

November 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	0	10	69	238	383	513	575	583	526	403	258	94	7	0	0	0	0	0	0	3659
2	0	0	0	0	0	0	5	68	226	354 ?	506	573	585	534	417	273	102	10	0	0	0	0	0	0	3652
3	0	0	0	0	0	0	4	82	253	384	514	582	583	523	411	260	96	6	0	0	0	0	0	0	3697
4	0	0	0	0	0	0	1	65	233	385	509	562	572	460	367	220	62	5	0	0	0	0	0	0	3441
5	0	0	0	0	0	0	1	26	122	185	452	503	219	265	338	100	15	5	0	0	0	0	0	0	2231
6	0	0	0	0	0	0	2	17	72	64	88 ?	126	134	129	49	34 ?	11 ?	3	0	0	0	0	0	0	728 ?
7	0	0	0	0	0	0	1	11	27	53	86	101	78	68	72	45 ?	11 ?	4	0	0	0	0	0	0	556
8	0	0	0	0	0	0	2	48	219	381	508	579	586	528	408	258	86	5	0	0	0	0	0	0	3606
9	0	0	0	0	0	0	2	43	214	374	497	567	575	517	404	250	85	7	0	0	0	0	0	0	3534
10	0	0	0	0	0	0	0	47	191	283	466	511	501	506	405	234	71	2	0	0	0	0	0	0	3217
11	0	0	0	0	0	0	0	6	63	123	177	178	327	426	342	105	24	2	0	0	0	0	0	0	1774
12	0	0	0	0	0	0	0	15	48	85	60 ?	77	93	103	48 ?	49	15	8	0	0	0	0	0	0	601
13	0	0	0	0	0	0	0	43	213	382	508	584	584	543	356	222	75	9	0	0	0	0	0	0	3519
14	0	0	0	0	0	0	0	47	194	352	414	431	331	215	234	218	84	9	0	0	0	0	0	0	2530
15	0	0	0	0	0	0	0	9	35	48	61	94	115	111	103	59	25	5	0	0	0	0	0	0	664
16	0	0	0	0	0	0	0	9	26	51	61	102	181	75	51	?	3 ?	0	0	0	0	0	0	0	559 ?
17	0	0	0	0	0	0	0	28	166	355	277	521	401	494	389	196	38	0	0	0	0	0	0	0	2864
18	0	0	0	0	0	0	0	11	41	49	106	111	151	66	63	54	3	1	0	0	0	0	0	0	657
19	0	0	0	0	0	0	0	1	2 ?	33 ?	95	127	315	245	62	35	14	6	0	0	0	0	0	0	936 ?
20	0	0	0	0	0	0	0	22	138	336	462	530	539	483	376	223	63	0	0	0	0	0	0	0	3173
21	0	0	0	0	0	0	0	34	174	329	454	527	535	479	372	225	67	0	0	0	0	0	0	0	3195
22	0	0	0	0	0	0	0	41	149 ?	327	458	522	527	477	372	216	62	0	0	0	0	0	0	0	3151
23	0	0	0	0	0	0	0	30	175	296	423	493	480	431	350	196	53	1	0	0	0	0	0	0	2930
24	0	0	0	0	0	0	0	20	98	43	61	102	59 ?	86	99	48	24	3	0	0	0	0	0	0	642
25	0	0	0	0	0	0	0	31	94 ?	495 ?	509	531	537	485	323	180	70	2	0	0	0	0	0	0	3255 ?
26	0	0	0	0	0	0	0	16	163	249	302	317	340	325	217	118	24	0	0	0	0	0	0	0	2071
27	0	0	0	0	0	0	0	19	119	201	191	212	118	58	36 ?	20 ?	9	1	0	0	0	0	0	0	983 ?
28	0	0	0	0	0	0	0	0	23 ?	92	56	107	175	135	90	30 ?	6	1	0	0	0	0	0	0	715 ?
29	0	0	0	0	0	0	0	4	30	52	73	91	90	117	189	115	46	5	0	0	0	0	0	0	813
30	0	0	0	0	0	0	0	19	114	271	431	500	512	463	365	210	59	1	0	0	0	0	0	0	2944
Avg	0	0	0	0	0	0	1	29	129	234	311	361	361	329	257	153	47	4	0	0	0	0	0	0	2210
S D	0	0	0	0	0	0	2	22	78	145	190	209	198	188	147	89	32	3	0	0	0	0	0	0	1243
S/A	0	0	0	0	0	0	2.24	0.74	0.61	0.62	0.61	0.58	0.55	0.57	0.57	0.58	0.69	0.87	0	0	0	0	0	0	0.56
Min	0	0	0	0	0	0	0	0	2	33	56	77	59	58	36	20	3	0	0	0	0	0	0	0	556
Max	0	0	0	0	0	0	10	82	253	495	514	584	586	543	417	273	102	10	0	0	0	0	0	0	3697
n	0	0	0	0	0	0	15	326	333	330	351	358	353	356	346	324	344	70	0	0	0	0	0	0	3507

Daylight Data Recovery: 0.0% missing; 3.9% exceed the 15% QC threshold -- 3651 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.

