



DIRECCIÓN METEOROLÓGICA DE CHILE



INFORME
SOLARIMÉTRICO
II SEMESTRE 2012

CLIMATOLOGÍA Y METEOROLOGÍA APLICADA

WMO
 Total radiation (sun and sky) T,MJ/m2
 Duration of sunshine ss, hours

Month: JULY Year: 2012 Country: CHILE

Daily Totals				
Latitude	18°21' S	22°29' S	23°26' S	27°15' S
Longitude	70°19' W	68°54' W	70°26' W	70°46' W
Elevation	58 m	2270 m	135 m	204 m
Station	ARICA	CALAMA	ANTOFAGASTA	CALDERA
Date				
1	10.05	17.01	15.32	8.53
2	9.17	16.64	10.15	4.24
3	6.30	16.93	6.56	4.44
4	7.13	16.82	5.15	14.06
5	6.56	16.88	7.18	14.08
6	9.83	17.24	16.40	15.40
7	10.53	17.59	16.00	15.99
8	7.78	6.95	12.48	9.26
9	8.25	13.72	4.48	11.59
10	7.65	10.96	8.92	13.19
11	9.50	16.35	12.20	12.85
12	12.21	16.87	13.13	14.88
13	9.18	15.70	8.82	7.08
14	10.93	17.50	13.64	10.43
15	12.32	17.43	15.27	15.87
16	12.11	18.00	15.43	16.64
17	12.99	18.38	16.21	14.75
18	11.98	18.34	14.79	13.56
19	12.15	18.30	15.38	11.50
20	8.90	18.37	12.38	3.81
21	12.66	18.56	14.84	11.24
22	9.43	18.85	15.96	16.61
23	13.52	18.56	16.51	15.02
24	11.10	18.65	16.47	16.53
25	10.61	18.93	12.90	7.74
26	12.63	18.93	10.58	14.85
27	8.61	19.12	16.00	10.73
28	13.71	17.09	15.92	14.88
29	13.13	18.87	17.75	15.52
30	10.00	18.93	16.63	10.50
31	15.89	19.11	.	16.42
TT Monthly Totals	326.83	531.60	.	382.17
 Daily Means	10.54	17.15	13.11	12.33
SS Monthly Totals				
 Daily Means				
Types of Instruments	PYRANOMETER PSP EPPLEY	PYRANOMETER PSP EPPLEY	PYRANOMETER PSP EPPLEY	PYRANOMETER PSP EPPLEY

WMO
 Total radiation (sun and sky) T,MJ/m2
 Duration of sunshine ss, hours

Month: JULY Year: 2012 Country: CHILE

Daily Totals				
Latitude	33°27' S	41°25' S	45°35' S	53°00' S
Longitude	70°42' W	73°05' W	72°07' W	70°51' W
Elevation	520 m	85 m	310 m	37 m
Station	QUINTA NORMAL	PUERTO MONTT	COYHAIQUE	PUNTA ARENAS
Date				
1	1.72	3.26	.	2.67
2	4.02	4.31	.	2.55
3	9.03	1.20	.	1.35
4	3.79	4.41	2.92	2.40
5	3.65	4.40	1.44	2.48
6	6.30	3.04	2.12	2.95
7	9.72	0.89	.	3.34
8	9.54	3.79	3.80	1.57
9	6.54	6.35	3.45	2.96
10	8.60	2.50	.	1.08
11	8.07	4.83	.	2.50
12	9.07	2.14	3.32	2.04
13	9.47	4.55	3.09	3.18
14	6.64	7.30	3.86	0.96
15	9.89	3.60	2.16	1.75
16	10.37	5.13	4.06	1.57
17	10.42	5.77	2.38	0.39
18	9.74	6.23	2.92	2.57
19	5.10	3.20	4.09	2.34
20	7.61	3.06	.	2.12
21	2.03	4.37	3.55	3.49
22	9.04	3.62	.	2.70
23	6.03	6.06	2.08	3.49
24	9.89	7.61	4.41	1.69
25	10.32	2.69	1.16	3.92
26	9.85	8.23	0.67	2.93
27	10.23	3.52	3.79	3.42
28	10.59	6.19	3.03	4.15
29	10.75	6.91	4.31	3.34
30	9.57	9.46	4.42	1.47
31	7.67	5.72	2.05	1.47
TT Monthly Totals	245.26	144.35	.	74.82
 Daily Means	7.91	4.66	.	2.41
SS Monthly Totals				
 Daily Means				
Types of Instruments	PYRANOMETER PSP EPPLEY	PYRANOMETER PSP EPPLEY	PYRANOMETER PSP EPPLEY	PYRANOMETER PSP EPPLEY

WMO
 Total radiation (sun and sky) T,MJ/m2
 Duration of sunshine ss, hours

Month: AUGUST Year: 2012 Country: CHILE

Daily Totals				
Latitude	18°21' S	22°29' S	23°26' S	27°15' S
Longitude	70°19' W	68°54' W	70°26' W	70°46' W
Elevation	58 m	2270 m	135 m	204 m
Station	ARICA	CALAMA	ANTOFAGASTA	CALDERA
Date				
1	11.67	19.02	16.87	14.36
2	7.61	18.75	14.90	15.09
3	5.31	19.16	3.72	15.57
4	6.61	19.13	17.65	16.91
5	7.45	19.38	8.71	17.26
6	7.77	19.57	14.23	17.26
7	5.42	19.86	19.43	18.86
8	12.40	20.26	8.47	18.47
9	15.25	20.05	12.78	3.96
10	15.52	20.30	11.96	3.47
11	9.86	20.32	17.75	10.34
12	7.70	20.92	8.64	18.76
13	10.43	21.30	7.25	8.45
14	18.06	20.99	.	8.53
15	14.07	21.02	.	9.21
16	13.16	21.15	.	6.21
17	17.09	21.09	10.96	15.25
18	12.85	21.56	20.01	19.51
19	10.95	21.78	19.95	14.83
20	14.22	21.94	19.65	18.74
21	10.24	11.38	15.62	12.16
22	16.29	.	12.70	9.08
23	14.31	6.98	.	16.12
24	10.73	22.88	20.32	20.41
25	10.83	23.24	18.09	11.21
26	9.19	17.54	19.52	16.07
27	13.75	22.99	11.41	18.75
28	9.59	23.22	18.27	20.13
29	17.72	23.27	10.82	9.62
30	20.86	22.63	21.65	17.42
31	19.53	22.69	18.85	15.29
TT Monthly Totals	376.47	.	.	437.30
 Daily Means	12.14	20.14	14.82	14.11
SS Monthly Totals				
 Daily Means				
Types of Instruments	PYRANOMETER PSP EPPLEY	PYRANOMETER PSP EPPLEY	PYRANOMETER PSP EPPLEY	PYRANOMETER PSP EPPLEY

WMO
 Total radiation (sun and sky) T,MJ/m2
 Duration of sunshine ss, hours

Month: AUGUST Year: 2012 Country: CHILE

Daily Totals				
Latitude	33°27' S	41°25' S	45°35' S	53°00' S
Longitude	70°42' W	73°05' W	72°07' W	70°51' W
Elevation	520 m	85 m	310 m	37 m
Station	QUINTA NORMAL	PUERTO MONTT	COYHAIQUE	PUNTA ARENAS
Date				
1	7.08	4.92	3.52	3.31
2	8.11	6.35	5.97	4.96
3	5.53	9.43	6.88	2.55
4	11.71	9.24	7.12	3.34
5	11.95	8.65	3.94	2.43
6	8.97	3.25	7.54	3.89
7	11.09	8.14	1.81	3.01
8	12.49	1.94	4.64	3.65
9	9.28	4.68	0.51	2.54
10	7.48	9.75	1.53	3.16
11	3.06	5.74	.	5.17
12	12.07	7.47	.	5.63
13	3.17	2.15	1.01	2.34
14	2.16	1.94	.	5.97
15	2.40	3.60	.	6.62
16	4.12	3.33	0.98	5.02
17	5.63	6.40	2.34	4.79
18	13.82	1.86	0.80	2.03
19	2.36	4.95	0.96	5.47
20	13.93	2.56	0.57	4.04
21	7.52	3.57	0.46	5.92
22	5.61	8.22	0.50	7.56
23	7.33	9.29	3.26	7.99
24	14.67	7.83	10.29	8.62
25	14.24	13.67	11.04	7.20
26	14.98	12.70	7.47	1.75
27	14.64	7.92	5.08	5.83
28	9.92	3.51	2.48	6.93
29	12.88	8.43	10.49	3.58
30	12.95	3.26	4.30	1.11
31	14.99	2.93	6.58	9.06
TT Monthly Totals	286.10	187.69	.	145.46
Daily Means	9.23	6.05	4.15	4.69
SS Monthly Totals				
Daily Means				
Types of Instruments	PYRANOMETER PSP EPPLEY	PYRANOMETER PSP EPPLEY	PYRANOMETER PSP EPPLEY	PYRANOMETER PSP EPPLEY

WMO
 Total radiation (sun and sky) T,MJ/m2
 Duration of sunshine ss, hours

Month: SEPTEMBER Year: 2012 Country: CHILE

Daily Totals				
Latitude	18°21' S	22°29' S	23°26' S	27°15' S
Longitude	70°19' W	68°54' W	70°26' W	70°46' W
Elevation	58 m	2270 m	135 m	204 m
Station	ARICA	CALAMA	ANTOFAGASTA	CALDERA
Date				
1	9.14	19.56	10.24	5.41
2	14.55	22.34	21.62	14.68
3	15.73	23.12	21.43	19.72
4	15.19	23.07	14.17	20.68
5	12.73	23.20	10.66	0.41
6	8.09	23.81	8.35	.
7	13.07	24.28	17.37	.
8	17.09	23.83	22.65	.
9	13.36	24.02	16.72	.
10	10.97	24.80	20.88	.
11	18.94	24.92	18.61	.
12	17.69	24.69	21.25	.
13	17.95	24.44	22.52	.
14	21.43	18.80	20.38	4.17
15	20.33	24.44	20.76	.
16	12.51	24.93	15.20	.
17	15.62	25.17	15.22	.
18	16.04	24.47	15.16	.
19	11.79	26.27	24.50	26.58
20	11.77	26.46	19.03	.
21	17.02	26.59	24.51	20.30
22	17.81	26.80	23.39	.
23	19.24	26.57	24.32	7.88
24	18.76	26.80	22.20	.
25	19.71	26.80	21.66	.
26	18.70	26.59	11.27	.
27	9.68	26.61	15.72	.
28	18.51	27.24	25.18	9.30
29	11.37	27.38	22.38	7.16
30	8.86	27.57	20.22	.
31				
TT Monthly Totals	453.67	745.57	567.55	.
 Daily Means	15.12	24.85	18.92	.
SS Monthly Totals				
 Daily Means				
Types of Instruments	PYRANOMETER PSP EPPLEY	PYRANOMETER PSP EPPLEY	PYRANOMETER PSP EPPLEY	PYRANOMETER PSP EPPLEY

