

## MHD Simulation of Magnetospheric Response to Sudden Change of the Solar Wind in October, 1999

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We have studied the event on October 21, 1999, using a 3-dimensional global magnetohydrodynamic (MHD) simulation of interaction between the solar wind and the earth's magnetosphere when the WIND observations in the upstream were used as input of simulation. On the event, the solar wind changed suddenly. We used the solar wind and magnetic field observed by the WIND satellite every 1 minute. The input data are the solar wind x-component of velocity, plasma density, pressure and IMF y and z components in GSM coordinates. We studied response of the magnetosphere to sudden change of the solar wind.