

On the DEAP-3600 in-situ resurfacing.

Friday, May 26, 2017 2:10 PM (20 minutes)

The DEAP-3600 experiment is a single-phase detector that uses 3600 Kg of liquid argon to search for Dark Matter at SNOLAB, Sudbury, Canada, 6800 ft. underground. The projected sensitivity to the spin-independent WIMP-nucleon cross-section is 10^{-46} cm² for a WIMP mass of 100 GeV.

One of the primary sources backgrounds to the WIMP search are alpha decays occurring on the surface of the experiment, which could mimic the expected signal. The work reported here focuses on the development and operation of a custom designed robot, the Resurfacers, aimed at removing 500 microns from the most inner layer of the detector's surface, thus removing any contamination introduced during the construction phase.

Primary author: Mr GIAMPA, Pietro (Queen's University)

Presenter: Mr GIAMPA, Pietro (Queen's University)

Session Classification: Session 7