

- 1) **The time resolution of the tomographic results has not been clearly indicated in the paper. In line 5 of page 4, the ZTD estimates have a 1 h time resolution. In line 7 of page 13, it shows the solutions have a 6 h resolution. It is not clear how long of the SWD data are stacked for each tomographic solution. Under extreme weather conditions, the water vapor changes quickly thus a reasonable resolution is very important.**

The time resolution of the tomographic results is indicated in table 3 (Time settings: every 6 hours). The ZTD estimates have 1 h time resolution, however, because of our assimilation settings, we needed the tomography outputs only from 00, 06, 12, and 18 UTC. The GNSS tomography models have been run every 6 hours and the SWD were not stacked. It has been written more explicitly in Section 2 of the new version of the paper.

- 2) **Three sets of SWD observations were tested: set0 without compensation for hydrostatic anisotropic effects, set1 with compensation of this effect and set2 cleaned by wet delays outside the inner voxel model. First, why not test the set2 by also considering the compensation of hydrostatic anisotropic effects. Another concern is that why not test set2 for WUELS model?**

In the case of set2 anisotropic effects were not compensated. It is right that in the comparison between set1 and set2 not only the effect of the outer delay but also of the hydrostatic asymmetry is shown. However, to fix this we have redrawn Figure 5 (4 in the new numeration) and 9 by replacing set1 with set0, to show only the effect of the outer delay.

In the case of the WUELS model, the coordinates of the voxels are projected to the UTM coordinate system. In set2, the ray-tracing through the ALADIN-CZ data was made using the ellipsoidal (BLH) coordinates. As the TUW model uses the same coordinate system (BLH), the application of the ray-traced data was possible without any modifications in the tomography model. Because of the complications in using the ray-traced data in the WUELS model (deformations caused by the coordinates transformation), we decided to test this approach only for the TUW model. In our future work, we plan to adjust the WUELS model to operate on the ellipsoidal coordinate system.

- 3) **In the voxel discretization, authors divide the region into an inner voxel and an out voxel. The outer voxel is used to also include those signals penetrate the model from the laterals. However, authors should explain how to model the SWDs in the outer voxel. As seen in Figure 3, it seems the outer voxels are too coarse to model the SWDs.**

In the case of set0 and set1, the refractivity in the outer domain is estimated together with the refractivity in the inner voxel domain. In the case of set2, the paths length and refractivity in the outer domain is set to zero (since already removed beforehand). The outer domain is coarse to avoid passing signals through lateral boundaries. This approach has some drawbacks as the signal is considered to be a straight line over the long distance in the outer voxels. This led us to apply two approaches for removing the outer parts of SWD (set0 and set1, set2) and compare them.

- 4) **Line 4 of page 7, how did you get the number of 120 times in the quality control?**

The number of 120 was defined empirically and removes large outliers in SWD only.

5) For Figures 8, 9, since the wet refractivity varies greatly over the time and space. It is not convenient to compare your results with previous studies. I thus suggest authors to also give the statistics of relative RMS

Thank you for this comment; we have redrawn Figures 8, 9 to include also the statistics of RMS.