



ATLAS

WEATHERING SERVICES GROUP

Latitude 33° 54' North, Longitude 112° 08' West, Elevation 610 (m)

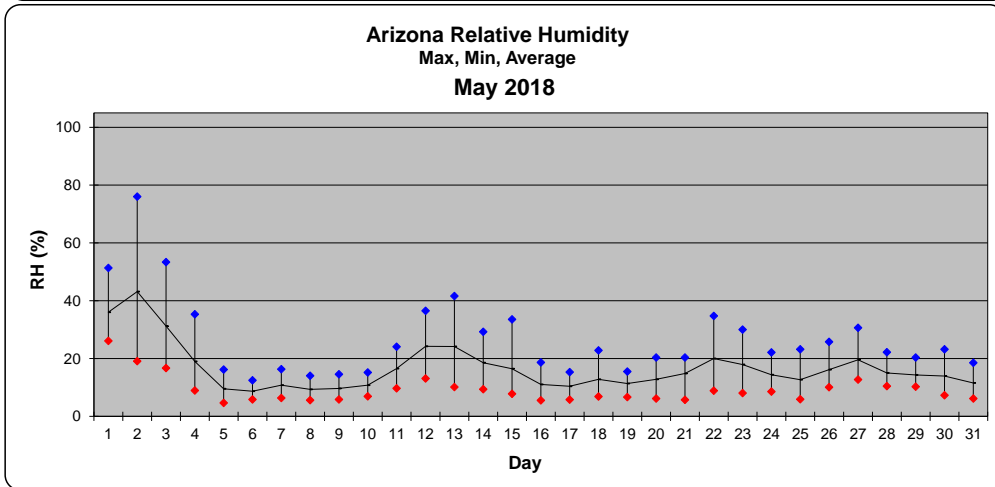
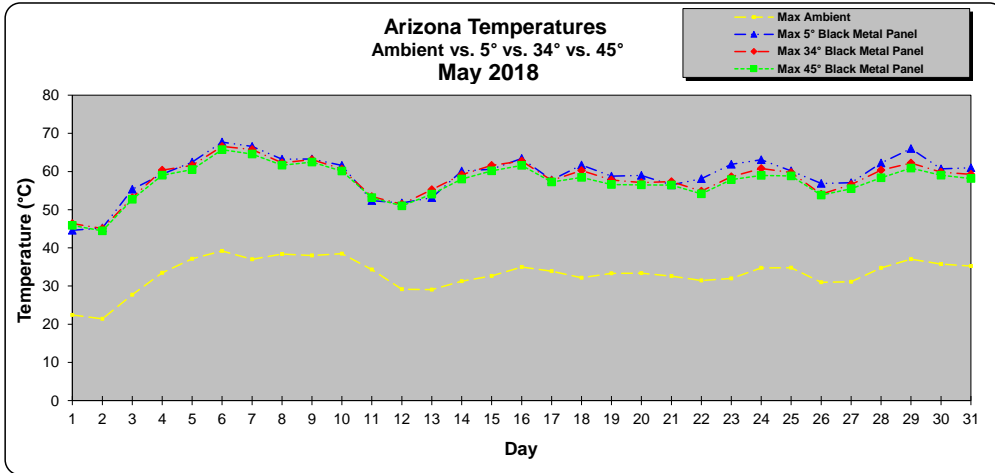


Weather Summary May 2018 Phoenix, Arizona

AWSG	Temperature Summary												Climate Summary						
	Ambient Temperature			Black Metal Panel Temperature (ASTM G179) (° C)									Relative Humidity			Wind Speed		Wind Direction	Rainfall
	Month	° C			5 °			34 °			45 °			%			m/sec	360°/70° = N	(mm)
Day	Max	Min	Avg.	Max	Min	Avg.	Max	Min	Avg.	Max	Min	Avg.	Max	Min	Avg.	Max	Avg.	Avg.	Total
1	22	13	18	45	8	21	46	9	21	46	9	21	51	26	36	11.0	2.1	174°	0.0
2	21	11	16	45	11	19	45	11	19	44	12	20	76	19	43	8.4	2.1	174°	0.0
3	28	11	20	55	10	26	53	10	26	53	10	25	53	17	31	8.3	2.4	8°	0.0
4	33	17	25	59	15	31	60	16	31	59	16	30	35	9	19	9.9	2.6	24°	0.3
5	37	22	30	62	20	34	62	20	35	61	20	35	16	5	10	17.2	2.8	68°	0.0
6	39	24	31	68	22	35	67	22	35	66	22	35	13	6	9	8.4	2.3	54°	0.0
7	37	22	30	67	19	34	66	19	34	65	20	34	16	6	11	6.5	1.6	98°	0.0
8	38	22	30	63	20	36	62	20	36	62	21	35	14	6	9	7.1	2.2	123°	0.0
9	38	21	30	63	18	35	63	18	35	62	18	35	15	6	10	10.0	1.7	121°	0.0
10	38	22	30	62	18	35	61	19	35	60	19	35	15	7	11	15.5	2.1	189°	0.0
11	34	21	28	52	16	31	53	17	31	53	17	31	24	10	17	12.2	2.9	209°	0.0
12	29	18	24	52	16	29	51	15	28	51	16	28	37	13	24	9.9	2.4	199°	0.0
13	29	15	22	53	12	28	55	13	28	54	13	28	42	10	24	12.9	1.6	152°	0.0
14	31	15	24	60	11	30	59	11	30	58	12	29	29	9	19	8.5	1.6	159°	0.0
15	33	16	26	61	12	32	62	13	31	60	13	31	34	8	16	11.1	1.4	80°	0.0
16	35	19	28	63	16	34	63	17	33	62	17	33	19	6	11	7.1	1.9	82°	0.0
17	34	19	27	58	16	32	58	17	32	57	17	32	15	6	10	8.5	2.1	180°	0.0
18	32	16	25	62	12	31	60	13	30	58	13	30	23	7	13	9.9	1.5	172°	0.0
19	33	18	26	59	14	32	58	15	31	57	15	31	16	7	11	9.1	1.7	114°	0.0
20	33	18	26	59	14	32	57	14	31	56	15	31	20	6	13	8.0	1.5	239°	0.0
21	33	19	26	56	16	30	57	16	30	56	16	30	20	6	15	9.8	1.9	175°	0.0
22	31	17	25	58	13	30	55	14	30	54	14	30	35	9	20	13.8	1.7	177°	0.0
23	32	17	25	62	13	31	59	14	30	58	14	30	30	8	18	11.0	1.6	148°	0.0
24	35	19	27	63	16	33	61	16	33	59	17	32	22	9	14	8.4	2.0	352°	0.0
25	35	18	27	60	14	33	60	15	32	59	15	32	23	6	13	8.4	1.7	147°	0.0
26	31	18	25	57	13	30	54	14	29	54	14	29	26	10	16	10.8	2.0	184°	0.0
27	31	17	25	57	13	31	57	14	30	56	14	30	31	13	20	9.4	1.6	143°	0.0
28	35	20	28	62	17	34	60	17	33	58	17	33	22	10	15	8.5	2.0	137°	0.0
29	37	23	31	66	20	37	62	21	36	61	21	36	20	10	14	11.2	2.4	160°	0.0
30	36	21	30	61	17	35	60	18	35	59	18	35	23	7	14	9.0	1.5	206°	0.0
31	35	19	28	61	14	33	59	15	33	58	15	33	19	6	12	13.0	1.8	179°	0.0
Monthly Avg.	33	18	26	59	15	31	58	16	31	57	16	31	27	9	17	10.1	2.0	149°	
Monthly Total																			0.3
YTD [†] Avg.	26	13	19	48	10	22	52	10	23	52	10	24	39	14	25	9.4	2.2	101°	
YTD [†] Total																			46.7

[†] Year To Date

Note:



Latitude 25° 34' North, Longitude 80° 28' West, Elevation 2 (m)

