

# ***Interactive comment on “Influence of atmospheric dynamics during events Secondary Effect of the Antarctic Ozone Hole on southern Brazil” by Gabriela Dornelles Bittencourt et al.***

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We thank the Anonymous Referee #1 for fruitful comments and the question/doubts on the paper. All the questions/doubts will be replied point by point just below. NOTE: The new inserts in the paper are in red color.

## REFeree COMMENTS/QUESTIONS AND REPLIES:

1. The total tropospheric analysis, which is supported by Figure 3, is very confusing. Especially, Fig. 3 has an incorrect description for each figure (same date for example examples). Next, I think it should be read by some meteorologist to improve this

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part. REPLY: Thank you for considering this part of the work and have suggested clarification, especially about Figure 3. The changes have been made and the text has been rearranged to better understand the new version of the article, as seen on page 8 (Lines 242 to 266) Errors occurred and the dates were really wrong, but now they have been corrected.

2. I would like to ask the author why they chose as a case study on September 18, 2017 if they can find a stronger event throughout the period. This should be discussed in more detail. REPLY: The event was chosen on 09/18/2017 as it was the most recent event identified in our studies. Previous works already identified this type of event over the region of interest. For example, in October 2016 there was the second AOH influence event ever recorded in southern Brazil, and it was deeply discussed by Bresciani et al. (2018) and Bittencourt et al. (2018), and in addition to these studies, other works show similar events occurring in that region. This explanation was added on page 7 (lines 215-218).

3. In the part of the discussion, it should be mentioned what is the reason for the rest (you say 92% has jet stream present) of the events. If this issue is resolved, I can recommend the manuscript for publication. REPLY: Thanks for the note, and the corrections have also been changed in the text for better understanding. This explanation was added on page 10 and 11 (lines 333-343).

Please also note the supplement to this comment:

<https://www.ann-geophys-discuss.net/angeo-2019-104/angeo-2019-104-AC1-supplement.pdf>

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