

**THE EVOLUTION OF GALACTIC COSMIC RAY ELEMENT SPECTRA
FROM
SOLAR MINIMUM TO SOLAR MAXIMUM**

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The spectra of galactic cosmic ray (GCR) elements from Beryllium to Nickel in the energy range 50 - 500 MeV/nucleon at 1 AU are being continuously measured by the Cosmic Ray Isotope Spectrometer on-board the Advanced Composition Explorer (ACE). The collecting power of this instrument allows statistically precise spectra to be calculated every few months for most elements. Measurements of temporal variations in GCR spectra over the solar cycle are important for understanding solar modulation processes, and also for refining models of the near-earth radiation environment used to perform shielding and dose calculations for manned and unmanned space missions. We report on ACE observations of the evolution of GCR element spectra from solar minimum in 1997 through Spring 2001. The observations are compared with models of GCR modulation in the heliosphere, and with neutron monitor measurements at higher energies.

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