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Supplemental Materials

The Atmospheric Mercury Network: Measurement and initial examination of an ongoing atmospheric mercury record across North America

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a) All Observations, including HI01		Fraction	N	Mean	St. Dev	Minimum	5th Percentile	25th Percentile	Median	75th Percentile	95th Percentile	Maximum	
		GEM	160,866	1.45	0.74	0.2	1.1	1.3	1.40	1.5	2.0	237.7	
		GOM	149,663	9.42	41.59	0.0	0.0	0.3	1.72	5.9	34.7	7694.8	
		PBM	147,482	8.72	26.27	0.0	0.0	1.8	3.90	7.9	26.1	3687.2	
b) All Observations, excluding HI01		Fraction	N	Mean	St. Dev	Minimum	5th Percentile	25th Percentile	Median	75th Percentile	95th Percentile	Maximum	
		GEM	157,077	1.45	0.75	0.2	1.1	1.3	1.40	1.5	2.0	237.7	
		GOM	145,983	6.04	32.05	0.0	0.0	0.3	1.62	5.3	25.2	7694.8	
		PBM	143,905	6.68	18.04	0.0	0.0	1.7	3.79	7.5	20.8	3687.2	
c) All Observations, excluding HI01		Year	Fraction	N	Mean	St. Dev	Minimum	5th Percentile	25th Percentile	Median	75th Percentile	95th Percentile	Maximum
	2009	GEM	52,966	1.42	1.14	0.2	1.0	1.2	1.36	1.5	2.0	237.7	
		GOM	48,645	6.92	22.72	0.0	0.0	0.4	2.03	6.1	27.8	2305.2	
		PBM	47,369	6.41	21.53	0.0	0.0	1.5	3.50	7.2	20.4	3687.2	
	2010	GEM	53,953	1.47	0.49	0.2	1.1	1.3	1.41	1.6	2.0	43.8	
		GOM	50,445	6.61	47.10	0.0	0.0	0.3	1.66	5.7	27.5	7694.8	
		PBM	50,007	7.51	18.86	0.0	0.1	1.9	4.08	8.1	24.8	2201.7	
	2011	GEM	50,158	1.44	0.38	0.4	1.1	1.3	1.42	1.6	1.8	30.5	
		GOM	46,893	4.52	16.53	0.0	0.0	0.0	1.20	4.2	18.8	1351.8	
		PBM	46,529	6.08	12.29	0.0	0.0	1.8	3.76	7.1	17.5	1021.6	

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Supplemental Table 1a-e: Observations of GEM (ng m⁻³), GOM, and PBM_{2.5} (pg m⁻³) for a) all sites and years, b) for all sites and years excluding HI00, c) all sites by year excluding HI00, d) all years by site group, and e) all years by site. Values in each table include valid-only number, mean, standard deviation, minimum, 5th percentile, 25th percentile, median, 75th percentile, 95th percentile and maximum. Data are inclusive for valid samples January 2009 through December 2011. Several sites were not used in this study.

