



Informe

Solarimétrico

II Semestre 2021

Oficina de Servicios Climáticos



Dirección Meteorológica de Chile
Subdepartamento de Climatología y Meteorología Aplicada

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

Month: JULY Year: 2021 Country: CHILE

Daily Totals				
Latitude	18°21' S	22°29' S	27°21' S	33°27' S
Longitude	70°19'W	68°54' W	70°21' W	70°42' W
Elevation	58 m	2270 m	362 m	520 m
Station	ARICA	CALAMA	COPIAPO	QUINTA NORMAL
Date				
1	8.61	.	7.02	8.70
2	10.74	.	11.11	8.10
3	15.75	.	12.32	8.62
4	13.01	.	8.18	10.30
5	7.72	.	9.84	10.48
6	11.31	.	11.93	7.65
7	14.43	.	16.16	10.61
8	12.34	.	5.38	10.55
9	17.45	.	3.87	6.75
10	13.86	.	10.52	10.45
11	12.44	.	11.68	9.35
12	19.35	.	9.00	2.66
13	16.89	.	10.01	9.38
14	5.33	.	16.14	9.91
15	5.25	.	14.84	10.95
16	6.39	.	14.03	10.97
17	5.99	.	12.49	11.53
18	10.41	.	10.39	12.51
19	18.66	.	13.53	12.15
20	0.13	.	15.18	11.75
21	0.46	.	15.00	11.71
22	11.04	.	6.64	10.45
23	6.81	.	3.22	11.71
24	13.23	.	12.58	1.97
25	9.19	.	17.64	11.44
26	8.71	.	15.79	8.88
27	7.14	.	16.50	12.20
28	13.45	.	16.03	12.95
29	10.87	.	17.11	13.01
30	7.18	.	14.83	12.75
31	11.96	.	12.51	12.31
TT Monthly Totals	326.06	.	371.46	312.74
Daily Means	10.52	.	11.98	10.09
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: 2021		Country: CHILE	
Daily Totals					
Latitude	41°25' S	45°35' S	53°00' S		
Longitude	73°05' W	72°07' W	70°51' W		
Elevation	85 m	310 m	37 m		
Station					
Date	PUERTO MONTT	COYHAIQUE	PUNTA ARENAS		
1	.	.	2.77		
2	2.21	.	2.58		
3	3.93	.	1.71		
4	3.40	.	2.75		
5	2.67	.	2.51		
6	3.10	.	4.11		
7	1.51	.	1.42		
8	1.38	.	0.79		
9	6.15	.	3.26		
10	4.47	.	2.12		
11	3.57	.	1.33		
12	7.10	.	2.01		
13	6.85	.	4.31		
14	2.63	.	0.85		
15	3.45	.	1.03		
16	4.06	.	3.67		
17	6.70	.	3.33		
18	9.17	.	1.52		
19	3.16	.	3.72		
20	2.36	.	4.98		
21	4.34	.	1.34		
22	2.17	.	2.84		
23	9.95	.	4.63		
24	3.46	.	3.22		
25	7.39	.	5.23		
26	8.75	.	2.66		
27	5.14	.	0.81		
28	5.54	.	1.87		
29	8.04	.	3.89		
30	4.02	.	5.56		
31	10.94	.	1.23		
TT Monthly Totals	147.60	.	84.03		
Daily Means	4.92	.	2.71		
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: AUGUST Year: 2021 Country: CHILE

Daily Totals				
Latitude	18°21' S	22°29' S	27°21' S	33°27' S
Longitude	70°19'W	68°54' W	70°21' W	70°42' W
Elevation	58 m	2270 m	362 m	520 m
Station	ARICA	CALAMA	COPIAPO	QUINTA NORMAL
Date				
1	13.87	.	11.89	13.06
2	11.10	.	13.78	13.03
3	12.00	.	18.16	12.77
4	12.37	.	15.54	13.02
5	6.88	.	16.90	9.55
6	13.81	.	17.37	11.70
7	12.13	.	10.65	1.60
8	8.56	.	19.07	4.75
9	7.55	.	18.19	12.12
10	14.14	.	9.28	13.16
11	10.54	.	8.30	13.70
12	10.03	.	15.73	10.96
13	11.34	.	19.66	12.49
14	13.01	.	11.13	12.33
15	8.91	.	18.66	4.24
16	13.86	.	18.03	6.42
17	13.55	.	20.27	7.24
18	15.52	.	20.88	2.66
19	17.46	.	17.11	8.37
20	15.64	.	20.79	5.72
21	15.49	.	20.09	10.61
22	14.86	.	19.89	15.19
23	14.08	.	11.54	7.69
24	10.58	.	17.23	15.79
25	16.14	.	19.52	15.08
26	8.33	.	21.87	16.76
27	18.13	.	17.10	6.12
28	19.58	.	19.85	10.47
29	20.86	.	8.03	17.82
30	19.72	.	20.75	12.40
31	11.98	.	22.53	11.42
TT Monthly Totals	411.99	.	519.77	328.25
Daily Means	13.29	.	16.77	10.59
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: 2021

Country: CHILE

Daily Totals				
Latitude	41°25' S	45°35' S	53°00' S	
Longitude	73°05' W	72°07' W	70°51' W	
Elevation	85 m	310 m	37 m	
Station				
Date	PUERTO MONTT	COYHAIQUE	PUNTA ARENAS	
1	11.43	.	3.43	
2	5.25	.	5.10	
3	3.60	.	3.79	
4	9.83	.	4.98	
5	1.94	.	6.43	
6	3.44	.	5.26	
7	8.91	.	6.73	
8	10.19	.	2.79	
9	3.31	.	4.15	
10	4.30	.	5.42	
11	12.30	.	3.61	
12	12.73	.	7.17	
13	2.59	.	6.10	
14	5.65	.	2.06	
15	2.38	.	4.22	
16	7.40	.	5.54	
17	2.00	.	2.31	
18	7.58	.	4.87	
19	3.29	.	7.35	
20	10.25	.	7.89	
21	2.65	.	7.95	
22	11.18	.	1.51	
23	9.90	.	9.37	
24	4.42	.	9.88	
25	3.26	.	5.14	
26	1.75	.	6.56	
27	2.59	.	5.13	
28	5.35	.	9.59	
29	4.77	.	10.35	
30	4.30	.	9.86	
31	8.50	.	5.85	
TT Monthly Totals	187.09	.	180.38	
Daily Means	6.04	.	5.82	
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: 2021 Country: CHILE

Daily Totals				
Latitude	18°21' S	22°29' S	27°21' S	33°27' S
Longitude	70°19'W	68°54' W	70°21' W	70°42' W
Elevation	58 m	2270 m	362 m	520 m
Station	ARICA	CALAMA	COPIAPO	QUINTA NORMAL
Date				
1	9.97	.	16.90	8.43
2	15.79	.	10.96	17.81
3	21.07	.	5.59	4.04
4	16.04	.	23.63	18.62
5	7.66	.	18.15	19.05
6	10.52	.	18.68	8.77
7	13.05	.	19.43	10.46
8	17.89	.	23.99	19.97
9	12.57	.	16.50	19.61
10	17.22	.	20.57	19.17
11	10.35	.	6.66	2.91
12	19.87	.	22.04	9.22
13	10.27	.	23.42	10.16
14	11.78	.	23.38	21.25
15	11.51	.	23.60	20.78
16	12.61	.	21.18	21.09
17	20.39	.	21.66	21.08
18	13.12	.	21.14	20.48
19	15.97	.	13.10	18.00
20	9.49	.	21.27	21.37
21	22.88	.	15.41	21.51
22	13.90	.	25.90	16.71
23	16.25	.	26.02	22.07
24	18.93	.	12.67	22.59
25	18.80	.	14.55	20.38
26	20.42	.	18.61	22.90
27	21.30	.	24.13	22.72
28	27.77	.	26.29	22.84
29	17.29	.	25.37	13.64
30	21.87	.	25.47	23.67
31				
TT Monthly Totals	476.56	.	586.27	521.31
Daily Means	16.10	.	19.54	17.38
SS Monthly Totals				
Daily Means				
Types of Instruments	PYRANOMETER PSP EPPLEY	PYRANOMETER PSP EPPLEY	PYRANOMETER PSP EPPLEY	PYRANOMETER PSP EPPLEY

