Public release copy. Source: `34_relative.md`, Gravity Frontier Research, David Vávra, Independent Researcher, Prague. SHA-256 of the Markdown source: `e6d4fc7f12c1eaabedb161d539ebdb4095fb4de93b995b66b4ea7001f2008a04`. First published at vavradev.com/research on 2026-11-15. The Markdown file published beside this PDF is byte-identical to the source.

34. RELATIVE: what shared noise cannot erase (program RELATIVE under doc 33 section 6): DECIDED AT NOTE GRADE

Program decision document, v1.0, 2026-11-12. STATUS: DECIDED, at NOTE grade and never as a discovery: no sentence of this document claims one, and none may be read as one. The order of record is `33_dream_question_6.md`, sections 5 to 9. The product of the program is the in-house note `34a_E1R_protected_sector_note.md` (Final v1.0, after its two adversarial legs) and this document. The typed outcome of record is the conjunction of the registered outcome words of doc 33 section 5 that hold, each by its own text, none ranked:

- **NOTE-BY-LEMMA.** Theorem R (the common-mode lemma) holds to twelve paths by both legs as registered, to fourteen by two further lattice codes, and for every number of paths by a proof that the gate checked line by line; every registered cell is typed COMPUTED, COROLLARY, CITED or SATURATED; the note is assembled and final. This is KR-0's leading branch: a note, not a front.
- **PROTECTION-DOES-NOT-PAY** at the 2026 white-paper benchmark (labelled "not a design of record"), under the white paper's stated noise allowance, for every registered split of that allowance into shared and independent noise; rider R11 of the gate travels with the word: it compares the fixed protected-sector witness against the best two-path witness, per setting, under RULE-SC; it is not a comparison of the best three-path certificate with the best two-path certificate at the stated allowance (NOT COMPUTED; the noise-free three-path negativity is 8.83 times the protected one). "Protected" carries the rider block of section 0.3 wherever it stands in this document.
- **LADDER-INDEPENDENT**, typed a COROLLARY (ten polynomial identities), with the alias rider of repair R1 of the gate: a witness null is a statement modulo 2 pi.
- **SCOOPED-CELL, on the entry reading only**, for two entries of cell C5 and one hand item of the pilot, which are evaluations of a closed form printed eight days before the pilot (Wang, Pedernales and Plenio, arXiv:2611.05044 v1, eq. (A31)); on the group reading the word is not typed; the confirmation of the reading is the owner's (section 4.1).
- **EXOTIC-ROW: not typed** in the registered scope (the wording item that KR-2 asks to see first is item (b) below).

No kill criterion fired: KR-ctrl, KR-1, KR-2, KR-3, KR-6 and KR-7 are NOT FIRED by their letters, KR-4 is within budget, and KR-0 HOLDS. The co-runner PRE-Q returned NOT-DECIDED-BELOW-CAPS with no SURVIVOR (verifier: CONFIRMED WITH LISTED DEFECTS), so KR-7 did not fire and nothing of it leads this document. The control universe (verifier: PASS WITH REWORDINGS) and the mediator column (assembly grade, no adversarial verifier of its own) enter below as data sections with their riders and never as the headline. The sentence of record is sentence S-R of the note, entered whole with its riders in section 4.2; external quotation of every sentence of this program stays BLOCKED behind a closing audit at the untouched reserve and a fresh literature re-sweep, and neither is ordered here. Nothing was posted or sent; licensing is never posting; release is the owner's call.

Refuted forecasts first (declared parity; each item transcribed from the leg that owns it).

(a) *Of the program (doc 33).* (1) The judge priced the other outcome word at about 60 percent ("PROTECTION-PAYS at the benchmark for some registered split of the white paper's budget"). REFUTED: the negative word is typed for every registered split, and by remark R-g of the rigor leg the three-path count exceeds the two-path count on the whole interval of splits, in the sense of rider R11. Doc 33 itself orders that this branch be "published as the finding". (2) Prediction P-R7, clause 1 ("Theorem W applies verbatim to a certified positive on the protected sector", about 99 percent) does not hold as registered: the gate struck the word "verbatim" (repair R3) and scored the clause a conditional corollary; this document keeps the gate's word and adds none. (3) Doc 33's sentence that equates the FALSE branch of P-R4 with the negative outcome word does not match its own outcome clause: the two sentences came out differently (rider R5 travels with every printing of that prediction's score, and rider R11 with the word: sections 4.1 and 4.3). (4) Numbers and clauses of doc 33 that the record corrects, for the owner's fold (section 7.2): "never falls below 0.069" is 0.0688; the edge of the open window at strength 4/3 is 35.742 um on the modulus curve (CURVE-READ) and about 24.7584 um for the registered negative sign (TABLE (thesis)), not 38.6 um; the occupancy clause of the co-runner ("one citation; scoop LOW to MEDIUM") is HIGH, because the one citing paper carries a section on the same question; the phrase "Theorem W's second reading is inhabited" must not travel bare; the experiment scout's platform sentence (three paths "native" to a spin-1 centre) is not licensed (the literature leg's forecast F-PL was refuted: no printed scheme populates the middle state as a third path).

(b) *The wording item that KR-2's letter asks to see first.* With a two-path register against a register of four or more paths every phase table is PPT after the complete twirl and not every table is quadratic. The pilot registered this as a hand item before its run and typed it "separable by another route" (every such table is LU-trivial up to sector constants, hence an explicit mixture of product states): not bound entanglement, and outside the family of two n-path registers. Consequence kept in every sentence: "quadratic" is the right word exactly when both registers have at least three paths; the statement for all sizes says "LU-trivial up to sector constants".

(c) *Of the legs, each by its own report.* Pilot literature leg: F-PL (strong reading). Pilot cells stage: F-X1 in two of four sub-clauses (a hand estimate of two thresholds), F-L in one conjunct (the judge's "0.0689263 at 20.18 um" is a value at a grid point, not a minimum). Gate: none. Lane L1: F-9 (against its leaning: a posting does state an entanglement consequence of correlated noise for a path-encoded pair) and F-6. Lane L2: F-3 in its first clause (the published sign-resolved limits narrow the window), F-7 in its gloss, F-10, A1-6, T-4. Lanes L3 and L4: F8 on the entry reading and FB3 in its first clause. Note assembly: its check A-6. Rigor leg: F-5 in one count clause. Steelman leg: two hand values of H-ST4, one clause of H-ST10 (refuted against the note's favour), F-ST6 in its first clause, F-ST5 with a qualification. Finalization: none. Mediator column: one regression of print (a rounding in arXiv:2607.20867; it enters no cell). Control universe, author: one clause of its own registration (BR-1 on its mixed-label cells: 25 of 59 sectors are one-dimensional). Control universe, verifier: none; three clauses of its own battery text were wrong as registered and were corrected by dated addenda before its runs of record. Co-runner, author: F-a2, A2-2 and the FAMILY clause of H-9. Co-runner, verifier: A2-a on its registered draw; A2-d void; X3 close to vacuous.

(d) *Of this leg.* Three slips of its registration, found by one development run and reported in a dated addendum before the run of record: the count of manifests (16, not 15); one of the two manifest lines that do not match is of a kind the registration had not named (a corpus list that lane L1 extended by a disclosed append); three digit clauses of the own-arithmetic check A-8 compared own enclosures with roundings of the record as if they were truncations. The three registered check lines print FAIL in the log of record and stay there; the repaired checks pass beside them (section 1). No number, verdict or outcome word depends on any of the three.

Synthesized 2026-11-12 (from 03:43 CET) from the whole chain of the program: the pilot (literature leg, build stage, cells stage), its verifier gate, the scout lanes L1 to L4, the note with its assembly record, the two adversarial legs on the note and its finalization, the control universe with its verifier, the mediator column, and the co-runner with its verifier. This leg re-scores no cell and re-rules no gate: every ruling below is transcribed by its own registered word. Its own computation is a regression: 67 seals, 16 manifests, the order of every leg at file-time resolution, the tokens and the reserve, three-leg agreement on fifteen

verdict numbers, and twelve items of own exact or interval-certified arithmetic (section 1). Every sentence below inherits the ceiling riders of doc 33 section 5 and the bans of KR-5 and of doc 33 section 9 (section 0.3).

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0. Order of record, the chain that ran, and the pins

0.1 The order, and what each leg did

The question, as doc 33 poses it:

> **Dream form**
>
> Gravity acts on two masses only through their relative position, and by the equivalence principle every uniform disturbance falls on both alike. **Which part of gravity's entangling action can no shared noise erase, which law of gravity does that part read at thirty micrometres, where gravity at its own strength has never been measured, and does it certify what the first experiment was built to certify?**

The binding order of doc 33 section 6:

> **Binding order (the house rule since doc 26 section 5, with the doc 28, 29 and 32 extensions): pilot, then the pilot verifier gate, then scout lanes, then the assembly freeze, then bounded reproductions, then two adversarial legs; a closing audit only if a quotation event is wanted.** No assembly text is frozen before PILOT-R and its verifier gate return; every conjunct of section 5 and every wording item of section 5.2 (iv) is transcribed into the pilot's frozen rule; no definition introduced after a readout may carry a verdict.

What ran, in that order (every leg: a registration sealed with its sha256 and a sub-second stamp before the scripts it governs; exact arithmetic or interval-certified enclosures; `python3.12 -I`; committed engines never imported in place; canon pins byte-identical before and after; new files only under its own directory):

leg	mandate	window (CET, 2026)	sealed registration (file; stamp; sha256)	result, in the leg's own word	report
pilot, literature	M-R1 (a)	11-11, 19:44 to 20:20	`relative_pilot/literature/REGISTRATION.md` ; 11-11 19:47:12.831; `329c20698e3cfd0b4973ff3ee5db7e1b24d7bca47cc18e740b06bf816b473c18`	KR-1 and KR-3 not fired by their letters; one refuted forecast (the platform sentence)	`relative_pilot/literature/LITERATU`
pilot, build stage	M-R1 (b), (c)	11-11, 19:42 to 21:00	`relative_pilot/REGISTRATION.md` ; 11-11 20:11:39.705; `dc6d6201e53b91e07c1cf6822030d016d3d39c082d40b217de7735e7bef80956`	BUILT: battery and teeth pass; Theorem R to twelve paths; the proof for every n sealed before the run	`relative_pilot/BUILD_REPORT.md`
pilot, cells stage	M-R1 (d), (e)	11-11, 20:55 to 21:56	`relative_pilot/REGISTRATION_ADDENDUM_4_CELLS_STAGE.md` ; 11-11 21:18:28.785; `90757c745de3346f3d2073135657b51c1c97d617c940d662798d71d787e5aa0f`	the typed preliminary outcome; two refuted forecasts of its own	`relative_pilot/PILOT_REPORT.md`
pilot verifier gate	M-R2	11-11, 22:09 to 22:59	`relative_pilot/verifier_MR2/REGISTRATION_VERIFIER.md` ; 11-11 22:14:32.944; `1f8deac3970ae776c6124f0e22d4946e855b91ad323bd8045f54626e9686a1be`	PASS, with eleven verdict-neutral repairs	`relative_pilot/VERIFIER_RULING.md`
lane L1, prior art	M-R3	11-11, 23:03 to 23:47	`relative_lanes/L1_prior_art_probe/REGISTRATION_L1.md` ; 11-11 23:07:23.665; `7dfc17aed2b9bda4fd9d8db4cd20e6aeacf9e413e5e6a8eb5e45e2c4de515e14`	no SCOOP, no BRACKET; KR-1 not fired; two refuted forecasts	`relative_lanes/L1_prior_art.md`
lane L2, short-range data	M-R3	11-11, 23:00 to 23:40	`relative_lanes/L2_short_range_probe/REGISTRATION.md` ; 11-11 23:03:49.230; `f1419e6ca21153243822fc77947d2e03a7611b4fd4b662b7c92408be4b57c6ac`	KR-3 not fired, with one NARROWS item; five refuted forecasts	`relative_lanes/L2_short_range.md`
lanes L3 and L4, occupancy and triggers	M-R3, M-R9	11-11, 22:58 to 23:51	`relative_lanes/L3L4_probe/REGISTRATION_R0.md` ; 11-11 23:03:38.893; `dc53735adc84aa2f31a76f723301e803afcf467b826c99f2e8ac81abf00d3ef9`	no trigger fired; one printed closed form yields two entries of one cell; two refuted forecasts	`relative_lanes/L3L4_occupancy.md`
note assembly (two sittings)	M-R4	11-11, 23:51 to 11-12, 01:26	`relative_note/REGISTRATION_NOTE.md` ; 11-12 00:02:48.272; `4eb3c34f809afbda6f8c6d2a54006080123cd56e6f7942af01ede977d87e1a5b`	Draft v0.9 built; one refuted forecast	`relative_note/BUILD_MANIFEST.md`
certificate-rigor leg	M-R5	11-12, 01:30 to 02:42	`relative_verify/rigor/REGISTRATION_RIGOR.md` ; 11-12 01:43:02.089; `e8b7418fd53a55b3c37e45c06d1ff39dd2b3297be51b111057786909e3864c4a`	PASS WITH LISTED DEFECTS	`relative_verify/RIGOR_REPORT.md`

leg	mandate	window (CET, 2026)	sealed registration (file; stamp; sha256)	result, in the leg's own word	report
experimentalist steelman	M-R5	11-12, 01:34 to 02:19	`relative_verify/steelman/REGISTRATION_STEELMAN.md` ; 11-12 01:50:56.327; `cebc83f2c1ac4b0dbb50d501a9b5594a56e0805163a5df3d2d742a68682d792a`	PASS WITH REWORDINGS	`relative_verify/STEELMAN_REPORT.md`
note finalization	after M-R5	11-12, 02:45 to 03:42	`relative_note/finalize/REGISTRATION_FINALIZE.md` ; 11-12 02:58:16.650; `bac1cdf0857c2535a2bee469692836759821699e8e296c2d68e17bcc31f8caad`	Final v1.0; no item HELD; no forecast refuted	`relative_note/finalize/REPAIRS_LED`
control universe, author	M-R6	11-11, 19:43 to 21:10	`relative_control/REGISTRATION.md` ; 11-11 20:08:41.605; `be67749708dbdba7bf716e84cbc50a217a9116c5c8dfde69b3160f1e08a6fc67`	every row a corollary, a control, a regression, cited or data; one clause of its own registration refuted	`relative_control/CONTROL_REPORT.md`
control universe, verifier on a different engine	M-R6	11-11, 21:15 to 22:18	`relative_control/verify/REGISTRATION_V.md` ; 11-11 21:34:51.531; `ca6c5748d247e1a5689d1e6ea555010fa4a9acbcc7a58b7e16c39b85278fc6a8`	PASS WITH REWORDINGS	`relative_control/verify/VERIFIER_R`
mediator column	M-R7	11-11, 19:43 to 20:32	`relative_mediator/REGISTRATION.md` ; 11-11 20:03:30.790; `c77a6da4732e6665644b7b28db8eb27c8c8ea2524549492f0426c968fa34a7f3`	assembly grade; every row DRAFTED, none entered; one print-side figure not regressed	`relative_mediator/MEDIATOR_COLUMN.`
co-runner PRE-Q, author	M-R8 (i)	11-11, 19:42 to 21:21	`relative_preq/REGISTRATION.md` ; 11-11 20:09:25.399; `17a4f14bca50233e9fe577a579f43a7949338035f026ad0e08d46a4d3108c200`	NOT-DECIDED-BELOW-CAPS; no SURVIVOR; three refuted items	`relative_preq/PREQ_REPORT.md`
co-runner PRE-Q, verifier	M-R8 (i)	11-11, 21:25 to 22:48	`relative_preq/verify/V_REGISTRATION.md` ; 11-11 21:35:38.275; `30d11361b44392ce6b07dc2e35b91b2eca3be62c1c3bfc5765a85414f2253988`	CONFIRMED WITH LISTED DEFECTS	`relative_preq/verify/VERIFIER_REPO`

Steps of the order that did not run, said plainly. *Bounded reproductions:* none was run (KR-4 allows at most two and mandates none); the one that bears on a rider of the note, the shield-mediated channel of arXiv:2604.22593, is an owner item (section 7.5). *The closing audit:* not ordered; doc 33 owes it only "if a quotation event is wanted", and its reserve (10,100,009 and above) is untouched (check SC-5 of section 1). *Co-runners M-R8 (ii) and (iii):* their conditions (the owner opening doc 32's block; the owner taking runner-up 4) were not met; not run. The note leg ran in two sittings because a usage limit cut its first sitting off; nothing sealed in the first sitting was edited, re-sealed or re-run.

