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Radial evolution of intermittency of density fluctuations in the inner heliosphere

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In-situ observations of solar wind plasma and magnetic field fluctuations have shown that solar wind turbulence is characterized by an intermittent behaviour. As a matter of fact, the tails of the distributions do not follow a Gaussian statistics since the largest events have a probability to happen much higher than that they would have if they were normally distributed. Moreover, this feature becomes more and more evident as we observe shorter and shorter scales.
In this study, we analyze the evolution of intermittency in the solar wind, as observed on the ecliptic plane, looking at density fluctuations between 0.3 and 1 AU, for both fast and slow wind. We use the flatness factor as an indicator of the degree of intermittency of our time series.
Our results show that the radial evolution of intermittency of density fluctuations is different from that of magnetic field and velocity fluctuations. Possible interpretations of this difference are discussed.