

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

Cooperating Observatories for Sunspot Relative-Numbers: Arcetri, Arosa, Athens (National Observatory), Athens (Eugenides Planetarium), Beirut, Bucarest, Catania, Herstmonceux, Hurbanovo, Istanbul, Kandilli, Kanzelhöhe, Kiev, Kislovodsk, Locarno, Madrid, Manila, Mitaka-Tokyo, Potsdam, Quezon City, Roma-Monte Mario, Roquetas-Tortosa, Rosario, San Miguel, Santiago de Chile, Skalnaté Pleso, Tashkent, Tokyo (Science Museum), Uccle, Zürich.

The first column gives the Relative-Numbers for the whole disk of the sun (R), the second that for the central zone (R_C). The diameter of the central zone is half that of the sun's disk.

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.

1974	Jan.	R	R_C	A_C	A_R	A_Z
	1	12	12	0	--	--
	2	15	15	126	118	94
	3	13	13	95	105	--
	4	12	12	63	--	20
	5	8	0	5	0	2
	6	0	0	0	--	0
	7	0	0	0	0	0
	8	24	12	116	--	103
	9	29	17	274	--	--
	10	43	17	326	350	274
	11	48	16	579	475	430
	12	54	22	337	523	518
	13	45	11	699	--	574
	14	70	25	--	--	582
	15	73	36	--	732	546
	16	64	34	740	633	536
	17	63	33	506	--	491
	18	55	39	295	--	--
	19	53	39	348	309	--
	20	48	41	252	--	171
	21	33	13	236	292	143
	22	36	0	179	335	102
	23	28	0	179	--	81
	24	14	0	37	--	11
	25	0	0	0	--	0
	26	8	8	11	--	4
	27	0	0	0	--	0
	28	8	8	11	0	3
	29	0	0	0	0	--
	30	0	0	5	0	--
	31	0	0	0	0	--
	Mean	27.6	13.6	187	242	204

1974	Feb.	R	R _C	A _C	A _R	A _Z
	1	13	0	--	--	6
	2	10	7	5	0	6
	3	7	7	5	--	--
	4	7	0	0	0	2
	5	0	0	0	0	0
	6	0	0	0	--	--
	7	7	0	21	0	--
	8	15	0	26	--	30
	9	21	0	247	207	159
	10	22	0	242	--	279
	11	20	7	283	255	300
	12	22	14	294	261	--
	13	48	35	305	255	383
	14	26	15	326	--	245
	15	45	15	505	511	432
	16	48	24	788	--	536
	17	49	24	583	--	--
	18	47	30	1009	908	--
	19	43	34	851	1130	614
	20	39	9	740	665	418
	21	35	7	504	531	458
	22	38	0	252	423	216
	23	31	0	--	372	--
	24	29	0	231	--	--
	25	17	0	100	--	94
	26	19	11	43	0	10
	27	37	14	126	--	67
	28	33	23	105	--	53
	Mean	26.0	9.9	292	345	215

1974	Mar.	R	R _C	A _C	A _R	A _Z
	1	24	15	37	--	18
	2	14	14	32	--	9
	3	0	0	0	--	--
	4	10	0	--	--	--
	5	14	0	63	--	47
	6	19	0	74	102	--
	7	20	0	58	67	22
	8	14	7	26	32	18
	9	20	11	26	32	18
	10	30	30	79	--	136
	11	37	28	452	496	340
	12	38	27	383	439	272
	13	30	0	321	290	272
	14	39	7	142	--	134
	15	34	20	68	--	65
	16	23	8	63	--	18
	17	20	12	263	--	--
	18	28	22	26	--	18
	19	21	10	--	--	90
	20	15	0	105	159	138
	21	16	0	157	181	153
	22	28	0	242	--	246
	23	25	10	268	360	282
	24	21	8	210	--	232
	25	16	10	236	223	208
	26	10	10	231	--	204
	27	9	0	210	175	153
	28	17	0	173	149	150
	29	19	0	--	--	108
	30	24	0	--	--	102
	31	26	0	58	--	65
	Mean	21.3	8.0	148	208	130

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

Cooperating Observatories for Sunspot Relative-Numbers: Arcetri, Arosa, Athens (National Observatory), Athens (Eugenides Planetarium), Beirut, Bucarest, Catania, Herstmonceux, Hurbanovo, Istanbul, Kandilli, Kanzelhöhe, Kiev, Kislovodsk, Locarno, Madrid, Manila, Mitaka-Tokyo, Potsdam, Quezon City, Roma-Monte Mario, Roquetas-Tortosa, Rosario, San Miguel, Santiago de Chile, Skalnaté Pleso, Tashkent, Tokyo (Science Museum), Uccle, Zürich.