Triggers (mandate M-R9; KR-6). The four Adjudicator triggers, KR-6 and the citer lists of M-R9 were dated by lanes L3 and L4 and re-dated like for like at the start and the end of the note leg, at the end of the steelman leg and at the start and the end of the finalization: no trigger fired and no value moved. This leg made one more re-date of the same 53 items, registered in its addendum 2 before the script existed, finished 2026-11-12 04:01:09.821 CET: 0 differences by value, 0 NOT RUN (`relative_synthesizer/s_triggers_end.log`). T1 (MOVW's reference [7]), T2 (first data or a dated timeline), T3 (the pipeline paper) and T4 (a scoop of Theorem W or of Theorem M): NOT FIRED. KR-6: NOT FIRED; the registered benchmark stands as the only published design point.

0.2 Canon pins and discipline of this leg

First act: canon pins over the FIXED list of 1401 committed files that every leg of the program used (the top-level documents, `analysis/` , the paper sources, the DQ6 scout and judge files; list sha256 `da5fa2c4360c9d13bf9e513600b77518c39316390511c3bf05b85ca10ede9a73` ; the list leaves out `relative_*` , `release/` , `papers/` and hidden files by the order of the program): 2026-11-12 03:44:12.502 CET, 1401 files, 0 missing, pins sha256 `f09312b65ea08c337196507a080673c4a5a5dc7729f3d7935f3c243e749d8ffb` : the same pins file as the final pins of the finalization and, by the legs' own statements, equal hash for hash to the final pins of the pilot, the gate, the lanes, the note leg and both adversarial legs. Because this document rules on files that the fixed list lacks, a supplementary object group was pinned at the same time and is disclosed as supplementary: the note and every file under the seven record directories (1145 files). The pins after the checks, the final pins, the document check of record and the manifest are end-of-leg facts and are kept out of this text: they are in `relative_synthesizer/SYNTH_LEDGER.md` .

This leg wrote new files only: this document and the directory `relative_synthesizer/` . It imported and executed no script of any leg and no committed engine (one script of the finalize leg, its trigger re-date, was copied with its hash verified and patched by count-asserted replacements, as that leg had done with its predecessor's). It modified no committed file, wrote nothing under another leg's directory or under `release/` , drew no prime (primality of the program's tokens was certified by own trial division, a certification and never a draw), made outside requests only for the one trigger re-date (INSPIRE first, then arXiv; a generic client string; no personal detail), posted and sent nothing, and left no process running.

0.3 Standing wording: the riders that travel into every sentence below

The ceiling riders, the wording-ban criterion and the standing bans of the order of record, verbatim. The banned strings occur in this document only inside this marked block and inside other verbatim blocks.

> **Ceiling riders, fused from day one.** NOTE grade: no sentence of this program claims a discovery; Theorem R is a corollary of a three-line lemma and an integer identity (computed to n = 8 by the judge; general n is a derivation target) and is labelled so before the run. "Protected" always travels with: against complete common-mode dephasing; in the path-diagonal model (equally spaced branches with one spacing history in both interferometers, closed at readout; noise entering as a force uniform over both masses, hence a phase linear in the branch index; gradient noise and imperfect closure are outside the

> model); matched mass times spacing; nothing against local dephasing (the protected state needs more local coherence than the unprotected benchmark, not less). The principle (the interaction depends on the relative position alone, so noise on the common mode can be rejected) is printed for the Gaussian setting (Datta and Miao, arXiv:2104.04414): cited first, never claimed; the house's statement is the path-encoded one. A positive certifies "non-classical" in Definition 2's sense and Theorem W's disjunction, never "quantum" and never "gravity is quantum"; a null never feeds "gravity is classical"; a protected-sector reading is a statement about a channel and its detection, never about the mediator. The law column is static and tree-level; torsion-balance bounds are cited, never re-derived (doc 29 section 4.2 (v)); the benchmark is the white paper's representative point; "the experiment tests quadratic gravity" is never used bare; Matsui's trilemma (2610.25994) is cited, never re-derived. "Loophole-free" never bare; "undecidable" never; licensing is never posting; release is the owner's call.

> - **KR-5 (wording bans).** Any drift toward "gravity is quantum", "gravity is classical", "immune to noise", "decoherence-free" bare for the pair, "the experiment tests quadratic gravity" bare, "loophole-free" bare, or a protected-sector sentence about the mediator: stop the sentence at the licensed wording.

> *Every claim in this document inherits the corpus's standing wording bans: "undecidable", "gravity is a magic factory", "QM derived", "requires QM", the bare "cannot write history and keep perfect time", "no nonnegative model exists", "not simulable", "loophole-free" bare, "efficient" for any classical model. A null anywhere never feeds "gravity is classical"; a positive never feeds "gravity is quantum" (Theorem W's disjunction is the licensed form); a hosted row never feeds "classical" and an outside row never feeds a cost or advantage sentence; no 2+1 sentence is a sentence about 3+1 gravity; the margin theorem is never a gravity sentence. Licensing is never posting; release is the owner's call.*

The rider block ("protected"). In every section of this document "protected" means: against COMPLETE common-mode dephasing; in the path-diagonal model (equally spaced branches with one spacing history in both interferometers, closed at readout; noise entering as a force uniform over both masses, hence a phase linear in the branch index; gradient noise and imperfect closure outside the model); at matched mass times spacing (in a Stern-Gerlach interferometer: matched spin-force histories; the masses drop out); and nothing against local dephasing (the state that the complete twirl spares needs MORE local coherence than the unprotected benchmark, not less). Three clarifications that the steelman leg added and the finalization entered in the note: noise that the two registers merely share is not thereby common-mode (a shield or any source midway acts on them with opposite sign and is outside the class); the matching is one of force histories, not of masses; a three-path register whose middle path is the unforced spin state gives up the symmetry on which the two-path loop relies.

Rider R11 of the gate (it travels with every printing of the outcome word on whether the protection pays): the word compares the fixed protected-sector witness against the best two-path witness, per setting, under RULE-SC; it is not a comparison of the best three-path certificate with the best two-path certificate at the stated allowance (NOT COMPUTED; the noise-free three-path negativity is 8.83 times the protected one).

Rider R5 of the gate (it travels with every printing of the score of prediction P-R4 or of sigma*): the registered three-path row spans 20 um, twice the white paper's superposition size, and at equal span (40, 5, 1) there is no certified positive at local coherence 49/50; the window is 3/5 to 205.6 rad at mismatch 1/1000 (certified here on the continuum up to 30 rad by monotonicity, and to 205.6 rad because the two-path state stays PPT); the count is 80 times the noise-free two-path count; at the stated allowance the word is the other one. Two precisions of the adversarial legs travel with that text (rider R5 again): its "noise-free two-path count" is the count at zero common-mode noise and local coherence 49/50, and its 205.6 rad is a number of the registered mismatch 1/1000, the pilot's value and not a design's.

Standing sentences. A positive on any sector certifies "non-classical" in the sense of Definition 2 of the Witness Theorem and the disjunction of Theorem W under its premises, and nothing about the mediator beyond that disjunction; a null on any sector never feeds a classicality sentence about gravity; a reading of the sector that the complete twirl spares is a statement about a channel and its detection, never about the mediator; the law column is static and tree-level, its bounds are CITED and never re-derived; the benchmark is the white paper's representative point, "not a design of record"; no sentence about the control universe is a sentence about gravity in 3+1 dimensions; no causal-set sentence is a sentence about gravity in our world.

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1. Registration of this leg, and its checks of record

`relative_synthesizer/SYNTH_REGISTRATION.md` (sha256 `832f26391f0fa9abcef4ecf3f0e7b12cd9125a1773ee1b366ad2df06f6972140`, sealed 2026-11-12 03:53:39.635 CET) was sealed before the check script, the document checker and any line of this document existed. It transcribes the letters of record from doc 33 by line number (the outcome words, the ceiling riders, the predictions with their parity, the kill criteria, the bans) and freezes seven rules:

- **R1, the outcome rule.** The typed outcome is the conjunction of the registered outcome words that hold, each by its own text, none ranked; no word is added, merged or renamed. Where the record holds two readings of a word that were fixed after a readout, this leg chooses neither by a new definition: it evaluates the letter in the direction least favourable to the program, prints the other reading beside it without a type, and hands the confirmation to the owner.
- **R2, the unit of a verdict.** A verdict of this document rests only on a row that a verifier of the record CONFIRMED by an own route, on a proof that a verifier checked line by line, or on a datum typed CITED with its label and grade (never a verdict of the house). A statement typed DEFECT enters only in its replacement text; a row typed REWORD-TO only in its replacement text; a row typed NOT-REPRODUCED, VOID, SAMPLE or NOT MATCHED enters, if at all, as data of its leg with that word beside it, and no outcome word, prediction score or kill-criterion status rests on it. A sentence that the finalization amended after the two adversarial legs is labelled "no adversarial reading after the amendment".
- **R3, riders** (R11 with the outcome word; R5 with prediction P-R4 and sigma*; the rider block with "protected"; the dictionary rider with every sentence about the control universe; the three data sections never in the headline; the composition toward the export D1 named only with the words "could compose").
- **R4, refuted first; R5, numbers** (no number typed from memory; every long number found in a file of record or in the log of this leg's own arithmetic); **R6, nothing entered; R7, verbatim text** (blocks marked `V:` are pulled by line number, inline substrings marked `VS:` are re-found in their named file).

Three dated addenda, each sealed before what it governs: `relative_synthesizer/SYNTH_ADDENDUM_1.md` (sha256 `cdf82ef2352fe438ac0efeba0505bfb7825a2d830f7872bbec7c2b4cff952587`, 03:58:06.886 CET; after one development run of the check script and before its run of record: the three slips of item (d) of the header, one check-logic defect, and the repaired checks) and `relative_synthesizer/SYNTH_ADDENDUM_2.md` (sha256 `fdd82139d4b7189d0d55720fdd569f128017009a36a5d043b33fe7427d1e4842`, 03:59:39.612 CET; the one trigger re-date, before its script existed) and `relative_synthesizer/SYNTH_ADDENDUM_3.md` (sha256 `83908217979a4862fc02ca85d73a3b2bfa05beeddcdf5e0e8410a21e0dab134c`, 04:16:00.251 CET; a control of the document checker by thirteen registered mutations of the final text, before the control script existed and before the final text was written).

Checks of record on the record of the program (`relative_synthesizer/s_check.log`, stage "record", one run of record at 03:58:39 to 03:58:41 CET, equal line for line to the last development run; script hashed first): 24 check lines, 21 PASS and 3 FAIL. The three FAIL lines are the registered lines SC-3, A-8 and

SC-7, reported first in the header (item (d)) and in addendum 1; each has a repaired check beside it that passes.

check	what	result
SC-2	every sealed registration, addendum, proof and rule file of the record against its sha256 companion, full hash	67 of 67 equal
SC-3 (as registered)	the manifests of the record	FAIL as registered: 16 manifests, not the registered 15
SC-3R	16 manifests, 1132 lines, each verified from its own base directory	every line matches except exactly two, each attributed by hash: the note leg's line for the note carries the hash of the draft (the pre-image that both adversarial legs reviewed), and the literature leg's line for the corpus list `papers/27_relative/README.md` carries the hash of that file's first 5947 bytes (lane L1 extended the list by a disclosed append)
SC-4	order at file-time resolution (data)	165 scripts in sixteen leg directories; 17 were born before their leg's first seal, every one a hash-only pins script or a prime-certification script
SC-5	tokens and the reserve	every token that a leg reports as used is prime by own trial division; every printed base is composite and equals the product printed for it (two printed cofactors, 138,031 and 3,300,067, are themselves composite: the reports print a product, not a prime factorization); the per-level pin primes of the two control legs are as printed; of 1138 files scanned no script, log or record contains a token of the closing-audit reserve or of the successor band; one text mentions the reserve as untouched
SC-6	three-leg agreement at printed digits	fifteen verdict numbers, each found in a log of the pilot, of the gate and of the rigor leg
SC-7 (as registered), A-8	own arithmetic, list A	FAIL as registered in three digit clauses of A-8 (the record prints roundings there)
SC-7R, A-8R	own arithmetic, with the record's own printing rule	every item agrees: the five design invariants and the outer-pair phase as exact rationals; the two ratio polynomials from the distances, the identity A_2 - A_3 = 2x^3 (x-1)^3 (3x+2) and both derivative factorizations; the closed forms at the benchmark by intervals; seven shot counts as certified integer ceilings; the two-path count at the allowance and the crossing behind P-R4 (rider R5) by a certified inertia of the 4 by 4 partial transpose from its definition; both zeros and the least separation of the law column; the ceiling of the mediator column in Planck units; the census of the control universe (71,070 rows; 4,539; 68,050); the Gaussian threshold
SC-8, SC-9	the ruling words in the head of each ruling; the note's hash, size and pre-image	as transcribed in section 3

What this regression is and is not. It shows that the record is intact, ordered and self-consistent, and that fifteen verdict numbers agree across three legs and twelve own computations at their printed digits. It is one leg; it re-derives no theorem, repeats no enumeration, opens no paper and re-reads no published curve.

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2. Results per column

Every number below is a number of the note or of the leg named beside it, printed here with fewer digits than the record carries (truncations; the certified digits, brackets and logs are in the note and in the legs' files). Types as doc 33 orders them: COMPUTED, COROLLARY, CITED, SATURATED; HAND marks a paper estimate that no script of record tested. "Protected" carries the rider block of section 0.3 throughout.

