Supplemental Information for:

Mobile Air Quality Monitoring and Comparison to Fixed Reference Sites for Quality Assurance

Andrew R. Whitehill[1], Melissa Lunden[2], Brian LaFranchi[2], Surender Kaushik[1], Paul A. Solomon[2,a]

[1]Center for Environmental Measurement and Modeling, Office of Research and Development, United States Environmental Protection Agency, Research Triangle Park, North Carolina, 27711, United States of America
[2]Aclima, Inc., San Francisco, California, 94111, United States of America
[a]formerly at: Office of Research and Development, United States Environmental Protection Agency, Las Vegas, Nevada, 89119, United States of America

Correspondence to: Andrew R. Whitehill (whitehill.andrew@epa.gov)

Table S1: Periods when at least one mobile monitoring platform was stationary and collocated with the CAMP site.

Period	Date	Start Time	End Time	Car	[1]Distance (m)
1	2014-07-24	13:40	14:02	Car 1	14
2	2014-07-25	11:59	12:19	Car 2	84
3	2014-07-30	09:29	09:50	Car 3	19
4	2014-07-31	09:02	09:33	Car 2	11
5	2014-07-31	18:33	19:05	Car 1	26
6	2014-08-01	10:46	11:06	Car 3	13
7	2014-08-02	09:39	09:59	Car 1	20
8	2014-08-04	12:42	12:59	Car 2	13
9	2014-08-05	11:03	11:24	Car 1	12
10	2014-08-11	16:45	17:08	Car 1	80
11	2014-08-12	13:11	13:35	Car 1	17
12	2014-08-12	22:31	22:50	Car 2	26
13	2014-08-12	22:31	22:50	Car 3	25
14	2014-08-13	14:12	14:33	Car 3	39
15	2014-08-14	22:01	22:21	Car 1	15

[1]Horizontal distance based on GPS coordinates of the site (from the state air monitoring plan) and the car. Estimated uncertainty in distances is ± 5 m.

Table S2: Periods when at least one mobile monitoring platform was stationary and collocated with the La Casa site.

Period	Date	Start Time	End Time	Car	[1]Distance (m)
1	2014-07-25	12:31	12:50	Car 1	129
2	2014-07-28	11:31	11:59	Car 2	94
3	2014-07-28	16:59	17:18	Car 3	81
4	2014-07-29	09:16	09:37	Car 3	85
5	2014-07-29	14:53	15:12	Car 1	145
6	2014-07-29	15:53	16:12	Car 3	92
7	2014-07-31	07:17	07:40	Car 3	84
8	2014-07-31	08:33	08:52	Car 1	123
9	2014-07-31	11:23	11:42	Car 1	125
10	2014-07-31	13:25	13:46	Car 3	82
11	2014-07-31	21:23	21:43	Car 2	132
12	2014-08-01	00:14	00:34	Car 2	140
13	2014-08-02	10:10	10:34	Car 1	94
14	2014-08-02	12:00	12:21	Car 1	87
15	2014-08-08	20:29	20:48	Car 3	137
16	2014-08-08	21:37	21:57	Car 2	112

