

Physikalisches Kolloquium



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Thursday, 26.04.2018, 16:15, HS 100

Reception with coffee & cookies 15:45

(For university staff: please bring your own cup for sustainability reasons)

Prof. Dr. Wolfgang J. Duschl, Christian-Albrechts-Universität zu Kiel:

Atmospheres of Exoplanets and the Quest for Habitability

Abstract

The general concept of planet formation being an integral (and almost unavoidable) part of star formation dates to the 18th century, to Swedenborg, Kant, and Laplace. Only in the mid-1990s, however, the first planets orbiting normal stars other than the Sun, so-called exoplanets, were detected. In the meantime, more than 4000 of them are known, and the number is limited only by the time it takes to confirm the detections, not by their occurrence. In the near future, routine spectroscopic investigations of exoplanetary atmospheres will become possible, and with it the search for (simple forms of) extraterrestrial life.

After an overview of the most successful techniques how to find exoplanets, I will introduce the concept of habitability of an exoplanet and discuss the pros and cons of it. Finally I will report on recent results of modelling exoplanetary atmospheres and the surprises that come with it.

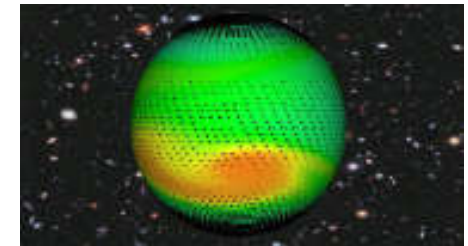


Photo: Temperature and wind speed distribution on the exoplanet Trappist-1d
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All of you interested in physics are cordially invited!