Contribution ID: **27** Type: **Talk (12+3min)**

The XENONnT Time Projection Chamber

Tuesday, 17 July 2018 16:00 (15 minutes)

Dual-phase time projection chambers (TPCs) filled with liquid xenon (LXe) are a widely-used technique for the direct search for dark matter in the form of weakly interacting massive particles (WIMPs). One of the upcoming experiments exploiting this technique is XENONnT, which aims at Dark Matter detection through the scattering of WIMPs off the xenon nuclei. XENONnT will be filled with 8 t of ultra-pure liquid Xenon, out of which will be 5.9 t in the active TPC. XENONnT will be located at the Laboratori Nazionali del Gran Sasso (LNGS) in Italy, at an average depth of 3600 m water equivalent. After an overview on the XENONnT project, this talk will present the working principles of the XENONnT TPC as well as the lessons learned from the operating XENON1T.
This work is supported by the Federal Ministry of Education and Research of Germany (BMBF).

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