

Abstract Submitted
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MASE (Multiplexed Analog Shaper Electronics): A novel approach to readout of a highly segmented silicon detector array¹ S. HUDAN, C.J. METELKO, M. HODEK, R.T. DE SOUZA, Department of Chemistry and IUCF, Indiana University, A. ALEXANDER, J. POEHLMAN, Department of Chemistry, Indiana University — A new approach in the signal processing and readout of highly segmented silicon detector arrays is described. The realization of this approach is Multiplexed Analog Shaper Electronics (MASE), an electronic system that allows the effective readout of highly segmented detector arrays when the occupancy in a single event is low. MASE combines the features of good energy resolution with time resolution adequate for random rejection. The MASE system is modular allowing for readout of a sixteen element silicon detector via a single board or a crate configuration of up to 4096 channels. Both the overall design and the performance characteristics of MASE are described.

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