Contribution ID: **80** Type: **Invited Poster**

Development of a molecular Hg_2 clock to investigate fundamental physics

We introduce a novel molecular sensor designed for the study of fundamental interactions, focusing on clock transitions within a Hg-Hg system. Our project implements optical Feshbach resonances in systems involving Hg_2 or Hg-alkali systems, with the ultimate goal of constructing a Hg_2 optical molecular clock. This tool has the potential to push limits for fundamental research by achieving unprecedented advancements in terms of precision and accuracy.

Author: CIURYŁO, Roman (Institute of Physics, Faculty of Physics, Astronomy and Informatics, Nicolaus Copernicus University in Toruń)

Co-authors: WITKOWSKI, Marcin (Institute of Physics, Faculty of Physics, Astronomy and Informatics, Nicolaus Copernicus University in Toruń); LINEK, Adam (Institute of Physics, Faculty of Physics, Astronomy and Informatics, Nicolaus Copernicus University in Toruń); ZAWADA, Michał (Institute of Physics, Faculty of Physics, Astronomy and Informatics, Nicolaus Copernicus University in Toruń)

Presenter: CIURYŁO, Roman (Institute of Physics, Faculty of Physics, Astronomy and Informatics, Nicolaus Copernicus University in Toruń)

Track Classification: Precision Tests on Fundamental Physics