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Solar - Geophysical Data

Part I (Prompt Reports)

NO. 489 MAY 1985

DATA FOR
APRIL 1985
MARCH 1985

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

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NUMBER 489

(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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*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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Prompt Reports DATA FOR APRIL 1985 Number 489 Part I

ALERT PERIODS
INTERNATIONAL URSIGRAM AND WORLD DAYS SERVICE

SUMMARY OF THE GEOALERT MESSAGES APRIL 1985

NO	DI	DO	WOLF	10CM	A	LOC	TOT	M	X	OUTSTANDING EVENTS	DA	LOC	DE	ALERTS
091	01	31	050	074	012	S11W77	2	0	0		01	S11W77	Q	SOLQUIET
						N06W45	0	0	0			N06W45	Q	MAGALERT
						N04W32	0	0	0			N04W32	Q	MINOR 01/03
						S26E55	0	0	0			S26E55	Q	RECURRENCE
092	02	01	037	072	017	N06W59	0	0	0		02	N06W59	Q	SOLQUIET
						N02W45	0	0	0			N02W45	Q	MAGALERT
						S25E42	0	0	0			S25E42	Q	MINOR 02/03 RECURRENCE
093	03	02	024	073	012	N06W72	0	0	0		03	N06W72	Q	SOLQUIET
						S22E40	0	0	0			S22E40	Q	MAGALERT MINOR 03 RECURRENCE
094	04	03	025	072	016	N06W87	0	0	0		04	N06W87	Q	SOLQUIET
						S21E27	0	0	0			S21E27	Q	MAGNIL
095	05	04	038	072	012	N06W92	0	0	0		05	N06W92	Q	SOLQUIET
						S20E14	0	0	0			S20E14	Q	MAGQUIET
						S16E62	0	0	0			S16E62	Q	
096	06	05	031	071	010	S20E01	1	0	0		06	S20E01	Q	SOLQUIET
						S16E49	1	0	0			S16E49	Q	MAGQUIET
097	07	06	029	070	005	S21W13	1	0	0		07	S21W13	Q	SOLQUIET
						S16E34	0	0	0			S16E34	Q	MAGQUIET
098	08	07	013	070	009	S22W26	0	0	0		08	S22W26	Q	SOLQUIET MAGQUIET
099	09	08	012	070	006	S03W11	0	0	0		09	S03W11	Q	SOLQUIET MAGQUIET
100	10	09	013	069	025	S04W25	0	0	0		10	S04W25	Q	SOLQUIET MAGQUIET
101	11	10	000	069	012	SPOTNIL					11	SPOTNIL		SOLQUIET MAGALERT 11
102	12	11	000	069	014	SPOTNIL					12	SPOTNIL		SOLQUIET MAGNIL
103	13	12	000	069	007	SPOTNIL					13	SPOTNIL		SOLQUIET MAGQUIET
104	14	13	000	069	008	SPOTNIL					14	SPOTNIL		SOLQUIET MAGQUIET
105	15	14	011	070	010	N10W47	0	0	0		15	N10W47	Q	SOLQUIET MAGQUIET
106	16	15	000	070	007	SPOTNIL					16	SPOTNIL		SOLQUIET MAGQUIET
107	17	16	000	069	008	SPOTNIL					17	SPOTNIL		SOLQUIET MAGQUIET
108	18	17	000	070	007	SPOTNIL					18	SPOTNIL		SOLQUIET MAGQUIET
109	19	18	013	071	007	S08E61	0	0	0		19	S08E61	Q	SOLQUIET MAGQUIET
110	20	19	013	071	014	S08E48	0	0	0		20	S08E48	Q	SOLQUIET

ALERT PERIODS
INTERNATIONAL URSIGRAM AND WORLD DAYS SERVICE

SUMMARY OF THE GEOALERT MESSAGES APRIL 1985

NO	DI	DO	WOLF	10CM	A	LOC	TOT	M	X	OUTSTANDING EVENTS	DA	LOC	DE	ALERTS
														MAGQUIET
111	21	20	026	072	030	S07E35	0	0	0		21	S07E35	Q	SOLQUIET
						N05E72	1	0	0			N05E72	Q	MAGALERT 21/XX
112	22	21	026	077	080	N07E57	7	0	0		22	N07E57	E	SOLQUIET MAGNIL
113	23	22	038	086	015	N05E44	9	1	0		23	N05E44	A	SOLQUIET MAGQUIET
114	24	23	042	092	014	N05E30	5	0	0		24	N05E30	A	SOLALERT MAGQUIET
115	25	24	053	090	019	S09W30	0	0	0	PRESTO XRAY EVENT X1/3B N05E32	25	S09W30	Q	SOLALERT
						N04E17	10	1	1	24/0848 UT DURATION 92 MINUTES. TENFLARE 4700 FLUX UNITS 24/0917 UT DURATION 56 MINUTES. PROTON EVENT 12 P/CM2/SEC/STER >10 MEV 24/1430 UT.		N04E17	P	25/XX MAGALERT 26/XX
116	26	25	055	094	021	N01W75	0	0	0	PRESTO PCA BEGAN 25/0530 UT	26	N01W75	Q	SOLALERT
						N04E03	13	0	0	0.6 DB ABSORPTION		N04E03	A	26/XX MAGALERT 26/27 FLARE
117	27	26	050	089	035	N00W91	0	0	0		27	N00W91	Q	SOLALERT
						N04W11	5	0	0			N04W11	Q	27/XX MAGALERT 27/XX FLARE
118	28	27	042	080	025	N05W25	3	0	0		28	N05W25	E	SOLALERT 28/XX MAGALERT 28/XX
119	29	28	034	077	041	N05W37	4	0	0		29	N05W37	E	SOLNIL MAGALERT MINOR 29/XX FLARE
120	30	29	035	082	018	N05W51	4	0	0		30	N05W51	E	SOLQUIET MAGNIL
121	01	30	030	080	021	N05W65	3	0	0		01	N05W65	E	SOLQUIET MAGQUIET

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

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

PRESTO BOULDER 24/1058 UT XRAY EVENT X1/3B N05E33 24/0848 UT DURATION 92 MINUTES
PRESTO MOSCOW 24/1200 UT IZMIRAN OBSERVED RADIO BURST AT 3000 MHZ BEGIN 0920 UT MAX 0925 UT TENFLARE 2500 FLUX UNITS
PRESTO BOULDER 24/1457 UT PROTON EVENT 12 P/CM2/SEC/STER > 10 MEV 24/1430 UT
PRESTO BOULDER 24/1846 UT TENFLARE 4700 FLUX UNITS 24/0917 UT DURATION 56 MINUTES
PRESTO BOULDER 25/1030 UT POLCAP ABSORPTION BEGAN 25/0530 UT 0.6 DB ABSORPTION

INTERNATIONAL* (R_I) RELATIVE SUNSPOT NUMBERS

Day	1984 Final May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	1985 Prov Jan	Feb	Mar	Apr
01	109	48	33	14	45	7	16	19	0	18	9	25
02	89	44	36	17	50	8	14	22	0	25	9	21
03	69	45	61	19	61	11	11	19	0	25	7	23
04	52	34	80	25	58	11	14	19	0	22	0	17
05	38	30	72	18	53	0	12	16	0	20	0	23
06	27	23	61	24	32	0	0	21	0	16	0	19
07	35	34	64	27	21	0	11	18	0	7	0	11
08	54	31	74	32	20	12	13	23	12	19	12	9
09	72	26	63	35	13	14	13	21	14	24	10	9
10	85	31	74	31	10	17	21	15	0	19	11	0
11	94	37	57	29	9	22	27	28	0	11	12	0
12	100	39	54	31	9	16	21	29	13	10	12	0
13	118	41	44	28	9	10	16	28	16	10	9	0
14	111	50	34	27	0	9	15	28	26	11	8	10
15	85	80	30	23	8	14	13	26	25	11	0	0
16	97	83	25	23	12	19	11	30	26	10	8	0
17	83	73	21	18	0	24	11	24	29	16	12	0
18	70	62	26	17	0	25	14	12	26	10	24	10
19	74	51	22	11	10	25	13	11	27	19	16	9
20	70	53	18	16	0	17	27	11	63	27	13	11
21	65	43	12	12	9	19	36	14	59	27	9	17
22	77	48	22	10	10	12	36	12	53	25	12	31
23	83	54	25	19	8	11	41	11	39	16	13	28
24	86	58	38	24	8	9	47	16	33	11	36	30
25	75	44	30	36	7	10	59	21	20	11	24	37
26	87	49	25	49	0	10	44	20	0	11	18	33
27	86	40	9	41	0	8	39	14	8	10	16	31
28	69	41	9	37	0	0	39	16	0	9	24	27
29	74	50	12	34	0	8	30	15	9		15	26
30	70	42	16	27	8	11	20	10	0		15	26
31	63		12	36		14		10	15		14	
Mean	76	46	37	26	16	12	23	19	16	16	12	16

*International sunspot numbers have replaced the Zurich values since January 1981.
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	May 84	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan 85	Feb	Mar	Apr
01	153.7	116.1	101.7	84.0	94.1	72.0	69.5	77.0	68.4	72.2	69.3	72.2
02	139.3*	111.3	103.6	86.3	93.2	74.8	70.1	76.8	67.8	73.8	69.1	72.6
03	123.1	109.6	104.8	88.4	94.5	75.2	72.0	77.9	67.7	73.6	69.0	72.5*
04	113.5*	106.8	105.7	85.7	91.9	75.2	72.2	75.9	67.8	70.9	68.6	71.9
05	114.9	104.6	104.4*	85.7	89.8	74.0	71.7	73.4	67.0	71.2	67.5	71.2
06	108.1	98.9	100.3	89.9	85.9	73.2	71.0	73.0	67.9	70.6	68.1	70.5
07	118.3	97.3	100.1	92.4	85.2	73.5	70.1	72.7	68.1	70.3	68.0	70.3
08	121.9	94.6	101.1	94.0	83.4	74.6	70.5	74.1	67.4	72.5	68.7	69.9
09	138.3	93.6	104.5	94.4	80.6	73.5	72.7	74.5	68.1	73.2	68.7	69.4
10	150.9	92.3	101.3	95.4	79.1	74.1	75.8	75.7	67.4	73.6	68.0	69.7
11	147.9	93.2	96.8	90.8	77.8	74.3	73.1	78.9	67.7	73.2	69.6	69.0
12	148.2*	93.0	94.7	88.0	76.5	73.9	72.8	77.8	68.4	72.3	69.3	69.6
13	151.4	98.6	92.6	86.5	75.0	74.7	71.6	76.2	72.6	70.8	69.5	69.8
14	146.9	110.2	92.2*	84.0	74.5	73.2	72.0	75.8	72.3	70.6	69.5	70.6
15	139.6	116.5*	92.2	82.6	73.3	76.4	72.9	74.9	72.4	70.2	69.6	70.0
16	137.3	110.3	90.1	83.1	73.4	76.6	70.7	74.2	74.7	69.8	70.1	69.4
17	130.1	109.5*	87.3	81.0	74.6	76.2	71.0	72.6	75.8	70.9	72.1	70.2
18	131.9	108.9	85.5	79.1	73.8	76.5	71.7	70.2	74.1	73.4*	74.6	71.7
19	137.6	107.8	84.7	76.2	74.6	74.2	72.3	71.0	75.4	76.1	74.2	71.7
20	138.0	106.6	84.8	75.6	74.1	73.5	74.8	69.9	81.7*	75.0	74.2	72.3
21	145.3*	103.4*	86.7	77.2	75.1	73.2	78.3	69.7	84.9*	74.2	76.1*	77.9
22	130.1	104.6	86.3	75.7	75.9	74.5	78.2	70.7	85.3	73.3	75.9	89.8
23	130.0	105.3	87.3	76.0	76.1	72.7	79.3	71.3	82.5	71.7	77.3	93.3*
24	126.9	103.6	86.8	81.6	76.2	70.8	81.1	71.8	78.2	70.5	79.6	89.0*
25	125.7*	104.6	85.9	83.0	74.6	70.2	83.1	72.2	73.9	70.1	78.5	95.2
26	121.0	100.1	83.4	87.7	74.3	69.4	82.5	72.3	71.0	69.7	79.7†	88.3*
27	120.3	101.5	83.0	90.4	73.5	68.6	82.5*	72.0	69.5	68.9	77.4†	80.6
28	118.5	99.5	82.5	88.6	73.1	69.3	81.0	72.2	69.6	69.7	77.7†	78.1
29	121.0	100.3	82.3	90.3	71.7	68.2	77.1	72.1	68.7		76.7†	83.2
30	119.7A	101.1	82.2	91.8	72.4	68.8	76.4	71.4	68.3		75.8†	80.8
31	115.9		83.0	93.1*		69.8		70.0	69.9A		76.4†	
Mean	131.1	103.5	92.2	85.8	78.9	73.1	74.6	73.5	72.1	71.9	72.5	75.7

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

APRIL 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	91	19	25		72.3	529	268	107	72.2	71	60	54	19	9
02	92	20	21		72.7	546	277	103	72.6	69	57	54	20	10
03	93	21	23		72.5*	554	277	102	72.5*	71	57	53	19	9
04	94	22	17		71.8	549	268	97	71.9	69	57	48	19	9
05	95	23	23		71.1	545	266	94	71.2	70	57	50	19	9
06	96	24	19		70.4	---	---	---	70.5	--	--	--	--	--
07	97	25	11		70.2	536	264	101	70.3	68	57	48	19	8
08	98	26	9		69.7	535	264	94	69.9	68	57	52	20	12
09	99	27	9		69.2	544	258	100	69.4	67	56	47	19	9
10	100	1	0		69.4	546	275	99	69.7	68	55	49	20	10
11	101	2	0		68.7	541	256	97	69.0	71	59	44	19	8
12	102	3	0		69.3	538	260	94	69.6	66	57	46	19	8
13	103	4	0		69.4	548	273	95	69.8	70	56	29	14	9
14	104	5	10		70.2	533	274	105	70.6	68	58	51	18	11
15	105	6	0		69.5	540	258	99	70.0	68	58	47	19	9
16	106	7	0		68.9	538	253	95	69.4	66	55	46	18	10
17	107	8	0		69.6	548	272	104	70.2	67	55	49	19	9
18	108	9	10		71.1	549	272	104	71.7	69	55	53	19	9
19	109	10	9		71.1	554	255	103	71.7	64	57	48	19	9
20	110	11	11		71.6	553	264	104	72.3	72	59	50	20	7
21	111	12	17		77.1	555	263	110	77.9	75	62	51	19	11
22	112	13	31		88.8	490	296	123	89.8	85	67	54	24	21
23	113	14	28		92.3*	567	313	133	93.3*	90	70	59	27	19
24	114	15	30		87.9*	573	307	127	89.0*	85	70	54	25	29
25	115	16	37		94.1	565	294	121	95.2	90	71	63	32	42
26	116	17	33		87.2*	---	---	---	88.3*	--	--	--	--	--
27	117	18	31		79.5	534	272	109	80.6	79	63	52	20	12
28	118	19	27		77.0	555	260	108	78.1	80	62	51	15	10
29	119	20	26		82.0	553	267	109	83.2	79	63	50	19	9
30	120	21	26		79.6	---	---	---	80.8	--	--	--	--	--
Mean			16		75.1	545	271	105	75.7	73	60	50	19	12

*Adjusted for burst in progress at time of measurement.
†Adjusted for antenna drift.

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 sunspot numbers shown above are preliminary values. The American values were unavailable at the time of publication.

OBSERVED AND PREDICTED SOLAR ACTIVITY INDICES

APRIL 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
May 81	127.5	143	141.3	149	152.8	159	198.9	204
Jun	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	118
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	40	23.2	35	78.9	90
Oct	12.0	28*	9.8	38	16.9	31	73.1	86
Nov	22.8	28(1)*	19.4	37	18.6	30	74.6	---
Dec	18.7	26(3)*	17.0	35	17.4	29	73.5	---
Jan 85	16.5†	25(5)*	14.5	34	15.9	28	72.1	---
Feb	16.1†	24(6)*	16.3	33	15.7	26	71.9	---
Mar	11.9†	23(7)*	----	31	16.3	25	72.5	---
Apr	16.1†	22(8)*	----	30	19.8	25	75.7	---
May	----	22(9)*	----	30	----	24	----	---
Jun	----	21(10)*	----	28	----	23	----	---
Jul	----	20(10)*	----	27	----	22	----	---
Aug	----	19(10)*	----	26	----	21	----	---
Sep	----	18(10)*	----	25	----	20	----	---
Oct	----	17(10)*	----	24	----	19	----	---

*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

APRIL 1985

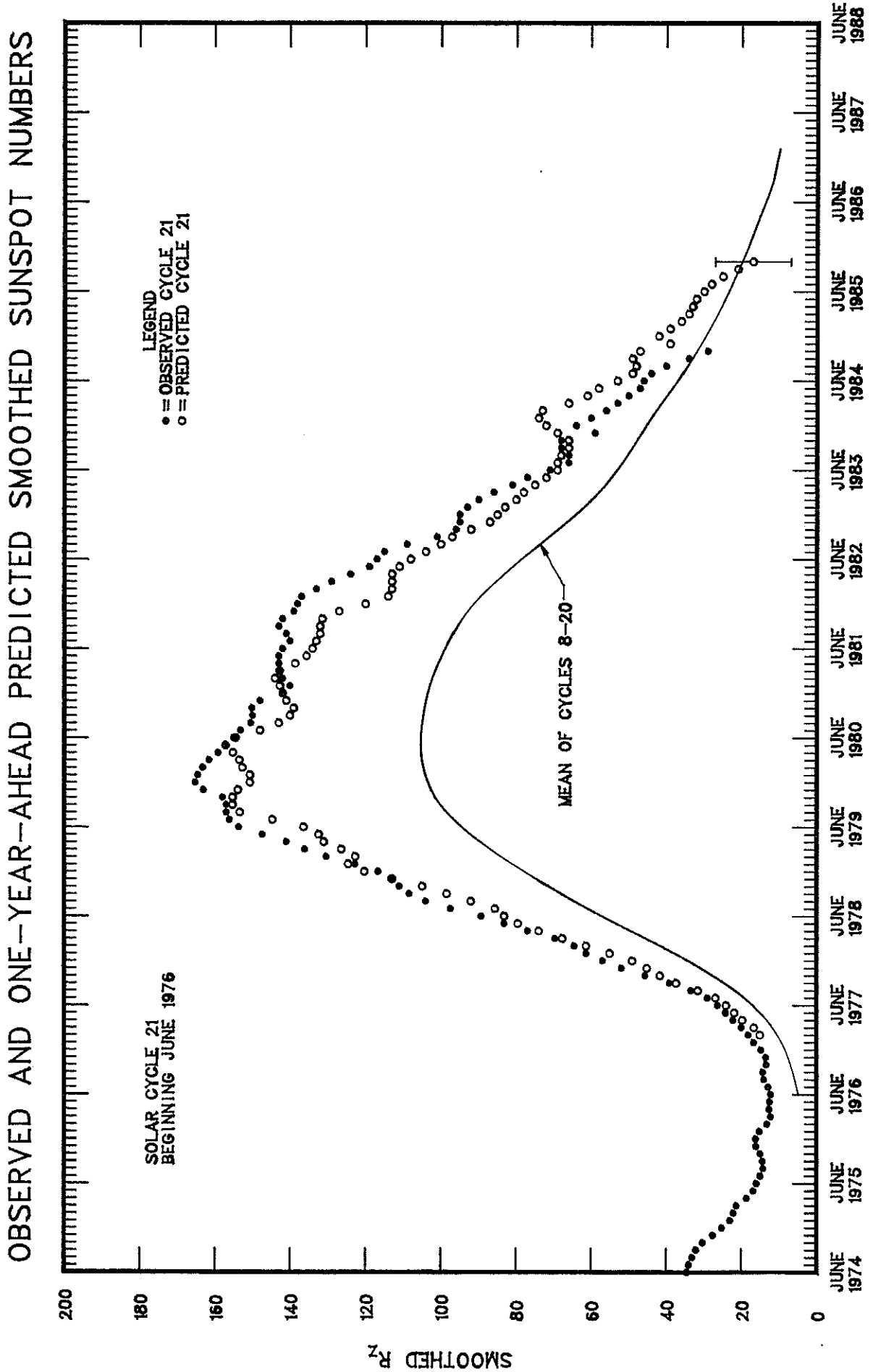
Month	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1976	15	13	12	13	13	12*	13	14	14	13	14	15
1977	17	18	20	22	24	26	29	33	39	46	52	57
1978	61	65	70	77	83	89	97	104	108	111	113	118
1979	124	131	137	141	147	153	155	155	156	158	162	165*
1980	164	163	161	159	156	155	153	150	150	150	148	143
1981	140	142	143	143	143	142	140	141	143	142	139	138
1982	137	133	129	124	119	117	115	109	101	96	95	95
1983	93	90	86	82	71	71	66	66	68	68	59	64
1984	60	56	53	50	48	47	44	40	34	29	28 (1)	26 (3)
1985	25 (5)	24 (6)	23 (7)	22 (8)	22 (9)	21 (10)	20 (10)	19 (10)	18 (9)	17 (10)	16 (11)	16 (11)
1986	15 (12)	15 (12)	14 (12)	13 (12)	12 (12)	12 (12)	11 (12)	10 (12)	10 (11)	10 (11)	10 (11)	10 (10)

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

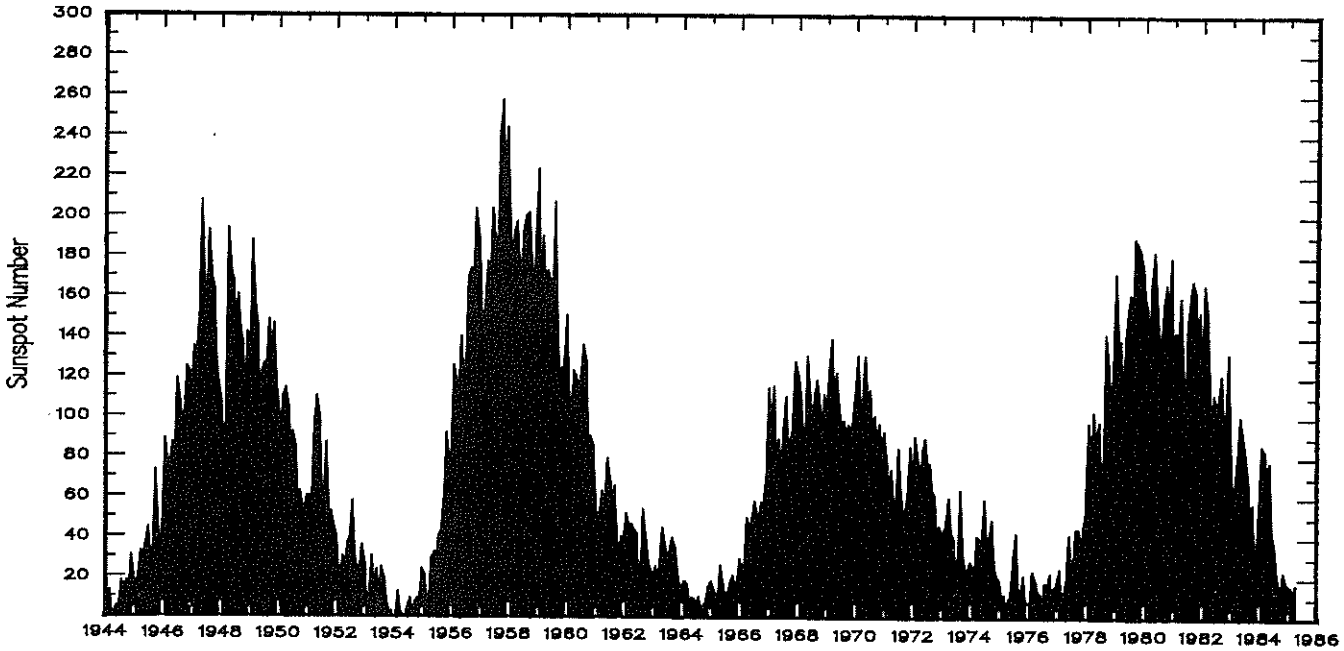
For the current solar cycle, this table gives observed smoothed sunspot numbers up to the one calculated from the most recently measured monthly mean. These smoothed observed values are based on final monthly mean Zurich numbers through 1980, on final international numbers through December 1984, and on provisional international numbers thereafter. Some table entries after the June 1976 value 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 10 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 October 1985 prediction tabulated above. There exists a 90% chance that in October 1985 the actual smoothed sunspot number will fall somewhere between 7 and 27.

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 – April 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*	16.1*	11.9*	16.1*								

*Provisional

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

APRIL 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
RAMY	01	1234	1331	1430	S26	E48	4640	04	05.2	116	SF		3	C		69		
RAMY	01	1516	1517	1556	S27	E49	4640	04	05.4	40	SF		3	C		40		
HOLL	01	1517	1518	1526	S27	E48	4640	04	05.4	9	SF		3	C		20		F
HOLL	01	1736	1737	1743	S28	E47	4640	04	05.4	7	SF		3	C		22		
RAMY	01	1736	1737	1744	S29	E48	4640	04	05.5	8	SF		3	C		25		
RAMY	03	1200	1222	1232	N07	W74	4637	03	29.0	32	SF		3	C		28		
WEND	03	1202		1530D	N05	W75		03	29.0	208D	SN			C	1204	30		DK
HOLL	03	1339	1405U	1412	N07	W73	4637	03	29.2	33	SF		3	C		13		H
HOLL	03	1420	1447	1505	N07	W73	4637	03	29.2	45	SF		3	C		33		H
RAMY	03	1612	1615	1622	N06	W73	4637	03	29.3	10	SF		3	C		15		
PALE	03	1643E	1653U	1715	N03	W69	4637	03	29.6	32D	SN		2	C		35		
HOLL	03	1713E	1716	1722	N07	W74	4637	03	29.3	9D	SF		3	C		23		
HOLL	03	1733	1748	1759D	N07	W74	4637	03	29.3	26D	SF		3	C		35		
RAMY	03	1739	1747	1803	N06	W73	4637	03	29.4	24	SF		3	C		18		
HOLL	03	1914	1917	1925	N08	W75	4637	03	29.3	11	SF		3	C		38		
PURP	04	0137E	0138	0202	S26	E17		04	05.4	25D	SN			C	0138	81	.9	EG
LEAR	04	0143	0155	0248	S26	E16	4640	04	05.3	65	SF		3	C		65		F
YUNN	04	0146E	0155	0247	S26	E15		04	05.2	61D	1B			P		185	2.1	KTW
PEKG	04	0159E	0205	0225	S27	E15		04	05.2	26D	SN			C	0205	126	1.4	E
RAMY	04	1951E		1953D	S28	E07	4640	04	05.4	2D	SN		3	C				F
HOLL	04	1951	1956	2022	S26	E05	4640	04	05.2	31	SN		3	C		70		F
HOLL	05	0031	0031	0046D	S19	E60	4643	04	09.6	15D	SF		3	C		26		
WEND	05	0712	0718	0743D	S17	W01		04	05.2	31D	SF			C	0718	46	.5	GS
RAMY	05	1747	1749	1755	S22	E06	4642	04	06.2	8	SF		3	C		39		F
HOLL	05	1747	1750	1754	S22	E06	4642	04	06.2	7	SF		3	C		21		
HOLL	06	1616	1617	1622	S21	W09	4642	04	06.0	6	SF		3	C		62		
RAMY	06	1616	1617	1625	S21	W07	4642	04	06.1	9	SF		3	C		84		
PEKG	07	0330	0335	0400	S28	W23		04	05.3	30	SN			C	0335	147	1.8	E
LEAR	07	0353	0357	0359	S27	W23	4640	04	05.4	6	SF		3	C		35		F
RAMY	09	1526	1528	1539	S18	E01	4643	04	09.7	13	SF		3	C		37		
HOLL	09	1527	1528	1539	S18	E01	4643	04	09.7	12	SF		3	C		38		H
HOLL	20	1753E	1754U	1811D	N04	E71		04	26.0	18D	SF		3	C		64		
LEAR	21	0028	0028	0036	N06	E71	4647	04	26.3	8	SF		2	C		13		F
YUNN	21	0125	0127U	0127D	N07	E67		04	26.1	2D	1N			P	0127	31		
RAMY	21	1040E	1129	1222	N07	E62	4647	04	26.1	102D	1F		3	C		149		K
RAMY	21	1040E	1144	1222	N07	E62	4647	04	26.1	102D	SN		3	C		62		F K
HOLL	21	1306	1332	1334	N01	E62	4647	04	26.2	28	SN		2	C		76		ZF
RAMY	21	1616	1624	1645D	N04	E62	4647	04	26.3	29D	SB	C 2.1	3	C		127		
PALE	21	1719E	1719	1725	N04	E60	4647	04	26.2	6D	SF		3	C		24		
PALE	21	1914	1914	1958	N04	E59	4647	04	26.2	44	SF		3	C		21		
PALE	21	2000	2007	2111	N04	E58	4647	04	26.2	71	SF		3	C		80		
LEAR	22	0023	0025	0043	N04	E56	4647	04	26.2	20	SN		3	C		20		
YUNN	22	0232E	0232U	0239	N04	E54		04	26.1	7D	SN			P	0232	31	.6	DT
YUNN	22	0305	0310	0316D	N07	E54		04	26.2	11D	SN			P		108	2.0	DT
GOES	22	0539	0547	0552						13		C 1.1						
YUNN	22	0724E	0724U	0728D	N02	E51		04	26.1	4D	SN			P	0724	46	.8	T
YUNN	22	0733E	0733U	0742D	N05	E52		04	26.2	9D	1N			P	0733	231	3.9	ET
RAMY	22	1212	1214	1222	N05	E49	4647	04	26.2	10	SN		3	C		28		
RAMY	22	1243	1243	1303D	N03	E49	4647	04	26.2	20D	SN		3	C		22		
GOES	22	1524	1538	1600						36		C 1.0						
HOLL	22	1637	1640	1649	N05	E49	4647	04	26.3	12	SB	M 1.0	3	C		149		F
HOLL	22	1701	1703	1730D	N05	E47	4647	04	26.2	29D	SB	C 2.1	3	C		38		F
PALE	22	1711E	1711U	1733	N06	E47	4647	04	26.2	22D	SF	C 2.1	2	C		20		
GOES	22	1947	1950	1952						5		C 8.7						
GOES	22	2129	2133	2137						8		C 1.0						
HOLL	22	2136	2137	2150	N04	E44	4647	04	26.2	14	SN		3	C		22		F
GOES	22	2204	2208	2210						6		C 1.2						
YUNN	23	0250	0253U	0300	N06	E41		04	26.2	10	SN	C 1.1		P	0253	92	1.3	
PALE	23	0251	0251	0259	N06	E41	4647	04	26.2	8	SF	C 1.1	2	C		21		
GOES	23	0507	0517	0526						19		C 1.4						
MITK	23	0513	0516	0536	N02	E38		04	26.0	23	SN			C	0516			E

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

APRIL 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
PURP	23	0516E	0517	0518	N03	E39		04	26.1	2D	SN			C	0517	62	.8	E
GOES	23	0856	0925	0949						53		C 1.4						
PALE	23	1900	1906	1907	N04	E29	4647	04	25.9	7	SF		3	C		33		F
HOLL	23	2108	2110	2124	N04	E30	4647	04	26.1	16	SN	C 5.5	3	C		95		F
RAMY	23	2118E		2127D	N04	E30	4647	04	26.1	9D	SN	C 5.5	2	C		67		F
MITK	24	0148	0150	0225	N05	E27		04	26.1	37	1N	C 8.8		C	0150	230	2.7	E
PURP	24	0148E	0151	0224	N05	E27		04	26.1	36D	SB			C	0151	153	1.8	C
PALE	24	0158E	0159	0229	N03	E28	4647	04	26.2	31D	1N	C 8.8	3	C		273		F
YUNN	24	0200E	0200U	0231	N05	E25		04	25.9	31D	1F	C 8.8		P	0200	185	2.1	
YUNN	24	0309	0315U	0315D	N05	E26		04	26.1	6D	SN			P	0315	108	1.3	E
PURP	24	0342	0353U	0516	N05	E26		04	26.1	94	1N			C	0353	180	2.1	K
PURP	24	0342	0455	0516	N06	E26		04	26.1	94	1N			C	0455	438	5.1	
PALE	24	0346	0353	0418	N04	E26	4647	04	26.1	32	SF	C 2.2	3	C		83		F
LEAR	24	0449	0451	0531	N05	E26	4647	04	26.1	42	SN	C 7.4	3	C		158		F
LEAR	24	0532	0533	0538	N07	E27	4647	04	26.2	6	SF		3	C		22		
YUNN	24	0855E	0902	0903D	N05	E23		04	26.1	8D	SN	X 1.9		P		108	1.2	E
RAMY	24	1600	1603	1744	N04	E20	4647	04	26.2	104	SN		3	C		37		K
HOLL	24	1600	1611	1738	N02	E18	4647	04	26.0	98	SN		3	C		45		K
HOLL	24	1600	1646	1738	N02	E18	4647	04	26.0	98	SB	C 1.2	3	C		174		FHK
RAMY	24	1600	1648	1744	N04	E20	4647	04	26.2	104	SB	C 1.2	3	C		161		FEK
GOES	24	1642	1702	1725						43		C 5.4						
PALE	24	1655E	1658U	1658D	N04	E20	4647	04	26.2	3D	SB	C 1.2	3	C		80		FE
HOLL	24	1800	1800	1813	N02	E17	4647	04	26.0	13	SF		3	C		30		F
RAMY	24	1800	1805	1808	N02	E17	4647	04	26.0	8	SN		3	C		31		F
RAMY	24	1833	1833	1835D	N03	E19	4647	04	26.2	2D	SB		3	C		39		FE
HOLL	24	1833	1833	1839	N03	E18	4647	04	26.1	6	SN		3	C		31		F
RAMY	24	1935	2012	2116	N04	E18	4647	04	26.2	101	SN		3	C		138		K
RAMY	24	1935	2058	2116	N04	E18	4647	04	26.2	101	SB	C 1.9	3	C		116		UFK
HOLL	24	2051	2057	2106	N04	E21	4647	04	26.4	15	SN	C 1.9	3	C		49		F
RAMY	24	2141	2142	2212	N05	E15	4647	04	26.0	31	SN		3	C		59		
MITK	24	2348E		2406	N06	E15		04	26.1	18D	SN			C	2348			D
YUNN	25	0108E	0115	0142	N05	E14		04	26.1	34D	SN			P		169	1.8	ET
PALE	25	0115	0115	0118	N03	E14	4647	04	26.1	3	SF		3	C		34		
LEAR	25	0228	0230	0246	N04	E14	4647	04	26.1	18	SF	C 1.0	3	C		56		F
YUNN	25	0253	0300	0330D	N06	E12		04	26.0	37D	SN			C		108	1.2	T
LEAR	25	0459	0500	0506	N05	E12	4647	04	26.1	7	SF		3	C		21		F
LEAR	25	0515	0516	0522	N03	E11	4647	04	26.0	7	SF		3	C		24		F
LEAR	25	0637	0639	0651	N05	E11	4647	04	26.1	14	SF		3	C		52		F
WEND	25	0724	0734	0805	N05	E11		04	26.1	41	SN	C 4.2		C	0734	48	.5	Z
LEAR	25	0725	0729	0809	N05	E11	4647	04	26.1	44	SN	C 4.2	3	C		89		ZF
ISTA	25	0726		0744	N05	E12		04	26.2	18	SF	C 4.2						E
YUNN	25	0729	0736	0745D	N04	E09		04	26.0	16D	SN			P		92	1.0	T
WEND	25	1015	1028	1044	N02	E06		04	25.9	29	SF			C	1028	44	.5	E
GOES	25	1156	1209	1213						17		C 1.0						
WEND	25	1444	1446	1523D	N05	E02		04	25.8	39D	SN			C	1446	20	.2	D
RAMY	25	1449	1519	1648	N05	E06	4647	04	26.1	119	SN		3	C		64		K
RAMY	25	1449	1612	1648	N05	E06	4647	04	26.1	119	SB		3	C		71		FEK
RAMY	25	1803	1804	1813	N06	E01	4647	04	25.8	10	SF		3	C		23		
RAMY	25	1816	1826	1827	N04	E05	4647	04	26.1	11	SF		3	C		31		F
RAMY	25	1828	1834	1837	N02	E03	4647	04	26.0	9	SF		3	C		46		F
RAMY	25	1852	1859	1904	N04	E04	4647	04	26.1	12	SN		3	C		80		F
RAMY	25	1906	1908	2134D	N06	E03	4647	04	26.0	148D	SN		3	C		113		K
RAMY	25	1906	2046	2134D	N06	E03	4647	04	26.0	148D	1B	C 1.9	3	C		300		FEK
HOLL	25	1925	1925	1933	S15	W30	4609	04	23.5	8	SF		3	C		23		F
RAMY	25	1926	1926	1937	S12	W30	4609	04	23.5	11	SF		3	C		22		
GOES	25	2225	2228	2230						5		C 2.0						
HOLL	25	2333	2334	2410D	N07	E35	4637	04	28.6	37D	SN		3	C		57		F
LEAR	25	2334	2334	2337D	N07	E38	4637	04	28.8	3D	SF		3	C		24		UF
LEAR	26	0024	0025	0035	N05	E02	4647	04	26.2	11	SN	C 1.9	3	C		48		F
LEAR	26	0233	0234	0236	N04	E02	4647	04	26.2	3	SF		3	C		27		
LEAR	26	0326	0328	0334	N04	E01	4647	04	26.2	8	SN	C 1.4	3	C		41		F
RAMY	26	1842	1847	1857	N04	W10	4647	04	26.0	15	SF		3	C		66		
GOES	26	2247	2306	2331						44		C 2.5						
RAMY	27	1227	1228	1237	N01	W17	4647	04	26.2	10	SF		3	C		30		F
RAMY	27	1323	1325	1329	N01	W20	4647	04	26.1	6	SF		3	C		30		F
RAMY	28	1719	1720	1723	N04	W40	4647	04	25.7	4	SF		3	C		50		H

H - ALPHA SOLAR FLARES

APRIL 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
RAMY	28	1903	1903	1914	N03	W36	4647	04	26.1	11	SF		3	C		28		F
RAMY	28	2146	2153	2209D	N03	W37	4647	04	26.1	23D	SF		3	C		37		F
PALE	28	2212	2213	2226	N03	W38	4647	04	26.1	14	SN		3	C		74		F
LEAR	29	0338	0340	0350	N00	W43	4647	04	25.9	12	SF		3	C		39		F
RAMY	29	1555	1558	1604	N03	W49	4647	04	26.0	9	SN		3	C		24		
PALE	29	1801	1805	1815	N02	W53	4647	04	25.8	14	SF	C 1.9	3	C		62		F
LEAR	30	0413	0413	0421	N03	W55	4647	04	26.1	8	SN		3	C		15		
RAMY	30	2030	2034	2040	N05	W63	4647	04	26.1	10	SF		3	C		31		
LEAR	30	2344	2344	2401	N03	W65	4647	04	26.1	17	SN	C 2.0	3	C		26		U

"Remarks":

A = Eruptive prominence whose base is less than 90° from central meridian.
B = Probably the end of a more important flare.
C = Invisible 10 minutes before.
D = Brilliant point.
E = Two or more brilliant points.
F = Several eruptive centers.
G = No visible spots in the neighborhood.
H = Flare accompanied by high-speed dark filament.
I = Active region very extended.
J = Distinct variations of plage intensity before or after the flare.
K = Several intensity maxima.
L = Existing filaments show signs of sudden activity.
M = White-light flare.
N = Continuous spectrum shows effects of polarization.
O = Observations have been made in the H and K lines of Ca II.
P = Flare shows helium D3 in emission.
Q = Flare shows Balmer continuum in emission.
R = Marked asymmetry in H-alpha line suggests ejection of high-velocity material.
S = Brightness follows disappearance of filament in same position.
T = Region active all day.
U = Two bright branches, parallel or converging.
V = Occurrence of an explosive phase: important, expansion within roughly 1 minute that often includes a significant intensity increase.
W = Great increase in area after time of maximum intensity.
X = Unusually wide H-alpha line.
Y = System of loop-type prominences.
Z = Major sunspot umbra covered by flare.

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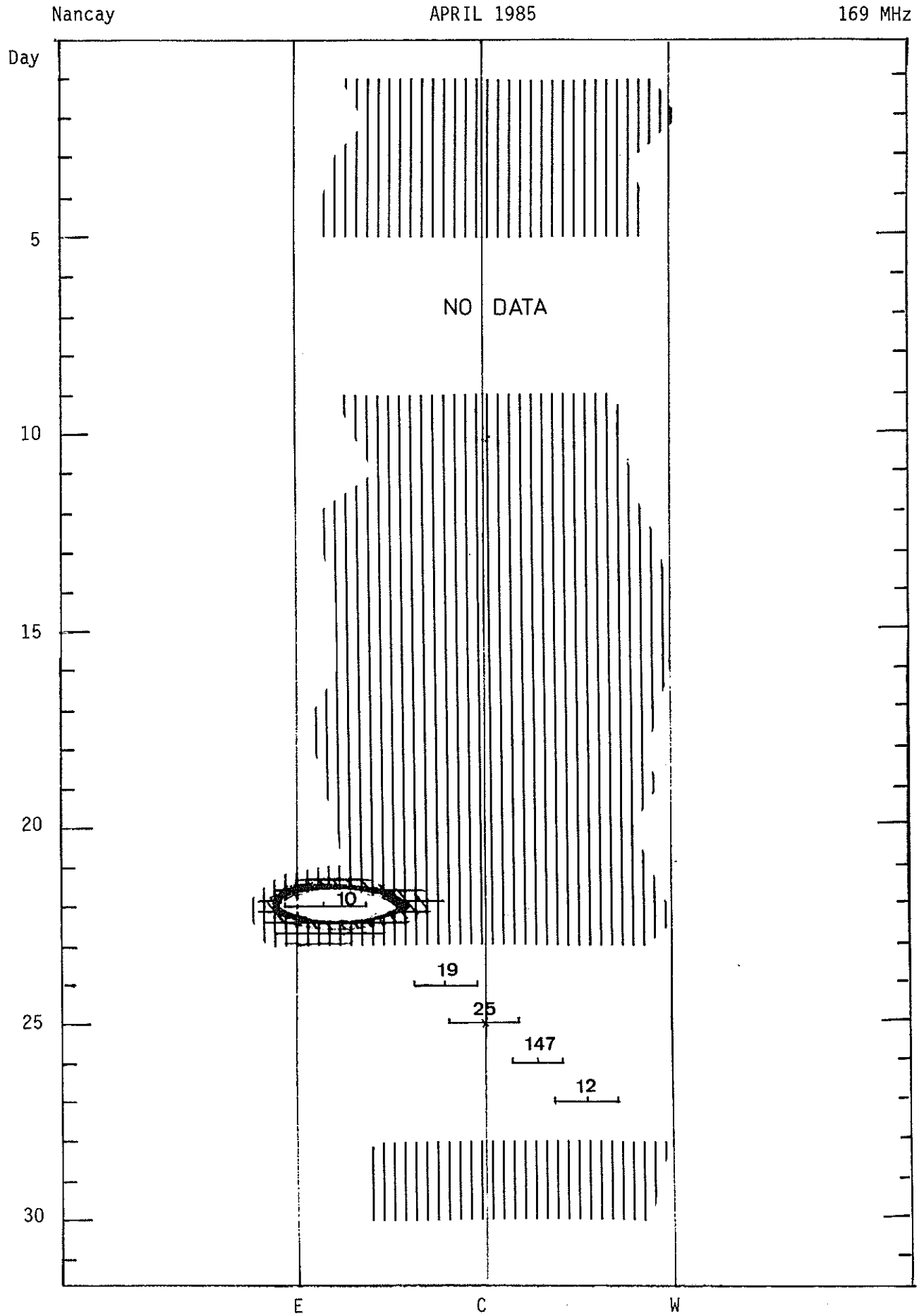
Apr 85

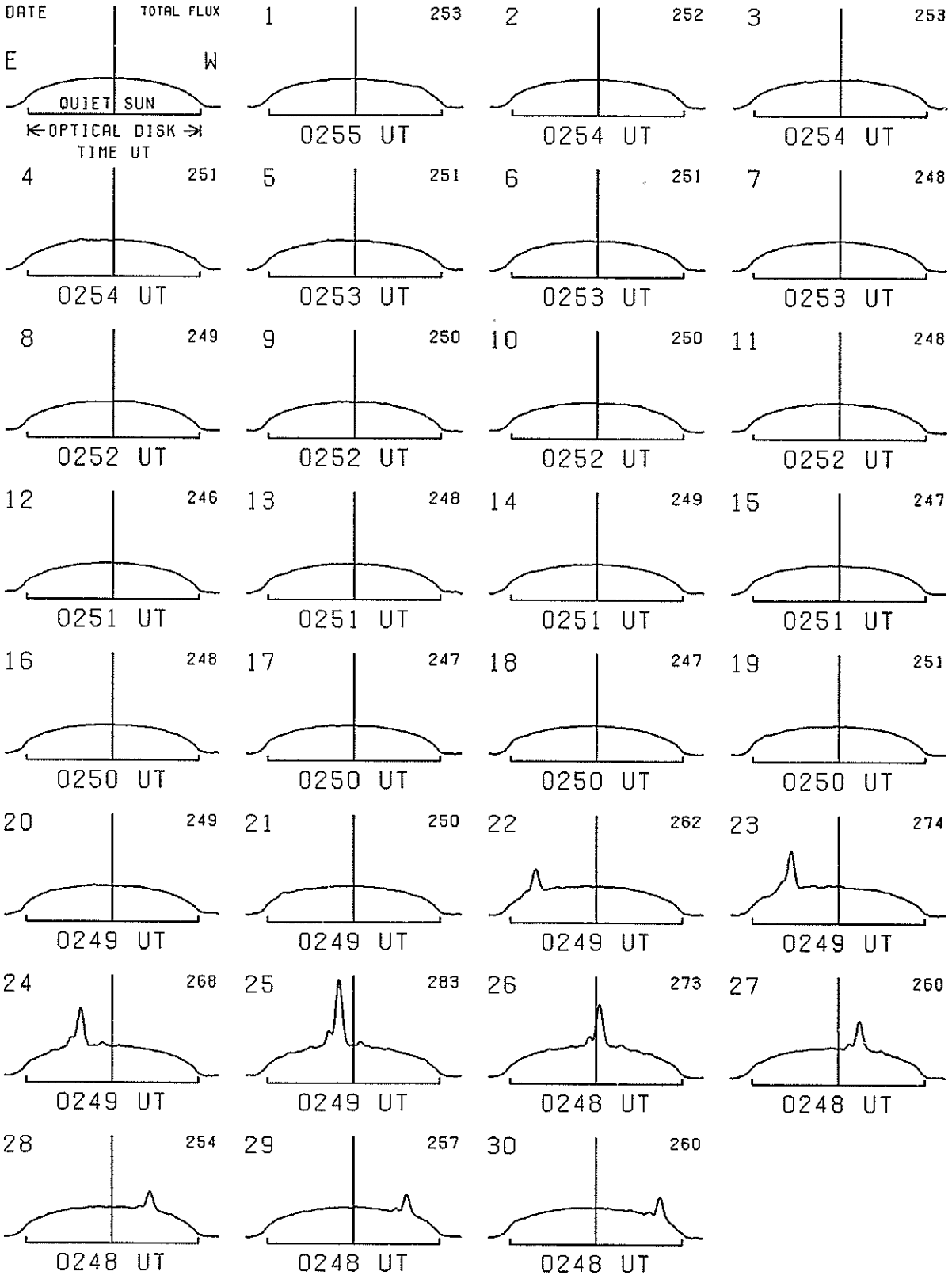
SOLAR INTERFEROMETRIC OBSERVATIONS



EAST-WEST SOLAR SCANS
APRIL 1985

TOYOKAWA, JAPAN

3 CM
FAN BEAM WITH 1.1 MINUTES OF ARC

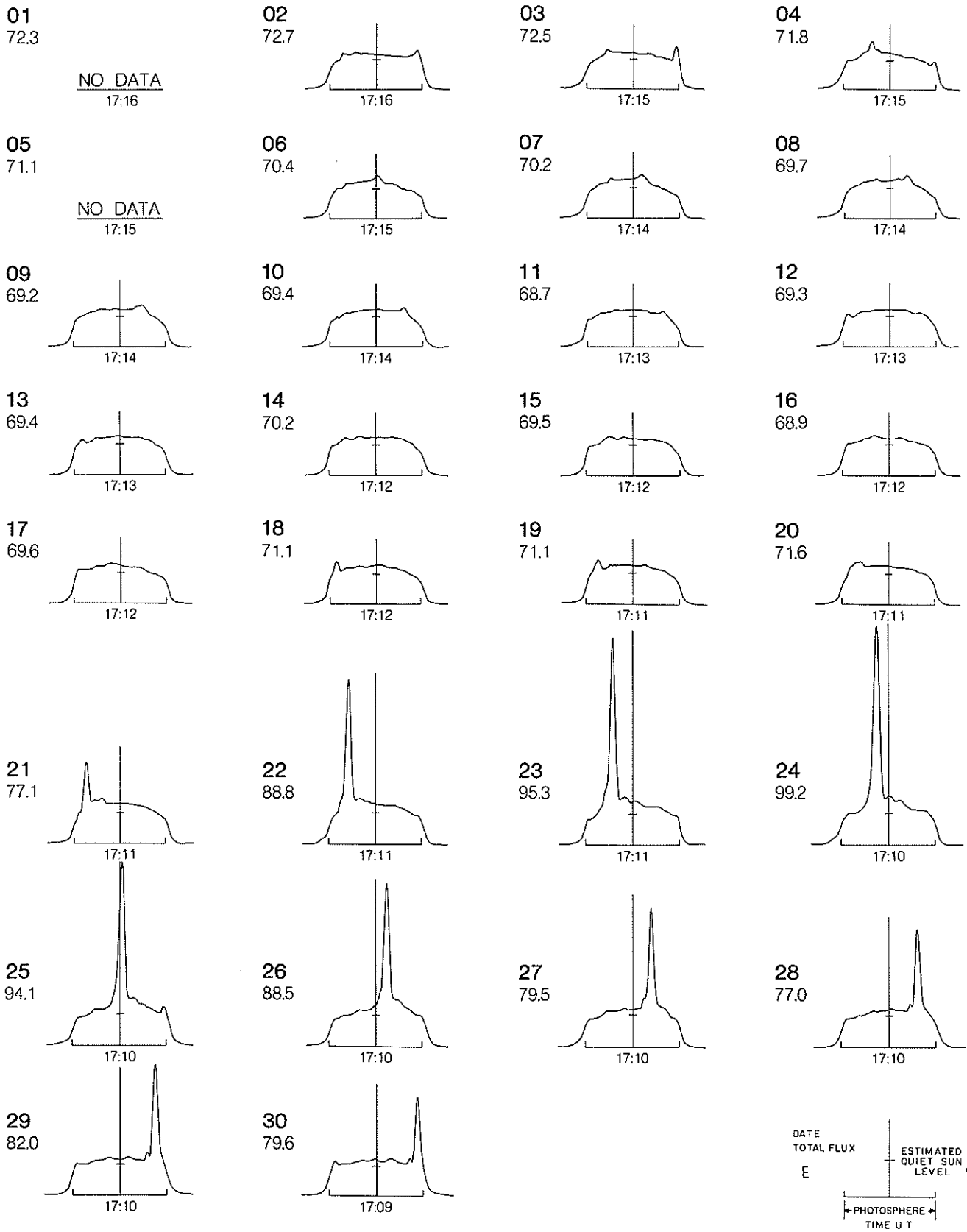


EAST-WEST SOLAR SCANS

APRIL 1985

ALGONQUIN RADIO OBSERVATORY
CANADA

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

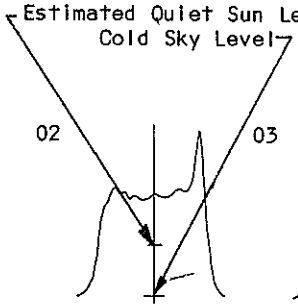


EAST-WEST SOLAR SCANS

Fleurs, Australia

APRIL 1985

21 cm
Fan-Beam with 2 minutes of arc
E-W Resolution



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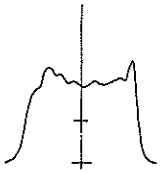

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E W

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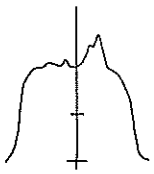
09


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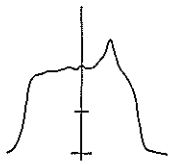

11


12


E W

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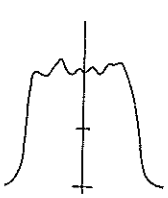
16


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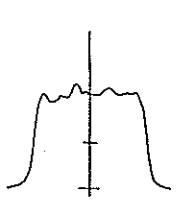

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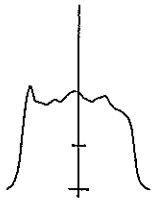
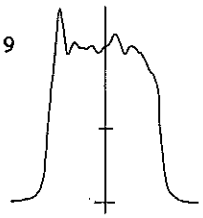


E W

19


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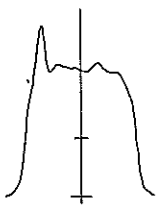
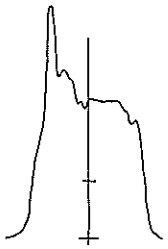


21


22


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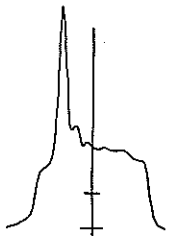

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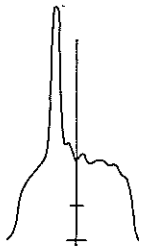

E W

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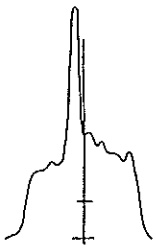

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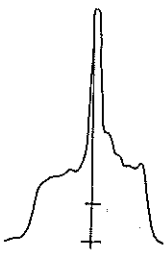

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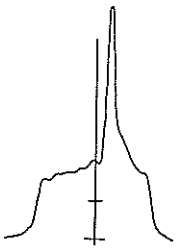

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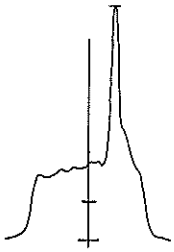

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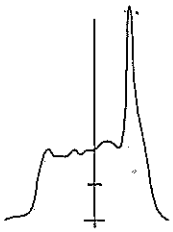


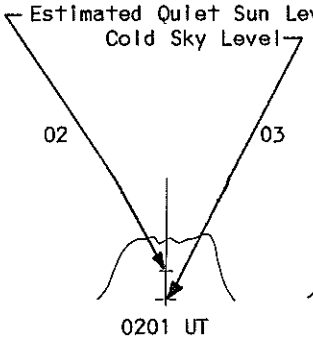
30 NO DATA

E W

20
Apr 85

E A S T - W E S T S O L A R S C A N S

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



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13 NO DATA	14 NO DATA	15 NO DATA	16 0157 UT	17 0157 UT	18 0204 UT
19 0156 UT	20 0156 UT	21 0156 UT	22 0155 UT	23 0155 UT	24 0155 UT
25 NO DATA	26 0155 UT	27 0155 UT	28 0154 UT	29 0154 UT	30 NO DATA

E — W

SOLAR RADIO EMISSION
SELECTED FIXED FREQUENCY EVENTS

APRIL 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
03	2800	OTTA	1 S	1914.2	1914.9	1.0	0.8	0.4		
	2800	OTTA	1 S	2032.0	2032.5	3.0	0.9	0.4		
04	2800	OTTA	20 GRF	1930.0	2000.0	110.0	1.6	0.8		
19	2695	SGMR	47 GB	1849.6	1850.1	1.2	430.0			QL=1 ST=2 TYP=5
21	8400	BERN	3 S	1639.5	1640.1	2.0	140.0			OPR
	2800	OTTA	240 R	1900.0	2220.0	200.0	5.2	2.6		
22	2800	OTTA	240 R	1525.0	1538.0	13.0	1.6	0.8		
	2800	OTTA	240AR	1639.0	1651.0	12.0	1.4			
	8800	ATHN	47 GB	1639.0	1640.0	2.0	93.0			QL=5 ST=2 TYP=5
	8800	SGMR	47 GB	1639.1	1639.8	1.5	51.0			QL=3 ST=2 TYP=5
	2800	OTTA	3 S	1639.3	1640.0	2.0	30.0	12.0		
	2695	SGMR	8 S	1639.3	1640.0	.8	23.0			QL=3 ST=2 TYP=3
	2695	ATHN	47 GB	1640.0	1640.0	1.0	82.0			QL=5 ST=2 TYP=5
	2800	OTTA	29 PBI	1641.3	1641.3	9.0	3.4	1.7		
	2800	OTTA	20 GRF	1850.0	1910.0	50.0	1.6	0.8		
	8800	PALE	8 S	1951.8	1952.0	.3	39.0			QL=6 ST=2 TYP=3
	2695	SGMR	8 S	1951.8	1952.1	.8	10.0			QL=3 ST=2 TYP=3
	8800	SGMR	8 S	1951.8	1952.1	.7	35.0			QL=3 ST=2 TYP=3
	2800	OTTA	1 S	1952.0	1952.1	2.0	9.2	2.3		
	2800	OTTA	20 GRF	2020.0	2050.0	95.0	2.8	1.6		
	2800	OTTA	1 S	2207.0	2207.2	1.2	2.2	1.1		
	2695	PENT	240 R	2230.0	2340.0	70.0	2.8	1.6		
23	2800	OTTA	20 GRF	1425.0	1450.0	55.0	2.0	1.2		
	2800	OTTA	22 GRF	1610.0	1705.0	100.0	3.4	1.7		
	2800	OTTA	22 GRF	1800.0	2020.0	440.0	11.4	6.0		
	8800	SGMR	47 GB	2107.6	2109.3	19.7	52.0			QL=6 ST=3 TYP=5
	8800	PALE	4 S/F	2108.1	2109.3	3.0	48.0			QL=6 ST=2 TYP=3
24	8800	PALE	47 GB	0148.1	0148.6	15.9	290.0			QL=6 ST=2 TYP=5
	8800	LEAR	47 GB	0148.1	0148.8	16.2	250.0			QL=3 ST=2 TYP=5
	2695	LEAR	49 GB	0913.0	0920.1	20.1	64.0			QL=6 ST=2 TYP=7
	8800	ATHN	49 GB	0917.0	0929.0	56.0	13999.0			QL=6 ST=2 TYP=6
	8400	BERN	47 GB	0917.0	0930.0U	80.0D	3600.0D			
	2695	ATHN	49 GB	0917.0	0931.0	56.0	4700.0			QL=6 ST=2 TYP=6
	8800	LEAR	49 GB	0917.3	0920.1	15.8	81.0			QL=3 ST=2 TYP=7
	2695	LEAR	49 GB	0933.1	0933.1	8.2	3000.0			QL=6 ST=2 TYP=7
	8800	LEAR	49 GB	0933.1	0934.6	8.2	12000.0			QL=3 ST=2 TYP=7
	2800	OTTA		1100.0	1110.0	180.0D	24.0			
	2800	OTTA	20 GRF	1440.0	1505.0	50.0	1.8	0.9		
	2800	OTTA	22 GRF	1540.0	1655.0	195.0	11.4	5.4		
	2695	ATHN	20 GRF	1641.0	1650.0	24.0	85.0			QL=1 ST=2 TYP=2
	8800	ATHN	20 GRF	1641.0	1747.0		88.0			QL=1 ST=3 TYP=2
	8800	SGMR	8 S	1658.8	1659.8	1.3	19.0			QL=6 ST=2 TYP=3
	8800	SGMR	8 S	1832.3	1832.6	.8	35.0			QL=6 ST=2 TYP=3
	2800	OTTA	20 GRF	1910.0	1950.0	90.0	2.2	1.1		
	2800	OTTA	8 S	2048.1	2048.2	.8	1.2	0.6		
	2800	OTTA	1 S	2050.0	2050.3	1.0	2.8	1.4		
	2800	OTTA	240 R	2110.0	2135.0	25.0	3.6	1.8		
25	8800	LEAR	8 S	0421.5	0421.8	1.1	18.0			QL=6 ST=2 TYP=3
	8800	LEAR	8 S	0459.1	0459.1	.4	19.0			QL=6 ST=2 TYP=3
	8800	LEAR	20 GRF	0553.6	0554.0	.5	13.0			QL=6 ST=2 TYP=2
	8400	BERN	3 S	0720.0	0729.0	30.0D	73.0			
	8800	LEAR	20 GRF	0725.6	0728.8	13.5	45.0			QL=6 ST=2 TYP=2
	2695	LEAR	20 GRF	0728.5	0729.6	1.1	23.0			QL=6 ST=2 TYP=2
	8400	BERN	3 S	0934.0	0934.5	2.0	36.0			
	2800	OTTA	20 GRF	1145.0	1200.0	45.0	2.2	1.1		
	2800	OTTA	22 GRF	1905.0	1930.0	45.0	1.8	0.9		
	2800	OTTA	22 GRF	2035.0	2048.0	20.0	4.0	2.0		
	2800	OTTA	21 GRF	2035.0	2105.0	55.0	4.4	2.2		
	2800	OTTA	21 GRF	2140.0	2300.0	175.0	8.4	4.0		
	2800	OTTA	22 GRF	2230.0	2236.7	18.0	12.8	5.4		
26	2800	OTTA	20 GRF	1600.0	1715.0	195.0	3.4	1.7		
	2695	PENT	21 GRF	2240.0	2300.0	170.0	10.4	4.6		
	2695	PENT	1 S	2250.0	2250.8	1.2	2.8	1.4		

