

**December 2001**

**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	0	20	144	294	415	483	496	448	341	200	35	0	0	0	0	0	0	0	2876
2	0	0	0	0	0	0	0	18	140	247	452	493	354	384	354	204	53	0	0	0	0	0	0	0	2699
3	0	0	0	0	0	0	0	16	143	296	417	491	506	455	353	199	49	0	0	0	0	0	0	0	2926
4	0	0	0	0	0	0	0	16	135	282	402	469	482	435	335	194	52	0	0	0	0	0	0	0	2804
5	0	0	0	0	0	0	0	16	127	274	394	463	478	431	334	193	50	0	0	0	0	0	0	0	2759
6	0	0	0	0	0	0	0	18	88	257	400	468	454	430	337	206	39	3	0	0	0	0	0	0	2700
7	0	0	0	0	0	0	0	3	20	63	85	82	96	76	46	50	18	0	0	0	0	0	0	0	540
8	0	0	0	0	0	0	0	2	6	23	36	61	21	60	31	24	7	2	0	0	0	0	0	0	273
9	0	0	0	0	0	0	0	7	46	170	234	355	456	321	343	159	30	0	0	0	0	0	0	0	2120
10	0	0	0	0	0	0	0	3	16	119	177	126	79	58	48	20	11	2	0	0	0	0	0	0	658
11	0	0	0	0	0	0	0	9	39	125	99	126	176	189	126	84	29	3	0	0	0	0	0	0	1004
12	0	0	0	0	0	0	0	4	18	84	207	308	345	377	308	144	50	2	0	0	0	0	0	0	1845
13	0	0	0	0	0	0	0	3	24	59	234	171	92	45	55	45	13	1	0	0	0	0	0	0	741
14	0	0	0	0	0	0	0	4	27	85	119	186	264	307	205	192	58	1	0	0	0	0	0	0	1448
15	0	0	0	0	0	0	0	5	30	63	108	99	184	274	185	94	29	0	0	0	0	0	0	0	1070
16	0	0	0	0	0	0	0	6	58	167	172	243	299	374	154	158	39	3	0	0	0	0	0	0	1674
17	0	0	0	0	0	0	0	10	69	117	301	307	178	121	26	21	9	1	0	0	0	0	0	0	1158
18	0	0	0	0	0	0	0	7	12	49	122	193	363	419	345	206	58	2	0	0	0	0	0	0	1776
19	0	0	0	0	0	0	0	12	117	178	400	468	492	446	332	214	63	4	0	0	0	0	0	0	2726
20	0	0	0	0	0	0	0	9	108	270	403	479	500	459	361	216	64	3	0	0	0	0	0	0	2871
21	0	0	0	0	0	0	0	10	59	170	388	471	494	453	357	212	61	1	0	0	0	0	0	0	2677
22	0	0	0	0	0	0	0	8	139 ?	424 ?	434	466	491	437	344	205	62	3	0	0	0	0	0	0	3012 ?
23	0	0	0	0	0	0	0	3	20	45	70	108	112	78	151	92	14	0	0	0	0	0	0	0	692
24	0	0	0	0	0	0	0	10	37	71	107	366	378	465	368	224	69	1	0	0	0	0	0	0	2095
25	0	0	0	0	0	0	0	10	54	268	397	487	495	470	321	171	40	4	0	0	0	0	0	0	2717
26	0	0	0	0	0	0	0	7	128	272	347 ?	481	498	466	369	224	66	2	0	0	0	0	0	0	2859
27	0	0	0	0	0	0	0	2	45	90	91	141	125	158	235	172	62	4	0	0	0	0	0	0	1125
28	0	0	0	0	0	0	0	5	77	161	317	203	317	404	355	190	59	4	0	0	0	0	0	0	2094
29	0	0	0	0	0	0	0	5	53	266	297	175	90	81	44	60	30	2	0	0	0	0	0	0	1102
30	0	0	0	0	0	0	0	5	45	134	341	482	508	473	379	234	79	2	0	0	0	0	0	0	2682
31	0	0	0	0	0	0	0	6	42	163	364	450	513	436	205	173	64	6	0	0	0	0	0	0	2423
Avg	0	0	0	0	0	0	0	8	67	170	269	319	333	323	250	154	44	2	0	0	0	0	0	0	1940
S D	0	0	0	0	0	0	0	5	46	100	136	160	169	157	126	70	20	2	0	0	0	0	0	0	880
S/A	0	0	0	0	0	0	0	0.63	0.69	0.59	0.51	0.5	0.51	0.49	0.5	0.45	0.47	0.9	0	0	0	0	0	0	0.45
Min	0	0	0	0	0	0	0	2	6	23	36	61	21	45	26	20	7	0	0	0	0	0	0	0	273
Max	0	0	0	0	0	0	0	20	144	424	452	493	513	473	379	234	79	6	0	0	0	0	0	0	3012
n	0	0	0	0	0	0	0	184	368	362	369	372	372	372	372	372	372	43	0	0	0	0	0	0	3558

Daylight Data Recovery: 0.0% missing; 0.5% exceed the 15% QC threshold -- 3575 total daylight measurements.

