

Interactive comment on “The impacts of fireworks burning at Chinese Spring Festival on air quality and human health: insights of tracers, source evolution and aging processes” by S. Kong et al.

S. Kong et al.

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Reply to Referee J. Williams:

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Dear Authors, I would like to draw two relevant papers to your attention. They are also focused on firework emissions and could help your results and discussion section. The aforementioned papers describe firework emissions from temperate mid-latitudes and are worthy of comparison in terms of absolute amount of particulate, species,

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temporal profile and longevity. Drewnick, F., S. S. Hings, J. Curtius, G. Eerdekens, and J. Williams: Measurement of fine particulate and gas-phase species during the New Year's Fireworks 2005 in Mainz, Germany. *Atmos. Environment*, 40, 4316-4326, 2006. Williams, J., F. Drewnick, S. S. Hings, J. Curtius, G. Eerdekens, T. Klüpfel, and T. Wagner: Firework emissions for satellite validation? *Environ. Chem.* 2, 1-2, doi:1071/EN05022, 2005.

Response: We really appreciate for the information. The two references have been added. Some data are interesting and favored the observation in this study. Following has been added in section 3.4.1 (line 571-line 575).

“Drewnick et al. (2006) found that after about three or four days, though the aerosol mass concentrations dropped to about one-third of the concentrations for Near Year's firework burning period, the relative compositions of aerosols were similar. And the mass concentrations of nitrate, sulfate and ammonium increased again after about three days.” This information could be found in Fig.2 and related discussions in Drewnick et al. (2006).

The directly emission of KCl from fireworks burning has also been verified by Drewnick et al. (2006).

Interactive comment on Atmos. Chem. Phys. Discuss., 14, 28609, 2014.