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

Month: SEPTEMBER Year: 2021 Country: CHILE

Daily Totals				
Latitude	41°25' S	45°35' S	53°00' S	
Longitude	73°05' W	72°07' W	70°51' W	
Elevation	85 m	310 m	37 m	
Station				
Date	PUERTO MONTT	COYHAIQUE	PUNTA ARENAS	
1	15.60	.	9.80	
2	8.07	.	11.23	
3	9.11	.	6.17	
4	7.15	.	7.79	
5	7.69	.	11.43	
6	12.01	.	6.92	
7	13.81	.	9.73	
8	13.62	.	6.37	
9	9.03	.	12.67	
10	6.46	.	10.50	
11	3.26	.	10.33	
12	11.00	.	9.38	
13	15.63	.	12.10	
14	8.47	.	10.65	
15	10.05	.	13.14	
16	8.63	.	1.90	
17	14.01	.	7.00	
18	12.17	.	10.23	
19	13.72	.	9.57	
20	14.98	.	8.12	
21	20.86	.	6.98	
22	10.76	.	10.01	
23	14.78	.	13.38	
24	20.89	.	8.91	
25	10.06	.	15.78	
26	19.82	.	13.24	
27	14.80	.	15.40	
28	21.05	.	11.45	
29	7.96	.	3.88	
30	13.80	.	12.40	
31		.		
TT Monthly Totals	369.27	.	296.44	
Daily Means	12.31	.	9.88	
SS Monthly Totals				
Daily Means				
Types of Instruments	PYRANOMETER PSP EPPLEY	PYRANOMETER PSP EPPLEY	PYRANOMETER PSP EPPLEY	PYRANOMETER PSP EPPLEY

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

Month: OCTOBER Year: 2021 Country: CHILE

Daily Totals				
Latitude	18°21' S	22°29' S	27°21' S	33°27' S
Longitude	70°19'W	68°54' W	70°21' W	70°42' W
Elevation	58 m	2270 m	362 m	520 m
Station	ARICA	CALAMA	COPIAPO	QUINTA NORMAL
Date				
1	21.46	.	25.85	23.42
2	17.00	.	24.63	23.55
3	11.16	.	25.79	24.71
4	11.13	.	26.64	23.60
5	11.84	.	20.45	24.44
6	21.83	.	21.21	24.53
7	24.79	.	20.60	24.58
8	23.40	.	27.41	11.75
9	20.52	.	29.25	24.84
10	22.43	.	29.90	19.78
11	19.66	.	20.40	26.00
12	13.32	.	9.85	14.83
13	23.13	.	29.16	22.50
14	17.28	.	27.52	14.02
15	19.79	.	24.88	26.45
16	29.39	.	29.22	26.63
17	25.97	.	25.90	26.77
18	25.20	.	27.14	27.60
19	25.84	.	15.43	26.47
20	22.86	.	27.11	20.06
21	22.03	.	30.46	21.03
22	22.08	.	18.46	22.71
23	25.07	.	27.17	27.57
24	24.60	.	29.62	27.95
25	25.90	.	18.83	28.17
26	28.30	.	20.81	25.65
27	30.26	.	28.69	27.40
28	30.81	.	24.48	27.70
29	24.20	.	25.27	27.74
30	23.50	.	28.60	27.88
31	27.88	.	26.48	23.24
TT Monthly Totals	692.63	.	767.21	743.56
Daily Means	22.34	.	24.75	23.99
SS Monthly Totals				
Daily Means				
Types of Instruments	PYRANOMETER PSP EPPLEY	PYRANOMETER PSP EPPLEY	PYRANOMETER PSP EPPLEY	PYRANOMETER PSP EPPLEY

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

Month: OCTOBER Year: 2021 Country: CHILE

Daily Totals				
Latitude	41°25' S	45°35' S	53°00' S	
Longitude	73°05' W	72°07' W	70°51' W	
Elevation	85 m	310 m	37 m	
Station				
Date	PUERTO MONTT	COYHAIQUE	PUNTA ARENAS	
1	3.58	.	16.18	
2	17.09	.	5.51	
3	15.35	.	12.09	
4	16.23	.	10.87	
5	18.74	.	19.17	
6	25.65	.	14.83	
7	24.29	.	14.84	
8	9.71	.	21.25	
9	22.04	.	11.39	
10	13.81	.	19.99	
11	18.47	.	18.17	
12	20.51	.	5.54	
13	3.60	.	19.33	
14	21.76	.	23.69	
15	9.03	.	14.99	
16	8.86	.	17.73	
17	20.24	.	4.94	
18	25.72	.	19.64	
19	27.02	.	13.34	
20	10.36	.	14.51	
21	19.24	.	23.10	
22	11.25	.	11.86	
23	16.88	.	19.57	
24	8.79	.	18.17	
25	12.53	.	18.08	
26	17.74	.	24.99	
27	15.84	.	23.28	
28	12.26	.	17.67	
29	10.58	.	19.11	
30	28.79	.	24.79	
31	28.72	.	27.32	
TT Monthly Totals	514.67	.	525.96	
Daily Means	16.60	.	16.97	
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: 2021 Country: CHILE

Daily Totals				
Latitude	18°21' S	22°29' S	27°21' S	33°27' S
Longitude	70°19'W	68°54' W	70°21' W	70°42' W
Elevation	58 m	2270 m	362 m	520 m
Station	ARICA	CALAMA	COPIAPO	QUINTA NORMAL
Date				
1	29.64	.	26.93	22.05
2	26.33	.	31.69	28.31
3	27.63	.	22.45	25.17
4	20.00	.	25.41	18.54
5	21.64	.	19.32	29.09
6	30.23	.	24.61	29.93
7	24.46	.	27.74	30.45
8	20.98	.	15.94	29.31
9	30.23	.	24.15	29.16
10	24.32	.	31.15	28.46
11	27.59	.	24.63	28.91
12	23.24	.	19.70	29.08
13	23.31	.	28.57	28.11
14	20.16	.	26.02	30.96
15	24.20	.	21.42	30.63
16	21.31	.	19.56	30.44
17	22.68	.	19.60	30.48
18	25.70	.	24.13	29.30
19	22.16	.	22.92	30.11
20	27.59	.	30.18	30.48
21	26.62	.	29.76	30.40
22	20.02	.	27.22	30.59
23	19.08	.	24.14	30.54
24	24.94	.	32.51	19.26
25	29.97	.	26.39	31.22
26	23.39	.	29.31	30.15
27	30.06	.	29.30	18.19
28	21.28	.	30.07	31.23
29	25.98	.	17.89	27.12
30	21.69	.	20.08	30.10
31				
TT Monthly Totals	736.43	.	752.79	847.76
Daily Means	24.55	.	25.09	28.26
SS Monthly Totals				
Daily Means				
Types of Instruments	PYRANOMETER PSP EPPLEY	PYRANOMETER PSP EPPLEY	PYRANOMETER PSP EPPLEY	PYRANOMETER PSP EPPLEY

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

Month: NOVEMBER		Year: 2021		Country: CHILE	
Daily Totals					
Latitude	41°25' S	45°35' S	53°00' S		
Longitude	73°05' W	72°07' W	70°51' W		
Elevation	85 m	310 m	37 m		
Station					
Date	PUERTO MONTT	COYHAIQUE	PUNTA ARENAS		
1	29.96	.	26.18		
2	10.81	.	13.47		
3	12.54	.	19.81		
4	18.86	.	17.85		
5	27.85	.	18.82		
6	18.05	.	5.21		
7	10.51	.	22.45		
8	20.31	.	23.48		
9	29.04	.	28.34		
10	13.24	.	28.31		
11	22.79	.	18.15		
12	9.74	.	28.49		
13	11.67	.	20.98		
14	9.84	.	13.97		
15	13.35	.	26.53		
16	31.83	.	12.49		
17	13.68	.	29.50		
18	25.32	.	16.18		
19	26.38	.	26.90		
20	25.08	.	32.31		
21	14.60	.	19.78		
22	20.47	.	22.57		
23	26.48	.	23.64		
24	11.51	.	26.03		
25	11.30	.	30.08		
26	17.42	.	15.09		
27	0.01	.	23.66		
28	18.78	.	22.32		
29	23.10	.	30.89		
30	28.75	.	29.71		
31					
TT Monthly Totals	553.26	.	673.17		
 Daily Means	18.44	.	22.44		
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: DECEMBER Year: 2021 Country: CHILE

