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说　　明

太阳地球物理资料的来源包括北京天文台（简称北台或BEIJ）、北京地磁台(BGMO)，北京天文馆（北馆或PLAT）、陕西天文台（陕台或LINT）、南京大学（南大或NAUN）、紫金山天文台（紫台或PURP）、乌鲁木齐天文工作站（乌站或WLMQ）和云南天文台（云台或YUNN）共八个单位的有关观测结果。内容分下列七个部分：

1．紫金山天文台编辑的太阳黑子相对数与面积数值、太阳黑子观测和太阳黑子群表等三种表格。

2．云南天文台绘制的黑子磁场图。

3．太阳地球物理资料编辑组（以下简称编辑组）编辑的太阳耀斑表、耀斑巡视时间表。

4．编辑组编辑的太阳射电辐射流量表，太阳射电显著事件表、太阳射电辐射巡视时间表和太阳射电辐射显著事件图。

5．编辑组编辑的突然电离层扰动（D层）表。

6．编辑组编辑的地磁活动指数K和A_K表。

7．北京地磁台编辑的磁暴表。

以上各种数据表均由编辑组利用计算机（VAX 11/780）存取及作必要的计算和检验，并提供照相印刷的正本。

内　容　简　介

1．与黑子有关的三种表格以云台的观测为主。云台缺测时，则用其它台站的结果，并在备注栏内注明台站简称。“太阳黑子观测”表和“太阳黑子群表”内容基本相同。前者以观测日期为引数，后者则以群号为引数。群号为综合各台站观测记录后的统一编号。

2．黑子表和耀斑表中的日面位置指卡林顿（Carrington）坐标。中经距指黑子或耀斑所在经圈与日面中心经圈之经度差，以度表示。E、W分别表示在日面中心经圈之东西。日心距指太阳圆面上的黑子或耀斑相对于日面中心之距离，以太阳半径为单位。视面积Sd指其在太阳圆面上的表观面积，以太阳圆面积的10^{-6}为单位。校正面积Sp指经过投影改正后，黑子或耀斑在太阳球面上的真正面积，以太阳半球面积的10^{-6}为单位。黑子型别按苏黎世（Zürich）分型。

3．黑子磁场图主要表征黑子磁场的极性和极大强度值，但图中黑子的形态和面积并不精确。图的左上方为观测日期和时刻，S、N分别表示太阳自转轴的南端和北端方向；E、W表示太阳赤道区的东、西方向。图内给出黑子群的统一编号。黑子的磁场极性分别在图内用N、S表示；其下标数字表示磁场强度，单位为100高斯。

4．太阳耀斑表列出北台、紫台、乌站、云台等单位用色球望远镜（通过Hα单色光）观测到的耀斑和亚耀斑。表中列出耀斑发生的时刻。其中极大表示耀斑亮度极大时的时刻；面积为极大时刻的面积。视面积Sd和校正面积Sp按 Sec θ 关系换算得到。耀斑级别以两个

字符表示，第一个字符由耀斑在极大时刻的面积决定；第二个字符表示耀斑亮度，由各观测台站根据经验确定。其中B表示“亮”、N表示亮度“中等”，F表示“暗”。当耀斑日心距r/R＜0.906时，即耀斑日心角θ（指耀斑和观测者在日心处的张角）＜65°时，其级别按“校正面积Sp”定级，如下表所示：

校正面积Sp	耀斑级别 暗（F）	中等（N）	亮（B）
≤100	－F	－N	－B
101—250	1 F	1 N	1 B
251—600	2 F	2 N	2 B
601—1200	3 F	3 N	3 B
≥1201	4 F	4 N	4 B

当耀斑日心距r/R≥0.906时，即耀斑日心角≥65°时，其级别按“视面积Sd”定级，如下表所示：

日心距 r/R	—	耀斑级别 1	2	3
.906— .939	Sd＜90	90—279	280—599	Sd≥600
.940— .984	75	75—239	240—499	500
.985— .999	50	50—179	180—349	350
1.000	45	45—169	170—299	300

耀斑表中资料栏内各字母分别表示：

C：全部或绝大部分过程有照相观测。

P：部分或很少部分过程有照相观测。

V：全部或大部分过程有目视观测。

S：部分或很少部分过程有目视观测。

备注一栏内的各字母的意义详见附录1。

5．耀斑巡视时间表包括目视和照相巡视。目视或照相间隔小于5分钟时，看作连续巡视。

6．太阳射电辐射流量表给出各种频率在太阳中天附近流量的实测值。其中紫台栏下的值是天线的温度值。太阳射电辐射流量单位全部采用10^{-22}·瓦·米$^{-2}$·赫$^{-1}$，并均已归算至日地平均距离。

7．太阳射电辐射显著事件表中峰值流量增值栏内，其相对值ΔS/S表示峰值流量增值ΔS与爆发前流量S之比值；平均流量增值表示在持续爆发时间内ΔS的平均值。爆发型别的划分详见附表2。对于流量增值较大而且记录质量较好的爆发，将给出爆发图。

8．太阳射电辐射显著事件图中，右上角分别给出事件的日期及其峰值流量和频率。在横坐标轴上，每十分钟标一时间，纵坐标给出归一化的幅度。

9．太阳射电辐射巡视时间表为各单位巡视观测结果。

10．突然电离层扰动（D层）（简称SID）表中给出由于电离层（D层）的变动导致Loran—C发播的100KHz(LF)和10.2KHz（VLF）一跳天波的相位和场强变化的测量值。陕

台和云台分别给出由于SID引起的低频突然相位异常（LF—SPA）的结果；陕台还给出甚低频相位异常（VLF—SPA）和低频场强异常（LF—SFA）的结果。

（LF—SPA）的$\Delta\phi_0$是对应于太阳天顶角为零时改正后的值，单位为微秒（μ_s）。$\Delta\phi_0$值按下式计算：

$$\Delta\phi_0 = \frac{\Delta\phi' + 10.5(\cos Zs - \cos Zm)}{(\cos Zs)^{0.5}}$$

式中，$\Delta\phi'$为实测的SPA的相位变化量；Zs 和Zm为在反射点处SPA开始和极大时刻的太阳天顶角。

（VLF—SPA）的$\Delta\phi$值为实测的相位变化量。

（LF—SFA）的ΔA值以分贝（dB）为单位。其值有四种表示方法：+，−，0，−—+。其中正值表示幅度增加，负值表示幅度减小，零值表示幅度几乎没有变化，先负值后正值则表示幅度先减小后增大。

SID事件的级别IMP按$\Delta\phi_0$定级如下：

$\Delta\phi_0$	(0, −1)	(−1, −2)	(−2, −3)	(−3, −4)	(−4, −5)
IMP	1−	1	1+	2−	2+
$\Delta\phi_0$	(−5, −6)	(−6, −7)	(−7, −8)	(−8, −∞)	
IMP	2+	3−	3	3+	

低电离层突然骚扰与太阳X射线爆发有着非常好的相关性。几乎每一个SPA 和 SFA 都是由太阳X射线爆发引起。因此这些数据对预测短波通讯的可靠性并进而研究太阳活动与电离层相关的影响有着重要的意义。

11. 地磁活动指数K和A_K表中日期后有Q者，表示当月五天地磁最平静日；有 D者表示当月五天地磁最扰动日。三小时时段的K指数由各时段地磁水平强度 H 的幅度消去正常日变化后的Y值决定。就中、低纬度地区而言，其对应关系如下：

H =	3	6	12	24	40	70	120	200	300	（单位为Y）
K = 0	1	2	3	4	5	6	7	8	9	

每日等效幅度A_K是当日8个三小时时段等效幅度a_k的平均。K指数与a_k的对应关系如下：

K = 0	1	2	3	4	5	6	7	8	9	
a_k = 0	3	7	15	27	48	80	140	240	400	（单位为1.2Y）

在磁暴表中，SC表示急始磁暴；SC* 表示先有一小负脉冲然后继以主要脉冲的急始磁暴，在量SC*的急始幅度时，仅量取主要脉冲幅度；GC表示缓始磁暴。活动程度栏中以m、ms、S分别表示中常，中烈和强烈磁暴。即分别对应于K = 5，6—7，8—9的磁暴。

北京地磁台的地理坐标：40°02′N、116°10′E；地磁坐标：28.°9N、186.°1E；海拔高度：43米。

以上所有图表中的时间一律采用世界时（UT）。由世界时转换到北京时间（东径 120° 标准时）应加上八小时。例如2230—2400（UT）观测太阳耀斑即相当于北京时间次日上午0630—0800。

对“太阳地球物理资料”的意见请寄北京中国科学院北京天文台“太阳地球物理资料”编辑组。电话：281698，电报挂号：9053，电传：22040 BAOAS CN。

附录 1

耀斑表中备注栏内各字母的意义（IAU　系统）

A = 底部位于中经距小于90°区域的爆发日珥。

B = 可能是一个比较大的耀斑的尾声。

C = 十分钟以前还看不见。

D = 一个亮点。

E = 两个或多个亮点。

F = 有几个爆发中心。

G = 在邻近区域无可见黑子。

H = 有高速暗条伴随的耀斑。

I = 活动区的范围很大。

J = 耀斑前或后谱斑亮度有明显变化。

K = 有好几个亮度极大。

L = 现存暗条有突然活动的迹象。

M = 白光耀斑。

N = 耀斑连续光谱出现各种偏振效应。

O = 用CaII的H或K线对耀斑进行了观测。

P = 耀斑HeD_3发射线。

Q = 耀斑的巴尔麦连续区呈发射光谱。

R = 耀斑的H_α线显著不对称表明有高速物质抛射。

S = 暗条消失以后在同一位置有增光现象发生。

T = 整天活动的区域。

U = 平行（‖）型或会聚型（Y）的双亮带耀斑。

V = 有爆发相的事件：在大约一分钟内，耀斑区有伴随或不伴随亮度的急剧增大。

W = 强度极大后，耀斑面积巨增。

X = 耀斑的H_α线很宽。

Y = 环形日珥系统。

Z = 大的黑子本影为耀斑所掩盖。

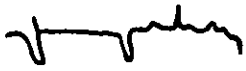
附录 2

太 阳 射 电 爆 发 分 型

类 型	定 义	图 形
1S	持续时间和峰值流量均小于10。	
2S/F	1S上有起伏。	
3S	峰值流量大于持续时间，且峰值流量大于10。	
4S/F	3S上有起伏。	
5S	不符合其它简单型爆发定义，且峰值流量大于持续时间的爆发。	
6S	持续时间为 1 或 2 分的简单上升和下降的爆发。	
7C	持续时间为几秒，峰值流量小于10的复杂型爆发。	
8S	迅速上升又迅速下降、持续时间接近或小于 1 分钟，且峰值流量大于10的简单爆发。	

类 型	定 义	图 形
20GRF	持续时间从10分钟到几小时，峰值流量小于持续时间，且流量值不超过50。	
21GRF	20GRF型爆发上迭加有清晰的爆发。	
22GRF	20GRF型爆发上有起伏。	
23GRF	20GRF型爆发上有起伏，且迭加有爆发。	
24R	持续时间为5到30分钟（指图中斜的部分）中等强度的流量上升，且在上升后数小时内不伴随下降。	
25R	24R型爆发上迭加有爆发。	
26FAL	持续时间为5到30分钟（指图中斜的部分）中等强度的流量下降，下降前数小时无流量上升。	
27RF	或多或少规律的连续谱上升和下降，持续时间为分到小时。	

