DA status in Poland

Bogdan Bochenek, Małgorzata Szczęch-Gajewska
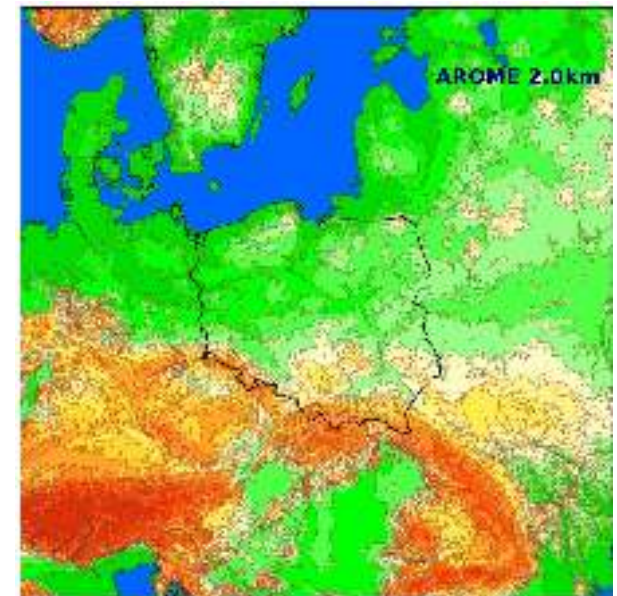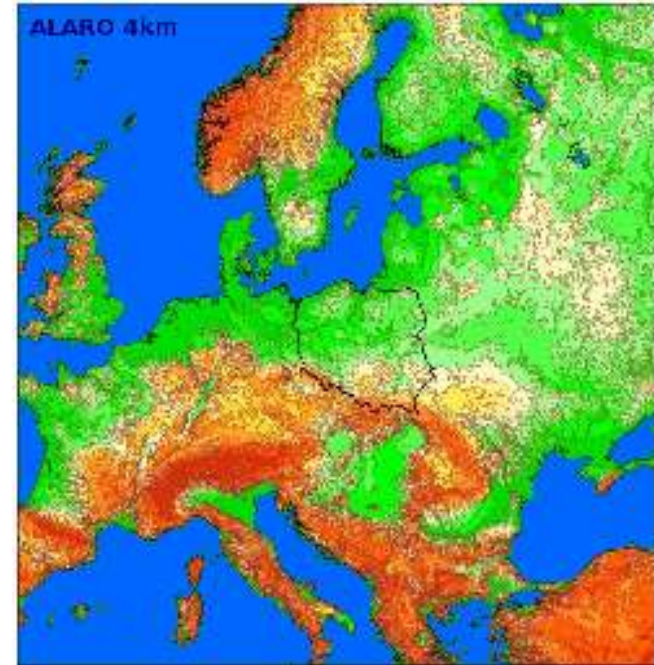
2019.09.18-21, Praga, Czechy

	ALARO-1	**AROME**
horizontal resolution	4.0km	2.0km
number of grid points	789x789	789x789
vertical levels	60	60
operational time step	163.6s/120s	51.4s/45s
coupling frequency	3h (ARPEGE LBC)	1h (ALARO-1 LBC)
forecast length	66h (60h at 18UTC)	30h
model version	**CY43T2 bf10**	**CY40T1**
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.	

