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## RESPONSE TO EDITOR CORRECTIONS

Thank you very much for your time and comments on this MS. Please find answers to specific comments below. Please find the response to queries and the corresponding change in the MS in **blue typeface**. We do hope that the editor will find the revised version more interesting and recommend publication soon.

P1, L15: “in the tropics” should be moved before “during the past five decades”.

Done, please find it in line 14.

P2, L29: downwards -> propagate downwards

Done, please find it in line 29.

P2, L31: earth -> Earth (?) . Later you indeed start with a capital letter. However, if “Earth” or “earth” is the correct version should be checked with the ACP guidelines and then corrected accordingly.

Done, changed it in line 31

P2, L27: Mccromick -> McCormick

Done, corrected it in line 38

P3, L71: I would write here “polar stratospheric clouds” (even if they are in the tropics not polar, but then the reader at least knows what type of clouds are needed). Alternative you could also write what kind/type of PSCs are required.

Done, rephrased it in line 72

P3, L71: Which CFC-12 observations. Please clearly state which CFC-12 observations you refer to (which instrument/model).

Done, its observations and model results. This is mentioned in line 73.

P3, L80: I would suggest to add “its successor” before SAGE II

Done, please find it in line 82

P3, L81: add “respectively, “ after Aura.

Done, there is no sequence here, so “respectively” is not added.

P4, L86: Mention that this is also a merged data set.

Done, please find it in line 89

P4, L97: “(/2)” correct? Or is there a typo?

Done, corrected it in line 100

P3, L79ff: I would add a “the” before each long version of the instrument names (even if this is often skipped when only the abbreviation is used). , P4, L86: Add “the” before “Stratospheric Water and.....”.

P4, L102ff: Also here, I would suggest to add “the” before the long names of the instruments.

P5, L134: Add “The” before “Tropospheric Ozone.....”, P5, L139: Add “The” -> The Ozone Mapping.....

P6, L144: Add "The" -> The Ozone Monitoring....., P6, L160: add "The" -> The Ozone Mapping  
Done, we have added in some places as appropriate, but not everywhere. Thank you.

P4, L101: Merged -> merged  
Done, please find it in line 104

P4, L113: location of SHADOZ -> location of the SHADOZ  
Done, please find it in line 116

P5, L117: radiosonde -> radiosondes  
Done, please find it in line 120

P5, L128: regions -> region  
Done, please find it in line 131

P5, L129: Hyplit -> HYSPLIT  
Done, please find it in line 132

P5, L130: of TOST -> of the TOST  
Done, please find it in line 133

P5, L134: in earth's -> in the earth's (Earths's?)  
Done, , Please find it in line 137

P5, L136: "and the detection of ozone depletion events" -> detects ozone depletion events (?)  
Done, please find it in line 140

P5, L137: Add "the" -> the GODFIT  
Done, please find it in line 140

P5, L139: Add "the" -> on-board the Suomi.....  
Done, please find it in line 142

P5, L140: delete "in"  
Done.

P6, L145: Add "the" -> scattered by the  
Done, please find it in line 148

P6, L149: Add "the" -> of the global  
Done, please find it in line 152

P6, L163: hereby -> here and what do you mean with explanatory variables? Rephrase?  
Done, please find it in line 166

P7, L173: add “merged” -> the merged satellite data

[Done, please find it in line 176](#)

P7, Figure 1: O3 in the legend cut.

[Done, please find it in the revised Figure 1](#)

P8, Figure 1 caption: add “the” twice and add “s” to show ->..... by the Ozone Mapping shows the region of the ozone hole.....

[Done, please find it in line 189](#)

P9, Figure 2 caption: Since you already have introduced the instrument names in the text, this is obsolete to be repeated in the figure captions.

[Done, please find it in lines 214–217](#)

P9, L221: data set or dataset? Please check the manuscript, I had the following that you used both versions of writing it.

[Done, we have consistently used “dataset”, e.g. line 103, 126, 204, 218](#)

P9, L229: MAM not introduced. I would suggest to write March, April and May (MAM).

[Done, please find it in line 227](#)

P10, L234: better to write “the trends” instead of “that”?

[Done, it is already mentioned, which is why we have used “that of”](#)

P10, L235: the trends ...is -> either the trends.....are or the trend .....is

[Done, please find it in line 232](#)

P10, L236: Same here, mixture of singular and plural.

[Done, corrected find it in line 234](#)

P10, L237: check sentence. Rather “and these in the lower and middle stratosphere are nonsignificant....

[Done, corrected it in line 235](#)

P10, L239: Aura MLS? Rather UARS MLS since Aura MLS was launched at around 2004 and not before.

[Done, please find it in line 237](#)

P11, L255: I would suggest to write 1960s, 1970s and 1980s instead of 1960, 1970 and 1980.

[Done, please find it in line 253](#)

P11, L262: low ozone air -> better to write “air with low ozone”?

[Done, please find it in line 259](#)

P13, L277: ppm/yr -> ppm/yr-1 (see ACP guidelines)

Done, please find it in line 273

P13, Figure 5 caption: In many cases capital letters are used where small letters should be used, e.g. Bottom Right/Left Panel -> bottom left/right panel

Done, the sentences are complete. So capital letters are used. Please find it in line 280

P14, L289: I think for ACP it should rather be written with small letters -> southern hemispheric.

Done, it is abbreviated now in line 287

P14, L293: bias -> biases

Done, please find it in line 291

P15, Figure 6: Since the abbreviation of the instruments have been introduced in the text, this does not need to be repeated in the figure caption.

Done, please find it in line 297

P16, L318: "mechanism" twice -> one obsolete

Done, we have removed one, please find it in line 314.

P16, L319: add "ice" -> for ice particles

Done, please find it in line 315

P16, L322: is -> are

Done, please find it in line 319

P16, L324: Tropics -> tropics

Done, please find it in line 321

P17, L338: of BDC -> of the BDC

Done, please find it in line 335

P17, L356: This is a bit of a repetition here and I would suggest to move this remainder of this paragraph to the conclusion section.

Done, please find it in line 360

P17, L358: reanalysed -> reanalyses

Done, please find it in line 362

P17, L366: of BDC -> of the BDC

Done, please find it in line 358

P18, L382: skip "the" and replace "is" by "are"

Done, "is" for the "no competing interest". Thank you.

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