

Abstract Submitted
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Raspberry Pi Readout of a Cosmic Muon Detector TRISTAN

PAUL, JENNIFER KLAY, Cal Poly - San Luis Obispo — We have designed a readout system for a scintillator-based cosmic ray detector using inexpensive electronic components and a Raspberry Pi (RPi) microcomputer. The light signal from two scintillator paddles is detected by avalanche photodiodes connected to an amplifier and coincidence circuit that is fed to the input pins of the RPi. The microcomputer's readout rate is more than adequate for the expected event rate. This prototype will be upgraded with a GPS unit and wireless networking to enable remote sensing of cosmic ray arrivals. Plans for deployment of a suite of detectors across campus will be discussed.

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