

Abstract Submitted
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Progress toward measuring the electron EDM in a cryogenic beam of polar molecules¹ ELIZABETH PETRIK, JACOB BARON, Harvard University, WESLEY CAMPBELL, University of California, Los Angeles, DAVID DEMILLE, Yale University, JOHN DOYLE, GERALD GABRIELSE, Harvard University, YULIA GUREVICH, Yale University, PAUL HESS, NICHOLAS HUTZLER, Harvard University, EMIL KIRILOV, University of Innsbruck, BRENDON O'LEARY, Yale University, BENJAMIN SPAUN, Harvard University, AMAR VUTHA, York University, ADVANCED COLD MOLECULE EEDM (ACME) COLLABORATION — We report on the progress of the ACME Collaboration experiment to measure the electric dipole moment (EDM) of the electron using thorium monoxide. We have demonstrated a statistical sensitivity of 1×10^{-28} e · cm in one day of averaging time. We discuss our studies of several potential sources of systematic error, various apparatus diagnostics, and improvements in the measurement and data analysis scheme.

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