

Interactive comment on “The ACOS X_{CO₂} retrieval algorithm, Part 2: Global X_{CO₂} data characterization” by D. Crisp et al.

Anonymous Referee #2

Received and published: 8 February 2012

The manuscript of Crisp et al., AMTD, 2012, presents a detailed overview of the latest version(s) of the ACOS XCO₂ retrieval algorithm and corresponding XCO₂ data products as obtained from real GOSAT data. The manuscript provides a good overview about the algorithm and the data product and many important details users of the data product need to know. The manuscript is well written and highly appropriate for AMT. I therefore recommend its publication in AMT after consideration of a few minor technical details listed below.

I agree with the comments already provided by Anonymous Referee Number 1 and list only a few additional items:

Section 1, page 5, line 24: Please add one sentence explaining why B2.9 is preliminary (ongoing optimization of the post-processing filtering as explained rather late in the

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manuscript in Sect. 7).

Section 2.1, page 8, line 7: Explain IMC.

Section 3, page 12, line 10: Please explain “diverging steps”.

Section 5.2, page 16, line 13: I would be helpful to refer to Tab. 1 when mentioning the WCO₂ band.

Section 5.2, page 18, lines 7-9: Is this statement also true for neglecting chlorophyll fluorescence ? Please provide some evidence, if possible, or consider modifying the statement.

Caption Table 1: As capital letters are used for “Spec tral Ranges” I recommend to also use capital letters for “Spectral bands”.

Table 4: Please explain “Outcome” shortly in the caption and (if necessary) in more detail in the main text.

Caption Fig. 15: Is delta XCO₂ corrected minus uncorrected ? Please add this information.

Caption Fig. 17: Last sentence: Please remove one of the two “the”.

Interactive comment on Atmos. Meas. Tech. Discuss., 5, 1, 2012.