WMO
 Total radiation (sun and sky) T,MJ/m2
 Duration of sunshine ss, hours

Month: SEPTEMBER Year: 2012 Country: CHILE

Daily Totals				
Latitude	33°27' S	41°25' S	45°35' S	53°00' S
Longitude	70°42' W	73°05' W	72°07' W	70°51' W
Elevation	520 m	85 m	310 m	37 m
Station	QUINTA NORMAL	PUERTO MONTT	COYHAIQUE	PUNTA ARENAS
Date				
1	15.57	3.08	5.24	9.52
2	15.70	12.46	3.68	8.06
3	11.88	5.94	11.37	7.24
4	7.05	7.72	10.77	4.71
5	15.64	13.91	11.24	5.05
6	6.72	11.74	12.49	7.17
7	14.62	10.01	10.35	7.19
8	12.00	10.11	9.47	7.25
9	16.75	15.60	12.59	6.93
10	16.37	6.77	11.14	2.31
11	15.80	5.71	3.81	10.92
12	16.87	6.61	3.25	7.19
13	17.15	9.76	7.13	3.04
14	15.38	3.31	.	9.48
15	12.96	10.57	6.89	2.32
16	10.75	8.18	1.00	10.34
17	6.40	8.27	1.88	11.35
18	11.22	14.31	1.60	3.71
19	11.23	4.99	0.46	6.28
20	19.50	11.44	2.17	10.16
21	18.45	8.50	1.20	13.02
22	19.34	18.09	7.20	12.38
23	17.01	13.47	16.37	14.32
24	15.00	19.43	15.33	14.67
25	20.29	19.64	16.77	14.78
26	20.21	19.05	16.48	10.31
27	3.71	2.29	15.79	14.87
28	17.93	9.90	11.02	12.63
29	10.84	8.42	8.02	7.79
30	13.96	10.74	11.59	3.41
31				
TT Monthly Totals	426.30	310.02	.	258.42
 Daily Means	14.21	10.33	8.49	8.61
SS Monthly Totals				
 Daily Means				
Types of Instruments	PYRANOMETER PSP EPPLEY	PYRANOMETER PSP EPPLEY	PYRANOMETER PSP EPPLEY	PYRANOMETER PSP EPPLEY

WMO
 Total radiation (sun and sky) T,MJ/m2
 Duration of sunshine ss, hours

Month: OCTOBER Year: 2012 Country: CHILE

Daily Totals				
Latitude	18°21' S	22°29' S	23°26' S	27°15' S
Longitude	70°19' W	68°54' W	70°26' W	70°46' W
Elevation	58 m	2270 m	135 m	204 m
Station	ARICA	CALAMA	ANTOFAGASTA	CALDERA
Date				
1	17.82	27.81	7.77	.
2	17.37	27.80	19.17	32.63
3	16.41	28.04	24.73	31.96
4	13.65	27.94	21.57	46.89
5	18.62	28.18	21.82	7.12
6	18.13	28.02	23.39	33.91
7	19.96	28.56	26.01	69.81
8	15.97	28.45	14.39	34.47
9	20.72	28.41	19.74	31.63
10	16.98	28.73	25.32	32.69
11	16.67	28.78	26.16	39.91
12	25.68	29.10	26.08	37.72
13	20.13	28.43	23.17	47.53
14	19.74	28.57	21.04	24.72
15	20.03	29.25	22.54	35.12
16	18.33	29.57	25.70	.
17	21.72	29.92	25.39	.
18	25.89	29.81	24.35	.
19	26.19	29.84	26.61	33.93
20	23.27	29.93	27.54	17.35
21	18.00	30.28	27.90	29.92
22	18.68	29.86	28.20	51.98
23	20.30	30.29	27.96	44.84
24	19.19	30.53	24.69	13.75
25	20.72	30.33	25.01	17.88
26	22.65	30.12	25.51	17.44
27	20.53	27.74	24.06	2.96
28	25.33	27.32	9.47	39.19
29	15.33	29.67	23.82	14.47
30	21.69	29.90	17.94	14.37
31	21.38	30.57	20.57	.
TT Monthly Totals	617.09	901.73	707.63	.
 Daily Means	19.91	29.09	22.83	30.93
SS Monthly Totals				
 Daily Means				
Types of Instruments	PYRANOMETER PSP EPPLEY	PYRANOMETER PSP EPPLEY	PYRANOMETER PSP EPPLEY	PYRANOMETER PSP EPPLEY

WMO
 Total radiation (sun and sky) T,MJ/m2
 Duration of sunshine ss, hours

Month: OCTOBER Year: 2012 Country: CHILE

Daily Totals				
Latitude	33°27' S	41°25' S	45°35' S	53°00' S
Longitude	70°42' W	73°05' W	72°07' W	70°51' W
Elevation	520 m	85 m	310 m	37 m
Station				
Date	QUINTA NORMAL	PUERTO MONTT	COYHAIQUE	PUNTA ARENAS
1	4.12	13.10	7.74	15.22
2	18.53	12.95	13.24	5.54
3	21.88	10.20	11.07	9.76
4	15.49	5.94	10.73	11.70
5	4.95	17.05	12.81	16.89
6	2.50	20.50	11.20	14.20
7	5.97	21.97	19.86	10.06
8	9.74	10.98	14.95	17.39
9	19.09	6.26	16.74	16.19
10	21.56	20.09	8.86	6.07
11	22.24	8.97	10.48	15.44
12	9.00	8.34	13.48	17.19
13	15.58	13.03	19.60	9.94
14	13.22	18.58	20.64	7.96
15	23.60	11.98	16.75	6.84
16	23.60	16.09	19.30	15.60
17	23.26	18.07	20.30	8.73
18	20.30	9.00	21.97	12.48
19	10.66	5.95	21.93	17.90
20	10.17	16.23	13.95	11.35
21	6.37	15.36	16.67	19.78
22	21.45	8.14	21.83	9.22
23	19.95	13.84	11.66	18.73
24	24.44	20.19	10.78	9.58
25	24.65	9.39	4.76	20.23
26	24.60	4.99	17.92	20.72
27	15.50	18.93	16.39	17.69
28	24.17	11.48	12.88	20.09
29	25.73	15.57	20.48	15.71
30	21.76	11.22	20.36	15.92
31	25.47	17.15	10.46	18.61
TT Monthly Totals	529.52	411.52	469.80	432.71
Daily Means	17.08	13.27	15.15	13.96
SS Monthly Totals				
Daily Means				
Types of Instruments	PYRANOMETER PSP EPPLEY	PYRANOMETER PSP EPPLEY	PYRANOMETER PSP EPPLEY	PYRANOMETER PSP EPPLEY

WMO
 Total radiation (sun and sky) T,MJ/m2
 Duration of sunshine ss, hours

Month: NOVEMBER Year: 2012 Country: CHILE

Daily Totals				
Latitude	18°21' S	22°29' S	23°26' S	27°15' S
Longitude	70°19' W	68°54' W	70°26' W	70°46' W
Elevation	58 m	2270 m	135 m	204 m
Station	ARICA	CALAMA	ANTOFAGASTA	CALDERA
Date				
1	24.85	30.63	29.89	46.23
2	21.30	30.92	29.70	16.38
3	11.68	30.80	27.51	20.39
4	21.63	30.91	27.25	0.93
5	25.86	30.98	26.31	11.50
6	24.04	31.25	30.28	42.87
7	24.23	31.24	29.21	69.95
8	23.95	31.22	28.90	17.28
9	25.63	31.52	27.48	88.78
10	21.48	31.51	28.81	24.16
11	20.69	30.46	27.50	45.09
12	19.34	30.08	26.08	39.09
13	21.49	31.28	28.38	14.40
14	23.60	31.48	26.11	36.32
15	21.97	31.35	21.51	.
16	27.84	31.44	30.16	.
17	25.95	30.73	29.89	61.53
18	19.76	31.68	28.49	40.21
19	21.43	30.34	29.02	51.71
20	23.46	31.84	31.57	36.23
21	21.25	26.20	28.93	53.09
22	21.30	31.54	31.93	71.20
23	20.85	32.06	29.27	28.04
24	24.28	31.82	28.99	8.87
25	25.90	32.16	31.24	35.09
26	24.85	32.44	30.23	82.99
27	21.38	32.10	29.70	30.30
28	24.82	30.23	27.28	52.21
29	23.69	29.10	31.94	28.90
30	24.75	31.86	32.26	37.03
31				
TT Monthly Totals	683.25	931.15	865.81	.
Daily Means	22.77	31.04	28.86	38.96
SS Monthly Totals				
Daily Means				
Types of Instruments	PYRANOMETER PSP EPPLEY	PYRANOMETER PSP EPPLEY	PYRANOMETER PSP EPPLEY	PYRANOMETER PSP EPPLEY

WMO
 Total radiation (sun and sky) T,MJ/m2
 Duration of sunshine ss, hours

Month: NOVEMBER Year: 2012 Country: CHILE

Daily Totals				
Latitude	33°27' S	41°25' S	45°35' S	53°00' S
Longitude	70°42' W	73°05' W	72°07' W	70°51' W
Elevation	520 m	85 m	310 m	37 m
Station				
Date	QUINTA NORMAL	PUERTO MONTT	COYHAIQUE	PUNTA ARENAS
1	25.73	6.13	21.04	15.83
2	26.02	7.34	17.81	12.43
3	25.92	21.24	14.71	18.21
4	26.26	16.30	17.67	21.00
5	26.37	7.50	6.17	19.61
6	26.51	11.94	7.48	6.90
7	25.56	10.06	10.78	22.88
8	18.92	13.59	12.02	10.10
9	22.68	24.99	19.59	21.31
10	26.67	26.94	24.68	12.33
11	28.01	20.91	25.32	12.79
12	27.89	20.73	25.62	13.52
13	27.79	27.19	25.63	10.96
14	27.17	23.35	27.55	12.54
15	25.92	15.23	24.04	26.48
16	15.34	22.65	26.13	12.16
17	24.71	17.42	24.50	19.66
18	28.27	15.85	22.22	22.68
19	27.91	22.66	25.72	19.91
20	27.55	20.40	25.02	7.87
21	22.45	25.22	18.33	20.78
22	21.53	18.04	21.01	16.06
23	28.38	23.61	17.99	22.92
24	28.36	26.43	25.64	9.31
25	28.49	28.90	26.00	17.18
26	28.26	29.67	18.53	11.02
27	27.77	28.70	15.92	16.45
28	23.92	27.65	27.41	22.51
29	15.18	15.18	26.35	21.81
30	11.26	13.32	24.46	9.52
31				
TT Monthly Totals	746.79	589.15	625.34	486.72
Daily Means	24.89	19.64	20.84	16.22
SS Monthly Totals				
Daily Means				
Types of Instruments	PYRANOMETER PSP EPPLEY	PYRANOMETER PSP EPPLEY	PYRANOMETER PSP EPPLEY	PYRANOMETER PSP EPPLEY

