Abstract Submitted
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Ultra-Low Background Measurements using AMS DANIEL J. ROBERTSON, University of Notre Dame, JOHN D. BAKER, Idaho National Lab, PHILIPPE COLLON, University of Notre Dame, JARET HEISE, Queen's University, KARA J. KEETER[1], Idaho State University, CHRISTOPHER J. SCHMITT, University of Notre Dame, ED TATAR, CHARLES TAYLOR, Idaho State University — Current-generation experiments studying rare processes such as neu- trino and dark matter interactions require ultra-low levels of radioactive background. Accelerator Mass Spectrometry (AMS) shows promise in achieving the ultra-low sensitivity required for detector material selec- tion. One project interested in such techniques is SNO+, which proposes to modify the existing SNO detector to study low-energy solar neutrinos as well as other neutrino properties via double-beta decay using a liquid scintillator called linear alkylbenzene (LAB). Due to the lower energy threshold of the detector, the present materials need to be reevaluated for concentrations of ^{40}K. Ultra-pure copper cathodes as well as sam- ples of materials to be used in the detector have been prepared at Idaho State University and Idaho National Laboratory. These materials are being tested for levels of ^{40}K at the Notre Dame AMS facility. Results from the first set of measurements will be discussed.

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