

June 2004

Global Solar Radiation on a Horizontal Surface
Hourly Integrated and Daily Totals
Instrument: Eppley PSP
Watt-Hours per Square Meter

Day	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Daily	
1	0	0	0	0	0	41	151 ?	419 ?	593	691	781	729	713	809	717	650	472	287	35	1	0	0	0	0	7088	
2	0	0	0	0	0	59	181	387	569	624	625	613	679	665	711	718	522	145	37 ?	6	0	0	0	0	6541	
3	0	0	0	0	0	46	115	269	541	681	859	963	975	952	703	579	493	264	97	17	0	0	0	0	7554	
4	0	0	0	0	0	4	21 ?	?	?	68 ?	79 ?	101 ?	81 ?	138	128	141	82 ?	35 ?	11 ?	4	0	0	0	0	893 ?	
5	0	0	0	0	0	6	24 ?	56	94	135	171	110	173	202	167	82	100	135	53	12	0	0	0	0	1520	
6	0	0	0	0	0	26	115	293	424	603	609	604	617	805	803	685	443	229	94	21	0	0	0	0	6370	
7	0	0	0	0	0	29	96 ?	375 ?	546	722	857	823	795	747	689	349	301	120	118	14	0	0	0	0	6582	
8	0	0	0	0	0	30	160	343	508	634	704	752	225	85 ?	?	96 ?	119	100	73	19	0	0	0	0	3848 ?	
9	0	0	0	0	0	54	155 ?	342 ?	263	273	807	980	852	412	468	609	496	328	78	3	0	0	0	0	6121	
10	0	0	0	0	0	19	53	170	362	605	749	775	903	565	409	247	87	202	76	15	0	0	0	0	5226	
11	0	0	0	0	0	34	141	312	557	707	887	550	562	434	568	467	255 ?	43 ?	18 ?	21	0	0	0	0	5555 ?	
12	0	0	0	0	0	33	84	168	290	206	517	842	719	785	570	235	?	?	26	7	0	0	0	0	4482 ?	
13	0	0	0	0	0	12	25	86 ?	352	738	651	202	498	927	821	464	340	197	154	19	0	0	0	0	5487	
14	0	0	0	0	0	8	57	61	140	205	298	458	580	729	340	166	341	135	25 ?	1	0	0	0	0	3543	
15	0	0	0	0	0	33	97	173	361	550	649	370	459	330	382	212	79	62	45	12	0	0	0	0	3815	
16	0	0	0	0	0	14	72	231	330	314	470	640	570	700	550	515	316	235	138	49	0	0	0	0	5146	
17	0	0	0	0	0	33	140	252	273	280	538	639	811	544	425	705	454	159	43	12	0	0	0	0	5307	
18	0	0	0	0	0	54	154	367 ?	479	175	166	362	239	299	357	377	480	300	114	19	0	0	0	0	3942	
19	0	0	0	0	0	21	113	220	261	539	258	410	276	184	102	137 ?	232	98	37 ?	15	0	0	0	0	2903	
20	0	0	0	0	0	23	116	385	559	784	893	991	990	953	868	718	548	351	139	8	0	0	0	0	8325	
21	0	0	0	0	0	29	99	283	563	709	868	799	747	378	548	549	416	300	139	18	0	0	0	0	6444	
22	0	0	0	0	0	39	137	351	235	605	399	797	765	597	832	476	489	243	115	17	0	0	0	0	6097	
23	0	0	0	0	0	10	58	85	101	63 ?	184	250	207	432	276	171	168	109	31	9	0	0	0	0	2153	
24	0	0	0	0	0	14	48	115	296	533	908	962	876	951	783	376	325	270	134	10	0	0	0	0	6599	
25	0	0	0	0	0	6	40	149	271	238	238	237	212	183	207 ?	75 ?	90	50	28	4	0	0	0	0	2029	
26	0	0	0	0	0	7	29	67	91	282	440	330	631	477	590	614	418	203	97	12	0	0	0	0	4289	
27	0	0	0	0	0	22	91	187	302	559	517	549	631	523	886	458	215	168	95	28	0	0	0	0	5232	
28	0	0	0	0	0	31	87	197	467	540	475	522	591	459	216	159	336	235	148	14	0	0	0	0	4476	
29	0	0	0	0	0	14	84	296	545	484	617	744	773	491	681	653	464	322	121	16	0	0	0	0	6304	
30	0	0	0	0	0	29	135	322	515	641	803	978	874	966	837	450	288	246	109	15	0	0	0	0	7209	
Avg	0	0	0	0	0	26	96	240	376	473	567	603	601	557	539	405	323	192	80	14	0	0	0	0	5036	
S D	0	0	0	0	0	15	46	112	159	224	254	271	260	268	244	217	154	92	45	9	0	0	0	0	1861	
S/A	0	0	0	0	0	0.58	0.48	0.47	0.42	0.47	0.45	0.45	0.43	0.48	0.45	0.54	0.48	0.48	0.56	0.67	0	0	0	0	0	0.37
Min	0	0	0	0	0	4	21	56	91	63	79	101	81	85	102	75	79	35	11	1	0	0	0	0	893	
Max	0	0	0	0	0	59	181	419	593	784	908	991	990	966	886	718	548	351	154	49	0	0	0	0	8325	
n	0	0	0	0	0	330	327	315	343	353	352	355	350	354	344	349	338	329	339	254	0	0	0	0	0	5034

