

## ***Interactive comment on “Morphology of GPS and DPS-TEC Over an Equatorial Station: Validation of IRI and NeQuick 2 Models” by Olumide O. Odeyemi et al.***

### **Anonymous Referee #2**

Received and published: 13 August 2018

The manuscript deals with the comparison of observed and modeled TEC over the African equatorial sector. Even though comparative studies of modeled outputs with observations from different sectors have importance in terms of modelling, the present paper is not well organized and presentation is monotonous with poor English. The manuscript needs substantial revisions to become suitable for publication. Some of the comments are outlined here under.

The English is at very primary level with several misleading, confusing and incomplete sentences. The manuscript requires a thorough English revision by a person well known with English

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The introduction is too lengthy which must be reduced

The conclusion section must be rewritten outline main and new findings of the present study.

Line 176: .... Krishna software.. - Give reference and/or the place where it can be archived.

Line 190: Instead of giving infinity, the upper height limit of the ionosonde topside profile must be given in the integral limits of second part.

Lines 200-201: refine the sentence about relation between UT and LT

Lines 229-332: the sentences are too monotonous. Must be rewritten

Figure 5 title must be rewritten

Lines 369-370: It is not the interaction of electric and magnetic fields. It is because of the vertical drift caused due to the combined effect of mutually perpendicular electric and magnetic fields on the plasma.

The study is nominal comparison of TEC from different methods and model. Whereas the statement in lines 456-457 "This will reshape the model parameters for improved ionospheric modeling over Africa" is superstitious.

Figure 3b: Cross check the huge negative values in March or Dec.

I am attaching annotated manuscript with more corrections and suggestions.

Please also note the supplement to this comment:

<https://www.ann-geophys-discuss.net/angeo-2018-57/angeo-2018-57-RC2-supplement.pdf>

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Interactive comment on Ann. Geophys. Discuss., <https://doi.org/10.5194/angeo-2018-57>, 2018.