

Description of maps

1) Sunspots:

The observations of 7 observatories are used. Differences in dividing spots into groups are equalized. In doubtful cases the decision is based on the magnetic polarities of spots, which we receive from Potsdam. Small A-groups, which are recorded under similar observing conditions only by one observatory and only for one day are generally ignored. The relative sunspot-number R is computed with the reduction factor 0,7

$$R = 0,7 (10 g + f)$$

The groups are classified according to the Zürich scale. They are represented by circles according to their seize, small for types A, B, J, medium for C, D, G, H and big circles for E and F. The centers of these symbols give the coordinates of the centers of gravity of the groups for 12^h U.T. Next to the group, type and number of spots are recorded, e.g. E 34.

2) Plages:

The plages are drawn by means of K₃-spectroheliograms in 3 different classes

shredded and weak	hatched
continuous	bordered
continuous and bright	bordered and hatched

This representation does not imply a photometric scale. Gap days and only these are bridged by using the Cartes Journalières of Meudon, if available.

3) Filaments, Prominences and Disparitions Brusques:

Filaments also are drawn in their position at 12^h U.T. For prominences important changes within 24 hours are presented in supplementary drawings. Observatory and time of observation are recorded then. Disparitions Brusques (DB's) are recorded as far as possible by giving the time interval of disappearance. Under-scored hours mean the observal beginning or the end of the phenomenon. Not under-scored hours belong to the last negative or drawing, on which the object was still at rest, or of the first on which the object was no more detectable.

4) Corona:

The brightness of the corona on the solar limb in λ 5303 is given in a 5 step scale.

step 1	11 to 30 10^{-6}	step 4	86 to 120 10^{-6}
2	31 to 55 10^{-6}	5	> 120 10^{-6} of the
3	56 to 85 10^{-6}		sun's brightness

The values supplied from Climax, Pic du Midi, Sacramento Peak and Wendelstein are given without change. The data from Kanzelhöhe, coming in a 50 step scale, are transformed into our 5 step scale. The data of Tokyo also come in a 5 step scale, which roughly fits our scale. To fill gaps occasionally Tokyo data shortly before or after 0^h U.T. are used for the preceding or following day.

5) Flares:

Flare positions are not reduced to 12^h U.T. Underscored hours give the beginning or the end of the phenomena, not underscored beginning or end of observation. When several subflares occur in the same spotgroup, they are summarized by giving their number, their average position, beginning time of the first and end of the last. Sometimes because of lack of space also flares of importance 1 are summarized. This happened in 1957

August 25,
September 10, 12, 13, 18, 19, 21
October 12, 13, 14, 16, 18, 19, 20, 23,
24, 25, 26, 28, 30, 31
November 24
December 23, 25

Written flare data are always preferred to telegrams, which often are not correct.

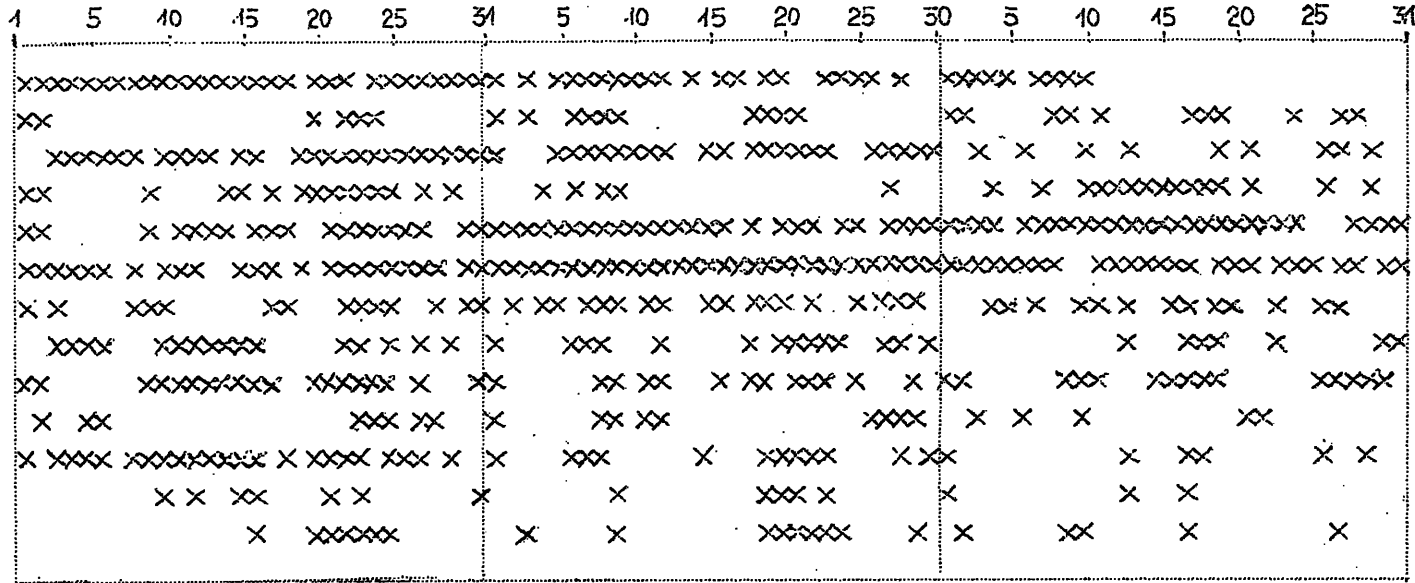
Department of Terrestrial Magnetism
5241 Broad Branch Road, N. W.
Washington 15, D. C.

We have received the following observations: 1956

October

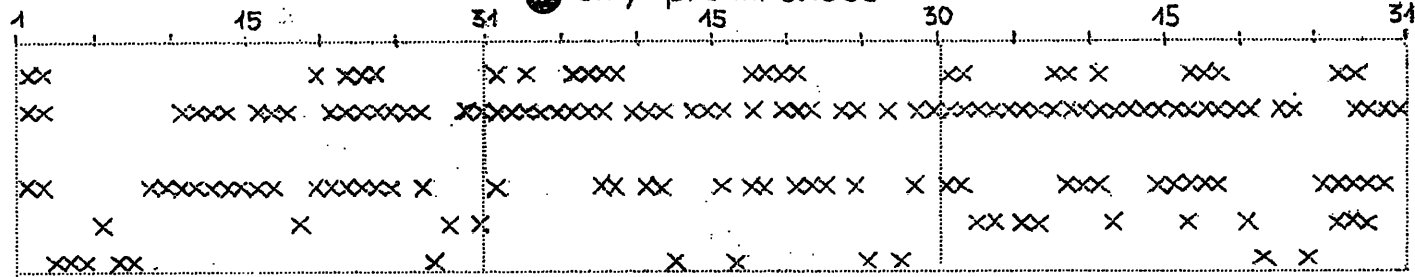
November

December

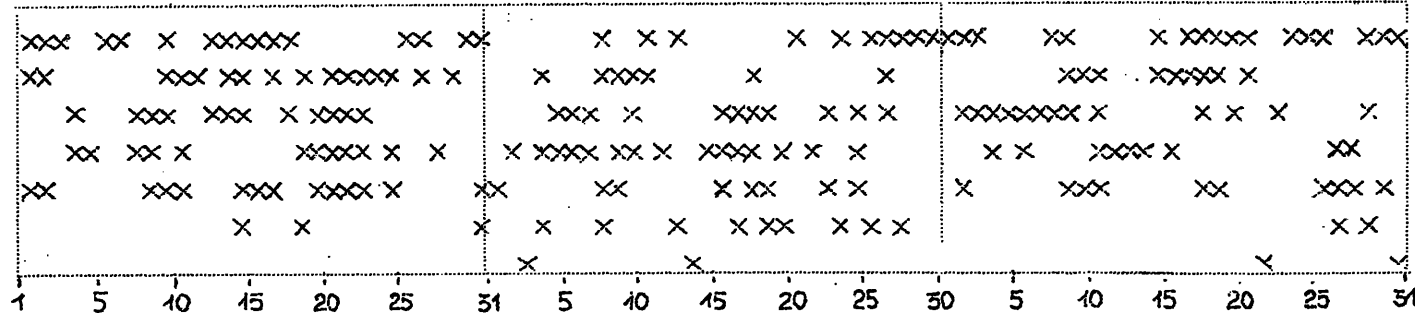


Hα

● only prominences



K₃



Corona

FEB 27 1957

Department of Terrestrial Magnetism
 5241 Broad Branch Road, N. W.
 Washington 15, D. C.

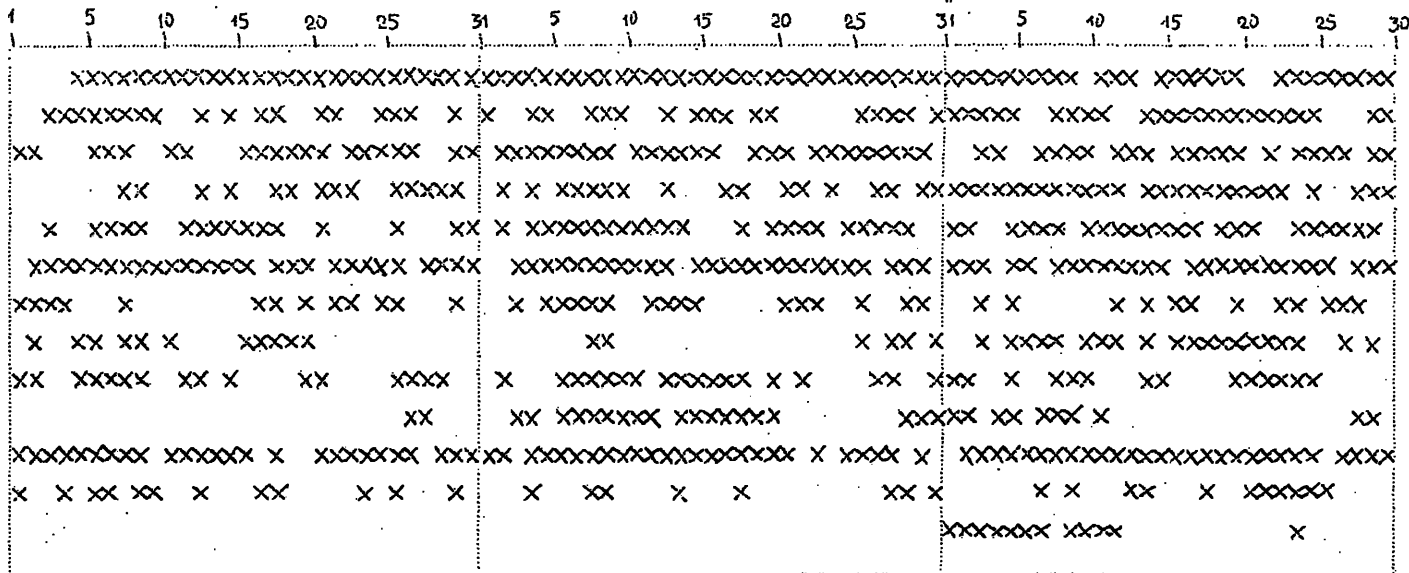
We have received the following observations: 1956

Juli

Aug.

Sept.

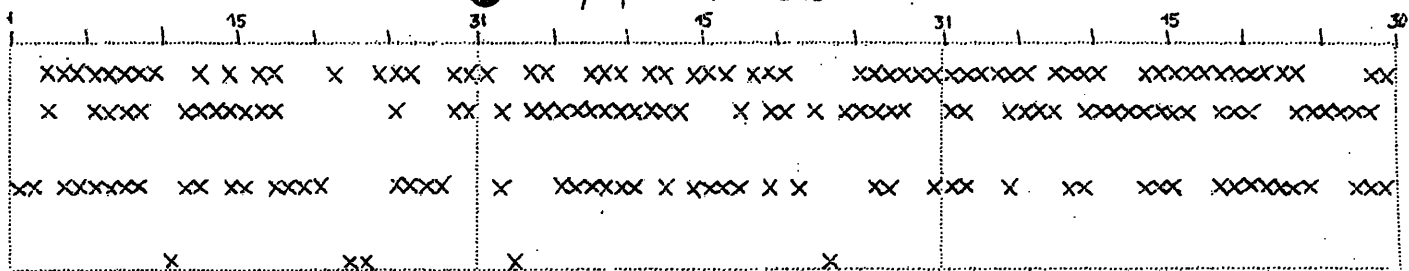
Capri G
 Freiburg
 G'wich
 K'höhe ●
 Kodaikanal
 Sac. Peak
 Sydney
 Uccle
 W'stein
 Jstanbul
 Meudon
 Potsdam ●
 Ondrejov ●
 gap day



H₂

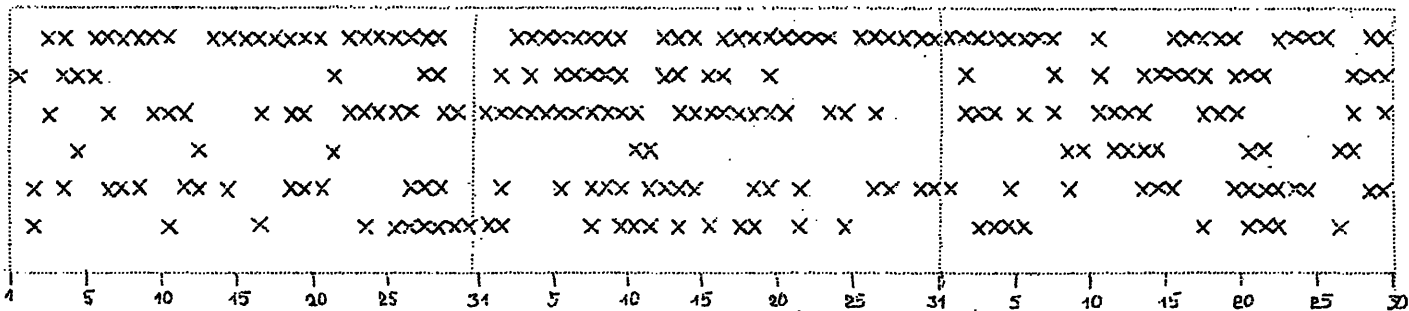
● only prominences

Freiburg
 Kodaikanal
 Tokyo
 W'stein
 (Arcetri)
 gap day



K₃

Boulder
 K'höhe
 Pic Midi
 Sac. Peak
 W'stein
 Tokyo
 gap day



Corona

[Handwritten signature]

We have received the following observations 1956

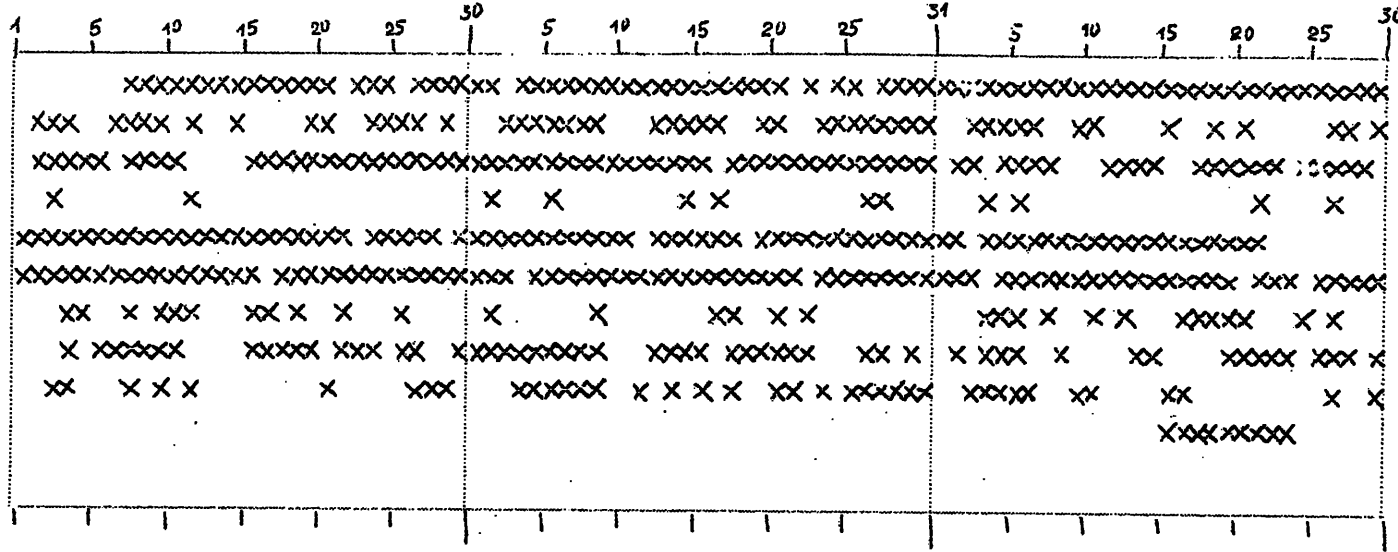
April

May

June

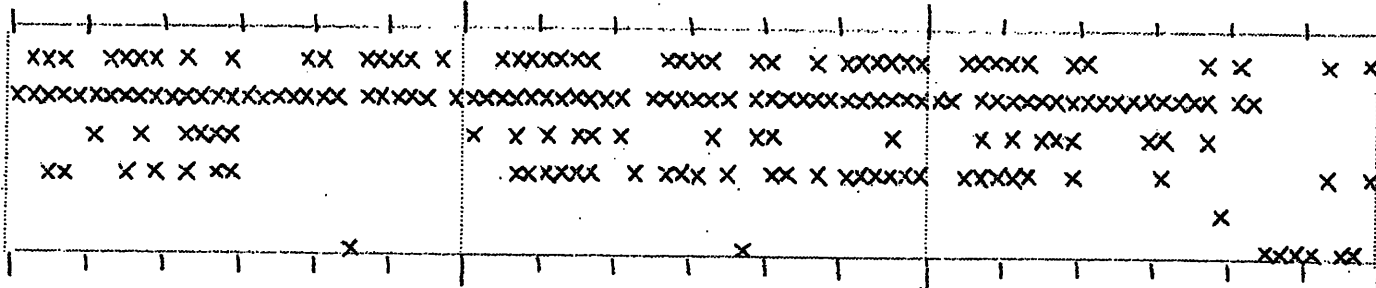
Capri G
Freiburg
Greenwich
Kanzelhöhe
Kodaikanal
Sac. Peak
Sydney
Uccle
Wendelstein
Istanbul

gap day



H_d

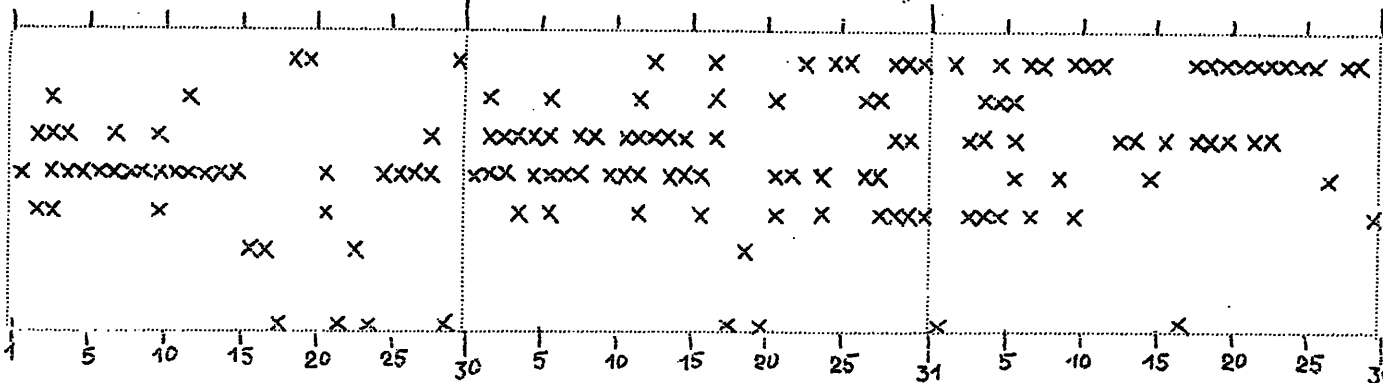
Freiburg
Kodaikanal
Tokyo
Wendelstein
(Arcetri)
gap day



K₃

Boulder
Kanzelhöhe
Pic Midi
Sac. Peak
Wendelstein
(Tokyo)

gap day



Corona

Department of Terrestrial Magnetism
5241 Broad Branch Road, N. W.
Washington 15, D. C.

