CSIRO

Ocean forecasting using the Bluelink Relocatable Ocean Atmosphere Model (ROAM)

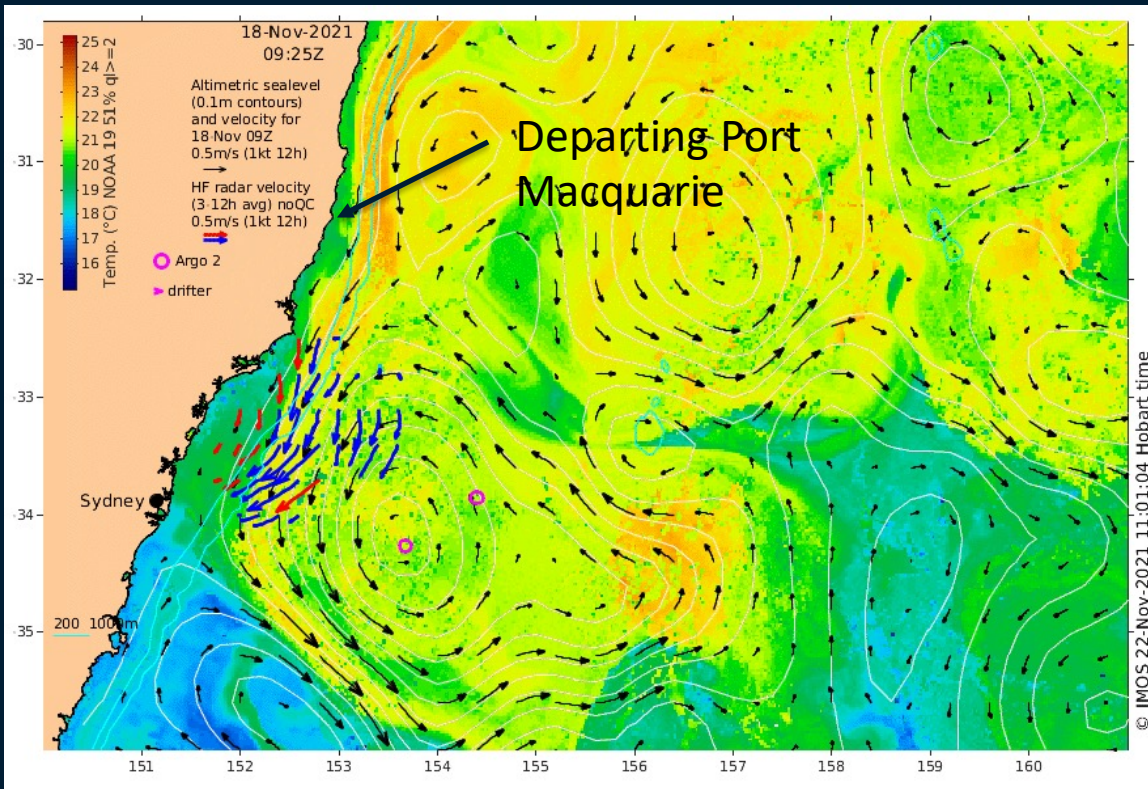David Griffin for the whole Bluelink Team

22 Nov 2021 Forum for Operational Oceanography

But first, an interruption

A kayaker is about to take on the EAC. I hope someone in our community is advising him.

http://lcrk.org.au/pmwiki/pmwiki.php?n=Main.2021Richard

Back to ROAM.
What you (probably?) know:

- Bluelink is multi-threaded
- ROAM-ocean is the regional-scale ocean modelling system
- nested in the global model, anywhere in the world
- takes a user about 30s to kick off a run
- Adds: finer resolution, tides and inverse barometer

What's new

- The user interface is now on the web (rather than an app)
- The service runs on CSIRO infrastructure
- Results are distributed via thredds
- The model does multi-cycle data assimilation
- of both public data, and private data

