LACE DA Working Days

Budapest, 22 September 2016

OI_main/Portugal: preliminary scores… (questions and problems)

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Main points:

1. SYNOP data pre-processing
2. Experiment settings
3. Preliminary scores

1. SYNOP data pre-processing

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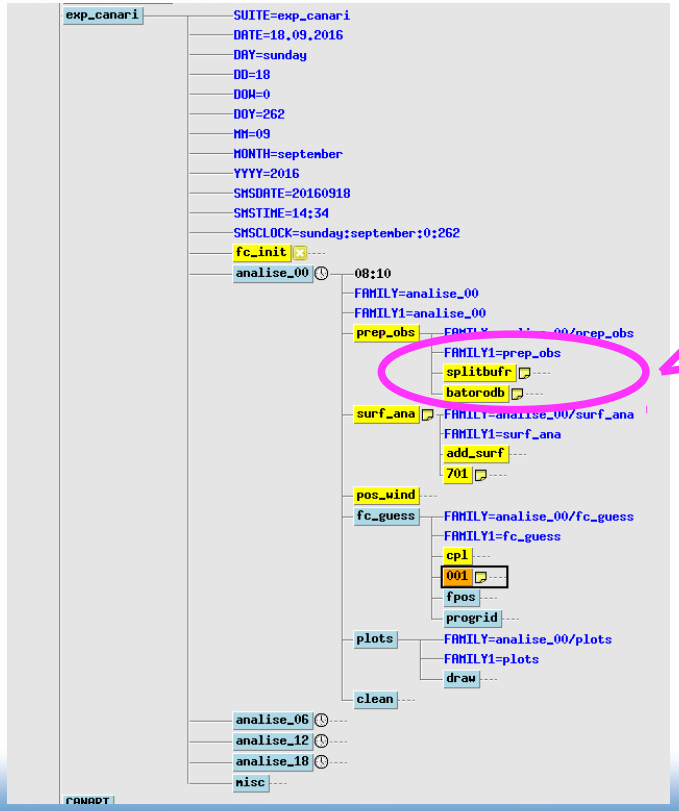
OBS: “regionally” exchanged SYNOP’s under WMO BUFR template
GOAL: to remove roughly coded data, corrections and duplicates
TASK



splitbufr:
(i) multisubset-split (@Trojakova)
(ii) prep1bufr
(iii) ftlcorr

batorodb:
bator_decodbufr_mod.F90 (@Guillaume)
WMO BUFR → ODB (see LACE report)

With the support of CHMI and M-F

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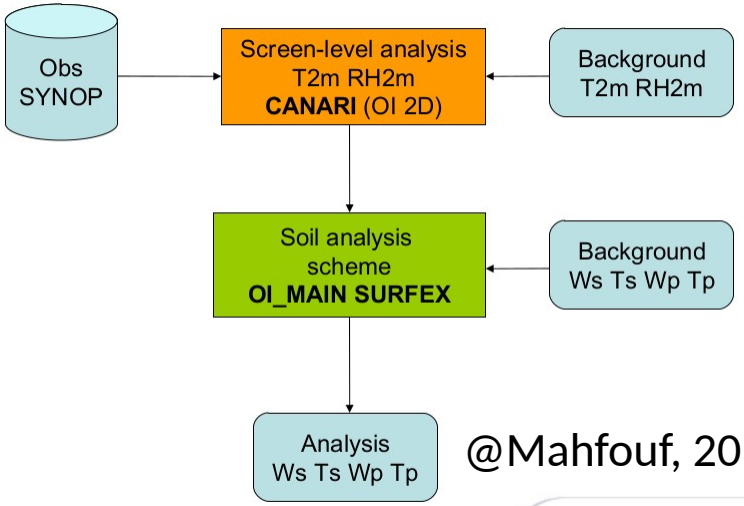
SYNOP data coverage over the Iberian Peninsula (thanks to AEMET)

