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DEAP-3600 Dark Matter Search with Argon

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The DEAP-3600 experiment will search for dark matter particle interactions on 3.6 tonnes of liquid argon at SNOLAB. The argon is contained in a large ultralow-background acrylic vessel viewed by 255 8-inch photomultiplier tubes. Very good pulse-shape discrimination has been demonstrated for scintillation in argon, and the detector has been designed to allow control of (alpha,n) and external neutron recoils, and surface contamination from 210Pb and radon daughters, allowing an ultimate sensitivity to spin-independent scattering of 10^{-46} cm^{2} per nucleon at 100 GeV mass. The detector is expected to begin collecting low-background data in 2016; the current status of the experiment will be presented.

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