



A Statistical study of plasma sheet oscillations with kinetic ballooning/interchange instability signatures using THEMIS spacecraft

Mirjana Jurisic (1,2), Evgeny Panov (1), Rumi Nakamura (1), and Wolfgang Baumjohann (1)

(1) Space Research Institute Graz, Austria (mirjana.jurisic@oeaw.ac.at), (2) Graz University of Technology, Austria

We use THEMIS data from 2010-2012 tail seasons to collect observations of plasma sheet oscillations with kinetic ballooning/interchange instability (BICI) signatures. Over seventy observations with closely located THEMIS probes P3-P5 reveal that BICI-like plasma sheet oscillations may appear at different magnetic local time. For these, we derive background plasma sheet parameters such as B_z , $\delta B_z/\delta x$ and plasma beta, and investigate solar wind conditions. We also estimate the proper parameters of BICI-like oscillations such as frequency and amplitude. Based on this, we search for a relation between the background plasma sheet parameters and the proper parameters of BICI-like oscillations.