

Abstract Submitted  
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**Spatial Reconstruction of Co-60 Radiation Sources Using  
Goodness-of-Fit Tests on Spectra Obtained from an HPGe Detector**

LENNY EVANS, University of North Carolina at Chapel Hill — HPGe detectors are used in numerous low background assay systems, including the MAJORANA experiment, and spatial reconstruction of radiation sources could be used to locate unwanted backgrounds. The effect of the position of a Co-60 point source on the shape of spectra was observed in both Monte Carlo and HPGe detector measurements. Spectra taken with the radiation source placed at points on the face and side of the detector were compared in peak areas and were compared using the Kolmogorov-Smirnov goodness-of-fit test. We will discuss the position reconstruction accuracy of this statistical method.

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