

Interactive comment on “Regional uncertainty of GOSAT XCO₂ retrievals in China: Quantification and attribution” by Nian Bie et al.

Anonymous Referee #2

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Major points : See the comments from the other reviewer : - EMMA should be left out as it is the combined product of all other retrieval products shown - Shorten the part on the new version of ACOS, or use only the new version data - Provide a more quantitative analysis of the effect of aerosols and albedo on the observed differences between different algorithms - Provide some clear evidence of performance of GEOS-Chem wrt total column XCO₂

Minor : Textual suggestions :

p.2 line 46 : I think you should leave out TanSat in that particular sentence as that instrument has not yet contributed to a better understanding of . . . as far as I know.

p.3 line 85-86 : rephrase 'that trend . . . to east' because unclear what is meant

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p.9 GLASS albedo is used. For which wavelength is this albedo ?

table 2. Add to the table caption : All biases > 1 ppm are underlined. Change 'the values in parentheses are the biases and their . . . ' → 'the values are the biases and -in parentheses- their. . . '

Table 3 table caption. What are the underlined values ?

p.18 line 350 ('To summarize the quantification. . . SRFP') : I do not understand this sentence given the data.

Fig. 8 Figure caption 'and the differences of detrended . . . and GEOS-Chem' should that be '. . . with GOES-Chem' ?

p.21 line 423/424 I do not understand the sentence 'No bias was found . . . R²=0.77' based on what I see in Table 6. Also it is not consistent with what is written in line 429/430.

p. 23, line 462 results above → results described above

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