LATITUDINAL TRANSPORT OF 7 MEV ELECTRONS IN THE INNER HELIOSPHERE

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The heliospheric modulation of galactic and Jovian electrons is studied using a fully three-dimensional, steady-state numerical model based on Parker's transport equation including the Jovian source. The model is used to study the latitudinal transport of both Jovian and 7 MeV galactic electrons by illustrating how the electron intensities are affected at different latitudes when enhancing perpendicular diffusion in the polar direction. In particular, the electron intensity-time profile along the Ulysses trajectory is calculated for various assumptions for perpendicular diffusion in the polar direction and compared to the 3-10 MeV electron flux observed by Ulysses. Compatibility between the model computations and the observations give an indication as to the magnitude of this diffusion coefficient.