

Earth Syst. Sci. Data Discuss., author comment AC2
<https://doi.org/10.5194/essd-2021-39-AC2>, 2021
© Author(s) 2021. This work is distributed under
the Creative Commons Attribution 4.0 License.

Reply on RC2

Janusz W. Krzyściński et al.

Author comment on "Total column ozone measurements by the Dobson spectrophotometer at Belsk (Poland) for the period 1963–2019: homogenization and adjustment to the Brewer spectrophotometer" by Janusz W. Krzyściński et al., Earth Syst. Sci. Data Discuss., <https://doi.org/10.5194/essd-2021-39-AC2>, 2021

Reviewer comment:

"This paper aims to provide a documentary of the long-term total ozone measurements at Belsk, Poland. This paper is well written and provides a great deal of details about record homogenization and calibration. I have studied stratospheric and tropospheric ozone variabilities for a long time, this manuscript fills me with some measurement history. In terms of data documentation, the material and presentation of the paper is nearly impeccable.

Whereas the authors point out the unexpected CFC emission and 2020 Antarctic ozone hole in the introduction, these issues are not discussed anywhere after the introduction. Since in the research community, the current mainstream seeks to address trends and variability attribution at detailed vertical structure/pressure surfaces, the total ozone measurements are rather handcuffed to answer the questions from a broader perspective. But the CFC emission and 2020 Antarctic ozone hole should be at least discussed further, for example, Belsk is a high latitude location, are the measurements affected by the Antarctic ozone hole in spring of 2020? As far as I recall, I have seen that the impact can be observed by Canadian ozonesonde records."

Author comment:

The Introduction mentions an unexpected upward trend in CFC emissions in recent years, emphasizing the need to continue observations of total ozone in the world. This topic is not discussed later in the text as the manuscript submitted to the journal should mainly focus on data description and procedures supporting data quality. Therefore, the reviewer's suggestion to discuss an impact of the Antarctic ozone hole on the NH midlatitudinal total ozone using Belsk data is left for further consideration.