类　型	定　　义	图　　形
28PRE	在主爆发之前，流量逐渐上升地(t>10min)增强，先兆的结束取 在斜率突变的时刻。	
29PBI	爆发后，流量在逐渐下降时（t> 10min)仍有明显的增强，增强的开始取在斜率突变的时刻。	
30PBI	29PBI型爆发上迭加有爆发。	
31ABS	爆发后流量密度逐渐下降后又回到事件前水平。	
32ABS	流量密度逐渐下降后又回到事件前水平。	
40F	流量密度有一系列迅速又无规则的变化，各峰无法明显区别，各次峰强度小于主峰的15%。	
41F	彼此接近的一群小爆发，每个小爆发均下降至爆发前水平，每两个爆发的时间间隔小于或等于5分钟。	

类 型	定 义	图 形
42SER	具有显著时间间隔的一系列爆发，每个爆发均降至爆发前水平。	
43NS	噪爆开始。	
44NS	进行中的噪爆。	
45C	几个或多个简单爆发的合成。	
46C	45C型爆发上有起伏。	
47GB	峰值流量密度＞500的爆发。	
48C	有大振幅、复杂变化的复杂型爆发。	
49GB	持续时间大于10分钟、流量有较大增强的爆发。	

CHINESE SOLAR-GEOPHYSICAL DATA (CSGD)
EXPLANATION OF DATA REPORTS

INTRODUCTION

The solar-geophsical data cotained in "Chinese Solar-Geophysical Data" are collected by Beijing Astronomical Observatory (BEIJ), Beijing Geomagnetic Observatory (BGMO), Beijing Planetarium (PLAT), Nanjing University (NAUN), Purple Mountain Observatory (PURP), Shaanxi Observatory (LINT), Wulumuqi Astronomical Station (WLMQ), and Yunnan Observatory (YUNN). The data are divided into the following seven parts :

1. Daily Relative Sunspot Numbers and Sunspot Areas, Daily Sunspot Observations and Sunspot Groups compiled by Purple Mountain Observatory.

2. Daily charts of Sunspot Magnetic Field made by Yunnan Observatory.

3. H-Alpha Solar Flares and Intervals of H-Alpha Solar Flare Patrol Observation compiled by the CSGD Editorial Group (EG) in Beijing.

4. Solar Radio Emission Flux and Solar Radio Emission Outstanding Occurrences, Intervals of Solar Radio Emission Patrol Observations and Solar Radio Emission Burst Profiles compiled by the EG .

5. Sudden Ionospheric Disturbances (D-Region) (SID) compiled by the EG.

6. Geomagnetic Indices K and A_K compiled by the EG .

7. Magnetic Storms compiled by Beijing Geomagnetic Observatory.

All the above data are stored in a VAX 11/780 computer, some calculations are made, and the data are checked before final data reports are photoprinted.

Brief Explanation of the main contents

1. The results contained in the tables of sunspots come mainly from the observations of Yunnan Observatory. When there are gaps in these observations,they are filled by observations made on the same day by other observatories whose corresponding names appear in the remarks column of the table. the table of " Daily Sunspot Observations " and the table of " Sunspot Groups " have the same contents but are arranged according to different parameters. The former is arranged according to observation dates and the latter according to sunspot group numbers. Sunspot group numbers are standardized after collecting all sunspot observations from different observatories.

2. In the table of " Daily Sunspot Observations " and the table of " H-Alpha Solar Flares " Carrington coordinates are used for the positions of sunspot groups or solar flares. Central Meridian Distance shows the distance in degrees between the central meridian and the meridian where a sunspot group or flare is located. E and W indicate that the sunspot group or flare lies to the east or to the west of the central meridian respectively. Heliocentric Distance measured in units of disk radius represents the distance from the center of gravity of the sunspot group or flare on the disk to the centre of the disk. Apparent Areas Sd is the area projected on the disk in millionths of the disk and the Corrected Area Sp is the real area of the sunspot group or flare occupied on the sun surface in millionths of the hemisphere after the projecting correction of Apparent Area Sd

is considered. Zurich classification is used for sunspot classification.

3. Daily Charts of Sunspot Magnetic Field mainly give the polarities and the maximum values of magnetic fields of sunspots but not the exact features and areas of sunspots. The observing time of sunspot magnetic fields is given for each chart, N-S and E-W represent the direction of the solar rotation axis and the equator of the sun respectively. The upper case letters N and S near sunspot groups indicate the polarities of the spots and the Arabic numbers show the measured values of the magnetic fields in 100 gauss.

4. The table of " H-Alpha Solar Flares " gives H-Alpha flare patrol observations including subflares made by Beijing Astronomical Observatory, Purple Mountain Observatory, Wulumuqi Astronomical Station, and Yunnan Observatory. For each flare, start time, end time and the time of maximum phase which shows the maximum of flare brightness are given, and the area is that measured at the time of maximum phase. For flares less than 65° from the centre of the disk the formula relating apparent area Sd and corrected area Sp is the so called Sec θ law. Two figures are assigned to each flare to show the importance of the flare. The first figure is defined by the area of the flare at the maximum phase and the second one is only a qualitative scale where each Observatory uses its experience to decide if a flare is rather faint (F), normal (N),or rather bright (B). For flares less than 65° from the centre of the disk, i.e. the heliocentric distance is less than 0.906, the first figure assigned to the flare importance is defined by the corrected area Sp according to the following table where areas are given in millionths of solar hemisphere.

Corrected Area Sp in Millionths of Hemisphere	Relative Intensity Evaluation		
	Faint(F)	normal(N)	Brilliant(B)
≤ 100	-F	-N	-B
101 -- 250	1F	1N	1B
251 -- 600	2F	2N	2B
601 -- 1200	3F	3N	3B
≥ 1201	4F	4N	4B

For flares equal to or greater than 65° from the centre of the disk, i. e. the heliocentric distance is equal to or greater than 0.906, the first figure assi gned to the flare importance can be estimated by the apparent area Sd according to the following table where the areas are given in millionths of the disk.

Heliocentric Distance r/R	Importance			
	-	1	2	3
.906 -- .939	Sd< 90	90 -- 279	280 -- 599	Sd≥ 600
.940 -- .984	75	75 -- 239	240 -- 499	500
.985 -- .999	50	50 -- 179	180 -- 349	350
1.	45	45 -- 169	170 -- 299	300

The upper case letters C, P, V and S in the column of Data marked " Observation Type " represent the nature and completeness of available observations, i.e.

C --- a complete or quasi-complete sequence of photographs was obtained.

P --- one or a few photographs of the event were obtained resulting in incomplete time coverage.

V --- all (or most of) the development of the flare was visually observed.

S --- flare was seen visually for a small part of its probable duration.

One or more than one upper case letter from A to Z appear in the column marked "remarks" which follows an International Astronomical Union notation, in which each letter of the Alphabet stands for a particular noteworthy condition, as shown in Appendix 1.

5. The table of " Intervals of H-Alpha Flare Patrol Observations " contains intervals of both visual and photographic observation. Flare patrol observations are considered to be continuous if the intervals of no flare patrol observations are less than five minutes.

6. The table of " Daily Solar Radio Emission Flux " gives the flux values of the sun at the time around meridian transit every day at different radio frequencies. All solar flux values are in units of 10^{-22} W·M^{-2}Hz^{-1} except the flux values measured at Purple Mountain Observatory where antenna temperature is used as flux unit. All flux values are adjusted to the mean Sun-Earth distance.

7. In the table of " Solar Radio Emission Outstanding Occurrences " the relative value $\Delta S/S$ is the ratio of the increment ΔS and the flux value S before the burst.

Mean flux increment is the averaged value of the increment ΔS over the period of the burst. For the classification of event type see Appendix 2. The burst profiles are given for the events with large increment of flux value and higher observation quality only.

8. In the " Profiles Figure Of Solar Radio Emission Outstanding Occurrences ", the dates, peak fluxes and frequencies of events are given on the right corner. The time is denoted on the abscissa axis for every ten minutes, and the normalized amplitude is denoted on the ordinate axis.

9. The table of "Intervals of Solar Radio Emission Patrol Observations" gives the time coverage of the observations made by those observatories that contribute the data reports.

10. The table of " Sudden Ionospheric Disturbances (D-Region) " (SID) gives the measured values of the Sudden Phase Anomalies (SPA) and Sudden Field Strength Anomalies (SFA) by the single hop inospheric propagation of Loran-C sky waves at 100 KHz (LF) and 10.2 KHz (VLF) caused by the sudden changes of condition in the D-Region. Sudden Phase Anomalies at low frequency (LF-SPA) are given by both Yunnan Observatory and Shaanxi Observatory. Records of Sudden Phase Anomalies at very low frequency (VLF- SPA) and Sudden Field Strength Anomalies of the type known as SFA at low frequency (LF-SFA) are given by Shaanxi Observatory only. The following equation is adopted for the solar zenith correction of SPA values at low frequency.

$$\Delta\phi_o = \frac{\Delta\phi' + 10.5\ (\ \mathrm{Cos\ Zs} - \mathrm{Cos\ Zm}\ )}{(\ \mathrm{Cos\ Zs}\ )^{0.5}}$$

where $\Delta\phi'$ is a measured value of SPA phase change while $\Delta\phi_o$ is a corrected value of $\Delta\phi'$, i.e. a value normalized to the solar zenith angle equal to zero. Zs and Zm are the solar zenith angles at the reflecting point at the time of SPA start and maximum respectively. The VLF-SPA data $\Delta\phi$ (in μs), the measured values of VLF-SPA phase changes without any correction, are also listed in the table. The LF-SPA data ΔA (in db) contain information of amplitude variation. The four signs +, -, 0 and - — + prefixed by ΔA

correspond respectively to amplitude increase, decrease, constand amplitude, and amplitude decrease before increase. The SID importance rating is based on a scale of 1-, the least, to 3+, the most important, shown in the table as follows :

$\Delta\phi_o$	(0,-1]	(-1,-2]	(-2,-3]	(-3,-4]	(-4,-5]
IMP	1 -	1	1 +	2 -	2 +
$\Delta\phi_o$	(-5,-6]	(-6,-7]	(-7,-8]	(-8,-∞]	
IMP	2 +	3 -	3	3 +	

SID phenomena have close correlation with solar X-ray flares. The SID data in this data report are very important for prediction of reliability of short wave communication and for studies of the correlation between solar activities and ionospheric condition since almost every SPA or SFA is caused by solar X-ray bursts.

11. The data included in the table of " The Geomagnetic Activity Indices K and A_K " are: three-hourly K index, five quietest days of the month (Q) and five most disturbed days of the month (D). Three-hourly K index is determined by the H components measured in γ in each corresponding three-hourly period and subtracted by the diurnal normal changes of geomagnetic field. For mid and low latitude areas, the corresponding relation of H and K is as follows :

H = 3, 6, 12, 24, 40, 70, 120, 200, 300 (in γ)

K = 0, 1, 2, 3, 4, 5, 6, 7, 8, 9

Daily effective A_K is the average of eight values of three-hourly index a , the corresponding relation of K and a_K is as follow :

K = 0, 1, 2, 3, 4, 5, 6, 7, 8, 9

a_K = 0, 3, 7, 15, 27, 48, 80, 140, 240, 400 (in 1.2γ)

Three kinds of geomagnetic storm are listed in the table of " The Magnetic Storms " : sudden commencement (SC), a small negative initial impulse followed by a main impulse (SC*) and gradual commencement (GC).Three degrees are used for the rating of geomagnetic storms, i.e. moderate (m), moderate severe (ms) and severe (s) corresponding to K=5, K=6 or 7 and K=8 or 9 respectively.

Beijing Geomagnetic Observatory is located at 40°02′ N, 116°10′ E geographic coordinates, 28°.9 N, 186°.1 E geomagnetic coordinates and 43 meters above sea level.

