

Interactive comment on “Assessing the Performance of Troposphere Tomographic Modeling Using Multi-Source Water Vapor Data During Hong Kong’s Rainy Season from May to October 2013” by Biyan Chen and Zhizhao Liu

Anonymous Referee #1

Received and published: 25 August 2016

General comments: This paper presents the proposal of troposphere modelling using tomography technique and multi-source water vapor data. The integration method of different observation is the novel approach and gives the possibility to improve the stability of equation system inversion. The results are significant and verified independently.

The answers to the main question for the reviewer:

1. Does the paper address relevant scientific questions within the scope of AMT? Yes 2. Does the paper present novel concepts, ideas, tools, or data? Yes, the propose of data

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integration in one solution. 3. Are substantial conclusions reached? Yes 4. Are the scientific methods and assumptions valid and clearly outlined? Yes/No details comments below 5. Are the results sufficient to support the interpretations and conclusions? Yes 6. Is the description of experiments and calculations sufficiently complete and precise to allow their reproduction by fellow scientists (traceability of results)? Yes 7. Do the authors give proper credit to related work and clearly indicate their own new/original contribution? Yes 8. Does the title clearly reflect the contents of the paper? Yes 9. Does the abstract provide a concise and complete summary? Yes 10. Is the overall presentation well structured and clear? Yes 11. Is the language fluent and precise? Yes 12. Are mathematical formulae, symbols, abbreviations, and units correctly defined and used? Yes 13. Should any parts of the paper (text, formulae, figures, tables) be clarified, reduced, combined, or eliminated? No 14. Are the number and quality of references appropriate? Yes 15. Is the amount and quality of supplementary material appropriate? Yes

Questions and comments:

p.9 l. 5 What observations were processed GPS or GNSS? It is not clearly explained.

p.9 l.20 The procedure for determining the weights for observations require stronger justification. The process of balancing equations observation weights should be the result of the analysis of the accuracy of observations. In paper for three types of observations unit weights are used and why they are equivalent?

Interactive comment on Atmos. Meas. Tech. Discuss., doi:10.5194/amt-2016-158, 2016.

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