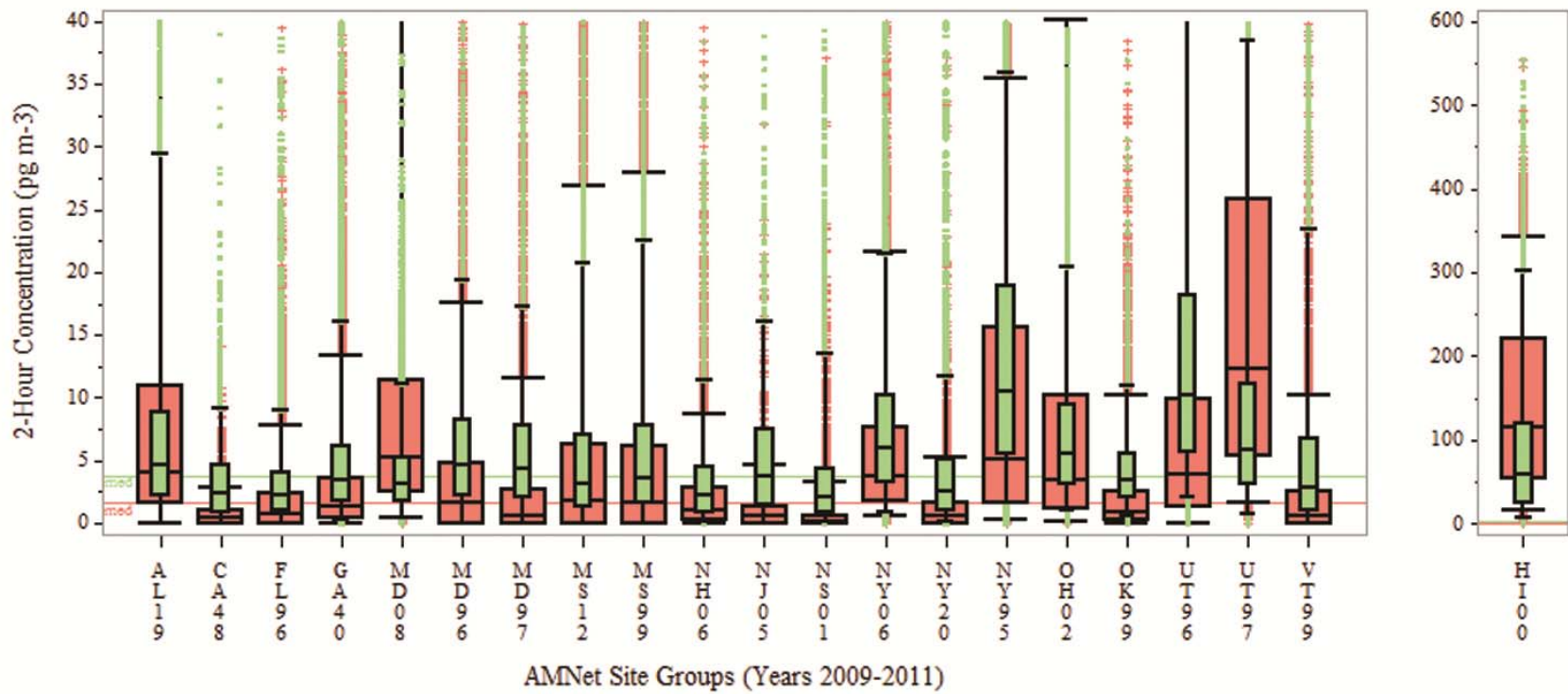
d) By Group												
	N	Fraction	N	Mean	St. Dev	Minimum	5th Percentile	25th Percentile	Median	75th Percentile	95th Percentile	Maximum
Coast/Remote	15,518	GEM	15,152	1.36	0.22	0.4	1.0	1.2	1.39	1.5	1.6	4.8
		GOM	13,955	1.56	3.30	0.0	0.0	0.0	0.47	1.6	6.7	61.5
		PBM	13,877	3.68	4.66	0.0	0.1	1.0	2.23	4.5	12.7	83.4
Coast/Sources	37,939	GEM	35,715	1.37	0.17	0.7	1.1	1.3	1.37	1.5	1.6	7.8
		GOM	33,337	4.35	9.31	0.0	0.0	0.0	1.16	4.2	20.8	130.6
		PBM	31,832	5.50	10.33	0.0	0.0	1.3	2.91	6.1	17.7	371.6
Contin/Remote	27,764	GEM	26,134	1.31	0.29	0.2	1.0	1.2	1.28	1.5	1.7	11.3
		GOM	24,750	2.55	5.60	0.0	0.0	0.1	0.90	2.7	10.4	223.5
		PBM	24,958	5.12	7.43	0.0	0.0	1.4	3.04	5.9	17.8	403.6
Contin/Sources	36,760	GEM	33,776	1.41	0.33	0.5	1.1	1.3	1.40	1.5	1.8	43.8
		GOM	31,330	8.77	15.29	0.0	0.0	1.1	3.41	9.6	35.5	234.3
		PBM	31,269	8.70	16.87	0.0	0.9	2.8	5.21	10.1	26.6	1411.7
High Elevation	4,071	GEM	3,789	1.45	0.51	0.4	0.8	1.1	1.37	1.7	2.2	8.3
		GOM	3,680	143.25	105.91	0.2	16.8	53.6	115.52	221.6	343.3	555.0
		PBM	3,577	90.69	92.07	0.0	7.5	25.8	59.84	120.6	302.0	555.6
Pacific Coast	4,876	GEM	4,158	1.48	0.16	0.9	1.3	1.4	1.47	1.6	1.8	2.4
		GOM	4,011	0.80	1.16	0.0	0.0	0.0	0.44	1.1	2.8	14.1
		PBM	3,702	3.27	3.29	0.0	0.0	1.0	2.34	4.6	9.2	39.0
Urban	50,326	GEM	42,142	1.65	1.36	0.4	1.2	1.4	1.51	1.8	2.5	237.7
		GOM	38,600	9.69	59.64	0.0	0.0	0.6	2.85	8.2	34.7	7694.8
		PBM	38,267	8.46	29.05	0.0	0.0	2.5	4.97	8.9	23.2	3687.2

