

# PROPERTIES OF STATISTICAL MOMENTS IN THE SOLAR WIND TURBULENCE

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Turbulence is a prominent feature of space and astrophysical plasmas. In-situ measurements describing different aspects of multi-scale turbulence are available in solar system plasmas. The direct estimation of turbulence characteristics, however, is often affected by the presence of boundaries and different time scales, occurrence of jumps and discontinuities. Transitory mechanisms driven by different physical processes involved in the generation of the observed scalings introduce further uncertainties in experiments. Due to the presence of coherent structures, sharp gradients and non-stationary competing physical processes in the solar wind non-universal scaling behaviour appears. We find that the non-universal behaviour is manifested in an interdependence of statistical moments introducing constraints in theoretical description of solar wind turbulence. On the other hand, it is not straightforward to recognize the mutual dependence between the statistical moments from in-situ data in the solar wind. We will propose proper methods for the estimation of the statistical moments in the solar wind turbulence.