

VARIATIONS IN COSMIC RAY MODULATION AND MAGNETIC FIELD
WITH LATITUDE: ULYSSES OBSERVATIONS

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After passage of the Ulysses spacecraft from pole-to-pole in 1994-95, the variation of cosmic ray flux with latitude revealed a larger gradient at latitudes below 60° and a lesser, perhaps non-existent, gradient, above 60°. Although some property of the magnetic field is presumably the cause of the abrupt change in gradient, no corresponding change in the field has yet been identified. Possibilities include a change in the Alfvén waves characteristic of the fast solar wind, the disappearance of Coronal Mass Ejections or solar wind microstreams at high latitude, or a change in the global field such as latitudinal motions of the field lines in the solar wind source region. We report an investigation of these and other possibilities using the simultaneous magnetic field and cosmic ray measurements.

Cosmic rays, modulation, latitude gradient, magnetic field, Alfvén waves,

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