



DIRECCIÓN METEOROLÓGICA DE CHILE

INFORME SOLARIMÉTRICO SEMESTRAL

I SEMESTRE 2004

SUBDIRECCIÓN DE CLIMATOLOGÍA Y MET APLICADA

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

Month: JANUARY

Year: 2004

Country: CHILE

Daily Totals				
Latitude	23°26' S	33°23' S	34°58' S	36°46' S
Longitude	70°26' W	70°47' W	71°14' W	73°03' W
Elevation	135 m	475 m	228 m	12 m
Station	ANTOFAGASTA	PUDAHUEL	CURICO	CONCEPCION
Date				
1	20.93	30.53	26.17	.
2	20.69	30.55	26.01	.
3	20.49	30.67	26.04	.
4	20.05	30.49	26.19	.
5	20.91	30.80	23.61	.
6	21.45	30.30	26.18	.
7	19.73	30.12	25.79	.
8	18.57	29.53	25.68	.
9	14.43	29.20	25.89	.
10	16.78	29.87	26.48	.
11	13.60	29.60	26.03	.
12	20.44	29.08	25.46	.
13	21.46	29.81	25.39	.
14	21.06	29.26	25.16	.
15	20.44	22.27	13.35	.
16	20.97	27.16	14.31	.
17	21.29	28.70	25.04	.
18	21.34	28.46	25.04	.
19	20.97	29.38	25.19	.
20	20.03	28.93	24.43	.
21	19.25	28.37	25.59	.
22	20.08	28.77	25.00	.
23	20.82	28.18	24.56	.
24	21.16	28.49	24.95	.
25	20.81	28.72	21.95	.
26	20.73	28.45	23.35	.
27	20.38	27.79	24.78	.
28	20.45	28.06	20.37	.
29	20.64	28.16	22.40	.
30	20.54	28.19	24.39	.
31	20.78	28.60	25.05	.
TT Monthly Totals	621.29	896.52	749.82	.
 Daily Means	20.04	28.92	24.19	.
SS Monthly Totals				
 Daily Means				
Types of	PYRANOMETER	PYRANOMETER	PYRANOMETER	PYRANOMETER
Instruments	PSP EPPLEY	PSP EPPLEY	PSP EPPLEY	PSP EPPLEY

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

Month: JANUARY

Year: 2004

Country: CHILE

Daily Totals				
Latitude	41°25' S	45°35' S	53°00' S	
Longitude	73°05' W	72°07' W	70°51' W	
Elevation	85 m	310 m	37 m	
Station				
Date	PUERTO MONTT	COYHAIQUE	PUNTA ARENAS	
1	24.93	30.08	9.66	
2	25.80	30.81	19.88	
3	17.98	12.93	25.79	
4	17.66	15.89	19.07	
5	14.39	15.86	8.19	
6	24.97	16.80	15.39	
7	29.58	26.79	16.02	
8	14.40	16.90	24.73	
9	17.91	23.28	22.61	
10	29.15	13.06	20.01	
11	29.15	27.04	25.19	
12	29.15	29.23	27.46	
13	24.85	12.65	29.11	
14	21.98	28.51	14.01	
15	29.38	28.94	11.32	
16	13.87	26.99	23.09	
17	12.06	23.36	17.43	
18	18.56	29.03	16.81	
19	24.37	20.62	12.29	
20	14.77	22.70	18.49	
21	28.89	19.77	17.92	
22	26.97	20.89	22.71	
23	18.08	14.44	8.76	
24	9.71	18.24	13.42	
25	18.20	20.13	14.49	
26	10.78	5.77	15.23	
27	8.56	16.06	26.71	
28	8.48	18.41	14.83	
29	10.37	20.65	23.69	
30	28.46	28.07	10.89	
31	24.90	27.81	24.15	
TT Monthly Totals	628.32	661.71	569.36	
 Daily Means	20.27	21.35	21.35	
SS Monthly Totals				
 Daily Means				
Types of	PYRANOMETER	PYRANOMETER	PYRANOMETER	
Instruments	PSP EPPLEY	PSP EPPLEY	PSP EPPLEY	

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

Month: FEBRUARY

Year: 2004

Country: CHILE

Daily Totals				
Latitude	23°26' S	33°23' S	34°58' S	36°46' S
Longitude	70°26' W	70°47' W	71°14' W	73°03' W
Elevation	135 m	475 m	228 m	12 m
Station	ANTOFAGASTA	PUDAHUEL	CURICO	CONCEPCION
Date				
1	17.07	28.91	25.02	.
2	19.88	28.37	24.39	.
3	19.45	27.95	25.01	.
4	20.19	28.29	24.97	.
5	18.31	28.42	24.71	.
6	14.82	27.54	24.04	.
7	19.34	25.55	22.98	.
8	17.52	27.84	24.46	.
9	19.93	28.38	24.61	.
10	19.40	27.31	23.57	.
11	19.51	26.68	20.71	.
12	16.07	27.19	23.06	.
13	18.41	27.23	23.86	.
14	19.58	26.86	24.08	.
15	18.89	27.02	23.16	.
16	18.85	24.01	20.63	.
17	19.41	26.74	23.69	.
18	17.97	27.04	23.73	.
19	18.81	26.93	23.30	.
20	18.49	24.67	18.20	.
21	18.93	25.15	21.60	.
22	19.09	25.54	21.87	.
23	16.72	24.89	21.58	.
24	19.19	25.43	21.24	.
25	19.04	24.48	20.96	.
26	18.85	24.82	19.41	.
27	18.59	24.88	21.57	.
28	18.72	25.08	21.60	.
29	17.57	24.58	21.46	.
TT Monthly Totals	538.61	767.79	659.46	.
 Daily Means	18.57	26.48	22.74	.
SS Monthly Totals				
 Daily Means				
Types of	PYRANOMETER	PYRANOMETER	PYRANOMETER	PYRANOMETER
Instruments	PSP EPPLEY	PSP EPPLEY	PSP EPPLEY	PSP EPPLEY

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

Month: FEBRUARY

Year: 2004

Country: CHILE

Daily Totals				
Latitude	41°25' S	45°35' S	53°00' S	
Longitude	73°05' W	72°07' W	70°51' W	
Elevation	85 m	310 m	37 m	
Station				
Date	PUERTO MONTT	COYHAIQUE	PUNTA ARENAS	
1	23.47	22.33	25.03	
2	11.95	26.82	13.84	
3	25.05	27.24	20.48	
4	26.35	27.12	19.16	
5	27.61	26.81	17.86	
6	27.09	26.04	23.54	
7	16.11	25.55	22.42	
8	10.44	24.42	19.40	
9	17.91	16.74	14.25	
10	27.00	24.45	4.76	
11	19.60	10.82	4.71	
12	23.57	24.34	19.86	
13	21.85	24.27	22.10	
14	24.61	24.32	15.26	
15	19.84	22.49	14.60	
16	20.05	14.51	12.54	
17	12.26	13.21	13.10	
18	15.27	18.12	12.44	
19	24.95	21.90	5.78	
20	24.70	22.99	13.54	
21	24.70	22.73	10.27	
22	20.90	22.99	16.95	
23	18.30	22.26	13.82	
24	6.25	21.40	4.52	
25	15.50	21.82	8.71	
26	23.13	20.95	5.87	
27	17.05	20.49	15.79	
28	8.38	7.65	5.02	
29	3.66	8.57	5.73	
TT Monthly Totals	557.53	613.32	401.35	
 Daily Means	19.23	21.15	13.84	
SS Monthly Totals				
 Daily Means				
Types of	PYRANOMETER	PYRANOMETER	PYRANOMETER	
Instruments	PSP EPPLEY	PSP EPPLEY	PSP EPPLEY	

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

Month: MARCH

Year: 2004

Country: CHILE

Daily Totals				
Latitude	23°26' S	33°23' S	34°58' S	36°46' S
Longitude	70°26' W	70°47' W	71°14' W	73°03' W
Elevation	135 m	475 m	228 m	12 m
Station	ANTOFAGASTA	PUDAHUEL	CURICO	CONCEPCION
Date				
1	11.85	13.68	8.91	.
2	19.00	25.10	21.12	.
3	17.97	25.29	21.29	.
4	18.09	24.11	20.50	.
5	18.28	19.81	12.27	.
6	18.18	23.64	20.36	.
7	17.90	23.73	14.31	.
8	17.16	23.55	21.98	.
9	16.78	.	18.85	.
10	17.08	.	19.49	.
11	17.37	.	5.91	.
12	17.27	21.91	19.39	.
13	17.29	18.55	8.67	.
14	16.99	20.18	19.24	.
15	15.16	21.83	19.62	.
16	17.12	21.28	19.97	.
17	17.46	21.32	18.03	.
18	16.99	21.52	20.07	.
19	16.99	21.30	19.72	.
20	16.62	21.34	18.88	.
21	15.97	20.36	17.82	.
22	16.25	20.63	16.37	.
23	15.84	20.53	18.45	.
24	15.74	20.46	16.19	.
25	14.56	20.28	18.18	.
26	15.92	19.76	17.92	.
27	15.49	19.63	17.94	.
28	15.50	6.47	1.89	.
29	15.74	15.17	13.70	.
30	15.04	3.62	5.33	.
31	15.59	13.37	9.63	.
TT Monthly Totals	513.17	.	502.04	.
 Daily Means	16.55	19.59	16.19	.
SS Monthly Totals				
 Daily Means				
Types of	PYRANOMETER	PYRANOMETER	PYRANOMETER	PYRANOMETER
Instruments	PSP EPPLEY	PSP EPPLEY	PSP EPPLEY	PSP EPPLEY

