

Interactive comment on “The Radiative Forcing Model Intercomparison Project (RFMIP): Experimental Protocol for CMIP6” by Robert Pincus et al.

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Thank you to the authors for having put this paper together. I have the following comments:

More important comments:

- it would be of benefit to the entire RFMIP/CMIP6 community to have an explicit, complete list of variables to provide for RFMIP in this RFMIP description paper. This list should be further divided into Tier 1 and other tier variables if need be.
- as already mentioned by J. Quaas, and to emphasize further on the first above comment, do RFMIP require on-line diagnostics of the components of the forcing? and if

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yes, what are the recommendations for these diagnostics?

- it is somehow disturbing to have a detailed description of simulations under 4.1, while this is not the case for the other two aspects/questions of RFMIP.

Other comments:

p9 : l 23 : There is no reference to MACv2-SP in the Eyring et al, 2015 GMD paper
p10 “piClim-anthro simulation described in Table 1”

p12 Table 1 Title: I would suggest to take out “with interactive vegetation” as some (many?) climate models do not implement this feature

p12 Table 1: this is no difference in the description of RFMIP-ERF-GHG and RFMIP-ERF-LU

p12 Table 1: RFMIP-ERF-AerO3x01 : the description should be : Changes in RFMIPERF- Aer03 scaled by 0.1

p12 Table 1: RFMIP-ERF-AerO3x2 : the description should be : Changes in RFMIPERF- Aer03 scaled by 2

page 13 Table 2: same comment as above, I would suggest to take out “with interactive vegetation”

page 13 Table 2: RFMIP-ERF-HistAer should not the CMIP6 label be : piClim-histaer?

page 13 Table 3: Title 1st sentence: should end “error in forcing”.

page 14 Table 5: Experiment titles are in the form of “*SpAerO3*” while in the text titles are in the form of “*SpAer*”: is this ok?

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