The time used in all these data reports is Universal Time (UT). To transform UT to Beijing Standard Time (120 E) simply add 8 hours to Universal Time. For instance, for a flare observed at 2230—2400 UT, the equivalent Beijing Standard Time is 0630—0800 next day.

Address your inquires to the CSGD Editorial Group, Beijing Astronomical Observatory, Beijing, China. Telephone number 281698. Telegram code: 9053. Telex: 22040 BAOAS CN.

太 阳 黑 子 观 测
DAILY SUNSPOT OBSERVATIONS

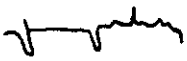
1985 年 1 月 JAN 1985

日期 Day	群号 No	过日面中心经圈 (月, 日) CMP-Day	日面位置 纬度 Lat	经度 L	中经距 CMD	型别 Type	日心距 r/R	视面积 Sd	校正面积Sp 全群 Whole	最大黑子 Max	备注 Remarks
1.07	282	XII-29.0	-10	350	45W	A	0.70	4	3	3	
2.15	1	I- 3.4	12	280	16E	A	0.37	8	4	2	PLAT
	2	I- 5.2	-15	256	40E	A	0.66	4	3	3	PLAT
3.38	0										
4.04	0										
5.04	0										
6.04	0										
7.04	0										
8.27	3	I-13.5	7	146	71E	A	0.95	4	7	7	PLAT
9.05	3				59E	A	0.86	8	8	4	
	4	I- 9.9	-14	194	11E	A	0.25	4	2	2	
10.10	0										
11.04	0										
12.06	0										
13.10	5	I-14.4	-9	134	18E	B	0.30	13	7	2	
14.05	5				5E	C	0.23	126	65	45	
15.08	5				9W	D	0.18	109	56	39	
16.06	5				22W	D	0.37	88	47	29	
17.06	5				36W	D	0.57	130	80	31	
18.03	5				48W	D	0.74	114	84	84	
19.07	5				62W	D	0.87	80	82	35	
20.05	5				76W	D	0.97	29	57	24	
	6	I-18.8	-10	76	16W	C	0.28	156	81	68	
	7	I-22.8	5	24	39E	A	0.64	8	5	3	
	8	I-20.9	-11	49	11E	A	0.22	4	2	2	PURP

太阳黑子相对数与面积数
DAILY RELATIVE SUNSPOT NUMBERS AND SUNSPOT AREAS

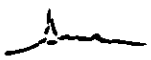
1985 年 1 月 JAN 1985

日期 Day	群数 Cro.	相对数值 Relative-Num. 北半球 N. H.	南半球 S. H.	合计 Sum	面积数值 (Areas) 手描 Drawing 北半球 N. H.	南半球 S. H.	合计 Sum	照像 Photo 北半球 N. H.	南半球 S. H.	合计 Sum
1	1	0	7	7	0	3	3	0	0	0
2	2	8	7	15	4	3	7			
3	0	0	0	0	0	0	0	0	0	0
4	0	0	0	0	0	0	0	0	0	0
5	0	0	0	0	0	0	0	0	0	0
6	0	0	0	0	0	0	0			
7	0	0	0	0	0	0	0	0	0	0
8	1	7	0	7	7	0	7	0	0	0
9	2	8	7	15	8	2	10	0	0	0
10	0	0	0	0	0	0	0	0	0	0
11	0	0	0	0	0	0	0	0	0	0
12	0	0	0	0	0	0	0	0	0	0
13	1	0	11	11	0	7	7	0	0	0
14	1	0	16	16	0	7	7	0	127	127
15	1	0	14	14	0	56	56	0	107	107
16	1	0	18	18	0	47	47	0	92	92
17	1	0	22	22	0	80	80	0	157	157
18	1	0	16	16	0	84	84			
19	1	0	16	16	0	82	82	0	190	190
20	4	8	37	45	5	140	145			
21	3	12	30	42	28	578	606			
22	3	11	31	42	9	645	654	0	688	688
23	3	9	27	36	9	540	549			
24	2	11	16	27	9	428	437	0	685	685
25	2	8	10	18	5	473	478			
26	1	7	0	7	3	0	3			
27	1	7	0	7	2	0	2			
28	0	0	0	0	0	0	0			
29	0	0	0	0	0	0	0			
30	1	0	7	7	0	3	3			
31	0	0	0	0	0	0	0	0	0	0
Mean		3.1	9.4	12.5	2.9	102.5	105.4	0.0	107.7	107.7

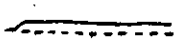
41F	A number of single bursts occur in succession and the flux level returns to the pre-event level; the interval between each two bursts is equal to or less than 5 min.	
42SER	A series of bursts occur with considerable time intervals between bursts; the flux level of each burst returns to the pre-burst.	
43NS	Onset of Noise Storm.	
44NS	Noise Storm in progress.	
45C	Combination of a few or many simple bursts.	
46C	45C burst with fluctuations.	
47GB	Peak flux density of 500 fu or more.	
48C	A complex event with complex and large variation of amplitude.	
49GB	Major increase of flux density, duration greater than 10 min.	

22GRF 20GRF type burst with fluctuations.

23GRF 20GRF type burst with fluctuations and superimposed bursts.



24R A moderate rise of flux from 5 to 30 minutes duration with no accompanying decline during the following hours.



25R 24R type bursts with superimposed bursts.

26FAL A moderate decline of flux from 5 to 30 minutes duration with no rise of flux during the foregoing hours.

27RF The rise and fall of continuous spectrum more or less regularly with duration in the range from minutes to hours.

28PRE A precursive enhancement of the flux density level with duration greater than 10 min preceding the main burst if it is a gradual rise; the end of the precursor is taken at the time when the slope suddenly changes.

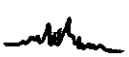
29PBI A post-burst enhancement of flux density level with duration greater than 10 min if it decreases gradually; the start of the enhancement is taken at the time when the slope suddenly changes.

30PBI 29PBI type events with superimposed bursts.

31ABS After the burst a gradual decrease of the flux density with a subsequent return to the pre-event level.

32ABS A gradual decrease of the flux density with a subsequent return to the pre-event level.

40F A series of rapid irregular changes in the flux density level, with no distinct peak grouping into individual events; the intensity of each component is less than 15% of the main peak.



Appendix 2

Classification of Solar Radio Bursts

Type	Definition	Figure
1S	Peak flux density (fu) and duration (min) both less than 10.0.	
2S/F	1S with fluctuations.	
3S	Peak flux density (fu) greater than both the duration (min) and 10.0.	
4S/F	3S with fluctuations.	
5S	Different from the simple events defined above, also peak flux density (fu) greater than duration (min) of the burst.	
6S	Simple rise and fall of minor burst with duration 1 or 2 min .	
7C	Complex events with duration of several seconds and flux density (fu) less than 10.0.	
8S	An event which shows a rapid rise to a single peak,followed by a rapid fall to the pre-event level with a duration about one minute or less and flux density (fu) greater than 10.0.	
20GRF	Bursts have duration in the range from 10 minutes to several hours and flux density (fu) less than both the duration (min) and 50.0.	
21GRF	20GRF type burst with superimposed distinct bursts.	

Appendix 1

The International Astronomical Union Notation for H-Alpha Solar Flares

A = Eruptive prominence whose base is less than 90° from the central meridian.

B = Probably the end of a more important flare.

C = Invisible 10 minutes before.

D = Brilliant Point.

E = Two or more brilliant points.

F = Several eruptive centers.

G = No visible spots in the neighborhood.

H = Flare accompanied by a high speed dark filament.

I = Active region very extended.

J = Distinct variations of plage intensity before or after the flare.

K = Several intensity maxima.

L = Existing filaments show signs of sudden activity.

M = White-light flare.

N = Continuous spectrum shows effects of polarization.

O = Observations have been made in the calcium II lines H or K.

P = Flare shows helium D_3 in emission.

Q = Flare shows the Balmer continuum in emission.

R = Marked asymmetry in H-alpha line suggests ejection of high velocity material.

S = Brightness follows disappearance of filament (same position).

T = Region active all day.

U = Two bright branches, parallel (//) or converging (Y).

V = Occurrence of an explosive phase: important and abrupt expansion in about a minute with or without important intensity increase.

W = Great increase in area after time of maximum intensity.

X = Unusually wide H-alpha line.

Y = System of loop-type prominences.

Z = Major sunspot umbra covered by flare.

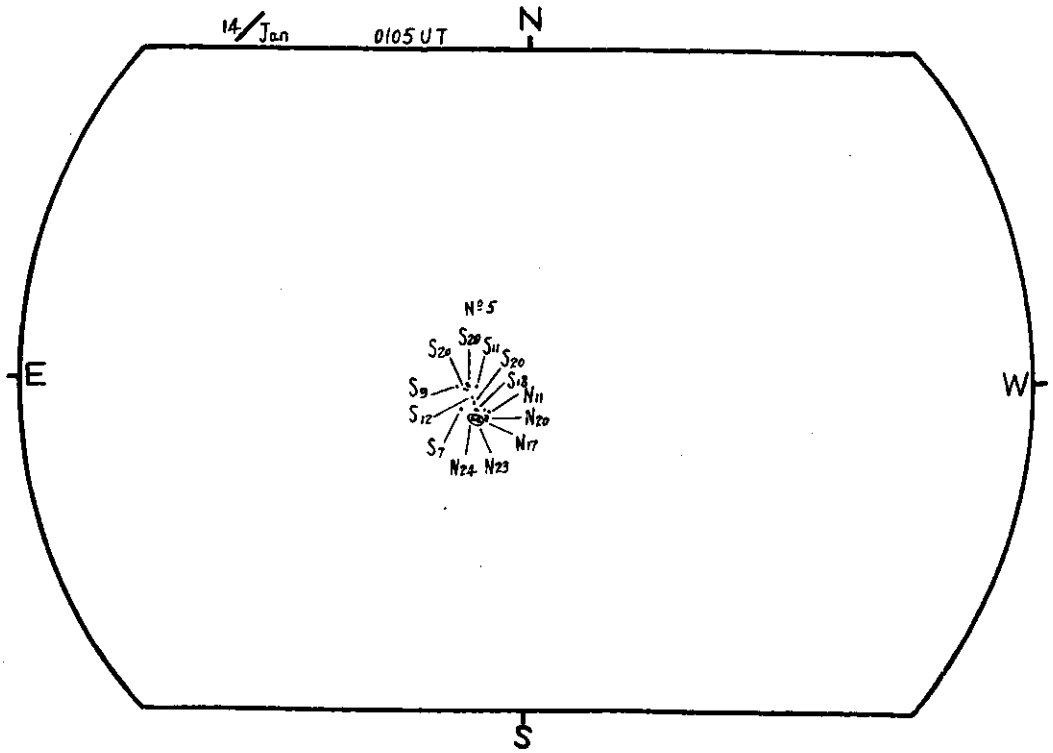
日期 Day	群号 No	过日面中心经圈 (月, 日) CMP-Day	日面位置 纬度 Lat	经度 L	中经距 CMD	型别 Type	日心距 r/R	视面积 Sd	校正面积Sp 全群 Whole	最大黑子 Max	备注 Remarks
21.04	6				27W	E	0.45	1022	572	296	
	7				24E	C	0.44	50	28	23	
	9	I-24.9	-7	356	50E	B	0.76	8	6	3	
22.04	6				40W	E	0.64	980	640	376	
	7				11E	B	0.26	17	9	2	
	9				37E	B	0.60	8	5	3	
23.03	6				53W	E	0.80	639	538	163	
	7				3W	J	0.18	17	9	6	
	9				25E	A	0.41	4	2	2	
24.06	6				67W	E	0.92	336	428	161	
	7				17W	B	0.34	17	9	2	
25.07	6				80W	E	0.99	143	473	250	
	7				30W	A	0.53	8	5	2	
26.08	7				44W	A	0.71	4	3	3	
27.04	10	I-25.0	5	355	27W	A	0.48	4	2	2	
29.02	0										
30.22	11	II- 2.1	-14	249	38E	A	0.61	4	3	3	
31.04	0										

