

Interactive comment on “Seven year particulate matter air quality assessment from surface and satellite measurements” by P. Gupta and S. A. Christopher

P. Gupta and S. A. Christopher

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** This is a very good paper that requires publication in ACP. It is well written but the grammar could be improved at a few instances. A few quick comments:

** p. 9, line 6; and p. 21, line 13: a wind speed of 50 km/hour (13 m/s) is quite a lot, at least for the boundary layer over land and even over the ocean it is high. Although later in the paper the authors investigate the effect of pixel size, I recommend that a brief comment is added and the average wind speed measured over the site is added to the text.

This aerosol transport speed is reported by Ichoku et al., [2002] for mid-troposphere and not within the boundary layer. Correction is made at page 9.

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** Page 21, line 16-19, clearly states that wind speed near the surface is much less than what is assumed in mid-troposphere.

NCEP Reanalysis annual average wind speed over the site is <4 m/s. Added to the text

** p. 13, line 16: ‘high humid conditions’; replace by ‘high relative humidity conditions’; RH determines particle size, not concentration.

Modified as suggested

** p. 17, line 13: why are meteorological parameters not added? Would these improve the outcome?

Analysis with inclusion of meteorology will be presented in separate paper, manuscript is under preparation.

** p. 19, line 21: I suggest to remove the last digit here and in the remainder of the text and the tables, it has no significance.

Modified

** p. 21, line 9: I cannot believe that sampling a larger box would significantly change the heterogeneity of the type of aerosols over scales of up to 0.5 degree, unless in the presence of point sources. The heterogeneity of the surface is usually a much larger problem.

Relative heterogeneity of aerosol is point of discussion with respect to small and large box sizes. Yes, this is true that, surface heterogeneity is bigger problem compared to aerosol heterogeneity for these box sizes. Sentence Modified for clarity

** p. 22, line 6-8: I suggest to reformulate this sentence, it is not clear to me what is meant

Modified

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** p. 22, lines 11-14: the first and second sentences seem to contradict each other.

Modified for clarity

Interactive comment on Atmos. Chem. Phys. Discuss., 8, 327, 2008.

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