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Latest results from XENON1T and a glimpse into the future with the XENONnT experiment

Thursday 30 July 2020 08:00 (25 minutes)

The xenon-based multi-ton-scale dark matter detectors XENON1T and XENONnT, are the latest in the XENON experiment series at the Laboratori Nazionali del Gran Sasso. XENON1T which operated from 2016 to 2018 was the largest liquid-xenon time projection chamber to date. With a fiducial mass of 1.3 ton and a ton year exposure, its data allowed us to place the most stringent limits on spin-independent WIMP interactions and to explore a multitude of other scientific channels. The successor to XENON1T is the upcoming XENONnT detector, which will start taking data in summer 2020. With a target mass of approximately 6 ton and a projected exposure of 20-ton years, XENONnT will allow us to probe new parameter spaces of potential dark matter candidates and search for long-sought-after decay processes. In this talk, the latest results from XENON1T will be presented as well as the latest developments and prospects of the XENONnT detector.

I read the instructions

Secondary track (number)

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