



DIRECCIÓN METEOROLÓGICA DE CHILE

INFORME
SOLARIMÉTRICO
I SEMESTRE 2009

CLIMATOLOGÍA Y METEOROLOGÍA APLICADA

**DIRECCION METEOROLOGICA DE CHILE
SUBDIRECCION DE CLIMAT. Y MET. APLICADA
DEPTO. CLIMATOLOGIA**

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

Month: JANUARY

Year: 2009

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	DESIERTO ATACAMA
Date				
1	24.08	31.43	32.08	20.98
2	27.45	31.38	31.50	27.55
3	27.70	31.47	31.53	23.94
4	26.39	31.19	31.01	31.08
5	27.61	30.60	31.01	30.33
6	27.70	30.78	30.39	28.30
7	27.66	31.26	30.84	28.49
8	27.29	31.80	28.83	26.75
9	25.27	32.43	30.78	24.88
10	20.28	32.58	31.44	8.10
11	21.33	32.29	31.67	17.00
12	24.10	27.49	30.19	20.54
13	25.82	29.26	31.03	19.58
14	22.79	28.53	30.99	31.20
15	26.84	30.52	30.89	28.24
16	25.95	30.15	31.21	21.67
17	20.32	27.26	26.68	23.12
18	27.29	21.96	29.08	30.60
19	26.59	30.29	30.73	30.81
20	27.18	30.03	30.35	25.85
21	27.47	30.66	30.79	26.63
22	27.34	30.42	29.71	26.27
23	22.81	30.65	23.98	6.60
24	26.85	30.78	31.15	15.46
25	26.83	30.25	30.71	16.54
26	26.51	29.99	.	8.58
27	25.92	30.12	.	10.70
28	26.34	29.88	.	10.69
29	25.88	29.25	.	25.76
30	25.80	.	.	30.33
31	25.76	.	.	29.72
TT Monthly Totals	797.15	.	.	706.28
 Daily Means	25.71	30.16	.	22.78
SS Monthly Totals				
 Daily Means				
Types of Instruments	PYRANOMETER PSP EPPLEY	PYRANOMETER PSP EPPLEY	PYRANOMETER PSP EPPLEY	PYRANOMETER PSP EPPLEY

**DIRECCION METEOROLOGICA DE CHILE
SUBDIRECCION DE CLIMAT. Y MET. APLICADA
DEPTO. CLIMATOLOGIA**

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

Month: JANUARY

Year: 2009

Country: CHILE

Daily Totals				
Latitude	33°27' S	34°58' S	36°46' S	41°25' S
Longitude	70°42' W	71°14' W	73°03' W	73°05' W
Elevation	520 m	228 m	12 m	85 m
Station	QUINTA NORMAL	CURICO	CONCEPCION	PUERTO MONTT
Date				
1	28.93	.	23.77	.
2	29.42	.	24.61	.
3	29.08	.	24.44	.
4	28.29	.	24.43	.
5	29.12	.	24.09	.
6	28.87	.	23.95	.
7	28.86	.	23.35	.
8	27.46	.	24.13	.
9	28.97	.	23.92	.
10	28.53	.	23.50	.
11	28.44	.	23.73	.
12	28.42	.	22.91	.
13	28.40	.	23.41	.
14	27.80	.	20.89	.
15	27.39	.	23.97	.
16	27.77	.	23.12	.
17	22.16	.	20.41	.
18	27.38	.	22.72	.
19	27.37	.	22.60	.
20	26.78	.	21.80	.
21	26.39	.	20.89	.
22	26.06	.	18.49	.
23	26.02	.	10.65	.
24	15.68	.	17.16	.
25	27.17	.	23.87	.
26	27.23	.	23.36	.
27	27.26	.	23.13	.
28	26.75	.	23.21	.
29	26.15	.	22.95	.
30	25.58	.	21.37	.
31	25.81	.	21.78	.
TT Monthly Totals	839.55	.	692.61	.
 Daily Means	27.08	.	22.34	.
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: JANUARY

Year: 2009

Country: CHILE

Daily Totals				
Latitude	45°35' S	53°00' S		
Longitude	72°07' W	70°51' W		
Elevation	310 m	37 m		
Station	COYHAIQUE	PUNTA ARENAS		
Date				
1	29.29	20.77		
2	21.48	22.96		
3	27.30	23.83		
4	14.32	28.92		
5	26.03	23.99		
6	21.58	24.49		
7	27.13	23.68		
8	28.80	26.99		
9	28.37	12.68		
10	26.64	28.58		
11	28.62	22.21		
12	13.73	24.71		
13	17.35	13.46		
14	20.50	22.31		
15	14.42	10.80		
16	14.91	29.19		
17	20.49	21.77		
18	16.09	10.64		
19	25.60	22.51		
20	22.95	24.70		
21	13.20	14.96		
22	18.03	26.38		
23	12.41	25.36		
24	16.42	24.86		
25	15.80	16.51		
26	19.32	15.49		
27	26.54	14.05		
28	23.57	14.49		
29	14.64	15.34		
30	21.84	17.38		
31	22.72	6.84		
TT Monthly Totals	650.07	630.87		
 Daily Means	20.97	20.35		
SS Monthly Totals				
 Daily Means				
Types of Instruments	PYRANOMETER PSP EPPLEY	PYRANOMETER PSP EPPLEY		

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

Month: FEBRUARY

Year: 2009

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	DESIERTO ATACAMA
Date				
1	25.96	29.68	.	21.67
2	26.05	29.48	.	28.98
3	26.50	29.30	.	26.56
4	26.21	28.91	.	26.81
5	24.57	29.14	.	26.44
6	25.66	29.45	.	18.67
7	23.19	29.12	.	17.05
8	24.94	28.95	.	19.81
9	24.55	27.78	.	23.63
10	26.02	27.15	.	26.79
11	20.39	28.64	.	26.83
12	22.20	28.27	.	21.68
13	25.39	28.32	.	13.42
14	19.64	27.78	.	29.09
15	22.95	28.39	.	28.70
16	25.50	27.97	.	28.43
17	24.08	27.57	.	28.74
18	22.81	20.95	.	25.25
19	25.50	27.31	.	28.36
20	24.03	26.85	.	25.14
21	23.12	27.34	.	24.77
22	20.74	27.10	.	20.17
23	22.77	26.85	.	19.17
24	19.56	25.27	.	27.96
25	24.33	26.23	.	26.84
26	20.30	26.83	.	20.48
27	20.32	26.18	.	22.16
28	20.64	25.98	.	24.71
29	0.00	0.00	.	0.00
30				
31				
TT Monthly Totals	657.91	772.78	.	678.33
 Daily Means	22.69	26.65	.	23.39
SS Monthly Totals				
 Daily Means				
Types of Instruments	PYRANOMETER PSP EPPLEY	PYRANOMETER PSP EPPLEY	PYRANOMETER PSP EPPLEY	PYRANOMETER PSP EPPLEY

**DIRECCION METEOROLOGICA DE CHILE
SUBDIRECCION DE CLIMAT. Y MET. APLICADA
DEPTO. CLIMATOLOGIA**

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

Month: FEBRUARY Year: 2009 Country: CHILE

Daily Totals				
Latitude	33°27' S	34°58' S	36°46' S	41°25' S
Longitude	70°42' W	71°14' W	73°03' W	73°05' W
Elevation	520 m	228 m	12 m	85 m
Station	QUINTA NORMAL	CURICO	CONCEPCION	PUERTO MONTT
Date				
1	25.92	.	20.85	.
2	22.53	.	14.94	.
3	25.56	.	18.44	.
4	25.00	.	17.46	.
5	25.95	.	20.81	.
6	25.58	.	22.69	.
7	25.67	.	21.94	.
8	25.66	.	21.85	.
9	21.90	.	21.21	.
10	24.72	.	17.69	.
11	24.69	.	21.85	.
12	24.26	.	21.46	.
13	24.30	.	20.52	.
14	23.52	.	20.64	.
15	23.12	.	7.02	.
16	22.93	.	20.47	.
17	22.71	.	20.29	.
18	22.57	.	14.86	.
19	22.40	.	7.05	.
20	22.42	.	21.13	.
21	22.55	.	20.01	.
22	23.61	.	19.64	.
23	22.86	.	19.78	.
24	22.04	.	19.00	.
25	21.73	.	18.27	.
26	20.69	.	18.87	.
27	19.15	.	10.84	.
28	5.81	.	8.42	.
29	0.00	.	0.00	.
30				
31				
TT Monthly Totals	639.85	.	508.02	.
 Daily Means	22.06	.	17.52	.
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: FEBRUARY

Year: 2009

Country: CHILE

Daily Totals				
Latitude	45°35' S	53°00' S		
Longitude	72°07' W	70°51' W		
Elevation	310 m	37 m		
Station	COYHAIQUE	PUNTA ARENAS		
Date				
1	22.35	20.94		
2	12.75	21.35		
3	15.57	17.88		
4	11.87	15.11		
5	14.82	11.19		
6	17.89	15.85		
7	18.82	20.87		
8	14.64	20.66		
9	9.59	22.47		
10	10.78	17.75		
11	13.74	14.78		
12	15.39	20.40		
13	10.48	14.20		
14	7.43	15.75		
15	7.62	8.05		
16	9.35	13.83		
17	5.97	21.74		
18	19.30	21.30		
19	16.59	16.90		
20	8.84	10.48		
21	14.74	17.77		
22	15.74	15.13		
23	21.88	16.49		
24	21.18	15.60		
25	13.79	15.20		
26	21.06	13.03		
27	5.98	17.73		
28	6.72	16.36		
29				
30				
31				
TT Monthly Totals	384.88	468.80		
Daily Means	13.75	16.74		
SS Monthly Totals				
Daily Means				
Types of Instruments	PYRANOMETER PSP EPPLEY	PYRANOMETER PSP EPPLEY		