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

Month: MARCH

Year: 2004

Country: CHILE

Daily Totals				
Latitude	41°25' S	45°35' S	53°00' S	
Longitude	73°05' W	72°07' W	70°51' W	
Elevation	85 m	310 m	37 m	
Station				
Date	PUERTO MONTT	COYHAIQUE	PUNTA ARENAS	
1	15.13	12.84	11.27	
2	14.73	11.84	14.06	
3	13.61	13.98	6.86	
4	17.47	10.29	15.59	
5	10.66	10.75	11.49	
6	8.95	7.66	15.77	
7	8.99	12.73	14.56	
8	13.15	19.21	16.12	
9	15.05	19.33	16.22	
10	20.58	19.41	17.49	
11	20.53	17.85	10.45	
12	16.64	18.85	16.68	
13	4.93	8.65	13.70	
14	6.40	8.36	7.04	
15	11.35	13.67	12.90	
16	10.28	7.92	13.64	
17	17.03	8.58	13.15	
18	18.87	11.90	11.72	
19	19.14	.	13.92	
20	14.22	.	11.93	
21	18.75	.	11.28	
22	6.40	.	11.62	
23	11.00	.	10.57	
24	10.19	.	8.49	
25	18.29	.	13.15	
26	17.35	.	8.82	
27	9.58	.	8.95	
28	8.65	.	10.71	
29	4.14	.	10.54	
30	8.27	.	3.53	
31	7.75	.	7.11	
TT Monthly Totals	398.09	.	369.30	
 Daily Means	12.84	.	11.91	
SS Monthly Totals				
 Daily Means				
Types of	PYRANOMETER	PYRANOMETER	PYRANOMETER	
Instruments	PSP EPPLEY	PSP EPPLEY	PSP EPPLEY	

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

Month: APRIL

Year: 2004

Country: CHILE

Daily Totals				
Latitude	23°26' S	33°23' S	34°58' S	36°46' S
Longitude	70°26' W	70°47' W	71°14' W	73°03' W
Elevation	135 m	475 m	228 m	12 m
Station	ANTOFAGASTA	PUDAHUEL	CURICO	CONCEPCION
Date				
1	15.41	6.77	9.94	.
2	15.38	18.86	16.86	.
3	14.55	18.57	16.99	.
4	15.62	17.85	13.96	.
5	15.47	4.55	5.68	.
6	15.73	17.86	14.64	.
7	14.71	18.21	14.69	.
8	14.28	17.00	11.37	.
9	14.76	11.64	5.81	.
10	14.69	17.34	12.37	.
11	14.38	17.06	8.20	.
12	14.27	5.41	1.38	.
13	13.43	7.00	2.27	.
14	13.77	7.25	13.98	.
15	10.87	3.13	10.86	.
16	12.93	16.03	14.81	.
17	13.23	15.92	10.53	.
18	14.03	16.15	12.64	.
19	11.52	15.62	10.96	.
20	9.58	5.65	2.18	.
21	13.08	3.09	4.46	.
22	13.30	12.85	9.69	.
23	12.52	10.53	12.24	.
24	13.70	9.95	8.96	.
25	.	11.73	12.87	.
26	13.13	14.62	12.94	.
27	.	13.68	3.09	.
28	12.06	10.02	11.35	.
29	12.93	12.34	11.78	.
30	6.87	12.44	8.11	.
TT Monthly Totals	.	369.12	305.60	.
 Daily Means	13.44	12.30	10.19	.
SS Monthly Totals				
 Daily Means				
Types of	PYRANOMETER	PYRANOMETER	PYRANOMETER	PYRANOMETER
Instruments	PSP EPPLEY	PSP EPPLEY	PSP EPPLEY	PSP EPPLEY

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

Month: APRIL

Year: 2004

Country: CHILE

Daily Totals				
Latitude	41°25' S	45°35' S	53°00' S	
Longitude	73°05' W	72°07' W	70°51' W	
Elevation	85 m	310 m	37 m	
Station				
Date	PUERTO MONTT	COYHAIQUE	PUNTA ARENAS	
1	2.71	.	7.43	
2	1.18	.	3.83	
3	10.19	.	8.57	
4	2.45	.	4.06	
5	5.74	.	4.55	
6	6.20	.	6.79	
7	3.26	.	5.92	
8	13.49	.	4.61	
9	8.55	.	4.15	
10	6.13	.	7.92	
11	2.81	.	3.73	
12	8.84	.	8.90	
13	8.75	.	9.56	
14	8.50	.	4.97	
15	2.66	.	7.87	
16	9.08	.	7.76	
17	5.37	.	5.27	
18	7.04	.	7.18	
19	8.25	.	6.29	
20	2.17	.	2.42	
21	10.53	.	7.92	
22	12.24	.	7.24	
23	10.20	.	4.56	
24	10.48	.	4.25	
25	7.56	.	6.53	
26	7.20	.	2.77	
27	5.20	.	5.18	
28	6.44	.	4.13	
29	9.93	.	3.62	
30	5.93	.	4.78	
TT Monthly Totals	209.08	.	172.73	
 Daily Means	6.97	.	5.76	
SS Monthly Totals				
 Daily Means				
Types of	PYRANOMETER	PYRANOMETER	PYRANOMETER	
Instruments	PSP EPPLEY	PSP EPPLEY	PSP EPPLEY	

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

Month: MAY

Year: 2004

Country: CHILE

Daily Totals				
Latitude	23°26' S	33°23' S	34°58' S	36°46' S
Longitude	70°26' W	70°47' W	71°14' W	73°03' W
Elevation	135 m	475 m	228 m	12 m
Station	ANTOFAGASTA	PUDAHUEL	CURICO	CONCEPCION
Date				
1	11.36	13.42	11.48	.
2	12.16	12.92	7.79	.
3	12.09	13.46	11.73	.
4	12.03	13.91	12.23	.
5	11.84	13.30	11.56	.
6	12.29	12.86	10.40	.
7	10.57	12.64	4.31	.
8	11.22	12.82	10.28	.
9	11.53	1.89	1.69	.
10	11.68	6.35	3.87	.
11	11.15	2.10	2.01	.
12	11.66	11.95	8.87	.
13	11.92	12.36	9.41	.
14	9.69	12.83	10.42	.
15	11.00	10.34	7.15	.
16	11.42	8.23	4.95	.
17	11.29	6.80	4.92	.
18	10.67	4.76	3.73	.
19	10.93	6.41	3.65	.
20	10.88	5.11	1.83	.
21	11.16	2.90	2.09	.
22	8.26	11.10	9.43	.
23	.	10.98	9.63	.
24	.	11.23	9.62	.
25	.	11.20	9.45	.
26	.	11.26	2.53	.
27	.	11.06	8.92	.
28	.	1.80	2.41	.
29	.	9.72	8.74	.
30	.	6.43	7.28	.
31	.	3.43	4.74	.
TT Monthly Totals	.	285.57	217.09	.
 Daily Means	.	9.21	7.00	.
SS Monthly Totals				
 Daily Means				
Types of	PYRANOMETER	PYRANOMETER	PYRANOMETER	PYRANOMETER
Instruments	PSP EPPLEY	PSP EPPLEY	PSP EPPLEY	PSP EPPLEY

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

Month: MAY

Year: 2004

Country: CHILE

Daily Totals				
Latitude	41°25' S	45°35' S	53°00' S	
Longitude	73°05' W	72°07' W	70°51' W	
Elevation	85 m	310 m	37 m	
Station				
Date	PUERTO MONTT	COYHAIQUE	PUNTA ARENAS	
1	3.67	1.42	5.55	
2	10.74	9.31	5.61	
3	10.19	5.00	3.02	
4	10.48	6.67	1.55	
5	9.95	5.85	3.09	
6	10.01	5.99	2.46	
7	3.93	5.85	4.02	
8	2.94	3.62	4.26	
9	6.37	5.23	4.13	
10	7.52	7.72	3.98	
11	3.68	5.94	4.24	
12	9.03	7.01	4.42	
13	9.76	5.20	3.03	
14	6.66	4.40	3.62	
15	8.71	1.07	2.32	
16	3.63	1.53	1.92	
17	1.29	1.03	1.94	
18	6.21	2.71	1.40	
19	3.98	0.77	0.57	
20	4.04	1.64	0.77	
21	7.95	2.63	2.61	
22	8.12	2.50	3.32	
23	8.00	2.00	2.28	
24	2.37	5.28	3.62	
25	2.87	5.93	2.53	
26	6.55	5.73	2.10	
27	5.91	3.07	1.93	
28	1.75	2.06	1.62	
29	1.88	3.39	1.61	
30	4.85	3.75	1.87	
31	5.05	3.72	0.49	
TT Monthly Totals	188.09	127.98	85.90	
 Daily Means	6.07	4.13	2.77	
SS Monthly Totals				
 Daily Means				
Types of	PYRANOMETER	PYRANOMETER	PYRANOMETER	
Instruments	PSP EPPLEY	PSP EPPLEY	PSP EPPLEY	

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

Month: JUNE

Year: 2004

Country: CHILE

Daily Totals				
Latitude	23°26' S	33°23' S	34°58' S	36°46' S
Longitude	70°26' W	70°47' W	71°14' W	73°03' W
Elevation	135 m	475 m	228 m	12 m
Station	ANTOFAGASTA	PUDAHUEL	CURICO	CONCEPCION
Date				
1	.	10.10	4.50	.
2	.	9.89	7.34	.
3	.	9.62	8.22	.
4	.	7.84	2.55	.
5	.	9.68	6.19	.
6	.	10.19	8.04	.
7	.	10.61	6.23	.
8	.	4.10	1.41	.
9	.	0.57	3.72	.
10	.	9.75	7.25	.
11	.	11.04	6.96	.
12	.	10.34	6.99	.
13	.	2.94	2.37	.
14	.	9.08	4.28	.
15	.	4.65	2.44	.
16	.	5.55	4.67	.
17	.	3.95	2.82	.
18	.	7.42	4.61	.
19	.	7.19	2.23	.
20	.	10.36	6.19	.
21	.	2.94	2.38	.
22	.	4.73	5.34	.
23	.	8.10	7.69	.
24	.	2.34	2.00	.
25	.	5.31	8.39	.
26	.	8.88	2.61	.
27	.	5.90	6.75	.
28	.	10.77	8.36	.
29	.	5.85	6.44	.
30	.	7.10	6.25	.
TT Monthly Totals	.	216.78	155.22	.
Daily Means	.	7.23	5.17	.
SS Monthly Totals				
Daily Means				
Types of	PYRANOMETER	PYRANOMETER	PYRANOMETER	PYRANOMETER
Instruments	PSP EPPLEY	PSP EPPLEY	PSP EPPLEY	PSP EPPLEY

