

## **DSP/Cluster Observation of Current Sheet Oscillation on August 5, 2004**

T. L. ZHANG<sup>1</sup>, V. SERGEEV<sup>2</sup>, A. RUNOV<sup>1</sup>, R. NAKAMURA<sup>1</sup>, M. VOLWERK<sup>1</sup>,  
Y. ASANO<sup>1</sup>, W. BAUMJOHANN<sup>1</sup>, H. U. EICHELBERGER<sup>1</sup>, C. M. CARR<sup>3</sup>,  
A. BALOGH<sup>3</sup>, K.-H. FORNACON<sup>4</sup>, J. K. SHI<sup>5</sup>

<sup>1</sup>*Space Research Institute, Austrian Academy of Sciences, Graz, Austria*

<sup>2</sup>*St. Petersburg University, Russia*

<sup>3</sup>*Imperial College, London, UK*

<sup>4</sup>*IGEP, Technische Universität Braunschweig, Germany*

<sup>5</sup>*Space Weather Laboratory, Chinese Academy of Sciences, China*

Previous Cluster observations have shown that the flapping motions of the Earth's magnetotail are of internal origin and that kink-like waves are emitted from the central part of the tail and propagate toward the tail flanks. The newly launched Double Star Program (DSP) satellite allows us to investigate current sheet at 10-13 Re in the tail. Using conjunctions with Cluster we will have simultaneous observations at tailward 10-13 and 16-19 Re of these flapping motions. In this paper, multiple crossings of the neutral sheet on August 5, 2004 are analysed. Using four Cluster spacecraft measurement, we determine the orientation of the wave propagation. Comparing with the measurements from Double Star spacecraft, we estimate the range of this wave activity along the tail direction.