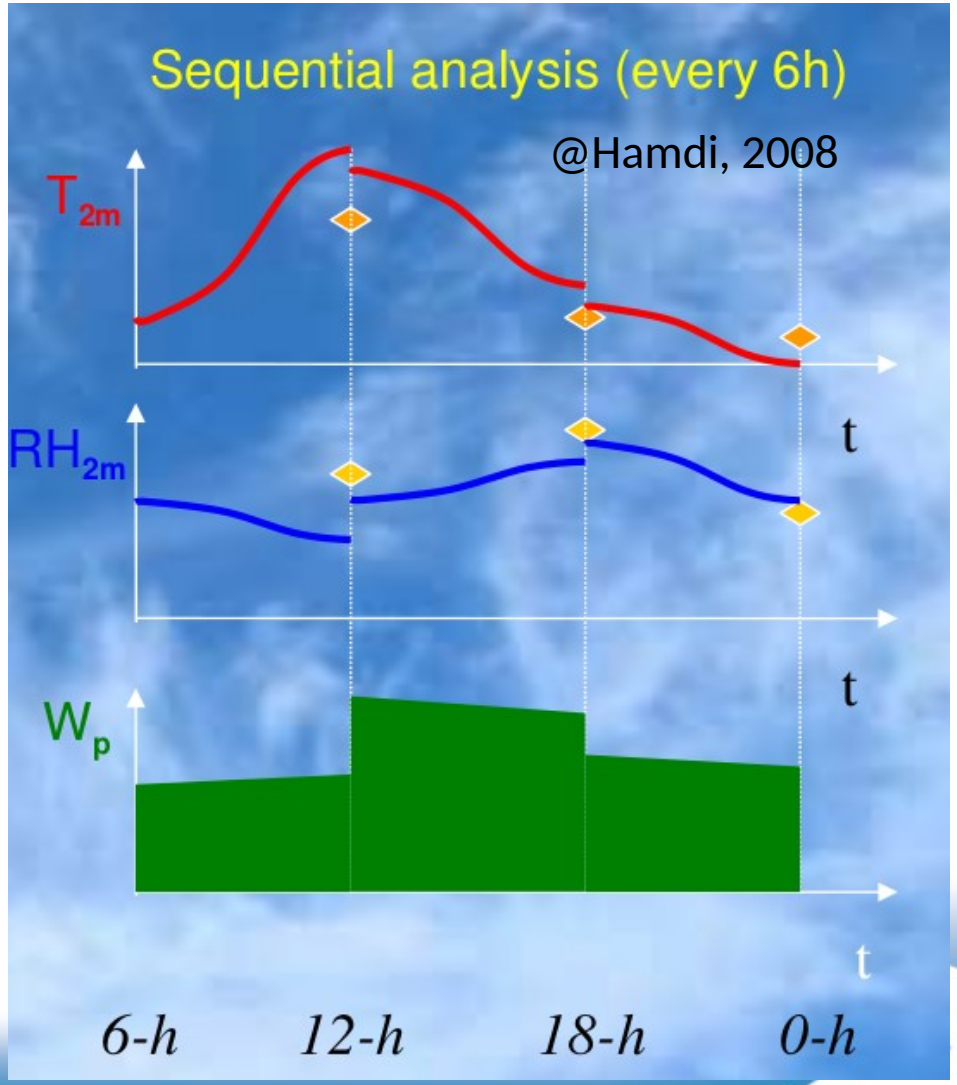
2. Experiment settings

OI_main
(Giard and Bazile 2000)

Local version: CY38 (export) – AROME (2,5km), 46 levels



@Mahfouf, 2010



With the support of Météo-France

3. Preliminary scores

20-day Summer (RMSE) score (~100 stations)

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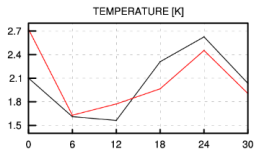
GOAL ???

