

***Interactive comment on “Atmospheric mercury concentration and chemical speciation at a rural site in Beijing, China: implication of mercury emission sources” by L. Zhang et al.***

**L. Zhang et al.**

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Received and published: 1 September 2013

Dear editor and reviewers:

We have accepted the review comments and revised our paper carefully. Please find our replies to interactive comments in the Supplement files. We hope that the revised manuscript is now acceptable for publication. We look forward to hearing your response to our revisions. If you need any additional information, please contact me at any moment.

Sincerely yours, Shuxiao Wang

C6446

Please also note the supplement to this comment:  
<http://www.atmos-chem-phys-discuss.net/13/C6446/2013/acpd-13-C6446-2013-supplement.zip>

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Interactive comment on Atmos. Chem. Phys. Discuss., 13, 12177, 2013.

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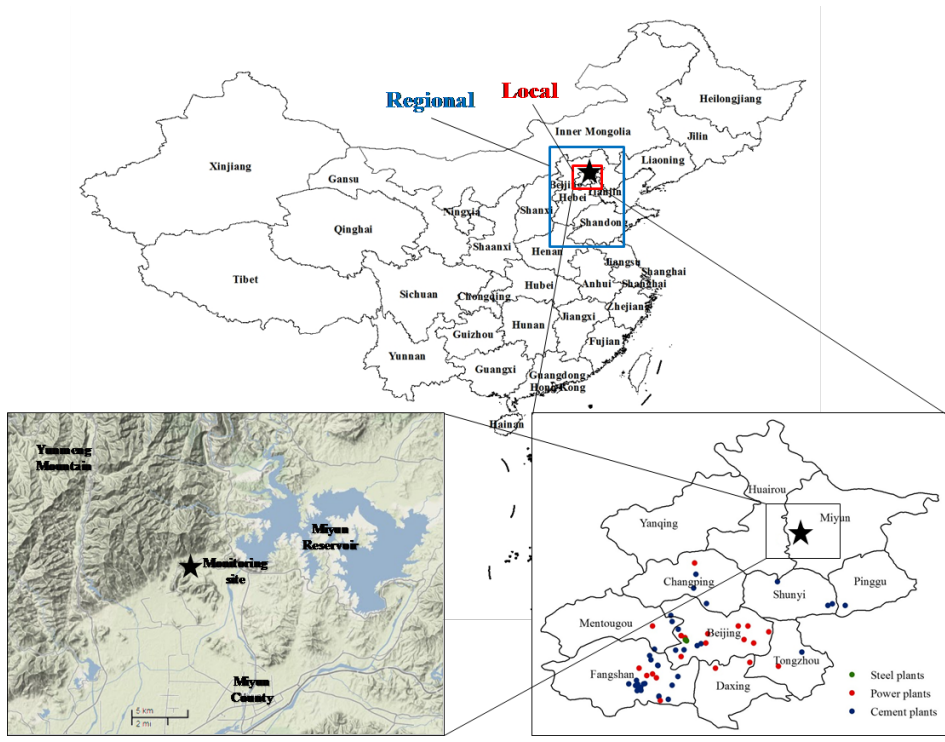


Fig. 1. The location of the Miyun monitoring station in Beijing, China.

