

Interactive comment on "Aircraft measurements of gases pollutants and particles during CAREBeijing-2008: distributions, characteristics and influencing factors" by W. Zhang et al.

Anonymous Referee #2

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This manuscript provides a series set of data from aircraft measurement, which is very valuable in study the long-range transport of the air-pollutants. However, what I can see from this manuscript is just a measurement data report, far from a scientific paper with a deep analysis. 1. It is not clear what the point of view of this manuscript is. I guess that the purpose of the aircraft measurement was to investigate the source and the transport of the air pollutants. From this manuscript, I do not see clearly what the source of those pollutants was and how those pollutants transported 2. This manuscript pointed out the different directions of the air transport with different components, such as from south with high level of pollutants, from north with cleaner air (less pollutants), from east with

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more sea salts. However, the text was not very organized with those measured data and clear logic thinking. 3. In the abstract it was said that this measurement was to characterize the regional variation of air pollution during and after the Olympics of 2008. In the text there is nothing related to the Olympics of 2008, except the time of the measurement was during and after the Olympics of 2008. 4. In the text there were a lot of conclusions, which were completely hypothetical and no attempt was made to support those conjectures. For example, the saying of "This may be due to the stagnation with low wind speeds and highly active photochemistry, the urban emissions of both primary compounds and precursors for secondary ions lead to an additional pollutant on top of the already elevated regional level" was simply descriptive with no data supported. In a word, this manuscript, as its current stage, is far from the publication in ACP. I suggest that this manuscript should be totally re-organized with deep analysis, focusing on how the air pollutants and the components in the aerosol transported and transformed during the long/middle-range transport before it can be accepted for publication in ACP.

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