

***Interactive comment on “Peroxyacetyl nitrate (PAN) and peroxypropionyl nitrate (PPN) in urban and suburban atmospheres of Beijing, China” by J. B. Zhang et al.***

**J. B. Zhang et al.**

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Thanks Mr Tanimoto for your suggestive comments. We have reviewed the published papers on PANs. Indeed, there are a number of important references have been missed to be cited. Those studies on PANs are meaningful just as what you have mentioned, especially for regional PANs investigation in East Asia. Therefore, we have made some changes in the full-text as follows.

1. On Page 8175 Line 7-8 For the statement of Only a few studies have reported PAN and PPN in East Asia concurrently, more references were added. (Tanimoto et al., 1999, 2002; Kondo et al., 2001)

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2. For Table 1, two related references on PAN campaign in the world have been added in, as shown in bold type. Site Type Date PAN ppbv (max/aver) PPN ppbv (max/aver) Reference PKU, Beijing, China Urban Several days in May and June, 1990 6.8 - [Zhang and Tang 1994] Island of Rishiri, Japan Remote March 1999 to June 2000 ~0.25/~ 0.1 - [Tanimoto et al., 2001] Tokyo, Japan Urban the periods of 16 June to 7 July, and 26 July to 14 August in 2004 10 (sum of PAN + PPN + PiBN + PnBN) - [Kondo et al., 2008]

Cited references are listed below:

Kondo, Y., Y. Morino, M. Fukuda, Y. Kanaya, Y. Miyazaki, N. Takegawa, H. Tanimoto, R. McKenzie, P. Johnston, D.R. Blake, T. Murayama, and M. Koike, Formation and transport of oxidized reactive nitrogen, ozone, and secondary organic aerosol in Tokyo J. Geophys. Res., 113, D21310, doi:10.1029/2008JD010134, 2008.

Tanimoto, H., J. Hirokawa, Y. Kajii, and H. Akimoto, A new measurement technique of peroxyacetyl nitrate at parts per trillion by volume levels: Gas chromatography/negative ion chemical ionization mass spectrometry, J. Geophys. Res., 104, 21,343-21,354, 1999.

Tanimoto, H., H. Furutani, S. Kato, J. Matsumoto, Y. Makide, and H. Akimoto, Seasonal cycles of ozone and oxidized nitrogen species in northeast Asia, 1, Impact of regional climatology and photochemistry observed during RISOTTO 1999-2000, J. Geophys. Res., 107, 4747, doi:10.1029/2001JD001496, 2002.

Please also note the supplement to this comment:

<http://www.atmos-chem-phys-discuss.net/11/C4036/2011/acpd-11-C4036-2011-supplement.pdf>

Interactive comment on Atmos. Chem. Phys. Discuss., 11, 8173, 2011.