E118-P005 **Room: Poster Session Hall** **Time: May 18**

Interaction of the dipolar magnetic field in the magnetotail and the fast plasma flow

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It is well known that magnetic reconnection occur in the near-Earth magnetotail associated with substorm onsets. Magnetic reconnection generates fast plasma flow and Earthward fast flow should collide with the dipolar magnetic flux and the ambient plasma in the plasma sheet with higher pressure. However, it is not clear how the fast flows and the dipolarization in substorms are related each other, yet.

In this study, we selected an Earthward fast flow event observed by four satellites of Cluster with tetrahedron configuration. During the interval with clear Earthward propagation of the Earthward fast flow and enhancement of Bz, we identified enhancement of the whistler waves. Electrons are accelerated, but do not show any clear perpendicular enhancement of the flux which is contrary to the following acceleration intervals without any clear whistler waves. We also show that the dipolarization appears after the end of the fast flow associated with the DC large electric field and wave activity which is most likely to be the drift lower-hybrid wave. We discuss the time evolution and the spatial structure of the flow-leading and dipolarization in the near-Earth magnetotail.