WMO
 Total radiation (sun and sky) T,MJ/m2
 Duration of sunshine ss, hours

Month: DECEMBER Year: 2012 Country: CHILE

Daily Totals				
Latitude	18°21' S	22°29' S	23°26' S	27°15' S
Longitude	70°19' W	68°54' W	70°26' W	70°46' W
Elevation	58 m	2270 m	135 m	204 m
Station	ARICA	CALAMA	ANTOFAGASTA	CALDERA
Date				
1	25.18	32.00	31.64	82.90
2	24.01	31.21	30.35	36.55
3	27.53	30.95	29.69	44.46
4	26.01	28.32	31.80	33.44
5	11.98	30.77	31.22	97.20
6	25.99	30.45	28.68	72.34
7	23.67	30.13	27.46	57.57
8	20.15	29.83	29.07	43.75
9	25.67	30.57	31.08	12.86
10	24.04	30.38	28.36	2.92
11	23.85	29.74	27.89	2.47
12	26.16	30.92	28.65	52.09
13	27.21	30.92	31.43	55.26
14	27.88	31.07	32.05	102.37
15	27.71	31.03	31.40	73.99
16	25.66	31.55	27.86	66.65
17	22.71	30.33	26.37	34.00
18	17.19	30.50	27.77	54.57
19	24.13	29.72	29.73	70.25
20	26.86	29.94	31.32	49.25
21	22.00	30.55	31.41	28.48
22	21.71	28.00	24.47	0.71
23	23.05	27.33	30.43	25.96
24	25.05	30.89	26.53	77.25
25	19.06	30.53	25.38	35.73
26	22.39	30.92	23.55	28.04
27	26.66	31.69	31.89	7.28
28	27.70	32.06	32.20	15.79
29	24.75	31.96	30.70	31.51
30	27.13	31.57	32.15	55.93
31	27.30	31.85	31.86	76.38
TT Monthly Totals	750.37	947.68	914.37	1427.96
Daily Means	24.21	30.57	29.50	46.06
SS Monthly Totals				
Daily Means				
Types of Instruments	PYRANOMETER PSP EPPLEY	PYRANOMETER PSP EPPLEY	PYRANOMETER PSP EPPLEY	PYRANOMETER PSP EPPLEY

WMO
 Total radiation (sun and sky) T,MJ/m2
 Duration of sunshine ss, hours

Month: DECEMBER Year: 2012 Country: CHILE

Daily Totals				
Latitude	33°27' S	41°25' S	45°35' S	53°00' S
Longitude	70°42' W	73°05' W	72°07' W	70°51' W
Elevation	520 m	85 m	310 m	37 m
Station				
Date	QUINTA NORMAL	PUERTO MONTT	COYHAIQUE	PUNTA ARENAS
1	19.42	6.41	13.55	7.37
2	28.18	12.25	14.13	13.72
3	24.39	11.06	22.33	12.11
4	28.02	15.98	20.87	22.69
5	28.72	12.75	17.27	10.40
6	13.32	11.07	14.52	28.26
7	29.06	21.88	22.12	25.06
8	28.97	21.33	17.39	20.61
9	28.64	10.09	12.00	29.06
10	25.80	12.44	16.90	9.27
11	28.86	4.86	16.93	11.43
12	28.85	16.91	22.25	16.04
13	29.22	10.80	17.24	22.79
14	29.67	13.93	19.50	15.93
15	21.89	6.94	11.53	18.67
16	28.82	21.88	21.49	11.41
17	28.98	8.93	14.91	29.47
18	15.84	14.13	15.91	3.75
19	2.04	20.19	14.22	10.78
20	10.82	17.23	22.42	16.52
21	29.77	5.89	11.13	21.17
22	29.67	4.63	16.30	11.88
23	29.75	8.48	14.60	19.79
24	29.95	8.30	8.40	19.12
25	30.49	18.47	21.30	22.27
26	30.67	13.40	26.10	12.50
27	29.52	18.03	19.00	26.92
28	29.54	26.25	18.11	10.92
29	29.32	9.79	17.58	23.24
30	29.42	10.51	17.78	25.27
31	28.98	19.18	24.64	28.68
TT Monthly Totals	806.56	414.01	542.42	557.11
Daily Means	26.02	13.36	17.50	17.97
SS Monthly Totals				
Daily Means				
Types of Instruments	PYRANOMETER PSP EPPLEY	PYRANOMETER PSP EPPLEY	PYRANOMETER PSP EPPLEY	PYRANOMETER PSP EPPLEY

WMO
 Total radiation (sun and sky) T,MJ/m2
 Duration of sunshine ss, hours

Month: JULY		Year: 2012		Country: CHILE	
Daily Totals					
Latitude	18°21' S	20°32' S	22°28' S	23°26' S	
Longitude	70°19'W	72°10' W	68°55' W	70°26' W	
Elevation	58 m	52 m	270 m	135 m	
Station	ARICA	IQUIQUE	CALAMA	ANTOFAGASTA	
Date					
1	4.6	5.6	9.9	8.7	
2	4.0	1.9	9.3	2.4	
3	2.1	0.0	9.9	0.3	
4	0.5	0.0	9.8	0.0	
5	0.0	0.0	9.9	2.5	
6	3.3	4.9	9.9	8.8	
7	4.8	0.0	9.9	8.5	
8	0.7	0.0	0.7	6.2	
9	2.5	0.4	6.0	0.0	
10	2.7	4.2	5.0	1.0	
11	4.4	3.3	9.7	5.1	
12	5.2	0.9	9.7	7.2	
13	3.7	0.5	8.5	2.0	
14	5.7	0.0	10.0	6.3	
15	6.4	9.1	10.1	7.8	
16	6.1	1.4	10.1	6.7	
17	6.6	5.7	10.1	9.2	
18	4.8	7.5	10.2	8.0	
19	6.1	4.4	10.2	6.9	
20	4.0	1.5	10.1	4.3	
21	7.0	6.4	10.2	6.6	
22	2.8	1.2	10.2	7.4	
23	7.5	4.0	10.2	8.9	
24	4.4	5.3	10.3	8.1	
25	3.5	0.4	10.2	4.8	
26	6.2	7.0	10.3	3.6	
27	2.9	6.0	10.2	8.5	
28	6.1	2.1	8.8	8.5	
29	3.7	9.2	10.4	10.0	
30	4.0	2.4	10.4	9.2	
31	7.4	9.5	10.4	9.9	
TT Monthly Totals					
Daily Means					
SS Monthly Totals	133.7	104.8	290.6	187.4	
Daily Means	4.3	3.4	9.4	6.0	
Types of Instruments	HELIOGRAPH CAMPBELL STOKES	HELIOGRAPH CAMPBELL STOKES	HELIOGRAPH CAMPBELL STOKES	HELIOGRAPH CAMPBELL STOKES	

WMO
 Total radiation (sun and sky) T,MJ/m2
 Duration of sunshine ss, hours

Month: JULY Year: 2012 Country: CHILE

Daily Totals				
Latitude	27°15'S	27°10' S	29°57' S	33°23' S
Longitude	70°46'W	109°26' W	71°22' W	70°47' W
Elevation	204 m	47 m	25 m	474 m
Station	CALDERA	ISLA DE PASCUA	LA SERENA	PUDAHUEL
Date				
1	1.1	7.0	0.9	0.0
2	0.5	2.5	8.3	2.0
3	0.0	5.0	.	7.5
4	8.2	0.4	8.9	1.0
5	8.1	8.5	8.8	2.7
6	9.1	5.9	9.1	3.9
7	9.4	2.3	9.4	7.7
8	4.0	4.0	.	8.1
9	5.5	7.3	7.6	3.0
10	6.8	6.2	9.2	6.0
11	7.1	7.2	8.3	6.9
12	9.3	4.7	9.2	7.1
13	1.9	3.6	3.9	8.1
14	3.9	0.0	1.6	4.8
15	9.4	4.6	.	7.2
16	9.4	9.4	0.0	7.4
17	7.6	4.6	6.4	8.8
18	6.4	9.3	7.4	7.4
19	4.6	8.5	3.1	1.4
20	0.0	7.7	1.5	6.0
21	4.7	8.2	.	0.1
22	8.3	6.7	9.4	6.7
23	7.1	7.6	9.1	0.8
24	8.7	7.5	9.4	7.4
25	1.7	6.7	1.4	7.7
26	8.0	7.0	8.2	7.1
27	3.5	5.5	3.4	7.2
28	7.6	1.0	3.2	8.4
29	7.8	6.6	.	7.9
30	3.8	7.9	1.0	5.6
31	8.9	5.0	7.9	4.2
TT Monthly Totals				
 Daily Means				
SS Monthly Totals	182.4	178.4	.	170.1
 Daily Means	5.9	5.8	6.0	5.5
Types of Instruments	HELIOGRAPH CAMPBELL STOKES	HELIOGRAPH CAMPBELL STOKES	HELIOGRAPH CAMPBELL STOKES	HELIOGRAPH CAMPBELL STOKES

WMO
 Total radiation (sun and sky) T,MJ/m2
 Duration of sunshine ss, hours

Month: JULY Year: 2012 Country: CHILE

Daily Totals				
Latitude	33°27' S	33°37' S	33°39' S	34°58' S
Longitude	70°42' W	78°50' W	71°36' W	71°12' W
Elevation	520 m	30 m	74 m	225 m
Station				
Date	QUINTA NORMAL	ROBINSON CRUSOE	SANTO DOMINGO	CURICO
1	0.0	4.0	0.0	0.0
2	0.5	4.6	8.3	6.2
3	7.1	3.7	9.2	6.0
4	0.0	2.9	0.9	0.0
5	2.0	5.9	4.3	3.4
6	3.2	3.0	7.2	7.2
7	7.1	1.6	9.2	7.2
8	7.1	1.6	9.3	0.2
9	3.3	0.3	1.5	0.0
10	4.4	5.8	8.8	3.4
11	5.9	2.3	8.7	6.1
12	6.8	6.2	9.1	5.1
13	8.2	7.2	9.3	7.0
14	3.5	2.3	0.0	0.5
15	6.7	4.1	8.5	8.3
16	7.3	6.7	9.0	4.7
17	8.0	7.2	9.1	6.6
18	7.0	6.1	7.6	6.7
19	1.3	6.4	3.8	0.3
20	4.6	0.8	5.6	1.9
21	0.0	3.6	1.2	0.6
22	7.6	2.9	7.3	1.3
23	0.5	4.7	2.6	0.0
24	7.2	3.9	7.3	3.3
25	7.4	1.7	8.3	3.7
26	7.4	1.6	8.7	3.0
27	7.6	5.1	9.4	2.9
28	7.5	1.6	8.4	9.0
29	7.7	6.4	9.3	7.5
30	5.1	5.8	6.1	3.6
31	5.1	0.0	4.6	7.4
TT Monthly Totals				
 Daily Means				
SS Monthly Totals	157.1	120.0	202.6	123.1
 Daily Means	5.1	3.9	6.5	4.0
Types of Instruments	HELIOGRAPH CAMPBELL STOKES	HELIOGRAPH CAMPBELL STOKES	HELIOGRAPH CAMPBELL STOKES	HELIOGRAPH CAMPBELL STOKES

WMO
 Total radiation (sun and sky) T,MJ/m2
 Duration of sunshine ss, hours

Month: JULY Year: 2012 Country: CHILE

Daily Totals				
Latitude	36°36' S	36°46' S	38°45' S	39°41' S
Longitude	72°26' W	73°03' W	72°38' W	73°04' W
Elevation	124 m	12 m	114 m	19 m
Station	CHILLAN	CONCEPCION	TEMUCO	VALDIVIA
Date				
1	0.0	5.0	4.8	5.3
2	8.3	8.7	0.0	0.0
3	7.6	8.1	1.6	0.0
4	7.3	4.0	1.5	4.2
5	3.0	5.6	0.4	0.2
6	6.8	5.5	0.0	0.0
7	7.0	7.9	0.0	0.0
8	0.6	2.9	7.5	4.8
9	5.4	8.3	8.1	7.6
10	8.4	8.5	6.7	3.9
11	4.3	1.4	2.4	6.8
12	6.6	9.0	0.5	2.7
13	8.2	8.9	6.5	0.0
14	1.8	0.0	6.3	8.2
15	7.3	4.6	4.5	3.1
16	6.9	8.8	5.8	0.0
17	7.8	8.3	5.8	0.0
18	7.9	8.3	5.1	3.7
19	1.6	1.3	0.0	0.0
20	0.0	0.0	1.8	0.5
21	1.1	7.5	6.0	3.4
22	4.1	6.5	3.0	2.3
23	0.0	1.1	3.4	5.7
24	8.6	8.6	6.5	5.2
25	8.3	8.5	1.9	0.2
26	8.2	9.1	4.8	5.6
27	7.2	8.9	8.1	0.2
28	8.3	8.4	4.1	6.7
29	8.7	9.5	7.5	5.1
30	6.3	9.4	7.4	4.0
31	0.9	0.1	4.5	1.9
TT Monthly Totals				
 Daily Means				
SS Monthly Totals	168.5	192.7	126.5	91.3
 Daily Means	5.4	6.2	4.1	2.9
Types of Instruments	HELIOGRAPH CAMPBELL STOKES	HELIOGRAPH CAMPBELL STOKES	HELIOGRAPH CAMPBELL STOKES	HELIOGRAPH CAMPBELL STOKES