SOLAR RADIO EMISSION
SELECTED FIXED FREQUENCY EVENTS

APRIL 1985

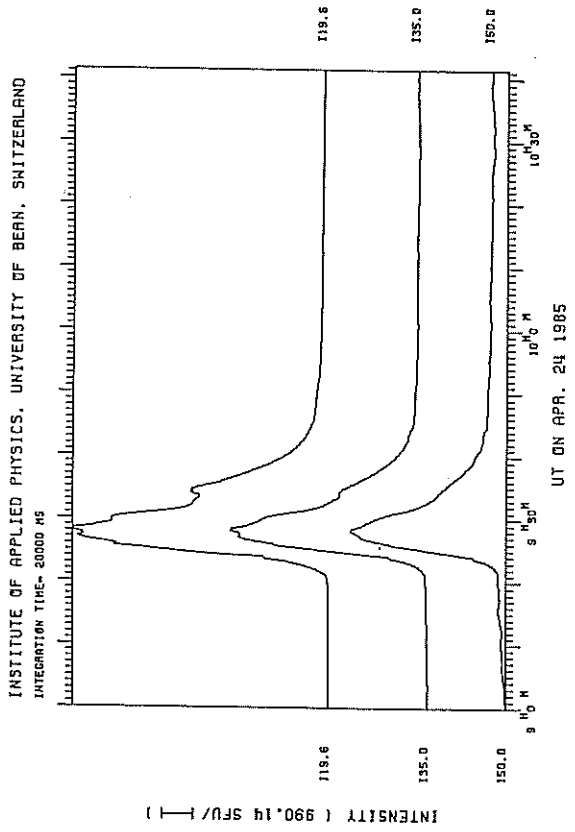
Day	Freq	Sta	Type	Start (UT)	Time of Maximum (UT)	Duration (Min)	Flux Density Peak (10^{-22} W/m^2 Hz)	Flux Density Mean (10^{-22} W/m^2 Hz)	Int	Remarks
27	2800	OTTA	20 GRF	1220.0	1235.0	100.0	1.8	0.9		
	2800	OTTA	20 GRF	1925.0	2200.0	325.0	7.0	3.5		
28	2800	OTTA	20 GRF	2050.0	2215.0	140.0	2.6	1.3		
29	8800	LEAR	8 S	0651.8	0652.0	.3	8.0			QL=6 ST=2 TYP=3
	2800	OTTA	20 GRF	1420.0	1450.0	50.0	1.2	0.6		
	2800	OTTA	20 GRF	1755.0	1835.0	95.0	2.6	1.5		
	2800	OTTA	20 GRF	1955.0	2050.0	115.0	2.4	1.2		
30	8800	LEAR	8 S	0412.8	0413.0	.3	13.0			QL=6 ST=2 TYP=3

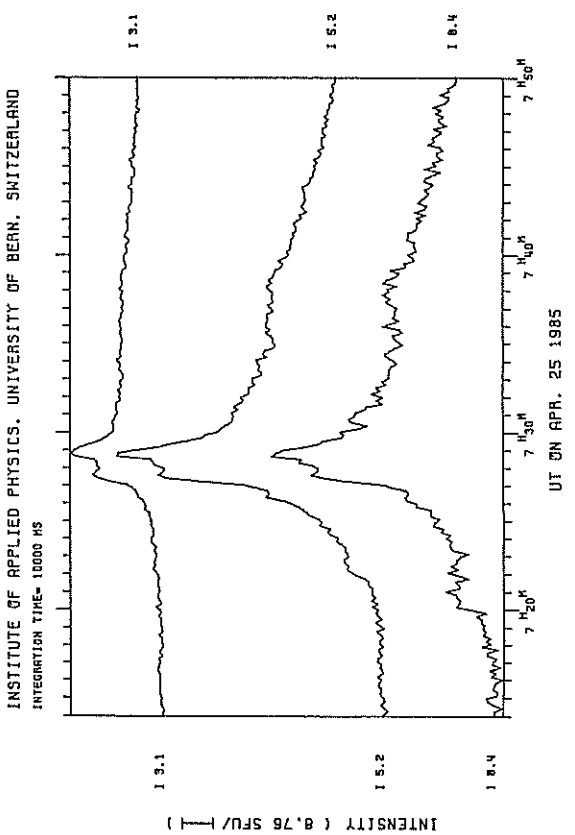
Observatories:
BERN = Berne MANI = Manila OTTA = Ottawa ARO PENT = Penticton SGMR = Sagamore Hill
LEAR = Learmonth ATHN = Athens PALE = Palehua

Explanation of Type Code:

1 Simple 1	7 Minor +	24 Rise	30 Post Burst Increase A	43 Onset on Noise Storm
2 Simple 1F	8 Spike	25 Rise A	31 Post Burst Decrease	44 Noise Storm In Progress
3 Simple 2	20 Simple 3	26 Fall	32 Absorption	45 Complex
4 Simple 2F	21 Simple 3A	27 Rise and Fall	40 Fluctuation	46 Complex F
5 Simple	22 Simple 3F	28 Precursor	41 Group of Bursts	47 Great Burst Storm
6 Minor	23 Simple 3AF	29 Post Burst Increase	42 Series of Bursts	48 Major
				49 Major +

Remarks:
QL = Quality (1=poor to 6=excellent)
ST = Status (1=real time; 2=final; 3=correction; 4=deletion)
TYP= Type (1=noise storm;2=rise in base level;3=minor;4=group;5=major;6=major plus;7=Castelli U-type burst)



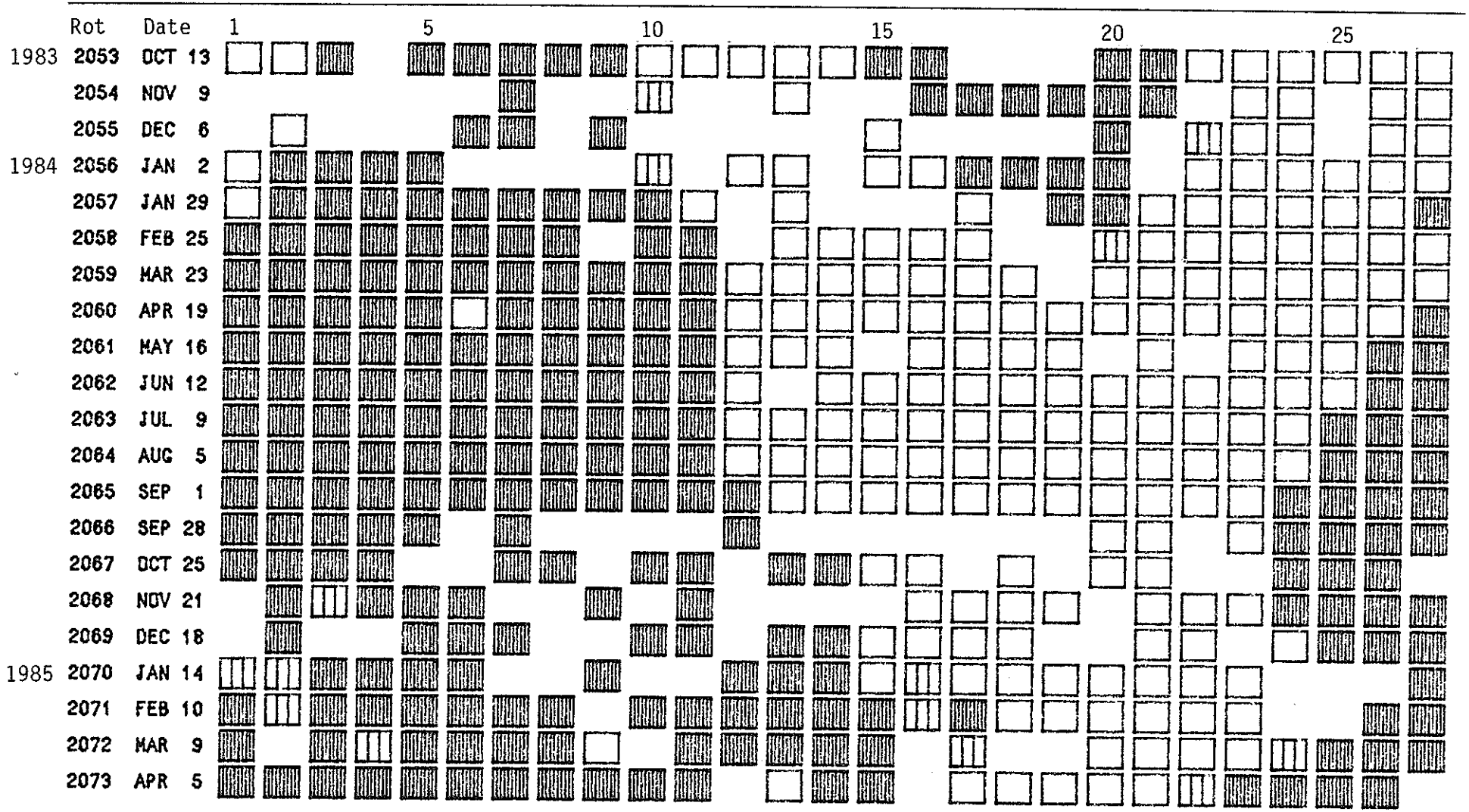


STANFORD MEAN SOLAR MAGNETIC FIELD (MICROTESLA)

Day	May 84	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan 85	Feb	Mar	Apr
1	56	24	38	17	-38	-42	-13	-32	5	38	31	2
2	53	27	44	-2	-20	-63	·	·	14	35	27	-10
3	40	42	33	-35	-42	·	-64	·	21	32	16	-14
4	36	·	62	-40	-58	-76	-37	·	38	30	13	-13
5	24	66	41	-44	-77	·	·	·	·	15	·	-17
6	15	·	5	-37	-86	·	-22	15	·	·	·	-20
7	15	65	-28	-50	-89	·	-4	28	37	·	-8	-7
8	30	53	-41	-82	-95	·	10	44	26	·	-17	-13
9	7	24	-62	-83	-81	-21	12	30	·	-4	-13	-6
10	19	-18	-56	-73	-55	·	·	·	6	-5	·	-13
11	47	-37	-66	-84	-27	·	16	39	-10	-1	-4	-29
12	42	-47	-70	-91	-8	·	·	27	-8	-2	-1	-19
13	32	-57	-96	-71	3	·	48	12	-10	-8	-3	-21
14	20	-63	-91	-67	11	·	24	-10	-1	-9	-15	-13
15	-5	-61	-102	-13	10	·	·	-12	1	-23	-12	-12
16	-39	-75	-93	6	12	·	·	-20	-7	-17	-6	·
17	-62	-73	-59	11	21	32	-4	-11	-3	-13	10	3
18	-57	-89	-39	21	23	36	-25	·	-25	·	·	-7
19	-58	-59	-11	18	49	·	-23	-8	-35	-12	-7	-10
20	-62	-66	14	19	52	15	·	·	·	-17	-6	·
21	-59	-52	9	21	44	-7	·	·	·	-15	-12	5
22	-66	-31	31	26	34	-32	-6	-24	-30	-12	-12	6
23	-68	11	7	39	20	-38	1	-35	·	-7	-5	18
24	-79	·	30	47	-5	-24	-15	-46	·	-6	·	23
25	-76	37	22	52	-26	-14	-10	·	-9	2	1	18
26	-42	33	26	31	-35	-18	-20	·	-12	-6	·	1
27	13	16	53	25	-26	-15	·	-23	-2	13	·	-12
28	57	26	43	11	-19	-32	·	-22	32	20	37	-27
29	66	15	54	-4	-19	·	-45	·	0		24	-32
30	·	32	36	-13	-30	·	·	-9	19		16	-47
31	38		31	-36		-71		-3	28		12	

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

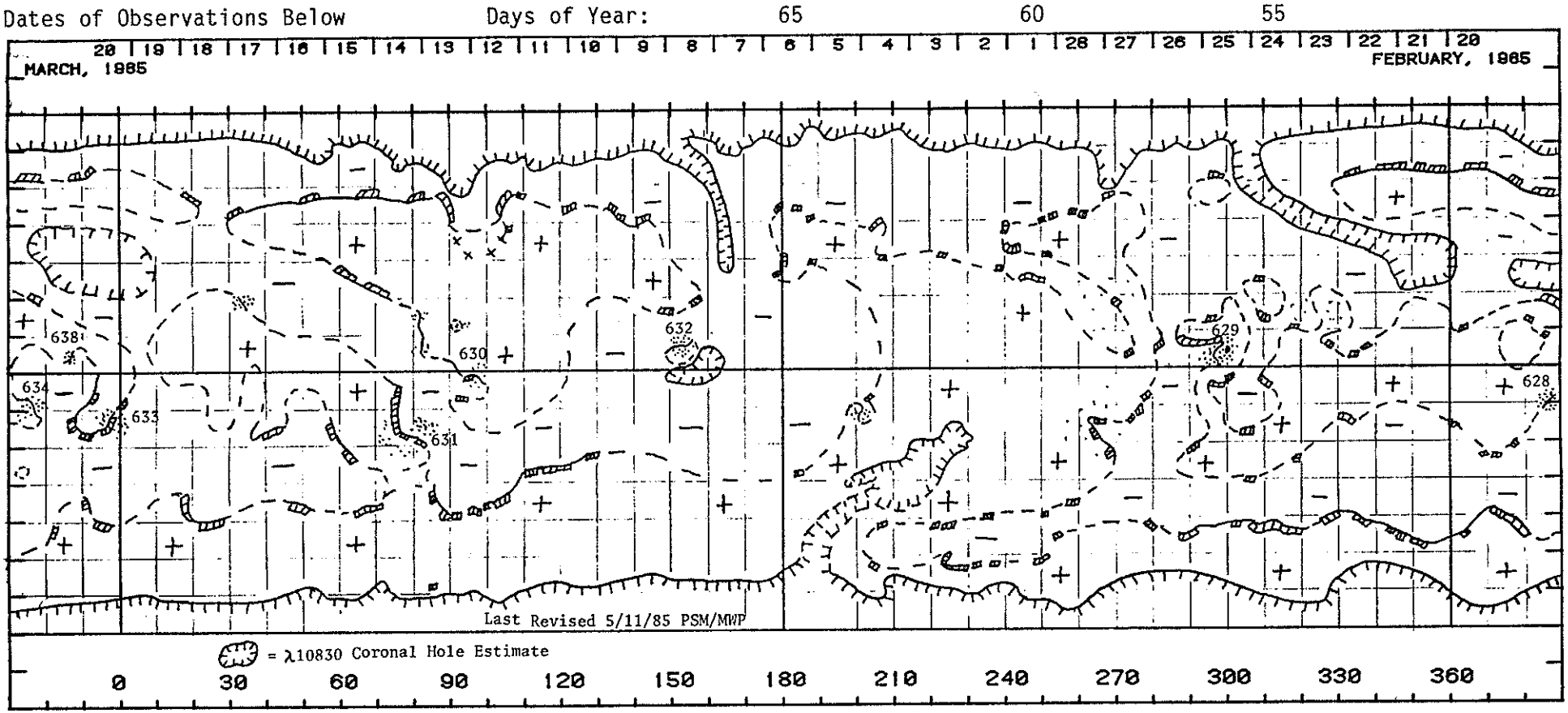
Observations are taken at 2000 UT. Rotation numbers given are the Bartels series, but the dates are not; these dates mark times of occurrence of phenomena on the Sun that affect the Earth during the given Bartels Rotation.

C O N T E N T S

Prompt Reports DATA FOR MARCH 1985 Number 489 Part I

P R E L I M I N A R Y H - ALPHA S O L A R S Y N O P T I C C H A R T

CARRINGTON ROTATION NUMBER 1759
(February 20 to March 20, 1985)

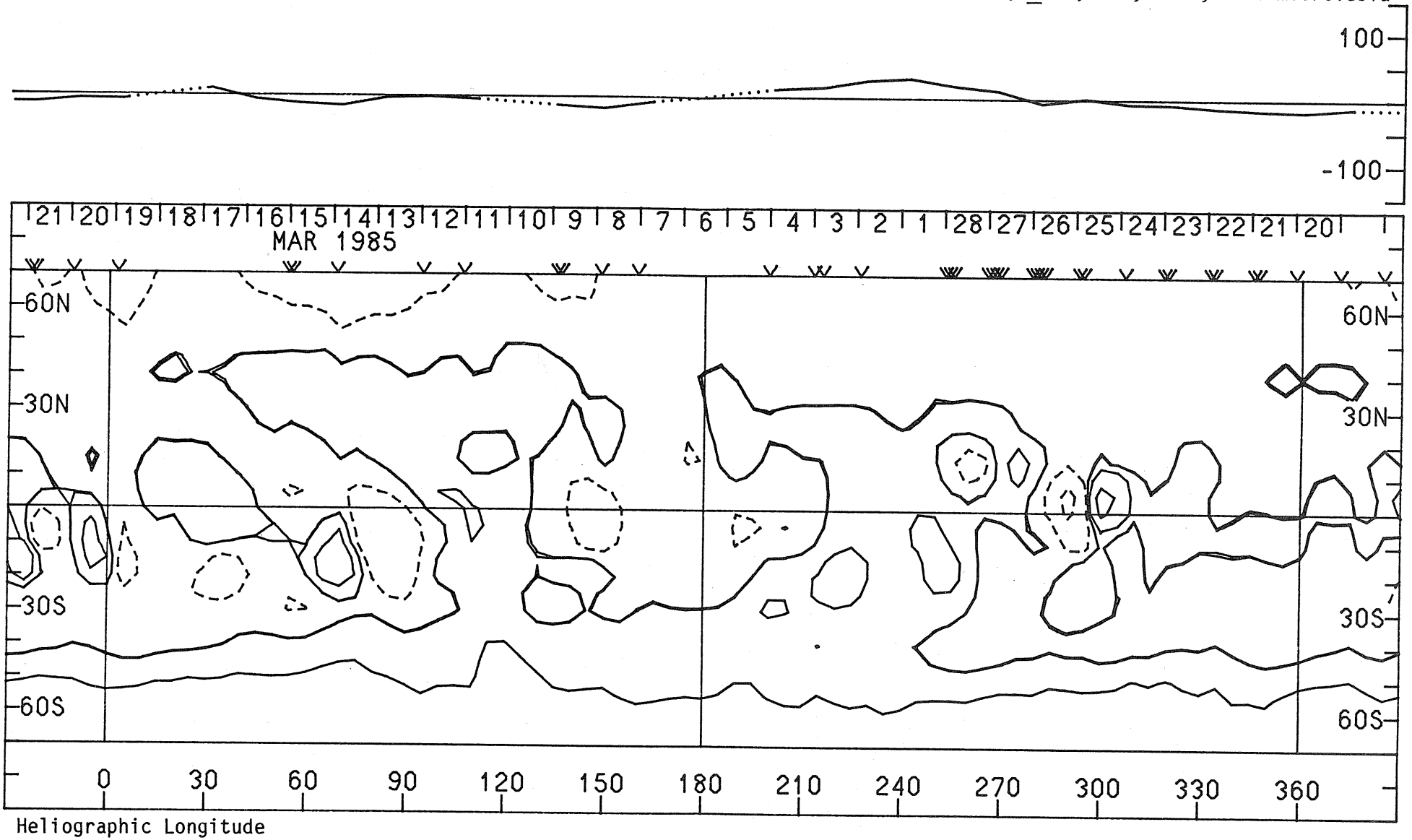


SOLAR MAGNETIC FIELD SYNOPTIC CHART

CARRINGTON ROTATION NUMBER 1759
(February 20 to March 20, 1985)

Stanford Solar Observatory

0, ±100, 500, 1000, 2000 microTesla



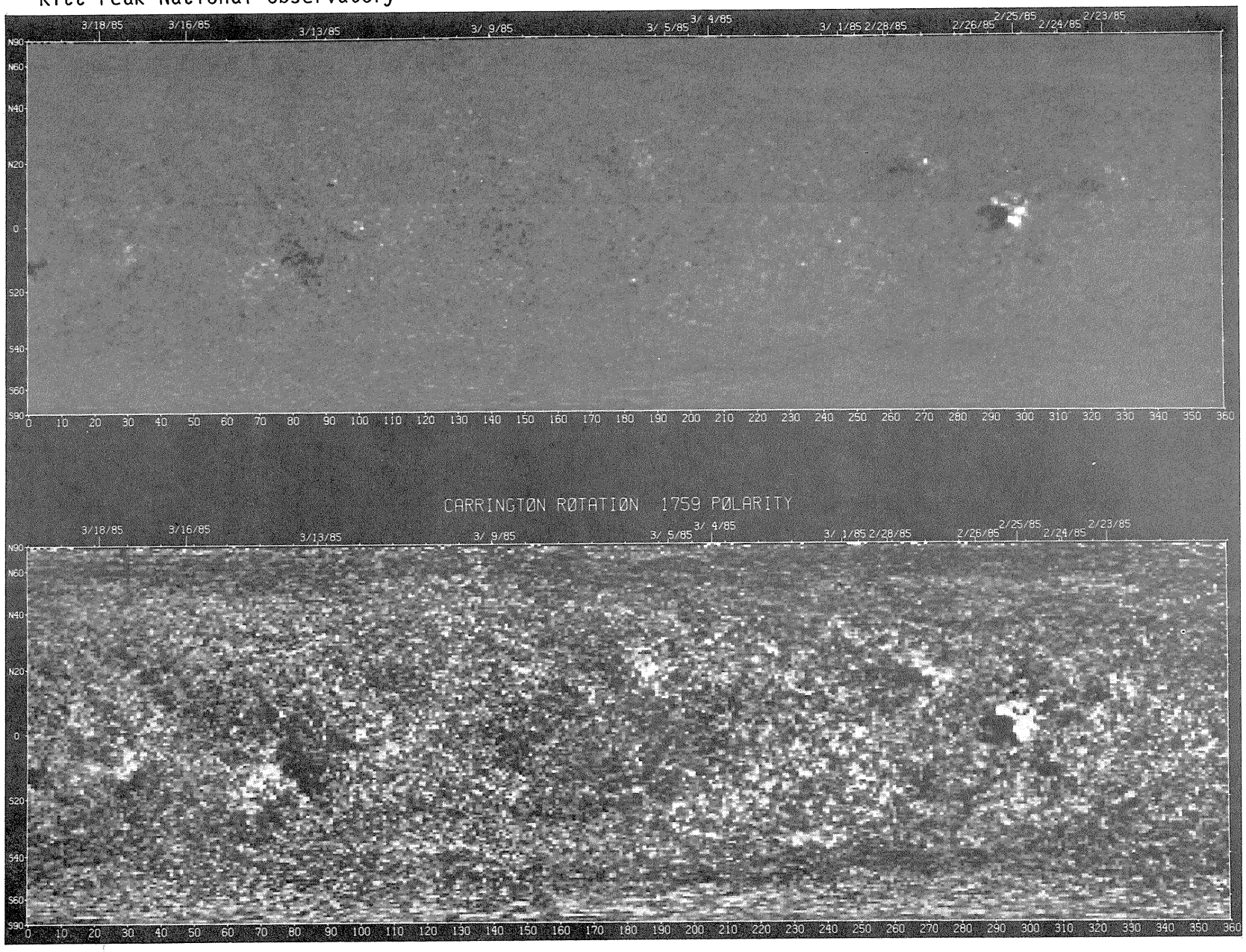
27 Mar 85

SOLAR MAGNETIC FIELD SYNOPTIC CHART

CARRINGTON ROTATION NUMBER 1759
(February 20 to March 20, 1985)

Kitt Peak National Observatory

Dates of Observations

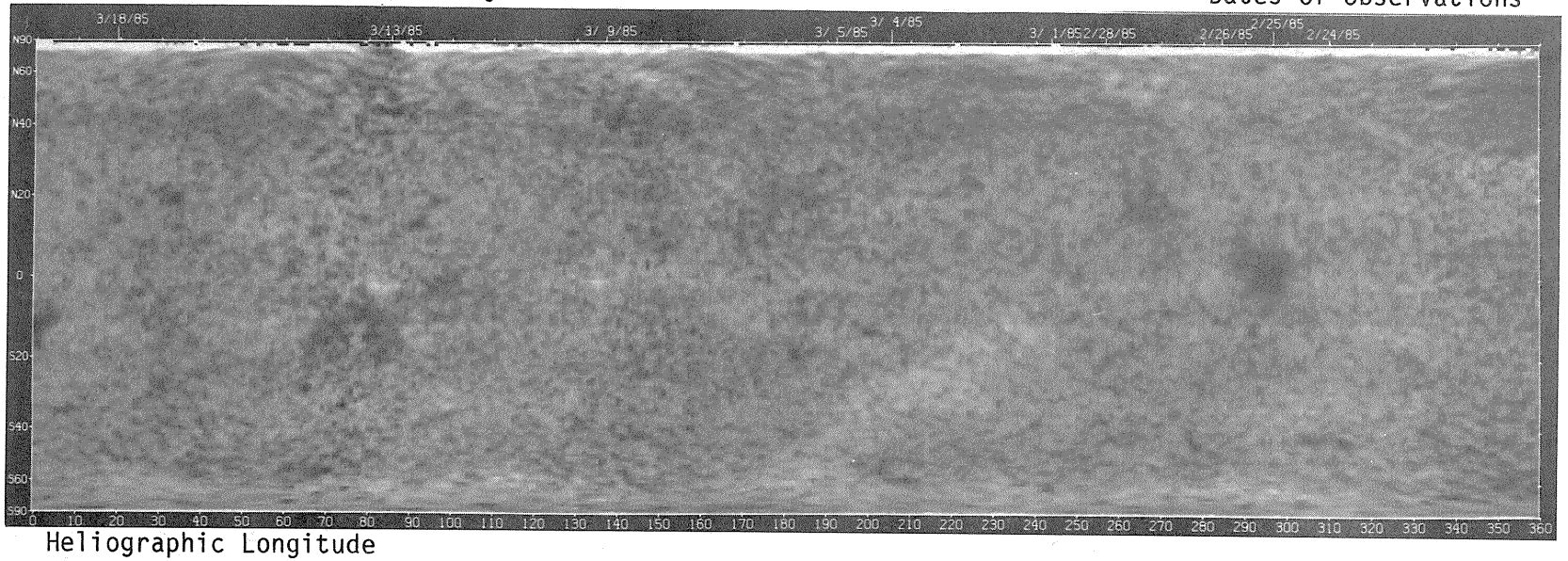


HELIUM 10830 ANGSTROM SYNOPTIC MAP OF THE SOLAR CORONA

CARRINGTON ROTATION NUMBER 1759
(February 20 to March 20, 1985)

Kitt Peak National Observatory

Dates of Observations



Heliographic Longitude

Regions for which no observations were available are black.
Irregularly shaped light areas mark either coronal holes or filament cavities.
Gray-scale display represents the strength of the helium 10830A absorption line.

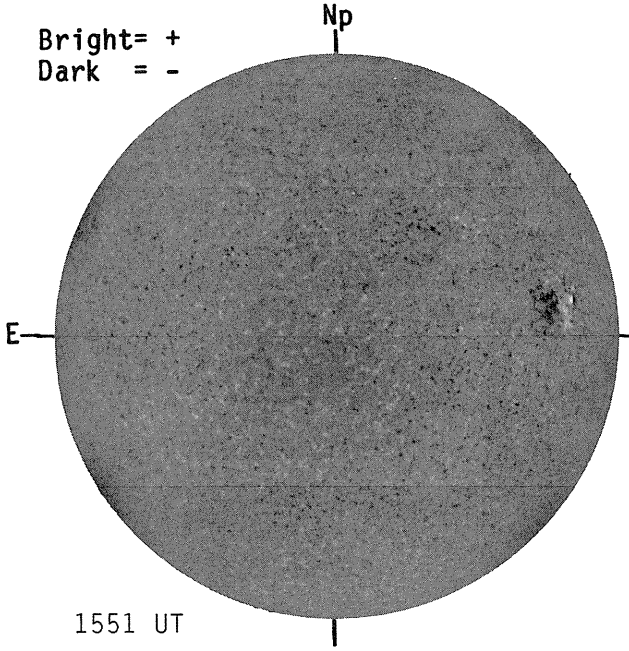
29
Mar 85

M A R C H 01, 1 9 8 5 (P -21.52, B_o=-7.11, L_o= 254.25)

30 Mar 85

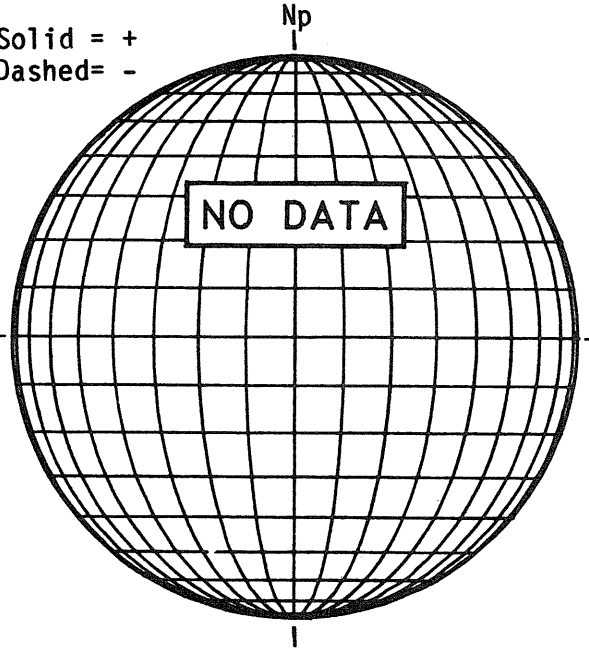
KITT PEAK MAGNETOGRAM

Bright= +
Dark = -



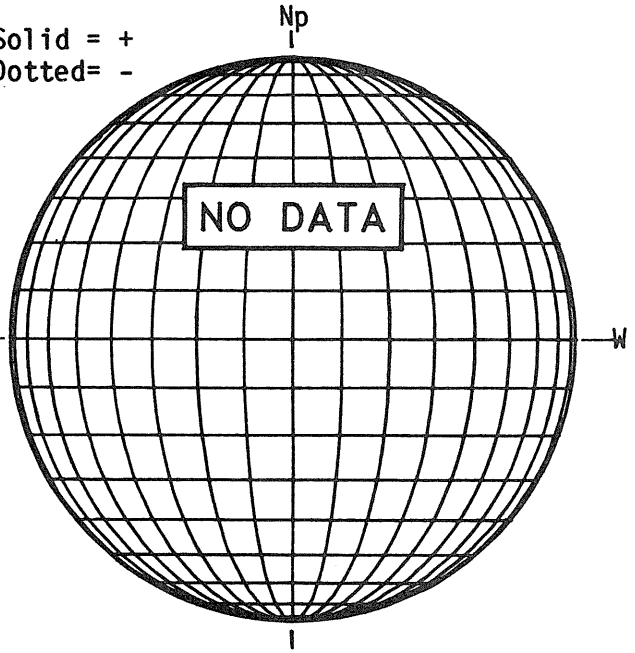
STANFORD MAGNETOGRAM

Solid = +
Dashed= -

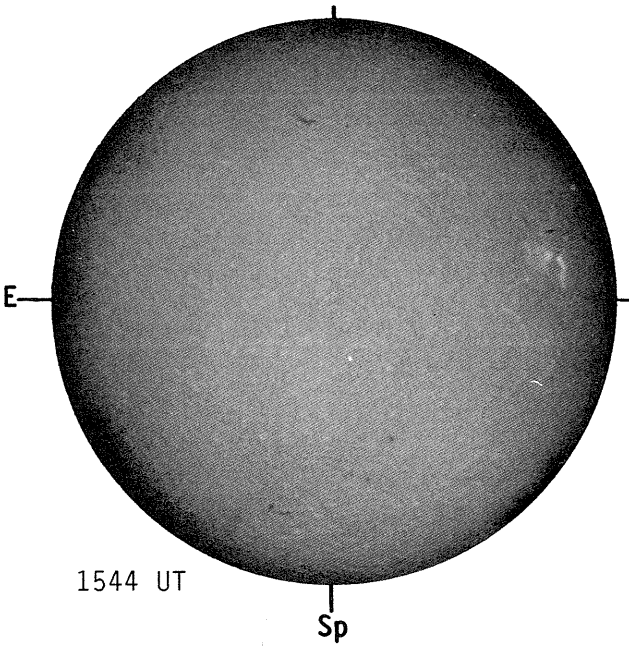


MT. WILSON MAGNETOGRAM

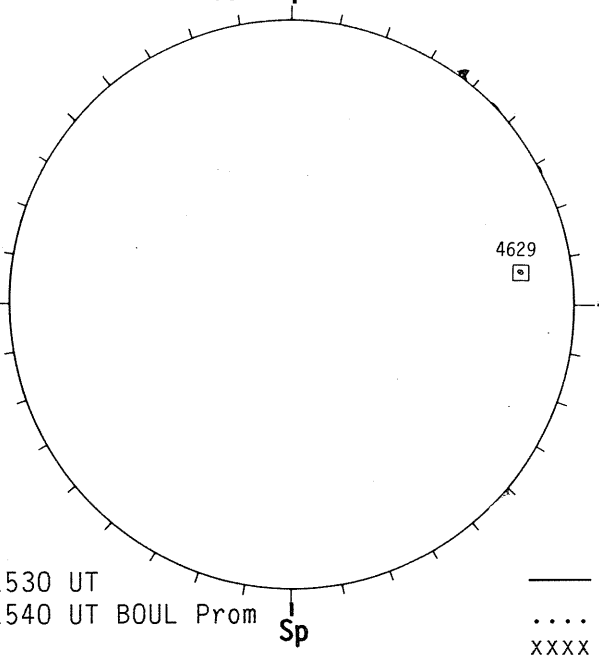
Solid = +
Dotted= -



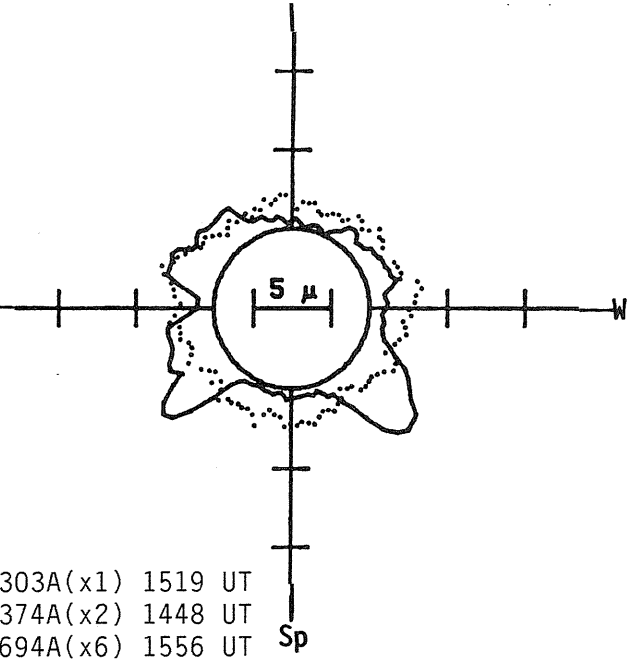
SACRAMENTO PEAK H-ALPHA



BOULDER SUNSPOTS



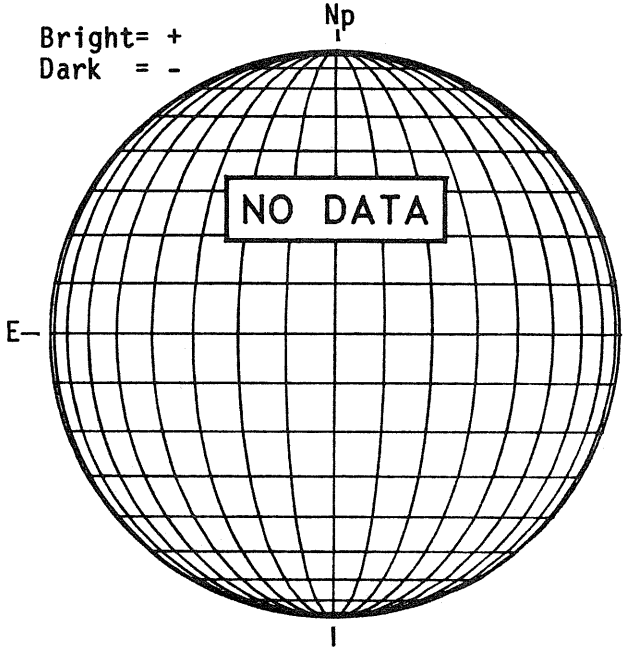
SACRAMENTO PEAK CORONA (1.15 Radii)



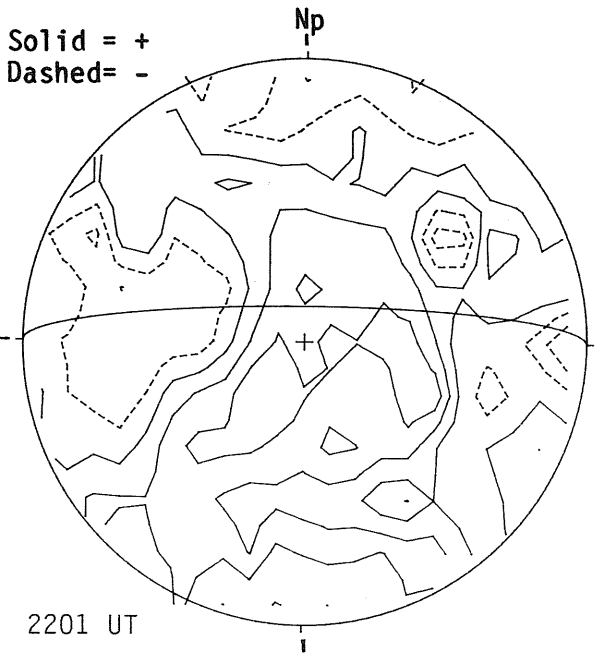
—— 5303A(x1) 1519 UT
.... 6374A(x2) 1448 UT
xxxx 5694A(x6) 1556 UT
No 5694A Activity Today

M A R C H 02, 1 9 8 5 (P -21.77, B_o=-7.12, L_o= 241.08)

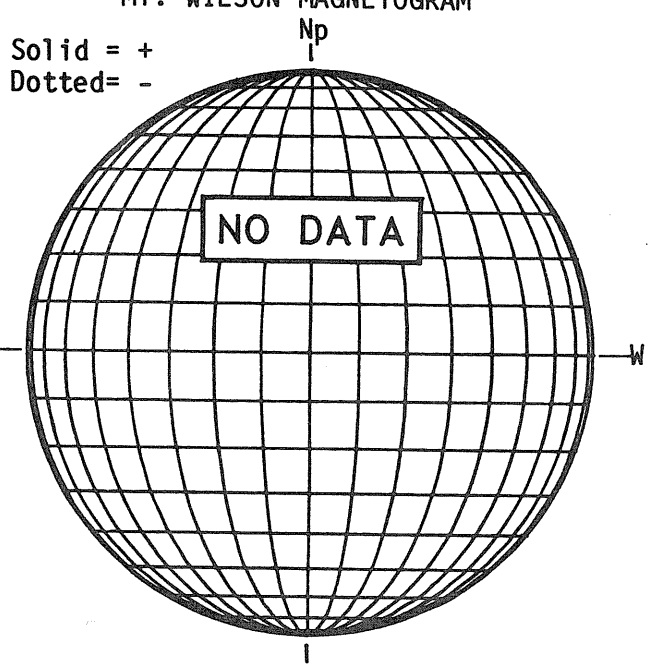
KITT PEAK MAGNETOGRAM



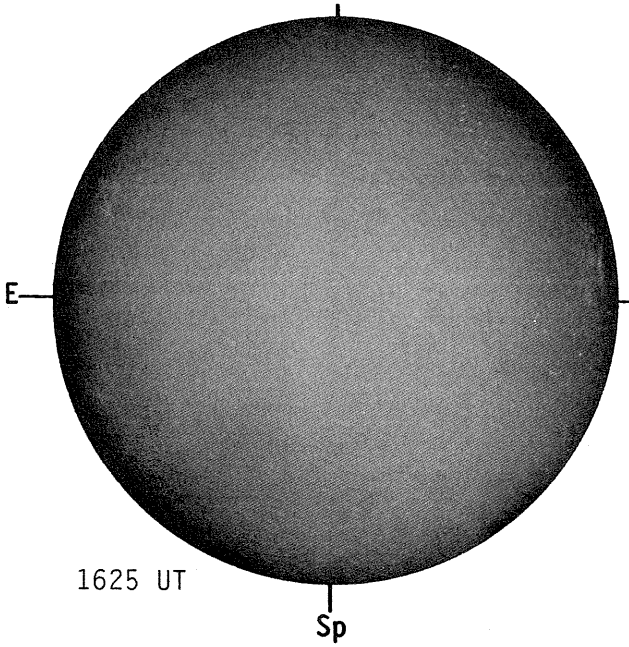
STANFORD MAGNETOGRAM



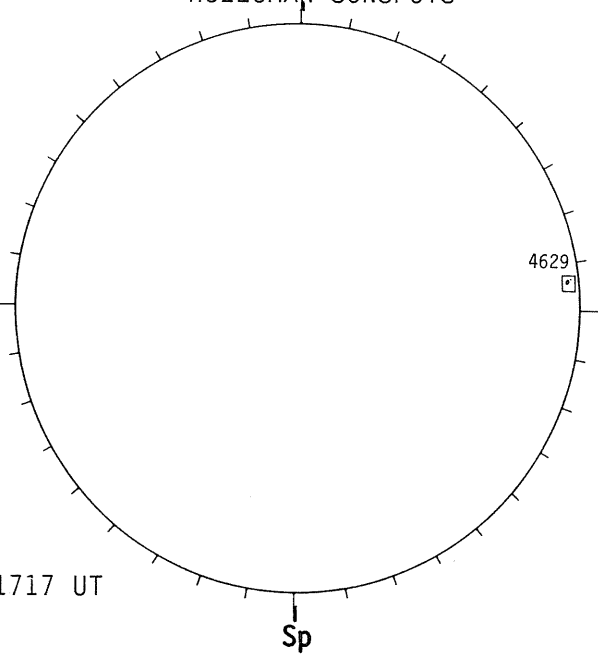
MT. WILSON MAGNETOGRAM



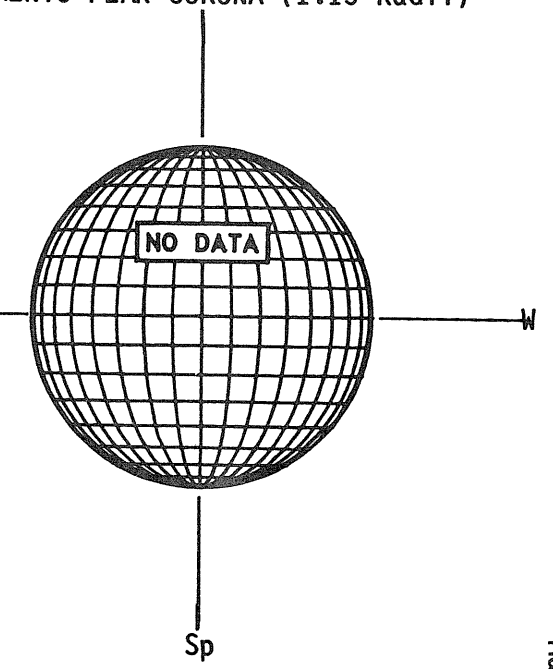
SACRAMENTO PEAK H-ALPHA



HOLLOMAN SUNSPOTS



SACRAMENTO PEAK CORONA (1.15 Radii)

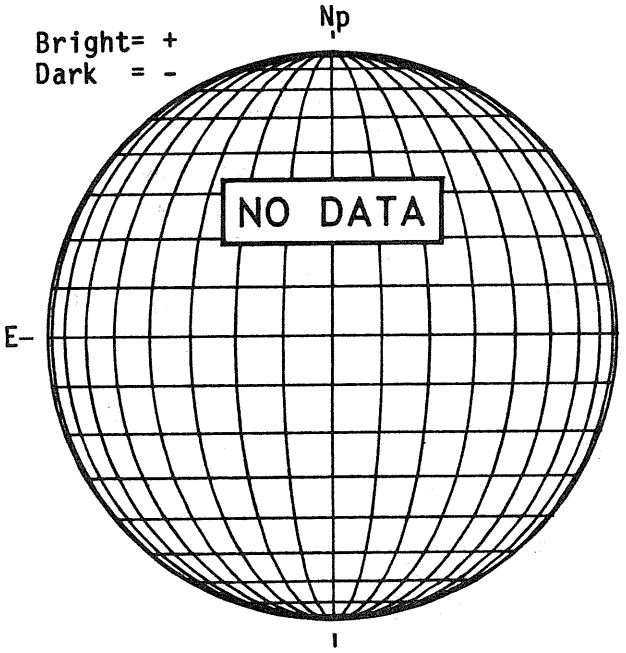


M A R C H 03, 1 9 8 5 (P -22.01, B_o=-7.13, L_o= 227.90)

32 Mar 85

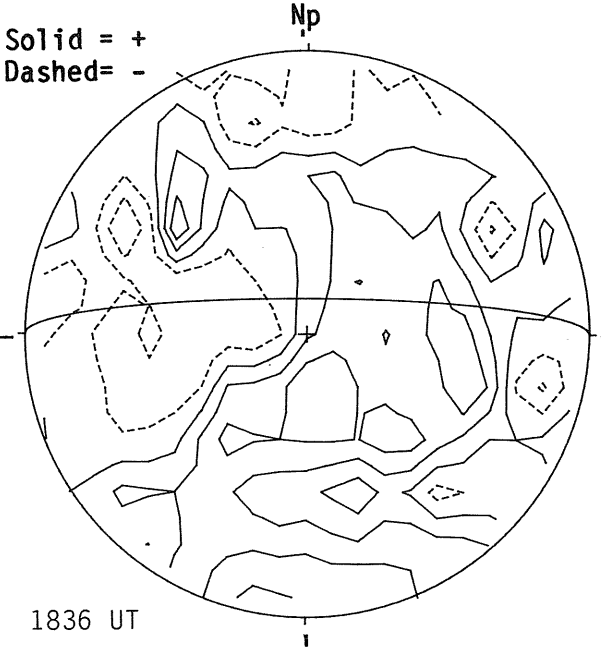
KITT PEAK MAGNETOGRAM

Bright= +
Dark = -



STANFORD MAGNETOGRAM

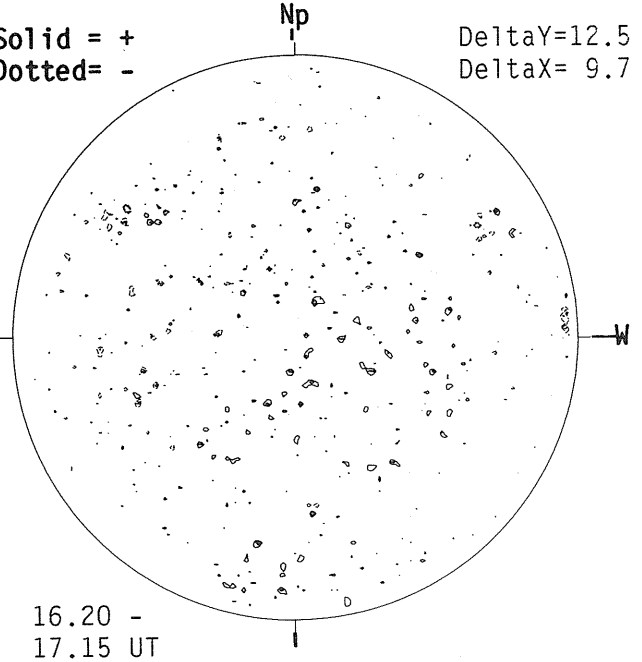
Solid = +
Dashed= -



MT. WILSON MAGNETOGRAM

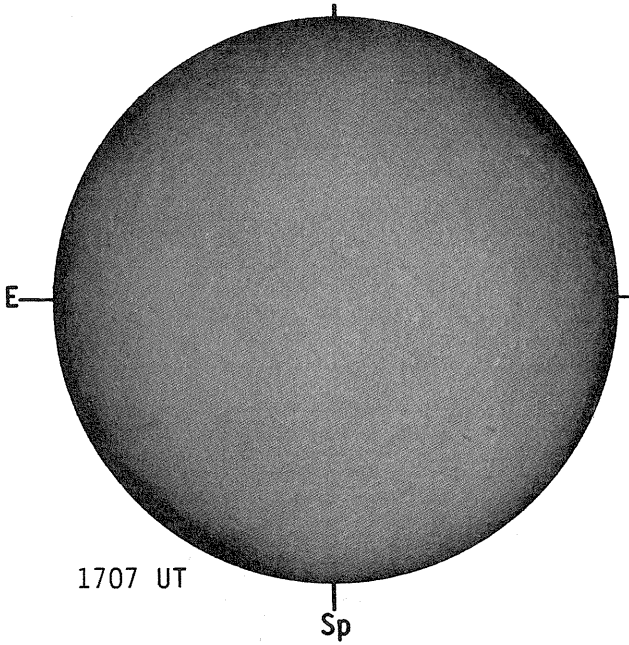
Solid = +
Dotted= -

DeltaY=12.5
DeltaX= 9.7

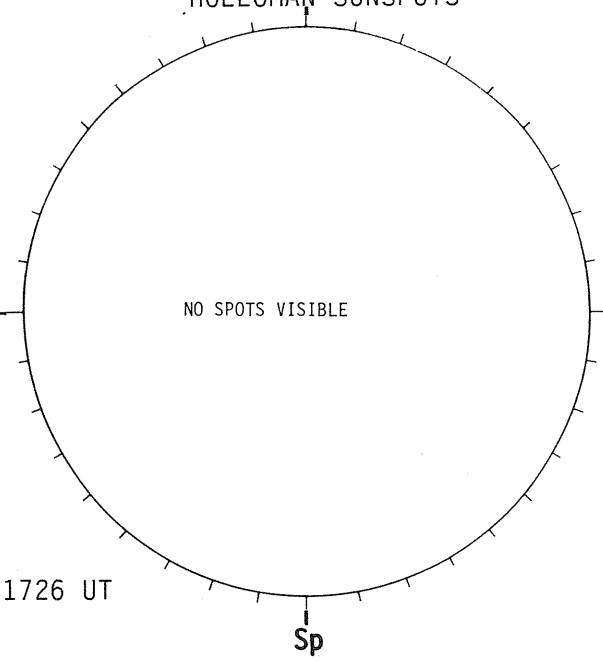


16.20 -
17.15 UT

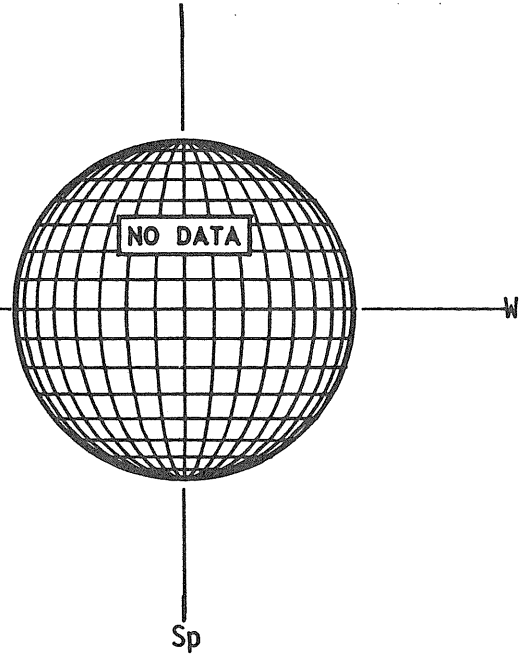
SACRAMENTO PEAK H-ALPHA



HOLLOMAN SUNSPOTS



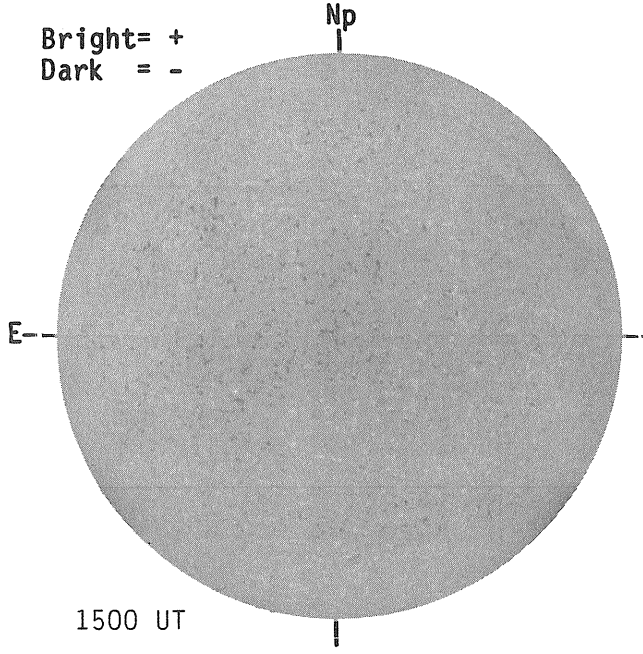
SACRAMENTO PEAK CORONA (1.15 Radii)



M A R C H 04, 1 9 8 5 (P -22.25, B_o=-7.14, L_o= 214.73)

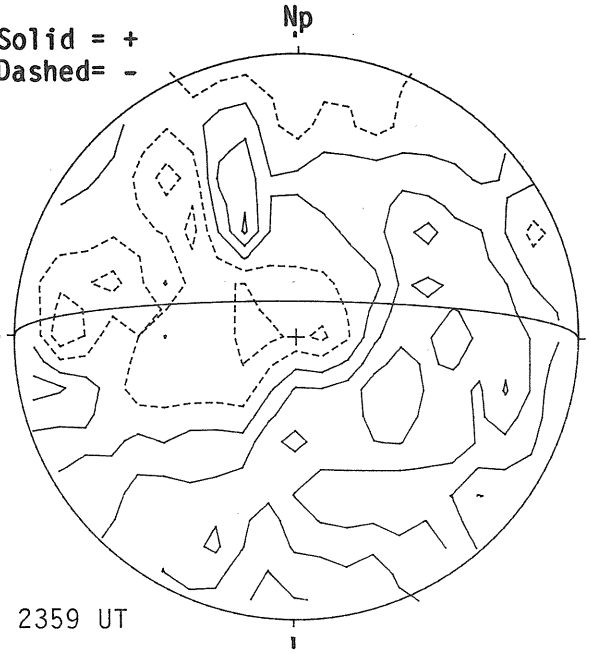
KITT PEAK MAGNETOGRAM

Bright= +
Dark = -



STANFORD MAGNETOGRAM

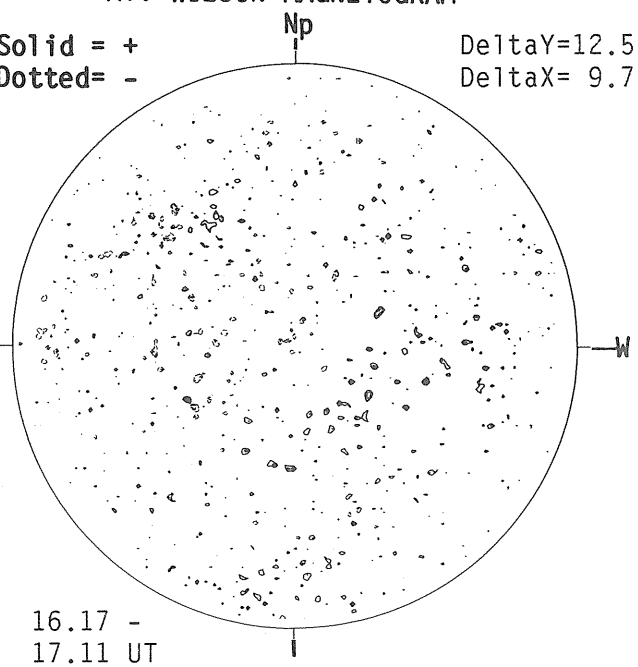
Solid = +
Dashed= -



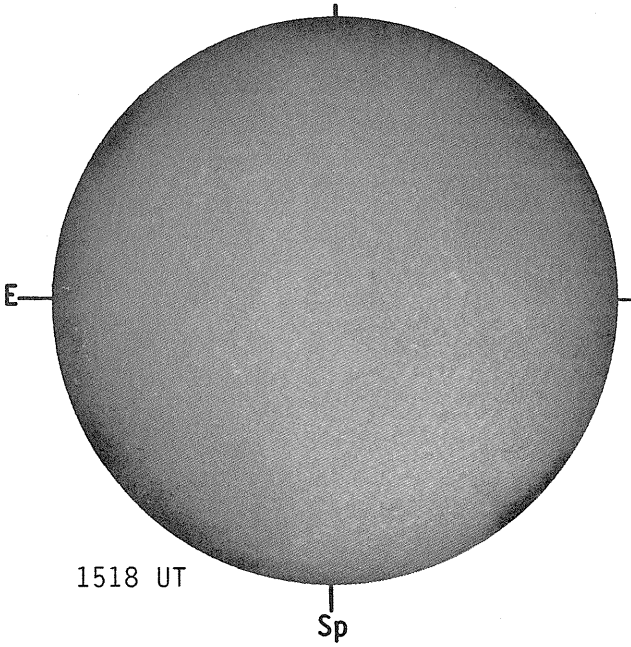
MT. WILSON MAGNETOGRAM

Solid = +
Dotted= -

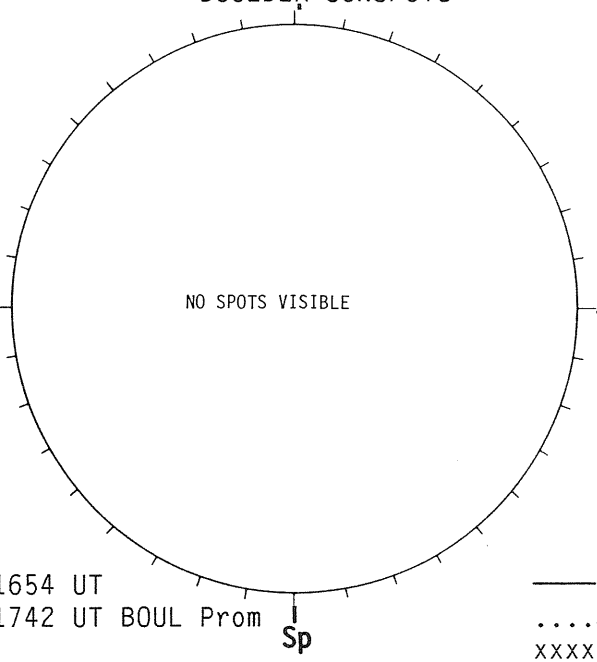
DeltaY=12.5
DeltaX= 9.7



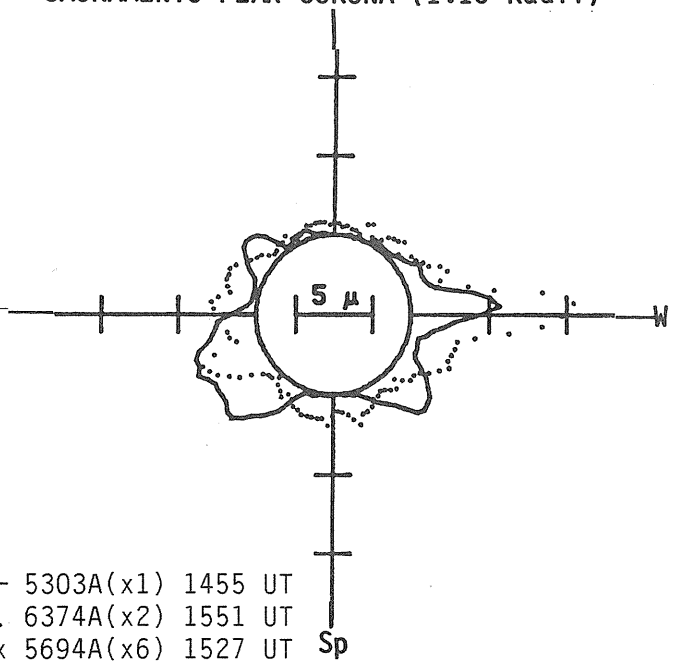
SACRAMENTO PEAK H-ALPHA



BOULDER SUNSPOTS



SACRAMENTO PEAK CORONA (1.15 Radii)

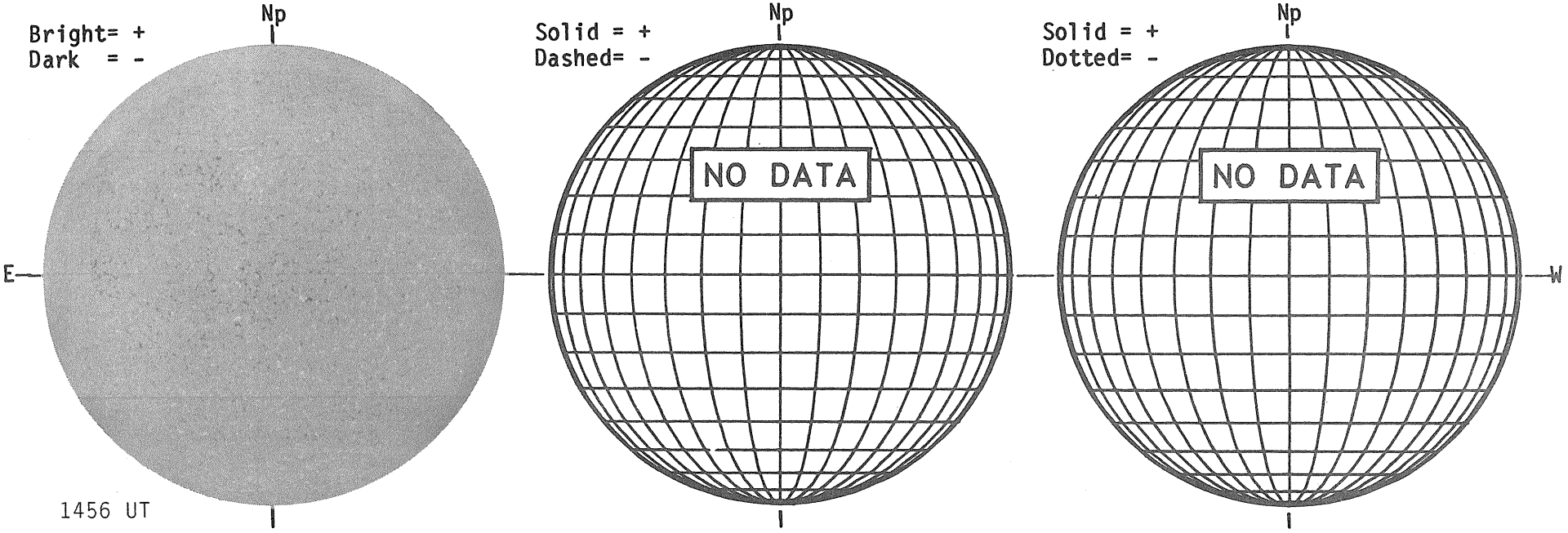


—— 5303A(x1) 1455 UT
.... 6374A(x2) 1551 UT
xxxx 5694A(x6) 1527 UT
No 5694A Activity Today

