



HORIZON 2020

IMMERSE

(Grant Agreement 821926)

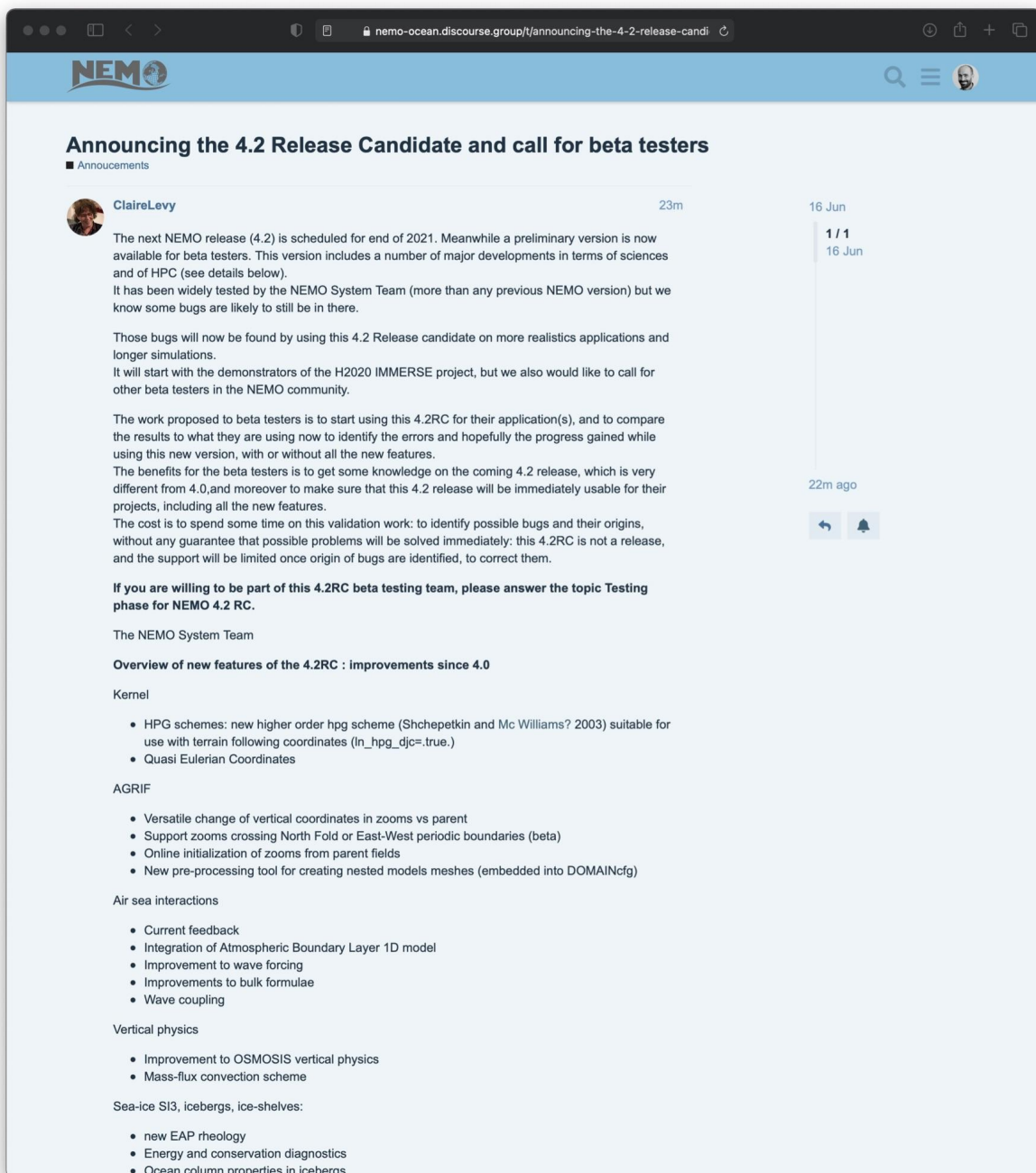
Improving Models for Marine EnviRonment SErvices

Deliverable D2.4 ***Public***

The NEMO v4.2 Release Candidate version has been officially announced to NEMO users on the 16 June 2021 on the NEMO users forum for calling beta testers :

<https://nemo-ocean.discourse.group/t/announcing-the-4-2-release-candidate-and-call-for-beta-testers/86>

The NEMO 4.2 Release Candidate sits on the trunk of NEMO repository, starting at revision 15005 : <https://forge.ipsl.jussieu.fr/nemo/log/NEMO/trunk?rev=15005>



The screenshot shows a web browser window displaying a Discourse forum post. The browser's address bar shows the URL: nemo-ocean.discourse.group/t/announcing-the-4-2-release-candi. The forum post is titled "Announcing the 4.2 Release Candidate and call for beta testers" and is categorized under "Announcements". The author is ClaireLevy, and the post was made 23 minutes ago on June 16, 2021. The post content includes an introduction to the NEMO 4.2 Release Candidate, a call for beta testers, and a detailed list of new features and improvements since version 4.0. The features are organized into sections: Kernel, AGRIF, Air sea interactions, Vertical physics, and Sea-ice SI3, icebergs, ice-shelves. The post concludes with a call to action for beta testers to answer a specific topic phase for NEMO 4.2 RC.

Announcing the 4.2 Release Candidate and call for beta testers
■ Announcements

ClaireLevy 23m 16 Jun

The next NEMO release (4.2) is scheduled for end of 2021. Meanwhile a preliminary version is now available for beta testers. This version includes a number of major developments in terms of sciences and of HPC (see details below). It has been widely tested by the NEMO System Team (more than any previous NEMO version) but we know some bugs are likely to still be in there.

Those bugs will now be found by using this 4.2 Release candidate on more realistic applications and longer simulations. It will start with the demonstrators of the H2020 IMMERSE project, but we also would like to call for other beta testers in the NEMO community.

The work proposed to beta testers is to start using this 4.2RC for their application(s), and to compare the results to what they are using now to identify the errors and hopefully the progress gained while using this new version, with or without all the new features.

The benefits for the beta testers is to get some knowledge on the coming 4.2 release, which is very different from 4.0, and moreover to make sure that this 4.2 release will be immediately usable for their projects, including all the new features.

The cost is to spend some time on this validation work: to identify possible bugs and their origins, without any guarantee that possible problems will be solved immediately: this 4.2RC is not a release, and the support will be limited once origin of bugs are identified, to correct them.

If you are willing to be part of this 4.2RC beta testing team, please answer the topic Testing phase for NEMO 4.2 RC.

The NEMO System Team

Overview of new features of the 4.2RC : improvements since 4.0

Kernel

- HPG schemes: new higher order hpg scheme (Shchepetkin and Mc Williams? 2003) suitable for use with terrain following coordinates (`ln_hpg_djc=true`.)
- Quasi Eulerian Coordinates

AGRIF

- Versatile change of vertical coordinates in zooms vs parent
- Support zooms crossing North Fold or East-West periodic boundaries (beta)
- Online initialization of zooms from parent fields
- New pre-processing tool for creating nested models meshes (embedded into DOMAINcfg)

Air sea interactions

- Current feedback
- Integration of Atmospheric Boundary Layer 1D model
- Improvement to wave forcing
- Improvements to bulk formulae
- Wave coupling

Vertical physics

- Improvement to OSMOSIS vertical physics
- Mass-flux convection scheme

Sea-ice SI3, icebergs, ice-shelves:

- new EAP rheology
- Energy and conservation diagnostics
- Ocean column properties in icebergs

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16 Jun
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