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

Month: JUNE

Year: 2004

Country: CHILE

Daily Totals				
Latitude	41°25' S	45°35' S	53°00' S	
Longitude	73°05' W	72°07' W	70°51' W	
Elevation	85 m	310 m	37 m	
Station				
Date	PUERTO MONTT	COYHAIQUE	PUNTA ARENAS	
1	2.93	3.04	2.88	
2	5.13	1.62	0.59	
3	5.08	2.96	1.91	
4	1.93	2.01	1.98	
5	1.04	5.09	2.37	
6	.	2.70	0.25	
7	1.08	4.26	2.27	
8	1.82	3.26	2.59	
9	3.29	4.02	3.42	
10	7.01	5.46	1.05	
11	5.67	4.04	2.05	
12	3.17	2.50	1.02	
13	1.98	2.82	0.08	
14	0.85	1.24	1.11	
15	5.00	0.99	0.41	
16	4.37	3.26	0.59	
17	2.55	3.06	0.51	
18	2.02	4.03	0.70	
19	1.26	2.04	0.44	
20	3.02	2.59	0.81	
21	1.16	2.34	1.72	
22	3.00	3.69	0.93	
23	2.72	2.63	1.51	
24	1.27	1.66	1.08	
25	5.77	2.55	1.78	
26	1.08	1.20	0.37	
27	1.73	2.33	1.29	
28	0.89	3.82	2.46	
29	4.68	3.00	1.74	
30	1.07	3.32	3.03	
TT Monthly Totals	.	87.53	42.95	
 Daily Means	2.85	2.92	1.43	
SS Monthly Totals				
 Daily Means				
Types of	PYRANOMETER	PYRANOMETER	PYRANOMETER	
Instruments	PSP EPPLEY	PSP EPPLEY	PSP EPPLEY	

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

Month: JANUARY		Year: 2004		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	10.3	11.3	12.5	9.3
2	8.4	11.3	12.5	9.4
3	3.5	4.7	12.8	9.1
4	5.6	3.0	11.8	8.9
5	6.0	4.1	11.7	10.4
6	4.1	7.6	11.5	10.7
7	6.3	8.9	11.7	11.0
8	0.0	3.7	10.4	8.9
9	3.6	8.3	8.0	3.8
10	2.2	7.2	7.7	7.0
11	10.2	11.1	8.8	3.8
12	9.1	11.6	12.4	10.5
13	8.7	7.9	12.5	10.1
14	10.6	12.0	12.6	11.5
15	11.5	12.0	11.9	10.4
16	10.9	12.0	12.0	11.3
17	4.8	11.4	12.4	11.6
18	12.0	11.7	12.5	11.8
19	7.8	11.7	12.5	11.1
20	8.6	11.7	12.5	9.9
21	10.5	11.9	12.1	9.9
22	3.7	11.8	12.3	10.4
23	11.5	11.9	12.0	11.4
24	11.2	10.5	12.5	11.6
25	10.9	11.0	12.5	11.5
26	11.2	11.7	12.4	11.6
27	11.4	11.5	12.4	11.5
28	10.3	11.8	12.4	10.9
29	11.1	11.7	12.5	10.8
30	10.3	11.8	12.2	11.1
31	10.2	11.4	12.2	10.8
TT Monthly Totals				
Daily Means				
SS Monthly Totals	256.5	310.2	366.2	312.0
Daily Means	8.3	10.0	11.8	10.1
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: JANUARY

Year: 2004

Country: CHILE

Daily Totals				
Latitude	27°10' S	27°18' S	29°57' S	32°51' S
Longitude	109°26' W	70°25' W	71°22' W	70°37' W
Elevation	47 m	291 m	25 m	880 m
Station				
Date	ISLA DE PASCUA	COPIAPO	LA SERENA	CALLE LARGA
1	11.9	11.0	7.8	11.5
2	3.7	9.1	3.4	11.5
3	2.8	8.8	1.0	11.5
4	4.0	7.7	1.4	11.5
5	6.6	8.2	6.4	11.5
6	10.1	7.9	5.7	11.5
7	4.2	11.9	6.8	11.5
8	12.0	9.1	9.5	11.3
9	9.3	10.9	8.9	10.4
10	6.6	10.5	10.6	11.4
11	3.8	10.0	7.3	11.4
12	13.0	7.7	4.8	11.4
13	9.1	8.3	4.4	11.3
14	11.8	8.7	3.0	9.7
15	4.5	9.8	7.4	5.9
16	8.4	10.7	9.0	4.5
17	12.4	12.5	12.7	11.3
18	2.5	11.3	10.5	11.4
19	1.6	9.8	0.0	11.3
20	6.0	7.1	4.2	11.3
21	11.6	0.1	0.0	11.3
22	11.3	12.5	7.6	11.2
23	6.7	9.7	5.1	11.1
24	7.3	10.3	5.7	11.3
25	9.4	9.2	5.7	11.2
26	10.5	10.9	6.4	11.3
27	11.7	9.0	6.5	11.3
28	6.5	9.0	12.0	11.3
29	9.3	9.2	11.0	11.2
30	10.7	12.4	8.6	11.2
31	10.5	8.7	7.7	11.2
TT Monthly Totals				
 Daily Means				
SS Monthly Totals	249.8	292.0	201.1	336.7
 Daily Means	8.1	9.4	6.5	10.9
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: JANUARY		Year: 2004		Country: CHILE
Daily Totals				
Latitude	33°23' S	33°27' S	33°37' S	33°39' S
Longitude	70°47' W	70°42' W	78°50' W	71°36' W
Elevation	474 m	520 m	30 m	74 m
Station	PUDAHUEL	QUINTA NORMAL	ROBINSON CRUSOE	SANTO DOMINGO
Date				
1	12.4	11.9	7.8	2.0
2	12.4	12.3	10.6	0.0
3	12.6	12.4	9.9	0.8
4	12.2	12.3	7.9	0.1
5	12.4	12.2	4.2	11.7
6	12.5	12.3	1.0	3.6
7	12.2	12.1	7.7	4.5
8	12.3	12.2	8.1	2.1
9	12.1	11.9	0.1	11.0
10	12.4	12.2	10.4	12.7
11	12.2	12.2	4.9	11.5
12	11.9	11.9	11.4	3.0
13	11.1	11.8	11.2	0.0
14	11.8	11.4	10.9	5.8
15	7.8	6.3	11.6	5.1
16	9.6	7.6	9.3	7.7
17	12.0	11.4	7.8	12.5
18	11.1	10.8	9.5	11.8
19	12.1	11.5	10.2	6.7
20	12.0	9.2	5.7	8.6
21	12.1	11.6	5.8	10.2
22	12.1	8.5	2.5	9.8
23	11.9	11.4	5.9	7.9
24	12.0	8.4	2.7	10.0
25	12.0	11.4	9.4	3.7
26	12.1	12.0	2.2	6.1
27	12.0	11.3	4.7	12.6
28	11.9	11.2	2.2	12.3
29	11.9	11.2	8.9	10.5
30	11.9	11.3	7.1	12.6
31	11.9	11.3	4.2	11.7
TT Monthly Totals				
Daily Means				
SS Monthly Totals	366.9	345.5	215.8	228.6
Daily Means	11.8	11.1	7.0	7.4
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: JANUARY		Year: 2004		Country: CHILE
Daily Totals				
Latitude	34°58' S	36°36' S	36°46' S	38°45' S
Longitude	71°12' W	72°26' W	73°03' W	72°38' W
Elevation	225 m	124 m	12 m	114 m
Station	CURICO	CHILLAN	CONCEPCION	TEMUCO
Date				
1	12.2	13.2	9.5	11.7
2	12.5	12.7	10.5	10.0
3	12.4	12.6	11.6	7.1
4	12.3	12.5	12.0	7.2
5	11.9	12.6	12.6	8.0
6	13.0	9.5	10.2	5.7
7	13.0	11.1	12.8	11.3
8	12.3	13.2	11.6	8.1
9	12.1	12.9	13.1	8.1
10	12.9	13.2	13.1	11.2
11	13.0	13.0	12.7	10.3
12	12.8	13.0	7.1	11.2
13	12.7	12.9	12.7	11.6
14	12.7	12.2	7.0	11.3
15	4.9	11.8	7.3	11.2
16	5.6	7.9	10.0	4.7
17	12.3	12.5	9.0	8.7
18	12.0	12.3	12.6	8.3
19	12.8	11.5	10.8	8.4
20	8.6	11.8	11.5	7.2
21	12.9	12.9	12.2	10.0
22	12.8	12.8	12.8	10.5
23	12.6	10.8	11.2	6.4
24	12.7	10.6	8.8	2.9
25	9.6	11.4	3.8	5.1
26	10.3	12.8	12.4	9.2
27	12.3	12.4	10.2	10.8
28	8.7	7.9	0.6	6.0
29	9.3	9.6	12.0	8.5
30	12.7	12.5	12.7	9.9
31	12.8	12.4	12.5	11.4
TT Monthly Totals				
Daily Means				
SS Monthly Totals	358.7	368.5	326.9	272.0
Daily Means	11.6	11.9	10.5	8.8
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: JANUARY

Year: 2004

Country: CHILE

Daily Totals				
Latitude	39°41' S	41°26' S	45°35' S	45°54' S
Longitude	73°04' W	73°07' W	72°07'W	71°43' W
Elevation	19 m	81 m	310 m	520 m
Station	VALDIVIA	PUERTO MONTT	COYHAIQUE	BALMACEDA
Date				
1	13.0	8.6	12.9	.
2	13.5	8.9	13.3	.
3	9.9	5.7	3.9	.
4	7.3	2.8	1.6	.
5	4.2	4.0	5.6	.
6	6.2	8.2	4.1	.
7	13.0	13.4	10.3	.
8	12.1	2.0	5.7	.
9	11.1	9.7	9.1	.
10	12.4	5.1	1.4	.
11	12.6	8.8	10.4	.
12	13.1	11.4	12.1	.
13	13.4	11.8	4.5	.
14	12.1	7.9	11.5	.
15	13.4	13.8	13.3	.
16	4.8	1.4	10.8	.
17	3.6	2.4	8.5	.
18	7.9	6.8	12.5	.
19	12.4	12.0	8.7	.
20	11.5	8.2	8.2	.
21	12.7	13.2	7.2	.
22	12.4	13.1	6.7	.
23	7.7	3.8	3.5	.
24	0.4	0.8	5.1	.
25	10.1	9.2	4.9	.
26	8.4	2.9	1.8	.
27	5.7	1.7	7.0	.
28	7.5	0.0	7.5	.
29	6.7	1.8	8.2	.
30	12.6	0.0	13.0	.
31	9.2	8.2	12.8	.
TT Monthly Totals				
 Daily Means				
SS Monthly Totals	300.9	207.6	246.1	.
 Daily Means	9.7	6.7	7.9	.
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: JANUARY

