

PUBLIC LECTURE

11.12.2024 WISTA Event Center

We are pleased to welcome you to a

PUBLIC LECTURE at the BUNSEN HALL of the WISTA Event Center given by

Dr. Christopher Pöhlker (Max Planck Institut für Chemie, Germany) on

Atmospheric Research in the Amazon: Photons, Aerosols, Clouds and a Flavor of Adventure

The Amazon rain forest plays key roles in the carbon and water cycles, biodiversity, and the climate system. However, it has already been altered significantly by human activities, and more pervasive change is expected to occur. Of particular concern is the interplay between deforestation, fire, and drought, which could lead to the loss of carbon storage, change precipitation patterns, and potentially trigger an irreversible transformation of the entire ecosystem.

A fascinating facet of the research in the Amazon is the intense water cycle, where evapotranspiration, cloud formation and precipitation not only sustain the rainforest, but also influence regional and global climate patterns. For clouds and precipitation to form, tiny airborne particles known as atmospheric aerosols are needed to condense water vapor into cloud droplets. The concentration of these particles over the rain forest varies significantly, ranging from very clean, preindustrial-like conditions during the wet season to dense smoke pollution from widespread fires in the dry season. How these strong changes in pollution alter clouds and, thus, the water cycle as the Achilles' heel of the ecosystem remains a critical yet unresolved question.

Here, I will take you on a tour into the Amazon rain forest, show you what our research at the Amazon Tall Tower Observatory (<https://www.attoproject.org/>) in the heart of the Amazon Basin is about and demonstrate how BESSY II helps us to literally shed light on some of the biggest open questions.



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The Public Lecture is a part of the BESSY@HZB User Meeting 2024. **Registration is not required.**

DATE

11 December 2024 from 17:30 to 18:30

HZB  BESSY II
Light Source

https://www.helmholtz-berlin.de/user/index_en.html

LOCATION

Bunsen Hall at WISTA Event Center
Rudower Chaussee 17, Berlin-Adlershof