

Interactive comment on “Detection and Attribution Model Intercomparison Project (DAMIP)” by Nathan P. Gillett et al.

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Thanks to the CMIP6 Panel for their comments. We have revised the manuscript taking into account their suggestions.

- p. 3 line 21: the D/A single forcing simulations were actually made available subsequent to CMIP3 in what was called CMIP4 (though not widely publicized as such). You can refer to Stouffer et al to fill in this chronology between CMIP3 and CMIP5: Stouffer, R.J., V. Eyring, G.A. Meehl, S. Bony, C. Senior, B. Stevens, K.E. Taylor, 2016: CMIP5 scientific gaps and recommendations for CMIP6. Bull. Amer. Meteorol. Soc., in press.

A reference to Stouffer et al. has been inserted where the DA single forcing simulations following CMIP3 are discussed.

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- p. 5 lines 1-10: the “All-but” approach could also include, for example, “all forcings but aerosols”, and so on. It may be worth clarifying this distinction here.

We have inserted the following text to provide an example of the ‘all-but’ approach: ‘An example of the latter is the LUMIP land-NoLu simulation which includes changes in all forcings but land use change (Lawrence et al., 2016).’

- P. 7 line 17: It may be worth clarifying here that natural forcings for the future would not include volcanoes unless I missed something, and only an estimate of solar; this comes up again on p. 9, lines 17-22

According to O’Neill et al. (2016): ‘Volcanic forcing will be ramped up from the value at the end of the historical simulation period (2015) over 10 years to the same constant value prescribed for the piControl simulations in the DECK, and then will be kept fixed’, hence volcanic aerosol does change in the SSP2-4.5 and ssp245NAT simulations up until 2025. This is now clarified in the description of ssp245NAT: ‘The future solar forcing data recommended for CMIP6 has a downward trend (Matthes et al., 2016), and stratospheric aerosol is prescribed to ramp up from its level in 2014 to the background level specified in piControl over the 2015-2025 period (O’Neill et al., 2016).’

- P. 8 line 27: should be “HistVLC”, not “HistVOL”

Thanks. This has been corrected.

Updated Reference: - Eyring, V., Bony, S., Meehl, G. A., Senior, C. A., Stevens, B., Stouffer, R. J., and Taylor, K. E.: Overview of the Coupled Model Intercomparison Project Phase 6 (CMIP6) experimental design and organization, Geosci. Model Dev., 9, 1937-1958, doi:10.5194/gmd-9-1937-2016, 2016.

Thanks. The reference has been updated.