Handwritten signature

SEP 7 1956

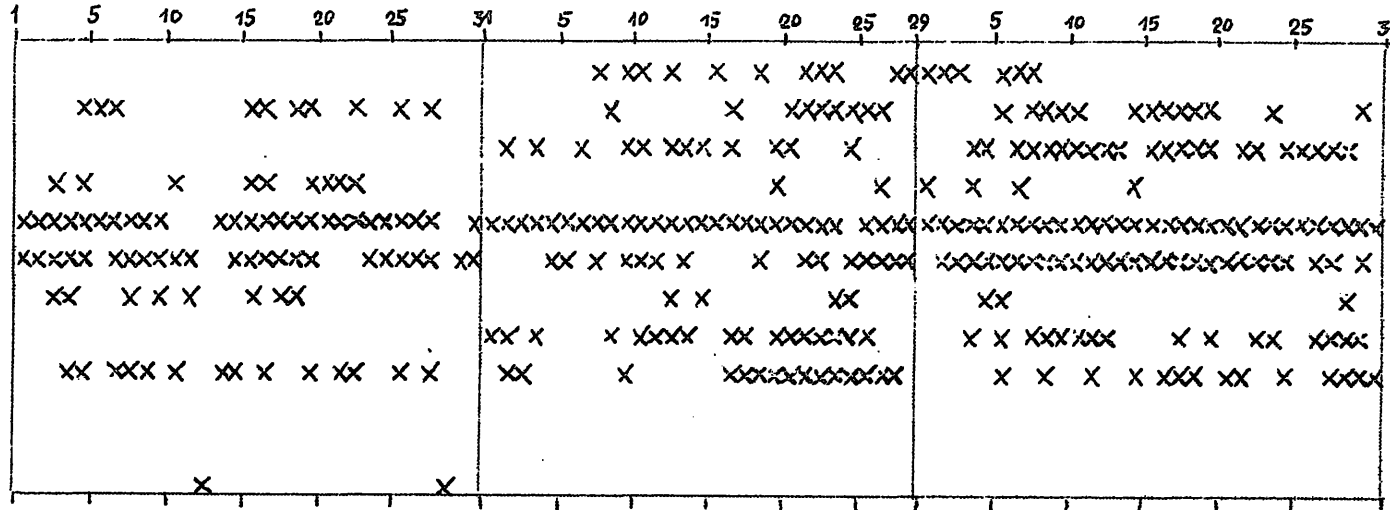
We have received the following observations

January

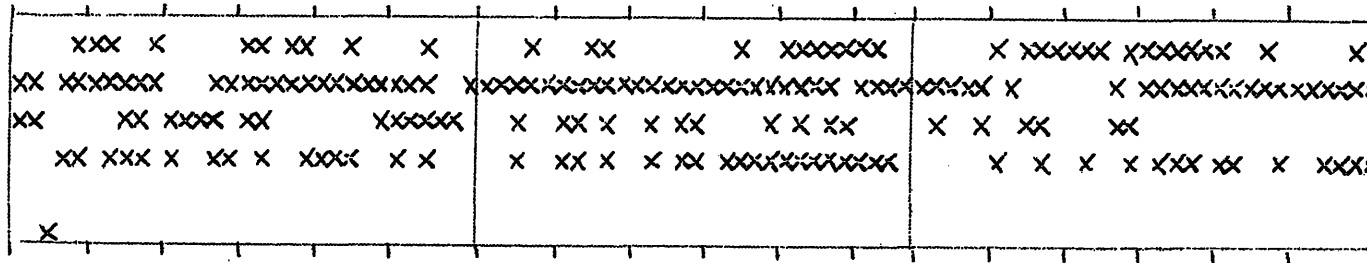
February

March 1956

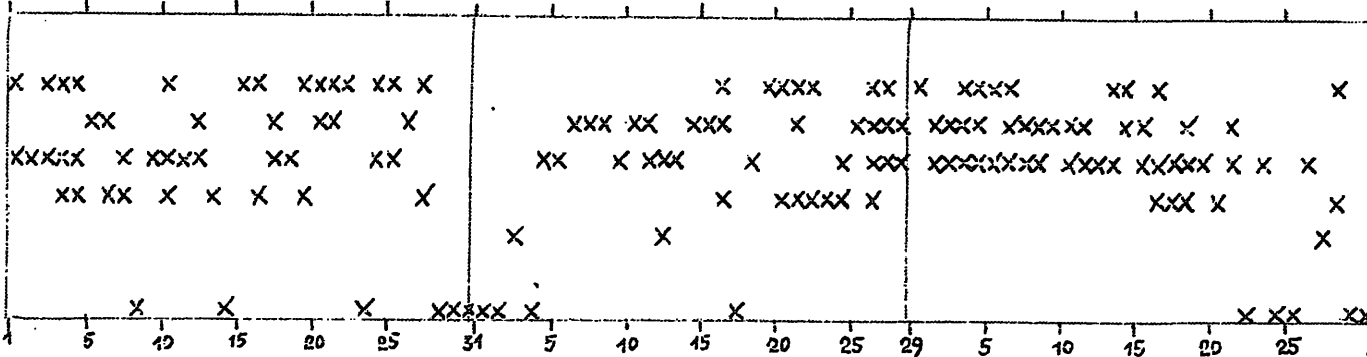
Capri G
Freiburg
Greenwich
Kanzelhöhe
Kodaikanal
Sac. Peak
Sydney
Uccle
Wendelstein



Freiburg
Kodaikanal
Tokyo
Wendelstein



Boulder
Kanzelhöhe
Pic Midi
Sac. Peak
Wendelstein
(Tokyo)



MAY 17 1956

FRAUNHOFER INSTITUT

MIT DEN OBSERVATORIEN SCHAUINSLAND UND ANACAPRI

FREIBURG IM BREISGAU
 SCHÖNECKSTRASSE 6

Gentlemen:

March 29, 1956

1) We want to inform you, that the observatories Greenwich, Ondrejov and Uccle are participating now in supplying us with their observations (see under 2).

2) List of contributing observatories

Station	Sunspots	H _α	K ₃	Corona λ 5303	Flares ⁺	
Boulder				x	B	
Capri (german)	x	x			C	
Freiburg	x	x	x		F	
Greenwich		x			G	
Istanbul	x				J	supplying
Kanzelhöhe	x	x		x	K	original
Kodaikanal		x	x		I	observations
Ondrejov					O	
Potsdam	x					
Sacr. Peak		x		x	P	
Sydney		x				
Tokyo			x		T	
Uccle		x			U	
Wendelstein	x	x	x	x	W	
Arcetri					A	
Capri (swedish)					S	
Edinburgh					E	
MacMath					H	
Meudon					M	via
Mt. Wilson					L	URSIGramm
Pic du Midi				x		
Stockholm					S	
Zürich					Z	

+) The abbreviations given in this column are those used on the maps in connection with the flare data

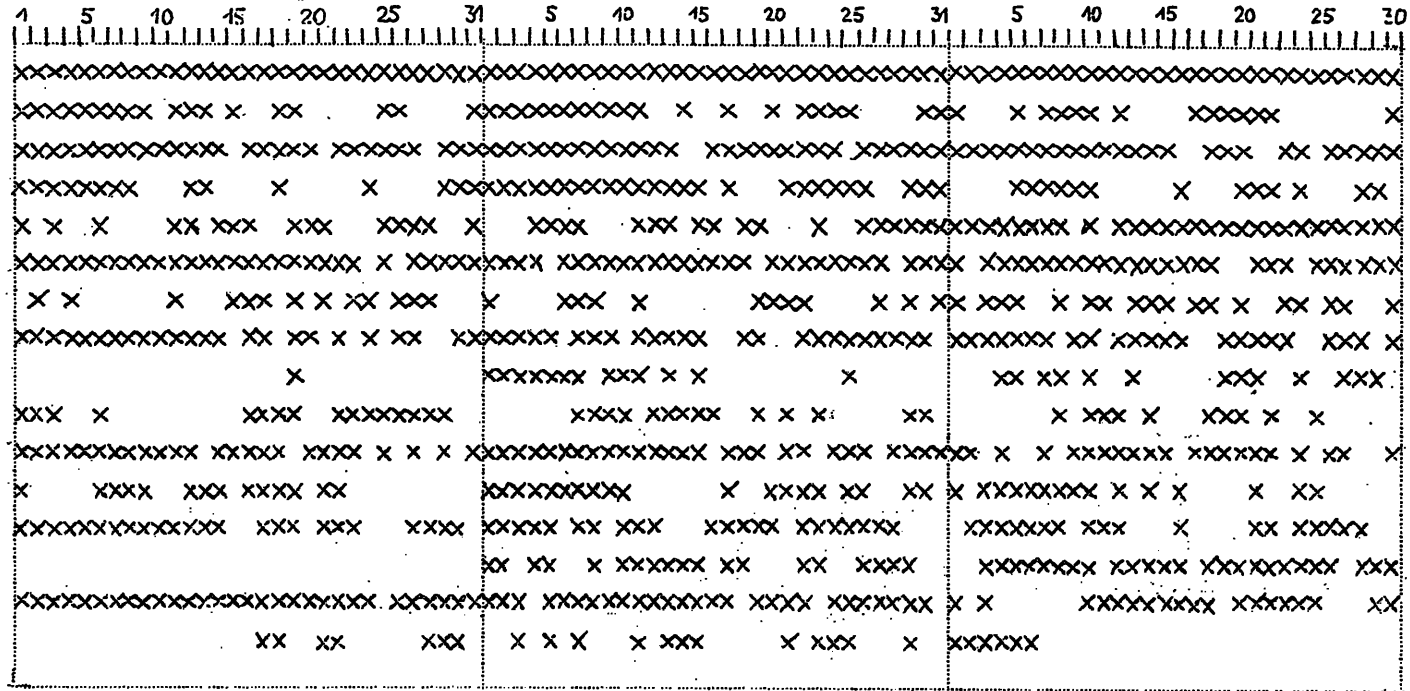
APR 16 1956

We have received the following observations: 1957

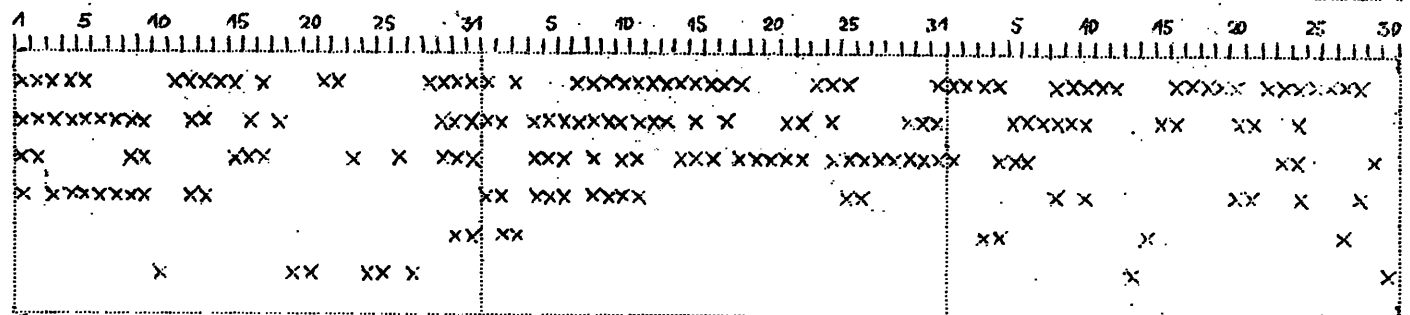
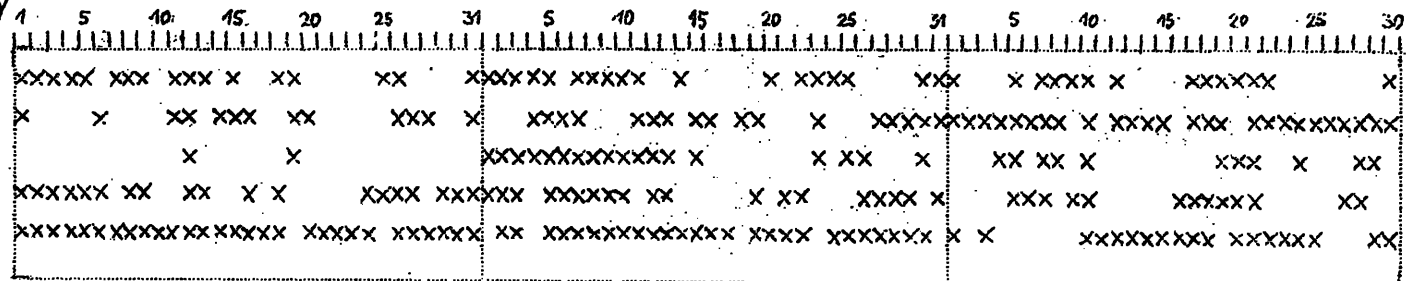
July

August

September



* prominences only



Hα

K₃

Corona

especially for small filaments and prominences. These are mostly due to differences in seeing (scintillation, contrast and scattered light). They also come about by using different photographic emulsions and spectrographic passbands. Prominences change their dimensions and shape sensibly with exposure time, so we do not claim photometric correctness for our prominence pictures. The same difficulty comes in when searching for disparitions brusques (D.B.'s). Also these are often feigned by the varying quality of negatives, or, when using filtergrams, by the limited passband of the instrument. In general we have become more cautious in judging such phenomena.

For the period of the IGY we are preparing final maps to be published in the Annals of the IGY. For these maps additional negatives will be available. In contrast to our preliminary maps which have to be drawn within a few days immediately after the arrival of the negatives, there will be more time for critical examination of all negatives.

With our best wishes for a sunny second half of the IGY,

sincerely yours

KO Kiepenheuer

K.O. Kiepenheuer

Observing material at our disposal

I Original observations (negatives, drawings, flare data)

	Flares	Spots	Plages K ₃	Filaments and prominences H _α			Corona 5303
				Spectro helio graph	Filter	Corono graph	
Arcetri Athens	A D	+	▽				
Boulder (Climax) Capri German	B C	+			△		*
Crimea Obs. Freiburg	R F	+	▽ △	▽ △			
Greenwich Honolulu	G X				△ △		
Istanbul, Kanzelhöhe	J K	* *			△	▽	*
Kodaikanal Meudon + Pic du Midi	I M		▽ +	▽ +			+
Ondrejov Potsdam	O	+				▽ △	
Sacramento Peak Sydney	P Σ				△ △		*
Tokyo Tonanzintla	T		+	+	△		+
Uccle Wendelstein	U W	+	△	△	△	△	*

II Flare data, based on telegrams only

Edinburgh	M F H L N Q R S V Y Z
Huancayo	
McMath Hulbert	
Mt. Wilson	
NERA	
Ottawa	
Russian Obs.	
Stockholm + Capri S.	
Utrecht	
Washington (N.R.L.)	
Zürich	

The letters under "Flare" give the origin of observation.

- △ Original negatives
 - ▽ Prints on film
 - +
 - *
- Drawn maps
Lists

FRAUNHOFER INSTITUT

MIT DEN OBSERVATORIEN SCHAUINSLAND UND ANACAPRI

FREIBURG IM BREISGAU
SCHÖNECKSTRASSE 6

J. V. LINCOLN

January 18, 1960

FEB 25 1960

Dear Colleague,

A few words of introduction to the beginning of the fifth year of our DAILY MAPS OF THE SUN might be appropriate.

The preparation of the maps is based essentially as before on the generous cooperation of numerous observatories all over the world. Our heartfelt thanks we owe to Dr. A.K. Das (Kodaikanal), Dr. J. Evans (Sacramento Peak), Dr. R.G. Giovanelli (Sydney), Prof. N.T. Gökdogan (Istanbul), Prof. G. Haro and Prof. L.R. Terrazzas (Tonanzintla), Dr. F.W. Jäger and Mr. H. Künzel (Potsdam), Prof. O. Mathias (Kanzelhöhe), Dr. R. Michard (Meudon), Prof. R. Müller (Wendelstein), Dr. M. Notuki (Tokyo), Prof. S. Plakidis and Mr. D.F. Elias (Athen), Prof. G. Righini (Arcetri), Dr. W.O. Roberts (Boulder, Climax), Prof. J. Roesch (Pic du Midi), Prof. S. Rosseland (Harestua), Prof. A.H. Samaha and Dr. M.K. Aly (Helwan), Prof. A.B. Severny (Crimea), Dr. W. Steiger (Honolulu), Dr. Z. Svestka (Ondrejov), Prof. R.v.d.R. Woolley (Greenwich).

The majority of maps hitherto published has been worked out by Dr. K. Brunckow, using the negatives which we receive twice monthly. A few periods have been prepared by Dr. U. Becker and Dr. A. Bruzek. The preparation of the clichés, printing and mailing has been done by Fräulein Brigitte Weis, Heide Randbrock and Felicitas Denecke.

During the 4 years of publication we had altogether only 3 gap days for the photosphere, 3 gap days for filaments, 4 for prominences, 37 for calcium plages and 150 for the corona.

The character of our maps has been maintained in general, nevertheless a few remarks might be good here about the difficulties we have in preparing them.

Our main problem is the critical examination of different documents as spectroheliograms, filtergrams, exposures in integrated light supplied to us from different observatories. The negatives come from different types of instruments, they are taken under varying seeing conditions. Often pictures taken almost simultaneously at different stations show diffe-

REC'D. 82.60 FEB 25 '60

rencies especially for small filaments and prominences. These are mostly due to differences in seeing (scintillation, contrast and scattered light). They also come about by using different photographic emulsions and spectrographic passbands. Prominences change their dimensions and shape sensibly with exposure time, so we do not claim photometric correctness for our prominence pictures. The same difficulty comes in when searching for disparitions brusques (D.B.'s). Also these are often feigned by the varying quality of negatives, or, when using filtergrams, by the limited passband of the instrument. In general we have become more cautious in judging such phenomena.

For the period of the IGY we are preparing final maps to be published by the Pergamon Press. Our maps will contain filaments, disparitions brusques and simplified representations of spots. Maps for other solar phenomena will be prepared by other institutions.

We wish you a sunny and successful new year!

Sincerely yours,

K O Kiepenheuer

K.O. Kiepenheuer

Observing material at our disposal.

1. Original observations (negatives, drawings, flare data) reach us from the following observatories:

	Flares	Spots	Plages K ₃	Filaments, prominences H α			Corona 5303
				Spectro helio graph	Filter	Corono graph	
Arceiri	A		▽				
Athens	D	+					
Boulder (Climax)	B						*
Capri German	C	+			△		
Crimea Obs.	R		▽	▽			
Freiburg	F	+	△	△			
Greenwich	G				△		
Harestua					△		
Helwan		+					
Honolulu	X				△		
Istanbul	J	*					
Kanzelhöhe	K	*				▽	*
Kodaikanal	I		▽	▽			
Meudon + Pic du Midi	M		+	+			+
Ondrejov	O					▽	
Potsdam	Π	+				△	
Sacramento Peak	P				△		*
Sydney	Σ				△		
Tokyo	T						*
Tonanzintla					△		
Wendelstein	W	+	△	△		△	*

Explication: First row abbreviation of station, △ original negative, ▽ print on film, + drawn map, * list.

2. Flare data, based on telegrams:

Anchorage	Φ	Ottawa	Q
Edinburgh	E	Russian Observatories	R
Huancayo	Γ	Stockholm + Capri S	S
JKoma	Ω	Uccle	U
McMath Hulbert	H	Utrecht	V
Mt. Wilson	L	Washington (NRL)	Y
Nera	N	Zürich + Locarno	Z
Nizamiah	Λ		

D e s c r i p t i o n . o f m a p s

1) Sunspots:

The observations of 7 observatories are used. Differences in dividing spots into groups are equalized. In doubtful cases the decision is based on the magnetic polarities of spots, which we receive from Potsdam. Small A-groups, which are recorded under similar observing conditions only by one observatory and only for one day are generally ignored. The relative sunspot-number R is computed with the reduction factor 0,7

$$R = 0,7 (10 g + f)$$

The groups are classified according to the Zürich scale. They are represented by circles according to their seize, small for types A, B, J, medium for C, D, G, H and big circles for E and F. The centers of these symbols give the coordinates of the centers of gravity of the groups for 12^h U.T. Next to the group, type and number of spots are recorded, e.g. E 34.

2) Plages:

The plages are drawn by means of K₃-spectroheliograms in 3 different classes

shredded and weak	hatched
continuous	bordered
continuous and bright	bordered and hatched

This representation does not imply a photometric scale. Gap days and only these are bridged by using the Cartes Journalières of Meudon, if available.

3) Filaments, Prominences and Disparitions Brusques:

Filaments also are drawn in their position at 12^h U.T. For prominences important changes within 24 hours are presented in supplementary drawings. Observatory and time of observation are recorded then. Disparitions Brusques (DB's) are recorded as far as possible by giving the time interval of disappearance. Underscored hours mean the observed beginning or the end of the phenomenon. Not underscored hours belong to the last negative or drawing, on which the object was still at rest, or of the first on which the object was no more detectable.

4) Corona:

The brightness of the corona on the solar limb in λ 5303 is given in a 5 step scale.

step 1	11 to $30 \cdot 10^{-6}$
2	31 to $55 \cdot 10^{-6}$
3	56 to $85 \cdot 10^{-6}$
4	86 to $120 \cdot 10^{-6}$
5	$> 120 \cdot 10^{-6}$ of the sun's brightness

The values supplied from Pic du Midi and Wendelstein are given without change. The data from Kanzelhöhe, coming in a 50 step scale, and those of Climax and Sacramento Peak, coming in a 9 step scale, are transformed into our 5 step scale. The data of Tokyo also come in a 5 step scale, which roughly fits our scale. To fill gaps occasionally Tokyo data shortly before or after 0^h U.T. are used for the preceding or following day.

5) Flares:

Flare positions are not reduced to 12^h U.T. Underscored hours give the beginning or the end of the phenomena, not underscored beginning or end of observation. When several subflares occur in the same spotgroup, they are summarized by giving their number, their average position, beginning time of the first and end of the last. Sometimes because of lack of space also flares of importance 1 are summarized. This happened 24 times in 1957 and 7 times in 1958.

Written flare data are always preferred to telegrams, which often are not correct.