Daily Totals				
Latitude	18°21' S	22°29' S	27°21' S	33°27' S
Longitude	70°19'W	68°54' W	70°21' W	70°42' W
Elevation	58 m	2270 m	362 m	520 m
Station	ARICA	CALAMA	COPIAPO	QUINTA NORMAL
Date				
1	28.46	.	24.52	30.74
2	31.38	.	19.85	27.92
3	25.54	.	27.63	30.79
4	26.73	.	28.00	31.22
5	23.94	.	22.57	31.32
6	23.62	.	22.25	28.05
7	28.23	.	24.57	29.52
8	26.58	.	23.65	31.25
9	16.70	.	16.17	30.94
10	29.87	.	23.14	30.63
11	26.88	.	33.28	21.19
12	25.76	.	33.69	26.40
13	24.45	.	28.23	31.04
14	30.07	.	32.58	30.19
15	30.45	.	27.14	30.57
16	23.91	.	26.42	31.01
17	18.15	.	27.87	30.92
18	24.90	.	26.99	31.06
19	27.36	.	16.15	31.01
20	12.85	.	10.20	24.74
21	24.81	.	30.76	31.11
22	20.11	.	32.83	31.39
23	29.77	.	33.59	30.01
24	21.26	.	33.00	30.82
25	21.86	.	29.33	30.71
26	21.34	.	32.06	28.13
27	22.81	.	25.27	28.97
28	23.15	.	13.52	30.13
29	23.98	.	.	22.98
30	29.73	.	.	30.62
31	26.71	.	.	31.16
TT Monthly Totals	771.37	.	.	916.54
Daily Means	24.88	.	25.90	29.57
SS Monthly Totals				
Daily Means				
Types of Instruments	PYRANOMETER PSP EPPLEY	PYRANOMETER PSP EPPLEY	PYRANOMETER PSP EPPLEY	PYRANOMETER PSP EPPLEY

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

Month: DECEMBER Year: 2021 Country: CHILE

Daily Totals				
Latitude	41°25' S	45°35' S	53°00' S	
Longitude	73°05' W	72°07' W	70°51' W	
Elevation	85 m	310 m	37 m	
Station				
Date	PUERTO MONTT	COYHAIQUE	PUNTA ARENAS	
1	13.64	.	28.92	
2	33.59	.	17.73	
3	27.21	.	21.99	
4	30.45	.	17.85	
5	33.36	.	33.03	
6	31.96	.	19.83	
7	8.14	.	32.31	
8	26.69	.	18.36	
9	33.37	.	30.79	
10	25.22	.	28.29	
11	13.37	.	29.02	
12	19.40	.	22.84	
13	13.89	.	18.86	
14	28.08	.	24.39	
15	31.95	.	14.12	
16	29.85	.	14.95	
17	16.62	.	13.70	
18	25.67	.	33.58	
19	17.77	.	34.51	
20	24.52	.	21.70	
21	31.87	.	26.06	
22	31.53	.	32.78	
23	16.40	.	22.33	
24	29.40	.	28.25	
25	30.74	.	28.48	
26	30.37	.	30.43	
27	25.14	.	29.24	
28	30.66	.	18.22	
29	14.40	.	32.19	
30	21.27	.	20.74	
31	13.64	.	24.44	
TT Monthly Totals	760.16	.	769.92	
Daily Means	24.52	.	24.84	
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: JULY		Year: 2021		Country: CHILE	
Daily Totals					
Latitude	18°21' S	20°32' S	22°28' S	23°26' S	
Longitude	70°19'W	72°10' W	68°55' W	70°26' W	
Elevation	58 m	52 m	270 m	135 m	
Station	ARICA	IQUIQUE	CALAMA	ANTOFAGASTA	
Date					
1	4.3	7.8	.	7.1	
2	3.9	0.6	.	6.1	
3	3.7	6.0	.	5.5	
4	5.7	4.8	.	8.2	
5	5.0	3.9	.	6.6	
6	1.7	4.9	.	5.2	
7	4.9	8.4	.	3.5	
8	6.2	0.5	.	3.9	
9	5.2	6.6	.	5.9	
10	7.1	9.3	.	5.7	
11	5.7	5.2	.	7.3	
12	4.4	1.2	.	7.1	
13	8.6	3.2	.	4.0	
14	8.5	8.9	.	5.2	
15	0.0	1.7	.	8.8	
16	0.0	1.3	.	6.8	
17	12.6	3.4	.	7.5	
18	0.0	1.7	.	6.0	
19	2.6	5.2	.	6.5	
20	9.1	5.7	.	4.5	
21	3.8	9.1	.	8.6	
22	5.8	6.7	.	7.6	
23	2.7	6.6	.	5.4	
24	1.8	6.3	.	3.5	
25	5.1	5.7	.	4.8	
26	1.4	0.3	.	2.4	
27	1.5	0.0	.	7.9	
28	2.8	7.4	.	7.5	
29	3.8	8.9	.	10.3	
30	1.8	3.2	.	4.0	
31	0.9	1.4	.	1.2	
TT Monthly Totals					
Daily Means					
SS Monthly Totals	130.6	145.9	.	184.6	
Daily Means	4.2	4.7	.	6.0	
Types of Instruments	HELIOGRAPH CAMPBELL STOKES	HELIOGRAPH CAMPBELL STOKES	HELIOGRAPH CAMPBELL STOKES	HELIOGRAPH CAMPBELL STOKES	

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

Month: JULY		Year: 2021		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	.	.	2.4	
2	2.8	.	.	7.4	
3	5.5	.	.	6.8	
4	5.6	.	.	8.2	
5	4.1	.	.	9.2	
6	3.0	.	.	9.2	
7	6.6	.	.	3.8	
8	10.1	.	.	9.2	
9	0.7	.	.	9.2	
10	0.0	.	.	2.8	
11	4.8	.	.	7.9	
12	3.7	.	.	7.3	
13	4.3	.	.	0.0	
14	3.2	.	.	8.3	
15	9.9	.	.	8.3	
16	6.4	.	.	9.1	
17	7.4	.	.	9.0	
18	6.4	.	.	9.3	
19	5.2	.	.	9.4	
20	6.0	.	.	9.4	
21	7.9	.	.	9.4	
22	7.3	.	.	9.0	
23	0.3	.	.	9.4	
24	0.0	.	.	9.2	
25	4.8	.	.	0.1	
26	9.9	.	.	8.1	
27	9.6	.	.	6.0	
28	8.3	.	.	8.7	
29	.	.	.	9.6	
30	8.3	.	.	9.7	
31	7.5	.	.	9.7	
TT Monthly Totals					
Daily Means					
SS Monthly Totals	.	.	.	235.1	
Daily Means	5.5	.	.	7.6	
Types of Instruments	HELIOGRAPH CAMPBELL STOKES	HELIOGRAPH CAMPBELL STOKES	HELIOGRAPH CAMPBELL STOKES	HELIOGRAPH CAMPBELL STOKES	

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

Month: JULY		Year: 2021		Country: CHILE	
Daily Totals					
Latitude	33°27' S	33°37' S	33°39' S	34°58' S	
Longitude	70°42' W	78°50' W	71°36' W	71°12' W	
Elevation	520 m	30 m	74 m	225 m	
Station					
Date	QUINTA NORMAL	ROBINSON CRUSOE	SANTO DOMINGO	CURICO	
1	0.0	7.0	0.4	.	
2	2.3	3.3	5.8	.	
3	7.1	6.9	6.2	.	
4	6.4	6.4	5.4	.	
5	7.0	2.4	5.4	.	
6	7.3	1.5	0.0	.	
7	3.9	4.5	2.7	.	
8	7.6	2.5	5.8	.	
9	7.3	3.3	6.1	.	
10	2.8	3.7	0.8	.	
11	7.0	5.2	6.2	.	
12	6.1	0.8	5.1	.	
13	0.0	0.3	0.0	.	
14	6.3	2.8	4.2	.	
15	6.6	1.3	6.1	.	
16	7.3	2.3	6.2	.	
17	7.4	4.8	6.9	.	
18	7.3	7.0	7.1	.	
19	7.4	7.4	7.1	.	
20	7.8	7.3	6.9	.	
21	7.8	6.7	7.2	.	
22	7.9	5.3	0.0	.	
23	7.5	0.4	1.2	.	
24	7.5	0.2	0.0	.	
25	0.0	3.3	0.0	.	
26	7.4	3.5	0.5	.	
27	5.3	3.8	5.7	.	
28	8.0	2.4	6.9	.	
29	8.0	4.9	7.5	.	
30	7.8	7.6	6.4	.	
31	7.6	4.8	0.0	.	
TT Monthly Totals					
 Daily Means					
SS Monthly Totals	189.7	123.6	129.8	.	
 Daily Means	6.1	4.0	4.2	.	
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: JULY		Year: 2021		Country: CHILE	
Daily Totals					
Latitude	36°36' S	36°46' S	38°45' S	39°41' S	
Longitude	72°26' W	73°03' W	72°38' W	73°04' W	
Elevation	124 m	12 m	114 m	19 m	
Station	CHILLAN	CONCEPCION	TEMUCO	VALDIVIA	
Date					
1	.	.	0.0	0.0	
2	.	.	0.3	2.2	
3	.	.	0.4	1.1	
4	.	.	5.2	3.6	
5	.	.	0.0	0.0	
6	.	.	2.3	0.8	
7	.	.	0.0	0.0	
8	.	.	0.0	0.0	
9	.	.	0.0	0.0	
10	.	.	3.1	4.0	
11	.	.	1.9	2.1	
12	.	.	4.9	1.2	
13	.	.	3.8	0.0	
14	.	.	0.9	0.0	
15	.	.	2.4	0.0	
16	.	.	1.2	0.0	
17	.	.	5.0	5.0	
18	.	.	3.5	0.0	
19	.	.	7.4	0.0	
20	.	.	4.0	2.2	
21	.	.	1.0	0.0	
22	.	.	0.0	0.0	
23	.	.	0.0	1.7	
24	.	.	1.7	4.9	
25	.	.	0.7	0.1	
26	.	.	0.0	1.8	
27	.	.	8.2	7.2	
28	.	.	7.7	6.2	
29	.	.	9.0	6.9	
30	.	.	.	3.9	
31	.	.	0.0	1.1	
TT Monthly Totals					
Daily Means					
SS Monthly Totals	.	.	.	56.0	
Daily Means	.	.	2.5	1.8	
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: JULY Year: 2021 Country: CHILE

