

## ***Interactive comment on “An important mechanism of regional O<sub>3</sub> transport for summer smog over the Yangtze River Delta in East China” by Jun Hu et al.***

### **Anonymous Referee #2**

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#### General comments

In this study, using the observations of surface ozone concentrations and some meteorological parameters and WRF-Chem model simulations, the authors analyzed the mechanism of regional ozone transport in a severe summer smog episode in the YRD region of China. This work revealed the fact that ozone can be transported from the upstream to the downstream through residual layer during nighttime and then from the residual layer to the surface due to the convective turbulence in the ABL after the sunrise, which is an important mechanism of ozone transport and the formation of ozone pollution in the near surface layer. The manuscript is well organized and easily under-

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stood. I recommend the publication of journal ACP after minor revision.

#### Specific comments

1. Please explain the definition of high air temperature in Table 2. Also, in Line 93, what is the daily high air temperature? Do you mean the daily maximum air temperature?
2. The authors mentioned the effect of dry deposition and NO<sub>x</sub> titration to O<sub>3</sub> consumption several times in the study when analyzing the change of surface O<sub>3</sub> concentration. Could you show the temporal variation of dry deposition and NO<sub>x</sub> concentration during the O<sub>3</sub> pollution episode in NJ?
3. Please add the statistics of wind speed and direction in Table 2 and explain the difference in the manuscript.

#### Technical comments

1. Please check all the subscript and superscript throughout the manuscript.

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