We have received the following observations : 1961

April

May

June

	1	5	10	15	20	25	30	5	10	15	20	25	31	5	10	15	20	25	30		
Burbank	xxxx	xx	x	xxxx	x	x	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xx	xx	xxx	xx	xxxx	xxxx	xxxx	xxxx	
Capri G	xxxxxxxx		xxx		xxx	x	xx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	
Crim. Obs.																					
Freiburg		xx	xx	xx	x	x		xx	xx	xx	xxx	xx	xx		x	xxxx	xx	xxxx	xx	xxxx	
Greenwich	x	x	x	xx	xx	xxxx	xx	xx	x	xxxx	xxxx	xxxx	xxxx	xx	xxx	xxx	xxxx	xxxx	xxxx	x	xxxx
Honolulu	x	xxx		x	xx	xxxx	xxxx	xxx	x	xx	xxxx	xxxx	xx	xxx	xxxx	xxx	xxx	xxx	xxxx	xxxx	
Kanzelhöhe *		xx	x					xx	x										x	xxxx	x
Kodaikanal	xxxxxxxx	xxxxxxxx	xxxxxxxx	xxxxxxxx	xxxxxxxx	xxxxxxxx	xxxxxxxx	xxxxxxxx	xxxxxxxx	xxxxxxxx	xxxxxxxx	xxxxxxxx	xxxx	xxxx	xxxx	x	xx	xx	x	x	
Meudon	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx
Potsdam *															xxx						
Sacr. Peak	xxxx	xxxx		xx	xx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xx	xx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx
Tonantzintla	xxxxxxxx	xxxxxxxx	xxxxxxxx	xxxxxxxx	xxxxxxxx	xxxxxxxx	xxxxxxxx	xxxxxxxx	xxxxxxxx	xxxxxxxx	xxxxxxxx	xxxxxxxx	xxxx	xxxx	xxxx	xx	xx	xxxx	xxxx	xxxx	xxxx
Wendelstein	xxx	x	xx	x	x	xx	x	x	x		xxx	x	x		x	x		xxxx	xxxx	xxx	xxx

* prominences only

H_α

	1	5	10	15	20	25	30	5	10	15	20	25	31	5	10	15	20	25	30		
Arcetri	xxxx		xx	x	x		xx	x	xx	xxx	xx	x	xxxx	x				xx	xxxx	x	xx
Crim. Obs.																					
Freiburg		x	xxx	xx	x	x		xx	xx	xx	xxx	x	xx		x	xxxx	xx	xxxx	xx	xxxx	xx
Kodaikanal	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xx	xx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx
Meudon	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xx	x	xxx	xxxx	xxxx	xxxx	xxxx	xxxx
Wendelstein	xxx	x	xx	x	xxxx	xx	xx	x	x		xxx	x	x		x	x		xxxx	xxxx	xxx	xxx

K₃

	1	5	10	15	20	25	30	5	10	15	20	25	31	5	10	15	20	25	30		
Boulder	xx				xx	x	x	x		x		xxx	x		xxx	xxxx				x	
Kanzelhöhe	xx							x													
Pic du Midi					x		x	x	xxx		xxx	x	x	x	x	xxx	xxxx	xx		xxx	xxx
Sacr. Peak	xxxx		x	xx	xx		xx	xx			xx	x	xx	xx	x		x				x
Tokyo			x		xxx	x		x	x			x	x	x	xx		x	xx			
Wendelstein	xx	x	x	x		x						xx	xx	xx			xxx	xxxx	xxx	xxx	xxx

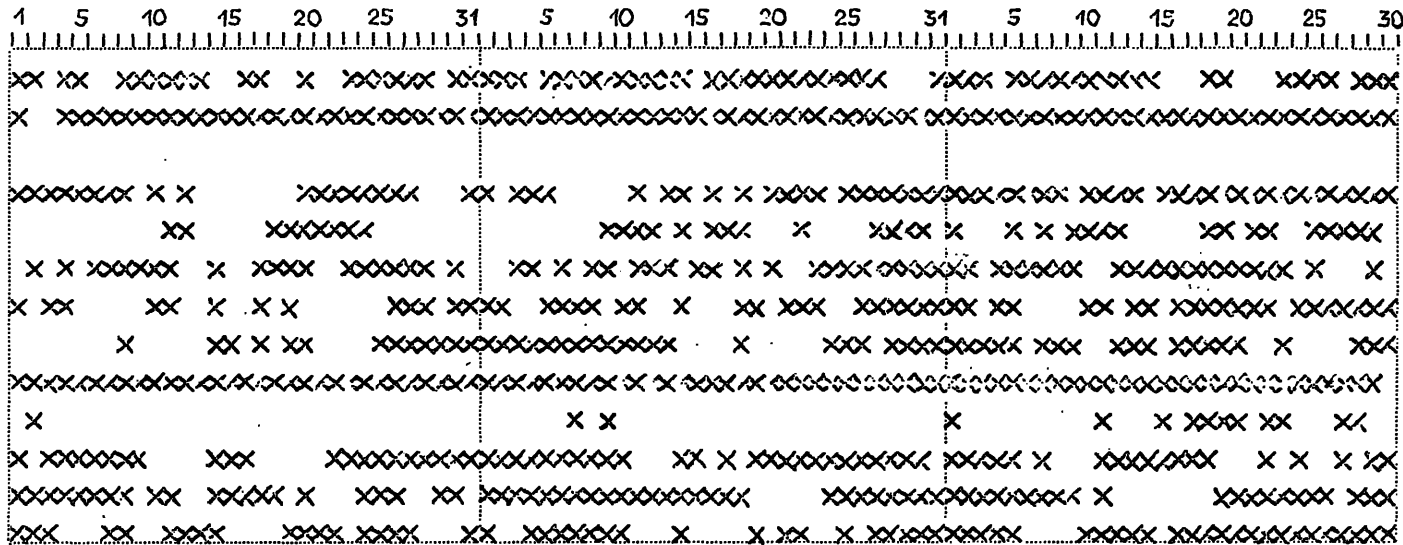
Corona
λ 5303

We have received the following observations : 1961

July

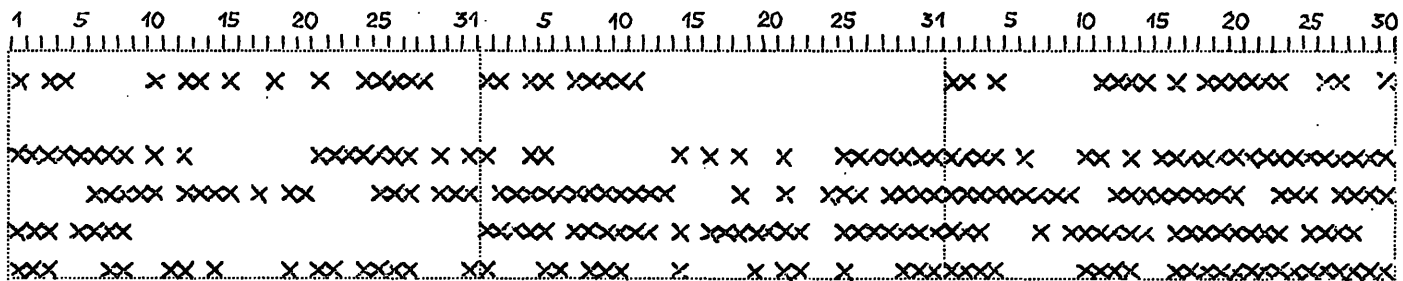
August

September

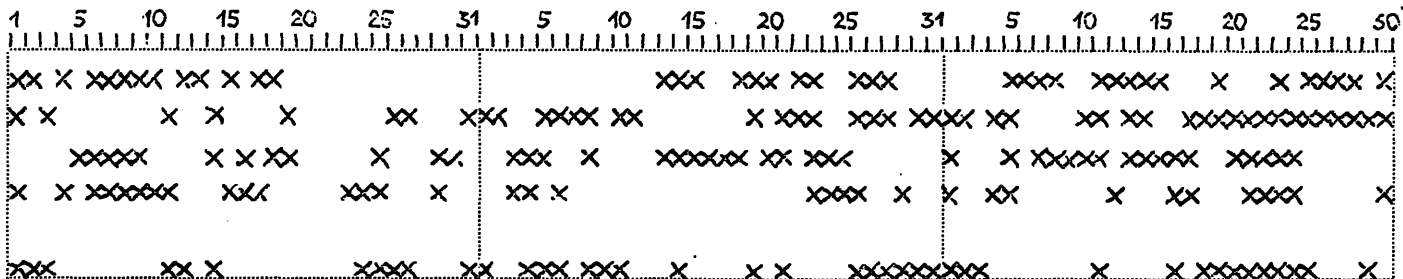


H_α

* prominences only



K₃



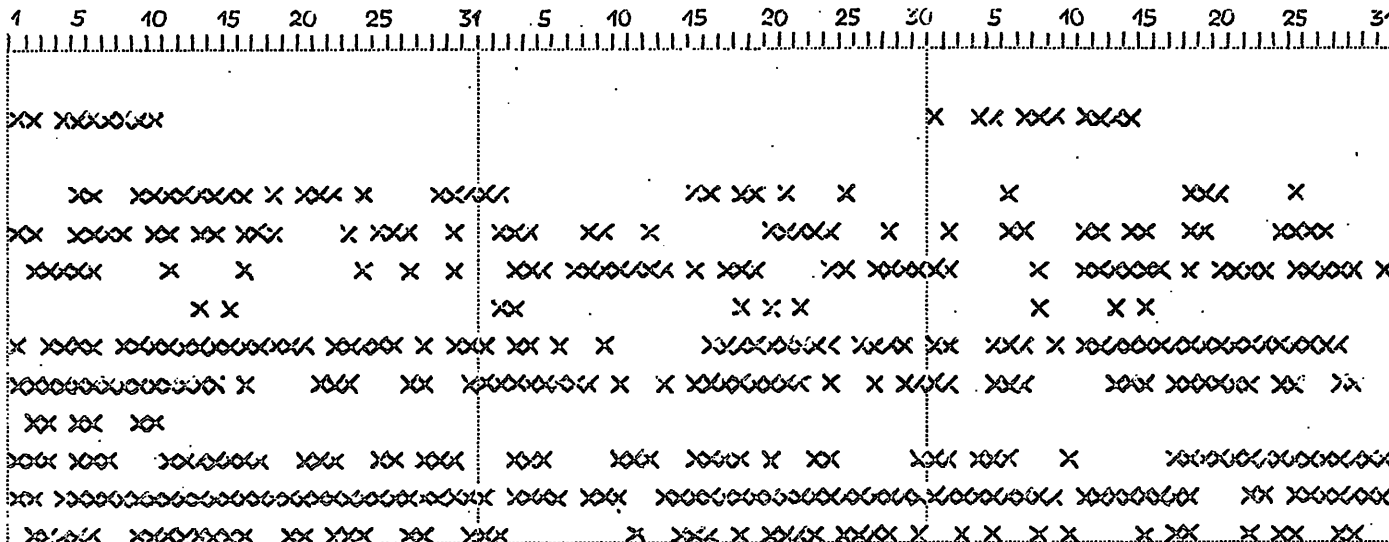
Corona
λ 5303

We have received the following observations : 1961

October

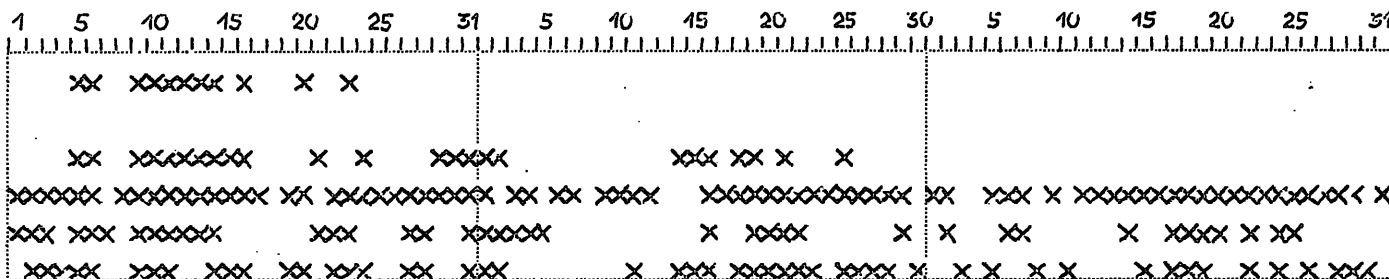
November

December

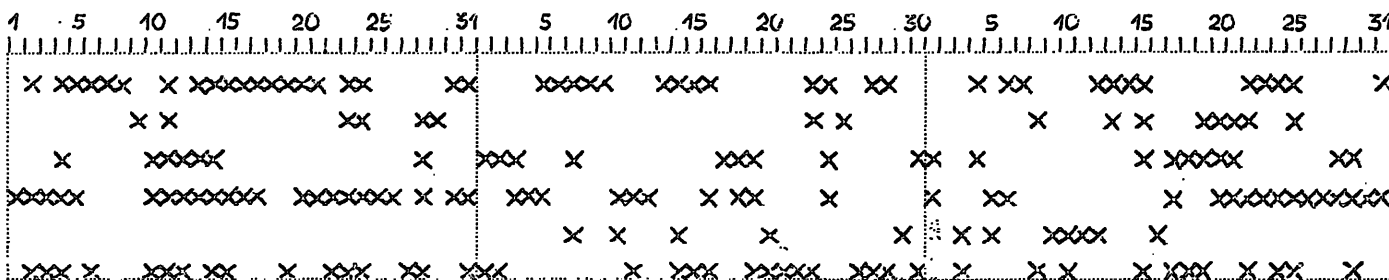


H α

* prominences only



K₃



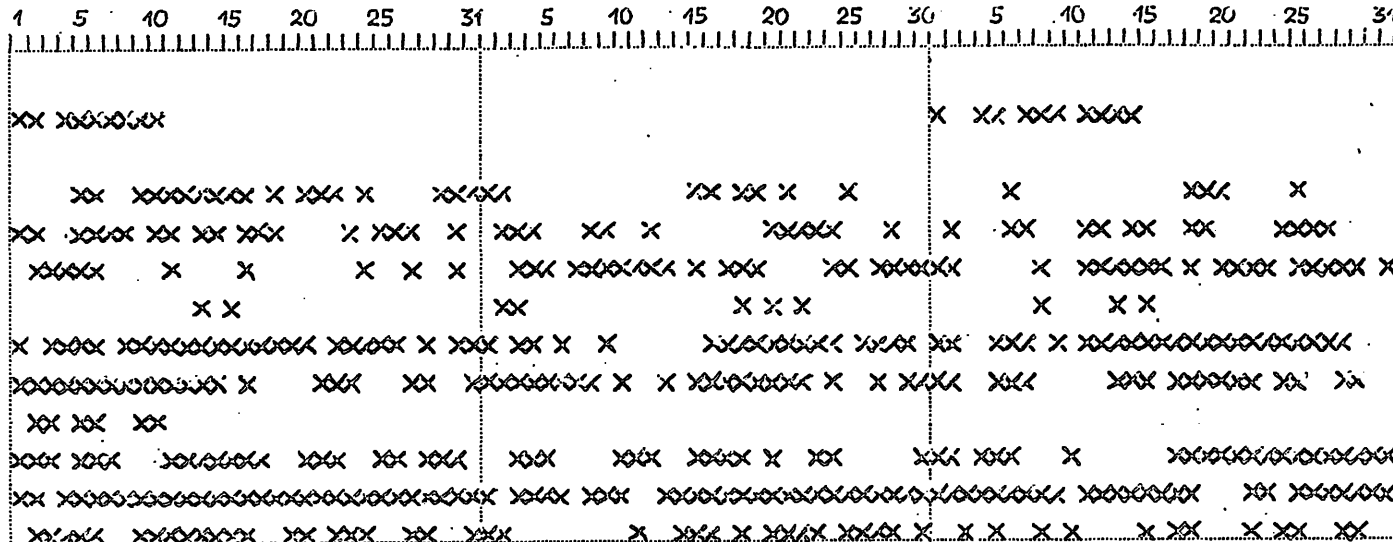
Corona
 λ 5303

We have received the following observations : 1961

October

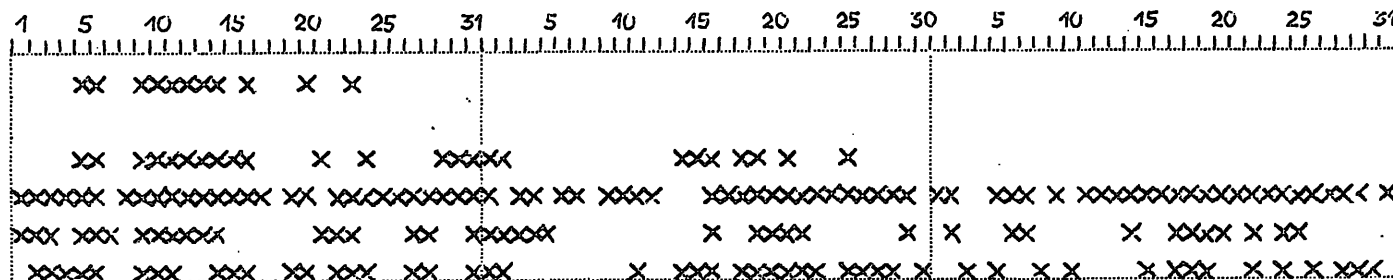
November

December

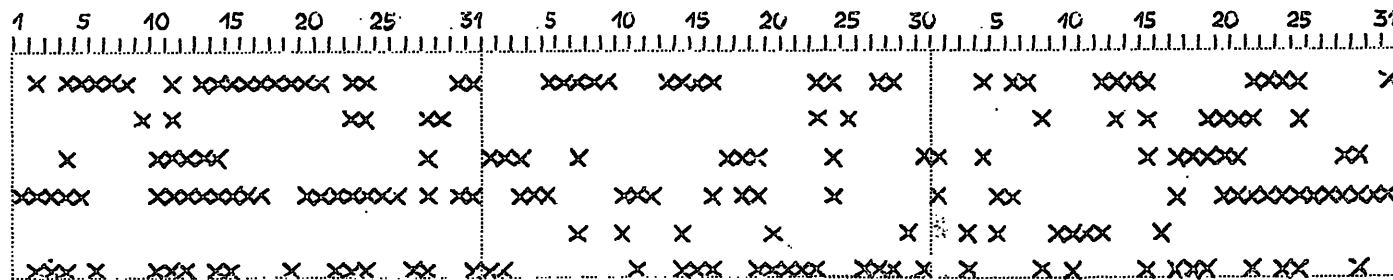


H α

* prominences only

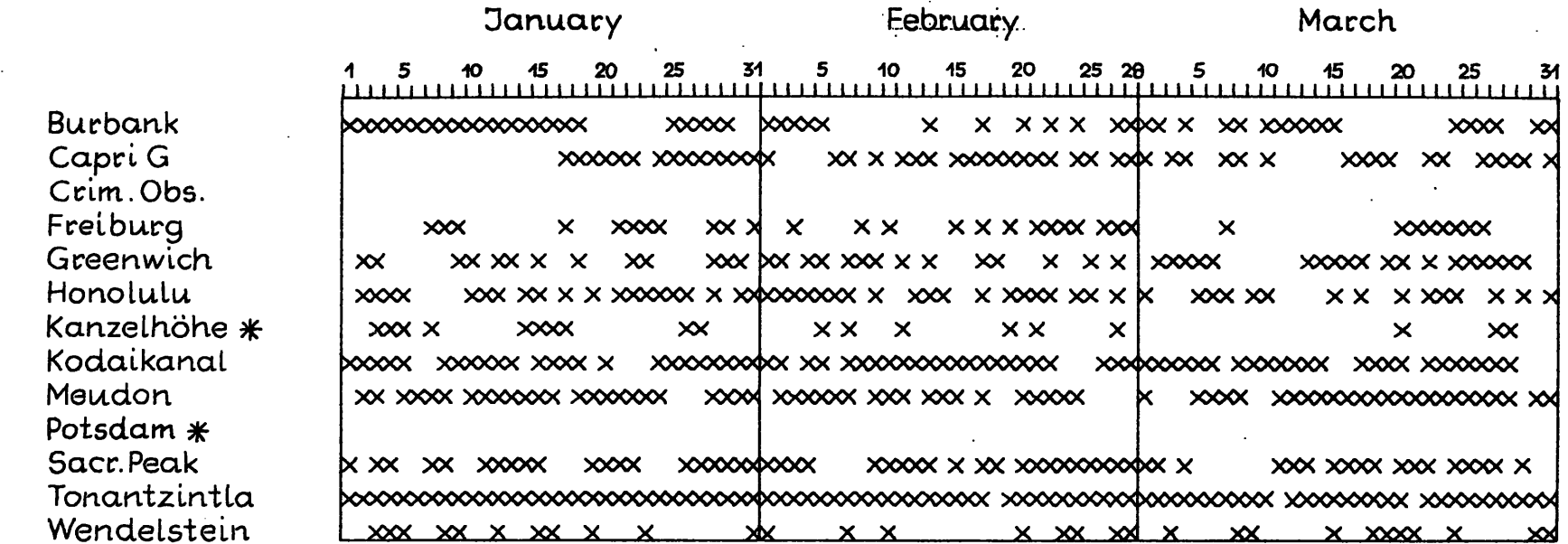


K $_3$



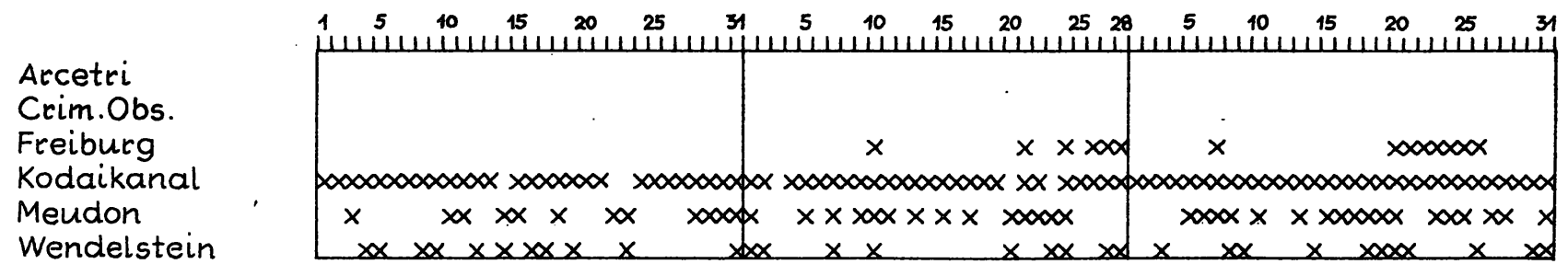
Corona
 λ 5303

We have received the following observations : 1962

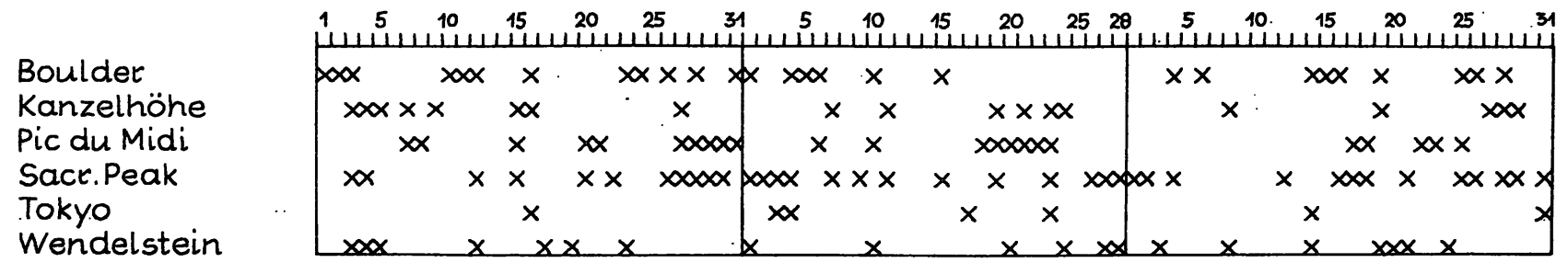


H_α

* prominences only



K₃



Corona
λ 5303

JUN 8 1962

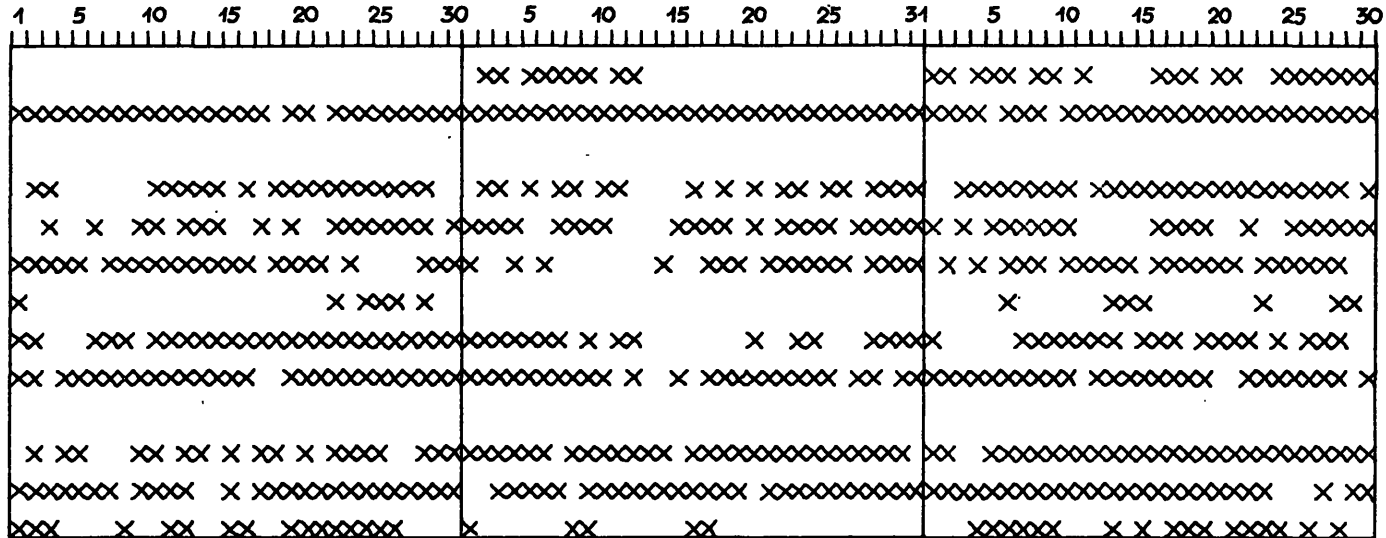
CARNEGIE INSTITUTION
 Department of Terrestrial Magnetism
 5241 Broad Branch Road, N.W.
 Washington 15, D.C. WO. 6-0863

