

Supplementary material

Sources of ultrafine particles and chemical species along a traffic corridor: comparison of the results from two receptor models

Adrian J. Friend^A, Godwin A. Ayoko^{A,B}, Daniel Jager^A, Megan Wust^A, E. Rohan Jayaratne^A, Milan Jamriska^A and Lidia Morawska^A

^AInternational Laboratory for Air Quality and Health, School of Chemistry, Physics and Mechanical Engineering, GPO Box 2434, Queensland University of Technology, QLD 4001, Australia.

^BCorresponding author. Email: g.ayoko@qut.edu.au

Table S1. Summary statistics for the chemical and particle size data for Site 1

Variable	Average (geometric mean)	Standard deviation (geometric standard deviation)	Minimum	Maximum	Median
NO ($\mu\text{g m}^{-3}$)	167.2 (111.6)	123.7 (2.0)	1.2	651.7	146.0
NO ₂ ($\mu\text{g m}^{-3}$)	56.9 (48.6)	31.3 (1.7)	1.9	233.3	50.8
CO ($\mu\text{g m}^{-3}$)	1720.3 (1254.1)	1297.1 (2.2)	114.6	15465.2	1374.7
PM ₁₀ ($\mu\text{g m}^{-3}$)	30.7 (26.5)	16.3 (1.6)	1.3	124.8	28.3
14.0746 nm	142.0 (100.6)	119.8 (1.9)	0.7	1256.6	118.5
14.5902 nm	157.0 (113.3)	130.6 (2.0)	1.8	1403.3	126.1
15.1247 nm	174.2 (126.7)	143.5 (2.0)	1.7	1415.5	138.0
15.6788 nm	192.3 (138.7)	160.9 (2.1)	0.9	1375.6	148.4
16.2531 nm	212.4 (153.0)	180.1 (2.2)	3.2	1296.6	158.8
16.8485 nm	232.5 (166.7)	198.5 (2.2)	1.6	1436.2	174.4
17.4658 nm	252.4 (178.9)	224.5 (2.3)	4.4	2478.4	185.0
18.1056 nm	271.4 (189.7)	251.8 (2.3)	2.2	3690.3	193.6
18.7688 nm	289.5 (200.0)	273.8 (2.4)	1.8	3635.3	204.5
19.4564 nm	305.8 (210.4)	289.3 (2.4)	4.1	3238.0	214.9
20.1691 nm	317.7 (217.6)	300.0 (2.5)	1.2	2734.4	218.1
20.908 nm	325.0 (222.6)	310.5 (2.5)	2.6	2795.1	220.6
21.6739 nm	332.7 (227.3)	318.4 (2.5)	3.0	3109.9	225.5
22.4679 nm	339.1 (232.6)	321.5 (2.5)	4.3	3112.6	234.8
23.291 nm	341.6 (234.6)	325.5 (2.5)	0.9	3218.9	234.8
24.1442 nm	342.3 (234.9)	328.6 (2.4)	3.9	3252.6	233.5
25.0287 nm	342.3 (235.4)	327.1 (2.4)	2.8	3259.6	236.0
25.9455 nm	343.8 (237.5)	328.8 (2.4)	2.7	3368.1	237.2
26.896 nm	341.7 (235.5)	331.4 (2.4)	3.4	3963.0	237.5
27.8813 nm	335.8 (231.5)	324.1 (2.3)	2.7	3691.7	236.6

Variable	Average (geometric mean)	Standard deviation (geometric standard deviation)	Minimum	Maximum	Median
28.9026 nm	333.5 (229.6)	320.8 (2.4)	2.7	2917.0	231.9
29.9614 nm	327.5 (225.5)	315.0 (2.4)	3.7	2811.7	224.4
31.059 nm	324.9 (223.7)	316.0 (2.3)	2.6	3083.7	223.2
32.1968 nm	320.6 (220.8)	316.3 (2.4)	4.6	3222.6	218.9
33.3762 nm	312.7 (215.2)	308.6 (2.3)	4.0	2966.1	217.0
34.5989 nm	307.8 (213.0)	299.0 (2.3)	4.9	2723.0	215.0
35.8664 nm	297.1 (207.4)	283.1 (2.3)	2.6	2617.9	209.9
37.1803 nm	290.6 (205.0)	269.0 (2.2)	3.6	2595.9	211.1
38.5423 nm	282.0 (200.0)	256.0 (2.1)	3.7	2676.0	211.2
39.9542 nm	276.2 (196.7)	248.4 (2.1)	0.5	2526.7	207.2
41.4178 nm	267.6 (192.3)	236.7 (2.1)	1.0	2453.2	201.2
42.9351 nm	264.4 (190.7)	231.3 (2.1)	4.9	2363.1	201.8
44.5079 nm	257.2 (187.6)	221.8 (2.0)	1.2	2324.8	201.4
46.1384 nm	252.9 (185.7)	217.8 (2.0)	2.3	2563.2	201.2
47.8286 nm	245.7 (181.6)	206.8 (2.0)	3.1	2469.4	197.4
49.5807 nm	244.4 (180.8)	204.4 (2.0)	1.0	2768.5	198.7
51.397 nm	240.7 (179.6)	194.7 (2.0)	3.1	2441.4	196.6
53.2798 nm	237.8 (178.2)	185.6 (2.0)	1.3	2326.8	193.9
55.2316 nm	235.1 (177.1)	182.1 (2.0)	4.3	2358.5	192.3
57.2549 nm	232.6 (176.2)	172.9 (2.0)	2.5	1877.2	192.7
59.3523 nm	228.8 (173.6)	166.1 (2.0)	2.3	1730.5	193.4
61.5265 nm	226.6 (171.3)	163.3 (2.0)	0.9	1581.6	189.3
63.7804 nm	225.4 (170.1)	161.8 (2.0)	0.4	1726.4	189.3
66.1169 nm	222.8 (167.8)	158.5 (2.0)	1.2	1470.5	190.5

Variable	Average (geometric mean)	Standard deviation (geometric standard deviation)	Minimum	Maximum	Median
68.539 nm	220.8 (166.4)	156.9 (2.0)	3.1	1416.4	186.4
71.0497 nm	215.9 (162.4)	153.8 (2.0)	4.1	1203.1	181.8
73.6525 nm	211.7 (158.6)	151.9 (2.0)	1.7	1331.1	178.2
76.3506 nm	208.3 (155.4)	150.3 (2.0)	4.6	1196.2	173.4
79.1476 nm	204.9 (152.5)	149.4 (2.0)	3.7	1128.5	170.5
82.047 nm	201.4 (149.2)	147.4 (2.0)	3.4	1188.3	169.8
85.0526 nm	197.3 (146.4)	144.9 (2.0)	2.9	1101.8	167.1
88.1683 nm	193.3 (143.2)	141.9 (2.0)	2.0	1053.2	162.6
91.3982 nm	188.3 (138.3)	140.2 (2.0)	1.7	943.6	156.5
94.7464 nm	184.0 (135.4)	138.9 (2.0)	3.0	965.7	152.1
98.2172 nm	180.1 (132.1)	135.7 (2.0)	2.3	937.1	149.3
101.8152 nm	176.5 (129.3)	132.8 (2.0)	1.2	982.5	146.8
105.545 nm	171.7 (124.9)	132.2 (2.0)	1.5	1100.3	141.8
109.4114 nm	166.0 (119.3)	132.0 (2.0)	0.1	1288.6	136.0
113.4194 nm	161.3 (116.0)	129.8 (2.0)	0.5	1377.8	131.2
117.5743 nm	155.7 (111.6)	126.4 (2.0)	1.5	1411.2	126.8
121.8814 nm	150.0 (107.1)	125.0 (2.0)	1.1	1432.3	120.9
126.3463 nm	145.0 (104.1)	122.6 (2.0)	1.6	1706.8	117.6
130.9747 nm	140.5 (99.9)	124.2 (2.0)	1.2	2351.1	113.5
135.7727 nm	134.8 (95.7)	122.3 (2.1)	1.6	2564.3	108.0
140.7465 nm	129.5 (91.4)	116.2 (2.0)	1.4	2268.9	104.6
145.9024 nm	122.9 (86.3)	115.0 (2.0)	2.0	2523.9	99.1
151.2473 nm	116.0 (81.3)	110.0 (2.1)	1.8	2404.5	93.2
156.7879 nm	109.6 (76.2)	102.8 (2.1)	1.5	2047.8	88.0

