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# Performance of an AGATA prototype detector estimated by Compton-imaging techniques

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High-resolution γ-ray spectroscopy is one of the most powerful and sensitive tools to investigate Nuclear Structure. However, it is apparent that the present generation devices are not suited to the expected experimental conditions at the planned and under construction radioactive ion beam facilities. Devices with higher efficiency and sensitivity should be developed. The solution which has been proposed since the mid-nineties relies on the possibility to determine the position and the energy deposition of the individual interaction points of a photon within a germanium crystal, and on the capability to reconstruct the photon scattering sequence through powerful data analysis algorithms. The estimation of the performance obtainable in experimental conditions was done by two ways: using an in-beam experiment, extracting the information from the Doppler correction capabilities, and using Compton imaging technique, extracting the information from the quality of the produced images of the radioactive sources.

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