

Atmos. Meas. Tech. Discuss., referee comment RC1
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Comment on amt-2021-237

Anonymous Referee #1

Referee comment on "Investigation of space-borne trace gas products over St. Petersburg and Yekaterinburg, Russia by using COCCON observations" by Carlos Alberti et al., Atmos. Meas. Tech. Discuss., <https://doi.org/10.5194/amt-2021-237-RC1>, 2021

A few comments / suggestions:

L42: a reference would be good.

L50: the reference is only 7 years after 2005, which is in conflict to the statement.

L59: 'long lived' should be specified.

L61: 'more crucial then ever' should be rewritten.

L66: I know there is no freely available data from Tansat so far, but shouldn't it still be mentioned ?

L105: this region has 'high uncertainties' because of the high emissions and high fluxes. This then raises the question if the scaled COCCON product can contribute to lower these high uncertainties also on the global scale?

L315: There are very few (or no?) overpasses within 50km for Yekaterinburg. Do the points with a higher difference in Fig. 10 (d and e) correspond to the overpasses with a higher distance? Maybe a plot Δx_{Gas} vs. distance would clarify this (in the appendix).