We have received the following observations : 1962

April

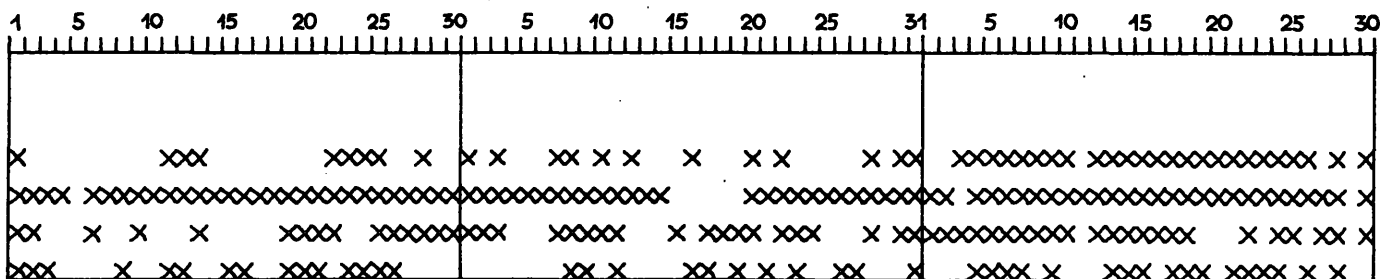
May

June

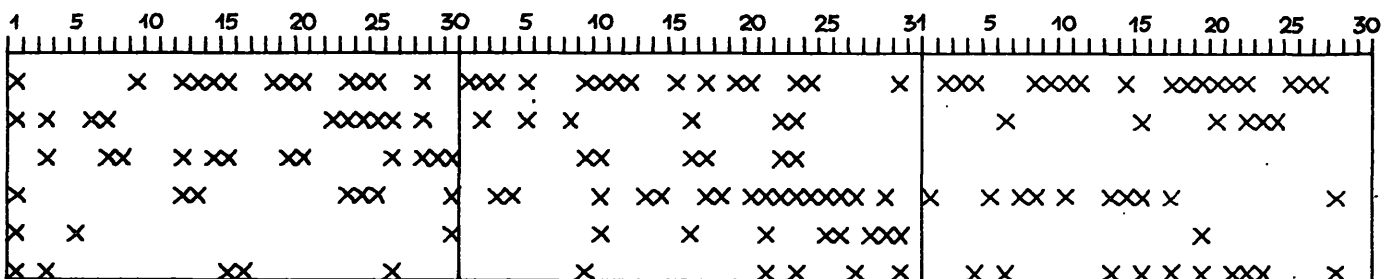


H_α

* prominences only



K₃



Corena
λ 5303

SEP 5 1962

Department of the Interior
 5241 Broad Branch Road, N.W.
 Washington 15, D.C. WO. 6-0863

We have received the following observations : 1962

	July						August						September								
	1	5	10	15	20	25	31	5	10	15	20	25	31	5	10	15	20	25	30		
Burbank	xxxxxxxxxxxxxxxxxxxx						xxxxxxxxxxxxxxxxxxxx						xxxxxxxxxxxxxxxxxxxx								
Capri G	xxxxxxxxxxxxxxxxxxxx						xxxxxxxxxxxxxxxxxxxx						xxxxxxxxxxxxxxxxxxxx								
Catania	xxxxxxxxxxxxxxxxxxxx						xxxxxxxxxxxxxxxxxxxx						xxxxxxxxxxxxxxxxxxxx								
Crim.Obs.	xxxxxxxxxxxxxxxxxxxx						xxxxxxxxxxxxxxxxxxxx						xxxxxxxxxxxxxxxxxxxx								
Freiburg	x	xx	x	xxx	xxx	xxxxxx	xxxx	xxxxxxxxxxxxxxxxxxxx	xxxx	xxxxxx	xxxx	xxxx	xx	xxxx	xxxxxx	xxxx	xxxx	xxxx	xx	xx	
Greenwich	xxx	xxx	xxxxxxxxxx	x	xxx	x	x	xxxx	xxx	xx	xxxx	x	x	xxxx	xxxx	x	xx		x	x	xx
Honolulu	xx	xxx	xx	x	xxxx	xx	xx	xx	xxxxxx	x	x	xx	xxxxxxxxxx	x	xxxx	xxx	xxx	x	xxx	xxx	
Kanzelhöhe *	xxx	xx			xx	xxx	xxxx	x	xxx	x	x	x	xx	x	xxxxxx	x	xxxx	x			
Kodaikanal			x	xx	x	x	x	x	x	xx	xx	xxx	xxx	xxx	x	x	xxx	xxxx	x	x	
Meudon	xxxx	xxxxxxxxxxxxxxxxxxxx	xxxx	xxxxxxxxxxxxxxxxxxxx	xxxx	xxxxxxxxxxxxxxxxxxxx	xxxx	xxxxxxxxxxxxxxxxxxxx	xxxx	xxxxxxxxxxxxxxxxxxxx	xxxx	xxxxxxxxxxxxxxxxxxxx	xxxx	xxxxxxxxxxxxxxxxxxxx	xxxx	xxxxxxxxxxxxxxxxxxxx	xxxx	xxxxxxxxxxxxxxxxxxxx	xxxx	xxxxxxxxxxxxxxxxxxxx	
Potsdam *	xxxxxxxxxxxxxxxxxxxx	xxxxxxxxxxxxxxxxxxxx	xxxx			x	xx	xxxxxxxxxxxxxxxxxxxx	xxxxxx	xxx	xxxxxx	xx	xxxx	x	xxx	xxxxxxxxxxxxxxxxxxxx	xx	xxx	xxx	xxx	
Sacr.Peak	xxx	xxx	xxxxxxxxxxxxxxxxxxxx	xxxxxxxxxxxxxxxxxxxx	xxxxxxxxxxxxxxxxxxxx	xxxxxxxxxxxxxxxxxxxx	xxxxxxxxxxxxxxxxxxxx	xxxxxxxxxxxxxxxxxxxx	xxxxxxxxxxxxxxxxxxxx	xxxxxxxxxxxxxxxxxxxx	xxxxxxxxxxxxxxxxxxxx	xxxxxxxxxxxxxxxxxxxx	xxxxxxxxxxxxxxxxxxxx	xxxxxxxxxxxxxxxxxxxx	xxxxxxxxxxxxxxxxxxxx	xxxxxxxxxxxxxxxxxxxx	xxxxxxxxxxxxxxxxxxxx	xxxxxxxxxxxxxxxxxxxx	xxxxxxxxxxxxxxxxxxxx	xxxxxxxxxxxxxxxxxxxx	
Tonantzintla	xxx	xxx	xxxxxxxxxxxxxxxxxxxx	xxxxxxxxxxxxxxxxxxxx	xxxxxxxxxxxxxxxxxxxx	xxxxxxxxxxxxxxxxxxxx	xxxxxxxxxxxxxxxxxxxx	xxxxxxxxxxxxxxxxxxxx	xxxxxxxxxxxxxxxxxxxx	xxxxxxxxxxxxxxxxxxxx	xxxxxxxxxxxxxxxxxxxx	xxxxxxxxxxxxxxxxxxxx	xxxxxxxxxxxxxxxxxxxx	xxxxxxxxxxxxxxxxxxxx	xxxxxxxxxxxxxxxxxxxx	xxxxxxxxxxxxxxxxxxxx	xxxxxxxxxxxxxxxxxxxx	xxxxxxxxxxxxxxxxxxxx	xxxxxxxxxxxxxxxxxxxx	xxxxxxxxxxxxxxxxxxxx	
Wendelstein	xxx	xx	xxx	xxx	xxxx	xxxx	xxxx	x	xxxxxx	x	x	xx	xxx	xxxxxx	xxx	xxx	xxx	x	xxx	xxx	

H_α

* prominences only

	July						August						September								
	1	5	10	15	20	25	31	5	10	15	20	25	31	5	10	15	20	25	30		
Arcetri	xxxxxxxxxxxxxxxxxxxx						xxxxxxxxxxxxxxxxxxxx						xxxxxxxxxxxxxxxxxxxx								
Crim.Obs.	xxxxxxxxxxxxxxxxxxxx						xxxxxxxxxxxxxxxxxxxx						xxxxxxxxxxxxxxxxxxxx								
Freiburg	x	xx	x	x	xxx	xxxxxx	xxxx	xxxxxxxxxxxxxxxxxxxx	xxxx	xxxxxx	xxxx	xxxx	xx	xxxx	xxxxxx	xxxx	xxxx	xxxx	xx	xx	
Kodaikanal	xxx		xxx	xxxxxxxxxx	x	x	xxxx	xxx	xxx	x	xx	xxxxxxxxxx	xxx	x	xx	xxx	x	xx	xxxxxxxxxx	xxx	
Meudon	xxx	xxxx	x	x	x	xxx	xxxxxxxxxxxxxxxxxxxx	xxxx	xxxx	x	xxxxxxxxxxxxxxxxxxxx	xxxxxxxxxxxxxxxxxxxx	xxxxxxxxxxxxxxxxxxxx	xxxxxxxxxxxxxxxxxxxx	xxxxxxxxxxxxxxxxxxxx	xxxxxxxxxxxxxxxxxxxx	xxxxxxxxxxxxxxxxxxxx	xxxxxxxxxxxxxxxxxxxx	xxxxxxxxxxxxxxxxxxxx	xxxxxxxxxxxxxxxxxxxx	xxxxxxxxxxxxxxxxxxxx
Wendelstein	x		xx	xxx	xxxx	xxxx	x	xxxxxx	x	x	xx	xxx	xxxxxx	xxx	xxx	xxx	xx	xxx	xxx	xxx	

K₃

	July						August						September							
	1	5	10	15	20	25	31	5	10	15	20	25	31	5	10	15	20	25	30	
Boulder	xxxxxx	x	x	xxxx	x		xxxx	xxx	xx	x	xxxxxxxxxxxx	x	xxxxxxxxxx	xxxxxx	xxxxxx	x	xx	x	xxxx	xxx
Kanzelhöhe			xx		xxx	xxxx	xxxx	x	xxx	xx	x	x	x	xxx	xxxx	xxx	x			
Pic du Midi					xxx	xxxx	xxx	xxxx	xx	xxxx	xxxx	x	x	x	x	xxxxxxxxxxxx	xxx	x	xxx	xxx
Sacr.Peak	xxx	xx	xxx	xxx	xxx	xxx	xxxx	xxxxxx	x	x	x	x	xxxx	xxx	xxxxxx	xxx	xxx			xxx
Tokyo					xxxx	x	xxx	x	xxxxxx	xxx	xxx	x	x							xxx
Wendelstein	xxx	x	x	xxx	xxx	xxx	x	xxxxxx	x	x	xx	xxx	xxxxxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx

Corona
λ 5303

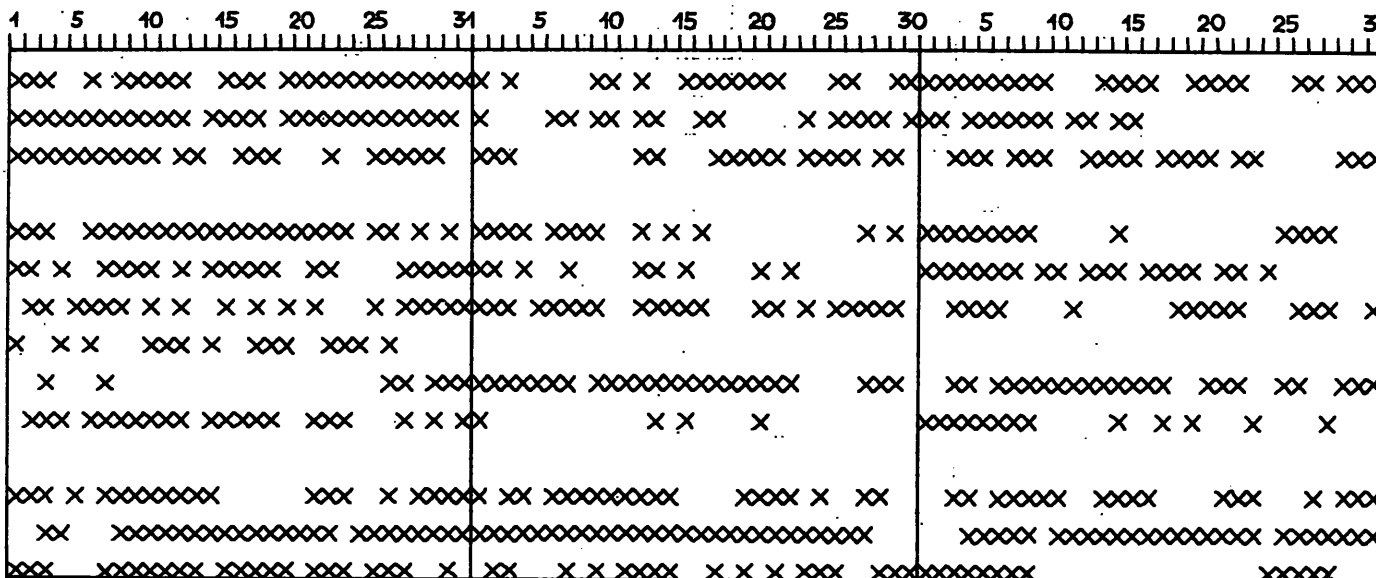
We have received the following observations : 1962

October

November

December

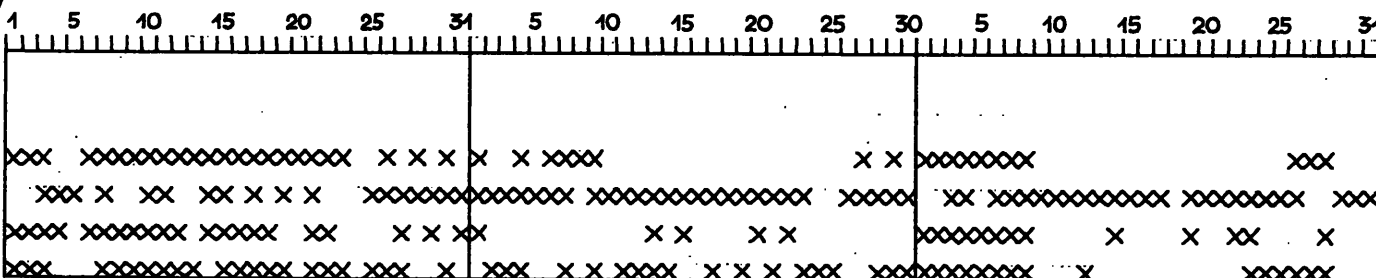
Burbank
 Capri G
 Catania
 Crim.Obs.
 Freiburg
 Greenwich
 Honolulu
 Kanzelhöhe *
 Kodaikanal
 Meudon
 Potsdam *
 Sacr.Peak
 Tonantzintla
 Wendelstein



H α

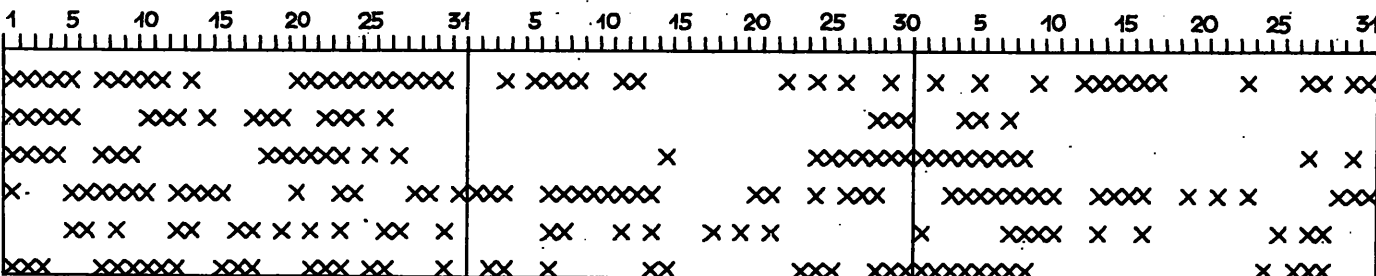
* prominences only

Arcetri
 Crim.Obs.
 Freiburg
 Kodaikanal
 Meudon
 Wendelstein



K $_3$

Boulder
 Kanzelhöhe
 Pic du Midi
 Sacr.Peak
 Tokyo
 Wendelstein



Corona
 λ 5303

WAR 7 1962

Description of the Maps of the Sun

1) Sunspots

The observations of 10 observatories are used. Differences in dividing spots into groups are equalized. In doubtful cases the decision is based on the magnetic polarities of spots, which we receive from Potsdam. Small A-groups, which are recorded under similar observing conditions only by one observatory and only for one day are generally ignored. The relative sunspot-number R is computed with the reduction factor 0.7

$$R = 0.7 \cdot (10g + f)$$

The groups are classified according to the Zürich scale. They are represented by circles according to their size, small for types A, B, J, medium for C, D, G, H and big circles for E and F. The centers of these symbols give the coordinates of the centers of gravity of the groups for 12^h UT. Next to the group, type and number of spots are recorded, e.g. E 34.

2) Plages

The plages are drawn by means of K₃-spectroheliograms in 3 different classes

shredded and weak	hatched
continuous	bordered
continuous and bright	bordered and hatched

This representation does not imply a photometric scale.

3) Filaments, Prominences and Disparitions Brusques

Filaments also are drawn in their position at 12^h UT. For prominences important changes within 24 hours are presented in supplementary drawings. Observatory and time of observation are recorded there. Disparitions Brusques (DB's) are recorded as far as possible by giving the time interval during which the feature disappears. Underscored hours mean the observed beginning or the end of the phenomenon. Not underscored hours belong to the last negative on which the object was still at rest, or the first on which the object was no longer detectable.

4) Corona

The brightness of the corona at the solar limb in λ 5303 is given in a 5 step scale.

step	1	11 to	$30 \cdot 10^{-6}$	of the sun's	brightness
2	31 to	55	"	"	"
3	56 to	85	"	"	"
4	86 to	120	"	"	"
5	>	120	"	"	"

The values supplied from Climax, Norikura, Pic du Midi and Wendelstein are given without change. The data from Kanzelhöhe, in a 50 step scale, and those of Sacramento Peak, in a 9 step scale, are transformed into our 5 step scale. To fill gaps, Norikura data shortly before or after 0^h UT are occasionally used for the following or the preceding day.

5) Flares

Flare positions are not reduced to 12^h UT. Underscored hours give the beginning or the end of the phenomena, not underscored beginning or end of observation. Subflares in the same spot group are summarized by giving their number, average position, beginning time of the first and end of the last. Sometimes because of lack of space flares of importance 1 are also summarized. Written flare data are always preferred to telegrams, which often are not quite correct.

1964.7.31

Observing Material at Our Disposal

- 1) Original observations (negatives, drawings, flare data) reach us from the following observatories.

	Flares	Spots	Plages K ₃	Filaments, prominences H α			Corona 5303
				Spectro- helio- graph	Filter	Corono- graph	
Arcetri	A		▽				
Athens	D	+			△		
Bucarest	Y				△		
Burbank					△		
Capri G	C	+			△		
Catania		+			△		
Climax							*
Freiburg	F	+	△	△	△		
Haleakala	X				△		
Helwan		+					
Herstmonceux	G				△		
Istanbul	J	*					
Kanzelhöhe	K	*				▽	*
Kodaikanal	I		▽	▽	▽		
Manila	Θ		△				
Meudon, St.Michel			▽	▽	△		
Mitaka, Mt.Norikura	T						*
Ondrejov	O						*
Pic du Midi							*
Potsdam		+					
Sacramento Peak	P				△		*
Sydney					▽		
Teheran		+					
Tonantzintla					△		
Uccle	U						
Wendelstein	W	+	△	△	△	△	*

Explication: First row abbreviation of station, △ original negative, ▽ print on film, + drawn map, * list.

- 2) Flare data, based on telegrams.