M A R C H 05, 1 9 8 5 (P -22.47, B_o=-7.14, L_o= 201.55)

KITT PEAK MAGNETOGRAM

Bright= +
Dark = -



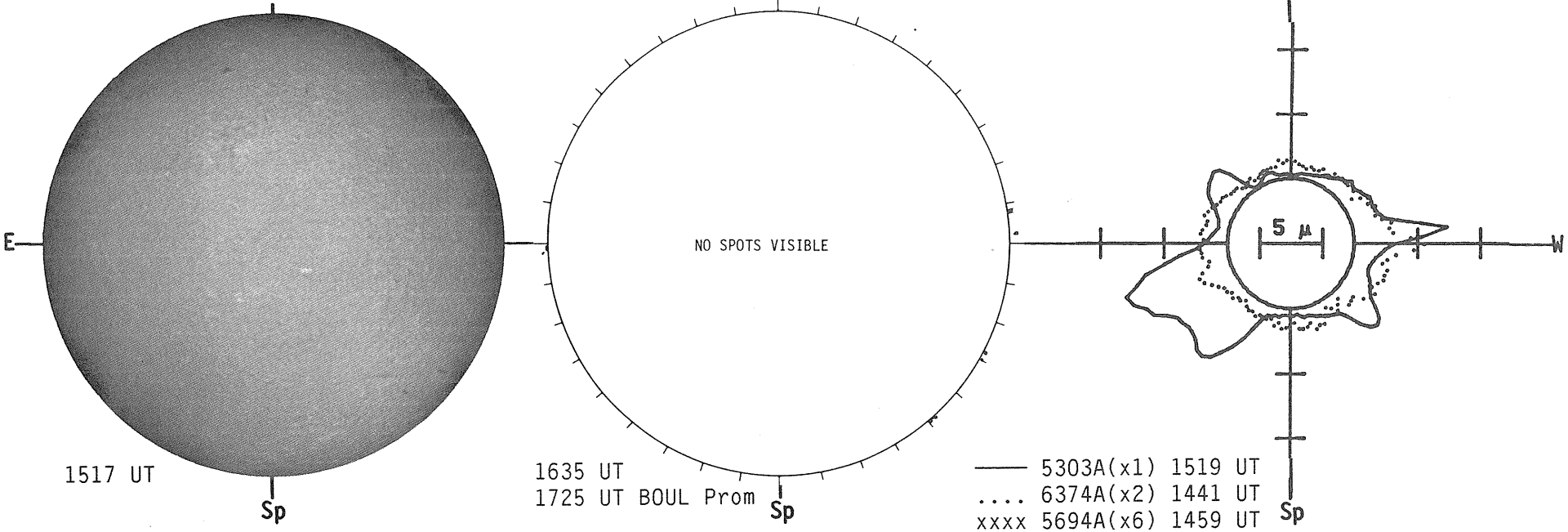
STANFORD MAGNETOGRAM

Solid = +
Dashed= -

MT. WILSON MAGNETOGRAM

Solid = +
Dotted= -

SACRAMENTO PEAK H-ALPHA



BOULDER SUNSPOTS

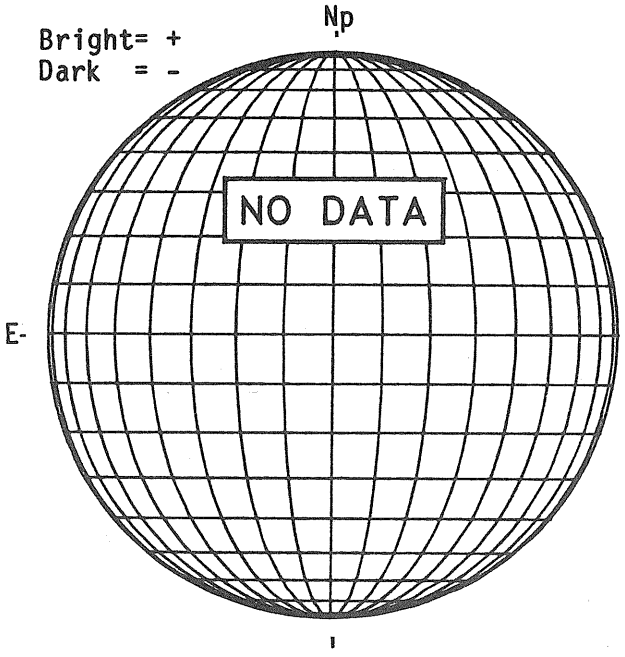
SACRAMENTO PEAK CORONA (1.15 Radii)

—— 5303A(x1) 1519 UT
.... 6374A(x2) 1441 UT
xxxx 5694A(x6) 1459 UT
No 5694A Activity Today

M A R C H 06, 1 9 8 5 (P -22.70, B_0=-7.15, L_0= 188.38)

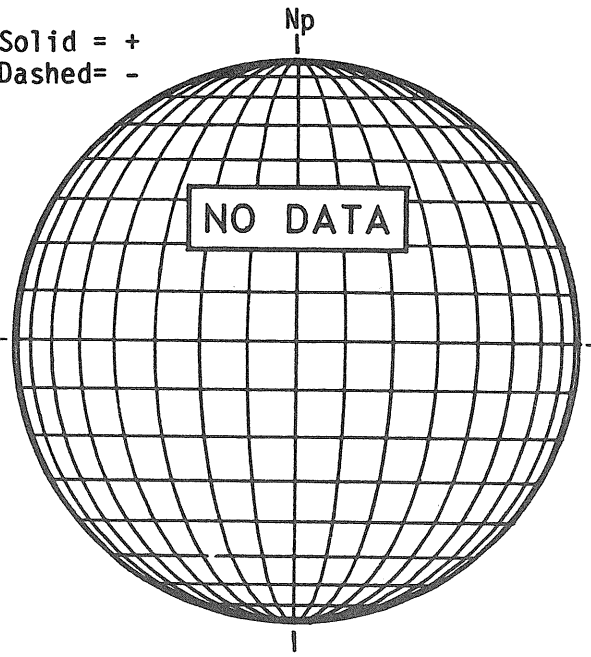
KITT PEAK MAGNETOGRAM

Bright= +
Dark = -



STANFORD MAGNETOGRAM

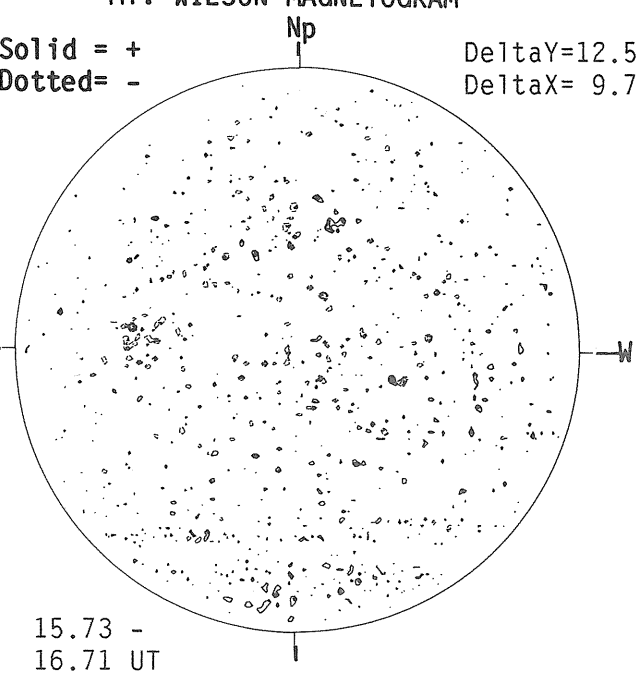
Solid = +
Dashed= -



MT. WILSON MAGNETOGRAM

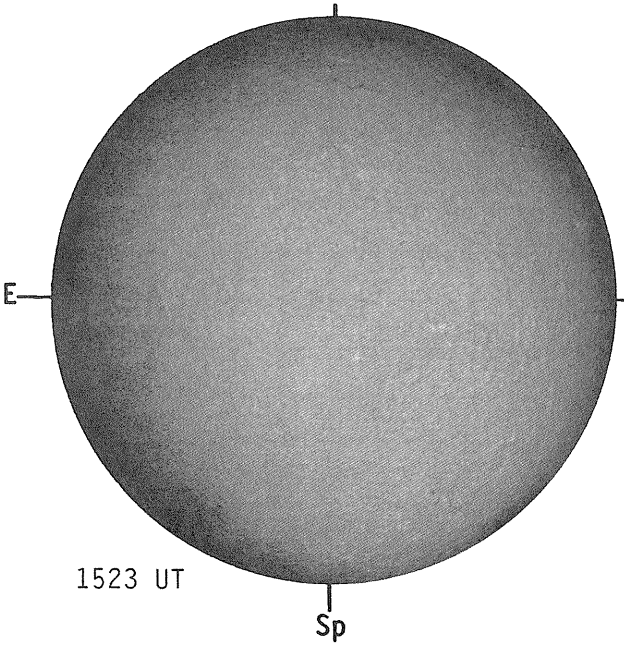
Solid = +
Dotted= -

DeltaY=12.5
DeltaX= 9.7



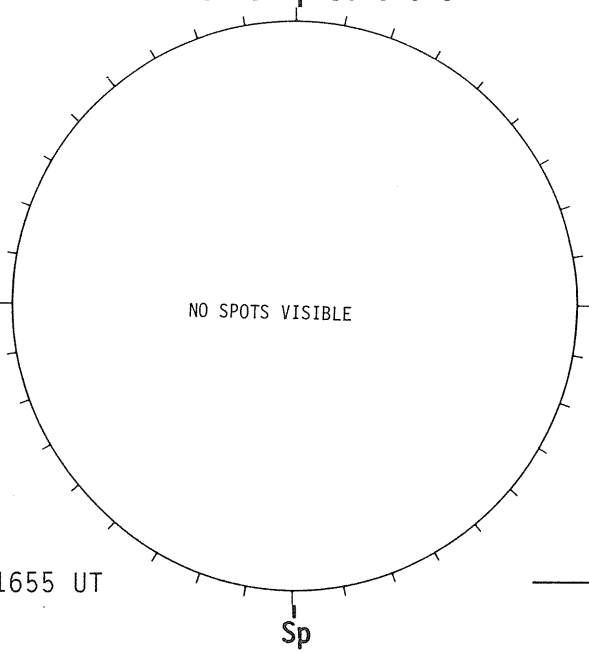
15.73 -
16.71 UT

SACRAMENTO PEAK H-ALPHA



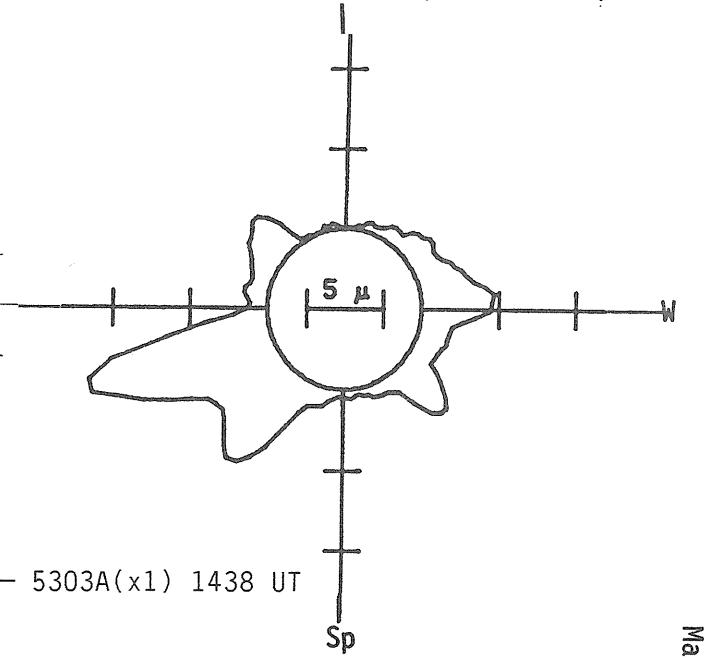
1523 UT

HOLLOMAN SUNSPOTS



1655 UT

SACRAMENTO PEAK CORONA (1.15 Radii)

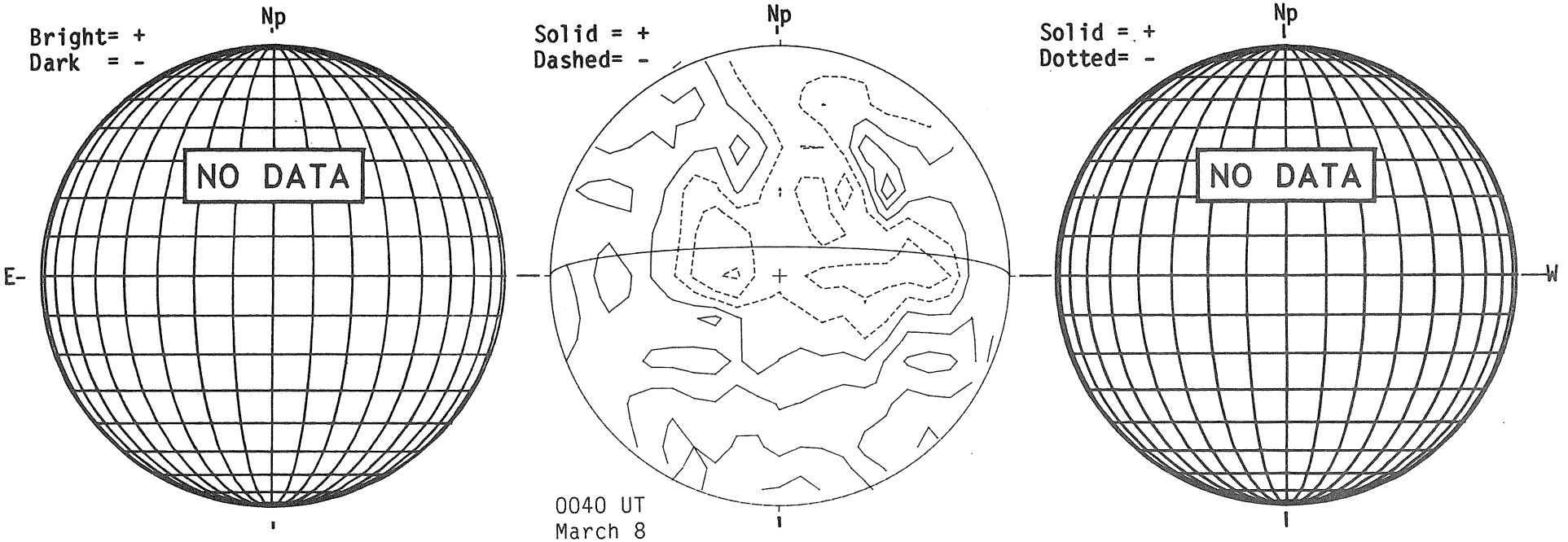


5303A(x1) 1438 UT

M A R C H 07, 1 9 8 5 (P -22.91, B_o=-7.15, L_o= 175.20)

KITT PEAK MAGNETOGRAM

Bright= +
Dark = -



STANFORD MAGNETOGRAM

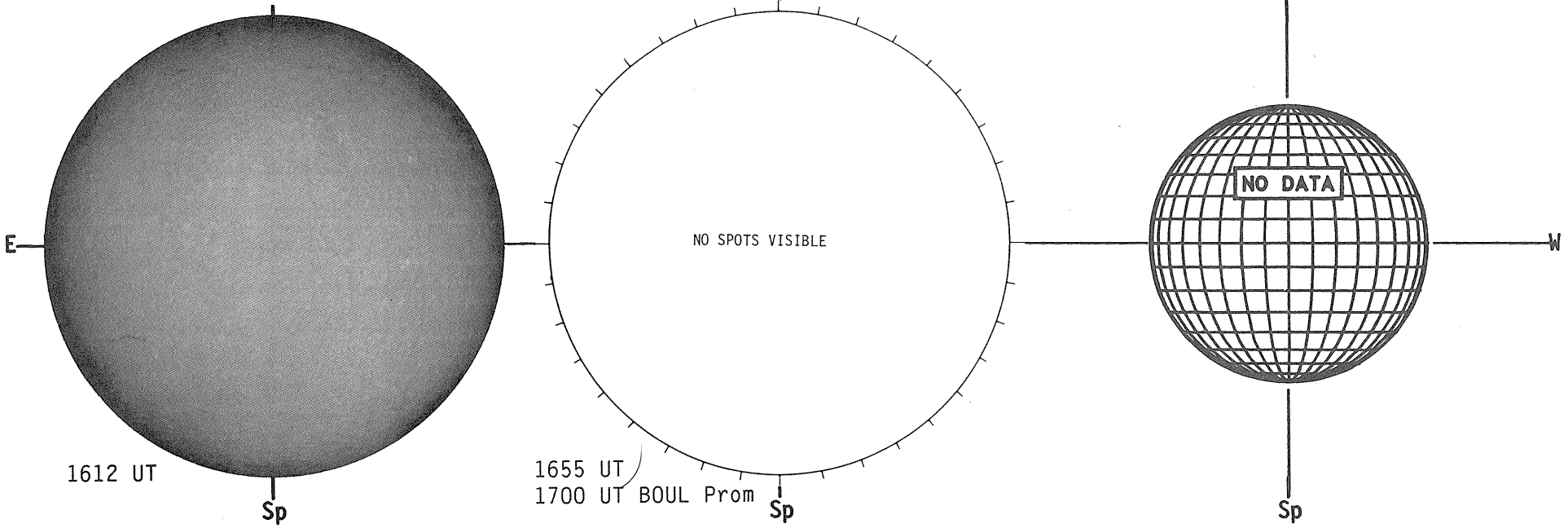
Solid = +
Dashed= -

0040 UT
March 8

MT. WILSON MAGNETOGRAM

Solid = +
Dotted= -

SACRAMENTO PEAK H-ALPHA



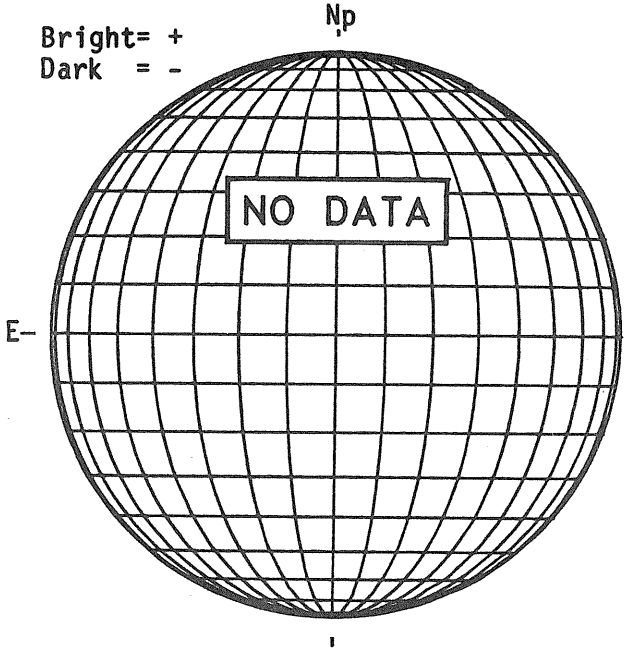
BOULDER SUNSPOTS

SACRAMENTO PEAK CORONA (1.15 Radii)

M A R C H 08, 1 9 8 5 (P -23.12, B_o=-7.14, L_o= 162.02)

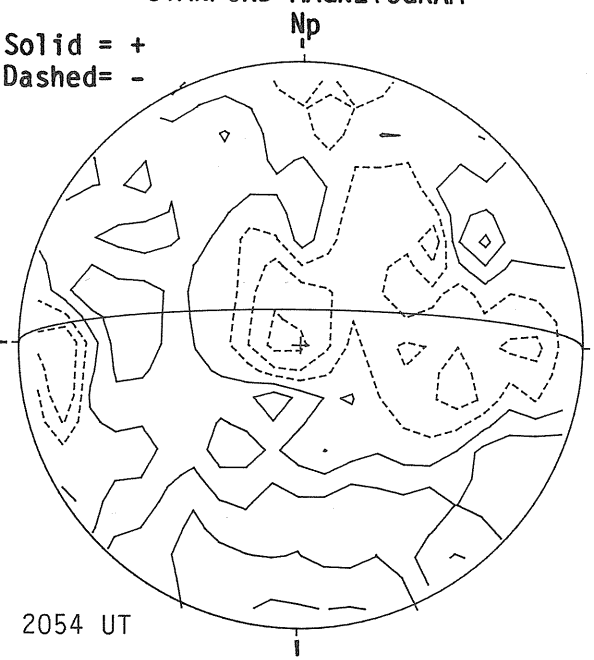
KITT PEAK MAGNETOGRAM

Bright= +
Dark = -



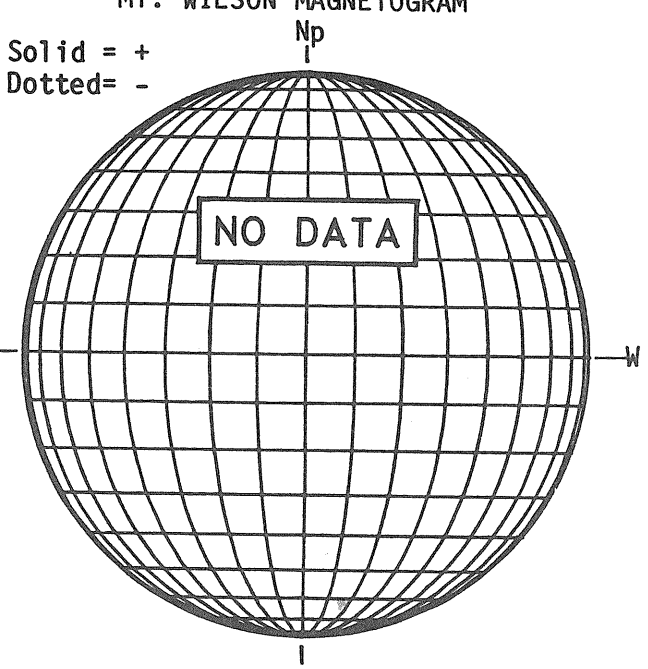
STANFORD MAGNETOGRAM

Solid = +
Dashed= -

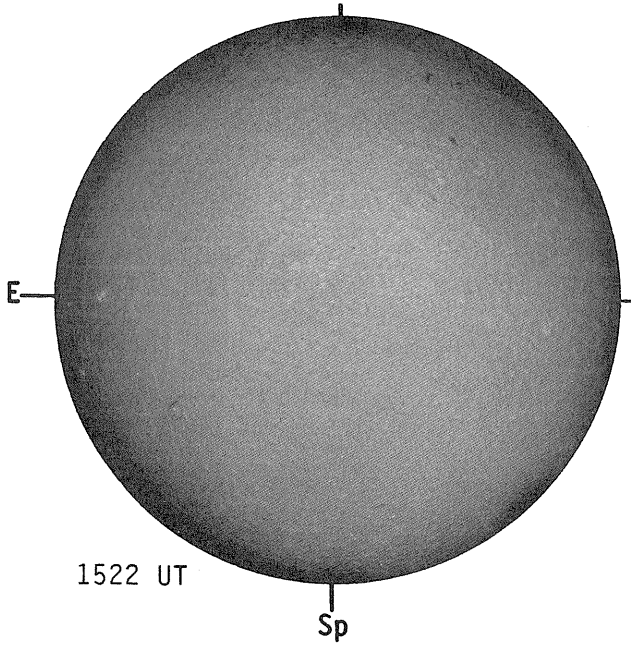


MT. WILSON MAGNETOGRAM

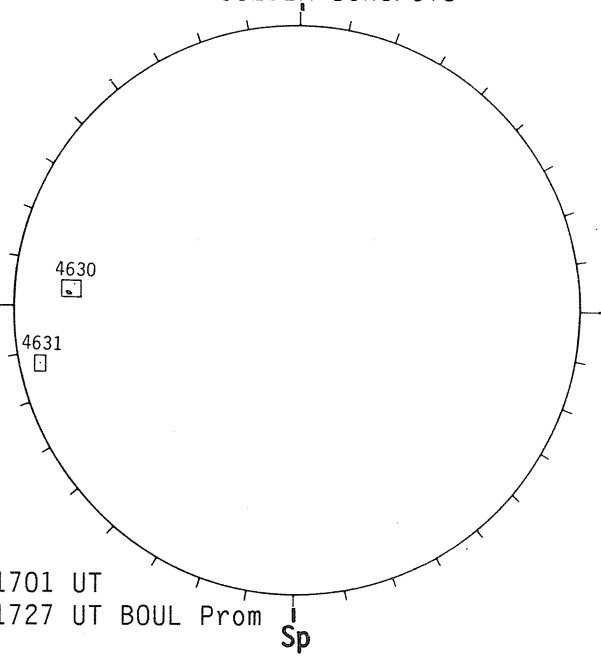
Solid = +
Dotted= -



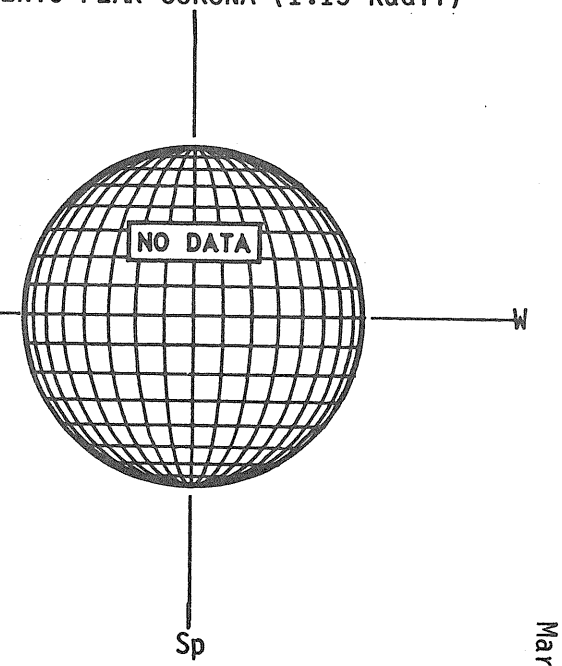
SACRAMENTO PEAK H-ALPHA



BOULDER SUNSPOTS



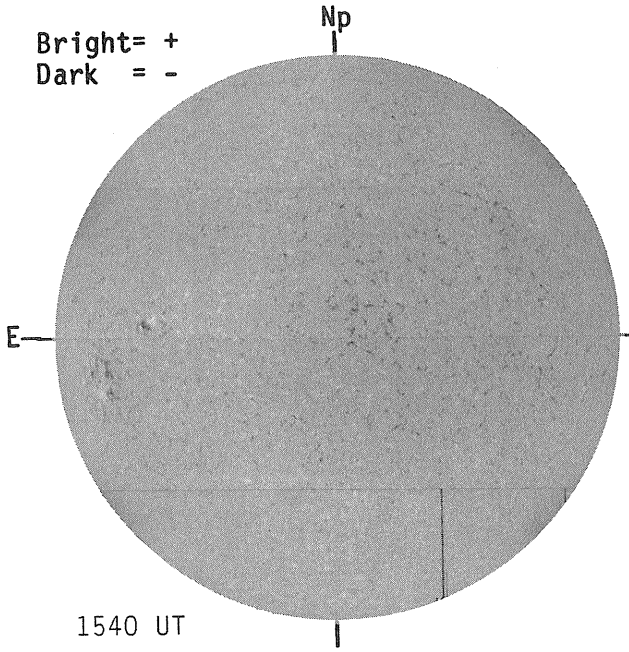
SACRAMENTO PEAK CORONA (1.15 Radii)



M A R C H 09, 1 9 8 5 (P -23.32, B_o=-7.14, L_o= 148.85)

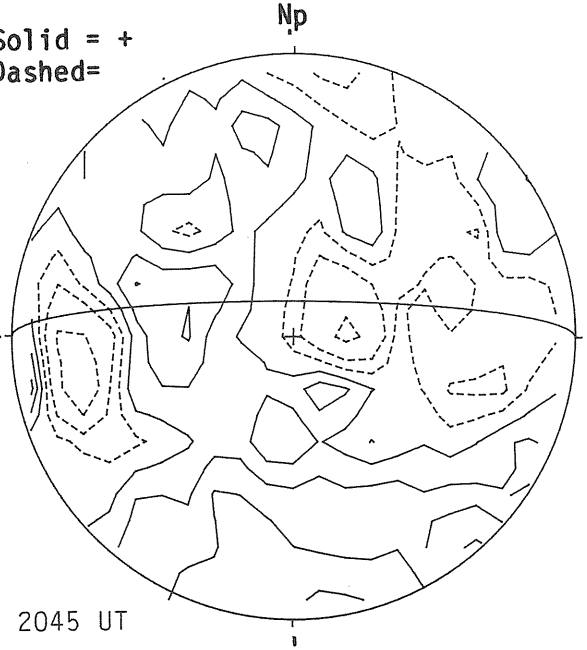
KITT PEAK MAGNETOGRAM

Bright= +
Dark = -



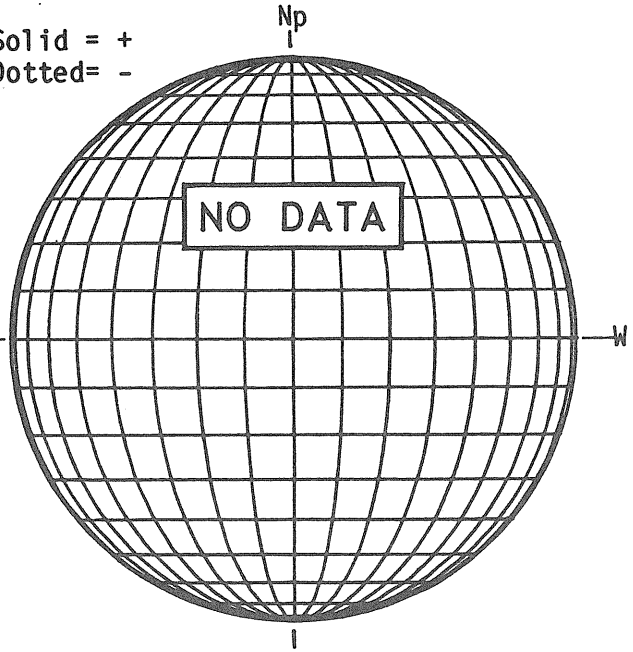
STANFORD MAGNETOGRAM

Solid = +
Dashed=

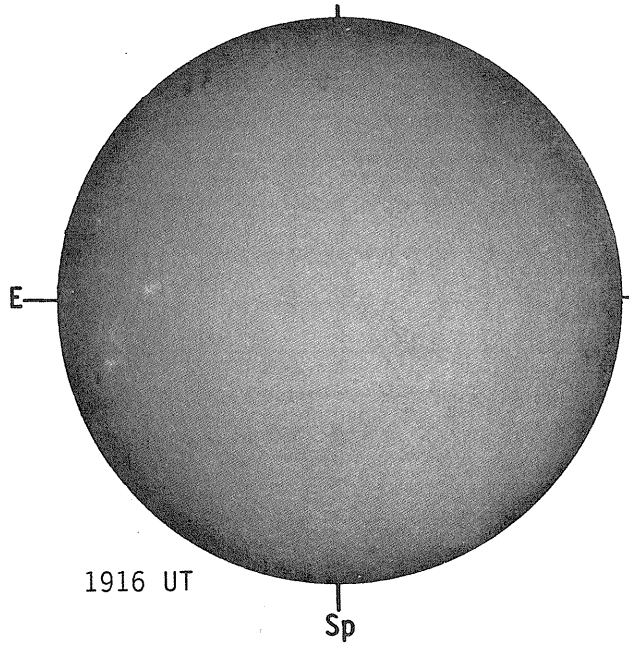


MT. WILSON MAGNETOGRAM

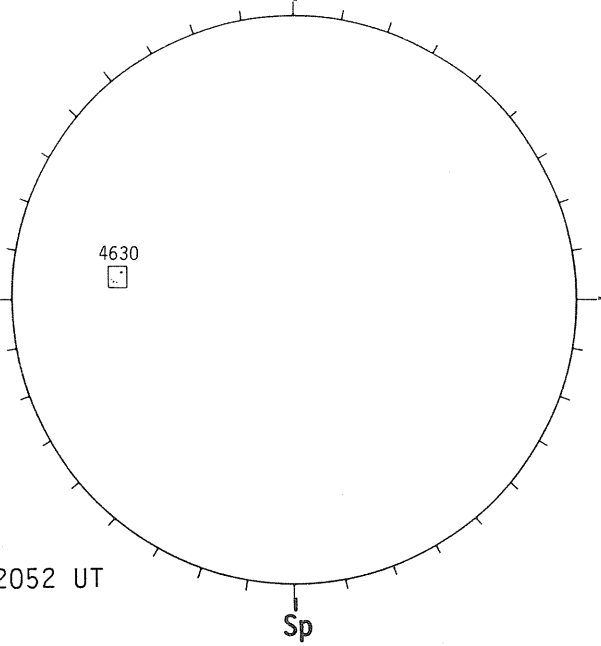
Solid = +
Dotted= -



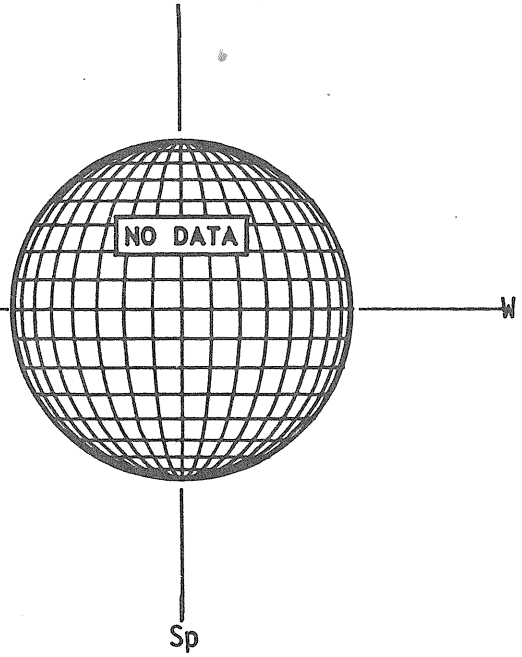
SACRAMENTO PEAK H-ALPHA



HOLLOMAN SUNSPOTS



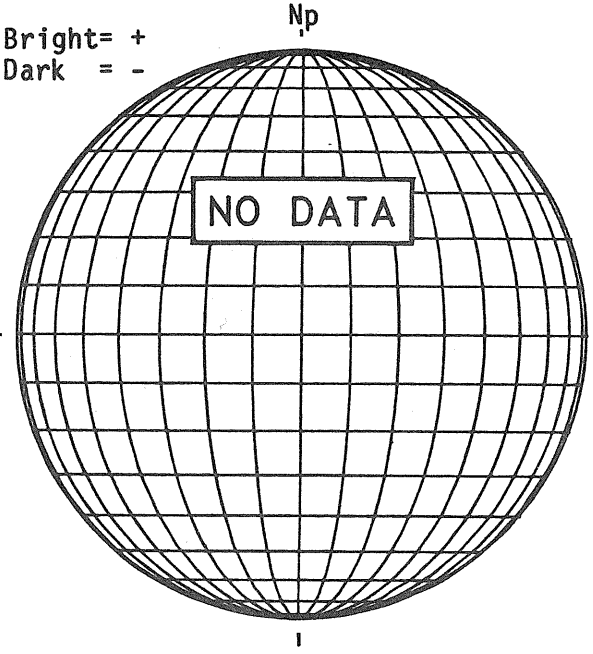
SACRAMENTO PEAK CORONA (1.15 Radii)



M A R C H 10, 1 9 8 5 (P -23.52, B_o=-7.13, L_o= 135.67)

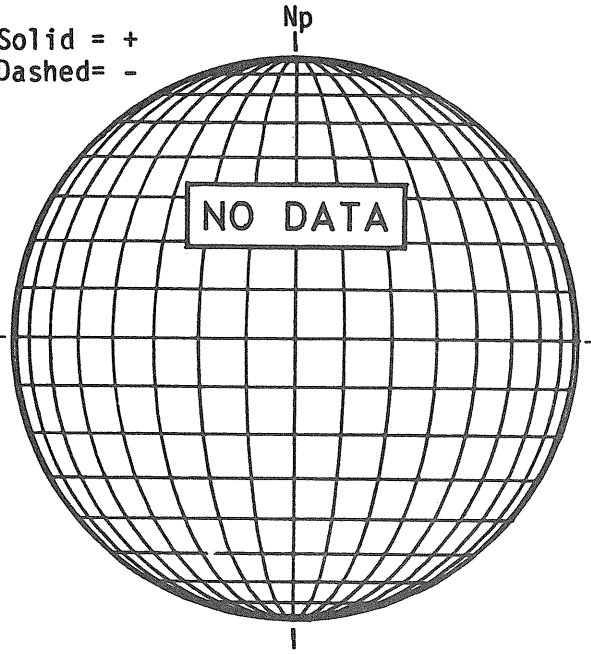
KITT PEAK MAGNETOGRAM

Bright= +
Dark = -



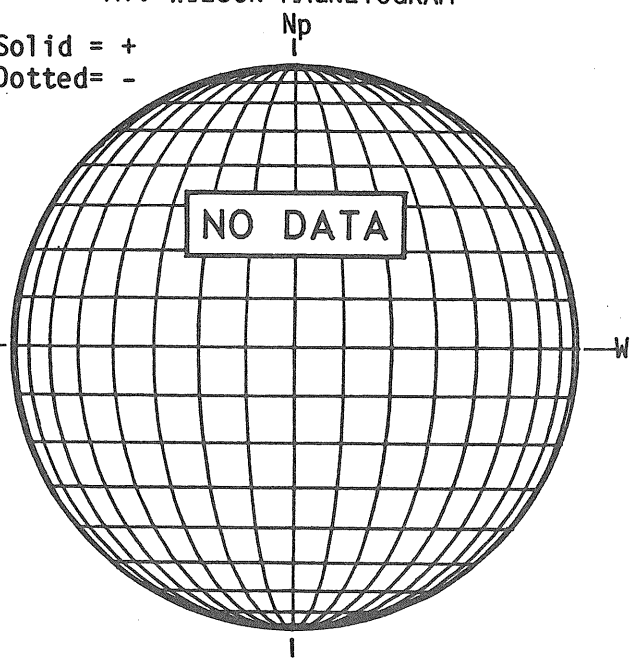
STANFORD MAGNETOGRAM

Solid = +
Dashed= -

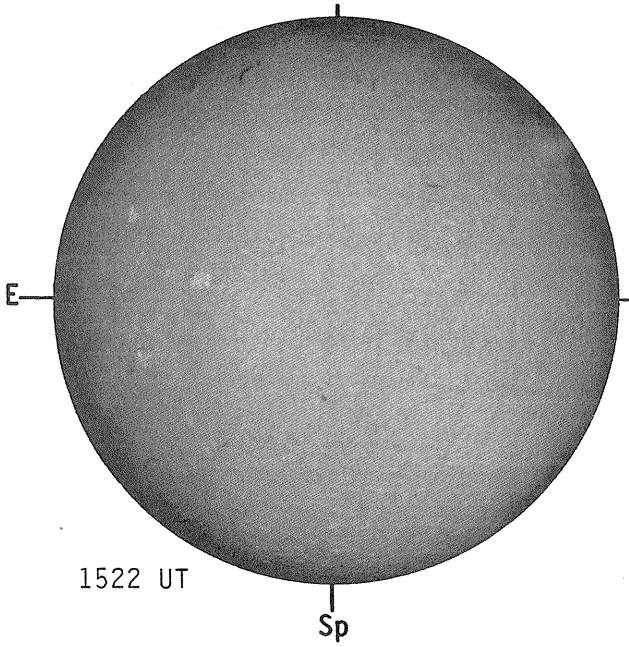


MT. WILSON MAGNETOGRAM

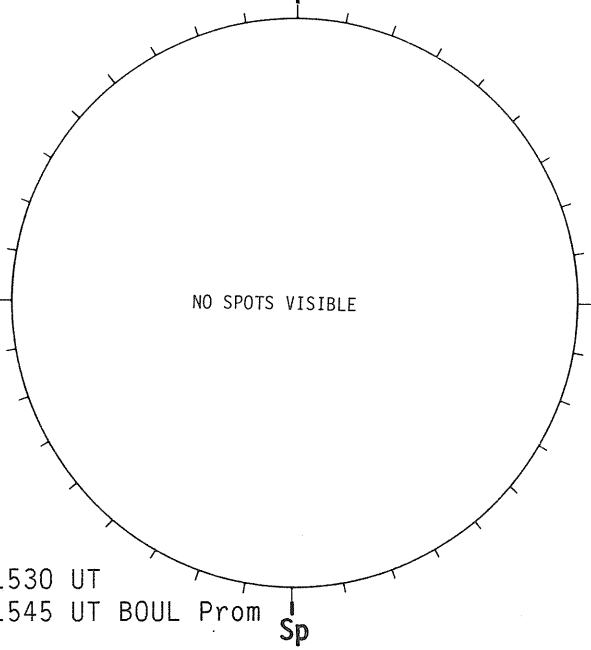
Solid = +
Dotted= -



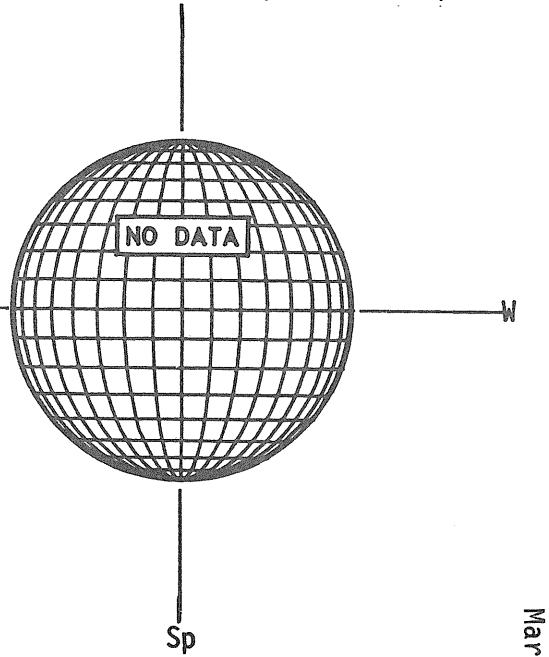
SACRAMENTO PEAK H-ALPHA



BOULDER SUNSPOTS



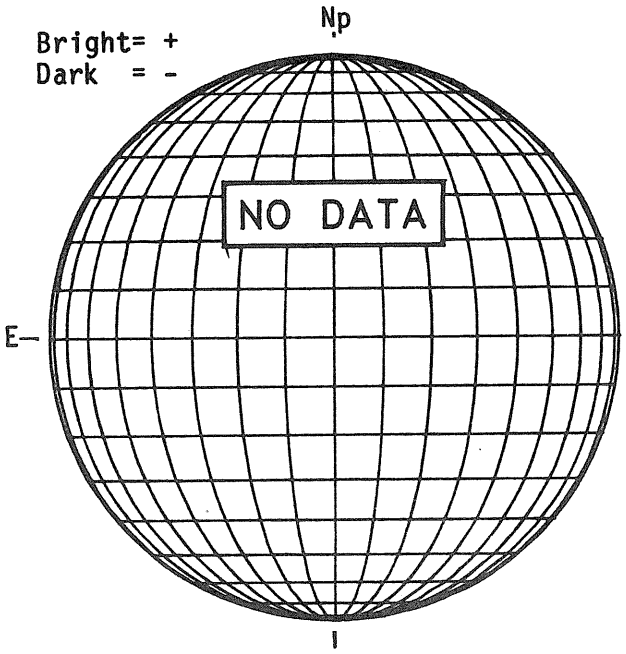
SACRAMENTO PEAK CORONA (1.15 Radii)



M A R C H 11, 1 9 8 5 (P -23.71, B_o=-7.12, L_o= 122.49)

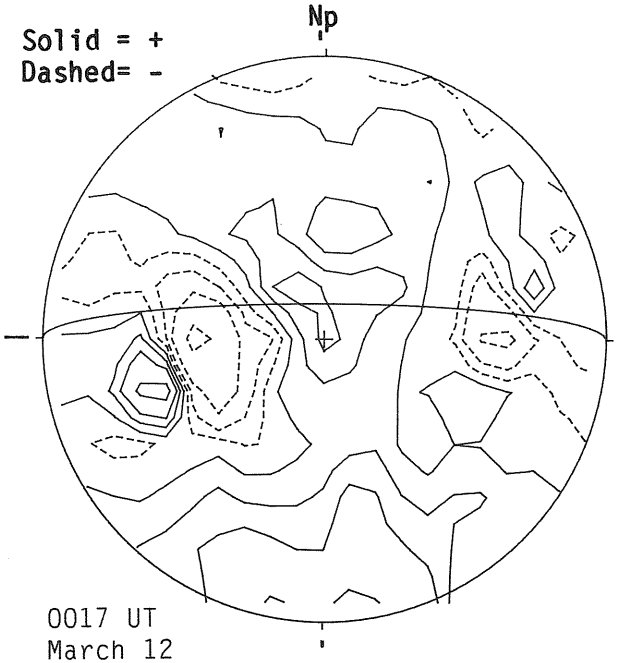
KITT PEAK MAGNETOGRAM

Bright= +
Dark = -



STANFORD MAGNETOGRAM

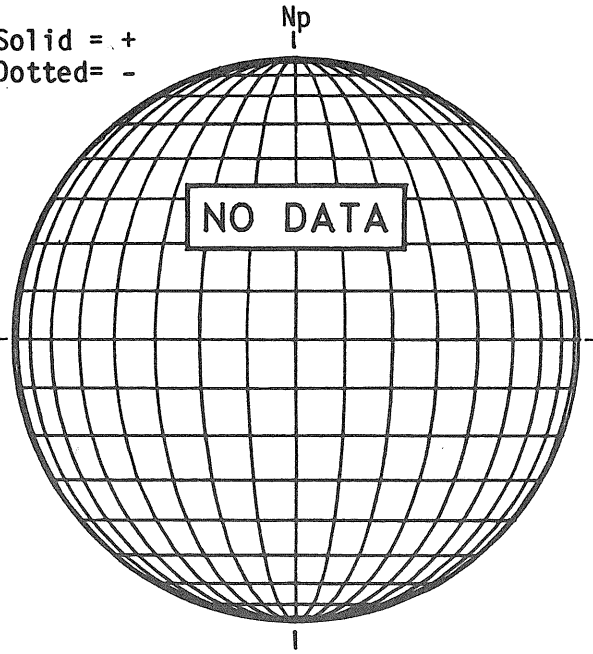
Solid = +
Dashed= -



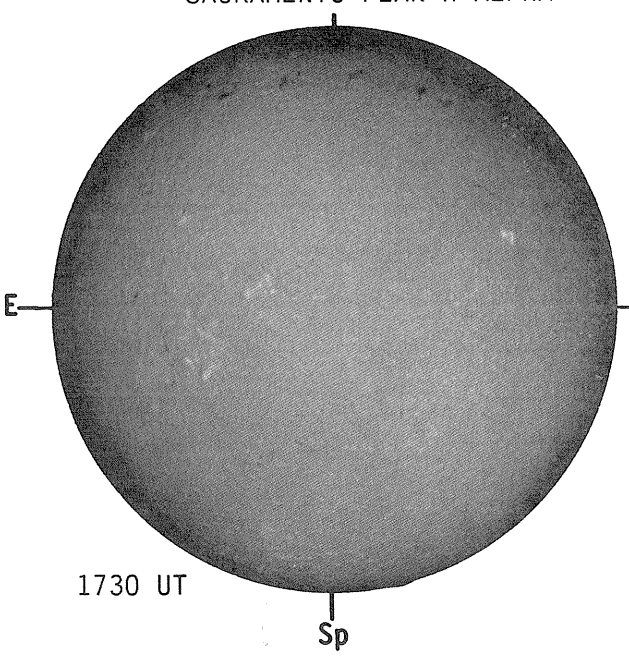
0017 UT
March 12

MT. WILSON MAGNETOGRAM

Solid = +
Dotted= -

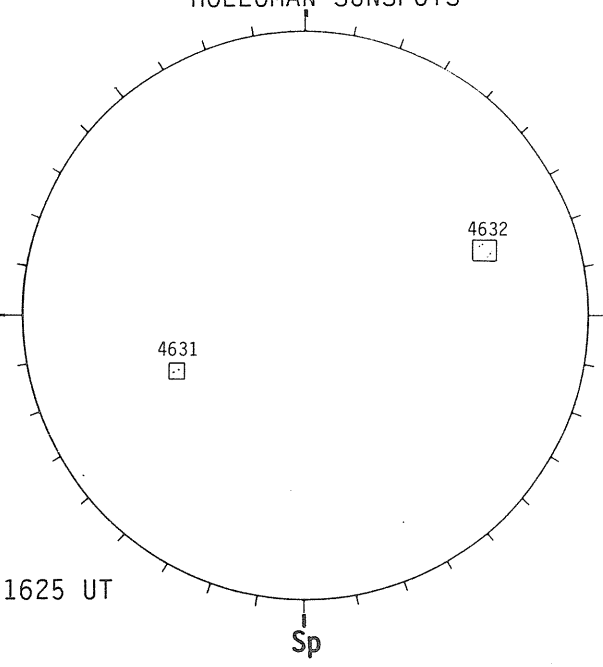


SACRAMENTO PEAK H-ALPHA



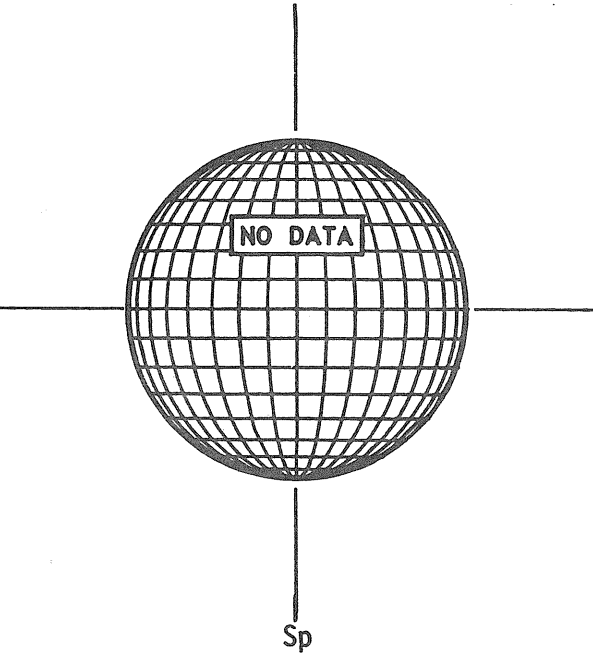
1730 UT

HOLLOMAN SUNSPOTS



1625 UT

SACRAMENTO PEAK CORONA (1.15 Radii)



M A R C H 12, 1 9 8 5 (P -23.89, B_o=-7.11, L_o= 109.31)

KITT PEAK MAGNETOGRAM

Np

Bright= +
Dark =

NO DATA

E-

STANFORD MAGNETOGRAM

Np

Solid = +
Dashed= -

2252 UT

MT. WILSON MAGNETOGRAM

Np

Solid = +
Dotted= -

DeltaY=13.1
DeltaX= 9.7

W

15.96 -
16.86 UT

SACRAMENTO PEAK H-ALPHA

E

1530 UT

Sp

BOULDER SUNSPOTS

4632

1650 UT
1655 UT BOUL Prom

Sp

SACRAMENTO PEAK CORONA (1.15 Radii)

5 μ

W

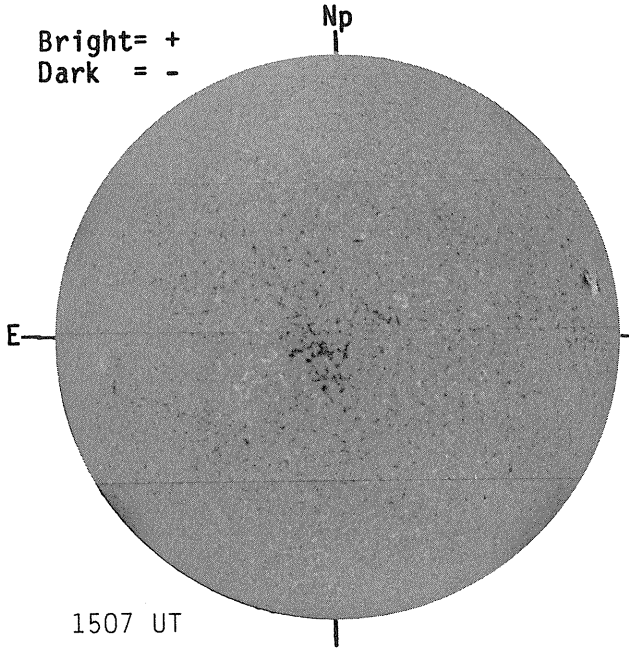
5303A(x1) 1501 UT

Sp

M A R C H 13, 1 9 8 5 (P -24.07, B_o=-7.10, L_o= 96.13)

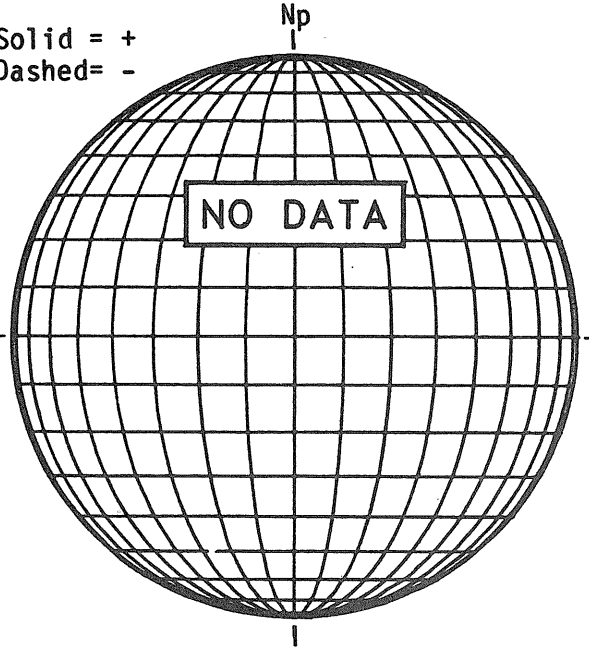
KITT PEAK MAGNETOGRAM

Bright= +
Dark = -



STANFORD MAGNETOGRAM

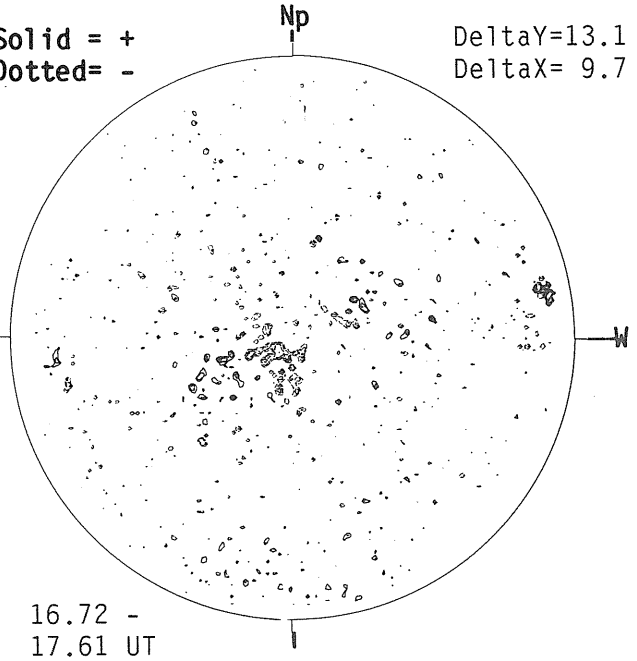
Solid = +
Dashed= -



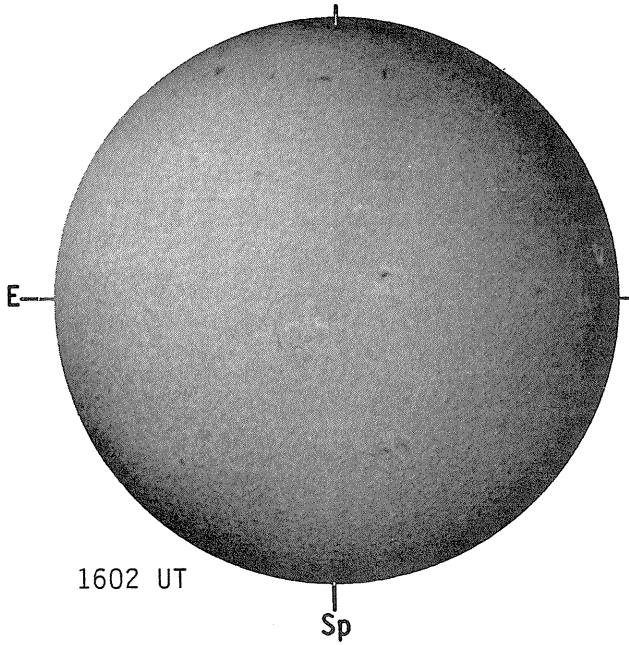
MT. WILSON MAGNETOGRAM

Solid = +
Dotted= -

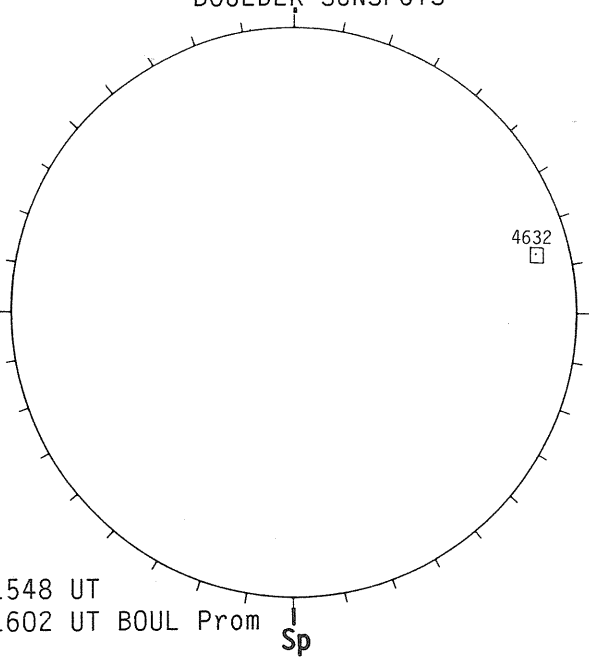
DeltaY=13.1
DeltaX= 9.7



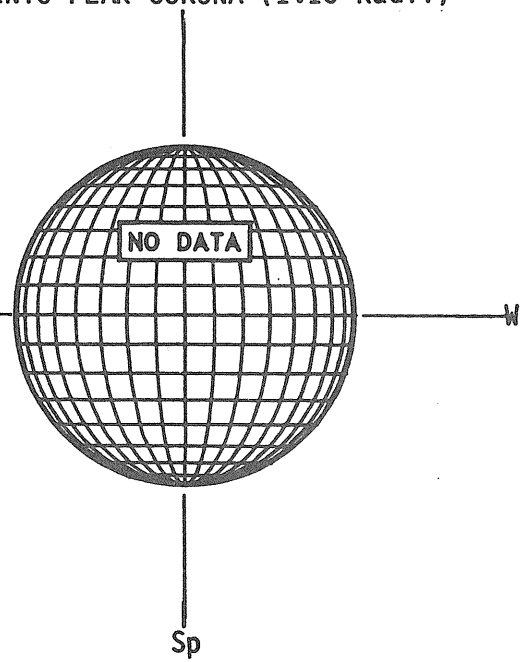
BOULDER H-ALPHA



BOULDER SUNSPOTS

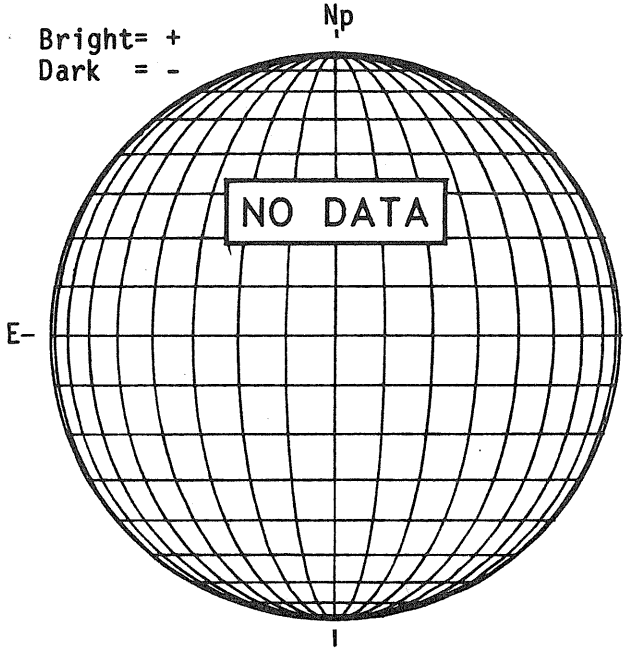


SACRAMENTO PEAK CORONA (1.15 Radii)

