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# Cosmic Ray Helium Intensities over the Solar Cycle from ACE

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## Abstract content

Observations of cosmic-ray helium energy spectra provide important constraints on cosmic ray origin and propagation. However, helium intensities measured at Earth are affected by solar modulation, especially below several GeV/nucleon. Observations of helium intensities over a solar cycle are important for understanding how solar modulation affects galactic cosmic ray intensities and for separating the contributions of anomalous and galactic cosmic rays. The Cosmic Ray Isotope Spectrometer (CRIS) on ACE has been measuring cosmic ray isotopes, including helium, since 1997 with high statistical precision. We present helium elemental intensities between ~10 to ~100 MeV/nucleon from the Solar Isotope Spectrometer (SIS) and CRIS observations over a solar cycle and compare these results with the observations from other satellite and balloon-borne instruments, and with GCR transport and solar modulation models.

## 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. 1 (SH), pages 813-816

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