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## Radiation Damage Testing of Silicon Photomultipliers for the Mu2e Experiment

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The Mu2e experiment at Fermilab will be looking for charged lepton flavor violation by searching for muon-to-electron conversion. A critical element of the detector for identifying and rejecting background events will be the cosmic ray veto (CRV) comprised of scintillator strips using wavelength-shifting (WLS) fibers mated to silicon photomultipliers (SiPMs). The CRV will cover approximately 325 sq. meters, use ~20K SiPMs and be subjected to an integrated dose of  $\sim 5E9$  neutrons (1 MeV equivalent) per sq. cm over the life of the experiment. As part of the campaign to identify devices that best serve the purposes of the CRV we report on radiation damage studies for SiPMs from several vendors by monitoring performance measures like dark current, dark rate, single photo-electron resolution, cross-talk, after-pulsing and response before and after exposure to proton and neutron radiation.

### Oral or Poster Presentation

Oral

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