

Table S1. Statistical assessment of hourly average PurpleAir PM_{2.5} at selected sites for the years 2016 and 2022 at FEM/FRM

Site Name and AQS ID, POC	PurpleAir Sensor Index	Distance, mts	Dates Duration	Num. of Paired Observation	R ²	Mean Bias (µg/m ³)	RMSE
Thousand Oaks 061110007, 3	12741	0.14	9 Jul 2018 to 10 Nov 2021	20,905	0.61	3.99	7.93
Arroyo Grande 060792007, 1	16741	7.16	29 Sep 2018 to 14 May 2022	21,257	0.28	2.47	10.48
Arroyo Grande 060792007, 1	6816	9.51	30 Jan 2018 to 6 Jan 2019	4,861	0.23	3.24	11.42
Bishop-Line 060270002, 1	17107	7.89	2 Oct 2018 to 8 Oct 2021	22,099	0.83	-1.9	9.89
Corcoran 060310004, 8	104104	6.78	14 Apr 2021 to 30 Jun 2022	6,690	0.69	10.25	18.94
El Rio-Rio Mesa Schl. 061113001, 3	9594	0.18	2 Apr 2018 to 31 Aug 2022	30,798	0.5	3.5	7.85
Fresno-Garland 060190011, 3	22305	6.62	13 Dec 2018 to 17 Jan 2021	16,222	0.8	6.19	13.16
Fresno-Garland 060190011, 3	2358	1.87	31 Jul 2017 to 9 Dec 2019	17,194	0.83	5.71	11.85
Fresno-Garland 060190011, 3	6558	8.68	25 Jan 2018 to 12 Dec 2018	3,729	0.85	2.96	9.28
Fresno-Garland 060190011, 4	22305	6.62	13 Dec 2018 to 31 Dec 2020	15,893	0.81	5.38	12.46
Fresno-Garland 060190011, 4	2358	1.87	31 Jul 2017 to 9 Dec 2019	17,016	0.83	6.98	12.58
Fresno-Garland 060190011, 4	6558	8.68	25 Jan 2018 to 12 Dec 2018	3,739	0.85	6.6	10.72
Goleta-Fairview 060832011, 1	16705	0	29 Sep 2018 to 30 Jun 2022	28,532	0.56	3.44	6.93
Hanford 060311004, 3	104246	17.59	15 Apr 2021 to 30 Jun 2022	6,578	0.73	10.61	18.6
Lancaster 060379033, 1	8290	18.28	8 Mar 2018 to 24 Aug 2020	18,658	0.51	0.03	5.64
Lancaster 060379033, 1	8306	18.28	8 Mar 2018 to 30 Jun 2022	11,712	0.51	-1.2	6.58
Long Beach 060374008, 3	104940	6.63	24 Apr 2021 to 14 Mar 2022	7,501	0.62	3.37	9.25
Long Beach 060374008, 3	5016	2.53	28 Nov 2017 to 14 Mar 2022	27,090	0.55	3.52	9.98
Lompoc 060832004, 1	16703	0	29 Sep 2018 to 30 Jun 2022	28,482	0.6	2.14	6.21

Madera 060392010, 3	104254	1.58	9 Jul 2021 to 30 Apr 2022	5,205	0.67	12.76	18.14
Manteca 060772010, 3	104108	5.87	14 Apr 2021 to 12 Feb 2022	2,090	0.67	13.01	20.32
Merced 060470003, 3	104208	7.42	15 Apr 2021 to 24 Jan 2022	2,181	0.7	15.67	21.23
Mammoth Lakes 060510001, 6	17105	11.32	20 Dec 2018 to 31 May 2019	3,793	0.9	-0.16	5.64
Modesto 060990005, 3	13489	4.23	18 Jul 2018 to 30 Jun 2022	10,267	0.75	1.26	11.64
Modesto 060990005, 3	2368	0.58	31 Jul 2017 to 30 Jun 2022	27,836	0.83	3.67	9.83
Ojai 061111004, 3	48393	0.35	26 Feb 2020 to 31 Aug 2022	20,756	0.55	1.82	6.05
Ontario 060710027, 3	5276	12.43	8 Jun 2018 to 9 Mar 2022	12,983	0.67	1.65	8.54
Piru 061110009, 3	12288	6.84	28 Jun 2018 to 2 Aug 2022	27,803	0.54	1.52	6.52
San Jose 060850005, 3	146592	9.91	13 Apr 2022 to 18 Aug 2022	2,753	0.25	-3.86	5.74
Simi Valley 061112002, 3	12743	0.64	9 Jul 2018 to 31 Aug 2022	30,151	0.66	2.6	7.03
Simi Valley 061112002, 4	12743	0.64	9 Jul 2018 to 31 Aug 2022	30,108	0.64	3.11	7.32
Santa Maria 060831008, 3	16701	3.34	29 Sep 2018 to 4 Feb 2021	16,931	0.63	2.78	7.14
Stockton 060771002, 3	44707	19.61	20 Dec 2019 to 1 Nov 2021	5,393	0.45	2.48	12.73
Stockton 060771002, 4	44707	19.61	20 Jan 2020 to 20 Feb 2020	717	0.29	19.76	24.45
Victorville 060710306, 1	8338	15.16	8 Mar 2018 to 30 Jun 2022	34,918	0.4	-1.55	7.25
Victorville 060710306, 2	8338	15.16	8 Mar 2018 to 30 Jun 2022	34,655	0.44	-1.98	6.95

