

# 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.

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1975	Jan.	$R$	$R_C$	$A_C$	$A_R$	$A_Z$
	1	30	0	137	--	--
	2	30	13	79	--	285
	3	28	12	169	239	163
	4	19	10	116	245	159
	5	18	10	74	--	--
	6	23	8	85	--	72
	7	29	8	153	--	117
	8	29	9	79	86	--
	9	37	20	299	270	145
	10	32	0	326	459	297
	11	30	7	315	399	320
	12	28	0	357	--	426
	13	32	17	368	--	381
	14	13	13	336	--	346
	15	20	20	342	494	336
	16	19	19	373	446	--
	17	16	0	231	286	267
	18	20	10	268	--	242
	19	20	11	247	--	--
	20	23	13	137	222	--
	21	16	16	58	64	--
	22	16	7	27	--	11
	23	15	7	--	--	4
	24	7	0	--	--	2
	25	7	7	5	13	6
	26	7	7	5	--	2
	27	0	0	0	--	--
	28	7	0	0	0	2
	29	7	0	0	0	2
	30	7	0	0	0	1
	31	0	0	0	0	0
	Mean	18.9	7.9	158	201	156

1975	Feb.	R	R <sub>C</sub>	A <sub>C</sub>	A <sub>R</sub>	A <sub>Z</sub>
	1	0	0	0	--	--
	2	18	7	26	--	--
	3	27	0	--	93	68
	4	27	0	--	--	63
	5	20	11	--	--	--
	6	26	10	179	188	117
	7	34	34	347	512	358
	8	29	29	515	781	440
	9	22	22	--	--	--
	10	18	18	315	525	278
	11	13	13	294	--	244
	12	18	7	200	--	218
	13	9	0	126	--	124
	14	8	0	0	95	49
	15	8	0	21	--	22
	16	8	8	--	--	4
	17	0	0	0	0	0
	18	0	0	0	0	0
	19	0	0	--	0	0
	20	7	7	0	--	1
	21	8	8	0	0	5
	22	0	0	0	0	0
	23	0	0	0	--	0
	24	12	12	42	111	22
	25	9	9	32	48	14
	26	0	0	--	0	0
	27	0	0	0	0	0
	28	0	0	0	0	0
	Mean	11.5	7.0	100	147	84

1975	March	R	R <sub>C</sub>	A <sub>C</sub>	A <sub>R</sub>	A <sub>Z</sub>
	1	0	0	0	0	0
	2	9	9	42	--	--
	3	14	0	42	89	51
	4	13	0	53	--	14
	5	14	0	16	0	6
	6	14	0	--	--	10
	7	7	0	--	--	7
	8	18	11	63	32	19
	9	20	12	69	--	--
	10	20	20	58	--	--
	11	18	18	74	--	16
	12	15	0	--	--	--
	13	15	0	63	112	37
	14	17	0	121	191	32
	15	24	9	90	--	--
	16	30	20	142	--	177
	17	28	0	389	350	311
	18	22	0	205	--	--
	19	20	0	69	--	20
	20	14	0	47	0	6
	21	9	0	5	--	6
	22	0	0	0	--	0
	23	0	0	0	--	0
	24	0	0	0	0	0
	25	0	0	--	0	--
	26	7	7	5	--	3
	27	0	0	0	--	--
	28	0	0	0	0	--
	29	0	0	0	--	0
	30	0	0	0	--	--
	31	8	8	5	--	6
	Mean	11.5	3.7	58	70	34

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1975	April	$R$	$R_C$	$A_C$	$A_R$	$A_Z$
	1	0	0	0	--	0
	2	0	0	0	--	0
	3	0	0	0	--	--
	4	0	0	0	0	0
	5	0	0	0	--	2
	6	0	0	0	--	0
	7	7	7	0	--	6
	8	17	9	21	27	13
	9	15	15	47	--	--
	10	7	7	5	--	--
	11	0	0	0	0	0
	12	0	0	0	0	--
	13	0	0	0	--	0
	14	0	0	0	0	0
	15	0	0	0	0	0
	16	0	0	0	0	0
	17	0	0	0	0	0
	18	0	0	0	0	0
	19	0	0	0	0	0
	20	0	0	0	--	0
	21	0	0	0	0	0
	22	0	0	0	0	1
	23	7	0	--	0	1
	24	8	0	--	--	3
	25	7	0	--	--	2
	26	7	0	0	--	2
	27	22	7	105	--	28
	28	21	0	89	--	68
	29	16	0	37	--	25
	30	20	0	5	0	5
	Mean	5.1	1.5	11	2	6

