



Dirección Meteorológica de Chile
Subdepartamento de Climatología y
Meteorología Aplicada



Informe Solarimétrico

II Semestre 2016



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

Month: JULY		Year: 2016		Country: CHILE
Daily Totals				
Latitude	18°21' S	22°29' S	23°26' S	33°27' S
Longitude	70°19'W	68°54' W	70°26' W	70°42' W
Elevation	58 m	2270 m	135 m	520 m
Station	ARICA	CALAMA	ANTOFAGASTA	QUINTA NORMAL
Date				
1	4.40	15.21	.	5.73
2	7.83	14.91	.	1.07
3	8.41	15.70	.	3.30
4	5.93	7.39	.	9.45
5	10.36	16.22	.	9.17
6	10.90	15.94	.	8.65
7	4.68	11.00	.	7.41
8	8.14	11.77	.	6.89
9	4.28	15.99	.	5.20
10	4.09	15.07	.	1.15
11	4.20	16.12	.	6.88
12	6.16	16.69	.	7.02
13	4.06	16.83	.	5.16
14	5.31	16.97	.	10.08
15	7.73	17.07	.	8.66
16	8.06	17.26	.	4.95
17	11.30	17.39	.	0.70
18	8.19	17.09	.	8.04
19	8.07	16.89	.	1.61
20	8.38	16.86	.	7.36
21	10.18	16.83	.	7.57
22	10.15	17.51	.	7.20
23	11.21	17.51	.	1.33
24	7.30	17.68	.	2.25
25	11.25	17.56	.	6.78
26	10.67	18.09	.	11.44
27	10.07	18.11	.	8.29
28	6.18	18.21	.	7.24
29	10.25	18.43	.	8.69
30	8.76	18.02	.	7.68
31	11.02	17.87	.	7.68
TT Monthly Totals	247.52	504.19	.	194.63
Daily Means	7.98	16.26	.	6.28
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: JULY		Year: 2016		Country: CHILE	
Daily Totals					
Latitude	41°25' S	45°35' S			
Longitude	73°05' W	72°07' W			
Elevation	85 m	310 m			
Station					
Date	PUERTO MONTT	COYHAIQUE			
1	.	2.83			
2	.	4.16			
3	.	2.98			
4	.	3.17			
5	.	1.40			
6	.	2.52			
7	.	2.14			
8	.	2.32			
9	.	2.14			
10	.	1.47			
11	.	2.12			
12	.	4.00			
13	.	1.87			
14	.	1.02			
15	.	3.95			
16	.	1.41			
17	.	2.77			
18	.	1.42			
19	.	2.60			
20	.	1.03			
21	.	1.44			
22	.	2.12			
23	.	3.22			
24	.	5.73			
25	.	3.39			
26	.	5.59			
27	.	0.21			
28	.	2.60			
29	.	3.40			
30	.	3.39			
31	.	1.35			
TT Monthly Totals	.	79.79			
Daily Means	.	2.57			
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: AUGUST		Year: 2016		Country: CHILE	
Daily Totals					
Latitude	18°21' S	22°29' S	23°26' S	33°27' S	
Longitude	70°19'W	68°54' W	70°26' W	70°42' W	
Elevation	58 m	2270 m	135 m	520 m	
Station	ARICA	CALAMA	ANTOFAGASTA	QUINTA	
Date				NORMAL	
1	9.50	18.24	.	8.47	
2	9.05	18.52	.	9.09	
3	8.14	18.49	.	6.08	
4	4.77	18.33	.	9.52	
5	8.31	18.33	.	9.83	
6	8.06	18.53	.	9.80	
7	8.49	18.86	.	4.86	
8	7.56	18.96	.	10.59	
9	8.86	19.29	.	10.58	
10	8.54	19.37	.	9.70	
11	9.54	19.28	.	9.96	
12	9.68	19.63	.	3.90	
13	9.68	19.85	.	8.25	
14	10.12	20.10	.	4.10	
15	11.72	20.37	.	10.36	
16	6.02	20.68	.	10.51	
17	9.20	21.08	.	11.68	
18	8.10	20.94	.	11.70	
19	7.98	21.25	.	9.09	
20	10.50	21.18	.	11.00	
21	9.26	21.85	.	12.18	
22	13.31	21.39	.	12.78	
23	10.90	20.32	.	2.20	
24	8.79	21.11	.	1.94	
25	6.13	21.52	.	11.23	
26	10.23	21.75	.	8.93	
27	11.28	17.50	.	5.66	
28	11.75	22.00	.	10.68	
29	11.95	22.41	.	13.28	
30	13.48	22.66	.	12.87	
31	10.26	22.90	.	3.21	
TT Monthly Totals	291.17	626.68	.	274.02	
Daily Means	9.39	20.22	.	8.84	
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: AUGUST		Year: 2016		Country: CHILE	
Daily Totals					
Latitude	41°25' S	45°35' S			
Longitude	73°05' W	72°07' W			
Elevation	85 m	310 m			
Station					
Date	PUERTO MONTT	COYHAIQUE			
1	.	3.82			
2	.	3.42			
3	.	3.22			
4	.	2.39			
5	.	2.90			
6	.	3.64			
7	.	4.04			
8	.	2.91			
9	.	1.04			
10	.	6.22			
11	.	2.91			
12	.	0.64			
13	.	4.23			
14	.	.			
15	.	3.99			
16	.	1.38			
17	.	2.56			
18	.	4.64			
19	.	4.85			
20	.	1.40			
21	.	7.95			
22	.	1.09			
23	.	4.89			
24	.	3.20			
25	.	2.65			
26	.	6.08			
27	.	6.83			
28	.	0.02			
29	.	0.04			
30	.	1.37			
31	.	3.89			
TT Monthly Totals	.	.			
Daily Means	.	3.27			
SS Monthly Totals					
Daily Means					
Types of	PYRANOMETER	PYRANOMETER	PYRANOMETER	PYRANOMETER	PYRANOMETER
Instruments	PSP EPPLEY	PSP EPPLEY	PSP EPPLEY	PSP EPPLEY	PSP EPPLEY

