



PP CALMO – Fieldextra (1)

- Integrated in the COSMO **data flow** (pre- and post-processing)
- Managed by the **LM package** (use of meta-namelist)
- All features requested for **data thinning** implemented, incl. production of synthetic satellite products
 - *release 12.1.0d, SVN revision 7104 or better*



PP CALMO – Fieldextra (2)

Data thinning

- Three sets of namelists available, for (1) *daily 36h forecast*, (2) a *full assimilation cycle* implemented with 24 hour cycles, and (3) a *reduced assimilation cycle* implemented with 24 hour cycles.
- The namelists provide the data for (1) *standard verification on the full domain* (SYNOP, upper air, radar composite), (2) *calibration* (T2 min and max, radar composite, vertical profiles, MSG BT), (3) *weather and model monitoring*.
- In addition to the thinned data, the *laf* file used to start the daily 36h forecast should also be kept.
- No model output on pressure surface is required (fieldextra interpolates on p-surfaces)
 - Configure the model namelist accordingly.
- No *aggregation /de-aggregation* is performed; this should (mostly) be done in the meta-model, but can also be done in a second fieldextra iteration, on the basis of the thinned data.
 - The processing of the atmospheric profiles will be done in the meta-model (CAPE, integrated water content, wind shear).



PP CALMO – Fieldextra (3)

Data thinning for daily 36h forecast

Data thinning for reduced assimilation cycle

- **Calibration** (T2m daily min / max, 24h accumulated precipitation, MSG cloudy brightness temperature, TEMP derived)
 - hourly, on full domain (T_2M, TOT_PREC, BT_IR10.8, BT_WV6.2)
 - 3-hourly, at selected locations (L2E profile)
- **Verification** (SYNOP, TEMP, radar composite)
 - hourly, on full domain (PS, PMSL, U_10M, V_10M, VMAX_10M, T_2M, TD2M, CLCT, TOT_PREC, ZTD, TWATER)
 - 3-hourly, at selected locations (L2E profile)
- **Monitoring** (soil, surface, atmosphere)
 - hourly, on full domain (CLCL, CLCM, CAPE_MU, HPBL, surface fluxes)
 - 3-hourly, on full domain, at 300 / 500 / 700 / 850 hPa (FI, T, U, V, RELHUM, THETA)
 - 6-hourly, on full domain (W_SO, T_SO, W_SNOW, RHO_SNOW, T_SNOW)

Data thinning for full assimilation cycle

- **Monitoring** (soil, surface, atmosphere)
 - 3-hourly, on full domain (PS, PMSL, U_10M, V_10M, VMAX_10M, T_2M, TD2M, CLCT, TOT_PREC, ZTD, TWATER, CLCL, CLCM, CAPE_MU, HPBL, surface fluxes)
 - 3-hourly, on full domain, at 300 / 500 / 700 / 850 hPa (FI, T, U, V, RELHUM, THETA)
 - 6-hourly, on full domain (W_SO, T_SO, W_SNOW, RHO_SNOW, T_SNOW)