

Atmos. Chem. Phys. Discuss., referee comment RC1  
<https://doi.org/10.5194/acp-2021-640-RC1>, 2021  
© Author(s) 2021. This work is distributed under  
the Creative Commons Attribution 4.0 License.

## **Comment on acp-2021-640**

Anonymous Referee #1

---

Referee comment on "Impact of biomass burning and stratospheric intrusions in the remote South Pacific Ocean troposphere" by Nikos Daskalakis et al., Atmos. Chem. Phys. Discuss., <https://doi.org/10.5194/acp-2021-640-RC1>, 2021

---

The manuscript describes an analysis of a long-term record of O<sub>3</sub> and CO measurements (multiple sources) and model simulations over the southern Pacific. The study describes the performance of the model, the observed and simulated trends of these pollutants, as well as the contribution of STE and biomass burning to O<sub>3</sub> and CO (only BB). Limitations were found in the model's ability to simulate especially the observed trends, and the relationship between the concentrations and ENSO. These limitations highlight key research gaps that need further investigation by the community, and I recommend are highlighted in the conclusions. The manuscript aligns with the scope and focus of ACP and provides important new results. I have made comments on the attached pdf. Many are related to the presentation and discussion of the results, and thus are not major comments. I do recommend these minor revisions are addressed before the manuscript is accepted.

Please also note the supplement to this comment:

<https://acp.copernicus.org/preprints/acp-2021-640/acp-2021-640-RC1-supplement.pdf>