

Tides / High-frequency Summary

2 talks on new CNES/CLS/LEGOS/Noveltis and ESA/Noveltis/DTU barotropic tide models:

FES2014 (global) + regional model of Arctic

The notorious 59-day problem in mean sea levels

Topex and Jason are inconsistent at β' period (S_2 alias)

Zawadzki et al., in preparation

3 talks on internal tides and 1 on internal waves

motivated especially to prepare for SWOT

first cut at new global internal-tide models

5 posters

– improvements to dynamic atmospheric loading model

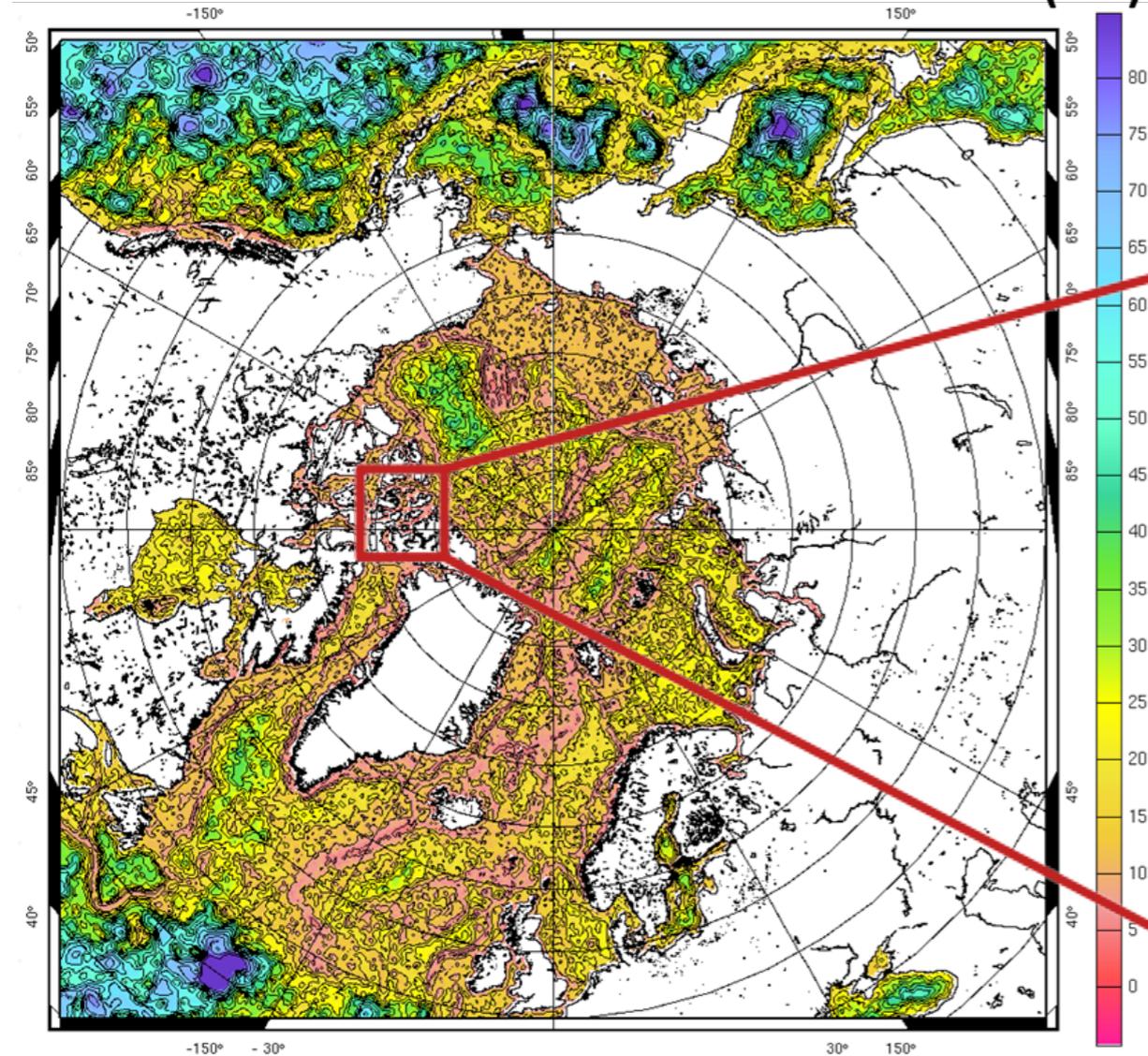
– surface & internal tides (including another global model)

