

Abstract Submitted
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Progress toward an EDM measurement in Ra-225 I.A. SULAI, Phys. Div., Argonne National Lab.; Dept. of Physics, University of Chicago, W.L. TRIMBLE, Phys. Div., Argonne National Lab., R.H. PARKER, Phys. Div., Argonne National Lab.; Dept. of Physics, University of Chicago, K. BAILEY, J.P. GREENE, R.J. HOLT, Phys. Div., Argonne National Lab., W. KORSCH, Dept. of Physics, University of Kentucky, Z.T. LU, Phys. Div., Argonne National Lab.; Dept. of Physics, University of Chicago, P. MUELLER, T.P. O'CONNOR, J. SINGH, Phys. Div., Argonne National Lab. — We are developing an EDM search based on laser-cooled and trapped Ra-225 (half-life = 15 d) atoms. Due to octupole deformation of the nucleus, Ra-225 is predicted to be 2-3 orders of magnitude more sensitive to T-violating interactions than Hg-199, which currently sets the most stringent limits in the nuclear sector. In preparation of an EDM measurement, we have trapped radium atoms first in a MOT and then transferred them to a far-off-resonant optical dipole trap. We will report progress towards the EDM search and the measurements of relevant atomic properties. This work is supported by DOE, Office of Nuclear Physics, under contract No. DE-AC02-06CH11357.

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