Burbank	Φ	Nizamiah	Λ
Climax	B	Ottawa	Q
Huancayo	Γ	Russian Observatories	R
McMath Hulbert Obs.	H	Stockholm, Anacapri S	S
Meudon	M	Sydney	N
Mt.Wilson	L	Utrecht	V
NERA	N	Zürich, Arosa, Locarno	Z

1964.7.31

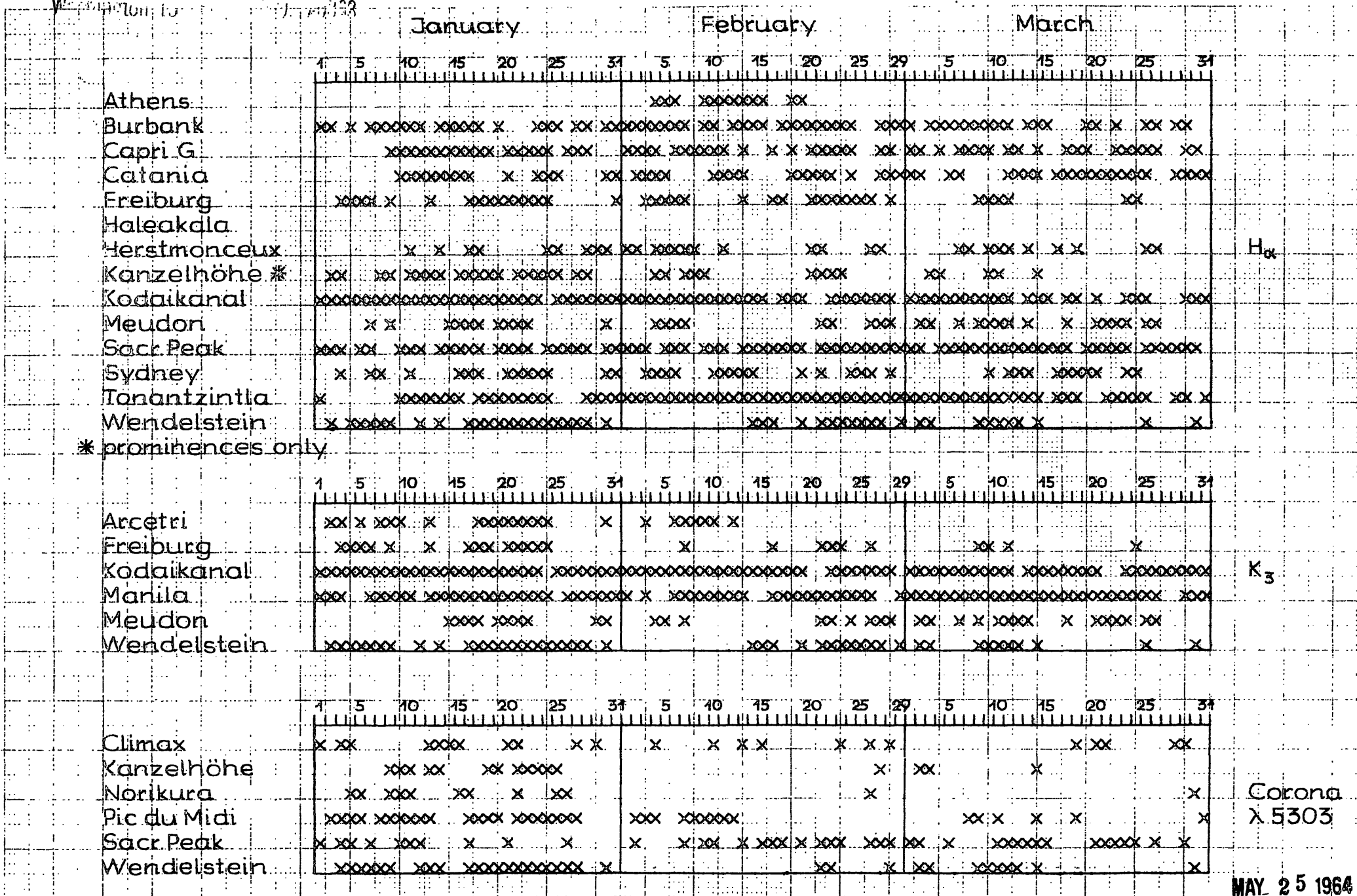
CARNEGIE INSTITUTION

Department of Terrestrial Magnetism

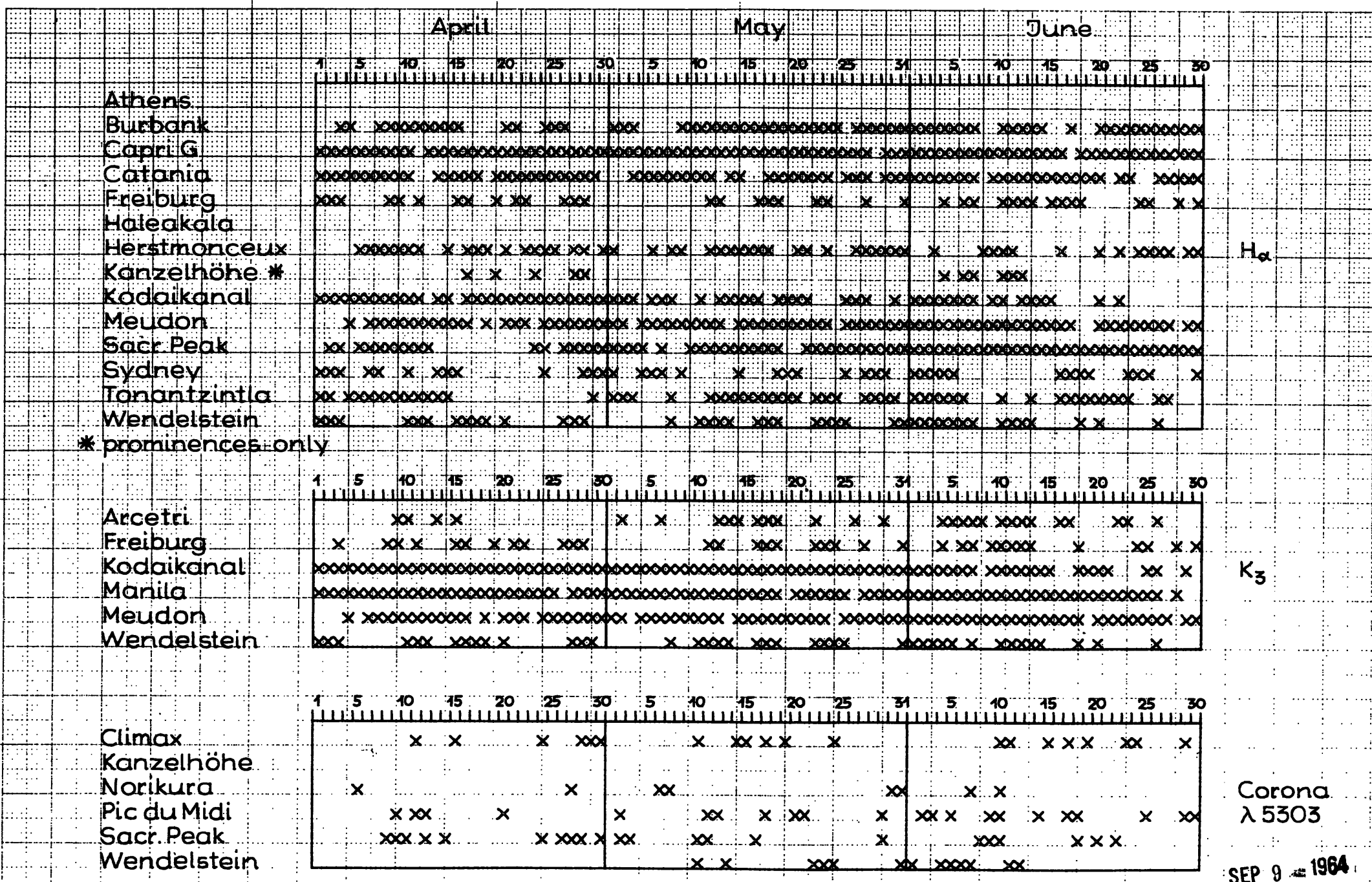
5241 Broad Branch Road, N.W.

We have received the following observations : 1964

Washington to ... 1963



We have received the following observations : 1964



Corona
λ 5303

We have received the following observations : 1964

	July							August							September						
	1	5	10	15	20	25	31	5	10	15	20	25	31	5	10	15	20	25	30		
Athens	XX							XX							XX						
Burbank	XX							XX							XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX XXXX XXXX						
Capri G	XXXXXXXXXXXX XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX							XXXXXXXXXXXXXXXXXXXXXXXXXXXX XXXXXXXXXXXXXXX							XX X						
Catania	XX							XXXXXXXXXXXXXXXXXXXXXXXXXXXX X XXXXXXXXXXXXXXX							XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX XXXX						
Freiburg	XXXXXXXX X XXXXXXXX XXXXXXX X XXXXXXX X XXXXXXX X XXXXXXX XXXXXXX							XXXXXXXX X XXXXXXX X XXXXXXX XXXXXXX							XXX XX XXXXXX XXX						
Haleakala																					
Herstmoncelux	XXX XXXX XXXXXXX X XXX XXXXXXX XXXXXXX XXXXXXX XXXXXXX XXXXXXX XXXXXXX							X X XX XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX							XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX X						
Kanzelhöhe *								X X X X							X X XXX						
Kodaikanal	X XXX X X X X X X XXX X XXX XXX							XXXXXXXX XXX X XXXXXXXXXXXXXXX							XXXXXXXX XXX X X XXXXXXXXXXXXXXX						
Meudon	XXXXXXXX XX XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX							XXXXXXXX XXX XXX XXXXXXXXXXXXXXXXXXXXXXX							XXX XXXX XXXXXXXXXXXXXXX XXX						
Sacr. Peak	XX							XXXXXXXXXXXXXXXXXXXXXXXXXXXX XXXXXXXXXXXXXXX							XXXXXXXXXXXXXXXXXXXXXXXXXXXX XXX XXX						
Sydney	XXX XXXX XXXX XXX X XXX							XXX XX XX X XXXXXXX X X X XXXXXXXXXXX XXX							XXX XXX						
Tonantzintla	XXX XXXXXXXXXXXXXXXXXXXXXXX X X XXX XXXXXXX XXXXXXX XXXXXXXXXXXXXXX XXXXXXX							XXXXXXXXXXXXXXXXXXXXXXXXXXXX XXXXXXX							XXXXXXXXXXXXXXXXXXXX X						
Wendelstein	XX XXXX XXXX XXX XXXXXXX X XXX XXX XXXXXXX X XXXXXX X XXXXXX							XXXX XXX XXXXXXX X XXXXXXX X XXXXXXX							X XXXX XXX X XX						

* prominences only

H_α

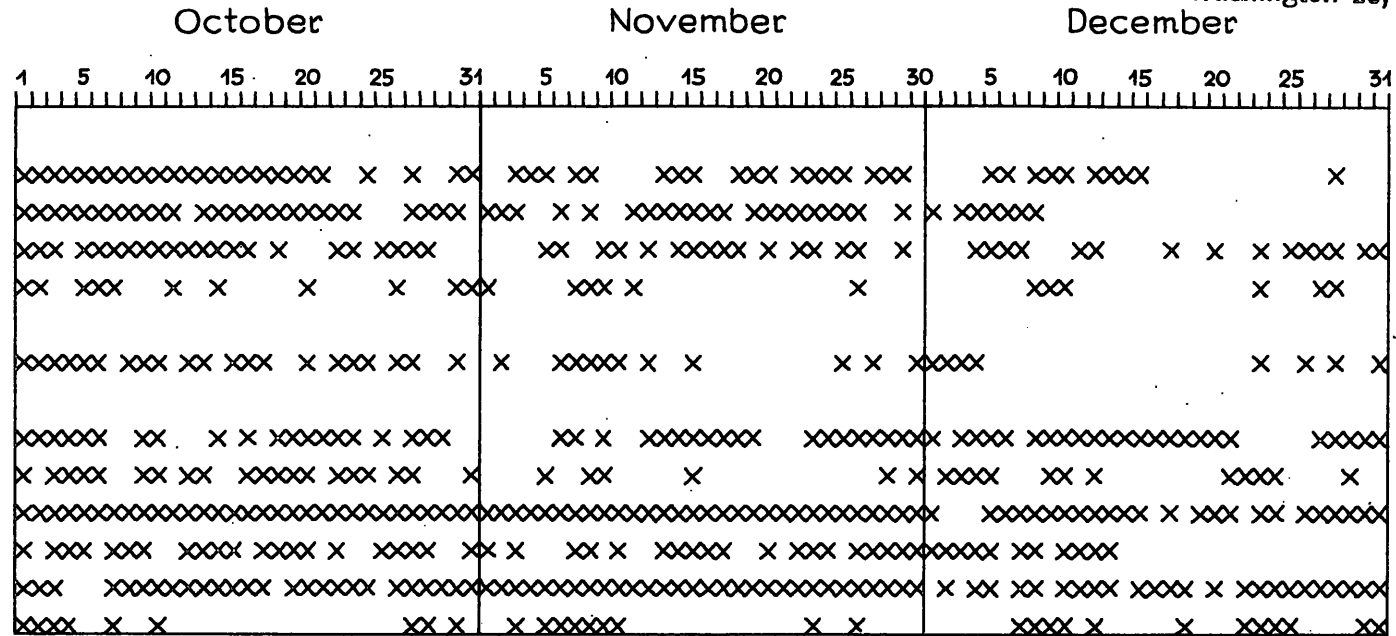
K₃

	July							August							September						
	1	5	10	15	20	25	31	5	10	15	20	25	31	5	10	15	20	25	30		
Arcetri	XXX X XXXX XXX X XX X X X XXXXX XXX XX XXX X X X XXXX XXXXX X																				
Freiburg	XXX XXXX XX XXXXXX X XXXXX X X XXXX X XXXX XXXXX XXXXX XXX XX XXX XXX																				
Kodaikanal	XXX XXX X X X X X X XXX XXX XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX							XX XXXXXXX XXXXXXX X XXXXXXXXXXXXXXX							XXX X X XXXXXXXXXXXXXXX XXXX X						
Manila	XX							X XXXX X X XXXXXXXXXXXXXXX							XXX X X XXXXXXXXXXXXXXX XXXX X						
Meudon	XXXXXXXX XX XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX							XXXXXXXX XXX XXX XXXXXXXXXXXXXXXXXXXXXXX							XXXX XXXXXXXXXXXXXXX XXXXXXXXXXXXXXX XXX						
Wendelstein	XX XXXX XXXX XXX X XXXXXXX							XXX XXXXXXX X XXXXXXX X XXXXXXX							XXXX XXX XXX XXX						
Climax	X X X X X XX							X XXX X XXX XX X X							X X X X XXXX XX X X						
Kanzelhöhe								X XXX X XXX							X						
Norikura	X X XX							X X X XXX							XXX XXX XX XX						
Pic du Midi	XXX X XXXXX XXX XX XXXXXXX XXX XXXX X XXXXX XXX							XXX XXX X XX X													
Sacr. Peak	X X X XX X X							X X X							XX XXX X X XXXX						
Wendelstein	XX XXX X XXX							XX XXX							XX XXX XXXX XX						

Corona
λ 5303

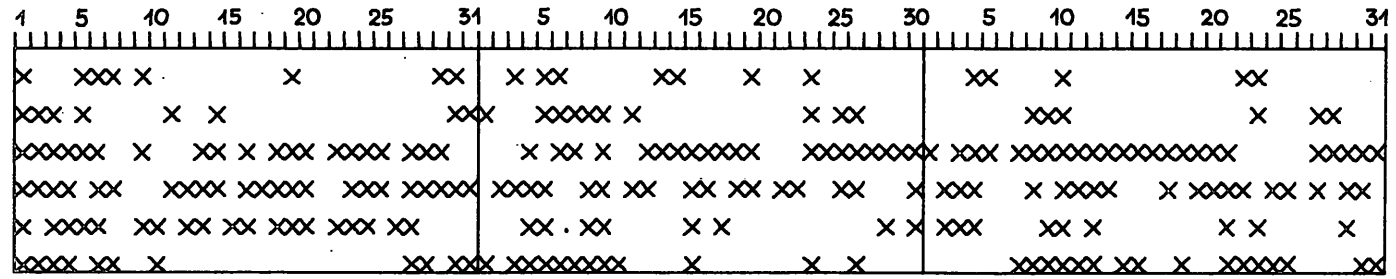
We have received the following observations :

1964



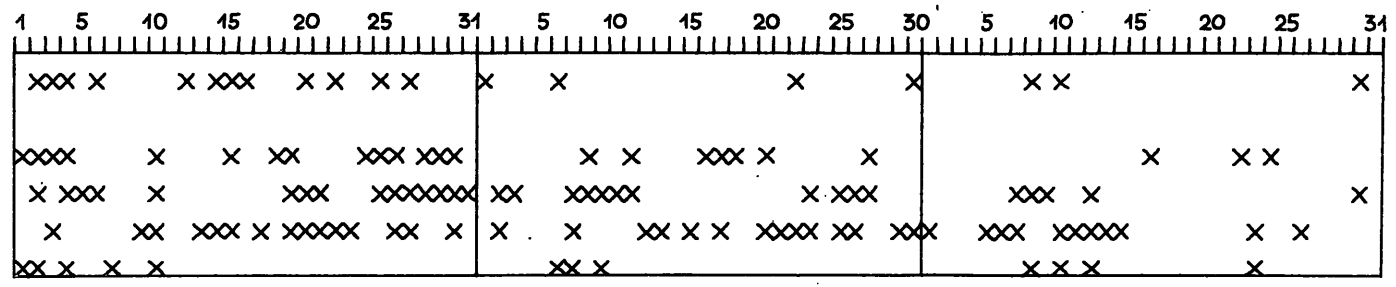
H_α

* prominences only



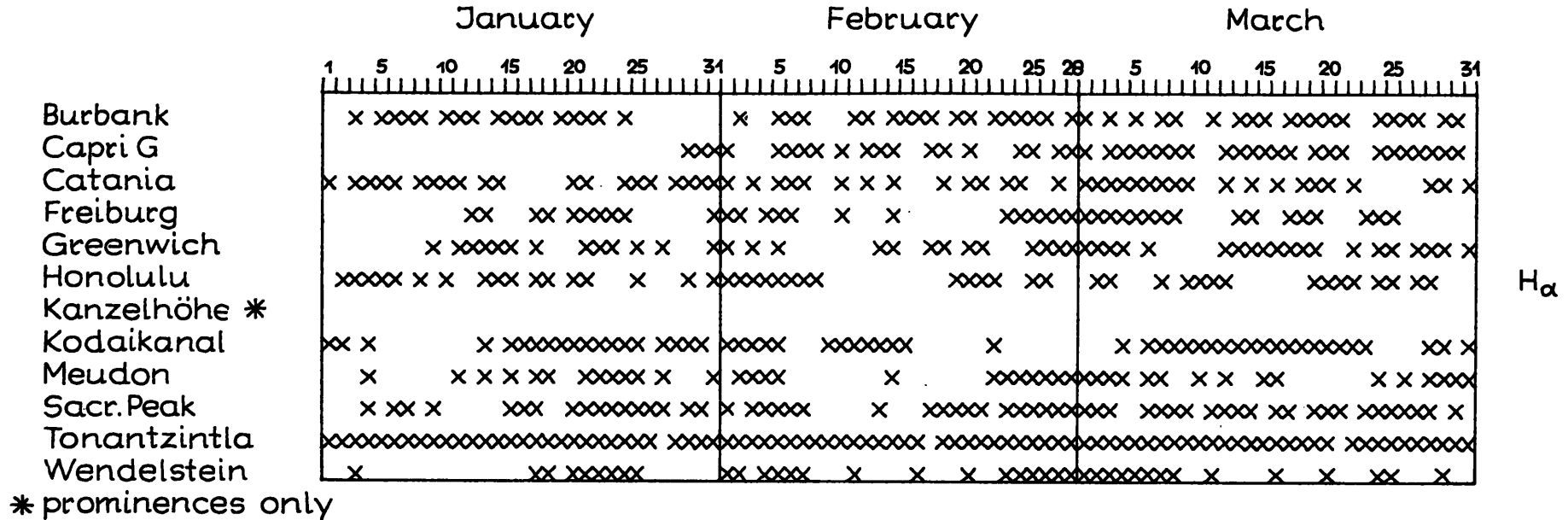
K₃

Rome xxx xxx x xx x xxx x xx x xx xx

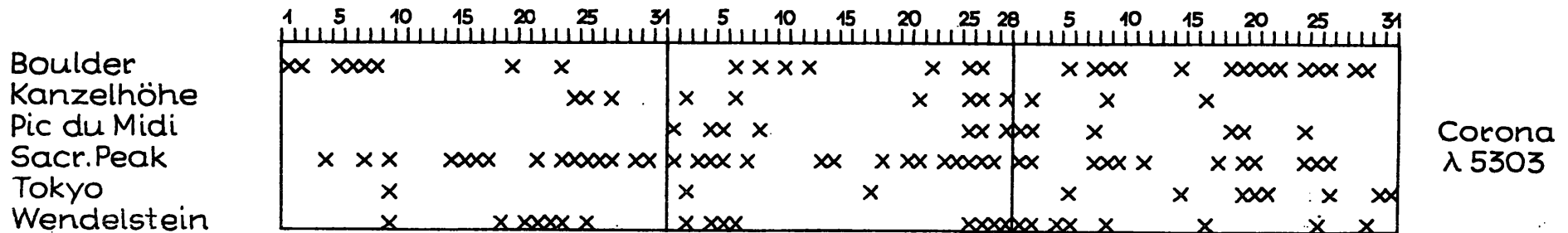
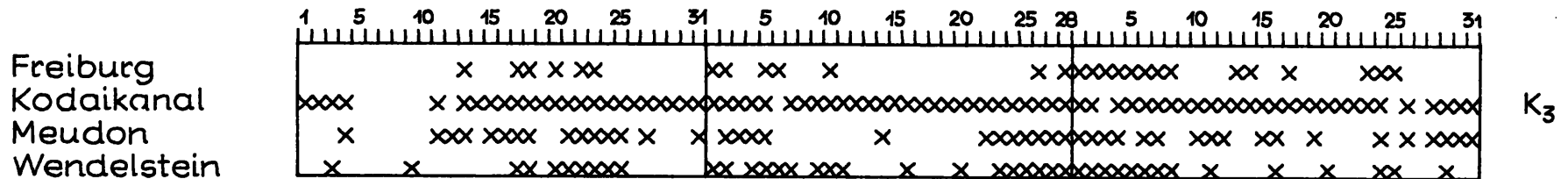


