in `BATTLE_GATES/`, not here, and is a *meta*-comparison of disclosure honesty.

Named principle ($\kappa^3 \cdot \pi^1$ -clean): AXIOM-DISCLOSURE-WIN-IS-META — "*the claim 'Fable wins the claim-boundary gate' is a comparison of disclosure practice, not a physics certificate, and is carried at interpretation strength.*" No value.

Success ladder. DISCLOSED-CONSISTENT — keep the framing at interpretation strength; never let it read as a certificate. **Honest disposition: DISCLOSED-CONSISTENT.**

4.9 Attack-plan roll-up

Residual	Technique	Named axiom ($\kappa^3 \cdot \pi^{-1}$ -clean)	Specialist target / owner artifact	Realistic endpoint
R1 completeness	T7 + T5	AXIOM-SCOPE-UNIVERSE	completeness witness; "name a missing sector" challenge	AXIOM-CLOSED (no true gap; M_R stays SG-8)
R2 three fences	T5	AXIOM-NO-DIAGNOSTIC-SUPPORT	lint emits per-gate support sets	AXIOM-CLOSED; fences PASS pending lint
R3 lint AUDIT	machine-lane	(none)	mount + run certificates/G11_claim_boundary/	BLOCKED_INPUTS → VERIFIED (best value/effort)
R4 per-wall conservatism	T6	AXIOM-WALL-CONSERVATISM	the §4.4 map at campaign floors	DISCLOSED-CONSISTENT (this §4.4 IS the artifact)
R5 silent-narrowing	T4	AXIOM-NO-SILENT-NARROWING	confirm binding rule + Downgrade Rules cover target-narrowing	AXIOM-CLOSED (strengthens the gate)
R6 cross-paper coherence	T5	AXIOM-CORPUS-BOUNDARY-COHERENCE	cross-paper exclusion grep	AXIOM-CLOSED (1 conditional: strong-CP)
R7 §9.6 remark	T6	AXIOM-UNFALSIFIABLE-REMARK-FENCED	confirm not cited by any gate	DISCLOSED-CONSISTENT
R8 Battle-WIN framing	T6	AXIOM-DISCLOSURE-WIN-IS-META	keep at interpretation strength	DISCLOSED-CONSISTENT

REDUCE-vs-RELOCATE verdict on the plan. The plan does **not** turn one problem into three harder ones — and for a disclosure gate the relevant check is the *inverse*: does any path quietly **promote** a wall or **claim** excluded physics? **No.** Every path either (a) names a target-blind *labeling/scope* axiom that pays a disclosure debt in plain sight (R1, R2, R4, R5, R6, R7, R8), or (b) is a mechanical owner task (R3 lint run). **Not one path closes, advances, or claims any excluded-sector physics** — the $\kappa^3 \cdot \pi^{-1}$ -as-deflation discipline (§3.2) is satisfied: every wall is stated at its campaign-conservative floor (Gap-01 consistency-coefficient /MO-12; Gap-02 Precisely-OPEN [X] with the $D \leq 0$ -proxy caveat; Λ Weinberg-OPEN/theorem-refuted; BG-10 0/4 with Rule A AXIOM-CLOSED $\neq$ proven; strong-CP observation-blocked). The honest expected outcome of a full campaign: **1 VERIFIED (R3 lint), 4 AXIOM-CLOSED (R1, R2, R5, R6), 3 DISCLOSED-CONSISTENT (R4, R7, R8)** — moving SG-10 from **DISCLOSED-with-asserted-lint** to **DISCLOSED-with-machine-verified-lint + a named disclosure-axiom floor + a per-wall conservatism map. No wall moves; no physics is claimed; this is a machine-reality + honesty gain, NOT a promotion.** The two genuine *strengthenings* (R5 generalizing the binding rule to all scope-narrowing; R1's completeness witness) make the boundary *harder to game*, which is precisely what a disclosure gate should optimize.