Year: 2004

Country: CHILE

Daily Totals				
Latitude	53°08' S			
Longitude	70°58' W			
Elevation	37 m			
Station	PUNTA ARENAS			
Date				
1	0.7			
2	6.4			
3	11.5			
4	6.3			
5	0.0			
6	1.9			
7	6.2			
8	13.0			
9	9.1			
10	6.6			
11	11.2			
12	11.5			
13	14.1			
14	2.1			
15	2.3			
16	8.4			
17	7.5			
18	4.9			
19	1.3			
20	6.7			
21	4.8			
22	10.2			
23	0.0			
24	5.0			
25	2.8			
26	7.0			
27	13.6			
28	5.4			
29	12.6			
30	3.6			
31	13.5			
TT Monthly Totals				
 Daily Means				
SS Monthly Totals	210.2			
 Daily Means	6.8			
Types of	HELIOGRAPH			
Instruments	CAMPBELL			
	STOKES			

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

Month: FEBRUARY

Year: 2004

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	10.3	10.5	12.0	7.6
2	9.3	9.0	11.8	10.8
3	7.4	11.0	11.5	10.6
4	10.9	11.2	11.4	11.2
5	7.5	10.6	10.4	7.3
6	7.0	7.9	10.1	11.6
7	7.3	10.6	9.9	9.4
8	5.7	10.3	10.2	11.1
9	7.2	6.1	10.6	10.7
10	7.6	10.3	10.9	10.6
11	3.8	6.5	9.9	8.0
12	3.9	8.5	11.9	8.1
13	9.6	10.5	11.9	10.7
14	10.9	11.0	12.0	10.7
15	10.0	11.4	11.8	10.6
16	10.4	11.3	11.6	10.0
17	11.2	11.3	11.8	10.9
18	10.7	11.0	12.0	8.9
19	8.1	7.8	11.9	10.1
20	10.4	11.3	11.7	10.1
21	7.9	11.4	11.8	11.2
22	11.3	11.5	11.9	11.0
23	11.4	11.4	11.8	9.2
24	10.6	11.4	11.9	10.9
25	11.5	10.7	11.9	11.5
26	11.0	7.9	11.7	11.4
27	11.1	11.3	11.9	11.0
28	10.0	10.0	11.2	11.3
29	9.9	10.7	11.3	8.8
TT Monthly Totals				
 Daily Means				
SS Monthly Totals	263.9	294.4	330.7	295.3
 Daily Means	9.1	10.2	11.4	10.2
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: FEBRUARY

Year: 2004

Country: CHILE

Daily Totals				
Latitude	27°10' S	27°18' S	29°57' S	32°51' S
Longitude	109°26' W	70°25' W	71°22' W	70°37' W
Elevation	47 m	291 m	25 m	880 m
Station	ISLA DE PASCUA	COPIAPO	LA SERENA	CALLE LARGA
Date				
1	12.3	7.5	1.6	11.2
2	9.6	7.5	4.8	11.2
3	4.9	11.7	9.1	11.1
4	8.7	11.7	9.8	11.1
5	9.7	11.7	8.3	11.1
6	11.5	9.6	8.4	11.0
7	12.5	11.6	10.9	10.5
8	12.3	10.5	10.9	11.0
9	10.9	12.0	11.9	11.0
10	6.2	10.5	6.2	10.8
11	11.3	8.6	7.7	9.5
12	6.6	8.6	10.8	11.0
13	10.5	8.7	6.5	11.0
14	12.4	9.0	3.9	11.0
15	9.3	7.8	3.5	11.1
16	9.5	9.7	9.0	10.3
17	6.9	8.9	11.9	10.0
18	10.7	10.8	11.3	11.0
19	4.8	8.1	0.0	10.9
20	7.1	7.9	3.5	10.7
21	10.0	11.4	5.0	10.7
22	11.4	11.2	11.7	10.0
23	12.1	8.6	4.2	5.4
24	2.4	8.1	0.9	8.3
25	0.4	8.5	5.1	10.3
26	9.2	11.1	12.0	10.7
27	10.0	9.2	11.1	10.3
28	9.2	11.2	12.1	10.5
29	9.1	8.4	11.8	10.5
TT Monthly Totals				
 Daily Means				
SS Monthly Totals	261.5	280.1	223.9	303.2
 Daily Means	9.0	9.7	7.7	10.5
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: FEBRUARY		Year: 2004		Country: CHILE
Daily Totals				
Latitude	33°23' S	33°27' S	33°37' S	33°39' S
Longitude	70°47' W	70°42' W	78°50' W	71°36' W
Elevation	474 m	520 m	30 m	74 m
Station	PUDAHUEL	QUINTA NORMAL	ROBINSON CRUSOE	SANTO DOMINGO
Date				
1	11.9	11.2	8.0	0.4
2	11.8	11.1	6.0	8.8
3	11.4	11.1	8.4	11.9
4	11.8	11.0	5.9	6.6
5	11.8	11.0	10.6	4.4
6	11.7	11.0	10.5	4.9
7	10.2	10.5	5.7	6.8
8	11.5	10.5	7.8	12.1
9	11.9	11.0	3.2	11.7
10	11.5	10.8	7.0	5.5
11	11.8	10.7	0.5	0.7
12	11.4	11.0	5.6	8.9
13	11.7	10.9	4.7	6.8
14	11.6	11.0	7.2	9.1
15	11.6	11.1	3.2	8.0
16	8.6	9.3	9.5	12.1
17	11.2	10.7	10.4	12.4
18	11.7	11.1	10.3	12.4
19	11.7	11.0	9.3	7.9
20	9.9	9.9	10.1	3.2
21	11.1	10.6	9.4	11.3
22	11.4	10.6	0.5	11.4
23	10.4	10.1	0.0	1.5
24	10.0	10.1	0.2	1.8
25	9.8	10.3	2.4	0.5
26	11.0	10.4	0.0	11.8
27	11.0	10.4	6.7	10.6
28	10.9	10.5	8.2	11.7
29	11.3	10.4	6.2	10.0
TT Monthly Totals				
Daily Means				
SS Monthly Totals	323.6	309.3	177.5	225.2
Daily Means	11.2	10.7	6.1	7.8
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: FEBRUARY

Year: 2004

Country: CHILE

Daily Totals				
Latitude	34°58' S	36°36' S	36°46' S	38°45' S
Longitude	71°12' W	72°26' W	73°03' W	72°38' W
Elevation	225 m	124 m	12 m	114 m
Station	CURICO	CHILLAN	CONCEPCION	TEMUCO
Date				
1	12.7	12.5	12.3	11.4
2	12.5	12.4	12.1	5.7
3	12.8	12.0	12.5	11.0
4	12.0	12.4	12.3	11.4
5	12.7	12.5	10.3	11.1
6	11.9	9.0	2.8	10.0
7	11.3	8.0	6.8	6.0
8	12.0	10.1	8.2	2.6
9	12.6	11.7	12.4	7.9
10	12.5	12.3	12.4	11.4
11	8.7	12.1	11.4	9.6
12	11.6	12.1	12.1	9.4
13	12.3	12.4	12.6	11.1
14	12.4	12.1	12.3	8.4
15	11.6	12.0	4.9	8.3
16	9.8	10.3	11.4	10.3
17	10.5	12.1	11.7	7.3
18	9.5	11.5	12.3	9.4
19	8.7	11.7	11.9	11.4
20	4.9	11.7	7.4	11.6
21	6.4	10.7	4.5	11.1
22	6.4	11.1	11.4	6.4
23	.	11.4	6.2	6.4
24	11.5	8.4	4.4	0.2
25	11.6	11.2	8.2	3.6
26	10.9	9.9	9.0	7.6
27	11.4	9.1	8.2	4.0
28	12.1	10.9	7.7	5.2
29	12.3	8.6	8.4	5.0
TT Monthly Totals				
 Daily Means				
SS Monthly Totals	.	322.2	278.1	234.8
 Daily Means	10.9	11.1	9.6	8.1
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: FEBRUARY

Year: 2004

Country: CHILE

Daily Totals				
Latitude	39°41' S	41°26' S	45°35' S	45°54' S
Longitude	73°04' W	73°07' W	72°07'W	71°43' W
Elevation	19 m	81 m	310 m	520 m
Station	VALDIVIA	PUERTO MONTT	COYHAIQUE	BALMACEDA
Date				
1	12.5	8.2	11.1	.
2	10.8	2.5	12.5	.
3	12.1	10.1	12.6	.
4	12.5	10.0	12.8	.
5	12.5	12.9	12.8	.
6	10.4	12.5	12.5	.
7	3.6	4.7	12.6	.
8	0.7	2.9	10.6	.
9	7.7	7.4	6.1	.
10	12.2	13.4	12.3	.
11	12.3	7.9	2.9	.
12	12.6	12.1	12.2	.
13	11.8	9.6	10.7	.
14	12.3	11.5	11.9	.
15	9.2	7.9	10.4	.
16	10.7	9.5	5.7	.
17	4.8	2.3	4.6	.
18	10.1	7.1	6.3	.
19	12.5	11.9	10.5	.
20	12.0	11.9	11.9	.
21	12.1	12.4	11.0	.
22	8.8	8.0	12.0	.
23	7.4	6.4	12.0	.
24	0.0	0.0	10.5	.
25	3.5	7.1	11.6	.
26	10.5	10.8	11.6	.
27	3.2	5.7	10.7	.
28	1.3	1.9	1.5	.
29	1.6	0.0	2.0	.
TT Monthly Totals				
 Daily Means				
SS Monthly Totals	251.7	228.6	285.9	.
 Daily Means	8.7	7.9	9.9	.
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: FEBRUARY

