

DETECTOR RESPONSES OF THE GRAPES III SCINTILLATION AND MUON COUNTERS

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Detector responses to air shower particles incident on the electron (scintillation) and muon counters of the GRAPES III experiment at Ooty are investigated using Monte Carlo simulations based on Geant4. The results are summarized as response functions which are then used for simulating air shower events for reducing systematic uncertainty in primary energy estimation. The intensity spectrum of signals detected by the scintillation counter is calculated using these response functions and compared with the observed intensity spectrum.