

EP Seminar

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TITLE: Storage ring proton EDM experiment

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PLACE: Council Chamber

ABSTRACT

I will give a overview of the present status of the electric dipole moment (EDM) experiments and then I will focus on the proton EDM method to be performed in an all-electric storage ring. In storage rings one has the chance to probe the EDM of the proton with unprecedented sensitivity of 10^-29 e-cm.

The strength of the method originates from the fact that there are high intensity polarized proton beams available and the fact that the so-called geometric phase systematic error background cancels with clock-wise and counter-clock-wise storage possible in electric rings. The ultimate sensitivity of the method is 10\^-30 e-cm. At this level it will either detect a non-zero EDM or it will eliminate electro-weak baryogenesis.