

Reviewer #1 Comments:

Report on the revised version paper “Ionosonde Total Electron Content Evaluation Using IGS Data” by Telmo dos Santos Klipp et al.

The authors properly satisfied all my previous requests. The paper now is improved and more significant from a scientific point of view. Before suggesting it for publication, I would suggest the authors to consider the following minor comments:

- page 1, line 10, replace “...and plasmasphere, and the NeQuick topside formulation.” with “...and plasmasphere, and a corrected version of the NeQuick topside formulation.”

Authors: The sentence was modified.

- page 2, line 8, replace “...optimization, and the NeQuick topside formulation (Pezzopane and Pignalberi, 2019).” with “...optimization, and a corrected version of the NeQuick topside formulation (Pezzopane and Pignalberi, 2019).”

Authors: The sentence was modified.

- fig. 10, replace “Km” with “km”

Authors: The Fig. 10 does not show “Km”, but Fig. 7 does, and it was corrected to “km”.

- pag. 11, line 4, delete “Pignalberi et al., 2018”, they do not talk about NeQuick there.

Authors: The reference was removed.

- pag 12, line 2, delete “Pignalberi et al., 2018”, they do not talk about NeQuick there.

Authors: The reference was removed.

- pag. 12, lines 8-12, replace “In Pignalberi et al. (2018), the authors propose a statistical assessment to create a two-dimensional grid to map H0 values, as a function of f0F2 and hmF2. Pezzopane and Pignalberi (2019) propose a new calculation of H0 using also a combination estimatives, derived from different Swarm satellites datasets.” with “Pezzopane and Pignalberi (2019) proposed a new formulation for H0 based on electron density measurements made by the Swarm satellite constellation.”

Authors: The sentence was modified.

- pag. 12, line 12, replace “...the values of H0,AC and H0,B for a given input (f0F2, hmF2). The grids...” with “...the values of H0,AC and H0,B as a function of f0F2 and hmF2. Specifically, the

Grids...”

Authors: The sentence was modified.

- pag. 12, line 13, when talking about IRI UP, please, put the following references:

A. Pignalberi, M. Pezzopane, R. Rizzi, and I. Galkin (2018), Effective Solar Indices for Ionospheric Modeling: A Review and a Proposal for a Real-Time Regional IRI, *Surveys in Geophysics* 39:125–167, <https://doi.org/10.1007/s10712-017-9438-y>.

A. Pignalberi, M. Pietrella, M. Pezzopane, and R. Rizzi 2018, Improvements and validation of the IRI UP method under moderate, strong, and severe geomagnetic storms, *Earth, Planets and Space* 70:180, doi:10.1186/s40623-018-0952-z.

Authors: The references were included in the sentence.

- pag. 15, delete the last sentence “It is relevant to mention that the vertical electron density distribution in the plasmasphere was determined based on a new criterion introduced in this work in which it is applied an adjustment of plasmaspheric basis density, as defined by (Jakowski, 2005), using an optimal factor (K) to minimize the global RMSE.” you have already highlighted this concept previously in the text, it is not necessary to reiterate it at the end of the paper.

Authors: The sentence was removed.

Reviewer #2 Comments:

- Grammar and style of the text should be edited. For example: "... decay too rapidly over 800-900 km" should say: ... decay too rapidly above ~800 km altitude

Authors: The sentences were edited as suggested.