

Abstract Submitted
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New separators at the ATLAS facility¹ BIRGER BACK, Argonne National Laboratory, AGFA COLLABORATION, AIRIS TEAM — Two new separators are being built for the ATLAS facility. The Argonne Gas-Filled Analyzer (AGFA) is a novel design consisting of a single quadrupole and a multipole magnet that has both dipole and quadrupole field components. The design allows for placing Gammasphere at the target position while providing a solid angle of ~ 22 msr for capturing recoil products emitted at zero degrees. This arrangement enables studies of prompt gamma ray emission from weakly populated trans-fermium nuclei and those near the doubly-magic $N=Z=50$ shell closure measured in coincidence with the recoils registered by AGFA. The Argonne In-flight Radioactive Ion Separator (AIRIS) is a magnetic chicane that will be installed immediately downstream of the last ATLAS cryostat and serve to separate radioactive ion beams generated in flight at an upstream high intensity production target. These beams will be further purified by a downstream RF sweeper and transported into a number of target stations including HELIOS, the Enge spectrograph, the FMA and Gammasphere. This talk will present the status of these two projects.

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