

Interactive comment on “A quasi chemistry-transport model mode for EMAC” by R. Deckert et al.

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Dear Dr Kirner,

thanks a lot for your review and we are glad you find the manuscript suitable for publication after minor revisions. Would you please see below how we have incorporated your comments into the manuscript.

With kind regards, Rudolf Deckert (on behalf of all co-authors)

Page 2190, line 7: I would prefer “These using” or a similar expression instead “These are fed with”.

Changed into: “These use offline ...”.

C654

2190, 9-11: Please set (a), (b) and (c) at the start of the sentences.

Good point, done.

2196, 8: I think instead “L_COUPLE_H2O=2” would “L_COUPLE_H2O=F” be correct.

Amended accordingly.

2196, 17: CFC-I2 -> CFC-12

Thanks, mistake removed.

2197, 24: Please change “(b) and (a)” in “(b) and (c)”

Modified as suggested.

2198, 16-17: I would skip the sentence “Here it is assumed that NAT nucleates on ice and that the ice forms in cases of supersaturation”. I think this sentence is mistakable. The assumption that NAT nucleates on ice and the supersaturation for ice has in my opinion nothing to do with the comparison between the equilibrium temperature of ice and NAT. Moreover the assumption that NAT nucleates on ice is only valid using the thermodynamical approach for NAT and the supersaturation for ice can be switched off in the PSC namelist.

You are raising a solid objection here and we have skipped the sentence.

2199, 5: Please exchange 3.2 and 3.1

Done.

2203, 3: This has to be Fig. 6a instead of Fig. 7a (see remarks below about the wrong captions in Fig. 6 and Fig. 7)

Thanks a lot as we had indeed mixed up the captions of Fig. 6 and Fig. 7.

2203, 15: Fig. 6a instead Fig. 7a

Done.

C655

2203, 21: Fig. 6b instead Fig. 7b

Done.

2204, 19: Fig. 7a and b instead Fig. 6a and b

Done.

2212, Table A1: - Why not EMAC version 1.10, as mentioned on page 2192, 25?

We had used EMAC version 1.10 for the evaluation simulations, but the QCTM was released in version 1.11. The text passage is now: "This documentation presents a QCTM implemented into the CCM ECHAM/MESSy Atmospheric Chemistry (EMAC), version 1.10. It was released in version 1.11."

I would skip the . . . and the " in the lines under ®RID

Done.

2218-2219, Fig. 6, Fig.7: The caption of Fig. 6 should be the caption of Fig. 7 and the caption of Fig.7 should be the caption of Fig.6 (most likely the labels are also exchanged).

Done.

Interactive comment on Geosci. Model Dev. Discuss., 3, 2189, 2010.