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[713] BeamEDM – A beam experiment to search for the neutron electric dipole moment

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The existence of a non-zero neutron Electric Dipole Moment (EDM) would violate CP symmetry and might help in the understanding of the apparent baryon asymmetry in the universe. The BeamEDM experiment aims to measure the neutron EDM using a novel technique which overcomes the systematic limitations of previous neutron beam experiments. BeamEDM exploits the time-of-flight technique with a pulsed neutron beam which allows to distinguish time-dependent from time-independent effects, e.g. an EDM. A proof-of-principle apparatus has been developed to perform preliminary measurements at the Institut Laue-Langevin. The future full-scale experiment is intended for the European Spallation Source.

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