

**May 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	13	56	231	557	642	341	483	241 ?	263	405	193	118	40	1	0	0	0	0	3588
2	0	0	0	0	0	18	116	268	405	674	789	771	976	790	797	516	136	124	43	9	0	0	0	0	6431
3	0	0	0	0	0	12	27	45	147	497	451	617	678	866	566	369	301	161	37	15	0	0	0	0	4790
4	0	0	0	0	0	7	41	165	303	588	673	840	963	680	666	415	274	149	57	3	0	0	0	0	5824
5	0	0	0	0	0	2	21	42	109	152	129	310	936	758	677	285	91	33 ?	24	1	0	0	0	0	3570
6	0	0	0	0	0	6	57	103	56 ?	59	88 ?	258	381	371	270	555	314	132	28	2	0	0	0	0	2679
7	0	0	0	0	0	3	33	156	232	386	554	613	594	578	369	235	207	57 ?	3 ?	0	0	0	0	0	4020
8	0	0	0	0	0	14	68	154	337	532	629	672	926	857	786	626	448	233	63	4	0	0	0	0	6348
9	0	0	0	0	0	27	125	241	456	590	739	861	556	191	231	326	206	125	29	4	0	0	0	0	4707
10	0	0	0	0	0	12	61	134 ?	451 ?	467	550	457	521	360	237	329	253 ?	153	47	4	0	0	0	0	4035 ?
11	0	0	0	0	0	5	29	38 ?	50 ?	149	445 ?	585 ?	?	?	?	?	?	138 ?	35 ?	8	0	0	0	0	1483 ?
12	0	0	0	0	0	6	52	185	327	392 ?	?	?	472 ?	452 ?	461 ?	310 ?	164	128	46	5	0	0	0	0	3001 ?
13	0	0	0	0	0	21	87 ?	?	?	300 ?	?	373 ?	?	?	?	?	?	?	39 ?	8	0	0	0	0	828 ?
14	0	0	0	0	0	26	79	164 ?	329	402 ?	?	974	760	800	639	621	430	189	45	6	0	0	0	0	5465 ?
15	0	0	0	0	0	6	55	150	367	223	147	300	96 ?	94 ?	124	434	397	129	22	0	0	0	0	0	2543
16	0	0	0	0	0	22	117 ?	441 ?	528 ?	730	597	467	456	350	583	174	299 ?	181	75	10	0	0	0	0	5031 ?
17	0	0	0	0	0	2	18	56 ?	108	163	250	406	463	286	347	120	56	37	17	1	0	0	0	0	2330
18	0	0	0	0	0	13	37	48	81	152	166	139	116	114	118	166	161	85	55	9	0	0	0	0	1460
19	0	0	0	0	0	14	98	120	327	319	386	371	351	371	606	496	343	332	55	6	0	0	0	0	4195
20	0	0	0	0	0	33	87	240	356	572	350	583	364	173	268	346	234	306	73	3	0	0	0	0	3989
21	0	0	0	0	0	5	38	121	140	139	125	103	124	118	117	90	80	43	20	5	0	0	0	0	1266
22	0	0	0	0	0	7	24	53	85	78	65 ?	80	93	131	140	126	94	61	19	7	0	0	0	0	1064
23	0	0	0	0	0	12	36	137	200	404	623	565	415	593	322	181	119	122	44	8	0	0	0	0	3779
24	0	0	0	0	0	7	49	125	229	279	352	606	731	692	775	595	429	264	77	11	0	0	0	0	5219
25	0	0	0	0	0	16	69	159	285	369	584	564	667	838	712	344	98	70 ?	18 ?	8	0	0	0	0	4800
26	0	0	0	0	0	5	22	68	140	438	277	236	269	369	230	152	88	133	60	12	0	0	0	0	2497
27	0	0	0	0	0	18	75	119	302	353	656	590	932	732	249	333	327	257	112	12	0	0	0	0	5068
28	0	0	0	0	0	11	51	191	505	636	571	709	826	729	563	493	343	190	57	17	0	0	0	0	5892
29	0	0	0	0	0	2	21 ?	94 ?	150	132	291	390	687	674	417	345	212	70	25	7	0	0	0	0	3517
30	0	0	0	0	0	5	21 ?	75	254	471	603	560	590	755	650	560	252	148	62	26	0	0	0	0	5031
31	0	0	0	0	0	2	40 ?	146	87	271	466	380	595	388	700	406	179	41 ?	22 ?	3	0	0	0	0	3727
Avg	0	0	0	0	0	11	54	136	253	370	436	491	553	495	444	357	232	140	44	7	0	0	0	0	3812
S D	0	0	0	0	0	8	32	85	138	188	216	224	268	262	228	159	116	78	23	6	0	0	0	0	1586
S/A	0	0	0	0	0	0.75	0.59	0.62	0.55	0.51	0.5	0.46	0.48	0.53	0.51	0.44	0.5	0.56	0.52	0.8	0	0	0	0	0.42
Min	0	0	0	0	0	2	13	38	50	59	65	80	93	94	117	90	56	33	3	0	0	0	0	0	828
Max	0	0	0	0	0	33	125	441	528	730	789	974	976	866	797	626	448	332	112	26	0	0	0	0	6431
n	0	0	0	0	0	276	340	324	330	343	315	342	327	328	338	337	337	329	347	143	0	0	0	0	4763

