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Atmospheric Chemistry and Physics Discussions

Interactive comment on "Impact of aerosol composition on cloud condensation nuclei activity" *by* Q. Zhang et al.

Anonymous Referee #1

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In this paper, the impact of aerosol composition on cloud condensation nuclei (CCN) activity were analyzed based on field experiments carried out at downtown Tianjin, China in September 2010, and some interesting results were shown that the influence of aerosol composition on CCN activity is notable under low super saturation (0.1%), and their influence decreased with increasing SS, so that it can't be neglected under low SS. Tianjin is a large city near Beijing in North China Plain experiencing the rapid social and economic developments. The results were representative in this area. In my opinion, this version of the paper is acceptable for publication. Some readers concern CCN number concentrations in true atmosphere where CCN act under low super saturation and how aerosol compositions affect CCN number concentrations. We expect the research group will improve the design and devices of experiments and get more data to analyze.

Interactive comment on Atmos. Chem. Phys. Discuss., 12, 1493, 2012.

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