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Solar - Geophysical Data

Part I (Prompt Reports)

NO. 499 MARCH 1986

DATA FOR
FEBRUARY 1986
JANUARY 1986

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

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

For sale through the National Geophysical Data Center, NOAA/NESDIS, E/GC2, 325 Broadway, Boulder, Colorado 80303. 1986 Subscription Price for the U.S.: $70.00 annually for both Part I (Prompt Reports) and Part II (Comprehensive Reports) or $35.00 annually for either part. Annual supplement containing explanation is included. Foreign subscriptions: For 1986 issues -- $106.00 for both parts or $53.00 for either part. We require prepayment for all orders. Please include with your request a check or money order payable in U.S. currency to the Department of Commerce, NOAA/NGDC. Any bank charges should be paid by the subscriber. Payment may be made through an American Express, Mastercard or VISA credit cards. Please include the correct name of credit card holder, card number and expiration date. Prices are subject to change. NGDC phone number: (303)497-6135 (FTS 320-6135).

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ISSN #0038-0911

S O L A R - G E O P H Y S I C A L D A T A

NUMBER 499

(Issued in Two Parts)

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Published with partial support from NASA (W-15,519) and NSF (ATM-8318491).

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INTERNATIONAL URSIGRAM AND WORLD DAYS SERVICE

SUMMARY OF THE GEOALERT MESSAGES FEBRUARY 1986

NO	DI	DO	WOLF	10CM	A	LOC	TOT	M	X	OUTSTANDING EVENTS	DA	LOC	DE	ALERTS
032	01	31	014	079	011	S07E65	3	0	0		01	S07E65	Q	SOLQUIET MAGQUIET
033	02	01	021	084	007	S07E51	2	0	0		02	S07E51	E	SOLQUIET MAGQUIET
034	03	02	052	090	006	S07E38 S05W46	2 0	0 0	0 0		03	S07E38 S05W46	E Q	SOLQUIET MAGQUIET
035	04	03	070	099	006	S08E24 S02W58 S02E70	7 1 2	1 0 0	0 0 0	PRESTO TENFLARE 210 FLUX UNITS 02/2040 UT IN PROGRESS	04	S08E24 S02W58 S02E70	A Q Q	SOLALERT 04/06 MAGQUIET
036	05	04	073	101	005	S07E10 S04W73 S02E54	4 0 1	0 0 1	1 0 0	PRESTO XRAY EVENT X3/3B S03E21 04/0735 UT DURATION 12 MINUTES TENFLARE 820 FLUX UNITS 04/0734 UT DURATION 23 MINUTES TENFLARE 1200 FLUX UNITS 04/0734 UT DURATION 20 MINUTES TENFLARE 250 FLUX UNITS 04/1023 UT DURATION 13 MINUTES TENFLARE 100 FLUX UNITS 04/0640 UT DURATION 20 MINUTES	05	S07E10 S04W73 S02E54	A Q E	SOLALERT 05/07 MAJOR FLARE ALERT 05/07 21007 PROTON FLARE ALERT 05/07 21007 MAGALERT 06/07 FLARE
037	06	05	073	103	008	S07W02 S05W90 S02E43	8 0 3	1 0 0	0 0 0	PRESTO TENFLARE 260 FLUX UNITS 05/0040 UT DURATION 25 MINUTES	06	S07W02 S05W90 S02E43	P Q A	SOLALERT 06/XX MAGALERT 06/07 FLARE
038	07	06	056	102	012	S08W16 S02E29	9 3	0 0	1 0	PRESTO SOFLARE X1/3B S04W06 06/0618 UT DURATION 49 MINUTES TENFLARE 1300 FLUX UNITS 06/0618 UT DURATION 45 MINUTES TENFLARE 1990 FLUX UNITS 06/0615 UT DURATION 70 MINUTES PROTON EVENT 06/0900 UT >10 MEV STRONG MAGSTORM IN PROGRESS 06/0112 UT	07	S08W16 S02E29	P Q	SOLALERT 07/XX MAGALERT 07/08 FLARE
039	08	07	058	099	038	S08W29 S02E15	8 2	1 0	0 0	PRESTO TENFLARE 4100 FLUX UNITS 07/1012 UT DURATION 39 MINUTES TENFLARE 1100 FLUX UNITS 07/1013UTIN PROGRESS	08	S08W29 S02E15	P Q	SOLALERT 08/09 MAGALERT 08/09 FLARE
040	09	08	061	098	110	S08W42 S01E01	8 4	0 0	0 0	PRESTO MAGSTORM BEGINS 06/1312 UT STRONG MAGSTORM IN PROGRESS 08/0600 UT	09	S08W42 S01E01	E E	SOLALERT 09/09 MAGALERT 09/10
041	10	09	059	095	070	S09W57 S01W13	1 0	0 0	0 0		10	S09W57 S01W13	Q Q	SOLNIL MAGALERT 10/10
042	11	10	044	099	007	S08W70 S01W28	3 6	0 0	0 0	PRESTO TENFLARE 740 FLUX UNITS 10/2020 UT DURATION 27 MINUTES	11	S08W70 S01W28	E E	SOLALERT 11/13 MAGNIL
043	12	11	049	098	019	S09W84 S01W45	2 6	0 2	0 0		12	S09W84 S01W45	Q E	SOLALERT 12/13 MAGQUIET
044	13	12	027	091	015	S01W60	2	0	0		13	S01W60	E	SOLALERT 13 MAGQUIET
045	14	13	023	089	015	S02W73	10	1	0	PRESTO TENFLARE 110 FLUX UNITS 13/2315 UT DURATION 2 MINUTES	14	S02W73	E	SOLNIL MAGQUIET

ALERT PERIODS
INTERNATIONAL URSIGRAM AND WORLD DAYS SERVICE

SUMMARY OF THE GEOALERT MESSAGES FEBRUARY 1986

NO	DI	DO	WOLF	10CM	A	LOC	TOT	M	X	OUTSTANDING EVENTS	DA	LOC	DE	ALERTS
046	15	14	018	090	025	S01W88	6	1	0	PRESTO TENFLARE 2400 FLUX UNITS 14/0906 UT DURATION 84 MINUTES PROTON EVENT BEGAN 14/1030 UT 10 P/CM2/SEC/STER>10 MEV AT 14/2000 UT IN PROGRESS	15	S01W88	Q	SOLALERT 15/16 MAGQUIET
047	16	15	000	082	010	SPOTNIL				PRESTO TENFLARE 2300 FLUX UNITS 15/1109 UT DURATION 51 MINUTES TENFLARE 290 FLUX UNITS 15/1204 UT DURATION 63 MINUTES	16	SPOTNIL		SOLNIL MAGALERT 16/XX
048	17	16	000	073	005	SPOTNIL				PRESTO TENFLARE 140 FLUX UNITS 16/2231 UT DURATION 20 MINUTES	17	SPOTNIL		SOLQUIET MAGALERT 17/XX
049	18	17	000	070	008	SPOTNIL					18	SPOTNIL		SOLQUIET MAGALERT 18/XX FLARE
050	19	18	000	070	012	SPOTNIL					19	SPOTNIL		SOLQUIET MAGNIL
051	20	19	000	070	010	SPOTNIL					20	SPOTNIL		SOLQUIET MAGALERT 20/22 RECURRENCE/ FLARE
052	21	20	011	070	018	S02E67	0	0	0		21	S02E67	Q	SOLQUIET MAGALERT 21/22 RECURRENCE
053	22	21	011	067	015	S02E53	0	0	0		22	S02E53	Q	SOLQUIET MAGALERT MINOR 22/23 RECURRENCE
054	23	22	011	069	025	S00E38	0	0	0		23	S00E38	Q	SOLQUIET MAGALERT MINOR 23/XX RECURRENCE
055	24	23	011	069	025	S01E26	0	0	0		24	S01E26	Q	SOLQUIET MAGALERT 24/XX RECURRENCE
056	25	24	000	070	013	SPOTNIL					25	SPOTNIL		SOLQUIET MAGNIL
057	26	25	000	072	014	SPOTNIL					26	SPOTNIL		SOLQUIET MAGQUIET
058	27	26	011	074	021	S02W16	0	0	0		27	S02W16	Q	SOLQUIET MAGALERT 26/27 RECURRENCE
059	28	27	016	077	020	N02W18	0	0	0		28	N02W18	Q	SOLQUIET MAGNIL

ALERT PERIODS
INTERNATIONAL URSIGRAM AND WORLD DAYS SERVICE

SUMMARY OF THE GEOALERT MESSAGES FEBRUARY 1986

NO	DI	DO	WOLF	10CM	A	LOC	TOT	M	X	OUTSTANDING EVENTS	DA	LOC	DE	ALERTS
060	01	28	023	079	015	N02W33	0	0	0		01	N02W33	Q	SOLQUIET
						S00E85	1	0	0			S00E85	E	MAGALERT 01/02 DISAPPEARING FILAMENT

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 AND LONGITUDE, TOT=TOTAL NUMBER OF FLARES, M=NUMBER OF M FLARES, X=NUMBER OF X FLARES, DA=DATE OF FORECAST, DE=DESCRIPTION, Q=QUIET, E=ERUPTIVE, A=ACTIVE, P=PROTON.

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PRESTO TOYOKAWA 04/0840 UT TENFLARE 100 FLUX UNITS 04/0640 UT DURATION 20 MINUTES
PRESTO TOYOKAWA 04/0840 UT TENFLARE 1200 FLUX UNITS 04/0734 UT DURATION 20 MINUTES
PRESTO BOULDER 04/0943 UT X-RAY EVENT X3/3B S03E21 04/0735 UT DURATION 12 MINUTES
PRESTO BOULDER 04/1300 UT TENFLARE 820 FLUX UNITS 04/0734 UT DURATION 23 MINUTES
PRESTO BOULDER 04/1320 UT TENFLARE 250 FLUX UNITS 04/1023 UT DURATION 13 MINUTES
PRESTO TOYOKAWA 05/0140 UT TENFLARE 260 FLUX UNITS 05/0040 UT DURATION 25 MINUTES
PRESTO BOULDER 06/0154 UT STRONG MAGSTORM IN PROGRESS 06/0112 UT
PRESTO SYDNEY 06/0645 UT SOFLARE CULGOORA 2B FLARE MAX TIME 06/0629 UT IN PROGRESS
PRESTO TOYOKAWA 06/0742 UT TENFLARE 1990 FLUX UNITS 06/0615 UT DURATION 70 MINUTES
PRESTO BOULDER 06/0801 UT TENFLARE 1300 FLUX UNITS 06/0618 UT DURATION 45 MINUTES
PRESTO BOULDER 06/0801 UT X-RAY EVENT X1/3B S04W06 06/0618 UT DURATION 49 MINUTES
PRESTO BOULDER 06/1048 UT PROTON EVENT 11 P/CM2/SEC/STER>10 MEV BEGAN 06/0910 UT IN PROGRESS
PRESTO MOSCOW 07/1120 UT TENFLARE 1100 FLUX UNITS 07/1013 UT IN PROGRESS
PRESTO BOULDER 07/1215 UT TENFLARE 4100 FLUX UNITS 07/1012 UT DURATION 39 MINUTES
PRESTO KAKIOKA 08/0000 UT MAGSTORM BEGINS 06/1312 UT
PRESTO BOULDER 08/0554 UT STRONG MAGSTORM IN PROGRESS 08/0600 UT
PRESTO BOULDER 10/2310 UT TENFLARE 740 FLUX UNITS 10/2020 UT DURATION 27 MINUTES
PRESTO BOULDER 13/2333 UT TENFLARE 110 FLUX UNITS 13/2315 UT DURATION 2 MINUTES
PRESTO TOYOKAWA 14/0005 UT TENFLARE 130 FLUX UNITS 13/2315 UT DURATION 4 MINUTES
PRESTO BOULDER 14/1004 UT TENFLARE 2400 FLUX UNITS 14/0906 UT IN PROGRESS
PRESTO BOULDER 14/1335 UT PROTON EVENT 10 P/CM2/SEC/STER>10 MEV BEGAN 14/1200 UT IN PROGRESS
PRESTO BOULDER 15/1215 UT TENFLARE 2300 FLUX UNITS 15/1109 UT IN PROGRESS
PRESTO BOULDER 15/1355 UT TENFLARE 290 FLUX UNITS 15/1204 UT DURATION 63 MINUTES
PRESTO BOULDER 16/2230 UT TENFLARE 140 FLUX UNITS 16/2231 UT DURATION 20 MINUTES

STRATWARM MESSAGES FOR FEBRUARY 1986

STRATWARM ALERT /THURSDAY/ STRONG WARMING AT 10 HPA OVER THE USSR FROM THE URAL REGION TO CENTRAL SIBERIA AROUND AND NORTH OF 60 NORTH WITH TEMPERATURE INCREASE MORE THAN 40 DEGREES THE LAST WEEK.
STRATWARM ALERT /FRIDAY/ WARMING OVER CENTRAL SIBERIA INTENSIFYING. POLAR VORTEX MOVING TOWARDS GREENLAND IN UPPER STRATOSPHERE.
STRATWARM ALERT /SUNDAY/ INTENSE WARMING OVER SIBERIA CONNECTED WITH TEMPERATURE INCREASE OVER THE POLAR REGION AND SPLIT OF THE POLAR VORTEX IN THE LOWER STRATOSPHERE. MEAN ZONAL FLOW THROUGHOUT THE WHOLE STATOSPHERE AT 60 NORTH STILL FROM THE WEST.
STRATWARM ALERT /MONDAY/ INTENSE WARMING OVER SIBERIA CONNECTED WITH TEMPERATURE INCREASE OVER THE POLAR REGION CONTINUES. TEMPERATURE GRADIENT REVERSED BETWEEN 60 NORTH AND THE POLE AT 10 MB TODAY.
STRATWARM ALERT /TUESDAY/ INTENSE WARMING OVER SIBERIA AND THE POLAR REGION CONTINUES. TEMPERATURE GRADIENT REVERSED BETWEEN THE POLE AND 60 NORTH IN THE UPPER AND MIDDLE STRATOPSHERE DOWNWARDS TO 30 MB. AT THE 1 MB LEVEL, MEAN ZONAL WIND AT 60 NORTH STRONGLY WEAKENED DURING THE LAST DAYS.
STRATWARM ALERT /WEDNESDAY/ THE POLAR REGION, ALASKA, AND NORTHWEST, AND NORTH CANADA SLOWLY WEAKENING. TEMPERATURE GRADIENT REVERSED BETWEEN THE POLE AND 60 NORTH IN THE UPPER AND MIDDLE STRATOSPHERE DOWNWARDS TO 30 HPA. AT THE 1 MB LEVEL, MEAN ZONAL WIND ALSO BETWEEN THE POLE AND 60 NORTH.
STRATWARM ALERT /THURSDAY/ WARMING OVER SIBERIA, ALASKA, CANADA, AND THE POLAR REGION CONTINUOUSLY WEAKENING. COOLING OVER EUROPE INTENSIFYING. TEMPERATURE GRADIENT REVERSED BETWEEN THE POLE AND 60 NORTH IN THE UPPER AND MIDDLE STRATOPSHERE. AT THE 1 MB LEVEL, THE MEAN ZONAL WIND AT 60 NORTH IS FROM THE EAST.
STRATWARM ALERT /FRIDAY/ WARM EVENT OVER POLAR LATITUDES TERMINATED. SLOW RETURN TO NORMAL MERIDIONAL TEMPERATURE GRADIENT BETWEEN THE POLE AND 60 NORTH EXPECTED DURING THE NEXT DAYS.

INTERNATIONAL (R_I) RELATIVE SUNSPOT NUMBERS

Day	1985 Final Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	1986 Prov Jan	Feb
01	13	25	19	10	21	35	7	0	0	0	0	18
02	13	21	15	0	27	25	0	0	0	16	0	31
03	9	23	14	11	30	27	0	0	0	13	0	57
04	0	17	18	26	32	27	0	0	0	0	0	58
05	0	23	16	35	38	20	0	0	16	18	0	53
06	0	19	14	37	43	14	0	0	19	26	0	47
07	0	11	32	38	71	12	0	0	19	15	0	52
08	14	9	44	42	67	12	0	0	18	12	0	54
09	15	9	56	42	82	17	0	0	25	16	0	47
10	13	0	49	58	82	12	0	0	15	15	0	37
11	16	0	49	66	61	12	7	0	17	18	0	37
12	18	0	33	54	45	12	0	0	19	19	0	25
13	14	0	32	45	25	0	9	11	30	18	13	22
14	10	10	32	36	9	0	9	13	44	30	14	16
15	0	0	32	37	8	0	9	15	48	47	12	11
16	11	0	31	27	9	14	9	25	39	66	8	0
17	20	0	38	23	11	12	8	19	43	63	0	0
18	35	10	41	18	11	11	10	20	37	52	0	0
19	27	9	40	10	11	12	10	31	30	40	0	0
20	19	11	37	9	11	10	9	44	28	24	0	10
21	9	17	36	9	10	9	8	50	18	17	0	10
22	15	31	34	9	10	0	7	72	12	11	0	10
23	22	28	32	12	18	0	0	67	10	0	0	11
24	36	30	25	13	12	0	0	63	0	0	0	8
25	30	37	19	12	10	0	0	55	0	0	0	11
26	33	37	13	10	13	8	0	40	0	0	7	11
27	27	31	12	8	12	8	0	27	0	0	0	15
28	36	27	12	8	36	10	0	14	0	0	0	10
29	25	26	10	9	51	9	7	11	0	0	0	
30	29	26	8	11	46	8	7	0	0	0	8	
31	23		8		40	9		0		0	8	
Mean	17	16	28	24	31	11	4	19	16	17	2	24

The yearly mean sunspot number equaled 17.9 in 1985.

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

ALGONQUIN RADIO OBSERVATORY, OTTAWA

Day	Mar 85	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan 86	Feb
01	69.3	72.2	80.6*	69.5	76.9	80.5	73.0	68.3	69.0	67.8	67.0	81.8
02	69.1	72.6	76.5	72.4	79.1*	80.4	72.8	67.5	68.8	68.4	67.6	86.4*
03	69.0	72.5A	72.6	74.6	81.3	79.2	73.1	68.7	68.0	68.5	68.4	96.0
04	68.6	71.9	70.8	77.5	80.4	79.3	73.5	68.3	67.6	68.3	69.5	97.8*
05	67.5	71.2	71.4	84.3	83.3	78.5	72.2	67.0	68.5	69.7	70.7	99.8
06	68.1	70.5	75.0	87.4	87.5	77.9	72.5	66.0	70.0	71.1	72.2	99.0
07	68.0	70.3	79.1	88.4	97.7	79.5	70.8	65.9	71.8	71.9	71.6	96.7
08	68.7	69.9	83.7	88.9	96.7*	78.5	70.3	65.8	73.7	73.0	71.2	94.3*
09	68.7	69.4	89.6	89.8	100.9*	74.9	70.6	66.0	72.9	75.2	72.7	92.5
10	68.0	69.7	91.7	91.7	104.6*	72.8	70.3	66.7	72.5	75.6	72.2	93.4*
11	69.6	69.0	89.9	91.2	97.3	68.4	69.2	67.7	74.7	76.6	71.9	95.1
12	69.3	69.6	92.1	89.8	92.9	69.7	68.5	66.9	74.7	77.3	71.2	88.4
13	69.5	69.8	91.9	89.2	85.5	68.9	70.7	66.7	74.3	75.6	74.3	86.4
14	69.5	70.6	90.7*	85.3	76.4	69.3	70.4	69.8	76.9	76.4	76.4	86.2*
15	69.6	70.0	92.0*	83.8	73.0	69.0	71.1	71.7	82.2*	80.2	75.1	79.6
16	70.1	69.4	95.5	80.9	71.9	68.2	70.3	73.2	78.8	83.7	75.5*	71.2
17	72.1	70.2	92.3	77.3	71.9	67.9	70.0	75.5	77.4	80.2	74.4	68.3
18	74.6	71.7	92.7	73.8	71.8	68.6	70.4	75.5	77.3	78.4	73.1	68.7
19	74.2	71.7	89.6	72.2	71.7	69.1	70.7	77.7	75.6	77.5	70.2	68.1
20	74.2	72.3	86.7	71.9	71.7	70.6	69.8	79.4	75.7	75.4*	69.2	68.1
21	76.1*	77.9	84.4*	71.5	71.2	70.4	69.6	84.7	73.7	75.1	67.9	66.0
22	75.9	89.8	82.7*	71.6	71.0	72.7	69.8	94.3	73.1	73.5	67.3	67.7
23	77.3	93.3*	80.0	71.8	71.1	72.9	69.2	93.2*	72.8	71.2	67.0	67.7
24	79.6	89.0*	78.3	70.8	71.0	72.1	69.0	92.5	71.9	69.9	66.9	68.6
25	78.5	95.2	77.2	71.0	75.6	72.5	68.7	88.5*	70.3	67.3	68.0	70.1
26	79.7†	88.3*	75.5	70.0	77.4	72.3	68.4	83.0	69.5	66.3	67.7	72.0
27	77.4†	80.6	74.6	70.2	79.2	73.1	67.7	78.5*	69.8	66.2	67.2	75.2
28	77.7†	78.1	72.7	71.0	81.2	73.1	67.8	76.7	69.0	66.2	70.0	77.0
29	76.7†	83.2	72.5	72.3	83.5	73.1	68.3	73.6	69.1	66.0	71.2	
30	75.8†	80.8	71.4	74.8	83.8	73.9	68.3	70.5	68.8	66.3	73.7	
31	76.4†		69.6		82.4	74.1		69.5		66.6	76.6	
Mean	72.5	75.7	82.0	78.5	81.3	73.3	70.2	74.2	72.6	72.4	70.9	81.5

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 74.7 in 1985.

DAILY SOLAR INDICES

February 1986

Day	Julian Day	Bartels Cycle Day	Sunspot Numbers Int	Sunspot Numbers 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	32	1	18	18	84.2	568	290	108	81.8	77	68	50	26	1
02	33	2	31	33	89.0*	552	318	111	86.4*	85	74	52	25	1
03	34	3	57	56	98.9	---	---	---	96.0	--	--	--	--	--
04	35	4	58	59	100.6*	556	334	136	97.8*	96	72	59	39	32
05	36	5	53	52	102.7	443	296	129	99.8	89	74	58	41	47
06	37	6	47	48	101.9	568	329	120	99.0	95	76	58	33	79
07	38	7	52	50	99.4	568	328	124	96.7	90	73	60	26	61
08	39	8	54	53	96.9*	564	313	106	94.3*	91	75	60	24	11
09	40	9	47	49	95.1	---	---	--	92.5	--	--	--	--	--
10	41	10	37	38	95.9*	566	330	109	93.4*	91	71	65	37	56
11	42	11	37	36	97.6	558	321	128	95.1	89	70	56	23	21
12	43	12	25	26	90.8	573	314	118	88.4	85	70	59	31	41
13	44	13	22	22	88.6	567	326	118	86.4	83	67	54	23	29
14	45	14	16	17	88.4*	573	316	119	86.2*	84	68	59	25	18
15	46	15	11	10	81.6	569	306	98	79.6	78	61	51	21	14
16	47	16	0	1	72.9	488	297	98	71.2	68	55	49	20	8
17	48	17	0	0	70.0	510	291	100	68.3	64	53	45	20	12
18	49	18	0	0	70.3	492	281	90	68.7	63	52	44	20	11
19	50	19	0	0	69.7	532	297	97	68.1	64	51	41	20	12
20	51	20	10	10	69.6	550	292	91	68.1	64	53	46	19	12
21	52	21	10	11	67.5	469	282	98	66.0	64	52	46	19	12
22	53	22	10	10	69.2	---	---	---	67.7	--	--	--	--	--
23	54	23	11	11	69.2	552	275	94	67.7	66	51	27	12	7
24	55	24	8	9	70.1	556	298	100	68.6	64	52	36	14	8
25	56	25	11	10	71.5	564	301	95	70.1	67	55	41	16	7
26	57	26	11	12	73.5	565	313	108	72.0	72	56	44	20	13
27	58	27	15	15	76.7	564	309	106	75.2	75	59	51	20	12
28	59	1	10	11	78.5	551	305	105	77.0	74	60	51	22	12
Mean			24	24	83.6	545	306	108	81.5	78	63	50	23	33

*Adjusted for burst in progress at time of measurement.

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

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

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

OBSERVED AND PREDICTED SOLAR ACTIVITY INDICES

FEBRUARY 1986

Date	RELATIVE SUNSPOT NUMBERS International (Ri) Monthly Mean	International (Ri) Smoothed	American (Ra) Monthly Mean	American (Ra) Smoothed	Derived (Rs) Monthly Mean	Derived (Rs) Smoothed	2800 MHz RADIO FLUX Adjusted to 1 AU (Sa) Monthly Mean	Sa Smoothed
Apr 82	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	38	30.7	41	85.8	95
Sep	15.7	34	13.6	32*	23.2	35	78.9	90
Oct	12.0	29	9.8	27*	16.9	31	73.1	86
Nov	22.8	25	19.4	23*	18.6	26	74.6	72
Dec	18.7	22	17.0	20*	17.4	23	73.5	79
Jan 85	16.5	20	14.5	19*	15.9	21	72.1	77
Feb	15.9	20	16.3	18*	15.7	20	71.9	76
Mar	17.2	19	11.8*	16*	16.3	19	72.5	75
Apr	16.2	18	17.1*	17*	19.8	19	75.7	75
May	27.5	18	24.0*	17*	26.6	19	82.0	75
Jun	24.2	18	22.2*	16*	22.8	19	78.5	75
Jul	30.7	17*	30.8*	16*	25.8	19	81.3	75
Aug	11.1	17*	10.7*	15*	17.2	19	73.3	75
Sep	3.9	16(2)*	3.4*	14	13.8	18	70.2	--
Oct	18.6	15(4)*	16.5*	13	18.1	17	74.2	--
Nov	16.2	14(5)*	16.4*	12	16.4	16	72.6	--
Dec	17.3	13(5)*	10.1*	11	16.2	15	72.4	--
Jan 86	2.3†	13(6)*	2.3*	11	14.6	15	70.9	--
Feb	23.6†	13(7)*	23.8*	10	26.0	14	81.5	--
Mar	----	12(8)*	----	10	----	14	----	--
Apr	----	11(8)*	----	9	----	13	----	--
May	----	10(9)*	----	9	----	12	----	--
Jun	----	10(9)*	----	8	----	11	----	--
Jul	----	9(9)*	----	7	----	11	----	--
Aug	----	9(9)*	----	7	----	10	----	--

*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. 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.

SMOOTHED OBSERVED AND PREDICTED SUNSPOT NUMBERS FOR CYCLE 21

FEBRUARY 1986

Month	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1976	15	13	12	13	13	12*	13	14	14	13	14	15
1977	17	18	20	22	24	26	29	33	39	46	52	57
1978	61	65	70	77	83	89	97	104	108	111	113	118
1979	124	131	137	141	147	153	155	155	156	158	162	165*
1980	164	163	161	159	156	155	153	150	150	150	148	143
1981	140	142	143	143	143	142	140	141	143	142	139	138
1982	137	133	129	124	120	117	115	109	101	96	95	95
1983	93	90	86	82	71	71	66	66	68	68	67	64
1984	60	56	53	50	48	47	44	40	34	29	25	22
1985	21	20	19	18	18	18	17	17	16 (2)	15 (4)	14 (5)	13 (5)
1986	13 (6)	13 (7)	12 (8)	11 (8)	10 (9)	10 (9)	9 (9)	9 (9)	8 (8)	8 (8)	8 (8)	8 (8)

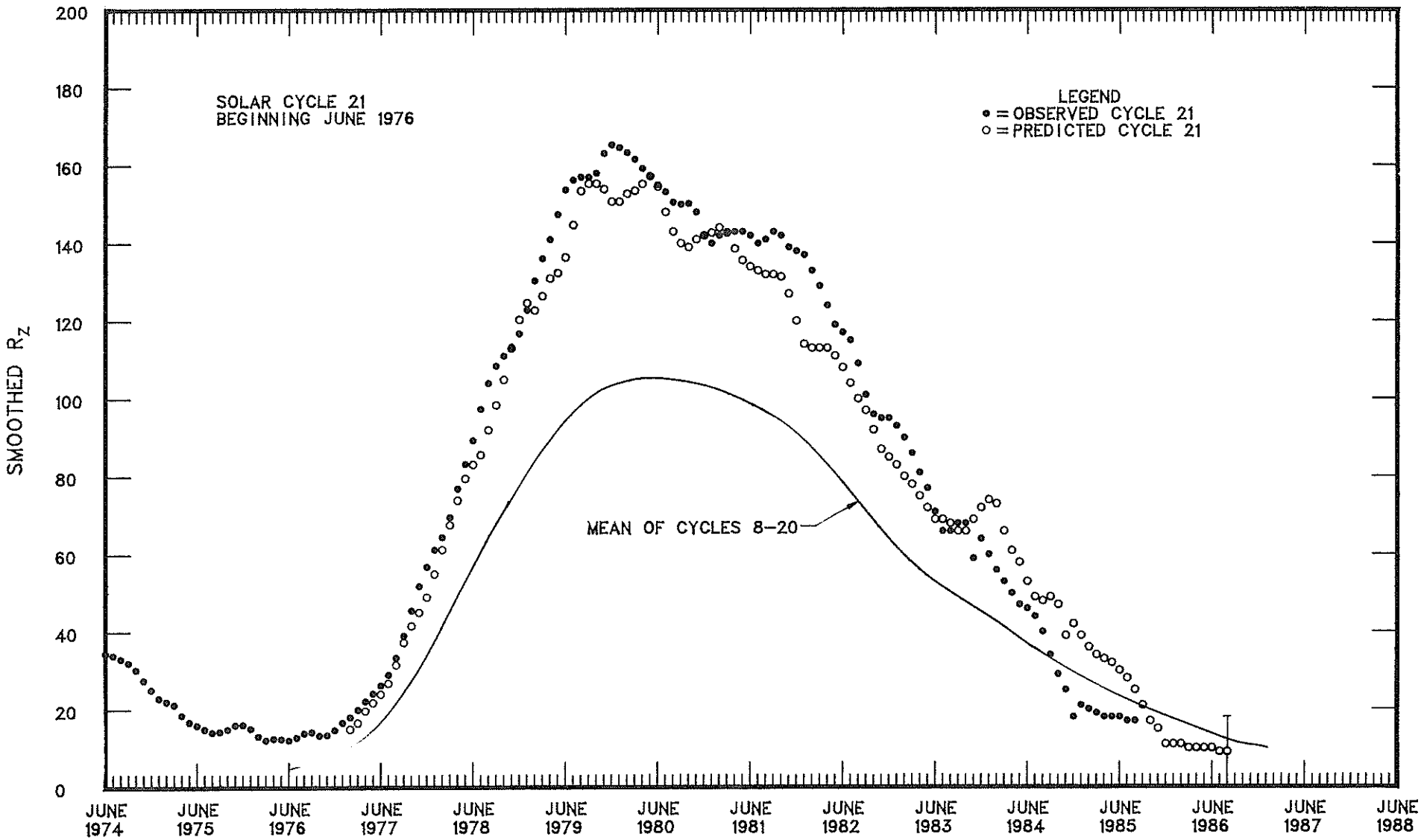
An asterisk marks the minimum and the maximum of Sunspot Cycle 21.

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 1985, and on provisional international numbers thereafter.

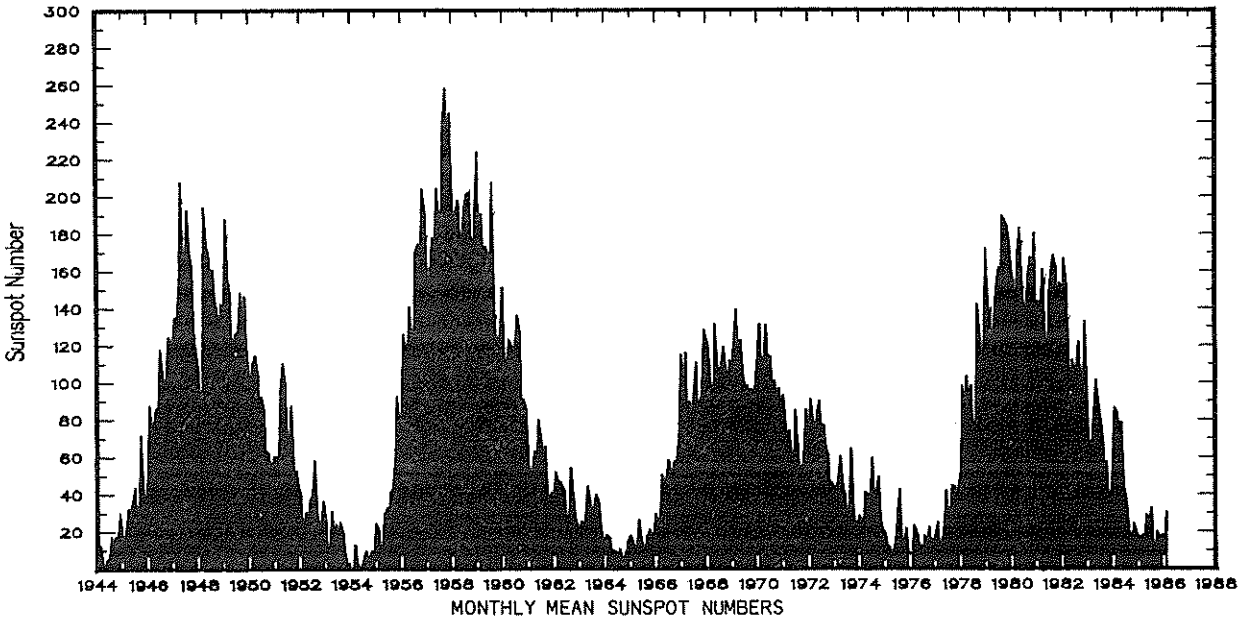
The entries with numbers in parentheses below them denote predictions by the McNish-Lincoln method. (See page 9 in the May 1985 edition of the "Solar-Geophysical Data" supplement.) Adding the number in parentheses to the predicted value generates the upper limit of the 90% confidence interval; subtracting the number in parentheses from the predicted value generates the lower limit. Consider, for example, the August 1986 prediction tabulated above. There exists a 90% chance that in August 1986 the actual smoothed sunspot number will fall somewhere between 0 and 18.

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



MONTHLY MEAN SUNSPOT NUMBERS
January 1944 — February 1986



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	55.8	63.6	37.7	32.6	39.9
1962	38.7	50.3	45.6	46.4	43.7	42.0	21.8	21.8	51.3	39.5	26.9	23.2
1963	19.8	24.4	17.1	29.3	43.0	35.9	19.6	33.2	38.8	35.3	23.4	14.9
1964	15.3	17.7	16.5	8.6	9.5	9.1	3.1	9.3	4.7	6.1	7.4	15.1
1965	17.5	14.2	11.7	6.8	24.1	15.9	11.9	8.9	16.8	20.1	15.8	17.0
1966	28.2	24.4	25.3	48.7	45.3	47.7	56.7	51.2	50.2	57.2	57.2	70.4
1967	110.9	93.6	111.8	69.5	86.5	67.3	91.5	107.2	76.8	88.2	94.3	126.4
1968	121.8	111.9	92.2	81.2	127.2	110.3	96.1	109.3	117.2	107.7	86.0	109.8
1969	104.4	120.5	135.8	106.8	120.0	106.0	96.8	98.0	91.3	95.7	93.5	97.9
1970	111.5	127.8	102.9	109.5	127.5	106.8	112.5	93.0	99.5	86.6	95.2	83.5
1971	91.3	79.0	60.7	71.8	57.5	49.8	81.0	61.4	50.2	51.7	63.2	82.2
1972	61.5	88.4	80.1	63.2	80.5	88.0	76.5	76.8	64.0	61.3	41.6	45.3
1973	43.4	42.9	46.0	57.7	42.4	39.5	23.1	25.6	59.3	30.7	23.9	23.3
1974	27.6	26.0	21.3	40.3	39.5	36.0	55.8	33.6	40.2	47.1	25.0	20.5
1975	18.9	11.5	11.5	5.1	9.0	11.4	28.2	39.7	13.9	9.1	19.4	7.8
1976	8.1	4.3	21.9	18.8	12.4	12.2	1.9	16.4	13.5	20.6	5.2	15.3
1977	16.4	23.1	8.7	12.9	18.6	38.5	21.4	30.1	44.0	43.8	29.1	43.2
1978	51.9	93.6	76.5	99.7	82.7	95.1	70.4	58.1	138.2	125.1	97.9	122.7
1979	166.6	137.5	138.0	101.5	134.4	149.5	159.4	142.2	188.4	186.2	183.3	176.3
1980	159.6	155.0	126.2	164.1	179.9	157.3	136.3	135.4	155.0	164.7	147.9	174.4
1981	114.0	141.3	135.5	156.4	127.5	90.9	143.8	158.7	167.3	162.4	137.5	150.1
1982	111.2	163.6	153.8	122.0	82.2	110.4	106.1	107.6	118.8	94.7	98.1	127.0
1983	84.3	51.0	66.5	80.7	99.2	91.1	82.2	71.8	50.3	55.8	33.3	33.4
1984	57.0	85.4	83.5	69.7	76.4	46.1	37.4	25.5	15.7	12.0	22.8	18.7
1985	16.5	15.9	17.2	16.2	27.5	24.2	30.7	11.1	3.9	18.6	16.2	17.3
1986	2.3*	23.6*										

*Provisional

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Sta	Day	Start (UT)	Max (UT)	End (UT)	Lat	CMD	NOAA/ USAF Region	CMP Mo	CMP Day	Dur (Min)	Imp Opt	Imp Xray	See	Obs Type	Time (UT)	Area Measurement Apparent (10^{-6} Disk)	Area Measurement Corr (Sq Deg)	Remarks
PALE	01	0022	0025	0038	S09	E62	4711	02	05.7	16	1F		3	C		229		F
ISTA	01	1010E		1028	S07	E56		02	05.6	18D	SB							D
RAMY	01	1953	2012	2035D	S11	E53	4711	02	05.8	42D	SB		3	C		39		
PALE	01	2004	2012	2026	S11	E53	4711	02	05.8	22	SN		3	C		24		
GOES	01	2345	2356	2412						27		C 1.3						
PEKG	02	0014	0020	0032	S07	E47		02	05.5	18	SN			P	0020	42	.7	D
PALE	02	0314	0314	0317	S09	E48	4711	02	05.7	3	SF		3	C		46		E
PURP	02	0349	0351	0359	S09	E53		02	06.1	10	SN			C	0351	32	.6	D
PEKG	02	0623	0630	0755	S08	E48		02	05.9	92	1N			C	0630	210	2.9	E
GOES	02	1118	1122	1125						7		C 2.2						
GOES	02	1649	1655	1703						14		C 1.7						
PALE	02	1946	1946	2101	S10	E49	4711	02	06.5	75	SF	C 3.0	3	C		20		F
PEKG	03	0413	0434	0507	S04	W49		01	30.6	54	SN			C	0434	84	1.3	D
LEAR	03	0430	0431	0437	N02	E86		02	09.6	7	SN		3	C		23		
PEKG	03	0430	0434	0437	S01	E85		02	09.5	7	1B			C	0434	42	2.9	D
LEAR	03	0828	0844	0850	S05	E36	4711	02	06.0	22	SF		3	C		59		F
RAMY	03	1400	1404	1409	S06	E31	4711	02	05.9	9	SN		3	C		43		
PALE	03	1804	1804	1811	S06	E29	4711	02	05.9	7	SF	C 1.0	3	C		26		E
RAMY	03	1804	1804	1848	S09	E31	4711	02	06.1	44	SN	C 1.0	3	C		36		
HOLL	03	1804	1805	1836	S09	E28	4711	02	05.8	32	SF	C 1.0	3	C		51		F
HOLL	03	1844	1844	1856	S03	W55	4712	01	30.8	12	SF		3	C		30		
HOLL	03	2037	2040	2240	S09	E26	4711	02	05.8	123	1B	M 2.3	3	C		365		UFK
HOLL	03	2037	2117	2240	S09	E26	4711	02	05.8	123	2B		3	C		606		K
PALE	03	2039	2040	2304	S09	E26	4711	02	05.8	145	1B	M 2.3	3	C		278		FSK
PALE	03	2039	2127	2304	S09	E26	4711	02	05.8	145	1N		3	C		461		K
RAMY	03	2111	2116	2139D	S11	E31	4711	02	06.2	28D	1B		3	C		487		
LEAR	04	0303	0304	0318	S04	E24	4711	02	05.9	15	SF		3	C		43		F
PURP	04	0517	0518	0520	S09	E24		02	06.0	3	SN			C	0518	86	1.0	D
PURP	04	0520	0529U	0545	S07	E22		02	05.9	25	SN			C	0529	56	.6	D
LEAR	04	0526	0528	0536	S03	E23	4711	02	05.9	10	SF		3	C		28		F
LEAR	04	0649	0650	0713	S07	E22	4711	02	05.9	24	SF	C 1.9	3	C		35		F
PEKG	04	0732	0747	0835	S07	E22		02	06.0	63	4B	X 3.0		C	0747	2484	27.9	I
LEAR	04	0735	0740	0837	S03	E21	4711	02	05.9	62	3B	X 3.0	3	C		1589		FH
HURB	04	0756	0756	0813	S03	E21		02	05.9	17	2N							BE
GOES	04	0919	0923	0931						12		C 1.8						
GOES	04	1004	1009	1014						10		C 1.0						
WEND	04	1025	1029	1128	S05	E64		02	09.2	63	1B	M 6.4		C	1029	206	4.9	
HURB	04	1026	1028	1044	S04	E65		02	09.3	18	3B							CD
MITK	05	0047	0052	0126	S06	E11		02	05.8	39	SN			C	0052			E
PALE	05	0051	0052	0113	S06	E11	4711	02	05.8	22	SF	C 3.9	3	C		32		FS
LEAR	05	0100E	0107	0119	S04	E12	4711	02	05.9	19D	SF	C 3.9	3	C		87		FS
PURP	05	0118E	0127	0141D	S07	E13		02	06.0	23D	1N			C	0127	200	2.1	E
LEAR	05	0607	0611	0623	N01	E58	4713	02	09.6	16	SF		3	C		26		
LEAR	05	0726	0728	0746	N02	E53	4713	02	09.3	20	SF		3	C		24		F
HURB	05	0934	0944	0952	S03	E53		02	09.3	18	1N							D
LEAR	05	0939	0942	0954	S04	E06	4711	02	05.8	15	SF	C 1.9	3	C		47		F
LEAR	05	0958	1003	1004D	S03	E05	4711	02	05.8	6D	SF		3	C		64		F
GOES	05	1017	1022	1027						10		C 1.1						
PALE	05	1929	1929	1932	S10	E04	4711	02	06.1	3	SF		3	C		25		F
HOLL	05	2143E	2143U	2215	S08	W03	4711	02	05.7	32D	SF		3	C		101		F
PALE	05	2254	2254	2259	S01	E48	4713	02	09.5	5	SF		3	C		32		F
PALE	05	2316	2320	2328	S06	W03	4711	02	05.7	12	SF		3	C		61		
LEAR	05	2318	2319	2322	S03	W03	4711	02	05.7	4	SF		3	C		35		
PALE	05	2331	2334	2339	S07	W06	4711	02	05.5	8	SF		3	C		48		F
LEAR	05	2333	2334	2342	S03	W05	4711	02	05.6	9	SF		3	C		23		F
MITK	05	2341E		2359	S07	W07		02	05.5	18D	SN			C	2344			E
LEAR	06	0058	0058	0103	N00	E42	4713	02	09.2	5	SF		3	C		23		
LEAR	06	0117	0117	0134	N00	E41	4713	02	09.1	17	SF		3	C		65		F
PALE	06	0117	0118	0130	S02	E41	4713	02	09.1	13	SF		2	C		42		F
PURP	06	0119	0121	0132	S03	E41		02	09.1	13	SB			C	0121	90	1.2	
PURP	06	0211	0220	0243	S07	W04		02	05.8	32	SN			C	0220	148	1.5	
LEAR	06	0212	0220	0246	S04	W04	4711	02	05.8	34	SN	C 1.8	3	C		105		F
PEKG	06	0215	0218	0300	S06	W05		02	05.7	45	SN	C 1.8		C	0218	168	1.7	I
MITK	06	0225E		0229D	S05	W06		02	05.6	4D	1N			P	0227	250	2.6	E
PALE	06	0335	0340	0355	S08	W06	4711	02	05.7	20	SF	C 1.9	2	C		25		F
MITK	06	0354	0402	0422	S05	W08		02	05.6	28	SN			C	0402			E
PURP	06	0356	0409	0439	S07	W05		02	05.8	43	SN			C	04			
LEAR	06	0531	0533	0541	S07	W02	4711	02	06.1	10	SN	C 1.7	3	C				
PURP	06	0618	0622	0653	S09	W08		02	05.7	35	3B			C	06			

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Sta	Day	Start (UT)	Max (UT)	End (UT)	Lat	CMD	NOAA/ USAF Region	CMP Mo	CMP Day	Dur (Min)	Imp Opt	Imp Xray	See	Obs Type	Area Measurement Time (UT)	Apparent (10^{-6} Disk)	Corr (Sq Deg)	Remarks
PEKG	06	0618	0628	0736	S07	W06		02	05.8	78	3B	X 1.7		C	0628	2061	21.3	HIJU
LEAR	06	0814	0815	0828	S06	W01	4711	02	06.3	14	SF		3	C		92		F
RAMY	06	1357	1501	1548	S10	W12	4711	02	05.7	111	SN		3	C		37		K
RAMY	06	1357	1528	1548	S10	W12	4711	02	05.7	111	SB		3	C		103		F K
RAMY	06	1431	1434	1436	S04	W90	4712	01	31.0	5	SF		3	C				
GOES	06	1724	1742	1749						25		C 1.1						
PALE	06	1833	1836	1841	S03	E35	4713	02	09.4	8	SF		3	C		27		
RAMY	06	1835	1836	1841	S01	E31	4713	02	09.1	6	SF		3	C		29		
PALE	06	1919	1921	1934	S11	W11	4711	02	06.0	15	SF	C 1.6	3	C		60		F
RAMY	06	1920E	1920	1942D	S13	W13	4711	02	05.8	22D	SN	C 1.6	3	C		145		
HOLL	06	2016E	2016U	2028	S06	W15	4711	02	05.7	12D	SF		2	C		39		
PALE	06	2126	2129	2136	S11	W10	4711	02	06.1	10	SF	C 1.2	3	C		50		F
GOES	06	2252	2310	2314						22		C 1.1						
LEAR	07	0133	0137	0151	S09	W16	4711	02	05.9	18	SF		3	C		107		F
GOES	07	0208	0221	0230						22		C 1.5						
LEAR	07	0326	0331	0342	S08	W15	4711	02	06.0	16	SN	C 2.2	3	C		140		F
PALE	07	0326	0332	0345	S11	W17	4711	02	05.9	19	SN	C 2.2	3	C		114		
LEAR	07	0523	0525	0533	S09	W18	4711	02	05.9	10	SN		3	C		87		F
LEAR	07	0729	0731	0758	S08	W18	4711	02	06.0	29	SF		3	C		95		F K
LEAR	07	0729	0751	0758	S08	W18	4711	02	06.0	29	SF		3	C		55		K
LEAR	07	1014	1024	1035D	S09	W20	4711	02	05.9	21D	2B	M 5.2	2	C		859		F
RAMY	07	1208E		1426	S11	W21	4711	02	05.9	138D	1N		3	C				F
GOES	07	2033	2039	2047						14		C 1.2						
PALE	07	2124	2127	2130	S01	E16	4713	02	09.1	6	SF		3	C		36		
GOES	07	2206	2209	2211						5		C 1.7						
HOLL	07	2256	2259	2308	N00	E09	4713	02	08.6	12	SF		3	C		32		
HOLL	07	2326	2328	2338	S08	W27	4711	02	05.9	12	SN	C 1.1	3	C		74		F
PALE	07	2329	2331	2337	S08	W27	4711	02	05.9	8	SF	C 1.1	3	C		69		
PALE	08	0241	0241	0245	S08	W29	4711	02	05.9	4	SF		3	C		27		
PURP	08	0415	0421	0437	S07	W35		02	05.5	22	SN			C	0421	94	1.2	
PEKG	08	0415	0425	0500	S05	W35		02	05.5	45	SN			C	0425	126	1.6	D
LEAR	08	0417	0421	0437	S04	W33	4711	02	05.7	20	SF		3	C		41		F
LEAR	08	0557	0559	0611	S04	W36	4711	02	05.5	14	SF		3	C		28		
LEAR	08	0609	0618	0652	S00	E12	4713	02	09.1	43	1F		3	C		284		K
LEAR	08	0609	0629	0652	S00	E12	4713	02	09.1	43	SF	C 1.7	3	C		76		F K
MITK	08	0611	0616	0627	S03	E12		02	09.1	16	SN			C	0616			E
PURP	08	0620E	0627	0651	S02	E12		02	09.2	31D	1N			C	0627	255	2.7	E
RAMY	08	1630	1637	1715	S10	W37	4711	02	05.9	45	SF		3	C		26		
RAMY	08	1917	1919	1924	S10	W38	4711	02	05.9	7	SF		3	C		18		
RAMY	08	1926	1927	1931	S10	W38	4711	02	05.9	5	SF		3	C		22		
RAMY	08	1935	1936	1943	S01	E01	4713	02	08.9	8	SF		3	C		50		
RAMY	08	2012	2019	2026	S03	E04	4713	02	09.1	14	SF		3	C		27		
RAMY	08	2028	2029	2033	S02	E02	4713	02	09.0	5	SF		3	C		25		
RAMY	08	2030	2036	2041	S12	W40	4711	02	05.8	11	SF		3	C		19		
LEAR	08	2327	2327	2332	S05	W40	4711	02	06.0	5	SF		3	C		18		F
PURP	09	0122	0125	0128	S01	W00		02	09.0	6	SN			C	0125	26	.3	E
PURP	09	0122	0125	0128	S07	W44		02	05.8	6	SN			C	0125	20	.3	E
LEAR	09	0929	0931	0943	S04	W46	4711	02	05.9	14	SF		3	C		44		
GOES	09	2100	2107	2111						11		C 1.8						
GOES	09	2316	2322	2329						13		C 1.0						
PURP	10	0038	0043	0049	N01	W13		02	09.0	11	SN			C	0043	160	1.7	
LEAR	10	0058	0101	0106	N02	W12	4713	02	09.1	8	SF		3	C		28		
PURP	10	0231E	0231U	0231D	S08	W02		02	09.9	8D	SN			P	0231	102	1.1	G
LEAR	10	0511	0513	0514	N01	W20	4713	02	08.7	3	SF		3	C		22		
LEAR	10	0533	0533	0540	N01	W15	4713	02	09.1	7	SF		3	C		31		
LEAR	10	0708	0720	0821	N01	W18	4713	02	08.9	73	SN	C 5.2	3	C		195		F K
LEAR	10	0708	0743	0821	N01	W18	4713	02	08.9	73	SF		3	C		115		K
LEAR	10	0947	0948	0954	S06	W60	4711	02	05.9	7	SF		3	C		17		
LEAR	10	1003	1007	1008D	N01	W23	4713	02	08.7	5D	SF		2	C		29		
RAMY	10	1147	1155	1235	S06	W66	4711	02	05.5	48	SB	C 3.4	3	C		111		
GOES	10	1602	1634	1643						41		C 1.8						
RAMY	10	1603	1606	1615	S09	W64	4711	02	05.9	12	SN		3	C		58		F
HOLL	10	2025	2048U	2100D	S01	W32	4713	02	08.5	35D	SB	C 9.5	3	C		60		K
HOLL	10	2025	2055	2100D	S01	W32	4713	02	08.5	35D	1B		3	C		314		K
RAMY	10	2026		2056D	S01	W31	4713	02	08.5	30D	SB		3	C				
LEAR	11	0102	0109	0112	S04	W68	4711	02	05.9	10	SF		3	C				
PURP	11	0114E	0116	0130	N00	W28		02	09.0	16D	1N			C	01			
PURP	11	0330	0337	0427	S01	W30		02	08.9	57	1N			C	03			
PEKG	11	0330	0345	0450	S01	W30		02	08.9	80	3B			C	03			

