

## Ulysses Magnetic Field Measurements: South Pole-to-Equator

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As Ulysses traveled from O to  $-80^\circ$  heliolatitude, several distinct regions were encountered characterized by (1) low-latitude stream structure and CMEs, (2) mid-latitude interaction regions formed by contrasting slow flow adjacent to the heliospheric current sheet and fast coronal hole flow and (3) high latitude fast flow from the south polar coronal hole. The radial component of the magnetic field,  $B_R$ , was found to be the same in all three regions. The spiral angle departed significantly from the Parker spiral angle owing to the presence of long period, large amplitude Alfvén waves and shorter period turbulence. The power in the continuously-present Alfvénic fluctuations increased monotonically with decreasing radial distance and/or increasing latitude, Shocks disappeared above region 2. Both discontinuities and magnetic holes persisted to the highest latitudes. As Ulysses descended back toward the equator, interaction regions, shocks and heliospheric current sheet crossings reappeared. The recent observations during the “fast latitude scan” will be presented and compared with the slower, more distant ascent in latitude.

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2. 001222040

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4. SH

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11. No