



Contribution ID: 721

Type: **Poster (Non-Student) / affiche (non-étudiant)**

In-situ Surface Contamination Removal With the DEAP-3600 Resurfacing Robot

Wednesday 17 June 2015 19:08 (2 minutes)

The success of any Dark Matter experiment depends on the ability of reducing any possible sources of backgrounds. For the DEAP-3600 experiment, surface backgrounds were reduced in-situ by removing more than 100 microns of acrylic from the most inner part of the detector with a resurfacing robot (Resurfacer). This machine was successfully run for over 200 hours, combined with a purge gas system that further eliminated Rn daughters depositions. We will present here the results of the Resurfacer runs, including all different used monitoring methods that allowed to estimate the current surface backgrounds level to be 0.1 events in 3 years exposure.

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Session Classification: PPD Poster Session with beer / Session d'affiches, avec bière PPD

Track Classification: Particle Physics / Physique des particules (PPD)