

ONSET OF SOLAR MODULATION IN THE OUTER HELIOSPHERE AS SEEN IN ANOMALOUS COSMIC RAYS

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At the positions of Voyagers 1 and 2 in the outer heliosphere, the intensities of anomalous cosmic rays (ACRs) at the peak energy in their spectra increased steadily from their minimum levels associated with the last solar maximum in 1990 until ~ 1998 when they reached a plateau. In 1999 the intensities began to decrease. In the case of ~ 10 MeV/nuc ACR O, well above the peak intensity in the ACR O energy spectrum, the intensities increased by a factor of 2-3 from 1993 to mid-2000 before a decrease was evident. In order to better understand the underlying physical causes of the solar modulation cycle of cosmic rays, we will compare the onset of solar modulation effects on ACR intensities in the outer heliosphere with the expected arrival times at the spacecraft of complex field topologies observed on the Sun that occur as the Sun's field reverses. This work was supported by NASA under contract NAS7-918.