

**Savannah State College**  
**32.03 N Latitude 81.07 W Longitude 11 Meters AMSL Time Zone -5**

**October 2002**

**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	19	85	193	304	254	352	438	320	701	448	224	58	3	0	0	0	0	0	3398
2	0	0	0	0	0	0	24	126	361	472	542	770	776	721	606	445	239	60	1	0	0	0	0	0	5143
3	0	0	0	0	0	0	23	174 ?	337	522	695	727	734	525	617	433	211	63	0	0	0	0	0	0	5061
4	0	0	0	0	0	0	22	117	261	432	410	640	786	657	528	250	167	41	0	0	0	0	0	0	4312
5	0	0	0	0	0	0	23	72	275	517	656	675	702	570	549	429	255	65	0	0	0	0	0	0	4788
6	0	0	0	0	0	0	4	28	216	497	633	576	647	630	523	407	204	39	0	0	0	0	0	0	4404
7	0	0	0	0	0	0	21	133	314	491	615	715	533	436	158	227	138	28	0	0	0	0	0	0	3809
8	0	0	0	0	0	0	9	75	128	177	425	546	578	128 ?	48 ?	?	38	12	0	0	0	0	0	0	2164 ?
9	0	0	0	0	0	0	7	40	159	304	490	333	345	248	239	109	29 ?	13	0	0	0	0	0	0	2316
10	0	0	0	0	0	0	19	119	283	464	267	442	?	?	?	79	40 ?	31	0	0	0	0	0	0	1744 ?
11	0	0	0	0	0	0	4	16 ?	79	233	215	331	420	371	429	426	191	46	0	0	0	0	0	0	2759
12	0	0	0	0	0	0	16	118	318	489	622	633	590	495	378	203	132	40	0	0	0	0	0	0	4035
13	0	0	0	0	0	0	21	111	174	314	191	513	262	263	242	200	120	28	0	0	0	0	0	0	2440
14	0	0	0	0	0	0	14	57	52 ?	47 ?	80	183	104	111	52 ?	48 ?	28	7	0	0	0	0	0	0	783 ?
15	0	0	0	0	0	0	2	19	54	125	209	289	242	225	117	124	46	7	0	0	0	0	0	0	1458
16	0	0	0	0	0	0	5	37	116	178	274	388	342	363	477	284	113	41	0	0	0	0	0	0	2619
17	0	0	0	0	0	0	14	105	315	513	653	730	740	679	561	390	184	36	0	0	0	0	0	0	4923
18	0	0	0	0	0	0	11	128	329	511	646	724	733	672	549	377	177	30	0	0	0	0	0	0	4887
19	0	0	0	0	0	0	13	117	305	311	453	319	427	206	295	276	121	26	0	0	0	0	0	0	2869
20	0	0	0	0	0	0	22	96	309	507	534	659	648	603	411	273	108	23	0	0	0	0	0	0	4193
21	0	0	0	0	0	0	11	57	256	463	586	661	700	518	346	247	101	17	0	0	0	0	0	0	3965
22	0	0	0	0	0	0	12	36	78	53	67	92	183	142	273	99	37	12	0	0	0	0	0	0	1084
23	0	0	0	0	0	0	4	26	41	181	249	562	540	439	257	117	54	18	0	0	0	0	0	0	2488
24	0	0	0	0	0	0	1	45	114	213	159	101	192	144	65	132	78	6	0	0	0	0	0	0	1251
25	0	0	0	0	0	0	8	27	77	137	208	183	96 ?	101	133	112	38	7	0	0	0	0	0	0	1127
26	0	0	0	0	0	0	3	23	73	178	373	441	446	354	273	142	51	5	0	0	0	0	0	0	2362
27	0	0	0	0	0	0	9	40	153	205	297	390	573	526	359	160	44	9	0	0	0	0	0	0	2765
28	0	0	0	0	0	0	16	49	221	284	389	531	518	450	437	270	133	16	0	0	0	0	0	0	3312
29	0	0	0	0	0	0	15	74	308	334	561	654	659	492	327	198	47	6	0	0	0	0	0	0	3675
30	0	0	0	0	0	0	4	51	203	411	577	448	569	636	502	305	142	16	0	0	0	0	0	0	3865
31	0	0	0	0	0	0	7	49	158	262	240	264	323	442	401	277	115	8	0	0	0	0	0	0	2546
Avg	0	0	0	0	0	0	12	73	202	327	406	480	495	416	362	250	116	26	0	0	0	0	0	0	3114
S D	0	0	0	0	0	0	7	42	102	152	192	199	207	191	181	124	70	19	0	0	0	0	0	0	1289
S/A	0	0	0	0	0	0	0.59	0.58	0.5	0.47	0.47	0.41	0.42	0.46	0.5	0.5	0.6	0.71	4.68	0	0	0	0	0	0.41
Min	0	0	0	0	0	0	1	16	41	47	67	92	96	101	48	48	28	5	0	0	0	0	0	0	783
Max	0	0	0	0	0	0	24	174	361	522	695	770	786	721	701	448	255	65	3	0	0	0	0	0	5143
n	0	0	0	0	0	0	202	361	365	367	370	372	353	357	347	354	362	291	3	0	0	0	0	0	4105