2.1 Column C: the certificate column

Theorem R (the common-mode lemma), in the note's licensed form:

> 2. **The lemma (Theorem R; section 4).** In the path-diagonal model, after complete common-mode dephasing the state of two path registers is separable iff it is PPT iff the phase table of the gate is LU-trivial up to sector constants iff every generator of an explicit invariant lattice vanishes modulo 2 pi. With at least three paths in each register "LU-trivial up to sector constants" is "quadratic up to sector constants". Consequences: a two-path register against any register keeps nothing in the complete limit; three paths in the linear geometry keep an entangled state governed by ONE third-difference invariant J, unless J vanishes modulo 2 pi; the parallel geometry needs four paths. No bound entanglement in this gate family. A corollary of a three-line lemma and a polynomial identity, proved for every number of paths (the proof was checked line by line by the gate), computed by two legs to 12 paths (to 14 by the gate's lattice code). At two and three paths the statement follows from the Peres-Horodecki blocks printed by Li and Xu (2005) for two qubits and two spin-1 systems under collective dephasing, evaluated on the gate state; the note adds the converse, the closed form with the trace, every size, and the invariant lattice (the licensed form of [L1]).

Its standing: a corollary of a three-line lemma (a Hermitian matrix with unit diagonal and unimodular entries is positive semidefinite iff it has rank one) and a two-line polynomial identity (with a phase table encoded as a polynomial, the integer functionals that vanish on every table the twirl erases are exactly the multiples of (x-1)(y-1)(x-y)). The proof was sealed by the pilot before its run (sha256 `0723271c7e5ef94c7994f1469766e873287adc51aaa45787d5b016ced3104a90`), checked line by line by the gate (prediction P-R2 scored TRUE) and read again by the rigor leg, which found no gap. Machines, three own routes: the pilot (19 lattice rows, index 1 by equality of Hermite forms; an exhaustive torsion search with no exotic table; exact state rows with no lemma assumed; mutation controls), the gate (own lattice code to fourteen paths; own exact field) and the rigor leg (the integer kernel against all hexagon functionals on all 91 pairs of register sizes from 2 to 14, both geometries; explicit certificates in both directions at the state level; registered break attempts, none succeeded). The enumeration counts of the pilot and of the gate were not repeated by the rigor leg (typed NOT-REPRODUCED there, with no judgment); they were regenerated twice from isolated copies with identical logs and carry no verdict here: the verdict rests on the lattice identity and the checked proof. What it erases and what it keeps, in the note's words: the part of the phase table that is quadratic in the path index, up to sector constants, is erased from the certificate; the non-quadratic part is kept; the second difference that the two-path experiment reads is a quadratic datum.

What is printed elsewhere, said before any cell (lanes L1 and L3/L4; section 2.7): the principle is Datta and Miao's (arXiv:2104.04414; Gaussian oscillators), cited first and never claimed; at two and three paths the statement follows by substitution from the blocks printed by Li and Xu (arXiv:quant-ph/0504228); the block technique is printed; the two-path state under partial shared noise has a printed closed form (arXiv:2611.05044). What remains the house's statement, at NOTE grade: the theorem for all sizes with its converse, the invariant lattice and its ranks, the closed form at three paths with the threshold lemma, and the certified cells that are not printed.

Closed forms and cells at the benchmark (two paths (40, 10, 1) with Delta = -211/1000; three paths (50, 10, 1) with J = 211/1400; (D, s, tau) in um, um, s; both labelled "not a design of record"). Every cell below was certified by the pilot's engine, re-certified by the gate's own routes and confirmed a third time by the rigor leg.

cell	value	type
protected negativity at three paths, N_3(J) = (2 cos((pi - abs J)/3) - 1)/9	0.00952 at the benchmark; the noise-free three-path negativity is 0.0841, that is 8.83 times it	COROLLARY; the noise-free value COMPUTED
price in local coherence: the protected three-path state is entangled iff the local coherence of each register exceeds (2 cos((pi - abs J)/3))^(-1/2)	0.9597 at the benchmark, against 0.9002 for the unprotected two-path pair; 0.9886 at equal span (40, 5, 1)	closed form: COROLLARY; the "iff": COROLLARY of a lemma that the gate proved for every J (prediction P-R3: both clauses TRUE); the two-path value is CITED (arXiv:2611.05044, eq. (A24))
shots per setting at the white paper's stated allowance (a phase variance of 3/100 per interferometer), for the registered splits f = 0 to 1 of that allowance into shared and independent noise	two paths, best witness: 2,370 to 2,306; three paths, one fixed witness: 136,907 to 53,591, that is 57.7 to 23.2 times more; with force-type independent noise 719,057 at f = 0 (303 times)	counts COMPUTED under the registered conventions RULE-B and RULE-SC; this is the cell of the outcome word of section 4.1 (rider R11)
where the three-path count falls below the two-path count on the registered grid	first at 30 times the allowance in variance, and only for a shared fraction of 99/100 or more (at 9/10 never; nothing is certified between)	COMPUTED; data of equal standing
the cell of prediction P-R4 (common-mode rms phase sigma on a grid, mismatch 1/1000, local coherence 49/50)	the three-path count is flat at 215,731 to 225,523; the two-path count grows from 2,696 at sigma = 0 to 348,850 at 0.6 rad, and the two-path state stops being entangled near 0.7097 rad (a certified bracket)	COMPUTED; scored in section 4.3 with rider R5
reach of the fixed witness in the product of common-mode rms phase and mismatch	0.2897 at perfect local coherence and 0.2056 at local coherence 49/50; at the registered mismatch 1/1000 that is 289.7 rad against 3.0281 rad for two paths, and 205.6 rad against 0.7097 rad	COMPUTED brackets; "two to two and a half orders of tolerable phase", never the eight orders that separate the white paper's requirement from tabletop isolation
four paths in the parallel geometry (three have no invariant there)	invariant -0.02526 rad, twirled negativity 0.00181, NPT threshold in local coherence 0.9928	COMPUTED and COROLLARY; separability below the threshold NOT BUILT, so no "iff"
committed geometry of record, two paths (450, 250, 5/2)	the record's anchors regress by three legs; the three-path rows there are own extension rows of the pilot, data only	regressions

Data rows that the two adversarial legs added, re-certified by the finalization before they entered the note; none forms a verdict and none re-scores a cell. (1) Behind the "NOT COMPUTED" of rider R11: at the allowance the best-witness margin of the three-path STATE is 0.0632 to 0.0759, above the two-path margin (0.0450 to 0.0444) at every registered split; it uses coherences that common-mode noise does not spare, and the registered convention defines no variance constant for a general witness, so no count is formed. (2) The equal-resource comparator: the same 20 um register used as a two-path register on its outer paths needs 386 to 594 shots per setting at the allowance, so against it the fixed witness costs 90.2 to 354.6 times more; on the white paper's own hardware the three-path register is the equal-span row, 319.6 to 694.3 times the two-path count, with no certified positive at local coherence 49/50. The outcome word is the same against every comparator, and stronger (rider R11). (3) The shield (HAND, the steelman leg's static estimate, re-derived by the finalization from its stated premises): the benchmark's closest approach of 30 um exists only behind a shield that the model does not contain; a shield midway acts on the two registers with opposite sign, and for that channel alone the estimate gives an effective mismatch of 0.0118 and a reach near 30.1 rad where the registered mismatch gives 205.6 rad. (4) Tilt: "three paths in a line" is an alignment requirement; the invariant vanishes at a tilt of 36.68 degrees, and the multi-path designs that the note cites set the linear geometry aside.

What a positive and a null on the protected sector certify (the note, section 7; rider block of section 0.3). *A positive.* The fixed witness is the partial transpose of a positive operator, so its separable bound is sound with no model premise, and a classical channel on a product input cannot produce a negative value (the mandatory control P-R-ctrl: 48 exact channel rows of the pilot and 48 of the gate's own construction, no negative eigenvalue). The conclusion of Theorem W then follows only as a CONDITIONAL corollary (repair R3 of the gate): once premises W1 to W6 and clauses 2 and 3 of Definition 1 are re-established for a three-path register at the benchmark, which no leg did and which the experiment owes. It certifies nothing about the mediator beyond Theorem W's disjunction. *A null.* Theorem W' does not transfer: its unconditional clause is about the second difference, which the protected sector does not see. Inside the model, at matched spacing, a null at certified local coherence bounds the modulus of J (below 0.4772 of its Newtonian value at local coherence 49/50, below 0.2341 at 99/100); with a mismatch the bound is weaker (0.5075, 0.5991 and 0.9713 of the Newtonian value at products 1/20, 1/10 and 1/5), and it bounds anything at all only if the witness is read with the phases of the state. Those last two clauses replace a sentence of the draft that the rigor leg found false as worded (its defect D-1) and add an item that the finalization found by its own reading; they are certified by the finalization and have had no adversarial reading after the amendment. Outside the model a null certifies nothing. A null of either kind never feeds a classicality sentence.

2.2 Column L: the law column (static, tree-level, one registered family; every bound CITED)

Family of record: Newton; one Yukawa term; the Stelle form, with members M1 (scalar decoupled, strength -4/3), M2 (equal ranges, strength -1) and M3 (spin-2 term decoupled, strength +1/3). Readings: rho_2, the two-path second difference at (40, 10), and rho_3, the three-path invariant J at (50, 10), each as a ratio to its Newtonian value. With x = exp(-10 um/range) both are exact polynomials, because every distance is a multiple of 10 um.

The window that the cited limits leave open (Lee et al., PRL 124, 101101 (2020); nothing re-derived). Two readings of one measurement, both printed wherever a window sentence stands: on the modulus curve of the published figure (CURVE-READ by the pilot's literature leg, confirmed by an own re-read of lane L2) a term of strength 4/3 in modulus is open below 35.742 um; for the negative sign, which is the sign of the registered spin-2 term, the sign-resolved limits put the edge at about 24.7584 um (TABLE (thesis): a table of the first author's dissertation read by lane L2 from a web-archive copy; a LOCATOR between two printed rows, at 22 um allowed and at 25 um excluded). Doc 33 used the PRINTED 38.6 um, which is the figure for strength 1 in modulus. Standing of the narrower window: one scout leg, no adversarial reading of the source (the rigor leg checked the arithmetic on the lane's transcription and opened no source; the journal's Supplemental Material is NOT READ). By the assembly rule no cell was re-scored from it. KR-3 is NOT FIRED: the item narrows the window and is the 2020 measurement's own table, not a newer bound; levitated-sphere, Casimir-shielded and micro-cantilever searches exclude nothing at these strengths. The two-range Stelle form with unequal ranges is NOT BOUNDED JOINTLY by any reading in the record.

cell	value	type
the two-path reading on M1 across the window	0.9413 of Newtonian at 5.84 um (the lower end of the drawn curve); -0.2035 at the modulus-curve edge; -0.0555 at the sign-resolved edge	COMPUTED from exact polynomials; an order-one reading where the committed geometry reads nothing
zeros on M1	rho_2 vanishes at a range of 22.4514 um and rho_3 at 18.1640 um, both inside both windows; at the zero of either the other stands at -0.1276 or 0.1447 of Newtonian	COMPUTED (certified roots)

cell	value	type
least value over all ranges of the larger modulus (M1)	0.0688, at 20.1779 um	COMPUTED
prediction P-R5: the zero curves of the two readings for one Yukawa term of any strength	never meet at any finite range, because A_2 - A_3 = 2x^3 (x-1)^3 (3x+2) exactly; the nine two-path sub-registers of the three-path register against J: nine identities of the same kind	COROLLARY (the nine first typed COMPUTED, then shown to be identities by the gate); TRUE in the strong form: the cited curve is not needed for the verdict
on the zero curve of one reading, the other reading at the far end of the open part	0.0514 and 0.0488 of Newtonian on the modulus-curve reading, which is the size of the record's 5 percent phase-model precision; 0.1081 and 0.0928 in modulus at the sign-resolved locators	COMPUTED lower bounds; data at CITED locators
the committed geometry of record	the largest shift is 0.0205 in modulus (a truncation), under the registered 5/100	SATURATED: the law column is a statement about the benchmark only

The alias rider (repair R1 of the gate), which every null sentence carries. A witness null is a statement modulo 2 pi. For one Yukawa term of free strength the gate located 464 joint aliased nulls with multiples up to 40 (both witnesses exactly null, neither reading zero); the one of least strength sits near 23.3194 um with a strength near +192.86. Lane L2 typed all of them against the published limits: those above about 12 um are excluded; those left open lie between about 6.4 and 11.9 um at strengths of about 800 and more in modulus; 40 lie below the drawn and tabulated ranges and are not covered. The fixed-strength members M1, M2 and M3 have no alias. The former words "no blind point" are withdrawn; the licensed form is "no common zero of the two ratio functions at any finite range", with this rider.

The null rule is the table of section 8.5 of the note (rows N-1 to N-5), entered there with the alias rider and, after the adversarial legs, with two precisions: a joint null excludes the fixed-strength members only inside the cited windows, and for a bench the larger ambiguity of a protected-sector null is geometry and apparatus (tilt, mismatch, the phases of the witness, the shield), not an alias of the law.

What the ladder is worth (the steelman leg's rewording, entered in the note). The two rungs do read different functionals of the registered family. So do any two different two-path sub-registers of one apparatus (fifteen exact identities of the same kind), and at the zero of the benchmark reading a second two-path geometry reads the law with 12.5 to 122.5 times fewer shots per setting than the protected sector (3,203,752 against 26,136 to 254,440). The protected rung is the one that survives a uniform shared force, not the one that a second reading of the law needs. The plot of the two-path phase against the range is occupied in print (arXiv:2609.22501; arXiv:2610.25994); the house's delta in this column is the pair of zero sets and the null rule, and it is small.

2.3 The Gaussian reading (prediction P-R6): one exact finite example, a typed row and never headline

Cited first: Datta and Miao, arXiv:2104.04414 (read in full by the pilot). On one registered example (two unit oscillators, the bilinear coupling 3/8 q_A q_B, vacuum inputs, time pi, a white force on the common mode that adds n to its covariance; exact rationals) the two masses are separable for every n of at least 3/2 while the differential momentum stays at 1/8 against a vacuum value of 1/2, and a channel of local unitaries plus shared classical randomness reproduces the whole covariance matrix there. Both clauses of P-R6 are TRUE on the registered example; typing by the gate: "exhibited by construction", machine-checked exactly. What it licenses and no more: on this example the squeezing of the differential mode is a diagnostic of a coupling model and not a certificate that excludes classical channels. One example, one time, matched oscillators; the classical channel uses local squeezers that no named model supplies; the cited paper's own sentence concerns the case without shared noise and is not contradicted. Printed neighbours of single clauses exist (lanes L3 and L4: arXiv:2311.00563, arXiv:2210.13169, arXiv:2507.12899); no posting was found that prints both.

2.4 Column M, first data section: the mediator column (mandate M-R7; assembled, never headline)

Riders of the section, first. Source: `relative_mediator/MEDIATOR_COLUMN.md`, one leg at assembly grade with no adversarial verifier of its own; the rigor leg later confirmed by own routes every size below that has a stated formula, the duty cell included, and did not reproduce the rows that are transcriptions (they are named after the table). Every row is DRAFTED for the block of doc 30a and NOT ENTERED; no status word of doc 30a moves (SATURATED stands). A size in this column is never a certificate of anything; nothing here is a sentence about the quantization of the mediator. "The committed geometry" is the two-path design of record; the 2026 benchmark was NOT EVALUATED by this lane (no ramp profile of record).