WMO
 Total radiation (sun and sky) T,MJ/m2
 Duration of sunshine ss, hours

Month: JULY Year: 2012 Country: CHILE

Daily Totals				
Latitude	41°26' S	45°35' S	53°08' S	
Longitude	73°07' W	72°07' W	70°58' W	
Elevation	81 m	310 m	37 m	
Station				
Date	PUERTO MONTT	COYHAIQUE	PUNTA ARENAS	
1	2.0	0.3	6.1	
2	2.6	1.3	3.9	
3	0.0	3.0	1.9	
4	2.7	4.7	4.2	
5	2.2	3.7	5.4	
6	0.2	5.0	4.4	
7	0.0	0.0	2.6	
8	3.0	5.5	1.7	
9	5.0	6.5	6.2	
10	0.1	0.0	0.0	
11	2.8	1.6	4.8	
12	0.0	3.1	2.7	
13	1.5	4.3	6.7	
14	5.5	5.1	0.0	
15	1.3	2.1	1.8	
16	2.8	5.6	0.5	
17	3.1	1.4	0.0	
18	4.1	3.3	2.5	
19	0.3	5.6	2.0	
20	1.3	0.4	1.0	
21	2.7	3.0	5.7	
22	0.9	0.0	3.8	
23	5.7	6.0	5.9	
24	6.9	4.0	0.2	
25	2.0	3.6	7.1	
26	6.5	4.6	3.7	
27	0.4	5.1	4.4	
28	4.4	1.7	6.8	
29	5.7	2.1	4.8	
30	7.6	6.6	0.0	
31	2.5	0.0	0.0	
TT Monthly Totals				
 Daily Means				
SS Monthly Totals	85.8	99.2	100.8	
 Daily Means	2.8	3.2	3.3	
Types of Instruments	HELIOGRAPH CAMPBELL STOKES	HELIOGRAPH CAMPBELL STOKES	HELIOGRAPH CAMPBELL STOKES	

WMO
 Total radiation (sun and sky) T,MJ/m2
 Duration of sunshine ss, hours

Month: AUGUST		Year: 2012		Country: CHILE	
Daily Totals					
Latitude	18°21' S	20°32' S	22°28' S	23°26' S	
Longitude	70°19'W	72°10' W	68°55' W	70°26' W	
Elevation	58 m	52 m	270 m	135 m	
Station	ARICA	IQUIQUE	CALAMA	ANTOFAGASTA	
Date					
1	3.9	7.7	10.5	8.4	
2	0.1	3.2	10.5	8.3	
3	0.0	3.0	10.6	8.3	
4	0.0	7.3	10.6	9.9	
5	0.0	0.8	10.5	0.8	
6	0.0	0.8	10.4	6.6	
7	0.0	5.0	10.5	10.1	
8	4.7	5.1	10.4	7.5	
9	6.1	3.9	10.2	4.1	
10	5.7	6.5	10.5	3.4	
11	2.0	6.3	10.5	8.0	
12	1.7	6.3	10.5	7.8	
13	3.7	2.3	10.6	0.1	
14	8.4	7.9	10.6	6.8	
15	4.3	7.5	10.7	7.0	
16	4.6	7.8	10.7	7.4	
17	6.7	6.5	10.7	8.3	
18	4.5	6.1	10.7	8.7	
19	4.3	7.9	10.8	7.9	
20	5.6	7.2	7.8	8.4	
21	2.3	0.0	.	7.0	
22	6.5	7.6	6.1	2.7	
23	3.2	0.4	.	7.2	
24	0.4	2.6	11.3	9.4	
25	1.3	0.2	.	7.0	
26	2.3	6.7	7.6	9.5	
27	4.6	6.2	10.2	6.8	
28	0.1	0.0	11.3	6.1	
29	6.8	0.1	11.3	2.5	
30	10.2	10.2	11.1	10.0	
31	10.2	6.9	11.0	6.3	
TT Monthly Totals					
Daily Means					
SS Monthly Totals	114.2	150.0	.	212.3	
Daily Means	3.7	4.8	10.3	6.8	
Types of	HELIOGRAPH	HELIOGRAPH	HELIOGRAPH	HELIOGRAPH	
Instruments	CAMPBELL	CAMPBELL	CAMPBELL	CAMPBELL	
	STOKES	STOKES	STOKES	STOKES	

WMO
 Total radiation (sun and sky) T,MJ/m2
 Duration of sunshine ss, hours

Month: AUGUST Year: 2012 Country: CHILE

Daily Totals				
Latitude	27°15'S	27°10' S	29°57' S	33°23' S
Longitude	70°46'W	109°26' W	71°22' W	70°47' W
Elevation	204 m	47 m	25 m	474 m
Station	CALDERA	ISLA DE PASCUA	LA SERENA	PUDAHUEL
Date				
1	6.6	2.8	5.0	4.4
2	7.2	4.4	.	5.9
3	8.5	6.6	7.3	0.0
4	9.0	5.2	9.4	7.4
5	9.1	8.9	8.6	8.4
6	8.9	3.5	8.5	5.2
7	10.0	3.2	9.6	6.2
8	9.5	1.1	8.9	8.8
9	0.0	0.0	3.2	5.7
10	3.5	0.7	0.0	0.8
11	10.0	9.0	4.5	0.0
12	10.0	7.5	9.4	7.4
13	1.9	9.4	0.9	0.0
14	2.0	10.8	4.7	0.0
15	1.1	9.4	0.0	0.0
16	0.0	0.7	0.0	0.5
17	6.6	9.8	4.9	1.7
18	10.1	9.1	9.9	7.2
19	6.3	3.5	6.2	0.8
20	8.6	7.6	9.9	6.9
21	3.9	5.4	4.8	1.8
22	1.2	6.1	0.0	1.0
23	7.9	9.6	8.9	3.1
24	10.4	9.2	10.3	8.6
25	3.2	9.3	10.6	8.7
26	6.6	2.9	6.5	9.5
27	8.3	10.0	6.2	9.3
28	9.1	11.7	5.3	3.3
29	1.5	2.5	0.1	7.7
30	7.3	0.3	2.7	8.5
31	.	7.7	4.4	8.4
TT Monthly Totals				
Daily Means				
SS Monthly Totals	.	187.9	.	147.2
Daily Means	6.3	6.1	5.7	4.7
Types of Instruments	HELIOGRAPH CAMPBELL STOKES	HELIOGRAPH CAMPBELL STOKES	HELIOGRAPH CAMPBELL STOKES	HELIOGRAPH CAMPBELL STOKES

WMO
 Total radiation (sun and sky) T,MJ/m2
 Duration of sunshine ss, hours

Month: AUGUST Year: 2012 Country: CHILE

Daily Totals				
Latitude	33°27' S	33°37' S	33°39' S	34°58' S
Longitude	70°42' W	78°50' W	71°36' W	71°12' W
Elevation	520 m	30 m	74 m	225 m
Station				
Date	QUINTA NORMAL	ROBINSON CRUSOE	SANTO DOMINGO	CURICO
1	3.6	4.9	2.8	1.8
2	4.3	6.0	8.0	0.1
3	0.4	3.9	0.0	0.0
4	7.4	6.3	8.8	8.4
5	4.2	2.9	3.0	5.8
6	4.6	5.3	6.8	1.9
7	6.6	6.3	8.9	3.3
8	7.4	7.3	9.3	3.4
9	4.6	2.1	3.5	0.0
10	0.0	4.3	5.2	0.1
11	0.1	4.8	5.1	4.4
12	6.1	4.9	10.0	6.9
13	0.0	3.4	0.0	0.0
14	0.0	0.0	0.3	0.2
15	0.0	2.1	0.0	0.0
16	0.3	1.2	1.9	7.0
17	3.0	1.8	3.9	1.4
18	7.2	0.5	7.5	6.3
19	0.0	7.2	4.9	0.0
20	6.8	2.0	9.1	7.6
21	0.8	7.2	0.0	0.0
22	2.1	7.2	0.0	0.0
23	2.6	6.0	8.2	7.5
24	8.2	5.3	10.6	6.7
25	8.1	5.2	9.7	8.1
26	8.2	8.4	10.2	9.2
27	8.3	5.7	9.4	9.4
28	2.4	0.5	5.0	0.8
29	7.4	1.7	8.1	8.0
30	7.5	9.0	6.2	6.5
31	8.2	8.8	10.2	9.5
TT Monthly Totals				
 Daily Means				
SS Monthly Totals	130.4	142.2	176.6	124.3
 Daily Means	4.2	4.6	5.7	4.0
Types of Instruments	HELIOGRAPH CAMPBELL STOKES	HELIOGRAPH CAMPBELL STOKES	HELIOGRAPH CAMPBELL STOKES	HELIOGRAPH CAMPBELL STOKES

WMO
 Total radiation (sun and sky) T,MJ/m2
 Duration of sunshine ss, hours

Month: AUGUST Year: 2012 Country: CHILE

Daily Totals				
Latitude	36°36' S	36°46' S	38°45' S	39°41' S
Longitude	72°26' W	73°03' W	72°38' W	73°04' W
Elevation	124 m	12 m	114 m	19 m
Station	CHILLAN	CONCEPCION	TEMUCO	VALDIVIA
Date				
1	0.0	3.3	2.6	2.8
2	0.0	1.3	0.0	1.4
3	0.0	0.0	6.2	7.7
4	4.2	8.1	8.7	4.9
5	0.0	5.4	1.4	2.5
6	0.0	7.7	0.2	0.0
7	2.7	8.9	5.1	4.3
8	3.1	3.9	0.0	0.0
9	1.0	3.8	0.3	0.1
10	3.5	4.3	5.7	4.3
11	7.8	9.3	4.0	1.2
12	6.3	2.2	1.5	4.2
13	1.5	1.4	0.0	0.0
14	0.0	0.0	0.0	0.0
15	0.0	0.0	0.0	0.0
16	0.0	2.5	1.0	0.0
17	2.9	4.0	2.1	1.5
18	0.4	0.0	0.2	0.0
19	0.8	0.0	0.0	0.0
20	7.6	7.7	4.4	2.6
21	0.0	0.0	0.2	2.4
22	0.4	3.4	0.0	1.3
23	6.7	10.0	4.9	4.8
24	8.0	10.1	7.0	4.6
25	9.3	10.2	9.5	9.7
26	8.8	9.3	6.6	5.6
27	8.5	8.4	8.1	5.6
28	0.9	0.4	2.4	0.0
29	2.0	5.6	0.3	3.7
30	7.4	8.2	1.7	0.2
31	8.2	8.5	0.0	0.0
TT Monthly Totals				
 Daily Means				
SS Monthly Totals	102.0	147.9	84.1	75.4
 Daily Means	3.3	4.8	2.7	2.4
Types of Instruments	HELIOGRAPH CAMPBELL STOKES	HELIOGRAPH CAMPBELL STOKES	HELIOGRAPH CAMPBELL STOKES	HELIOGRAPH CAMPBELL STOKES