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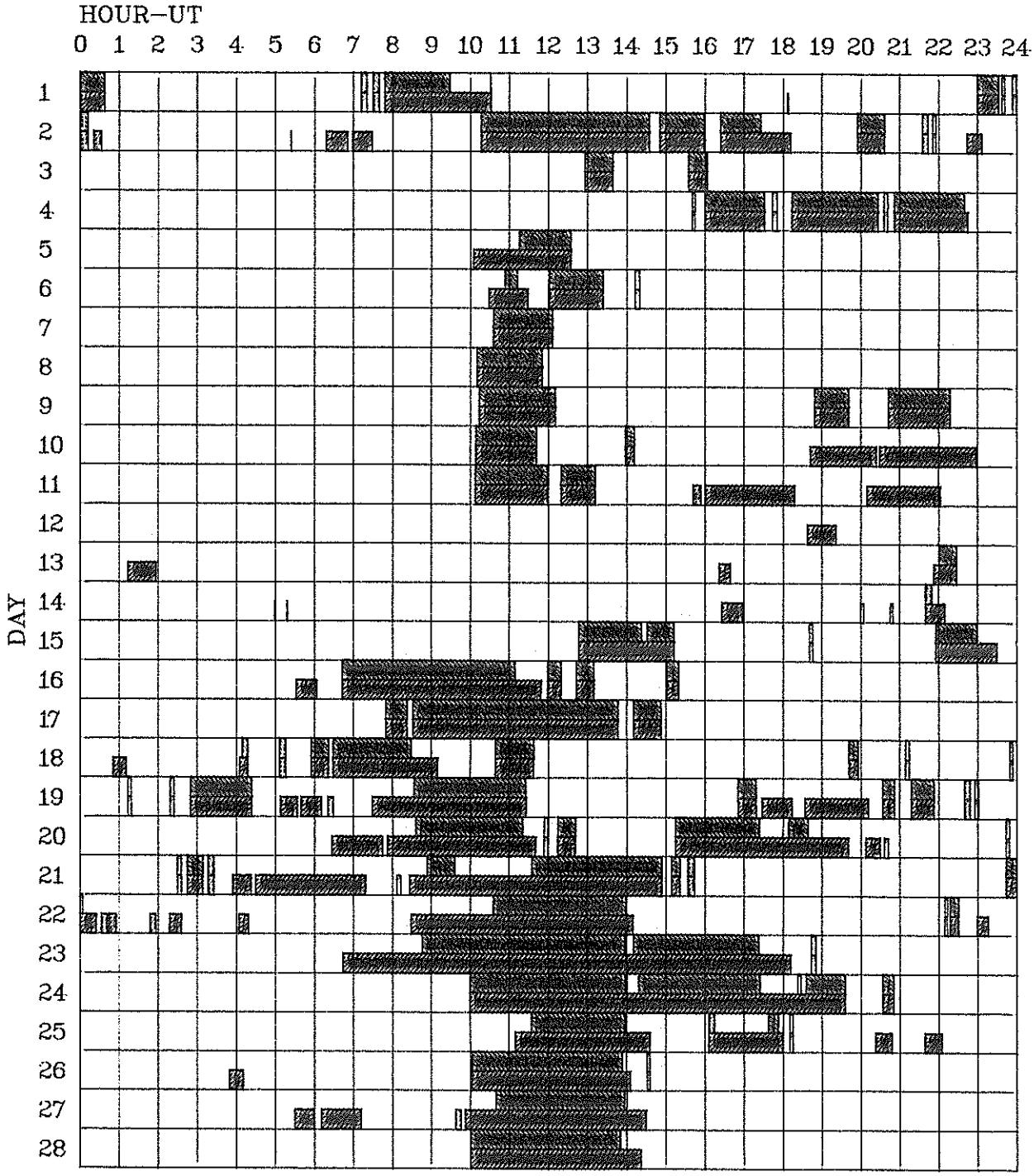
Sta	Day	Start (UT)	Max (UT)	End (UT)	Lat	CMD	NOAA/ USAF Region	CMP Mo	CMP Day	Dur (Min)	Imp Opt	Imp Xray	See	Obs Type	Time (UT)	Area Measurement Apparent (10^{-6} Disk)	Area Measurement Corr (Sq Deg)	Remarks
LEAR	11	0332	0338	0440	N00	W30	4713	02	08.9	68	1B	M 1.1	3	C		294		F K
LEAR	11	0332	0406	0440	N00	W30	4713	02	08.9	68	SN		3	C		189		K
GOES	11	0429	0440	0450						21		C 5.2						
LEAR	11	0450	0452	0509	S00	W29	4713	02	09.0	19	SF		3	C		24		F
GOES	11	0612	0652	0714						62		C 2.1						
PEKG	11	0615	0635	0726	N01	W37		02	08.5	71	1N			C	0635	210	2.7	E
LEAR	11	0854	0854	0900	N02	W37	4713	02	08.6	6	SF	C 1.1	3	C		25		
GOES	11	1109	1139	1139						30		C 1.2						
GOES	11	1150	1153	1155						5		C 2.0						
GOES	11	1342	1347	1351						9		C 2.3						
GOES	11	1546	1553	1603						17		C 1.9						
HOLL	11	2154E	2159	2231	S06	W80	4711	02	05.9	37D	SF		3	C		59		H
LEAR	11	2303	2321	2405	N00	W43	4713	02	08.7	62	SN	M 1.0	3	C		110		ZF
PALE	12	0027	0027	0030	S03	W47	4713	02	08.5	3	SN		3	C		24		
LEAR	12	0027	0027	0036	N03	W49	4713	02	08.3	9	SF		3	C		29		
PURP	12	0249	0251	0308	N01	W51		02	08.3	19	SN			C	0251	90	1.5	
LEAR	12	0251	0259	0303	N03	W49	4713	02	08.4	12	SF	C 1.6	3	C		28		
LEAR	12	0304	0308	0310	N03	W49	4713	02	08.5	6	SF	C 1.6	3	C		31		
PURP	12	0407	0409	0411	N01	W52		02	08.3	4	SN			C	0409	23	.4	D
GOES	12	0450	0509	0514						24		C 1.9						
PURP	12	0507	0509	0514	N01	W52		02	08.3	7	SF			C	0509	39	.7	E
LEAR	12	0541	0543	0552	N03	W51	4713	02	08.4	11	SF		3	C		19		
LEAR	12	0704	0706	0709	N03	W51	4713	02	08.5	5	SF		3	C		25		
LEAR	12	0913	0913	0918	N03	W52	4713	02	08.5	5	SF		3	C		43		
LEAR	12	0955	0956	1001	N03	W52	4713	02	08.5	6	SF		3	C		26		
WEND	12	1034	1104	1207	N03	W53		02	08.5	93	1F	C 1.7		C	1104	156	2.7	
GOES	12	1350	1353	1357						7		C 1.9						
RAMY	12	1351	1403	1425	S01	W53	4713	02	08.6	34	SB	C 2.1	3	C		62		FE
HOLL	12	2129E	2133	2139	N02	W62	4713	02	08.3	10D	SF		3	C		114		F
GOES	12	2201	2208	2211						10		C 2.7						
GOES	12	2322	2325	2335						13		C 1.0						
LEAR	13	0234	0235	0240	S01	W54	4713	02	09.1	6	SF		3	C		55		
LEAR	13	0246	0246	0254	N04	W63	4713	02	08.4	8	SF	M 1.0	3	C		43		F
PEKG	13	0246	0248	0252	N05	W64		02	08.3	6	2N	M 1.0		C	0248	210	5.2	E
LEAR	13	0256	0256	0302	N02	W61	4713	02	08.6	6	SF		3	C		20		F
LEAR	13	0316	0327	0332	N02	W61	4713	02	08.6	16	SF		3	C		31		F
LEAR	13	0354	0354	0359	N02	W63	4713	02	08.4	5	SF		3	C		23		F
GOES	13	0451	0454	0501						10		C 6.9						
PEKG	13	0454	0458	0502	N05	W64		02	08.4	8	1N			C	0458	168	3.9	E
LEAR	13	0710	0716	0721	N03	W65	4713	02	08.4	11	SF		3	C		24		
LEAR	13	0729	0732	0738	N04	W67	4713	02	08.3	9	SF		3	C		24		F
GOES	13	1250	1258	1306						16		C 1.0						
GOES	13	1351	1358	1406						15		C 1.0						
HOLL	13	1717	1720	1742	S03	W65	4713	02	08.9	25	SB	C 2.0	3	C		76		FH
RAMY	13	1719	1720	1723	S03	W65	4713	02	08.9	4	SB	C 2.0	3	C		50		
PALE	13	1933	1933	1935	N01	W70	4713	02	08.6	2	SF		2	C		16		H
PALE	13	2315	2316	2319	S03	W68	4713	02	08.9	4	SN	C 5.1	2	C		60		
LEAR	13	2316	2318	2320	S01	W66	4713	02	09.0	4	SN	C 5.1	3	C		60		
PALE	14	0002	0003	0009	S03	W68	4713	02	08.9	7	SF		3	C		34		
PALE	14	0045	0047	0049	S03	W68	4713	02	09.0	4	SF		3	C		23		
LEAR	14	0301	0304	0306	N04	W76	4713	02	08.4	5	SF		3	C		15		
LEAR	14	0909	0922	1034D	S01	W76	4713	02	08.7	85D	1N	M 6.4	3	C		114		F
WEND	14	0910	0926	1000	S02	W80		02	08.4	50	1N	M 6.4		C	0926	90		A
HOLL	14	1545	1545	1600	N01	W80	4713	02	08.7	15	SB	C 5.8	3	C		89		F
RAMY	14	1545	1546	1549D	S03	W78	4713	02	08.8	4D	SB	C 5.8	3	C		79		
HOLL	14	2038	2038	2052	N00	W86	4713	02	08.4	14	SB	C 3.5	3	C		40		
GOES	15	0407	0412	0414						7		C 1.0						
GOES	15	0543	0611	0627						44		C 1.4						
GOES	15	0642	0733	0824						102		C 4.4						
LEAR	15	0842	0846	0849	S01	W83	4713	02	09.2	7	SN	C 5.7	3	C		50		Y
LEAR	15	0950	0951	0955	S02	W83	4713	02	09.2	5	SN	C 7.4	3	C		27		Y
GOES	15	1016	1203	1300						164		M 2.2						
GOES	15	1304	1309	1316						12		M 1.6						
GOES	15	1746	1749	1801						15		C 2.3						
GOES	16	1134	1151	1156						22		C 1.0						
GOES	16	2246	2357	2550						184		C 7.0						
GOES	28	1456	1506	1510						14		C 1.0						

INTERVALS OF NO FLARE PATROL OBSERVATION

FOR PRECEDING SOLAR FLARE TABLE

FEBRUARY 1986



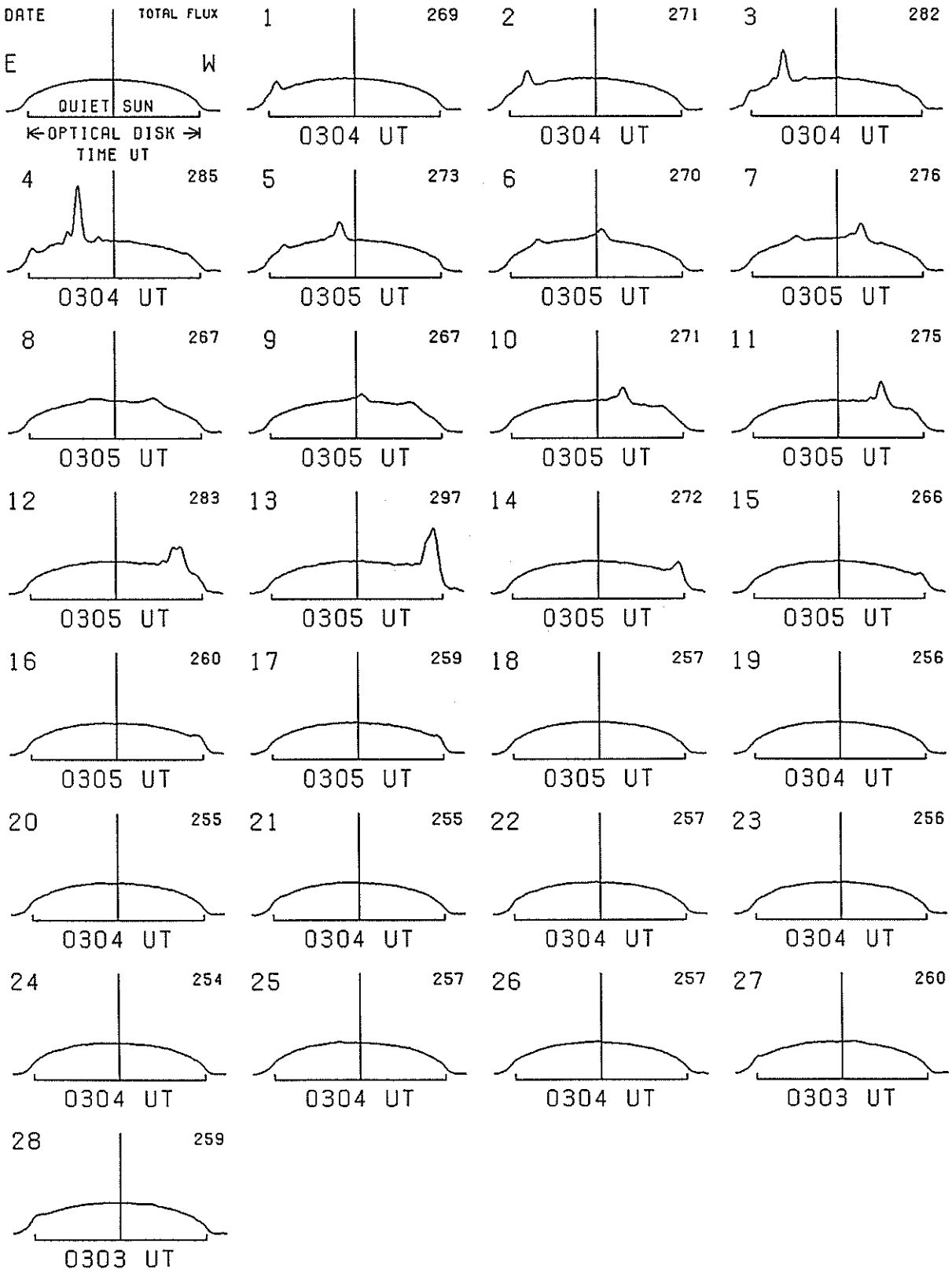
Times of no flare patrol, shown here as shaded areas, combine reports from the observatories listed below. Portions of a panel completely shaded mark dates and times of no patrol of any kind, that is, of neither visual nor cinematographic; portions of a panel with only the bottom half shaded mark times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

Holloman	Istanbul	Mitaka	Peking	Ramey
Hurbanovo	Learmonth	Palehau	Purple Mt.	Wendelstein

EAST-WEST SOLAR SCANS
FEBRUARY 1986

TOYOKAWA, JAPAN

3 CM
FAN BEAM WITH 1.1 MINUTES OF ARC

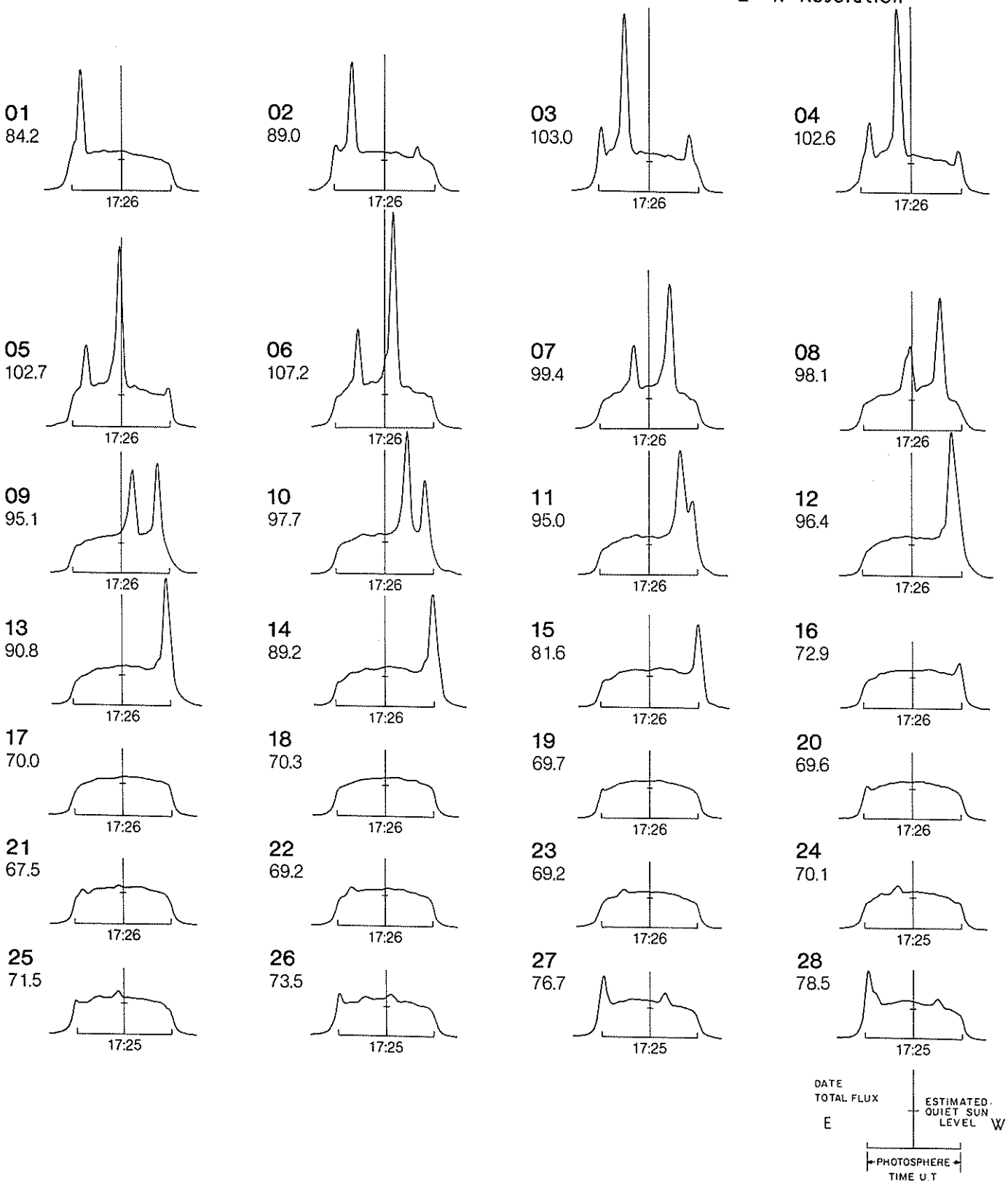


EAST-WEST SOLAR SCANS

FEBRUARY 1986

ALGONQUIN RADIO OBSERVATORY
CANADA

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



SOLAR RADIO EMISSION
SELECTED FIXED FREQUENCY EVENTS

FEBRUARY 1986

Day	Freq	Sta	Type	Start (UT)	Time of Maximum (UT)	Duration (Min)	Flux Density Peak (10^{-22} W/m^2 Hz)	Flux Density Mean (10^{-22} W/m^2 Hz)	Int	Remarks
01	2800	OTTA	240 R	1653.0	1700.0	7.0	1.2	0.6		
	2800	OTTA	20 GRF	1830.0	1847.0	40.0	1.4	0.5		
	2695	PENT	20 GRF	2120.0	2125.0	20.0	1.6	0.8		
02	2800	OTTA	8 S	1543.2	1543.3	.7	6.4	2.1		
	2800	OTTA	4 S/F	1651.0	1652.1	3.0	25.0	6.2		
	2800	OTTA	29 PBI	1654.0	1654.0	20.0	2.6	1.3		
	2800	OTTA	23 GRF	1935.0	2057.0	205.0D	12.6			
	2800	OTTA	1 S	2028.0	2030.0	4.0	2.0	1.4		
	2695	PENT	1 S	2202.0	2204.0	8.0	2.4	1.2		
03	2800	OTTA	46F C	1538.0	1539.5	17.0	23.2	10.0		
	2800	OTTA	30 PBI	1555.0	1555.0	35.0	4.0	2.4		
	2800	OTTA	21 GRF	1600.0	1604.0	12.0	2.0	1.0		
	2800	OTTA	1 S	1606.0	1606.5	2.0	2.6	1.2		
	2800	OTTA	28 PRE	1723.8	1726.0	7.2	4.6			
	2800	OTTA	4 S/F	1731.0	1733.0	7.0	28.4	14.0		
	2800	OTTA	30 PBI	1738.0	1738.0	18.0	4.0	2.0		
	2800	OTTA	1 S	1740.7	1741.0	2.0	2.0	1.0		
	2800	OTTA	1 S	1909.0	1909.7	5.0	3.4	1.1		
	2800	OTTA	2 S/F	1958.0	2000.0	8.0	2.0	0.8		
	2800	OTTA	46F C	2036.7	2042.5	86.3	228.0	65.0		
	8800	SGMR	49 GB	2037.0	2042.6		590.0			QL=6 ST=3 TYP=6
	2695	SGMR	47 GB	2040.1	2042.6		210.0			QL=6 ST=3 TYP=5
	2695	SGMR	47 GB	2115.1	2115.6	1.0D	61.0			QL=6 ST=2 TYP=5
	2800	OTTA	29 PBI	2203.0	2203.0	90.0D	25.7			
04	8800	LEAR	47 GB	0445.3	0445.6	1.8	110.0			QL=6 ST=2 TYP=5
	8800	LEAR	47 GB	0516.1	0516.1	.5	51.0			QL=6 ST=2 TYP=5
	2695	LEAR	8 S	0521.6	0521.8	.4	13.0			QL=6 ST=2 TYP=3
	2695	LEAR	8 S	0527.1	0528.1	1.2	13.0			QL=6 ST=2 TYP=3
	2695	LEAR	47 GB	0648.1	0649.3	10.4	58.0			QL=6 ST=2 TYP=5
	8800	LEAR	47 GB	0648.3	0649.1	3.5	189.0			QL=6 ST=2 TYP=5
	8800	LEAR	49 GB	0734.1	0737.1	28.0	6700.0			QL=6 ST=3 TYP=7
	2695	LEAR	49 GB	0734.3	0737.1	23.0	820.0			QL=6 ST=3 TYP=7
	8400	BERN	47 GB	1023.4	1027.1	25.0U	1560.0			
	2800	OTTA	20 GRF	1355.0	1530.0	130.0	2.0	1.7		
	2800	OTTA	8 S	1610.5	1610.9	.7	9.0	4.5		
	2800	OTTA	4 S/F	1648.0	1649.7	6.0	20.0	10.0		
	8800	SGMR	47 GB	1649.1	1649.3		61.0			QL=6 ST=3 TYP=5
	2800	OTTA	30 PBI	1654.0	1654.0	70.0	4.2	1.8		
	2800	OTTA	22 GRF	1720.0	1723.0	20.0	2.4	1.4		
	2800	OTTA	20 GRF	1930.0	1940.0	70.0	2.0	1.0		
	2695	PENT	4 S/F	2215.5	2216.9	5.5	32.0	8.4		
05	8800	LEAR	47 GB	0051.8	0052.1	2.2	78.0			QL=6 ST=2 TYP=5
	2695	LEAR	4 S/F	0051.8	0052.1	3.5	47.0			QL=6 ST=2 TYP=3
	8800	ATHN	49 GB	1234.0	1244.0	65.0	2600.0			QL=3 ST=2 TYP=6
	8400	BERN	47 GB	1234.0	1244.0	60.0U	2300.0			
	2695	ATHN	49 GB	1234.0	1247.0	40.0	1199.0			QL=3 ST=2 TYP=6
	8800	SGMR	49 GB	1246.1	1246.3	6.4	1600.0			QL=6 ST=2 TYP=6
	2695	SGMR	49 GB	1246.1	1246.8	8.5	810.0			QL=6 ST=2 TYP=6
	2800	OTTA		1254.0		16.0D	87.0			
	2800	OTTA	29 PBI	1310.0	1310.0	90.0	10.2	4.7		
	2800	OTTA	1 S	1441.7	1443.0	7.0	1.6	0.8		
	2800	OTTA	20 GRF	1515.0	1517.5	15.0	1.8	0.9		
	2800	OTTA	20 GRF	1840.0	1910.0	80.0	1.6	0.9		
	2695	PENT	20 GRF	2135.0	2205.0	70.0	2.8	1.0		
06	8800	LEAR	49 GB	0617.5	0621.8	57.6	8800.0			QL=6 ST=2 TYP=7
	2695	LEAR	49 GB	0618.1	0622.6	45.2	1300.0			QL=6 ST=2 TYP=7
	2800	OTTA	21 GRF	1400.0	1435.0	100.0	4.2	2.2		
	2800	OTTA	240AR	1400.0	1545.0	105.0	2.0	1.0		
	2800	OTTA	1 S	1527.7	1527.7	1.5	2.0	1.0		
	2800	OTTA	3 S	1725.0	1726.1	3.0	10.8	5.2		
	2800	OTTA	30 PBI	1728.0	1728.0	140.0	3.0	1.5		
	2800	OTTA	20 GRF	1733.0	1743.0	30.0	3.4	1.2		
	2800	OTTA	20 GRF	1822.0	1825.5	20.0	2.8	1.0		
	2800	OTTA	21 GRF	1905.0	1925.0	30.0	4.2	2.1		
	2800	OTTA	1 S	1916.0	1917.0	7.0	5.6	1.9		
07	2695	LEAR	8 S	0953.1	0953.8	.7	11.0			QL=6 ST=2 TYP=3

SOLAR RADIO EMISSION
SELECTED FIXED FREQUENCY EVENTS

FEBRUARY 1986

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
07	2695	ATHN	49	GB	1012.0	1026.0	39.0	3199.0			QL=6 ST=3 TYP=6
	8400	BERN	47	GB	1013.0	1024.1	75.0U	2450.0			
	8800	ATHN	49	GB	1013.0	1027.0	43.0	3600.0			QL=6 ST=2 TYP=6
	2800	OTTA	20	GRF	1720.0	1815.0	110.0	1.6	0.9		
	2800	OTTA	20	GRF	2030.0	2038.0	25.0	1.2	0.6		
08	8800	LEAR	8	S	0239.6	0239.8	.5	28.0			QL=6 ST=2 TYP=3
	2800	OTTA	22	GRF	1617.0	1635.0	150.0	2.4	1.0		
09	2800	OTTA	240	R	1645.0	1720.0	35.0	2.0	1.0		
	2800	OTTA	20	GRF	1745.0	1750.0	25.0	1.0	0.5		
10	8800	ATHN	4	S/F	0708.0	0720.0	23.0	34.0			QL=6 ST=2 TYP=3
	2800	OTTA	20	GRF	1547.0	1635.0	125.0	4.0	1.8		
	2800	OTTA	28	PRE	1935.0	2016.5	43.0	23.0			
	2800	OTTA	47	GB	2018.0	2023.5	47.0	850.0	209.0		
	2695	SGMR	49	GB	2020.3	2023.3		740.0			QL=6 ST=1 TYP=6
	2695	SGMR	49	GB	2020.3	2023.3		730.0			QL=6 ST=1 TYP=6
	8800	SGMR	49	GB	2020.8	2022.6		790.0			QL=6 ST=1 TYP=6
	2800	OTTA	29	PBI	2105.0	2105.0	165.0	21.0	9.4		
11	8800	LEAR	47	GB	0333.1	0336.5	25.0	55.0			QL=6 ST=2 TYP=5
	2695	LEAR	8	S	0335.6	0336.0	.5	15.0			QL=6 ST=2 TYP=3
	2800	OTTA	260	FAL	1520.0	1755.0	155.0	-10.2	-5.2		
	2695	PENT	240	R	2120.0	2150.0	30.0	3.4	1.7		
	2695	PENT	21	GRF	2255.0	2330.0	60.0D	10.6			
	2695	PENT	1	S	2311.5	2313.0	5.0	6.0	3.0		
	2695	PENT	40	F	2320.0	2324.5	8.0	5.2			
12	8800	ATHN	47	GB	1044.0	1044.0	1.0	85.0			QL=1 ST=2 TYP=5
	8800	ATHN	4	S/F	1059.0	1104.0	9.0	36.0			QL=1 ST=2 TYP=3
	2800	OTTA	22	GRF	1310.0	1355.0	185.0	4.2	2.1		
	2800	OTTA	240	R	1700.0	1710.0	10.0	2.8	1.0		
	2800	OTTA	21	GRF	1715.0	1725.0	50.0	3.2	1.0		
	2800	OTTA	1	S	1722.0	1723.0	2.0	4.2	1.4		
	2800	OTTA	240	R	1825.0	1835.0	10.0	1.6	0.8		
	2800	OTTA	20	GRF	1935.0	2120.0	220.0D	6.2			
13	2695	LEAR	8	S	0234.0	0234.1	.3	13.0			QL=6 ST=2 TYP=3
	2800	OTTA	21	GRF	1315.0	1328.0	205.0	4.0	2.0		
	2800	OTTA	20	GRF	1350.0	1355.0	30.0	2.4	1.2		
	2800	OTTA	20	GRF	1440.0	1445.0	30.0	2.4	1.4		
	2695	SGMR	49	GB	1604.6	1605.3		189.0			QL=6 ST=1 TYP=7
	8800	SGMR	49	GB	1604.6	1606.1		1600.0			QL=6 ST=1 TYP=7
	2800	OTTA	21	GRF	1715.0	1721.0	25.0	2.0	0.7		
	2800	OTTA	2	S/F	1718.7	1719.0	1.3	1.8			
	2800	OTTA	20	GRF	1750.0	1815.0	65.0	2.0	1.0		
	2800	OTTA	20	GRF	1920.0	1935.0	25.0	1.0	0.5		
	2800	OTTA	27	RF	1950.0		90.0	2.0	1.6		
	2800	OTTA	24	R	1950.0	2010.0	20.0	2.0	1.5		
	2800	OTTA	24P	R	2010.0		55.0	2.0			
	2800	OTTA	26	FAL	2105.0	2120.0	15.0	-2.0	-1.5		
	2695	PENT	3	S	2315.0	2315.5	47.0	107.0	17.8		
	2695	LEAR	47	GB	2315.1	2315.5	1.9	110.0			QL=6 ST=2 TYP=5
	8800	LEAR	47	GB	2315.3	2315.3	.5	67.0			QL=6 ST=2 TYP=5
	2695	PALE	47	GB	2315.3	2315.5	.7	98.0			QL=2 ST=2 TYP=5
14	2695	ATHN	49	GB	0906.0	0921.0	84.0	2100.0			QL=6 ST=3 TYP=6
	8400	BERN	47	GB	0906.0	0921.0	120.0D	3600.0			
	8800	ATHN	49	GB	0906.0	0921.0	84.0	4300.0			QL=6 ST=3 TYP=6
	2800	OTTA	26A	FAL	1315.0	1600.0	165.0	-12.6	-6.0		
	2800	OTTA	4	S/F	1544.2	1545.2	5.0	20.4	5.2		
	2800	OTTA	20	GRF	1630.0	1700.0	80.0	1.8	1.2		
	2800	OTTA	260	FAL	1845.0	1940.0	55.0	-3.8	-2.5		
15	2695	LEAR	47	GB	0501.5	0501.8		61.0			QL=6 ST=1 TYP=5
	8800	LEAR	8	S	0501.6	0501.8		45.0			QL=6 ST=1 TYP=3
	8400	BERN	41	F	0838.3	0845.6	10.0U	45.0			
	8400	BERN	3	S	0949.3	0950.3	6.0	45.0			
	2695	ATHN	47	GB	0950.0	0950.0	2.0	68.0			QL=1 ST=2 TYP=5
	8800	ATHN	47	GB	0950.0	0950.0	2.0	52.0			QL=6 ST=2 TYP=5

SOLAR RADIO EMISSION
SELECTED FIXED FREQUENCY EVENTS

FEBRUARY 1986

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
15	8800	LEAR	8	S	0950.1	0950.3	.5	31.0			QL=6 ST=2 TYP=3
	8400	BERN	47	GB	1112.0	1117.0	130.0U	2000.0			
	2695	SGMR	47	GB	1204.3E	1204.6	63.0D	290.0			QL=6 ST=2 TYP=5
	8800	SGMR	47	GB	1215.3E	1215.8	52.0D	169.0			QL=6 ST=2 TYP=5
	2800	OTTA			1250.0		23.0	18.4			
	2800	OTTA	30	PBI	1313.0	1313.0	180.0	7.8	3.9		
	2800	OTTA	20	GRF	1345.0		40.0	2.8			
	2800	OTTA	20	GRF	1427.0	1505.0	65.0	3.0	1.5		
16	2800	OTTA	1	S	1438.0	1439.0	4.0	2.0	1.0		
	2695	PENT	3	S	2228.0	2247.0	60.0	135.0	41.0		
	2695	PALE	47	GB	2228.1E	2251.1	42.2D	98.0			QL=2 ST=2 TYP=5
	2695	LEAR	20	GRF	2230.8	2245.8	20.5	139.0			QL=6 ST=2 TYP=2
	2695	LEAR	20	GRF	2230.8	2245.8	38.5	139.0			QL=6 ST=2 TYP=2
21	2800	OTTA	21	GRF	1715.0	1805.0	130.0	2.0	1.0		
28	2800	OTTA	8	S	1502.5	1502.7	.6	1.2	0.6		

Reports are received routinely from the following observatories:

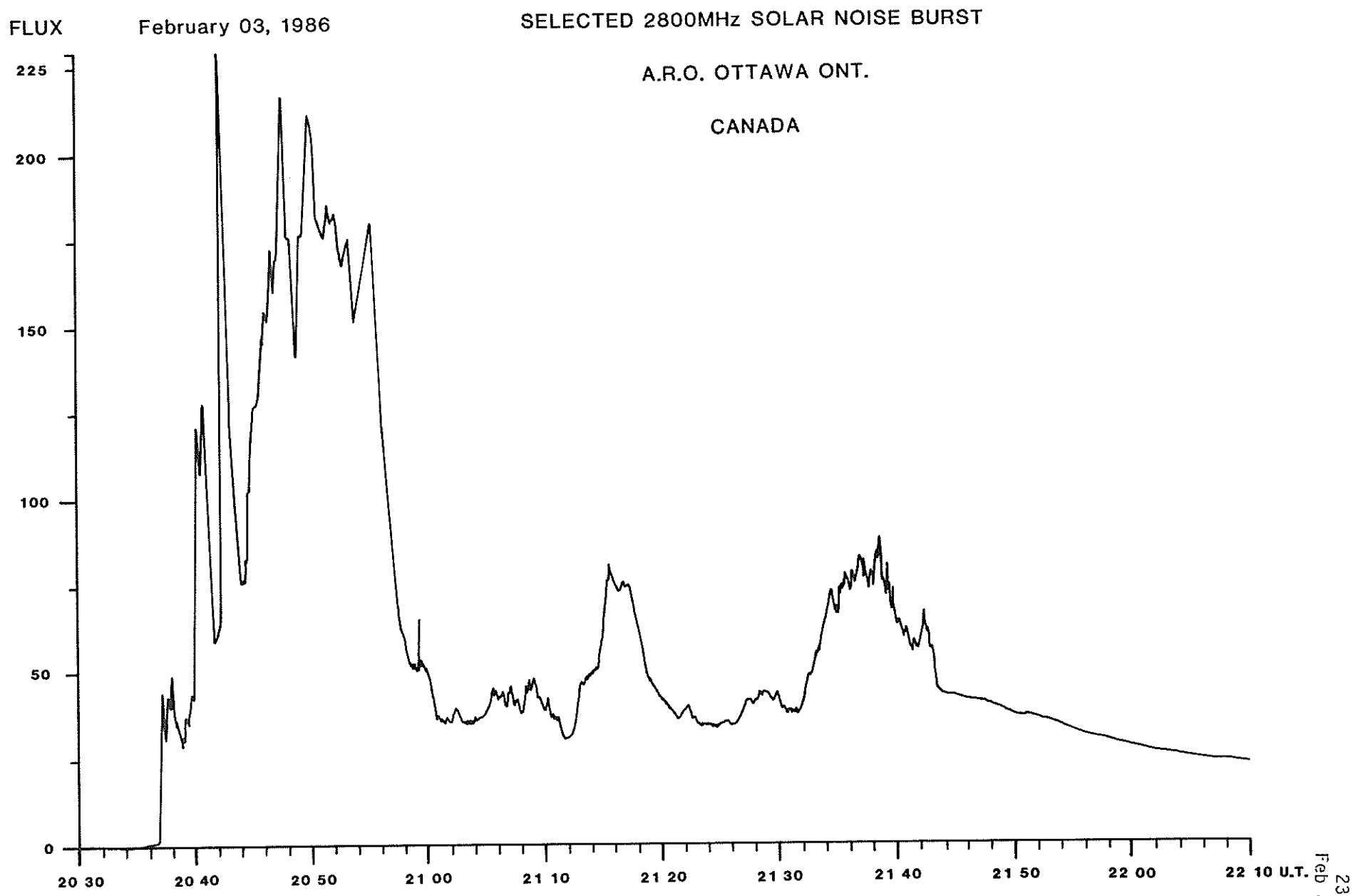
ATHN = Athens
BERN = Berne
BORD = Bordeaux
CRIM = Crimea
DWIN = Dwingeloo
GORK = Gorky
HIRA = Hiraiso
HUAN = Huancayo
IRKU = Irkutsk
IZMI = IZMIRAN
KISV = Kislovodsk
KRAK = Krakow
LEAR = Learmonth
MANI = Manila
NAGO = Nagoya
NOBE = Nobeyama
ONDR = Ondrejov
OTTA = Ottawa
PALE = Palehua
PEKG = Peking
PENT = Penticton
POTS = Potsdam
SAOP = Sao Paulo
SGMR = Sagamore Hill
TORN = Torun
TYKW = Toyokawa
TRST = Trieste
UPIC = Upice

Explanation of Type Code:

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

1A Simple 1A
3A Simple 2A
21A Simple 3A GRF
2A Simple 1AF
4A Simple 2AF
240 Rise only
240F Rise only F
24P Post Rise
24PF Post Rise F
16A Fall A
260 Fall Only
26F Fall F
27F Rise and Fall F
27AF Rise and Fall AF
31A Post Burst Decrease A
32A Absorption A

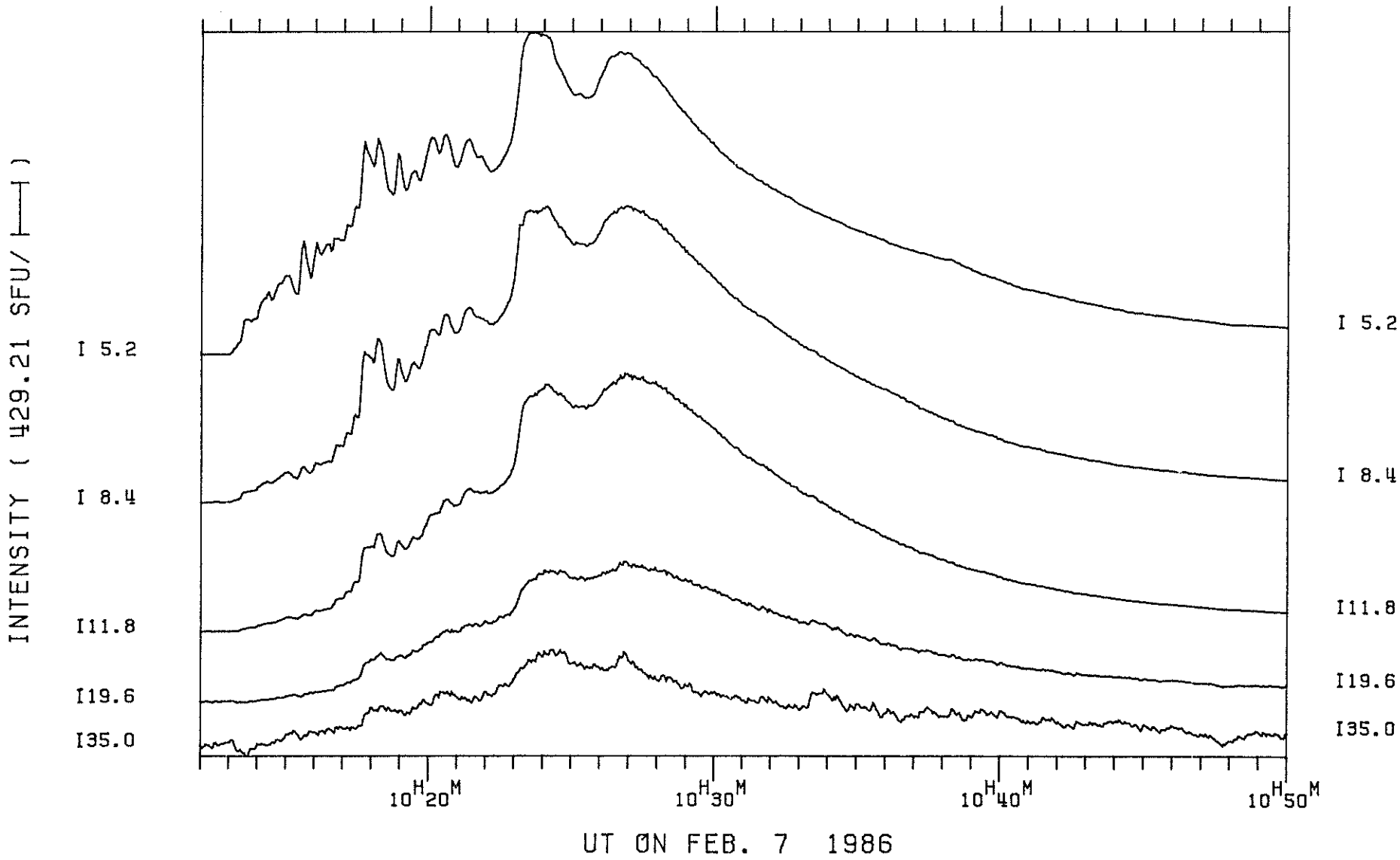
Remarks:
QL = Quality (1=poor to 6=excellent)
ST = Status (1=real time; 2=final; 3=correction; 4=deletion)
TYP= Type (1=noise storm;2=rise in base level;3=minor;4=group;5=major;6=major plus;7=Castelli U-type burst)

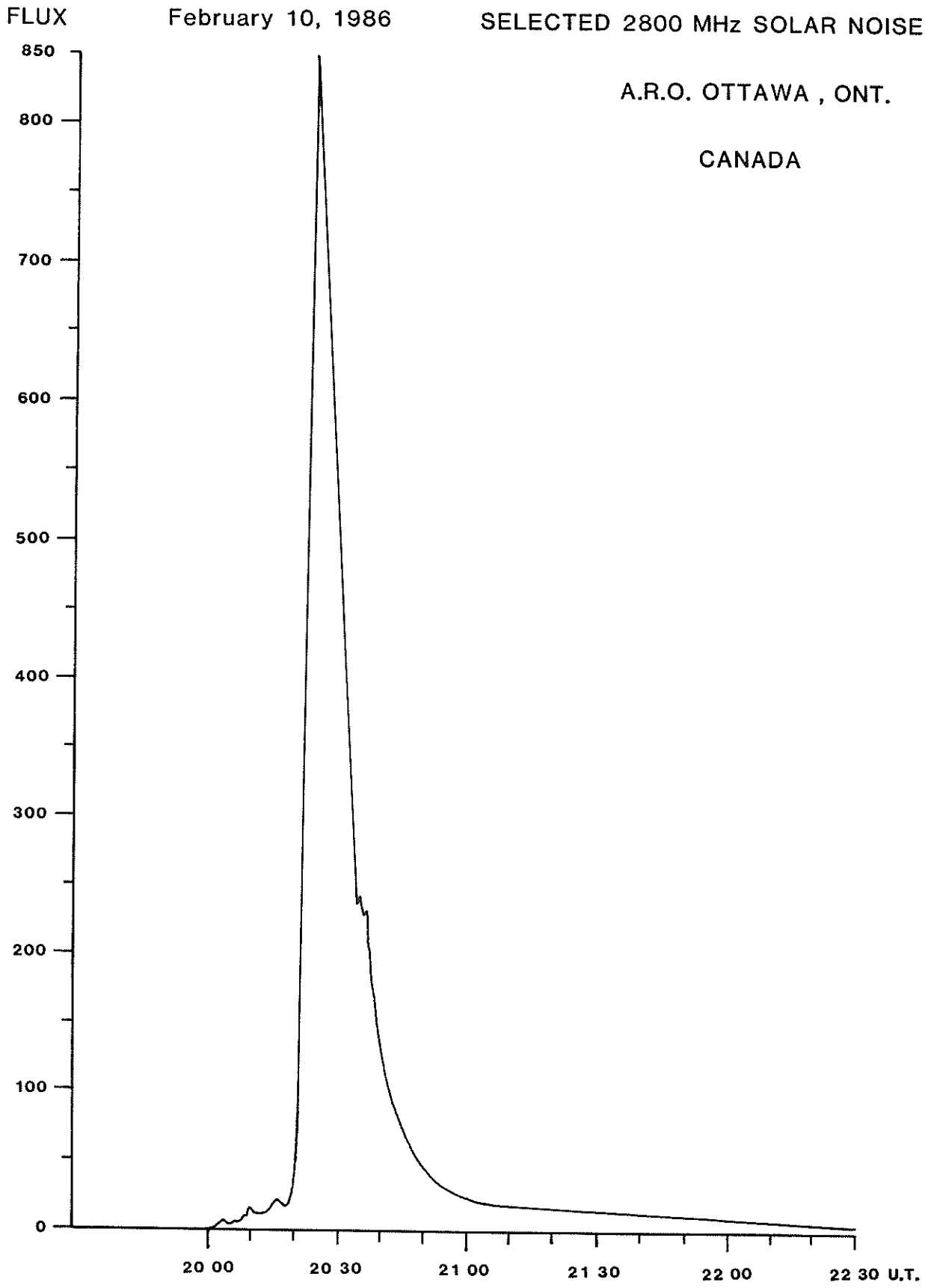

FLUX
February 03, 1986
SELECTED 2800MHz SOLAR NOISE BURST
A.R.O. OTTAWA ONT.
CANADA
225
200
150
100
50
0
20 30
20 40
20 50
21 00
21 10
21 20
21 30
21 40
21 50
22 00
22 10 U.T.