– revised pole-tide correction

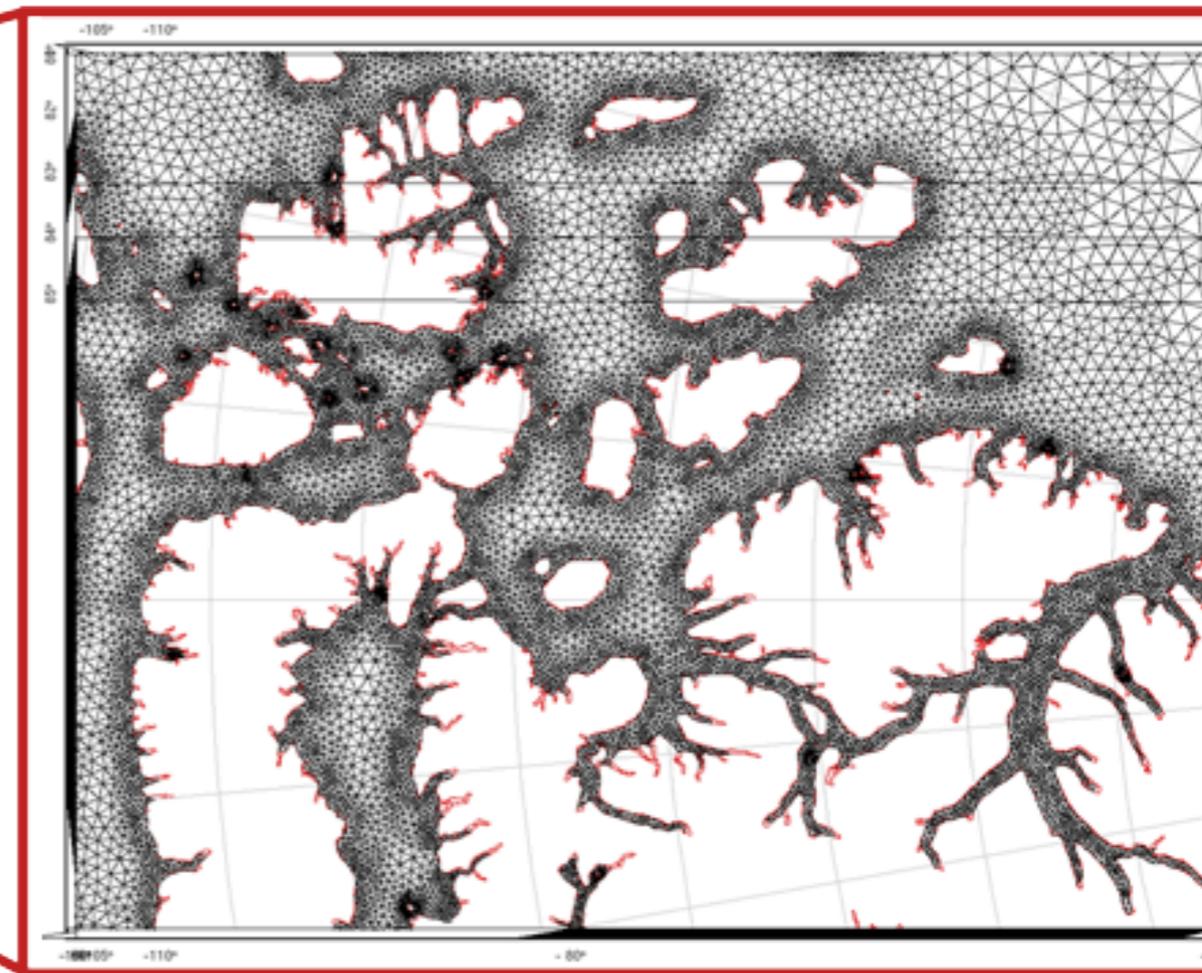
Finite-element mesh – Arctic Ocean

Cancet et al.