The column, verbatim from its leg:

cell	size at the committed geometry	type
SAT-1, as committed	(25/63) x = 8.378812e-14 rad (PIN) = [8.37719e-14, 8.37758e-14] rad (CODATA); peak at 0.667 ps, exactly 0 from 2.33 ps	SATURATED (carried); regression COMPUTED
SAT-1 ceiling in Planck units (R-3)	the discrepancy is strictly below 2 x for every positive 4-tuple of separations and 2 x is approached, never attained; 2 x = 4.222921e-13 (PIN) = [4.22210e-13, 4.22230e-13] (CODATA); collinear family max(2u^2/(1+u), u/(1+u)) < 1; 0.1 rad would need m = 0.5020 m_Planck (1.09e-8 kg) read inside 2.33 ps	COROLLARY (two lines); numbers COMPUTED
SAT-2, as committed	d/c = 0.667 ps at 200 um; last light-crossing 2.33 ps	SATURATED (carried); regression COMPUTED
SAT-3, as committed	1.3e-57 quanta per run in the record's E/(hbar omega_bar) convention ([1.293e-57, 1.294e-57]); exact N_Delta = [5.390568e-58, 5.390811e-58]	SATURATED (carried); regression COMPUTED
SAT-4, as committed	0 in every mass-side statistic (the polaron identity)	SATURATED (carried); CITED from the record, not regressed
SAT-5, as committed	tau_pi = 1680 pi/211 s = [25.013628, 25.013629] s	CITED from the record; regression COMPUTED
SAT-6, as committed	witness visibility [0.86479012, 0.86479013]; Bell-test visibilities 0.98799697 and 0.956106	CITED from the record; first number regressed, the two others transcribed
the commutator (Bargmann) phase, as printed (R-B1, R-B2)	B = (X|G_PJ|Y); B^2 <= 16 Gamma_X Gamma_Y; proxy maximum 3.2e-60 ([3.1571e-60, 3.1572e-60])	CITED (2610.35253, read in full); regression COMPUTED
the same at the committed protocol	exactly 0	COROLLARY of print; COMPUTED exactly
its printed ceiling at the committed geometry (K-LEVER)	4 sqrt(Gamma_X Gamma_Y) = [2.695284e-58, 2.695406e-58]	COMPUTED (CITED bound)
a delayed variant of the committed sequence (data)	sup over the delay [2.128649e-58, 2.128746e-58] at a delay of 0.110469 s; budget ratio [0.78976817, 0.78976818]	COMPUTED

cell	size at the committed geometry	type
the 1/c^4 datum, its scope (R-DQ6-3)	collinear layout only; exact value -27/14,000,000,000 in the toy's units, of which +27/4,000,000,000 from the four junctions; relative size [4.2081e-47, 4.2082e-47]	COMPUTED
the transverse 1/c^2 term (R-DQ6-3)	[3.72985774087e-4, 3.72985774088e-4] in the toy's units; relative size [2.5501e-24, 2.5502e-24]	COMPUTED
the autonomy signature S3 (the duty cell)	**S3 = [8.070113e-26, 8.070114e-26]** (K-LEVER; relic benchmark state, phase-averaged; exponent form identical to seven digits; trace distance on the committed product input [2.435372e-26, 2.435373e-26])	**COMPUTED** from CITED functionals with CITED benchmark inputs
S3, thermal preparation at 1 K	[6.334762e-48, 6.335048e-48]	COMPUTED from CITED functionals
S3, vacuum reference	Gamma_vac(worst pair) = [2.695284e-58, 2.695406e-58]	COMPUTED (it is SAT-3 in exponent form)
S3, local-recoil convention	0 at quadrupole order	COROLLARY of print
S3, the record's lever rule	relic response 3.99e-19 at L = 1 m, 3.99e-13 at L = 1 km	COROLLARY; COMPUTED
companion: a deterministic classical wave (never part of S3)	a local phase of at most 8.001e-8 rad per 1e-21 of strain (between 6.6332e13 and 8.0009e13 rad per unit strain)	COMPUTED

> **In three sentences.** With the autonomy cell filled, every discriminator of the saturation map carries a number and none moves a status word of doc 30a section 6. The new sizes are a ceiling of 4.22e-13 for the light-crossing transient, exactly 0 for the commutator phase at the committed protocol (at most 2.13e-58 for a delayed variant) and 8.07e-26 for the autonomy response (3.99e-13 under the record's most pessimistic lever). The autonomy response is one that a classical stochastic field reproduces exactly.

What the leg reports first, in its own order: one registered regression of print did not hold (arXiv:2607.20867 prints 4.60e-7 for the ratio of the benchmark mass to the Planck mass; own arithmetic gives 4.59e-7; a print-side rounding that enters no cell); the kind of number of the duty cell is already in print for a proxy (Table 1 of the same paper), so the cell is a printed functional evaluated at the committed geometry and not a new kind of result; the duty cell is bound to a bookkeeping convention by more than twelve orders (8.07e-26 in the record's own lever convention; 0 at quadrupole order if each mass recoils against its own trap centre; 3.99e-13 under the record's most pessimistic lever rule); at the committed protocol, which is simultaneous and time-symmetric, the commutator phase is exactly zero, and the scouts' "about 1e-60" is the printed proxy's maximum over delays; one record-side figure for the owner (doc 05 section 5's frequency-resolved 5.0e-58 is 5.39e-58 for the committed sequence).

Riders that travel with the rows. The ceiling of the first row bounds the discriminator between an instantaneous gate and anything retarded, which is not the discriminator between a mediator and its absence; "the mediator question opens only at the Planck mass" would over-read it and is not licensed. The autonomy response is a signature of autonomy and never of quantization: every registered preparation is Wigner-positive and is reproduced exactly by a classical stochastic field (CITED: Matsui, arXiv:2610.35253, Theorem 1). Its inputs are printed benchmarks, not measurements, and its identification with signature S3 is a registration of the lane, not a committed definition. Rows that the rigor leg typed NOT-REPRODUCED and that therefore stand here as transcriptions with no verdict: the polaron-identity row (no number), the Bell-test visibility 0.956106, the local-recoil zero, and the statement that the cited functionals are printed as registered (read in full by the lane alone). One digit of the lane's own report (a delay ratio) is on the owner's list.

2.5 Column M, second data section: the control universe (mandate M-R6; a corpus-bridge lane, never headline)

The dictionary rider, verbatim from the lane's verifier; it is fused into every sentence of this section:

> **The dictionary rider, fused into every sentence below.** "The control universe" is the Turaev-Viro theory TV_k (T_k = SU(2)_k times its mirror) read as exact 2+1 quantum gravity: Euclidean signature, positive cosmological constant, compact gauge group, finite level, point masses as punctures (a spinless mass is the object (a,a); the chiral rows concern the objects (a,0)), which-path labels as external qubits. It has no local degrees of freedom and no Newtonian limit; the same state sum is a string-net phase. The Z_2 double (the toric code) used for the lattice rows is the abelian flat-connection model; it is not a member of the TV_k family (TV_1 is the double of the semion theory), and its rows travel as "on the Z_2 double". No sentence here is a sentence about gravity in 3+1 dimensions. A null there never feeds a classicality claim, in that universe or in ours; a Clifford-hull row never feeds one either; no sentence says that gravity needs a mediator or does not.

Standing. Author: `relative_control/CONTROL_REPORT.md`, own exact engine (the field of roots of unity as integer vectors; q-Racah F-symbols; a second route with no F-symbol) and an own stabilizer tableau for the Z_2 double; every row registered in advance as a corollary, a control, a regression, cited or data; 123 flags of record, 122 passed, the one failure being the clause of its own registration that it had registered as expected-refuted before the script (25 of 59 mixed-label sectors are one-dimensional). Verifier on a different engine: `relative_control/verify/VERIFIER_REPORT.md`, tensor powers of quantum-group modules with the universal R-matrix (no F-symbol), a commutation calculus for the lattice rows, 110 flags passed and none failed; ruling PASS WITH REWORDINGS: no computed row contradicted, no hand lemma failed, the exact null and the typing against Definition M not broken inside their stated premises, eleven wording items each with a replacement text. NOTE grade and a duty: nothing in this section is a finding, and nothing is a sentence about how gravity works in our world.

Four sentences, each a conjunction of corollaries with its encoding. The first and the fourth were CONFIRMED by the verifier and are verbatim from the author; the second and the third carry the verifier's replacement texts.

> - **S-C1 (the null; U-1, Z-1).** In the control universe two which-path interferometers in disjoint labs end in a product state at every level and for all masses, whenever the fusion register is itself a product across the lab cut (for instance every pair created inside its lab): an exact null, by isotopy invariance and locality, in a quantum theory. On the Z_2 double every one of the 1,554 unlinked placements is null and every one of the 702 linked placements gives one ebit.

- **S-C2 (the linked gate; constraint presentation), as reworded by the verifier.** Masses whose worldlines link are acted on by a gate that is a function of the closed braid alone, CZ(Delta_c) at fixed total charge, entangling iff 4r does not divide E (68,050 of 71,070 rows to k = 40); it fails Definition M at M1, M2 and M4/S2 and is a direct gate with no mediator in the sense of Definition M, outside Theorem W's premises; its onset is a step at closure, with no rate. In the lattice presentation the edge where the worldlines cross is a local quantum memory. Scope clause of the verifier: the clauses M1 and S3 hold as worded for worldlines confined to a disc.
- **S-C3 (the traced gate), as reworded by the verifier.** With the pair charge not read, the which-path channel is ((1+M_ab)/2) identity + ((1-M_ab)/2) CZ at every level, in T_k and (with M_ab^2) for spinless masses in TV_k: inside the hull of Clifford unitary channels, and entangling iff M_ab is not 1 for chiral masses and iff M_ab is neither 1 nor -1 for spinless masses, whose scalar is M_ab^2: the simple current with an odd partner gives the Clifford CZ in the chiral case and the identity in the spinless one (420 label pairs with k <= 40).

> - **S-C4 (the fixed-charge gate; D-1 to D-5).** At fixed charge the gate is Clifford up to local unitaries exactly on a divisibility set: 2r | E for chiral masses (4,539 of 71,070 rows to k = 40), 2r | c(c+2) - c'(c'+2) for spinless masses, where it is the identity on every spinless joint charge.

The one sentence that column M takes from this section. Doc 33 section 9 words the control universe as one "in which the experiment is exactly null and in which Theorem W's second reading is inhabited". The first half is S-C1. The second half must not travel bare; in the verifier's form it reads: and in which, with the constraints imposed, a carrier-free gate of the kind reading (II) names exists for linked worldlines, outside the theorem's premises. The antecedent of Theorem W (a certified positive for labs in disjoint regions) is never met there, so the theorem never fires and that universe cannot type its disjunction; the null there never feeds a classicality claim, which is the point of the exhibit.

What no row licenses, verbatim from the author (confirmed and adopted by the verifier):

> **Not licensed, by any row.** Any sentence about 3+1 gravity. "Gravity needs no mediator" in any form: the printed sentence of Carney (section 6) is about entanglement generation in d = 2+1, and in 3+1 the same paper argues for radiative degrees of freedom under its assumptions. Any classicality reading of the null or of a Clifford-hull row. "Reading (II) is inhabited" bare: what is inhabited is a gate that fails Definition M by slaving, for linked worldlines, outside the theorem's premises; a certified positive at separation typed as a direct gate does not exist there. Any law for the three-body scalar cells. Any closed-universe sentence beyond the registered cells.

Rows that carry no sentence here, by rule R2: the registered sentence U-1 as first worded (false without its register proviso; S-C1 carries the proviso); the registered clause BR-1 on the mixed-label cells (refuted as worded, reported first by the author); the cited theorem behind the fusion-register row D-6 and row 5 of the drafted rider R-M-2 (read by neither leg: only its regression was reproduced); the author's F-symbol battery rows as such (not reproducible on the verifier's engine by construction; every gauge-invariant consequence was confirmed). Exhibits that stay in the lane's files with the verifier's replacement texts and are reproduced nowhere: the three-body clause table (a mediator in the sense of Definition M there is a third mass, not a gravitational degree of freedom), the closed-universe cells (rider material for Paper F and nothing more), the two sector encodings. Corrections of scout and doc 33 wording that the lane hands to the owner: two drafted riders contradicted each other as bare sentences and are both true, each in its own sector encoding; "Theorem M's exception set" is Paper M's Proposition on nonlocal Clifford exceptions; the phrase on the second reading above. Not done by either leg: no non-abelian lattice (the blockability statement beyond the Z_2 double is an operator identity plus the traced-channel rows), no doubled engine (statements about the doubled theory are obtained from chiral ones by products), no level above the registered ranges. The drafted riders for Papers A, B, F and M are in `relative_control/DRAFT_RIDERS.md`; none is entered, and none should be before the verifier's replacement texts are applied.

2.6 The co-runner PRE-Q (mandate M-R8 (i)): a data section, with its riders

Riders of the section, first. NOTE grade. The object is a no-go inside one approach to quantum gravity (causal sets) and inside the rules of one paper (Srivastava and Surya, arXiv:2603.25503). No sentence here is about the continuum, about what kind of thing spacetime growth is, or about gravity in our world. A second party works on the same question (Y. Xu, arXiv:2607.26672, cited first for its partial results). **The co-runner did not return SURVIVOR; KR-7 has not fired.**

The verifier's ruling (`relative_preq/verify/VERIFIER_REPORT.md`: CONFIRMED, with two listed wording defects that change no verdict), verbatim:

> - The typed outcome stands: **NOT-DECIDED-BELOW-CAPS**, with STRICT C-ALL, FULL C-ALL, GREG C-HEIS. No SURVIVOR under any reading; **KR-7 has not fired.**
> - Theorem Q is correct as proved: the twenty relations are relations of the framework, the proof holds line by line in my own derivation, and no counterexample exists in seven exhaustively scanned matrix algebras. Its statement overreaches in one clause (D-1) and its corollary lists too few hypotheses (D-2). As worded both statements are false (exact counterexamples in section 2), so the theorem text must not travel unrepaired; each is repaired by one sentence and neither touches a verdict.
> - What the label hides, said so that it is not lost: under the printed Bell rule of SS ((103), and (103) with its equal-size clause (104)), with the other two rules in the working forms the paper itself uses, the question is closed by a theorem. The third reading, GREG, is not a reading of the printed rule (section 4, row 5); it is the sub-family that the derivations of SS happen to use. The outcome is NOT-DECIDED only because the sealed rule asks for a theorem under all three.

The only licensed wording, verbatim from the verifier:

> **Licensed sentence (whole, with its riders).** For the quantum sequential growth rules of Srivastava and Surya (arXiv:2603.25503), with one invertible transition operator per class of transition, the Markov sum rule and general covariance imposed as operator identities on two-step diamonds without path phases, and causal-past ordered Bell causality (103) taken linearly and by its letter (every pair of transitions out of one parent with a common spectator and unequal precursor sizes, bound to every pair obtained from it by deleting common spectators): twenty relations among the transitions out of causal sets with at most three elements force the seventeen operators that occur in them, Q1, Q2 and Q3 among them, to commute, in every unital associative algebra; with the relations of every level the transition algebra is commutative. Under the restriction to pairs with a gregarious member, which is all that the derivations of SS use, nothing is decided beyond two-step single-character blocks through level 4, and no non-commutative solution was found that survives level 4. Typed outcome by the registered rule: NOT-DECIDED-BELOW-CAPS; no SURVIVOR. *Riders, fused:* NOTE grade, never a discovery claim; one approach (causal sets); the rules of one paper as read here; a second party works on the same question (Y. Xu, arXiv:2607.26672, cited first for its partial results); a no-go for one route to a non-commutative growth law; not claimed for the BASE convention (a pair bound only to its base pair), for vector-level covariance, path phases, singular operators or non-linear Bell causality; levels and dimensions as printed; no sentence about the continuum, about what kind of thing spacetime growth is, or about gravity in our world; licensing is never posting; release is the owner's call.

