PB86-121985

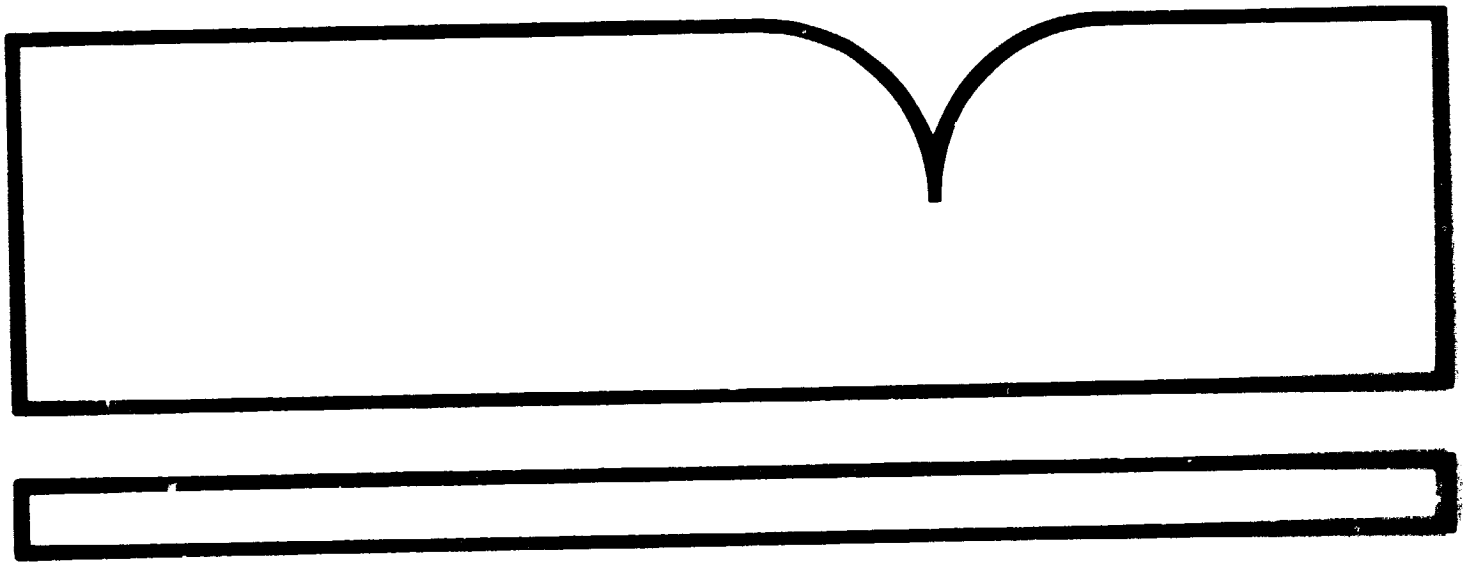
Solar-Geophysical Data Number 490 June 1985. Part 1 (Prompt Reports) Data for May 1985, April 1985 and Late Data

(U.S.) National Geophysical Data Center
Boulder, CO

Prepared for

National Aeronautics and Space Administration
Washington, DC

Jun 85



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Solar-Geophysical Data Number 490, June 1985. Part 1 (Prompt Reports). Data for May 1985, April 1985 and Late Data,

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by H. E. Coffey.

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Contents: Detailed index for 1984-1985; Data for May 1985--(IUWDS alert periods (Advance and Worldwide), Solar activity indices, Solar flares, Solar radio emission, Stanford mean solar magnetic field); Data for April 1985--(Solar active regions, Sudden ionospheric disturbances, Solar radio spectral observations, Cosmic ray measurements by neutron monitor, Geomagnetic indices, Radio propagation indices); Late data--(Geomagnetic indices, Cosmic rays, Calcium plage data).

KEYWORDS: *Solar activity.

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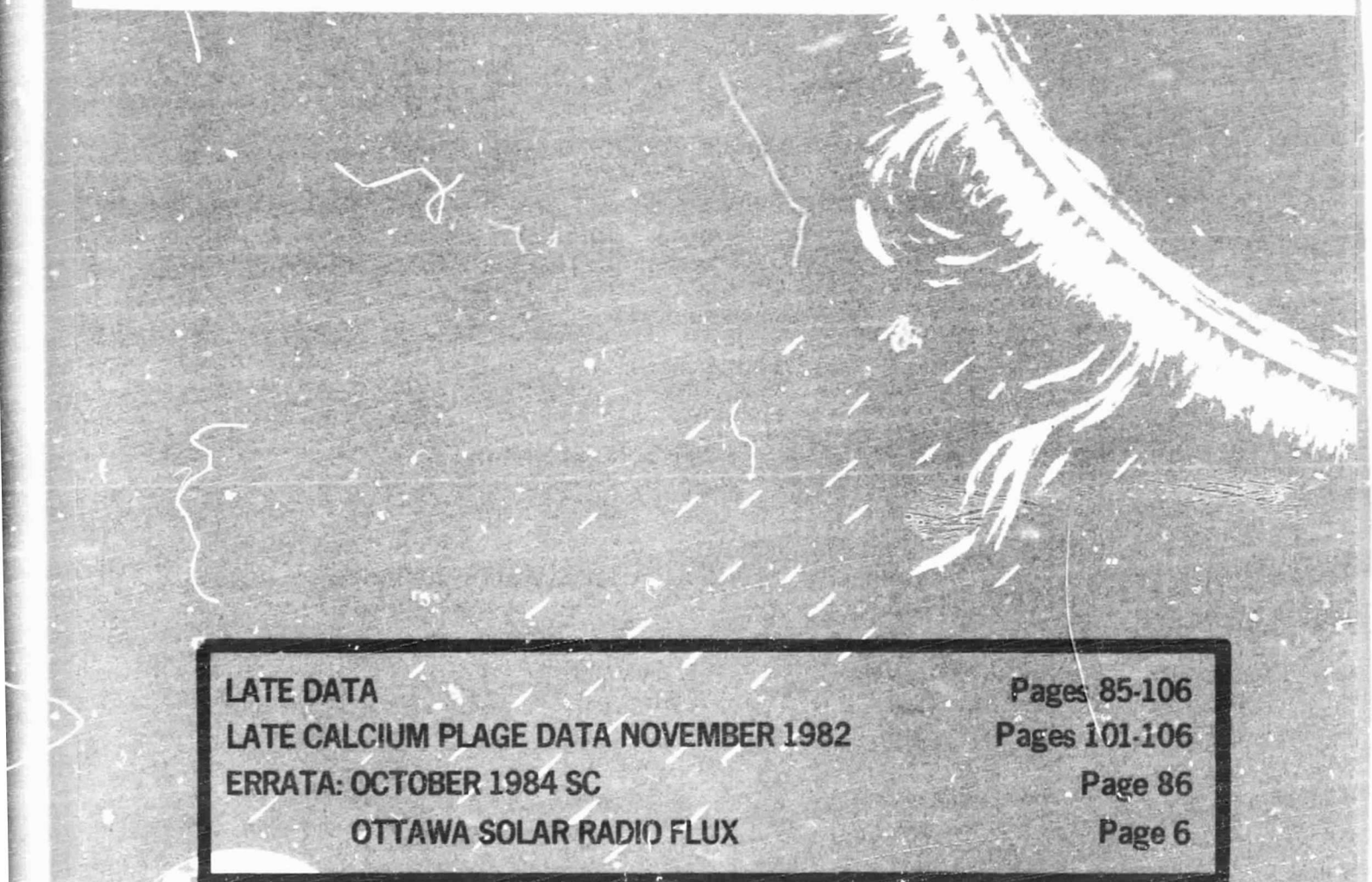
PB86-121985

JUNE 1985 NUMBER 490 -- Part I

Solar-Geophysical Data prompt reports

Data for May 1985, April 1985, & Late Data

Explanation of Data Reports Issued as Number 489 (Supplement) May 1985



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Solar - Geophysical Data

Part I (Prompt Reports)

NO. 490 JUNE 1985

DATA FOR
MAY 1985
APRIL 1985

Michael A. Chinnery, Director
NATIONAL GEOPHYSICAL DATA CENTER
BOULDER, COLORADO

International Standard Serial Number: 0038-0911
Library of Congress Catalog Number: 79-640375 //r81

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3	Jan 58 - Dec 58	Microfilm	11	Jan 66 - Sep 66	Microfilm	19	Jul 70 - Dec 70	Microfilm
4	Jan 59 - Dec 59	Microfilm	12	Oct 66 - Dec 66	Microfilm	20	Jan 71 - Jun 71	Microfilm
5	Jan 60 - Dec 60	Microfilm	13	Jan 67 - Dec 67	Microfilm	21	Jul 71 - Dec 71	Microfilm
6	Jan 61 - Dec 61	Microfilm	14	Jan 68 - Jun 68	Microfilm	22	Jan 72 - Jun 72	Microfilm
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S O L A R - G E O P H Y S I C A L D A T A

NUMBER 490

(Issued in Two Parts)

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C O N T E N T S

PART I (PROMPT REPORTS)

PART II (COMPREHENSIVE REPORTS)

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DETAILED INDEX OF OBSERVATIONS PUBLISHED IN "SOLAR-GEOPHYSICAL DATA"

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*Solar radio noise bursts observed at Athens, Learmonth, Manila, Palehua and Sagamore Hill during Aug 1979 through Oct 1980 appear in SOLAR-GEOPHYSICAL DATA, No. 461, Part II, pages 103-235.

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ALERT PERIODS
INTERNATIONAL UNSIGRAM AND WORLD DAYS SERVICE

SUMMARY OF THE GEOALERT MESSAGES MAY 1985

NO	DI	DO	WOLF	10CM	A	LOC	TOT	M	X	OUTSTANDING EVENTS	DA	LOC	DE	ALERTS
121	01	30	030	080	021	N05W65	0	0	0		01	N05W65	E	SOLQUIET MAGQUIET
122	02	01	019	081	012	N05W77	9	0	0		02	N05W77	E	SOLQUIET MAGQUIET
123	03	02	036	075	030	N05W92	2	1	0	PRESTO TENFLARE 450 FLUX UNITS	03	N05W92	E	SOLQUIET
						N10E32	0	0	0	02/0745 UT DURATION 4 MINUTES		N10E32	Q	MAGQUIET
						N04E71	0	0	0			N04E71	Q	
124	04	03	025	071	008	N05E42	0	0	0		04	N05E42	E	SOLQUIET
						N03E61	0	0	0			N03E61	Q	MAGQUIET
125	05	04	025	070	012	N06E28	0	0	0		05	N06E28	Q	SOLQUIET
						N04E45	0	0	0			N04E45	Q	MAGQUIET
126	06	05	026	070	010	N06E11	0	0	0		06	N06E11	Q	SOLQUIET
						N04E32	0	0	0			N04E32	Q	MAGALERT MINOR 06/07
127	07	06	025	074	015	N06W03	0	0	0		07	N06W03	Q	SOLQUIET
						N04E20	1	0	0			N04E20	Q	MAGNIL
128	08	07	050	078	010	N05W17	0	0	0		08	N05W17	Q	SOLQUIET
						N04E06	0	0	0			N04E06	Q	MAGQUIET
						S13E73	5	0	0			S13E73	E	
129	09	08	067	080	014	N05W30	0	0	0		09	N05W30	Q	SOLQUIET
						N03W08	2	0	0			N03W08	Q	MAGQUIET
						S13E63	3	0	0			S13E63	E	
						N07E70	0	0	0			N07E70	Q	
130	10	09	065	088	012	N06W44	0	0	0		10	N06W44	Q	SOLQUIET
						N04W22	0	0	0			N04W22	Q	MAGQUIET
						S13E50	4	0	0			S13E50	E	
						N07E57	2	0	0			N07E57	Q	
131	11	10	060	090	006	N06W58	0	0	0		11	N06W58	Q	SOLQUIET
						S14E37	3	0	0			S14E37	E	MAGQUIET
						N07E46	0	0	0			N07E46	Q	
132	12	11	062	088	010	N07W75	0	0	0		12	N07W75	Q	SOLQUIET
						S13E24	1	0	0			S13E24	E	MAGQUIET
						N08E37	0	0	0			N08E37	Q	
133	13	12	048	090	012	N04W89	0	0	0		13	N04W89	Q	SOLQUIET
						S12E11	9	0	0			S12E11	E	MAGQUIET
134	14	13	062	090	012	S13W03	9	1	0		14	S13W03	E	SOLQUIET
						N07E10	0	0	0			N07E10	Q	MAGQUIET
						S05E45	0	0	0			S05E45	Q	
135	15	14	052	090	009	S12W17	6	0	0		15	S12W17	Q	SOLQUIET
						N07W04	0	0	0			N07W04	Q	MAGQUIET
						S05E32	0	0	0			S05E32	Q	
136	16	15	048	091	016	S13W29	1	0	0		16	S13W29	Q	SOLQUIET
						N07W18	0	0	0			N07W18	Q	MAGQUIET
						S07E69	0	0	0			S07E69	Q	
137	17	16	031	093	012	S13W43	2	0	0		17	S13W43	Q	SOLQUIET
						S07E58	0	0	0			S07E58	Q	MAGALERT MINOR 17/XX
138	18	17	042	090	007	S13W56	0	0	0		18	S13W56	Q	SOLQUIET

ALERT PERIODS
INTERNATIONAL URSIGRAM AND WORLD DAYS SERVICE

SUMMARY OF GEOALERT MESSAGES MAY 1985

NO	DI	DO	WOLF	10CM	A	LOC	TOT	M	X	OUTSTANDING EVENTS	DA	LOC	DE	ALERTS
						S07E44	0	0	0			S07E44	Q	MAGNIL
						N08E71	2	0	0			N08E71	Q	
139	19	18	053	091	011	S13W71	1	0	0		19	S13W71	Q	SOLQUIET
						N07W68	0	0	0			N07W68	Q	MAGQUIET
						S08E31	0	0	0			S08E31	Q	
						N09E57	1	0	0			N09E57	Q	
140	20	19	052	088	011	S12W83	1	0	0		20	S12W83	Q	SOLQUIET
						N08W81	0	0	0			N08W81	Q	MAGQUIET
						S08E18	0	0	0			S08E18	Q	
						N07E44	1	0	0			N07E44	E	
141	21	20	051	085	008	S13W97	0	0	0		21	S13W97	Q	SOLQUIET
						S08E04	0	0	0			S08E04	Q	MAGQUIET
						N07E26	2	0	0			N07E26	E	
142	22	21	040	083	005	S08W08	0	0	0		22	S08W08	Q	SOLQUIET
						N07E16	7	0	0			N07E16	E	MAGQUIET
143	23	22	037	082	008	S08W22	0	0	0		23	S08W22	Q	SOLQUIET
						N07E02	4	0	0			N07E02	E	MAGQUIET
144	24	23	043	078	008	S08W36	0	0	0		24	S08W36	Q	SOLQUIET
						N08W21	0	0	0			N08W21	Q	MAGQUIET
						N06W12	3	0	0			N06W12	E	
145	25	24	026	076	008	S08W50	1	0	0		25	S08W50	Q	SOLQUIET
						N07W24	2	0	0			N07W24	Q	MAGQUIET
146	26	25	023	075	008	S07W62	0	0	0		26	S07W62	Q	SOLQUIET
						N07W37	1	0	0			N07W37	Q	MAGALERT
														MINOR 26/27
147	27	26	022	074	010	S07W77	0	0	0		27	S07W77	Q	SOLQUIET
						N07W50	0	0	0			N07W50	Q	MAGNIL
148	28	27	035	073	010	S07W91	0	0	0		28	S07W91	Q	SOLQUIET
						N07W75	0	0	0			N07W75	Q	MAGALERT
						N07W71	0	0	0			N07W71	Q	
149	29	28	000	071	012	SPOTNIL					29	SPOTNIL		SOLQUIET
														MAGNIL
150	30	29	012	071	007	N04W39	0	0	0		30	N04W39	Q	SOLQUIET
														MAGQUIET
151	31	30	011	070	006	N04W50	0	0	0		31	N04W50	Q	SOLQUIET
														MAGQUIET
152	01	31	000	068	012	SPOTNIL					01	SPOTNIL		SOLQUIET
														MAGALERT 01

NO=MESSAGE SERIAL NUMBER, DI=DATE OF ISSUE, DO=DATE OF OBSERVATION, WOLF=WOLF NUMBER, 10CM=10CM SOLAR FLUX, A=A INDE., LOC=LOCATION LATITUDE AND LONGITUDE, TOT=TOTAL, M=NUMBER OF M FLARES, X=NUMBER OF X FLARES, DA=DATE OF FORECAST, DE=DESCRIPTION, Q=QUIET, E=ERUPTIVE, A=ACTIVE, P=PROTON.

PRESTO MESSAGES (THE RAPID REPORT OF MAJOR EVENTS) MAY 1985

PRESTO BOULDER 02/0845 UT TENFLARE 450 FLUX UNITS 02/0745 UT DURATION 4 MINUTES

INTERNATIONAL (R_I) RELATIVE SUNSPOT NUMBERS

Day	1984 Final Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	1985 Prov Apr	May
01	48	33	14	45	7	16	19	0	18	13	25	19
02	44	36	17	50	8	14	22	0	22	13	21	15
03	45	61	19	61	11	11	19	0	25	9	23	14
04	34	80	25	58	11	14	19	0	22	0	17	18
05	30	72	18	53	0	12	16	0	20	0	23	16
06	23	61	24	32	0	0	21	0	16	0	19	14
07	34	64	27	21	0	11	18	0	7	0	11	32
08	31	74	32	20	12	13	23	11	16	14	9	44
09	26	63	35	13	14	13	21	14	24	15	9	56
10	31	74	31	10	17	21	15	0	19	13	0	49
11	37	57	29	9	22	27	28	0	13	16	0	49
12	39	54	31	9	16	21	29	13	10	18	0	33
13	41	44	28	9	10	16	28	16	11	14	0	32
14	50	34	27	0	9	15	28	26	13	10	10	32
15	80	30	23	8	14	13	26	25	11	0	0	32
16	83	25	23	12	19	11	30	26	10	11	0	31
17	73	21	18	0	24	11	24	29	12	20	0	38
18	62	26	17	0	25	·	12	26	10	35	10	41
19	51	22	11	10	25	·	11	27	19	27	9	40
20	53	18	16	0	17	27	11	55	27	19	11	37
21	43	12	12	9	19	36	14	59	27	9	17	36
22	48	22	10	10	12	36	12	50	25	15	31	34
23	54	25	19	8	11	41	11	39	16	22	28	32
24	58	38	24	8	9	47	16	33	11	36	30	25
25	44	30	36	7	10	59	21	20	11	30	37	19
26	49	25	49	0	10	44	20	9	11	33	33	11
27	40	9	41	0	8	39	14	8	10	27	31	12
28	41	9	37	0	0	39	16	0	9	36	27	12
29	50	12	34	0	8	30	15	9		25	26	10
30	42	16	27	8	11	20	10	0		29	26	8
31		12	36		14		10	17		23		8
Mean	46	37	26	15	12	23	19	16	16	17	16	27

The yearly mean sunspot number equaled 45.9 in 1984.

DAILY SOLAR FLUX AT 2800 MHz (10.7 CM) ADJUSTED TO 1 AU

ALGONQUIN RADIO OBSERVATORY, OTTAWA

Day	Jun 84	Jul	Aug	Sep	Oct	Nov	Dec	Jan 85	Feb	Mar	Apr	May
01	116.1	101.7	84.0	94.1	72.0	69.5	77.0	68.4	72.2	69.3	72.2	80.6
02	111.3	103.6	86.3	93.2	74.8	70.1	76.8	67.8	73.8	69.1	72.6	76.5
03	109.6	104.8	88.4	94.5	75.2	72.0	77.9	67.7	73.6	69.0	72.5*	72.6
04	106.8	105.7	85.7	91.9	75.2	72.2	75.9	67.8	70.9	68.6	71.9	70.8
05	104.6	104.4*	85.7	89.8	74.0	71.7	73.4	67.0	71.2	67.5	71.2	71.4
06	98.9	100.3	89.9	85.9	73.2	71.0	73.0	67.9	70.6	68.1	70.5	75.0
07	97.3	100.1	92.4	85.2	73.5	70.1	72.8	68.1	70.3	66.0	70.3	79.1
08	94.6	101.1	94.0	83.4	74.6	70.5	74.1	67.4	72.5	68.7	69.9	83.7
09	93.6	104.5	94.4	80.6	73.5	72.7	74.5	68.1	73.2	68.7	69.4	89.6
10	92.3	101.3	95.4	79.1	74.1	75.8	75.7	67.4	73.6	68.0	69.7	91.7
11	93.2	96.8	90.8	77.8	74.3	73.1	78.9	67.7	73.2	69.6	69.0	89.9
12	93.0	94.7	88.0	76.5	73.9	72.8	77.8	68.4	72.3	69.3	69.6	92.1
13	98.6	92.6	86.5	75.0	74.7	71.6	76.2	72.6	70.8	69.5	69.8	91.9
14	110.2	92.2*	84.0	74.5	73.2	72.0	75.8A	72.3	70.6	69.5	70.6	90.7*
15	116.5*	92.2	82.6	73.3	76.4	72.9	74.9	72.4	70.2	69.6	70.0	92.0*
16	110.3	90.1	83.1	73.4	76.6	70.7	74.2	74.7	69.8	70.1	69.4	95.5
17	109.5*	87.3	81.0	74.6	76.2	71.0	72.6	75.8	70.9	72.1	70.2	92.3
18	108.9	85.5	79.1	73.8	76.5	71.7	70.2	74.1	73.4*	74.6	71.7	92.7
19	107.8	84.7	76.2	74.6	74.2	72.3	71.0	75.4	76.1	74.2	71.7	89.6
20	106.6	84.8	75.6	74.1	73.5	74.8	69.9	81.7*	75.0	74.2	72.3	86.7
21	103.4*	86.7	77.2	75.1	73.2	78.3	69.7	84.9*	74.2	76.1*	77.5	84.4*
22	104.6	86.3	75.7	75.9	74.5	78.2	70.7	85.3	73.3	75.9	89.8	82.7*
23	105.3	87.3	76.0	76.1	72.7	79.3	71.3	82.5	71.7	77.3	93.3*	80.0
24	103.6	86.8	81.6	76.2	70.8	81.1	71.8	78.2	70.5	79.6	89.0*	78.3
25	104.6	85.9	83.0	74.6	70.2	83.1	72.2	73.9	70.1	78.5	95.2	77.2
26	100.1	83.4	87.7	74.3	69.4	82.5	72.3	71.0	69.7	79.7†	88.3*	75.5
27	101.5	83.0	90.4	73.5	68.6	82.5*	72.0	69.5	68.9	77.4†	80.6	74.6
28	99.5	82.5	88.6	73.1	69.3	81.1	72.2	69.0	69.7	77.7†	78.1	72.7
29	100.3	82.3	90.3	71.7	68.2	77.1	72.1	68.7		76.7†	83.2	72.5
30	101.1	82.2	91.8	72.4	68.8	76.4	71.4	68.3		75.8†	80.8	71.4
31		83.0	93.1*		69.8		70.0	69.9A		76.4†		69.6
Mean	103.5	92.2	85.8	78.9	73.1	74.6	73.5	72.1	71.9	72.5	75.7	82.0

A = interpolated value; --- = no observation.
*Adjusted for burst in progress at time of measurement; †corrected for antenna drift.
The yearly mean 2800 MHz flux adjusted to 1 astronomical unit equaled 101.1 in 1984.

ERRATA: In SGD issues number 485-488, solar fluxes for 31st day of 1984 must be shifted right 1 column.

DAILY SOLAR INDICES

MAY 1985

Day	Julian Day	Bartels Cycle Day	Sunspot Numbers Int	Amer	Obs Flux Ottawa (2800)	Solar Flux Adjusted to 1 Astronomical Unit SGMR (15400)	SGMR (8800)	SGMR (4995)	Ottawa (2800)	SGMR (2695)	SGMR (1415)	SGMR (610)	SGMR (410)	SGMR (245)
01	121	22	19	19	79.3	547	255	115	80.6	78	63	51	19	8
02	122	23	15	14	75.3	555	264	91	76.5	74	60	46	19	9
03	123	24	14	16	71.4	495	230	94	72.6	66	55	46	20	10
04	124	25	18	15	69.6	---	102	94	70.8	67	57	48	19	--
05	125	26	16	15	70.1	557	256	94	71.4	71	57	48	19	10
06	126	27	14	12	73.7	518	250	103	75.0	68	58	48	20	8
07	127	1	32	24	77.6	556	262	103	79.1	75	63	50	19	10
08	128	2	44	41	82.1	549	275	111	83.7	83	65	47	14	13
09	129	3	56	49	87.9	561	283	106	89.6	84	67	51	21	10
10	130	4	49	43	89.9	557	267	124	91.7	85	69	48	23	10
11	131	5	49	37	88.1	552	262	123	89.9	84	70	38	17	10
12	132	6	33	28	90.2	549	292	126	92.1	88	73	53	22	12
13	133	7	32	29	90.0	---	---	---	91.9	--	--	--	--	--
14	134	8	32	27	88.7*	524	290	122	90.7*	87	67	--	--	--
15	135	9	32	28	90.0*	---	---	---	92.0*	--	--	--	--	--
16	136	10	31	29	93.4	554	271	120	95.5	91	71	44	20	17
17	137	11	38	32	90.2	555	270	120	92.3	89	73	47	18	12
18	138	12	41	35	90.5	534	278	115	92.7	89	73	48	19	9
19	139	13	40	35	87.5	563	272	117	89.6	87	74	50	19	14
20	140	14	37	32	84.7	---	---	---	86.7	--	--	--	--	--
21	141	15	36	32	82.3*	539	259	111	84.4*	80	69	43	18	14
22	142	16	34	30	80.7*	552	264	109	82.7*	79	68	41	18	6
23	143	17	32	28	78.0	548	259	108	80.0	78	68	47	18	7
24	144	18	25	22	76.3	565	257	110	78.3	74	68	50	19	8
25	145	19	19	18	75.2	---	---	---	77.2	--	--	--	--	--
26	146	20	11	10	73.5	553	258	95	75.5	73	62	43	17	8
27	147	21	12	10	72.6	543	252	106	74.6	69	60	38	16	8
28	148	22	12	8	70.8	392	203	81	72.7	67	55	38	17	7
29	149	23	10	10	70.5	555	263	95	72.5	69	56	38	17	7
30	150	24	8	9	69.5	556	258	106	71.4	68	56	40	17	12
31	151	25	8	7	67.7	541	258	104	69.6	67	55	37	16	7
			27	24	80.2	541	256	107	82.0	77	64	45	18	10

*Adjusted for burst in progress at time of measurement.

The observed and the adjusted Ottawa fluxes tabulated above are the "Series C" daily values reported by the Algonquin Radio Observatory, Ottawa, Ontario, Canada. The letter "A" following an entry designates an interpolated flux. Numbers in parentheses in the column headings denote frequencies in MHz.

Equipment problems produced the gaps shown here in the Air Weather Service's Sagamore Hill (SGMR) observations.

The international and American sunspot numbers shown above are preliminary values.

OBSERVED AND PREDICTED SOLAR ACTIVITY INDICES

MAY 1985

	RELATIVE SUNSPOT NUMBERS						2800 MHz RADIO FLUX	
	Zurich or Internat (Ri)		American (Ra)		Derived (Rs)		Adjusted to 1 AU (Sa)	
Date	Monthly Mean	Smoothed	Monthly Mean	Smoothed	Monthly Mean	Smoothed	Monthly Mean	Smoothed
Jun 81	90.9	142	99.0	147	112.9	158	161.9	203
Jul	143.8	140	154.3	146	152.1	157	198.2	203
Aug	158.7	141	170.4	147	182.1	158	226.0	203
Sep	167.3	143	174.5	148	177.7	158	221.9	204
Oct	162.4	142	157.0	146	178.6	156	222.8	202
Nov	137.5	139	138.8	142	157.6	151	203.3	197
Dec	150.1	138	145.0	140	155.5	149	201.4	195
Jan 82	111.1	137	110.4	139	124.2	148	173.4	195
Feb	163.6	133	161.0	134	163.6	144	208.9	191
Mar	153.8	129	155.5	130	163.0	139	208.3	186
Apr	122.0	124	121.9	124	113.9	134	162.9	182
May	82.2	120	82.6	120	97.7	129	147.9	177
Jun	110.4	117	113.5	118	129.6	127	177.4	175
Jul	106.1	115	113.3	117	116.0	125	164.8	174
Aug	107.6	109	110.5	111	123.9	120	172.1	168
Sep	118.8	101	117.8	103	118.5	112	167.1	161
Oct	94.7	96	90.1	97	111.8	106	160.9	155
Nov	98.1	95	93.2	95	114.8	103	163.7	153
Dec	127.0	95	145.0	95	146.7	101	193.2	151
Jan 83	84.3	93	82.8	93	86.7	98	137.7	148
Feb	51.0	90	53.4	90	67.2	94	119.6	145
Mar	66.5	86	60.5	85	64.7	90	117.3	141
Apr	80.7	82	74.5	81	67.5	85	119.9	136
May	99.2	77	97.7	77	86.1	80	137.1	131
Jun	91.1	70	93.1	69	92.4	72	143.0	124
Jul	82.2	66	82.2	63	77.4	66	129.1	118
Aug	71.8	66	69.2	63	75.7	66	127.5	118
Sep	50.3	68	47.4	66	57.0	67	110.2	119
Oct	55.8	68	52.3	66	58.6	67	111.7	120
Nov	33.3	59	30.2	65	35.6	67	90.4	120
Dec	33.4	64	32.3	62	35.7	65	90.5	116
Jan 84	57.0	60	54.4	58	59.4	61	112.4	115
Feb	85.4	56	81.5	54	86.2	58	137.2	101
Mar	83.5	53	83.0	51	68.5	55	120.8	108
Apr	69.7	50	66.5	48	78.1	52	129.7	105
May	76.4	48	72.1	45	79.6	49	131.1	103
Jun	46.1	46	45.2	44	49.8	48	103.5	102
Jul	37.4	44	36.2	42	37.6	39	92.2	99
Aug	25.5	40	24.5	41	30.7	41	85.8	95
Sep	15.7	34	13.6	39	23.2	35	78.9	90
Oct	12.0	29*	9.8	38	16.9	31	73.1	86
Nov	22.8	25*	19.4	37	18.6	26	74.6	72
Dec	18.7	23(2)*	17.0	35	17.4	25	73.5	---
Jan 85	16.5	22(4)*	14.5	34	15.9	24	72.1	---
Feb	15.9	21(5)*	16.3	32	15.7	23	71.9	---
Mar	17.2	20(6)*	----	31	16.3	22	72.5	---
Apr	16.1†	20(8)*	----	30	19.8	21	75.7	---
May	27.4†	19(9)*	----	29	26.6	20	82.0	---
Jun	----	19(9)*	----	28	----	20	----	---
Jul	----	18(9)*	----	27	----	19	----	---
Aug	----	17(9)*	----	26	----	18	----	---
Sep	----	16(9)*	----	25	----	17	----	---
Oct	----	15(10)*	----	24	----	16	----	---
Nov	----	14(11)*	-----	23	-----	15	-----	---

*An asterisk marks either a value of the observed 12-month running mean or of a predicted 12-month average that is based in part on preliminary observations.

Underlined entries indicate predicted values and parentheses enclose the absolute value of the 90% confidence limits. All tabulated entries of the American sunspot number are final values. The two columns headed "Derived" represent a sunspot number computed from a linear regression equation between the 2800 MHz solar flux (adjusted to 1 astronomical unit) and the Zurich sunspot number.

†International numbers replaced the Zurich values in January 1981.

SMOOTHED OBSERVED AND PREDICTED SUNSPOT NUMBERS FOR CYCLE 21

MAY 1985

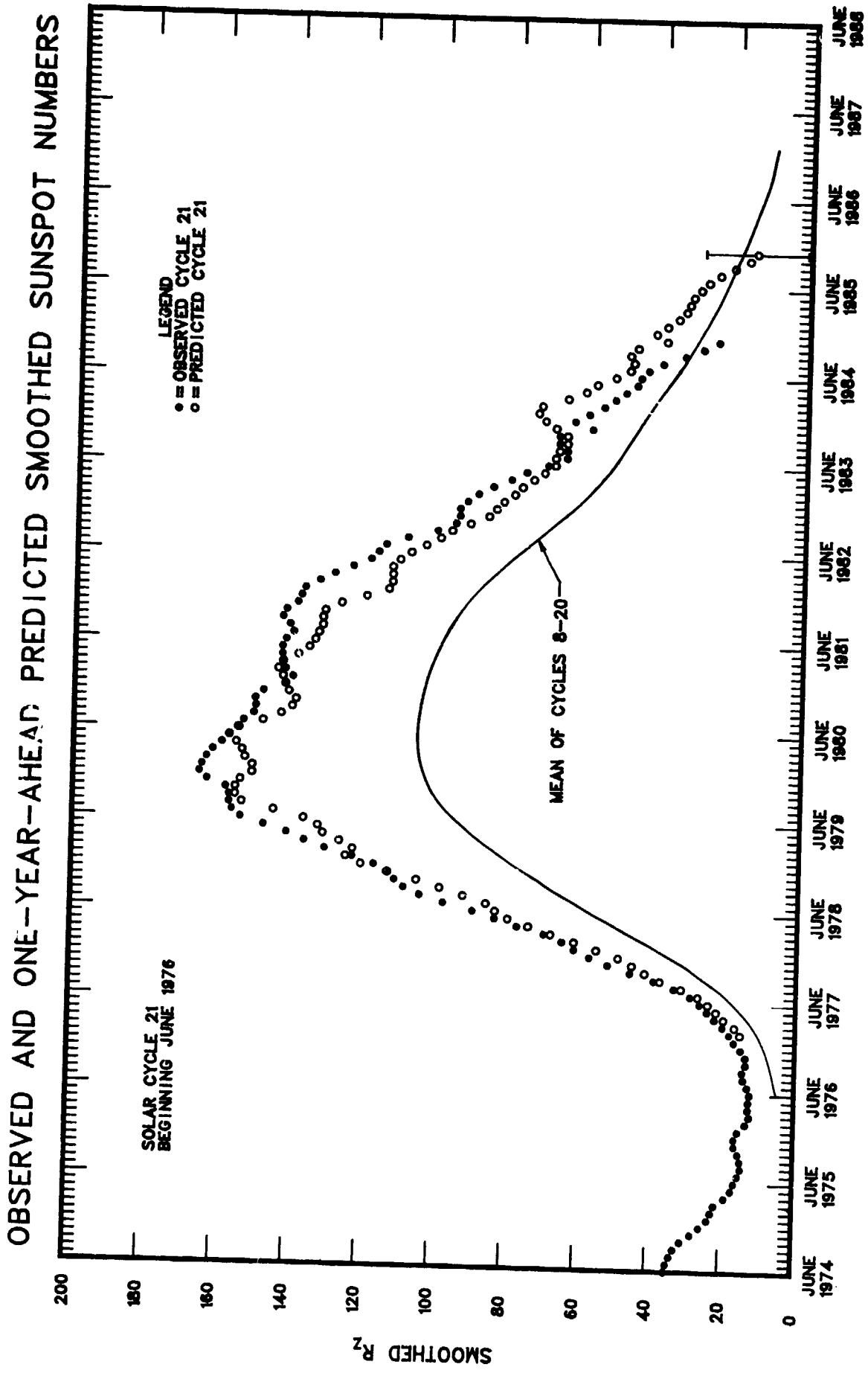
Month	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1976	15	13	12	13	13	12*	13	14	14	13	14	15
1977	17	18	20	22	24	26	29	33	39	46	52	57
1978	61	65	70	77	83	89	97	104	108	111	113	118
1979	124	131	137	141	147	153	155	155	156	158	162	165*
1980	164	163	161	159	156	155	153	150	150	150	148	143
1981	140	142	143	143	143	142	140	141	143	142	139	138
1982	137	133	129	124	120	117	115	109	101	96	95	95
1983	93	90	86	82	71	71	66	66	68	68	67	64
1984	60	56	53	50	48	47	44	40	34	29	25	23 (2)
1985	22 (4)	21 (5)	20 (6)	20 (8)	19 (9)	19 (9)	18 (9)	17 (9)	16 (9)	15 (10)	14 (11)	13 (11)
1986	13 (12)	13 (12)	12 (12)	11 (12)	10 (12)	10 (12)	9 (12)	9 (12)	8 (11)	8 (11)	9 (11)	9 (10)

An asterisk marks the minimum and the maximum of Sunspot Cycle 21.

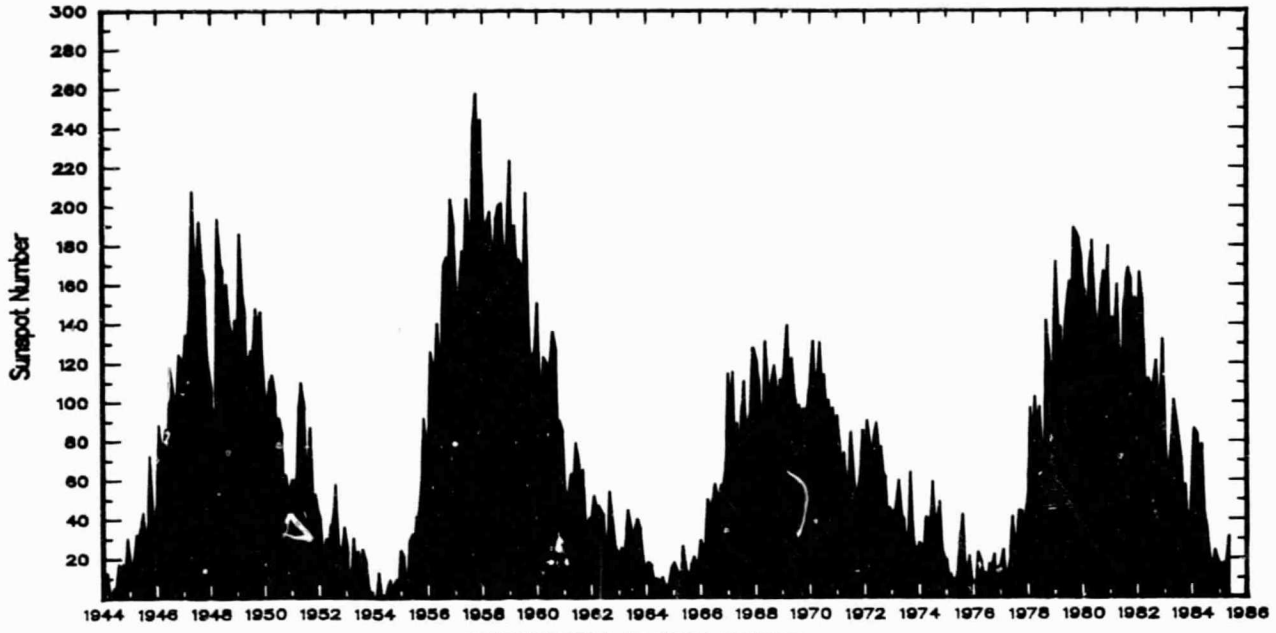
For the current solar cycle, this table gives observed smoothed sunspot numbers up to the one calculated from the most recently measured monthly mean. These smoothed observed values are based on final monthly mean Zurich numbers through 1980, on final International numbers through March 1985, and on provisional International numbers thereafter. Some table entries for 1984 will change slightly, when we incorporate final data for 1985.

The entries with numbers in parentheses below them denote predictions by the McNish-Lincoln method. (See page 9 in the May 1985 edition of the "Solar-Geophysical Data" supplement.) Adding the number in parentheses to the predicted value generates the upper limit of the 90% confidence interval; subtracting the number in parentheses from the predicted value generates the lower limit. Consider, for example, the November 1985 prediction tabulated above. There exists a 90% chance that in November 1985 the actual smoothed sunspot number will fall somewhere between 3 and 25.

THE MCNISH-LINCOLN PREDICTION METHOD GENERATES USEFUL ESTIMATES OF SMOOTHED SUNSPOT NUMBERS FOR NO MORE THAN 12 MONTHS AHEAD. Beyond a year the predictions regress rapidly toward the mean of all 13 cycles of data used in the computation. Furthermore, the method is very sensitive to the date defined as the beginning of the current sunspot cycle, that is, to the date of the most recent sunspot minimum. In "Solar-Geophysical Data," Issues 390-401, we based the current cycle predictions on March 1976 as the end of cycle 20 and the onset of the new cycle 21. Later studies, including one published by M. Waldmeier, showed that June 1976 was more appropriately the minimum epoch. We therefore generated this table using the June 1976 date.


OBSERVED AND ONE-YEAR-AHEAD PREDICTED SMOOTHED SUNSPOT NUMBERS
LEGEND
● = OBSERVED CYCLE 21
○ = PREDICTED CYCLE 21
SOLAR CYCLE 21
BEGINNING JUNE 1976
MEAN OF CYCLES 8-20
SMOOTHED R_Z
200
180
160
140
120
100
80
60
40
20
0
JUNE 1974
JUNE 1975
JUNE 1976
JUNE 1977
JUNE 1978
JUNE 1979
JUNE 1980
JUNE 1981
JUNE 1982
JUNE 1983
JUNE 1984
JUNE 1985
JUNE 1986
JUNE 1987
JUNE 1988

MONTHLY MEAN SUNSPOT NUMBERS
January 1944 – May 1985



MONTHLY MEAN SUNSPOT NUMBERS

Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1944	3.7	0.5	11.0	0.3	2.5	5.0	5.0	16.7	14.3	16.9	10.8	28.4
1945	18.5	12.7	21.5	32.0	30.6	36.2	42.6	25.9	34.9	68.8	46.0	27.4
1946	47.6	86.2	76.6	75.7	84.9	73.5	116.2	107.2	94.4	102.3	123.8	121.7
1947	115.7	133.4	129.8	149.8	201.3	163.9	157.9	188.8	169.4	163.6	128.0	116.5
1948	108.5	86.1	94.8	189.7	174.0	167.8	142.2	157.9	143.3	136.3	95.8	138.0
1949	119.1	182.3	157.5	147.0	106.2	121.7	125.8	123.8	145.3	131.6	143.5	117.6
1950	101.6	94.8	109.7	113.4	106.2	83.6	91.0	85.2	51.3	61.4	54.8	54.1
1951	59.9	59.9	55.9	92.9	108.5	100.6	61.5	61.0	83.1	51.6	52.4	45.8
1952	40.7	22.7	22.0	29.1	23.4	36.4	39.3	54.9	28.2	23.8	22.1	34.3
1953	26.5	3.9	10.0	27.8	12.5	21.8	8.6	23.5	19.3	8.2	1.6	2.5
1954	0.2	0.5	10.9	1.8	0.8	0.2	4.8	8.4	1.5	7.0	9.2	7.6
1955	23.1	20.8	4.9	11.3	28.9	31.7	26.7	40.7	42.7	58.5	89.2	76.9
1956	73.6	124.0	118.4	110.7	136.6	116.6	129.1	169.6	173.2	155.3	201.3	192.1
1957	165.0	130.2	157.4	175.2	164.6	200.7	187.2	158.0	235.8	253.8	210.9	239.4
1958	202.5	164.9	190.7	196.0	175.3	171.5	191.4	200.2	201.2	181.5	152.3	187.6
1959	217.4	143.1	185.7	163.3	172.0	168.7	149.6	199.6	145.2	111.4	124.0	125.0
1960	146.3	106.0	102.2	122.0	119.6	110.2	121.7	134.1	127.2	82.8	89.6	85.6
1961	57.9	46.1	53.0	61.4	51.0	77.4	70.2	55.9	63.6	37.7	32.6	40.0
1962	38.7	50.3	45.6	46.4	43.7	42.0	21.8	21.8	51.3	39.5	26.9	23.2
1963	19.8	24.4	17.1	29.3	43.0	35.9	19.6	33.2	38.8	35.3	23.4	14.9
1964	15.3	17.7	16.5	8.6	9.5	9.1	3.1	9.3	4.7	6.1	7.4	15.1
1965	17.5	14.2	11.7	6.8	24.1	15.9	11.9	8.9	16.8	20.1	15.8	17.0
1966	28.2	24.4	25.3	48.7	45.3	47.7	56.7	51.2	50.2	57.2	57.2	70.4
1967	110.9	93.6	111.8	69.5	86.5	67.3	91.5	107.2	76.8	88.2	94.3	126.4
1968	121.8	111.9	92.2	81.2	127.2	110.3	96.1	109.3	117.2	107.7	86.0	109.8
1969	104.4	120.5	135.8	106.8	120.0	106.0	96.8	98.0	91.3	95.7	93.5	97.9
1970	111.5	127.8	102.9	109.5	127.5	106.8	112.5	93.0	99.5	86.6	95.2	83.5
1971	91.3	79.0	60.7	71.8	57.5	49.8	81.0	61.4	50.2	51.7	63.2	82.2
1972	61.5	88.4	80.1	63.2	80.5	88.0	76.5	76.8	64.0	61.3	41.6	45.3
1973	43.4	42.9	46.0	57.7	42.4	39.5	23.1	25.6	59.3	30.7	23.9	23.3
1974	27.6	26.0	21.3	40.3	39.5	36.0	55.8	33.6	40.2	47.1	25.0	20.5
1975	18.9	11.5	11.5	5.1	9.0	11.4	28.2	39.7	13.9	9.1	19.4	7.8
1976	8.1	4.3	21.9	18.8	12.4	12.2	1.9	16.4	13.5	20.6	5.2	15.3
1977	16.4	23.1	8.7	12.9	18.6	38.5	21.4	30.1	44.0	43.8	29.1	43.2
1978	51.9	93.6	76.5	99.7	82.7	95.1	70.4	58.1	138.2	125.1	97.9	122.7
1979	166.6	137.5	138.0	101.5	134.4	149.5	159.4	142.2	188.4	186.2	183.3	176.3
1980	159.6	155.0	126.2	164.1	179.9	157.3	136.3	135.4	155.0	164.7	147.9	174.4
1981	114.0	141.3	135.5	156.4	127.5	90.9	143.8	158.7	167.3	162.4	137.5	150.1
1982	111.2	163.6	153.8	122.0	82.2	110.4	106.1	107.6	118.8	94.7	98.1	127.0
1983	84.3	51.0	66.5	80.7	99.2	91.1	82.2	71.8	50.3	55.8	33.3	33.4
1984	57.0	85.4	83.5	69.7	76.4	46.1	37.4	25.5	15.7	12.0	22.8	18.7
1985	16.5	15.9	17.2	16.1*	27.4*							

*Provisional

H - ALPHA S O L A R F L A R E S

MAY 1985

Sta	Day	Start (UT)	Max (UT)	End (UT)	Lat	CMD	NOAA/ USAF Region	CMP Mo	CMP Day	Dur (Min)	Imp Opt	Imp Xray	Imp See	Obs Type	Area Measurement Time (UT)	Area Measurement Apparent (10^{-6} Disk)	Area Measurement Corr (Sq Deg)	Remarks
LEAR	01	0659	0701	0721	N02	W72	4647	04	26.0	22	SN		3	C		84		F
RAMY	01	1251	1301	1310	N03	W74	4647	04	26.1	19	SF		3	C		22		
RAMY	01	1430	1431	1433D	N03	W73	4647	04	26.2	3D	SB	C 2.7	3	C		44		F
HOLL	01	1430	1431	1455	N04	W72	4647	04	26.3	25	SN	C 2.7	3	C		33		F
HOLL	01	1723	1723	1728	N11	W71	4647	04	26.5	5	SF		3	C		13		
HOLL	01	1918	1919	1932	N05	W70	4647	04	26.7	14	SN		3	C		49		
HOLL	01	2122	2124	2129	N10	W73	4647	04	26.5	7	SN		3	C		57		
PALE	01	2124E	2125U	2126	N08	W74	4647	04	26.4	2D	SF		2	C		12		
LEAR	02	0504	0506	0539	N04	W90	4647	04	25.6	35	SN		3	C		60		F
GOES	02	0554	0558	0600						6		C 3.3						
PEKG	02	0645	0700	0715	N04	E63		05	07.^	30	1F			C	0700	168	3.9	EG
LEAR	02	0700E	0713U	0740	N04	E58		05	06.6	40D	SF		3	C		122		F
CATA	02	0715E	0715	0735	N05	E59		05	06.7	20D	1B		2	P	0715	112	2.3	
PEKG	02	0725	0750	0805	N06	W90		04	25.7	40	1B			C	0750	126		E
GOES	02	0741	0745	0753						12		M 4.9						
LEAR	02	0745E	0749U	0836	N04	W90	4647	04	25.7	51D	1B		3	C		244		FE
CATA	02	0750E	0755	0755D	N02	W85		04	26.1	5D	2B		2	P	0715	169		
YUNN	02	0813E	0818	0836	N03	W90		04	25.7	23D	SB			P		79		
CATA	02	0820E	0825	0835D	N01	W90		04	25.7	15D	1B		2	P	0825	112		
HOLL	02	1858	1859	1906	N03	E77		05	08.5	8	SF		3	C		19		
PEKG	06	0630	0638	0650	S11	W33		05	03.8	20	1N			C	0638	210	2.6	E
LEAR	07	0751	0752	0756	S11	E85	4652	05	13.7	5	SN	C 1.4	3	C		16		F
ISTA	07	0800		0816	S14	E83		05	13.6	16	SN	C 1.4						AD
LEAR	07	0805	0807	0811	S11	E85	4652	05	13.7	6	SN	C 1.4	3	C		1.		F
RAMY	07	1439	1445	1457	S14	E83	4652	05	13.9	18	SN		3	C		4!		
HOLL	07	1443	1444	1450	S16	E90		05	14.4	7	SF		3	C		21		
HOLL	07	1723	1726	1742D	S16	E80	4652	05	13.8	19D	SN		3	C		15		
PALE	07	1939	1939	1942	S13	E75	4652	05	13.5	3	SF		3	C		14		
GOES	07	1948	2004	2022						34		C 1.3						
LEAR	08	0244	0245	0251	S11	E72	4652	05	13.5	7	SF		3	C		18		F
HOLL	08	1459	1459	1502	S15	E77	4652	05	14.4	3	SF		3	C		12		
HOLL	08	1622	1622	1634	N04	W03	4650	05	08.4	12	SF		3	C		22		
HOLL	08	1923	1923	1928	S15	E66	4652	05	13.8	5	SF		3	C		14		
HOLL	08	2121	2138	2155	N04	W06	4650	05	08.4	34	SN		3	C		46		F
LEAR	09	0534	0535	0543	N06	E70	4653	05	14.5	9	SN		3	C		22		FH
LEAR	09	0554	0558	0610	S14	E59	4652	05	13.7	16	SN		3	C		58		F
RAMY	09	1718	1718	1726	S14	E54	4652	05	13.8	8	SF		3	C		17		F
HOLL	09	1723	1723	1744	S13	E55	4652	05	13.9	21	SF		3	C		35		
RAMY	09	1941	1943	1945D	S12	E50	4652	05	13.6	4D	SB		3	C		38		FE
RAMY	09	1955	1959	2015	N04	E64	4653	05	14.6	20	SN		3	C		50		F
PALE	09	2316E	2316U	2431D	S12	E52	4652	05	13.9	75D	SN		2	C		40		F
RAMY	10	1139	1142	1149	S15	E44	4652	05	13.8	10	SF		3	C		44		
RAMY	10	1439	1440	1445	S12	E42	4652	05	13.8	6	SF		3	C		23		
RAMY	10	1556	1602	1635	S12	E40	4652	05	13.7	39	SN		3	C		121		F
PALE	11	0053	0054	0104	S17	E35	4652	05	13.7	11	SF		3	C		29		H
GOES	11	0548	0604	0616						28		C 1.3						
PALE	12	0025	0028	0042	S13	E26	4652	05	14.0	17	SF		3	C		89		
PALE	12	0045	0046	0058	S13	E25	4652	05	13.9	13	SF		2	C		43		
HOLL	12	0048	0049	0056	S14	E23	4652	05	13.8	8	SN		3	C		24		
LEAR	12	0651	0657	0713D	S09	E23	4652	05	14.0	22D	SF		3	C		117		F
CATA	12	0652	0655	0728	S09	E22		05	13.9	36	SB		2	C	0655	112	1.2	
PURP	12	0652	0657U	0719	S11	E23		05	14.0	27	1N			C	0657	235	2.7	
KANZ	12	0633	0653	0709D	S11	E22		05	13.9	16D	SN		2					EFG
HOLL	12	1815	1820	1821	S09	E15	4652	05	13.9	6	SF		3	C		23		F
PALE	12	1816	1818	1821	S10	E15	4652	05	13.9	5	SF		3	C		30		F
HOLL	12	1910	1916	1923	S11	E16	4652	05	14.0	13	SF		3	C		27		
HOLL	12	2228	2232	2242	S09	E12	4652	05	13.8	14	SN		3	C		49		
LEAR	13	0119	0119	0127	S14	E11	4652	05	13.9	8	SF		3	C		36		
LEAR	13	0444	0444	0455	S11	E02	4652	05	13.3	11	SF		3	C		44		
LEAR	13	0459	0501	0505	S11	E02	4652	05	13.3	6	SF		3	C		21		
LEAR	13	0518	0518	0525	S11	E09	4652	05	13.9	7	SN		3	C		46		ZF
LEAR	13	0803	0810	0853	S13	E05	4652	05	13.7	50	SF		3	C		56		ZF
YUNN	13	0806	0816	0831	S12	E06		05	13.8	25	1N			C		236	2.5	
GOES	13	0904	0936	0948						44		M 1.0						

H - ALPHA S O L A R F L A R E S

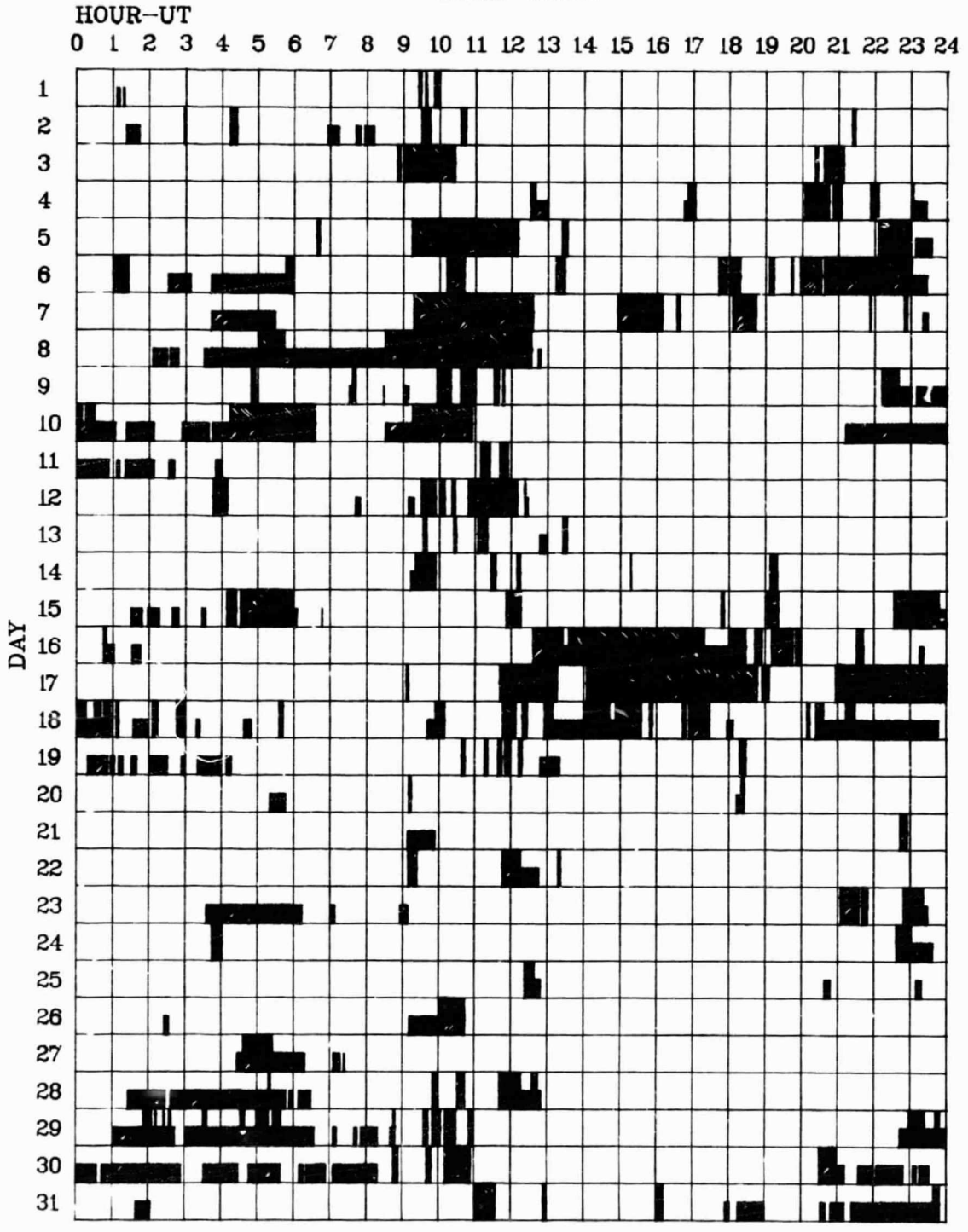
MAY 1985

Sta	Day	Start (UT)	Max (UT)	End (UT)	Lat	CMD	NOAA/ USAF Region	CMP Mo	CMP Day	Dur (Min)	Imp Opt	Imp Xray	Obs See	Obs Type	Area Measurement Time (UT)	Area Measurement Apparent (10^{-6} Disk)	Area Measurement Corr (Sq Deg)	Remarks
WEND	13	0916	0933	1043	S13	E07		05	13.9	87	1N			C	0933	344	3.6	FZ
HOLL	13	1353	1355	1404	S15	E03	4652	05	13.8	11	SF		3	C		27		F
PALE	13	1819	1822	1854	S10	E02	4652	05	13.9	35	SN		3	C		122		F
HOLL	13	1820	1828	1931	S15	W02	4652	05	13.6	71	SN	C 2.1	3	C		144		F
HOLL	13	2049	2059	2110	S11	E01	4652	05	13.9	21	SF		3	C		22		
PALE	13	2052	2055	2112	S13	W00	4652	05	13.9	20	SF		3	C		28		F
HOLL	14	0009	0014	0026D	S14	W04	4652	05	13.7	17D	SN		3	C		117		K
HOLL	14	0009	0026U	0026D	S14	W04	4652	05	13.7	17D	SB	C 2.0	3	C		190		K
LEAR	14	0011	0026	0207	S14	W03	4652	05	13.8	116	SF	C 2.0	3	C		137		FHK
LEAR	14	0011	0126	0207	S14	W03	4652	05	13.8	116	SF		3	C		66		K
LEAR	14	0353	0353	0359	S14	W04	4652	05	13.8	6	SF		3	C		24		F
LEAR	14	0403	0403	0425	S14	W05	4652	05	13.8	22	SF		3	C		24		F
HOLL	14	1356	1402	1404	S13	W10	4652	05	13.8	8	SF		3	C		44		
HOLL	14	1410	1430	1526	S12	W10	4652	05	13.8	76	SF		3	C		133		
HOLL	14	1717	1717	1729	S10	W11	4652	05	13.9	12	SF		3	C		21		
KANZ	15	1144	1144	1151D	S12	W21		05	13.9	7D	SN		2					
RAMY	15	1753E		1808	S13	W24	4652	05	13.9	15D	SF		3	C				F
PALE	16	0150	0152	0205	S11	W29	4652	05	13.9	15	SB		3	C		73		F
LEAR	16	0630	0637	0707	S11	W32	4652	05	13.9	37	1N	C 1.9	3	C		222		UF
BUCA	16	0630	0637U	0715	S09	W30		05	14.0	45	SN	C 1.9		C	0637	150	1.7	E
PURP	16	0631E	0642U	0639	S11	W32		05	13.9	28D	1N			P	0642	187	2.3	
YUNN	16	0635E	0640	0655	S10	W31		05	13.9	20D	1B			P		346	4.2	
CATA	16	0637E	0637	0650D	S12	W31		05	13.9	13D	1B		2	P	0637	253	3.1	
CATA	16	0925	0930	0930D	N01	E90		05	23.1	5D	1N		2	P	0930	112		A
GOES	17	1850	1858	1904						14		C 1.0						
HOLL	17	2016	2017	2037	N05	E70	4656	05	23.1	21	SF		3	C		20		
LEAR	18	0403	0404	0423	S11	W57	4652	05	13.9	20	SF		3	C		60		F
RAMY	18	1229	1230	1242	N09	E61	4656	05	23.1	13	SF		3	C		37		F
GOES	19	1711	1737	1749						38		C 1.7						
HOLL	19	2052	2054	2059	N05	E46	4656	05	23.3	7	SN	C 3.5	3	C		52		
RAMY	20	1452	1454	1500	N07	E38	4656	05	23.5	8	SN		3	C		64		
HOLL	20	1452	1454	1501	N06	E37	4656	05	23.4	9	SF		3	C		70		H
LEAR	21	0411	0417	0450	N06	E24	4656	05	23.0	39	1N	C 1.9	3	C		276		F
PURP	21	0412	0426U	0442	N06	E26		05	23.1	30	1N			C	0426	350	4.1	
PEKG	21	0413	0417	0444	N05	E26		05	23.1	31	1N	C 1.9		C	0417	252	2.9	EF
PEKG	21	0835	0845	0848	N08	E27		05	23.4	13	SF			C	0845	42	.5	D
LEAR	21	0836	0837	0848	N06	E27	4656	05	23.4	12	SF		3	C		21		F
PEKG	21	0917	0920	0925	N07	E27		05	23.4	8	SF			C	0920	84	1.0	E
CATA	21	0958	0958	1010	N07	E26		05	23.4	12	SN		2	C	0958	112	1.3	
KANZ	21	1203	1207	1219	N07	E25		05	23.4	16	SF		2					
HOLL	21	1413	1414	1423	N06	E24	4656	05	23.4	10	SF		3	C		26		F
RAMY	21	1413	1414	1428	N08	E25	4656	05	23.5	15	SF		3	C		42		
RAMY	21	1703	1707	1716	N09	E24	4656	05	23.5	13	SF		3	C		57		
PALE	21	1705E	1707U	1716D	N07	E25	4656	05	23.6	11D	SF		2	C		57		
HOLL	21	1707	1708	1716	N06	E23	4656	05	23.4	9	SF		3	C		44		
HOLL	21	1850	1851	1906	N06	E22	4656	05	23.4	16	SB		3	C		111		F
LEAR	22	0119	0121	0130	N07	E19	4655	05	23.5	11	SF		3	C		20		
PEKG	22	0120	0124	0130	N07	E20		05	23.5	10	SN			C	0124	50	.6	D
PURP	22	0549	0550	0558	N07	E16		05	23.4	9	SN			C	0550	74	.8	D
RAMY	22	1708	1710	1723	N08	E04	4656	05	23.0	15	SF		3	C		60		F
HOLL	22	1709	1713	1731	N04	E04	4656	05	23.0	22	SF		3	C		38		
HOLL	22	2237	2238	2258	N09	E01	4656	05	23.0	21	SF		3	C		31		
LEAR	23	0204	0205	0216	N08	E01	4656	05	23.2	12	SF		3	C		23		F
LEAR	23	0220	0223	0249	N08	W00	4656	05	23.1	29	SF		3	C		84		F
LEAR	23	0635E		0650D	N07	W05	4656	05	22.9	15D	SF		3	C		140		F
LEAR	24	0720	0722	0738	N07	W17	4656	05	23.0	18	SF		3	C		24		F
KANZ	24	0723	0723	0737	N10	W16		05	23.1	14	SF		2					
RAMY	24	1126	1131	1142	N03	W20	4656	05	23.0	16	SF	C 1.5	3	C		28		
RAMY	24	1316	1318	1328	S09	W44	4655	05	21.2	12	SF		3	C		42		F
KANZ	24	1318	1318	1326	S08	W43		05	21.3	8	SF		2					EF
HOLL	25	1929	1933	1955	N10	W39	4656	05	22.9	26	SF		3	C		42		F

INTERVALS OF NO FLARE PATROL OBSERVATION

FOR PRECEDING SOLAR FLARE TABLE

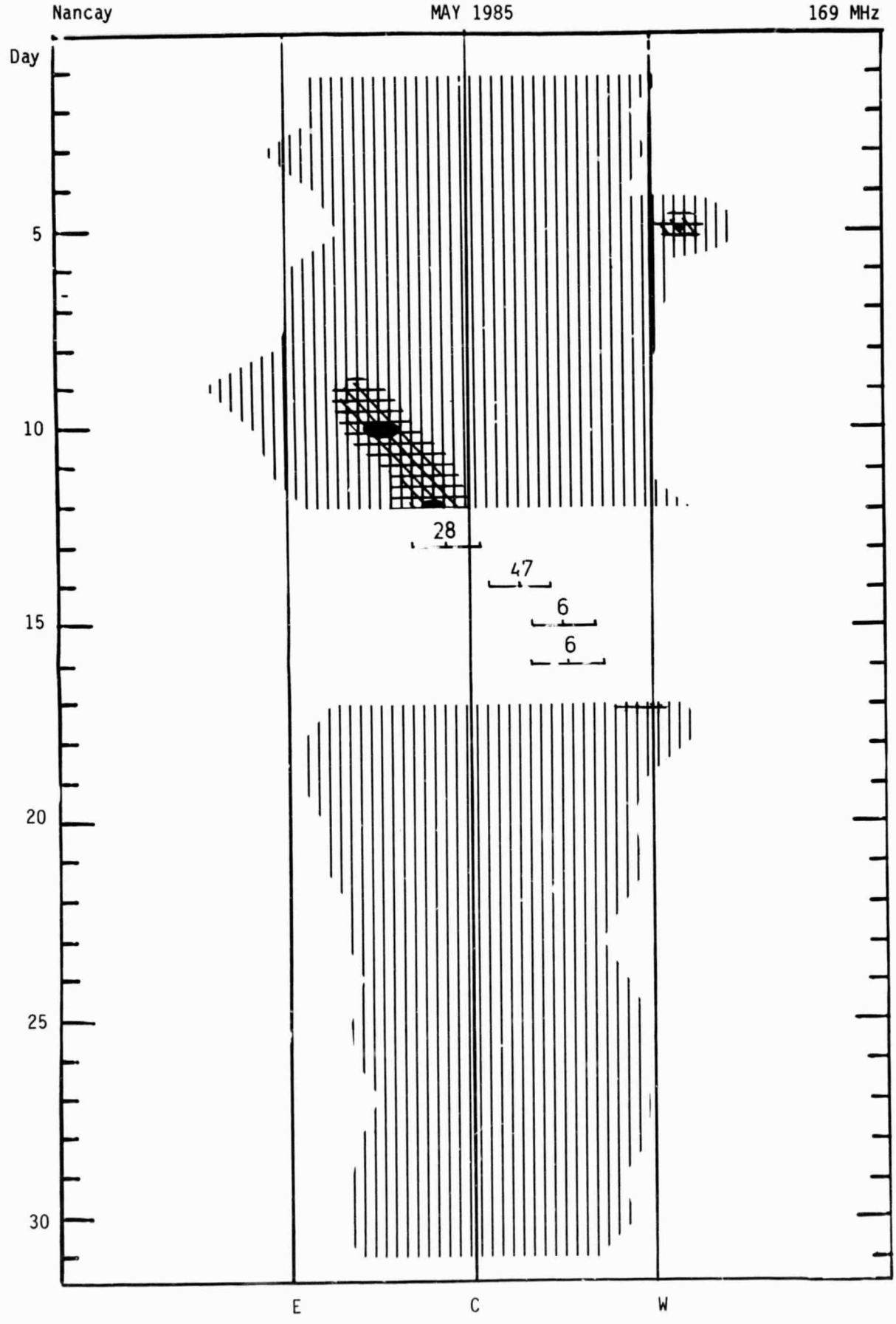
MAY 1985



Times of no flare patrol, shown here as shaded areas, combine reports from the observatories listed below. Portions of a panel completely shaded mark dates and times of no patrol of any kind, that is, of neither visual nor cinematographic; portions of a panel with only the bottom half shaded mark times of strictly visual patrol.

