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Interactive comment on "Solar response in tropical stratospheric ozone: a 3-D chemical transport model study using ERA reanalyses" *by* S. Dhomse et al.

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Reply to interactive comment on "Solar response in tropical stratospheric ozone: a 3-D chemical transport model study using ERA reanalyses" by J. McCormack

The authors note that nearly all 2-D models show only one broad peak in the tropical stratospheric ozone response to the 11-year cycle solar UV. One exception is the 2-D modeling study of McCormack et al. (JGR, 2007), which produced a double-peak solar cycle response in stratospheric ozone in multi-decadal simulations that included realistic semi-annual and quasi-biennial oscillations in tropical stratospheric winds. It should be noted that these oscillations were not imposed, but were generated internally

by the model dynamics. The results of this study indicated that the lower stratospheric ozone response was likely produced by quasi-decadal variability in transport related to solar-cycle changes in planetary wave forcing of the winter extratropical circulation.

We thank Dr. McCormack for drawing our attention to this 2-D model study. In the revised manuscript we have added the reference and the corresponding sentence is reworded as "With an exception of McCormack et al (2007), most of the 2-D models .."

Interactive comment on Atmos. Chem. Phys. Discuss., 11, 13975, 2011.