

Interactive  
Comment

## ***Interactive comment on “VOC reactivity and its effect on ozone production during the HaChi summer campaign” by L. Ran et al.***

**Anonymous Referee #2**

Received and published: 6 May 2011

This manuscript reports atmospheric measurements of O<sub>3</sub>, NO<sub>x</sub> and VOCs made during the HaChi summer field campaign and provide interesting information on the contribution of VOCs to the photochemical activity in this area of North China Plain. From observed VOC-to-NO<sub>x</sub> ratios and the use of a photochemical box model, the authors also infer that the chemical regime of O<sub>3</sub> formation is NO<sub>x</sub> limited in this region.

This manuscript is well structured. The language is clear and precise. Substantial conclusions have been reached and I believe this paper will be interesting for the atmospheric community. I recommend publication in ACP after the authors address the following points:

Major comments:

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I share the concerns of Anonymous Referee #1 about the modeling results and also urge the authors to provide more details on the modeling procedure used for this study.

There is no discussion of previous studies investigating the photochemical activity of the North China Plain area. Is there a lack of such studies? If previous studies have been published, the authors should cite them in their manuscript and should discuss how it compares to their work?

Minor comments:

Abstract L9-12: The contribution of the key species to the total VOC reactivity should be reported here as %

Were oxidation products of isoprene such as methacrolein and methyl vinyl ketone measured during this field campaign? If so, do these measurements support the authors' hypothesis stated P8607 L1-5 about isoprene?

P8616 Table1: Indicate the day associated to each scenario

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Interactive comment on Atmos. Chem. Phys. Discuss., 11, 8595, 2011.

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