OPERATIONAL STATUS AUSTRIA

Operational model (no change):

General characteristics:

Model Version:	**CY32T1**
Horizontal resolution:	**9.6 km**
Number of levels:	**60**
Number of grid points:	**300 x 270**
Time-step:	**415 sec**
Coupling model:	**ARPEGE**
Coupling frequency:	**3 hours**
Forecast range:	**72h / 60h**
Output every:	**1 hour**
Physics:	**ALARO-0 (without 3MT), SK scheme**
Orography:	**envelope**
Grid:	**quadratic**
Hardware:	**NEC SX-8R, 16 CPU with 0.51 Tflop (32 Gflops/CPU), 128 GB RAM, 4.4TB storage**

Table 1: Operational model setup for ALADIN-AUSTRIA

ALADIN-AUSTRIA is operationally run four times per day. The forecast range is 72h hours for the main runs (00 and 12 UTC) and 60 hours for the intermediate runs (06 and 18 UTC). ALADIN-AUSTRIA uses an additional routine (acnebsk) to improve the forecast in the case of low stratus (Seidl-Kann-scheme).

LBC retrieval/backup:

- LBC are downloaded via internet from MF; 1. Backup: Retrieval of LBC files via RMDCN from ECMWF; 2. Backup: LBC production using ECMWF T799 as input:

Archiving:

- ALADIN-AUSTRIA 00 and 12 UTC runs are archived up to 48h
- ARPEGE LBC files (LACE domain) are archived for 00, 06, 12 and 18 UTC runs

Other activities:

ALADIN/ALARO/AROME:

At the moment there are 3 parallel/test suites running:

- CY32T1- ALARO on 4.9km horizontal resolution using 59 level; 540x501 gridpoints; 1 run per day (00 UTC, +48h); hydrostatic mode; linear grid; mean orography; verification ongoing

- CY33T1- AROME on 2.5km horizontal resolution using 60 level; 432x320 grid points; 1 run per day (00 UTC,+30h); non hydrostatic; linear grid; mean orography;

- CY32T1- ALARO (minus 3MT) on 9.6km resolution using CANARI surface assimilation; 60 level; 300x270 grid points; hydrostatic; envelope orography; quadratic grid; verification is ongoing, first results show slightly better scores for T2M and RH2M; verification ongoing

Verification for high resolution runs is still ongoing. A new verification method named SAL (*Structure Amplitude Location*) has been implemented in order to allow a fair comparison of precipitation forecasts on different horizontal resolutions (9.6km, 4.9km, 2.5km,…), whereas INCA precipitation analysis is used as observation.

SURFACE assimilation:

- No change during the last months (Sabine Leroch left in October, new colleague coming in March); Surface assimilation using CANARI optimum interpolation implemented and used for parallel suite (see above)

3D Var:

- Bmatrix computed
- Validation of screening and minimization ongoing;

New cycles

- CY35T1 has been compiled; validation is ongoing.

ALADIN-LAEF:

- ALADIN-LAEF “second generation” will be put in operations (under SMS at HPCE) beginning of February; details see Area leader report for Predictability;
- Start of archiving LAEF data in MARS archive is planned for begin of February (operational archiving + back archiving)

INCA:

- INCA Austria domain has been extended
- Improvement of precipitation fields in Alpine regions (height correction)
- Operational system:
    - Precipitation every 15 min
    - Precipitation type (rain, snow, mix, freezing rain) every 15min
    - Cloudiness every 15min
    - Temperature every 1h
    - Surface temperature every 1h
    - Relative Humidity, specific humidity, dew point every 1h
    - Snowfall-line, zero-degree line every 1h
    - Wind + gusts every 10min
    - Global radiation every 1h
    - Icing potential (experimental) every 1h
    - Wind Chill every 1h
    - MOCON, CAPE, CIN, convection index … every 1h

Plans for 2009:

- Operational implementation of ALARO including 3MT;
- Further tests on 4.9km and 2.5km resolution using SAL verification technique
- Operational implementation of surface assimilation using CANARA OI
- Parallel suite using 3D var