



Assoc.-Prof. Dr. Manuela Temmer
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PhD position in the Heliospheric Research Group (Institute of Physics)

Magnetosheath jets constitute a very young and rich field of research. Coordinated investigations of the origins, characteristics, evolution, and downstream consequences of magnetosheath jets have been performed just for a few years. Although many basic questions still remain unsolved, it has already become clear, that jets are an important element in the frame of solar wind – magnetosphere – ionosphere interactions. In this frame, the solar cycle (quiet versus active phases), in general, and impulsive transient events (coronal mass ejections, CMEs) or periodic recurrent disruptions (corotating interaction regions, CIRs) play a major role. So far, nothing is known about how jets relate to solar cycle phases, CMEs, or CIRs.

For the FWF financed interdisciplinary project “Magnetosheath jets throughout the solar cycle” (in collaboration with Dr. Ferdinand Plaschke from the Space Research Institute Graz), we hire a PhD student who will perform advanced time series analyzes of in situ plasma and magnetic field measurements using different spacecraft in near Earth space (e.g., ACE, Wind, DSCOVR). The aim is to determine long and short term variations and dependencies in the solar wind data that can be related to the occurrence of magnetosheath jets. Special focus will be put on the specific signatures that stem from transient events, like coronal mass ejections, and stream or corotating interaction regions as well as complex compounds of those.

The PhD candidate ideally holds a Master’s degree in Space Science (covering e.g., Solar, Heliospheric, or Magnetospheric Physics), is fluent in English language, skilled in programming (IDL, Python, ...), and has experience working with satellite data.

The project position will start January 4, 2021 and has a duration of 3 years, during which the student will work on his/her PhD thesis based on the project results. The salary is according to FWF rules (see more details under: <https://www.fwf.ac.at/en/research-funding/personnel-costs/>).

Send your resume with cover letter and CV to Assoc.-Prof. Dr. Manuela Temmer (manuela.temmer@uni-graz.at) by *October 16, 2020*.