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## Longitudinal development of EAS muon component - comparison of data from the Muon Tracking Detector in KASCADE-Grande with model predictions

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The KASCADE-Grande Muon Tracking Detector allowed measurements with high accuracy for the directions of EAS muons having energy above 0.8 GeV. Combining information about the direction of the extensive air shower, obtained with the KASCADE-Grande particle detector array, and the directions of reconstructed muon tracks we have investigated the muon production heights by means of the triangulation method. The obtained results gave us direct insight into the longitudinal development of the muonic component of EAS for showers with the primary energy above  $10^{16}$  eV.

Distributions of measured muon production heights are compared to the distributions obtained for showers simulated with CORSIKA for proton and iron primaries. In the simulations the following four models: QGSJet-II-02, QGSJet-II-04, EPOS1.99 and EPOS-LHC, in combination with FLUKA, were used and their ability to reproduce the experimental results is discussed.

### Collaboration

KASCADE-Grande

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