太 阳 黑 子 群 表
SUNSPOT GROUPS

1985 年 1 月 JAN 1985

黑子群编号及过日心经圈日期(月，日) CMP-Day No		日期 Date	日面位置 纬度 Lat	经度 L	中经距 CMD	型别 Type	日心距 r/R	视面积 Sd	校正面积Sp 全群 Whole	最大黑子 Max	备注 Remarks
1	I	2	12	280	16E	A	0.37	8	4	2	PLAT
I- 3.4											
2	I	2	-15	256	40E	A	0.66	4	3	3	PLAT
I- 5.2											
3	I	8	7	146	71E	A	0.95	4	7	7	PLAT
I-13.5		9			59E	A	0.86	8	8	4	
4	I	9	-14	194	11E	A	0.25	4	2	2	
I- 9.9											
5	I	13	-9	134	18E	B	0.30	13	7	2	
I-14.4		14			5E	C	0.23	126	65	45	
		15			9W	D	0.18	109	56	39	
		16			22W	D	0.37	88	47	29	
		17			36W	D	0.57	130	80	31	
		18			48W	D	0.74	114	84	84	
		19			62W	D	0.87	80	82	35	
		20			76W	D	0.97	29	57	24	
6	I	20	-10	76	16W	C	0.28	156	81	68	
I-18.8		21			27W	E	0.45	1022	572	296	
		22			40W	E	0.64	980	640	376	
		23			53W	E	0.80	639	538	163	
		24			67W	E	0.92	336	428	161	
		25			80W	E	0.99	143	473	250	
7	I	20	5	24	39E	A	0.64	8	5	3	
I-22.8		21			24E	C	0.44	50	28	23	
		22			11E	B	0.26	17	9	2	
		23			3W	J	0.18	17	9	6	
		24			17W	B	0.34	17	9	2	
		25			30W	A	0.53	8	5	2	
		26			44W	A	0.71	4	3	3	
8	I	20	-11	49	11E	A	0.22	4	2	2	PURP
I-20.9											
9	I	21	-7	356	50E	B	0.76	8	6	3	
I-24.9		22			37E	B	0.60	8	5	3	
		23			25E	A	0.41	4	2	2	
10	I	27	5	355	27W	A	0.48	4	2	2	
I-25.0											
11	I	30	-14	249	38E	A	0.61	4	3	3	
II- 2.1											