Table S2. Statistical assessment of hourly average PurpleAir PM_{2.5} at selected sites for the years 2016 and 2022 at non-FEM/FRM sites

Site Name and AQS ID, POC	PurpleAir Sensor Index	Distance, mts	Dates Duration	Num. of Paired Observation	R ²	Mean Bias (µg/m ³)	RMSE
Bakersfield 060290014, 3	13473	0.6	18 Jul 2018 to 25 Oct 2021	3,531	0.76	3.1	9.4
Bakersfield 060290014, 3	2350	0.6	31 Jul 2017 to 8 Mar 2022	34,583	0.73	4.3	11.7
Calexico-Ethel Street 060250005, 3	1174	0.0	24 Oct 2017 to 19 Feb 2018	2,486	0.89	3.5	11.6
Eureka-Humboldt Hill 060231005, 1	12929	15.9	31 Jul 2018 to 31 Dec 2018	2,717	0.27	1.1	15.1
Riverside 060658001, 9	1854	8.5	10 Jul 2017 to 31 Dec 2019	14,604	0.69	5.7	9.7
Riverside 060658001, 9	2612	9.0	7 Aug 2017 to 31 Dec 2019	19,132	0.73	4.6	9.0
Riverside 060658001, 9	4731	11.2	22 Nov 2017 to 1 Mar 2019	5,686	0.76	5.2	9.7
Riverside 060658001, 9	4748	10.3	22 Nov 2017 to 31 Dec 2019	12,614	0.72	4.4	8.6
Riverside 060658001, 9	5280	14.8	12 Dec 2017 to 31 Dec 2019	13,888	0.73	4.4	8.6
Riverside 060658001, 9	5284	17.2	12 Dec 2017 to 31 Dec 2019	13,815	0.73	3.8	8.1
Riverside 060658001, 9	6806	18.4	30 Jan 2018 to 31 Dec 2019	11,599	0.68	5.0	9.0
Sacramento-T Street 060670010, 3	1208	11.9	18 Jul 2018 to 25 Oct 2021	536	0.65	4.6	7.6
Sacramento-T Street 060670010, 3	13369	13.1	31 Jul 2017 to 8 Mar 2022	8,824	0.79	4.6	11.6
Sacramento-T Street 060670010, 3	13373	13.1	24 Oct 2017 to 19 Feb 2018	8,909	0.80	4.1	11.2
Sacramento-T Street 060670010, 3	13391	13.1	31 Jul 2018 to 31 Dec 2018	8,896	0.82	4.2	11.0
Sacramento-T Street 060670010, 3	13413	13.1	10 Jul 2017 to 31 Dec 2019	8,801	0.79	3.6	9.2
Sacramento-T Street 060670010, 3	13421	13.1	7 Aug 2017 to 31 Dec 2019	8,881	0.80	3.9	10.5
Sacramento-T Street 060670010, 3	13447	13.1	22 Nov 2017 to 1 Mar 2019	9,412	0.80	3.9	10.7
Sacramento-T Street 060670010, 3	16599	13.1	22 Nov 2017 to 31 Dec 2019	8,897	0.80	3.9	10.4

