Training course: Parametrization of subgrid physical processes



Contribution ID: 14

Type: not specified

Convection (3)

Thursday, 18 March 2021 10:45 (1 hour)

Convection affects all atmospheric scales. Therefore, the convection session aims to provide a deeper understanding of the atmospheric general circulation and its interaction with convective heating and vertical transports. The notions and techniques acquired during the course should be useful for developers of convective parametrizations, forecasters and for analysing ouput from high-resolution convection resolving models. By the end of the session you should become familiarised with

• the interaction between the large-scale circulation and the convection including radiative-convective equilibrium and convectively-coupled large-scale waves

• the notion of convective adjustment and the mass flux concept in particular

• the basic concepts behind the ECMWF convection parametrization and some useful numerical tricks

• forecasting convection including convective systems and the diurnal cycle

- diagnose forecast errors related to convection.

Presenters: BECHTOLD, Peter (ECMWF); BECKER, Tobias (MPI / ECMWF Visiting Scientist)