Atmos. Chem. Phys. Discuss., 11, C6692–C6693, 2011
www.atmos-chem-phys-discuss.net/11/C6692/2011/

Atmospheric Chemistry and Physics Discussions

Interactive comment on "Emission controls versus meteorological conditions in determining aerosol concentrations in Beijing during the 2008 Olympic Games" *by* Y. Gao et al.

Anonymous Referee #1

Received and published: 21 July 2011

This paper addresses an important issue in air pollution control strategy in mega cities, like Beijing, and provide successful example of how to improve air quality in big city by control emissions. This paper points out that to improve the air quality over Beijing, emission control strategy should be focused on the regional scale instead of the local scale. These findings have important applications to other cities and other countries, especially in era of fast economical development and urbanization. The science in the paper is sufficient. I recommend publication after the minor modifications.

1. No doubt that emission reduction will improve air quality eventually, but the key is the control efficiency. For control scenario, what pollutant species were cut most or cut

all pollutants same. Authors should discuss more about it and which or what pollutants are limit or sensitivity. 2. As authors suggested that meteorological conditions (e.g., wind direction and precipitation) are at least as important as emission controls in producing the low aerosol concentrations during Olympic Game. Authors should discuss more about the effects of meteorological condition. So it helps to make more effect control strategy, since meteorological condition can't be controlled. But we can make different emission control strategies according to different meteorological condition. 3. As authors address that in order to improve air quality in Beijing, control strategy should focus on the regional scale instead of the local scale. To contrast this conclusion, it's better to compare and plot of CTL-RD0 and CTL-BJ0 with CTL and NO-CTL directly, like Figure 2 in the text.

Interactive comment on Atmos. Chem. Phys. Discuss., 11, 16655, 2011.