23 Feb 86

INSTITUTE OF APPLIED PHYSICS, UNIVERSITY OF BERN, SWITZERLAND

INTEGRATION TIME= 3000 MS



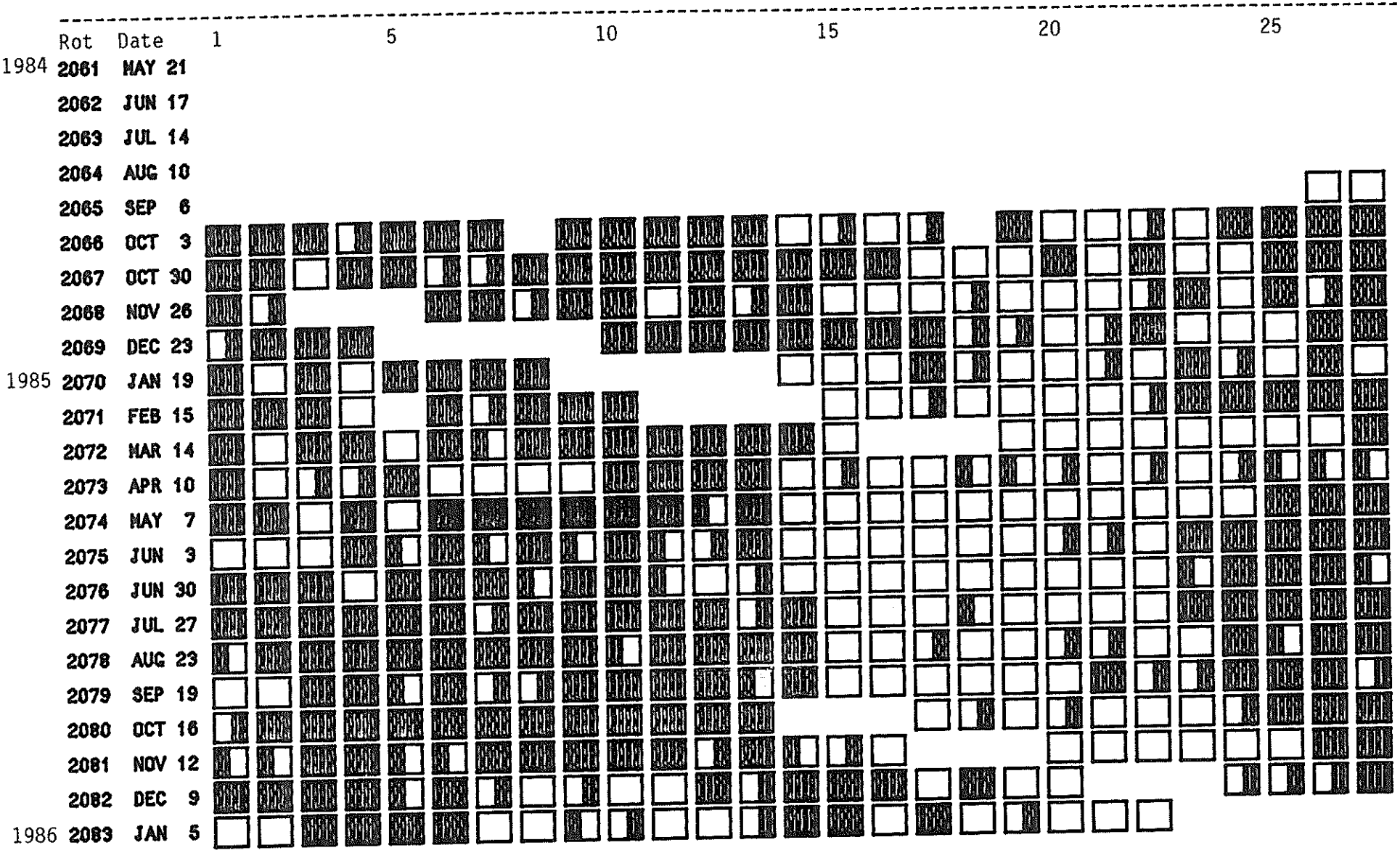

FLUX
February 10, 1986
SELECTED 2800 MHz SOLAR NOISE BURST
A.R.O. OTTAWA , ONT.
CANADA
850
800
700
600
500
400
300
200
100
0
20 00
20 30
21 00
21 30
22 00
22 30 U.T.

VOSTOK INFERRED INTERPLANETARY MAGNETIC FIELD
PRELIMINARY DATA

March 1985 - February 1986

Day	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb 86
1	A	A	AT	T	T	T	TA	TA	A	A	AT	-
2	A	A	A	T	T	AT	T	T	AT	A	AT	T
3	T	A	AT	A	A	T	T	A	A	A	AT	TA
4	A	A	TA	A	T	T	T	A	AT	A	T	TA
5	A	A	TA	A	T	T	T	A	A	A	A	T
6	A	A	TA	T	T	T	A	A	A	A	A	T
7	A	A	T	TA	TA	T	A	A	A	T	T	T
8	AT	A	T	T	T	AT	AT	A	AT	T	T	T
9	T	T	A	TA	T	T	A	T	T	T	T	AT
10	T	T	T	T	TA	A	A	AT	T	T	T	T
11	T	A	A	TA	A	A	AT	AT	T	T	A	T
12	T	AT	T	T	AT	A	AT	T	TA	T	A	T
13	T	AT	T	TA	A	TA	A	T	TA	TA	TA	T
14	T	T	T	AT	A	A	A	T	T	T	AT	T
15	A	A	T	T	A	A	T	AT	T	AT	A	T
16	T	A	T	A	A	A	TA	AT	TA	A	A	T
17	T	A	T	A	A	A	T	T	TA	AT	AT	T
18	A	A	TA	A	A	T	T	T	T	A	T	A
19	T	T	T	A	A	T	A	T	T	A	T	TA
20	TA	T	A	A	A	T	A	T	T	T	A	A
21	T	T	A	A	A	T	T	T	T	AT	T	A
22	T	T	A	AT	TA	T	T	T	T	T	A	A
23	T	A	A	AT	T	TA	TA	T	AT	T	AT	A
24	T	AT	A	A	T	T	T	T	T	T	A	A
25	T	A	A	T	T	T	AT	T	TA	A	A	A
26	T	A	A	T	TA	T	AT	T	AT	T	A	A
27	T	TA	A	T	T	T	T	T	A	A	-	AT
28	A	TA	A	T	T	T	T	-	-	A	-	A
29	-	AT	A	T	T	T	T	-	-	-	-	
30	-	A	A	T	T	T	T	-	-	-	-	
31	-		T		T	T		-		-	-	

VOSTOK INFERRED INTERPLANETARY MAGNETIC FIELD

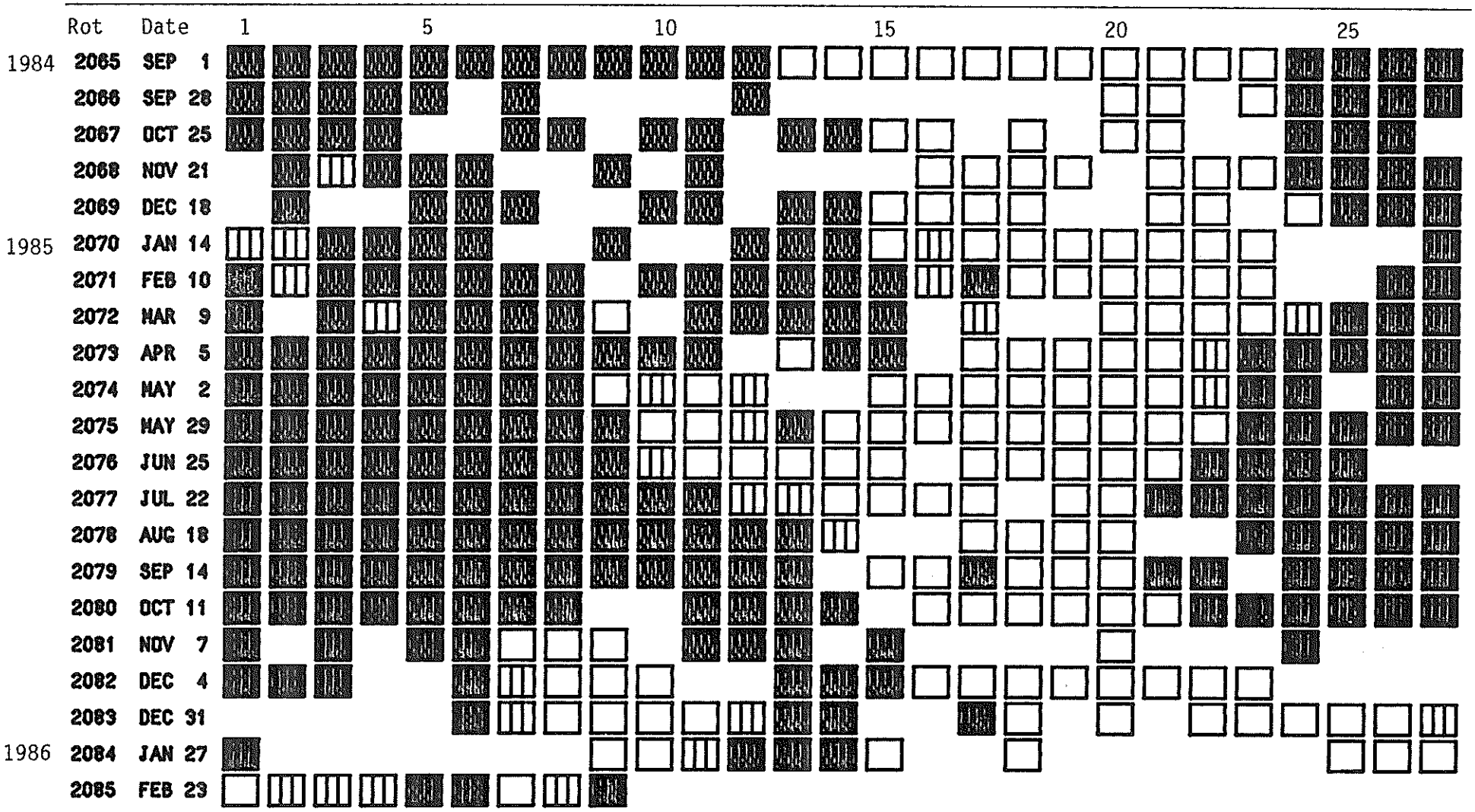


Inferred Interplanetary Magnetic Field Polarity:

No box = no data available ■ = definitely towards the Sun □ = definitely away from the Sun

The chart shows the daily inferences of the polarity of the interplanetary magnetic field based principally on the magnetograms produced by the magnetometer at the Vostok Antarctic Station of the USSR.

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.

29
Feb 86

STANFORD MEAN SOLAR MAGNETIC FIELD (MICROTESLA)

Day	Mar 85	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan 86	Feb
1	31	2	-5	-10	-16	-5	•	13	-7	•	•	•
2	27	-10	-8	-7	-14	1	•	15	-10	•	•	•
3	16	-14	-9	-11	-5	2	7	6	-8	•	•	•
4	13	-13	-5	-12	2	8	3	-6	-15	-16	•	15
5	•	-17	-5	-11	5	11	5	-13	-16	-20	-3	15
6	•	-20	-5	-3	17	6	3	•	-25	-25	1	2
7	-8	-7	-8	4	31	10	•	-20	-26	•	14	-8
8	-17	-13	-8	6	24	•	•	-23	•	•	3	-27
9	-13	-6	-5	-1	22	8	-26	-26	-17	-14	11	-14
10	•	-13	4	-4	•	8	-24	-27	•	1	12	4
11	-4	-29	2	3	12	-9	-24	-21	-6	13	0	•
12	-1	-19	8	12	7	-16	-22	-23	-5	8	-19	•
13	-3	-21	1	22	5	-24	-25	-16	5	3	-14	9
14	-15	-13	•	21	8	-28	-24	-26	11	•	•	•
15	-12	-12	•	19	6	-22	-21	-20	6	•	•	•
16	-6	•	11	17	-10	-23	-21	-27	•	-18	-12	•
17	10	3	22	13	-27	-22	-25	-21	-3	-20	21	•
18	•	-7	33	15	-27	-20	-29	-25	-2	-21	•	•
19	-7	-10	48	7	-24	-20	-28	•	-11	3	24	•
20	-6	•	39	-10	•	-17	-22	•	•	11	•	9
21	-12	5	27	-21	•	-19	-21	-17	-5	15	16	18
22	-12	6	25	-16	-19	-22	-23	-17	•	22	11	10
23	-5	18	0	-13	-19	-18	-16	-12	•	28	12	9
24	•	23	-9	-13	-10	-22	-10	-8	•	15	15	1
25	1	18	-21	-16	-14	-28	-6	•	•	21	10	1
26	•	1	•	-12	-19	-25	-5	4	15	8	2	0
27	•	-12	-18	-12	-27	-15	•	19	•	•	-3	-4
28	37	-27	-8	-9	-26	-9	11	17	•	•	•	-4
29	24	-32	-8	-13	-27	-4	12	14	•	•	•	
30	16	-47	-9	-9	-25	-2	-6	16	-8	•	•	
31	12		-5		-22	1		5		•	•	

Dot symbol indicates no data available for the day.

C O N T E N T S

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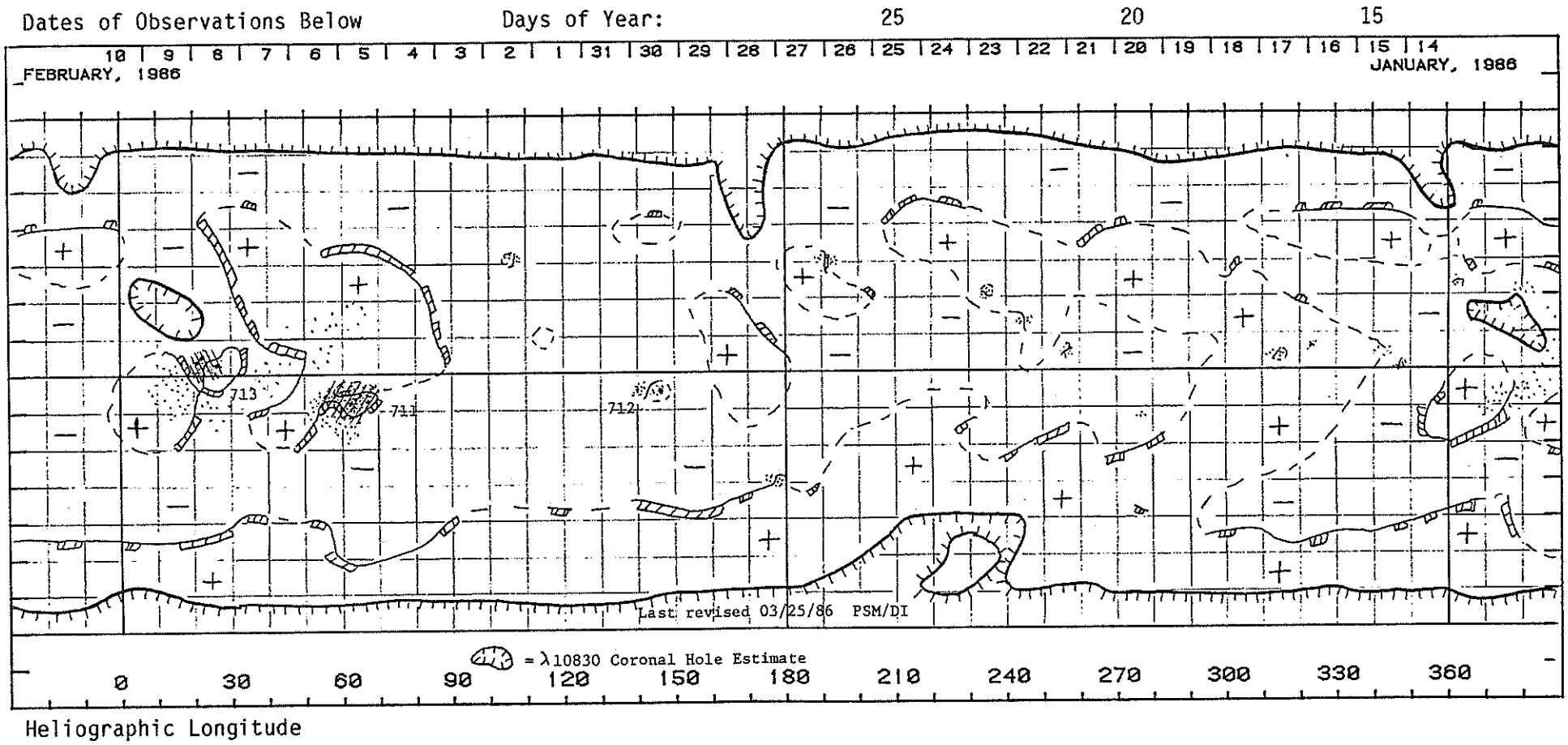
PRELIMINARY H-ALPHA SOLAR SYNOPTIC CHART

CARRINGTON ROTATION NUMBER 1771
(January 14 to February 10, 1986)

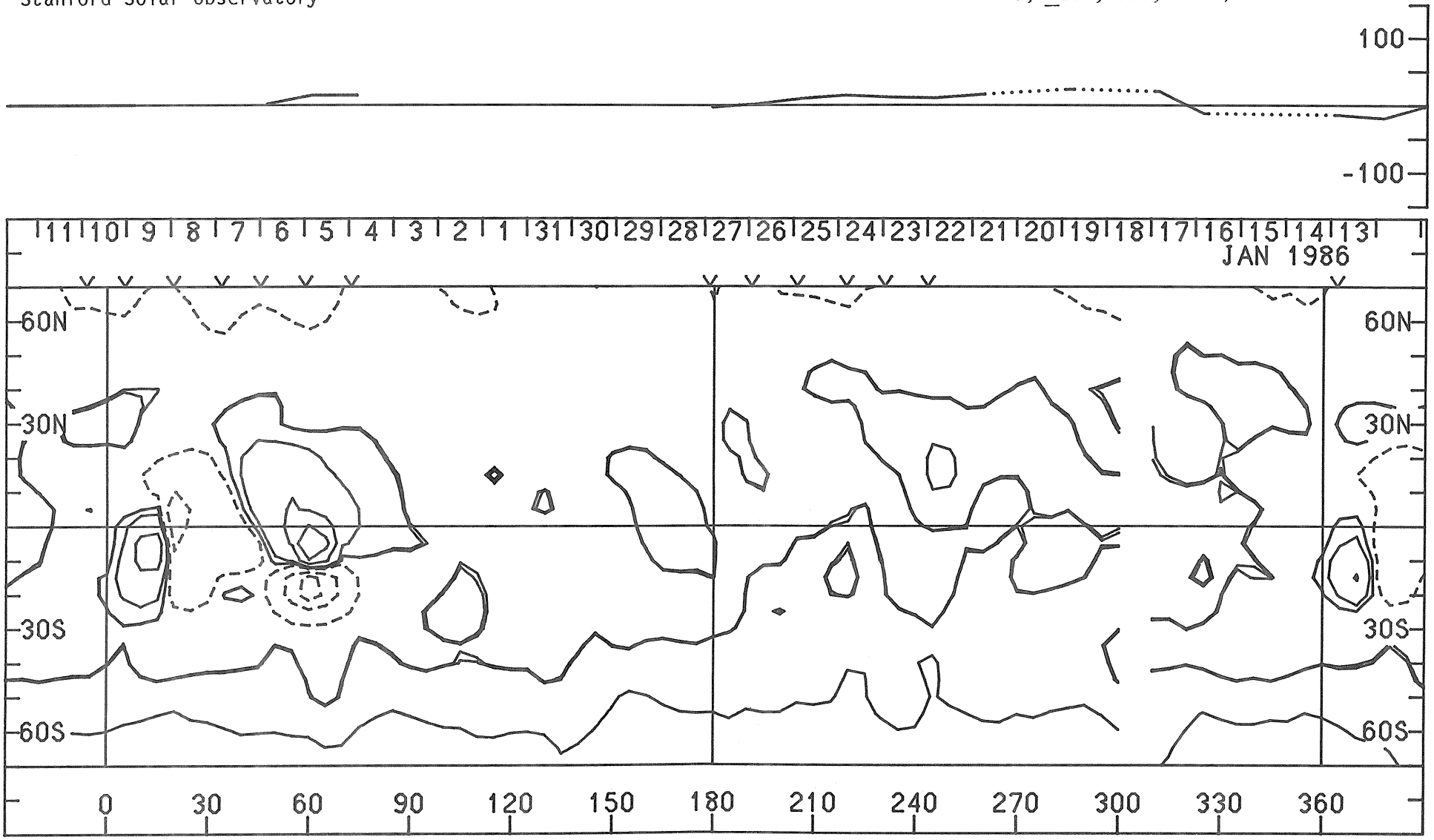


SOLAR MAGNETIC FIELD SYNOPTIC CHART

CARRINGTON ROTATION NUMBER 1771
(January 14 to February 10, 1986)

Stanford Solar Observatory

0, ±100, 500, 1000, 2000 microTesla

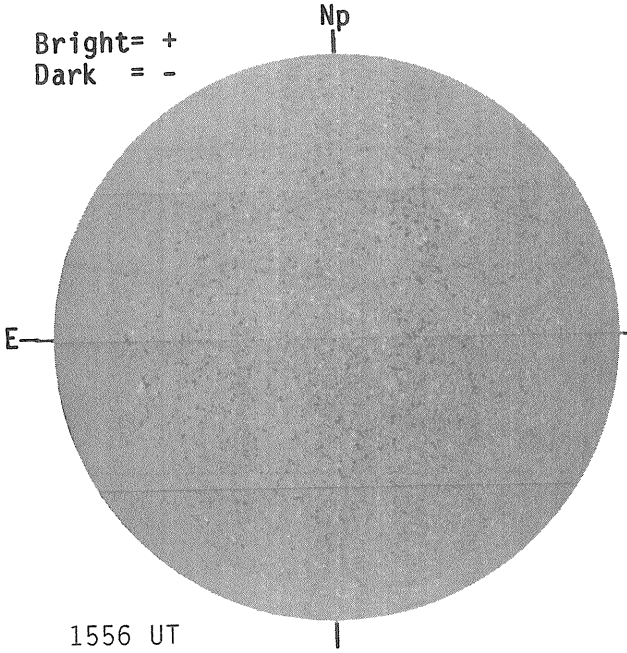


Heliographic Longitude

J A N U A R Y 01, 1 9 8 6 (P= 2.09, B_o=-2.94, L_o= 173.60)

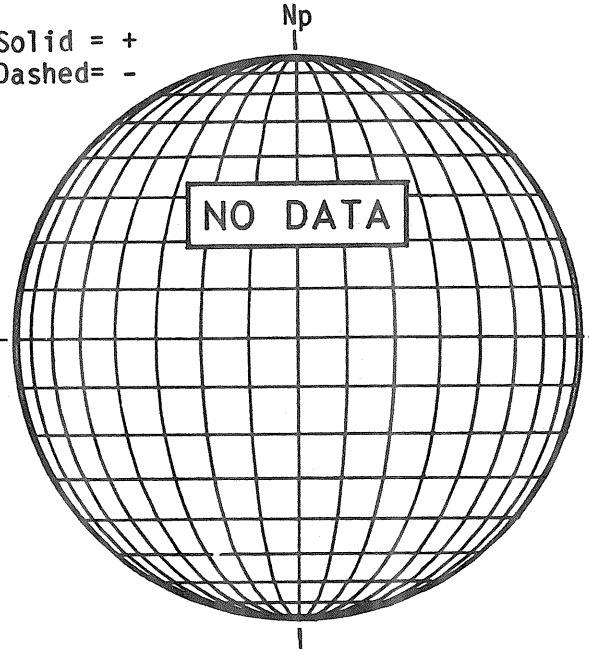
KITT PEAK MAGNETOGRAM

Bright= +
Dark = -



STANFORD MAGNETOGRAM

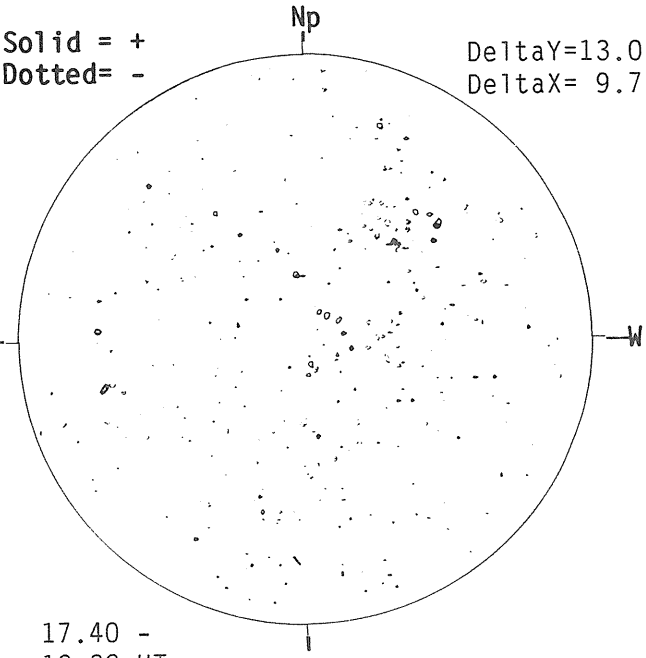
Solid = +
Dashed= -



MT. WILSON MAGNETOGRAM

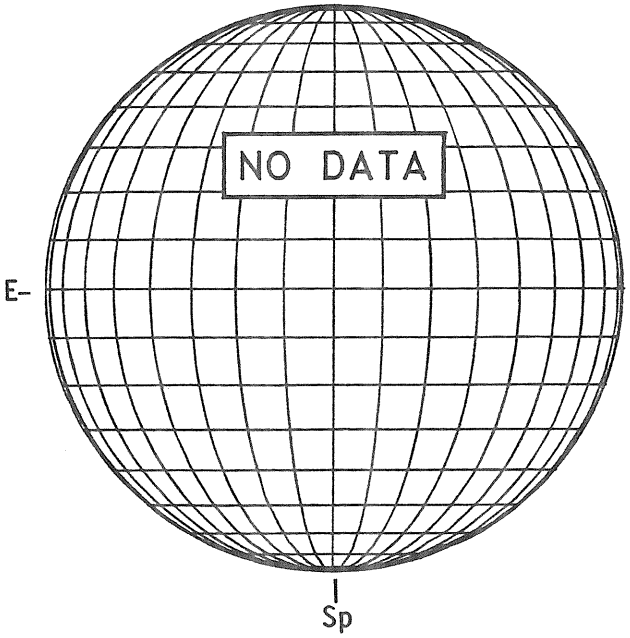
Solid = +
Dotted= -

DeltaY=13.0
DeltaX= 9.7

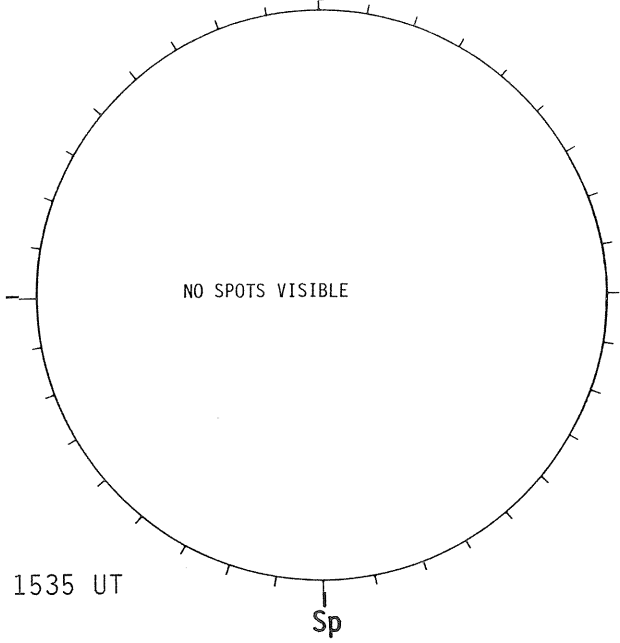


17.40 -
18.32 UT

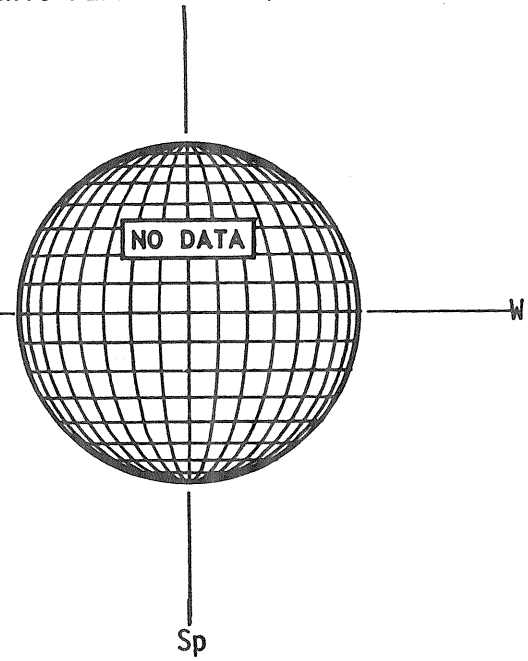
SACRAMENTO PEAK H-ALPHA



HOLLOMAN SUNSPOTS



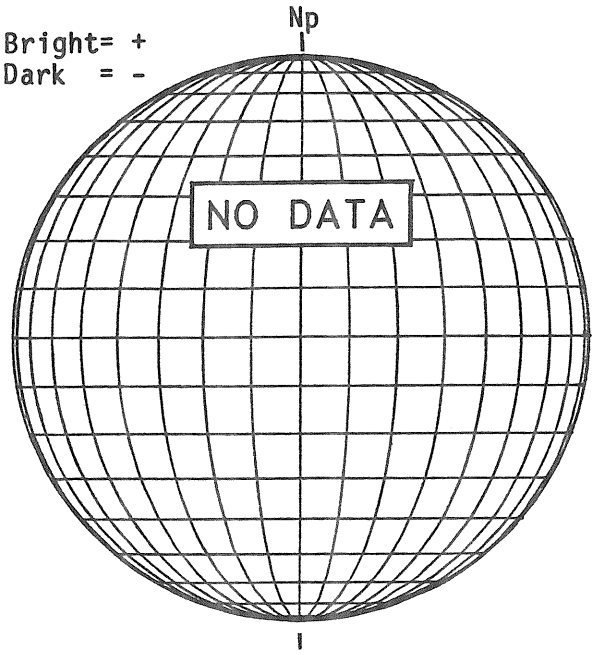
SACRAMENTO PEAK CORONA (1.15 Radii)



J A N U A R Y 02, 1 9 8 6 (P= 1.61, B_0=-3.06, L_0= 160.43)

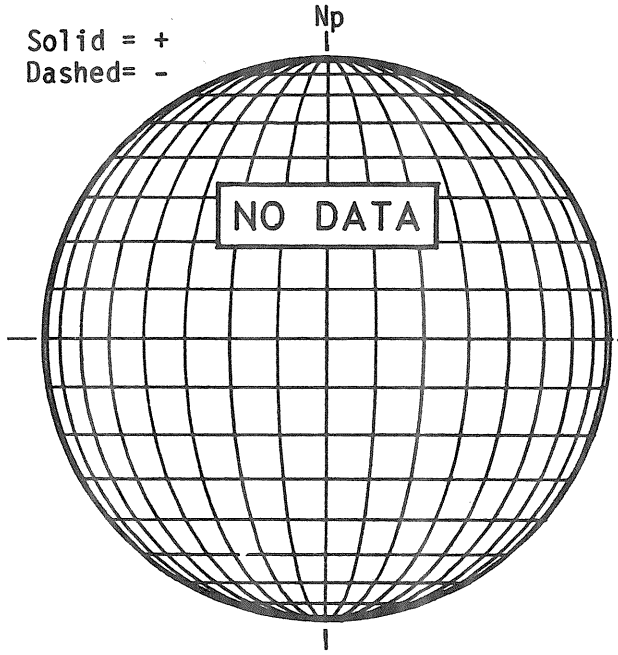
KITT PEAK MAGNETOGRAM

Bright= +
Dark = -



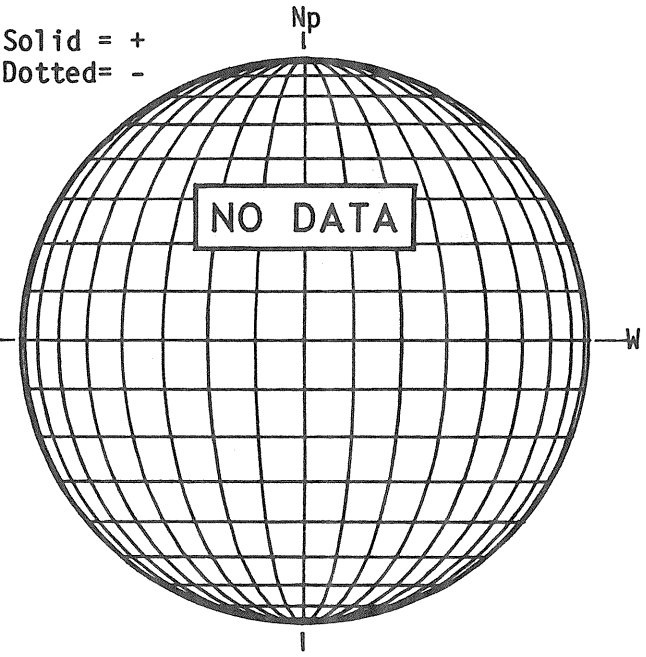
STANFORD MAGNETOGRAM

Solid = +
Dashed= -

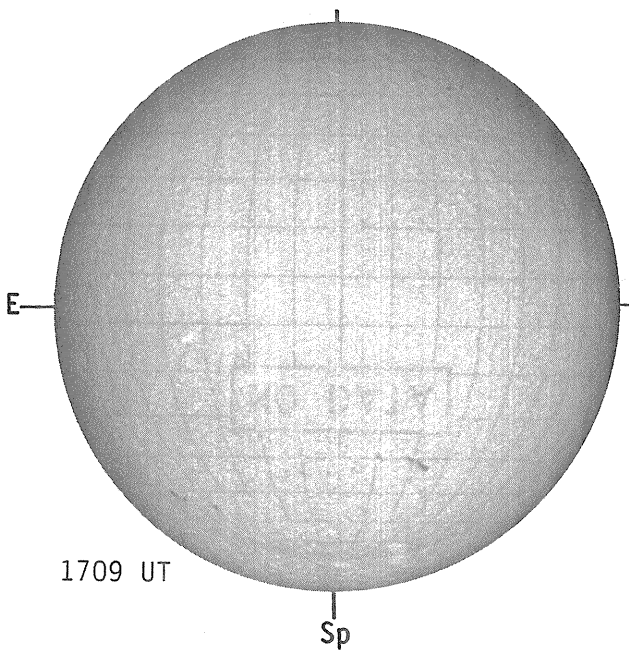


MT. WILSON MAGNETOGRAM

Solid = +
Dotted= -

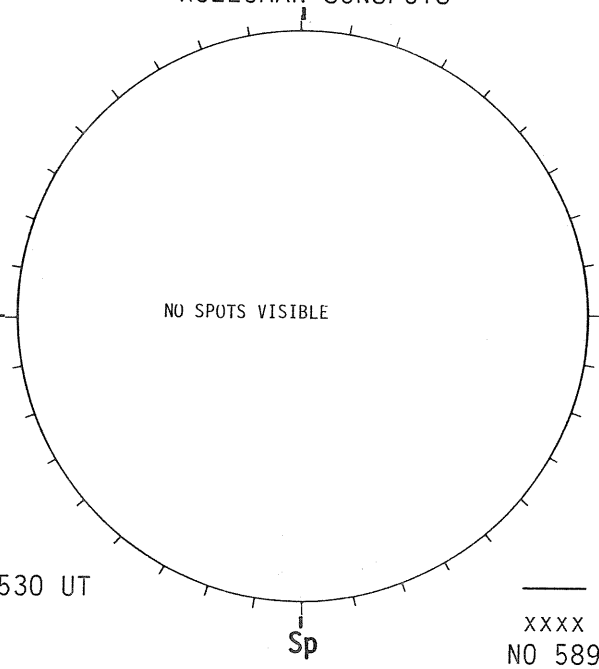


SACRAMENTO PEAK H-ALPHA



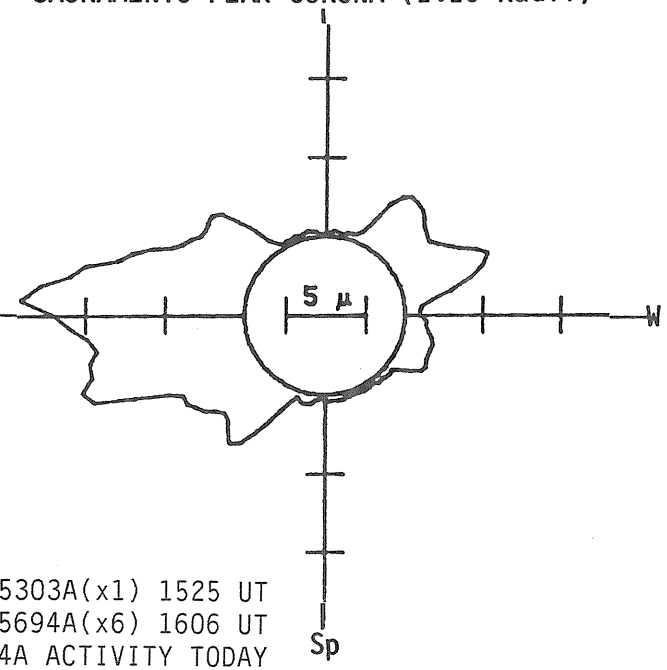
1709 UT

HOLLOMAN SUNSPOTS



1530 UT

SACRAMENTO PEAK CORONA (1.15 Radii)

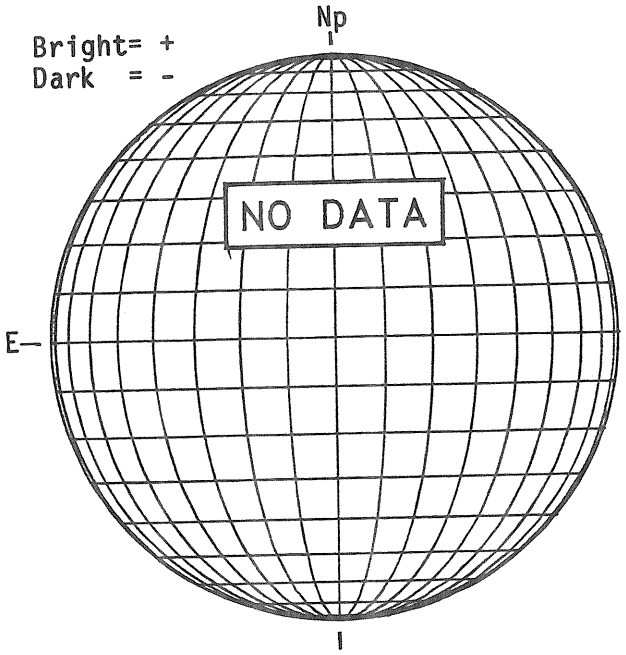


—— 5303A(x1) 1525 UT
xxxx 5694A(x6) 1606 UT
NO 5894A ACTIVITY TODAY

J A N U A R Y 03, 1 9 8 6 (P= 1.13, B_0=-3.17, L_0= 147.26)

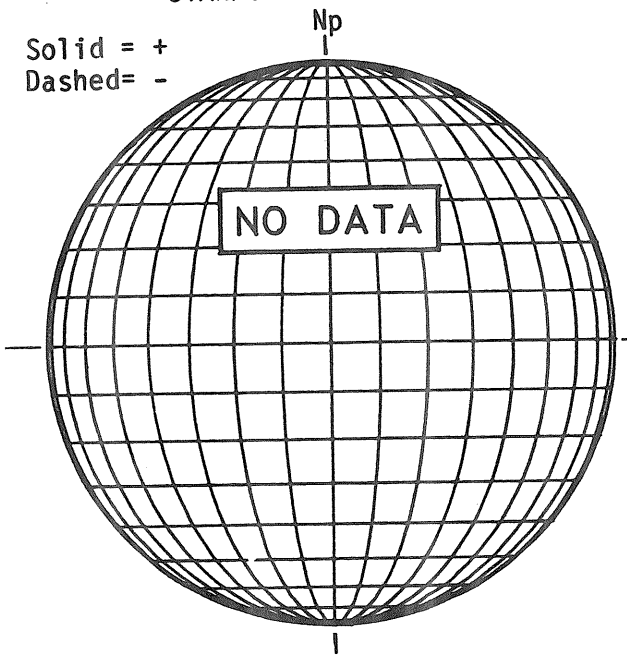
KITT PEAK MAGNETOGRAM

Bright= +
Dark = -



STANFORD MAGNETOGRAM

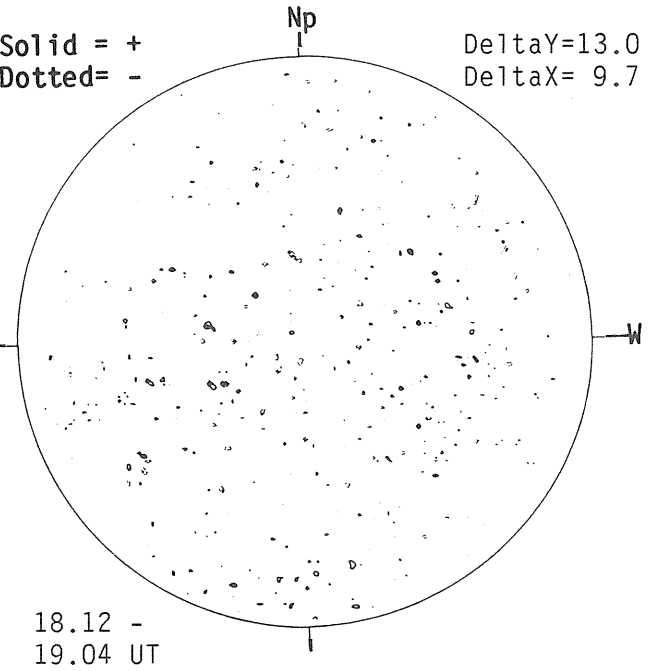
Solid = +
Dashed= -



MT. WILSON MAGNETOGRAM

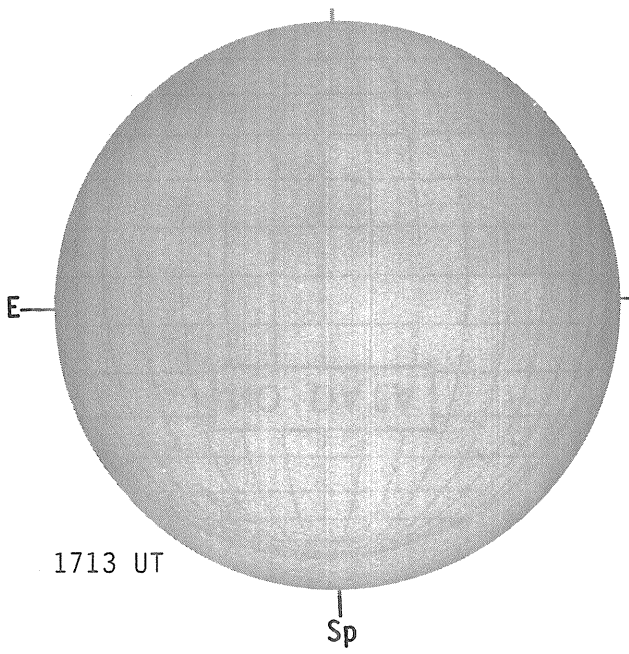
Solid = +
Dotted= -

DeltaY=13.0
DeltaX= 9.7



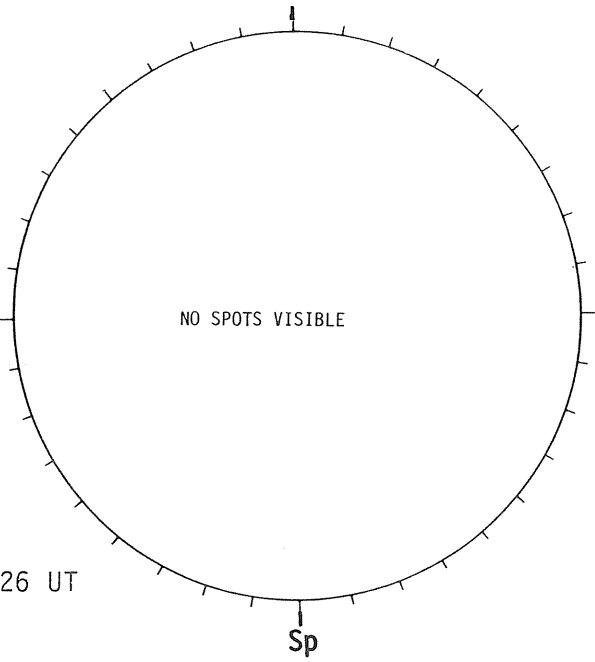
18.12 -
19.04 UT

SACRAMENTO PEAK H-ALPHA



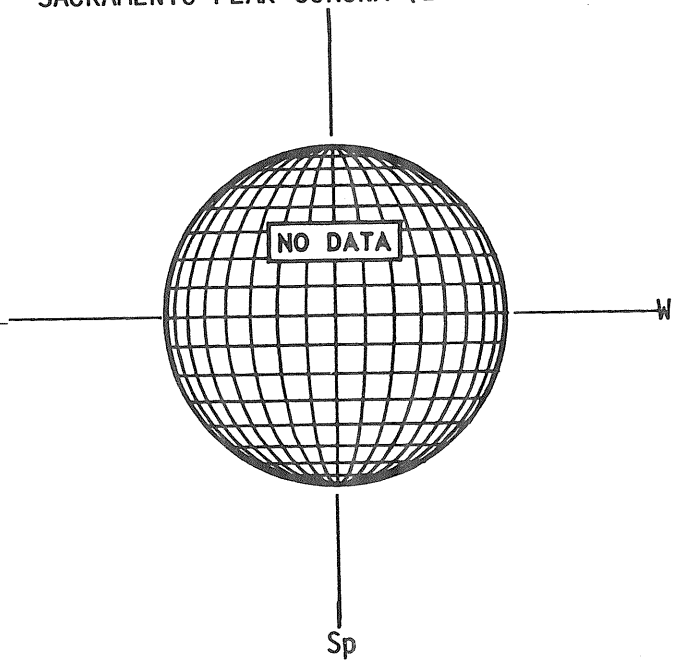
1713 UT

HOLLOMAN SUNSPOTS



1526 UT

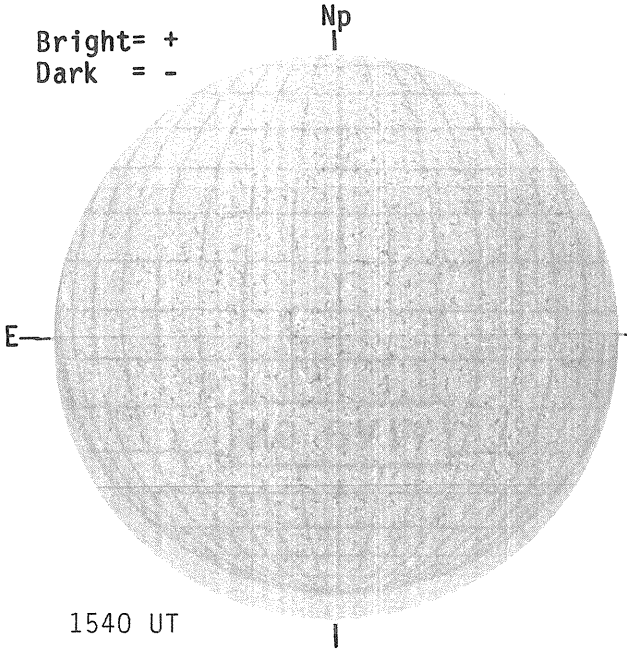
SACRAMENTO PEAK CORONA (1.15 Radii)



J A N U A R Y 04, 1 9 8 6 (P= 0.64, B_o=-3.28, L_o= 134.09)

