



Recent experiments/developments with AGFA

Dariusz Seweryniak on behalf of the AGFA collaboration

Physics Division, Argonne National Laboratory, Argonne, IL 60439, USA

After a break due to the GRETINA campaign at ATLAS the experimental program with the Argonne Gas-Filled Analyzer was restarted in summer 2022. Several AGFA experiments in stand-alone mode were performed since then. The $^{22}\text{Ne}+^{238}\text{U}$ reaction was used to produce ^{256}No to test performance of AGFA for asymmetric reactions. Search for proton emission in proton-rich At isotopes was carried out: the α decay of the new isotope ^{190}At was observed and a search for ^{189}At , which a candidate for the heaviest proton emitter to date, was carried out. Beam discrimination in these experiments was challenging due to symmetric reactions which were used. In a very recent experiment, the odd dubnium isotopes $^{255,257}\text{Db}$ were studied. Preliminary results from these experiments will be presented. Plans for experimental program with AGFA in near future will be also discussed. It is anticipated that a campaign of experiments with AGFA and Gammasphere will take place this year following the completion of upgrade of Gammasphere. A new implantation station optimized for the AGFA focal plane, which is currently under construction, will be also presented.

This material is based upon work supported by the U.S. Department of Energy, Office of Science, Office of Nuclear Physics, under contract number DE-AC02-06CH11357. This research used resources of ANL's ATLAS facility, which is a DOE Office of Science User Facility.