

Abstract Submitted
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Design of a New Eot-Wash Inverse Square Law Instrument

TED COOK, DAN KAPNER, C.D. HOYLE, ERIC ADELBERGER, BLAYNE HECKEL, JENS GUNDLACH, ERIK SWANSON, University of Washington — The Eot-Wash group has designed a new inverse square law torsion pendulum to replace the instrument described by Kapner et al. at this meeting. The new design employs a novel geometry that has been optimized to probe gravity at and below the 50-micron range by using much higher azimuthal symmetry and smaller scale features. This configuration also eliminates the need for Newtonian cancellation while increasing our sensitivity to new short-range physics by more than a factor of twenty. An overview of design, construction, and expected sensitivity will be discussed.

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