

Interactive comment on “A parameterization of low visibilities for hazy days in the North China Plain” by J. Chen et al.

Anonymous Referee #1

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Major comments

Based on ground measurement of aerosol, visibility and meteorological conditions in north china plain, the paper proposed a parameterization scheme for low visibility conditions on hazy days. The analysis is well-grounded, the result is reliable with innovative ideas. The reviewer thinks this paper can be published on ACP.

Minor comments

In the introduction part, the author mentioned “Mass concentrations of PM_{2.5} in Beijing and Chongqing both exceeded the national air quality standard of particulate matter within 10 μm (PM₁₀) for residential areas (100 $\mu\text{g}\text{m}^{-3}$) and were at least 10 times those (5–10 $\mu\text{g}\text{m}^{-3}$) measured in US continental east (Hidy et al., 2009).” The term

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“air quality standard for residential area” is not clear and improper. It is suggested to revise the sentence to “Mass concentrations of PM_{2.5} in Beijing and Chongqing both exceeded the ambient air quality standard of China (GB3095-1996) for PM₁₀ (100 $\mu\text{g}\text{m}^{-3}$, grade 2) and were at least 10 times those (5–10 $\mu\text{g}\text{m}^{-3}$) measured in US continental east (Hidy et al., 2009).”

Another suggestion is that besides GB3095-1996, the author may consider referring following PM_{2.5} standards in China for comparison in the sentence mentioned above:

75 $\mu\text{g}\text{m}^{-3}$ (QX/T 113-2010, Observation and forecast levels of haze)

35 $\mu\text{g}\text{m}^{-3}$ (grade 2, annual average limit, ambient air quality standard of China, GB3095-20XX (draft), <http://www.zhb.gov.cn/gkml/hbb/bgth/201111/W020111121388004546031.pdf>)

These may help the readers (especially for those non-Chinese readers) to know updated progress of ambient air quality standard revision in china.

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