

Interactive comment on “Year-round record of near-surface ozone and “O₃ enhancement events” (OEEs) at Dome A, East Antarctica” by Minghu Ding et al.

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I am glad that the authors expressed interest in the STEFLUX tool for analyzing the stratosphere-to-troposphere exchange at Dome A. However, I would like to ask the authors some clarifications on the use of the tool that they state in the paper.

In particular, what do the authors mean with Lines 339–343? The tropopause within STEFLUX is defined as the “dynamical tropopause”, i.e., the combination of the ± 2 pvu potential vorticity isosurfaces and the 380 K isentrope, as also stated in Škerlak et al. (2014). Furthermore, STEFLUX involves the declaration of a “target box” of interest, which is taken as a reference 3D area for calculating the STT events. I am

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quite confused because I do not see any definition of this “target box”; instead, the authors indicate the combination of $PVU > 2$ and 300 hPa for analyzing the transport. Last but not least, as indicated in the STEFLUX reference paper (Putero et al., 2016), unfortunately the code is not publicly available yet: the outputs of the tool are available on request by writing an email and by specifying the “target box” characteristics and the period of study chosen. I would be more than happy to collaborate with the authors, but so far none of the STEFLUX paper authors has received any request with regard to this.

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Škerlak, B., Sprenger, M., and Wernli, H.: A global climatology of stratosphere–troposphere exchange using the ERA-Interim data set from 1979 to 2011, *Atmos. Chem. Phys.*, 14, 913–937, <https://doi.org/10.5194/acp-14-913-2014>, 2014.

Interactive comment on *Atmos. Chem. Phys. Discuss.*, <https://doi.org/10.5194/acp-2019-1042>, 2020.

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