SUPPLEMENTAL MATERIAL

Altered Heart Rate Variability in Spontaneously Hypertensive Rats is Associated with Specific Particulate Matter Components in Detroit, Michigan

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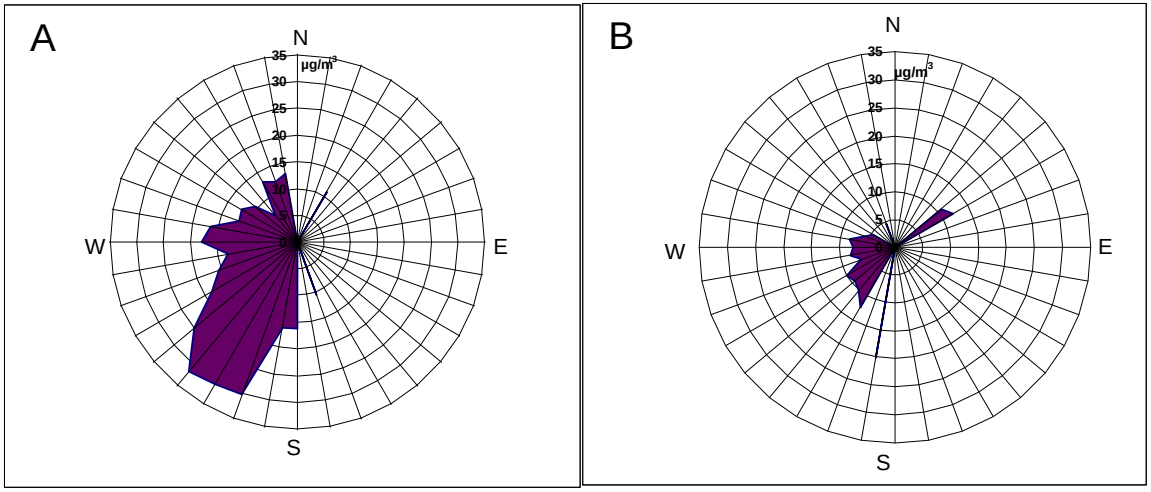
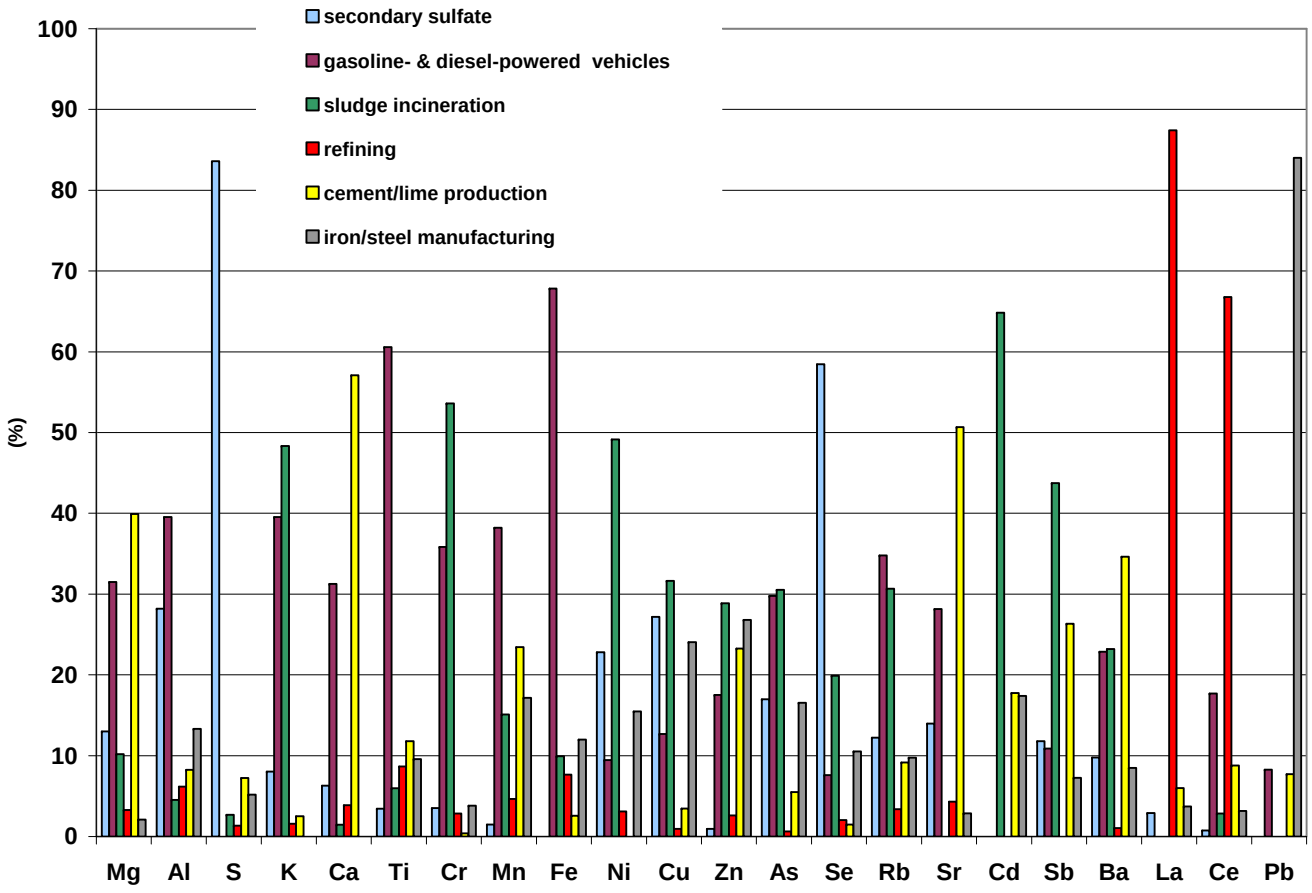
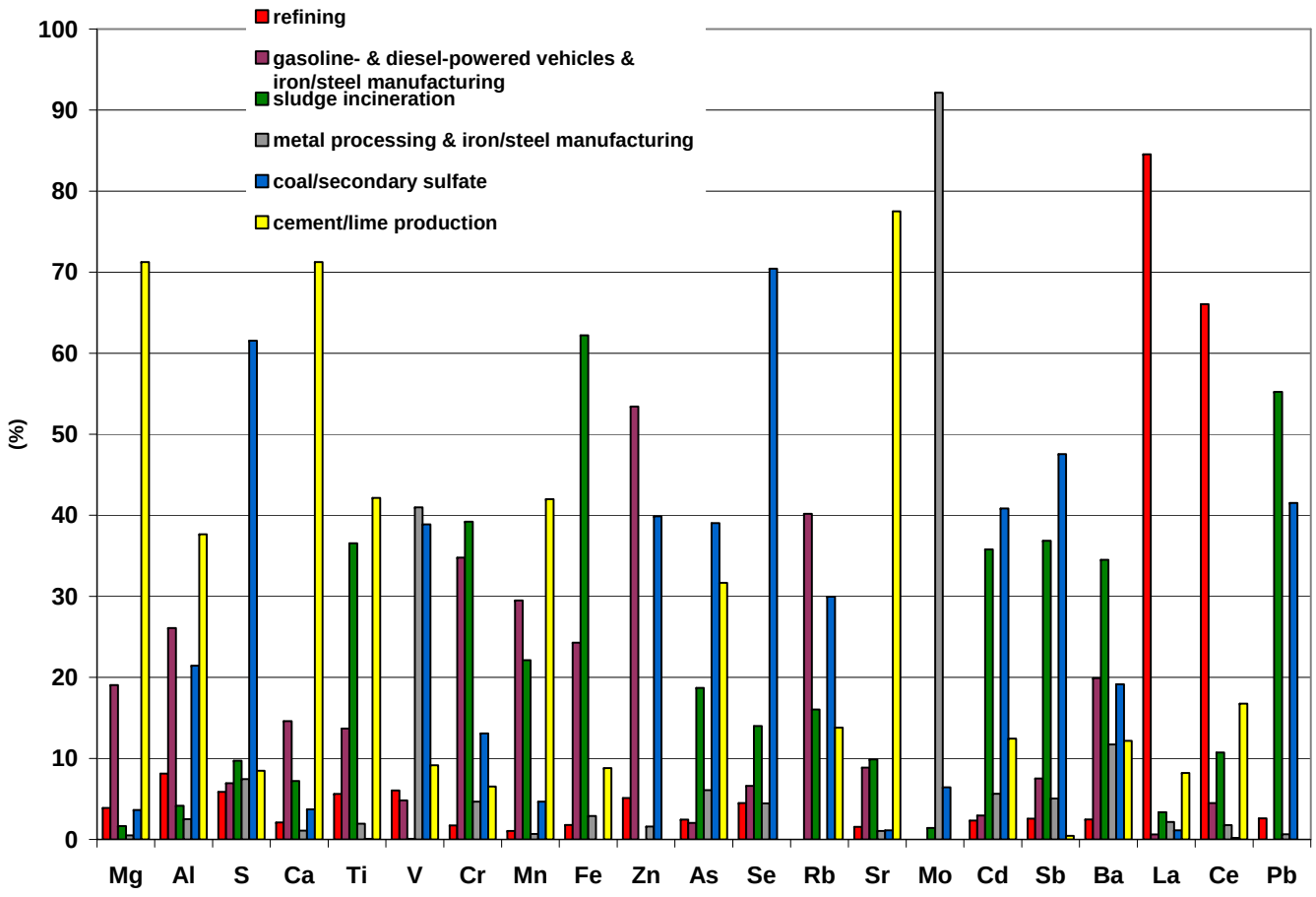