1975	May	R	R <sub>C</sub>	A <sub>C</sub>	A <sub>R</sub>	A <sub>Z</sub>
	1	26	14	36	--	16
	2	33	18	189	296	156
	3	34	34	714	690	479
	4	32	19	542	--	--
	5	30	9	458	--	383
	6	20	8	199	--	151
	7	14	7	26	--	32
	8	0	0	0	--	0
	9	0	0	0	0	0
	10	8	0	0	0	4
	11	0	0	0	--	--
	12	0	0	--	--	0
	13	0	0	0	--	0
	14	7	7	0	0	1
	15	7	7	0	--	2
	16	8	8	0	0	3
	17	0	0	0	0	0
	18	8	8	21	--	2
	19	0	0	0	0	0
	20	0	0	0	0	0
	21	0	0	0	0	0
	22	8	0	11	--	10
	23	8	8	11	16	6
	24	7	7	16	0	4
	25	0	0	0	--	0
	26	0	0	0	0	--
	27	7	7	0	0	2
	28	13	13	26	0	1
	29	0	0	0	--	0
	30	0	0	0	--	0
	31	8	0	21	--	7
	Mean	9.0	5.6	76	67	45

1975	June	R	R <sub>C</sub>	A <sub>C</sub>	A <sub>R</sub>	A <sub>Z</sub>
	1	7	0	32	--	4
	2	11	0	42	--	12
	3	8	0	16	--	3
	4	7	7	5	--	1
	5	7	7	32	--	7
	6	7	7	5	0	2
	7	0	0	0	--	1
	8	0	0	0	--	0
	9	0	0	0	--	0
	10	0	0	0	--	0
	11	9	9	5	--	4
	12	0	0	0	--	0
	13	0	0	0	--	0
	14	0	0	0	--	0
	15	8	8	0	--	18
	16	19	0	74	--	--
	17	17	0	210	--	151
	18	12	0	126	--	82
	19	15	0	53	--	24
	20	0	0	0	0	0
	21	7	7	0	0	1
	22	0	0	0	--	0
	23	12	12	26	64	14
	24	20	12	137	48	57
	25	24	0	53	259	220
	26	33	0	431	450	316
	27	38	0	462	528	381
	28	36	0	609	592	554
	29	23	12	704	588	611
	30	22	22	609	--	582
	Mean	11.4	3.4	121	253	105

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1975	July	$R$	$R_C$	$A_C$	$A_R$	$A_Z$
	1	23	23	651	705	574
	2	18	18	567	636	530
	3	22	0	515	525	440
	4	16	0	336	334	--
	5	23	0	347	--	--
	6	33	0	184	--	124
	7	23	9	79	58	24
	8	19	19	68	--	13
	9	16	16	105	--	22
	10	23	15	127	--	45
	11	29	20	184	229	99
	12	33	0	420	526	314
	13	43	7	509	--	552
	14	46	10	683	765	646
	15	43	9	819	779	564
	16	39	9	620	--	501
	17	25	9	546	573	511
	18	32	24	504	649	534
	19	36	28	615	596	483
	20	28	12	432	--	387
	21	30	14	373	--	330
	22	27	0	368	362	325
	23	19	0	305	271	354
	24	30	12	348	420	298
	25	33	25	336	414	303
	26	30	30	326	340	262
	27	29	29	431	--	403
	28	26	26	420	510	387
	29	20	9	336	331	257
	30	27	0	399	354	268
	31	34	0	358	297	342
	Mean	28.2	12.0	397	461	341

1975	Aug.	R	R <sub>C</sub>	A <sub>C</sub>	A <sub>R</sub>	A <sub>Z</sub>
	1	37	0	599	586	577
	2	36	0	987	859	858
	3	46	31	1470	--	1273
	4	78	50	1817	1973	1660
	5	93	51	2552	3017	2070
	6	104	57	2499	3293	2524
	7	102	102	3255	3328	2801
	8	89	44	2772	2943	2676
	9	83	44	2289	2958	2215
	10	80	51	2457	--	1581
	11	72	47	2006	--	1356
	12	45	0	1397	--	948
	13	52	0	1097	1019	769
	14	34	0	504	--	602
	15	31	7	200	--	114
	16	26	9	116	--	17
	17	19	9	73	--	2
	18	16	0	42	48	19
	19	8	8	32	0	9
	20	22	14	74	--	17
	21	23	14	80	80	27
	22	7	0	0	0	--
	23	14	8	21	--	--
	24	8	8	11	--	--
	25	11	11	21	--	--
	26	16	16	294	--	--
	27	18	0	--	--	188
	28	10	0	126	143	91
	29	10	0	95	--	46
	30	21	7	26	--	19
	31	21	8	0	--	6

