

Interactive comment on “Development of time-varying global gridded Ts-Tm model for precise GPS-PWV retrieval” by Peng Jiang et al.

Anonymous Referee #2

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General Comment: The manuscript presented comprehensive investigation of the Ts-Tm relationship in both spatial and temporal domains using ECMWF reanalysis products. There are two interesting results: 1) Ts-Tm relationship has significant spatial and temporal variations; 2) the developed time-varying global gridded Ts-Tm equations perform better than the static model. The presentation of this investigation is well structured and written. I would like to recommend it for publication after the following modifications.

1 GPT2w model can also provide the Tm globally for real time applications. Authors should include this model in the comparisons. 2 What do the numbers in Figure 4 stand for? Are they results from the radiosonde? If so, you can also use the circles as shown in Figure 1. 3 Explain m1, m2, n1, n2 in equation (5) 4 When interpolating the Tm onto

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the GNSS sites, did you consider the impact of height differences?

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