



Das Institut für Physik

Institutsbereich Geophysik, Astrophysik und Meteorologie

lädt zu folgendem Vortrag

im Rahmen des **Astrophysikalischen Kolloquiums** ein:

**"Cool planets of cool stars:
how habitable are they really?"**

Dr. Eike Günther

Thüringer Landessternwarte (TLS), Tautenburg, Germany

The long-term goal of exoplanet research is to find out whether Earth-twins are common, or rare. The focus has recently shifted from planets of solar-like stars to planets of M-stars. The reason is that it is simply easier to detect low-mass planets of low-mass stars. Of particular exciting are, of course, planets in the so-called habitable zone. Detecting such planets is also the goal of our CARMNES survey which has already led to the discovery of 28 planets. However, how Earth-like are these planets really? Two aspects are particularly interesting: What is the impact of stellar activity on the atmospheres of the planets? Particular emphasis will be given to the impact of flares and coronal-mass ejections on the planets. The second aspect is the composition of the planets, because it is also important for their potential habitability. Is it really justified to assume that all low-mass planets have also an Earth-like composition, or is it more likely that these planets are very diverse? I will finally present two new instrumentation projects: CRIRES+, the new high resolution near-infrared spectrograph for the VLT which we will use to study the atmospheres of planets. The other project is PLATOSpec, a new spectrograph for the ESO 1.5m telescope at La Silla. PLATOSpec will be used for studying TESS and PLATO objects, particularly their activity.

Time: **Wednesday, January 13, 2021, 17:00 CET (st!)**

Meeting: <https://unigraz.webex.com/meet/paul.beck>

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