KITT PEAK MAGNETOGRAM

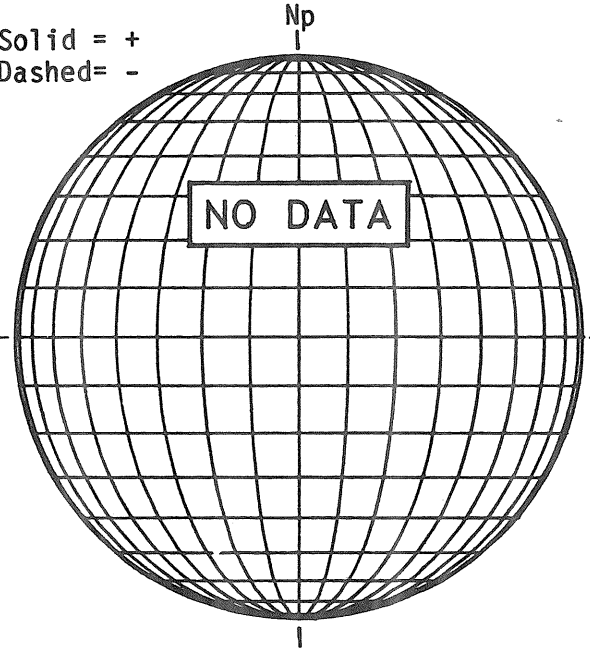
Bright= +
Dark = -



1540 UT

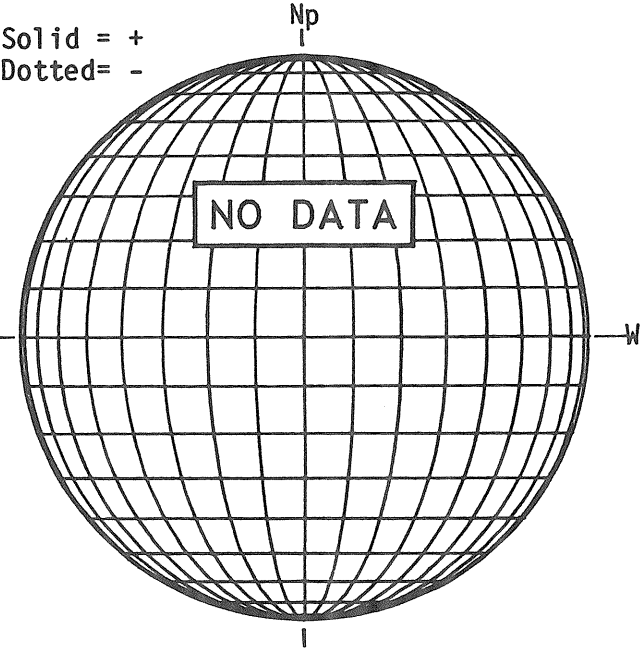
STANFORD MAGNETOGRAM

Solid = +
Dashed= -

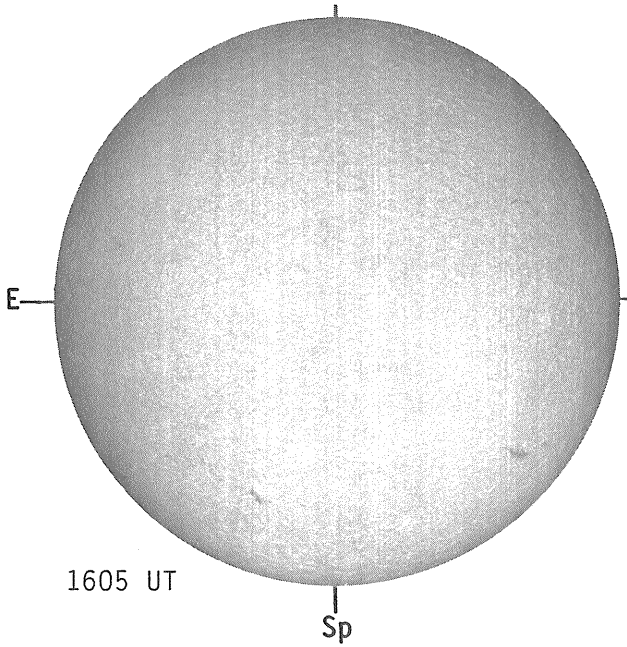


MT. WILSON MAGNETOGRAM

Solid = +
Dotted= -

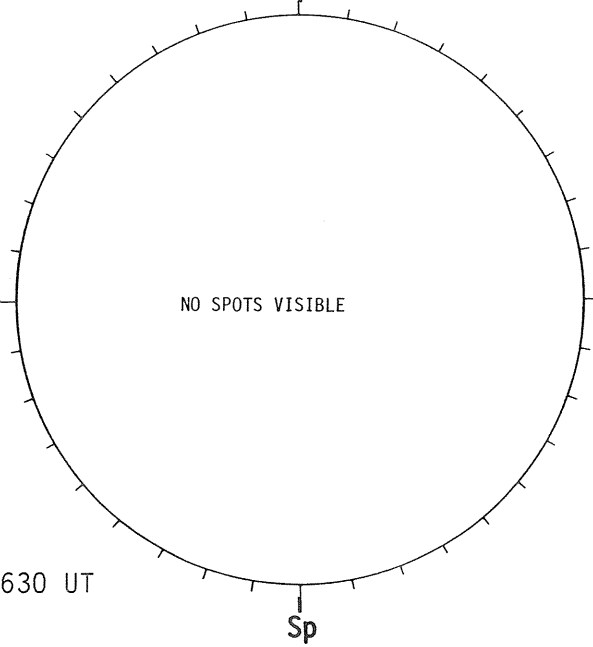


SACRAMENTO PEAK H-ALPHA



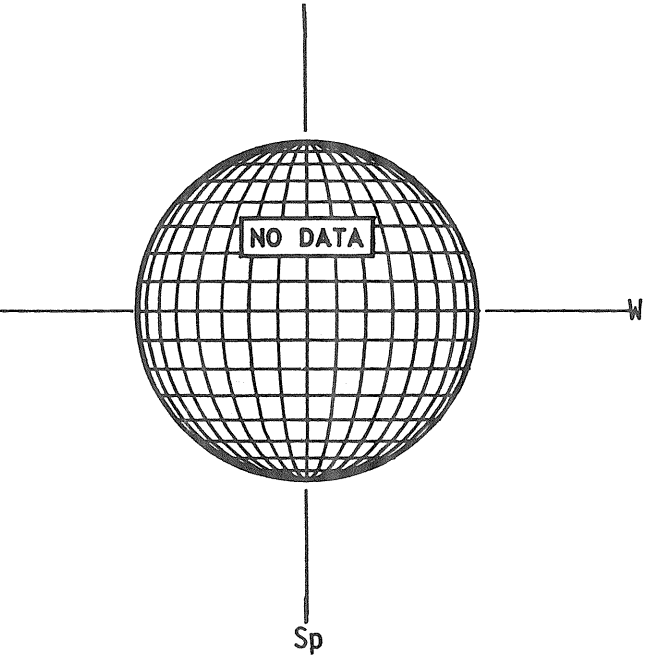
1605 UT

HOLLOMAN SUNSPOTS



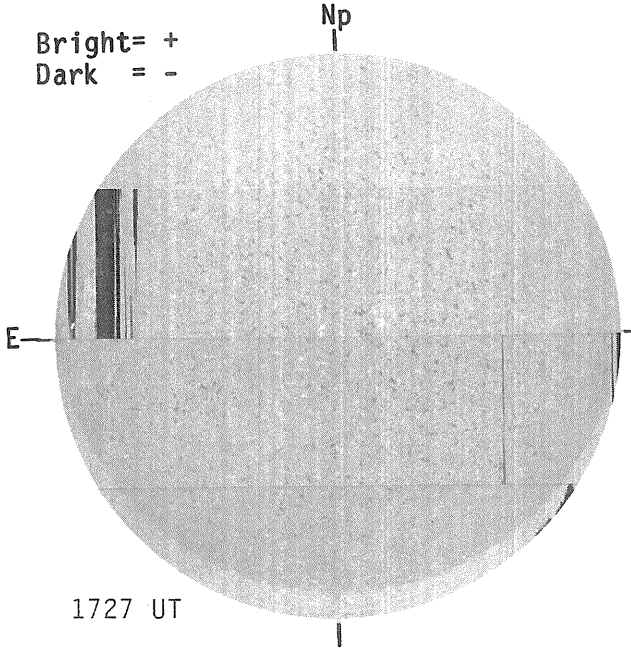
1630 UT

SACRAMENTO PEAK CORONA (1.15 Radii)

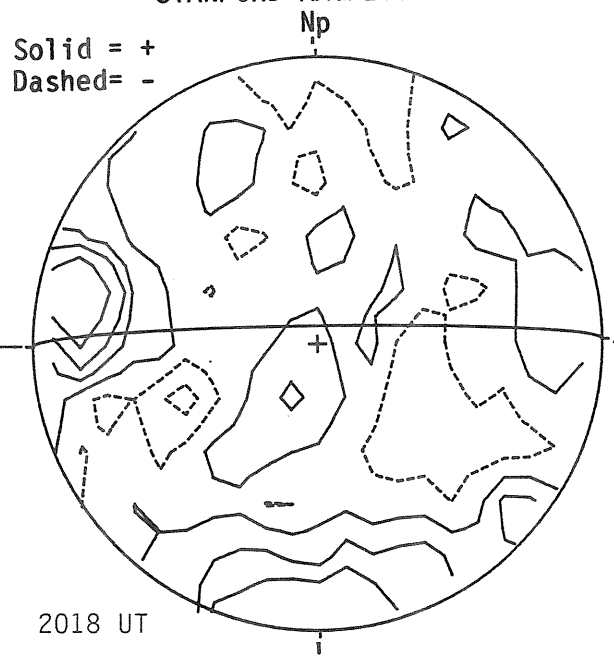


J A N U A R Y 05, 1 9 8 6 (P= 0.16, B_0=-3.40, L_0= 120.92)

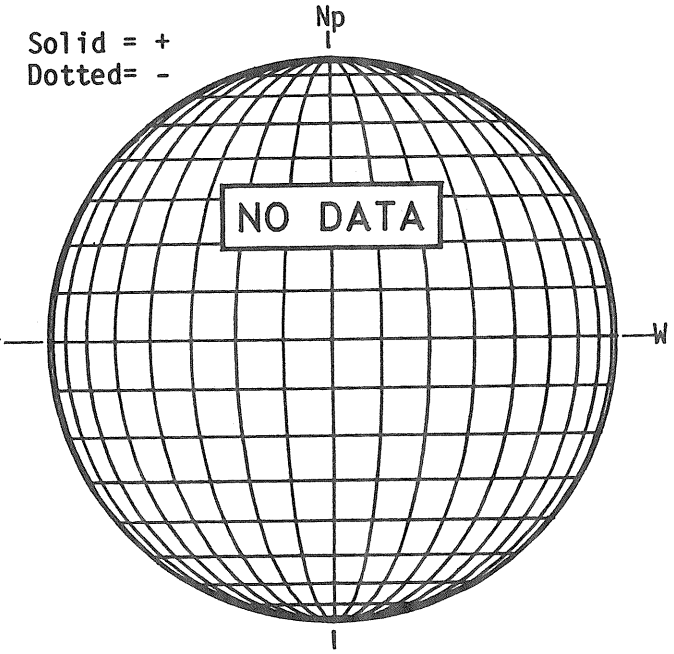
KITT PEAK MAGNETOGRAM



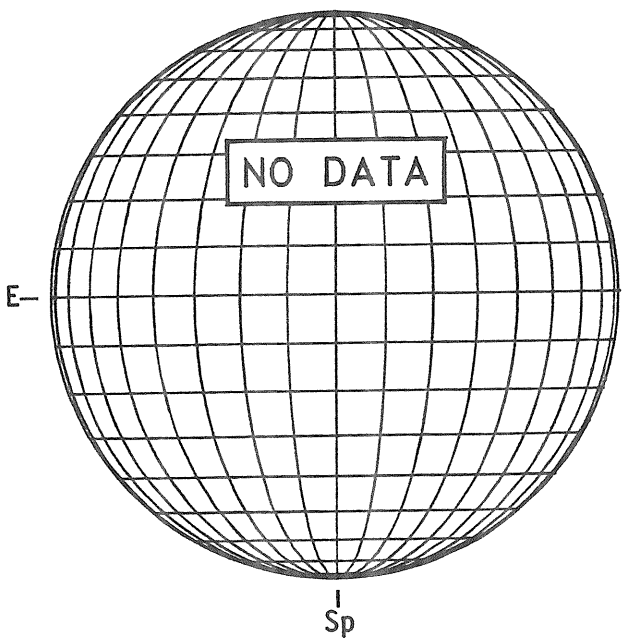
STANFORD MAGNETOGRAM



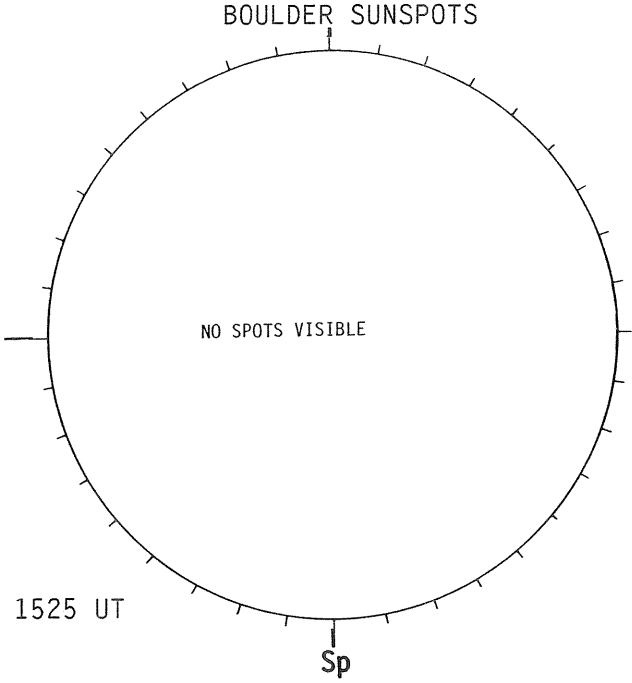
MT. WILSON MAGNETOGRAM



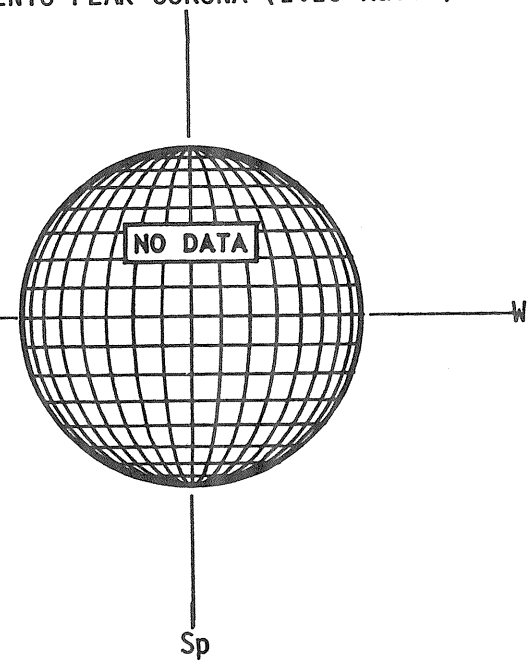
SACRAMENTO PEAK H-ALPHA



BOULDER SUNSPOTS



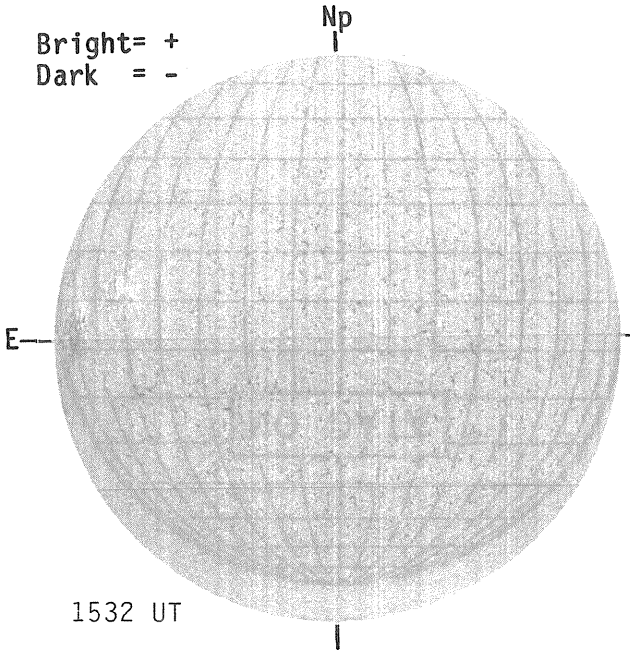
SACRAMENTO PEAK CORONA (1.15 Radii)



J A N U A R Y 06, 1 9 8 6 (P= -0.33, B_0=-3.51, L_0= 107.75)

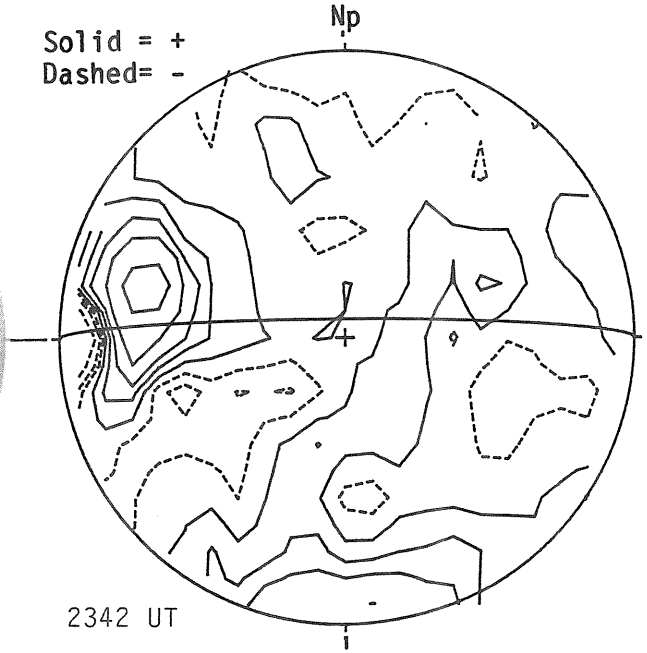
KITT PEAK MAGNETOGRAM

Bright= +
Dark = -



STANFORD MAGNETOGRAM

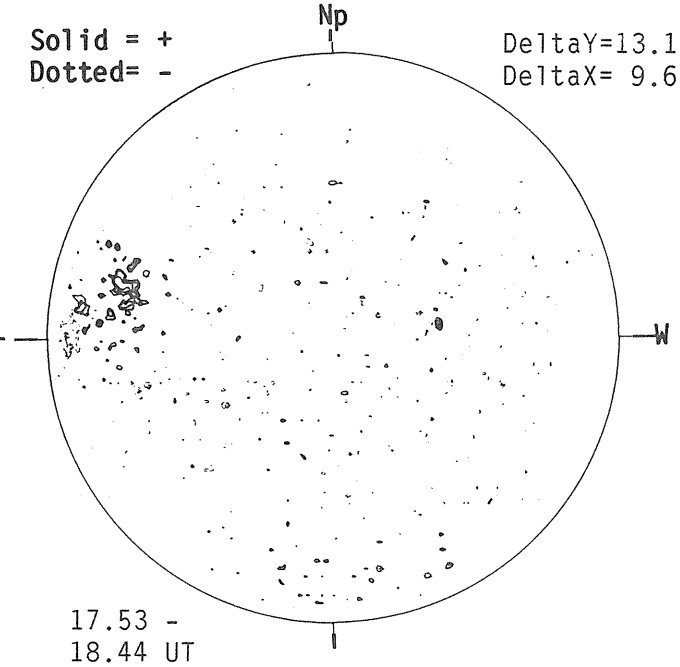
Solid = +
Dashed= -



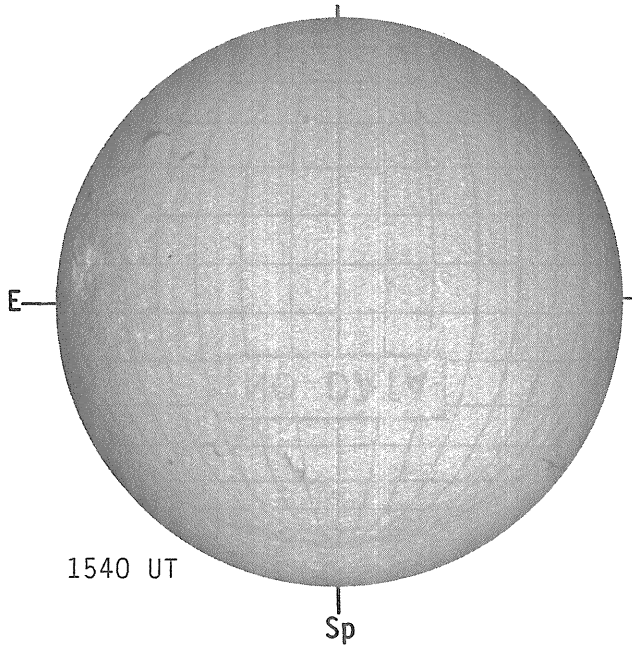
MT. WILSON MAGNETOGRAM

Solid = +
Dotted= -

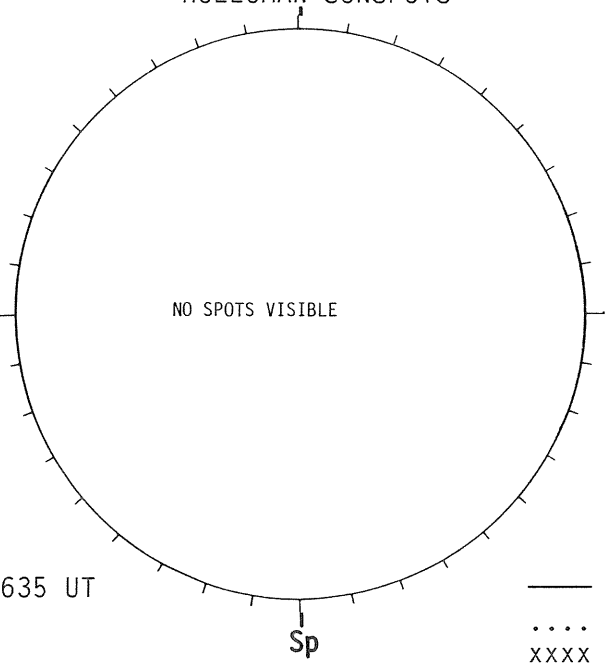
DeltaY=13.1
DeltaX= 9.6



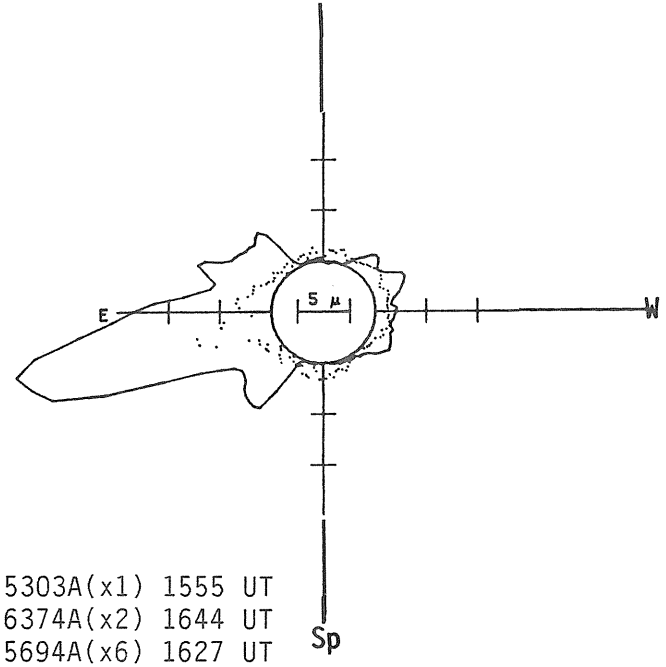
SACRAMENTO PEAK H-ALPHA



HOLLOMAN SUNSPOTS

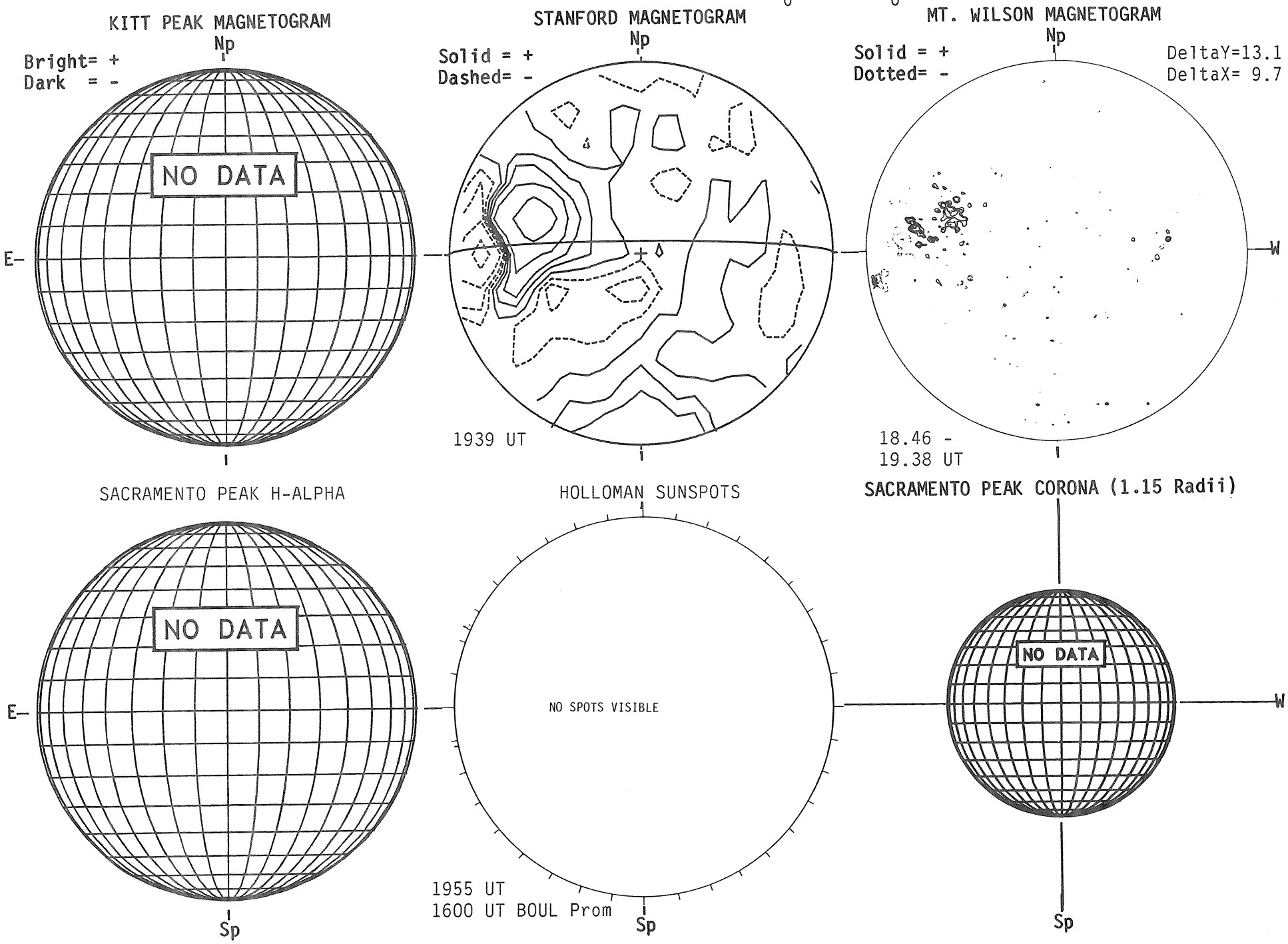


SACRAMENTO PEAK CORONA (1.15 Radii)



—— 5303A(x1) 1555 UT
.... 6374A(x2) 1644 UT
xxxx 5694A(x6) 1627 UT
NO 5894A ACTIVITY TODAY

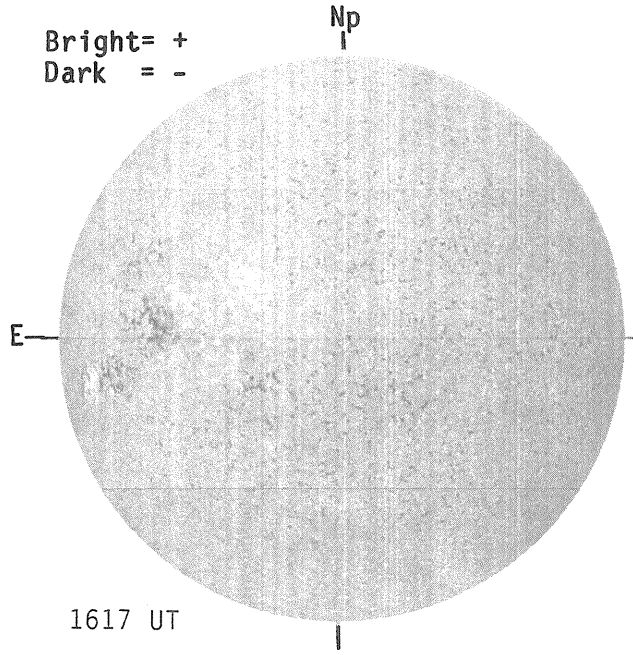
J A N U A R Y 07, 1 9 8 6 (P= -0.81, B_0=-3.62, L_0= 94.58)



J A N U A R Y 08, 1 9 8 6 (P= -1.29, B_0=-3.73, L_0= 81.41)

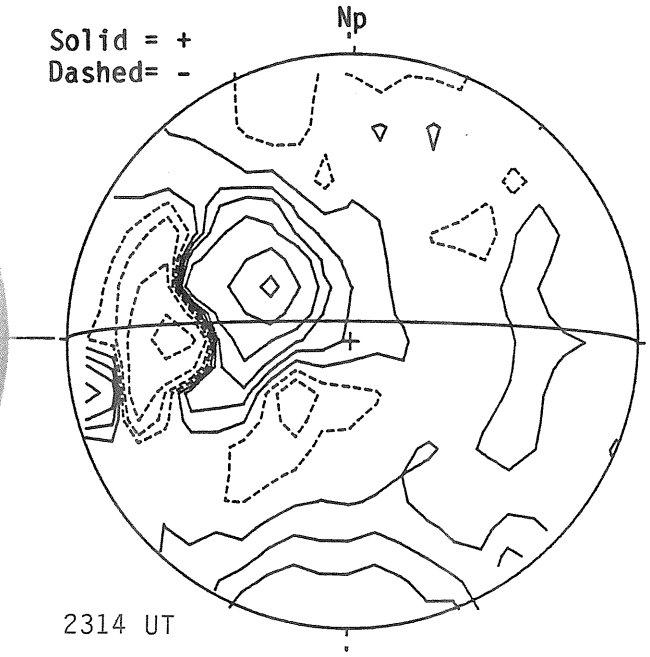
KITT PEAK MAGNETOGRAM

Bright= +
Dark = -



STANFORD MAGNETOGRAM

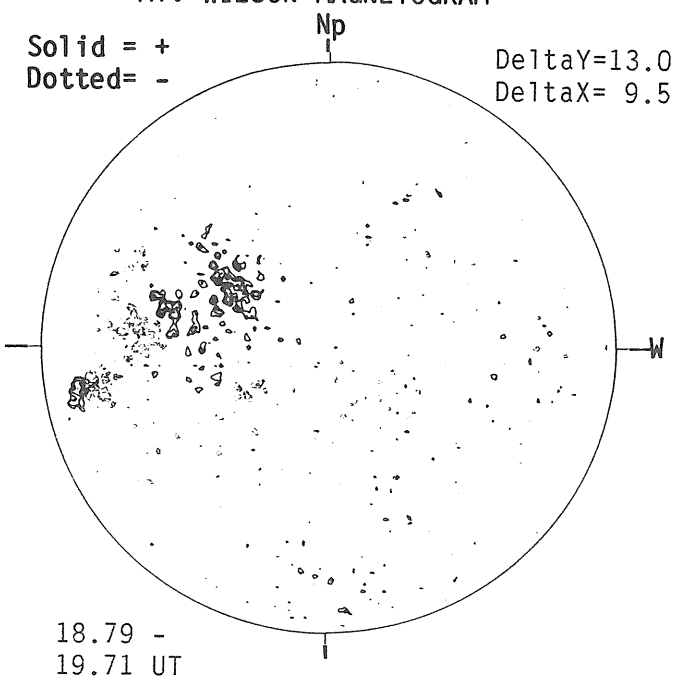
Solid = +
Dashed= -



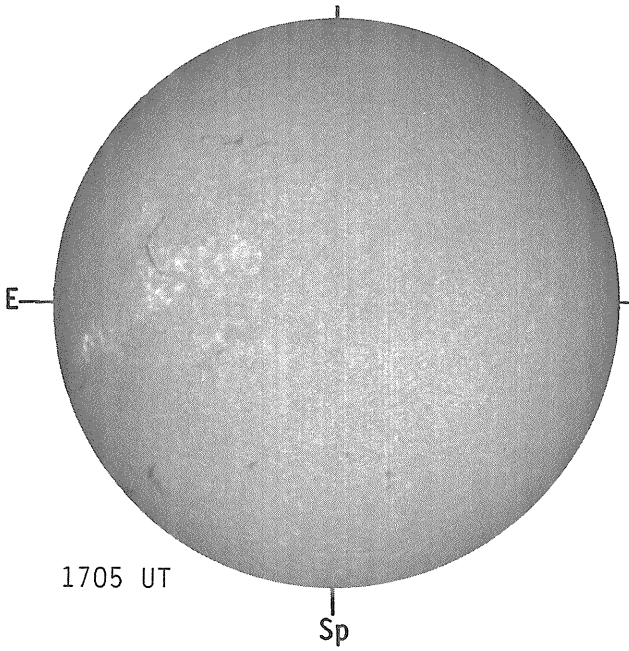
MT. WILSON MAGNETOGRAM

Solid = +
Dotted= -

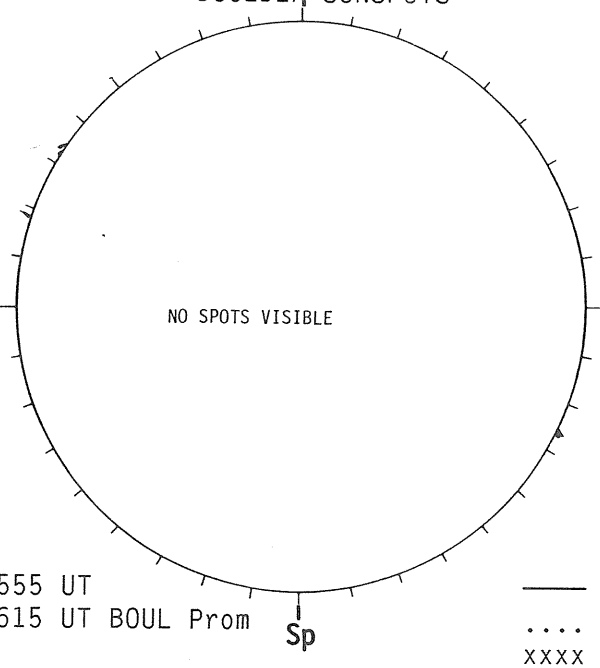
DeltaY=13.0
DeltaX= 9.5



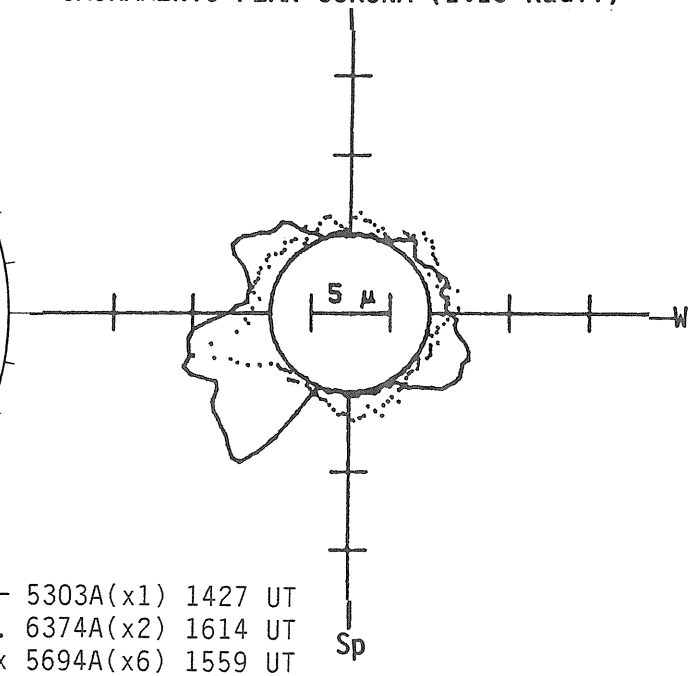
SACRAMENTO PEAK H-ALPHA



BOULDER SUNSPOTS



SACRAMENTO PEAK CORONA (1.15 Radii)

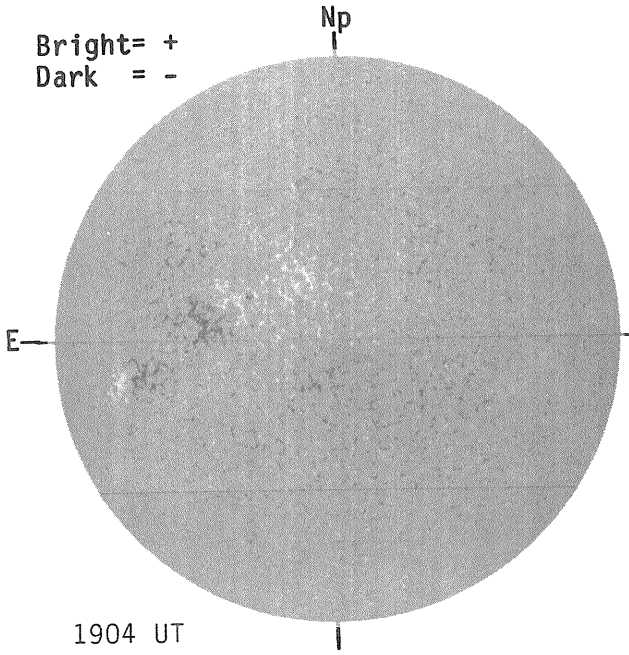


—— 5303A(x1) 1427 UT
.... 6374A(x2) 1614 UT
xxxx 5694A(x6) 1559 UT
NO 5894A ACTIVITY TODAY

J A N U A R Y 09, 1 9 8 6 (P= -1.77, B_0=-3.83, L_0= 68.24)

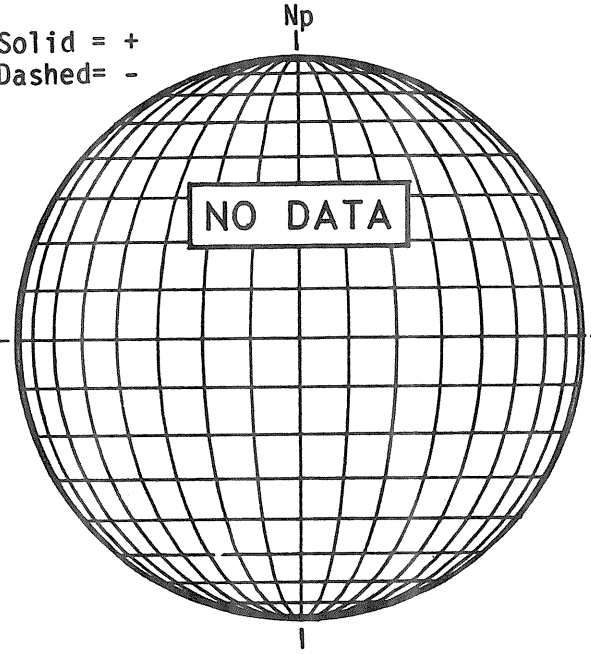
KITT PEAK MAGNETOGRAM

Bright= +
Dark = -



STANFORD MAGNETOGRAM

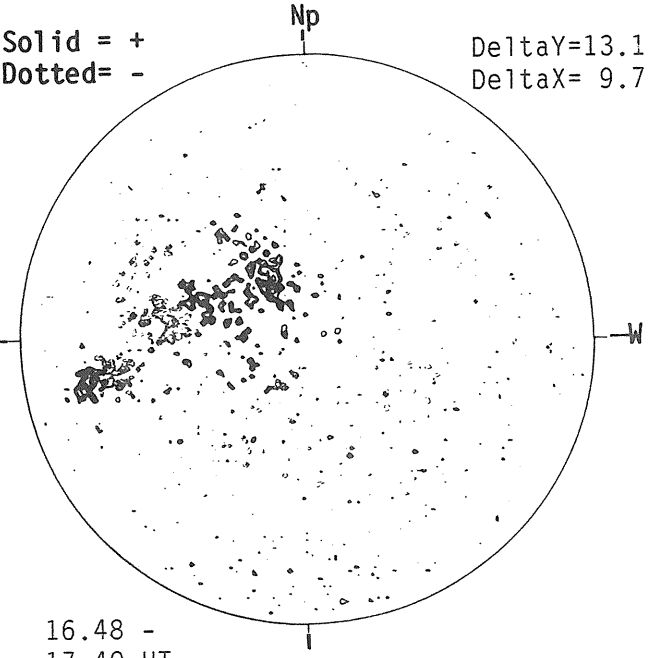
Solid = +
Dashed= -



MT. WILSON MAGNETOGRAM

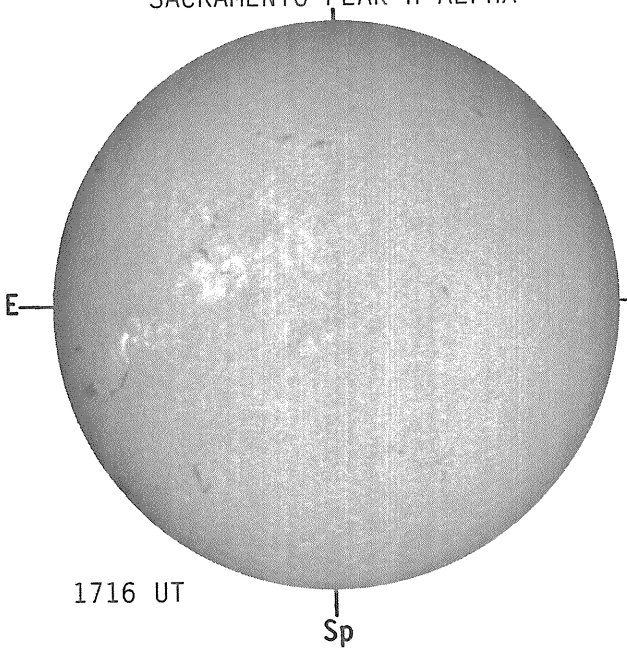
Solid = +
Dotted= -

DeltaY=13.1
DeltaX= 9.7

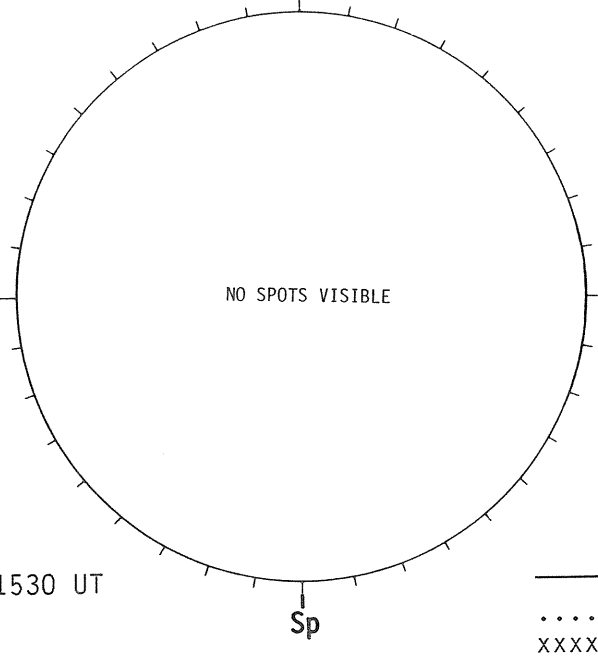


16.48 -
17.40 UT

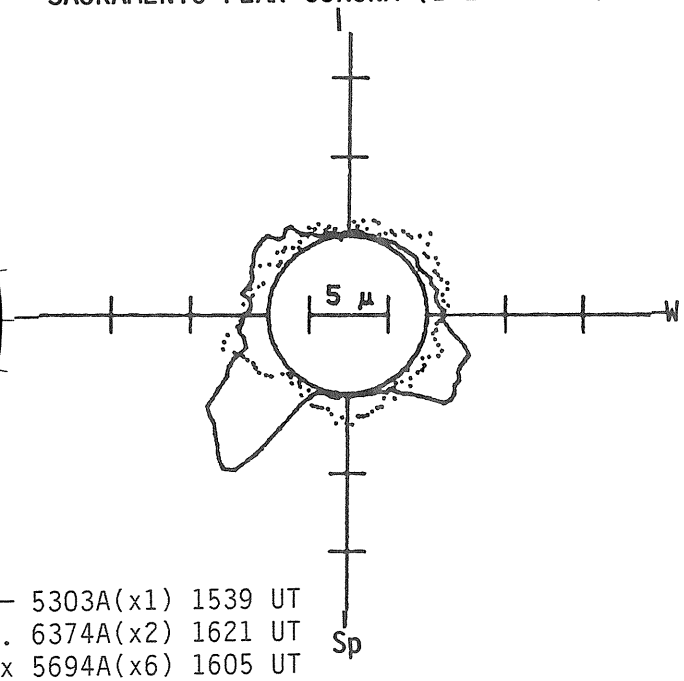
SACRAMENTO PEAK H-ALPHA



BOULDER SUNSPOTS



SACRAMENTO PEAK CORONA (1.15 Radii)

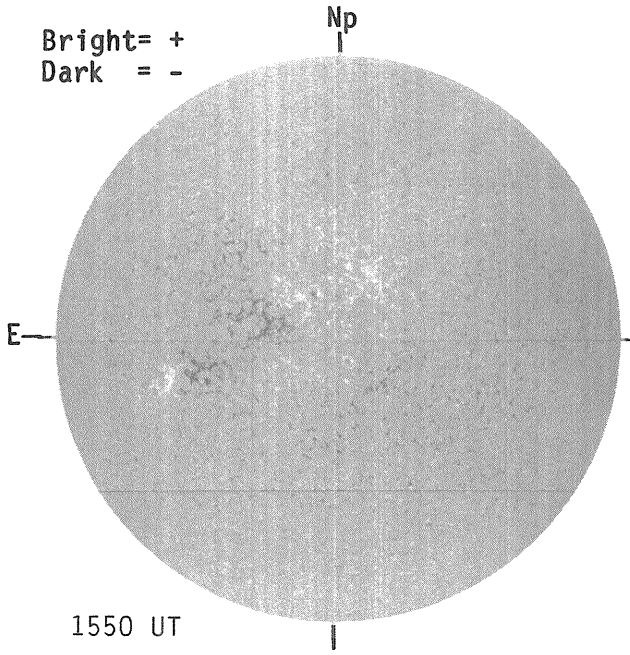


—— 5303A(x1) 1539 UT
.... 6374A(x2) 1621 UT
xxxx 5694A(x6) 1605 UT
NO 5894A ACTIVITY TODAY

J A N U A R Y 10, 1 9 8 6 (P= -2.25, B_0=-3.94, L_0= 55.08)

