

# Parity violation is evidence that our universe is inside an extremal rotating Kerr black hole

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If our universe is inside an extremal rotating Kerr black hole, then the angular momentum vector of the black hole can be identified with the axial vector responsible for the handedness of the weak interaction. This paper examines the conditions for our universe to be inside such a black hole. One of the conditions is that general covariance in general relativity must be abandoned. General covariance (the principle that physical laws should look the same in all coordinate systems) may simplify the math in general relativity, but at the cost of excluding other possible physics. Instead of general relativity this paper uses absolute gravity, which is based on absolute space and time. Absolute gravity can be described mathematically in terms of an ordinary fixed three-dimensional cartesian coordinate system with time proceeding at the same rate everywhere. The predicted association of the weak interaction with angular momentum is experimentally testable. For example, one might measure variations in parity violation with respect to varying angular momentum. Several experiments along these lines have already been performed, with results consistent with our universe being inside a rotating black hole, and consistent with a breakdown of general covariance.

To be presented as a poster at the APS 2024 conference, on April 3-6 in Sacramento. The paper will be posted as a preprint at pgu.org before the conference.

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