Bucharest	Holloman	Kanzelhoehe	Palehua	Ramey
Catania	Istanbul	Learmonth	Peking	Wendelstein
		Manila	Purple Mt.	Yunnan

SOLAR INTERFEROMETRIC OBSERVATIONS



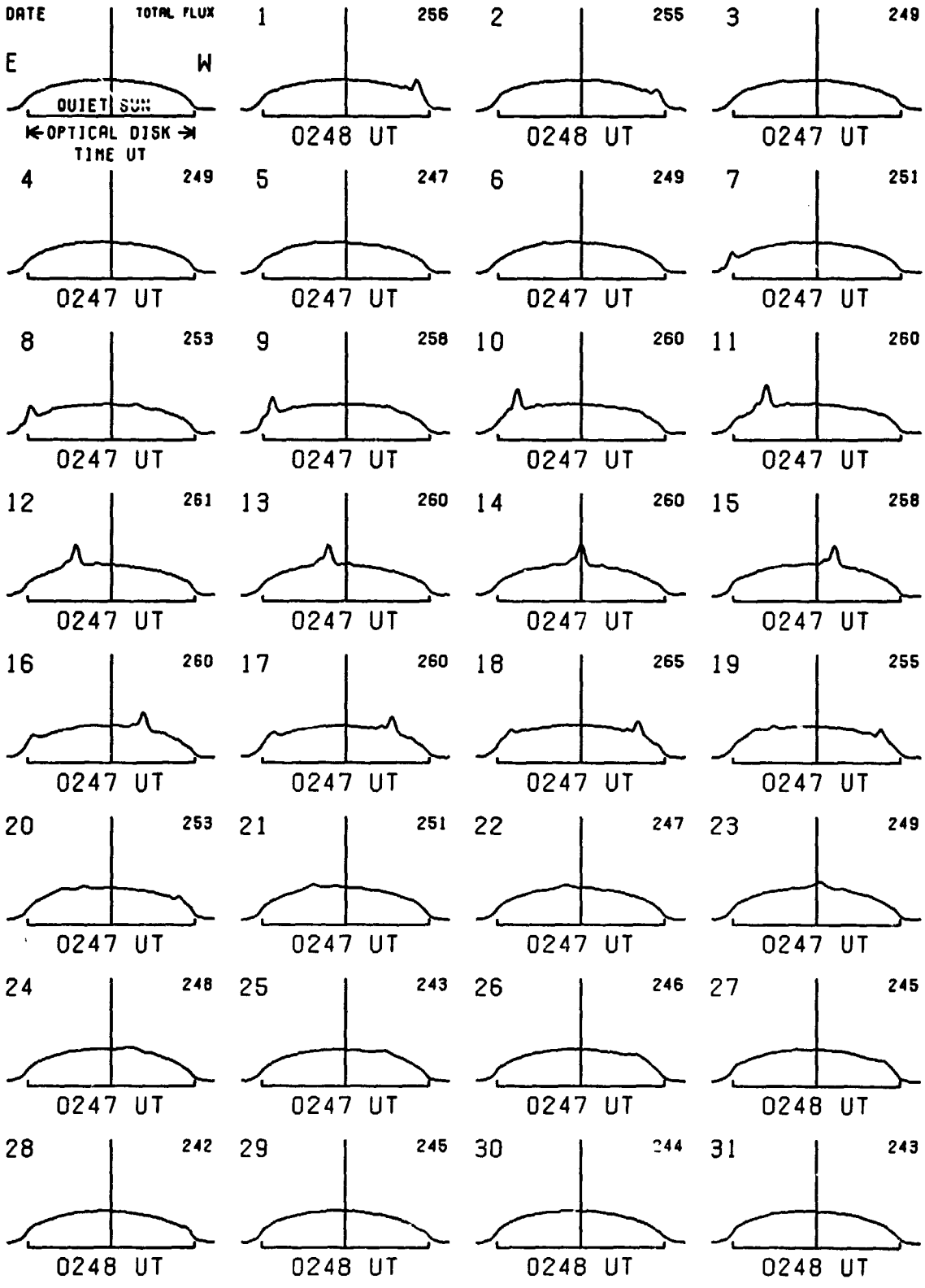
16
May 85

EAST-WEST SOLAR SCANS

MAY 1985

TOYOKAWA, JAPAN

3 CM
FAN BEAM WITH 1.1 MINUTES OF ARC

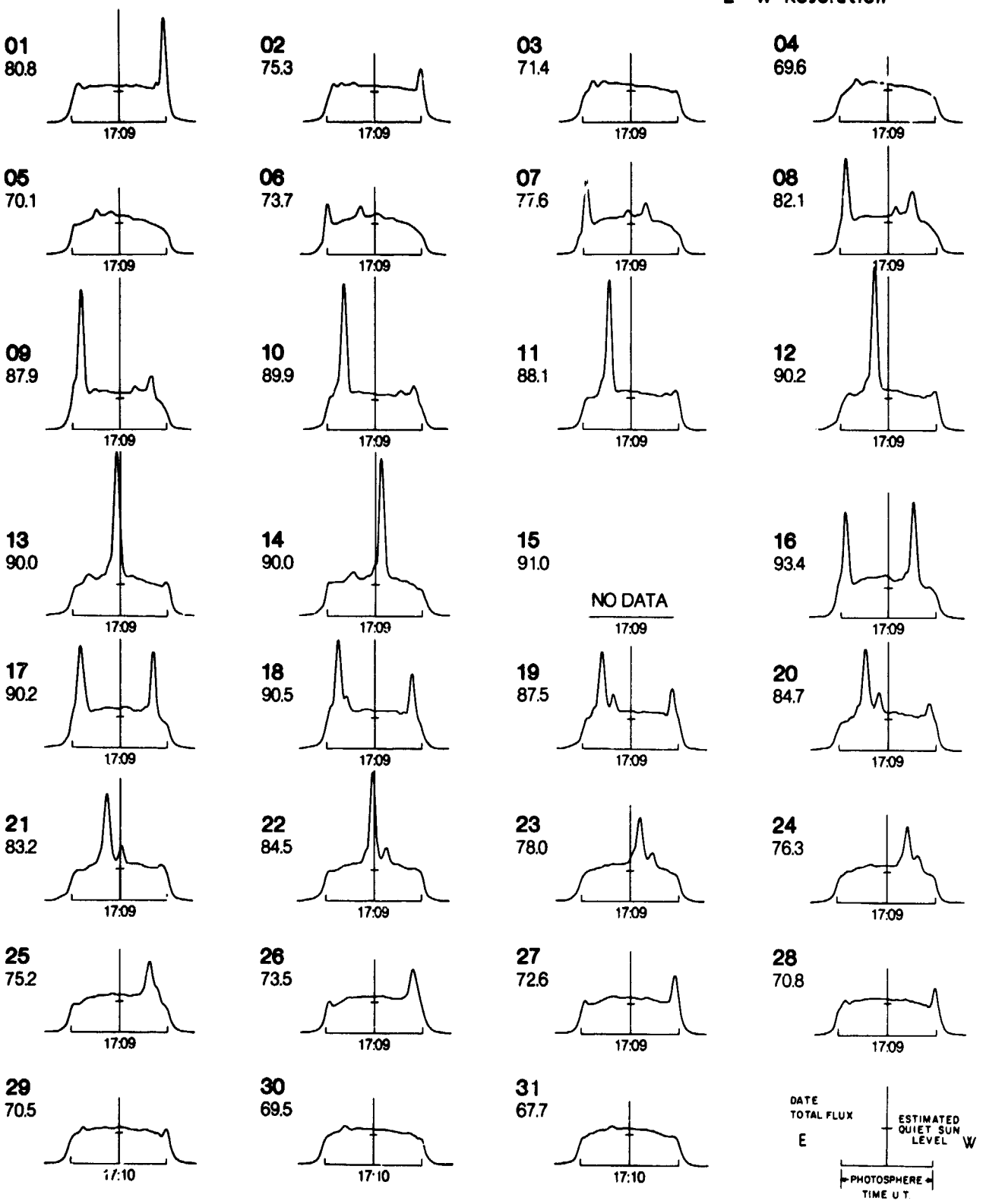


EAST-WEST SOLAR SCANS

MAY 1985

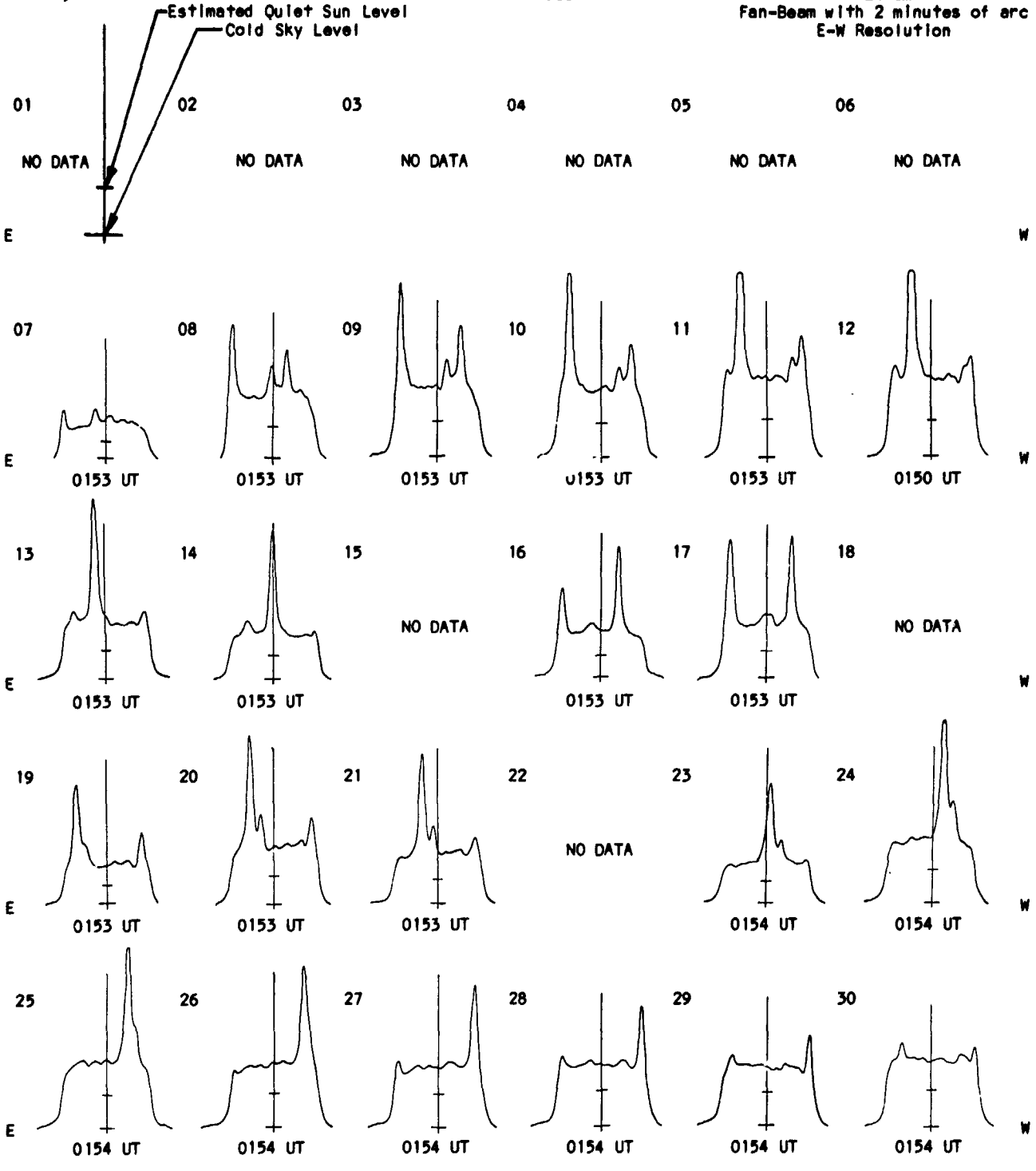
ALGONQUIN RADIO OBSERVATORY
CANADA

10·7 cm
Fan Beam with 1·5 minutes of arc
E-W Resolution



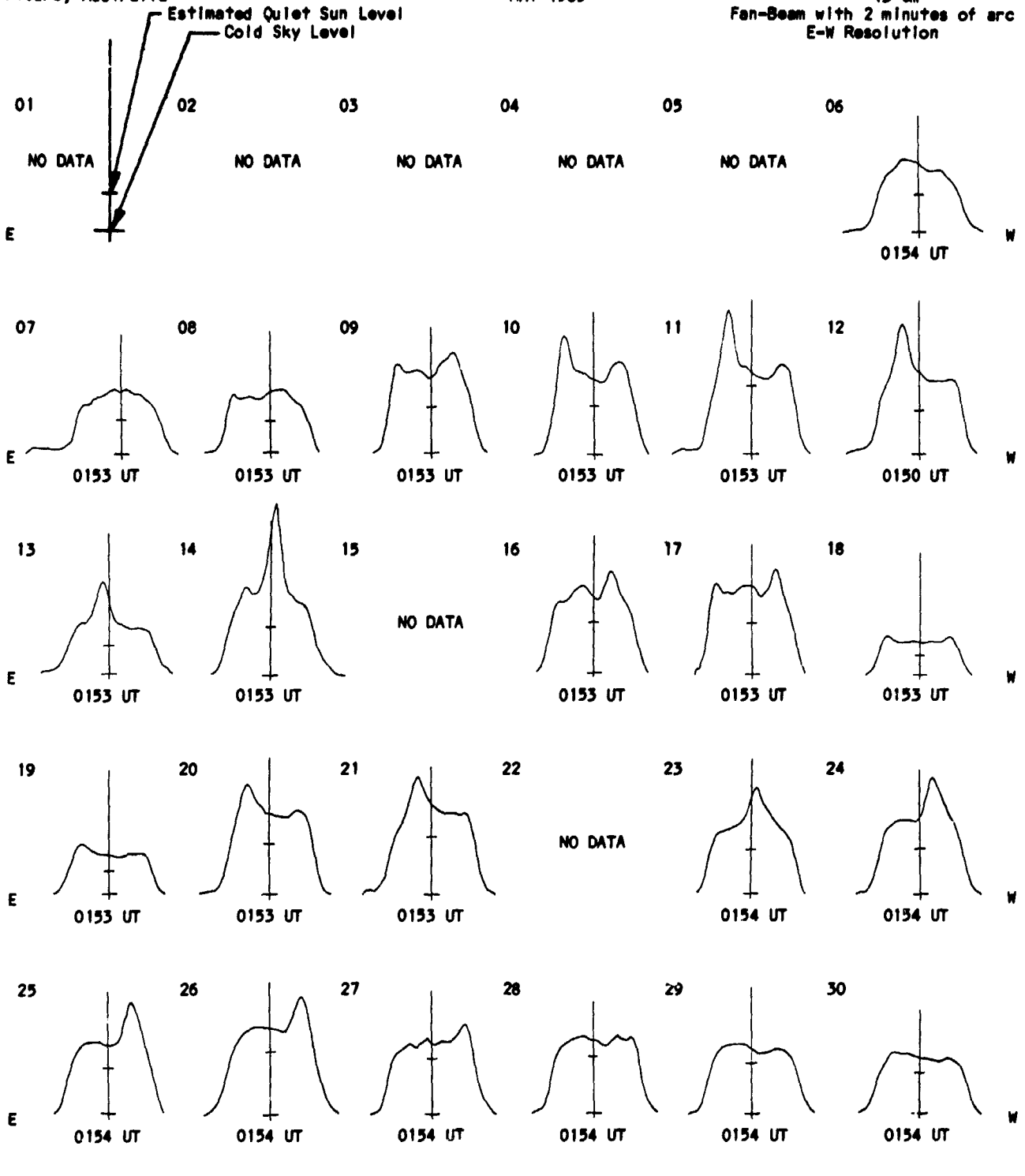
EAST-WEST SOLAR SCANS

Fleurs, Australia — MAY 1985 — 21 cm
Fan-Beam with 2 minutes of arc E-W Resolution



EAST-WEST SOLAR SCANS

Fleurs, Australia — MAY 1985 — 43 cm
Fan-Beam with 2 minutes of arc
E-W Resolution



SOLAR RADIO EMISSION
SELECTED FIXED FREQUENCY EVENTS

MAY 1985

Day	Freq	Sta	Type		Start (UT)	Time of Maximum (UT)	Duration (Min)	Flux Density Peak (10^{-22} W/m^2 Hz)	Flux Density Mean (10^{-22} W/m^2 Hz)	Int	Remarks
01	2695	ATHN	8	S	0700.0	0701.0	2.0	2.0			QL=6 ST=3 TYP=3
	8800	ATHN	4	S/F	0700.0	0701.0	3.0	23.0			QL=6 ST=3 TYP=3
	2695	LEAR	4	S/F	0700.5	0701.1	2.1	7.0			QL=6 ST=2 TYP=3
	8800	LEAR	8	S	0701.0	0701.1	.3	19.0			QL=6 ST=2 TYP=3
	2800	OTTA	1	S	1249.0	1251.0	4.0	1.8	0.9		
	2800	OTTA	20	GRF	1325.0	1330.0	25.0	1.2	0.6		
	2800	OTTA	27A	RF	1428.0		200.0	1.8	1.7		
	2800	OTTA	24	R	1428.0	1430.0	2.0	1.8	0.9		
	3400	BERN	4	S/F	1428.0	1430.0	5.0	80.0			
	8800	SGMR	47	GB	1429.6	1430.6	2.5	65.0			QL=6 ST=2 TYP=5
	2800	OTTA	40	F	1429.8	1431.1	3.0	45.0			
	2800	OTTA	24P	R	1430.0		175.0	1.8			
	8800	ATHN	47	GB	1430.3	1431.5	4.7	67.0			QL=6 ST=2 TYP=5
	2695	SGMR	8	S	1430.5	1431.6	1.5	35.0			QL=6 ST=2 TYP=3
	2695	ATHN	4	S/F	1430.6	1431.5	3.9	24.0			QL=1 ST=3 TYP=3
	2800	OTTA	21	GRF	1447.0	1455.0	55.0	2.6	1.3		
	2800	OTTA	1	S	1447.5	1448.5	3.0	1.8	1.0		
	2800	OTTA	26	FAL	1725.0	1748.0	23.0	-1.8	-0.9		
	2800	OTTA	1	S	1917.5	1918.3	1.5	3.6	1.2		
	2695	PENT	240	R	2315.0	2340.0	25.0	2.2	1.1		
02	2695	PENT	20	GRF	0015.0	0025.0	60.0	3.0	1.3		
	8800	ATHN	47	GB	0743.0	0745.0	5.0	480.0			QL=6 ST=2 TYP=5
	2695	ATHN	47	GB	0743.0	0745.0	6.0	450.0			QL=6 ST=2 TYP=5
	8800	LEAR	49	GB	0743.1	0744.8	13.2	680.0			QL=6 ST=2 TYP=6
	8400	BERN	4	S/F	0743.3	0744.8	4.0	950.0			
	2695	LEAR	47	GB	0743.3	0745.1	13.5	480.0			QL=6 ST=2 TYP=5
	2695	LEAR	4	S/F	0755.6	0756.3	9.5	26.0			QL=6 ST=2 TYP=3
	2695	LEAR	8	S	0813.6	0814.0	.5	13.0			QL=6 ST=2 TYP=3
	2695	LEAR	8	S	0851.6	0851.8	.4	16.0			QL=6 ST=2 TYP=3
	2800	OTTA	20	GRF	1730.0	1750.0	135.0	1.8	0.9		
03	2695	PENT	20	GRF	0015.0	0040.0	40.0	3.4	2.2		
06	2800	OTTA	20	GRF	1345.0	1410.0	95.0	1.4	0.7		
07	2695	ATHN	8	S	0559.1	0559.3	.5	16.0			QL=6 ST=2 TYP=3
	8800	ATHN	8	S	0559.1	0559.3	.5	6.0			QL=6 ST=2 TYP=3
	2695	LEAR	8	S	0559.1	0559.5	.5	13.0			QL=6 ST=2 TYP=3
	2695	ATHN	20	GRF	0921.5	0922.0	2.0	9.0			QL=6 ST=2 TYP=2
	8800	ATHN	20	GRF	0921.6	0922.0	.9	6.0			QL=6 ST=2 TYP=2
	2800	OTTA	240	R	1948.0	1958.0	10.0	2.2	1.1		
08	2800	OTTA	8	S	1742.3	1742.5	.5	0.8	0.4		
09	2800	OTTA	20	GRF	1525.0	1630.0	95.0	1.8	0.9		
	2800	OTTA	20	GRF	1735.0	1743.0	20.0	1.4	0.7		
	2800	OTTA	21	GRF	1925.0	2000.0	90.0	2.0	1.5		
	2800	OTTA	1	S	1953.2	1954.5	2.0	1.8	0.9		
10	2695	LEAR	20	GRF	0232.0	0241.0	12.5	7.0			QL=6 ST=2 TYP=2
	8800	LEAR	20	GRF	0238.5	0240.5	7.0	3.0			QL=6 ST=2 TYP=2
	2800	OTTA	20	GRF	1555.0	1602.0	12.0	1.8	0.8		
	2800	OTTA	20	GRF	2125.0	2200.0	60.0	1.6	0.7		
12	2800	OTTA	21	GRF	1815.0	1827.0	135.0	6.0	1.5		
	2800	OTTA	1	S	1823.0	1825.0	4.0	3.8	1.9		
13	8400	BERN	21	GRF	0900.0	0930.9	120.0D	50.0			
	2800	OTTA	20	GRF	1430.0	1525.0	100.0	1.8	0.9		
	2800	OTTA	8	S	1642.0	1642.0	.1	3.0			
	2800	OTTA	23	GRF	1818.0	1826.0	70.0	20.0	7.2		
	2800	OTTA	3	S	1821.0	1822.3	3.0	12.0	3.6		
	2695	SGMR	8	S	1821.6	1822.3		27.0			QL=6 ST=1 TYP=3
	8800	PALE	8	S	1821.8	1822.3	.7	27.0			QL=6 ST=3 TYP=3
	2695	PALE	8	S	1822.0	1822.3	.8	25.0			QL=6 ST=3 TYP=3
	2800	OTTA	20	GRF	2040.0	2055.0	40.0	1.8	0.9		
	2800	OTTA	20	GRF	2135.0	2140.0	20.0	1.2	0.8		
	2800	OTTA	2	S/F	2205.8	2205.9	1.0	5.0	1.6		
	2800	OTTA	20	GRF	2215.0	2220.0	25.0	1.2	0.6		
	2695	PENT	20	GRF	2248.0	2300.0	12.0	1.2	0.6		

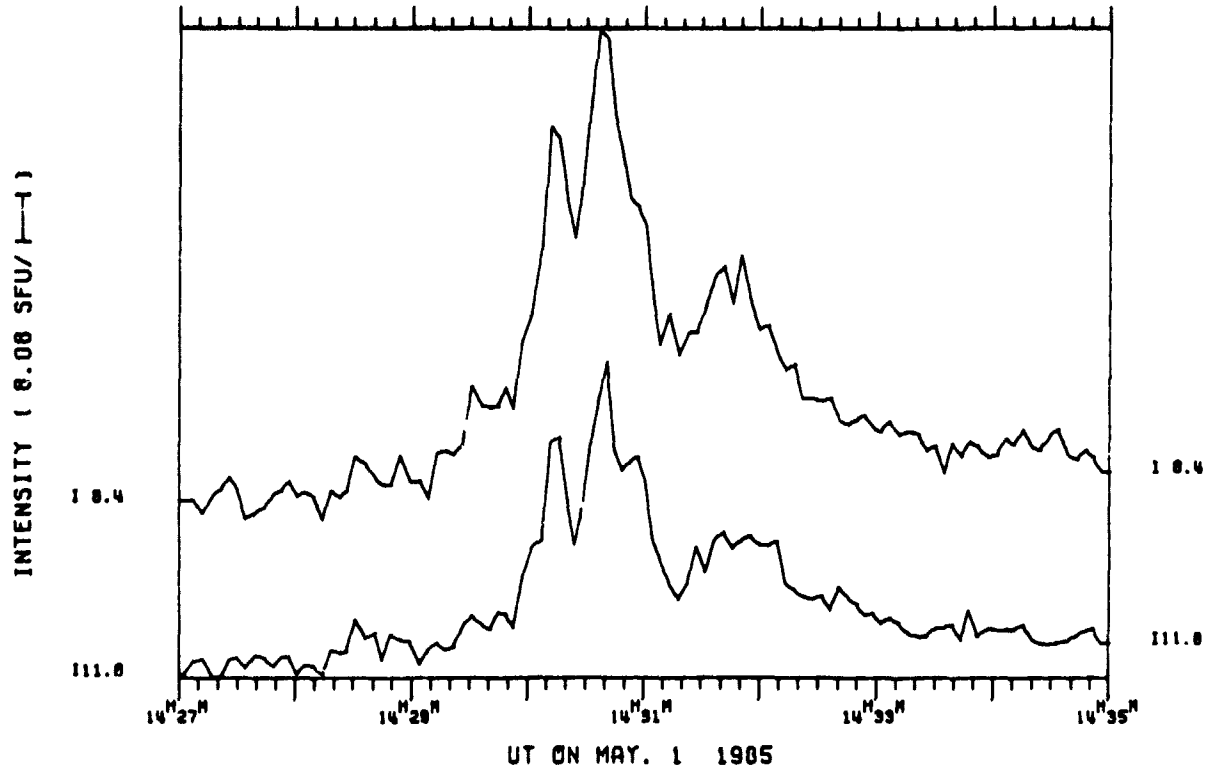
SOLAR RADIO EMISSION
SELECTED FIXED FREQUENCY EVENTS

MAY 1985

Day	Freq	Sta	Type		Start (UT)	Time of Maximum (UT)	Duration (Min)	Flux Density Peak (10^{-22} W/m^2 Hz)	Flux Density Mean (10^{-22} W/m^2 Hz)	Int	Remarks
14	2695	PENT	23	GRF	0005.0	0025.0	90.0D	4.8			
	2695	PENT	1	S	0011.7	0011.9	1.0	1.6	0.8		
	2695	PENT	1	S	0025.0	0026.0	2.0	3.0	1.5		
	2800	OTTA	20	GRF	1425.0	1505.0	95.0	1.6	0.8		
	2800	OTTA	20	GRF	1615.0	1720.0	125.0	2.2	1.1		
	2800	OTTA	20	GRF	1905.0	1910.0	35.0	1.4	0.7		
	2695	PENT	1	S	2324.0	2325.0	3.0	1.2	0.8		
15	2695	PENT	8	S	0017.5	0017.7	.3	2.0			
	2800	OTTA	20	GRF	1415.0	1420.0	55.0D	2.2			
	2800	OTTA	20	GRF	1600.0	1630.0	80.0	1.6	0.8		
	2800	OTTA	22	GRF	1730.0	1742.0	65.0	8.6	3.0		
	2800	OTTA	20	GRF	1922.0	1924.0	15.0	3.0	1.3		
	2800	OTTA	240	AR	2100.0	2130.0	30.0	1.6	0.8		
	2800	OTTA	1	S	2125.5	2126.1	2.0	2.2	0.6		
	2695	PENT	40	F	2254.0	2255.5	3.0	2.0			
16	2800	OTTA	20	GRF	1540.0	1550.0	25.0	2.2	1.0		
	2800	OTTA	20	GRF	1630.0	1633.0	15.0	1.6	0.8		
	2800	OTTA	20	GRF	1736.0	1759.0	35.0	3.6	1.6		
	2800	OTTA	8	S	2029.5	2029.6	.8	88.0	22.0		
	2695	PALE	47	GB	2029.6	2029.8	.5	61.0			QL=6 ST=2 TYP=5
17	2800	OTTA	20	GRF	1225.0	1230.0	55.0	3.0	1.7		
	2800	OTTA	20	GRF	1415.0	1420.0	50.0D	3.6			
	2800	OTTA	2	S/F	1851.0	1852.5	6.0	3.0	1.5		
	2800	OTTA	1	S	2235.0	2236.0	4.0	1.0	0.5		
18	2800	OTTA	21	GRF	1450.0	1502.0	65.0	7.2	2.6		
	2800	OTTA	1	S	1455.8	1457.5	3.5	5.4	2.7		
	2800	OTTA	23	GRF	1755.0	1845.0	80.0	3.2	1.5		
	2800	OTTA	20	GRF	1825.0	1829.0	15.0	6.6	2.2		
	2800	OTTA	20	GRF	1954.0	1957.0	18.0	1.6	1.0		
	2800	OTTA	20	GRF	2115.0	2125.0	35.0	2.4	1.6		
19	2800	OTTA	20	GRF	1135.0	1138.0	30.0	4.0	1.3		
	2800	OTTA	20	GRF	1320.0	1435.0	100.0	2.0	1.0		
	2800	OTTA	21	GRF	1520.0	1545.0	100.0	4.0	2.0		
	2800	OTTA	22	GRF	1527.5	1529.0	15.0	12.2	4.4		
	2695	SGMR	8	S	1528.6	1529.5	1.0	11.0			QL=1 ST=2 TYP=3
	2800	OTTA	23	GRF	1710.0	1735.0	75.0	8.0	2.7		
	2800	OTTA	2	S/F	1717.0	1718.8	5.0	6.2	3.0		
	2800	OTTA	4	S/F	1731.0	1733.0	5.0	16.0	5.6		
	2695	PALE	8	S	1732.6	1732.8	.7	26.0			QL=6 ST=2 TYP=3
	2800	OTTA	1	S	2052.0	2052.5	2.5	3.4	1.2		
	2695	PENT	20	GRF	2238.0	2244.0	20.0	1.4	0.7		
20	2800	OTTA	23	GRF	1400.0	1415.0	75.0	3.0	1.5		
	2695	PENT	1	S	1403.0	1404.0	4.0	1.6	0.8		
	2800	OTTA	20	GRF	1920.0	1930.0	30.0	3.6	1.2		
21	2695	ATHN	4	S/F	0410.0	0417.0	9.0	13.0			QL=1 ST=3 TYP=3
	2695	PALE	4	S/F	0413.6	0415.3	3.4	22.0			QL=6 ST=2 TYP=3
	2695	LEAR	20	GRF	0416.6E	0417.1	2.4D	41.0			QL=6 ST=2 TYP=2
	2695	ATHN	4	S/F	0953.1	0955.8	2.2	38.0			QL=6 ST=2 TYP=3
	8800	ATHN	47	GB	0953.3	0954.3	2.2	110.0			QL=6 ST=2 TYP=5
	8800	SGMR	47	GB	1224.3	1224.3	.3	350.0			QL=6 ST=3 TYP=5
	2800	OTTA	20	GRF	1610.0	1710.0	110.0	1.6	0.8		
	2800	OTTA	1	S	1849.0	1850.9	5.0	6.8	1.7		
	2800	OTTA	20	GRF	2145.0	2155.0	40.0	1.6	0.8		
22	2800	OTTA	1	S	1244.0	1245.5	4.0	1.8	0.8		
	2800	OTTA	20	GRF	1655.0	1710.0	65.0	4.6	1.6		
	2800	OTTA	22	GRF	2235.0	2238.0	25.0	3.0	1.3		
23	2695	LEAR	8	S	0221.3	0222.1	1.2	18.0			QL=6 ST=2 TYP=3
24	2800	OTTA	20	GRF	1100.0	1110.0	50.0	1.8	0.6		
25	2800	OTTA	23	GRF	1220.0	1235.0	190.0	5.0	2.0		
	2800	OTTA	2	S/F	1229.7	1230.8	2.5	3.8	1.8		
	2800	OTTA	1	S	1238.0	1240.5	4.0	2.0	1.0		
	2800	OTTA	1	S	1309.0	1312.0	6.0	1.8	0.9		
	2800	OTTA	20	GRF	1925.0	1933.0	25.0	2.0	1.0		

INSTITUTE OF APPLIED PHYSICS, UNIVERSITY OF BERN, SWITZERLAND

INTEGRATION TIME= 4000 MS



UT ON MAY. 1 1985

INSTITUTE OF APPLIED PHYSICS, UNIVERSITY OF BERN, SWITZERLAND

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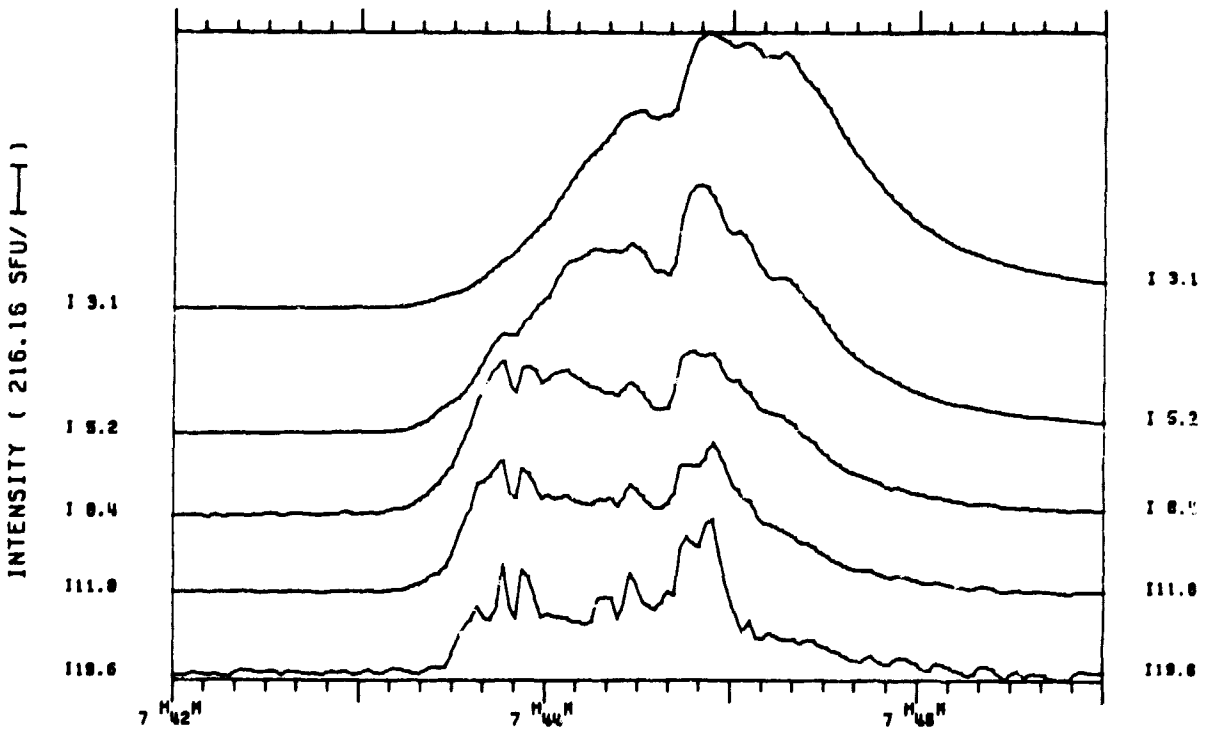


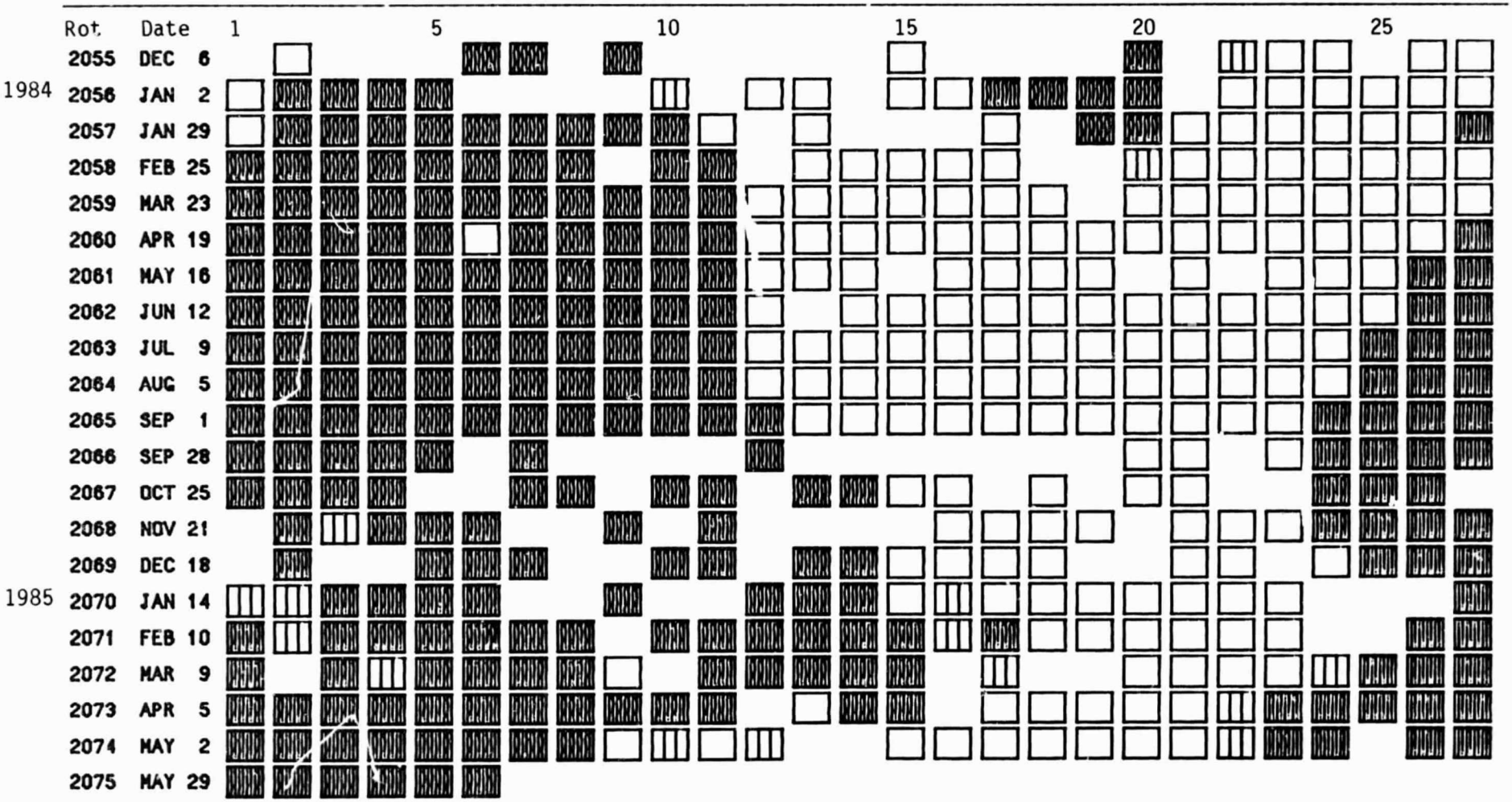
UT ON MAY. 2 1985

STANFORD MEAN SOLAR MAGNETIC FIELD (MICROTESLA)

Day	Jun 84	Jul	Aug	Sep	Oct	Nov	Dec	Jan 85	Feb	Mar	Apr	May
1	24	38	17	-38	-42	-13	-32	5	38	31	2	-5
2	27	44	-2	-20	-63	•	•	14	35	27	-10	-8
3	42	33	-35	-42	•	-64	•	21	32	16	-14	-9
4	•	62	-40	-58	-76	-37	•	38	30	13	-13	-5
5	66	41	-44	-77	•	•	•	•	15	•	-17	-5
6	•	5	-37	-86	•	-22	15	•	•	•	-20	-5
7	65	-28	-50	-89	•	-4	28	37	•	-8	-7	-8
8	53	-41	-82	-95	•	10	44	26	•	-17	-13	-8
9	24	-62	-83	-81	-21	12	30	•	-4	-13	-6	-5
10	-18	-56	-73	-55	•	•	•	6	-5	•	-13	4
11	-37	-66	-84	-27	•	16	39	-10	-1	-4	-29	2
12	-47	-70	-91	-8	•	•	27	-8	-2	-1	-19	8
13	-57	-96	-71	3	•	48	12	-10	-8	-3	-21	1
14	-63	-91	-67	11	•	24	-10	-1	-9	-15	-13	•
15	-61	-102	-13	10	•	•	-12	1	-23	-12	-12	•
16	-75	-93	6	12	•	•	-20	-7	-17	-6	•	11
17	-73	-59	11	21	32	-4	-11	-3	-13	10	3	22
18	-89	-39	21	23	36	-25	•	-25	•	•	-7	33
19	-59	-11	18	49	•	-23	-8	-35	-12	-7	-10	48
20	-66	14	19	52	15	•	•	•	-17	-6	•	39
21	-52	9	21	44	-7	•	•	•	-15	-12	5	27
22	-31	31	26	34	-32	-6	-24	-30	-12	-12	6	25
23	11	7	39	20	-38	1	-35	•	-7	-5	18	0
24	•	30	47	-5	-24	-15	-46	•	-6	•	23	-9
25	37	22	52	-26	-14	-10	•	-9	2	1	18	-21
26	33	26	31	-35	-18	-20	•	-12	-6	•	1	•
27	16	53	25	-26	-15	•	-23	-2	13	•	-12	-18
28	26	43	11	-19	-32	•	-22	32	20	37	-27	-8
29	15	54	-4	-19	•	-45	•	0		24	-32	-8
30	32	36	-13	-30	•	•	-9	19		16	-47	-9
31		31	-36		-71		-3	28		12		-5

Dot symbol indicates no data available for the day.

STANFORD MEAN SOLAR MAGNETIC FIELD



Mean Solar Magnetic Field Polarity: □ = field > 2 microT; ▥ = -2 microT ≤ field ≤ 2 microT

■ = field <-2 microT; No box = no data available

Observations are taken at 2000 UT. Rotation numbers given are the Bartels series, but the dates are not; these dates mark times of occurrence of phenomena on the Sun that affect the Earth during the given Bartels Rotation.

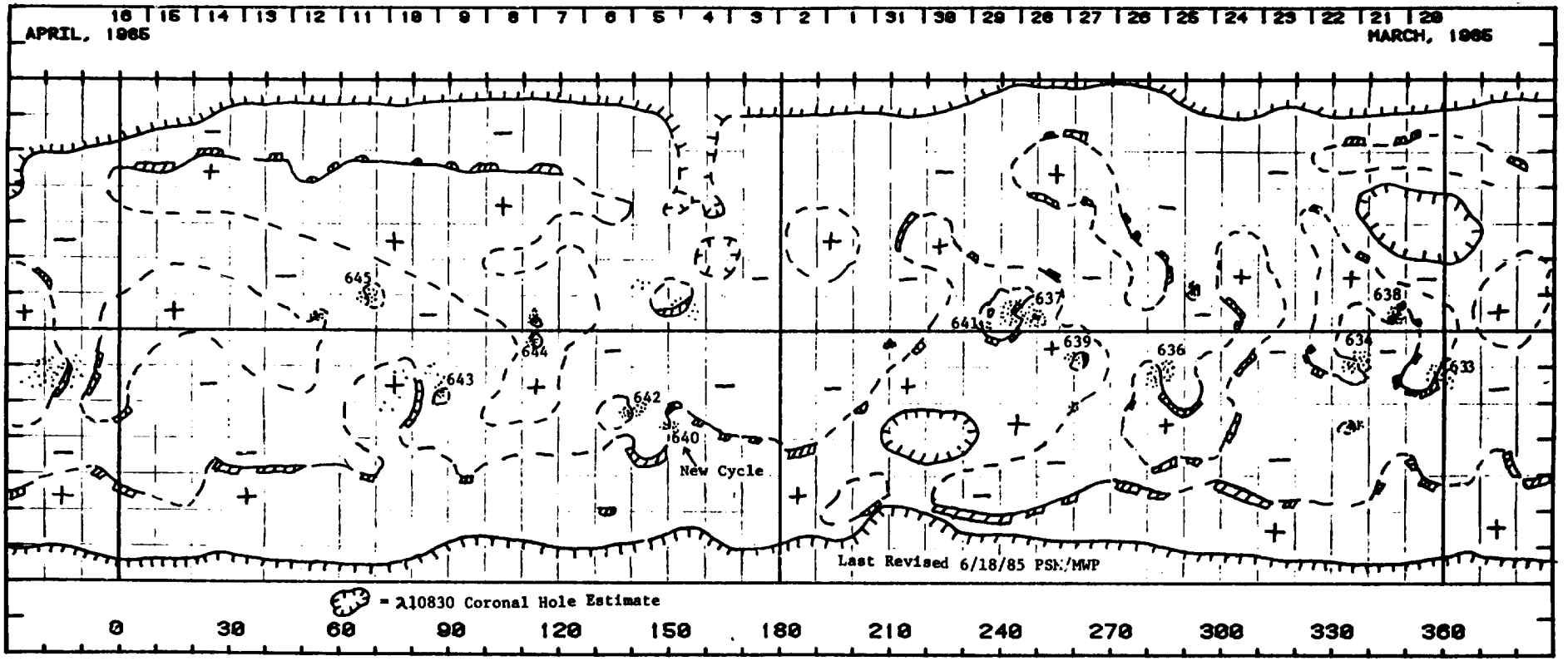
CONTENTS

Prompt Reports DATA FOR APRIL 1985 Number 490 Part I

PRELIMINARY H-ALPHA SOLAR SYNOPTIC CHART

CARRINGTON ROTATION NUMBER 1760
(March 20 to April 16, 1985)

Dates of Observations Below Days of Year: 92 87 82

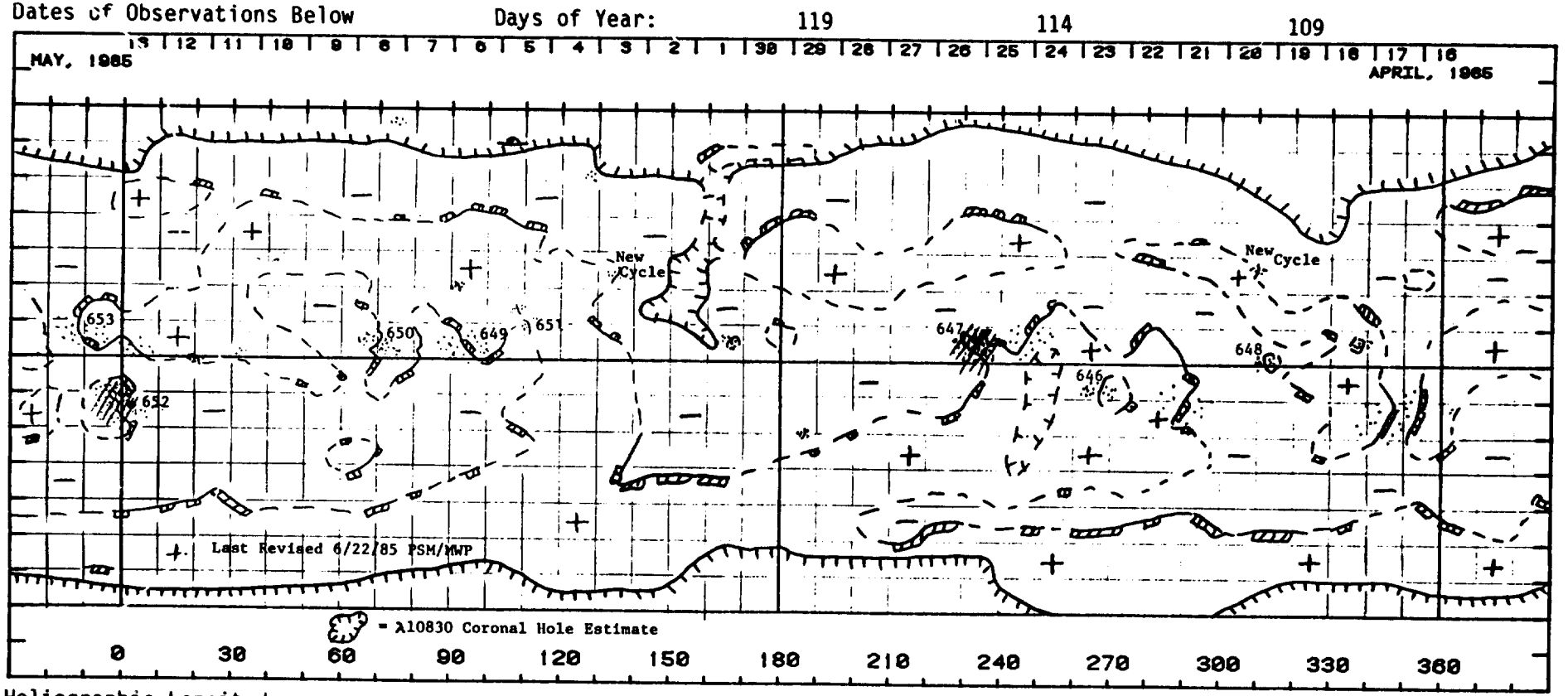


Heliographic Longitude

PRELIMINARY H-ALPHA SOLAR SYNOPTIC CHART

CARRINGTON ROTATION NUMBER 1761

(April 16 to May 13, 1985)



27 Apr 85

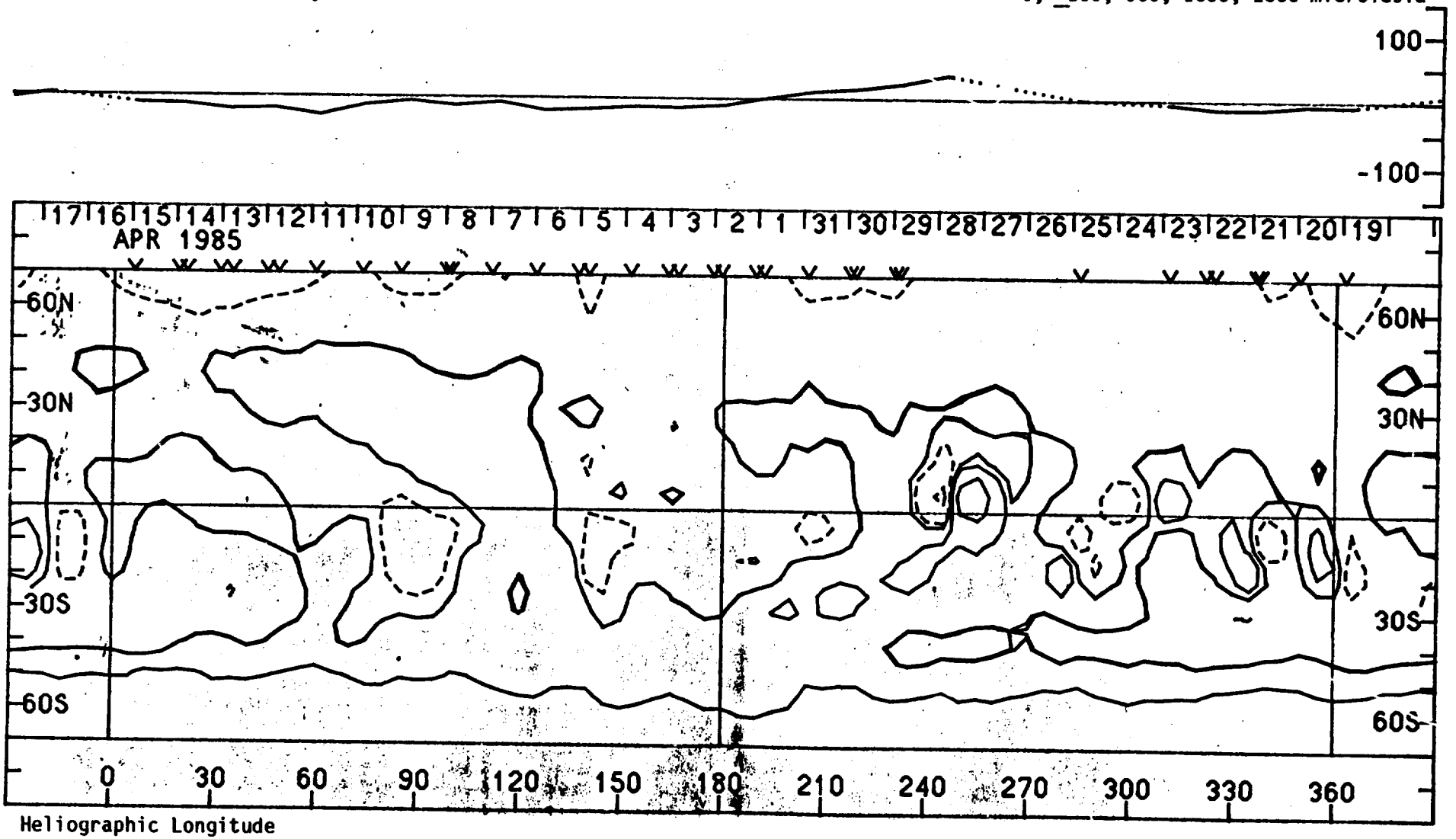
SOLAR MAGNETIC FIELD SYNOPTIC CHART

CARRINGTON ROTATION NUMBER 1760
(March 20 to April 16, 1985)

28 Apr 85

Stanford Solar Observatory

0, ±100, 500, 1000, 2000 microTesla

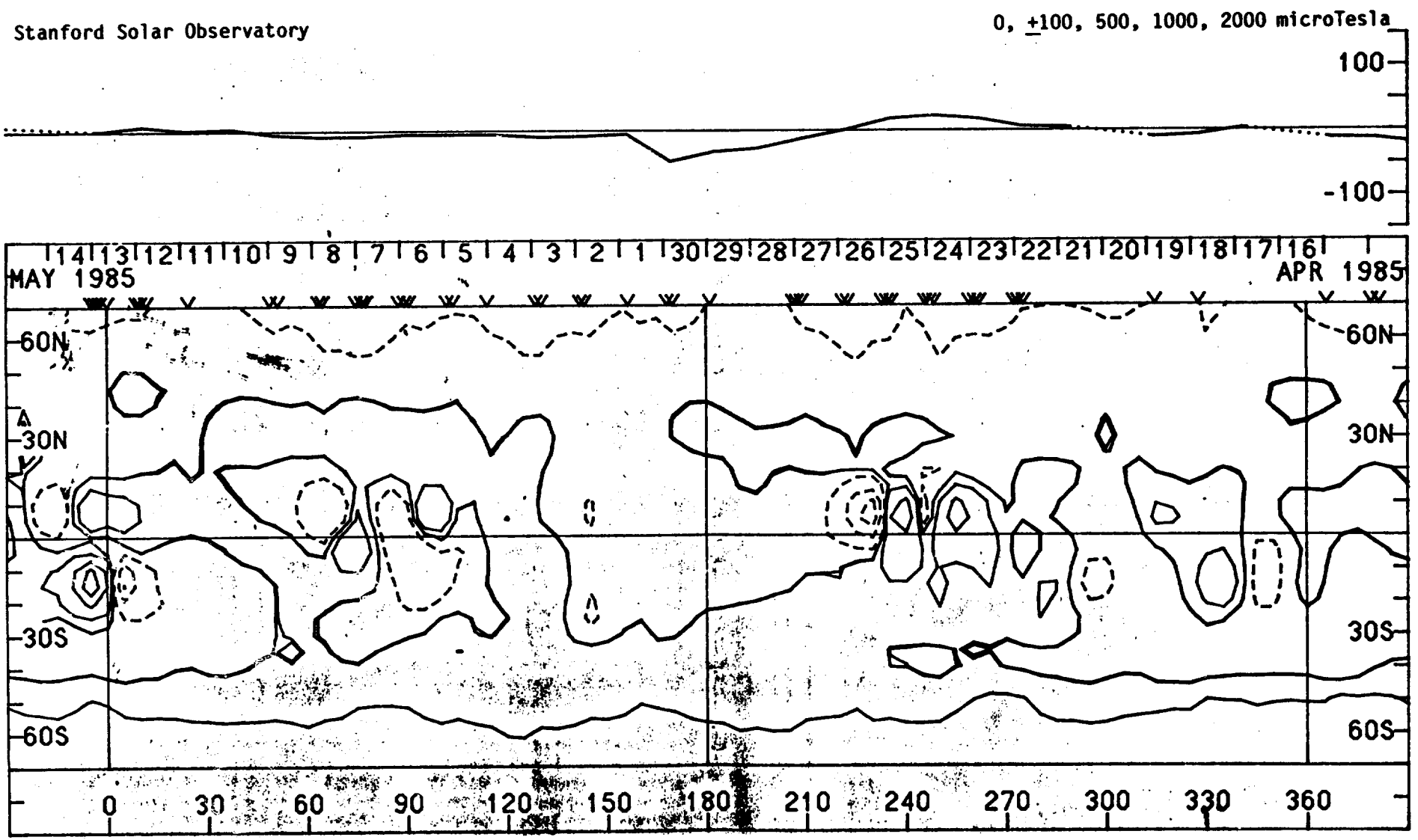


SOLAR MAGNETIC FIELD SYNOPTIC CHART

CARRINGTON ROTATION NUMBER 1761
(April 16 to May 13, 1985)

Stanford Solar Observatory

0, ±100, 500, 1000, 2000 microTesla



Heliographic Longitude

29 Apr 85

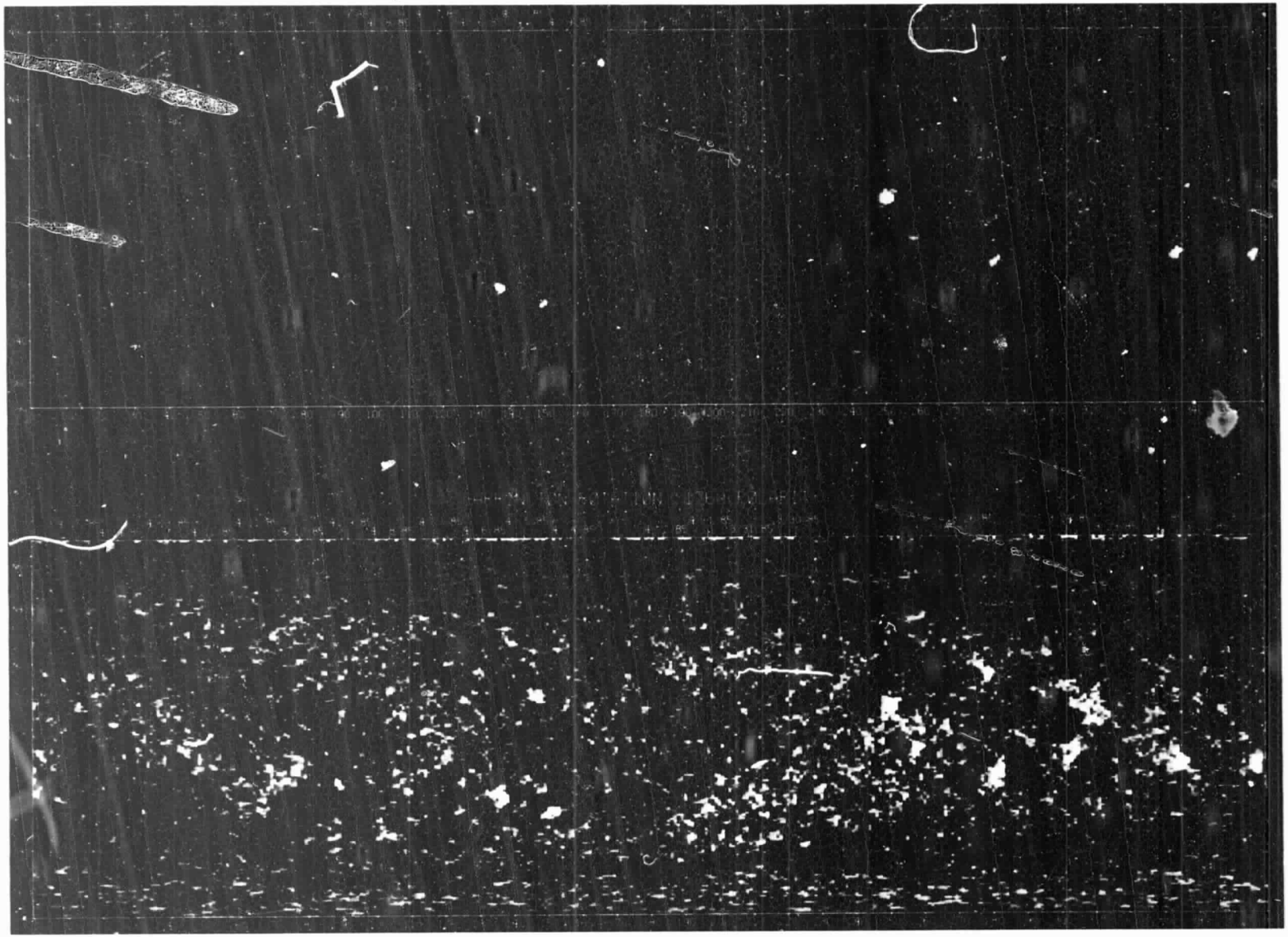
SOLAR MAGNETIC FIELD SYNOPTIC CHART

CARRINGTON ROTATION NUMBER 1760
(March 20 to April 16, 1985)

Kitt Peak National Observatory

Dates of Observations

30
Apr 85



SOLAR MAGNETIC FIELD SYNOPTIC CHART

CARRINGTON ROTATION NUMBER 1761
(April 16 to May 13, 1985)

Kitt Peak National Observatory

Dates of Observations

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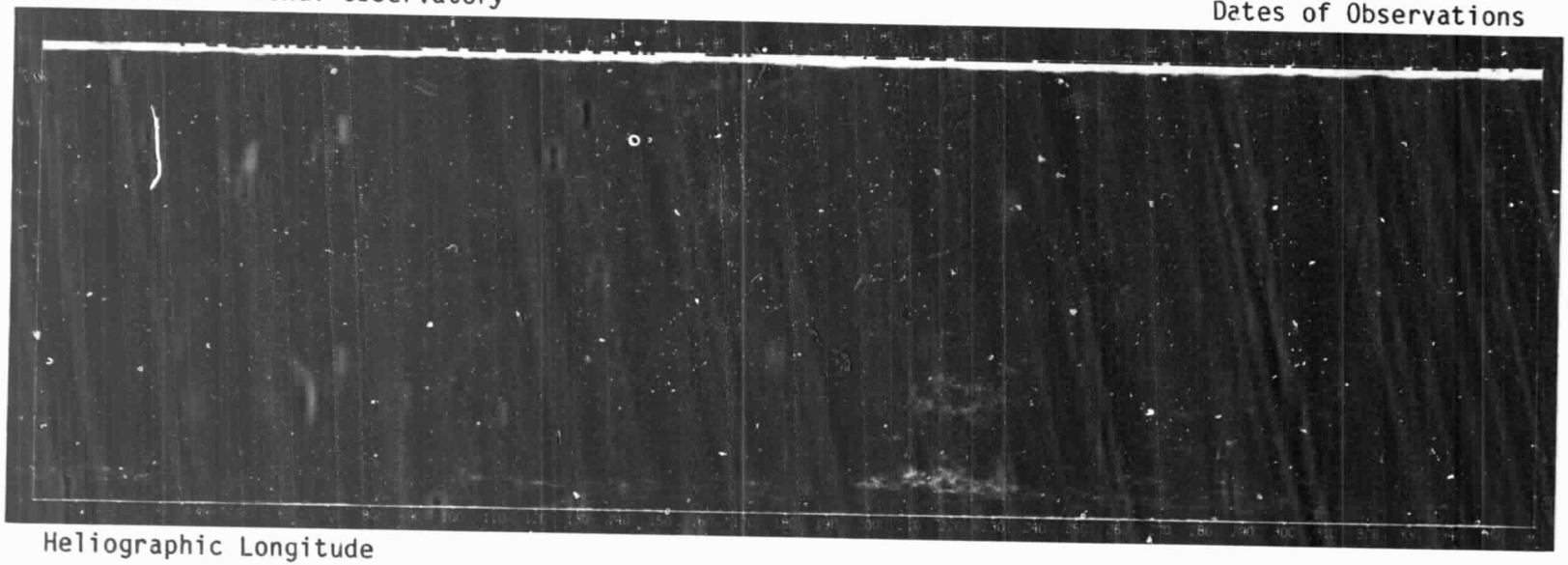
Apr 85

HELIUM 10830 ANGSTROM SYNOPTIC MAP OF THE SOLAR CORONA

CARRINGTON ROTATION NUMBER 1760
(March 20 to April 16, 1985)

Kitt Peak National Observatory

Dates of Observations



Heliographic Longitude

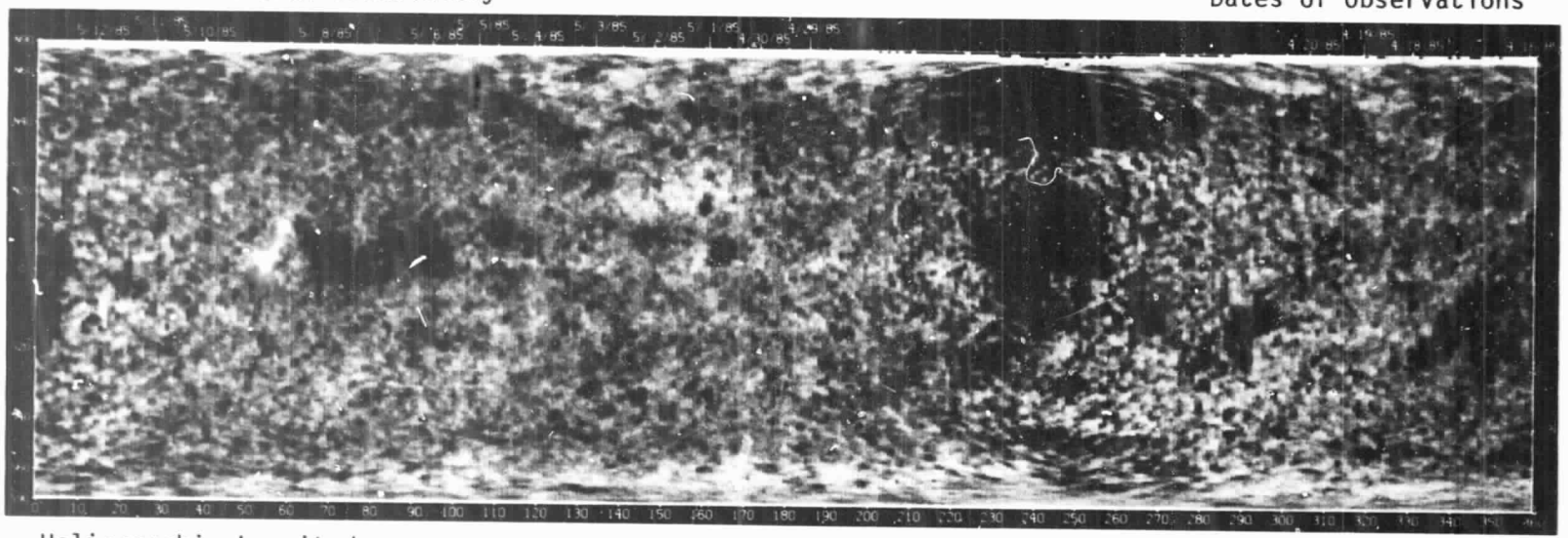
Irregularly shaped light areas mark either coronal holes or filament cavities.
Strength of the helium 10830A absorption line depicted here as various shades of gray.