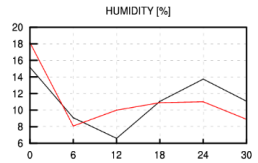
Act4. Surface Assimilation

- AROME OI_main (alone) was tested for winter and summer period
- In dry regimes OI_main could improve wet and cold bias present in AROME dynamical adaptation at first 12 hours
- In wet regimes OI_main alone is not able to beat DYNA
- RMSE scores for 2m temperature and humidity in figures →

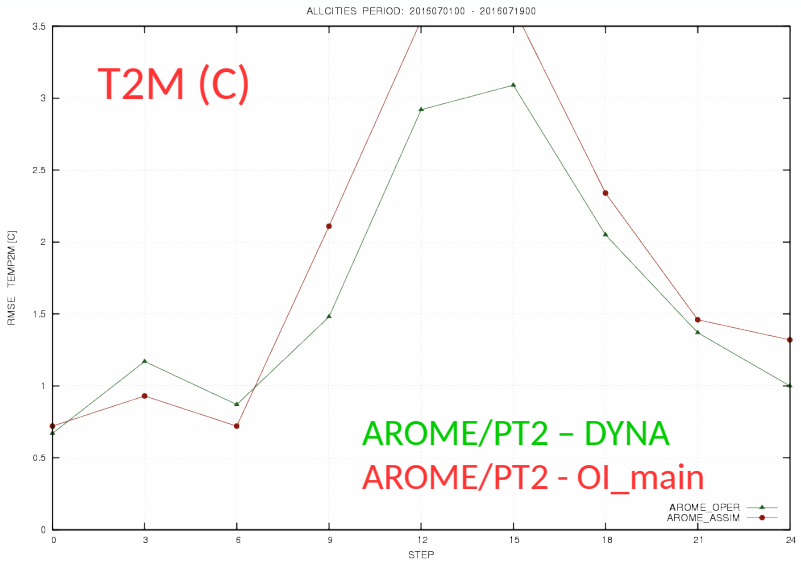
A part of this study was conducted in the framework of a French-Hungarian bilateral project; Project numbers TET_11-2-2012-0003 (Hungary) and 27855UD (France)

