

## Low frequency waves observed in the downstream region of magnetic reconnection at the dayside magnetopause

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Some of low frequency waves observed near the magnetopause are suggested to contribute to diffusion of the magnetosheath plasma into the magnetosphere or to heating of plasma sheet particles. These waves can be important in magnetospheric physics, but little is not known about fundamental processes of the waves. Diffusion by kinetic Alfvén waves (KAWs) has been proposed as a transport process of solar wind particles into the magnetosphere [Johnson and Cheng, 1997]. However, conclusive evidence of such a diffusion process has not been shown observationally. In this study, we investigate whether the solar wind particle diffusion process induced by low frequency waves can be at work. For the analysis, an event in which KAWs were identified by Gershman et al. [2017] from data taken by NASA' s Magnetospheric Multiscale (MMS) spacecraft observed in the downstream plasma flow of dayside magnetopause reconnection is used. We examine whether particles satisfying the resonance condition with KAWs have a cross-field velocity.