

# ACCORD ASW 2024 - Physics side meeting Tuesday afternoon¶¶

Title: **ADVANCING THE EVALUATION OF PARAMETERIZATION DEVELOPMENT**

Time: Tuesday, April 16, 16:30-17:30 CEST

Video: Webex video link

## Agenda

If you like, please add items! It could mean e.g. just 1 slide to introduce a discussion or a presentation...

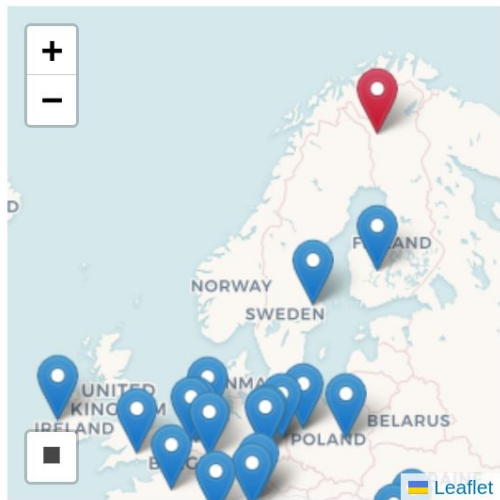
If you like, please upload your presentation/slide and/or link it to your title

1. Using the ACTRIS Cloudnet data
  - a. How do we (as ACCORD) see the collaboration with the Cloud Remote Sensing Data Centre Unit (CLU)? <https://cloudnet.fmi.fi/>
  - b. Products/data to be considered?
  
2. Organization of the ACCORD Physics WW in Madrid (18-22 November 2024) on model development evaluation/validation
  - a. Any ideas/proposals on the agenda (general)?
  - b. Long term model improvement: Do we need guidelines (or even a procedure) to avoid introducing compensating errors and to ensure modifications are "real" improvements?
  - c. What do we want to achieve with the WW?

## 1. Using the ACTRIS Cloudnet data

a. How do we (as ACCORD) see the collaboration with the Cloud Remote Sensing Data Centre Unit (CLU)? <https://cloudnet.fmi.fi/>

- From a video meeting with Ewan O'Connor (PI cloudnet data portal):
  - he is very much interested in collaboration; we are not the first ones that are asking this (ICON/COSMO, ECMWF are also interested in the similar topic)
  - he is willing to share some tools/scripts for model evaluation based on cloudnet data, but also more (Doppler LidaR, ..); he would like to get some model output data to do inter-model comparison (benefit for his project ACTRiS)
  - he is interested and willing to participate in-person in the ACCORD PH WW on model evaluation (November in Madrid)
  - Create and send a document of collaboration (informal)



Location

Show all sites

Date

Visualisations for 16 April 2024

comparison view

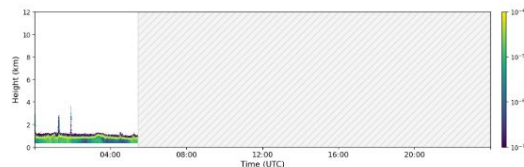
Kenttäröva CL61 ceilometer [↗](#)

**Volatile**

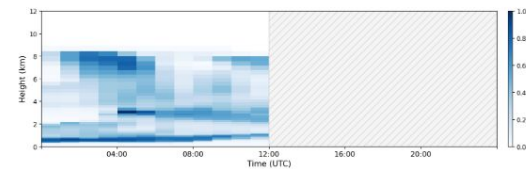
Kenttäröva HARMONIE-AROME (6h-11h forecast) [↗](#)

