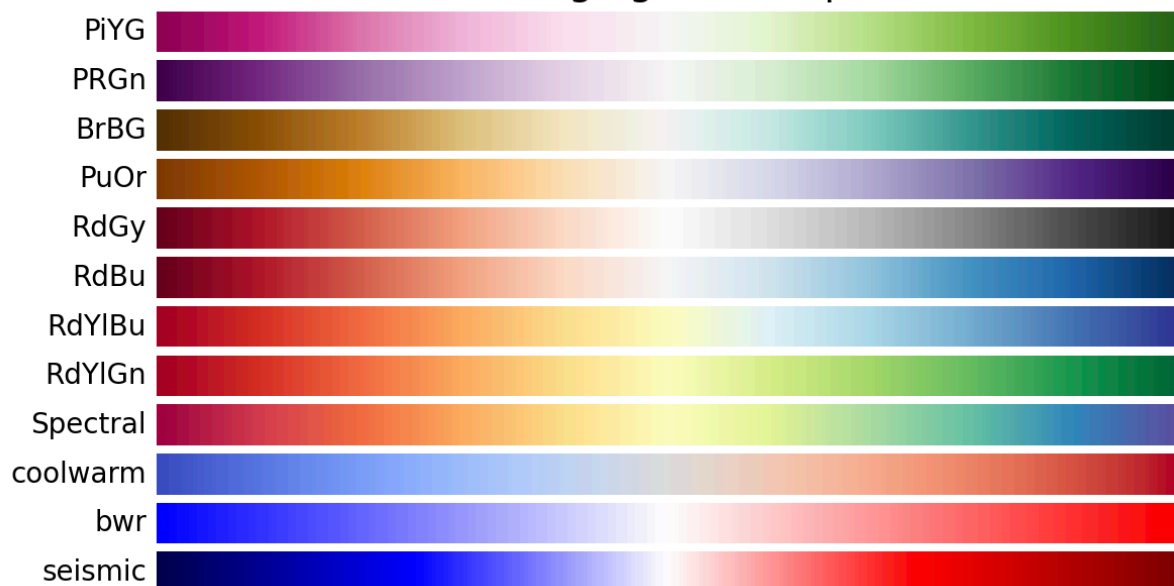# Review#2 of Froidevaux et al. about ozone and carbon monoxide trends in the tropical upper troposphere

This second version of the manuscript is far much better than the previous one, resolving (by updateting the text or by answering my comments) all the issues I have pointed out in my first review. The manuscript now reads well and with clear motivations. I have three new general comments that I asks the authors to address before publishing this study.

General comments:

- This study is based on the 2005-2020 while three additional years are available. For a paper about trends, it is difficult tu understand why the period is not the longest available? Extending up to 2023 would include three additional years which would potentially improve the significant of the trends, esspecially for CO. This would mean to recompute all the figures and update the text accordingly – so an important effort – but it would make this paper stronger. If not, is there any justification to keep the 2005-2020 period?
- The discussion sections 2.2.4 and 3.2.4 are still difficult to read (in particular the first one) because citing to a lot of numbers from different publications. In order to improve the readability, I suggest to create figures with these numbers to allow the reader to visualize the comparison of your study with the findings from litterature. I also suggest to create a table with these numbers where to cite the papers in the supplement. This will lighten these sections and largely improve the message of the paper.
- Contour plots showing differences, sensitivities or trends (Fig. 1, 4, 5, 7, 8, 14 and 16) should use diverging colormap (see below or https://matplotlib.org/stable/gallery/color/colormap_reference.html) centered over 0. For example, in the current state of the manuscript, MLS O3 trend at 178 hPa (in Fig. 5) seems to be strongly negative on the Nothern Pacific ocean which is not the case. Using a divering colormap centered over 0 would aleviate that.

Diverging colormaps

L43: What do you mean by "first-order" correlation? Please, clarify.

L92: "…showed understimates of satellite-derived…". Which satellite? Does MLS included?

L416: "…the O3 and CO…". Please, remove "CO" since the section is about O3.

L447: "…MLS and TCO resolution…". Do you mean vertical resolution? Please, clarify.

L450: "…pattern of UT O3 and…". Do you meam "UT MLS O3"?

L494: "…at least at 147 hPa, there are two strong…". I see only one negative minima above the Pacific ocean. Please, clarify.

L511: "…observations of O3 and CO…". Please, remove CO.

L513: Remove "For O3,".

L623-638: I don't see the point here. What message would you like to bring here? Please, clarify the text.

Fig. 4: Include vertical axis for the latitude as it is done for the longitude.