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Cosmic Ray Energy Spectra of Primary Nuclei from Oxygen to Iron: Results from the TRACER 2003 LDB Flight

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Abstract content

The first long-duration balloon flight of TRACER in 2003 provided high-quality measurements of the primary cosmic-ray nuclei over the range oxygen (Z = 8) to iron (Z = 26). The analysis of these measurements is now complete, and we will present the individual energy spectra and absolute intensities of the nuclei O, Ne, Mg, Si, S, Ca, A, and Fe. The spectra cover the energy range from 1 GeV/nucleon to more than 10 TeV/nucleon, or in terms of total energy, to several 1014 eV per particle. We shall compare our results with those of other recent observations in space and on balloons. We notice, in general, good agreement with these data for those regions where overlap exists. We also shall compare our data with information that has recently been inferred from air shower observations.

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 87-90

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