

Editor Corrections for ACP Manuscript No. ACP-2020-746 2nd revision

Dameris et al., Record low ozone values over the Arctic in boreal spring 2020

P1, L15: Abbreviations ERA5 and ECMWF need to be introduced

P1, L18: change to, namely the 1997 and 2011 seasons that were also showing.....

P1, L23: in Northern hemisphere spring 2020 → in the Northern hemispheric spring 2020

P1, L34: (here 2016) → (as e.g. 2016)

P2, L1: can occur in polar regions → can occur in the polar regions

P2, L2-3: Sentence not clear. Does the ozone depletion hampers the transport or the chemical and dynamical processes? Sentence should be split in two or rephrased to be more clear.

P2, L8: The abbreviation SH should be introduced here.

P2, L23: in the polar spring → in polar spring

P3, L2: Introducing SH here is too late. Should already be done on P2, L8.

P3, L4: is known → was known

P3, L5: P3, L5: in NH spring → in the NH spring

P3, L6: as we will see → as will be seen

P3, L9: Here I would suggest to write that these were low, but not as low as 220 DU. Otherwise it feels a bit contradicting to what is written on P3, L30.

P3, L24: delete “such low”

P3, L26: “far removed” is also not the right expression. I would say it is even worse than far away. Please rephrase. I think just writing “far from” could be correct experssion.

P3, L28: delete “it is”.

P3, L29: I would rather write “season” here than “period”.

P3, L32: in Section 5 and Section 6 → in Section 5 and 6

P4, L3 and 4: ERA5 and ECMWF need to be introduced here once again.

P4, L5: delete “was downloaded” and add at the end of the sentence “were used”.

P4, L6: prepared → calculated

P4, L9: produced → “derived” or “calculated”

P4, L9-10: Not clear what you actually derive from ERA5 the PV or the data on isentropes (interpolation from pressure to theta levels)?

P4, L13: The abbreviation TROPOMI needs to be introduced.

P4, L17: total ozone → total ozone columns?

P4, L20: Abbreviation OMI needs to be introduced.

P4, L22: What do you mean with “first”? For the first time?

P4, L25: Also here, the instrument abbreviations that have not been introduced before need to be introduced here.

P4, L29: Sentence not clear. It may be that you need to add a comma after “for”.

P5, L17: which was using → who used

P5, L26: as hinted → as can be seen from

P5, L26: further supported → better to write “in agreement with”

P5, L27: March in 2020 → March 2020

P6, L1: replace either “which is” by “that is” or just write without so that it reads.....inside the height range important for

P6, L7: in both occasions delete “which were”

P6, L8-9: which is found end of → found at the end of January (delete “which is” and add “at the” before end.

P6, L10: Add here that this is the vortex size.

P6, L10: allowing the formation → allowing for the formation

P6, L11: Our results were → Our results are

P6, L24: GTO-ECV has already been introduced. Obsolete here.

P6, L27: Dec → December

P6, L28: Also here, in all occasions Jan should be changed to January.

P7, L2: Connected is not the correct word here. It should rather read “coincides” or “accompanied”.

P7, L3: created → develop

P7, L4: they → these

P7, L7: Abbreviation UK not introduced

P7, L9: Add “Arctic” before winter

P7, L10: was → were

P7, L16-17: I don't understand why you add here the web links to the data. The references to the studies by van Geffen et al. (2017) and Wohltmann et al. (2020) are sufficient.

P8, L4: periods → seasons

P8, L11: in (see e.g. Lawrence et al., 2020) → in Lawrence e.g. et al. (2020)

P9, L20 and 21: What areas? Be more precise.

P10, L1–2: Same here. Cumulative areas of what?

P10, L11: Abbreviation MLS needs to be introduced.

P11, L1-2: NH and SH has already been introduced. Therefore, here it is obsolete and can be removed.

P11, L8: we saw → we found

P13, L2: caused by reduced → caused by a reduced

P13, L28: Add “hemispheric” after Northern

P14, L2: data of → data from

P14, L11: This paragraph stands a bit alone here. Something should be added what one gets from these studies, thus a detailed overview. description or analyses of the Arctic winter 2019/2020.

P14, L19: add “stratospheric” before ozone

Figure 1: this is a very weird solution to make these areas white. This could easily be misread as missing data.

P30, L10: cycle → season