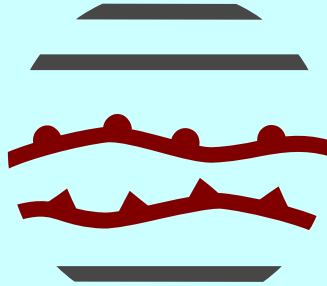


# ACCORD

The logo for ACCORD features the letters 'A', 'C', 'C', 'R', and 'D' in a bold, dark red, sans-serif font. The letter 'O' is replaced by a stylized icon of a hamburger, with two grey horizontal lines representing the top and bottom buns, and two red wavy lines representing the meat and cheese layers.

A Consortium for COnvection-scale modelling  
Research and Development

## Physics Sessions

Author(s), date, place or video-conference

# Cloud-Aerosol-Radiation

- **The importance of validation of radiation fluxes and clouds**

- **dealing with existing compensating errors**

- **Aerosols in radiation scheme**

- › First tests with new ecRad that is more modular and more efficient

- › Can use real time aerosols or re-computed Tegen type 'climatology', total column optical depth over LW or SW spectra

- Tests performed on cases and longer term periods show positive impact

- **Aerosols in microphysics**

- › Number of CCN determined from surface (sea/land) modified or replaced using various sources of aerosols

- › Effects on both precipitation and clouds, little effect on prec scores over one month (CAMs, MEPS and control)

- › First tests bring small improvement and some problems remain unsolved (coastal precipitation)

# Microphysics

- **ALARO lightning based on graupel**

- › Implemented and tested using LINET data

- Correct diurnal cycle

- **ICE-T**

- › Better representation of the super-cooled liquid water, heavier ice loads, better match with obs

- **Fog tests**

- › Hectometric scale and 156 lev 1m lowest, better life cycle with LIMA and deposition

- › Number of vertical levels important for correct representation of the sea fog

- **Sub-grid precipitation and light precipitation in shallow clouds**

- **Improving consistency by direct use of hydrometeor PDF that provides opportunity for uncertainty assessment and re-tuning**

# Turbulence

- 
- **CAT**
  - Flight level cloud free turb at VHR study
  - Higher vertical resolution near tropopause is needed
- **TOUCANS**
  - Work on numerics and mixing length
  - Interfacing with SURFEX options and fixing
- **Wind farm parametrisation**
- **Stable boundary layer issues**
  - Diagnostics work
  -

# General proposals

- **New dawn for MUSC (for testing all physics)**
- **ML and data driven parametrisations**
- **Specific cross-CSC working weeks/days/meetings**
  - › Foster direct cross-CSC interactions
  - ›
- **topic oriented coordination?**
  - › Semi-regular meetings of teams working on particular WP
  - › (very) Stable BL
  - › 3D radiation and turbulence
  - › ML techniques
  - › VHR and interoperability