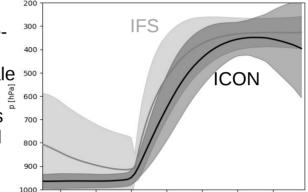
How does the model representation of (micro-)physical heating rates influence warm conveyor belt ascent: A model-intercomparison using ICON and the IFS?

 Warm conveyor belts (WCBs) are coherently ascending airstreams in extratropical cyclones (ETCs) and form largescale cloud bands

• WCB ascent and cloud formation influences the larger-scale 500 flow (e.g. ridge amplification)

Latent heat release (~25 K) dominated by cloud processes which are differently represented in NWP models (sub-grid scale parameterizations)



Open questions:

- How are (micro-)physical heating rates in a WCB represented in two state-of-the-art NWP prediction models (ICON vs. IFS)?
- How does this influence WCB ascent and subsequently the larger-scale flow?

Tasks:

- Compare ICON (DWD) and IFS (ECMWF) simulations for one (or more)
 WCB case study
- Analyse Diabatic heating (and PV) rates from all parameterizations from a Eulerian and Lagrangian perspective

