

September 2003

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	3	35	156	324	559	726	590	493	787	514	523	221	94	26	0	0	0	0	0	5051
2	0	0	0	0	0	2	54	202	388	556	617	709	346	458	394	462	252	98	13	0	0	0	0	0	4550
3	0	0	0	0	0	0	27	88	154	238	399	256	296	392	524	363	225	113	14	0	0	0	0	0	3090
4	0	0	0	0	0	0	14	46	57 ?	72 ?	?	116 ?	225	145	300	548	374	59	23	0	0	0	0	0	1978 ?
5	0	0	0	0	0	3	38	98	460	511	644	845	810	877	721	445	262	177	18	0	0	0	0	0	5910
6	0	0	0	0	0	0	31	150	342	495	720	741	567	741	564	449	312	87	25	0	0	0	0	0	5225
7	0	0	0	0	0	0	44	226	380	478	744	658	583	590	408	345	164	45	7	0	0	0	0	0	4673
8	0	0	0	0	0	0	35	127	252	238	229	599	732	774	602	354	366	133	17	0	0	0	0	0	4458
9	0	0	0	0	0	0	21	76	154	360	568	751	811	694	691	477	340	154	20	0	0	0	0	0	5116
10	0	0	0	0	0	0	21	78	166	456	740	640	646	493	509	293	310	103	14	0	0	0	0	0	4468
11	0	0	0	0	0	0	44	211	417	603	747	839	863	818	707	544	354	154	11	0	0	0	0	0	6310
12	0	0	0	0	0	0	51	204	127	607	720	832	850	789	692	451	290	90	11	0	0	0	0	0	5714
13	0	0	0	0	0	0	18	95	215	576	570	399	536	757	532	412	253	181	11	0	0	0	0	0	4557
14	0	0	0	0	0	0	27	155	444	541	714	801	800	747	439	395	103	23	6	0	0	0	0	0	5198
15	0	0	0	0	0	0	19	37	73 ?	110	66 ?	117	87	108 ?	183	120	192	105	11	0	0	0	0	0	1228 ?
16	0	0	0	0	0	0	23	148	414	569	633	761	780	698	685	524	329	126	1	0	0	0	0	0	5692
17	0	0	0	0	0	0	38	209 ?	429 ?	620	730	805	832	761	665	494	322	121	8	0	0	0	0	0	6034
18	0	0	0	0	0	0	38	161	202	256	314	277	231	126	136	67	?	9 ?	2	0	0	0	0	0	1819 ?
19	0	0	0	0	0	0	4	40	143	163	316	354	527	568	662	490	295	100	4	0	0	0	0	0	3666
20	0	0	0	0	0	0	17	78	294	355	646	772	588	521	452	285	136	34	9	0	0	0	0	0	4186
21	0	0	0	0	0	0	42	159	331	533	668	701	506	482	430	344	142	61	3	0	0	0	0	0	4401
22	0	0	0	0	0	0	5	35	71	127	134	135	167	159	79	62	62	25	1	0	0	0	0	0	1063
23	0	0	0	0	0	0	27	185	328 ?	450 ?	489	456	651	528	638	520	240	91	6	0	0	0	0	0	4608
24	0	0	0	0	0	0	23	125 ?	347 ?	607 ?	712	791	798	743	627	464	277	86	2	0	0	0	0	0	5603 ?
25	0	0	0	0	0	0	38	169	353	543	687	770	600	549	320	295	194	39	6	0	0	0	0	0	4563
26	0	0	0	0	0	0	19	109	320	516	479	558	787	656	273	417	223	68	3	0	0	0	0	0	4429
27	0	0	0	0	0	0	29	155	255	446	407	694	535	474	337	89 ?	37 ?	13	6	0	0	0	0	0	3479 ?
28	0	0	0	0	0	0	20	91	292	510	419	183	302	195	400	132 ?	85	60	0	0	0	0	0	0	2689
29	0	0	0	0	0	0	6	34	105	217	511	563	289	301	331	355	279	68	2	0	0	0	0	0	3061
30	0	0	0	0	0	0	32	109 ?	?	550 ?	701	780	788	741	622	455	259	67	0	0	0	0	0	0	5105 ?
Avg	0	0	0	0	0	0	28	125	270	429	553	583	568	556	481	373	238	86	9	0	0	0	0	0	4264
S D	0	0	0	0	0	1	13	58	123	170	195	241	231	232	180	147	92	46	7	0	0	0	0	0	1407
S/A	0	0	0	0	0	2.95	0.46	0.46	0.46	0.4	0.35	0.41	0.41	0.42	0.37	0.39	0.39	0.54	0.8	0	0	0	0	0	0.33
Min	0	0	0	0	0	0	4	34	57	72	66	116	87	108	79	62	37	9	0	0	0	0	0	0	1063
Max	0	0	0	0	0	3	54	226	460	620	747	845	863	877	721	548	374	181	26	0	0	0	0	0	6310
n	0	0	0	0	0	5	320	341	315	335	338	355	359	356	359	347	338	351	170	0	0	0	0	0	4289

Daylight Data Recovery: 0.0% missing; 3.7% exceed the 15% QC threshold -- 4455 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.

