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Neutron EDM and its implications for HEP

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The quest for a non-zero electric dipole moment (EDM) of simple systems such as the electron, the neutron or atoms / molecules is a powerful way to search for physics beyond the standard model in particular for new sources of CP violation, complementary to LHC experiments. So far, no EDM signal was observed and the upper limit on the neutron EDM, established by the RAL/Sussex/ILL collaboration, is $|dn| < 3 \times 10^{-26}$ e cm (90% C.L.). This limit was set with an apparatus using ultra cold neutrons stored in a vessel at room temperature. The nEDM collaboration at the Paul Scherrer Institute in Switzerland aims at reaching a sensitivity in the 10-27 e cm range soon. I will present the current status of the experiment and discuss the prospects for the future on behalf the nEDM collaboration.

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