

PhD position in Atmospheric Dynamics



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Stratospheric impact on North-Atlantic/Eurasian weather patterns

It is well established that strong anomalies of the wintertime polar stratospheric flow (e.g., associated with so-called sudden stratospheric warmings) are followed by hemispheric-scale tropospheric circulation anomalies over the course of several weeks. These tropospheric anomalies tend to manifest most strongly regionally over the North Atlantic, giving rise to sub-seasonal predictability over Eurasia. However, the underlying mechanisms for this tropospheric response to stratospheric flow anomalies remain incompletely understood. In this project we will work with large ensembles of simulations using the numerical weather prediction model ICON to shed new light onto the dynamical planetary-to-synoptic scale interactions involved in the above described stratosphere-troposphere coupling.

The successful candidate will be **co-advised by Prof. Thomas Birner** at the Meteorological Institute, Faculty of Physics at Ludwig-Maximilians-University (LMU) Munich **and Dr. Hella Garny** (Institute of Physics of Atmospheric Physics, German Aerospace Center, DLR Oberpfaffenhofen). The work is part of a joint project between LMU and Johannes-Gutenberg-University (JGU) Mainz (Prof. Wirth's group at the Institute of Atmospheric Physics at JGU).

Requirements

MSc in meteorology, atmospheric sciences or related field (such as physics, engineering, other related natural science field). Experience with numerical modeling and/or computational analysis of large data sets is advantageous but not strictly necessary.

Employment conditions

The position is offered for 3 years. Employment is by the Ludwig-Maximilians-University Munich (75% of E13 TV-L including benefits). The targeted starting date is currently flexible; we hope to fill the position by 1 October 2025 the latest.

Applications and deadline

Please send applications as one pdf-document to thomas.birner@lmu.de, including a 1-page motivation letter, CV, copies of relevant certificates, preferred starting date, and the names of at least two references. Review of applications will start on **1 May 2025** and will continue until the position is filled.

LMU actively supports equality, diversity and inclusion, and as an equal opportunity employer, LMU explicitly encourages applications from women as well as from all others who will bring additional diversity to the university's research and teaching. Applicants with disabilities will be preferentially considered if suitably qualified.

We look forward to receiving your application!