

Dear reviewer,

I am really grateful for your numerous hints to unclear or mistakable wordings, verbal errors, typos and errors in equations! I tried to follow all your hints and advise. I hope this led to a substantial improvement of the paper.

I added a section explaining how error bars are calculated and I corrected and completed the section about base line determination.

The abstract has been reduced.

Your major concerns were:

- 1) Missing source code.

Replay: We will add the MATLAB source code as supplementary material to this publication. It still needs some revision and will be uploaded, possibly not before the interactive public discussion.

- 2) Evaluation of measurements without zenith ocular and example of outlier:

Replay: I am going to provide simulated results as proposed.

- 3) It takes some time to understand what Figure 1 is telling.

Replay: I tried to better explain the figure. But the matter is rather complicated. The plot allows nicely visualizing the set of orientations within a certain measuring scheme. We found out, that even people experienced with DI-measurements found it interesting to see, that all possible orientations are on two different lines and that you always need two rotations of  $180^\circ$  on both circles to get from a given sensor-up the respective sensor-down position. We thought about a 3D plot showing these things but could not find one. We added declination and inclination values of the three

observatories. They are the parameters determining the shape of the dashed lines specific to each observatory.

4) Use of symbols being incorrectly or too late introduced.

Replay: We tried to introduce now all symbols before using them.

Your effort to find so many errors in the text and in the equations is really appreciated!

I hope I covered all your concerns and apologize for the long time needed. Your contribution is really appreciated! It would be great if you could also contribute to the open discussion.

With best regards,

Heinz-Peter Brunke