Daylight Data Recovery: 0.0% missing; 9.4% exceed the 15% QC threshold -- 5255 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.

**May 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	0	0	42	334	428	163	199	1	14	154	116	30	0	0	0	0	0	0	1481
2	0	0	0	0	0	61	324	439	370	568	655	556	861	603	743	492	0	0	13	0	0	0	0	0	5683
3	0	0	0	0	0	0	0	0	1	244	144	337	441	721	412	277	256	189	42	0	0	0	0	0	3065
4	0	0	0	0	0	0	0	18	50	322	373	549	637	303	289	74	13	3	0	0	0	0	0	0	2632
5	0	0	0	0	0	0	0	0	0	1	1	4	629	431	408	17	0	0	0	0	0	0	0	0	1492
6	0	0	0	0	0	0	0	2	0	0	1	3	6	11	3	480	199	4	0	0	0	0	0	0	709
7	0	0	0	0	0	0	0	4	6	40	202	135	84	102	17	22	3	0	0	0	0	0	0	0	616
8	0	0	0	0	0	0	2	27	156	334	388	377	648	692	743	736	674	352	48	0	0	0	0	0	5176
9	0	0	0	0	0	7	79	191	378	368	491	533	177	3	17	33	10	37	0	0	0	0	0	0	2325
10	0	0	0	0	0	0	0	0?	0?	0	0	0	0	0	0	0	0?	0	0	0	0	0	0	0	0?
11	0	0	0	0	0	0	0	0	0	0	0?	0?	?	?	?	?	?	0?	0?	0	0	0	0	0	0?
12	0	0	0	0	0	0	0	0	0	0?	?	?	0?	0?	0?	0?	0	0	0	0	0	0	0	0	0?
13	0	0	0	0	0	0	0?	?	?	0?	?	0?	?	?	?	?	?	?	0?	0	0	0	0	0	0?
14	0	0	0	0	0	1	0	0?	0	0?	?	746	186	448	309	382	344	105	0	0	0	0	0	0	2521?
15	0	0	0	0	0	0	2	30	109	3	0	9	0	0	1	168	266	6	0	0	0	0	0	0	595
16	0	0	0	0	0	19	178?	714?	774?	774	252	32	105	18	109	1	179	72	36	0	0	0	0	0	3263?
17	0	0	0	0	0	0	0	0	0	0	1	12	9	2	5	0	0	0	0	0	0	0	0	0	29
18	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	0	0	0	0	0	0	0	4
19	0	0	0	0	0	0	3	0	39	3	3	2	3	3	75	71	43	302	2	0	0	0	0	0	548
20	0	0	0	0	0	29	103	257	133	237	12	30	3	0	3	40	14	393	113	0	0	0	0	0	1367
21	0	0	0	0	0	0	0	1	1	1	0	1	1	1	1	0	0	0	0	0	0	0	0	0	7
22	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	0	0	0	0	0	0	0	0	3
23	0	0	0	0	0	0	0	0	0	3	86	36	3	89	40	1	0	0	0	0	0	0	0	0	259
24	0	0	0	0	0	0	0	1	49	26	40	212	288	362	598	471	388	363	52	0	0	0	0	0	2851
25	0	0	0	0	0	0	2	5	6	11	52	46	172	563	364	26	0	0	0	0	0	0	0	0	1248
26	0	0	0	0	0	0	0	0	2	134	12	2	2	3	2	2	0	0	0	0	0	0	0	0	160
27	0	0	0	0	0	0	1	5	12	29	290	232	570	330	20	98	137	265	171	0	0	0	0	0	2161
28	0	0	0	0	0	0	0	29	356	484	288	388	491	346	201	243	148	50	0	0	0	0	0	0	3025
29	0	0	0	0	0	0	0	0	3	1	25	72	292	287	48	19	20	0	0	0	0	0	0	0	767
30	0	0	0	0	0	0	0	1	30	147	263	247	191	457	396	444	42	4	0	0	0	0	0	0	2222
31	0	0	0	0	0	1	1	27	1	10	70	81	298	78	502	180	19	0	0	0	0	0	0	0	1269
Avg	0	0	0	0	0	4	22	58	84	131	146	160	217	202	183	153	99	73	15	0	0	0	0	0	1467
S D	0	0	0	0	0	12	68	156	172	203	185	213	254	243	239	202	159	127	38	0	0	0	0	0	1524
S/A	0	0	0	0	0	3.21	3.02	2.67	2.05	1.55	1.27	1.33	1.17	1.2	1.31	1.32	1.6	1.76	2.45	3.92	0	0	0	0	1.04
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	0
Max	0	0	0	0	0	61	324	714	774	774	655	746	861	721	743	736	674	393	171	0	0	0	0	0	5683
n	0	0	0	0	0	276	360	339	343	347	329	343	338	342	338	338	340	353	363	143	0	0	0	0	4899

