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Energetic particles upstream and downstream of the bow shock observed on Interball-1

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The DOK-2 instrument on Interball-1 provided extensive measurements of energetic ($\tilde{2}0$ - $\tilde{6}00$ keV) ions and electrons. Its fluxes, energy spectra and estimates of angular distribution on both sides of the Earth's bow shock during the spacecraft's 5- year mission are reviewed. We present results of statistical study of particle fluxes both in the upstream and downstream region, especially dependences of average flux at various energies on the satellite position, geometry to the nominal bow shock, IMF, local magnetic field, solar wind parameters and geomagnetic activity. The results are discussed in the frame of scenarios of energetic particles acceleration, deduced from earlier theoretical studies, and with the contribution of magnetospheric particles. Comparison with other similar-type of studies is done. In addition, for selected time intervals, the angular distribution of the ions is discussed based on data with 1s resolution. This work was supported by the Slovak Research and Development Agency under the contract No. APVV-51-053805 (KL) and by VEGA Grant Agency, project 2/7063/27 (MS).