

Interactive
Comment

Interactive comment on “Search for evidence of trend slow-down in the long-term TOMS/SBUV total ozone data record: the importance of instrument drift uncertainty and fingerprint detection” by R. S. Stolarski and S. Frith

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Received and published: 10 August 2006

The referee raises the same point as Referee 1 about the robustness of the fingerprint for trend slow-down. We agree that a single model does not necessarily provide a robust fingerprint. Certainly the details will vary from model to model. We have therefore removed Figure 12 and the description of the model results. We do feel that there is a robust signature to be expected from the peaking and reduction of chlorine and bromine compounds in the atmosphere. The robust signature is that the chlorine and bromine will be removed from both hemispheres and ozone can be expected to respond to that removal in both hemispheres. We do not need a large model to make that statement.

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The details of the timing may be slightly different in the two hemispheres and models may not agree exactly on the details. The implication of this discussion is we feel that the lack of a 2 sigma significant CUSUM signal in the southern hemisphere indicates that the CUSUM signal in the northern hemisphere is probably a combination of response to changing chlorine/bromine and a response to variations in dynamics. We feel that attribution requires, at a minimum, a significant signal in both hemispheres. It appears that a few more years will be necessary to reach this attribution level in the MOD data set when the instrumental uncertainties are included as part of the analysis.

Interactive comment on Atmos. Chem. Phys. Discuss., 6, 3883, 2006.

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