HELIUM 10830 ANGSTROM SYNOPTIC MAP OF THE SOLAR CORONA

CARRINGTON ROTATION NUMBER 1761
(April 16 to May 13, 1985)

Kitt Peak National Observatory

Dates of Observations



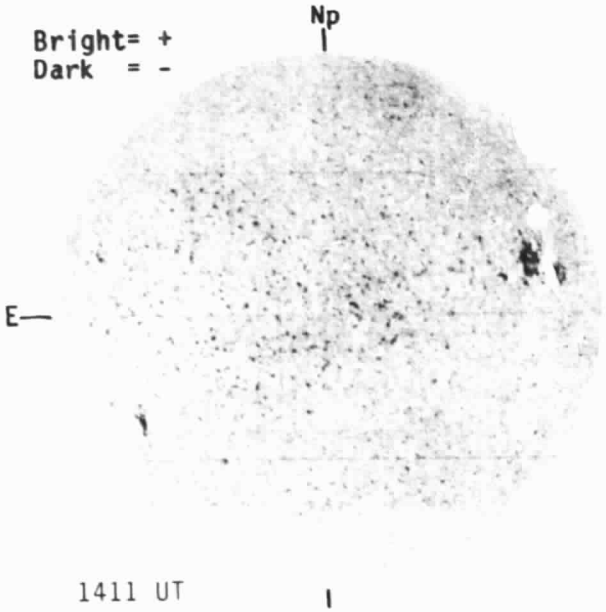
Heliographic Longitude

Irregularly shaped light areas mark either coronal holes or filament cavities.
Strength of the helium 10830A absorption line depicted here as various shades of gray.

A P R I L 01, 1 9 8 5 (P -26.11, B_o=-6.46, L_o= 205.61)

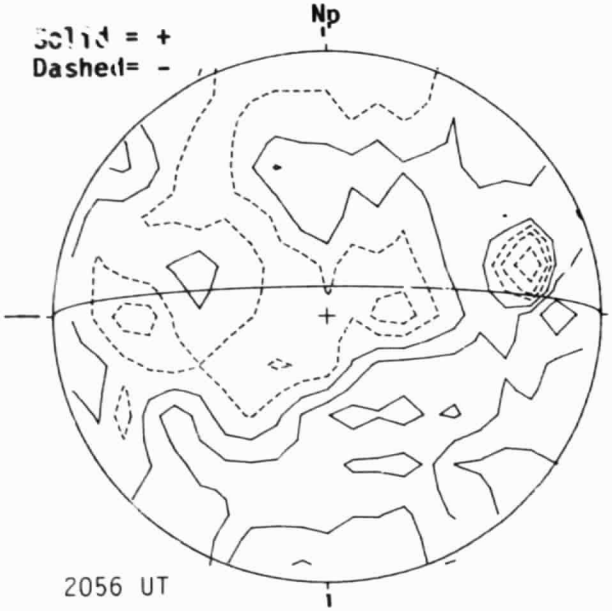
KITT PEAK MAGNETOGRAM

Bright= +
Dark = -



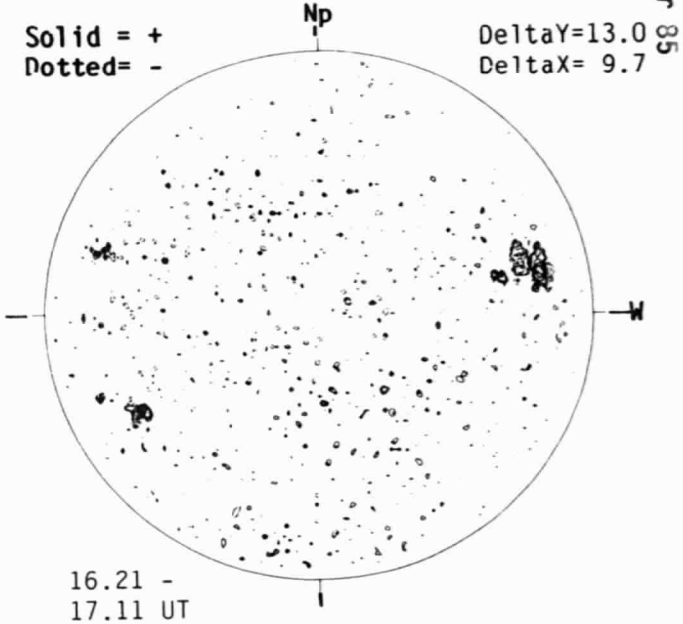
STANFORD MAGNETOGRAM

Solid = +
Dashed= -

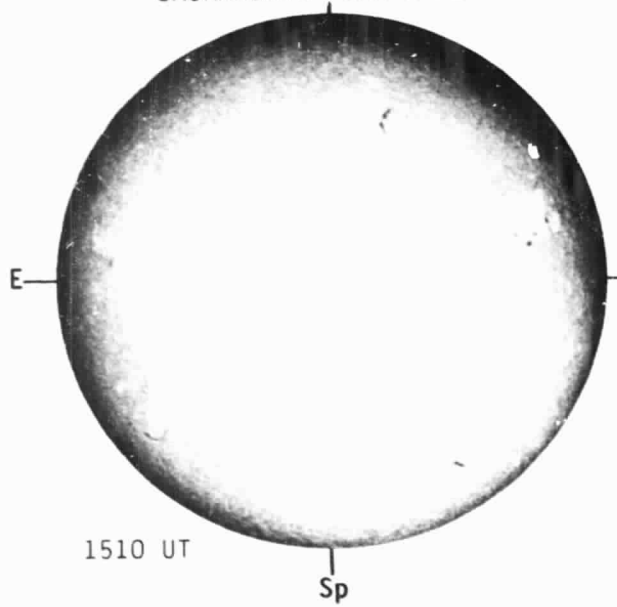


MT. WILSON MAGNETOGRAM

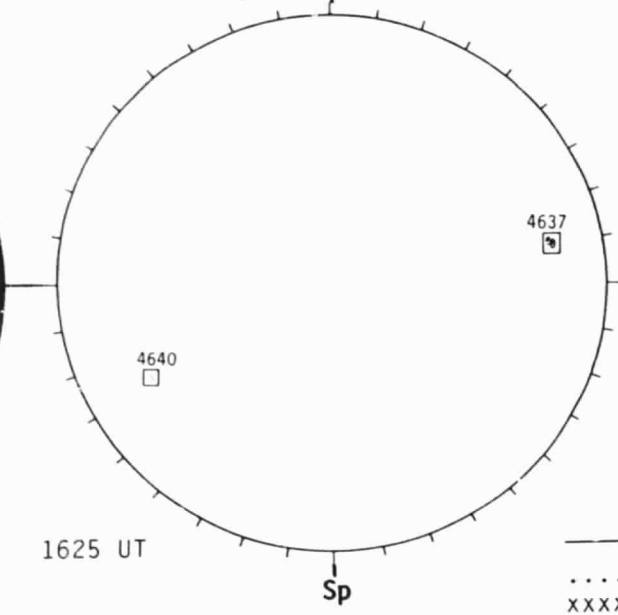
Solid = +
Dotted= -
DeltaY=13.0
DeltaX= 9.7



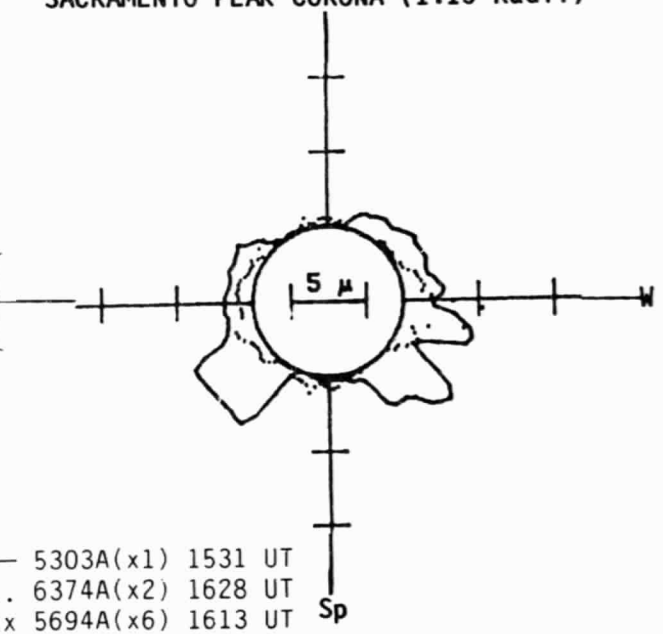
SACRAMENTO PEAK H-ALPHA



HOLLOMAN SUNSPOTS



SACRAMENTO PEAK CORONA (1.15 Radii)



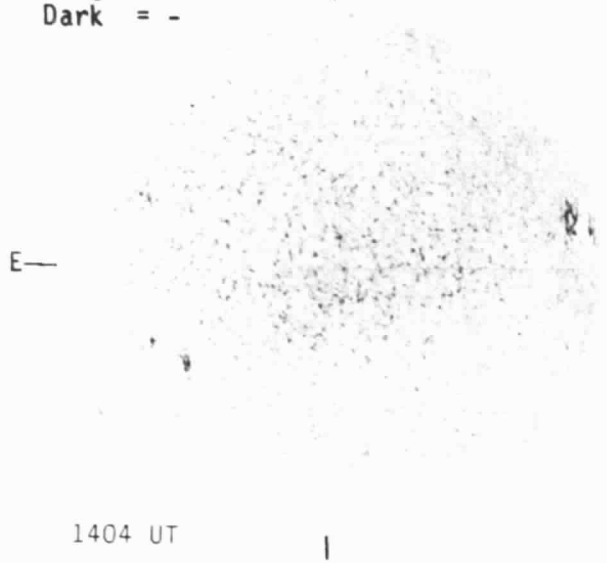
—— 5303A(x1) 1531 UT
.... 6374A(x2) 1628 UT
xxxx 5694A(x6) 1613 UT
No 5694A Activity Today

A P R I L 02, 1 9 8 5 (P -26.15, B_o=-6.40, L_o= 192.42)

KITT PEAK MAGNETOGRAM

Np

Bright= +
Dark = -



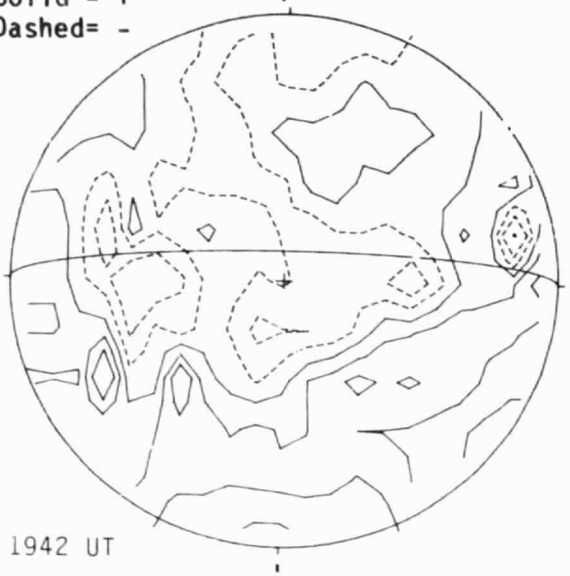
E

1404 UT

STANFORD MAGNETOGRAM

Np

Solid = +
Dashed= -



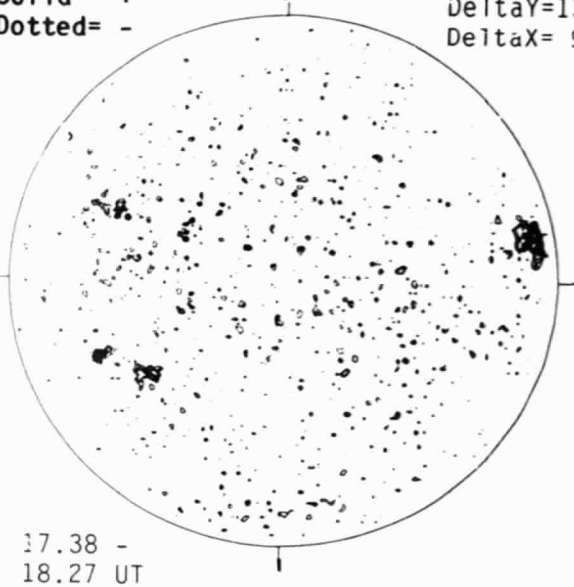
1942 UT

MT. WILSON MAGNETOGRAM

Np

Solid = +
Dotted= -

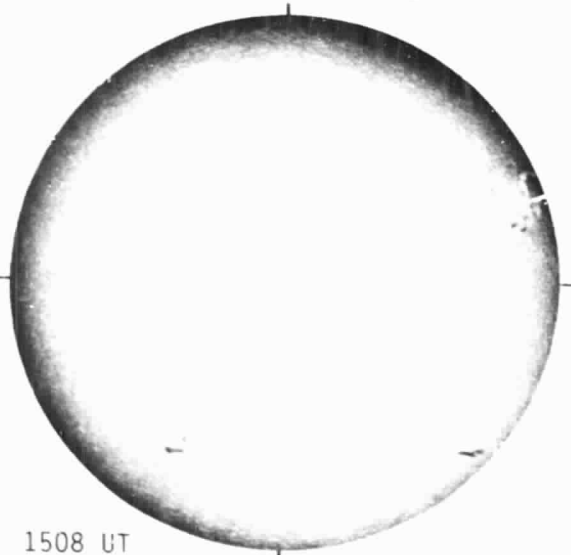
DeltaY=13.0
DeltaX= 9.7



W

17.38 -
18.27 UT

SACRAMENTO PEAK H-ALPHA

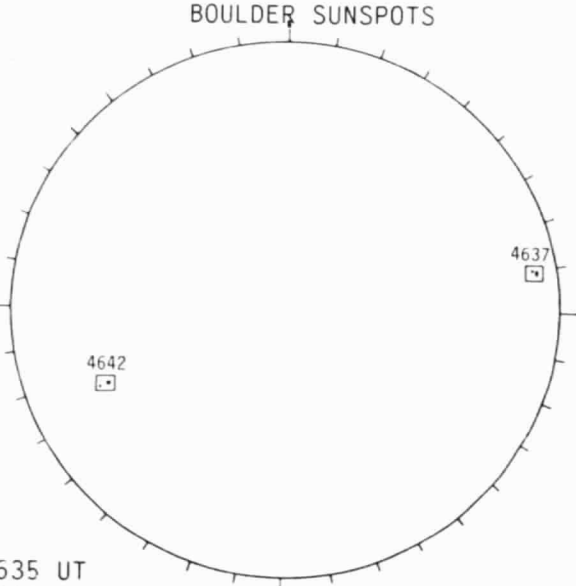


E

1508 UT

Sp

BOULDER SUNSPOTS



1635 UT
1643 UT BOUL Prom

Sp

SACRAMENTO PEAK CORONA (1.15 Radii)

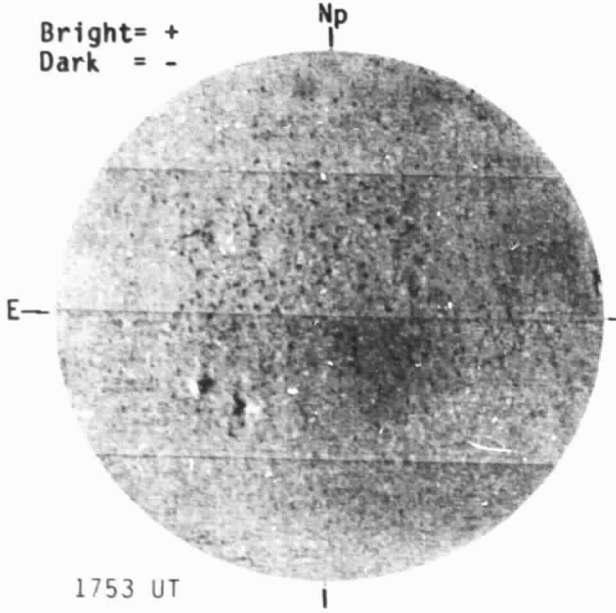
W

Sp

A P R I L 03, 1 9 8 5 (P -26.18, B_o=-6.35, L_o= 179.22)

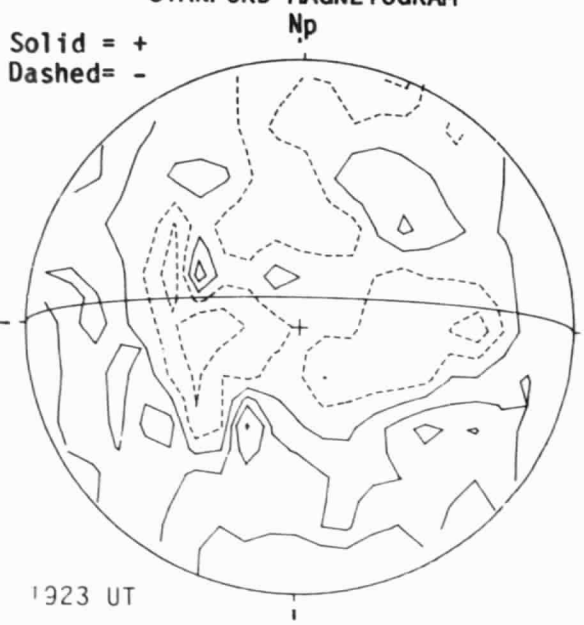
KITT PEAK MAGNETOGRAM

Bright= +
Dark = -



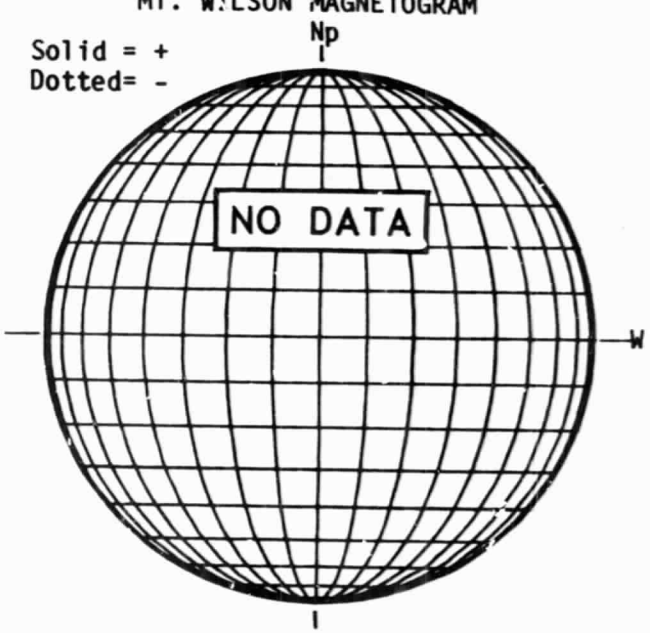
STANFORD MAGNETOGRAM

Solid = +
Dashed= -

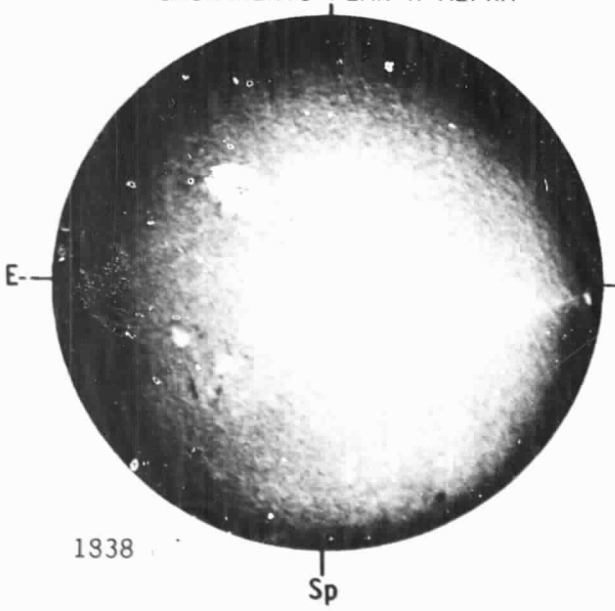


MT. WILSON MAGNETOGRAM

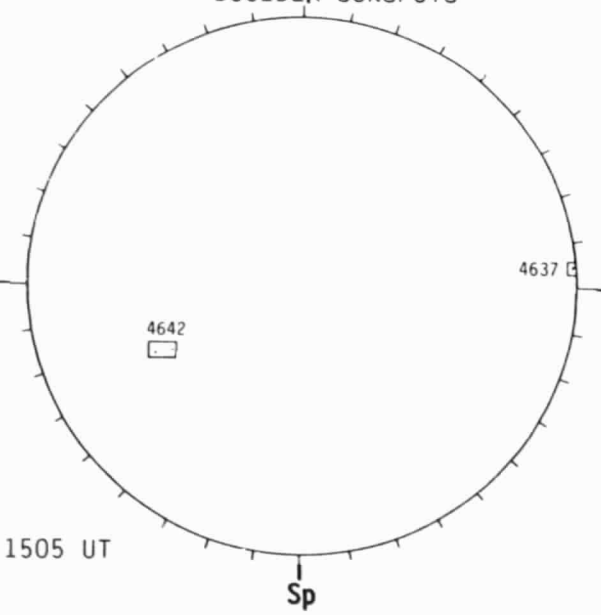
Solid = +
Dotted= -



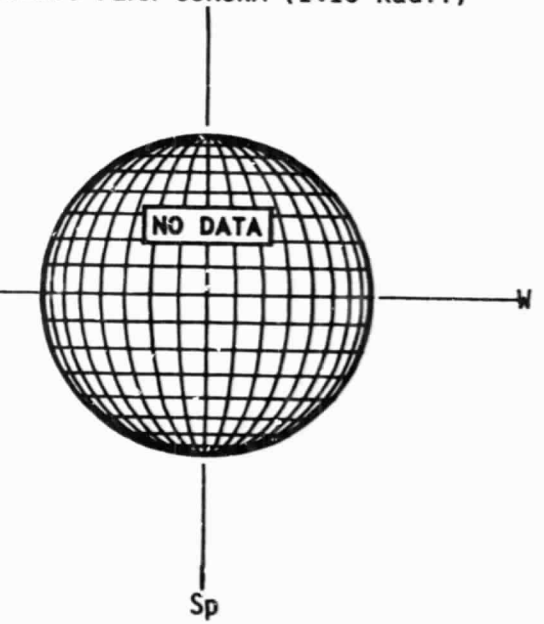
SACRAMENTO PEAK H-ALPHA



BOULDER SUNSPOTS



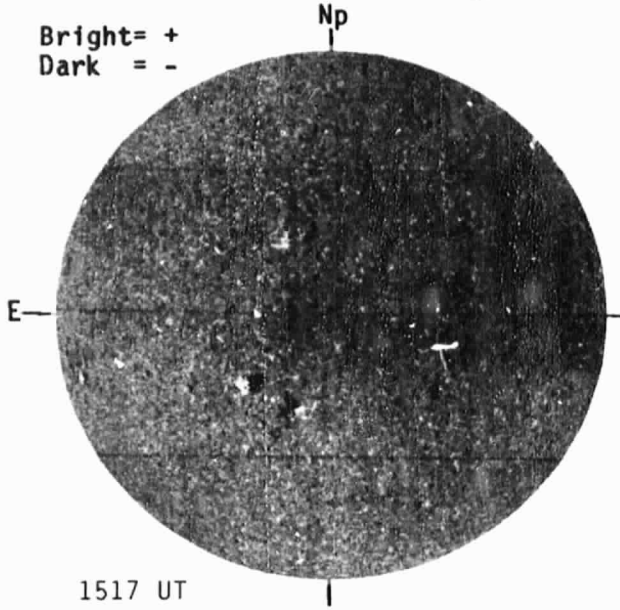
SACRAMENTO PEAK CORONA (1.15 Radii)



A P R I L 04, 1 9 8 5 (P -26.20, B_o=-6.29, L_o= 166.03)

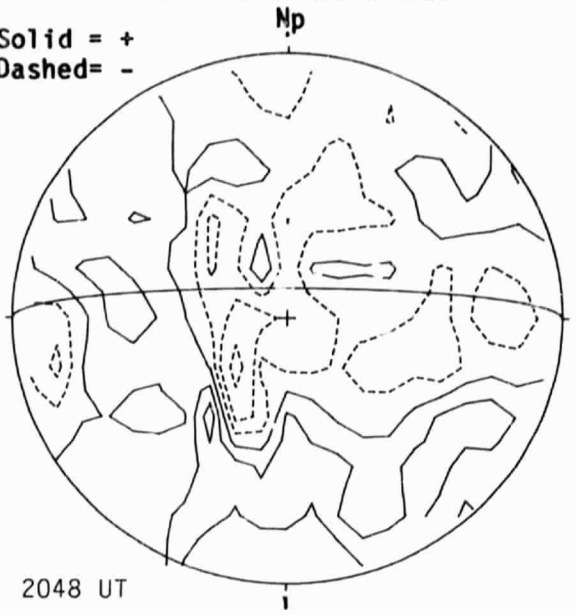
KITT PEAK MAGNETOGRAM

Bright= +
Dark = -



STANFORD MAGNETOGRAM

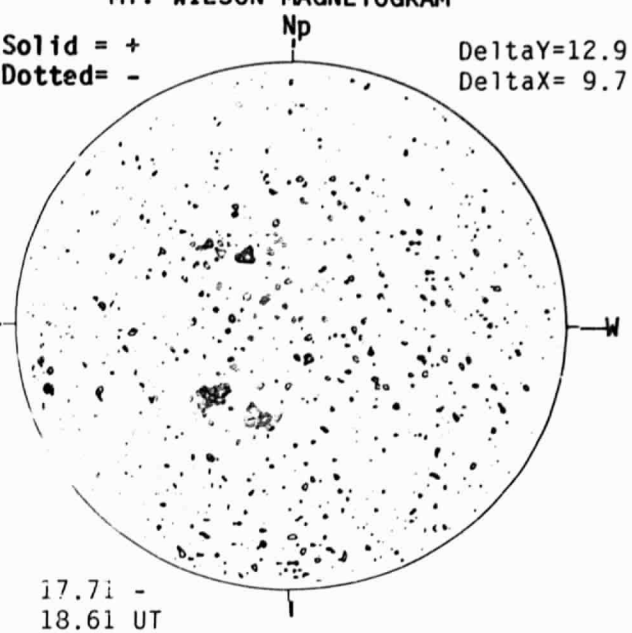
Solid = +
Dashed= -



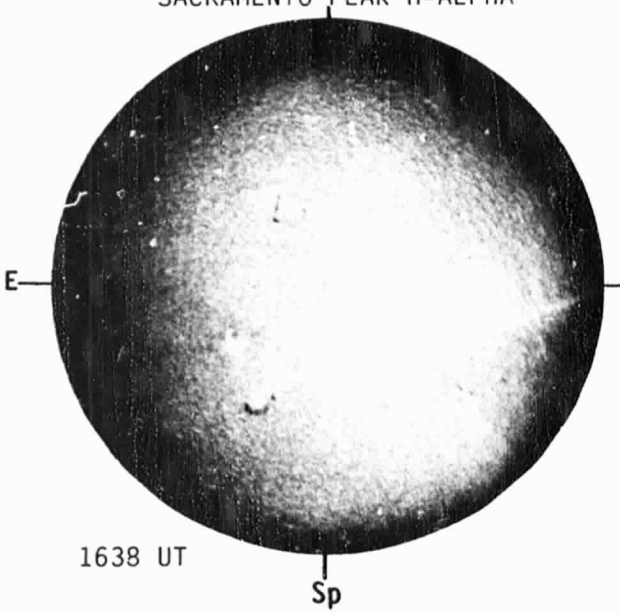
MT. WILSON MAGNETOGRAM

Solid = +
Dotted= -

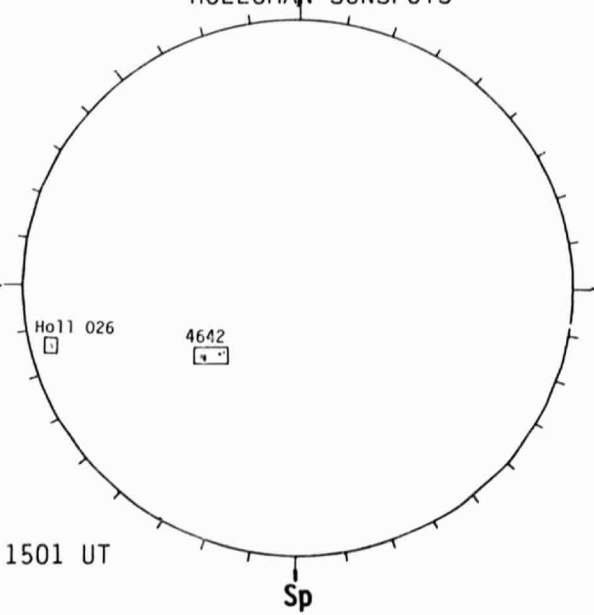
DeltaY=12.9
DeltaX= 9.7



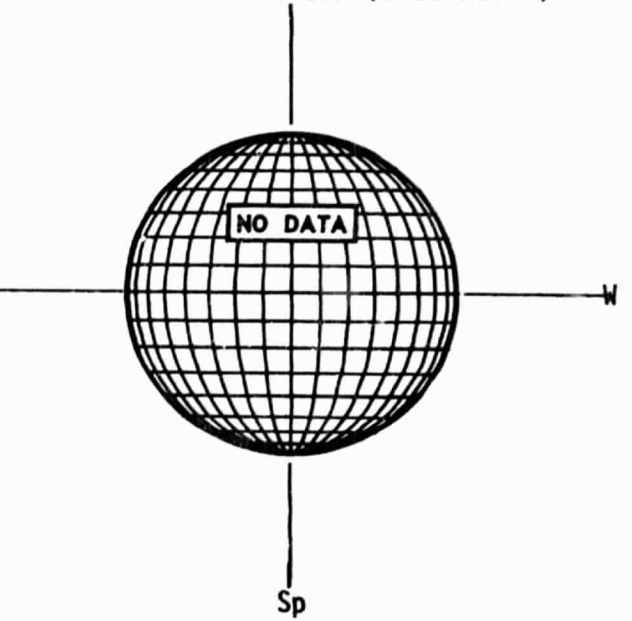
SACRAMENTO PEAK H-ALPHA



HOLLOMAN SUNSPOTS



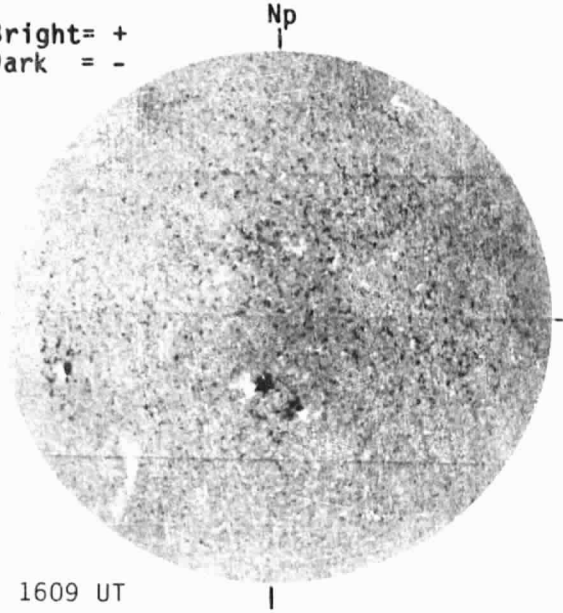
SACRAMENTO PEAK CORONA (1.15 Radii)



A P R I L 05, 1 9 8 5 (P -26.22, B_o=-6.23, L_o= 152.83)

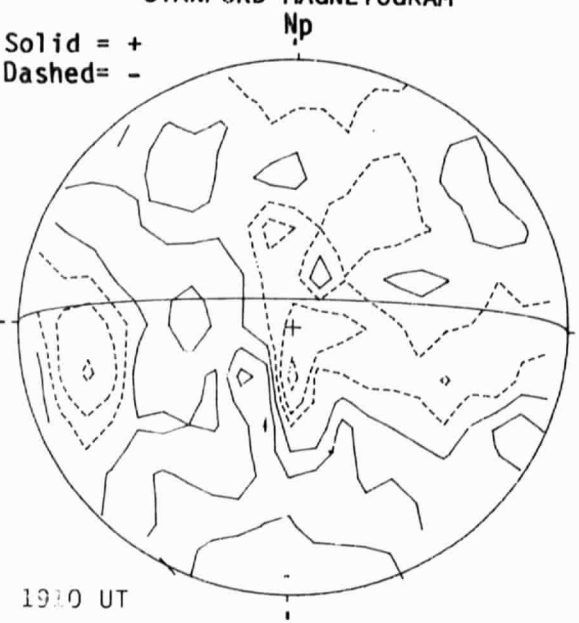
KITT PEAK MAGNETOGRAM

Bright= +
Dark = -



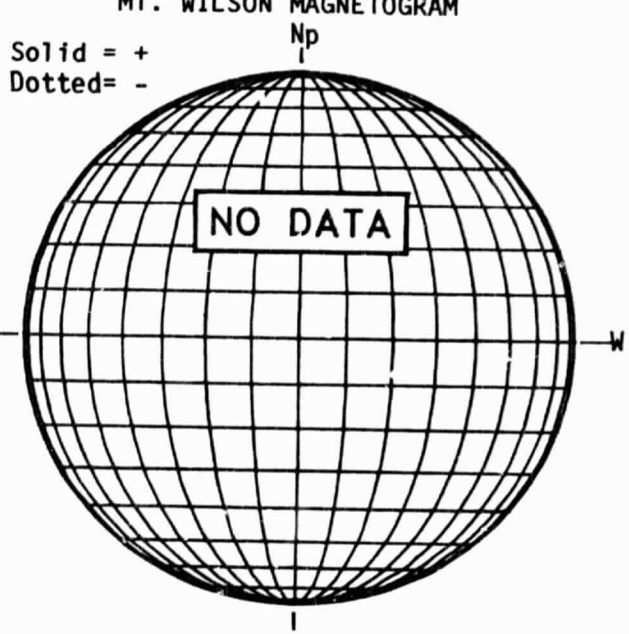
STANFORD MAGNETOGRAM

Solid = +
Dashed= -

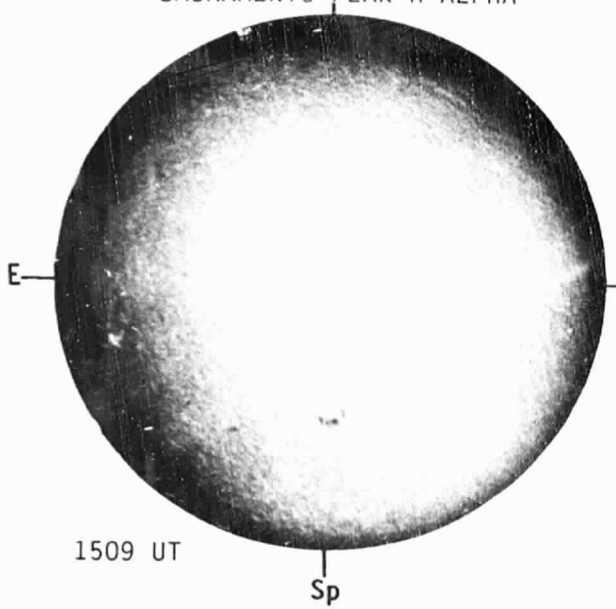


MT. WILSON MAGNETOGRAM

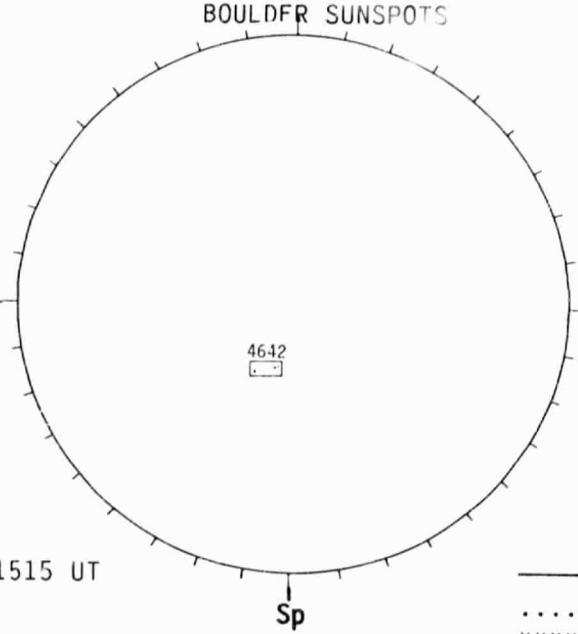
Solid = +
Dotted= -



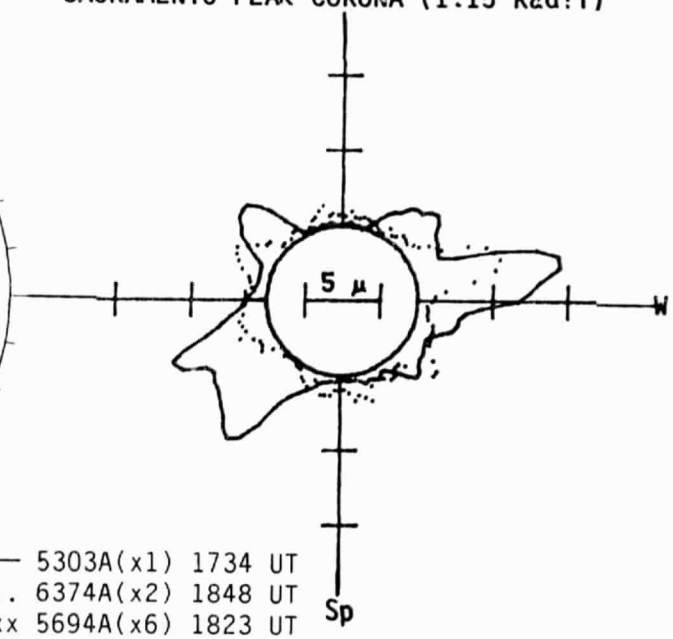
SACRAMENTO PEAK H-ALPHA



BOULDER SUNSPOTS



SACRAMENTO PEAK CORONA (1.15 Radii)

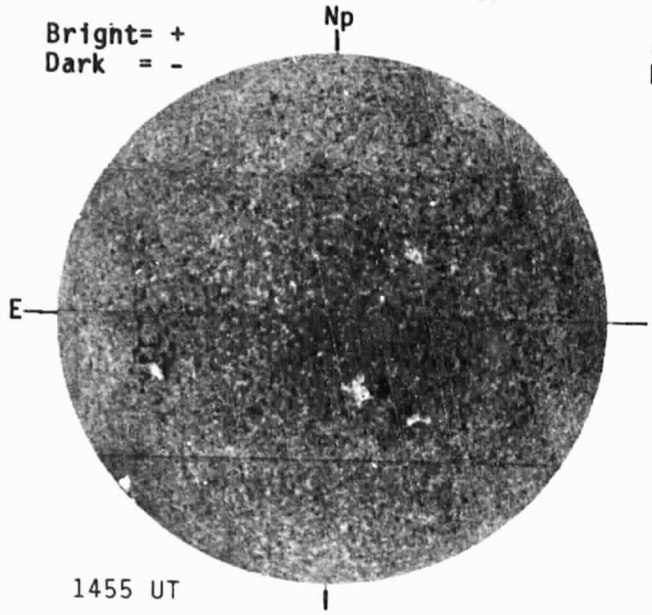


—— 5303A(x1) 1734 UT
.... 6374A(x2) 1848 UT
xxxx 5694A(x6) 1823 UT
No 5694A Activity Today

A P R I L 06, 1 9 8 5 (P -26.23, B_0=-6.17, L_0= 139.63)

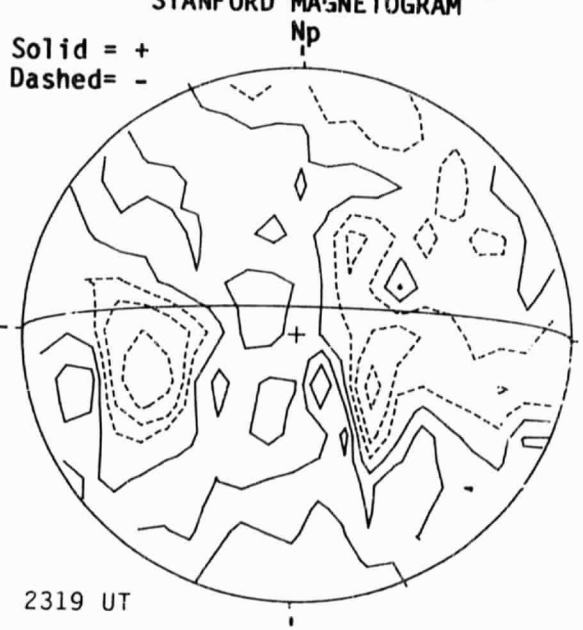
KITT PEAK MAGNETOGRAM

Bright= +
Dark = -



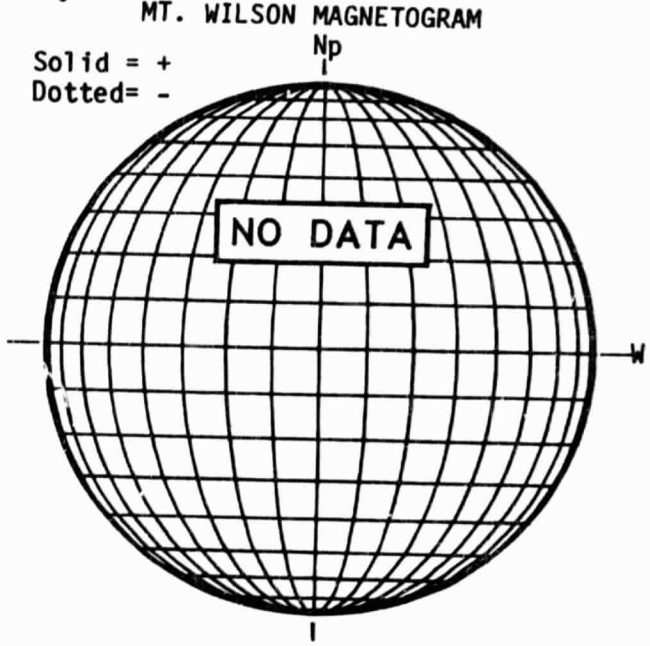
STANFORD MAGNETOGRAM

Solid = +
Dashed= -

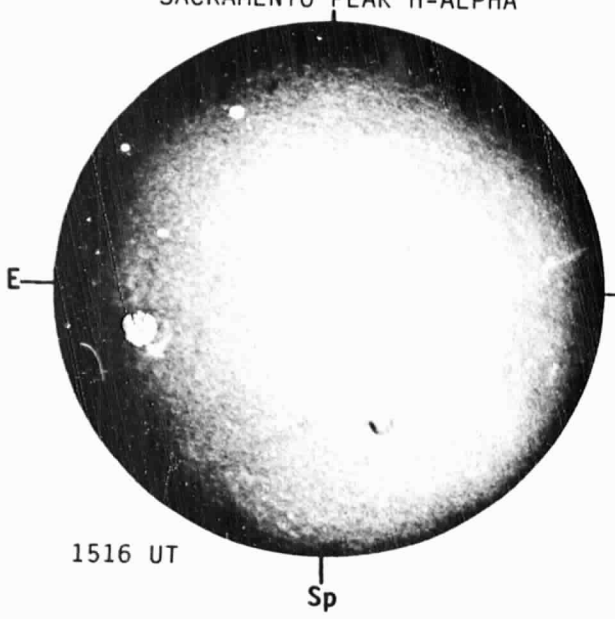


MT. WILSON MAGNETOGRAM

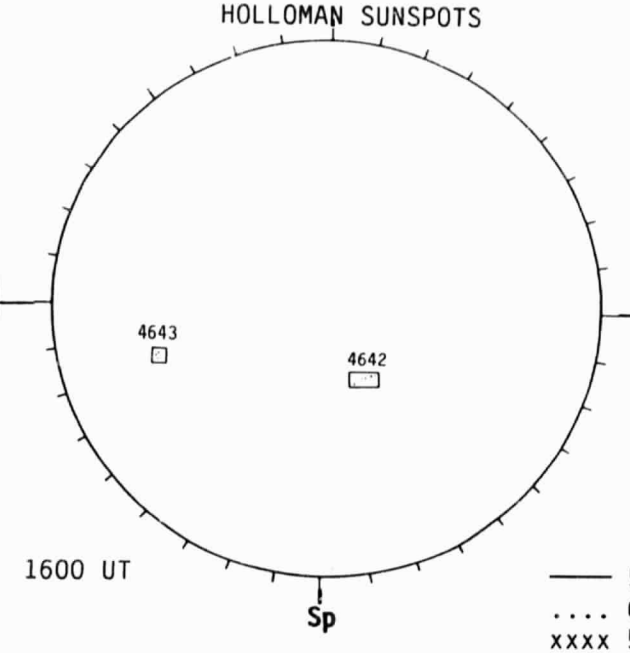
Solid = +
Dotted= -



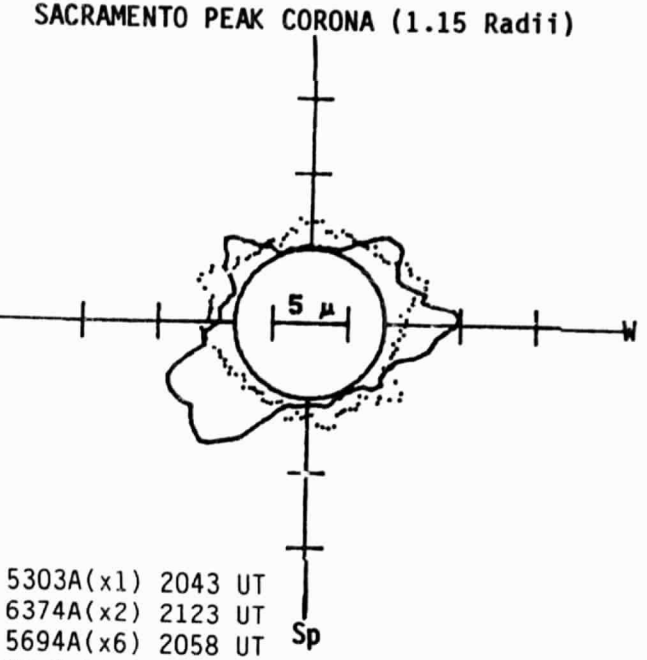
SACRAMENTO PEAK H-ALPHA



HOLLOMAN SUNSPOTS



SACRAMENTO PEAK CORONA (1.15 Radii)



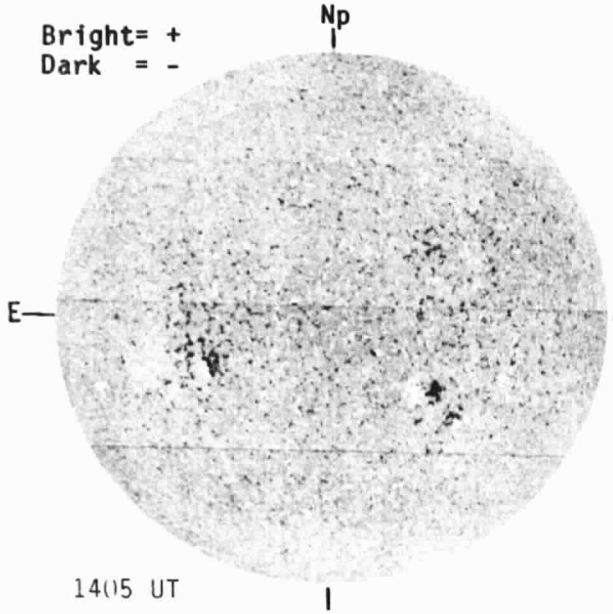
—— 5303A(x1) 2043 UT
.... 6374A(x2) 2123 UT
xxxx 5694A(x6) 2058 UT
No 5694A Activity Today

A P R I L 07, 1 9 8 5 (P -26.23, B_o=-6.11, L_o= 126.44)

40 Apr 85

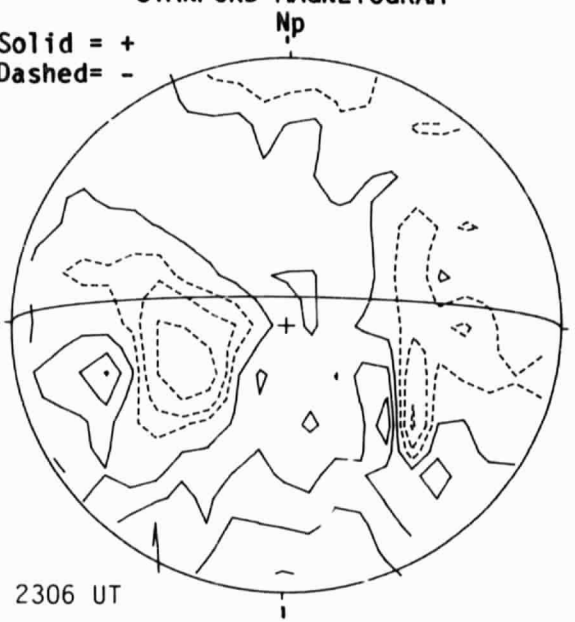
KITT PEAK MAGNETOGRAM

Bright= +
Dark = -



STANFORD MAGNETOGRAM

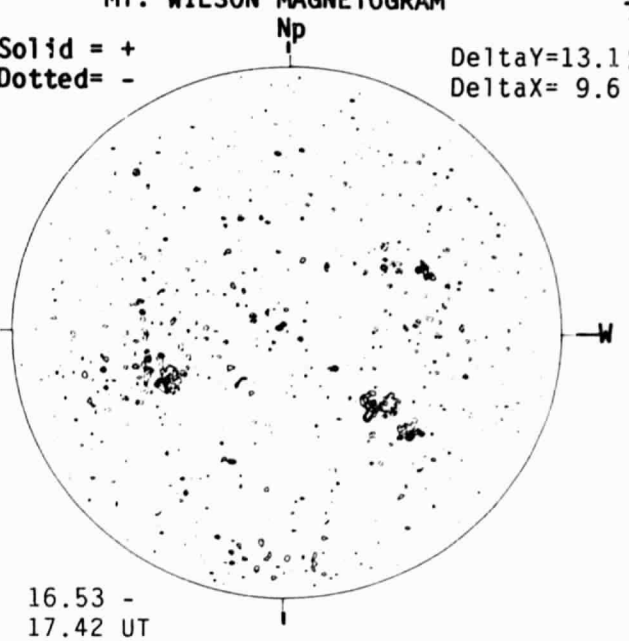
Solid = +
Dashed= -



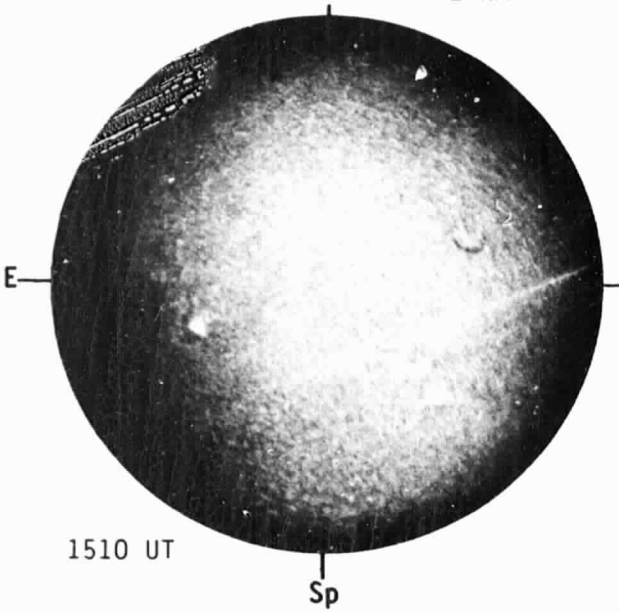
MT. WILSON MAGNETOGRAM

Solid = +
Dotted= -

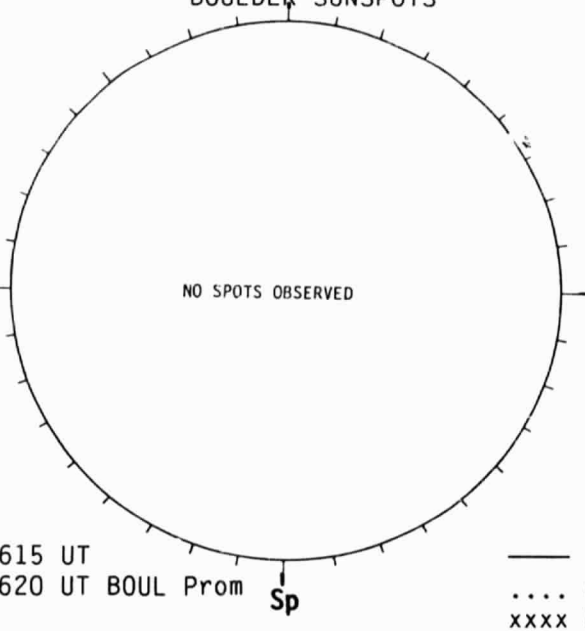
DeltaY=13.1
DeltaX= 9.6



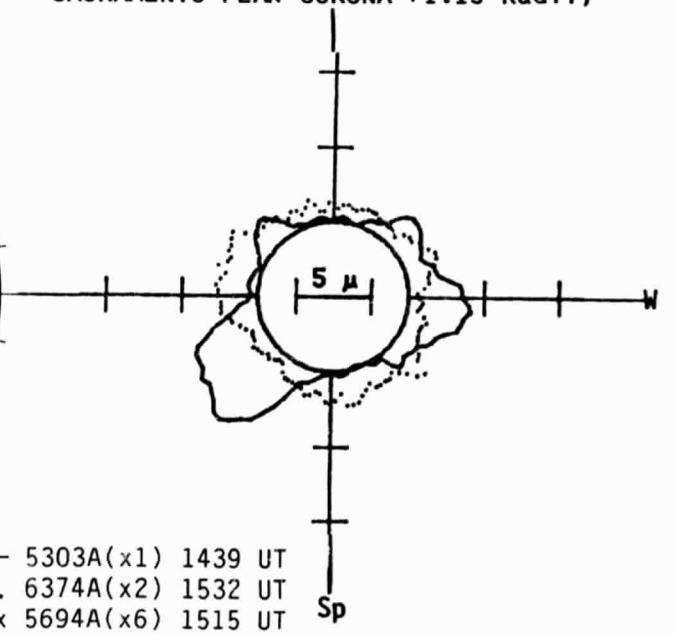
SACRAMENTO PEAK H-ALPHA



BOULDER SUNSPOTS



SACRAMENTO PEAK CORONA (1.15 Radii)

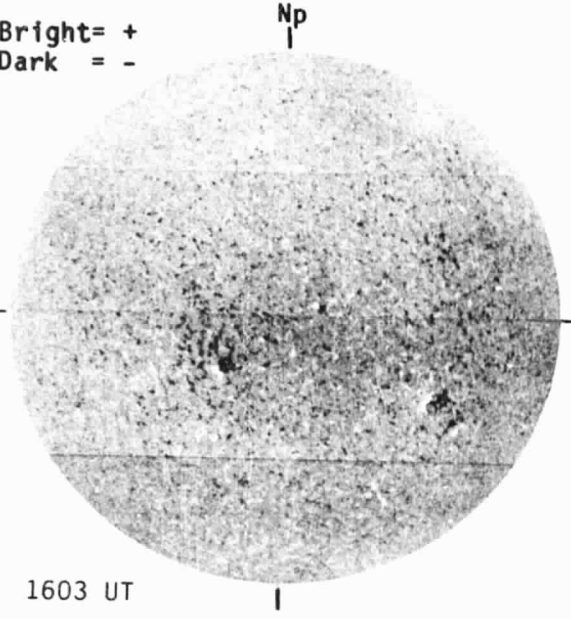


—— 5303A(x1) 1439 UT
.... 6374A(x2) 1532 UT
xxxx 5694A(x6) 1515 UT
No 5694A Activity Today

A P R I L 08, 1 9 8 5 (P -26.22, B_o=-6.04, L_o= 113.24)

