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## A new limit on the permanent electric dipole moment of the neutron

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The measurement of a permanent electric dipole moment of the neutron (nEDM), as a CP-violating observable, is one of the main priorities at the low energy frontier of particle physics. A discovery or a highly improved constraint could contribute to our understanding of the baryon asymmetry of the universe. Our international collaboration obtained a new limit on the nEDM with an apparatus connected to the UCN source of the Paul Scherrer Institut in Switzerland. This experiment was based on the Ramsey method of separated oscillatory fields in vacuum and at room temperature. An important gain compared to previous experiments was a much-advanced control of the homogeneity and stability of the magnetic field. To this end, the method of mercury co-magnetometry was further optimized, and cesium magnetometers were employed to suppress field gradients of higher orders. A blinding scheme in two steps was developed in order to exclude any bias in the work of two distinct analysis groups. In this talk, we present our new result and the steps which led to this novel constraint on the nEDM.

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