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*Supplement of*

## **Influence of the Bermuda High on interannual variability of summertime ozone in the Houston–Galveston–Brazoria region**

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## Supplementary Materials

Table S1. Names and locations of the 30 ozone monitoring sites used in this study. Blank in the End Date column means this monitoring site is still active to the present.

Site number	Site Name	Latitude	Longitude	Start Date	End Date
1	Baytown Garth	29.82	94.98	06/05/2012	
2	Channelview	29.80	95.13	07/26/2001	
3	Clinton	29.73	95.26	01/01/1972	
4	Clute	29.01	95.40	01/01/1974	06/11/2003
5	Conroe	30.35	95.42	10/01/1999	06/01/2002
6	Conroe Relocated	30.35	95.43	10/01/2001	
7	Deer Park	29.67	95.13	01/01/1981	10/23/1996
8	Galveston airport	29.26	94.86	12/01/1996	03/22/2007
9	Galveston 99th street	29.25	94.86	03/20/2007	
10	Houston Aldine	29.90	95.33	01/01/1974	
11	Houston Bayland Park	29.70	95.50	03/24/1998	
12	Houston Crawford	29.75	95.36	08/17/1971	03/27/2001
13	Houston Croquet	29.62	95.47	01/01/1978	
14	Houston Deer Park #2	29.67	95.13	10/22/1996	
15	Houston East	29.77	95.22	01/01/1973	
16	Houston Monroe	29.63	95.27	01/01/1984	
17	Houston North Wayside	29.83	95.28	01/01/1976	
18	Houston Regional Office	29.74	95.32	05/03/2000	06/15/2012
19	Houston Texas Avenue	29.75	95.35	03/30/2001	
20	Houston Westhollow	29.72	95.64	07/01/1994	
21	Lake Jackson	29.04	95.47	06/10/2003	
22	Lang	29.83	95.49	01/01/1978	
23	Lynchburg Ferry	29.76	95.08	04/24/2003	
24	Manchester	29.71	95.28	01/01/1981	01/21/1998
25	Manvel Croix Park	29.52	95.39	08/23/2001	
26	Northwest Harris County	30.04	95.67	01/01/1981	
27	Park Place	29.69	95.30	02/22/2006	
28	Rosenburg Public Works	29.57	95.80	01/01/1990	12/31/1990
29	Seabrook Friendship Park	29.58	95.02	07/29/2001	
30	Texas City	29.40	94.93	01/01/1974	07/10/2004

**Table S2.** Regression coefficient of determination ( $R^2$ ) using different treatments of BH-Lon and HGB-O<sub>3</sub> in the MLR model.

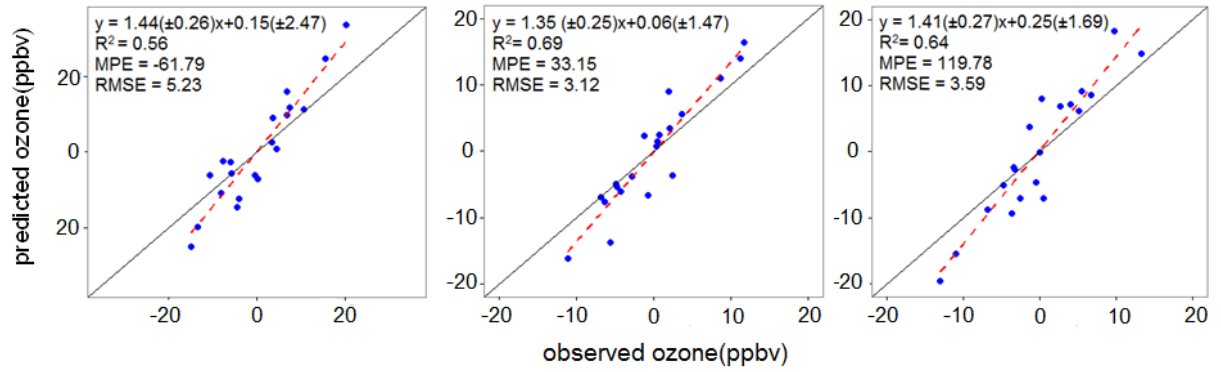
<b>BH-Lon and O<sub>3</sub> in MLR</b>	<b>June</b>	<b>July</b>	<b>August</b>
(1) Raw data for both.	0.52	0.35	0.24
(2) Raw data for BH-Lon only; O <sub>3</sub> is de-trended by subtracting the 7-yr moving average from the raw data.	0.60	0.67	0.65
(3) Both de-trended by removing the linear trend from the raw data.	0.52	0.58	0.56
* (4) Both de-trended by subtracting the 7-yr moving average from the raw data.	0.61	0.72	0.70

*\*This setting is reported in Table 1 of the main text.*

**Table S3.** Regression coefficient of determination ( $R^2$ ) for August with and without V wind.

<b>BH-Lon and O<sub>3</sub> in August MLR model</b>	<b>Without V</b>	<b>With V</b>
(1) Raw data for both.	0.08	0.24
(2) Raw data for BH-Lon only; O <sub>3</sub> is de-trended by subtracting the 7-yr moving average from the raw data.	0.32	0.65
(3) Both de-trended by removing the linear trend from the raw data.	0.20	0.56
* (4) Both de-trended by subtracting the 7-yr moving average from the raw data.	0.41	0.70

*\*This setting is reported in Table 1 of the main text.*



**Figure S1.** Scatter plots of cross-validation (CV) results between observed ozone (x-axis) and CV-predicted ozone (y-axis) for June (left), July (middle) and August (right).