

## ULYSSES OBSERVATIONS OF LATITUDE GRADIENTS IN THE HELIOSPHERIC MAGNETIC FIELD: THE RADIAL COMPONENT AND VARIANCES

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Since Jupiter deflected Ulysses into its high inclination orbit, the spacecraft has been proceeding southward at an average rate of  $-2^\circ$  per month and is now approaching a maximum latitude of greater than  $80^\circ$ . Latitude gradients in two parameters of particular interest will be reported. The radial field component is a characteristic property of the solar magnetic field and is unaffected, for example, by solar wind speed and is little influenced by stream interactions even at low latitudes. Extrapolation of this measured component to the solar surface should reveal properties of the polar cap fields such as their strength, homogeneity and the extent of a dipole-like topology. Variances in the field magnitude and components and their variation with latitude, derived over a range of time intervals, provide information on the irregularities in the field and solar wind including contributions from hydromagnetic waves, discontinuities and turbulence,

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D. 1.1 The Heliosphere during the Declining Solar Cycle  
MSO - M. A. Shea  
Oral presentation