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**Bundesamt für Meteorologie und Klimatologie MeteoSchweiz**

# News about COSMO/INT2LM Versions

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COSMO User Workshop, 1.11.2012



# COSMO

- Operational at MeteoSwiss: 4.19.2
  - Namelist switches (updated!) available under
  - COSMO 4.19.2  
<http://www.cosmo-model.org/content/tasks/operational/nmlDoc/cosmoDefault.htm>
  - INT2LM 1.18  
<http://www.cosmo-model.org/content/tasks/operational/nmlDoc/int2lmDefault.htm>
- 4.23
  - Changes in the parameterization of the cloud cover for ice clouds (reduce overestimation of ice clouds)
- 4.24
  - New fast waves solver
- 4.25
  - Implementation of a new tracer module
  - Implementation of interfaces for 2-moment microphysics
  - CLM: implementation of IFS convection interface with `#ifdef CLM`

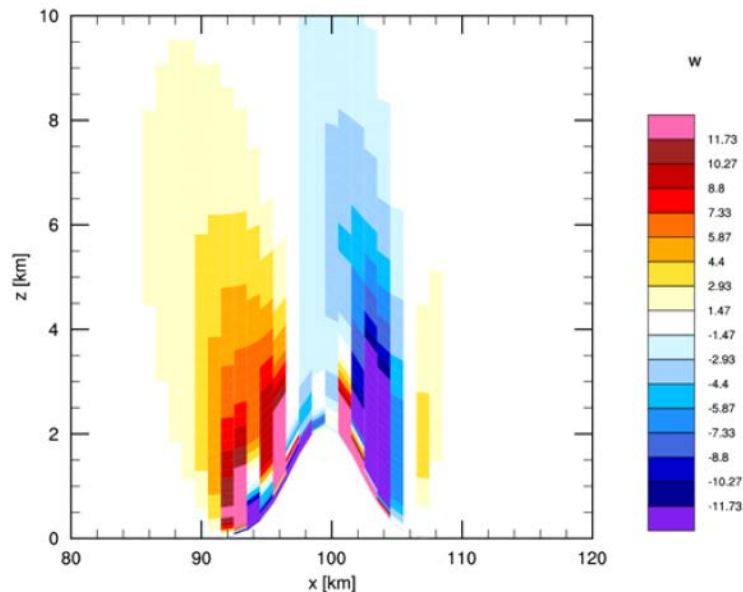


# New fast wave solver

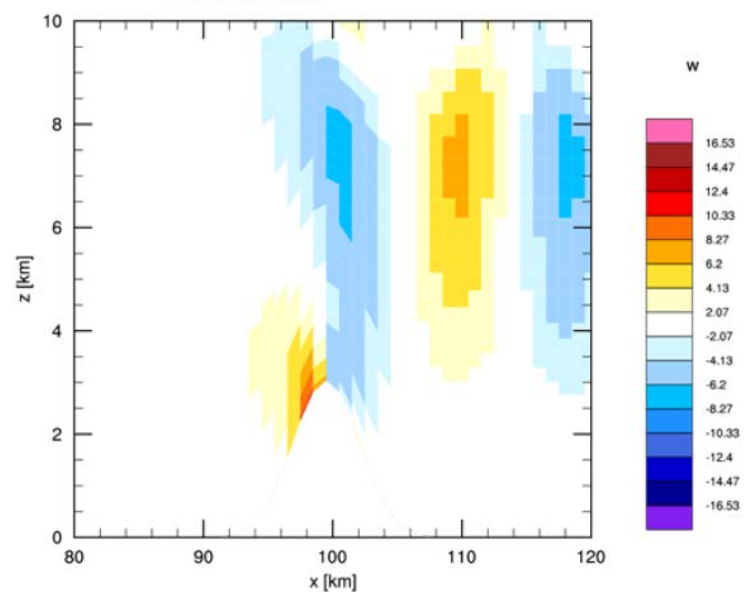
- overall goal: improve numerical stability of COSMO, particularly over steep slopes
- improvement of the vertical discretization: use of weighted averaging operators for all vertical operations
- divergence in strong conservation form

## Atmosphere at rest experiment (M. Baldauf, DWD)

Current, w at 5h, slope 27°



New, w at 24h, slope 35°





# New unified release (expected end '12)

- COSMO 5.0
  - Implementation of grib\_api for reading and writing
  - Adaptation of COSMO-ART to the new Tracer Module
  - And there are some bugs (few already known, but also some rather new ones) which should be solved for a new version, but will definitely change the results again
  - COSMO-MESSy interfaces
- INT2LM 2.0
  - Implementation of grib\_api for writing
  - Optimized asynchronous GRIB I/O
  - Asynchronous NetCDF I/O
  - Only technical changes without changes of the results!



# COSMO in C2SM SVN Repository

- Code released by DWD (not adapted to CSCS)
  - `$SVN/cosmo/vendor_tags/cosmo`
- Code running at CSCS
  - `$SVN/cosmo/trunk_tags/cosmo_c2sm`
- Code with all modifications for MeteoSwiss
  - `$SVN/cosmo/trunk_tags/cosmo_opr`
- Current operational MeteoSwiss version
  - `$SVN/cosmo/trunk_tags/cosmo_opr/CURRENT`
- Where `$SVN = https://cosmo.cscs.ch`
  
- Same structure holds for int2Im