

Interactive comment on “Insights into a historic severe haze weather in Shanghai: synoptic situation, boundary layer and pollutants” by C. Leng et al.

Anonymous Referee #3

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This paper aims at documenting a historic winter haze weather, characterized by long duration, large scale and strong pollution intensity, which occurred in the Yangtze River Delta (YRD) region of China during early December 2013. Aerosol physical, chemical and optical properties, inorganic water-soluble ions in particles, trace gases were measured in Shanghai, where the instantaneous particulate mass burden per volume (e.g., PM_{2.5}) exceeded 600 $\mu\text{g m}^{-3}$.

The extend of this episode was such, that it strongly impacted the air quality throughout this densely populated region. As such, this warrants already the publication of the associated information, as support for further understanding of the physical- and

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chemical-features of such episodes. In fact, one of the goal of that submission is to provide supports for the public and authorities to recognize severe haze weathers in urban environments, and improve their forecasting.

I consider this manuscript as highly interesting, but would nevertheless recommend major revisions prior to publications in Atmospheric Chemistry and Physics.

First of all, the manuscript would clearly gain in strength if edited by native English speaker. Currently, it contains too many grammatical errors and some sentences are difficult to follow.

Secondly, my reading of that this manuscript presents many raw data, with finally little interpretation. So maybe the authors could decide to present extensively all data providing ground for further investigations (in another study) of the specific features of that event i.e., with little or no data treatment. They could also select to present here the real specificities of that event. I feel that the current version oscillates between both options, which weakens the associated message.

In fact, one of the clearly strong aspect of that investigation, is the quite large number of parameters that have been reported, but finally not really used. I would encourage the authors to try to draw some strong scientific conclusions or underline the less understood aspects of haze formation that may require further investigations.

Interactive comment on Atmos. Chem. Phys. Discuss., 15, 32561, 2015.

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