

Abstract Submitted  
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**Digital Electronics for Nuclear Physics Experiments<sup>1</sup>** WOJTEK SKULSKI, SkuTek Instrumentation and University of Rochester, DAVID HUNTER, Skutek Instrumentation, ERYK DRUSZKIEWICZ, DEV ASHISH KHAITAN, JUN YIN, FRANK WOLFS, University of Rochester, SKUTEK INSTRUMENTATION TEAM, DEPARTMENT OF PHYSICS AND ASTRONOMY, UNIVERSITY OF ROCHESTER TEAM — Future detectors in nuclear physics will use signal sampling as one of primary techniques of data acquisition. Using the digitized waveforms, the electronics can select events based on pulse shape, total energy, multiplicity, and the hit pattern. The DAQ for the LZ Dark Matter detector, now under development in Rochester, is a good example of the power of digital signal processing. This system, designed around 32-channel, FPGA-based, digital signal processors collects data from more than one thousand channels. The solutions developed for this DAQ can be applied to nuclear physics experiments.

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