The first column gives the Relative-Numbers for the whole disk of the sun (R), the second that for the central zone (R_C). The diameter of the central zone is half that of the sun's disk.

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.

1974	April	R	R_C	A_C	A_R	A_Z
	1	22	14	58	--	11
	2	20	9	48	35	10
	3	19	8	31	54	11
	4	22	22	58	--	11
	5	21	21	--	--	8
	6	23	17	126	270	36
	7	28	18	243	--	198
	8	38	11	263	198	57
	9	56	36	253	354	108
	10	66	57	599	--	607
	11	71	56	1686	--	1198
	12	74	63	1664	--	1658
	13	77	71	1780	--	1420
	14	83	17	1397	--	1487
	15	87	0	1759	--	--
	16	77	7	1412	--	--
	17	67	14	946	--	477
	18	55	14	341	400	127
	19	45	14	383	628	330
	20	42	7	383	312	219
	21	35	0	231	--	124
	22	25	0	27	0	9
	23	17	0	16	--	6
	24	18	18	--	--	41
	25	19	19	252	--	107
	26	20	20	210	191	96
	27	28	28	53	--	57
	28	15	0	0	--	--
	29	22	0	68	--	48
	30	16	0	152	--	--
	Mean	40.3	18.7	516	244	325

1974	May	R	R _C	A _C	A _R	A _Z
	1	47	10	426	--	420
	2	70	0	851	--	658
	3	85	21	1303	1278	--
	4	98	27	1229	1587	1104
	5	100	34	1328	--	1152
	6	102	71	1608	--	1239
	7	98	90	--	--	--
	8	96	71	1618	1896	1126
	9	88	57	1203	1182	762
	10	69	23	651	795	503
	11	62	17	457	350	--
	12	49	23	252	--	189
	13	38	24	116	111	80
	14	32	21	37	--	40
	15	23	9	47	80	41
	16	16	0	42	45	26
	17	8	0	26	32	8
	18	0	0	0	0	1
	19	0	0	0	--	0
	20	0	0	0	0	0
	21	0	0	0	0	0
	22	7	7	11	0	4
	23	9	9	16	--	8
	24	7	0	11	--	3
	25	0	0	0	0	0
	26	20	0	42	--	16
	27	18	0	147	350	150
	28	28	0	257	446	185
	29	18	0	121	--	70
	30	7	0	0	--	--
	31	30	7	111	--	95
	Mean	39.5	16.8	397	480	292

1974	June	R	R _C	A _C	A _R	A _Z
	1	33	14	236	--	147
	2	41	15	368	--	369
	3	52	24	436	--	294
	4	67	59	458	--	200
	5	62	30	415	572	277
	6	72	34	600	--	382
	7	65	47	362	672	312
	8	59	27	624	--	204
	9	64	28	357	--	177
	10	59	8	252	--	179
	11	48	0	488	674	346
	12	38	30	609	700	574
	13	44	28	672	--	626
	14	41	19	677	--	612
	15	32	20	630	604	520
	16	25	0	546	--	530
	17	25	15	504	620	437
	18	27	20	425	--	363
	19	28	22	310	305	276
	20	20	20	263	223	187
	21	16	0	74	175	78
	22	11	0	63	70	20
	23	11	0	26	--	--
	24	15	15	21	--	6
	25	15	15	21	--	5
	26	8	0	37	--	--
	27	8	0	21	80	59
	28	18	0	95	--	--
	29	30	0	210	--	--
	30	47	19	478	--	442
	Mean	36.0	17.0	343	427	293

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

Cooperating Observatories for Sunspot Relative-Numbers: Arcetri, Arosa, Athens (National Observatory), Athens (Eugenides Planetarium), Beirut, Bucarest, Catania, Herstmonceux, Hurbanovo, Istanbul, Kandilli, Kanzelhöhe, Kiev, Kislovodsk, Locarno, Madrid, Manila, Mitaka-Tokyo, Potsdam, Quezon City, Roma-Monte Mario, Roquetas-Tortosa, Rosario, San Miguel, Santiago de Chile, Skalnaté Pleso, Tashkent, Tokyo (Science Museum), Uccle, Zürich.

