

# 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 large-scale cloud bands
- WCB ascent and cloud formation influences the larger-scale 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

