

#Referee 2

Thanks the reviewer for the valuable comments. We have revised the manuscript accordingly, with a point-by-point reply to the comments, and a marked-up manuscript version showing the changes made (text in red).

- Line 16: “develop” -> “developed” Line 16: “evaluate” -> “evaluated”
Response: Revised as suggested.
P1, Line 17: “**In this study, we developed and evaluated...**”
- Line 23: this sentence should be revised for better readability. “with R² and leave-one-out cross-validation (LOOCV) R² values of > 0.72 and > 0.53, respectively.” -> “with R² of > 0.72, and leave-one-out cross-validation (LOOCV) R² values of > 0.53.”
Response: Revised as suggested.
P1, Line 24-25: “**with R² values of > 0.72 and leave-one-out cross-validation (LOOCV) R² values of > 0.53.**”
- Line 30: “our study” -> “this study”
Response: Revised as suggested.
P1, Line 31: “**..., this study is the first to...**”
- Line 41: I do not think LUR is a standard modeling approach. It is just a typical approach. So, it is suggested to revise the sentence to be “land-use regression (LUR) is a widely used modeling approach to characterize long-term average air pollutant concentrations”
Response: Agreed and revised.
P2, Line 42-43: “**..., land-use regression (LUR) is a widely used modeling approach...**”
- Line 46: “these stations” -> “the stations”
Response: Done.
P2, Line 48: “**... surrounding the stations...**”
- Line 55: “have been” -> “were”
Response: Revised.
P2, Line 57: “**... in the Taiwan region were limited...**”
- Line 63: “is that the established models are usually only valid during the measurement period” -> “is that the established models only reflect the situation during the measurement period”
Response: Done.
P2, Line 65-66: “**... may only reflect the situation...**”
- Line 73: what does the “they” mean? Does it mean the previous two studies cited before the sentence?
Response: The mentioned word was revised to make the meaning clearer.
P3, Line 75: “**Previous studies on the transferability of LUR models...**”
- Line 79: “The remainder of this paper ...” -> “This paper ...”
Response: We decide to keep the phrase “the remainder of this paper...” because the Introduction section is not included here.
- Line 119: “require” -> “requires”
Response: It is correct to use “require” here because the subject of this sentence is “...estimates...”.
P4, Line 120-121: “**Daily and annual average estimates for the air pollutants require...**”

- Line 119: “is” -> “was”
Response: Revised.
P4, Line 121: “...; otherwise there was no value...”
- Line 301: the opposite trend of NO₂ and O₃ is definitely the O₃ titration in urban areas. This should be mentioned here.
Response: The related information was added.
P10, Line 303-304: “... were negatively correlated because of the strong NO_x titration effect in urban areas...”
- Table 3: the empty grids should be filled by grey color.
Response: Modified as suggested.

- Figure 2: Green color is not a good choice for display and should not be used. I suggest the authors to change the green dots to black or blue so as to enhance the readability. The size of the texts in the figure should be enhanced.

Response: Thanks the reviewer for the comment. We changed the green color to blue and enlarged the text sizes.

