

Eleven Falsifiers, and the Measurement That Ends Each One

Eleven falsifiers, and the measurement that ends each one. Part VII states these as eleven prose subsections and nowhere gathers them; this is that table. Each row carries what is being watched, the outcome declared in advance that would end the claim, and where the test lives: a companion paper, a named experiment, or a dash where the exposure is real but no single instrument owns it. The structural claim itself is the falsifier’s own title, in the first column. Two rows carry numbers a reader can hold: the lock cluster near 3.85 TeV (F-11) and $Q_B \approx 0.1555$ eV/qubit (F-2, F-8); the fine-structure integer 137 and the fenced dark-matter window are registered in the companion papers’ falsifiers and the dictionary anchors. A framework with nothing left to adjust has no way to absorb a disagreement. Stated in full, one subsection each, in Sec. 66, p. 244.

Falsifier	What is watched	Dies if	Tested in
F-1 Geometrize gauge, do not quantize gravity	Gravitational decoherence; Planck-scale Lorentz violation; gravitational corrections at colliders	Gravity is required as a quantum sector distinct from the composite connection $\mathcal{A}$, below E_{P1}	—
F-2 Six forces, not four	Proton stability; $Q_B \approx 0.1555$ eV/qubit; no further long-range gauge-mediated force	A third Abelian factor, or a new long-range gauge force beyond $U(1)_B \times U(1)_{Qi}$	GG-A7-Qi4, GG-A11-Origin
F-3 Unification at E_{GUT} , not E_{P1}	The running of $\alpha_1, \alpha_2, \alpha_3$ and any intermediate threshold corrections	The couplings unify near E_{P1} or at TeV, or do not converge at all; or unification requires MSSM thresholds	—
F-4 6D anomaly cancellation, not 10D or 11D	The rank-one Green–Schwarz factorization, local and global, on the GG-6 background class	6D needs several tensor sectors, or is incompatible with $(1, -1, -2/5, -2/5)$, or a residual anomaly survives inflow	GG-A3-BI6
F-5 No SUSY, no fundamental strings	Collider searches for superpartners; evidence for string-scale excitations	Superpartners below the TeV naturalness scale with a structural role at E_{GUT} ; or a fundamental extended object	LHC: none to TeV
F-6 Measurement from OGGEF	Weak measurement; precision Bell tests; objective-collapse and macroscopic-superposition tests	CPTP evolution fails macroscopically in a way the Nakajima–Zwanzig + GKLS structure cannot carry	GG-A8-QM
F-7 Proton stability as a theorem	The proton lifetime in $p \rightarrow e^+ \pi^0, \mu^+ \pi^0, \nu K^+$	One decay in any channel above background	Super-K, Hyper-K, DUNE
F-8 Life and mind from $U(1)_{Qi}$	The per-qubit energetics of biological molecular machinery	Q_B differs beyond the stated uncertainty, or the four-current lock $J_E/Q_B = J_e = J_B = J_{Qi}$ fails in a controlled system	GG-A7-Qi4, GG-A11-Origin
F-9 The Constitution as the starting point	The internal consistency of the eight-Theorem chain of Part II	A step not forced by the clauses cited; a theory meeting all eleven clauses outside GG-6’s class; or extra clauses needed	GG-A1-Constitution
F-10 Quaternionic Goldilocks: $d = 6$ selected	The generation count: the Atiyah–Singer index of the bulk Dirac operator, claimed to evaluate to $N_g = 3$	A fourth chiral generation	GG-A9-SM
F-11 The lock cluster at M_{lock}	Resonance searches near 3.85 TeV: the color octet (reach) and the leptophobic Z'_B at the derived $g_B = 0.565$	A clean exclusion across the couplings/width window registered in GG-P1-KK; or a cluster at the wrong mass	HL-LHC; FCC decisive