Daily Totals				
Latitude	41°26' S	45°35' S	53°08' S	
Longitude	73°07' W	72°07' W	70°58' W	
Elevation	81 m	310 m	37 m	
Station				
Date	PUERTO MONTT	COYHAIQUE	PUNTA ARENAS	
1	0.2	0.0	6.4	
2	4.6	0.9	0.0	
3	0.0	0.0	2.4	
4	0.4	0.0	1.1	
5	0.1	1.8	3.9	
6	0.1	1.3	1.8	
7	1.1	0.2	5.6	
8	0.0	0.2	0.0	
9	0.6	0.0	0.0	
10	2.6	0.0	3.9	
11	0.9	1.1	2.7	
12	0.0	1.9	0.4	
13	5.4	3.1	2.8	
14	3.9	0.0	6.0	
15	0.3	2.5	0.0	
16	0.2	0.9	0.1	
17	3.4	1.1	2.8	
18	6.0	1.3	2.1	
19	6.8	0.0	0.9	
20	0.7	0.0	3.8	
21	0.0	2.7	5.2	
22	0.5	2.7	0.0	
23	0.0	0.0	2.6	
24	8.0	3.3	4.7	
25	0.3	1.1	2.2	
26	5.6	3.7	5.6	
27	6.9	3.9	0.0	
28	3.0	3.0	0.0	
29	5.0	1.9	0.0	
30	5.6	3.8	3.1	
31	1.3	1.5	6.7	
TT Monthly Totals				
 Daily Means				
SS Monthly Totals	73.5	43.9	76.8	
 Daily Means	2.4	1.4	2.5	
Types of Instruments	HELIOGRAPH CAMPBELL STOKES	HELIOGRAPH CAMPBELL STOKES	HELIOGRAPH CAMPBELL STOKES	

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

Month: AUGUST		Year: 2021		Country: CHILE	
Daily Totals					
Latitude	18°21' S	20°32' S	22°28' S	23°26' S	
Longitude	70°19'W	72°10' W	68°55' W	70°26' W	
Elevation	58 m	52 m	270 m	135 m	
Station	ARICA	IQUIQUE	CALAMA	ANTOFAGASTA	
Date					
1	4.2	7.4	.	9.1	
2	4.7	4.6	.	5.7	
3	4.0	3.3	.	6.4	
4	1.2	8.8	.	7.8	
5	2.6	8.4	.	9.1	
6	0.1	8.1	.	9.7	
7	4.8	5.7	.	7.2	
8	3.3	9.2	.	8.2	
9	1.6	9.3	.	9.8	
10	0.3	4.0	.	1.4	
11	5.2	5.0	.	3.9	
12	2.0	2.6	.	0.0	
13	1.6	8.0	.	5.0	
14	2.2	7.1	.	9.6	
15	2.9	6.0	.	7.1	
16	1.7	6.6	.	5.8	
17	5.2	9.0	.	4.1	
18	3.4	2.3	.	8.1	
19	5.5	1.0	.	8.1	
20	5.4	8.1	.	9.1	
21	4.6	6.8	.	10.1	
22	5.6	4.2	.	7.0	
23	5.5	4.8	.	9.3	
24	5.0	3.5	.	1.9	
25	0.5	0.0	.	0.2	
26	4.7	10.9	.	10.7	
27	0.0	10.2	.	9.7	
28	4.2	10.6	.	6.1	
29	7.0	10.1	.	6.1	
30	9.2	9.3	.	8.4	
31	3.8	9.5	.	8.8	
TT Monthly Totals					
Daily Means					
SS Monthly Totals	112.0	204.4	.	213.5	
Daily Means	3.6	6.6	.	6.9	
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: AUGUST Year: 2021 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	5.4	.	.	9.7
2	5.0	.	.	9.7
3	5.7	.	.	9.7
4	9.4	.	.	9.7
5	7.3	.	.	9.3
6	8.3	.	.	5.4
7	8.9	.	.	9.4
8	3.9	.	.	0.0
9	10.5	.	.	1.7
10	10.6	.	.	7.8
11	.	.	.	10.0
12	3.9	.	.	10.0
13	6.9	.	.	5.2
14	10.3	.	.	6.1
15	2.5	.	.	9.1
16	8.4	.	.	0.0
17	8.2	.	.	4.2
18	10.9	.	.	2.5
19	10.2	.	.	0.0
20	8.1	.	.	5.4
21	10.9	.	.	1.3
22	9.1	.	.	4.3
23	9.3	.	.	7.6
24	3.5	.	.	3.0
25	7.8	.	.	8.4
26	11.0	.	.	7.0
27	10.8	.	.	10.5
28	6.6	.	.	0.2
29	8.0	.	.	5.1
30	1.2	.	.	10.6
31	9.0	.	.	4.2
TT Monthly Totals				
Daily Means				
SS Monthly Totals	.	.	.	187.1
Daily Means	7.7	.	.	6.0
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: 2021 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	7.7	3.9	6.9	.
2	8.2	7.8	7.4	.
3	8.0	7.4	7.5	.
4	7.7	8.0	0.0	.
5	7.9	8.1	3.6	.
6	5.7	0.3	1.7	.
7	7.6	0.0	0.0	.
8	0.0	4.0	0.0	.
9	0.3	4.1	1.4	.
10	6.8	2.6	7.5	.
11	8.0	2.7	8.8	.
12	7.9	3.9	7.2	.
13	5.6	5.9	0.0	.
14	6.9	0.1	5.1	.
15	6.8	0.4	3.5	.
16	0.0	2.3	0.0	.
17	1.7	7.0	0.0	.
18	1.2	0.0	1.1	.
19	0.0	3.3	0.0	.
20	2.7	6.8	3.9	.
21	0.0	0.0	3.8	.
22	2.0	2.4	3.8	.
23	7.4	6.7	8.5	.
24	2.9	2.4	4.2	.
25	7.9	7.7	9.0	.
26	7.7	3.1	9.0	.
27	8.4	2.5	10.2	.
28	0.0	0.1	0.3	.
29	3.8	2.2	5.5	.
30	8.6	0.6	3.2	.
31	4.8	1.1	0.0	.
TT Monthly Totals				
 Daily Means				
SS Monthly Totals	154.2	107.4	123.1	.
 Daily Means	5.0	3.5	4.0	.
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: 2021 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	.	.	8.8	5.4
2	.	.	8.1	0.0
3	.	.	5.9	4.7
4	.	.	7.2	2.7
5	.	.	8.0	4.1
6	.	.	4.4	1.8
7	.	.	.	0.0
8	.	.	6.8	6.2
9	.	.	8.5	9.5
10	.	.	8.2	3.8
11	.	.	9.4	9.0
12	.	.	8.7	9.0
13	.	.	9.0	4.9
14	.	.	0.0	0.0
15	.	.	1.1	0.0
16	.	.	0.0	1.0
17	.	.	7.2	7.0
18	.	.	0.0	0.0
19	.	.	0.4	4.9
20	.	.	5.5	3.3
21	.	.	1.2	0.3
22	.	.	0.0	0.0
23	.	.	5.9	7.6
24	.	.	8.5	4.9
25	.	.	5.0	3.0
26	.	.	0.8	0.6
27	.	.	0.1	0.0
28	.	.	0.0	0.0
29	.	.	0.0	0.0
30	.	.	3.0	1.1
31	.	.	3.9	4.6
TT Monthly Totals				
 Daily Means				
SS Monthly Totals
 Daily Means	.	.	4.5	3.2
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: AUGUST Year: 2021 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	9.1	3.7	0.0	
2	9.4	0.8	0.0	
3	2.7	1.0	3.8	
4	0.2	3.2	0.8	
5	5.7	0.4	3.6	
6	0.0	2.7	5.9	
7	0.7	2.5	4.0	
8	6.2	0.2	5.5	
9	6.6	6.2	2.1	
10	0.0	5.3	3.3	
11	0.9	5.2	7.4	
12	7.9	4.6	2.0	
13	8.9	5.2	5.9	
14	0.0	6.1	3.4	
15	0.7	2.1	0.0	
16	0.0	0.0	0.4	
17	4.3	1.1	3.1	
18	0.0	1.3	0.0	
19	3.3	0.5	3.3	
20	1.2	4.0	6.6	
21	4.6	1.2	7.8	
22	0.2	0.0	0.0	
23	4.8	6.5	0.0	
24	7.0	5.5	6.3	
25	0.0	0.5	8.4	
26	0.6	0.2	0.8	
27	4.7	6.7	0.0	
28	0.0	0.1	0.8	
29	0.5	3.3	4.2	
30	0.6	0.0	7.8	
31	0.0	4.2	5.1	
TT Monthly Totals				
 Daily Means				
SS Monthly Totals	90.8	84.3	102.3	
 Daily Means	2.9	2.7	3.3	
Types of Instruments	HELIOGRAPH CAMPBELL STOKES	HELIOGRAPH CAMPBELL STOKES	HELIOGRAPH CAMPBELL STOKES	