Miami, Florida

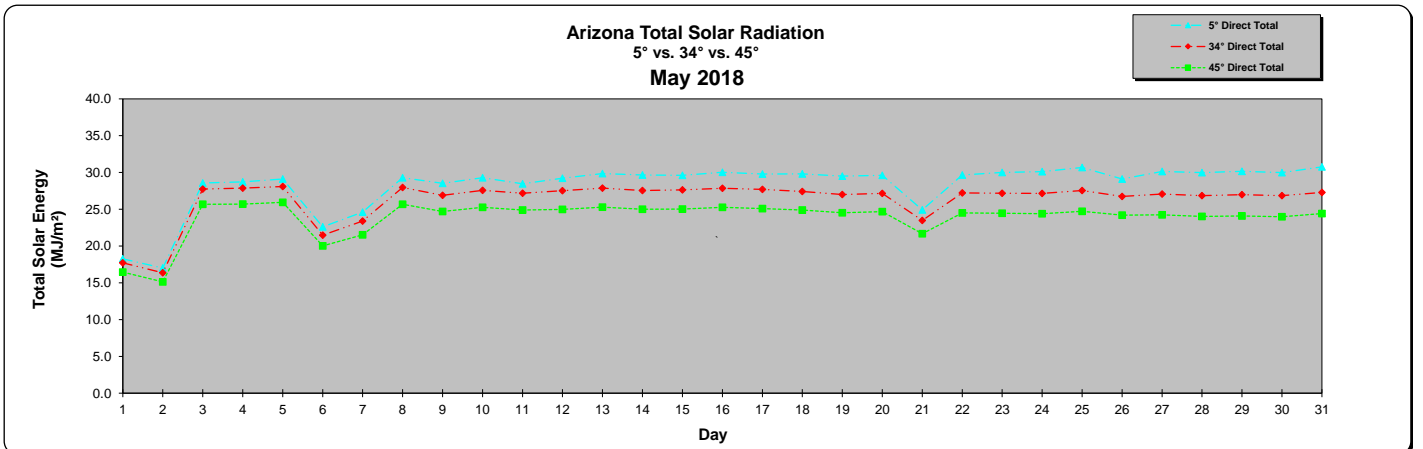
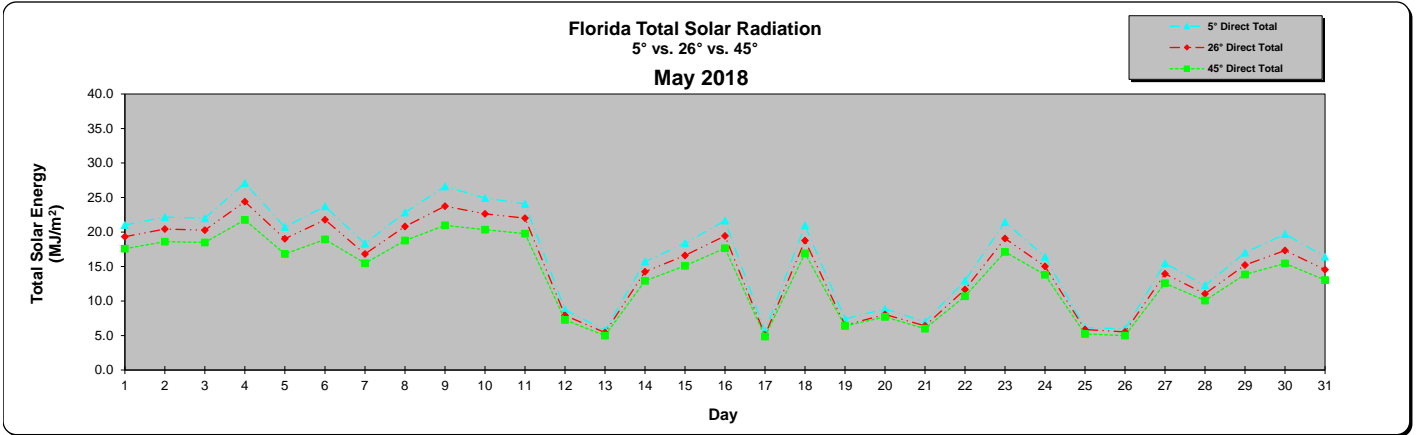
Latitude 33° 54' North, Longitude 112° 08' West, Elevation 610 (m)

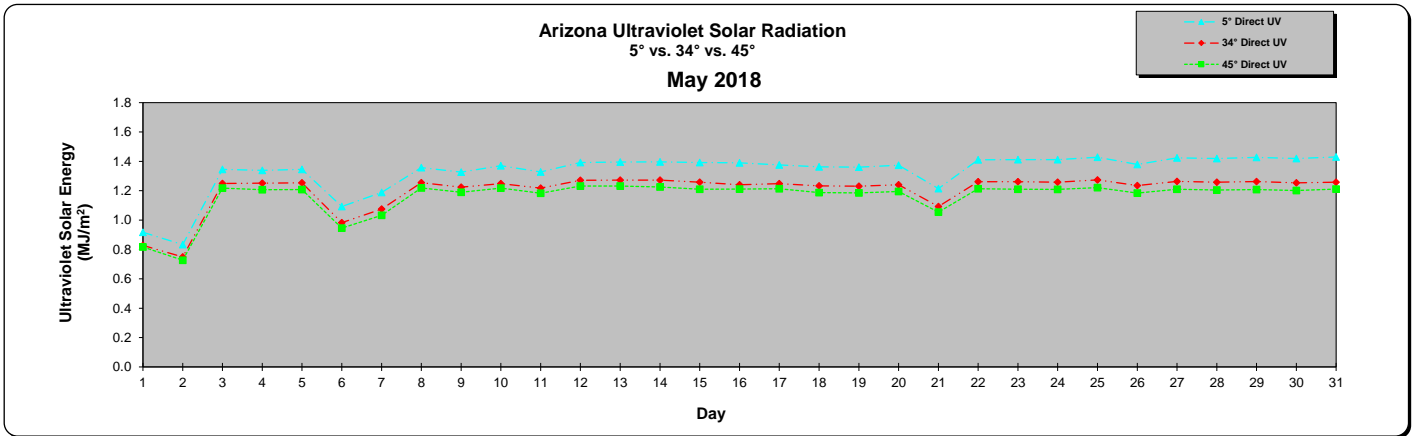
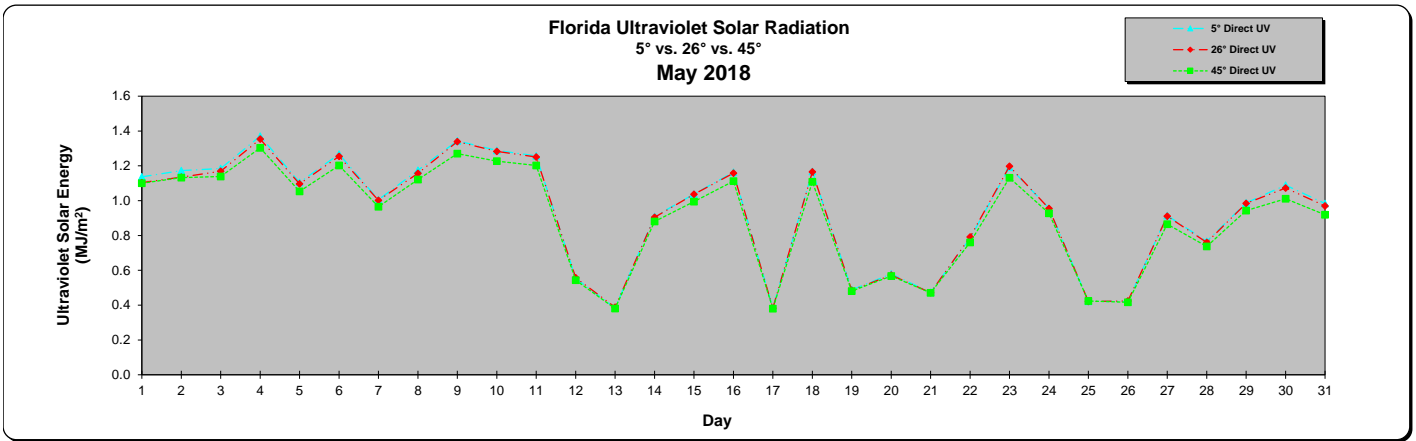
Solar Radiation Summary														
Month	Total Solar Radiation (MJ/m2)						Ultraviolet Solar Radiation (MJ/m ²)						EMMAQUA™	
May	Direct			Underglass			Direct			Underglass			Total	UV
Day	5°	26°	45°	5°	26°	45°	5°	26°	45°	5°	26°	45°		
1	21.0	19.3	17.6	16.8	16.9	14.2	1.14	1.10	1.10	0.74	0.64	0.55		
2	22.2	20.4	18.6	18.0	18.0	15.2	1.17	1.14	1.13	0.76	0.67	0.57		
3	22.0	20.3	18.5	17.5	17.5	15.0	1.18	1.17	1.14	0.76	0.67	0.57		
4	27.1	24.4	21.8	21.4	21.4	17.8	1.37	1.35	1.30	0.89	0.78	0.66		
5	20.7	19.0	16.8	16.1	16.1	13.5	1.10	1.10	1.05	0.73	0.63	0.53		
6	23.7	21.8	18.9	18.7	18.4	15.3	1.27	1.25	1.20	0.83	0.71	0.61		
7	18.3	16.8	15.5	14.8	14.8	12.6	1.01	1.00	0.96	0.66	0.57	0.49		
8	22.8	20.8	18.8	18.6	17.8	15.3	1.17	1.16	1.12	0.77	0.67	0.57		
9	26.6	23.7	21.0	21.2	20.1	17.0	1.34	1.34	1.27	0.89	0.77	0.64		
10	24.9	22.6	20.3	19.9	19.4	16.7	1.29	1.28	1.23	0.85	0.74	0.63		
11	24.1	22.0	19.8	19.5	18.8	16.0	1.26	1.25	1.20	0.82	0.72	0.61		
12	8.7	7.9	7.3	7.0	6.6	5.8	0.55	0.56	0.54	0.36	0.31	0.26		
13	5.8	5.4	5.0	4.7	3.6	3.8	0.38	0.39	0.38	0.26	0.22	0.19		
14	15.7	14.2	12.9	12.4	11.0	10.3	0.91	0.90	0.88	0.60	0.51	0.44		
15	18.4	16.6	15.1	14.9	13.4	12.0	1.04	1.04	0.99	0.68	0.58	0.50		
16	21.7	19.4	17.6	17.5	16.2	14.0	1.16	1.16	1.11	0.77	0.65	0.56		
17	5.7	5.1	4.8	4.7	3.6	3.9	0.38	0.38	0.38	0.26	0.22	0.19		
18	21.0	18.8	16.9	16.9	15.9	13.9	1.17	1.17	1.11	0.77	0.65	0.56		
19	7.4	6.5	6.4	6.0	5.2	5.1	0.49	0.49	0.48	0.32	0.28	0.25		
20	8.9	8.0	7.7	7.2	6.5	6.1	0.58	0.57	0.57	0.38	0.32	0.29		
21	7.0	6.4	6.0	5.7	4.9	4.8	0.47	0.47	0.47	0.31	0.26	0.23		
22	12.9	11.7	10.7	10.4	9.3	8.6	0.78	0.79	0.76	0.51	0.44	0.37		
23	21.5	19.1	17.1	17.2	16.0	13.9	1.19	1.20	1.13	0.78	0.66	0.56		
24	16.4	15.0	13.8	13.3	12.4	11.3	0.96	0.95	0.93	0.62	0.54	0.46		
25	6.2	5.9	5.2	5.1	4.0	4.4	0.42	0.42	0.42	0.28	0.24	0.21		
26	6.0	5.5	5.0	5.0	4.1	4.1	0.42	0.42	0.42	0.28	0.24	0.22		
27	15.5	13.9	12.6	12.6	11.6	10.4	0.91	0.91	0.87	0.59	0.50	0.44		
28	12.2	11.0	10.1	9.9	9.0	8.1	0.77	0.76	0.74	0.49	0.42	0.36		
29	17.0	15.2	13.8	13.8	12.3	11.1	0.99	0.98	0.94	0.64	0.54	0.46		
30	19.7	17.3	15.4	15.8	14.3	12.6	1.09	1.07	1.01	0.70	0.59	0.49		
31	16.4	14.5	13.0	16.8	16.9	14.2	0.98	0.97	0.92	0.63	0.54	0.45		
Monthly Total	517.3	468.8	424.0	419.3	395.8	347.4	28.96	28.75	27.76	18.95	16.29	13.89		
YTD [†] Total	2705.2	2886.3	2883.8	2269.7	2466.3	2388.9	139.27	145.81	150.36	94.05	88.85	82.47		

