

QUARTERLY BULLETIN ON SOLAR ACTIVITY

Published by the Eidgen. Sternwarte in Zürich

with financial support from UNESCO

I. SUNSPOTS

Sunspot Relative-Numbers and Sunspot-Areas

Co-operating Observatories for Sunspot Relative-Numbers R: Arcetri, Arosa, Athen, Beirut, Bucarest, Catania, Herstmonceux, Ikoma-Nara, Istanbul, Kanzelhöhe, Kiev, Kislovodsk, Locarno, Madrid, Manila, Potsdam, Prag, Quezon City, Roma-Monte Mario, Skalnaté Pleso, Tashkent, Tokyo, Tortosa, Uccle, Wroclaw, Zürich.

The Sunspot-Areas A are based upon measurements made at Catania A_C , Roma-Monte Mario A_R , and at Locarno and Zürich (combined values) A_Z . The apparent total area of the umbra plus penumbra is uncorrected for foreshortening and expressed in millionths of the solar disk.

1965	January				February				March			
	R	A_C	A_R	A_Z	R	A_C	A_R	A_Z	R	A_C	A_R	A_Z
1	23	—	541	—	14	292	461	251	16	10	—	—
2	26	392	—	—	13	255	446	285	7	0	—	—
3	31	191	—	205	13	201	445	259	0	0	0	0
4	31	207	324	134	13	201	382	207	8	47	74	12
5	26	149	318	137	10	—	274	167	13	27	—	4
6	19	—	201	133	23	143	191	130	26	58	—	36
7	18	—	—	—	23	159	—	—	26	126	146	50
8	17	74	—	27	17	191	222	—	7	5	—	6
9	11	—	—	15	23	164	—	—	0	0	0	0
10	8	—	0	26	17	89	—	—	12	69	127	32
11	7	16	—	6	17	116	184	126	9	37	74	15
12	0	—	—	—	23	144	191	184	18	42	—	33
13	0	—	—	0	25	154	238	183	16	—	350	120
14	7	—	—	—	16	186	—	147	17	191	—	173
15	8	11	—	12	23	122	—	92	12	—	—	136
16	7	5	13	6	15	97	79	57	9	149	159	76
17	7	5	19	8	8	37	57	27	11	95	—	75
18	20	132	—	54	8	16	38	14	22	202	—	55
19	22	117	—	—	0	—	0	0	17	175	—	118
20	28	160	143	76	0	—	0	0	19	122	156	51
21	23	105	—	63	7	5	0	5	9	63	67	18
22	22	49	44	19	0	—	0	0	0	0	0	0
23	13	—	175	22	0	—	0	0	0	0	0	0
24	19	79	197	83	13	—	—	5	7	0	0	2
25	18	142	328	108	15	21	85	18	17	64	—	—
26	18	164	213	83	22	26	73	23	10	74	207	—
27	34	137	239	53	23	54	146	29	18	48	64	31
28	17	122	—	63	18	85	121	40	12	58	—	28
29	25	—	—	106					9	—	—	7
30	22	266	372	—					9	11	—	5
31	15	340	382	—					8	0	—	3
Mean	17.5	136	219	63	14.2	125	165	94	11.7	60	95	40

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1965	April				May				June			
	R	A_C	A_R	A_Z	R	A_C	A_R	A_Z	R	A_C	A_R	A_Z
1	0	0	0	0	0	0	0	0	9	10	159	20
2	0	0	0	0	14	5	—	6	24	180	245	114
3	0	0	0	0	8	0	0	4	36	382	524	326
4	0	0	0	0	8	11	—	6	38	610	764	—
5	0	0	0	0	7	16	—	8	34	461	653	458
6	0	0	0	0	0	5	0	0	30	222	436	203
7	0	0	0	0	11	11	80	14	32	171	296	163
8	0	0	0	0	15	52	80	27	24	131	169	—
9	0	0	0	0	9	37	57	23	23	95	175	57
10	0	0	0	0	0	0	0	0	9	37	—	20
11	0	0	—	—	0	0	0	0	7	0	0	1
12	9	32	—	30	15	10	25	11	0	0	0	0
13	9	48	89	39	21	47	149	27	0	0	0	0
14	15	63	83	59	15	16	32	40	14	5	0	8
15	27	121	139	67	30	243	490	210	0	0	0	0
16	18	79	—	42	36	467	694	428	0	0	0	0
17	17	58	32	41	55	959	983	678	12	42	—	33
18	8	32	—	9	72	1039	1358	518	25	201	216	50
19	7	0	0	6	75	938	1289	522	16	181	181	81
20	7	0	—	—	72	774	1082	652	21	170	150	38
21	9	42	54	73	70	678	—	552	19	211	120	36
22	15	133	—	55	62	615	—	502	14	22	0	7
23	17	122	—	47	50	532	774	369	7	0	0	2
24	10	32	54	17	43	276	470	188	7	0	0	5
25	7	5	—	10	30	137	111	109	7	0	0	2
26	11	42	—	20	22	22	112	41	7	0	—	5
27	10	42	—	21	7	0	0	2	8	5	32	8
28	8	27	—	9	0	0	0	—	23	16	—	18
29	0	0	0	0	0	0	0	0	18	5	—	17
30	0	0	0	0	0	0	0	0	14	95	137	47
31					0	0	—	—				
Mean	6.8	29	24	19	24.1	222	311	170	15.9	108	170	61

