

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

**Anonymous Referee #1**

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### GENERAL COMMENTS.

This paper can be interesting especially for people, who are conducting routine observations of geomagnetic field. The problems described in that paper are more common, especially in new-established observatories. The paper draws especially attention on problems related to observations of slow changes of the earth's magnetic field i.e. geomagnetic secular variations. We know that accuracy of observations of secular variations is mainly determined by quality of baseline determining. The authors of the article rightly note, that special attention should be paid to an unexpected jumps on baselines. Such jumps were observed on 2014 and 2015 baselines of Cheongyang observatory. A cause can be both on the side of recording of magnetic variations and

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absolute control. The analysis carried out in the paper shows that the reason was in the absolute house. 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. I think a good evidence would be a comparison with neighboring observatories (e.g. KAK, KNY, MMB).

### SPECIFIC COMMENTS.

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

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

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

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

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 magntitude can be observed in D on 1 July 2014 but it does not show a similar trend with H and Z." (lines 22@23)

### TYPING ERRORS and TECHNICAL CORRECTIONS

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

Page 3, line 22 magnitude instead of magntitude

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