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WMO-CIMO
UPPER-AIR INSTRUMENT INTERCOMPARISON

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Introduction

• WMO-CIMO radiosonde intercomparison campaigns are organized for the purpose getting an overview of the performance of the various operational radiosounding systems that are currently available

• Last intercomparison campaign took place in 2010 in Yangjiang (China)

• Several manufacturers have introduced new radiosonde models since then

  ➢ It is time for another campaign to evaluate these recent developments

➔ August-September 2021 at Lindenberg observatory (DWD, Germany)

➔ co-organisers / co-hosts: DWD & MeteoSwiss
Goals

• Test the performance of existing operational radiosonde systems and provide guidance on their performance relative to each other.

• All systems that are employed in the observational network in WMO should be represented.

• Assess added value by involving a variety of other already at Lindenberg observatory available measurement techniques for upper-air observations.
Set-up of the Campaign

1. Laboratory testing (separate period)

2. Radiosounding campaign

Including

- Reference instruments (e.g. CFH)
- ground-based remote sensing instruments at Lindenberg:
  RWP, Doppler-/Raman-Lidar, MWR cloud-Radar, Ceilometers
- AMDAR observations
- Satellite-based observations
Laboratory facilities at Lindenberg

Laboratory

PTU

Climate chamber

Radiation
Resources and further steps

• The laboratory and radiosounding activities will be performed by DWD staff of the in-situ sounding group from Lindenberg Observatory (GRUAN), supported by various technical staff. DWD will provide balloons and helium, office space, IT infrastructure, mechanical workshop and laboratory facilities.

• MeteoSwiss will provide personal support by a scientist, a technician and a scientific programmer and analysis software (RSKOMP) as well as limited monetary support.

• Idea of a "Blind" intercomparison: Independent operators, provided from WMO-members could employ the system (WMO capacity building)