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8, S487–S488, 2008

Interactive Comment

Interactive comment on "Long-term trend of surface ozone at a regional background station ineastern China 1991–2006: enhanced variability" by X. Xu et al.

Anonymous Referee #2

Received and published: 4 March 2008

General comments:

This paper firstly well presented the long-term enhanced trends of surface ozone measured at the Linan Regional Background Station in eastern China, although surface ozone data were only collected during 6 periods between 1991 and 2006. This paper is well presented and suitable to be published at ACP with minor revisions. I have a few comments for the authors might take into consideration.

Specific comments:

1) In abstract, the authors should list the "Possible causes for the observed trends are



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discussed". Among these possible causes, it is really due to "the increase of NOx concentration"?

2) The authors should give more linkage between NOx change and ozone variations (Fig. 6 and Fig. 8). How about the percentage of regional ozone transport from the surrounding area such as the Yangtze Delta Region? If possible, to use a box model to show how these NOx increase can make daily amplitude of relative diurnal variations?

3) Fig.1 should afford high resolution figures, the proportions of different clusters given in the colored boxed are not clear.

4) Please list seasonal peak and minimum of ozone in different seasons and years in table 2.

5) Please give monthly mean lines during 1994-1995 and 2005-2006 in Fig. 2.

6) Have any datasets to show the VOCs change at Linan? Please discuss the possible impacts of VOCs change on ozone variations.

Interactive comment on Atmos. Chem. Phys. Discuss., 8, 215, 2008.

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