

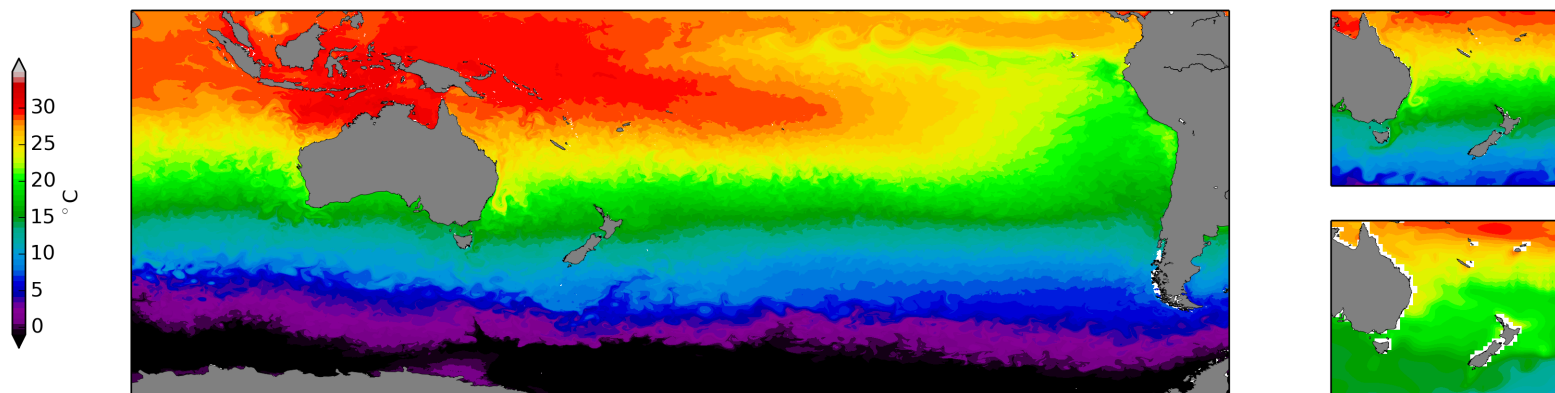
Repeat Year Forcing Strategies for ACCESS-OM2

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COSIMA team

ACCESS-OM2 Pre-release

ACCESS-OM2 pre-release and testing is underway:

- The default **1° version** based heavily on ACCESS-CM2;
- The **0.25° version** developed by ARCCSS;
- A new **0.1° configuration**, funded by COSIMA Linkage Project (ANU, UNSW, BoM, CSIRO, AAD, UTas).



Configurations are now in 3rd pre-release stage, see:

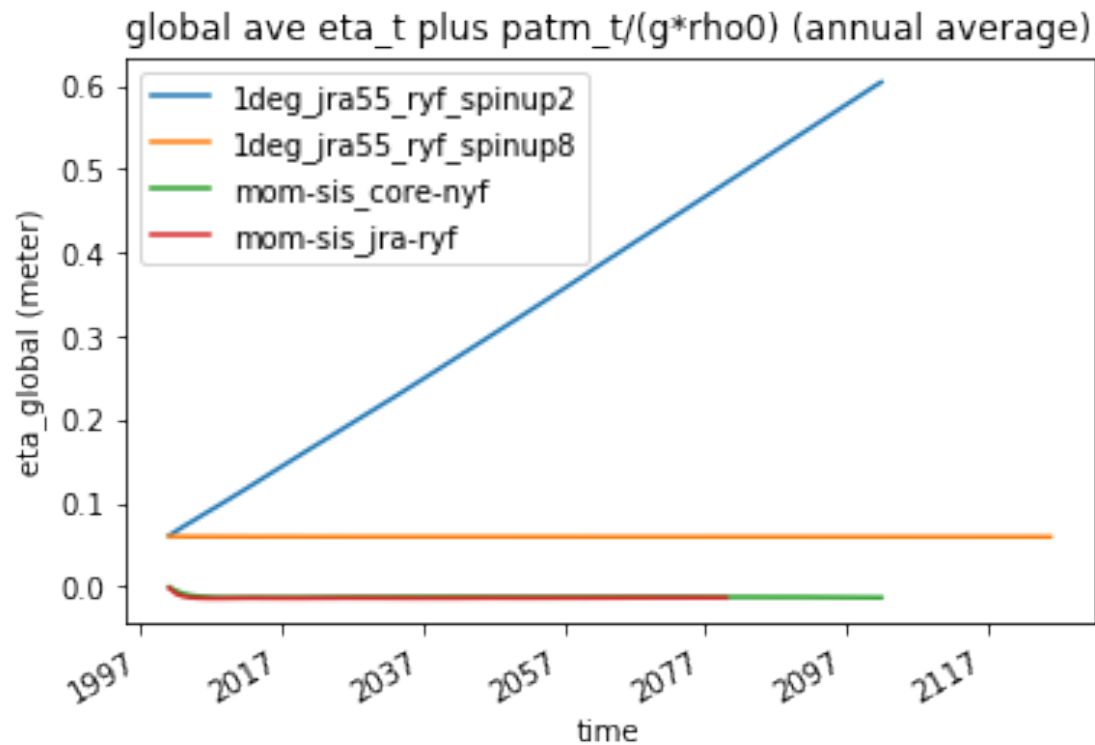
<https://github.com/OceansAus/access-om2>

What's in the Box?

