Contribution ID: **22** Type: **Poster**

Search for the 2vECB+ in Xe-124 with the XENONnT experiment

Friday, 21 June 2024 17:30 (2 hours)

The XENONnT experiment has been built at the Laboratori Nazionali del Gran Sasso (LNGS) in order to continue the search for dark matter in the form of weakly interactive massive particles (WIMPs). Thanks to its low energy threshold and unprecedentedly low background level, the physics reach of XENONnT has expanded from the direct detection of WIMPs to a variety of rare event searches such as solar neutrinos, supernova neutrinos, axion-like particles, and second-order weak decays. For the latter, the two-neutrino electron capture with positron emission in the Xe-124 isotope is likely to be observed with the current generation of multi-tonne xenon experiments. This contribution will present an overview of the analysis strategy and the challenges of the search with the XENONnT detector.

Poster prize

Yes

Given name

Paloma

Surname

Cimental

First affiliation

University of Zurich

Second affiliation

Institutional email

paloma.cimentalchavez@physiks.uzh.ch

Gender

Female

Collaboration (if any)

XENON Collaboration

Primary authors: Ms CIMENTAL, Paloma (University of Zurich); Ms RAJADO, Mariana (University of Zurich)

Presenter: Ms CIMENTAL, Paloma (University of Zurich)

Session Classification: Poster session and reception 2

Track Classification: Beyond Standard Model searches in the neutrino sector