

May 2005

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	9	60	292	420	618	830	911	992	898	757	572	453	277	67	3	0	0	0	0	7161	
2	0	0	0	0	0	14	66	129	198	260	144	89	136	453	537	286	386	227	51	5	0	0	0	0	2982	
3	0	0	0	0	0	20	165	362	560	748	904	945	890	827	623	522	372	204	54	4	0	0	0	0	7199	
4	0	0	0	0	0	13	79	158	263	455	721	622	732	880	835	668	479	247	61	6	0	0	0	0	6219	
5	0	0	0	0	0	13	150	303	429	576	906	998	918	564	278	327	246	70	37	7	0	0	0	0	5821	
6	0	0	0	0	0	12	98	268	412	439	467	697	534	366	93	282	158	85 ?	44	1	0	0	0	0	3955	
7	0	0	0	0	0	20	134	309	526	629	864	751	250	399	442	409	314	122 ?	8	0	0	0	0	0	5176	
8	0	0	0	0	0	21	92 ?	397 ?	560	757	904	981	992	948	847	691	496	284	70	5	0	0	0	0	8045	
9	0	0	0	0	0	22	164	359	566	747	885	969	984	941	834	673	488	268	64	3	0	0	0	0	7968	
10	0	0	0	0	0	11	79	285	380	464	390	296	177 ?	341 ?	648	229	404	210	61	13	0	0	0	0	3989	
11	0	0	0	0	0	20	115	277 ?	532	713	840	868	961	640	415	621	352	67	49	12	0	0	0	0	6482	
12	0	0	0	0	0	27	140	324	520	694	768	776	624	572	634	418	414	238	85	2	0	0	0	0	6237	
13	0	0	0	0	0	9	59	109	130	333	472	732	953	953	573	134	88	106	15	0	0	0	0	0	4666	
14	0	0	0	0	0	27	143	274	479	686	733	874	737	229 ?	635	307	451	237	19	6	0	0	0	0	5837	
15	0	0	0	0	0	2	27 ?	77	152	692	721	469	579	517	275	266	201	190	105	8	0	0	0	0	4281	
16	0	0	0	0	0	24	182	347	534	769	819	905	931	877	767	634	348	262	74	8	0	0	0	0	7481	
17	0	0	0	0	0	22	144	359	550	732	913	581	800	672	404	392	352	124	42	5	0	0	0	0	6092	
18	0	0	0	0	0	22	154	246	518	681	706	716	889	837	662	528	430	268	85	13	0	0	0	0	6755	
19	0	0	0	0	0	11	114	280	487	564	583	523	735	479	386	378	77	31 ?	13 ?	1	479	0	0	0	0	4663
20	0	0	0	0	0	14	111	189	421	482	287	450	313	182	183	163	77 ?	38	38	14	0	0	0	0	2961	
21	0	0	0	0	0	9	133 ?	385	595	771	902	978	999	959	854	733	519	304	95	10	0	0	0	0	8247	
22	0	0	0	0	0	36	94 ?	435 ?	596	768	891	952	1009	736	346	300	172	70	34	2	0	0	0	0	6441 ?	
23	0	0	0	0	0	15	67	205	507	671	620	860	727	669	761	380	397	166	79	7	0	0	0	0	6130	
24	0	0	0	0	0	6	24	100	66	137 ?	119 ?	206	236	238	143	66	106	105	40	8	0	0	0	0	1602	
25	0	0	0	0	0	25	41	85	264	312	268	220	429	388	199	159	179 ?	77 ?	17	3	0	0	0	0	2667	
26	0	0	0	0	0	37	214 ?	384	573	745	906	964	878	920	824	697	514	320	104	6	0	0	0	0	8087	
27	0	0	0	0	0	42	166	114	439	344	428	395	760	712	379	585	328	318	100	18	0	0	0	0	5126	
28	0	0	0	0	0	8	72	100	81	242	897	872	739	902	450	650	453	337	112	7	0	0	0	0	5922	
29	0	0	0	0	0	51	149	288	528	650	808	918	775	632	548	454	320	175	56	10	0	0	0	0	6362	
30	0	0	0	0	0	49	205	369	528	523	851	635	676	703	753	591	446	278	130	4	0	0	0	0	6740	
31	0	0	0	0	0	48	183	358	582	723	842	920	932	767	715	374	357	248	112	16	0	0	0	0	7177	
Avg	0	0	0	0	0	21	117	263	432	578	690	712	719	652	542	435	335	192	62	7	0	0	0	0	5757	
S D	0	0	0	0	0	13	51	107	161	183	245	264	266	240	231	190	138	94	33	5	0	0	0	0	1721	
S/A	0	0	0	0	0	0.62	0.44	0.41	0.37	0.32	0.36	0.37	0.37	0.37	0.43	0.44	0.41	0.49	0.53	0.7	0	0	0	0	0.3	
Min	0	0	0	0	0	2	24	77	66	137	119	89	136	182	93	66	77	31	8	0	0	0	0	0	1602	
Max	0	0	0	0	0	51	214	435	596	771	913	998	1009	959	854	733	519	337	130	18	0	0	0	0	8247	
n	0	0	0	0	0	277	342	352	369	369	369	369	365	363	370	371	363	352	362	145	0	0	0	0	0	5138