Solar Radiation Summary																				
Total Solar Radiation (MJ/m2)														EMMAQUA™						
Direct						Underglass						Ultraviolet Solar Radiation (MJ/m2)						Total	UV	
5°	34°	45°	5°	34°	45°	5°	34°	45°	5°	34°	45°	5°	34°	45°						
1	18.3	17.7	16.5	15.8	14.9	14.3	0.92	0.83	0.82	0.53	0.55	0.55	79	2.73						
2	17.0	16.4	15.1	14.4	13.6	13.1	0.83	0.75	0.73	0.49	0.50	0.50	0	0.00						
3	28.6	27.8	25.7	24.6	23.3	22.1	1.35	1.25	1.22	0.79	0.83	0.82	199	6.66						
4	28.7	27.9	25.7	24.9	23.4	22.2	1.34	1.25	1.21	0.78	0.82	0.82	192	6.53						
5	29.1	28.1	25.9	25.3	23.7	22.3	1.35	1.25	1.21	0.77	0.82	0.81	185	6.38						
6	22.6	21.5	20.0	19.4	17.9	17.1	1.09	0.98	0.95	0.62	0.63	0.63	0	0.00						
7	24.6	23.4	21.5	21.1	19.4	18.6	1.19	1.08	1.03	0.67	0.69	0.69	0	0.00						
8	29.3	28.0	25.7	25.4	23.4	22.0	1.36	1.26	1.22	0.78	0.82	0.81	209	7.14						
9	28.5	26.9	24.7	24.6	22.6	21.3	1.33	1.23	1.19	0.76	0.90	0.79	191	6.70						
10	29.3	27.6	25.3	25.4	23.2	21.8	1.37	1.25	1.22	0.79	0.92	0.81	207	7.23						
11	28.5	27.2	24.9	24.8	22.9	21.6	1.33	1.22	1.18	0.77	0.91	0.79	154	5.51						
12	29.2	27.5	25.0	25.2	22.9	21.5	1.39	1.27	1.23	0.80	0.94	0.82	191	6.95						
13	29.8	27.9	25.3	25.7	23.2	21.7	1.40	1.27	1.23	0.80	0.94	0.82	196	6.95						
14	29.7	27.5	25.0	25.7	23.1	21.6	1.40	1.27	1.23	0.80	0.94	0.82	206	7.25						
15	29.6	27.6	25.0	25.7	23.1	21.6	1.39	1.26	1.21	0.80	0.94	0.81	207	6.84						
16	30.0	27.9	25.3	26.0	23.3	21.6	1.39	1.24	1.21	0.80	0.94	0.81	209	7.20						
17	29.8	27.7	25.1	26.0	23.1	21.6	1.38	1.25	1.21	0.80	0.93	0.81	207	7.17						
18	29.8	27.4	24.9	25.7	23.0	21.3	1.36	1.23	1.19	0.79	0.92	0.79	199	6.80						
19	29.5	27.0	24.5	25.4	22.6	21.0	1.36	1.23	1.19	0.78	0.92	0.79	186	6.46						
20	29.6	27.2	24.7	25.5	22.8	21.2	1.37	1.24	1.20	0.79	0.92	0.79	187	6.57						
21	24.9	23.5	21.7	21.7	19.7	18.7	1.22	1.09	1.06	0.69	0.81	0.70	97	3.52						
22	29.7	27.2	24.5	25.9	22.8	21.1	1.41	1.26	1.21	0.81	0.94	0.81	206	7.18						
23	30.0	27.2	24.5	25.9	22.7	20.9	1.41	1.26	1.21	0.81	0.94	0.81	204	7.15						
24	30.1	27.2	24.4	26.1	22.5	20.9	1.41	1.26	1.21	0.81	0.94	0.80	207	7.32						
25	30.7	27.5	24.7	26.6	23.0	21.2	1.43	1.27	1.22	0.81	0.94	0.81	213	6.46						
26	29.1	26.8	24.2	25.3	22.4	20.9	1.38	1.24	1.18	0.79	0.92	0.79	169	6.19						
27	30.1	27.1	24.2	26.0	22.5	20.7	1.42	1.26	1.21	0.81	0.94	0.80	154	5.68						
28	30.0	26.9	24.0	25.9	22.3	20.5	1.42	1.26	1.21	0.80	0.92	0.79	0	0.00						
29	30.2	27.0	24.1	26.0	22.4	20.5	1.43	1.26	1.21	0.80	0.92	0.79	205	7.38						
30	30.0	26.8	24.0	26.0	22.3	20.4	1.42	1.25	1.20	0.81	0.93	0.79	202	7.28						
31	30.8	27.3	24.4	26.7	22.7	20.8	1.43	1.26	1.21	0.82	0.93	0.81	211	7.39						
Monthly Total	876.9	814.3	740.3	758.6	680.7	636.0	41.26	37.28	35.99	23.66	26.91	23.99	5072	176.57						
YTD [†] Total	3105.2	3628.2	3526.8	2612.5	2992.2	3091.8	141.84	143.80	142.97	82.59	97.95	98.69	17236	532.49						

[†] Year To Date

Note: Total Solar Radiation - (290-3000 nm) Ultraviolet Solar Radiation - (295-385 nm).

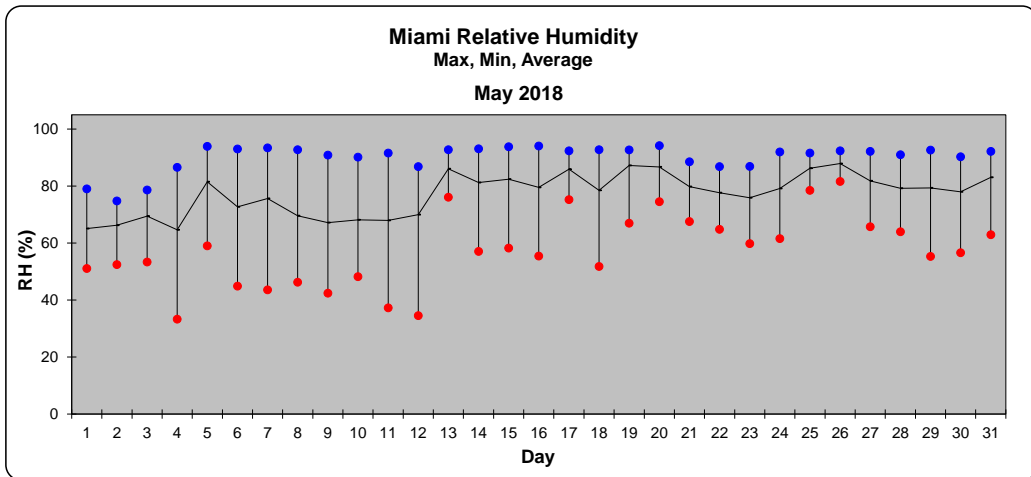
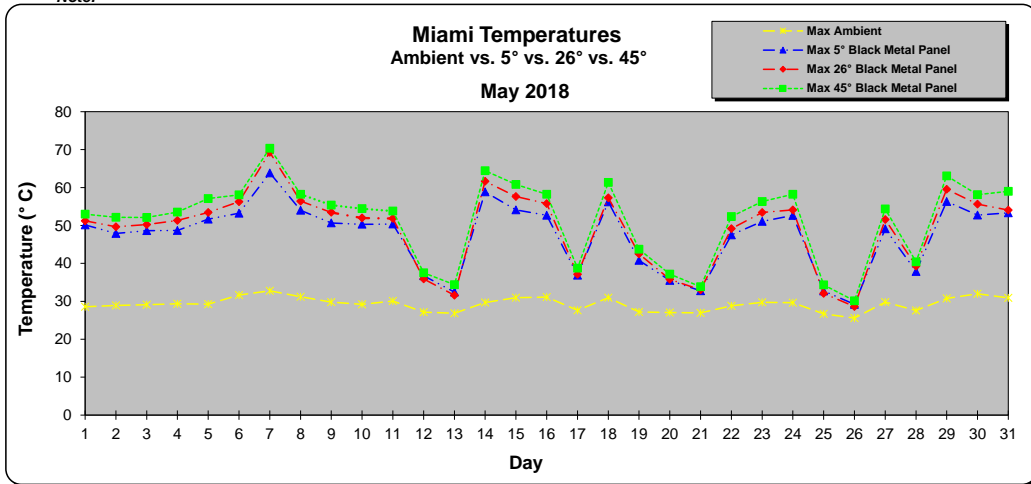