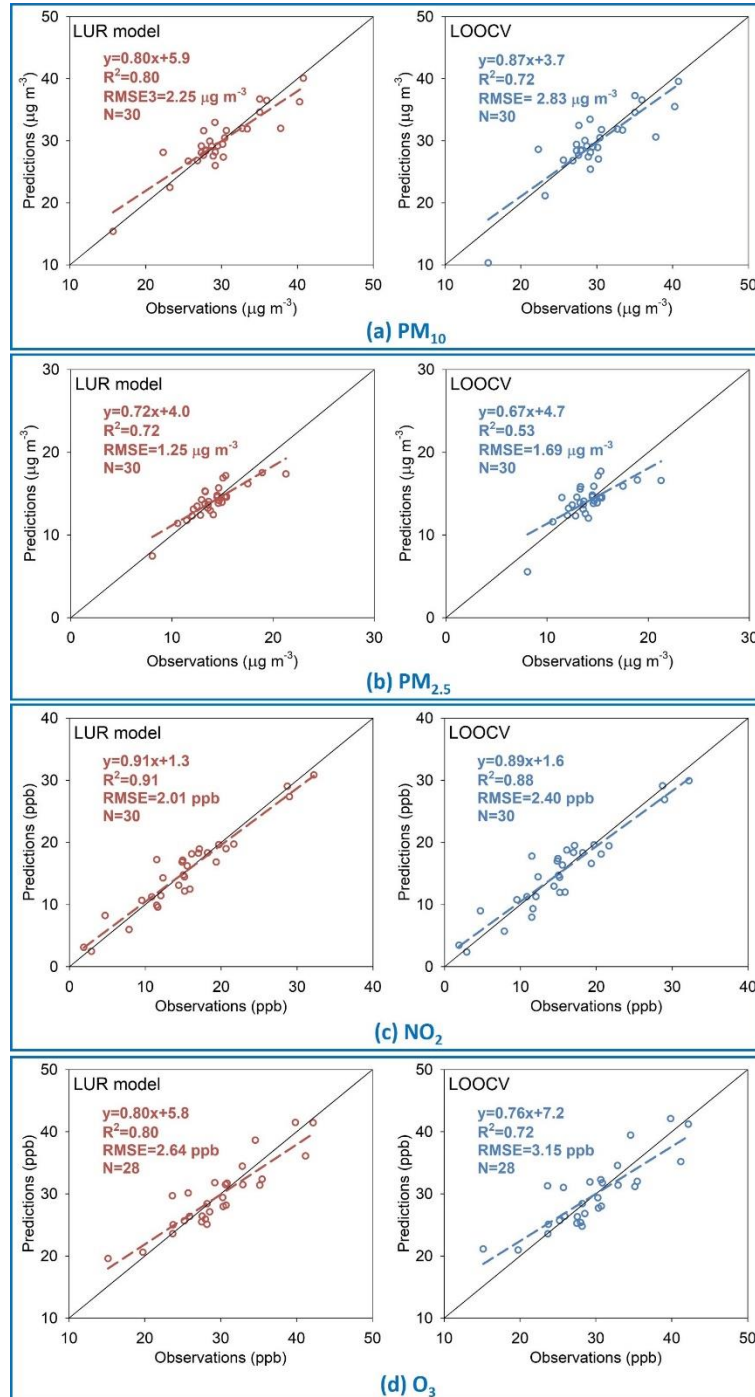


Figure 2

- Figure 4: the size of the texts is too small.
Response: We replotted Fig. 4 with the size of the texts enlarged.

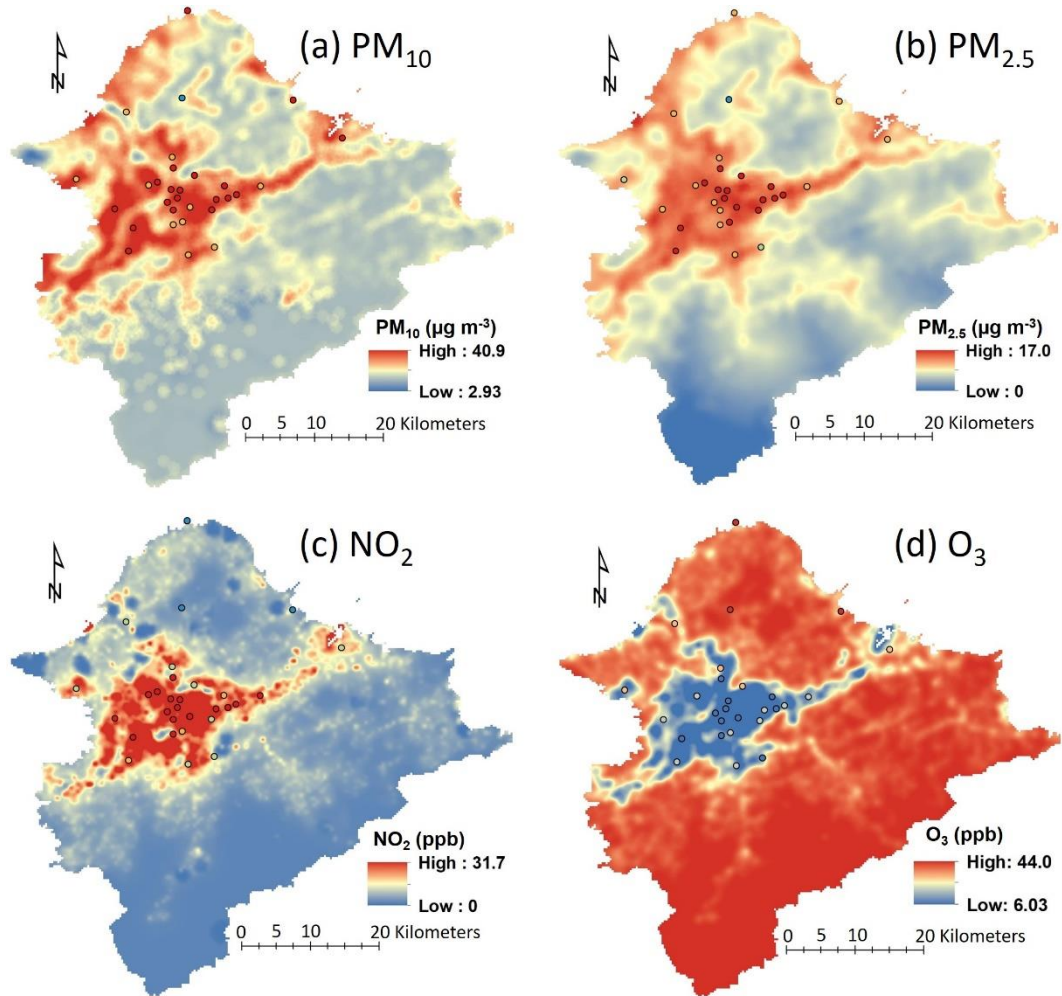


Figure 4