

## Latest Dark Matter Search Results from the XENON1T Experiments

*Sunday, 3 September 2017 14:00 (25 minutes)*

Understanding the properties of dark matter particle is a fundamental problem in particle physics and cosmology. The search of dark matter particle scattering off nuclei target using ultra-low background detector is one of the most promising technology to decipher the nature of dark matter. The XENON1T experiment, which is a dual phase detector with  $\sim 2.0$  tons of xenon running at the Gran Sasso Laboratory in Italy, is designed to lead the field of dark matter direct detection. Since November 2016, the XENON1T detector is continuously taking data, with a background rate of more than one order of magnitude lower than any current generation dark matter search experiment. The first dark matter search results from XENON1T experiment is expected to come this summer, and will be the main scope of this talk. Details about the XENON1T detector as well as the data analysis techniques will also be covered.

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**Session Classification:** Dark matter and cosmology

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