

Abstract Submitted
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South Pole Lorentz Invariance Test¹ MORGAN HEDGES, MARC SMICIKLAS, MICHAEL ROMALIS, Princeton Univ — Atomic spin co-magnetometers are among the most sensitive instruments to test for violations of CPT and Lorentz symmetry. Our rotating co-magnetometer has, in recent years, set the most stringent limits for such violations in fermions with measurements conducted in Princeton. In order to eliminate the gyroscopic pickup of Earth's rotation as a major limiting background, we now operate a Rb-²¹Ne co-magnetometer at the Amundsen-Scott South Pole Station. We discuss the current status of our ongoing South Pole experiment along with the latest results.

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