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Dark Matter search by the XENON collaboration

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The evidence for dark matter is overwhelming, yet there has not been an unambiguous detection of a dark matter particle. The XENON collaboration has operated successively larger experiments in the hunt for WIMP-dark matter using dual phase time projection chambers with xenon as the target material. The XENON collaboration is one of the leading collaborations in constraining the WIMP-nucleon scattering cross-sections, as well as being sensitive to other rare processes such as solar-axions coherent elastic scattering of solar neutrinos and two-neutrino double electron capture in ^{124}Xe . The XENONnT detector with a target mass of 8000kg is operated at the INFN Gran Sasso National Laboratory in Italy and in this talk I will discuss results of XENONnT and its predecessor, XENON1T, along with the plans for operating XENONnT in the future.

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