Abstract for an Invited Paper for the APR07 Meeting of The American Physical Society

## Preferred Frame and CP-Violation Tests with Polarized Electrons<sup>1</sup>

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We used a torsion pendulum containing  $10^{23}$  polarized electrons to search for CP-violating interactions between the pendulum's electrons and unpolarized matter in the earth or the sun, to test rotation and boost-dependent preferred-frame effects using the earth's rotation and velocity around the sun, and to search for exotic velocity-dependent potentials between polarized electrons and the sun. Experimental constraints on these spin-dependent couplings will be presented along with a description of the experiments and the means by which the spin density of the pendulum was determined.

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