Latitude 25° 34' North, Longitude 80° 28' West, Elevation 2 (m)

Month	Temperature Summary												Climate Summary						
	Ambient Temperature			Black Metal Panel Temperature (ASTM G179) (° C)									Relative Humidity			Wind Speed		Wind Direction	Rainfall
Day	° C			5 °			26 °			45 °			%			m/sec		360°/0°=N	(mm)
	Max	Min	Avg.	Max	Min	Avg.	Max	Min	Avg.	Max	Min	Avg.	Max	Min	Avg.	Max	Avg.	Avg	Total
1	29	20	25	50	18	28	51	18	28	53	17	28	79	51	65	6.6	3.0	73°	0.0
2	29	24	26	48	22	29	50	22	29	52	22	30	75	52	66	6.9	3.9	75°	0.0
3	29	24	26	49	22	29	50	22	29	52	22	30	79	53	69	7.1	4.0	75°	0.0
4	29	22	26	49	21	30	51	21	30	54	21	31	87	33	65	6.9	3.1	79°	0.0
5	29	21	25	52	20	28	53	20	29	57	20	29	94	59	82	5.3	2.0	174°	8.4
6	32	22	26	53	20	30	56	20	31	58	20	31	93	45	73	5.7	1.7	167°	3.8
7	33	20	26	64	18	30	69	18	30	70	18	31	93	44	76	4.5	1.3	202°	7.6
8	31	22	26	54	20	30	56	20	30	58	20	31	93	46	70	5.7	2.0	221°	0.0
9	30	19	25	51	17	29	53	17	30	55	17	30	91	42	67	5.8	2.2	216°	0.0
10	29	19	25	50	16	29	52	16	29	54	16	30	90	48	68	5.3	2.1	226°	0.0
11	30	20	26	50	18	29	52	18	30	54	18	30	92	37	68	5.1	2.0	233°	0.0
12	27	23	25	37	21	26	36	21	26	38	21	26	87	35	70	5.3	1.7	225°	0.3
13	27	22	24	32	20	25	32	20	24	34	20	25	93	76	86	5.3	1.4	243°	7.9
14	30	22	25	59	20	28	62	20	28	64	20	29	93	57	81	5.9	1.8	261°	10.2
15	31	21	25	54	20	28	58	20	28	61	20	29	94	58	82	5.4	1.9	275°	7.1
16	31	21	26	53	20	29	56	20	30	58	19	30	94	55	80	5.9	1.8	279°	0.3
17	28	22	24	37	21	25	37	21	25	39	21	25	92	75	86	5.4	0.9	260°	24.6
18	31	22	26	56	20	29	57	20	30	61	20	30	93	52	79	4.9	1.6	244°	0.0
19	27	21	24	41	20	24	43	20	24	44	20	24	93	67	87	5.5	1.7	255°	19.1
20	27	22	24	36	21	25	36	21	25	37	21	25	94	75	87	5.3	2.2	275°	63.8
21	27	24	26	33	23	26	33	23	26	34	23	26	89	68	80	5.7	2.6	284°	1.0
22	29	24	26	48	23	28	49	23	28	52	23	28	87	65	78	6.4	2.8	282°	0.0
23	30	24	26	51	22	30	53	22	30	56	21	31	87	60	76	5.6	2.2	274°	0.0
24	30	23	26	53	22	29	54	21	29	58	21	30	92	62	79	5.2	1.7	265°	0.8
25	27	22	25	33	21	25	32	22	25	34	22	25	92	79	86	6.7	1.5	268°	21.1
26	26	22	24	29	21	24	29	21	23	30	21	24	92	82	88	6.5	2.7	268°	25.9
27	30	23	26	49	23	28	52	22	28	54	22	29	92	66	82	8.3	3.9	317°	16.8
28	28	23	25	38	22	27	39	22	27	40	22	28	91	64	79	6.2	2.8	304°	2.0
29	31	23	26	56	22	30	60	22	30	63	22	31	93	55	79	4.7	1.6	272°	9.4
30	32	26	28	53	24	31	56	24	32	58	24	32	90	57	78	4.9	2.2	292°	0.0
31	31	24	26	53	22	29	54	22	29	59	22	30	92	63	83	5.0	1.4	251°	0.0
Monthly Avg.	29	22	25	47	21	28	49	21	28	51	20	29	90	57	77	5.9	2.2	230°	
Monthly Total																			229.9
YTD [†] Avg.	28	18	22	50	16	25	53	16	26	53	15	26	91	49	73	5.7	2.1	165°	
YTD [†] Total																			398.3

[†] Year To Date
Note:

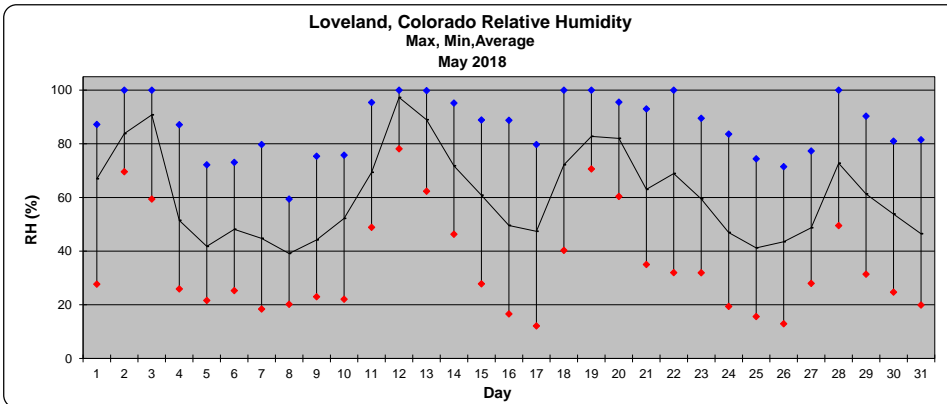
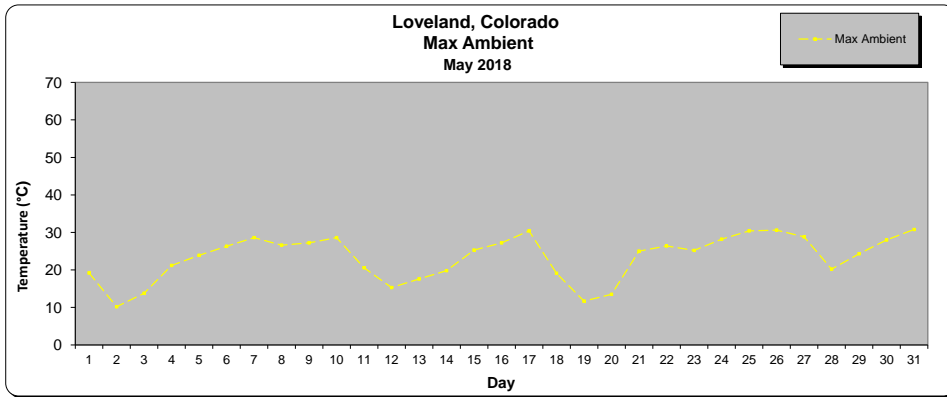


Weather Summary May 2018 Loveland, Colorado

Latitude 40° 25' North Longitude 104° 59' West Elevation 1527 (m).

