



Contribution ID : 591

Type : Oral

## Charge Identification in the CREAM Experiment

*Friday, 6 July 2007 11:42 (0:12)*

### Abstract content

The Cosmic Ray Energetics And Mass (CREAM) experiment has now flown over Antarctica for a total of 70 days, combining a record-breaking continuous 42 days in the air with a second Long Duration Balloon flight. The array of detection techniques utilized by CREAM includes a Timing Charge Detector, a Transition Radiation Detector, a Silicon Charge Detector, and a tracking Calorimeter to obtain the first direct charge and energy measurements of cosmic rays up to the knee using complementary techniques in the same instrument. We are able to detect charges from protons through iron in the energy range  $\sim 10^{12} - 10^{15}$  eV. These are of particular relevance when determining source(s) of cosmic rays and their propagation conditions. In this paper, we focus on the charge identification capabilities of the CREAM experiment.

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

CREAM I 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 377-380

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**Session Classification :** OG 1.5

**Track Classification :** OG.1.5