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e) By Site													
	N	Fraction	N	Mean	St. Dev		Minimum	5th Percentile	25th Percentile	Median	75th Percentile	95th Percentile	Maximum
AL19	12,252	GEM	8,237	2.00	2.90		0.4	1.4	1.5	1.70	2.0	3.3	237.7
		GOM	7,650	16.30	63.40		0.0	0.0	1.6	4.00	10.9	51.5	2305.2
		PBM	7,666	9.90	37.20		0.0	0.0	2.3	4.60	8.8	29.4	2201.7
CA48	4,876	GEM	4,158	1.50	0.20		0.9	1.2	1.4	1.50	1.6	1.8	2.4
		GOM	4,011	0.80	1.20		0.0	0.0	0.0	0.40	1.1	2.8	14.1
		PBM	3,702	3.30	3.30		0.0	0.0	1.0	2.30	4.6	9.2	39.0
FL96	11,857	GEM	11,049	1.30	0.10		0.7	1.0	1.2	1.30	1.4	1.5	3.2
		GOM	10,135	2.00	4.40		0.0	0.0	0.0	0.80	2.4	7.8	126.1
		PBM	10,156	3.20	3.60		0.0	0.0	1.1	2.30	4.1	9.0	76.8
GA40	12,203	GEM	11,260	1.20	0.20		0.4	1.0	1.1	1.20	1.3	1.5	11.3
		GOM	10,747	3.40	6.90		0.0	0.0	0.5	1.40	3.7	13.3	223.4
		PBM	10,747	5.30	7.80		0.0	0.4	1.8	3.50	6.1	16.1	403.6
HI00	4,071	GEM	3,789	1.40	0.50		0.4	0.8	1.1	1.40	1.7	2.2	8.2
		GOM	3,680	143.30	105.90		0.2	16.8	53.6	115.50	221.6	343.3	555.0
		PBM	3,577	90.70	92.10		0.0	7.5	25.8	59.80	120.6	302.0	555.6
MD08	7,917	GEM	7,676	1.40	0.20		0.5	1.0	1.3	1.40	1.5	1.6	3.2
		GOM	7,174	11.20	17.50		0.0	0.5	2.6	5.30	11.5	47.1	207.4
		PBM	7,218	4.20	3.80		0.0	0.5	1.8	3.20	5.3	11.1	57.4
MD96	10,580	GEM	9,596	1.40	0.30		0.5	1.1	1.3	1.40	1.5	1.8	21.8
		GOM	9,073	5.50	81.80		0.0	0.0	0.0	1.60	4.8	17.6	7694.8
		PBM	9,133	7.20	13.10		0.0	0.0	2.2	4.70	8.3	19.3	545.5
MD97	11,191	GEM	10,426	1.40	0.30		0.5	1.1	1.3	1.40	1.5	1.7	21.7
		GOM	9,889	3.40	60.90		0.0	0.0	0.0	0.60	2.7	11.5	6000.4
		PBM	9,942	6.60	14.80		0.0	0.0	2.1	4.40	7.8	17.3	835.1
MS12	11,571	GEM	11,026	1.40	0.20		0.8	1.2	1.3	1.40	1.5	1.6	7.8
		GOM	10,613	5.90	11.10		0.0	0.0	0.0	1.80	6.3	26.9	130.2
		PBM	10,298	6.40	12.30		0.0	0.0	1.3	3.10	7.1	20.7	305.7
MS99	11,113	GEM	10,566	1.40	0.20		0.7	1.2	1.3	1.40	1.5	1.6	6.5
		GOM	10,048	5.90	11.20		0.0	0.0	0.0	1.60	6.2	28.0	130.5
		PBM	9,739	7.00	12.70		0.0	0.0	1.6	3.60	7.8	22.5	371.5

