



Contribution ID : 1235

Type : **Oral**

Nuclear composition of primary cosmic rays around the knee region observed with GRAPES-3

Monday, 9 July 2007 09:06 (0:12)

Abstract content

We have measured the primary cosmic ray spectra of various nuclear groups by analyzing the relationship between muon multiplicity distribution and air shower size, and we have also estimated their mean mass as a function of primary energy. The shower data were obtained from the four years of observations with the GRAPES-3 air shower experiment, which has a high-density air shower array of plastic scintillation detectors and a large area muon detectors located at Ooty in southern India. Our results indicate an increase in mean mass of primary cosmic rays with increasing energies in the knee region. We will present brief descriptions about our experiment, data analysis and discuss the implications of these results.

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

GRAPES-3

Summary

Reference

Proceedings of the 30th International Cosmic Ray Conference; Rogelio Caballero, Juan Carlos D'Olive, 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 55-58

Primary author(s) : Dr. TANAKA, Hideki (Tata Institute of Fundamental Research)

Presenter(s) : Dr. TANAKA, Hideki (Tata Institute of Fundamental Research)

Session Classification : HE 1.1.A

Track Classification : HE.1.1.A