



BULLETIN FOR CHARACTER FIGURES OF SOLAR PHENOMENA

Published by the

Eidgen. Sternwarte in Zürich

Co-operating Observatories : Arcetri-Firenze, Cambridge (England), Catania, del Ebro, Ewhurst (Mr. Evershed), Greenwich and Cape Town, Kodaikanal, Kyoto-Kwasan, Lyons, Kiew, Meudon-Paris, Mount Wilson, Roma/Campid., South Hadley, Stonyhurst, Tokyo, Zürich.



Character Figures for 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. As central zone a circular surface of a semi-diameter of the sun's disc has been taken.

Whole Sun Disc

Observatory		April																														Mean	
		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
Arcetri/Firenze	K3																																
Cambridge/Kodaikl.	K2-3	0.5	0.5	0.5	0.5	0.5	0	0	0	0	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5*	0.5*	0.5*	0.5*	0.5	0.5	0.5	
del Ebro	K2			0.5		0.2	0	0.2	0		0.2	0.2	0.5	0.7				0.5	0.5	0.5	0.5			0.7			0.7	1			1		
Kwasan	K2	1	0.5	0.5	0.5	0	0	0	0				0	0.5			0	0.5	0.5	0.5	0.5	0.5	1				1			1.5			
Meudon	K3	0		0.5			0	0	0	0		0	0										1	1	1	1			1				
Mount Wilson	K2	1	1	1	0.5	0	0	0	0	0	0	0	0	0.5	0	0.5	0.5	0.5	0					1	1	1				1	1	0.5	
Tokyo	K2-3	1	1	1		1	0			0.5		1		1	1		1	1			1	1	1	1			2			2			
Mean		0.7	0.8	0.7	0.5	0.5	0.1	0	0	0.1	0	0.4	0.2	0.4	0.6	0.2	0.5	0.5	0.5	0.5	0.5	0.6	0.7	0.9	0.8	0.8	1	0.8	0.8	0.8	1.2	0.8	

March

Arcetri/Firenze	K3											1		1	1		1.5			1.5										0.5							
Cambridge/Kodaikl.	K2-3	0.5	0	0	0	0	0	0	0.5	0.5	0.5	0.5	0.5	0.5	0.5	1*	1*	1*	1	1	1	1	1	1	1	1	1	1	1	1	1*	1*	0.5	0.5	0.5	0.5	0.6
del Ebro	K2		0	0				0	0.7	1	0.7	0.7	1	1			1.7	2	2.5						2.2		2.2	1.7		1	1.2	1	1	1	1.1		
Kwasan	K2	0	0	0							0.5	0.5				1	1.5	1.5	1							2	2			2	1.5	1.5	1	1	1.1		
Meudon	K3				0	0	0	0.5	0.5	0.5				0.5					2	2	2	1.5	1.5		1.5	1.5			1	1	1	1	1	1	1.0		
Mount Wilson	K2	0				0		0	0.5	0.5	1	1	1	1	1	1	2	2		2	2	2	2	2	2	2	2	2	1	2	1	1	1	1	0.5	1.2	
Tokyo	K2-3	1	0	0	0	0	0	0			1.5	2		2		2	2	3							3			3		2	2		2		1.4		
Mean		0.5	0	0	0	0	0	0	0.4	0.6	0.7	1	0.8	1	0.8	1.2	1.5	1.8	1.9	1.6	1.5	1.3	1.7	1.6	2	1.2	2	1.5	0.9	1.2	1.1	0.7	1.0	1.0			

