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Accelerator Mass Spectrometry at the Nuclear Science Laboratory: Applications to Nuclear Astrophysics¹

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The Accelerator Mass Spectrometry (AMS) program at the Nuclear Science Laboratory (NSL) of the University of Notre Dame is focused on measurements related to galactic radioactivity and to nucleosynthesis of main stellar burning as well as the production of so called Short-Lived Radionuclides (SLRs) in the Early Solar System (ESS). The research program is based around the 11MV FN tandem accelerator and the use of the gas-filled magnet technique for isobar separation. Using a technique that evolved from radiocarbon dating, this talk will give an overview of the ongoing research at the NSL and then focus on a number of research programs that rely on the use of an 11MV tandem accelerator at the center of the AMS program.

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