

Case study	N	R^2	RMSE (ppb)	MBE (ppb)	Standard deviation R^2	Standard deviation RMSE	Standard deviation MBE
		O ₃ models					
Best O ₃ model (Casey et al., 2018)							
ANN with inputs: e2vO3, temp, absHum, e2vVOC, e2vCO, FigCH4, FigCxHy							
Dawson summer 2014	1	0.83	6.46	-0.91	0.00	0.00	0.00
SJ Basin spring 2015	4	0.86	7.74	3.69	0.05	3.82	5.78
SJ Basin summer 2015	7	0.85	7.03	4.89	0.10	1.10	1.73
BAO summer 2015	2	0.93	4.26	1.45	0.00	0.31	0.07
BAO summer 2016	2	0.92	12.21	-11.14	0.00	0.31	0.07
GRET fall 2016	2	0.96	12.87	12.02	0.01	2.30	2.35
GRET spring 2017	2	0.98	2.59	1.49	0.00	0.69	1.02
Simple model (single gas sensor)							
LM with inputs: e2vO3, temp, absHum							
Dawson summer 2014	1	0.95	3.59	-0.46	0.00	0.00	0.00
SJ Basin spring 2015	4	0.83	17.95	16.09	0.06	6.10	5.83
SJ Basin summer 2015	7	0.86	6.30	3.53	0.06	1.40	2.06
BAO summer 2015	2	0.87	5.50	0.94	0.00	0.78	1.56
BAO summer 2016	2	0.89	5.78	-2.71	0.00	0.78	1.56
GRET fall 2016	2	0.93	12.73	11.92	0.01	0.62	0.88
GRET spring 2017	2	0.89	6.00	-3.19	0.00	0.73	1.38
Models optimized for case studies							
Dawson summer 2014	1	0.95	3.59	-0.46	0.00	0.00	0.00
SJ Basin spring 2015	4	0.86	7.74	3.69	0.05	3.82	5.78
SJ Basin summer 2015	7	0.85	7.03	4.89	0.10	1.10	1.73
BAO Summer 2015	2	0.93	4.26	1.45	0.02	0.51	1.54
BAO summer 2016	2	0.87	6.25	-0.20	0.02	0.51	1.54
GRET fall 2016	2	0.95	3.99	2.14	0.00	0.28	0.89
GRET spring 2017	2	0.98	2.59	1.49	0.00	0.69	1.02