

Responds to the comments1

The authors have properly made corrections in response to my points. Additionally, they have added the discussion with an attempt to correct the vertical deflection, which is welcome. To finalize the paper, please consider the last points below :

L285: Account -> Accounting

L288: 2001). -> 2001),

L290: Where -> where

Reply: These errors in L285, L288, and L290 have been corrected.

L302: The paragraph wouldn't start here.

Reply: This paragraph has been moved up to L281 in front of Table 3.

Section 5: It is uncommon to have the title "Conclusions and discussion". I suggest that the discussion part (the third paragraph starting from L324) is moved to Section 4 so that Section 5 is dedicated solely for conclusions. Also there is ambiguity in the first sentence of Section 5. Some readers may start with Conclusions, so it is better to clearly describe the "two methods" comparing the azimuths measured in the past and re-measured recently.

Reply: Thank you very much for your suggestion. The third paragraph of "Conclusion and Discussion" (starting from L324) discusses the results of the re-measurement. Therefore, it would be more suitable to be placed in Section 4. Now this paragraph has been moved to Section 4 (starting from L281). Section 5 only displays the conclusion section.

Responds to the comments2

There is just one comment from Reviewer #2:

It would be better to briefly describe (in Section 4?) how the angle measurements are made with a theodolite (how many repetitions? in both faces?).

Reply: Thanks for the reviewer's suggestion. We have added a description of the number of repeated measurements in Section 4 (starting from L288) and provided the mean square error of the measurement results in Scenario II and Scenario IV. These sentences are “The last one is that measurement errors will be introduced when measuring the angles between the azimuth mark and the GNSS target in Scenario II and IV using theodolite. In this work, each angle was measured 6 times. The standard deviation of angle α in Fig. 3 of Scenario II is 2.5”, and standard deviation of angle α_1 and α_2 in Fig. 5b of Scenario IV are 3.3” and 1.8”, respectively.”