

Abstract Submitted  
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**Time Domain Analysis of ARIANNA Data Acquisition: Distinguishing Askaryan Radiation from Thermal Backgrounds** JORDAN HANSON, University of Kansas, ARIANNA COLLABORATION — The Antarctica Ross Ice Shelf Antenna Neutrino Array (ARIANNA) is a high energy astrophysical neutrino detector, currently under construction near McMurdo Station, Antarctica. The ARIANNA detector design is optimized for detection of Askaryan radio frequency pulses, created in the ice shelf above the Antarctic ocean, that originate from cosmogenic GZK neutrino interactions. A formal analysis of the electromagnetic properties of the ARIANNA detection chain in the time domain is presented, and combined with a theoretical understanding of the Askaryan signal. This combination produces signal templates, used to distinguish thermal backgrounds from true signal in the current ARIANNA data. The results of this data analysis are also presented.

Jordan Hanson  
University of Kansas

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