A. Anchoring & Hardening Map

This section runs SG-10's residuals through **our internal honesty methodology** — the same hardening method that produced the live **Gaps & Walls Register**: for each residual, first classify it **gap (a route exists) vs wall (the route itself is the problem)**; then **hunt the implicit assumption** the residual silently rests on; then ask **what measured invariant the residual must ultimately terminate on** — does it reduce to an *existing* anchor ($\hbar / M_{Pl}$ / a measured spectrum energy / the $\alpha_i(M_Z)$ couplings / $y_t / |V_{us}|$), does it need a *new named invariant*, does it hinge on a *scheme-anchor* (one geometry-unfixed convention), is it a pure *computation-debt*, or does it have *no witness* → OPEN; then assign the most conservative defensible **disposition** and name the single concrete step that would **harden** it. SG-10 is special: it is the *disclosure* gate — it closes no physics, derives no number, and rides no new hash. So most residuals here terminate not on a *physical* invariant but on a **scope/labeling invariant** (the disclosed status of the object being fenced); the only physical invariants that appear are the **observation- locked truths** that make four of the walls *real* (a short-ranged strong force + massive hadrons for Gap-02; the measured $\eta_B \approx 6.1 \times 10^{-10}$ for BG-10; the measured $(2.3 \text{ meV})^4$ residue for Λ ; the nEDM bound for strong-CP). The SG-10-specific failure mode is the *inverse* of target-loading: not over-fitting a number, but **quiet scope creep** — a wall stated as more-closed-than-its-owner-verified. Disposition vocabulary is used exactly as the Register defines it: **DERIVED** (tied to an already-measured fact, no new assumption) / **DERIVED-GIVEN-E** (rigid once the observed spectrum E is supplied) / **AXIOM-CLOSED** (reduced to one named, value-free, unproven posit; the gap stays open) / **DISSOLVED** (a false/unmeasured premise dropped; a smaller real obligation remains) / **SCHEME-ANCHORED** (a number reachable only after one named geometry-unfixed convention) / **OPEN** (genuinely unsolved or the only escape assumes the answer) / **BLOCKED** (a route exists but a required file/input is missing and fabricating it is refused) / **measured-but-irreducible** (known from experiment, no derivation anywhere).

A.1 Per-residual anchoring & hardening

Residual	gap / WALL (+kind)	Measured-invariant truth it must terminate on	Honest disposition	What would HARDEN it (concrete next step)
R1 — completeness of the exclusion list	gap (computation/enumeration debt; it has a route — build the witness)	No physical invariant — it terminates on a <i>scope-universe</i> invariant: every relevant non-GUT sector is either a §9.4 row, a defensible subsumption, or a required Gate 1–10. Needs a new named (value-free) invariant : AXIOM-SCOPE-UNIVERSE (the closed seven-sector list). The firewall sub-test for M_R correctly routes it to the <i>measured</i> anchor it belongs to — the absolute v-scale is an SG-8 anchor-consistency check, not an SG-10 exclusion.	AXIOM-CLOSED at AXIOM-SCOPE-UNIVERSE — the completeness sweep (§4.1) finds no true gap and no required-gate-in-exclusions ; "complete" means <i>relative to the declared seven-sector universe</i> , not proven exhaustive.	Publish the completeness-witness table as a standing artifact and issue the open "name one un-listed relevant non-GUT sector" challenge; any clean addition is a true gap closed, any required-gate-in-exclusions is the catastrophic finding the gate exists to catch.
R2 — the three fences (Diagnostic-only modes · Λ downstream pointer · §11 QC bridge)	gap (firewall debt; route = run the support-set scan)	No physical invariant — terminates on a <i>status-label</i> invariant: no object carrying <i>Diagnostic only / Outside scoped-GUT claim / downstream / external-engineering</i> appears in any required gate's support set. New named (value-free) invariant: AXIOM-NO-DIAGNOSTIC-SUPPORT.	AXIOM-CLOSED at AXIOM-NO-DIAGNOSTIC-SUPPORT — all three fences PASS by reading ; the Λ pointer is <i>inert by construction</i> (a negative result cannot be leaned on to close anything), conditional only on the lint run (R3).	Run the W4 lint so it emits each Gate 1–10 certificate's support set with status labels ; a single Diagnostic/downstream/external hit is a concrete Gate-11 falsification that downgrades the <i>offending</i> gate, not SG-10.
R3 — the scope-consistency lint is AUDIT	gap (pure computation/owner-artifact debt)	No physical invariant — it is a COMPUTATION-DEBT : mount + run <code>certificates/G11_claim_boundary/</code> target-blind over the frozen manuscript text (no number to derive).	BLOCKED (referenced, not independently re-run here) → target is VERIFIED . Same class as the SG-7 δ -harness and SG-8 J.6/K.5 harness.	Execute both lint clauses (i: every excluded sector in §9.4; ii: no Gate 1–10 certificate cites an excluded sector); this simultaneously discharges R2's "pending the run" and R1's no-required-gate-in-exclusions cross-check — the highest value-per-effort, zero-new-physics win.
R4 — each wall stated at its campaign-	mixed: maps four real WALLS + two gaps (Gap-02 = continuum	The only place real physical invariants enter . Each wall must terminate on its <i>measured</i> anchor,	DISCLOSED-CONSISTENT — §4.4 IS this	A consistency sweep confirming no boundary row over-states any wall; the deflation check is

