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Magnetopause properties on the dawn and dusk magnetospheric flanks for similar interplanetary conditions

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On 30 June 2001 CLUSTER satellites crossed the high latitude magnetopause on the dawn side of magnetosphere in the region where local magnetosheath and magnetospheric magnetic fields were almost antiparallel. The structure and dynamic of the magnetopause and the boundary layer shows that the main process responsible for boundary layer creation and perturbation of the magnetopause is patchy sporadic reconnection occurring locally. Another observation was made by CLUSTER on 30 Dec 2001 during the same interplanetary conditions on the dusk flank. The local magnetic shear was low. Nevertheless the satellites were observing a pronounced boundary layer and a quasi-periodically perturbed magnetopause. This presentation tries to verify if Kelvin-Helmholtz instability is responsible for such magnetopause perturbation.