Variable	Average (geometric mean)	Standard deviation (geometric standard deviation)	Minimum	Maximum	Median
162.5315 nm	104.4 (72.2)	99.4 (2.1)	0.4	1823.9	83.0
168.4855 nm	98.0 (67.0)	94.2 (2.0)	0.4	1650.6	78.6
174.6576 nm	93.2 (64.0)	87.6 (2.0)	0.2	1261.0	74.4
181.0558 nm	87.3 (59.7)	82.1 (2.1)	0.5	1208.4	70.2
187.6884 nm	83.2 (56.5)	79.8 (2.0)	0.6	1028.9	66.3
194.564 nm	76.1 (50.9)	75.4 (2.1)	0.1	1006.2	60.0
201.6915 nm	67.6 (44.9)	69.9 (2.1)	0.4	1111.1	53.2
209.08 nm	62.7 (42.1)	64.9 (2.1)	0.2	1061.4	48.2
216.7392 nm	58.3 (38.9)	61.2 (2.1)	0.5	1041.3	44.8
224.679 nm	55.7 (36.8)	57.7 (2.1)	0.1	949.6	42.8
232.9097 nm	51.5 (33.8)	54.1 (2.1)	0.2	925.3	39.3
241.4418 nm	47.8 (31.3)	50.7 (2.1)	0.4	815.3	36.3
250.2865 nm	43.6 (28.1)	46.3 (2.1)	0.1	742.1	32.7
259.4553 nm	38.5 (24.4)	42.1 (2.2)	0.1	585.7	27.7
268.9599 nm	34.6 (21.6)	39.5 (2.2)	0.1	498.6	24.3
278.8127 nm	31.2 (18.9)	37.9 (2.3)	0.1	443.3	21.7
289.0264 nm	28.5 (17.1)	34.9 (2.3)	0.1	446.3	19.6
299.6143 nm	25.3 (15.2)	31.5 (2.4)	0.1	465.6	17.0
310.59 nm	24.0 (14.3)	30.9 (2.3)	0.1	503.9	16.5
321.9678 nm	27.0 (17.2)	30.1 (2.2)	0.1	445.6	19.8
333.7625 nm	25.1 (15.7)	28.0 (2.2)	0.2	409.6	18.7
345.9892 nm	22.9 (14.3)	25.1 (2.3)	0.1	344.2	16.7
358.6638 nm	21.4 (13.2)	24.1 (2.3)	0.1	349.4	15.8
371.8027 nm	19.5 (11.9)	22.4 (2.3)	0.1	357.4	14.5

Variable	Average (geometric mean)	Standard deviation (geometric standard deviation)	Minimum	Maximum	Median
385.4229 nm	18.2 (11.1)	21.1 (2.3)	0.1	299.3	13.0
399.5421 nm	16.8 (10.1)	18.9 (2.3)	0.1	281.2	12.3
414.1785 nm	15.6 (9.5)	17.7 (2.4)	0.1	293.5	11.1
429.351 nm	22.7 (13.5)	23.2 (2.2)	0.1	403.1	17.9
445.0794 nm	26.5 (15.3)	27.8 (2.3)	0.2	473.0	20.5
461.384 nm	25.9 (14.8)	27.2 (2.2)	0.2	469.3	20.6
478.2858 nm	25.2 (14.0)	27.6 (2.3)	0.1	537.0	19.6
495.8068 nm	24.7 (13.9)	27.4 (2.4)	0.6	504.8	18.5
513.9697 nm	24.4 (13.0)	27.2 (2.4)	0.1	485.1	18.6
532.7979 nm	24.1 (13.2)	26.7 (2.4)	0.2	499.2	18.3
552.3158 nm	23.8 (12.6)	26.4 (2.4)	0.5	377.6	17.9
572.5488 nm	23.5 (12.1)	25.7 (2.4)	0.1	377.0	18.1
593.5229 nm	23.7 (12.4)	26.3 (2.5)	0.4	351.6	18.6
615.2654 nm	23.4 (12.2)	26.4 (2.5)	0.3	419.9	17.4
637.8044 nm	24.0 (12.5)	28.3 (2.5)	0.4	489.8	18.4
661.169 nm	23.7 (11.9)	26.5 (2.5)	0.1	343.6	17.5
685.3896 nm	23.8 (12.1)	27.5 (2.6)	0.4	365.7	18.2
710.4974 nm	23.8 (11.9)	27.2 (2.5)	0.4	367.2	18.6
Total	17719.9 (14022.3)	11853.4 (1.9)	525.9	84277.9	15105.3

Table S2. Summary statistics for the chemical and particle size data for Site 2

Variable	Average (geometric mean)	Standard deviation (geometric standard deviation)	Minimum	Maximum	Median
NO ($\mu\text{g m}^{-3}$)	82.4 (60.4)	63.4 (2.2)	1.2	331.4	65.0
NO ₂ ($\mu\text{g m}^{-3}$)	51.1 (49.0)	15.0 (1.3)	11.3	124.2	48.9
CO ($\mu\text{g m}^{-3}$)	1259.7 (959.7)	1026.3 (2.3)	229.1	5842.4	916.5
PM ₁₀ ($\mu\text{g m}^{-3}$)	20.0 (18.9)	6.7 (1.4)	1.7	43.8	18.4
14.0746 nm	140.1 (121.1)	112.9 (1.7)	23.1	1648.9	116.6
14.5902 nm	143.4 (122.7)	115.1 (1.7)	14.6	1607.0	116.0
15.1247 nm	145.2 (124.8)	112.7 (1.8)	28.7	1532.8	119.7
15.6788 nm	149.6 (127.5)	113.5 (1.8)	39.2	1442.2	119.8
16.2531 nm	152.4 (128.4)	116.7 (1.9)	38.9	1404.3	117.7
16.8485 nm	158.9 (132.8)	122.1 (1.9)	39.1	1396.4	126.0
17.4658 nm	162.1 (134.7)	129.2 (1.9)	27.3	1490.0	128.4
18.1056 nm	166.4 (138.5)	127.5 (1.9)	41.9	1361.5	128.3
18.7688 nm	169.3 (140.2)	127.9 (1.9)	41.8	1269.1	136.4
19.4564 nm	175.2 (142.9)	139.9 (1.9)	40.3	1281.9	136.5
20.1691 nm	180.0 (146.4)	146.1 (1.9)	28.6	1285.5	139.1
20.908 nm	182.0 (148.3)	144.1 (1.8)	35.9	1205.6	143.5
21.6739 nm	182.4 (148.0)	142.9 (1.9)	35.9	1101.5	142.6
22.4679 nm	185.3 (149.8)	148.1 (1.8)	34.2	1125.8	145.8
23.291 nm	189.7 (153.4)	151.3 (1.7)	36.5	1083.8	152.1
24.1442 nm	187.2 (150.5)	146.9 (1.7)	36.4	969.5	150.8
25.0287 nm	189.0 (151.8)	150.7 (1.7)	35.3	962.1	152.0
25.9455 nm	190.7 (153.9)	150.9 (1.8)	32.6	915.8	151.0
26.896 nm	192.8 (155.7)	149.8 (1.8)	36.3	884.8	148.3
27.8813 nm	190.3 (153.8)	148.0 (1.9)	38.6	938.8	148.1

