



Institute of Meteorology and Water Management
National Research Institute

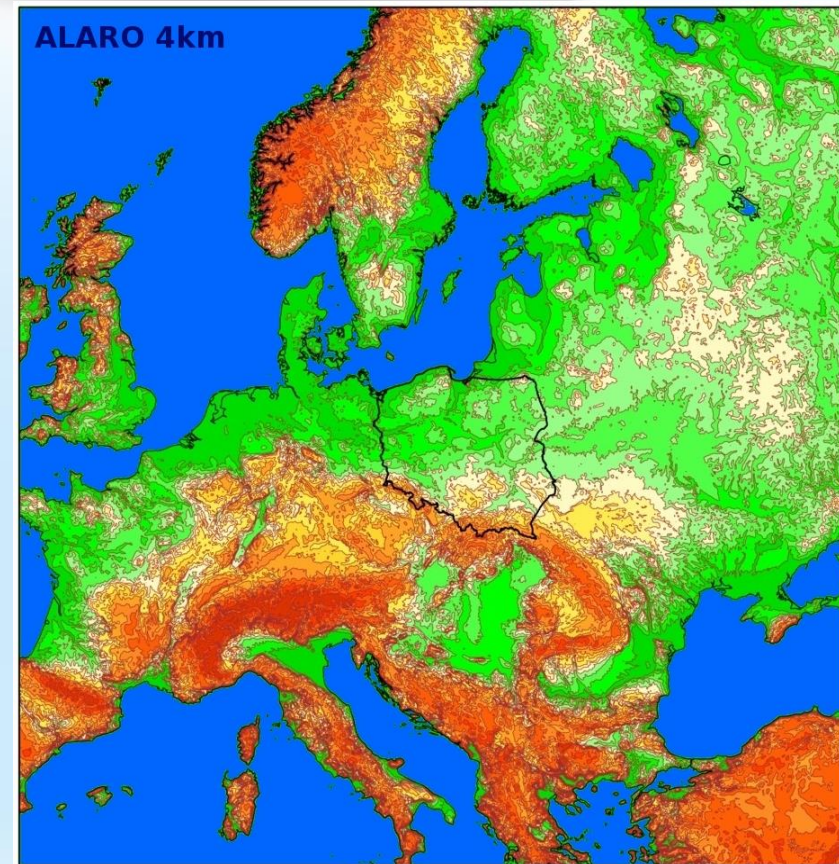
DATA ASSIMILATION activities at IMWM Kraków

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Model characteristics

	ALARO-1
horizontal resolution	4.0km
number of grid points	789 x 789
vertical levels	60
operational time step	163.6s / 120s
coupling frequency	3h (ARPEGE LBC)
forecast length	66h (60h at 18UTC)
model version	CY40 T1
HPC	Cluster of HP BL460c_GEN8 servers connected with Infiniband network, OS Scientific Linux 6, Intel Xeon E5-2690 processors – with maximum 1552 cores (97 nodes with 16 cores each), each core RAM 128 GB, disc array – 64 TB.





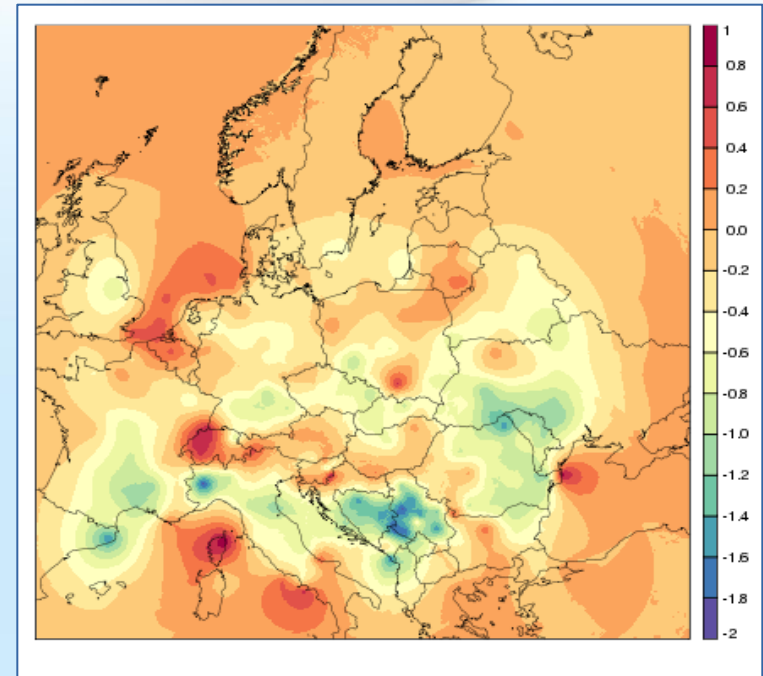
AROME/IMWM DA

Data

- for now just OPLACE base

Surface

- Data assimilation using CANARI
- Standard setting, no special tuning
- Test once per day run at 00UTC
 - (background our 6h forecast from 18UTC, SST copied from ARPEGE analysis, CANARI and then 66h forecast)



