## Joint Annual Meeting of the Swiss and Austrian Physical Society 2023



Contribution ID: 152

Type: Poster

## [732] CREScent: High-precision Electron Spectroscopy using Cyclotron Radiation Emissions

Tuesday 5 September 2023 19:04 (1 minute)

High-precision measurements of angular correlations in neutron beta decay are at the forefront of particle physics. For a new generation of beta decay experiments, like the PERC (Proton Electron Decay Channel) experiment under construction in Munich, frequency-based beta spectroscopy methods using the cyclotron radiation emitted by electrons in a homogeneous magnetic field have been emerging as new methods for high-precision energy measurements. The CREScent experiment is a proof-of-principle experiment aiming to combine the CRES (Cyclotron Radiation Emission Spectroscopy)-technique with the signal amplification qualities of a RF cavity, naturally compensating for the extremely weak signal power of the expected cyclotron radiation pulses.

## **Theoretical Work**

**Authors:** SAAVEDRA GARCÍA, Alberto José (Technische Universität Wien - Atominstitut); DOBLHAMMER, Andreas (Vienna University of Technology (AT)); ABELE, Hartmut; Dr PRADLER, Irina (Technische Universität Wien - Atominstitut)

Presenter: SAAVEDRA GARCÍA, Alberto José (Technische Universität Wien - Atominstitut)

Session Classification: Poster Session

Track Classification: Neutron Science