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

Month: SEPTEMBER		Year: 2016		Country: CHILE
Daily Totals				
Latitude	18°21' S	22°29' S	23°26' S	33°27' S
Longitude	70°19'W	68°54' W	70°26' W	70°42' W
Elevation	58 m	2270 m	135 m	520 m
Station	ARICA	CALAMA	ANTOFAGASTA	QUINTA NORMAL
Date				
1	13.87	27.19	.	13.25
2	9.65	26.95	.	13.18
3	11.54	27.27	.	13.48
4	12.85	27.46	.	13.79
5	14.30	27.83	.	14.53
6	12.22	27.95	.	15.02
7	13.31	27.79	.	14.96
8	13.41	27.75	.	12.45
9	12.51	28.06	.	14.60
10	12.73	28.18	.	14.93
11	11.02	28.20	.	7.91
12	8.77	28.15	.	10.36
13	9.98	28.76	.	13.45
14	15.12	27.86	.	13.39
15	14.88	28.81	.	8.06
16	11.94	28.53	.	4.12
17	11.10	29.08	.	12.59
18	9.65	28.58	.	17.10
19	12.95	29.53	.	17.49
20	11.89	29.67	.	16.77
21	13.48	29.97	.	17.09
22	13.50	29.22	.	17.17
23	15.70	29.64	.	17.36
24	11.94	29.76	.	18.82
25	14.18	29.83	.	17.40
26	13.57	30.14	.	18.76
27	15.24	30.03	.	17.71
28	13.79	29.85	.	18.91
29	11.77	29.92	.	12.59
30	11.29	30.29	.	19.00
31				
TT Monthly Totals	378.12	862.23	.	436.23
Daily Means	12.66	28.74	.	14.54
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: SEPTEMBER		Year: 2016		Country: CHILE	
Daily Totals					
Latitude	41°25' S	45°35' S			
Longitude	73°05' W	72°07' W			
Elevation	85 m	310 m			
Station	PUERTO MONTT	COYHAIQUE			
Date					
1	.	6.98			
2	.	5.45			
3	.	8.33			
4	.	12.51			
5	.	10.82			
6	.	8.13			
7	.	4.76			
8	.	6.58			
9	.	6.03			
10	.	2.92			
11	.	4.40			
12	.	5.73			
13	.	6.07			
14	.	2.62			
15	.	4.31			
16	.	8.99			
17	.	13.82			
18	.	13.48			
19	.	9.23			
20	.	8.74			
21	.	10.68			
22	.	14.40			
23	.	12.68			
24	.	9.44			
25	.	11.79			
26	.	6.46			
27	.	5.70			
28	.	12.24			
29	.	13.44			
30	.	1.12			
31					
TT Monthly Totals	.	247.87			
Daily Means	.	8.26			
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: OCTOBER		Year: 2016		Country: CHILE
Daily Totals				
Latitude	18°21' S	22°29' S	23°26' S	33°27' S
Longitude	70°19'W	68°54' W	70°26' W	70°42' W
Elevation	58 m	2270 m	135 m	520 m
Station	ARICA	CALAMA	ANTOFAGASTA	QUINTA NORMAL
Date				
1	13.44	27.19	.	16.12
2	16.20	26.95	.	19.72
3	13.15	27.27	.	17.66
4	13.97	27.46	.	19.97
5	13.02	27.83	.	20.04
6	13.77	27.95	.	12.74
7	15.58	27.79	.	19.66
8	14.72	27.75	.	17.93
9	17.55	28.06	.	20.03
10	17.23	28.18	.	21.24
11	14.76	28.20	.	12.26
12	16.45	28.15	.	7.31
13	16.25	28.76	.	17.81
14	14.96	27.86	.	7.69
15	9.84	28.81	.	5.33
16	12.06	28.53	.	12.43
17	15.27	29.08	.	12.47
18	13.84	28.58	.	13.23
19	14.57	29.53	.	22.49
20	16.09	29.67	.	23.05
21	17.32	29.97	.	21.37
22	15.29	29.22	.	21.26
23	16.51	29.64	.	17.77
24	13.78	29.76	.	20.23
25	15.23	29.83	.	23.51
26	15.65	30.14	.	23.48
27	17.85	30.03	.	23.68
28	16.93	29.85	.	19.13
29	18.53	29.92	.	21.50
30	14.79	30.29	.	22.14
31	14.37	30.69	.	9.32
TT Monthly Totals	468.99	892.92	.	542.58
Daily Means	15.13	28.80	.	17.50
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: OCTOBER		Year: 2016		Country: CHILE	
Daily Totals					
Latitude	41°25' S	45°35' S			
Longitude	73°05' W	72°07' W			
Elevation	85 m	310 m			
Station					
Date	PUERTO MONTT	COYHAIQUE			
1	.	5.63			
2	.	2.97			
3	.	4.57			
4	.	11.71			
5	.	0.07			
6	.	13.51			
7	.	9.76			
8	.	2.29			
9	.	9.17			
10	.	5.41			
11	.	8.85			
12	.	4.98			
13	.	9.71			
14	.	12.80			
15	.	11.77			
16	.	7.02			
17	.	12.60			
18	.	16.13			
19	.	17.81			
20	.	20.04			
21	.	8.05			
22	.	15.80			
23	.	12.11			
24	.	13.93			
25	.	8.82			
26	.	16.91			
27	.	17.41			
28	.	6.54			
29	.	17.62			
30	.	1.49			
31	.	2.13			
TT Monthly Totals	.	307.61			
Daily Means	.	9.92			
SS Monthly Totals					
Daily Means					
Types of	PYRANOMETER	PYRANOMETER	PYRANOMETER	PYRANOMETER	PYRANOMETER
Instruments	PSP EPPLEY	PSP EPPLEY	PSP EPPLEY	PSP EPPLEY	PSP EPPLEY

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

Month: NOVEMBER		Year: 2016		Country: CHILE
Daily Totals				
Latitude	18°21' S	22°29' S	23°26' S	33°27' S
Longitude	70°19'W	68°54' W	70°26' W	70°42' W
Elevation	58 m	2270 m	135 m	520 m
Station	ARICA	CALAMA	ANTOFAGASTA	QUINTA NORMAL
Date				
1	14.33	26.69	.	25.85
2	16.68	31.59	.	25.05
3	16.60	30.49	.	25.11
4	18.03	28.12	.	24.69
5	19.59	31.55	.	24.92
6	17.84	31.53	.	23.07
7	16.40	31.37	.	25.19
8	16.05	31.15	.	25.12
9	19.70	31.12	.	25.94
10	14.96	31.25	.	26.22
11	14.42	31.04	.	25.57
12	15.31	31.56	.	20.44
13	19.46	31.88	.	21.47
14	20.24	30.78	.	24.69
15	18.98	28.72	.	24.79
16	20.47	29.43	.	24.04
17	19.73	31.60	.	26.23
18	17.68	31.38	.	24.67
19	19.68	31.27	.	24.66
20	17.80	31.01	.	20.68
21	17.06	30.87	.	22.24
22	20.35	30.23	.	23.48
23	20.50	30.20	.	10.64
24	19.91	29.04	.	25.72
25	20.35	29.25	.	24.86
26	17.77	30.27	.	26.28
27	19.89	30.79	.	26.63
28	20.12	31.28	.	26.57
29	18.90	28.46	.	25.67
30	13.54	28.18	.	25.47
31				
TT Monthly Totals	542.33	912.11	.	725.93
Daily Means	18.08	30.40	.	24.20
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: NOVEMBER		Year: 2016		Country: CHILE	
Daily Totals					
Latitude	41°25' S	45°35' S			
Longitude	73°05' W	72°07' W			
Elevation	85 m	310 m			
Station	PUERTO MONTT	COYHAIQUE			
Date					
1	.	23.85			
2	.	7.12			
3	.	4.10			
4	.	1.48			
5	.	14.37			
6	.	13.64			
7	.	13.49			
8	.	22.85			
9	.	20.98			
10	.	19.98			
11	.	18.47			
12	.	12.65			
13	.	.			
14	.	6.09			
15	.	6.34			
16	.	24.26			
17	.	20.98			
18	.	24.65			
19	.	23.20			
20	.	26.17			
21	.	24.92			
22	.	24.50			
23	.	24.54			
24	.	24.39			
25	.	21.74			
26	.	19.57			
27	.	26.38			
28	.	26.44			
29	.	25.08			
30	.	23.80			
31					
TT Monthly Totals	.	.			
Daily Means	.	18.83			
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: DECEMBER		Year: 2016		Country: CHILE
Daily Totals				
Latitude	18°21' S	22°29' S	23°26' S	33°27' S
Longitude	70°19'W	68°54' W	70°26' W	70°42' W
Elevation	58 m	2270 m	135 m	520 m
Station	ARICA	CALAMA	ANTOFAGASTA	QUINTA NORMAL
Date				
1	13.85	26.69	.	25.08
2	16.70	31.59	.	25.47
3	19.54	30.49	.	25.76
4	18.91	28.12	.	20.21
5	17.72	31.55	.	26.89
6	16.55	31.53	.	27.75
7	18.48	31.37	.	26.57
8	20.17	31.15	.	23.54
9	20.24	31.12	.	3.67
10	20.21	31.25	.	29.95
11	20.25	31.04	.	28.04
12	20.70	31.56	.	28.38
13	20.80	31.88	.	28.36
14	19.95	30.78	.	29.17
15	17.71	28.72	.	29.22
16	20.17	29.43	.	27.07
17	16.87	31.60	.	27.49
18	20.08	31.38	.	29.89
19	19.82	31.27	.	29.97
20	20.63	31.01	.	29.67
21	20.06	30.87	.	28.19
22	19.88	30.23	.	28.14
23	19.81	30.20	.	28.22
24	19.34	29.04	.	27.20
25	19.56	29.25	.	27.19
26	19.21	30.27	.	16.81
27	17.80	30.79	.	29.40
28	16.28	31.28	.	28.67
29	20.14	28.46	.	28.77
30	18.93	28.18	.	28.63
31	.	.	.	.
TT Monthly Totals	.	.	.	.
Daily Means	19.01	30.40	.	26.45
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: DECEMBER		Year: 2016		Country: CHILE	
Daily Totals					
Latitude	41°25' S	45°35' S			
Longitude	73°05' W	72°07' W			
Elevation	85 m	310 m			
Station	PUERTO MONTT	COYHAIQUE			
Date					
1	.	26.40			
2	.	26.53			
3	.	23.80			
4	.	8.84			
5	.	14.96			
6	.	24.96			
7	.	25.17			
8	.	25.03			
9	.	24.38			
10	.	24.48			
11	.	13.65			
12	.	16.33			
13	.	21.30			
14	.	21.45			
15	.	23.95			
16	.	24.03			
17	.	21.08			
18	.	21.16			
19	.	13.66			
20	.	13.73			
21	.	13.43			
22	.	13.57			
23	.	15.29			
24	.	15.45			
25	.	12.62			
26	.	13.29			
27	.	8.18			
28	.	13.79			
29	.	26.04			
30	.	26.11			
31	.	13.71			
TT Monthly Totals	.	586.37			
Daily Means	.	18.92			
SS Monthly Totals					
Daily Means					
Types of	PYRANOMETER	PYRANOMETER	PYRANOMETER	PYRANOMETER	PYRANOMETER
Instruments	PSP EPPLEY	PSP EPPLEY	PSP EPPLEY	PSP EPPLEY	PSP EPPLEY

