

Abstract Submitted
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Pulse Shape Discrimination (PSD) in Liquid Argon BEI CAI, Queen's University, Canada, THE DEAP-1 COLLABORATION — Dark Matter Experiment using Argon Pulse-shape discrimination (DEAP) plans to search for WIMPs (Weakly Interacting Massive Particles) through elastic scattering on ^{40}Ar . In this single-phase liquid argon (LAr) experiment discrimination of β and γ backgrounds from the WIMP-induced nuclear recoil signal is achieved by analyzing the pulse shape of scintillation light. A 7-kg low-background LAr scintillation detector was constructed and run at Queen's University in Canada. A background rejection of 6×10^{-8} at 120-240 photo-electrons was achieved.

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