



## **Steady and burst reconnections in the high-altitude cusp**

**J. Safrankova**, Z. Nemecek, J. Simunek, L. Prech

Charles University, Faculty of Mathematics and Physics, Prague, Czech Republic  
(jana.safrankova@mff.cuni.cz)

Magnetic reconnection at the magnetopause has been identified as the most important source of the solar wind plasma in the magnetosphere. In spite of its principal importance, reconnection is still understood insufficiently. The main problem is probably connected with the fact that both MHD and kinetic processes are equally important for its initialization and further development. Experimental investigations are difficult because reconnection spots are limited in space and time and a probability that a spacecraft is located in appropriate time at a right position is very low. However, all possible places where magnetopause reconnection can occur are magnetically connected to the cusp and thus the plasma proceeding along reconnected magnetic field lines brings information on reconnection. Two-point observations in the high-altitude cusp show that the reconnection outflow can be quasisteady for many hours or it can consist of insulated bursts. We have analyzed several cusp passes with motivation to determine conditions that distinct these states.