Residual	gap / WALL (+kind)	Measured-invariant truth it must terminate on	Honest disposition	What would HARDEN it (concrete next step)
conservative floor	WALL , marginal-coercivity kind; Λ -value = WALL , Weinberg-irreducible; BG-10 = observation-locked WALL ; strong-CP = observation-blocked WALL ; Gap-01 a_6 = gap/scheme; the labeling task itself is a gap)	never more closed: Gap-02 on the observed short-ranged strong force + massive hadrons + measured α_s running (an existing spectrum/coupling anchor — and the discriminator: pure-glue projection of the <i>frozen 13D branch</i> , not generic SU(3)); Λ -value on the measured (2.3 meV) ⁴ residue (measured-but-irreducible); BG-10 on the measured $\eta_B \approx 6.1 \times 10^{-10}$; strong-CP on the nEDM bound; Gap-01 a_6 rides an injected scale (SCHEME-ANCHORED magnitude; clean ratio 124/315 derived, defect total BLOCKED).	map: Gap-01 consistency-coefficient/MO-12 (defect UNCOMPUTED, no total); Gap-02 Precisely-OPEN [X] (the $D \leq 0$ negative is a <i>proxy</i> , not the boxed target); Λ measured-but-irreducible / Weinberg-OPEN (cancellation theorem-refuted) with its catastrophe-half DISSOLVED-not-solved ; BG-10 0/4 (Rule A AXIOM-CLOSED $\neq$ proven); strong-CP OPEN / observation-blocked .	the $\kappa^3 \cdot \pi^{-1}$ failure mode in reverse — stating a wall as more closed than its owner verified is the SG-10-specific violation, so each row carries its named falsifier and its caveats travel.
R5 — does the binding rule fence all scope-narrowing, not just sector-relocation?	gap (rule-completeness audit; route = check the rule system covers target-narrowing)	No physical invariant — terminates on a <i>rule-coverage</i> invariant: a required gate may not be closed by narrowing its target (sector / operator class / observable set) unless the narrowing is card-declared and the remainder is labeled Diagnostic/Open. New named (value-free) invariant: AXIOM-NO-SILENT-NARROWING.	AXIOM-CLOSED at AXIOM-NO-SILENT-NARROWING — the three live target-narrowings (SG-6 downstream-moduli, SG-8 ratios-only, SG-9 operator-class) are each card-declared and remainder-labeled ; binding rule + Downgrade Rules already fence silent narrowing. A genuine strengthening of the gate.	Adopt AXIOM-NO-SILENT-NARROWING as one stated rule generalizing §1.2.1 from "don't relocate sectors" to "don't silently narrow targets," widening the lint's clause (ii) accordingly.

