



Sharp and sizeable changes of solar wind ion flux as a feature of dense non-CIR turbulent regions.

O.V. Khabarova, G.N. Zastenker

Space Research Institute, Russian Academy of Sciences, Moscow, Russia (olik3110@list.ru / Fax: +7495-3331248)

Sharp and sizeable changes of solar wind ion flux (several times for the several seconds) were first detected during Interball-1 mission and considered as unknown phenomenon. More than 20000 events with duration about several minutes or even seconds and amplitude $dF > 0,510^8 \text{ cm}^{-2} \text{ s}^{-1}$ were observed with 1-second accuracy for 1996-2000. Investigations show that sharp changes of ion flux (SCIFs) are not shocks, they are mainly density changes, usually observed one by one like pulse packet in dense regions (mainly non-CIRs). It was found that number of SCIFs is depended on plasma density, IMF magnitude, as well as on variability of density and IMF (combined adjusting parameter correlates with SCIFs number per day with corr.coefficient = 0.75). This fact gives the possibility to assume that SCIFs are produced by particular plasma conditions and their source is solar wind (not Sun). SCIFs' geoeffectiveness and peculiarities of propagation in solar wind are discussed.