

***Interactive comment on “Chemical
characterization of aerosols at the summit of
Mountain Tai in the middle of central east China”
by C. Deng et al.***

Anonymous Referee #1

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This paper presents the measurements of aerosol concentration and composition at the summit of Mountain Tain in East China. The properties of aerosols at MT were compared with the measurements conducted in several sites in the North China. As mentioned in my previous review, the scientific value of this research is doubtless. Unfortunately, there are still significant errors in this manuscript (see the followings) despite the noticeable improvement from its previous version. Thus, I think this paper is not yet acceptable for final publication in ACP.

1. The concentrations of TSP and PM_{2.5} measured at MT were compared with those of several sites in China, including Beijing and Shanghai. It was indicated that the aerosol

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concentration at MT was higher than in the urban areas. This finding is very important; however, the data presented in this manuscript are not enough to support such an important argument. For instance, it is even unclear how many samples were collected at those sites other than MT. Are they enough to give the seasonal means? 2. Whatman 41 filters were used to collect aerosol samples. Although cellulose filters are widely used for water quality analysis, it is not a common practice in aerosol measurement. The influence of static charges is the major issue. Thus, it is important to identify the precision of the gravimetric measurement of filters in this study. 3. The web-based sources of meteorological data are cited. Those web sites are prepared in Chinese and could not be accessible worldwide. I'd like to suggest the authors making a table of the meteorological data as a supplement. 4. In Table 1: the 2006 spring average of TSP is 128 $\mu\text{g}/\text{m}^3$, but the max is 108 $\mu\text{g}/\text{m}^3$ only. What's wrong? 5. The data presented in the tables and figures are not consistent. For example, Table 1 shows the PM_{2.5} sample numbers for 2006 spring/summer are 16/27; Figure 2 is consistent with the table, whereas there are 14/22 data points shown in Figure 4, and 17/30 data points shown in Figure 5. How did you treat your data? 6. In Table 4: the summer levels of MSA and Cl⁻ in PM_{2.5} are significantly higher than in TSP? please check them. 7. The concentration of diacids in PM_{2.5} (~0 – 3) seems being larger than that in TSP (~0.5 – 2) in summertime. What's wrong? (* I mentioned this in my previous review)

Interactive comment on Atmos. Chem. Phys. Discuss., 10, 20975, 2010.

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