We thank Editor Igo Paulino for the suggestions and questions in the paper. All questions / concerns and suggestions will be answered point by point below.

### NOTE: New inserts in the paper are blue.

### EDITOR'S COMMENTS / QUESTIONS AND ANSWERS:

### In the introduction, it is not clear the objectives of the present work and what is the new findings from the authors to the knowledge on the dynamics of the ozone holes.

Answer: The text has been rearranged and the main purpose of this work has been added. See page 3, line 79.

# Line 35: In my opinion, this statement must be re-written. I agree with authors about the importance of the ozone to the stratosphere and atmosphere, but I would not write it as "the most important constituent" because It depends on the objective of study.

Answer: The whole sentence has been reworded for a better understanding. See page 2, line 34-35.

Line 54: delete "in and". Answer: The suggestion was accepted, and corrections were made. (page 2, line 57)

### Line 60: mid- and low-latitudes

Answer: The suggestion was accepted, and corrections were made. (page 2, line 62)

## Lines 65-66: Effects of this secondary event on middle latitude regions such as the southern region of Brazil, where ozone content falls over the region from August to November have been published elsewhere (Peres et al., 2014,2015).

Answer: All references to this were mentioned in the paper throughout the text. (page 2, line 65-66)

### Please, write the meaning of all acronyms as soon as they apear in the manuscript, e.g., SSO, MKII, MKIV, SSO, WMO, UT-LS (described only in the abstract), etc.

Answer: Actually, WMO is at the line 68. It was added the meaning of this acronym. The meaning of SSO is at the line 88-89, just before "(SSO/INPE)". The meaning of UT-LS was properly added at line 72 (pg 3).

#### Line 269: "...For the day of the event September 18, 2018, it was..."

Answer: All the sentence was rephrased. Thanks for had noted this mistake. (page 9, line 274)

#### Line 310: "November is the month.."

Answer: The sentence was changed in a proper way. (page 10, line 317)

### Line 345: Please, revise: "It was shown from PV and PV anomalies..." It is confuse. Answer: The sentence was changed in a proper way. (page 11, line 355)

### Why did not you overplot the Jet stream and Omega on the map in Figure 6?

Answer: Figure 6 shows the jet field at 250 hPa represented by shading in the figure, and omega is in positive and negative values, solid lines representing omega with positive values and dotted line omega with negative values.