

here is a draft accounting from the tech' videoconf meeting of 16 May 2017:

0. participants: Deborah, Olivier (EC), Daniel (Aemet), Claude, Stéphane, Alexandre, Ryad, Karim (MF)

Daan eventually couldn't join (connexion information missing on time ?)

1. status of preparation of pre-CY45

MF had listed their planned upgrades of the pre-CY45 versions in their GIT repository:

- v01: (kind of dismissed)
- v02: based on Olivier's send / 27 April

- v03: includes MF and LAM phasing by Alexandre / 12 May

- v04: Olivier's last re-factoring and some IFS fixes + MF fixes for Surface codes and Bator / planned on 17 or 18 May
MF will send this v04 to EC asar, as a new common base version for testing.

- v05: including,
 - MF fixes for Arpège and LAM
 - EC fixes (IFS physics) / fixes will be exchanged as soon as ready to enable cross validation
 - some fixes for MF assimilation confs from CY43 / *Claude to check with Christophe*
 - tidying up LASCAW (if tested in time) / Karim, Alexandre
 - oops/ifs upgrades / Olivier, Deborah
 - tidying up some calling sequences / Olivier

v05 would be built in week of 29 May. Hopefully, MF configurations would work in v05 (mitraille global and LAM tests).

The target for validation is to obtain bit-reproducible results in pre-CY45 w/r to CY44.

MF have a strong wish not to declare CY45 before Arpège and LAM model configurations have been validated, not to step back with respect to the scientific and technical achievements of CY44.

2. status of validation of assimilation at MF (CY43)

Claude listed the main trouble-shooting issues in Arpège 4D-VAR:

- crash in DECIS for AIREP data when Open-MP is on. Deborah suggested to try increase the size of the Open-MP heap (or stack). Make it times 2 ?

- departure values are not reproducible from one run to the next, for TEMP/Z and for microwave radiances.

Deborah suggested to remove the Open-MP loops inside TASKOB and then check again, as it might be simpler without multi-threaded code there.

- bug (crash) in wavelet Jb code (not yet investigated) / so the present testing is done with the spectral Jb global code

Christophe has a full list of already known fixes for CY43. MF will check whether some of these fixes could enter in CY45 before declaring this cycle.
This would however only happen for v05.

3. AOB about code re-factoring or code cleaning beyond CY45

EC listed the expected next steps for code re-factoring:

- VarQC (Lars Isaksen)
- TOVSCV: delayed to later - to be discussed at the OOPS Board
- VarBC: Roel Stappers will continue to work on this - (1) re-factor code in order to tidy up the copy constructor of the VarBC class - (2) issue with preconditioning.

Deborah reminded that Sébastien Massart and Gérald Desroziers had been shortly discussing the NCEP preconditioning strategy (based on only a B_beta).

This approach would be very compatible with what's coded in OOPS, but would change the preconditioning strategy w/r to IFS as of today.

- implement Jo-table facility from OOPS (Peter Lean)
- Clean (remove) the specific duplicated IFS routines for handling the trajectory in OOPS (Deborah)
- implement time related features in a class (Mats)
- corrected use of IFS physics from OOPS (Deborah & Mats)
- clean up MODEL modules from below HOP and remove Tomas' trick (Olivier) - expected for CY45R1

Deborah mentioned that EC would probably have to freeze their operational suite around mid-2019, in order to then prepare for the move of the HPC/Data center to Bologna. This schedule was putting a high pressure on the timing and operational implementation of OOPS-IFS, if the system has to become oper before this freeze. Claude stressed that this would possibly mean that OOPS should be tested in an e-suite not later than February or March 2019.

If this deadline is missed, then OOPS only would be tested after the Bologna move is completed, which would mean 2020 (one year shift).

4. AOB & next meetings

The e-suite based on CY43R1 is probably going to be extended a little in time, at EC.

The e-suite based on CY42_op2 (new convection scheme and SURFEX in Arpège) also has been prolonged at MF.

It is now planned to switch it to operations in beginning of September.

Next meeting: physical and videoconf meeting on 12 June (IFS/Arpège) in Reading.

OOPS Board on 13 June also in Reading.

Claude and Ryad will join the coord meeting; Claude will also attend the OOPS Project Board.

A videoconf facility is planned between Reading and Toulouse for 12 June.

Claude.