

RADIAL COMPONENT OF THE MAGNETIC FIELD: ULYSSES

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The Ulysses magnetic field investigation has revealed little, if any, dependence of B_R on latitude. The global field can be accounted for by the heliospheric current sheet only with B_R the same above and below the current sheet except for the reversal in polarity. The strong polar cap fields near the Sun (estimated to be ~ 7 Gauss) imply a divergence of the magnetic field and solar wind leading to a redistribution of the field. The existence of a uniform field beyond a few solar radii appears to be at variance with earlier reports of a "flux deficit" in outer heliosphere and of a north-south asymmetry in B_R . Recent observations of B_R as Ulysses returns to $\sim 30^\circ$ latitude from the north polar passage will be presented and compared with previous results. In addition, reconciliation of the Ulysses results with the earlier contradictory-appearing conclusions will be attempted.

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