Daylight Data Recovery: 0.0% missing; 6.8% exceed the 15% QC threshold -- 5255 total daylight measurements.

Instrument: Eppley NIP    Serial Number: 17664E6    Calibration Factor: 8.480 μV/W/m<sup>2</sup>    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.

**May 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	3	13	60	223	320	296	211	305	202	264	324	137	117	42	1	0	0	0	0	2518
2	0	0	0	0	0	13	70	101	211	271	259	270	198	271	222	189	146	133	43	10	0	0	0	0	2405
3	0	0	0	0	0	13	28	45	158	327	340	324	282	242	241	196	189	109	31	16	0	0	0	0	2541
4	0	0	0	0	0	8	43	168	285	372	368	356	393	415	444	379	283	157	60	3	0	0	0	0	3734
5	0	0	0	0	0	2	22	42	118	163	136	329	359	377	348	290	97	34 ?	25	0	0	0	0	0	2342
6	0	0	0	0	0	6	61	102	49	61	74	274	401	386	288	254	211	139	29	2	0	0	0	0	2337
7	0	0	0	0	0	3	35	164	244	375	387	482	528	505	375	233	221	50	3 ?	0	0	0	0	0	3603
8	0	0	0	0	0	16	71	152	254	307	312	342	341	250	195	142	116	120	56	5	0	0	0	0	2679
9	0	0	0	0	0	21 ?	113	181	270	322	326	393	410	203	227	318	212	123	31	5	0	0	0	0	3154
10	0	0	0	0	0	13	65	128 ?	369 ?	416	480	461	477	329	228	302	215 ?	146	49	4	0	0	0	0	3681 ?
11	0	0	0	0	0	6	31	39	38	156	397 ?	494 ?	?	?	?	?	?	96 ?	31 ?	9	0	0	0	0	1298 ?
12	0	0	0	0	0	6	54	180	271	326 ?	?	?	397 ?	363 ?	340 ?	282 ?	168	121	47	6	0	0	0	0	2560 ?
13	0	0	0	0	0	20	52 ?	?	?	245 ?	?	299 ?	?	?	?	?	?	?	37 ?	9	0	0	0	0	661 ?
14	0	0	0	0	0	34 ?	84	165 ?	321	378 ?	?	279	543	289	315	292	189	140	48	6	0	0	0	0	3083 ?
15	0	0	0	0	0	7	57	144	314	233	156	306	70 ?	94 ?	132	305	209	132	22	0	0	0	0	0	2182
16	0	0	0	0	0	26	76 ?	90	116 ?	158	362	444	342	338	475	186	193	151	71	10	0	0	0	0	3039
17	0	0	0	0	0	1	19	50	115	172	262	408	480	308	363	129	60	39	18	1	0	0	0	0	2424
