



## **Comparative statistics of small-scale magnetic structures by observations and simulations**

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Global hybrid and fully kinetic simulations provide an idea of the spatial distribution and evolution of coherent structures generated by plasma turbulence. They come in different forms (vortices, flux tubes, current sheets) and various sizes in the range from magnetohydrodynamic to kinetic scales. In order to understand the mechanisms of structure generation at kinetic scales and their interaction with background turbulence we compare simulations data obtained along virtual spacecraft trajectories with high resolution observations from Magnetospheric Multiscale Mission (MMS) taken in the terrestrial magnetosheath turbulence. Specifically, we focus the investigation on the statistics of intensive thin current sheets produced during the interaction of adjacent magnetic Islands or/and flow shears.