Contribution ID : **1173** Type : **Poster**

All-Particle Spectrum Measured by the ATIC Experiment

Wednesday, 4 July 2007 14:45 (0:00)

Abstract content

The Advanced Thin Ionization Calorimeter (ATIC), a balloon-borne experiment, is designed to investigate the composition and energy spectra of cosmic rays of charge Z = 1 to 26 over the energy range ~ 10^11 - ~ 10^14 eV. The instrument consists of a silicon matrix charge detector, plastic scintillator strip hodoscopes interleaved with graphite interaction targets, and an 18 radiation length deep, fully active bismuth germanate (BGO) calorimeter. ATIC has had two successful long duration balloon (LDB) flights launched from McMurdo Station, Antarctica in 2000 and 2002. In this paper, we present the all-particle spectrum extracted from data collected during the ATIC flights, and compare it with results from other experiments at both lower and higher energies.

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. 2 (OG part 1), pages 79-82

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Session Classification : Posters 1 + Coffee

Track Classification : OG.1.1