Supplemental Material, Figure 1. Wind rose plots of the 30-minute average ambient $PM_{2.5}$ concentration during (a) summer; and (b) winter studies.



Supplemental Material, Figure 2a. Percentage contribution of each element to each identified source factor during the summer study.



Supplemental Material, Figure 2b. Percentage contribution of each element to each identified source factor during the winter study.

Table 1. CAPs elemental composition, July 16-28, 2005 and February 11-23, 2006. All concentrations in ng/m3.

SUMMER	Mg	Al	P	S	K	Ca	Ti	V	Cr	Mn	Fe	Co	Ni	Cu	Zn	As	Se	Rb	Sr	Mo	Cd	Sb	Ba	La	Ce	Sm	Pb
7/16/05	244	0	308	58163	1182	753	17.3	17.8	62	60	2162	0.8	40.1	46	155	17.5	69.8	2.1	11.3	5.5	2.3	7.8	36	0.6	0.8	0.03	36
7/17/05	475	246	179	131986	2616	753	28.1	16.2	93	94	3343	1.8	64.1	114	319	56.0	67.0	1.6	58.0	14.6	2.3	39.8	191	1.3	1.8	0.04	59
7/18/05	1296	941	302	210868	1722	6414	88.5	21.3	324	205	7041	6.4	211.0	116	769	40.9	164.7	3.6	34.3	62.5	4.1	20.9	174	24.4	16.5	0.19	355
7/19/05	894	371	604	15925	1379	3502	51.5	4.7	38	191	6848	2.0	26.9	209	1629	17.2	20.5	1.9	19.1	11.2	5.0	116.9	150	1.2	1.9	0.11	921
7/20/05	1758	1245	426	6033	1363	5903	67.1	7.1	65	411	9350	1.9	18.7	105	2419	11.5	13.1	3.9	38.2	16.1	4.0	74.0	183	22.0	14.2	0.18	789
7/21/05	477	212	280	44243	952	1302	36.7	6.6	111	106	4802	2.3	69.8	120	1192	13.6	25.7	1.3	15.5	18.7	2.9	19.4	156	1.1	1.3	0.05	133
7/22/05	800	875	109	18950	1055	2388	54.8	7.0	74	118	3942	1.4	24.6	70	336	6.6	15.2	1.4	18.0	19.0	1.0	18.8	185	1.2	2.0	0.11	25
7/23/05	431	0	146	3790	651	1488	20.8	4.2	33	39	1671	0.6	12.4	39	48	5.5	7.4	0.7	8.8	5.0	1.0	5.2	90	0.4	0.7	0.03	36
7/24/05	189	449	4	2998	571	827	8.3	2.9	39	53	1937	1.6	43.2	24	35	3.8	4.0	1.1	9.3	4.3	0.4	2.9	21	1.3	1.0	0.03	11
7/25/05	119	308	143	5473	1003	443	7.6	1.7	87	9	491	0.2	4.9	8	122	1.5	2.6	0.5	2.6	2.6	0.1	2.4	24	0.3	0.3	0.02	3
7/26/05	883	877	267	78273	1335	3124	37.0	13.3	129	190	3207	1.5	26.6	118	966	16.9	60.4	3.6	17.6	4.3	2.4	9.1	84	6.3	4.5	0.13	53
7/27/05	279	278	571	5074	980	924	26.9	1.9	143	84	2579	1.6	48.6	61	272	4.7	4.4	2.1	7.2	16.6	1.4	10.7	106	0.3	0.8	0.02	17
7/28/05	1383	755	385	3372	1356	4712	70.7	62.8	156	529	8527	3.6	98.1	149	16737	11.5	12.5	4.6	33.9	27.3	7.7	63.5	376	11.3	6.4	0.27	172
Mean	710	504	286	45011	1243	2502	40	13	104	161	4300	2	53	91	1923	16	36	2	21	16	3	30	137	6	4	0	201

