

Interactive comment on “The Cloud Feedback Model Intercomparison Project Observational Simulator Package: Version 2 (COSP2)” by Dustin J. Swales et al.

Anonymous Referee #1

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This is an exceptionally well-written manuscript which introduces a new version of the CFMIP Observational Simulator Package (COSP). The manuscript clearly described the design of COSPv2 and its software improvements compared to the COSPv1. The reorganization of the COSP architecture allows for increased efficiency, helps to make the diagnostics consistent with radiation calculations of the host model more easily, and makes it easier to add new simulators and diagnostics. Given the wide use of the COSP in the global climate modeling community, this article should be able to provide helpful guidance to users.

Specific comments: 1. It will be better if the author can quantitatively estimate the

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improved efficiency of the new COSP version compared with the old one in section 3. 2. Since COSPv1.4.1 is the production version for CFMIP3 and CMIP6, will the new COSPv2 diagnostics be different? It was also mentioned in the summary that there is an optional layer in COSPv2 to provide compatibility with COSPv1.4.1. Is this option recommended for recent efforts of model evaluation? 3. Page 3, Line 10, “ISSCP” should be “ISCCP”.

Interactive comment on Geosci. Model Dev. Discuss., <https://doi.org/10.5194/gmd-2017-148>, 2017.

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