

***Interactive comment on “Chemical composition, sources, and processes of urban aerosols during summertime in Northwest China: insights from High Resolution Aerosol Mass Spectrometry” by J. Xu et al.***

**Anonymous Referee #2**

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This paper presents the PMF analysis of AMS data taken in Lanzhou, China. The procedures employed are pretty standard and there are no really surprising results here, however this is the first paper presenting data of this type in this region, so it is still reasonably novel in that regard. The analysis is largely sound and the paper is well written and presented, so I recommend publication subject to minor comments.

Comments:

General: When presenting an acronym, the authors use bold on the key letters. This is

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not standard practice (capitalisation is normally employed) and makes the article look a little informal, so I would recommend writing them in standard weight text.

16204, Line 15: The nominal chemical formula is essentially repeating the ratios already stated and is potentially misleading because the AMS cannot deliver data on carbon number, so I recommend that it be removed.

16208, Line 22: The narrower distribution could also be because the particles are more spherical, or vaporise faster.

16211, Line 12: This fit should have been performed with an additional parameter not multiplied by a PMF factor, to represent the average BC mass not accounted for by the PMF factors. Without this, the other factors will not be accurate. Also, were the parameters constrained to be non-negative?

Fig. S2: This is not very clear. Is a colour version available?

Running title: I would revise this to make specific reference to Lanzhou

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Interactive comment on Atmos. Chem. Phys. Discuss., 14, 16187, 2014.