太阳黑子磁场图（共 12 天）
DAILY CHARTS OF SUNSPOT MAGNETIC FIELD
(12 days in all)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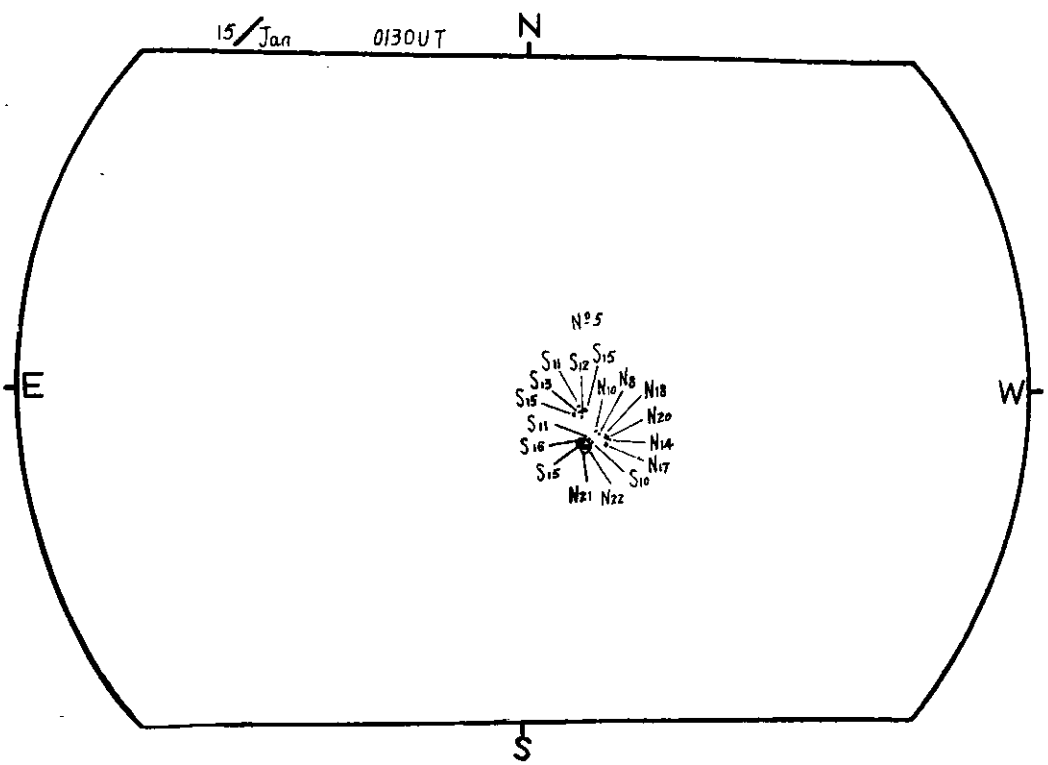
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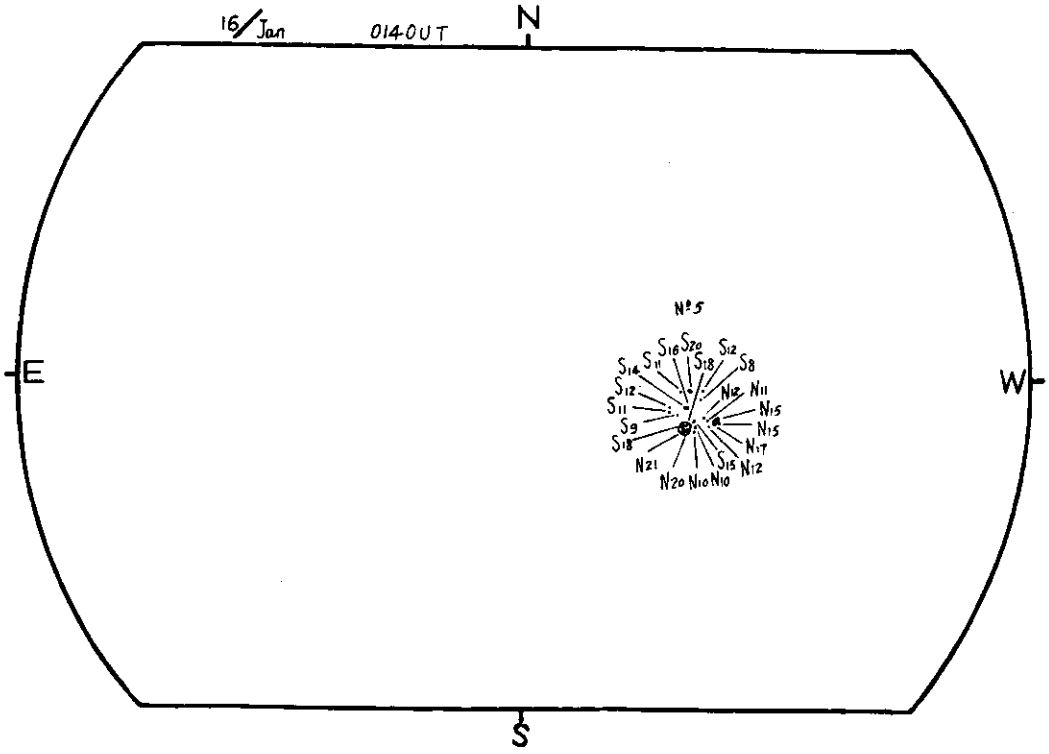
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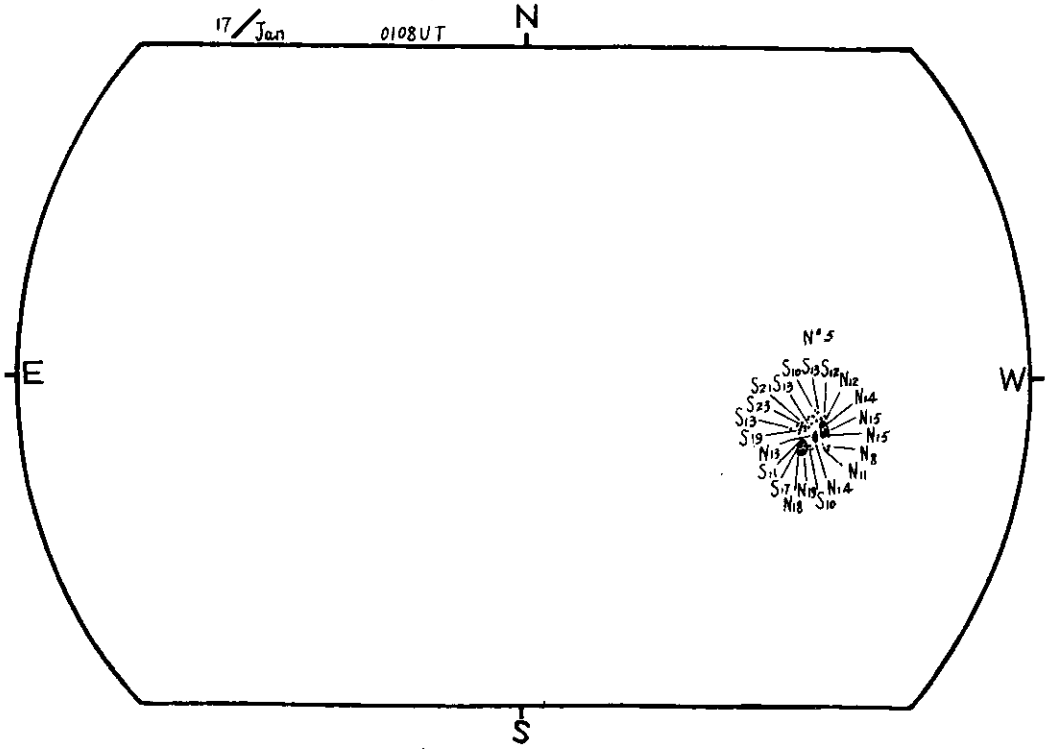
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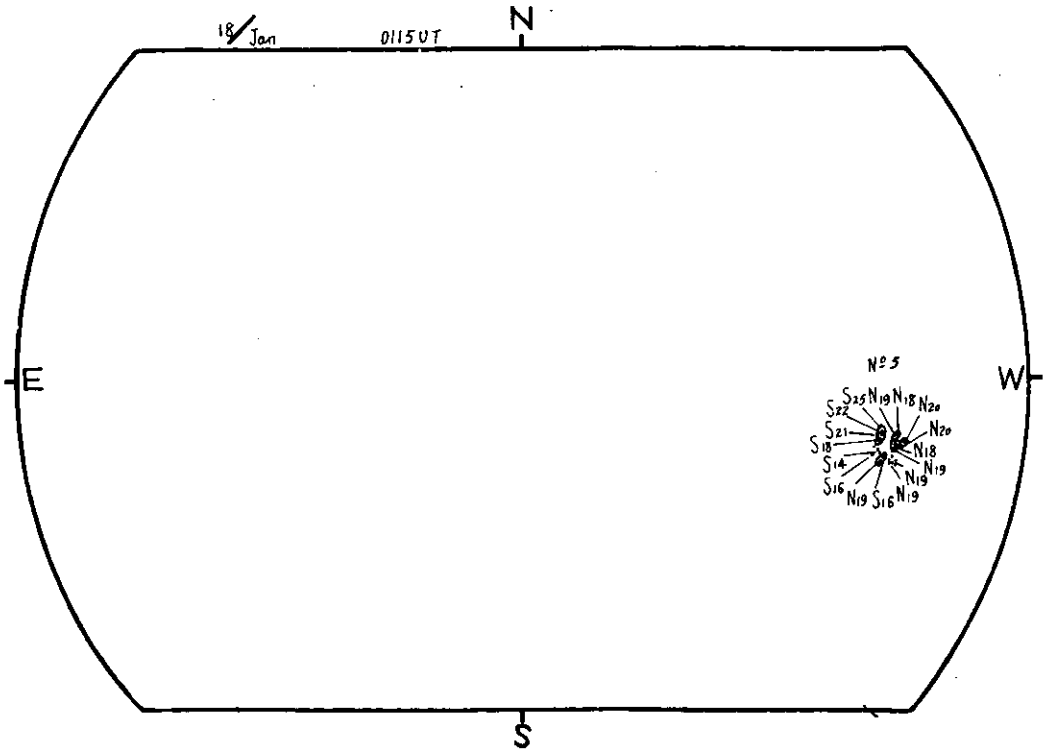
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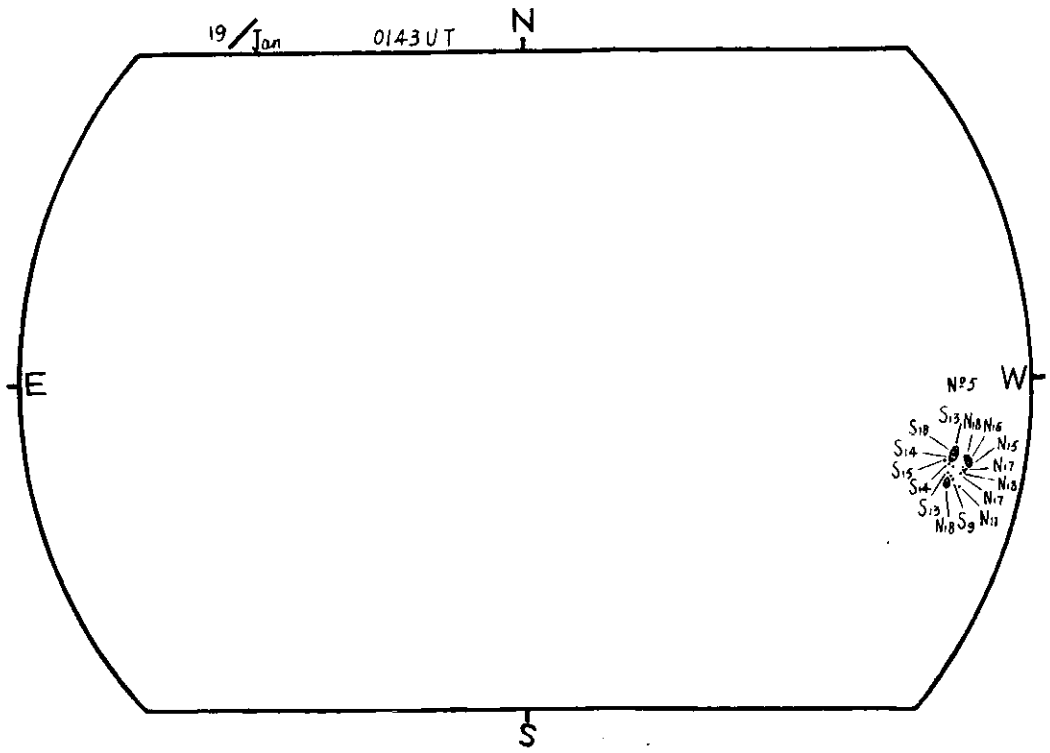
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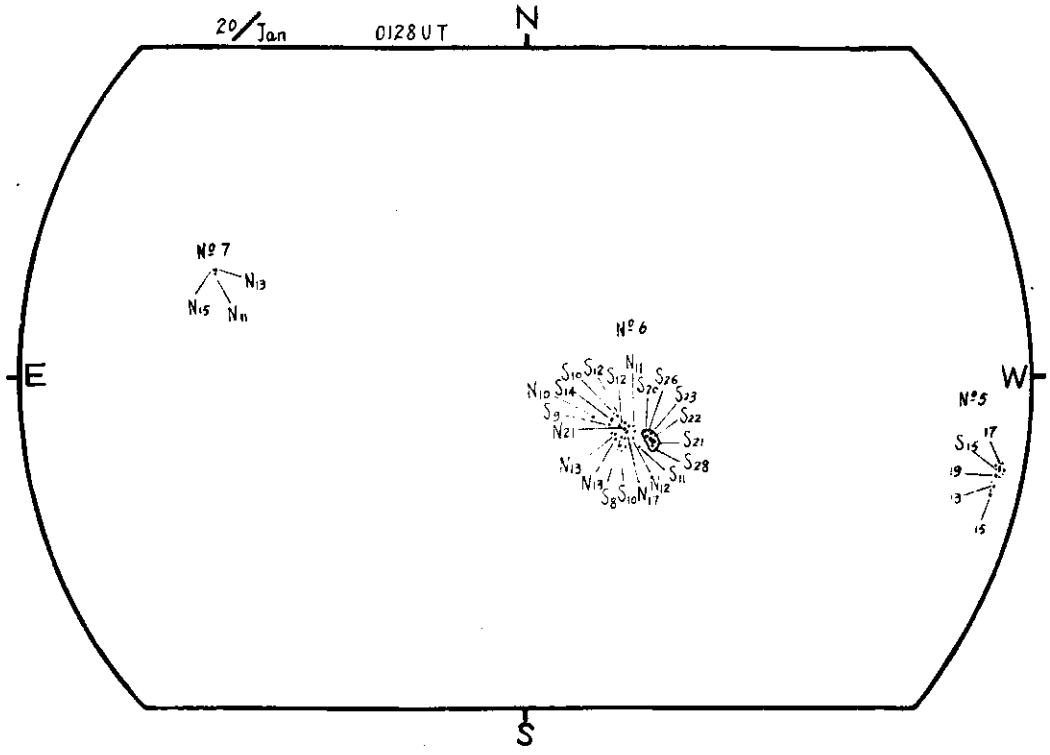
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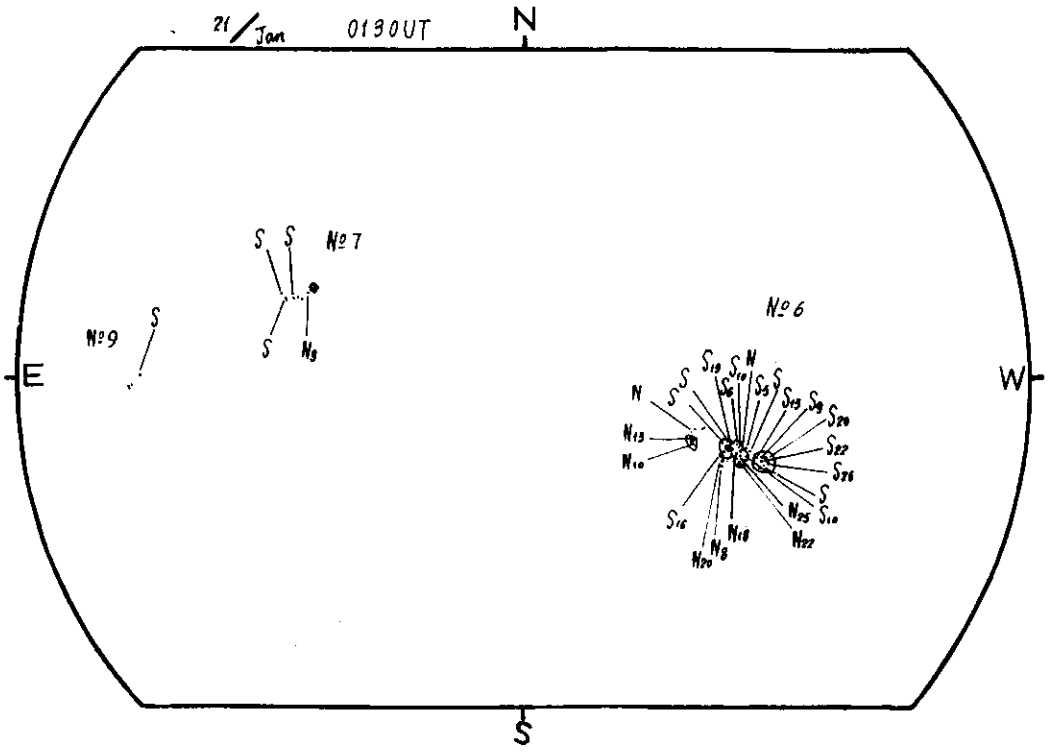
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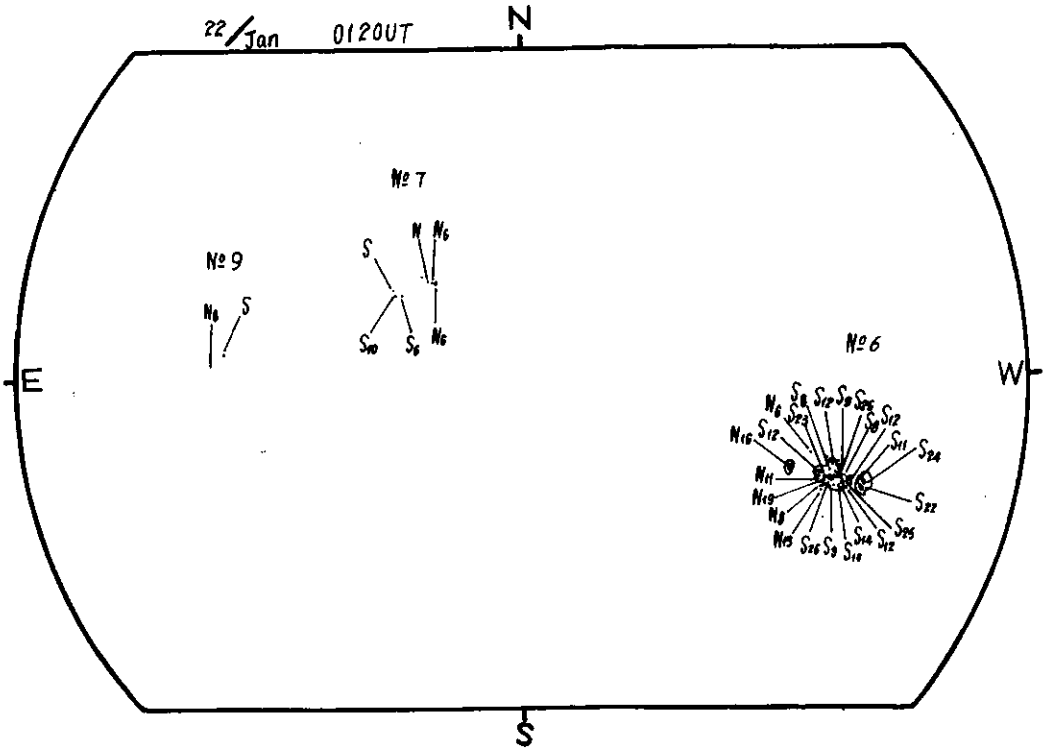
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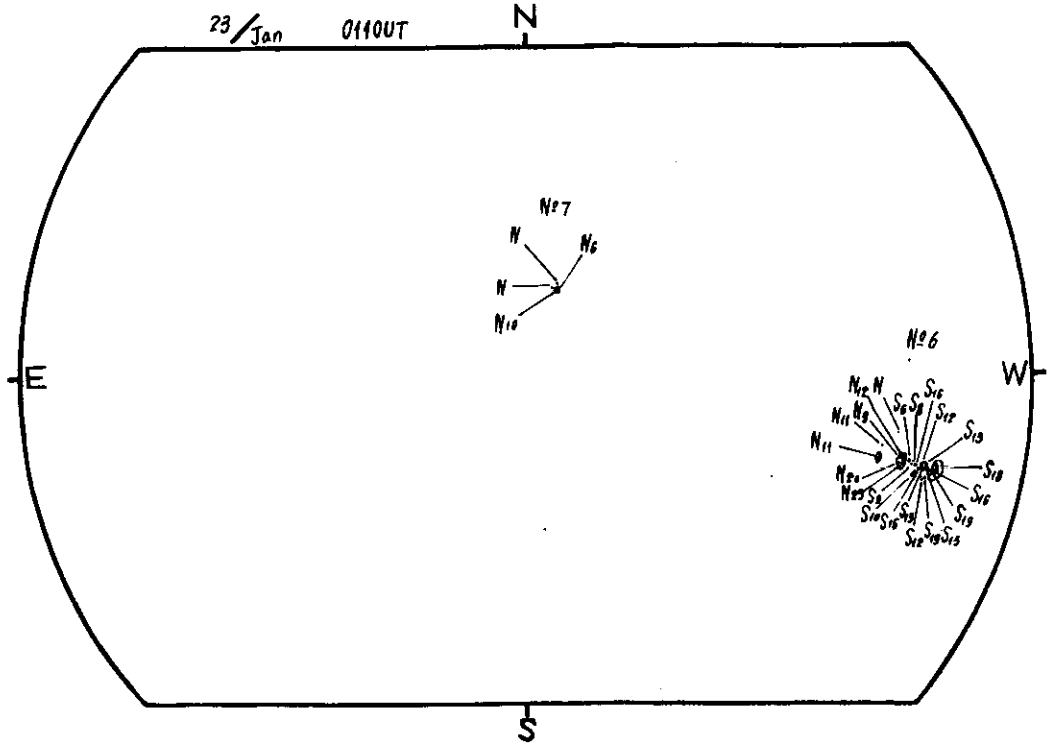
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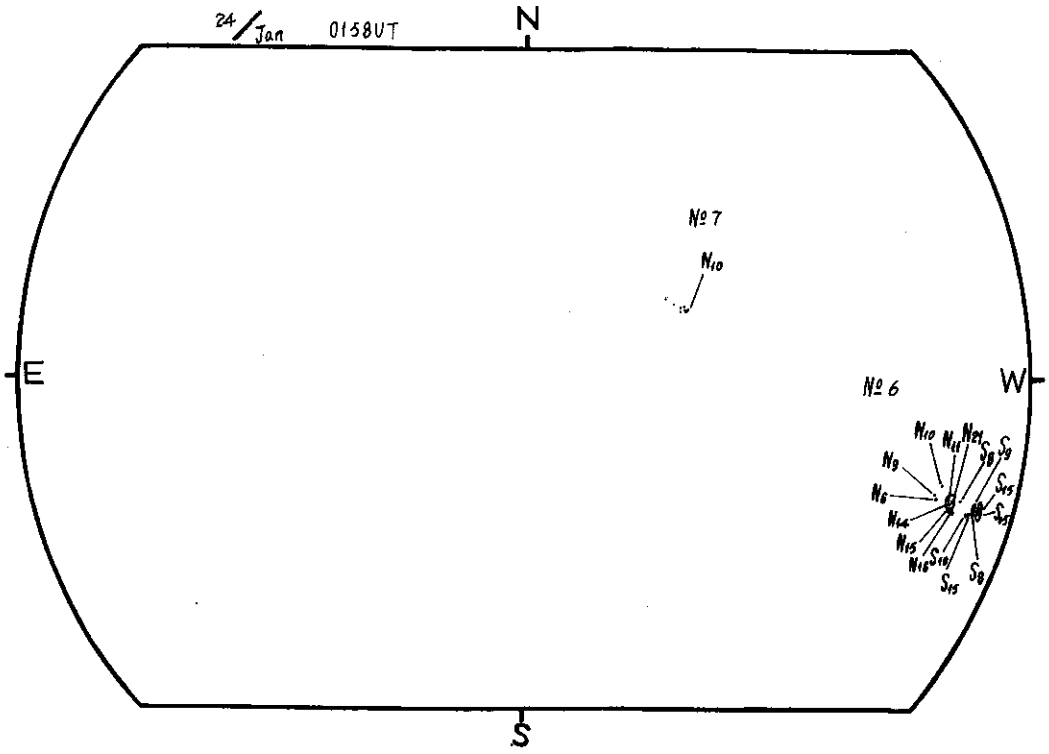
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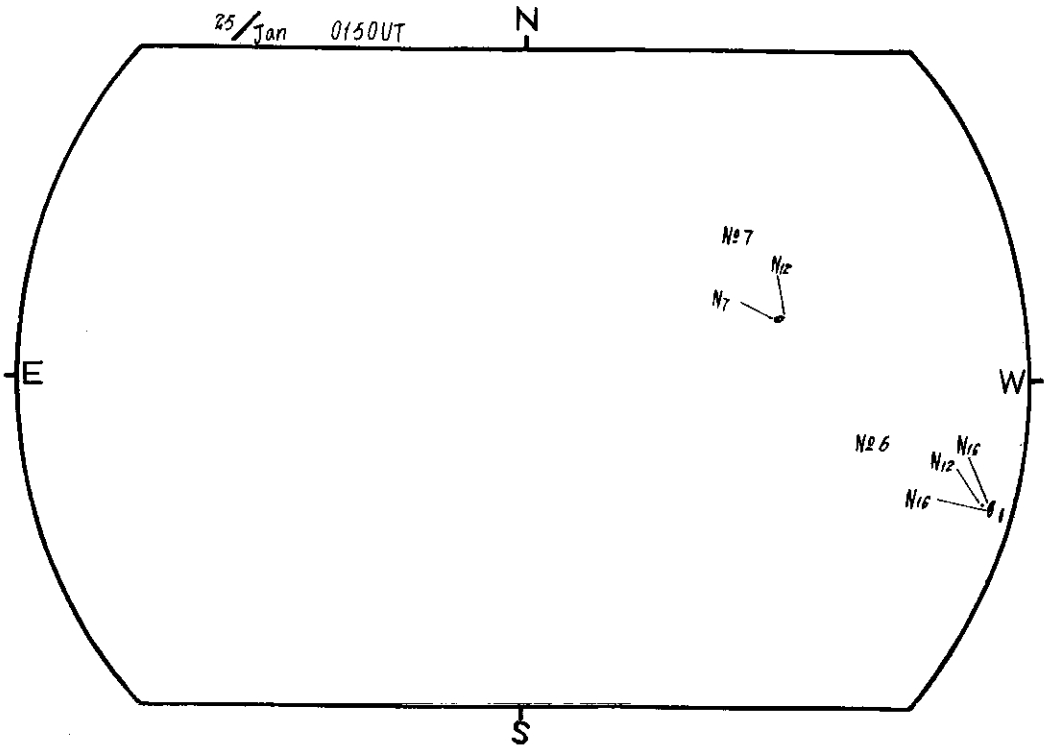
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№7
N12
N7
№6
N16
N12
N16

