

Atmos. Meas. Tech. Discuss., referee comment RC3
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Comment on amt-2020-512

Anonymous Referee #3

Referee comment on "On the capability of the future ALTIUS ultraviolet–visible–near-infrared limb sounder to constrain modelled stratospheric ozone" by Quentin Errera et al., Atmos. Meas. Tech. Discuss., <https://doi.org/10.5194/amt-2020-512-RC3>, 2021

The topic of the paper is to show how assimilation of measurements from the upcoming ALTIUS instrument will improve our understanding of the atmospheric state. The paper is lucidly written and well referenced. The title is in my mind too general. I have only one comment about the content of the paper:

A fundamental question (in my mind): What is the real purpose of this paper and study? I think that you already have a confirmation that your instrument will fly and that must be congratulated! If results from this study were bad (ALTIUS measurements do not offer any additional constrain), I think you would like to hide your results in your drawer. But I guess that you can be happy with the results. But this conclusion does not lead to any further developments because a real ALTIUS data simulator (if such an entity exists) has not been used in getting the results.

A study like this would be interesting if data from a realistic data simulator were used or when real data from flying instrument will start flowing in. Results could affect the ALTIUS mission planning and provide help in determining possible biases between various ALTIUS measurement modes and biases with respect to results from other instruments.