

COMPARISONS OF MEASURED AND SIMULATED ENERGY SPECTRA OF ELECTROMAGNETIC PARTICLES AT THE PAMIR EMULSION EXPERIMENT

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The reconstructed energy spectrum of electromagnetic particles, measured at the high-altitude Pamir emulsion experiment, is compared with spectra obtained by Monte Carlo simulations. The extensive air shower simulations are based on the CORSIKA program including different high energy interaction models, e.g. QGSJet, VENUS or neXus. Additionally the Monte Carlo includes a detailed simulation of the detector response for the particles based on the GEANT code. From the obtained optical density the energy spectrum of the particles is reconstructed with the same algorithms like at the Pamir experiment. These procedures enables to discuss in details resolution and threshold effects of the Pamir emulsion calorimeter at both, the optical density and the energy of the electromagnetic particles.