Corona
λ 5303

We have received the following observations : 1963



* prominences only



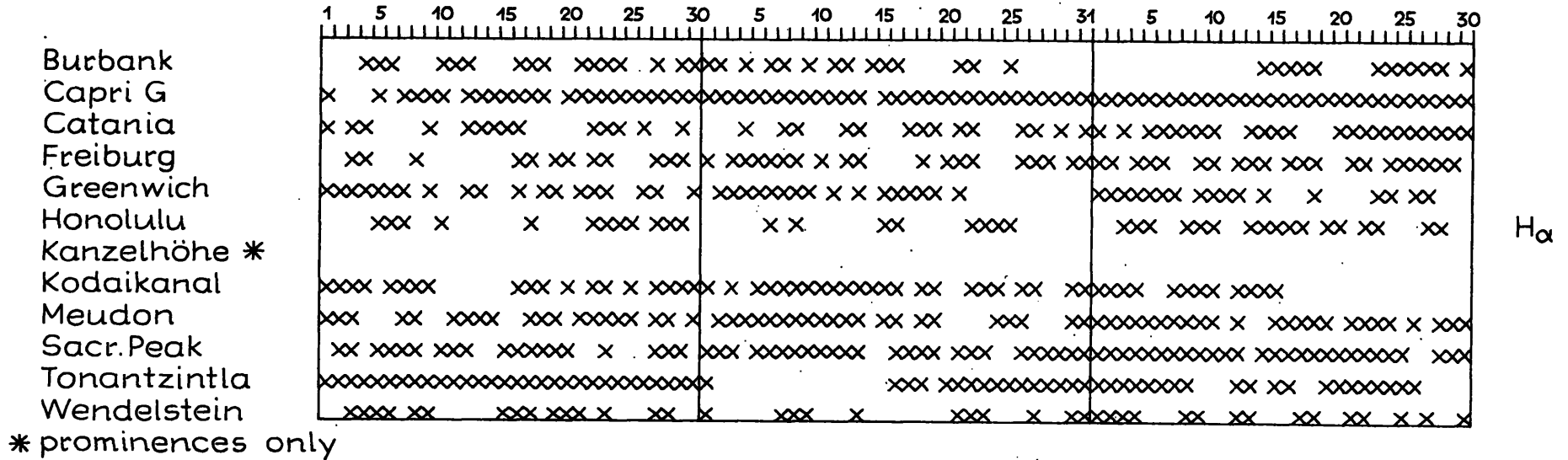
MAY 28 1963

We have received the following observations : 1963

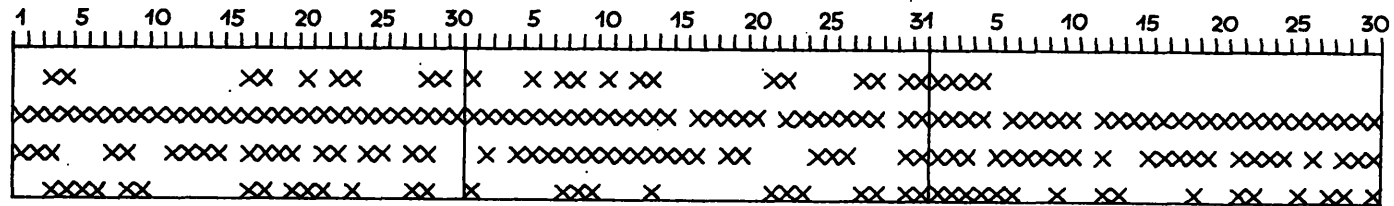
April

May

June

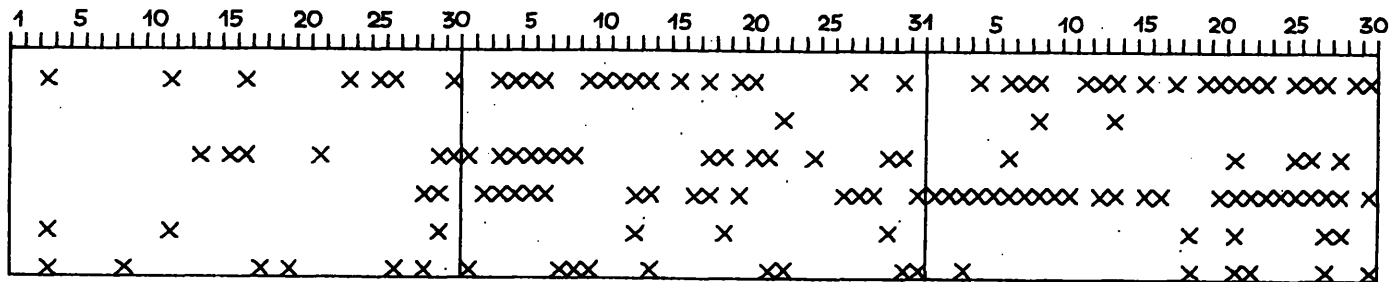


H α

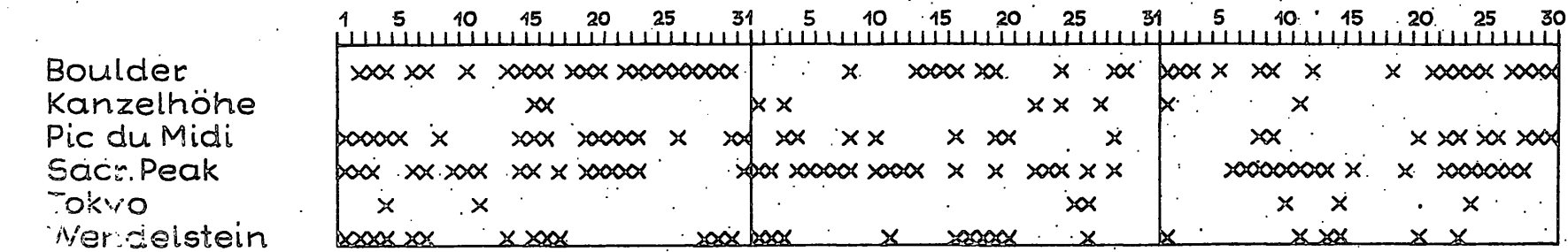
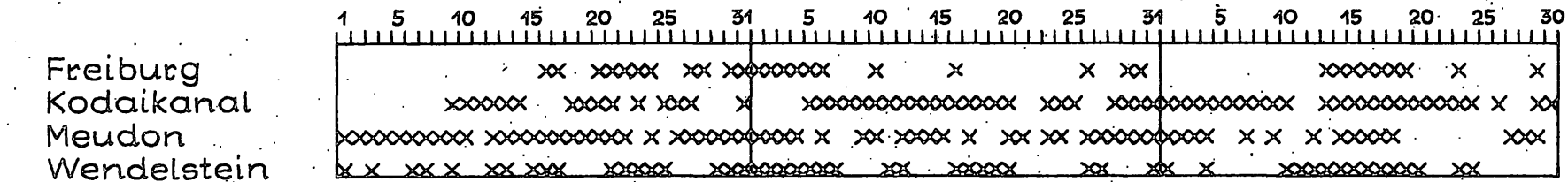
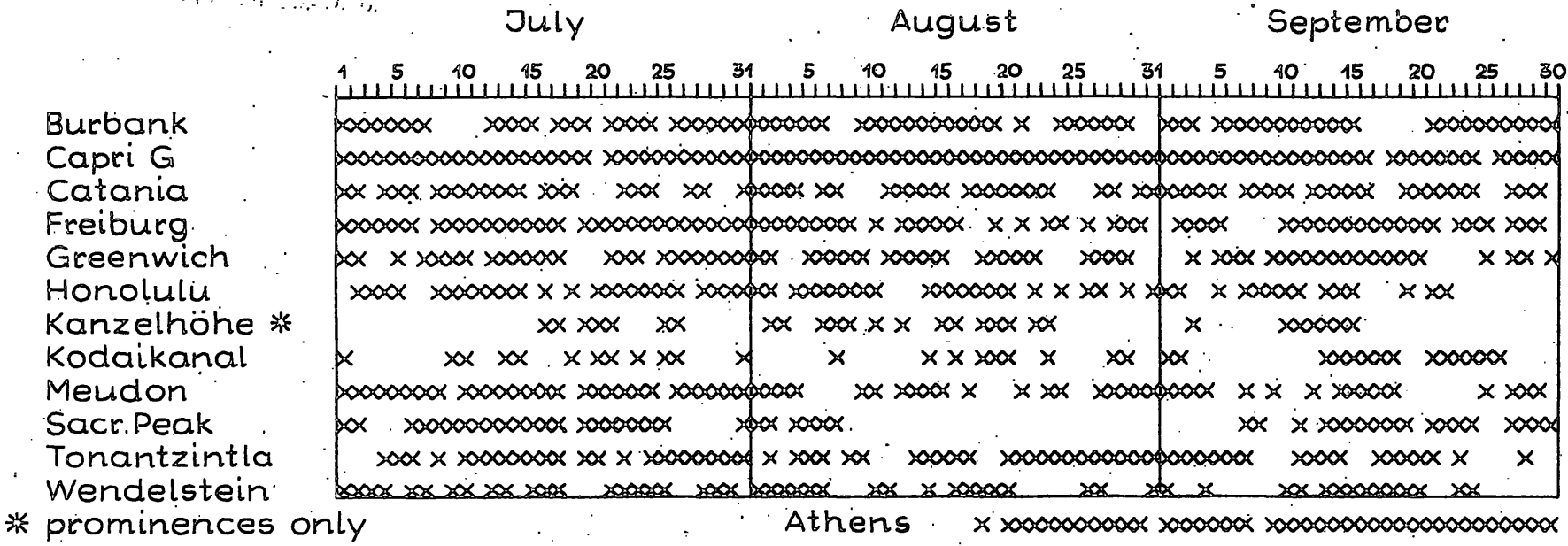


K $_3$

Boulder
Kanzelhöhe
Pic du Midi
Sacr. Peak
Tokyo
Wendelstein



Corona
 λ 5303



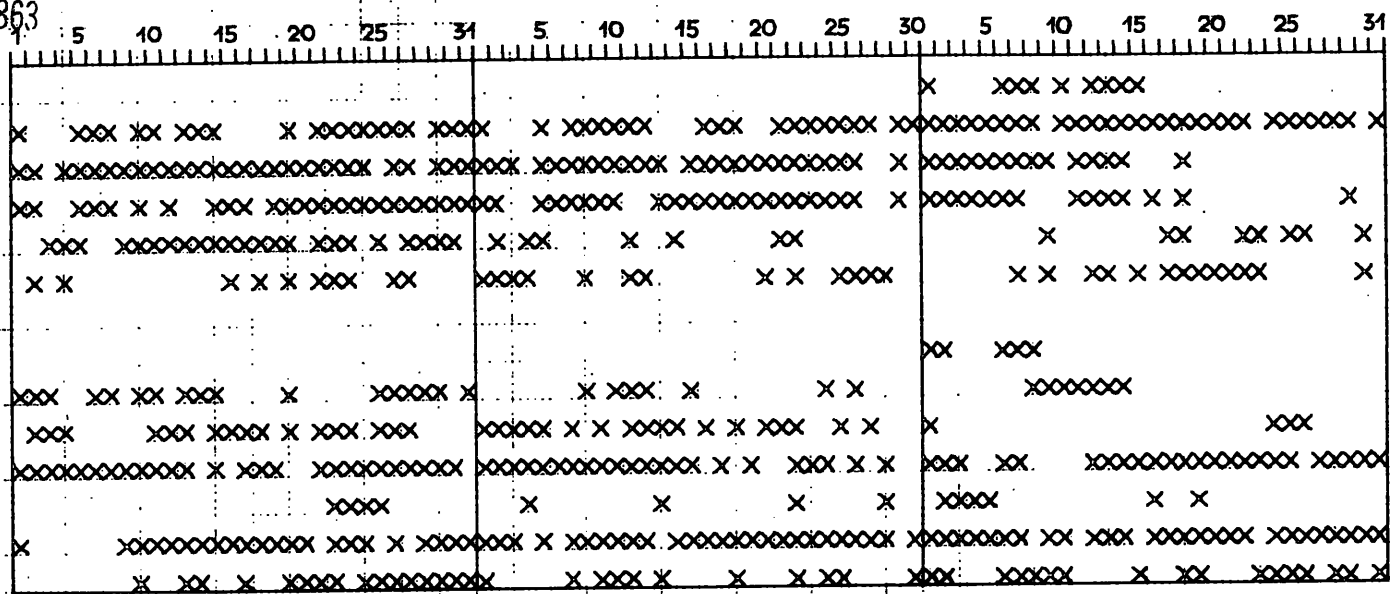
CARNEGIE INSTITUTION
 Department of Terrestrial Magnetism
 5241 Broad Branch Road, N.W.
 Washington 15, D.C. WO. 6-0863

We have received the following observations : 1963

October

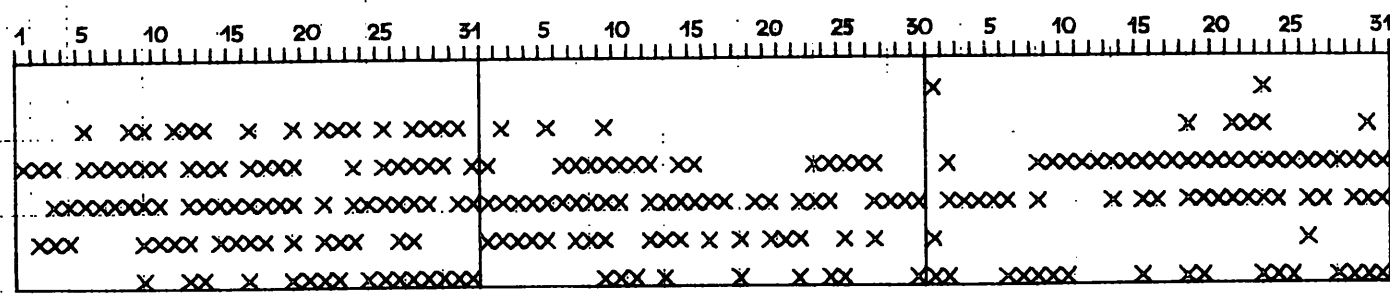
November

December

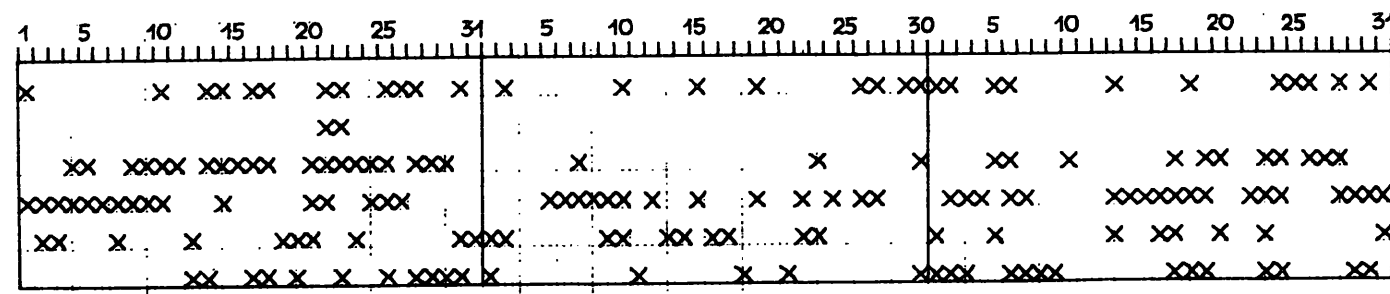


H α

* prominences only



K $_3$



Corona
 λ 5303

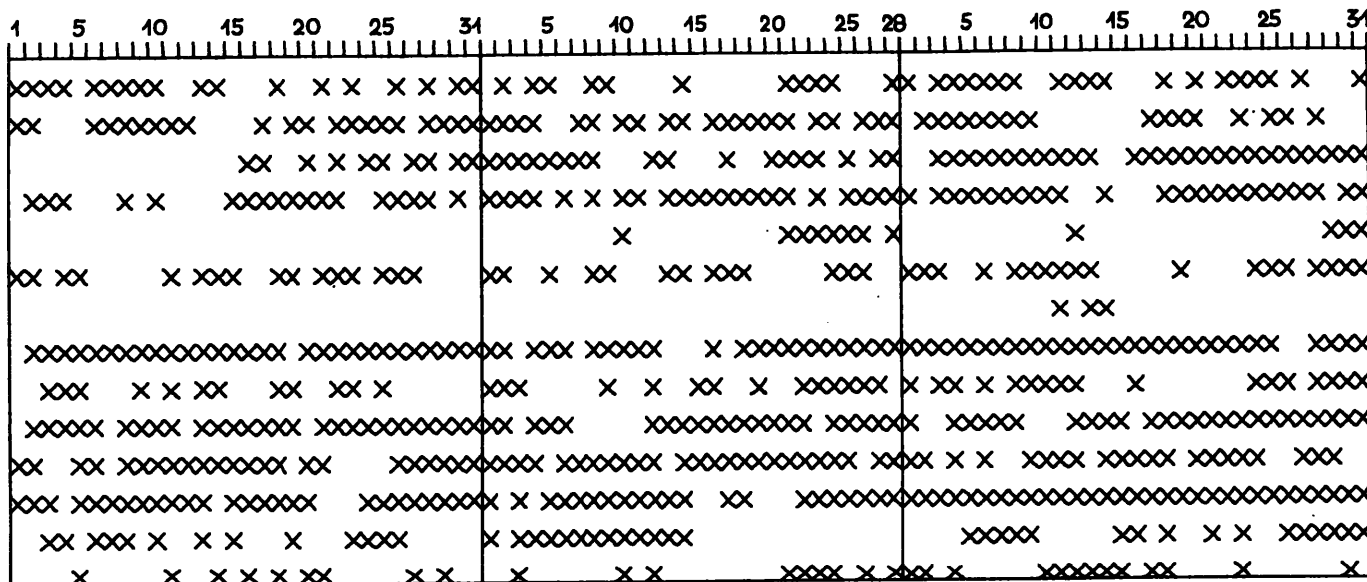
We have received the following observations : 1965

January

February

March

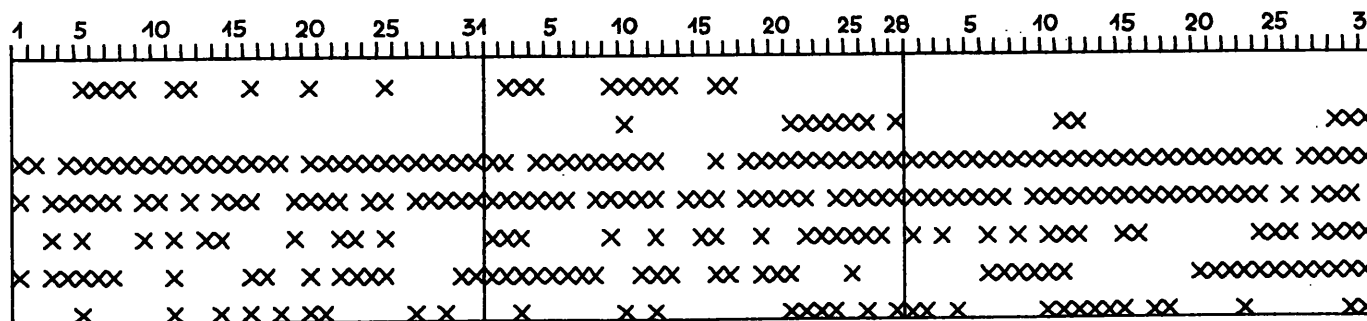
Athens
 Burbank
 Capri G
 Catania
 Freiburg
 Herstmonceux
 Kanzelhöhe *
 Kodaikanal
 Meudon
 Sacr. Peak
 Sydney
 Tonantzintla
 Tortosa
 Wendelstein



