



Das Institut für Physik

Institutsbereich Geophysik, Astrophysik und Meteorologie

lädt zu folgendem Vortrag

im Rahmen des **Astrophysikalischen Kolloquiums** ein:

## **"How can magnetic activity change the plasma composition of solar and stellar coronae?"**

**Dr. Deborah Baker**

Dept of Space & Climate Physics, UCL-MSSL, UK

Plasma composition in stellar coronae can differ from that of their photospheres. The cause of which is one of the open questions in astrophysics. As our nearest star, the Sun has long been used as a local laboratory, with measurements of its chemical composition providing a reference for comparable measurements of phenomena across the Universe. Fifteen years of spatially resolved spectroscopic observations provided by Hinode/EIS have fundamentally changed our understanding of how plasma composition in the solar corona varies in space and time depending on magnetic activity on all scales. I will discuss how magnetic wave activity in the solar lower atmosphere and reconnection beneath the solar surface can directly change the plasma composition we observe in the corona. The insight gained in our understanding of the processes in creating plasma composition variability in the solar atmosphere goes beyond solar physics, as it informs us about how and why the coronae of solar type stars and M dwarfs are dominated by different plasma composition.

Date: **Wednesday October 13, 2021 - 17:00 CEST (online)**

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

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