

Interactive comment on “Bias assessment of lower and middle tropospheric CO₂ concentrations of GOSAT/TANSO-FTS TIR Version 1 product” by Naoko Saitoh et al.

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To Referee #1,

We appreciate you reading our paper carefully and giving valuable comments and suggestions. We have considered your recommendations for revisions and made the necessary changes. The major points that we deal with in the revised manuscript are as follows:

1. Following your advice, we have added Table 2 to present bias values of GOSAT/TANSO-FTS thermal infrared (TIR) version 1 (V1) Level 2 (L2) CO₂ data

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against CONTRAIL CME CO₂ data to which TIR CO₂ averaging kernel functions were applied. It could help readers see Figure 6. 2. Following your advice, we have added Table 3 to present mode values of frequency distributions of differences in monthly averaged CO₂ concentrations between original or bias-corrected TIR and NICAM-TM CO₂ data and numbers of data categorized into the mode values and all 2.5° gridded data used for comparisons. It could help readers see Figure 7.

Individual responses to the Referee's comments are attached as a supplement PDF file.

Please also note the supplement to this comment:

<https://www.atmos-meas-tech-discuss.net/amt-2017-111/amt-2017-111-AC2-supplement.pdf>

Interactive comment on Atmos. Meas. Tech. Discuss., doi:10.5194/amt-2017-111, 2017.

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