

Abstract Submitted  
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**A High Efficiency Cosmic Ray Veto Detector for the Mu2e Experiment**<sup>1</sup> CHARLES JENKINS, University of South Alabama, MU2E COLLABORATION — The Mu2e Experiment, at the Fermi National Accelerator Laboratory, will search for the coherent, neutrinoless conversion of stopped muons into electrons, a charged lepton flavor-changing process highly suppressed and hence undetectable in the Standard Model. Many scenarios for physics beyond the Standard Model predict small but observable rates. The sensitivity of this experiment is a factor of  $10^4$  improvement over the current limit. One source of background is cosmic rays that can produce one event per day that would look like a muon to electron conversion. A Cosmic Ray Veto that surrounds the Mu2e spectrometer will be used to identify and reject such cosmic-ray induced events. It must have an overall efficiency of 99.99% over an area of some 330 m<sup>2</sup>. A description of the Cosmic Ray Veto, its anticipated performance, and status will be presented.

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