

Abstract Submitted  
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**Radio Frequency Attenuation Length Estimate in Antarctic Ice from Radar Depth Sounding Data** MARK STOCKHAM, University of Kansas, ANITA COLLABORATION — The balloon-borne ANITA experiment in Antarctica seeks detection of in-ice neutrino collisions, which generate radio waves propagating upwards to the suite of 32 horn antennas that constitute ANITA. The primary virtue of ANITA is the ability to simultaneously observe 20,000 cubic kilometers of ice from its 38-km altitude vantage point. The radio frequency signal strength observed at the balloon, however, depends on the radio frequency attenuation length of the ice through which the neutrino-generated signal must pass. Ice attenuation length varies as a function of surface temperature, depth, bedrock depth, and ice chemistry (imperfections). The CReSIS project has data from several locations on the Antarctic continent gathered from radar depth sounding. An approximation to the attenuation length, as a function of location, in Antarctic ice derived from comparing the bedrock reflection strength at different depths is presented.

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