

## ***Interactive comment on “Stability analysis of geomagnetic baseline data obtained at Cheongyang observatory in Korea” by Shakirah M. Amran et al.***

**Shakirah M. Amran et al.**

shakirah@sirim.my

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The authors thank to the Peer Reviewers for his/her valuable comments to the manuscript. All changes done in the light of the reviewer's comment are highlighted in the revised version.

### GENERAL COMMENTS

1. The paper presents the method of baseline correction. However there is no solid evidence, that correction is appropriate for all elements (H,D,Z). Comparison D from CYG and D from IGRF is only partial evidence It is not understandable that no analog information is given on H and Z elements although they have greater baseline jumps.

C1

I think a good evidence would be a comparison with neighboring observatories (e.g. KAK, KNY, MMB).

Author's response: The authors have made a comparison with KAK data. The KAK data show that there are no similar jumps in all baseline components. Fig. 4 was added to show the KAK baselines for comparison. A brief explanation to the figure was added too.

### SPECIFIC COMMENT

2. Most items listed in the section "References" are not referred in the text of the paper. That is completely unacceptable.

Author's response: All the references are cited in the text.

3. Page 1, line 28 The word "easier" should be rather replaced with "more accurate" or similar.

Author's response: Corrected as reviewer suggested.

4. Page 4, line 9 The word "immediately" should be rather replaced with other word e.g. "permanently".

Author's response: Corrected as reviewer suggested.

5. Page 2, line 10 Now is "is used for control room". Should be rather "is used as a control room".

Author's response: Corrected as reviewer suggested.

6. Page 3, lines 2&3, lines 22@23 In my opinion there is contradiction between the following sentences: "The first step with magnitude of approximately 5.2 nT was found in H on 1 July 2014." (lines 2&3) and "Small step of approximately 0.3 arcmin in magnitude can be observed in D on 1 July 2014 but it does not show a similar trend with H and Z." (lines 22@23) .

C2

Author's response: We wanted to explain that the first step can be found in DHZ components on 1 July 2014. But after July 2014, no more steps can be seen in D baselines compared to the H and Z baselines, in which two more steps happened on 23 Oct 2014 and 4 Jun 2015. We have rephrased the sentences to provide better explanation. We have also made a correction on the date of first step which is 7 July 2014 and not 1 July 2014.

#### TYPING ERRORS and TECHNICAL CORRECTIONS

7. Page 2, line 7 Now is "form". Should be "from"

Author's response: Corrected as reviewer suggested.

8. Page 3, line 22 magnitude instead of magntitude

Author's response: Corrected as reviewer suggested.

Please also note the supplement to this comment:

<http://www.geosci-instrum-method-data-syst-discuss.net/gi-2017-8/gi-2017-8-AC1-supplement.pdf>

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Interactive comment on Geosci. Instrum. Method. Data Syst. Discuss., doi:10.5194/gi-2017-8, 2017.