## commited

- no halo in input and output
- change the way to deal with scale factors in z\*-coordinate (save memory)
- current feedback parametrization on wind stress
- Shallow Water (cleaning needed)
- immerse: Air-sea coupling test case with an atmospheric toy model
- v4: param of frozen lids on top of melt ponds
- v4: new param of solar flux transmitted thru the ice Lebrun (2019) thesis
- v4: implicit ice-ocean drags (from J. Chanut)
- v4: add a dependency of the turbulent mixing to the presence of sea-ice
- a bunch of debugs...

## to arrive by the end of 2020

- copy v4 sea-ice related developments into the trunk
- Improve the AGRIF\_DEMO by adding TOP + PISCES
- Sea ice and Antarctic ice sheet fe source
- cleaning of Shallow Water
- trusting: Trusting: regular and automatic verification and validation. As much as possible...
- Addition of regular tests (in sette probably, or in a similar script) for some test cases, 50y simulations of ORCA2\_ICE\_PISCES, others?...
- improve bulk transfer coefficients over sea-ice. adapt STATION\_ASF test-case to sea-ice.
- SI3 improvments: melt ponds topo (Flocco Feltham 2007), drags coefficients, rhéologie VP (SI3\_03\_VPrheology)
- replace hydrostatic pressure gradient by pressure gradient anomaly