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Updated Sensitivities for Accelerator Mass Spectrometry at the Notre Dame Nuclear Science Laboratory ADAM CLARK, TYLER ANDERSON, LAUREN CALLAHAN, AUSTIN NELSON, MICHAEL SKULSKI, PHILIPPE COLLON, University of Notre Dame — Accelerator Mass Spectrometry (AMS) is an ultra-sensitive measuring technique excelling for long-lived isotopes where direct decay counting becomes impractical. At the University of Notre Dame's Nuclear Science Laboratory (NSL), AMS capabilities for a select few isotopes have been developed over the last decade for studies ranging from radiocarbon dating (^{14}C), to nuclear astrophysics (^{36}Cl, ^{41}Ca, ^{44}Ti, ^{60}Fe, ^{93}Zr), and nuclear forensics (^{129}I). However, limitations and shortcomings in the accelerator system were identified. This prompted upgrades and modifications to both the low energy injection to the accelerator system and to the AMS beamline. The current status of the accelerator system and its recent improvements will be presented along with updated measurement sensitivities and developments toward measuring new isotopes at the NSL. This work is supported by the NSF: PHY-1713857 (NSL) and PHY-1337608 (MRI)

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