

Abstract Submitted
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Analysis of Alpha Backgrounds in DarkSide-50 ALISSA MONTE,
Univ of Mass - Amherst, DARKSIDE COLLABORATION — DarkSide-50 is the current phase of the DarkSide direct dark matter search program, operating underground at the Laboratori Nazionali del Gran Sasso in Italy. The detector is a dual-phase argon Time Projection Chamber (TPC), designed for direct detection of Weakly Interacting Massive Particles, and housed within an active veto system of liquid scintillator and water Cherenkov detectors. Since switching to a target of low radioactivity argon extracted from underground sources in April, 2016, the background is no longer dominated by naturally occurring ^{39}Ar . However, alpha backgrounds from radon and its daughters remain, both from the liquid argon bulk and internal detector surfaces. I will present details of the analysis used to understand and quantify alpha backgrounds, as well as to understand other types of radon contamination that may be present, and our sensitivity to them.

Alissa Monte
Univ of Mass - Amherst

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