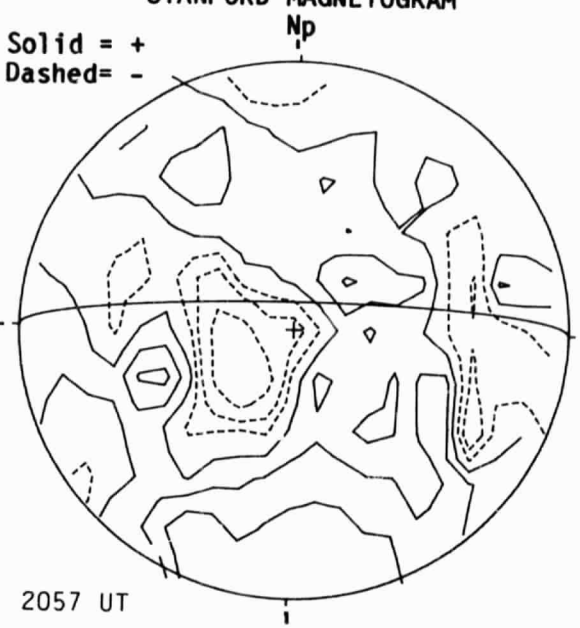
KITT PEAK MAGNETOGRAM

Bright= +
Dark = -



STANFORD MAGNETOGRAM

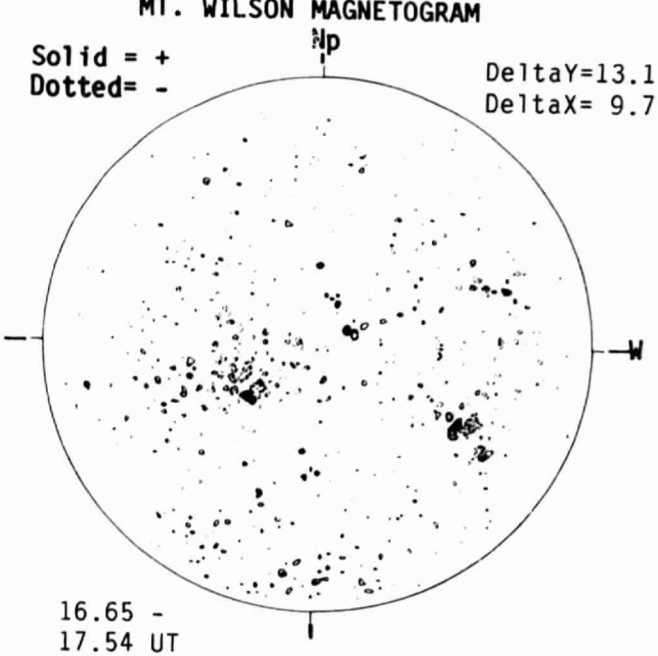
Solid = +
Dashed= -



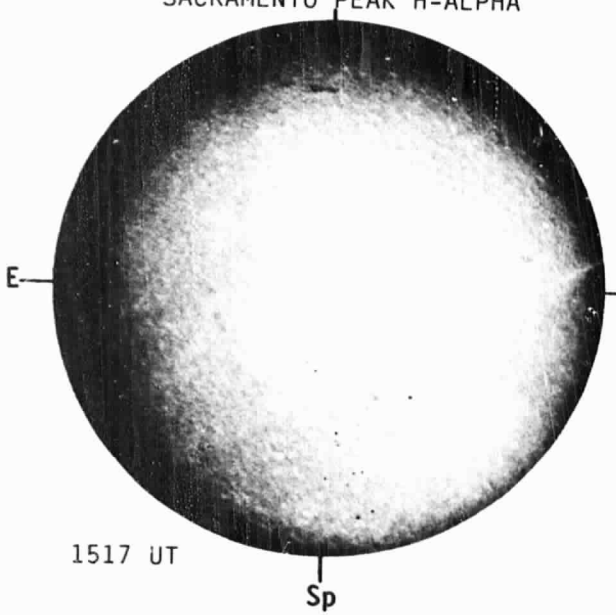
MT. WILSON MAGNETOGRAM

Solid = +
Dotted= -

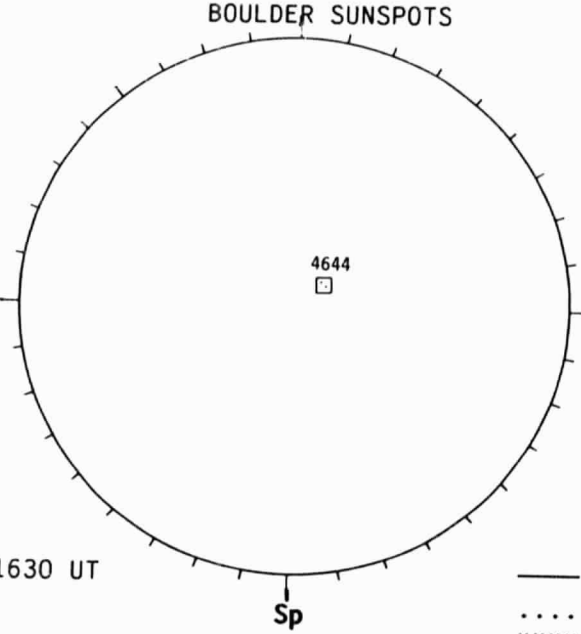
DeltaY=13.1
DeltaX= 9.7



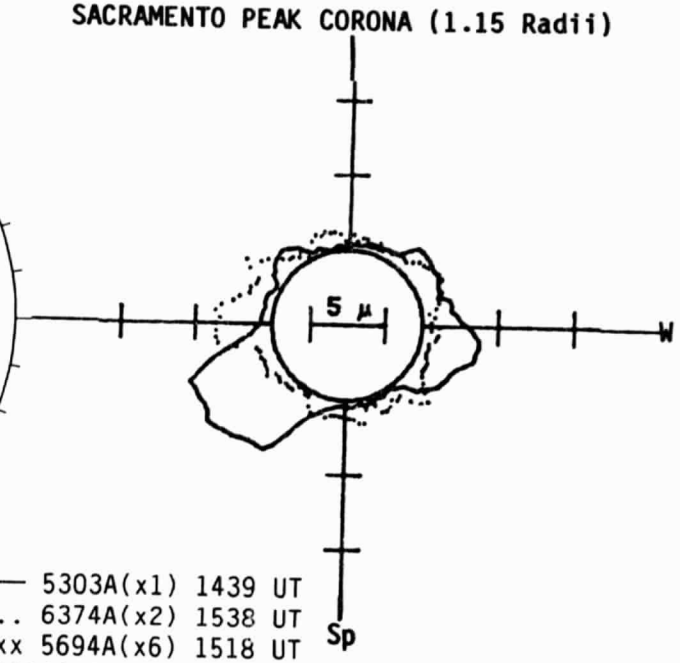
SACRAMENTO PEAK H-ALPHA



BOULDER SUNSPOTS



SACRAMENTO PEAK CORONA (1.15 Radii)



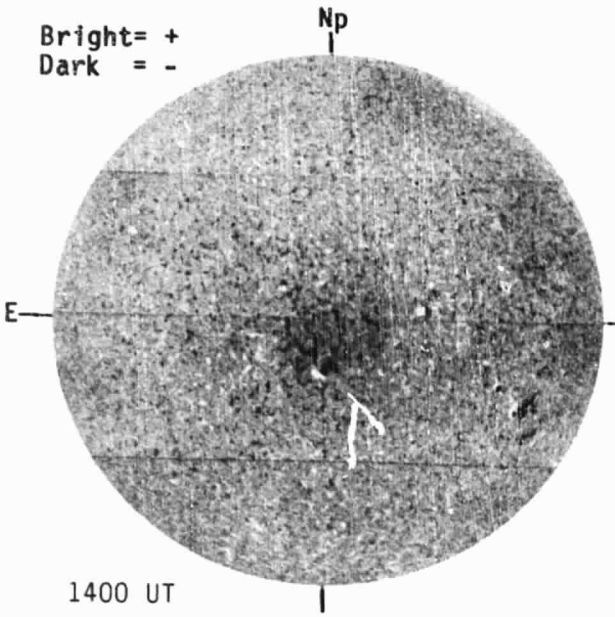
—— 5303A(x1) 1439 UT
.... 6374A(x2) 1538 UT
xxxx 5694A(x6) 1518 UT
No 5694A Activity Today

A P R I L 09, 1 9 8 5 (P -26.21, B_o=-5.98, L_o= 100.04)

Apr 85 42

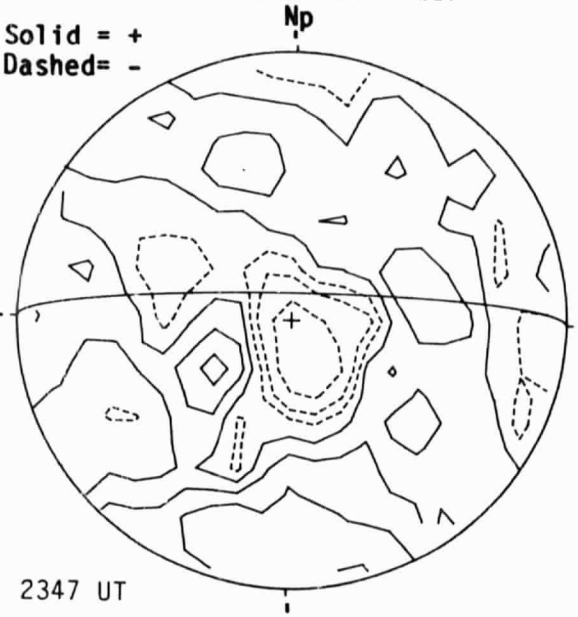
KITT PEAK MAGNETOGRAM

Bright= +
Dark = -



STANFORD MAGNETOGRAM

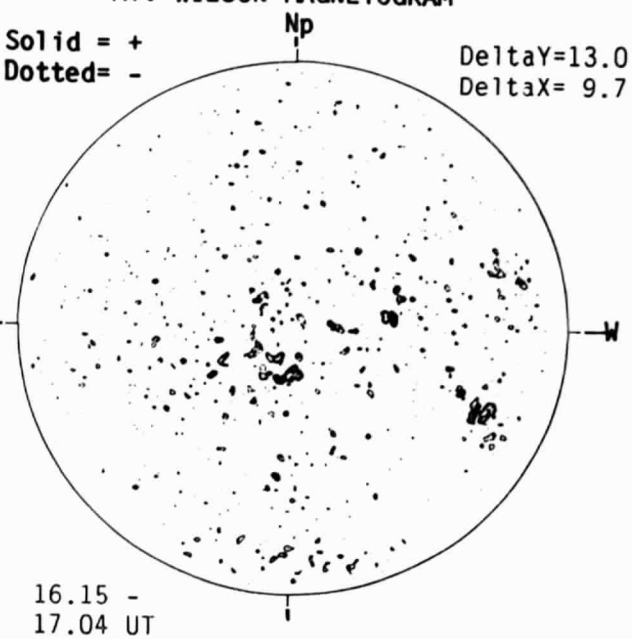
Solid = +
Dashed= -



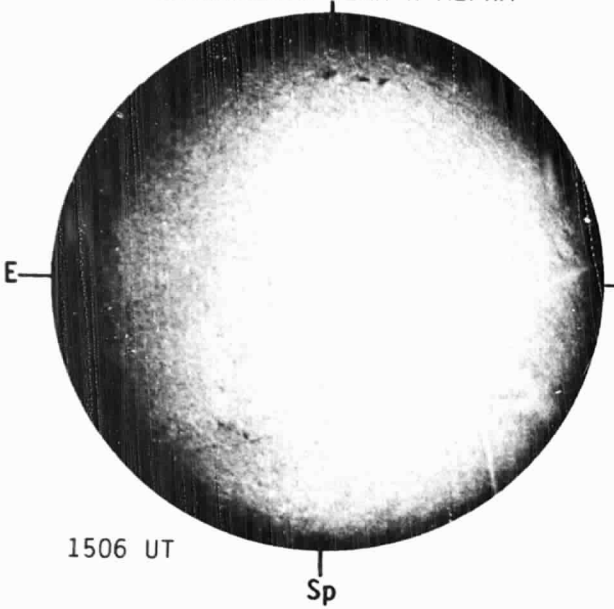
MT. WILSON MAGNETOGRAM

Solid = +
Dotted= -

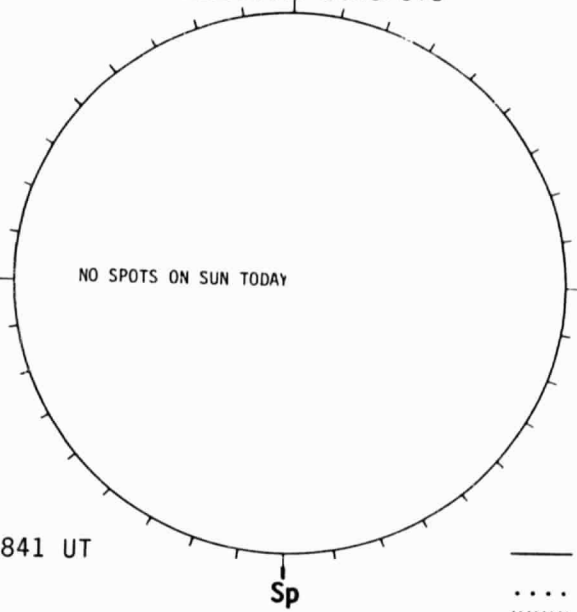
DeltaY=13.0
DeltaX= 9.7



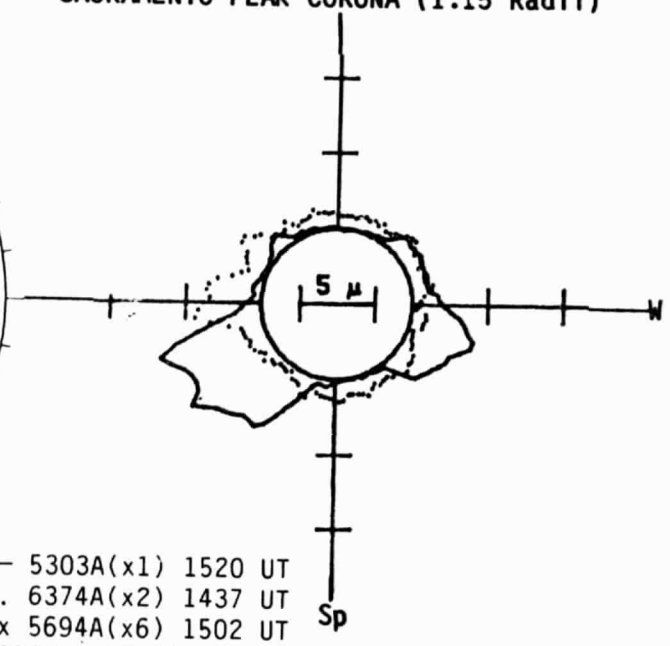
SACRAMENTO PEAK H-ALPHA



HOLLOMAN SUNSPOTS



SACRAMENTO PEAK CORONA (1.15 Radii)

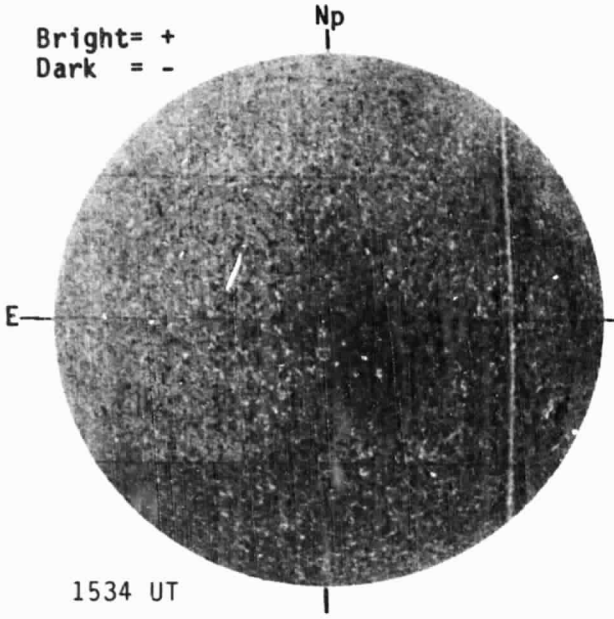


—— 5303A(x1) 1520 UT
.... 6374A(x2) 1437 UT
xxxx 5694A(x6) 1502 UT
No 5694A Activity Today

A P R I L 10, 1 9 8 5 (P -26.19, B_o=-5.91, L_o= 86.84)

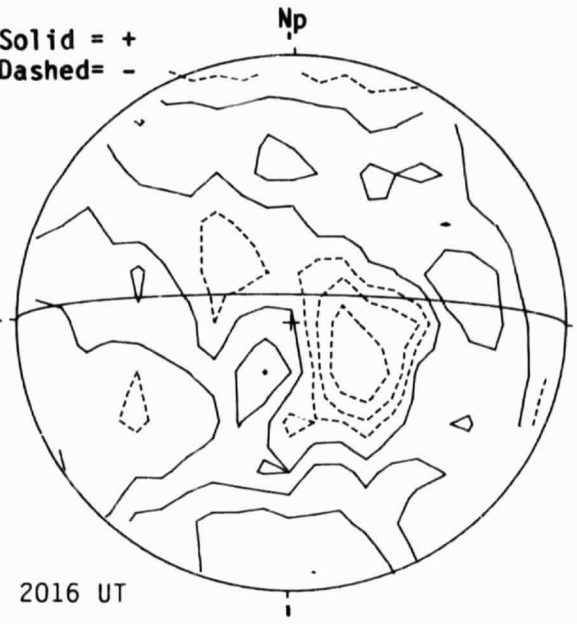
KITT PEAK MAGNETOGRAM

Bright= +
Dark = -



STANFORD MAGNETOGRAM

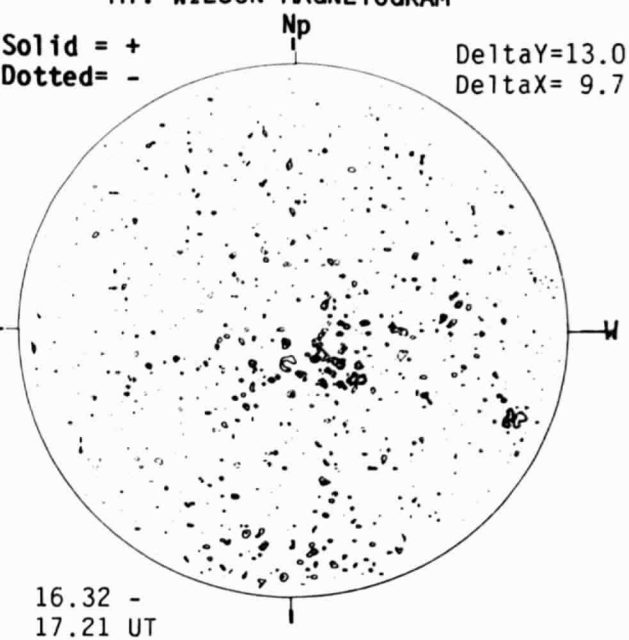
Solid = +
Dashed= -



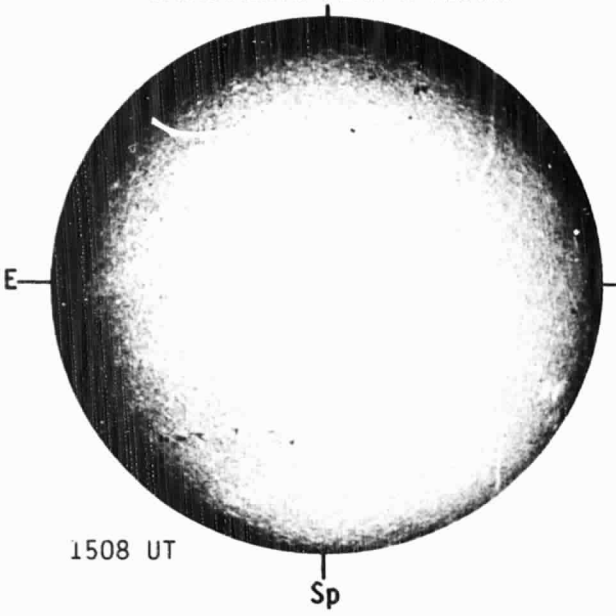
MT. WILSON MAGNETOGRAM

Solid = +
Dotted= -

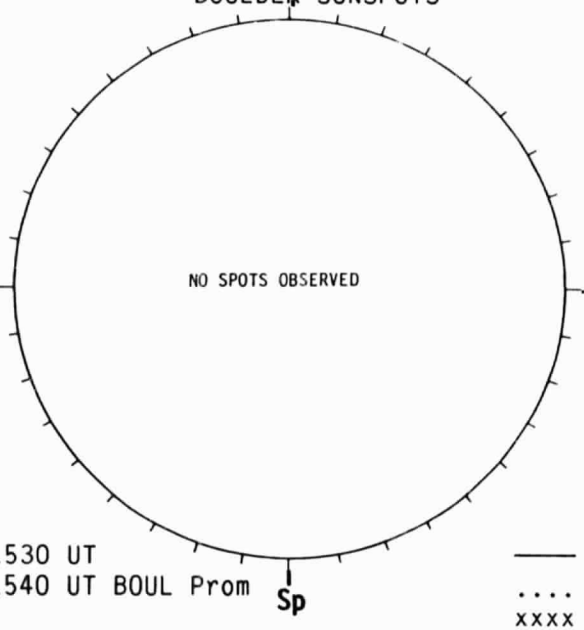
DeltaY=13.0
DeltaX= 9.7



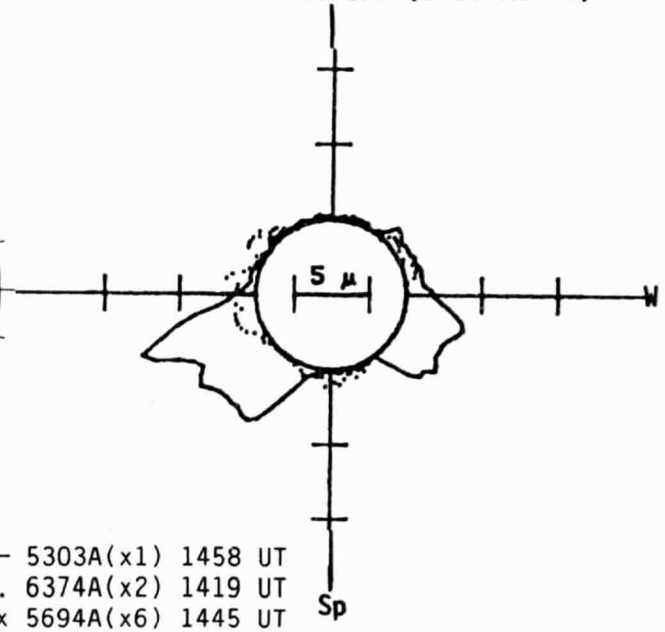
SACRAMENTO PEAK H-ALPHA



BOULDER SUNSPOTS



SACRAMENTO PEAK CORONA (1.15 Radii)

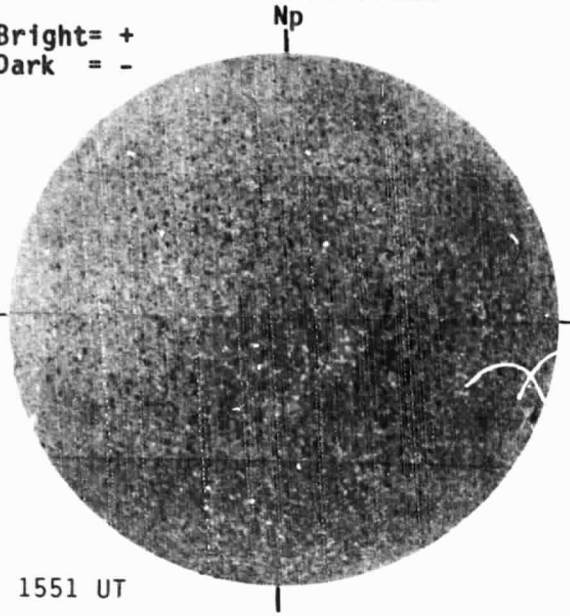


—— 5303A(x1) 1458 UT
.... 6374A(x2) 1419 UT
xxxx 5694A(x6) 1445 UT
No 5694A Activity Today

A P R I L 11, 1 9 8 5 (P -26.16, B_0=-5.84, L_0= 73.64)

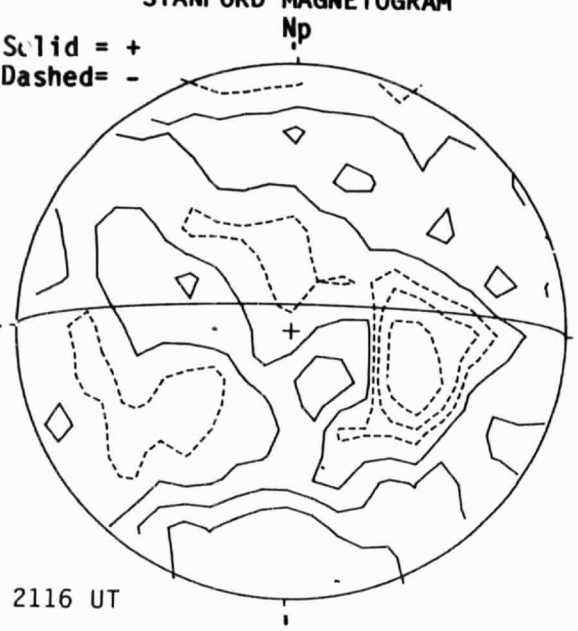
KITT PEAK MAGNETOGRAM

Bright= +
Dark = -



STANFORD MAGNETOGRAM

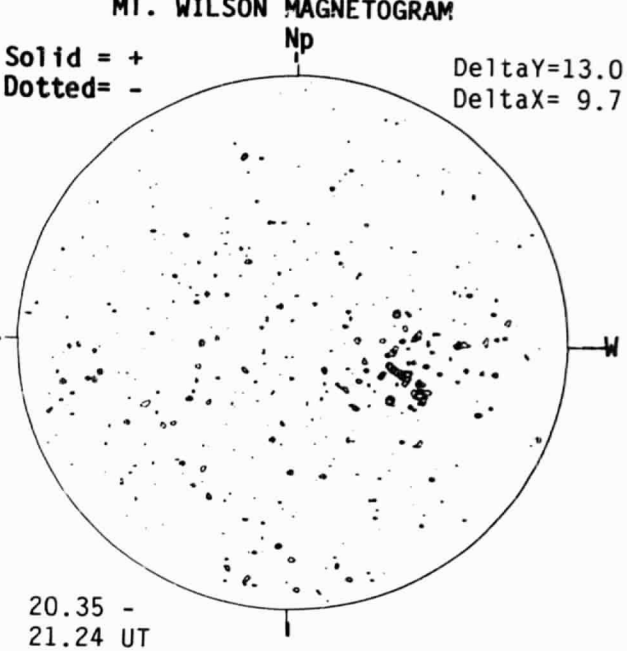
Solid = +
Dashed= -



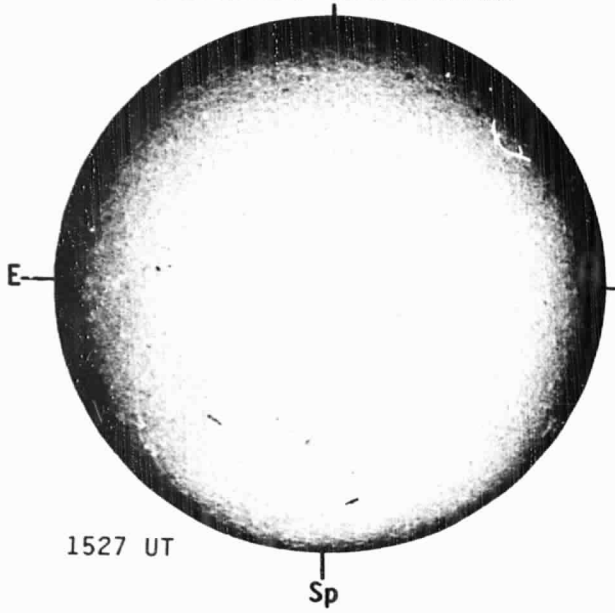
MT. WILSON MAGNETOGRAM

Solid = +
Dotted= -

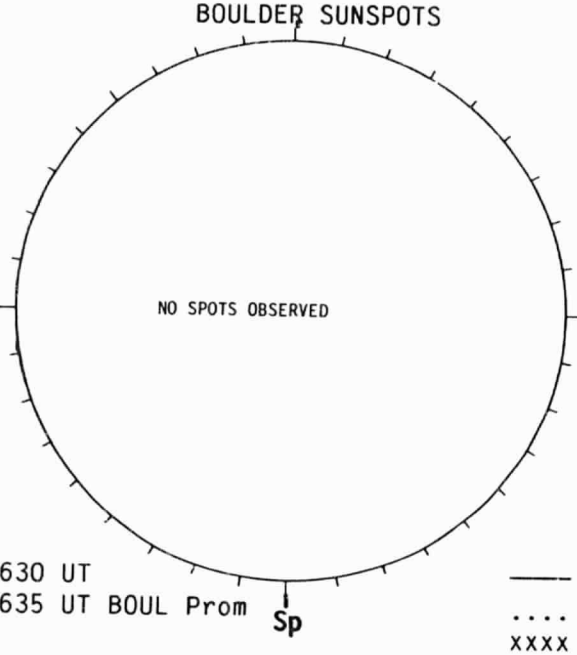
DeltaY=13.0
DeltaX= 9.7



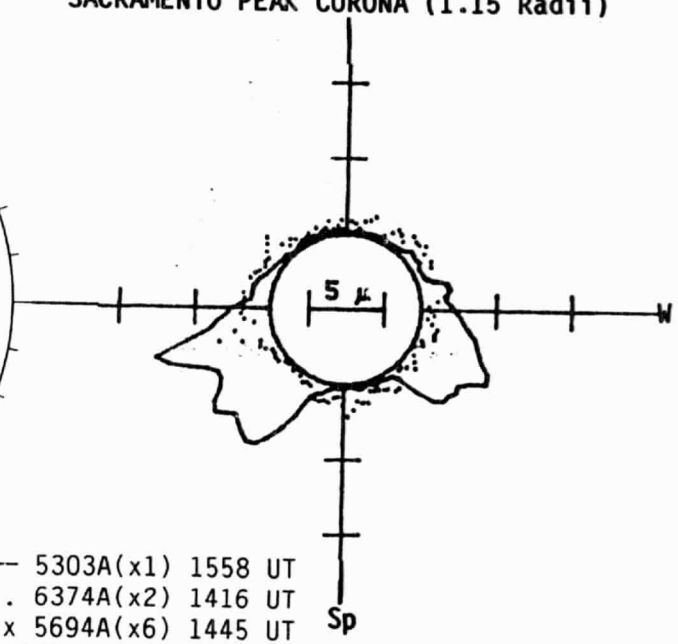
SACRAMENTO PEAK H-ALPHA



BOULDER SUNSPOTS



SACRAMENTO PEAK CORONA (1.15 Radii)

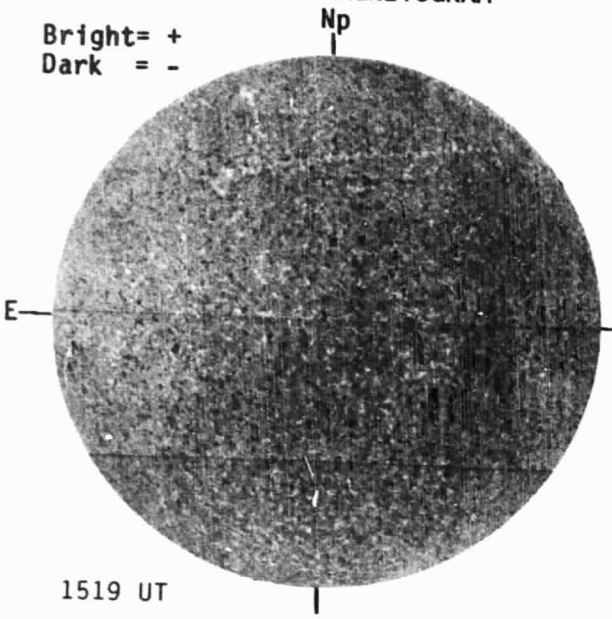


—— 5303A(x1) 1558 UT
.... 6374A(x2) 1416 UT
xxxx 5694A(x6) 1445 UT
No 5694A Activity Today

A P R I L 12, 1 9 8 5 (P -26.13, B_o=-5.77, L_o= 60.44)

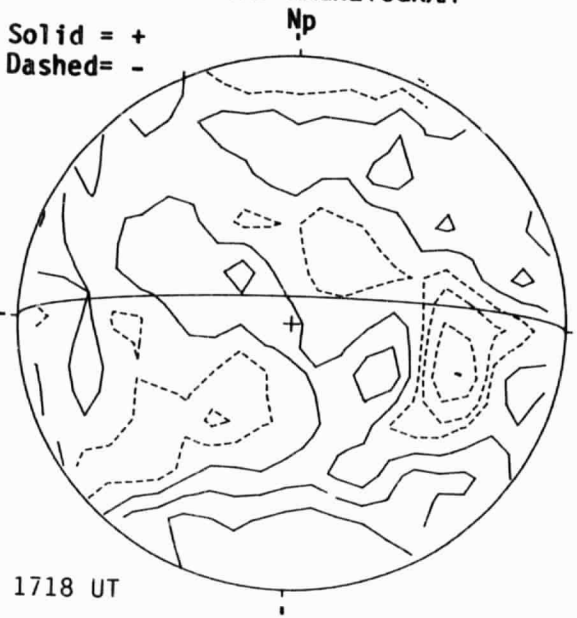
KITT PEAK MAGNETOGRAM

Bright= +
Dark = -



STANFORD MAGNETOGRAM

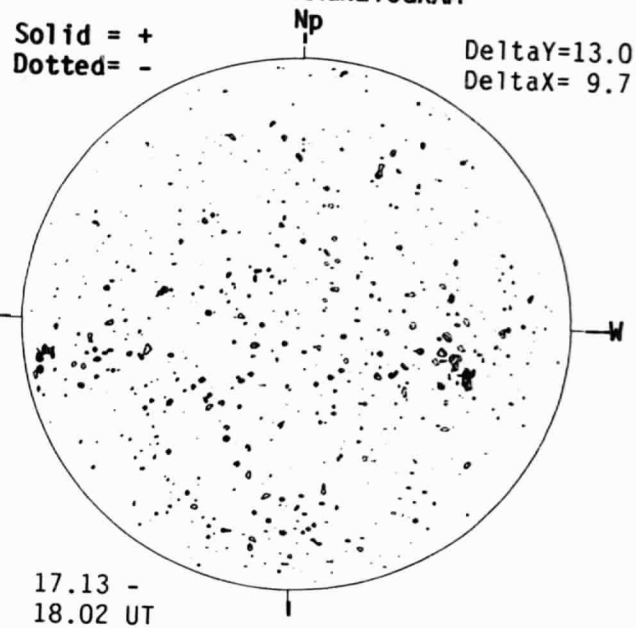
Solid = +
Dashed= -



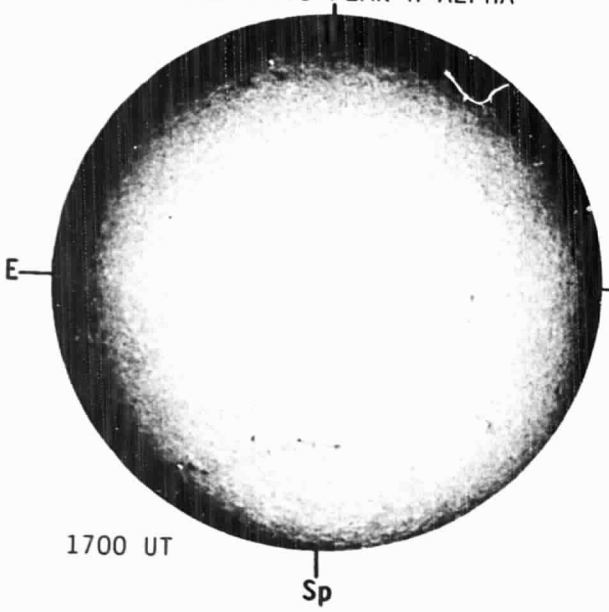
MT. WILSON MAGNETOGRAM

Solid = +
Dotted= -

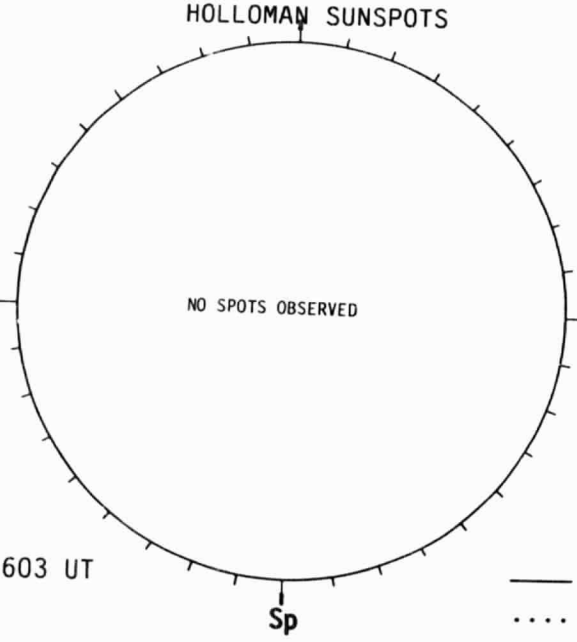
DeltaY=13.0
DeltaX= 9.7



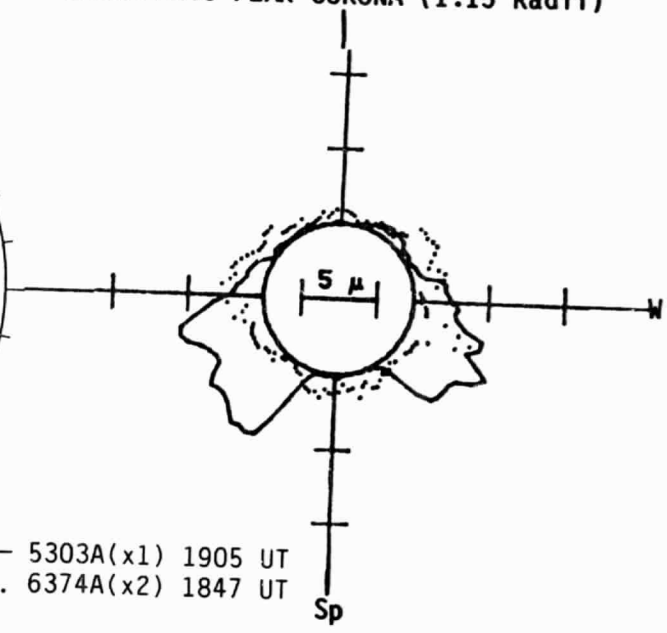
SACRAMENTO PEAK H-ALPHA



HOLLOMAN SUNSPOTS



SACRAMENTO PEAK CORONA (1.15 Radii)

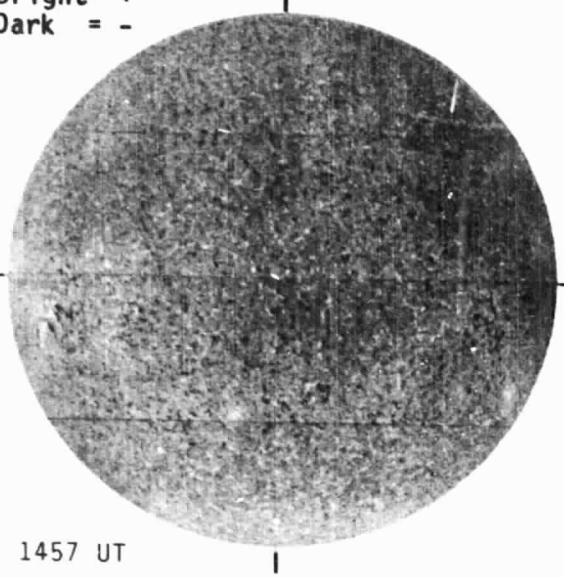


—— 5303A(x1) 1905 UT
.... 6374A(x2) 1847 UT

A P R I L 13, 1 9 8 5 (P -26.08, B_o=-5.69, L_o= 47.24)

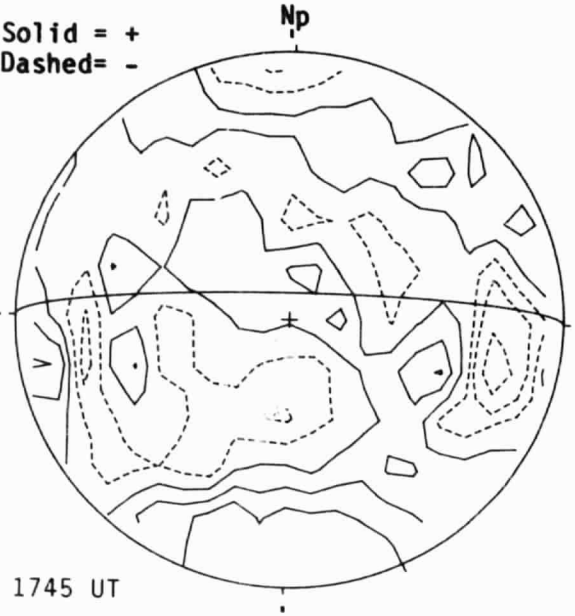
KITT PEAK MAGNETOGRAM

Bright= +
Dark = -



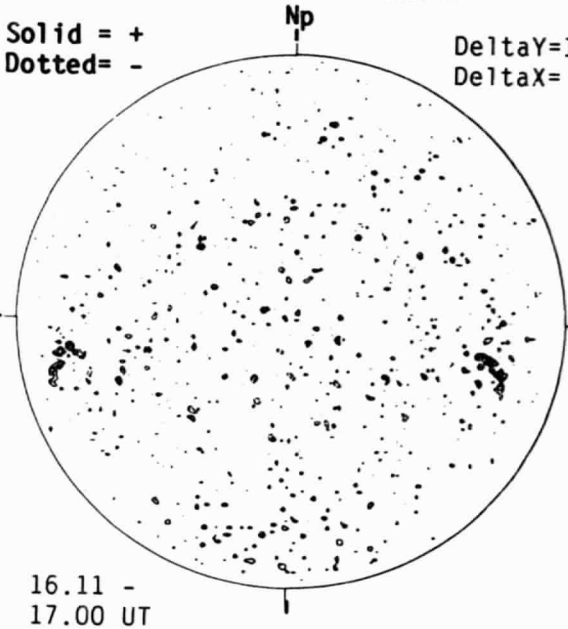
STANFORD MAGNETOGRAM

Solid = +
Dashed= -



MT. WILSON MAGNETOGRAM

Solid = +
Dotted= -



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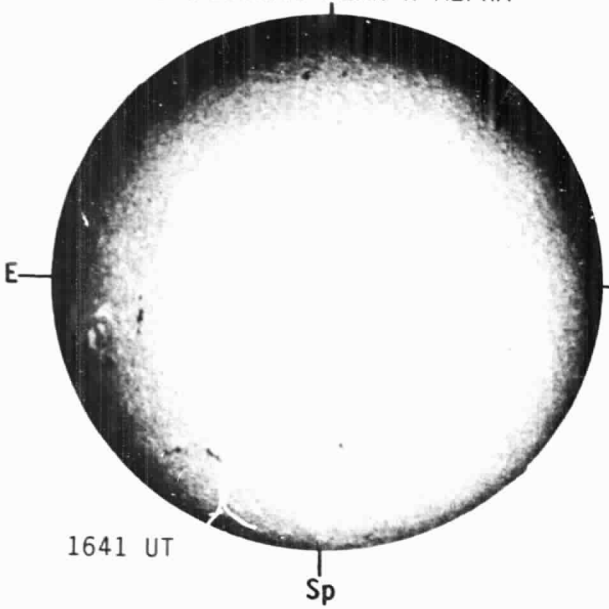
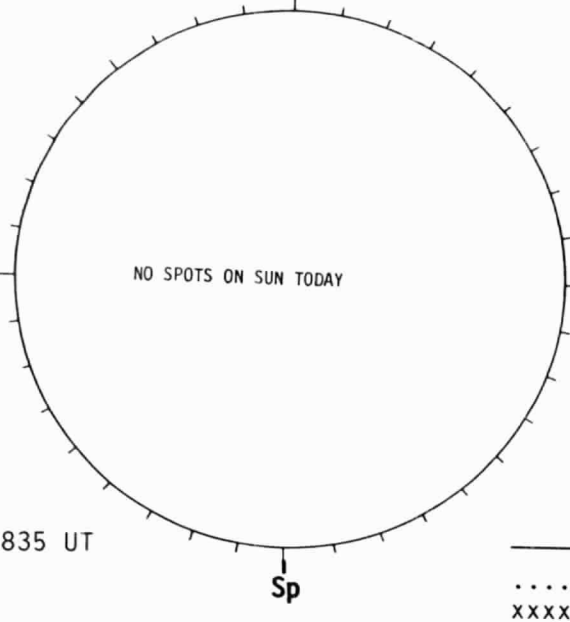
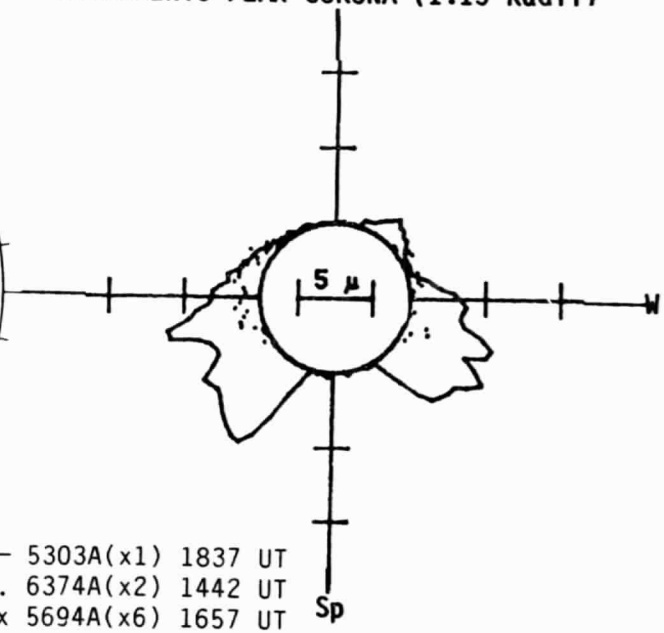
SACRAMENTO PEAK H-ALPHA



HOLLOMAN SUNSPOTS



SACRAMENTO PEAK CORONA (1.15 Radii)

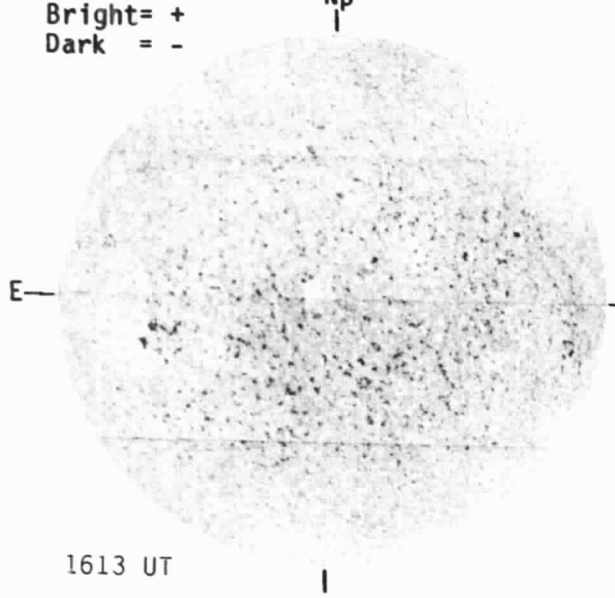


—— 5303A(x1) 1837 UT
.... 6374A(x2) 1442 UT
xxxx 5694A(x6) 1657 UT
No 5694A Activity Today

A P R I L 14, 1 9 8 5 (P -26.03, B_o=-5.62, L_o= 34.03)

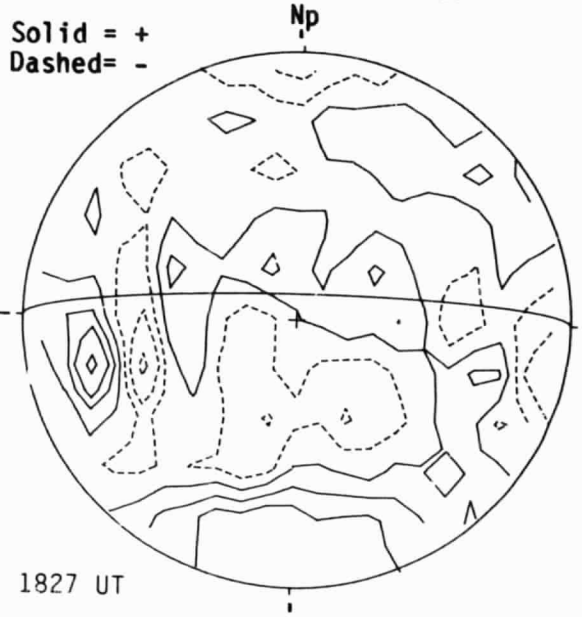
KITT PEAK MAGNETOGRAM

Bright= +
Dark = -



STANFORD MAGNETOGRAM

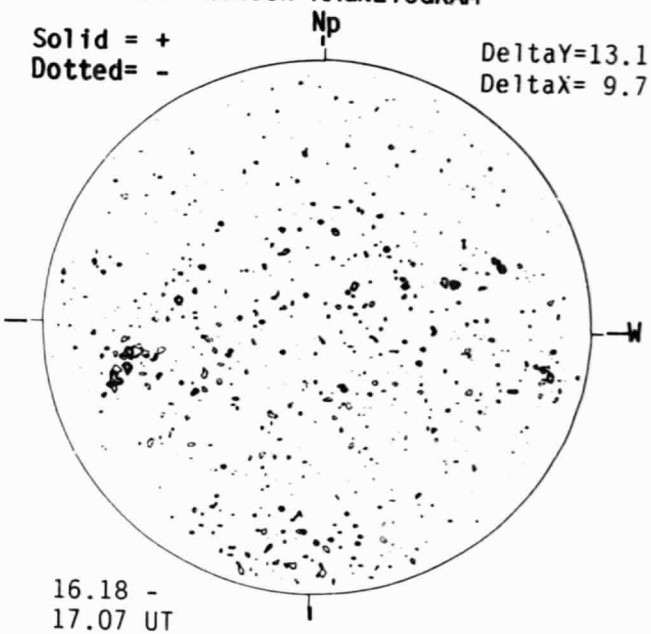
Solid = +
Dashed= -



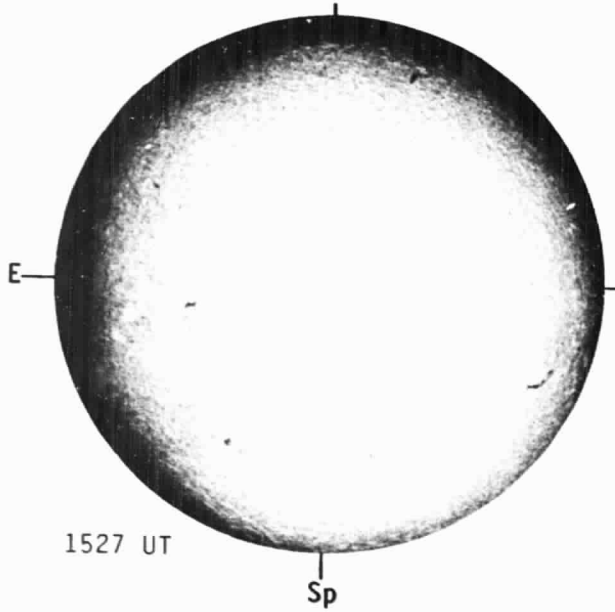
MT. WILSON MAGNETOGRAM

Solid = +
Dotted= -

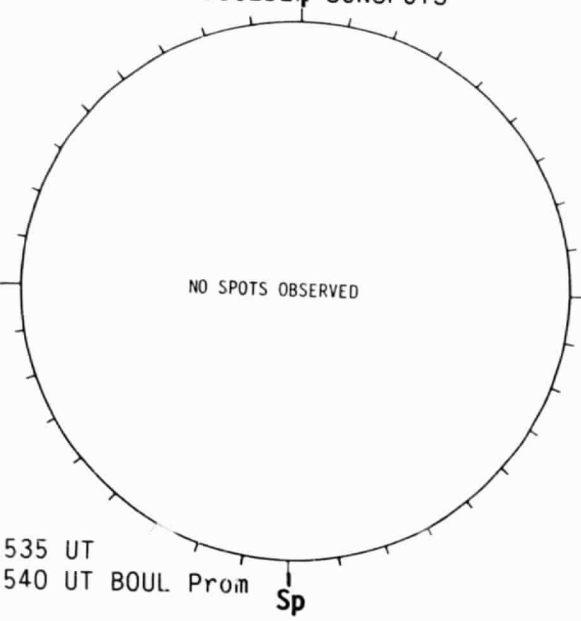
DeltaY=13.1
DeltaX= 9.7



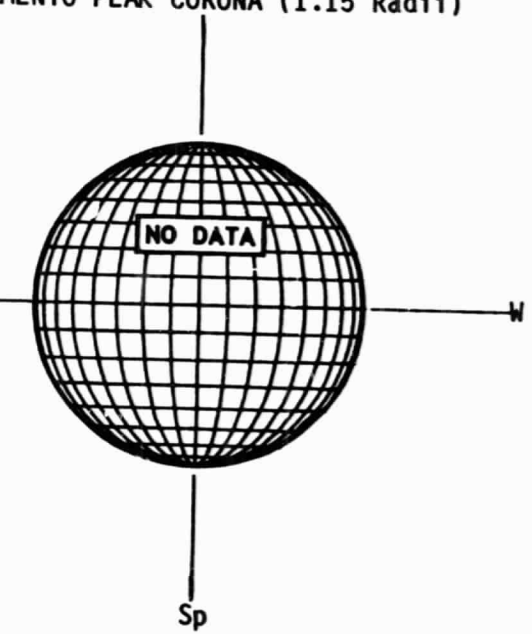
SACRAMENTO PEAK H-ALPHA



BOULDER SUNSPOTS



SACRAMENTO PEAK CORONA (1.15 Radii)



A P R I L 15, 1 9 8 5 (P -25.98, B_o=-5.54, L_o= 20.83)

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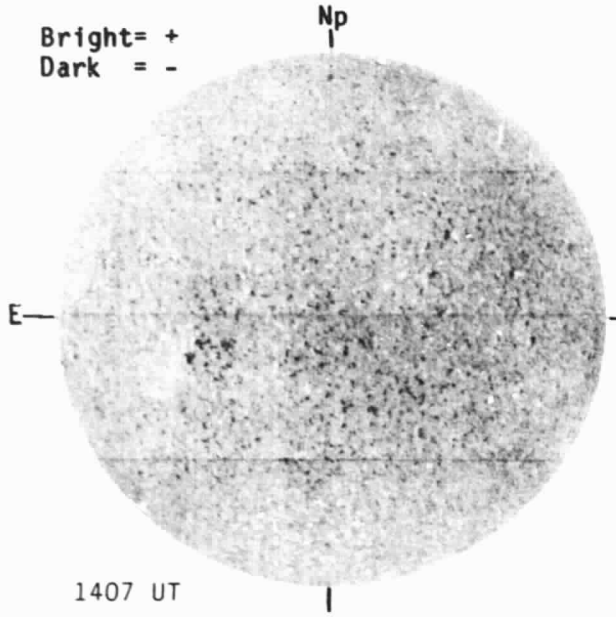
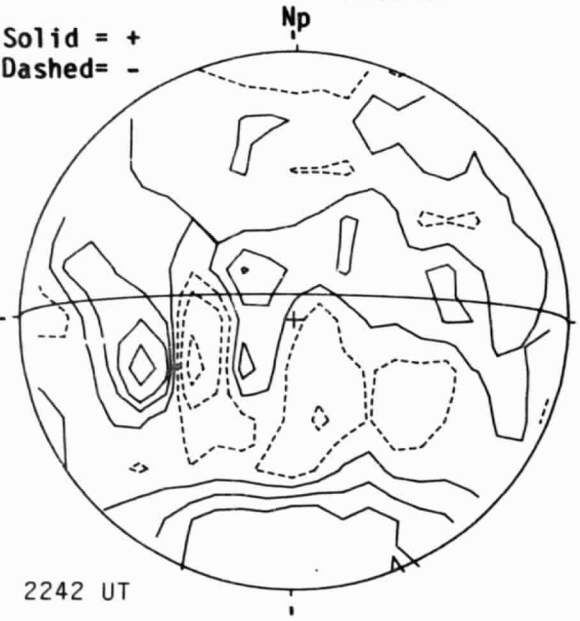
KITT PEAK MAGNETOGRAM

Bright= +
Dark = -



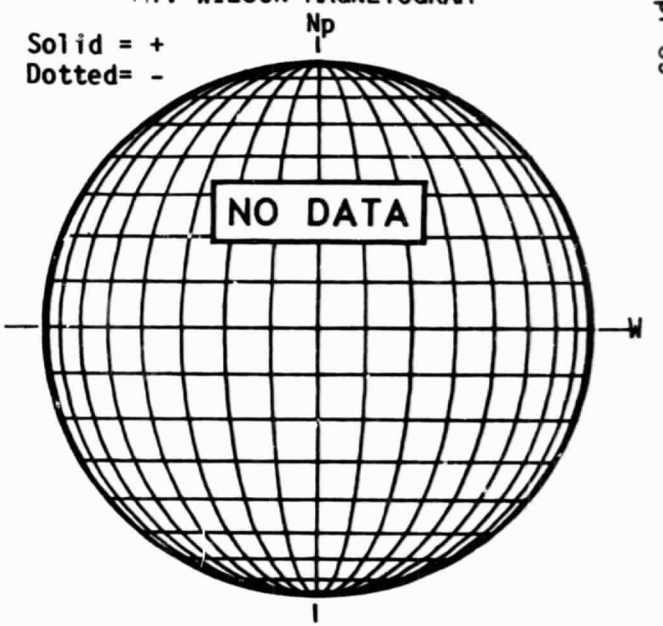
STANFORD MAGNETOGRAM

Solid = +
Dashed= -

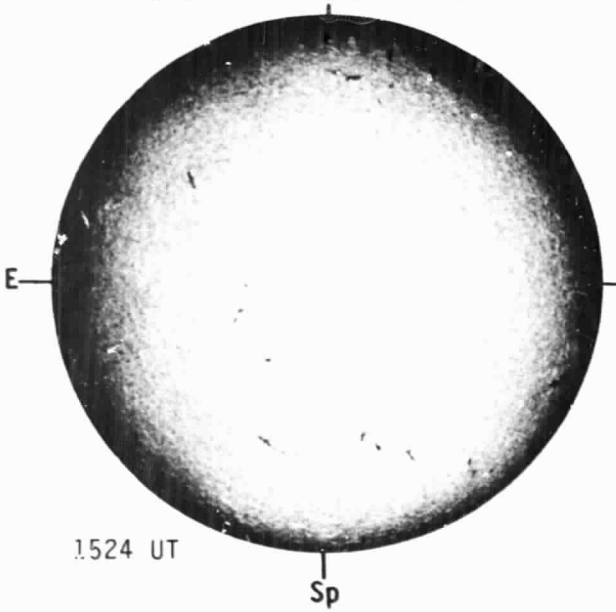


MT. WILSON MAGNETOGRAM

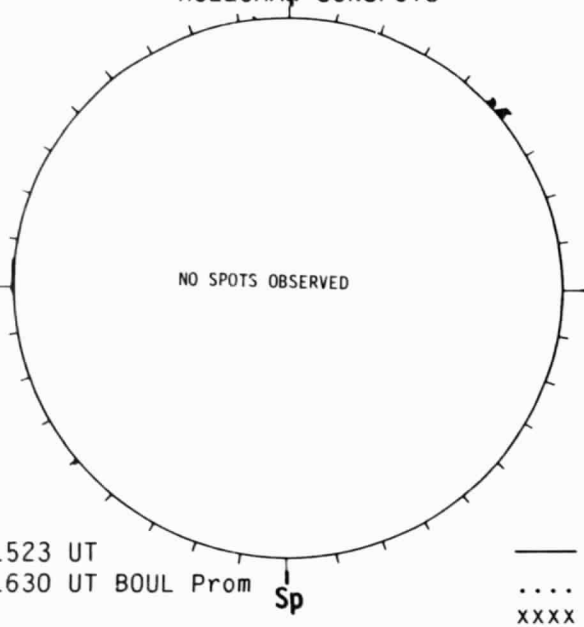
Solid = +
Dotted= -



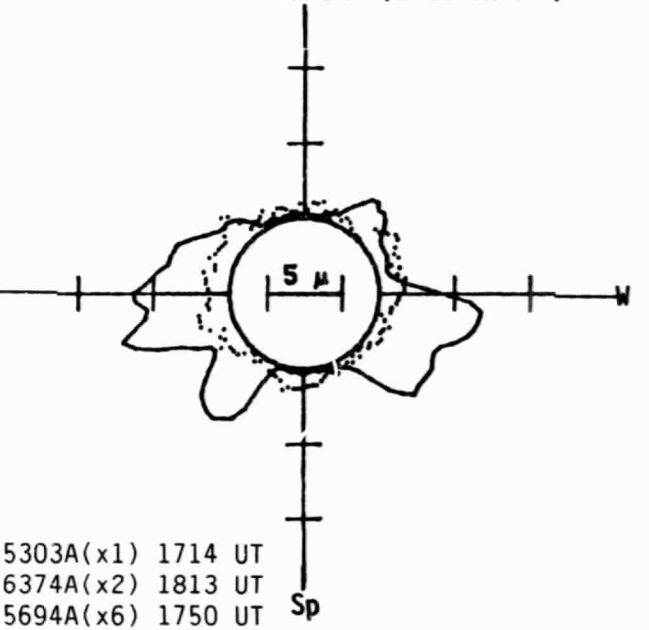
SACRAMENTO PEAK H-ALPHA



HOLLOMAN SUNSPOTS



SACRAMENTO PEAK CORONA (1.15 Radii)

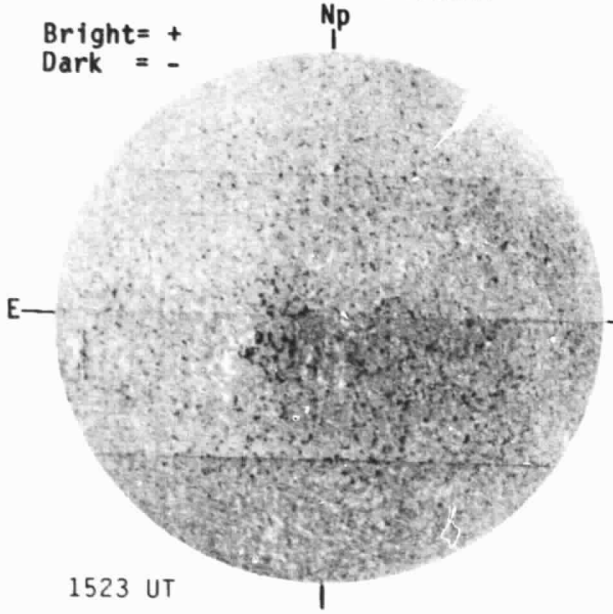


—— 5303A(x1) 1714 UT
.... 6374A(x2) 1813 UT
xxxx 5694A(x6) 1750 UT
No 5694A Activity Today

A P R I L 16, 1 9 8 5 (P -25.91, B_o=-5.46, L_o= 7.63)