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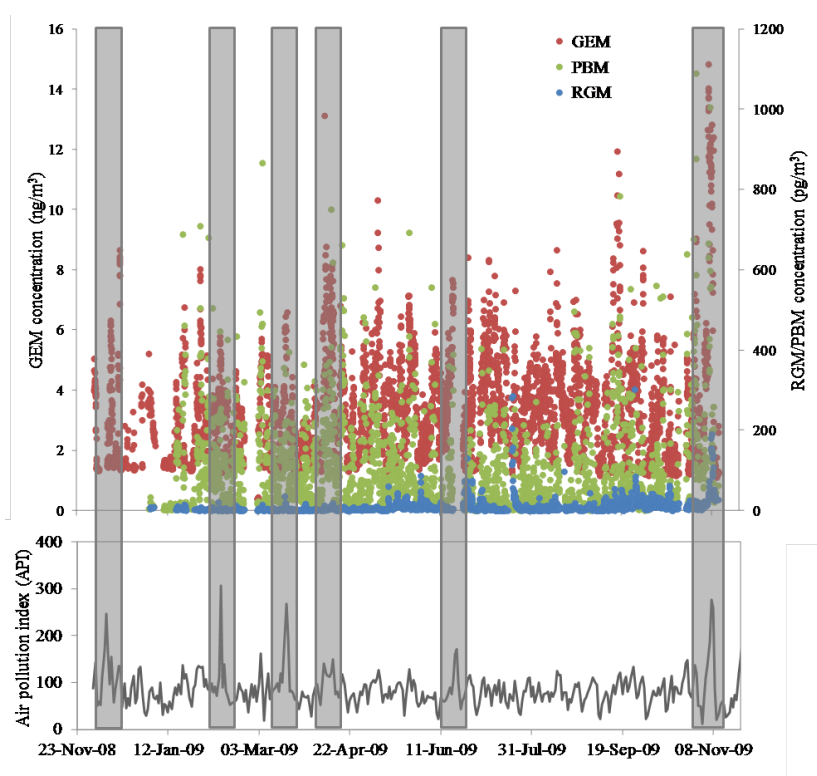
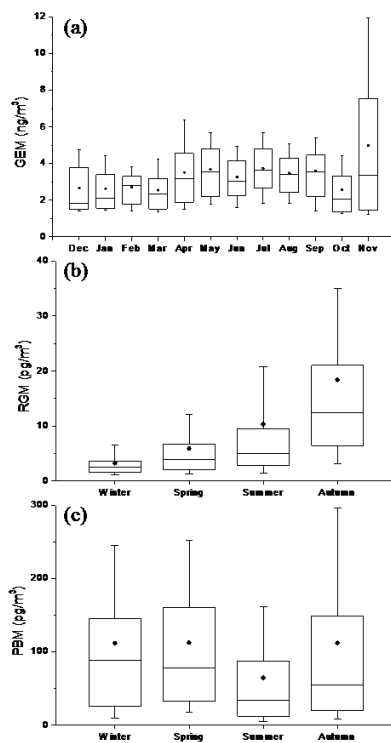


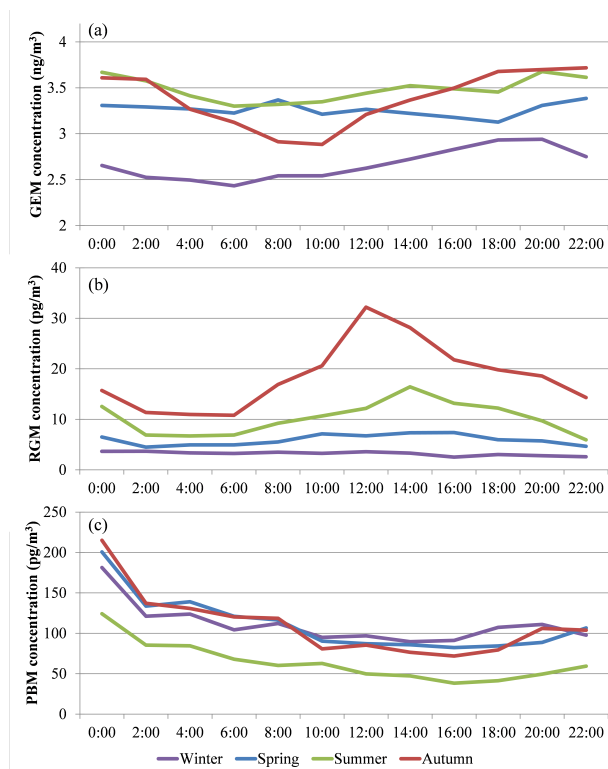
Fig. 2. Hourly averaged GEM, RGM and PBM concentrations at monitoring site and air pollution index (API) in Beijing urban area from December 2008 to November 2009.