Instrument: Eppley PSP    Serial Number: 25821F3    Calibration Factor: 9.020 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.

**December 2001**

**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	102	654	798	884	924	934	922	836	713	127	2	0	0	0	0	0	0	6894
2	0	0	0	0	0	0	0	80	351	353	639	513	269	681	910	806	521	103	0	0	0	0	0	0	5225
3	0	0	0	0	0	0	0	93	733	876	943	963	973	951	900	783	472	86	0	0	0	0	0	0	7774
4	0	0	0	0	0	0	0	68	662	836	900	932	939	921	862	738	462	74	0	0	0	0	0	0	7395
5	0	0	0	0	0	0	0	58	614	799	877	912	923	909	863	754	478	78	0	0	0	0	0	0	7268
6	0	0	0	0	0	0	0	29	238	648	836	858	706	731	727	589	70	6	0	0	0	0	0	0	5438
7	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
8	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
9	0	0	0	0	0	0	0	0	41	115	223	339	550	414	518	299	50	8	0	0	0	0	0	0	2558
10	0	0	0	0	0	0	0	0	6	40	0	0	0	0	0	0	0	0	0	0	0	0	0	0	47
11	0	0	0	0	0	0	0	0	0	1	1	1	2	1	0	0	0	0	0	0	0	0	0	0	7
12	0	0	0	0	0	0	0	0	0	1	32	159	358	587	504	237	54	0	0	0	0	0	0	0	1932
13	0	0	0	0	0	0	0	0	0	0	119	21	1	0	0	0	0	0	0	0	0	0	0	0	141
14	0	0	0	0	0	0	0	0	1	1	1	2	68	295	273	585	427	109	0	0	0	0	0	0	1762
15	0	0	0	0	0	0	0	0	0	0	0	0	1	195	61	3	11	0	0	0	0	0	0	0	272
16	0	0	0	0	0	0	0	0	54	64	4	31	62	383	16	116	74	1	0	0	0	0	0	0	805
17	0	0	0	0	0	0	0	0	38	39	211	224	5	3	0	0	0	0	0	0	0	0	0	0	519
18	0	0	0	0	0	0	0	0	0	0	4	17	402	754	773	737	431	102	0	0	0	0	0	0	3221
19	0	0	0	0	0	0	0	0	193	352	930	956	982	955	827	810	505	99	0	0	0	0	0	0	6610
20	0	0	0	0	0	0	0	0	588	863	952	988	993	985	936	834	547	198	0	0	0	0	0	0	7885
21	0	0	0	0	0	0	0	0	195	298	891	969	980	964	918	807	479	146	0	0	0	0	0	0	6646
22	0	0	0	0	0	0	0	0	511 ?	891 ?	935	979	988	878	788	662	389	146	0	0	0	0	0	0	7167 ?
23	0	0	0	0	0	0	0	0	0	0	1	1	1	1	8	1	0	0	0	0	0	0	0	0	12
24	0	0	0	0	0	0	0	0	0	0	0	481	646	983	940	839	573	94	0	0	0	0	0	0	4556
25	0	0	0	0	0	0	0	0	46	833	885	724	702	824	386	186	1	0	0	0	0	0	0	0	4585
26	0	0	0	0	0	0	0	0	434	578	551	889	941	985	925	828	450	42	0	0	0	0	0	0	6623
27	0	0	0	0	0	0	0	0	13	0	0	0	1	1	146	203	134	0	0	0	0	0	0	0	498
28	0	0	0	0	0	0	0	0	115	97	190	10	167	603	595	506	276	59	0	0	0	0	0	0	2618
29	0	0	0	0	0	0	0	0	31	714	191	1	0	0	0	1	25	0	0	0	0	0	0	0	963
30	0	0	0	0	0	0	0	0	0	51	612	979	994	985	939	847	581	82	0	0	0	0	0	0	6069
31	0	0	0	0	0	0	0	0	0	60	625	791	908	575	30	170	35	2	0	0	0	0	0	0	3196
Avg	0	0	0	0	0	0	0	14	178	299	403	441	468	532	474	421	231	46	0	0	0	0	0	0	3506
S D	0	0	0	0	0	0	0	31	250	358	400	431	427	403	399	351	229	57	0	0	0	0	0	0	2934
S/A	0	0	0	0	0	0	0	2.21	1.41	1.2	0.99	0.98	0.91	0.76	0.84	0.83	0.99	1.23	0	0	0	0	0	0	0.84
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	1
Max	0	0	0	0	0	0	0	102	733	891	952	988	994	985	940	847	581	198	0	0	0	0	0	0	7885
n	0	0	0	0	0	0	0	184	369	362	372	372	372	372	369	372	372	43	0	0	0	0	0	0	3559

Daylight Data Recovery: 0.0% missing; 0.4% exceed the 15% QC threshold -- 3575 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.

