

Status and recent results of the XENONnT experiment

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The detection of particle dark matter (DM) remains an unresolved challenge in contemporary physics. The XENONnT experiment, located at the Laboratori Nazionali del Gran Sasso, in Italy, utilizes a multi-tonne liquid xenon time projection chamber to probe DM interactions. With an active target of 5.9 tonnes, low background, and keV-level threshold, XENONnT completes its science program with other rare-event searches such as solar neutrinos, solar axions, bosonic DM, and rare nuclear decays. In this talk, I will present an overview of the XENONnT detector, its subsystems, and the key results from its first science run.

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