Daylight Data Recovery: 0.0% missing; 4.4% exceed the 15% QC threshold -- 5264 total daylight measurements.

Instrument: Eppley PSP Serial Number: 25821F3 Calibration Factor: 9.020 μV/W/m² Calibration Date: 05/1998

Data & Flag	Hour Column	Day Column
<value> *	> 20% Missing	> 10% Missing
<value> ?	> 20% Fail QC	> 10% Fail QC
<blank> *	> 90% Missing	> 90% Missing
<blank> ?	> 90% Fail QC	> 90% Fail QC

Note: Daily values with a missing flag (*) are not used in monthly statistics.

June 2004

Direct Normal Solar Radiation
Hourly Integrated and Daily Totals
Instrument: Eppley NIP
Watt-Hours per Square Meter

Day	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Daily
1	0	0	0	0	0	203	439 ?	782 ?	863	667	630	559	446	655	602	667	615	410	0	0	0	0	0	0	7537
2	0	0	0	0	0	213	515	750	591	526	357	129	402	438	610	823	687	123	9	0	0	0	0	0	6174
3	0	0	0	0	0	150	112	286	629	601	747	818	881	900	607	537	547	328	78	0	0	0	0	0	7221
4	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	1	0	0	0	0	0	0	0	3
5	0	0	0	0	0	0	0	0	1	1	2	0	1	2	1	0	1	5	0	0	0	0	0	0	14
6	0	0	0	0	0	0	104	360	201	285	155	136	107	366	561	606	391	152	31	0	0	0	0	0	3455
7	0	0	0	0	0	38	189 ?	579 ?	671	728	775	638	505	481	395	51	132	19	169	0	0	0	0	0	5372
8	0	0	0	0	0	63	284	454	454	312	296	378	34	0	0	0	1	1	2	0	0	0	0	0	2279
9	0	0	0	0	0	132	265 ?	545 ?	18	3	501	795	487	3	53	406	578	552	36	0	0	0	0	0	4374
10	0	0	0	0	0	0	0	13	61	306	395	427	442	224	60	45	0	58	6	0	0	0	0	0	2036
11	0	0	0	0	0	30	209	396 ?	542	617	684	244	245	128	255	225	81	0	0	0	0	0	0	0	3655
12	0	0	0	0	0	1	1	12	16	13	111	393	272	464	295	39	0	0	0	0	0	0	0	0	1617
13	0	0	0	0	0	0	0	0	189	781	396	1	76	512	644	153	71	44	196	0	0	0	0	0	3063
14	0	0	0	0	0	0	1	0	3	2	7	57	93	388	19	4	223	0	0	0	0	0	0	0	798
15	0	0	0	0	0	2	3	5	100	141	233	3	10	4	33	10	0	0	0	0	0	0	0	0	543
16	0	0	0	0	0	0	9	113	23	67	178	243	158	332	308	281	148	330	283	0	0	0	0	0	2472
17	0	0	0	0	0	15	39	99	23	3	230	296	501	231	179	659	503	53	4	0	0	0	0	0	2834
18	0	0	0	0	0	149	256	591 ?	455	9	1	23	2	4	43	94	376	331	121	0	0	0	0	0	2454
19	0	0	0	0	0	0	2	59	51	202	13	89	11	2	0	1	46	6	0	0	0	0	0	0	482
20	0	0	0	0	0	11	52	310	494	823	896	956	914	880	885	854	848	766	475	0	0	0	0	0	9163
21	0	0	0	0	0	26	40	281	565	541	633	516	364	43	236	209	291	444	308	0	0	0	0	0	4497
22	0	0	0	0	0	93	161	391	68	375	94	407	465	266	672	218	503	359	234	0	0	0	0	0	4304
23	0	0	0	0	0	0	1	1	1	0	1	3	1	13	4	1	7	5	0	0	0	0	0	0	37
24	0	0	0	0	0	0	0	7	122	360	757	766	556	739	663	80	91	217	121	0	0	0	0	0	4479
25	0	0	0	0	0	0	0	2	8	2	1	1	1	1	0	0	0	0	0	0	0	0	0	0	16
26	0	0	0	0	0	0	0	0	1	17	49	17	133	100	236	384	281	106	103	0	0	0	0	0	1429
27	0	0	0	0	0	0	1	31	10	91	36	77	133	83	492	130	14	23	23	0	0	0	0	0	1145
28	0	0	0	0	0	0	0	19	327	209	66	46	65	40	1	0	80	200	293	0	0	0	0	0	1347
29	0	0	0	0	0	1	7	351	504	312	361	407	417	217	443	528	437	516	250	0	0	0	0	0	4751
30	0	0	0	0	0	42	282	466	577	518	556	678	525	653	577	109	37	101	149	0	0	0	0	0	5272
Avg	0	0	0	0	0	39	99	230	252	284	305	303	275	272	296	237	233	172	96	0	0	0	0	0	3094
S D	0	0	0	0	0	65	143	252	270	275	288	297	261	283	276	272	252	208	126	0	0	0	0	0	2450
S/A	0	0	0	0	0	1.66	1.44	1.09	1.07	0.97	0.94	0.98	0.95	1.04	0.93	1.14	1.08	1.21	1.31	2.71	0	0	0	0	0.79
Min	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3
Max	0	0	0	0	0	213	515	782	863	823	896	956	914	900	885	854	848	766	475	0	0	0	0	0	9163
n	0	0	0	0	0	330	341	328	359	360	360	360	360	360	360	360	360	360	360	254	0	0	0	0	5212

