

## ***Interactive comment on “Simulation of solar-cycle response in tropical total column ozone using SORCE irradiance” by K.-F. Li et al.***

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We appreciate very much the constructive comments from the two reviewers, who are clearly experts in the field. We have revised the paper according to their comments. Note that during the paper revision, a similar study by Swartz et al. (2012; doi:10.5194/acp-12-5937-2012) was published in Atmos. Chem. Phys. in July. In the revised manuscript, we discussed the similarities and differences between our study and Swartz et al.'s.

Below, we highlight several revisions.

(1) We have compared the model O<sub>3</sub> response with SAGE measurements in addition to TOMS/SBUV and ground-based measurements;

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(2) We have shown the model vertical O<sub>3</sub> response in a new subsection and compared that with observations;

(3) We have clarified that our simulations did not have QBO or aerosol prescriptions.

The revised manuscript and our detailed responses can be found in the Supplement. Note that the referees' comments are in red italic and our responses are in black.

Please also note the supplement to this comment:

<http://www.atmos-chem-phys-discuss.net/12/C5550/2012/acpd-12-C5550-2012-supplement.pdf>

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Interactive comment on Atmos. Chem. Phys. Discuss., 12, 1867, 2012.