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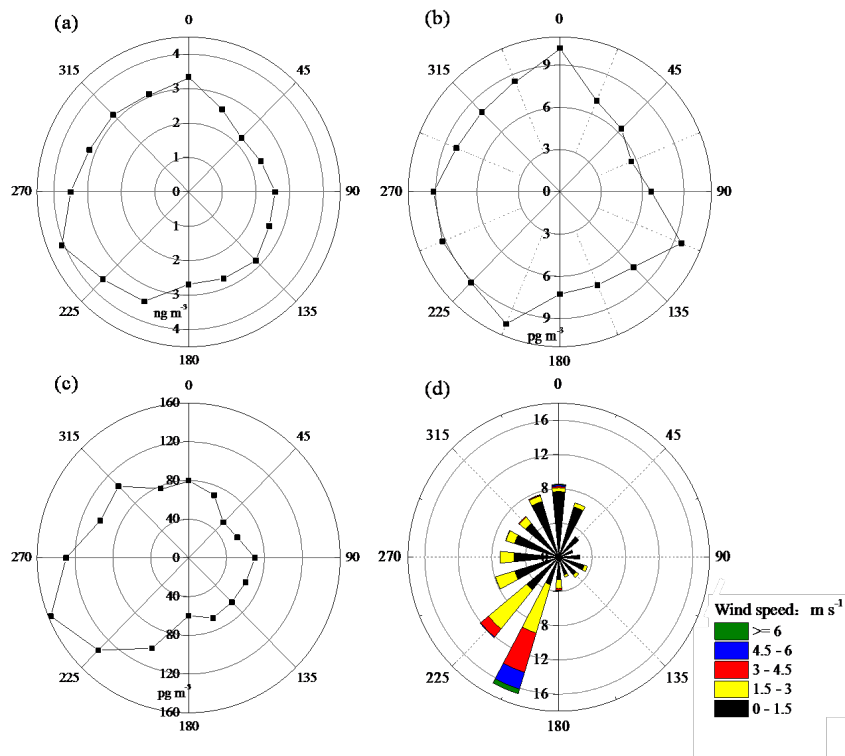
**Fig. 3.** Monthly variation of (a) GEM and seasonal variation of (b) RGM and (c) PBM concentration.

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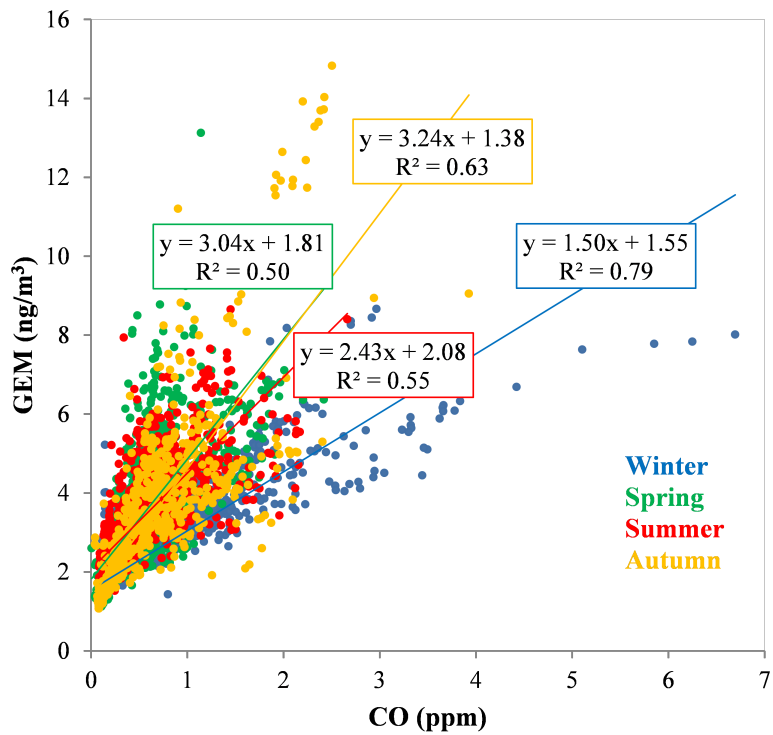
**Fig. 4.** Daily variation of (a) GEM, (b) RGM and (c) PBM concentration.

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**Fig. 5.** Statistics of (a) average GEM concentration, (b) average RGM concentration, (c) average PBM concentration and (d) wind direction frequency in different wind directions.

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**Fig. 6.** Correlation between CO concentration and GEM concentration.

