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POS-40 - Position Reconstruction and Monte Carlo Tuning in DEAP-3600

Wednesday, 31 May 2017 18:08 (2 minutes)

The DEAP-3600 spin-independent WIMP search experiment has been taking data since 2016. In order to exclude WIMP-like backgrounds, it is necessary to make a fiducial volume cut. This is only possible through effective event position reconstruction. The results of Monte Carlo studies on the probability of events that occur outside the fiducial volume being reconstructed within the fiducial volume will be presented. Scattering, absorption, and various other aspects of the optical model of the Monte Carlo detector have also been tuned to match that of the physical detector, and the process behind this tuning will be presented.

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