

## ***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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We appreciate comments of anonymous referee number 2. Some of the points he raised was mentioned by the 1st referee which we have addressed, for example points number 2 and 3. Our response to the other points are as follows: 1. The data used in the study are raw daily data in 60 iterations (1 minute time resolution). These minute values are averaged to hourly values and further averaged into daily values which are plotted against the hours of the day. Elevation angle of 20 degrees is appropriate for the region used in the study. The region is located in the desert region where obstacles are very few or even absent. Ionospheric shell height of 350km will be included in the

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body of the paper. 2. The formular for converting STEC to VTEC will be changed to the correct one. 3. We obtained our data from the SPIDR website before it became unavailable, we might consider deleting it. 4. Yes, ISR can sound through the entire ionosphere. The statement will be corrected. 5. Deviations from monthly mean values (SD) will be included on each plot to reveal day-to-day variability of TEC. 6. According to some researchers (Dabas et al., 2003; Anderson et al., 2004), magnetic field tubes at sunrise leads to solar Extreme Ultraviolet ionization coupled with upward vertical drift of electric and magnetic fields. 7. The peak of TEC in some months occurs exactly at noon. 8. Standard deviation (SD) will be used to reveal the phenomenon. 9. Lines 225-232 will be rephrased 10. All other minor errors mentioned will be addressed accordingly.

Thank you.. Authors

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