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

Month: JULY		Year: 2016		Country: CHILE
Daily Totals				
Latitude	18°21' S	20°32' S	22°28' S	23°26' S
Longitude	70°19'W	72°10' W	68°55' W	70°26' W
Elevation	58 m	52 m	270 m	135 m
Station	ARICA	IQUIQUE	CALAMA	ANTOFAGASTA
Date				
1	0.0	0.0	10.2	0.0
2	4.0	0.0	9.2	0.0
3	2.9	3.2	9.6	0.6
4	0.7	7.3	1.8	3.6
5	6.3	9.7	10.4	9.3
6	9.0	7.2	9.5	8.9
7	0.0	2.3	4.6	5.9
8	0.8	8.3	6.6	6.7
9	0.0	0.0	10.5	4.0
10	0.0	0.0	9.0	0.0
11	0.0	3.2	10.5	2.7
12	3.1	4.0	10.5	8.9
13	0.0	0.1	10.6	6.1
14	2.7	2.7	10.4	9.4
15	4.9	10.3	10.4	6.7
16	4.3	0.0	10.5	6.8
17	9.5	7.5	10.4	6.3
18	5.7	8.7	10.4	8.7
19	4.4	3.3	10.5	8.0
20	2.6	7.7	10.5	7.8
21	6.7	7.3	10.6	9.2
22	6.4	9.1	10.6	5.8
23	8.0	7.0	10.6	4.7
24	5.4	0.0	10.6	1.4
25	8.5	9.7	10.5	9.7
26	6.3	3.4	10.6	7.6
27	6.7	3.7	10.6	5.7
28	1.4	6.8	10.6	6.8
29	6.5	7.0	10.7	8.3
30	5.5	5.6	10.5	6.6
31	8.0	9.7	10.6	7.9
TT Monthly Totals				
Daily Means				
SS Monthly Totals	130.3	154.8	302.6	184.1
Daily Means	4.2	5.0	9.8	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: JULY		Year: 2016		Country: CHILE
Daily Totals				
Latitude	27°15'S	27°10' S	29°57' S	33°23' S
Longitude	70°46'W	109°26' W	71°22' W	70°47' W
Elevation	204 m	47 m	25 m	474 m
Station	CALDERA	ISLA DE PASCUA	LA SERENA	PUDAHUEL
Date				
1	0.0	2.3	0.0	
2	0.0	4.9	0.0	
3	0.3	0.9	0.2	
4	8.8	7.2	9.2	
5	8.7	4.3	8.9	
6	9.1	4.8	9.0	
7	4.8	1.8	6.0	
8	7.3	8.8	5.9	
9	6.6	2.4	4.8	
10	0.0	5.2	0.0	
11	8.8	0.0	3.2	
12	9.1	8.7	0.4	
13	9.3	9.1	1.6	
14	9.3	7.5	9.1	
15	6.1	5.0	6.6	
16	9.2	7.6	6.3	
17	3.1	8.0	1.8	
18	9.4	4.6	9.0	
19	7.2	6.4	4.4	
20	9.3	6.9	9.2	
21	8.6	6.7	8.7	
22	7.6	7.2	5.0	
23	5.3	7.5	3.7	
24	0.0	6.5	3.2	
25	9.3	1.5	6.4	
26	8.1	6.4	9.8	
27	5.6	1.7	3.9	
28	7.4	7.9	3.7	
29	5.0	9.0	7.2	
30	0.0	6.1	8.2	
31	8.2	6.7	9.5	
TT Monthly Totals				
Daily Means				
SS Monthly Totals	191.5	173.6	164.9	.
Daily Means	6.2	5.6	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: JULY		Year: 2016		Country: CHILE
Daily Totals				
Latitude	33°27' S	33°37' S	33°39' S	34°58' S
Longitude	70°42' W	78°50' W	71°36' W	71°12' W
Elevation	520 m	30 m	74 m	225 m
Station				
Date	QUINTA NORMAL	ROBINSON CRUSOE	SANTO DOMINGO	CURICO
1	3.0	6.2	0.0	2.8
2	0.0	0.0	0.0	0.0
3	1.0	0.5	0.2	1.2
4	6.7	5.6	5.9	5.1
5	6.9	1.2	5.9	4.3
6	7.0	2.0	6.0	0.0
7	6.4	0.0	6.4	5.5
8	3.6	0.0	0.0	1.3
9	3.1	0.1	5.8	7.4
10	0.0	6.0	0.0	0.0
11	1.8	5.8	4.3	2.2
12	0.0	0.0	0.0	0.0
13	0.6	4.7	3.5	0.0
14	7.5	6.9	6.6	8.2
15	7.1	0.0	7.1	4.9
16	1.0	0.0	0.0	2.6
17	0.0	4.4	0.0	0.0
18	7.5	5.1	6.8	7.9
19	0.0	2.7	0.0	0.0
20	5.7	7.3	5.9	5.8
21	4.8	0.0	6.8	0.7
22	4.9	4.8	0.6	2.7
23	0.0	0.0	0.0	0.0
24	0.0	2.3	0.0	0.0
25	3.2	3.8	5.8	0.8
26	5.5	3.6	6.5	4.8
27	6.8	0.0	6.4	6.8
28	3.0	4.3	5.9	0.0
29	7.2	6.7	6.8	5.4
30	5.3	4.3	2.8	0.6
31	5.9	5.3	6.7	4.1
TT Monthly Totals				
Daily Means				
SS Monthly Totals	115.5	93.6	112.7	85.1
Daily Means	3.7	3.0	3.6	2.7
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: JULY		Year: 2016		Country: CHILE
Daily Totals				
Latitude	36°36' S	36°46' S	38°45' S	39°41' S
Longitude	72°26' W	73°03' W	72°38' W	73°04' W
Elevation	124 m	12 m	114 m	19 m
Station	CHILLAN	CONCEPCION	TEMUCO	VALDIVIA
Date				
1	.	8.7	6.7	3.8
2	.	2.0	2.9	0.0
3	.	3.7	0.0	0.0
4	.	5.6	0.0	3.2
5	.	6.1	0.0	0.1
6	.	8.5	0.0	0.0
7	.	7.8	2.6	2.6
8	.	0.0	0.2	0.0
9	.	0.5	0.5	0.9
10	.	1.9	0.0	2.0
11	.	7.7	4.2	1.5
12	.	0.0	0.9	0.4
13	.	0.0	0.0	0.0
14	.	6.9	3.1	4.8
15	.	8.7	7.1	3.7
16	.	0.6	0.0	0.0
17	.	0.3	0.0	0.0
18	.	7.5	7.4	7.9
19	.	1.7	1.3	0.5
20	.	0.0	0.0	1.3
21	.	0.2	1.2	0.2
22	.	0.2	0.0	0.0
23	.	0.0	0.1	1.2
24	.	0.0	0.0	0.0
25	.	7.3	0.0	0.2
26	.	8.0	7.7	4.2
27	.	6.0	6.0	4.3
28	.	0.0	0.0	2.0
29	.	7.6	4.2	0.4
30	.	0.9	0.0	0.3
31	.	0.5	0.8	2.0
TT Monthly Totals				
Daily Means				
SS Monthly Totals	.	108.9	56.9	47.5
Daily Means	.	3.5	1.8	1.5
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: JULY

Year: 2016

Country: CHILE

Daily Totals				
Latitude	41°26' S	45°35' S	53°08' S	
Longitude	73°07' W	72°07' W	70°58' W	
Elevation	81 m	310 m	37 m	
Station				
Date	PUERTO MONTT	COYHAIQUE	PUNTA ARENAS	
1	3.2	3.1	5.2	
2	5.3	1.1	1.1	
3	5.1	2.5	5.3	
4	1.2	1.9	5.3	
5	0.0	0.2	0.4	
6	0.0	0.4	0.7	
7	0.1	0.8	0.0	
8	0.0	0.5	0.0	
9	1.2	0.9	0.0	
10	0.2	0.0	3.4	
11	0.0	0.0	0.0	
12	2.1	3.7	6.6	
13	0.7	0.0	5.9	
14	3.4	0.0	3.6	
15	5.1	4.3	1.1	
16	0.0	4.3	0.6	
17	1.0	2.8	0.0	
18	4.0	5.1	6.4	
19	0.1	1.1	0.4	
20	2.3	1.7	1.5	
21	2.6	5.1	4.2	
22	1.0	3.4	2.0	
23	5.4	4.9	7.3	
24	0.8	3.2	7.4	
25	1.5	1.0	7.4	
26	3.8	2.9	7.6	
27	2.3	0.0	6.3	
28	1.5	0.3	0.0	
29	1.6	0.1	1.6	
30	2.9	1.2	7.3	
31	1.7	0.0	0.0	
TT Monthly Totals				
Daily Means				
SS Monthly Totals	60.1	56.5	98.6	
Daily Means	1.9	1.8	3.2	
Types of	HELIOGRAPH	HELIOGRAPH	HELIOGRAPH	
Instruments	CAMPBELL	CAMPBELL	CAMPBELL	
	STOKES	STOKES	STOKES	