Variable	Average (geometric mean)	Standard deviation (geometric standard deviation)	Minimum	Maximum	Median
28.9026 nm	191.9 (153.8)	156.8 (1.9)	34.2	1116.5	150.5
29.9614 nm	191.1 (153.0)	157.6 (1.9)	33.9	1147.8	151.3
31.059 nm	190.1 (152.9)	156.5 (1.9)	30.1	1150.1	149.4
32.1968 nm	192.0 (153.9)	166.9 (1.9)	34.3	1527.6	150.7
33.3762 nm	189.4 (154.1)	160.2 (1.8)	38.7	1440.7	153.0
34.5989 nm	190.2 (154.5)	160.2 (1.9)	32.3	1415.6	150.2
35.8664 nm	186.1 (150.6)	161.0 (1.8)	29.8	1429.1	146.8
37.1803 nm	186.1 (151.3)	165.9 (1.8)	30.4	1558.2	146.4
38.5423 nm	183.2 (149.0)	164.4 (1.8)	33.5	1599.8	140.1
39.9542 nm	181.4 (148.5)	164.1 (1.8)	30.9	1616.9	142.7
41.4178 nm	182.4 (148.7)	171.0 (1.8)	29.4	1745.4	141.4
42.9351 nm	180.9 (148.2)	167.6 (1.7)	26.2	1871.1	142.2
44.5079 nm	179.2 (147.2)	165.3 (1.8)	32.4	1893.2	140.9
46.1384 nm	179.3 (147.2)	168.8 (1.7)	37.1	1974.3	137.3
47.8286 nm	176.5 (145.7)	167.0 (1.7)	34.1	2019.5	139.8
49.5807 nm	173.4 (144.4)	158.8 (1.7)	31.9	1880.9	134.4
51.397 nm	171.8 (144.2)	150.7 (1.6)	37.8	1763.0	137.3
53.2798 nm	170.4 (144.8)	142.5 (1.6)	37.9	1684.8	137.9
55.2316 nm	169.3 (145.7)	130.2 (1.6)	36.2	1463.6	139.4
57.2549 nm	167.0 (144.5)	123.9 (1.5)	43.7	1394.7	139.6
59.3523 nm	165.1 (144.0)	114.0 (1.6)	34.0	1219.9	138.4
61.5265 nm	163.5 (144.4)	107.2 (1.6)	35.7	1207.5	135.1
63.7804 nm	163.2 (144.5)	105.6 (1.5)	40.9	1189.1	139.0
66.1169 nm	162.6 (144.1)	101.5 (1.5)	35.2	1149.3	142.5

Variable	Average (geometric mean)	Standard deviation (geometric standard deviation)	Minimum	Maximum	Median
68.539 nm	160.4 (143.1)	103.4 (1.5)	29.3	1298.9	138.3
71.0497 nm	160.2 (142.4)	108.8 (1.5)	34.5	1442.9	140.5
73.6525 nm	157.5 (139.7)	113.7 (1.6)	31.8	1574.7	133.5
76.3506 nm	157.4 (140.2)	115.8 (1.5)	26.4	1677.7	137.0
79.1476 nm	157.5 (140.0)	119.2 (1.4)	26.4	1742.3	139.3
82.047 nm	155.8 (138.0)	118.1 (1.4)	31.3	1703.7	139.0
85.0526 nm	153.2 (135.2)	115.7 (1.5)	23.1	1638.9	134.8
88.1683 nm	150.8 (133.9)	109.1 (1.4)	30.9	1525.6	135.5
91.3982 nm	147.3 (131.4)	99.0 (1.4)	28.3	1353.0	135.4
94.7464 nm	144.1 (128.6)	91.9 (1.4)	20.1	1152.8	126.9
98.2172 nm	141.6 (127.5)	81.7 (1.3)	20.4	974.4	132.6
101.8152 nm	139.7 (126.2)	74.3 (1.4)	16.9	813.3	129.8
105.545 nm	136.0 (123.2)	67.9 (1.4)	23.7	651.6	122.8
109.4114 nm	132.7 (121.0)	60.7 (1.4)	18.7	499.2	123.0
113.4194 nm	129.6 (118.0)	59.7 (1.4)	24.9	448.3	119.4
117.5743 nm	125.0 (114.2)	57.5 (1.4)	27.3	468.9	113.6
121.8814 nm	122.2 (112.4)	54.7 (1.4)	30.4	431.8	112.1
126.3463 nm	119.9 (110.2)	53.1 (1.4)	18.6	425.6	111.6
130.9747 nm	118.9 (109.2)	51.8 (1.4)	13.5	401.1	109.1
135.7727 nm	116.5 (107.3)	50.8 (1.4)	28.5	403.5	108.5
140.7465 nm	112.2 (103.2)	49.3 (1.4)	26.0	388.7	105.9
145.9024 nm	107.8 (99.0)	48.8 (1.4)	21.3	397.8	100.0
151.2473 nm	102.5 (93.6)	46.9 (1.4)	11.8	418.6	96.6
156.7879 nm	97.9 (90.2)	43.7 (1.4)	26.8	401.4	92.1

Variable	Average (geometric mean)	Standard deviation (geometric standard deviation)	Minimum	Maximum	Median
162.5315 nm	94.1 (86.4)	41.8 (1.4)	15.0	372.8	88.0
168.4855 nm	90.7 (83.3)	40.5 (1.4)	26.3	341.5	84.9
174.6576 nm	86.2 (79.3)	37.3 (1.4)	20.3	287.3	81.3
181.0558 nm	82.8 (76.1)	36.0 (1.4)	17.6	280.7	78.6
187.6884 nm	77.6 (71.1)	33.9 (1.4)	21.6	248.3	73.0
194.564 nm	70.7 (64.5)	31.2 (1.4)	17.9	239.8	66.6
201.6915 nm	61.6 (56.0)	27.5 (1.4)	15.7	223.6	57.8
209.08 nm	56.5 (50.7)	27.2 (1.5)	13.5	230.6	52.0
216.7392 nm	52.7 (47.0)	26.5 (1.4)	8.1	217.3	49.6
224.679 nm	49.9 (44.6)	24.8 (1.4)	10.6	213.9	46.5
232.9097 nm	46.1 (41.0)	23.6 (1.4)	6.2	182.7	43.0
241.4418 nm	42.6 (37.4)	22.4 (1.4)	5.1	182.4	40.1
250.2865 nm	37.9 (32.4)	21.3 (1.5)	0.7	165.4	34.5
259.4553 nm	31.6 (26.1)	18.7 (1.6)	0.9	146.7	29.7
268.9599 nm	26.5 (21.2)	17.6 (1.6)	0.1	145.8	24.0
278.8127 nm	23.9 (19.1)	16.2 (1.6)	0.2	115.5	21.1
289.0264 nm	21.1 (16.4)	14.8 (1.7)	0.3	119.9	18.7
299.6143 nm	18.9 (14.7)	13.8 (1.7)	0.3	91.6	16.2
310.59 nm	17.8 (13.9)	11.7 (1.7)	0.1	73.5	16.0
321.9678 nm	24.0 (20.1)	14.1 (1.6)	1.6	108.5	21.9
333.7625 nm	22.3 (18.7)	13.5 (1.7)	2.0	91.1	19.5
345.9892 nm	20.8 (16.9)	12.9 (1.6)	0.9	75.4	18.8
358.6638 nm	18.9 (15.4)	12.0 (1.7)	0.9	83.3	16.9
371.8027 nm	17.4 (14.5)	10.8 (1.7)	0.9	76.3	15.0

Variable	Average (geometric mean)	Standard deviation (geometric standard deviation)	Minimum	Maximum	Median
385.4229 nm	16.9 (13.7)	11.0 (1.7)	0.1	86.2	14.6
399.5421 nm	15.4 (12.5)	10.7 (1.7)	0.7	94.5	13.5
414.1785 nm	15.3 (11.9)	10.7 (1.7)	0.2	74.7	13.2
429.351 nm	26.4 (22.9)	14.9 (1.5)	0.4	102.3	23.6
445.0794 nm	32.2 (28.4)	17.4 (1.6)	2.8	104.3	27.8
461.384 nm	31.7 (27.8)	17.2 (1.6)	2.6	124.6	27.8
478.2858 nm	32.0 (27.7)	18.4 (1.7)	2.8	121.5	26.6
495.8068 nm	31.3 (27.5)	16.8 (1.5)	4.6	109.8	28.0
513.9697 nm	31.5 (27.4)	18.2 (1.6)	5.5	109.2	27.3
532.7979 nm	31.3 (27.5)	17.5 (1.5)	5.1	136.1	27.5
552.3158 nm	31.2 (27.2)	18.6 (1.7)	4.2	138.3	26.3
572.5488 nm	31.4 (27.2)	18.5 (1.6)	4.7	139.9	27.1
593.5229 nm	30.8 (26.8)	17.9 (1.5)	2.9	139.7	27.5
615.2654 nm	31.1 (27.2)	17.7 (1.6)	2.9	143.4	27.5
637.8044 nm	32.2 (28.0)	18.9 (1.7)	7.3	137.2	27.8
661.169 nm	31.5 (27.6)	17.7 (1.7)	7.5	132.5	27.0
685.3896 nm	31.7 (27.9)	17.5 (1.6)	5.1	130.9	28.5
710.4974 nm	32.0 (28.1)	17.9 (1.6)	6.4	144.2	27.8
Total	12568.3 (11257.0)	7038.5 (1.5)	2731.2	65017.9	10964.0

