**Atmospheric
Measurement
Techniques
Discussions**

Interactive comment on "An intercomparison of GC-FID and PTR-MS toluene measurements in ambient air under conditions of enhanced monoterpene loading" *by J. L. Ambrose et al.*

J. L. Ambrose et al.

jambrose@unh.edu

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Please see supplement for Author Responses.

Please also note the supplement to this comment:
http://www.atmos-meas-tech-discuss.net/3/C268/2010/amtd-3-C268-2010-supplement.pdf

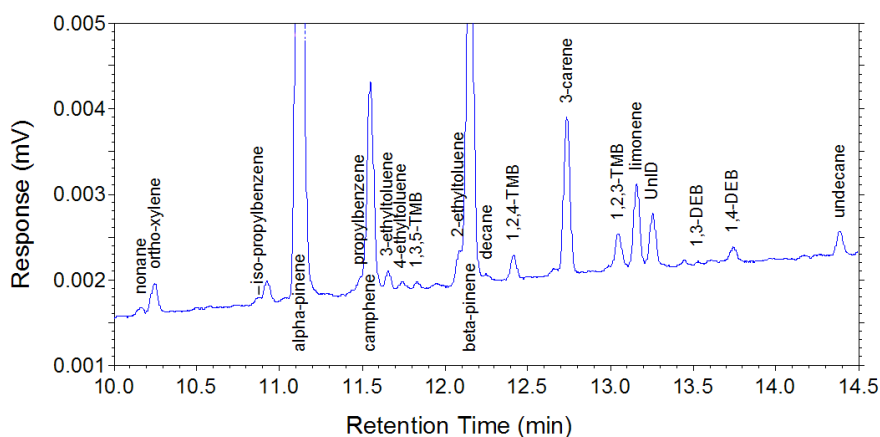Interactive comment on Atmos. Meas. Tech. Discuss., 3, 1, 2010.

Fig. 1. (Figure 3) Portion of a chromatogram recorded at THF on 3 August, 04:23 LT during a period of enhanced monoterpene mixing ratios.
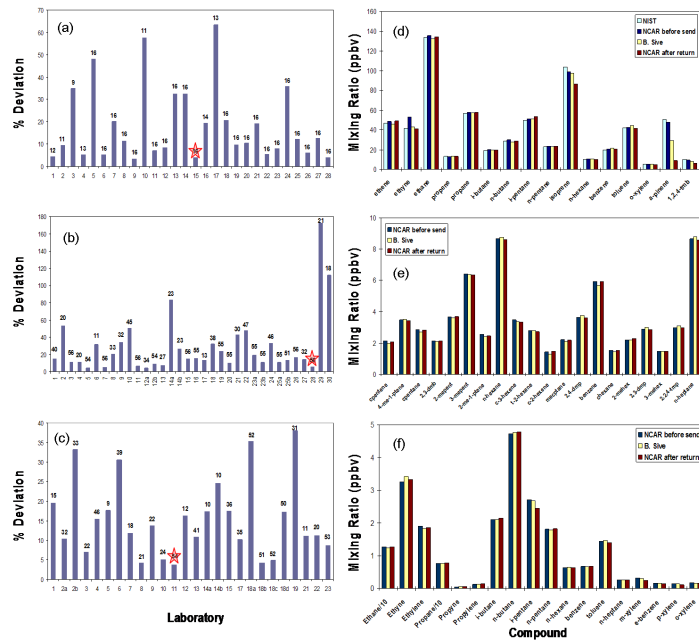
Figure A. Average absolute percent deviation of each investigator's reported values from NCAR values for (a) Task 2, (b) Task 3 and (c) Task 4 of NOMHICE, respectively. The numbers above each bar represent the number of compounds reported by each investigator; the red stars designate the results of B. Sive. The results for select compounds showing the NIST (Task 2 only), NCAR before send, B. Sive and NCAR after return values are shown for (d) Task 2, (e) Task 3 and (f) Task 4, respectively.

Fig. 2. (Figure A)

Table 4. Ranking With Respect to NCAR-NOMHICE Reference Results of Participants' Results for All 54 Compounds as Calculated by Equation (1)[a]

Analysis	N	n	$n \leq \pm10\%$	$\pm10\% \leq n \leq \pm25\%$	$\pm25\% \leq n \leq \pm50\%$	$n \geq \pm50\%$	Rank
30	45	1.00	27	12	6	0	1
23	50	0.96	21	20	9	0	2
17	51	0.89	24	18	6	3	3
10	45	1.09	21	15	6	3	4
11	49	0.95	20	16	9	4	5
13	37	0.96	16	15	5	1	6
24	49	0.85	22	15	9	3	7
22	35	0.86	12	19	4	0	8
9	22	1.04	12	7	2	1	9
16	23	1.08	15	4	2	2	10
15	21	0.87	11	7	3	0	11
12	9	1.09	6	2	0	1	12
7	32	0.85	14	8	6	4	13
25	50	0.78	14	14	15	7	14
5	11	0.90	4	6	1	0	15
1	15	1.20	8	5	1	1	16
3	12	1.19	6	4	1	1	17
26	49	0.72	17	10	10	12	18
14	20	1.02	7	4	7	2	19
21	33	0.79	9	9	12	3	20
2	16	1.16	6	5	4	1	21
18	39	0.87	14	7	5	13	22
29	20	0.86	6	6	5	3	23
6	33	1.61	14	6	5	8	24
8	33	1.18	4	5	13	11	25
19	10	0.79	1	2	6	1	26
20	10	0.72	1	2	6	1	27
27	30	0.61	1	3	6	20	28
4	18	1.75	0	0	11	7	29
28	15	5.80	4	4	0	7	30

