

In general the revised manuscript has been improved accordingly. However, the authors are recommended to consider the following points for further improvement.

R: We greatly appreciate the reviewer's constructive comments and, accordingly, have completed the revision and the responses as following:

1. I find several places where the authors' reply contents should be included in the text for clarification.

First, the locations and date of the forest fires affecting the observed air masses should be mentioned in the text, as analyzed with Figure R7 (as between 100-110 E and 12-20 N (Myanmar, Laos, Thailand, and Vietnam) during 13-15 March 2018).

R: Thank you for the suggestion. Figure R7 has been included in this revision to further explain the locations and dates of the forest fires affecting the observed air masses. (Figures 3e and 4e in this revision; **Line 243-251** and **Line 260-263**)

Second, about the likely negligible effect from wet deposition on the loss of BC and OA during the transport to secure the conclusion that the OA and BC emissions were likely overestimated.

R: Thank you for this suggestion. This point has been included in this revision (**Line 452-457**)

Third, about the relatively weaker forest fire activity in the year of 2018 over Indochina (Figure R5).

R: Figure R5 also has been included in the text in this revision (Supplementary Figure S1a; **Line 207-209**).

2. The statements about OH and HO₂ in the paragraph starting from line 490 (ATC1.pdf) need justification. First, the term "observed" in line 492 needs to be avoided as HO₂ is only modeled.

R: Thank you for the comment. The text "observed" has been dropped in this revision.

Second, I disagree with the statement in line 496 that trace constituents from BB were expected to increase OH and HO₂, as the emitted VOCs could reduce OH (depending on the chemical mechanism). I am afraid that most light-weighted NMHCs were unmeasured and thus were unconstrained in the model - such overstatement about the behavior of HO_x radicals should be avoided.

R: We agree with the concern point from this reviewer. The statement in line 496 has been dropped in this revision.