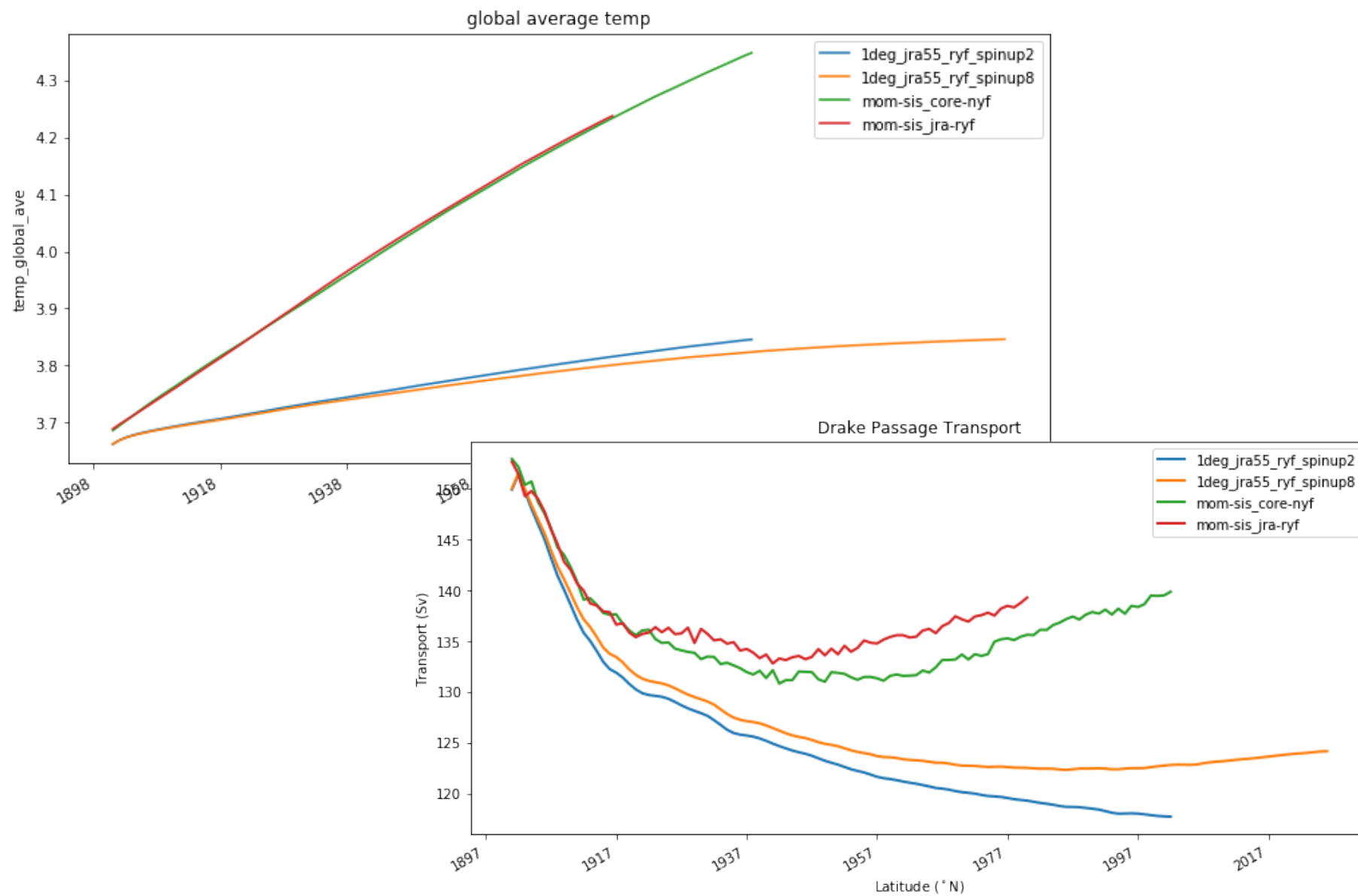
- Based on MOM5, CICE5, OASIS-MCT and MATM.
- JRA55 forcing supported.
- New method of setting up regridding interpolation using ESMF. This is necessary because the regridding method used by OASIS won't scale to 0.1° .
- Significant performance improvements, especially to do with coupling. We expect the final model to run only a few % slower than standalone MOM5.
- Runoff regridding is done , based on offline regridding work using the kdtree data structure by Russ Fiedler (CSIRO).
- Ironed out many coupling bugs, some of which may have existed for some time.
- Will include new 0.1° bathymetry (Russ Fiedler)

Initial testing

Model	Resolution	N CPUs	Years/Day	Notes
ACCESS-OM2	1°	252	40	
ACCESS-OM2-025	0.25°	1455	21	
ACCESS-OM2-01	0.1°	5600	~3	Not tested yet



Initial testing



Forcing Strategies (thanks to Kial Stewart)

- MATM is a “file-based” atmosphere
- We use JRA55-do (1955-2016)
- “Repeat Year Forcing” option for spinup
- Pick a year which minimises variability
- Use May 1990 to April 1991

