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BEHAVIOUR OF SOME CHARACTERISTICS OF EAS IN THE REGION "KNEE" AND "ANKLE" OF COSMIC RAY ENERGY SPECTRUM

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Abstract content

The EAS characteristics relating to the lateral development of a shower at sea level are considered, namely, a mean square radius for the spatial distribution of charged particles, the total number of charged particles and muons with $E(\text{th}) \geq 1$ GeV and their correlation at fixed energy; the longitudinal development of a shower in the atmosphere, i.e. a maximum depth of EAS. The energy-dependence of such characteristics as a ration of the total number of charged particles to the total flux of EAS Cherenkov radiation; a ratio of $E(\text{th}) \geq 1$ GeV muon flux density at the distance 600 m from a shower core to charged particle flux density; a ratio of the energy transferred to the electromagnetic component of EAS to the primary particle energy are presented. Their comparison with two-component mass composition of cosmic rays (proton-Fe nucleus) in the framework of calculations by a QGSJET model is given.

If this papers is presented for a collaboration, please specify the 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 79-82

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