

Interactive comment on “Estimation and Evaluation of COSMIC Radio Occultation Excess Phase Using Non-differenced Measurements” by Pengfei Xia et al.

Anonymous Referee #2

Received and published: 27 February 2017

The manuscript compares a non-differenced technique for estimating atmospheric excess phase (AEP) then compares the results with the AEP provided in current GPS-RO processing system. Though, the topic is relevant to AMT, the manuscript needs a major revision for both English as well as the section that discusses the results.

1. Please revise the abstract and especially properly define ROPP and atmProf.
2. P3-L72, L75, L76 - please define and provide a reference
3. P5 - L136 - Bernes 5.2?
4. P10 L236; please use actual definitions rather than the color of the lines to explain the results. Please do so for the rest of the manuscript.

C1

5. The manuscript currently only mentions the differences between different techniques but doesn't provide any error analysis. Please provide as much discussion as possible on the results and for instance explain why the differences are very large at higher altitudes. Please also compare your results with previous studies when possible.
6. Please only include the references that are actually cited.
7. Figures need a revision as the thickness of the lines is so small that hardly show up in the printed versions.
8. Please also consider revising the text for English.

Interactive comment on Atmos. Meas. Tech. Discuss., doi:10.5194/amt-2016-276, 2016.