Slow and fast solar wind – data selection and statistical analysis

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In this work we consider the important problem of selection of slow and fast solar wind data measured *in-situ* by the Ulysses spacecraft during two solar minima (1995-1997, 2007-2008) and solar maximum (1999-2001). To recognise different types of solar wind we use a set of following parameters: radial velocity, proton density, proton temperature, the distribution of charge states of oxygen ions, and compressibility of magnetic field. We present how this idea of the data selection works on Ulysses data. In the next step we consider the chosen intervals for fast and slow solar wind and perform statistical analysis of the fluctuating magnetic field components. In particular, we check the possibility of identification of inertial range by considering the scale dependence of the third and fourth orders scaling exponents of structure function. We try to verify the size of inertial range depending on the heliographic latitudes, heliocentric distance and phase of the solar cycle.