Contribution ID: **39** Type: **Presentation**

Status of XENON experiment

Tuesday 21 June 2016 11:40 (25 minutes)

Cosmological observations provide strong evidence for an invisible and dominant mass component. If the dark matter is made of Weakly Interacting Massive Particles (WIMPs), it can be directly detected via elastic scattering from nuclei in ultra-low background, deep-underground detectors. Among various direct dark matter search experiments, the experiments utilizing liquid-gas dual phase xenon Time Projection Chamber (TPC) are leading the field. The XENON1T experiment is the ton-scale liquid xenon detector at the National Laboratory of Gran Sasso, Italy. The design characteristics, the status, and the scientific reach of the XENON1T will be covered.

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