WMO
 Total radiation (sun and sky) T,MJ/m2
 Duration of sunshine ss, hours

Month: AUGUST

Year: 2012

Country: CHILE

Daily Totals				
Latitude	41°26' S	45°35' S	53°08' S	
Longitude	73°07' W	72°07' W	70°58' W	
Elevation	81 m	310 m	37 m	
Station				
Date	PUERTO MONTT	COYHAIQUE	PUNTA ARENAS	
1	2.4	1.3	3.9	
2	2.9	5.0	5.9	
3	9.0	5.9	1.1	
4	7.9	6.6	3.4	
5	5.6	2.1	2.1	
6	0.9	7.1	5.6	
7	6.5	7.0	0.2	
8	0.0	6.4	3.0	
9	2.4	0.3	1.8	
10	6.3	5.7	3.3	
11	2.5	0.4	6.0	
12	5.4	2.3	6.8	
13	0.0	2.0	0.0	
14	0.0	0.3	7.5	
15	0.2	0.0	7.6	
16	0.0	0.0	4.9	
17	4.0	3.7	3.9	
18	0.0	2.6	0.2	
19	1.9	3.1	5.3	
20	0.0	1.0	1.0	
21	1.5	2.2	5.3	
22	5.9	7.9	7.8	
23	4.9	8.0	8.8	
24	5.3	6.7	8.6	
25	8.3	7.3	6.1	
26	8.3	4.1	0.0	
27	3.4	1.5	3.5	
28	0.0	1.2	5.0	
29	4.1	8.7	0.1	
30	0.1	1.9	0.5	
31	0.0	7.2	8.6	
TT Monthly Totals				
 Daily Means				
SS Monthly Totals	99.7	119.5	127.8	
 Daily Means	3.2	3.9	4.1	
Types of Instruments	HELIOGRAPH CAMPBELL STOKES	HELIOGRAPH CAMPBELL STOKES	HELIOGRAPH CAMPBELL STOKES	

WMO
 Total radiation (sun and sky) T,MJ/m2
 Duration of sunshine ss, hours

Month: SEPTEMBER		Year: 2012		Country: CHILE	
Daily Totals					
Latitude	18°21' S	20°32' S	22°28' S	23°26' S	
Longitude	70°19'W	72°10' W	68°55' W	70°26' W	
Elevation	58 m	52 m	270 m	135 m	
Station	ARICA	IQUIQUE	CALAMA	ANTOFAGASTA	
Date					
1	0.0	8.0	7.8	1.7	
2	0.0	9.6	10.7	10.4	
3	5.2	9.9	10.8	9.0	
4	3.7	8.8	10.8	2.6	
5	2.7	8.3	10.8	0.9	
6	0.0	5.1	10.9	6.5	
7	3.6	7.2	10.8	5.6	
8	5.5	7.2	11.1	9.4	
9	4.4	8.1	10.9	3.5	
10	0.3	0.2	11.4	6.5	
11	6.7	10.2	11.1	6.9	
12	6.4	7.7	11.2	7.3	
13	4.0	9.6	11.1	8.5	
14	8.5	7.8	6.2	6.7	
15	7.5	6.2	10.8	5.9	
16	1.7	0.2	11.0	2.7	
17	5.0	0.3	10.8	2.4	
18	3.7	3.1	10.8	4.0	
19	0.6	2.9	11.3	8.7	
20	0.0	0.0	11.3	6.5	
21	4.5	4.4	10.8	9.9	
22	4.6	8.8	10.9	8.3	
23	6.5	8.7	11.0	9.0	
24	5.6	6.0	10.8	7.5	
25	6.0	9.1	11.1	6.2	
26	6.2	8.4	10.4	7.7	
27	0.0	4.3	10.3	2.7	
28	5.6	8.7	11.2	9.9	
29	0.5	3.0	11.0	6.4	
30	0.0	5.9	11.2	5.0	
31					
TT Monthly Totals					
Daily Means					
SS Monthly Totals	109.0	187.7	320.3	188.3	
Daily Means	3.6	6.3	10.7	6.3	
Types of Instruments	HELIOGRAPH CAMPBELL STOKES	HELIOGRAPH CAMPBELL STOKES	HELIOGRAPH CAMPBELL STOKES	HELIOGRAPH CAMPBELL STOKES	

WMO
 Total radiation (sun and sky) T,MJ/m2
 Duration of sunshine ss, hours

Month: SEPTEMBER		Year: 2012		Country: CHILE	
Daily Totals					
Latitude	27°15'S	27°10' S	29°57' S	33°23' S	
Longitude	70°46'W	109°26' W	71°22' W	70°47' W	
Elevation	204 m	47 m	25 m	474 m	
Station	CALDERA	ISLA DE PASCUA	LA SERENA	PUDAHUEL	
Date					
1	0.0	10.0	0.0	9.7	
2	4.2	7.2	0.3	9.3	
3	8.8	7.2	0.0	4.4	
4	10.2	0.8	10.1	3.2	
5	0.0	9.4	0.0	7.6	
6	5.3	6.5	4.7	2.2	
7	1.6	2.5	0.8	6.9	
8	10.4	9.1	10.4	6.1	
9	7.9	5.0	5.2	9.1	
10	5.1	9.8	1.6	9.0	
11	3.7	4.5	0.0	7.8	
12	3.5	6.2	6.4	8.3	
13	5.5	6.1	0.0	8.7	
14	8.3	0.8	.	6.0	
15	4.4	1.9	5.7	6.4	
16	5.3	8.1	7.7	3.3	
17	1.9	4.3	7.6	0.4	
18	7.2	3.4	10.5	4.9	
19	10.9	7.4	10.9	4.2	
20	9.4	3.9	10.3	10.6	
21	7.8	9.1	10.5	8.8	
22	5.8	5.4	1.0	10.2	
23	6.2	5.0	2.0	7.3	
24	4.0	10.0	0.0	6.7	
25	0.5	2.1	0.0	9.9	
26	0.0	10.0	0.0	9.5	
27	0.6	10.0	0.0	0.5	
28	10.9	3.4	9.8	9.7	
29	7.3	3.9	9.3	4.4	
30	5.0	4.5	8.1	7.7	
31					
TT Monthly Totals					
Daily Means					
SS Monthly Totals	161.7	177.5	.	202.8	
Daily Means	5.4	5.9	4.6	6.8	
Types of Instruments	HELIOGRAPH CAMPBELL STOKES	HELIOGRAPH CAMPBELL STOKES	HELIOGRAPH CAMPBELL STOKES	HELIOGRAPH CAMPBELL STOKES	

WMO
 Total radiation (sun and sky) T,MJ/m2
 Duration of sunshine ss, hours

Month: SEPTEMBER Year: 2012 Country: CHILE

Daily Totals				
Latitude	33°27' S	33°37' S	33°39' S	34°58' S
Longitude	70°42' W	78°50' W	71°36' W	71°12' W
Elevation	520 m	30 m	74 m	225 m
Station				
Date	QUINTA NORMAL	ROBINSON CRUSOE	SANTO DOMINGO	CURICO
1	9.0	7.6	10.4	7.6
2	8.8	4.7	1.8	10.0
3	4.8	4.0	0.0	0.1
4	2.1	1.6	8.9	8.1
5	7.1	1.0	0.0	4.6
6	1.6	4.4	7.7	5.6
7	5.9	0.4	1.4	1.9
8	5.5	0.2	9.4	7.8
9	8.4	8.6	6.1	9.4
10	8.3	6.5	0.0	7.5
11	7.9	8.6	0.0	4.8
12	8.5	7.1	9.9	8.2
13	8.6	8.3	0.0	6.5
14	7.0	4.3	0.0	5.6
15	5.6	8.2	10.3	9.1
16	2.1	5.2	7.7	0.0
17	0.0	3.1	6.7	8.1
18	4.3	7.7	9.2	5.6
19	2.4	2.2	7.0	0.4
20	9.0	0.2	10.0	9.0
21	8.6	7.3	10.7	9.1
22	8.6	4.4	10.5	6.3
23	6.9	0.4	2.1	3.1
24	5.3	4.6	5.7	5.7
25	9.1	8.1	1.4	10.3
26	8.7	1.4	0.0	9.8
27	0.0	7.0	0.0	0.2
28	8.1	9.5	9.5	8.4
29	2.0	5.8	6.5	5.8
30	4.9	3.8	4.8	3.3
31				
TT Monthly Totals				
Daily Means				
SS Monthly Totals	179.1	146.2	157.7	181.9
Daily Means	6.0	4.9	5.3	6.1
Types of Instruments	HELIOGRAPH CAMPBELL STOKES	HELIOGRAPH CAMPBELL STOKES	HELIOGRAPH CAMPBELL STOKES	HELIOGRAPH CAMPBELL STOKES

WMO
 Total radiation (sun and sky) T,MJ/m2
 Duration of sunshine ss, hours

Month: SEPTEMBER		Year: 2012		Country: CHILE	
Daily Totals					
Latitude	36°36' S	36°46' S	38°45' S	39°41' S	
Longitude	72°26' W	73°03' W	72°38' W	73°04' W	
Elevation	124 m	12 m	114 m	19 m	
Station	CHILLAN	CONCEPCION	TEMUCO	VALDIVIA	
Date					
1	5.9	7.7	5.7	3.3	
2	8.9	9.3	5.7	4.8	
3	0.5	0.1	0.0	0.3	
4	2.1	5.5	1.2	4.0	
5	2.9	8.8	9.3	10.1	
6	1.9	2.3	3.2	9.0	
7	4.0	2.6	1.9	3.8	
8	8.1	8.5	9.4	8.4	
9	9.7	10.1	9.2	10.1	
10	7.7	8.5	4.0	5.8	
11	6.0	6.7	8.1	4.6	
12	9.5	10.2	8.3	5.1	
13	7.7	7.8	5.6	1.9	
14	1.7	1.6	2.0	0.0	
15	5.9	8.4	2.5	0.3	
16	2.1	6.8	6.8	8.5	
17	4.1	1.8	0.4	2.5	
18	8.9	10.2	8.5	5.8	
19	0.0	0.1	0.0	1.2	
20	9.5	8.7	5.0	4.0	
21	9.6	9.9	2.2	0.4	
22	9.2	7.6	8.3	8.6	
23	8.0	6.3	5.7	8.4	
24	7.1	10.2	9.4	10.7	
25	10.0	10.2	9.6	9.7	
26	9.5	9.4	8.8	9.3	
27	0.0	0.6	0.0	0.0	
28	7.8	10.1	5.0	5.2	
29	6.9	3.2	2.4	2.3	
30	9.4	9.0	8.4	7.3	
31					
TT Monthly Totals					
Daily Means					
SS Monthly Totals	184.6	202.2	156.6	155.4	
Daily Means	6.2	6.7	5.2	5.2	
Types of Instruments	HELIOGRAPH CAMPBELL STOKES	HELIOGRAPH CAMPBELL STOKES	HELIOGRAPH CAMPBELL STOKES	HELIOGRAPH CAMPBELL STOKES	