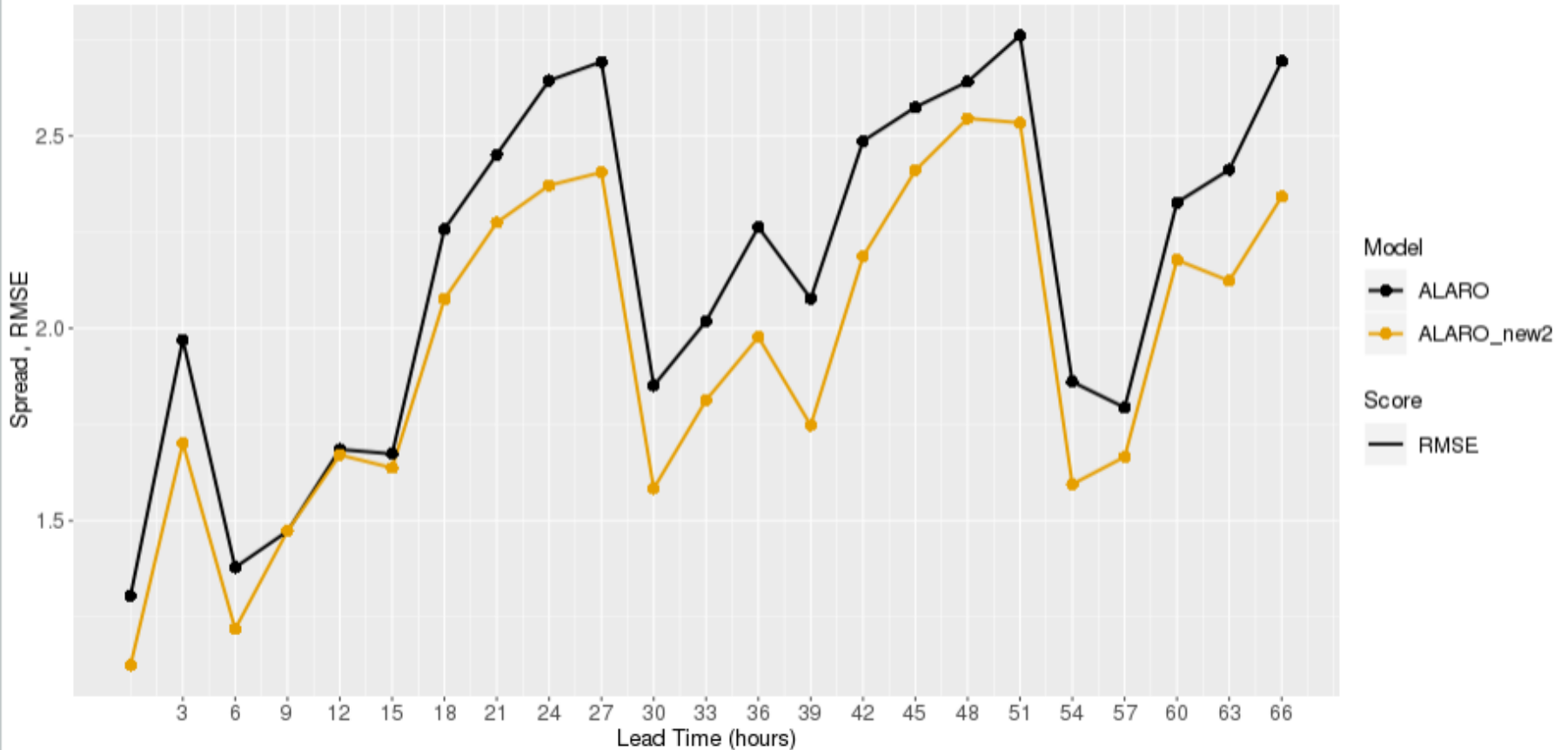


ALARO-1/IMWM DA - verification

HARP verification

Plot Data

Spread & Skill(RMSE) : T2m
Verification Period: 2018091000-2018091700
Stations: ALL





Plans: local data

- Add local data to our CANARI run
(*obsoul_merge* we have but not yet used)
- Start 4 times per day parallel run with CANARI
- 3D-Var ...



Plans: 3D-Var preparation

- First for AROME B matrix was built on the base of our domain AROME ensemble forecast with LBC from AEARP. AROME domain: 799x799 grid points, 2.0km horizontal resolution, 60 vertical levels. Ensemble: 6 members, 2 times per day and 30 days of forecast.
- Not finished yet the same work for ALARO-1.
Details – ask Bogdan.

