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Elemental Spectra from the CREAM-I Flight

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Abstract content

The Cosmic Ray Energetics And Mass (CREAM) instrument is a balloon-borne experiment designed to measure the composition and energy spectra of cosmic rays of charge $Z = 1$ to 26 up to an energy of $\sim 10^{15}$ eV. CREAM had two successful flights on long-duration balloons (LDB) launched from McMurdo Station, Antarctica, in December 2004 (CREAM-I) and December 2005. CREAM-I achieves a substantial measurement redundancy by employing multiple detector systems, namely a Timing Charge Detector and a Silicon Charge Detector (SCD) for particle identification, and a Transition Radiation Detector and a sampling tungsten/scintillating-fiber ionization calorimeter (CAL) for energy measurement. In this paper, spectra of various elements measured with SCD/CAL during the first 42-day flight are presented, along with spectral shapes and relative abundances.

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

The CREAM 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 63-66

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