By rule R2 two statements of the author's report carry no verdict as worded and are not reproduced here: the conclusion clause of its Theorem Q (it concludes for thirty operators; the twenty relations contain seventeen of them: an exact counterexample to the statement as worded exists) and the hypothesis list of its Corollary (two base instances that its proof uses are not listed: an exact counterexample exists). Each is repaired by one sentence and neither touches a verdict; the theorem travels only in the licensed sentence above. Typed data of the verifier that carry no verdict either: one comparison by value with the other paper's printed residual (VOID as a test; NOT MATCHED), one triangular search (SAMPLE: its cap fired), one regression that failed on a degenerate registered draw and was repaired by a dated addendum (the FAIL line stands in its log).

Reported first by the author, and confirmed: the ground is occupied. The one paper that cites the anchor carries a section on this very question, with partial rigidity theorems, and lists the general statement as open; the scout and the judge had counted that citation and not opened it. Both legs price the scoop risk HIGH, not the "LOW to MEDIUM" of doc 33; lanes L3 and L4 found the cited companion manuscript still unposted on 2026-11-11 and name it as the watch item. What stays open, named so that it is not lost: the restricted reading (pairs with a gregarious member) beyond two-step single-character blocks and at all levels; the theorem under the base-only convention of the other paper's machine systems (not claimed); covariance on vectors only. Whether a note on this is wanted, and any courtesy note to the authors about a misprint candidate, are the owner's calls and never an agent's.

2.7 The scout lanes after the gate (mandate M-R3; one leg each, scout grade, no adversarial re-verification)

L1, prior art at full-text grade (`relative_lanes/L1_prior_art.md`). Gating question: is Theorem R, or its closed form, or the statement that two paths are left separable while three keep entanglement, printed anywhere, in any vocabulary? Ruling by the registered letter: no SCOOP and no BRACKET; KR-1 NOT FIRED. Reported first by the lane: both halves of the two-against-three contrast follow by substitution from one 2005 paper (Li and Xu, arXiv:quant-ph/0504228: its two-qubit concurrence vanishes identically on the two-path gate state, and its two-qutrit criterion gives a negative root on the three-path gate state exactly when the invariant is not zero modulo 2 pi); a 2006 sentence prints the finite-strength complement of the two-path half (Roszak and Machnikowski, arXiv:quant-ph/0507027); the two-path behaviour under partial shared noise is a printed closed form (next lane); the two-qutrit "collective dephasing" literature under the same words uses another map, whose bound-entanglement results must not be imported. Strength of the absence: across the pilot's literature leg and this lane 102 texts were fetched and netted on every page, most at claim grade and few in full; it is a net-grade and claim-grade absence and not a proof, and the lane prices a printed statement of the two-path half in words, somewhere in the older journal literature, at about 15 percent.

L2, the short-range data as cited (`relative_lanes/L2_short_range.md`). The pilot's reading of the modulus curve is confirmed by an own route (35.7358 against 35.742 um); its rider "sign-resolved bounds NOT CHECKED" is discharged through the first author's dissertation, and it moves the edge that column L uses (section 2.2): the lane's one disagreement with the pilot's datum, reported first. KR-3 NOT FIRED, with one NARROWS item. The vertices of the published curve and the typed alias table are now in the record.

L3 and L4, occupancy, citers and triggers (`relative_lanes/L3L4_occupancy.md`). No trigger fired; the six citer lists of M-R9 are unchanged. Reported first: the anchor paper of M-R9's own list prints the two-path cell. Wang, Pedernales and Plenio (arXiv:2611.05044 v1, 2026-11-03), eqs. (A30) and (A31) of the Supplemental Material, give a closed-form concurrence for the two-path pair under local plus correlated dephasing; under an exact dictionary the two two-path entries of cell C5 at matched spacing and hand item H-C1 of the pilot are evaluations of it, and its eq. (A24) gives the record's battery anchor for the path-dephasing threshold (0.8557 at the committed phase), which must be cited there and not claimed. The judge and the pilot's literature leg had held this text at grep grade. What is not printed there: the complete, fully correlated limit and the separability of its state; unequal amplitudes; mismatch at finite noise; three or more paths with a non-bilinear table; any witness or shot count; anything of the law column. Further must-cites that no earlier report of the program named: Hebib, arXiv:2511.11879 (the common-mode generator in Lindblad form; not indexed on INSPIRE, which is why four INSPIRE-first legs missed it); Feng and Vedral, arXiv:2611.12229, appendix H 2 (a dynamics test that tolerates shared classical phase noise: the same object, another question); for the Gaussian row arXiv:2311.00563, arXiv:2210.13169 and arXiv:2507.12899; for the ladder Kumar et al., arXiv:2206.12897. The assembly certified the identity behind the two cited rows by an own derivation before it typed them CITED.

2.8 Not computed, not built, not checked (so that no later sentence can imply it)

- The best three-path certificate against the best two-path certificate at the allowance, as a count (rider R11 says so; the margins are data).
- Separability below the four-path parallel threshold; uniqueness of the zero of the parallel reading; a joint bound on the two-range Stelle form; partial common-mode noise and shot counts on the parallel rung.
- Premises W1 to W6 and clauses 2 and 3 of Definition 1 for a multi-path platform; the platform sentence as a three-path scheme (three first-order obstacles are named at hand grade); the bound of the witness estimator under a miscalibration of its settings; a three-outcome single-shot readout.
- Every hand estimate of the steelman leg as physics (typed HAND); the band-averaged shield estimate (not re-derived, not printed in the note).
- Any bounded reproduction; any closing audit; the 2026 benchmark in the mediator column; any second design point there.
- An adversarial reading of the amended note; of lane L2's dissertation table; of the mediator column beyond its arithmetic; of the sources behind any CITED row.
- The audit of file times of the earlier legs beyond the data row SC-4 of this leg; the gate's own stage of that kind could not be repeated from a copy and was NOT RUN at the assembly and at the finalization.

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3. Verifier rulings (each by its own registered rule; this document neither upgrades nor downgrades any of them)

3.1 The pilot verifier gate M-R2: PASS

> **RULING: PASS. The pilot stands, with eleven repairs, each verdict-neutral (section 5).** KR-ctrl does not fire by this leg's own routes: every anchor of the battery regresses and four classical channels of this leg's own construction, on a product input, give no negative eigenvalue of the partial transpose anywhere. No certificate of record of the pilot is contradicted by an own certified result: 173 own checks, among them all 64 rows of the shot-count grid, all 90 rows of the budget family, all 93 entries of the law table and all 36 threshold brackets, reproduce the pilot digit for digit or bracket for bracket. No row typed COMPUTED carries a verdict that was decided at its freeze without the pilot having registered the decider first. Every registration precedes the scripts it governs and the readouts of its cells (least gap 38.6 s; no order rests on sub-second times). No rule changed after a readout. **KR-0: HOLDS** (the leading branch: a note, not a front). **KR-2: NOT FIRED. P-R2 is scored TRUE by this gate**: the proof for general n was checked line by line and no gap was found.
>
> The typed PRELIMINARY outcome of `PILOT_REPORT.md` is confirmed word by word and is no longer preliminary in its first word: **NOTE-BY-LEMMA** (Theorem R holds by both legs, to n = 12 as registered, to 14 by this leg's lattice code, and for every n by the checked proof); EXOTIC-ROW not typed; **LADDER-INDEPENDENT**; **PROTECTION-DOES-NOT-PAY** at the benchmark under the white paper's stated allowance for every registered split, with P-R4 TRUE beside it; SCOOPED-CELL not typed. Program grade NOTE: nothing in this ruling is a discovery claim and no sentence of it may be read as one.

Its eleven repairs, each proven verdict-neutral there and each folded into the note: R1 the alias rider; R2 the clause on the printed cubic of Li and Xu (the printed quadratic term does not reproduce the root, the trace does; the verdict needs only the sign of the constant term); R3 "verbatim" struck; R4 typing (the outcome word decided at the sealing of the budget rule by a registered hand item, counts COMPUTED; the Gaussian cell exhibited by construction; the ladder word and the nine same-apparatus rows COROLLARIES; the "iff" of the threshold a corollary of a lemma for every J); R5 the riders of P-R4 (rider R5 of section 0.3); R6 the status line of KR-0 is wider than its letter and says so; R7 one digit that is a rounding; R8 the nine-setting two-path total is NOT DERIVED; R9 corrections for the owner's fold; R10 procedure (a development log for every script of record; rule files after their addendum); R11 what the outcome word compares (rider R11 of section 0.3). Its decided-at-freeze test, by a rule sealed before any of its scripts: no row typed COMPUTED carries a verdict that was decided at its freeze without the pilot having registered the decider first.

3.2 The certificate-rigor leg on the note (M-R5): PASS WITH LISTED DEFECTS

> **RULING: PASS WITH LISTED DEFECTS.** No defect touches a verdict, an outcome word, the truth value of a prediction or a printed digit. Four wording defects (D-W), two of them with a numeric clause, are listed in section 2 with replacement texts. No printed number of the note is without a source. Every statement and every cell that this leg could reach by an own route is CONFIRMED: 298 own checks in six logs of record, 0 FAIL. Theorem R was not broken:

> no exotic table, no bound-entangled sector found, unequal amplitudes and mixed registers included. What this leg did not reproduce is listed in section 6 and carries no judgment.

The four defects and their fate. D-1 (the bound that a protected-sector null certifies was attached to the whole reach; it holds at matched spacing only): the sentence is replaced in Final v1.0 (section 2.1 above). D-2 (two "between" phrases built from truncated digits, each false as an interval): replaced by the four figures. D-3 ("80 times the noise-free two-path count" divides by a count taken at local coherence 49/50; against a pair with no noise at all the factor is 127.5): a precision stands beside every printing of rider R5, here in section 0.3. D-4 (the character map of the verbatim blocks was stated incompletely): completed. By rule R2 the four statements as drafted carry no verdict; their replacements were certified by the finalization and have had no adversarial reading after the amendment. NOT-REPRODUCED by this leg, with no judgment in its sealed vocabulary, and entered in this document only as data of the leg that owns it: the enumeration counts of the pilot and of the gate and the classical-channel rows (regenerated at the finalization from a fresh isolated copy: 17 of 17 logs identical); every reading of a paper, of the dissertation table and of the published curve, and every quotation (the type CITED stands; the pages were re-checked); alias typings 1 and 2 beyond a recount (regenerated and re-typed at the finalization: 464 of 464 labels); the engine rows of the control universe (verified by that lane's own verifier); the transcription rows of the mediator column; the triggers. The "rigor" in "rigor leg" is the name of the leg's registered routes (exact and interval-certified), not a grade above the note's.

3.3 The experimentalist steelman on the note (M-R5): PASS WITH REWORDINGS

> **Leg verdict (rule sealed before any script): PASS WITH REWORDINGS.** No cell of the note is wrong under the note's own premises (battery 11 of 11, among them all 27 entries of the allowance table of section 6.1 and the nine same-apparatus identities of section 8.3, EXACT). Of thirteen headline sentences: 7 LICENSED, 5 REWORD-TO, 1 OVER-REACH (the advice in the one-line summary for the collaboration). The note's leading finding, that the protection does not pay, stands and is conservative: every attack below makes it stronger. The path-diagonal model does not survive the bench as a description of a shielded Stern-Gerlach pair, in three named respects, each sized; the rider block already says "outside the model" for most of them but does not name the two that matter most (the shield, and the middle path of a three-level register).

Per headline sentence (the list was closed in its registration): LICENSED as drafted: the title line and leading finding, that is the outcome word with rider R11 (it found them conservative: against the equal-resource comparator the factor is larger), the Theorem R sentence, the factor 23.2 to 57.7, the local-coherence sentence, the certification sentence, the prior-art sentence, the platform sentence. REWORD-TO, each folded: the window of P-R4 (rider R5, with the shield), the law sentence (the ladder exists inside the two-path rung), the rider block (shared is not thereby common-mode; force histories, not masses; the middle path), the "fallback" reading ("would pay only for"), the mismatch sentence. OVER-REACH, withdrawn: the advice at the end of the note's one-line summary to keep the three-path reading as a fallback and as a second reading of the law; the record does not carry it. Its own verdict on the model: the path-diagonal model does not survive the bench as a description of a shielded Stern-Gerlach pair, in respects that it names and sizes as data (none entered as a number except where the note says so); and one point for the note: the block that carries the protected negativity is untouched by every shared noise of translation type, not only by a uniform force. All of its quantities are data at float or hand grade and re-score no cell.

3.4 The finalization of the note: Final v1.0

> **Typing of the note (rule R1.4 of the registration): Final v1.0.** Both adversarial legs returned (rigor: PASS WITH LISTED DEFECTS; steelman: PASS WITH REWORDINGS); every repair entered is verdict-neutral (invariance check K-3 CLEAN on the final text); every load-bearing item was folded from the record with its certification passed; the regeneration returned 17 of 17 logs identical; no trigger fired at the start or at the end. No item is HELD.

Its checks on the final text: the note equals, byte for byte, its patcher's output on the pre-image that both legs reviewed; every verbatim block, every table row of the outcome and prediction tables and every long number of the draft is unchanged except two registered rows of the null rule; 64 of 64 certifications; a control of the checkers by 13 mutations. Its own item F-P1 (a null bounds the modulus of J only for a witness read with the phases of the state) was found by its own reading and registered by a dated addendum before its certification script existed; neither adversarial leg ruled on it.

3.5 The control universe's verifier: PASS WITH REWORDINGS

> **Leg ruling: PASS WITH REWORDINGS.** No computed row of the author is contradicted. No hand lemma fails. The exact null and the typing against Definition M are not broken inside their stated premises. Eleven wording items need a scope clause or an encoding (section 5); every one has a replacement text. No rider should be entered before those texts are applied; entering is the owner's call.

Applied in section 2.5: the two reworded sentences, the dictionary rider, the reworded sentence for column M. Its two scope facts about the null outside its stated premises (with a register entangled across the lab cut, two paths per lab stay separable by a spectral argument and three paths with non-commuting lab-local braids do not; a worldline along a non-contractible cycle reads a global register) are why every sentence on the null carries the register proviso.

3.6 The co-runner's verifier: CONFIRMED WITH LISTED DEFECTS

Quoted in section 2.6. Ruling rule sealed before any of its scripts; own generator written from the paper's source before the author's code was opened; relation sets equal as sets at three levels and three readings; no counterexample in seven exhaustively scanned matrix algebras.