WMO
 Total radiation (sun and sky) T,MJ/m2
 Duration of sunshine ss, hours

Month: SEPTEMBER Year: 2012 Country: CHILE

Daily Totals				
Latitude	41°26' S	45°35' S	53°08' S	
Longitude	73°07' W	72°07' W	70°58' W	
Elevation	81 m	310 m	37 m	
Station				
Date	PUERTO MONTT	COYHAIQUE	PUNTA ARENAS	
1	0.0	4.8	9.0	
2	8.0	0.3	4.4	
3	1.5	8.4	5.0	
4	4.1	9.4	0.3	
5	8.1	7.9	1.5	
6	6.1	9.2	5.3	
7	0.0	7.2	5.2	
8	7.0	3.9	5.0	
9	9.6	8.2	1.1	
10	0.7	6.8	0.0	
11	0.5	7.0	10.2	
12	1.4	3.5	4.2	
13	4.8	8.5	0.0	
14	0.8	0.1	5.4	
15	4.6	6.5	0.0	
16	3.2	3.4	6.7	
17	2.2	6.9	8.5	
18	8.0	4.2	0.9	
19	1.9	5.2	2.2	
20	6.5	8.1	5.7	
21	1.5	8.4	8.6	
22	9.2	10.0	7.9	
23	6.2	10.0	10.2	
24	10.8	9.4	10.3	
25	10.9	9.8	12.3	
26	10.4	9.8	5.0	
27	0.0	8.5	10.4	
28	4.0	5.1	7.9	
29	3.5	1.9	0.3	
30	4.3	6.6	0.0	
31				
TT Monthly Totals				
 Daily Means				
SS Monthly Totals	139.8	199.0	153.5	
 Daily Means	4.7	6.6	5.1	
Types of Instruments	HELIOGRAPH	HELIOGRAPH	HELIOGRAPH	
	CAMPBELL	CAMPBELL	CAMPBELL	
	STOKES	STOKES	STOKES	

WMO
 Total radiation (sun and sky) T,MJ/m2
 Duration of sunshine ss, hours

Month: OCTOBER		Year: 2012		Country: CHILE	
Daily Totals					
Latitude	18°21' S	20°32' S	22°28' S	23°26' S	
Longitude	70°19'W	72°10' W	68°55' W	70°26' W	
Elevation	58 m	52 m	270 m	135 m	
Station	ARICA	IQUIQUE	CALAMA	ANTOFAGASTA	
Date					
1	4.7	1.8	11.2	0.4	
2	5.4	6.9	11.2	4.3	
3	3.3	5.5	11.1	7.7	
4	3.5	7.3	11.2	6.9	
5	5.3	5.8	13.0	6.9	
6	5.4	10.0	11.1	7.9	
7	5.6	9.0	11.1	9.5	
8	4.6	7.9	11.2	1.6	
9	6.4	8.0	11.2	4.7	
10	4.2	4.9	11.0	8.5	
11	5.1	4.6	11.1	9.1	
12	11.0	10.3	11.2	9.3	
13	5.4	7.2	11.1	7.4	
14	5.6	5.2	11.0	5.6	
15	6.3	8.1	11.2	6.9	
16	5.5	0.3	11.0	8.7	
17	6.7	1.8	11.4	8.3	
18	10.6	10.5	11.3	7.4	
19	9.6	10.9	11.3	10.3	
20	6.3	10.4	11.4	9.8	
21	5.6	5.7	11.4	11.3	
22	5.6	5.4	11.3	11.0	
23	4.4	7.2	11.3	9.9	
24	5.8	9.8	11.4	8.6	
25	5.2	10.1	11.4	9.3	
26	6.8	8.7	11.4	6.8	
27	5.3	9.6	9.8	6.6	
28	9.3	9.4	10.5	0.0	
29	2.1	5.7	10.9	6.5	
30	4.5	3.3	11.1	2.9	
31	5.9	0.2	11.0	2.1	
TT Monthly Totals					
 Daily Means					
SS Monthly Totals	181.0	211.5	346.8	216.2	
 Daily Means	5.8	6.8	11.2	7.0	
Types of Instruments	HELIOGRAPH CAMPBELL STOKES	HELIOGRAPH CAMPBELL STOKES	HELIOGRAPH CAMPBELL STOKES	HELIOGRAPH CAMPBELL STOKES	

WMO
 Total radiation (sun and sky) T,MJ/m2
 Duration of sunshine ss, hours

Month: OCTOBER Year: 2012 Country: CHILE

Daily Totals				
Latitude	27°15'S	27°10' S	29°57' S	33°23' S
Longitude	70°46'W	109°26' W	71°22' W	70°47' W
Elevation	204 m	47 m	25 m	474 m
Station	CALDERA	ISLA DE PASCUA	LA SERENA	PUDAHUEL
Date				
1	4.4	1.4	10.5	0.0
2	6.3	1.5	10.0	7.9
3	9.1	1.2	10.6	10.7
4	7.7	2.4	6.4	5.4
5	5.4	0.8	0.1	0.0
6	7.0	3.2	8.0	0.0
7	8.5	4.9	0.0	1.1
8	11.0	6.3	7.7	6.1
9	11.0	5.1	11.6	8.8
10	8.7	4.1	8.9	9.7
11	6.5	9.2	2.7	9.8
12	7.3	9.2	6.5	3.1
13	6.9	0.5	3.3	6.0
14	6.0	7.8	7.5	6.3
15	10.8	6.7	12.2	10.8
16	7.2	6.9	9.2	10.2
17	0.0	7.6	6.7	11.6
18	0.0	9.4	0.0	7.0
19	5.6	2.8	6.4	4.9
20	5.1	4.0	10.6	5.0
21	7.6	2.4	7.9	0.4
22	12.0	11.3	12.5	9.4
23	11.2	10.1	11.9	9.3
24	7.6	10.9	11.4	11.5
25	6.5	8.5	9.8	11.4
26	8.0	5.8	9.2	11.4
27	4.0	4.5	9.7	7.3
28	5.7	3.7	3.9	11.5
29	5.9	11.9	11.1	10.9
30	5.0	2.8	4.7	10.5
31	0.2	10.8	4.6	11.5
TT Monthly Totals				
 Daily Means				
SS Monthly Totals	208.2	177.7	235.6	229.5
 Daily Means	6.7	5.7	7.6	7.4
Types of Instruments	HELIOGRAPH CAMPBELL STOKES	HELIOGRAPH CAMPBELL STOKES	HELIOGRAPH CAMPBELL STOKES	HELIOGRAPH CAMPBELL STOKES

WMO
 Total radiation (sun and sky) T,MJ/m2
 Duration of sunshine ss, hours

Month: OCTOBER Year: 2012 Country: CHILE

Daily Totals				
Latitude	33°27' S	33°37' S	33°39' S	34°58' S
Longitude	70°42' W	78°50' W	71°36' W	71°12' W
Elevation	520 m	30 m	74 m	225 m
Station				
Date	QUINTA NORMAL	ROBINSON CRUSOE	SANTO DOMINGO	CURICO
1	0.0	7.8	0.0	0.0
2	7.2	7.5	10.2	10.6
3	9.4	9.8	10.1	9.9
4	5.6	0.4	0.4	0.4
5	0.0	0.8	0.5	0.0
6	0.0	6.4	0.0	0.0
7	0.0	6.1	0.5	0.2
8	3.4	6.2	6.7	4.8
9	8.0	0.6	7.4	2.7
10	10.0	7.6	9.9	5.0
11	10.4	4.8	0.4	9.2
12	1.0	1.9	0.0	0.2
13	5.9	2.9	4.0	6.2
14	5.3	2.3	5.3	5.2
15	10.6	2.3	10.7	10.8
16	10.0	7.0	10.2	7.7
17	10.5	4.7	0.0	11.1
18	8.2	1.6	3.1	6.7
19	4.6	8.0	6.7	3.6
20	7.2	4.7	3.7	2.4
21	0.7	3.9	1.5	1.2
22	8.8	2.2	10.2	7.1
23	8.2	0.7	10.3	10.6
24	10.9	4.3	.	12.3
25	10.7	0.0	.	12.0
26	10.8	3.3	11.2	8.9
27	6.9	7.3	9.3	9.4
28	10.5	9.3	11.8	11.5
29	11.2	7.8	12.6	12.5
30	9.6	9.6	4.0	6.1
31	10.6	7.8	11.8	8.1
TT Monthly Totals				
Daily Means				
SS Monthly Totals	216.2	149.6	.	196.4
Daily Means	7.0	4.8	5.9	6.3
Types of Instruments	HELIOGRAPH CAMPBELL STOKES	HELIOGRAPH CAMPBELL STOKES	HELIOGRAPH CAMPBELL STOKES	HELIOGRAPH CAMPBELL STOKES

WMO
 Total radiation (sun and sky) T,MJ/m2
 Duration of sunshine ss, hours

Month: OCTOBER Year: 2012 Country: CHILE

Daily Totals				
Latitude	36°36' S	36°46' S	38°45' S	39°41' S
Longitude	72°26' W	73°03' W	72°38' W	73°04' W
Elevation	124 m	12 m	114 m	19 m
Station	CHILLAN	CONCEPCION	TEMUCO	VALDIVIA
Date				
1	7.0	10.7	8.5	6.6
2	10.5	8.9	3.2	6.8
3	11.1	10.3	9.5	6.4
4	0.0	0.0	0.0	0.0
5	0.6	1.1	4.0	7.3
6	0.0	0.0	0.0	6.2
7	10.3	10.0	10.6	11.6
8	2.6	8.0	3.5	0.7
9	9.7	11.3	9.7	4.2
10	8.7	11.6	8.2	9.0
11	8.5	0.0	5.2	4.0
12	0.0	0.0	1.3	2.1
13	4.7	0.0	6.0	7.8
14	1.7	0.2	9.6	8.6
15	7.6	7.0	6.2	7.1
16	9.9	11.1	7.0	8.4
17	10.6	0.0	9.3	10.6
18	5.2	8.0	3.0	4.7
19	2.1	1.4	1.3	0.2
20	3.8	0.6	5.8	5.7
21	0.0	3.9	2.2	5.3
22	3.9	9.3	5.3	9.5
23	9.5	11.7	5.3	5.2
24	12.3	11.9	8.5	8.8
25	11.6	11.8	6.5	4.6
26	10.2	11.5	2.4	4.1
27	9.5	11.3	8.1	11.3
28	11.9	11.7	11.3	11.7
29	12.1	11.8	12.3	9.6
30	9.2	9.6	6.7	6.1
31	6.1	6.1	7.8	11.3
TT Monthly Totals				
 Daily Means				
SS Monthly Totals	210.9	210.8	188.3	205.5
 Daily Means	6.8	6.8	6.1	6.6
Types of Instruments	HELIOGRAPH CAMPBELL STOKES	HELIOGRAPH CAMPBELL STOKES	HELIOGRAPH CAMPBELL STOKES	HELIOGRAPH CAMPBELL STOKES