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e) By Site, cont.													
	N	Fraction	N	Mean	St. Dev	Minimum	5th Percentile	25th Percentile	Median	75th Percentile	95th Percentile	Maximum	
NH06	7,874	GEM	7,685	1.30	0.20	0.4	1.0	1.2	1.40	1.5	1.6	2.6	
		GOM	6,813	2.40	3.90	0.0	0.0	0.4	1.10	2.8	8.8	61.5	
		PBM	6,700	3.60	4.40	0.0	0.1	1.0	2.30	4.5	11.4	83.4	
NJ05	3,398	GEM	3,074	1.40	0.10	1.0	1.2	1.4	1.40	1.5	1.7	2.5	
		GOM	2,541	1.20	2.30	0.0	0.0	0.0	0.50	1.4	4.7	31.9	
		PBM	1,639	5.50	6.10	0.0	0.0	1.5	3.80	7.5	16.0	50.3	
NS01	7,644	GEM	7,467	1.40	0.20	0.4	1.0	1.3	1.40	1.5	1.6	4.8	
		GOM	7,142	0.80	2.30	0.0	0.0	0.0	0.20	0.6	3.3	52.0	
		PBM	7,177	3.80	4.90	0.0	0.1	1.0	2.20	4.4	13.6	48.8	
NY06	8,068	GEM	6,597	1.50	0.30	0.6	1.1	1.3	1.40	1.6	2.1	6.9	
		GOM	6,096	6.70	19.40	0.0	0.6	1.8	3.80	7.7	21.6	1351.8	
		PBM	6,177	8.40	13.90	0.0	0.9	3.3	6.00	10.2	21.5	670.6	
NY20	7,600	GEM	7,108	1.30	0.40	0.2	0.8	1.1	1.30	1.5	1.8	10.5	
		GOM	6,498	1.40	2.50	0.0	0.0	0.0	0.60	1.6	5.3	42.5	
		PBM	6,644	4.00	5.40	0.0	0.2	1.1	2.50	5.1	11.7	102.4	
NY95	7,664	GEM	7,102	1.40	0.20	0.7	1.1	1.3	1.40	1.5	1.7	4.6	
		GOM	6,371	10.40	12.70	0.0	0.2	1.7	5.20	15.6	35.4	183.6	
		PBM	6,447	14.10	21.60	0.0	1.6	5.5	10.50	19.0	35.9	1021.6	
OH02	8,176	GEM	7,804	1.40	0.20	0.6	1.1	1.3	1.40	1.5	1.7	3.7	
		GOM	7,535	9.50	16.20	0.0	0.1	1.1	3.50	10.2	40.0	229.6	
		PBM	7,520	7.50	7.20	0.0	1.1	3.2	5.50	9.4	20.4	121.9	
OK99	7,666	GEM	6,692	1.40	0.20	0.6	1.1	1.2	1.40	1.5	1.7	3.6	
		GOM	6,231	2.40	4.30	0.0	0.0	0.3	0.90	2.6	10.2	73.3	
		PBM	6,162	4.30	3.60	0.0	0.7	2.1	3.40	5.6	11.0	77.0	
UT96	5,337	GEM	4,502	1.60	0.70	0.7	1.3	1.5	1.60	1.7	2.1	43.8	
		GOM	4,019	10.40	20.50	0.0	0.0	1.3	3.80	9.9	42.2	234.3	
		PBM	3,922	17.20	34.20	0.0	2.2	5.8	10.20	18.2	56.1	1411.6	
UT97	8,235	GEM	7,286	2.00	0.80	1.1	1.5	1.7	2.00	2.2	2.8	37.4	
		GOM	5,892	21.30	29.60	0.0	1.7	5.4	12.40	25.8	69.4	693.0	
		PBM	5,349	12.20	55.70	0.0	0.7	3.1	5.90	11.1	38.5	3687.2	
VT99	7,961	GEM	7,766	1.50	0.20	0.7	1.1	1.3	1.50	1.6	1.8	3.0	
		GOM	7,505	2.30	5.30	0.0	0.0	0.0	0.70	2.5	10.2	162.4	
		PBM	7,567	5.90	8.20	0.0	0.0	1.1	2.80	6.7	23.4	82.2	



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Supplemental Figure 1: Box and whisker plots of gaseous oxidized and particulate bound mercury (GOM in red, $PBM_{2.5}$ in green, $pg\ m^{-3}$) observations for each site for years 2009 to 2011. Each box includes the median (midline), 25th and 75th percentiles (box edges), 5th and 95th percentiles (whiskers), and individual values outside these limits (dots/pluses). Values above $40\ pg\ m^{-3}$ are not shown. The respective medians of all observations are shown for reference (red and green lines, without HI00).