

T3.2-P01. A Gamma-Gamma coincidence system for radionuclide quantification

A high-resolution gamma-gamma coincidence system has been developed at GBL15 for fast quantification of both cascade and single gamma emissions from CTBT relevant radionuclides. This consists of two BEGe-6530 crystals and an active cosmic veto. CAEN digitisers collect all data in list-mode, allowing offline sorting and processing with ROOT based analysis routines. Energy and time gated coincidence, sum-coincidence, and anti-coincidence modes are all possible with the current setup. Substantial MDA improvements have been achieved, which will be presented alongside various characterisations required for such measurements.

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