

# **Macroscopic properties of the current sheets at the high-latitude Earth's magnetopause**

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The magnetopause determines the transport of the magnetosheath plasma into the magnetosphere. The mechanism of transport depends on the magnetopause current sheets (CSs) and the conditions of the plasmas in which the CSs are embedded. It well may be that thin CSs with a thickness of the order of a few ion gyro-radii are responsible for the most efficient transport. In the present work we use magnetic field and plasma data of the four CLUSTER spacecraft during periods, when the spacecraft separation was between 100 km and 300 km, i.e. the most suitable to study thin CSs. We collect all necessary information to analyze the embedding plasma and field conditions of the CSs like magnetic shear angle, plasma beta and Alfvén Mach number. We also calculate the proper parameters of the CSs such as thickness, normal direction and the peak current density. We use the collected data to study the dependence of the CS properties on the embedding plasma conditions.