



Master-Thesis in Physics/SES

Disturbance periods of interplanetary space due to the impact of CMEs

Motivation and Aims:

Transient events such as coronal mass ejections (CMEs) are known to disrupt the rather stable structure of the solar wind flow. For the solar wind plasma speed component, it was found that the disturbance period lasts on average twice as long as the CME duration itself (shock-sheath to end of magnetic structure; see Temmer et al., 2017). The results refer to relaxation processes of IP space of the order of 2-5 days, which might be explained in terms of MHD theory. Before sophisticated interpretations can be given more in-depth studies on the other solar wind plasma components and the magnetic field need to be outlined.

Work:

The study performed in Temmer et al. (2017) is based on plasma bulk speed, and will be repeated for the plasma density and temperature, as well the magnetic field vector components of the solar wind flow. From the results we expect to give physical interpretations for possible relaxation processes.

Profile required:

We are searching for qualified Master students in *Physics* with focus on „Astrophysics“, „Geophysics“, „Space Physics and Aeronomy“ or Master students in *Space Sciences and Earth from Space*.

We seek students with

- good knowledge in solar and/or space physics
- good knowledge of programming
- strong motivation and interest to be part of a scientific project and team

For students with marks above average, the work will be supported by a stipendium of **500 €** per month for the duration of 6 months (+3 optional).

Planned start: November 2017.

Contact:

With deadline October 2, 2017, send your complete application including a) letter of motivation, b) CV c) standard transcripts from University (as pdf), via email to:

Assoc.-Prof. Mag. Dr. Manuela Temmer (manuela.temmer@uni-graz.at; 0316 / 380 8610)

Assoz.-Prof. Mag.Dr. Manuela Temmer
☒ Universitätsplatz 5/II, 8010 Graz, Austria

Tel.: +43 (0) 316 / 380-8610
E-Mail: manuela.temmer@uni-graz.at
<http://physik.uni-graz.at/en/astrophysics/temmer/>