Abstract Submitted
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**A Self-consistent Theory of Gravitation and Particle Physics**[1]
WAYNE LUNDBERG, None — A well-founded representation theory and non-commutative matrix algebra is known to be consistent with QCD & QED. The representation theory models particle interactions, flavors and gluons with finitary geometry. A tetrahedron represents Higgs interaction vertex, consistent with string theory results (Kaku, 1990). An astrophysical theory is constructed following Guth, in which Higgs vertex has a dual representation as the kernel of a black hole. A Planck-scale tetrahedral physical singularity is bi-laterally asymmetric, explaining Galactic Annihilation Fountain. A finite physical singularity informs quantum gravity to construct an AdS/CFT representation of an information-preserving black hole. Tetrahedral quantum topology preserves CFT quanta in an anti-de Sitter space conformally attached at the throat of AdS-2 black holes. A triangulated AdS-2 black hole throat is consistent with the theory that highly-wound string are fractionalized (Mathur, 2005). Modern black hole theory examines fields deep within the throat, in which a "highly macroscopic quantum effects make[s] the physics of very deep throats nonlocal" (de Boers, 2010). An extra scalar field exists due to gravitational quanta in I-P black holes. This is consistent with string-theoretic duality, R$\leftrightarrow \sqrt{\alpha}$/r, and predicts that quanta preserved at the BH Planck scale are observed at astrophysical scale. Thus the smooth distribution of gravitational anomaly in lensing observations is explained by nonlocal gravitational fields.

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