

AMS DETECTION SYSTEM FOR ACTINIDES AT THE ARGONNE FRAGMENT MASS ANALYZER

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The AMS (Accelerator Mass Spectrometry) project at ATLAS complements the MANTRA (Measurement of Actinide Neutronic Transmutation Rates with Accelerator mass spectrometry) experimental campaign to obtain valuable integral information about neutron cross sections for very high mass actinides. The irradiated samples from the Advanced Test Reactor (ATR) at the Idaho National Laboratory are studied via AMS at ATLAS. The project progress as well as first results from the test run will be discussed.

A second, but different topic addressed will be results from the nuclear structure studies of the protonrich ^{179}Tl and ^{180}Tl nuclei. Both in-beam and decay properties of the Tl-nuclei were deduced in a Recoil Decay Tagging experiment using the Gammasphere array in tandem with the Argonne Fragment Mass Analyzer. The alpha decay fine structures as well as level schemes depicting the excited structures will be presented.

**Nuclear
Seminar**

**All interested
persons are
cordially
invited to
attend.**