Residual	gap / WALL (+kind)	Measured-invariant truth it must terminate on	Honest disposition	What would HARDEN it (concrete next step)
R6 — cross-paper boundary coherence (GUT vs TOE/Quantum)	gap (corpus-level firewall debt; route = cross-paper grep)	No physical invariant — terminates on a <i>corpus-coherence</i> invariant: a sector excluded by any paper is not claimed-closed by a sibling except via that sibling's own declared, frozen, certified gate. New named (value-free) invariant: AXIOM-CORPUS-BOUNDARY-COHERENCE.	AXIOM-CLOSED, one conditional row — $\wedge$ / baryogenesis / mass-gap / quantum-gravity are COHERENT (siblings also exclude or carry honest negatives); strong-CP is COHERENT-conditional pending confirmation that no sibling resurrects the historical "strong CP closes" wording on a live path.	Cross-paper grep for each excluded sector's name + a status-label scan; confirm no sibling carries <i>Claimed certificate pass</i> / "closes" / "solved" for a Paper-I-excluded sector outside its own gate (closes the strong-CP conditional via the §9.4a / A3 firewall).
R7 — the §9.6 "why these four values" remark (honest but unfalsifiable)	gap (already-fenced labeling task; not a wall — there is nothing to derive)	No physical invariant, and by construction no falsifier — terminates on a <i>fencing</i> invariant: any reading the framework supplies no experiment to separate is carried as Outside-scoped-GUT-claim and never as gate support. New named (value-free) invariant: AXIOM-UNFALSIFIABLE-REMARK-FENCED.	DISCLOSED-CONSISTENT — already correctly self-labeled Outside-scope; the "reduced nineteen-plus numbers to four" framing is stated as a <i>reduction</i> , not an answer.	Confirm §9.6 is cited by no gate certificate (it is a §9 remark, not a gate input) and keep the four-values framing at <i>reduction</i> strength, never <i>answer</i> strength.
R8 — Battle-WIN framing must not inflate	gap (interpretation-labeling task; not a wall)	No physical invariant — terminates on an <i>interpretation-strength</i> invariant: "Fable wins the claim-boundary gate" is a comparison of <i>disclosure practice</i> (most rivals omit an exclusion list), not a physics certificate. New named (value-free) invariant: AXIOM-DISCLOSURE-WIN-IS-META.	DISCLOSED-CONSISTENT — carried at interpretation strength; the rival comparison lives in BATTLE_GATES/ , not here, as a meta-comparison of disclosure honesty.	Keep the "win" at interpretation strength ("suggests / is consistent with"); never let a disclosure-practice observation read as a physics determination.

A.2 Gate-level rollout

- **Overall disposition.** SG-10 is **DISCLOSED**, hardening to **DISCLOSED-with-machine-verified-lint over a named disclosure-axiom floor** (the realistic ceiling — there is no DERIVED-CLOSED for a disclosure gate). The expected full-campaign outcome across the eight residuals: **1** → **VERIFIED** (R3 lint), **4 AXIOM-CLOSED** (R1, R2, R5, R6), **3 DISCLOSED-CONSISTENT** (R4, R7, R8). Five new *value-free disclosure axioms* are named (scope-universe, no-diagnostic-support, no-silent-narrowing, corpus-coherence, unfalsifiable-remark-fenced; plus wall-conservatism and disclosure-win-is-meta as labeling disciplines). **No wall moves; no excluded physics is claimed; PROMOTIONS:o** — this is a machine-reality + honesty gain, not a promotion. Ceiling: **serious candidate, NOT validated**.
- **Which anchors it depends on.** SG-10 itself rides **no anchor and no new hash** — it is a meta-constraint on the text. Its dependence on the four headline anchors $\{M_Pl, \alpha_i(M_Z), y_t, |V_us|\}$ is *indirect*: it consumes the status outputs of Gates 1–10 (which ride those anchors) but adds nothing to them. The **physical** invariants that actually appear are the *observation-locked truths fenced inside R4* — the short-ranged strong force + massive hadrons + measured α_s running (Gap-02), $\eta_B \approx 6.1 \times 10^{-10}$ (BG-10), the $(2.3 \text{ meV})^4$ residue (Λ , measured-but-irreducible), and the nEDM bound (strong-CP) — and these are owned by their *campaigns*, not by SG-10; SG-10 only states each wall at that anchor's conservative floor. The dominant terminating invariants for this gate are therefore **scope/labeling invariants**, consistent with a disclosure gate that closes no physics.
- **Single highest-leverage hardening move. Mount and run the W4 scope-consistency lint (certificates/G11_claim_boundary/) target-blind over the frozen manuscript text (R3).** It is a pure computation-debt with zero new physics, and one run *simultaneously* discharges R3 (AUDIT → VERIFIED), proves R2's three fences machine-real, and supplies R1's no-required-gate-in-exclusions cross-check — converting the gate's signature claim "machine-enforced, not authorial" from asserted to machine-checked in a single fail-closed pass.

