No. 45 International Astronomical Union January/March 1939

QUARTERLY BULLETIN ON SOLAR ACTIVITY

Published by the Eidgen. Sternwarte in Zürich

東京天文臺 15.2.27

CHARACTER FIGURES OF SOLAR PHENOMENA

Co-operating Observatories: Abastuman, Arcetri-Firenze, Belgrade, Cambridge (England), Catania, Coimbra, Ewhurst (Mr. Evershed), Greenwich and Cape-Town, Kodaikanal, Lyons, Kiew, Meudon-Paris, Mount Wilson, Roma-Monte Mario, Simeis, South Hadley, Stonyhhurst, Tashkent, Tokyo, Zurich.

In the present issue some changes have been made in the Solar Bulletin. The inclusion of the records for bright chromospheric eruptions has so much increased the value of the Bulletin that it seemed advisable to indicate this important enlargement by a more suitable title. It was decided, therefore, at the meeting of the International Astronomical Union at Stockholm that, beginning with 1939, the title „Bulletin for Character Figures of Solar Phenomena" is to be replaced by „QUARTERLY BULLETIN ON SOLAR ACTIVITY".

Further it has been agreed to omit in future the data for the central zones. For the motive which led to this resolution I beg to refer to the „draft report and minutes of the commission 10" published in Vol. VI (1939) of the „Transactions" of the I. A. U.

The intensity numbers for ultra-violet radiation will no longer be published in the Bulletin either. Mr. Edison Pettit, who made these measurements, has written us on the subject as follows: „As the work has now covered a period of fifteen years and seems to show only a seasonal term due to atmospheric ozone we are discontinuing the observations".

For alterations in the second part of the Bulletin (Chromospheric Eruptions) see the remarks made by Mr. d'Azambuja under the heading „Éruptions Chromosphériques Brillantes".

Calcium-Flocculi.

The character figures are assigned on the scale of 0, 1, 2, 3, 4, 5. The numbers refer to the area and intensity of the flocculi; 0 representing absence or rarity, 5 extreme abundance and intensity.

January

Observatory		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	Mean
Arcetri/Firenze	K3				2.5			3	3.5												2.5	2				2.5							2.7
Cambridge/Kodaikl.	K2-3	3	3	3	3.5				4	3.5				4		4.5	4	3.5	3		3	3	3	3		3	3.5	3	3.5	3.5	4	4	3.4
Coimbra	K3					3.5		4	4	4	3.5									2.5				3									3.5
Meudon	K3		2.5				3						3															3		3	3	3	2.9
Mount Wilson	K2-3	3		3	3		4	4	4		4	3	4	4	4	4	3		3	3				3	3	3	3	4	3				3.5
Tokyo	K2-3		3	3	3	3	3	3	3	3		3.5	4	4	4	4	3.5	3.5		3	3	3	3		3	3	3	3	3.5	3.5		3.5	3.3
	Mean	3.0	2.8	3.0	3.0	3.2	3.3	3.5	3.7	3.5	3.8	4.2	3.7	4.0	4.0	4.2	3.5	3.5	3.0	2.8	2.8	2.7	3.0	3.0	3.0	2.9	3.2	3.2	3.3	3.3	3.5	3.5	3.3

February

Observatory		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	Mean
Arcetri/Firenze	K3	2	2.5	3.5	3.5		3									3	2.5	3					3						4.5				3.1
Cambridge/Kodaikl.	K2-3	4	3.5	3.5	3.5	3.5	3	3	3	3	3	2.5	3	3	3	3			2.5	2.5	2.5	3	3	2.5	3	3.5	3.5	4	3.5				3.1
Coimbra	K3		3		3		3		2.5	2.5	2.5	2.5	2.5		2.5	2.5	2.5	2.5	2.5	2.5	3					3							2.7
Meudon	K3	3	3	3	3	3	3	2.5	2.5			2	2.5	2.5	2.5	2		2	2		2	2.5						3.5					2.6
Mount Wilson	K2-3		3			3	3	3				3	3	3	2	2	3	3	2	3	3	3	3	3	3	4	4	4					3.0
Tokyo	K2-3	3	3	3	3	2.5	2.5	2	2	2	2	2		2.5	3		2.5	2.5	2.5	2.5			3	3	3.5	3.5	3.5	4	4				2.8
	Mean	3.0	3.0	3.2	3.2	3.0	2.9	2.6	2.5	2.5	2.5	2.4	2.8	2.8	2.6	2.5	2.6	2.6	2.3	2.6	2.6	2.8	3.0	2.8	3.2	3.4	3.7	3.9	4.0				2.9