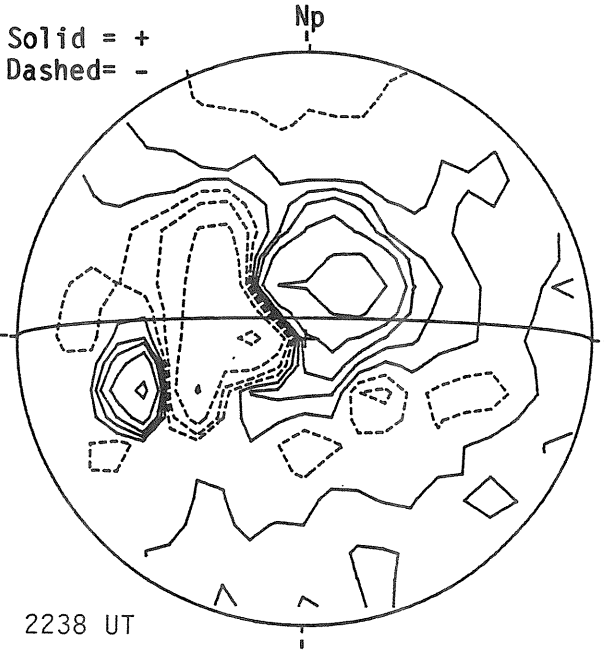
KITT PEAK MAGNETOGRAM

Bright= +
Dark = -



STANFORD MAGNETOGRAM

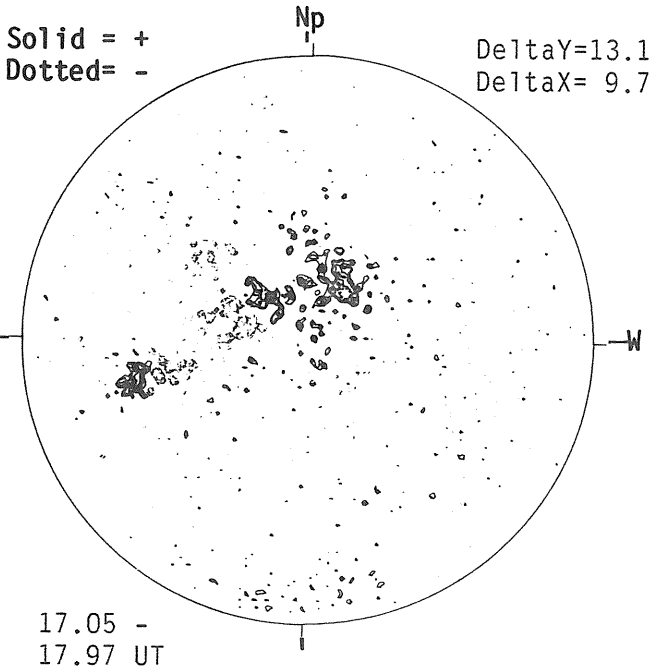
Solid = +
Dashed= -



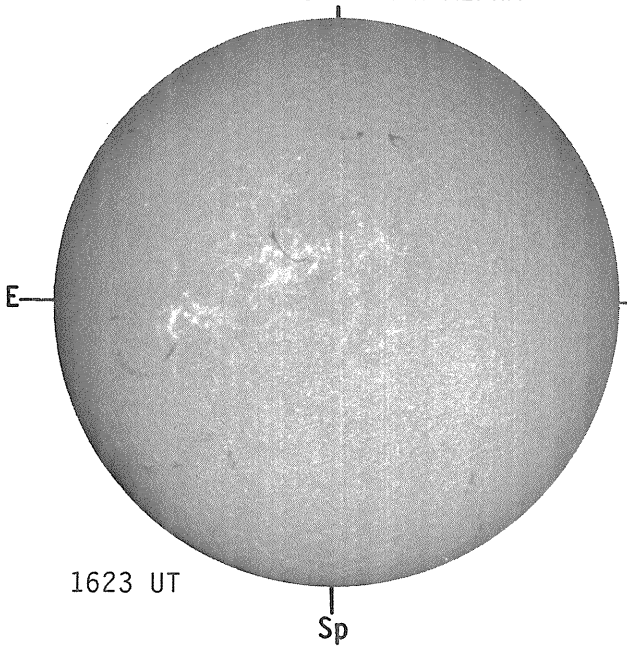
MT. WILSON MAGNETOGRAM

Solid = +
Dotted= -

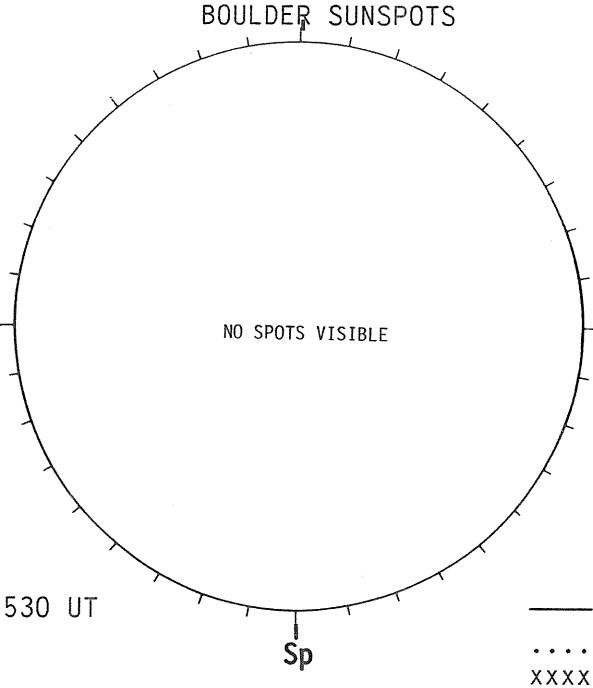
DeltaY=13.1
DeltaX= 9.7



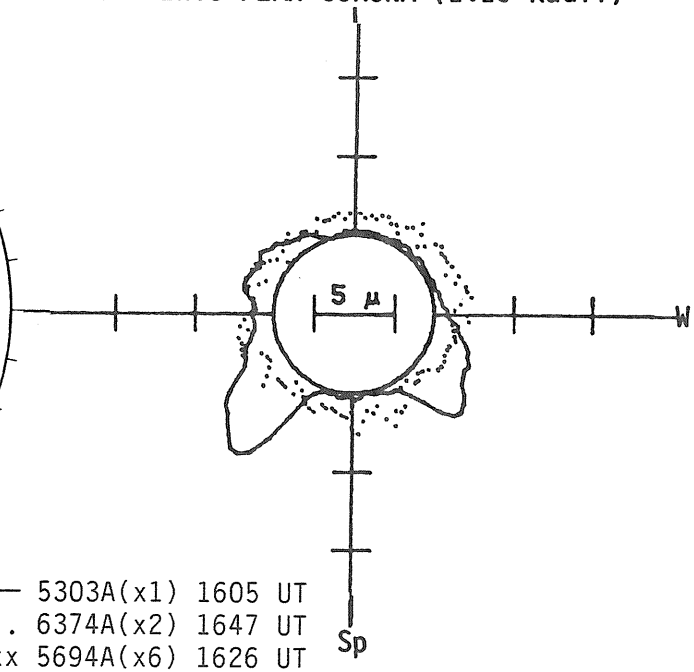
SACRAMENTO PEAK H-ALPHA



BOULDER SUNSPOTS



SACRAMENTO PEAK CORONA (1.15 Radii)

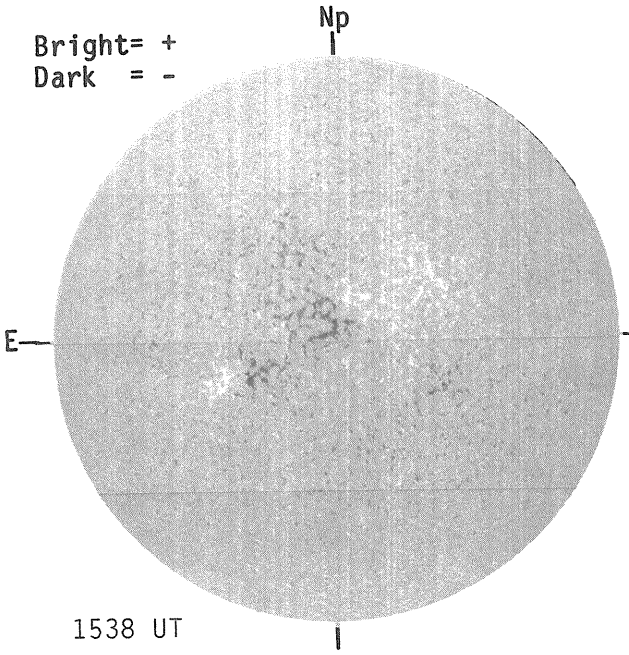


—— 5303A(x1) 1605 UT
.... 6374A(x2) 1647 UT
xxxx 5694A(x6) 1626 UT
NO 5894A ACTIVITY TODAY

J A N U A R Y 11, 1 9 8 6 (P= -2.73, B_o=-4.05, L_o= 41.91)

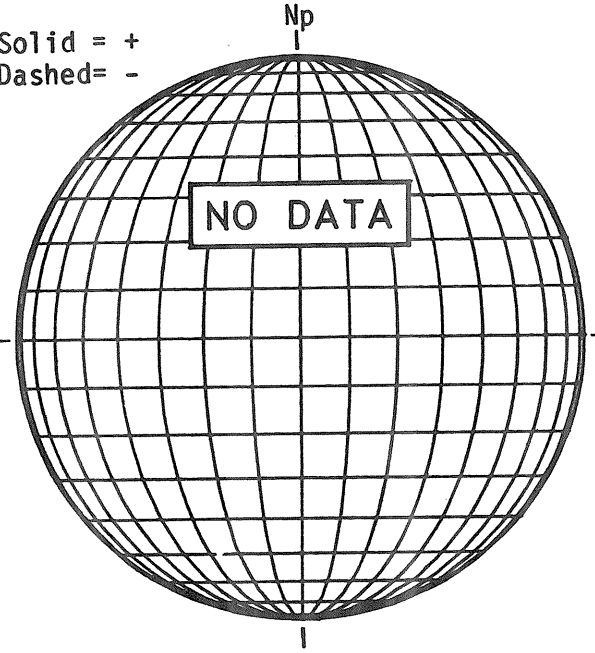
KITT PEAK MAGNETOGRAM

Bright= +
Dark = -



STANFORD MAGNETOGRAM

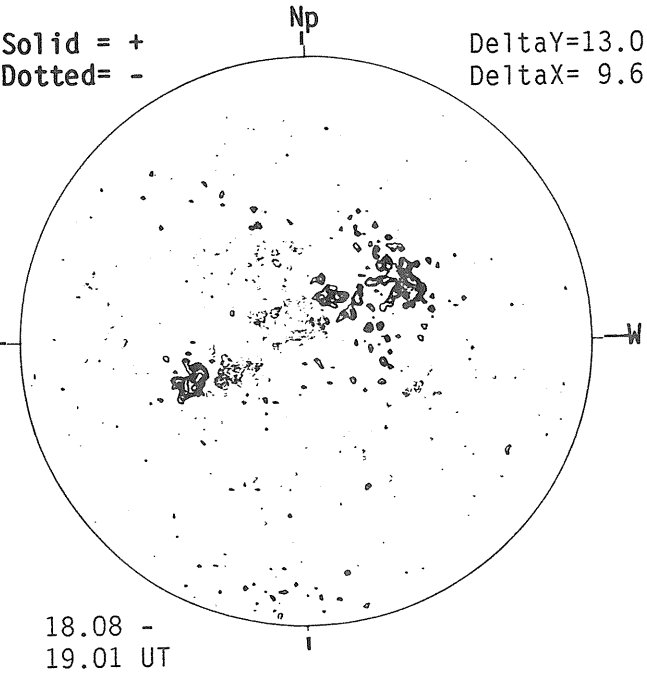
Solid = +
Dashed= -



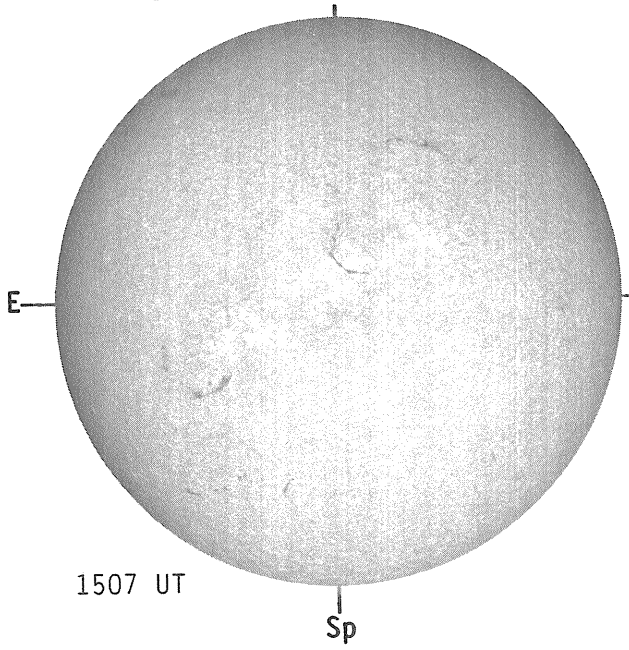
MT. WILSON MAGNETOGRAM

Solid = +
Dotted= -

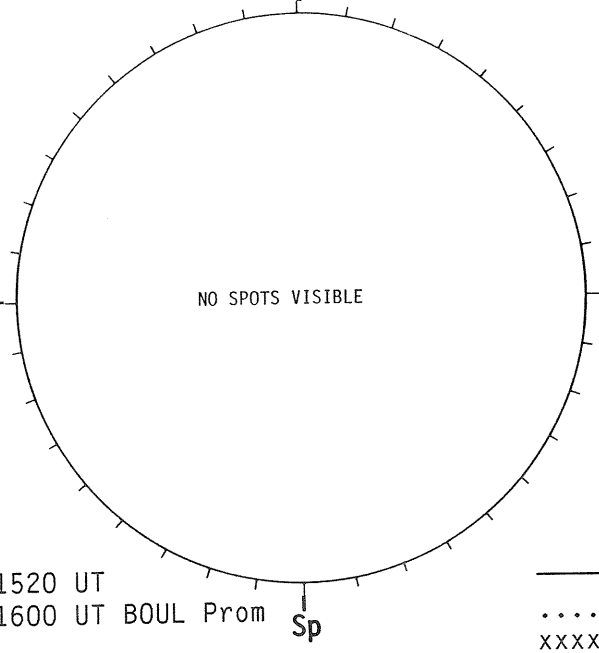
DeltaY=13.0
DeltaX= 9.6



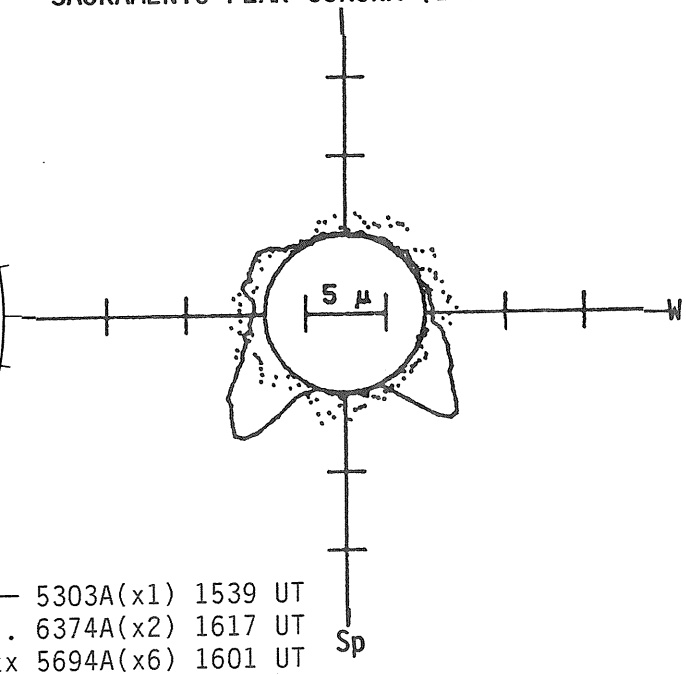
SACRAMENTO PEAK H-ALPHA



BOULDER SUNSPOTS



SACRAMENTO PEAK CORONA (1.15 Radii)

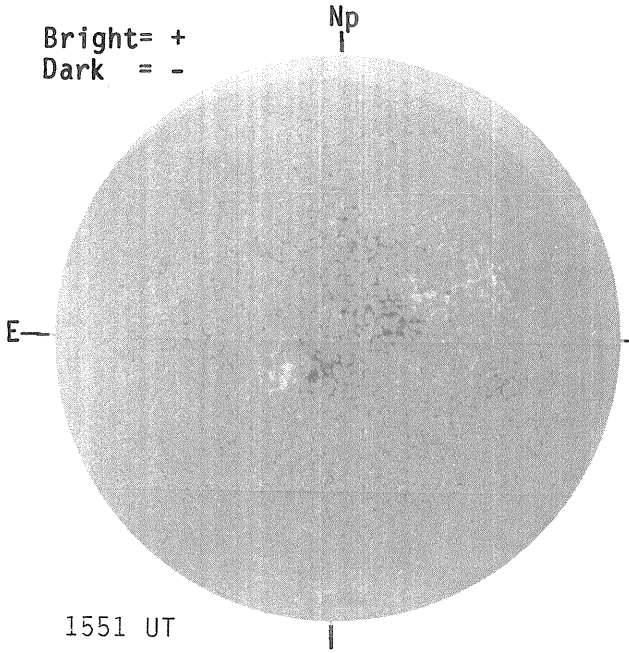


—— 5303A(x1) 1539 UT
.... 6374A(x2) 1617 UT
xxxx 5694A(x6) 1601 UT
NO 5894A ACTIVITY TODAY

J A N U A R Y 12, 1 9 8 6 (P= -3.20, B_0=-4.15, L_0= 28.74)

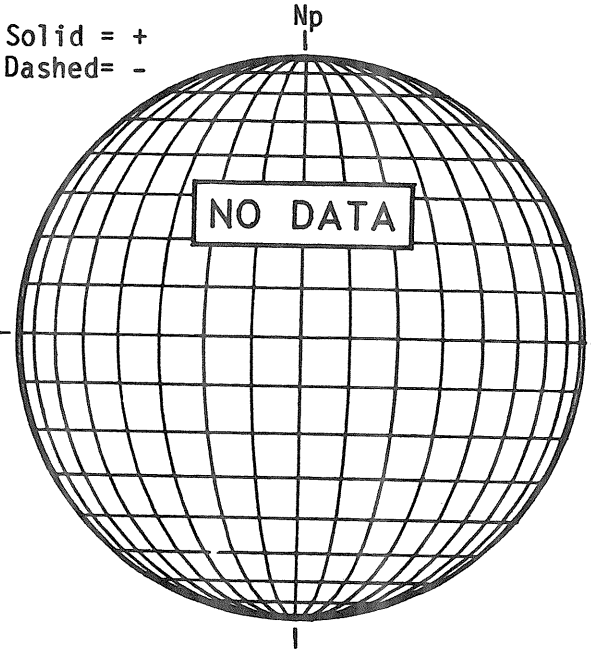
KITT PEAK MAGNETOGRAM

Bright= +
Dark = -



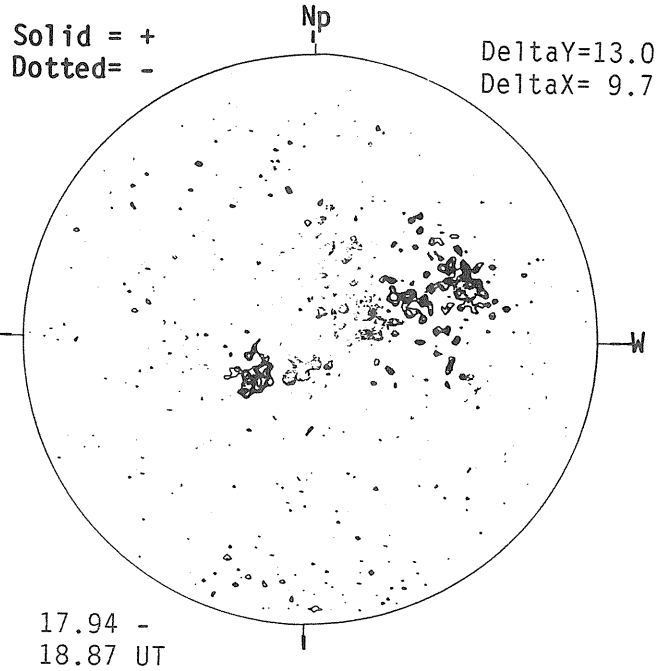
STANFORD MAGNETOGRAM

Solid = +
Dashed= -

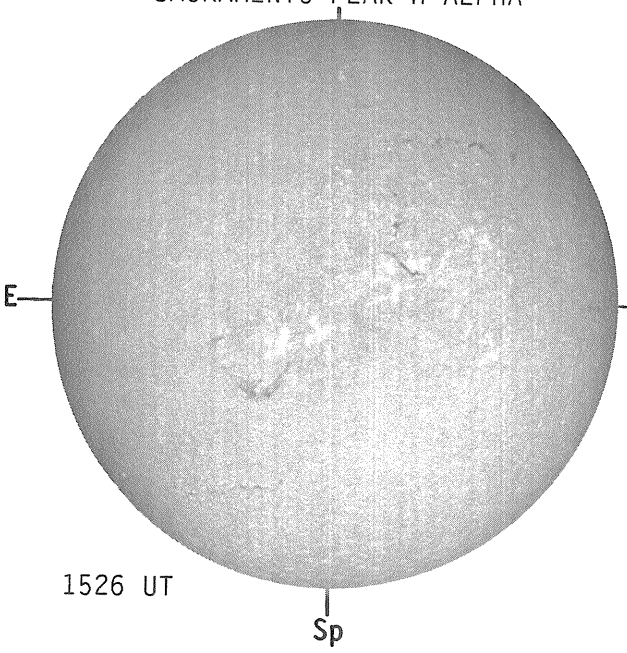


MT. WILSON MAGNETOGRAM

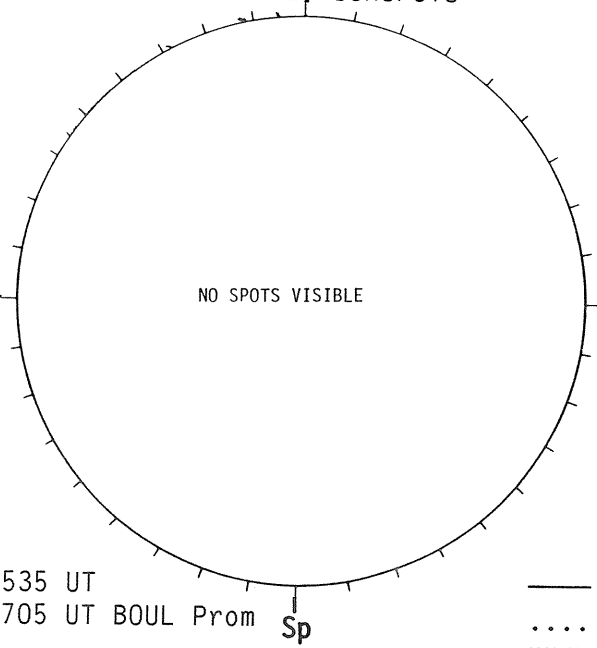
Solid = +
Dotted= -



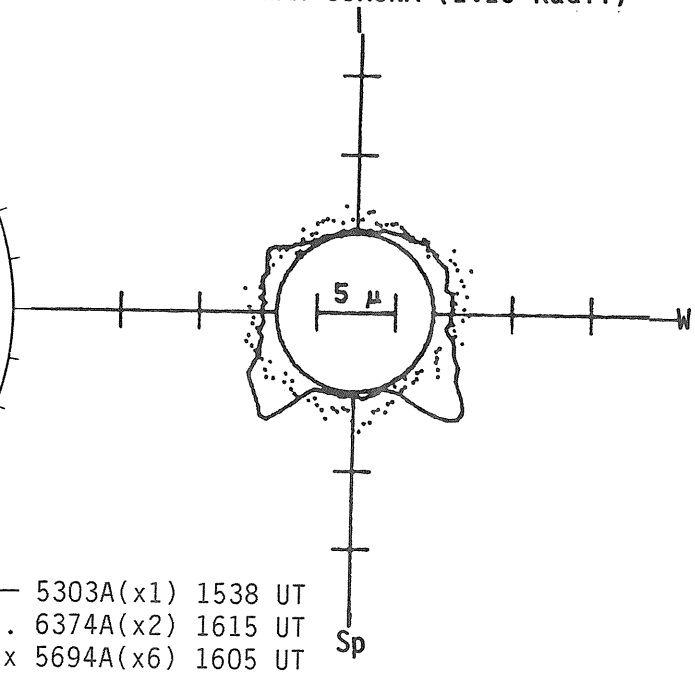
SACRAMENTO PEAK H-ALPHA



BOULDER SUNSPOTS



SACRAMENTO PEAK CORONA (1.15 Radii)

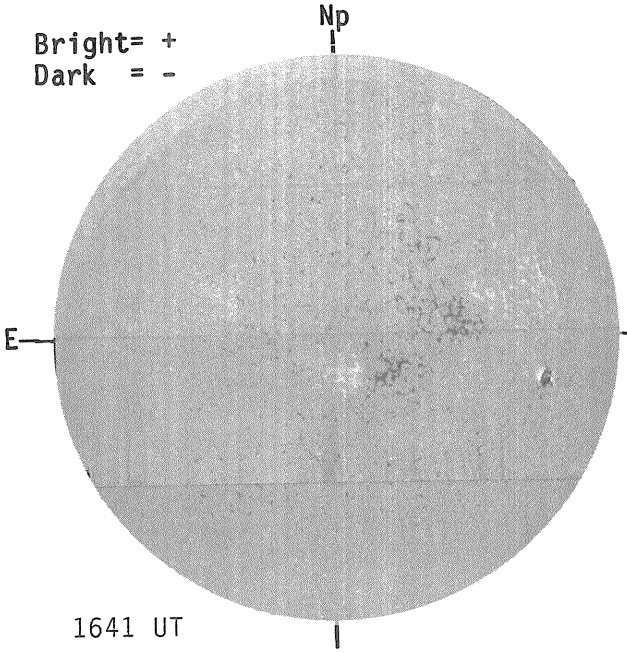


—— 5303A(x1) 1538 UT
.... 6374A(x2) 1615 UT
xxxx 5694A(x6) 1605 UT
NO 5894A ACTIVITY TODAY

J A N U A R Y 13, 1 9 8 6 (P= -3.68, B_0=-4.25, L_0= 15.57)

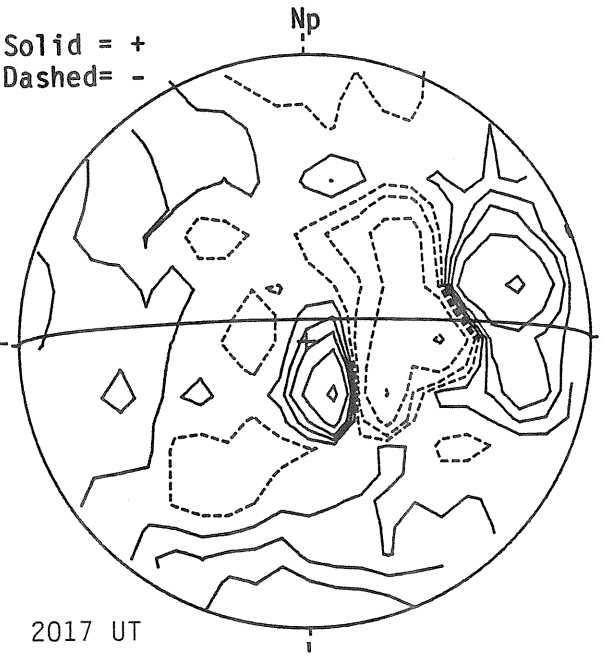
KITT PEAK MAGNETOGRAM

Bright= +
Dark = -



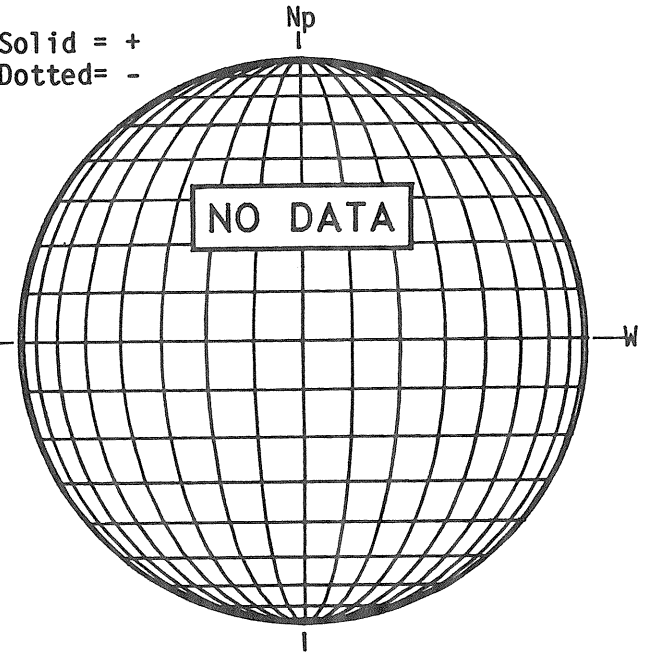
STANFORD MAGNETOGRAM

Solid = +
Dashed= -

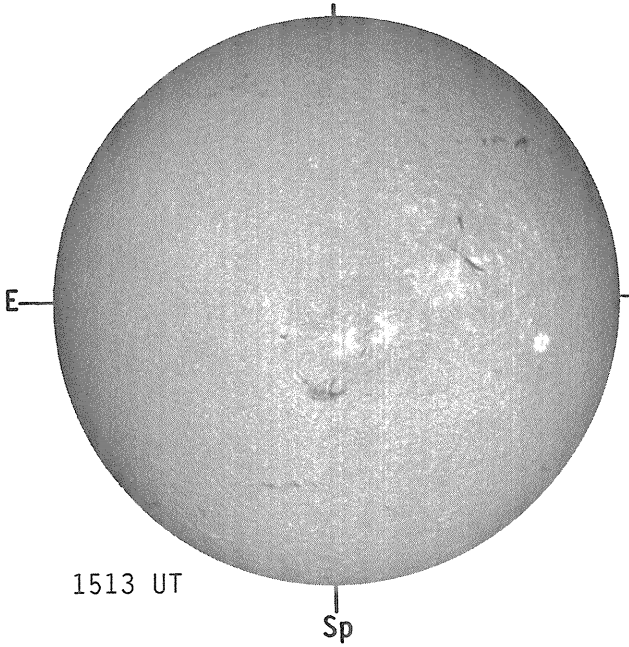


MT. WILSON MAGNETOGRAM

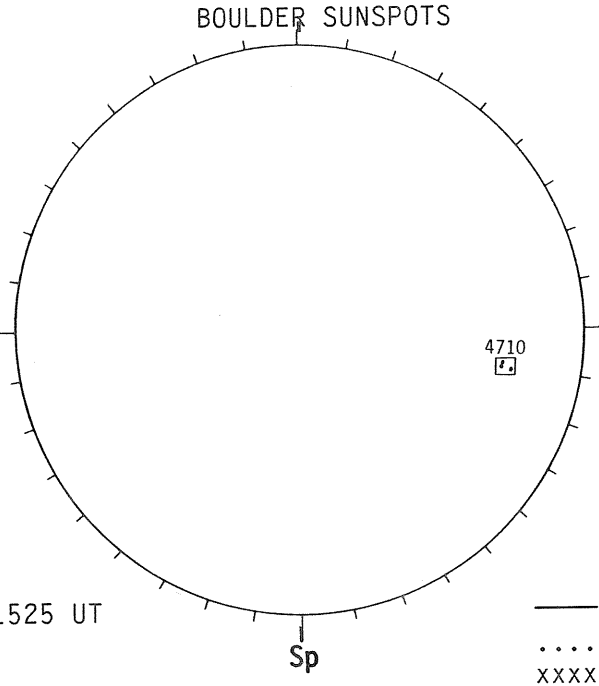
Solid = +
Dotted= -



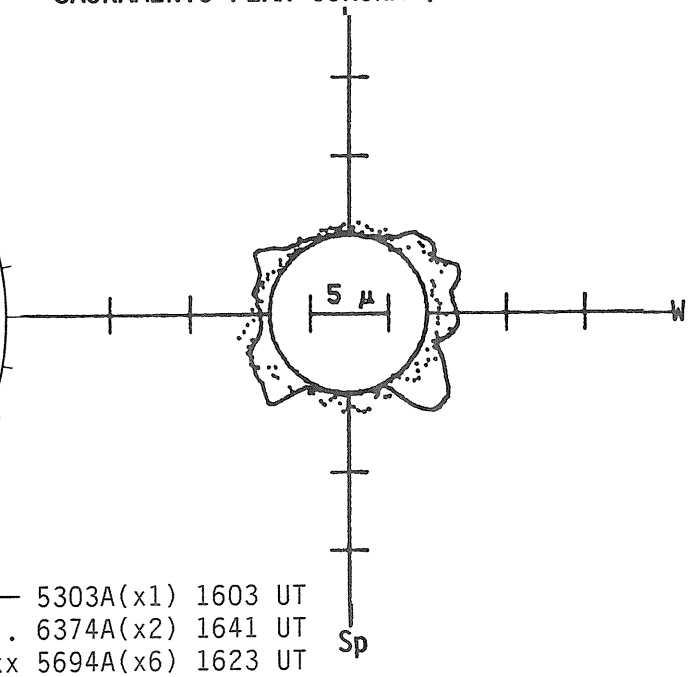
SACRAMENTO PEAK H-ALPHA



BOULDER SUNSPOTS

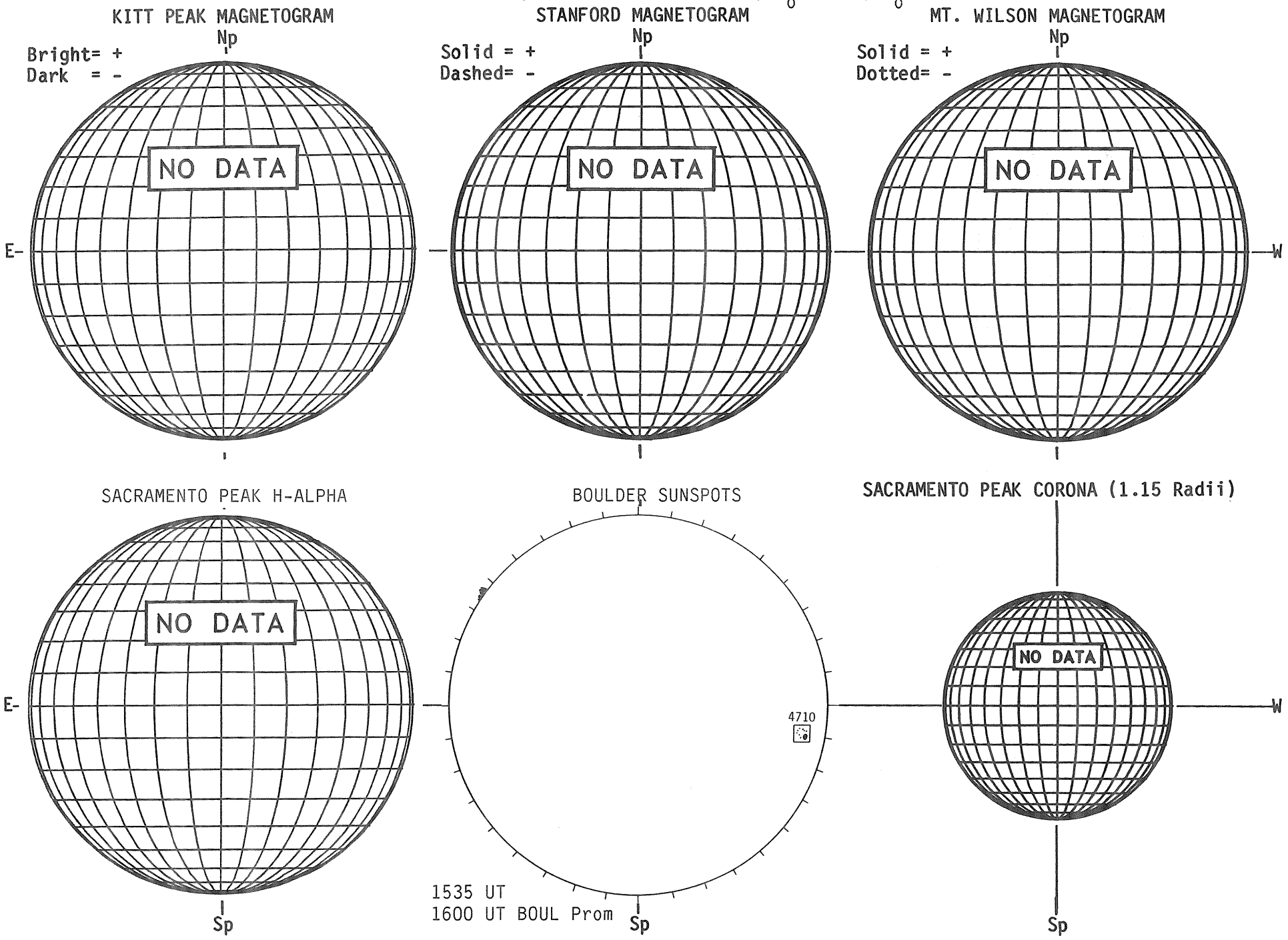


SACRAMENTO PEAK CORONA (1.15 Radii)

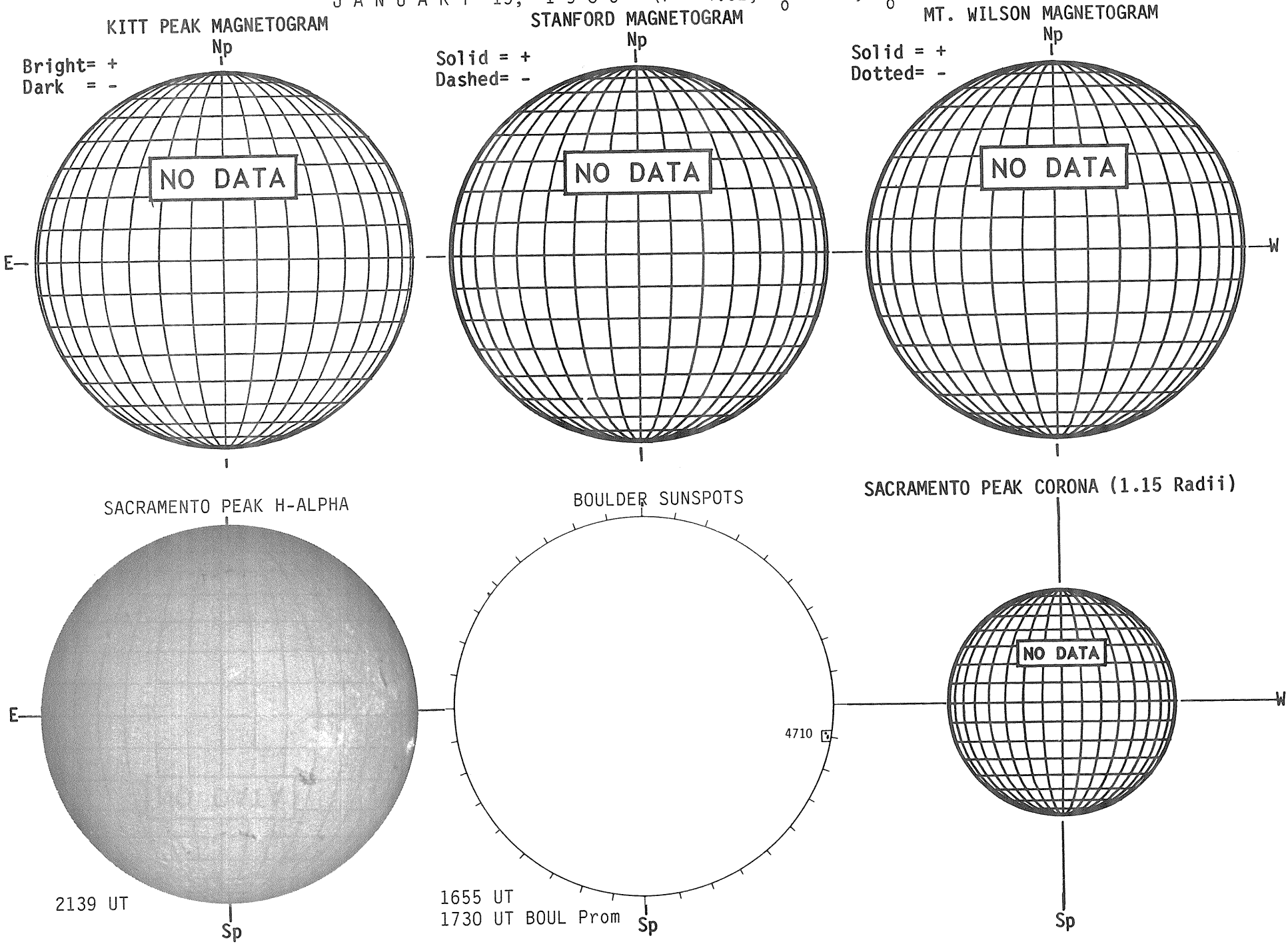


—— 5303A(x1) 1603 UT
.... 6374A(x2) 1641 UT
xxxx 5694A(x6) 1623 UT
NO 5894A ACTIVITY TODAY

J A N U A R Y 14, 1 9 8 6 (P= -4.15, B_0=-4.35, L_0= 2.40)



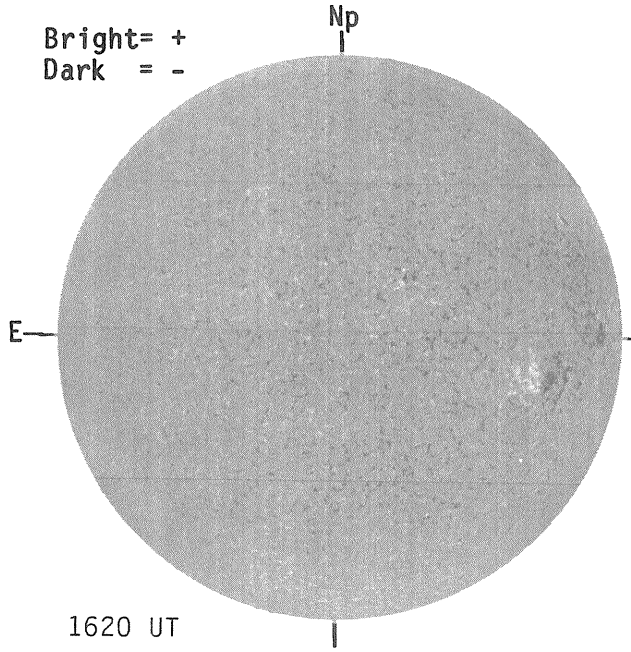
J A N U A R Y 15, 1 9 8 6 (P= -4.62, B_0=-4.45, L_0= 349.24)



J A N U A R Y 16, 1 9 8 6 (P= -5.08, B_o=-4.55, L_o= 336.07)

KITT PEAK MAGNETOGRAM

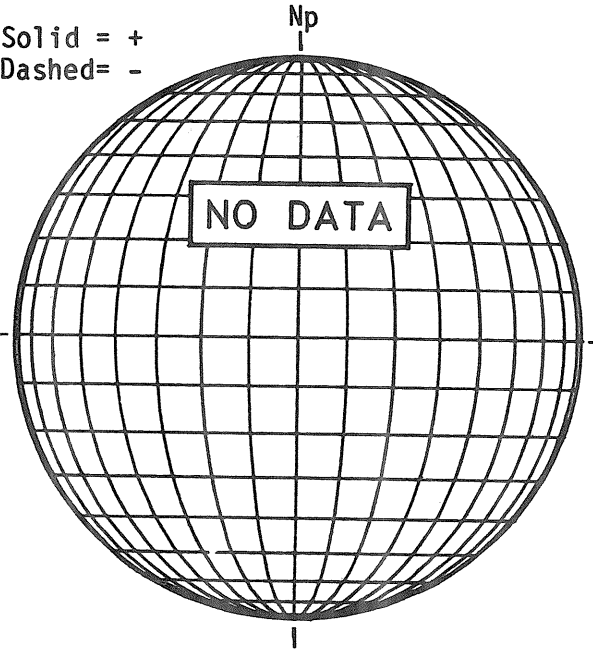
Bright= +
Dark = -



1620 UT

STANFORD MAGNETOGRAM

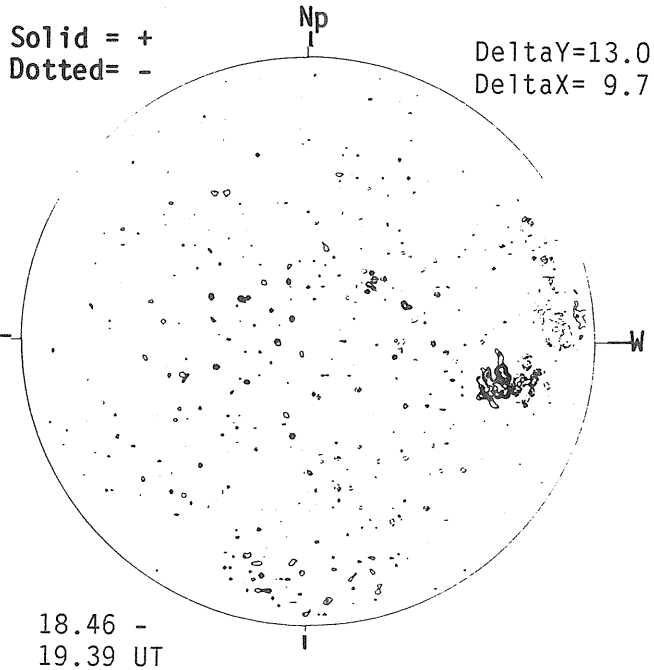
Solid = +
Dashed= -



MT. WILSON MAGNETOGRAM

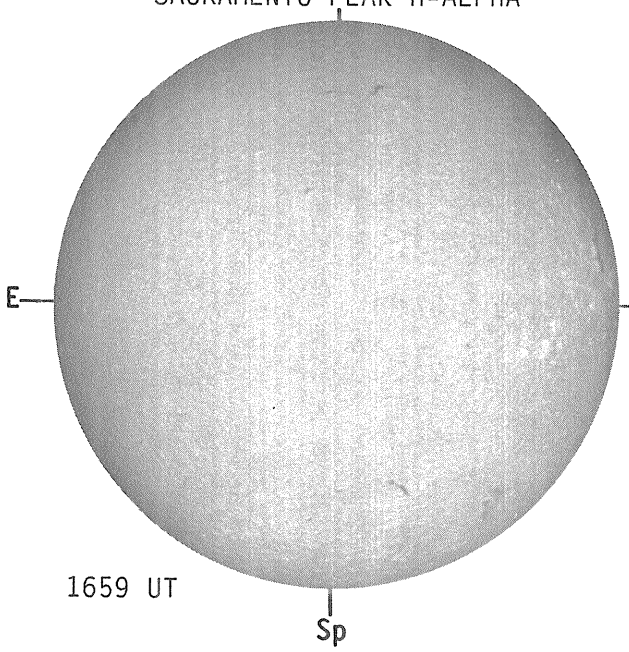
Solid = +
Dotted= -

DeltaY=13.0
DeltaX= 9.7



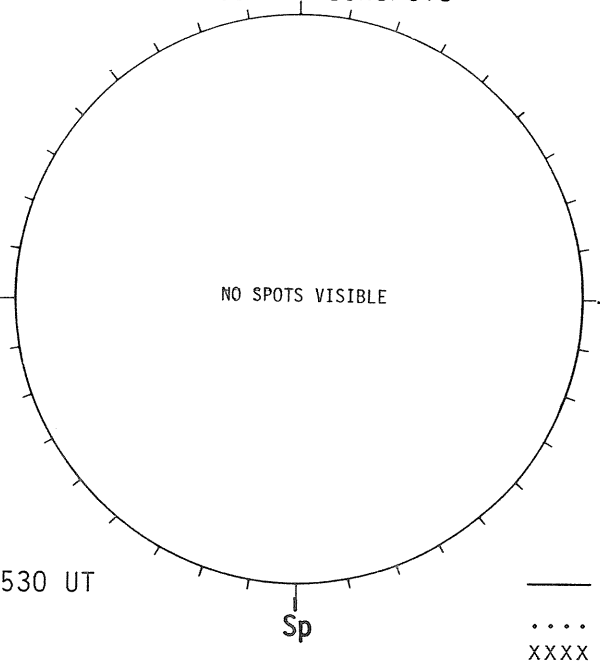
18.46 -
19.39 UT

SACRAMENTO PEAK H-ALPHA



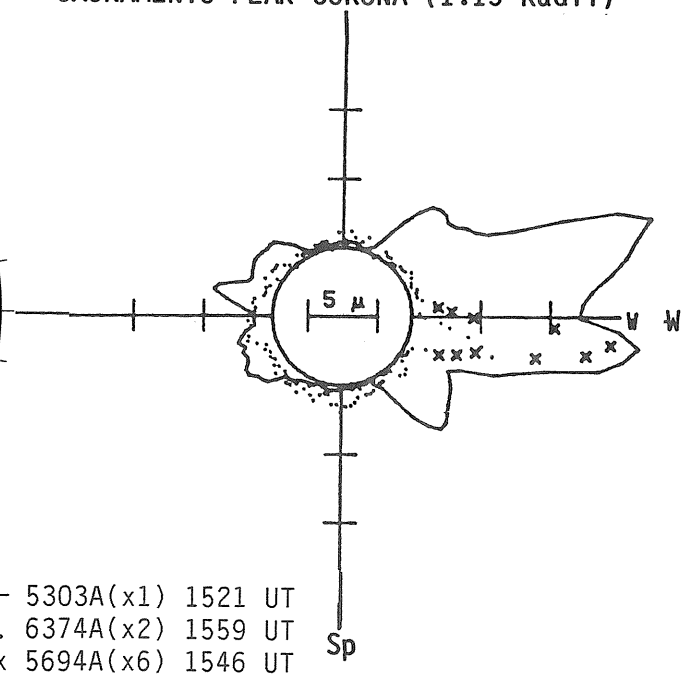
1659 UT

BOULDER SUNSPOTS



1530 UT

SACRAMENTO PEAK CORONA (1.15 Radii)

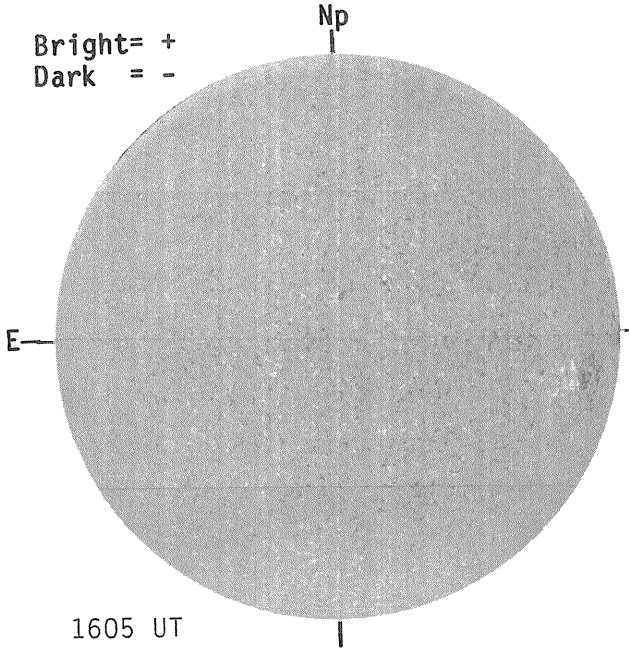


—— 5303A(x1) 1521 UT
.... 6374A(x2) 1559 UT
xxxx 5694A(x6) 1546 UT

J A N U A R Y 17, 1 9 8 6 (P= -5.55, B_0=-4.65, L_0= 322.90)

