



Contribution ID: 155

Type: oral

Status of the XENON1T Experiment

Thursday, 8 September 2016 11:30 (15 minutes)

Astronomical and cosmological observations indicate that a large amount of the energy content of the Universe is made of dark matter. The most promising dark matter candidates are the so-called WIMPs (Weakly Interacting Massive Particles). The search for these particles is performed with various experimental approaches. The XENON Project, at the Gran Sasso National Laboratory (LNGS), is devoted to the direct search for dark matter particles. It consists in operating a double-phase time projection chamber (TPCs) using ultra-pure liquid Xenon as both target and detection medium for dark matter particle interactions. The WIMPs can be indeed detected via their elastic scattering off Xenon nuclei.

After the successful operation of the XENON10 and XENON100 the collaboration is starting the operation of the next generation XENON1T detector, XENON1T is the first ton scale liquid Xenon detector; it hosts 3.3 tonnes of ultra-pure liquid Xenon and is designed to increase the sensitivity by two orders of magnitude.

We will present the status of the XENON1T experiment.

Primary author: GARBINI, Marco (INFN Bologna)

Presenter: GARBINI, Marco (INFN Bologna)

Session Classification: Parallel