



# WG6: news about our activities

Massimo Milelli  
&  
many others



# Outlook

- Documentation
- WG6 PPs status
- Web server replacement
- Web services
- NWP/ICON TS news
- COSMO-LEPS system update
- Namelist tool



# Documentation



- DACE user manual to be updated
- NWP TS report published → COSMO ver 5.05 vs 5.06
- expected TRs during the COSMO year: PP KENDA, PP CDIC, PP CELO, PP CEL-ACCEL, PP EX-CELO
- Documentation for Model version 5.0 has got DOI, v5.05 and v6.0 will follow
- All TRs (n°1 to n°42) and Newsletter 2019 have DOI
- Newsletter 2020: up to now 2 contributions + 2 mission reports. Proposal for merging 2020/2021 editions



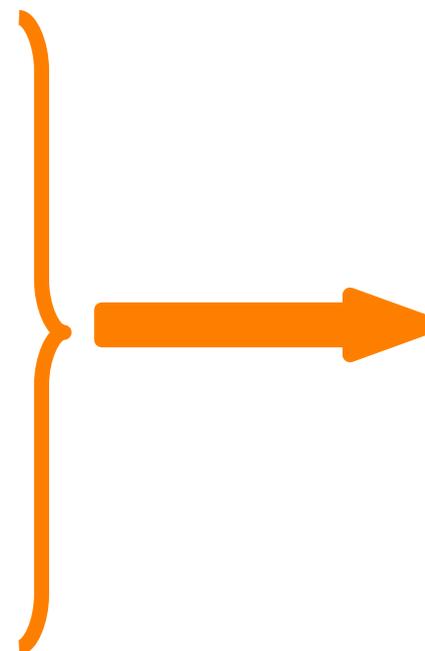
## WG6 PPs status

- PP C2I  
PPL: Daniel Rieger  
end: 03/2022  
status: ongoing



Tomorrow

- PP IMPACT  
PPL: Carlos Osuna  
end: 09/2022  
status: ongoing



Later

- PP CEL-ACCEL  
PPL: Zbigniew Piotrowski  
end: 03/2020  
status: ended



# Web server replacement

The reasons for proposing the replacement are:

- the system, being in use 24x7 is reaching the point in time when any **sudden hardware failure is probable**, possibly leaving the consortium without service for a considerable time;
- there is **some advancement in PC architecture**, namely an (at least) x4 increase in number of hardware threads (and memory), that would profit the software we have been using. Other than number of cores, the now common use of M.2 solid state disks will increase speed and protection against sudden hardware failure;
- **the web/mail server is gradually evolving into an application server**. Other than the originally planned site and mailserver/maillists, it runs extra applications with a web interface (like R and RFDBK, Shiny Server, ICON configurations viewers, cloud optics programs and their support, like separate uploaders and viewers). Currently the machine is copying, but this won't last for long if external apps keep coming up, so it is a good future-strategy to enhance the computational potential of the system.



## Web services

- Cloud optical properties

<http://www.cosmo-model.org/content/tasks/operational/ims/cloudOptics/>

- Rfdbk

<http://www.cosmo-model.org/shiny/users/fdbk/>



# NWP/ICON Test Suite

- The next (and last) step will be the comparison: v5.06 vs v6.0
- ECMWF Special Project submitted, available on the ECMWF SP web page, "COSMO and ICON Numerical Weather Prediction Test Suite" (2021 - 2023)

Resources		2021	2022	2023
HPC	B.U.	<b>5.000.000</b>	<b>5.000.000</b>	<b>5.000.000</b>
Storage	G.B.	<b>2000</b>	<b>4000</b>	<b>6000</b>

# COSMO-LEPS system update

## Technical upgrades in the last COSMO year:

- Complete migration from grib\_api to eccodes, including the version upgrade of several modules (Magics, Metview, libsim, fieldextra) and the migration from python to python3 (January 2020)
- Transition to ecfLOW version 5 (July 2020)