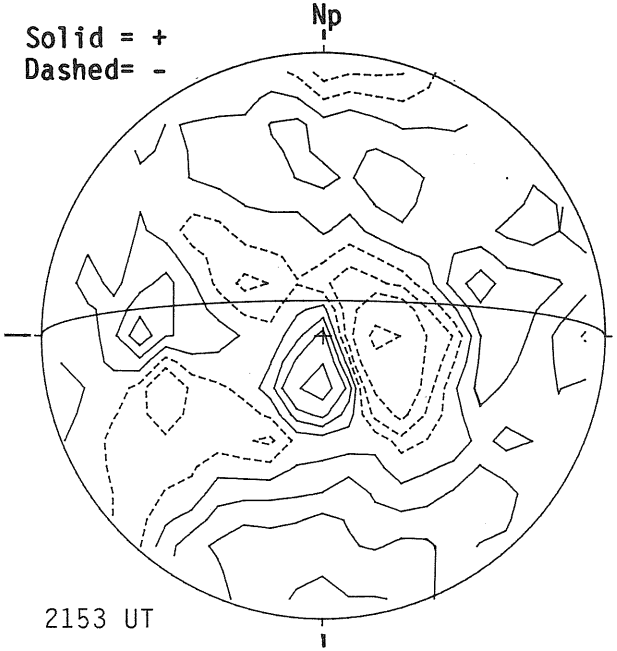


M A R C H 14, 1 9 8 5 (P -24.24, B_o=-7.08, L_o= 82.95)

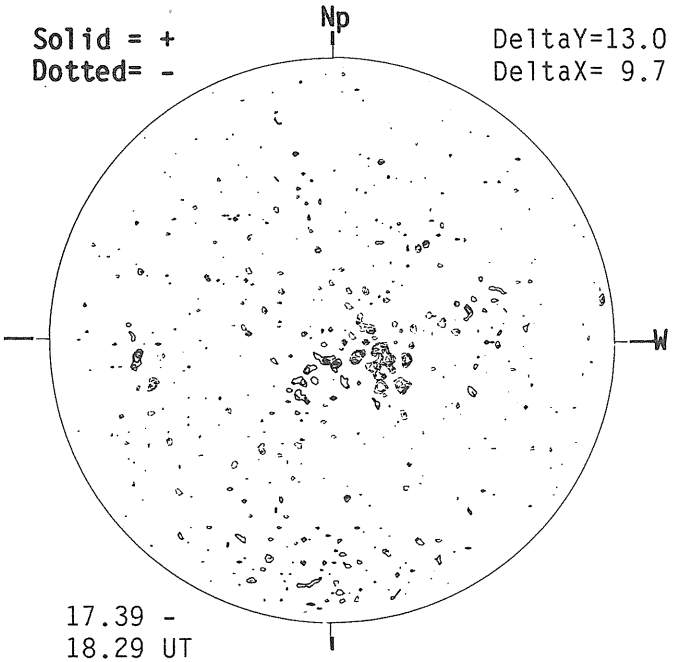
KITT PEAK MAGNETOGRAM



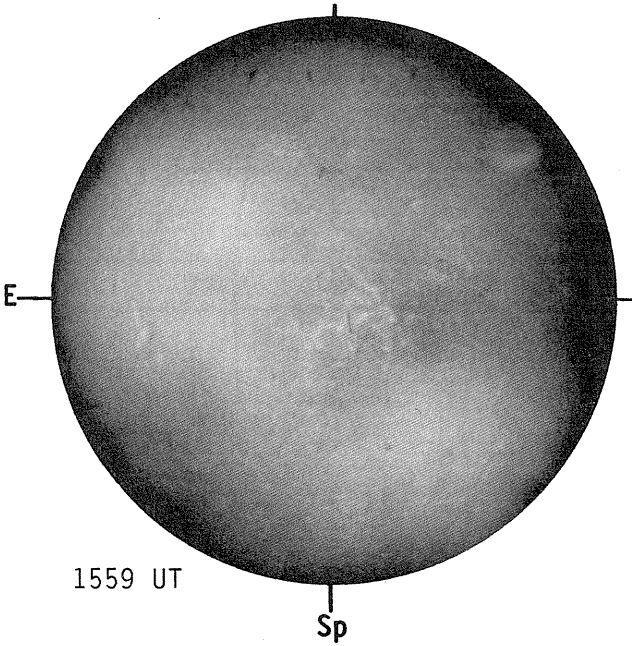
STANFORD MAGNETOGRAM



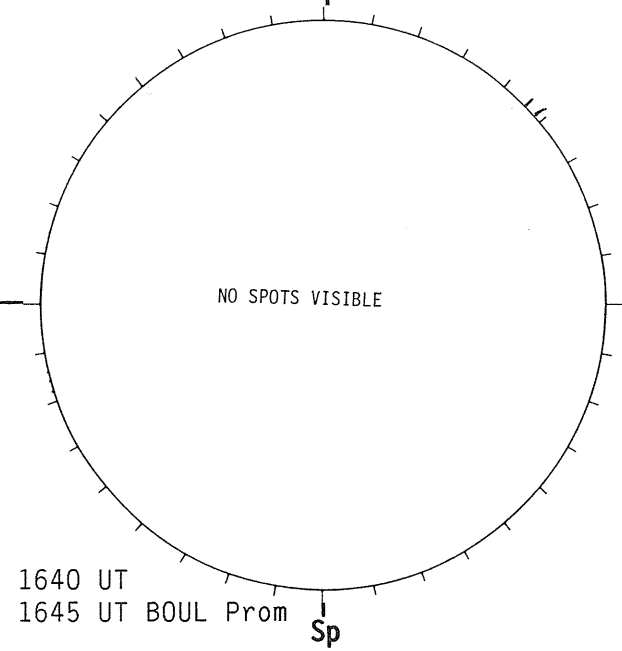
MT. WILSON MAGNETOGRAM



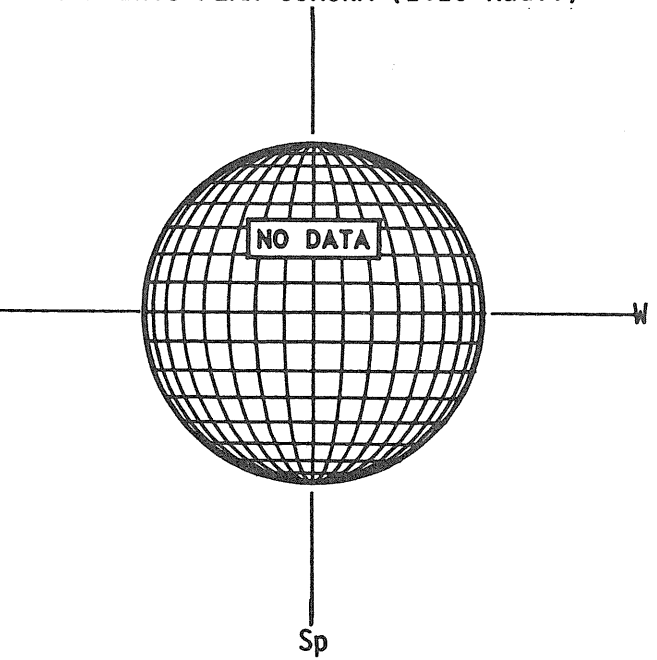
SACRAMENTO PEAK H-ALPHA



BOULDER SUNSPOTS



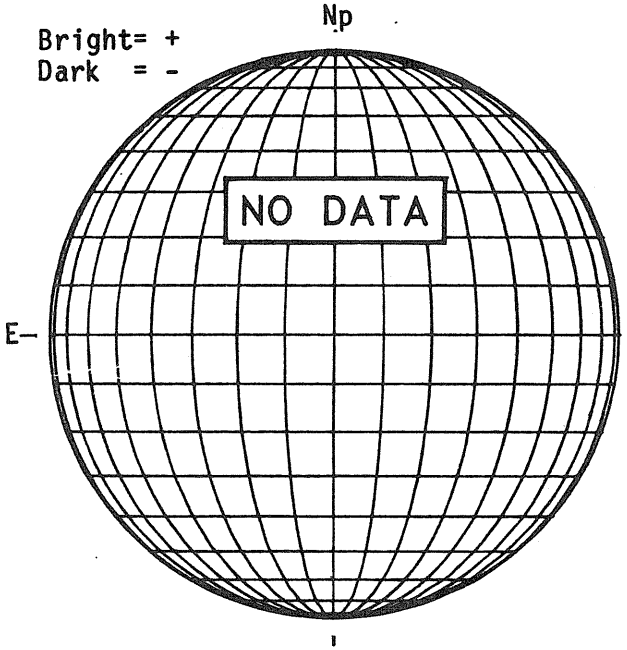
SACRAMENTO PEAK CORONA (1.15 Radii)



M A R C H 15, 1 9 8 5 (P -24.40, B_o=-7.07, L_o= 69.77)

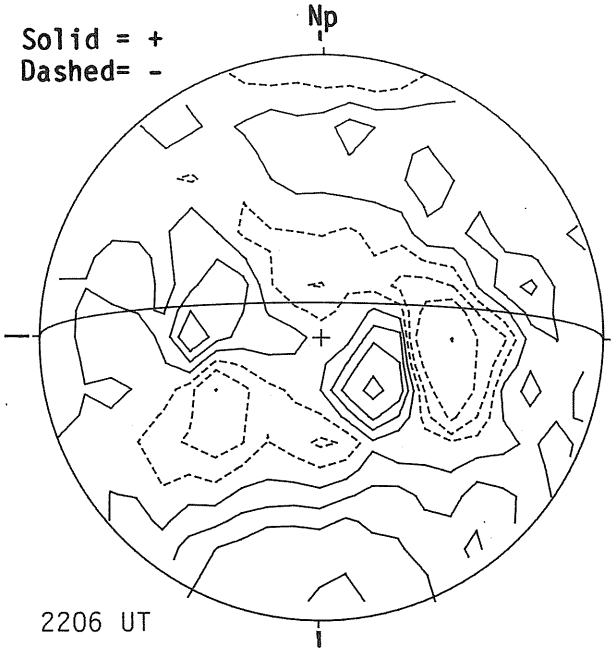
KITT PEAK MAGNETOGRAM

Bright= +
Dark = -



STANFORD MAGNETOGRAM

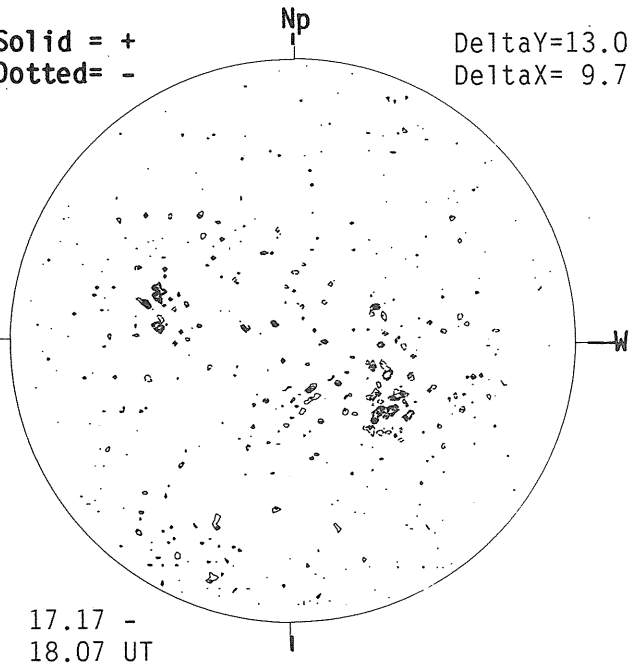
Solid = +
Dashed= -



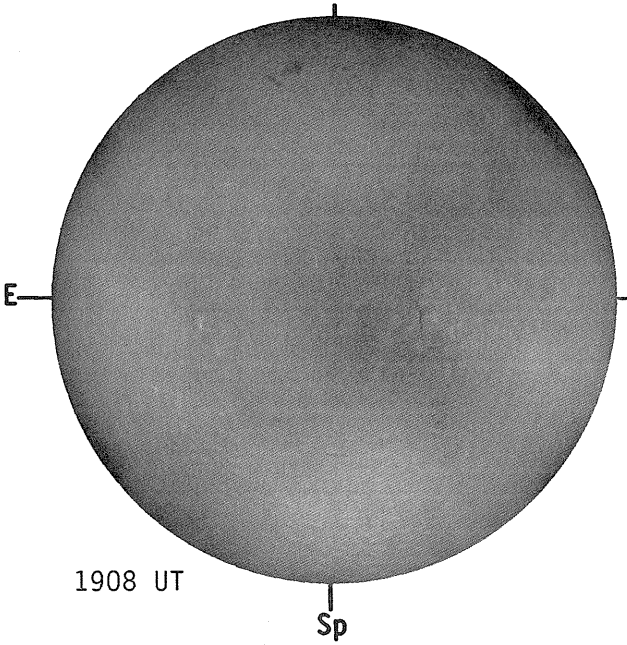
MT. WILSON MAGNETOGRAM

Solid = +
Dotted= -

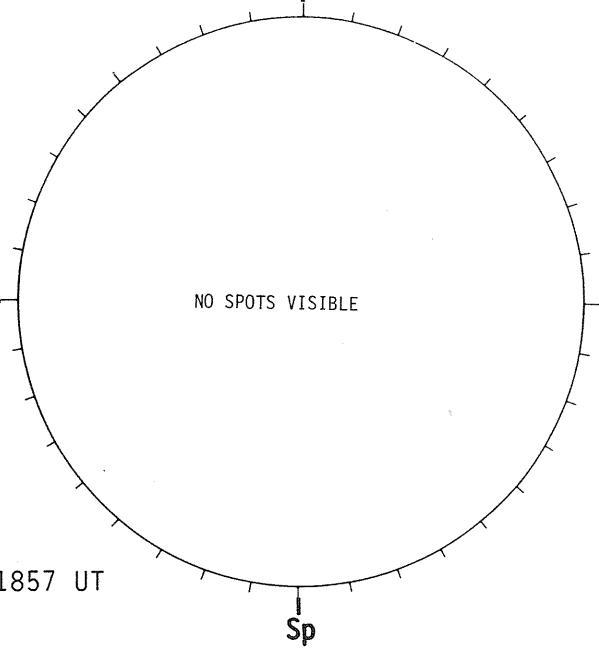
DeltaY=13.0
DeltaX= 9.7



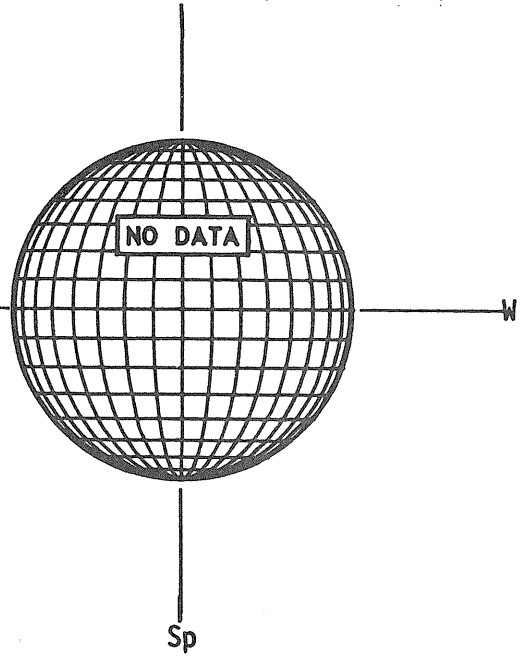
SACRAMENTO PEAK H-ALPHA



BOULDER SUNSPOTS



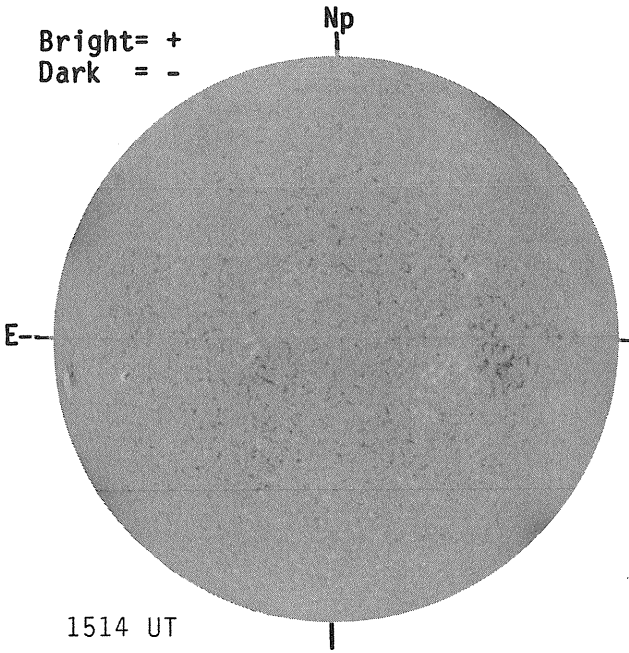
SACRAMENTO PEAK CORONA (1.15 Radii)



M A R C H 16, 1 9 8 5 (P -24.55, B_o=-7.05, L_o= 56.59)

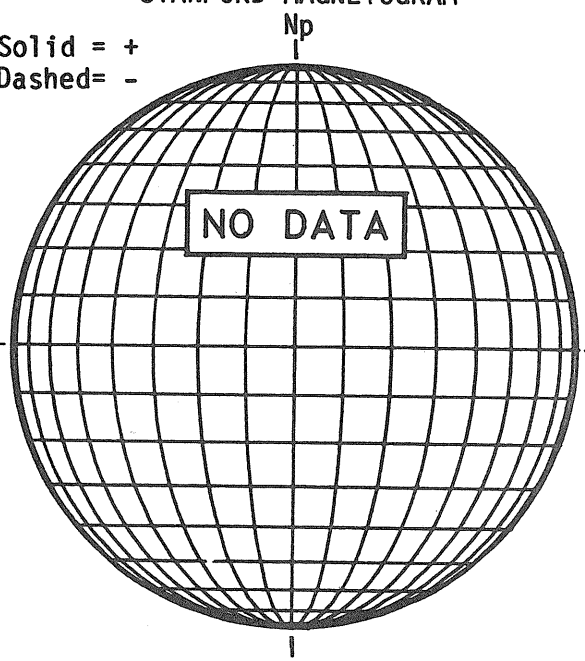
KITT PEAK MAGNETOGRAM

Bright= +
Dark = -



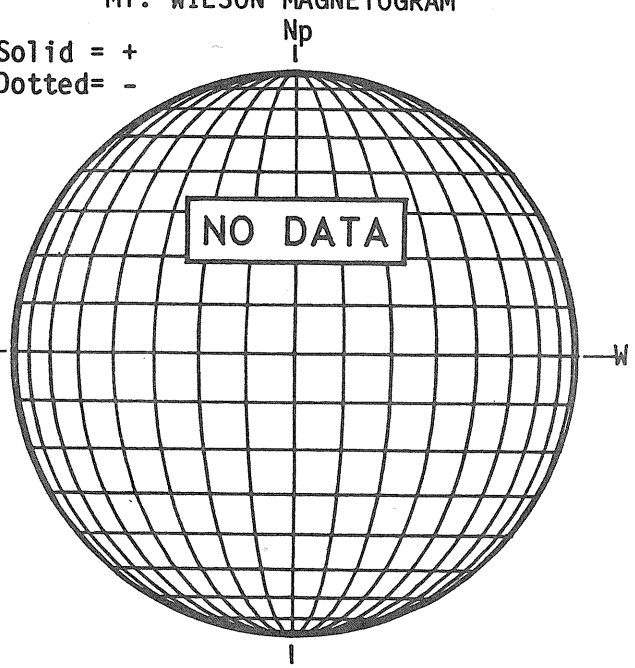
STANFORD MAGNETOGRAM

Solid = +
Dashed= -

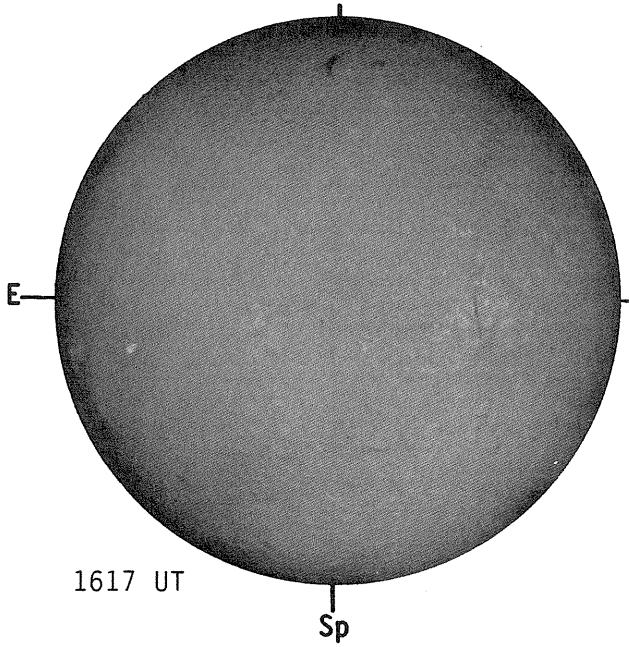


MT. WILSON MAGNETOGRAM

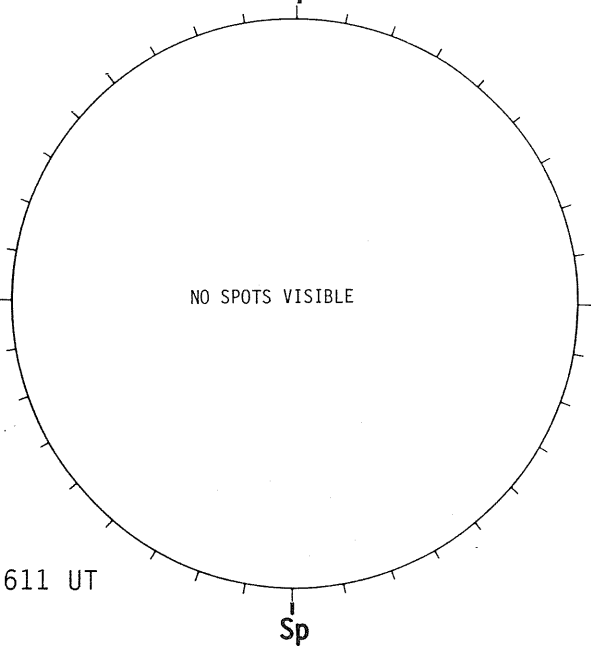
Solid = +
Dotted= -



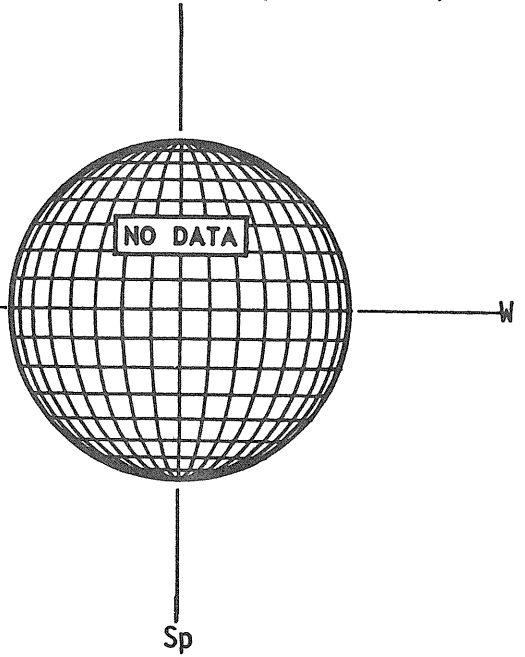
SACRAMENTO PEAK H-ALPHA



BOULDER SUNSPOTS



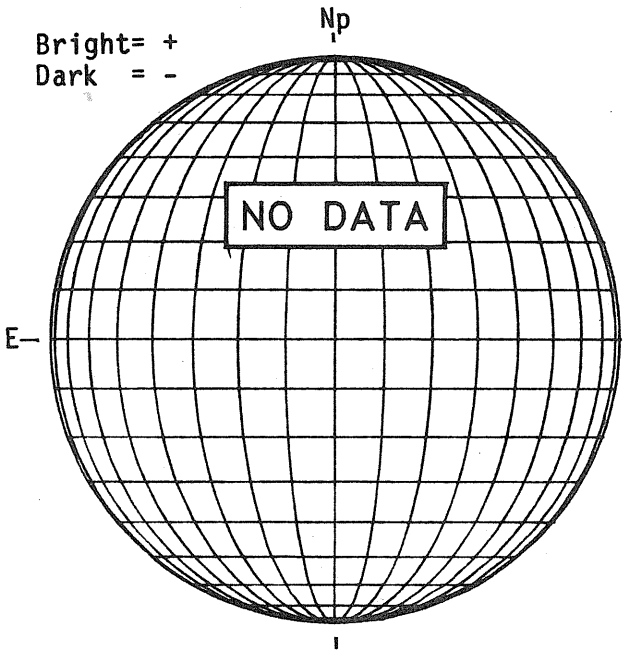
SACRAMENTO PEAK CORONA (1.15 Radii)



M A R C H 17, 1 9 8 5 (P -24.70, B_o=-7.03, L_o= 43.41)

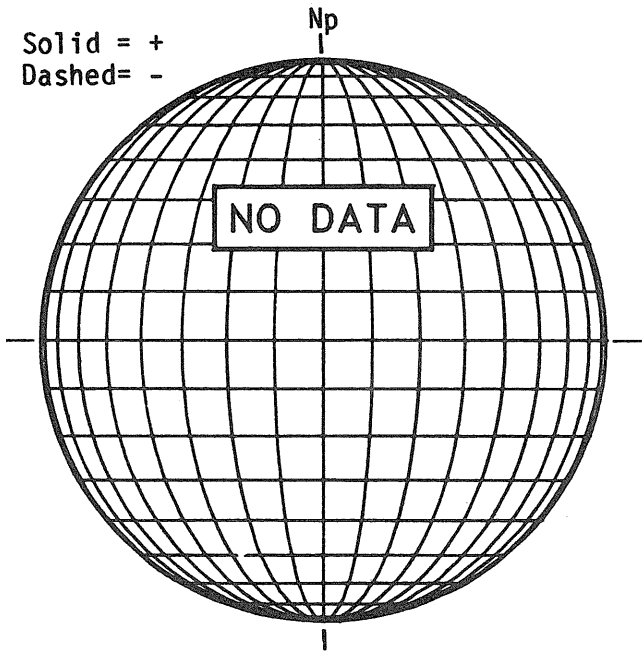
KITT PEAK MAGNETOGRAM

Bright= +
Dark = -



STANFORD MAGNETOGRAM

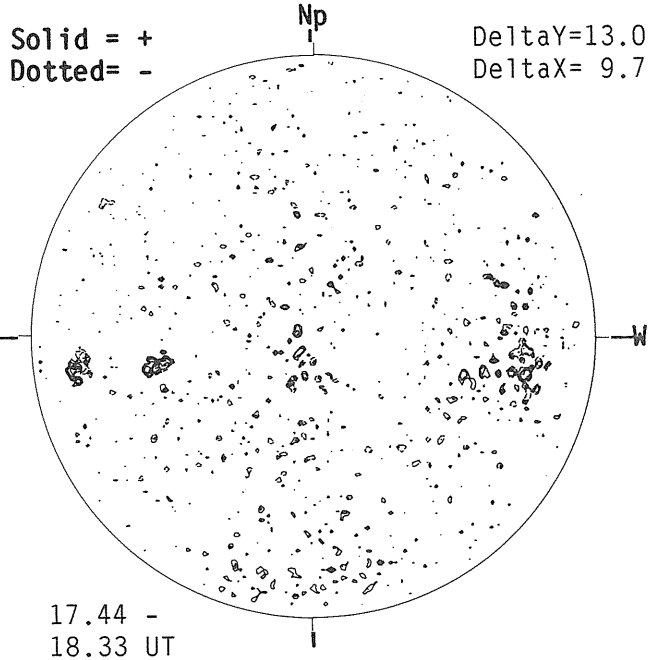
Solid = +
Dashed= -



MT. WILSON MAGNETOGRAM

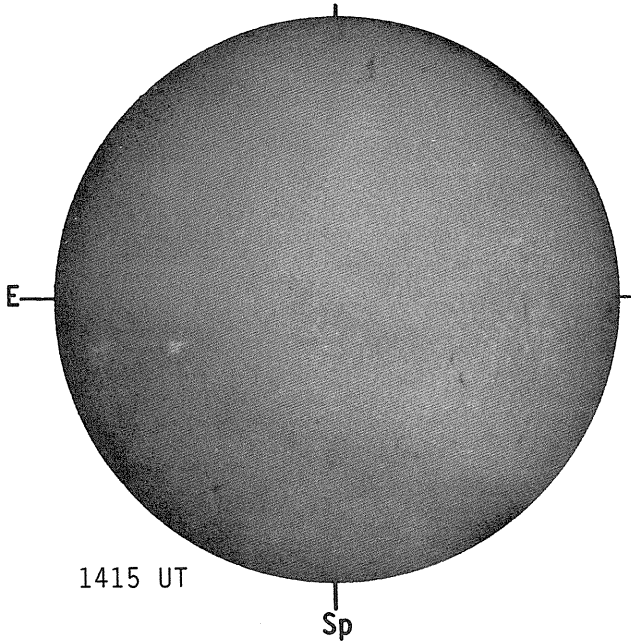
Solid = +
Dotted= -

DeltaY=13.0
DeltaX= 9.7



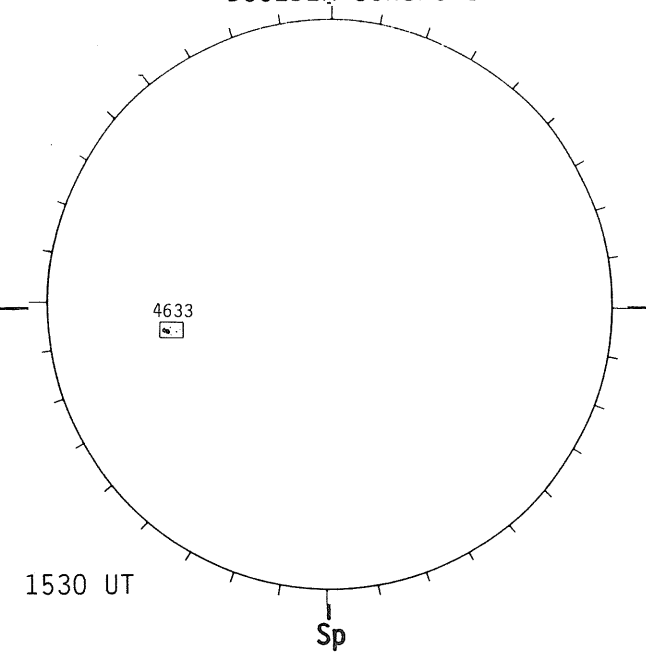
17.44 -
18.33 UT

SACRAMENTO PEAK H-ALPHA



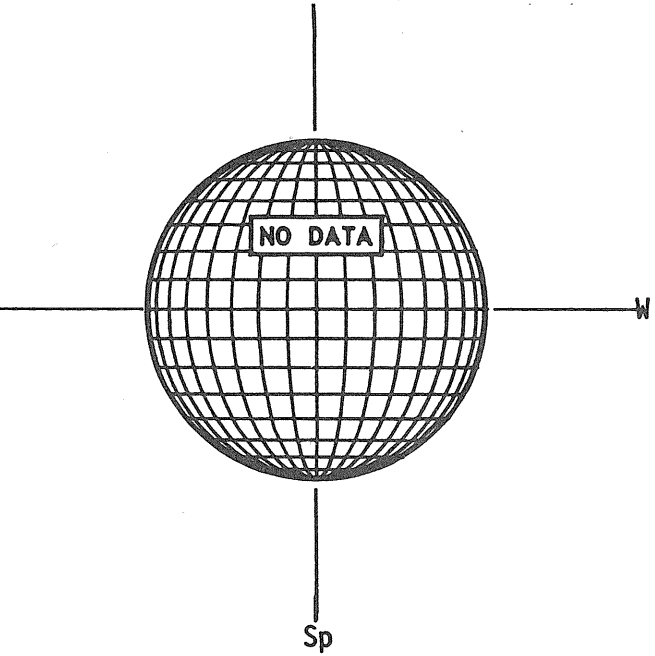
1415 UT

BOULDER SUNSPOTS



1530 UT

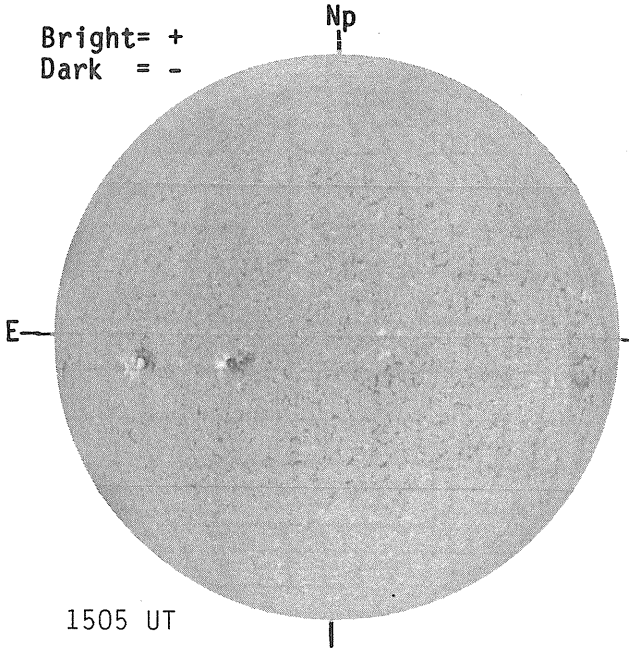
SACRAMENTO PEAK CORONA (1.15 Radii)



M A R C H 18, 1 9 8 5 (P -24.85, B_o=-7.00, L_o= 30.23)

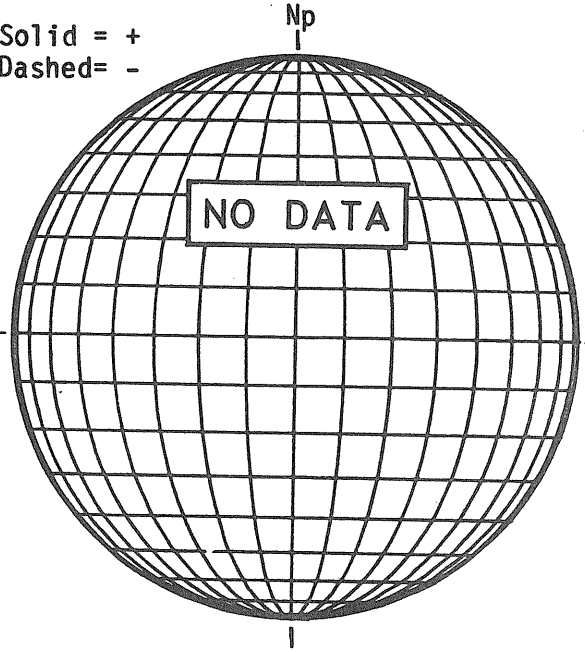
KITT PEAK MAGNETOGRAM

Bright= +
Dark = -



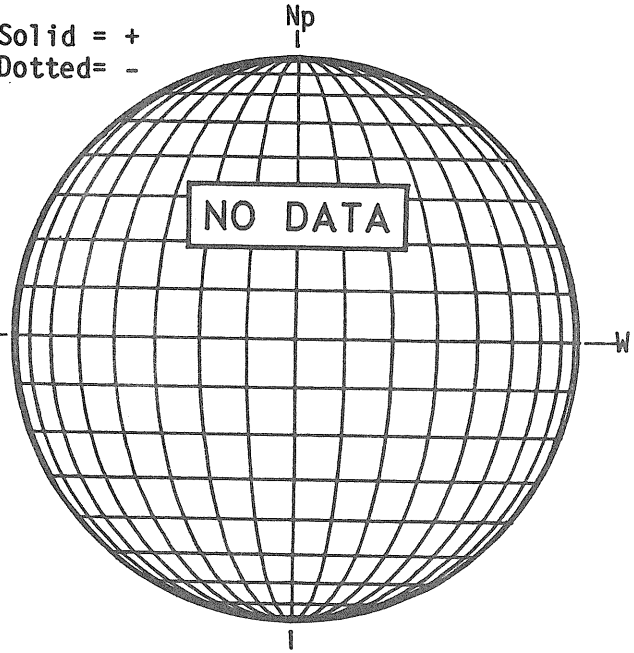
STANFORD MAGNETOGRAM

Solid = +
Dashed= -

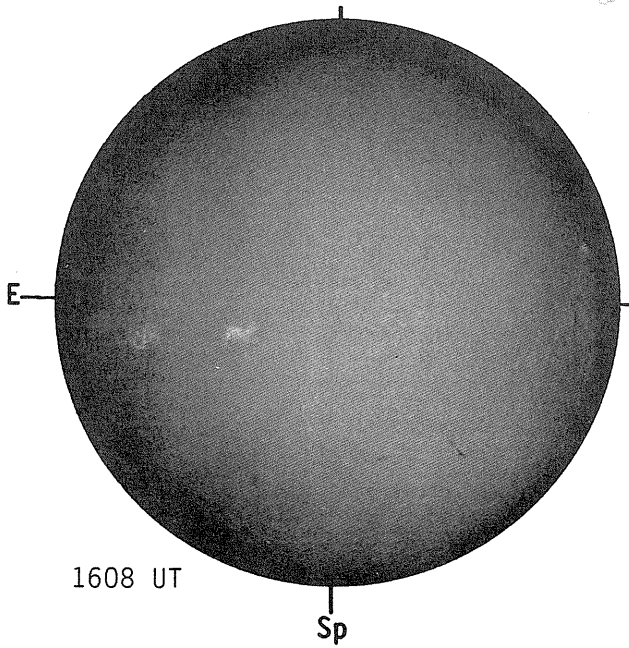


MT. WILSON MAGNETOGRAM

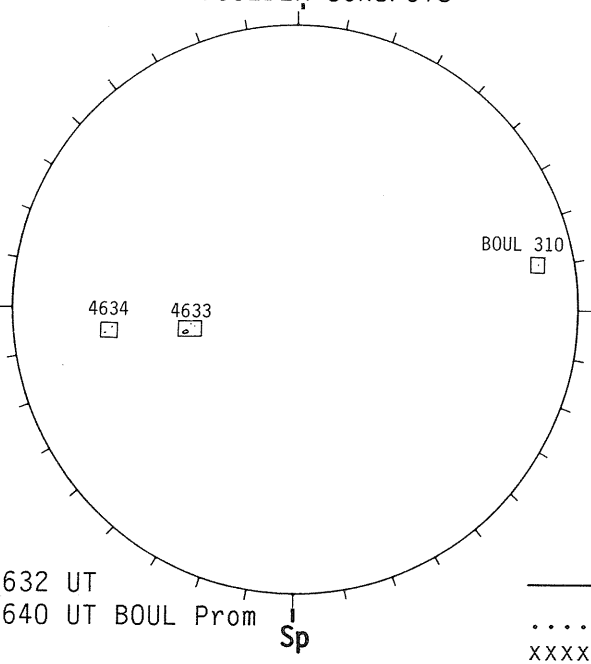
Solid = +
Dotted= -



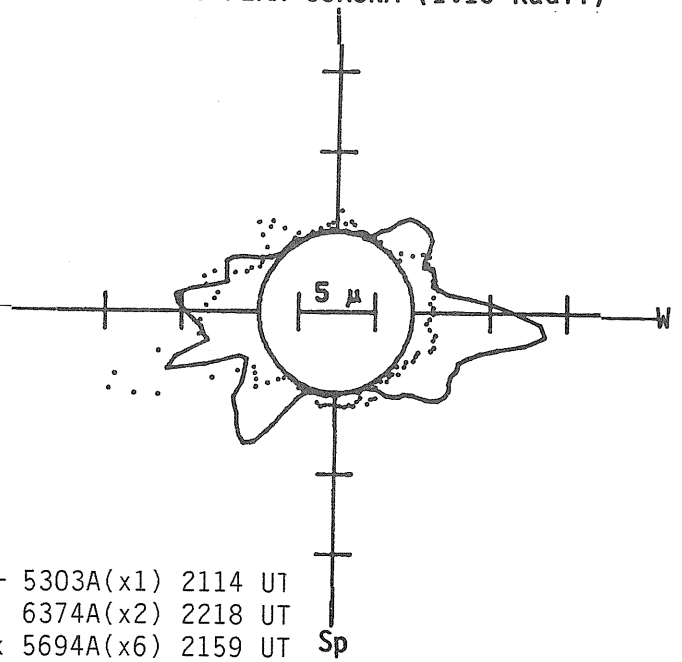
SACRAMENTO PEAK H-ALPHA



BOULDER SUNSPOTS



SACRAMENTO PEAK CORONA (1.15 Radii)



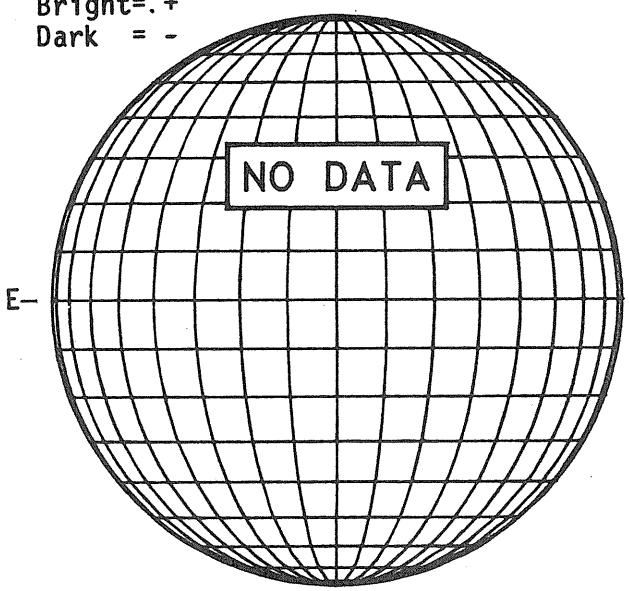
—— 5303A(x1) 2114 UT
.... 6374A(x2) 2218 UT
xxxx 5694A(x6) 2159 UT
No 5694A Activity Today

M A R C H 19, 1 9 8 5 (P -24.98, B_o=-6.98, L_o= 17.05)

KITT PEAK MAGNETOGRAM

Np

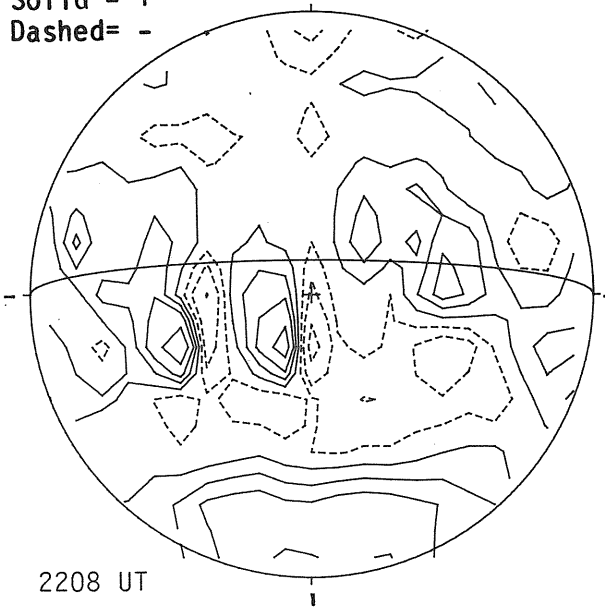
Bright=. +
Dark = -



STANFORD MAGNETOGRAM

Np

Solid = +
Dashed= -



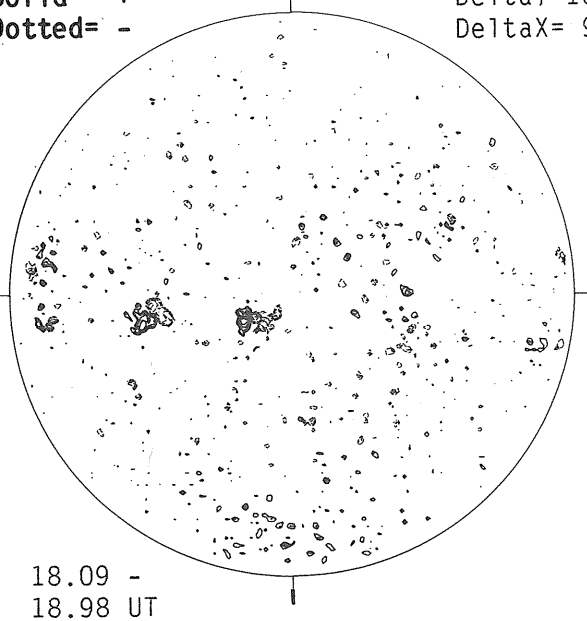
2208 UT

MT. WILSON MAGNETOGRAM

Np

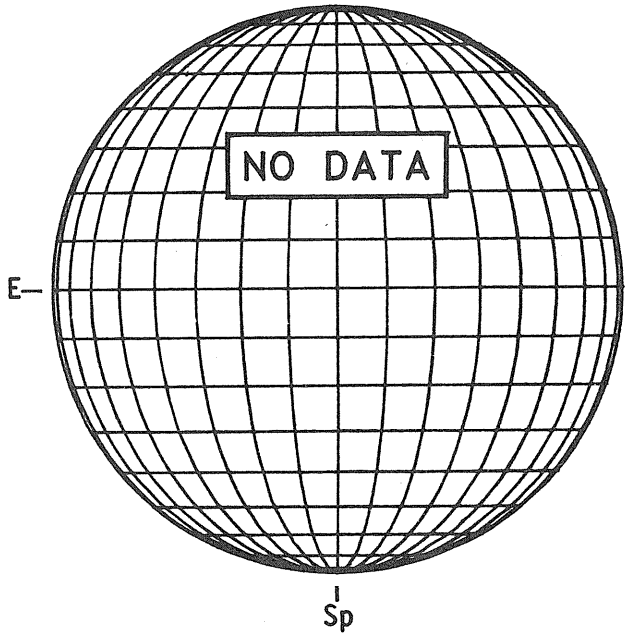
Solid = +
Dotted= -

DeltaY=13.0
DeltaX= 9.7

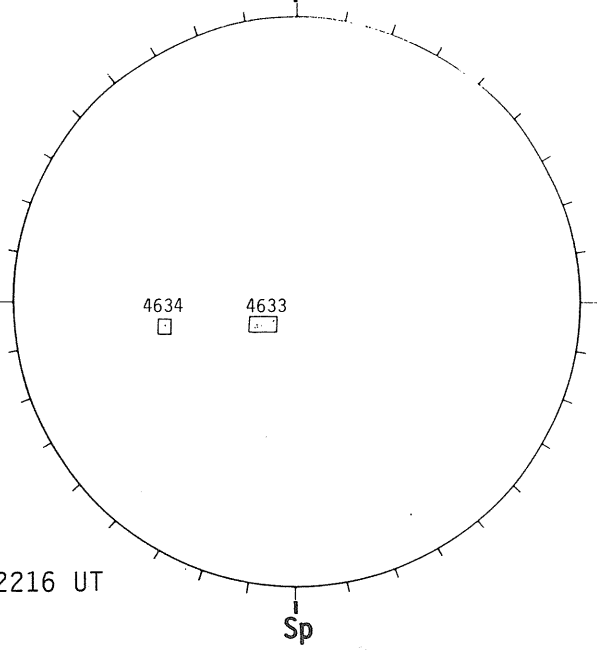


18.09 -
18.98 UT

SACRAMENTO PEAK H-ALPHA

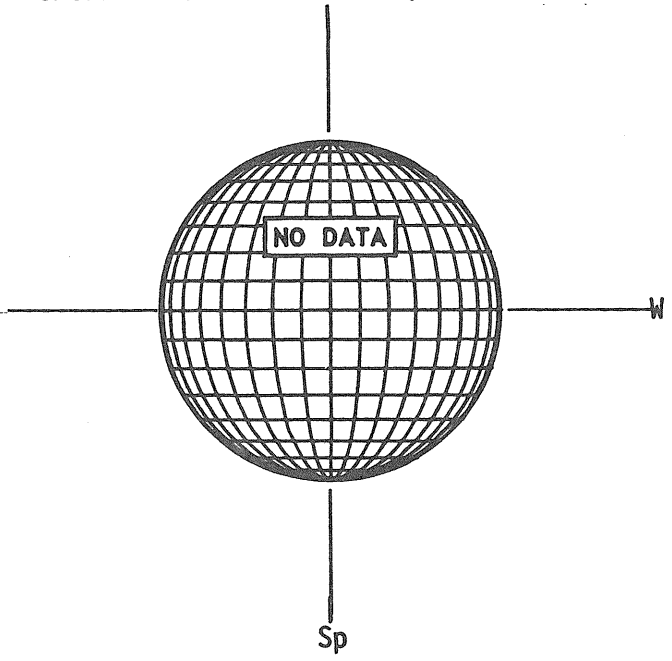


HOLLOMAN SUNSPOTS



2216 UT

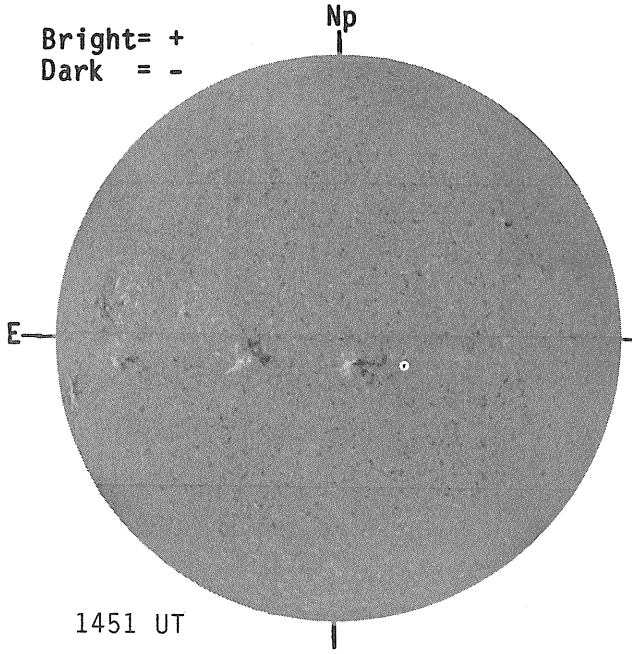
SACRAMENTO PEAK CORONA (1.15 Radii)



M A R C H 20, 1 9 8 5 (P -25.11, B_o=-6.95, L_o= 3.86)

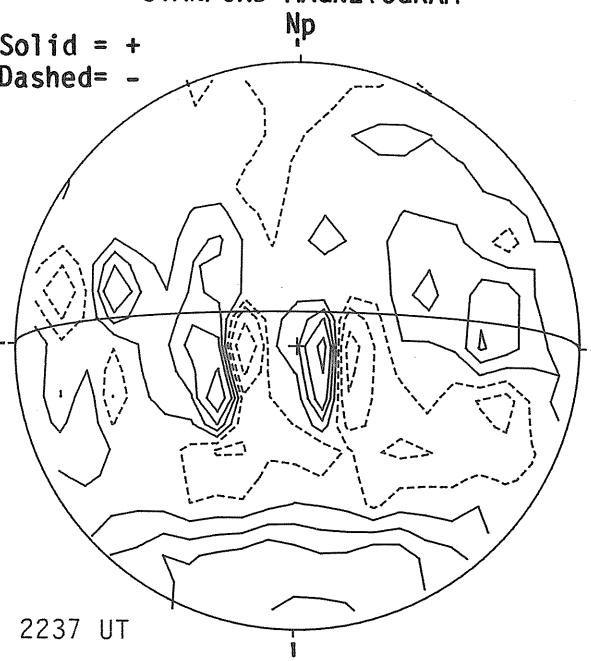
KITT PEAK MAGNETOGRAM

Bright= +
Dark = -



STANFORD MAGNETOGRAM

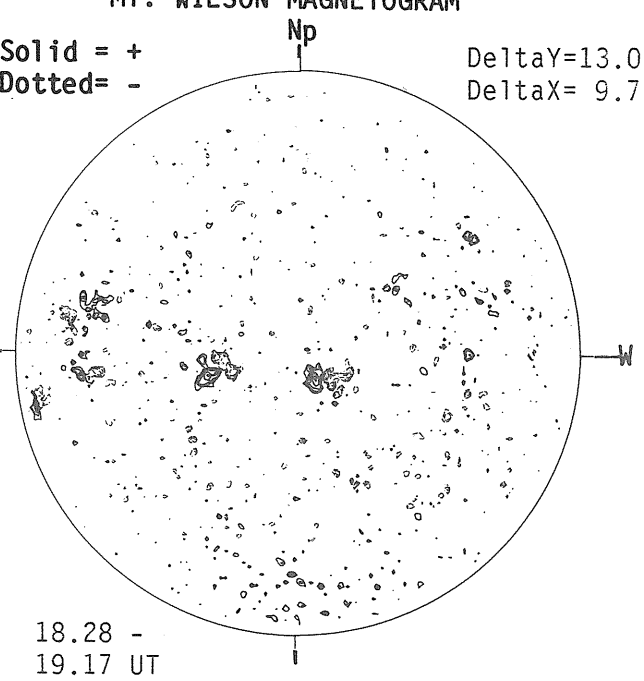
Solid = +
Dashed= -



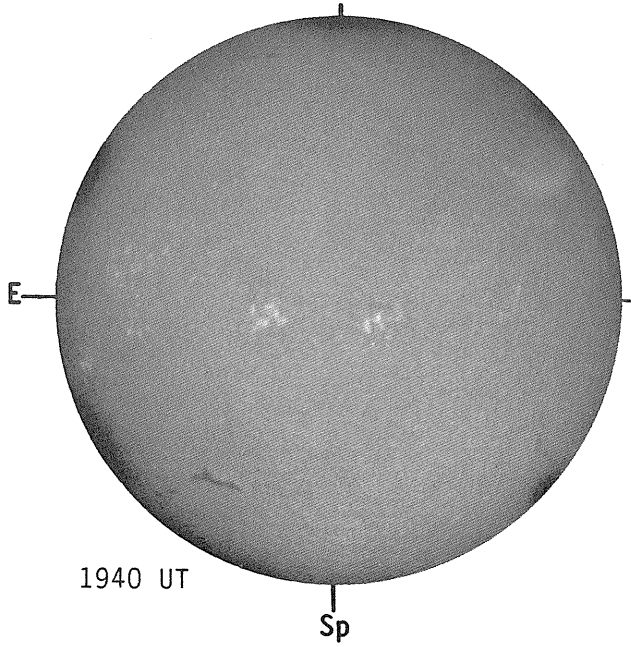
MT. WILSON MAGNETOGRAM

Solid = +
Dotted= -

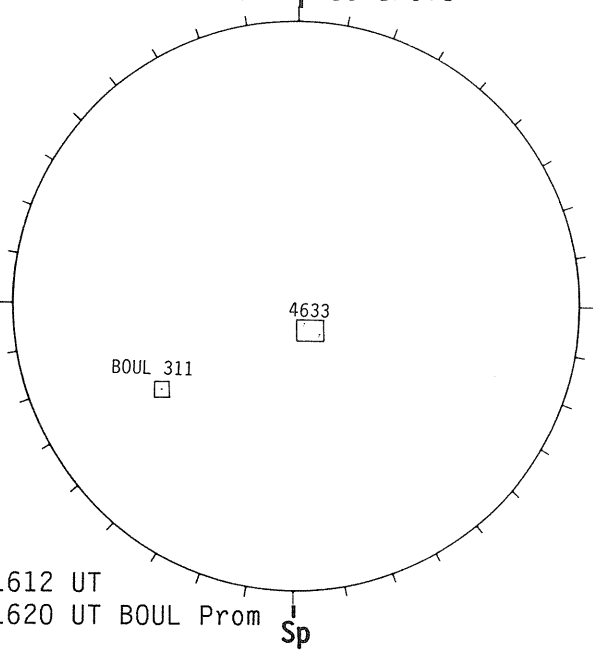
DeltaY=13.0
DeltaX= 9.7



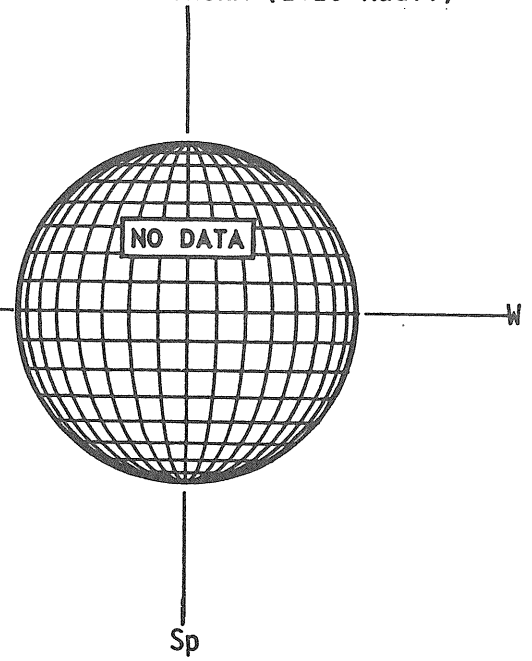
SACRAMENTO PEAK H-ALPHA



BOULDER SUNSPOTS



SACRAMENTO PEAK CORONA (1.15 Radii)

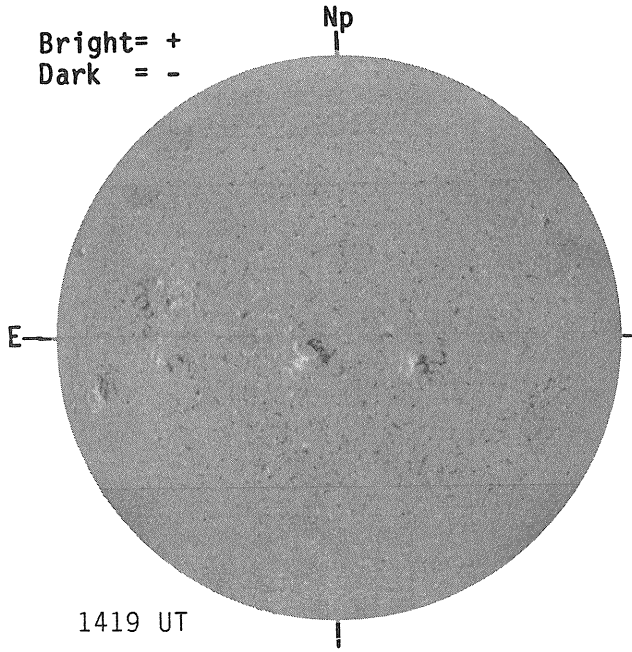


M A R C H 21, 1 9 8 5 (P -25.23, B_o=-6.92, L_o= 350.68)