Model characteristcs – CANARI runs

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ALARO 4km
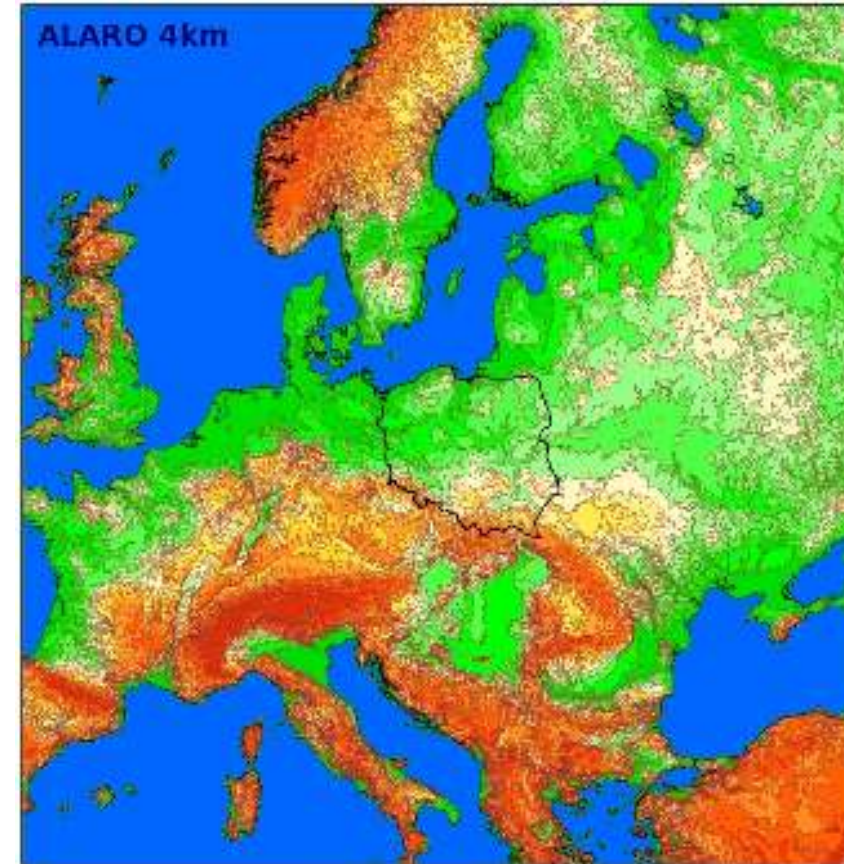
Data

- for now just OPLACE base
- prepared, but not yet introduced local SYNOP data

Surface DA

- Data assimilation using CANARI

- Standard setting, no special tuning

- 6-hours cycling - four times per day (00, 06, 12 and 18UTC) CANARI surface assimilation + forecast. (almost 3 weeks to „tune" forecast from the begining of cycle)

