

POSITIONS AND AREAS OF SUN SPOTS—Continued

Date	East-earn stand-ard time		Heliographic			Area		Total area for each day	Observatory
			Diff. in longi-tude	Longi-tude	Lat-i-tude	Spot	Group		
1937 May 18	h m	°	°	°				U. S. Naval.	
	11 4	-37.0	179.9	+19.0	145				
		-28.0	188.9	-15.0		1,164			
		-20.0	196.9	+23.0	12				
		-11.0	205.9	-19.0		97			
		+30.5	247.4	-30.5	24				
		+41.0	257.9	+20.0		430			
		+54.0	270.9	-17.0		291	3,138		
May 19	10 39	-87.0	116.9	-19.5	242			Do.	
		-65.0	138.9	+10.5		242			
		-35.0	168.9	+18.5		388			
		-25.0	178.9	+28.5	194				
		-24.0	179.9	+19.0	145				
		-14.0	189.9	-16.0		1,164			
		-7.0	196.9	+23.0	24				
		+2.5	206.4	-19.0		97			
		+43.0	246.9	-30.5	24				
		+53.0	256.9	+20.0		339			
		+65.0	268.9	-17.0		388	3,247		
May 20	11 10	-73.0	117.3	-19.5	201			Do.	
		-51.0	139.3	+11.0		242			
		-21.0	169.3	+19.5		388			
		-11.0	179.3	+28.5	104				
		-10.0	180.3	+19.0	145				
		-1.0	189.3	-16.0		1,400			
		+7.0	197.3	+23.0	24				
		+13.0	203.3	-19.0		97			
		+67.0	257.3	+20.0		339			
		+80.0	270.3	-17.0		388	3,514		
May 21	11 7	-76.0	101.1	+12.0		970		Do.	
		-60.0	117.1	-20.0	430				
		-38.0	139.1	+11.0		242			
		-10.0	167.1	+19.5		242			
		+0.5	177.6	+28.5		194			
		+1.0	178.1	+19.0	145				
		+12.0	189.1	-16.5		1,745			
		+19.0	196.1	+21.0		97			
		+28.0	205.1	-19.0		48			
		+81.0	258.1	+20.0		291	4,410		
		-64.0	99.6	+12.0		873			
		-46.0	117.6	-20.0	533				
		-39.0	124.6	+10.5		97			
		-27.0	136.6	+10.5		73			
		-21.0	142.6	+10.9	194				
		+6.0	169.6	+19.5		218			
		+14.0	177.6	+27.0		242			
		+16.5	180.1	+19.0	145				
		+25.0	188.6	-16.0		1,309			
		+32.0	195.6	+21.0		339			
		+41.0	204.6	-13.0		48	4,071		
May 23	9 59	-53.0	98.3	+13.0		921		Mt. Wilson.	
		-35.0	116.3	-20.0	582				
		-27.0	124.3	+12.0		194			
		-14.0	137.3	+12.0		48			
		-10.0	141.3	+10.0		145			
		+19.5	170.8	+20.0		145			
		+27.0	178.3	+28.0		194			
		+29.5	180.8	+19.5	121				
		+40.0	191.3	-17.0		1,212			
		+48.0	199.3	+23.0		970			
May 24	11 9	-57.0	208.3	-19.0		97	4,629	U. S. Naval.	
		-62.0	75.4	+6.0	12				
		-35.0	102.4	+12.0		776			
		-20.0	117.4	-20.0	485				
		-10.0	127.4	+12.0		48			
		+5.5	142.9	+9.5	121				
		+30.0	167.4	+19.5		73			
		+40.0	177.4	+27.0		97			
		+41.5	178.9	+19.0	73				
		+51.0	188.4	-16.0		1,115			
		+59.5	196.9	+21.5		1,018	3,818		
May 25	11 9	-50.0	74.2	+6.0		48		Do.	
		-21.5	102.7	+12.5		776			
		-7.5	116.7	-20.0	485				
		+19.0	143.2	+10.0		97			
		+45.0	169.2	+19.0		48			
		+51.0	175.2	+27.0		97			
		+56.0	180.2	+18.5		97			
		+59.0	183.2	+29.0		24			

