



ID de Contribution: **68**

Type: **Ordinary**

## Recent results from DarkSide

*lundi 16 mars 2015 17:20 (15 minutes)*

DarkSide-50 is dual-phase liquid argon time projection chamber, designed for direct WIMP search. The detector, consisting of 50 kg of liquid argon and shielded by active neutron and muon vetoes, is installed at Gran Sasso underground laboratory. DarkSide-50 is taking data since November 2013, collecting more than  $10^7$  events with atmospheric argon, naturally contaminated with cosmogenic  $^{39}\text{Ar}$  beta decay. This contamination is equivalent to  $\sim 20$  years of data taking with underground argon, depleted in  $^{39}\text{Ar}$  by a factor larger than 150. Thanks to the excellent nuclear-electron recoil discrimination power of liquid argon and to the high efficiencies of the vetoes, no event has been observed in the WIMP region of interest in 47.1 days of data taking. We present the detector design and performance and the results from the atmospheric argon run.

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**Classification de Session:** VHE and Dark Matter

**Classification de thématique:** Experiment