KITT PEAK MAGNETOGRAM

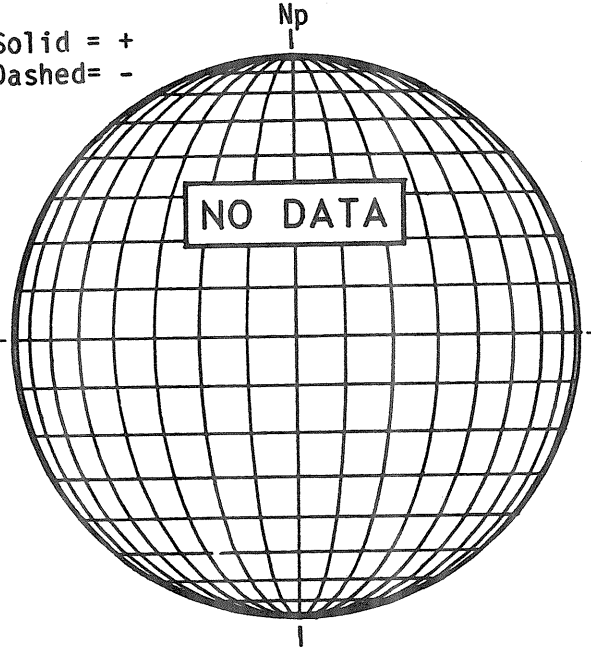
Bright= +
Dark = -



1605 UT

STANFORD MAGNETOGRAM

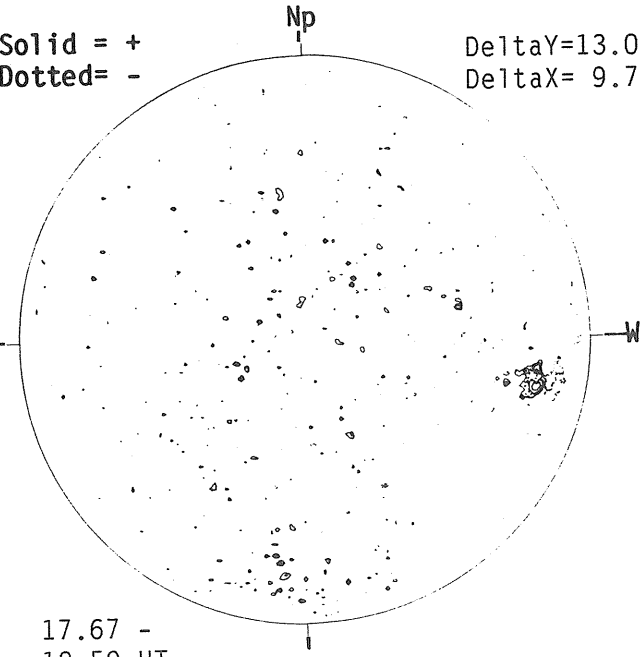
Solid = +
Dashed= -



MT. WILSON MAGNETOGRAM

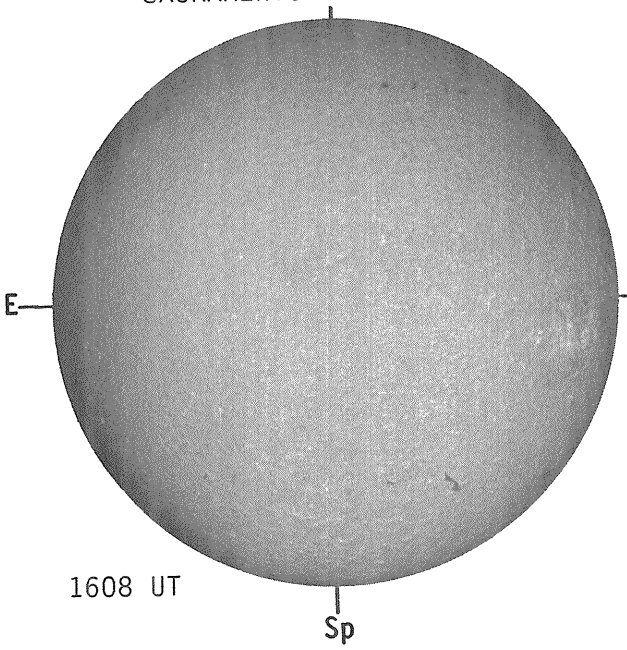
Solid = +
Dotted= -

DeltaY=13.0
DeltaX= 9.7



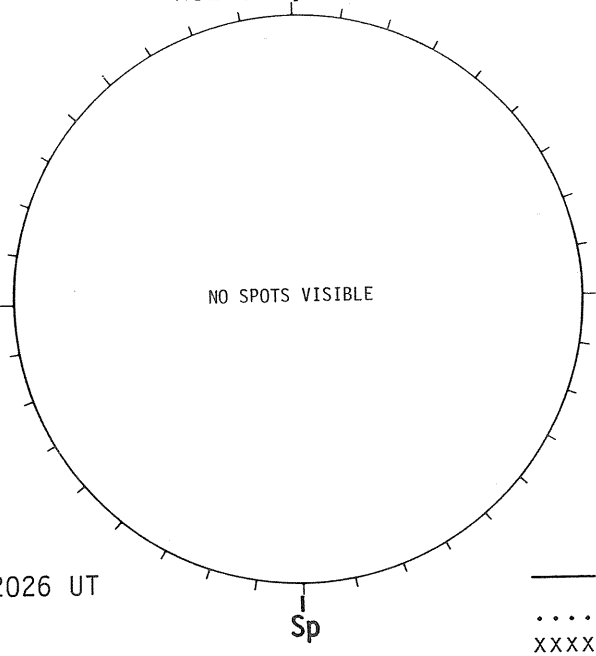
17.67 -
18.59 UT

SACRAMENTO PEAK H-ALPHA



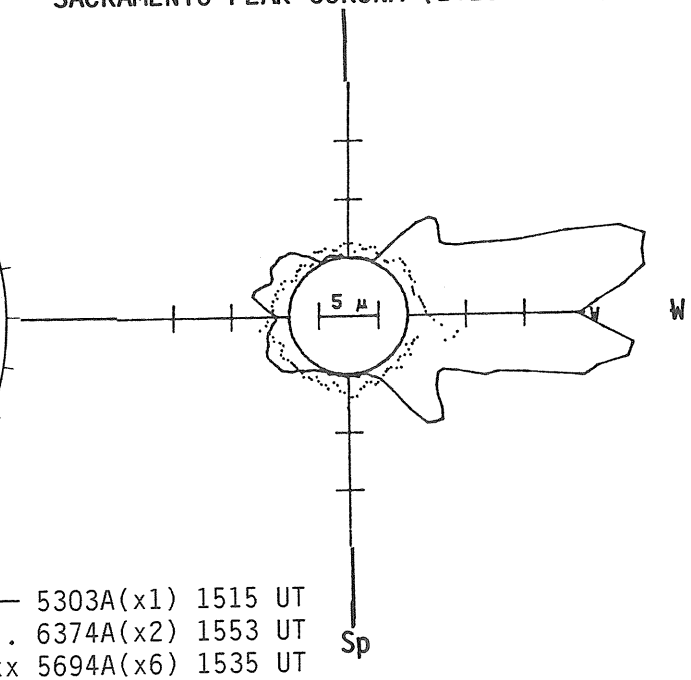
1608 UT

HOLLOMAN SUNSPOTS



2026 UT

SACRAMENTO PEAK CORONA (1.15 Radii)

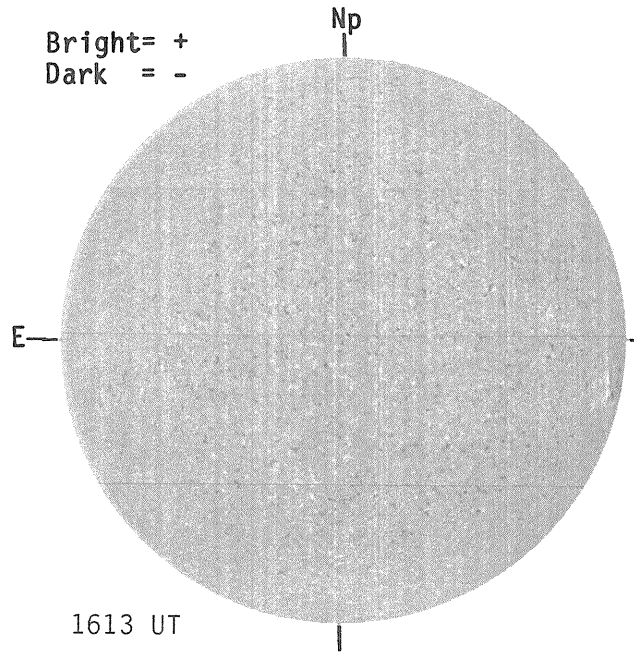


—— 5303A(x1) 1515 UT
.... 6374A(x2) 1553 UT
xxxx 5694A(x6) 1535 UT
NO 5894A ACTIVITY TODAY

J A N U A R Y 18, 1 9 8 6 (P= -6.01, B_0=-4.75, L_0= 309.74)

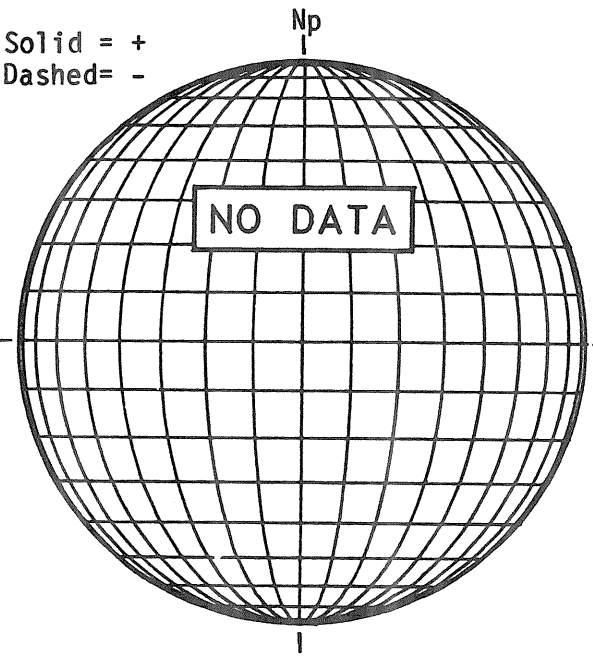
KITT PEAK MAGNETOGRAM

Bright= +
Dark = -



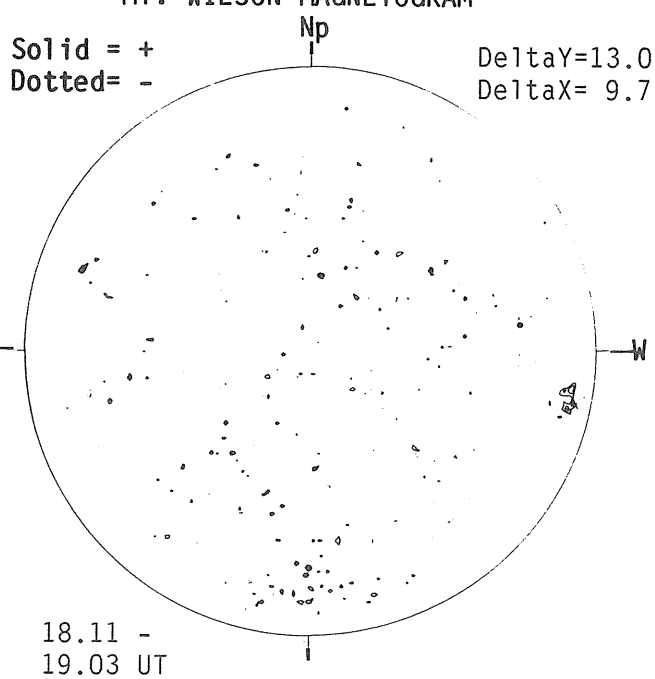
STANFORD MAGNETOGRAM

Solid = +
Dashed= -

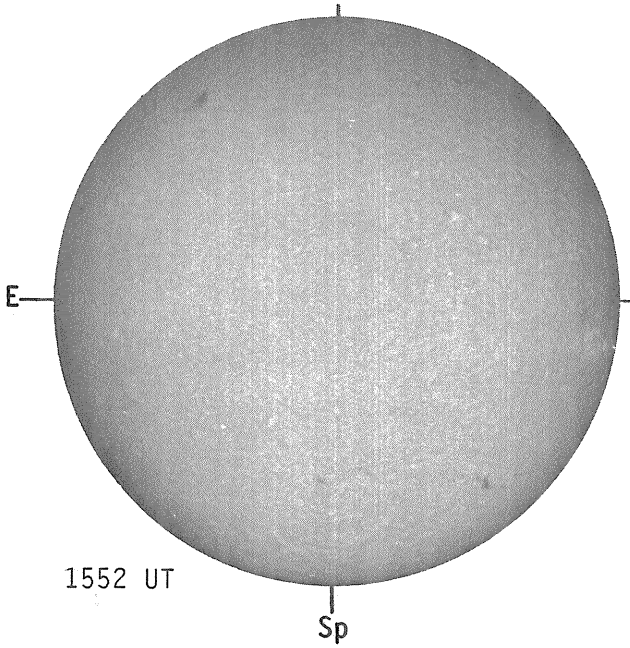


MT. WILSON MAGNETOGRAM

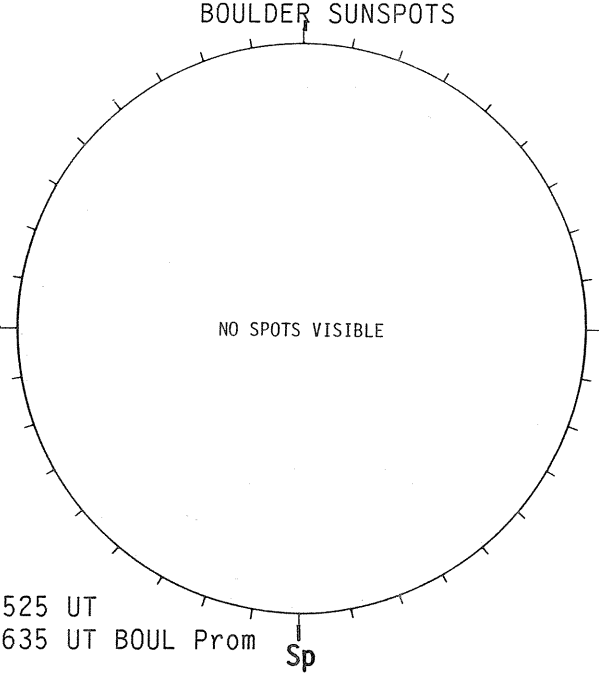
Solid = +
Dotted= -



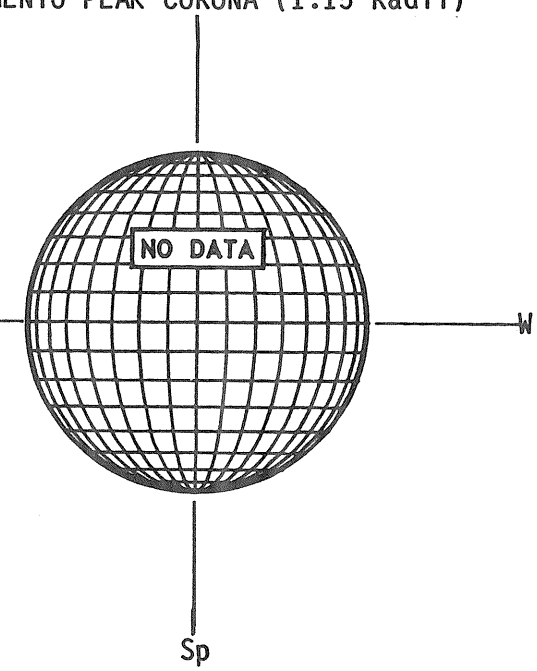
SACRAMENTO PEAK H-ALPHA



BOULDER SUNSPOTS



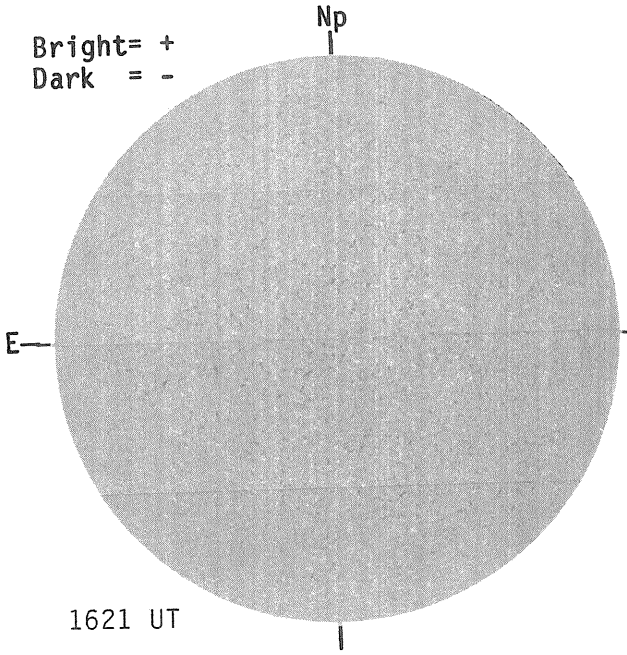
SACRAMENTO PEAK CORONA (1.15 Radii)



J A N U A R Y 19, 1 9 8 6 (P= -6.47, B_0=-4.84, L_0= 296.57)

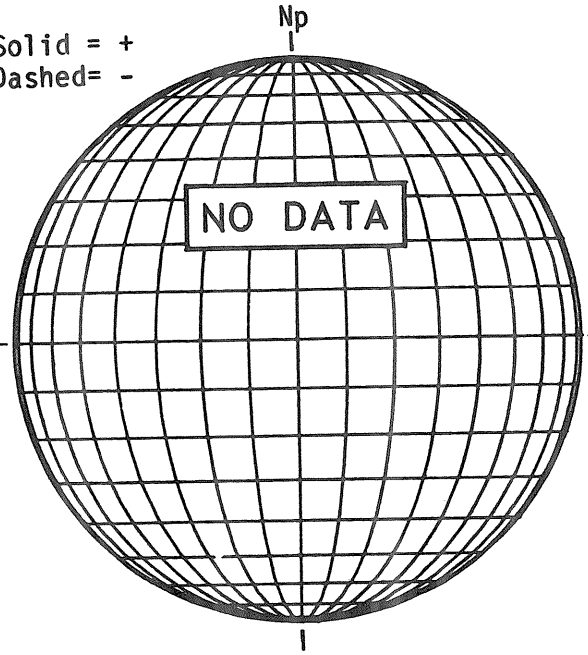
KITT PEAK MAGNETOGRAM

Bright= +
Dark = -



STANFORD MAGNETOGRAM

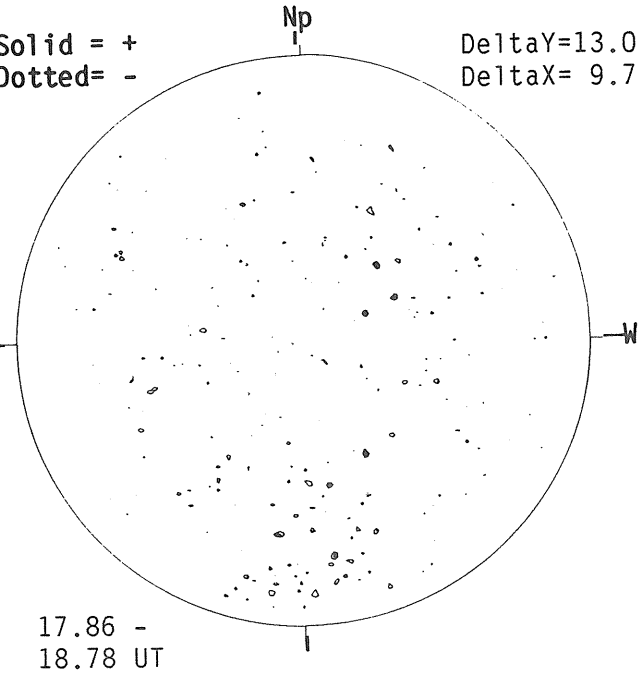
Solid = +
Dashed= -



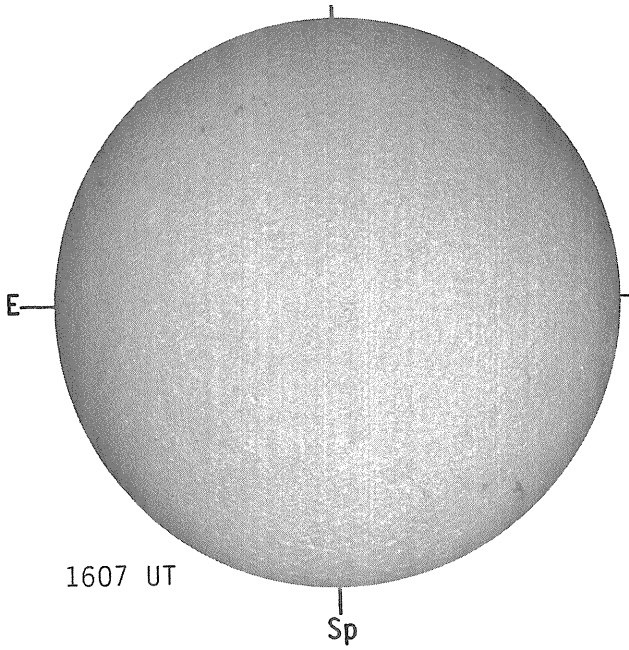
MT. WILSON MAGNETOGRAM

Solid = +
Dotted= -

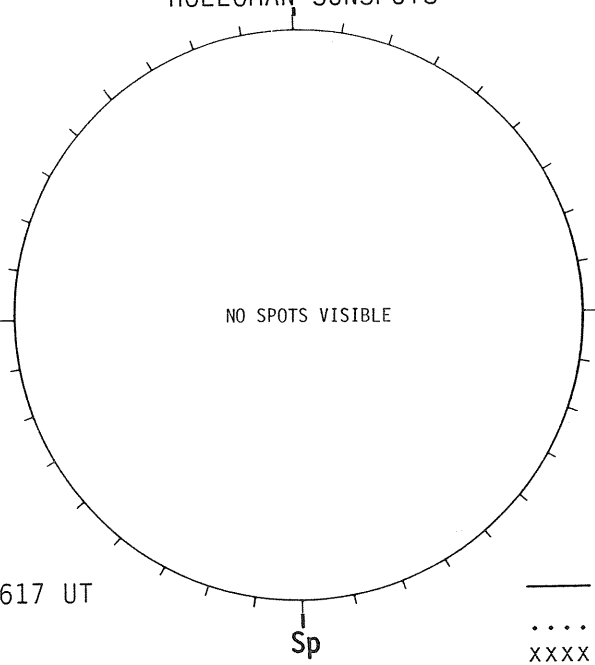
DeltaY=13.0
DeltaX= 9.7



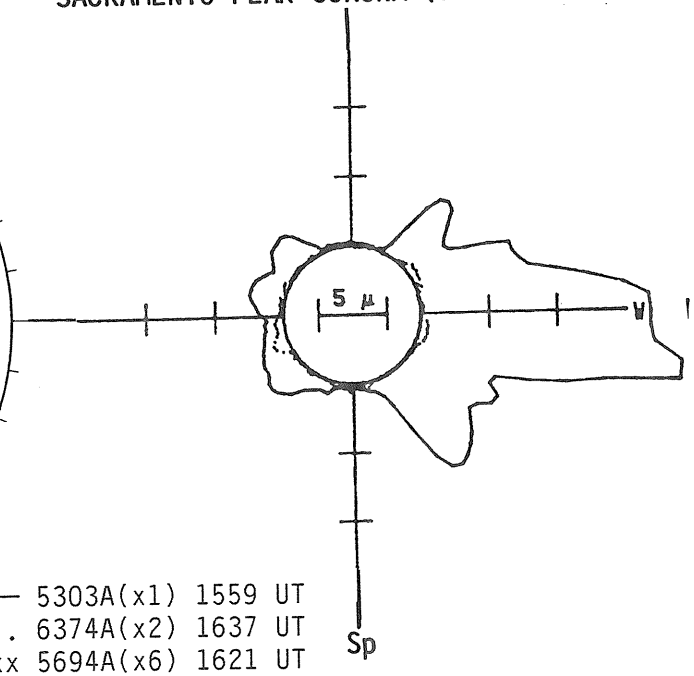
SACRAMENTO PEAK H-ALPHA



HOLLOMAN SUNSPOTS



SACRAMENTO PEAK CORONA (1.15 Radii)

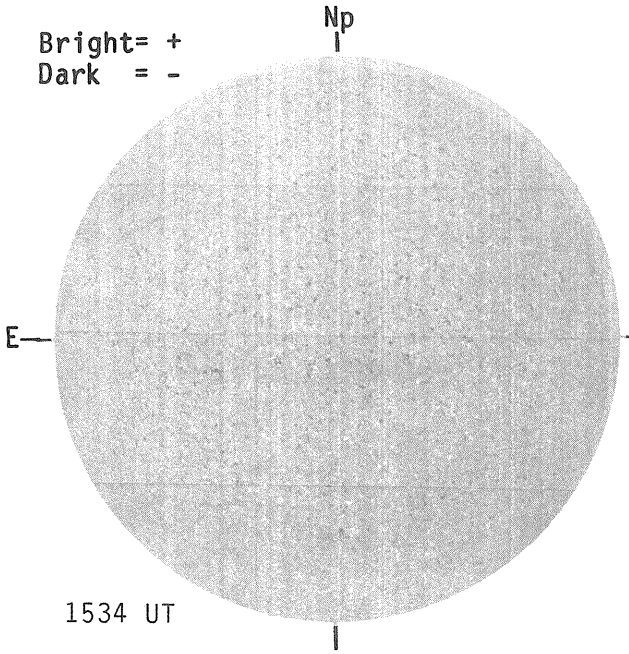


—— 5303A(x1) 1559 UT
.... 6374A(x2) 1637 UT
xxxx 5694A(x6) 1621 UT
NO 5894A ACTIVITY TODAY

J A N U A R Y 20, 1 9 8 6 (P= -6.92, B_0=-4.93, L_0= 283.40)

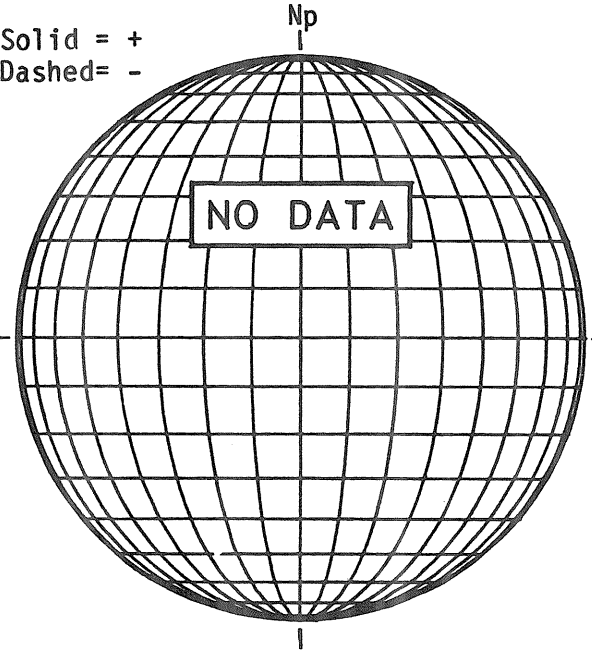
KITT PEAK MAGNETOGRAM

Bright= +
Dark = -



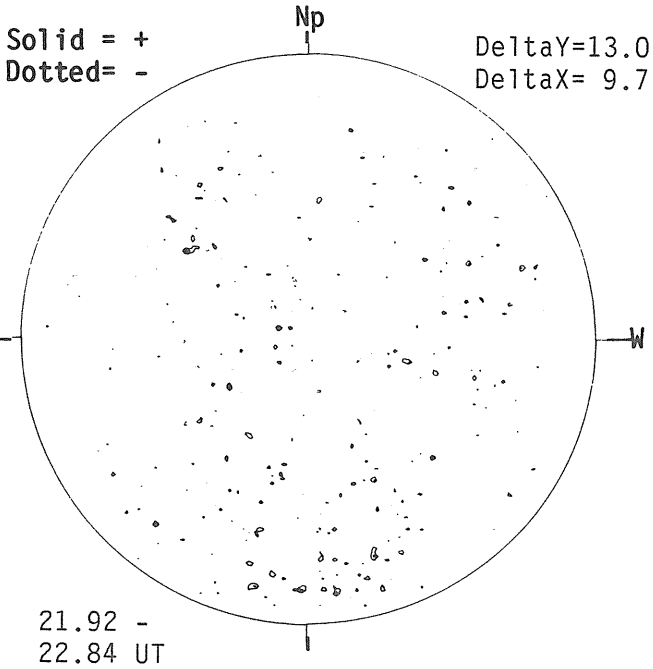
STANFORD MAGNETOGRAM

Solid = +
Dashed= -

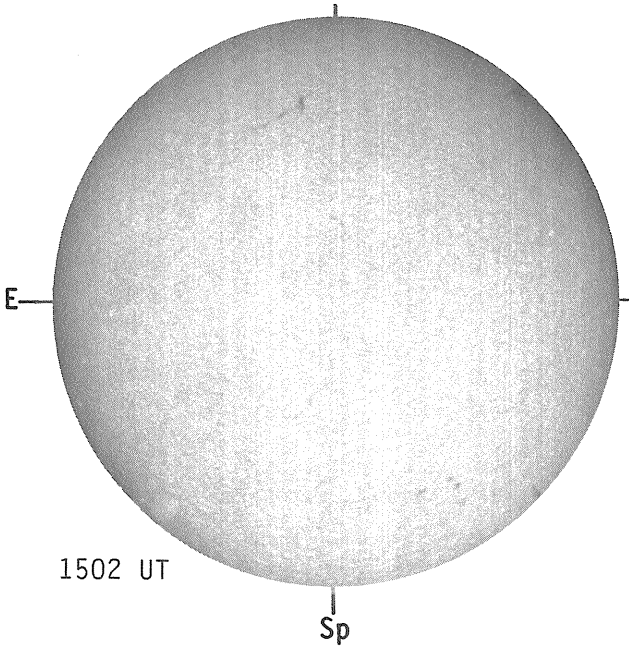


MT. WILSON MAGNETOGRAM

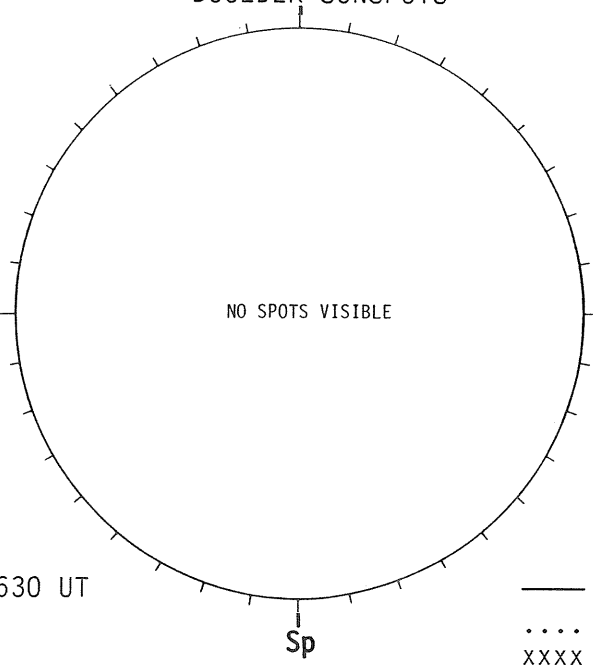
Solid = +
Dotted= -



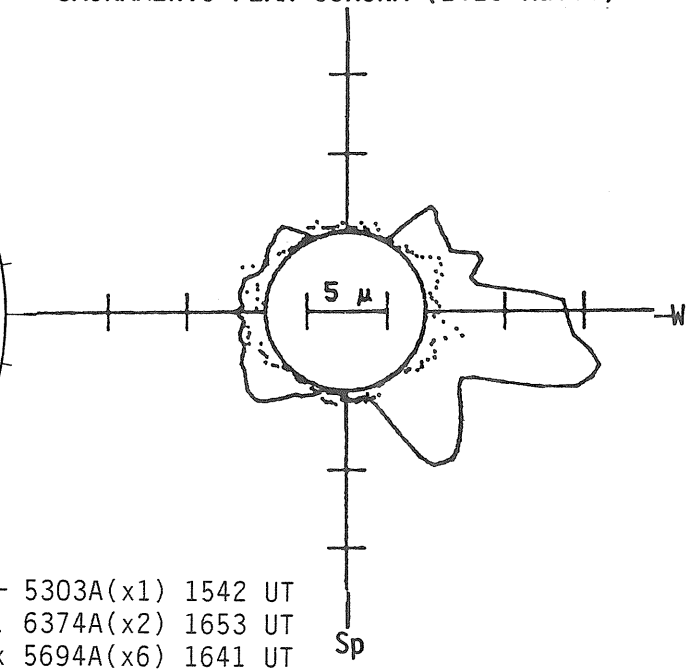
SACRAMENTO PEAK H-ALPHA



BOULDER SUNSPOTS



SACRAMENTO PEAK CORONA (1.15 Radii)

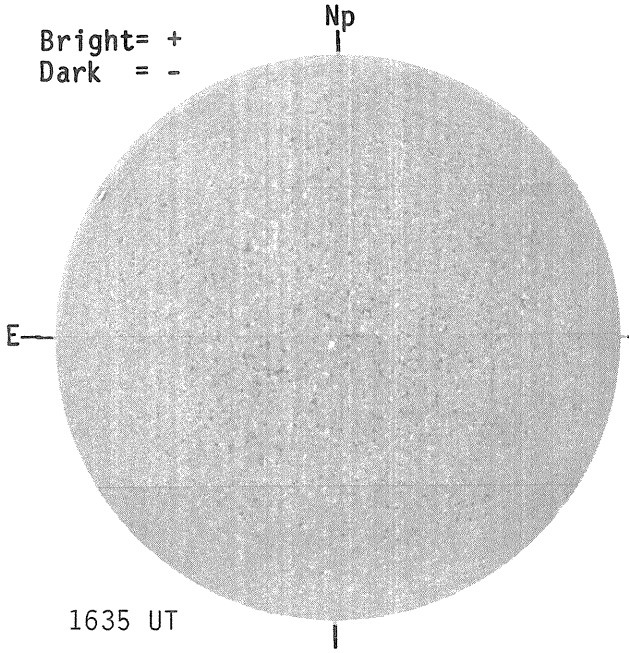


—— 5303A(x1) 1542 UT
.... 6374A(x2) 1653 UT
xxxx 5694A(x6) 1641 UT
NO 5894A ACTIVITY TODAY

J A N U A R Y 21, 1 9 8 6 (P= -7.38, B_0=-5.02, L_0= 270.23)

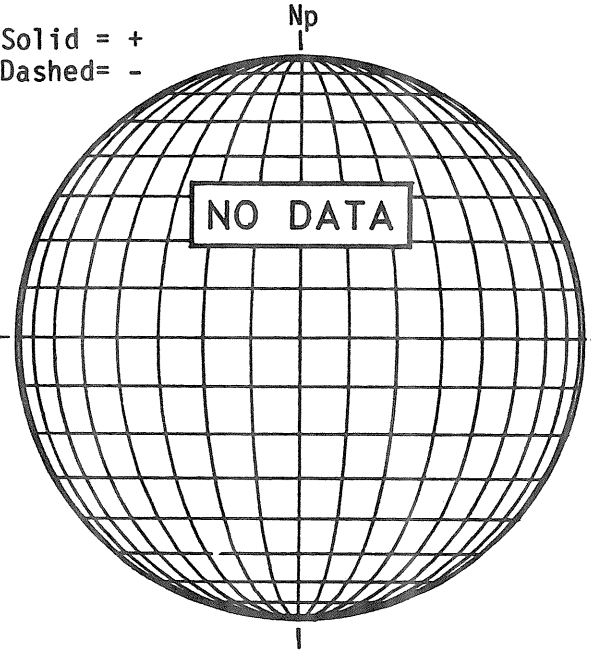
KITT PEAK MAGNETOGRAM

Bright= +
Dark = -



STANFORD MAGNETOGRAM

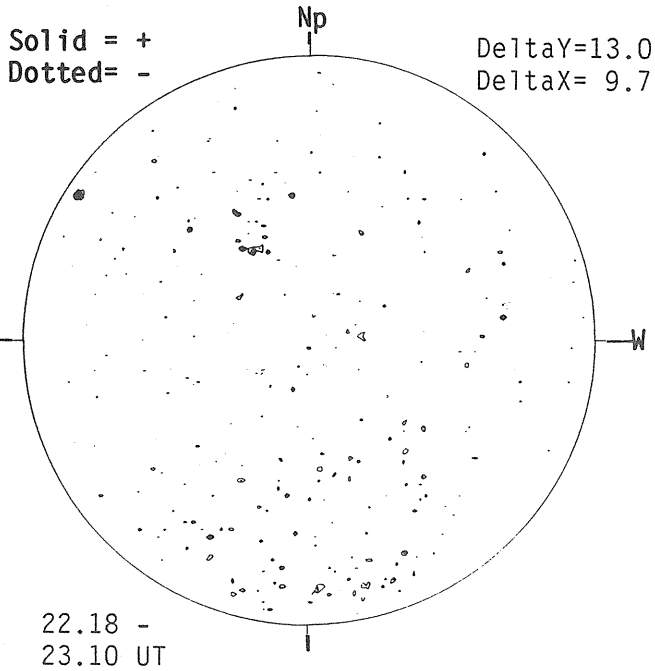
Solid = +
Dashed= -



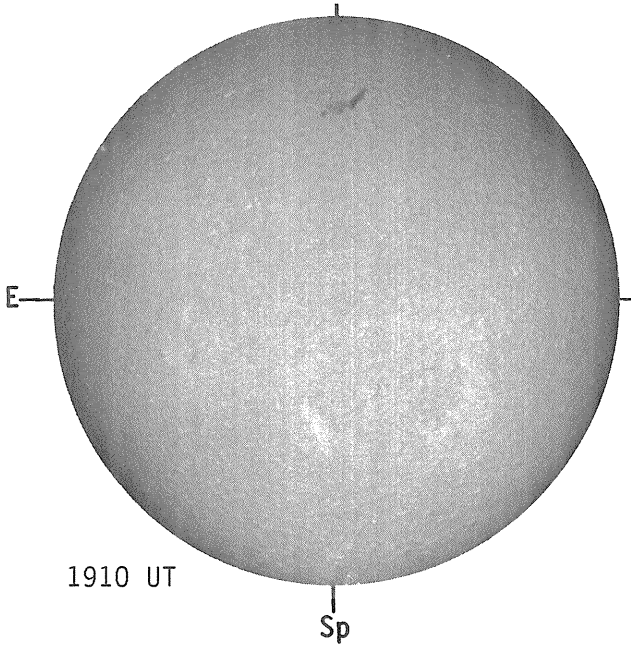
MT. WILSON MAGNETOGRAM

Solid = +
Dotted= -

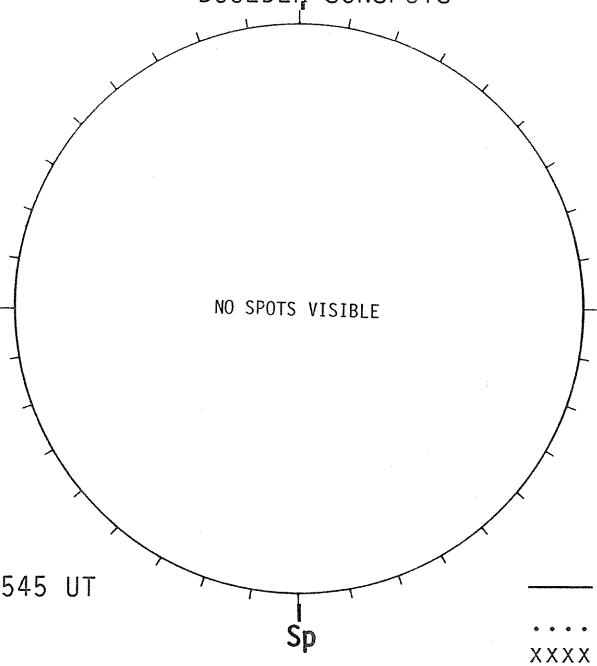
DeltaY=13.0
DeltaX= 9.7



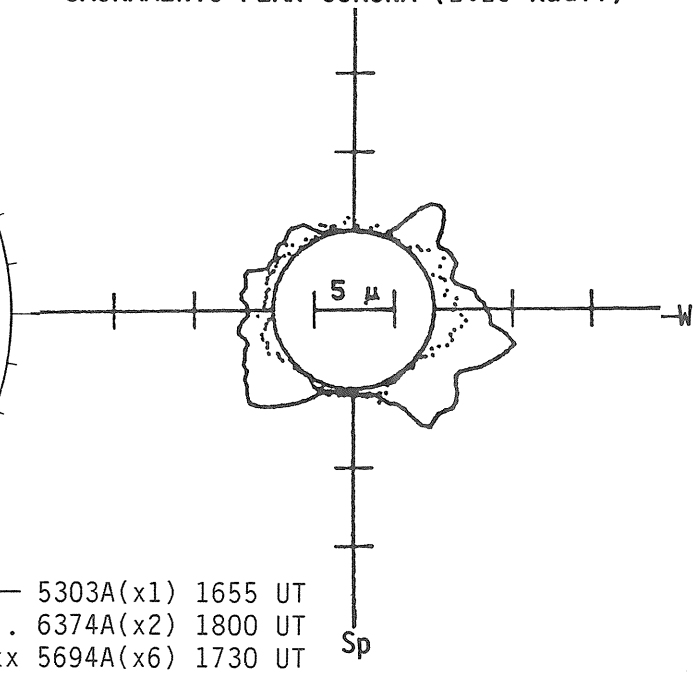
SACRAMENTO PEAK H-ALPHA



BOULDER SUNSPOTS



SACRAMENTO PEAK CORONA (1.15 Radii)

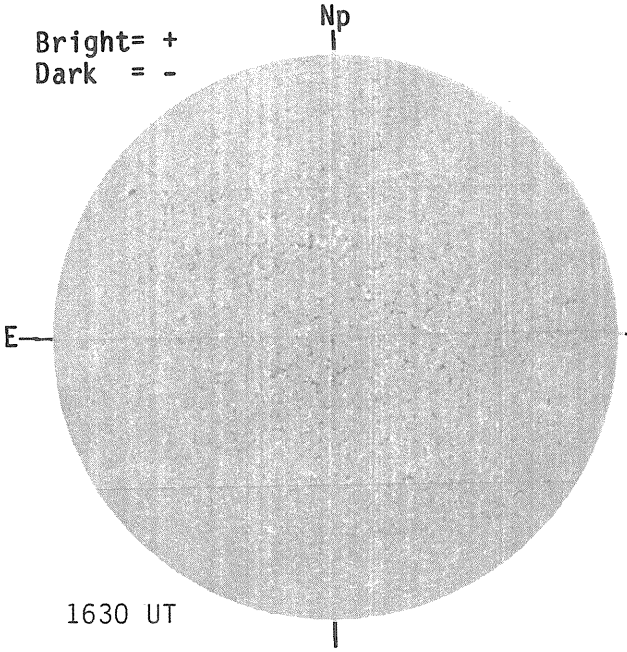


—— 5303A(x1) 1655 UT
.... 6374A(x2) 1800 UT
xxxx 5694A(x6) 1730 UT
NO 5894A ACTIVITY TODAY

J A N U A R Y 22, 1 9 8 6 (P= -7.83, B_0=-5.11, L_0= 257.07)

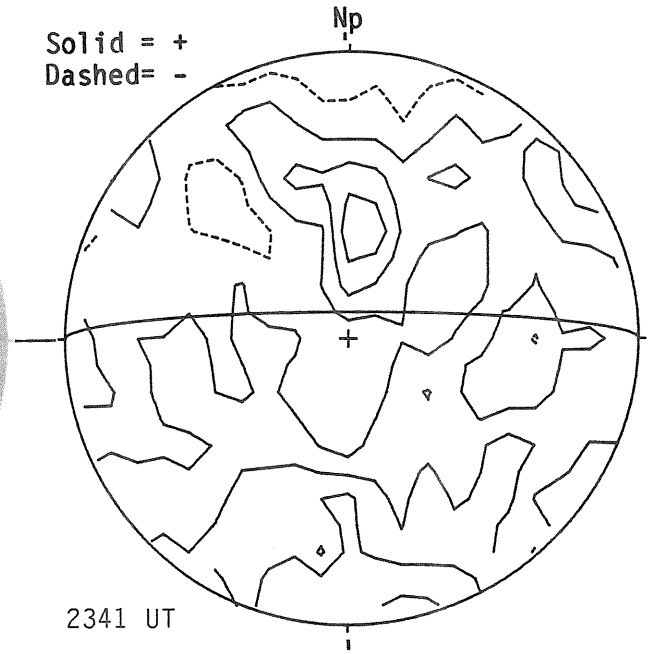
KITT PEAK MAGNETOGRAM

Bright= +
Dark = -



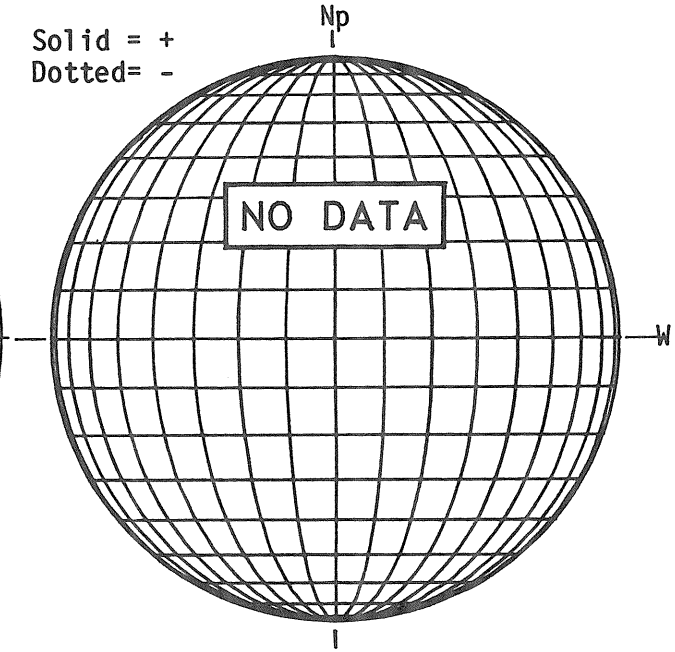
STANFORD MAGNETOGRAM

Solid = +
Dashed= -

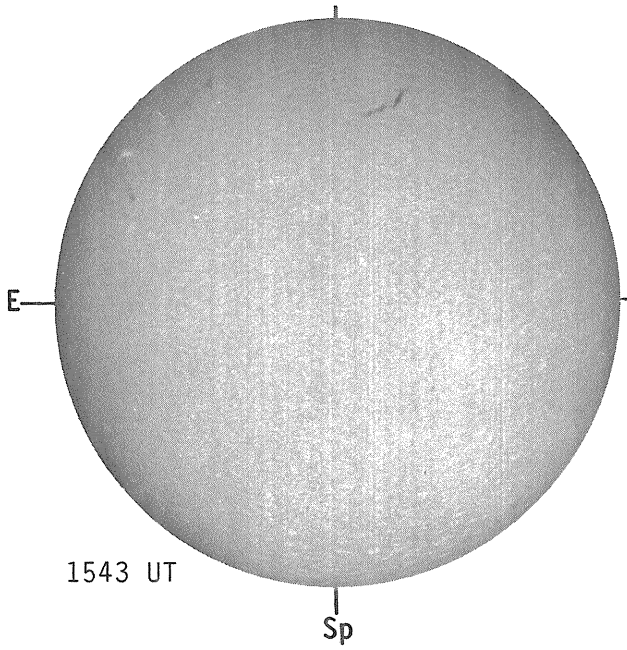


MT. WILSON MAGNETOGRAM

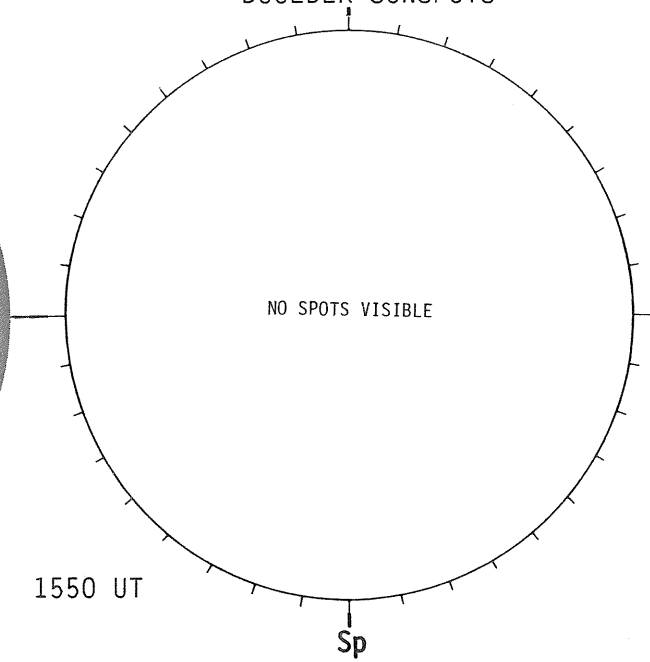
Solid = +
Dotted= -



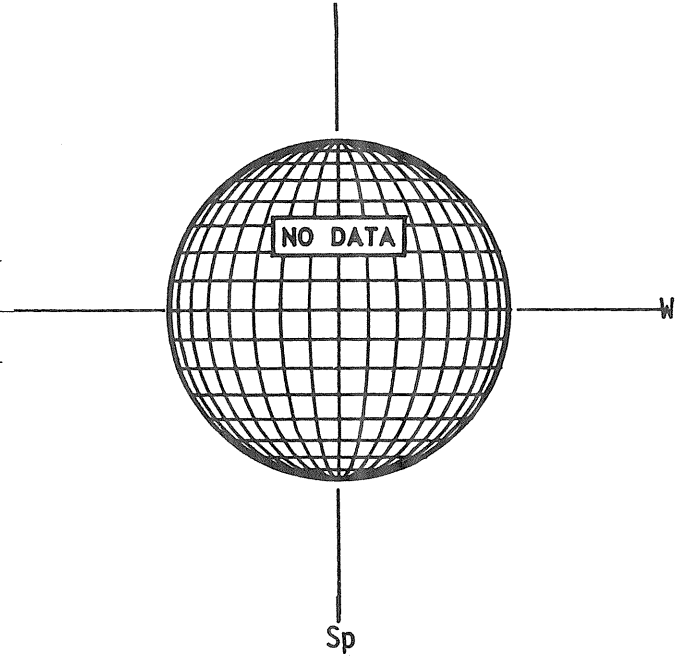
SACRAMENTO PEAK H-ALPHA



BOULDER SUNSPOTS



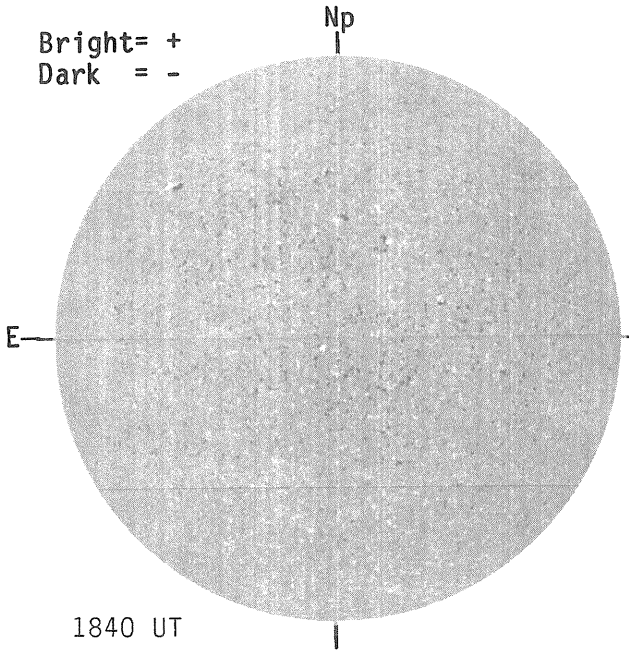
SACRAMENTO PEAK CORONA (1.15 Radii)



