

Abstract Submitted
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The Nature of Horizontally Polarized Events in ANITA 1: MC Simulations ERIC GRASHORN, Center for Cosmology and AstroParticle Physics, Ohio State University, ANTARCTIC IMPULSIVE TRANSIENT ARRAY (ANITA) COLLABORATION — The ANITA (ANtarctic Impulsive Transient Antenna) experiment is a balloon-borne, broadband antenna array flown over the Antarctic continent. It is designed to detect radio Cherenkov emission from UHE astrophysical neutrinos ($E > 10^{18}$) interactions in the ice below. ANITA 1 completed a 35 day flight during the Austral summer of 2006-2007, observing a number of horizontally polarized events, which could be caused by radio emission from downward going cosmic rays reflecting off the ice. A detailed simulation was written to calculate ANITA's sensitivity to reflected cosmic ray radio signals.

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