

Comments on the manuscript

Angeo-2019-14

**'Investigation of the ionospheric absorption response to flare events during the
solar cycle 23 as seen by
European and South African ionosondes'**

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By

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General Comments:

The paper had significant improvements. The English, the figures and also the physical discussions were included and improved. It is an important work with good results. However, I still have few questions and suggestions before the publication. After the authors improve this part, I recommend for publishing.

Comments:

1. **Introduction:** The authors commented on Sripathi et al 2013 work (lines 20-22). The strong Es layers that occurred before of the solar flare were due to the wind shear mechanism presence during the Counter Electrojet (CEJ) event. Therefore, the Es layers occurrence does not related to the flare event. The CEJ event that is related to the solar flare, and in turn, the blanketing Es layers occurred in equatorial regions. Please, consider to explain with more details about this work or remove this discussion.
2. The authors need to explain Figure 1 with more detail. I did not understand the black line in the figure. I imagine it to be the fmim parameter. Authors need to better to define this parameter in the manuscript since it is using a general criterion. I would also like to have a more little discussion regarding the differences in the equatorial region and mid-latitudes in relation to the blackout events that occurred in this day.

3. **Discussion:** Line 27-30 -First paragraph is very confusing after the modifications.
4. Li et al is missing is missing an end point (page 13).