

Interactive
Comment

Interactive comment on “Overview of the Coupled Model Intercomparison Project Phase 6 (CMIP6) experimental design and organisation” by V. Eyring et al.

H. Hewitt

helene.hewitt@metoffice.gov.uk

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The comments below reflect the views of the CLIVAR Ocean Model Development Panel (OMDP). There is general agreement among the panel that spin-up is an issue which requires further attention. While analysis of spin-up does not usually appear in peer-reviewed publications, being able to analyse the spin-up enables a deeper understanding of the simulations and may lead to improved guidance on spin-up for the future. Archiving the model spin-up could also be important for comparison with HighResMIP where control and transient experiments are likely to be run close to the model initial conditions.

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The paper states (p10549, line 5) that the spin-up ‘is usually performed and discarded’. In the discussion of piControl (p10561, line 7), it is stated that ‘the length of the spin-up period should be documented’. OMDP suggest that:

-Text on p10549 is modified to read ‘is usually performed, with the length of this ‘spin-up’ period being model and resource-dependent. It is recommended that the spin-up length and procedures are documented and the spin-up archived as far as possible.’

-Text on p10561 is amended to read ‘This spin-up period can be as long as several hundred years. Spin-up length and procedures (coupling/forced, bug corrections, re-tuning, etc) should be documented and the spin-up archived as far as possible’

Regarding archiving requirements, we suggest that the spin-up should be archived with decadal means of 3D ocean temperature, salinity, carbon-related quantities, 2D surface fluxes and zonally integrated ocean heat and freshwater transports. Archiving these fields would be sufficient to enable a better understanding of climate drift.

Helene Hewitt on behalf of CLIVAR OMDP

Interactive comment on Geosci. Model Dev. Discuss., 8, 10539, 2015.

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