

Interactive comment on “Variation in total electron content with sunspot number during the ascending and maximum phases of solar cycle 24 at Birnin Kebbi” by Aghogho Ogwala et al.

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LIST OF CORRECTIONS: REVIEWER 1 1. The title of the paper have been adjusted to suite the body of the paper. 2. More numeric and statistical data have been included in our work and compared with IRI-2016 model. Figures 1 – 8, Table II, Lines 192 – 196, 228, 241 – 151, 266 – 271, 274 – 276 attest to our claim. 3. Lines 311 – 316 explains pre- and post-midnight differences of GPS-TEC for all seasons, while 317 – 321 explains the positioning errors of the annual GPS-TEC. Hence, all results have been sufficiently investigated. Some lines in the introduction were deleted while new lines were added in RED. 4. Lines 90 – 96 introduces the IRI model. 5. In line 141,

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equation 3 have been corrected appropriately. 6. Line 161 stated that the SPIDR website used to obtain sunspot number became unavailable shortly after data were downloaded from it. 7. Figures 1 – 4 now reflects day-to-day variation of GPS-TEC using error bars which shows deviation from monthly mean values. 8. Lines 147 – 149 states ionospheric height used in equation (4) along with minimum elevation cut-off angle. 9. In lines 138 – 140 VTEC, STEC are defined. 10. In Line 105 EIA have been defined as Equatorial Ionization Anomaly. CORRECTIONS: REVIEWER 2 1. Lines 168 – 169 shows the methodology have been beefed up by including % deviation of IRI-2016 model from GPS-TEC, thus leading to equation (5). 2. Line 132 now includes the sample rate of 60 iteration (1 minute time resolution) data sample rate is now included. 3. Also, in lines 147 - 149, ionospheric shell height for corresponding elevation cut off angle in the equatorial/ low latitude region have been corrected. 4. In lines 141, the error in equation 3 have been sorted. 5. We have stated that the SPIDR website used to obtain sunspot number became unavailable shortly after data were downloaded from it (see line 161). 6. Lines containing information on ionosonde and incoherent have been deleted 7. Figures 1 – 4 shows day-to-day variation of GPS-TEC have been indicated using error bars which shows deviation from monthly mean values.

Other minor errors like spacing, spellings, etc have been corrected. It important to mention that new text in RED have been added.

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