

Mechatronics/Electrical Engineer (B.Sc., M.Sc.)

In connection with an international research project, the Kiepenheuer Institute for Solar Physics based in Freiburg is looking for a mechatronics/electrical engineer (B.Sc., M.Sc.) to work full-time in the development of the periphery of a measuring and control system for the positioning of optical components in a balloon-borne solar telescope.

The international project comprises solar observations to be conducted from a height of 35 km using the balloon-borne 1-m telescope SUNRISE. Since the idea is to achieve a diffraction-limited image resolution of about 0.1 arc seconds (detail size of ca. 70 km on the sun), high-precision image stabilisation will be required, consisting of a fast adjustable mirror, a correlative wavefront sensor (image position sensor) and a control calculator. This image stabilization is being developed by the Kiepenheuer Institute.

In this connection, we are looking for an engineer specialising in electronics or mechatronics to perform the following duties:

- Independently develop the electronic components for the power supply and signal transmission to serve the image stabilisation at the balloon-borne telescope SUNRISE, with a particular focus on the specific environmental and flight conditions at a height of 35 km.
- Design the mechanics of the electronics box, including the cabling.
- Perform testing and prepare test documentation, including vacuum thermal testing.
- Prepare project documentation in English language.
- Supervise the assembly of airworthy electronic and mechanical components.
- Assist during the launch preparations at Kiruna, northern Sweden.

Successful candidates will have a university degree in electrical engineering or in related fields of expertise and will have experience in the development of control electronics and their application in difficult environmental conditions including thermal regulation.

The Kiepenheuer Institute for Solar Physics strives to establish professional equality of men and women and to increase the percentage of female staff especially in the scientific and technical departments. Therefore, we expressly invite qualified women to apply. The position is limited to three years and the salary will be according to TV-L. Equally qualified candidates with severe disabilities will be given priority.

This job advertisement will remain open until a suitable candidate has been found.

Please send your application in writing to:

Kiepenheuer-Institut für Sonnenphysik, Schöneckstr. 6, 79104 Freiburg.