Contribution ID: **261** Type: **Oral**

Benchmarking 0□ββ-decay nuclear matrix elements with the MONUMENT Experiment

Tuesday 26 August 2025 14:20 (20 minutes)

The **nuclear matrix elements of neutrinoless double beta decay** are a dominant source of uncertainty when connecting the decay rate to article-physics properties. Due to its large momentum transfer, **ordinary muon capture** offers a promising method to benchmark nuclear matrix element calculations under similar conditions. When a muon is captured on a double beta daughter isotope, the resulting nucleus reflects the virtual intermediate state of the double beta transition. Studying its de-excitation yields insight into the nuclear structure relevant for neutrinoless double beta decay. Within the **MONUMENT experiment**, ordinary muon capture was measured on various isotopes including ^{76}Se, ^{136}Ba, and ^{48}Ti. The measurements were performed at the Paul Scherrer Institute. The measurements will be presented along with a description of the setup and initial findings from the analysis.

Collaboration you are representing

MONUMENT

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Session Classification: Neutrino Physics and Astrophysics

Track Classification: Neutrino Physics and Astrophysics