ID de Contribution: **31** Type: **Oral presentation**

Tabletop Experiment for beyond Standard Model Physics: Electron EDM in a Cryogenic Matrix

mercredi 2 novembre 2022 15:45 (15 minutes)

To explain the open questions in the fundaments of physics, new theories that reach beyond the standard model of particle physics are needed. A great number of these indirectly predict electric dipole moments (EDM) of fundamental particles in ranges that are just within reach for modern atomic and molecular physics experiments. While measurements in atomic and molecular beams provided the most successful null measurements of the electron EDM over the past decades, only quite recently did the method of matrix isolation spectroscopy arise. It has the potential advantage of performing spectroscopy on unprecedented numbers of atoms/molecules at once. To enable a high-precision measurement with this novel technique, it is first necessary to gain an understanding of possible systematic effects.

In this presentation, I will show some of the results we have made so far in studying our particular system of Cs and Rb atoms doped into a cryogenic Ar matrix.

Auteur principal: LAHS, Sebastian (Laboratoire Aimé Cotton)

Co-auteurs: M. BATTARD, Thomas; COMPARAT, daniel (Laboratoire Aimé Cotton (CNRS))

Orateur: LAHS, Sebastian (Laboratoire Aimé Cotton)

Classification de Session: Oral Presentations (first in the afternoon)