



Contribution ID: 344

Type: Talk

## **【383】 Calibrations of the XENON1T dark matter detector**

*Friday 25 August 2017 11:45 (15 minutes)*

Numerous observations show that most of the matter in the Universe is in a form of non-luminous, cold, collisionless, non-baryonic dark matter. One candidate under study is a stable weakly interacting massive particle (WIMP).

Liquefied-noble-gas-detectors are now among the technologies at the forefront of WIMP direct detection experiments, looking for its interactions with nuclei.

In a dual-phase LXe time-projection-chamber such in XENON1T, a particle interaction creates both primary scintillation photons and ionization electrons.

The energy scale is based on these signals and consequently a precise calibration is of prime importance. In this talk I will present the calibration steps made to allow XENON1T leading the research of dark matter.

**Primary authors:** Ms CAPELLI, Chiara (University of zurich); XENON1T COLLABORATION

**Presenter:** Ms CAPELLI, Chiara (University of zurich)

**Session Classification:** Nuclear, Particle-and Astrophysics (TASK-FAKT)

**Track Classification:** Nuclear, Particle- and Astrophysics (TASK - FAKT)