Daylight Data Recovery: 0.0% missing; 2.7% exceed the 15% QC threshold -- 4217 total daylight measurements.

Instrument: Eppley PSP    Serial Number: 28401F3    Calibration Factor: 7.980 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.

**October 2002**

**Estimated Direct Normal Solar Radiation**  
**Hourly Integrated and Daily Totals**  
**Instrument: Calculated**  
**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	35	58	80	0	6	8	2	574	516	405	164	0	0	0	0	0	0	1859
2	0	0	0	0	0	0	34	258	648	477	479	826	829	813	779	722	512	211	0	0	0	0	0	0	6589
3	0	0	0	0	0	0	15	597	532	646	656	659	686	461	688	617	379	128	0	0	0	0	0	0	6065
4	0	0	0	0	0	0	8	147	276	402	205	393	690	618	499	201	179	20	0	0	0	0	0	0	3638
5	0	0	0	0	0	0	9	65	320	676	722	630	607	505	537	498	424	121	0	0	0	0	0	0	5115
6	0	0	0	0	0	0	0	1	246	549	611	408	487	573	557	621	420	106	0	0	0	0	0	0	4579
7	0	0	0	0	0	0	23	217	441	590	632	664	335	228	18	114	132	35	0	0	0	0	0	0	3429
8	0	0	0	0	0	0	0	0	0	0	63	167	214	2	0	0	0	1	0	0	0	0	0	0	446
9	0	0	0	0	0	0	0	0	1	33	176	4	5	0	21	0	0	0	0	0	0	0	0	0	240
10	0	0	0	0	0	0	3	89	235	417	36	170	0	0	0	0	0	0	0	0	0	0	0	0	949
11	0	0	0	0	0	0	0	0	0	0	0	4	19	60	86	45	0	0	0	0	0	0	0	0	214
12	0	0	0	0	0	0	11	36	12	0	0	2	0	4	11	2	0	0	0	0	0	0	0	0	79
13	0	0	0	0	0	0	0	12	0	8	1	1	0	0	0	0	0	0	0	0	0	0	0	0	22
14	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
15	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1
16	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
17	0	0	0	0	0	0	13	29	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	44
18	0	0	0	0	0	0	3	57	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	60
19	0	0	0	0	0	0	4	43	1	0	1	0	1	0	1	3	0	0	0	0	0	0	0	0	54
20	0	0	0	0	0	0	8	24	21	0	0	0	0	0	0	0	4	4	0	0	0	0	0	0	60
21	0	0	0	0	0	0	0	0	1	0	0	0	0	0	1	1	2	0	0	0	0	0	0	0	4
22	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	0	0	0	0	0	0	0	0	0	3
23	0	0	0	0	0	0	0	0	0	0	0	1	7	1	2	0	0	0	0	0	0	0	0	0	11
24	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	2	3	2	0	0	0	0	0	0	9
25	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
26	0	0	0	0	0	0	0	0	0	0	9	18	17	2	1	0	0	1	0	0	0	0	0	0	48
27	0	0	0	0	0	0	2	0	2	2	4	0	0	1	1	0	0	0	0	0	0	0	0	0	12
28	0	0	0	0	0	0	9	5	7	12	4	2	1	1	0	0	3	0	0	0	0	0	0	0	44
29	0	0	0	0	0	0	11	15	45	18	0	0	0	0	0	1	0	0	0	0	0	0	0	0	90
30	0	0	0	0	0	0	0	1	4	5	0	4	0	0	0	0	0	1	0	0	0	0	0	0	15
31	0	0	0	0	0	0	0	0	2	3	1	0	1	2	0	0	0	4	0	0	0	0	0	0	12
Avg	0	0	0	0	0	0	5	53	92	126	116	128	126	106	122	108	79	26	0	0	0	0	0	0	1087
S D	0	0	0	0	0	0	8	119	177	231	232	247	252	227	245	223	161	56	0	0	0	0	0	0	2003
S/A	0	0	0	0	0	0	1.5	2.27	1.92	1.83	2	1.93	2	2.15	2.01	2.07	2.03	2.18	0	0	0	0	0	0	1.84
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	0
Max	0	0	0	0	0	0	34	597	648	676	722	826	829	813	779	722	512	211	0	0	0	0	0	0	6589
n	0	0	0	0	0	0	202	372	372	372	372	372	372	372	372	372	372	292	3	0	0	0	0	0	4217

