



MMS-Cluster conjugate observations of fast flows and dipolarization in the near-Earth magnetotail

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In the near-Earth magnetotail region, a major energy conversion process takes place that is associated with dipolarization and localized fast flows during substorms and leads to large-scale reconfiguration of the magnetotail. We report conjugate observations of fast flows and dipolarizations obtained by MMS (Magnetospheric Multiscale) and Cluster on Sep. 8, 2018 between 13 and 15 UT in the near-Earth magnetotail at downtail distance of about 17 RE. We present the evolution of the disturbances observed in the fields and particles based on multi-point data analysis to discuss the role of the small-scale processes such as the dipolarization fronts and field-aligned currents in the larger-scale magnetotail dynamics.