

Interactive comment on “GPS radio occultation with TerraSAR-X and TanDEM-X: sensitivity of lower troposphere sounding to the Open-Loop Doppler model” by F. Zus et al.

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We thank both reviewers for their constructive and helpful comments. We will follow the first reviewer's suggestion and implement the method proposed by Sokolovskiy et al., "Postprocessing of L1 GPS radio occultation signals recorded in open-loop mode", 2009, Radio Science. However, we cannot implement these changes in our software in a timely manner and therefore will not be able to upload a revised version of the manuscript in this special issue.

We are grateful to Atmospheric Measurement Techniques that this paper will remain

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open to the scientific community as an AMT discussion paper. We maintain that the TerraSAR/TanDEM open-loop data set, discussed in this paper, are valuable to the scientific community since these observations demonstrate unambiguously the potentially significant influence of the receiver (or post-processing) Doppler model on the reconstructed carrier phases in the lower troposphere (see Figure 4 at SLTAs below about -80 km). This fact might be relevant to RO data users, in particular those who employ RO observations for climate change studies.

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