- We still kept test once per day run at 00UTC (background our 6h forecast from 18UTC, SST copied from ARPEGE analysis, CANARI and then 66h forecast)
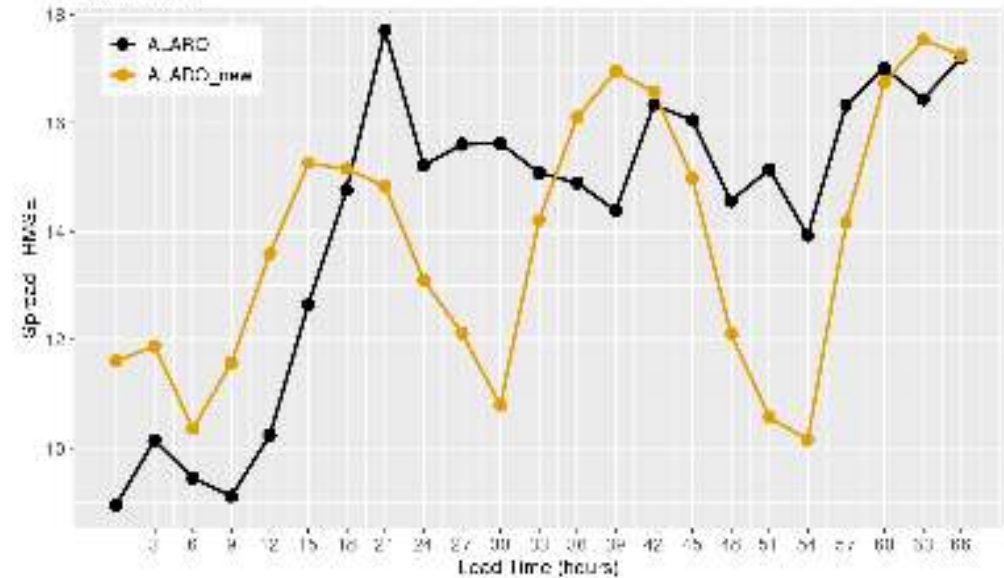
Runs 4 times per day – for every full forecast of DA cycling
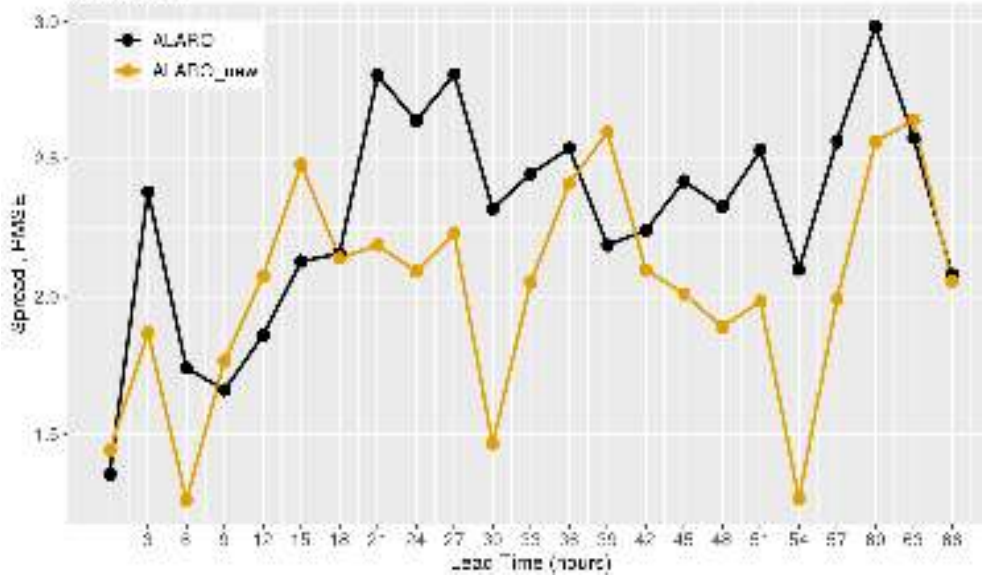
ALARO – operational CY43T2

ALARO_new – forecast from DA cycling
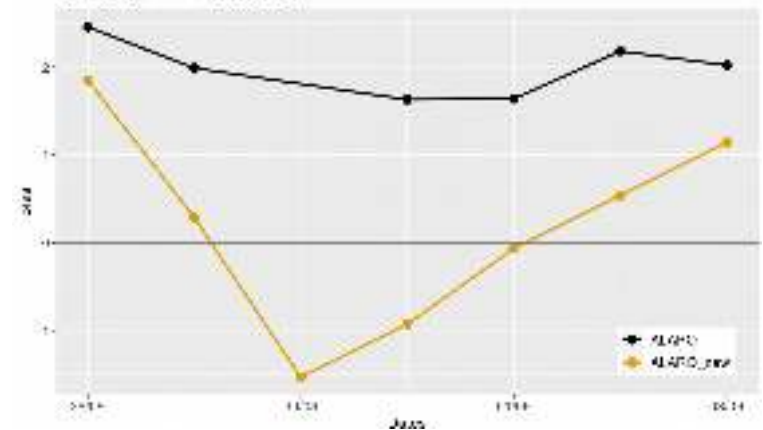
Localy installed, but not used.

- Use local data

- Use more data (WMO/GTS base?)

- Move to CY43T2?

- 3D-Var?