50 Mar 85

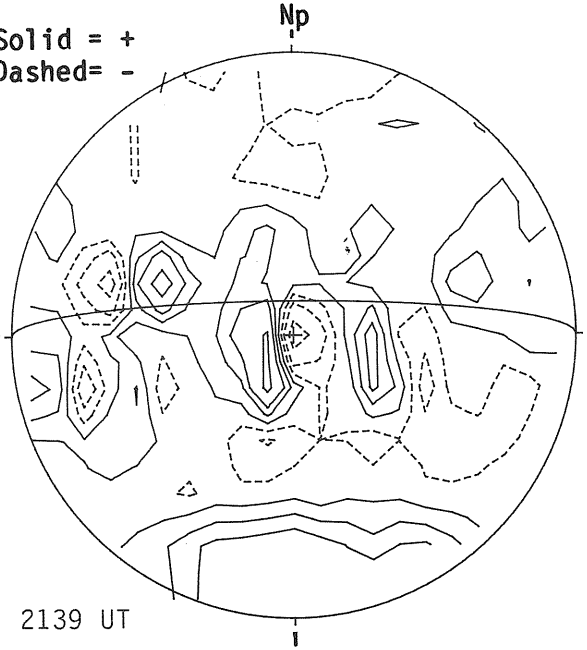
KITT PEAK MAGNETOGRAM

Bright= +
Dark = -



STANFORD MAGNETOGRAM

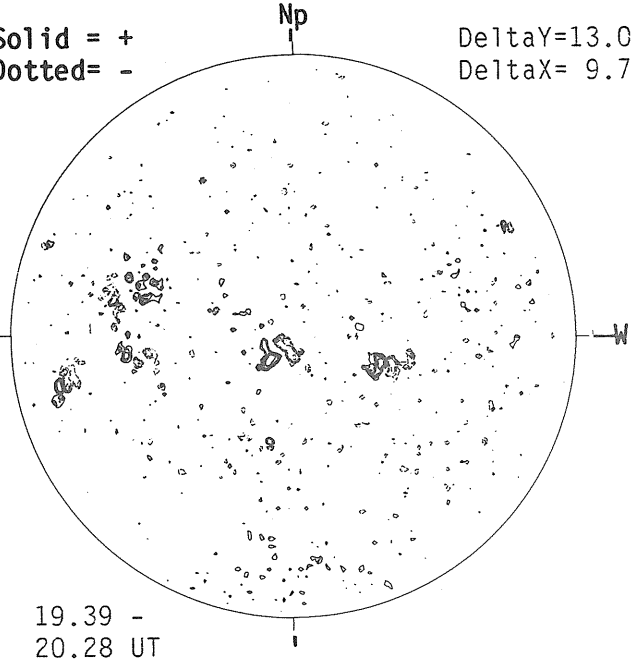
Solid = +
Dashed= -



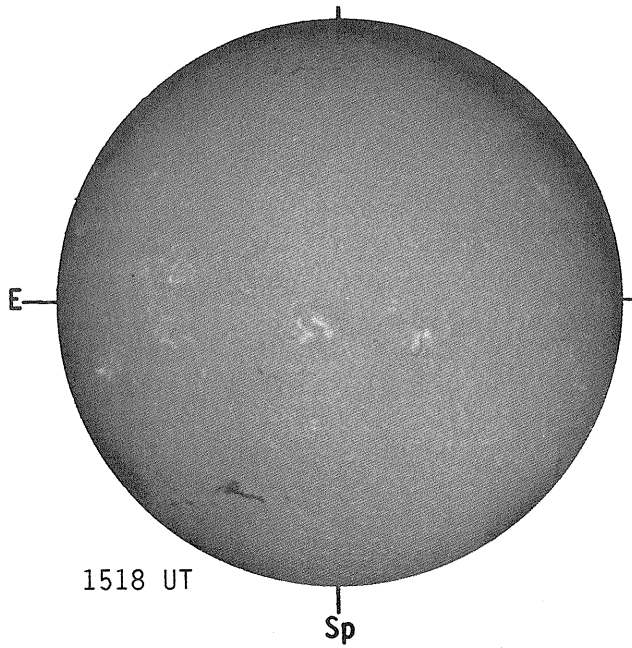
MT. WILSON MAGNETOGRAM

Solid = +
Dotted= -

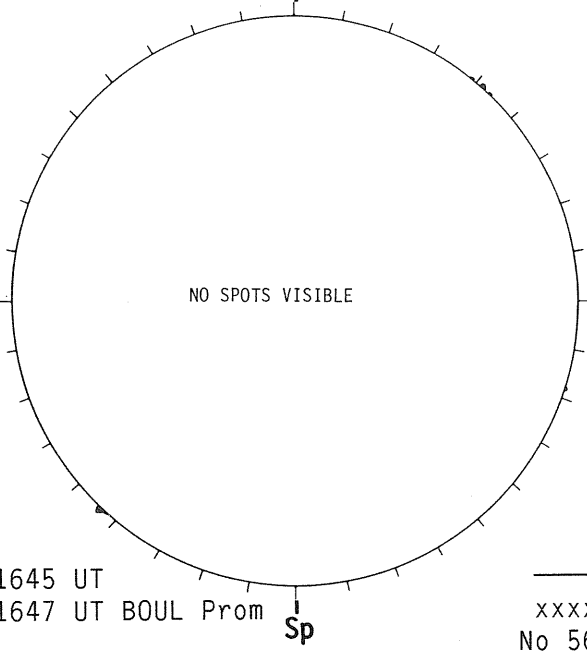
DeltaY=13.0
DeltaX= 9.7



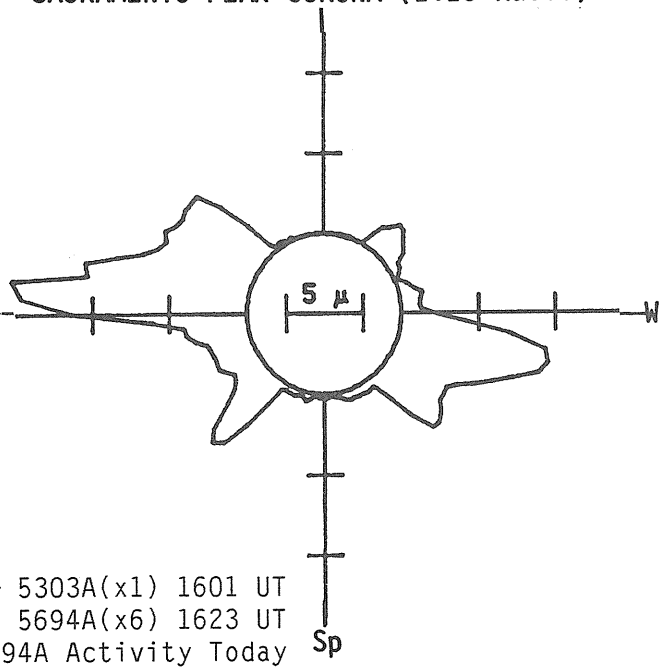
SACRAMENTO PEAK H-ALPHA



BOULDER SUNSPOTS



SACRAMENTO PEAK CORONA (1.15 Radii)

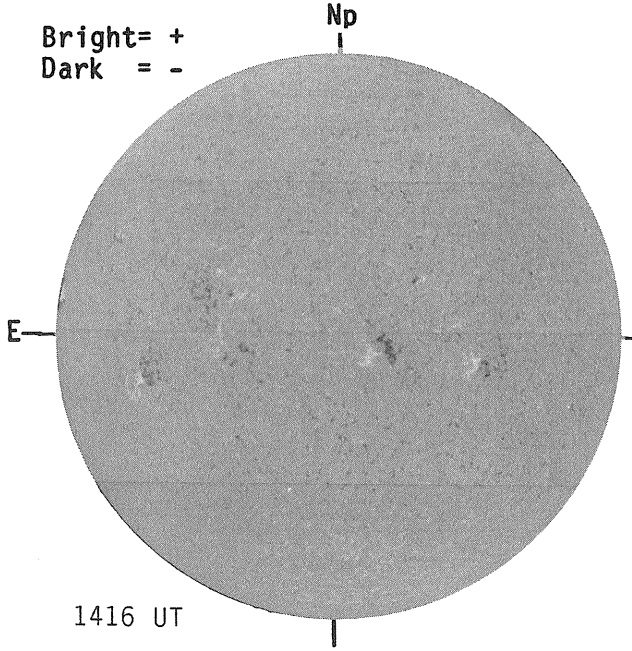


—— 5303A(x1) 1601 UT
xxxx 5694A(x6) 1623 UT
No 5694A Activity Today

M A R C H 22, 1 9 8 5 (P -25.35, B_o=-6.89, L_o= 337.50)

KITT PEAK MAGNETOGRAM

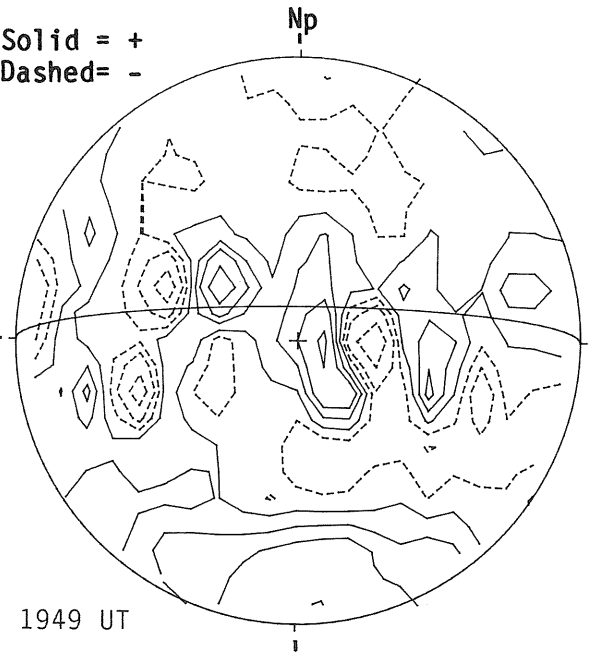
Bright= +
Dark = -



1416 UT

STANFORD MAGNETOGRAM

Solid = +
Dashed= -

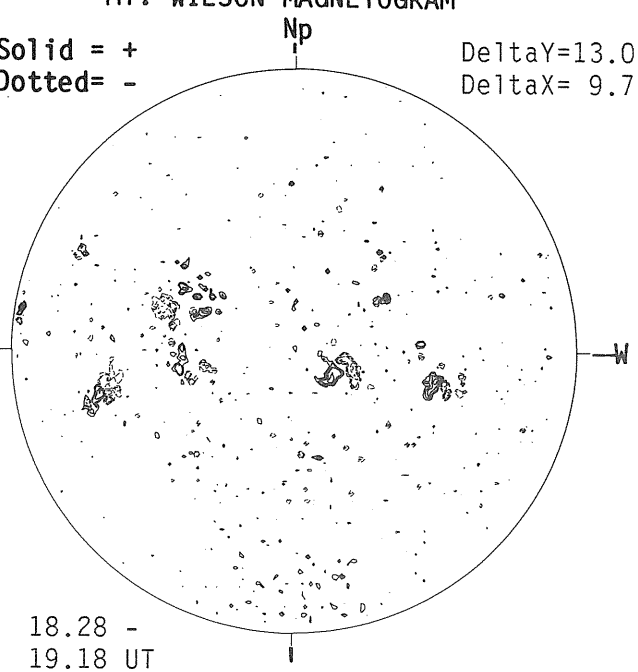


1949 UT

MT. WILSON MAGNETOGRAM

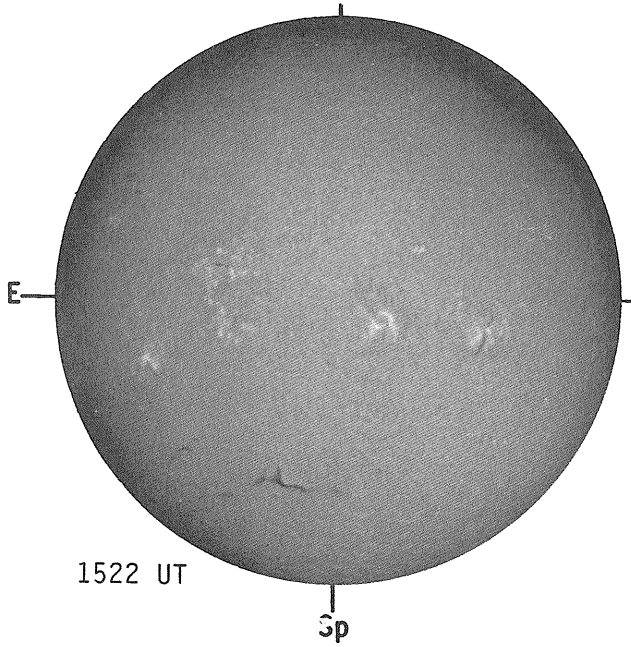
Solid = +
Dotted= -

DeltaY=13.0
DeltaX= 9.7



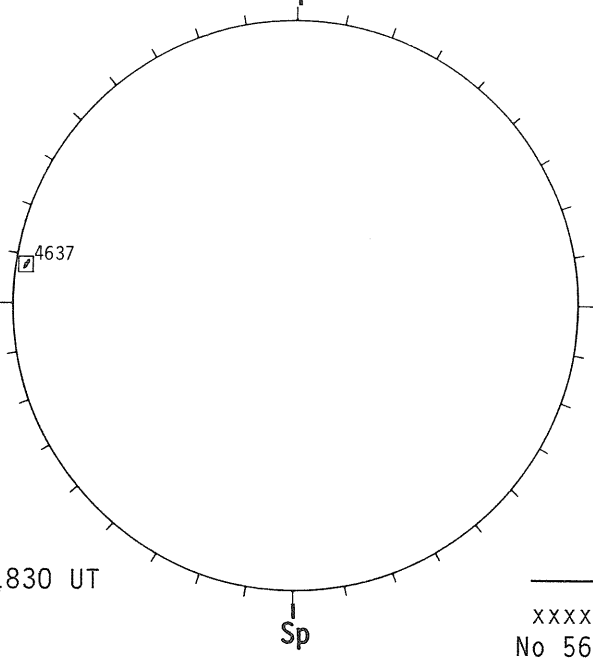
18.28 -
19.18 UT

SACRAMENTO PEAK H-ALPHA



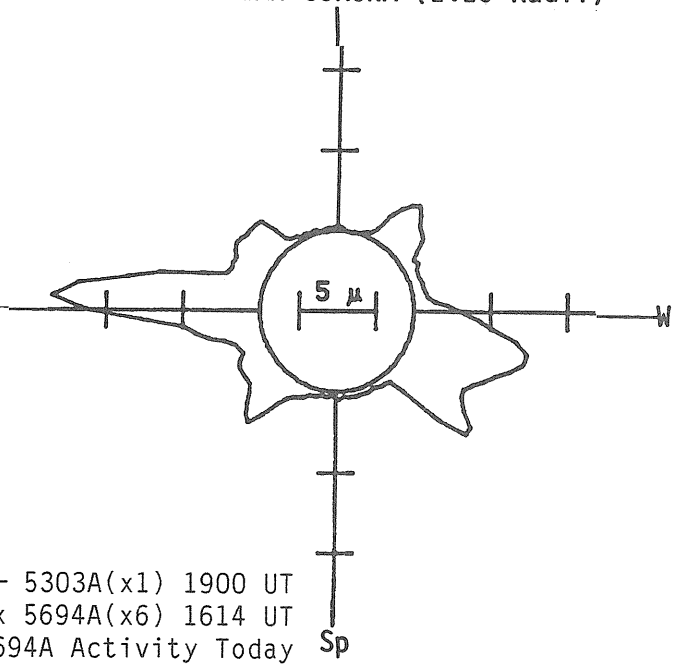
1522 UT

BOULDER SUNSPOTS



1830 UT

SACRAMENTO PEAK CORONA (1.15 Radii)

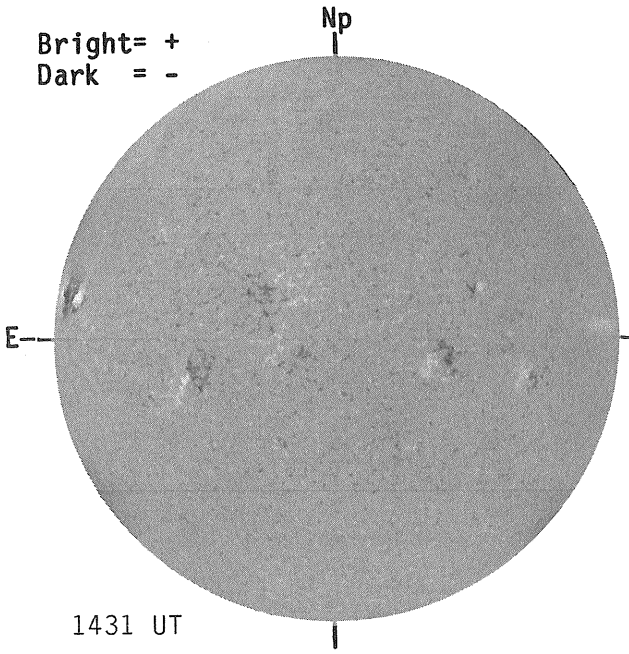


—— 5303A(x1) 1900 UT
xxxx 5694A(x6) 1614 UT
No 5694A Activity Today

M A R C H 23, 1 9 8 5 (P -25.46, B_o=-6.85, L_o= 324.31)

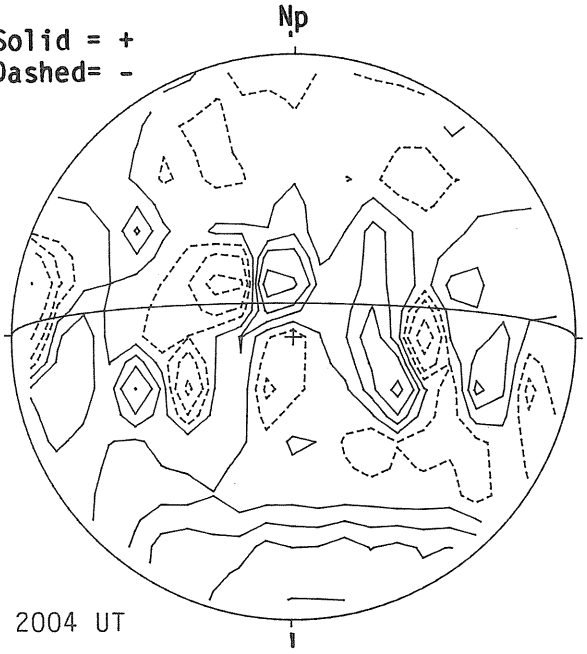
KITT PEAK MAGNETOGRAM

Bright= +
Dark = -



STANFORD MAGNETOGRAM

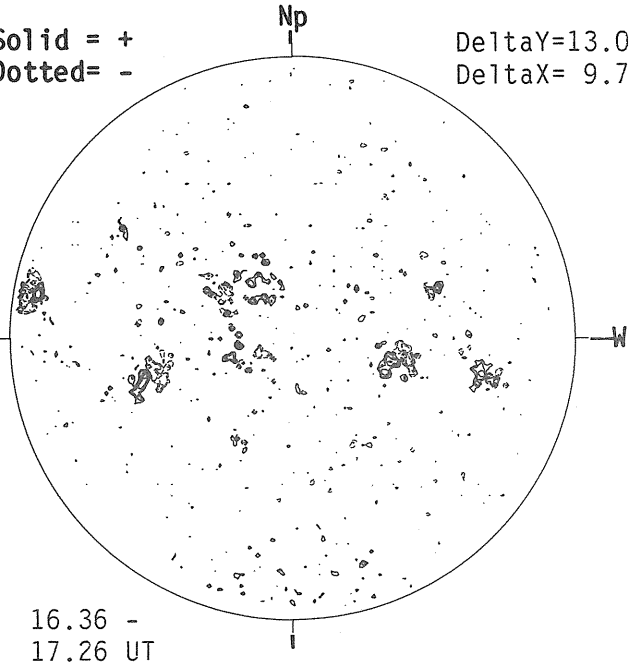
Solid = +
Dashed= -



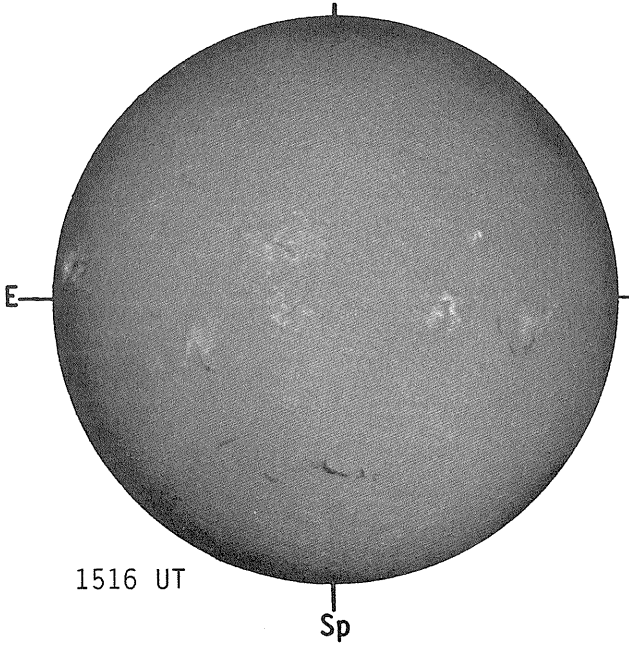
MT. WILSON MAGNETOGRAM

Solid = +
Dotted= -

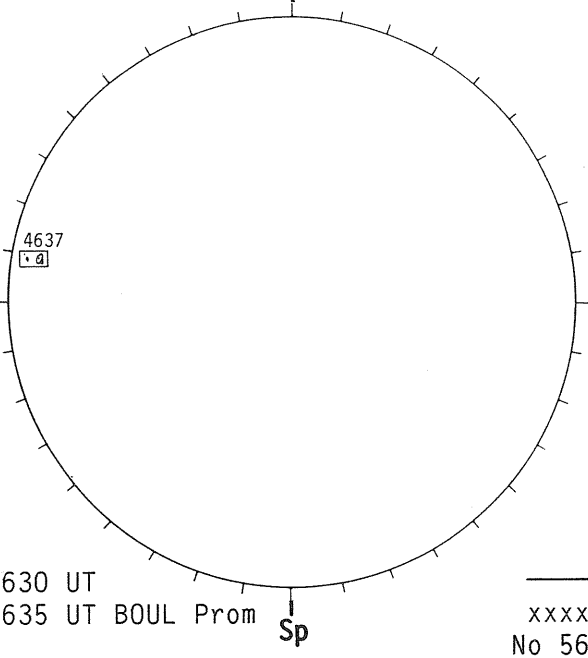
DeltaY=13.0
DeltaX= 9.7



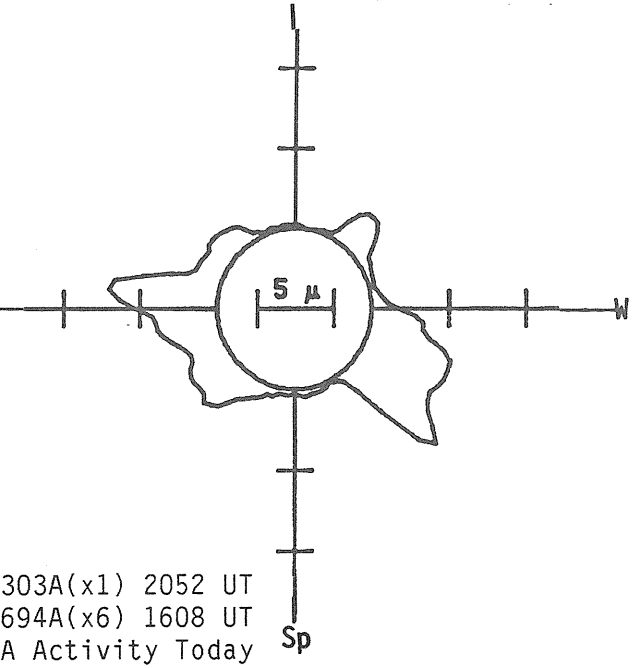
SACRAMENTO PEAK H-ALPHA



BOULDER SUNSPOTS



SACRAMENTO PEAK CORONA (1.15 Radii)

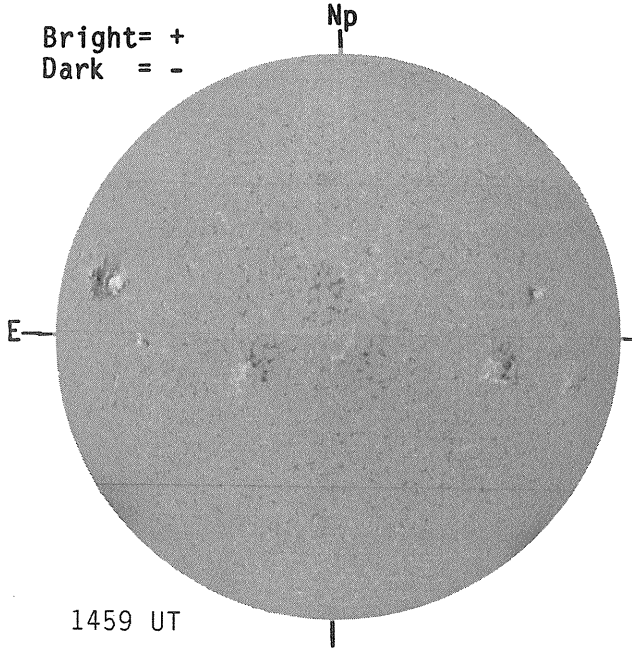


—— 5303A(x1) 2052 UT
xxxx 5694A(x6) 1608 UT
No 5694A Activity Today

M A R C H 24, 1 9 8 5 (P -25.56, B_0=-6.82, L_0= 311.12)

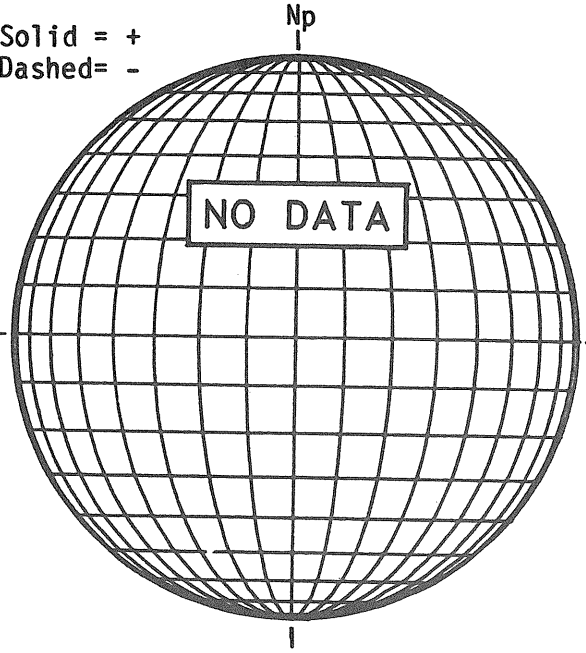
KITT PEAK MAGNETOGRAM

Bright= +
Dark = -



STANFORD MAGNETOGRAM

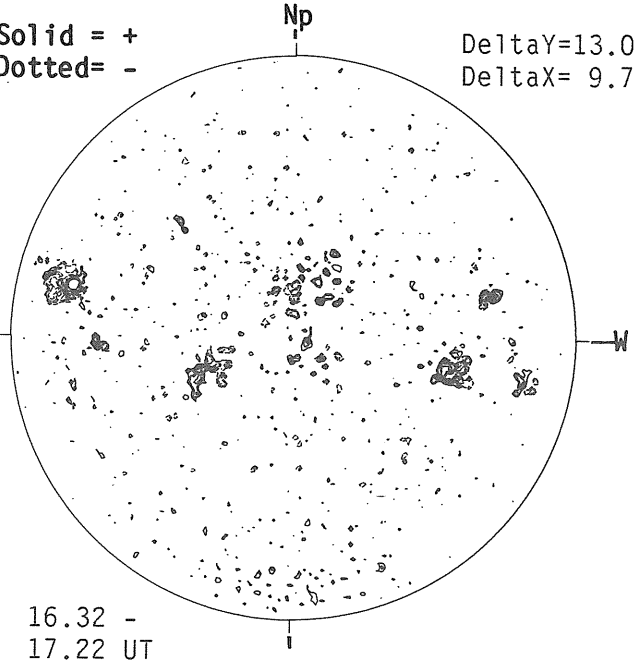
Solid = +
Dashed= -



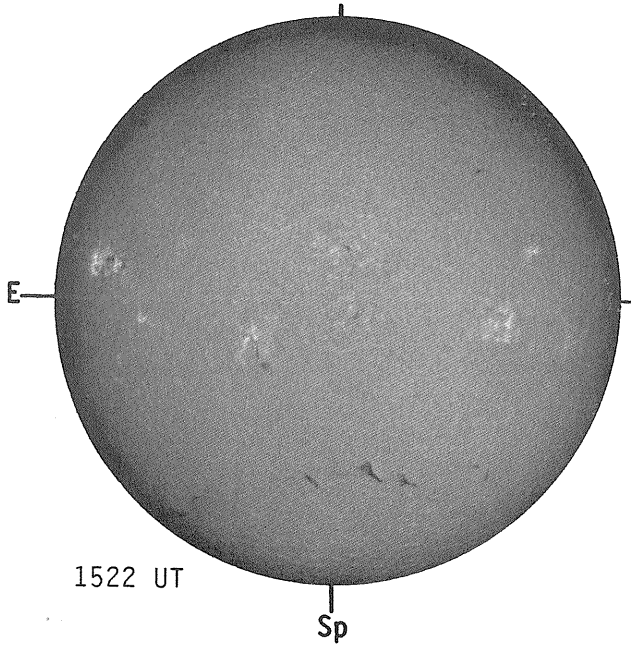
MT. WILSON MAGNETOGRAM

Solid = +
Dotted= -

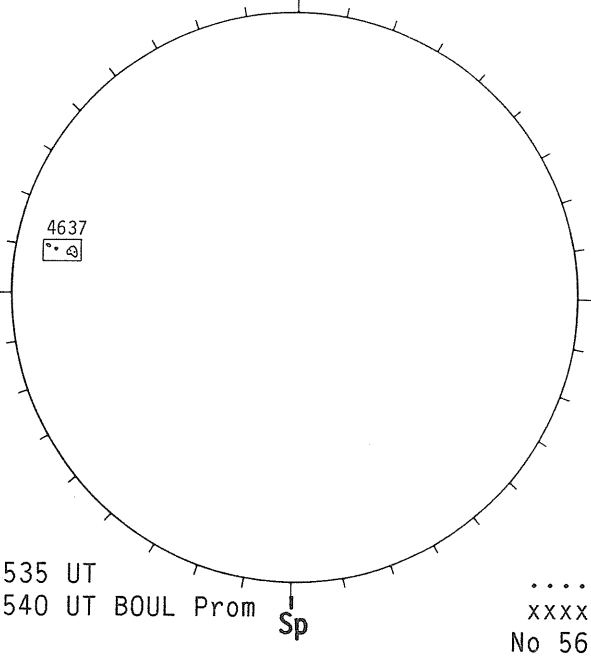
DeltaY=13.0
DeltaX= 9.7



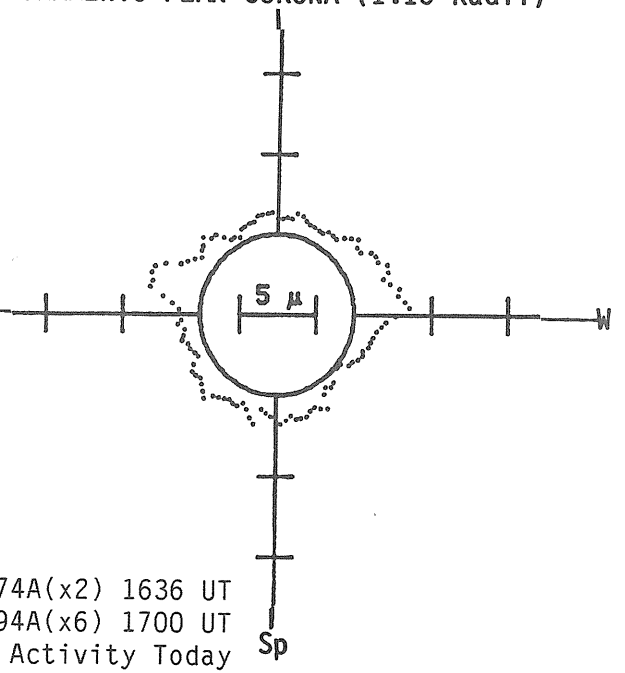
SACRAMENTO PEAK H-ALPHA



BOULDER SUNSPOTS



SACRAMENTO PEAK CORONA (1.15 Radii)

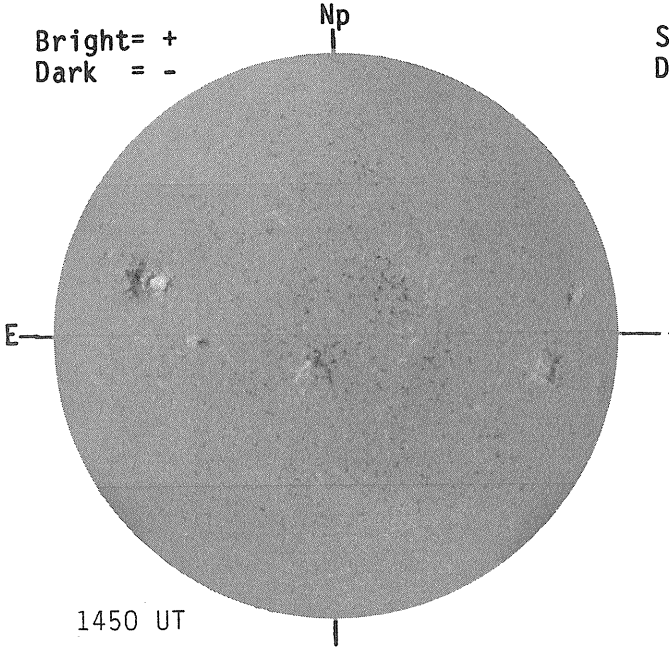


.... 6374A(x2) 1636 UT
xxxx 5694A(x6) 1700 UT
No 5694A Activity Today

M A R C H 25, 1 9 8 5 (P -25.65, B_o=-6.78, L_o= 297.94)

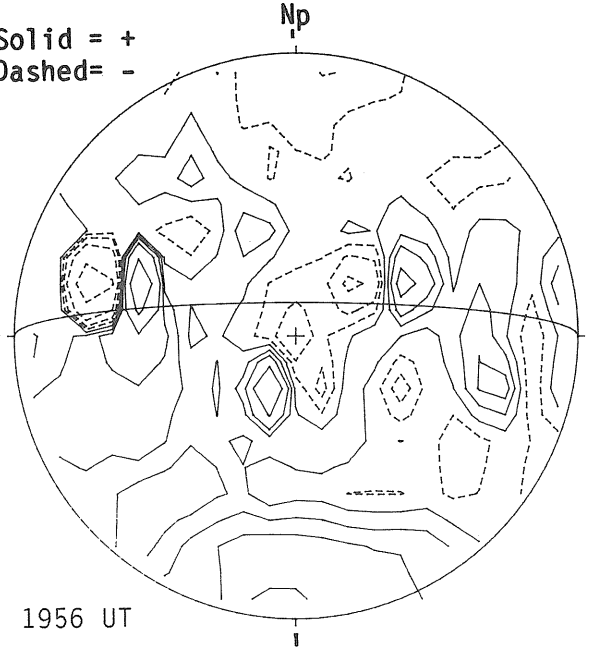
KITT PEAK MAGNETOGRAM

Bright= +
Dark = -



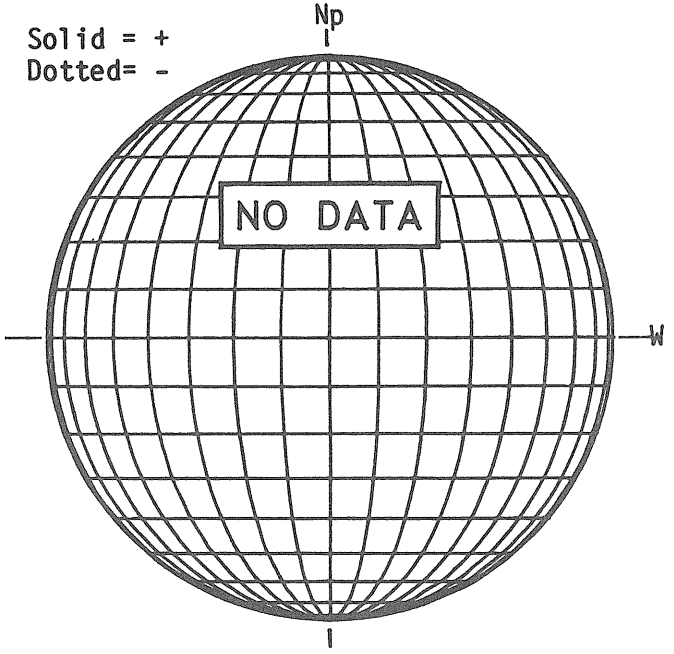
STANFORD MAGNETOGRAM

Solid = +
Dashed= -

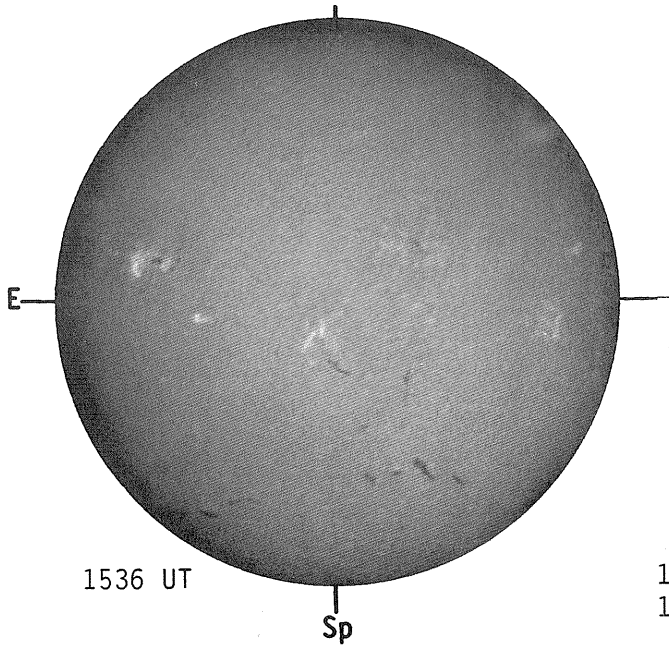


MT. WILSON MAGNETOGRAM

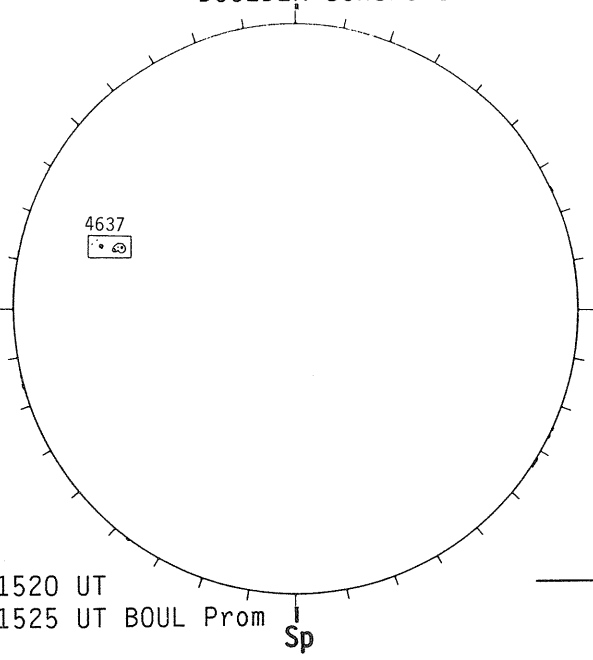
Solid = +
Dotted= -



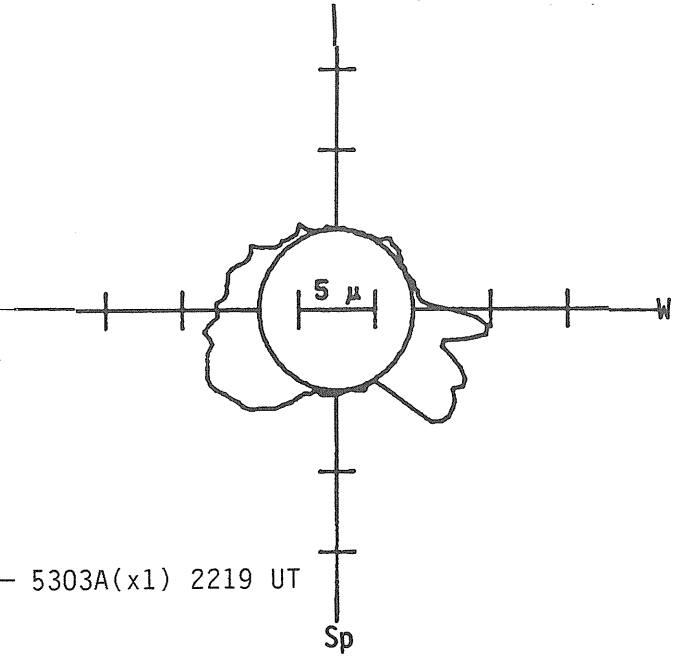
SACRAMENTO PEAK H-ALPHA



BOULDER SUNSPOTS



SACRAMENTO PEAK CORONA (1.15 Radii)

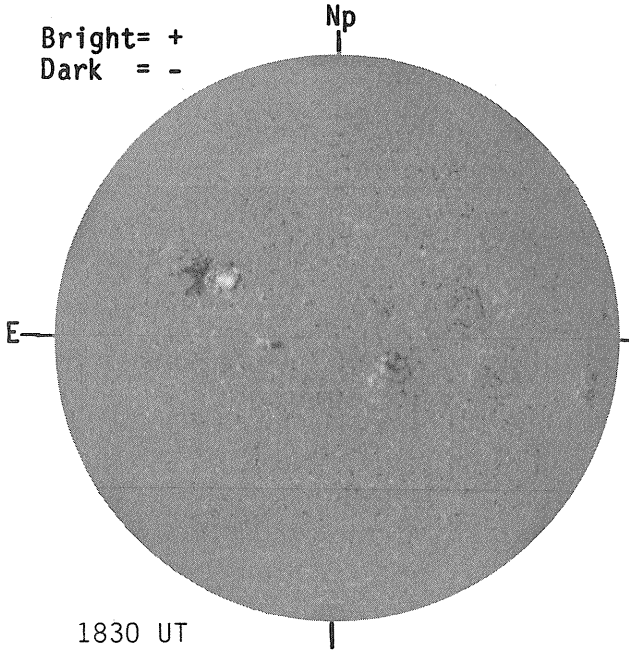


—— 5303A(x1) 2219 UT

M A R C H 26, 1 9 8 5 (P -25.74, B_o=-6.74, L_o= 284.75)

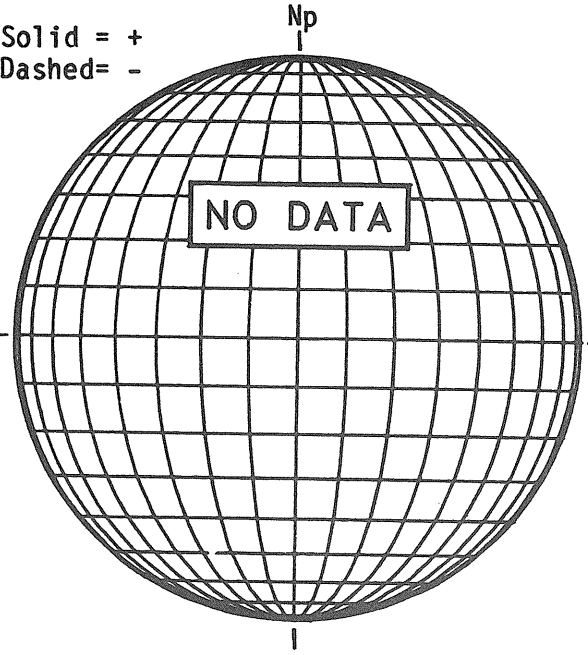
KITT PEAK MAGNETOGRAM

Bright= +
Dark = -



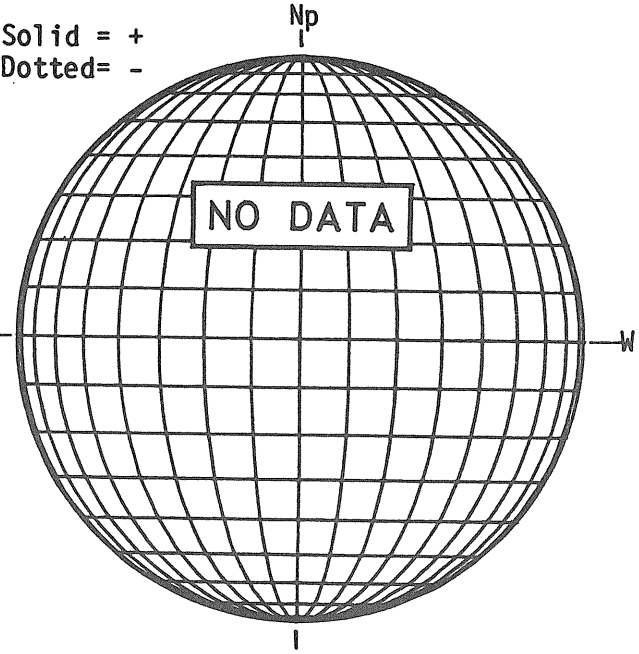
STANFORD MAGNETOGRAM

Solid = +
Dashed= -

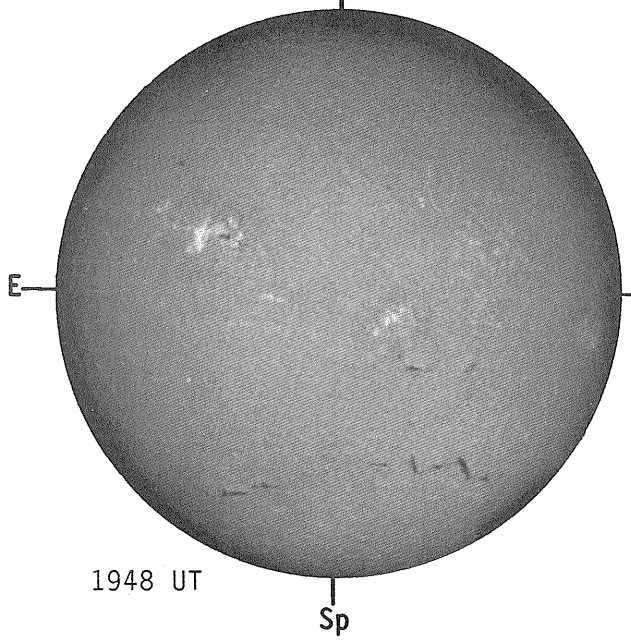


MT. WILSON MAGNETOGRAM

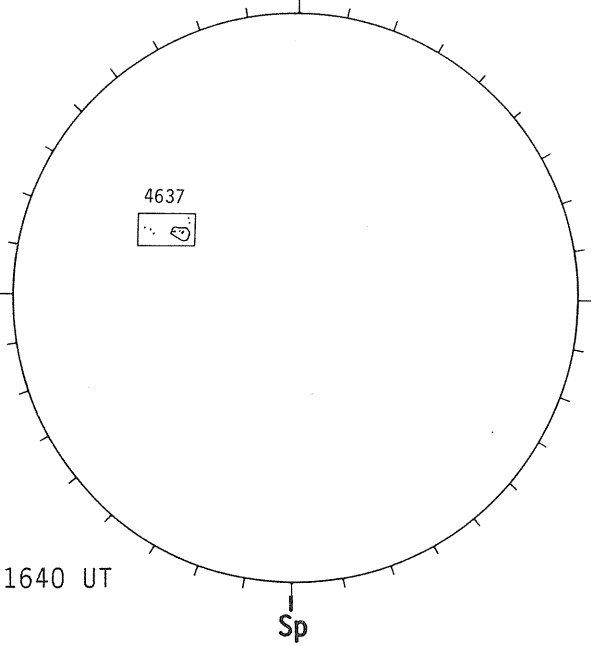
Solid = +
Dotted= -



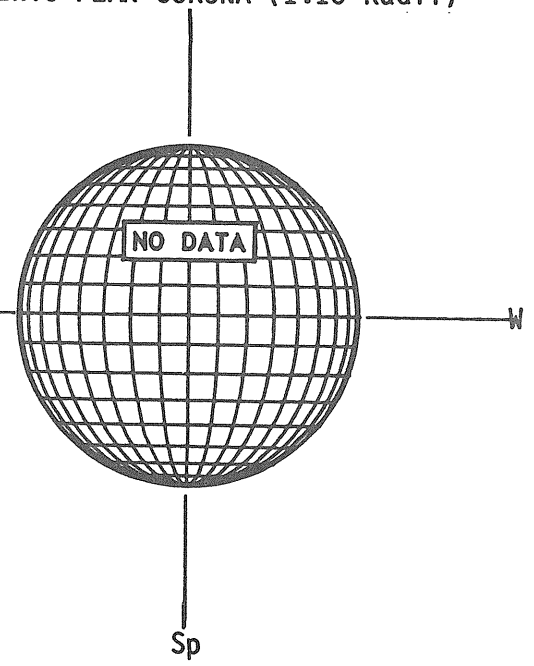
SACRAMENTO PEAK H-ALPHA



HOLLOMAN SUNSPOTS



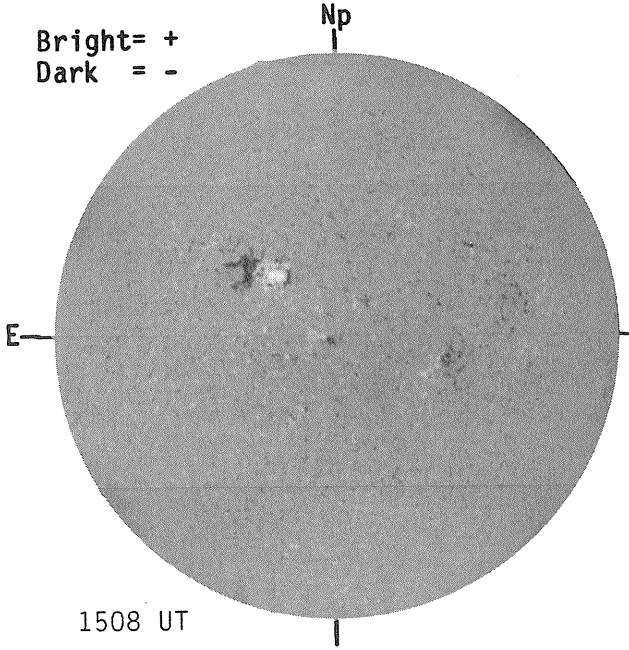
SACRAMENTO PEAK CORONA (1.15 Radii)



M A R C H 27, 1 9 8 5 (P -25.82, B_o=-6.70, L_o= 271.56)

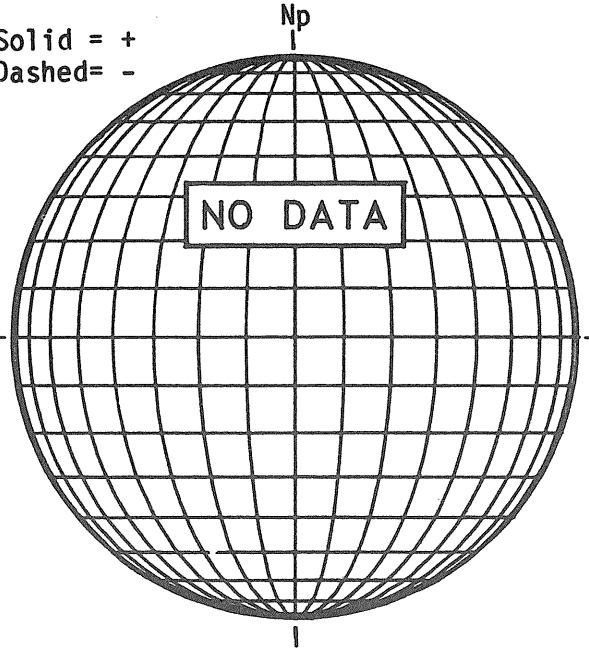
KITT PEAK MAGNETOGRAM

Bright= +
Dark = -



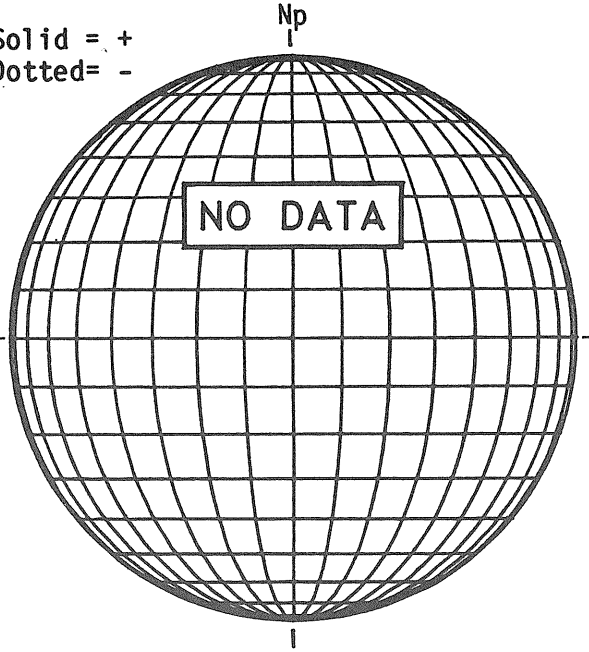
STANFORD MAGNETOGRAM

Solid = +
Dashed= -

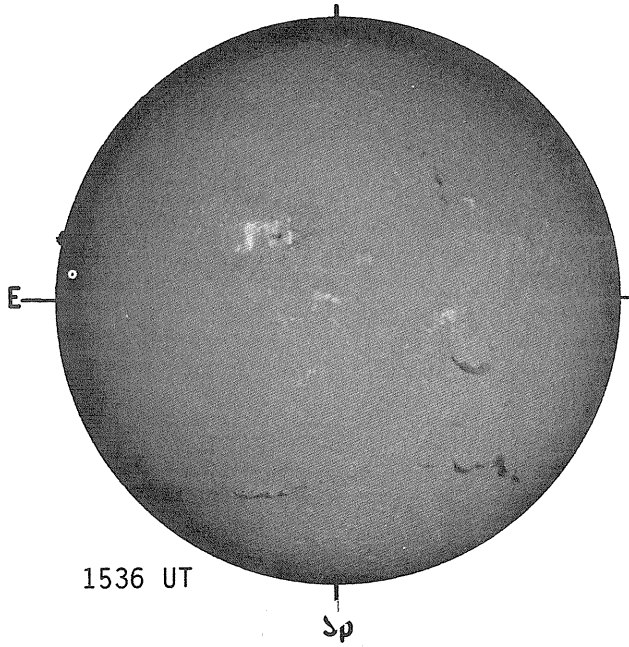


MT. WILSON MAGNETOGRAM

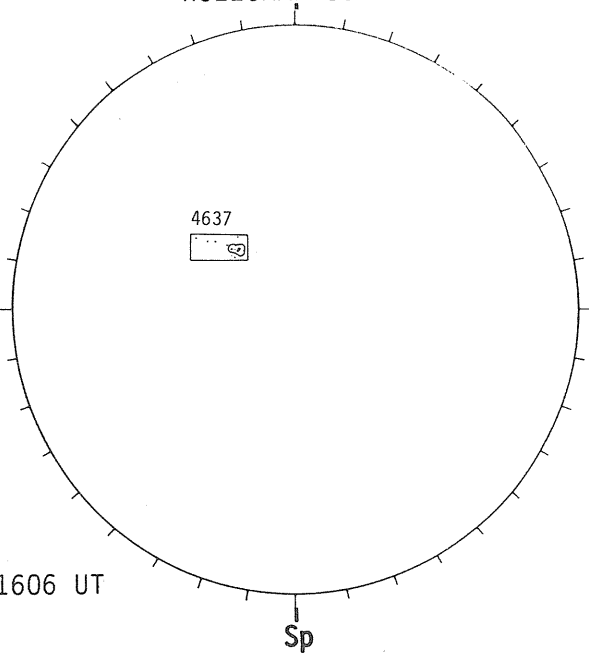
Solid = +
Dotted= -



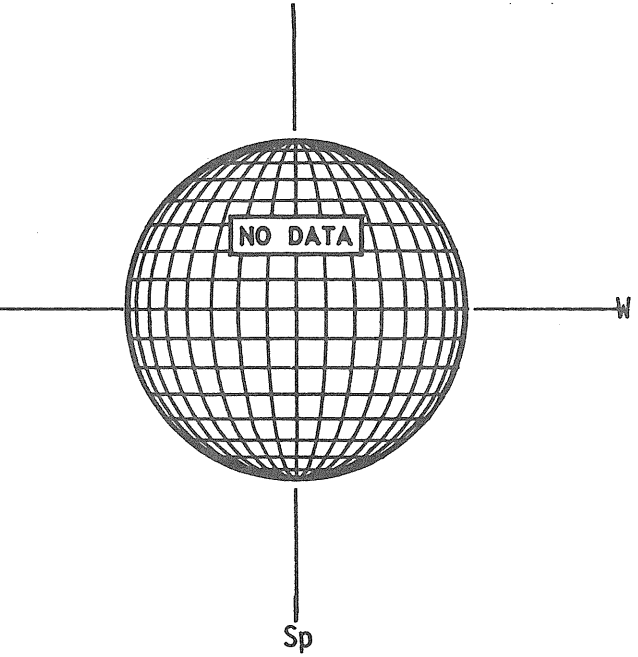
SACRAMENTO PEAK H-ALPHA



HOLLOMAN SUNSPOTS



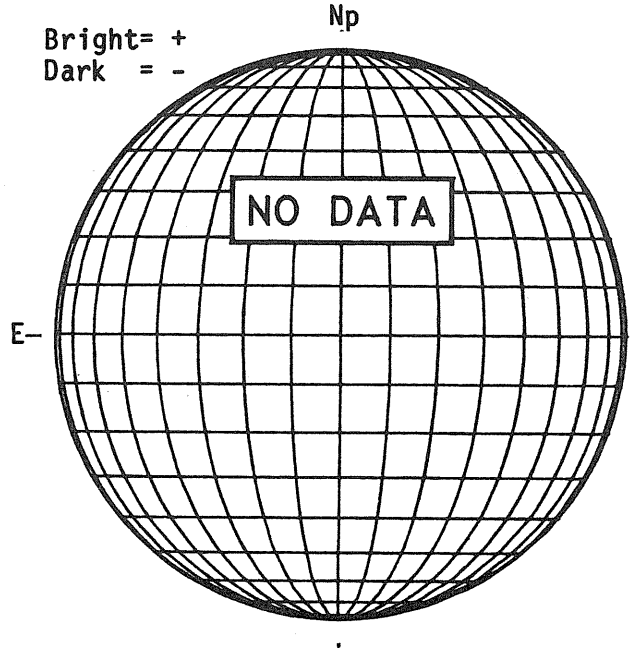
SACRAMENTO PEAK CORONA (1.15 Radii)



M A R C H 28, 1 9 8 5 (P -25.89, B_o=-6.65, L_o= 258.37)

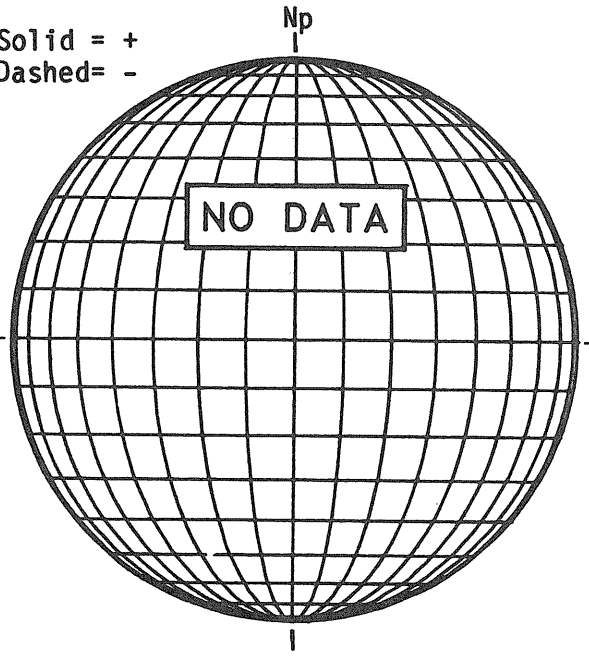
KITT PEAK MAGNETOGRAM

Bright= +
Dark = -



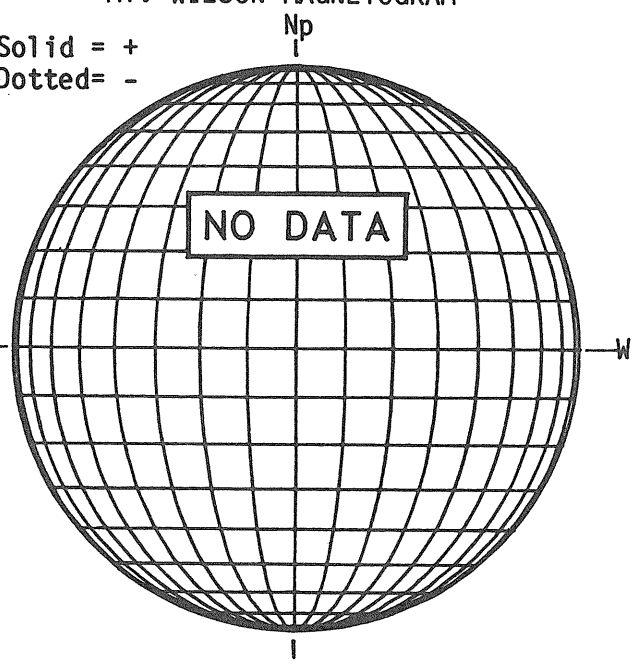
STANFORD MAGNETOGRAM

Solid = +
Dashed= -

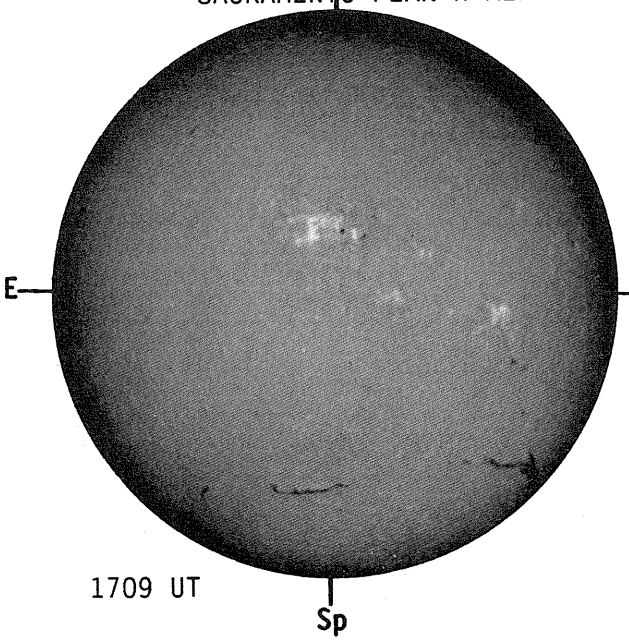


MT. WILSON MAGNETOGRAM

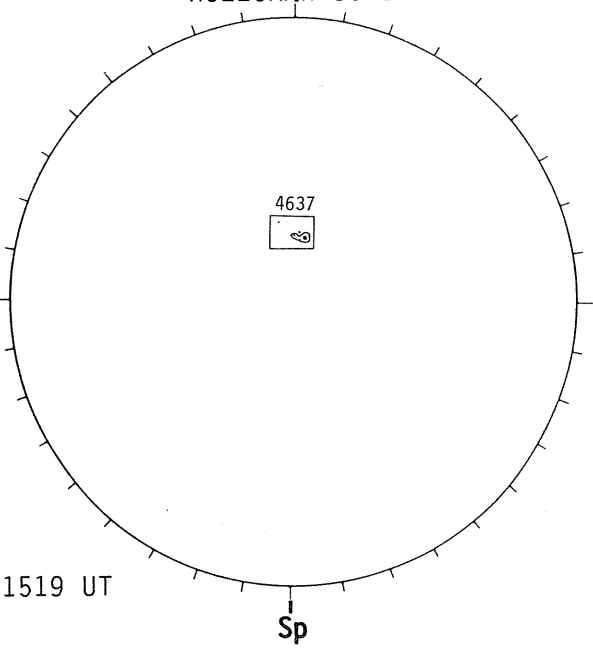
Solid = +
Dotted= -



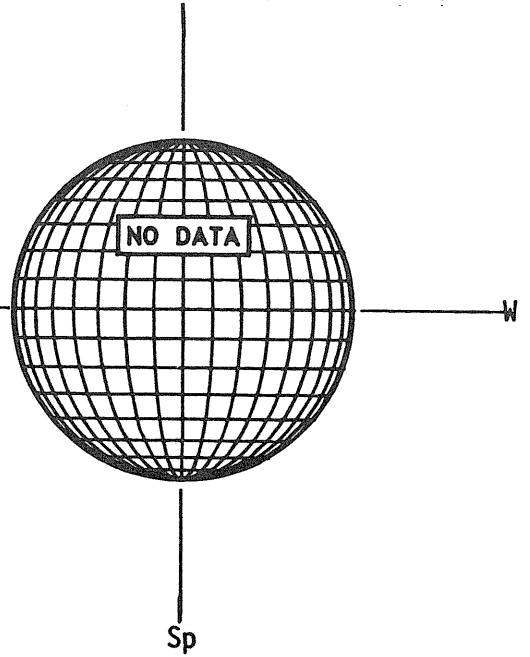
SACRAMENTO PEAK H-ALPHA



HOLLOMAN SUNSPOTS



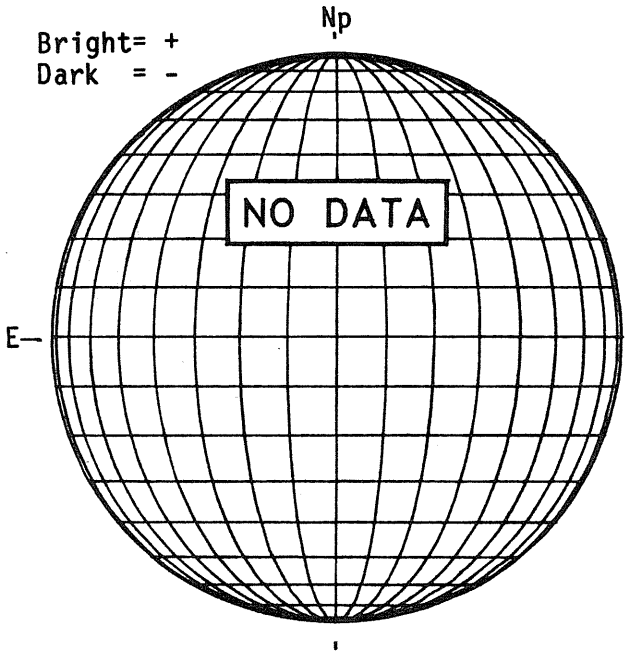
SACRAMENTO PEAK CORONA (1.15 Radii)