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

Month: AUGUST		Year: 2016		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	5.7	3.0	10.6	8.0
2	4.9	1.5	10.6	9.1
3	4.9	6.5	10.7	6.6
4	0.2	0.0	10.5	5.9
5	5.2	0.2	10.6	4.4
6	4.3	0.0	9.1	8.3
7	4.3	0.0	10.6	3.8
8	3.4	0.0	10.7	8.9
9	4.3	7.3	10.7	8.8
10	4.3	6.3	10.9	8.4
11	5.4	8.0	10.8	8.0
12	5.4	5.0	10.9	8.4
13	3.4	4.4	10.7	8.0
14	4.6	9.2	10.8	6.2
15	5.9	4.9	10.9	8.8
16	0.6	0.0	10.9	5.5
17	5.0	4.9	10.9	7.3
18	1.9	8.2	10.9	7.3
19	3.0	8.3	10.9	6.6
20	5.9	6.0	10.6	7.8
21	4.1	1.8	11.0	8.4
22	10.3	10.2	11.1	7.4
23	5.0	9.7	10.3	9.5
24	2.2	6.3	11.0	2.4
25	0.0	5.7	11.2	5.9
26	4.3	7.0	11.0	0.5
27	5.0	1.0	7.1	3.8
28	6.5	1.8	11.0	2.0
29	7.0	10.4	11.0	10.2
30	8.4	9.3	11.2	11.8
31	5.3	0.0	11.0	4.1
TT Monthly Totals				
Daily Means				
SS Monthly Totals	140.7	146.9	330.2	212.1
Daily Means	4.5	4.7	10.7	6.8
Types of	HELIOGRAPH	HELIOGRAPH	HELIOGRAPH	HELIOGRAPH
Instruments	CAMPBELL	CAMPBELL	CAMPBELL	CAMPBELL
	STOKES	STOKES	STOKES	STOKES

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

Month: AUGUST		Year: 2016		Country: CHILE
Daily Totals				
Latitude	27°15'S	27°10' S	29°57' S	33°23' S
Longitude	70°46'W	109°26' W	71°22' W	70°47' W
Elevation	204 m	47 m	25 m	474 m
Station	CALDERA	ISLA DE PASCUA	LA SERENA	PUDAHUEL
Date				
1	9.7	7.8	9.9	.
2	6.1	4.5	2.0	.
3	5.0	8.2	7.0	.
4	5.1	8.8	9.6	.
5	0.0	6.8	2.0	.
6	6.3	0.0	9.3	.
7	3.8	6.0	1.5	.
8	4.5	7.2	5.8	.
9	6.0	6.1	1.6	.
10	3.5	2.8	0.0	.
11	6.1	10.9	6.6	.
12	6.1	8.1	3.0	.
13	6.0	9.0	8.2	.
14	7.3	0.2	7.7	.
15	7.5	8.7	10.2	.
16	7.2	4.7	7.6	.
17	7.8	7.2	10.1	.
18	7.7	7.9	9.8	.
19	10.1	3.0	10.1	.
20	10.0	0.2	9.0	.
21	9.5	0.7	10.3	.
22	6.4	0.0	4.3	.
23	8.6	9.9	3.0	.
24	6.7	7.3	6.1	.
25	10.4	8.8	9.9	.
26	5.0	9.4	3.4	.
27	0.6	9.4	1.2	.
28	0.0	10.7	5.0	.
29	7.9	3.6	4.2	.
30	10.0	10.6	10.0	.
31	5.9	6.0	9.0	.
TT Monthly Totals				
Daily Means				
SS Monthly Totals	196.8	194.5	197.4	.
Daily Means	6.3	6.3	6.4	.
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: AUGUST		Year: 2016		Country: CHILE
Daily Totals				
Latitude	33°27' S	33°37' S	33°39' S	34°58' S
Longitude	70°42' W	78°50' W	71°36' W	71°12' W
Elevation	520 m	30 m	74 m	225 m
Station				
Date	QUINTA NORMAL	ROBINSON CRUSOE	SANTO DOMINGO	CURICO
1	5.2	4.6	5.1	7.8
2	5.9	2.1	5.5	2.5
3	1.8	4.5	3.6	1.5
4	7.6	1.5	7.3	4.2
5	7.5	6.5	7.8	6.3
6	7.4	4.0	8.4	6.6
7	3.4	3.2	5.8	6.0
8	8.0	3.3	7.2	5.0
9	8.0	2.5	8.1	6.5
10	6.6	4.2	0.0	4.4
11	7.6	7.6	7.2	3.4
12	0.0	0.3	1.6	0.6
13	5.1	0.0	4.2	5.6
14	1.3	7.1	2.5	5.6
15	7.3	4.2	7.4	4.3
16	8.0	7.9	1.8	0.4
17	8.1	4.8	8.1	7.0
18	8.3	7.5	8.9	8.9
19	5.7	6.5	8.1	1.7
20	7.9	7.7	8.7	6.0
21	8.2	8.5	9.5	8.8
22	8.2	8.5	9.1	9.4
23	0.0	5.1	0.0	0.0
24	0.0	1.4	3.2	0.5
25	7.2	7.1	9.7	8.6
26	3.6	6.1	6.0	2.2
27	1.7	2.8	3.3	3.8
28	5.6	4.7	9.0	9.5
29	8.5	7.0	9.5	9.3
30	8.7	5.3	8.9	2.6
31	0.0	8.1	7.4	7.1
TT Monthly Totals				
Daily Means				
SS Monthly Totals	172.4	154.6	192.9	156.1
Daily Means	5.6	5.0	6.2	5.0
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: AUGUST		Year: 2016		Country: CHILE
Daily Totals				
Latitude	36°36' S	36°46' S	38°45' S	39°41' S
Longitude	72°26' W	73°03' W	72°38' W	73°04' W
Elevation	124 m	12 m	114 m	19 m
Station	CHILLAN	CONCEPCION	TEMUCO	VALDIVIA
Date				
1	.	9.1	8.2	5.5
2	.	7.4	1.4	0.0
3	.	0.0	0.0	0.5
4	.	0.7	0.0	0.4
5	.	7.0	4.6	2.8
6	.	1.0	0.0	0.0
7	.	4.2	0.0	0.6
8	.	9.0	6.1	2.4
9	.	8.9	6.7	1.5
10	.	0.0	0.6	0.9
11	.	7.7	6.8	4.6
12	.	0.0	0.0	0.0
13	.	0.0	0.9	0.5
14	.	0.0	0.2	1.8
15	.	0.4	0.0	0.0
16	.	9.2	6.8	5.5
17	.	6.5	4.9	3.8
18	.	4.5	3.2	5.0
19	.	4.5	0.8	2.6
20	.	9.7	8.9	6.9
21	.	10.1	9.6	0.6
22	.	10.1	10.0	6.0
23	.	10.1	0.0	0.7
24	.	0.0	0.0	0.0
25	.	0.0	1.2	2.3
26	.	10.0	6.6	8.0
27	.	7.3	3.0	1.1
28	.	10.1	8.8	6.7
29	.	3.4	3.7	0.0
30	.	1.7	1.4	5.8
31	.	10.0	7.5	7.6
TT Monthly Totals				
Daily Means				
SS Monthly Totals	.	162.6	111.9	84.1
Daily Means	.	5.2	3.6	2.7
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: AUGUST

Year: 2016

Country: CHILE

Daily Totals				
Latitude	41°26' S	45°35' S	53°08' S	
Longitude	73°07' W	72°07' W	70°58' W	
Elevation	81 m	310 m	37 m	
Station				
Date	PUERTO MONTT	COYHAIQUE	PUNTA ARENAS	
1	6.8	5.2	0.7	
2	3.7	0.9	6.8	
3	5.6	2.9	3.5	
4	0.7	0.4	0.2	
5	1.6	2.0	7.4	
6	2.2	1.6	2.1	
7	3.8	2.5	2.5	
8	2.4	2.0	2.0	
9	5.8	0.4	7.3	
10	1.5	5.9	0.0	
11	5.3	2.7	0.0	
12	0.1	0.3	0.7	
13	0.0	2.8	4.4	
14	3.2	0.0	4.9	
15	0.0	1.7	8.8	
16	5.0	0.0	0.6	
17	3.8	1.7	1.9	
18	4.9	4.3	8.1	
19	1.9	4.5	8.4	
20	7.5	1.0	0.0	
21	0.0	7.4	2.1	
22	1.0	1.6	6.9	
23	1.7	3.3	2.8	
24	0.0	0.2	0.0	
25	2.1	1.5	9.3	
26	7.2	4.9	1.1	
27	6.6	7.0	6.3	
28	1.7	1.9	0.0	
29	0.0	0.4	3.7	
30	6.7	3.7	8.1	
31	8.0	7.6	7.8	
TT Monthly Totals				
Daily Means				
SS Monthly Totals	100.8	82.3	118.4	
Daily Means	3.3	2.7	3.8	
Types of	HELIOGRAPH	HELIOGRAPH	HELIOGRAPH	
Instruments	CAMPBELL	CAMPBELL	CAMPBELL	
	STOKES	STOKES	STOKES	

