

## Wave activity in the LH frequency range in 3-dimensional structure of the magnetotail reconnection site

# Iku Shinohara[1]; Hirotugu Kojima[2]; Tsugunobu Nagai[3]; Seiji Zenitani[4]; Masaki Fujimoto[5]  
[1] ISAS/JAXA; [2] RISH, Kyoto Univ.; [3] Tokyo Institute of Technology; [4] NAOJ; [5] ISAS, JAXA

We have reported plasma wave activity observed in magnetotail reconnection sites. One of the most important conclusions of our study is that the magnetic diffusion region of the near Earth magnetotail reconnection site is mainly controlled by the physics of the collisionless reconnection process, rather than the anomalous resistivity due to turbulence. However, the wave activity observed in the electron-ion decoupling region and/or the plasma sheet boundary region show still not ignorable wave power to the electron heating. (Our rough estimation implies that the magnetic Reynolds number is the order of 100.) In order to address the role of the wave activity in the LH frequency range around the X-lines, we have done a statistical survey of the wave activity and its relation to the structure of the magnetotail reconnection sites. Based on the reconnection events shown in Nagai et al. (2013), we will discuss the excitation process of the wave activity in the context of the 3-dimensional structure of the magnetotail reconnection site and its contribution to the electron heating.