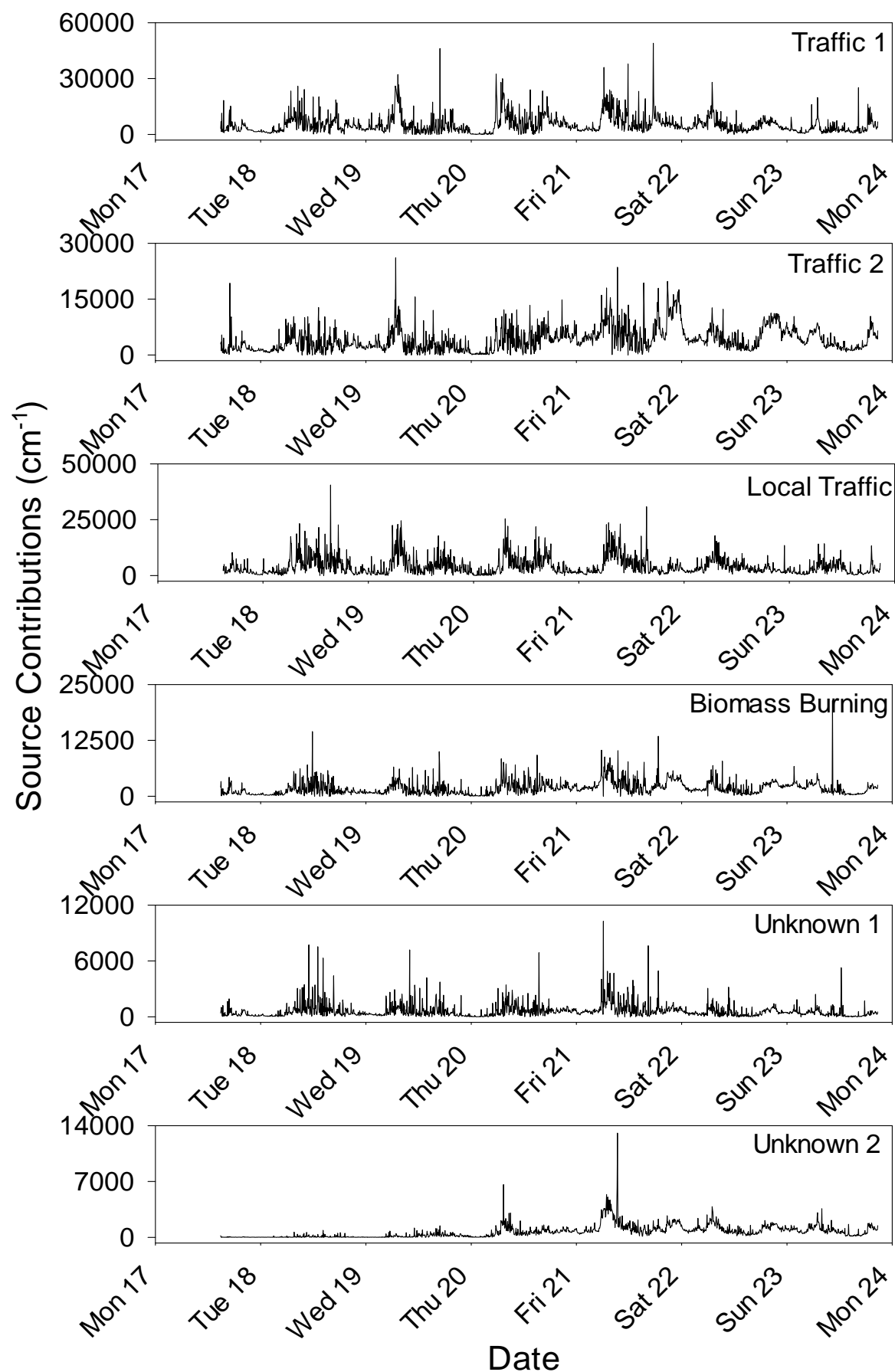


Fig S1. Source contributions from the PMF analysis of Site 1.

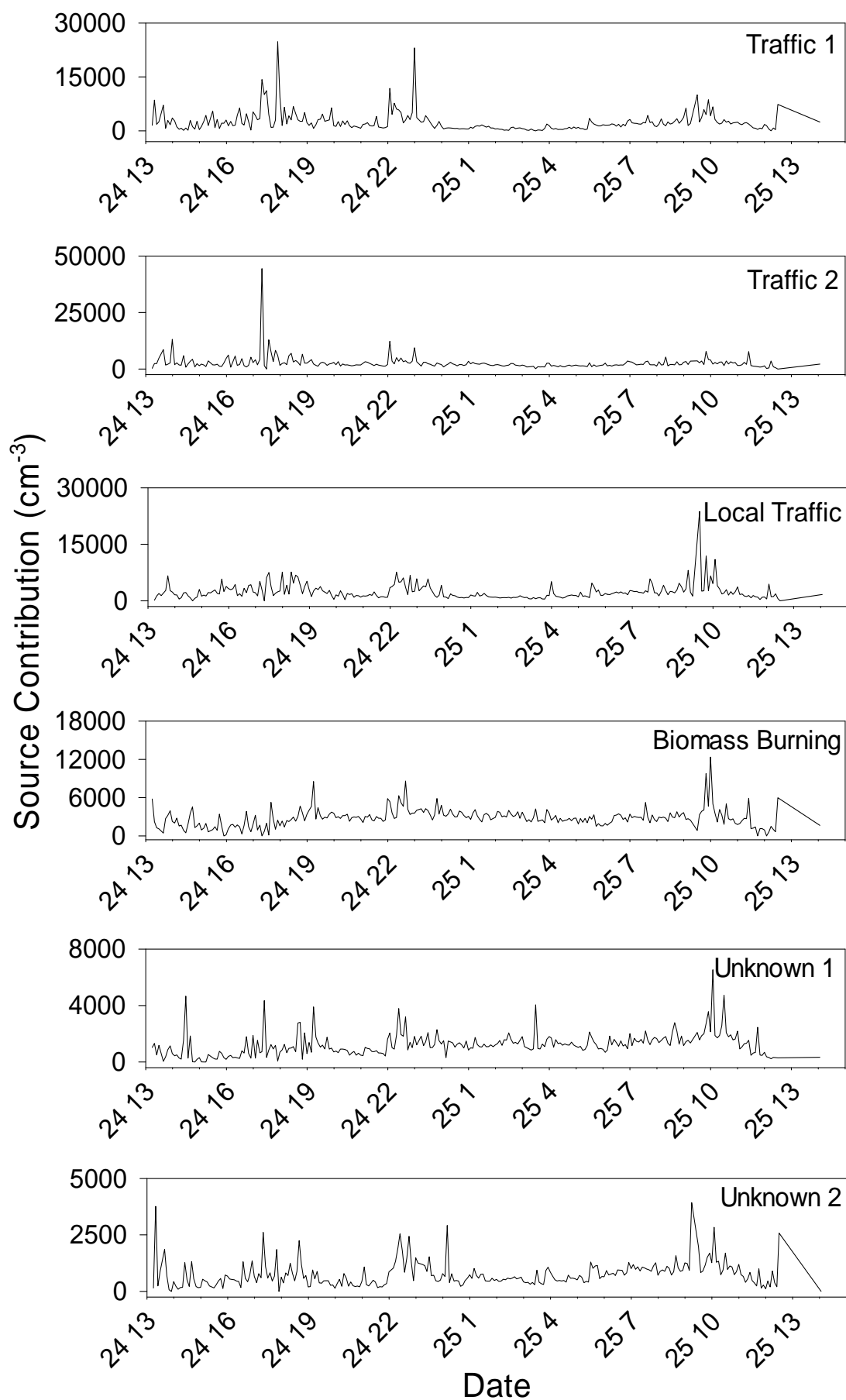


Fig. S2. Source contributions from the PMF analysis of Site 2.

