

Abstract Submitted  
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**Measuring Negative Energy Dilaton Particles** GEORGE SOLI, Integrated Detector Systems — Measured dilaton particles have negative energy because they support one-way “superluminal” group velocity data. Dilaton particles are modeled as negative energy excitations of a dark energy field. These excitations saturate the Ford-Roman Quantum Inequality (QI) below the cutoff energy value required to stabilize the vacuum against decay through a negative energy channel. The QI saturates near the dark energy density value required to drive the observed accelerated expansion rate of the universe.

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