



Supplement of

Sensitivity studies of nighttime top-of-atmosphere radiances from artificial light sources using a 3-D radiative transfer model for nighttime aerosol retrievals

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Table S1. List of nights with VIIRS data used in the analysis. Also included are the scene averaged lunar fraction, lunar phase angle, cosine lunar zenith angle and cosine satellite zenith angle. Highlighted nights are nights that were used for computing background emissions for Dakar. Nights highlighted with “*” are nights that are used for constructing Figure 3.

Year	Month	Day	Lunar Fraction	Lunar Phase angle	Cosine Lunar Zenith Angle	Cosine satellite zenith angle
2019	1	18*	86.26	43.51	0.38	0.89
2019	1	19*	93.23	30.17	0.65	0.98
2019	2	20	99.63	7.00	0.98	0.98
2019	2	21	96.74	20.79	0.98	0.74
2019	2	22	91.15	34.61	0.89	0.49
2019	2	23	82.81	48.99	0.90	0.54
2019	2	24	73.54	61.91	0.75	0.80
2019	2	25	63.50	74.34	0.53	1.00
2019	3	2	16.91	131.43	-0.40	0.97
2019	3	3	10.59	142.03	-0.62	0.92
2019	3	4	5.64	152.52	-0.80	0.65
2019	3	7*	0.35	173.22	-0.95	0.90
2019	3	8*	2.09	163.36	-0.98	0.98
2019	3	9*	5.56	152.71	-0.94	0.74
2019	3	10	10.70	141.81	-0.84	0.48
2019	3	12	26.13	118.51	-0.72	0.80
2019	3	14	45.75	94.88	-0.27	0.83
2019	3	15	56.51	82.52	0.01	0.56
2019	3	16	68.05	68.84	-0.07	0.47
2019	3	24*	87.31	41.73	0.83	0.98
2019	3	26*	70.02	66.40	0.45	0.48
2019	4	7	3.33	158.97	-0.90	0.63
2019	4	9	13.92	136.18	-0.79	0.98
2019	4	12	42.15	99.03	-0.48	0.54
2019	4	13	53.15	86.38	-0.23	0.81
2019	4	15*	74.79	60.28	0.32	0.83
2019	4	17*	92.20	32.44	0.46	0.47
2019	4	18	97.26	19.05	0.68	0.71
2019	4	21	96.43	21.78	0.87	0.64
2019	4	25	66.86	70.29	0.46	0.98
2019	4	26	57.49	81.38	0.24	0.73
2019	4	27	48.02	92.27	0.00	0.48

2019	4	28	38.14	103.72	0.15	0.54
2019	4	29	29.36	114.38	-0.08	0.81
2019	4	30	21.28	125.06	-0.31	1.00
2019	5	4	0.90	169.13	-0.72	0.71
2019	5	5	0.23	174.49	-0.82	0.97
2019	5	9	19.11	128.16	-0.74	0.62
2019	5	21*	94.34	27.53	0.80	0.97
2019	5	22*	88.74	39.22	0.73	0.92
2019	5	23*	81.72	50.63	0.61	0.64
2019	5	24*	73.64	61.78	0.43	0.42
2019	6	8	25.79	118.96	-0.53	0.65
2019	6	15	94.28	27.69	0.37	0.54
2019	6	17	99.90	3.63	0.71	1.00
2019	6	20	92.30	32.21	0.80	0.47
2019	7	15	96.60	21.25	0.60	0.74
2019	7	18	98.59	13.64	0.80	0.80
2019	7	20	90.66	35.60	0.82	0.84
2019	8	10	73.62	61.81	0.00	0.92
2019	9	12	95.79	23.68	0.66	0.64
2019	9	17	92.28	32.27	0.96	0.74
2019	9	18	86.37	43.32	0.889	0.48
2019	10	2	15.27	133.99	-0.94	0.98
2019	10	12	96.80	20.61	0.65	0.97
2019	10	13	99.18	10.38	0.83	0.92
2019	10	17	89.93	37.00	0.99	0.90
2019	10	20	64.99	72.56	0.56	0.48
2019	10	21	53.66	85.81	0.64	0.54
2019	10	27	1.58	165.57	-0.70	0.71
2019	10	28	0.17	175.32	-0.88	0.97
2019	10	29*	1.46	166.13	-0.98	0.92
2019	10	30*	5.21	153.61	-0.99	0.65
2019	10	31*	11.50	140.35	-0.99	0.40
2019	11	1	18.99	128.33	-0.95	0.62
2019	11	2	27.55	116.69	-0.82	0.89
2019	11	3	36.74	105.38	-0.64	0.98
2019	11	6*	65.37	72.09	-0.28	0.54
2019	11	12	99.64	6.83	0.79	0.71
2019	11	14	97.53	18.10	0.99	0.92
2019	11	22*	24.52	120.64	0.05	0.54
2019	11	23*	15.38	133.82	-0.26	0.80
2019	11	24*	8.081	146.97	-0.54	1.00

2019	11	25*	3.02	159.98	-0.77	0.83
2019	11	26*	0.43	172.46	-0.92	0.56
2019	11	28*	2.83	160.63	-0.97	0.71
2019	11	29*	7.28	148.70	-0.99	0.97
2019	11	30	13.39	137.07	-0.92	0.92
2019	12	15*	90.07	36.74	0.97	0.97
2019	12	16*	82.32	49.72	0.86	0.92
2019	12	17*	72.87	62.78	0.67	0.64
2019	12	18	62.22	75.85	0.41	0.42
2019	12	19	50.14	89.84	0.51	0.62
2019	12	20*	38.89	102.84	0.22	0.90
2019	12	21*	28.27	115.76	-0.08	0.98
2019	12	22*	18.82	128.58	-0.37	0.74
2019	12	23	10.99	141.28	-0.63	0.48
2019	12	24*	4.80	154.69	-0.54	0.54
2019	12	26*	0.01	178.92	-0.91	1.00
2019	12	27*	0.90	169.12	-0.98	0.83
2019	12	28*	3.77	157.60	-0.98	0.56