



## Open Position

# Experimental Investigation of Particle Development during Destructive Re-entry

The High Enthalpy Flow Diagnostics Group (HEFDiG) at the Institute of Space Systems has an open position for a PhD student.

The goal of a new project is to find out what happens with the molten and evaporated droplets which are generated during the destructive atmospheric re-entry. Current state of the art is that the materials reduce to solid particle clusters at altitudes above 50 km. Within this new research, fundamental experiments are to be designed to assess how particles are formed, how this changes the atmospheric composition, and the impact this might have. The experiments will be conducted in the plasma wind tunnel facilities of the Institute of Space Systems. The diagnostic methods will focus primarily around optical methods to assess the plasma characteristics.

HEFDiG ([www.hefdig.com](http://www.hefdig.com), Instagram: @hefdig) concentrates its research around the atmospheric entry flight, experimentally simulated in plasma wind tunnel facilities. We work on ice giant entries, meteoroid entry, and space debris. The focus is on the development and application of diagnostic methods, including sensors for rockets and satellites, but also for the airborne observation of entering objects.

For our team, we are searching for an inquisitive person that is excited about the topic and keen to try some new experiments. The pay is TV-L E13, 75 % with a first contract duration of 2 years.

### Qualifications:

- Master's degree in engineering or equivalent
- Attracted to experimental research
- Curiosity for diagnostic method development
- Team player

### We offer:

- Working in an internationally interconnected team of researchers
- Flexible work hours
- Opportunity to complete a PhD

### Contact:

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