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COSMO 5.0

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COSMO User Workshop, 27.11.2013



Finally out...

- Unified NWP and Climate Version of COSMO
- Will highlight some interesting changes since V4.21



Interesting changes

- Changes in ice cloud parametrisation: now 100% cirrus coverage can be reached (A. Seifert) -> talk on COSMO-1 by Marco
- New versions of the Bott Advection Scheme (M. Baldauf)
 - More efficient full strang splitting (applied in lower atmosphere, only)



Interesting changes

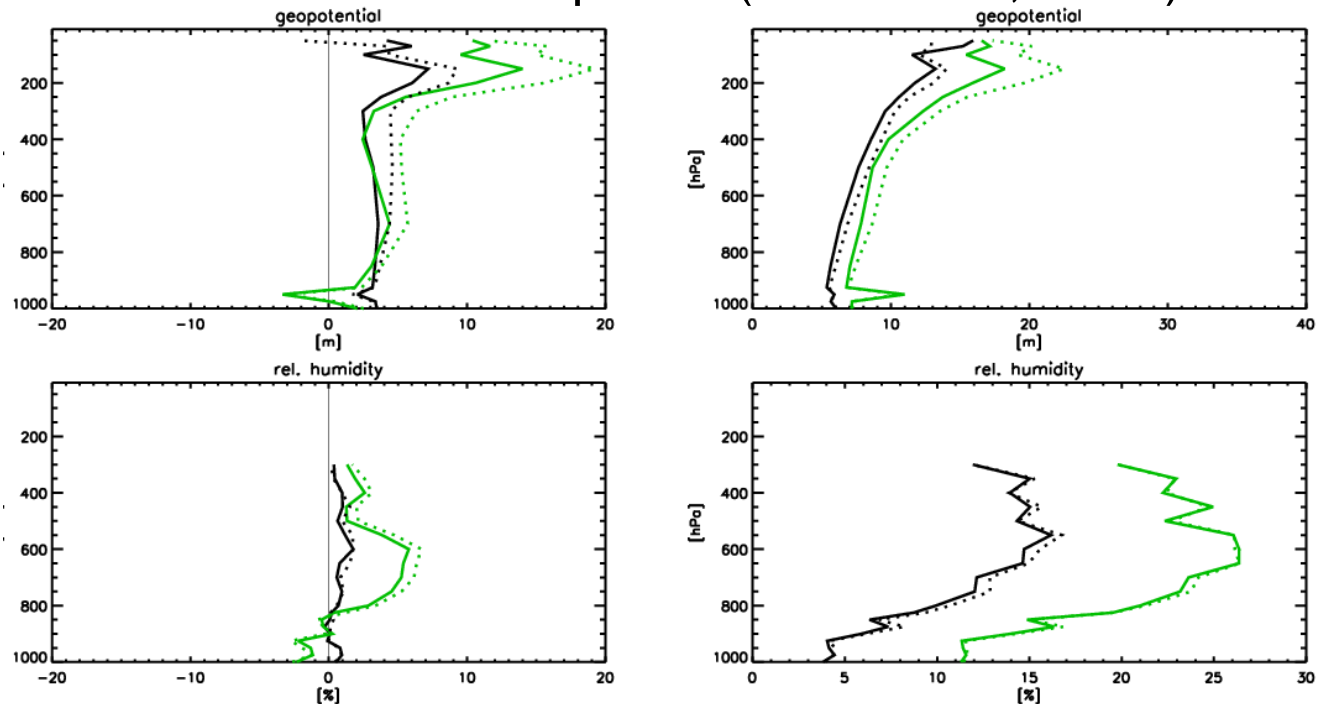
- Input of surface albedo for CLM (D. Luethi)
- New GHG scenarios (H. Panitz)
- Time dependent boundary values for aerosol optical depths (D. Luethi)



New fast wave solver

- New vertical discretization, proper handling of grid stretching
- Strong conservation form for the divergence operator
- Allows for steeper slopes in model topography
- Makes COSMO-1 possible!
- See technical report by M. Baldauf

6 weeks summer trial period (M. Baldauf, DWD)





Interesting changes

- Tracer module (A. Roches)
- 2-moment microphysics interface (U. Blahak)
 - Not official COSMO code, since not sticking to standards (e.g. german comments, etc.)
 - Available on request by Uli Blahak (DWD)
- Asynchronous NetCDF writing (C. Osuna)
 - I/O can be done asynchronous (completely hidden)
 - Ask D. Lüthi about how to use it



Interesting changes

- Interface for IFS convection scheme
- RTTOV10 interface
 - RTTOV 10 library available from D. Leuenberger
- MESSY interface (A. Kerckweg)
 - Lots of code changes, not widely used
- GRIB2 support
- !! Many changes in the default namelist switches !!
- More and more IFDEF's. Make sure to understand them!