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Latest updates and results from the DEAP-3600 experiment

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The DEAP-3600 experiment at SNOLAB primarily searches for Weakly Interacting Massive Particle (WIMP) dark matter candidates through interactions with argon nuclei. The detector consists of 3.3 tonnes of liquid argon housed in a spherical acrylic vessel which is viewed by 255 photomultiplier tubes. Data have been taken stably from November 2016 to March 2020 and the detector is currently undergoing hardware upgrades. DEAP-3600 achieved world-leading constraints on Planck-scale mass dark matter, and the most sensitive limit on the spin-independent WIMP-nucleon cross-section among the argon-based experiments. This talk presents the latest DEAP-3600 results demonstrating the background models, updates on the dark matter search, as well as other physics analyses and measurements.

Keyword-1

Dark matter

Keyword-2

Liquid Argon

Keyword-3

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