Target anchor(s) for this gate

SG-10 is the **disclosure** gate: it terminates not on one physical invariant but on the **honest completeness of the scope boundary** — so its "target anchors" are *per scope-wall*, each stated at its owner's conservative floor and moving no status. **A:** the measured $(2.3 \text{ meV})^4$ **vacuum-energy residue — measured-but-irreducible / Weinberg-OPEN** (cancellation route theorem-refuted; the catastrophe-half is DISSOLVED-not-solved). **Gap-02 (Yang-Mills mass gap):** the observed short-ranged strong force + massive hadrons + measured α_s running, as the *pure-gluon projection of the frozen 13D branch* — the **continuum gap has NO witness → Precisely-OPEN [X]** (the $D \leq 0$ result is a proxy, not the boxed target). **Strong-CP:** the **nEDM bound — OPEN / observation-blocked** (an observation-bet, no derivation). **BG-10 (baryon asymmetry):** the measured $\eta_B \approx 6.1 \times 10^{-10}$ anchor — **o/4** (Rule A is **AXIOM-CLOSED ≠ proven**; **M_R has no witness → OPEN/UNKNOWN**, no hash). The gate's own SG-10-level anchors are **scope/labeling invariants** (AXIOM-SCOPE-UNIVERSE, AXIOM-NO-DIAGNOSTIC-SUPPORT, AXIOM-NO-SILENT-NARROWING, AXIOM-CORPUS-BOUNDARY-COHERENCE), reached at most **AXIOM-CLOSED**; the lint is the lone **COMPUTATION-DEBT → VERIFIED-on-run**. SG-10 itself rides **no anchor and no new hash**; it terminates on the honest completeness of that boundary, not a single measured invariant. **PROMOTIONS:o — no wall moves.**

5. References & source map

5.1 Website source-of-truth (common material — link, don't duplicate)

- **Paper I, GUT.html** — <https://physics.magflowmeters.com/articles/GUT.html>
- **§6.11** Gate-11 card (binding status verbatim); **§6.12** falsification map (Gate-11 row + downgrade); **§6.13** certificate-status summary (the excluded-sector paragraph).
- **§5.10** narrative module ("translates to nothing geometric"); **§1.2.1 / §1.7** the binding rule + scope-boundary statement; **§9** *What Is Not Claimed* (§9.1 why; §9.2 what IS claimed; §9.3.1–§9.3.7 per-sector; **§9.4 Boundary Ledger**; §9.4a historical firewall; §9.5 why exclusions strengthen; §9.6 the "why four values" remark).
- Front matter: **Claim Boundary / Scope Ledger**; **Review Status Vocabulary**; **Downgrade Rules** (the "relies on excluded sector → Open / not claimed" row + the operator-class / post-hoc narrowing rows); **Known Weakest Links** (the "Claim language" row); **Claim Strength Ladder** (the *Exclusion* row); **Assumption Ledger** (the "Exclusion of non-GUT sectors" row).
- **Appendix CR module CR11** (reader companion — the two failure modes of ambitious papers; explanatory only); **Appendix A3 §A3.18 / §A3.19** (strong-CP + reservoir/26D migration audit); **§11** (QC bridge fence) + **§4.9** (data-use firewall); **Appendix R2.5** (search-category scoping for quantum gravity).
- **Paper IV, TOE.html** — <https://physics.magflowmeters.com/articles/TOE.html> — Λ downstream computed- negative (§III; reinforces §9.3.4, never lifts) + baryogenesis withdrawal (§IV; the honesty event behind §9.3.5).

This dossier recaps only what is needed to attack the boundary; the site controls all common material.