**DIRECCION METEOROLOGICA DE CHILE
SUBDIRECCION DE CLIMAT. Y MET. APLICADA
DEPTO. CLIMATOLOGIA**

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

Month: MARCH Year: 2009 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	DESIERTO ATACAMA
Date				
1	22.83	24.74	28.25	24.35
2	16.34	22.92	28.20	17.21
3	22.69	24.16	24.42	21.24
4	22.60	25.34	27.71	27.30
5	17.48	21.14	22.76	15.94
6	22.45	25.44	26.53	16.03
7	21.57	25.13	27.57	26.51
8	22.97	25.26	27.48	22.84
9	19.39	25.90	27.24	16.94
10	22.01	25.32	26.75	22.77
11	22.70	24.90	26.04	25.90
12	22.85	24.35	25.99	22.54
13	22.94	24.48	25.54	25.23
14	21.86	24.41	26.04	17.42
15	21.06	24.36	25.00	17.67
16	22.14	24.26	25.89	16.07
17	16.61	23.95	25.31	13.12
18	17.39	25.55	25.11	20.61
19	19.67	26.67	25.04	23.94
20	21.96	26.83	22.97	23.77
21	21.66	26.50	24.80	9.15
22	21.61	26.44	24.79	16.38
23	21.44	26.83	25.22	12.15
24	21.62	26.63	24.75	20.79
25	21.79	26.40	25.09	21.49
26	20.11	26.58	24.35	17.24
27	21.25	26.57	24.89	23.24
28	21.01	26.05	24.10	15.73
29	21.38	25.77	24.11	18.14
30	21.39	25.36	23.13	19.56
31	20.57	25.21	20.71	10.59
TT Monthly Totals	653.36	783.46	785.76	601.86
 Daily Means	21.08	25.27	25.35	19.41
SS Monthly Totals				
 Daily Means				
Types of Instruments	PYRANOMETER PSP EPPLEY	PYRANOMETER PSP EPPLEY	PYRANOMETER PSP EPPLEY	PYRANOMETER PSP EPPLEY

DIRECCION METEOROLOGICA DE CHILE
 SUBDIRECCION DE CLIMAT. Y MET. APLICADA
 DEPTO. CLIMATOLOGIA

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

Month: MARCH Year: 2009 Country: CHILE

Daily Totals				
Latitude	33°27' S	34°58' S	36°46' S	41°25' S
Longitude	70°42' W	71°14' W	73°03' W	73°05' W
Elevation	520 m	228 m	12 m	85 m
Station	QUINTA NORMAL	CURICO	CONCEPCION	PUERTO MONTT
Date				
1	23.10	.	8.74	.
2	23.51	.	17.16	.
3	7.03	.	18.39	.
4	22.81	.	18.63	.
5	22.77	.	18.12	.
6	22.19	.	18.16	.
7	22.88	.	17.99	.
8	21.17	.	17.82	.
9	21.60	.	16.69	.
10	20.67	.	7.37	.
11	20.70	.	13.46	.
12	20.78	.	14.38	.
13	20.81	.	16.88	.
14	21.43	.	16.70	.
15	21.31	.	16.60	.
16	20.86	.	15.69	.
17	21.21	.	16.59	.
18	20.37	.	15.58	.
19	19.82	.	15.50	.
20	19.54	.	16.10	.
21	19.06	.	16.11	.
22	18.76	.	15.84	.
23	18.95	.	15.44	.
24	18.60	.	15.33	.
25	18.15	.	14.96	.
26	17.52	.	14.24	.
27	17.94	.	10.06	.
28	17.63	.	3.71	.
29	17.77	.	13.96	.
30	17.35	.	13.23	.
31	17.19	.	14.81	.
TT Monthly Totals	613.50	.	464.24	.
 Daily Means	19.79	.	14.98	.
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: MARCH

Year: 2009

Country: CHILE

Daily Totals				
Latitude	45°35' S	53°00' S		
Longitude	72°07' W	70°51' W		
Elevation	310 m	37 m		
Station	COYHAIQUE	PUNTA ARENAS		
Date				
1	18.85	14.03		
2	20.73	15.39		
3	11.11	15.81		
4	9.52	11.65		
5	19.46	14.09		
6	15.90	4.85		
7	9.27	16.75		
8	13.99	11.51		
9	18.30	8.62		
10	17.21	14.11		
11	18.71	13.47		
12	11.06	5.55		
13	14.15	12.43		
14	16.93	12.27		
15	6.88	2.72		
16	6.95	11.64		
17	14.52	16.28		
18	15.81	5.42		
19	14.39	10.68		
20	13.71	8.28		
21	11.08	5.53		
22	12.88	11.73		
23	6.90	12.96		
24	6.07	6.45		
25	5.58	8.40		
26	12.81	10.34		
27	3.56	3.32		
28	5.99	6.59		
29	8.84	11.59		
30	8.33	10.51		
31	12.20	9.72		
TT Monthly Totals	381.70	322.70		
 Daily Means	12.31	10.41		
SS Monthly Totals				
 Daily Means				
Types of Instruments	PYRANOMETER PSP EPPLEY	PYRANOMETER PSP EPPLEY		

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

Month: APRIL Year: 2009 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	DESIERTO ATACAMA
Date				
1	21.05	24.81	23.74	14.67
2	21.12	24.92	23.76	21.53
3	20.91	24.87	23.80	8.70
4	20.88	24.72	23.80	15.92
5	20.61	24.60	23.31	14.68
6	20.06	24.51	5.69	12.02
7	19.75	23.47	23.12	18.34
8	19.77	22.62	22.91	19.84
9	19.39	23.77	22.52	20.64
10	19.75	22.92	22.32	20.84
11	17.93	22.69	21.62	20.85
12	18.63	21.51	16.91	19.63
13	19.48	22.43	17.76	20.11
14	19.23	22.45	12.08	8.77
15	18.89	22.61	15.54	4.68
16	18.74	22.11	19.77	5.98
17	18.88	22.16	20.35	8.99
18	18.78	22.07	16.57	6.62
19	18.63	21.95	19.72	11.99
20	18.04	21.76	20.01	15.09
21	18.04	21.98	19.99	10.43
22	17.74	21.84	19.55	10.77
23	17.80	21.69	19.67	14.94
24	17.96	21.25	16.57	10.08
25	16.60	21.27	5.74	3.95
26	17.17	21.22	16.45	3.29
27	17.30	20.75	17.38	8.28
28	16.20	20.67	17.58	4.32
29	14.36	20.53	13.63	13.79
30	17.14	20.69	18.07	17.04
31				
TT Monthly Totals	560.82	674.85	559.92	386.79
 Daily Means	18.69	22.49	18.66	12.89
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: APRIL Year: 2009 Country: CHILE

Daily Totals				
Latitude	33°27' S	34°58' S	36°46' S	41°25' S
Longitude	70°42' W	71°14' W	73°03' W	73°05' W
Elevation	520 m	228 m	12 m	85 m
Station	QUINTA NORMAL	CURICO	CONCEPCION	PUERTO MONTT
Date				
1	16.94	.	.	.
2	16.89	.	.	.
3	12.44	.	.	.
4	12.98	.	.	.
5	17.36	.	.	.
6	17.12	.	.	.
7	16.64	.	.	.
8	16.43	.	.	.
9	15.67	.	.	.
10	15.20	.	.	.
11	15.50	.	.	.
12	15.72	.	.	.
13	15.41	.	.	.
14	15.62	.	.	.
15	14.67	.	.	.
16	14.26	.	.	.
17	14.05	.	.	.
18	14.98	.	.	.
19	15.13	.	.	.
20	14.30	.	.	.
21	12.94	.	.	.
22	14.02	.	.	.
23	13.68	.	.	.
24	13.66	.	.	.
25	13.35	.	.	.
26	13.85	.	.	.
27	13.36	.	.	.
28	12.64	.	.	.
29	11.12	.	.	.
30	8.67	.	.	.
31				
TT Monthly Totals	434.60	.	.	.
 Daily Means	14.49	.	.	.
SS Monthly Totals				
 Daily Means				
Types of Instruments	PYRANOMETER PSP EPPLEY	PYRANOMETER PSP EPPLEY	PYRANOMETER PSP EPPLEY	PYRANOMETER PSP EPPLEY

**DIRECCION METEOROLOGICA DE CHILE
SUBDIRECCION DE CLIMAT. Y MET. APLICADA
DEPTO. CLIMATOLOGIA**

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

Month: APRIL

Year: 2009

Country: CHILE

Daily Totals				
Latitude	45°35' S	53°00' S		
Longitude	72°07' W	70°51' W		
Elevation	310 m	37 m		
Station	COYHAIQUE	PUNTA ARENAS		
Date				
1	5.56	4.49		
2	5.80	1.79		
3	8.40	4.96		
4	6.01	3.33		
5	7.97	1.66		
6	5.29	7.07		
7	6.42	3.83		
8	11.04	8.69		
9	6.78	3.82		
10	8.17	7.63		
11	6.90	2.94		
12	9.88	8.80		
13	11.15	4.97		
14	8.72	7.92		
15	3.87	2.83		
16	3.93	8.04		
17	7.80	4.16		
18	9.58	3.75		
19	9.26	4.95		
20	7.37	6.72		
21	5.04	2.05		
22	1.40	5.54		
23	5.19	3.71		
24	4.06	6.78		
25	7.30	5.06		
26	3.76	4.33		
27	8.65	2.79		
28	2.70	6.17		
29	8.53	3.06		
30	6.72	2.09		
31				
TT Monthly Totals	203.26	143.92		
 Daily Means	6.78	4.80		
SS Monthly Totals				
 Daily Means				
Types of Instruments	PYRANOMETER PSP EPPLEY	PYRANOMETER PSP EPPLEY		

