Abstract Submitted
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Liquid-nitrogen cryogenic system for noble liquid detectors EMILY LEBSACK, Princeton University, DARKSIDE COLLABORATION — The next generation of noble liquid dark-matter detectors will require a powerful, stable, and adjustable cryogenic cooling system that will not introduce backgrounds into the detector. I will discuss the design and operation of a novel liquid-nitrogen based heat exchanger capable of delivering a widely varying degree of cooling power and maintaining a range of stable temperatures. I will present measurements from our successful integration of this cooling system with our liquid argon time-projection-chamber, Darkside-10.

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