

Abstract Submitted  
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**Search for Electric dipole moment (EDM) in laser cooled and trapped  $^{225}\text{Ra}$  atoms**<sup>1</sup> MUKUT KALITA, University of Kentucky/ Argonne National Laboratory, KEVIN BAILEY, MATTHEW DIETRICH, JOHN GREEN, ROY HOLT, Argonne National Laboratory, WOLFGANG KORSCH, University of Kentucky, ZHENG-TIAN LU, Argonne National Laboratory/University of Chicago, NATHAN LEMKE, PETER MUELLER, TOM O'CONNOR, Argonne National Laboratory, RICHARD PARKER, University of Chicago/Argonne National Laboratory, JAIDEEP SINGH, Technische Universität München, WILL TRIMBLE, Argonne National Laboratory, ARGONNE NATIONAL LABORATORY COLLABORATION, UNIVERSITY OF CHICAGO COLLABORATION, UNIVERSITY OF KENTUCKY COLLABORATION — We are searching for an EDM of the diamagnetic  $^{225}\text{Ra}$  atom.  $^{225}\text{Ra}$  has nuclear spin  $I=1/2$ . Experimental sensitivity to its EDM is enhanced due to its heavy mass and the increased Schiff moment of its octupole deformed nucleus. Our experiment involves collecting laser cooled Ra atoms in a magneto-optical trap (MOT), transporting them 1 meter with a far off-resonant optical dipole trap (ODT) and then transferring the atoms to a second standing-wave ODT in our experimental chamber. We will report our recent experiences in polarizing and observing Larmor precession of  $^{225}\text{Ra}$  atoms in parallel electric and magnetic fields in a magnetically shielded region and progress towards a first measurement of the EDM of  $^{225}\text{Ra}$ .

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