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Atmospheric Chemistry and Physics Discussions

Interactive comment on "A modeling analysis of a heavy air pollution episode occurred in Beijing" *by* X. An et al.

Anonymous Referee #3

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General comments

This is an interesting paper about the source apportionment of the air pollution in Beijing, China.
An important part of the results depends on the meteorological field however there is no evaluation of the performance of it for this specific period.

Specific comments

Model description and validation

The Models 3-/CMAQ has been used with RAMS, authors must present an evaluation of the meteorological performance of MM5 in the area.

A statistical comparision related to the performance of MM5 in the description of the meteorological variables in the domain is necessary. (i.e. RMSE, Index of agreement, between measured vs. modeled for temperature, wind speed, etc. see Willmott, C.J. 1981,1985). This information can be included as a table.

Willmott, C.J., On the validation of models (1981) *Phys. Geog.*, **2**, pp. 184-194;

Willmott, C.J., Ackleson, S.G., Davis, R.E., Feddema, J.J., Klink, K.M., Legates, D.R., O'Donnell, J., Rowe, C.M., Statistics for the evaluation and comparison of models (1985) *J. Geophys. Res.*, **90**, pp. 8995-9005.

3.1 Model Setup

A map of the three domains can help to see the coverage of the modeling area.

The pametrizations used by MM5 should be mentioned here at least for 3rd and 4rt domains.

3.2 Comparison of model results. . .

In the comparison between observations and similuation it is a good practice to use the Index of agreement in addition of the correlation coefficient.

Technical corrections

Abstract

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Line 20 SOIL if it is not an acronym should not be in capitals.

Introduction
Page 8217 Line 17 May use a different word than “obviously”.

Model description and validation
Page 8220 line 7 *Yamaji et al 2006* it is not present in the references.

References
Review the order of the references. (Kazuyo)

Interactive comment on Atmos. Chem. Phys. Discuss., 6, 8215, 2006.