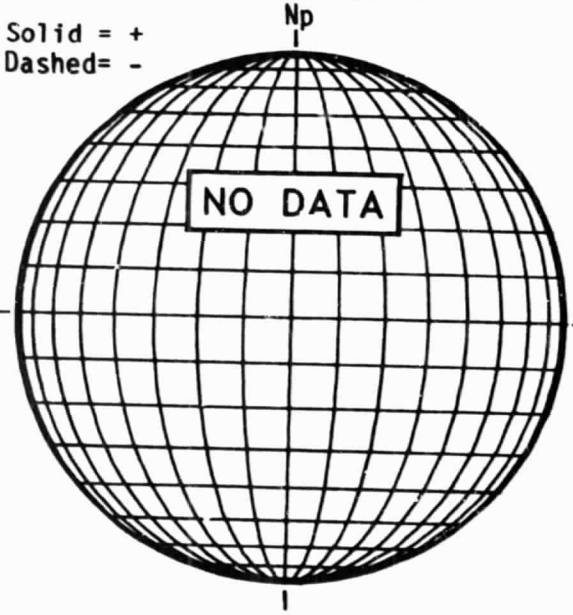
KITT PEAK MAGNETOGRAM

Bright= +
Dark = -



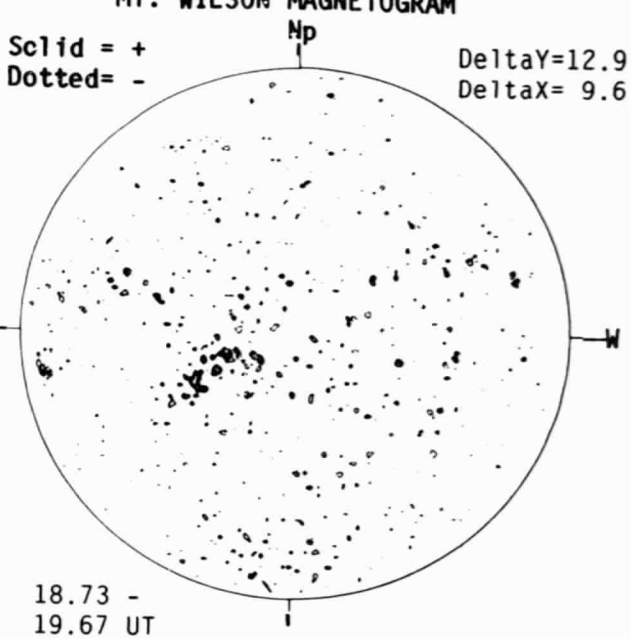
STANFORD MAGNETOGRAM

Solid = +
Dashed= -

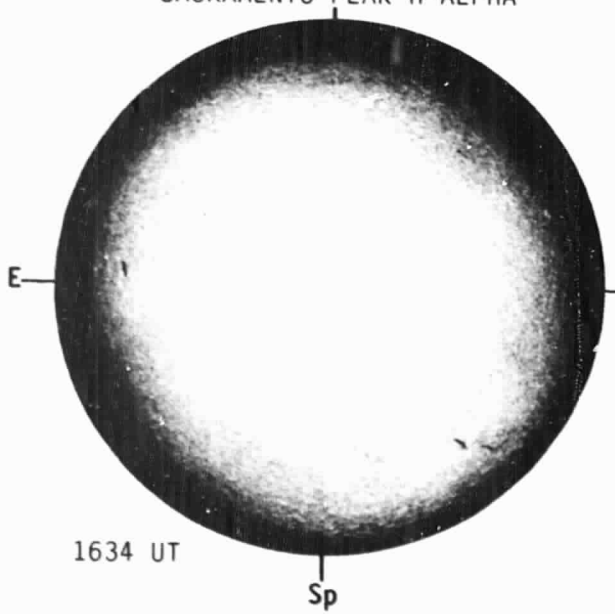


MT. WILSON MAGNETOGRAM

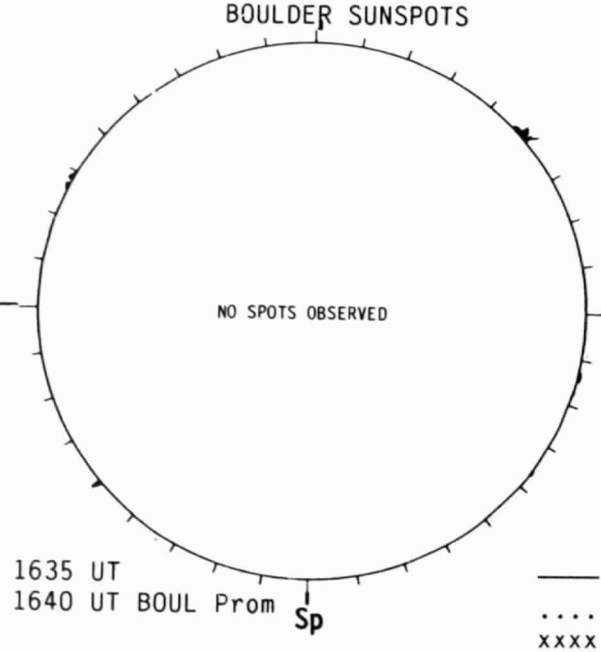
Sclid = +
Dotted= -



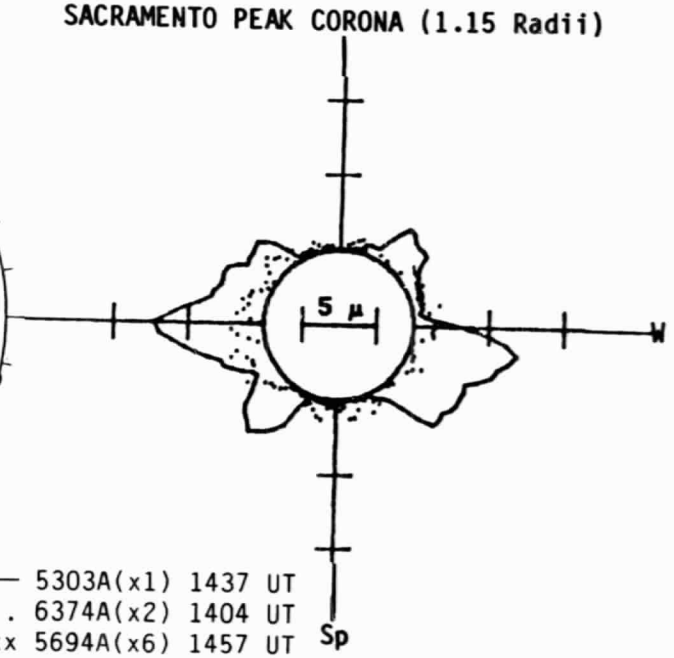
SACRAMENTO PEAK H-ALPHA



BOULDER SUNSPOTS



SACRAMENTO PEAK CORONA (1.15 Radii)

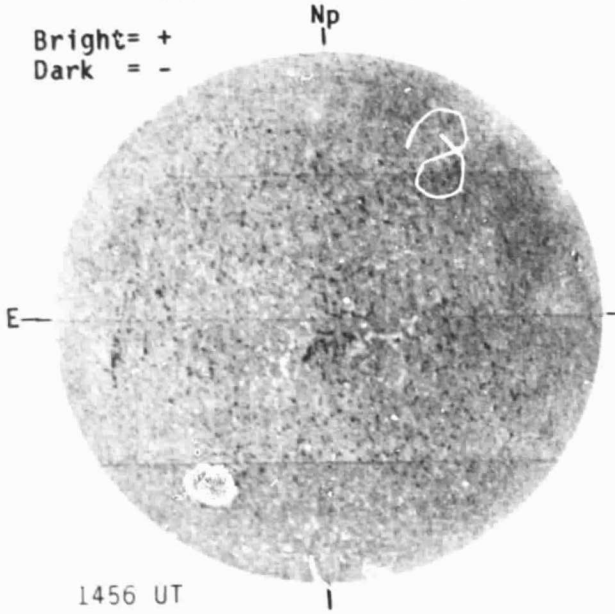


—— 5303A(x1) 1437 UT
.... 6374A(x2) 1404 UT
xxxx 5694A(x6) 1457 UT
No 5694A Activity Today

A P R I L 17, 1 9 8 5 (P -25.84, B_o=-5.38, L_o= 354.42)

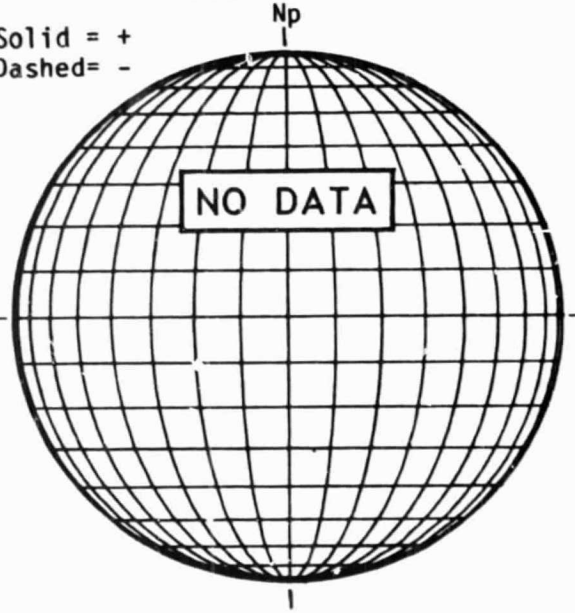
KITT PEAK MAGNETOGRAM

Bright= +
Dark = -



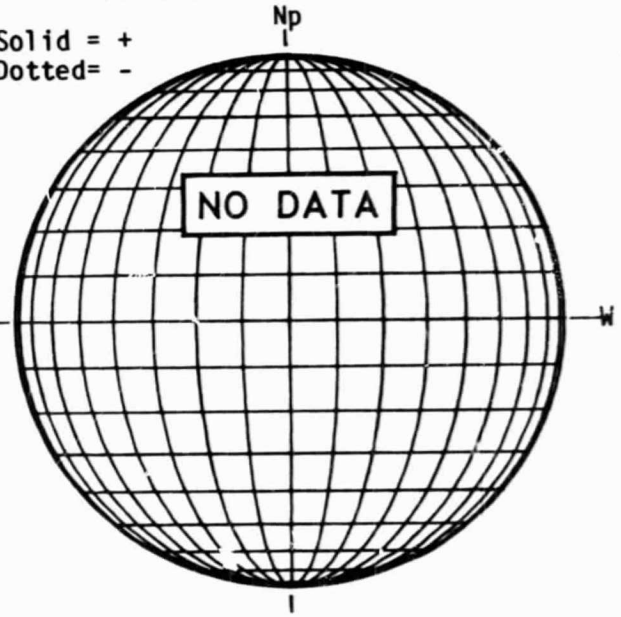
STANFORD MAGNETOGRAM

Solid = +
Dashed= -

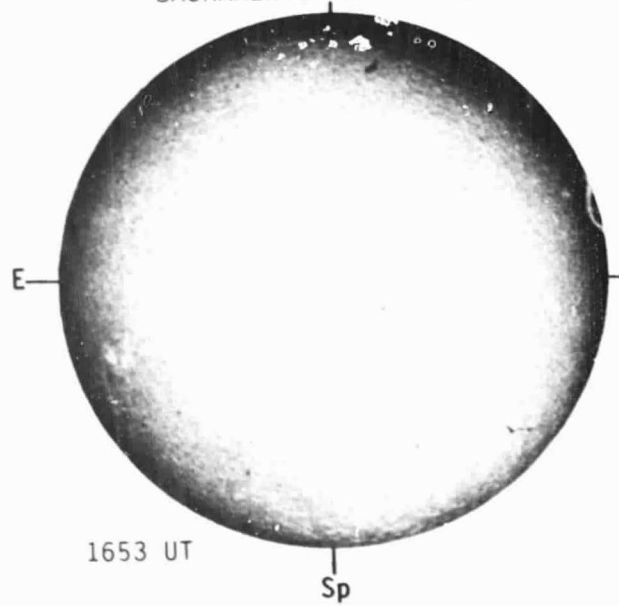


MT. WILSON MAGNETOGRAM

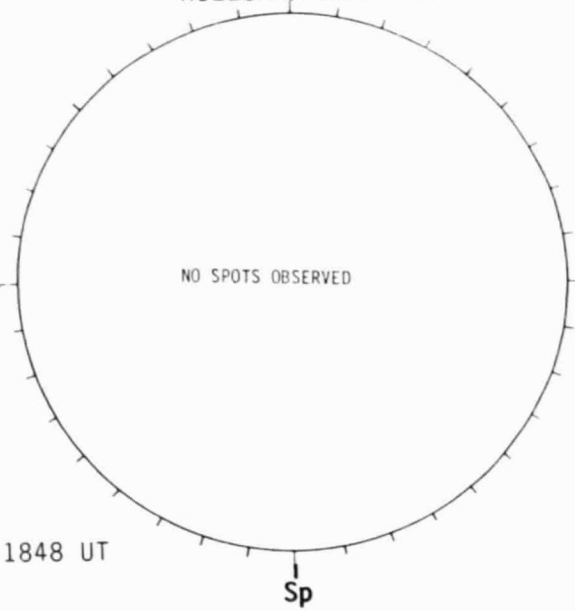
Solid = +
Dotted= -



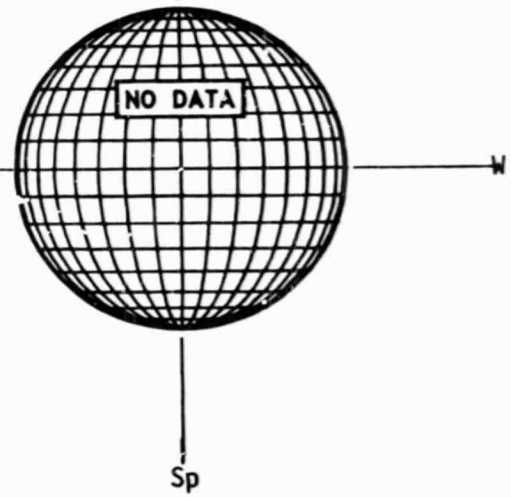
SACRAMENTO PEAK H-ALPHA



HOLLOMAN SUNSPOTS



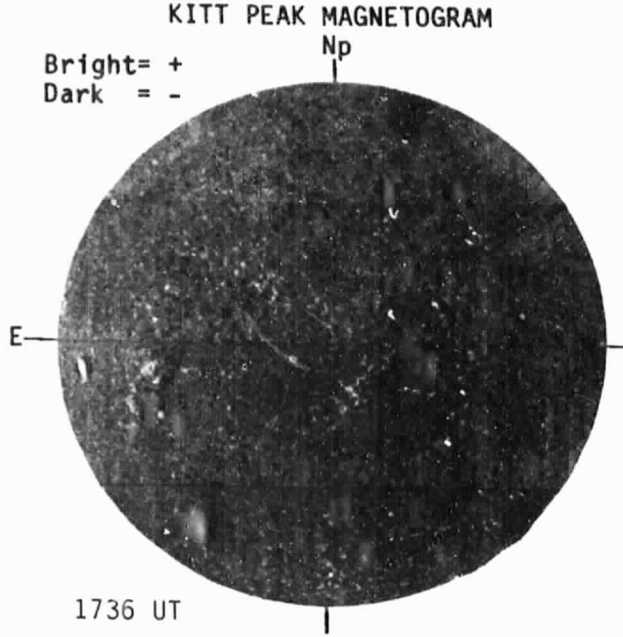
SACRAMENTO PEAK CORONA (1.15 Radii)



A P R I L 18, 1 9 8 5 (P -25.76, B_o=-5.30, L_o= 341.22)

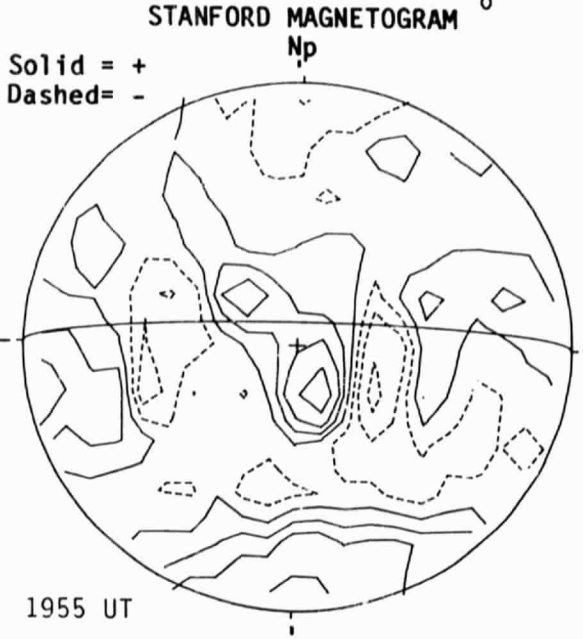
KITT PEAK MAGNETOGRAM

Bright= +
Dark = -



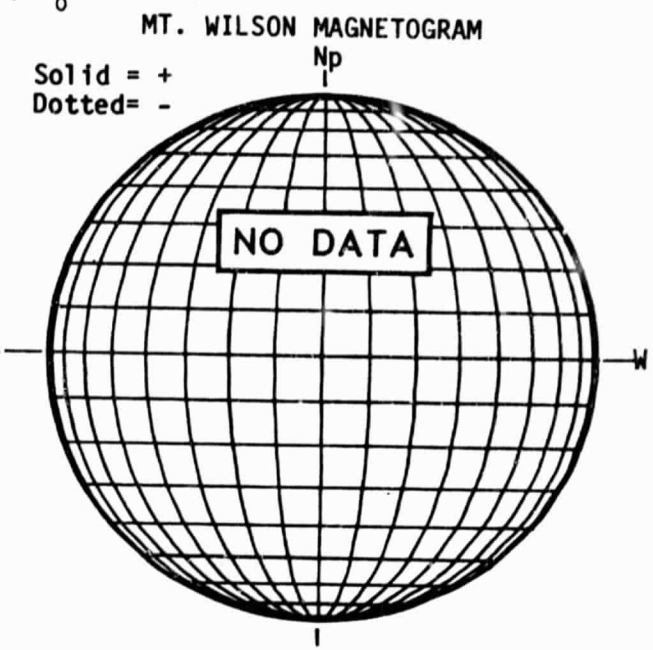
STANFORD MAGNETOGRAM

Solid = +
Dashed= -

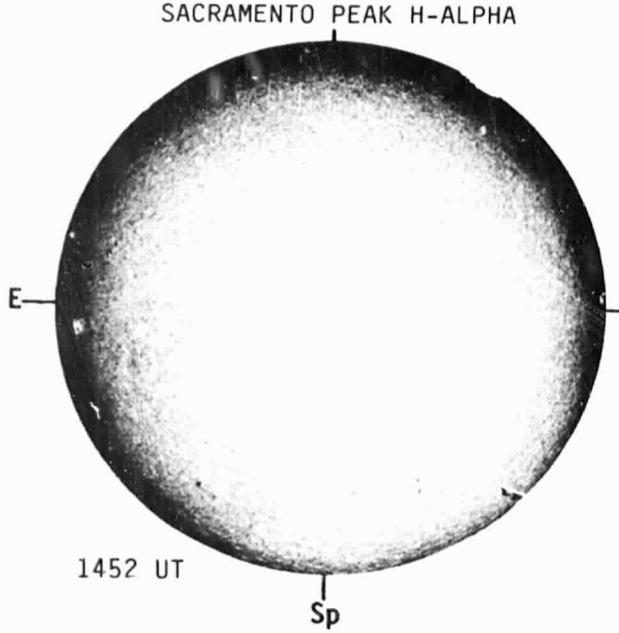


MT. WILSON MAGNETOGRAM

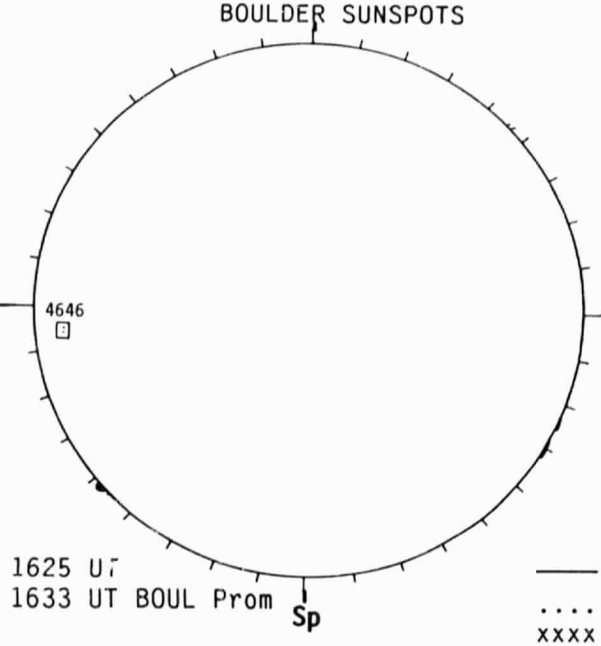
Solid = +
Dotted= -



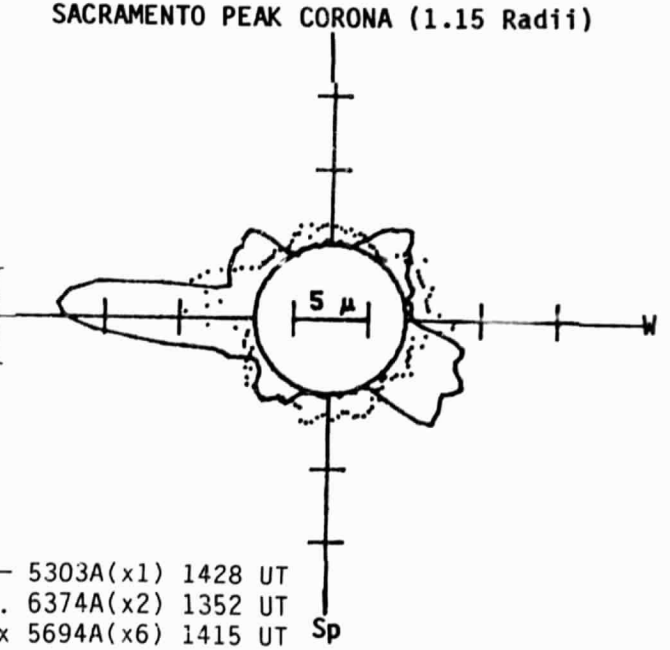
SACRAMENTO PEAK H-ALPHA



BOULDER SUNSPOTS



SACRAMENTO PEAK CORONA (1.15 Radii)



—— 5303A(x1) 1428 UT
.... 6374A(x2) 1352 UT
xxxx 5694A(x6) 1415 UT
No 5694A Activity Today

A P R I L 19, 1 9 8 5 (P -25.68, B_o=-5.22, L_o= 328.01)

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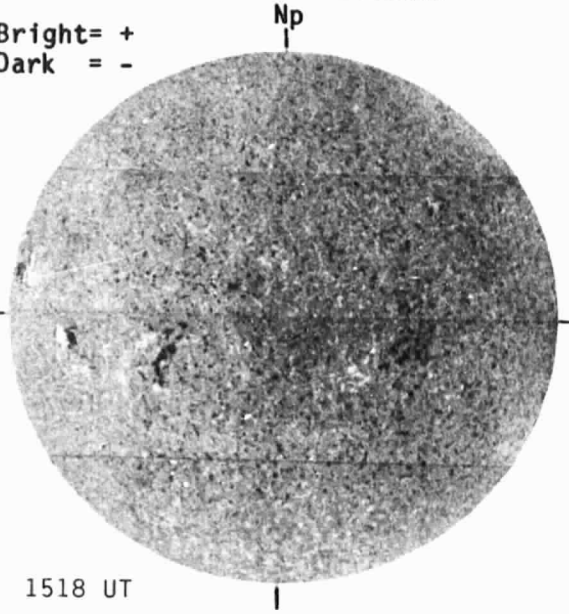
Apr 85

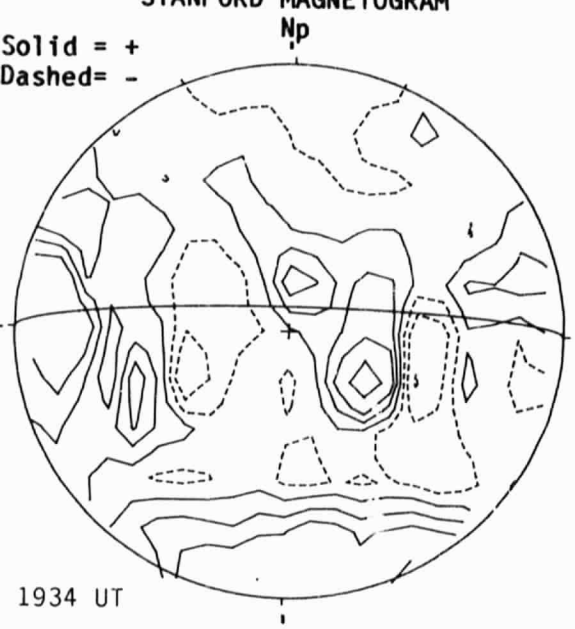
KITT PEAK MAGNETOGRAM

Bright= +
Dark = -



STANFORD MAGNETOGRAM

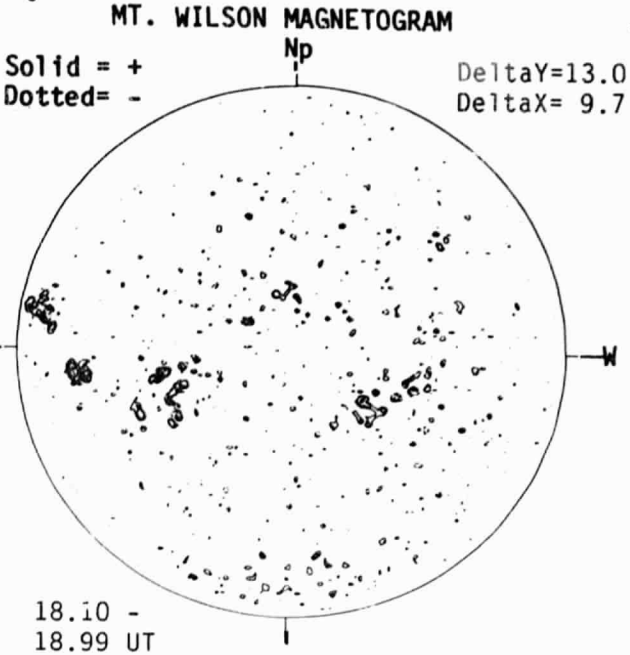
Solid = +
Dashed= -



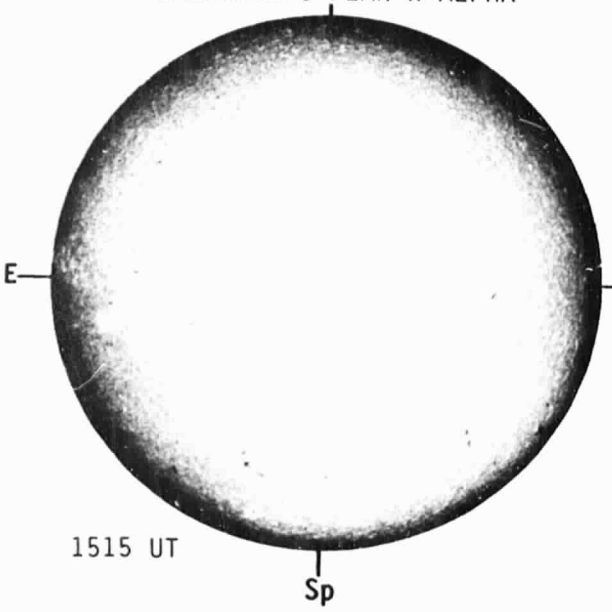
MT. WILSON MAGNETOGRAM

Solid = +
Dotted= -

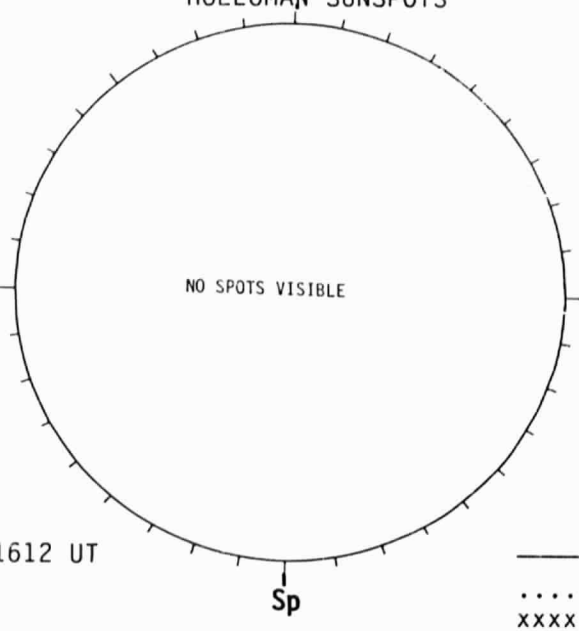
DeltaY=13.0
DeltaX= 9.7



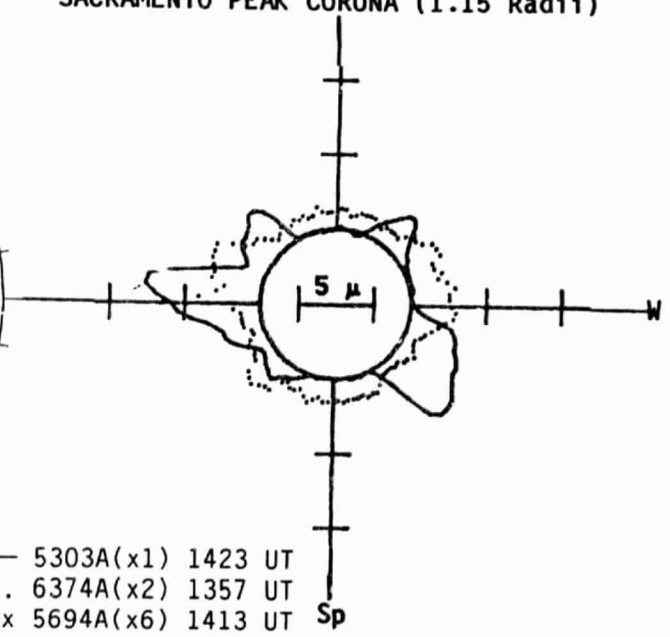
SACRAMENTO PEAK H-ALPHA



HOLLOMAN SUNSPOTS



SACRAMENTO PEAK CORONA (1.15 Radii)

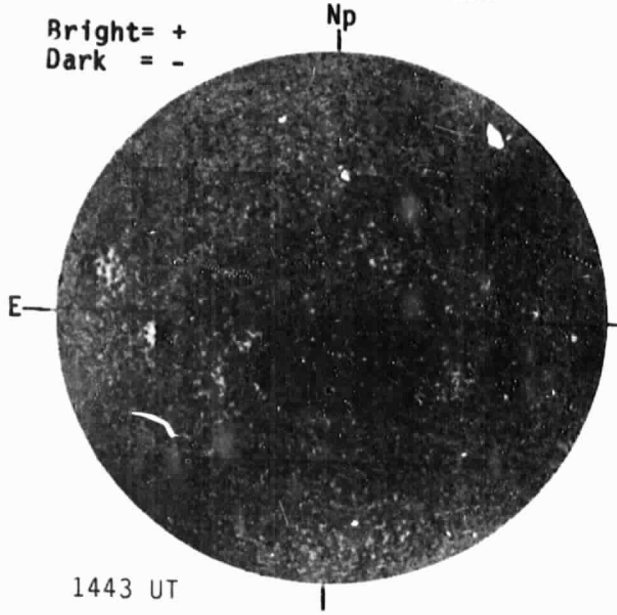


—— 5303A(x1) 1423 UT
.... 6374A(x2) 1357 UT
xxxx 5694A(x6) 1413 UT
No 5694A Activity Today

A P R I L 20, 1 9 8 5 (P -25.58, B_o=-5.14, L_o= 314.80)

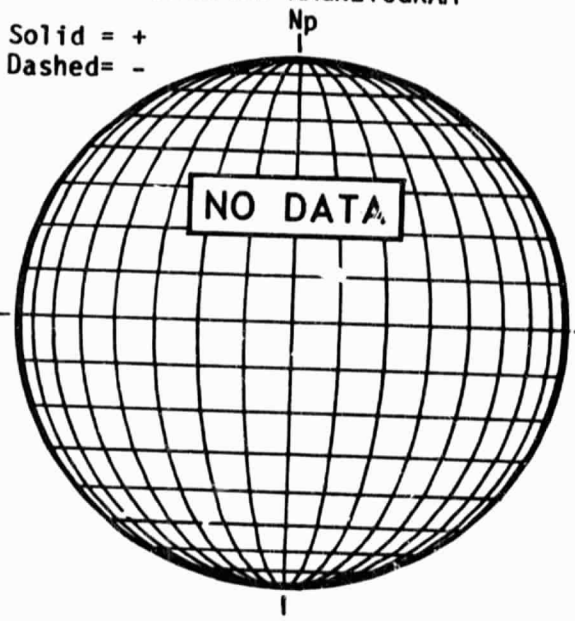
KITT PEAK MAGNETOGRAM

Bright= +
Dark = -



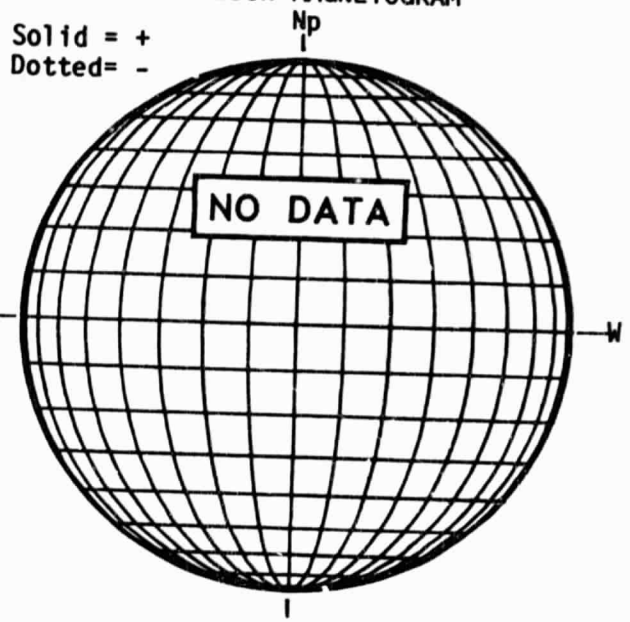
STANFORD MAGNETOGRAM

Solid = +
Dashed= -

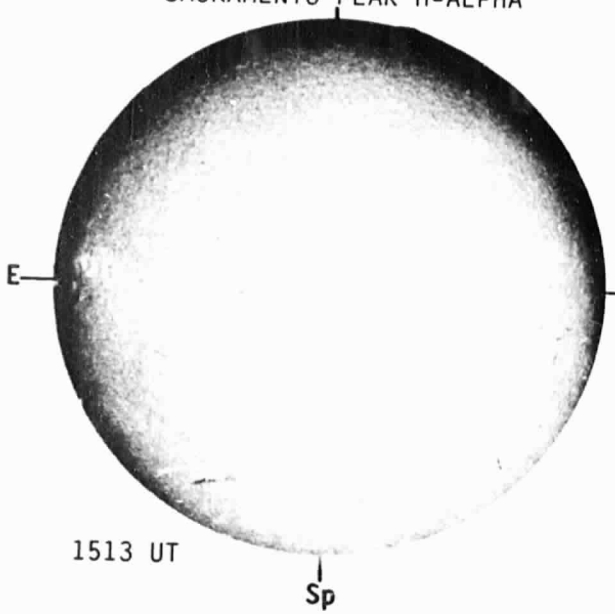


MT. WILSON MAGNETOGRAM

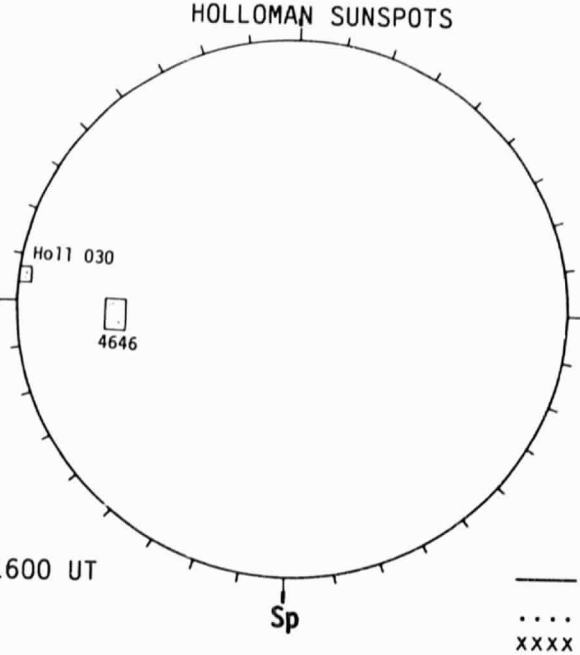
Solid = +
Dotted= -



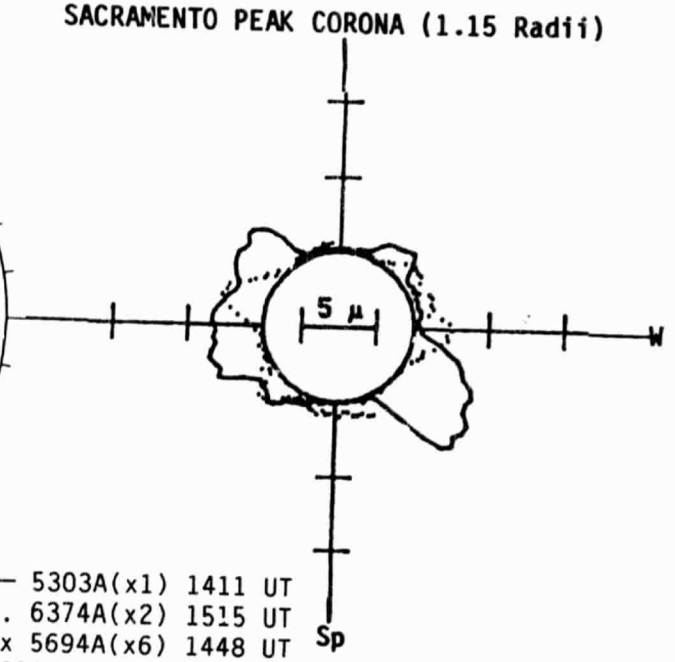
SACRAMENTO PEAK H-ALPHA



HOLLOMAN SUNSPOTS



SACRAMENTO PEAK CORONA (1.15 Radii)



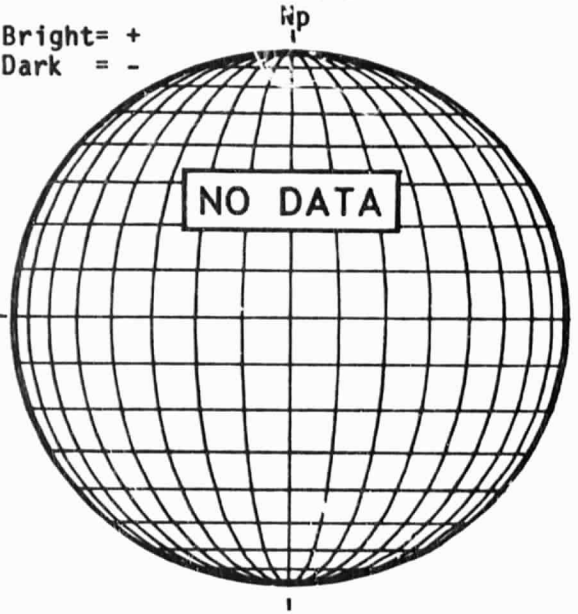
—— 5303A(x1) 1411 UT
.... 6374A(x2) 1515 UT
xxxx 5694A(x6) 1448 UT
No 5694A Activity Today

A P R I L 21, 1 9 8 5 (P -25.48, B_o=-5.05, L_o= 301.59)

Apr 85 54

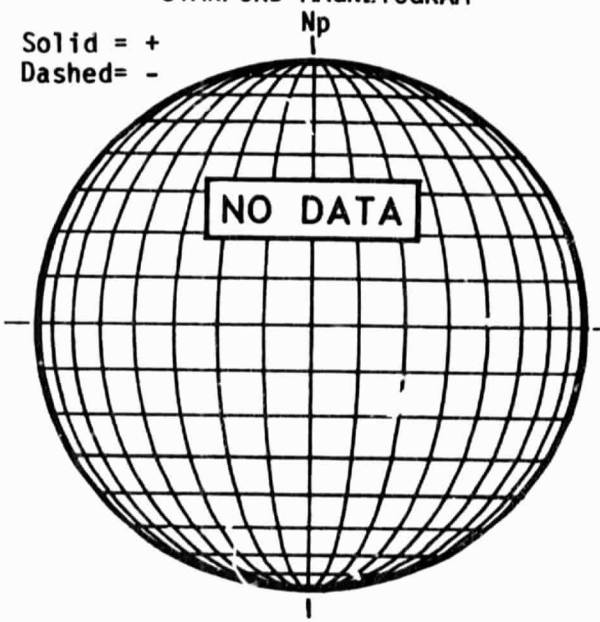
KITT PEAK MAGNETOGRAM

Bright= +
Dark = -



STANFORD MAGNETOGRAM

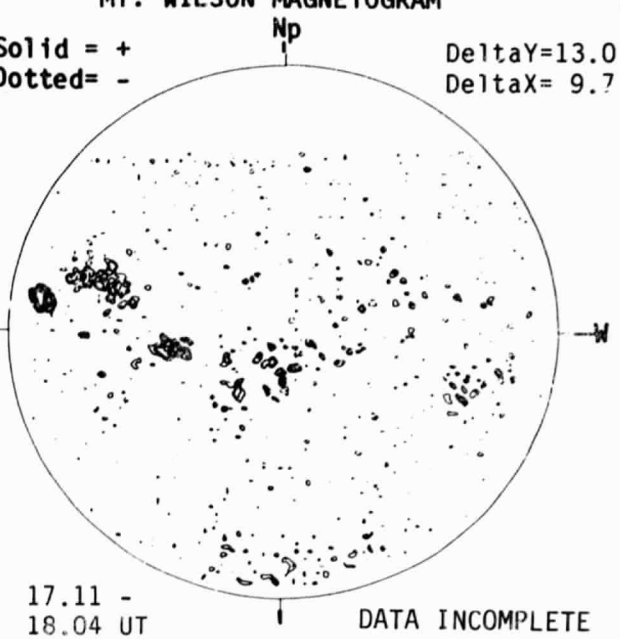
Solid = +
Dashed= -



MT. WILSON MAGNETOGRAM

Solid = +
Dotted= -

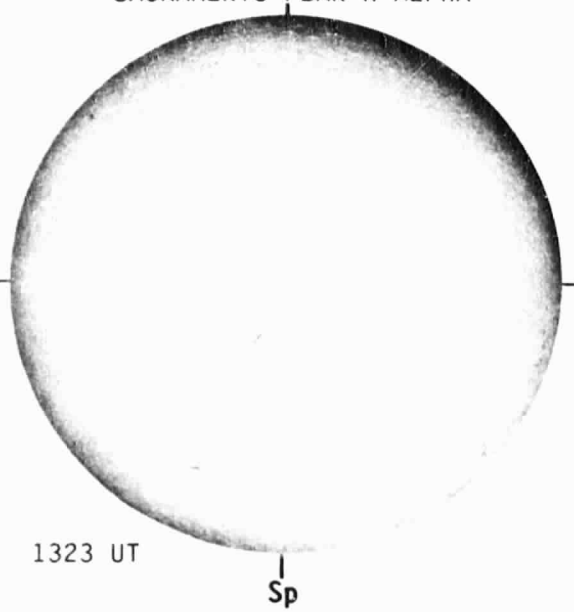
DeltaY=13.0
DeltaX= 9.7



17.11 -
18.04 UT

DATA INCOMPLETE

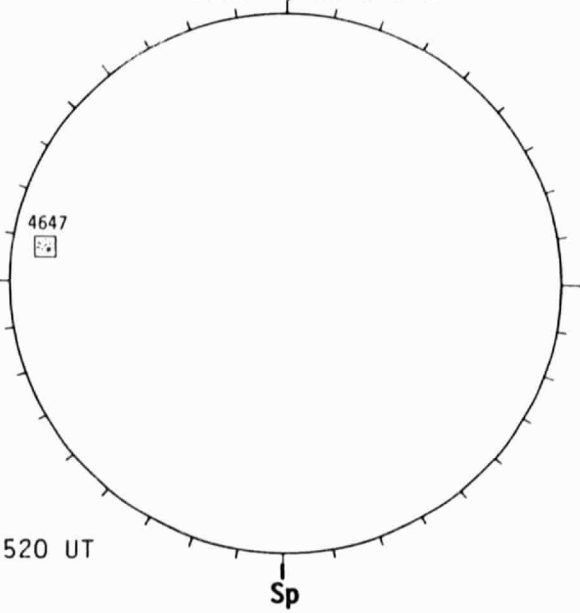
SACRAMENTO PEAK H-ALPHA



1323 UT

Sp

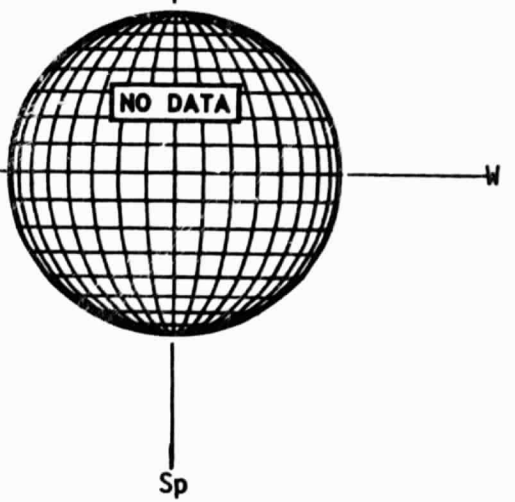
HOLLOMAN SUNSPOTS



1520 UT

Sp

SACRAMENTO PEAK CORONA (1.15 Radii)

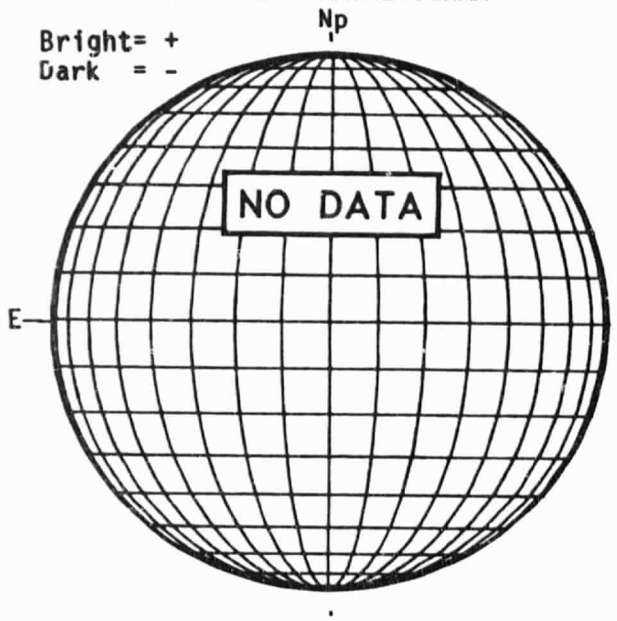


Sp

A P R I L 22, 1 9 8 5 (P -25.37, B_o=-4.96, L_o= 288.38)

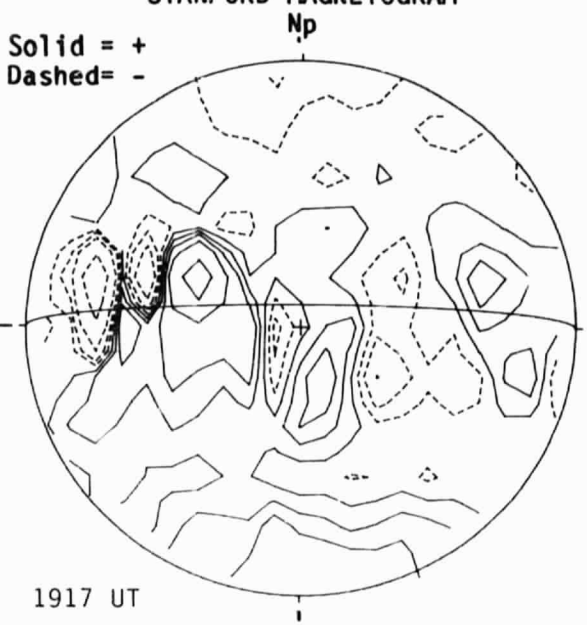
KITT PEAK MAGNETOGRAM

Bright= +
Dark = -



STANFORD MAGNETOGRAM

Solid = +
Dashed= -

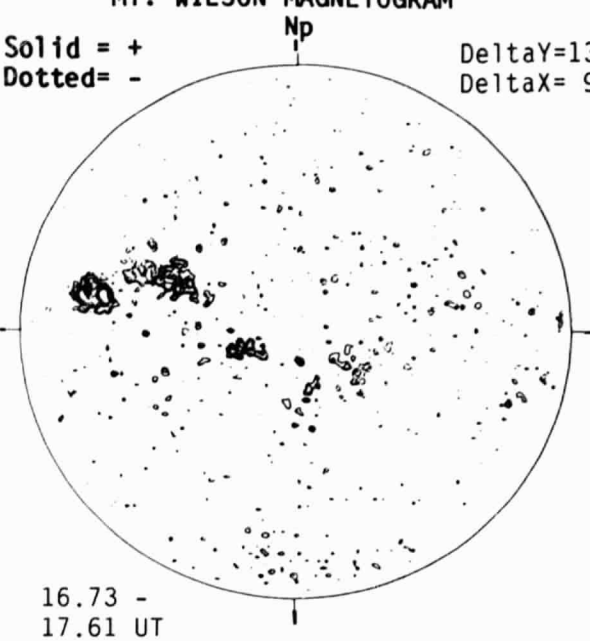


1917 UT

MT. WILSON MAGNETOGRAM

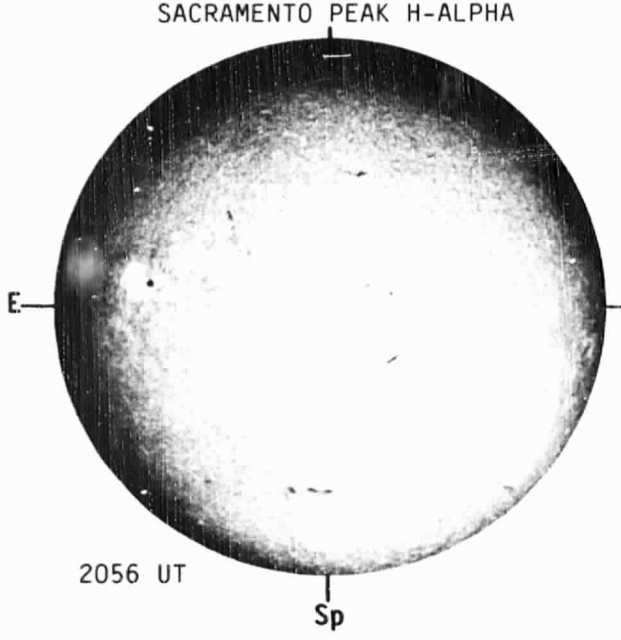
Solid = +
Dotted= -

DeltaY=13.0
DeltaX= 9.7



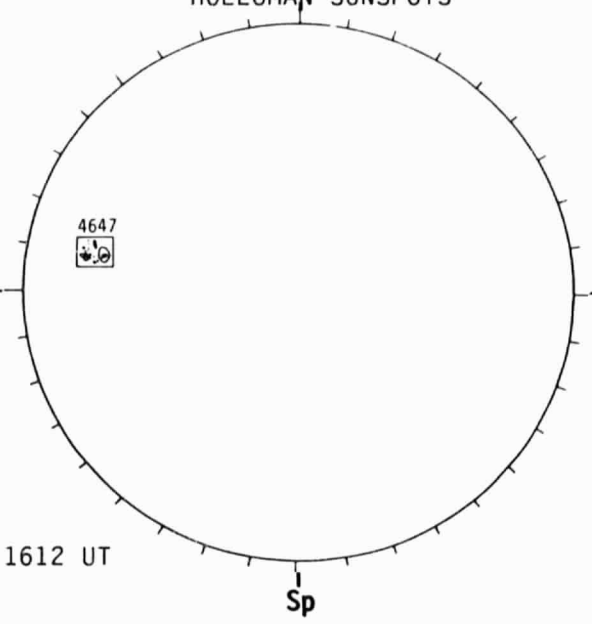
16.73 -
17.61 UT

SACRAMENTO PEAK H-ALPHA



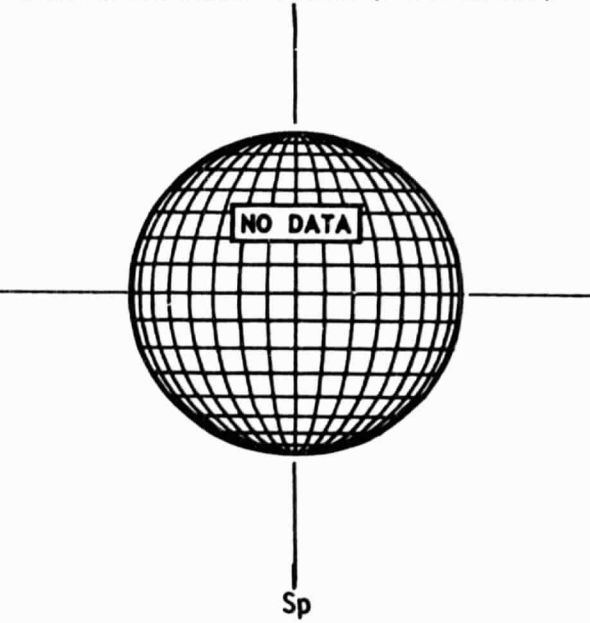
2056 UT

HOLLOMAN SUNSPOTS



1612 UT

SACRAMENTO PEAK CORONA (1.15 Radii)



A P R I L 23, 1 9 8 5 (P -25.26, B_o=-4.88, L_o= 275.18)

KITT PEAK MAGNETOGRAM

Np

Bright= +
Dark = -

NO DATA

E

STANFORD MAGNETOGRAM

Np

Solid = +
Dashed= -

1924 UT

MT. WILSON MAGNETOGRAM

Np

Solid = +
Dotted= -

DeltaY=13.0
DeltaX= 9.6

W

16.90 -
17.78 UT

Apr 85 56

SACRAMENTO PEAK H-ALPHA

E

1526 UT

Sp

BOULDER SUNSPOTS

4647

1640 UT
1650 UT BOUL Prom

Sp

SACRAMENTO PEAK CORONA (1.15 Radii)

5 μ

W

—— 5303A(x1) 1402 UT
.... 6374A(x2) 1424 UT
xxxx 5694A(x6) 1440 UT
No 5694A Activity Today

Sp

A P R I L 24, 1 9 8 5 (P -25.14, B_o=-4.79, L_o= 261.96)

KITT PEAK MAGNETOGRAM

Np

Bright= +
Dark = -

NO DATA

E-

STANFORD MAGNETOGRAM

Np

Solid = +
Dashed= -

2003 UT

MT. WILSON MAGNETOGRAM

Np

Solid = +
Dotted= -

DeltaY=12.9
DeltaX= 9.6

W

18.83 -
19.72 UT

SACRAMENTO PEAK H-ALPHA

E

1524 UT

Sp

HOLLOMAN SUNSPOTS

4647

1516 UT

Sp

SACRAMENTO PEAK CORONA (1.15 Radii)

5 μ

W

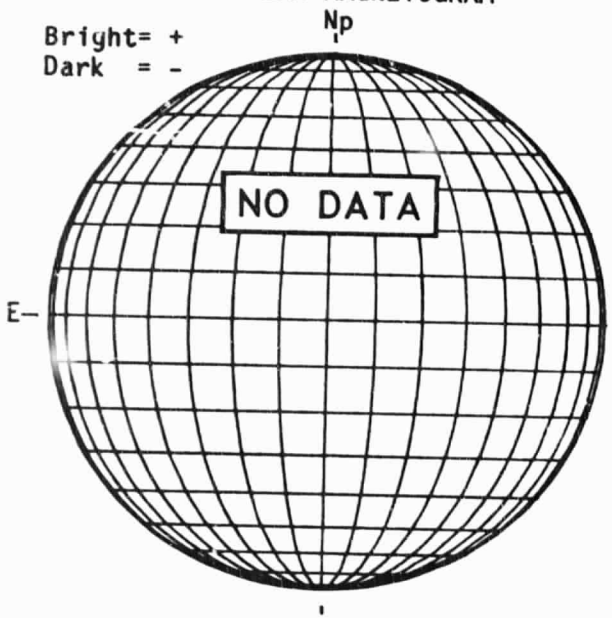
—— 5303A(x1) 1417 UT
xxxx 5694A(x6) 1346 UT
No 5694A Activity Today

Sp

A P R I L 25, 1 9 8 5 (P -25.00, B_0=-4.70, L_0= 248.75)

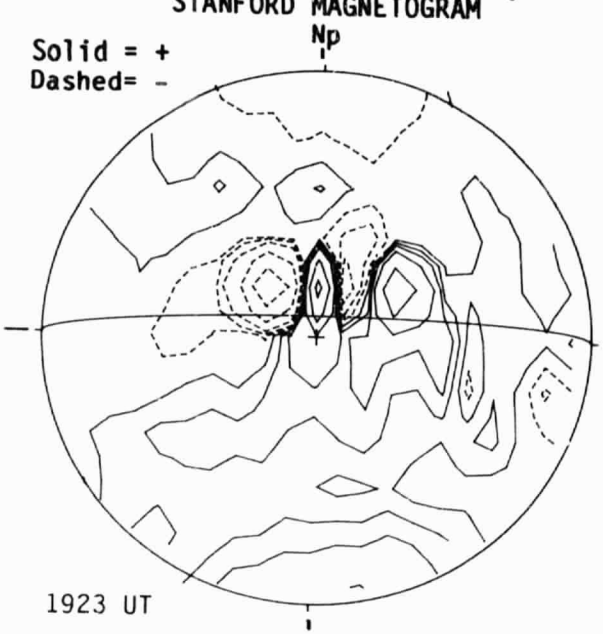
KITT PEAK MAGNETOGRAM

Bright= +
Dark = -



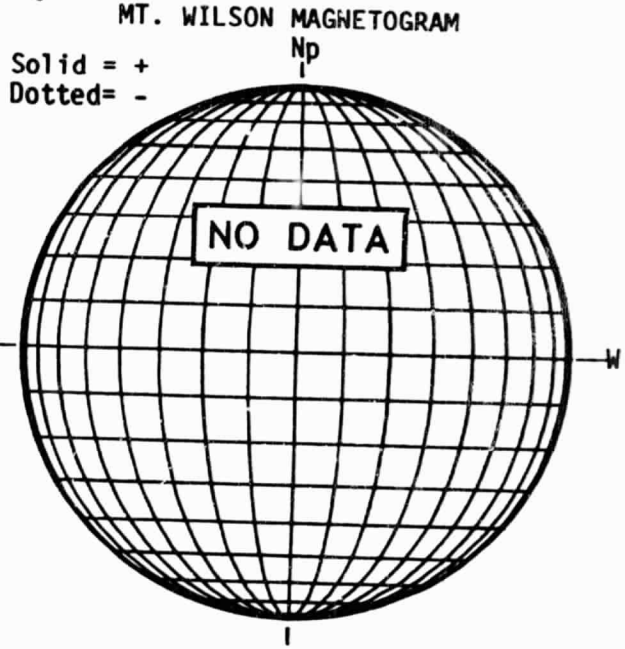
STANFORD MAGNETOGRAM

Solid = +
Dashed= -

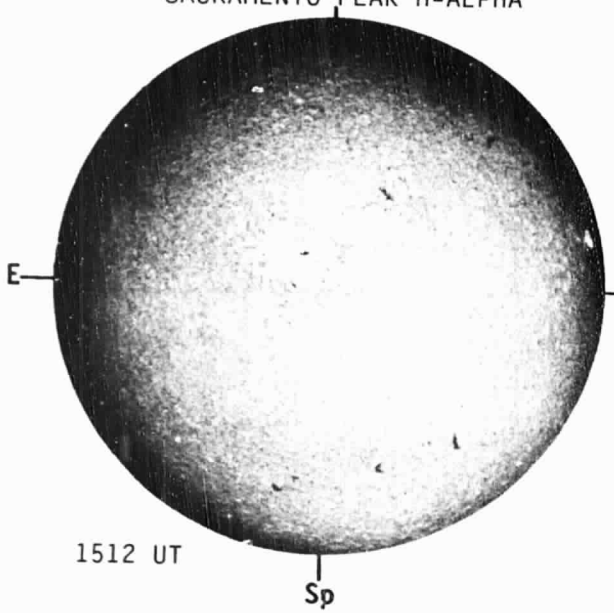


MT. WILSON MAGNETOGRAM

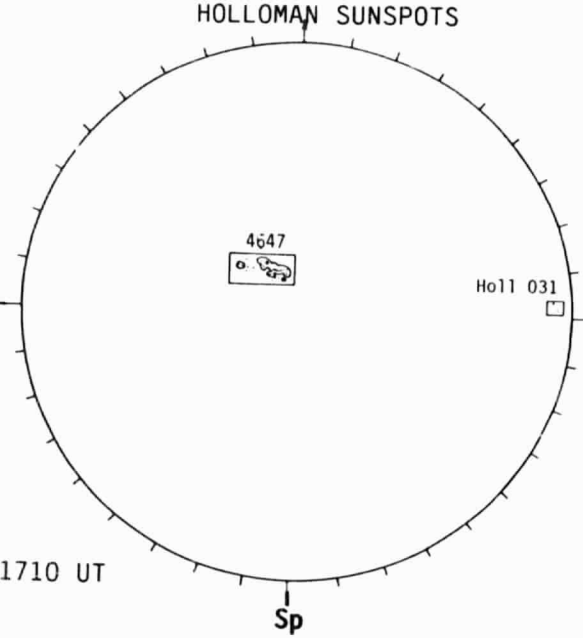
Solid = +
Dotted= -



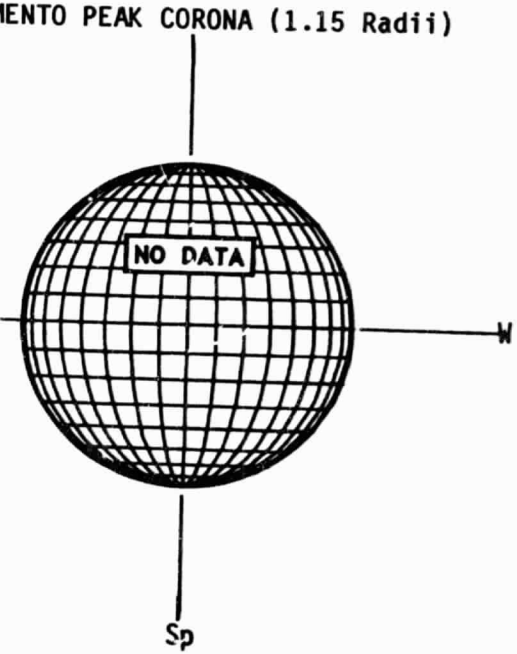
SACRAMENTO PEAK H-ALPHA



HOLLOMAN SUNSPOTS



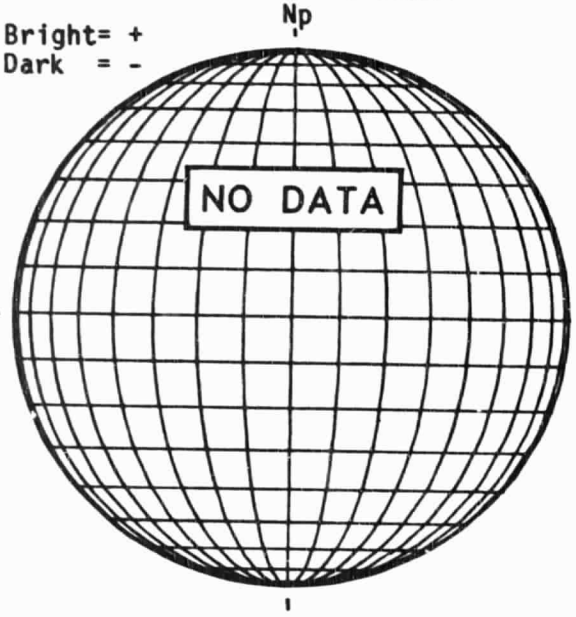
SACRAMENTO PEAK CORONA (1.15 Radii)



APRIL 26, 1985 (P -24.87, B_0=-4.60, L_0= 235.54)