Daylight Data Recovery: 0.0% missing; 0.0% exceed the 15% QC threshold -- 4217 total daylight measurements.

Instrument: Calculated    Serial Number: Estimated    Calibration Factor: Global = Diffuse + Direct \* COS (Zenith Angle)    Calibration Date: N/A

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.

October 2002

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	20	81	167	259	270	363	444	334	320	177	85	31	4	0	0	0	0	0	2555
2	0	0	0	0	0	0	20	56	74	188	193	114	107	101	88	70	62	25	2	0	0	0	0	0	1101
3	0	0	0	0	0	0	24	66	101	133	222	205	183	172	163	114	83	42	0	0	0	0	0	0	1510
4	0	0	0	0	0	0	24	81	144	182	274	330	235	190	197	144	111	37	0	0	0	0	0	0	1951
5	0	0	0	0	0	0	25	59	126	114	140	182	219	190	200	174	116	46	0	0	0	0	0	0	1590
6	0	0	0	0	0	0	4	28	106	172	198	260	262	202	166	96	67	23	0	0	0	0	0	0	1585
7	0	0	0	0	0	0	21	81	124	143	169	200	271	267	155	169	91	23	0	0	0	0	0	0	1713
8	0	0	0	0	0	0	11	79	137	187	387	427	411	109	42	26 ?	36	12	0	0	0	0	0	0	1866
9	0	0	0	0	0	0	10	44	164	287	366	342	352	264	236	104	29	13	0	0	0	0	0	0	2211
10	0	0	0	0	0	0	20	98	183	226	250	323	50 ?	38 ?	30 ?	84	36 ?	36	0	0	0	0	0	0	1373 ?
11	0	0	0	0	0	0	4	16	83	241	230	341	411	330	364	267 ?	170 ?	48	0	0	0	0	0	0	2505
12	0	0	0	0	0	0	17	101	359 ?	?	?	313 ?	532 ?	371 ?	350	208	118 ?	42	0	0	0	0	0	0	2413 ?
13	0	0	0	0	0	0	25	110	159 ?	288	200	410 ?	275	277	250	207	123	29	0	0	0	0	0	0	2352
14	0	0	0	0	0	0	15	59	46	43	78	192	109	117	45	43	30	7	0	0	0	0	0	0	783
15	0	0	0	0	0	0	3	19	54	132	215	303	252	236	124	131	50	8	0	0	0	0	0	0	1527
16	0	0	0	0	0	0	6	40	120	187	284	400	352	377	300 ?	240 ?	116	44	0	0	0	0	0	0	2465
17	0	0	0	0	0	0	13	61 ?	299 ?	?	?	?	?	?	?	?	161 ?	39	0	0	0	0	0	0	573 ?
18	0	0	0	0	0	0	11	105	?	?	?	?	?	?	?	?	162 ?	33	0	0	0	0	0	0	312 ?
