

WAVELET ANALYSIS OF THE 26 DAYS RECURRENT COMPONENT IN THE OUTER HELIOSPHERE

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It has been reported in previous research that the 26-days recurrent phenomena exist on the data of intensity variation of solar wind, interplanetary magnetic field and cosmic rays observed in the outer heliosphere. In a recent paper by Zang (1994), linear correlation between mean amplitude of those recurrent phenomena and latitudinal gradient of cosmic rays has been reported based on the data from Ulysses. We have analysed this phenomena over the solar minimum of cycle 21(1986.5 - 1987.5) by applying a wavelet transform technique to the data from Voyager 1&2 and Pioneer11. The average amplitudes are derived for Ions (>70 MeV) or H (>80 MeV), and which are 1.78 ± 0.47 (%), 0.30 ± 0.25 (%) and 5.64 ± 1.05 (%) at the location of V1 (31 AU, 31°N), V2 (23.2 AU) and P11 (23.7 AU, 16.5°N), respectively. These quasi-periodic variations are also present in the distant heliosphere out to heliocentric distances greater than 70 AU over the 1995-1998 solar minimum period of cycle 22.