

Dear Troy Thornberry,

Thank you very much for the positive decision. We have considered all comments you raised (see below).

Kind regards,
Melanie Coldewey-Egbers

Comments (line number refer to the revised manuscript with tracked changes):

L16 "indicate" might be better "exhibit" or possibly "reproduce" or "reflect" (also L503)

→ Replaced with "exhibit".

L127 suggest omit "that is" and "and"--"(RAL) scheme, a sequential three-step process described in detail"

→ Done.

L128 could include, perhaps parenthetically, the top level pressure since the retrieval is defined on fixed pressure levels

→ Top level pressure (0.01 hPa) has been included.

L133 comma--"For OMI, version 2 of the retrieval scheme is used"

→ Done.

L160 comma--"project, it is" and omit "it"--"basis and is freely"

→ Done.

L203 omit "the"--"strongly depends on latitude and altitude"

→ Done.

L220 comma--"(see Sec. 2.3), we use OMI"

→ Done.

L228 should "polynomial" also be "linear" here in "the straight lines for...denote the results of the polynomial fits"?

→ Replaced with "linear".

L238 omit "probably"--you are arguing that it is indeed feasible since that is the approach you have taken, correct?

→ Deleted "probably".

L243 perhaps "spatial bin, we first calculate...and then average"

→ Changed as suggested.

L253 "+3 DU (May and June in the NH"--from the plot it looks more like June and July (?), but the trace colors are close...

→ Changed; June and July is correct.

L290 comma--"Sec. 3, thereby aiming"

→ Done.

L298 you ended up with a "3." before the ", and"

→ Seems to be an artifact of the "latexdiff" procedure to generate the version including track changes.

L384 "i.e." should either be omitted if the list is complete or "e.g." if the parameters listed only some

→ "i.e." has been deleted; the list is complete.

L416 should "the information to which class the profile" be just "the class to which the profile"?

→ Changed.

L459 perhaps "solely consists of GOME measurements (1995 - 2002) or of GOME and SCIAMACHY (2003 - 2004)"

→ Changed as suggested.