

Manifestation of the Jupiter's influence on the interplanetary magnetic field and cosmic rays

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Based on extended set of observational data, we study some peculiarities in the distribution of Jovian relativistic electrons along the Earth's orbit. It is shown that the maximum in electron intensity appears 243 day after the Jupiter-Earth opposition. This corresponds to the magnetic field line of IMF which passes throughout the Jupiter and Earth simultaneously. It seems that Jupiter due to the flux of charged particles (energetic electrons) causes 399-day variations in the IMF magnitude and, as a consequence, in the intensity of cosmic rays. The amplitudes of the variations in the electron flux, IMF magnitude and cosmic ray intensity are 71.0, 2.8, and 0.8%, respectively.