November 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	221	554	623	667	702	772	795	731	652	443	116	0	0	0	0	0	0	6276
2	0	0	0	0	0	0	0	305	643	709 ?	753	768	824	860	837	758	546	190	0	0	0	0	0	0	7194
3	0	0	0	0	0	0	0	357	700	755	780	812	849	865	843	761	554	209	0	0	0	0	0	0	7485
4	0	0	0	0	0	0	0	354	709	768	790	702	802	440	553	474	119	40	0	0	0	0	0	0	5751
5	0	0	0	0	0	0	0	2	109	154	505	464	5	90	228	19	0	0	0	0	0	0	0	0	1578
6	0	0	0	0	0	0	0	0	1	1	0	1	1	1	0	0	0	0	0	0	0	0	0	0	5
7	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	2
8	0	0	0	0	0	0	0	274	742	888	947	969	971	958	869	808	567	213	0	0	0	0	0	0	8206
9	0	0	0	0	0	0	0	167	691	835	903	937	944	927	882	778	522	169	0	0	0	0	0	0	7755
10	0	0	0	0	0	0	0	166	362	463	808	679	649	870	851	546	306	118	0	0	0	0	0	0	5819
11	0	0	0	0	0	0	0	0	1	7	22	1	187	254	306	101	0	0	0	0	0	0	0	0	879
12	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	2
13	0	0	0	0	0	0	0	189	740	925	984	1004	989	966	731	643	419	184	0	0	0	0	0	0	7775
14	0	0	0	0	0	0	0	230	587	725	580	386	191	6	32	401	367	21	0	0	0	0	0	0	3526
15	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	3
16	0	0	0	0	0	0	0	0	0	0	0	1	14	0	0	0	0	0	0	0	0	0	0	0	15
17	0	0	0	0	0	0	0	2	434	698	335	848	516	898	866	568	124	0	0	0	0	0	0	0	5288
18	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	3
19	0	0	0	0	0	0	0	0	0	0	4	9	234	186	1	0	0	0	0	0	0	0	0	0	434
20	0	0	0	0	0	0	0	29	256	637	938	971	976	955	908	806	535	124	0	0	0	0	0	0	7135
21	0	0	0	0	0	0	0	216	756	886	941	983	981	961	906	817	552	118	0	0	0	0	0	0	8117
22	0	0	0	0	0	0	0	208	726 ?	863	888	884	923	956	913	774	538	213	0	0	0	0	0	0	7885
23	0	0	0	0	0	0	0	200	773	739	844	788	710	725	766	623	281	53	0	0	0	0	0	0	6501
24	0	0	0	0	0	0	0	27	38	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	67
25	0	0	0	0	0	0	0	10	562	887 ?	976	1003	994	939	578	280	284	17	0	0	0	0	0	0	6530
26	0	0	0	0	0	0	0	0	259	278	153	114	164	150	64	34	0	0	0	0	0	0	0	0	1217
27	0	0	0	0	0	0	0	21	222	218	5	12	0	0	0	0	0	0	0	0	0	0	0	0	479
28	0	0	0	0	0	0	0	0	0	6	0	2	20	10	0	0	0	0	0	0	0	0	0	0	39
29	0	0	0	0	0	0	0	0	0	0	0	0	0	0	32	28	89	56	0	0	0	0	0	0	205
30	0	0	0	0	0	0	0	59	338	660	912	942	951	945	895	782	506	126	0	0	0	0	0	0	7114
Avg	0	0	0	0	0	0	0	101	340	424	458	466	456	459	426	355	225	66	0	0	0	0	0	0	3776
S D	0	0	0	0	0	0	0	123	311	375	418	428	425	434	402	346	236	80	0	0	0	0	0	0	3395
S/A	0	0	0	0	0	0	3.29	1.22	0.91	0.88	0.91	0.92	0.93	0.95	0.94	0.98	1.05	1.22	0	0	0	0	0	0	0.9
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	0	357	773	925	984	1004	994	966	913	817	567	213	0	0	0	0	0	0	8206
n	0	0	0	0	0	0	15	326	353	348	360	360	360	360	360	359	360	70	0	0	0	0	0	0	3631

Daylight Data Recovery: 0.0% missing; 0.5% exceed the 15% QC threshold -- 3651 total daylight measurements.

Instrument: Eppley NIP Serial Number: 17664E6 Calibration Factor: 8.480 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.

