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Interactive comment on "Nonlinear forcing mechanisms of the terdiurnal solar tide and their impact on the zonal mean circulation" *by* Friederike Lilienthal and Christoph Jacobi

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Dear anonymous referee,

thank you very much for your valuable comments to help improve our manuscript. Please find below our detailed response to each of your concerns:

"The paper can be published, with the following revisions: The material reported in sections 1, 2, and 3.1 reprises findings reported in Lilienthal et al., 2018, and I saw little value in it. I recommend that section 3.1 be cut, or very briefly summarized. The paper should only report the new information appearing in section 3.2 and beyond, and

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Figures 3 and onward."

We agree that sections 1, 2 and 3.1 present some similarities with Lilienthal et al. (2018). However, in contrast to the present paper, there we presented simulations with one of the forcing mechanisms removed and therefore, two of three mechanisms were still included. The new aspect of Figs. 1 and 2 is to present the absolute contribution of each single forcing. We will remove Fig. 1 and reduce Fig. 2, restricting ourselves to January conditions. Accordingly, the text in section 1-3.1 will be adjusted and shortened.

"I also recommend that it be edited for proper English grammar and usage."

We carefully went through the paper and corrected to our best knowledge, also considering the suggestions of reviewer #2.

"Minor comments: 1. The text refers to panels a and b in Figure 4, but these labels that do not appear in the plots. Please recheck all Figures for this issue."

Thank you very much for the hint. We double checked all figures and included the labels in each of them.

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