

Expanding the EAGLE Array at HIL: The FLASH Campaign for Fast-Timing Spectroscopy

Thursday 13 March 2025 10:00 (30 minutes)

The EAGLE array (European Array for Gamma Levels Evaluations) [1] is a multi-configuration detector set-up for in-beam nuclear spectroscopy studies at the Heavy Ion Laboratory (HIL) of the University of Warsaw. It can accommodate up to 30 Compton-suppressed HPGe detectors.

Building on this foundation, a new campaign, FLASH (Fast-Timing LaBr₃ Array for Spectroscopy at HIL), is planned to expand the experimental capabilities of the EAGLE array. By incorporating up to 15 LaBr₃(Ce) detectors, the setup will enable advanced fast-timing measurements, opening a possibility for precise lifetime measurements of excited nuclear states.

The current status of the setup will be presented as well as information on the expected performance. The goals of the commissioning experiment, planned after the workshop, will also be outlined. In addition, several physics ideas intended with the FLASH setup will be discussed.

This presentation aims to highlight the potential of the FLASH campaign and inspire collaboration and innovative research ideas within the community.

[1] J. Mierzejewski *et al.*, Nucl. Inst. & Meth. Phys. Res. Sec. A **659**, 84 (2011).

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