March

Observatory		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	Mean
Arcetri/Firenze	K3		4	4	3.5						2.5	2	2				2	2.5			2	2.5	3.5										2.8
Cambridge/Kodaikl.	K2-3	3.5	3	3.5	3.5	3.5	3	3	3	3	3	3	2.5	2.5	2.5	2.5	2.5	2.5	3	3	3	3	3	3	2.5	2.5	3	3	2.5	2.5	2	2	2.8
Coimbra	K3	3	3				3	3	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5				2.5	2.5	2		2	2	2.5
Meudon	K3	3.5		3	2.5					2.5	2.5	2.5	2	2			1.5	2					2	2.5		2.5				1.5		1.5	2.3
Mount Wilson	K2-3	4	4	4	4	3	3	3	3			2	2	2	2	2	2	3			3			3	3	3				2	3	2	2.8
Tokyo	K2-3	3.5	3.5	3.5	3	3	3		2.5	2.5	2.5		2	2	2	2	2	2	2	2.5	2.5	2.5		2.5	3		3	3		2	2		2.6
	Mean	3.5	3.5	3.6	3.3	3.2	3.0	3.0	2.8	2.6	2.6	2.4	2.2	2.2	2.2	2.2	2.2	2.3	2.4	2.7	2.6	2.6	2.8	2.8	2.8	2.7	2.8	2.8	2.5	2.6	2.2	1.9	2.6

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No. 46 International Astronomical Union April / June 1939

QUARTERLY BULLETIN ON SOLAR ACTIVITY

Published by the Eidgen. Sternwarte in Zürich

CHARACTER FIGURES OF SOLAR PHENOMENA

Co-operating Observatories: Abastuman, Arcetri-Firenze, Belgrade, Cambridge (England), Catania, Coimbra, Ewhurst (Mr. Evershed), Greenwich and Cape-Town, Kodaikanal, Lyons, Kiew, Meudon-Paris, Mount Wilson, Roma-Monte Mario, Simeis, South Hadley, Stonyhhurst, Tashkent, Tokyo, Zurich.

Calcium-Flocculi.

The character figures are assigned on the scale of 0, 1, 2, 3, 4, 5. The numbers refer to the area and intensity of the flocculi; 0 representing absence or rarity, 5 extreme abundance and intensity.

April

Observatory		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	Mean
Arcetri/Firenze	K3										3.5	3	3	2.5	3.5			3.5				3.5											3.2
Cambridge/Kodaikl.	K2-3	1,5	2	2	2	2.5	2.5	2.5	2.5	3	3	3.5					3	3	3	3	3	3.5	3.5	3.5	3.5	3.5	4	4	4	4	4		3.1
Coimbra	K3								3	3			3	3	3	3	3	3	3	3	3	3	3	3.5	3.5		3.5	4	4	4	4		3.3
Meudon	K3		2			2.5	2.5		3.5	3.5	3.5	3	3	3		3		3	3	3	3	3.5	3.5			4		4	4				3.2
Mount Wilson	K2-3				2	2	3	2	3	3	3	3	3			3	3	3	3	3	3	3	3	3	4	4	4	4	4	4	4		3.2
Tokyo	K2-3	2						3	3	3	3	3	3		3	3		3	3	3	3				3.5	3.5		4	4	4	4		3.2
	Mean	1.8	2.0	2.0	2.0	2.3	2.7	2.5	3.0	3.1	3.2	3.1	3.0	2.8	3.2	3.0	3.0	3.1	3.0	3.0	3.0	3.3	3.2	3.3	3.6	3.8	3.8	4.0	4.0	4.0	4.0		3.1