Mean 39.7 19.2 897 1446 864

1975	Sep.	R	R <sub>C</sub>	A <sub>C</sub>	A <sub>R</sub>	A <sub>Z</sub>
	1	14	7	53	--	6
	2	16	7	53	--	7
	3	19	19	68	--	15
	4	29	29	106	191	60
	5	25	25	100	--	54
	6	24	16	142	95	45
	7	24	16	121	--	71
	8	23	0	168	127	126
	9	17	0	168	--	150
	10	10	10	194	--	168
	11	10	10	168	175	170
	12	16	16	179	175	159
	13	19	12	179	--	175
	14	17	0	147	--	--
	15	8	0	74	111	98
	16	14	7	100	64	63
	17	14	7	42	--	42
	18	18	12	58	95	57
	19	13	13	63	111	54
	20	30	22	63	111	75
	21	27	8	79	--	36
	22	23	9	47	0	18
	23	0	0	0	0	0
	24	0	0	0	0	1
	25	0	0	0	0	0
	26	0	0	0	0	0
	27	0	0	0	0	0
	28	0	0	16	--	0
	29	0	0	0	0	0
	30	7	0	0	0	14

Mean 13.9 8.2 80 70 57

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1975	Oct.	$R$	$R_C$	$A_C$	$A_R$	$A_Z$
	1	15	7	63	--	60
	2	8	0	105	111	112
	3	9	0	158	159	122
	4	10	0	163	191	151
	5	8	0	168	--	183
	6	10	10	189	191	194
	7	9	9	252	191	182
	8	16	8	231	191	180
	9	15	0	137	--	155
	10	8	0	116	--	119
	11	8	0	105	--	--
	12	10	0	84	--	--
	13	21	13	121	--	--
	14	26	26	399	496	417
	15	21	21	504	532	441
	16	18	18	441	--	428
	17	16	0	420	--	--
	18	16	0	321	302	--
	19	15	0	210	--	--
	20	10	0	126	111	94
	21	7	0	42	0	33
	22	0	0	0	0	0
	23	0	0	0	0	0
	24	7	7	0	0	2
	25	0	0	0	0	0
	26	0	0	0	--	0
	27	0	0	0	0	0
	28	0	0	0	0	0
	29	0	0	0	0	1
	30	0	0	0	0	0
	31	0	0	0	0	0
Mean		9.1	3.8	140	124	115

1975	Nov.	R	R <sub>C</sub>	A <sub>C</sub>	A <sub>R</sub>	A <sub>Z</sub>
	1	0	0	0	--	0
	2	0	0	0	--	--
	3	7	0	0	--	0
	4	18	0	63	--	--
	5	22	14	142	198	141
	6	27	15	226	239	202
	7	30	11	--	309	--
	8	33	14	294	--	214
	9	30	30	273	--	--
	10	26	26	289	--	150
	11	30	15	147	191	100
	12	24	16	158	--	104
	13	22	0	116	--	92
	14	29	12	268	--	234
	15	28	12	310	368	--
	16	28	14	572	--	--
	17	30	11	971	--	--
	18	33	33	--	--	--
	19	36	23	987	1177	917
	20	35	21	903	987	--
	21	31	24	725	--	750
	22	23	0	578	636	--
	23	12	0	378	--	387
	24	11	0	231	318	199
	25	9	0	84	95	103
	26	7	0	58	--	16
	27	0	0	0	--	0
	28	0	0	0	--	0
	29	0	0	0	0	0
	30	0	0	0	--	--
	Mean	19.4	9.7	278	411	190
1975	Dec.	R	R <sub>C</sub>	A <sub>C</sub>	A <sub>R</sub>	A <sub>Z</sub>
	1	7	0	10	--	1
	2	23	8	152	207	126
	3	20	20	284	255	224
	4	23	23	163	191	113
	5	21	21	126	--	131
	6	18	18	189	366	--
	7	20	7	210	--	--
	8	18	7	63	--	63
	9	8	0	63	--	20
	10	0	0	--	--	0
	11	0	0	0	--	0
	12	0	0	0	0	0
	13	0	0	0	0	0
	14	7	0	16	--	--
	15	7	7	37	--	--
	16	7	7	--	--	--
	17	9	9	5	--	--
	18	8	8	21	--	4
	19	7	0	0	--	--
	20	0	0	0	0	0
	21	0	0	--	--	0
	22	0	0	0	0	0
	23	0	0	0	0	0
	24	18	10	58	--	41
	25	14	0	33	--	--
	26	8	0	--	--	--
	27	0	0	0	0	0
	28	0	0	0	--	0
	29	0	0	0	0	0
	30	0	0	0	--	0
	31	0	0	0	--	--
	Mean	7.8	4.7	53	93	34