Daylight Data Recovery: 0.0% missing; 2.3% exceed the 15% QC threshold -- 5258 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 2005

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	4	299	447	582	694	824	907	831	722	576	709	671	188	0	0	0	0	0	7453
2	0	0	0	0	0	2	2	2	2	6	0	0	1	53	198	96	379	433	35	0	0	0	0	0	1208
3	0	0	0	0	0	93	567	795	895	938	972	899	705	637	502	479	382	213	70	0	0	0	0	0	8148
4	0	0	0	0	0	0	22	26	24	86	302	284	441	758	884	868	797	567	137	0	0	0	0	0	5196
5	0	0	0	0	0	5	335	276	320	306	544	623	478	83	1	14	27	0	0	0	0	0	0	0	3013
6	0	0	0	0	0	24	68	141	443	187	76	361	129	130	0	53	10	22	14	0	0	0	0	0	1659
7	0	0	0	0	0	47	472	734 ?	749	612	823	272	5	104	102	196	203	59	0	0	0	0	0	0	4378
8	0	0	0	0	0	16	300 ?	799 ?	879	953	991	999	987	976	963	928	866	734	252	0	0	0	0	0	10644
9	0	0	0	0	0	69	592	777	862	927	971	995	981	975	945	898	843	658	191	0	0	0	0	0	10684
10	0	0	0	0	0	3	68	336	246	98	50	2	1	8	145	2	209	205	18	0	0	0	0	0	1391
11	0	0	0	0	0	32	309 ?	607 ?	738	802	777	714	817	521	212	581	291	0	9	0	0	0	0	0	6411
12	0	0	0	0	0	30	345	543	687	771	617	390	189	309	220	54	396	337	127	0	0	0	0	0	5017
13	0	0	0	0	0	0	0	1	0	36	73	267	715	742	306	0	0	1	0	0	0	0	0	0	2141
14	0	0	0	0	0	13	157	182	395	562	394	517	345	2	241	19	464	352	0	0	0	0	0	0	3643
15	0	0	0	0	0	0	0	1	4	501	399	167	177	116	7	26	18	261	195	0	0	0	0	0	1871
16	0	0	0	0	0	78	558	562	586	705	613	681	693	695	612	589	271	334	68	0	0	0	0	0	7043
17	0	0	0	0	0	1	315	611	696	797	811	275	521	394	173	191	238	10	0	0	0	0	0	0	5033
18	0	0	0	0	0	18	266	192	530	556	463	489	659	612	519	504	553	471	100	0	0	0	0	0	5931
19	0	0	0	0	0	0	88	350	427	358	321	237	222	206	103	97	0	0	0	0	0	0	0	0	2410
20	0	0	0	0	0	0	49	35	153	108	3	15	3	1	1	1	0	0	0	0	0	0	0	0	370
21	0	0	0	0	0	0	215 ?	738	901	944	961	968	973	957	943	858	801	687	280	0	0	0	0	0	10225
22	0	0	0	0	0	146	235 ?	811 ?	897	935	938	903	952	403	54	24	1	0	0	0	0	0	0	0	6297
23	0	0	0	0	0	2	2	47	550	657	412	673	496	386	592	168	332	37	139	0	0	0	0	0	4492
24	0	0	0	0	0	0	0	2	0	1	1	4	2	4	0	0	0	19	5	0	0	0	0	0	37
25	0	0	0	0	0	0	0	1	13	41	3	2	53	7	1	1	8	0	0	0	0	0	0	0	131
26	0	0	0	0	0	141	483 ?	696	813	835	924	856	609	786	844	880	827	743	354	0	0	0	0	0	9790
27	0	0	0	0	0	130	271	1	356	7	81	51	460	416	135	490	202	448	134	0	0	0	0	0	3182
28	0	0	0	0	0	0	8	2	0	51	612	480	467	744	287	711	641	781	374	0	0	0	0	0	5157
29	0	0	0	0	0	139	129	216	493	433	595	599	313	158	186	211	127	34	1	0	0	0	0	0	3634
30	0	0	0	0	0	183	477	632	623	415	666	368	433	463	570	515	472	375	237	0	0	0	0	0	6429
31	0	0	0	0	0	199	441	604	755	691	692	703	646	496	461	97	210	244	139	0	0	0	0	0	6378
Avg	0	0	0	0	0	44	219	355	467	481	509	472	464	418	353	327	331	281	99	0	0	0	0	0	4819
S D	0	0	0	0	0	62	200	308	320	340	343	331	328	328	324	333	296	275	113	0	0	0	0	0	3091
S/A	0	0	0	0	0	1.4	0.92	0.87	0.68	0.71	0.67	0.7	0.71	0.78	0.92	1.02	0.89	0.98	1.14	3.55	0	0	0	0	0.64
Min	0	0	0	0	0	0	0	1	0	1	0	0	1	1	0	0	0	0	0	0	0	0	0	0	37
Max	0	0	0	0	0	199	592	811	901	953	991	999	987	976	963	928	866	781	374	0	0	0	0	0	10684
n	0	0	0	0	0	277	339	349	370	372	372	372	372	372	372	372	372	372	372	145	0	0	0	0	5200

