

Research in Astrophysics from Space (E)

Cosmic Ray Origins: the Viktor Hess Centennial Anniversary (E1.15)

## **B, C, N AND O FLUXES RECONSTRUCTION WITH THE CREAM-III EXPERIMENT**

Benoit Coste, ben.coste@gmail.com

Laboratoire de Physique Subatomique et de Cosmologie, Grenoble, France

CREAM-III

H. S. Ahn, P. Bhojar, O. Ganel, J. H. Han, K. C. Kim, M. H. Lee, A. Malinin, E. S. Seo, P. Walpole, J. Wu, J. H. Yoo, Y. S. Yoon, T. Anderson, N. B. Conklin, S. Coutu, M. Geske, S. I. Mognet, L. Barbier, J. T. Link, J. W. Mitchell, A. Barrau, M. Buénerd, L. Derome, M. Mangin-Brinet, A. Putze, Y. Sallaz-Damaz, R. Bazer-Bachi, J.N. Périé, J. J. Beatty, T. J. Brandt, M. A. DuVernois, J. A. Jeon, G. Na, S. Nam, I. H. Park, N. H. Park, J. Yang, A. Menchaca-Rocha, S. Nutter

CREAM (Cosmic Ray Energetics And Mass) is a balloon-borne experiment which measures cosmic-ray elemental fluxes from 100 GeV to a few hundred TeV. The data facilitate the investigation of galactic cosmic-ray source abundances and propagation mechanisms. B, C, N, and O are among the best probes due to their large abundances and multiple origins: purely primary (C and O), purely secondary (B), or mixed (N). The instrument's third flight (CREAM-III) took place between December 19th 2007 and January 16th 2008, recording a total of 1.1M science events triggered by the calorimeter in 29 days. Particle energies were measured using a hadronic tungsten calorimeter (20 X0). Redundant charge measurements from a timing charge detector (TCD), a Cherenkov camera (CherCam), and two silicon charge detectors (SCDs) identified the elemental species of each particle. This contribution presents an analysis based on CherCam, the SCD detectors, and the calorimeter to reconstruct elemental fluxes. B, C, N, O fluxes and the B/C ratio are presented.