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Precision Penning-Trap Mass measurements for Fundamental Studies

Thursday 11 September 2025 14:00 (30 minutes)

Precision mass measurements of stable as well as long-lived nuclides have numerous applications among others in atomic-, nuclear-, neutrino- and particle physics. Technical developments in the manipulation and detection of radionuclides and stable species in high-precision Penning-trap mass spectrometry have boosted the field and allow for relative mass uncertainties at the level of 10^{-11} and below. These technical advances as well as the opening of new fields of applications like the measurement of not only nuclear but also electron binding energies of exotic species as well as tests of physics beyond the Standard Model will be presented.

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Session Classification: Session