

Performance Measurements for the Ge Tracking Array AGATA

Wednesday, 12 November 2014 15:10 (20 minutes)

From 2012 to 2014 the pan-European Advanced GAMMA-ray Tracking Array (AGATA) is placed at the German accelerator research centre GSI Darmstadt. Within the PreSPEC collaboration, AGATA is used to perform high-resolution γ -ray spectroscopy of relativistic radioactive ions to obtain unique nuclear structure information of exotic nuclei far away from the line of stability.

In order to evaluate the performance of AGATA array and compare with Monte-Carlo simulations, a series of gamma-ray source measurements were conducted at GSI. Different sources have been used, such as ^{60}Co , ^{56}Co , ^{152}Eu and $^{166\text{m}}\text{Ho}$. The results of this calibration measurement with 21 AGATA crystals coupled with a single EUROBALL encapsulated detector used as a coincidence trigger are presented. In these performance figures the absolute and relative efficiency, P/T ratio, quality of the Pulse-shape Analysis and the effect of tracking will be evaluated. In addition to the aforementioned aspects, the analysis of AGATA performance at high multiplicities is ongoing.

Primary author: Ms LALOVIC, Natasa (Lund University Sweden)

Co-authors: Prof. RUDOLPH, Dirk (Lund University, Sweden); Dr GERL, Juergen (GSI Darmstadt, Germany)

Presenter: Ms LALOVIC, Natasa (Lund University Sweden)

Session Classification: SFS-KF

Track Classification: SFS-KF