

Interactive
Comment

Interactive comment on “Origin of springtime ozone enhancements in the lower troposphere over Beijing: in situ measurements and model analysis” by J. Huang et al.

J. Huang et al.

hongyu.liu-1@nasa.gov

Received and published: 25 March 2015

Thank Referee #1 for helpful comments.

1. "Section 3, Page 32592, lines 4-5: Awkward sentence. Change to 'Measurements were made by both platforms on four days: 1, 3, 11, and 15 May.' "

Reply - Changed accordingly.

2. "Section 3, Page 32594: Lines 1-5: Please be specific how “enhanced” is defined. Was there a threshold?"

Full Screen / Esc

Printer-friendly Version

Interactive Discussion

Discussion Paper



Reply - We have revised the text to "The O₃ concentrations (~65 ppbv) at ~1.5 km in the average profile reflects O₃ enhancements (> 70 ppbv) frequently observed in individual profiles during April-May, 2005."

3. "Section 4, Page 32596, Lines 1-5: Is there another meteorological scale that could be missing and is important? Is that what is implied here?"

Reply - The original text was not clear. We have revised it to: "The distribution and variability of model relative humidity (RH) are generally similar to those observed by ozonesondes (not shown), suggesting that convective transport and large-scale ascending and descending motions in the study region are reasonably represented in the GEOS-4 and GEOS-5 meteorology."

4. "Section 5.1, Page 32598, line 8 and others: The word "suppressed" is not a good choice here. If the emissions were completely turned off in the model, as I suspect they were, then do not use the word "suppressed" throughout this paragraph. Instead say the emissions were not included."

Reply - We have replaced "suppressed" with "turned off".

5. "Section 5.2, Page 32600, Lines 14 – 15: "Followed by a trend of decreasing with altitude" is awkward and should be reworded."

Reply - We have rewritten the sentence to "The ozone mixing ratio was lowest near the surface and increased with altitude below ~1.5km where it reached a maximum (94.7ppbv and 90ppbv in ozonesonde and aircraft measurements, respectively), and then decreased with altitude from ~1.5km to ~4km."

Interactive comment on Atmos. Chem. Phys. Discuss., 14, 32583, 2014.

[Full Screen / Esc](#)[Printer-friendly Version](#)[Interactive Discussion](#)[Discussion Paper](#)