



PhD Position



at the Thüringer Landessternwarte Tautenburg

The Thüringer Landessternwarte Tautenburg (TfLS) invites applications for a PhD research position to work on the project "**The erosion of planetary atmospheres**". The project is funded through the DFG Priority Program SPP1992: "Exploring the Diversity of Extrasolar Planets".

Scientific background of the project: In order to understand the evolution of planetary atmospheres, it is necessary to find out what the role of flares and Coronal-Mass ejections (CMEs) are for the erosion of planetary atmospheres. Atmospheric loss-processes are particularly relevant for M-stars. The aim of the PhD-project is to study flares and CMEs of M-stars at different ages. The project has four parts: 1.) Determining the flare-frequency distribution for young M-stars 2.) Developing a new method to characterise the flare frequency that does not rely on counting individual flares 3.) Study the flare-frequency for old M-stars in solar-neighbourhood 4.) Obtaining and analysing high-resolution spectra of CMEs. The project involves the analysis of light-curves obtained by the K2 mission, and in analysing high-resolution spectra obtained with ground-based telescopes (VLT, WHT and the TfLS echelle spectrograph). In collaboration with other research institutes the mass-loss rate for planets of different masses will be determined. In this way we will find out whether the diversity of exoplanets is the result of atmospheric loss-processes. This project also sheds new light on to the question which planets can potentially be habitable and which not. More information about the project can be found here:

http://www.tls-tautenburg.de/research/eike/vorles/Flare_project_TfLS.pdf

The position: The appointment is for three years and is funded through the Deutsche Forschungsgemeinschaft (DFG). It is paid according to German public service scale TV-L E13/2. A master, or diploma degree in Physics, Astronomy or related fields is required. Applicants should send a curriculum vita including statements on education and research experience via email to [guenther\(at\)tls-tautenburg.de](mailto:guenther(at)tls-tautenburg.de), or via post to:

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Also needed are two letters of reference that should be sent directly by email to [guenther\(at\)tls-tautenburg.de](mailto:guenther(at)tls-tautenburg.de). Applications will be considered until September 30, 2017. Starting date will be December 1, 2017. Further information can be obtained by email.

The institute seeks to increase the percentage of women in those areas of research where they are underrepresented. Women are therefore encouraged to apply for this position. Handicapped persons of equal qualification will receive preferential status. More information about the Thüringer Landessternwarte Tautenburg can be found at <http://www.tls-tautenburg.de>.