9 Model Development and Application

This section includes several reports on various research topics and model applications as well as progress and status reports of the COSMO Working Groups. Within this section, we omit a subdivision by themes and the numbering of equations and figures refers to each paper. The contributions are ordered such that follow the topics of WG1 – WG4 and WG6. Papers related to model verification have been included in the preceding section.

Most of the papers included in this section are write-ups from the COSMO annual meeting 2002 in Warsaw. Many thanks to all who provided contributions for the present issue of the Newsletter.

We have not included longer reports that have been or are going to be published in the COSMO Technical Report (TR) series. The TRs are intended for a documentation of research activities, to present and discuss results from model applications and from verification and interpretation, and to document technical changes and new components of the LM package. The purpose of these reports is to communicate results, changes and progress related to the LM model system relatively fast within the COSMO consortium. The following TRs appeared in 2002 (available at www.cosmo-model.org).

No. 3, Günther Doms: *A Scheme for Monotonic Numerical Diffusion in the LM.*

No. 4, Hans-Joachim Herzog, Ursula Schubert, Gerd Vogel, Adelheid Fiedler and Roswitha Kirchner: *LLM – The High-Resolving Nonhydrostatic Simulation Model in the DWD – Project LITFASS. Part I: Modelling Technique and Simulation Method.*

No. 5, Jean-Marie Bettems: *EUCOS Impact Study Using the Limited-Area Non-Hydrostatic Model in Operational Use at MeteoSwiss.*

The following issues are planned so far for 2003. Of course, any additional paper is welcome, and we would like to encourage all of you to submit a contribution.

No. 6, Matthias Raschendorfer: *A New TKE-Based Scheme for Vertical Diffusion and Surface-Layer Transfer.*

No. 7, Günther Doms: *The LM Cloud Ice Scheme.*

No. 8, Andrea Montani et al.: *COSMO-LEPS: Description of the Methodology, Configuration of the system, Products and User Guide*