TABLE 2.—*Daily totals and weekly means of solar radiation (direct and diffuse) received on a horizontal surface*

[Gram-calories per square centimeter]

Date	Washington	Madison	Lincoln	Chicago	New York	Fresno	Fairbanks	Cambridge	Nashville	Twin Falls	La Jolla	New Orleans	Riverside	Blue Hill	Friday Harbor	Ithaca	Newport	State College
	cal.	*cal.*	*cal.*	*cal.*	*cal.*	*cal.*	*cal.*	*cal.*	*cal.*	*cal.*	*cal.*	*cal.*	*cal.*	*cal.*	*cal.*	*cal.*	*cal.*	*cal.*
Apr. 23	622	599	531	638	602	680	.....	586	518	583	.....	466	633	628	365	76	648	688
Apr. 24	612	503	251	556	549	664	.....	536	521	654	.....	338	674	599	546	635	632	663
Apr. 25	574	318	371	378	560	660	.....	559	504	579	.....	376	653	528	318	590	642	589
Apr. 26	526	162	433	239	558	673	.....	600	188	511	.....	623	360	613	370	632	638	608
Apr. 27	507	395	439	602	626	203	.....	656	604	196	.....	562	412	698	433	539	704	390
Apr. 28	377	654	523	628	461	479	.....	557	91	327	.....	248	473	583	240	524	620	551
Apr. 29	437	418	527	480	292	632	.....	459	538	492	.....	458	688	450	280	645	464	615
Mean	**522**	**556**	**439**	**503**	**521**	**570**	**278**	**565**	**430**	**477**	.....	**439**	**556**	**586**	**364**	**520**	**621**	**586**
DEPARTURES FROM WEEKLY NORMALS																		
Apr. 2	+21	−2	−13	+35	+17	−102	−28	+35	.....	−40	.....	+127	0	+54	+110	+43	−18	−38
Apr. 9	−18	+80	+63	+91	−9	−84	+36	−86	.....	+27	.....	0	−63	−51	0	+59	−90	−80
Apr. 16	+76	+154	+40	+270	+25	−83	+79	−19	.....	−97	.....	+22	−110	−4	−40	−4	+24	−85
Apr. 23	+71	+114	+6	+104	+60	+8	−88	+153	.....	−103	.....	+43	+101	+24	−116	+61	+154	+43
	+1050	**+2422**	**+672**	**+3500**	**+651**	**−1827**	**−7**	**+581**	.....	**−1491**	.....	**+1344**	**−504**	**+161**	**−322**	**+1113**	**−490**	**+1120**
ACCUMULATED DEPARTURES ON APRIL 29																		
	+2870	**−504**	**−2359**	**+2758**	**+1533**	**−140**	**−861**	**+91**	.....	**+889**	.....	**+5929**	**+3318**	**−882**	**+1862**	**+903**	**−497**	.....

POSITIONS, AREAS, AND COUNTS OF SUN SPOTS FOR APRIL 1942

[Communicated by Capt. J. F. Hellweg, U. S. N. (Ret.), Superintendent, U. S. Naval Observatory.] All measurements and spot counts were made at the Naval Observatory from plates taken at the observatories indicated. Difference in longitide is measured from the central meridian, positive toward the west. Latitude is positive toward the north. Areas are corrected for foreshortening and expressed in millionths of Sun's hemisphere. For each day, under longitude, latitude, area of spot or group, and spot count, are included assumed longitude of center of the disk, assumed latitude of center of the disk, total area of spots and groups, and total spot count.

Date	Eastern standard time	Mount Wilson group No.	Heliographic: Difference in longitude	Heliographic: Longitude	Heliographic: Latitude	Heliographic: Distance from center of disk	Area of spot or group	Spot count	Plate quality	Observatory
1942	*h m*		°	°	°	°				
Apr. 1	10 38	(*)	−43	94	+13	48	24	3	VG	U.S.Naval.
		7403	−34	103	+10	38	48	4		
		7404	+25	162	−3	26	48	4		
		7397	+61	198	+9	63	242	7		
		7397	+70	207	+9	71	97	8		
				(137)	(−7)		459	26		
2	10 39	7403	−29	95	+13	35	36	3	VG	Do.
		(*)	−23	101	+5	27	24	4		
		7403	−20	104	+10	26	48	4		
		7404	+38	162	−3	39	48	3		
		7397	+74	198	+9	76	145	4		
				(124)	(−6)		301	18		
3	10 35	(*)	−20	91	+18	31	24	4	VG	Do.
		7403	−15	96	+13	24	24	3		
		7403	−7	104	+10	18	48	10		
		7407	+9	120	+7	17	24	2		
		7404	+55	166	−2	56	12	2		
		7397	+88	199	+10	88	73	1		
				(111)	(−6)		205	22		
4	10 35	7408	−73	24	+2	74	145	4	G	Do.
		7403	0	97	+13	19	24	5		
		7403	+5	102	+9	17	24	2		
		(*)	+5	102	+5	13	12	1		
		7407	+23	120	+7	28	48	5		
				(97)	(−6)		253	17		
5	11 15	7408	−60	24	+2	61	97	3	F	Do.
		7407	+37	121	+6	40	24	2		
				(84)	(−6)		121	5		
6	10 37	7408	−48	23	+2	50	97	5	VG	Do.
		7409	−40	31	−8	40	48	4		
				(71)	(−6)		145	9		
7	10 49	7408	−35	23	+2	36	97	10	VG	Do.
		7409	−26	32	−8	26	339	19		
				(58)	(−6)		436	29		

