

On the Calibration of the DEAP-3600 Experiment

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The DEAP-3600 experiment is a single phase liquid argon (LAr) dark matter detector, capable of holding up to 3,6 tonnes of LAr. The target material is contained within an ultra-radiopure acrylic vessel 85 cm in radius. Particle interactions within the active volume are observed via 255 HQE 8 inches Hamamatsu room-temperature PMTs, which are coupled to the detector via 50 cm long acrylic light guides (LGs). The inner detector is sealed inside a stainless steel vessel, which is immersed in a 400 meter-cube water tank that functions as a muon veto. The experiment has been operational since May 2016 and stable physics trigger data-taking has been underway since November 2016. In this talk, we will report on the full (multi-year) calibration campaign completed for the PMTs response, the energy response, and the pulse-shape discrimination, all necessary to achieve the ultimate WIMP-nucleus sensitivity.

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