

# EGS Abstract for The Hague, May, 1996

## ULYSSES SWOOPS PLASMA MEASUREMENTS FROM POLE-TO-POLE

**B. E. Goldstein** and M. Neugebauer (Jet Propulsion Laboratory, California Institute of Technology, Pasadena, CA 91109, USA)

S. J. Barne, H. L. Barraclough, J. C. Gosling, G. W. Hoogeveen, D. J. McComas,

J. L. Phillips (Los Alamos National Laboratory, Los Alamos, NM 87545, **USA**)

S. C. Suess (NASA/Marshall Space Flight Center, Huntsville, AL 35812, USA)

Recent results from the Ulysses SWOOPS plasma experiment are reviewed. For the recent Southern to Northern high latitude pass, the heliospheric streamer belt was confined close to the equator, with width of 43°. At high latitudes solar wind velocities were 700-800 km/s, whereas velocities in the low latitude wind were typical of previous in ecliptic observations. As expected for a tilted current sheet, reverse compression waves/shocks propagated poleward, and forward compression waves/shocks propagated equatorward. Variations of solar wind parameters with latitude were: mass flux was most nearly constant but was somewhat higher at low latitudes, speed and density had positive and negative poleward gradients, respectively. Solar wind energy and momentum fluxes were greater at high latitudes than in the streamer belt, the latter has implications for the location of the heliospheric termination shock. The thermal pressure was higher in the equatorial region, with implications for flow divergence from the equator. Latitudinal asymmetries were observed, with the velocity in the high latitude North being slightly greater than in the South, temperature was also higher in the North; density, mass flux and momentum flux were lower in the North. Other topics will also be discussed.

### Submittal Information

1. Bruce E. Goldstein  
Jet Propulsion Laboratory  
Mail Stop 169-506  
4800 Oak Grove Drive  
Pasadena, CA 91109  
USA  
Tel.: [+1] 818-354-7363  
Fax.: [+1] 818-354-8895  
E-mail: bgoldstein@jplsp2.jpl.nasa.gov
2. ST7 The High Latitude Heliosphere
3. Dr. R. G. Marsden
4. none
5. Oral presentation strongly preferred