PP CARMA

Common Area with Rfdbk/MEC Application

FINAL OVERVIEW

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Task 1. First Level Support Implementation and Training

First level support implementation and training of the Project Support Team (PST);
they will, in turn, ensure and support the implementation of the system for all the other partners.

Deliverables:

- Installation of the MEC-Rfdbk system @NMA and @HMNS and first tests of the implementation.
- Scripts for semi-automatic use of the system, available to project participants through common WG5 repository.
- Data for a test period experiment
- Completion of test period experiment and production of statistics by PST
- Web interface to host Common Area plots for all countries

Task 2. Second Level Implementation and support

Implementation of the MEC-Rfdbk system by all the member countries, with support from PST
DWD support will be provided only when necessary and always through the PST

Deliverables:

MEC-Rfdbk system installed by all project participants with support from PST.

Task 3. **Cross-validation of implementation**

Testing of the verification system implementation and training through practical use

Task 4. **Implementation of CP activity content**

Task 3. Cross-validation of implementation

Performance of a complete seasonal test with all the necessary output for the CP reports (COSMO or ICON).

- Performance of a complete seasonal test with all the necessary output for the CP reports.
- Set-up and testing of MEC+Rfdbk capabilities for ICON-LAM
- (optional) Set-up of individual shiny server for visualization

Task 5 Elaboration of guidelines for CARMA (MEC-Rfdbk) system

Task 0. Administrative Tasks

Summary for each center

	IMPLEMENTATION		PRODUCTION		Visualization (optional)
	DACE/MEC	Rfdbk	FF	SCORES	
NMA	yes	yes	yes	yes	yes
HNMS	yes	yes	yes	yes	-
DWD	- (yes)	- (yes)	- (yes)	- (yes)	- (yes)
MCH	- (yes)	- (yes)	on going	on going	
CoMET	yes	yes	yes	yes	
IMGW	yes	yes	yes	yes	yes
RHM	yes	yes	on going		
IMS	yes	yes	yes	yes	yes
ArpaE	yes	on going			
Arpa-PT					

	NMA	HNMS	DWD	IMGW	CoMET	MCH	RHM	IMS	ArpaE	Arpa-PT
COSMO	yes	-	yes	yes	yes	yes	-	-	on going	
ICON	yes	yes	yes	yes	yes	-	on going	yes	-	

Project Ending – September 2021

REMINDER – Documentation

- **Documentation uploaded to the WG5 Repository:** http://cosmo-model.org/view/repository/wg5/PP-CARMA/Task1

How to install ***– is being updated***
Task-1.2_Install_notes_CARMA_v1.2.pdf

How to use (example based on NWP Test Suite @ECMWF)
NWPTest-Suite_Doc4CARMA.docx

About RFDBK
FFverificationsuite[at]DWD.docx

About feedback files
cosmoFeedbackFileDefinition.pdf

General Guidelines
Done, will be available shortly

REMINDER – Data available on the FTP server

- Observations in netcdf format
- Template for running MEC
- Template for running Rfdbk

For FTP server credentials, amalia.iriza@meteoromania.ro / bogdan.maco@meteoromania.ro.

REMINDER – Data available on GIT REPO

- Source code for DACE
- Sources for the Rfdbk package: Felix.Fundel@dwd.de
- Scripts to run verification using Rfdbk: Felix.Fundel@dwd.de

*For access, see documentation **Task-1.2_Install_notes_CARMA_v1.2.pdf – is being updated*** and ***Guidelines***

