Editor comments on angeo-2018-93-manuscript-version8

My comments (in black) to yours answers (in green) to my previous review

The impact of mapping functions on ZHD (ZWD) and gradients is not equal or fully comparable. The magnitude of gradient is more sensitive to MF, compared to the ZHD (ZWD), because it is estimated from all the satellites (observations) and directly scaled with the actual gradient MF. In the case of ZHD (ZWD), the MF affects the estimated zenith delay depending on elevations of individual satellites (observations). Improving gradient MF will only be possible if high-resolution and high-accurate NWM data sets are available. Optimal selection will be available only if we have another high-accuracy and independent observations for the gradients.

I don't understand your argumentation. Both types of parameters (ZWD and gradients) are estimated from all the satellites and are directly scaled by their MF, see your Eq. (1). I don't see how the sensitivity of parameters can be compared directly (which one is more/less sensitive) without a quantitative assessment. Do you have any results, documentation, or reference of this? Please use in the manuscript.

Time periods with unrealistic cases influencing strongly the quality of tropospheric gradients from RT3 were fully excluded from statistical evaluation. This step partly influenced also RT1 results.

Can you be more specific and explain the detection procedure used? Is it the same for both RT streams? How many cases were excluded from the RT1 and RT3 datasets? This information may be useful to other users of these products. => add a short explanation and numbers at the end of Section 2.4 when you mention "data screening".

Now mentioned in section 2.4.

Add to the text inserted P7L17 the numbers of values used or compared (55 days x 243 stations x 288 estimates per day ~ 3.4x10^6 values). Since this applies to all three Tables, the information can be removed from section 3.2.

P16L1-2: I think both plots show results close to the expected behaviour: smaller residuals near the zenith and larger at low elevations. SINEL2 is preferred not because of the residual properties but because more accurate parameters are estimated (ZTD, coordinates, etc.).

You are right, but still there are differences in the distribution of residuals as we describe them in the manuscript. We don't see any reason for degradation close to the zenith. Therefore, we keep the text in its previous version.

There is no degradation at the zenith, just a distribution of residuals consistent with the observation weighting model (more uniform). The sentence could be revised as: "It is closer to the expected behaviour…" => "Both show the expected behaviour…"

Comments on manuscript version 9:

P20L14: "Since no meteorological data providing any information about prevailing atmospheric conditions during the evaluated time period entered the GNSS data processing," This is not generally true, e.g. when VMF1 and ECMWF a priori ZHD/ZWD data are used. In your case GMF and GPT and used, so it is important in the conclusion section to be more specific about what is a general result and what is specific. => add "(because we used empirical mapping functions and a priori tropospheric delays)"

Add the missing sections at the end of the manuscript (see https://www.annales-geophysicae.net/for_authors/manuscript_preparation.html):

- Code availability
- Data availability
- Sample availability
- Team list
- Author contribution
- Competing interests

See especially the Data policy of the journal:

https://www.annales-geophysicae.net/about/data_policy.html