September 2003

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	0	38	133	249	542	689	331	211	624	354	424	85	3	0	0	0	0	0	0	3684
2	0	0	0	0	0	0	144	319	477	499	286	288	52	95	56	338	150	7	0	0	0	0	0	0	2710
3	0	0	0	0	0	0	0	1	2	5	27	2	2	28	114	102	37	8	0	0	0	0	0	0	328
4	0	0	0	0	0	0	0	0	0	0	0	1	3	1	25	524	467	5	13	0	0	0	0	0	1040
5	0	0	0	0	0	0	5	6	534	493	563	740	743	892	756	546	422	595	69	0	0	0	0	0	6363
6	0	0	0	0	0	0	1	52	179	187	459	422	146	430	221	224	206	12	0	0	0	0	0	0	2538
7	0	0	0	0	0	0	75	253	162	219	621	211	31	216	113	34	20	0	0	0	0	0	0	0	1956
8	0	0	0	0	0	0	1	36	102	19	3	314	637	766	530	372	762	402	49	0	0	0	0	0	3993
9	0	0	0	0	0	0	1	0	3	204	380	576	664	595	686	543	583	438	27	0	0	0	0	0	4701
10	0	0	0	0	0	0	0	0	4	262	652	401	334	262	275	123	492	219	9	0	0	0	0	0	3034
11	0	0	0	0	0	0	168	537	737	836	903	962	987	973	945	874	787	632	36	0	0	0	0	0	9377
12	0	0	0	0	0	0	279	631	8	664	836	959	966	934	914	524	528	312	23	0	0	0	0	0	7578
13	0	0	0	0	0	0	0	1	3	703	383	41	143	464	228	306	292	551	21	0	0	0	0	0	3138
14	0	0	0	0	0	0	43	289	721	723	893	899	792	700	311	362	75	0	0	0	0	0	0	0	5810
15	0	0	0	0	0	0	1	0	0	1	0	0	0	0	2	1	130	111	0	0	0	0	0	0	247
16	0	0	0	0	0	0	0	15	616	860	654	790	682	661	886	890	798	588	1	0	0	0	0	0	7441
17	0	0	0	0	0	0	85	610 ?	838 ?	908	921	912	955	884	876	802	763	523	1	0	0	0	0	0	9078
18	0	0	0	0	0	0	30	163	62	13	15	10	2	0	1	0	0	0	0	0	0	0	0	0	295
19	0	0	0	0	0	0	0	0	2	1	22	22	142	344	741	747	631	362	1	0	0	0	0	0	3013
20	0	0	0	0	0	0	0	0	242	250	591	590	310	272	210	127	23	0	0	0	0	0	0	0	2615
21	0	0	0	0	0	0	94	232	443	672	754	656	217	95	142	211	14	6	0	0	0	0	0	0	3536
22	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	2
23	0	0	0	0	0	0	49	501	541 ?	339 ?	302	287	621	405	724	823	508	384	0	0	0	0	0	0	5485
24	0	0	0	0	0	0	2	198 ?	824 ?	932 ?	951	970	973	964	917	847	741	430	0	0	0	0	0	0	8748 ?
25	0	0	0	0	0	0	152	561	691	773	827	814	415	356	131	205	162	1	0	0	0	0	0	0	5090
26	0	0	0	0	0	0	0	7	577	718	444	398	791	690	129	616	429	206	0	0	0	0	0	0	5005
27	0	0	0	0	0	0	105	282	349	509	228	459	291	328	220	0	0	1	0	0	0	0	0	0	2771
28	0	0	0	0	0	0	58	11	344	567	147	51	149	25	317	2	1	116	0	0	0	0	0	0	1788
29	0	0	0	0	0	0	0	0	2	38	455	443	104	186	235	419	745	239	0	0	0	0	0	0	2865
30	0	0	0	0	0	0	99	395 ?	?	893 ?	899	855	944	975	957	899	778	390	0	0	0	0	0	0	8084 ?
Avg	0	0	0	0	0	0	48	175	300	428	464	447	410	439	401	396	354	218	8	0	0	0	0	0	4077
S/D	0	0	0	0	0	0	68	215	296	332	333	344	360	342	340	310	303	227	17	0	0	0	0	0	2746
S/A	0	0	0	0	0	5.48	1.43	1.23	0.99	0.78	0.72	0.77	0.88	0.78	0.85	0.78	0.86	1.04	2.03	0	0	0	0	0	0.67
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	2
Max	0	0	0	0	0	0	279	631	838	932	951	970	987	975	957	899	798	632	69	0	0	0	0	0	9377
n	0	0	0	0	0	5	320	342	328	342	360	360	360	360	360	360	360	360	170	0	0	0	0	0	4387

Daylight Data Recovery: 0.0% missing; 1.5% exceed the 15% QC threshold -- 4455 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.