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

Month: SEPTEMBER		Year: 2016		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	8.8	9.7	10.9	7.7
2	5.0	3.7	10.7	5.0
3	5.3	6.6	11.0	8.7
4	6.7	8.2	10.8	9.0
5	9.4	10.0	11.0	10.3
6	5.4	1.6	10.3	10.0
7	9.3	9.5	11.0	7.8
8	7.4	8.0	11.1	7.9
9	5.6	5.6	11.1	7.7
10	6.9	7.4	11.0	7.6
11	5.9	9.3	10.9	8.9
12	3.9	2.6	10.8	3.5
13	5.2	1.0	11.0	0.0
14	10.6	10.1	10.8	9.7
15	9.8	10.1	11.0	8.3
16	5.6	8.7	11.1	9.2
17	4.4	8.5	10.8	4.7
18	1.9	5.7	10.9	6.5
19	6.8	9.1	10.7	5.8
20	5.3	5.5	10.7	8.6
21	7.5	8.8	10.8	7.3
22	6.9	7.2	10.8	8.0
23	10.3	10.2	10.7	8.4
24	5.0	8.5	10.6	8.2
25	7.2	9.1	11.1	4.2
26	7.0	6.3	10.9	3.0
27	9.0	9.1	11.3	8.6
28	7.3	10.3	11.0	6.2
29	5.1	8.7	11.2	9.5
30	4.2	4.8	11.1	7.7
31				
TT Monthly Totals				
Daily Means				
SS Monthly Totals	198.7	223.9	327.1	218.0
Daily Means	6.6	7.5	10.9	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: SEPTEMBER		Year: 2016		Country: CHILE
Daily Totals				
Latitude	27°15'S	27°10' S	29°57' S	33°23' S
Longitude	70°46'W	109°26' W	71°22' W	70°47' W
Elevation	204 m	47 m	25 m	474 m
Station	CALDERA	ISLA DE PASCUA	LA SERENA	PUDAHUEL
Date				
1	4.4	5.0	5.8	.
2	8.2	0.4	10.1	.
3	10.1	4.0	10.2	.
4	8.0	7.0	10.3	.
5	10.6	2.1	10.7	.
6	10.3	3.8	9.1	.
7	7.3	0.3	6.2	.
8	8.2	9.3	9.9	.
9	4.1	6.1	2.1	.
10	1.1	10.2	0.0	.
11	3.5	8.4	1.5	.
12	6.3	4.6	10.1	.
13	5.4	9.5	9.7	.
14	5.7	10.6	0.0	.
15	6.3	7.8	7.9	.
16	4.4	0.0	4.0	.
17	5.2	7.3	9.4	.
18	4.8	9.9	9.4	.
19	2.0	9.9	4.0	.
20	2.5	10.0	0.0	.
21	2.6	10.6	0.0	.
22	0.0	0.0	0.0	.
23	4.9	5.0	5.5	.
24	4.6	10.0	0.0	.
25	3.1	0.0	2.4	.
26	0.0	3.8	0.0	.
27	4.4	1.2	3.6	.
28	6.1	2.9	0.0	.
29	6.8	6.4	7.0	.
30	10.8	9.8	11.4	.
31				
TT Monthly Totals				
Daily Means				
SS Monthly Totals	161.7	175.9	160.3	.
Daily Means	5.4	5.9	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: SEPTEMBER		Year: 2016		Country: CHILE
Daily Totals				
Latitude	33°27' S	33°37' S	33°39' S	34°58' S
Longitude	70°42' W	78°50' W	71°36' W	71°12' W
Elevation	520 m	30 m	74 m	225 m
Station				
Date	QUINTA NORMAL	ROBINSON CRUSOE	SANTO DOMINGO	CURICO
1	7.9	5.5	10.0	7.3
2	9.0	6.7	9.6	9.2
3	9.0	8.5	10.0	9.3
4	8.9	8.6	9.8	10.0
5	8.7	8.0	9.2	9.0
6	8.9	8.5	10.5	9.3
7	9.0	7.1	9.6	8.0
8	6.5	5.1	8.9	0.2
9	8.6	1.4	9.1	3.1
10	8.8	1.6	7.7	6.6
11	2.6	5.4	0.2	0.7
12	4.8	4.4	6.3	2.6
13	8.4	5.1	9.2	6.5
14	6.3	6.9	0.1	4.7
15	3.0	5.1	0.1	1.1
16	0.3	3.7	0.1	0.0
17	6.2	4.1	9.9	7.9
18	8.8	4.8	10.5	7.8
19	8.8	6.8	6.1	8.7
20	8.5	6.5	4.9	10.1
21	8.5	3.5	2.9	8.2
22	8.3	8.8	10.6	6.5
23	8.9	9.7	5.5	10.4
24	8.8	9.6	0.0	9.6
25	7.5	9.5	0.2	1.9
26	8.9	7.7	5.6	7.0
27	8.9	4.7	6.1	10.4
28	8.9	0.3	0.0	4.5
29	5.0	5.1	6.3	3.7
30	8.8	3.5	10.8	10.3
31				
TT Monthly Totals				
Daily Means				
SS Monthly Totals	225.5	176.2	189.8	194.6
Daily Means	7.5	5.9	6.3	6.5
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: SEPTEMBER		Year: 2016		Country: CHILE
Daily Totals				
Latitude	36°36' S	36°46' S	38°45' S	39°41' S
Longitude	72°26' W	73°03' W	72°38' W	73°04' W
Elevation	124 m	12 m	114 m	19 m
Station	CHILLAN	CONCEPCION	TEMUCO	VALDIVIA
Date				
1	.	9.9	9.6	8.2
2	.	9.8	9.7	9.7
3	.	10.3	10.4	10.7
4	.	10.5	10.7	11.8
5	.	9.8	9.0	7.9
6	.	10.3	9.9	8.7
7	.	4.9	5.0	1.9
8	.	7.3	0.0	0.0
9	.	1.9	4.8	6.0
10	.	9.3	6.4	5.9
11	.	4.0	2.1	0.8
12	.	4.6	3.2	5.4
13	.	10.1	9.6	6.7
14	.	6.2	4.3	3.9
15	.	1.6	0.0	0.3
16	.	4.1	1.1	0.4
17	.	4.2	1.4	1.4
18	.	9.8	10.6	8.1
19	.	9.4	6.8	1.7
20	.	8.9	2.9	5.7
21	.	6.6	3.0	6.2
22	.	11.0	11.0	10.9
23	.	10.6	11.2	10.8
24	.	9.7	10.9	9.7
25	.	0.8	6.0	8.5
26	.	7.1	1.0	4.6
27	.	8.1	5.3	0.0
28	.	6.0	8.3	5.3
29	.	2.8	1.8	2.0
30	.	8.9	4.8	2.9
31				
TT Monthly Totals				
Daily Means				
SS Monthly Totals	.	218.5	180.8	166.1
Daily Means	.	7.3	6.0	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: SEPTEMBER		Year: 2016		Country: CHILE
Daily Totals				
Latitude	41°26' S	45°35' S	53°08' S	
Longitude	73°07' W	72°07' W	70°58' W	
Elevation	81 m	310 m	37 m	
Station				
Date	PUERTO MONTT	COYHAIQUE	PUNTA ARENAS	
1	8.3	6.3	8.0	
2	9.5	7.7	9.6	
3	9.4	7.7	7.4	
4	9.7	7.8	0.0	
5	7.6	8.4	2.3	
6	9.7	6.4	1.5	
7	0.0	1.1	0.6	
8	0.7	3.6	5.1	
9	2.1	3.4	6.3	
10	6.6	7.3	9.6	
11	1.6	2.3	9.4	
12	3.2	3.8	0.0	
13	7.8	6.4	0.2	
14	3.4	4.9	0.0	
15	0.0	1.3	10.0	
16	0.0	8.9	9.7	
17	0.0	8.0	5.0	
18	5.3	9.2	3.4	
19	0.3	4.1	0.0	
20	4.3	7.8	6.3	
21	2.4	8.1	0.1	
22	10.3	9.7	7.3	
23	9.5	7.4	2.9	
24	5.6	3.0	10.7	
25	9.2	5.2	5.1	
26	0.0	4.9	4.1	
27	7.9	2.4	7.8	
28	6.2	8.4	9.8	
29	3.3	8.5	9.3	
30	1.8	0.0	6.9	
31				
TT Monthly Totals				
Daily Means				
SS Monthly Totals	145.7	174.0	158.4	
Daily Means	4.9	5.8	5.3	
Types of	HELIOGRAPH	HELIOGRAPH	HELIOGRAPH	
Instruments	CAMPBELL	CAMPBELL	CAMPBELL	
	STOKES	STOKES	STOKES	

