Turn on the Tides (TOTs)

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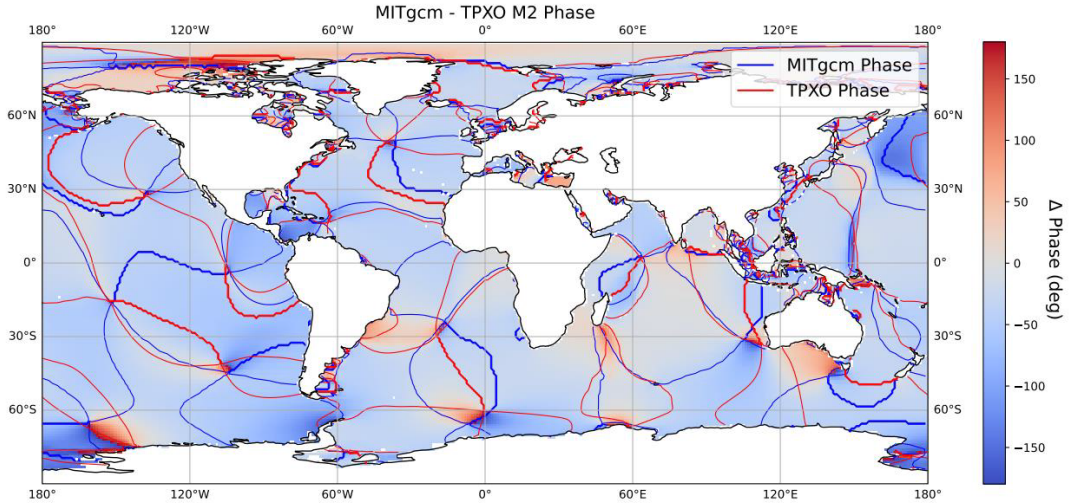
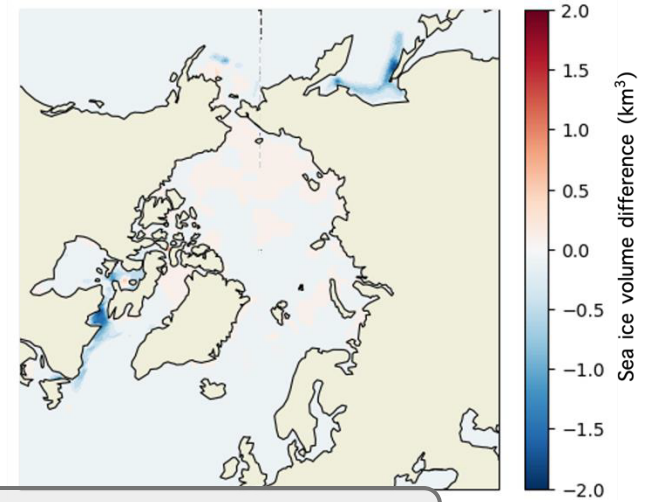
WHAT HAPPENS WHEN WE TURN ON THE TIDES IN ECCOV4R5 ?



CHALLENGE

Add tides in a 1° resolution model (LLC90)



Negative = less sea ice w/ tides
Positive = more sea ice w/ tides

OUTCOMES:

- LLC90 capture tidal amplitude and phase in the open ocean. Coastal ocean is however less consistent
- An **increase in the ocean water volume** has been observed resulting from a **decrease of the sea ice volume** in the Arctic Ocean
- We observe an **enhanced vertical mixing** (deeper MLD) showing an **increase in the heat water flux** further increasing the melting of Arctic sea ice