J A N U A R Y 23, 1 9 8 6 (P= -8.27, B_0=-5.20, L_0= 243.90)

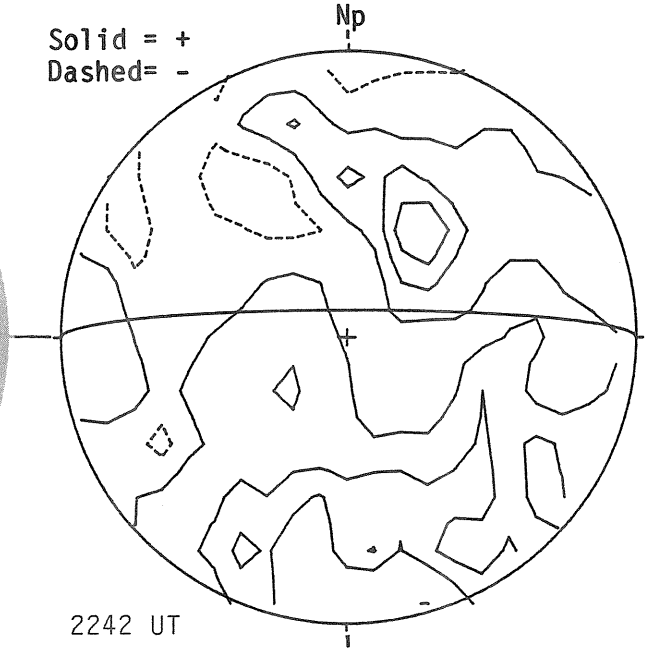
KITT PEAK MAGNETOGRAM

Bright= +
Dark = -



STANFORD MAGNETOGRAM

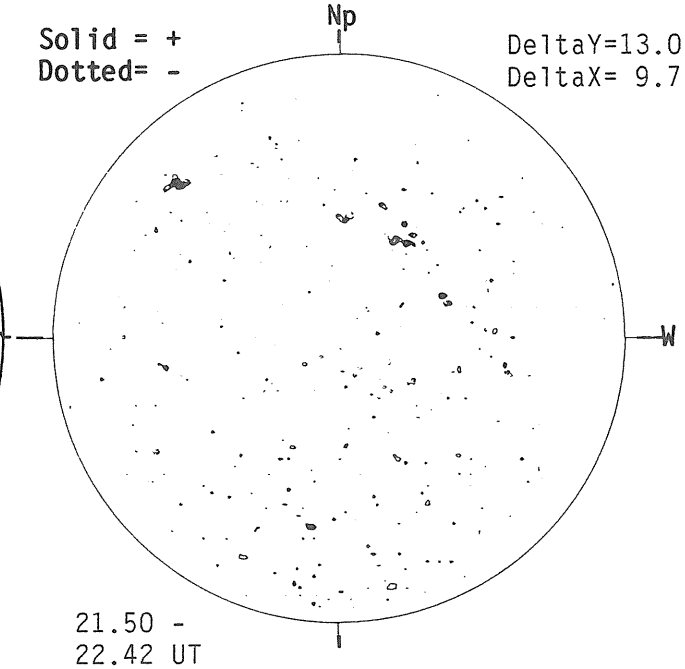
Solid = +
Dashed= -



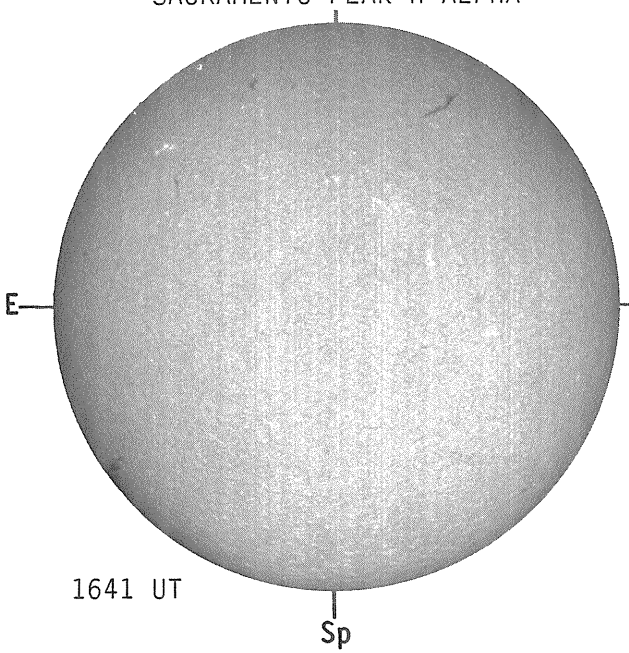
MT. WILSON MAGNETOGRAM

Solid = +
Dotted= -

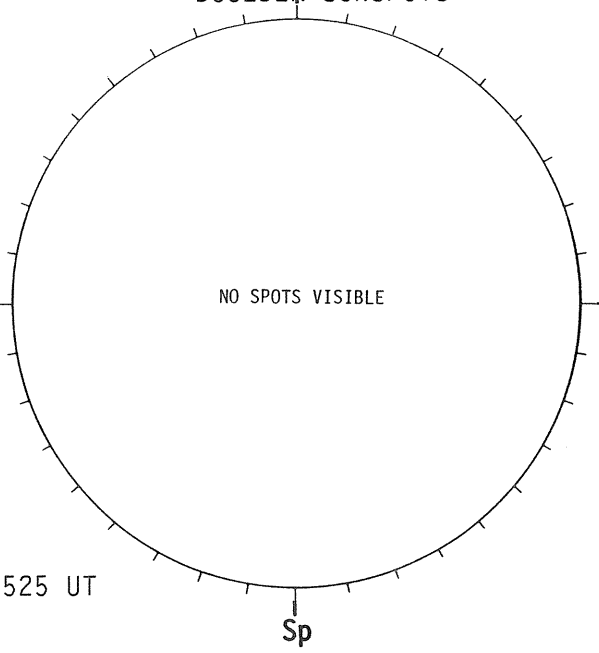
DeltaY=13.0
DeltaX= 9.7



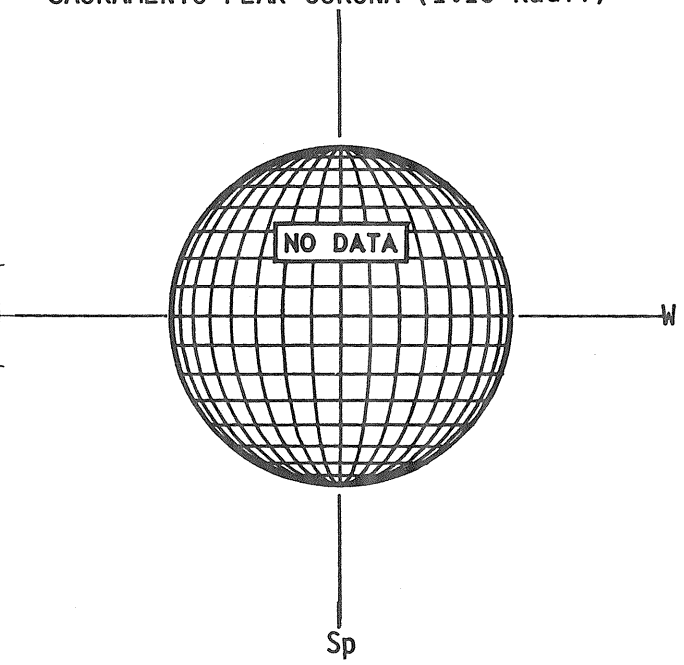
SACRAMENTO PEAK H-ALPHA



BOULDER SUNSPOTS



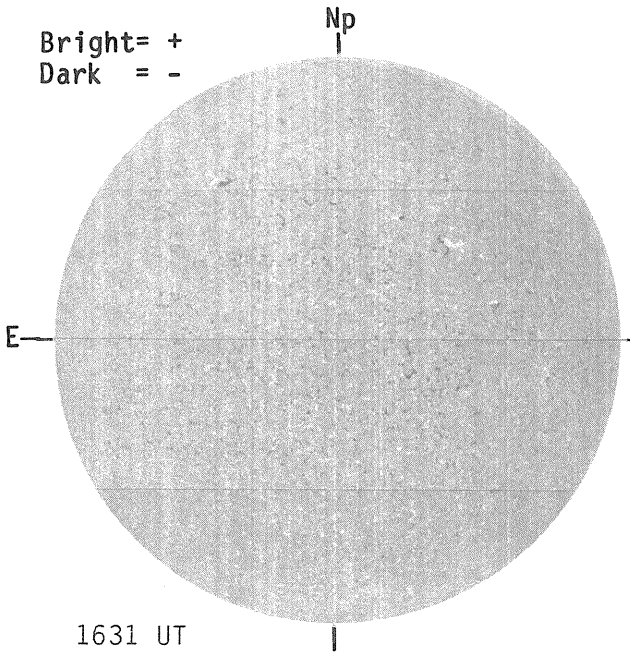
SACRAMENTO PEAK CORONA (1.15 Radii)



J A N U A R Y 24, 1 9 8 6 (P= -8.71, B_o=-5.29, L_o= 230.73)

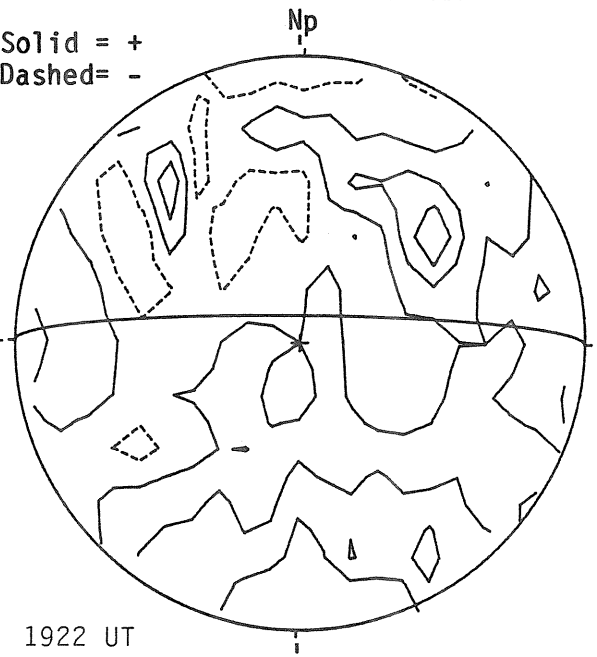
KITT PEAK MAGNETOGRAM

Bright= +
Dark = -



STANFORD MAGNETOGRAM

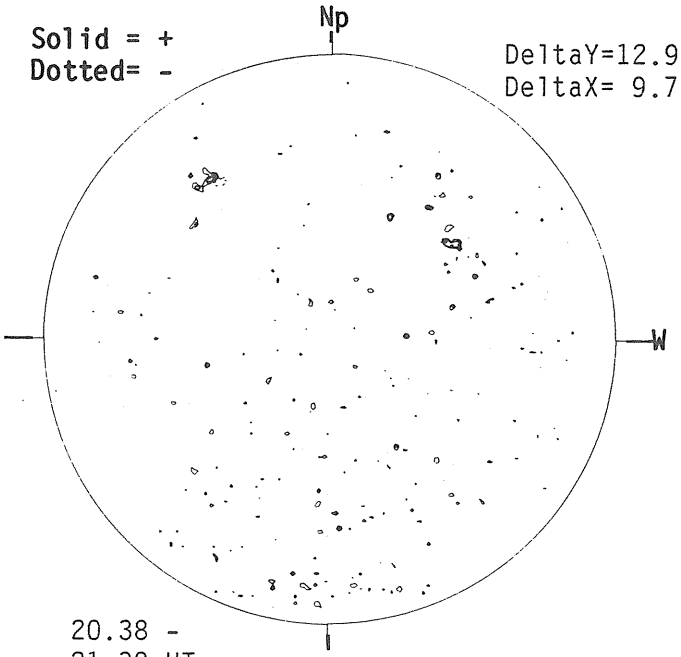
Solid = +
Dashed= -



MT. WILSON MAGNETOGRAM

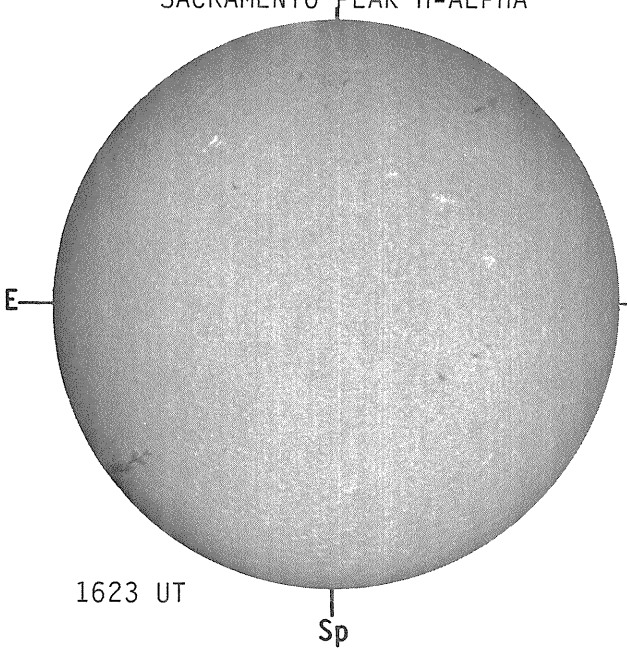
Solid = +
Dotted= -

DeltaY=12.9
DeltaX= 9.7

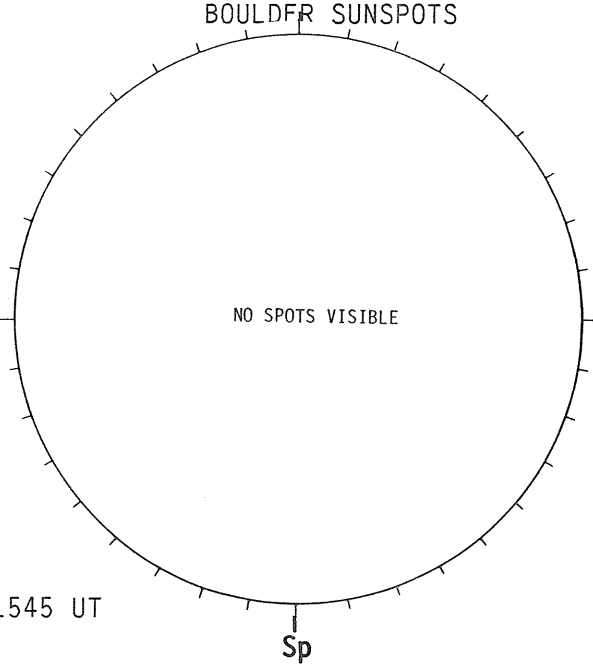


20.38 -
21.30 UT

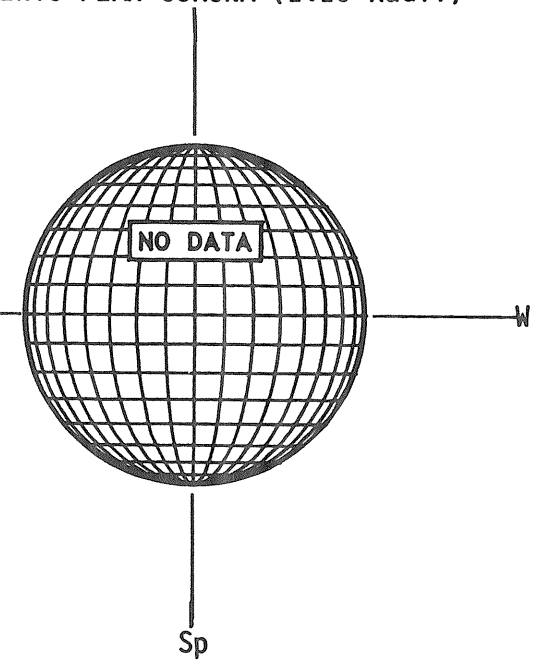
SACRAMENTO PEAK H-ALPHA



BOULDER SUNSPOTS



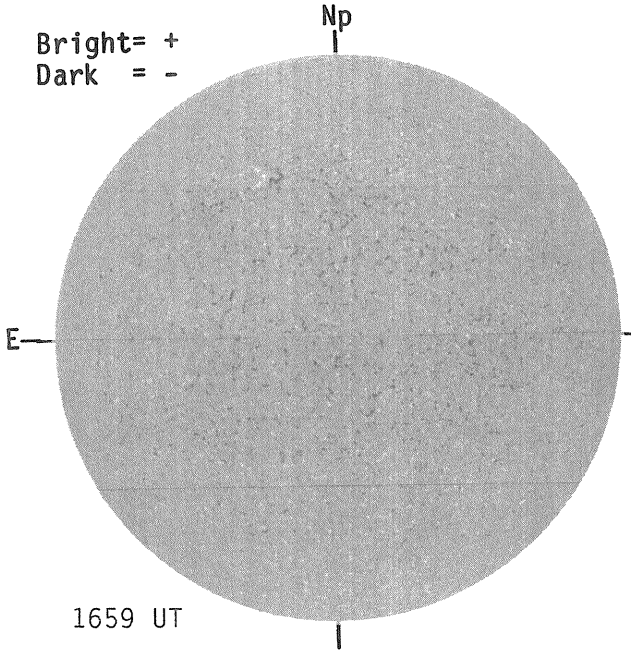
SACRAMENTO PEAK CORONA (1.15 Radii)



J A N U A R Y 25, 1 9 8 6 (P= -9.15, B_0=-5.37, L_0= 217.57)

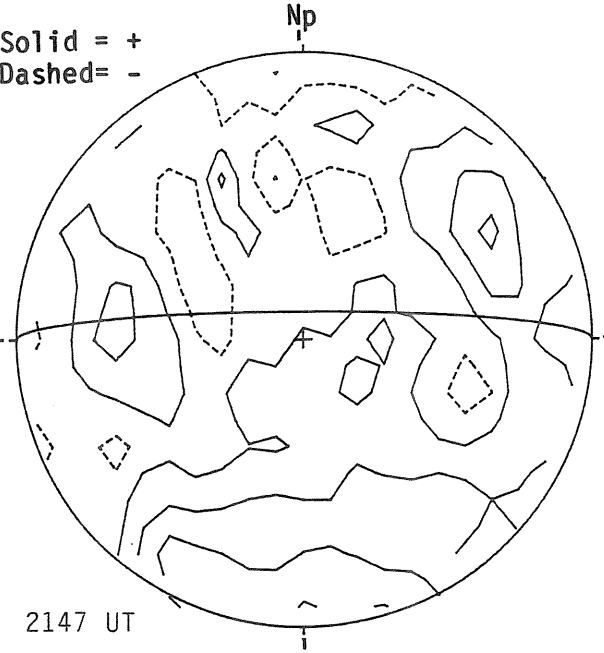
KITT PEAK MAGNETOGRAM

Bright= +
Dark = -



STANFORD MAGNETOGRAM

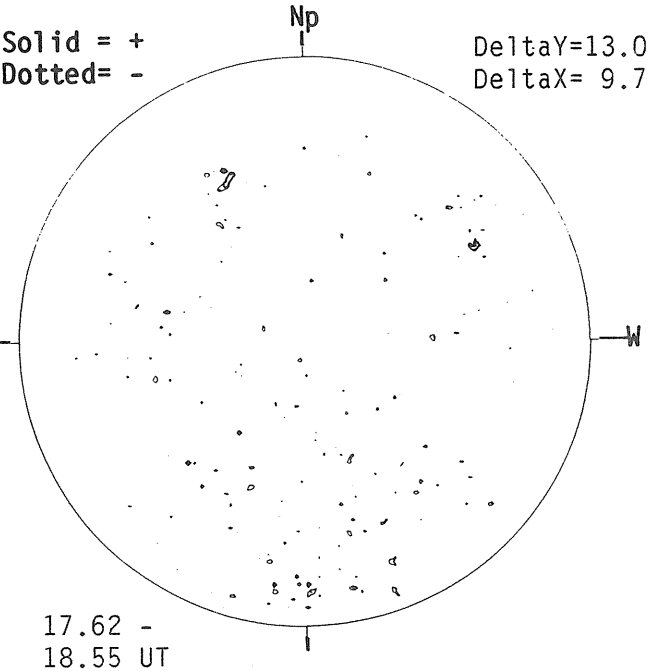
Solid = +
Dashed= -



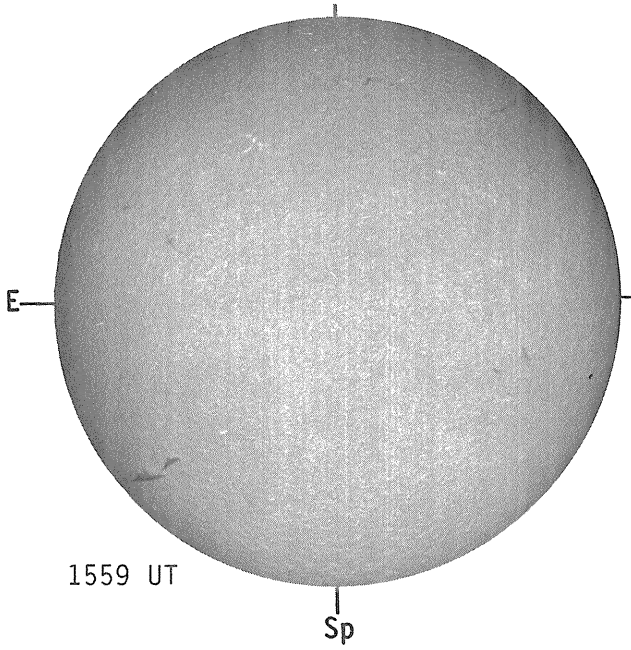
MT. WILSON MAGNETOGRAM

Solid = +
Dotted= -

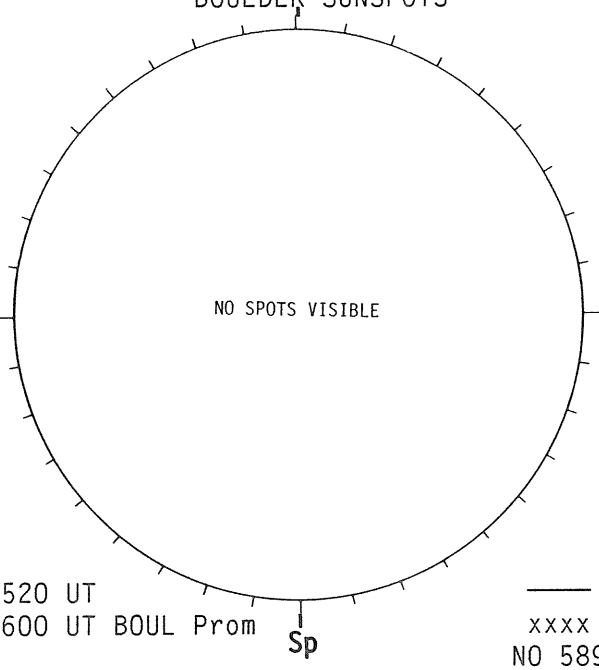
DeltaY=13.0
DeltaX= 9.7



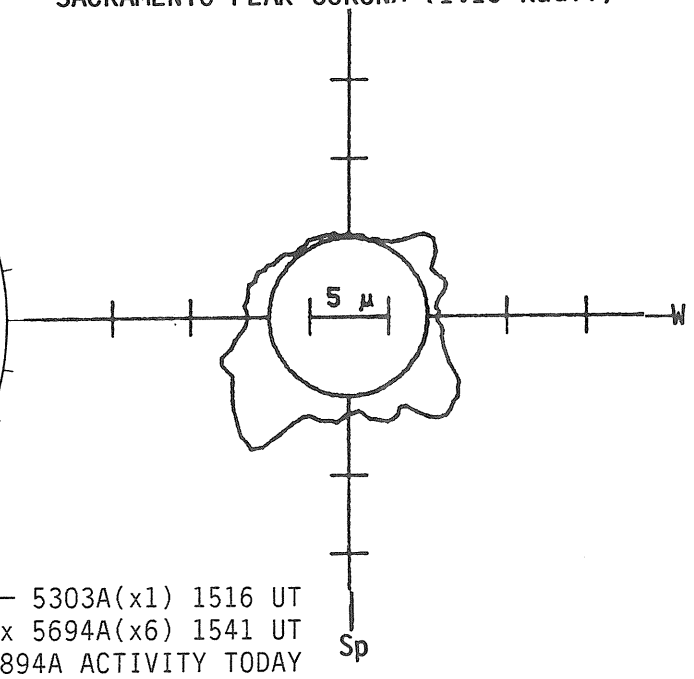
SACRAMENTO PEAK H-ALPHA



BOULDER SUNSPOTS



SACRAMENTO PEAK CORONA (1.15 Radii)

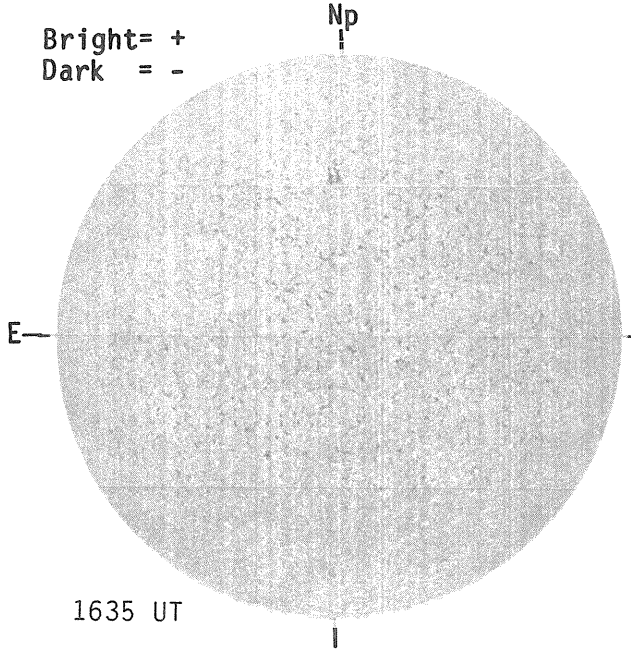


—— 5303A(x1) 1516 UT
xxxx 5694A(x6) 1541 UT
NO 5894A ACTIVITY TODAY

J A N U A R Y 26, 1 9 8 6 (P= -9.59, B_0=-5.45, L_0= 204.40)

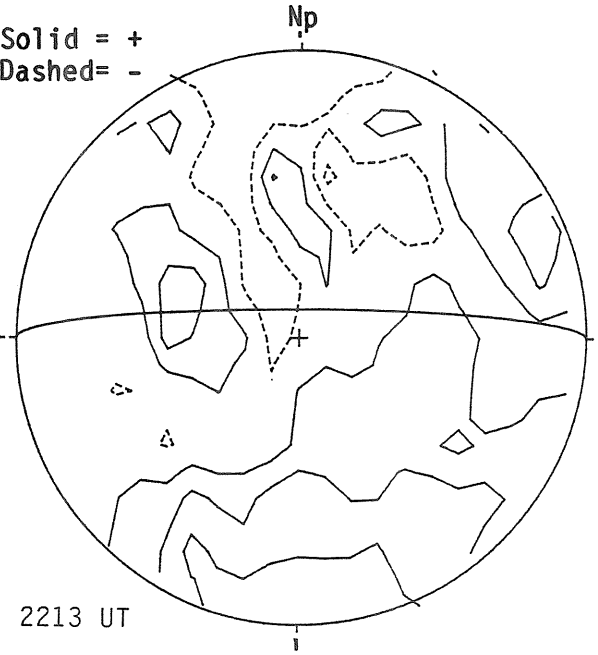
KITT PEAK MAGNETOGRAM

Bright= +
Dark = -



STANFORD MAGNETOGRAM

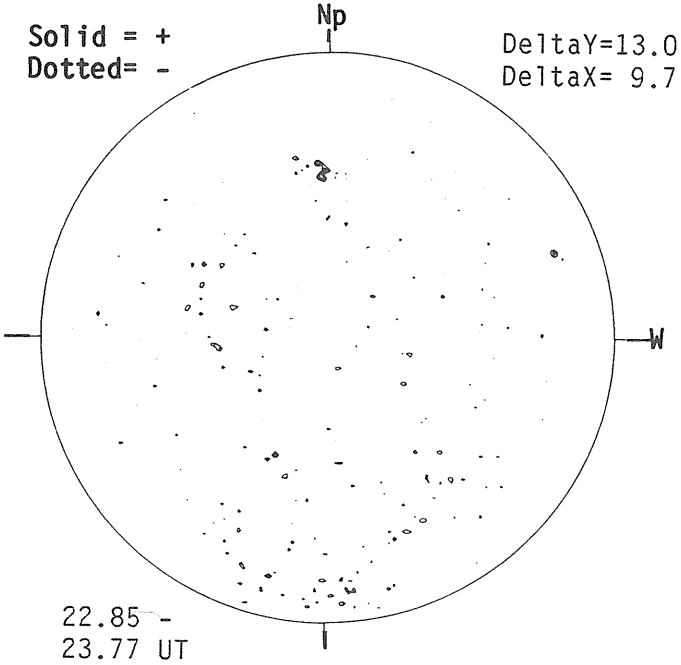
Solid = +
Dashed= -



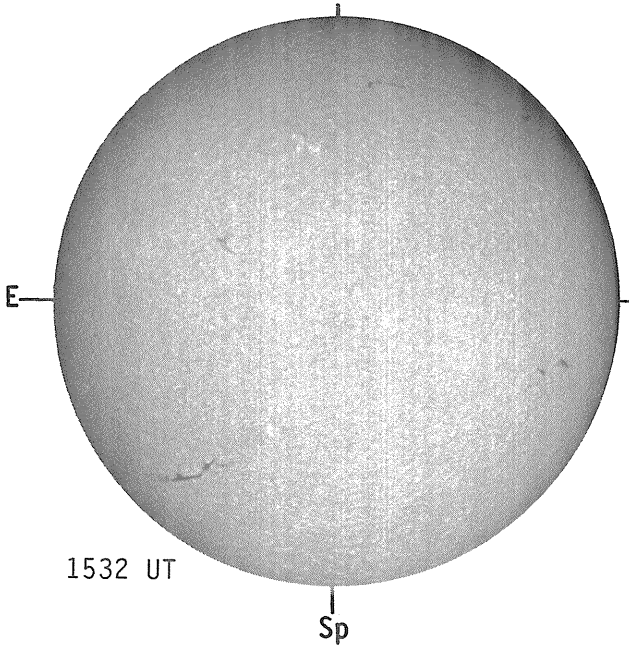
MT. WILSON MAGNETOGRAM

Solid = +
Dotted= -

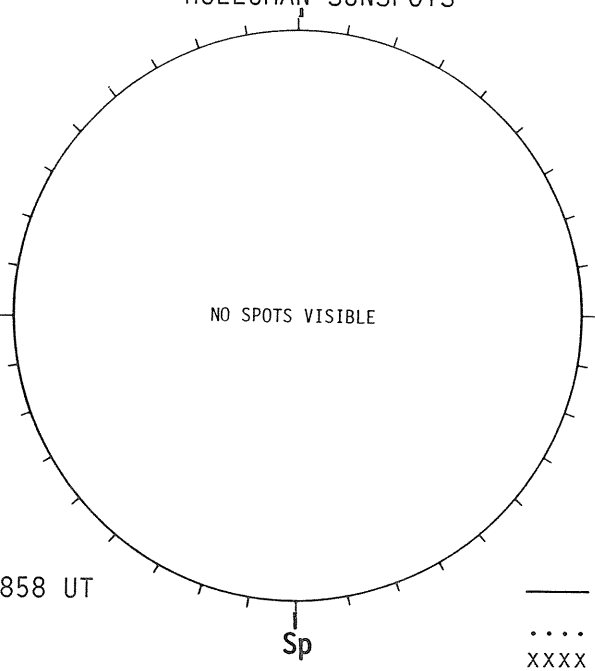
DeltaY=13.0
DeltaX= 9.7



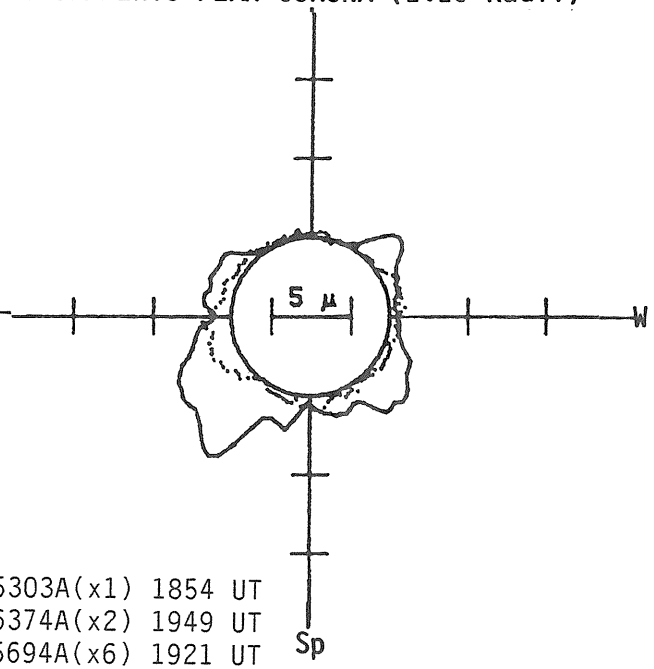
SACRAMENTO PEAK H-ALPHA



HOLLOMAN SUNSPOTS



SACRAMENTO PEAK CORONA (1.15 Radii)

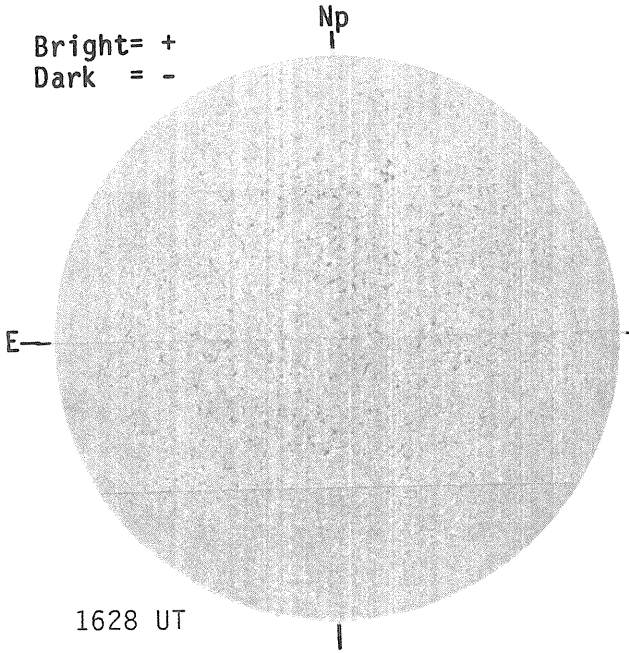


—— 5303A(x1) 1854 UT
.... 6374A(x2) 1949 UT
xxxx 5694A(x6) 1921 UT
NO 5894A ACTIVITY TODAY

JANUARY 27, 1986 (P=-10.02, B_0=-5.54, L_0= 191.23)

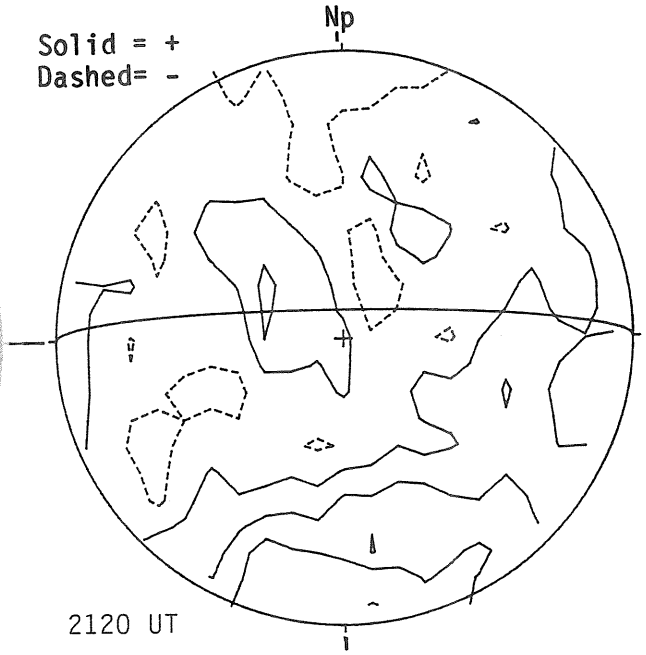
KITT PEAK MAGNETOGRAM

Bright= +
Dark = -



STANFORD MAGNETOGRAM

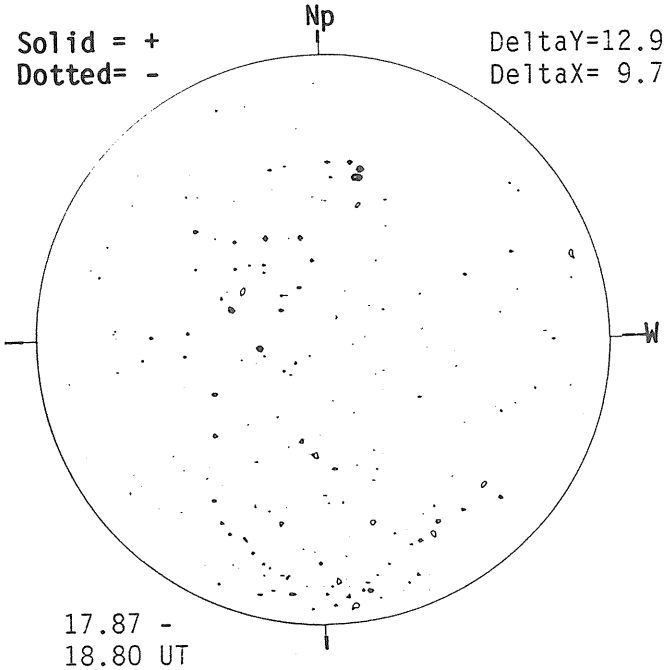
Solid = +
Dashed= -



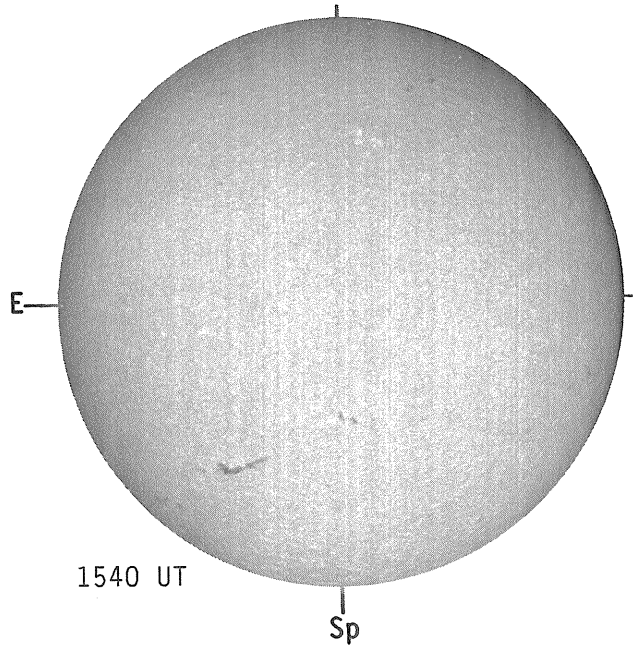
MT. WILSON MAGNETOGRAM

Solid = +
Dotted= -

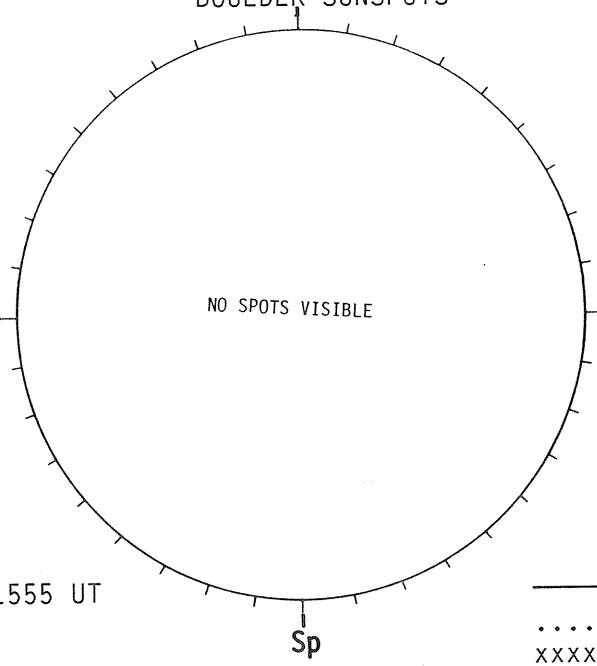
DeltaY=12.9
DeltaX= 9.7



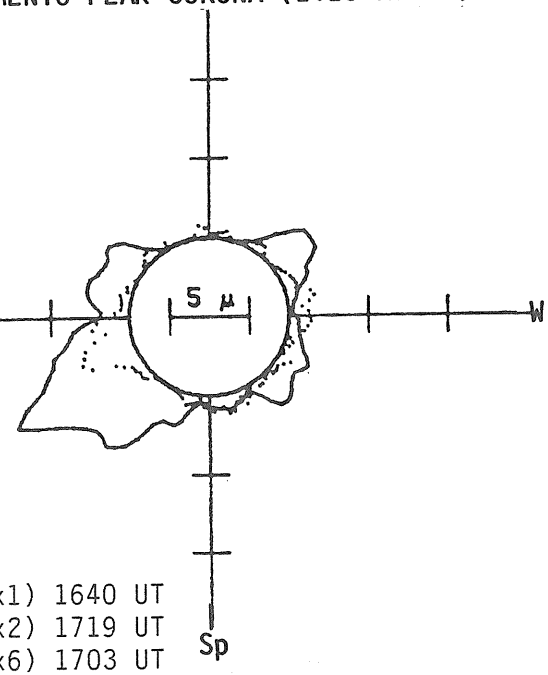
SACRAMENTO PEAK H-ALPHA



BOULDER SUNSPOTS



SACRAMENTO PEAK CORONA (1.15 Radii)

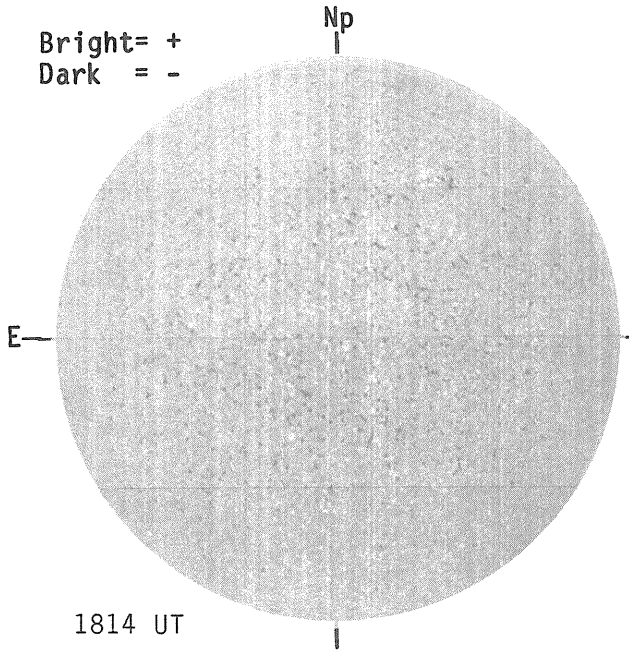


—— 5303A(x1) 1640 UT
.... 6374A(x2) 1719 UT
xxxx 5694A(x6) 1703 UT
NO 5894A ACTIVITY TODAY

J A N U A R Y 28, 1 9 8 6 (P=-10.45, B_0=-5.61, L_0= 178.07)