AWSG	Temperature Summary						Climate Summary		
Month	Ambient Temperature			Relative Humidity			Wind Speed		Wind Direction
May	(^ C)			(%)			(m/s)		360°/0° = N
Day	Max	Min	Avg	Max	Min	Avg	Max	Avg	Avg
1	19	7	11	87	28	67	11.4	2.4	114
2	10	6	8	100	70	84	6.9	2.9	202
3	14	3	7	100	59	91	9.5	4.8	266
4	21	6	14	87	26	51	5.3	1.7	184
5	24	8	17	72	22	42	7.1	1.5	188
6	26	9	18	73	25	48	4.1	1.9	190
7	29	10	19	80	18	45	5	2.0	200
8	27	13	20	59	20	39	7.8	2.8	194
9	27	10	19	75	23	44	6.1	2.3	170
10	29	11	19	76	22	52	9.9	3.6	164
11	21	9	15	95	49	69	8.4	3.5	143
12	15	9	11	100	78	97	5.7	2.8	111
13	18	10	12	100	62	89	6.1	2.0	125
14	20	11	14	95	46	72	10.3	2.0	156
15	25	7	16	89	28	61	6.5	1.8	157
16	27	11	20	89	17	50	5.5	1.9	160
17	30	12	21	80	12	47	10.8	2.5	182
18	19	9	15	100	40	72	15.8	3.5	148
19	12	7	10	100	71	83	9.8	4.4	111
20	14	6	9	96	60	82	5	2.1	135
21	25	6	16	93	35	63	4.7	1.9	156
22	26	12	17	100	32	69	7.7	3.0	153
23	25	10	18	90	32	59	7.6	2.1	159
24	28	11	20	84	19	47	11	2.0	196
25	30	11	22	74	16	41	3.7	1.6	142
26	31	13	23	72	13	44	4.2	1.8	185
27	29	16	21	77	28	49	13.7	3.7	125
28	20	9	16	100	50	73	15	2.7	167
29	24	11	17	90	31	61	6.1	1.9	156
30	28	11	19	81	25	54	6.4	1.7	138
31	31	12	22	82	20	46	8.7	2.7	160°
Monthly Avg.	23	9	16	87	35	61	7.9	2.5	162°
YTD[†] Avg.	14	-1	6	77	30	53	8.4	2.9	167°

[†] Year To Date
Note:





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Solar Radiation Summary May 2018 Loveland, Colorado

Latitude 40° 25' North Longitude 104° 59' West Elevation 1527 (m).

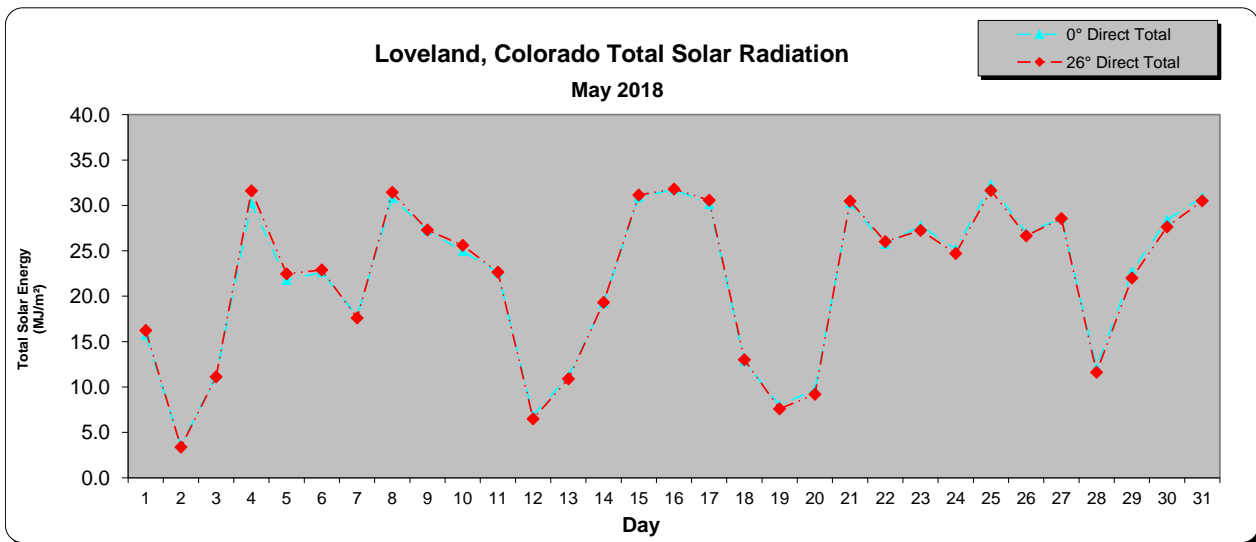


AWSG	Radiation	
Month	Total Solar	
May	Direct	
Day	0°	26°
1	15.7	16.2
2	3.6	3.4
3	11.2	11.1
4	30.2	31.6
5	21.8	22.5
6	22.6	22.9
7	17.8	17.6
8	30.8	31.5
9	27.3	27.3
10	25.0	25.6
11	22.6	22.6
12	6.9	6.5
13	11.2	10.9
14	19.2	19.3
15	30.9	31.1
16	31.8	31.8
17	30.1	30.6
18	12.8	13.0
19	8.0	7.6
20	9.7	9.2
21	30.2	30.5
22	25.7	26.0
23	27.8	27.3
24	25.2	24.7
25	32.3	31.6
26	27.0	26.6
27	28.6	28.6
28	12.2	11.6
29	22.7	22.0
30	28.4	27.6
31	30.9	30.5
Monthly Total	680.3	679.4
YTD[†] Total	2510.3	2920.8

[†] Year To Date

Note:

*No data available





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Weather Summary May 2018

WEATHERING SERVICES GROUP

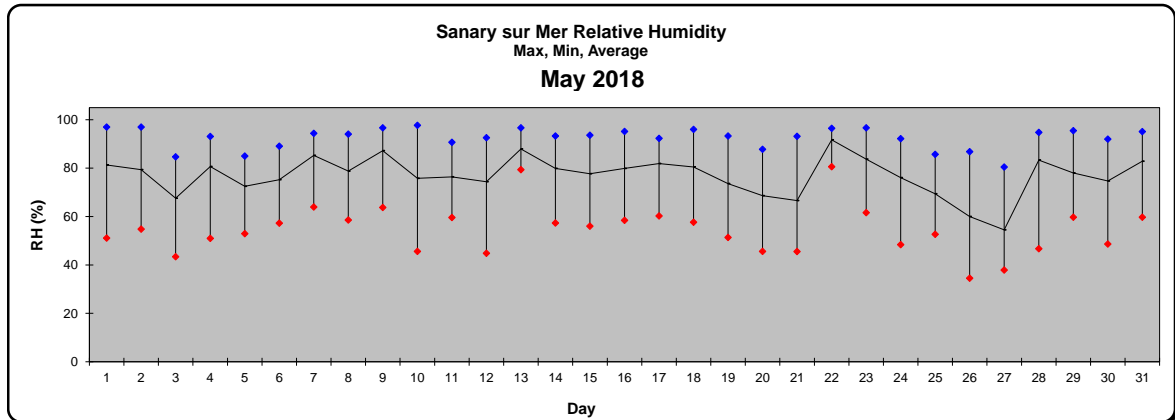
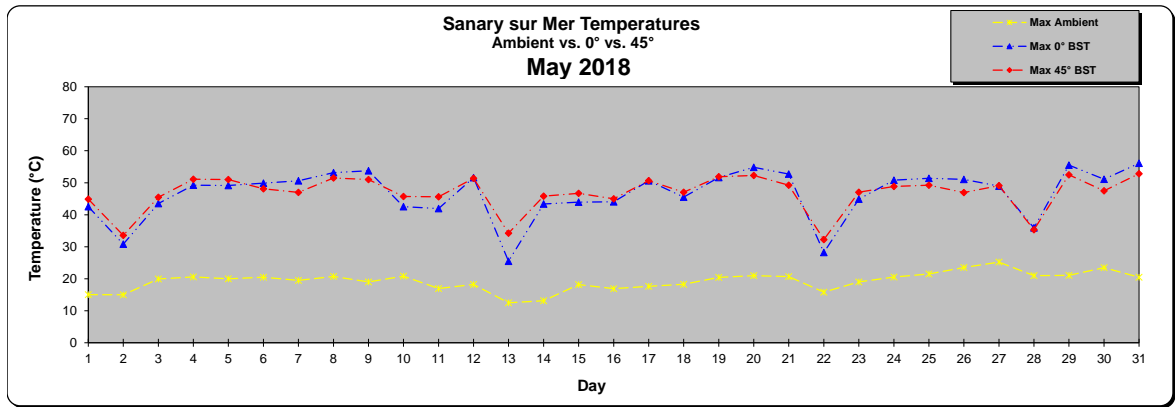
Latitude 43° 08' North, Longitude 05° 49' East, Elevation 110 (m)