WMO
 Total radiation (sun and sky) T,MJ/m2
 Duration of sunshine ss, hours

Month: OCTOBER Year: 2012 Country: CHILE

Daily Totals				
Latitude	41°26' S	45°35' S	53°08' S	
Longitude	73°07' W	72°07' W	70°58' W	
Elevation	81 m	310 m	37 m	
Station				
Date	PUERTO MONTT	COYHAIQUE	PUNTA ARENAS	
1	5.8	3.8	9.8	
2	6.8	7.2	0.9	
3	3.8	5.2	3.9	
4	0.2	4.8	3.9	
5	9.4	7.8	11.4	
6	10.7	4.1	7.6	
7	11.1	10.1	5.1	
8	1.3	6.1	10.1	
9	0.6	8.9	8.9	
10	9.1	0.8	1.5	
11	1.5	3.2	5.7	
12	0.3	6.1	10.1	
13	4.4	9.5	3.5	
14	9.7	10.4	2.7	
15	3.4	8.3	0.0	
16	6.6	10.7	8.5	
17	6.3	10.9	0.5	
18	0.7	11.0	4.1	
19	0.1	11.7	10.1	
20	5.9	6.1	5.5	
21	4.9	9.7	11.1	
22	1.1	10.7	2.5	
23	5.0	3.7	10.2	
24	11.4	4.4	0.3	
25	2.3	0.0	11.0	
26	0.0	9.4	12.0	
27	11.4	6.7	8.0	
28	3.3	5.5	10.9	
29	8.2	7.8	6.6	
30	4.5	8.3	7.4	
31	7.3	3.7	11.0	
TT Monthly Totals				
Daily Means				
SS Monthly Totals	157.1	216.6	204.8	
Daily Means	5.1	7.0	6.6	
Types of Instruments	HELIOGRAPH CAMPBELL STOKES	HELIOGRAPH CAMPBELL STOKES	HELIOGRAPH CAMPBELL STOKES	

WMO
 Total radiation (sun and sky) T,MJ/m2
 Duration of sunshine ss, hours

Month: NOVEMBER		Year: 2012		Country: CHILE	
Daily Totals					
Latitude	18°21' S	20°32' S	22°28' S	23°26' S	
Longitude	70°19' W	72°10' W	68°55' W	70°26' W	
Elevation	58 m	52 m	270 m	135 m	
Station	ARICA	IQUIQUE	CALAMA	ANTOFAGASTA	
Date					
1	8.0	11.1	11.2	9.0	
2	6.0	10.2	11.1	10.6	
3	0.2	8.7	11.1	9.1	
4	5.5	9.1	11.1	8.1	
5	8.8	9.1	11.0	7.0	
6	7.5	10.8	11.0	7.0	
7	9.1	10.6	10.9	10.0	
8	7.3	10.6	11.0	9.8	
9	8.4	11.1	11.0	9.3	
10	6.1	9.6	11.1	9.3	
11	6.5	9.4	9.9	9.5	
12	5.1	9.2	11.5	8.1	
13	6.0	9.3	11.5	8.2	
14	7.4	10.6	11.5	6.1	
15	7.0	1.8	11.4	5.1	
16	11.4	7.3	11.4	9.9	
17	10.9	9.3	11.3	10.2	
18	6.0	10.6	11.0	8.3	
19	5.9	7.8	9.1	9.3	
20	6.4	9.2	11.4	10.7	
21	4.8	6.1	8.1	11.0	
22	4.0	10.0	11.2	11.4	
23	6.4	9.8	11.2	9.3	
24	6.6	7.3	10.6	9.1	
25	8.2	7.9	11.2	11.0	
26	7.8	10.8	11.3	9.8	
27	6.5	9.1	10.8	10.6	
28	8.2	6.6	9.4	8.3	
29	7.0	7.8	9.4	11.4	
30	7.5	11.6	10.7	11.8	
31					
TT Monthly Totals					
Daily Means					
SS Monthly Totals	206.5	272.4	324.4	278.3	
Daily Means	6.9	9.1	10.8	9.3	
Types of Instruments	HELIOGRAPH CAMPBELL STOKES	HELIOGRAPH CAMPBELL STOKES	HELIOGRAPH CAMPBELL STOKES	HELIOGRAPH CAMPBELL STOKES	

WMO
 Total radiation (sun and sky) T,MJ/m2
 Duration of sunshine ss, hours

Month: NOVEMBER Year: 2012 Country: CHILE

Daily Totals				
Latitude	27°15'S	27°10' S	29°57' S	33°23' S
Longitude	70°46'W	109°26' W	71°22' W	70°47' W
Elevation	204 m	47 m	25 m	474 m
Station	CALDERA	ISLA DE PASCUA	LA SERENA	PUDAHUEL
Date				
1	6.6	2.7	7.7	12.1
2	6.1	5.5	2.2	13.2
3	5.7	2.6	3.8	12.1
4	3.4	10.7	1.4	12.0
5	2.8	2.2	0.0	12.3
6	5.5	11.3	2.7	12.2
7	9.9	7.7	3.0	9.8
8	7.6	2.8	1.2	5.6
9	9.6	7.2	12.6	7.4
10	12.0	5.6	12.6	11.5
11	7.3	11.4	10.8	12.1
12	5.4	1.6	8.4	12.6
13	0.0	10.5	1.4	11.1
14	4.0	12.4	2.3	9.8
15	0.0	9.0	0.8	9.2
16	1.2	1.0	4.8	4.1
17	12.5	0.0	.	8.6
18	5.3	2.9	3.4	12.5
19	6.6	2.6	0.0	12.6
20	6.0	7.2	0.0	12.4
21	7.8	9.5	0.8	8.3
22	9.9	12.7	11.6	9.1
23	7.4	11.2	12.3	12.5
24	8.9	12.4	12.5	12.6
25	6.7	9.3	8.0	12.6
26	8.6	7.7	8.1	12.5
27	3.4	11.3	0.0	12.2
28	9.1	11.7	0.0	8.1
29	10.3	13.0	3.5	6.4
30	12.6	0.0	8.5	0.2
31				
TT Monthly Totals				
 Daily Means				
SS Monthly Totals	202.2	215.7	.	307.7
 Daily Means	6.7	7.2	5.0	10.3
Types of Instruments	HELIOGRAPH CAMPBELL STOKES	HELIOGRAPH CAMPBELL STOKES	HELIOGRAPH CAMPBELL STOKES	HELIOGRAPH CAMPBELL STOKES

WMO
 Total radiation (sun and sky) T,MJ/m2
 Duration of sunshine ss, hours

Month: NOVEMBER Year: 2012 Country: CHILE

Daily Totals				
Latitude	33°27' S	33°37' S	33°39' S	34°58' S
Longitude	70°42' W	78°50' W	71°36' W	71°12' W
Elevation	520 m	30 m	74 m	225 m
Station				
Date	QUINTA NORMAL	ROBINSON CRUSOE	SANTO DOMINGO	CURICO
1	11.1	7.1	10.5	7.6
2	11.1	9.6	10.6	12.5
3	11.1	3.4	11.0	13.0
4	11.0	10.3	6.1	12.7
5	11.0	11.4	10.9	13.2
6	11.2	5.3	0.7	13.0
7	10.5	0.6	5.2	10.1
8	4.9	0.6	0.0	2.1
9	7.8	8.0	4.8	3.8
10	10.7	4.2	8.9	9.1
11	11.1	9.9	12.5	13.8
12	11.2	10.0	0.0	13.7
13	10.8	9.9	1.7	8.3
14	9.4	4.3	0.0	7.0
15	9.7	3.1	0.0	6.6
16	3.4	7.9	1.7	0.2
17	8.8	8.4	11.8	8.0
18	11.1	10.2	12.6	10.8
19	11.7	10.8	1.5	13.3
20	11.1	8.7	2.3	13.4
21	8.1	1.0	10.6	13.3
22	7.2	7.9	10.5	9.0
23	11.5	5.8	12.5	13.4
24	11.7	4.6	13.1	11.7
25	11.9	8.2	12.2	13.5
26	11.5	10.9	10.1	13.5
27	11.6	6.5	7.6	13.5
28	11.6	1.7	4.8	6.1
29	5.8	8.6	9.5	7.7
30	0.2	2.5	7.7	2.3
31				
TT Monthly Totals				
Daily Means				
SS Monthly Totals	289.8	201.4	211.4	296.2
Daily Means	9.7	6.7	7.0	9.9
Types of Instruments	HELIOGRAPH CAMPBELL STOKES	HELIOGRAPH CAMPBELL STOKES	HELIOGRAPH CAMPBELL STOKES	HELIOGRAPH CAMPBELL STOKES

WMO
 Total radiation (sun and sky) T,MJ/m2
 Duration of sunshine ss, hours

Month: NOVEMBER Year: 2012 Country: CHILE

Daily Totals				
Latitude	36°36' S	36°46' S	38°45' S	39°41' S
Longitude	72°26' W	73°03' W	72°38' W	73°04' W
Elevation	124 m	12 m	114 m	19 m
Station	CHILLAN	CONCEPCION	TEMUCO	VALDIVIA
Date				
1	12.4	12.2	8.6	9.0
2	11.5	11.3	2.0	0.8
3	12.3	12.8	7.7	10.2
4	12.2	11.7	6.9	8.4
5	12.7	12.4	9.3	1.7
6	12.6	12.2	3.6	9.2
7	5.7	0.0	5.1	1.0
8	0.1	0.0	0.0	2.1
9	3.2	0.4	9.1	9.7
10	5.5	10.6	11.0	12.8
11	11.0	12.6	10.3	12.2
12	11.0	9.3	11.0	11.6
13	7.7	2.3	7.1	12.7
14	5.3	1.5	5.0	10.9
15	6.5	10.7	8.7	4.1
16	2.9	2.5	5.1	6.7
17	8.3	9.8	4.5	10.5
18	12.6	12.7	3.2	7.2
19	11.8	12.0	9.5	9.0
20	9.8	12.5	7.8	10.7
21	11.5	10.8	5.3	11.1
22	13.3	12.8	10.7	11.6
23	13.3	11.9	10.6	9.9
24	12.6	12.9	10.0	13.2
25	13.4	12.7	11.4	13.2
26	13.4	12.8	10.4	13.4
27	13.0	12.2	10.3	12.9
28	11.1	7.6	10.5	13.2
29	4.5	4.6	0.9	2.9
30	9.1	9.9	9.3	7.6
31				
TT Monthly Totals				
 Daily Means				
SS Monthly Totals	290.3	277.7	224.9	269.5
 Daily Means	9.7	9.3	7.5	9.0
Types of Instruments	HELIOGRAPH CAMPBELL STOKES	HELIOGRAPH CAMPBELL STOKES	HELIOGRAPH CAMPBELL STOKES	HELIOGRAPH CAMPBELL STOKES

WMO
 Total radiation (sun and sky) T,MJ/m2
 Duration of sunshine ss, hours

Month: NOVEMBER Year: 2012 Country: CHILE

Daily Totals				
Latitude	41°26' S	45°35' S	53°08' S	
Longitude	73°07' W	72°07' W	70°58' W	
Elevation	81 m	310 m	37 m	
Station				
Date	PUERTO MONTT	COYHAIQUE	PUNTA ARENAS	
1	0.4	10.6	6.1	
2	0.8	7.6	4.1	
3	10.1	6.8	9.2	
4	5.4	7.8	11.3	
5	0.3	0.3	9.1	
6	1.3	0.0	9.1	
7	0.7	1.5	9.2	
8	5.7	3.1	4.5	
9	11.6	7.2	6.8	
10	12.0	10.7	4.1	
11	7.5	12.1	3.2	
12	8.2	12.0	5.6	
13	12.4	12.3	0.6	
14	9.2	11.5	6.0	
15	4.4	8.9	14.4	
16	9.7	11.8	2.9	
17	9.3	11.5	9.2	
18	5.2	9.7	10.9	
19	8.2	12.1	7.8	
20	8.3	11.8	0.2	
21	11.3	.	8.1	
22	8.7	9.6	5.6	
23	10.3	7.8	12.2	
24	11.9	11.6	1.5	
25	12.9	11.4	7.9	
26	12.3	5.8	0.1	
27	11.1	5.2	9.4	
28	11.4	12.2	8.3	
29	5.0	10.5	6.2	
30	5.3	8.4	0.4	
31				
TT Monthly Totals				
Daily Means				
SS Monthly Totals	230.9	.	194.0	
Daily Means	7.7	8.7	6.5	
Types of Instruments	HELIOGRAPH CAMPBELL STOKES	HELIOGRAPH CAMPBELL STOKES	HELIOGRAPH CAMPBELL STOKES	

