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Study of the efficiency calibrations of HPGe detector for the PGNAA system

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One of the most important part of the Prompt Gamma Neutron Activation Analysis system (PGNAA) is the High Purity Germanium detector (HPGe). In this paper, the calibrations of an HPGe detector were made with the isotopic source ^{152}Eu. The same detector was modelled in the MCNP5 and simulated. The thickness of the dead layer was determined. The simulated and experimental efficiency over the energy range of the ^{152}Eu are compared observing a satisfactory agreement.

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