

Interactive comment on “The Impact of Increasing Stratospheric Radiative Damping on the QBO Period” by Tiehan Zhou et al.

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Dear authors,

thank you very much for an interesting study. In connection with the comments raised by the referees, I would like to point to you a paper that we recently published (Eichinger and Šácha, 2020) on the impact of scale height changes on tropical upwelling trends. Stratospheric cooling due to increasing GHGs is both observed and robustly simulated by CCMs and it is directly related with scale-height changes. In our paper you can find the rate of "shrinkage" among CCMs and how this small change may result in considerable overestimation of the upwelling trends.

Best regards, Petr Šácha.

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Eichinger, R, Šácha, P. Overestimated acceleration of the advective Brewer–Dobson circulation due to stratospheric cooling. *QJR Meteorol Soc.* 2020; 1– 15. <https://doi.org/10.1002/qj.3876>

Interactive comment on Atmos. Chem. Phys. Discuss., <https://doi.org/10.5194/acp-2020-925>, 2020.

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