[1]Horizontal distance based on GPS coordinates of the site (from the state air monitoring plan) and the car. Estimated uncertainty in distances is ± 5 m.
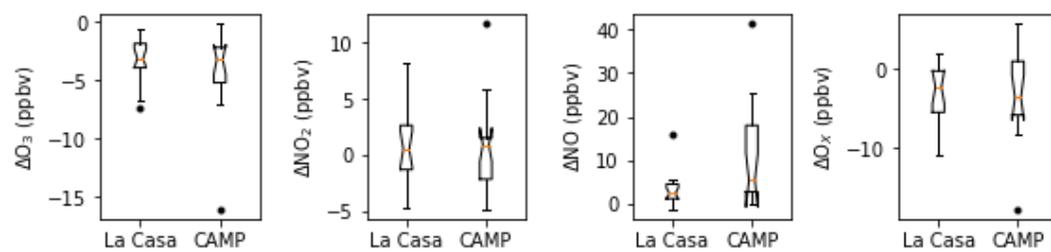
Figure S1: Distribution of median (by collocation period) 1-minute ΔO_3, ΔNO_2, ΔNO, and ΔO_X from the side-by-side parked comparison periods at La Casa and CAMP.
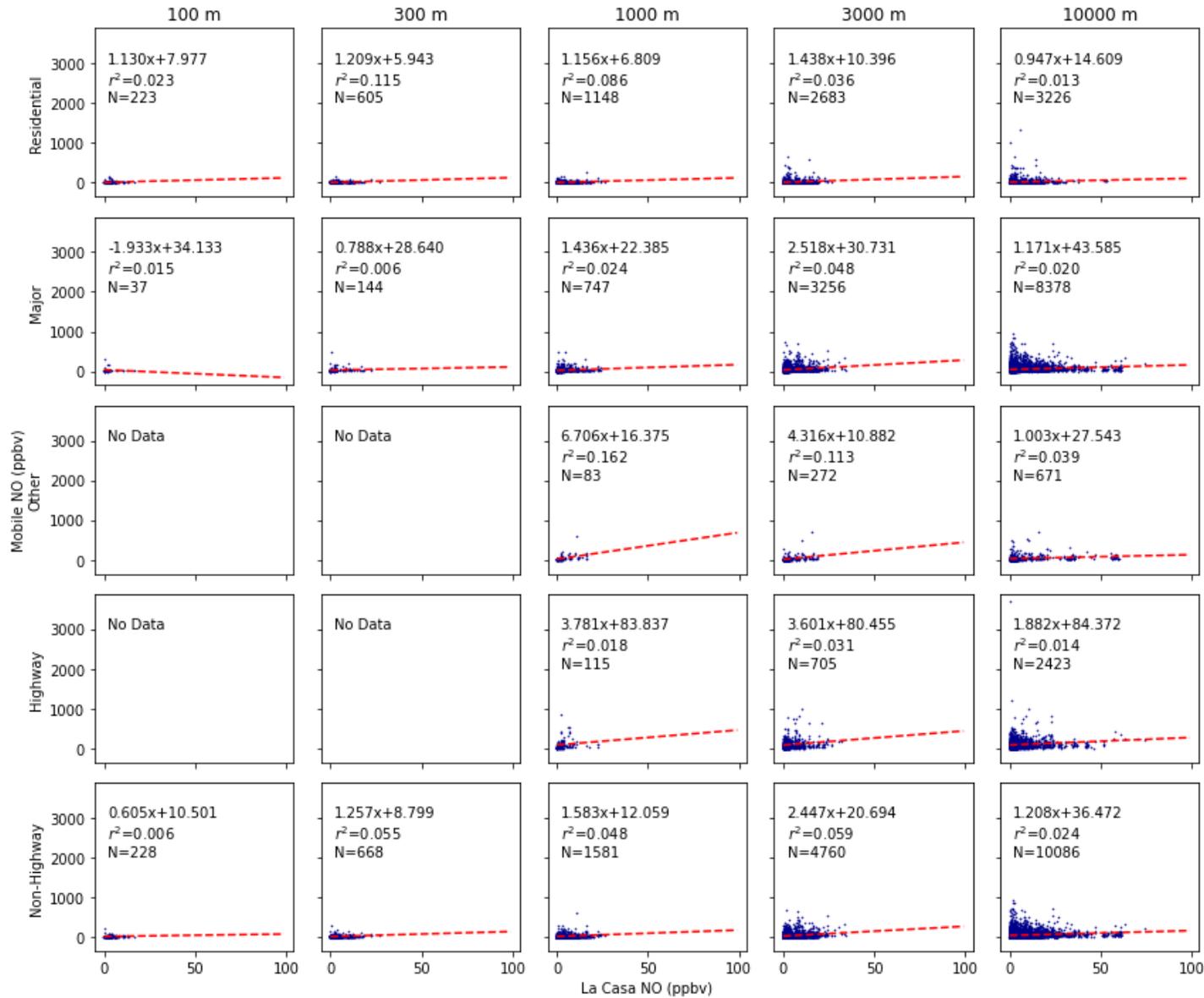
Figure S2: Scatterplots of 1-minute average mobile platform versus 1-minute fixed reference