Daylight Data Recovery: 0.0% missing; 1.1% exceed the 15% QC threshold -- 5258 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.

Bluefield State College
37.27 N Latitude 81.24 W Longitude 803 Meters AMSL Time Zone -5

May 2005

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	9	63	191	184	220	274	183	185	184	190	197	118	86	41	3	0	0	0	0	2127
2	0	0	0	0	0	15	70	137	210	270	154	88	137	421	393	237	209	115	48	6	0	0	0	0	2510
3	0	0	0	0	0	15	58	74	83	104	124	151	260	276	224	225	187	145	45	4	0	0	0	0	1978
4	0	0	0	0	0	15	78	157	263	403	472	375	342	237	153	117	101	81	42	6	0	0	0	0	2841
5	0	0	0	0	0	13	101	208	252	352	470	468	510	510	302	339	245	76	39	7	0	0	0	0	3892
6	0	0	0	0	0	11	95	212	169	322	417	378	430	261	96	260	163	57	43	1	261	0	0	0	2913
7	0	0	0	0	0	19	57	88 ?	124	193	198	505	262	326	374	287	220	78	10	0	0	0	0	0	2741
8	0	0	0	0	0	21	55 ?	79 ?	78	85	88	92	98	97	90	83	74	64	33	6	0	0	0	0	1042
9	0	0	0	0	0	25	59	76	90	91	86	85	94	90	89	85	76	62	34	3	0	0	0	0	1045
10	0	0	0	0	0	13	66	167	267	407	368	315	143 ?	323	536	241	315	149	59	12	0	0	0	0	3382
11	0	0	0	0	0	21	61 ?	109 ?	123	146	196	235	227	187	254	237	205	73	50	12	0	0	0	0	2135
12	0	0	0	0	0	28	77	123	144	152	260	408	454	313	446	391	224	132	68	2	0	0	0	0	3224
13	0	0	0	0	0	10	63	116	139	319	422	489	309	320	335	144	94	113	16	0	0	0	0	0	2889
14	0	0	0	0	0	32	119	210	259	288	409	420	421	177 ?	430	309	222	127	19	6	0	0	0	0	3447
15	0	0	0	0	0	2	21	81	159	329	393	330	416	415	283	262	197	112	73	8	0	0	0	0	3083
16	0	0	0	0	0	25	69	139	192	250	288	278	285	247	266	230	208	159	63	9	0	0	0	0	2707
17	0	0	0	0	0	23	82	129	161	164	244	335	336	332	270	276	228	129	45	5	0	0	0	0	2758
18	0	0	0	0	0	23	95	186	229	290	330	284	294	301	259	209	160	117	70	14	0	0	0	0	2860