Sanary sur Mer, France

Month	Temperature Summary																		Climate Summary										
	Ambient Temperature			Black Standard Temperature BST (°C)						Black Panel Temperature BPT (°C)						Black Metal Panel Temperature (ASTM G179) (°C)						Relative Humidity			Wind Speed		Wind Direction	Rainfall	
	°C			0°			45°			0°			45°			0°			45°			%		(m/s)		360°/0°=N	(mm)		
Day	Max	Min	Avg	Max	Min	Avg	Max	Min	Avg	Max	Min	Avg	Max	Min	Avg	Max	Min	Avg	Max	Min	Avg	Max	Min	Avg	Max	Avg	Avg	Total	
1	15	6	10	43	8	16	45	8	17	40	7	16	41	5	14	46	7	16	50	8	17	97	51	81	5.3	0.9	56°	13.0	
2	15	6	11	31	10	16	34	10	17	29	9	16	29	7	15	34	9	17	35	10	17	97	55	79	3.8	0.6	336°	0.3	
3	20	8	14	44	9	21	45	9	21	39	8	20	38	7	19	46	8	21	48	9	21	85	43	68	5.2	0.6	343°	0.0	
4	21	11	14	49	13	19	51	13	20	46	12	19	47	12	18	50	13	20	53	13	20	93	51	81	5.2	0.5	353°	6.1	
5	20	12	15	49	13	22	51	14	23	43	13	21	44	12	20	49	14	22	52	14	22	85	53	73	4.2	0.6	348°	0.0	
6	20	12	16	50	14	22	48	15	22	43	14	22	43	13	20	50	14	22	52	14	22	89	57	75	2.6	0.5	315°	0.0	
7	20	12	15	51	13	21	47	14	22	43	13	20	43	12	20	47	13	21	48	14	22	94	64	85	3.2	0.5	60°	0.5	
8	21	11	15	53	13	25	52	13	25	44	13	23	44	12	22	51	13	25	52	13	25	94	59	79	4.7	0.9	286°	0.0	
9	19	10	14	54	12	20	51	12	21	44	12	19	45	10	18	52	12	20	54	12	20	97	64	87	4.2	0.5	20°	5.3	
10	21	10	15	43	11	22	46	11	24	40	10	21	40	9	21	45	11	23	47	11	23	98	46	76	6.7	1.0	309°	0.0	
11	17	9	13	42	10	23	46	10	24	38	10	21	40	8	20	44	10	23	47	10	23	91	60	76	4.6	0.9	274°	0.0	
12	18	11	14	52	12	25	51	13	25	44	12	23	46	11	22	49	12	24	52	12	25	93	45	74	5.0	0.8	91°	0.0	
13	13	4	8	25	7	12	34	7	13	28	7	12	27	5	10	35	7	13	37	7	13	97	79	88	7.1	1.2	262°	22.9	
14	13	4	8	43	6	15	46	6	16	37	6	14	36	4	13	45	6	16	47	6	16	93	57	80	6.7	1.3	276°	4.1	
15	18	5	12	44	7	19	47	7	19	40	6	17	40	5	16	48	6	19	50	7	19	94	56	78	5.9	1.0	285°	0.0	
16	17	8	12	44	10	19	45	10	19	42	9	18	41	8	17	49	10	19	50	10	19	95	58	80	4.1	0.8	310°	0.0	
17	18	9	13	51	10	21	51	11	21	45	10	20	44	9	19	52	10	20	52	10	20	92	60	82	4.6	0.8	63°	0.0	
18	18	9	14	46	10	21	47	11	22	40	10	20	40	10	19	48	10	22	49	11	22	96	58	81	3.9	0.7	286°	0.0	
19	20	10	15	52	11	26	52	12	26	47	11	25	48	10	23	50	11	26	53	11	26	93	51	74	4.0	0.6	63°	0.0	
20	21	11	16	55	12	27	52	12	26	47	11	25	48	10	23	52	11	26	54	12	26	88	46	69	4.8	0.8	17°	0.0	
21	21	12	16	53	13	23	49	13	23	44	12	22	45	11	21	48	12	23	49	13	23	93	46	67	7.6	1.1	69°	8.6	
22	16	11	13	28	14	17	32	14	18	29	14	17	29	13	17	38	14	18	37	14	18	97	81	92	3.5	0.3	306°	6.9	
23	19	10	15	45	12	24	47	12	25	40	11	23	41	11	22	47	12	24	48	12	24	97	62	84	4.5	0.9	266°	0.0	
24	21	10	16	51	11	24	49	12	25	42	11	23	43	9	21	49	11	24	50	12	24	92	48	76	4.3	1.0	286°	0.0	
25	21	11	17	51	12	27	49	12	27	47	11	25	45	10	24	50	12	26	51	12	26	86	53	69	3.9	0.8	289°	0.0	
26	24	13	18	51	14	26	47	15	26	47	14	25	48	13	24	52	14	25	53	14	25	87	35	60	6.2	0.9	76°	0.0	
27	25	18	21	49	19	28	49	19	28	43	19	27	42	17	26	48	19	27	49	19	27	81	38	55	9.0	1.7	90°	0.0	
28	21	13	16	36	14	21	35	15	21	37	14	21	36	13	20	40	14	21	40	15	21	95	47	83	6.8	1.5	95°	0.0	
29	21	12	17	56	13	28	53	14	27	46	13	26	47	12	25	52	13	27	53	13	27	96	60	78	5.1	0.9	88°	0.0	
30	23	14	18	51	16	25	47	16	25	48	16	24	45	13	22	52	16	24	52	16	25	92	49	75	6.4	0.8	88°	0.0	
31	20	13	16	56	15	25	53	15	25	47	14	23	46	12	22	54	15	25	55	15	25	95	60	83	4.2	0.8	237°	1.0	
Monthly Avg.	19	10	14	47	12	22	47	12	22	42	11	21	42	10	20	47	12	22	49	12	22	93	54	77	5.1	0.8	201°		
Monthly Total																													68.6
YTD [†] Avg.	14	5	9	33	6	15	39	7	16	30	6	14	34	5	14	34	6	15	39	6	16	88	51	72	6.6	1.4	167°	463.3	
YTD [†] Total																													

[†] Year To Date

Note: *No data available



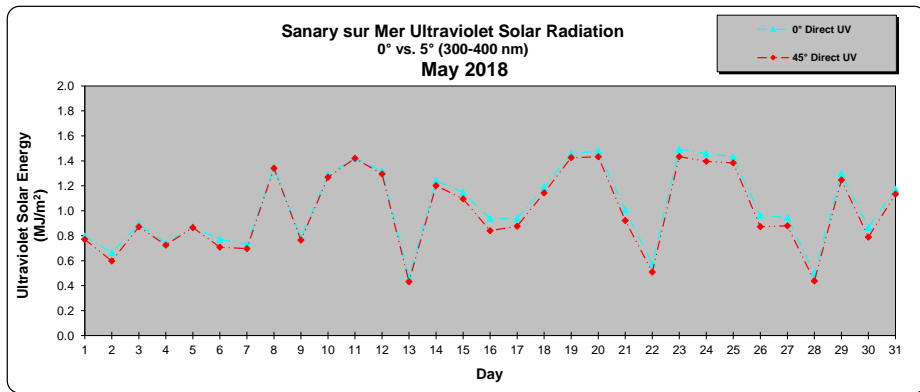
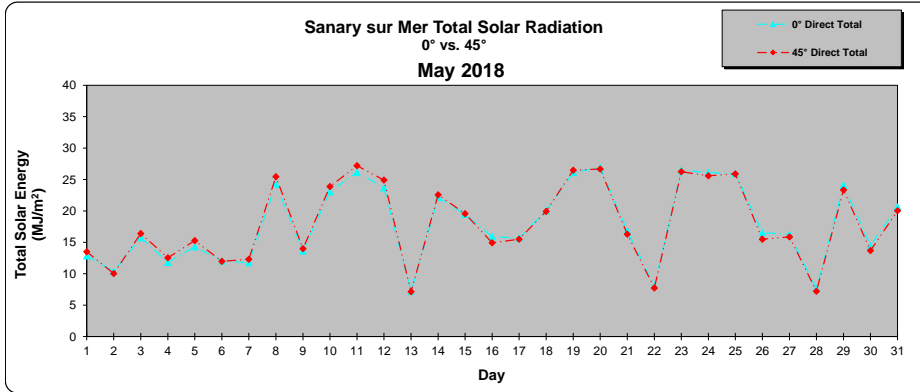
**Solar Radiation Summary
May 2018**

Sanary sur Mer, France

Latitude 43° 08' North, Longitude 05° 49' East, Elevation 110 (m)