M A R C H 29, 1 9 8 5 (P -25.96, B_o=-6.61, L_o= 245.18)

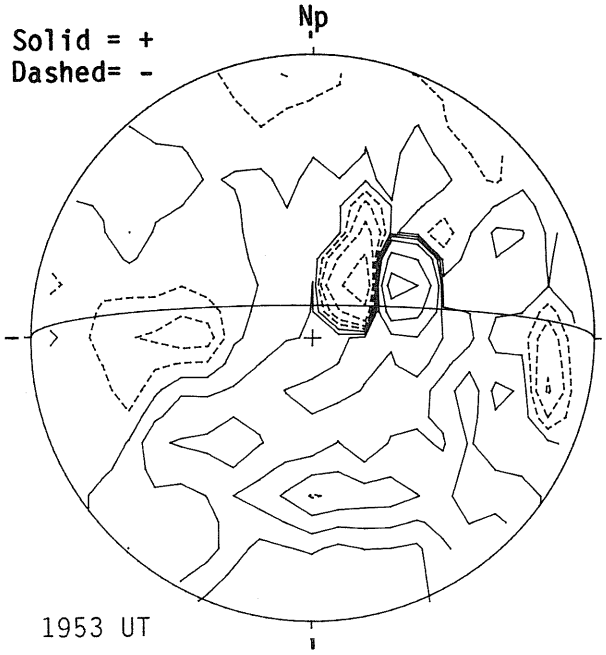
KITT PEAK MAGNETOGRAM

Bright= +
Dark = -



STANFORD MAGNETOGRAM

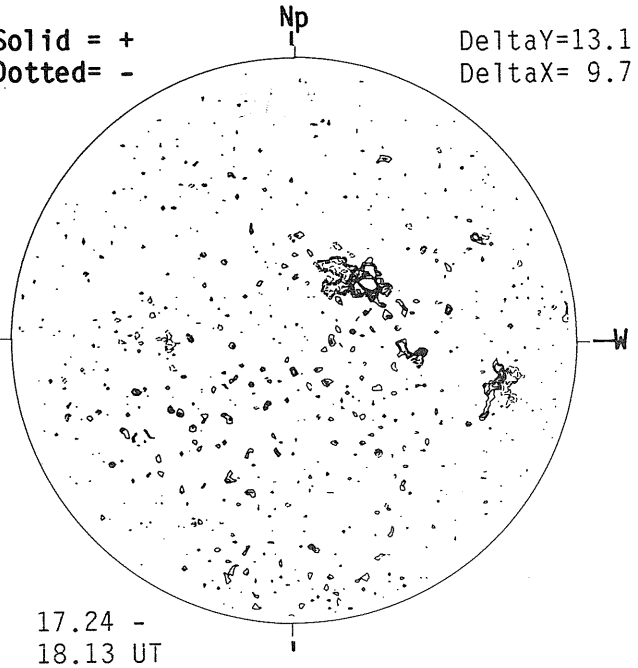
Solid = +
Dashed= -



MT. WILSON MAGNETOGRAM

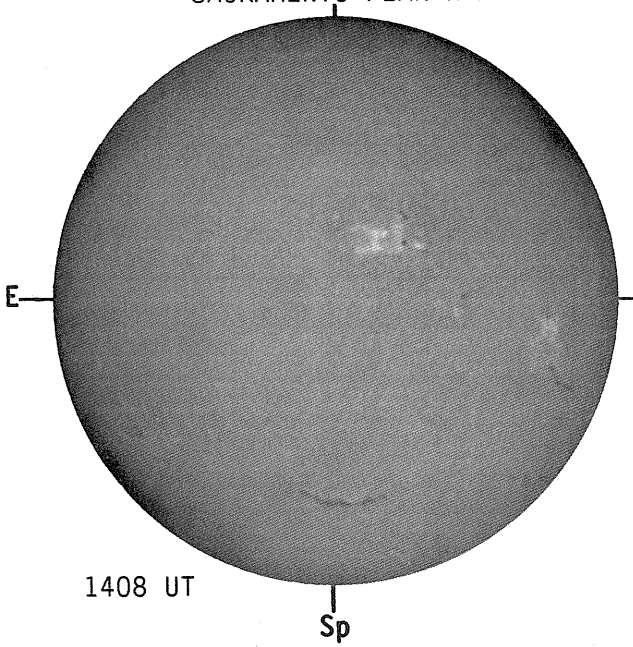
Solid = +
Dotted= -

DeltaY=13.1
DeltaX= 9.7

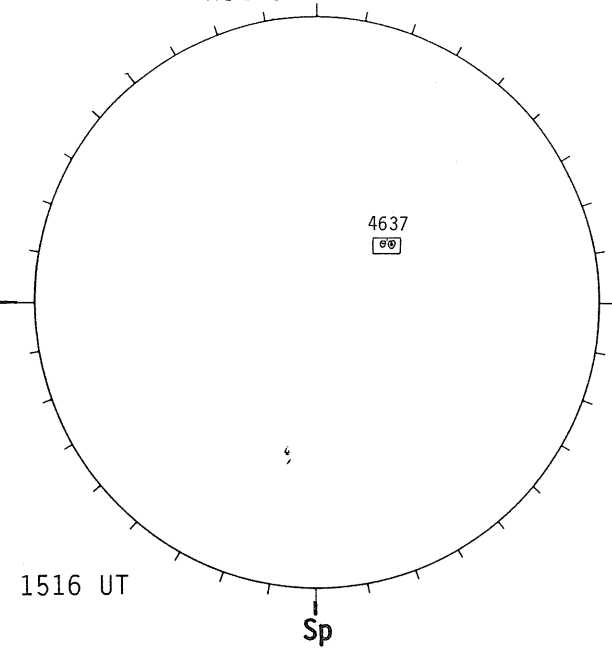


17.24 -
18.13 UT

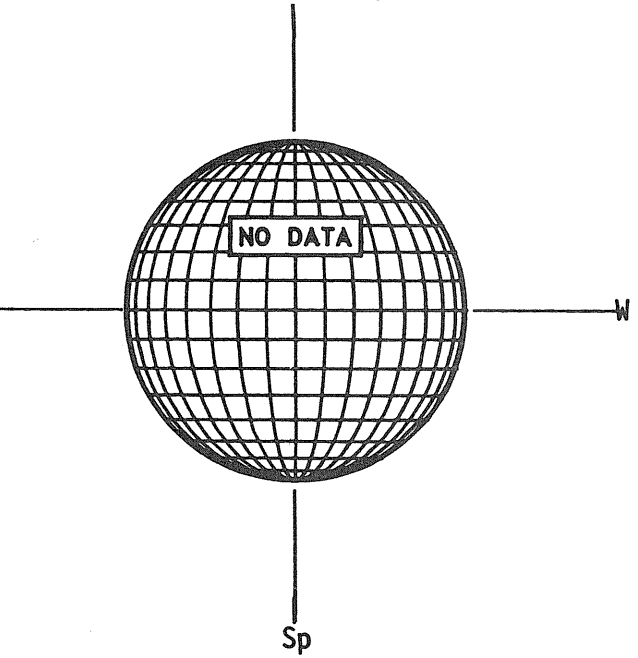
SACRAMENTO PEAK H-ALPHA



HOLLOMAN SUNSPOTS



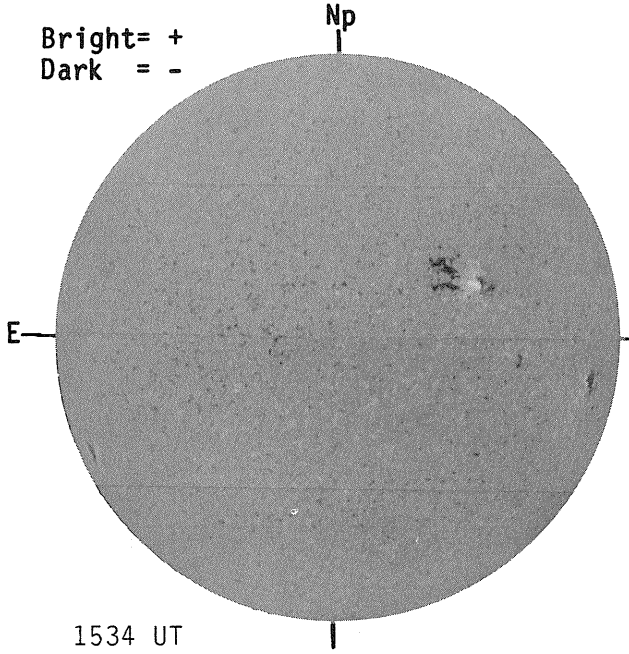
SACRAMENTO PEAK CORONA (1.15 Radii)



M A R C H 30, 1 9 8 5 (P -26.02, B_o=-6.56, L_o= 231.99)

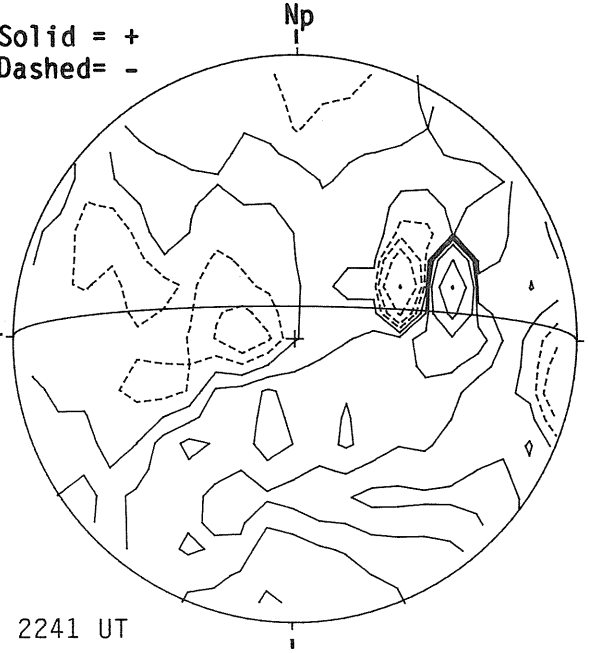
KITT PEAK MAGNETOGRAM

Bright= +
Dark = -



STANFORD MAGNETOGRAM

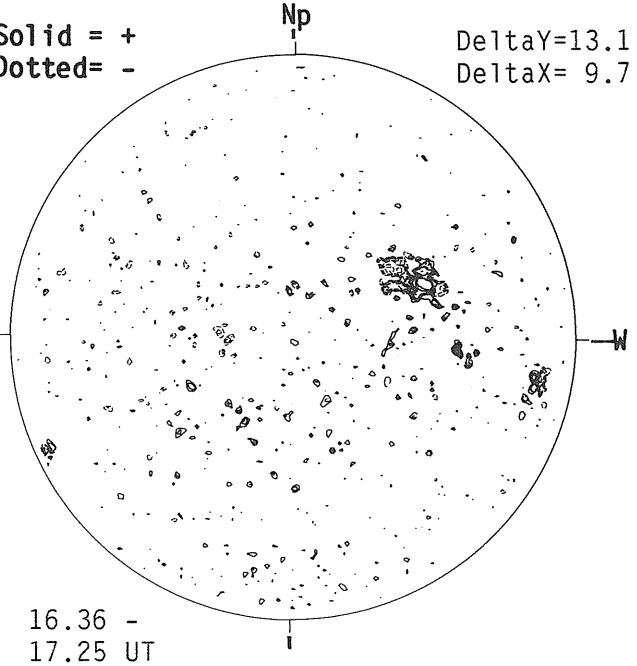
Solid = +
Dashed= -



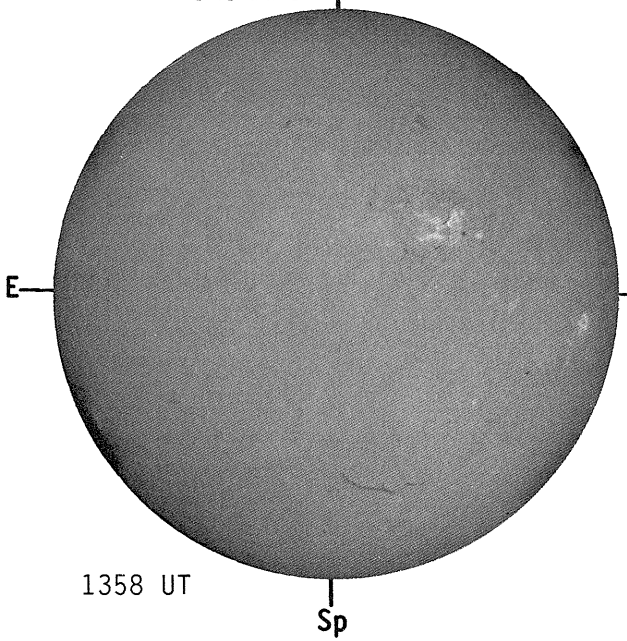
MT. WILSON MAGNETOGRAM

Solid = +
Dotted= -

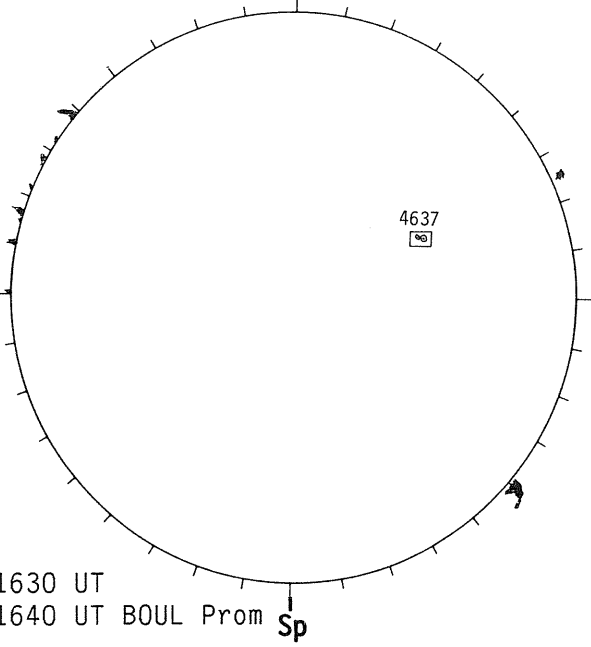
DeltaY=13.1
DeltaX= 9.7



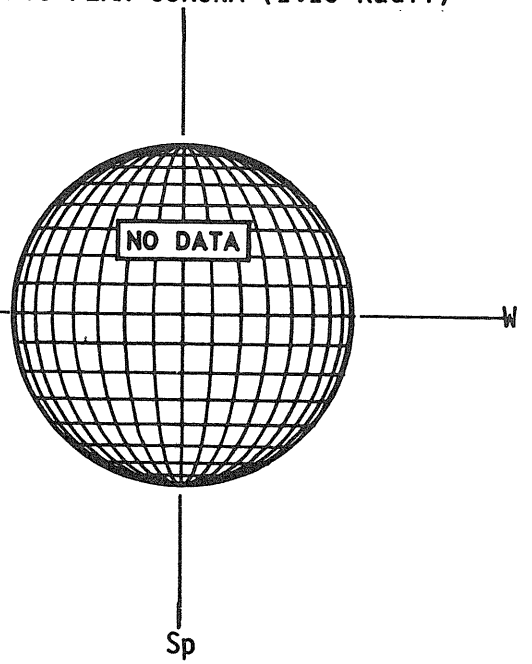
SACRAMENTO PEAK H-ALPHA



BOULDER SUNSPOTS



SACRAMENTO PEAK CORONA (1.15 Radii)



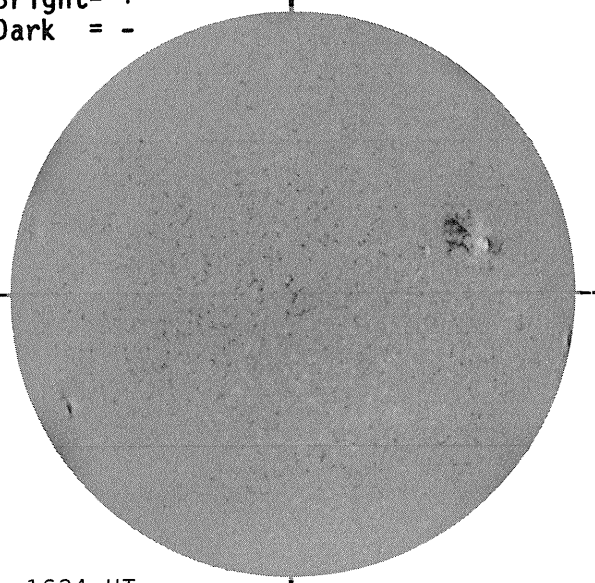
M A R C H 31, 1 9 8 5 (P -26.07, B_o=-6.51, L_o= 218.80)

Mar 85 60

KITT PEAK MAGNETOGRAM

Np

Bright= +
Dark = -



E

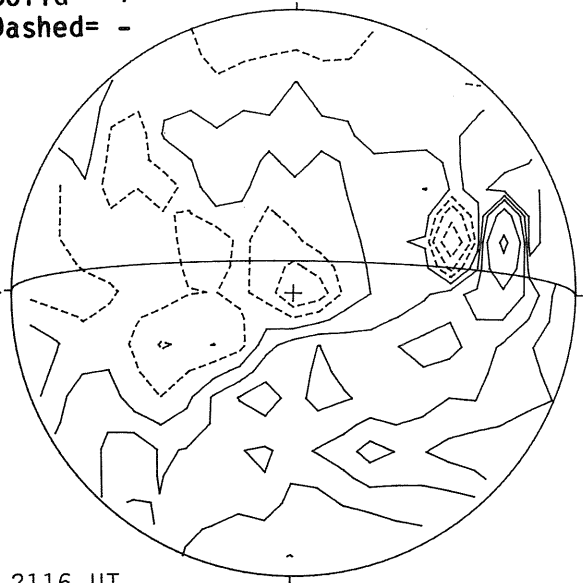
1634 UT

Sp

STANFORD MAGNETOGRAM

Np

Solid = +
Dashed= -



2116 UT

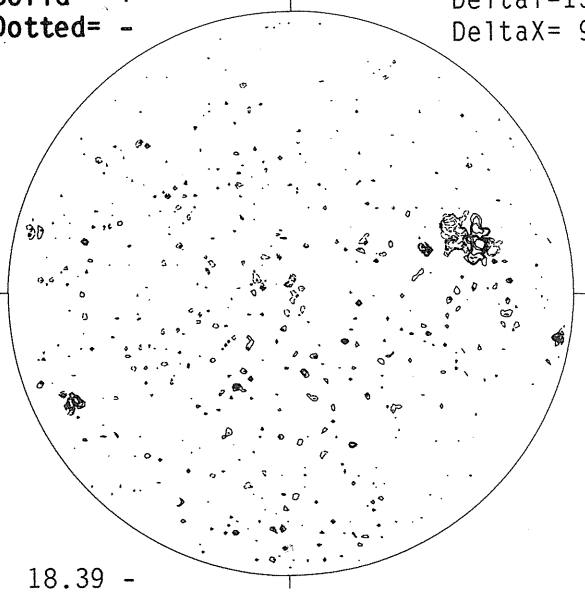
Sp

MT. WILSON MAGNETOGRAM

Np

Solid = +
Dotted= -

DeltaY=13.0
DeltaX= 9.7

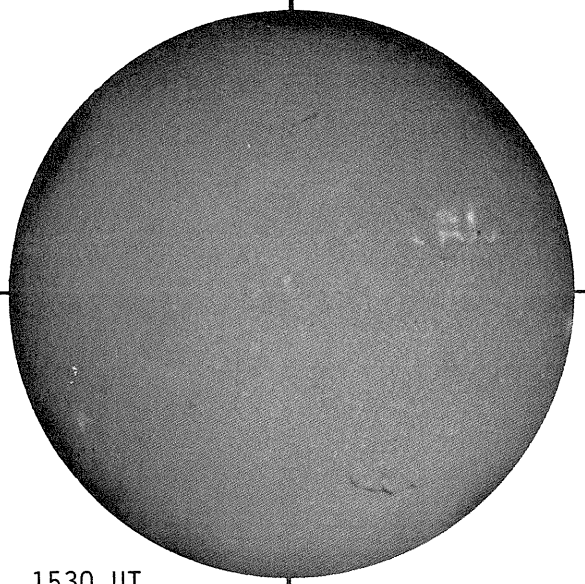


W

18.39 -
19.28 UT

Sp

SACRAMENTO PEAK H-ALPHA

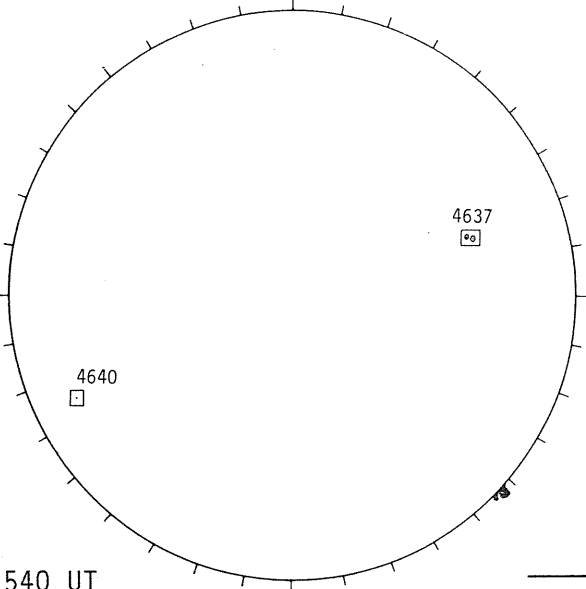


E

1530 UT

Sp

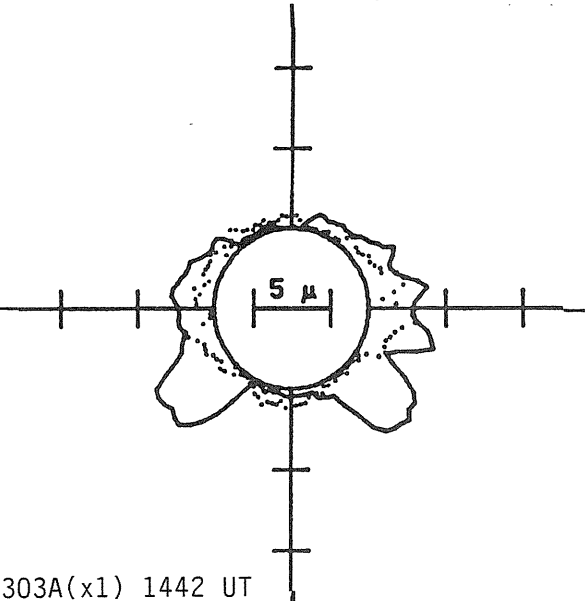
BOULDER SUNSPOTS



1540 UT
1545 UT BOUL Prom

Sp

SACRAMENTO PEAK CORONA (1.15 Radii)



W

Sp

—— 5303A(x1) 1442 UT
.... 6374A(x2) 1533 UT
xxxx 5694A(x6) 1512 UT
No 5694A Activity Today

SUNSPOT GROUPS
(ORDERED BY CENTRAL MERIDIAN PASSAGE DATE)

MARCH 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
4632		LEAR	03 11 0508	N08 W33	03 8.7		B	BXO	10	5	3	3
4632		RAMY	03 11 1237	N08 W37	03 8.8		B	BXO	10	5	4	4
4632		HOLL	03 11 1625	N07 W39	03 8.8		B	BXO	10	5	4	3
4632		PALE	03 11 1923	N08 W41	03 8.7		B	BXO	20	5	4	3
4632	24208	MWIL	03 11 1945	N07 W42	03 8.7	4	(AP)					
4632		LEAR	03 12 0017	N07 W44	03 8.7		B	BXO	50	5	3	3
4632		ATHN	03 12 0900	N07 W46	03 8.9		B	BRO	40	2	3	1
4632		RAMY	03 12 1230	N07 W50	03 8.8		B	DAO	80	9	4	4
4632	24208	MWIL	03 12 1530	N08 W51	03 8.8	3	(AP)					
4632		HOLL	03 12 1535	N08 W52	03 8.8		B	BXO	20	4	5	3
4632		PALE	03 12 1838	N07 W54	03 8.7		B	CRO	40	7	5	4
4632		MANI	03 12 2312	N08 W55	03 8.8			CRO	30	3	4	2
4632		LEAR	03 13 0038	N07 W57	03 8.8		B	CRO	30	3	5	3
4632		RAMY	03 13 1318	N07 W63	03 8.8		B	CAO	20	4	7	4
4632		BOUL	03 13 1548	N09 W59	03 9.2		A	AXX	20	1	1	3
4632	24208	MWIL	03 13 1600	N08 W65	03 8.8	3	(B)					
4632		PALE	03 13 1835	N07 W66	03 8.8		B	BXO	20	4	5	3
4632		HOLL	03 13 2255	N08 W66	03 9.0		A	AXX	10	1		2
4632		LEAR	03 14 0041	N08 W68	03 8.9		A	AXX	10	1	1	2
4632		RAMY	03 14 1233	N08 W73	03 9.0		B	BXO		2	1	4
4632	24208	MWIL	03 14 1600	N08 W79	03 8.7	2	(AF)					
4630		HOLL	03 08 1000	S02 E55	03 12.5		B	BXO	10	3	4	3
4630		RAMY	03 08 1400	S02 E57	03 12.8		B	BXO	10	5	4	3
4630	24206	MWIL	03 08 1600	S02 E56	03 12.8	3	B					
4630		BOUL	03 08 1701	S02 E52	03 12.6		B	CSO	30	3	3	2
4630		PALE	03 08 1920	S02 E54	03 12.8		B	BXO	30	3	3	2
4630		MANI	03 09 0007	S02 E50	03 12.7			CRO	10	3	3	2
4630		RAMY	03 09 1340	S02 E43	03 12.8		B	BXO	10	6	4	4
4630	24206	MWIL	03 09 1730	S02 E40	03 12.7	3	(B)					
4630		PALE	03 09 1930	S03 E41	03 12.9		B	BXO	10	4	4	3
4630		HOLL	03 09 2052	N02 E37	03 12.6		B	BXO	20	4	3	2
4630		MANI	03 09 2312	S03 E38	03 12.8			BXO	10	3	4	3
4630		LEAR	03 10 0410	S02 E34	03 12.7		B	BXO	10	2	3	2
4631		HOLL	03 08 1000	S14 E70	03 13.7		A	AXX	10	2	2	3
4631		RAMY	03 08 1400	S15 E70	03 13.9		A	AXX		1		3
4631	24207	MWIL	03 08 1600	S15 E70	03 14.0	3	X					
4631		BOUL	03 08 1701	S14 E68	03 13.8		A	AXX	20	1	1	2
4631		PALE	03 08 1920	S15 E67	03 13.9		A	AXX	10	2	1	2
4631		RAMY	03 11 1237	S18 E31	03 13.9		B	BXO		3	2	4
4631		RAMY	03 11 1237	S18 E31	03 13.9		B	BXO		3	2	4
4631		HOLL	03 11 1625	S17 E28	03 13.8		A	AXX	10	2	2	3
4631		PALE	03 11 1923	S17 E27	03 13.9		A	AXX	10	2	2	3
4631	24209	MWIL	03 11 1945	S17 E27	03 13.8	3	(B)					
4631		LEAR	03 12 0017	S16 E24	03 13.8		A	AXX	10	1	1	3
4631		RAMY	03 12 1230	S09 E17	03 13.8		A	AXX		1		4
4635		BOUL	03 18 1632	N06 W60	03 14.2		A	AXX	20	1	1	3
4635		PALE	03 18 1913	N06 W64	03 14.0		B	BXO	10	3	4	3
4635		LEAR	03 19 0043	N07 W65	03 14.2		A	AXX	10	1	1	2
4635A		LEAR	03 10 0410	N15 E53	03 14.2		A	AXX	10	1	1	2
4635B		MANI	03 09 0007	S12 E75	03 14.7			AXX	20	2	1	2
4633		HOLL	03 16 1657	S12 E48	03 20.3		B	BXO	10	2	2	3
4633		RAMY	03 16 1737	S12 E48	03 20.4		B	BXO	30	6	3	3
4633		PALE	03 16 1940	S13 E46	03 20.3		B	BXO	20	6	4	2
4633		LEAR	03 17 0042	S12 E43	03 20.3		B	BXO	30	6	5	4
4633		MANI	03 17 0214	S12 E42	03 20.3			BXO	20	5	5	3
4633		ATHN	03 17 0800	S12 E39	03 20.3		B	BXO	30	4	5	2
4633		RAMY	03 17 1415	S12 E37	03 20.4		B	CAO	30	11	4	3
4633		BOUL	03 17 1530	S11 E35	03 20.3		B	CSI	40	6	3	3
4633	24210	MWIL	03 17 1615	S12 E36	03 20.4	4	(B)					
4633		HOLL	03 17 1707	S12 E35	03 20.4		B	CAO	60	10	5	3
4633		LEAR	03 18 0038	S12 E31	03 20.4		B	CRO	40	12	6	3
4633		MANI	03 18 0249	S11 E30	03 20.4			CRO	30	9	6	2
4633		ATHN	03 18 0630	S12 E29	03 20.5			CAO	40	8	3	3
4633		HOLL	03 18 1537	S12 E24	03 20.5		B	CRO	50	9	4	2
4633		BOUL	03 18 1632	S11 E22	03 20.3		B	CSI	30	7	3	3

SUNSPOT GROUPS
(ORDERED BY CENTRAL MERIDIAN PASSAGE DATE)

MARCH 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
4633		PALE	03	18	1913	S12	E21	03	20.4		B	CRO	50	10	6	3
4633		LEAR	03	19	0043	S12	E18	03	20.4		B	CRO	30	6	4	2
4633		RAMY	03	19	1338	S12	E12	03	20.5		B	CAO	50	11	4	3
4633	24210	MWIL	03	19	1515	S12	E11	03	20.5	4	(B)					
4633		PALE	03	19	1920	S12	E09	03	20.5		B	CRO	20	5	3	2
4633		HOLL	03	19	2216	S12	E06	03	20.4		B	CRO	20	5	4	2
4633		MANI	03	19	2250	S12	E05	03	20.3			CRO	20	5	4	3
4633		LEAR	03	20	0012	S12	E06	03	20.5		B	CRO	20	6	4	3
4633		ATHN	03	20	0600	S12	E04	03	20.6			CRO	20	2	2	2
4633	24210	MWIL	03	20	1515	S12	W05	03	20.3	3	(BP)					
4633		BOUL	03	20	1612	S13	W04	03	20.4		B	BXO	20	4	4	3
4633		HOLL	03	20	1705	S12	W03	03	20.5		A	AXX		1		3
4633		PALE	03	20	1935	S12	W03	03	20.6		A	AXX		1		2
4633		ATHN	03	21	0800	S11	W09	03	20.7			AXO	10	2		3
4638		LEAR	03	23	0137	N05	W24	03	21.3		A	AXX	10	1	1	3
4638		HOLL	03	23	1623	N04	W32	03	21.3		A	AXX		1		4
4638		PALE	03	23	2220	N05	W35	03	21.3		A	AXX	10	2	2	2
4638		LEAR	03	24	0912	N04	W42	03	21.2		B	BXO	10	2	2	2
4638		RAMY	03	24	1228	N04	W42	03	21.4		B	CRO	30	6	4	4
4638	24212A	MWIL	03	24	1515	N04	W44	03	21.3	4	(B)					
4638		HOLL	03	24	1606	N04	W44	03	21.4		B	BXO	10	4	4	4
4638		PALE	03	24	2319	N04	W49	03	21.3		A	AXX	10	2	2	2
4638		LEAR	03	25	0059	N03	W49	03	21.4		B	CRO	20	3	5	3
4638		RAMY	03	25	1242	N03	W60	03	21.0		A	AXX		1		4
4638		LEAR	04	25	0059	N03	W49	04	21.4		B	CRO	20	3	5	3
4638		RAMY	04	25	1242	N03	W60	04	21.0		A	AXX		1		4
4634		LEAR	03	18	0038	S09	E52	03	21.9		B	BXO	10	3	2	3
4634		MANI	03	18	0249	S09	E52	03	22.0			BXO	10	2	1	2
4634		ATHN	03	18	0630	S11	E49	03	22.0			BXO	30	3	3	3
4634		HOLL	03	18	1537	S09	E44	03	22.0		B	BXO	20	7	2	2
4634		BOUL	03	18	1632	S10	E42	03	21.8		B	BXO	30	4	3	3
4634		PALE	03	18	1913	S10	E42	03	22.0		B	BXO	20	4	4	3
4634		LEAR	03	19	0043	S10	E39	03	22.0		B	BXO	10	4	3	2
4634		RAMY	03	19	1338	S11	E33	03	22.1		A	AXX	10	2	2	3
4634		PALE	03	19	1920	S11	E30	03	22.1		A	AXX		2	1	2
4634		HOLL	03	19	2216	S11	E28	03	22.0		A	AXX		1		2
4634		MANI	03	19	2250	S11	E27	03	22.0			AXX	10	1	1	3
4634		LEAR	03	20	0012	S11	E27	03	22.0		A	AXX	10	1	1	3
4634		LEAR	03	22	0430	S14	E02	03	22.3		B	BXO	20	5	4	2
4634		LEAR	03	24	0912	S13	W33	03	21.9		B	BXO	20	2	3	2
4634		RAMY	03	24	1228	S14	W34	03	21.9		B	BXO	10	2	3	4
4634	24213	MWIL	03	24	1515	S13	W36	03	21.9	4	(B)					
4634		HOLL	03	24	1606	S14	W36	03	22.0		B	BXO	10	2	3	4
4634		PALE	03	24	2319	S12	W41	03	21.9		A	AXX		1		2
4634		LEAR	03	25	0059	S12	W42	03	21.9		A	AXX	10	1	1	3
4634		LEAR	04	25	0059	S12	W42	04	21.9		A	AXX	10	1	1	3
4634A		BOUL	03	20	1612	S24	E31	03	23.1		A	AXX		1	1	3
4634B		ATHN	03	21	0800	N01	E40	03	24.3		A	AXX	10	1		3
4634B		RAMY	03	21	1618	N02	E32	03	24.1		A	AXX		1		3
4636		LEAR	03	21	0007	S15	E68	03	26.2		A	AXX	10	1	1	2
4636		LEAR	03	22	0430	S14	E53	03	26.2		A	AXX	10	⊙1	1	2
4636		RAMY	03	25	1242	S12	E08	03	26.1		A	AXX		1		4
4636		RAMY	03	26	1240	S11	W09	03	25.9		A	AXX	10	2	1	4
4636		LEAR	03	28	0115	S11	W28	03	25.9		A	AXX	10	1	1	3
4636		ATHN	03	28	0615	S10	W29	03	26.1			AXX	10	1	1	3
4636		RAMY	03	28	1550	S11	W36	03	26.0		B	BXO		3	2	4
4636		LEAR	03	29	0018	S10	W41	03	25.9		B	BXO	10	2	3	3
4636		MANI	03	29	0040	S11	W41	03	25.9			AXX	10	1	1	3
4636		LEAR	03	30	0025	S11	W54	03	26.0		A	AXX	10	1	1	3
4636		RAMY	03	30	1241	S11	W60	03	26.0		B	BXO	20	5	3	4
4636		HOLL	03	30	1530	S11	W63	03	25.9		B	BXO		3	3	3
4636		LEAR	03	31	0004	S10	W64	03	26.2		A	AXX	10	1	1	3
4636		RAMY	03	31	1227	S11	W71	03	26.2		A	AXX		1		5
4639		LEAR	03	24	0912	S06	E47	03	27.9		B	BXO	10	3	4	2
4639		RAMY	03	24	1228	S07	E45	03	27.9		B	CRO	40	6	3	4

SUNSPOT GROUPS
(ORDERED BY CENTRAL MERIDIAN PASSAGE DATE)

MARCH 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
4639	24214	MWIL	03 24 1515	S07 E43	03 27.9	4	(B)					
4639		HOLL	03 24 1606	S06 E43	03 27.9		B	BXO	10	4	3	4
4639		PALE	03 24 2319	S07 E40	03 28.0		B	BXO	20	4	4	2
4639		LEAR	03 25 0059	S08 E38	03 27.9		B	BXO	20	5	4	3
4639		RAMY	03 25 1242	S07 E31	03 27.9		B	BXO	20	5	3	4
4639		LEAR	03 30 0025	S08 W31	03 27.7		A	AXX	10	1	1	3
4639		LEAR	04 25 0059	S08 E38	04 27.9		B	BXO	20	5	4	3
4639		RAMY	04 25 1242	S07 E31	04 27.9		B	BXO	20	5	3	4
4639A		PALE	03 29 1929	S09 W18	03 28.5		A	AXX		1		3
4639A		MANI	03 29 2347	S09 W20	03 28.5			AXX	10	1	1	2
4637		LEAR	03 22 0430	N06 E84	03 28.5		A	HKI	50	2	2	2
4637		RAMY	03 22 1340	N07 E80	03 28.6		A	HKX	120	2	3	4
4637		HOLL	03 22 1631	N07 E79	03 28.6		A	HKX	330	3	4	4
4637	24211	MWIL	03 22 1700	N07 E78	03 28.6	6	(AP)					
4637		BOUL	03 22 1830	N06 E73	03 28.2		A	HRX	90	3	3	2
4637		PALE	03 22 1955	N06 E77	03 28.6		A	HKX	320	3	4	3
4637		MANI	03 22 2353	N06 E74	03 28.5			HKX	370	3	3	3
4637		LEAR	03 23 0137	N07 E75	03 28.7		B	DKC	80	3	5	3
4637		ATHN	03 23 0730	N05 E69	03 28.5			DKC	200	3	5	2
4637	24211	MWIL	03 23 1515	N07 E68	03 28.7	6	(B)					
4637		RAMY	03 23 1559	N07 E68	03 28.8		B	DKO	380	8	9	4
4637		HOLL	03 23 1623	N08 E69	03 28.9		B	DKO	510	5	10	4
4637		BOUL	03 23 1630	N06 E67	03 28.7		B	CAO	170	4	10	2
4637		PALE	03 23 2220	N07 E66	03 28.9		B	EHO	290	6	12	2
4637		LEAR	03 24 0912	N08 E59	03 28.8		B	DKO	160	11	10	2
4637		RAMY	03 24 1228	N07 E57	03 28.8		B	DKO	340	15	10	4
4637	24211	MWIL	03 24 1515	N06 E54	03 28.7	5	(B)					
4637		BOUL	03 24 1535	N05 E55	03 28.8		B	EKI	200	4	11	2
4637		HOLL	03 24 1606	N08 E56	03 28.9		B	EKO	280	8	11	4
4637		HOLL	03 24 1606	N08 E56	03 28.9		B	EKO	740	8	11	4
4637		PALE	03 24 2319	N07 E53	03 28.9		B	EKO	280	6	12	2
4637		LEAR	03 25 0059	N07 E49	03 28.7		B	DKO	250	5	10	3
4637		RAMY	03 25 1242	N07 E44	03 28.8		B	EKO	290	12	11	4
4637		BOUL	03 25 1520	N07 E43	03 28.9		B	DKI	220	7	9	3
4637		HOLL	03 25 1815	N06 E39	03 28.7		B	DKO	330	6	10	3
4637		LEAR	03 26 0038	N08 E38	03 28.9		B	CHO	330	13	11	3
4637		MANI	03 26 0110	N08 E37	03 28.8			DKO	270	15	12	2
4637		RAMY	03 26 1240	N07 E30	03 28.8		B	DKO	340	15	9	4
4637		HOLL	03 26 1640	N07 E27	03 28.7		B	DKO	420	8	10	3
4637		MANI	03 26 2300	N07 E24	03 28.8			CKO	210	9	9	3
4637		LEAR	03 27 0008	N08 E25	03 28.9		B	CKO	250	11	9	3
4637		HOLL	03 27 1606	N06 E15	03 28.8		B	CKO	350	11	11	2
4637		MANI	03 27 2316	N07 E09	03 28.6			CKO	180	10	10	2
4637		LEAR	03 28 0115	N07 E07	03 28.6		B	CKO	150	11	9	3
4637		ATHN	03 28 0615	N06 E06	03 28.7			CKO	220	10	7	3
4637		HOLL	03 28 1519	N07 E02	03 28.8		B	CKO	260	7	9	2
4637		RAMY	03 28 1550	N06 W00	03 28.7		B	DAO	190	11	3	4
4637		LEAR	03 29 0018	N05 W05	03 28.6		B	CSO	110	12	7	3
4637		MANI	03 29 0040	N06 W06	03 28.6			CKO	120	11	7	3
4637		ATHN	03 29 0630	N06 W08	03 28.7			DSO	190	13	6	3
4637		HOLL	03 29 1516	N06 W13	03 28.7		B	DSO	180	3	4	3
4637	24211	MWIL	03 29 1615	N06 W15	03 28.6	5	(AP)					
4637		PALE	03 29 1929	N05 W17	03 28.5		B	DSO	120	6	3	3
4637		MANI	03 29 2347	N06 W17	03 28.7			CSO	140	10	8	2
4637		LEAR	03 30 0025	N05 W19	03 28.6		B	DSO	170	10	4	3
4637		RAMY	03 30 1241	N05 W23	03 28.8		B	CAO	170	13	7	4
4637	24211	MWIL	03 30 1515	N06 W28	03 28.5	6	(AP)					
4637		HOLL	03 30 1530	N06 W27	03 28.6		B	DAO	150	5	4	3
4637		BOUL	03 30 1630	N06 W27	03 28.7		A	HSX	90	3	3	2
4637		LEAR	03 31 0004	N06 W33	03 28.5		B	DSO	130	7	3	3
4637		MANI	03 31 0103	N06 W32	03 28.6			DSO	120	6	6	3
4637		RAMY	03 31 1227	N05 W39	03 28.6		A	HAX	140	7	3	5
4637		ATHN	03 31 1240	N06 W37	03 28.8			DSO	150	4	4	3
4637	24211	MWIL	03 31 1515	N06 W41	03 28.6	5	(AP)					
4637		BOUL	03 31 1540	N07 W38	03 28.8		A	HSX	70	2	3	3
4637		HOLL	03 31 1545	N05 W41	03 28.6		B	DSO	80	5	3	3
4637		PALE	03 31 1910	N06 W43	03 28.6		B	DSO	110	2	4	3
4637		LEAR	04 01 0026	N06 W46	03 28.6		B	CSO	60	2	4	3
4637		ATHN	04 01 0630	N07 W48	03 28.7			DSO	190	2	4	3

SUNSPOT GROUPS
(ORDERED BY CENTRAL MERIDIAN PASSAGE DATE)

MARCH 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
4637	24211	MWIL	04	01	1530	N06	W54	03	28.6	5	(AP)					
4637		HOLL	04	01	1625	N06	W54	03	28.6		B	DSO	100	4	4	3
4637		PALE	04	01	1710	N06	W56	03	28.5		B	DAO	100	2	4	2
4637		LEAR	04	02	0012	N06	W58	03	28.7		B	CSO	60	2	3	3
4637		ATHN	04	02	0615	N07	W64	03	28.5			DAO	170	3	4	3
4637		RAMY	04	02	1310	N05	W67	03	28.5		B	DAO	130	2	3	4
4637		HOLL	04	02	1443	N06	W67	03	28.6		A	HSX	110	2	3	3
4637	24211	MWIL	04	02	1545	N06	W68	03	28.6	5	(AP)					
4637		BOUL	04	02	1635	N07	W66	03	28.7		A	HSX	60	2	3	3
4637		PALE	04	02	2026	N07	W71	03	28.5		A	HSX	80	2	4	2
4637		MANI	04	03	0016	N06	W73	03	28.5			DSO	90	2	3	3
4637		LEAR	04	03	0218	N06	W73	03	28.6		B	DSO	40	2	3	2
4637		ATHN	04	03	0605	N06	W80	03	28.3			CSO	120	3	3	3
4637		RAMY	04	03	1415	N06	W82	03	28.5		B	CAO	40	2	2	4
4637		BOUL	04	03	1505	N05	W82	03	28.5		A	HSX	40	1	1	2
4637		HOLL	04	03	1545	N07	W80	03	28.7		B	CSO	60	3	10	4
4637	24211	MWIL	04	03	1700	N05	W80	03	28.7	2	AP					
4637		PALE	04	03	1905	N08	W89	03	28.1		B	CRO	80	2	4	2
4637		LEAR	04	04	0104	N06	W89	03	28.4		A	AXX	10	1	1	3
4641		PALE	03	31	1910	N04	W29	03	29.6		A	AXX	10	2	2	3
4641		LEAR	04	01	0026	N02	W32	03	29.6		B	BXO	10	1	2	3

March 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
04	1313	1331	1401	1-	1		1				*		
04	1403	1418U	1452	1-	1		1				No Flare		
07	1343	1352U	1409	1-	1		1				No Flare		
09	1108	1130	1150	1-	1		1				*		
13	0324	0327	0344	1-	1				1		No Flare		
15	0119	0130	0140	1-	1				1		No Flare		
16	1450	1502	1522	1-	1		1				No Flare		
20	1210	1215	1230	1-	1		1				*		
21	1507	1518	1550	2+	5	1	4		1	12	1509 UT	C7.5	4637
21	2224	2232	2311	1-	1			1			2230E UT	C2.2	4637
22	0221	0230	0251	1-	1			1			No Flare		
23	0313	0320	0344	1-	3			1	1		0313 UT		4637
24	0906	0926U	0943	1-	1		1				No Flare		

* No flare patrol

SIDs by NOAA/SESC REGION

March 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	31
Region Number 4637																					2		1								
X-Ray																					2										
No Flare				1			1						1		1	1						1		1							
No Flare Patrol				1					1											1											
No Data																															
Event Totals				2			1		1				1		1	1				1	2	1	1	1							

OBSERVATORIES REPORTING FOR MAR 1985*

Ayrshire, Scotland (AY)	SES	Lintong, China (LT)	SPA
Edenvale, South Africa (A52)	SES	Louisville, Kentucky, USA (A26)	SES
Farsta, Sweden (FA)	SES	Maui, Hawaii, USA (MI)	SWF
Glenorchy, Tasmania, Australia (GN)	SES	Panska Ves, Czechoslovakia (PU)	SEA, SWF, SES
Hiraiso, Japan (HI)	SWF	Paterson, New Jersey, USA (A46)	SES
Houston, Texas, USA (A50)	SES	Sao Paulo, Brasil (UM)	SPA, SES
Inubo, Japan (IN)	SPA	St. Cloud, Minnesota, USA (SC)	SES
Juliusruh, GDR (JU)	SWF	Tavares, Florida, USA (A49)	SES
Kuhlungsborn, GDR (KU)	SPA, SEA	Upice, Czechoslovakia (UI)	SEA
Lake Hiawatha, New Jersey, USA (A32)	SES	Valley Cottage, New York, USA (A01)	SES
Latrobe, Pennsylvania, USA (A19)	SES	Vsetin, Czechoslovakia (VS)	SEA

*Observations are not necessarily continuous for each reporting station.

SOLAR RADIO EMISSION
SPECTRAL OBSERVATIONS

MARCH 1985

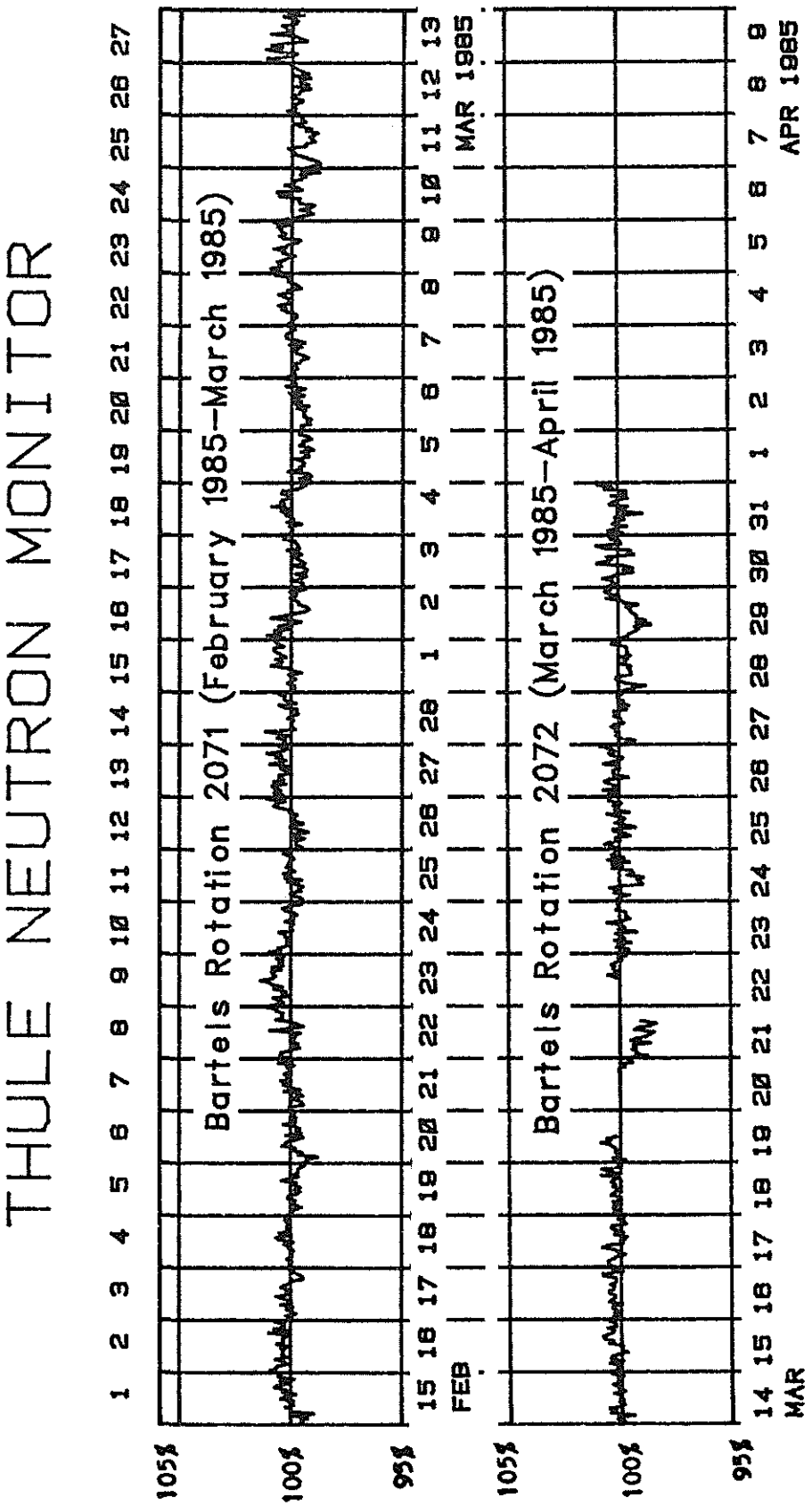
Day	Observation Start (UT)	Observation End (UT)	Sta	Decimetric Band Start (UT)	Decimetric Band End (UT)	Decimetric Band Int (1-3)	Metric Band Start (UT)	Metric Band End (UT)	Metric Band Int (1-3)	Dekametric Band Start (UT)	Dekametric Band End (UT)	Dekametric Band Int (1-3)	Spectral Type
01	0710	1620	BLEN										
			SGMR				1346.1	1346.3	1				III
02	0700	1610	BLEN										
04	1103	1640	BLEN										
05	0700	0720	BLEN										
	1014	1645	BLEN										
06	0650	1645	BLEN										
07	0650	1645	BLEN										
08	0650	1645	BLEN										
09	0650	1645	BLEN										
10	0650	1700	BLEN										
11	0640	1018	BLEN										
13	0803	1630	BLEN										
14	0630	1630	BLEN										
15	0630	1230	BLEN										
	1338	1640	BLEN										
16	0630	1640	BLEN										
17	0630	1640	BLEN										
18			LEAR				0155.0	0158.8	1				III
	0630	1640	BLEN										
19	0640	1640	BLEN										
			LEAR				0727.8	0729.3	1				III
20			LEAR				0730.5	0733.3	1				III
			LEAR				0957.6	0958.3	1				III
21			LEAR				0330.5	0330.8	1				III
			LEAR				0429.3	0430.1	1				III
			LEAR				0725.6	0732.8	1				G
			LEAR				0735.5	1018.0	1				CONT
	0909	1640	BLEN				0913.0	0913.9	2				III,G
			BLEN				1504.0	1513.7	2				III,GG
			SGMR				1530.0	2235.0	1				CONT
			PALE				2225.1	2226.8	3				V
			LEAR				2309.6	2310.1	1				III
22			LEAR				0908.1	0909.0	1				III
			SGMR				1104.0	2237.0	1				CONT
	0610	1645	BLEN				1157.6	1158.1	2				III,G
23			LEAR				0118.3	0119.3	1				V
			LEAR				0119.3	1016.0	1				CONT
			LEAR				0313.1	0317.6	2				V
			PALE				0314.1	0314.8	2				III
			LEAR				0511.8	0512.1	1				III
			LEAR				0533.0	0533.6	2				V
	0610	1645	BLEN										
24	0605	1645	BLEN										
			LEAR				0748.3	0749.1	1				III
			SGMR				1357.8	1400.1	1				V
			SGMR				1650.6	1658.3	1				V
25	0600	1650	BLEN										
26	0600	1655	BLEN										
			LEAR				0631.8	0633.0	1				III
			LEAR				0818.0	0818.3	1				III
27	0600	0840	BLEN										

COSMIC RAY INDICES
(Neutron Monitor)

March 1985

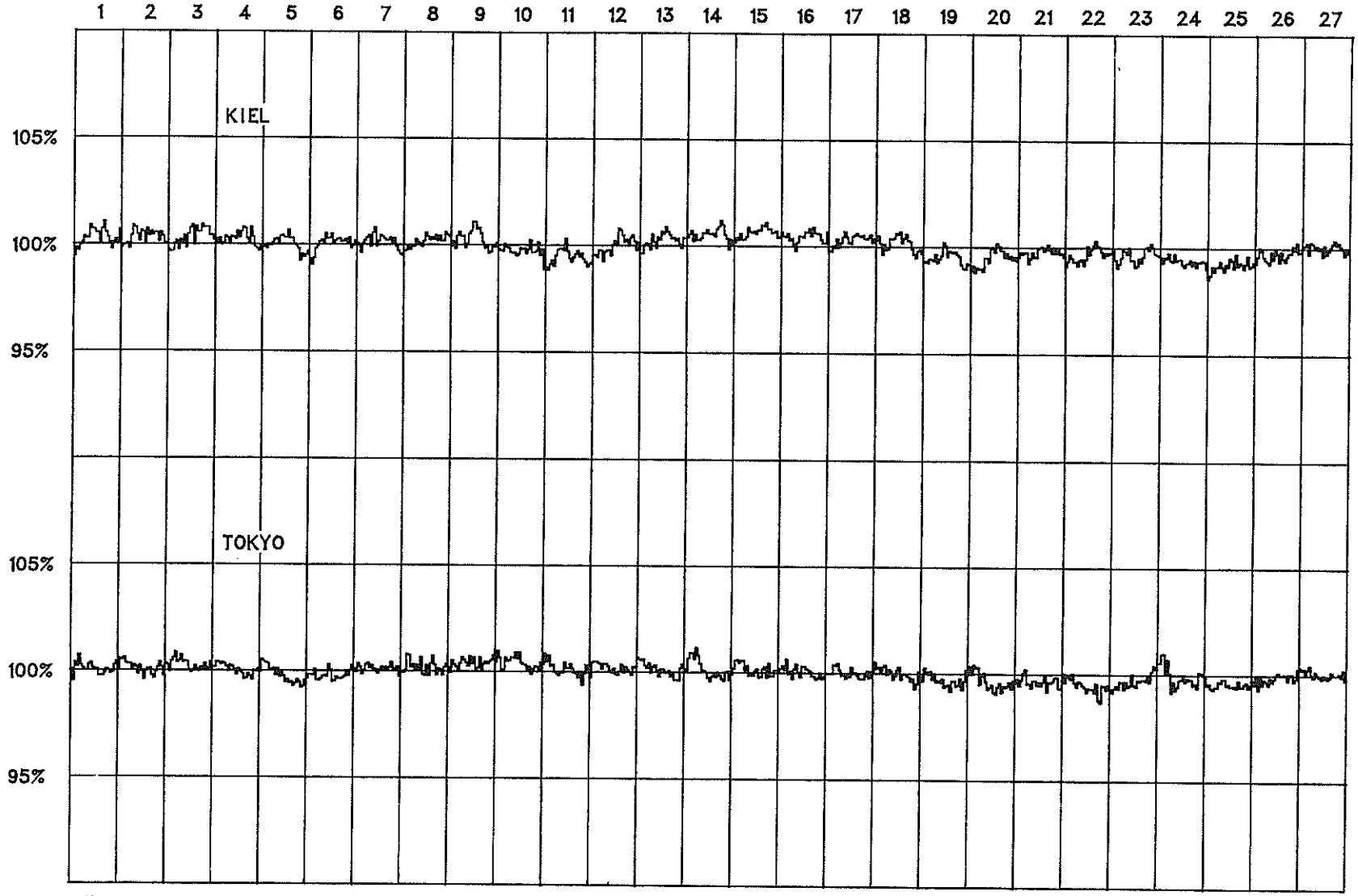
Day	THULE Average (cts/h)/100	ALERT Average (cts/h)/100	DEEP RIVER Average (cts/h)/300	KIEL Average (cts/h)/100	CLIMAX Average (cts/h)/100	PREDIGTSTUHL Average (cts/h)/100	TOKYO Average (cts/h)/256	HUANCAYO Average (cts/h)/100
1	4340			6036.4		1167	3621.1	
2	4327			6026.6		1168	3617.8	
3	4316			6017.6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