## Technical upgrades foreseen in the next months:

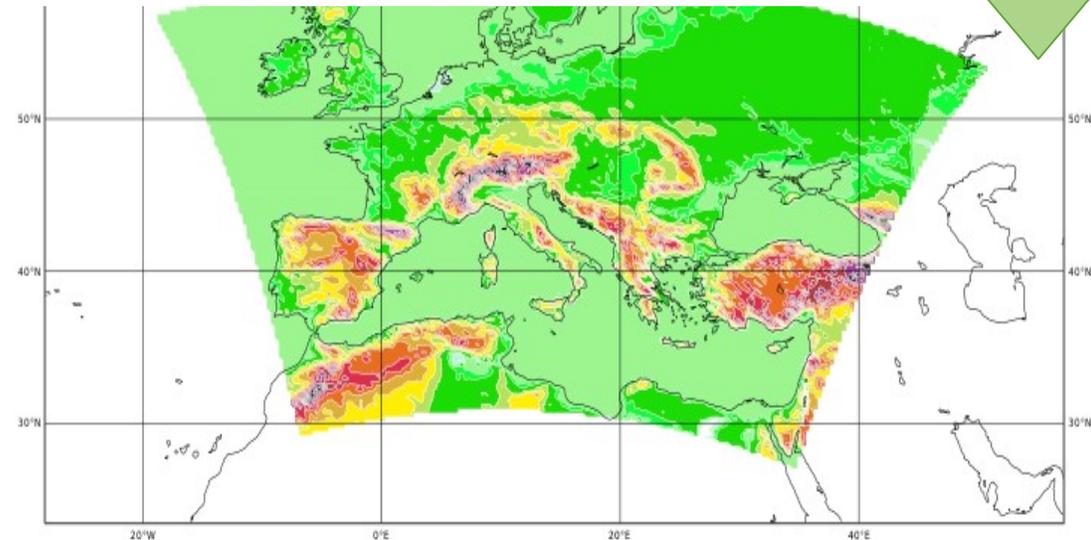
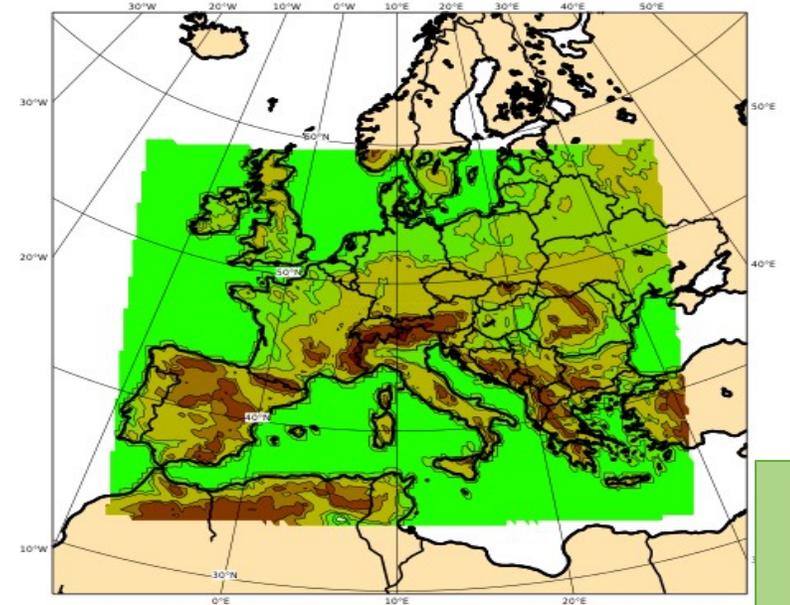
- Update of COSMO code to version 5.06 Single Precision
- Include in the lagged ensemble the ENS runs starting at 18UTC and 06UTC
- Test new grib definition to include COSMO-LEPS specific metadata (developed by Dörte Liermann)

