

Table-top particle physics with slow and trapped molecules

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Precision measurements on molecular quantum systems have developed into a powerful way to explore new physics. Such measurements are currently the most sensitive way to probe an effective asymmetry in the charge distribution of the electron - its electric dipole moment. Through a measurement of this property, limits can be set on possible extensions of the Standard model of particle physics. In this colloquium we will present the context, methods and latest developments in this field where the precision techniques of atomic physics are used to probe the frontiers of particle physics.