

Interactive comment on “Remote Sensing of Tropospheric Turbulence Using GPS Radio Occultation” by Esayas Shume and Chi Ao

Anonymous Referee #2

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1. I feel a more accurate title might read:

Troposphere Turbulence Climatology Using GPS Radio Occultation

2. (line 6, section 2) Should qualify: "During the time frame relevant to this study, the COSMIC satellites provide a significant number of RO profiles..."

3. (line 12, section 2) The last sentence in this paragraph could be more explicit. E.g. "...that amplitude and phase in the impact parameter domain, rather than raw signal amplitude and phase, provide a more effective observable for measuring scintillation of interest."

4. (line 6, section 2.2.2) "...shows values less than 1 <for> more <than> 95% of cases."

5. Structural change: I feel it would be more natural to have the climatology results at

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the end. Namely, to move results from 2.2.1 and last paragraph of 2.2.2 to the end. The introduction to MPS could move closer to the beginning. Then the method/discussion on MPS could go before 2.2.2, or maybe at least somewhere before the discussion in 2.2.2 about estimating the signal propagation distance L , which I take to be a key point of this work. Maybe you could include the discussion or reference to the discussion on the relation between structure parameter and phase screen realization that you show in 3.2.1. In either case—it would have helped to understand this relation before reading the procedure outlining estimation of L .

6. Be sure to correct the citation "Knepp and Lickish" to Knepp and Nickisch".

7. Plots look better, but for the sake of future readers I really hope the publisher manages to compress the (file) size of the scatter plots.

Interactive comment on Atmos. Meas. Tech. Discuss., doi:10.5194/amt-2016-81, 2016.

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