Year: 2004

Country: CHILE

Daily Totals				
Latitude	53°08' S			
Longitude	70°58' W			
Elevation	37 m			
Station	PUNTA ARENAS			
Date				
1	11.6			
2	3.8			
3	9.0			
4	10.4			
5	8.4			
6	13.3			
7	13.1			
8	9.8			
9	7.0			
10	1.4			
11	0.0			
12	10.2			
13	13.8			
14	6.7			
15	6.6			
16	5.8			
17	5.7			
18	6.9			
19	1.3			
20	6.3			
21	2.6			
22	8.3			
23	6.6			
24	0.1			
25	0.1			
26	1.7			
27	7.0			
28	0.5			
29	0.0			
TT Monthly Totals				
 Daily Means				
SS Monthly Totals	178.0			
 Daily Means	6.1			
Types of	HELIOGRAPH			
Instruments	CAMPBELL			
	STOKES			

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

Month: MARCH		Year: 2004		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	8.1	10.7	10.1	
2	10.2	10.8	11.8	9.3	
3	10.8	10.9	11.6	9.7	
4	9.0	10.7	11.5	10.9	
5	10.4	9.8	11.5	10.7	
6	10.1	10.8	11.3	10.3	
7	7.8	10.7	11.4	10.6	
8	7.8	10.0	10.4	10.0	
9	4.9	10.1	9.8	9.8	
10	10.6	10.4	8.1	9.9	
11	9.6	10.7	11.2	10.2	
12	10.6	10.0	11.0	10.4	
13	6.7	9.8	10.9	10.4	
14	10.7	10.6	12.6	10.3	
15	10.3	10.4	7.6	8.6	
16	7.5	9.0	11.0	10.7	
17	9.1	10.7	11.0	10.7	
18	10.3	9.4	11.0	10.6	
19	9.7	10.5	11.0	10.6	
20	10.2	10.4	10.9	10.1	
21	9.7	10.3	10.2	9.0	
22	9.9	10.5	10.9	10.0	
23	8.3	9.8	10.4	9.0	
24	8.2	9.3	10.2	9.3	
25	8.2	10.5	10.9	10.4	
26	10.5	10.5	11.1	10.4	
27	9.3	10.5	10.8	9.6	
28	9.2	10.3	10.3	10.5	
29	10.1	10.5	10.8	9.9	
30	5.8	8.6	8.5	9.9	
31	10.2	10.2	10.8	10.4	
TT Monthly Totals					
Daily Means					
SS Monthly Totals	283.7	314.8	331.2	312.3	
Daily Means	9.2	10.2	10.7	10.1	
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: MARCH		Year: 2004		Country: CHILE
Daily Totals				
Latitude	27°10' S	27°18' S	29°57' S	32°51' S
Longitude	109°26' W	70°25' W	71°22' W	70°37' W
Elevation	47 m	291 m	25 m	880 m
Station				
Date	ISLA DE PASCUA	COPIAPO	LA SERENA	CALLE LARGA
1	9.7	9.4	6.4	5.0
2	11.1	11.0	11.7	10.2
3	10.4	9.5	9.0	10.2
4	6.0	6.9	6.3	10.1
5	5.2	10.6	11.1	10.0
6	10.9	9.3	10.9	10.0
7	8.9	8.0	9.1	9.8
8	11.0	8.4	4.4	10.0
9	10.2	10.4	8.3	10.0
10	10.5	8.7	5.3	10.0
11	10.4	7.1	5.6	7.2
12	10.9	7.2	10.7	9.4
13	8.8	8.7	4.9	10.0
14	9.7	9.6	11.3	9.7
15	8.6	6.8	6.1	9.8
16	10.3	6.9	4.9	9.7
17	11.4	10.5	4.6	9.7
18	7.4	7.5	8.6	9.8
19	11.1	6.7	3.3	9.8
20	2.5	7.4	1.9	9.9
21	3.6	8.1	2.9	9.7
22	1.5	8.0	0.0	9.9
23	8.5	7.4	5.0	9.9
24	5.9	7.5	4.4	9.9
25	9.0	5.4	0.0	9.9
26	8.0	9.4	6.0	9.8
27	7.2	8.4	3.6	9.8
28	8.0	8.3	3.6	4.7
29	10.7	9.6	9.9	8.0
30	10.3	8.8	5.4	1.2
31	10.0	9.0	8.7	6.7
TT Monthly Totals				
Daily Means				
SS Monthly Totals	267.7	260.5	193.9	279.8
Daily Means	8.6	8.4	6.3	9.0
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: MARCH		Year: 2004		Country: CHILE	
Daily Totals					
Latitude	33°23' S	33°27' S	33°37' S	33°39' S	
Longitude	70°47' W	70°42' W	78°50' W	71°36' W	
Elevation	474 m	520 m	30 m	74 m	
Station	PUDAHUEL	QUINTA NORMAL	ROBINSON CRUSOE	SANTO DOMINGO	
Date					
1	3.5	4.1	8.2	4.0	
2	11.0	10.3	7.8	11.7	
3	11.2	10.4	6.9	11.3	
4	11.0	10.1	6.8	3.1	
5	7.1	6.9	8.8	7.8	
6	10.0	9.5	6.7	11.2	
7	11.1	10.1	5.5	11.5	
8	11.0	10.1	4.7	8.4	
9	9.1	9.5	6.1	7.7	
10	10.2	10.0	2.5	0.0	
11	5.2	5.1	0.0	5.0	
12	9.5	9.1	0.5	0.0	
13	7.3	6.5	5.7	0.0	
14	8.4	8.4	7.8	8.6	
15	10.1	9.4	9.1	11.1	
16	10.7	9.1	2.2	11.4	
17	10.7	9.0	5.1	11.1	
18	10.7	8.9	4.7	10.7	
19	10.5	8.9	7.3	10.3	
20	10.5	9.0	9.2	9.5	
21	10.3	8.6	7.4	2.1	
22	10.1	8.5	4.3	0.0	
23	10.0	8.5	3.0	5.7	
24	10.4	8.6	8.5	10.4	
25	10.4	8.6	11.1	10.7	
26	10.2	8.7	8.6	10.5	
27	10.2	8.7	8.9	10.1	
28	0.4	0.7	0.4	0.0	
29	6.5	4.8	7.9	7.3	
30	0.3	0.7	6.8	3.3	
31	5.6	5.3	4.0	7.4	
TT Monthly Totals					
Daily Means					
SS Monthly Totals	273.2	246.1	186.5	221.9	
Daily Means	8.8	7.9	6.0	7.2	
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: MARCH		Year: 2004		Country: CHILE
Daily Totals				
Latitude	34°58' S	36°36' S	36°46' S	38°45' S
Longitude	71°12' W	72°26' W	73°03' W	72°38' W
Elevation	225 m	124 m	12 m	114 m
Station	CURICO	CHILLAN	CONCEPCION	TEMUCO
Date				
1	3.9	0.4	5.1	3.7
2	9.1	10.1	9.2	8.4
3	9.2	10.9	11.5	9.7
4	10.5	9.7	9.7	7.5
5	3.3	2.4	5.4	4.4
6	9.2	10.3	10.7	3.8
7	6.4	10.3	11.5	10.4
8	11.5	10.4	11.3	7.7
9	8.4	9.8	11.1	3.1
10	10.5	9.5	5.9	10.4
11	2.1	0.0	0.0	9.4
12	8.5	7.7	0.0	0.0
13	1.9	0.2	0.0	0.0
14	8.3	3.3	5.6	0.0
15	9.1	9.0	9.3	7.9
16	10.9	7.5	3.4	1.4
17	8.2	10.3	10.6	9.5
18	10.8	10.2	10.6	10.8
19	10.7	10.1	10.6	9.5
20	10.6	10.0	10.7	8.5
21	10.6	10.0	9.9	8.2
22	7.9	9.3	9.2	4.2
23	10.0	8.6	10.6	2.5
24	7.7	10.0	9.9	9.9
25	10.6	10.4	10.3	9.6
26	10.6	10.1	10.3	9.4
27	10.6	10.4	10.5	7.0
28	0.0	0.0	0.0	0.0
29	6.0	0.4	0.0	0.2
30	1.2	4.1	4.0	5.3
31	3.7	0.3	0.2	0.2
TT Monthly Totals				
Daily Means				
SS Monthly Totals	242.0	225.7	227.1	182.6
Daily Means	7.8	7.3	7.3	5.9
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: MARCH

Year: 2004

Country: CHILE

Daily Totals				
Latitude	39°41' S	41°26' S	45°35' S	45°54' S
Longitude	73°04' W	73°07' W	72°07'W	71°43' W
Elevation	19 m	81 m	310 m	520 m
Station	VALDIVIA	PUERTO MONTT	COYHAIQUE	BALMACEDA
Date				
1	7.3	5.3	4.1	.
2	9.2	9.4	6.4	.
3	8.0	4.4	6.0	.
4	6.1	8.2	6.4	.
5	5.3	4.3	3.9	.
6	1.7	0.8	0.6	.
7	11.1	1.2	5.2	.
8	6.1	6.6	10.8	.
9	4.8	6.7	10.5	.
10	11.3	11.2	10.0	.
11	9.9	11.2	10.6	.
12	0.0	6.8	2.1	.
13	3.7	0.0	1.8	.
14	0.0	0.3	8.5	.
15	7.3	4.6	1.0	.
16	0.2	5.0	2.6	.
17	7.0	9.6	6.5	.
18	10.9	9.1	8.1	.
19	10.9	10.3	4.0	.
20	11.0	6.6	10.5	.
21	10.7	10.8	0.9	.
22	7.7	0.2	2.6	.
23	4.7	5.0	4.9	.
24	5.7	4.9	7.7	.
25	10.3	10.1	5.7	.
26	11.3	9.3	9.3	.
27	7.6	4.1	0.2	.
28	0.0	4.1	2.4	.
29	1.1	1.6	6.9	.
30	2.6	4.4	0.5	.
31	2.5	2.9	2.6	.
TT Monthly Totals				
 Daily Means				
SS Monthly Totals	196.0	179.0	163.3	.
 Daily Means	6.3	5.8	5.3	.
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: MARCH

