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Atmospheric Chemistry and Physics Discussions

Interactive comment on "Uncertainty of the stratospheric/tropospheric temperature trends in 1979–2008: Multiple Satellite MSU, radiosonde, and reanalysis datasets" *by* J. Xu and A. M. Powell Jr.

Anonymous Referee #2

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This paper compares different estimates of temperature in the troposphere and the stratosphere obtained by 5 reanalysis products, 5 sets of radiosonde observations and MSU satellite observations. The results show a lack of consistency among the different temperature estimates and the spread among the estimates is not the same at different latitudes and altitudes.

This result is a useful reminder to the many contemporary users of reanalysis products and other data that there is considerable uncertainty in these estimates, and reanalysis should not be assumed to be an accurate description of nature. As such, the results

should be of interest to the users of these data, of which there are many.

However, this manuscript is almost the same as that published by the authors in GRL in 2010: Xu J, Powell AM., Ensemble spread and its implication for the evaluation of temperature trends from multiple radiosondes and reanalyses products, and the one they submitted to Tellus in spring 2011:Xu and Powell, Uncertainty Estimation of the Global Temperature Trends for Multiple Radiosondes, Reanalyses and CMIP3/IPCC Climate Model Simulations.

Different combinations of data are presented in the three papers. In the paper under review here 5 reanalysis products, 5 radiosonde data sets and 3 MSU time series are compared. In the GRL paper the 5 radiosonde data sets are compared with 7 reanalyses, and in the Tellus paper the 5 radiosonde products, 7 reanalyses, and output from CMIP models are compared.

The methodology and the result are the same in the three manuscripts. The main result is that different data products give slightly different estimates for temperatures in the troposphere and the stratosphere.

This reviewer is of the view that multiple publications of the same result should be avoided because it leads to an unnecessary and undesirable dilution of scientific literature. When authors submit a manuscript to a journal they declare that the material has not been published or submitted elsewhere, and this guarantee should be taken seriously.

Interactive comment on Atmos. Chem. Phys. Discuss., 11, 16639, 2011.