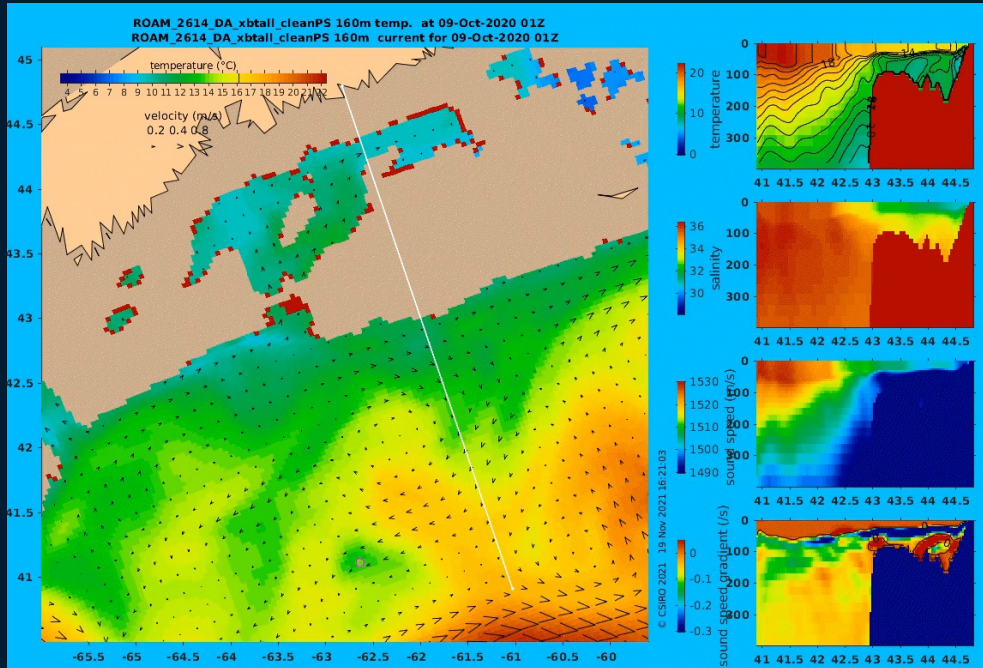# Tough test: Bay of Fundy and Gulf Stream eddies.
1) check for damage from including tides (see 30d)
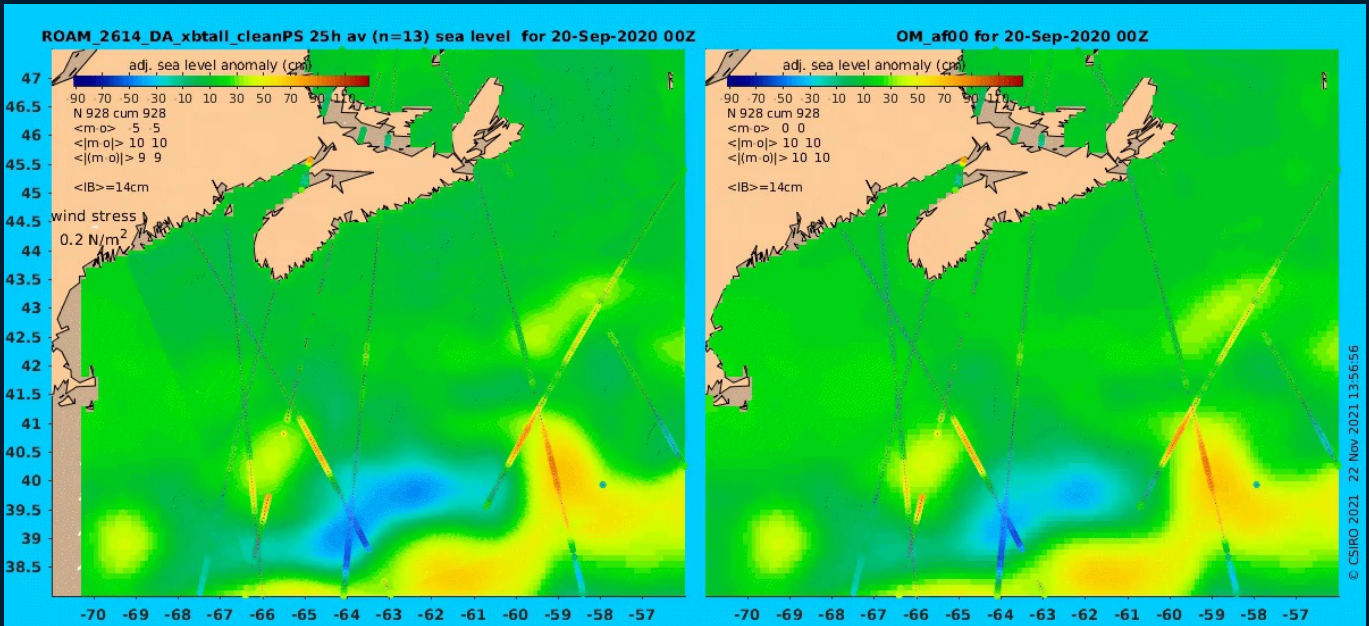
2) Now see how the tides are behaving (ramp in first 48h of run)
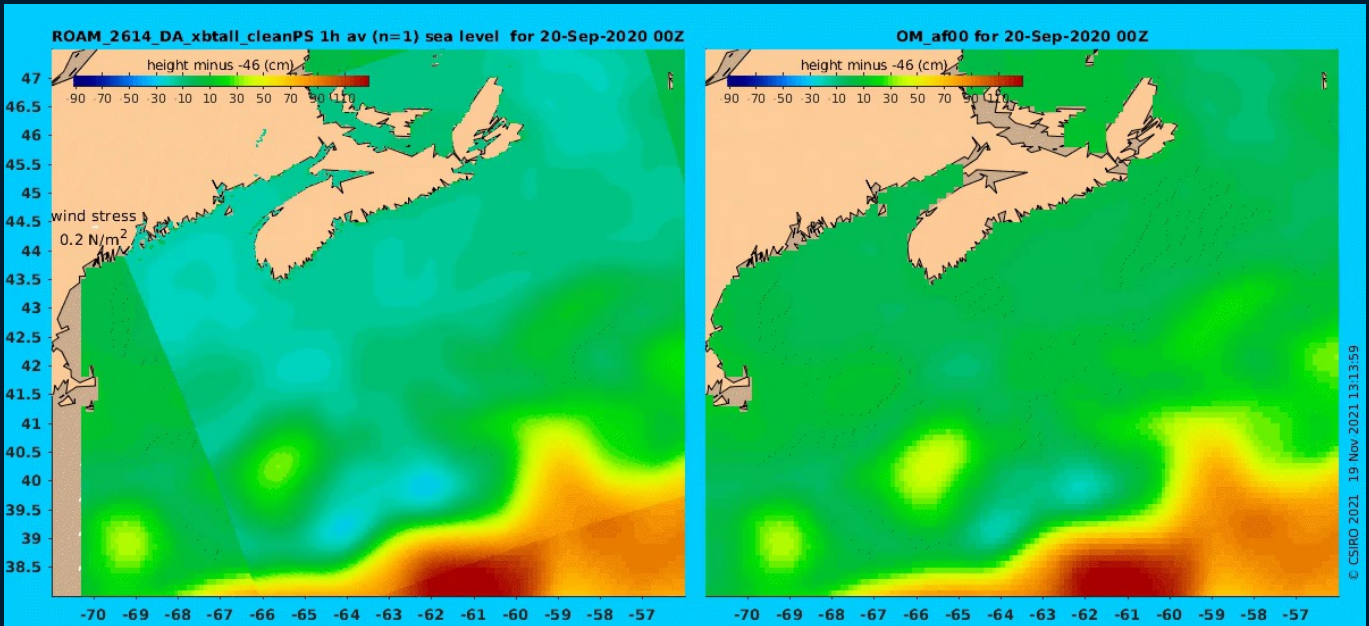
3) See internal tides side-by-side with eddies (see 3 days at 1h of temperature at 150m)

Conclusions

- DA of satellite data is working well, tides & IB included
- But DA can not do miracles: sat and in situ data is sparse
- SWOT launches in Nov 2022, but 3 will be needed
- Coming soon: assimilate selected IMOS in situ obs

Thank you

CSIRO Oceans and Atmosphere
David Griffin for the Bluelink team

+61 3 62325244
David.Griffin@csiro.au