



## Development of compressional turbulence along the Earth's magnetotail.

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We study the turbulent spectrum in the magnetic field data, obtained by the THEMIS mission, when the spacecraft are aligned along the Earth's magnetotail. It has been found that at the location of the Cluster spacecraft (19 Re) the frequency range between 0.08 and 1 Hz shows fully developed quasi two-dimensional turbulence. [Volwerk et al., A statistical study of compressional waves in the tail current sheet, *J. Geophys. Res.*, 108(A12), 1429, doi:10.1029/2003JA010155, 2003]. The total power in the turbulence was found to be dependent on the flow velocity of the plasma. In this present study we use the different locations of the THEMIS spacecraft to study the development of this turbulent spectrum, combined with the development of the plasma flow data, for several events.