

Norrköping, 2014-07-18

Dear Heini,

We are herewith uploading the revised version of the manuscript. We have tried to address referee suggestions and have clarified the text where relevant.

The major revisions include:

- a) Revision of nearly all figures (except one). Only those CO anomalies exceeding one standard deviation are shown as a measure of statistical confidence. The broader wind and temperature patterns are included in the main manuscript.
- b) Four new figures are included in the supplementary section providing information on CO seasonality and trends among others.
- c) Section 3 is considerably revised to improve clarity and integrate meteorological information.
- d) Section 2 and 4 are also partly revised to add more information on AIRS data analysis and interpretations.

A couple of other suggestions by the referees (one on investigating total column CO and the other on presenting broader study area) are partly included in the revision. It is worth point out that these new results nothing but confirm what we were arguing in the original manuscript.

Minor changes include addition of a table and some references and some editorial changes.

We hope that this satisfies referee concerns. We look forward to further comments from the referees and will be happy to work further if required.

Thanks and regards,
Manu Thomas and Abhay Devasthale