

The visit at Royal Belgian Institute for Space Aeronomy (IASB-BIRA) embraced intensive working meetings with Prof. Viviane Pierrad and members of her group. We discussed the results obtained in the studies performed together so far, related to plasmopause formation and evolution. We agreed that the last used experimental dataset based on THEMIS satellite measurements has to be revised, and the analyses again has to be performed using the new dataset. We decided that the plasmopause dataset based on Van Allen Probe has to be employed as soon as this will be available. We expect that when applying the method we established in the previous studies on this fully new dataset will give a new insight in the physical processes responsible for the plasmopause erosion and evolution. Such new analyses will validate the scenario about plasmaspheric dynamic that we proposed until now.

The results based on interchange instability simulations (available at space weather portal) are discussed in terms of possible improvement, e.g. including the plasmaspheric wind or different magnetospheric electric field. Very useful discussions were performed with Prof. Joseph Lemaire who first proposed the physical mechanism based on interchange plasma instability for the plasmopause formation. We also discussed with him the preliminary results of the ongoing study in which we focus on the plasmaspheric wind. We agreed about the further steps.

I also gave a talk entitled: "Global plasmopause characteristics based on satellite data and numerical simulations", which was accompanied with interesting discussions.

The visit was very efficient and will help to strength the collaboration between the Faculty of Science, Geophysical Department, University of Zagreb, Croatia and IASB-BIRA, Belgium. In this way, this visit also strongly contributes to developing the space physics in Croatia, the country which is at the moment declared as 'inclusiveness country'.

Last, but not the least, the important contribution of this visit is the transfer of the knowledge and experience that I acquired to the students that attend the courses at the University which I teach.

Associate prof. Giuli Verbanac