

Abstract Submitted
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Ultrarelativistic Magnetic Monopole Flux Constraints from RICE DANIEL HOGAN, University of Kansas, RICE COLLABORATION — The Radio Ice Cherenkov Experiment (RICE) is a radio array buried in the Antarctic ice. A Monte Carlo simulation has been developed to model the behavior of an ultrarelativistic magnetic monopole propagating through the ice and RICE's response. With this, we've determined RICE's effective volume for detecting these particles as a function of monopole mass, charge, and gamma-value. As previously reported, RICE failed to detect an in-ice high-energy Cherenkov radiation signal consistent with a relativistic magnetic monopole over roughly two years of livetime. From this null result and the effective volume calculation, we can extrapolate upper bounds on ultrarelativistic magnetic monopole flux. Provisional values are presented.

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