TABLE 3.—*Solar radiation measurements, and determinations of atmospheric turbidity factor, β. Washington, May, 1932*

Date and solar hour angle	Solar altitude, *h*.	Air mass, *m*.	I_m	I_y	I_n	β	Blueness of sky	Atmospheric dust particles per cubic centimeter	Polarization (per cent) and clouds
May 3									
	° ′		gr. cal.	gr. cal.	gr. cal.				
5:17 a	18-05	3.19	0.978	*0.741*	0.612	0.067		483	
5:11 a	19-15	3.02	1.000	.763	*.623*	.069			
4:50 a	22-43	2.59	1.101	*.834*	.677	.067			
4:46 a	23-29	2.49	1.120	*.847*	.691	.075			
4:19 a	28-45	2.08	1.217	.879	*.705*	.065			
4:15 a	29-31	2.03	1.225	*.883*	*.708*	.065	5		58.6
3:31 a	38-44	1.60	1.282	*.927*	.738	.087			
3:25 a	39-53	1.56	1.291	.933	*.745*	.075			
1:30 a	59-12	1.16	1.432	*.990*	.778	.078			
1:26 a	59-57	1.15	1.438	.990	*.778*	.075			
0:34 a	65-40	1.09	1.449	.997	*.772*	.075			
0:30 a	65-54	1.09	1.432	*.975*	.770	.078			
May 4									
3:34 a	38-18	1.62	1.180	------	.703	.120		840	
3:29 a	39-10	1.58	1.201	.887	*.705*	.120			
May 16									
5:20 a	19-36	2.96	.762	.612	*.510*	.145		966	
5:16 a	20-22	2.84	.791	------	.512	.135			
May 18									
0:56 p	67-07	1.09	1.434	------	.818	.110		483	
1:02 p	66-21	1.09	1.432	1.047	*.812*	.100			
2:14 p	55-14	1.22	1.386	*.982*	.774	.090			
2:18 p	54-20	1.24	1.354	.975	*.770*	.110			
3:18 p	43-10	1.46	1.271	.886	*.718*	.090			
3:24 p	42-02	1.49	1.258	*.886*	.700	.085			
4:16 p	32-08	1.88	1.157	*.844*	.685	.090			
4:20 p	31-16	1.92	1.131	.842	*.683*	.100	4		54.0
May 20									
2:15 a	55-49	1.21	1.251	*.890*	.716	.130		567	
2:10 a	56-38	1.20	1.250	.890	*.716*	.120			
0:34 a	70-20	1.06	1.340	.878	*.702*	.090			
0:28 a	70-42	1.06	1.328	*.876*	.700	.095			
2:04 p	57-50	1.18	1.310	*.926*	.730	.120			
2:08 p	57-18	1.19	1.296	.928	*.730*	.125			
May 23									
3:44 a	38-49	1.59	1.265	*.909*	.718	.080	4	309	58.0
3:38 a	40-00	1.56	1.267	.908	*.722*	.085			
3:26 a	42-26	1.48	1.280	.909	*.724*	.090			
3:21 a	43-24	1.45	1.301	*.916*	.726	.080			
2:54 a	48-30	1.33	1.329	*.937*	.747	.095			Ci.
2:48 a	49-46	1.30	1.336	.960	*.748*	.095			
2:32 a	52-34	1.26	1.364	*.965*	.747	.080			Ci.
2:14 a	56-02	1.20	1.388	*.965*	.758	.075			
0:36 a	70-11	1.06	1.433	*.985*	.742	.058			
0:25 a	70-58	1.06	1.388	.992	------	------			
0:09 a	71-38	1.05	1.434	------	.753	.068			
0:44 p	70-19	1.06	1.422	------	.769	.087			
0:52 p	69-22	1.07	1.433	.983	------	------			
1:08 p	67-22	1.09	1.413	------	.729	.040			
4:24 p	31-47	1.90	1.183	------	.685	.075			
4:30 p	30-50	1.94	1.146	.859	------				
May 24									
5:47 a	15-20	3.75	.694	------	.457	.105		588	
5:37 a	17-13	3.35	.720	.568	*.477*	.120			
5:30 a	18-33	3.12	.745	*.579*	.486	.120			
5:02 a	23-54	2:46	.854	*.650*	.535	.130			
4:54 a	25-33	2.31	.896	.678	*.556*	.125			
4:37 a	28-44	2.08	.971	------	.579	.110	5		46.9
3:43 a	39-47	1.56	1.105	------	.635	.125			
3:38 a	40-51	1.52	1.126	.807	------	------			
0:23 a	71-17	1.05	1.273	------	.745	.180			
May 25									
5:00 a	24-30	2.41	.863	------	.560	.145		890	
4:44 a	27-24	2.17	.930	.699	------	------	4		55.6
3:54 a	37-08	1.64	1.054	------	.624	.145			
3:49 a	38-11	1.62	1.060	.777	*.625*	.145			
3:32 a	41-24	1.51	1.080	.791	.633	.145			
3:29 a	42-13	1.49	1.092	------	.634	.145			
0:40 a	70-08	1.06	1.193	------	.646	.145			
0:36 a	70-34	1.06	1.202	.827	------	------			
May 26									
4:12 a	33-47	1.78	1.085	*.813*	.663	.135	4	292	55.9
4:08 a	34-29	1.76	1.090	.840	*.664*	.135			
3:08 a	46-11	1.39	1.222	.869	*.684*	.110			
3:04 a	46-57	1.37	1.224	*.872*	.685	.110			
3:12 p	45-32	1.38	1.226	------	.678	.105			
3:14 p	44-57	1.40	1.221	.860	------	------			
4:16 p	33-02	1.83	1.129	.810	*.638*	.085			
4:20 p	32-21	1.86	1.132	*.806*	.639	.080			
May 27									
4:22 a	31-53	1.88	1.093	.804	*.635*	.100	4	309	55.0
4:19 a	32-33	1.85	1.112	*.810*	.639	.090			
3:42 a	39-38	1.56	1.166	.838	*.661*	.105			