19	0	0	0	0	0	0	13	113	286 ?	256 ?	405 ?	329	340 ?	217	298	261 ?	110	27	0	0	0	0	0	0	2654 ?
20	0	0	0	0	0	0	25	102	354 ?	?	476 ?	582 ?	545 ?	448 ?	402 ?	264	108	23	0	0	0	0	0	0	3328 ?
21	0	0	0	0	0	0	13	59	167 ?	?	?	?	?	429 ?	299 ?	171 ?	88	18	0	0	0	0	0	0	1244 ?
22	0	0	0	0	0	0	14	38	82	56	71	97	193	151	258	105	39	13	0	0	0	0	0	0	1115
23	0	0	0	0	0	0	5	27	43	190	260	459 ?	485	299 ?	259	122	56	19	0	0	0	0	0	0	2225
24	0	0	0	0	0	0	1	48	119	215	165	106	201	150	65	134	78	6	0	0	0	0	0	0	1287
25	0	0	0	0	0	0	8	28	80	144	217	192	67	106	139	118	40	8	0	0	0	0	0	0	1145
26	0	0	0	0	0	0	3	24	77	184	368	428	434	336	275	145	53	6	0	0	0	0	0	0	2334
27	0	0	0	0	0	0	10	41	156	206	296	319	480 ?	371 ?	247 ?	163	46	9	0	0	0	0	0	0	2345 ?
28	0	0	0	0	0	0	19	50	167 ?	278	378	396 ?	442 ?	422 ?	404 ?	244 ?	132	16	0	0	0	0	0	0	2949 ?
29	0	0	0	0	0	0	17	71	193 ?	326	?	?	475 ?	422 ?	337	203	49	6	0	0	0	0	0	0	2100 ?
30	0	0	0	0	0	0	5	52	167 ?	356 ?	?	334 ?	425 ?	?	?	205 ?	116 ?	17	0	0	0	0	0	0	1677 ?
31	0	0	0	0	0	0	7	51	158	264	244	271	331	384 ?	406 ?	269 ?	120	8	0	0	0	0	0	0	2511
Avg	0	0	0	0	0	0	13	61	150	202	254	304	317	261	229	161	86	23	0	0	0	0	0	0	1848 ?
S D	0	0	0	0	0	0	8	28	82	76	100	116	143	118	115	68	41	14	1	0	0	0	0	0	712
S/A	0	0	0	0	0	0	0.57	0.47	0.55	0.38	0.39	0.38	0.45	0.45	0.5	0.42	0.48	0.59	4.15	0	0	0	0	0	0.39
Min	0	0	0	0	0	0	1	16	43	43	71	97	50	38	30	26	29	6	0	0	0	0	0	0	312
Max	0	0	0	0	0	0	25	113	359	356	476	582	545	448	406	269	170	48	4	0	0	0	0	0	3328
n	0	0	0	0	0	0	185	364	303	302	289	283	282	283	294	307	350	291	3	0	0	0	0	0	3538

Daylight Data Recovery: 0.0% missing; 16.1% exceed the 15% QC threshold -- 4217 total daylight measurements.

Instrument: Eppley PSP Serial Number: 17862F3 Calibration Factor: 7.530 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.