June

Arcetri/Firenze	K3				0.5						1	1.5																		1	1				1.0
Cambridge/Kodaikl.	K2-3	0.5	0	0.5	0.5	0.5	1	1*	1*	1*	1*	1*	1	1	1	0.5	0.5	0.5	0.5		1	1*	1*	1	1	1	1	1	1	1	1	1	1*	0.5*	0.8
del Ebro	K2	0.5	0	0.5	0.7	0.7	0.7	0.7	1.2	1.2						0.7	1	1.2	1.5					1.7	1.7	1.7		1.7	2	1.7				1.1	
Kwasan	K2	0	0	0					2	2.5	2	1.5								1.5								2			1.5	1.5		1.5	
Meudon	K3	0	0	0.5	0.5			1	1.5	1.5	1.5	1.5	1.5	1.5	1	0.5	0.5	1	1	1.5	1.5		1.5	1.5	1	2	2	2	2	2	2	1	1	1.2	
Mount Wilson	K2	0	0	0		1	1	1	1	2	2	2	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1.1
Tokyo	K2-3	0								2	2									2	2									2	2			1.7	
Mean		0.2	0	0.5	0.4	0.6	0.9	0.9	1.3	1.2	1.8	1.7	1.5	1.2	1	0.7	0.8	0.9	1	1.4	1.6	1.6	1.3	1.3	1	1.4	1.6	1.3	1.4	1.1	1.2		1.1		

Central Zone

Observatory		April																														Mean		
		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	
Arcetri/Firenze	K3																																	
Cambridge/Kodaikl.	K2-3	0.5	0.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0.5	0.5	0.5	0.5	0	0	0	0	0	0	0.5	0.5	0.5	0.5	0	0	0	0.2
del Ebro	K2			0.2				0	0	0	0								0.5	0.5					0.7			1	1.5				0	
Kwasan	K2	1	0.5	0	0	0	0	0								0	0.5			0	0.5	0	0	0	0	0.5					0		0.2	
Meudon	K3	0.5			0			0	0	0	0													0	0.5	1.5	1.5						0	
Mount Wilson	K2	1	0.5	0	0	0	0	0	0	0.5	0	0	0	0		0.5	0.5	1	0.5	0	0				0	1	1				0	0	0	
Tokyo	K2-3	1	0.5	0		0	0			1		1		1	1		1	1			0	0.5	0	0				2			0		0.6	
Mean		0.8	0.5	0	0	0	0	0	0	0.2	0	0.2	0	0.3	0.6	0.5	0.6	0.6	0	0	0.2	0	0.1	0.6	1	1.2	1	0.8	0	0	0	0	0.3	

May

Arcetri/Firenze	K3											1		1	1		1													1				1.0	
Cambridge/Kodaikl.	K2-3	0	0	0	0	0	0	0	0	0	0	0	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0	0	0	0.3	
del Ebro	K2	0	0	0				0	0	0.2	0	0	1.2	1.2			0.7	1.2	1.5						1.5		1.5	1.5		1.5	1.5	0.2	0	0.7	
Kwasan	K2	0	0	0												1.5	1	1	1									2	1		2	1.5	0.5	0	0.8
Meudon	K3				0	0	0	0	0					1					1.5	1.5	1.5	1.5	1.5		1.5	1.5				1.5	0	0	0	0.7	
Mount Wilson	K2	0				0		0	0	0	1	1	1	2	2	1	2		1	2		1	2		2	2	2	2	2	2	2	1	0	0	1.1
Tokyo	K2-3	0	0	0	0	0	0	0			0	0		2	2		2	2		1	2									3	0	0		0.7	
Mean		0	0	0	0	0	0	0	0	0	0.3	0.9	1.1	1.2	1.5	0.8	1.2	1.3	1	1.3	1	1.3	1.5	1.2	1.3	2	1.7	1.1	0.1	0	0	0	0.7		

June

Arcetri/Firenze	K3				0						1	1.5																						0.5
Cambridge/Kodaikl.	K2-3	0	0	0	0	0	0	0.5	0.5	1	1	1	0.5	0.5	0	0	0	0	0		0	0.5	0.5	0.5	0.5	0.5	0	0	0	0.5	0.5		0.3	
del Ebro	K2	0	0	0	0	0	0.2	1	1	1.5						0.2	0.2	0.7	0.5					1.7	2	2.2		0.2	0	0			0.6	
Kwasan	K2	0						2	2	3	0.5																							1.3
Meudon	K3	0	0	0			1.5	1.5	2	3	1	1	1	0	0	0.5	0.5	0.5	0.5	1	1.5		2.5	2.5	1.5	0.5	0	0	0	1.5	1.5		0.9	
Mount Wilson	K2	0	0	0		1	1	2	2	2	1	2	1	0	0	1	1	1	1	1	1	1	2	2	2	2	0	0	0	1	2	2		1.1
Tokyo	K2-3	0								3	2																			0	2			1.1
Mean		0	0	0	0	0	0.4	1	1.4	1.5	2.2	1.6	1	0.8	0	0	0.4	0.6	0.5	0.8	0.6	1.4	1.8	1.8	1.3	0.3	0	0	0.2	1.2	1.6		0.7	

