



Solar wind flow near a reconnection site at the dayside magnetopause: Cluster multi-spacecraft observations coupled with a three-dimensional theoretical analysis.

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An investigation of the large scale solar wind flow in the vicinity of a reconnection site is presented, using measurements from the Cluster satellites. We focus on magnetopause crossings occurring on the 13th of January 2002, when the four satellite formation was scanning the magnetopause boundary for a period of several hours. A number of events when magnetic reconnection occurs are registered. We study a couple of episodes with significant signatures of ongoing reconnection and where the normal to the magnetopause surface is well definable. Evidence of ongoing reconnection is discussed, as well as the correlation between measured data and results from a three-dimensional theoretical analysis treating the plasma flow in a region close to a reconnection site.