

## The Radial Component of the Heliospheric Magnetic Field: Ulysses Observations

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The radial field component,  $B_R$ , has been monitored continuously since the Ulysses spacecraft left the ecliptic plane in February 1992 traveling toward the southern pole of the Sun. In order to separate spatial from temporal changes, the Ulysses measurements from  $0^\circ$  to  $80^\circ$  heliographic latitude were compared with in-ecliptic measurements of  $B_R$  being made simultaneously by IMP-8. The data revealed essentially the same field strengths and time variations at both locations. The conclusion was drawn that there was no significant latitude gradient in  $B_R$  and that the stronger polar cap coronal magnetic fields were being transported equatorward to yield a uniform field in the solar wind. The results contrasted with the predictions of the various source surface models which ignore magnetic stresses within 2.5 solar radii. Since the maximum south latitude was attained in September, 1994, Ulysses has traveled northward toward an ecliptic crossing in March 1995 and onward into the north solar hemisphere. The recent results will be presented and compared with those obtained in the southern hemisphere.

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