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

Month: OCTOBER		Year: 2016		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	5.2	8.2	11.2	6.5
2	9.2	7.0	11.1	0.7
3	5.7	8.1	11.2	7.9
4	6.9	8.4	11.0	7.6
5	6.2	2.5	11.2	9.5
6	6.2	0.3	11.4	6.5
7	7.8	6.9	11.3	6.0
8	7.0	8.3	11.2	7.3
9	11.0	9.6	11.3	7.7
10	11.1	9.6	11.5	9.8
11	7.5	10.5	11.2	7.6
12	8.4	10.2	11.1	8.8
13	8.2	10.5	11.3	7.1
14	7.3	4.9	11.2	9.1
15	0.1	11.0	11.2	7.4
16	2.4	6.1	11.7	5.3
17	6.3	3.1	11.7	4.8
18	4.8	5.3	11.2	7.6
19	5.7	1.4	11.7	11.2
20	6.4	7.3	12.7	10.8
21	8.5	8.5	11.6	10.5
22	6.0	8.9	11.9	9.8
23	7.3	8.3	11.8	10.1
24	5.7	7.9	11.6	10.6
25	6.8	4.7	11.7	7.7
26	6.7	0.6	11.6	9.7
27	9.3	4.4	11.7	10.9
28	6.8	11.2	11.6	11.7
29	8.4	11.2	11.7	11.3
30	0.0	8.9	11.8	8.9
31	4.8	10.9	11.9	8.5
TT Monthly Totals				
Daily Means				
SS Monthly Totals	203.7	224.7	356.3	258.9
Daily Means	6.6	7.2	11.5	8.4
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: OCTOBER		Year: 2016		Country: CHILE
Daily Totals				
Latitude	27°15'S	27°10' S	29°57' S	33°23' S
Longitude	70°46'W	109°26' W	71°22' W	70°47' W
Elevation	204 m	47 m	25 m	474 m
Station	CALDERA	ISLA DE PASCUA	LA SERENA	PUDAHUEL
Date				
1	1.9	7.6	3.7	
2	1.2	7.9	0.5	
3	1.1	7.9	0.2	
4	9.2	8.0	11.0	
5	8.3	3.9	11.6	
6	7.3	2.1	11.0	
7	9.5	9.3	9.8	
8	7.0	6.1	11.4	
9	4.8	11.1	10.7	
10	6.2	8.1	10.3	
11	6.3	8.2	9.3	
12	8.7	6.5	7.7	
13	10.8	0.0	10.6	
14	5.2	6.2	0.2	
15	5.8	7.0	4.6	
16	9.7	7.2	6.7	
17	0.2	5.0	3.3	
18	7.3	4.3	9.4	
19	11.6	10.1	12.3	
20	8.9	10.1	12.4	
21	5.3	10.1	9.5	
22	8.4	11.2	3.7	
23	11.6	12.1	8.7	
24	11.4	4.0	12.0	
25	11.9	1.9	12.4	
26	10.0	12.0	10.5	
27	6.5	12.0	5.0	
28	9.7	12.3	6.7	
29	10.4	9.7	12.1	
30	7.2	11.3	4.3	
31	5.0	10.5	3.1	
TT Monthly Totals				
Daily Means				
SS Monthly Totals	228.4	243.7	244.7	.
Daily Means	7.4	7.9	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: OCTOBER		Year: 2016		Country: CHILE
Daily Totals				
Latitude	33°27' S	33°37' S	33°39' S	34°58' S
Longitude	70°42' W	78°50' W	71°36' W	71°12' W
Elevation	520 m	30 m	74 m	225 m
Station				
Date	QUINTA NORMAL	ROBINSON CRUSOE	SANTO DOMINGO	CURICO
1	7.4	0.0	5.3	5.8
2	9.2	7.8	10.8	8.8
3	7.6	4.1	5.4	7.8
4	9.8	8.6	10.7	11.1
5	10.2	9.2	11.5	11.4
6	5.0	6.1	10.5	4.2
7	10.1	10.3	11.4	11.6
8	7.6	2.4	10.6	9.1
9	10.8	10.3	10.8	9.4
10	10.9	10.6	8.7	11.0
11	2.9	0.1	4.0	1.1
12	0.2	3.4	0.1	0.0
13	8.2	5.9	3.9	4.5
14	1.0	0.0	0.0	0.2
15	1.0	0.0	0.0	0.2
16	2.7	5.4	6.1	4.1
17	0.0	8.5	6.1	6.2
18	4.9	7.5	10.5	7.1
19	10.2	9.0	11.1	11.6
20	10.4	5.5	10.0	12.1
21	10.4	4.9	7.6	9.7
22	8.5	7.9	0.8	7.1
23	7.6	8.5	8.7	6.8
24	9.2	4.4	11.5	10.2
25	10.7	7.9	11.5	10.5
26	11.2	11.2	10.8	7.6
27	11.1	11.2	10.0	11.7
28	7.5	10.5	0.5	0.0
29	8.7	10.0	7.8	7.6
30	10.4	9.0	3.3	9.3
31	1.6	5.0	2.3	1.0
TT Monthly Totals				
Daily Means				
SS Monthly Totals	227.0	205.2	222.3	218.8
Daily Means	7.3	6.6	7.2	7.1
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: OCTOBER		Year: 2016		Country: CHILE
Daily Totals				
Latitude	36°36' S	36°46' S	38°45' S	39°41' S
Longitude	72°26' W	73°03' W	72°38' W	73°04' W
Elevation	124 m	12 m	114 m	19 m
Station	CHILLAN	CONCEPCION	TEMUCO	VALDIVIA
Date				
1	.	5.6	1.8	1.5
2	.	11.0	6.4	5.6
3	.	2.9	0.6	0.2
4	.	10.9	9.7	10.2
5	.	10.8	3.9	1.5
6	.	9.4	9.2	7.2
7	.	11.6	11.5	10.3
8	.	11.4	5.1	1.5
9	.	10.5	8.2	8.1
10	.	9.3	9.1	6.6
11	.	0.0	0.0	6.8
12	.	1.7	1.0	1.7
13	.	0.0	11.5	8.5
14	.	3.9	1.8	2.4
15	.	0.4	0.9	0.0
16	.	0.4	0.8	0.0
17	.	11.7	11.7	7.1
18	.	3.5	2.0	0.9
19	.	12.1	10.0	9.0
20	.	12.5	12.9	11.5
21	.	8.3	6.7	4.6
22	.	1.5	4.6	0.8
23	.	5.1	7.4	8.5
24	.	9.9	8.5	7.6
25	.	12.0	12.2	8.4
26	.	12.7	12.6	11.6
27	.	12.5	12.8	11.4
28	.	8.1	4.9	10.3
29	.	7.9	4.2	5.1
30	.	11.0	11.6	9.2
31	.	0.8	0.0	0.8
TT Monthly Totals				
Daily Means				
SS Monthly Totals	.	229.4	203.6	178.9
Daily Means	.	7.4	6.6	5.8
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: OCTOBER		Year: 2016		Country: CHILE
Daily Totals				
Latitude	41°26' S	45°35' S	53°08' S	
Longitude	73°07' W	72°07' W	70°58' W	
Elevation	81 m	310 m	37 m	
Station				
Date	PUERTO MONTT	COYHAIQUE	PUNTA ARENAS	
1	4.2	5.6	1.3	
2	9.8	1.5	2.3	
3	0.3	1.5	0.0	
4	7.1	9.0	6.1	
5	1.0	1.2	8.4	
6	9.4	10.2	11.4	
7	8.7	9.2	9.3	
8	4.2	4.3	0.9	
9	7.1	4.8	6.1	
10	2.8	2.7	5.5	
11	6.0	4.5	4.3	
12	6.0	1.9	7.3	
13	9.3	7.3	0.3	
14	3.1	7.8	11.7	
15	0.0	9.2	4.7	
16	0.0	0.4	12.6	
17	4.1	3.7	13.0	
18	5.8	11.1	12.7	
19	10.3	10.8	0.3	
20	12.1	11.4	0.0	
21	6.3	3.4	9.3	
22	4.5	9.7	7.7	
23	8.8	6.5	10.3	
24	7.0	8.1	5.4	
25	4.9	3.1	9.1	
26	11.9	11.4	6.0	
27	11.4	10.6	9.4	
28	3.7	3.1	6.9	
29	7.8	9.0	2.3	
30	6.4	8.0	1.6	
31	2.5	4.1	13.3	
TT Monthly Totals				
Daily Means				
SS Monthly Totals	186.5	195.1	199.5	
Daily Means	6.0	6.3	6.4	
Types of	HELIOGRAPH	HELIOGRAPH	HELIOGRAPH	
Instruments	CAMPBELL	CAMPBELL	CAMPBELL	
	STOKES	STOKES	STOKES	