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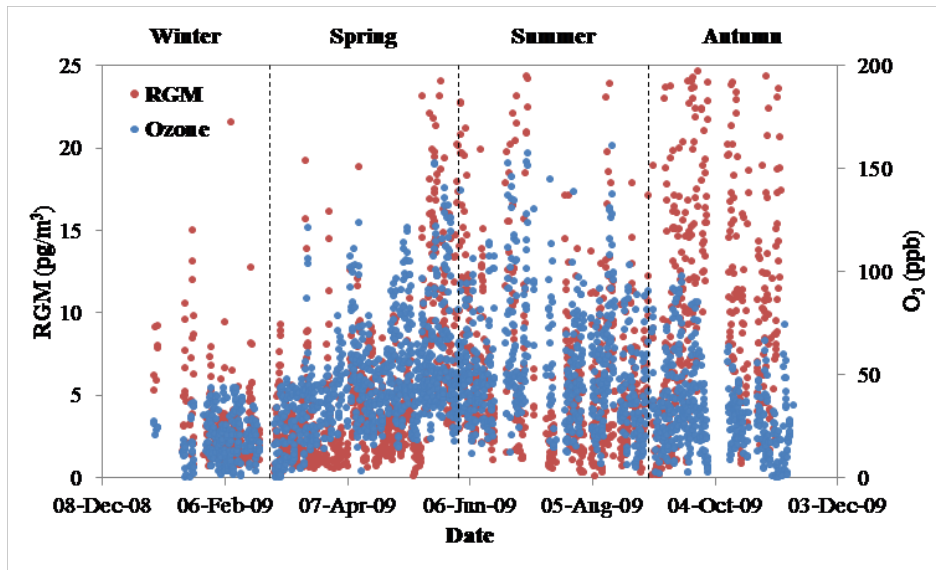


Fig. 7. Comparison of O<sub>3</sub> and RGM concentrations in different seasons.

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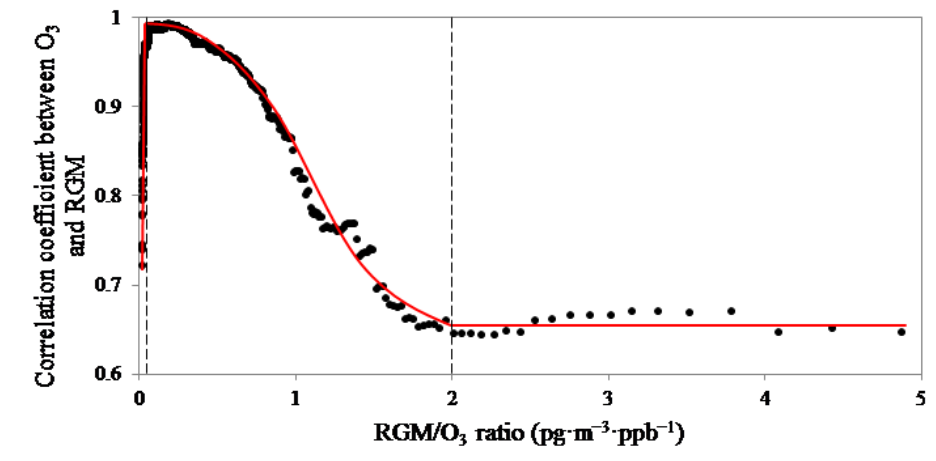


Fig. 8. Relationship between RGM/O<sub>3</sub> ratio and O<sub>3</sub>-RGM correlation coefficient.

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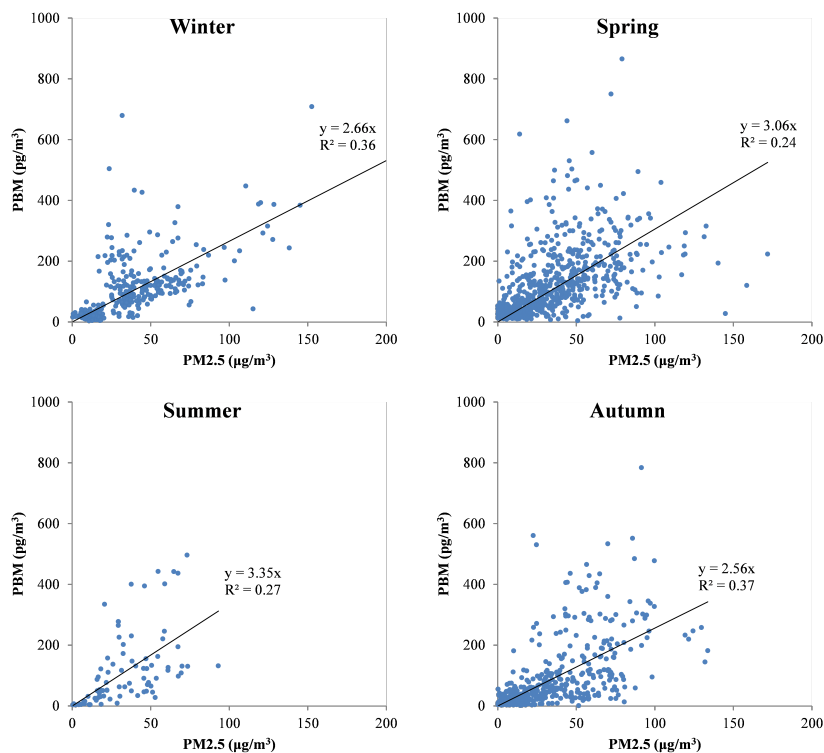


