

## **Influence of the Solar Wind Velocity and Southward IMF on Magnetic Reconnection**

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In the 3-dimensional MHD global model of interaction between the solar wind and earth's magnetosphere, we have changed parameters of the solar wind and interplanetary magnetic field (IMF) to study what conditions control magnetic reconnection in the tail as well as at the dayside magnetopause. In this simulation, we adjusted IMF Bz component and solar wind velocity,  $V_x$  as parameters and calculated the electric field, Ey component in the region where magnetic reconnection is occurring.

We obtained the result that the solar wind velocity largely influences the electric field of reconnection region in comparison with the IMF Bz component. In the presentation we will report the simulation results for the cases of large IMF Bz component and large solar wind velocity in comparison of the reconnection electric field with the electric field in the solar wind.