POSITIONS AND AREAS OF SUN SPOTS

[Communicated by Capt. J. F. Hellweg, Superintendent United States Naval Observatory. Data furnished by Naval Observatory, in cooperation with Harvard, Yerkes, Perkins, and Mount Wilson Observatories. The differences of longitude are measured from central meridian, positive west. The north latitudes are plus. Areas are corrected for foreshortening and are expressed in millionths of sun's visible hemisphere. The total area, including spots and groups, is given for each day in the last column]

Date	Eastern standard civil time		Heliographic			Area		Total area for each day
			Diff. long.	Longitude	Latitude	Spot	Group	
1932	*H*	*m*	°	°	°			
May 1 (Yerkes Observatory)			No spots					
May 2 (Naval Observatory)	10	14	No spots					
May 3 (Naval Observatory)	10	9	No spots					
May 4 (Naval Observatory)	11	14	No spots					
May 5 (Naval Observatory)	10	57	No spots					
May 6 (Naval Observatory)	11	58	No spots					
May 7 (Naval Observatory)	10	48	−83.0	260.5	−7.0	185		185
May 8 (Perkins Observatory)	16	56	−69.0	257.8	−7.5		45	45
May 9 (Mount Wilson)	13	25	−54.0	261.5	−8.0	127		127
May 10 (Yerkes Observatory)	10	43	−41.0	262.8	−7.5	148		148
May 11 (Mount Wilson)	14	0	−26.0	262.8	−8.0	106		106
May 12 (Yerkes Observatory)	12	29	−13.5	262.9	−7.6	116		116
May 13 (Naval Observatory)	13	27	0.0	262.7	−8.0	108		108
May 14 (Naval Observatory)	11	38	−60.0	190.4	+5.0		31	
			−36.0	214.4	+13.0		46	
			+13.0	263.4	−8.0	93		170
May 15 (Naval Observatory)	11	28	−46.0	191.3	+6.0		123	
			+26.0	263.3	−8.0	123		246
May 16 (Naval Observatory)	13	19	−73.0	150.0	+12.0		401	
			−29.0	194.0	+7.0		93	
			+41.0	264.0	−8.0	123		617
May 17 (Perkins Observatory)	10	55	−58.5	152.6	+12.0		124	
			−11.0	200.1	+10.0		98	
			+53.0	264.1	−4.0	45		267
May 18 (Naval Observatory)	10	18	−47.0	151.3	+11.0		401	
			−7.0	191.3	+8.0		31	
			0.0	198.3	+6.0	123		
			+67.0	265.3	−8.0		45	570
May 19 (Naval Observatory)	12	18	−33.0	150.9	+11.0		370	
			+9.0	192.9	+8.0		25	
			+15.0	198.9	+6.0	123		518
May 20 (Naval Observatory)	10	41	−76.0	95.6	+4.0	401		
			−21.0	150.6	+10.0		370	
			+28.0	199.6	+6.0	123		894
May 21 (Naval Observatory)	10	23	−64.0	94.5	+4.0	401		
			−8.0	150.5	+10.0		370	
			+41.0	199.5	+6.0	123		894
May 22 (Naval Observatory)	11	51	−50.0	94.5	+4.0	309		
			+7.0	151.5	+10.0		309	
			+56.0	200.5	+6.0	93		711
May 23 (Naval Observatory)	11	44	−37.0	94.9	+4.0	309		
			+19.0	150.9	+10.0		247	
			+68.0	199.9	+6.0	62		618
May 24 (Naval Observatory)	10	50	−24.0	94.6	+4.0	278		
			+31.0	149.6	+10.0		216	494
May 25 (Naval Observatory)	10	57	−10.0	95.3	+4.0	247		
			+46.0	151.3	+10.0		154	401
May 26 (Naval Observatory)	11	4	+3.0	95.0	+4.0	247		
			+60.0	152.0	+10.0		93	340
May 27 (Naval Observatory)	10	8	+17.0	96.3	+4.0	216		
			+72.0	151.3	+10.0		77	293
May 28 (Naval Observatory)	10	29	+31.0	96.8	+4.0	216		216
May 29 (Naval Observatory)	11	47	+45.0	96.9	+4.0	216		216
May 30 (Naval Observatory)	10	32	+58.0	97.3	+4.0	216		216
May 31 (Naval Observatory)	10	29	+70.0	96.1	+4.0	185		185
Mean daily area for May								281

PROVISIONAL SUN-SPOT RELATIVE NUMBERS FOR MAY, 1932

(Dependent alone on observations at Zurich and its station at Arosa)

[Data furnished through the courtesy of Prof. W. Brunner, University of Zurich, Switzerland]

May, 1932	Relative numbers	May, 1932	Relative numbers	May, 1932	Relative numbers
1	8	11	9	21	30
2	0	12	9	22	*a* 31
3	0	13	8	23	31
4	0	14	Eac 25	24	34
5	0	15	36	25	23
6	0	16	d 35	26	a 22
7	d 8	17	41	27	18
8	----------	18	40	28	17
9	14	19	a 27	29	----------
10	8	20	d 38	30	10
				31	8

Mean: 29 days=18.0

a=Passage of an average-sized group through the central meridian.
b=Passage of a large group or spot through the central meridian.
c=New formation of a center of activity: E, on the eastern part of the sun's disk; W, on the western part; M, in the central zone.
d=Entrance of a large or average-sized center of activity on the east limb.