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

Month: MAY Year: 2009 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	DESIERTO ATACAMA
Date				
1	17.23	20.25	17.15	4.38
2	17.11	20.19	18.09	15.04
3	12.06	20.01	16.56	7.05
4	6.66	19.84	15.51	8.61
5	16.93	19.89	17.50	7.83
6	16.17	19.56	17.54	6.82
7	16.16	19.73	17.17	11.18
8	16.33	19.83	17.77	16.91
9	15.76	19.58	17.85	13.55
10	12.59	19.84	15.02	17.17
11	11.78	19.64	16.74	12.42
12	11.62	19.41	16.98	9.11
13	14.24	19.30	15.85	6.67
14	12.88	18.96	15.42	6.79
15	16.30	18.70	8.31	4.87
16	16.09	18.55	16.48	9.67
17	15.90	18.43	16.38	13.02
18	15.90	17.23	14.39	12.38
19	15.07	17.23	12.74	3.37
20	15.07	17.10	15.64	13.24
21	12.68	18.24	14.50	14.08
22	8.56	18.37	9.76	11.79
23	14.66	18.21	15.18	12.45
24	13.98	18.11	14.34	7.12
25	13.49	17.85	13.03	6.11
26	13.00	17.85	13.78	4.84
27	12.99	17.37	11.93	3.79
28	9.30	15.02	4.24	6.31
29	11.54	14.19	15.33	10.94
30	13.99	17.35	16.10	15.17
31	15.50	17.02	16.16	15.13
TT Monthly Totals	431.54	572.85	463.45	307.80
 Daily Means	13.92	18.48	14.95	9.93
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: MAY Year: 2009 Country: CHILE

Daily Totals				
Latitude	33°27' S	34°58' S	36°46' S	41°25' S
Longitude	70°42' W	71°14' W	73°03' W	73°05' W
Elevation	520 m	228 m	12 m	85 m
Station	QUINTA NORMAL	CURICO	CONCEPCION	PUERTO MONTT
Date				
1	11.81	.	.	.
2	7.59	.	.	.
3	11.05	.	.	.
4	11.53	.	.	.
5	10.91	.	.	.
6	9.09	.	.	.
7	5.80	.	.	.
8	11.23	.	.	.
9	10.10	.	.	.
10	4.48	.	.	.
11	2.70	.	.	.
12	4.83	.	.	.
13	4.20	.	.	.
14	5.90	.	.	.
15	9.32	.	.	.
16	4.52	.	.	.
17	7.52	.	.	.
18	10.26	.	.	.
19	10.59	.	.	.
20	10.35	.	.	.
21	10.33	.	.	.
22	10.46	.	.	.
23	9.38	.	.	.
24	4.25	.	.	.
25	1.71	.	.	.
26	8.04	.	.	.
27	6.06	.	.	.
28	5.94	.	.	.
29	3.12	.	.	.
30	3.53	.	.	.
31	10.01	.	.	.
TT Monthly Totals	236.60	.	.	.
 Daily Means	7.63	.	.	.
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: MAY

Year: 2009

Country: CHILE

Daily Totals				
Latitude	45°35' S	53°00' S		
Longitude	72°07' W	70°51' W		
Elevation	310 m	37 m		
Station	COYHAIQUE	PUNTA ARENAS		
Date				
1	1.03	5.64		
2	2.02	5.33		
3	8.18	2.70		
4	4.88	2.98		
5	5.42	1.90		
6	7.05	3.88		
7	6.79	4.55		
8	1.06	5.26		
9	2.49	3.97		
10	5.10	4.87		
11	1.52	2.60		
12	4.79	3.43		
13	6.85	4.16		
14	4.62	3.75		
15	3.43	4.09		
16	1.51	3.18		
17	2.93	4.05		
18	1.24	3.34		
19	6.09	2.35		
20	1.67	2.13		
21	1.24	3.68		
22	1.38	3.43		
23	2.73	2.91		
24	3.93	1.66		
25	4.79	1.71		
26	3.04	2.88		
27	5.35	3.16		
28	1.37	1.96		
29	3.36	1.80		
30	1.85	0.88		
31	5.13	2.41		
TT Monthly Totals	112.84	100.66		
 Daily Means	3.64	3.25		
SS Monthly Totals				
 Daily Means				
Types of Instruments	PYRANOMETER PSP EPPLEY	PYRANOMETER PSP EPPLEY		

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

Month: JUNE Year: 2009 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	DESIERTO ATACAMA
Date				
1	15.48	17.08	15.01	15.09
2	13.87	17.26	13.92	14.88
3	9.78	17.30	13.29	11.81
4	9.66	17.41	13.57	10.28
5	14.29	17.00	13.31	8.17
6	8.77	15.42	13.71	7.70
7	14.96	15.70	13.79	8.04
8	12.21	17.00	14.55	14.58
9	11.16	16.84	14.10	12.10
10	10.75	16.73	13.55	12.01
11	7.90	16.14	12.30	10.35
12	15.05	16.69	14.37	9.09
13	12.75	17.00	11.59	10.73
14	11.89	16.52	12.51	11.00
15	11.00	16.50	14.58	14.05
16	9.65	17.03	9.20	14.08
17	16.46	16.74	14.82	11.61
18	13.96	16.87	14.45	14.22
19	12.80	16.80	13.74	9.86
20	13.33	16.86	14.11	13.71
21	11.60	16.79	13.17	10.29
22	13.60	16.56	4.55	6.18
23	11.82	16.51	13.47	9.83
24	15.16	16.46	15.17	10.54
25	12.74	16.33	15.01	7.83
26	15.18	16.65	13.77	13.31
27	12.48	16.77	12.01	7.96
28	11.15	16.75	14.24	8.18
29	14.59	16.80	14.63	14.87
30	9.20	17.07	14.59	14.84
31				
TT Monthly Totals	373.24	501.58	401.08	337.19
 Daily Means	12.44	16.72	13.37	11.24
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: JUNE Year: 2009 Country: CHILE

Daily Totals				
Latitude	33°27' S	34°58' S	36°46' S	41°25' S
Longitude	70°42' W	71°14' W	73°03' W	73°05' W
Elevation	520 m	228 m	12 m	85 m
Station	QUINTA NORMAL	CURICO	CONCEPCION	PUERTO MONTT
Date				
1	9.74	.	.	.
2	9.79	.	.	.
3	7.42	.	.	.
4	8.58	.	.	.
5	9.45	.	.	.
6	7.97	.	.	.
7	3.71	.	.	.
8	8.50	.	.	.
9	9.03	.	.	.
10	9.14	.	.	.
11	9.39	.	.	.
12	9.05	.	.	.
13	7.77	.	.	.
14	0.69	.	.	.
15	2.87	.	.	.
16	4.98	.	.	.
17	1.74	.	.	.
18	2.02	.	.	.
19	0.35	.	.	.
20	1.99	.	.	.
21	5.51	.	.	.
22	4.07	.	.	.
23	8.76	.	.	.
24	8.89	.	.	.
25	3.27	.	.	.
26	3.59	.	.	.
27	4.12	.	.	.
28	1.48	.	.	.
29	6.87	.	.	.
30	2.31	.	.	.
31				
TT Monthly Totals	173.03	.	.	.
 Daily Means	5.77	.	.	.
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: JUNE

Year: 2009

Country: CHILE

Daily Totals				
Latitude	45°35' S	53°00' S		
Longitude	72°07' W	70°51' W		
Elevation	310 m	37 m		
Station	COYHAIQUE	PUNTA ARENAS		
Date				
1	3.94	2.94		
2	3.53	0.63		
3	4.66	2.47		
4	4.83	2.91		
5	4.73	2.26		
6	5.18	1.53		
7	5.29	2.54		
8	3.38	1.82		
9	4.47	2.77		
10	3.20	1.98		
11	5.09	1.27		
12	4.56	1.18		
13	2.30	1.02		
14	4.38	2.56		
15	3.66	2.03		
16	0.89	2.21		
17	4.06	1.72		
18	3.75	2.47		
19	5.64	2.61		
20	1.10	2.59		
21	4.88	1.33		
22	2.59	2.05		
23	3.24	2.01		
24	4.03	2.58		
25	2.36	2.56		
26	3.52	3.02		
27	2.76	0.32		
28	1.60	0.27		
29	2.15	0.67		
30	2.55	2.04		
31				
TT Monthly Totals	108.29	58.37		
Daily Means	3.61	1.95		
SS Monthly Totals				
Daily Means				
Types of Instruments	PYRANOMETER PSP EPPLEY	PYRANOMETER PSP EPPLEY		

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

Month: JANUARY Year: 2009 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	7.1	12.0	11.6	11.8
2	11.3	11.7	11.7	11.1
3	11.4	10.9	11.7	11.3
4	12.0	12.0	11.7	11.4
5	12.0	12.1	11.2	11.5
6	12.0	12.0	11.7	10.4
7	11.8	12.0	11.8	10.1
8	11.8	12.0	11.8	8.7
9	10.8	10.1	11.8	9.5
10	5.7	9.7	11.9	10.9
11	5.0	9.7	11.8	10.7
12	7.8	10.0	9.5	10.6
13	9.5	11.7	9.7	11.3
14	7.4	10.6	9.3	10.9
15	10.7	11.2	11.4	10.8
16	9.9	11.4	11.2	11.0
17	4.8	4.3	10.6	8.3
18	11.8	12.0	5.4	9.8
19	11.2	11.9	11.8	11.5
20	12.1	12.0	11.6	11.0
21	11.7	11.9	11.9	11.5
22	12.0	11.9	11.8	9.9
23	7.5	9.0	11.7	6.8
24	11.2	11.6	11.2	11.5
25	11.6	12.0	11.9	11.6
26	11.7	11.9	10.8	10.6
27	11.1	11.8	11.9	10.1
28	11.5	11.6	11.7	11.3
29	11.0	11.6	11.5	11.5
30	11.4	11.6	11.5	11.5
31	11.3	11.6	11.5	11.5
TT Monthly Totals				
 Daily Means				
SS Monthly Totals	318.1	.	346.6	330.4
 Daily Means	10.3	11.2	11.2	10.7
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: 2009 Country: CHILE

