

Interactive comment on “On the distortions in calculated GW parameters during slanted atmospheric soundings” by Alejandro de la Torre et al.

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We acknowledge the comments and suggestions made by Dr. P. Pisoft (reviewer).

In particular regarding his suggestion in the Specific Comments Section, we feel that due to the complexity of any GW ensemble composed by monochromatic modes and the fact that our analysis should ideally be applied to each individual component, we are at this point able only to include an additional paragraph at lines 410-418 (see attached file):

" Up to now, from the satellite data at disposal, an attempt to quantitatively illustrate

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the implications and possible misrepresentation (or distortion) of our general understanding of GW parameters values from slanted soundings, as their global distribution and variability, seems unrealistic. After some research to improve this scenario, we are now working on previous GW parameters solution schemes which were modified for the use of close sounding groups of RO profiles. The method is currently being applied to calculate GW propagation direction, net MF and real vertical and horizontal wavelength for some case studies. The unavoidable constraint imposed to extend preliminary results to a GW climatological useful description is strictly conditioned by the still largely insufficient density of satellite-based soundings."

We feel that any further inference would result ambiguous and not straightforwardly applicable. GW parameters from low, medium and high frequency components suffer different distortions depending on their aspect ratio and sounding direction imposed by the respective radio occultation events. In particular, in the reference made to the status of our present work, we mention our attempt to go in depth over the open issues discussed in the paper.

The indicated typing errors were corrected.

Please also note the supplement to this comment:

<https://www.atmos-meas-tech-discuss.net/amt-2017-192/amt-2017-192-AC1-supplement.pdf>

Interactive comment on Atmos. Meas. Tech. Discuss., doi:10.5194/amt-2017-192, 2017.

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