

Dear Authors,

I am coming back to you on the status of your paper. Thank you for your response to the referees' comments. All three referees found your paper as interesting and contributive to the ionospheric research. The argumentation in the manuscript is given in an easy way, is clear and is easy to follow. There was also pointed out in the reports that the work you are presenting in the manuscript is important step towards a more precise representation of the state of ionization of the ionosphere. However, referees had some important objections to the present version of the manuscript, and this is a reason why I suggest a minor revision. Please, consider carefully and discuss in the revised version of the manuscript all comments of the referees.

From my side, I would like to draw your attention to:

i) Ppage 2, paragraph 25:

The TEC variation is correlated with the diurnal and seasonal time variation, and the ionospheric delay **above the locations involved in the study** reaches its maximum around 14 hours local time (LT) and its minimum around 2 LT. Also, the TEC is **higher** in spring and autumn, and **lower** in summer and winter (**here you mean the same local time?**).

ii) I agree with the referee's comment that using both F10.7 and SSN is not necessary, or you need to argue the necessity/importance of using both indices.

iii) As for using *Kp* and *Dst* indices, there it is necessary to take into account different sources of ionospheric disturbances CMEs and CIR/CH HSSS. CMEs induce non-recurrent storms, while recurrent storms are driven by high-speed solar wind and reappearing with about 27-day periodicity, when the same coronal hole (CH) is facing the Earth. During this kind of disturbance the *Dst* index remains smaller, but because fast streams with southward IMF component may last much longer, the CIR/HSSS related storms have a longer duration, and the cumulative effects of these storms could be more severe than the effects of CME-related storms with significant decrease in *Dst*. (Buresova, et al., 2014). So in the case of coronal holes you need to monitor polar activity (e.g. *Kp*, *AE* , unfortunately, is not available in real time)

If you are prepared to undertake the improvements required, please submit the revised manuscript as well as a list of changes or a rebuttal against each point, which is being raised when you submit the revised manuscript.

Kindest regards

Yours sincerely

D. Buresova