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

Month: SEPTEMBER		Year: 2021		Country: CHILE	
Daily Totals					
Latitude	18°21' S	20°32' S	22°28' S	23°26' S	
Longitude	70°19'W	72°10' W	68°55' W	70°26' W	
Elevation	58 m	52 m	270 m	135 m	
Station	ARICA	IQUIQUE	CALAMA	ANTOFAGASTA	
Date					
1	1.3	4.5	.	5.8	
2	2.7	4.7	.	3.4	
3	5.0	3.7	.	0.0	
4	7.4	4.0	.	0.0	
5	2.5	9.4	.	5.6	
6	0.0	0.0	.	6.9	
7	1.3	0.0	.	0.7	
8	2.5	4.8	.	4.5	
9	4.7	5.3	.	8.9	
10	2.1	7.0	.	8.6	
11	3.5	9.2	.	7.4	
12	0.1	0.0	.	2.5	
13	4.6	10.1	.	8.4	
14	0.4	3.6	.	0.0	
15	0.2	0.6	.	8.3	
16	.	7.2	.	8.1	
17	0.9	7.4	.	8.6	
18	3.4	9.1	.	7.7	
19	1.5	3.9	.	6.1	
20	2.6	4.0	.	5.2	
21	0.1	1.1	.	4.9	
22	4.2	7.2	.	5.5	
23	0.9	8.4	.	9.5	
24	5.8	7.7	.	7.7	
25	4.2	0.0	.	7.8	
26	3.1	10.2	.	7.6	
27	4.1	4.5	.	7.2	
28	3.9	5.7	.	7.2	
29	6.9	8.6	.	5.8	
30	3.9	7.5	.	8.3	
31					
TT Monthly Totals					
Daily Means					
SS Monthly Totals	.	159.4	.	178.2	
Daily Means	2.9	5.3	.	5.9	
Types of	HELIOGRAPH	HELIOGRAPH	HELIOGRAPH	HELIOGRAPH	
Instruments	CAMPBELL	CAMPBELL	CAMPBELL	CAMPBELL	
	STOKES	STOKES	STOKES	STOKES	

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

Month: SEPTEMBER		Year: 2021		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	11.1	.	.	6.1	
2	6.7	.	.	5.1	
3	2.8	.	.	8.8	
4	0.0	.	.	1.8	
5	11.1	.	.	9.5	
6	6.0	.	.	10.8	
7	7.0	.	.	5.9	
8	10.5	.	.	5.0	
9	8.5	.	.	11.1	
10	5.4	.	.	11.1	
11	7.9	.	.	10.0	
12	0.0	.	.	0.0	
13	11.5	.	.	4.1	
14	10.3	.	.	5.4	
15	9.2	.	.	11.2	
16	9.3	.	.	11.3	
17	7.6	.	.	11.3	
18	7.8	.	.	11.3	
19	6.5	.	.	8.6	
20	3.9	.	.	7.9	
21	7.5	.	.	11.2	
22	5.2	.	.	11.4	
23	11.7	.	.	9.3	
24	9.8	.	.	11.5	
25	3.4	.	.	11.5	
26	4.4	.	.	8.5	
27	5.9	.	.	11.5	
28	7.8	.	.	11.5	
29	10.0	.	.	11.6	
30	8.8	.	.	5.8	
31					
TT Monthly Totals					
Daily Means					
SS Monthly Totals	217.6	.	.	260.1	
Daily Means	7.3	.	.	8.7	
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: SEPTEMBER		Year: 2021		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	5.9	6.8	8.9	.	
2	1.9	1.1	9.5	.	
3	8.5	3.9	0.0	.	
4	0.0	0.1	0.1	.	
5	8.6	6.6	10.9	.	
6	8.4	7.2	9.9	.	
7	2.5	5.8	7.0	.	
8	3.8	4.7	9.1	.	
9	8.5	6.4	9.9	.	
10	8.6	1.6	9.9	.	
11	8.0	0.0	0.5	.	
12	0.0	3.4	0.0	.	
13	2.8	4.4	3.6	.	
14	4.0	5.2	10.0	.	
15	8.9	1.8	10.8	.	
16	8.8	2.7	10.3	.	
17	8.7	1.2	10.0	.	
18	8.7	3.1	4.4	.	
19	7.9	5.7	8.3	.	
20	6.2	2.7	9.8	.	
21	8.5	0.5	10.2	.	
22	8.6	1.7	0.0	.	
23	6.1	1.6	9.3	.	
24	8.7	5.1	10.7	.	
25	9.5	2.6	4.0	.	
26	7.7	7.7	7.2	.	
27	8.7	3.0	10.3	.	
28	9.0	6.5	11.8	.	
29	9.6	10.0	10.6	.	
30	5.5	5.5	4.3	.	
31					
TT Monthly Totals					
Daily Means					
SS Monthly Totals	202.6	118.6	221.3	.	
Daily Means	6.8	4.0	7.4	.	
Types of Instruments	HELIOGRAPH CAMPBELL STOKES	HELIOGRAPH CAMPBELL STOKES	HELIOGRAPH CAMPBELL STOKES	HELIOGRAPH CAMPBELL STOKES	

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

Month: SEPTEMBER		Year: 2021		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	.	.	3.1	3.0	
2	.	.	9.9	5.5	
3	.	.	7.1	3.8	
4	.	.	0	0.0	
5	.	.	1.1	0.0	
6	.	.	0.8	0.1	
7	.	.	0.4	0.5	
8	.	.	9.7	8.6	
9	.	.	7	5.8	
10	.	.	6.9	8.9	
11	.	.	0.7	0.0	
12	.	.	0	0.0	
13	.	.	0.5	0.6	
14	.	.	.	10.4	
15	.	.	7.5	3.8	
16	.	.	5.1	2.2	
17	.	.	8	3.8	
18	.	.	4.9	3.2	
19	.	.	5.8	4.7	
20	.	.	7.8	6.4	
21	.	.	10.3	11.9	
22	.	.	11.1	10.8	
23	.	.	6.2	6.5	
24	.	.	9.5	8.5	
25	.	.	8.1	8.9	
26	.	.	2.4	1.1	
27	.	.	11.1	8.6	
28	.	.	9.6	9.4	
29	.	.	8.6	10.3	
30	.	.	4.6	1.7	
31					
TT Monthly Totals					
 Daily Means					
SS Monthly Totals	.	.	.	149.0	
 Daily Means	.	.	5.8	5.0	
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: SEPTEMBER Year: 2021 Country: CHILE