Refined mesh (km)



Refined mesh

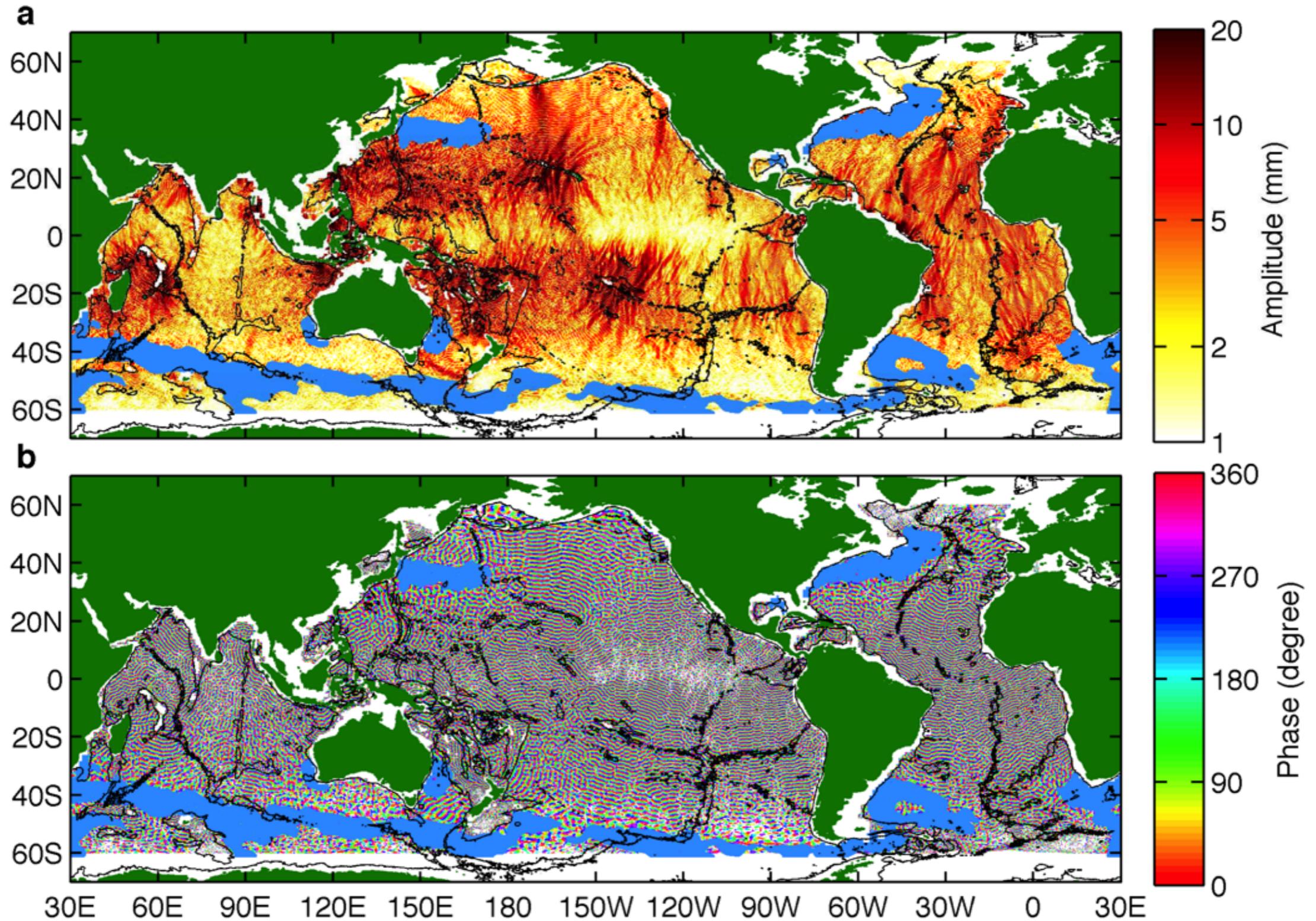


Coast: ~4 km

Offshore: ~8 km

Global mode-1 M2 internal tide

Zhongxiang Zhao



Tides Round Table Discussion

Jason-2 EOL orbit:

No strong preference, but we should check aliasing

SARAL orbit:

Some in favor of letting it drift

Some in favor of staying ± 5 km

**Loren Carrère: CNES SWOT managers desire testing
of new internal tide models early next year.**

Too soon? Current models are fledglings.

How to do it?

- independent altimetry (if there is any)**
- PIES (but often deployed in boundary currents)**
- many subtleties (e.g., coupling with surface tide)**