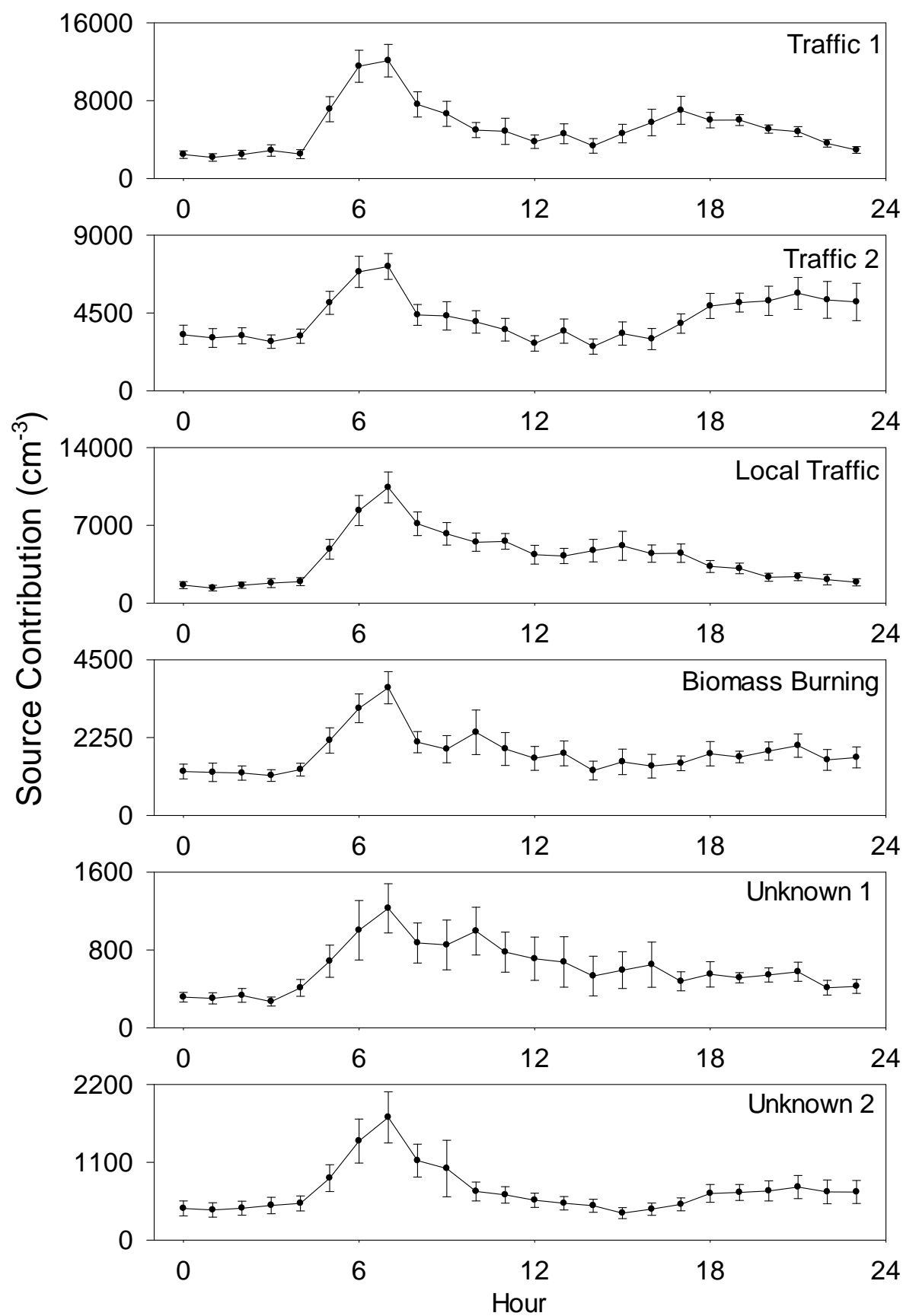


Fig. S3. Diurnal variation of the contributions from the PMF analysis of Site 1.

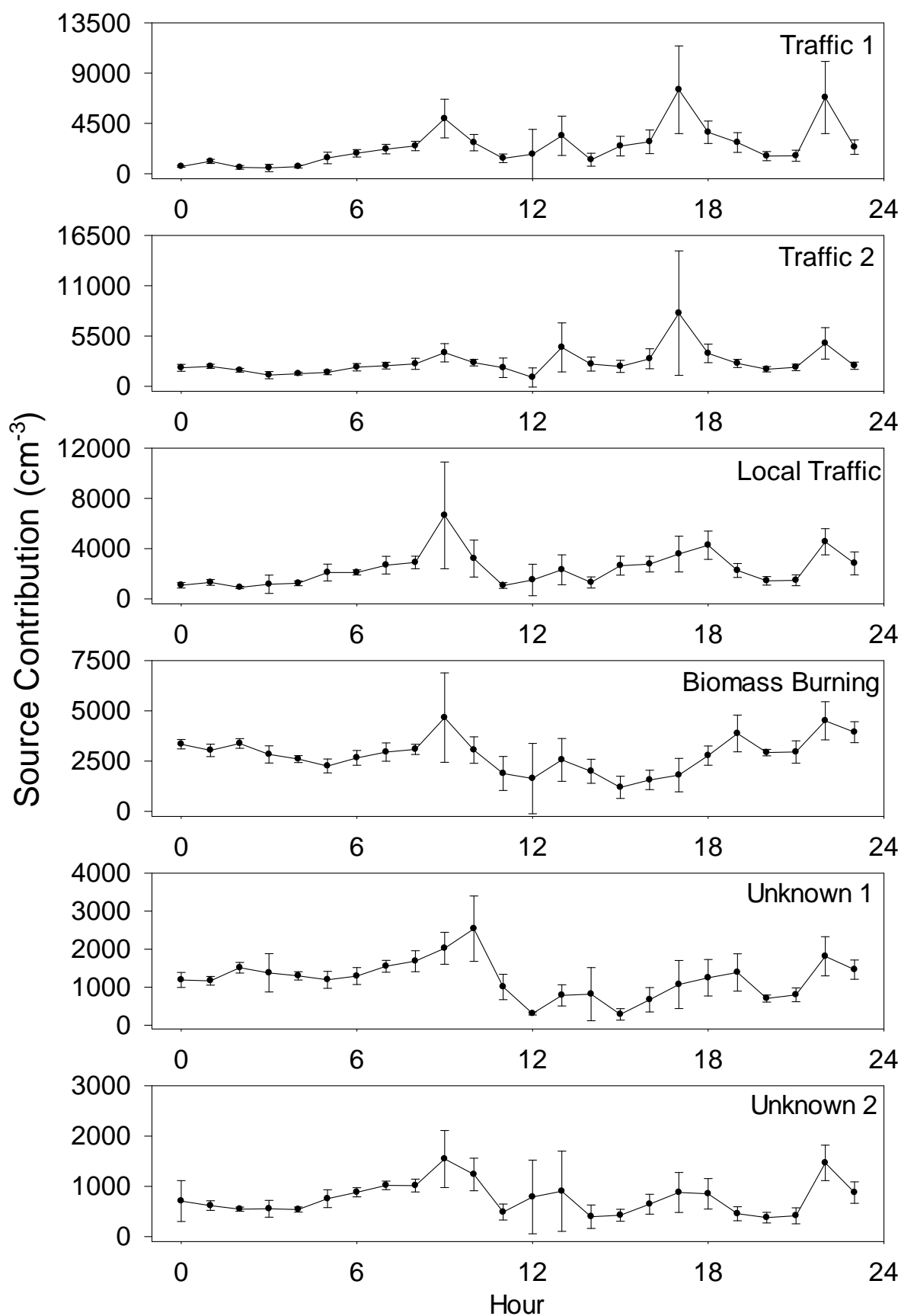


Fig. S4. Diurnal variation of the contributions from the PMF analysis of Site 2.

