

Abstract Submitted
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The DarkSide-10 Prototype Dark Matter Detector BEN LOER,
Princeton University, DARKSIDE COLLABORATION — The DarkSide collaboration will search for evidence of interactions of Weakly Interacting Massive Particles (WIMPs) with normal matter using a two-phase argon Time Projection Chamber (TPC). The TPC measures both the scintillation and ionization of interactions in the detector, providing precise measurement of the interaction position and two means to discriminate minimum ionizing particles from potential WIMP signals: the time profile of the primary scintillation pulse and the ratio of scintillation to ionization. We have constructed DarkSide-10, a 10kg argon TPC, as a prototype for full-scale physics detectors. I will describe the key features of this detector and present results from recent data collection campaigns at Princeton University.

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