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Development of Self-calibration technique for AGATA via Coulomb excitation

Monday 13 May 2024 17:00 (20 minutes)

We propose to develop a new signal basis for AGATA array via Coulomb excitation of ^{28}Si on a thin ^{197}Au target using the AGATA + PRISMA setup at LNL. The new signal basis will be obtained in an experimental way using the newly developed self-calibration technique from a long-time γ-source calibration data. The performance of the new self-calibration basis will be studied from the photo-peak efficiency and energy resolution of the Doppler-corrected γ-energy spectra from this measurement. The γ-particle coincidence yields is estimated by the GOSIA code. Sufficient statistics to study the signal basis performance can be achieved in 1 day beam time. This development will benefit general AGATA experiments in future at LNL and other facilities.

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