H_α 太 阳 耀 斑
H-ALPHA SOLAR FLARES

1985 年 1 月 JAN 1985

日 期 Day	台 站 Sta	开 始 Start (UT)	极 大 Max (UT)	结 束 End (UT)	纬 度 Lat	经 度 L	中 经 距 CMD	日 心 距 Cen Dist	面积 Area 视面积 Appar (Sd)	面积 Area 校正面积 Corr (Sp)	级 别 Imp	观测资料 Obs Type	对应黑子群号 A.R.	备注 Remarks
17	YUNN	0324	0331	0337	S10	136	W38	.615	113	72	-N	C	5	DH
20	YUNN	0241E	0245U	0258D	S10	72	W13	.243	126	65	-B	P	6	E
20	YUNN	0359E	0400U	0410D	N 4	19	E40	.658	79	52	-N	P	7	D
20	YUNN	0359E	0408	0410D	S 8	72	W13	.231	79	41	-N	P	6	
21	PURP	0103	0122U	0143	S11	73	W27				-N	C	6	E
21	PURP	0200	0221	0226D	S10	75	W29				1B	C	6	E
21	YUNN	0208	0222	0229	S 8	77	W31	.511	246	143	1B	C	6	T
21	PURP	0242E	0248U	0304	S11	70	W25				1N	C	6	E
21	YUNN	0244	0248	0307	S11	72	W26	.445	92	51	-N	C	6	T
21	YUNN	0303E	0304	0314	S 9	76	W30	.502	123	71	-N	P	6	FT
21	YUNN	0343	0353	0415	S 9	76	W30	.504	246	142	1B	C	6	FT
21	PURP	0344	0351	0406	S11	73	W28				1B	C	6	
21	YUNN	0510E	0512U		S11	74	W29	.495	231	133	1N	P	6	
21	YUNN		0517	0525	S11	75	W30	.496	189	109	1N	C	6	FKT
21	YUNN	0706	0718	0734	S 7	74	W30	.492	538	309	2F	C	6	T
21	YUNN	0806E	0806	0818	S10	78	W35	.574	46	28	-N	P	6	DT
21	YUNN	0824	0830	0836	S11	78	W35	.578	63	39	-F	C	6	T
22	YUNN	0143E	0152U	0303D	S11	75	W42	.665	630	422	2N	P	6	BFW
23	YUNN	0727E	0738	0816D	S10	78	W61	.873	246	252	2B	P	6	F
27	YUNN	0213	0216	0221	N 5	24	W57	.851	31	30	-N	C		G

H_α 耀 斑 巡 视 时 间

INTERVALS OF H-ALPHA FLARE PATROL OBSERVATION

1985 年 1 月 JAN 1985

日期 Day	北台 BEIJ 开始 From	北台 BEIJ 结束 To	云台 YUNN 开始 From	云台 YUNN 结束 To	紫台 PURP 开始 From	紫台 PURP 结束 To	乌鲁木齐 WLMQ 开始 From	乌鲁木齐 WLMQ 结束 To
1			0230	0348				
2			0134	0135				
			0210	0214				
			0230	0304				
			0315	0319				
			0649	0650				
			0725	0731				
4			0137	0246				
			0253	0322				
			0635	0734				
			0811	0813				
			0819	0825				
5			0141	0216				
			0224	0318				
			0328	0341				
			0622	0628				
			0648	0716				
			0724	0746				
6			0225	0353				
7			0136	0237				
			0249	0301				
			0307	0308				
			0641	0645				
			0705	0714				
			0721	0735				
			0753	0811				
8	0130	0230	0137	0205				
			0221	0224				
			0244	0320				
			0720	0753				
			0803	0818				
9	0110	0608	0139	0154				
			0227	0328				
			0700	0811				
10	0215	0800	0218	0324				
			0639	0642				
			0648	0740				
			0748	0800				
11	0130	0800	0139	0157				