Year: 2004

Country: CHILE

Daily Totals				
Latitude	53°08' S			
Longitude	70°58' W			
Elevation	37 m			
Station	PUNTA ARENAS			
Date				
1	3.8			
2	6.3			
3	2.5			
4	9.7			
5	4.2			
6	7.2			
7	5.7			
8	8.1			
9	9.2			
10	9.7			
11	3.5			
12	8.8			
13	4.9			
14	0.8			
15	4.0			
16	9.7			
17	7.9			
18	6.2			
19	8.6			
20	7.0			
21	4.5			
22	8.0			
23	4.7			
24	4.6			
25	10.1			
26	4.5			
27	5.5			
28	6.6			
29	5.8			
30	0.3			
31	3.8			
TT Monthly Totals				
 Daily Means				
SS Monthly Totals	186.2			
 Daily Means	6.0			
Types of	HELIOGRAPH			
Instruments	CAMPBELL			
	STOKES			

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

Month: APRIL

Year: 2004

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	9.6	0.0	10.8	8.1
2	10.3	0.0	10.6	9.1
3	8.3	6.6	10.9	9.0
4	9.8	0.0	11.1	10.5
5	8.5	1.8	11.1	10.6
6	7.5	2.4	11.0	10.6
7	5.6	0.0	11.2	9.3
8	10.3	6.7	11.0	10.5
9	10.2	4.7	11.0	10.2
10	10.1	1.6	10.9	10.4
11	4.8	0.0	10.9	10.1
12	10.7	4.0	10.8	10.3
13	9.8	5.2	10.9	8.5
14	9.9	3.4	10.9	8.7
15	7.6	0.0	8.7	6.4
16	8.0	4.7	10.7	9.2
17	6.6	2.7	10.2	10.3
18	0.4	2.7	11.0	10.3
19	4.9	4.3	11.0	6.2
20	1.4	0.0	10.9	5.0
21	10.6	7.0	11.0	9.8
22	6.8	9.3	10.9	10.3
23	10.3	6.9	10.9	9.7
24	8.6	6.5	10.9	10.5
25	10.6	4.9	9.6	9.4
26	10.4	2.7	10.9	8.8
27	4.9	1.0	10.8	0.0
28	8.9	2.3	6.0	8.6
29	5.6	7.6	10.7	8.6
30	5.0	1.8	10.8	8.7
TT Monthly Totals				
 Daily Means				
SS Monthly Totals	236.0	100.8	318.1	267.7
 Daily Means	7.9	3.4	10.6	8.9
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: APRIL		Year: 2004		Country: CHILE
Daily Totals				
Latitude	27°10' S	27°18' S	29°57' S	32°51' S
Longitude	109°26' W	70°25' W	71°22' W	70°37' W
Elevation	47 m	291 m	25 m	880 m
Station				
Date	ISLA DE PASCUA	COPIAPO	LA SERENA	CALLE LARGA
1	9.6	8.8	10.4	4.0
2	7.9	8.4	9.4	9.3
3	9.6	3.2	6.2	10.0
4	7.1	4.7	7.8	10.0
5	7.1	5.4	6.1	5.0
6	8.5	8.6	10.2	7.7
7	8.1	6.3	8.8	10.0
8	2.3	5.0	0.0	9.0
9	5.6	4.1	0.0	2.8
10	1.1	3.4	0.0	9.3
11	2.9	4.9	0.0	9.7
12	3.5	8.4	8.1	0.0
13	2.1	6.2	1.2	9.2
14	7.8	8.6	4.9	0.6
15	2.4	2.7	0.0	0.0
16	4.8	5.6	9.1	7.5
17	9.9	8.9	10.0	10.0
18	8.2	8.9	7.6	9.3
19	6.2	7.3	6.3	9.8
20	9.7	6.2	1.9	1.3
21	6.4	0.6	0.0	0.1
22	11.2	8.8	8.4	6.6
23	4.1	7.8	9.3	5.9
24	7.1	9.0	6.8	5.9
25	8.4	9.0	10.4	7.4
26	4.9	9.1	9.7	9.8
27	4.7	8.6	9.1	9.7
28	2.1	6.4	8.8	4.5
29	3.4	9.0	9.9	8.3
30	4.2	9.0	7.7	10.0
TT Monthly Totals				
Daily Means				
SS Monthly Totals	180.9	202.9	188.1	202.7
Daily Means	6.0	6.8	6.3	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: APRIL		Year: 2004		Country: CHILE
Daily Totals				
Latitude	33°23' S	33°27' S	33°37' S	33°39' S
Longitude	70°47' W	70°42' W	78°50' W	71°36' W
Elevation	474 m	520 m	30 m	74 m
Station				
Date	PUDAHUEL	QUINTA NORMAL	ROBINSON CRUSOE	SANTO DOMINGO
1	0.5	0.5	4.6	0.0
2	9.5	8.8	5.9	9.8
3	9.3	8.6	0.1	10.9
4	9.1	8.7	0.1	2.4
5	0.4	0.0	7.2	3.3
6	9.6	7.9	5.1	10.3
7	9.5	9.8	7.9	10.8
8	9.6	8.2	0.0	10.5
9	5.0	3.0	5.3	4.1
10	8.8	8.1	5.4	9.1
11	8.5	8.0	0.9	6.0
12	0.6	0.0	1.4	2.4
13	0.5	0.4	5.0	0.0
14	1.6	0.1	4.2	9.3
15	0.0	0.0	4.8	5.3
16	8.3	7.6	6.5	10.4
17	9.3	8.2	5.5	10.2
18	9.1	8.0	0.8	10.5
19	8.9	7.9	5.6	9.0
20	0.8	0.0	1.6	1.5
21	0.0	0.0	5.7	0.4
22	5.5	5.7	6.0	8.9
23	3.2	3.2	1.7	10.3
24	3.4	4.6	6.6	7.9
25	6.3	5.2	6.8	4.7
26	8.1	8.2	4.8	10.1
27	7.3	7.2	0.9	3.2
28	5.0	5.0	3.2	5.9
29	7.2	7.3	1.8	9.3
30	7.4	7.8	6.9	7.5
TT Monthly Totals				
Daily Means				
SS Monthly Totals	172.3	158.0	122.3	204.0
Daily Means	5.7	5.3	4.1	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: APRIL		Year: 2004		Country: CHILE
Daily Totals				
Latitude	34°58' S	36°36' S	36°46' S	38°45' S
Longitude	71°12' W	72°26' W	73°03' W	72°38' W
Elevation	225 m	124 m	12 m	114 m
Station				
Date	CURICO	CHILLAN	CONCEPCION	TEMUCO
1	2.9	3.5	2.9	0.0
2	9.4	5.7	0.5	0.0
3	9.9	0.1	0.0	2.6
4	6.8	6.1	0.2	1.2
5	1.5	2.7	0.2	0.0
6	7.9	5.7	7.2	4.8
7	7.7	8.2	5.7	0.0
8	4.5	7.6	6.6	5.5
9	0.6	0.7	0.4	1.1
10	6.4	7.5	8.8	7.1
11	2.1	0.0	0.0	0.0
12	0.0	2.0	0.0	0.0
13	0.0	8.1	6.5	5.2
14	7.4	8.0	9.8	8.3
15	4.3	8.8	9.6	6.6
16	9.3	1.0	6.6	2.3
17	3.7	9.8	3.3	1.0
18	6.9	9.1	9.7	8.8
19	5.5	0.0	9.2	7.4
20	0.0	0.2	0.0	0.0
21	1.5	0.4	1.4	3.5
22	7.3	7.2	3.0	0.0
23	6.7	8.6	9.8	8.2
24	4.8	8.3	9.8	9.0
25	9.1	0.0	9.6	6.2
26	9.0	0.0	5.6	1.7
27	0.0	5.7	1.6	2.7
28	6.3	8.0	7.0	2.4
29	8.6	6.7	8.1	6.2
30	4.6	0.0	7.5	6.8
TT Monthly Totals				
Daily Means				
SS Monthly Totals	154.7	139.7	150.6	108.6
Daily Means	5.2	4.7	5.0	3.6
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: APRIL

Year: 2004

Country: CHILE

Daily Totals				
Latitude	39°41' S	41°26' S	45°35' S	45°54' S
Longitude	73°04' W	73°07' W	72°07'W	71°43' W
Elevation	19 m	81 m	310 m	520 m
Station	VALDIVIA	PUERTO MONTT	COYHAIQUE	BALMACEDA
Date				
1	0.0	10.2	5.7	.
2	0.0	8.2	5.3	.
3	6.5	10.3	5.8	.
4	0.0	10.4	1.7	.
5	0.2	10.0	1.0	.
6	2.3	10.3	2.8	.
7	0.0	6.8	7.0	.
8	1.3	10.3	8.6	.
9	0.4	9.0	4.4	.
10	1.6	10.2	1.0	.
11	0.0	5.0	0.9	.
12	2.7	10.1	0.7	.
13	2.9	10.1	0.6	.
14	3.8	7.6	2.5	.
15	0.6	7.7	3.2	.
16	1.2	9.8	7.2	.
17	3.3	9.3	2.0	.
18	5.5	10.2	9.0	.
19	5.2	9.6	4.4	.
20	0.0	3.6	0.0	.
21	6.4	10.2	0.9	.
22	7.6	10.1	8.5	.
23	4.9	10.1	7.0	7.0
24	4.7	10.2	6.6	7.5
25	1.3	9.0	5.8	8.3
26	5.3	8.3	3.6	7.6
27	4.8	4.0	7.0	8.3
28	1.1	8.5	1.3	2.4
29	6.1	10.1	7.6	8.8
30	4.9	9.6	0.6	0.9
TT Monthly Totals				
 Daily Means				
SS Monthly Totals	84.6	268.8	122.7	.
 Daily Means	2.8	9.0	4.1	.
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: APRIL

Year: 2004

Country: CHILE

Daily Totals				
Latitude	53°08' S			
Longitude	70°58' W			
Elevation	37 m			
Station	PUNTA ARENAS			
Date				
1	2.6			
2	0.5			
3	6.5			
4	0.1			
5	0.6			
6	2.0			
7	3.4			
8	2.4			
9	0.0			
10	5.1			
11	0.1			
12	7.2			
13	8.5			
14	3.1			
15	7.8			
16	7.7			
17	1.1			
18	5.1			
19	5.5			
20	0.0			
21	8.9			
22	6.3			
23	0.0			
24	1.5			
25	8.1			
26	0.8			
27	5.9			
28	2.8			
29	2.2			
30	6.1			
TT Monthly Totals				
 Daily Means				
SS Monthly Totals	111.9			
 Daily Means	3.7			
Types of	HELIOGRAPH			
Instruments	CAMPBELL			
	STOKES			

