

Reply to Dr. Meiyun Lin (meiyun.lin@noaa.gov)

We thank Dr. Meiyun Lin for the careful reading of the manuscript and helpful comments. We have revised the manuscript following the suggestion, as described below.

Comment: This is a nice paper reporting ozone pollution in China. I strongly encourage the authors to convert the unit for ozone mixing ratios from $\mu\text{g}/\text{m}^3$ to ppbv. The latter (ppbv) is a more common unit used in the literature for ozone. By converting the unit to ppbv, the readers can quickly get a sense of how severe ozone pollution is in China, as compared to the other parts of the world.

Response: We have clarified in Section 2.3: “*China MEP releases the pollutants observations using the mass concentration ($\mu\text{g m}^{-3}$ or mg m^{-3}) as the unit. Therefore, in order to keep consistent with the observations, the mass concentration is used in the manuscript, although the mixing ratio (such as ppbv) is a more common unit used in the literature for air pollutants.*” Generally, it is easy for the model to output species using the mass concentration or the mixing ratio. However, if the simultaneous measurement of the air density (or air temperature and pressure) at monitoring sites is not provided, the unit conversion from the mass concentration to the mixing ratio might be biased.