Daily Totals				
Latitude	41°26' S	45°35' S	53°08' S	
Longitude	73°07' W	72°07' W	70°58' W	
Elevation	81 m	310 m	37 m	
Station				
Date	PUERTO MONTT	COYHAIQUE	PUNTA ARENAS	
1	2.8	0.5	4.3	
2	8.6	1.1	0.0	
3	2.0	4.2	7.0	
4	3.9	7.8	1.0	
5	1.2	2.5	4.7	
6	4.5	3.4	9.1	
7	4.1	5.5	1.4	
8	8.9	7.6	4.2	
9	7.6	1.0	3.4	
10	3.0	3.1	5.0	
11	2.8	1.1	6.7	
12	0.0	0.8	4.6	
13	3.4	5.0	2.7	
14	7.6	7.4	0.0	
15	1.6	2.5	6.0	
16	4.1	6.8	7.7	
17	1.4	2.4	0.0	
18	5.0	5.4	0.5	
19	4.7	4.7	7.5	
20	5.2	7.8	3.2	
21	7.9	9.0	0.8	
22	10.8	6.6	0.5	
23	2.6	3.7	0.0	
24	6.8	2.2	2.9	
25	10.9	6.5	1.6	
26	3.0	5.9	7.2	
27	10.1	6.0	7.6	
28	8.7	6.4	7.4	
29	11.4	6.5	4.2	
30	0.4	5.6	0.0	
31				
TT Monthly Totals				
 Daily Means				
SS Monthly Totals	155.0	139.0	111.2	
 Daily Means	5.2	4.6	3.7	
Types of Instruments	HELIOGRAPH CAMPBELL STOKES	HELIOGRAPH CAMPBELL STOKES	HELIOGRAPH CAMPBELL STOKES	

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

Month: OCTOBER		Year: 2021		Country: CHILE	
Daily Totals					
Latitude	18°21' S	20°32' S	22°28' S	23°26' S	
Longitude	70°19'W	72°10' W	68°55' W	70°26' W	
Elevation	58 m	52 m	270 m	135 m	
Station	ARICA	IQUIQUE	CALAMA	ANTOFAGASTA	
Date					
1	3.6	11.2	.	10.1	
2	3.6	2.0	.	4.1	
3	3.8	9.2	.	6.4	
4	0.0	7.6	.	5.9	
5	0.0	3.5	.	7.6	
6	1.9	8.7	.	7.3	
7	5.2	8.1	.	7.8	
8	3.6	10.8	.	6.0	
9	3.4	8.4	.	6.8	
10	2.5	6.3	.	4.5	
11	3.5	8.2	.	8.6	
12	0.3	4.9	.	6.1	
13	0.0	4.1	.	5.7	
14	2.8	10.6	.	10.8	
15	2.5	6.7	.	5.1	
16	3.7	6.5	.	5.2	
17	6.8	11.8	.	7.1	
18	3.4	10.2	.	8.5	
19	3.4	10.5	.	10.4	
20	3.1	10.4	.	9.9	
21	2.1	11.4	.	9.3	
22	1.5	12.0	.	8.8	
23	3.5	9.0	.	7.6	
24	3.5	12.0	.	9.7	
25	3.4	11.4	.	9.7	
26	3.4	10.3	.	9.6	
27	3.8	12.0	.	11.0	
28	6.6	12.1	.	10.0	
29	5.6	12.1	.	6.8	
30	3.4	10.5	.	7.2	
31	4.8	10.8	.	9.8	
TT Monthly Totals					
Daily Means					
SS Monthly Totals	98.7	283.3	.	243.4	
Daily Means	3.2	9.1	.	7.9	
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: OCTOBER Year: 2021 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	.	.	11.7
2	8.6	.	.	11.7
3	8.5	.	.	11.3
4	9.4	.	.	11.8
5	9.3	.	.	11.8
6	6.0	.	.	11.8
7	5.2	.	.	11.8
8	.	.	.	11.6
9	9.5	.	.	4.5
10	12.2	.	.	11.9
11	12.3	.	.	9.0
12	6.2	.	.	12.1
13	2.4	.	.	6.3
14	12.2	.	.	9.9
15	9.9	.	.	3.4
16	7.0	.	.	11.9
17	10.4	.	.	12.1
18	8.2	.	.	11.2
19	8.7	.	.	12.3
20	3.4	.	.	12.3
21	9.1	.	.	6.8
22	9.6	.	.	7.5
23	5.4	.	.	10.3
24	10.5	.	.	12.3
25	10.3	.	.	12.4
26	5.7	.	.	12.5
27	6.3	.	.	12.4
28	9.9	.	.	12.4
29	7.9	.	.	12.5
30	.	.	.	12.5
31	9.2	.	.	12.5
TT Monthly Totals				
 Daily Means				
SS Monthly Totals	.	.	.	334.5
 Daily Means	8.4	.	.	10.8
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: OCTOBER		Year: 2021		Country: CHILE	
Daily Totals					
Latitude	33°27' S	33°37' S	33°39' S	34°58' S	
Longitude	70°42' W	78°50' W	71°36' W	71°12' W	
Elevation	520 m	30 m	74 m	225 m	
Station					
Date	QUINTA NORMAL	ROBINSON CRUSOE	SANTO DOMINGO	CURICO	
1	9.9	3.2	11.9	.	
2	9.5	5.3	10.9	.	
3	9.8	7.1	8.3	.	
4	10.0	4.0	11.5	.	
5	10.1	2.7	11.1	.	
6	9.7	3.3	8.2	.	
7	10.1	7.4	10.5	.	
8	10.7	8.1	10.2	.	
9	4.1	1.9	5.8	.	
10	10.2	4.1	10.4	.	
11	6.8	2.5	9.8	.	
12	10.3	1.9	3.7	.	
13	5.5	7.3	6.3	.	
14	7.1	1.7	8.3	.	
15	4.2	1.7	10.8	.	
16	10.1	6.0	12.2	.	
17	10.6	2.8	11.8	.	
18	10.8	4.4	11.3	.	
19	11.3	4.9	11.5	.	
20	11.2	10.6	0.0	.	
21	7.3	3.4	0.6	.	
22	7.1	1.2	7.6	.	
23	8.0	4.7	9.9	.	
24	11.2	1.1	11.9	.	
25	11.3	10.4	11.8	.	
26	11.4	7.4	12.4	.	
27	11.1	9.6	0.0	.	
28	11.2	7.9	0.0	.	
29	11.1	8.1	10.2	.	
30	11.2	4.0	4.0	.	
31	11.3	7.0	11.8	.	
TT Monthly Totals					
 Daily Means					
SS Monthly Totals	294.2	155.7	264.7	.	
 Daily Means	9.5	5.0	8.5	.	
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: OCTOBER		Year: 2021		Country: CHILE	
Daily Totals					
Latitude	36°36' S	36°46' S	38°45' S	39°41' S	
Longitude	72°26' W	73°03' W	72°38' W	73°04' W	
Elevation	124 m	12 m	114 m	19 m	
Station	CHILLAN	CONCEPCION	TEMUCO	VALDIVIA	
Date					
1	.	.	0.1	1.8	
2	.	.	0.2	0.0	
3	.	.	0.5	7.1	
4	.	.	9.3	5.0	
5	.	.	10.5	10.8	
6	.	.	8.6	8.7	
7	.	.	12.3	11.4	
8	.	.	12.3	11.4	
9	.	.	12.1	11.4	
10	.	.	10.0	11.6	
11	.	.	0.0	2.5	
12	.	.	9.5	8.4	
13	.	.	4.3	10.9	
14	.	.	0.8	0.7	
15	.	.	4.3	9.3	
16	.	.	11.5	3.9	
17	.	.	3.3	3.0	
18	.	.	11.6	9.7	
19	.	.	11.7	12.6	
20	.	.	11.3	11.9	
21	.	.	0.0	1.1	
22	.	.	5.9	6.3	
23	.	.	11.2	6.6	
24	.	.	0.1	1.0	
25	.	.	0.5	1.0	
26	.	.	0.0	1.9	
27	.	.	6.2	8.6	
28	.	.	6.9	7.2	
29	.	.	.	9.8	
30	.	.	6.2	9.0	
31	.	.	12.2	10.9	
TT Monthly Totals					
 Daily Means					
SS Monthly Totals	.	.	.	215.5	
 Daily Means	.	.	6.4	7.0	
Types of Instruments	HELIOGRAPH	HELIOGRAPH	HELIOGRAPH	HELIOGRAPH	
	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: 2021 Country: CHILE