Daylight Data Recovery: 0.0% missing; 1.0% exceed the 15% QC threshold -- 5264 total daylight measurements.

Instrument: Eppley NIP Serial Number: 17664E6 Calibration Factor: 8.480 $\mu\text{V}/\text{W}/\text{m}^2$ Calibration Date: 05/1998

Data & Flag	Hour Column	Day Column
<value> *	> 20% Missing	> 10% Missing
<value> ?	> 20% Fail QC	> 10% Fail QC
<blank> *	> 90% Missing	> 90% Missing
<blank> ?	> 90% Fail QC	> 90% Fail QC

Note: Daily values with a missing flag (*) are not used in monthly statistics.

June 2004

Diffuse Solar Radiation (Shadow Band) on a Horizontal Surface
 Hourly Integrated and Daily Totals
 Instrument: Eppley PSP
 Watt-Hours per Square Meter

Day	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Daily
1	0	0	0	0	0	36	85 ?	73	81	204	240	217	289	208	222	189	145	139	36	1	0	0	0	0	2165
2	0	0	0	0	0	44	65	81	212	218	331	501	300	269	197	141	144	107	36 ?	5	0	0	0	0	2650
3	0	0	0	0	0	43	89	141	168	224	215	197	139	128	194	200	200	140	84	18	0	0	0	0	2180
4	0	0	0	0	0	3	17	27 ?	?	66	65	89	65 ?	149	138	154	67	30 ?	12 ?	4	0	0	0	0	885 ?
5	0	0	0	0	0	6	22	56	99	144	183	117	183	213	177	80	106	138	55	12	0	0	0	0	1590
6	0	0	0	0	0	28	93	197	330	391	485	492	523	471	335	252	232	175	92	22	0	0	0	0	4118
7	0	0	0	0	0	36	78 ?	150 ?	162	189	199	236	323	312	368	325	236	122	92	15	0	0	0	0	2845
8	0	0	0	0	0	28	103	168	254	417	446	412	210	80	43 ?	92	127	107	78	20	0	0	0	0	2585
9	0	0	0	0	0	54	114 ?	152 ?	262	290	373	244	374	434	434	321	176	126	70	3	0	0	0	0	3427
10	0	0	0	0	0	20	57	174	343	377	410	381	474	366	354	228	87	194	66	15	0	0	0	0	3544
11	0	0	0	0	0	38	88	183 ?	231	249	304	330	343	283	356	313	158	30	18	22	0	0	0	0	2947
12	0	0	0	0	0	36	88	174	298	205	436	486	463	362	331	209	?	?	27	7	0	0	0	0	3122 ?
13	0	0	0	0	0	13	25	79	229	157	324	204	441	443	271	356	315	187	121	19	0	0	0	0	3187
14	0	0	0	0	0	8	60	62	126	220	308	414	493	368	338	169	205	140	23	0	0	0	0	0	2935
15	0	0	0	0	0	35	103	182	307	450	457	389	473	343	362	213	84	66	48	12	0	0	0	0	3527
16	0	0	0	0	0	15	75	200	325	270	317	404	429	400	305	306	251	111	82	23 ?	0	0	0	0	3512
17	0	0	0	0	0	35	137	214	271	298	324	362	338	338	268	227	160	137	41	11	0	0	0	0	3160