POSITIONS, AREAS, AND COUNTS OF SUN SPOTS FOR APRIL 1942—Continued

Date	Eastern standard time	Mount Wilson group No.	Heliographic: Difference in longitude	Heliographic: Longitude	Heliographic: Latitude	Heliographic: Distance from center of disk	Area of spot or group	Spot count	Plate quality	Observatory
1942	*h m*		°	°	°	°				
Apr. 8	11 52	7408	−21	23	+1	23	48	4	F	U. S. Naval.
		7409	−12	32	−8	12	339	19		
				(44)	(−6)	.....	387	23		
11	10 6	7412	−82	283	+8	82	194	1	F	Do.
		7411	−72	293	+15	74	24	1		
		7410	+5	10	+8	16	12	1		
		7410	+8	13	+3	13	12	3		
		7408	+19	24	−1	20	24	3		
		7409	+29	34	−7	29	679	26		
				(5)	(−6)		945	35		
12	11 44	7412	−68	283	+8	70	194	1	F	Do.
		7411	−58	293	+14	62	48	1		
		7413	−48	303	+13	52	48	5		
		7409	+43	34	−7	43	776	10		
				(351)	(−6)		1,066	17		
13	10 52	7412	−55	284	+8	58	194	1	F	Do.
		7411	−46	293	+14	51	145	8		
		7413	−34	305	+12	40	145	11		
		7409	+56	35	−7	56	824	10		
				(339)	(−6)		1,308	30		
14	10 27	7412	−41	285	+8	45	194	1	G	Do.
		7411	−32	294	+14	38	145	12		
		7413	−20	306	+12	28	145	14		
		7409	+70	36	−8	70	776	9		
				(326)	(−6)		1,260	36		
15	11 35	7414	−71	241	−5	71	48	4	VG	Do.
		(*)	−50	262	−10	50	48	2		
		7412	−28	284	+8	32	194	1		
		7411	−18	294	+13	27	145	16		
		7413	−7	305	+11	19	242	22		
		7409	+85	37	−7	85	485	6		
				(312)	(−6)		1,162	51		
16	11 56	7414	−57	241	−5	57	24	5	VG	Do.
		7415	−36	262	−10	36	48	8		
		7412	−14	284	+9	21	194	1		
		7411	−5	293	+14	22	388	24		
		7413	+7	305	+12	20	388	26		
				(298)	(−6)		1,042	64		
17	10 45	7415	−23	263	−11	24	48	2	F	Do.
		7412	−1	285	+9	14	194	1		
		7411	+10	296	+13	21	436	22		
		7413	+20	306	+12	27	388	19		
				(286)	(−5)		1,066	44		

POSITIONS, AREAS, AND COUNTS OF SUN SPOTS FOR APRIL 1942—Continued

Date	Eastern standard time	Mount Wilson group No.	Heliographic: Difference in longitude	Heliographic: Longitude	Heliographic: Latitude	Heliographic: Distance from center of disk	Area of spot or group	Spot count	Plate quality	Observatory
1942	*h m*		°	°	°	°				
Apr. 18	10 8	7420	−68	205	+5	69	24	2	VG	U. S. Naval
		7419	−55	218	−8	55	48	8		
		7418	−52	221	+9	54	12	2		
		7417	−17	256	+14	27	12	4		
		7415	−10	263	−11	11	24	2		
		7416	0	273	−2	3	48	10		
		7412	+12	285	+9	19	48	4		
		7411	+19	292	+16	28	291	23		
		7411	+28	301	+12	33	533	9		
		7413	+34	307	+12	37	338	22		
				(273)	(−5)		1,378	86		
19	10 38	7421	−79	180	+14	79	194	5	VG	Mt. Wilson.
		7420	−55	204	+5	56	73	7		
		7419	−41	218	−9	41	145	17		
		7418	−38	221	+9	42	145	20		
		7417	−4	255	+14	19	48	7		
		7415	+3	262	−11	7	24	3		
		7416	+13	272	−2	13	24	4		
		7412	+26	285	+8	30	194	1		
		7411	+33	292	+16	40	242	20		
		7411	+42	301	+12	46	582	9		
		7413	+48	307	+12	51	291	16		
				(259)	(−5)		1,962	109		
20	10 49	7421	−70	176	+15	73	97	6	G	U. S. Naval.
		7421	−62	184	+18	65	194	2		
		7420	−40	206	+5	37	24	3		
		7419	−27	219	−8	27	145	19		
		7418	−24	222	+9	28	145	15		
		7417	+10	256	+14	22	48	16		
		7412	+39	285	+8	41	194	1		
		7411	+46	292	+16	50	97	10		
		7411	+55	301	+12	57	582	13		
		7413	+60	306	+12	62	242	8		
				(246)	(−5)		1,768	93		
21	10 18	7421	−56	177	+15	60	97	9	VG	Do.
		7421	−48	185	+18	52	194	4		
		7420	−23	210	+5	23	24	5		
		7419	−13	220	−8	13	436	31		
		7418	−10	223	+9	17	145	15		
		7417	+23	256	+15	31	97	18		
		7422	+42	275	−3	42	24	3		
		7412	+51	284	+8	53	194	1		
		7411	+59	292	+16	62	73	5		
		7411	+68	301	+12	70	533	10		
		7413	+72	305	+12	74	242	5		
				(233)	(−5)		2,059	106		
22	10 44	7421	−40	180	+15	45	97	10	VG	Do.
		7421	−34	186	+7	36	242	7		
		7420	−8	212	+7	14	24	7		
		7419	+1	221	−8	3	436	30		
		7418	+4	224	+10	16	242	22		
		7417	+37	257	+14	41	145	21		
		7422	+56	276	−3	56	48	8		
		7412	+64	284	+8	66	194	1		
		7411	+71	291	+16	73	73	5		
		7411	+82	302	+12	82	533	3		
				(220)	(−5)		2,034	114		
23	11 49	7421	−27	179	+15	33	145	12	F	Do.
		7421	−22	184	+17	31	291	5		
		7419	+14	220	−8	14	485	21		
		7418	+17	223	+9	22	242	18		
		7417	+50	256	+14	53	145	13		
		7412	+78	284	+8	79	194	1		
				(206)	(−5)		1,502	70		