Daily Totals				
Latitude	41°26' S	45°35' S	53°08' S	
Longitude	73°07' W	72°07' W	70°58' W	
Elevation	81 m	310 m	37 m	
Station				
Date	PUERTO MONTT	COYHAIQUE	PUNTA ARENAS	
1	5.2	8.2	5.5	
2	0.0	0.0	3.1	
3	5.2	2.6	4.2	
4	6.3	5.3	7.4	
5	6.7	3.9	3.7	
6	9.6	10.7	10.6	
7	12.1	9.5	4.5	
8	11.3	11.2	4.3	
9	3.7	8.5	0.0	
10	9.4	8.1	4.0	
11	3.8	2.6	9.3	
12	9.7	7.4	7.5	
13	6.7	8.8	0.0	
14	0.0	1.8	8.3	
15	8.5	8.3	9.5	
16	1.2	4.8	6.3	
17	1.2	6.5	11.0	
18	7.5	9.2	0.0	
19	9.9	5.5	9.4	
20	11.5	11.5	3.0	
21	1.9	5.0	5.4	
22	5.7	8.1	11.1	
23	3.5	6.8	2.0	
24	5.1	10.6	8.2	
25	1.0	0.0	7.9	
26	3.2	2.2	9.4	
27	4.8	5.3	10.7	
28	5.7	3.2	7.4	
29	3.6	10.6	5.9	
30	3.7	4.7	8.6	
31	10.5	11.5	11.7	
TT Monthly Totals				
 Daily Means				
SS Monthly Totals	178.2	202.4	199.9	
 Daily Means	5.7	6.5	6.4	
Types of Instruments	HELIOGRAPH CAMPBELL STOKES	HELIOGRAPH CAMPBELL STOKES	HELIOGRAPH CAMPBELL STOKES	

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

Month: NOVEMBER		Year: 2021		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					
Date	ARICA	IQUIQUE	CALAMA	ANTOFAGASTA	
1	3.6	11.2	.	10.4	
2	5.9	12.1	.	7.8	
3	3.4	10.6	.	8.7	
4	3.2	9.7	.	7.3	
5	3.3	10.8	.	9.6	
6	3.4	8.2	.	7.1	
7	6.3	12.2	.	9.9	
8	3.3	10.4	.	6.1	
9	2.5	3.4	.	5.8	
10	.	11.6	.	9.5	
11	.	10.1	.	11.3	
12	3.2	10.4	.	8.8	
13	2.0	9.4	.	5.9	
14	1.7	9.4	.	8.3	
15	1.8	7.9	.	4.3	
16	2.4	9.9	.	4.3	
17	2.6	9.6	.	10.3	
18	1.2	10.1	.	10.4	
19	3.2	12.3	.	8.7	
20	2.7	8.4	.	11.4	
21	1.2	12.2	.	10.0	
22	1.1	8.3	.	9.5	
23	1.1	9.6	.	8.3	
24	1.7	9.3	.	10.0	
25	2.5	11.7	.	9.2	
26	3.8	12.3	.	9.2	
27	2.2	12.2	.	11.5	
28	3.9	12.3	.	10.7	
29	2.7	7.7	.	0.0	
30	3.1	3.9	.	8.1	
31					
TT Monthly Totals					
Daily Means					
SS Monthly Totals	.	297.2	.	252.4	
Daily Means	2.8	9.9	.	8.4	
Types of Instruments	HELIOGRAPH CAMPBELL STOKES	HELIOGRAPH CAMPBELL STOKES	HELIOGRAPH CAMPBELL STOKES	HELIOGRAPH CAMPBELL STOKES	

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

Month: NOVEMBER		Year: 2021		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	9.1	.	.	8.5	
2	9.4	.	.	7.9	
3	9.0	.	.	12.7	
4	6.7	.	.	11.5	
5	7.4	.	.	7.6	
6	4.8	.	.	12.7	
7	7.1	.	.	12.7	
8	8.2	.	.	12.9	
9	4.5	.	.	12.9	
10	8.4	.	.	12.9	
11	10.1	.	.	10.1	
12	6.7	.	.	13.0	
13	5.4	.	.	13.0	
14	9.1	.	.	11.0	
15	7.5	.	.	13.0	
16	6.0	.	.	12.4	
17	4.5	.	.	13.1	
18	3.9	.	.	13.1	
19	5.9	.	.	13.1	
20	4.1	.	.	13.2	
21	8.7	.	.	12.9	
22	9.5	.	.	13.2	
23	7.9	.	.	13.3	
24	7.7	.	.	13.3	
25	11.0	.	.	7.4	
26	7.9	.	.	13.4	
27	8.7	.	.	13.4	
28	10.2	.	.	9.5	
29	9.9	.	.	13.4	
30	3.8	.	.	13.5	
31					
TT Monthly Totals					
 Daily Means					
SS Monthly Totals	223.1	.	.	360.6	
 Daily Means	7.4	.	.	12.0	
Types of Instruments	HELIOGRAPH CAMPBELL STOKES	HELIOGRAPH CAMPBELL STOKES	HELIOGRAPH CAMPBELL STOKES	HELIOGRAPH CAMPBELL STOKES	

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

Month: NOVEMBER Year: 2021 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	6.6	10.9	0.0	.
2	5.2	9.0	0.0	.
3	11.0	9.5	0.0	.
4	8.3	9.4	5.0	.
5	5.3	8.1	12.1	.
6	10.9	5.4	12.0	.
7	11.1	0.0	12.8	.
8	11.1	8.2	9.0	.
9	11.1	5.0	11.2	.
10	11.2	4.5	3.3	.
11	10.3	1.8	2.4	.
12	11.3	6.9	0.0	.
13	11.2	7.9	11.1	.
14	9.0	6.8	12.9	.
15	11.0	6.1	10.8	.
16	11.3	4.2	12.7	.
17	11.2	10.4	12.4	.
18	11.3	10.2	15.9	.
19	11.2	2.8	9.2	.
20	11.1	7.0	0.0	.
21	11.3	9.7	0.0	.
22	11.1	8.3	0.0	.
23	11.3	5.9	3.0	.
24	12.0	10.3	4.6	.
25	5.4	5.6	6.4	.
26	11.1	7.6	12.7	.
27	11.1	7.6	6.4	.
28	7.7	9.2	12.3	.
29	11.2	9.7	19.0	.
30	10.9	6.1	10.6	.
31				
TT Monthly Totals				
 Daily Means				
SS Monthly Totals	303.8	214.1	227.8	.
 Daily Means	10.1	7.1	7.6	.
Types of Instruments	HELIOGRAPH CAMPBELL STOKES	HELIOGRAPH CAMPBELL STOKES	HELIOGRAPH CAMPBELL STOKES	HELIOGRAPH CAMPBELL STOKES

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

Month: NOVEMBER		Year: 2021		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	.	.	10.7	11.9	
2	.	.	7.8	10.2	
3	.	.	9.0	1.9	
4	.	.	4.4	2.1	
5	.	.	7.8	8.6	
6	.	.	13.3	12.3	
7	.	.	8.6	11.8	
8	.	.	5.2	8.1	
9	.	.	9.7	11.5	
10	.	.	1.9	12.6	
11	.	.	9.3	7.1	
12	.	.	8.9	4.3	
13	.	.	0.2	1.0	
14	.	.	2.9	2.3	
15	.	.	1.2	0.8	
16	.	.	12.1	9.8	
17	.	.	13.8	12.0	
18	.	.	11.2	11.0	
19	.	.	7.9	8.6	
20	.	.	11.6	10.6	
21	.	.	10.8	11.3	
22	.	.	10.6	11.4	
23	.	.	10.4	11.1	
24	.	.	13.5	12.8	
25	.	.	0.0	6.1	
26	.	.	4.3	1.8	
27	.	.	7.5	5.6	
28	.	.	8.2	9.6	
29	.	.	13.0	12.8	
30	.	.	7.8	8.4	
31					
TT Monthly Totals					
Daily Means					
SS Monthly Totals	.	.	243.6	249.4	
Daily Means	.	.	8.1	8.3	
Types of Instruments	HELIOGRAPH CAMPBELL STOKES	HELIOGRAPH CAMPBELL STOKES	HELIOGRAPH CAMPBELL STOKES	HELIOGRAPH CAMPBELL STOKES	