\* Days of special activity

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Whole Sun Disc

Observatory		July																															Mean
		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	
Arcetri/Firenze	K3	1.5			1	1	1																			0.5						0.5	
Cambridge/Kodaikl.	K2-3	0.5	0.5		0.5	1	0.5	0.5		0.5	0.5		0	0.5	0.5	0.5	0	0	0	0	0	0	0	0			0	0	0.5	0.5			
del Ebro	K2			1.7	1.7		1.7		1.5	1.2		0.7	0.7	1	1.2	1	1.2		0.7			1			0.7							1.2	
Kwasan	K2				2	2						1	0.5	1	0	0			1	1.5	1	1	1	1		0.5		0	0.5	1	1		
Meudon	K3	2	2	2	2	2	2		1	1	1	0.5	0	0			0		0.5	0.5				0	0		0	0	0.5	0.5			
Mount Wilson	K2	2	2	2	2	1	1	1	1	1	1	0	0	0	0	0	0	0	0.5	1	1	1	0.5	0.5	0	0.5	0.5	0.5	0.5	1	1		
Tokyo	K2-3				1.5						0.5		0.5	0	0.5								1	1	1	1	1	0.5	0	0.5	1		
Mean		1.5	1.5	1.9	1.5	1.4	1.2	0.8	1.2	0.8	1	0.5	0.4	0.5	0.3	0.4	0.6	0.3	0.7	0.8	0.6	0.6	0.6	0.5	0.4	0.6	0.2	0.1	0.5	0.8	0.8		

August

Arcetri/Firenze	K3	0.5	0.5		0.5			0.5		0.5	0.5	0.5	0.5								0.5		0.5	0.5			0.5	0.5			0.5
Cambridge/Kodaikl.	K2-3	0.5	0.5		0.5			0.5		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.5	0.5	0.5	0.5			
del Ebro	K2			0.7	0.7		0.7	0.7	0.5	0.2	0.2	0.5						0	0	0					0.5	0.7	1.2		1.7	1.2	1.2
Kwasan	K2	1	1	0.5	0.5			0.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.5	0.5		1	1	1
Meudon	K3	0.5			0.5		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.5	0.5		1		0.5
Mount Wilson	K2	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	1	1
Tokyo	K2-3		0.5		0.5		0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.5					0.5
Mean		0.7	0.7	0.7	0.6	0.3	0.2	0.3	0	0.1	0.2	0.1	0.1	0	0	0	0	0	0	0	0	0.1	0	0.1	0.2	0.4	0.7	0.8	0.8	1.2	0.8

September

Arcetri/Firenze	K3							0																								
Cambridge/Kodaikl.	K2-3	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
del Ebro	K2			0.2	0.2		0	0	0	0	0	0	0	0.2	0.2	0.2		0.2	0.2		0.5	0.5		0.2	0.5		0.5	0.2	0.2	0.2		
Kwasan	K2	0.5	0.5	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.5		0		0			0.5		0		
Meudon	K3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
Mount Wilson	K2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
Tokyo	K2-3	0	0	0	0																											
Mean		0.1	0.1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2	0.2	0	0	0.1	0	0.2	0.1	0.1	0.1	

