



Current sheet structure in the turbulent magnetosheath

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Both numerical simulations and in-situ observations indicate that turbulent interactions may play a key role in generation of thin current sheets in collisionless plasmas. The structure of current sheets in a turbulent plasma environment has to be investigated in order to understand the details of their generation mechanisms. The goal of this event study is to provide an example of the internal 3D structure of a current sheet observed by MMS spacecraft in the turbulent magnetosheath downstream of a quasi-parallel bow shock. The occurrence of interactions between fields and particles, electromagnetic waves and pressure instabilities associated with the magnetosheath current sheet will be compared to similar events accompanying reconnecting current sheets at the magnetopause.