Daily Totals				
Latitude	27°10' S	29°57' S	33°23' S	33°27' S
Longitude	109°26' W	71°22' W	70°47' W	70°42' W
Elevation	47 m	25 m	474 m	520 m
Station	ISLA DE PASCUA	LA SERENA	PUDAHUEL	QUINTA NORMAL
Date				
1	11.4	0.8	12.7	12.1
2	10.2	7.5	12.2	11.9
3	12.2	2.6	12.6	12.0
4	8.8	10.1	11.7	11.9
5	12.4	7.9	12.5	11.7
6	11.2	9.6	12.7	11.9
7	11.7	10.6	12.7	12.0
8	7.1	11.8	10.1	9.3
9	11.9	5.3	12.8	11.9
10	11.9	9.9	12.5	11.8
11	11.9	4.5	12.7	11.7
12	9.5	5.6	12.5	11.6
13	11.4	6.3	12.6	11.6
14	13.2	12.1	10.6	11.5
15	12.2	12.1	12.6	11.7
16	11.7	5.5	12.6	11.6
17	9.6	4.7	8.4	8.7
18	7.5	12.6	12.6	11.4
19	8.9	8.6	12.6	11.5
20	10.9	6.2	12.3	11.2
21	5.6	8.1	12.4	11.1
22	8.6	5.8	12.1	11.1
23	4.6	0.0	12.2	11.2
24	7.3	4.3	6.1	5.8
25	8.4	8.5	11.9	11.0
26	10.2	6.0	11.5	11.1
27	10.9	9.6	12.5	11.1
28	3.2	0.9	12.2	11.2
29	12.2	5.4	11.8	11.2
30	12.4	12.6	11.6	11.0
31	5.4	5.6	12.4	11.2
TT Monthly Totals				
 Daily Means				
SS Monthly Totals	304.4	221.1	368.7	346.0
 Daily Means	9.8	7.1	11.9	11.2
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: JANUARY Year: 2009 Country: CHILE

Daily Totals				
Latitude	33°37' S	33°39' S	34°58' S	36°36' S
Longitude	78°50' W	71°36' W	71°12' W	72°26' W
Elevation	30 m	74 m	225 m	124 m
Station	ROBINSON CRUSOE	SANTO DOMINGO	CURICO	CHILLAN
Date				
1	11.0	9.0	13.5	13.1
2	11.3	11.1	13.4	13.3
3	9.9	9.4	13.6	13.3
4	8.1	4.7	13.2	13.1
5	6.9	7.6	13.4	13.3
6	7.5	10.0	13.5	12.9
7	5.1	9.4	13.5	13.3
8	4.6	12.3	13.5	13.3
9	3.2	6.4	13.5	13.3
10	2.5	9.8	13.5	13.2
11	8.4	10.7	13.5	13.7
12	10.2	6.7	12.5	12.7
13	8.1	12.3	13.5	13.0
14	9.4	8.4	12.8	13.2
15	3.3	12.4	13.4	13.2
16	10.8	12.3	13.4	13.3
17	0.3	9.0	10.8	12.0
18	11.3	11.8	13.3	13.3
19	7.9	12.0	13.2	12.9
20	11.4	0.2	12.1	12.9
21	11.4	0.0	12.1	11.9
22	7.7	1.6	12.1	12.9
23	2.6	0.0	12.0	13.3
24	6.3	11.9	9.6	3.3
25	3.4	12.3	12.1	13.2
26	7.2	12.3	13.2	13.3
27	8.4	12.1	13.0	13.2
28	9.5	0.3	13.0	13.1
29	8.9	5.5	13.0	13.2
30	3.0	2.9	12.1	13.0
31	7.3	10.9	12.9	12.6
TT Monthly Totals				
 Daily Means				
SS Monthly Totals	226.9	255.3	398.2	395.3
 Daily Means	7.3	8.2	12.8	12.8
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: 2009 Country: CHILE

Daily Totals				
Latitude	36°46' S	38°45' S	39°41' S	41°26' S
Longitude	73°03' W	72°38' W	73°04' W	73°07' W
Elevation	12 m	114 m	19 m	81 m
Station	CONCEPCION	TEMUCO	VALDIVIA	PUERTO MONTT
Date				
1	12.6	11.0	13.4	13.9
2	12.8	10.7	13.2	11.1
3	12.9	.	13.5	10.5
4	12.6	9.7	12.5	8.3
5	12.3	4.4	5.5	6.1
6	12.7	9.1	7.0	6.6
7	12.8	10.8	13.3	10.5
8	12.8	10.8	13.0	11.9
9	12.8	10.3	13.0	13.2
10	12.5	10.5	12.3	4.1
11	12.6	10.8	12.8	12.8
12	11.0	5.5	5.9	2.8
13	12.5	8.3	9.2	0.7
14	11.8	2.1	4.5	7.9
15	12.8	10.8	12.5	12.2
16	12.6	5.5	0.0	2.1
17	10.1	11.0	12.6	12.0
18	12.7	10.7	11.9	0.9
19	12.4	10.4	13.0	13.5
20	10.7	10.8	12.9	12.2
21	10.4	10.8	13.1	8.0
22	6.7	10.6	12.5	11.0
23	2.5	7.5	10.7	10.6
24	8.4	7.4	11.0	6.4
25	12.7	8.2	8.9	7.7
26	12.5	10.6	12.2	9.0
27	12.4	10.8	12.0	12.4
28	12.7	10.3	13.3	13.4
29	12.6	9.9	12.1	9.7
30	11.9	6.7	10.0	9.8
31	11.4	10.9	12.7	11.5
TT Monthly Totals				
 Daily Means				
SS Monthly Totals	360.2	.	340.5	282.8
 Daily Means	11.6	9.2	11.0	9.1
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: JANUARY

Year: 2009

Country: CHILE

Daily Totals			
Latitude	45°35' S	53°08' S	
Longitude	72°07'W	70°58' W	
Elevation	310 m	37 m	
Station	COYHAIQUE	PUNTA ARENAS	
Date			
1	12.6	6.0	
2	10.3	9.0	
3	11.3	.	
4	6.1	13.3	
5	7.7	10.8	
6	10.2	10.7	
7	9.8	.	
8	13.3	10.0	
9	13.0	1.8	
10	10.8	13.6	
11	12.1	7.4	
12	1.0	11.0	
13	7.0	1.9	
14	6.8	11.1	
15	4.4	2.6	
16	7.1	11.7	
17	5.5	9.3	
18	5.2	2.7	
19	.	7.6	
20	7.5	12.9	
21	.	5.0	
22	6.9	13.3	
23	4.4	11.1	
24	4.2	11.4	
25	4.4	3.9	
26	5.4	5.3	
27	12.0	3.5	
28	9.3	5.5	
29	3.8	7.5	
30	10.7	7.3	
31	7.7	0.0	
TT Monthly Totals			
Daily Means			
SS Monthly Totals	.	.	
Daily Means	7.9	7.8	
Types of Instruments	HELIOGRAPH CAMPBELL STOKES	HELIOGRAPH CAMPBELL STOKES	

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

Month: FEBRUARY Year: 2009 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	11.8	11.6	11.6	11.6
2	11.6	11.6	11.6	11.3
3	11.5	11.6	11.6	11.0
4	11.5	11.6	11.6	11.0
5	11.3	11.5	11.7	7.4
6	11.4	6.7	11.7	7.0
7	8.0	9.0	11.2	9.6
8	11.2	10.9	11.7	10.1
9	10.7	11.0	11.5	10.7
10	11.5	11.4	11.2	11.1
11	11.1	11.4	11.7	10.3
12	11.7	10.0	11.6	6.4
13	11.5	7.8	11.3	10.6
14	10.4	6.5	11.0	11.3
15	11.2	10.7	11.6	11.3
16	8.4	11.7	11.2	11.3
17	9.5	11.6	11.2	11.1
18	9.7	9.9	6.5	11.3
19	9.4	11.4	11.5	11.2
20	8.0	11.3	11.5	10.0
21	7.0	11.0	11.0	10.6
22	10.7	11.3	11.5	10.9
23	10.6	8.9	11.5	11.2
24	10.7	10.5	10.8	10.7
25	11.5	11.4	10.9	11.0
26	2.7	11.4	11.3	11.1
27	11.3	10.8	9.8	11.2
28	11.1	9.2	8.8	10.7
29				
30				
31				
TT Monthly Totals				
 Daily Means				
SS Monthly Totals	287.0	293.7	310.1	293.0
 Daily Means	10.3	10.5	11.1	10.5
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: FEBRUARY Year: 2009 Country: CHILE

Daily Totals				
Latitude	27°10' S	29°57' S	33°23' S	33°27' S
Longitude	109°26' W	71°22' W	70°47' W	70°42' W
Elevation	47 m	25 m	474 m	520 m
Station	ISLA DE PASCUA	LA SERENA	PUDAHUEL	QUINTA NORMAL
Date				
1	12.5	0.1	12.2	11.2
2	9.1	6.2	10.9	10.5
3	11.8	10.0	12.5	11.2
4	10.6	9.8	12.4	10.4
5	12.3	12.2	12.4	11.0
6	10.1	11.4	12.3	11.1
7	11.0	9.6	12.3	11.1
8	10.6	10.7	12.3	11.1
9	11.4	5.9	8.8	8.7
10	9.4	12.3	12.0	11.0
11	9.7	11.1	12.2	11.1
12	8.1	6.6	12.1	11.1
13	9.0	6.8	12.1	11.1
14	12.2	11.9	11.9	11.1
15	12.0	9.4	11.4	11.1
16	12.3	10.9	11.1	10.5
17	0.0	9.3	11.8	11.0
18	0.0	9.9	11.3	11.0
19	10.1	8.9	11.3	10.7
20	6.3	9.1	11.3	10.9
21	11.6	8.7	10.9	10.1
22	4.1	10.4	11.6	10.9
23	10.2	1.1	12.7	10.5
24	7.8	11.2	11.2	10.4
25	8.5	5.4	11.2	10.4
26	6.7	2.7	9.4	9.2
27	11.7	0.0	10.5	9.9
28	10.6	6.3	1.4	1.0
29				
30				
31				
TT Monthly Totals				
 Daily Means				
SS Monthly Totals	259.7	227.9	313.5	289.3
 Daily Means	9.3	8.1	11.2	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: FEBRUARY Year: 2009 Country: CHILE