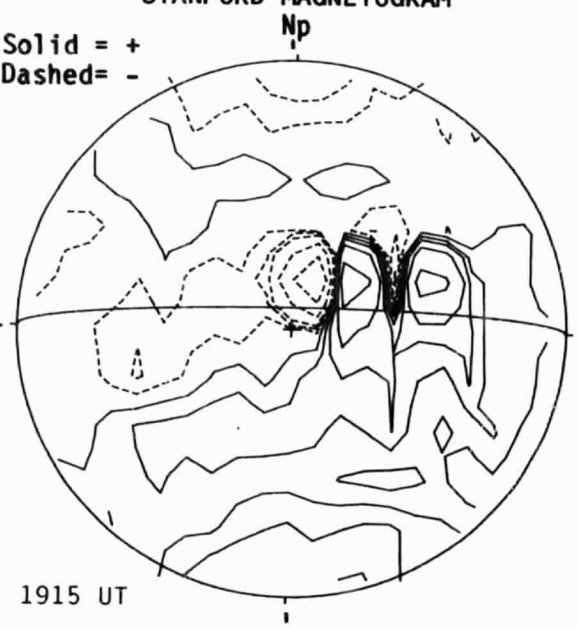
KITT PEAK MAGNETOGRAM

Bright= +
Dark = -



STANFORD MAGNETOGRAM

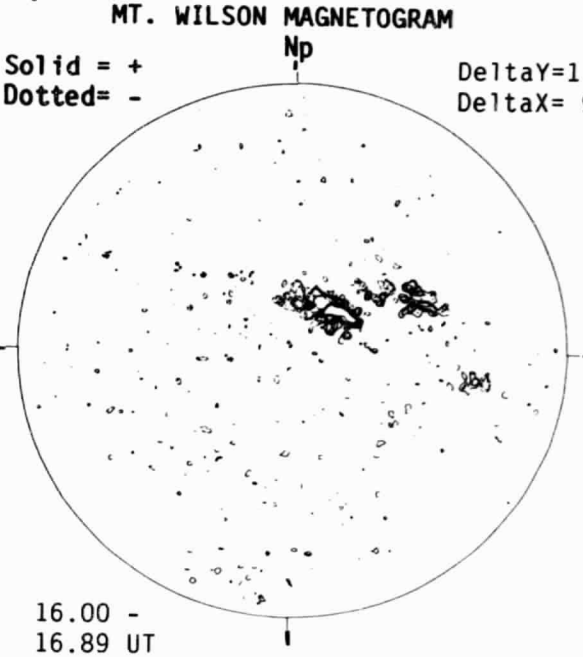
Solid = +
Dashed= -



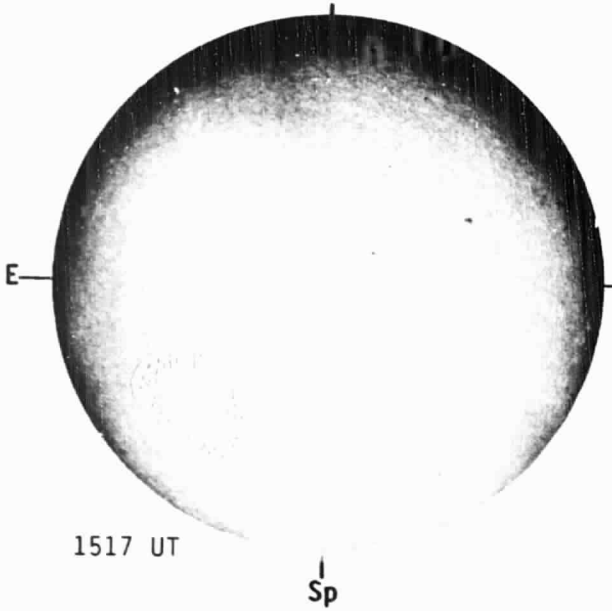
MT. WILSON MAGNETOGRAM

Solid = +
Dotted= -

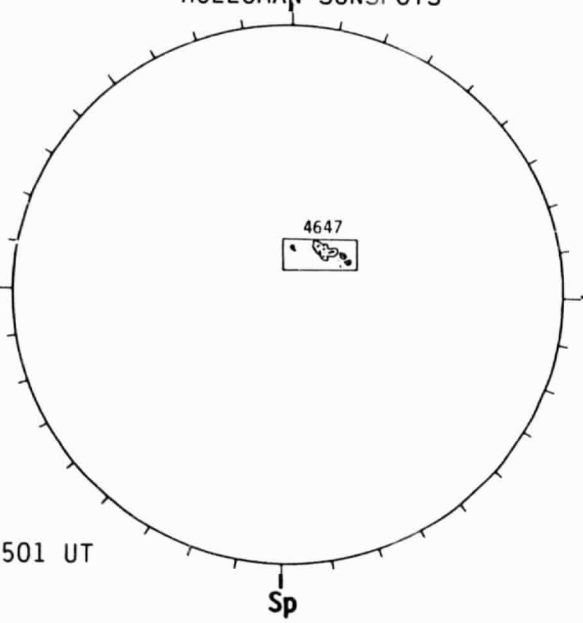
DeltaY=13.0
DeltaX= 9.7



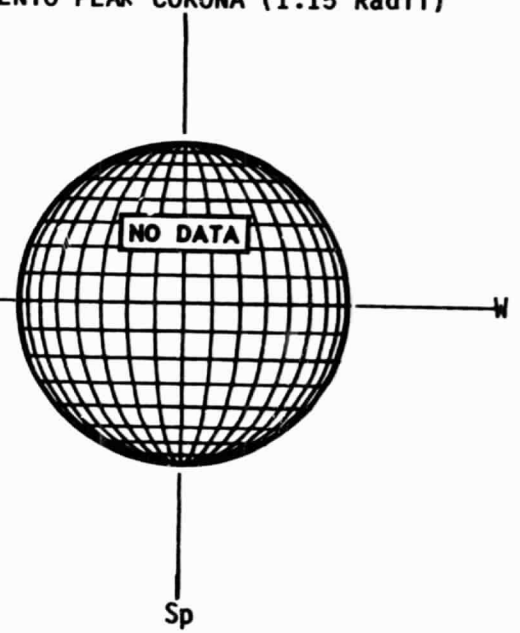
SACRAMENTO PEAK H-ALPHA



HOLLOMAN SUNSPOTS



SACRAMENTO PEAK CORONA (1.15 Radii)



A P R I L 27, 1 9 8 5 (P -24.72, B_o=-4.51, L_o= 222.33)

KITT PEAK MAGNETOGRAM

Np

Bright= +
Dark = -

NO DATA

E

STANFORD MAGNETOGRAM

Np

Solid = +
Dashed= -

2019 UT

MT. WILSON MAGNETOGRAM

Np

Solid = +
Dotted= -

DeltaY=13.0
DeltaX= 9.6

W

19.29 -
20.16 UT

Apr 85 60

SACRAMENTO PEAK H-ALPHA

E

1526 UT

Sp

HOLLOMAN SUNSPOTS

4647

1548 UT

Sp

SACRAMENTO PEAK CORONA (1.15 Radii)

5 μ

W

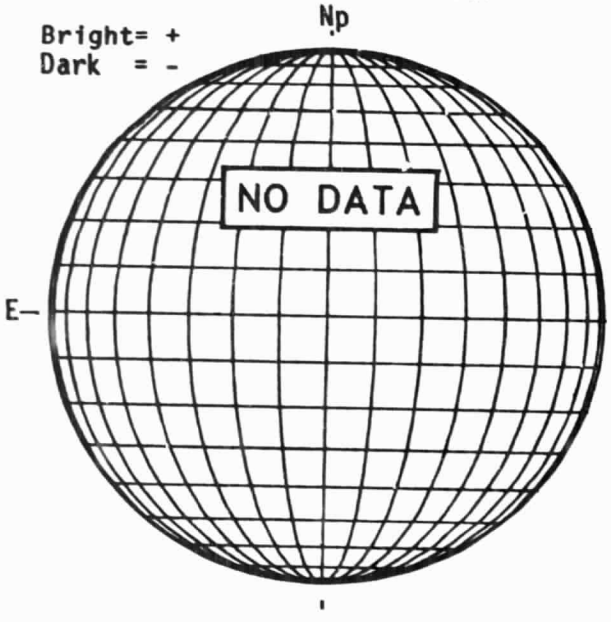
5303A(x1) 1734 UT

Sp

A P R I L 28, 1 9 8 5 (P -24.57, B_o=-4.42, L_o= 209.12)

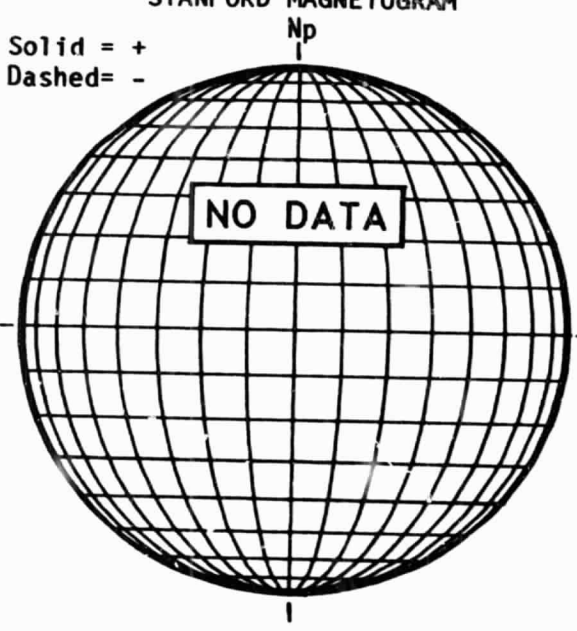
KITT PEAK MAGNETOGRAM

Bright= +
Dark = -



STANFORD MAGNETOGRAM

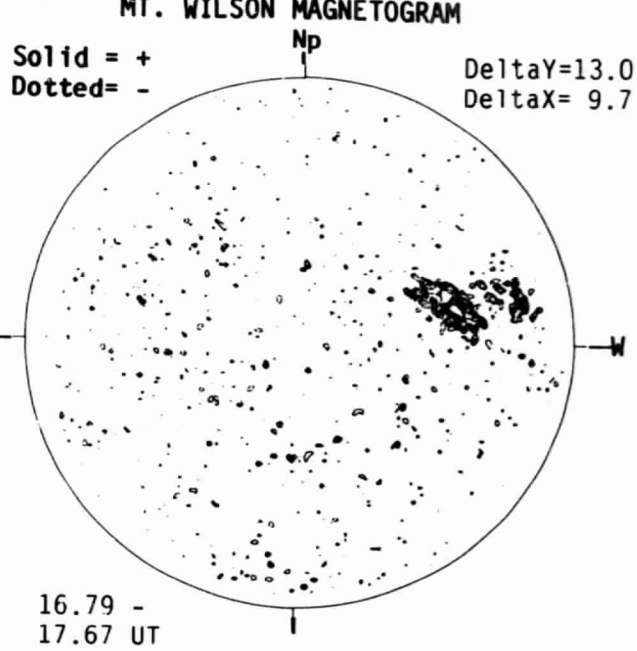
Solid = +
Dashed= -



MT. WILSON MAGNETOGRAM

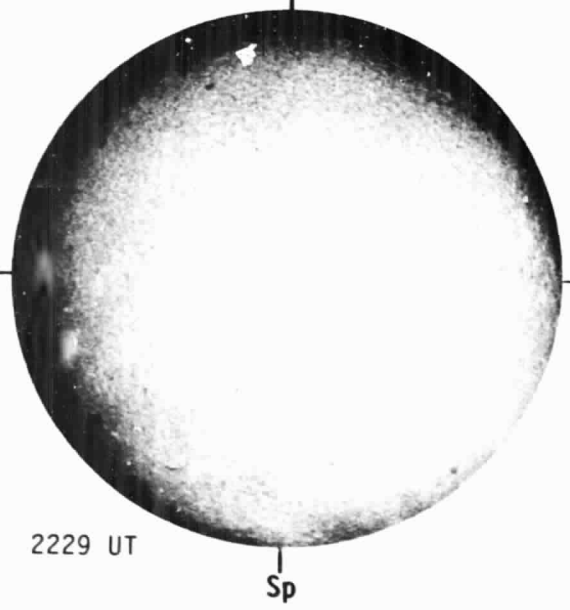
Solid = +
Dotted= -

DeltaY=13.0
DeltaX= 9.7



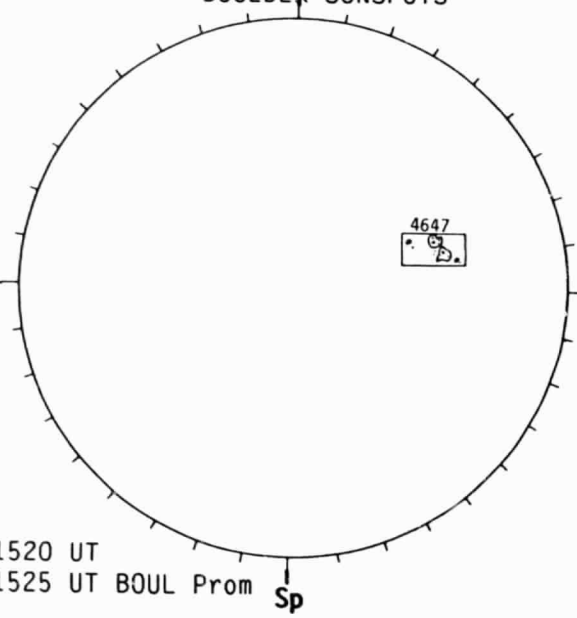
16.79 -
17.67 UT

SACRAMENTO PEAK H-ALPHA



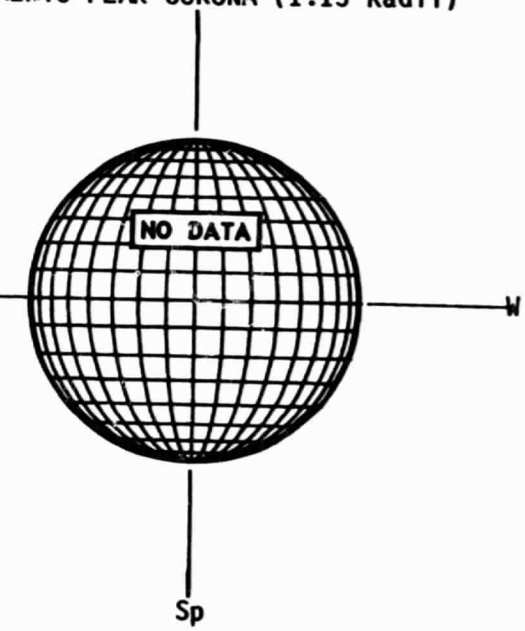
2229 UT

BOULDER SUNSPOTS



1520 UT
1525 UT BOUL Prom

SACRAMENTO PEAK CORONA (1.15 Radii)

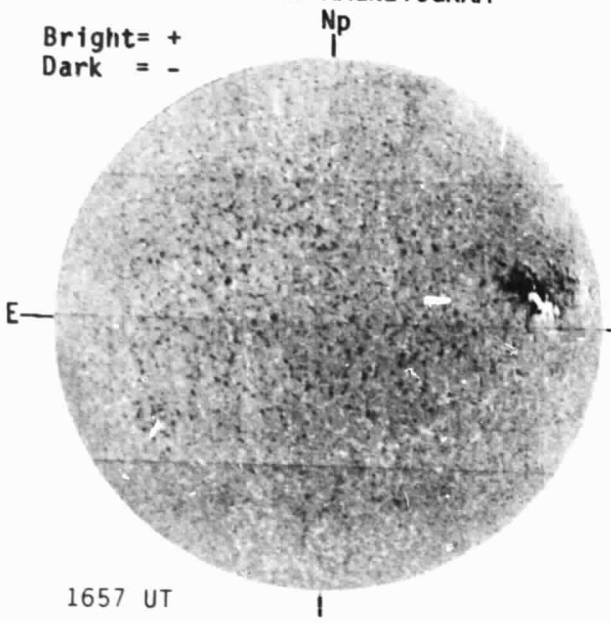


A P R I L 29, 1 9 8 5 (P -24.41, B_o=-4.32, L_o= 195.90)

62
Apr 85

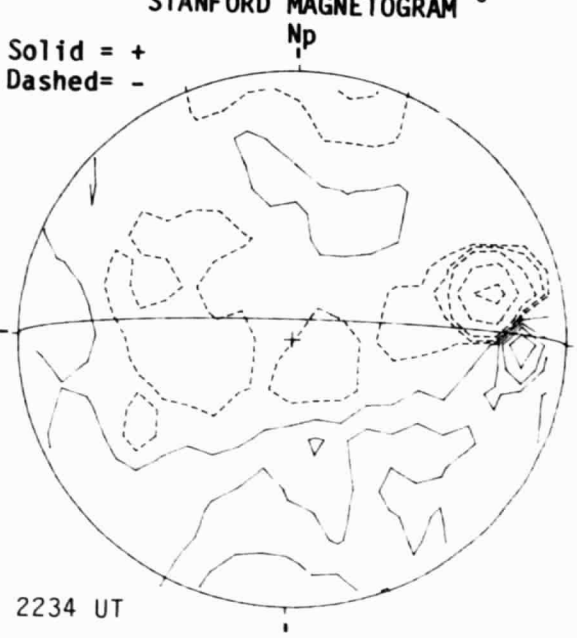
KITT PEAK MAGNETOGRAM

Bright= +
Dark = -



STANFORD MAGNETOGRAM

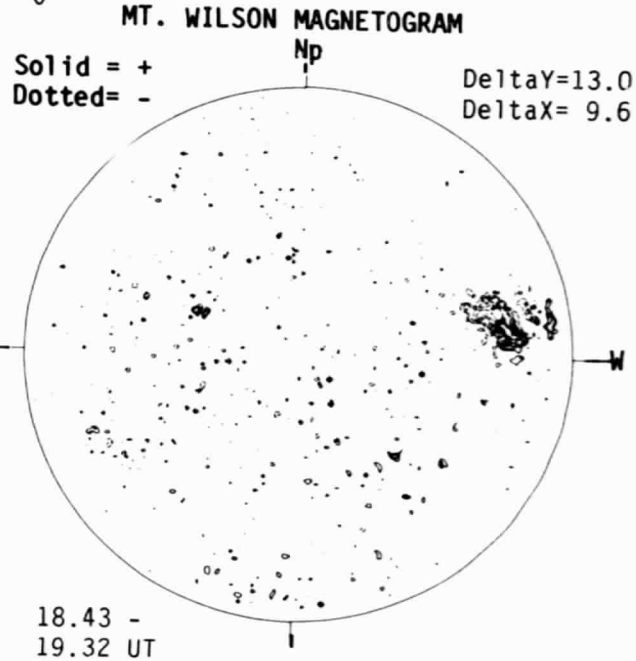
Solid = +
Dashed= -



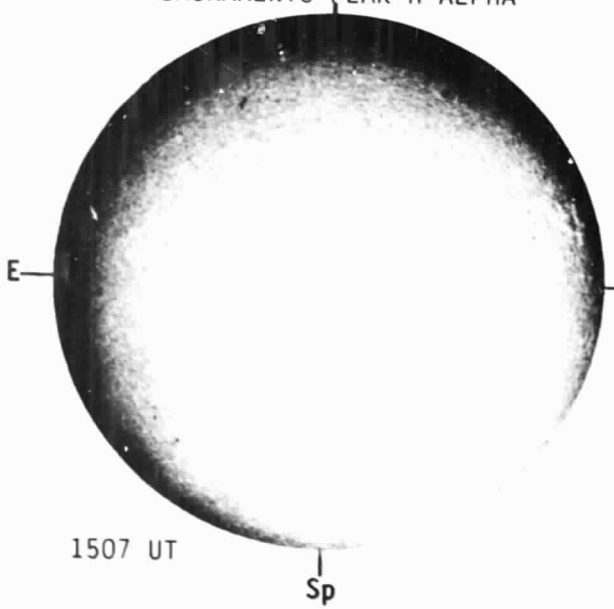
MT. WILSON MAGNETOGRAM

Solid = +
Dotted= -

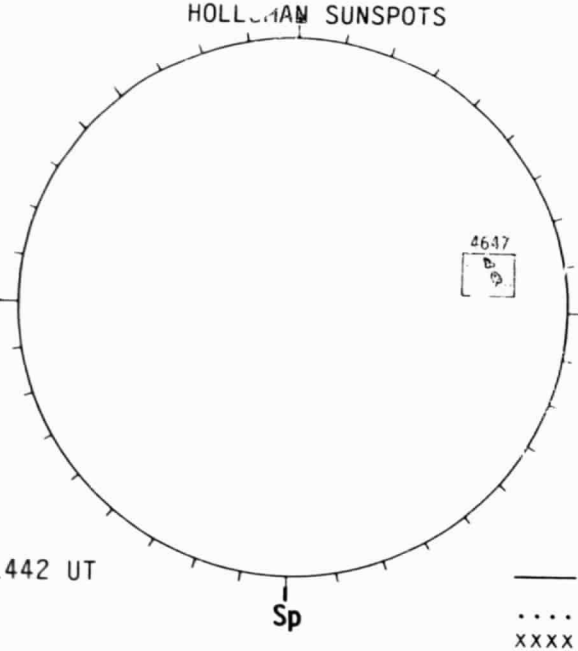
DeltaY=13.0
DeltaX= 9.6



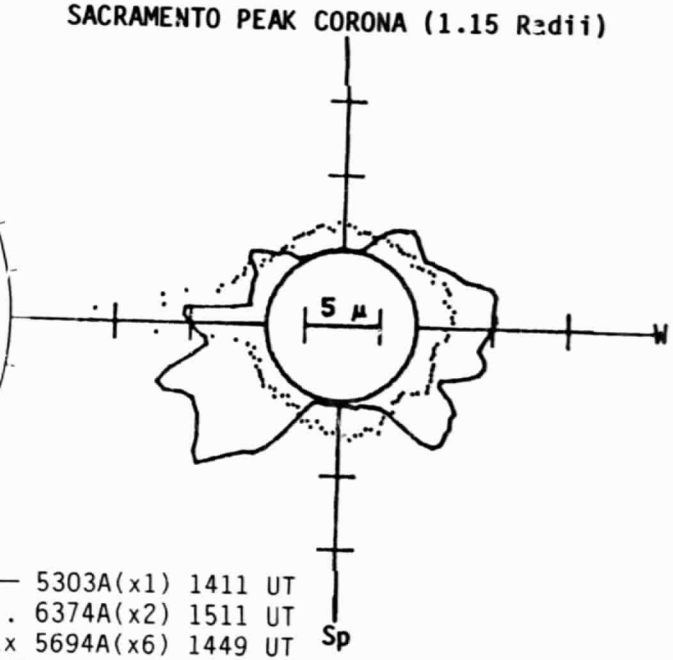
SACRAMENTO PEAK H-ALPHA



HOLLOMAN SUNSPOTS



SACRAMENTO PEAK CORONA (1.15 Radii)

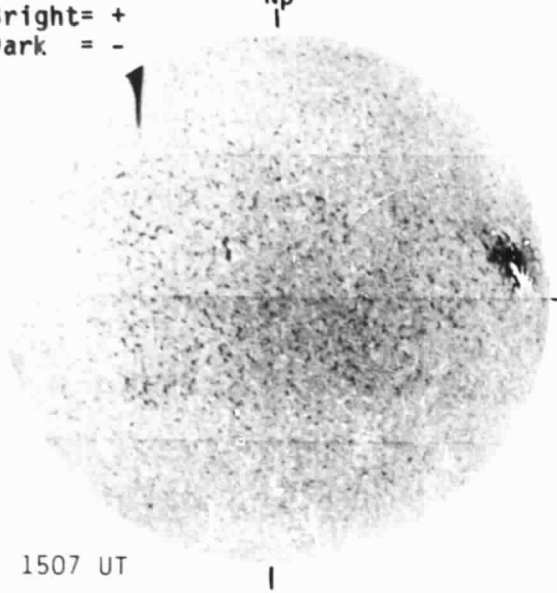


—— 5303A(x1) 1411 UT
.... 6374A(x2) 1511 UT
xxxx 5694A(x6) 1449 UT
No 5694A Activity Today

A P R I L 30, 1 9 8 5 (P -24.24, B_0=-4.22, L_0= 182.69)

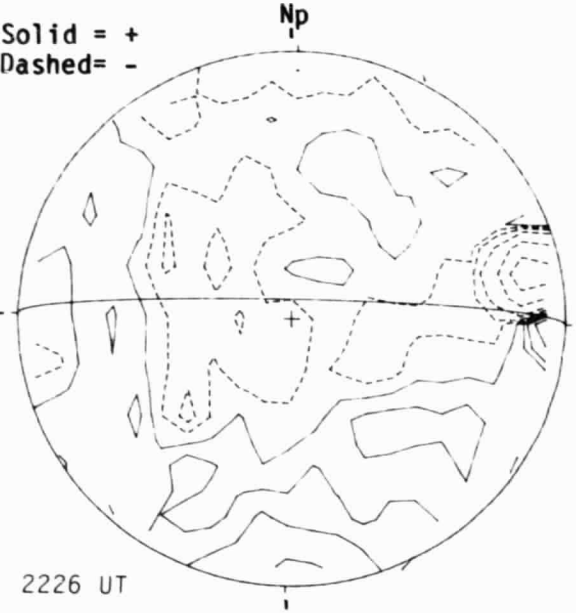
KITT PEAK MAGNETOGRAM

Bright= +
Dark = -



STANFORD MAGNETOGRAM

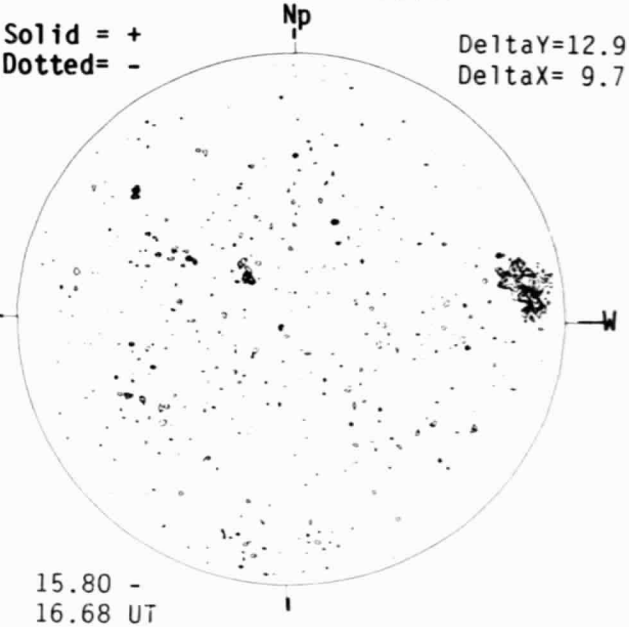
Solid = +
Dashed= -



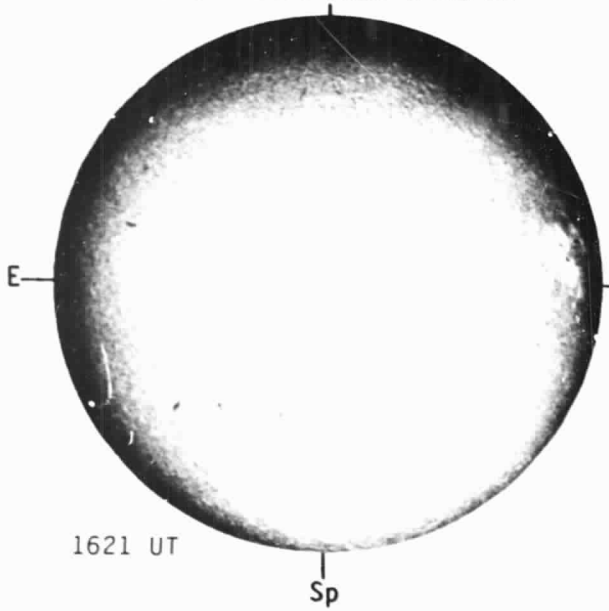
MT. WILSON MAGNETOGRAM

Solid = +
Dotted= -

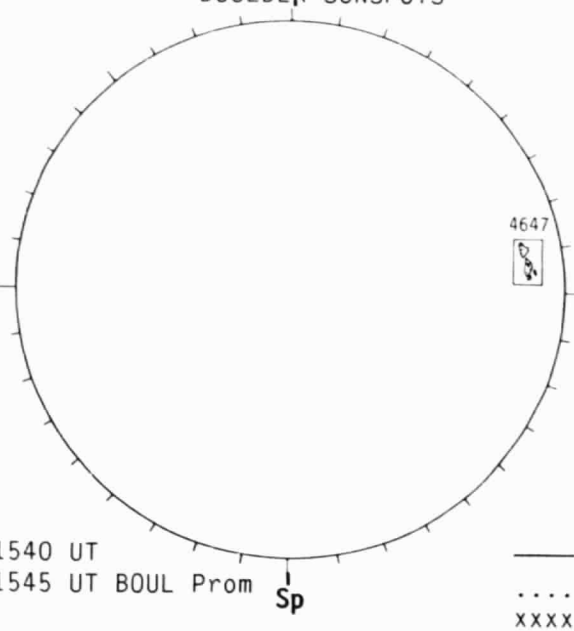
DeltaY=12.9
DeltaX= 9.7



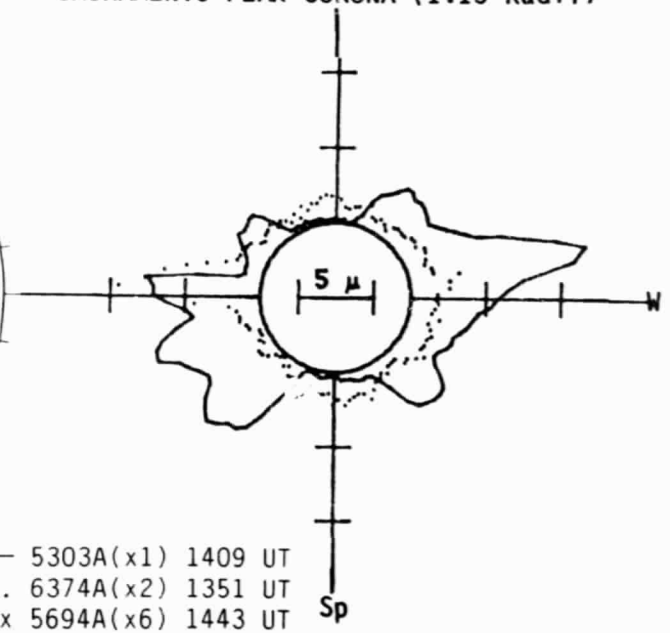
SACRAMENTO PEAK H-ALPHA



BOULDER SUNSPOTS



SACRAMENTO PEAK CORONA (1.15 Radii)



—— 5303A(x1) 1409 UT
.... 6374A(x2) 1351 UT
xxxx 5694A(x6) 1443 UT
No 5694A Activity Today

SUNSPOT GROUPS
(ORDERED BY CENTRAL MERIDIAN PASSAGE DATE)

APRIL 1985

NOAA/ USAF Group	Mt Wilson Group	Sta	Observation Mo	Day	Time (UT)	Lat	CMD	CMP Mo	Day	Max H	Mag Class	Spot Class	Corrected Area (10-6 Hemi)	Spot Count	Long. Extent (Deg)	Qual
4640		RAMY	03	31	1227	S26	E61	04	5.3		A	AXX		1		5
4640	242128	MWIL	03	31	1515	S27	E58	04	5.2	4	(AP)					
4640		BOUL	03	31	1540	S26	E57	04	5.1		A	AXX		1	1	3
4640		HOLL	03	31	1545	S25	E60	04	5.3		B	BXO	10	2	2	3
4640		PALE	03	31	1910	S26	E58	04	5.3		B	BXO	20	2	4	3
4640		LEAR	04	01	0026	S26	E55	04	5.3		A	HXX	10	1	1	3
4640		ATHN	04	01	0630	S26	E52	04	5.3		B	BXO	30	2	2	3
4640	24212	MWIL	04	01	1530	S26	E45	04	5.1	4	(G)					
4640		HOLL	04	01	1625	S24	E45	04	5.2		B	BXO	20	2	2	3
4640		PALE	04	01	1710	S26	E45	04	5.2		A	AXX	10	1	1	2
4640		MANI	04	03	0016	S25	E29	04	5.3			BXO	10	3	2	3
4640		RAMY	04	07	1335	S28	W29	04	5.3		A	AXX		1		4
4642		ATHN	04	02	0615	S22	E50	04	6.1			AXX	10	1	1	3
4642		RAMY	04	02	1310	S22	E47	04	6.2		B	CAO	30	3	3	4
4642		HOLL	04	02	1443	S22	E46	04	6.1		B	DRO	40	2	4	3
4642	24213	MWIL	04	02	1545	S21	E45	04	6.1	5	(B)					
4642		BOUL	04	02	1635	S21	E44	04	6.1		B	CSO	20	2	3	3
4642		PALE	04	02	2026	S22	E43	04	6.2		B	DSO	60	2	5	2
4642		MANI	04	03	0016	S20	E40	04	6.1			DRO	80	4	4	3
4642		LEAR	04	03	0218	S21	E39	04	6.1		B	BXO	30	4	4	2
4642		ATHN	04	03	0605	S21	E36	04	6.0			CSO	30	2	3	3
4642		RAMY	04	03	1415	S21	E33	04	6.1		B	BXO	20	3	4	4
4642		BOUL	04	03	1500	S19	E31	04	6.0		B	BXO	20	2	3	2
4642		HOLL	04	03	1545	S21	E33	04	6.2		B	BXO	30	4	5	4
4642	24213	MWIL	04	03	1700	S21	E31	04	6.1	5	(B)					
4642		PALE	04	03	1905	S21	E30	04	6.1		B	CRO	20	2	5	2
4642		LEAR	04	04	0418	S19	E25	04	6.1		B	BXO	40	11	7	2
4642		RAMY	04	04	1342	S21	E19	04	6.0		B	CRO	30	5	5	4
4642	24213	MWIL	04	04	1500	S20	E18	04	6.0	6	(B)					
4642		HOLL	04	04	1501	S20	E19	04	6.1		B	CRO	60	5	5	3
4642		ATHN	04	05	1100	S21	E12	04	6.4			BXO	40	3	5	1
4642	24213	MWIL	04	05	1500	S21	E05	04	6.0	5	(B)					
4642		BOUL	04	05	1515	S21	E06	04	6.1		B	BXO	20	3	6	1
4642		RAMY	04	05	1532	S20	E05	04	6.0		B	DAO	30	5	6	3
4642		HOLL	04	05	1618	S19	E05	04	6.1		B	CRO	30	5	6	4
4642		PALE	04	05	1756	S21	E04	04	6.1		B	CRO	30	6	7	5
4642		LEAR	04	06	0018	S21	E00	04	6.0		B	CRO	60	7	7	3
4642		ATHN	04	06	0615	S20	W04	04	6.0			CSI	80	8	6	3
4642		RAMY	04	06	1230	S22	W06	04	6.1		B	CRO	30	7	7	3
4642	24213	MWIL	04	06	1515	S21	W10	04	5.9	5	(B)					
4642		HOLL	04	06	1600	S20	W08	04	6.1		B	CRO	20	5	5	3
4642		PALE	04	06	2050	S22	W13	04	5.9		B	BXO	20	5	6	3
4642		LEAR	04	07	0005	S22	W13	04	6.0		B	BXO	30	7	6	2
4642		ATHN	04	07	0750	S21	W16	04	6.1		B	BXO	20	2	7	3
4642		RAMY	04	07	1335	S22	W23	04	5.8		B	BXO	10	3	3	4
4642	24213	MWIL	04	07	1500	S21	W21	04	6.0	3	(B)					
4642		HOLL	04	07	1600	S22	W19	04	6.2		B	BXO	10	2	1	3
4642A		RAMY	04	07	1335	S14	W10	04	6.8		B	BXO	10	3	3	4
4644		RAMY	04	08	1335	S04	W06	04	8.1		B	BXO	10	2	2	3
4644	24215	MWIL	04	08	1530	S04	W06	04	8.2	4	(B)					
4644		HOLL	04	08	1600	S03	W06	04	8.2		B	BXO	10	2	2	4
4644		BOUL	04	08	1630	S02	W06	04	8.2		A	AXX	10	2	2	2
4644		PALE	04	08	1905	S03	W08	04	8.2		A	AXX	10	2	3	2
4644		LEAR	04	09	0041	S04	W13	04	8.1		A	AXX	10	3	3	2
4644		ATHN	04	09	0630	S04	W14	04	8.2		B	BXO	10	3	2	3
4643		RAMY	04	04	1342	S16	E69	04	9.8			BXO		2	1	4
4643		HOLL	04	04	1501	S16	E67	04	9.7			BXO		2	1	3
4643	24214	MWIL	04	05	1500	S16	E53	04	9.6	3						
4643		RAMY	04	05	1532	S16	E53	04	9.7			BXO	20	5	4	3
4643		HOLL	04	05	1618	S14	E53	04	9.7		B	BXO	20	6	4	4
4643		PALE	04	05	1756	S16	E53	04	9.8		B	BXO	20	7	4	5
4643		ATHN	04	06	0615	S16	E43	04	9.5			BXO	20	2	2	3
4643		RAMY	04	06	1230	S16	E42	04	9.7		B	BXO	20	3	4	3
4643		HOLL	04	06	1600	S15	E38	04	9.5		B	BXO	10	3	2	3
4643A		LEAR	04	14	0610	N08	W38	04	11.4		A	AXX	10	1	1	3
4643A	24217	MWIL	04	14	1530	N11	W42	04	11.5	2	(AF)					

SUNSPOT GROUPS
(ORDERED BY CENTRAL MERIDIAN PASSAGE DATE)

APRIL 1985

NOAA/ USAF Group	Mt Wilson Group	Sta	Observation Time Mo	Day	(UT)	Lat	CMD	CMP Mo	Day	Max H	Mag Class	Spot Class	Corrected Area (10-6 Hemi)	Spot Count	Long. Extent (Deg)	Qual
4643A		HOLL	04	14	1646	N12	W43	04	11.5		A	AXX		1		4
4643B		PALE	04	14	1716	N02	W33	04	12.3		A	AXX		1		3
4643C		LEAR	04	22	0438	N02	W70	04	17.0		B	CSO	20	2	3	3
4643C		ATHN	04	22	0630	N03	W71	04	17.0			BXO	20	2	2	3
4643D	24216	MWIL	04	12	1515	S11	E70	04	17.9	2	(AF)					
4643D		LEAR	04	13	0250	S09	E66	04	18.1		A	AXX	10	1	1	3
4648		LEAR	04	25	0140	N02	W64	04	20.3		A	AXX	10	1	1	3
4648		HOLL	04	25	1710	N01	W68	04	20.6		B	BXO	10	2	5	3
4648		PALE	04	25	1750	N01	W72	04	20.4		B	BXO	10	2	5	4
4648		MANI	04	26	0026	N01	W77	04	20.3			AXX	20	1	1	3
4648		LEAR	04	26	0045	S01	W78	04	20.2		A	AXX	10	1	1	3
4646		RAMY	04	18	1323	S08	E66	04	23.5		B	BXO		3	2	4
4646		HOLL	04	18	1456	S08	E67	04	23.6		B	BXO	10	2	4	3
4646	24218	MWIL	04	18	1600	S08	E65	04	23.5	2	X					
4646		BOUL	04	18	1625	S08	E63	04	23.4		A	AXX	10	2	1	3
4646		PALE	04	18	1829	S08	E65	04	23.6		B	BXO	10	4	5	3
4646		MANI	04	19	0045	S08	E61	04	23.6			BXO	20	4	5	3
4646		RAMY	04	20	1228	S08	E40	04	23.5		B	BXO	30	5	4	4
4646		HOLL	04	20	1600	S05	E41	04	23.7		B	BXO	20	3	6	3
4646		LEAR	04	24	0240	S09	W07	04	23.6		A	AXX	10	1	1	3
4646		LEAR	04	24	0240	S09	W07	04	23.6		A	AXX	10	1	1	3
4646		ATHN	04	24	0615	S09	W10	04	23.5		A	AXX	10	2		4
4629		MANI	03	01	0102	N03	W40	02	26.1			HSX	50	1	2	3
4629		LEAR	03	01	0104	N03	W48	02	25.5		A	HSX	40	1	1	2
4629		RAMY	03	01	1225	N03	W55	02	25.4		A	HAX	30	1	2	4
4629		BOUL	03	01	1530	N04	W55	02	25.5		A	HSX	30	1	2	2
4629	24205	MWIL	03	01	1615	N03	W56	02	25.5	4	(AP)					
4629		HOLL	03	01	1632	N03	W56	02	25.5		A	HSX	40	1	2	3
4629		PALE	03	01	2048	N04	W58	02	25.5		A	HSX	20	1	1	3
4629		LEAR	03	02	0721	N03	W61	02	25.7		A	HSX	10	1	1	3
4629		RAMY	03	02	1440	N03	W69	02	25.5		A	HAX	30	1	1	4
4629		HOLL	03	02	1717	N05	W74	02	25.2		A	HRX	10	1	2	3
4629		PALE	03	02	1959	N04	W71	02	25.5		A	HSX	20	1	1	3
4629		LEAR	03	03	0127	N04	W78	02	25.2		A	AXX	10	1	1	2
4629		LEAR	04	25	0104	N03	E06	04	25.5		B	CSO	60	4	4	3
4629		RAMY	04	25	1340	N04	E01	04	25.6		B	CAO	60	8	4	3
4629		HOLL	04	25	1550	N04	W02	04	25.5		B	CSO	70	6	5	4
4629		BOUL	04	25	1615	N02	E05	04	26.1		B	CSO		7	3	2
4629		PALE	04	25	1900	N03	E01	04	25.9		B	CSO	40	8	8	3
4629		LEAR	04	26	0006	N03	W06	04	25.6		B	CSO	60	5	4	3
4629		ATHN	04	26	0630	N03	W07	04	25.7			CSO	40	3	4	2
4629		RAMY	04	26	1341	N02	W12	04	25.7		B	CSO	60	8	7	3
4629		BOUL	04	26	1640	N04	W14	04	25.5		B	CSO	40	3	6	2
4629		HOLL	04	26	1930	N03	W17	04	25.5		B	CAO	40	3	4	2
4626		PALE	04	26	2011	N03	W13	04	25.9		B	CSO	40	5	8	3
4629A		RAMY	04	25	1242	S12	E08	04	26.1		A	AXX		1		4
4629A		RAMY	04	26	1240	S11	W09	04	25.9		A	AXX	10	2	1	4
4647		HOLL	04	20	1600	N05	E76	04	26.4		B	BXO	10	2	9	3
4647		PALE	04	20	2300	N03	E73	04	26.4		B	CRO	50	3	4	1
4647		MANI	04	20	2340	N04	E71	04	26.3			CRO	50	4	3	3
4647		LEAR	04	21	0019	N06	E68	04	26.1		B	BXO	20	4	3	2
4647		ATHN	04	21	0600	N04	E67	04	26.3			CSO	60	3	3	2
4647		RAMY	04	21	1214	N05	E63	04	26.2		B	DRO	60	16	7	4
4647		HOLL	04	21	1520	N05	E62	04	26.3		B	DRI	50	18	7	2
4647	24219	MWIL	04	21	1630	N05	E61	04	26.3	4	(B)					
4647		PALE	04	21	1737	N04	E61	04	26.3		B	DRI	70	14	8	2
4647		MANI	04	22	0103	N04	E58	04	26.4			DKI	100	16	12	3
4647		LEAR	04	22	0438	N05	E54	04	26.2		B	DKO	280	33	8	3
4647		ATHN	04	22	0630	N05	E54	04	26.3			DKO	250	22	9	3
4647		RAMY	04	22	1325	N05	E50	04	26.3		B	DKI	760	37	8	3
4647	24219	MWIL	04	22	1600	N05	E48	04	26.3	5	(B)					
4647		HOLL	04	22	1612	N05	E48	04	26.3		B	DKI	580	31	9	2

SUNSPOT GROUPS
(ORDERED BY CENTRAL MERIDIAN PASSAGE DATE)

APRIL 1985

NOAA/ USAF Group	Mt Wilson Group	Sta	Observation Mo	Day	Time (UT)	Lat	CMD	CMP Mo	Day	Max H	Mag Class	Spot Class	Corrected Area (10-6 Hemi)	Spot Count	Long. Extent (Deg)	Qual
4647		PALE	04	22	1752	N04	E47	04	26.3		B	DKI	330	30	10	3
4647		ATHN	04	23	0615	N05	E40	04	26.3		B	EKI	720	34	11	3
4647		LEAR	04	23	0857	N05	E37	04	26.1		B	EKI	510	31	11	2
4647		HOLL	04	23	1520	N05	E35	04	26.3		BD	DKI	930	37	10	4
4647	24219	MWIL	04	23	1615	N05	E33	04	26.1	6	(D)					
4647		BOUL	04	23	1640	N05	E33	04	26.2		B	EKI	1000	21	11	3
4647		RAMY	04	23	1720	N05	E35	04	26.3		BD	EKI	910	37	11	4
4647		PALE	04	23	1743	N04	E34	04	26.3		BD	EKI	780	28	11	3
4647		LEAR	04	24	0240	N05	E30	04	26.4		BGD	EKI	750	30	11	3
4647		ATHN	04	24	0615	N03	E25	04	26.1			EKI	900	31	11	4
4647	24219	MWIL	04	24	1515	N04	E19	04	26.1	6	(D)					
4647		HOLL	04	24	1516	N05	E23	04	26.4		BGD	EKO	100	28	12	3
4647		RAMY	04	24	1659	N05	E21	04	26.3		BGD	EKI	920	34	11	4
4647		MANI	04	24	2300	N04	E16	04	26.2			EKI	680	29	12	3
4647		LEAR	04	25	0140	N05	E15	04	26.2		BGD	EKI	750	25	11	3
4647		ATHN	04	25	0815	N04	E12	04	26.2			EKI	850	23	11	3
4647		RAMY	04	25	1330	N04	E08	04	26.2		BGD	EKI	800	45	12	4
4647		HOLL	04	25	1710	N05	E06	04	26.2		BGD	EKI	680	27	12	3
4647		PALE	04	25	1750	N03	E07	04	26.3		BGD	EKI	960	37	12	4
4647	24219	MWIL	04	26	0023	N05	E04	04	26.3	5	BG					
4647		MANI	04	26	0026	N04	E02	04	26.2			EKI	730	39	12	3
4647		LEAR	04	26	0045	N05	E02	04	26.2		G	EKI	740	19	12	3
4647		ATHN	04	26	0615	N04	W01	04	26.2			EKI	810	31	13	2
4647	24219	MWIL	04	26	1515	N05	W07	04	26.1	5	(B)					
4647		LEAR	04	27	0020	N05	W14	04	26.0		GD	EKI	910	33	13	3
4647		RAMY	04	27	1242	N06	W18	04	26.2		BGD	EKI	560	30	13	3
4647	24219	MWIL	04	27	1545	N05	W20	04	26.2	6	(D)					
4647		HOLL	04	27	1548	N05	W20	04	26.2		BGD	EKI	590	35	13	3
4647		PALE	04	27	1741	N05	W19	04	26.3		BGD	EKI	570	27	12	2
4647		LEAR	04	28	0020	N05	W25	04	26.1		BGD	EKI	610	25	10	3
4647		ATHN	04	28	0815	N06	W28	04	26.2			EKO	500	22	11	1
4647		RAMY	04	28	1224	N06	W31	04	26.2		BGD	EKI	490	25	14	3
4647		BOUL	04	28	1520	N05	W29	04	26.5		B	DKI	590	22	10	3
4647	24219	MWIL	04	28	1530	N06	W34	04	26.1	5	(D)					
4647		PALE	04	28	1738	N05	W34	04	26.2		BGD	EKI	510	25	14	3
4647		MANI	04	29	0120	N05	W40	04	26.1			EKI	770	21	13	3
4647		RAMY	04	29	1439	N06	W44	04	26.3		BGD	EKI	390	22	13	3
4647	24219	MWIL	04	29	1445	N06	W46	04	26.2	5	(D)					
4647		PALE	04	29	1725	N05	W47	04	26.2		BGD	EKI	350	31	14	4
4647		LEAR	04	30	0017	N05	W53	04	26.0		BGD	EKI	300	22	8	3
4647		ATHN	04	30	0600	N05	W55	04	26.1			DKI	480	14	10	1
4647		MANI	04	30	0730	N05	W56	04	26.1			DAI	670	15	10	3
4647		RAMY	04	30	1313	N05	W60	04	26.1		B	EKI	690	18	11	3
4647	24219	MWIL	04	30	1430	N06	W60	04	26.1	5	(D)					
4647		BOUL	04	30	1540	N06	W59	04	26.2		B	DKI	680	20	9	3
4647		PALE	04	30	1850	N04	W62	04	26.1		B	DKC	420	23	10	3
4647		LEAR	05	01	0218	N05	W66	04	26.2		BGD	DKI	250	10	7	3
4647		ATHN	05	01	0845	N03	W69	04	26.2			DAO	210	10	4	3
4647		BOUL	05	01	1420	N06	W70	04	26.4		B	DAO	280	9	6	3
4647	24219	MWIL	05	01	1445	N06	W73	04	26.2	5	(B)					
4647		HOLL	05	01	1520	N05	W74	04	26.1		B	DKO	250	8	5	3
4647		RAMY	05	01	1556	N05	W70	04	26.4		B	DAO	100	9	7	3
4647		RAMY	05	01	1556	N05	W70	04	26.4		B	DAO	200	9	7	3
4647		PALE	05	01	1907	N06	W75	04	26.2		B	DAI	220	8	6	3
4647		MANI	05	02	0025	N04	W78	04	26.2			DSO	260	6	6	3
4647		ATHN	05	02	0615	N05	W80	04	26.3			DAO	180	2	6	2
4647		RAMY	05	02	1238	N05	W87	04	26.0		B	DAO	90	3	8	4
4647	24219	MWIL	05	02	1515	N08	W88	04	26.0	2	AF					
4647A		RAMY	04	25	1242	N07	E44	04	28.8		B	EKO	290	12	11	4
4647A		BOUL	04	25	1520	N07	E43	04	28.9		B	DKI	220	7	9	3
4647A		HOLL	04	25	1815	N06	E39	04	28.7		B	DKO	330	6	10	3
4647A		RAMY	04	26	1240	N07	E30	04	28.8		B	DKO	340	15	9	4
4647A		HOLL	04	26	1640	N07	E27	04	28.7		B	DKO	420	8	10	3
4637A		LEAR	04	25	0059	N07	E49	04	28.7		B	DKO	250	5	10	3
4637A		LEAR	04	26	0038	N08	E38	04	28.9		B	CHO	330	13	11	3
4637A		MANI	04	26	0110	N08	E37	04	28.8			DKO	270	15	12	2
4637A		MANI	04	26	2300	N07	E24	04	28.8			CKO	210	9	9	3

SUDDEN IONOSPHERIC DISTURBANCES

April 1985

Day	Start (UT)	Max (UT)	End (UT)	Imp	Wide-spread Index	Number of Station Reports by Type SWF	SEA	SPA	LF-SPA	SES	Known Flare	X-ray Class	NOAA/SESC Region
01	1130	1145	1254	1-	3		2				No Flare		
14	0929	0940	1006	1-	1		1				No Flare		
15	0816	0823	0850	1-	1		1				*		
15	1426		1543	1-	1		1				No Flare		
16	1336	1338	1400	1-	1					1	No Flare		
17	1428	1443	1457	1-	1		1				No Flare		
20	1550	1605	1635	1-	1			1		1	No Flare		
20	1710	1730	1810	1-	1			1		1	No Flare		
21	1304	1310	1359	1-	1		1				1306 UT		4647
21	1529		1540	1-	1			1			No Flare		
21	1620	1635	1658	1-	1			1			1616 UT	C2.1	4647
22	0231	0235	0252	1-	1			1			0232E UT		No data
22	0852	0858	0449	1-	3	1		1			No Flare		
22	0544	0551	0623	1-	1			1			0539 UT	C1.1	No data
22	0904	0910	0933	1-	3	1	1	1	1		0903 UT		No data
22	1537	1553	1605	1-	1			1			1524 UT	C1.0	No data
22	1641	1652	1800	1-	3	1	3	1	1		No Flare		
22	2130	2136	2204	1-	1			1			2129 UT	C1.0	No data
23	0250	0255	0328	1-	1			1			0250 UT	C1.1	4647
23	0512	0521	0610	1-	1			1			0507 UT	C1.4	No data
23	1019	1032	1100	1-	3	1			1		1012 UT		No data
23	1847	1908	2012	1-	3			1		1	No Flare		
23	2108	2114	2203	1-	3	1		1			2108 UT	C5.5	No data
24	0148	0156	0335	2-	3	1		1			0158E UT	C8.8	4647
24	0546	0603	0447D	1-	3	1		1			0546 UT	C2.2	4647
24	0447E	0506	0706	2	3	2		1	1		0449 UT	C7.4	4647
24	0841	0914U	0915	1	1		1				0850E UT	X1.9	No data
24	0919	0934	1106	2	5	2	3	1	1		0914E UT		No data
24	1644	1700	1715	1	3	1		1			1655E UT	C1.2	4647
25	0228	0240	0322	1-	1			1			0228 UT	C1.0	4647
25	0636	0646	0721	1-	3			1		1	0637 UT		4647
25	0726	0741	0914	1+	3	1	1	1	1	1	0725 UT	C4.2	4647
25	2040	2059	2128	1-	1			1			No Flare		
25	2229	2245	2356	1-	1			1			2225 UT	C2.0	No data
26	0022	0028	0048	1-	1			1			0024 UT	C1.9	4647
26	0526	0528	0411	1-	1			1			0526 UT	C1.4	4647
26	2252	2308	0055	1-	1			1			2247 UT	C2.5	No data
27	1027	1032	1056	1-	3		2				No Flare		
27	2055	2103	2105	1	1	1					*		
27	2210	2212	2215	1	1	1					No Flare		
28	2343	2347	0006	1-	1			1			No Flare		

* No flare patrol

SUDDEN IONOSPHERIC DISTURBANCES

SIDs by NOAA/SESC REGION

April 1985

Day	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30
Region Number 4647																					2		1	4	3	2				
X-Ray																					1	3	3	5	3	3				
No Flare	1													1	1	1	1			2	1	2	1		1		2	1		
No Flare Patrol															1												1			
No Data																						5	3	2	1	1				
Event Totals	1													1	2	1	1			2	3	7	5	6	5	3	3	1		

OBSERVATORIES REPORTING FOR APR 1985[a]

Darmstadt, GFR (DA)	SWF	Maui, Hawaii, USA (MI)	SWF
Hiraiso, Japan (HI)	SWF	Panska Ves, Czechoslovakia (PU)	SEA, SWF, SES
Inubo, Japan (IN)	SPA	Sao Paulo, Brasil (UM)	SPA, SES
Juliusruh, GDR (JU)	SWF	Upice, Czechoslovakia (UI)	SEA
Kuhlungsborn, GDR (KU)	SPA, SEA	Vsetin, Czechoslovakia (VS)	SEA

[a]Observations are not necessarily continuous for each reporting station.

SOLAR RADIO EMISSION
SPECTRAL OBSERVATIONS

APRIL 1985

Day	Observation Start (UT)	Observation End (UT)	Sta	Decimetric Band Start (UT)	Decimetric Band End (UT)	Decimetric Band Int (1-3)	Metric Band Start (UT)	Metric Band End (UT)	Metric Band Int (1-3)	Dekametric Band Start (UT)	Dekametric Band End (UT)	Dekametric Band Int (1-3)	Spectral Type
02	1317	1725	BLEN										
			SGMR				1633.8	1634.3	1				V
03	0550	1725	BLEN				1315.1	1315.2	1				III
			SGMR				1402.3	1403.1	1				V
			SGMR				1952.6	1954.3	1				V
04	0550	1725	BLEN										
05	0545	1725	BLEN										
06	0545	1725	BLEN										
07	0545	1725	BLEN										
08	0545	0827	BLEN										
10	1505	1720	BLEN										
11	0545	0934	BLEN										
12	0545	0848	WEIS										
	0932	1744	WEIS										
13	0517	0610	WEIS										
	0722	0915	WEIS										
	0944	1104	WEIS										
	1152	1747	WEIS										
14	0514	1543	WEIS										
15	0813	1750	WEIS										
16	0510	1211	WEIS										
	1314	1346	WEIS										
	1404	1504	WEIS										
	1531	1751	WEIS										
17	0553	1105	WEIS										
	1130	1752	WEIS										
18	0507	0839	WEIS										
	0847	1753	WEIS										
19	0506	1554	WEIS										
20	0502	1756	WEIS										
21	0503	1235	WEIS										
	1302	1758	WEIS										
22	0500	1759	WEIS				1640.6	1642.3	2				II HARM
			WEIS				1642.0	1644.5	2				II HARM
23	0459	0713	WEIS										
	0719	1800	WEIS				1046.4	1046.4	2				IIIG
	1220	1740	BLEN	1229.9	1260.1	3	1229.9	1230.1	3				IIIG,RS
			WEIS				1239.9	1240.6	2				IIIG
			WEIS				1243.1	1243.2	2				IIIB
			WEIS				1312.4	1312.5	1				IIIB
			WEIS				1328.2	1328.6	1				IIIG
			WEIS				1345.4	1345.5	2				IIIB
			WEIS				1354.9	1355.1	1				IIIG
	1439	1735	BLEN				1524.6	1524.9	1				III
			WEIS				1524.6	1525.2	2				IIIH
			SGMR				1925.5	1926.1	1				V
			SGMR				1947.0	2312.0	1				CONT
			PALE				2007.8	2300.0	1				CONT
24			PALE				0049.5	0049.8	2				V
			LEAR				0330.0	0947.0					CONT

SOLAR RADIO EMISSION
SPECTRAL OBSERVATIONS

APRIL 1985

Day	Observation Start (UT)	Observation End (UT)	Sta	Decimetric Band Start (UT)	Decimetric Band End (UT)	Decimetric Band Int (1-3)	Metric Band Start (UT)	Metric Band End (UT)	Metric Band Int (1-3)	Dekametric Band Start (UT)	Dekametric Band End (UT)	Dekametric Band Int (1-3)	Spectral Type
24	0456	1423	WEIS				0515.6	0515.7	2				IIIB
			WEIS				0527.0	0655.0	1				IIIN
	0528	1735	BLEN				0528.0E	0917.2	1				I
			WEIS				0600.0	0919.0	1				IN
			BLEN	0917.2	0926.0	3	0917.2	0926.0	3				IIIGG
			WEIS				0921.0	0926.3	3				IIIGG
			BLEN	0922.8	1459.0	3	0922.8	1459.0	3				IV
			BLEN				0923.5	0927.0	3				II
			WEIS				0924.0	0930.0	3				IV DM
			LEAR				0926.3	0947.0					IV
			WEIS				0926.3	1423.0	3				IV M
	1436	1802	WEIS				1035.0	1744.0	3				IS DC
			WEIS				1039.0	1423.0	3				IV DM
			PALE				2049.1	2051.5	2				V
			LEAR				2300.0	0946.0					CONT
25			LEAR				0159.8	0200.0	1				III
	0456	1803	WEIS				0905.3	0907.3	3				IIIGG
	0525	1532	BLEN	0905.4	0906.7	1	0905.4	0906.7	2				IIIG
			WEIS				0923.0	1701.0	2				IIIS
			BLEN				1028.2	1028.3	2				IIIG
			WEIS				1028.2	1028.4	2				DCIM
			BLEN	1445.5	1445.6	1	1445.5	1445.6	2				IIIG
			WEIS				1516.4	1516.9	3				DCIM
			WEIS				1531.3	1532.9	2				IIIG
26			LEAR				0219.8	0220.3	1				III
	0453	0826	WEIS				0531.0	1725.0	3				IS
			LEAR				0631.8	0633.0	1				III
			LEAR				0818.0	0818.3	1				III
	0834	1832	WEIS				0850.7	0850.8	2				IIIG,RS
			WEIS				0932.2	0934.2	3				IIIG
			SGMR				1143.1	2315.0	1				CONT
			WEIS				1143.3	1143.4	3				IIIG
			WEIS				1213.4	1213.9	3				IIIG
			WEIS				1213.6	1214.5	2				RS
			WEIS				1217.3	1218.4	3				IIIG
			WEIS				1228.0	1230.2	3				IIIG,RS
			WEIS				1342.8	1342.9	3				IIIG,RS
			BLEN	1342.9	1343.0	3	1342.9	1343.0	3				III,RS
			BLEN				1539.3	1540.4	1				III
			BLEN	1617.5	1619.4	2	1617.5	1619.4	2				III
			WEIS				1736.8	1736.9	1				IIIB
			PALE				2136.0	0420.0	2				CONT
			LEAR				2245.0	0945.0	1				CONT
27			LEAR				0018.1	0019.1	1				III
	0510	1745	BLEN				0510.0E	0715.0	1				I,N
	0453	1321	WEIS				0530.7	0531.7	2				IIIG
			WEIS				0546.0	1016.0	1				IN
			WEIS				0548.7	0549.1	1				IIIG
			WEIS				0651.0	1258.0	1				CONT
			WEIS				0939.2	0939.7	1				IIIG
	1343	1527	WEIS				1501.0	1515.0	2				I
	1545	1806	WEIS										
			PALE				2059.6	2100.0	1				V
			SGMR				2059.6	2101.3	1				V
			SGMR				2113.3	2115.3	1				V
			PALE				2113.5	2114.6	1				V
			PALE				2142.1	2144.1	2				V
			SGMR				2142.5	2145.1	1				V
			PALE				2228.5	2230.8	1				V
			SGMR				2228.8	2230.5	1				V
			PALE				2253.8	2255.6	1				V
			SGMR				2254.8	2255.3	1				V
			PALE				2320.0	2320.3	1				V
			LEAR				2320.1	2320.3	1				III
			LEAR				2336.5	2336.6	1				III
28	0450	1806	WEIS				0516.8	0516.9	1				IIIB
			WEIS				0638.7	0639.6	1				IIIG

SOLAR RADIO EMISSION
SPECTRAL OBSERVATIONS

APRIL 1985

Day	Observation Start (UT)	Observation End (UT)	Sta	Decimetric Band Start (UT)	Decimetric Band End (UT)	Decimetric Band Int (1-3)	Metric Band Start (UT)	Metric Band End (UT)	Metric Band Int (1-3)	Dekametric Band Start (UT)	Dekametric Band End (UT)	Dekametric Band Int (1-3)	Spectral Type
28			LEAR				0638.8	0639.6	1				III
			WEIS				0651.7	0652.0	2				IIIG
			LEAR				0651.8	0652.1	1				III
			LEAR				0901.1	0901.3	1				III
			WEIS				0901.2	0901.4	3				IIIG
			WEIS				0902.7	0903.6	2				IIIG
			WEIS				0907.6	0909.3	2				IIIG
			WEIS				0945.5	0945.7	2				IIIG
			WEIS				1143.3	1145.2	3				IIIGG
			SGMR				1143.8	1145.3	2				V
	0510	1745	BLEN	1144.0	1149.1	1	1144.0	1149.1	2				IIIGG
			WEIS				1148.8	1149.9	2				IIIG
			SGMR				1624.5	1624.8	1				V
			WEIS				1624.5	1624.7	1				IIIB
29	0450	0938	WEIS										
	0510	0834	BLEN										
	0943	1808	WEIS										
			SGMR				1229.8	1231.3	1				V
30	0446	1641	WEIS										
	0946	1800	BLEN										
	1655	1809	WEIS										

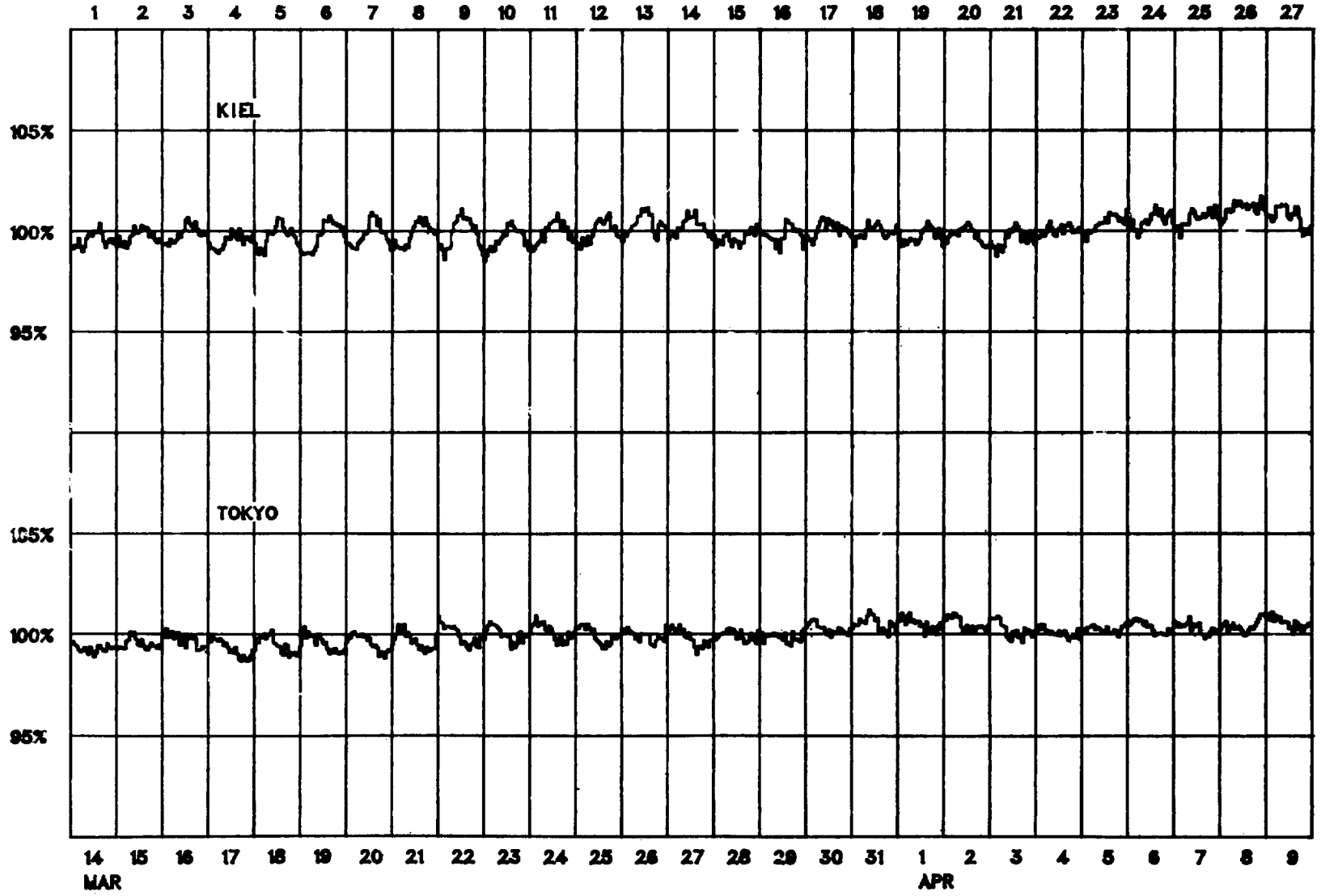
The symbols used under the column heading SPECTRAL TYPE have the following definitions:

B = Single burst
G = Small group (< 10) of bursts
GG = Large group (> 10) of burst
C = Underlying continuum (particularly with Type I)
S = Storm in the sense of intermittent but apparently connected activity
N = Intermittent activity in this period
U = U-shaped burst of Type III

RS = Reverse slope burst
DP = Drifting pairs
DC = Drifting Chains
H = Herringbone
W = Weak
P = Pulsations
CONT = Continuum
UNCLF = Unclassified activity
DCIM = Fast drift

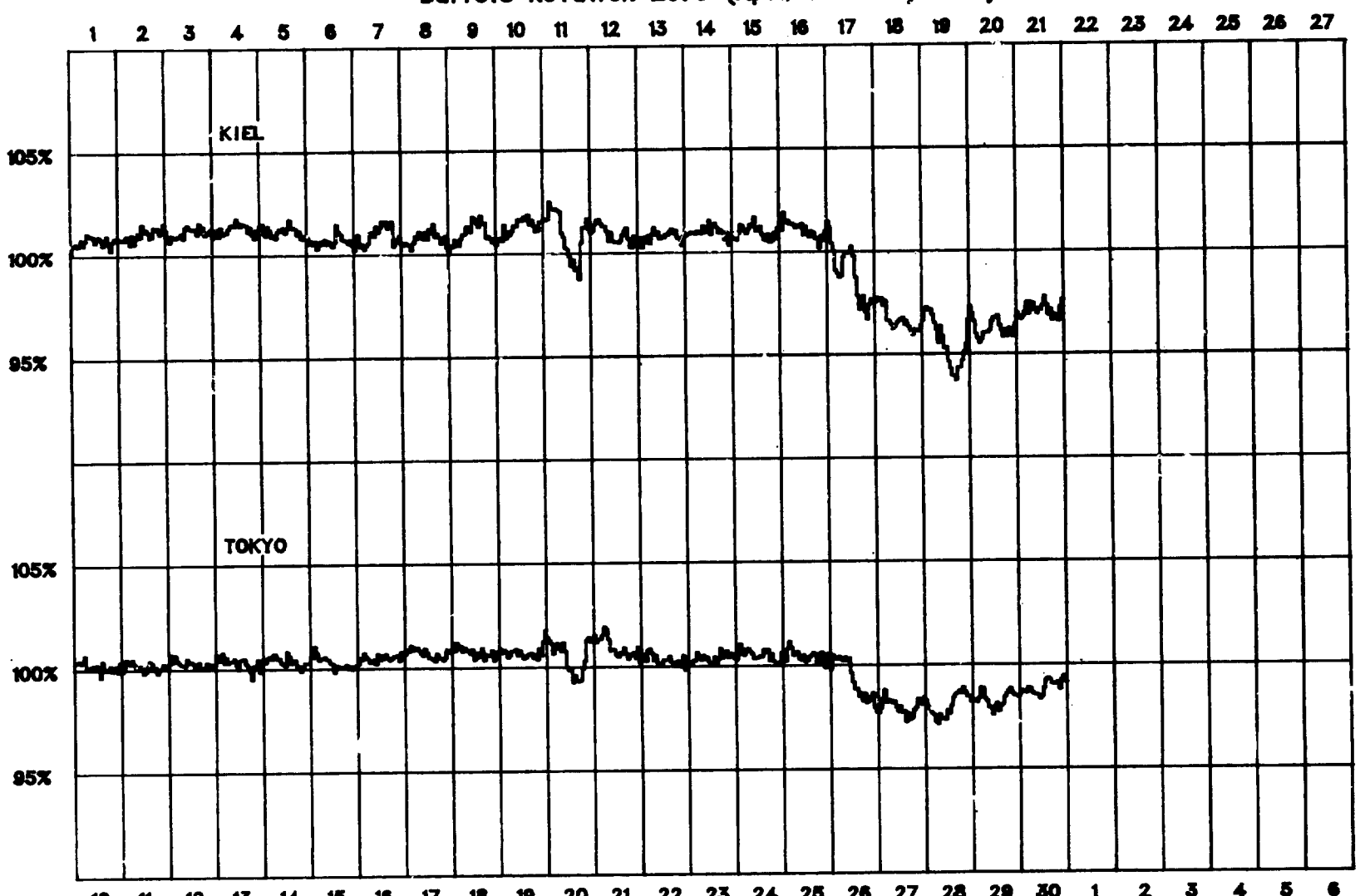
COSMIC RAY INDICES
(Neutron Monitor)

Bartels Rotation 2072 (March 1985–April 1985)



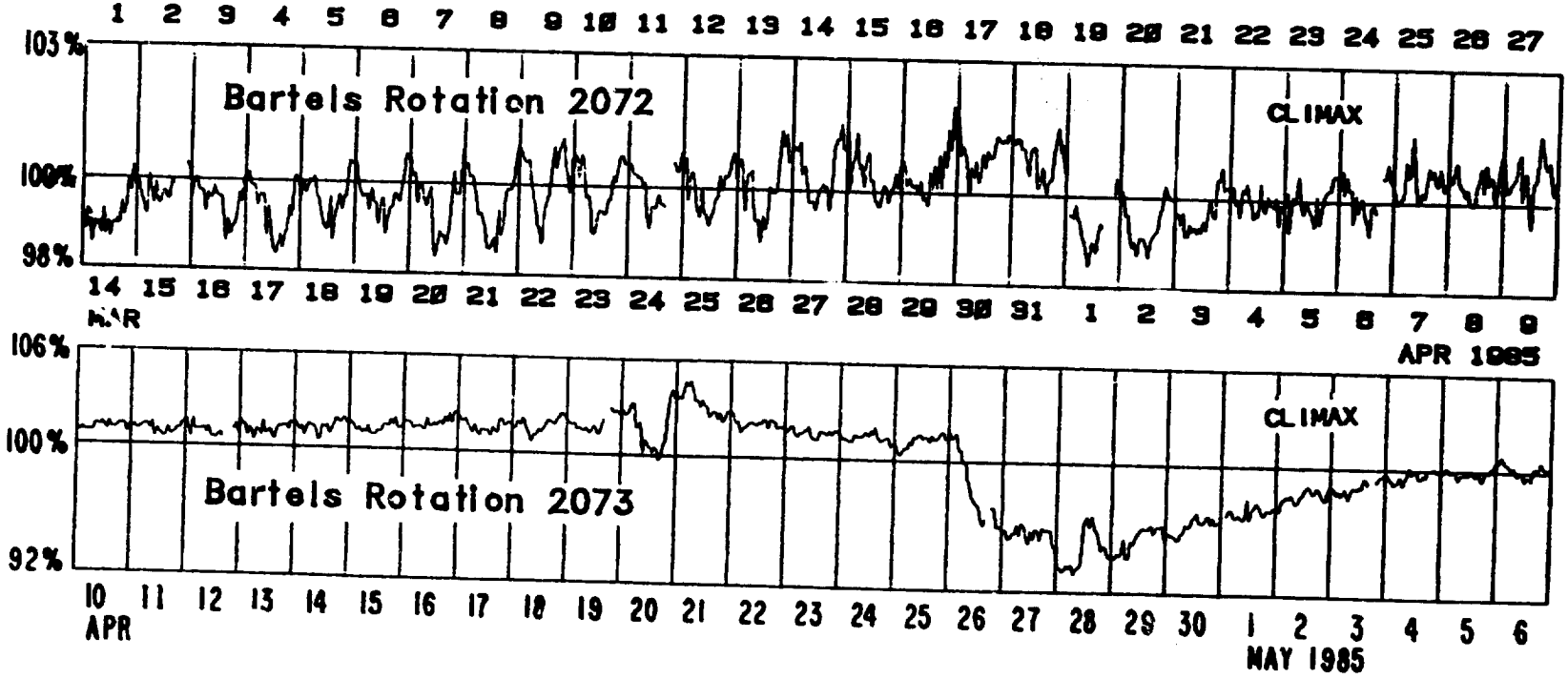
COSMIC RAY INDICES
(Neutron Monitor)

Bartels Rotation 2073 (April 1985–May 1985)



73
Apr 85

COSMIC RAY INDICES
(Neutron Monitor)



COSMIC RAY INDICES
(Neutron Monitor)

April 1985

Day	THULE Average (cts/h)/100	ALERT Average (cts/h)/100	DEEP RIVER Average (cts/h)/300	KIEL Average (cts/h)/100	CLIMAX Average (cts/h)/100	PREDIGTSTUHL Average (cts/h)/100	TOKYO Average (cts/h)/256	HUANCAYO Average (cts/h)/100
1				6028.2	3937.3(3)	1177	3652.0	
2				6030.9	3941.0	1179	3652.0	
3				6020.5	3951.1	1183	3641.8	
4				6045.2	3960.9	1187	3635.4	
5				6065.5	3963.7	1191	3641.7	
6				6077.4	3968.2	1194	3646.1	
7				6081.5	3980.3	1196	3644.3	
8				6111.4	3981.3	1198	3648.5	
9				6086.0	3987.5	1199	3654.2	
10				6071.0	3973.5	1198	3644.0	
11				6090.1	3971.2	1198	3643.0	
12				6095.2	3968.6	1199	3647.2	
13				6103.7	3974.6	1199	3647.9	
14				6097.9	3983.0	1199	3651.1	
15				6 69.7	3982.9	1199	3648.2	
16				6084.1	3998.4	1198	3655.7	
17				6074.7	3992.5	1197	3662.7	
18				6087.5	3999.0	1196	3664.7	
19				6103.3	4005.9	1195	3663.9	
20				6083.6	3999.5	1196	3656.0	
21				6082.7	4059.0	1197	3670.7	
22				6074.0	4013.7	1198	3649.1	
23				6085.7	3993.8	1199	3651.2	
24				6084.4	3984.4	1199	3655.8	
25				6090.6	3979.3	1199	3634.4	
26				5962.0	3870.0	1199	3610.6	
27				5829.8	3756.8	1197	3564.0	
28				5763.2	3717.1	1195	3565.2	
29				5802.2	3747.5	1193	3575.5	
30				5852.5	3782.3	1191	3596.1	
Mean				6037.8	3947.4	1195	3639.8	

For less than 24-hour coverage, parentheses enclose the number of hours for which data are available.
For Climax and Huancayo, parentheses enclose the number of section hours whenever the sum of both sections falls below 40 hours.

GEOMAGNETIC ACTIVITY INDICES

April 1985

Day		Kp Three-Hourly Indices 1	2	3	4	5	6	7	8	Sum	Ap	Cp	Km Three-Hourly Indices 1	2	3	4	5	6	7	8	ae Provisional Am	N	S	M	
1		2-	2	3-	4-	5	5+	4-	3-	27-	23	1.1	2-	2	3-	3	5+	5	3+	3-	43	38	36	21	53	
2		2-	3	3+	2+	3	4-	4+	3-	24	16	0.9	1+	3-	3	3-	3-	3+	4-	3-	28	37	20	21	37	
3		5-	3	3-	3-	3-	3+	5-	3	27-	20	1.0	4+	3-	2+	3-	2	3	4	3	33	41	20	29	33	
4		2+	3+	3	3-	3	4	4-	3	25	17	0.9	2-	3-	3-	3	2+	4-	4-	3-	28	30	19	19	32	
5	Q7A	2+	3+	1	2	2-	1-	1	1-	13-	7	0.3	2	3-	1+	2	2+	0+	1-	1	12	14	11	15	10	K
6	Q5	0+	0	1	2-	1+	1	2+	2	10-	5	0.2	0+	0+	1+	2-	2-	1-	2	2+	9	14	5	7	13	CC
7	Q8A	1-	2	3-	2	2	3-	2-	0	14	7	0.4	1-	2	3	3-	2-	2+	1+	0+	15	10	13	13	11	CC
8		0+	1-	2-	2	2-	3	4	3+	15-	15	0.9	0+	1-	1+	2-	1+	2+	4-	3-	23	29	13	7	36	
9	D5	4	4	4+	4+	6-	6+	3+	1-	33-	38	1.4	4	4-	4	5-	6-	5	3	1	60	49	64	46	67	
10		0+	2-	2+	4-	3	3-	2+	3-	19-	11	0.6	0+	2	2+	3+	3	3-	2+	3-	21	18	24	18	25	
11		4	3+	2	2	1+	3	1-	1	17+	11	0.6	4	3	2-	2	1+	3-	1	1	20	23	11	21	13	
12	Q4	2-	2-	1+	1+	1+	1+	1+	0+	10+	5	0.2	1+	1+	2-	1	2-	1	2-	0+	9	12	7	11	9	CC
13	Q6	1-	1	1+	2-	1+	2	1+	3-	12	6	0.3	1-	1	1	1+	1+	2	2	3	12	13	8	8	13	CC
14	Q10A	3	4-	2+	1	2+	2-	2-	1+	17	10	0.5	3+	3+	2+	1+	2	1+	2-	2-	19	19	12	17	14	K
15	Q1	1+	2-	1	1	1	1-	1-	2-	9	4	0.2	1-	1+	1	1+	1-	0+	0+	2-	6	9	4	7	7	CC
16	Q9A	1+	2	1+	3-	3-	1+	2-	2+	15+	8	0.4	1+	2	1+	3-	3-	2-	2-	2+	15	19	12	13	18	K
17	Q3	2-	1-	2-	1-	1+	0+	1-	2+	9+	5	0.2	1+	1	2-	1	1-	1-	1	2	8	12	5	8	10	CK
18	Q2	3-	0+	1-	1-	1-	1	0+	1	7+	4	0.1	2+	1-	1+	0+	1	1	0+	1+	7	11	3	8	6	CK
19		2	3-	4-	3	3+	3+	4	5	27	21	1.1	2-	3	4-	3	3+	4-	4	5-	41	32	33	18	48	
20	D3	5	6-	6+	3+	2	3	6-	7-	38-	53	1.6	4	5-	6	3+	2	3	5-	6-	73	68	67	73	61	
21	D1	8+	7+	8	6-	5-	6-	4+	4-	48-	103	1.9	7	6-	6+	5-	4+	5	4	4-	112	124	94	165	55	
22		3	2+	2+	4-	2+	3-	2-	2+	20+	11	0.7	3-	2+	3-	3+	2+	2+	1+	2	20	21	15	19	18	
23		4-	2+	3-	2	3-	3	3-	2	21	12	0.7	3+	2	3-	2	2+	3-	2+	2	21	27	13	19	21	
24		4	4+	4+	3+	2+	2+	1+	1+	23+	17	0.9	3+	4-	4	3	2	2	1+	1+	26	32	20	43	9	
25		4-	4+	4	4+	3+	2+	2+	3+	28-	21	1.1	4	4+	4-	4-	3	2-	2+	3	37	40	32	45	27	
26		5-	5	4+	4	2	4-	4	5-	32+	30	1.3	4-	4	5-	4+	2-	3-	3+	4	45	52	34	48	38	
27		4-	5	4-	3+	4+	5-	3+	6-	34-	33	1.3	3+	5-	4-	4	4	3+	3-	4+	49	49	39	45	44	
28	D2	7-	6-	7	7-	5-	3-	3-	2	38	61	1.7	5	5-	5+	6-	4-	3-	2+	2	69	69	56	98	28	
29		3	6	3+	1-	2	1+	2-	1	19	17	0.9	3-	5	3	1	2+	2-	2-	1	26	27	22	40	10	
30	D4	2-	0+	1	5+	7+	5	5	3+	29	42	1.5	2-	1-	2-	5	7-	4+	4-	3-	36	69	40	25	84	
Mean											21	0.83									31.4	33.7	25.2	29.5		

Day	Kn Three-Hourly Indices 1	2	3	4	5	6	7	8	An	Ks Three-Hourly Indices 1	2	3	4	5	6	7	8	As	S_B	Prov R_I	R_B	R_S	IMF	
1	2-	2	3-	3+	5-	4+	3+	3	37	2	2	3-	3	6-	5+	3+	2	48	72.2	25	21	16	D	-
2	2-	3	3+	3	3	3+	4	3	32	1	3-	3	3-	2	3	3+	2+	23	72.6	21	25	16	A	-
3	4+	3	3-	3-	3-	3	4	3	35	4	2+	2+	3	2-	3	4	3+	31	72.5A	23	25	16	T	-
4	2-	3-	3	3	3-	4-	4-	3	30	2	3-	3-	3-	2	3+	4-	3-	26	71.9	17	19	16	A	-
5	2	3	2-	2	2+	1-	1	1	13	2	3-	1-	2-	2+	0+	1-	1	11	71.2	23	21	15		-
6	0	0+	2-	2-	2	1-	2+	3-	11	1-	0	1-	2-	1+	1-	2-	2-	7	70.5	19	15	14	N O	-
7	1	2	3	3-	2	3-	2-	1-	16	1-	2+	3+	2+	1+	2	1-	0	14	70.3	11	12	14	T	-
8	0+	1-	1+	2	2	3	4-	5-	25	0+	1-	1+	2-	1-	2-	4-	4+	20	69.9	9	10	13		-
9	4-	4-	4	5-	5+	5	3-	1+	57	4	4	4+	5-	6-	5	3	1-	64	69.4	9	10	13	A	-
10	0+	2	3-	3	3+	3-	3-	3	23	1-	2	2+	3+	3	3-	2-	3-	19	69.7	0	0	13	V A	-
11	4	3	2	2+	1+	3-	1+	1+	21	4	3+	1+	2-	1+	3-	0+	1-	19	69.0	0	0	13	I	-
12	1+	1+	2	1+	2	2-	2	1-	11	1	1+	2-	1-	1	0+	2-	0	7	69.6	0	0	13	L	-
13	1-	1	1+	2-	2-	2+	2+	3	14	0+	1	1-	1	1	2-	1+	3	9	69.8	0	0	13	A	-
14	3-	3	2+	1+	2+	2-	2	2	18	4-	4-	2+	1+	2	1+	1+	1+	21	70.6	10	8	14	B	-
15	1	1+	1+	1+	1	1	1-	2	8	1-	1+	1-	1	1-	0	0	1	5	70.0	0	0	14	L E	-
16	2-	2	1+	3-	3-	2-	2	3-	17	1-	2	1+	3-	3-	2-	1+	2	14	69.4	0	0	13		-
17	1+	1	2	1+	1	1+	1+	2+	10	2-	1	2-	0+	0+	0+	0+	2	7	70.2	0	8	14	C	-
18	2+	1-	1+	1-	1	1+	1-	2	9	2+	1-	1	0	1-	1-	0	1	6	71.7	10	9	15	U	-
19	2	3	3+	3	3+	3+	4-	4+	37	1+	3	4-	3	3+	4-	4	5+	45	71.7	9	9	15	R	-
20	4	5	6	3+	2+	3	4+	6	79	4	4+	6-	3	2	3	5	5+	67	72.3	11	10	16	R E	-
21	7-	6-	6+	5-	4+	4+	4	3+	106	7	6-	6+	5	4+	6-	4	4-	119	77.9	17	18	22	N	-
22	3-	3-	3-	4-	2+	2+	2-	2+	23	2+	2+	2+	3	2+	2	1-	2	17	89.8	31	30	35	T	-
23	3+	2+	3-	2+	2+	3	3-	2+	24	3	2-	2+	2	2	3-	2+	2-	18	93.3*	28	33	39	L	-
24	3+	4-	4-	3+	2+	2	1+	2-	28	3	4-	4	3-	2-	2-	1+	1-	23	89.0*	30	32	34	Y	-
25	4-	4	4-	4-	3	2	2+	3+	37	4	4+	3+	4-	3+	1	2+	3-	38	95.2	37	35	41		-
26	4-	4	5-	4+	2	3+	3+	4	48	4-	4	4+	4+	2-	2	3	4	43	88.3*	33	37	33		-
27	3+	4+	4	4	4	4-	3	5-	52	3+	5-	4-	4	4	3+	2	4	46	80.6	31	36	25		-
28	5	5-	5+	6-	4	3-	3-	2+	67	5+	5	6-	6	4-	3-	2	2-	71	78.1	27	32	22		-
29	3	5	3+	1+	2+	2+	2-	2-	28	3-	5	3-	0+	2-	1+	2	1-	23	83.2	26	30	28		-
30	2	1-	2-	5	7-	4+	4	3+	63	1+	1-	2-	4	6+	4+	3	2	48	80.8	26	27	25		-
Mean									32.6									30.3	75.7	16.1	17.1	19.8		

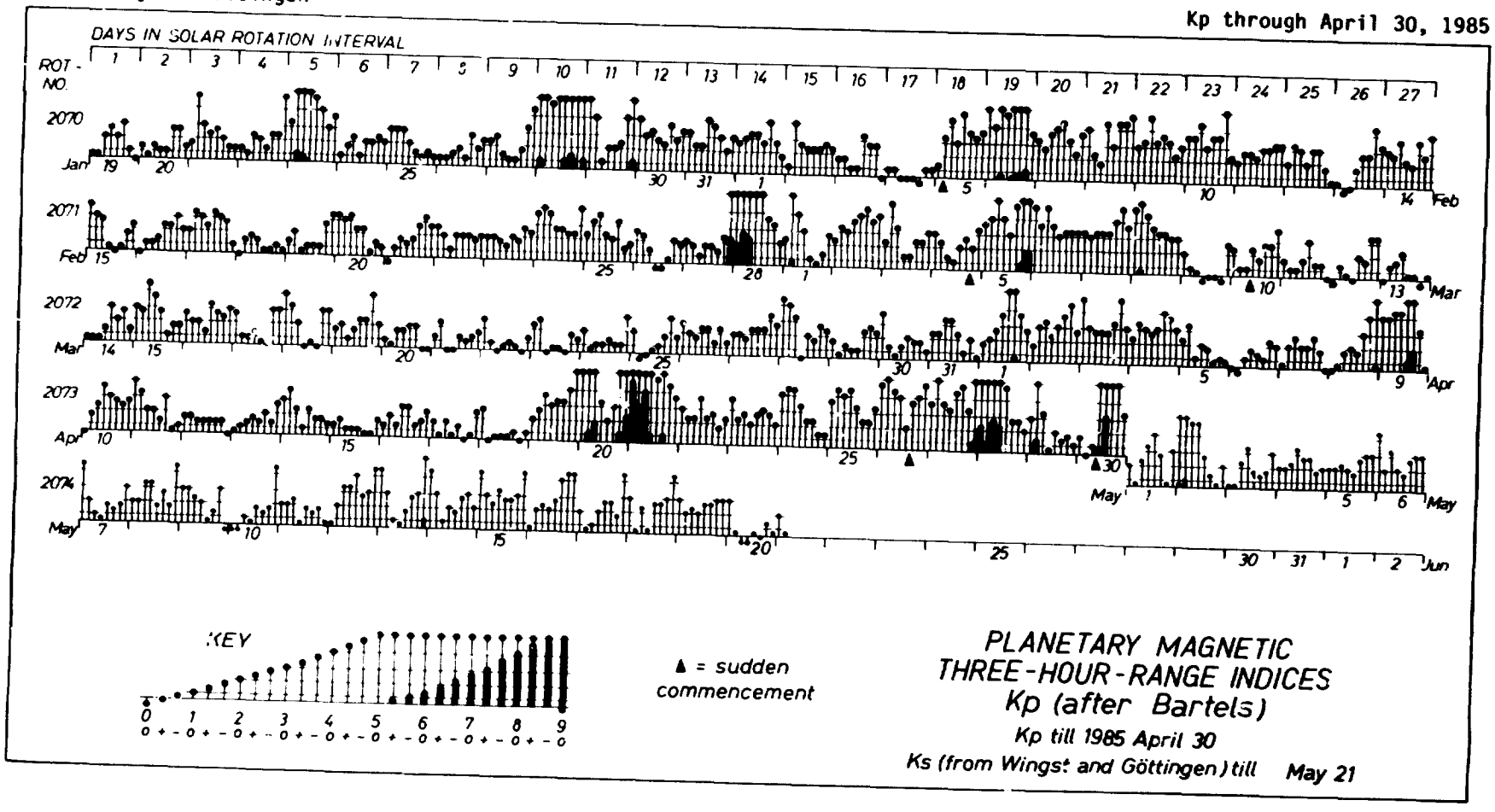
DAILY AVERAGE INDICES Ap

DAY	1984 MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	1985 JAN	FEB	MAR	APR
1	22	7	14	75	11	7	27	15	33	15	16	23
2	13	12	12	24	12	10	12	27	17	11	22	16
3	12	32	12	14	12	20	18	22	13	8	14	20
4	13	26	12	14	59	6	18	28	7	3	10	17
5	27	19	12	7	63	7	13	20	6	21	42	7
6	10	12	10	4	12	21	14	22	5	46	24	5
7	4	10	7	4	6	43	20	18	5	20	22	7
8	5	10	10	14	11	24	20	8	19	24	27	15
9	19	20	9	17	12	20	12	6	46	19	4	38
10	27	15	14	8	25	29	18	9	29	24	10	11
11	10	11	11	11	17	28	20	19	20	13	6	11
12	12	7	13	15	13	32	8	17	19	11	7	5
13	9	6	62	8	11	17	10	27	14	11	4	6
14	12	4	40	20	14	15	14	8	9	16	7	10
15	9	24	25	22	10	14	52	24	9	9	14	4
16	7	42	25	15	8	19	112	33	8	7	11	8
17	32	11	43	11	6	3	35	28	9	12	8	5
18	12	27	19	6	3	43	22	15	6	4	11	4
19	22	29	14	14	36	75	21	8	7	7	9	21
20	30	16	12	10	21	63	20	6	6	10	5	53
21	44	3	8	3	10	47	22	13	12	8	5	103
22	32	6	9	1	22	46	14	9	11	7	4	11
23	30	11	8	8	112	27	10	16	36	7	5	12
24	30	22	12	23	52	39	10	4	7	18	6	17
25	16	10	8	18	43	22	10	5	9	12	5	21
26	14	8	6	10	42	14	8	26	6	5	8	30
27	7	10	14	36	25	8	7	17	11	19	10	33
28	8	21	18	36	16	8	6	31	58	60	14	61
29	9	12	12	21	12	7	13	26	24		6	17
30	17	12	8	16	11	7	36	21	17		7	42
31	7		17	12		6		24	15		10	
MEAN	17	15	16	16	24	23	21	18	16	15	11	21

PLANETARY 3-HOUR-RANGE INDICES (Kp) BY 27-DAY SOLAR ROTATION INTERVAL

University of Gottingen

Kp through April 30, 1985



NASA/GODDARD SPACE FLIGHT CENTER

HOURLY EQUATORIAL DST VALUES(PROVISIONAL)

APRIL 1984

UNIT=NT

DAY	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	U.T. 24
1	-1	4	9	12	9	7	9	12	12	1	3	7	6	2	-23	-41	-41	-37	-32	-29	-28	-26	-22	-19
2	-22	-21	-20	-17	-22	-19	-17	-17	-13	-8	-8	-10	-14	-15	-18	-22	-21	-24	-23	-21	-23	-21	-16	-10
3	-10	-15	-7	-7	-7	-7	-9	-8	-6	-5	-9	-9	-9	-13	-18	-16	-16	-17	-17	-20	-21	-17	-12	-9
4	-15	-16	-14	-14	-15	-21	-20	-17	-13	-16	-14	-10	-12	-13	-16	-20	-26	-25	-21	-20	-1[illegible]	-15	-11	-9
5	-13	-14	-11	-11	-11	-12	-11	-10	-11	-12	-13	-11	-13	-9	-11	-9	-10	-10	-7	-8	-1[illegible]	-14	-15	-12
6	-11	-9	-7	-5	-5	-5	-6	-6	-7	-10	-12	-9	-7	-4	-2	0	1	1	0	-4	-6	-4	1	4
7	3	6	8	6	4	-2	-9	-11	-20	-19	-13	-8	-6	-7	-11	-11	-11	-13	-10	-7	-9	-8	-7	-6
8	-7	-5	-4	-5	-3	-2	-1	0	-1	-1	-3	0	1	3	4	-1	-1	4	-1	-5	-9	-24	-37	-32
9	-28	-16	-12	-11	-9	-17	-22	-23	-18	-28	-29	-17	-22	-36	-37	-56	-62	-49	-35	-29	-30	-31	-30	-25
10	-22	-19	-19	-20	-17	-18	-22	-27	-27	-26	-20	-24	-19	-15	-24	-26	-22	-25	-25	-20	-13	-12	-13	-11
11	-14	-18	-18	-19	-24	-27	-24	-23	-24	-23	-20	-17	-20	-22	-20	-19	-22	-21	-17	-15	-13	-11	-)	-9
12	-11	-10	-6	-5	-5	-5	-5	-1	-2	-4	-5	-7	-2	-5	-6	-11	-14	-16	-17	-12	-9	-10	-11	-10
13	-12	-14	-14	-9	-1	4	4	6	7	5	5	6	3	2	2	7	9	11	13	7	1	-3	-1	1
14	3	-5	-6	-10	-19	-18	-18	-19	-15	-15	-13	-11	-14	-12	-10	-7	-5	-4	-5	-7	-9	-8	-4	-3
15	-4	-6	-6	-7	-9	-6	-3	-3	-3	-1	0	-1	-6	-5	-6	-4	0	1	1	3	4	6	8	5
16	5	7	9	8	9	13	17	19	19	18	11	1	2	2	3	3	0	-2	4	6	6	5	-2	-3
17	-3	-6	-6	-4	0	0	0	1	0	2	5	5	6	7	7	8	5	2	0	-1	0	0	-2	-5
18	-4	-5	-5	-4	-3	-2	-2	-3	2	5	6	6	5	5	5	4	5	9	12	14	13	12	12	16
19	21	23	18	11	5	0	1	-1	-9	-12	-14	-12	-12	-16	-16	-23	-33	-45	-50	-47	-58	-55	-49	-48
20	-54	-56	-45	-32	-38	-43	-20	-7	-48	-61	-50	-46	-44	-47	-49	-48	-46	-49	-50	-55	-63	-90	-114	-123
21	-126	-117	-104	-107	-128	-146	-158	-156	-133	-119	-113	-103	97	-98	-105	-112	-106	-97	-96	-94	-86	-78	-77	-72
22	-70	-59	-54	-46	-47	-48	-46	-44	-47	-54	-50	-47	30	-51	-49	-48	-47	-42	-35	-31	-29	-29	-30	-33
23	-34	-33	-36	-35	-35	-33	-33	-31	-32	-34	-31	-27	-26	-25	-30	-30	-35	-42	-39	-36	-31	-29	-29	-29
24	-30	-32	-29	-28	-27	-31	-43	-48	-45	-40	-39	-39	-42	-40	-38	-35	-34	-31	-28	-27	-27	-26	-26	-23
25	-24	-20	-22	-29	-25	-22	-23	-27	-27	-24	-25	-30	-37	-38	-36	-32	-31	-33	-35	-33	-30	-29	-29	-28
26	-30	-32	-15	-23	-19	-19	-22	-26	-33	-37	-23	-11	-5	-5	-12	-22	-19	-22	-26	-18	-20	-37	-35	-36
27	-35	-31	-32	-42	-50	-54	-51	-46	-45	-48	-35	-38	-48	-44	-45	-41	-37	-35	-35	-36	-42	-41	-28	-34
28	-30	-49	-60	-68	-64	-57	-68	-86	-95	-95	-99	-89	-76	-78	-78	-72	-67	-64	-61	-63	-57	-51	-45	-41
29	-46	-47	-45	-45	-63	-65	-53	-48	-45	-47	-44	-41	-39	-44	-48	-43	-43	-43	-39	-38	-37	-34	-29	-27
30	-27	-24	-24	-23	-19	-15	-14	-11	-13	4	19	30	5	-59	-63	-64	-55	-64	-63	-65	-53	-59	-57	-53

PRINCIPAL MAGNETIC STORMS

APRIL 1985

Sta	Geomag Lat	Commencement Day	Time (UT)	Type	SC Amplitudes D (Min)	H (Gamma)	Z (Gamma)	Maximum 3-Hour K Index Day(3-Hour Periods)	K	Ranges D (Min)	H (Gamma)	Z (Gamma)	End Day	Hour (UT)
HYB	07.6N	01	0200	..	..	..	..	01(5)	5	4	138	19	02	23
GUA	04.0N	01	0800	..	..	..	..	01(5)	5	—	50	10	01	19
COL	64.6N	08	19--	..	..	..	..	09(3,4,6)	7	272	1750	760	09	21
WIT	54.2N	08	1900	..	..	..	..	09(6)	6	38	208	102	09	18
FRD	49.6N	08	18--	..	..	..	..	08(8) 09(5,6) 11(1)	5	29	155	167	12	--
JAI	17.3N	08	0900	..	..	..	..		-	6	139	38	09	21
SHL	14.7N	08	0900	..	..	..	..		-	6	124	35	09	21
UJJ	13.5N	08	0900	..	..	..	..		-	5	141	33	09	21
ABG	09.5N	08	0900	..	..	..	..	09(5)	6	6	155	44	09	21
HYB	07.6N	08	1100	..	..	..	..	09(6)	6	5	172	25	09	21
ANN	01.5N	08	0900	..	..	..	..		-	4	210	66	09	21
TRV	01.1S	08	0900	..	..	..	..		-	3	235	75	09	21
GUA	04.0N	09	0804	..	..	..	..	09(6)	5	—	80	20	09	20
COL	64.6N	19	00--	..	..	..	..	21(3)	8	320	2380	1590	22	11
SIT	60.0N	19	0830	SC	4	- 11	7	21(3)	8	—	—	—	21	23
FRD	49.6N	19	----	..	..	..	..	21(1)	8	68	220	300	—	—
JAI	17.3N	19	0730	..	..	..	..		-	—	—	—	21	24
SHL	14.7N	19	0730	..	..	..	..		-	8	273	41	21	24
ABG	09.5N	19	0730	..	..	..	..	20(3) 21(2,3)	6	10	246	53	21	24
HYB	07.6N	19	0000	..	..	..	..	19(3,6,7,8)	4	4	134	32	20	01
ANN	01.5N	19	0730	..	..	..	..		-	6	288	96	21	24
TRV	01.1S	19	0730	..	..	..	..		-	5	268	91	21	24
HER	33.7S	19	17--	..	..	..	..	20(3)	6	22	145	106	20	10
GNA	43.3S	19	08--	..	..	..	..	20(7) 21(3)	6	27	260	240	21	20
WIT	54.2N	20	1958	SC	- 3	26	0	21(1)	8	58	460	295	21	24
BJI	28.5N	20	0311	SC	1.2	14	..	20(3)	7	17	283	52	22	20
HON	21.1N	20	0316	SC	..	8	3	20(3)	6	12	211	56	21	23
HYB	07.6N	20	0311	SC	0.3	17	- 3	21(3)	7	8	275	36	22	02
GUA	04.0N	20	0311	SC*	.1	8	- 2	20(3)	6	—	110	20	20	11
GUA	04.0N	20	1933	..	..	..	..	21(4)	5	10	220	30	21	19
PMG	18.6S	20	0311	SC	- 0.3	17	12	20(3)	7	8	240	70	22	00
HER	33.7S	20	19--	..	..	..	..	21(1)	7	56	201	174	22	01
KGL	56.5S	20	1500	..	..	..	..	20(8) 21(1,6)	8	173	1104	720	22	02
COL	64.6N	25	19--	..	..	..	..	28(3,4)	7	296	2100	1340	29	08
SIT	60.0N	26	02--	..	..	..	..	28(4)	7	—	—	—	28	16
FRD	49.6N	26	----	..	..	..	..	28(1,4)	6	40	105	111	29	—
BJI	28.5N	26	02--	..	..	..	..	28(3)	6	11	175	46	29	09
HYB	07.6N	26	0201	SC	- 0.7	28	- 1	26(4,8) 27(5)	5	3	104	18	27	18
GUA	04.0N	26	0203	..	..	..	..	26(4)	5	—	120	30	26	23
PMG	18.6S	26	02--	..	..	..	..	28(3,4) 29(2)	6	4	180	70	29	07
GNA	43.3S	26	02--	..	..	..	..	28(4)	6	22	150	150	28	16
JAI	17.3N	27	0830	..	..	..	..		-	5	167	29	29	06
SHL	14.7N	27	0830	..	..	..	..		-	5	179	31	29	06
ABG	09.5N	27	0830	..	..	..	..	28(3)	6	5	167	36	29	06
HYB	07.6N	27	2200	..	..	..	..	28(3,4)	6	4	179	33	29	08
GUA	04.0N	27	0040	..	..	..	..	27(4)	5	—	110	10	27	17
GUA	04.0N	27	2235	..	..	..	..	28(3)	6	—	130	20	28	19
ANN	01.5N	27	0830	..	..	..	..		-	4	197	91	29	06
TRV	01.1S	27	0830	..	..	..	..		-	3	216	94	29	06
HER	33.7S	27	22--	..	..	..	..	27(8) 28(1,3)	5	26	165	113	28	15
GUA	04.0N	29	0254	..	..	..	..	29(2)	5	--	80	20	29	19
HER	33.7S	29	0923	SC	1	23	15	30(5)	7	15	158	147	30	22
COL	64.6N	30	0923	SC*	- 7	53	- 32	30(5)	8	161	1770	510	30	22
WIT	54.2N	30	0923	SC*	1	32	0	30(5)	7	30	312	70	30	22
FRD	49.6N	30	0923	SC	2	28	- 3	30(5)	6	30	170	45	03	--
BJI	28.5N	30	0923	SC	0.9	42	1	30(5)	8	9	263	33	01	16
HON	21.1N	30	0928	SC	..	25	11	30(5)	6	5	91	27	01	16
JAI	17.3N	30	0921	SC	- 0.8	34	- 12		-	5	231	33	30	24
SHL	14.7N	30	0921	SC	0.2	27	6		-	4	224	17	30	24
ABG	09.5N	30	0921	SC	- 1.1	32	- 10	30(4)	6	5	237	32	30	24
HYB	07.6N	30	0923	SC	- 0.7	36	- 4	30(5)	8	5	265	20	30	24
GUA	04.0N	30	0921	SC	0.2	30	- 9	30(5)	7+	—	140+	30	30	22
ANN	01.5N	30	0921	SC	- 1.9	49	20		-	6	259	88	30	24
TRV	01.1S	30	0921	SC	0.1	44	52		-	3	250	180	30	24
PMG	18.6S	30	0923	SC	0.5	30	24	30(5)	7	6	170	90	01	00
GNA	43.3S	30	0923	SC*	4.2	24 *	18	30(5)	6	17	180	(240)	30	22
KGL	56.5S	30	0943	SC	8	48	10	30(5)	8	69	640	116	30	22

MAGNETIC STORM SUDDEN COMMENCEMENTS AND SOLAR FLARE EFFECTS
(PRELIMINARY REPORT ON RAPID MAGNETIC VARIATIONS)

APRIL 1985

Storm Sudden Commencements (ssc)			Solar Flare Effects (sfe)		
Day	Time	Quality: Station Group*	Day	Begin-End	Station(s)
20	0311	A: LNP, MPO; B: WNG MMB KAK KNY; C: WIT CLF SPT HTY AMS CZT KGL	24	0925-1015	WNG WIT EBR SPT
			24	1139-1155	MPO
30	0923	A: WNG FRD LNP; B: SOD DOB WIT NGK VAL HAD BDV CLF GCK MMB AQU EBR SPT KAK KNY GNA AMS CZT KGL; C: HTY			

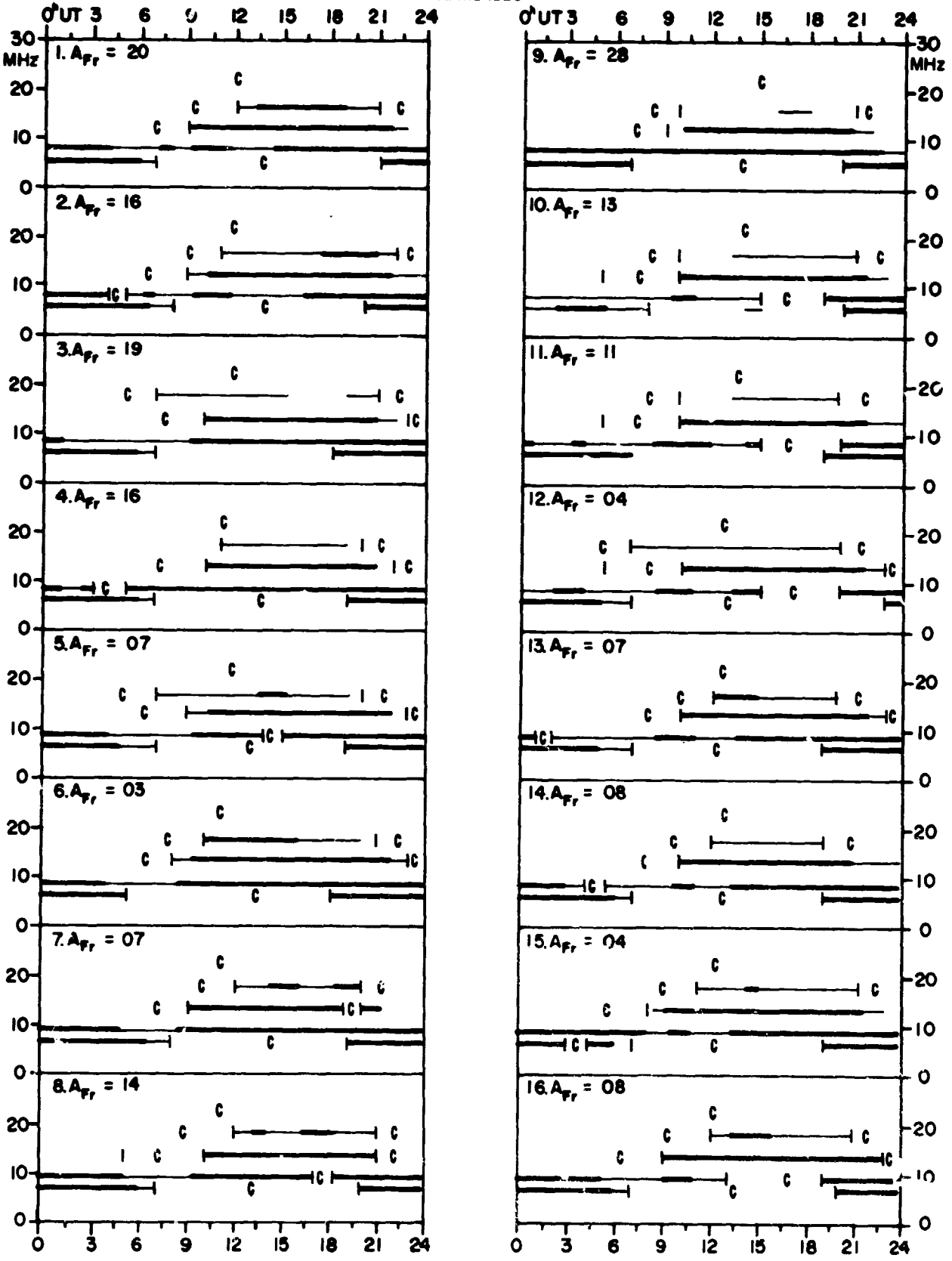
Reporting Observatories:

SOD DOB NUR WNG WIT NGK VAL HAD BDV CLF GCK MMB AQU
EBR SPT FRD KAK HTY KNY LNP MPO GNA AMS CZT KGL DUM

*Three-letter codes identify each observatory.

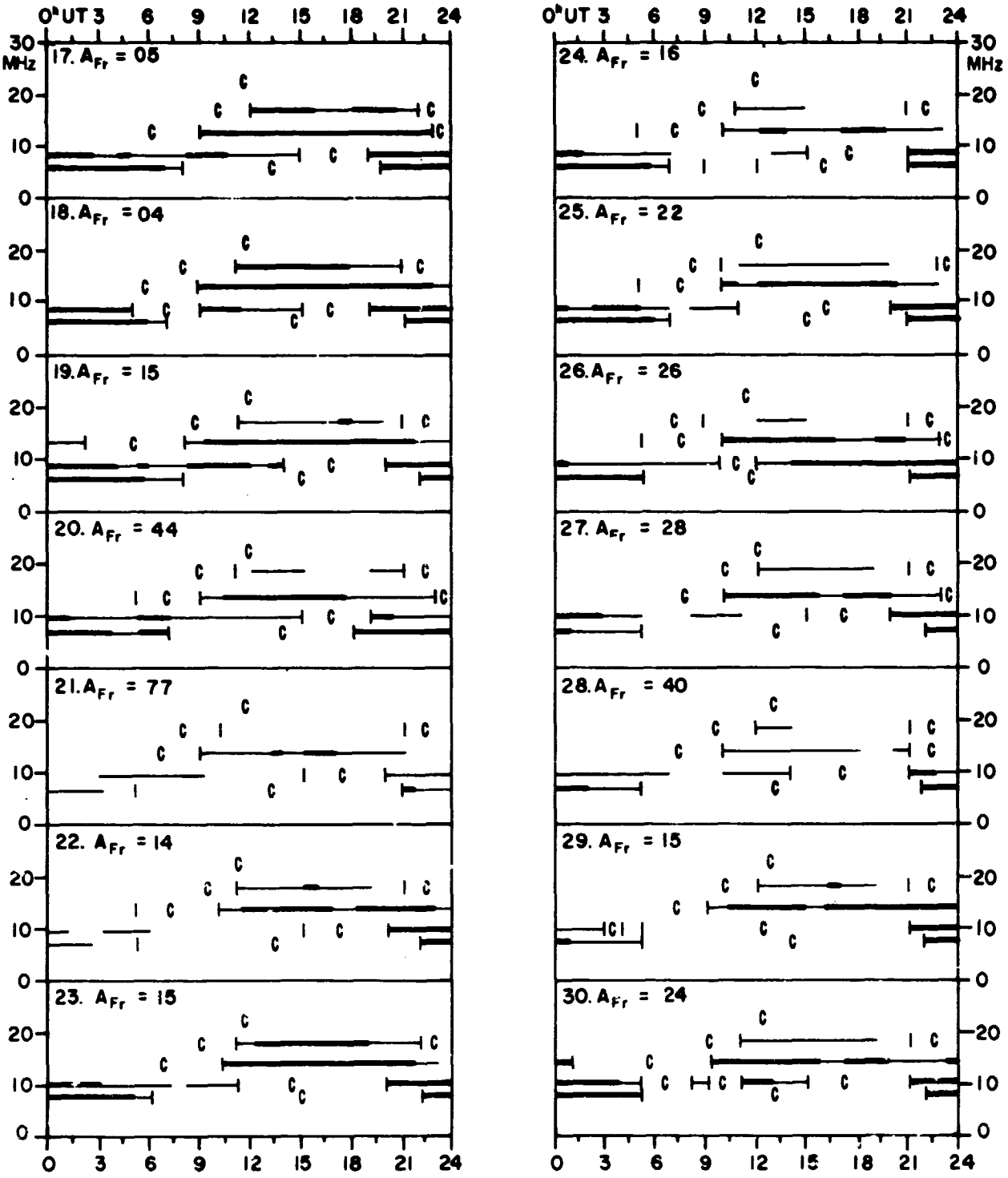
TRANSMISSION FREQUENCY RANGES -- NORTH ATLANTIC PATH

APRIL 1985



TRANSMISSION FREQUENCY RANGES -- NORTH ATLANTIC PATH

APRIL 1985



Field strengths from five frequencies, 6.4, 8.6, 13.0, 17.0 and 22.5 MHz, observed on a Norddeich-New York circuit are represented above. Heavy solid lines represent field strengths $\geq$ -12 dB above 1 μV/m (transmitter power reduced to 1 kW). Observed field strengths between -12 dB above 1 μV/m and -40 dB above 1 μV/m are represented by the fine line.

RADIO PROPAGATION QUALITY INDICES

APRIL 1985

Day	Bracknell	Teheran	New York	Tokyo	Canberra
1	7.7	7.5	4.8	6.8	7.9
2	4.5	3.3	3.8	5.4	5.8
3	3.0	3.4	3.3	6.0	5.1
4	4.7	5.5	4.1	5.4	7.7
5	6.8	6.7	4.0	6.2	5.4
6	5.3	3.3	5.2	6.2	4.7
7	4.3	3.9	5.5	5.8	5.7
8	4.6	3.3	4.8	6.7	4.6
9	4.0	3.5	2.3	5.8	4.9
10	2.7	4.6	2.1	5.4	2.8
11	3.2	5.7	3.8	4.3	3.8
12	4.5	4.5	3.5	5.6	4.3
13	4.8	5.0	3.6	5.7	5.4
14	3.8	6.5	5.0	4.4	5.9
15	4.9	5.0	5.7	5.7	5.5
16	5.9	7.2	5.0	4.8	5.8
17	4.7	5.4	5.5	6.1	5.2
18	4.1	5.5	6.5	5.6	4.2
19	4.1	5.9	3.5	6.3	4.5
20	4.2	4.4	0.9	4.7	3.2
21	2.7	3.4	0.0	3.4	3.7
22	3.8	7.1	3.2	4.6	4.2
23	5.3	5.2	4.8	4.2	4.3
24	3.1	4.5	2.8	2.9	4.7
25	4.2	7.2	3.0	3.6	5.0
26	4.9	7.3	3.5	3.8	4.8
27	5.0	6.1	3.0	4.7	3.5
28	7.4	5.6	1.3	3.6	3.5
29	9.8	7.1	5.7	4.1	4.2
30	5.9	6.1	4.4	5.1	4.3
Mean	4.8	5.3	3.8	5.1	4.8

CALCULATION OF QUALITY INDICES (Q)

From all 24 hourly field strength values and from all frequencies of the same circuit a median field strength value is calculated (FD). Thi daily value is compared with the average value (FA) of th, preceeding 27 days (1 sun rotation).

$$Q = 6.0 + 20 \log(FD/FA)/3.0$$

The quality indices vary from 0.0 to 9.9 where 6.0 is normal. Conditions are "normal" (index = 6.0), if they correspond to the average of the preceeding 27 days.

SCALE FOR QUALITY INDICES

0.0 - 1.0 = very poor
1.1 - 3.0 = poor
3.1 - 5.0 = fair
5.1 - 7.0 - normal
7.1 - 9.0 = good
9.1 - 9 9 = very good

CONTENTS

Prompt Reports LATE DATA Number 490 Part I

86
ERR
Oct 84

ERRATA: The day of this October 1984 Sudden Commencement was in error and published as day 08 instead of day 18 in SGD 485 Part I page 86.

MAGNETIC STORM SUDDEN COMMENCEMENTS AND SOLAR FLARE EFFECTS
(PRELIMINARY REPORT ON RAPID MAGNETIC VARIATIONS)

OCTOBER 1984

Storm Sudden Commencements (ssc)			Solar Flare Effects (sfe)		
Day	Time	Quality: Station Group*	Day	Begin-End	Station(s)
18	1045	A: COI; B: WNG; C: WIT CLF EBR AMS KGL (bps A: MPO)	04	0745-0745 UT	MPO
			05	0332-0336 UT	GNA (ssc: C: MPO)
			06	0742-0757 UT	MPO (ssc: A: COI)
			10	2330-2335 UT	LNP
			12	1106-1121 UT	MPO
			17	0949-0957 UT	MPO
			25	1040-1057 UT	MPO
			29	0714-0730 UT	MPO
			29	1142-1155 UT	MPO

Reporting Observatories:

SOD DOM NUR WNG WIT NGK HAD BDV CLF GCK MMB AQU EBR COI
SPT FRD KAK HTY KNY QUE LNP MPO GNA CAA AMS CZT KGL DUM

*Three-letter codes identify each observatory.

MAGNETIC STORM SUDDEN COMMENCEMENTS AND SOLAR FLARE EFFECTS
(PRELIMINARY REPORT ON RAPID MAGNETIC VARIATIONS)

MARCH 1985

Storm Sudden Commencements (ssc)			Solar Flare Effects (sfe)		
Day	Time	Quality: Station Group*	Day	Begin-End	Station(s)
04	1827	A: MPO; B: WNG WIT HRB COI; C: DOU BDV CLF DUM	05	0944-1040	NGK
			06	0855-0904	CLF (ssc: C: NGK SPT)
			15	0512-0521	LNP
10	0924	B: WNG WIT MPO AMS CZT; C: DOU BDV GCK (sI: B: EBR; C: SPT - sfe: NGK CLF LNP)	18	0230-0241	LNP
			29	0920-0936	NGK

Reporting Observatories:

DOB NUR WNG WIT NGK HAD DOU BDV CLF HRB GCK MMB EBR
COI SPT FRD KAK KNY LNP MPO GNA CAO AMS CZT DUM

*Three-letter codes identify each observatory.

COSMIC RAY INDICES
(Neutron Monitor)

January 1985

Day	THULE Average (cts/h)/100	ALERT Average (cts/h)/100	DEEP RIVER Average (cts/h)/300	KIEL Average (cts/h)/100	CLIMAX Average (cts/h)/100	PREDIGTSTUHL Average (cts/h)/100	TOKYO Average (cts/h)/256	HUANCAYO Average (cts/h)/100
1	4244			5917.5	3861.5	1148	3597.5	1747.9(16)
2	4259			5929.0	3864.9	1148	3602.7	1743.8
3	4268			5950.1	3858.4	1148	3598.9	1748.0(2)
4	4282			5962.7	3866.0	1148	3604.2	1742.4(28)
5	4277			5957.7	3843.6(36)	1150	3601.2	1742.0
6	4299			5970.0	3897.7(38)	1149	3607.7	1751.0
7	4301			5963.2	3880.9	1153	3607.8	1746.5
8	4292			5965.7	3896.6	1155	3608.1	1754.1
9	4258			5934.9	3900.4	1156	3603.2	1747.0
10	4256			5902.5	3884.1	1151	3585.8	1736.1(38)
11	4268			5912.8	3885.3	1149	3592.7	1737.5
12	4285			5927.3	3901.9	1148	3589.7	1736.4(24)
13	4281			5943.3	3893.8(38)	1149	3585.1	1720.5(4)
14	4261			5898.0	3858.7	1144	3580.2	1730.4
15	4196			5882.5	3849.4	1138	3571.6	1731.1(28)
16	4225			5892.0	3873.4	1140	3575.5	1737.0(36)
17	4215			5908.9	3858.3	1142	3585.7	1738.2(26)
18	4212			5899.8	3846.6(36)	1139	3584.0	1735.8(34)
19	4232			5900.9	3861.1	1143	3587.6	1736.8(34)
20	4242			5915.0	3861.0	1147	3593.2	1737.5
21	4257			5929.9	3880.2	1149	3605.1	1741.2
22	4248			5910.5	3870.9	1147	3591.9	1738.6
23	4254			5924.7	3877.9	1154	3597.5	1740.7
24	4202			5888.1	3872.2	1144	3592.6	1737.2
25	4170			5843.1	3786.9	1130	3576.2	1730.6
26	4157			5813.1	3767.4	1126	3564.5	1728.2
27	4186			5844.0	3804.0(36)	1136	3572.7	1737.0
28	4200			5855.2	---	1144	3586.8	1740.4
29	4237			5887.8	---	1153	3603.4	1745.3
30	4244			5895.7	---	1143	3610.6	1749.2
31	4253			5916.6	---	1136	3606.6	1749.4
Mean	4244			5911.0	3863.4	1145	3592.6	1740.5

For less than 24-hour coverage, parentheses enclose the number of hours for which data are available.
For Climax and Huancayo, parentheses enclose the number of section hours whenever the sum of both sections falls below 40 hours.

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Late
Feb 85

COSMIC RAY INDICES
(Neutron Monitor)

February 1985

Day	THULE Average (cts/h)/100	ALERT Average (cts/h)/100	DEEP RIVER Average (cts/h)/300	KIEL Average (cts/h)/100	CLIMAX Average (cts/h)/100	PREDIGTSTUHL Average (cts/h)/100	TOKYO Average (cts/h)/256	HUANCAYO Average (cts/h)/100
1	4271			5911.4	3915.1	1118	3606.5	1747.4(14)
2	4271			5923.0	3918.1	1126	3608.0	1751.1(18)
3	4281			5935.0	3922.5	1128	3610.6	1747.1
4	4298			5956.7	3934.4	1127	3608.7	1750.3
5	4291			5959.3	3938.5	1126	3601.8	1751.0
6	4256			5920.1	3898.0	1120	3591.7	1751.3
7	4268			5911.2	3888.6	1119	3595.7	1740.7
8	4293			5955.5	3904.9	1130	3596.6	1745.3
9	4307			5987.0	3932.9	1124	3595.5	1748.2
10	4312			5994.7	3943.9	1118	3616.5	1752.3
11	4323			5997.3	3935.8	1130	3614.2	1751.0
12	4333			6023.7	3938.1	1143	3609.2	1752.1
13	4330			6032.3	3944.7	1144	3621.4	1751.4
14	4330			6018.4	3942.8	1133	3621.9	1755.2(38)
15	4329			6016.0	3932.8	1130	3617.3	1752.9(28)
16	4345			6018.7	3948.7	1134	3618.9	---
17	4329			6019.0	3952.1	1139	3624.6	---
18	4333			6014.5	3939.9	1140	3616.4	---
19	4318			5999.7	3919.9	1143	3607.4	1737.0(4)
20	4317			6001.9	3948.1	1142	3607.6	1744.3
21	4327			6006.5	3955.6	1141	3620.1	1740.8(30)
22	4335			6009.5	3952.0	1142	3622.0	1742.7(38)
23	4353			6014.6	3955.5	1138	3628.0	1743.2(20)
24	4333			5983.0	3936.5	1126	3629.7	---
25	4325			5964.8	3924.6	1128	3619.7	---
26	4326			5999.2	3942.8	1151	3621.0	---
27	4349			6013.7	3969.4	1160	3619.6	---
28	4334			6030.1	3994.3	1172	3620.3	---
Mean	4315			5986.3	3937.1	1135	3613.2	1748.4

For less than 24-hour coverage, parentheses enclose the number of hours for which data are available.
For Climax and Huancayo, parentheses enclose the number of section hours whenever the sum of both sections falls below 40 hours.

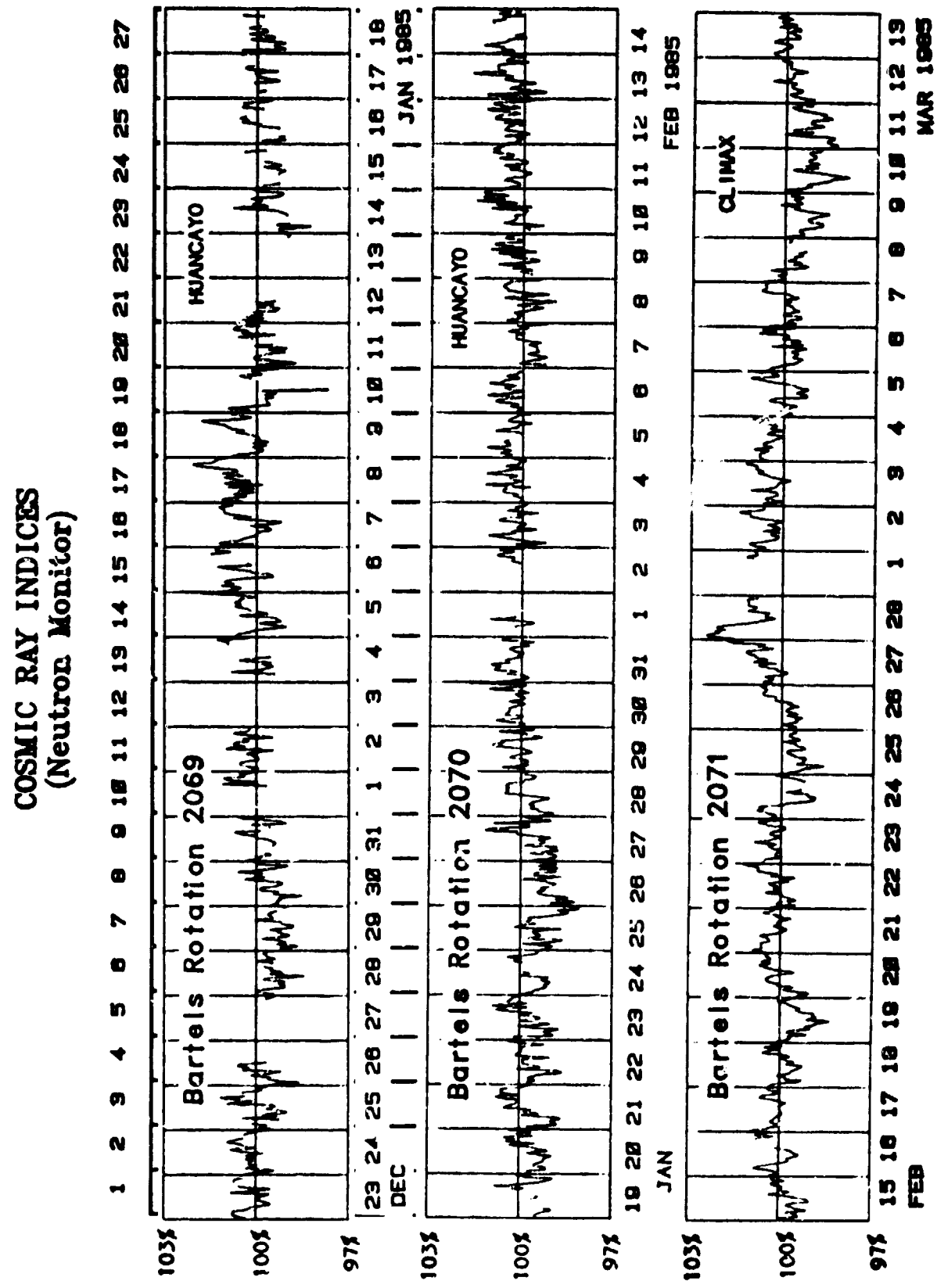
COSMIC RAY INDICES
(Neutron Monitor)

March 1985

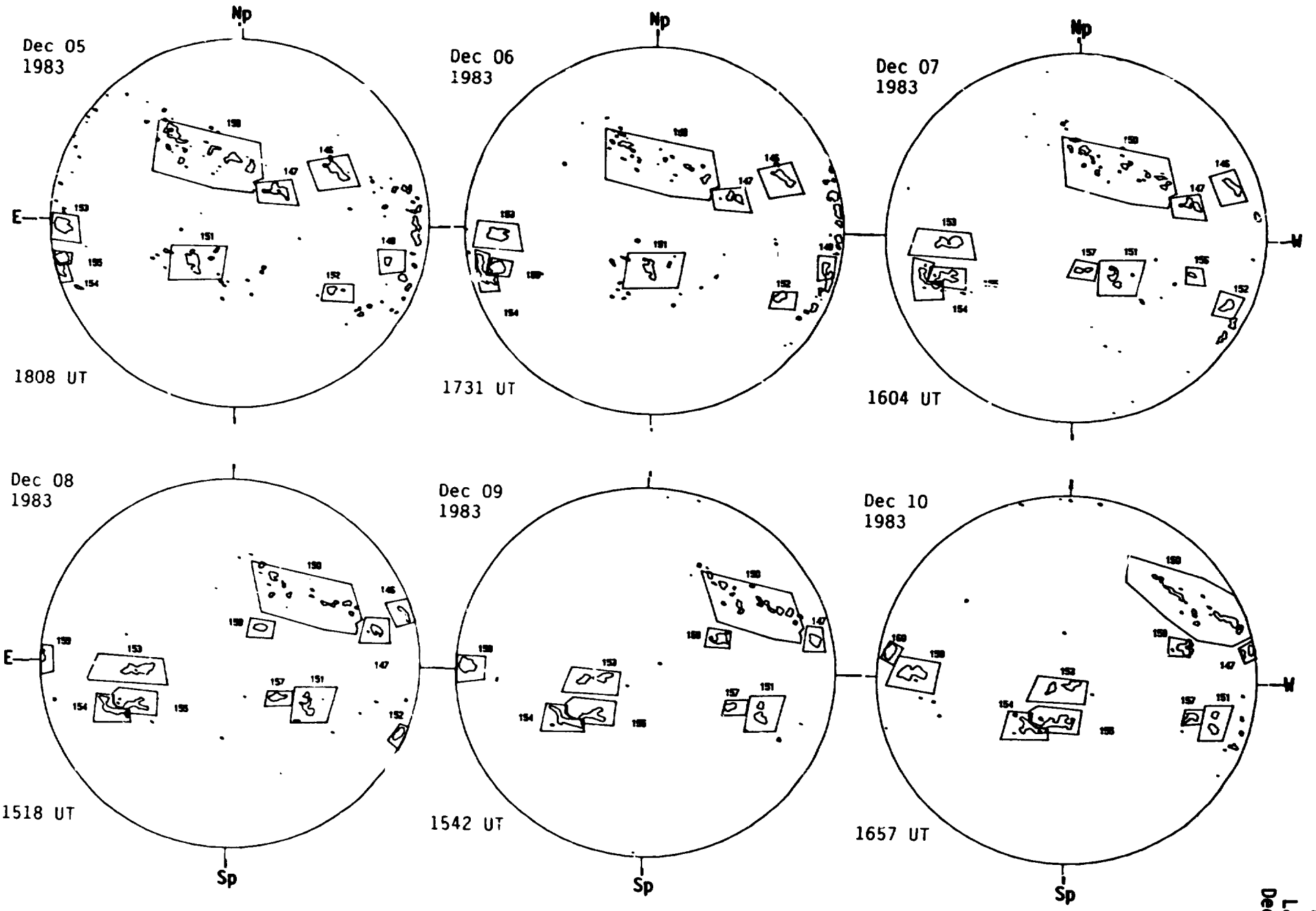
Day	THULE Average (cts/h)/100	ALERT Average (cts/h)/100	DEEP RIVER Average (cts/h)/300	KIEL Average (cts/h)/100	CLIMAX Average (cts/h)/100	PREDIGTSTUHL Average (cts/h)/100	TOKYO Average (cts/h)/256	HUANCAYO Average (cts/h)/100
1	4340			6036.4	3982.4(10)	1167	3621.1	
2	4327			6026.6	3968.0	1168	3617.8	
3	4316			6017.6	3964.9	1165	3615.8	
4	4330			6008.0	3965.2	1165	3615.5	
5	4304			5968.2	3944.9	1165	3605.2	
6	4311			5967.0	3940.2	1165	3603.3	
7	4320			5984.4	3944.5	1166	3602.7	
8	4333			5977.6	3937.3	1166	3597.2	
9	4343			5977.3	3919.3	1167	3603.5	
10	4313			5961.4	3907.0	1166	3614.2	
11	4301			5949.7	3906.5	1166	3599.3	
12	4315			5980.7	3934.6	1166	3610.3	
13	4337			6001.1	3945.1	1167	3618.0	
14	4329			6017.6	3930.7	1167	3607.1	
15	4338			6027.5	3952.6(38)	1167	3615.1	
16	4339			6035.4	3943.7	1167	3622.6	
17	4332			6013.5	3937.7	1166	3607.2	
18	4336			6028.6	3949.8	1165	3614.1	
19	4338			6029.8	3952.0	1164	3617.2	
20	4316			6033.2	3945.1	1163	3617.8	
21	4282			6035.1	3945.2	1162	3621.9	
22	4330			6037.8	3968.9	1162	3632.2	
23	4320			6020.4	3962.0	1162	3632.6	
24	4317			6039.1	3963.1	1162	3637.0	
25	4328			6042.2	3962.8	1162	3630.8	
26	4335			6064.8	3967.4	1163	3630.2	
27	4322			6055.9	3980.6	1163	3626.7	
28	4310			6024.3	3976.1	1163	3630.0	
29	4306			6032.0	3981.9	1163	3627.0	
30	4328			6048.7	3998.6	1163	3642.8	
31	4325			6040.5	3995.2	1163	3651.8	
Mean	4323			6015.6	3953.3	1165	3618.9	

For less than 24-hour coverage, parentheses enclose the number of hours for which data are available.
For Climax and Huancayo, parentheses enclose the number of section hours whenever the sum of both sections falls below 40 hours.