site NO for different road classes within five distance buffers of the fixed reference sites in the Denver study. The red dashed lines show the result of the ordinary least squares regression.
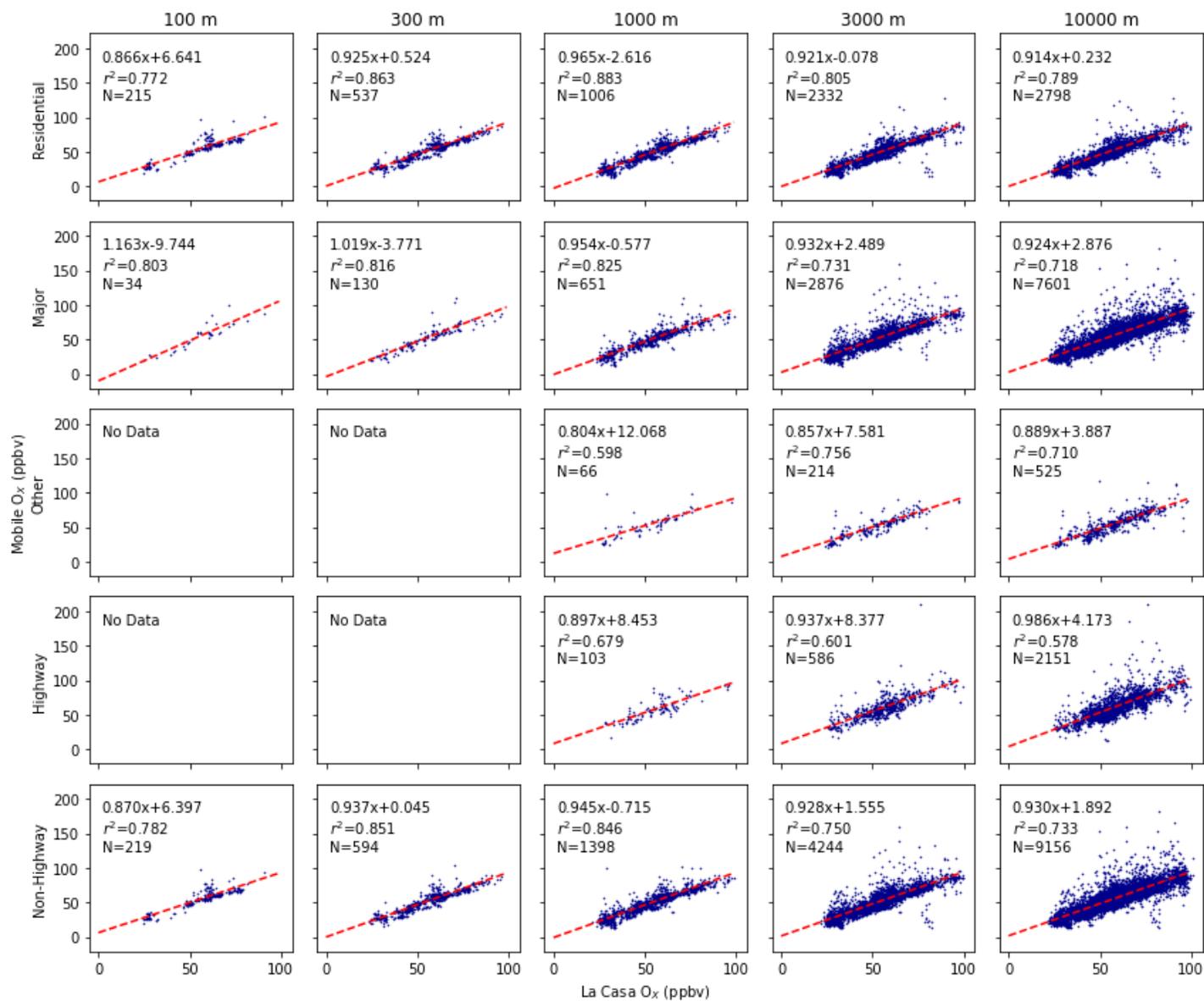
Figure S3: Scatterplots of 1-minute average mobile platform versus 1-minute fixed reference site O_X for different road classes within five distance buffers of the fixed reference sites in the Denver study. The red dashed lines show the result of the ordinary least squares regression.