Sacramento-T			12 Dec 2017 to				
Street 060670010, 3	16603	13.1	31 Dec 2019	8,830	0.80	3.8	11.0
Sacramento-T			12 Dec 2017 to				
Street 060670010, 3	16605	13.1	31 Dec 2019	8,911	0.81	4.1	11.3
Sacramento-T			20 Oct 2017 to				
Street 060670010, 3	16619	13.1	16 Nov 2017	8,896	0.79	4.3	11.4
Sacramento-T			17 Jul 2018 to				
Street 060670010, 3	16627	13.1	1 Sep 2020	8,922	0.80	3.9	10.6
Sacramento-T			17 Jul 2018 to				
Street 060670010, 3	16633	13.1	1 Sep 2020	8,943	0.80	4.4	11.6
Sacramento-T			17 Jul 2018 to				
Street 060670010, 3	16639	13.1	31 Aug 2020	8,874	0.79	4.1	11.2
Sacramento-T			17 Jul 2018 to				
Street 060670010, 3	16643	13.1	1 Sep 2020	8,986	0.80	4.1	10.7
Sacramento-T			17 Jul 2018 to				
Street 060670010, 3	16645	13.1	1 Sep 2020	9,191	0.80	3.9	10.9
Sacramento-T			8 Nov 2018 to				
Street 060670010, 3	18819	2.8	4 Sep 2020	1,543	0.81	7.2	20.9
Sacramento-T			7 Jul 2020 to				
Street 060670010, 3	18825	5.2	4 Sep 2020	1,371	0.84	8.0	20.8
Sacramento-T			8 Nov 2018 to				
Street 060670010, 3	18827	4.6	28 Aug 2020	1,117	0.79	6.9	21.8
Sacramento-T			8 Nov 2018 to				
Street 060670010, 3	18835	9.8	27 Aug 2020	1,190	0.80	5.0	18.9
Sacramento-T			8 Nov 2018 to				
Street 060670010, 3	18851	8.8	27 Aug 2020	1,352	0.79	4.6	17.8
Sacramento-T			8 Nov 2018 to				
Street 060670010, 3	18857	11.0	27 Aug 2020	1,351	0.79	4.2	17.5
Sacramento-T			8 Nov 2018 to				
Street 060670010, 3	18865	9.3	26 Aug 2020	1,422	0.79	4.3	18.4
Sacramento-T			8 Nov 2018 to				
Street 060670010, 3	18869	3.7	27 Aug 2020	1,442	0.78	3.5	16.8
Sacramento-T			8 Nov 2018 to				
Street 060670010, 3	18871	10.3	26 Aug 2020	1,435	0.79	4.5	17.1
Sacramento-T			8 Nov 2018 to				
Street 060670010, 3	18873	3.1	26 Aug 2020	1,419	0.79	3.3	16.1
Sacramento-T			8 Nov 2018 to				
Street 060670010, 3	18879	10.3	20 Aug 2020	1,469	0.78	2.0	9.2
Sacramento-T			11 Dec 2018 to				
Street 060670010, 3	21613	5.5	25 Jun 2020	3,548	0.77	2.3	6.9
Sacramento-T			11 Dec 2018 to				
Street 060670010, 3	21651	5.5	19 Jun 2020	3,405	0.77	2.5	7.1
Sacramento-T			11 Dec 2018 to				
Street 060670010, 3	21667	5.5	11 Dec 2018 to	3,329	0.79	2.1	6.2

Street 060670010, 3			19 Jun 2020				
Sacramento-T			11 Dec 2018 to				
Street 060670010, 3	21681	5.5	19 Jun 2020	3,291	0.79	2.2	6.3
Sacramento-T			11 Dec 2018 to				
Street 060670010, 3	21683	5.5	19 Jun 2020	3,336	0.77	2.7	7.1
Sacramento-T			11 Dec 2018 to				
Street 060670010, 3	21691	5.5	19 Jun 2020	3,386	0.77	2.2	6.8
Sacramento-T			11 Dec 2018 to				
Street 060670010, 3	21734	5.5	7 Jul 2020	3,868	0.72	2.3	6.7
Sacramento-T			11 Dec 2018 to				
Street 060670010, 3	21741	5.5	19 Jun 2020	2,356	0.56	-0.7	5.3
Sacramento-T			11 Dec 2018 to				
Street 060670010, 3	21743	5.5	19 Jun 2020	3,363	0.79	2.7	6.7
Sacramento-T			11 Dec 2018 to				
Street 060670010, 3	21753	5.5	25 Jun 2020	3,518	0.76	2.8	7.8
Sacramento-T			11 Dec 2018 to				
Street 060670010, 3	21767	5.5	19 Jun 2020	3,333	0.78	2.1	6.3
Sacramento-T			11 Dec 2018 to				
Street 060670010, 3	21787	5.5	25 Jun 2020	3,558	0.77	2.4	6.8
Sacramento-T			11 Dec 2018 to				
Street 060670010, 3	21792	5.5	19 Jun 2020	3,310	0.79	2.0	6.0
Sacramento-T			11 Dec 2018 to				
Street 060670010, 3	21835	5.5	19 Jun 2020	3,316	0.78	1.9	6.4
Sacramento-T			12 Dec 2018 to				
Street 060670010, 3	21863	5.5	1 Aug 2020	3,887	0.70	2.5	7.3
Sacramento-T			12 Dec 2018 to				
Street 060670010, 3	21871	5.5	19 Jun 2020	3,314	0.79	2.2	6.2
Sacramento-T			12 Dec 2018 to				
Street 060670010, 3	21873	5.5	19 Jun 2020	3,389	0.78	2.7	7.2
Sacramento-T			12 Dec 2018 to				
Street 060670010, 3	21875	5.5	19 Jun 2020	3,448	0.78	2.1	6.7
Sacramento-T			24 Apr 2020				
Street 060670010, 3	53637	10.2	to 11 Dec 2020	2,389	0.87	8.3	17.3
Sacramento-T			27 Apr 2020				
Street 060670010, 3	53769	9.0	to 11 Dec 2020	2,378	0.91	7.7	14.0
Sacramento-T			27 Apr 2020				
Street 060670010, 3	53777	15.8	to 11 Dec 2020	2,323	0.89	12.2	21.0
Sacramento-T			7 Jul 2020 to				
Street 060670010, 3	58715	6.1	20 Aug 2020	1,043	0.85	1.0	9.3
Sacramento-T			14 Jun 2018 to				
Street 060670010, 3	8246	1.4	11 Dec 2020	17,724	0.91	5.1	12.2
Sacramento-T			9 Mar 2018 to				
Street 060670010, 3	8396	6.1	11 Dec 2020	20,709	0.91	5.2	13.1