Fig. 9. Relationship between PM<sub>2.5</sub> and PBM in different seasons.

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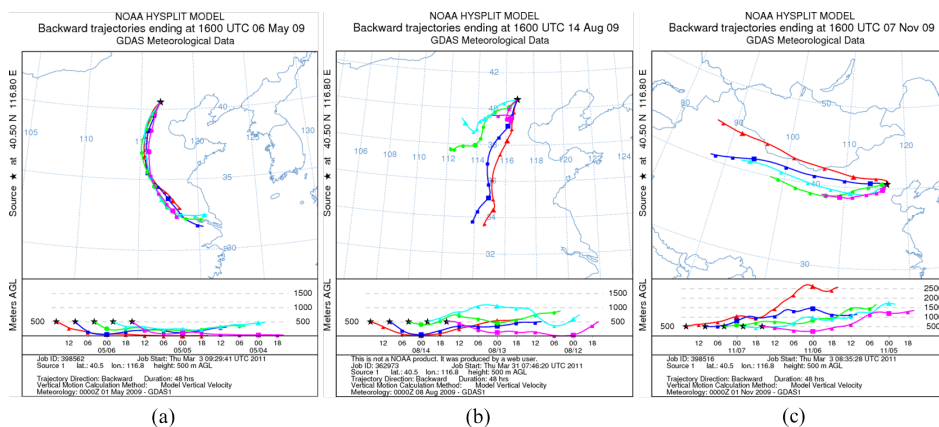
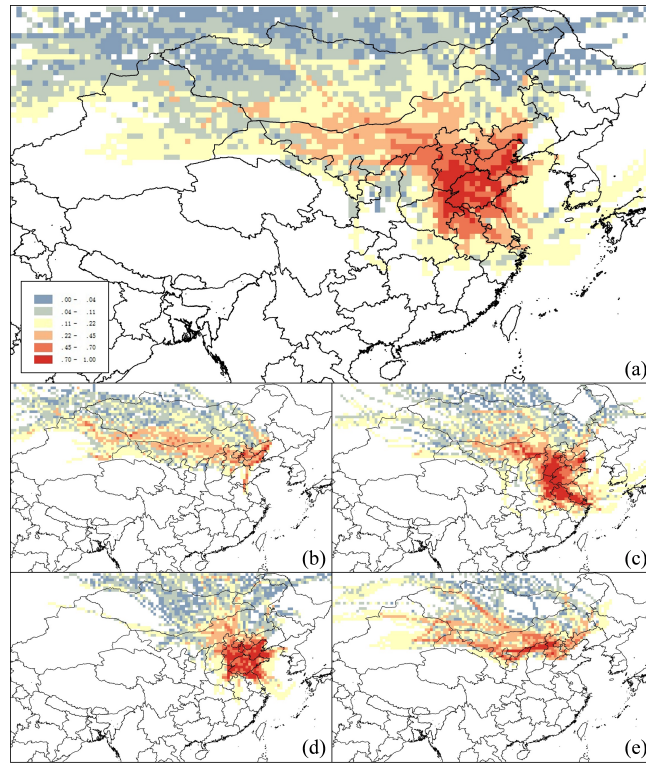


Fig. 10. HYSPLIT modeling results for the period of (a) May 4–6, (b) August 12–14, and (c) November 5–7, 2009.

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**Fig. 11.** Spatial contribution of mercury emission sources simulated by PSCF model (a: overall; b: winter; c: spring; d: summer; e: autumn).