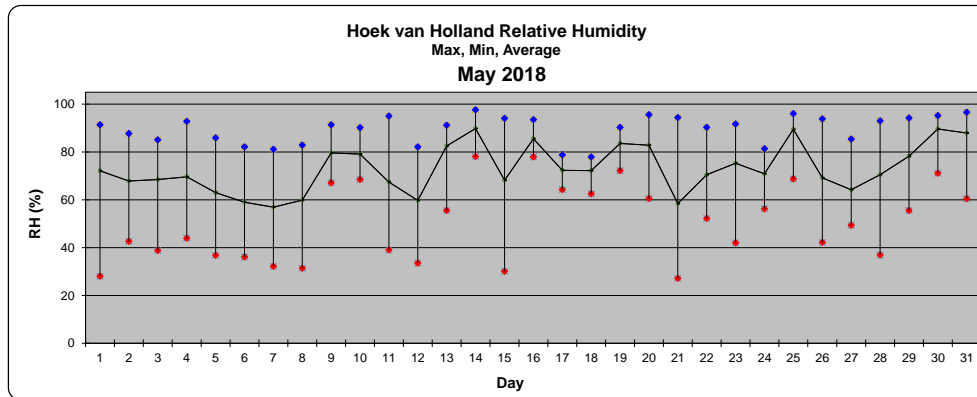
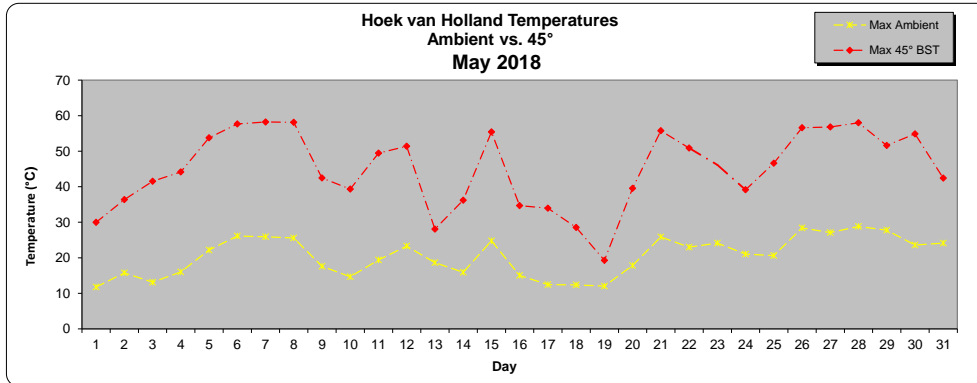
AWSG	Solar Radiation Summary						
	Month	Total Solar Radiation (MJ/m ²)		Ultraviolet Solar Radiation (MJ/m ²)			
		Direct		295-385 nm		300-400 nm	
Day	0°	45°	0°	45°	0°	45°	
1	12.9	13.5	0.61	0.59	0.80	0.77	
2	10.4	10.0	0.51	0.46	0.66	0.60	
3	15.7	16.4	0.68	0.67	0.89	0.87	
4	11.8	12.5	0.56	0.55	0.74	0.73	
5	14.3	15.3	0.67	0.66	0.88	0.87	
6	12.0	12.0	0.59	0.54	0.77	0.71	
7	11.8	12.3	0.56	0.53	0.73	0.70	
8	24.3	25.4	1.03	1.02	1.34	1.34	
9	13.6	14.0	0.60	0.59	0.79	0.77	
10	23.1	23.9	0.99	0.97	1.29	1.27	
11	26.2	27.2	1.09	1.08	1.42	1.42	
12	23.7	24.9	1.01	0.99	1.32	1.29	
13	7.2	7.1	0.36	0.33	0.47	0.43	
14	22.1	22.6	0.95	0.92	1.24	1.20	
15	19.5	19.6	0.87	0.84	1.15	1.10	
16	15.9	14.9	0.72	0.64	0.94	0.84	
17	15.7	15.5	0.71	0.67	0.94	0.88	
18	20.0	19.9	0.91	0.87	1.19	1.14	
19	26.1	26.5	1.11	1.09	1.46	1.43	
20	26.9	26.7	1.13	1.09	1.48	1.43	
21	16.9	16.3	0.77	0.70	1.01	0.92	
22	8.1	7.7	0.44	0.39	0.57	0.51	
23	26.5	26.3	1.14	1.10	1.49	1.43	
24	26.1	25.6	1.11	1.07	1.46	1.40	
25	25.9	25.9	1.09	1.06	1.43	1.38	
26	16.5	15.5	0.73	0.67	0.96	0.87	
27	16.3	15.9	0.72	0.67	0.95	0.88	
28	7.6	7.2	0.38	0.33	0.50	0.44	
29	24.1	23.3	0.99	0.95	1.30	1.25	
30	14.5	13.7	0.66	0.60	0.87	0.79	
31	20.7	20.0	0.89	0.87	1.17	1.13	
Monthly Total	556.1	557.6	24.56	23.50	32.20	30.77	
YTD¹ Total	1824.4	2415.0	74.81	81.81	98.00	107.10	

¹ Year To Date Total Solar Radiation - (290-3000 nm) Ultraviolet Solar Radiation - (295-385 nm) or (300-400 nm).
Note: * No data available



Month	Temperature Summary						Climate Summary						
	Ambient Temperature			Black Metal Panel Temperature (ASTM G179) (°C)			Relative Humidity			Wind Speed		Wind Direction	Rainfall
May	(°C)			45 °			(%)			(m/s)		360°/0° = N	(mm)
Day	Max	Min	Avg	Max	Min	Avg	Max	Min	Avg	Max	Avg	Avg	Total
1	12	6	9	30	5	13	91	28	72	19.5	7.6	247°	14.2
2	16	8	11	36	6	15	88	43	68	14.3	5.8	184°	0.6
3	13	7	11	42	2	18	85	39	68	6.3	2.7	311°	0.0
4	16	4	11	44	1	17	93	44	70	7.5	1.9	358°	0.0
5	22	7	15	54	3	22	86	37	63	7.0	1.9	52°	0.0
6	26	9	18	58	5	26	82	36	59	5.8	1.0	71°	0.0
7	26	12	19	58	8	27	81	32	57	4.8	0.8	87°	0.0
8	26	12	19	58	8	26	83	31	60	4.8	1.3	60°	0.0
9	18	12	15	42	9	21	91	67	80	7.8	2.4	314°	0.0
10	15	9	12	39	5	16	90	69	79	11.3	4.0	287°	0.0
11	19	6	13	49	3	21	95	39	67	4.5	1.0	97°	0.0
12	23	12	18	51	9	23	82	34	60	4.5	0.8	99°	0.0
13	19	12	13	28	11	16	91	56	83	9.8	3.8	296°	0.0
14	16	10	12	36	10	17	98	78	90	10.8	5.0	347°	0.0
15	25	12	17	55	10	24	94	30	68	8.8	3.3	8°	0.0
16	15	10	13	35	10	15	94	78	86	15.5	6.0	1°	0.0
17	12	9	10	34	7	15	79	64	72	11.5	5.6	358°	0.0
18	12	8	10	29	7	12	78	63	72	7.8	3.7	349°	0.0
19	12	9	10	19	8	12	90	72	84	6.0	2.4	342°	0.0
20	18	9	13	40	5	20	96	61	83	8.8	2.7	9°	0.0
21	26	11	19	56	7	23	94	27	58	7.3	1.3	57°	0.0
22	23	15	18	51	13	24	90	52	71	8.5	2.3	19°	3.4
23	24	15	18	46	12	22	92	42	75	7.5	2.3	19°	2.0
24	21	15	18	39	13	20	81	56	71	7.0	2.0	53°	0.8
25	21	13	16	47	12	23	96	69	90	7.0	2.0	331°	2.6
26	28	13	22	57	12	29	94	42	69	6.5	1.3	57°	0.0
27	27	18	22	57	15	26	85	49	64	7.5	1.2	69°	0.0
28	29	17	22	58	15	29	93	37	71	7.8	1.7	50°	0.0
29	28	17	21	52	16	26	94	56	78	7.5	2.7	2°	22.8
30	24	16	18	55	14	24	95	71	90	6.3	2.2	236°	0.2
31	24	15	18	42	14	22	97	60	88	12.0	2.0	340°	20.4
Monthly Avg.	20	11	16	45	9	21	90	51	73	8.4	2.7	165°	
Monthly Total													67.0
YTD [†] Ava.	11	5	8	29	3	10	91	62	79	10.2	3.7	167°	
YTD [†] Total													311.8

[†] Year To Date For Pollution (SO2, NOx, O3) visit www.lml.rivm.nl
Note: * = Data Unavailable





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North Sea Corrosion Test Centre

Solar Radiation Summary

May 2018

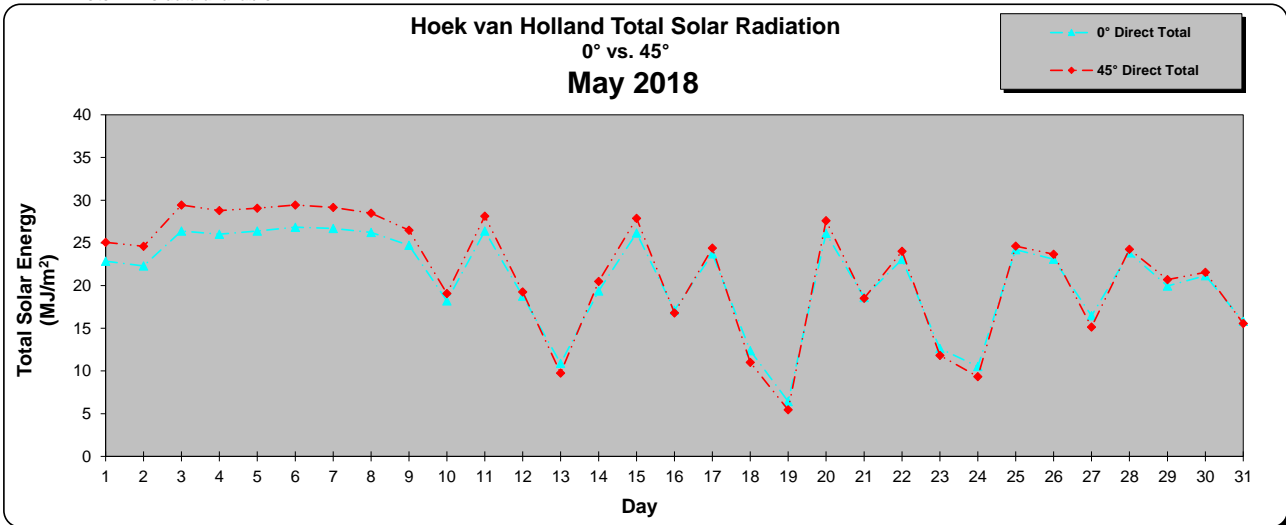
Hoek van Holland, The Netherlands

Latitude 51° 57' North, Longitude 04° 10' East Elevation 6 (m)