**Volatile**

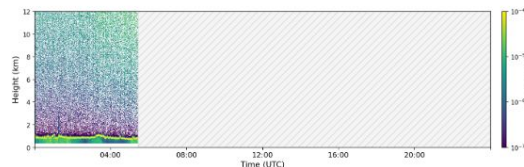
Attenuated backscatter coefficient



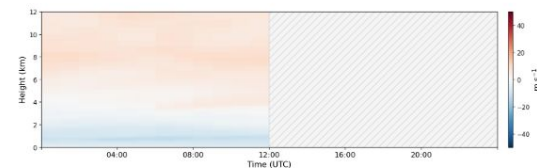
Cloud fraction



Non-screened attenuated backscatter coefficient



Model zonal wind



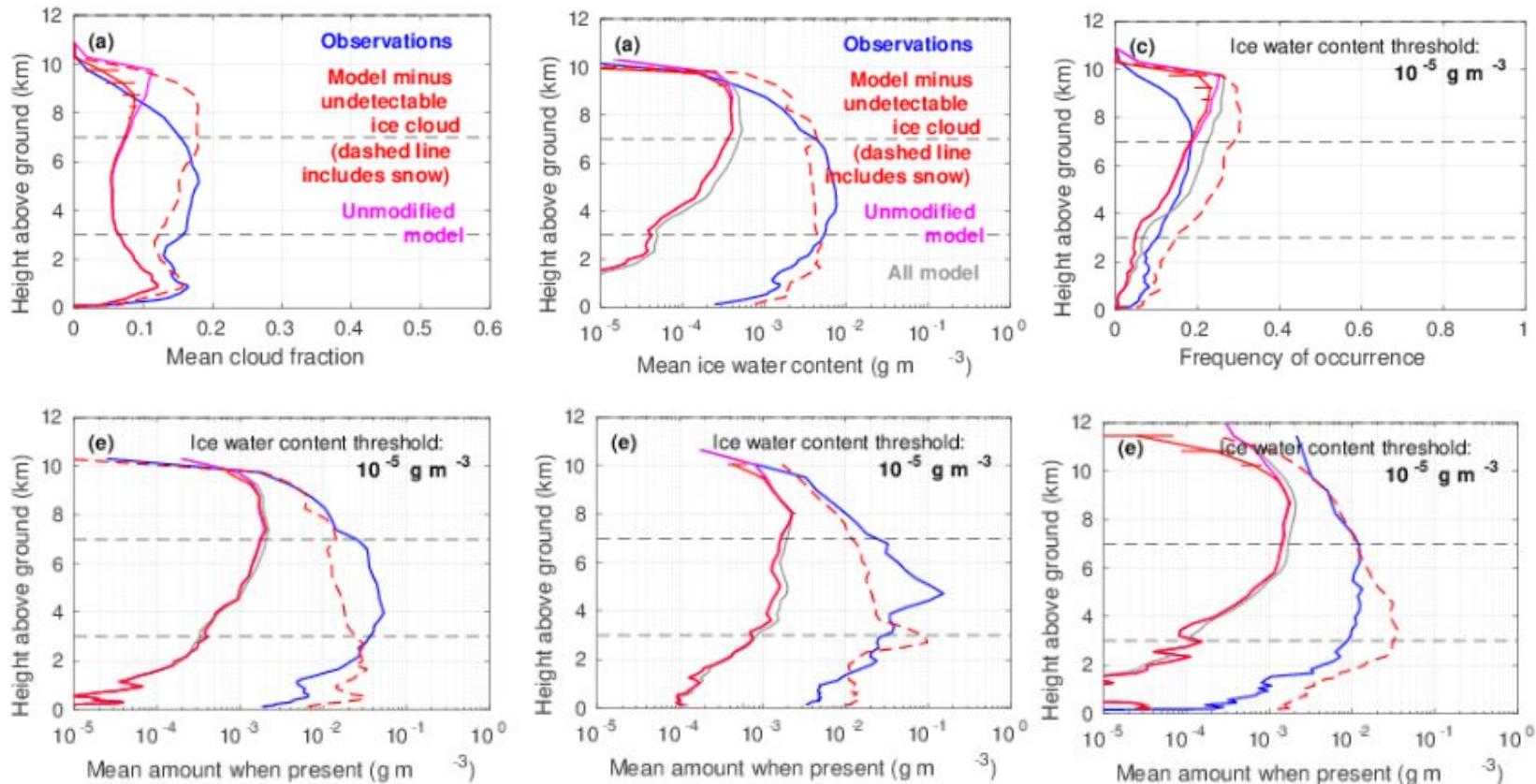
Uncalibrated lidar volume linear depolarisation ratio