Daily Totals				
Latitude	33°37' S	33°39' S	34°58' S	36°36' S
Longitude	78°50' W	71°36' W	71°12' W	72°26' W
Elevation	30 m	74 m	225 m	124 m
Station	ROBINSON CRUSOE	SANTO DOMINGO	CURICO	CHILLAN
Date				
1	5.8	7.8	13.2	12.5
2	6.6	11.6	9.7	10.7
3	9.3	12.3	13.1	10.4
4	6.9	10.9	12.7	9.7
5	7.0	12.1	12.6	11.8
6	4.8	12.6	13.1	12.0
7	5.2	11.9	12.2	12.9
8	10.1	11.8	.	12.8
9	4.0	3.7	11.5	10.8
10	5.0	11.9	12.2	11.5
11	6.5	12.0	12.8	12.7
12	10.9	11.2	12.8	12.2
13	9.1	11.4	11.3	12.6
14	7.2	10.6	12.4	12.2
15	7.8	4.8	11.5	9.9
16	10.9	8.8	11.7	11.2
17	10.1	11.3	12.3	12.0
18	2.0	7.8	12.2	11.7
19	3.9	5.3	12.0	11.2
20	6.7	11.2	9.5	12.0
21	5.5	10.0	10.1	10.4
22	4.6	11.3	12.3	0.0
23	8.6	8.2	12.2	11.1
24	4.6	2.5	12.1	12.9
25	3.4	.	11.4	9.5
26	9.2	.	12.0	11.8
27	9.5	5.2	11.8	12.0
28	7.4	2.7	8.5	8.2
29				
30				
31				
TT Monthly Totals				
 Daily Means				
SS Monthly Totals	192.6	.	.	308.7
 Daily Means	6.9	9.3	11.8	11.0
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: FEBRUARY Year: 2009 Country: CHILE

Daily Totals				
Latitude	36°46' S	38°45' S	39°41' S	41°26' S
Longitude	73°03' W	72°38' W	73°04' W	73°07' W
Elevation	12 m	114 m	19 m	81 m
Station	CONCEPCION	TEMUCO	VALDIVIA	PUERTO MONTT
Date				
1	11.1	10.3	9.8	8.7
2	6.3	5.7	8.3	4.4
3	8.7	9.3	8.5	12.6
4	6.9	4.7	2.0	0.8
5	11.9	8.7	10.8	8.8
6	12.4	8.4	9.2	9.0
7	12.1	10.8	12.5	9.9
8	12.4	10.6	11.7	4.5
9	11.6	10.8	12.1	9.7
10	8.7	3.8	8.4	6.5
11	12.3	10.5	12.2	8.9
12	12.3	10.5	9.4	1.3
13	12.2	10.3	10.1	5.3
14	12.3	10.6	12.1	2.5
15	0.0	4.1	4.9	3.7
16	11.7	9.3	6.1	0.0
17	12.2	8.5	8.0	2.4
18	8.3	9.4	2.7	1.4
19	0.0	0.4	6.9	7.9
20	12.3	10.2	12.4	3.5
21	11.7	9.7	10.1	8.2
22	12.0	8.5	11.3	1.1
23	12.1	11.1	11.0	8.3
24	10.3	11.1	11.1	9.1
25	10.1	11.1	11.9	10.6
26	10.9	9.5	10.4	6.7
27	3.4	10.7	11.5	8.8
28	1.0	7.7	11.2	0.5
29				
30				
31				
TT Monthly Totals				
 Daily Means				
SS Monthly Totals	267.2	246.3	266.6	165.1
 Daily Means	9.5	8.8	9.5	5.9
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: FEBRUARY

Year: 2009

Country: CHILE

Daily Totals			
Latitude	45°35' S	53°08' S	
Longitude	72°07'W	70°58' W	
Elevation	310 m	37 m	
Station	COYHAIQUE	PUNTA ARENAS	
Date			
1	8.8	11.9	
2	2.2	10.7	
3	5.7	6.9	
4	1.3	5.5	
5	3.9	3.9	
6	6.7	5.4	
7	6.3	10.6	
8	3.3	9.3	
9	4.8	11.5	
10	4.2	9.8	
11	6.0	5.9	
12	5.4	10.0	
13	5.4	8.0	
14	2.6	8.2	
15	1.4	0.2	
16	2.4	6.1	
17	0.0	11.5	
18	8.2	12.1	
19	6.8	7.4	
20	1.5	1.5	
21	5.3	10.1	
22	6.3	7.7	
23	11.8	7.1	
24	11.5	6.8	
25	7.0	8.0	
26	11.6	7.3	
27	2.0	9.9	
28	0.7	8.9	
29			
30			
31			
TT Monthly Totals			
Daily Means			
SS Monthly Totals	143.1	222.2	
Daily Means	5.1	7.9	
Types of Instruments	HELIOGRAPH CAMPBELL STOKES	HELIOGRAPH CAMPBELL STOKES	

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

Month: MARCH Year: 2009 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	9.4	11.1	10.8	10.6
2	3.8	10.4	9.2	10.9
3	9.5	9.3	8.7	9.6
4	10.3	11.0	11.0	9.9
5	6.1	5.7	6.1	7.5
6	8.4	10.7	11.0	10.4
7	7.9	10.8	11.1	11.1
8	10.2	10.8	11.2	11.1
9	6.8	9.9	11.2	10.7
10	10.2	10.8	11.2	10.7
11	10.9	10.8	10.9	10.7
12	11.0	10.8	10.3	11.0
13	11.0	10.8	10.8	9.4
14	10.5	10.7	11.1	10.2
15	8.2	10.6	11.1	9.6
16	10.6	10.7	11.0	10.7
17	5.5	9.3	11.0	10.7
18	5.7	10.5	10.8	10.7
19	7.9	10.6	11.0	10.7
20	10.7	10.3	11.0	7.8
21	10.7	10.5	10.9	10.5
22	10.4	10.5	11.0	9.7
23	10.7	10.6	11.2	10.8
24	10.6	10.5	11.3	10.3
25	10.8	11.6	11.1	10.4
26	10.0	7.4	10.9	10.6
27	10.5	10.5	11.0	10.6
28	11.5	10.6	11.1	9.6
29	11.0	10.4	11.0	9.8
30	9.8	10.4	11.0	9.2
31	9.1	10.4	10.9	7.9
TT Monthly Totals				
 Daily Means				
SS Monthly Totals	289.7	319.0	331.9	313.4
 Daily Means	9.3	10.3	10.7	10.1
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: MARCH Year: 2009 Country: CHILE

Daily Totals				
Latitude	27°10' S	29°57' S	33°23' S	33°27' S
Longitude	109°26' W	71°22' W	70°47' W	70°42' W
Elevation	47 m	25 m	474 m	520 m
Station	ISLA DE PASCUA	LA SERENA	PUDAHUEL	QUINTA NORMAL
Date				
1	8.1	11.6	10.8	10.0
2	9.5	4.8	11.0	10.5
3	10.7	4.0	1.0	0.0
4	8.3	11.7	11.5	12.5
5	11.0	7.5	11.4	10.2
6	8.9	2.9	11.4	10.1
7	7.0	8.1	11.4	10.5
8	10.2	6.2	11.2	10.2
9	11.6	0.4	11.2	10.4
10	9.7	2.7	10.0	9.6
11	5.5	11.4	10.1	9.5
12	8.1	3.3	10.6	9.3
13	8.1	3.9	10.9	9.6
14	9.0	3.3	10.9	9.5
15	8.1	0.0	10.6	9.2
16	0.0	5.2	10.7	9.0
17	10.4	7.9	10.7	8.9
18	5.0	3.4	10.7	8.8
19	10.5	7.8	9.4	8.8
20	6.9	4.5	9.5	8.8
21	5.5	2.6	10.5	8.7
22	9.9	3.0	10.8	8.9
23	9.3	0.0	10.7	8.2
24	7.8	7.8	10.8	8.7
25	5.7	1.0	10.0	8.8
26	11.1	2.6	10.6	8.8
27	7.5	9.8	10.3	8.8
28	8.0	0.5	10.4	8.8
29	8.8	9.6	10.5	8.7
30	8.7	4.5	10.7	8.8
31	8.0	0.8	10.1	8.8
TT Monthly Totals				
 Daily Means				
SS Monthly Totals	256.9	152.8	320.4	.
 Daily Means	8.3	4.9	10.3	9.1
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: MARCH Year: 2009 Country: CHILE