H α

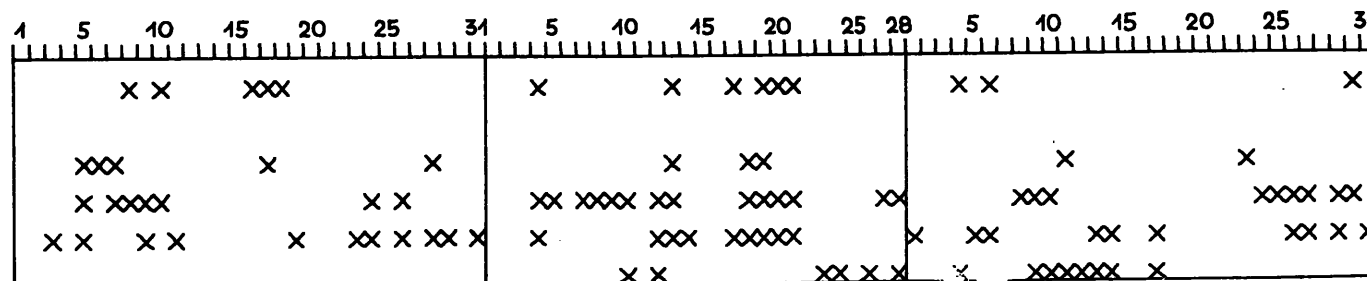
* prominences only

Arcetri
 Freiburg
 Kodaikanal
 Manila
 Meudon
 Rome
 Wendelstein



K $_3$

Climax
 Kanzelhöhe
 Norikura
 Pic du Midi
 Sacr. Peak
 Wendelstein



Corona
 λ 5303

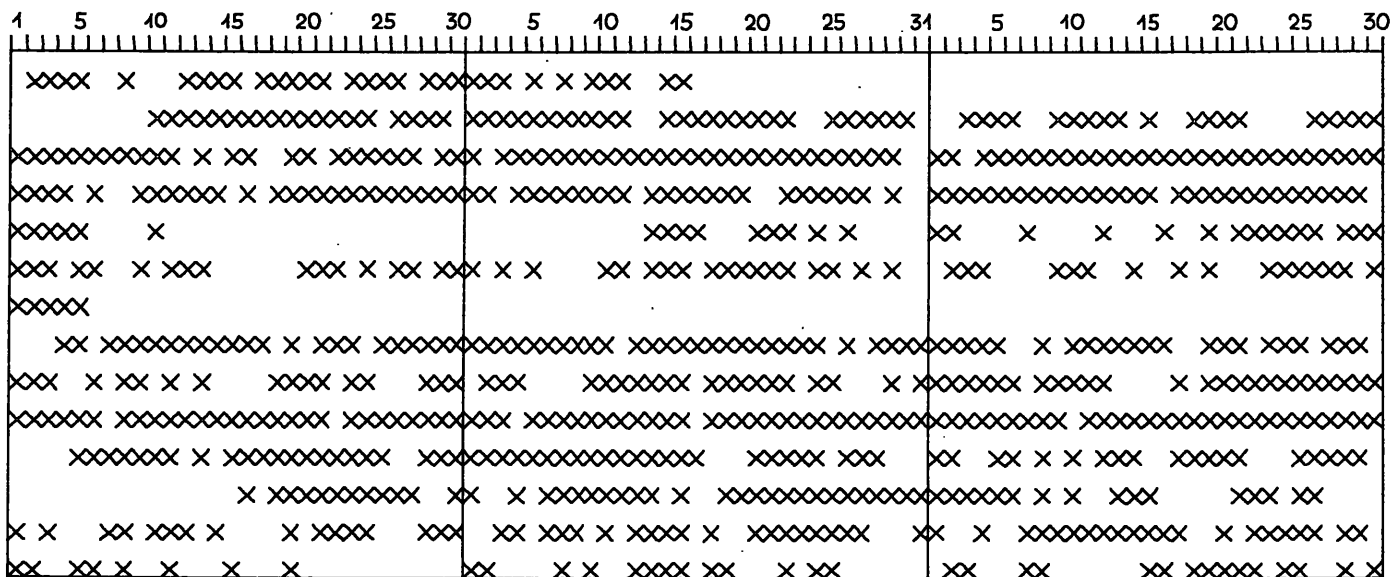
221 85 1965

We have received the following observations : 1965

April

May

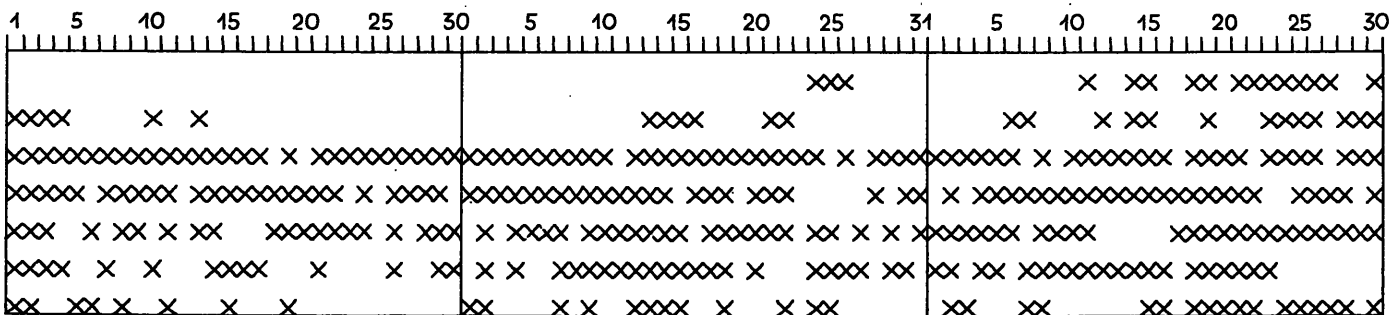
June



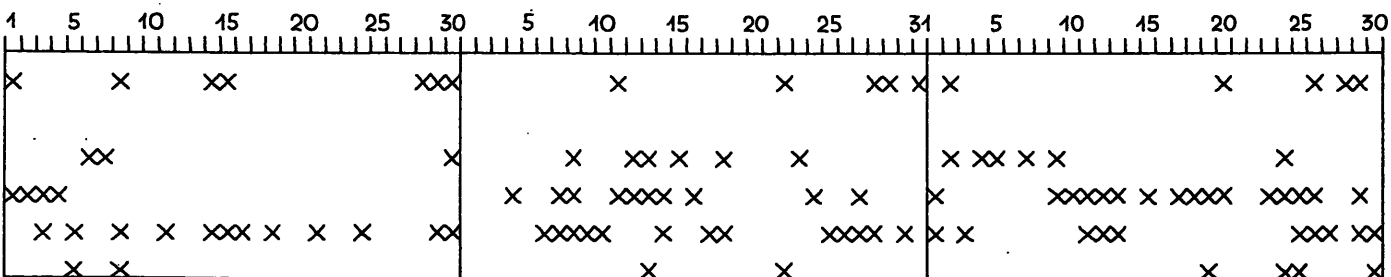
H_α

* prominences only

Teheran : x x x x x x x x x



K₃



Corona
λ 5303

1965

Recd JVL 22 DEC 65

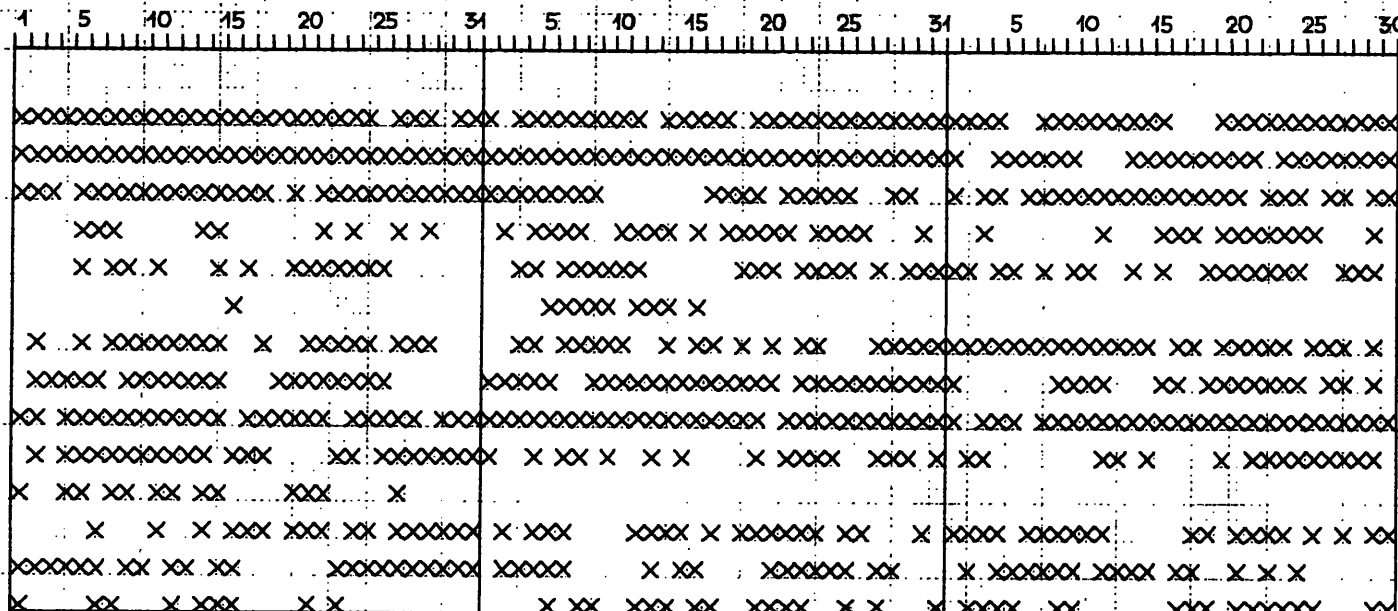
We have received the following observations : 1965

July

August

September

Athens
 Burbank
 Capri G
 Catania
 Freiburg
 Herstmonceux
 Kanzelhöhe *
 Kodaikanal
 Meudon
 Sac. Peak
 Sydney
 Teheran
 Tonantzintla
 Tortosa
 Wendelstein

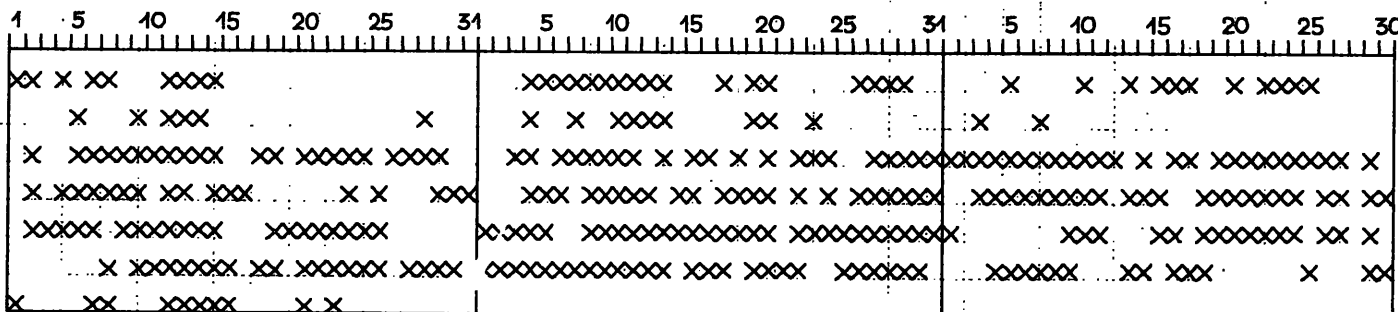


H α

* prominences only

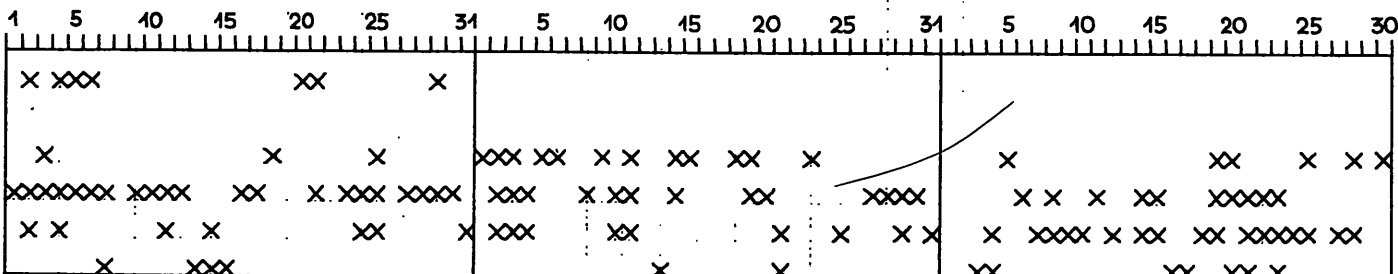
Haleakala : xxxxxxxx xxxxxxxx xx xxxxx

Arcetri
 Freiburg
 Kodaikanal
 Manila
 Meudon
 Rome
 Wendelstein



K $_3$

Climax
 Kanzelhöhe
 Norikura
 Pic du Midi
 Sac. Peak
 Wendelstein



Corona
 λ 5303

FRAUNHOFER INSTITUT

MIT DEN OBSERVATORIEN SCHAUINSLAND UND ANACAPRI

DIREKTOR: PROF. DR. K. O. KIEPENHEUER

FREIBURG IM BREISGAU
SCHÖNECKSTRASSE 6
TELEFON 32864

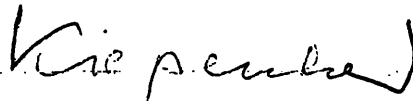
November 30, 1965

Dear Sir,

The number of people using our DAILY MAPS OF THE SUN is steadily increasing. On the other hand our financial funds for printing and distributing of these maps are limited. Would you therefore be kind enough to indicate on the above sheet, whether you will need our maps for your further work or not. If we do not receive your answer we assume, that the maps are no more wanted.

Thank you very much, and best wishes for Christmas and a happy New Year.

Very sincerely yours,



K.O. Kiepenheuer

1-3-66

Dr. Ford:

Are these of further use
to the Department?

2 g. Rollers 1-3-66
(No.)

MAR 1 1966

Here are - as postscriptum -
 the complete McMath plage data
 for the second half of January.
 Further we have to give a cor-
 rection for our "Description
 of the Maps of the Sun" sent
 to you in January: Paragraph 2
 last but one line instead of
 "disk" put "hemisphere".

Thank you.

<u>1966 Jan. 16</u>	<u>1966 Jan. 17</u>	<u>1966 Jan. 18</u>	<u>1966 Jan. 19</u>
117 25N70W 12	129 22N28W	129 23N40W 1	129 23N53W
129 20N17W 3	130 29N25E	130 29N14E 10	130 29N 1E
130 29N36E 14	131 18N28E	131 17N16E 35	131 17N 2E
131 18N41E 35	132 10N48E	132 9N35E 35	132 9N21E
132 10N62E 34	133 30N58E	133 28N46E 18	133 29N33E
133 31N70E 12	134 29S58W	136 0 25W 1	139 26S79E
134 29S45W 3	135 28S28W	137 26S 0 2	140 31N40W
135 28S15W 2		138 37S43E 1	
		139 27S90E 2	

<u>1966 Jan. 20</u>	<u>1966 Jan. 21</u>	<u>1966 Jan. 22</u>	<u>1966 Jan. 23</u>	<u>1966 Jan. 24</u>	<u>1966 Jan. 25</u>
129 23N66W	130 29N25W 17	130 29N40W	130 29N56W 17	130 28N70W 26	130 28N79W 14
130 29N12W	131 18N26W 36	131 18N40W	131 19N55W 28	131 17N68W 37	131 18N79W 19
131 17N12W	132 9N 6W 31	132 10N20W	132 11N35W 17	132 12N48W 33	132 11N60W 21
132 9N 8E	133 30N 6E 28	133 30N 7W	133 31N20W 19	133 31N35W 26	133 30N46W 20
133 29N19E	139 25S55E 4	139 24S39E	139 23S23E 8	139 23S11E 11	139 23S 1W 12
139 26S67E	140 31N66W 3	142 8N29E		143 27N54E 2	143 26N41E 4
140 31N53W	141 23N30E 1				144 19N44W 2
	142 8N42E 1				

<u>1966 Jan. 26</u>	<u>1966 Jan. 27</u>	<u>1966 Jan. 28</u>	<u>1966 Jan. 29</u>	<u>1966 Jan. 30</u>	<u>1966 Jan. 31</u>
132 10N76W 26	133 31N75W 20	133 30N89W 12	139 26S53W 13	139 25S67W 10	139 25S81W 9
133 32N60W 24	139 25S27W 11	139 26S41W 14	147 25N19W 5	148 27S27W 3	148 28S39W 3
139 23S16W 13	146 26S40E 1	147 27N 7W 4	148 29S 8W 4	152 25S54W 10	152 25S65W 6
145 5S12W 2	147 26N 4E 1	148 29S 5E 3	150 20N59W 2	153 32N25E 2	153 32N11E 2
146 24S49E 2	148 29S17E 1	150 19N48W 3	152 25S39W 6	154 28N67E 17	154 28N57E 17
	149 26N73E 1	151 2S20E 2	153 31N34E 1		155 23N26W 2
			154 27N86E 15		156 17N46E 1
					157 27N88E 3
					158 36N90E 2

IGSY WORLD DATA CENTER A
 HIGH ALTITUDE CENTER
 P. O. Box 1850
 Boulder, Colorado
 U. S. A.

FRAUNHOFER INSTITUT

MIT DEN OBSERVATORIEN SCHAUINSLAND UND ANACAPRI

DIREKTOR: PROF. DR. K. O. KIEPENHEUER

Recd JVL 22 MAR '66

78 FREIBURG IM BREISG.
SCHÖNECKSTRASSE 6
TELEFON 32864

J. Virginia Lincoln 22 MAR '66

January 1966

Dear Colleague,

We are entering with our Daily Maps of the Sun now the 11th year of publication. At this occasion we would like again to express our very thanks to the numerous contributors. When we started in 1956 we received data from 11 observatories. Today almost 30 observatories are contributing. The type of representation has not changed sensibly within long time. We have tried always to be as complete as possible without overloading the maps graphically. From January 1, 1966 on we will introduce three slight changes: New presentation of coronal data, incorporation of the McMath Plage Regions (number and area), and we will follow the new classification of flares, proposed by the I.A.U. For details please see the enclosed new description of the maps.

With our best wishes,
sincerely yours,



K.O. Kiepenheuer

1) Sunspots

The observations of 10 observatories are used. Differences in dividing spots into groups are equalized. In doubtful cases the decision is based on the magnetic polarities of spots, which we receive from Potsdam. Small A-groups, which are recorded under similar observing conditions only by one observatory and only for one day are generally ignored. The relative sunspot number R is computed with the reduction factor 0.7.

$$R = 0.7 \cdot (10g + f)$$

The groups are classified according to the Zürich scale. They are represented by circles according to their size, small for types A, B, J, medium for C, D, G, H and big circles for E and F. The centers of these symbols give the coordinates of the centers of gravity of the groups for 12^h U.T. Next to the group, type and number of spots are recorded, e.g. E 3 $\frac{1}{2}$.

2) Plages

The plages are drawn by means of K₂-spectroheliograms and K-filtergrams in 3 different classes:

shredded and weak	hatched
continuous	bordered
continuous and bright	bordered and hatched

This representation does not imply a photometric scale. Left of the sun's disk the McMath numbers of plage areas are given together with coordinates (reduced to U.T. noon) and areas (given in units of 10⁻⁴ of the solar disk). For gapdays the coordinates of the plages will be interpolated. The data reach us by URSIGRAM.

3) Filaments, Prominences and Disparitions Brusques

Filaments also are drawn in their position at 12^h U.T. For prominences important changes within 24 hours are presented in supplementary drawings. Observatory and time of observation are recorded there. Disparitions Brusques (DB's) are recorded as far as possible by giving the time interval during which the feature disappears. Underscored hours mean the observed beginning or the end of the phenomenon. Not underscored hours belong to the last negative on which the object was still at rest, or the first on which the object was no longer detectable.

4) Corona

The brightness of the corona at the solar limb in λ 5303 is given in a 9 step scale.

step	1	0 to	10×10^{-6}	of the sun's brightness
2	11 to	30	"	"
3	31 to	55	"	"
4	56 to	85	"	"
5	86 to	120	"	"
6	121 to	160	"	"
7	161 to	205	"	"
8	206 to	255	"	"
9	> 255	"	"	"

The values are given in figures at the appropriate place around the limb. No figures mean no observation. Data from Pic du Midi and Mt. Norikura are given without change. Intensities from Climax and Wendelstein are multiplied with 0.65. The preliminary estimates from Sacramento Peak (9-step scale) are reproduced without change. The Kanzelhöhe values will be treated specially until a definite scale is available. To fill gaps, Norikura data shortly before or after 0^h U.T. are occasionally used for the following or the preceding day.

5) Flares

Flare positions are not reduced to 12^h U.T. Underscored hours give the beginning or the end of the phenomena, not underscored beginning or end of observation. Subflares in the same spot group are summarized by giving their number, average position, beginning time of the first and end of the last.

Importance of flares is given according to the new scheme of classification proposed by the Working Committee of Commission 10 of the I.A.U. The new dual classification is given in the following table:

"Corrected" area in heliographic square degrees	Relative intensity evaluation		
	Faint (f)	Normal (n)	Brilliant (b)
< 2.1	Sf	Sn	Sb
2.1 - 5.1	1f	1n	1b
5.2 - 12.4	2f	2n	2b
12.5 - 24.7	3f	3n	3b
> 24.7	4f	4n	4b

For more details see IQSY Instruction Manual Amendments of December 1, 1965, distributed by the Meudon Observatory.

1966

Observing Material at Our Disposal

Original observations (negatives, drawings, flare data) reach us from the following observatories.

	Flares	Spots	Plages K ₃		Filam.Promin.Ha			Corona 5303
			Spectro-heliogr.	Filter	Spectro-heliogr.	Filter	Corono-graph	
Arcetri	A		o					
Athens	D	+				Δ		
Bucharest	Ψ							
Burbank						Δ		
Capri G	C	+				Δ		
Catania	E	+				Δ		
Climax								x
Culgoora						Δ		
Freiburg	F	+	Δ	Δ	Δ	Δ		
Haleakala	X					Δ		
Helwan		x						
Herstmonceux	G					Δ		
Istanbul	J	x						
Kandilli	Y	x						
Kanzelhöhe	K	x					Δ	x
Kodaikanal	I		o		o			
Manila	Θ		Δ					
Meudon			o		o			
Mitaka,Mt.Norikura	T							x
Ondrejov	O							
Pic du Midi								x
Potsdam		+						
Rome	E			o				
Sacramento Peak	P					Δ		x
Teheran						Δ		
Thessaloniki	Δ							
Tonantzintla						Δ		
Tortosa						Δ		
Uccle	U							
Wendelstein	W	+	Δ		Δ	Δ	Δ	x

Explication: First row abbreviation of station, Δ original negative, o film copy, + drawn map, x list.

Flare data, based on telegrams.

Burbank	Φ
Climax	B
Culgoora	T
Huancayo	F
McMath Hulbert obs.	H
Meudon	M

NERA	N
Nizamiah	A
Ottawa	Q
Russian Observatories	R
Stockholm, Anacapri S	S
Zürich, Arosa, Locarno	Z

FRAUNHOFER INSTITUT

MIT DEN OBSERVATORIEN SCHAUINSLAND UND ANACAPRI

MAR 28 1967

DIREKTOR: PROF. DR. K. O. KIEPENHEUER

1957 WORLD DATA CENTER A
HIGH ALTITUDE OBSERVATORY
P. O. Box 1558
Boulder, Colorado 80301
U. S. A.

78 FREIBURG IM BREISGAU
SCHÜNECKSTRASSE 6
TELEFON 32864

March 1967

Dear Colleague,

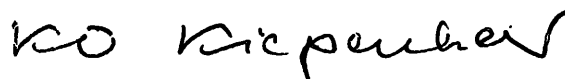
Beginning with this series of Daily Maps of the Sun for the first half of February 1967 the flare list will be omitted.

We discontinue publishing these data because it is our feeling that the Daily Maps are used - as they are intended to be - as a means providing information on solar structures and configurations and on their variations from day to day. Unfortunately it proved not feasible to include drawings showing the shape and development of the flares as we had planned originally. On the other hand, flare lists based on more or less the same observations and reports are published at present by a number of other institutes. We would like to refer especially to the flare listings in Solar Geophysical Data (CRPL-Series) of the Space Disturbance Laboratory, ESSA, Boulder/Col., which contain more flare observations and give more data on a single flare than the Daily Maps could possibly provide. The S.G.D. give a preliminary compilation with a delay of one month as well as a completed final version comprising all available observations after four months.

A final list of flares is supplied by the Quarterly Bulletin on Solar Activity (edited by Eidgenössische Sternwarte Zürich).

We take this occasion to express our very best thanks to all observatories and to all observers who have kindly supplied us with their flare data hitherto.