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

Month: NOVEMBER		Year: 2016		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	5.6	10.0	11.9	8.0
2	7.4	9.2	11.8	5.8
3	7.0	7.7	11.8	8.6
4	10.6	10.1	11.6	10.7
5	11.1	11.1	11.6	11.2
6	7.7	9.3	11.5	8.9
7	6.0	7.9	11.7	10.6
8	4.9	9.0	11.8	10.3
9	11.6	11.4	11.8	11.5
10	6.0	8.3	11.6	10.0
11	6.3	11.2	11.7	10.9
12	5.2	8.0	11.6	5.4
13	9.9	9.3	11.7	6.9
14	12.0	11.4	11.8	9.8
15	9.3	9.1	11.8	11.1
16	11.7	11.1	11.7	10.7
17	11.4	11.1	11.2	10.4
18	9.3	10.5	11.7	10.8
19	10.6	7.6	7.0	8.1
20	7.4	8.6	11.3	7.4
21	7.4	10.2	9.2	7.6
22	11.9	11.6	11.6	12.2
23	11.7	11.5	11.6	12.1
24	11.6	11.4	11.7	12.2
25	11.9	11.5	11.6	9.1
26	8.3	11.4	11.6	11.7
27	11.0	10.8	11.4	11.9
28	11.5	11.0	11.1	10.4
29	9.1	10.9	11.8	11.1
30	4.7	3.8	5.1	8.3
31				
TT Monthly Totals				
Daily Means				
SS Monthly Totals	270.1	296.0	335.3	293.7
Daily Means	9.0	9.9	11.2	9.8
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: NOVEMBER		Year: 2016		Country: CHILE
Daily Totals				
Latitude	27°15'S	27°10' S	29°57' S	33°23' S
Longitude	70°46'W	109°26' W	71°22' W	70°47' W
Elevation	204 m	47 m	25 m	474 m
Station	CALDERA	ISLA DE PASCUA	LA SERENA	PUDAHUEL
Date				
1	10.4	11.0	12.5	
2	12.1	1.3	11.7	
3	8.2	0.2	12.1	
4	6.7	0.0	7.0	
5	10.9	0.0	9.9	
6	10.5	3.3	7.0	
7	4.6	9.7	8.4	
8	4.3	5.4	6.7	
9	5.1	2.2	6.2	
10	4.6	1.7	8.5	
11	8.6	9.7	4.7	
12	8.1	9.7	0.0	
13	7.4	7.7	0.6	
14	11.1	7.1	12.6	
15	10.5	0.1	12.7	
16	10.8	6.9	9.2	
17	9.5	6.4	12.0	
18	10.9	1.7	3.2	
19	9.4	0.0	7.3	
20	11.5	12.0	12.0	
21	9.9	9.2	6.2	
22	11.6	7.4	12.0	
23	11.4	10.3	12.1	
24	12.8	7.3	12.0	
25	6.7	12.0	5.2	
26	12.8	10.9	13.0	
27	11.0	9.5	12.7	
28	8.0	2.0	12.5	
29	7.2	0.5	6.1	
30	8.6	6.7	6.0	
31				
TT Monthly Totals				
Daily Means				
SS Monthly Totals	275.2	171.9	262.1	.
Daily Means	9.2	5.7	8.7	.
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: NOVEMBER		Year: 2016		Country: CHILE
Daily Totals				
Latitude	33°27' S	33°37' S	33°39' S	34°58' S
Longitude	70°42' W	78°50' W	71°36' W	71°12' W
Elevation	520 m	30 m	74 m	225 m
Station				
Date	QUINTA NORMAL	ROBINSON CRUSOE	SANTO DOMINGO	CURICO
1	11.1	10.3	11.2	11.2
2	10.9	7.6	11.4	11.7
3	10.6	10.6	11.4	12.8
4	11.0	10.6	12.1	9.5
5	11.0	9.1	0.0	13.0
6	10.8	7.7	7.5	10.0
7	11.1	8.9	9.6	8.1
8	11.3	5.7	10.8	.
9	12.1	8.0	11.3	13.1
10	11.4	6.9	11.6	10.4
11	11.4	10.2	11.8	13.0
12	7.4	0.0	3.2	9.4
13	8.3	0.6	9.3	12.0
14	9.9	6.0	10.2	8.8
15	10.9	3.8	11.9	9.6
16	9.7	9.7	12.0	7.4
17	11.2	10.7	11.1	13.3
18	11.2	8.7	11.6	13.2
19	10.8	4.9	7.5	11.5
20	9.5	6.0	5.2	6.8
21	9.3	7.6	11.7	12.4
22	8.3	10.2	10.2	10.3
23	2.1	11.6	4.2	6.6
24	11.1	8.5	11.0	7.3
25	10.7	7.6	6.7	4.8
26	11.3	6.4	11.9	12.8
27	11.3	9.7	12.0	9.7
28	11.6	9.2	12.5	10.3
29	11.9	11.4	0.2	13.4
30	11.0	10.8	3.1	11.1
31				
TT Monthly Totals				
Daily Means				
SS Monthly Totals	310.2	239.0	274.2	.
Daily Means	10.3	8.0	9.1	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: NOVEMBER		Year: 2016		Country: CHILE
Daily Totals				
Latitude	36°36' S	36°46' S	38°45' S	39°41' S
Longitude	72°26' W	73°03' W	72°38' W	73°04' W
Elevation	124 m	12 m	114 m	19 m
Station	CHILLAN	CONCEPCION	TEMUCO	VALDIVIA
Date				
1	.	11.6	8.1	8.8
2	.	11.1	3.0	0.2
3	.	6.0	0.2	0.0
4	.	12.8	12.7	7.8
5	.	10.2	8.3	6.9
6	.	11.7	2.9	5.7
7	.	11.1	7.9	6.7
8	.	12.6	10.6	8.2
9	.	12.4	13.1	11.5
10	.	12.4	13.3	9.6
11	.	12.4	13.7	11.8
12	.	12.8	4.8	6.8
13	.	10.3	0.7	0.4
14	.	0.5	0.6	0.0
15	.	9.9	9.2	8.0
16	.	12.6	13.0	10.8
17	.	12.7	12.7	12.3
18	.	9.8	10.7	11.6
19	.	5.6	2.6	3.0
20	.	11.9	8.0	10.0
21	.	9.2	13.8	11.7
22	.	2.1	8.7	12.3
23	.	4.5	7.9	8.3
24	.	11.3	10.4	10.8
25	.	4.4	0.9	0.8
26	.	8.3	0.3	5.8
27	.	11.9	9.4	7.4
28	.	13.0	13.1	12.2
29	.	12.8	14.1	12.6
30	.	2.6	13.1	11.5
31				
TT Monthly Totals				
Daily Means				
SS Monthly Totals	.	290.5	247.8	233.5
Daily Means	.	9.7	8.3	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: NOVEMBER		Year: 2016		Country: CHILE
Daily Totals				
Latitude	41°26' S	45°35' S	53°08' S	
Longitude	73°07' W	72°07' W	70°58' W	
Elevation	81 m	310 m	37 m	
Station				
Date	PUERTO MONTT	COYHAIQUE	PUNTA ARENAS	
1	6.4	9.9	4.5	
2	0.0	6.1	6.6	
3	0.0	3.9	9.3	
4	1.5	0.0	4.5	
5	0.9	3.2	6.3	
6	11.9	9.9	10.5	
7	5.2	11.8	6.5	
8	9.1	12.0	7.0	
9	1.5	9.6	12.1	
10	4.3	9.2	10.8	
11	13.0	8.5	6.2	
12	5.1	5.9	9.5	
13	0.0	0.1	10.5	
14	1.7	4.2	10.1	
15	9.8	5.6	6.4	
16	11.8	11.0	5.4	
17	13.1	7.3	0.4	
18	9.8	11.6	7.1	
19	1.8	8.8	4.5	
20	9.8	11.9	11.7	
21	13.7	11.3	3.8	
22	13.5	11.5	10.1	
23	8.2	11.9	12.5	
24	11.5	8.1	3.4	
25	1.6	3.5	13.7	
26	3.6	8.0	14.8	
27	2.0	12.1	7.2	
28	10.6	4.3	13.9	
29	13.0	11.5	4.2	
30	12.1	11.4	10.4	
31				
TT Monthly Totals				
Daily Means				
SS Monthly Totals	206.5	244.1	243.9	
Daily Means	6.9	8.1	8.1	
Types of	HELIOGRAPH	HELIOGRAPH	HELIOGRAPH	
Instruments	CAMPBELL	CAMPBELL	CAMPBELL	
	STOKES	STOKES	STOKES	

