

Results from the KASCADE-Grande data analysis

Tuesday 13 July 2021 19:00 (12 minutes)

KASCADE-Grande and its original array of KASCADE were dedicated to measure individual air showers of cosmic rays with great detail in the primary energy range of 100 TeV up to 1 EeV. The experiment has significantly contributed to investigations of the energy spectrum and chemical composition of cosmic rays in the transition region from galactic to extragalactic origin of cosmic rays as well as to the further development of hadronic interaction models through validity tests using the multi-detector information from KASCADE-Grande. Though the data accumulation was completed in 2013, the data analysis is still continuing. Recently, we investigate the reliability of the new hadronic interactions model of the Sibyll version 2.3d with the combined data from KASCADE and KASCADE-Grande, and compare it to the predictions of different hadronic interaction models. In addition, we update the web-based platform of the KASCADE Cosmic Ray Data Centre (KCDC), where now full datasets from KASCADE and KASCADE-Grande and the corresponding Monte-Carlo simulated events are available.

Keywords

KASCADE-Grande; energy spectrum; mass composition; hadronic interaction model; Sibyll 2.3d

Collaboration

KASCADE-Grande

other Collaboration

Subcategory

Experimental Results

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Session Classification: Discussion

Track Classification: Scientific Field: CRI | Cosmic Ray Indirect