Daily Totals				
Latitude	33°37' S	33°39' S	34°58' S	36°36' S
Longitude	78°50' W	71°36' W	71°12' W	72°26' W
Elevation	30 m	74 m	225 m	124 m
Station	ROBINSON CRUSOE	SANTO DOMINGO	CURICO	CHILLAN
Date				
1	5.4	8.1	7.4	2.0
2	0.0	3.4	8.7	8.5
3	2.3	3.8	9.6	11.5
4	8.4	10.4	10.1	11.1
5	6.6	10.2	11.7	11.6
6	10.3	10.4	11.6	11.7
7	8.9	11.5	11.5	11.1
8	10.2	5.1	11.4	11.0
9	9.6	0.1	11.2	11.5
10	4.6	1.9	8.4	11.3
11	7.1	2.6	7.7	8.2
12	9.9	0.3	10.3	9.4
13	9.8	6.3	11.0	11.3
14	9.4	11.2	10.9	11.3
15	7.4	11.1	10.7	10.2
16	6.9	10.4	10.9	11.4
17	5.2	11.1	9.1	11.3
18	8.7	8.2	10.7	10.8
19	6.2	0.0	10.8	10.4
20	5.8	0.0	10.8	10.5
21	7.5	1.4	10.2	10.9
22	8.6	9.3	10.4	11.0
23	4.6	3.9	10.6	10.1
24	8.6	1.5	10.2	11.2
25	5.7	0.0	9.3	9.2
26	4.1	0.0	8.0	9.0
27	6.5	0.0	10.0	6.7
28	6.1	4.8	10.2	3.6
29	2.4	1.5	9.2	4.1
30	3.5	9.8	5.1	7.7
31	9.1	11.2	10.0	10.5
TT Monthly Totals				
 Daily Means				
SS Monthly Totals	209.4	169.5	307.7	300.1
 Daily Means	6.8	5.5	9.9	9.7
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: 2009 Country: CHILE

Daily Totals				
Latitude	36°46' S	38°45' S	39°41' S	41°26' S
Longitude	73°03' W	72°38' W	73°04' W	73°07' W
Elevation	12 m	114 m	19 m	81 m
Station	CONCEPCION	TEMUCO	VALDIVIA	PUERTO MONTT
Date				
1	2.5	2.7	0.7	0.7
2	10.4	7.6	7.5	5.8
3	10.5	8.7	6.9	10.3
4	11.4	10.6	6.9	0.0
5	11.8	9.0	9.4	8.1
6	11.7	10.2	5.3	5.4
7	11.1	10.7	8.5	8.9
8	11.2	10.1	10.8	10.5
9	8.8	10.1	10.9	8.3
10	0.7	8.4	11.0	5.2
11	7.1	3.5	1.1	1.2
12	7.5	6.5	9.8	10.7
13	11.0	8.9	4.4	2.0
14	10.9	9.6	10.5	10.5
15	10.8	9.1	10.4	8.8
16	10.3	3.0	10.3	4.0
17	11.3	9.5	9.1	9.5
18	9.8	8.9	9.1	5.2
19	9.6	5.7	7.9	2.2
20	10.5	9.3	10.1	9.2
21	10.3	9.5	10.1	8.3
22	10.5	9.4	9.5	5.4
23	10.4	.	9.4	7.2
24	10.4	8.3	5.7	4.7
25	10.3	8.2	10.3	6.4
26	8.3	7.8	10.3	8.1
27	5.6	4.3	0.0	0.0
28	8.7	0.0	0.0	0.3
29	8.7	0.8	0.2	4.4
30	8.8	5.0	6.4	1.7
31	10.6	8.5	7.8	9.5
TT Monthly Totals				
 Daily Means				
SS Monthly Totals	291.5	.	230.3	182.5
 Daily Means	9.4	7.5	7.4	5.9
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: MARCH

Year: 2009

Country: CHILE

Daily Totals			
Latitude	45°35' S	53°08' S	
Longitude	72°07'W	70°58' W	
Elevation	310 m	37 m	
Station	COYHAIQUE	PUNTA ARENAS	
Date			
1	9.2	10.5	
2	11.1	7.2	
3	1.5	9.2	
4	4.3	4.8	
5	11.0	7.0	
6	7.6	0.2	
7	3.7	10.6	
8	9.0	5.6	
9	10.9	3.4	
10	10.3	7.6	
11	10.5	7.4	
12	6.4	0.6	
13	7.3	6.1	
14	10.1	7.2	
15	0.8	0.2	
16	1.6	8.2	
17	7.4	10.9	
18	8.7	2.4	
19	7.0	.	
20	6.9	2.4	
21	7.9	3.0	
22	5.8	7.3	
23	3.7	9.1	
24	2.1	3.0	
25	2.1	5.9	
26	6.7	7.6	
27	1.5	0.0	
28	1.3	2.6	
29	4.6	9.1	
30	3.6	8.5	
31	6.9	6.7	
TT Monthly Totals			
Daily Means			
SS Monthly Totals	191.5	.	
Daily Means	6.2	5.8	
Types of Instruments	HELIOGRAPH CAMPBELL STOKES	HELIOGRAPH CAMPBELL STOKES	

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

Month: APRIL Year: 2009 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	10.8	10.5	10.9	10.3
2	10.5	10.3	10.9	10.2
3	10.7	10.4	10.9	10.3
4	10.8	10.3	10.9	10.2
5	10.6	10.3	10.9	10.1
6	9.9	10.4	10.9	9.5
7	10.6	10.2	10.4	10.2
8	9.9	8.0	9.0	10.6
9	8.9	9.5	10.9	10.5
10	10.0	10.3	10.7	10.6
11	9.9	10.0	10.7	10.0
12	9.0	10.2	9.3	6.9
13	10.7	10.4	10.5	6.1
14	10.6	10.3	10.7	0.0
15	10.5	8.6	10.7	5.0
16	10.3	9.9	10.7	8.7
17	10.4	10.1	10.8	9.0
18	10.5	7.8	10.7	5.8
19	10.3	10.2	10.6	8.7
20	10.2	10.0	10.5	10.2
21	10.2	10.1	10.5	10.0
22	10.1	10.1	10.4	10.1
23	10.4	10.1	10.4	10.1
24	10.3	10.1	10.4	5.7
25	7.5	9.6	9.7	0.0
26	9.3	10.2	10.1	6.5
27	10.0	10.1	10.2	8.1
28	7.7	10.1	10.3	7.9
29	6.0	6.5	10.3	5.3
30	0.0	10.1	10.1	10.0
31				
TT Monthly Totals				
 Daily Means				
SS Monthly Totals	286.6	294.7	314.0	246.6
 Daily Means	9.6	9.8	10.5	8.2
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: APRIL Year: 2009 Country: CHILE

Daily Totals				
Latitude	27°10' S	29°57' S	33°23' S	33°27' S
Longitude	109°26' W	71°22' W	70°47' W	70°42' W
Elevation	47 m	25 m	474 m	520 m
Station	ISLA DE PASCUA	LA SERENA	PUDAHUEL	QUINTA NORMAL
Date				
1	10.0	2.6	10.2	8.9
2	9.5	10.0	10.4	8.9
3	9.4	0.0	3.2	4.7
4	5.3	3.2	7.0	5.5
5	6.3	5.8	10.5	8.7
6	9.9	0.1	10.4	9.1
7	9.9	2.8	10.4	9.1
8	9.5	3.7	10.1	9.1
9	2.8	9.2	9.4	8.9
10	6.5	10.0	9.3	8.7
11	6.0	10.2	9.3	7.6
12	8.0	9.9	9.5	8.5
13	8.3	10.4	9.5	8.6
14	10.0	0.0	10.0	8.7
15	3.4	0.0	9.2	8.4
16	8.6	0.0	9.4	8.4
17	6.4	0.6	9.7	8.2
18	7.3	2.3	9.9	8.3
19	7.9	1.6	10.8	8.4
20	8.0	1.6	9.9	8.5
21	8.4	0.0	8.8	7.8
22	0.0	0.0	9.7	8.3
23	8.9	0.0	9.7	8.2
24	10.3	4.9	9.3	8.2
25	7.0	0.0	9.3	8.2
26	8.7	0.0	9.5	8.5
27	10.6	.	9.3	8.1
28	5.9	0.0	8.1	7.9
29	0.0	3.8	5.9	7.3
30	8.3	5.1	4.8	4.9
31				
TT Monthly Totals				
 Daily Means				
SS Monthly Totals	221.1	.	272.5	242.6
 Daily Means	7.4	3.4	9.1	8.1
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: APRIL Year: 2009 Country: CHILE

Daily Totals				
Latitude	33°37' S	33°39' S	34°58' S	36°36' S
Longitude	78°50' W	71°36' W	71°12' W	72°26' W
Elevation	30 m	74 m	225 m	124 m
Station	ROBINSON CRUSOE	SANTO DOMINGO	CURICO	CHILLAN
Date				
1	8.1	9.2	.	9.6
2	7.4	8.9	.	0.0
3	4.6	5.0	.	0.6
4	5.9	10.1	.	7.9
5	8.2	10.7	.	9.5
6	4.4	10.5	.	9.6
7	3.9	0.0	.	9.4
8	6.1	0.0	.	8.9
9	8.9	0.3	.	8.4
10	8.8	2.4	.	7.4
11	0.0	1.1	.	3.8
12	0.0	10.4	.	5.0
13	6.4	9.9	.	8.7
14	10.3	2.2	.	8.7
15	5.7	3.4	.	6.7
16	8.7	0.0	.	8.7
17	4.4	8.4	.	8.9
18	8.6	10.0	.	9.7
19	7.9	9.8	.	8.7
20	8.2	10.2	.	9.9
21	7.9	9.0	.	8.7
22	5.1	0.0	.	7.3
23	5.0	9.2	.	8.9
24	3.5	9.3	.	9.0
25	2.9	9.4	.	9.8
26	2.8	9.8	.	9.7
27	6.8	0.0	.	8.0
28	3.4	0.0	.	7.2
29	2.4	0.0	.	0.0
30	0.8	0.0	.	0.0
31				
TT Monthly Totals				
 Daily Means				
SS Monthly Totals	167.1	169.2	.	218.7
 Daily Means	5.6	5.6	.	7.3
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: APRIL Year: 2009 Country: CHILE