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

Month: NOVEMBER Year: 2021 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	13.0	11.4	13.3	
2	10.2	11.5	12.3	
3	1.6	5.5	2.5	
4	2.3	4.2	0.0	
5	8.3	5.5	7.3	
6	12.0	10.3	8.3	
7	6.2	12.1	0.0	
8	0.0	7.5	0.0	
9	8.0	14.2	8.5	
10	1.9	11.3	8.4	
11	4.2	10.3	10.3	
12	9.5	8.5	3.6	
13	1.5	4.2	12.4	
14	1.4	7.2	9.2	
15	0.4	2.5	1.6	
16	6.6	10.2	0.0	
17	12.9	8.5	1.4	
18	4.2	8.1	11.4	
19	7.6	6.7	4.9	
20	9.8	8.5	10.6	
21	8.3	6.4	13.8	
22	2.1	5.9	3.4	
23	7.8	9.8	10.4	
24	10.8	9.5	9.4	
25	1.9	4.3	9.2	
26	0.7	9.1	12.4	
27	6.5	5.8	0.8	
28	10.2	10.1	7.7	
29	7.1	3.2	8.4	
30	8.0	11.1	11.5	
31				
TT Monthly Totals				
 Daily Means				
SS Monthly Totals	185.0	243.4	213.0	
 Daily Means	6.2	8.1	7.1	
Types of Instruments	HELIOGRAPH CAMPBELL STOKES	HELIOGRAPH CAMPBELL STOKES	HELIOGRAPH CAMPBELL STOKES	

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

Month: DECEMBER		Year: 2021		Country: CHILE	
Daily Totals					
Latitude	18°21' S	20°32' S	22°28' S	23°26' S	
Longitude	70°19'W	72°10' W	68°55' W	70°26' W	
Elevation	58 m	52 m	270 m	135 m	
Station	ARICA	IQUIQUE	CALAMA	ANTOFAGASTA	
Date					
1	3.1	6.0	.	9.1	
2	.	9.7	.	10.2	
3	5.8	12.4	.	11.4	
4	4.1	12.4	.	11.0	
5	2.1	12.0	.	9.3	
6	0.7	7.1	.	8.4	
7	0.7	9.9	.	8.3	
8	1.7	11.6	.	5.3	
9	1.8	11.9	.	5.4	
10	0.0	7.6	.	7.6	
11	3.1	9.9	.	4.0	
12	3.1	12.1	.	12.3	
13	1.1	11.4	.	7.3	
14	.	12.5	.	9.8	
15	2.9	12.4	.	11.9	
16	4.4	11.9	.	10.4	
17	1.2	10.6	.	9.9	
18	2.9	10.6	.	10.4	
19	2.8	8.6	.	4.8	
20	2.4	3.8	.	8.4	
21	0.0	3.4	.	6.9	
22	0.2	8.8	.	7.8	
23	1.1	7.2	.	4.5	
24	3.1	7.0	.	5.4	
25	0.6	8.9	.	8.7	
26	0.2	12.1	.	6.9	
27	2.6	12.4	.	10.2	
28	0.5	11.4	.	11.2	
29	3.1	9.6	.	10.0	
30	3.0	9.6	.	9.6	
31	5.5	12.1	.	11.2	
TT Monthly Totals					
 Daily Means					
SS Monthly Totals	.	306.9	.	267.6	
 Daily Means	2.2	9.9	.	8.6	
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: 2021		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	4.3	.	.	13.5	
2	7.4	.	.	13.5	
3	4.6	.	.	13.4	
4	8.6	.	.	13.4	
5	8.3	.	.	13.5	
6	6.1	.	.	13.5	
7	6.9	.	.	13.4	
8	7.4	.	.	11.8	
9	6.8	.	.	13.5	
10	3.2	.	.	14.4	
11	3.7	.	.	13.3	
12	11.1	.	.	6.9	
13	11.7	.	.	9.8	
14	8.5	.	.	13.2	
15	11.2	.	.	13.5	
16	8.8	.	.	13.4	
17	8.5	.	.	13.4	
18	7.7	.	.	13.4	
19	6.8	.	.	13.4	
20	1.7	.	.	13.4	
21	0.0	.	.	13.4	
22	10.1	.	.	13.5	
23	13.4	.	.	13.5	
24	13.2	.	.	12.8	
25	12.8	.	.	13.4	
26	12.2	.	.	13.4	
27	12.0	.	.	13.3	
28	8.1	.	.	10.3	
29	10.4	.	.	13.1	
30	12.9	.	.	8.6	
31	7.2	.	.	12.2	
TT Monthly Totals					
Daily Means					
SS Monthly Totals	255.6	.	.	395.1	
Daily Means	8.2	.	.	12.7	
Types of Instruments	HELIOGRAPH CAMPBELL STOKES	HELIOGRAPH CAMPBELL STOKES	HELIOGRAPH CAMPBELL STOKES	HELIOGRAPH CAMPBELL STOKES	

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

Month: DECEMBER		Year: 2021		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	12.3	3.6	7.9	.	
2	11.3	5.9	7.6	.	
3	11.3	0.0	11.6	.	
4	11.4	8.7	10.7	.	
5	11.6	7.8	12.3	.	
6	11.6	10.4	0.5	.	
7	10.4	0.0	6.1	.	
8	10.6	2.2	9.5	.	
9	11.6	6.9	9.6	.	
10	11.7	11.5	6.7	.	
11	11.7	10.3	1.3	.	
12	5.2	6.5	0.8	.	
13	8.4	5.1	10.7	.	
14	12.1	4.5	12.7	.	
15	11.9	0.9	9.6	.	
16	12.0	1.0	12.1	.	
17	11.7	3.6	4.7	.	
18	9.9	6.0	12.6	.	
19	11.9	1.7	7.4	.	
20	12.1	1.5	3.7	.	
21	11.9	10.0	0.0	.	
22	11.8	11.7	3.6	.	
23	11.7	8.8	5.7	.	
24	11.4	3.9	4.5	.	
25	10.6	5.4	10.0	.	
26	10.9	10.4	3.6	.	
27	11.7	10.9	1.5	.	
28	8.8	10.5	5.2	.	
29	11.3	11.1	5.1	.	
30	7.5	7.1	3.4	.	
31	11.5	6.4	12.9	.	
TT Monthly Totals					
Daily Means					
SS Monthly Totals	339.8	194.3	213.6	.	
Daily Means	11.0	6.3	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: DECEMBER		Year: 2021		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	.	.	11.1	12.8	
2	.	.	1.9	0.0	
3	.	.	4.9	10.8	
4	.	.	13.0	10.3	
5	.	.	13.3	12.2	
6	.	.	14.4	12.7	
7	.	.	13.7	12.2	
8	.	.	1.1	0.0	
9	.	.	13.5	10.0	
10	.	.	15.0	14.0	
11	.	.	11.3	12.0	
12	.	.	7.0	6.0	
13	.	.	8.3	10.5	
14	.	.	11.2	5.4	
15	.	.	11.7	10.1	
16	.	.	13.2	12.0	
17	.	.	13.4	12.4	
18	.	.	10.9	7.8	
19	.	.	11.2	12.4	
20	.	.	12.0	12.4	
21	.	.	12.8	12.4	
22	.	.	12.7	12.4	
23	.	.	13.0	12.8	
24	.	.	4.5	7.1	
25	.	.	11.6	12.4	
26	.	.	13.9	12.7	
27	.	.	13.9	12.6	
28	.	.	11.7	12.1	
29	.	.	11.9	12.5	
30	.	.	0.0	6.0	
31	.	.	12.1	10.4	
TT Monthly Totals					
 Daily Means					
SS Monthly Totals	.	.	330.2	319.4	
 Daily Means	.	.	10.7	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: DECEMBER		Year: 2021		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	10.5	11.3	8.5		
2	3.8	7.2	9.9		
3	12.7	11.9	6.0		
4	9.6	12.4	5.8		
5	11.0	12.3	7.8		
6	13.1	6.5	0.0		
7	13.2	11.7	5.3		
8	0.2	9.5	12.1		
9	9.3	11.0	4.2		
10	14.2	12.3	11.6		
11	9.2	8.3	9.3		
12	2.6	4.2	10.6		
13	5.1	5.6	10.4		
14	3.6	6.5	4.4		
15	9.0	11.0	7.3		
16	9.8	10.3	2.0		
17	11.5	12.1	0.0		
18	6.2	12.1	2.8		
19	9.8	2.1	12.2		
20	6.2	10.4	14.1		
21	9.9	10.7	10.3		
22	11.7	12.4	10.8		
23	11.3	11.8	12.4		
24	4.3	12.3	4.5		
25	10.8	6.3	11.1		
26	13.4	11.8	10.4		
27	11.5	11.3	11.3		
28	9.3	11.2	13.6		
29	11.1	11.7	4.9		
30	2.0	7.5	11.6		
31	6.7	6.2	5.9		
TT Monthly Totals					
 Daily Means					
SS Monthly Totals	272.6	301.9	251.1		
 Daily Means	8.8	9.7	8.1		
Types of Instruments	HELIOGRAPH CAMPBELL STOKES	HELIOGRAPH CAMPBELL STOKES	HELIOGRAPH CAMPBELL STOKES		