

***Interactive comment on* “Chemical Isolation in the Asian monsoon anticyclone observed in Atmospheric Chemistry Experiment (ACE-FTS) data” by M. Park et al.**

Anonymous Referee #3

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Authors in this paper used the satellite observed ACE-FTS data to examine high concentrations of surface pollutants associated with the Asian summer Monsoon circulation in which vertically transported pollutants are trapped in the upper troposphere and the lower stratosphere. High concentrations of surface pollutants in the upper troposphere over Asia due to the Asian Monsoon were previously shown in the literature (e.g. Li et al., 2005) but they were limited by a lack of vertical profiles of chemical data which were clearly displayed in this paper. The paper is well written and includes scientifically important analysis. It certainly deserves a publication in ACP although there are a few minor issues to be addressed. My comments on them are given as follows:

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1) P5, "The initial comparisons of version 1.0" - this is unclear because the comparison is in good agreement with what? Please revise this sentence.

2) "Profiles depends (typo?)"

3) P6, The method to delineate the boundary of the monsoon region seems too arbitrary unless readers read the paper by Park et al. (2007). How robust the choice of 60 ppbv is to define the monsoon region (as discussed in section 4)? A physically based approach should be employed to define the monsoon region and is highly recommended for authors to consider.

4) P8, "In order to study."; Please revise this sentence which is now unclear.

5) P9, The relative enhancement in concentrations inside decreases with lifetimes of species. However there is a slight increase from C₂H₆ to CO between 12.5 and 14.5 km in figure 6. Any explanation for this?

Interactive comment on Atmos. Chem. Phys. Discuss., 7, 13839, 2007.

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