

Contribution ID: 818

Type: Parallel

Latest results from the XENONnT experiment

Tuesday 8 July 2025 17:50 (17 minutes)

The XENONnT detector, located at the INFN Laboratori Nazionali del Gran Sasso in Italy, is a leading experiment in the search for dark matter in the form of Weakly Interacting Massive Particles (WIMPs). It features a dual-phase time projection chamber with a 5.9-tonne liquid xenon active target, designed to detect rare particle interactions. Owing to its low background environment, the scientific reach of XENONnT extends beyond WIMP searches to include rare event studies such as bosonic dark matter, solar axions, rare nuclear decays, and solar neutrinos. In this talk, I will present recent results on the first observation of Boron-8 solar neutrinos via coherent elastic neutrino-nucleus scattering (CEvNS), as well as the latest findings from the WIMP search with XENONnT.

Secondary track

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Track Classification: T02 - Dark Matter