

Variations of the solar wind density and temperature under the effect of the Jupiter

V.E. TIMOFEEV¹, L.I. MIROSHNICHENKO², S.N. SAMSONOV¹, N.G. SKRYABIN¹

¹*Yu.G. Shafer Institute of Cosmophysical Research and Aeronomy, 31 Lenin Ave., 677980 Yakutsk, Russia, E-mail: vetimofeev@ikfia.ysn.ru*

²*N.V. Pushkov Institute of Terrestrial Magnetism, Ionosphere and Radio Wave Propagation, 142190 Troitsk, Moscow region, Russia*

On the basis of daily data ($N = 14038$) of the solar wind density, the fluctuation power spectrum has been determined. It is found that in the interval of periods of 20 to 800 days, the 399-day variation (synodic period of the Jupiter) has the largest amplitude. The amplitudes of 399-day variation in the solar wind density and temperature have been determined using the superposed epoch technique. They are $\sim 0.5 \text{ cm}^{-3}$ and 8000 K respectively, at the significance level greater than 95%. From this result, the conclusion can be drawn regarding the possible existence of "Jovian wind".