September 2003

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	2	31	127	202	225	216	333	321	278	252	269	188	100	27	0	0	0	0	0	2572
2	0	0	0	0	0	1	37	117	164	239	403	475	312	394	367	274	189	102	13	0	0	0	0	0	3086
3	0	0	0	0	0	0	28	94	163	254	390	273	317	392	444	306	220	116	15	0	0	0	0	0	3013
4	0	0	0	0	0	0	15	46	49 ?	74 ?	?	110	242	156	293	249	185	60	22	0	0	0	0	0	1500 ?
5	0	0	0	0	0	?	39	101	211	207	219	249	189	167	182	127	103	49	12	0	0	0	0	0	1856
6	0	0	0	0	0	0	33	137	259	373	384	403	454	388	399	322	225	88	27	0	0	0	0	0	3494
7	0	0	0	0	0	0	36	165	309	330	261	468	568	407	316	335	162	48	8	0	0	0	0	0	3414
8	0	0	0	0	0	0	40	127	210	243	247	340	201	163	207	147	68	53	13	0	0	0	0	0	2059
9	0	0	0	0	0	0	23	82	163	221	273	292	275	243	226	184	119	70	18	0	0	0	0	0	2190
10	0	0	0	0	0	0	23	84	175	297	266	311	379	295	332	236	128	58	14	0	0	0	0	0	2599
11	0	0	0	0	0	0	29	76	98	108	105	88	78	78	72	71	58	34	9	0	0	0	0	0	904
12	0	0	0	0	0	0	20	49	129	199	112	84	83	80	80	151	94	42	11	0	0	0	0	0	1132
13	0	0	0	0	0	0	19	101	227	151	302	385	416	375	384	235	155	83	11	0	0	0	0	0	2845
14	0	0	0	0	0	0	21	76	144	104	86	107	178	221	235	209	74	24	7	0	0	0	0	0	1486
15	0	0	0	0	0	0	20	40	52	111	49	119	91	102	197	128	156	82	11	0	0	0	0	0	1158
16	0	0	0	0	0	0	26	145	141	85	172	137	234	193	103	60	45	24	2	0	0	0	0	0	1368
17	0	0	0	0	0	0	22	49	59	66	82	101	91	107	98	82	56	32	10	0	0	0	0	0	855
18	0	0	0	0	0	0	35	122	185	265	323	289	251	136	147	70	21	10 ?	2	0	0	0	0	0	1857
19	0	0	0	0	0	0	5	43	154	176	317	353	413	300	187	114	82	43	5	0	0	0	0	0	2192
20	0	0	0	0	0	0	19	84	191	174	231	329	355	323	322	227	136	35	10	0	0	0	0	0	2435
21	0	0	0	0	0	0	36	108	144	143	143	192	332	423	349	240	145	63	3	0	0	0	0	0	2322
22	0	0	0	0	0	0	5	34	77	136	145	146	180	170	84	65	61	27	1	0	0	0	0	0	1131
23	0	0	0	0	0	0	23	70	113 ?	211 ?	282	237	183	234	196	126	80	32	6	0	0	0	0	0	1794
24	0	0	0	0	0	0	22	61 ?	52	51	54	62	65	64	64	59	43	24	3	0	0	0	0	0	625
25	0	0	0	0	0	0	23	65	79	103	114	157	282	295	246	202	145	41	6	0	0	0	0	0	1759
26	0	0	0	0	0	0	22	111	118	119	185	262	194	166	191	125	93	40	4	0	0	0	0	0	1631
27	0	0	0	0	0	0	23	102	104	162	254	356	304	250	197	71 ?	35 ?	13	6	0	0	0	0	0	1875
28	0	0	0	0	0	0	16	89	139	200	315	150	187	184	178	102	83	41	0	0	0	0	0	0	1684
29	0	0	0	0	0	0	6	34	109	198	199	226	214	187	196	163	64	33	1	0	0	0	0	0	1631
30	0	0	0	0	0	0	14	37	52	62	88	136	92	80	66	52	38	18	0	0	0	0	0	0	737
Avg	0	0	0	0	0	0	24	86	142	176	214	239	250	228	220	167	109	50	9	0	0	0	0	0	1907
S D	0	0	0	0	0	1	10	36	65	82	103	120	124	111	108	87	58	28	7	0	0	0	0	0	779
S/A	0	0	0	0	0	3.9	0.4	0.42	0.46	0.46	0.48	0.5	0.5	0.48	0.49	0.52	0.53	0.56	0.79	0	0	0	0	0	0.41
Min	0	0	0	0	0	0	5	34	49	51	49	62	65	64	64	52	21	10	0	0	0	0	0	0	625
Max	0	0	0	0	0	2	40	165	309	373	403	475	568	423	444	335	225	116	27	0	0	0	0	0	3494
n	0	0	0	0	0	4	308	350	349	350	346	358	360	358	360	354	353	356	170	0	0	0	0	0	4376

Daylight Data Recovery: 0.0% missing; 1.8% exceed the 15% QC threshold -- 4455 total daylight measurements.

Instrument: Eppley PSP Serial Number: 17860F3 Calibration Factor: 7.010 $\mu\text{V}/\text{W}/\text{m}^2$ 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.