**All these upgrades are user transparent**

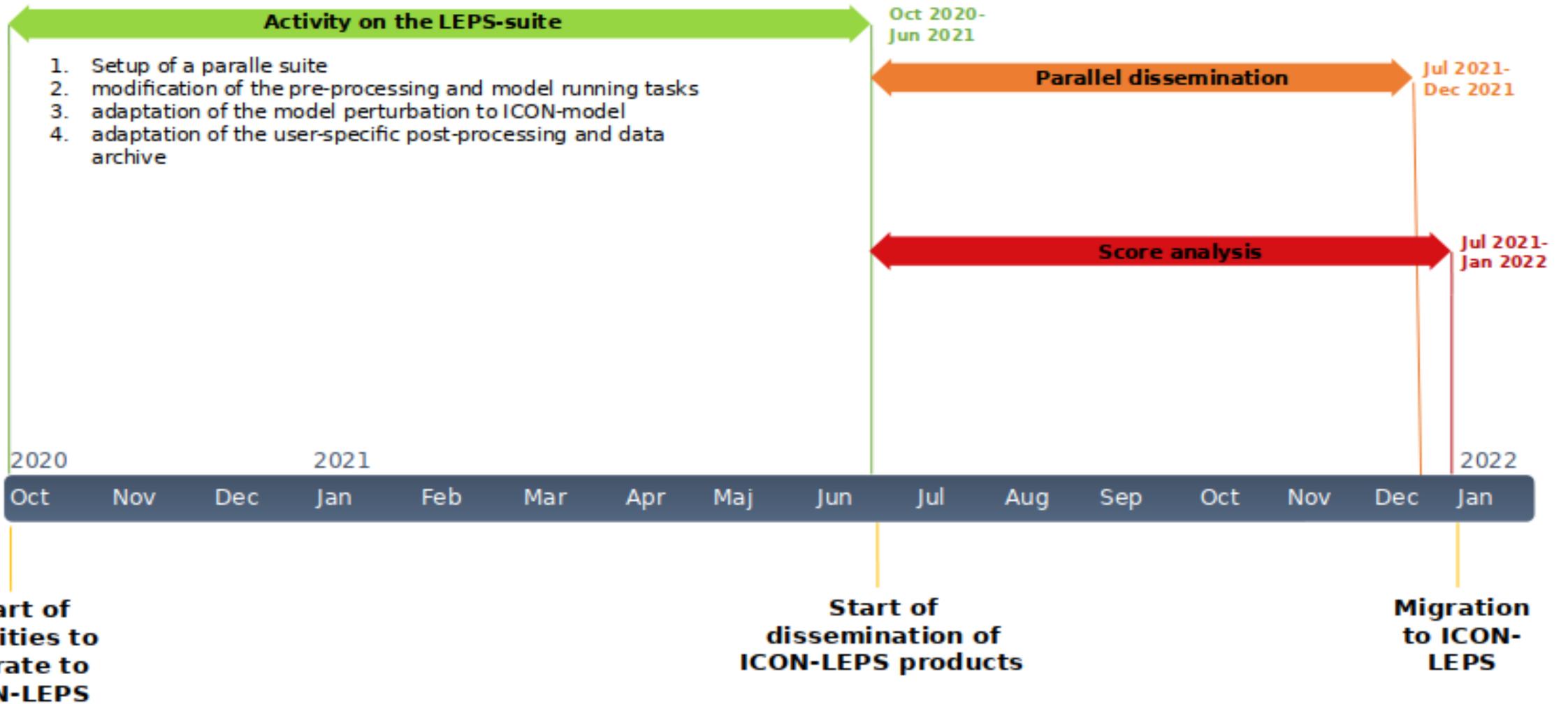
# COSMO-LEPS system update

## Migration to ICON-LEPS:

- useful to facilitate adaptation to the new model, domain extension and horizontal resolution increment can be easily included
- non-transparent changes in the output fields e.g. migration to grib2
- computational cost +30%, the suite would require several modifications (0.3 - 0.4 FTEs)
- parallel production, verification and dissemination should be done for 6 months



# COSMO-LEPS system update





## Namelist tool

Namelist tool from CLM Community

<https://tools.clm-community.eu/NLT/devel/portal/index.php>

User: cosmo user

Passwd: WebPEP4all

Please provide your new set of namelists if it is the case (and if not done yet).  
You can send them to me directly.



**Thanks for your attention and for your work !**