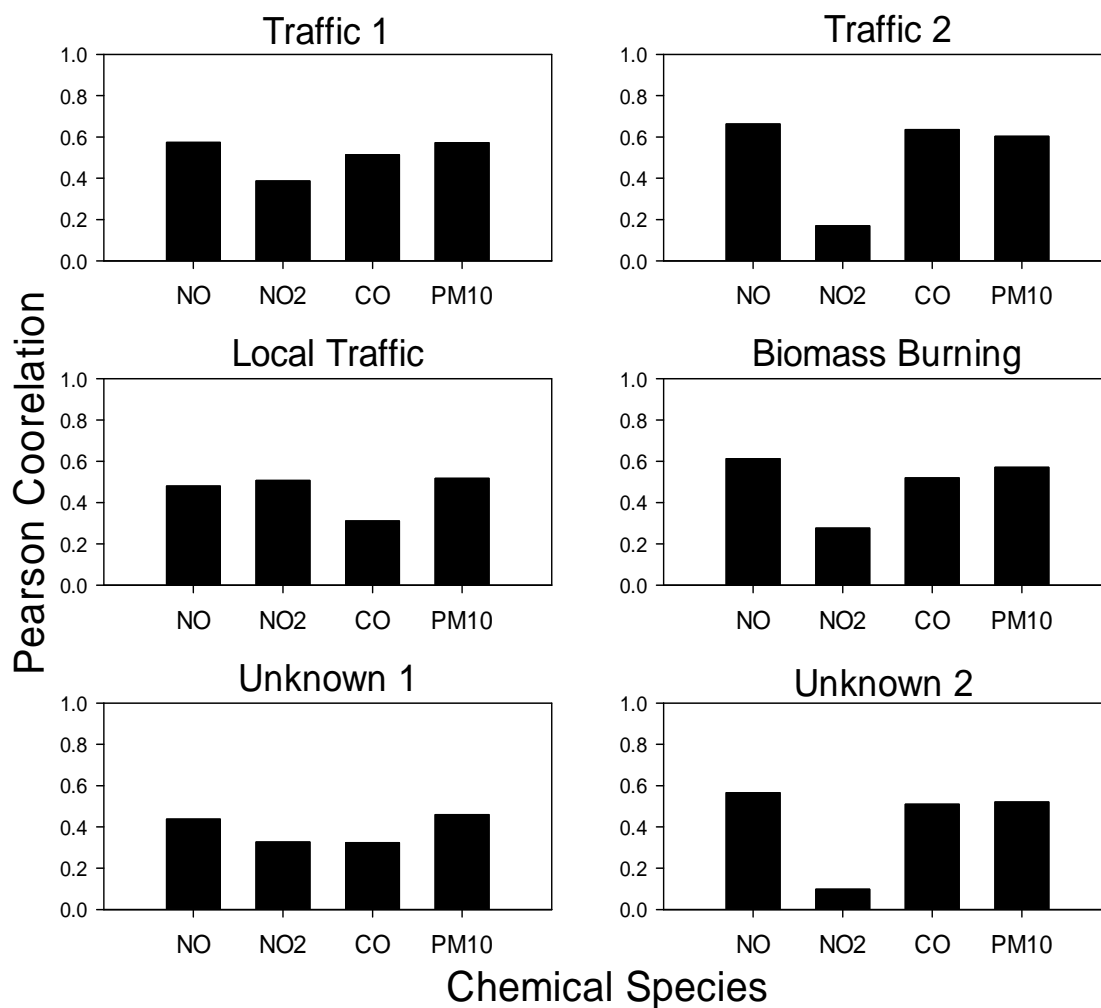


Fig. S5. Pearson Correlation Coefficients of the contributions produced from the PMF analysis of Site 1 with the chemical species measured at the site.

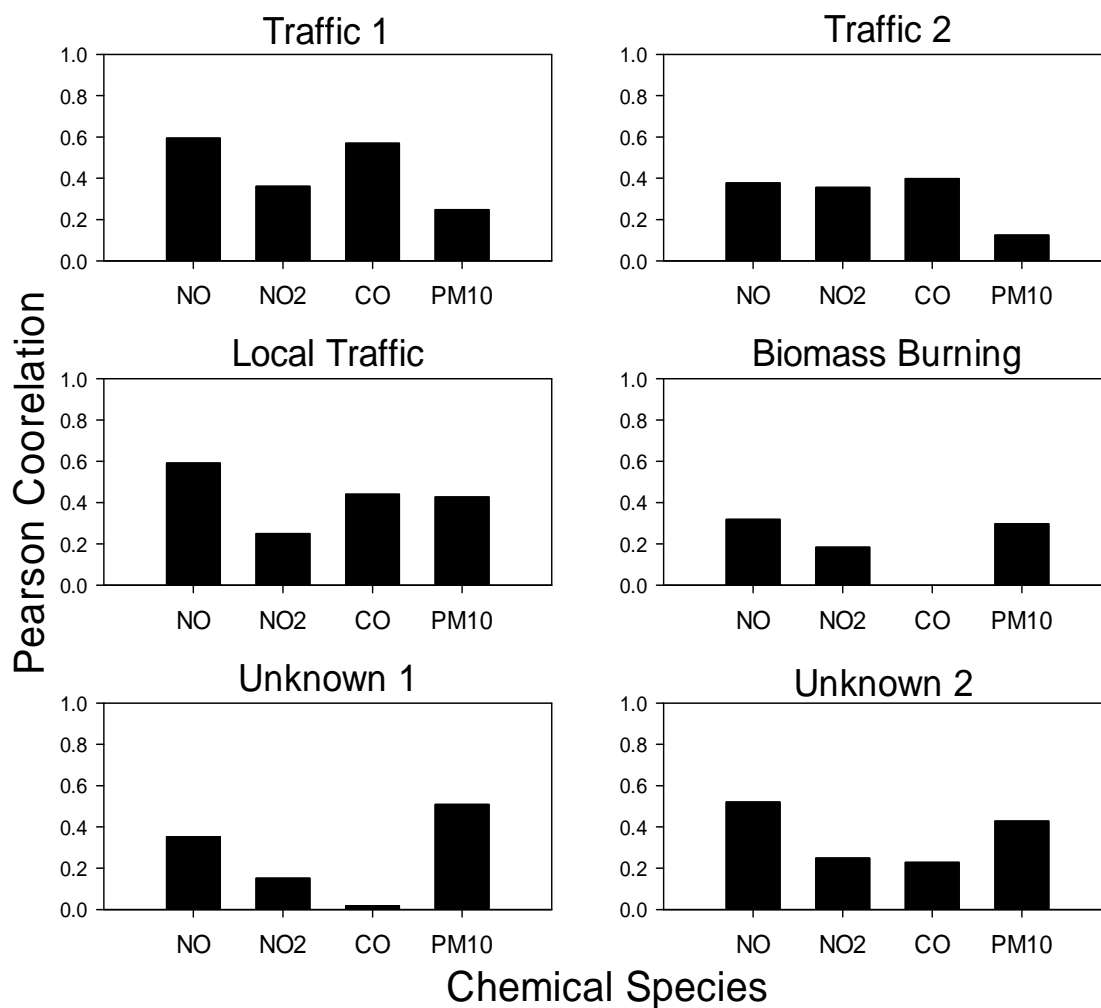


Fig. S6. Pearson Correlation Coefficients of the contributions produced from the PMF analysis of Site 2 with the chemical species measured at the site.

