No. 117 International Astronomical Union January/March 1957

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, Barcelona, Beirut, Belgrad, Bucarest, Catania, Freiburg, Granada, Herstmonceux, Istanbul, Kanzelhöhe, Karlsruhe, Kiev, Kislovodsk, Locarno, Madrid, Manila-Baguio City, Meudon, Nara-Ikoma, Potsdam, Prag, Roma-Monte Mario, Skalnaté Pleso, Sonneberg, South Hadley, Taipei, Taiwan, Tashkent, Tokyo, Tortosa, Uccle, Wellington, Zürich.

The Sunspot-Areas are based upon measurements made at the U.S.Naval Observatory Washington on plates secured either there or at the Mt. Wilson Observatory. The true area A of the umbra plus penumbra is expressed in millionths of the visible hemisphere.

1957	January		February		March	
	R	A	R	A	R	A
1	160	3784	108	927	155	—
2	189	3801	120	1085	164	3075
3	211	5631	102	950	137	2225
4	224	4908	110	1513	128	2081
5	226	5974	110	1805	124	2108
6	252	3580	123	1677	147	1184
7	224	4442	138	1942	147	1794
8	207	3289	151	—	144	1319
9	166	1388	157	1618	180	1771
10	153	1784	142	2089	186	2159
11	151	2193	136	—	210	2430
12	155	—	132	2254	224	1822
13	134	1896	122	1621	228	1446
14	121	1635	130	2262	175	1523
15	86	1314	142	2098	156	1482
16	100	1626	153	2110	146	1989
17	112	2071	140	1105	150	2277
18	143	2921	132	1848	147	2279
19	170	3440	123	947	147	—
20	170	2708	117	1427	122	2658
21	177	3168	123	1540	120	3297
22	193	2457	130	1922	137	3051
23	191	3864	132	3042	152	3218
24	209	3478	134	2945	145	2456
25	184	3017	139	2118	160	2636
26	168	3798	131	1653	170	2450
27	150	—	141	2574	155	2650
28	141	—	129	—	152	2059
29	132	—			154	2382
30	107	1030			172	2363
31	108	1016			145	2301
Mean	165.0	2971	130.2	1803	157.4	2224

Zürich, February 1958 M. Waldmeier

No. 118 **International Astronomical Union** April/June 1957

QUARTERLY BULLETIN ON SOLAR ACTIVITY

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The Sunspot-Areas are based upon measurements made at the U.S.Naval Observatory Washington on plates secured either there or at the Mt. Wilson Observatory. The true area A of the umbra plus penumbra is expressed in millionths of the visible hemisphere.

1957	April		May		June	
	R	A	R	A	R	A
1	140	2100	124	1382	158	3678
2	152	1781	121	1897	163	5139
3	135	2161	118	1727	180	3389
4	160	1854	106	1481	169	2735
5	138	1301	92	2665	159	2693
6	108	1326	138	2858	194	3146
7	138	2175	140	3216	170	2812
8	160	3253	150	3446	145	3255
9	163	3733	162	3825	168	3318
10	150	2773	195	3886	158	3712
11	121	3046	211	—	140	3161
12	114	1621	204	5504	160	3577
13	143	1800	197	4689	178	3956
14	122	1828	214	4541	158	2996
15	162	2011	210	4863	225	3623
16	181	2682	196	4699	239	6110
17	202	—	179	3374	252	6293
18	205	3321	185	2869	272	6972
19	207	3261	173	2382	274	7497
20	208	2876	182	1936	272	7990
21	214	2615	205	2597	265	7385
22	218	2470	159	2159	242	8339
23	226	3158	180	2940	232	7013
24	248	3640	186	2629	235	6863
25	251	3535	150	2621	208	7186
26	223	3729	132	3109	212	6799
27	215	2705	132	2179	220	5981
28	221	3183	143	2033	190	4941
29	177	2179	162	2613	180	6345
30	155	1713	179	3375	204	6222
31			179	2990		
Mean	175.2	2546	164.6	3016	200.7	5104

