

Performance of Scintillation Counters as Measured at the Fermilab Test Beam Facility for the Mu2e Cosmic Ray Veto System

Photoelectron yields of extruded scintillation counters with titanium dioxide coating and embedded wavelength shifting fibers read out by silicon photomultipliers have been measured at the Fermilab Test Beam Facility using 120 GeV protons. The yields were measured as a function of transverse, longitudinal, and angular positions for a variety of scintillator compositions, reflective coating mixtures, and fiber diameters. Timing performance was also studied. These studies were carried out by the Cosmic Ray Veto Group of the Mu2e collaboration as part of their R&D program.

Primary author: CHEN, Ningshun (Virginia)

Co-author: GROUP, Craig (University of Virginia)

Presenter: CHEN, Ningshun (Virginia)

Session Classification: Posters & welcome reception