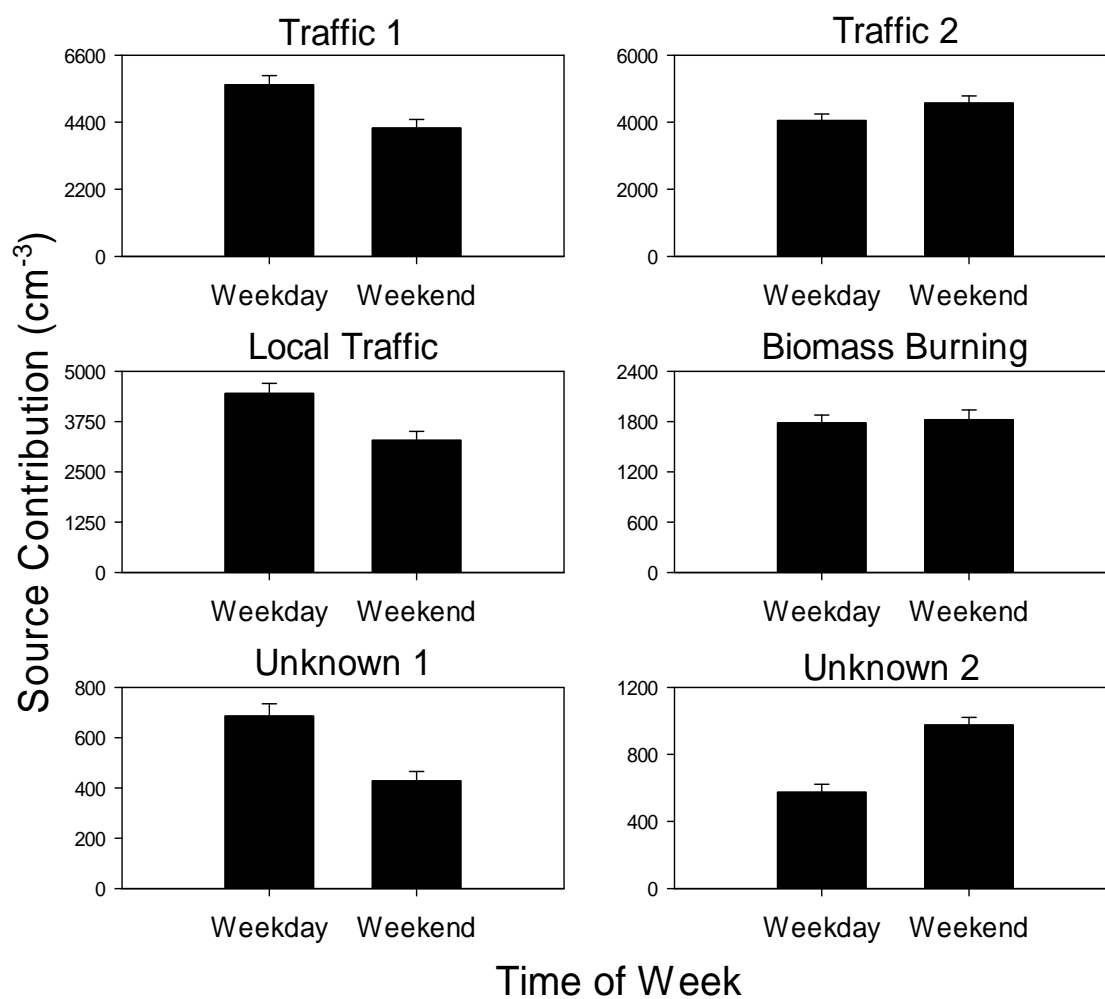


Fig. S7. Average of contribution values during Weekdays (Monday–Friday) and Weekends (Saturday–Sunday) from the PMF analysis of Site 1.

Table S3. Summary statistics of contribution values during Weekdays (Monday–Friday) and Weekends (Saturday–Sunday) from the PMF analysis of Site 1

	Site 1	Average (geometric mean)	Standard deviation (geometric standard deviation)	Min.	Max.	Median
Traffic 1	Weekday	5631.4 (3155.6)	3155.6 (5393.3)	0.005	49037.0	4074.9
	Weekend	4206.7 (3166.9)	3166.9 (3355.9)	0.02	27982.0	3162.0
Traffic 2	Weekday	4045.8 (2357.8)	2357.8 (3528.2)	0.002	26113.0	3156.9
	Weekend	4570.2 (3860.4)	3860.4 (2533.8)	814.5	12666.0	4053.2
Local Traffic	Weekday	4447.3 (2533.1)	2533.1 (4518.4)	0.001	40524.0	2887.3
	Weekend	3281.3 (2443.7)	2443.7 (2651.4)	199.5	17880.0	2522.7
Biomass Burning	Weekday	1784.3 (1022)	1022 (1653.5)	0.0008	14475.0	1304.4
	Weekend	1822.9 (1439.9)	1439.9 (1383.7)	41.5	21376.0	1690.4
Unknown 1	Weekday	685.7 (352.2)	352.2 (879.5)	0.0002	10263.0	442.5
	Weekend	427.9 (193.3)	193.3 (445.3)	0.0005	5272.6	330.8
Unknown 2	Weekday	573.9 (172.8)	172.8 (871.9)	0.0004	13078.0	226.0
	Weekend	974.8 (827.6)	827.6 (542.7)	138.0	3870.8	908.5

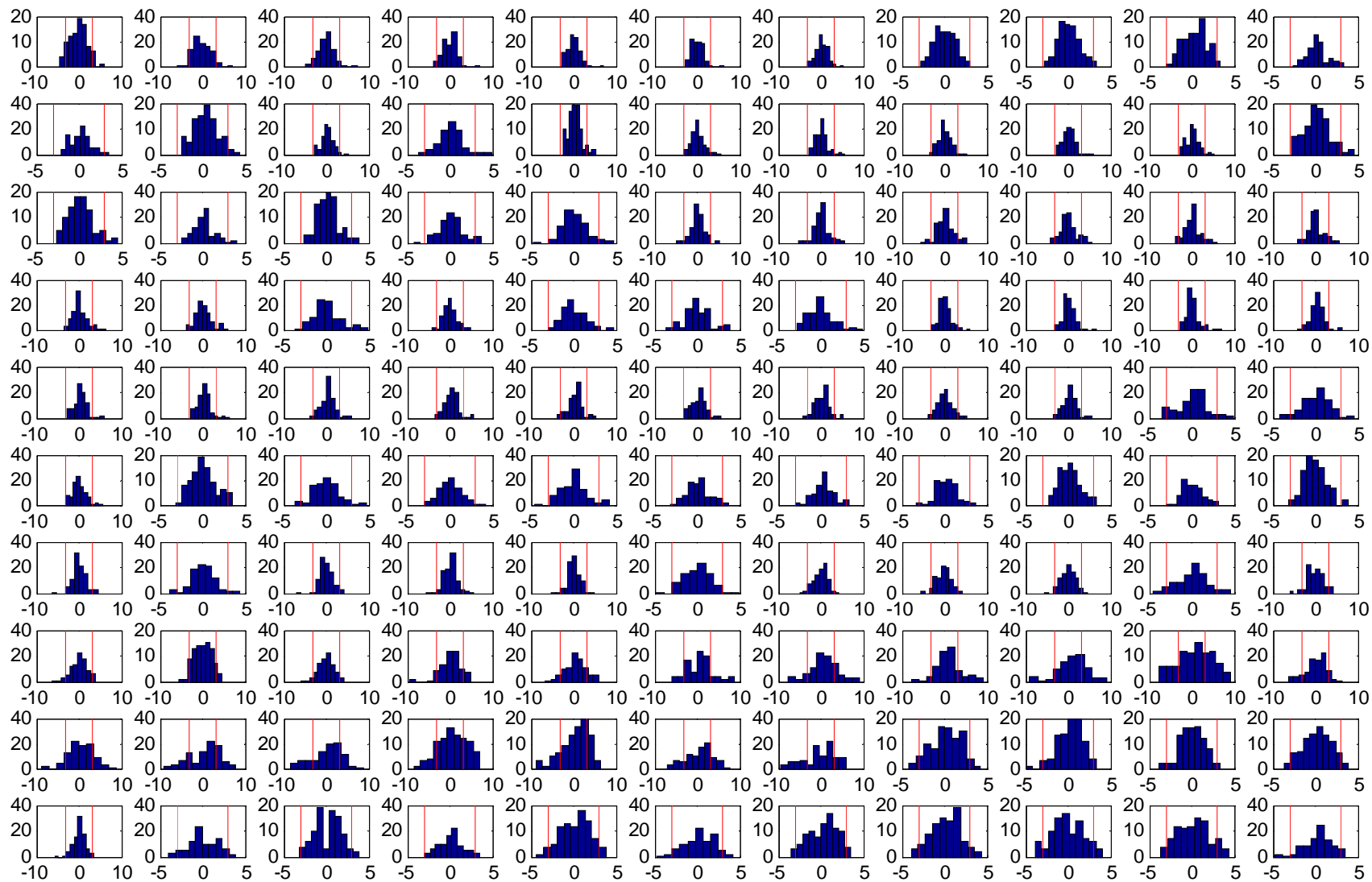


Fig. S8. Standardised Residuals example from Site 2.