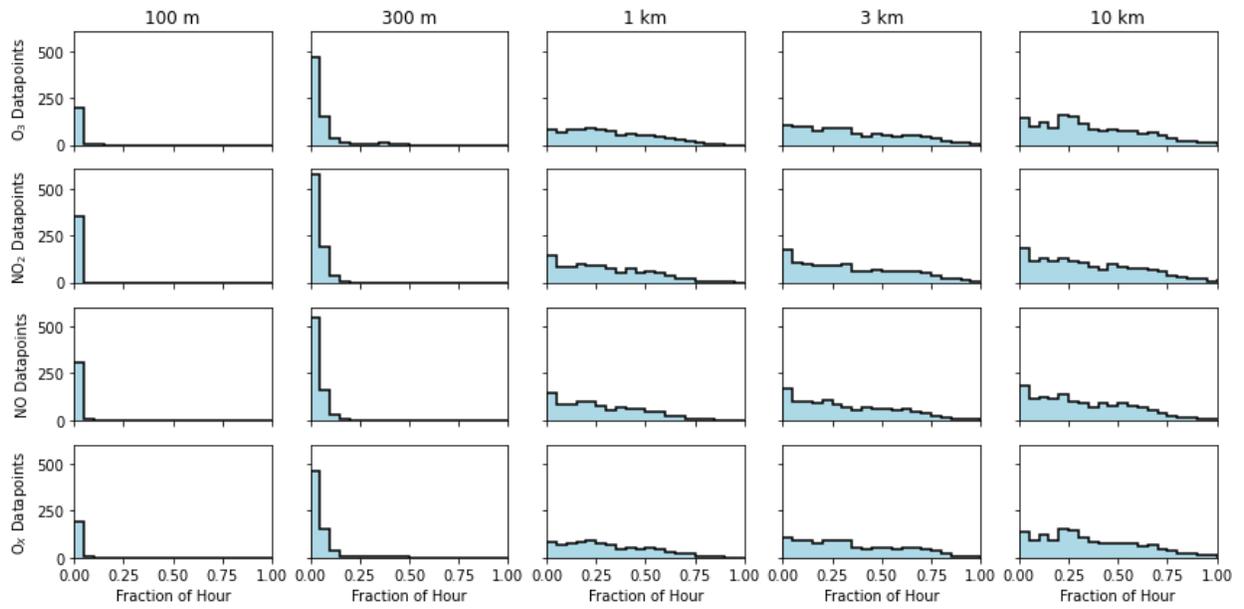
Figure S4: Fraction of each 3600 second period represented by valid 1-second measurements for the Residential subsets of the California dataset (Section 5.1). Each bar spans 0.05 hours (3 minutes).
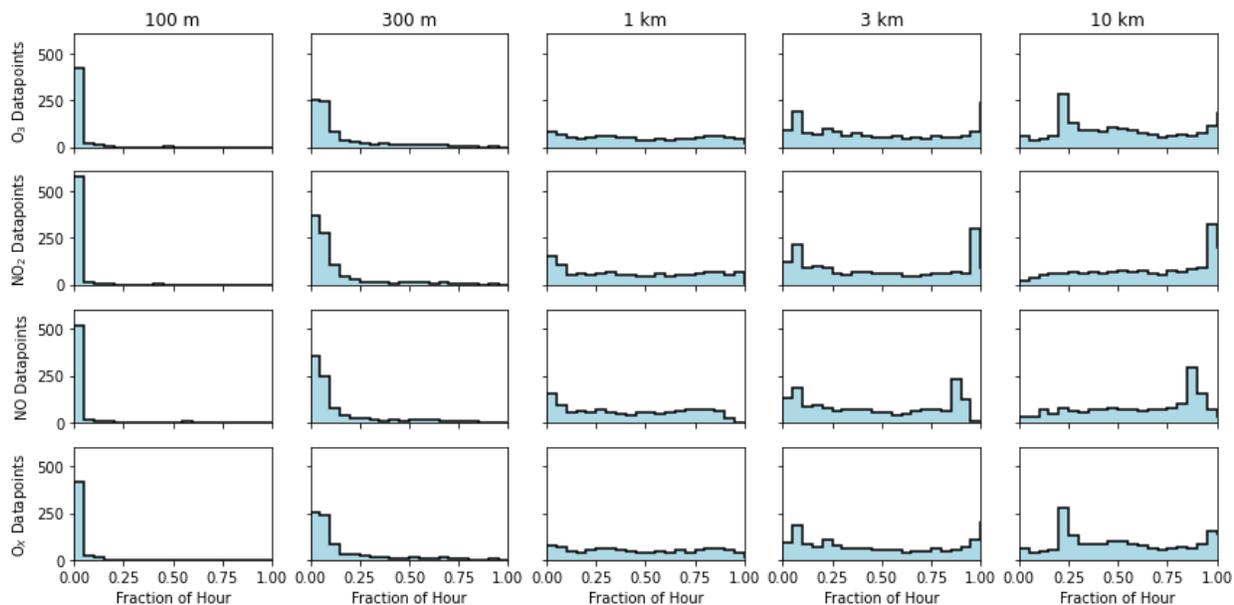
Figure S5: Fraction of each 3600 second period represented by 1-second measurements for the Non Highway subsets of the California dataset (Section 5.1). Each bar spans 0.05 hours.