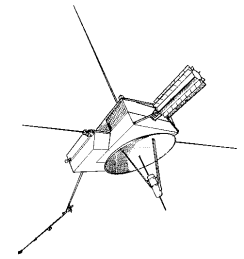
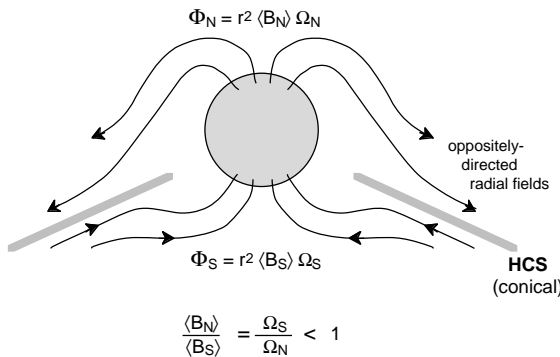




Asymmetric Solar Magnetic Field



Asymmetric Current Sheet



Displacement of the Sun's magnetic equator implies that magnetic flux from the sun's north hemisphere occupies a larger volume than the equal flux from the southern hemisphere (Smith *et al.*, *Ap. J.*, 533, 1084, 2000)

As Ulysses progressed from the south to the north solar pole in 1994-95, there was an asymmetry in the intensities of galactic and anomalous cosmic rays with a minimum at 10° south latitude. Ulysses and WIND found the cause: a southward displacement of the heliospheric current sheet (the Sun's magnetic equator) caused by an unsuspected north-south asymmetry of the heliosphere. The current sheet is displaced downward around the sun, and the field in the north is weaker than in the south. Other consequences for the cosmic rays, energetic particles, and the solar wind are being investigated.