

Interactive comment on “Influence of the sudden stratosphere warming on quasi-2 day waves” by S.-Y. Gu et al.

Anonymous Referee #2

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General comments:

The authors use the thermosphere-Ionosphere-Mesosphere-Electrodynamics General Circulation model to model the effect of the sudden stratospheric warming on the quasi-2- day wave (QTDW). They investigate the non-linear interaction of the QTDW with westward zonal wavenumber 3 (W3) and the stationary planetary wave with zonal wavenumber 1 and show that a QTDW with westward zonal wavenumber 2 can be produced.

Specific comments:

I agree with the specific comments of referee nr. 1 in addition I was wondering:

1) Why has the analysis of the W3 wave been performed in the meridional wind at 82

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km, 7.5 S and days 25-30

2) Why are days 15-20 chosen for the analysis of the W2 and not the same time period as for the analysis of the W3?

3) Why has the analysis of the W2 wave been performed in the meridional wind at 100 km, 2.5 N and during days 15-20?

4) In the caption of Figure 5 the authors state that the analysis of the W3 has been performed at 22.5S and ~90km. However, in the text describing Figure 5 (page 11, line 226f), the authors state that the analysis of the W3 wave has been performed at ~82 km and at 7.5S. Which coordinates have been used?

Technical corrections:

1) Page 15, Line 313: Baratropic/baraclinic => barotropic/baroclinic

Interactive comment on *Atmos. Chem. Phys. Discuss.*, doi:10.5194/acp-2015-982, 2016.

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