

## ***Interactive comment on “Ozone affected by a succession of four landfall typhoons in the Yangtze River Delta, China: major processes and health impacts” by Chenchao Zhan et al.***

### **Anonymous Referee #1**

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**General comments** This research is talking about an interesting topic. Ozone pollution episodes caused by the landfall typhoon were analyzed based on typical cases in the Yangtze River delta in China. This study provided an insight into the characteristics of the occurrence of ozone pollution and the changes in O<sub>3</sub> concentrations during the special synoptic system. I think this paper is well-organized and presenting an important schematic diagram.

**Specific comments** Here are some questions listed in the below, which need further addressing in the modified version:

1. Section 3.1, Figure 2, since the influences of the typhoon cases are special in

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2018, could the authors add summertime ozone concentrations in 2017 and 2019 (if the measurement data could be available) to compare with that in 2018 to show the roles clearer? 2 Section 3.2, Line 309, Here the authors mentioned the “coastal” region and “inland” region, what is the distance definition for them? Could you describe them here? 3 Section 3.3, Line 324, the representatives of the chosen cities should be addressed here, is it according to the distance off coastal lines? 4 Section 3.3 Table 3, what is the situation for simulated precipitation compare with the observed one? Also, 5 Line 386-388, the authors mentioned the high value center of O<sub>3</sub> appeared near altitude of 1km instead of near surface caused by the high photochemical production efficiency of ozone. What is the physical transport role in the high O<sub>3</sub> here? 6 Section 3.7, the evaluation on the premature mortalities induced by O<sub>3</sub> exposure are important, but here the authors did not give detailed methodologies or any reference about the estimation of premature mortalities. More details should be added here. Technical corrections 7 Table 3: the authors need indicating o and s with “observation” and “simulation” as a note.

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