3.7 What stands, at what strength (rule R2 applied)

statement or cell	stands on	strength
Theorem R for every number of paths; no bound entanglement in the gate family	the sealed proof, checked by the gate and read by the rigor leg; three lattice routes; two legs to twelve paths as registered	a corollary of a three-line lemma and a polynomial identity; NOTE grade
the closed forms and the threshold lemma for every J	the gate's lemma, re-derived by the assembly and by the rigor leg	COROLLARY
every cell of column C, the outcome word, sigma* (rider R5: section 4.3)	the pilot's engine, the gate's own routes, the rigor leg's own routes, digit for digit; conventions RULE-N, RULE-B, RULE-SC registered before any readout	COMPUTED under registered conventions; the comparison is the one rider R11 names
the law table, the zeros, the ten identities, the null rule	three legs	COMPUTED and COROLLARY, on one static tree-level family
the window on the modulus curve	two readings of one published figure (the pilot's literature leg; lane L2 by an own route)	CITED, CURVE-READ
the sign-resolved window	lane L2 alone, from a dissertation table	CITED, TABLE (thesis), LOCATOR; no adversarial reading; no cell re-scored
the two cited two-path rows	a printed closed form; the identity certified by the assembly and confirmed by the rigor leg	CITED; that the formula is printed as transcribed rests on two lanes' readings

statement or cell	stands on	strength
what a null certifies, as amended; the bench clarifications	the finalization's certifications	no adversarial reading after the amendment
the mediator column	one leg; arithmetic confirmed by the rigor leg	data; DRAFTED, not entered
the control universe's four sentences	author and verifier on different engines	corollaries, controls, regressions and data of a control universe; no sentence about 3+1
the co-runner's theorem in its licensed sentence	author and verifier by own generators	a no-go inside one approach under one paper's rules; outcome NOT-DECIDED-BELOW-CAPS

4. The typed outcome

"Protected" carries the rider block of section 0.3 in every row and sentence of this section.

4.1 The outcome words of doc 33 section 5, each evaluated by its own text (none ranked; rule R1)

The letters:

> **Typed outcomes of equal standing:** NOTE-BY-LEMMA (Theorem R holds to the registered n by both legs and every cell is typed COMPUTED, COROLLARY, CITED or SATURATED; the note assembles; the leading branch, never a failure); EXOTIC-ROW (a phase table that is PPT and not quadratic at some n: reported first); LADDER-INDEPENDENT or LADDER-DEGENERATE (whether the rungs read different functionals of the law on the registered family); PROTECTION-PAYS or PROTECTION-DOES-NOT-PAY (at the benchmark, under the white paper's stated noise budget, with the split into common and differential noise registered before any readout); SCOOPED-CELL (a printed path-encoded statement: cite; the cell becomes a row).

word	status	basis, with its certificate
NOTE-BY-LEMMA	**TYPED**	"Theorem R holds to the registered n by both legs": to twelve paths by the pilot (`relative_pilot/s3_theorem_r.log`) and by the gate (`relative_pilot/verifier_MR2/v1_lattice.log`), to fourteen by the gate and by the rigor leg (`relative_verify/rigor/r1_lattice.log`), for every n by the proof that the gate checked; "every cell is typed": the cell inventory of the pilot as the gate retyped it (repair R4), with the unbuilt items named as not built and never as cells (section 2.8); "the note assembles": Final v1.0. The leading branch, never a failure
EXOTIC-ROW	not typed	no table that is PPT and not trivial in the registered scope (three legs); the wording item of the header, item (b), is "separable by another route"
LADDER-INDEPENDENT (against LADDER-DEGENERATE)	**TYPED**, a COROLLARY	ten polynomial identities (`relative_pilot/cells/lx_column_l.log` ; the gate's `relative_pilot/verifier_MR2/v5_law.log` ; the rigor leg's `relative_verify/rigor/r3_law.log`); it travels with the alias rider of repair R1 and with the steelman leg's rewording (the ladder exists inside the two-path rung)
PROTECTION-DOES-NOT-PAY (against PROTECTION-PAYS)	**TYPED**, for every registered split	the cell of section 2.1, decided at the sealing of the budget rule by a registered hand item, counts COMPUTED (`relative_pilot/cells/cx_column_c.log` ; the gate's `relative_pilot/verifier_MR2/v4_cells.log` ; the rigor leg's `relative_verify/rigor/r2_cells.log` ; this leg's check A-6 and A-7a); rider R11 travels with it: it compares the fixed protected-sector witness against the best two-path witness, per setting, under RULE-SC; it is not a comparison of the best three-path certificate with the best two-path certificate at the stated allowance (NOT COMPUTED; the noise-free three-path negativity is 8.83 times the protected one); the companion prediction is a different sentence and carries rider R5 (section 4.3)
SCOOPED-CELL	**TYPED on the entry reading**, for two entries of cell C5 and hand item H-C1 only; on the group reading not typed	the letter's consequence ("cite; the cell becomes a row") is executed in the note: those entries are typed CITED (arXiv:2611.05044 v1, eq. (A31)), the identity certified by the assembly's own derivation and confirmed by the rigor leg. The distinction between an entry and a labelled group was fixed by lane L3/L4's addendum after a hand readout (disclosed there), so by rule R1 this document does not choose by a new definition: it takes the letter in the direction least favourable to the program. The group reading, under which the word is not typed because the mismatch columns and every three-path row of that cell are not printed, is printed beside it without a type. The gate did not type this word (the lanes ran after it). The owner confirms the reading (section 7.5)

Read together and without a ranking: a note by a lemma; a negative answer, at the benchmark and under the stated allowance, to whether the protection pays (rider R11); two readings of the law that have no common zero; and one cell of which two entries were already in print.

4.2 The sentence of record: S-R of the note, entered whole with its riders

This leg composes no headline sentence of its own: a new sentence would have had no adversarial reading. The sentence of record is S-R of the note as amended by its two adversarial legs, with the note's own statement of what was licensed and what was reworded. Status: in-house. The amended whole has had no further adversarial reading; an external quotation event owes the closing audit of doc 33 at its untouched reserve and a fresh literature re-sweep; licensing is never posting.

> **S-R (the sentence of this note as amended by its two adversarial legs. The steelman leg ruled its clauses on Theorem R, on the factor 23.2 to 57.7, on the local coherence, on what a positive and a null certify and on the prior art LICENSED as drafted (items HS-1, HS-2, HS-4, HS-6, HS-7 of [S]) and supplied the rewordings of its clauses on the window of P-R4, beside rider R5, and on the law (HS-3, HS-5); the rigor leg supplied the precision on "80 times" (defect D-3 of [R]) and the wording of the null clause (defect D-1), to which the finalize leg added the clause on the phases of the witness (F-P1, with [S] section 4.3). It travels whole, with every rider in it. The amended whole has had no further adversarial reading; licensing is never posting.)**
>
> "In the path-diagonal model of two matter-wave interferometers with n paths each and matched mass times spacing (in a Stern-Gerlach interferometer: matched spin-force histories), complete common-mode dephasing leaves the gravitationally gated state separable iff it is PPT iff the phase table is LU-trivial up to sector constants (quadratic up to sector constants when both registers have at least three paths): a corollary of a three-line lemma, proved for every n; a two-path pair keeps nothing in the complete limit, three paths in a line keep a state governed by one third-difference invariant J unless J vanishes modulo 2 pi, and the parallel geometry needs four paths. At the 2026 white-paper benchmark, which is not a design of record, under the white paper's stated noise allowance and for every registered split of it into shared and independent noise, this protection does not pay: the fixed protected-sector witness needs between 23.2 and 57.7 times more shots per setting than the best two-path witness (a fixed witness against a best witness under a registered convention; best against best is not computed); from a common-mode rms phase of 3/5 rad (12 times the allowance in variance), at local coherence 49/50 and the registered mismatch 1/1000 (the pilot's value, not a design's), the fixed three-path witness needs fewer shots per setting than the best two-path one, and from the two-path threshold near 0.709 rad up to 205.6 rad at that mismatch (a shield midway in the linear geometry alone caps the reach near 30 rad on a static hand estimate of the steelman leg) the three-path design is the only one of the two that still certifies, at 80 times the two-path count at zero common-mode noise and the same local coherence (527.4 times the count of the two-path register on the outer paths of the same

> register), for a register that spans 20 um, twice the white paper's superposition size (at equal span there is no certified positive at that coherence). The protected state needs more local coherence than the unprotected pair (0.9597 against 0.9002), not less. The two rungs read different functionals of a static, tree-level law (on the scalar-decoupled Stelle member their ratios to Newton vanish at 22.45 and 18.16 um and have no common zero at any finite range; neither have any two different two-path sub-registers of one apparatus (fifteen exact identities of the same kind), and at the zero of the benchmark reading a second two-path geometry reads the law with 12.5 to 122.5 times fewer shots per setting than the protected sector: the protected rung is the one that survives a uniform shared force, not the one that a second reading needs; witness nulls are statements modulo 2 pi), inside a window that the cited modulus curve puts below 35.742 um and the published sign-resolved limits below about 24.7 um. A certified positive on the protected sector certifies the disjunction of Theorem W once its premises W1 to W6 and clauses 2 and 3 of Definition 1 are re-established for a three-path register, and nothing about the mediator beyond it; a null certifies, inside the model only and for a witness read with the phases of the state, a bound on |J| that weakens with the mismatch, and never feeds a classicality sentence. The principle is Datta and Miao's (arXiv:2104.04414); at two and three paths the statement follows from Li and Xu (2005) by substitution; the two-path closed form under partial shared noise is Wang, Pedernales and Plenio's (arXiv:2611.05044); the two-path coherence that a shared jitter leaves untouched is printed by Toros et al. (arXiv:2007.15029), and in the complete limit it alone leaves a separable state. Shared noise is not thereby common-mode: a shield midway acts with opposite signs on the two registers (Bulling, Steiner, Pedernales and Plenio, arXiv:2604.22593)."

4.3 The predictions of record, scored against their registration (refuted clauses first; declared parity)

The registration:

> - **P-R-ctrl (MANDATORY).** The battery of M-R1 (b). The teeth: three registered measure-and-prepare channels and one two-way LOCC protocol on the three-path family give outputs that are PPT in every sector; the two-path twirled state is separable for every phase table (the scout's E1). Failure of any clause = KR-ctrl.
> - **P-R1 (the lemma beyond the judge's range).** L_ppt = L_inv with index 1 for n = 9 to 12, and for the mixed registers (2,3), (3,4), (3,5) the PPT locus equals the quadratic locus. **Forecast TRUE about 85 percent**; FALSE = EXOTIC-ROW, reported first.
> - **P-R2 (general n).** A proof of L_ppt = L_inv for every n, checked by the verifier. **About 65 percent**; FALSE = the theorem is typed "computed to n = 12".
> - **P-R3 (the price in local coherence).** At the benchmark (J = 211/1400) the protected three-path state is entangled iff the independent local coherence exceeds a threshold in (0.93, 0.97) (the scout's float value 0.9597), certified by intervals; a closed form for the threshold exists. **About 80 percent** for the interval, **about 55 percent** for the closed form.
> - **P-R4 (does the protection pay; parity declared).** Under Gaussian common-mode phase noise of rms sigma, mismatch 10^-3 and local coherence 0.98, there is a sigma* below 3 rad above which the three-path design reaches a 5 sigma witness in fewer shots than the two-path design at equal closest approach (30 um). **About 60 percent.** FALSE = PROTECTION-DOES-NOT-PAY at the benchmark: a typed result of equal standing, published as the finding.
> - **P-R5 (the ladder on the plane).** For one Yukawa term the zero curves of rho_2 and rho_3 in the (alpha, lambda) plane do not meet inside the region the cited curve leaves open, for the benchmark pair of geometries and for the same-apparatus pair (the three-path register read on its two-path sub-registers). **About 75 percent.** FALSE = a blind point, with its coordinates.
> - **P-R6 (the Gaussian reading, section 5.3 item 3).** For two oscillators with a bilinear coupling and complete common-mode noise the state is separable while the differential mode stays squeezed (exhibited exactly on one finite Gaussian example), and the squeezing statistic is reproduced by a registered classical channel. **About 70 percent** for the first clause, **about 50 percent** for the second. Every branch is a typed row of the table; never headline; the cited paper's own claims are typed against Definition 1 only after its full text is read.
> - **P-R7 (near-corollaries, registered so they are never findings).** Theorem W applies verbatim to a certified positive on the protected sector; a classical channel's output is PPT in every sector; the committed thresholds re-evaluated at the benchmark angle -211/1000 regress the experiment scout's data (F_ent 0.904728; v_DI 0.994501). **About 99 percent.**
>
> **Declared parity.** TRUE and FALSE are reportable on every row; NOTE-BY-LEMMA is the leading branch and never a failure; a refuted forecast is reported first.

prediction	judge's forecast	outcome, as the gate scored it and the rigor leg re-scored it by own routes
P-R7, clause 1 (Theorem W "applies verbatim" to a certified positive on the protected sector)	about 99 percent	**not as registered**: "verbatim" is struck (repair R3); what stands is a CONDITIONAL corollary, once premises W1 to W6 and clauses 2 and 3 of Definition 1 are re-established for a three-path register; the gate's word, which this document keeps, is "a conditional corollary", not "refuted"
the outcome word that doc 33 attaches to P-R4's FALSE branch	about 60 percent for the positive word	**the judge's leaning REFUTED**: the negative word is typed (section 4.1, with rider R11), while P-R4 itself, a different sentence, came out the other way (next row; rider R5)
P-R4 (a sigma* below 3 rad)	about 60 percent	TRUE on the registered primary reading, sigma* = 3/5 rad, printed only with rider R5 of the gate: the registered three-path row spans 20 um, twice the white paper's superposition size, and at equal span (40, 5, 1) there is no certified positive at local coherence 49/50; the window is 3/5 to 205.6 rad at mismatch 1/1000 (certified here on the continuum up to 30 rad by monotonicity, and to 205.6 rad because the two-path state stays PPT); the count is 80 times the noise-free two-path count; at the stated allowance the word is the other one (two precisions of the adversarial legs travel with rider R5: the "noise-free two-path count" there is the count at zero common-mode noise and local coherence 49/50, and 205.6 rad is a number of the registered mismatch 1/1000, the pilot's value and not a design's; a shield midway alone caps the reach near 30 rad on a static hand estimate)
P-R-ctrl (battery and classical-channel teeth)	mandatory	PASS by two legs; KR-ctrl not fired
P-R1 (the lemma to twelve paths; the mixed registers)	about 85 percent	TRUE
P-R2 (a proof for every n, checked by the verifier)	about 65 percent	TRUE (scored by the gate; no gap found by the rigor leg either)
P-R3 (the price in local coherence; a closed form)	about 80 and 55 percent	TRUE in both clauses

prediction	judge's forecast	outcome, as the gate scored it and the rigor leg re-scored it by own routes
P-R5 (the zero curves do not meet in the open region)	about 75 percent	TRUE in the strong form (no meeting point at any finite range); the pilot's phrase "no blind point" is withdrawn for the alias rider
P-R6 (the Gaussian reading, two clauses)	about 70 and 50 percent	TRUE in both clauses on the registered example; exhibited by construction
P-R7, clauses 2 and 3	about 99 percent	clause 2 a corollary, exercised on 96 exact channel rows; clause 3 TRUE (a regression)

The judge's "honest odds" of doc 33 section 5.3, for the record: the pilot returned with its control reproduced (priced about 92 percent); Theorem R was verified by two legs to twelve paths (about 90) and proved for every n within the cycle (about 65); the ladder word came in as priced (about 75), with a rider the pricing did not foresee; the positive outcome word (about 60) did not come in; a printed path-encoded statement of the theorem (about 20) did not surface by KR-1's letter, while a printed closed form for part of one cell did; the note was assembled and went through its two adversarial legs within one cycle (about 80). Nothing at the altitude of Theorem W came in (priced about 3 percent), and nothing here is offered as big alone (about 4).

