

## ***Interactive comment on “Evaluation of the IGS–Global Ionospheric Mapping model over Egypt” by Mostafa Rabah and Ahmed Sedeek***

### **Anonymous Referee #2**

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This paper reports improvement of the GNSS positioning accuracy by modifying the ionospheric global model using the regional ionospheric data. This study is worth publishing in this journal. However, this reviewer recommends the authors to address the following issues before its publication.

- Kp index, which represents geomagnetic activity, on April 15, 2015 was 2+3-3-5 5+4-5-4- This condition is moderately disturbed. Horizontal distribution of TEC could not be homogeneous compared to that on geomagnetically quiet conditions. It would be better to describe geomagnetic conditions in this paper.

- Figure 4 What is shown in the horizontal axis? Local standard time in Egypt? TEC at "alex" is highest at 0 LT(?). Is this TEC correct value? Why is TEC is highest around midnight?

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- Figures 8-10 – This reviewer considers that it is worth showing comparison of TEC obtained from GIM and modified GIM at the two locations used as the baseline to show how much TEC affect the accuracy of the positioning.

Minor comments - l. 148, at a unit of TEC: "2" should be a superscript of "m". - l. 165, "10<sup>11</sup>:10<sup>12</sup>": Change ":" to "-" or "i;d". Unit of this values should be e/m<sup>3</sup>. - l. 176: "ECEF" appears in this line firstly. Describe its full name here, instead of l. 182. - l. 180: Explain X<sub>N</sub>, X<sub>E</sub>, and X<sub>U</sub>. - Figure 6: In the 3th column of the left-hand side: Third line cannot be seen. - Figure 7: Insert a space between "April" and "15".

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