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Status and Results from DarkSide-50

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DarkSide-50 is the first physics detector of the DarkSide dark matter search program. The detector features a dual-phase underground-argon Time Projection Chamber (TPC) of 50 kg active mass surrounded by an organic liquid-scintillator neutron veto (30 tons) and a water-Cherenkov muon detector (1000 tons). The TPC is currently fully shielded and operating underground at Gran Sasso National Laboratory. A first run of 1422 kg-day exposure with atmospheric argon represents the most sensitive dark matter search using a liquid argon target. The TPC is now filled with underground argon, greatly reduced in Ar-39, and DarkSide-50 is in its final configuration for an extended dark matter search. Overviews of the design, performance, and results obtained so far with DarkSide-50 will be presented, along with future prospects for the DarkSide program.

Oral or Poster Presentation

Oral

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