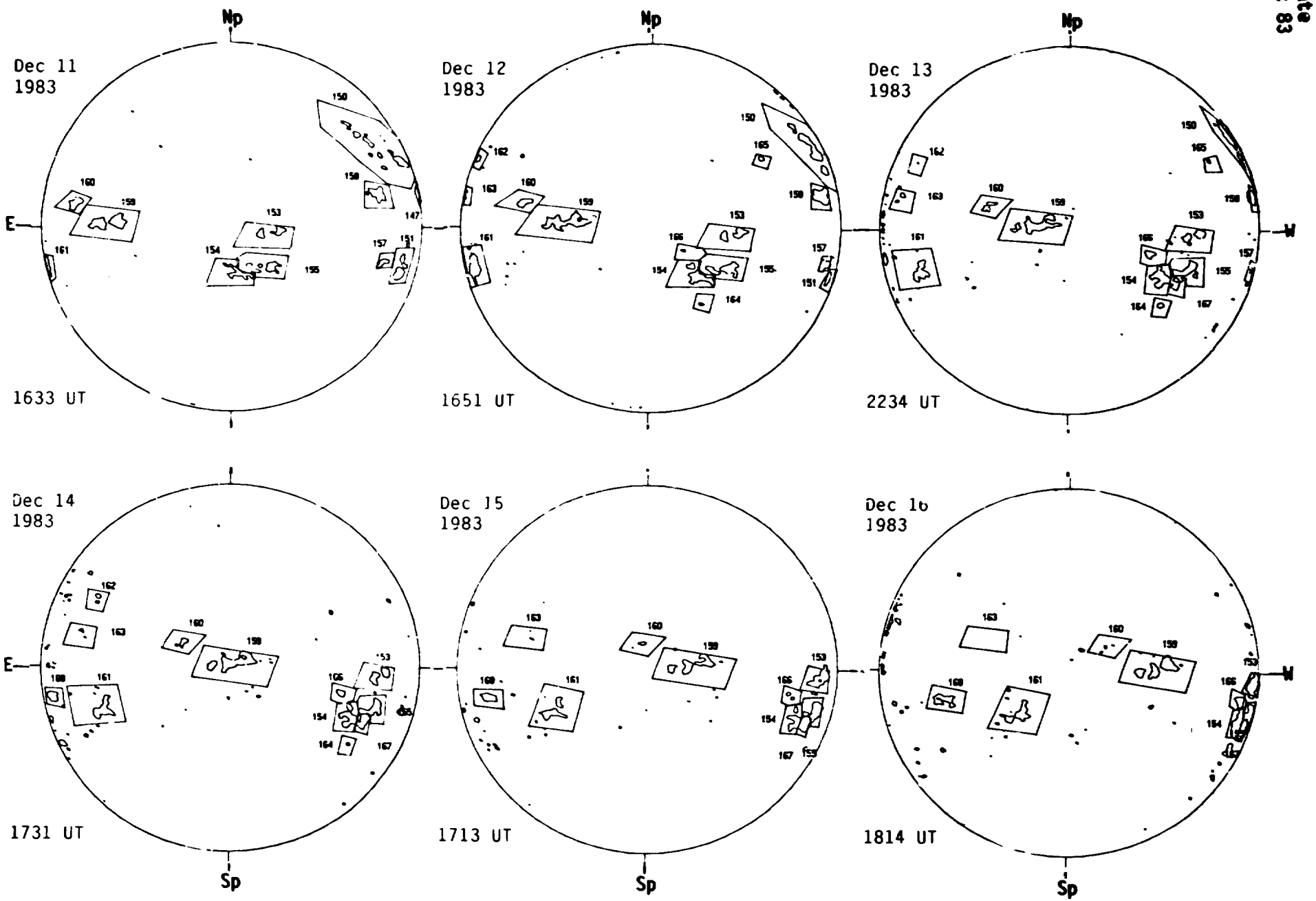
90
Late
Jan-Mar 85



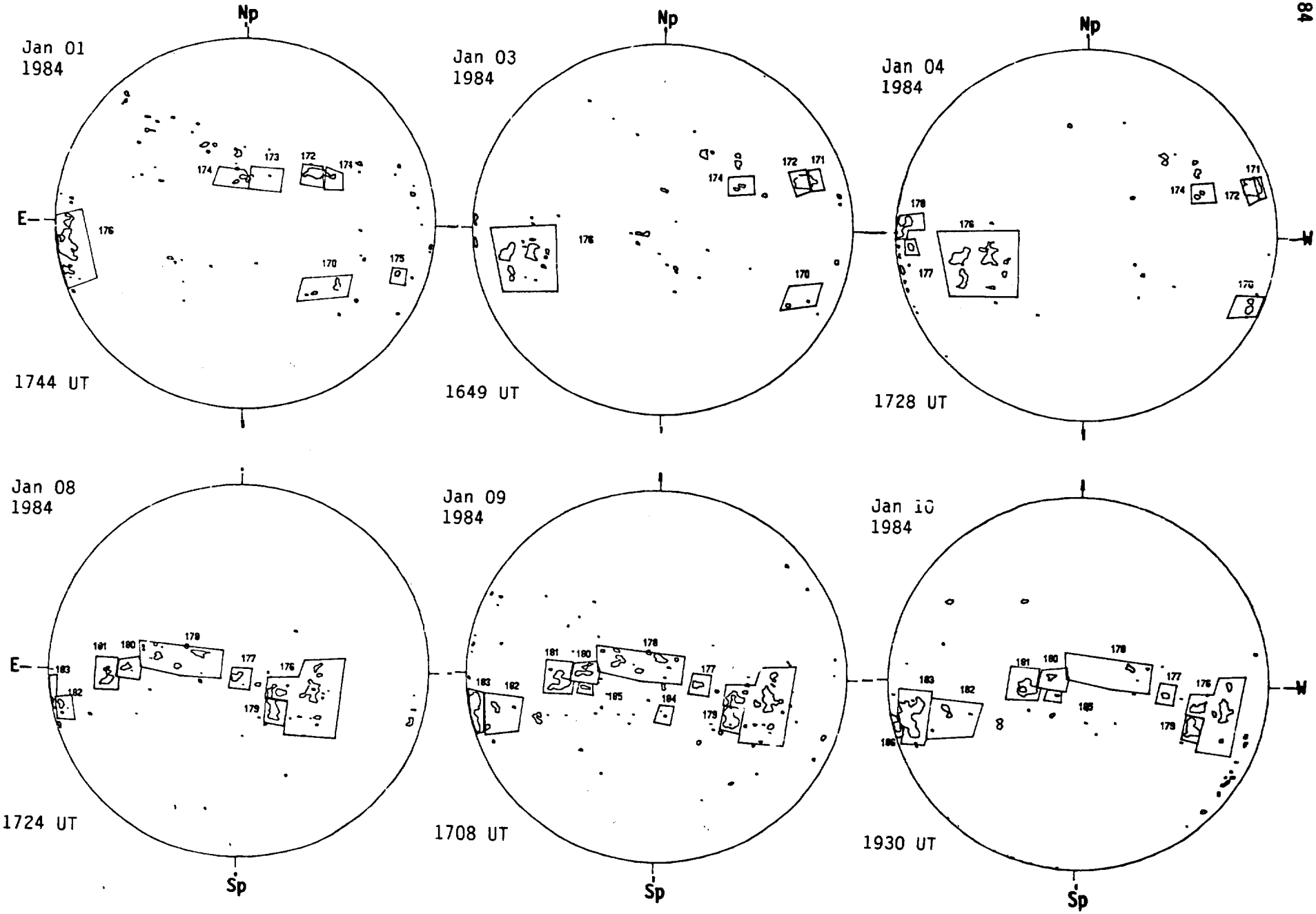
BIG BEAR SOLAR CALCIUM PLAGE REGIONS



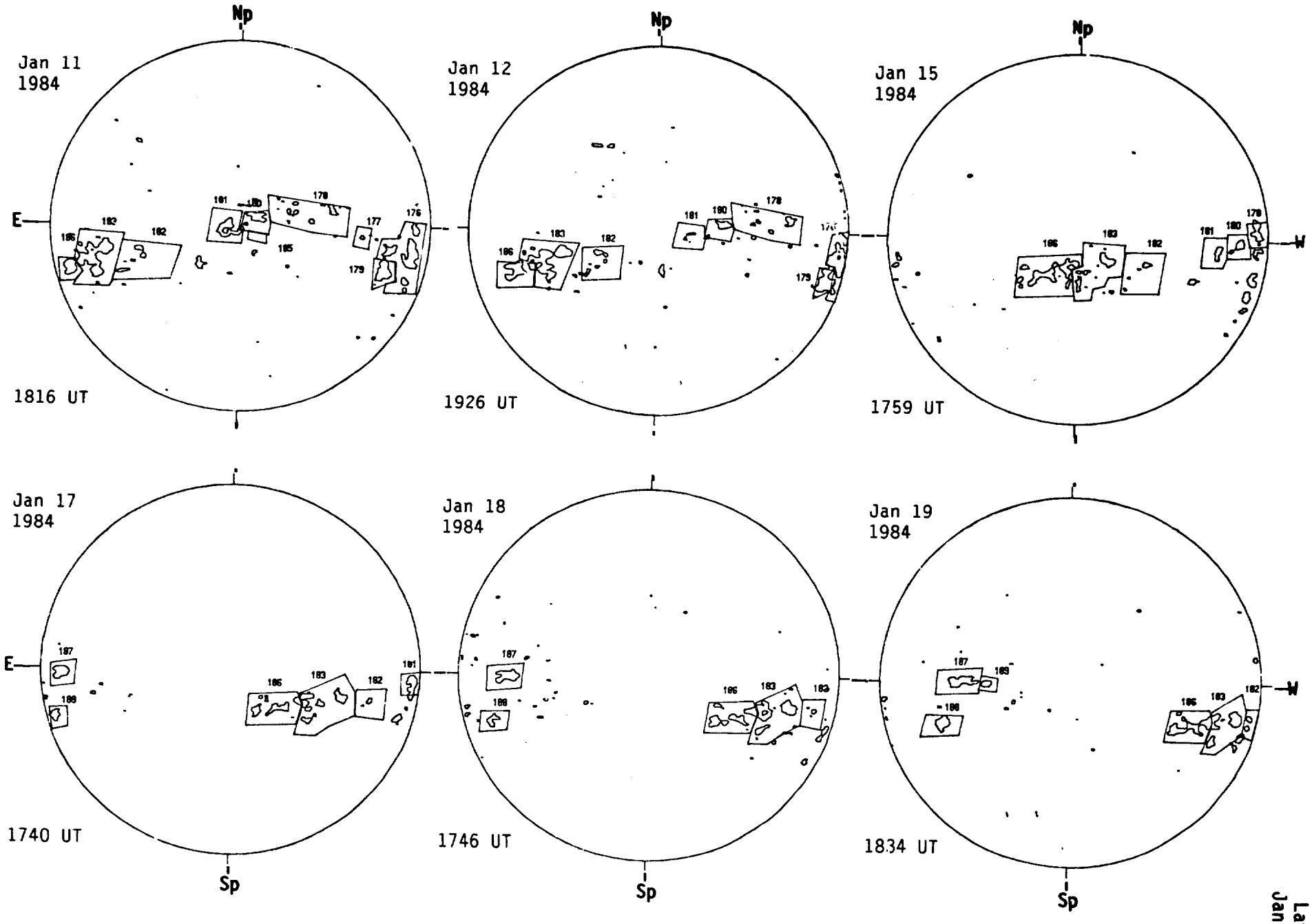
BIG BEAR SOLAR CALCIUM PLAGE REGIONS



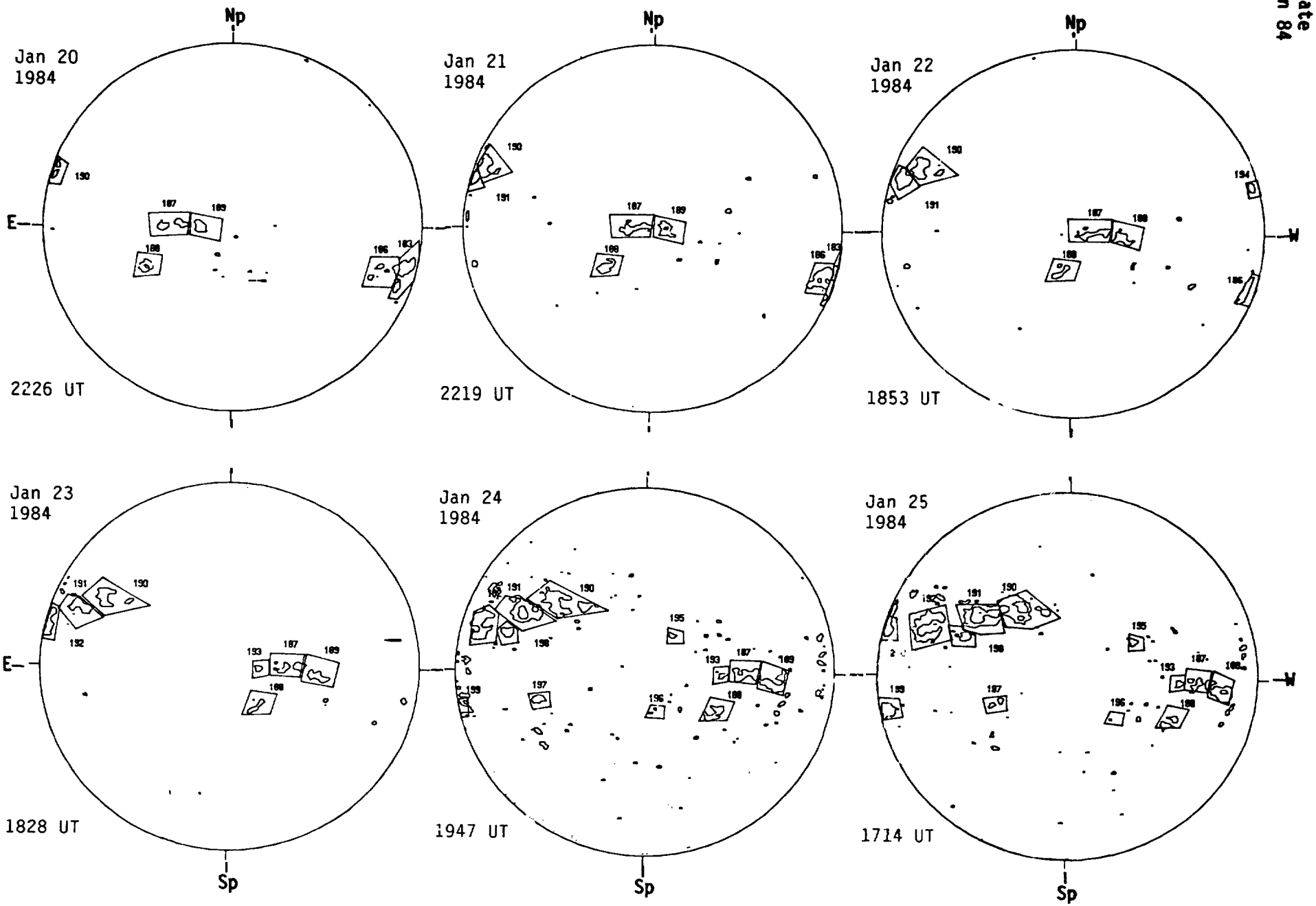
BIG BEAR SOLAR CALCIUM PLAGE REGIONS



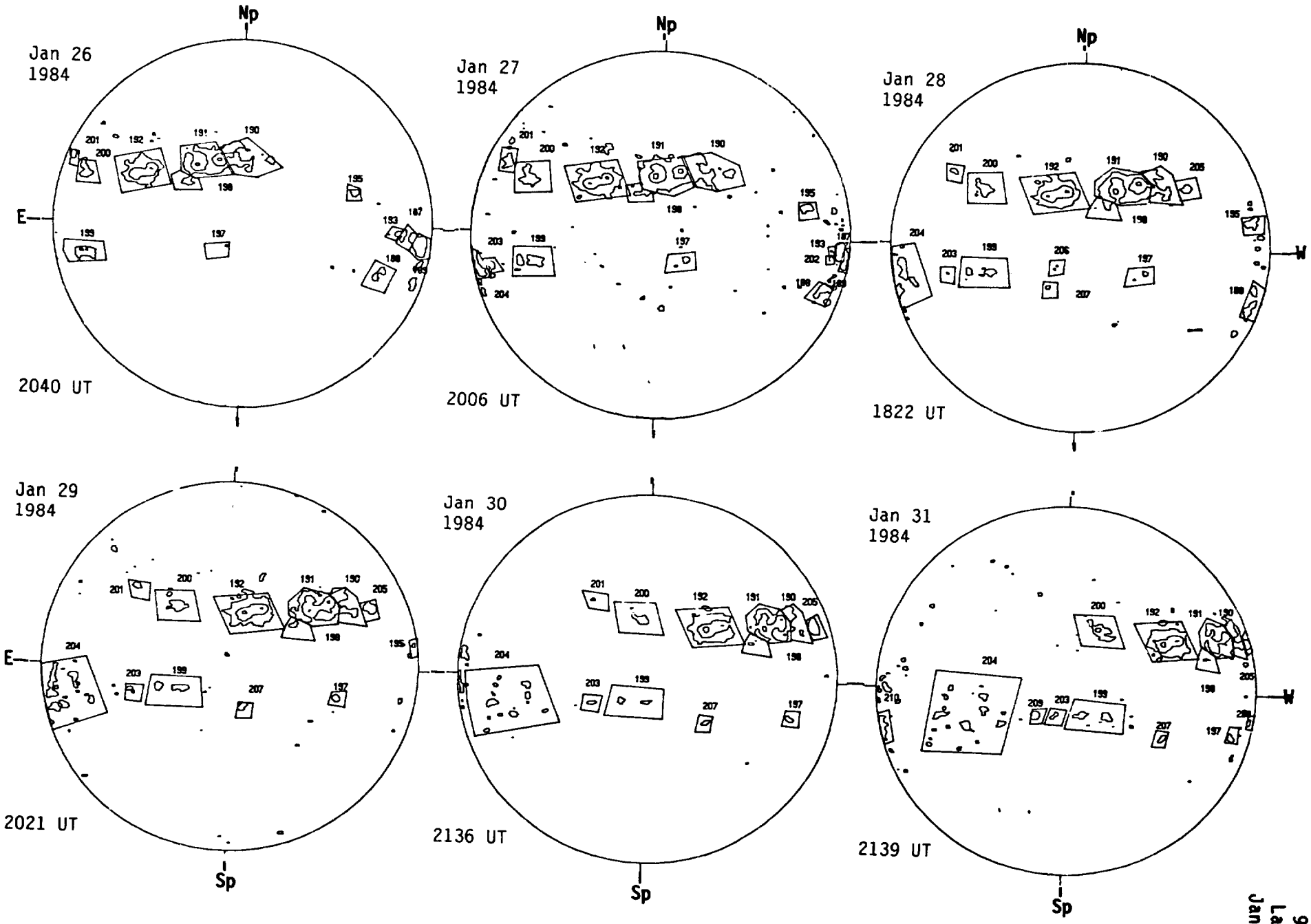
BIG BEAR SOLAR CALCIUM PLAGE REGIONS



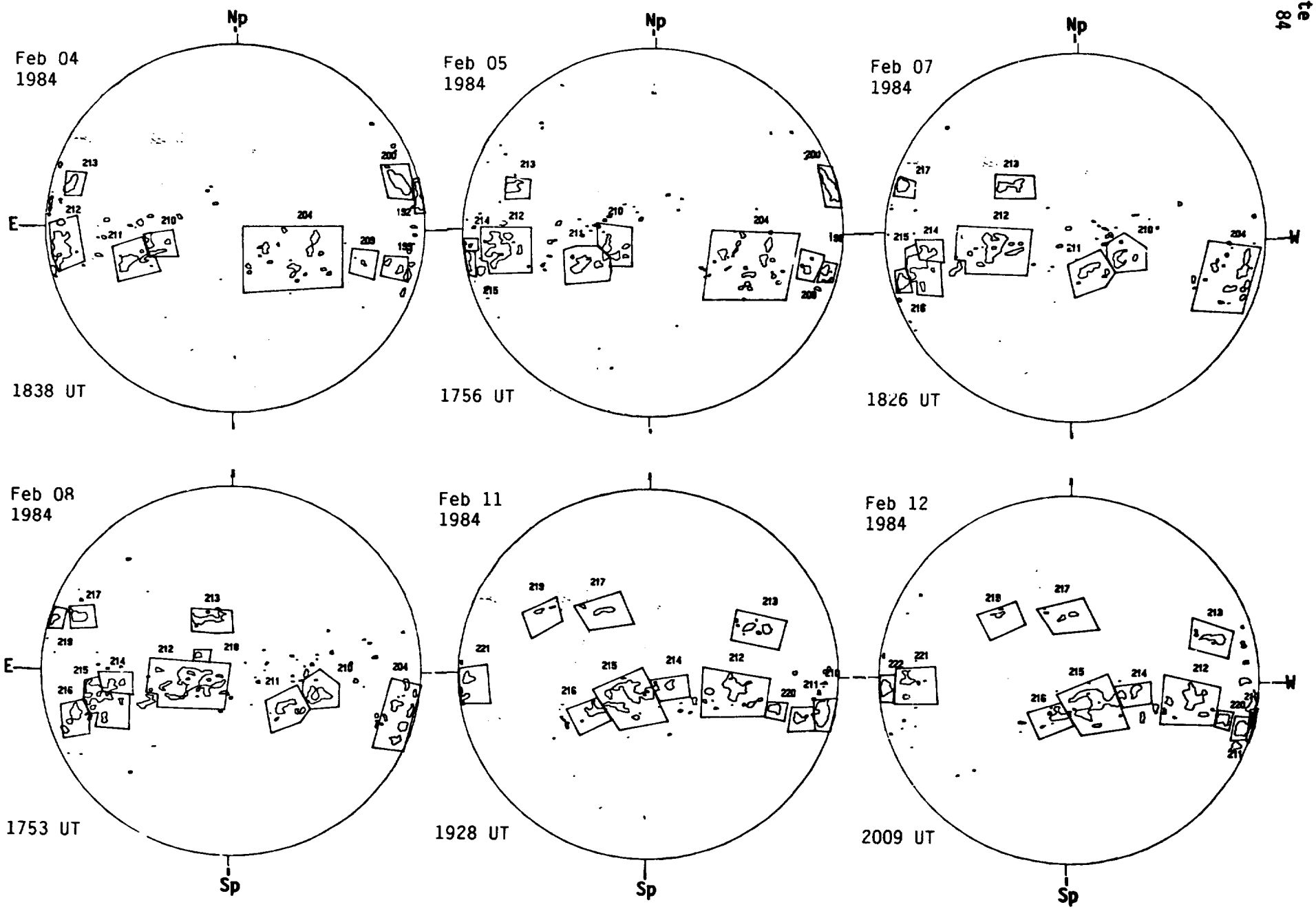
BIG BEAR SOLAR CALCIUM PLAGE REGIONS



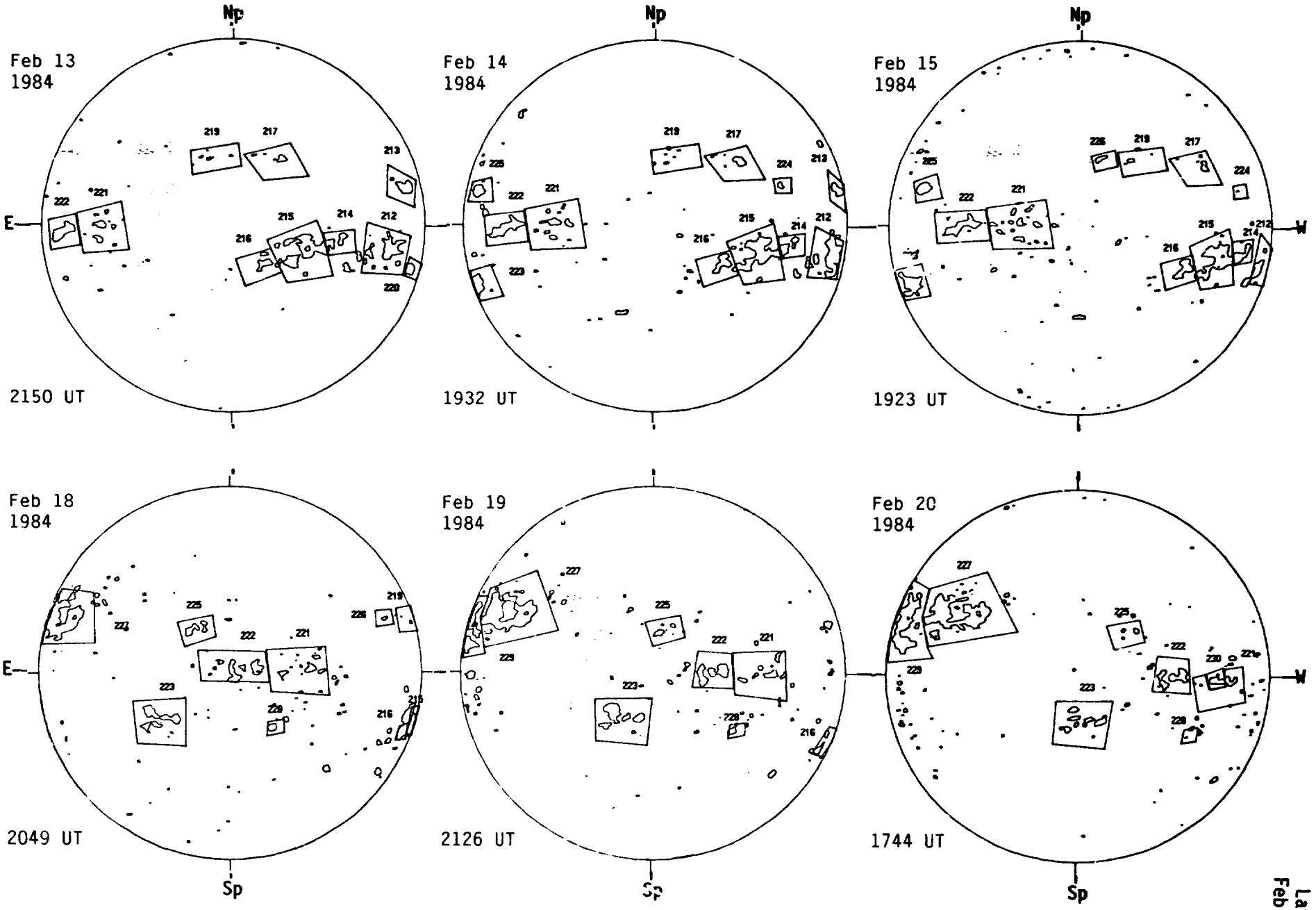
BIG BEAR SOLAR CALCIUM PLAGE REGIONS



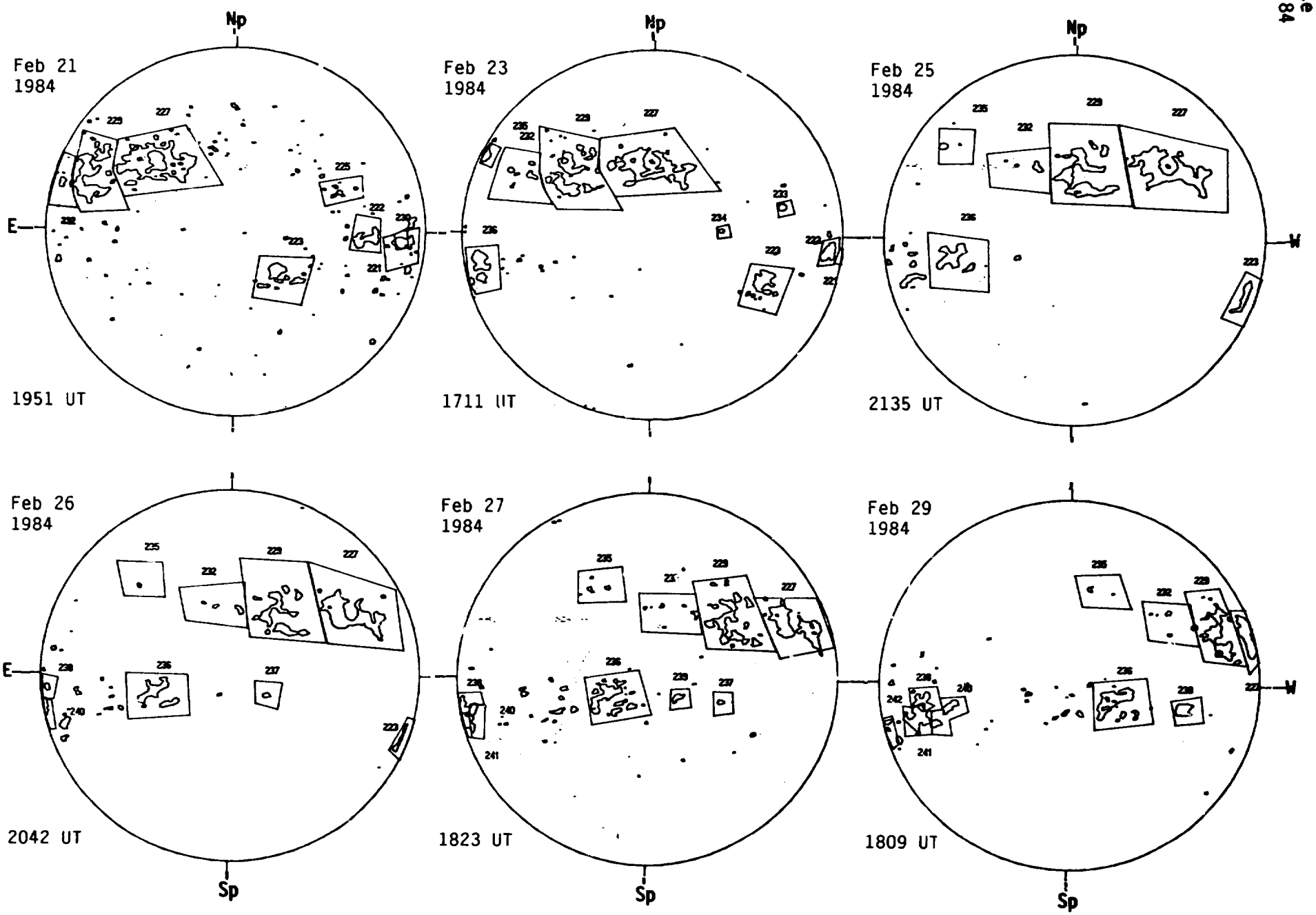
BIG BEAR SOLAR CALCIUM PLAGE REGIONS



BIG BEAR SOLAR CALCIUM PLAGE REGIONS



BIG BEAR SOLAR CALCIUM PLAGE REGIONS



CALCIUM PLAGE REGIONS
(ORDERED BY CENTRAL MERIDIAN PASSAGE DATE)

NOVEMBER 1982

Calcium Plage Region	Sta	Observation Time Mo Day (UT)	Lat CMD	CMP Mo Day	Intensity	Corrected Area (10-6 Hemi)	NOAA/USAF Sunspot Groups #1	#2	#3
18638	BIGB	11 03 1914	N18 W27	11 1.7	1.0	0685			
18638	BIGB	11 04 2015	N18 W41	11 1.7	1.0	0619			
18638	BIGB	11 05 1625	N18 W53	11 1.6	1.0	0512			
18638	BIGB	11 06 1936	N18 W71	11 1.4	1.0	0346			
18639	BIGB	11 02 1911	S07 W02	11 2.6	1.5	0297	3975		
18639	BIGB	11 03 1914	S09 W16	11 2.6	2.5	0601	3975		
18639	BIGB	11 04 2015	S09 W31	11 2.5	2.5	0998	3975		
18639	BIGB	11 05 1625	S08 W41	11 2.6	2.5	1073	3975		
18639	BIGB	11 06 1936	S09 W57	11 2.5	2.5	1073	3975		
18633	BIGB	10 29 1745	S23 E87	11 5.4	2.0	1443	3971	3988	
18633	BIGB	10 31 1825	S23 E50	11 4.6	3.0	2839	3971	3988	
18633	BIGB	11 01 1713	S21 E38	11 4.6	2.5	3333	3971	3988	
18633	BIGB	11 02 1911	S20 E25	11 4.7	2.5	3779	3971	3988	
18633	BIGB	11 03 1914	S21 E14	11 4.9	2.5	3925	3971	3988	
18633	BIGB	11 04 2015	S19 E01	11 4.9	2.5	4024	3971	3988	
18633	BIGB	11 05 1625	S19 W09	11 5.0	2.5	3927	3971	3988	
18633	BIGB	11 06 1936	S20 W22	11 5.1	2.5	3771	3971	3988	
18633	BIGB	11 09 1504	S19 W56	11 5.3	1.5	3482	3971	3988	
18634	BIGB	10 31 1825	N19 E88	11 7.5	2.5	0601	3970		
18634	BIGB	11 01 1713	N20 E61	11 6.4	2.5	0892	3970		
18634	BIGB	11 02 1911	N20 E47	11 6.4	2.5	1056	3970		
18634	BIGB	11 03 1914	N20 E36	11 6.5	2.5	1136	3970		
18634	BIGB	11 04 2015	N20 E22	11 6.5	2.5	1152	3970		
18634	BIGB	11 05 1625	N25 E13	11 6.7	2.5	1670	3970		
18634	BIGB	11 06 1936	N25 W01	11 6.7	2.0	1695	3970		
18634	BIGB	11 09 1504	N24 W38	11 6.7	2.0	1353	3970		
18634	BIGB	11 11 1100	N24 W66	11 6.3	2.0	0996	3970		
18644	BIGB	11 06 1936	S13 E06	11 7.3	2.0	0813	3977	3983	
18644	BIGB	11 09 1504	S11 W32	11 7.2	2.0	0594	3977	3983	
18644	BIGB	11 11 1100	S11 W59	11 7.0	2.0	0846	3977	3983	
18636	BIGB	11 01 1713	N08 E69	11 6.9	2.0	1518	3972		
18636	BIGB	11 02 1911	N10 E59	11 7.2	2.5	2954	3972		
18636	BIGB	11 03 1914	N10 E45	11 7.2	2.5	3106	3972		
18636	BIGB	11 04 2015	N11 E34	11 7.4	3.0	3251	3972		
18636	BIGB	11 05 1625	N11 E25	11 7.6	3.0	2789	3972		
18636	BIGB	11 06 1936	N11 E11	11 7.6	2.5	2889	3972		
18636	BIGB	11 09 1504	N13 W25	11 7.7	2.5	2310	3972		
18636	BIGB	11 11 1100	N14 W51	11 7.6	2.0	2091	3972		
18636	BIGB	11 12 1029	N13 W65	11 7.5	2.0	1977	3972		
18635	BIGB	11 01 1713	N22 E73	11 7.3	2.5	1370	3973	3961	
18635	BIGB	11 02 1911	N22 E60	11 7.4	2.5	2393	3973	3981	
18635	BIGB	11 03 1914	N23 E51	11 7.7	2.5	2488	3973	3981	
18635	BIGB	11 04 2015	N23 E37	11 7.7	3.0	2580	3973	3981	
18635	BIGB	11 05 1625	N23 E26	11 7.7	2.5	2013	3973	3981	
18635	BIGB	11 06 1936	N24 E11	11 7.7	2.5	2387	3973	3981	
18635	BIGB	11 09 1504	N26 W22	11 7.9	2.5	1881	3973	3981	
18635	BIGB	11 11 1100	N26 W50	11 7.6	2.5	1925	3973	3981	
18635	BIGB	11 12 1029	N26 W67	11 7.2	2.0	1994	3973	3981	
18640	BIGB	11 02 1911	S11 E62	11 7.5	1.0	0500			
18640	BIGB	11 03 1914	S11 E52	11 7.7	1.0	0651			
18640	BIGB	11 04 2015	S11 E40	11 7.8	1.0	0722			
18640	BIGB	11 05 1625	S11 E28	11 7.8	1.5	0892			
18640	BIGB	11 06 1936	S11 E18	11 8.2	1.5	1246			
18640	BIGB	11 09 1504	S10 W20	11 8.1	1.5	1073			
18640	BIGB	11 11 1100	S09 W47	11 7.9	1.5	0514			
18640	BIGB	11 12 1029	S09 W69	11 7.2	1.0	0507			
18641	BIGB	11 02 1911	N04 E69	11 7.9	2.5	1657	3975	3974	3988
18641	BIGB	11 03 1914	N03 E56	11 8.0	2.5	2500	3975	3974	3988
18641	BIGB	11 04 2015	N03 E45	11 8.2	3.0	2632	3975	3974	3988
18641	BIGB	11 05 1625	N03 E32	11 8.1	2.5	2871	3975	3974	3988
18641	BIGB	11 06 1936	N03 E22	11 8.5	2.5	2993	3975	3974	3988
18641	BIGB	11 09 1504	N04 W15	11 8.5	2.5	1914	3975	3974	3988
18641	BIGB	11 11 1100	N06 W40	11 8.5	2.5	2639	3975	3974	3988

CALCIUM PLAGE REGIONS
(ORDERED BY CENTRAL MERIDIAN PASSAGE DATE)

NOVEMBER 19o2

Calcium Plage Region	Sta	Observation Time Mo	Day	(UT)	Lat	CMD	CMP Mo	Day	Intensity	Corrected Area (10-6 Hemi)	NOAA/USAF Sunspot Groups #1	#2	#3
18641	BIGB	11	12	1029	N05	W54	11	8.4	2.5	2501	3975	3974	3988
18641	BIGB	11	14	1043	N06	W75	11	8.8	2.5	1902	3975	3974	3988
18646	BIGB	11	06	1936	N10	E40	11	9.8	3.0	1100	3979		
18646	BIGB	11	09	1504	N09	W00	11	9.6	3.0	1155	3979		
18646	BIGB	11	11	1100	N10	W26	11	9.5	3.5	1261	3979		
18646	BIGB	11	12	1029	N10	W40	11	9.4	3.0	1368	3979		
18646	BIGB	11	14	1043	N11	W64	11	9.6	3.0	1410	3979		
18646	BIGB	11	15	1359	N10	W77	11	9.8	3.5	0940	3979		
18642	BIGB	11	04	2015	N10	E73	11	10.3	2.5	2064	3976		
18642	BIGB	11	05	1625	N11	E57	11	10.0	3.0	2228	3976		
18642	BIGB	11	06	1936	N12	E52	11	10.7	3.0	2214	3976		
18642	BIGB	11	09	1504	N12	E13	11	10.6	3.0	2079	3976		
18642	BIGB	11	11	1100	N12	W12	11	10.5	3.5	3104	3976		
18642	BIGB	11	12	1029	N13	W25	11	10.5	3.0	2923	3976		
18642	BIGB	11	14	1043	N14	W51	11	10.6	3.0	2132	3976		
18642	BIGB	11	15	1359	N14	W66	11	10.6	3.0	1996	3976		
18643	BIGB	11	05	1625	N24	E64	11	10.6	2.5	0611	3978		
18643	BIGB	11	06	1936	N24	E54	11	11.0	2.0	1038	3978		
18643	BIGB	11	09	1504	N24	E14	11	10.7	2.0	0891	3978		
18643	BIGB	11	11	1100	N25	W10	11	10.7	2.0	0896	3978		
18643	BIGB	11	12	1029	N26	W22	11	10.7	2.0	0878	3978		
18643	BIGB	11	14	1043	N27	W48	11	10.7	1.0	0410	3978		
18643	BIGB	11	15	1359	N27	W65	11	10.5	1.0	0313	3978		
18645	BIGB	11	06	1936	N04	E76	11	12.5	1.0	0398	3986		
18645	BIGB	11	09	1504	N04	E41	11	12.7	2.0	0957	3986		
18645	BIGB	11	11	1100	N05	E15	11	12.6	2.0	1112	3986		
18645	BIGB	11	12	1029	N05	E01	11	12.5	2.0	1216	3986		
18645	BIGB	11	14	1043	N06	W24	11	12.6	1.0	0918	3986		
18645	BIGB	11	15	1359	N08	W37	11	12.8	1.5	0858	3986		
18645	BIGB	11	17	1406	N08	W64	11	12.8	1.5	0739	3986		
18654	BIGB	11	14	1043	S26	W25	11	12.5	1.5	0590	3992		
18654	BIGB	11	15	1359	S26	W39	11	12.5	1.5	0462	3992		
18654	BIGB	11	17	1406	S27	W65	11	12.5	1.5	0419	3992		
18648	BIGB	11	09	1504	S16	E58	11	14.0	3.0	1914	3984		
18648	BIGB	11	11	1100	S16	E31	11	13.8	3.0	1875	3984		
18648	BIGB	11	12	1029	S15	E17	11	13.7	2.5	1977	3984		
18648	BIGB	11	14	1043	S15	W08	11	13.8	2.5	1935	3984		
18648	BIGB	11	15	1359	S16	W22	11	13.9	2.5	1765	3984		
18648	BIGB	11	17	1406	S15	W47	11	14.0	2.5	1360	3984		
18648	BIGB	11	18	0921	S14	W56	11	14.1	2.0	1195	3984		
18649	BIGB	11	09	1504	N05	E59	11	14.0	2.5	1551	3991		
18649	BIGB	11	11	1100	N05	E36	11	14.1	2.5	1776	3991		
18649	BIGB	11	12	1029	N05	E23	11	14.1	2.0	2163	3991		
18649	BIGB	11	14	1043	N06	W03	11	14.2	1.5	2066	3991		
18649	BIGB	11	15	1359	N06	W19	11	14.2	1.5	2161	3991		
18649	BIGB	11	17	1406	N06	W46	11	14.1	1.0	1915	3991		
18649	BIGB	11	18	0921	N06	W56	11	14.2	1.5	1626	3991		
18647	BIGB	11	09	1504	N20	E62	11	14.4	1.5	1980			
18647	BIGB	11	11	1100	N21	E38	11	14.4	1.5	2838			
18647	BIGB	11	12	1029	N21	E27	11	14.5	1.5	3211			
18647	BIGB	11	14	1043	N21	W00	11	14.4	1.5	3181			
18647	BIGB	11	15	1359	N21	W15	11	14.4	1.5	3382			
18647	BIGB	11	17	1406	N23	W34	11	15.0	1.0	3141			
18647	BIGB	11	18	0921	N23	W45	11	14.9	1.0	3237			
18647	BIGB	11	20	1206	N25	W58	11	16.0	1.0	1935			
18650	BIGB	11	09	1504	S13	E70	11	14.9	3.0	1881	3990	3987	3995
18650	BIGB	11	11	1100	S10	E43	11	14.7	3.5	3519	3990	3987	3995
18650	BIGB	11	12	1029	S10	E30	11	14.7	3.5	5222	3990	3987	3995
18650	BIGB	11	14	1043	S11	E05	11	14.8	3.5	5346	3990	3987	3995
18650	BIGB	11	15	1359	S11	W08	11	15.0	4.0	5082	3990	3987	3995
18650	BIGB	11	17	1406	S11	W33	11	15.1	3.5	5023	3990	3987	3995
18650	BIGB	11	18	0921	S11	W42	11	15.2	3.5	4946	3990	3987	3995

CALCIUM PLAGE REGIONS
(ORDERED BY CENTRAL MERIDIAN PASSAGE DATE)

NOVEMBER 1982

Calcium Plage Region	Sta	Observation Time Mo	Day	(UT)	Lat	CMD	CMP Mo	Day	Intensity	Corrected Area (10-6 Hemi)	NOAA/USAF Sunspot Groups #1	#2	#3
18650	BIGB	11	20	1206	S07	W69	11	15.3	3.5	4346	3990	3987	3995
18655	BIGB	11	15	1359	N01	W05	11	15.2	1.0	0198			
18651	BIGB	11	11	1100	S14	E71	11	16.8	1.0	0498	3999		
18651	BIGB	11	12	1029	S14	E61	11	17.0	1.0	0709	3999		
18651	BIGB	11	14	1043	S14	E33	11	16.9	1.0	0672	3999		
18651	BIGB	11	15	1359	S14	E19	11	17.0	1.0	0544	3999		
18651	BIGB	11	17	1406	S15	W07	11	17.0	1.0	0537	3999		
18651	BIGB	11	18	0921	S15	W18	11	17.0	1.0	0481	3999		
18651	BIGB	11	20	1205	S11	W48	11	16.9	1.5	0311	3999		
18651	BIGB	11	21	1340	S12	W61	11	17.0	1.0	0214	3999		
18652	BIGB	11	12	1029	N10	E59	11	16.9	1.0	0811	4003		
18652	BIGB	11	14	1043	N10	E33	11	16.9	1.0	1000	4003		
18652	BIGB	11	15	1359	N10	E17	11	16.8	1.0	0907	4003		
18652	BIGB	11	17	1406	N12	W07	11	17.1	1.0	0856	4003		
18652	BIGB	11	18	0921	N12	W18	11	17.0	1.0	0736	4003		
18652	BIGB	11	20	1206	N12	W43	11	17.3	1.0	0590	4003		
18652	BIGB	11	21	1340	N14	W60	11	17.0	2.0	0643	4003		
18653	BIGB	11	12	1029	S06	E70	11	17.7	1.5	0760	3993		
18653	BIGB	11	14	1043	S05	E38	11	17.3	2.5	1213	3993		
18653	BIGB	11	15	1359	S05	E24	11	17.4	2.0	1336	3993		
18653	BIGB	11	17	1406	S05	W02	11	17.4	1.0	0974	3993		
18653	BIGB	11	18	0921	S04	W11	11	17.6	1.0	0747	3993		
18653	BIGB	11	20	1206	S03	W38	11	17.7	1.0	0524	3993		
18653	BIGB	11	21	1340	S03	W52	11	17.7	1.0	0231	3993		
18664	BIGB	11	20	1206	S06	W28	11	18.4	2.0	0131	4002		
18664	BIGB	11	21	1340	S06	W42	11	18.4	2.5	0412	4002		
18667	BIGB	11	21	1340	N16	W35	11	18.9	2.5	0346			
18667	BIGB	11	24	0924	N18	W70	11	19.1	2.5	0634			
18656	BIGB	11	14	1043	S13	E64	11	19.3	3.5	5182	3994		
18656	BIGB	11	15	1359	S13	E52	11	19.5	3.5	2772	3994		
18656	BIGB	11	17	1406	S14	E23	11	19.3	3.5	3208	3994		
18656	BIGB	11	18	0921	S13	E16	11	19.6	3.5	3203	3994		
18656	BIGB	11	20	1206	S11	W12	11	19.6	3.5	4395	3994		
18656	BIGB	11	21	1340	S11	W27	11	19.5	3.5	4983	3994		
18656	BIGB	11	24	0924	S11	W61	11	19.8	3.5	4625	3994		
18656	BIGB	11	25	1214	S11	W72	11	20.1	3.5	3382	3994		
18657	BIGB	11	14	1043	N08	E70	11	19.7	1.0	1016	4001		
18657	BIGB	11	15	1359	N08	E58	11	19.9	1.0	0841	4001		
18657	BIGB	11	17	1406	N10	E37	11	20.4	1.5	0974	4001		
18657	BIGB	11	18	0921	N10	E26	11	20.3	1.5	0946	4001		
18657	BIGB	11	20	1206	N09	W03	11	20.3	2.5	0984	4001		
18657	BIGB	11	21	1340	N11	W17	11	20.3	2.5	1122	4001		
18657	BIGB	11	24	0924	N13	W56	11	20.2	3.0	1035	4001		
18657	BIGB	11	25	1214	N13	W69	11	20.3	3.5	1914	4001		
18657	BIGB	11	26	1156	N14	W71	11	21.1	3.0	1108	4001		
18658	BIGB	11	15	1359	S14	E71	11	20.9	1.5	080			
18658	BIGB	11	17	1406	S13	E41	11	20.7	2.0	1007			
18658	BIGB	11	18	0921	S14	E31	11	20.7	2.0	0996			
18658	BIGB	11	20	1206	S13	E02	11	20.6	2.0	1016			
18658	BIGB	11	21	1340	S13	W10	11	20.8	1.5	0907			
18658	BIGB	11	24	0924	S12	W44	11	21.1	1.5	0701			
18658	BIGB	11	25	1214	S12	W57	11	21.2	1.5	0775			
18658	BIGB	11	26	1156	S12	W68	11	21.4	2.0	0635			
18659	BIGB	11	17	1406	S15	E57	11	21.9	2.0	2116			
18659	BIGB	11	18	0921	S15	E47	11	21.9	2.0	2191			
18659	BIGB	11	20	1206	S14	E21	11	22.1	2.0	2279			
18659	BIGB	11	21	1340	S14	E07	11	22.1	1.5	1963			
18659	BIGB	11	24	0924	S13	W27	11	22.3	1.5	1586			
18659	BIGB	11	25	1214	S13	W40	11	22.5	2.0	1320			
18659	BIGB	11	26	1156	S13	W52	11	22.6	1.5	1010			
18659	BIGB	11	27	0951	S13	W61	11	22.8	1.5	0810			

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CALCIUM PLAGE REGIONS
(ORDERED BY CENTRAL MERIDIAN PASSAGE DATE)

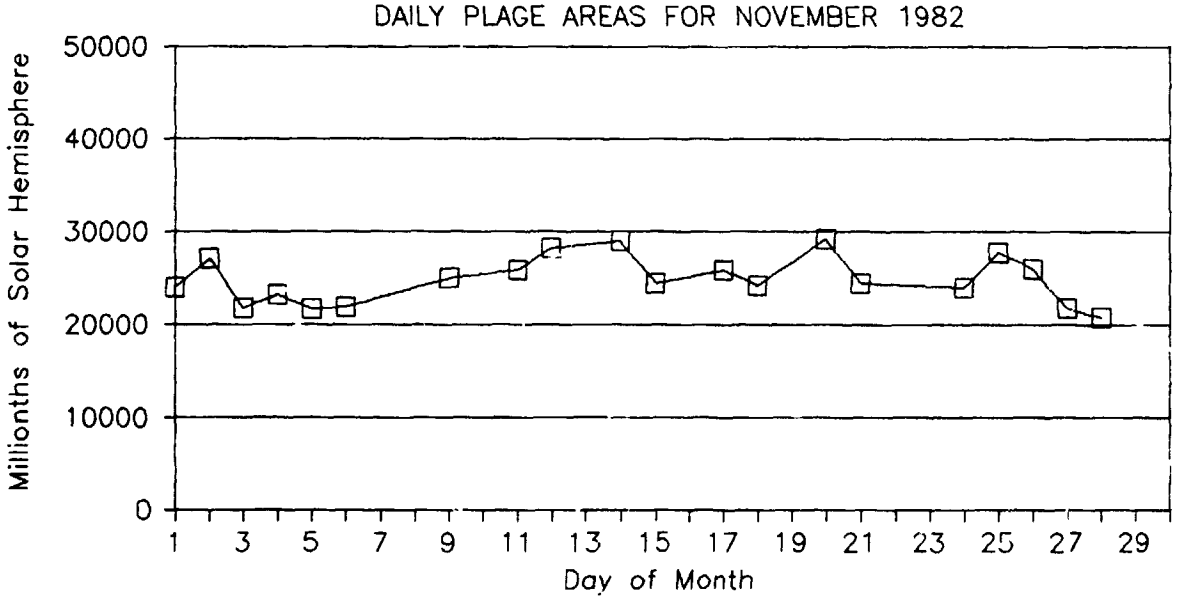
NOVEMBER 1982

Calcium Plage Region	Sta	Observation Time Mo	Day	(UT)	Lat	CMD	CMP Mo	Day	Intensity	Corrected Area (10-6 Hemi)	NOAA/USAF Sunspot Groups #1	#2	#3
18659	BIGB	11	28	1146	S13	W70	11	23.2	1.5	0712			
18660	BIGB	11	17	1406	N14	E63	11	22.3	1.5	1159			
18660	BIGB	11	18	0921	N15	E54	11	22.5	1.5	1195			
18660	BIGB	11	20	1206	N15	E28	11	22.6	1.5	1640			
18660	BIGB	11	21	1340	N15	E14	11	22.6	1.0	1105			
18660	BIGB	11	24	0924	N17	W19	11	22.9	1.0	1085			
18660	BIGB	11	25	1214	N17	W34	11	22.9	1.5	1254			
18660	BIGB	11	26	1156	N16	W47	11	22.9	1.0	1320			
18660	BIGB	11	27	0951	N19	W50	11	23.6	1.0	0939			
18660	BIGB	11	28	1146	N19	W73	11	22.9	1.0	0696			
18662	BIGB	11	17	1406	S07	E70	11	22.8	2.0	1108	3997		
18662	BIGB	11	18	0921	S07	E64	11	23.2	2.0	1195	3997		
18662	BIGB	11	20	1206	S08	E38	11	23.3	2.5	2246	3997		
18662	BIGB	11	21	1340	S07	E25	11	23.4	2.5	2359	3997		
18662	BIGB	11	24	0924	S06	W10	11	23.6	2.5	2104	3997		
18662	BIGB	11	25	1214	S06	W24	11	23.7	2.5	2277	3997		
18662	BIGB	11	26	1156	S06	W36	11	23.8	2.5	2037	3997		
18662	BIGB	11	27	0951	S06	W45	11	24.0	2.5	1782	3997		
18662	BIGB	11	28	1146	S06	W59	11	24.1	2.5	2251	3997		
18661	BIGB	11	17	1406	N10	E72	11	23.0	2.0	0957	3998		
18661	BIGB	11	18	0921	N10	E70	11	23.6	2.5	0813	3998		
18661	BIGB	11	20	1206	N09	E47	11	24.0	3.0	1951	3998		
18661	BIGB	11	21	1340	N10	E34	11	24.1	2.5	1518	3998		
18661	BIGB	11	24	0924	N11	W02	11	24.2	3.0	1419	3998		
18661	BIGB	11	25	1214	N10	W18	11	24.1	3.0	1914	3998		
18661	BIGB	11	26	1156	N11	W30	11	24.2	2.5	1581	3998		
18661	BIGB	11	27	0951	N12	W41	11	24.3	2.5	1101	3998		
18661	BIGB	11	28	1146	N12	W52	11	24.6	2.5	1134	3998		
18663	BIGB	11	17	1406	S22	E71	11	23.0	1.0	0419			
18663	BIGB	11	18	0921	S22	E64	11	23.3	1.5	0713			
18663	BIGB	11	20	1206	S25	E44	11	23.9	1.5	1115			
18663	BIGB	11	21	134	S25	E32	11	24.0	1.5	2112			
18663	BIGB	11	24	0924	S23	W01	11	24.3	1.5	2020			
18663	BIGB	11	25	1214	S23	W14	11	24.4	1.5	2178			
18663	BIGB	11	26	1156	S23	W26	11	24.5	1.5	1629			
18663	BIGB	11	27	0951	S25	W36	11	24.6	1.5	1571			
18663	BIGB	11	28	1146	S23	W49	11	24.7	1.5	1539			
18665	BIGB	11	20	1206	N09	E71	11	25.8	2.0	3329			
18665	BIGB	11	21	1340	N09	E56	11	25.8	1.5	3102			
18665	BIGB	11	24	0924	N11	E28	11	26.5	2.0	3306			
18665	BIGB	11	25	1214	N11	E12	11	26.4	2.0	3300			
18665	BIGB	11	26	1156	N11	W00	11	26.5	2.0	3765			
18665	BIGB	11	27	0951	N14	W12	11	26.5	2.0	3677			
18665	BIGB	11	28	1146	N10	W27	11	26.5	2.0	3029			
18665	BIGB	12	02	2056	N14	W76	11	27.2	2.0	1461			
18666	BIGB	11	20	1206	S25	E71	11	26.0	2.5	2492	4000	4011	
18666	BIGB	11	21	1340	S25	E60	11	26.2	2.5	3448	4000	4011	
18666	BIGB	11	24	0924	S25	E27	11	26.5	3.0	4191	4000	4011	
18666	BIGB	11	25	1214	S25	E13	11	26.5	3.5	4273	4000	4011	
18666	BIGB	11	26	1156	S25	E01	11	26.6	3.5	4009	4000	4011	
18666	BIGB	11	27	0951	S25	W09	11	26.7	3.5	3580	4000	4011	
18666	BIGB	11	28	1146	S24	W23	11	26.7	3.5	3013	4000	4011	
18666	BIGB	12	02	2056	S25	W70	11	27.5	3.0	3091	4000	4011	
18669	BIGB	11	24	0924	S11	E61	11	29.0	2.5	1336	4009A		
18669	BIGB	11	25	1214	S11	E45	11	28.9	2.5	1435	4009A		
18669	BIGB	11	26	1156	S11	E33	11	29.0	2.0	1124	4009A		
18669	BIGB	11	27	0951	S10	E21	11	29.0	1.5	0907	4009A		
18669	BIGB	11	28	1146	S10	E07	11	29.0	1.5	0793	4009A		
18669	BIGB	12	02	2056	S10	W42	11	29.8	1.0	0336	4009A		
18669	BIGB	12	03	2049	S10	W55	11	29.8	1.0	0218	4009A		
18669	BIGB	12	04	2028	S12	W71	11	29.6	1.0	0172	4009A		

DAILY PLAGE SUMMARIES

NOVEMBER 1982

Day	Sta	Plage Index	Plage Count	Smallest Plage (Millionths	Largest Plage of Solar	Total Area Hemisphere)	Smallest Intensity	Largest Intensity
01	BIGB	33.9	14	215	4884	24028	1.0	3.5
02	BIGB	35.3	16	100	4505	27176	1.0	4.0
03	BIGB	33.2	12	601	3925	21823	1.0	3.5
04	BIGB	39.4	12	619	4024	23236	1.0	3.5
05	BIGB	39.3	13	297	3927	21672	1.0	3.5
06	BIGB	42.8	13	346	3771	21883	1.0	3.0
07	No Observations This DAY							
08	No Observations This DAY							
09	BIGB	40.7	15	594	3482	25015	1.5	3.0
10	No Observations This DAY							
11	BIGB	50.2	15	498	3519	25890	1.0	3.5
12	BIGB	50.2	15	507	5222	28217	1.0	3.5
13	No Observations This DAY							
14	BIGB	50.2	15	410	5346	28973	1.0	3.5
15	BIGB	46.1	16	198	5082	24448	1.0	4.0
16	No Observations This DAY							
17	BIGB	40.0	17	419	5023	25912	1.0	3.5
18	BIGB	38.1	15	481	4946	24280	1.0	3.5
19	No Observations This DAY							
20	BIGB	45.5	16	131	4395	29284	1.0	3.5
21	BIGB	42.2	15	214	4983	24465	1.0	3.5
22	No Observations This DAY							
23	No Observations This DAY							
24	BIGB	42.6	12	634	4625	24042	1.0	3.5
25	BIGB	48.3	13	676	4273	27849	1.5	3.5
26	BIGB	41.5	14	635	4009	26007	1.0	3.5
27	BIGB	39.8	12	648	3677	21769	1.0	3.5
28	BIGB	38.7	12	680	3110	20796	1.0	3.5
29	No Observations This Day							
30	No Observations This Day							



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BIG BEAR SOLAR OBSERVATORY
ACTIVE REGION SUMMARY

NOVEMBER 1982

REGION	IDENTIFICATION	AGE	FIRST SEEN	DURATION
18638	New	1	821103	≥04 days
639	New	1	821102	≥05
640	18610	2	821102	11
641	18603 & 18606	2	821102	13
642	New (vic. of 18608)	1	821104	≥12
643	New	1	821105	≥11
633	18595 & 18596	2 & 3	821029	≥12
635	18601	3	821101	12
636	New	1	821101	12
634	18599	2	821031	12
644	New	1	821106	06
645	New	1	821106	12
646	New	1	821106	10
654	New	1	821114	≥04
648	New	1	821109	≥10
650	New (vic. of 18614)	1	821109	12
647	18612	4	821109	≥12
649	So. portion of 18612	4	821109	≥10
655	New	1	821115	≥01
652	18616	2	821112	≥10
651	18615	2	821111	≥11
653	New	1	821112	≥10
664	New	1	821120	≥01
667	New	1	821121	≥04
656	18619	2	821114	12
657	New	1	821114	13
658	Following polarity of 18619	2	821115	12
660	18623	3	821117	≥12
659	18621	3	821117	12
662	18625	2	821117	≥12
663	18624	4	821117	≥12
665	18630	3	821120	13
666	New	1	821120	13
669	New	1	821124	11

1. No CaK Observations at BBSO on Nov. 7, 8, 10, 13, 16, 19, 22, 23, 29, 30.

2. No CaK Prints on Nov. 7, 8, 10, 13, 16, 19, 23, 24, 28-30.

3. Contiguous Plages: 18624/18637 18656/18658
   18625/18626
   18634/18635

4. No KPNO Magnetograms on Nov. 6-10, 13, 16-18, 23, 24, 29, 30.

5. Mount Wilson CaK Prints were used on Nov. 14, 25-27.

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