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# #11-188 Scanning of a Germanium Double Sided Strip Detector

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The response of a position-sensitive planar High Purity Germanium (HPGe) detector has been studied using pulse shape comparison and positron annihilation method. Such detectors will be useful in the DESPEC (DEcay SPECtroscopy) experiments at the FAIR facility to study the exotic nuclei. The characterization of the detector has been performed using a novel scanning system available at GSI Helmholtz Centre for heavy-ion research, Germany, which consists of a LYSO (Cerium doped Lutetium Ytturium Orthosilicate) scintillation crystal-based position-sensitive scintillator detector (PSD) [1]. The crystal is coupled to a position-sensitive photomultiplier tube, a mesh of 16X and 16Y anodes. The electrically segmented HPGe detector has dimensions 6cmx6cmx2cm consisting of 10 segments each along the horizontal and vertical directions [2]. The pulses have been stored for scanning along the front and side view of the segmented HPGe detector. The 2D image from the PSD has been used to characterize the depth of interaction information in the planar strip detector using pulse shape analysis. The analysis and results from the scanning of the planar HPGe detector will be presented at the conference.

[1] C. Domingo-Pardo et al., Nucl. Instru. Methods in Physics Research, 643 (2011) 79.
[2] J. Sethi, R. Palit, S. Saha, B. Naidu, AIP Conference Proceedings 1524 (2013) 287.

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