Model meridional wind

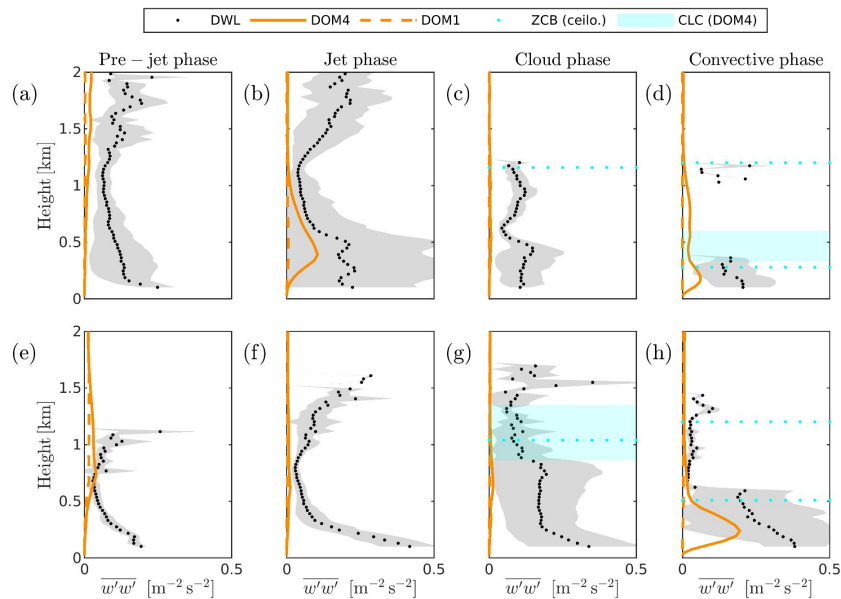
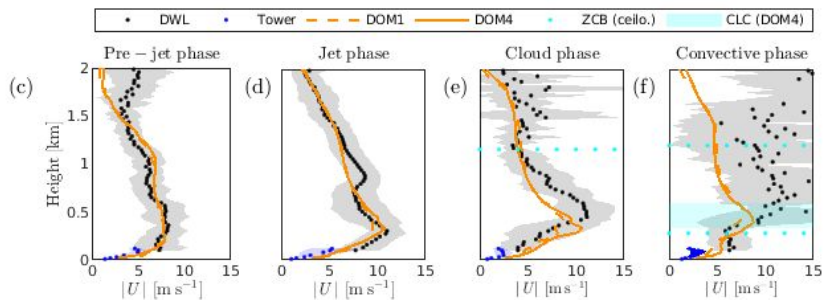
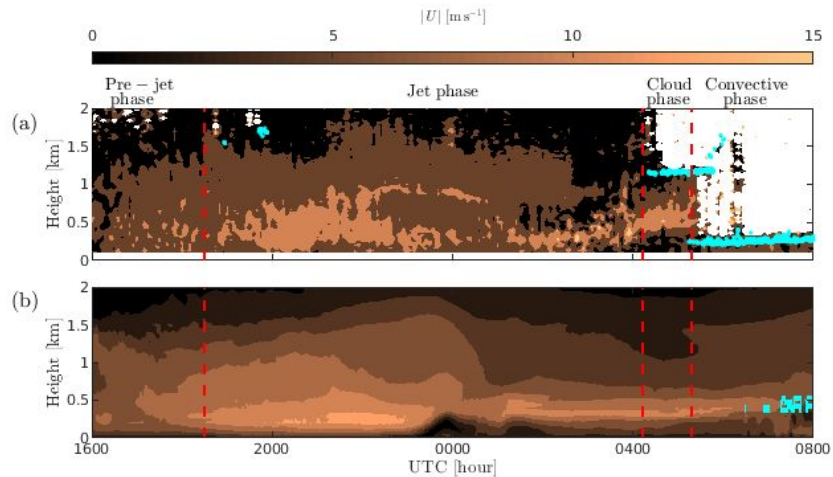


# Mean profiles (statistics) of variables of interest



(Magnus Linskog et al. 2024: Technical note describing the updates of the HARMONIE-AROME system (ESA))

