

The German Center for Astrophysics (DZA) is a new research center in Lusatia, Saxony, that is currently being established. The decision to create the center was made on 29.09.2022 as part of the competition "Science Creating Prospects for the Region!", which was launched by the Federal Government, represented by the Federal Ministry of Education and Research (BMBF), the Free State of Saxony and the Land of Saxony-Anhalt as part of the Act on Structural Change in Coal Mining Areas (Strukturstärkungsgesetz Kohleregionen, StStG) to strengthen Germany's position as a leading location for science and innovation as well as the economic development of the regions affected by the coal phase-out. As a globally visible sign of innovation, the DZA will create new opportunities for strategic leadership roles of German astrophysics and have a lasting impact on structural change in Lusatia.

A three-year start-up phase began in 2023 with the aim of establishing the DZA as an independent institution in 2025. The start-up phase is being jointly organized by TUD Dresden University of Technology and the Deutsches Elektronen Synchrotron (DESY). There is a unique opportunity to actively contribute to the establishment of a large research center and to become involved in shaping the future structures.

For TUD and DZA diversity is an essential feature and a quality criterion of an excellent university. Accordingly, we welcome all applicants who would like to commit themselves, their achievements and productivity to the success of the whole institution.

As part of the development of the **DZA**, is offering a position in Görlitz as

Research Associate / Postdoc (m/f/x)

(subject to personal qualification employees are remunerated according to salary group E 13 TV-L)

starting at the **earliest possible date**. The position is limited until December 31, 2025 with the option for extension/permanence after the start-up phase of the DZA. The period of employment is governed by the Fixed Term Research Contracts Act (Wissenschaftszeitvertragsgesetz – WissZeitVG). Balancing family and career is an important issue. The position is generally suitable for candidates seeking part-time employment. Please indicate the request in your application.

Tasks:

- review of current literature on materials science and mirror technologies for third generation (3G) gravitational wave detectors (GWD), in particular silicon technology for the Einstein Telescope (ET-LF);
- identification of suitable mirror technologies for 3G GWD based on literature, theoretical models and experimental results;
- development and validation of a process chain for the production of the mirrors including bonding/optical contacting, polishing and coating as well as the handling of the mirrors;
- characterization of mirrors and mirror components for 3G-GWD with regard to optical and thermomechanical properties;
- generating cryogenic temperatures;
- establishment of a research network consisting of science and industry;
- publication of the results obtained at internationally recognized conferences and in peer-reviewed journals;
- supervision of Bachelor and Master students.

Requirements:

- university degree and PhD degree in physics or a related subject;
- relevant experience in the fields of gravitational physics, thermodynamics and/or thermomechanics;

- interdisciplinary working method;
- experience in supervising students;
- team spirit;
- resilience, flexibility and adaptability in an evolving organization;
- willing to travel for business purposes;
- business fluent in English.

What we offer:

- the chance to contribute to the development of the largest research center for astrophysics in Germany;
- the opportunity to play an active role in shaping structural change in Upper Lusatia;
- the opportunity to establish the personnel requirements to support the discovery of groundbreaking research results and to contribute to the realization of research projects;
- a dynamic, committed, international and interdisciplinary environment with renowned experts from science and industry;
- remuneration according to TV-L, as well as conditions and social benefits of the public sector;
- compatibility of family and career;
- the possibility of a permanent employment contract after the start-up phase.

TUD and DZA strive to employ more women in academia and research. We therefore expressly encourage women to apply. The University is a certified family-friendly university and offers a Dual Career Service. We welcome applications from candidates with disabilities. If multiple candidates prove to be equally qualified, those with disabilities or with equivalent status pursuant to the German Social Code IX (SGB IX) will receive priority for employment.

Please submit your detailed application with the usual documents quoting the **job reference "w24-221"**, preferably via the TUD SecureMail Portal <https://securemail.tu-dresden.de> by sending it as a single pdf file to dza@tu-dresden.de or to: **Deutsches Zentrum für Astrophysik (DZA), Alexander Welk, Postplatz 1, 02826 Görlitz, Germany**. Please submit copies only, as your application will not be returned to you. Expenses incurred in attending interviews cannot be reimbursed.

Reference to data protection: Your data protection rights, the purpose for which your data will be processed, as well as further information about data protection is available to you on the website: <https://tu-dresden.de/karriere/datenschutzhinweis>.