Contribution ID: **10** Type: **not specified**

The use of precise molecular line spectroscopy in a search for m_e/m_p variations

Tuesday 13 October 2015 17:45 (45 minutes)

We report results of precise laboratory spectroscopy for a set of astropysically important species carried out at the Institute of Applied Physics of the RAS over the last years. The investigations are based on Lamb-dip measurements at mm−sub-mm wavelengths with the developed sub-Doppler spectrometer. In particular, from a comparison of precise radio astronomical and laboratory frequencies of CH_3OH lines we estimate the upper limit on the possible m_e/m_p variation in dark interstellar clouds as $\leq 1.5 \times 10^{-8}$.

Author: Dr LAPINOV, Alexander (Institute of Applied Physics of the RAS)

Co-author: Dr GOLUBIATNIKOV, Guerman (Institute of Applied Physics of the RAS)

Presenter: Dr LAPINOV, Alexander (Institute of Applied Physics of the RAS)

Session Classification: Fundamental Constants