日期 Day	北台 BEIJ 开始 From	结束 To	云台 YUNN 开始 From	结束 To	紫台 PURP 开始 From	结束 To	乌鲁木齐 WLMQ 开始 From	结束 To
			0220	0241				
			0252	0257				
			0304	0308				
			0315	0324				
			0724	0729				
			0739	0808				
			0815	0902				
12	0100	0500	0139	0304				
			0517	0709				
13	0030	0400	0200	0229				
			0301	0305				
			0313	0317				
			0343	0353				
			0716	0820				
14	0300	0500	0143	0206				
			0214	0220				
			0228	0232				
			0302	0308				
			0316	0320				
			0328	0332				
			0345	0412				
			0420	0436				
			0450	0516				
			0536	0541				
15	0130	0230	0202	0205				
	0345	0500	0213	0312				
			0320	0328				
			0528	0632				
			0657	0700				
16	0215	0400	0154	0210				
			0227	0241				
			0249	0317				
			0325	0352				
			0427	0441				
			0453	0509				
			0517	0529				
			0603	0616				
17	0315	0400	0215	0235				
			0248	0337				
			0413	0514				
			0521	0554				
			0601	0614				
18			0217	0336				

日期 Day	北台 BEIJ 开始 From	北台 BEIJ 结束 To	云台 YUNN 开始 From	云台 YUNN 结束 To	紫台 PURP 开始 From	紫台 PURP 结束 To	乌鲁木齐 WLMQ 开始 From	乌鲁木齐 WLMQ 结束 To
			0615	0620				
			0627	0631				
			0651	0707				
			0715	0720				
			0744	0747				
			0800	0815				
			0824	0826				
19	0325	0730	0144	0344				
			0430	0605				
			0623	0639				
20			0241	0258				
			0340	0343				
			0359	0410				
21			0201	0437	0103	0104		
			0510	0525	0112	0135		
			0534	0622	0143	0200		
			0648	0625	0242	0314		
			0706	0808	0320			
			0818	0837	0328	0329		
					0337	0406		
					0421	0422		
22			0143	0303				
			0533	0536				
			0548	0628				
23			0139	0344				
			0447	0457				
			0525	0559				
			0621	0629				
			0727					
			0735	0750				
			0810	0816				
			0843	0847				
24			0125	0128	0709	0712		
			0142	0152				
			0220	0236				
			0244	0300				
			0312	0328				
			0340	0344				
			0625	0627				
			0822	0823				
25			0150	0205	0037			
			0218	0238	0045			
			0313	0314	0103	0111		

日期 Day	北台 BEIJ 开始 From	北台 BEIJ 结束 To	云台 YUNN 开始 From	云台 YUNN 结束 To	紫台 PURP 开始 From	紫台 PURP 结束 To	乌鲁木齐 WLMQ 开始 From	乌鲁木齐 WLMQ 结束 To
			0716	0737	0118	0154		
					0205	0212		
					0224			
					0238			
					0245	0250		
					0259			
					0308	0525		
					0536			
					0549			
					0600	0605		
					0614			
					0628			
					0634	0646		
					0653			
					0704	0714		
					0720			
					0729			
					0739			
					0751			
					0759	0809		
26			0235	0251	0048	0500		
			0258	0355	0058			
			0403	0428	0109			
			0443	0447	0115	0119		
			0503	0511	0128			
			0639	0652	0135			
			0709	0725	0143	0155		
					0204	0209		
					0217	0219		
					0228	0237		
					0244			
					0251			
					0259			
					0306			
					0317	0330		
					0339	0343		
27			0135	0230				
			0244	0320				
			0329	0332				
28			0216	0240	0058			
			0250	0255	0109	0120		
			0302	0313	0128			
			0652	0744	0135			
			0752	0801	0147			
					0155			
					0202	0207		
					0226			

日期 Day	北台 BEIJ 开始 From	北台 BEIJ 结束 To	云台 YUNN 开始 From	云台 YUNN 结束 To	紫台 PURP 开始 From	紫台 PURP 结束 To	乌鲁木齐 WLMQ 开始 From	乌鲁木齐 WLMQ 结束 To
					0237			
					0246			
					0253			
					0300			
					0313	0316		
					0324			
					0330			
					0340	0341		
					0425			
					0435			
					0456			
					0504			
					0519			
					0530			
					0541			
					0548			
					0603			
					0610	0611		
					0624			
					0632			
					0642			
					0650			
					0656			
29					0024			
					0038			
					0100			
					0126	0129		
					0136			
					0146			
					0156			
					0210			
					0218	0223		
					0233			
					0243			
					0252			
30			0726	0741	0025	0026		
			0805	0817	0037			
					0059			
					0134	0135		
					0155			
					0204			
					0213	0215		
					0230	0234		
					0246			
					0435	0439		
					0446			
					0454	0603		
					0619			

日期 Day	北台 BEIJ 开始 From	北台 BEIJ 结束 To	云台 YUNN 开始 From	云台 YUNN 结束 To	紫台 PURP 开始 From	紫台 PURP 结束 To	乌鲁木齐 WLMQ 开始 From	乌鲁木齐 WLMQ 结束 To
					0635			
					0648			
					0703			
					0716			
					0722			
					0737			
					0744	0746		
31			0143	0250	0020	0023		
			0315	0324	0034			
			0645	0801	0048	0100		
					0107			
					0133	0137		
					0144			
					0601	0605		
					0631	0638		
					0702	0705		
					0730			

太阳射电辐射流量
SOLAR RADIO EMISSION FLUX

1985 年 1 月 JAN 1985

日期 Day	北台 BEIJ 9395	紫台 PURP 9375	南大 NAUN 9375	紫台 PURP 3000	云台 YUNN 2902	北台 BEIJ 2840
1	260	784		139	87	60.4
2	265	761		124	92	59
3	252	741		128	89	64
4	256	819		135	89	59.4
5	255	826		137	88	59
6	257	819		136	86	57
7	261	786		134	89	52
8	260	828		137	90	59
9	259	837	238	135	85	61
10	257	824	241	134	86	58
11	257	824	230	137	87	57
12	261	823	241	137	87	60
13	257	842	243	142	86	59
14	259	826	235	150	91	64
15	257	824	234	149	90	62
16	259	829	241	146	91	61
17	262	817		150	94	63
18	258	838	241	154	91	64
19	262	831	242	143	93	61.2
20	267	853	248	159	96	70
21	285	879	258	183	103	84
22	284	843	258	165	98	80
23	265	841	249	171	103	75
24	265	847	255	158	93	68
25	262	834	236	152	92	62
26	266	832	242	152	91	61
27	268	823	243	139	89	58
28	264	830	245	140	87	57
29	259	824	238	138	90	58
30	262	817	236	138	90	58
31	256	823	239	135	89	55

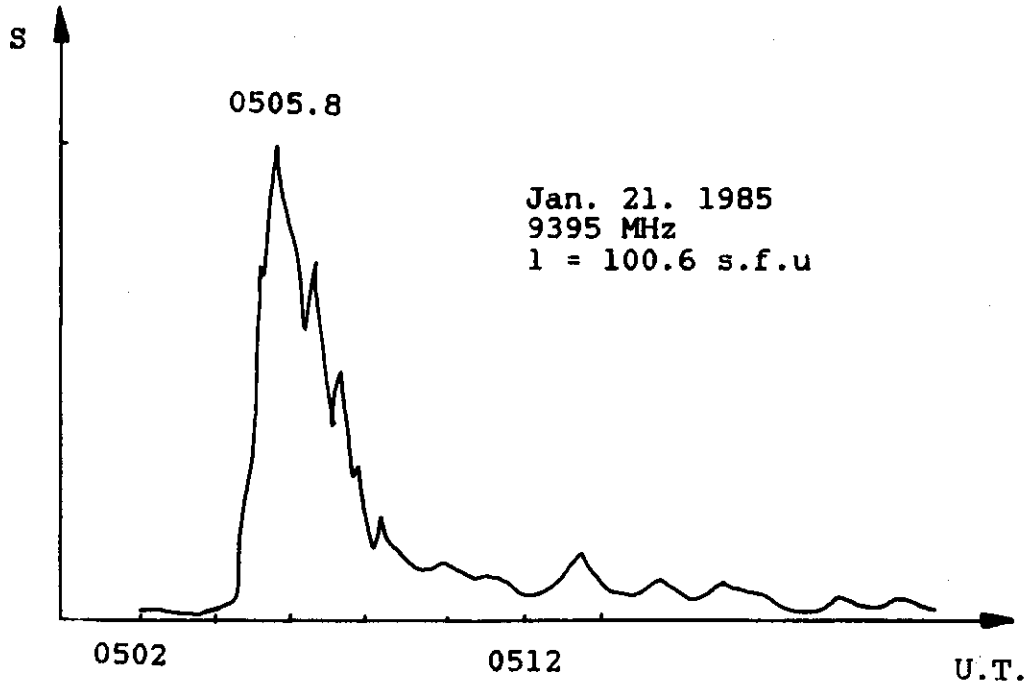
太阳射电辐射显著事件
SOLAR RADIO EMISSION OUTSTANDING OCCURRENCES

