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Orbits and Scaling for an Isotropic Metric JOSEPH RUDMIN, James Madison University — An isotropic metric is offered to resolve well known gravitational paradoxes and inconsistencies of general relativity with quantum mechanics. Reasons for and against an isotropic metric are presented, such as conservation of momentum and energy in multiple reference frames, and violation of the equivalence principle. Orbits are derived in the conventional way, showing that objects do not cross event horizons for an isotropic metric. Scaling of physical quantities elucidates some powerful symmetries.

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