May

Observatory		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	Mean
Arcetri/Firenze	K3															4																	—
Cambridge/Kodaikl.	K2-3	4	4	4	4	4			3.5	4	4	4	3.5	3.5	3.5	3.5	3.5	3.5	3	3	3	3	2.5	3	3	3	3	3	3.5	3.5	3.5	4	3.5
Coimbra	K3	4	4	4	4			3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5		3	3			3	3	3	3	3.5	3.5	3.5	3.5	4	4		3.5
Meudon	K3	4				4	4		3.5	3.5	3.5	3.5			3			2.5	3		3	3	3	3	3	3	3.5	4	4	4.5	4	4	3.5
Mount Wilson	K2-3	4	4	4	4	4	3	3	3	3	3	3	3	4	3	3	3	3	3	3	3	3	3	3	3	4	4	4	4	4	4	4	3.4
Tokyo	K2-3			4	4	4	4			3.5	3.5	3.5				3.5	3.5	3	3	3	3	3	3				3.5	4				4.5	3.5
	Mean	4.0	4.0	4.0	4.0	4.0	3.7	3.2	3.4	3.5	3.5	3.5	3.3	3.7	3.2	3.5	3.3	3.0	3.0	3.0	3.0	3.0	2.9	3.0	3.0	3.4	3.5	3.7	3.8	4.0	3.9	4.1	3.5

June

Observatory		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	Mean
Arcetri/Firenze	K3				3.5	4	4	3.5	3.5	4							3.5		3				2	2.5			3		3.5		3.5		3.3
Cambridge/Kodaikl.	K2-3	4	4	4	4	4	4	4	4	3.5	3.5	3.5	3			3	3	3		3.5	3	3	2.5	2.5	3	3	3	3	3	3	3.5		3.4
Coimbra	K3													3.5	3.5	4		4	4	4	3.5	3.5	3.5				3	3	3	3	3		3.5
Meudon	K3	4			3.5	4	4	4	4	3.5	3.5	3.5	3.5	3.5		4	4	4	4	3.5	3.5	3.5		3.5				4		4	4		3.8
Mount Wilson *	K2-3																																—
Tokyo	K2-3		4	4	4	4	3.5			3	3				3	3	3	3	3	3	3	2.5		2.5	2.5						3.5		3.2
	Mean	4.0	4.0	4.0	3.8	4.0	3.9	3.8	3.8	3.5	3.3	3.5	3.2	3.5	3.2	3.5	3.4	3.5	3.5	3.5	3.2	3.1	2.7	2.8	2.8	3.0	3.0	3.3	3.2	3.3	3.5		3.4

* The 60-foot tower telescope has been out of use since June 1 because of alterations.

京大 15.3.29 書文天

No. 47 International Astronomical Union July / September 1939

QUARTERLY BULLETIN ON SOLAR ACTIVITY

Published by the Eidgen. Sternwarte in Zürich

CHARACTER FIGURES OF SOLAR PHENOMENA

Co-operating Observatories: Abastuman, Arcetri-Firenze, Belgrade, Cambridge (England), Catania, Coimbra, Ewhurst (Mr. Evershed), Greenwich and Cape-Town, Kiew, Kodaikanal, Lyons, Madrid, Meudon-Paris, Mount Wilson, Roma-Monte Mario, Simeis, South Hadley, Stonyhhurst, Tashkent, Tokyo, Zurich.

Calcium-Flocculi.

The character figures are assigned on the scale of 0, 1, 2, 3, 4, 5. The numbers refer to the area and intensity of the flocculi; 0 representing absence or rarity, 5 extreme abundance and intensity.

