



Contribution ID: 22

Type: **not specified**

Frequency metrology of buffer-gas-cooled molecular spectra for fundamental Physics research

Wednesday, 12 February 2025 10:10 (40 minutes)

Based on the production of molecular samples at cryogenic temperatures by the buffer-gas-cooling technique and their combination with cavity-enhanced spectroscopy in the Lamb-dip regime, we present a new generation of high-accuracy physics tests beyond the Standard Model at the eV energy scale. Examples include searching for putative fifth-force interactions and assessing the space-time stability of the proton-to-electron mass ratio.

Primary author: MADDALONI, Pasquale (Istituto Nazionale di Fisica Nucleare)

Presenter: MADDALONI, Pasquale (Istituto Nazionale di Fisica Nucleare)

Session Classification: Fifth Force and Variation of Fundamental Constants