# Mean profiles (statistics) of variables of interest

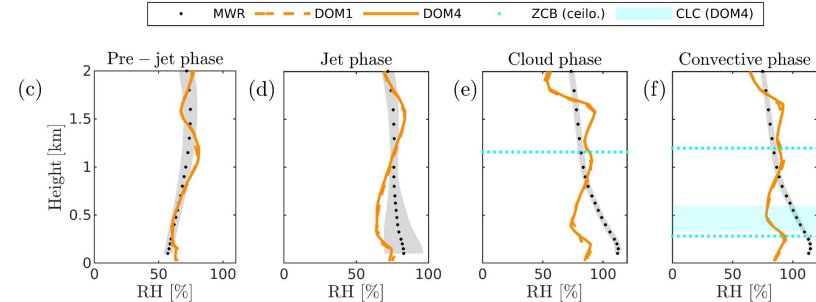
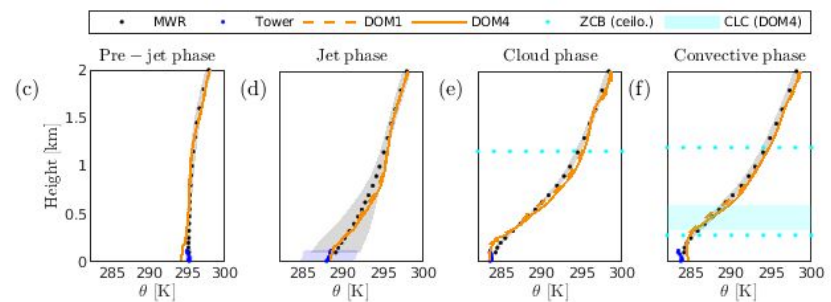
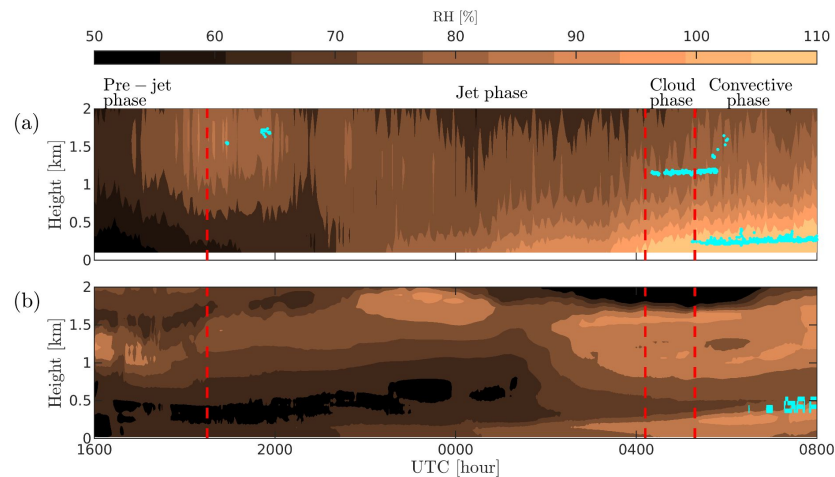
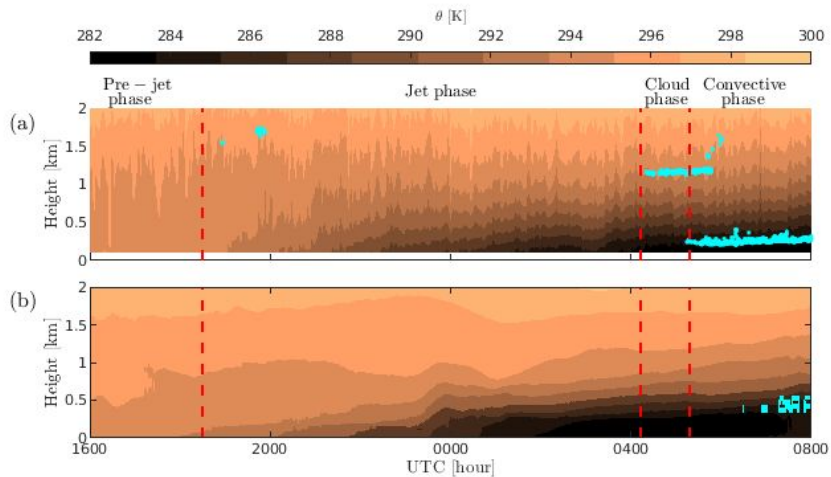


CS1: 08-09.06.2013

CS2: 13-14.06.2013

TKE is difficult to retrieve from Doppler LiDAR  
but TKE dissipation could be contacted

# Mean profiles (statistics) of variables of interest





# 1. Using the ACTRIS Cloudnet data

## b. Products/data to be considered?

- **Surface-atmosphere momentum, energy, compounds exchange:** ICOS tower flux-gradient data: <https://www.icos-cp.eu/>
- **Turbulent mixing:** LiDAR, Doppler LiDARs (supersite: Cabauw, Jülich, ...)
- **Cloud-precipitation (Microphysics, aerosols):** composite of cloud radars, ceilometers, MWR
- **Radiation:** ICOS tower observatories

## c. Some common storage: <https://github.com/ACCORD-NWP/ACCORDPhysicsTools>

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