Central Zone

Observatory		July																															Mean
		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	
Arcetri/Firenze	K3	1			0.5	1	1																			0.5					0.5		
Cambridge/Kodaikl.	K2-3	0.5*	0.5		0	1	0.5	0.5		0		0	0	0	0	0	0	0	0.5	0.5	0.5	0	0	0			0	0	0	0			
del Ebro	K2			0.5	0.7		2		1.2	0.5		0.2	0.2	0.2	0.2	0.5	0.7		0.7			0.2			0.5					0.5			
Kwasan	K2				1	1						0	0	0.5	0	0			1	1.5	1	1	0.5	0.5		0		0	0.5	0.5			
Meudon	K3	2.5	2.5	1	1	2	2		1.5	0	0	0	0	0	0	0	0	0.5		1	1	1	0.5	0.5	0	0	0	0	0	0			
Mount Wilson	K2	2	2	1	1	2	1	2	1	0	0	0	0	0	0	0.5	0	1	1	1	1	0.5	0.5	1	0.5	1	0.5	0.5	0	0.5			
Tokyo	K2-3				0.5				0	0	0	0	0	0	0	0	0	0					0	0	0.5	0.5	0	0	0.5	0.5			
Mean		1.5	1.7	0.8	0.7	1.4	1.3	1.2	1.2	0.1	0	0	0	0.2	0	0.2	0.2	0.5	0.8	1	0.9	0.4	0.2	0.3	0.4	0.5	0.1	0.1	0.3	0.2	0.3		

August

Arcetri/Firenze	K3	0.5	0.5		0.5			0		0	0	0.5	0									0		0.5	0			0.5	0.5		
Cambridge/Kodaikl.	K2-3	0	0.5*	0.5*		0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
del Ebro	K2			1.2	1.2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2	0.7	1.5		1	0.7	0.7
Kwasan	K2	0.5	1	0.5	0			0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.5	1	0.5	0.5	
Meudon	K3	1			1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.5	1	0.5	0.5	
Mount Wilson	K2	1	1	1	0.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.5	1	1	0.5	0.5	1	1
Tokyo	K2-3		0.5		0.5		0	0		0	0	0	0	0	0	0	0	0							0.5						0
Mean		0.6	0.7	0.8	0.6	0	0	0	0	0	0	0.1	0	0	0	0	0	0	0	0	0	0	0	0.1	0	0.2	0.8	0.8	0.6	0.6	0.4

June

Arcetri/Firenze	K3							0																							
Cambridge/Kodaikl.	K2-3	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
del Ebro	K2			0	0	0	0	0	0	0	0	0	0	0	0.2	0.2		0.2	0.2		0.5	0.7		0.2	1		0.2	0	0	0	
Kwasan	K2	0	0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Meudon	K3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Mount Wilson	K2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.5	0.5	0.5	0.5	0	0	0
Tokyo	K2-3	0	0	0																											
Mean		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2	0.4	0.2	0.2	0.4	0	0	0

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Whole Sun Disc

Table for Whole Sun Disc in October. Columns: Observatory, K3, K2-3, K2, K3, K2, K3, K2-3, Mean. Rows: Arcetri/Firenze, Cambridge/Kodaikl., del Ebro, Kwasan, Meudon, Mount Wilson, Tokyo.

November

Table for Whole Sun Disc in November. Columns: Observatory, K3, K2-3, K2, K3, K2, K3, K2-3, Mean. Rows: Arcetri/Firenze, Cambridge/Kodaikl., del Ebro, Kwasan, Meudon, Mount Wilson, Tokyo.

December

Table for Whole Sun Disc in December. Columns: Observatory, K3, K2-3, K2, K3, K2, K3, K2-3, Mean. Rows: Arcetri/Firenze, Cambridge/Kodaikl., del Ebro, Kwasan, Meudon, Mount Wilson, Tokyo.

Central Zone

Table for Central Zone in October. Columns: Observatory, K3, K2-3, K2, K3, K2, K3, K2-3, Mean. Rows: Arcetri/Firenze, Cambridge/Kodaikl., del Ebro, Kwasan, Meudon, Mount Wilson, Tokyo.

November

Table for Central Zone in November. Columns: Observatory, K3, K2-3, K2, K3, K2, K3, K2-3, Mean. Rows: Arcetri/Firenze, Cambridge/Kodaikl., del Ebro, Kwasan, Meudon, Mount Wilson, Tokyo.

December

Table for Central Zone in December. Columns: Observatory, K3, K2-3, K2, K3, K2, K3, K2-3, Mean. Rows: Arcetri/Firenze, Cambridge/Kodaikl., del Ebro, Kwasan, Meudon, Mount Wilson, Tokyo.

\* Days of special activity