



Scaling features of turbulent fluctuations at non-MHD scales of a reconnection event.

Giuseppe Consolini (1), Simona Grandioso (1), Emiliya Yordanova (2), Maria Federica Marcucci (1), and Giuseppe Pallocchia (1)

(1) INAF-Istituto di Astrofisica e Planetologia Spaziali, Roma, Italy (giuseppe.consolini@iaps.inaf.it), (2) Swedish Institute for Space Physics, Uppsala, Sweden

The reconnection events in space plasmas are accompanied by the occurrence of large-amplitude fluctuations in several observable quantities. These fluctuations have a nearly turbulent character and occur at both MHD and non-MHD scales. The sporadic character of these fluctuations in the non-MHD domain and the non Gaussian nature of the associated probability distribution functions suggested that intermittency is a relevant phenomenon associated with these fluctuations. Although several studies have been done about the nature of such fluctuations, little is known about the scaling and intermittent properties of them. Here, we attempt the analysis of the scaling features of fluctuations in the non-MHD domain by carefully investigating the occurrence or not of intermittency during an already studied reconnection event (Eastwood et al., PRL, 2009) from CLUSTER observations in the magnetotail.

The research leading to these results has received funding from the European Community's Seventh Framework Programme (FP7/ 2007-2013 under Grant agreement no. 313038/STORM.