19	0	0	0	0	0	13	95	156	249	316	324	312	504	308	312	321	83	28 ?	13	1	0	0	0	0	3036
20	0	0	0	0	0	14	103	183	337	413	306	463	334	194	196	173	71	39	40	14	0	0	0	0	2881
21	0	0	0	0	0	9	78 ?	82	79	88	97	102	103	111	96	158	112	79	50	11	0	0	0	0	1253
22	0	0	0	0	0	29	63 ?	74	81	92	105	129	135	361	307	300	183	74	36	2	0	0	0	0	1972
23	0	0	0	0	0	16	71	193	180	202	280	251	272	327	286	269	229	159	59	8	0	0	0	0	2801
24	0	0	0	0	0	6	24	104	70	133	106	197	248	245	152	68	112	104	40	7	0	0	0	0	1618
25	0	0	0	0	0	26	42	88	265	296	280	232	392	401	212	168	138 ?	63	17	3	0	0	0	0	2623
26	0	0	0	0	0	27	105 ?	104	106	129	122	182	306	214	137	92	83	67	40	7	0	0	0	0	1722
27	0	0	0	0	0	33	110	121	242	360	377	369	348	351	282	262	238	171	81	18	0	0	0	0	3363
28	0	0	0	0	0	8	74	106	82	205	383	419	313	242	214	170	121	71	44	8	0	0	0	0	2458
29	0	0	0	0	0	55	126	204	241	327	300	370	489	497	397	311	259	168	60	11	0	0	0	0	3815
30	0	0	0	0	0	34	81	118	165	219	289	300	276	301	290	230	192	161	89	4	0	0	0	0	2748
31	0	0	0	0	0	36	80	122	143	214	247	268	314	315	330	313	256	165	89	16	0	0	0	0	2907
Avg	0	0	0	0	0	20	76	134	173	238	271	291	298	287	265	225	172	104	47	7	0	0	0	0	2606
S D	0	0	0	0	0	11	25	46	73	103	119	125	120	104	112	83	67	42	21	5	0	0	0	0	733
S/A	0	0	0	0	0	0.55	0.32	0.34	0.42	0.43	0.44	0.43	0.4	0.36	0.42	0.37	0.39	0.4	0.45	0.69	0	0	0	0	0.28
Min	0	0	0	0	0	2	21	74	70	85	86	85	94	90	89	68	71	28	10	0	0	0	0	0	1042
Max	0	0	0	0	0	55	126	212	337	413	472	505	510	510	536	391	315	171	89	18	0	0	0	0	3892
n	0	0	0	0	0	262	342	350	372	370	372	372	369	367	371	372	367	366	369	145	0	0	0	0	5166

Daylight Data Recovery: 0.0% missing; 1.7% exceed the 15% QC threshold -- 5258 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.