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The neutron electric dipole moment experiment at the FRM-II MICHAEL MARINO, Technische Universitaet Muenchen, NEDM PROJECT TEAM — The discovery of a neutron electric dipole moment (nEDM) would provide an unambiguous indication of time violation in a fundamental system, and address one of the Sakharov conditions (CP-symmetry violation) necessary to explain the observed matter/antimatter asymmetry in the universe. Current experimental limitations on the nEDM are roughly 6 orders of magnitude above the Standard Model (SM) prediction and so searches for the nEDM provide powerful tests of physics beyond the SM. The nEDM experiment currently under construction at the FRM-II reactor in Munich is seeking to improve this limit up to 2 orders of magnitude. A contextual overview of the relevant physics will be given, and developments in the FRM-II nEDM experiment, including the recent installation of a world-record magnetically shielded room, will be presented.

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