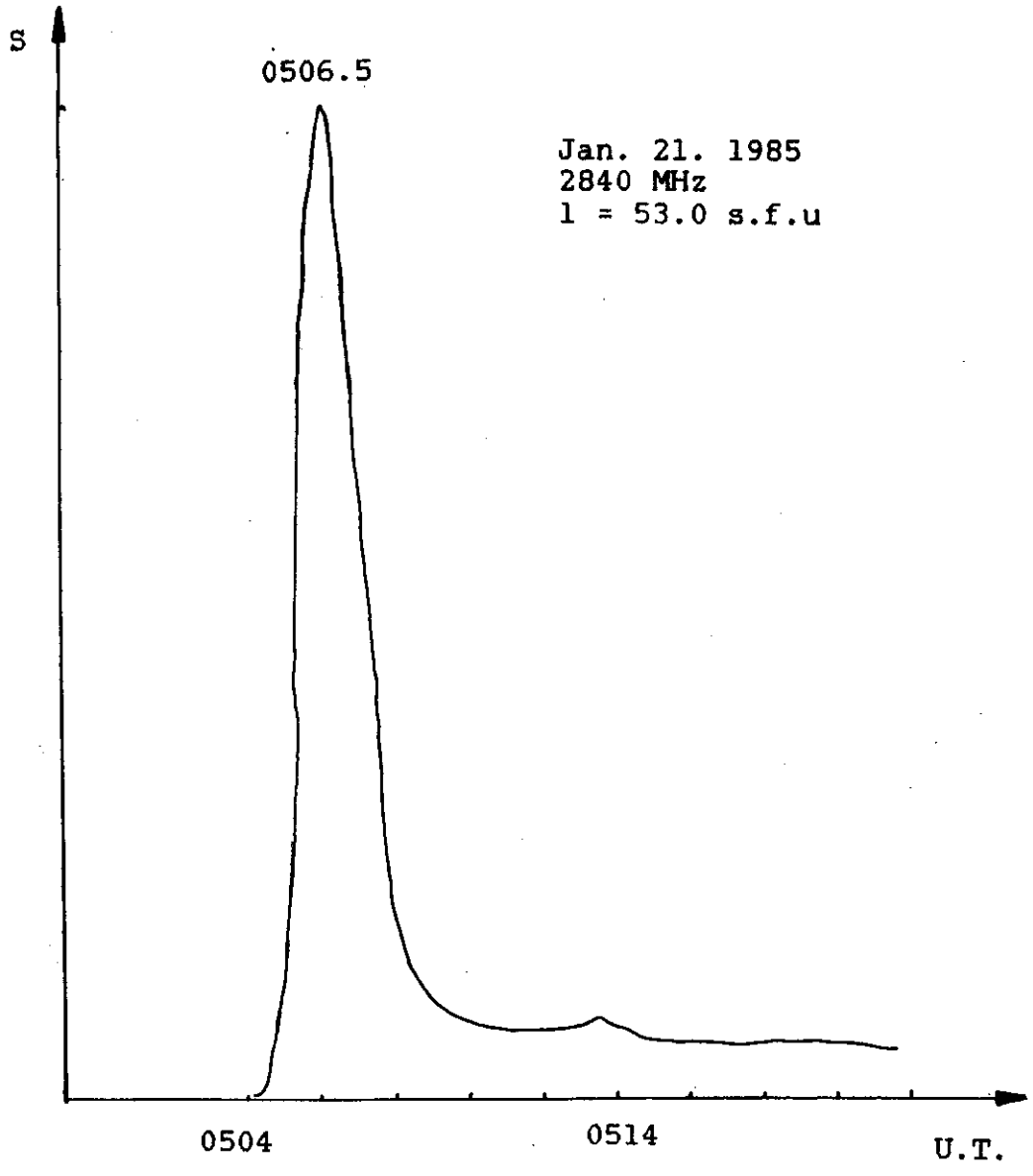
1985 年 1 月　　JAN 1985

日期 Day	频率 Freq	台站 Sta	开始 Start (UT)	极大 Max (UT)	持续 Dura-tion	型别 Type	流量密度 Flux Density 峰值 Peak	相对值 Rel	平均值 Mean
1	2902	YUNN	0733.6 U	0735.9 U	7	45C	30		
7	2902	YUNN	0813.1	0814.3	4.5	2S/F	8		
12	2902	YUNN	0542.3	0542.7	1.3	1S	3		
18	2902	YUNN	0751	0803.5	10.6	20GRF	6		
21	9375	PURP	0036.0	0040.5	9.5	1S	131	14.9	
	9395	BEIJ	0504	0505.8	4	45C	100.6		48.7
	2840	BEIJ	0504	0506.5	5	45C	53.0		32.2
	9395	BEIJ	0513	0513.5	1	3S	12.4		5.9
	2840	BEIJ	0510	0513.6	4	1S	1.7		0.78
	2840	BEIJ	0705	0706.5	3	1S	2.0		0.3
22	9395	BEIJ	0047	0057	15	45C	95.0		36.2
	9395	BEIJ	0102		61	30PBI	72		19.0
	9395	BEIJ	0147	0147.8	2	3S	49.8		33.0
	2840	BEIJ	0047	0056	53	45C	286.0		192.0
	2840	BEIJ	0140		24	30PBI	12.2		5.1
	2840	BEIJ	0147	0147.8	2	1S	3.3		2.2
	2902	YUNN	0018.6	0055.9	244.4	45C	363 U		
	9375	NAUN	0046	0056	17	46C	80	0.3	
	9375	NAUN	0103		62	30PBI	64	2.4	
	9395	NAUN	0146	0147	2	1S	16	0.06	
	2902	YUNN	0534.6	0535.9	13.4	5S	2		
23	9395	BEIJ	0726	0723.3	4	45C	61.0		26.0
	8240	BEIJ	0724	0727.7	12	45C	22.0		9.8
	2902	YUNN	0724	0727.4	19	45C	27		
	2902	YUNN	0743	0749.8	66.2	29PBI	16		
	9375	NAUN	0726	0726.8	4	46C	72	0.32	
25	9375	NAUN	0618.2	0619.1	1.4	7C	58	0.24	

太阳射电辐射显著事件图

PROFILES OF SOLAR RADIO EMISSION OUTSTANDING OCCURRENCES


S
0505.8
Jan. 21. 1985
9395 MHz
1 = 100.6 s.f.u
0502
0512
U.T.


S
0506.5
Jan. 21. 1985
2840 MHz
1 = 53.0 s.f.u
0504
0514
U.T.

太阳射电辐射巡视时间
INTERVALS OF SOLAR RADIO EMISSION PATROL OBSERVATION

1985年 1月 JAN 1985

日期 Day	北台 BEIJ 9395	紫台 PURP 9375	南大 NAUN 9375	紫台 PURP 3000	云台 YUNN 2902	北台 BEIJ 2840
1	0200-0450 0520-0800	0032-0832		0021-0832	0200-0800	0200-0450 0520-0800
2	0012-0340 0408-0740	0030-0835		0028-0835	0118-0800	0045-0340 0358-0740
3	0102-0300 0330-0620	0028-0826		0025-0826	0300-0900	0106-0330 0345-0620
4	0033-0750 0400-0750	0030-0838		0022-0838	0030-0915	0034-0330 0400-0750
5	0037-0230 0355-0720	0015-0823		0018-0823	0020-0815	0037-0230 0355-0720
6	0000-0317 0352-0750	0014-0833		0016-0833	0210-0900	0000-0317 0352-0750
7	0105-0300 0320-0750	0030-0842		0039-0842	0120-0940	0105-0300 0320-0750
8	0035-0320 0340-0750	0013-0840		0014-0840	0057-0755	0035-0320 0340-0750
9	0037-0300 0340-0750	0032-0840	0030-0330	0033-0840	0103-0800	0037-0340 0400-0750
10	0035-0300 0320-0750	0014-0841	0030-0400	0016-0841	0053-0800	0040-0310 0320-0750
11	0035-0400 0415-0750	0012-0832	0030-0400	0013-0832	0210-0810	0035-0300 0320-0750
12	0035-0330 0400-0720	0014-0826	0000-0330	0015-0826	0157-0800	0035-0320 0320-0720
13	0130-0420 0450-0815	0024-0819	0200-0330	0025-0819	0210-0810	0130-0420 0450-0815
14	0045-0340 0405-0750	0011-0032 0430-0840	0100-0330	0012-0032 0430-0840	0120-0952	0045-0340 0355-0750
15	0039-0350 0425-0750	0015-0840	0000-0330	0015-0840	0040-0930	0037-0425 0446-0750

太阳射电辐射巡视时间

INTERVALS OF SOLAR RADIO EMISSION PATROL OBSERVATION

1985 年 1 月　　JAN 1985

日期 Day	北台 BEIJ 9395	紫台 PURP 9375	南大 NAUN 9375	紫台 PURP 3000	云台 YUNN 2902	北台 BEIJ 2840
16	0035-0340 0405-0750	0017-0840	0010-0330	0018-0840	0020-0935	0035-0340 0400-0750
17	0032-0320 0400-0750	0032-0823		0032-0823	0026-0920	0032-0332 0400-0750
18	0030-0440 0501-0750	0011-0830	0010-0330	0013-0830	0055-0920	0030-0440 0510-0750
19	0030-0350 0420-0720	0013-0840	0020-0330	0019-0840	0035-0805	0030-0352 0420-0720
20	0130-0410 0440-0810	0020-0843	0200-0330	0025-0843	0212-0400	0130-0410 0430-0810
21	0057-0308 0334-0750	0012-0437 0614-0845	0000-0330	0012-0437 0614-0845	0110-0955	0057-0359 0421-0750
22	0040-0305 0332-0750	0022-0838	0015-0825	0023-0838	0020-0900	0040-0320 0345-0750
23	0025-0317 0345-0800	0023-0825	0000-0900	0023-0825	0100-0925	0025-0347 0415-0800
24	0104-0240 0305-0750	0030-0840	0045-0900	0034-0840	0020-0930	0104-0310 0331-0750
25	0035-0315 0347-0750	0025-0830	0000-0900	0025-0830	0025-0956	0035-0555 0615-0750
26	0206-0435 0500-0805	0012-0832	0000-0800	0013-0832	0030-0800	0245-0303 0330-0805
27	0050-0320 0350-0835	0030-0810	0200-0400	0035-0810	0100-1005	0050-0300 0320-0835
28	0030-0320 0340-0750	0020-0843	0000-0330	0020-0843	0044-0950	0030-0300 0320-0750
29	0049-0330 0400-0701	0012-0833	0000-0330	0010-0833	0042-0935	0039-0254 0325-0701
30	0033-0255 0319-0850	0020-0830	0000-0330	0021-0830	0100-0948	0034-0320 0349-0850
31	0034-0510 0540-0751	0018-0832	0000-0330	0023-0942	0018-0832	0033-0300 0320-0751

突然电离层扰动(D层)

SUDDEN IONOSPHERIC DISTURBANCES (D-Region)

1985 年 1 月　　JAN 1985

日期 Day	台站 Sta	开始 Start	极大 Max	结束 End	级别 Imp	相位异常 SPA 低频 LF	相位异常 SPA 甚低频 VLF	场强异常 SFA 低频 LF
4	YUNN	0847	0851		1-	0.9		
	YUNN	0856	0857	0942	1	1.4		
6	YUNN	0030	0038	0115	3+	10.7		
8	YUNN	0921	0938	1010	3+	9.8		

地磁活动指数K和Ak
THE GEOMAGNETIC ACTIVITY INDICES K AND Ak

1985 年 1 月 JAN 1985

日期 Day		三小时 Three-hourly Indices K 0—3	3—6	6—9	9—12	12—15	15—18	18—21	21—21	总和 Sum	Ak
1	D	2	4	3	4	3	5	5	4	30	27
2		2	2	2	3	4	3	2	3	21	13
3		3	3	4	3	1	2	3	3	22	14
4		3	2	3	2	1	2	2	2	17	9
5	Q	3	2	2	1	2	2	2	3	17	9
6	Q	1	1	2	2	2	2	2	2	14	6
7	Q	1	2	3	1	1	3	3	3	17	10
8		3	3	3	3	3	4	6	4	29	26
9	D	3	5	6	5	5	5	3	3	35	40
10	D	2	4	4	4	4	4	4	2	28	22
11		3	3	3	4	3	4	3	2	25	17
12		2	3	3	4	5	4	4	1	26	21
13		3	3	3	2	3	4	3	1	22	14
14		1	2	2	2	2	4	2	1	16	9
15		2	2	3	3	2	4	3	2	21	13
16		2	3	3	4	3	2	1	1	19	12
17		2	1	2	5	3	4	3	2	22	16
18	Q	3	2	2	2	3	2	1	3	18	10
19		1	2	3	3	4	4	2	2	21	14
20	Q	1	1	1	2	2	3	3	2	15	8
21		4	5	4	3	3	3	2	3	27	21
22		3	3	4	2	3	3	3	4	25	17
23	D	3	4	5	5	5	4	2	3	31	29
24		3	2	2	1	3	2	1	1	15	8
25		3	3	3	3	3	1	2	3	21	13
26		2	1	2	3	2	4	2	3	19	11
27		1	2	2	2	1	2	5	4	19	14
28	D	5	4	4	5	6	6	4	4	38	46
29		4	2	1	2	3	2	5	4	23	18
30		3	4	3	3	3	4	3	3	26	18
31		3	3	3	3	3	4	3	2	24	16
										Sum	521
										Mean	16.8

磁　　暴
MAGNETIC STORMS

1985 年 1 月　　JAN 1985

日期 Day	磁暴时间 Time of M.S. 始 (时，分) Start	终 (日，时) End	类型 Type	急始变幅 Sudden Com. Amplitude D′	H^{nT}	Z^{nT}	活动程度 Deg. of Acti.	最大活动程度 Max. Acti. on K 日期 Day	三小时段 3Hour Int.	指数 K Index	最大幅度 Range D′	H^{nT}	Z^{nT}
8	14 13	9 20	sc	0.6	19	1	ms	9	3	6	12.9	115	19
27	20	29 6	...				ms	28	5	6	12.8	204	30