



Das Institut für Physik

Institutsbereich Geophysik, Astrophysik und Meteorologie

lädt zu folgendem Vortrag

im Rahmen des **Astrophysikalischen Kolloquiums** ein:

**"When Astrophysics meets Biology: re-estimating  
UV habitability and stellar (super)flare impact on  
life through experiments"**

**Dr. Ximena Abrevaya**

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Invited scientist, IGAM, University of Graz, Austria

The search for life in the universe together with the increasing discovery of exoplanets has boosted the studies for the characterization of planetary habitability. Stellar radiation is one of the fundamental factors to be studied in the context of habitability, as it can be a constraint for life through direct or indirect effects. Particularly, UV radiation wavelengths (200-400 nm) can reach the surface of the planets (depending on the atmospheric composition and pressure) and could be harmful to life. High UV radiation fluxes as those coming from flares and superflares are fundamental to be studied, as it is unknown if they could limit the surface habitability of a planet. Previous studies have analyzed the impact of UV radiation on life in exoplanets, however, this has only been approached from a theoretical point of view (i.e., modeling). This led us to create the EXO-UV program, an international interdisciplinary collaboration that seeks to expand the characterization of UV radiation environments through experimental approaches. In this talk I will explain the drawbacks of the methodologies used so far and I will present the results of the first biological experiments done to determine the impact that flares and superflares could have on life as we know it (microorganisms).

Zeit: **Wednesday, May 26, 2021 at 17:00 (CEST) - online**

<https://unigraz.webex.com/meet/manuela.temmer>

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