November 5, 2025

Editors
Physical Review Letters

Dear Editors,

I am pleased to submit the manuscript "Gauge-Aligned Gravity Emergence (GAGE): SM-derived gravitational coupling $G(Q)$" for consideration in *Physical Review Letters*.

This Letter derives the gravitational coupling G directly from Standard Model gauge couplings, without introducing new fields or parameters. The framework identifies a unique integer projector $\chi = (16, 13, 2)$ from the one-loop decoupling lattice, defines an even curvature gate $\Pi(\Xi)$ with $\Pi'(\Xi_{\rm eq}) = 0$, and shows that the resulting emergent coupling $G(M_Z) = \Omega(M_Z)\,\hbar c/m_p^2$ reproduces the observed gravitational constant within experimental precision. The construction is analytically closed, numerically reproducible, and empirically falsifiable through the quadratic laboratory null $\Delta G/G \simeq (\Delta\Xi/\sigma_\chi)^2$.

All data, pins, and code needed to reproduce the figures and tables are contained in the Letter, the Supplemental Material, and the accompanying reproducibility repository: Zenodo DOI 10.5281/zenodo.17537647.

The work has not been published or submitted elsewhere. Thank you for your consideration.

Sincerely,

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