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

Month: MAY

Year: 2004

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	1.6	0.9	10.9	6.6
2	9.9	9.9	10.8	8.6
3	9.7	9.8	10.7	10.2
4	9.5	7.6	10.8	9.2
5	6.2	7.3	10.7	9.9
6	7.7	10.1	10.7	10.1
7	8.0	10.0	10.7	6.4
8	4.7	9.6	10.7	8.3
9	6.2	9.8	10.7	8.3
10	5.7	.	10.7	9.8
11	4.7	.	9.2	8.7
12	8.7	.	10.5	10.1
13	10.3	9.9	10.5	9.5
14	4.4	6.5	9.1	6.2
15	10.2	10.0	10.5	8.4
16	9.8	9.8	10.5	9.7
17	8.3	9.4	10.2	9.4
18	4.8	7.2	9.8	8.4
19	6.9	5.7	10.2	9.4
20	9.0	9.7	8.0	9.4
21	8.7	9.7	10.4	8.2
22	0.0	0.0	9.4	5.8
23	4.9	9.9	10.3	9.9
24	9.7	10.0	10.3	10.2
25	9.4	9.9	10.3	9.8
26	7.4	9.7	10.0	9.3
27	5.4	9.6	10.1	8.6
28	4.4	4.6	10.4	8.5
29	4.9	9.5	10.1	9.8
30	6.7	9.7	8.8	8.1
31	8.8	9.7	10.0	9.6
TT Monthly Totals				
 Daily Means				
SS Monthly Totals	216.6	.	316.0	274.4
 Daily Means	7.0	8.4	10.2	8.9
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: MAY

Year: 2004

Country: CHILE

Daily Totals				
Latitude	27°10' S	27°18' S	29°57' S	32°51' S
Longitude	109°26' W	70°25' W	71°22' W	70°37' W
Elevation	47 m	291 m	25 m	880 m
Station				
Date	ISLA DE PASCUA	COPIAPO	LA SERENA	CALLE LARGA
1	2.5	7.8	7.1	9.7
2	9.5	5.3	4.4	6.2
3	0.8	8.4	1.4	9.5
4	5.8	5.8	0.2	9.7
5	7.6	6.2	3.2	9.6
6	10.0	7.7	1.7	9.6
7	9.4	8.9	4.9	9.3
8	1.5	4.0	0.0	9.5
9	8.1	6.9	4.1	1.7
10	0.9	4.9	8.3	7.2
11	3.9	6.3	0.0	0.0
12	8.0	8.7	9.4	8.9
13	6.3	8.2	7.1	9.0
14	8.5	6.1	5.4	9.5
15	4.4	1.1	3.6	7.5
16	8.5	6.9	5.8	4.8
17	4.3	5.9	6.8	2.7
18	5.7	6.9	0.0	1.2
19	4.7	4.7	5.9	8.2
20	6.0	8.9	9.2	0.6
21	0.4	8.9	9.4	0.2
22	1.7	6.9	7.8	6.6
23	4.6	6.6	3.6	7.8
24	7.1	8.4	9.5	9.3
25	1.9	8.8	9.6	9.2
26	9.1	8.9	6.0	8.2
27	8.1	8.2	6.7	8.6
28	1.9	6.0	7.4	1.0
29	1.6	8.0	8.9	8.0
30	8.1	7.4	6.8	0.6
31	4.5	7.7	6.2	0.0
TT Monthly Totals				
 Daily Means				
SS Monthly Totals	165.4	215.4	170.4	193.9
 Daily Means	5.3	6.9	5.5	6.3
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: MAY

Year: 2004

Country: CHILE

Daily Totals				
Latitude	33°23' S	33°27' S	33°37' S	33°39' S
Longitude	70°47' W	70°42' W	78°50' W	71°36' W
Elevation	474 m	520 m	30 m	74 m
Station	PUDAHUEL	QUINTA NORMAL	ROBINSON CRUSOE	SANTO DOMINGO
Date				
1	8.4	7.7	5.0	8.7
2	8.4	6.9	2.2	4.7
3	8.5	7.6	6.4	9.9
4	8.3	8.1	7.2	9.1
5	8.2	8.2	7.2	1.4
6	7.8	8.1	7.3	0.0
7	7.3	8.0	4.5	6.9
8	9.2	7.9	3.5	0.0
9	0.0	0.0	1.9	0.0
10	1.7	1.6	2.2	1.7
11	0.0	0.0	2.8	0.0
12	8.2	7.2	1.4	8.3
13	8.3	8.0	5.6	8.7
14	8.9	8.1	6.6	9.6
15	7.1	5.5	2.1	0.0
16	4.9	5.6	6.7	0.0
17	0.8	2.0	3.7	0.0
18	0.0	0.0	0.1	0.9
19	1.6	1.8	0.8	3.0
20	1.3	1.8	2.6	0.0
21	0.0	0.3	4.8	0.6
22	6.8	7.0	3.3	8.8
23	7.9	7.8	2.9	9.2
24	7.8	7.6	0.2	7.1
25	8.2	7.5	0.0	6.0
26	8.0	7.4	3.2	8.7
27	8.0	7.1	4.5	0.2
28	0.0	0.0	3.4	0.3
29	6.7	6.6	2.0	8.1
30	2.6	3.4	1.2	3.4
31	0.0	0.0	0.0	1.7
TT Monthly Totals				
 Daily Means				
SS Monthly Totals	164.9	158.8	105.3	127.0
 Daily Means	5.3	5.1	3.4	4.1
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: MAY

Year: 2004

Country: CHILE

Daily Totals				
Latitude	34°58' S	36°36' S	36°46' S	38°45' S
Longitude	71°12' W	72°26' W	73°03' W	72°38' W
Elevation	225 m	124 m	12 m	114 m
Station	CURICO	CHILLAN	CONCEPCION	TEMUCO
Date				
1	8.2	0.3	0.0	0.0
2	5.8	8.2	9.1	8.6
3	8.4	8.5	8.7	8.3
4	9.3	8.9	9.8	8.7
5	8.8	8.2	9.5	8.5
6	6.4	7.6	0.0	8.5
7	0.9	5.3	5.9	1.3
8	6.6	0.8	4.4	0.0
9	0.0	3.2	0.0	0.3
10	0.4	0.0	9.0	5.9
11	0.0	0.0	2.2	0.0
12	6.2	7.4	8.7	7.5
13	6.4	8.4	9.1	8.4
14	8.3	7.0	8.3	6.0
15	3.7	4.0	4.3	4.7
16	0.6	4.6	0.0	0.4
17	0.0	3.4	0.1	0.7
18	0.2	0.0	5.7	3.3
19	0.0	0.1	0.0	2.0
20	0.0	0.0	0.5	0.3
21	0.7	2.4	1.6	3.1
22	8.1	4.9	6.4	8.2
23	8.6	8.1	8.3	8.2
24	8.8	5.3	8.8	7.9
25	8.7	2.8	6.4	0.0
26	0.0	5.7	8.5	6.7
27	7.0	1.0	4.7	5.4
28	0.0	6.9	0.0	0.0
29	7.3	0.0	7.2	4.7
30	5.0	5.8	0.0	5.8
31	2.1	4.9	6.8	4.9
TT Monthly Totals				
 Daily Means				
SS Monthly Totals	136.5	133.7	154.0	138.3
 Daily Means	4.4	4.3	5.0	4.5
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: MAY

Year: 2004

Country: CHILE

Daily Totals				
Latitude	39°41' S	41°26' S	45°35' S	45°54' S
Longitude	73°04' W	73°07' W	72°07'W	71°43' W
Elevation	19 m	81 m	310 m	520 m
Station	VALDIVIA	PUERTO MONTT	COYHAIQUE	BALMACEDA
Date				
1	0.1	0.4	0.0	0.0
2	8.5	8.2	7.5	8.9
3	8.7	8.6	3.2	3.6
4	8.5	8.8	4.5	5.0
5	9.1	7.8	3.4	4.6
6	4.9	6.9	4.7	5.9
7	0.1	0.2	6.4	8.6
8	0.0	0.3	1.3	7.9
9	3.6	4.5	4.4	8.4
10	8.0	7.4	6.5	7.3
11	0.3	1.5	4.5	5.6
12	5.6	7.3	4.8	6.1
13	8.7	7.8	3.6	4.1
14	3.8	2.6	0.2	1.8
15	2.5	8.2	0.0	0.0
16	0.0	0.2	0.1	0.5
17	0.0	0.0	0.0	0.0
18	1.3	3.2	0.0	0.0
19	3.2	0.5	0.0	0.0
20	0.0	0.5	0.0	0.0
21	6.5	6.9	0.0	5.9
22	8.3	8.0	0.0	2.9
23	7.4	5.8	0.0	1.8
24	0.0	0.1	3.0	2.2
25	0.0	0.1	6.6	7.1
26	7.9	5.5	6.6	7.5
27	4.5	2.9	1.5	0.5
28	0.0	0.0	0.0	0.0
29	0.2	0.0	1.4	0.1
30	2.1	1.6	1.4	2.3
31	0.5	4.1	3.3	3.5
TT Monthly Totals				
 Daily Means				
SS Monthly Totals	114.3	119.9	78.9	112.1
 Daily Means	3.7	3.9	2.5	3.6
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: MAY

Year: 2004

Country: CHILE

Daily Totals				
Latitude	53°08' S			
Longitude	70°58' W			
Elevation	37 m			
Station	PUNTA ARENAS			
Date				
1	8.3			
2	6.3			
3	3.5			
4	0.0			
5	3.3			
6	1.5			
7	5.6			
8	5.3			
9	5.8			
10	5.2			
11	6.9			
12	6.2			
13	2.2			
14	3.4			
15	0.3			
16	0.0			
17	0.8			
18	0.0			
19	0.0			
20	0.0			
21	2.7			
22	1.7			
23	0.0			
24	6.0			
25	4.6			
26	2.2			
27	0.0			
28	1.5			
29	0.3			
30	2.6			
31	0.0			
TT Monthly Totals				
 Daily Means				
SS Monthly Totals	86.2			
 Daily Means	2.8			
Types of	HELIOGRAPH			
Instruments	CAMPBELL			
	STOKES			