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

Month: DECEMBER		Year: 2016		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	5.1	4.1	9.6	9.7
2	7.1	11.2	10.8	8.7
3	8.9	8.5	11.4	10.3
4	11.1	10.5	9.9	11.7
5	7.5	11.5	11.6	11.4
6	6.8	11.4	11.6	12.1
7	9.9	11.0	11.6	12.0
8	11.5	11.1	11.6	10.8
9	11.6	11.5	11.6	7.9
10	11.6	11.3	11.4	12.3
11	11.4	11.5	11.6	12.0
12	11.5	11.6	11.6	11.5
13	11.8	11.5	11.6	12.2
14	10.4	11.1	11.6	11.7
15	8.4	9.7	10.7	12.0
16	11.4	9.5	11.4	10.8
17	7.3	11.3	11.6	11.6
18	11.3	11.2	11.6	11.5
19	11.2	12.4	11.6	12.1
20	11.8	11.1	11.6	12.2
21	11.4	10.9	11.6	11.7
22	11.3	10.3	11.6	11.3
23	11.5	11.2	11.6	12.0
24	10.8	11.2	11.2	10.7
25	9.7	11.0	10.8	11.2
26	8.9	11.3	11.6	10.6
27	7.5	11.1	11.5	11.1
28	5.9	11.5	11.6	12.0
29	11.6	8.3	10.0	9.4
30	8.1	10.7	9.7	12.0
31	5.0	6.3	11.3	8.5
TT Monthly Totals				
Daily Means				
SS Monthly Totals	299.3	326.8	348.5	345.0
Daily Means	9.7	10.5	11.2	11.1
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: DECEMBER		Year: 2016		Country: CHILE
Daily Totals				
Latitude	27°15'S	27°10' S	29°57' S	33°23' S
Longitude	70°46'W	109°26' W	71°22' W	70°47' W
Elevation	204 m	47 m	25 m	474 m
Station	CALDERA	ISLA DE PASCUA	LA SERENA	PUDAHUEL
Date				
1	9.8	4.7	12.9	.
2	8.5	9.8	7.3	.
3	7.7	0.8	3.6	.
4	9.1	10.7	7.3	.
5	12.6	12.1	13.0	.
6	7.0	10.9	11.9	.
7	8.4	10.4	5.6	.
8	11.0	10.8	6.0	.
9	11.3	7.3	10.1	.
10	11.6	4.5	12.8	.
11	10.2	8.5	12.7	.
12	9.8	8.4	7.6	.
13	9.7	2.1	10.6	.
14	9.5	1.0	7.3	.
15	9.6	0.0	7.8	.
16	11.1	0.0	8.6	.
17	3.9	0.0	8.6	.
18	5.2	0.0	8.2	.
19	0.0	10.4	3.2	.
20	9.2	6.7	3.9	.
21	5.8	11.3	12.9	.
22	7.6	8.3	12.3	.
23	8.0	10.9	7.7	.
24	8.2	9.5	12.9	.
25	6.9	11.4	0.2	.
26	11.2	7.4	11.7	.
27	11.1	7.9	12.8	.
28	10.3	7.6	8.0	.
29	8.0	7.4	9.5	.
30	9.5	10.6	10.5	.
31	9.0	5.3	12.7	.
TT Monthly Totals				
Daily Means				
SS Monthly Totals	270.8	216.7	280.2	.
Daily Means	8.7	7.0	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: DECEMBER		Year: 2016		Country: CHILE
Daily Totals				
Latitude	33°27' S	33°37' S	33°39' S	34°58' S
Longitude	70°42' W	78°50' W	71°36' W	71°12' W
Elevation	520 m	30 m	74 m	225 m
Station				
Date	QUINTA NORMAL	ROBINSON CRUSOE	SANTO DOMINGO	CURICO
1	11.1	5.5	1.5	8.1
2	11.4	10.6	0.0	13.0
3	11.1	7.2	0.2	12.4
4	7.1	9.8	6.0	4.5
5	11.0	5.0	11.8	10.5
6	11.0	5.5	11.5	10.6
7	12.1	5.9	4.3	10.8
8	10.1	7.5	10.3	11.3
9	0.0	10.5	5.1	0.5
10	11.3	9.2	11.9	9.6
11	11.6	10.8	11.8	10.4
12	12.5	7.2	11.8	13.4
13	12.6	9.1	11.8	13.5
14	12.4	11.5	11.6	13.5
15	11.9	11.8	6.6	13.2
16	11.7	9.2	4.8	9.4
17	11.0	6.3	3.7	8.7
18	11.5	11.3	10.8	8.7
19	11.4	11.2	11.8	13.5
20	11.6	6.2	6.3	13.5
21	11.4	5.4	11.6	9.7
22	12.3	7.5	10.7	12.6
23	11.7	6.1	11.6	13.5
24	12.2	3.2	10.9	13.4
25	10.8	8.5	9.6	12.1
26	6.3	7.0	9.3	6.6
27	11.7	6.1	11.3	12.3
28	12.4	3.7	0.6	13.5
29	12.1	1.6	2.2	9.5
30	12.0	0.5	2.5	10.1
31	10.9	2.2	6.6	6.9
TT Monthly Totals				
Daily Means				
SS Monthly Totals	338.2	223.1	240.5	329.3
Daily Means	10.9	.	7.8	10.6
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: DECEMBER		Year: 2016		Country: CHILE
Daily Totals				
Latitude	36°36' S	36°46' S	38°45' S	39°41' S
Longitude	72°26' W	73°03' W	72°38' W	73°04' W
Elevation	124 m	12 m	114 m	19 m
Station	CHILLAN	CONCEPCION	TEMUCO	VALDIVIA
Date				
1	.	9.3	9.0	11.2
2	.	12.9	13.0	12.4
3	.	10.3	10.3	11.5
4	.	4.5	5.6	1.9
5	.	13.0	8.8	3.0
6	.	13.1	6.3	3.9
7	.	12.5	13.6	12.9
8	.	12.1	13.0	11.8
9	.	5.1	11.0	11.2
10	.	2.7	0.8	6.1
11	.	11.2	3.5	2.5
12	.	11.2	10.3	10.4
13	.	13.1	13.3	12.1
14	.	13.1	13.6	13.3
15	.	11.9	10.9	12.4
16	.	3.3	2.0	1.2
17	.	4.4	6.3	10.6
18	.	12.6	10.9	13.5
19	.	12.7	9.0	7.6
20	.	9.0	0.8	0.0
21	.	12.0	10.8	11.6
22	.	13.1	9.2	8.1
23	.	13.1	13.0	10.8
24	.	4.9	11.3	0.9
25	.	4.5	3.1	7.8
26	.	12.2	7.6	6.0
27	.	13.5	13.6	12.9
28	.	10.8	13.4	13.4
29	.	0.5	11.5	12.5
30	.	0.3	1.2	6.3
31	.	2.9	1.7	9.9
TT Monthly Totals				
Daily Means				
SS Monthly Totals	.	285.8	268.4	269.7
Daily Means	.	9.2	8.7	8.7
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: DECEMBER		Year: 2016		Country: CHILE
Daily Totals				
Latitude	41°26' S	45°35' S	53°08' S	
Longitude	73°07' W	72°07' W	70°58' W	
Elevation	81 m	310 m	37 m	
Station				
Date	PUERTO MONTT	COYHAIQUE	PUNTA ARENAS	
1	8.9	10.8	8.6	
2	12.7	11.0	4.8	
3	12.4	2.0	5.7	
4	2.4	2.2	15.0	
5	1.0	4.2	13.2	
6	1.0	9.3	8.3	
7	12.9	11.8	6.4	
8	8.2	6.5	9.6	
9	5.3	9.4	7.1	
10	4.3	8.9	7.4	
11	1.4	3.3	1.1	
12	10.2	7.3	12.1	
13	5.1	9.7	8.7	
14	10.2	2.9	6.4	
15	11.3	9.1	13.1	
16	1.1	5.2	4.8	
17	12.0	7.7	5.0	
18	7.3	5.5	8.2	
19	2.2	5.7	10.6	
20	0.0	5.9	9.7	
21	10.8	7.1	4.0	
22	3.1	4.0	6.7	
23	1.6	4.7	0.0	
24	0.9	2.8	0.6	
25	5.1	6.3	11.5	
26	1.4	5.0	10.2	
27	10.4	6.6	9.4	
28	12.8	6.6	13.8	
29	8.8	12.0	13.5	
30	8.9	5.6	4.1	
31	8.2	3.9	5.0	
TT Monthly Totals				
Daily Means				
SS Monthly Totals	201.9	203.0	244.6	
Daily Means	6.5	6.5	7.9	
Types of	HELIOGRAPH	HELIOGRAPH	HELIOGRAPH	
Instruments	CAMPBELL	CAMPBELL	CAMPBELL	
	STOKES	STOKES	STOKES	