



The Leibniz Institute for Astrophysics Potsdam (AIP) continues the tradition of the Astrophysical Observatory Potsdam and the Berlin Observatory. It is located in the beautiful Potsdam/Babelsberg area, at the South-western border of the Berlin metropolitan area. The innovation center innoFSPEC headquartered at AIP is a joint project between the University of Potsdam and AIP. While AIP has a strong record in the development of optical instrumentation for state-of-the-art international observatories (e.g. ESO, LBT, HET, CAHA), innoFSPEC Potsdam provides a unique opportunity for research in fundamental astronomy & astrophysics utilizing instruments such as MUSE, PMAS etc., as well as, on key enabling technologies, in the field of Astrophotonic instrumentation for modern telescopes and facilities, e.g. the ELT, VLT, CAHA, etc. Under the DFG funded project OH-SUPER innoFSPEC invites applications for

PhD position (m/f/d) in fiber Bragg Gratings for Astronomy

OH-SUPER aspires to develop multi-notch fiber Bragg grating filters for suppression of narrow hydroxyl (OH) emission lines originating in the Earth's atmosphere, which pose enormous challenges for ground-based astronomical observations in NIR. The project runs for a duration of 36 months under the supervision of Prof. Dr. Martin M. Roth. The framework of the research will provide ample opportunity for close collaboration with the Institute of Applied Physics at Friedrich Schiller University Jena with the group of Prof. Dr. Stefan Nolte.

Your Tasks:

- Design and simulation of multi-notch fiber Bragg gratings and complex phase masks
- Design and programmable control for FBG fabrication setup to achieve stability and repeatability over multiple sets of filters
- Analysis and control of strain / temperature effects on complex FBGs
- Manufacturing, assembly, integration, and test of OH-filter unit for on-sky validations

Your Profile:

- Master's degree in physics, applied optics, or related discipline with a strong mathematical background
- Good knowledge and programming experience with MATLAB, Python, LabVIEW etc.
- Experience with optics, optical fibers, and optical instruments will be beneficial.

The AIP is an equal opportunity employer and strives to maintain a diverse, inclusive work environment, and culture. AIP particularly encourages applications from women and those from diverse backgrounds. Preference will also be given to people with disabilities with equal competence. The salary is based on the German public service scale (65% TV-L E13), including employer contributions to medical and dental insurance, parental leave, and retirement benefits. To apply, applicants should send a single PDF containing a cover letter, CV, master's degree certificate (or equivalent), copy of master's thesis, and two reference letters to bewerbung_2021-02@aip.de. Review of applications will begin on 25.01.2021 and continue until the position is filled.

Contact

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