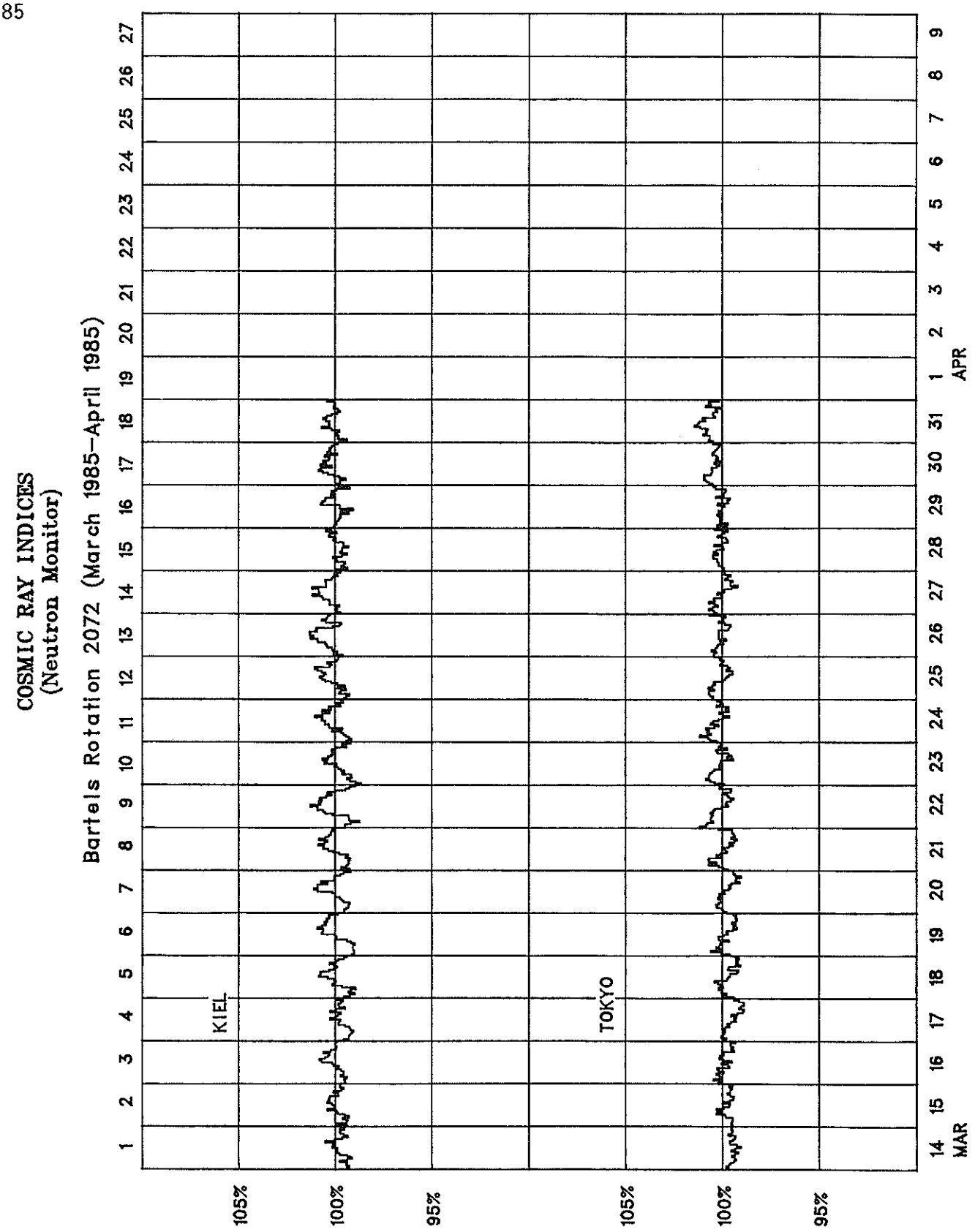

THULE NEUTRON MONITOR
Bartels Rotation 2071 (February 1985–March 1985)
Bartels Rotation 2072 (March 1985–April 1985)
105%
100%
95%
FEB
MAR
MAR 1985
APR 1985

COSMIC RAY INDICES
(Neutron Monitor)

Bartels Rotation 2071 (February 1985–March 1985)



69
Mar 85


COSMIC RAY INDICES
(Neutron Monitor)
Bartels Rotation 2072 (March 1985–April 1985)
KIEL
TOKYO
105%
100%
95%
105%
100%
95%
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
14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 1 2 3 4 5 6 7 8 9
MAR
APR

GEOMAGNETIC ACTIVITY INDICES

March 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	aa Provisional Am	N	S	M	
1		2+	5+	4	3	1	1-	1+	3-	20+	16	0.9	2+	4	3+	3-	1+	1	1+	3-	23	25	13	26	13	
2	D5	2+	3+	3	4-	4	4+	4-	4	28+	22	1.1	2-	3-	3-	4-	4	4	4-	4-	37	41	29	22	48	
3		2+	5-	3+	1+	1+	2+	2+	3	21-	14	0.8	2+	3+	3-	1	1+	2+	2+	3-	20	25	12	22	16	
4		3	2+	1+	1	2	3-	2	3+	18-	10	0.5	2+	2-	1	1+	2	2+	2+	3-	16	19	13	12	20	
5	D1	4-	4	5	4	3	5-	6-	6+	36+	42	1.5	3-	3	4-	4-	3-	4-	5-	5	50	73	37	39	71	
6	D3	5-	4-	5-	4-	3	3+	3+	3+	30-	24	1.2	4-	3-	4-	3	3-	3	3	3-	32	47	27	45	30	
7	D4	3+	3	3+	3+	3+	4	5-	4-	29-	22	1.1	3-	3-	3	3+	3	3+	4	3-	33	45	29	31	44	
8	D2	5-	5+	4+	4-	3+	3+	3	3	31-	27	1.2	4	4	4-	3+	3+	3-	3-	3-	37	38	33	45	27	
9	Q2	2	1	1-	0	0+	0+	0	3-	7	4	0.1	2-	1-	1-	0+	0	0+	0	2+	6	9	5	5	8	CK
10		2+	1	1	2+	2-	3-	3-	4-	17+	10	0.5	2	1	1+	3-	2-	2+	3-	3+	18	23	13	13	24	
11	Q9K	2-	1	1	2-	3	1+	1+	0+	11+	6	0.3	1+	1+	1+	1+	2+	1+	1	0	9	13	8	10	12	CK
12		0	1+	1-	0+	2	2-	3+	3+	13-	7	0.4	0+	1+	1+	0+	3-	2+	3+	3	17	20	18	6	32	
13	Q1	0+	1+	2-	2+	1-	1-	0	1-	8-	4	0.1	1-	1+	2-	2+	1	1-	0+	1-	8	8	8	11	6	C
14	Q10K	1-	1-	1-	1+	3	2	3-	1+	12+	7	0.3	1	1	1+	2-	3-	2-	3	2-	13	15	13	8	21	
15		3	3-	4+	4-	3-	1	2-	2-	21-	14	0.8	3-	3-	4	3+	3-	1	1+	2-	24	22	24	32	14	
16		3-	2	2	1+	3+	3-	2+	3	19+	11	0.6	2+	2-	2-	1+	3	3-	2-	3	18	25	18	12	31	
17		3-	1	1	1+	1-	0+	3	3	13	8	0.4	2+	1	1-	1+	1-	1-	3-	3-	12	20	8	11	18	
18		4	3+	2	0+	1-	0+	3	3	17-	11	0.6	4-	2+	2	0+	1-	0+	3	3-	17	29	15	25	19	
19		2-	2	1	2-	2+	2+	4	2	17	9	0.5	2-	2-	1+	2	3	2+	3+	2-	17	18	18	11	26	
20	Q4	1	1-	2-	2-	2	2	0+	0+	10-	5	0.2	1	1-	2-	1+	2+	2	1-	0	9	9	9	9	11	CK
21	Q5	1+	2+	0+	0+	1+	1	1+	2-	10-	5	0.2	1+	2-	0+	0+	1+	1	1+	2-	8	10	5	6	9	CC
22	Q3	3-	1	0+	1-	1	1-	0+	1+	8	4	0.2	2+	1-	0	0+	1+	1-	0+	1+	7	11	7	8	10	CC
23	Q6	2+	3-	0+	1-	1-	0+	2-	1+	10	5	0.2	3-	2+	1-	1-	1	0+	1+	1+	10	13	7	10	11	CC
24	Q7K	2	1-	1	1	1+	1	1	3	11	6	0.3	2-	1-	1+	1+	1	1	1+	3	10	16	5	9	13	KK
25	Q8K	2	0	0+	1-	1	2-	3	2-	10+	5	0.2	1+	0	0+	1-	1+	2-	3-	2-	9	12	6	5	14	CK
26		3-	2	2-	2+	2+	1+	2+	1+	16	8	0.4	3-	2	1+	2+	2+	1+	2+	2	16	19	13	15	17	
27		2	2	2-	2+	2+	2+	3+	3-	19-	10	0.5	2-	1+	2-	2+	2+	2+	3	3	19	23	14	11	27	
28		4+	4	3+	0+	2	2-	3-	2+	21-	14	0.8	4-	4-	3	0+	2-	2-	3-	2	23	27	13	24	17	
29		2-	1-	1+	1	1	2+	3-	2+	13	6	0.3	2-	1+	1+	1	1	2	2+	2+	12	14	10	8	16	C
30		4-	1+	1-	1+	2	2-	2-	1	13+	7	0.4	3	1	1	1-	2-	1+	1+	1	11	18	8	14	13	K
31		2+	2+	3+	3+	2+	1	2	1-	17+	10	0.5	2	2+	4-	3+	2+	0+	2	1-	19	19	22	29	12	
Mean											11	0.55									18.1	23.0	14.8		19.0	

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_a	Prov R_I	R_a	R_s	IMF	
1	2+	4	4-	3-	1+	1	1+	3-	24	2+	4	3+	2	1+	1-	1	3-	22	69.3	9	10	13	A	-
2	2	3-	3	4-	4+	4+	4-	4-	42	2-	3-	3-	4-	4-	4-	3+	3+	33	69.1	9	10	13	A	-
3	2+	4-	3	1+	2-	3-	3-	3-	23	2+	3	3-	1-	1+	2	2+	2+	17	69.0	7	9	13	AT	-
4	3-	2-	1+	1+	2+	3-	2+	3	17	2+	2-	1	1+	2-	2-	2+	3-	14	68.6	0	0	12	A	-
5	3	3+	4	4	3	4	5-	5+	56	3-	3	4-	3+	3-	4-	5-	4+	43	67.5	0	0	11	A	-
6	4	3	4-	3+	3	3+	3+	3	37	3+	3-	4-	3-	2+	3	3-	2+	27	68.1	0	0	12	A	-
7	3-	2+	3	3+	3+	4-	4	3	35	3-	3	3	3	3	3+	4	3-	32	68.0	0	0	11	A	-
8	4	4+	4-	3+	4-	3	3-	3-	40	4	4-	4-	3+	3	2+	2+	3-	34	68.7	12	13	12	AT	-
9	2	1-	1-	0	0+	0+	0+	2+	6	2-	1	0+	0+	0	0	0	2+	5	68.7	10	10	12	T	-
10	2-	1	2-	3-	2	3-	3-	3+	20	2+	1	1+	3-	1+	2	2+	3+	17	68.0	11	12	11	T	-
11	1+	1	2-	2-	3-	2-	1+	0+	11	1+	2-	1+	1+	2	1+	0+	0	8	69.6	12	13	13	T	-
12	0+	1+	1+	1-	3-	2	3+	3+	17	0+	2-	2-	0	3-	2+	3+	3	17	69.3	12	12	13	T	-
13	1	1+	2-	2+	1+	1-	1-	1	9	1-	1	1+	3-	0+	0+	0+	1-	7	69.5	9	10	13	T	-
14	1	1-	1+	2-	3-	2-	3	1+	14	1	1	1+	2-	2+	2-	3	2	13	69.5	8	9	13	T	-
15	2+	3-	4+	3	3-	1	2-	2-	24	3	3-	4-	4-	3-	1-	1	2-	23	69.6	0	0	13	A	-
16	2+	2-	2	1+	3+	3-	2	3+	21	3-	2-	1+	1	3-	2+	1+	2+	16	70.1	8	6	14	T	-
17	2+	1	1-	1+	1	1	3-	3-	13	2+	1	1	1	0+	0+	3-	3-	11	72.1	12	16	16	T	-
18	4-	3-	2-	0+	1	0+	3-	3	18	4-	2	2+	0	0+	0+	3	3-	17	74.6	24	23	19	A	-
19	2-	2-	1+	2+	3	2+	4-	2-	19	1+	2-	1+	2-	3	2+	3	2-	16	74.2	16	17	18	T	-
20	1-	0+	2-	1+	3-	2	1+	0+	10	1	1-	2-	1+	2	2-	0+	0	8	74.2	13	12	18	TA	-
21	1+	2	1-	0+	1+	1+	2-	2	9	1+	2-	0+	0	1+	1-	1+	1+	7	76.1*	9	0	20	T	-
22	2+	1	0+	1-	1+	1	1-	2-	8	2+	1-	0	0	1+	0	0	1	5	75.9	12	11	20	T	-
23	2+	2+	1-	1	1	1-	2-	1+	10	3	2+	0+	1-	1-	0	1	1+	9	77.3	13	15	21	T	-
24	2-	1-	1+	1+	1+	1+	2-	3	12	2-	0+	1+	1+	1-	0+	1	3-	9	79.6	36	27	24	T	-
25	1+	0+	0+	1+	2-	2	3-	2-	11	1+	0	0	0+	1-	1	3-	1+	7	78.5	24	21	23	T	-
26	2+	2	2-	2+	2+	2-	2+	2-	18	3	2	1+	2	2+	1+	2+	2	16	79.7A	18	19	24	T	-
27	2	1+	1+	2+	2	3-	3+	3	19	1+	1+	2	3-	3-	2	3	3-	19	77.4A	16	19	22	T	-
28	4-	4-	3	1-	2+	2	3-	2+	25	4-	4-	3	0	1-	1+	3-	2-	21	77.7A	24	21	22	A	-
29	2-	1+	1+	1+	1+	2+	3-	3-	14	1+	1+	1-	1-	1-	2-	2	2-	9	76.7A	15	18	21	-	-
30	3+	1	1	1+	2	2-	2-	1+	13	3	1+	1	0+	2-	1	0+	1-	9	75.8A	15	16	20	-	-
31	2+	2+	4-	3	3-	1	2+	1	21	2	2+	4-	3+	2-	0	2-	0+	17	76.4A	14	17	21	-	-
Mean									19.8									16.4	72.5	11.9	11.8	16.3		

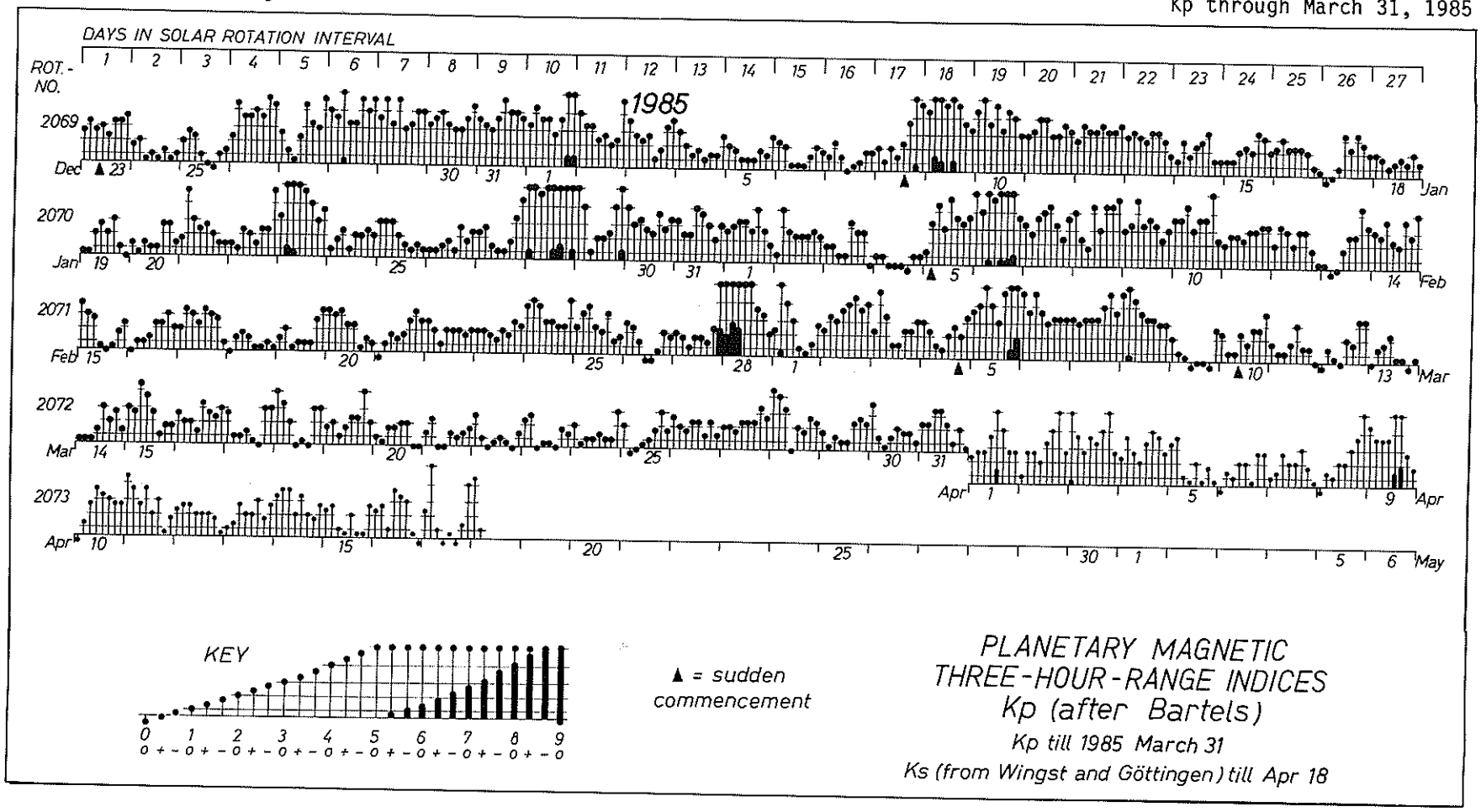
D A I L Y A V E-R A G E I N D I C E S Ap

DAY	1984 APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	1985 JAN	FEB	MAR
1	34	22	7	14	75	11	7	27	15	33	15	16
2	46	13	12	12	24	12	10	12	27	17	11	22
3	42	12	32	12	14	12	20	18	22	13	8	14
4	84	13	26	12	14	59	6	18	28	7	3	10
5	57	27	19	12	7	63	7	13	20	6	21	42
6	12	10	12	10	4	12	21	14	22	5	46	24
7	25	4	10	7	4	6	43	20	18	5	20	22
8	58	5	10	10	14	11	24	20	8	19	24	27
9	37	19	20	9	17	12	20	12	6	46	19	4
10	8	27	15	14	8	25	29	18	9	29	24	10
11	13	10	11	11	11	17	28	20	19	20	13	6
12	15	12	7	13	15	13	32	8	17	19	11	7
13	15	9	6	62	8	11	17	10	27	14	11	4
14	18	12	4	40	20	14	15	14	8	9	16	7
15	10	9	24	25	22	10	14	52	24	9	9	14
16	4	7	42	25	15	8	19	112	33	8	7	11
17	8	32	11	43	11	6	3	35	28	9	12	8
18	7	12	27	19	6	3	43	22	15	6	4	11
19	12	22	29	14	14	36	75	21	8	7	7	9
20	20	30	16	12	10	21	63	20	6	6	10	5
21	11	44	3	8	3	10	47	22	13	12	8	5
22	5	32	6	9	1	22	46	14	9	11	7	4
23	6	30	11	8	8	112	27	10	16	36	7	5
24	6	30	22	12	23	52	39	10	4	7	18	6
25	33	16	10	8	18	43	22	10	5	9	12	5
26	103	14	8	6	10	42	14	8	26	6	5	8
27	26	7	10	14	36	25	8	7	17	11	19	10
28	17	8	21	18	36	16	8	6	31	58	60	14
29	18	9	12	12	21	12	7	13	26	24		6
30	9	17	12	8	16	11	7	36	21	17		7
31		7		17	12		6		24	15		10
MEAN	25	17	15	16	16	24	23	21	18	16	15	11

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

University of Gottingen

Kp through March 31, 1985

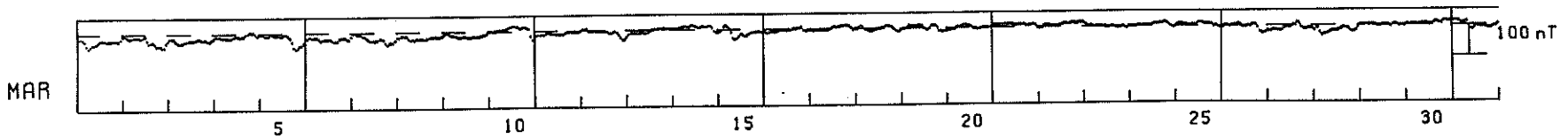


NASA/GODDARD SPACE FLIGHT CENTER

HOURLY EQUATORIAL DST VALUES(PROVISIONAL)

MARCH 1985

DAY	UNIT=NT 1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	U.T. 23	24
1	-15	-14	-18	-24	-38	-47	-41	-35	-33	-31	-26	-22	-19	-20	-23	-23	-23	-23	-22	-22	-23	-23	-17	-7
2	-6	-10	-14	-15	-13	-11	-11	-11	-14	-13	-10	-7	-20	-30	-27	-26	-31	-39	-41	-38	-44	-43	-30	-21
3	-16	-15	-17	-24	-27	-31	-30	-28	-25	-24	-21	-21	-21	-20	-19	-16	-18	-21	-21	-19	-24	-25	-19	-15
4	-10	-10	-11	-12	-14	-14	-15	-16	-15	-13	-9	-8	-9	-12	-12	-10	-4	0	3	1	2	-3	-10	-5
5	-3	-5	-9	-11	-9	-2	-5	-9	-8	-7	-10	-10	-5	-6	-11	-17	-29	-46	-52	-50	-42	-40	-33	-33
6	-19	-13	-17	-18	-16	-16	-20	-27	-23	-22	-21	-22	-20	-25	-28	-28	-27	-19	-18	-18	-17	-21	-23	-13
7	-4	-2	-7	-7	-7	-13	-16	-18	-23	-27	-26	-29	-27	-25	-21	-22	-24	-35	-42	-36	-33	-33	-26	-17
8	-19	-14	-12	-16	-14	-22	-26	-23	-27	-23	-23	-23	-23	-24	-23	-21	-19	-17	-17	-15	-18	-18	-16	-13
9	-8	-5	-7	-12	-13	-14	-16	-18	-19	-17	-16	-17	-18	-19	-18	-16	-17	-16	-15	-13	-12	-11	-8	-1
10	1	0	0	1	2	5	6	7	7	9	14	16	18	16	15	10	10	13	12	10	7	-17	-29	-21
11	-14	-13	-13	-13	-13	-8	-7	-8	-11	-11	-12	-12	-12	-12	-13	-7	-3	-3	-4	-3	-4	-6	-4	-1
12	4	5	5	-2	-4	-3	-1	-3	-4	-4	-4	-4	-4	-6	-10	-10	-6	-4	-8	-16	-24	-31	-30	-21
13	-14	-9	-9	-9	-10	-11	-10	-7	-10	-12	-7	-4	0	1	3	4	5	5	5	5	5	3	4	5
14	5	4	6	7	8	11	11	9	11	14	14	9	8	6	9	12	9	10	13	13	6	-5	-10	-9
15	-7	-2	9	14	10	5	-9	-29	-32	-28	-22	-14	-16	-21	-20	-15	-12	-9	-8	-8	-6	-7	-9	-5
16	-8	-13	-9	-7	-7	-9	-7	-3	-2	-2	-1	-3	0	-3	-1	2	0	4	3	7	-3	-6	-6	-4
17	-4	-7	-5	-4	-3	-4	-3	-4	-3	-3	0	4	7	5	5	7	11	11	12	11	8	2	-4	0
18	-1	5	8	5	-3	-2	-7	-10	-7	-5	-1	0	1	2	3	9	9	7	5	0	-6	-9	-8	-4
19	0	-1	3	9	8	7	7	6	9	11	7	0	-4	-5	0	8	10	8	1	-9	-11	-12	-9	-7
20	-6	-5	-4	-4	0	3	5	6	9	10	7	7	3	-2	-1	-3	-4	-1	0	0	1	0	1	6
21	10	9	8	9	9	8	11	11	12	12	10	7	8	10	9	10	9	6	6	7	9	10	6	-1
22	-3	-2	4	8	7	6	4	3	5	5	6	7	10	13	11	11	12	14	13	12	13	15	16	15
23	10	5	1	4	2	1	1	1	1	1	0	-1	-2	-1	1	0	-2	-3	-2	-1	1	-3	-5	0
24	0	1	1	1	4	4	2	2	3	3	4	4	8	9	9	11	11	13	13	9	5	0	-3	-1
25	5	8	8	6	5	5	4	4	6	5	5	12	13	11	8	8	9	7	7	0	3	0	-3	-3
26	-2	3	3	0	1	3	3	5	8	4	-2	-2	-2	1	-1	4	6	5	-5	-18	-22	-23	-19	-16
27	-17	-15	-12	-13	-13	-14	-15	-12	-7	-3	-4	-3	-1	2	2	11	7	-3	-9	-11	-11	-7	-7	-6
28	-14	-6	-8	-22	-31	-27	-25	-24	-22	-18	-16	-16	-15	-14	-11	-7	-6	-9	-11	-18	-19	-18	-14	-6
29	2	1	4	4	3	3	3	2	1	-2	-2	0	2	1	1	0	-3	3	5	2	-1	0	1	-1
30	2	3	3	4	3	4	2	2	6	6	6	3	1	4	8	12	10	7	6	14	15	14	12	14
31	13	15	14	13	7	8	9	12	-3	-14	-14	-10	-2	-5	-6	-6	-5	-7	-11	-9	-8	-5	-2	3



PRINCIPAL MAGNETIC STORMS

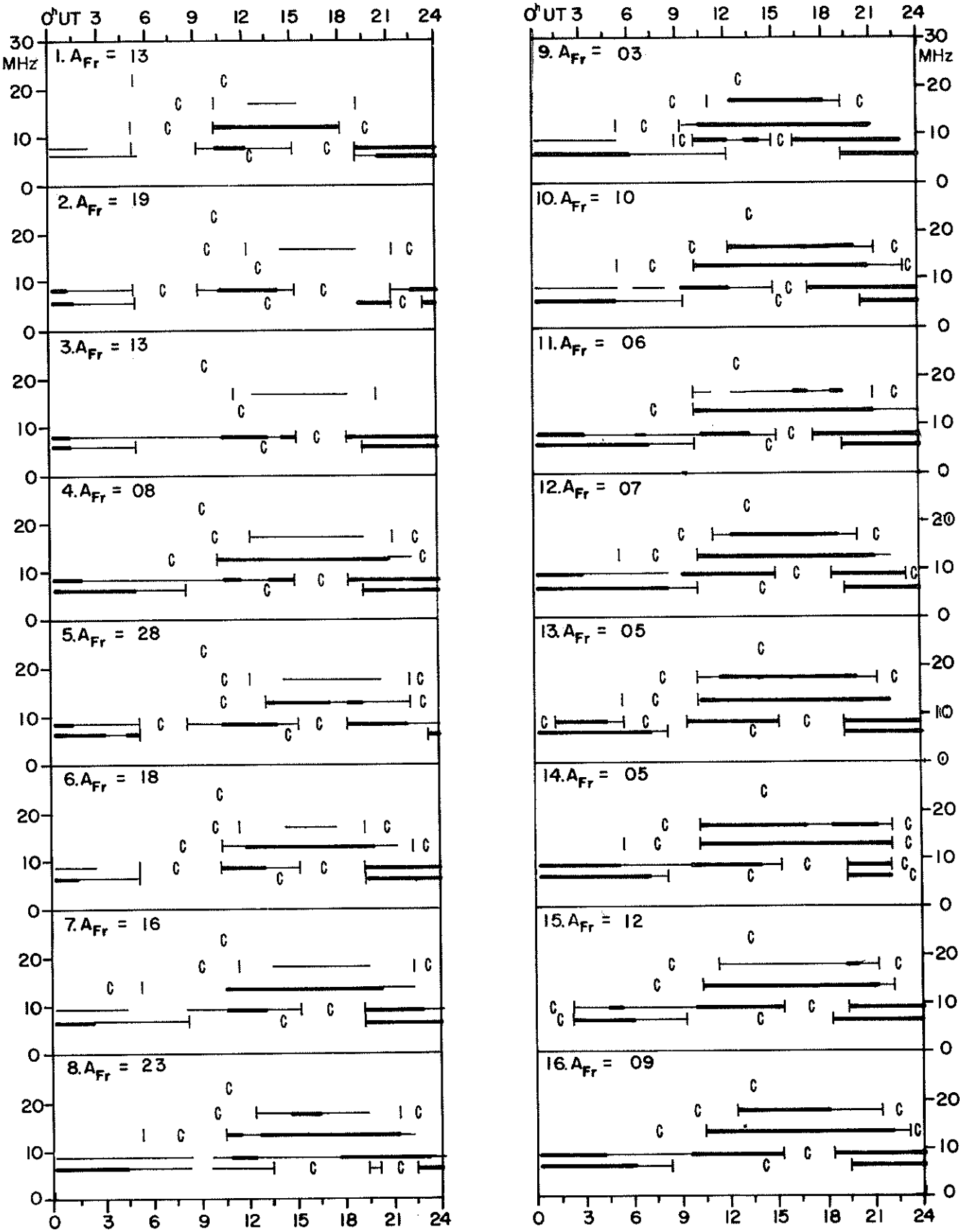
MARCH 1985

Sta	Geomag Lat	Commencement Time Day	(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)
COL	64.6N	02	07--	..	..	..	..	02(4,6)	6	175	1010	580	03	14
IRK	41.0N	02	0200	..	..	..	..	02(4,7)	5	15	90	28	03	17
HYB	07.6N	02	0300	..	..	..	..	02(3)	5	3	113	14	03	10
WIT	54.2N	04	1827	SC	1	20	0	05(7,8)	6	28	182	75	06	01
FRD	49.6N	04	18--	..	..	..	..	05(8)	6	31	107	38	09	--
IRK	41.0N	04	1200	..	..	..	..	05(7,8) 07(6,7)	5	20	76	32	08	21
HYB	07.6N	04	1400	..	..	..	..	05(2,8)	5	4	124	22	06	23
COL	64.6N	05	05--	..	..	..	..	05(3)	7	261	1260	890	09	03
HER	33.7S	05	1500	..	..	..	..	05(6,7)	5	17	83	88	06	03
WIT	54.2N	07	1400	..	..	..	..	07(7)	5	25	137	48	08	11
HYB	07.6N	07	0400	..	..	..	..	07(7)	5	2	87	14	08	20
HER	33.7S	07	1400	..	..	..	..	07(7)	5	16	73	60	08	03
GUA	04.0N	15	04--	..	..	..	..	15(3)	5	--	100	10	15	15

ABG = ALIBAG
ANN = ANNAMALAINAGAR
BJI = BEIJING
CNB = CANBERRA
COL = COLLEGE
FRD = FREDERICKSBURG
GNA = GNANGARA
GUA = GUAM
HER = HERMANUS
HON = HONOLULU
HUA = HUANCAYO
HYB = HYDERABAD
IRK = IRKUTSK
JAI = JAIPUR
KGL = KERGUELEN
PMG = PORT MORESBY
SHL = SHILLONG
SIT = SITKA
TRD = TRIVANDRUM
UJJ = UJJAIN
WIT = WITTEVEEN

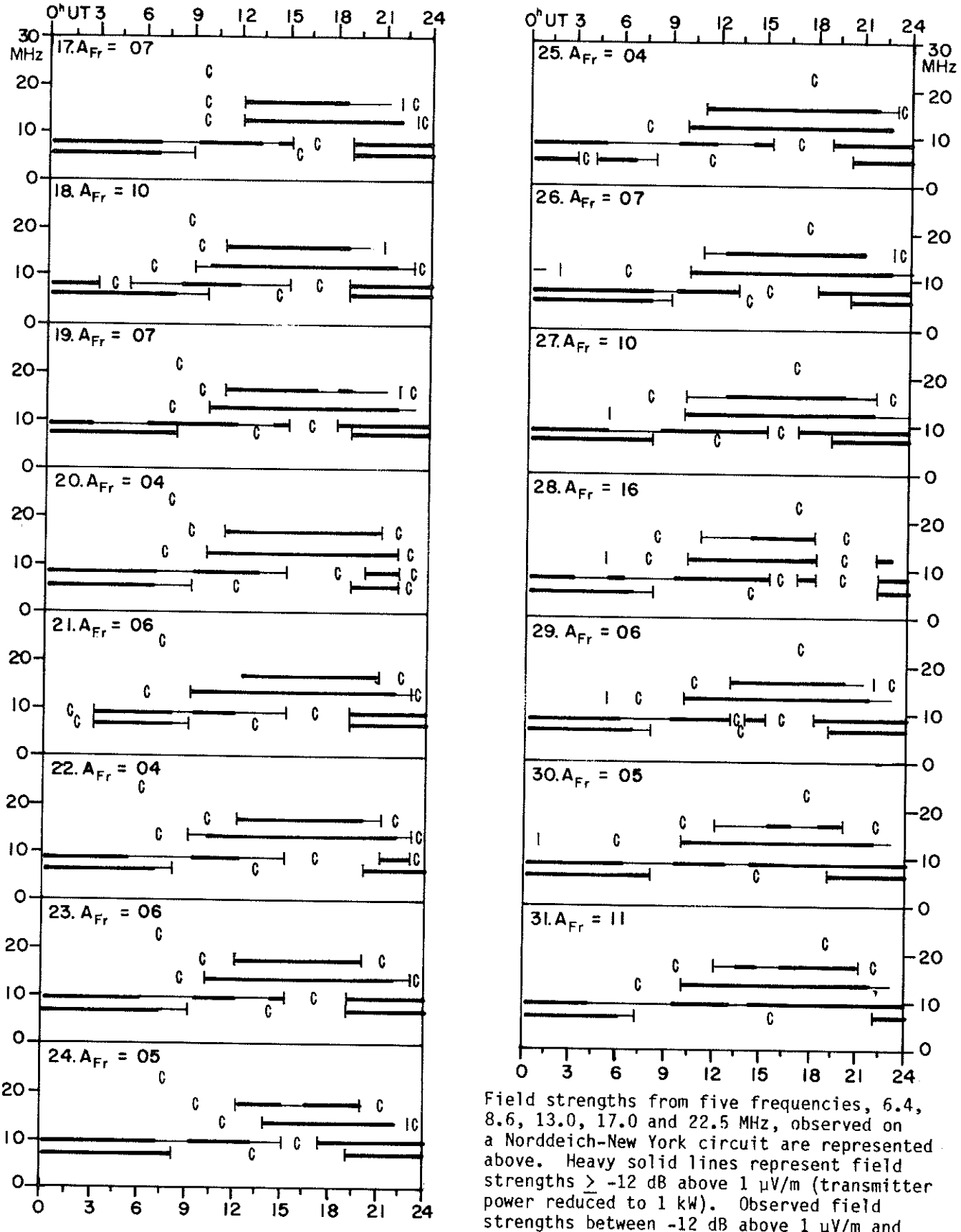
TRANSMISSION FREQUENCY RANGES -- NORTH ATLANTIC PATH

MARCH 1985



TRANSMISSION FREQUENCY RANGES -- NORTH ATLANTIC PATH

MARCH 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

MARCH 1985

Day	Bracknell	Teheran	New York	Tokyo	Canberra
1	4.3	6.3	2.9	3.0	2.8
2	4.1	4.9	3.1	3.7	4.1
3	4.5	5.5	4.5	4.4	4.2
4	5.9	5.6	4.4	4.2	4.9
5	5.0	4.7	2.8	4.8	4.3
6	5.0	5.3	2.9	4.9	4.8
7	5.1	5.6	3.3	5.4	5.8
8	6.1	5.6	3.9	6.1	6.6
9	6.1	5.5	6.0	7.0	3.6
10	5.7	6.5	6.9	7.5	4.0
11	6.3	7.6	5.1	7.8	6.3
12	8.3	9.9	7.4	7.0	5.7
13	8.5	9.4	8.3	7.1	7.6
14	8.0	7.6	8.3	7.0	6.0
15	5.8	5.6	5.3	7.3	6.5
16	5.8	7.2	7.7	7.1	6.9
17	6.8	7.5	7.5	7.9	6.8
18	8.0	9.5	7.3	7.4	7.0
19	6.6	5.9	7.8	6.8	8.1
20	8.2	5.3	8.6	7.3	8.6
21	6.8	9.7	8.3	6.6	7.1
22	6.7	6.8	7.0	7.3	8.0
23	7.7	6.1	7.6	6.6	6.4
24	8.2	4.3	7.2	6.6	6.6
25	7.0	4.4	8.4	6.8	7.0
26	8.0	8.7	8.7	5.6	7.0
27	6.5	5.3	6.5	6.3	7.3
28	6.1	5.1	6.4	6.1	6.2
29	6.6	5.3	6.9	6.3	5.6
30	6.7	5.4	4.6	6.6	4.9
31	5.9	6.9	4.6	6.0	6.4
Mean	6.5	6.4	6.1	6.3	6.0

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). This daily value is compared with the average value (FA) of the 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

C O N T E N T S

Prompt Reports LATE DATA Number 489 Part I

80
Late
Feb 85

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

FEBRUARY 1985

Storm Sudden Commencements (ssc)			Solar Flare Effects (sfe)		
Day	Time	Quality: Station Group*	Day	Begin-End	Station(s)
05	0348	A: SOD COI FRD ALM MPO; B: WNG WIT VAL GCK AQU SPT GNA COA; C: NGK HAD BDV CLF MMB KAK KNY LNP KGL	23	1720-1742	ALM

Reporting Observatories:

SOD DOB NUR WNG WIT NGK VAL HAD BDV CLF GCK MMB
AQU EBR COI SPT FRD ALM KAK KNY LNP MPO GNA CAO KGL

*Three-letter codes identify each observatory.

C O S M I C R A Y I N D I C E S
(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	
2	4259			5929.0	3864.9	1148	3602.7	
3	4268			5950.1	3858.4	1148	3598.9	
4	4282			5962.7	3866.0	1148	3604.2	
5	4277			5957.7	3843.6(36)	1150	3601.2	
6	4299			5970.0	3897.7(38)	1149	3607.7	
7	4301			5963.2	3880.9	1153	3607.8	
8	4292			5965.7	3896.6	1155	3608.1	
9	4258			5934.9	3900.4	1156	3603.2	
10	4256			5902.5	3884.1	1151	3585.8	
11	4268			5912.8	3885.3	1149	3592.7	
12	4285			5927.3	3901.9	1148	3589.7	
13	4281			5943.3	3893.8(38)	1149	3585.1	
14	4261			5898.0	3858.7	1144	3580.2	
15	4196			5882.5	3849.4	1138	3571.6	
16	4223			5892.0	3873.4	1140	3575.5	
17	4215			5908.9	3858.3	1142	3585.7	
18	4212			5899.8	3846.6(36)	1139	3584.0	
19	4232			5900.9	3861.1	1143	3587.6	
20	4242			5915.0	3861.0	1147	3593.2	
21	4257			5929.9	3880.2	1149	3605.1	
22	4248			5910.5	3870.9	1147	3591.9	
23	4254			5924.7	3877.9	1154	3597.5	
24	4202			5888.1	3872.2	1144	3592.6	
25	4170			5843.1	3786.9	1130	3576.2	
26	4157			5813.1	3767.4	1126	3564.5	
27	4186			5844.0	3804.0(36)	1136	3572.7	
28	4200			5855.2	---	1144	3586.8	
29	4237			5887.8	---	1153	3603.4	
30	4244			5895.7	---	1143	3610.6	
31	4253			5916.6	---	1136	3606.6	
Mean	4244			5911.0	3863.4	1145	3592.6	

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.

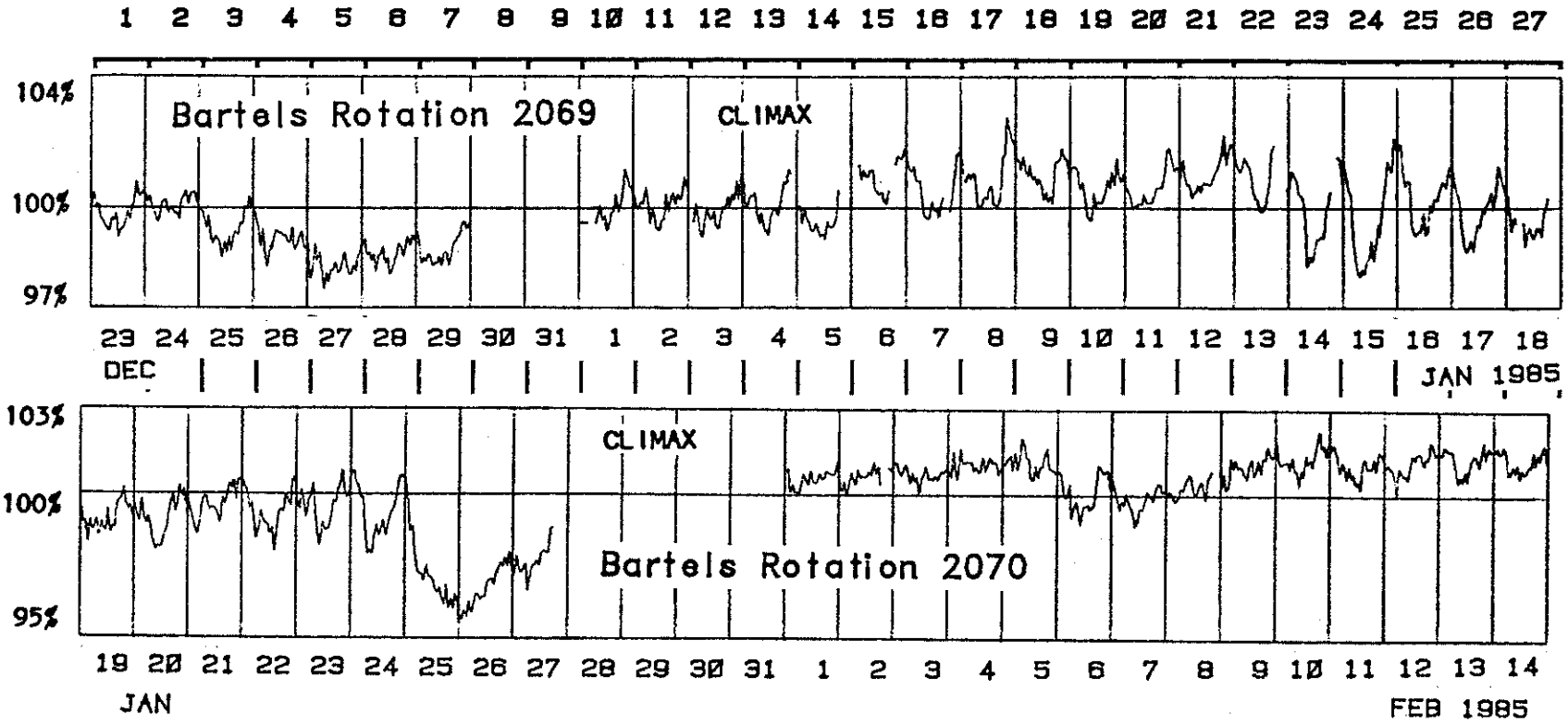
COSMIC RAY INDICES
(Neutron Monitor)

February 1985

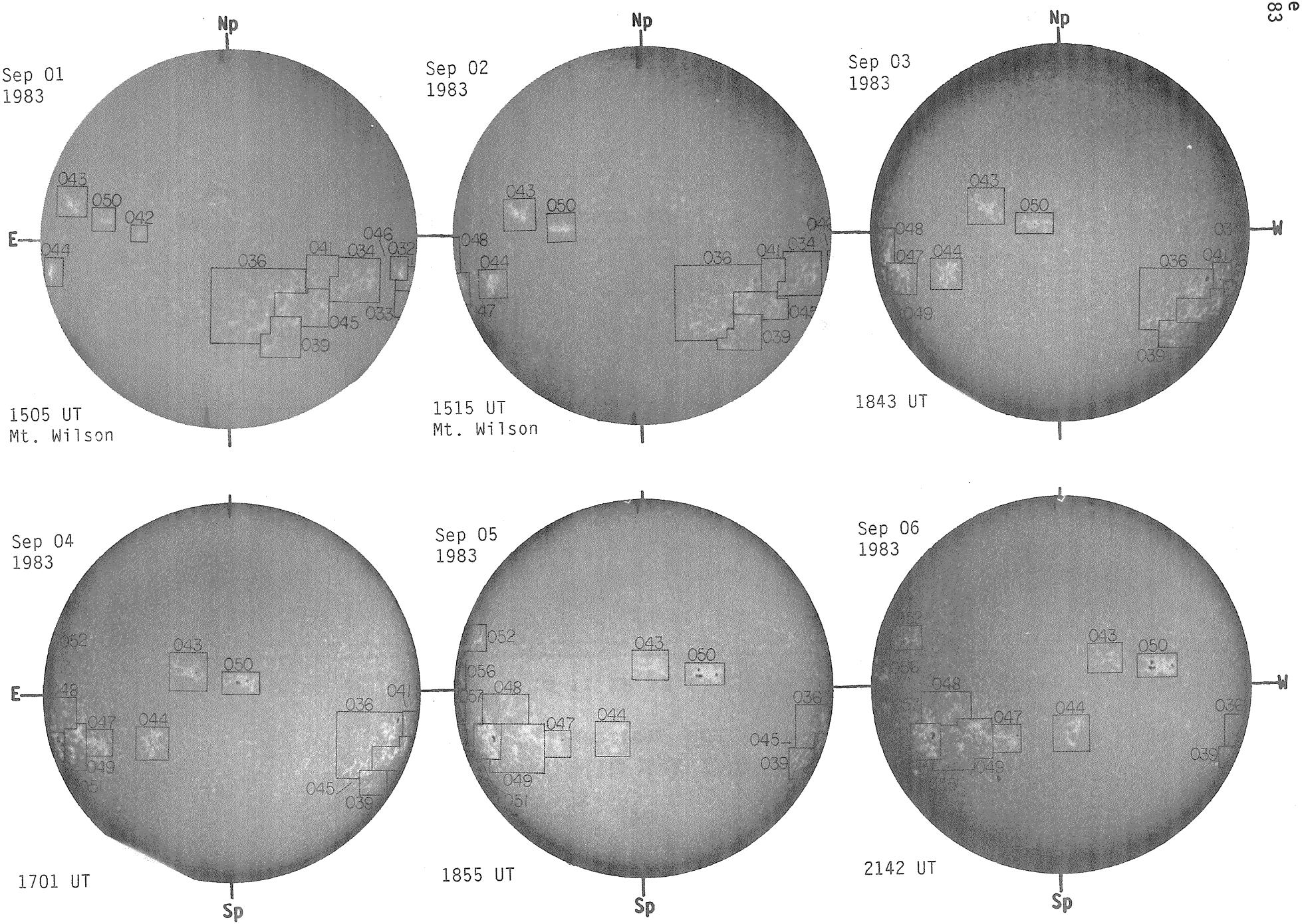
Day	THULE Average (cts/h)/100	ALERT Average (cts/h)/100	DEEP RIVER Average (cts/h)/300	KIEL Average (cts/h)/100	CLIMAX Average (cts/h)/100	PREDIGTSTUHL Average (cts/h)/100	TOKYO Average (cts/h)/256	HUANCAYO Average (cts/h)/100
1	4271			5911.4	3915.1	1118	3606.5	
2	4271			5923.0	3918.1	1126	3608.0	
3	4281			5935.0	3922.5	1128	3610.6	
4	4298			5956.7	3934.4	1127	3608.7	
5	4291			5959.3	3938.5	1126	3601.8	
6	4256			5920.1	3898.0	1120	3591.7	
7	4268			5911.2	3888.6	1119	3595.7	
8	4293			5955.5	3904.9	1130	3596.6	
9	4307			5987.0	3932.9	1124	3595.5	
10	4312			5994.7	3943.9	1118	3616.5	
11	4323			5997.3	3935.8	1130	3614.2	
12	4333			6023.7	3938.1	1143	3609.2	
13	4330			6032.3	3944.7	1144	3621.4	
14	4330			6018.4	3942.8	1133	3621.9	
15	4329			6016.0	3932.8	1130	3617.3	
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	
20	4317			6001.9	3948.1	1142	3607.6	
21	4327			6006.5	3955.6	1141	3620.1	
22	4335			6009.5	3952.0	1142	3622.0	
23	4353			6014.6	3955.5	1138	3628.0	
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	

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.

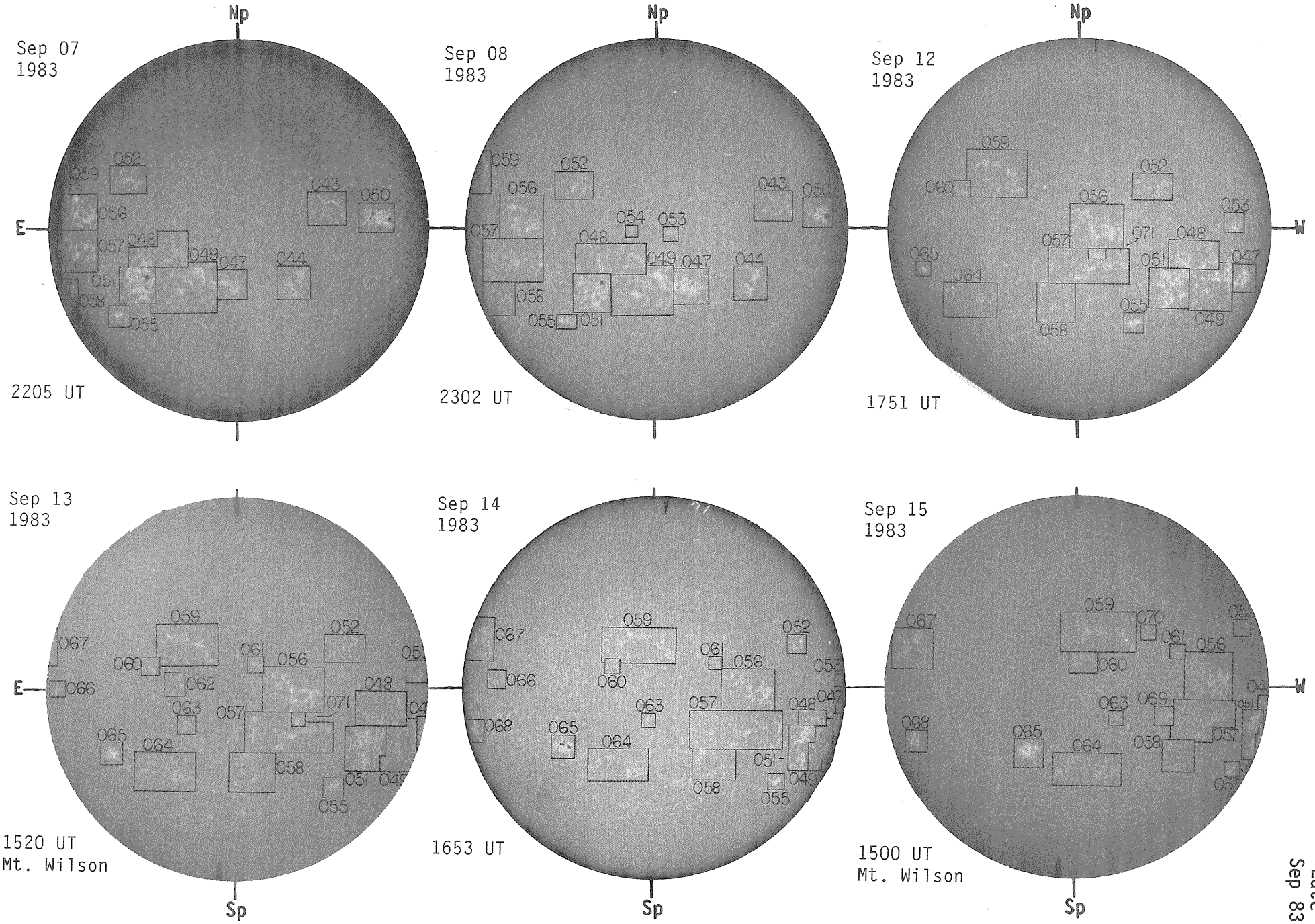
COSMIC RAY INDICES
(Neutron Monitor)



