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Hardware Emulator of Noise for HPGe Preamp

Abstract—This paper describes the HPGe preamp noise hardware simulation based on Vivado that can generate a b and c noise. The simulation is based on Broad Energy Germanium Detectors (BEGe) experimental platform. Noise power spectral density are obtained from BEGe by fit ENC curve with different shaping time. The Monte Carlo method is used in the noise hardware simulation with Tausworth method for random number and Box-Muller method for white gaussian noise. A noise is generated by scaling standard white gaussian noise with noise power. B and c noise are generated by Auto Regressive model.

Minioral

No

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No

Are you a student?

Yes

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