Abstract Submitted
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**Slow-Atom Electron EDM Experiment with Electric Field Quantization**[1] HARVEY GOULD, JASON AMINI[2], LBNL, CHARLES MUNGER JR., SLAC — Improving the electron electric dipole moment (e-EDM) upper limit has been a 40-year battle against systematic effects. Two new weapons in this battle are slow atoms and ground-state electric field quantization, both of which suppress motional magnetic field effects. They have been used effectively in a recently completed e-EDM experiment that is a prototype for a high-sensitivity Cs fountain e-EDM experiment. Electric field quantization of Cs atoms required nulling residual magnetic fields to $< 200$ pT, transport of polarized atoms through field-free (nulled) regions, and inducing transitions between closely spaced $|m_F|$ levels using separated short pulses in place of oscillatory fields. The possibility of improving the e-EDM limit with a Cs fountain experiment will be discussed.

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