

Interactive
Comment

Interactive comment on “Evaluations of NO_x and highly reactive VOC emission inventories in Texas and their implications for ozone plume simulations during the Texas Air Quality Study 2006” by S.-W. Kim et al.

Anonymous Referee #2

Received and published: 21 September 2011

This paper applies an abundant array of satellite, aircraft and other observations to thoroughly evaluate NO_x and VOC emission inventories in Texas. The authors capitalize upon various recent studies of Texas emissions and their own analyses to generate thoughtful and detailed adjustments of inventories on category- and region-specific bases. Modeling demonstrates that the adjustments to NO_x and VOC inventories greatly improve performance. Methods and implications are thoroughly explained in this highly readable paper. This paper should be accepted as it provides an important contribution to the field, both for this region and for demonstrating effective methods of

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linking satellite and field-campaign data to assess emissions inventories.

Specific comments: The vertical basis for comparing the WRF-Chem results with the various retrievals of satellite column NO₂ is unclear. The satellites observe NO₂ with different efficiencies at different altitudes, and each retrieval may have assumed a different vertical profile for NO₂ from that in WRF-Chem. It is unclear if this was accounted for in comparing the column densities.

Interactive comment on Atmos. Chem. Phys. Discuss., 11, 21201, 2011.

ACPD

11, C9171–C9172, 2011

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