18	0	0	0	0	0	14	40	53	88	164	176	148	120	111	125	178	171	89	58	9	0	0	0	0	1544
19	0	0	0	0	0	17	103	128	306	337	411	395	375	398	530	438	320	211	57	6	0	0	0	0	4032
20	0	0	0	0	0	39	65	145	280	389	360	570	389	186	286	328	235	163	56	4	0	0	0	0	3494
21	0	0	0	0	0	5	40	127	147	140	132	105	130	125	124	95	84	45	20	4	0	0	0	0	1323
22	0	0	0	0	0	7	24	56	91	85	61	85	99	140	150	135	100	64	20	8	0	0	0	0	1126
23	0	0	0	0	0	12	37	143	215	424	555	550	440	531	303	192	126	128	46	8	0	0	0	0	3712
24	0	0	0	0	0	8	48	129	208	277	336	433	481	383	298	276	238	150	71	12	0	0	0	0	3346
25	0	0	0	0	0	16	72	165	295	378	547	538	504	323	401	338	105	66 ?	17 ?	8	0	0	0	0	3772
26	0	0	0	0	0	5	21	71	146	339	278	247	285	388	244	156	92	139	62	11	0	0	0	0	2485
27	0	0	0	0	0	21	79	123	305	344	423	381	411	449	246	273	255	170	85	12	0	0	0	0	3576
28	0	0	0	0	0	12	53	184	284	284	331	349	359	415	402	336	274	179	60	17	0	0	0	0	3540
29	0	0	0	0	0	1	17	81 ?	155	139	278	337	415	425	387	350	211	64	26	6	0	0	0	0	2893
30	0	0	0	0	0	5	19	79	246	374	381	341	421	338	329	243	240	154	65	30	0	0	0	0	3265
31	0	0	0	0	0	1	35	142	92	281	421	320	319	289	285	282	161	39	21	1	0	0	0	0	2691
Avg	0	0	0	0	0	12	50	115	207	276	316	349	354	313	295	257	181	116	42	7	0	0	0	0	2743
S D	0	0	0	0	0	9	26	47	91	102	127	121	127	116	103	84	66	47	20	6	0	0	0	0	870
S/A	0	0	0	0	0	0.81	0.52	0.41	0.44	0.37	0.4	0.35	0.36	0.37	0.35	0.33	0.37	0.41	0.47	0.86	0	0	0	0	0.32
Min	0	0	0	0	0	1	13	39	38	61	61	85	70	94	124	95	60	34	3	0	0	0	0	0	661
Max	0	0	0	0	0	39	113	184	369	424	555	570	543	531	530	438	320	211	85	30	0	0	0	0	4032
n	0	0	0	0	0	261	357	342	345	347	329	343	332	337	338	338	340	337	352	142	0	0	0	0	4847

Daylight Data Recovery: 0.0% missing; 7.8% exceed the 15% QC threshold -- 5255 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.