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1965	July				August				September			
	R	A_C	A_R	A_Z	R	A_C	A_R	A_Z	R	A_C	A_R	A_Z
1	18	52	70	28	0	0	0	0	20	143	—	—
2	20	64	86	21	0	0	0	0	20	84	57	—
3	19	21	105	17	15	37	73	14	21	111	—	88
4	17	11	0	10	14	11	—	11	22	95	106	100
5	8	21	0	6	0	0	0	0	22	175	83	—
6	17	84	143	20	16	32	—	8	19	180	127	97
7	22	223	261	77	7	5	51	13	23	324	190	265
8	29	382	573	469	31	63	—	38	22	414	270	319
9	33	515	509	365	12	26	73	13	18	350	207	—
10	29	403	484	298	14	37	64	26	15	340	—	—
11	35	350	478	240	16	26	134	22	19	265	—	173
12	30	297	359	209	13	127	96	43	17	169	—	164
13	23	121	255	100	8	11	29	9	17	90	86	96
14	12	85	137	44	7	0	0	—	8	85	83	41
15	11	84	70	23	0	0	0	0	8	90	89	61
16	8	42	—	16	0	0	0	0	16	106	93	37
17	7	22	29	7	0	0	0	0	8	53	35	14
18	0	0	0	0	7	5	—	6	9	31	—	7
19	0	0	0	0	7	0	0	4	7	0	0	6
20	0	0	0	0	7	—	0	5	0	0	0	0
21	0	0	0	0	7	11	0	6	0	0	0	0
22	0	0	0	0	0	0	0	0	0	0	0	0
23	0	0	0	0	0	11	0	0	11	64	—	17
24	0	0	0	0	8	11	0	6	17	74	159	90
25	7	11	0	8	0	0	0	0	13	127	150	51
26	0	0	0	0	8	0	0	—	17	63	—	36
27	7	11	0	8	14	85	147	65	24	104	92	—
28	0	0	0	0	12	117	93	53	23	149	—	—
29	0	0	0	0	16	85	38	15	37	398	684	—
30	9	11	64	14	15	63	—	16	50	605	1202	—
31	7	5	—	5	22	95	—	—				
Mean	11.9	91	125	64	8.9	29	32	13	16.8	156	177	79

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1965	October				November				December			
	R	A_C	A_R	A_Z	R	A_C	A_R	A_Z	R	A_C	A_R	A_Z
1	52	828	1002	—	29	154	219	108	13	—	67	37
2	63	849	954	634	28	132	—	106	8	53	80	—
3	60	945	—	656	20	106	—	57	8	53	—	49
4	62	795	1066	873	13	26	—	—	8	64	48	—
5	55	562	894	583	13	11	0	—	8	53	44	—
6	39	351	445	237	29	202	243	106	8	48	—	—
7	27	243	182	87	40	—	—	407	8	43	32	—
8	7	10	—	4	46	350	—	364	15	16	0	14
9	8	63	64	29	38	339	652	372	7	11	—	2
10	13	74	—	45	41	—	—	—	7	22	—	—
11	8	—	80	39	40	355	748	385	0	10	0	0
12	9	37	—	36	26	212	—	—	0	0	0	0
13	8	—	48	23	17	255	216	122	14	5	0	6
14	7	5	19	5	16	138	239	85	0	0	0	0
15	0	0	0	0	10	64	95	49	14	64	130	27
16	7	5	—	0	9	37	51	41	22	—	191	51
17	0	—	0	0	7	11	29	—	21	—	356	118
18	0	—	—	0	0	0	0	0	20	287	302	194
19	10	—	0	14	0	0	—	0	18	164	176	—
20	12	—	89	57	0	0	0	0	15	106	—	—
21	15	—	159	—	0	0	0	0	10	0	—	12
22	26	—	—	100	7	5	0	2	11	64	54	—
23	23	—	277	107	0	0	0	0	9	90	102	—
24	16	117	169	94	7	0	0	—	8	—	—	4
25	24	122	191	135	0	0	0	0	12	58	159	—
26	17	127	159	135	7	0	0	2	23	133	239	—
27	17	148	143	130	0	0	0	—	29	648	906	—
28	9	148	127	95	8	21	—	8	64	764	—	—
29	8	—	127	108	8	43	67	—	64	646	447	590
30	8	128	95	75	15	58	—	43	44	—	477	—
31	14	106	70	49	—	—	—	—	38	117	149	—
Mean	20.1	270	265	150	15.8	90	128	103	17.0	135	172	74