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## The Design and Development of the JSNS2 DAQ Upgrade

The J-PARC Sterile Neutrino Search at the J-PARC Spallation Neutron Source (JSNS<sup>2</sup>) will begin data taking this year using DAQ electronics donated by the Double Chooz reactor neutrino experiment. Detailed here is the design of custom electronics for a planned upgrade to the JSNS<sup>2</sup> readout and trigger system. The upgraded electronics will digitize PMT signals at 500 MSPS with 14-bit resolution and will have beam-synchronized triggers as well as self-triggering capabilities. Signal processing will be done with several Xilinx Kintex UltraScale FPGA, each FPGA independently handling 16 digitized PMT signals with timing synchronization and trigger logic handled by a special “hub” FPGA. The custom PCB and firmware for the upgrade electronics are in the design and testing phase and will be commissioned this fall.

### Mini-abstract

The design and status of a planned DAQ upgrade for the JSNS<sup>2</sup> experiment

### Experiment/Collaboration

JSNS2

**Primary author:** Dr MARZEC, Eric (University Of Michigan)

**Presenter:** Dr MARZEC, Eric (University Of Michigan)

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