WINTER	Mg	Al	P	S	K	Ca	Ti	V	Cr	Mn	Fe	Co	Ni	Cu	Zn	As	Se	Rb	Sr	Mo	Cd	Sb	Ba	La	Ce	Sm	Pb
2/11/06	258	289	197	36095	1284	737	13.6	11.3	153	68	1644	0.9	13.7	46	443	16.4	44.4	2.4	5.4	4.4	1.7	37.9	35	1.3	0.7	0.02	42
2/12/06	289	449	208	12605	931	738	17.5	3.2	38	29	2083	0.8	22.9	46	323	12.3	9.9	1.3	8.7	2.8	1.4	14.0	187	0.6	0.6	0.02	19
2/13/06	775	1278	376	20916	1568	5767	23.4	4.7	39	198	5010	0.8	21.6	63	2098	9.6	6.4	3.7	14.8	5.3	1.7	6.1	156	7.8	4.8	0.05	44
2/14/06	841	1451	277	28590	1934	3536	48.7	8.0	38	203	4773	0.9	5.1	94	1519	12.9	28.9	4.2	20.4	6.7	3.5	8.9	151	38.1	22.3	0.09	68
2/15/06	718	719	0	7083	1403	5946	36.2	6.8	30	127	4699	0.8	17.6	60	752	8.6	19.6	3.1	24.7	6.4	2.4	11.4	184	5.5	3.6	0.10	62
2/16/06	271	416	278	49434	1294	1260	24.8	240.6	22	138	2502	1.0	54.5	68	838	12.3	32.8	2.5	10.8	396.2	5.0	14.8	150	4.4	1.9	0.18	72
2/17/06	492	352	87	3488	722	2360	11.7	2.0	18	36	940	0.4	3.5	26	106	7.8	2.0	0.9	9.7	2.3	1.1	11.0	182	0.3	0.6	0.03	32
2/18/06	2232	969	136	6258	1320	1527	10.3	2.3	8	21	888	0.2	0.7	12	135	4.3	1.3	1.5	17.0	0.9	0.8	2.8	92	0.2	0.5	0.04	17
2/19/06	2603	851	149	10790	1949	827	26.0	4.7	62	184	3659	0.5	8.3	20	1105	8.8	5.5	3.3	25.7	1.9	2.5	3.7	21	17.3	9.4	0.09	48
2/20/06	1980	1028	190	13115	1555	414	41.8	6.4	3	165	3420	0.7	5.3	50	863	10.0	8.0	3.3	37.5	6.2	2.4	7.4	22	20.0	9.9	0.11	72
2/21/06	941	1135	169	13114	1346	2950	34.8	6.4	35	118	2588	0.8	12.7	64	670	11.8	15.3	3.1	25.0	14.8	11.7	13.6	79	9.7	5.3	0.09	90
2/22/06	1059	1119	435	22644	2647	890	45.2	11.6	34	214	4952	1.2	13.3	79	1497	24.0	86.0	9.1	34.0	9.5	6.5	20.4	102	2.4	1.9	0.12	111
2/23/06	1152	934	33	9714	1190	3796	45.5	5.2	79	195	6731	1.0	24.0	79	512	9.2	9.8	2.5	35.3	8.0	1.9	9.8	303	8.7	4.8	0.11	98
Mean	1047	846	195	17988	1472	2365	29	24	43	130	3376	1	16	54	835	11	21	3	21	36	3	12	128	9	5	0	60