5.2 Corpus locations (authoritative inputs to this dossier)

Source	Path	Role
Per-gate dossier spec	.../rendered/TOE/PER_GATE_DOSSIER_SPEC.md	structure (sections 0–5)
SG-8 exemplar	.../rendered/TOE/PER_GATE_DOSSIERS/DOSSIER_SG8_FLAVOR_CLOSURE_ATTACK.md	shape/depth/format match
SG-10 status line (carried verbatim)	.../rendered/TOE/SCOPED_GUT_PER_GATE_STATUS_LEDGER.md (SG-10 entry)	the DISCLOSED label + the "purely disclosure discipline / excluded sectors entirely OPEN" caveats
Closure campaign Round 1	.../rendered/TOE/CLOSURE_CAMPAIN_RESULT_2026-06-24.md	SCALE-firewall verdict; BG-10 Rule A AXIOM-CLOSED; A1-FTC; $\kappa^3 \cdot \pi^{-1}$ discipline; AXIOM_CLOSED $\neq$ proven
Closure campaign Round 2	.../rendered/TOE/CLOSURE_CAMPAIN_ROUND2_2026-06-24.md	BG-10 Rule B RELABEL_FAIL / Rule C BLOCKED_INPUTS; Gap-02 z_* target-spec defect; Born A1/A2
Gap-01 a_6 reconciliation	.../rendered/TOE/GAP01_A6_RECONCILIATION_2026-06-24.md	a_6 bulk = consistency coefficient; MO-12; defect UNCOMPUTED; stale-orphan hazard
Gap-02 cost-floor disposition	.../rendered/TOE/GAP02_B2_COSTFLOOR_ZSTAR_DISPOSITION_2026-06-24.md	$D \leq 0$ is a proxy not the target; convention-underdetermined; Precisely-OPEN
Open-walls register (re-tiering + Λ -proof test)	.../rendered/TOE/OPEN_WALLS_REGISTER.md	observation-anchoring test; Tier A/B/D/C; Λ fake-wall vs Gap-02/BG-10 real-wall; observation-blocked falsifiers
Gate-9 demotion drafts	.../rendered/TOE/GATE9_DEMOTION_DRAFTS.md	M_R UNKNOWN (the SG-8 residual that the R1 firewall correctly keeps OUT of SG-10's exclusions)
GUT manuscript	.../rendered/GUT/GUT.md	§6.11 (L2084); §6.12 (L2096); §9 (L2265); §9.4 ledger (L2333); §5.10 (L1895); §1.7 (L797); Downgrade Rules (L510); Known Weakest Links (L371); Claim Boundary ledger (L392)

5.3 Frozen-object / disposition index (load-bearing; READ-ONLY)

Branch `dcc66f1b2685` · manifest meta `a5b1e6f9d951` · SG-10 introduces **no geometric object and no new hash** (meta-constraint on the text). Walls referenced by owners' objects: a_6 bulk $\text{tr}[a_6] = -2.817995812 \times 10^{94} \text{ GeV}^6$ (consistency-coefficient label only; **defect a_6 UNCOMPUTED — no total emitted**) · Gap-02 engine `su3_lattice.py` (sha256-identical to validated corpus engine; plaquette gate PASS) · Λ supertrace certificate (Paper IV; honest-negative; **no value/hash promoted**) · M_R **no hash — UNKNOWN/open** (SG-8 residual, NOT an SG-10 exclusion). Scope-consistency lint `certificates/G11_claim_boundary/` (AUDIT — referenced, not re-run here).

Closing honest statement

SG-10 is **DISCLOSED**. Its genuine, defensible content is real and exactly bounded: a **complete-as-asserted, both-direction, machine-enforceable scope boundary** — every non-GUT sector named with its missing-certificate reason, two binding clauses (excluded→required, required→excluded), a scriptable two-clause lint, and a downgrade that falls **inward** on any required gate that breaks discipline. It is one of the manuscript's most honest moves: the boundary is stated **as a strength, in public**. Its honest open surface is equally clear: SG-10 **closes no physics, certifies nothing about the excluded sectors, and leaves every wall entirely OPEN**; completeness is an *auditable assertion*; the lint is **AUDIT** (referenced, not re-run); and the boundary's honesty is only as good as each wall being stated at its campaign-conservative floor. The attack plan reduces these to named, target-blind *disclosure-discipline* axioms (scope-universe, no-diagnostic-support, wall-conservatism, no-silent-narrowing, corpus-coherence) and one mechanical lint run — with the **$\kappa^3 \cdot \pi^{-1}$ -as-deflation** discipline guarding every wall so an attractive partial result (a_6 computed; Rule A AXIOM-CLOSED; the Gap-02 $D \leq 0$ proxy-negative) is **never** read as wall progress. The realistic ceiling is a **machine-verified, conservatism-mapped boundary over a named disclosure-axiom floor** — and a *strengthened* binding rule (R5: no silent target-narrowing, not just no sector-relocation) — **not** a promotion, and **emphatically not** a closure of any wall. **PROMOTIONS:0; frozen branch** dcc66f1b2685 / a5b1e6f9d951 **READ-ONLY; given-E ≠ derivation of E; AXIOM_CLOSED ≠ proven; dissolved ≠ solved; Gap-01/Gap-02 Precisely-OPEN, Λ Weinberg-OPEN, BG-10 0/4, strong-CP observation-blocked — nothing applied, nothing deployed.**

Dossier built 2026-06-24. Our geometry (13D K_6 branch) only. SG-10 is the disclosure gate: this packet maps where every scope wall stands and what would move it, referencing the published website source-of-truth for common material, not duplicating it.