The first column gives the Relative-Numbers for the whole disk of the sun (R), the second that for the central zone (R_C). The diameter of the central zone is half that of the sun's disk.

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.

1974	July	R	R_C	A_C	A_R	A_Z
	1	79	27	1082	1504	832
	2	87	87	1575	--	1369
	3	90	70	1785	--	2024
	4	93	70	2651	2212	2223
	5	95	70	2106	2419	1927
	6	93	18	1838	--	1597
	7	78	21	1344	--	1062
	8	59	0	678	--	622
	9	40	0	740	766	602
	10	26	0	641	503	563
	11	22	7	761	--	705
	12	22	0	940	--	796
	13	28	17	1129	--	882
	14	38	17	908	--	--
	15	49	37	1055	--	872
	16	54	42	1371	--	1254
	17	52	36	1596	--	1249
	18	53	21	1281	--	1028
	19	47	13	839	--	--
	20	50	14	452	--	384
	21	55	16	426	--	--
	22	58	10	625	--	564
	23	60	28	1124	1178	900
	24	57	30	1013	--	756
	25	59	39	997	--	672
	26	60	25	803	645	641
	27	54	26	788	581	532
	28	51	32	478	--	295
	29	42	19	195	--	190
	30	41	30	205	223	91
	31	38	31	163	265	120
Mean		55.8	27.5	1019	1030	884

1974	Aug.	R	R _C	A _C	A _R	A _Z
	1	37	0	147	302	147
	2	23	0	127	223	78
	3	12	0	79	67	14
	4	17	0	58	--	67
	5	18	0	252	208	215
	6	26	0	378	--	390
	7	32	0	557	668	498
	8	34	0	725	694	583
	9	43	21	794	--	596
	10	48	22	683	668	628
	11	54	45	731	--	--
	12	67	52	1345	1546	1096
	13	69	54	1215	1090	1048
	14	66	35	1025	--	877
	15	59	30	757	--	686
	16	57	22	798	--	682
	17	52	0	840	--	752
	18	44	12	825	--	678
	19	43	12	610	549	393
	20	32	16	526	510	444
	21	28	20	494	557	472
	22	34	0	525	--	435
	23	34	10	431	493	379
	24	28	9	426	--	342
	25	25	8	316	--	214
	26	8	8	137	--	106
	27	8	8	95	159	102
	28	8	0	0	--	61
	29	14	7	105	89	53
	30	8	0	63	64	40
	31	15	0	42	26	18
	Mean	33.6	12.6	487	465	403

1974	Sep.	R	R _C	A _C	A _R	A _Z
	1	8	0	84	--	69
	2	8	0	147	127	102
	3	16	0	252	239	224
	4	37	9	352	334	395
	5	40	24	404	430	370
	6	44	33	289	466	487
	7	38	31	452	382	477
	8	32	32	383	--	404
	9	63	30	782	--	722
	10	74	16	1355	--	1224
	11	80	9	1712	2019	1760
	12	80	0	1665	1957	1660
	13	74	31	2142	1974	1818
	14	67	52	1953	1941	1574
	15	64	58	1565	--	1645
	16	68	56	1716	1830	1364
	17	71	45	1702	--	1246
	18	66	0	1344	1293	1023
	19	51	13	888	859	670
	20	31	10	473	--	343
	21	13	0	179	--	63
	22	0	0	0	--	0
	23	7	7	0	0	3
	24	11	11	47	--	44
	25	11	11	84	191	--
	26	13	13	116	111	--
	27	19	11	42	64	58
	28	23	0	73	70	--
	29	38	0	362	--	257
	30	58	21	709	939	643
	Mean	40.2	17.4	709	801	691

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

Cooperating Observatories for Sunspot Relative-Numbers: Arcetri, Arosa, Athens (National Observatory), Athens (Eugenides Planetarium), Beirut, Bucarest, Catania, Herstmonceux, Hurbanovo, Istanbul, Kandilli, Kanzelhöhe, Kiev, Kislovodsk, Locarno, Madrid, Manila, Mitaka-Tokyo, Potsdam, Quezon City, Roma-Monte Mario, Roquetas-Tortosa, Rosario, San Miguel, Santiago de Chile, Skalnaté Pleso, Tashkent, Tokyo (Science Museum), Uccle, Zürich.

