Universität Rostock Traditio et Innovatio

Zertifikat seit 2009 audit familiengerechte hochschule

Advertisement D 90/2019

At the University of Rostock, Faculty of Mathematics and Natural Sciences, Institute of Physics, subject to funding, applications are invited for the position of a

Postdoctoral Researcher (f/m/d)
(pay scheme TV-L E13, full-time, start: as soon as possible, for 1 year)

Remit:
We are seeking a Postdoc for our project *"Structure and dynamics of hot Jupiter atmospheres"* which is funded within the DFG Priority Program 1992 "The diversity of exoplanets". The goal of the project is to study the process of Ohmic dissipation in hot Jupiters based on atmospheric and interior models. This is a joint project between University of Rostock and the MPS Göttingen where the dynamo simulations will be performed.

The successful candidate will calculate equation-of-state data and pressure temperature profiles through the atmosphere and interior of hot Jupiters considering the relevant ionization processes. The electrical and thermal conductivities are determined for these conditions by solving the Boltzmann equation. These data are provided as input in magneto-hydrodynamical simulations for the dynamo process in hot Jupiters, which are performed by the partner group at the MPS Göttingen. Work packages include:

- calculation of the ionization degree of multicomponent dense plasmas for the conditions of the atmosphere and interior of hot Jupiters
- calculation of electrical and thermal conductivity by solving the Boltzmann equation for dense partially ionized plasmas for the same conditions
- comparison with available experimental and theoretical results
- collaboration with the partner group at the MPS Göttingen and data transfer

Requirements:
- master degree in physics, theoretical chemistry, astrophysics or in a closely related field
- PhD in theoretical physics, theoretical chemistry or astrophysics with good result
- basic knowledge of concepts of plasma physics is requested
- experience in calculating equation-of-state data and transport properties of dense plasmas beneficial
- excellent research and communication skills (English) are necessary
- willingness to interdisciplinary exchange with the partner group at MPS Göttingen and other groups participating in the DFG Priority Program 1992 "The diversity of exoplanets"

We offer:
- wide variety of possible assignments as well as interesting and challenging tasks in a university which is rich in tradition but also innovative, modern and family friendly, being situated in a lively city at the Baltic Sea
- employment in accordance with the provisions of the public sector's wage agreement (TV-L)
- remuneration will be paid in accordance with remuneration group 13 TV-L/13 Ü if the personal and tariff prerequisites are satisfied

Further information

The position is generally suitable for part-time work. If appropriate applications are received, it is examined whether the part-time wishes can be fulfilled within the employment opportunities.

The limitation of the term of employment complies with § 2 (2) WissZeitVG.

Equal opportunity is an essential part of our human resources policy. Applications from suitably disabled or equal people are therefore welcome. The University of Rostock seeks to increase the proportion of women in research and teaching and particularly encourages female applicants to apply for this position. We welcome applications from people of other nationalities or with a migration background.

On Request, the Personnel Council can be brought in. Please submit a formless application to your application documents.

We are looking forward to your application. Please send your informative documents until 05.07.2019 with the e-mail subject „Advertisement D 90/2019 – last name, first name“ to bewerbungen.personal@uni-rostock.de. Only applications, which are send to this e-mail-address, in time and as one single pdf-document, will be included in the selection process. The protection of your personal data is very important to us. Therefore, your data collected as part of the application process are collected, processed and used in accordance with the relevant data protection rules.

Please note that the Federal State of Mecklenburg-Vorpommern does not reimburse application and travel costs.

For further questions, please contact:

Institute of Physic	Prof. Dr. Ronald Redmer, Tel. 0381/498-6910
Administration	Kati Barth, Tel. 0381/498-1312