B. Sive Group 30 → (row 30, rank 1)

[a]The overall rank is given in the last column with a rank of 1 being in closest agreement with the reference laboratory and a rank of 30 being in poorest from agreement with the reference laboratory. N is the total number of reported NMHCs. n is defined as $(\sum_i^N \delta i)/N$ where $\delta i =$ (participant value, NMHC$_i$)/(NCAR-NOMHICE reference value, NMHC$_i$). n is the total number of reported compounds falling within the given brackets of the reference analyses. See text for discussion.

Fig. 3. (Figure B) Table 4 of Apel et al. (2003b).

Table 5. Ranking With Respect to NCAR-NOMHICE Reference Results of Participants' Results for Intercompared Compounds 1–37 as Calculated by Equation (1)[a]

Analysis	N	n	$n \leq \pm10\%$	$\pm10\% \leq n \leq \pm25\%$	$\pm25\% \leq n \leq \pm50\%$	$n \geq \pm50\%$	Rank
30	33	1.02	23	7	3		1
17	34	0.95	21	9	4		2
10	32	1.07	19	8	4	1	3
23	34	0.93	15	14	5		4
24	32	0.91	17	10	5		5
11	32	1.07	16	11	4	1	6
13	28	0.93	12	13	3		7
16	19	1.03	13	3	3		8
26	32	0.85	16	7	9		9
22	26	0.88	10	15	1		10
7	24	0.94	14	6	3	1	11
15	17	0.91	11	5	1		12
9	19	1.04	10	6	2	1	13
25	34	0.83	11	12	9	2	14
12	3	1.10	2	1			15
18	29	1.03	13	7	3	6	16
21	29	0.82	9	8	11	0	17
1	15	1.20	8	5	1	1	18
5	11	0.90	4	6	1		19
3	12	1.19	6	4	1	1	20
14	16	1.04	7	3	4	2	21
2	16	1.16	6	5	4	1	22
29	16	0.78	5	6	4	1	23
8	26	1.40	4	5	13	4	24
6	23	1.89	12	4	2	5	25
19	4	0.73	0	1	3		26
28	11	2.41	3	5	3		27
27	22	0.73	1	2	6	13	28
20	4	0.57	0	0	3	1	29
4	18	1.75	0	0	11	7	30

B. Sive
Group 30

[a]The overall rank is given in the last column with a rank of 1 being in closest agreement with the reference laboratory and a rank of 30 being in poorest from agreement with the reference laboratory. N is the total number of reported NMHCs. n is defined as $(\sum_1^N \delta_i)/N$ where δ_i = (participant value, $NMHC_i$)/(NCAR-NOMHICE reference value, $NMHC_i$). n is the total number of reported compounds falling within the given brackets of the reference analyses. See text for discussion.

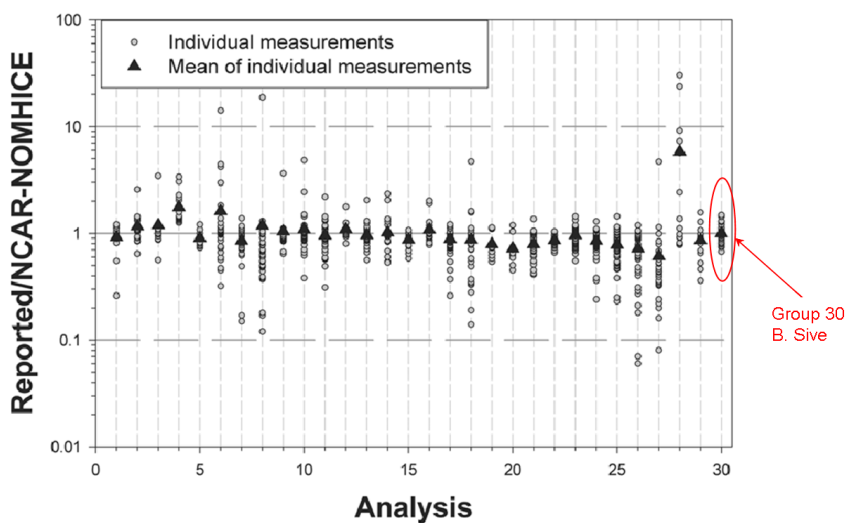**Fig. 4.** (Figure C) Table 5 of Apel et al. (2003b).

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Fig. 5. (Figure D) Figure 9 of Apel et al. (2003b).

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