

Abstract Submitted  
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**Towards a More Sensitive Measurement of the Atomic Electric Dipole Moment of Radium-225**<sup>1</sup> ROY READY, Michigan State Univ — Permanent atomic electric dipole moments (EDMs) violate parity (P), time reversal (T), and combined charge-conjugation and parity transformation (CP) under CPT symmetry. The EDM observable is enhanced in large-Z atoms with octupole-deformed nuclei like Radium-225. In the Ra EDM experiment, radium atoms are vaporized, slowed, trapped, and transported between two high voltage electrodes. The first-generation Radium-225 EDM upper limit results were measured in 2014 and 2015. For the imminent second-generation measurements, we increased the applied electric field by using a pair of meticulously conditioned niobium electrodes. The electrodes and several complementary upgrades will help improve our sensitivity by up to two orders of magnitude. Additionally, the Facility for Rare Isotope Beams (FRIB) is expected to produce Radium-225 when it is fully operational. We are making early progress in characterizing our ability to efficiently extract FRIB-harvested radium using stable surrogate isotopes.

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