The Beam EDM Experiment

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The Beam EDM experiment is a new neutron electric dipole moment search that aims to overcome a limiting systematic of previous beam based measurements. A novel technique using a pulsed neutron source and time-of-flight is employed to account for the velocity dependent effects. The project is currently under development, with several successful tests of a small-scale version using cold neutron beams available at Institut Laue-Langevin and the Paul Scherrer Institute. Ultimately, a full-scale implementation is planned for the upcoming European Spallation Source in Sweden. This experiment intends to provide a complementary measurement to the widely established use of stored ultra-cold neutrons, with a competitive sensitivity.

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