



Energetic Particle Observations in the Three-Dimensional Heliosphere

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Ulysses, the first spacecraft ever to fly over the poles of the Sun, is a key element of the Heliospheric Network (HN), the international fleet of spacecraft studying the Sun and heliosphere. In November 2006, Ulysses began its passage over the Sun's south pole for the third time. Although the Sun is again close to its activity minimum, solar activity has been more prevalent during the declining phase of the current solar cycle (23rd) than was the case in the declining phase of the 22nd cycle, when the first polar passes occurred (1994/1995). In December 2006 active region 0930 produced a series of major solar flares with the strongest one (X9.0) recorded on December 5 after it rotated into view on the solar east limb. We will present energetic particle observations by Ulysses located at > 70 deg south during this period and study the effect of this intense solar activity at such high heliographic latitudes. Comparisons will be made with previous Ulysses high latitude measurements obtained close to solar maximum. Furthermore, data acquired by other spacecraft of the HN near the ecliptic plane (ACE, STEREO) and recent measurements obtained by Ulysses at high helio-latitudes will be discussed.