POSITIONS AND AREAS OF SUN SPOTS—Continued

Date	East-earn stand-ard time		Heliographic			Area		Total area for each day	Observatory
			Diff. in longi-tude	Longi-tude	Lat-i-tude	Spot	Group		
1937 May 25	h m	°	°	°				U. S. Naval.	
	11 9	+65.0	189.2	-17.0			1,115		
		+73.0	197.2	+21.0			970	3,757	
May 26	12 0	-37.0	73.5	+5.0			48	Do.	
		-8.0	102.5	+12.0			679		
		+8.0	118.5	-20.0			485		
		+32.0	142.6	+9.5			73		
		+64.0	176.6	+27.0			97		
		+69.0	179.5	+18.5			73		
		+70.0	180.6	-16.0			97		
		+83.0	193.5	-14.0			194	1,746	
May 27	10 53	-25.0	72.9	+5.0				Do.	
		+6.0	103.9	+12.0			679		
		+15.5	113.4	-16.0			24		
		+20.0	117.9	-20.0			485		
		+45.0	142.9	+9.5			48	1333	
May 28	11 0	-11.0	73.6	+5.0			73	Do.	
		+10.0	103.6	+12.0			679		
		+33.0	117.6	-20.0			436		
		+37.0	121.6	+13.0			48		
		+59.0	143.6	+9.0			48	1284	
May 29	11 1	-85.0	346.3	+11.0			388	Do.	
		-4.0	74.3	+5.0			73		
		+32.0	103.3	+12.0			679		
		+47.0	118.3	-20.0			436		
		+51.0	122.3	+12.5			97		
		+70.0	141.3	+9.0			24	1697	
May 30	8 41	-73.0	346.4	+12.0			679	Mt. Wilson.	
		-4.0	55.4	+16.0			145		
		+13.0	72.4	+5.0			48		
		+44.0	103.4	+11.0			727		
		+61.0	120.4	-21.0			436		
May 31	8 42	-65.0	124.4	+11.5			194	Do.	
		-57.0	349.1	+12.0			582		
		+11.0	57.1	+16.0			242		
		+60.0	106.1	+10.5			824		
		+71.0	117.1	+11.0			97		
		+71.0	117.1	-22.0			436	2181	

Mean daily area for 31 days, May, 2089.

PROVISIONAL SUN-SPOT RELATIVE NUMBERS FOR MAY 1937

[Dependent alone on observations at Zurich and its station at Arosa]
[Furnished through the courtesy of Prof. W. Brunner, Eidgen. Sternwarte, Zurich, Switzerland]

May 1937	Relative numbers	May 1937	Relative numbers	May 1937	Relative numbers
1	89	11	a 99	21	aad 154
2	91	12	91	22	Eac 194
3	77	13		23	202
4	ad 56	14	Ecd 111	24	a 213
5	59	15	ad 140	25	171
6	46	16	Wc 183	26	a 130
7	47	17	184	27	b 93
8	Ec 50	18	d 158	28	71
9	d 68	19	158	29	Ecd 83
10	Mac 103	20	bd 177	30	103
				31	98

Mean, 30 days=116.9.

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 group developing into a middle sized or large center of activity;
E, on the eastern part of the sun's disc; W, on the western part; M, in the central circle zone.
d= Entrance of a large or average sized center of activity on the east limb.

AEROLOGICAL OBSERVATIONS

[Aerological Division, D. M. Little, in charge]

By LOYD A. STEVENS

Mean free-air data, based on airplane weather observations during the month of May 1937, are given in tables 1 to 3.

The mean surface temperatures for May (see ch. I) were, in general, above normal over the entire country; the departures from normal being small except over the central and northern portions of the Rocky Mountain and Western Plateau regions and along the New England

coast, where, for individual stations, they amounted to between 2° and 3° C.

The mean free-air temperatures for the month up to 5 km above sea level (table 1) were slightly above normal over the greater portion of the country; negative departures being confined, for the most part, to the extreme northwest and the southeast portions of the country. The eastern area of negative departures was small at