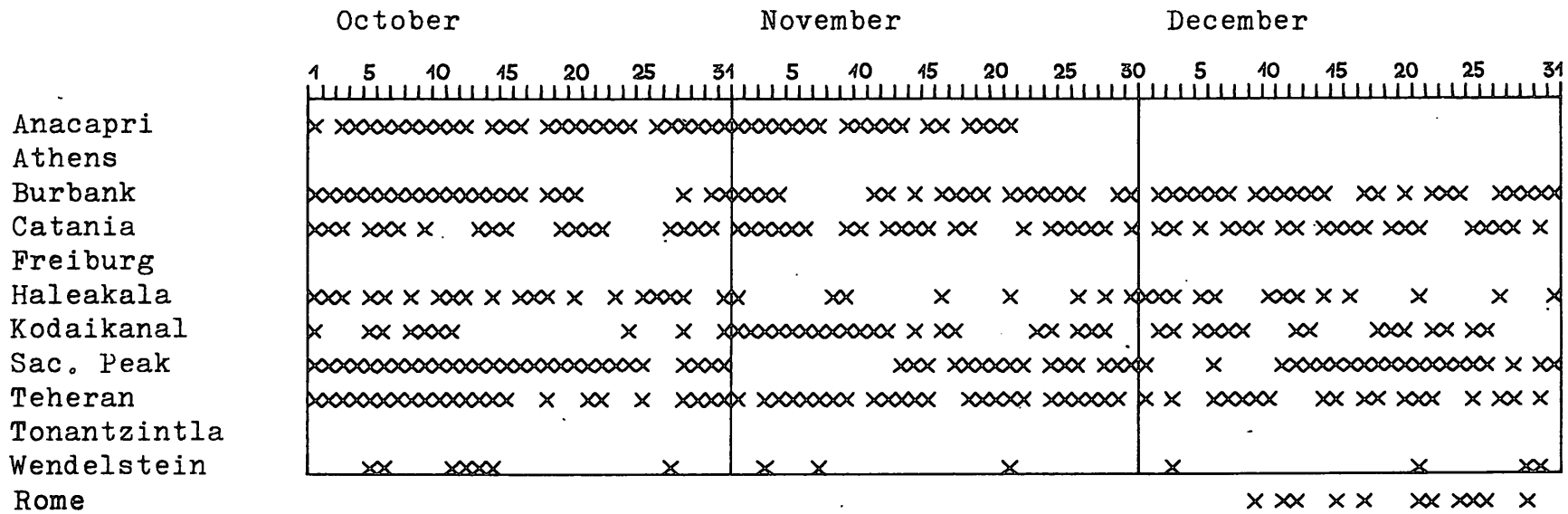
Hoping that you are appreciative for this change,



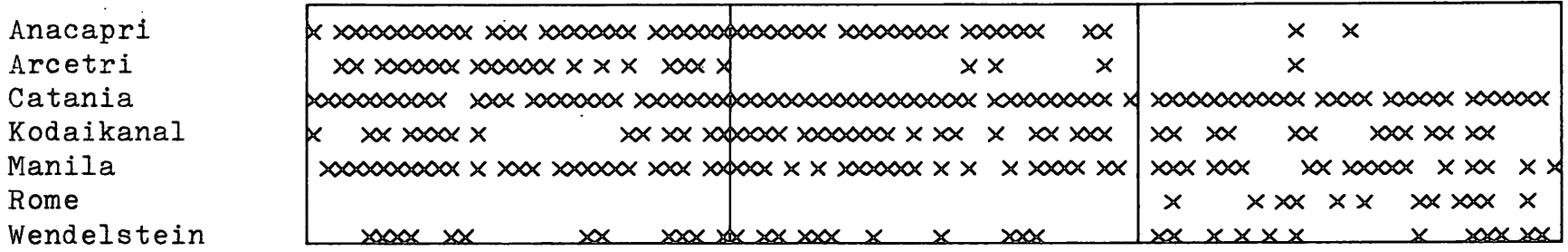
K.O. Kiepenheuer

We have received the following observations : 1969

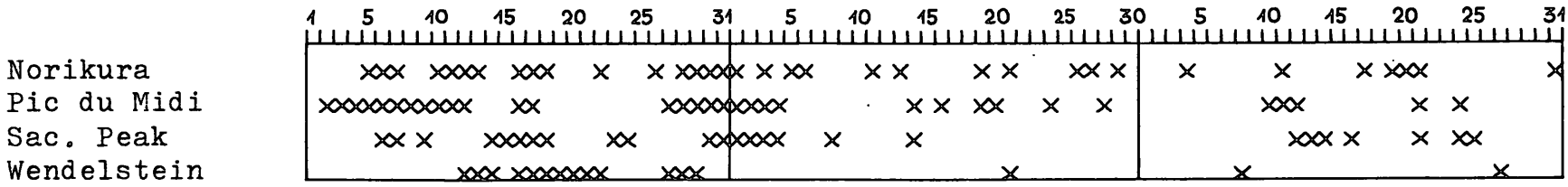
REC'D WDC-VAG 18 FEB 70



H_α



K₃

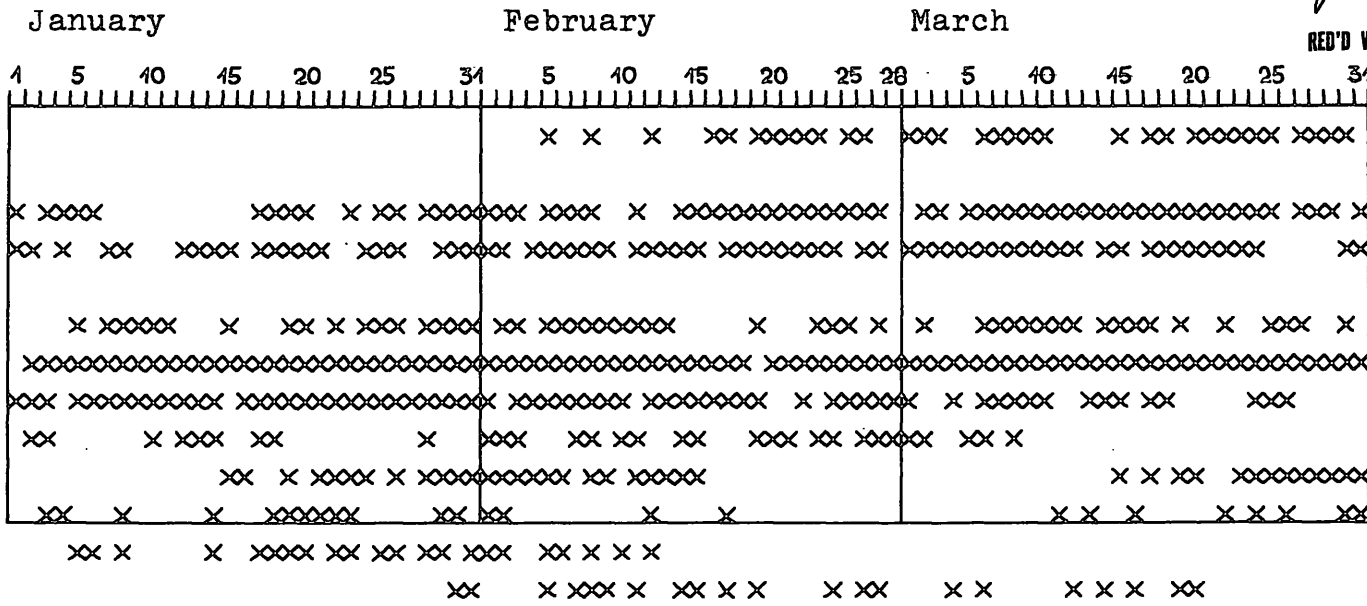


Corona
5303

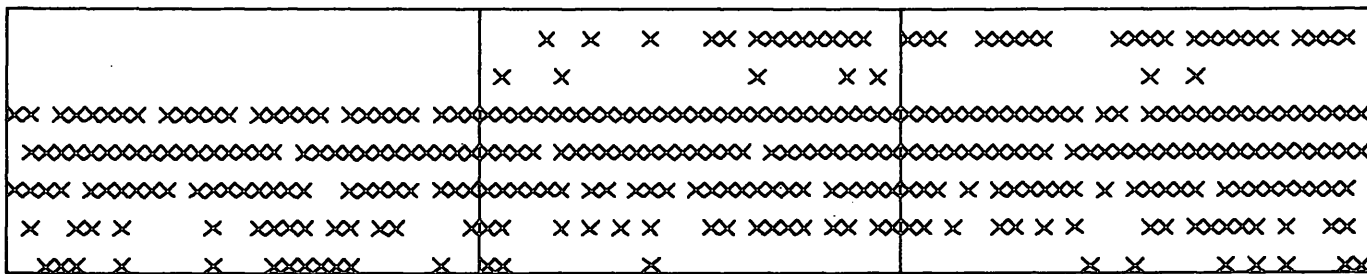
We have received the following observations : 1970

Apr 70

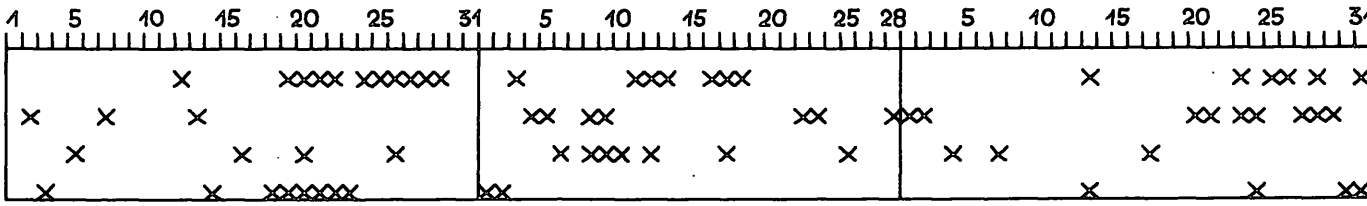
RED'D WDC-UAG 18 MAY '70



H_α



K₃

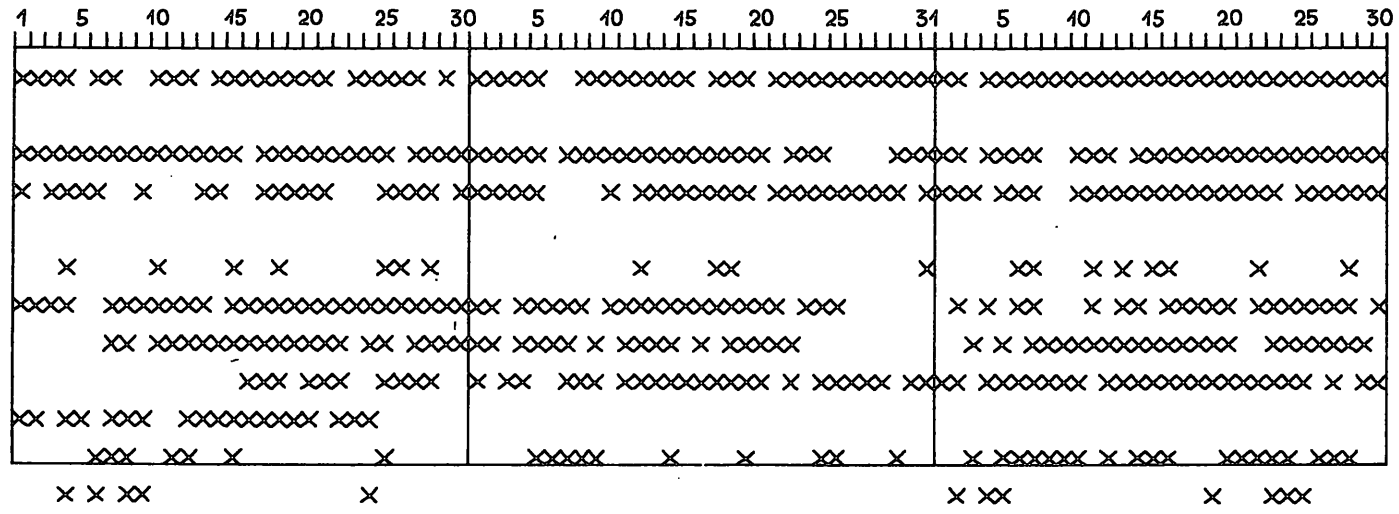


Corona
5303

We have received the following observations : 1970

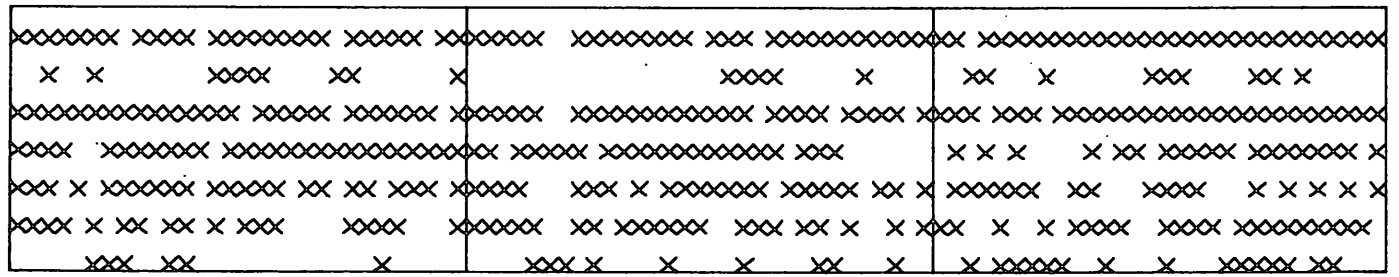
April May June

Anacapri
 Athens
 Burbank
 Catania
 Freiburg
 Haleakala
 Kodaikanal
 Sac. Peak
 Teheran
 Tonantzintla
 Wendelstein
 Climax



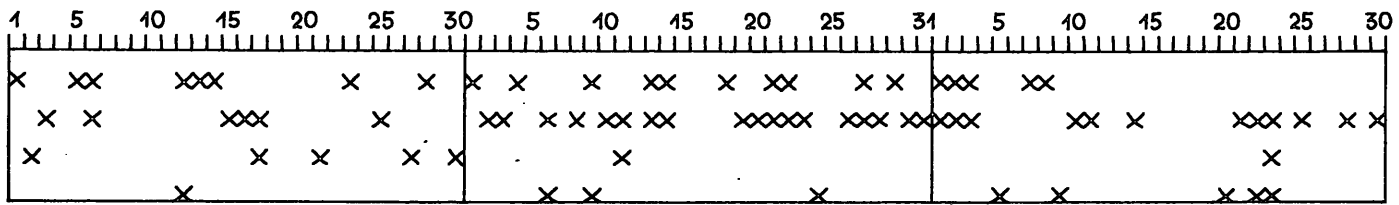
H_α

Anacapri
 Arcetri
 Catania
 Kodaikanal
 Manila
 Rome
 Wendelstein



K₃

Norikura
 Pic du Midi
 Sac. Peak
 Wendelstein

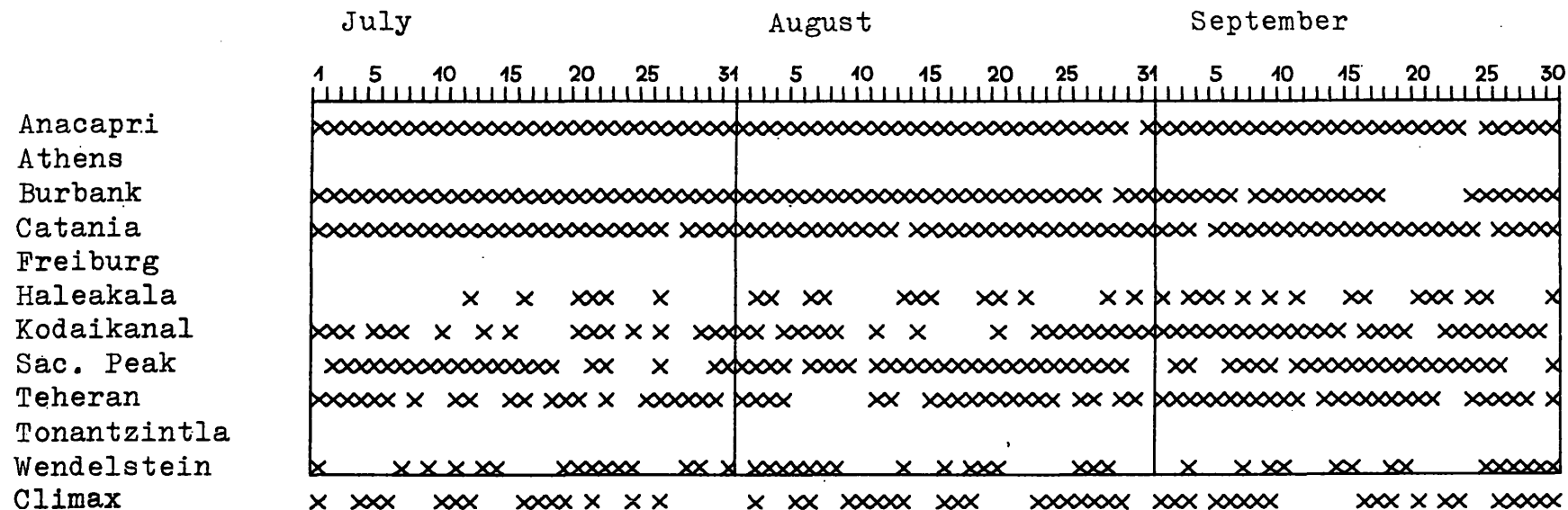


Corona 5303

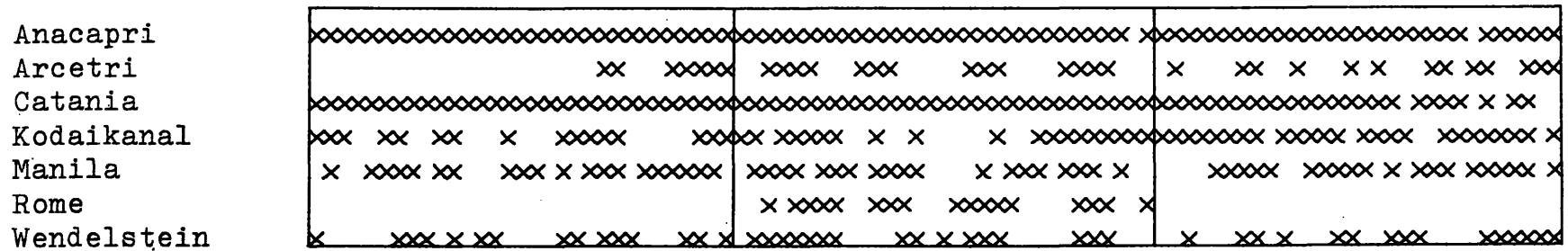
OCT 1970

We have received the following observations : 1970

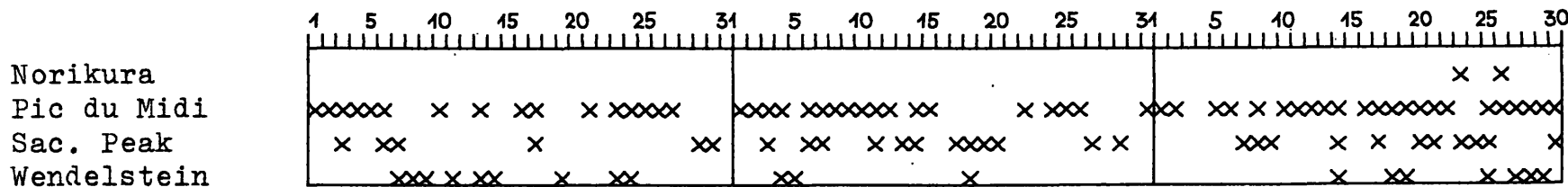
REC'D WDC-VAG 15 DEC '70



H_α



K₃



Corona 5303

APRIL 1971

We have received the following observations : 1971

RED'D WDC-RT 1 4 JUN '71

	January							February							March								
	1	5	10	15	20	25	31	1	5	10	15	20	25	28	1	5	10	15	20	25	31		
	Anacapri								xxxxxx	xxx	x	x	x	xxx	x	xx	x	xxxx	xxxx	xxx	xx		xx
Burbank	xxxxxx	xx	x	xxxxxx	xxxxxx	xxxxxx	xxxxxx	xxxxxx	xxxxxx	xxxxxx	xxxxxx	xxxxxx	xxxxxx	xxxxxx	xxxxxx	xxxxxx	xxxxxx	xxxxxx	xxxxxx	xxxxxx	xxxxxx		
Catania	x	xxxxxx	xx	x	xx	xx	xxxxxx	xx	xxx	xxx	xxxxxx	xx	xx	x	x	x	xxx	xx	x	xx	xx	xx	
Climax					x	x	xxxx	x	x	x	x	x	xxx	xxx			x	x	x	x	xxx		
Freiburg																							
Haleakala	x				x	x	xx	x	x	xx	xx	xx	xx			x	xxxxxx	xxxxxx	xx	xx		H _α	
Kodaikanal	xxxx	xxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx		
Sac. Peak	xx	xx	xx	xxxx	x	xxxx	xxxx	xxxx	xx	xxxx	x	xxxx	xx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx		
Teheran	xxxxxx	x	xx	x	x	xxxxxx	xx	xx	x	x	x	xxxx	xx	xxxx	x	x	x	x	x	x	x		
Tonantzintla																							
Wendelstein	xxxx	x	xx	xx	x	xx	xx	xx	xx	xx	xx	xx	xx	x	x	xx	xx	xx	xx	xx	xx		
Rome	x	xxx	x			xx	xx	x	xxxxxx	xxxxxx	x	xxxxxx	xxxxxx	xxxxxx	xxxxxx	xxxxxx	xxxxxx	xxxxxx	xxxxxx	xxxxxx	xxxxxx		
Anacapri																							
Arcetri		xx	xx					xxx	xxxx		xx					x	x						
Catania	x	xxxx	xxx	xx		xxxxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	x	x	xxx	x	xx	xxxxxx	xxxxxx	xxxxxx		
Kodaikanal	xxxx	xxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	K ₃	
Manila	xxxxxx	xxxxxx	xxxxxx	xxxxxx	xxxxxx	xxxxxx	xxxxxx	xxxxxx	xxxxxx	xxxxxx	xxxxxx	xxxxxx	xxxxxx	xxxxxx	xxxxxx	xxxxxx	xxxxxx	xxxxxx	xxxxxx	xxxxxx	xxxxxx		
Rome		xxx	x			xx	xx	x	xxxxxx	xxxxxx	x	xxxxxx	xxxxxx	xxxxxx	xxxxxx	xxxxxx	xxxxxx	xxxxxx	xxxxxx	xxxxxx	xxxxxx		
Wendelstein	x	xx	x	xx	x	x	x	xx	xxxx	x	x			x	x	x	x	xx	xx	x	x		
Norikura		xx	xxxx	x	x		xxx		x	x						x	xx	xxx	xxx	x			
Pic du Midi	xx	x	xx	x	xx			xx	xx	xxx		x	xx	xx	x	xx	xx		xx	xx	xx	Corona	
Sac. Peak		x	xx	x	xxxx			xx	x		x			x	x	xxx	x			x		5303	
Wendelstein	xxxx							x	x	xx		x				x	x		x		x		

