



Thüringer Landessternwarte Tautenburg

Post-Doc Position in Astronomical Instrumentation/Adaptive Optics

The Thüringer Landessternwarte (TLS) Tautenburg, located near the university town of Jena in Germany, conducts research in a wide variety of fields, ranging from studies of the Sun and extrasolar planets to clusters of galaxies. The institute operates the world-largest classical Schmidt telescope, a station of the international Low Frequency Array (LOFAR), and a pathfinder station for the Solar Physics Research Integrated Network (SPRING). TLS was and is actively involved in the development of state-of-the-art instrumentation for 1.5 to 8-m class optical telescopes (e.g., ESO/La Silla, ESO/Paranal).

Job description: The offered position is in the context of high-precision astronomical spectroscopy. In a collaboration between TLS and the Fraunhofer Institute for applied Optics and Precision Engineering (IOF) in Jena, TLS is developing a compact telescope interface module based on adaptive optics to inject light of celestial objects into a single-mode optical wave guide. The project is supported by the Bundesland Thuringia and co-financed by the European Social Fund (ESF) Plus. The successful applicant will work in close interaction with the instrument teams at TLS and IOF on various tasks such as:

- the concept evaluation of various subsystems (modelling and experiments)
- the preparation of experiments and bread-board setups in the lab and for real telescopes
- the correction mechanism for atmospheric differential refraction
- the optimal wavefront sensing strategy

The offered position can be filled immediately and is offered on a fixed-term contract until 31 Dec 2027.

Candidate Profile: Applicants should hold a PhD/Doctorate degree in (Astro-)Physics, Astronomy, Optical Engineering, or equivalent. Candidates holding a M.Sc. with several years of work experience in the field are welcome to apply as well. Experience with optical instrumentation, laboratory work and data analysis, and good communication skills in spoken and written English are required. Experience with wavefront control, AO, optical fiber technology, astronomical spectrographs or programming (Python, C, C++, etc.) will be considered an asset.

Included Benefits: Monthly remuneration is based on the German collective agreement for the public sector (TVL), up to level 13 (depending on qualification), which includes comprehensive health care and other social benefits such as contributions to the VBL company pension, sick leave and 30 days of vacation per year. TLS offers flexible working-time models.

How to apply: Applications should be sent as a single PDF document to stellenausschreibung@tls-tautenburg.de. They should include a cover letter, a curriculum vitae, the abstract of the thesis, a list of publications and talks, a copy of the PhD/M.Sc. degree certificate, and contact details of up to three referees willing to provide a letter of recommendation on request. The selection of candidates continues until the position is filled.

Inquiries: For any further questions related to the project please contact:

Dr. Hans-Peter Doerr, e-mail: doerr@tls-tautenburg.de, phone: +49 36427 863-757.

TLS seeks to increase the percentage of women in those areas of research where they are underrepresented. Women are therefore particularly encouraged to apply for this position. Handicapped persons of equal qualification will receive preferential status. Though, we note that work at the telescope and in the lab is not barrier-free.

Date: February 14, 2025