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Dark Matter Search Results from DEAP-3600

Sunday, 15 February 2026 12:00 (15 minutes)

The latest results from the DEAP-3600 experiment in the search for dark matter will be presented. 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. This talk will present the latest dark matter search results from the DEAP-3600 collaboration, which uses a profile likelihood ratio analysis and increased livetime to improve our results.

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