- Scripts for shiny server available: Felix.Fundel@dwd.de

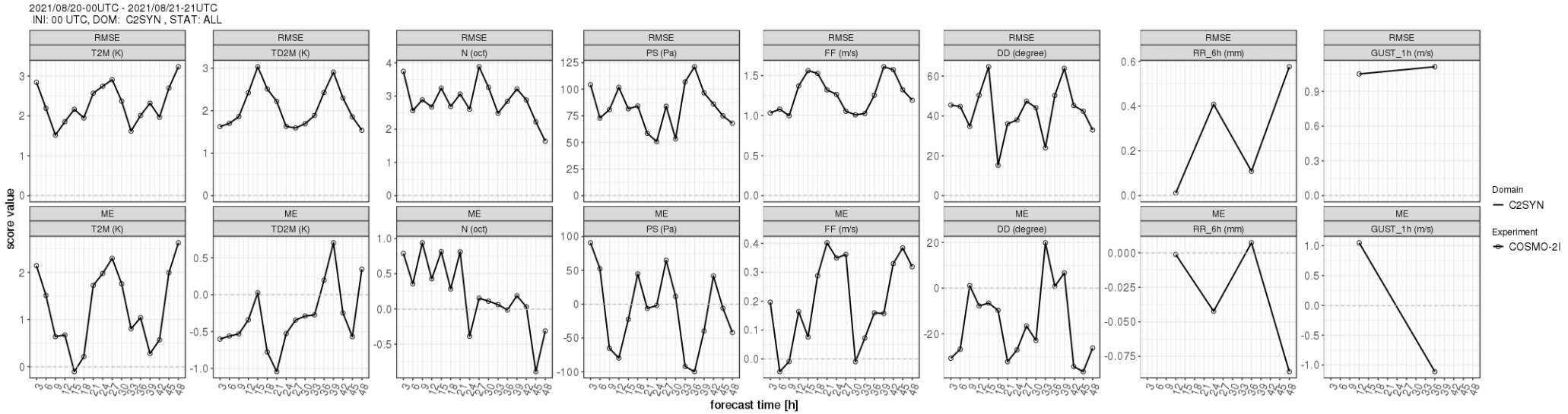
MAM 2021 FF available for:

ICON-GLOBAL
ICON-EU
ICON-D2
ICONGR
ICON_IT2
ICON_IMS
ICONPL
ICON-RO_2p8

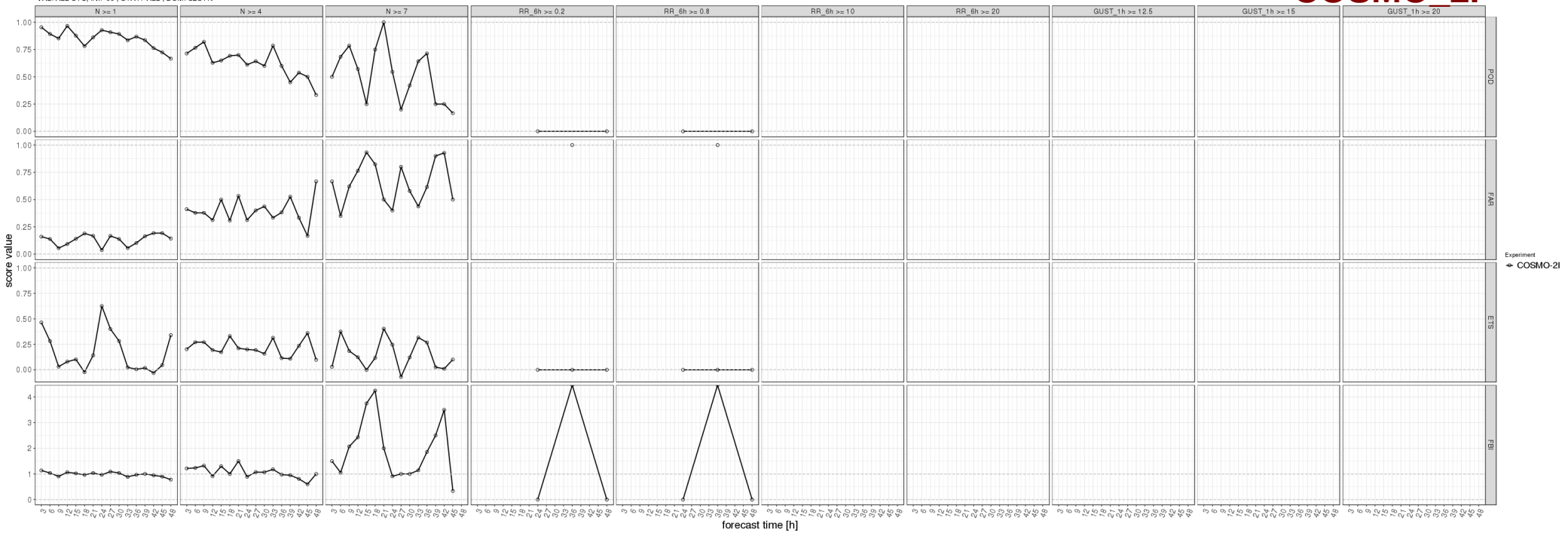
COSMO_IT2
COSMOPL7
COSMO-CE-PL
COSMO_ME
COSMO-RO_2p8
COSMO-2E
COSMO-1E
COSMO-2I (starting September)