Daily Totals				
Latitude	36°46' S	38°45' S	39°41' S	41°26' S
Longitude	73°03' W	72°38' W	73°04' W	73°07' W
Elevation	12 m	114 m	19 m	81 m
Station	CONCEPCION	TEMUCO	VALDIVIA	PUERTO MONTT
Date				
1	6.0	4.0	0.8	0.0
2	0.0	0.0	0.0	3.2
3	0.3	3.2	4.5	6.6
4	7.5	4.2	0.6	0.4
5	3.8	0.0	0.0	0.2
6	9.8	2.4	0.3	0.0
7	10.1	8.0	5.6	2.3
8	10.1	9.2	10.0	0.3
9	7.9	8.1	9.4	6.7
10	0.7	8.3	9.6	9.3
11	0.0	6.7	3.3	5.4
12	5.7	0.0	0.0	0.0
13	9.6	8.3	6.4	4.1
14	9.5	7.1	2.9	4.9
15	8.7	5.3	5.5	5.8
16	8.5	5.3	7.3	3.2
17	9.3	8.5	8.5	6.3
18	9.4	8.6	8.6	9.0
19	10.0	9.4	6.4	7.3
20	9.4	5.1	0.8	0.3
21	8.4	3.4	4.6	6.6
22	0.5	1.8	2.1	3.2
23	9.0	8.2	9.0	3.0
24	9.6	7.9	5.3	1.7
25	9.9	6.7	5.4	7.1
26	9.9	9.2	.	6.9
27	9.6	8.1	9.0	5.2
28	5.1	3.6	5.8	4.7
29	0.0	8.6	5.1	0.0
30	0.0	0.0	0.0	0.0
31				
TT Monthly Totals				
Daily Means				
SS Monthly Totals	198.3	169.2	.	113.7
Daily Means	6.6	5.6	4.7	3.8
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: APRIL

Year: 2009

Country: CHILE

Daily Totals			
Latitude	45°35' S	53°08' S	
Longitude	72°07'W	70°58' W	
Elevation	310 m	37 m	
Station	COYHAIQUE	PUNTA ARENAS	
Date			
1	1.6	0.0	
2	1.5	0.0	
3	5.7	0.2	
4	0.6	0.0	
5	4.1	0.0	
6	0.7	5.1	
7	0.7	0.7	
8	8.2	7.9	
9	3.7	0.0	
10	4.0	6.5	
11	3.8	0.0	
12	6.1	9.2	
13	8.1	1.4	
14	6.3	6.5	
15	1.1	0.0	
16	1.2	8.1	
17	5.1	2.0	
18	8.9	0.5	
19	4.9	3.1	
20	5.5	6.0	
21	2.0	0.0	
22	0.0	5.0	
23	2.7	2.1	
24	1.0	6.7	
25	6.6	4.7	
26	1.1	3.1	
27	7.4	1.8	
28	0.1	6.7	
29	7.2	0.0	
30	4.4	0.8	
31			
TT Monthly Totals			
Daily Means			
SS Monthly Totals	114.3	88.1	
Daily Means	3.8	2.9	
Types of Instruments	HELIOGRAPH CAMPBELL STOKES	HELIOGRAPH CAMPBELL STOKES	

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

Month: MAY Year: 2009 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	9.8	10.0	9.1
2	10.1	10.2	10.2	10.2
3	4.9	7.7	10.1	7.9
4	1.4	4.8	10.0	5.7
5	10.4	9.9	10.2	9.3
6	10.1	10.0	10.1	10.3
7	9.0	10.1	10.2	9.5
8	9.0	9.9	10.2	9.3
9	7.4	9.9	10.2	9.2
10	5.2	7.7	10.3	6.1
11	5.1	8.6	10.3	8.3
12	5.2	1.0	10.2	9.2
13	6.5	8.1	10.2	8.9
14	6.0	5.7	10.2	8.3
15	10.2	9.9	10.0	2.9
16	10.0	9.9	10.0	9.5
17	10.2	9.9	10.0	9.5
18	9.8	9.6	9.5	6.3
19	9.2	8.2	9.4	5.2
20	9.2	8.6	9.1	8.8
21	5.3	9.3	10.1	6.0
22	4.5	6.4	10.1	2.2
23	7.3	9.7	10.1	7.1
24	6.7	7.3	10.0	7.3
25	6.2	7.0	10.0	5.7
26	5.8	3.7	9.9	6.5
27	5.7	0.9	9.9	5.4
28	2.7	3.2	8.0	0.0
29	5.3	6.4	7.4	9.0
30	6.7	9.9	9.9	9.7
31	10.3	10.3	10.0	9.6
TT Monthly Totals				
 Daily Means				
SS Monthly Totals	225.7	243.6	305.8	232.0
 Daily Means	7.3	7.9	9.9	7.5
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: MAY Year: 2009 Country: CHILE

Daily Totals				
Latitude	27°10' S	29°57' S	33°23' S	33°27' S
Longitude	109°26' W	71°22' W	70°47' W	70°42' W
Elevation	47 m	25 m	474 m	520 m
Station	ISLA DE PASCUA	LA SERENA	PUDAHUEL	QUINTA NORMAL
Date				
1	8.1	0.0	6.7	7.0
2	9.1	3.5	4.3	3.8
3	4.7	6.7	5.3	6.0
4	0.0	2.1	7.6	6.5
5	7.8	0.0	6.9	6.5
6	7.2	2.9	5.2	4.4
7	9.3	8.5	2.8	2.3
8	6.4	8.9	7.8	7.5
9	1.9	7.1	5.0	6.8
10	0.6	9.0	0.7	0.3
11	1.6	8.1	0.0	0.0
12	3.9	5.1	1.9	1.5
13	7.1	7.4	2.1	1.6
14	6.2	1.8	3.7	3.7
15	7.8	0.0	4.9	6.4
16	6.4	0.0	1.6	0.4
17	3.6	0.8	4.7	2.0
18	7.9	5.3	6.9	7.4
19	6.6	0.0	8.0	7.2
20	1.9	5.3	8.1	7.5
21	0.1	7.8	8.7	7.9
22	4.2	0.2	8.7	7.9
23	6.3	3.1	6.5	5.7
24	8.3	0.0	0.0	0.0
25	8.3	6.7	0.0	0.0
26	2.7	0.0	5.9	5.4
27	6.4	0.0	1.9	1.8
28	0.8	0.0	1.4	2.0
29	1.8	0.0	0.0	0.2
30	6.3	9.2	0.0	0.0
31	8.1	8.1	8.1	7.5
TT Monthly Totals				
 Daily Means				
SS Monthly Totals	161.4	117.6	135.4	127.2
 Daily Means	5.2	3.8	4.4	4.1
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: MAY Year: 2009 Country: CHILE

Daily Totals				
Latitude	33°37' S	33°39' S	34°58' S	36°36' S
Longitude	78°50' W	71°36' W	71°12' W	72°26' W
Elevation	30 m	74 m	225 m	124 m
Station	ROBINSON CRUSOE	SANTO DOMINGO	CURICO	CHILLAN
Date				
1	5.8	3.4	.	6.8
2	1.2	0.0	.	0.0
3	2.7	3.8	.	0.0
4	5.3	9.7	.	6.7
5	3.7	0.0	.	9.0
6	4.4	0.0	.	1.9
7	0.0	0.9	.	0.0
8	0.9	6.7	.	1.2
9	2.3	4.7	.	0.0
10	3.0	0.0	.	0.0
11	1.2	2.0	.	0.0
12	1.7	0.0	.	0.0
13	0.2	0.0	.	1.1
14	5.3	0.6	.	6.6
15	5.3	7.7	.	2.5
16	5.5	2.7	.	0.0
17	6.9	0.0	.	7.8
18	7.0	8.5	.	8.4
19	6.6	8.1	.	6.3
20	0.0	9.1	.	0.0
21	1.6	9.4	.	0.0
22	0.6	7.9	.	4.6
23	1.7	0.2	.	0.6
24	0.9	0.0	.	0.0
25	6.6	1.5	.	6.8
26	5.5	8.0	.	8.8
27	2.0	7.1	.	5.4
28	3.9	0.0	.	0.5
29	0.0	1.2	.	1.9
30	6.5	2.5	.	7.7
31	5.1	9.5	.	1.9
TT Monthly Totals				
 Daily Means				
SS Monthly Totals	103.4	115.2	.	96.5
 Daily Means	3.3	3.7	.	3.1
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: MAY Year: 2009 Country: CHILE

Daily Totals				
Latitude	36°46' S	38°45' S	39°41' S	41°26' S
Longitude	73°03' W	72°38' W	73°04' W	73°07' W
Elevation	12 m	114 m	19 m	81 m
Station	CONCEPCION	TEMUCO	VALDIVIA	PUERTO MONTT
Date				
1	0.0	0.0	0.0	0.1
2	0.0	0.3	0.3	0.8
3	0.8	2.9	2.4	2.7
4	8.2	2.6	0.9	0.0
5	9.2	6.5	7.2	2.4
6	6.8	0.0	0.1	1.2
7	1.5	7.4	0.6	1.8
8	1.2	0.3	0.0	0.0
9	0.0	0.0	0.0	0.0
10	0.0	0.0	0.0	0.3
11	5.6	0.3	8.7	7.6
12	0.0	0.2	0.5	2.3
13	.	7.6	6.1	5.9
14	6.6	1.3	1.4	0.0
15	4.5	0.6	0.0	0.0
16	0.0	0.0	0.3	1.0
17	8.6	7.8	3.6	1.6
18	8.3	8.0	4.2	1.2
19	7.1	1.0	0.0	0.0
20	0.0	0.0	0.0	0.0
21	0.0	0.0	0.0	0.0
22	0.4	1.1	0.0	0.0
23	0.0	0.0	0.0	0.0
24	0.0	2.3	3.1	3.6
25	9.5	2.5	3.7	4.4
26	8.3	5.4	1.2	4.2
27	8.5	7.8	6.4	4.1
28	7.9	9.1	8.6	6.2
29	1.4	2.6	0.7	6.1
30	0.6	3.2	0.0	0.0
31	0.2	1.4	2.6	0.6
TT Monthly Totals				
 Daily Means				
SS Monthly Totals	.	82.2	62.6	58.1
 Daily Means	3.5	2.7	2.0	1.9
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: MAY

