

Abstract Submitted
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Developing the Cosmic Ray Veto for ν -SNS¹ L. ERIKSON, J. EAST-BURG, U. GREIFE, Colorado School of Mines, ν -SNS COLLABORATION — The newly operational Spallation Neutron Source (SNS) will produce large quantities of neutrinos ($\sim 2 \times 10^7 \nu/cm^2/s$ at 20m) at energies relevant to nuclear astrophysics. To exploit this opportunity, the proposed Neutrinos at the SNS (ν -SNS) facility will host 2 detectors (target mass of ~ 20 tons each) to measure neutrino-nucleus cross sections for a number of materials (e.g. C, O, Fe, Pb). Shielding the detectors from background is crucial so the facility will employ an iron bunker and a cosmic ray veto. As part of the ν -SNS collaboration, the Colorado School of Mines nuclear group is responsible for the design and construction of this veto. Presented in this talk is the current progress for the research and development of the highly efficient, low cost, large veto panels based on extruded plastic scintillator.

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