

Dear Editor and referees,

We are very grateful for your time and attentions on this manuscript. Please find below our itemized responses to the referees' comments. We have addressed all the comments raised by the referee and incorporated them in the revised manuscript.

Thank you for your consideration.

Sincerely,

Sunling Gong

Referee's comments on Development and application of a street-level meteorology and pollutant tracking system (S-TRACK)

1. L.28: *Add the result for the conclusion for Section 3.3 after line 28-29*

Response: It has been added.

2. L.38: *Check the order of in-text citations. Here is the guideline of ACP*
In terms of in-text citations, the order can be based on relevance, as well as
chronological or alphabetical listing, depending on the author's preference.

Response: The citations in-text have been arranged in alphabetical listing.

3. L.51: *pre-processing can be removed.*

Response: It has been removed.

4. L.55: *CFD technology, CFD approach, CFD simulation*

Response: "CFD technology" has been changed to "CFD simulation".

5. L.65: *give the full name of NO₂ and O₃ because they appear in the text for the first time.*

Response: They have been given the full names.

6. L.75: *give the full name of ECMWF and NCEP.*

Response: They have been given the full names.

7. L.81: *give the full name of NO_x.*

Response: It has been given the full names.

8. L.81: *correct WRF-LES to WRF*

Response: It has been corrected.

9. L.125: *correct base -> based*

Response: It has been corrected.

10. L.126: *correct refine -> refined*

Response: It has been corrected.

11. L.135: *correct grids -> grid cells. There are other places to check.*

Response: They have been corrected.

12. L.149: *correct the citation and also in the reference list: Jls et al. to Santiago et al.*

Response: It has been corrected.

13. L.167: correct Figs -> Fig

Response: It has been corrected.

14. L.192: *If you do not use Turbulence option in FLEXPART, I think you don't have to explain the option. You may remove the paragraph from "plus random" to line 198.*

Response: Thanks for pointing this out. It has been removed.

15. L.203: *remove "tracer particles in the course of simulation".*

Response: It has been removed.

16. L.220: *add the minus sign, 1.86K to -1.86K and 5.95% to -5.95%*

Response: Thanks for pointing this out. they have been added.

17. L.222: *correct as "significance test (see Appendix 2)"*

Response: It has been corrected.

18. L.234: *rewrite the sentence.*

Response: It has been rewritten.

19. L.244: *define the hit rates (HR)*

Response: Its definition has been explained in Appendix in the revised manuscript.

20. L.307-L.311: *In abstract, you explain that an identical traffic volume is used. Is it true? You mention the average traffic volumes for R1 to R4 in L.308. "identical intensity" is same to identical traffic volume?*

Response: In this study, we used the same traffic density instead of traffic volume. We have corrected in abstract of the revised manuscript.

21. L.312-322: *I understand that RTA is the potential contribution ratio. RTA is computed using the residence time in the grid cell (i, j) of the particles passing within 5 m height above the road. Is it right? Using the acronym PCR for potential contribution ratio may be helpful.*

Response: RTA is computed using the residence time in the grid cell (i, j) of the particles passing within 5 m height above the road. However, RTA is not the potential contribution ratio, is a method to calculate the potential contribution

ratio. We have used PCR as the acronym for potential contribution ratio in the revised manuscript.

22. L.324: *“potential impact” and “potential contribution” are confusing. You may improve the manuscript using one of them.*

Response: The term “potential contribution” has been unified using in the revised manuscript.

23. L.337: *explain what is the density distribution in the text instead of Figure 7.*

Response: We have added the explanation of the density distribution to the text and removed the explanation in Figure 7.

24. L.353: *I think higher potential contribution ratio from R1 than R3 may be due to higher traffic volumes (see L.308) at R1 if you use different traffic volumes (see my question 20).*

Response: In this study, we assumed that the traffic intensity of the roads is consistent. Therefore, the potential contribution ratio of R1 is higher than that of R3, due to higher the road width of R1. Also, to avoid misleading the readers' judgment, we have removed the information on the average road traffic volume in the revised manuscript.

25. L.409: *Please write the conclusion from Section 3.3.1 (L.415-L.421) and then that from Section 3.3.2 according to the order in the text.*

Response: It has been changed. The conclusion of section 3.3.1 was written before the conclusion of 3.3.2 in the revised manuscript.

26. L. 702: *Correct Table R4 to Table 4*

Response: It has been corrected.