Working Group 3: Physical Aspects

- WP 3.1:   planetary boundary layer

- WP 3.2:   soil processes

- WP 3.3   convection

- WP 3.4:   microphysics

- WP 3.5:   clouds

- WP 3.6:   radiation

- WP 3.7:   2.8 km version

- WP 3.8:   sub-km version

- WP 3.9:   z-coordinate version

- WP 3.10:   tackle observed model deficiencies

- WP 3.11:   cross-WG coordination

The detailed status report is available on the COSMO web-site at http://cosmo-
model.cscs.ch/private/physicalAspectsGroup.htm

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Working Group 3: Physical Aspects

- WP 3.1: planetary boundary layer
  - 3.1.1 boundary and surface layer scheme (Raschendorfer; Bonafè)

    some (sub-) packages are finished, some others delayed

    → talk (by Raschendorfer)

    → poster on single column LM

- WP 3.2: soil processes
  - 3.2.1 multi-layer soil model (Schrodin)

    final tests ongoing, operational usage still pending

    → talk (by Heise)
  - 3.2.2 implementation of lake model into LM (Mironov)

    → talk
  - 3.2.3 provision of SYNOP-derived soil parameters (Loglisci)

    → talk at yesterday's WG3 workshop

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- WP 3.3: convection

    - 3.3.1 & 3.3.4 implementation and testing of different convection schemes (Arpagaus; Smoydzin)

      delayed, but gained new momentum due to work done in Bonn

      → talk (by Smoydzin)

    - 3.3.2 development of a new convection scheme (Doms)

      …

    - 3.3.3 parametrization of shallow convection on the meso-gamma scale (Schulz)

      ongoing

      → partly covered by talk on LMK (Baldauf)

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- WP 3.4: microphysics
  - 3.4.1 three-category ice scheme (Reinhardt)
    implemented; tests ongoing

- WP 3.5: clouds
  - 3.5.1 parametrization of boundary layer clouds (Doms)
    delayed, but first tests are underway (Heise)
  - 3.5.2 sub-grid scale cloudiness (Heise)
    work did not yet start

- WP 3.6: radiation
  - 3.6.1 cloud-radiation interaction (NN)

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- WP 3.7: 2.8 km version

  - 3.7.1 implementation and integration of test suite at DWD (Baldauf)

    → partly covered by talk on LMK (Baldauf)

  - 3.7.2 test cases, with emphasis on precipitation processes (Elementi)

  - 3.7.3 testing of 3D turbulence formulation (Vogel)

    implemented; test ongoing

    → talk

- WP 3.8: sub-km version

  - 3.8.1 convective rain cells over the ocean and the Mediterranean Sea (Parodi)

    → talk

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- ## WP 3.9: z-coordinate version

  - 3.9.1 adaptation of the parametrization schemes (NN)

- ## WP 3.10: tackle observed model deficiencies

  - 3.10.1 cure overestimation of low precipitation in winter (Heise)

    work was discontinued due to other priorities (➔ gusts)

- ## WP 3.11: cross-WG coordination

  - 3.11.1 clarify the situation concerning the soil moisture analysis

    done; proposal approved by steering committee

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- additional talks (no formal work packages)
    - today:
        - Mercogliano, Milelli: Modification of LM parametrization schemes in the framework of the HYDROPTIMET project
        - Sorbjan: Parametrization of free and forced convection in the ABL based on LES experiments
    - at yesterday's WG3 workshop:
        - Heise: Test of alternative gust parametrizations
        - Clappier: Parametrization of urban turbulence in weather forecast models
        - … and various contributions to a discussion concerning the soil moisture analysis (*soil moisture initialization!)* issue

    Note on WG3 workshop: We plan to have another WG3 workshop next year, right before the General Meeting.

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