POSITIONS, AREAS, AND COUNTS OF SUN SPOTS FOR APRIL 1942—Continued

Date	Eastern standard time	Mount Wilson group No.	Heliographic: Difference in longitude	Heliographic: Longitude	Heliographic: Latitude	Heliographic: Distance from center of disk	Area of spot or group	Spot count	Plate quality	Observatory
1942	*h m*		°	°	°	°				
Apr. 24	10 52	7421	−13	180	+15	25	145	21	VG	U. S. Naval.
		7421	−9	184	+17	23	339	5		
		7419	+28	221	−9	28	436	22		
		7418	+31	224	+9	33	339	20		
		(*)	+52	245	+11	55	12	3		
		7417	+64	257	+16	68	48	4		
				(193)	(−5)		1,319	75		
25	9 25	7423	−68	113	+10	70	48	5	VG	Mt. Wilson.
		7421	0	181	+15	20	145	12		
		7421	+4	185	+17	22	339	8		
		7419	+43	224	−9	43	436	22		
		7418	+45	226	+8	48	485	21		
		7417	+76	257	+16	78	48	1		
				(181)	(−5)		1,501	69		
26	11 8	7423	−53	114	+10	55	48	3	F	U. S. Naval.
		7427	−51	116	−6	51	48	7		
		7426	+6	173	−14	10	12	2		
		7421	+13	180	+15	24	48	6		
		7421	+18	185	+16	28	291	7		
		7425	+34	201	+3	36	12	2		
		7424	+37	204	+13	42	24	2		
		7419	+50	217	−9	50	145	9		
		7418	+58	225	+8	60	533	7		
		7419	+60	227	−8	60	194	5		
				(167)	(−5)		1,355	50		
27	10 25	7428	−40	114	+12	44	12	3	VG	Do.
		7423	−39	115	+10	42	48	8		
		7427	−38	116	−6	38	97	6		
		7426	+19	173	−13	21	73	5		
		7421	+27	181	+14	33	48	4		
		7421	+30	184	+16	36	291	8		
		7425	+47	201	+3	49	24	2		
		7424	+51	205	+13	54	24	2		
		7419	+70	224	−9	70	291	12		
		7418	+71	225	+8	73	533	7		
				(154)	(−5)		1,441	57		
28	11 25	7428	−27	113	+13	32	48	7	F	Do.
		7423	−25	115	+10	29	97	5		
		7427	−24	116	−6	24	97	3		
		7426	+32	172	−13	33	145	5		
		7421	+44	184	+16	49	291	8		
		7419	+80	220	−9	80	242	2		
		7418	+80	220	+9	80	242	1		
				(140)	(−4)		1,162	31		
29	10 53	7429	−84	43	−9	84	242	1	F	Do.
		7428	−13	114	+12	20	97	6		
		7423	−11	116	+10	18	194	13		
		7427	−10	117	−6	10	73	2		
		7426	+46	173	−14	47	145	9		
		7421	+58	185	+16	60	291	4		
				(127)	(−4)		1,042	35		
30	10 30	7429	−71	43	−9	71	242	1	F	Do.
		7428	0	114	+13	17	48	4		
		7423	+2	116	+10	14	145	11		
		7427	+3	117	−6	3	48	2		
		7426	+60	174	−13	13	48	3		
		7421	+71	185	+16	73	291	3		
				(114)	(−4)		822	24		

Mean daily area for 28 days=1,054.

(*)Not numbered.
VG=very good; G=good; F=fair; P=poor.