18	0	0	0	0	0	44	91	104 ?	224	180	177	352	255	319	326	317	275	177	91	19	0	0	0	0	2951
19	0	0	0	0	0	22	119	207	242	392	258	336	280	195	104	119	183	100	30	14	0	0	0	0	2602
20	0	0	0	0	0	23	108	255	272	161	109	88	106	126	109	97	71	61	44	9	0	0	0	0	1637
21	0	0	0	0	0	32	100	197	192	302	316	318	405	360	357	391	263	128	77	19	0	0	0	0	3458
22	0	0	0	0	0	35	103	204	206	321	327	421	322	357	250	305	208	116	74	18	0	0	0	0	3267
23	0	0	0	0	0	10	61	91	96	59	197	270	219	444	287	180	171	111	31	8	0	0	0	0	2234
24	0	0	0	0	0	14	50	118	229	262	246	239	328	261	209	324	283	188	112	10	0	0	0	0	2874
25	0	0	0	0	0	7	42	159	284	253	253	250	227	194	180	74	96	49	29	4	0	0	0	0	2100
26	0	0	0	0	0	6	30	71	97	281	412	332	518	399	400	346	274	168	80	13	0	0	0	0	3426
27	0	0	0	0	0	25	96	187	309	493	503	492	512	461	470	360	220	169	95	29	0	0	0	0	4420
28	0	0	0	0	0	38	92	194	275	386	433	490	534	434	231	170	308	164	96	15	0	0	0	0	3861
29	0	0	0	0	0	16	86	168	242	268	323	373	387	301	318	285	235	136	75	17	0	0	0	0	3227
30	0	0	0	0	0	30	99	155	193	277	334	360	388	372	351	376	277	219	84	16	0	0	0	0	3529
Avg	0	0	0	0	0	26	79	147	226	267	310	327	345	313	276	237	192	129	63	13	0	0	0	0	2932
S D	0	0	0	0	0	14	30	57	75	105	110	119	130	110	103	97	74	48	30	7	0	0	0	0	773
S/A	0	0	0	0	0	0.53	0.38	0.39	0.33	0.39	0.35	0.37	0.38	0.35	0.37	0.41	0.39	0.38	0.47	0.54	0	0	0	0	0.26
Min	0	0	0	0	0	3	17	27	81	59	65	88	65	80	43	74	67	30	12	0	0	0	0	0	885
Max	0	0	0	0	0	54	137	255	343	493	503	501	534	471	470	391	315	219	121	29	0	0	0	0	4420
n	0	0	0	0	0	314	340	324	347	359	358	360	354	360	357	359	348	344	349	251	0	0	0	0	5125

Daylight Data Recovery: 0.0% missing; 2.6% exceed the 15% QC threshold -- 5264 total daylight measurements.

Instrument: Eppley PSP Serial Number: 17860F3 Calibration Factor: 7.010 μV/W/m² Calibration Date: 05/1998

Data & Flag	Hour Column	Day Column
<value> *	> 20% Missing	> 10% Missing
<value> ?	> 20% Fail QC	> 10% Fail QC
<blank> *	> 90% Missing	> 90% Missing
<blank> ?	> 90% Fail QC	> 90% Fail QC

Note: Daily values with a missing flag (*) are not used in monthly statistics.