



Analysis of velocity fluctuations in the solar atmosphere: relation between intermittency and chromospheric magnetic topology

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The line-of-sight velocity fluctuations measured simultaneously in a photospheric (Fe I 709.0 nm) and a chromospheric line (Ca II 854.2 nm) were investigated. The velocities were obtained from full spectroscopic data acquired at high spatial resolution with the Interferometric BIdimensional Spectrometer (IBIS). The field of view encompasses a full supergranular cell, allowing us to discriminate between areas with different magnetic characteristics. Nearly power-law tails at high frequencies ($\nu > 10$ mHz), absent in the photosphere, are present in the chromospheric velocity power spectra. An analysis of the intermittency of chromospheric velocity fluctuations was performed and it was found that short timescale fluctuations are more intermittent in the network magnetic elements than in the quiet internetwork regions and the chromospheric canopy. Moreover the Probability Density Functions (PDFs) of velocity fluctuations become significantly asymmetric at small scales.