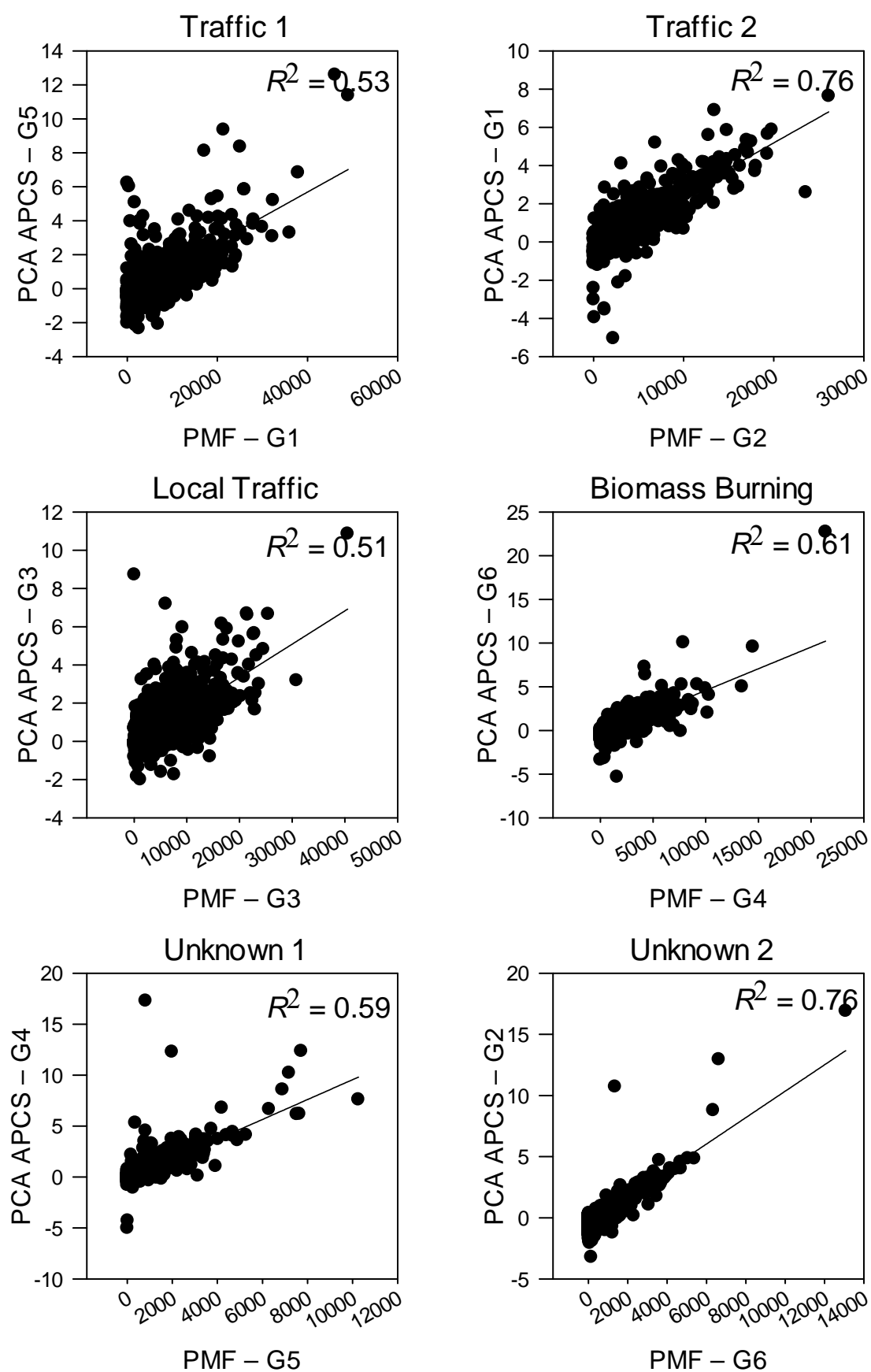


Fig. S9. Comparison of the common sources obtained by PMF and PCA/APCS at Site 1.

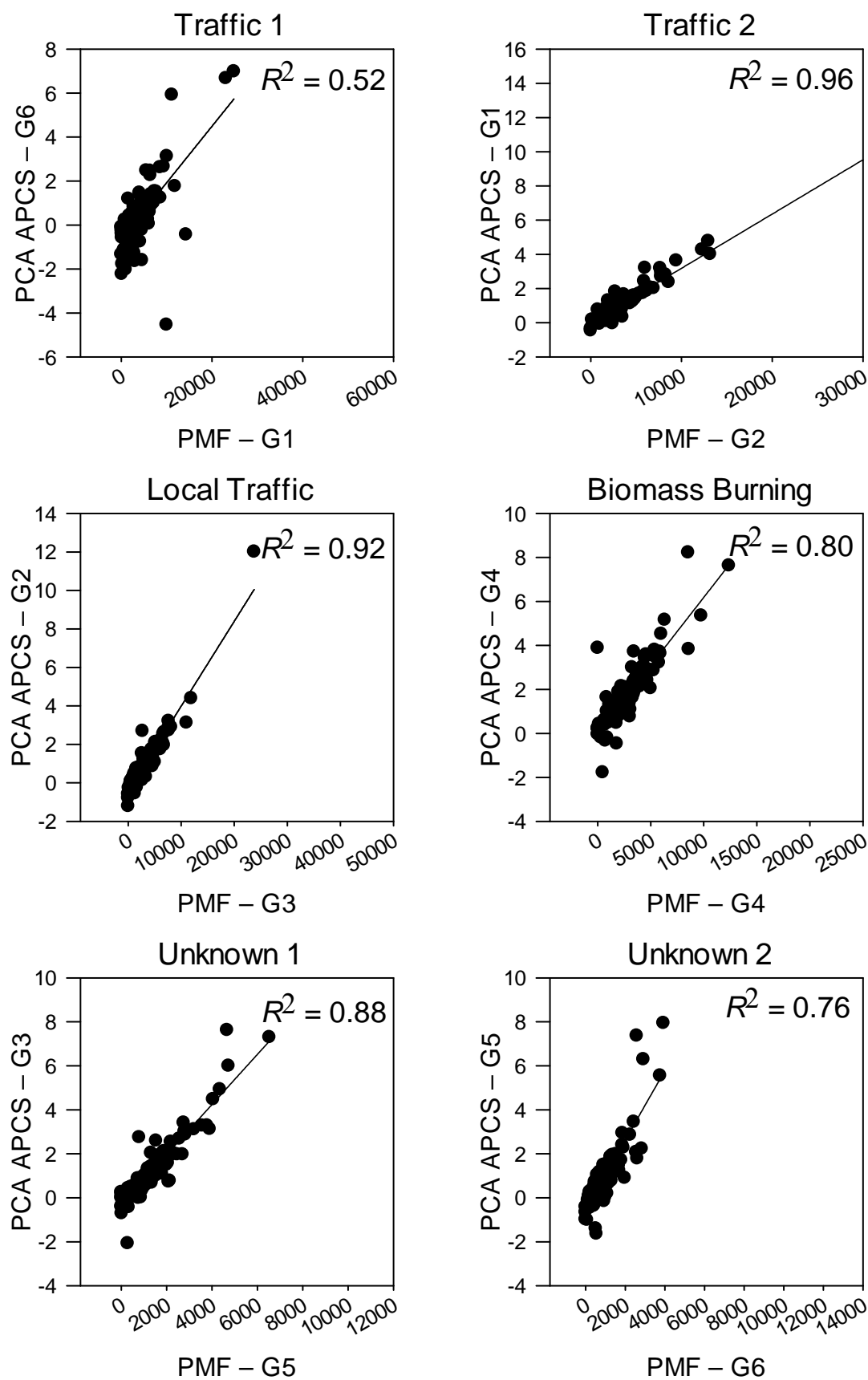


Fig. S10. Comparison of the common sources obtained by PMF and PCA/APCS at Site 2.