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Results from a Prototype TES Detector for the Ricochet Experiment

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Coherent elastic neutrino-nucleus scattering (CEνNS) offers valuable sensitivity to physics beyond the Standard Model. The Ricochet experiment will use cryogenic solid-state detectors to perform a precision measurement of a CEνNS spectrum at the ILL nuclear reactor. The experiment will employ an array detectors, each with a mass of approximately 30 g and an energy threshold of 50 eV. Nine of these detectors (the 'Q-Array') will be based on a novel Transition Edge Sensor (TES) readout style, in which the TES devices are thermally coupled to the target using an Au wirebond. I will present our initial characterization of a Q-Array-style detector architecture using a 1-gram Si target.

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