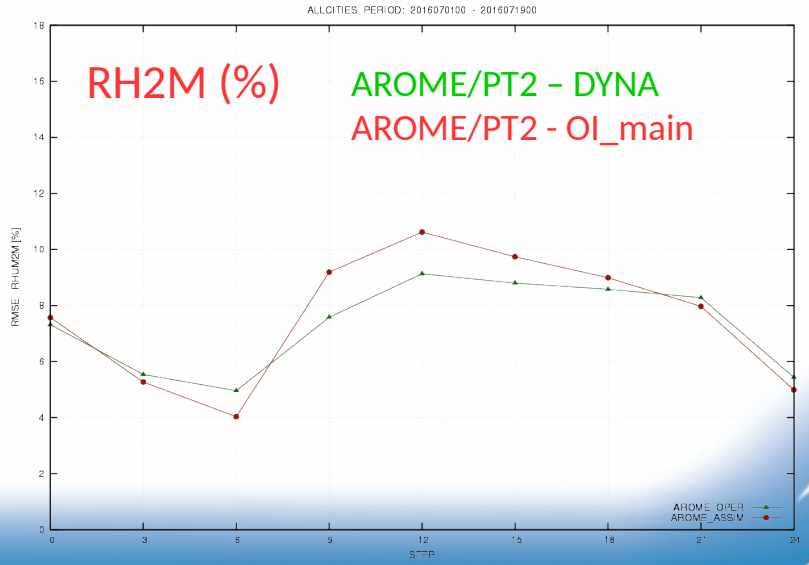
AROME OI_main – Black
AROME DYNA - Red



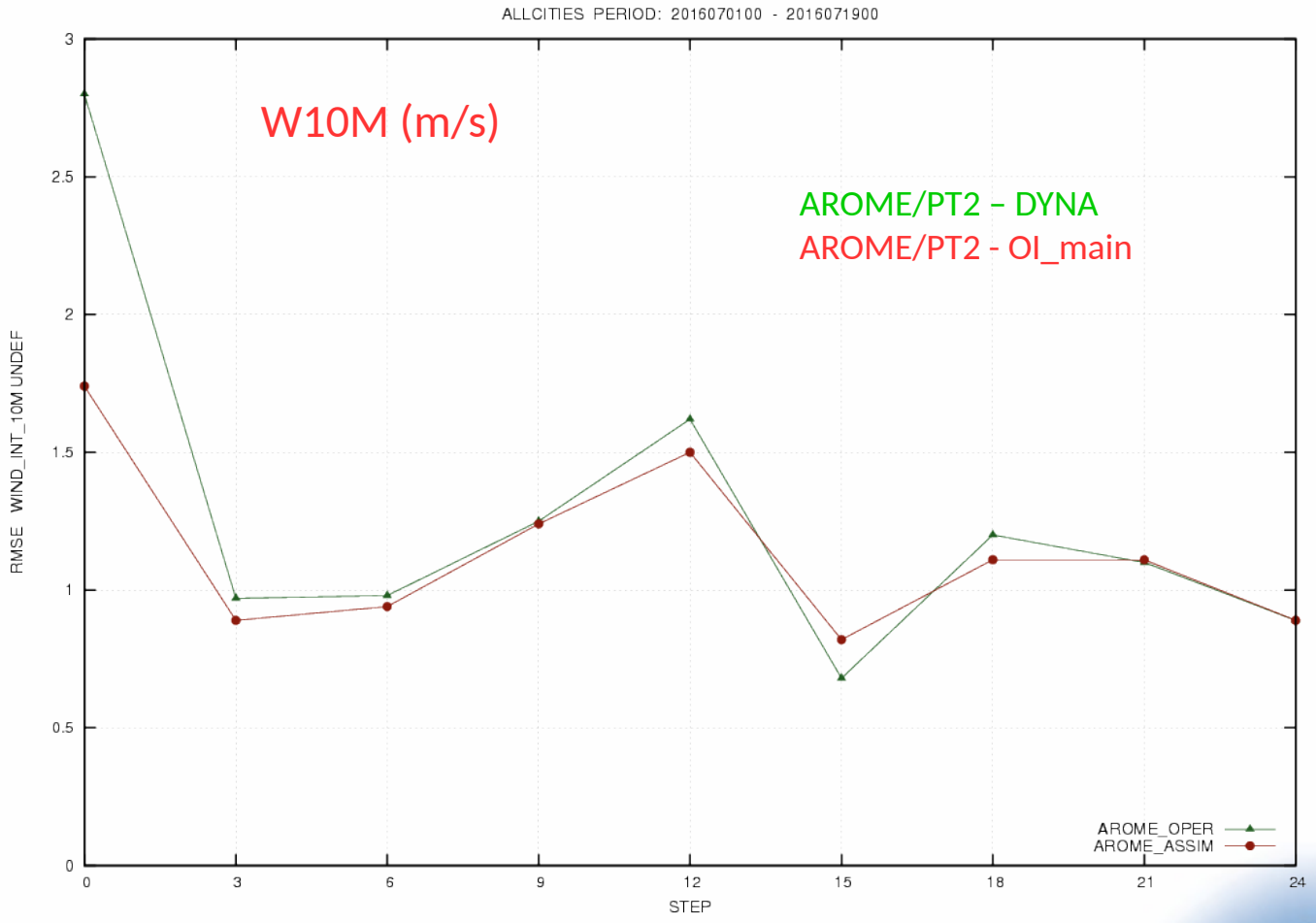


@ OMSZ





20-day Summer (RMSE) score (~100 stations)



On-going outlook on (operational) DA activities in Portugal

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- Local installations :

CY38T1 (export) → actual operational system

CY38H1.1 → scripting system working; conf 927 and 001 implemented but not used

- Implementation of a local 6h cycling OI_MAIN data assimilation system (SYNOP); under test (pre-processing is being improved)

Up to end of 2016

- To validate the OI_MAIN system by checking the impact on the 24h model integration

- To validate a new HARMONIE experiment at ECMWF for two seasons but using the 3 Portuguese radars under OPERA (with the “BALTRAD” pre-processing)