The first column gives the Relative-Numbers for the whole disk of the sun (R), the second that for the central zone (R_C). The diameter of the central zone is half that of the sun's disk.

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.

1974	Oct.	R	R_C	A_C	A_R	A_Z
	1	61	13	968	1003	808
	2	53	53	1003	--	899
	3	46	26	961	878	--
	4	60	29	1003	983	840
	5	85	28	1067	--	830
	6	83	0	883	--	1038
	7	84	0	1344	1302	--
	8	97	26	--	--	--
	9	107	52	1813	1596	--
	10	114	80	1467	2164	1369
	11	110	86	2126	2470	1864
	12	92	74	--	--	2039
	13	76	61	1848	--	--
	14	63	36	--	--	1057
	15	48	0	--	--	692
	16	41	0	546	716	611
	17	28	0	320	318	--
	18	16	7	84	0	75
	19	9	0	21	48	--
	20	11	0	21	--	41
	21	12	0	63	--	51
	22	9	0	63	--	42
	23	7	0	16	0	2
	24	7	8	11	0	2
	25	8	0	42	95	61
	26	16	0	126	165	--
	27	30	8	163	--	--
	28	27	15	231	249	--
	29	22	16	158	191	--
	30	22	15	252	--	169
	31	16	9	126	175	111
Mean		47.1	20.7	619	686	630

1974	Nov.	R	R _C	A _C	A _R	A _Z
	1	18	9	194	--	102
	2	27	0	132	--	--
	3	39	7	211	--	188
	4	45	10	179	--	--
	5	36	18	136	--	49
	6	25	25	--	--	20
	7	22	22	26	--	8
	8	14	14	11	0	4
	9	7	7	5	0	2
	10	24	17	69	--	8
	11	27	27	74	35	11
	12	24	24	79	137	--
	13	16	16	32	35	6
	14	8	8	--	0	2
	15	16	0	--	191	--
	16	20	0	--	493	--
	17	20	0	--	--	--
	18	18	0	--	955	--
	19	34	16	--	--	990
	20	40	19	903	1193	955
	21	40	32	1229	--	929
	22	44	36	1076	1160	--
	23	44	32	851	1065	862
	24	37	24	767	--	--
	25	29	21	--	541	--
	26	25	16	--	350	--
	27	23	16	--	134	--
	28	13	13	--	--	--
	29	7	0	--	48	6
	30	7	0	--	16	6
	Mean	25.0	14.3	351	374	244
1974	Dec.	R	R _C	A _C	A _R	A _Z
	1	0	0	--	--	--
	2	0	0	--	0	0
	3	9	0	--	0	3
	4	16	8	--	0	5
	5	17	10	--	--	4
	6	8	8	--	0	--
	7	7	7	0	0	--
	8	0	0	0	--	--
	9	0	0	0	0	0
	10	9	0	0	0	--
	11	21	21	74	--	67
	12	31	23	294	--	220
	13	34	20	399	636	--
	14	33	25	599	556	640
	15	35	0	620	--	--
	16	40	7	746	747	668
	17	36	9	651	631	--
	18	34	10	851	--	--
	19	43	18	888	843	--
	20	40	19	835	796	760
	21	40	20	688	710	628
	22	37	30	604	--	565
	23	28	21	394	431	416
	24	26	17	263	--	198
	25	9	9	84	--	96
	26	8	0	63	--	--
	27	8	0	21	--	--
	28	20	0	37	--	--
	29	16	0	58	--	--
	30	19	0	95	--	--
	31	13	0	110	--	--
	Mean	20.5	9.1	335	357	285