Sacramento-T			9 Mar 2018 to				
Street 060670010, 3	8408	17.4	11 Dec 2020	20,293	0.78	4.1	9.7
Sacramento-T			9 Mar 2018 to				
Street 060670010, 3	8414	2.1	11 Dec 2020	20,799	0.90	5.0	11.5
Sacramento-T			9 Mar 2018 to				
Street 060670010, 3	8422	15.8	11 Dec 2020	20,958	0.90	5.0	12.0
Sacramento-T			14 Sep 2019 to				
Street 060670010, 3	8424	6.1	11 Dec 2020	9,574	0.86	5.5	12.0
Sacramento-T			9 Mar 2018 to				
Street 060670010, 3	8432	2.1	28 Oct 2020	19,490	0.92	5.0	12.6
Sacramento-T			2 Feb 2019 to				
Street 060670010, 3	8440	2.1	11 Dec 2020	14,797	0.86	4.2	10.2
South Long Beach			12 Dec 2018 to				
060374004, 3	21893	18.9	1 Mar 2019	407	0.54	3.7	11.3
South Long Beach			12 Dec 2018 to				
060374004, 3	21895	16.1	1 Mar 2019	360	0.76	3.6	7.9
South Long Beach			12 Dec 2018 to				
060374004, 3	21897	15.3	1 Mar 2019	407	0.50	3.0	11.0
South Long Beach			12 Dec 2018 to				
060374004, 3	21899	10.4	1 Mar 2019	410	0.48	3.0	11.2
South Long Beach			12 Dec 2018 to				
060374004, 3	21901	17.4	11 Mar 2019	456	0.48	3.5	10.7
South Long Beach			12 Dec 2018 to				
060374004, 3	21907	16.6	1 Mar 2019	408	0.55	2.9	10.5
South Long Beach			12 Dec 2018 to				
060374004, 3	21909	18.3	1 Mar 2019	403	0.51	3.2	11.4
South Long Beach			12 Dec 2018 to				
060374004, 3	21919	18.4	1 Mar 2019	407	0.74	3.1	7.9
South Long Beach			12 Dec 2018 to				
060374004, 3	21921	7.8	1 Mar 2019	406	0.53	3.0	11.0
South Long Beach			12 Dec 2018 to				
060374004, 3	21937	13.6	1 Mar 2019	408	0.70	2.9	7.9
South Long Beach			12 Dec 2018 to				
060374004, 3	21951	16.8	1 Mar 2019	407	0.68	3.3	9.0
South Long Beach			12 Dec 2018 to				
060374004, 3	21955	17.4	1 Mar 2019	408	0.44	3.8	13.3
South Long Beach			12 Dec 2018 to				
060374004, 3	21959	16.1	1 Mar 2019	407	0.51	3.3	11.1
South Long Beach			12 Dec 2018 to				
060374004, 3	21971	15.3	1 Mar 2019	408	0.46	3.3	12.1
South Long Beach			12 Dec 2018 to				
060374004, 3	21975	14.4	1 Mar 2019	405	0.43	3.4	13.0
South Long Beach			12 Dec 2018 to				
060374004, 3	21979	15.2	1 Mar 2019	405	0.51	2.7	10.9

060374004, 3			1 Mar 2019				
South Long Beach			31 Jan 2018 to				
060374004, 3	6848	6.9	16 Mar 2019	3,094	0.62	-1.4	5.2
Yosemite Village			28 Aug 2020				
060431001, 3	50601	6.9	to 30 Jun 2022	10,290	0.92	-0.8	13.5