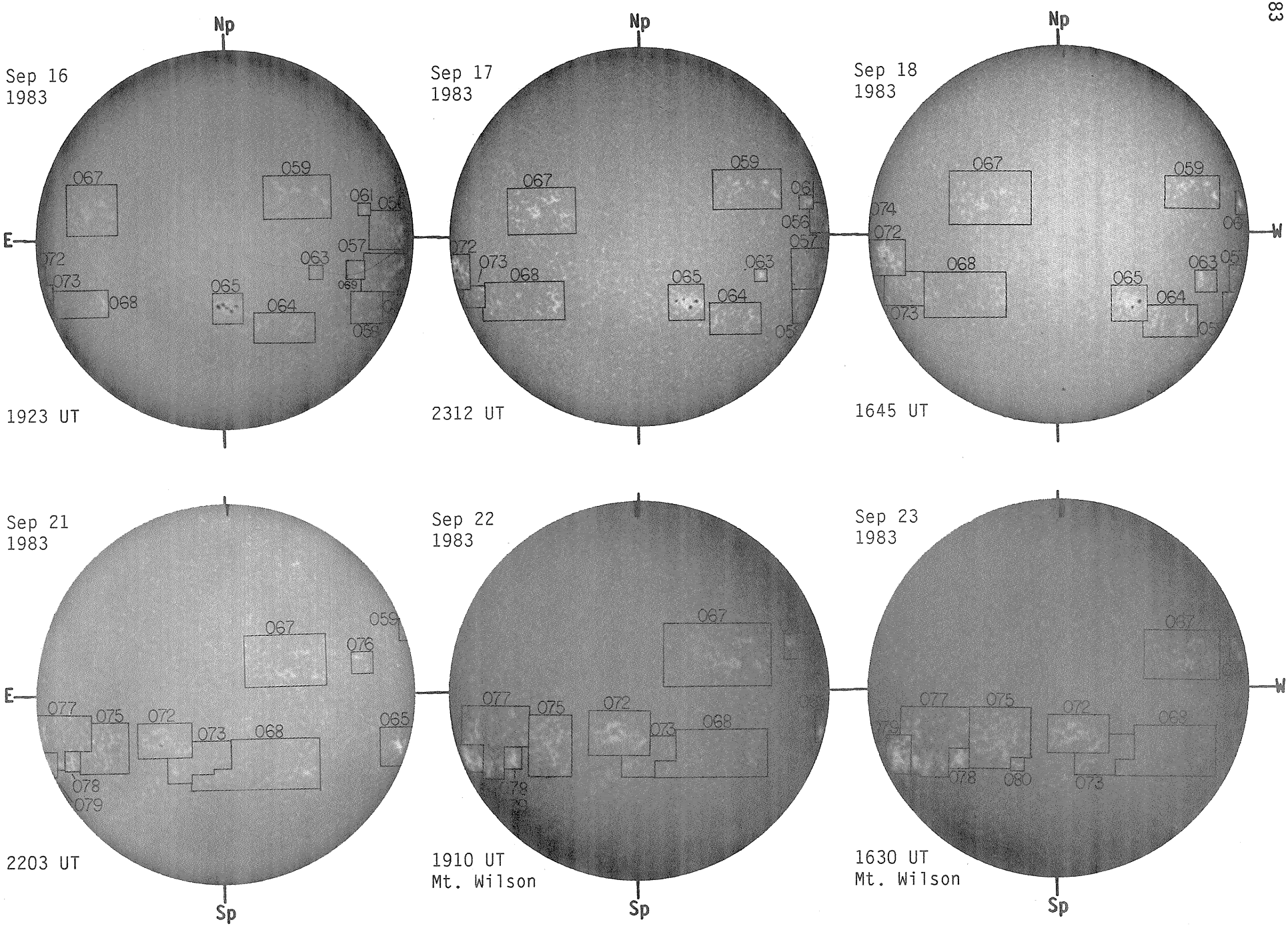
BIG BEAR SOLAR CALCIUM PLAGE REGIONS



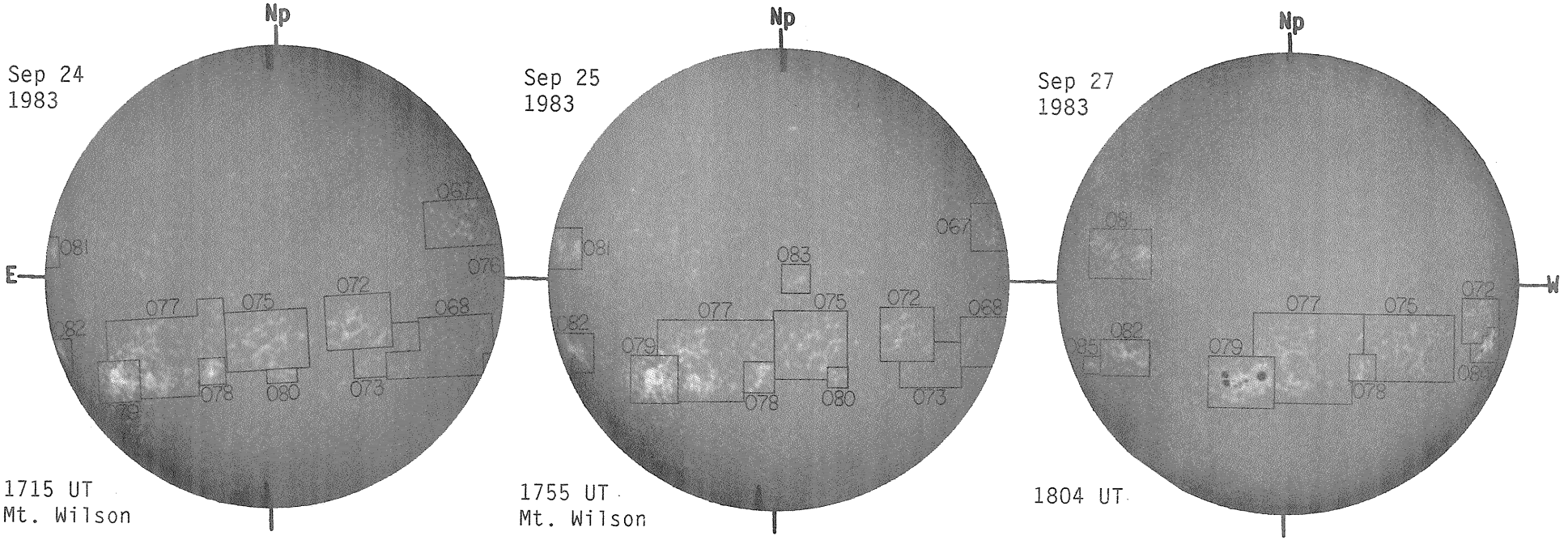
BIG BEAR SOLAR CALCIUM PLAGE REGIONS

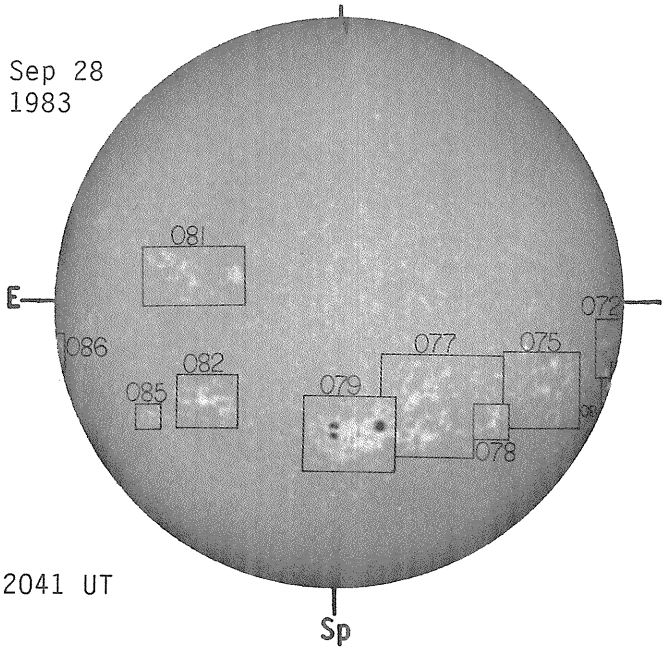


BIG BEAR SOLAR CALCIUM PLAGE REGIONS

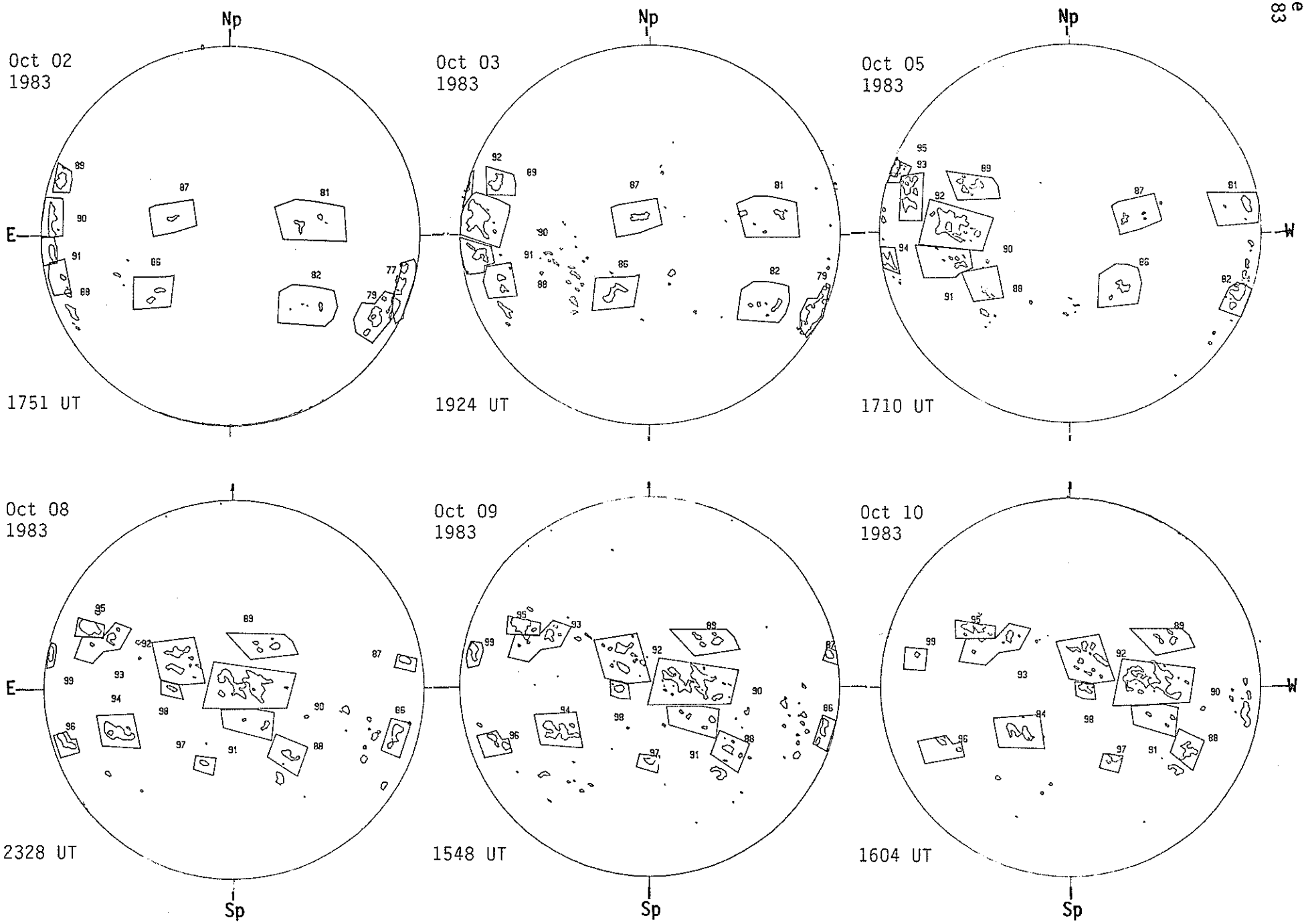


BIG BEAR SOLAR CALCIUM PLAGE REGIONS

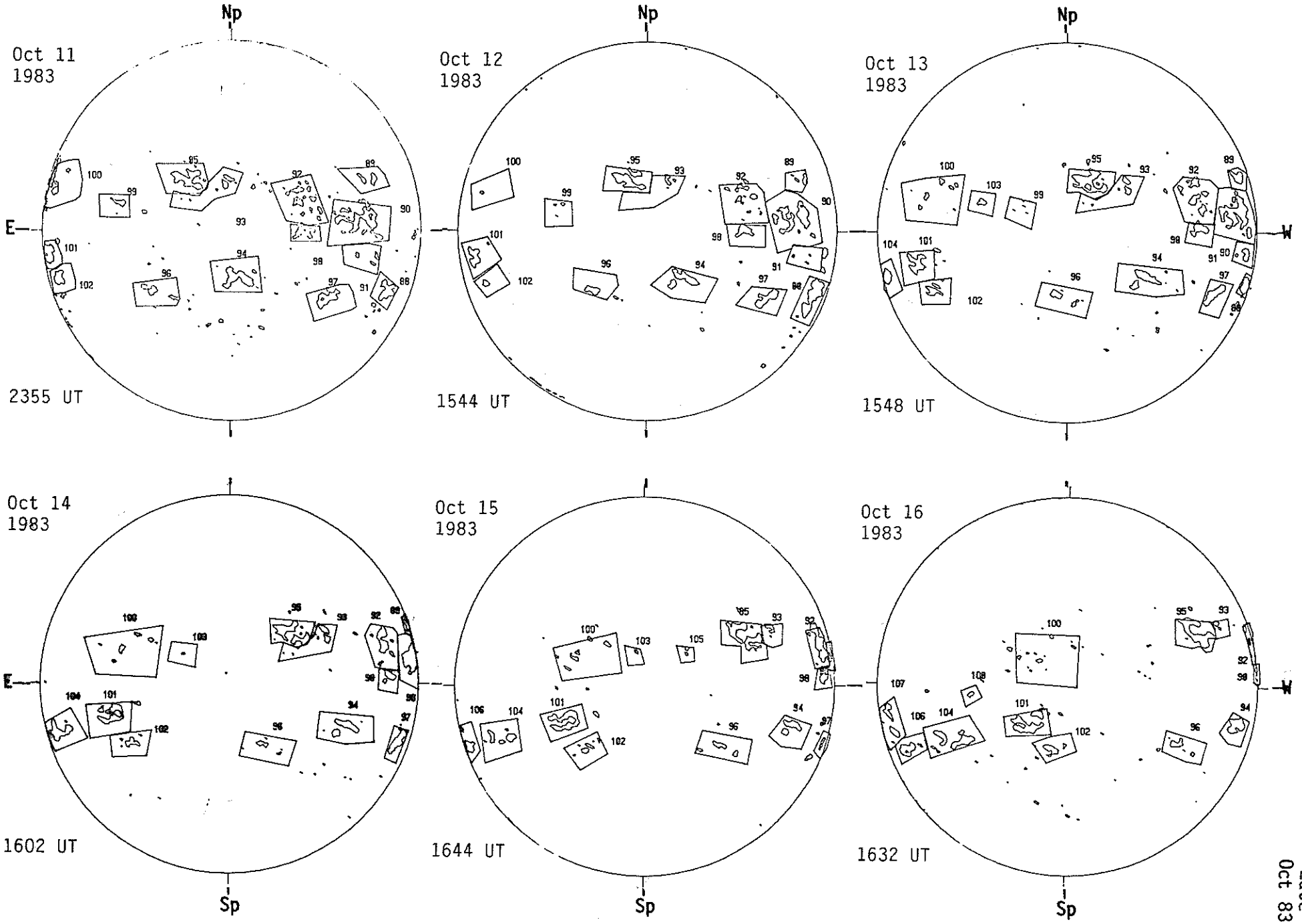




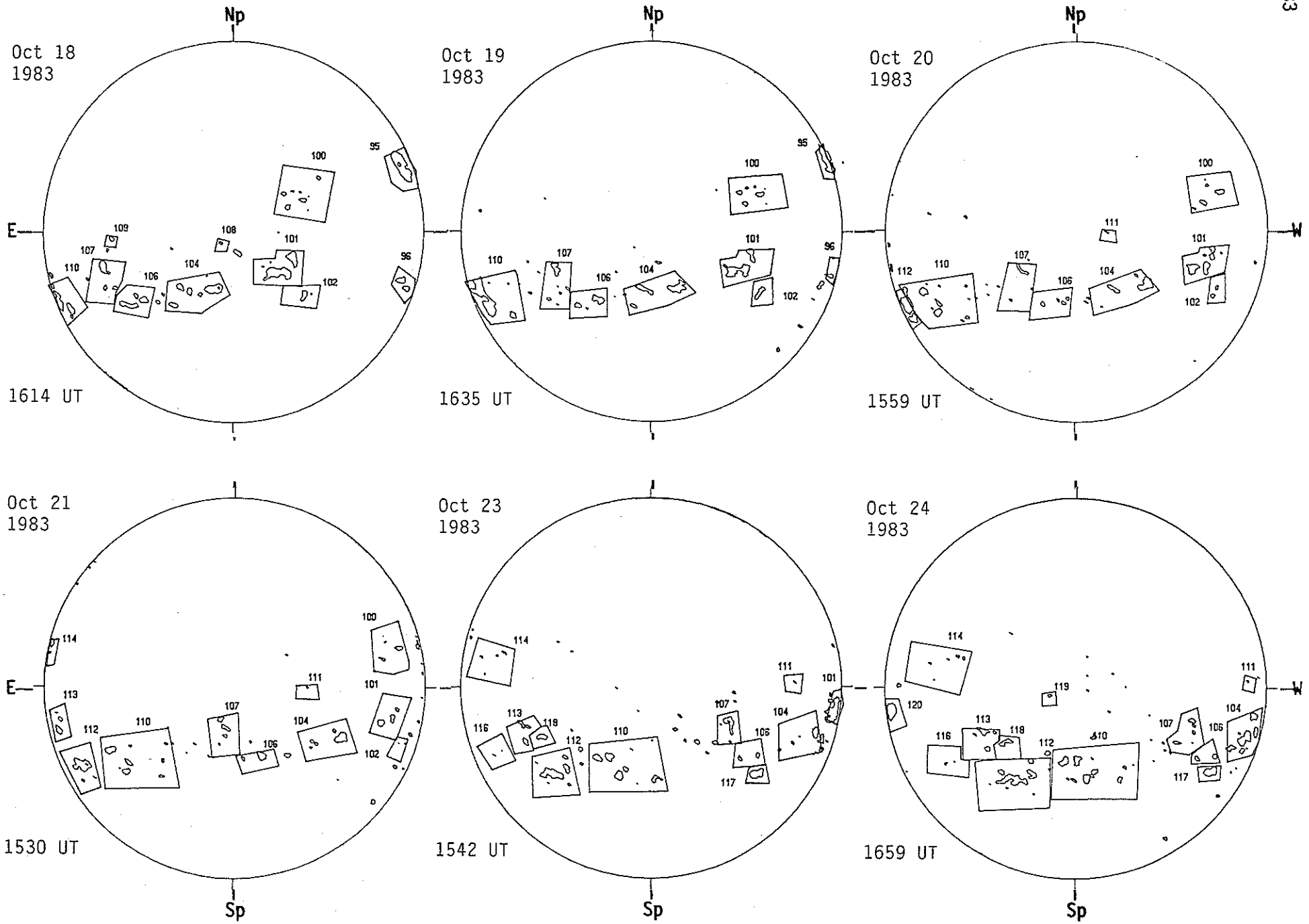
BIG BEAR SOLAR CALCIUM PLAGE REGIONS



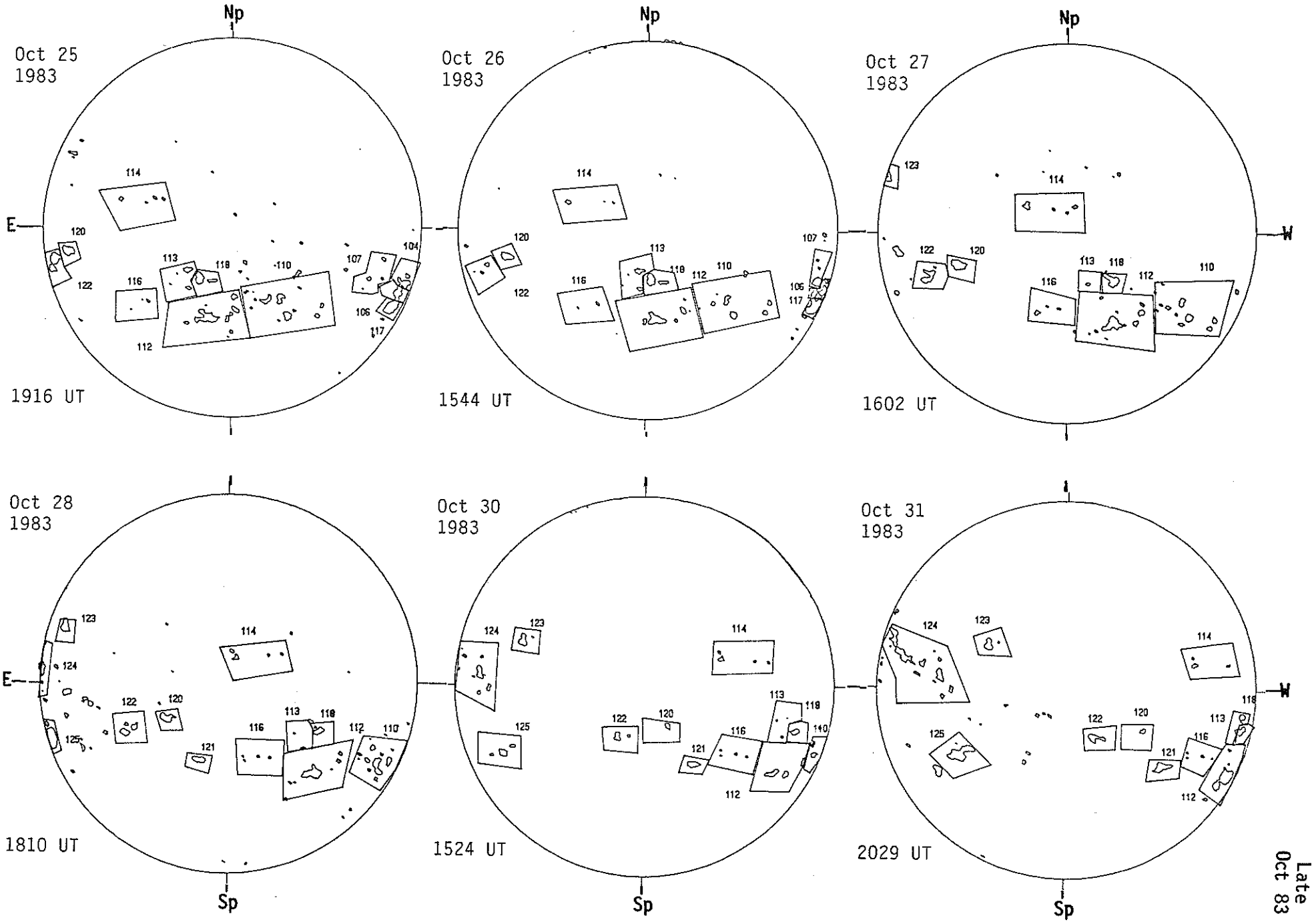
BIG BEAR SOLAR CALCIUM PLAGE REGIONS



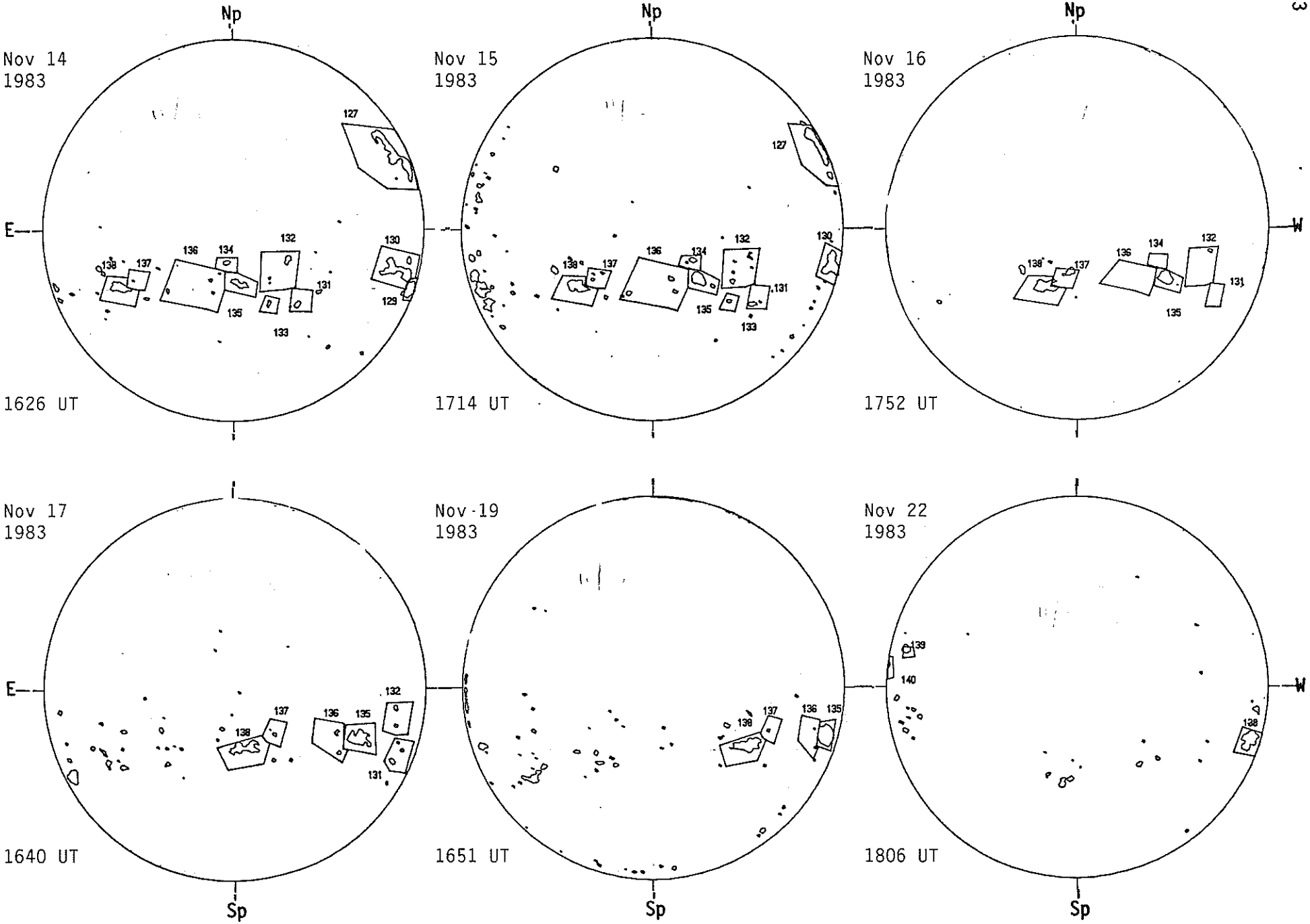
BIG BEAR SOLAR CALCIUM PLAGE REGIONS



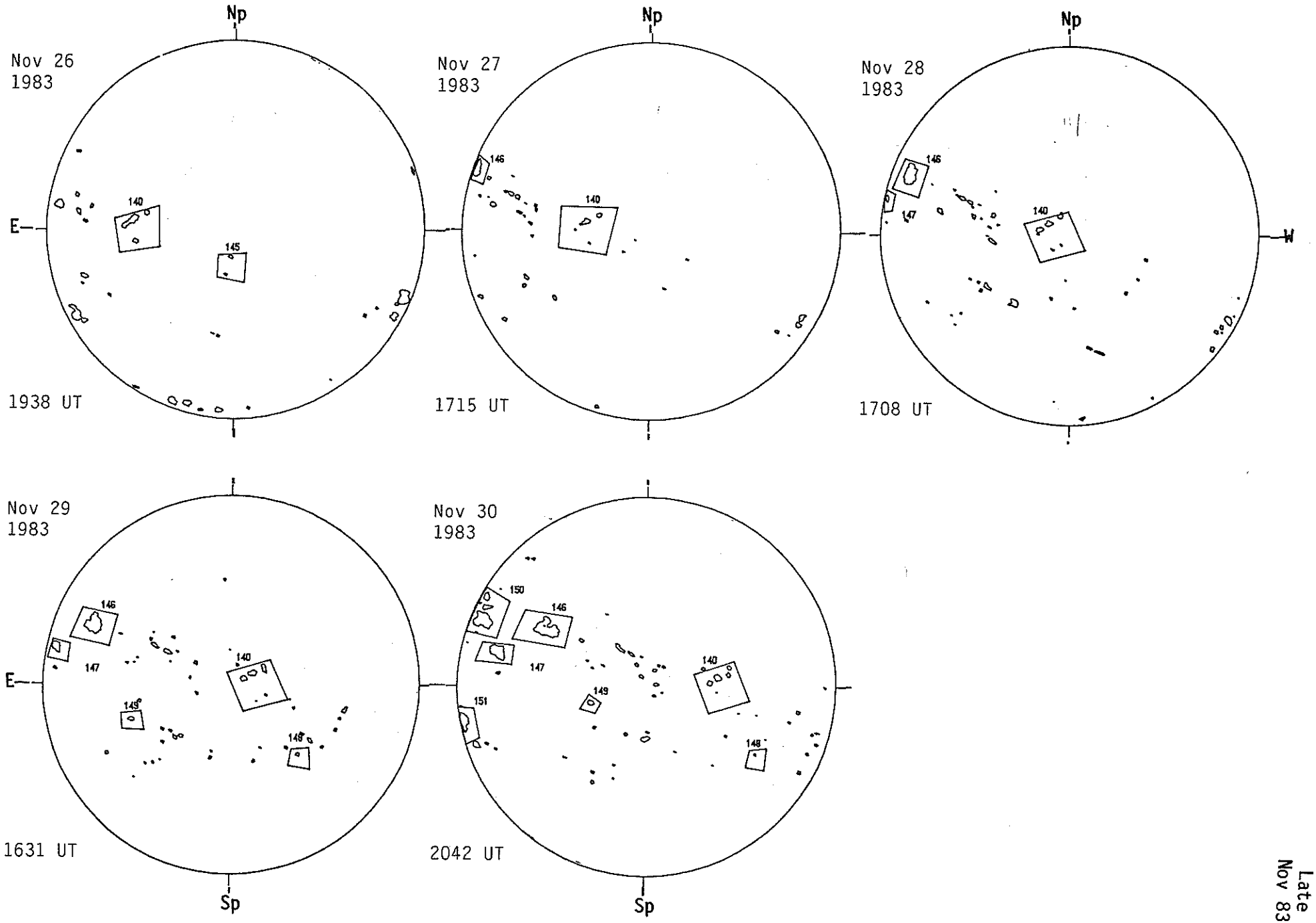
BIG BEAR SOLAR CALCIUM PLAGE REGIONS



BIG BEAR SOLAR CALCIUM PLAGE REGIONS



BIG BEAR SOLAR CALCIUM PLAGE REGIONS



CALCIUM PLAGE REGIONS
(ORDERED BY CENTRAL MERIDIAN PASSAGE DATE)

OCTOBER 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
18586	BIGB	09	25	1651	S01	E72	10	1.1	2.0	2059	3923		
18586	BIGB	09	28	1832	S05	E30	10	1.0	3.0	2600	3923		
18586	BIGB	09	29	1622	S03	E18	10	1.0	3.5	2500	3923		
18586	BIGB	09	30	2000	S03	E03	10	1.0	3.0	2600	3923		
18586	BIGB	10	01	1925	S02	W08	10	1.2	3.0	1823	3923		
18586	BIGB	10	02	1526	S02	W20	10	1.1	3.0	2018	3923		
18586	BIGB	10	03	1627	S02	W31	10	1.4	3.0	1938	3923		
18586	BIGB	10	04	1825	N00	W46	10	1.3	3.0	1791	3923		
18586	BIGB	10	05	1727	N00	W58	10	1.4	3.0	1521	3923		
18586	BIGB	10	06	1726	S02	W67	10	1.7	2.5	1650	3923		
18591	BIGB	10	01	1925	N12	W10	10	1.0	1.5	0378	3930		
18591	BIGB	10	02	1526	N12	W22	10	1.0	3.5	0644	3930		
18591	BIGB	10	03	1627	N13	W35	10	1.0	3.0	1021	3930		
18591	BIGB	10	04	1825	N13	W47	10	1.2	3.5	1031	3930		
18591	BIGB	10	05	1727	N13	W60	10	1.2	3.5	1453	3930		
18591	BIGB	10	06	1726	N14	W72	10	1.3	3.5	1502	3930		
18592	BIGB	10	01	1925	N12	E04	10	2.1	2.5	1961	3931		
18592	BIGB	10	02	1526	N12	W07	10	2.1	2.5	2523	3931		
18592	BIGB	10	03	1627	N12	W18	10	2.3	2.5	1903	3931		
18592	BIGB	10	04	1825	N16	W32	10	2.3	2.0	2163	3931		
18592	BIGB	10	05	1727	N15	W45	10	2.3	1.5	1690	3931		
18597	BIGB	10	04	1825	N06	W23	10	3.0	1.0	0400	3936		
18597	BIGB	10	05	1727	N09	W33	10	3.2	2.5	0220	3936		
18597	BIGB	10	06	1726	N09	W46	10	3.3	2.5	0314	3936		
18597	BIGB	10	07	2119	N09	W62	10	3.2	3.0	0539	3936		
18597	BIGB	10	08	1745	N09	W70	10	3.5	2.0	0752	3936		
18587	BIGB	09	28	1832	N14	E63	10	3.5	2.5	5000	3937	3937	
18587	BIGB	09	29	1622	N14	E50	10	3.5	2.5	5200	3937	3937	
18587	BIGB	09	30	2000	N15	E37	10	3.6	2.5	5200	3937	3937	
18587	BIGB	10	02	1526	N15	E17	10	3.9	2.5	4698	3937	3937	
18587	BIGB	10	03	1627	N15	E02	10	3.8	2.5	3962	3937	3937	
18587	BIGB	10	04	1825	N15	W11	10	3.9	2.0	4326	3937	3937	
18587	BIGB	10	05	1727	N21	W09	10	5.0	2.0	4157	3937	3937	
18587	BIGB	10	06	1726	N17	W36	10	4.0	2.5	2987	3937	3937	
18587	BIGB	10	07	2119	N12	W48	10	4.3	2.0	2506	3937	3937	
18587	BIGB	10	08	1745	N12	W57	10	4.4	2.0	1887	3937	3937	
18587	BIGB	10	10	1751	N15	W74	10	5.1	1.0	0799	3937	3937	
19587	BIGB	10	01	1925	N15	E28	10	3.9	2.5	4197			
18593	BIGB	10	01	1925	N00	E63	10	6.5	1.0	0361			
18593	BIGB	10	02	1526	N00	E52	10	6.5	1.0	0400			
18594	BIGB	10	01	1925	N21	E68	10	7.0	1.0	0258			
18594	BIGB	10	02	1526	N22	E59	10	7.2	1.0	0365			
18595	BIGB	10	02	1526	S20	E70	10	8.0	1.5	1740			
18595	BIGB	10	03	1627	S25	E64	10	8.6	2.5	1609			
18595	BIGB	10	04	1825	S21	E46	10	8.3	2.0	1335			
18595	BIGB	10	05	1727	S22	E35	10	8.4	3.0	1301			
18595	BIGB	10	06	1726	S24	E22	10	8.4	3.0	1254			
18595	BIGB	10	07	2119	S25	E07	10	8.4	2.5	1444			
18595	BIGB	10	08	1745	S24	W02	10	8.6	3.0	1102			
18595	BIGB	10	10	1751	S22	W28	10	8.6	2.5	1239			
18595	BIGB	10	11	1738	S22	W41	10	8.6	2.5	1488			
18595	BIGB	10	12	1716	S22	W53	10	8.6	2.0	1209			
18595	BIGB	10	13	1724	S22	W65	10	8.7	1.5	1037			
18596	BIGB	10	02	1526	S09	E73	10	8.1	1.0	0539	3932		
18596	BIGB	10	03	1627	S16	E68	10	8.8	1.5	1073	3932		
18596	BIGB	10	04	1825	S09	E50	10	8.5	1.5	0811	3932		
18596	BIGB	10	05	1727	S14	E39	10	8.7	2.0	1268	3932		
18596	BIGB	10	06	1726	S14	E26	10	8.7	2.0	1073	3932		
18596	BIGB	10	07	2119	S14	E08	10	8.5	2.5	2036	3932		
18596	BIGB	10	08	1745	S14	W02	10	8.6	2.5	2221	3932		
18596	BIGB	10	10	1751	S12	W22	10	9.1	2.0	1598	3932		
18596	BIGB	10	11	1738	S12	W35	10	9.1	2.0	1539	3932		

CALCIUM PLAGE REGIONS
(ORDERED BY CENTRAL MERIDIAN PASSAGE DATE)

OCTOBER 1982

Calcium Plage Region	Sta	Observation Mo	Day	Time (UT)	Lat	CMD	CMP Mo	Day	Intensity	Corrected Area (10-6 Hemi)	NOAA/USAF Sunspot Groups #1	#2	#3
18596	BIGB	10	12	1716	S13	W47	10	9.2	1.5	1058	3932		
18596	BIGB	10	13	1724	S13	W60	10	9.2	1.5	0867	3932		
18598	BIGB	10	03	1627	S23	E76	10	9.5	1.5	0500			
18598	BIGB	10	04	1825	S23	E63	10	9.6	1.5	0456			
18598	BIGB	10	05	1727	S24	E48	10	9.4	1.0	0473			
18598	BIGB	10	06	1726	S24	E36	10	9.5	1.0	0594			
18598	BIGB	10	07	2119	S21	E20	10	9.4	1.5	0539			
18598	BIGB	10	08	1745	S21	E09	10	9.4	1.5	0518			
18598	BIGB	10	10	1751	S18	W12	10	9.8	1.0	0538			
18598	BIGB	10	11	1738	S19	W25	10	9.8	1.5	0616			
18598	BIGB	10	12	1716	S19	W36	10	9.9	1.5	0302			
18598	BIGB	10	13	1724	S19	W49	10	10.0	1.5	0102			
18604	BIGB	10	10	1751	N14	W09	10	10.1	2.0	0293	3940		
18604	BIGB	10	11	1738	N14	W25	10	9.8	2.5	0274	3940		
18604	BIGB	10	12	1716	N14	W39	10	9.8	1.5	0100	3940		
18605	BIGB	10	08	1745	N13	E21	10	10.3	2.5	0351			
18605	BIGB	10	10	1751	N15	W03	10	10.5	2.5	0685			
18605	BIGB	10	11	1738	N15	W19	10	10.3	3.0	0650			
18605	BIGB	10	12	1716	N15	W31	10	10.4	2.5	0454			
18605	BIGB	10	13	1724	N16	W44	10	10.4	2.0	0272			
18600	BIGB	10	04	1825	N05	E71	10	10.1	3.0	0997	3935	3947	
18600	BIGB	10	05	1727	N05	E60	10	10.2	3.0	1386	3935	3947	
18600	BIGB	10	06	1726	N06	E49	10	10.4	3.0	1452	3935	3947	
18600	BIGB	10	07	2119	N05	E33	10	10.3	3.5	1775	3935	3947	
18600	BIGB	10	08	1745	N06	E23	10	10.5	2.5	1720	3935	3947	
18600	BIGB	10	10	1751	N07	W01	10	10.7	2.5	1728	3935	3947	
18600	BIGB	10	11	1738	N10	W15	10	10.6	2.5	1659	3935	3947	
18600	BIGB	10	12	1716	N07	W29	10	10.5	2.5	1142	3935	3947	
18600	BIGB	10	13	1724	N08	W41	10	10.6	2.5	0901	3935	3947	
18600	BIGB	10	15	2156	N10	W70	10	10.6	2.0	0774	3935	3947	
18600	BIGB	10	16	1716	N10	W77	10	10.9	1.0	0152	3935	3947	
18599	BIGB	10	04	1825	N20	E71	10	10.2	1.5	0575	3938		
18599	BIGB	10	05	1727	N20	E62	10	10.5	2.0	0676	3938		
18599	BIGB	10	06	1726	N20	E48	10	10.4	2.5	0528	3938		
18599	BIGB	10	07	2119	N20	E35	10	10.6	3.0	0766	3938		
18599	BIGB	10	08	1745	N20	E25	10	10.6	3.0	1035	3938		
18599	BIGB	10	10	1751	N23	E01	10	10.8	3.0	1891	3938		
18599	BIGB	10	11	1738	N22	W11	10	10.9	3.5	2206	3938		
18599	BIGB	10	12	1716	N23	W27	10	10.6	3.5	2470	3938		
18599	BIGB	10	13	1724	N23	W39	10	10.7	3.5	2499	3938		
18599	BIGB	10	15	2156	N22	W68	10	10.7	3.0	2305	3938		
18599	BIGB	10	16	1716	N23	W74	10	11.0	3.0	1758	3938		
18609	BIGB	10	10	1751	N08	E13	10	11.7	3.0	0440	3944		
18609	BIGB	10	11	1738	N08	W00	10	11.7	2.0	0462	3944		
18609	BIGB	10	12	1716	N09	W13	10	11.7	1.0	0269	3944		
18609	BIGB	10	13	1724	N10	W26	10	11.8	1.0	0102	3944		
18609	BIGB	10	15	2156	N10	W56	10	11.7	1.0	0100	3944		
18601	BIGB	10	06	1726	N15	E77	10	12.5	1.5	0545			
18601	BIGB	10	07	2119	N17	E57	10	12.2	1.5	0679			
18601	BIGB	10	08	1745	N16	E46	10	12.2	2.0	0735			
18601	BIGB	10	10	1751	N17	E29	10	12.9	2.0	1011			
18601	BIGB	10	11	1738	N18	E09	10	12.4	2.0	0958			
18601	BIGB	10	12	1716	N19	W03	10	12.5	2.0	0504			
18601	BIGB	10	13	1724	N18	W16	10	12.5	2.0	0527			
18601	BIGB	10	15	2156	N20	W41	10	12.8	2.0	0396			
18601	BIGB	10	16	1716	N20	W51	10	12.8	1.5	0456			
18601	BIGB	10	17	1857	N21	W66	10	12.7	1.0	0467			
18610	BIGB	10	11	1738	S10	E09	10	12.4	2.5	0787	3946		
18610	BIGB	10	12	1716	S10	W03	10	12.5	2.5	1059	3946		
18610	BIGB	10	13	1724	S10	W16	10	12.5	2.5	1071	3946		
18610	BIGB	10	15	2156	S11	W47	10	12.4	3.0	1049	3946		
18610	BIGB	10	16	1716	S10	W57	10	12.4	3.0	1048	3946		
18610	BIGB	10	17	1857	S10	W72	10	12.4	2.0	0900	3946		

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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
18602	BIGB	10 06 1726	S14 E83	10 13.0	1.0	0825	3949A		
18602	BIGB	10 07 2119	S14 E60	10 12.4	1.5	1653	3949A		
18602	BIGB	10 08 1745	S15 E51	10 12.6	2.0	2121	3949A		
18602	BIGB	10 10 1751	S12 E26	10 12.7	2.0	1858	3949A		
18602	BIGB	10 11 1738	S16 E19	10 13.2	1.5	1881	3949A		
18602	BIGB	10 12 1716	S14 E04	10 13.0	1.5	1310	3949A		
18602	BIGB	10 13 1724	S14 W08	10 13.1	2.0	1020	3949A		
18602	BIGB	10 15 2156	S16 W37	10 13.1	2.0	0808	3949A		
18602	BIGB	10 16 1716	S15 W46	10 13.2	1.5	0862	3949A		
18602	BIGB	10 17 1857	S17 W56	10 13.5	1.0	0649	3949A		
18613	BIGB	10 12 1716	N02 E09	10 13.4	2.0	0302	3949		
18613	BIGB	10 13 1724	N02 W04	10 13.4	2.5	0680	3949		
18613	BIGB	10 15 2156	N03 W35	10 13.3	3.0	0791	3949		
18613	BIGB	10 16 1716	N04 W46	10 13.3	3.0	0862	3949		
18613	BIGB	10 17 1857	N04 W61	10 13.2	2.5	0744	3949		
18613	BIGB	10 18 1826	N04 W73	10 13.3	2.0	0499	3949		
18606	BIGB	10 08 1745	N10 E75	10 14.4	1.5	2288	3951		
18606	BIGB	10 10 1751	N13 E53	10 14.7	3.0	1174	3951		
18606	BIGB	10 11 1738	N11 E39	10 14.7	3.0	1813	3951		
18606	BIGB	10 12 1716	N10 E21	10 14.3	3.0	1226	3951		
18606	BIGB	10 13 1724	N10 E07	10 14.2	2.5	1122	3951		
18606	BIGB	10 15 2156	N10 W22	10 14.3	2.0	1032	3951		
18606	BIGB	10 16 1716	N10 W32	10 14.3	2.0	0913	3951		
18606	BIGB	10 17 1857	N10 W47	10 14.2	2.0	0744	3951		
18606	BIGB	10 18 1826	N11 W60	10 14.2	2.0	0808	3951		
18606	BIGB	10 19 1926	N10 W74	10 14.2	1.5	0588	3951		
18603	BIGB	10 12 1716	N06 E22	10 14.4	3.0	0823	3948		
18603	BIGB	10 13 1724	N06 E09	10 14.4	3.0	1003	3948		
18603	BIGB	10 15 2156	N06 W20	10 14.4	3.0	1032	3948		
18603	BIGB	10 16 1716	N05 W29	10 14.5	3.0	0980	3948		
18603	BIGB	10 17 1857	N05 W45	10 14.4	2.5	0934	3948		
18603	BIGB	10 18 1826	N06 W56	10 14.6	2.5	0912	3948		
18603	BIGB	10 19 1926	N05 W70	10 14.6	2.0	0346	3948		
18618	BIGB	10 18 1826	N07 W44	10 15.5	2.5	0327	3941A		
18618	BIGB	10 19 1926	N07 W59	10 15.4	1.5	0311	3941A		
18618	BIGB	10 20 2109	N07 W78	10 15.0	1.0	0200	3941A		
18618	BIGB	10 21 1738	N07 W82	10 15.6	1.0	0154	3941A		
18607	BIGB	10 10 1751	S12 E62	10 15.4	3.0	1190	3943		
18607	BIGB	10 11 1738	S15 E52	10 15.7	3.5	1881	3943		
18607	BIGB	10 12 1716	S15 E40	10 15.7	3.0	1915	3943		
18607	BIGB	10 13 1724	S14 E28	10 15.8	2.5	1972	3943		
18607	BIGB	10 15 2156	S15 W00	10 15.9	2.5	1995	3943		
18607	BIGB	10 16 1716	S12 W14	10 15.7	2.5	1673	3943		
18607	BIGB	10 17 1857	S13 W27	10 15.7	3.0	1868	3943		
18607	BIGB	10 18 1826	S13 W40	10 15.8	3.0	1565	3943		
18607	BIGB	10 19 1926	S13 W53	10 15.8	3.0	1471	3943		
18607	BIGB	10 20 2109	S14 W70	10 15.6	2.5	1000	3943		
18607	BIGB	10 21 1738	S16 W80	10 15.7	2.5	0616	3943		
18608	BIGB	10 10 1751	N16 E75	10 16.4	3.0	0831	3945		
18608	BIGB	10 11 1738	N15 E57	10 16.0	3.5	1163	3945		
18608	BIGB	10 12 1716	N15 E43	10 16.0	3.5	1277	3945		
18608	BIGB	10 13 1724	N15 E30	10 16.0	3.0	0935	3945		
18608	BIGB	10 15 2156	N16 E01	10 16.0	3.0	0791	3945		
18608	BIGB	10 16 1716	N16 W07	10 16.2	2.5	0524	3945		
18608	BIGB	10 17 1857	N16 W23	10 16.0	2.5	0484	3945		
18608	BIGB	10 18 1826	N17 W34	10 16.2	2.5	0705	3945		
18608	BIGB	10 19 1926	N17 W49	10 16.1	2.0	0554	3945		
18608	BIGB	10 20 2109	N18 W63	10 16.1	1.5	0500	3945		
18608	BIGB	10 21 1738	N17 W74	10 16.1	1.5	0342	3945		
18611	BIGB	10 11 1738	S16 E69	10 17.0	2.0	0838			
18611	BIGB	10 12 1716	S16 E57	10 17.0	2.5	1042			
18611	BIGB	10 13 1724	S17 E46	10 17.2	2.0	1224			
18611	BIGB	10 15 2156	S16 E19	10 17.3	2.0	1496			
18611	BIGB	10 16 1716	S17 E09	10 17.4	2.0	1318			

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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
18611	BIGB	10	17	1857	S17	W03	10	17.6	2.5	1315			
18611	BIGB	10	18	1826	S18	W16	10	17.5	2.0	1221			
18611	BIGB	10	19	1926	S18	W32	10	17.4	2.5	1090			
18611	BIGB	10	20	2109	S17	W48	10	17.2	2.5	1000			
18611	BIGB	10	21	1738	S15	W58	10	17.3	2.0	0735			
18611	BIGB	10	22	1629	S14	W73	10	17.2	2.5	0633			
18612	BIGB	10	11	1738	N23	E74	10	17.4	1.0	1077	3952	3953	
18612	BIGB	10	12	1716	N18	E67	10	17.8	1.5	1982	3952	3953	
18612	BIGB	10	13	1724	N15	E62	10	18.4	1.5	9486	3952	3953	
18612	BIGB	10	15	2156	N15	E40	10	18.9	2.0	8500	3952	3953	
18612	BIGB	10	16	1716	N15	E28	10	18.8	2.0	6135	3952	3953	
18612	BIGB	10	17	1857	N15	E15	10	18.9	2.5	5104	3952	3953	
18612	BIGB	10	18	1826	N16	E03	10	19.0	2.0	6364	3952	3953	
18612	BIGB	10	19	1926	N17	W09	10	19.1	2.0	5813	3952	3953	
18612	BIGB	10	20	2109	N20	W25	10	19.0	2.5	4700	3952	3953	
18612	BIGB	10	21	1738	N20	W32	10	19.3	2.5	4651	3952	3953	
18612	BIGB	10	22	1629	N21	W45	10	19.2	2.5	4292	3952	3953	
18612	BIGB	10	23	1614	N22	W56	10	19.4	2.0	4280	3952	3953	
18612	BIGB	10	24	2217	N15	W63	10	20.1	1.0	2988	3952	3953	
18614	BIGB	10	12	1716	S06	E71	10	18.0	1.0	0202	3950		
18614	BIGB	10	13	1724	S10	E67	10	18.7	2.0	3128	3950		
18614	BIGB	10	15	2156	S10	E43	10	19.1	3.5	4420	3950		
18614	BIGB	10	16	1716	S10	E32	10	19.1	3.5	2501	3950		
18614	BIGB	10	17	1857	S10	E18	10	19.1	3.5	2560	3950		
18614	BIGB	10	18	1826	S11	E06	10	19.2	3.0	2683	3950		
18614	BIGB	10	19	1926	S11	W06	10	19.3	3.0	1699	3950		
18614	BIGB	10	20	2109	S10	W22	10	19.2	3.0	2500	3950		
18614	BIGB	10	21	1738	S11	W30	10	19.5	3.0	2360	3950		
18614	BIGB	10	22	1629	S11	W42	10	19.5	3.0	2342	3950		
18614	BIGB	10	23	1614	S11	W54	10	19.6	2.5	1705	3950		
18614	BIGB	10	24	2217	S14	W72	10	19.5	1.0	0996	3950		
18615	BIGB	10	15	2156	S13	E69	10	21.1	1.5	0172	3957		
18615	BIGB	10	16	1716	S15	E62	10	21.4	1.5	0727	3957		
18615	BIGB	10	17	1857	S15	E50	10	21.6	2.0	0952	3957		
18615	BIGB	10	18	1826	S15	E36	10	21.5	2.0	1049	3957		
18615	BIGB	10	19	1926	S14	E23	10	21.5	2.5	0917	3957		
18615	BIGB	10	20	2109	S14	E08	10	21.5	3.0	1000	3957		
18615	BIGB	10	21	1738	S15	W05	10	21.3	3.0	1077	3957		
18615	BIGB	10	22	1629	S14	W18	10	21.3	3.0	1077	3957		
18615	BIGB	10	23	1614	S14	W31	10	21.3	3.0	0609	3957		
18615	BIGB	10	24	2217	S16	W48	10	21.3	2.5	0266	3957		
18616	BIGB	10	15	2156	N12	E71	10	21.3	1.5	0310	3958		
18616	BIGB	10	16	1716	N11	E60	10	21.2	2.0	0423	3958		
18616	BIGB	10	17	1857	N11	E46	10	21.2	1.5	0502	3958		
18616	BIGB	10	18	1826	N11	E35	10	21.4	2.0	0499	3958		
18616	BIGB	10	19	1926	N12	E23	10	21.5	2.0	0398	3958		
18616	BIGB	10	20	2109	N12	E08	10	21.5	3.0	0500	3958		
18616	BIGB	10	21	1738	N10	W03	10	21.5	3.0	1146	3958		
18616	BIGB	10	22	1629	N11	W16	10	21.5	3.0	1026	3958		
18616	BIGB	10	23	1614	N11	W30	10	21.4	3.5	1183	3958		
18616	BIGB	10	24	2217	N08	W44	10	21.6	3.0	0830	3958		
18616	BIGB	10	27	1823	N13	W76	10	22.0	1.0	0374	3958		
18617	BIGB	10	17	1857	S07	E80	10	23.8	1.5	0300	3954		
18617	BIGB	10	18	1826	S07	E73	10	24.2	2.0	0929	3954		
18617	BIGB	10	19	1926	S07	E55	10	23.9	2.5	1003	3954		
18617	BIGB	10	20	2109	S07	E40	10	23.9	2.5	0900	3954		
18617	BIGB	10	21	1738	S07	E29	10	23.9	2.5	1094	3954		
18617	BIGB	10	22	1629	S07	E17	10	24.0	2.5	1061	3954		
18617	BIGB	10	23	1614	S08	E04	10	24.0	2.5	1009	3954		
18617	BIGB	10	24	2217	S08	W12	10	24.0	2.0	0863	3954		
18617	BIGB	10	27	1823	S06	W49	10	24.1	1.5	0629	3954		
18617	BIGB	10	28	1947	S07	W65	10	23.9	1.5	0599	3954		
18617	BIGB	10	29	1745	S05	W73	10	24.3	1.5	0295	3954		
18619	BIGB	10	19	1926	S12	E71	10	25.1	3.0	2266	3955		
18619	BIGB	10	20	2109	S12	E60	10	25.4	3.5	3000	3955		

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18619	BIGB	10	21	1738	S11 E45	10	25.1	3.5	3129	3955		
18619	BIGB	10	22	1629	S11 E33	10	25.2	4.0	4754	3955		
18619	BIGB	10	23	1614	S11 E21	10	25.2	4.0	4681	3955		
18619	BIGB	10	24	2217	S11 E03	10	25.1	3.5	4598	3955		
18619	BIGB	10	27	1823	S10 W33	10	25.3	3.5	4369	3955		
18619	BIGB	10	28	1947	S10 W46	10	25.4	3.5	3625	3955		
18619	BIGB	10	29	1745	S10 W55	10	25.6	4.0	3608	3955		
18622	BIGB	10	21	1738	N10 E45	10	25.1	2.5	0410	3963		
18622	BIGB	10	22	1629	N12 E31	10	25.0	3.5	0325	3963		
18622	BIGB	10	23	1614	N12 E17	10	24.9	3.5	0609	3963		
18622	BIGB	10	24	2217	N11 E02	10	25.1	3.0	0896	3963		
18622	BIGB	10	27	1823	N12 W36	10	25.0	3.0	1649	3963		
18622	BIGB	10	28	1947	N12 W51	10	25.0	3.0	1607	3963		
18622	BIGB	10	29	1745	N12 W62	10	25.1	3.0	1525	3963		
18620	BIGB	10	19	1926	N13 E70	10	25.1	1.0	1021	3959	3967	
18620	BIGB	10	20	2109	N14 E65	10	25.8	2.0	1300	3959	3967	
18620	BIGB	10	21	1738	N13 E53	10	25.7	2.0	1385	3959	3967	
18620	BIGB	10	22	1629	N13 E41	10	25.8	3.0	1112	3959	3967	
18620	BIGB	10	23	1614	N13 E28	10	25.8	3.0	1253	3959	3967	
18620	BIGB	10	24	2217	N13 E12	10	25.8	3.0	1029	3959	3967	
18620	BIGB	10	27	1823	N14 W24	10	25.9	2.5	0918	3959	3967	
18620	BIGB	10	28	1947	N14 W39	10	25.9	2.0	0770	3959	3967	
18620	BIGB	10	29	1745	N14 W51	10	25.9	2.0	0787	3959	3967	
18620	BIGB	10	31	1825	N15 W71	10	26.4	2.0	0251	3959	3967	
18621	BIGB	10	20	2109	S14 E78	10	26.8	2.0	1200	3964		
18621	BIGB	10	21	1738	S14 E63	10	26.5	2.5	2223	3964		
18621	BIGB	10	22	1629	S14 E52	10	26.6	3.0	2633	3964		
18621	BIGB	10	23	1614	S15 E40	10	26.7	2.5	2349	3964		
18621	BIGB	10	24	2217	S14 E24	10	26.7	2.5	1892	3964		
18621	BIGB	10	27	1823	S13 W14	10	26.7	2.5	2822	3964		
18621	BIGB	10	28	1947	S13 W27	10	26.8	2.5	2377	3964		
18621	BIGB	10	29	1745	S13 W38	10	26.9	2.5	2017	3964		
18621	BIGB	10	31	1825	S14 W64	10	26.9	2.5	2121	3964		
18621	BIGB	11	01	1713	S14 W73	10	27.3	1.0	1799	3964		
18631	BIGB	10	27	1823	N10 W11	10	26.9	3.0	0986			
18631	BIGB	10	28	1947	N10 W26	10	26.9	2.5	0975			
18631	BIGB	10	29	1745	N10 W37	10	26.9	2.5	0820			
18631	BIGB	10	31	1825	N11 W63	10	27.0	2.0	0618			
18623	BIGB	10	21	1738	N15 E66	10	26.7	3.0	6635	3960	3965	
18623	BIGB	10	22	1629	N15 E58	10	27.1	3.0	4036	3960	3965	
18623	BIGB	10	23	1614	N15 E46	10	27.1	3.0	4019	3960	3965	
18623	BIGB	10	24	2217	N13 E30	10	27.2	3.0	4034	3960	3965	
18623	BIGB	10	27	1823	N16 W01	10	27.7	3.0	3655	3960	3965	
18623	BIGB	10	28	1947	N15 W14	10	27.8	2.5	3181	3960	3965	
18623	BIGB	10	29	1745	N09 W25	10	27.9	2.5	2296	3960	3965	
18623	BIGB	10	31	1825	N16 W51	10	27.9	2.5	1787	3960	3965	
18623	BIGB	11	01	1713	N16 W59	10	28.3	2.5	1865	3960	3965	
18623	BIGB	11	02	1911	N16 W73	10	28.4	1.5	1337	3960	3965	
18626	BIGB	10	22	1629	S02 E62	10	27.3	2.0	0650			
18626	BIGB	10	23	1614	S02 E51	10	27.5	1.5	0557			
18626	BIGB	10	24	2217	S02 E34	10	27.5	1.0	0481			
18626	BIGB	10	27	1823	S01 W01	10	27.7	1.5	0595			
18626	BIGB	10	28	1947	S02 W16	10	27.6	1.5	0547			
18626	BIGB	10	29	1745	S02 W27	10	27.7	1.5	0508			
18626	BIGB	10	31	1825	S01 W54	10	27.7	2.0	0551			
18626	BIGB	11	01	1713	S02 W65	10	28.0	1.5	0495			
18626	BIGB	11	02	1911	S02 W77	10	28.0	1.0	0396			
18625	BIGB	10	22	1629	S08 E73	10	28.1	3.0	0735	3961		
18625	BIGB	10	23	1614	S08 E62	10	28.3	2.5	0853	3961		
18625	BIGB	10	24	2217	S06 E44	10	28.2	2.5	1477	3961		
18625	BIGB	10	27	1823	S07 E05	10	28.1	3.5	2482	3961		
18625	BIGB	10	28	1947	S06 W10	10	28.1	3.0	2309	3961		
18625	BIGB	10	29	1745	S06 W21	10	28.2	3.5	3198	3961		
18625	BIGB	10	31	1825	S07 W46	10	28.3	3.5	3039	3961		

C A L C I U M P L A G E R E G I O N S
(ORDERED BY CENTRAL MERIDIAN PASSAGE DATE)

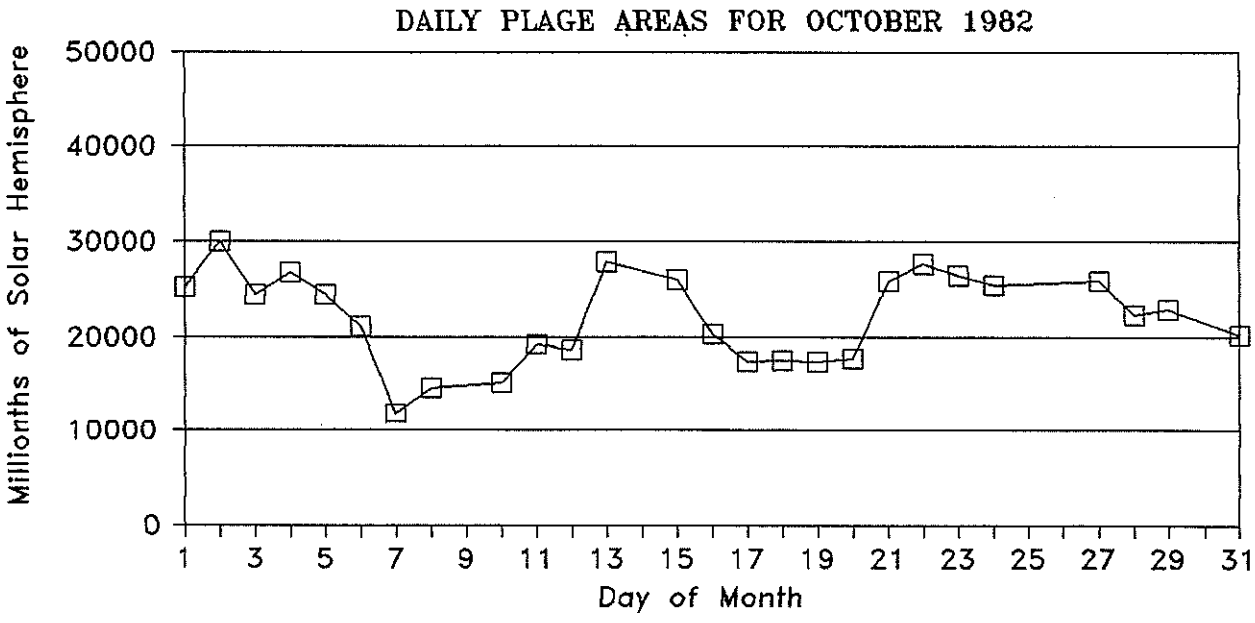
OCTOBER 1982

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
18625	BIGB	11 01 1713	S06 W59	10 28.4	3.5	3102	3961		
18625	BIGB	11 02 1911	S07 W69	10 28.7	4.0	2987	3961		
18624	BIGB	10 22 1629	S23 E67	10 27.8	2.5	2599	3968		
18624	BIGB	10 23 1614	S24 E58	10 28.1	2.5	2819	3968		
18624	BIGB	10 24 2217	S23 E41	10 28.1	2.0	3818	3968		
18624	BIGB	10 27 1823	S24 E08	10 28.4	2.0	4284	3968		
18624	BIGB	10 28 1947	S25 W05	10 28.4	2.0	2941	3968		
18624	BIGB	10 29 1745	S25 W15	10 28.6	2.5	3198	3968		
18624	BIGB	10 31 1825	S24 W37	10 28.9	2.5	4142	3968		
18624	BIGB	11 01 1713	S27 W51	10 28.8	2.5	4884	3968		
18624	BIGB	11 02 1911	S24 W55	10 29.6	1.5	4505	3968		
18624	BIGB	11 03 1914	S26 W70	10 29.5	1.0	1603	3968		
18627	BIGB	10 22 1629	N06 E73	10 28.1	2.0	0376			
18627	BIGB	10 23 1614	N07 E65	10 28.5	1.5	0574			
18627	BIGB	10 24 2217	N08 E49	10 28.6	1.5	0498			
18627	BIGB	10 27 1823	N08 E12	10 28.7	1.5	0510			
18627	BIGB	10 28 1947	N10 W03	10 28.6	1.5	0547			
18627	BIGB	10 29 1745	N08 W12	10 28.8	1.5	0558			
18627	BIGB	10 31 1825	N09 W38	10 28.9	2.0	0384			
18627	BIGB	11 01 1713	N08 W53	10 28.8	1.5	0264			
18627	BIGB	11 02 1911	N08 W64	10 29.1	1.0	0248			
18628	BIGB	10 24 2217	N09 E62	10 29.6	1.0	0365			
18628	BIGB	10 27 1823	N10 E24	10 29.6	1.0	0408			
18628	BIGB	10 28 1947	N10 E09	10 29.5	1.0	0393			
18628	BIGB	10 29 1745	N12 W03	10 29.5	1.5	0262			
18628	BIGB	10 31 1825	N13 W29	10 29.6	1.5	0217			
18637	BIGB	11 01 1713	S16 W44	10 29.5	1.5	0215	3961A		
18637	BIGB	11 02 1911	S15 W57	10 29.6	1.0	0100	3961A		
18629	BIGB	10 24 2217	N03 E68	10 30.0	1.0	0415	3962	3966	
18629	BIGB	10 27 1823	N04 E29	10 29.9	1.0	0289	3962	3966	
18629	BIGB	10 28 1947	N05 E16	10 30.0	1.5	0222	3962	3966	
18629	BIGB	10 29 1745	N06 E04	10 30.0	1.5	0492	3962	3966	
18629	BIGB	10 31 1825	N06 W20	10 30.3	3.5	1269	3962	3966	
18629	BIGB	11 01 1713	N06 W32	10 30.4	3.5	1667	3962	3966	
18629	BIGB	11 02 1911	N05 W46	10 30.4	3.5	1749	3962	3966	
18629	BIGB	11 03 1914	N07 W59	10 30.5	3.5	1788	3962	3966	
18629	BIGB	11 04 2015	N06 W75	10 30.3	3.0	1737	3962	3966	
18629	BIGB	11 05 1625	N06 W80	10 30.8	1.0	0297	3962	3966	
18632	BIGB	10 28 1947	S09 E18	10 30.2	1.0	0599	3969		
18632	BIGB	10 29 1745	S09 E06	10 30.2	1.0	0328	3969		
18632	BIGB	10 31 1825	S08 W16	10 30.6	2.0	0534	3969		
18632	BIGB	11 01 1713	S09 W28	10 30.7	2.5	0611	3969		
18632	BIGB	11 02 1911	S09 W41	10 30.8	2.5	0957	3969		
18632	BIGB	11 03 1914	S09 W53	10 30.9	2.0	0802	3969		
18632	BIGB	11 04 2015	S10 W69	10 30.7	3.5	1049	3969		
18632	BIGB	11 05 1625	S09 W72	10 31.3	3.5	0776	3969		
18630	BIGB	10 27 1823	N13 E38	10 30.6	1.5	1938			
18630	BIGB	10 28 1947	N12 E23	10 30.5	1.0	1642			
18630	BIGB	10 29 1745	N15 E12	10 30.6	1.5	1574			
18630	BIGB	10 31 1825	N15 W12	10 30.8	2.0	1904			
18630	BIGB	11 01 1713	N15 W25	10 30.9	2.0	2013			
18630	BIGB	11 02 1911	N15 W39	10 30.9	2.0	2261			
18630	BIGB	11 03 1914	N16 W48	10 31.2	2.0	2538			
18630	BIGB	11 04 2015	N17 W59	10 31.4	1.5	2408			
18630	BIGB	11 05 1625	N16 W67	10 31.6	1.0	2013			

D A I L Y P L A G E S U M M A R I E S

OCTOBER 1982

Day	Sta	Plage Index	Plage Count	Smallest Plage (Millionths	Largest Plage of Solar	Total Area Hemisphere)	Smallest Intensity	Largest Intensity
01	BIGB	60.5	14	258	7534	25301	1.0	3.5
02	BIGB	65.5	16	313	8091	30048	1.0	3.5
03	BIGB	50.4	11	190	7820	24445	1.5	3.5
04	BIGB	43.8	15	101	8163	26814	1.0	4.0
05	BIGB	34.5	13	220	7436	24471	1.0	3.5
06	BIGB	26.1	13	314	7475	21156	1.0	3.5
07	BIGB	21.3	9	539	2506	11937	1.5	3.5
08	BIGB	23.1	11	351	2288	14730	1.5	3.0
09	No Observations This DAY							
10	BIGB	28.1	14	293	1891	15275	1.0	3.0
11	BIGB	37.0	16	274	2206	19292	1.0	3.5
12	BIGB	34.9	19	100	2470	18646	1.0	3.5
13	BIGB	38.9	18	102	9486	27948	1.0	3.5
14	No Observations This DAY							
15	BIGB	46.6	16	100	8500	25971	1.0	3.5
16	BIGB	36.1	15	152	6135	20332	1.0	3.5
17	BIGB	35.5	14	300	5104	17523	1.0	3.5
18	BIGB	32.9	12	327	6364	17561	2.0	3.0
19	BIGB	28.4	13	311	5813	17477	1.0	3.0
20	BIGB	31.8	12	200	4700	17800	1.0	3.5
21	BIGB	44.4	14	154	6635	25957	1.0	3.5
22	BIGB	53.7	15	325	4754	27651	2.0	4.0
23	BIGB	53.7	14	557	4681	26500	1.5	4.0
24	BIGB	50.0	16	266	4598	25446	1.0	3.5
25	No Observations This DAY							
26	No Observations This DAY							
27	BIGB	59.9	15	289	4369	25908	1.0	3.5
28	BIGB	44.0	15	222	3625	22334	1.0	3.5
29	BIGB	44.0	16	262	3608	22909	1.0	4.0
30	No Observations This DAY							
31	BIGB	35.2	14	217	4142	20257	1.5	3.5



BIG BEAR SOLAR OBSERVATORY
ACTIVE REGION SUMMARY

OCTOBER 1982

REGION	IDENTIFICATION	AGE	FIRST SEEN	DURATION
18592	18549	2	821001	05 days
587	18551	2	820928	12
597	New	1	821006	03
593	New	1	821001	02
594	New	1	821001	02
595	New	1	821002	13
596	18555	2	821002	13
604	New	1	821010	03
598	18560	2	821003	12
599	New	1	821004	13
600	New	1	821006	13
605	New	1	821008	07
609	New	1	821010	06
601	18565	2	821010	12
610	New	1	821011	07
602	18561	2	821006	12
613	New	1	821012	07
603	New	1	821012	08
606	New	1	821008	12
618	New	1	821018	03
607	18562	2	821009	>12
608	New	1	821010	>12
611	18567	2	821011	>10
612	18566, 18568, 18569	3	821011	14
614	18571	2	821012	13
615	New and part of 18582	1 & 2	821015	>10
616	New	1	821015	13
617	New	1	821017	>12
619	New near loc. of 18581	2	821019	12
622	New	1	821021	>06
620	18579	2	821019	>09
621	18581	2	821020	13
631	New	1	821027	>05
623	18583	2	821021	>11
626	18586	2	821022	>11
625	New	1	821022	>11
624	18585	3	821022	>12
627	18591	2	821022	11
628	New	1	821024	05
637	New	1	821101	02
629	New	1	821024	13
632	New	1	821028	09

1. No CaK Observations at BBSO on October 14, 25, 26, 30.

2. Contiguous Plages: 18583/18591
18587/18597
18603/18606
18620/18622

3. No Magnetograms were taken at KPNO on October 23, 24, 28, 29.

*U.S. GOVERNMENT PRINTING OFFICE: 1985-0-576-027/10,012

WORLD DATA CENTER A
FOR
SOLAR-TERRESTRIAL PHYSICS

The ICSU Panel on WDCs has recommended that it would be appropriate courtesy to acknowledge in publications that data were obtained from the originating station or investigator through the intermediary of the WDCs. The following statement is suggested:

"Data used in this study were provided by WDC-A for Solar-Terrestrial Physics, NOAA E/GC2, 325 Broadway, Boulder Colorado 80303, USA."