

1. Why do you only remove O₃? Do you ever test the impact of NH₃?
2. The following, *natural emissions, nature surface emissions, and surface emissions*, seem refer to the same thing. Please be consistent throughout the whole text including in the figure. Moreover, re-emission is a significant source of atmospheric Hg, how do you consider its contribution?
3. Original comment 3: ***Ferrous metal smelting*** such as iron and steel smelting, instead of **non-ferrous metal smelting**, is one significant source of Ca emission. That is why I do not agree that *The factor with high loading of Ca was assigned to cement production as the raw materials used in cement production contain a large amount of calcium compounds*. The authors should notice that it is just one case. Actually, the results of Figure 6 is still under doubt. For example, ship and vehicle emissions are two large anthropogenic emission sources in Shanghai. One of the problems to this result is that the indicators used in PMF currently are not source-specific indicators and much depend on the subjective judgment of the authors. Under such situations, analyzing the uncertainty of the results is particularly important.