

Interactive comment on “Evidence for the effectiveness of the Montreal Protocol to protect the ozone layer” by J. A. Mäder et al.

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We thank the referee for his/her valuable comments and suggestions on the paper.

Ref #3: I would recommend that the 2 supplemental figures possibly be included in the paper . . .”

We decided to keep the figures in the supplementary material as they do not directly belong to the main analysis presented in the paper. However, we included in the supplement also figures for stations preferring LT over EESC.

Ref #3: “Are there examples of locations where the explained variance is not significantly different between the EESC and LT . . .”

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We agree that the difference in explained variance between the two scenarios is usually small. However, note that the study is based on a simple sign test regarding preference for LT or EESC. Further, we use the sign test over multiple stations (zonal bands) and therefore the significance of the difference between R2 using LT or EESC is of minor interest and was not considered.

Ref #3: “could you include a legend that shows the length of a line that is significant at the 90% or 95% level.

This would require additional calculations on station level. As we use the sign test over multiple stations (zonal bands) the significance of the difference between R2 using LT or EESC is of minor interest (see above). Therefore this information is not available and cannot be included in the figure.

Ref #3: “ Are there any systematic difference for stations with shorter records ? . . .”

Sensitivity analysis did not show any effect of record length on test value T. This information (see line 200) and an additional figure (now Figure 2) are added in the revised manuscript to illustrate this important test.

All other comments have been included.

We hope that these comments and the changes in the revised manuscript improve the quality of the paper and clarify the points raised by Ref #3.

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