

Dark Matter Search Status from DEAP-3600

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The current status of the search for dark matter from the DEAP-3600 experiment will be presented, along with a detailed description of the analysis techniques. DEAP-3600 is a direct detection experiment that uses 3.3 tonnes of liquid argon as its target material. Located over 2 km underground at SNOLAB in Sudbury, Canada, the detector is designed to observe scintillation light from nuclear recoils induced by dark matter interactions. Pulse-shape discrimination is employed to suppress the dominant background from beta decays of argon-39. Additional backgrounds include alpha decays from the inner surface of the detector and from dust within the liquid argon, radiogenic neutrons from detector components, and Cherenkov radiation.

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Session Classification: SESSION 10: Direct Detection: status of liquid/gas WIMP detectors