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Editors
Foundations of Physics

Dear Editor,

I am pleased to submit the manuscript *Long-Distance Swirl Gravity from Chiral Swirling Knots with Central Holes* for consideration in *Foundations of Physics*. The work proposes a flat-space, topological mechanism for long-range attraction within Swirl-String Theory (SST) and advances concrete, falsifiable predictions that connect conceptual foundations to laboratory tests.

Conceptually, we derive integer plateaus of circulation (tracked by a “Swirl Clock”) via Cauchy’s integral theorem and Kelvin’s invariant; show that additivity at Y-junctions yields composite baryon tubes with $\Gamma_{\text{baryon}} = 3\kappa$, setting a local time-dilation scale; and provide a sharp experimental discriminator from the swirl-EM correspondence, where topology changes generate geometry-independent, quantized electromotive impulses of fixed magnitude $\Delta\Phi = \pm\Phi_*$ (sign set by chirality). At galactic scales, a saturated swirl “tail” contributes a radius-independent term to $v_\phi(r)$, offering a falsifiable analogue of flattened rotation curves within this model.

Relationship to prior work and presentation. This manuscript builds on a formal framework (SST) developed in public technical reports available on Zenodo. The full derivations and symbolic mappings are included in referenced appendices, but the current manuscript is self-contained, testable, and focused on experimental predictions. All persistent DOIs and the code/data archive are cited in the “Code and Data Availability” section.

Why *Foundations of Physics*. The paper addresses foundational questions about the origin of long-range attraction, the role of topology versus curvature, and the interface between information-theoretic and fluid descriptions—each paired with explicit failure modes—aligning with the journal’s mission.

Compliance. The manuscript is original, not under consideration elsewhere, and all authorship/affiliation information is complete. Conflicts of interest: none. Data and code are available via the cited Zenodo record(s).

Thank you for your consideration.

Sincerely,

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