

PHYSIKALISCHES KOLLOQUIUM

Sommersemester 2023

Das Kolloquium findet (soweit nicht anders angegeben) **jeweils montags um 17:15 Uhr in Präsenz im Röntgen-Hörsaal des Physikalischen Instituts, Hubland Campus Süd, Universität Würzburg und online via Zoom statt.**

Link zum Zoom-Raum:

<https://go.uniwue.de/physkolloqzoom>



10.07.2023

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Precision Tests of Fundamental Interactions and Their Symmetries using Exotic Ions in Penning Traps

Abstract

An overview is given on recent mass and g -factor measurements with extreme precision on single or few cooled ions stored in Penning traps. On the one hand, mass measurements provide crucial information for atomic, nuclear and neutrino physics as well as for testing fundamental interactions and their symmetries. On the other hand, g -factor measurements of the bound electron in highly charged hydrogen-like ions allow for the determination of fundamental constants and for constraining Quantum Electrodynamics. For example, the most stringent test of CPT symmetry in the baryonic sector could be performed by mass comparison of the antiproton with H- and the knowledge of the electron atomic mass could be improved by a factor of 13.

Für die Dozentinnen bzw. Dozenten der Fakultät

PD. Dr. Meyer, Prof. Dr. Klembt, Dr. Fromm, Dr. Feichtner und Hr. Kögel