

Interactive comment on “A community diagnostic tool for Chemistry Climate Model Validation” by A. Gettelman et al.

Anonymous Referee #1

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The manuscript provides an overview of an analysis and plotting package that has developed within the CCMVal project to aid in the analysis of data submitted from a large number of models, including producing comparisons between models and of models with observations, and is based on freely available software packages. The diagnostic package is tailored to analysis of stratospheric chemistry climate models, understandable given its origins, but can equally ingest CF-compliant netCDF files produced by other Model Intercomparison Projects such as CMIP5.

The manuscript provides a well written and organized overview of the structure of the package and its capabilities and I only have a few minor comments to make.

There are several places through the text where the netCDF conventions expected by the analysis package are not simply referred to as CF-compliant, but as 'CF NetCDF

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CCMVal-2 format' or similar wording. I think it would be very helpful to the reader if there were a few sentences included that explain how the CF-CCMVal-2 convention differs from the more widely-recognized CF-netCDF convention. Is it just that the CCMVal-2 data request specified standard variable names that are not accepted CF-standard names? In any case, a brief outline of the differences would help the reader to understand what is particular about the CCMVal-2 data.

Page 1240, Lines 10-11, the statement 'Difference plots interpolate and regrid for comparison purposes' makes me wonder how exactly the regridding is done. Can a common grid, a standard lat-lon grid, for example, be specified by the user or is one dataset interpolated on to the grid of the other? Again, just a few words to give the reader an idea of the process.

I realize it is only for illustrative purposes, but Figure 2 uses a very different range along the vertical axis for the two models and the ERA-40 data. The very different patterns between the models and observations invite the reader to take a second, longer look. Is it possible to plot up the ERA40 data with the same vertical range as the models, or somehow standardize the vertical domain?

Interactive comment on Geosci. Model Dev. Discuss., 5, 1229, 2012.