Year: 2009

Country: CHILE

Daily Totals			
Latitude	45°35' S	53°08' S	
Longitude	72°07'W	70°58' W	
Elevation	310 m	37 m	
Station	COYHAIQUE	PUNTA ARENAS	
Date			
1	0.0	8.6	
2	0.0	5.9	
3	6.8	1.8	
4	0.6	2.2	
5	6.1	1.1	
6	7.1	3.2	
7	5.1	7.3	
8	0.0	6.6	
9	0.5	1.1	
10	3.7	6.5	
11	1.5	2.2	
12	4.9	3.2	
13	7.0	5.4	
14	3.2	5.9	
15	1.5	6.5	
16	0.0	2.7	
17	0.0	5.6	
18	0.0	4.5	
19	0.0	3.2	
20	0.0	0.4	
21	0.0	4.0	
22	0.0	5.3	
23	0.4	3.0	
24	3.5	1.1	
25	5.3	1.7	
26	0.6	4.1	
27	6.3	5.2	
28	0.0	1.8	
29	0.0	1.0	
30	0.7	0.0	
31	6.4	3.4	
TT Monthly Totals			
Daily Means			
SS Monthly Totals	71.2	114.5	
Daily Means	2.3	3.7	
Types of Instruments	HELIOGRAPH CAMPBELL STOKES	HELIOGRAPH CAMPBELL STOKES	

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

Month: JUNE Year: 2009 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	10.0	9.7	9.9	8.8
2	7.0	9.6	9.8	5.7
3	4.2	3.7	9.9	5.8
4	4.8	5.6	9.9	6.5
5	7.4	3.1	9.5	6.5
6	3.5	3.1	7.8	6.0
7	8.9	9.2	9.2	7.2
8	5.3	9.4	10.0	7.0
9	5.2	8.3	9.9	7.1
10	4.7	4.7	9.9	6.9
11	3.7	0.9	9.1	5.6
12	9.8	9.5	9.9	7.8
13	6.6	6.3	10.0	4.2
14	5.4	5.0	9.6	5.2
15	6.5	8.0	9.8	9.2
16	4.3	0.0	10.0	4.2
17	8.1	9.1	10.0	9.5
18	5.4	5.8	10.0	8.9
19	5.0	4.6	9.9	7.4
20	4.8	9.4	10.0	7.9
21	4.8	5.6	9.9	6.5
22	6.1	5.4	9.9	1.1
23	4.7	5.5	9.6	7.1
24	6.7	7.4	9.7	9.6
25	5.4	9.6	9.9	9.4
26	7.7	8.4	9.9	6.8
27	5.0	0.0	9.9	5.6
28	4.4	3.6	10.0	7.7
29	5.9	8.3	9.9	8.2
30	3.6	0.4	9.8	7.8
31				
TT Monthly Totals				
 Daily Means				
SS Monthly Totals	174.9	179.2	292.6	207.2
 Daily Means	5.8	6.0	9.8	6.9
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: JUNE Year: 2009 Country: CHILE

Daily Totals				
Latitude	27°10' S	29°57' S	33°23' S	33°27' S
Longitude	109°26' W	71°22' W	70°47' W	70°42' W
Elevation	47 m	25 m	474 m	520 m
Station	ISLA DE PASCUA	LA SERENA	PUDAHUEL	QUINTA NORMAL
Date				
1	4.7	8.4	8.7	8.0
2	5.8	4.9	8.8	7.8
3	2.2	1.9	4.5	4.3
4	8.4	5.1	8.0	6.9
5	3.6	6.6	8.7	7.8
6	1.9	1.9	7.2	5.7
7	8.0	1.0	1.3	0.0
8	6.7	9.0	7.1	7.8
9	4.3	8.8	7.5	7.5
10	8.9	3.8	7.6	7.9
11	6.8	5.2	8.6	8.0
12	9.3	1.1	8.6	7.3
13	6.3	7.6	5.6	5.9
14	2.7	5.5	0.0	0.0
15	7.2	7.2	0.0	0.0
16	0.0	6.8	1.0	1.2
17	8.9	0.0	0.0	0.0
18	1.4	3.0	0.0	0.0
19	0.0	4.9	0.0	0.0
20	5.3	8.4	0.0	0.0
21	0.4	3.4	3.6	2.2
22	8.9	2.2	0.0	0.0
23	7.2	4.0	7.4	7.0
24	8.5	4.8	6.0	5.6
25	2.5	0.4	0.0	5.6
26	7.5	5.2	0.6	0.1
27	6.8	3.9	1.2	0.2
28	7.6	0.4	0.0	0.0
29	4.0	9.5	3.6	3.2
30	2.4	7.9	0.0	0.4
31				
TT Monthly Totals				
 Daily Means				
SS Monthly Totals	158.2	142.8	115.6	110.4
 Daily Means	5.3	4.8	3.9	3.7
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: JUNE Year: 2009 Country: CHILE

Daily Totals				
Latitude	33°37' S	33°39' S	34°58' S	36°36' S
Longitude	78°50' W	71°36' W	71°12' W	72°26' W
Elevation	30 m	74 m	225 m	124 m
Station	ROBINSON CRUSOE	SANTO DOMINGO	CURICO	CHILLAN
Date				
1	6.3	9.3	.	3.4
2	1.2	1.2	.	0.0
3	2.9	0.0	.	0.0
4	5.6	7.9	.	1.4
5	4.0	9.2	.	8.5
6	1.0	0.0	.	0.0
7	0.0	0.0	.	0.0
8	0.0	8.5	.	5.5
9	0.0	8.5	.	5.1
10	2.4	9.0	.	8.0
11	7.1	8.7	.	4.1
12	0.0	0.0	.	4.0
13	0.0	4.7	.	0.0
14	1.7	0.0	.	1.4
15	5.5	4.9	.	8.5
16	0.5	0.5	.	0.0
17	0.0	0.0	.	0.0
18	1.9	0.0	.	0.0
19	1.6	0.0	.	0.0
20	5.2	5.1	.	8.0
21	5.4	9.2	.	2.3
22	3.5	3.4	.	8.5
23	4.5	8.9	.	9.0
24	0.0	6.8	.	0.0
25	0.3	0.0	.	0.0
26	0.0	0.0	.	0.0
27	4.7	4.1	.	0.0
28	5.5	0.9	.	0.0
29	1.9	8.0	.	3.3
30	4.9	0.0	.	0.4
31				
TT Monthly Totals				
 Daily Means				
SS Monthly Totals	77.6	118.8	.	81.4
 Daily Means	2.6	4.0	.	2.7
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: JUNE Year: 2009 Country: CHILE

Daily Totals				
Latitude	36°46' S	38°45' S	39°41' S	41°26' S
Longitude	73°03' W	72°38' W	73°04' W	73°07' W
Elevation	12 m	114 m	19 m	81 m
Station	CONCEPCION	TEMUCO	VALDIVIA	PUERTO MONTT
Date				
1	7.1	5.5	1.7	2.9
2	8.2	5.7	0.0	1.7
3	0.0	0.0	0.0	0.0
4	3.7	1.2	5.5	0.0
5	9.6	5.7	0.3	4.8
6	2.8	0.0	0.0	3.2
7	1.1	0.0	0.0	0.0
8	6.9	0.0	0.0	0.0
9	8.4	3.3	6.4	1.4
10	8.1	7.7	5.0	0.0
11	9.6	6.6	3.0	3.0
12	0.0	6.4	3.5	2.8
13	0.0	0.5	0.0	0.0
14	5.5	6.1	3.0	3.1
15	7.6	4.4	4.4	0.4
16	0.1	0.0	0.0	0.0
17	0.0	0.0	1.1	1.7
18	0.0	0.0	0.1	0.0
19	1.6	6.3	8.0	4.7
20	8.1	3.8	1.0	0.2
21	1.5	1.0	1.5	1.7
22	8.2	2.2	1.1	1.5
23	9.7	5.1	3.4	4.0
24	8.3	0.0	0.0	0.0
25	1.8	1.1	2.8	4.6
26	0.5	1.6	0.9	1.6
27	0.0	0.1	0.0	0.0
28	2.9	0.8	0.7	1.0
29	4.0	4.1	2.8	1.5
30	1.8	1.0	0.2	0.2
31				
TT Monthly Totals				
 Daily Means				
SS Monthly Totals	127.1	80.2	56.4	46.0
 Daily Means	4.2	2.7	1.9	1.5
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: JUNE

Year: 2009

Country: CHILE

Daily Totals			
Latitude	45°35' S	53°08' S	
Longitude	72°07'W	70°58' W	
Elevation	310 m	37 m	
Station	COYHAIQUE	PUNTA ARENAS	
Date			
1	1.8	5.5	
2	2.1	0.0	
3	4.5	2.4	
4	6.1	4.8	
5	3.0	1.1	
6	6.0	0.0	
7	4.7	5.5	
8	2.0	2.1	
9	4.0	6.4	
10	1.4	2.8	
11	5.8	0.3	
12	6.0	0.1	
13	0.4	0.5	
14	2.9	5.3	
15	3.1	2.1	
16	0.0	4.4	
17	4.1	1.8	
18	2.6	5.5	
19	4.6	6.6	
20	0.0	6.4	
21	4.8	0.1	
22	0.8	2.7	
23	1.2	1.2	
24	3.3	.	
25	0.7	6.3	
26	0.0	2.2	
27	0.5	0.0	
28	0.0	0.0	
29	1.2	0.0	
30	0.7	3.2	
31			
TT Monthly Totals			
Daily Means			
SS Monthly Totals	78.3	.	
Daily Means	2.6	2.7	
Types of Instruments	HELIOGRAPH CAMPBELL STOKES	HELIOGRAPH CAMPBELL STOKES	