

Master Module E2 (12-11-1036)

Ground-based remote sensing with radar and microwave radiometer

- **Lecturers:** Heike Kalesse-Los (heike.kalesse-losatuni-leipzig.de)
Patric Seifert (seifertattropos.de)
Andreas Foth (andreas.fothatuni-leipzig.de)
Moritz Lochmann (moritz.lochmannatuni-leipzig.de)

- **Schedule:**
lecture: Tuesdays: 13:00 – 14:30 h
seminar: Tuesdays: 14:30 – 15:15 h

- **First lecture: 11.10.2022** (given by Patric Seifert)

- **Format depending on Covid regulation rules:**
For now: I person, **Prager Str. 34, 5th floor**, seminar room “Arktis”
If Uni Leipzig Covid regulations require it, we’ll switch to remote teaching via the platform Big Blue Button: <https://ninjo.meteo.uni-leipzig.de/b/hei-gum-ndp>

- **Course content:** The lecture "Remote sensing of the atmosphere with radar and microwave radiometer" will cover active and passive methods. Emphasis will be on radar and microwave radiometer remote sensing as well as their applications for the determination of atmospheric state parameters and the properties of clouds and precipitation. In the exercise "Microwave Remote Sensing" correlations between meteorological parameters of the atmosphere and active and passive observations in the microwave range are worked out. A calibration of the receivers of a microwave radiometer will take place at LIM at some point during the semester, if the (Covid) hygiene regulations allow it.

- **Suggested literatur & links:**
 - Cimini, D.: Integrated Ground-Based Observing Systems, 2011, Springer
 - Fabry, F.: Radar Meteorology, 2015, Cambridge University Press
 - Rinehart, R.E.: Radar for Meteorologists, 1997. Rinehart Publishing
 - www.radartutorial.eu