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

Month: JUNE

Year: 2004

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	9.5	9.7	10.1	9.6
2	8.0	9.6	10.1	9.0
3	4.5	4.6	10.3	3.7
4	6.0	6.4	10.4	4.9
5	9.2	9.6	10.2	9.3
6	5.6	7.9	10.4	8.5
7	6.3	9.5	10.3	9.5
8	7.3	9.7	10.4	9.6
9	4.6	8.4	10.4	9.1
10	3.9	7.1	10.4	7.4
11	6.3	9.7	10.4	7.9
12	3.5	1.4	10.5	9.0
13	7.2	6.0	10.4	8.1
14	6.3	7.4	10.5	6.9
15	2.5	0.0	10.6	3.8
16	8.8	9.0	10.5	8.3
17	1.3	8.6	10.4	6.9
18	5.2	7.2	10.4	5.1
19	7.4	7.0	10.3	2.7
20	5.6	9.1	10.3	9.0
21	2.6	0.5	10.6	6.9
22	1.6	8.5	10.2	7.5
23	6.1	7.7	9.7	8.1
24	4.3	0.0	10.5	6.4
25	3.8	0.0	10.4	6.4
26	3.8	7.4	10.3	9.4
27	4.2	9.4	10.4	8.4
28	3.3	0.9	10.4	5.7
29	3.9	3.9	8.1	7.7
30	6.8	2.9	7.2	3.7
TT Monthly Totals				
 Daily Means				
SS Monthly Totals	159.4	189.1	305.1	218.5
 Daily Means	5.3	6.3	10.2	7.3
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: JUNE

Year: 2004

Country: CHILE

Daily Totals				
Latitude	27°10' S	27°18' S	29°57' S	32°51' S
Longitude	109°26' W	70°25' W	71°22' W	70°37' W
Elevation	47 m	291 m	25 m	880 m
Station				
Date	ISLA DE PASCUA	COPIAPO	LA SERENA	CALLE LARGA
1	2.7	7.0	5.9	8.1
2	1.3	8.7	9.0	9.0
3	5.6	7.0	2.8	8.2
4	4.3	4.7	0.0	9.0
5	4.5	8.5	8.7	8.0
6	6.8	6.0	8.4	8.5
7	8.4	7.1	1.6	9.0
8	4.5	8.3	8.8	0.6
9	6.7	5.9	0.0	0.0
10	8.6	7.9	8.9	8.0
11	5.7	8.8	9.2	8.0
12	7.3	8.7	9.6	8.1
13	6.1	7.1	6.1	0.0
14	7.8	8.7	9.2	6.2
15	9.0	6.1	5.1	1.1
16	5.2	5.3	5.4	2.0
17	6.9	8.4	3.8	0.9
18	8.3	7.4	4.7	4.1
19	2.7	0.0	2.8	4.8
20	5.0	8.6	6.5	6.9
21	7.5	8.8	6.6	0.0
22	0.9	6.8	6.5	2.3
23	8.1	8.6	9.2	6.4
24	7.6	6.2	7.7	0.0
25	6.6	1.7	1.3	1.9
26	2.3	7.9	5.4	8.5
27	9.1	8.1	2.7	8.9
28	3.8	6.9	1.9	9.0
29	4.6	6.8	8.1	8.9
30	1.7	7.3	6.6	9.0
TT Monthly Totals				
 Daily Means				
SS Monthly Totals	169.6	209.3	172.5	165.4
 Daily Means	5.7	7.0	5.8	5.5
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: JUNE		Year: 2004		Country: CHILE
Daily Totals				
Latitude	33°23' S	33°27' S	33°37' S	33°39' S
Longitude	70°47' W	70°42' W	78°50' W	71°36' W
Elevation	474 m	520 m	30 m	74 m
Station	PUDAHUEL	QUINTA NORMAL	ROBINSON CRUSOE	SANTO DOMINGO
Date				
1	7.4	6.9	0.0	8.5
2	7.8	6.5	1.8	8.9
3	7.6	7.0	3.9	6.0
4	6.3	6.3	3.7	5.4
5	7.3	6.2	4.6	8.2
6	7.6	7.9	3.5	9.4
7	8.0	8.0	2.1	9.3
8	0.2	0.0	3.0	0.2
9	0.0	0.0	6.3	0.4
10	6.6	6.2	2.0	8.2
11	7.9	7.4	0.5	9.3
12	6.8	7.6	1.9	6.4
13	0.0	0.0	0.4	0.1
14	6.9	6.0	0.8	5.8
15	0.0	0.0	0.0	0.0
16	2.2	1.9	4.7	3.3
17	1.5	1.5	0.0	4.0
18	4.6	3.8	0.0	3.2
19	3.6	4.0	3.1	0.0
20	7.7	6.7	5.0	5.0
21	0.0	0.0	0.0	0.5
22	1.4	0.3	3.9	1.8
23	5.5	4.0	4.7	6.0
24	0.0	0.0	0.0	0.3
25	2.9	2.5	4.8	7.3
26	6.4	6.7	0.4	0.0
27	3.2	4.7	5.2	6.4
28	8.3	7.7	1.1	0.0
29	3.3	4.3	5.4	6.4
30	4.2	5.0	5.7	8.0
TT Monthly Totals				
Daily Means				
SS Monthly Totals	135.2	129.1	78.5	138.3
Daily Means	4.5	4.3	2.6	4.6
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: JUNE

Year: 2004

Country: CHILE

Daily Totals				
Latitude	34°58' S	36°36' S	36°46' S	38°45' S
Longitude	71°12' W	72°26' W	73°03' W	72°38' W
Elevation	225 m	124 m	12 m	114 m
Station	CURICO	CHILLAN	CONCEPCION	TEMUCO
Date				
1	2.7	3.4	3.8	5.9
2	5.1	2.3	5.3	3.9
3	6.8	1.3	0.0	0.5
4	1.8	0.4	0.1	2.1
5	1.5	5.2	8.4	6.0
6	5.4	8.8	8.0	4.7
7	3.0	3.5	3.8	0.0
8	0.0	3.0	0.0	0.0
9	2.1	0.0	4.7	4.0
10	4.9	7.4	8.1	7.6
11	4.6	6.3	8.1	4.4
12	4.6	2.8	7.7	0.6
13	0.0	0.0	0.0	0.0
14	0.8	0.1	0.0	0.0
15	0.0	5.3	0.0	0.0
16	0.7	5.9	6.0	5.3
17	0.0	0.0	0.0	1.6
18	0.4	0.0	0.0	0.0
19	0.0	0.0	0.0	0.5
20	4.5	0.0	4.8	2.3
21	0.0	0.0	0.1	0.0
22	3.5	2.7	6.0	1.2
23	5.3	2.3	3.2	4.1
24	0.0	0.0	0.0	0.4
25	7.2	5.3	2.7	0.5
26	0.0	0.0	1.6	0.0
27	4.9	0.5	0.0	0.0
28	5.1	0.0	0.0	0.0
29	2.5	8.4	8.6	7.4
30	4.0	2.7	4.7	0.0
TT Monthly Totals				
 Daily Means				
SS Monthly Totals	81.4	77.6	95.7	63.0
 Daily Means	2.7	2.6	3.2	2.1
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: JUNE

Year: 2004

Country: CHILE

Daily Totals				
Latitude	39°41' S	41°26' S	45°35' S	45°54' S
Longitude	73°04' W	73°07' W	72°07'W	71°43' W
Elevation	19 m	81 m	310 m	520 m
Station	VALDIVIA	PUERTO MONTT	COYHAIQUE	BALMACEDA
Date				
1	3.9	1.1	2.7	5.5
2	0.5	3.2	0.0	0.0
3	0.5	2.9	3.8	4.3
4	0.9	0.0	0.0	0.7
5	3.8	3.0	4.8	6.4
6	0.0	0.7	0.6	2.4
7	0.0	0.0	5.1	6.5
8	0.0	0.0	2.3	5.3
9	6.6	0.8	4.2	4.4
10	5.0	7.1	5.0	3.5
11	0.0	3.7	3.2	1.5
12	0.0	0.0	0.0	2.2
13	0.0	0.0	2.0	0.7
14	0.0	0.0	0.0	0.0
15	0.2	3.2	0.0	1.1
16	0.0	2.9	1.8	5.0
17	1.0	1.2	1.3	3.7
18	0.0	0.0	4.8	5.6
19	0.0	0.0	0.0	0.0
20	4.0	0.8	1.6	2.4
21	0.0	0.0	0.0	0.0
22	0.4	0.7	2.5	4.8
23	0.9	0.0	0.7	3.6
24	0.0	0.0	0.1	0.7
25	0.3	3.2	2.0	5.2
26	0.0	0.0	0.0	0.0
27	0.0	0.0	1.3	1.5
28	0.0	0.0	3.3	5.5
29	3.3	1.8	1.6	5.5
30	0.0	0.0	2.4	4.9
TT Monthly Totals				
 Daily Means				
SS Monthly Totals	31.3	36.3	57.1	92.9
 Daily Means	1.0	1.2	1.9	3.1
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: JUNE

Year: 2004

Country: CHILE

Daily Totals				
Latitude	53°08' S			
Longitude	70°58' W			
Elevation	37 m			
Station	PUNTA ARENAS			
Date				
1	0.5			
2	0.0			
3	4.4			
4	0.7			
5	5.7			
6	0.0			
7	1.2			
8	1.5			
9	6.2			
10	0.6			
11	4.1			
12	1.1			
13	0.0			
14	0.3			
15	0.0			
16	0.0			
17	0.0			
18	0.0			
19	0.0			
20	0.0			
21	3.0			
22	0.0			
23	3.5			
24	1.4			
25	4.3			
26	0.0			
27	1.8			
28	6.6			
29	2.4			
30	4.5			
TT Monthly Totals				
 Daily Means				
SS Monthly Totals	53.8			
 Daily Means	1.8			
Types of	HELIOGRAPH			
Instruments	CAMPBELL			
	STOKES			