Observatory		July 1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	Mean
Arcetri/Firenze	K3	3		3.5	3.5	3.5	3	3	3		3			3						2.5	2.5	3				3	2.5	1.5	1.5	2	2	1.5	2.7
Cambridge/Kodaikl.	K2-3			3.5		3.5	3	3.5			3.5	3.5	3.5			3	2.5	2.5	2.5		2.5	2.5	2.5	2.5	2	2.5	2.5	2.5	2.5	2	2.5	2.5	2.8
Coimbra	K3	3.5	3.5	3.5	3.5	3	3	3	3	3	3	3	3	3		3.5	3.5	3			3	3	3	3	2.5	2.5	2.5	2.5	2.5	2.5		3	3.0
Meudon	K3		3.5	4	4	3.5	3		4	4	4	3	4	4	3.5		3	3		2.5	3	3		3	3	2.5		2.5	2	2.5	3	3.5	3.2
Mount Wilson *	K2-3																																
Tokyo	K2-3		3.5	3	3		3	3	3	3.5	3.5		3.5	3	3	3	3	3	3	3	3	3	3	3	2.5	2.5	2.5	2.5	2	2	2.5	2.5	2.9
	Mean	3.2	3.5	3.5	3.5	3.4	3.0	3.1	3.2	3.5	3.4	3.2	3.5	3.2	3.2	3.2	3.0	2.9	2.7	2.7	2.8	2.9	2.8	2.9	2.5	2.6	2.5	2.3	2.1	2.2	2.5	2.6	3.0

Observatory		August 1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	Mean
Arcetri/Firenze	K3	2	2	2		2		2.5				3.5	3.5																3	3	3.5		2.7
Cambridge/Kodaikl.	K2-3	3	3	3	3.5	3.5	4	4	3.5	3.5	3.5	4				3	3			4	4	3.5	3.5	3.5	3.5	3.5	3.5	3.5	4	3.5	4	3.5	3.5
Coimbra	K3	3	3	3	3	3	3	3.5	3.5	3.5	3.5	3.5	3.5	4	4.5	4.5							3.5	3.5		3.5	3.5	3.5	3.5			3.5	3.5
Meudon	K3		3.5	3.5	3.5			4	3.5	3.5			4	3.5	4	4	4	4	4	4.5	4	4	4				3	4	3.5	4		4.5	3.8
Mount Wilson *	K2-3																																
Tokyo	K2-3	2.5	3	3.5			3.5	3	3.5	3.5	3	3	3.5	3.5	3.5	3.5	3.5	3.5	3.5			3	3	3	3	3	3	3	3.5	3.5	3.5	3.5	3.3
	Mean	2.6	2.9	3.0	3.3	2.8	3.5	3.4	3.5	3.5	3.3	3.5	3.6	3.7	4.0	3.8	3.5	3.8	3.8	4.2	4.0	3.5	3.5	3.3	3.2	3.3	3.2	3.5	3.5	3.5	3.7	3.8	3.5

Observatory		September 1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	Mean
Arcetri/Firenze	K3	3								3.5		3.5	2.5								2					3	3						2.9
Cambridge/Kodaikl.	K2-3	4	3.5	3.5	4	4	4	3.5	3.5	3.5	4	3.5	3.5	3.5	3.5	3	3		3	3	3	3	3	3	3.5	3.5	4	4	4	4	4		3.5
Coimbra	K3			4	4	4	4	4	4	4	4	4			3.5	3.5		3	3	3				3.5	3.5		4						3.7
Meudon	K3	4.5	4.5			4	4	3.5	4	4	4		4	4		3.5	3	3			3.5	3.5	4	4	4	4	4	4	4.5	5	5		4.0
Mount Wilson *	K2-3																																
Tokyo	K2-3	3.5	3.5	3		3	3	3	3	3.5	3.5	3.5	3.5	3.5	3	2.5	2.5	2.5		2.5		2.5			3.5	3.5	4	4		4	4		3.3
	Mean	3.8	3.8	3.5	4.0	3.8	3.8	3.5	3.6	3.7	3.9	3.6	3.4	3.7	3.3	3.1	2.8	2.8	3.0	3.5	2.8	3.0	3.5	3.5	3.6	3.5	3.8	4.0	4.2	4.3	4.3		3.5

* The 60-foot tower telescope is still out of use because of alterations.

No. 48 International Astronomical Union October / December 1939

QUARTERLY BULLETIN ON SOLAR ACTIVITY

Published by the Eidgen. Sternwarte in Zürich

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15. 6. 10
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CHARACTER FIGURES OF SOLAR PHENOMENA

Co-operating Observatories: Abastuman, Arcetri-Firenze, Belgrade, Cambridge (England), Catania, Coimbra, Ewhurst (Mr. Evershed), Greenwich and Cape-Town, Kiew, Kodaikanal, Lyons, Madrid, Meudon-Paris, Mount Wilson, Roma-Monte Mario, Simeis, South Hadley, Stonyhhurst, Tashkent, Tokyo, Zurich.

