DNP16-2016-000230

Abstract for an Invited Paper
for the DNP16 Meeting of
the American Physical Society

An Overview of GRETINA and its Physics Program[1]

AUGUSTO MACCHIAVELLI, Lawrence Berkeley Natl Lab

GRETINA [1], a first implementation of a gamma-ray tracking array, combines unparalleled position resolution, large Ge efficiency, and good P/T to provide a powerful tool for in-beam gamma-ray spectroscopy. The commissioning in 2012 demonstrated the technical feasibility and unique capabilities of a gamma-ray tracking array, and successful physics campaigns have followed at NSCL/MSU(2013/14) and ATLAS/ANL (2014/15). New and exciting physic results have been shown in a broad range of topics, clearly confirming the expectations of excellent performance in both high- and Coulomb barrier-energy environments, and in multiple configurations. GRETINA is again operating at NSCL for a second campaign coupled to the S800 spectrometer. Following a brief status report of the array, I will present some selected highlights from the science campaigns, complementing the latest results to be discussed in this mini-symposium. Future plans, with an emphasis on the development and construction of the full 4π GRETA, will also be discussed. [1] S. Paschalis, I.Y.Lee, et al. NIM A709 (2013) 44-55

[1]This work is supported by the U.S. Department of Energy, Office of Nuclear Physics, under contract no DE-AC02-05CH11231.