http://www.cosmo-model.org/shiny/apps/carma/

PP CARMA – FINAL OVERVIEW

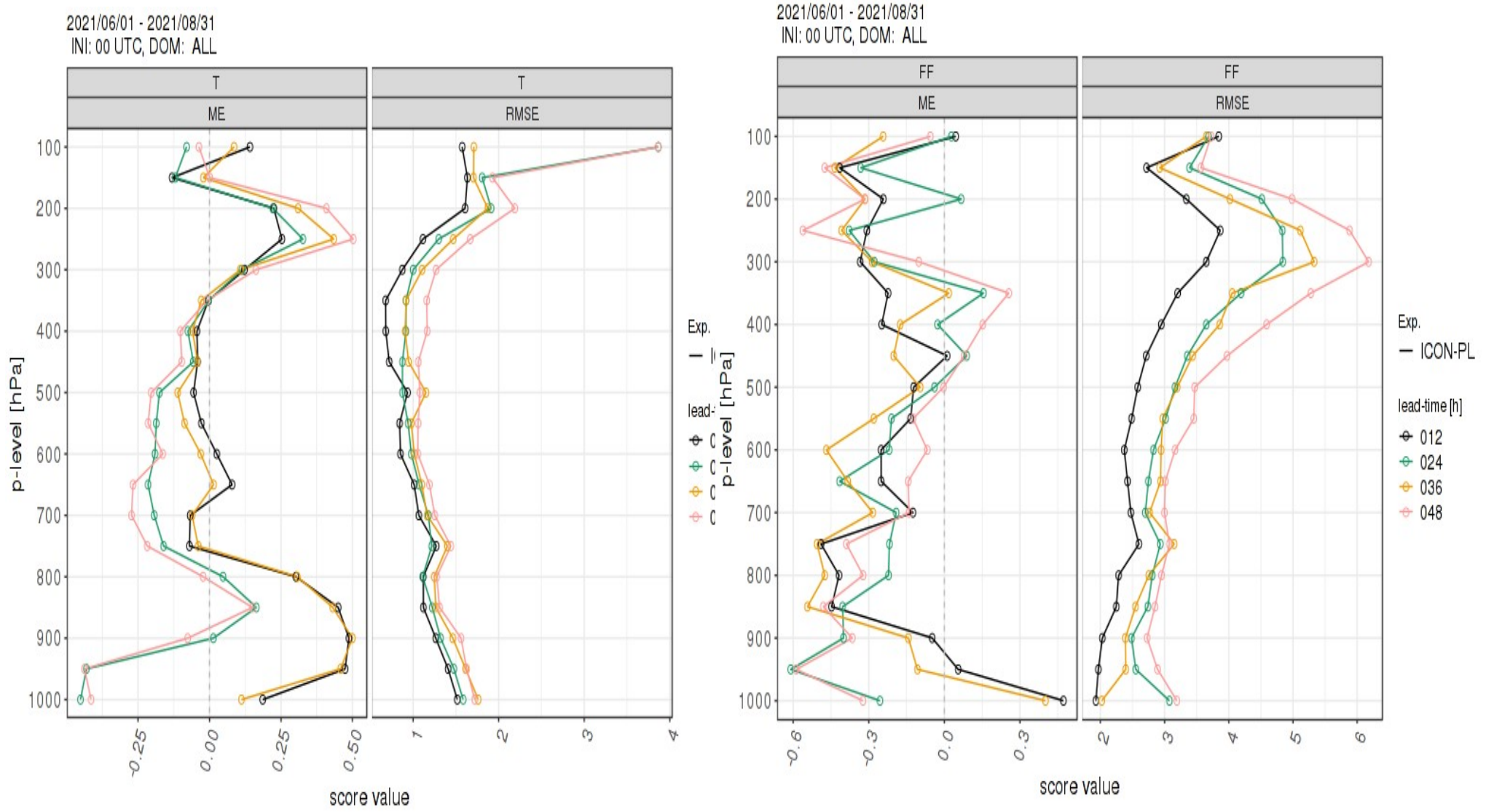


COSMO_2I



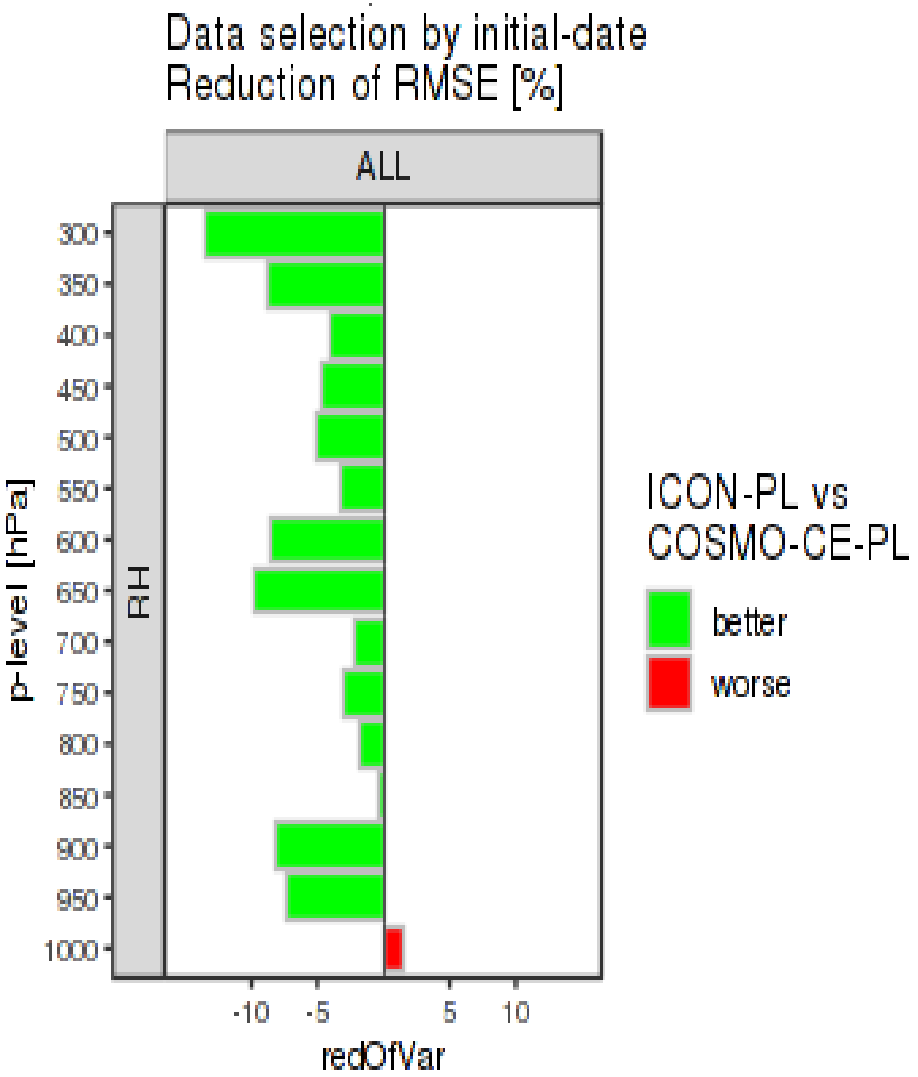
Upper air Example: JJA 2021, whole domain, ICON-PL

(J. Linkowska, IMGW-PIB)



Upper air Example: Relative Humidity, Winter 2021, whole domain
ICON-PL vs. COSMO-CE-PL

(J. Linkowska, IMGW-PIB)



The scores are aggregated over all initial times and all forecast ranges > 0h.

Remaining Issues

Main

- **RHM** – problems with producing ICON forecast files for MEC (under investigation)
- **MEC for IFS**: work is on-going; some more time needed than first anticipated (due to MEC specifications)

Minor observations

- Verification for **TEMP observations** and **geographical scores** (on-going; will finish shortly); available after the completion of the project (*migration to new version of scripts, **thanks to** **@Felix***)
- Define polygon stratification where required (e.g. IMS national domain, TEMP verification, etc.)
- **MCH** – using a different observations data-set
- **ArpaE** –on-going production files; full season starting with September
- **Arpa-PT** – not implemented yet; **HOWEVER**, *we now have the experience to help whenever it is possible for them to move to the new system.*

Future Activities such as on-going support, preparation of observations and scores, remaining issues to be included in WG5 and Support Activities.

Project page & final FTEs to be updated shortly (if not already).

Thanks everyone for your efforts!

J. Linkowska (IMGW-PIB),
D. Boucouvala, T. Andreadis (HNMS),
F. Batignani (CoMET),
I. Carmona, P. Khain, A. Shtivelman (IMS),
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A. Pauling (MCH),
B. Maco, M. Bogdan (NMA)

Questions?

Thanks for the support:

Harald Anlauf, DWD
Felix Fundel, DWD
Flora Gofa, HNMS
Hendrik Reich, DWD