Zürich, February 1958 M. Waldmeier

No. 119 **International Astronomical Union** July/September 1957

QUARTERLY BULLETIN ON SOLAR ACTIVITY

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SUNSPOT RELATIVE-NUMBERS AND SUNSPOT-AREAS

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The Sunspot-Areas are based upon measurements made at the Astronomical Observatory Roma-Monte Mario. The true area A of the umbra plus penumbra is expressed in millionths of the visible hemisphere.

1957	July		August		September	
	R	A	R	A	R	A
1	185	5793	144	2958	244	4859
2	194	4570	148	2386	225	4631
3	204	4410	162	3038	190	4354
4	235	4724	163	2761	173	4317
5	213	4447	158	2812	171	6279
6	226	4193	163	2722	160	5263
7	192	3511	157	2291	137	2335
8	152	2628	141	2602	172	3650
9	162	2317	121	1666	215	3849
10	135	2186	89	1488	240	4729
11	107	1845	96	1240	245	5311
12	93	1271	116	1406	253	—
13	97	1702	104	1542	252	—
14	136	1986	135	1544	251	6037
15	156	2585	157	1484	247	7184
16	184	3433	195	2472	252	7136
17	203	3360	197	3051	258	5979
18	218	3311	196	2470	273	4975
19	223	3282	186	2243	290	5920
20	238	4167	170	1910	302	4510
21	250	4028	138	1477	334	6098
22	255	4113	114	1529	302	5650
23	265	3762	108	1726	268	7662
24	265	3732	110	1769	238	8070
25	227	3451	132	—	234	8987
26	206	3598	164	4172	215	—
27	173	3918	181	4571	226	4308
28	158	2891	204	4093	242	6682
29	142	2941	236	3838	242	4829
30	159	3363	252	3772	224	4565
31	150	3226	261	4587		
Mean	187.2	3379	158.0	2521	235.8	5488

Zürich, February 1958 M. Waldmeier

No. 120 **International Astronomical Union** October/December 1957

QUARTERLY BULLETIN ON SOLAR ACTIVITY

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SUNSPOT RELATIVE-NUMBERS AND SUNSPOT-AREAS

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The Sunspot-Areas are based upon measurements made at the Astronomical Observatory Roma-Monte Mario. The true area A of the umbra plus penumbra is expressed in millionths of the visible hemisphere.

1957	October		November		December	
	R	A	R	A	R	A
1	236	--	266	4753	230	2938
2	234	--	250	--	217	3698
3	242	--	232	4036	230	3316
4	217	4667	214	3431	243	4106
5	219	--	201	1741	266	4140
6	227	--	182	3543	245	3374
7	234	4549	177	2517	190	2337
8	244	4755	158	--	197	2202
9	267	3803	192	--	152	--
10	264	3963	226	2425	148	855
11	232	4998	232	2474	151	1075
12	236	6986	231	1950	157	1113
13	244	6503	221	1888	161	--
14	232	5916	210	2474	167	--
15	264	5881	177	1792	174	--
16	268	6074	179	2019	187	3198
17	251	5045	181	2247	205	2658
18	222	4185	185	--	225	2505
19	217	4572	194	2392	249	3564
20	230	--	207	2567	284	5874
21	237	4285	234	--	299	5889
22	241	5390	263	--	316	8345
23	254	5580	251	3393	343	--
24	276	2926	238	--	355	--
25	240	2442	211	2634	355	--
26	293	3136	199	1879	337	--
27	280	4197	201	2684	275	--
28	317	4418	215	3497	260	5544
29	334	5005	215	3426	275	--
30	317	--	184	3315	274	4377
31	299	5212			255	3945
Mean	253.8	4770	210.9	2742	239.4	3574

Zürich, February 1958

M. Waldmeier