



# Leibniz-Institut für Astrophysik Potsdam

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 AIP invites applications for a

## PhD student position (m/f/other)

in the *Magnetohydrodynamics and Turbulence* group at the AIP. The group has a long tradition in the subject of Mean-Field MHD. Under the supervision of M. Küker and O. Gressel, the primary goal of the 3-year (+1 year upon evaluation) project is to predict stellar differential rotation / meridional circulation based on simulation work and subsequently perform mean-field modelling of stellar dynamos.

### Your tasks:

- Study angular momentum transport, meridional flows, and magnetic field generation (via the mean-field dynamo mechanism) in the convection zones of cool stars.
- Setup state-of-the-art direct numerical simulations of stellar convection and extract the resulting Reynolds stress and the turbulent electromotive force from the simulations.

### Your profile:

- Applicants should hold a MSc degree or equivalent in astrophysics or a related discipline at the time of starting the position.
- Previous experience in the fields of fluid dynamics or magnetohydrodynamics, and/or a background in stellar astrophysics will be considered a strong asset.
- Ideally, you are already equipped with a skillset covering basic scientific programming, as well as running and analysing high-performance computer simulations.

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. The AIP is an equal opportunity employer, who values diversity, and especially encourages women and other underrepresented groups to apply. For informal inquiries, please contact Manfred Küker <mkueker@aip.de> directly.

To apply, please send a single PDF containing a cover letter, your curriculum vitae, master degree certificate (or equivalent), a link to your master thesis, and a brief research statement (max. 2 pages) to <bewerbung\_2021-10@aip.de>, and arrange for two reference letters to be sent to the same address. Applications sent before April 23, 2021 will receive full consideration, later submissions will be considered until the position is filled. Should you be anticipating the successful completion of your master thesis and/or are awaiting your MSc waiver/defence, please state this clearly in your cover letter. In this case, you are welcome to apply without including these documents.

### Contact:

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