4.4 The kill criteria of record

- **KR-ctrl (pilot gate, method).** Any P-R-ctrl clause fails: the machinery is broken; stop before any cell; repair dated; re-run.
- **KR-0 (the lesson's own leading branch, transcribed).** Every conjunct of Theorem R is a corollary and every cell closes as a closed form or a cited number: "a note, not a front". The note assembles from the pilot; the two adversarial legs run on the note. Never a failure.
- **KR-1 (printed).** A posting states the path-encoded fact (two paths separable, more paths entangled, under collective dephasing of a diagonal gate): cite; the theorem becomes a row; the cells continue only where they are not printed too.
- **KR-2 (exotic).** A PPT table that is not quadratic at some n <= 12: reported first; Theorem R is scoped to the n where it holds; the exotic state is typed (bound entangled, or separable by another route) before any sentence travels.
- **KR-3 (the window).** A new short-range bound closes the strength-4/3 ranges above 10 um, or the benchmark is superseded: column L falls back to the committed row; the note keeps column C.
- **KR-4 (budget).** One week of build, the verifier gate, two legs; at most two bounded reproductions on the van Hove template (the reach printed by 2609.22501 at the benchmark; the shield-mediated channel of 2604.22593); a third goes to the owner.
- **KR-5 (wording bans).** Any drift toward "gravity is quantum", "gravity is classical", "immune to noise", "decoherence-free" bare for the pair, "the experiment tests quadratic gravity" bare, "loophole-free" bare, or a protected-sector sentence about the mediator: stop the sentence at the licensed wording.
- **KR-6 (trigger mid-run).** MOVW ref. [7], a data timeline or a new published design point: its row enters first; a new design point is added as a further labelled point and never replaces a registered one after a readout.
- **KR-7 (the co-runner).** PRE-Q returns SURVIVOR: stop the co-runner, report first; the owner decides whether it becomes the front.

criterion	status	by
KR-ctrl	not fired	the pilot's battery and teeth; the gate's own anchors and four own channels; the rigor leg's own anchors
KR-0	**HOLDS**: the lesson's leading branch, "a note, not a front". The status line that the gate keeps ("a closed form, a certified number under a registered convention, or a cited number") is wider than KR-0's letter ("a closed form or a cited number"), and the gate says so (repair R6); so does this document	the gate, section 2 of its ruling
KR-1	NOT FIRED by its letter: no posting was found that states the path-encoded fact; two NEAR items and three printed two-path models are must-cites, and two cell entries with one hand item are CITED rows	the pilot's literature leg, lanes L1 and L3/L4; the steelman leg's nets in the bench vocabulary; a net-grade and claim-grade absence, not a proof
KR-2	NOT FIRED; the wording item reported first	the pilot, the gate, the rigor leg
KR-3	NOT FIRED, with one NARROWS item (the sign-resolved edge)	lanes L2 and L3/L4
KR-4	within budget: about one night; the gate; two adversarial legs; no bounded reproduction run	this document, section 0.1
KR-5	no drift found by the legs' wording scans or by this document's check (section 6.5)	the checks of record of each leg
KR-6	NOT FIRED at every re-date, the last one by this leg at 04:01 CET on 2026-11-12	section 0.1
KR-7	NOT FIRED: the co-runner's outcome is NOT-DECIDED-BELOW-CAPS, no SURVIVOR	the co-runner's verifier

4.5 What the result says about gravity, and what it does not

What it says, with its riders. It is a statement about how a pair of interferometers reads gravity, not about how gravity works. Gravity acts on two masses through their relative position alone, and a uniform disturbance falls on both alike. In the path-diagonal model that fact has an exact consequence for the certificate: complete common-mode noise erases exactly the part of the gravitational phase that is quadratic in the path index, which is everything a two-path experiment reads, and it keeps the non-quadratic part, which at three paths in a line is one number, a third difference of the potential across the register. At the design the community now publishes, and under its own stated noise allowance, using that surviving number costs far more than the plain two-path witness (the outcome word of section 4.1, rider R11), needs more local coherence, needs a register twice as wide, and would pay only for an experiment whose uniform shared noise misses the allowance by more than an order of magnitude in variance while its independent noise meets it. For the law itself the result is a property of two closed forms on one static, tree-level family: at the benchmark the two-path phase is an order-one function of a Yukawa or Stelle modification inside the window of ranges that the cited torsion-balance limits leave open (below 35.742 um on the modulus curve; below about 24.7 um for the registered sign), where the committed geometry of record reads nothing; the two readings have different zero sets, and a second two-path geometry gives that second reading more cheaply than the protected sector does.

What it does not say. Nothing about whether the mediator is quantized: a certified positive on any sector certifies the disjunction of Theorem W under its premises and nothing beyond it, and a null never feeds a classicality sentence. Nothing about the mediator at all from the protected sector, which is a statement about a channel and its detection. Nothing about the law of gravity at short range: the bounds are cited, the family is registered, the potentials are static and tree-level, the two-range form is not bounded jointly, and a joint null does not exclude one Yukawa term of free strength (aliases). Nothing that a bench can use without checks the program did not make: the model does not contain the shield that the benchmark presupposes, a three-path register is not shown to be usable on any platform, and the multi-path designs in print set the linear geometry aside. Nothing about gravity in our world from the control universe (a 2+1 exhibit under a dictionary that a physicist may decline) or from the co-runner (one approach, one paper's rules). And nothing at discovery

altitude: the principle is printed (Datta and Miao), the instances at two and three paths follow from a 2005 paper by substitution, the theorem is a corollary of a three-line lemma, and the judge of doc 33 reduced it to that lemma within the hour.

Where the mediator stays. Where the committed saturation map and this year's literature left it, now with every discriminator carrying a number at the committed geometry (section 2.4): a light-crossing transient of at most two units of m_A m_B / m_Planck^2, approached and never attained; a commutator phase that is exactly zero for the simultaneous committed protocol; an autonomy response of 8.07e-26 in the record's own convention, which moves by more than twelve orders with the convention and which a classical stochastic field reproduces. None of these is a certificate, and none is a sentence about quantization.

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5. Forecast ledger (every registration scored by its own letter; refuted items are in the header)

leg	registered or addendum items scored	refuted or void	checks of record
judge (doc 33)	its own probe forecasts (none refuted at judging); the program's predictions and odds (section 4.3)	the leaning on the outcome word; clause 1 of P-R7 as worded; one conjunct of its ladder datum (a grid value printed as a minimum)	as doc 33 records
pilot, literature	16 forecasts	1 (F-PL)	42 of 42 quotations on their pages
pilot, build	every forecast confirmed	0	battery 26 of 26, teeth 8 of 8, theorem stage 51 of 51
pilot, cells	23 forecast lines	2 (F-X1 in two sub-clauses; F-L in one conjunct)	engine runs and column checks as its report lists; one FAIL line kept (a check-logic defect, repaired by a dated addendum)
gate M-R2	V-0 to V-17	0	173 own checks, 0 FAIL
lane L1	13 forecasts	2 (F-9, F-6)	13 exact checks; 34 of 34 quotations
lane L2	36 items	5 (F-3 first clause, F-7 gloss, F-10, A1-6, T-4)	document check clean; 24 of 24 quotations
lanes L3 and L4	35 items	2 (F8 on the entry reading; FB3 first clause)	two FAIL lines kept (a cancellation, repaired on a cancellation-free form)
note assembly	20 assembly checks	1 (A-6)	regeneration 17 of 17; document checks and a control by 19 mutations
rigor leg	F-1 to F-7, hand and break items	1 clause (F-5)	298 own checks, 0 FAIL
steelman leg	hand items and forecasts	3 hand values or clauses (H-ST4 twice, H-ST10), F-ST6 first clause	battery 11 of 11; harness 54 lines ok, 3 refuted
finalization	9 forecasts	0	64 of 64 certifications; checks 16 of 16 and 7 of 7; control 13 of 13
mediator column	11 forecasts	1 sub-forecast (a regression of print)	battery 16 of 16
control universe, author	every row registered in advance	1 clause (BR-1 on its mixed-label cells)	123 flags, 122 passed
control universe, verifier	forecasts of reproduction and eight adversarial forecasts	0 (three clauses of its own battery text corrected before its runs)	110 flags passed, 0 failed
co-runner, author	its scoreboard (section 8 of its report)	3 (F-a2, A2-2, the FAMILY clause of H-9), two void blocks	as its report lists
co-runner, verifier	its scoreboard (section 5 of its report)	1 (A2-a on its registered draw), 1 void (A2-d)	172 check lines, 171 PASS
this leg	SC-1 to SC-10, list A, T-S	3 registered check lines (SC-3, A-8, SC-7: item (d) of the header)	section 1; the ledger of this leg

Parity record. The registered branches that came in against the forecast were reported by their owners first and are typed results of equal standing; no registered rule was changed after a readout in any leg (the gate audited the pilot's order; each verifier audited its author's; this leg's data row SC-4 found no script born before its leg's first seal other than pins and prime-certification scripts).

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6. Honesty

"Protected" carries the rider block of section 0.3 wherever it stands in this section.

6.1 Doc 33 section 9's own risk statements ("what would make this the wrong choice"), answered after the run

- "*The owner wants progress on how gravity works, and this is a law of how an experiment reads gravity.*" That is what the program produced, and nothing above it. The pattern doc 33 named held once more inside the program itself: after the freeze the gate turned two rows that the pilot had honestly typed COMPUTED into corollaries (the threshold lemma for every J; the nine same-apparatus identities), and the co-runner's first question was closed by a one-page theorem. The honest route statement of doc 33 stands unchanged: an instrument that does not exist yet, or acceptance that the house reaches sentences about gravity only on the witness line.
- "*It may be printed.*" The principle is. The theorem's path-encoded statement was not found, at net and claim grade over more than a hundred fetched texts; but both halves of its headline contrast follow from a 2005 paper by substitution, a 2006 sentence prints the finite-strength complement of its two-path half, and the two-path cell under partial shared noise was printed eight days before the pilot in a paper that the judge and the pilot had held at grep grade. The note says all of this before it states the theorem. A printed statement of the two-path half in words, in the older journal literature, is priced by lane L1 at about 15 percent.
- "*The protection may not pay.*" It does not, in the sense of rider R11, at the benchmark and under the stated allowance, for every registered split; the note leads with it, as doc 33 ordered.
- "*The path-diagonal model may not survive the experimentalist.*" By the steelman leg's ruling it does not survive the bench as a description of a shielded Stern-Gerlach pair: the shield that the benchmark presupposes is outside the model and acts with the opposite sign on the two registers; the middle

path of a three-level register gives up the symmetry of the two-path loop; the linear geometry is the one the cited designs set aside. The theorem is a theorem about the model, and the note now says where the model ends.

- "*The law column's plot is occupied.*" It is; the delta is the pair of zero sets and the null rule, it is small, and the steelman leg showed that a second two-path geometry already gives the second reading.
- "*The lemma is three lines, and cheapness is a warning.*" Confirmed. What the house added is the exact statement with its lattice, the certified cells, the negative finding at the benchmark and two adversarial legs; an experiment's own theorists could do the lemma in an afternoon.
- "*A theory-side reader would rank QSG-NC first.*" It ran as the co-runner. Under the paper's printed rule the question is closed by a theorem; under the sub-family that the paper's derivations use it is not decided; the registered outcome is NOT-DECIDED-BELOW-CAPS; and the ground turned out to be occupied by a second party.
- "*The judge's own probes are one leg.*" Each was re-derived by the program: the lattice identity to fourteen paths and by proof for every size; the closed form by three legs; the Gaussian reading exhibited on one exact example; the three premises of the judge's structure lemma derived under two readings and one of them refuted under the third.

6.2 Defects of the legs (each disclosed first by its owner; by the legs' statements and the verifiers' rulings none touches a verdict)

leg	defects and disclosures that a reader of this document should know
pilot	one FAIL line of a check-logic defect kept in a log of record and repaired by a dated addendum; development instances beyond the registered list; two rule files written four minutes before the addendum that sealed them; three scripts born seconds before their runs of record, so their development is NOT AUDITABLE from the record (the gate's repair R10)
literature legs (pilot, L1, L3/L4)	reading grades below the registered commitment (most texts at claim grade); the anchor paper of the program's own watch list was held at grep grade until lane L3/L4 read its equations; lane L1 logged seven web locators after the fact; lane L3/L4 fixed the entry and group readings after a hand readout, in the direction against its own forecast
lane L2	the published curve was not read blind; the sign-resolved limits come from a dissertation table in a web-archive copy; the journal supplement is NOT READ
gate	three development slips corrected before their runs of record; one line that cannot fail is not counted; the journal version of the 2005 paper is NOT READ
note assembly and finalization	two sittings (a usage limit); vacuous passes of its own checker found by reading and repaired with a control by mutations; two writes of record at the finalization; one item (F-P1) found by the finalizer's own reading after both adversarial legs
rigor and steelman legs	development on the cells of record with logs kept; one hung development run killed; three hand values of the steelman leg refuted by its own harness; an over-statement of its own caught by its own reading of the finished report
mediator column	development on a test instance exposed instance-independent pieces of the live cells before the run of record; one float cross-check ran 204 s in the background and finished; no adversarial verifier
control universe	author: two check-logic slips in development and one registration slip; verifier: three clauses of its own battery text wrong as registered, corrected by dated addenda before its runs; both legs obtain statements about the doubled theory from chiral ones by products
co-runner	author: one vacuous count and one void block, repaired by dated addenda; verifier: one void test, one sample-grade search whose cap fired, one long scan that the harness moved to the background

6.3 What could still be wrong

One program night, sixteen legs before this one, each one leg; adversarial pairs only where doc 33 ordered them. The note's amended sentences (what a null certifies; the bench clarifications; the comparator rows) have had no adversarial reading. Every CITED row rests on scout-grade readings: no adversarial leg opened a paper, the dissertation or the published figure, and the sign-resolved window rests on one lane. The absence of a printed path-encoded statement is of net and claim grade. The outcome word is typed under the pilot's own definition of a split that the white paper does not print and under a shot-count convention; rider R11 says what it compares, and the comparison of best certificates is not computed as a count. The mediator column is bound to a bookkeeping convention by more than twelve orders and has no verifier of its own. The typings of the control universe against Definition M are readings by one reader per leg, and the gravity dictionary is a reading that was not computed. The co-runner's theorem assumes covariance as an operator identity on diamonds, which is more than the paper's printed principle. This leg is a regression: it found the record intact and three legs in agreement at the printed digits; it re-derived no theorem.

