

Supplementary Information

Seasonal and Diurnal Variations of Total Gaseous Mercury in Urban Houston, TX, USA. *Atmosphere* 2014, 5, 399–419**Xin Lan ^{1,*}, Robert Talbot ¹, Patrick Laine ², Barry Lefer ¹, James Flynn ¹ and Azucena Torres ¹**

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This supplementary supports the main text as follows:

Figure S1. Satellite image of Houston and Houston Ship Channel Area (in purple box). MT site is note in red dot.

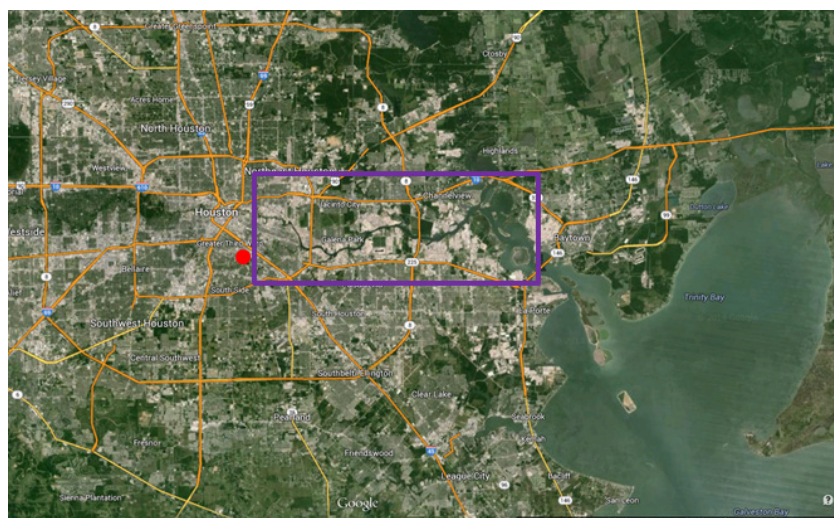


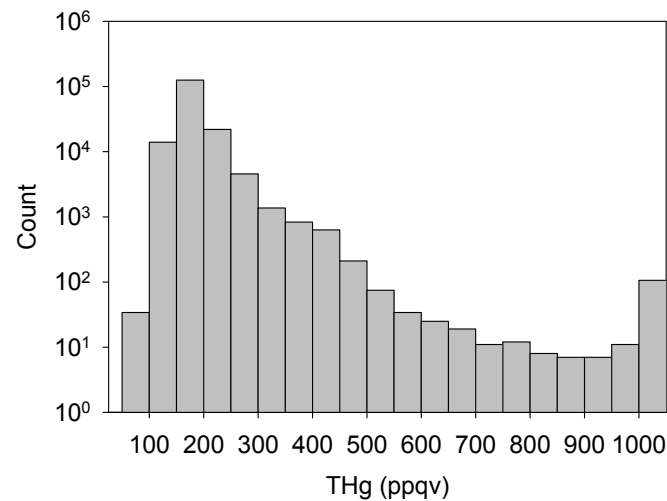
Table S1. Statistics of key trace gases with 5 min. resolution.

Species	Count	Mean	Median	Max.	Min.	Std. Dev.	10th	90th	Sampling Period
THg (ppqv)	86945	181.03	172.16	4876.72	80.37	62.79	152.23	216.74	8/26/2011–10/24/2012
CO (ppbv)	80104	178.73	160.77	2508.71	64.53	81.29	109.04	262.87	10/4/2011–10/24/2014
O ₃ (ppbv)	117745	33.25	30.73	232.98	0.23	18.27	11.81	57.98	8/26/2011–10/24/2012
CH ₄ (ppmv)	40943	1.95	1.88	12.72	1.80	0.38	1.76	2.14	6/4/2012–10/24/2012
CO ₂ (ppmv)	67083	410.64	407.07	664.05	385.00	16.63	394.05	431.57	2/16/2012–10/24/2012
SO ₂ (ppbv)	18624	0.74	0.32	43.27	0.10	1.68	0.12	1.28	9/27/2011–12/9/2011, 8/1/2012–9/27/2012
NO (ppbv)	66159	1.50	0.25	139.40	0.00	5.60	0.04	2.77	2/29/2012–10/24/2012
NO ₂ (ppbv)	66075	6.75	3.91	84.54	0.00	7.78	0.91	16.65	2/29/2012–10/24/2013

Table S2. Correlation coefficient (R value) between THg and other species or meteorological factors. NS means statistically non-significant (95%).

	CO	O ₃	Temp.	RH	WS	CO ₂	H ₂ O	Precip.	SO ₂	CH ₄	NO	NO ₂
Fall11	0.225	−0.135	0.039	0.077	−0.236	--	--	0.010 NS	0.175	--	--	--
Winter11	0.138	−0.081	−0.025	0.039	−0.075	--	--	0.012 NS	--	--	--	--
Spring12	0.406	−0.063	−0.059	0.003 NS	−0.168	0.400	−0.039	0.019	--	--	0.321	0.345
Summer12	0.362	−0.206	−0.219	0.247	−0.273	0.421	0.056	−0.002 NS	0.052 NS	0.376	0.443	0.415

Figure S2. Number distribution of THg for the whole study period. The last bin on the right represents the total count of THg ≥ 1000 ppqv. This dataset is not normally distributed (fail the Kolmogorov-Smirnov normality test). Skewness equals to 25.5; Kurtosis equals to 1132.



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