WMO
 Total radiation (sun and sky) T,MJ/m2
 Duration of sunshine ss, hours

Month: DECEMBER		Year: 2012		Country: CHILE	
Daily Totals					
Latitude	18°21' S	20°32' S	22°28' S	23°26' S	
Longitude	70°19'W	72°10' W	68°55' W	70°26' W	
Elevation	58 m	52 m	270 m	135 m	
Station	ARICA	IQUIQUE	CALAMA	ANTOFAGASTA	
Date					
1	8.3	11.3	10.9	10.6	
2	7.8	9.1	10.8	10.1	
3	10.5	9.9	10.0	10.1	
4	9.5	11.4	7.9	11.6	
5	0.0	7.8	10.2	11.6	
6	9.3	9.9	10.7	9.5	
7	8.6	9.2	10.1	8.2	
8	3.8	6.3	9.0	9.6	
9	8.1	7.4	10.5	11.5	
10	6.0	9.9	10.4	8.3	
11	5.8	2.2	10.0	8.4	
12	8.7	8.7	10.6	9.7	
13	11.4	11.2	10.7	11.3	
14	11.6	11.3	10.5	11.8	
15	11.0	11.0	10.6	11.8	
16	8.4	10.7	11.1	9.1	
17	7.1	8.4	11.4	8.2	
18	1.9	6.9	11.2	8.2	
19	6.7	7.2	10.3	10.9	
20	11.2	10.1	10.6	10.7	
21	5.8	8.4	10.6	10.7	
22	6.7	1.1	9.1	6.5	
23	6.1	6.1	7.6	10.9	
24	8.9	7.7	13.2	6.8	
25	4.8	4.3	11.3	5.4	
26	6.8	7.4	10.0	6.9	
27	11.4	9.3	11.6	11.8	
28	10.1	11.0	11.6	11.7	
29	7.9	9.7	11.3	10.2	
30	11.8	11.4	11.0	12.1	
31	11.1	11.6	11.6	10.7	
TT Monthly Totals					
 Daily Means					
SS Monthly Totals	247.1	267.9	326.4	304.9	
 Daily Means	8.0	8.6	10.5	9.8	
Types of Instruments	HELIOGRAPH CAMPBELL STOKES	HELIOGRAPH CAMPBELL STOKES	HELIOGRAPH CAMPBELL STOKES	HELIOGRAPH CAMPBELL STOKES	

WMO
 Total radiation (sun and sky) T,MJ/m2
 Duration of sunshine ss, hours

Month: DECEMBER		Year: 2012		Country: CHILE	
Daily Totals					
Latitude	27°15'S	27°10' S	29°57' S	33°23' S	
Longitude	70°46'W	109°26' W	71°22' W	70°47' W	
Elevation	204 m	47 m	25 m	474 m	
Station	CALDERA	ISLA DE PASCUA	LA SERENA	PUDAHUEL	
Date					
1	10.5	0.0	12.8	6.8	
2	7.1	0.2	8.2	12.2	
3	7.9	8.8	2.9	9.8	
4	12.2	11.1	10.2	12.6	
5	10.2	5.0	12.3	12.7	
6	12.8	10.0	13.2	6.4	
7	11.7	3.6	13.1	12.6	
8	7.3	9.4	12.7	12.7	
9	2.8	1.4	5.0	12.7	
10	2.5	2.6	9.0	8.7	
11	2.5	2.9	7.3	12.6	
12	6.0	6.7	6.1	12.6	
13	11.3	13.2	10.2	12.7	
14	8.9	5.1	9.2	11.8	
15	10.0	12.5	12.5	7.5	
16	8.9	9.1	8.2	10.9	
17	7.2	13.1	9.2	12.2	
18	8.5	11.6	12.0	2.0	
19	11.8	10.5	6.6	0.0	
20	12.1	9.3	.	2.3	
21	12.5	9.0	13.2	11.9	
22	8.7	10.1	12.1	12.6	
23	6.7	7.0	7.9	12.7	
24	12.7	6.7	13.1	12.5	
25	9.9	2.4	13.1	12.8	
26	7.7	2.8	13.0	12.8	
27	8.4	8.8	12.7	12.7	
28	6.6	11.6	10.9	12.6	
29	7.0	7.1	7.6	12.6	
30	8.9	6.6	4.7	12.7	
31	5.8	8.9	6.0	11.6	
TT Monthly Totals					
 Daily Means					
SS Monthly Totals	267.1	227.1	.	329.3	
 Daily Means	8.6	7.3	9.8	10.6	
Types of Instruments	HELIOGRAPH CAMPBELL STOKES	HELIOGRAPH CAMPBELL STOKES	HELIOGRAPH CAMPBELL STOKES	HELIOGRAPH CAMPBELL STOKES	

WMO
 Total radiation (sun and sky) T,MJ/m2
 Duration of sunshine ss, hours

Month: DECEMBER		Year: 2012		Country: CHILE	
Daily Totals					
Latitude	33°27' S	33°37' S	33°39' S	34°58' S	
Longitude	70°42' W	78°50' W	71°36' W	71°12' W	
Elevation	520 m	30 m	74 m	225 m	
Station					
Date	QUINTA NORMAL	ROBINSON CRUSOE	SANTO DOMINGO	CURICO	
1	3.8	1.5	11.6	6.6	
2	11.8	7.2	8.6	4.6	
3	7.9	8.4	8.8	1.6	
4	9.9	7.8	12.3	13.5	
5	11.9	5.9	12.7	12.7	
6	3.7	9.2	7.8	6.0	
7	11.6	3.2	12.6	13.2	
8	12.3	1.0	12.1	12.9	
9	12.2	4.1	0.0	13.6	
10	9.2	3.1	9.0	9.7	
11	12.3	8.7	10.1	13.1	
12	12.3	2.5	12.6	13.5	
13	12.3	6.1	12.6	10.5	
14	11.6	4.9	12.1	13.3	
15	7.3	9.1	6.7	1.5	
16	11.4	2.6	11.4	13.3	
17	11.8	2.3	9.2	3.0	
18	2.0	5.0	9.2	1.4	
19	0.0	10.2	0.0	3.8	
20	1.5	10.7	6.4	4.9	
21	11.3	8.2	12.5	13.8	
22	12.0	8.1	12.5	13.8	
23	12.2	1.8	11.6	13.6	
24	11.1	9.1	5.8	4.4	
25	12.2	5.1	11.7	11.7	
26	12.2	6.9	13.4	10.6	
27	12.3	7.1	.	12.8	
28	12.2	5.0	13.3	9.2	
29	12.3	11.1	8.6	13.6	
30	12.2	7.6	.	12.3	
31	11.4	0.8	9.6	13.3	
TT Monthly Totals					
Daily Means					
SS Monthly Totals	308.2	184.3	.	301.8	
Daily Means	9.9	5.9	9.8	9.7	
Types of Instruments	HELIOGRAPH CAMPBELL STOKES	HELIOGRAPH CAMPBELL STOKES	HELIOGRAPH CAMPBELL STOKES	HELIOGRAPH CAMPBELL STOKES	

WMO
 Total radiation (sun and sky) T,MJ/m2
 Duration of sunshine ss, hours

Month: DECEMBER Year: 2012 Country: CHILE

Daily Totals				
Latitude	36°36' S	36°46' S	38°45' S	39°41' S
Longitude	72°26' W	73°03' W	72°38' W	73°04' W
Elevation	124 m	12 m	114 m	19 m
Station	CHILLAN	CONCEPCION	TEMUCO	VALDIVIA
Date				
1	8.2	7.2	1.0	0.0
2	0.0	4.3	0.7	1.8
3	0.7	3.3	0.5	0.0
4	11.1	11.5	10.5	9.3
5	12.0	1.8	0.0	0.0
6	7.3	11.0	5.8	8.7
7	12.1	12.9	6.6	10.9
8	13.5	13.1	10.9	12.9
9	12.9	13.1	10.7	9.7
10	3.9	9.5	6.3	9.8
11	12.7	13.5	7.8	0.4
12	11.3	7.0	9.5	11.0
13	8.1	12.6	11.1	9.1
14	9.0	7.6	8.2	7.7
15	1.7	8.3	0.2	0.5
16	3.3	6.2	4.7	8.3
17	0.0	0.0	0.0	0.2
18	0.0	6.2	6.3	7.5
19	2.6	6.1	5.5	2.0
20	4.4	12.3	7.1	7.8
21	8.8	13.2	10.7	4.9
22	7.5	10.9	0.3	0.0
23	6.9	4.3	0.8	0.0
24	2.6	9.2	6.6	3.2
25	5.8	13.1	7.3	10.6
26	13.6	13.1	9.5	7.9
27	12.2	13.1	10.8	12.1
28	12.6	13.0	10.6	11.3
29	13.5	13.1	10.6	4.3
30	9.7	12.6	2.9	8.7
31	13.5	13.2	10.9	12.1
TT Monthly Totals				
 Daily Means				
SS Monthly Totals	241.5	296.3	194.4	192.7
 Daily Means	7.8	9.6	6.3	6.2
Types of Instruments	HELIOGRAPH CAMPBELL STOKES	HELIOGRAPH CAMPBELL STOKES	HELIOGRAPH CAMPBELL STOKES	HELIOGRAPH CAMPBELL STOKES

WMO
 Total radiation (sun and sky) T,MJ/m2
 Duration of sunshine ss, hours

Month: DECEMBER Year: 2012 Country: CHILE

Daily Totals				
Latitude	41°26' S	45°35' S	53°08' S	
Longitude	73°07' W	72°07' W	70°58' W	
Elevation	81 m	310 m	37 m	
Station				
Date	PUERTO MONTT	COYHAIQUE	PUNTA ARENAS	
1	0.3	2.3	0.0	
2	4.1	4.6	3.5	
3	1.5	8.2	2.4	
4	5.6	8.9	8.4	
5	1.8	5.3	3.2	
6	1.9	4.0	12.3	
7	10.1	9.9	12.0	
8	8.6	6.5	6.9	
9	0.1	1.0	13.0	
10	2.3	4.9	13.0	
11	0.0	4.5	0.0	
12	7.4	9.0	3.7	
13	2.1	5.1	7.9	
14	2.5	6.9	2.9	
15	0.2	1.6	5.7	
16	9.2	8.7	1.7	
17	0.1	4.2	14.8	
18	6.5	4.8	0.0	
19	8.8	0.8	0.0	
20	8.1	7.8	6.1	
21	0.0	2.8	6.5	
22	0.0	5.8	0.9	
23	0.0	5.9	6.9	
24	2.7	0.0	9.5	
25	5.6	8.7	8.9	
26	2.7	10.6	2.9	
27	8.0	8.0	12.0	
28	12.5	5.5	3.4	
29	0.0	4.6	12.6	
30	1.8	5.9	13.8	
31	7.3	8.4	13.5	
TT Monthly Totals				
 Daily Means				
SS Monthly Totals	121.8	175.2	208.4	
 Daily Means	3.9	5.7	6.7	
Types of Instruments	HELIOGRAPH CAMPBELL STOKES	HELIOGRAPH CAMPBELL STOKES	HELIOGRAPH CAMPBELL STOKES	