- To write the SMS/XCDP scripting system for the 3D-Var assimilation (TEMP)

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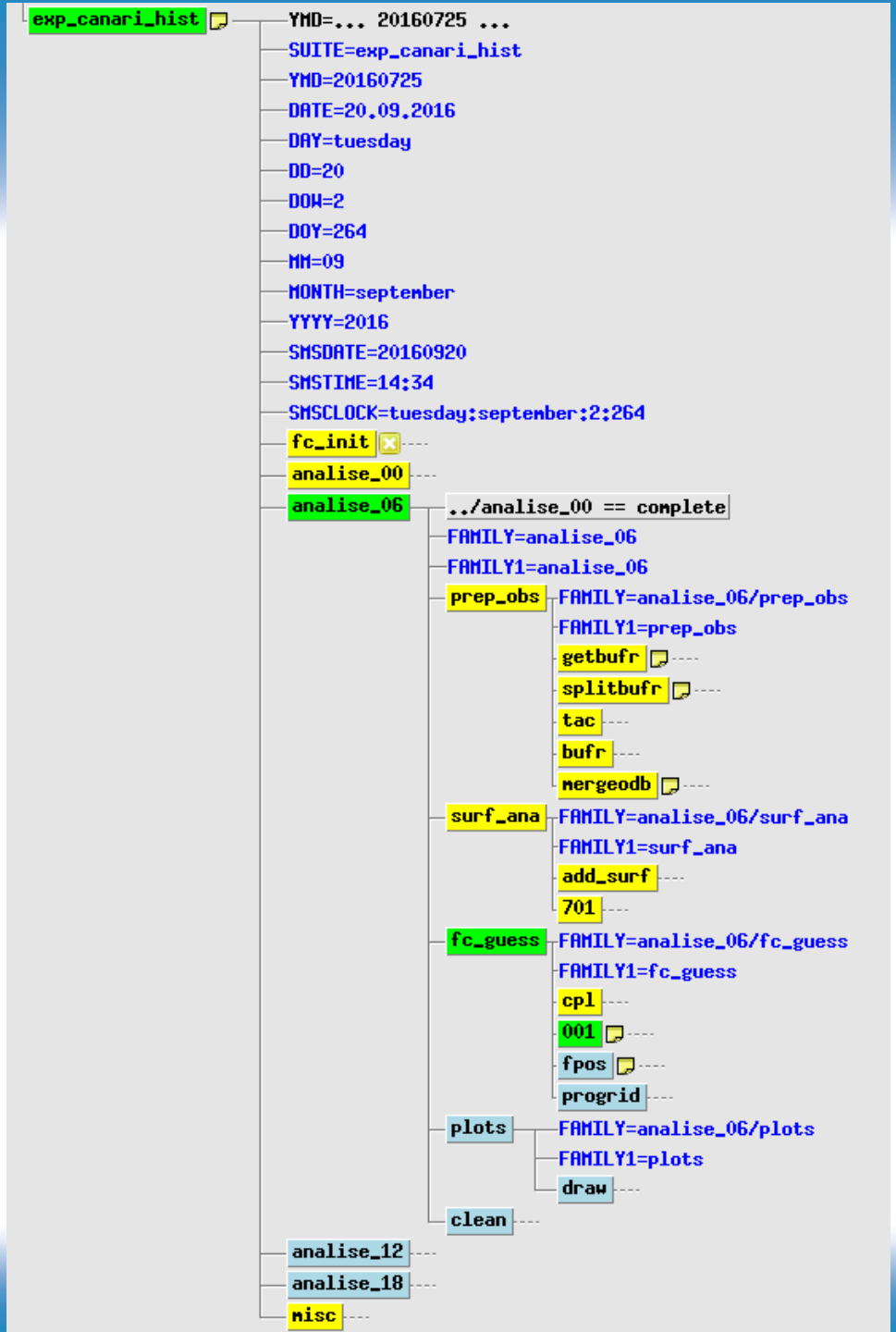
Thanks for your attention !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bufr
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analise_18
misc