

Interactive comment on “Analysis of non-methane hydrocarbons in air samples collected aboard the CARIBIC passenger aircraft” by A. K. Baker et al.

Anonymous Referee #1

Received and published: 20 November 2009

1. This paper is well-suited for this journal.
2. Although individual components of the CARIBIC whole air sampling system which analyzes NMHC are presently in use, they have not been previously configured so as to sample automatically from an airliner.
3. From a technical standpoint, substantial conclusions can be reached in that such a system can be assembled and provide useful data that the calibration procedures using this laboratory are able to maintain their calibration over several years.
4. Generally the technical aspects are well described. I would however mention the type of valves used to seal the glass sampling flasks and the type of tanks used for the working and primary standards.

5. Although this is a technical paper describing the experimental setup of the CARIBIC system, it would helpful to see more of their data and a comparison to existing airborne data. Are the data archived and accessible?

6. Experimental description is in sufficient detail that another group could reproduce their system.

7. The authors give sufficient credit to previous researchers except in regards to the limited data analysis.

8. The title is appropriate.

9. Abstract meets the criteria of being concise and complete.

10-12. Adequately addressed

13. In regards to figures: Figure 1. This figure may need to be a large to accommodate larger font sizes. Figure 2. Again the font sizes are quite small. Figure 3. It appears the C8 hydrocarbon i-octane is out of sequence. Figure 4. The fonts are much too small and some of the colors much to faint.

14 and 15 are appropriate for this paper.

A few minor points. In your test of injecting samples using your drying system and without, did you see any correlation of your co-eluting peak with specific humidity of the sample what I was collected? Some explanation might be appropriate as to why you switched from stainless steel canisters to glass canisters and why you went from an MS detector to an FID?

Interactive comment on Atmos. Meas. Tech. Discuss., 2, 2377, 2009.

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