6.4 This leg's own defects and disclosures

(1) Three slips of its registration (the count of manifests; one unregistered kind of manifest line; three digit clauses that compared own enclosures with roundings of the record), found by one development run of the check script on the record itself, reported in addendum 1 before the run of record; the three registered FAIL lines stay in the log. (2) One check-logic defect of the first version of the check script (it compared complete prime factorizations with the products that two reports print); the registered sentence held; the first version is kept. (3) Surveys before the seal (hash prefixes of the sealed files, manifest heads, greps for eleven numbers and for the reserve tokens) make three of its forecasts regressions and not blind forecasts; the registration says which. (4) Addendum 2 and the trigger script it governs were written by one shell command, the addendum sealed first (stamps 41 ms apart). (5) Reading grades: every main report of every leg in full, with these exceptions: the note's section 4.1 (the sealed proof, transcribed verbatim) was not read line by line; the control author's report was read through its section 5; the pilot's literature report through the head of its section 2; the registrations and addenda of the legs, their scripts and their logs entered as data. No paper was opened by this leg. (6) The text of this document was assembled from chunk files by a tool that pulls every verbatim block by line number; wording repairs after the first check went through count-asserted patchers kept under `relative_synthesizer/dev/`; the check of record is the last run in the leg's document-check log, on the final text. (7) The registration says that "the fifteen RELATIVE variants" of the house procedure were read; the file holds thirteen variants of this program's legs and four of the DQ6 pass, and those seventeen were read. (8) The first run of the document checker on the first assembled draft returned one DEFECT line, as the registered forecast expected (0.6): four log names of this document stood without their directories, and one backticked name inside a verbatim block was read as a path of the corpus. The names were completed; the path check of the checker now skips verbatim blocks (a logic repair, second version; the first version and the log of that run are kept under `relative_synthesizer/dev/`).

6.5 Wording of this document

No sentence above claims a discovery; the word occurs only in negations. The banned strings of doc 33 occur only inside the marked ban list of section 0.3 and inside verbatim blocks; this is checked by script, and every line that contains "classical", "quantum" or "discover" was read by the author on the final text. Rider R11 stands in, or is named on, every line that prints the outcome word; rider R5 likewise for prediction P-R4 and sigma*; every section that uses the word "protected" points to the rider block; every sentence about the control universe sits under its dictionary rider; the mediator column, the control universe and the co-runner are data sections. The composition of section 7.3 is worded "could compose" and nothing more. The checker was not trusted on its first all-clean run: by addendum 3 of this leg thirteen registered mutations of this text must each turn their named check; the result of that control, like every count of the checks of this very text, is in the ledger and not here.

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7. Consequences

"Protected" carries the rider block of section 0.3 wherever it stands in this section.

7.1 Nothing is entered anywhere: what is drafted, and where it lies

No committed document, paper source, engine or record was modified by any leg of the program. Drafted and NOT ENTERED: the rows of the mediator column for the block of doc 30a (section 4 of `relative_mediator/MEDIATOR_COLUMN.md`: an extended first row of the saturation map, two new rows for the commutator phase and the autonomy signature, a re-worded sentence for Paper B, one clause for the lab decision rule); the riders of the control universe for Papers A, B, F and M (`relative_control/DRAFT_RIDERS.md`, to be read with the eleven replacement texts of section 5 of its verifier's report and with the dependency note there); the record-side lines of the finalization (section 7 of `relative_note/finalize/REPAIRS_LEDGER.md`); the wording lines and must-cite additions of the lanes, which the note has already absorbed. No pointer row is entered in any committed document; the default of docs 30 and 32 holds.

7.2 Corrections of the order of record, for the owner's fold (nothing applied; doc 33 is pinned and unchanged)

1. Doc 33 section 5.3 item 2: "never falls below 0.069 (at 20.18 um)" is 0.0688 (the certified minimum is at 20.1779 um; the judge's figure is the value at a grid point).
2. Doc 33 sections 5 and 5.2 (iv) (c): the edge of the open window at strength 4/3 is 35.742 um on the modulus curve (CURVE-READ), and about 24.7584 um for the registered negative sign (TABLE (thesis)), not 38.6 um; "between +1 and about -0.2 times its Newtonian value" holds on the modulus-curve window and reads "between +1 and about -0.05" on the sign-resolved one.
3. Doc 33 section 6, under prediction P-R4: the sentence that equates its FALSE branch with the negative outcome word does not match the outcome clause of section 5 (riders R5 and R11 say why the two sentences can differ, and they did).
4. Doc 33 section 5.2 (ii) and prediction P-R7, clause 1: "applies verbatim" is a conditional corollary (the gate's repair R3).
5. Doc 33 section 5.1 item 5 and row R21 of doc 30a: the quoted shifts at a 52 um range lie outside the cited single-term windows; inside them the committed geometry is SATURATED, more strongly.
6. Doc 33 sections 1 and 2, the co-runner's row: "one citation; scoop LOW to MEDIUM" is HIGH; the one citing paper carries a section on the same question.
7. Doc 33 section 9: "in which Theorem W's second reading is inhabited" travels only in the control verifier's form (section 2.5); "Theorem M's exception set" in doc 33 sections 0 and 4 is Paper M's Proposition on nonlocal Clifford exceptions.
8. Doc 33 sections 5.2 (iv) (a) and 5.3 item 3, the occupancy of the recommended candidate: beyond Datta and Miao the must-cites are Li and Xu (2005), Wang, Pedernales and Plenio (2026), Roszak and Machnikowski (2006), Hebib (2025), and Feng and Vedral (2026), as section 2.7 lists them; the experiment scout's platform sentence (wording item (d)) is not licensed.
9. Doc 33 section 8, the rider candidates for the owner's block on doc 30a: the path-dephasing threshold 0.8557 at the committed phase is the zero of a printed formula (arXiv:2611.05044 v1, eq. (A24)) and must be cited there, not claimed; arXiv:2604.22593 bears on clause 2 of Definition 1 at any shielded design.
10. Doc 05 section 5 (from the mediator column): the frequency-resolved figure 5.0e-58 is 5.39e-58 for the committed sequence.
11. Two reports of the control lanes print a correct product, not a prime factorization, for their band bases (check SC-5 of this leg); nothing rests on it.

7.3 The composition toward D1: named, never claimed

Doc 33 section 9 names five closures that this pass "makes available" for the export D1 that doc 29 named. After the run their state is: the protected-sector note is final in-house; the law reading and the null rule at the 2026 design are in it, with the alias rider and two readings of the window; the control universe is verified on a second engine, with rewordings to apply; the saturation map has a number in every row, drafted and not entered; the refreshed table was not touched by this program (it is the owner's block on doc 30a). Together with the earlier notes and the living table these could compose into D1's protocol leg. That is all this document says about it: "could compose". Whether to compose, when, and whether the composition is something big is the owner's call; no sentence of this program is a sentence of D1.

7.4 Gates

External quotation of every sentence of this program, S-R included, is BLOCKED behind two things that this document does not order: the closing audit of doc 33 at the untouched reserve (10,100,009 and above; an adversarial reading of the amended note belongs there) and a fresh literature re-sweep at the date of quotation (the standing citers of M-R9, and the companion manuscript that the co-runner's second party cites). Release is the owner's call and is never an agent's act; licensing is never posting.

7.5 Owner items (handed, never done by an agent)

1. Fold README, memory and the status file for docs 34 and 34a (the owner's files; not touched).
2. Confirm or overrule the reading of the last outcome word (the entry reading against the group reading: section 4.1).
3. Apply or decline the corrections of section 7.2 as dated additive amendments (doc 33 stays pinned).
4. The block on doc 30a, with this program's inputs beside those of doc 33 section 8: the drafted rows of the mediator column; the must-cites of sections 2.7 and 7.2; the record-side figure of doc 05.
5. The riders of the control universe for Papers A, B, F and M: apply the verifier's replacement texts first, then enter or decline each; decide whether the control universe is wanted as a standalone note (doc 33 section 7 item 2).
6. The co-runner: whether a note is wanted (the theorem travels only in the verifier's licensed sentence, with its two repairs); whether a courtesy note to the authors of the anchor paper about a misprint candidate is wanted; the scoop risk is priced HIGH by both of its legs.
7. KR-4: whether a bounded reproduction of the shield-mediated channel of arXiv:2604.22593 is wanted now (it would replace the static hand estimate behind the note's shield rider); the other reproduction that KR-4 names (the reach printed by arXiv:2609.22501 at the benchmark) was not run either.
8. Whether a quotation event is wanted at all; if so, section 7.4.
9. Two record-side lines of the finalization (a member that the null rule could name; one digit of the mediator report), the procedure item R10 of the gate, and the two procedure variants that the control lanes drafted in their reports and did not enter.
10. The owner's standing blocks (doc 27, then doc 30, then doc 32, and the audit G31-2) are untouched by this program and are not gated by it.

7.6 Lessons for the owner's list (drafted, not entered; continuing doc 33 section 9's (ee) to (jj))

The legs drafted lessons under letters that collide with one another (the co-runner's author and the finalization both begin at (kk)). They are merged and re-lettered here once; the source of each is named.

- **(kk)** Open and read the citers of a candidate's anchor paper before pricing its occupancy; a citation count is not a reading (co-runner, author).
- **(ll)** A grep grade on an anchor paper is not a reading: the equations of a long supplement decide occupancy, and an INSPIRE-first lane runs one arXiv net per vocabulary, because some arXiv categories are not indexed there (lanes L3 and L4; the pilot's literature leg).
- **(mm)** When a paper states a rule for all pairs and its derivations use a sub-family, register both as readings and look at the unused pairs first (co-runner, author).
- **(nn)** A structure lemma is tested on its universal first-order model against every generated relation before any elimination: one relation was the decider (co-runner, author).
- **(oo)** Read the statement as carefully as the proof: count the symbols that occur in the hypotheses, and re-read each corollary's hypothesis list against its proof line (co-runner, verifier).
- **(pp)** Seal a randomized regression with several draws or a genericity guard; before sealing a comparison "up to a factor", count how many candidates pass it; before a small-field search for a counterexample, check that the field can host the object (co-runner, verifier).
- **(qq)** A registration that types an outcome "for a cell" says whether a cell is an entry or a group (lanes L3 and L4); and an order of record that words an outcome clause and a prediction's negative branch as one sentence checks that they are one sentence (the gate; this leg).
- **(rr)** Every "null" sentence is read modulo 2 pi before it is typed, and every "verbatim" corollary is checked against the printed regime and the listed statistics of the theorem it invokes (the gate).
- **(ss)** After a freeze, factor before counting: ten root counts hid ten one-line identities, and a located certificate hid a closed-form lemma (the gate); doc 33's lesson (ii), met again after the freeze.
- **(tt)** A cited bound is read for its sign: when the best fit sits off zero the sign-resolved limit can differ from the modulus limit by a large factor, and a walled supplement can be discharged through the first author's dissertation (lane L2).
- **(uu)** Before any number, sort shared noise by symmetry class (translation, mirror, differential) and read the design paper's benchmark for what it presupposes; the shield was never in the model (steelman leg).
- **(vv)** When a note states what a NULL certifies, test the instrument on a state it was not built for; check the direction of every bound before printing a leg's rounding; read a registered control table against the text before the control script exists; read the written note once more before the pins (finalization).
- **(ww)** A regression of own enclosures against printed digits registers, number by number, whether the record's print is a truncation or a rounding; and a count that a registration prints is recounted from the survey that precedes it (this leg).
- **(xx)** A development log is kept for every script of record, and rule files are written after the addendum that seals them (the gate's repair R10).

7.7 Next calculation (doc 33 section 7's when-instead conditions, evaluated and not re-ranked)

This document orders no next calculation. By doc 33 section 7: QSG-NC would have become the front automatically on a SURVIVOR, which did not come; it remains available if the owner prefers a theory-side sentence, now with an occupied ground and a theorem that closes the printed rule. CONTROL-2+1 as a standalone note has fixed content (corollaries) and is the owner's choice. TOPO-MAGIC, FINISH-D and FINISH-E are untouched by this program and stand as doc 33 ranked them. BORROMEAN stays an exhibit row, now verified. The duties of the owner's block on doc 30a gained the inputs of section 7.5 item 4. Watch items, with what this program adds: the companion manuscript that arXiv:2607.26672 cites as its reference [87]; a posted closed form for the n-path protected negativity or a posted statement of the two-path half in words; the Gaussian line adopting path encoding; MOVW's reference [7]. The altitude statement of doc 33 section 9 is unchanged by the run: this was a NOTE-grade step on the witness line, it came out as a note with a negative finding at its head (the outcome word of section 4.1, with rider R11), and the pass before it found no discovery front on exact finite instruments.

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8. Provenance of this document

Read, in this order, before the registration was sealed: doc 33 (whole); the house procedure (its core; the variants on a program's decision document, on a STOP document and on the synthesizer of doc 32; the thirteen variants of this program's legs and the four of the DQ6 pass); the pilot's report of its cells stage, the gate's ruling, the pilot's build report; the three lane reports; the note (whole, except its section 4.1, the sealed proof in verbatim transcription); the rigor report and the steelman report; the control verifier's report; the mediator column; the co-runner's verifier's report and its author's report; the repairs ledger of the finalization; the control author's report through its section 5; the head of the pilot's literature report; the heads of docs 27, 30 and 32 for the format. Everything else of the record (registrations, addenda, scripts, logs, records, manifests) entered as data through this leg's check script. No paper, thesis or published figure was opened by this leg.

Order kept: canon pins and object pins BEFORE (03:44:12 CET); reading; surveys (disclosed in the registration); `SYNTH_REGISTRATION.md` *sealed 03:53:39.635 CET;* `s_check.py` *born after it; one development run in the session scratchpad (03:56:38; log kept under* `dev/`*);* `SYNTH_ADDENDUM_1.md` *sealed 03:58:06.886 CET; the second version of the script hashed 03:58:39.683 CET and its run of record of the stage "record" made at once (equal to the last development run line for line);* `SYNTH_ADDENDUM_2.md` *sealed 03:59:39.612 CET; the patched trigger script hashed 03:59:39.653 CET and run once, finished 04:01:09.821 CET; this document assembled from chunk files with every verbatim block pulled by line number; the document checker born after the registration and run on two assembled drafts in the session scratchpad;* `SYNTH_ADDENDUM_3.md` *sealed 04:16:00.251 CET; the final text written; the control of the checker by registered mutations; the document check of record; the author's reading of the checker's hand-reading lists; pins after; the ledger; the manifest last. The end-of-leg facts (pins after and final, the document check of record, the manifest) are in* `relative_synthesizer/SYNTH_LEDGER.md` *and not in this text.*

Files written by this leg: this document, and under `relative_synthesizer/`*: the registration and three addenda (each with its sha256 companion and stamp);* `s_pins.py`*,* `pins_list.txt` *(a byte copy of the pilot's fixed list) and the pin and object-pin files with their stamps;* `s_assemble.py` *and* `s_tables.py` *(text tools);* `s_check.py` *with* `s_check.log` *and* `s_check_record.json`*;* `s_triggers.py` *with its log and state file;* `s_doc_check.py` *and* `s_doc_teeth.py` *with their logs; the pre-run hashes of the scripts;* `SYNTH_LEDGER.md`*;* `dev/` *(the chunk files, the superseded first version of the check script, the two development logs, the patchers); the manifest, written last. Environment:* `python3.12 -I`*, exact rationals and mpmath interval arithmetic for every comparison of this leg's own arithmetic. No committed file was modified; nothing was written under another leg's directory or under* `release/`*; no prime was drawn; no process is left running; nothing was posted or sent. README, memory and the status file are the owner's to fold. Licensing is never posting; release is the owner's call.*

End of doc 34.