Calcium-Flocculi.

The character figures are assigned on the scale of 0, 1, 2, 3, 4, 5. The numbers refer to the area and intensity of the flocculi; 0 representing absence or rarity, 5 extreme abundance and intensity.

Observatory		October 1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	Mean
Arcetri/Firenze	K3																								3						3		
Cambridge/Kodaikl.	K2-3	4		4	4	3.5	3.5	3.5	3	3	3	3	3	2.5	2.5	3		3	3	3	3		3.5	4	4	4	4	4	4	3.5	3.5	3	3.4
Coimbra	K3					4					3.5	3.5	3.5			3.5	3.5		3	3.5	3.5	4			4	4	4	4	4				3.7
Meudon	K3		5	4.5				3.5	3.5		3		2.5			2				2.5			3.5	3.5		3					3.5	3	3.3
Mount Wilson	K2-3																											3	3	3	3	3	3.0
Tokyo	K2-3	4	4				3	3	2.5			2.5		2.5	2.5	2.5			2.5	2.5	3	3		3.5				3.5	3.5	3.5	3.5	3	3.1
	Mean	4.0	4.5	4.2	4.0	3.8	3.2	3.3	3.0	3.0	3.2	3.0	3.0	2.5	2.5	2.8	3.5	3.0	2.8	2.9	3.2	3.5	3.5	3.7	3.7	3.7	4.0	3.6	3.6	3.3	3.3	3.0	3.4

November

Observatory		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30		Mean
Arcetri/Firenze	K3															3								2.5	3.5								
Cambridge/Kodaikl.	K2-3				3	2.5	2.5			2.5		2.5	2.5	3					4.5	4	4	4	3.5	3.5	3	3	3.5	3	3	3	3		3.2
Coimbra	K3				3					3	3				3.5	3.5		4	4	4	4	4	4	4		4	4	3.5	3	3	3		3.6
Meudon	K3	2.5				2.5	2	2			1.5					2				3.5			3	3		3.5			2.5				2.5
Mount Wilson	K2-3	3	3	3		2	2	2		2	2	2	2	2	2	3		4	4	4	4	4	3	3		3			3	3	3		2.8
Tokyo	K2-3	3		3		3		2.5	2	2		2	2.5	2.5		2.5	2.5					3.5		3.5		3	3	3	2.5	2.5	2.5		2.7
	Mean	2.8	3.0	3.0	3.0	2.5	2.2	2.2	2.0	2.4	2.2	2.2	2.3	2.5	2.8	2.8	2.5	4.0	4.2	3.9	4.0	3.9	3.4	3.2	3.2	3.3	3.5	3.2	2.8	2.9	2.9		3.0

December

Observatory		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	Mean
Arcetri/Firenze	K3								2		1.5											2	2								1.5		
Cambridge/Kodaikl.	K2-3	3	3		3	2.5	2	2	2		2.5	2.5			3		3	3	3	3	3	3	3	3	3	2.5	2.5	2	2	2	2	1.5	2.6
Coimbra	K3	3	3	3				2.5				2.5	2.5		3									3				2.5	2.5				2.8
Meudon	K3			2.5				2		2						2.5					2.5	2.5	2.5	2	2								2.3
Mount Wilson	K2-3	3		3	3	2	2	3	2	2	2		3	3	3	3	3	3	3	3	3	3	3			3	3	2	2	2	2	2	2.6
Tokyo	K2-3	2.5	2.5	2.5	2	2			2	2	2	2	2.5	2.5	3	3		3	3	3	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2	2	2.4
	Mean	2.9	2.8	2.8	2.7	2.2	2.0	2.4	2.0	2.0	2.0	2.3	2.7	2.8	3.0	2.8	3.0	3.0	3.0	3.0	2.8	2.6	2.6	2.6	2.5	2.7	2.7	2.2	2.2	2.2	1.9	1.8	2.5