November 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	0	12 ?	37	72	85	99	97	87	82	79	60	31	5	0	0	0	0	0	0	745
2	0	0	0	0	0	0	6 ?	25	45	50 ?	56	64	65	62	54	45	26	5	0	0	0	0	0	0	504
3	0	0	0	0	0	0	5 ?	21	35	39	47	49	53	53	48	37	22	2	0	0	0	0	0	0	412
4	0	0	0	0	0	0	1	19	33	37	41	96	67	210	121	74	39	5	0	0	0	0	0	0	743
5	0	0	0	0	0	0	2 ?	27	91	112	186	234	232	221	239	86	16	5	0	0	0	0	0	0	1451
6	0	0	0	0	0	0	2	17	77	62	69	136	142	139	50	30	12	2	0	0	0	0	0	0	739
7	0	0	0	0	0	0	0	11	28	56	92	108	83	72	76	29	12	3	0	0	0	0	0	0	571
8	0	0	0	0	0	0	?	18	36	41	50	56	56	50	52	37	19	3	0	0	0	0	0	0	418
9	0	0	0	0	0	0	?	19	47	58	64	66	67	60	50	41	24	5	0	0	0	0	0	0	501
10	0	0	0	0	0	0	0	26	102	84	77	134	137	78	62	72	40	1	0	0	0	0	0	0	814
11	0	0	0	0	0	0	0	6	66	125	174	187	226	288	221	75	25	2	0	0	0	0	0	0	1395
12	0	0	0	0	0	0	0	16	50	89	56	78	99	103	41	53	17	10	0	0	0	0	0	0	612
13	0	0	0	0	0	0	0	23	41	46	53	64	65	81	73	55	30	8	0	0	0	0	0	0	538
14	0	0	0	0	0	0	0	22	60	81	133	211	210	217	222	124	42	8	0	0	0	0	0	0	1329
15	0	0	0	0	0	0	0	9	37	51	65	101	123	119	110	62	26	5	0	0	0	0	0	0	707
16	0	0	0	0	0	0	0	8	27	55	66	110	181	74	54	18 ?	2 ?	0	0	0	0	0	0	0	596
17	0	0	0	0	0	0	0	28	58	103	110	87	125	73	60	51	21	0	0	0	0	0	0	0	716
18	0	0	0	0	0	0	0	13	44	52	113	119	161	72	68	58	5	1	0	0	0	0	0	0	706
19	0	0	0	0	0	0	0	1	8 ?	25	100	123	213	164	66	36	15	5	0	0	0	0	0	0	755
20	0	0	0	0	0	0	0	17	92	107	51	49	51	47	41	32	13	0	0	0	0	0	0	0	501
21	0	0	0	0	0	0	0	14	27	34	46	44	47	43	38	33	16	0	0	0	0	0	0	0	342
22	0	0	0	0	0	0	0	14	28	45	76	86	68	45	39	34	14	0	0	0	0	0	0	0	450
23	0	0	0	0	0	0	0	11	28	51	54	100	118	95	64	45	25	1	0	0	0	0	0	0	591
24	0	0	0	0	0	0	0	18	93	41	65	107	47	91	105	50	24	2	0	0	0	0	0	0	643
25	0	0	0	0	0	0	0	27	58	69 ?	51	49	56	68	99	107	49	2	0	0	0	0	0	0	634
26	0	0	0	0	0	0	0	16	104	152	236	257	258	254	192	110	25	0	0	0	0	0	0	0	1605
27	0	0	0	0	0	0	0	17	69	130	198	215	127	56	30 ?	18	9	0	0	0	0	0	0	0	867
28	0	0	0	0	0	0	0	0	21	94	57	112	169	134	95	22	6	1	0	0	0	0	0	0	710
29	0	0	0	0	0	0	0	3	31	54	77	95	95	123	179	111	42	3	0	0	0	0	0	0	812
30	0	0	0	0	0	0	0	14	51	57	59	63	63	55	52	36	17	1	0	0	0	0	0	0	468
Avg	0	0	0	0	0	0	1	17	52	69	87	110	116	108	89	55	22	3	0	0	0	0	0	0	729
S D	0	0	0	0	0	0	3	8	26	32	50	57	64	67	60	29	12	3	0	0	0	0	0	0	317
S/A	0	0	0	0	0	0	2.59	0.5	0.46	0.58	0.52	0.55	0.62	0.67	0.53	0.53	0.53	0.96	0	0	0	0	0	0	0.43
Min	0	0	0	0	0	0	0	0	8	25	41	44	47	43	30	18	2	0	0	0	0	0	0	0	342
Max	0	0	0	0	0	0	12	37	104	152	236	257	258	288	239	124	49	10	0	0	0	0	0	0	1605
n	0	0	0	0	0	0	9	316	348	346	360	360	358	360	356	351	356	70	0	0	0	0	0	0	3590

Daylight Data Recovery: 0.0% missing; 1.7% exceed the 15% QC threshold -- 3651 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.