December 2001

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	0	11	32	45	50	50	49	44	42	36	17	0	0	0	0	0	0	0	377
2	0	0	0	0	0	0	0	9	88	115	186	234	212	84	35	25	10	0	0	0	0	0	0	0	997
3	0	0	0	0	0	0	0	8	23	31	35	45	46	42	37	25	9	0	0	0	0	0	0	0	301
4	0	0	0	0	0	0	0	12	27	32	39	40	42	37	34	30	13	0	0	0	0	0	0	0	306
5	0	0	0	0	0	0	0	11	28	36	41	44	45	40	34	27	12	0	0	0	0	0	0	0	318
6	0	0	0	0	0	0	0	16	41	59	63	73	116	109	80	74	33	3	0	0	0	0	0	0	668
7	0	0	0	0	0	0	0	3	19	60	84	80	94	75	45	50	17	0	0	0	0	0	0	0	528
8	0	0	0	0	0	0	0	2	6	22	34	59	20	59	30	23	7	1	0	0	0	0	0	0	263
9	0	0	0	0	0	0	0	6	36	138	142	193	198	141	163	93	27	0	0	0	0	0	0	0	1138
10	0	0	0	0	0	0	0	2	15	113	156	122	77	56	47	19	10	2	0	0	0	0	0	0	619
11	0	0	0	0	0	0	0	8	37	121	97	122	172	183	123	82	28	2	0	0	0	0	0	0	977
12	0	0	0	0	0	0	0	4	17	80	192	229	167	116	127	83	42	2	0	0	0	0	0	0	1060
13	0	0	0	0	0	0	0	2	24	58	177	159	89	43	53	43	12	0	0	0	0	0	0	0	660
14	0	0	0	0	0	0	0	4	27	80	114	180	234	178	118	59	19	1	0	0	0	0	0	0	1014
15	0	0	0	0	0	0	0	5	29	61	105	96	178	181	161	89	27	0	0	0	0	0	0	0	931
16	0	0	0	0	0	0	0	6	52	145	164	220	261	189	146	129	35	2	0	0	0	0	0	0	1349
17	0	0	0	0	0	0	0	10	62	105	216	202	170	116	25	20	9	1	0	0	0	0	0	0	936
18	0	0	0	0	0	0	0	7	11	48	117	181	169	91	75	41	19	2	0	0	0	0	0	0	761
19	0	0	0	0	0	0	0	10	56	80	52	49	48	44	48	35	19	4	0	0	0	0	0	0	445
20	0	0	0	0	0	0	0	8	27	41	46	49	52	46	39	31	16	3	0	0	0	0	0	0	357
21	0	0	0	0	0	0	0	10	37	75	51	49	52	47	42	32	16	1	0	0	0	0	0	0	412
22	0	0	0	0	0	0	0	7	31 ?	47 ?	44	40	46	63	67	55	25	3	0	0	0	0	0	0	430 ?
23	0	0	0	0	0	0	0	2	19	43	68	105	108	74	143	88	13	0	0	0	0	0	0	0	663
24	0	0	0	0	0	0	0	9	35	68	104	143	81	51	43	34	17	1	0	0	0	0	0	0	587
25	0	0	0	0	0	0	0	9	43	50	66	155	165	118	175	119	38	3	0	0	0	0	0	0	941
26	0	0	0	0	0	0	0	6	33	72	146	85	71	49	46	35	17	2	0	0	0	0	0	0	562
27	0	0	0	0	0	0	0	2	41	86	88	136	120	152	174	118	42	4	0	0	0	0	0	0	964
28	0	0	0	0	0	0	0	5	64	126	240	194	233	138	135	72	23	4	0	0	0	0	0	0	1235
29	0	0	0	0	0	0	0	5	46	80	225	170	87	80	43	57	25	1	0	0	0	0	0	0	818
30	0	0	0	0	0	0	0	5	43	113	97	59	58	53	47	35	19	2	0	0	0	0	0	0	531
31	0	0	0	0	0	0	0	5	39	135	112	94	93	177	191	133	59	6	0	0	0	0	0	0	1045
Avg	0	0	0	0	0	0	0	7	35	76	108	118	115	93	83	58	22	2	0	0	0	0	0	0	716
S D	0	0	0	0	0	0	0	3	17	35	61	64	68	51	54	34	12	2	0	0	0	0	0	0	308
S/A	0	0	0	0	0	0	0	0.52	0.49	0.46	0.57	0.54	0.6	0.55	0.65	0.6	0.54	0.97	0	0	0	0	0	0	0.43
Min	0	0	0	0	0	0	0	2	6	22	34	40	20	37	25	19	7	0	0	0	0	0	0	0	263
Max	0	0	0	0	0	0	0	16	88	145	240	234	261	189	191	133	59	6	0	0	0	0	0	0	1349
n	0	0	0	0	0	0	0	183	369	362	372	372	372	372	372	372	372	43	0	0	0	0	0	0	3561

Daylight Data Recovery: 0.0% missing; 0.4% exceed the 15% QC threshold -- 3575 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.