Interactive comment on “Chemistry and transport of pollution over the Gulf of Mexico and the Pacific: Spring 2006 INTEX-B Campaign overview and first results” by H. B. Singh et al.

H. B. Singh et al.

Received and published: 5 March 2009

Response to referee comments:

We thank both referees for their constructive comments. We have done our best to respond to these. In several cases the comments are of an editorial nature and we have addressed these while explaining the special circumstances arising from the fact that some of the information was deliberately excluded from this paper because it appears in a MILAGRO overview being prepared by Molina et al (2009). Overall these referee comments have helped to improve and clarify the manuscript and we have now complied with nearly all of the suggestions. We would be submitting a revised manuscript shortly.
Response to Referee 1: We thank this referee for his/her thorough review with generally favorable comments stating that the paper is well written, logical, and useful. A key suggestion is that a historical perspective on the Pacific part of this experiment has not been provided in sufficient detail and this may make it difficult for some readers to easily follow the content. As the referee notes this should be a relatively straightforward thing to address. We have taken this advise and provided such a perspective albeit concisely. This has involved adding several references and some text associated with many previous missions (such as PEM-West A, PEM-West B, Trace-P. ITCT-2k2, INTEX-A). We note that this work focuses on the INTEX-B experiment and is not intended to be a paper that reviews all past work. Nevertheless we feel that the referee suggestion is constructive and we have now addressed it satisfactorily.

Comment 1: As suggested we have removed the word "comprehensive" in the abstract and replaced it with "valuable".

Comment 2: We have now added an additional section that briefly acquaints the reader with previous studies (such as PEM-West A, PEM-West B, Trace-P. ITCT-2k2, INTEX-A) and also added several references that a reader could access for more detail on science and instrumentation.

Comment 3: It is correct that NCAR C-130 played an important role in INTEX-B and this has been discussed. The payload information on C-130 has deliberately not been included here as it appears in the MILAGRO overview paper being submitted to this special issue by Molina et al. (2009) and its inclusion in this paper will constitute duplication. It has now been clearly stated that C-130 payload information is contained in the upcoming paper by Molina et al (2009).

Comment 4: We have now added information on where some of the instrument details and data can be found. All INTEX-B data are now available to public and all password protections have been removed.

Comment 5: A Table (5b) describing C-130 flight salient mission activity has now been
added.

**Comment 6:** NOy has been added to the list of species intercompared. The intercomparison data are no longer password protected and are available to all. Because of the large amount of detail and nuances involved in these intercomparisons, a detailed discussion in this paper is deemed inappropriate. A separate paper that provides all necessary details with focus on intercomparison issues is being prepared by Chen et al. to be published in ACP.

**Comment 7:** The trend is indeed for Asia and the sentence has been clarified.

**Comment 8:** The offending sentence about PAN and HNO3 trends has been removed. The result stated is correct but the author is right to point out that the IGAC News Letter is not a peer reviewed publication and this important result needs to be further vetted.

**Comment 9:** The Nowak (2004) and other references have now been added to give a better perspective on historical work.

**Comment 10:** The relationship between Hg and CO has been restated and clarified.

**Comment 11:** Radke et al. (2007) reference has been added.

**Technical Corrections:** These have been incorporated in full.

**Response to Referee 2:** This referee makes several statements complementing the work and proposes further research in this important area. We have no disagreement with these comments and no change to manuscript is requested or required.