TFPT Prediction: Intrinsic Neutrino Mass Sum on the Closed Branch

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Standalone prediction note – April 27, 2026

Abstract

This note isolates the neutrino mass-sum row as an intrinsic normal-ordering output of the closed neutrino branch.

Prediction scope and audit

Target. $\Sigma m_\nu = 5.8764 \times 10^{-2}\,\mathrm{eV}$
Status. Physical observable / comparison quantity; neutrino closure readout.
Dependency class. neutrino readout N_u
Kill or pressure test. robust cosmological upper bound below the branch value.

1 Standalone Minimal Kernel

Minimal TFPT kernel used in this prediction

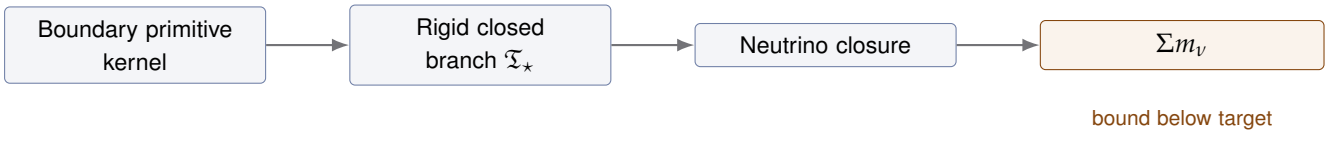
The standalone input package is the boundary-polarized closed branch

$$\mathfrak{S}_{\min} \Rightarrow \mathcal{B}_{\min} \Rightarrow \mathfrak{T}_\partial^{\min} \Rightarrow (\tau_{\mathrm{dbl}}, \iota_C, P_{\mathrm{prim}}, [u_\Sigma], c_3) \Rightarrow d^\star_{\mathrm{disc}} \Rightarrow P_{\mathrm{adm}} \Rightarrow \mathfrak{T}_\star.$$

The prediction uses only the sector map named in its audit box. Numerical comparison conventions are not theorem inputs; they enter only at the final interface row.

The paper is intentionally one-row: it does not reprove the full TFPT series. It states the minimal closed-branch input needed for this prediction, shows the sector map, and gives the direct failure mode. The source status follows the TFPT 4.5 split: boundary and carrier inputs are core, electromagnetic/flavor/metrology inputs are bridge readouts, QFT closure is conditional, and cosmology rows are downstream comparison targets when explicitly marked.

2 Dependency Graph



No external oscillation inversion is used as primitive input.

3 Derivation

The intrinsic neutrino closure row gives

$$m_{\nu_1} = 0, \qquad m_{\nu_2} = 8.614 \times 10^{-3}\,\mathrm{eV}, \qquad m_{\nu_3} = 5.015 \times 10^{-2}\,\mathrm{eV}.$$

Thus

$$\Sigma m_\nu = m_{\nu_1} + m_{\nu_2} + m_{\nu_3} = 5.8764 \times 10^{-2}\,\mathrm{eV}.$$

The row is compared to cosmological mass-sum analyses only after the neutrino closure map has fixed the internal value.

4 No-Knobs and Failure Surface

No-knobs audit

A robust upper bound below the branch value would pressure the closed neutrino sector, not merely a comparison convention.

5 Minimal Submission Claim

The standalone claim is limited to the displayed target and dependency class. It does not assert that every comparison row of the full TFPT ledger has the same proof status. Any update of the upstream boundary kernel, carrier theorem, or sector map must be propagated into this prediction before the numerical row is distributed.

References

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