Dziękuję za uwagę / Thank you

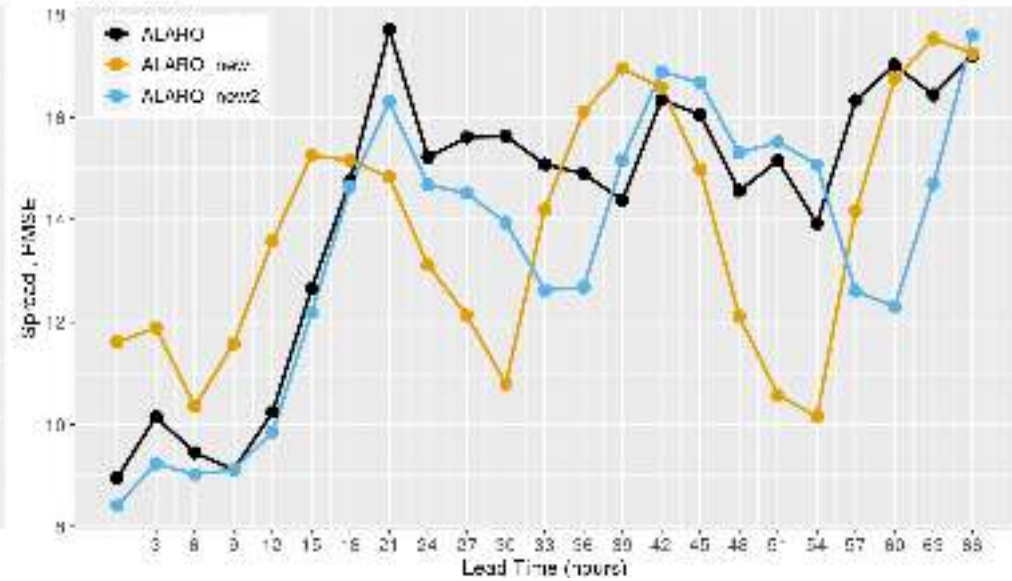## "Cold start" comparison with 6h cycling and operational
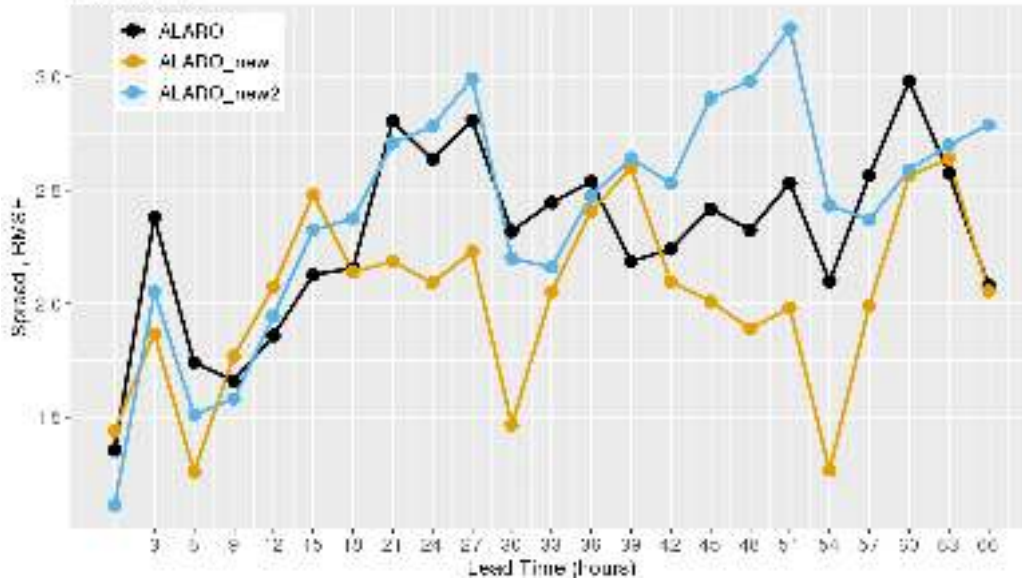
ALARO – operational CY43T2

ALARO_new – forecast from DA cycling

ALARO_new2 – "cold start"