

Seminar über Microwavephysics and Atmospheric Physics

Referent: Dr. Rolf Rüfenacht, IAP, K hlungsborn

Titel: Co-located observations of middle-atmospheric wind by microwave radiometry and lidar

Wind is a key parameter characterising the state of the atmosphere and the most direct manifestation of dynamics. Nevertheless there is a substantial lack of wind observations from the upper stratosphere to the mesosphere. Established measurement techniques such as radiosondings, radars or airglow spectrometry cannot assess this altitude range, until recently direct observational knowledge of wind at these altitudes was solely based on rocket-aided techniques. This changed in 2009/2010 when two novel approaches providing much more frequent measurements reached their operational state: Doppler microwave wind radiometry and lidar single-edge iodine spectroscopy on the molecular backscatter signal. These completely independent measurement approaches are operated in co-location at polar latitudes since spring 2016. In this talk I will introduce the lidar and the radiometer method and highlight their advantages and limitations before presenting the first intercomparison of wind observation techniques in the upper stratosphere and mesosphere.

Zeit: Freitag, 24.03.2017, 10:15 Uhr

Ort: **H rsaal A97**, Geb ude exakte Wissenschaften, Sidlerstrasse 5, Bern, Schweiz