AWSG	Solar Radiation Summary	
Month	Total Solar Radiation (MJ/m ²)	
May	Direct	
Day	0°	45°
1	22.9	25.1
2	22.3	24.6
3	26.4	29.4
4	26.0	28.8
5	26.4	29.1
6	26.8	29.4
7	26.7	29.2
8	26.2	28.5
9	24.7	26.5
10	18.2	19.1
11	26.4	28.1
12	18.8	19.3
13	10.9	9.8
14	19.4	20.5
15	26.2	27.9
16	17.1	16.8
17	23.7	24.4
18	12.4	11.0
19	6.4	5.4
20	26.1	27.6
21	18.6	18.5
22	23.1	24.0
23	12.6	11.8
24	10.5	9.3
25	24.2	24.6
26	23.1	23.7
27	16.5	15.2
28	23.8	24.3
29	20.0	20.7
30	21.2	21.6
31	15.8	15.6
Monthly Total	643.4	669.6
YTD[†] Total	1677.9	2007.7

[†] Year To Date Total Solar Radiation - (390-3000nm)

Note: * No data available





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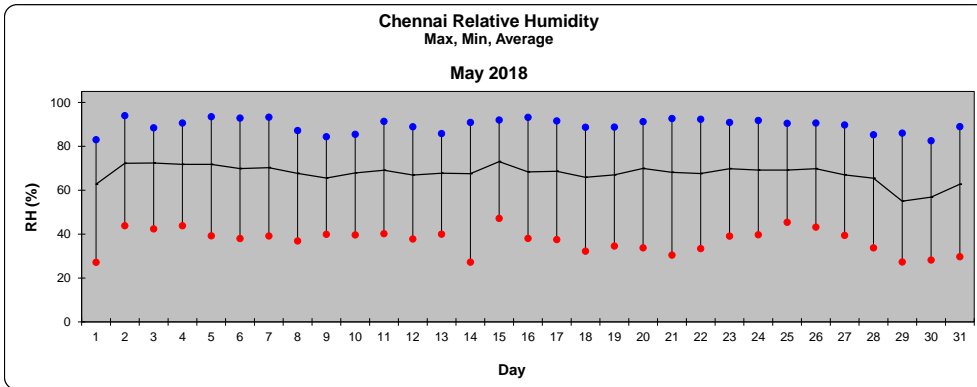
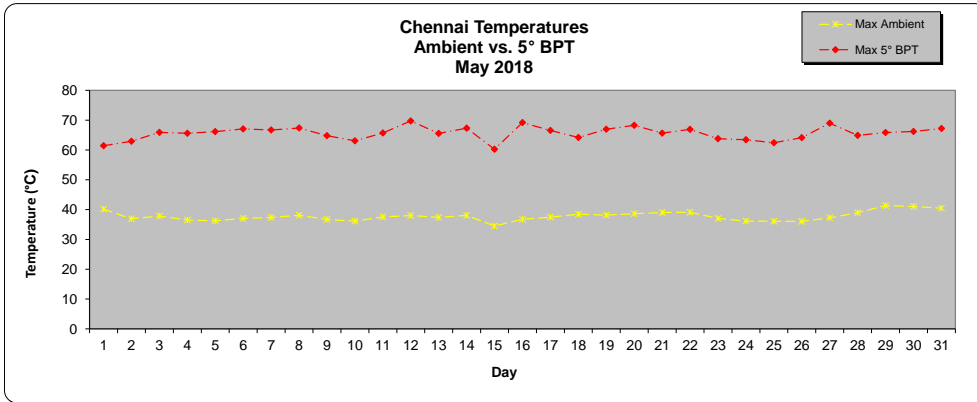
Weather Summary May 2018 Chennai, India

Latitude 12° 35' North, Longitude 79° 48' East Elevation 45 (m)

Month	Temperature Summary						Climate Summary						
	Ambient Temperature			Black Metal Panel Temperature (ASTM G179) (°C)			Relative Humidity			Wind Speed		Wind Direction	Rainfall
May	°C			5°			%			(m/s)		360°/0° = N	(mm)
Day	Max	Min	Avg	Max	Min	Avg	Max	Min	Avg	Max	Avg	Avg	Total
1	40	28	32	61	26	38	83	27	63	4.8	1.1	147°	0.0
2	37	22	30	63	21	35	94	44	72	7.2	1.1	117°	82.0
3	38	26	31	66	25	37	88	42	72	7.5	1.0	107°	0.0
4	36	25	29	66	23	34	91	44	72	5.4	0.8	126°	0.0
5	36	26	30	66	25	36	94	39	72	3.9	0.7	108°	0.0
6	37	26	31	67	24	36	93	38	70	8.0	0.8	144°	0.0
7	37	26	31	67	25	36	93	39	70	7.2	0.8	114°	0.0
8	38	27	31	67	25	37	87	37	68	5.2	0.8	135°	0.0
9	37	26	31	65	25	36	84	40	66	6.5	0.9	130°	0.0
10	36	26	30	63	24	35	86	40	68	5.1	0.8	121°	0.0
11	38	26	31	66	25	37	91	40	69	7.6	0.9	122°	0.0
12	38	27	31	70	25	37	89	38	67	4.7	0.9	121°	0.0
13	37	27	31	66	25	37	86	40	68	5.0	0.9	122°	0.0
14	38	26	31	67	25	37	91	27	68	4.0	0.9	109°	0.0
15	35	26	30	60	24	32	92	47	73	4.3	0.6	98°	0.0
16	37	25	30	69	24	36	93	38	68	4.1	0.8	119°	0.0
17	37	26	31	67	25	36	92	37	69	7.5	0.8	112°	0.0
18	38	25	31	64	24	37	89	32	66	4.7	0.8	111°	0.0
19	38	27	31	67	25	36	89	35	67	4.4	0.8	117°	0.0
20	39	27	31	68	25	37	91	34	70	6.7	0.9	115°	0.0
21	39	27	32	66	25	37	93	30	68	4.8	0.9	103°	0.0
22	39	26	31	67	25	37	92	33	68	6.6	0.9	81°	0.0
23	37	26	31	64	25	36	91	39	70	6.6	0.8	111°	0.0
24	36	26	31	63	25	35	92	40	69	4.1	0.8	63°	0.0
25	36	27	30	62	25	35	91	45	69	6.5	0.8	97°	0.0
26	36	26	30	64	24	35	91	43	70	5.8	0.9	93°	0.0
27	37	26	31	69	25	36	90	39	67	4.4	0.9	121°	0.0
28	39	27	32	65	26	37	85	34	65	5.4	1.0	128°	0.0
29	41	27	34	66	25	39	86	27	55	4.4	0.9	153°	0.0
30	41	28	33	66	26	38	83	28	57	4.5	1.0	100°	0.0
31	40	28	32	67	26	37	89	30	63	6.8	0.9	266°	0.0
Monthly Avg.	38	26	31	66	25	36	90	37	68	5.6	0.9	120°	
Monthly Total													82.0
YTD [†] Avg.	34	22	27	60	20	32	93	36	72	4.7	0.8	106°	
YTD [†] Total													121.6

[†] Year To Date

Note: * Data Unavailable





ATLAS

WEATHERING SERVICES GROUP

AMETEK
MEASUREMENT, COMMUNICATIONS
& TESTING

Solar Radiation Summary May 2018

Chennai, India

Latitude 12° 35' North, Longitude 79° 48' East Elevation 45 (m)

AWSG Solar Radiation Summary			
Month	Total Solar Radiation (MJ/m ²)	Ultraviolet Solar Radiation (MJ/m ²)	
May	Direct	295-385 nm	300-400 nm
Day	5°	5°	
1	22.9	1.09	1.43
2	21.4	1.07	1.40
3	23.3	1.16	1.52
4	19.0	1.02	1.33
5	25.3	1.29	1.68
6	23.2	1.22	1.60
7	19.5	1.04	1.36
8	23.1	1.21	1.59
9	24.7	1.30	1.70
10	21.9	1.23	1.61
11	24.7	1.28	1.68
12	23.9	1.22	1.60
13	23.9	1.22	1.60
14	25.0	1.28	1.68
15	12.8	0.74	0.97
16	24.2	1.29	1.69
17	20.4	1.09	1.43
18	20.8	1.05	1.38
19	21.1	1.03	1.34
20	22.9	1.10	1.44
21	22.8	1.11	1.45
22	23.0	1.16	1.51
23	21.2	1.06	1.38
24	18.2	0.98	1.28
25	18.1	1.05	1.38
26	21.2	1.19	1.55
27	21.9	1.17	1.53
28	23.3	1.25	1.64
29	24.5	1.28	1.68
30	22.4	1.16	1.52
31	19.0	0.96	1.25
Monthly Total	679.7	35.25	46.18
YTD¹ Total	3160.5	167.14	219.02

¹ Year To Date Total Solar Radiation - (290-3000nm)

Note:

