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Muon spectra reconstructed from inclined air showers measured by KASCADE-Grande

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Abstract content

Inclined showers (i.e. showers with zenith angle above 40 degrees) are registered by the KASCADE-Grande experiment, which is designed to address fundamental questions about the origin, composition and acceleration mechanisms of primary cosmic rays between 10^{14} and 10^{18} eV. Despite the aggravate reconstruction due to the thin scintillation detectors used in KASCADE-Grande these inclined events are valuable since they offer a good opportunity to both, study the penetrating component of the air showers and cross-checks of hadronic interaction models. Working in this direction, a first analysis of the KASCADE-Grande data from inclined events has been done. In particular, the muon spectra from these showers have been reconstructed for different zenith angle intervals and the features of the resulting spectra, studied and confronted with expectations from Monte Carlo simulations.

If this papers is presented for a collaboration, please specify the collaboration

KASCADE-Grande collaboration

Summary

Reference

Proceedings of the 30th International Cosmic Ray Conference; Rogelio Caballero, Juan Carlos D'Olivo, Gustavo Medina-Tanco, Lukas Nellen, Federico A. Sánchez, José F. Valdés-Galicia (eds.); Universidad Nacional Autónoma de México, Mexico City, Mexico, 2008; Vol. 4 (HE part 1), pages 203-206

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