KITT PEAK MAGNETOGRAM

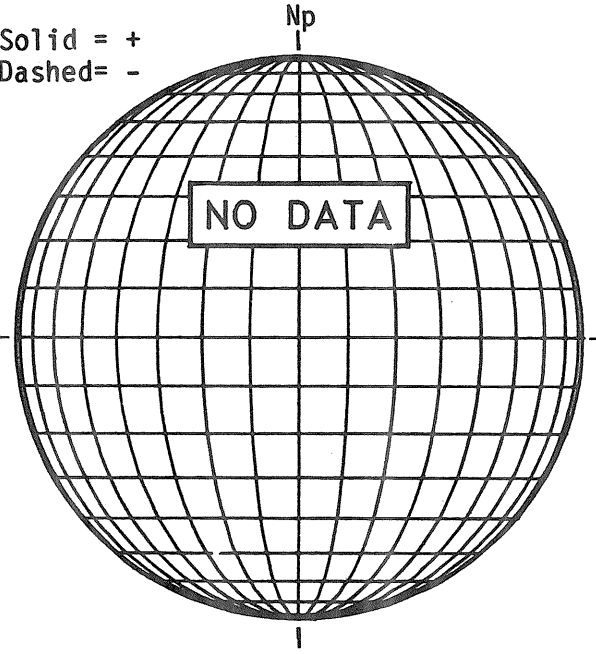
Bright= +
Dark = -



1814 UT

STANFORD MAGNETOGRAM

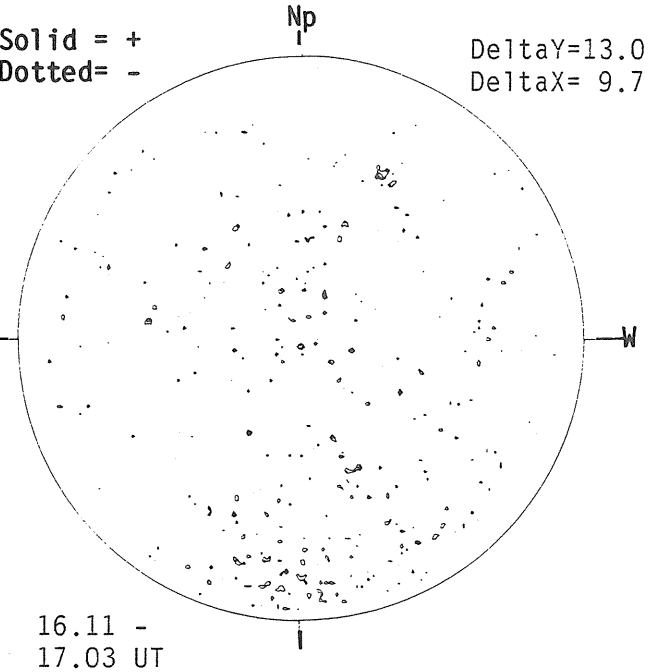
Solid = +
Dashed= -



MT. WILSON MAGNETOGRAM

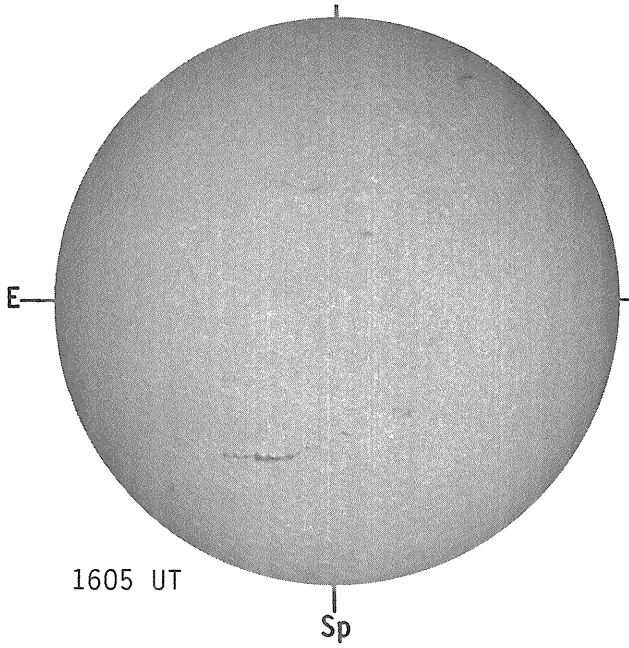
Solid = +
Dotted= -

DeltaY=13.0
DeltaX= 9.7



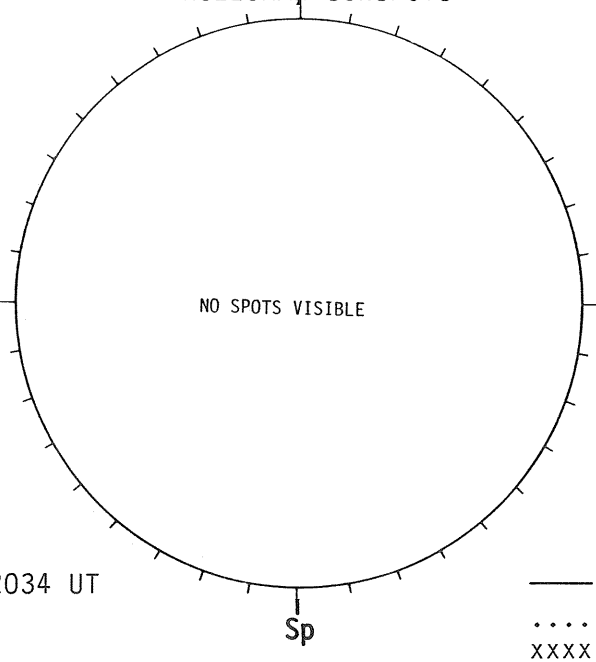
16.11 -
17.03 UT

SACRAMENTO PEAK H-ALPHA



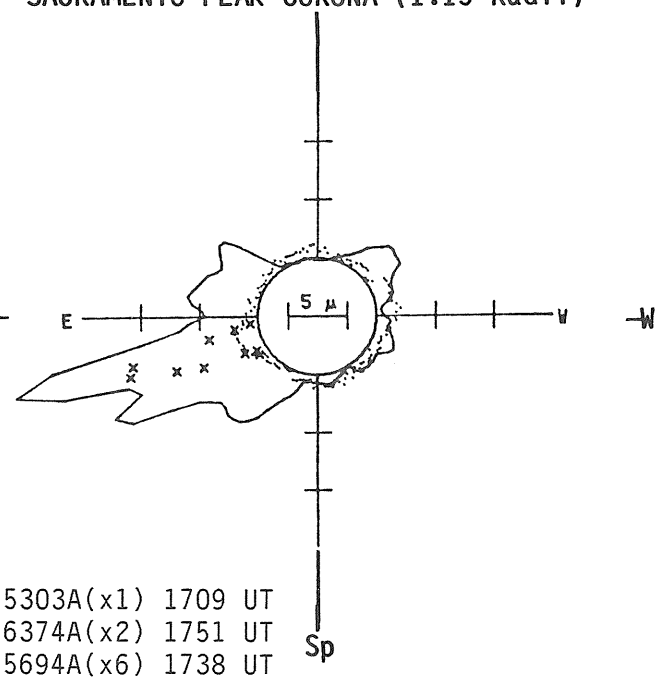
1605 UT

HOLLOMAN SUNSPOTS



2034 UT

SACRAMENTO PEAK CORONA (1.15 Radii)

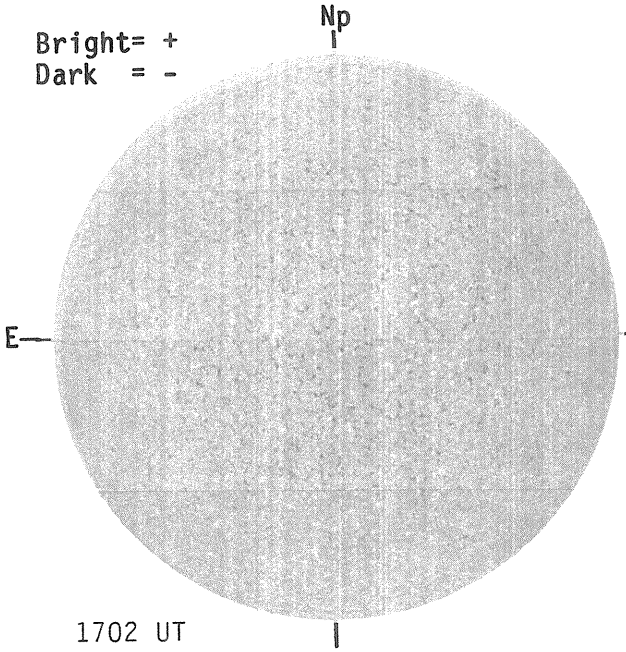


—— 5303A(x1) 1709 UT
.... 6374A(x2) 1751 UT
xxxx 5694A(x6) 1738 UT

J A N U A R Y 29, 1 9 8 6 (P=-10.87, B_o=-5.69, L_o= 164.90)

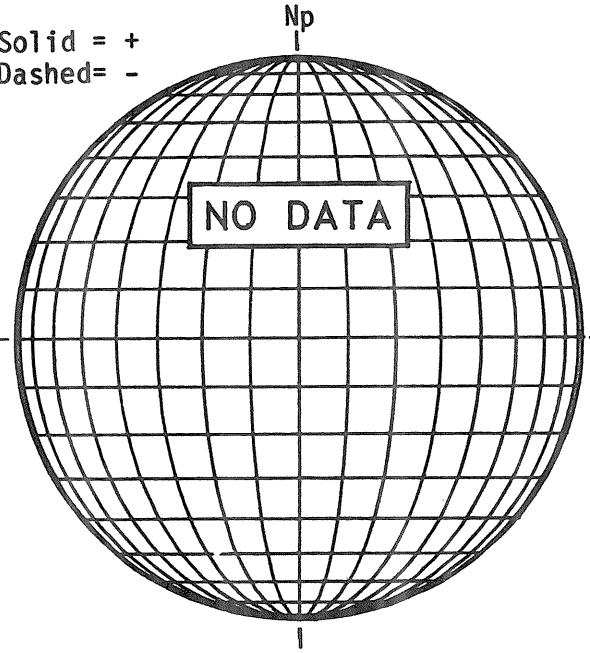
KITT PEAK MAGNETOGRAM

Bright= +
Dark = -



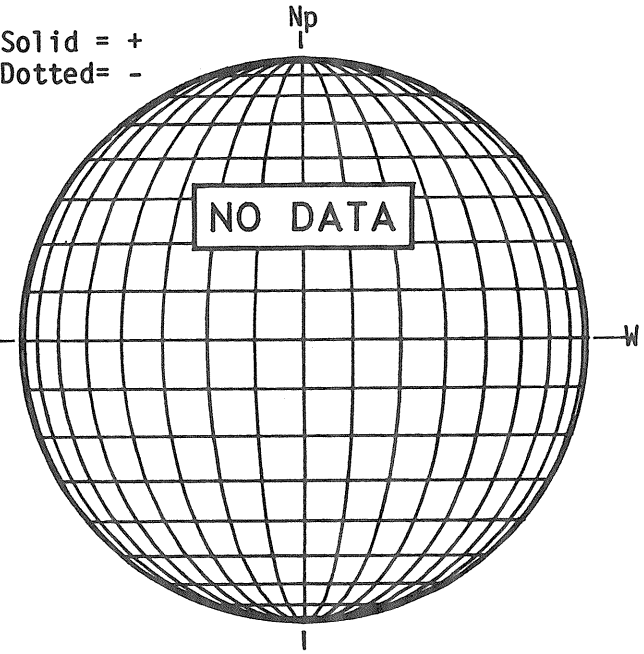
STANFORD MAGNETOGRAM

Solid = +
Dashed= -

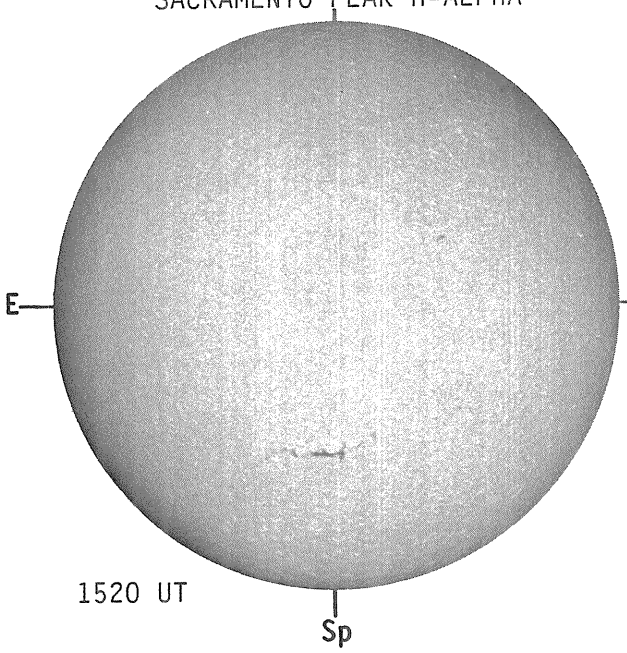


MT. WILSON MAGNETOGRAM

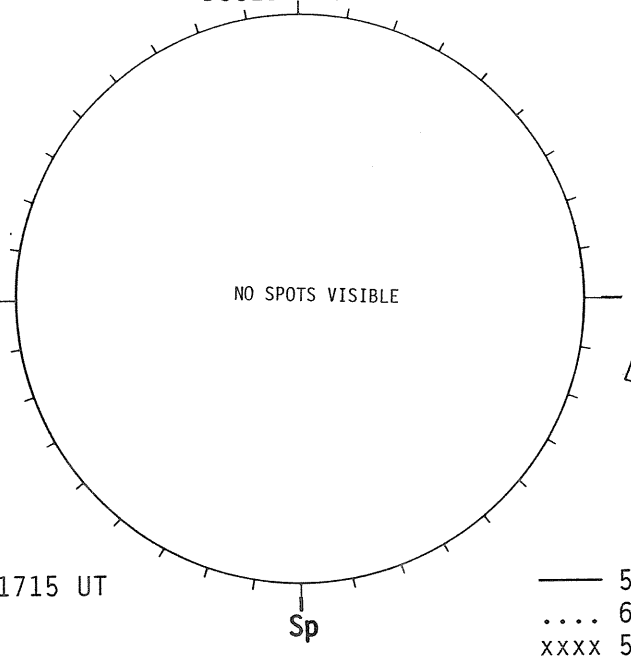
Solid = +
Dotted= -



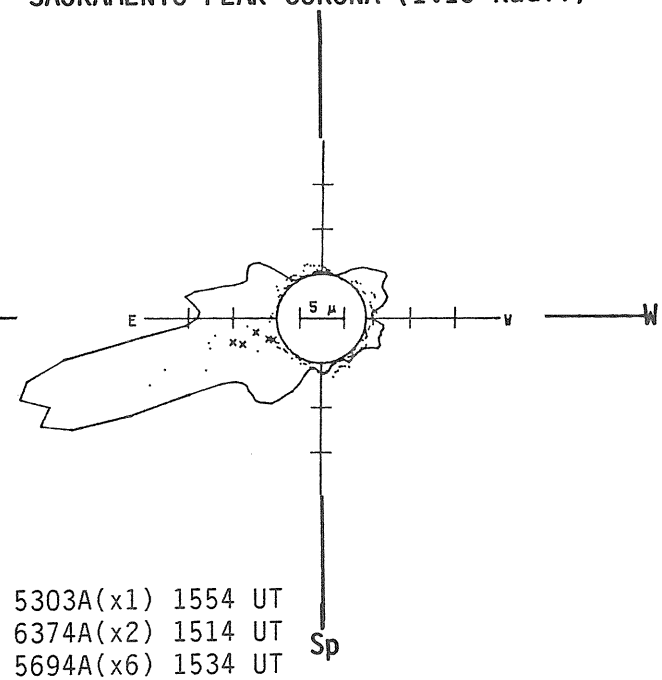
SACRAMENTO PEAK H-ALPHA



BOULDER SUNSPOTS



SACRAMENTO PEAK CORONA (1.15 Radii)

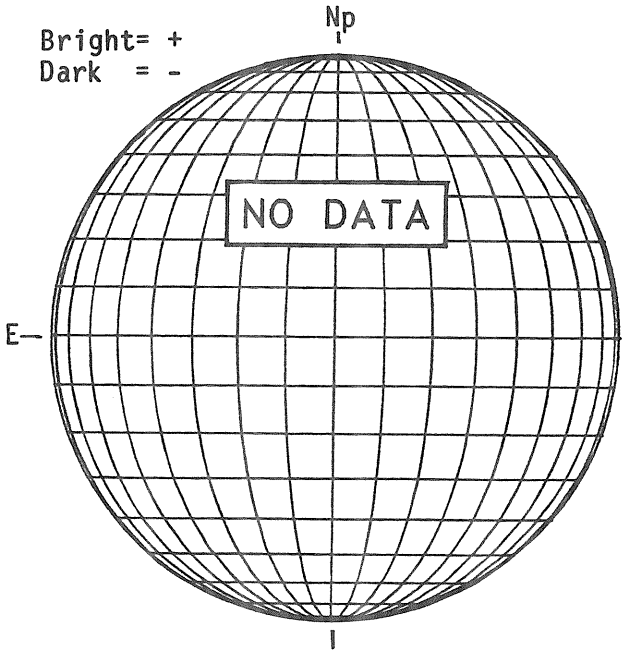


—— 5303A(x1) 1554 UT
.... 6374A(x2) 1514 UT
xxxx 5694A(x6) 1534 UT

J A N U A R Y 30, 1 9 8 6 (P=-11.29, B_o=-5.77, L_o= 151.73)

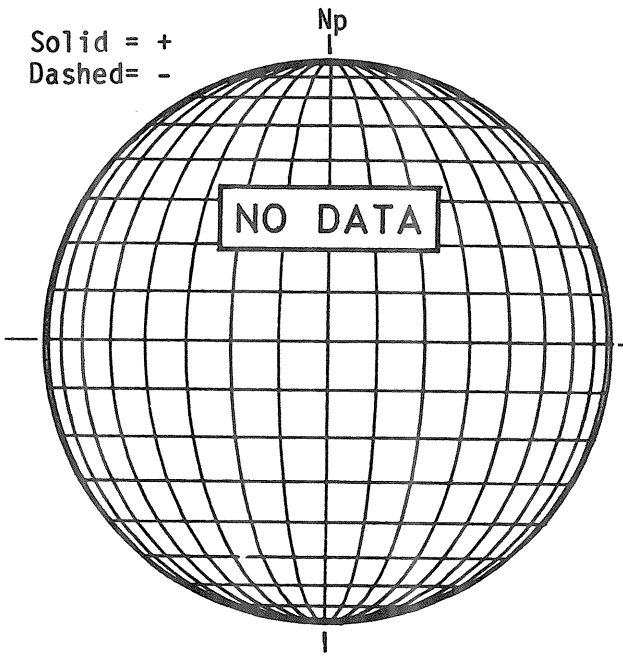
KITT PEAK MAGNETOGRAM

Bright= +
Dark = -



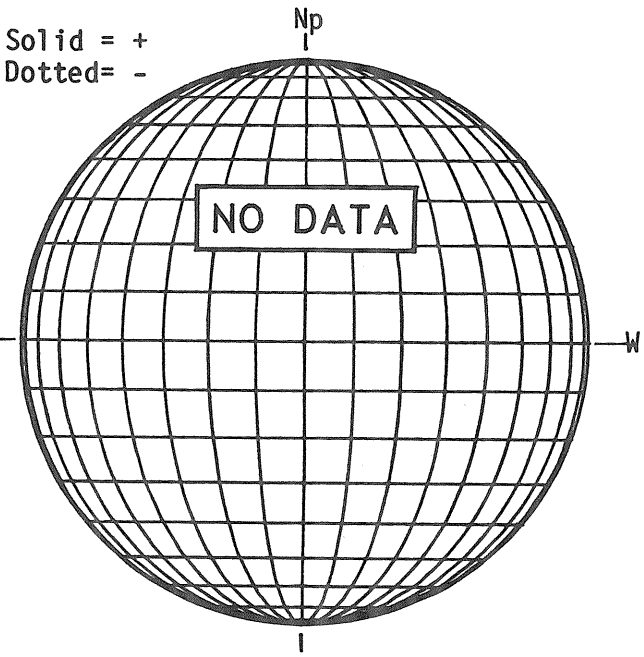
STANFORD MAGNETOGRAM

Solid = +
Dashed= -

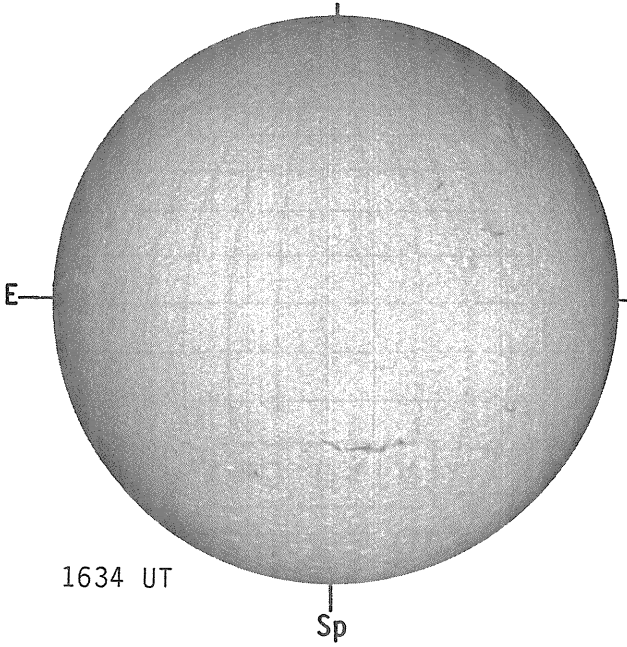


MT. WILSON MAGNETOGRAM

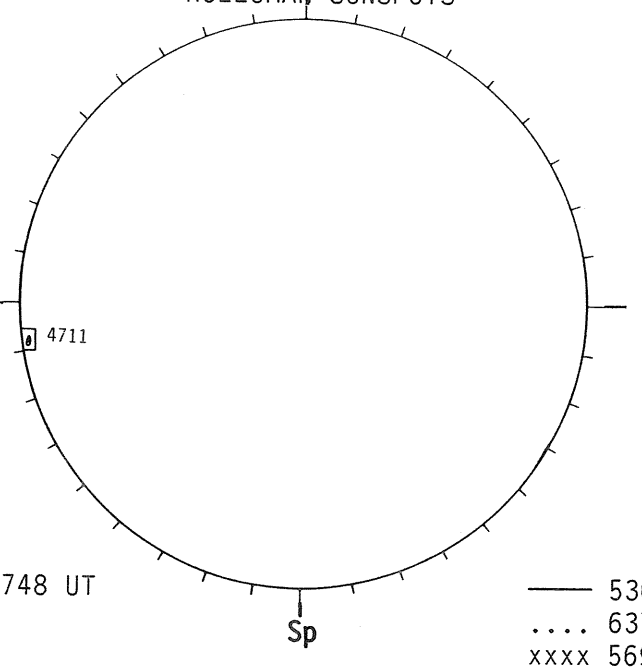
Solid = +
Dotted= -



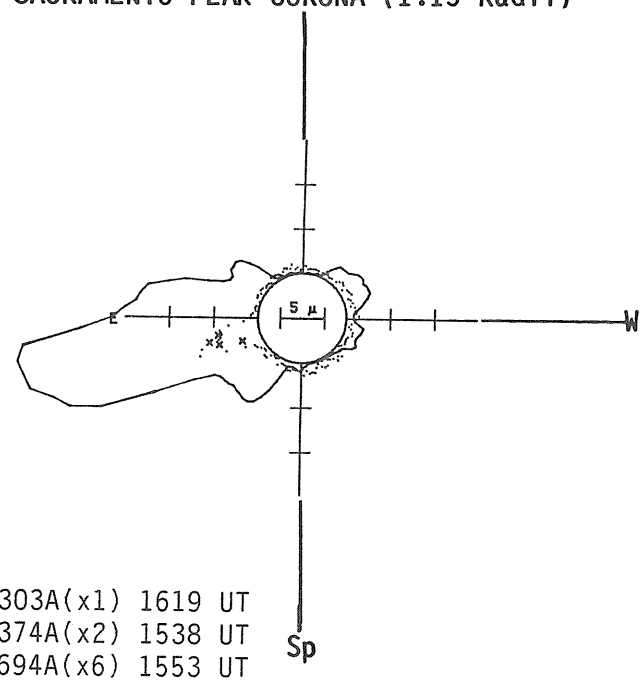
SACRAMENTO PEAK H-ALPHA



HOLLOMAN SUNSPOTS



SACRAMENTO PEAK CORONA (1.15 Radii)

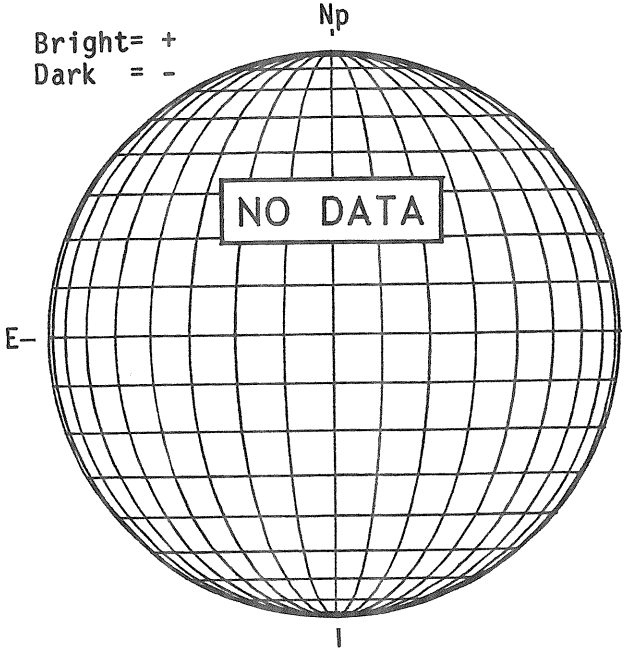


—— 5303A(x1) 1619 UT
.... 6374A(x2) 1538 UT
xxxx 5694A(x6) 1553 UT
NO 5894A ACTIVITY TODAY

J A N U A R Y 31, 1 9 8 6 (P=-11.70, B_0=-5.84, L_0= 138.57)

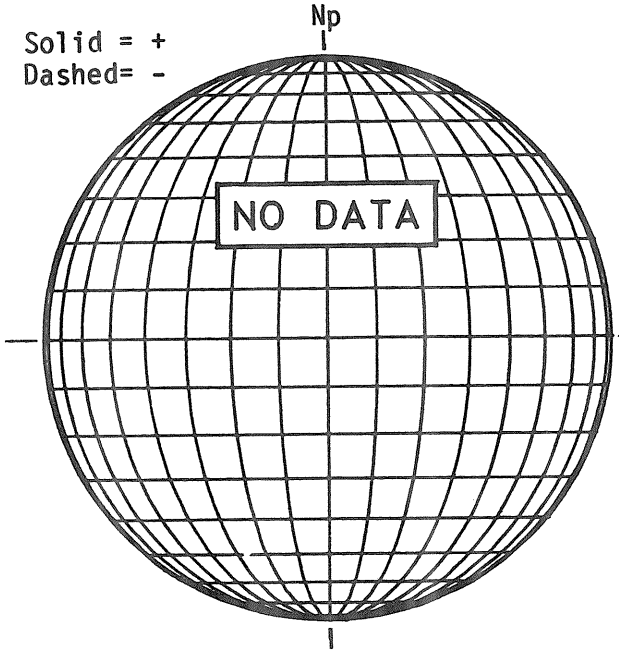
KITT PEAK MAGNETOGRAM

Bright= +
Dark = -



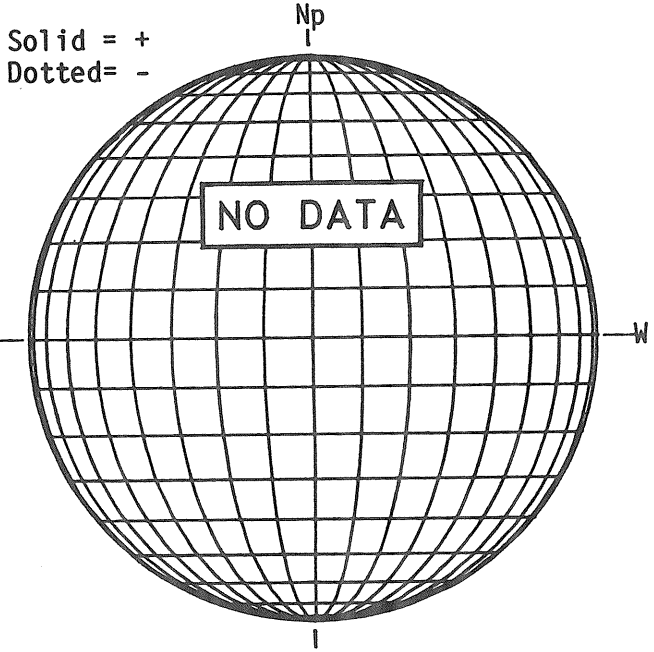
STANFORD MAGNETOGRAM

Solid = +
Dashed= -

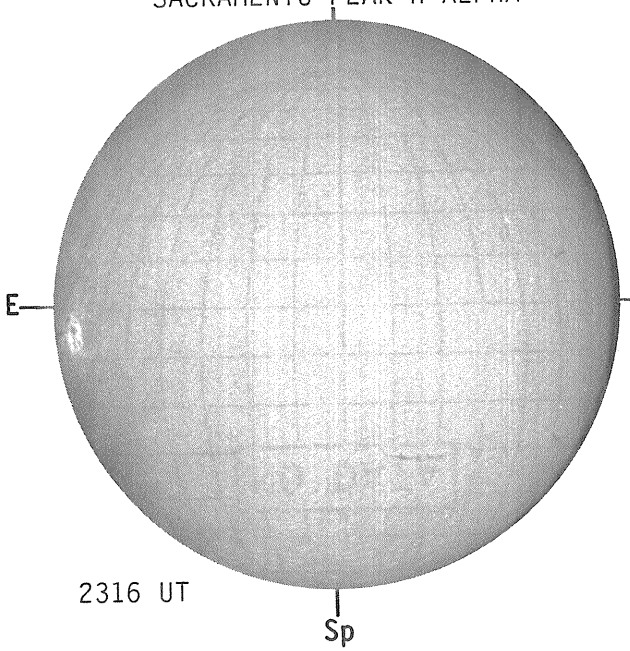


MT. WILSON MAGNETOGRAM

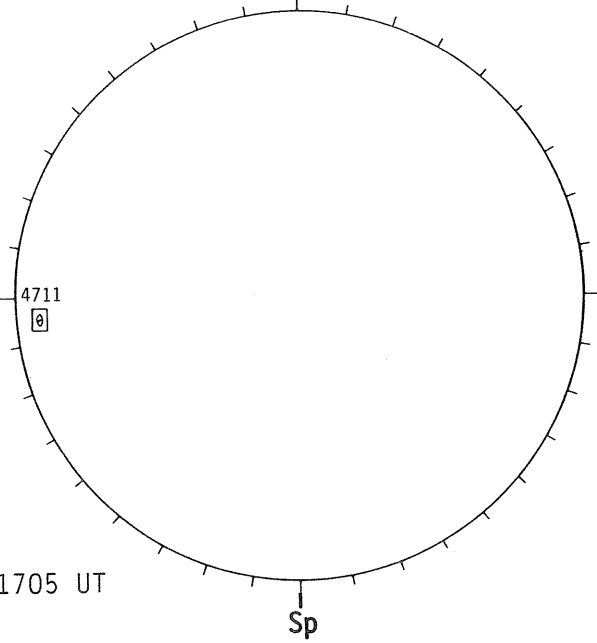
Solid = +
Dotted= -



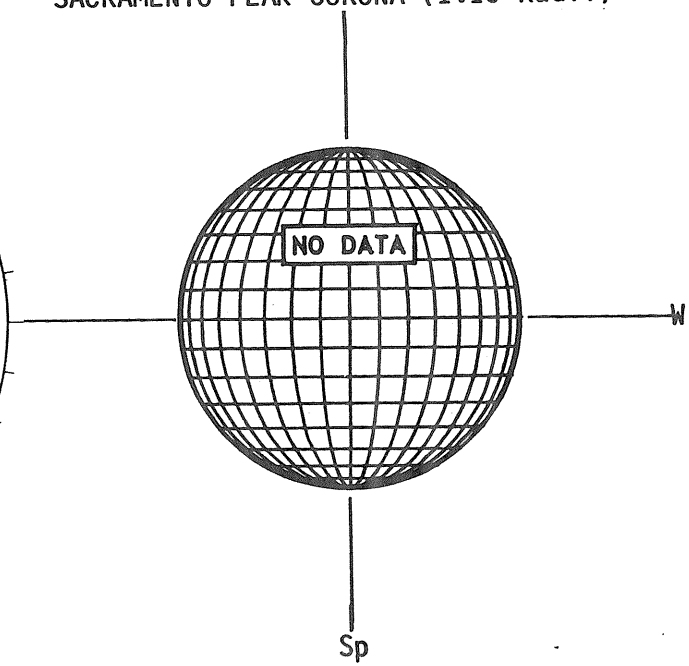
SACRAMENTO PEAK H-ALPHA



BOULDER SUNSPOTS



SACRAMENTO PEAK CORONA (1.15 Radii)



S U N S P O T G R O U P S
(ORDERED BY CENTRAL MERIDIAN PASSAGE DATE)

JANUARY 1986

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
4710		LEAR	01	13	0225	S12	W42	01	9.9		A	AXX	10	1	1	3
4710		ATHN	01	13	0740	S12	W38	01	10.4		B	CRO	40	4	3	2
4710		ATHN	01	13	0740	S12	W42	01	10.2		B	CRO	40	4	3	2
4710		RAMY	01	13	1335	S12	W47	01	10.0		B	DAO	120	12	4	3
4710		BOUL	01	13	1525	S11	W47	01	10.1		B	DSO	60	3	4	1
4710	24287	MWIL	01	13	1600	S11	W48	01	10.1	4	(B)					
4710		HOLL	01	13	1707	S11	W48	01	10.1		B	DSO	120	12	5	4
4710		PALE	01	13	1834	S12	W48	01	10.2		B	DSO	120	8	4	2
4710		LEAR	01	14	0049	S12	W52	01	10.1		B	DSO	80	12	5	2
4710		ATHN	01	14	1150	S13	W60	01	10.0			BXO	90	7	4	3
4710		RAMY	01	14	1301	S12	W60	01	10.0		B	DAO	150	19	5	3
4710		BOUL	01	14	1535	S11	W62	01	10.0		B	CSI	110	9	9	2
4710		HOLL	01	14	1830	S13	W64	01	9.9		B	DAO	110	15	8	2
4710		PALE	01	14	1924	S13	W65	01	9.9		B	CSI	110	11	7	4
4710		MANI	01	15	0015	S12	W65	01	10.1			DAO	120	15	6	2
4710		LEAR	01	15	0118	S12	W66	01	10.1		B	CSO	100	12	6	3
4710		ATHN	01	15	0830	S12	W73	01	9.9			CSO	80	7	8	1
4710		RAMY	01	15	1615	S11	W78	01	9.8		B	DRO	10	4	7	3
4710		BOUL	01	15	1655	S11	W81	01	9.6		B	BXO	90	2	6	1
4710		HOLL	01	15	1725	S10	W76	01	10.0		B	DAO	70	6	9	3
4710		PALE	01	15	2030	S12	W81	01	9.8		B	CSO	80	6	5	2
4710		LEAR	01	16	0027	S12	W77	01	10.2		B	CSO	60	7	14	3
4710A		LEAR	01	26	0001	S09	W02	01	25.9		A	AXO	10	2	1	3
4710B	24288	MWIL	01	21	1730	N29	E69	01	27.1	3	AP					
4710B		LEAR	01	22	0004	N29	E67	01	27.3		A	AXX	10	1	1	3
4710B		ATHN	01	22	1100	N32	E62	01	27.4		A	AXX	10	1		3
4710B	24288	MWIL	01	22	1600	N29	E58	01	27.2	2	(AP)					
4710B		RAMY	01	23	1454	N29	E43	01	27.0		A	AXX		1		3
4710B	24288	MWIL	01	23	1545	N29	E44	01	27.1	2	(AF)					
4710B		HOLL	01	23	1605	N28	E44	01	27.1		A	AXX		1		4
4710C	24289	MWIL	01	26	1930	S29	E14	01	27.9	3	(B)					
4712		RAMY	02	02	1445	S05	W40	01	30.6		B	CAO	30	5	4	3
4712	24291	MWIL	02	02	1600	S04	W39	01	30.8	4	(B)					
4712		PALE	02	02	1907	S05	W43	01	30.6		B	CSO	40	10	5	4
4712		HOLL	02	02	2350	S04	W45	01	30.6		B	CSO	80	8	6	2
4712		LEAR	02	03	0033	S04	W45	01	30.7		B	CSO	60	11	6	3
4712		ATHN	02	03	0638	S04	W49	01	30.6			CSO	50	8	4	4
4712		RAMY	02	03	1425	S03	W54	01	30.6		B	DAO	140	8	6	3
4712		BOUL	02	03	1550	S04	W54	01	30.6		B	BXI	70	7	8	3
4712	24291	MWIL	02	03	1600	S03	W54	01	30.6	4	(B)					
4712		HOLL	02	03	1800	S03	W55	01	30.6		B	DRI	10	5	7	3
4712		PALE	02	03	1940	S04	W56	01	30.6		B	DAI	120	9	7	4
4712		LEAR	02	04	0012	S05	W59	01	30.6		B	DSO	80	9	8	3
4712		ATHN	02	04	0940	S04	W65	01	30.5			CSO	50	3	4	1
4712		RAMY	02	04	1339	S03	W68	01	30.5		B	CAO	170	9	7	3
4712		BOUL	02	04	1542	S03	W70	01	30.4		B	DSO	90	5	10	3
4712	24291	MWIL	02	04	1630	S03	W70	01	30.5	3	(B)					
4712		LEAR	02	05	0013	S04	W77	01	30.3		B	BXO	60	6	6	2
4712	24291	MWIL	02	05	1545	S02	W88	01	30.1	2	X					
4712		RAMY	02	05	1609	S04	W87	01	30.2		A	AXX		1		3

SUDDEN IONOSPHERIC DISTURBANCES

JANUARY 1986

Day	Start (UT)	Max (UT)	End (UT)	Imp	Wide-spread Index	Number of Station Reports by Type SWF	SEA	SPA	LF-SPA	SES	Known Flare	X-ray Class	NOAA/SESC Region
01	1204	1211	1225	1	1		1		1		No Flare		
04	0905	0910	0930U	1	1		1				No Flare		
05	1104	1129	1157	1	3		2				*		
05	1222	1238	1300	1	3		2				No Flare		
09	0832	0845	0930	1	1		1				No Flare		
10	0943	1000	1021	1	1		1				No Flare		
14	1457	1500	1516	1-	3					2	1507 UT	C3.1	4710
15	0653	0713	0944	2+	3	1		1		1	0654 UT	M1.1	4710
15	2117	2119	2145	1-	3			1		1	2057 UT	C6.0	
15	2124	2129	2150	1+	1					1	No Flare		
16	1206	1214	1310	1-	5		4	1		4	1200 UT	C4.3	
16	1608	1617	1745	2	3					6	1609 UT	M6.6	4710
16	1829	1832	1920	2+	3		4			4	1837 UT	M1.3	4710
17	0033	0039	0113	1-	1			1			0030 UT	C2.0	4710
17	0116	0142	0246	2	1			1			0114 UT	C3.6	4710
17	0352	0406	0516	1-	1			1			0350 UT	C1.7	
17	1106	1114U	1124	1-	1		1				No Flare		
17	1131	1148U	1219	1-	1		1				No Flare		
31	0319	0324	0349	1-	3		1	1			No Flare		

* No flare patrol

SIDs by NOAA/SESC REGION

JANUARY 1986

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 4710														1	1	2	2														
X-Ray														1	2	3	3														
No Flare	1			1	1				1	1					1		2														1
No Flare Patrol					1																										
Event Totals	1			1	2				1	1				1	3	3	5														1

OBSERVATORIES REPORTING FOR JANUARY 1986

Ayrshire, Scotland (AY)	SES	Maui, Hawaii, USA	SWF
Durban, South Africa (A58)	SES	Panska Ves, Czechoslovakia (PU)	SEA, SWF, SES
Edenvale, South Africa (A52)	SES	Paterson, New Jersey, USA (A46)	SES
Farsta, Sweden (FA)	SES	Sao Paulo, Brasil (UM)	SPA, SES
Hiraiso, Japan (HI)	SWF	St. Cloud, Minnesota, USA (SC)	SES
Houston, Texas, USA (A50)	SES	Tavares, Florida, USA (A49)	SES
Inubo, Japan (IN)	SPA	Tucson, Arizona, USA (A01)	SES
Kuhlungsborn,GDR (KU)	SPA, SEA	Upice, Czechoslovakia (UI)	SEA
Latrobe, Pennsylvania, USA (A19)	SES	Valley Cottage, New York, USA (A01)	SES
Losov, Czechoslovakia (LO)	SEA	Vsetin, Czechoslovakia (VS)	SEA
Louisville, Kentucky, USA (A26)	SES		

*Observations are not necessarily continuous for each reporting station.

SOLAR RADIO EMISSION SPECTRAL OBSERVATIONS

JANUARY 1986

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	0811	1514	WEIS										
02	0758	1515	WEIS										
03	0218	0735	CULG										
	0758	1215	WEIS										
	1229	1515	WEIS										
	2035	2400	CULG										
04	0000	0432	CULG										
	0800	1517	WEIS										
	2035	2400	CULG										
05	0000	0643	CULG										
	0758	1518	WEIS										
	2037	2400	CULG										
06	0000	0738	CULG										
	0757	1033	WEIS										
	1112	1518	WEIS										
	2037	2400	CULG										
07	0000	0739	CULG										
	1429	1521	WEIS										
	2039	2400	CULG										
08	0000	0345	CULG										
	0757	1522	WEIS										
	2041	2400	CULG										
09	0000	0739	CULG										
	0756	1522	WEIS										
	2039	2400	CULG										
10	0000	0739	CULG										
	0757	0830	WEIS										
	0834	1524	WEIS										
	2039	2400	CULG										
11	0000	0740	CULG										
	0755	1526	WEIS										
	2040	2400	CULG										
12	0000	0740	CULG										
	0754	1349	WEIS										
	1458	1527	WEIS										
	2040	2400	CULG										
13	0000	0740	CULG										
	0756	1428	WEIS										
	1501	1529	WEIS										
	2040	2400	CULG										
14			LEAR				0350.6	0351.1	1				III
	0000	0740	CULG				0351.0	0352.0	2				IIIB
			CULG				0359.5	0404.0	2				I
	0753	1435	WEIS										
	1451	1530	WEIS										
	2045	2400	CULG										
15	0000	0741	CULG	0654.5	0656.0	2							IIIG
			CULG	0658.5	0700.0	2							DCIM,CONT
			CULG				0701.0	0719.0	3				II
			CULG	0701.0	0703.0	1							IV
			LEAR				0706.0	0000.0	3				II
			CULG				0716.5	0720.0	1				IS
	0752	0908	WEIS										
	0932	1252	WEIS										
	1346	1531	WEIS										
	2041	2400	CULG										
16	0000	0741	CULG										

SOLAR RADIO EMISSION SPECTRAL OBSERVATIONS

JANUARY 1986

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
16	0754	1533	WEIS										
	2042	2400	CULG										
17	0000	0742	CULG										
	0750	1535	WEIS										
			PALE				1850.0	1850.1	1				III
	2042	2400	CULG										
18	0000	0742	CULG										
	0749	1024	WEIS										
	1036	1535	WEIS										
	2042	2400	CULG										
19	0000	0603	CULG										
	0751	1538	WEIS										
	2055	2400	CULG										
20	0000	0743	CULG										
	0747	1512	WEIS										
	1518	1539	WEIS										
	2043	2400	CULG										
21	0000	0743	CULG										
	0746	1541	WEIS										
	2043	2400	CULG										
22	0000	0743	CULG										
	0747	0946	WEIS										
	1031	1214	WEIS										
	1347	1542	WEIS										
	2043	2400	CULG										
			PALE				2107.5	2108.8	2				V
23	0000	0744	CULG										
	0744	1046	WEIS										
	1111	1143	WEIS										
	1155	1542	WEIS										
	2044	2400	CULG										
24	0000	0744	CULG										
	0743	1544	WEIS										
	2055	2400	CULG										
25	0000	0745	CULG										
	0744	1547	WEIS										
26	0047	0745	CULG										
	0814	1549	WEIS										
			SGMR				1337.8	1338.5	1				V
			SGMR				1822.3	1823.1	1				V
	2047	2400	CULG										
27			PALE				0225.8	0226.6	1				V
	0000	0745	CULG				0226.0	0227.0	2	0226.0	0227.0	1	IIIG
			LEAR				0226.8	0228.5	1				V
			CULG				0424.0		1				IIIB
			CULG				0427.0		1				IIIB
	0739	1549	WEIS										
	2237	2400	CULG				2250.5	2253.0	1				IIIG
28	0000	0804	CULG				0728.5	0731.0	1				IIIG
			CULG				0735.0	0738.5	2				IIIG
	0739	1209	WEIS										
			CULG				0742.0	0754.0	3				II
	1420	1552	WEIS										
			PALE				2156.6	2156.8	1				III
29	0736	1554	WEIS										
	2048	2400	CULG				2238.5		1				IIIB
			CULG				2359.5		1				IIIB
30	0000	0745	CULG				0032.0	0033.0					IIIG,W

SOLAR RADIO EMISSION SPECTRAL OBSERVATIONS

JANUARY 1986

Observation Day	Start (UT)	End (UT)	Sta	Decimetric Band Start (UT)	End (UT)	Int (1-3)	Metric Band Start (UT)	End (UT)	Int (1-3)	Dekametric Band Start (UT)	End (UT)	Int (1-3)	Spectral Type
30			CULG				0053.0	0055.0					III G,W
			CULG				0056.0	0057.5	2	0057.0	0057.5	1	III G,V
			LEAR				0056.1	0057.0	2				V
			PALE				0056.3	0057.1	1				V
			CULG				0127.0	0127.5	1				III G
			CULG				0157.0	0158.5	1				III G
			CULG				0319.5	0320.0	1				III G
			CULG				0402.0		1				III B
			CULG				0517.0		1				III B
	0735	1555	WEIS				1233.0	1233.1	2				III G
	2045	2400	CULG										
31	0000	0745	CULG										
	0947	1339	WEIS										
	0735	0928	WEIS				1301.8	1302.1	2				III G
	1401	1557	WEIS										
	2046	2400	CULG										

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

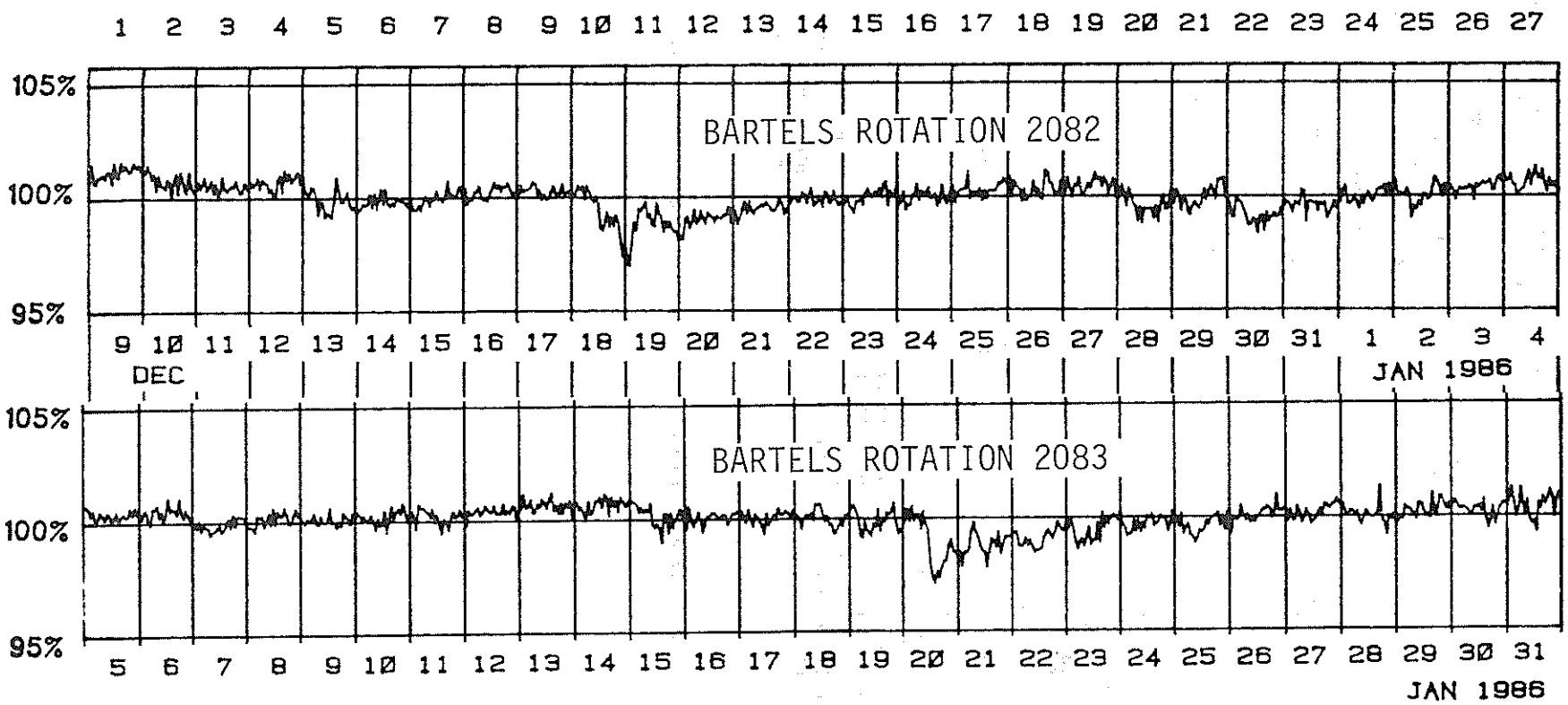
B = Single burst
G = Small group (< 10) of bursts
GG = Large group (> 10) of burst
C = Underlying continuum (particularly with Type I)
S = Storm in the sense of intermittent but apparently connected activity
N = Intermittent activity in this period
U = U-shaped burst of Type III

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

Stations Reporting:

CULG = Culgoora LEAR = Learmonth PALE = Palehua SGMR = Sagamore Hill WEIS = Weissenau

THULE NEUTRON MONITOR



COSMIC RAY INDICES
(Neutron Monitor)

JANUARY 1986

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	4455			6227.5			3640.8	
2	4458			6237.4			3657.2	
3	4473			6226.4			3654.7	
4	4482			6232.7			3648.9	
5	4492			6242.6			3661.7	
6	4494			6230.3			3652.6	
7	4471			6193.1			3644.7	
8	4482			6196.4			3650.9	
9	4479			6188.8			3654.3	
10	4484			6191.3			3657.7	
11	4485			6243.9			3662.0	
12	4494			6266.7			3666.4	
13	4506			6266.3			3667.2	
14	4506			6295.2			3662.0	
15	4482			6285.3			3658.5	
16	4479			6264.9			3660.3	
17	4479			6245.7			3644.4	
18	4477			6216.7			3652.2	
19	4469			6224.6			3657.9	
20	4428			6191.4			3639.9	
21	4424			6195.2			3653.5	
22	4436			6197.9			3662.7	
23	4453			6216.8			3653.8	
24	4464			6230.7			3661.2	
25	4461			6180.3			3648.5	
26	4481			6215.0			3656.7	
27	4485			6225.8			3662.0	
28	4477			6234.2			3653.4	
29	4488			6246.8			3658.1	
30	4487			6243.3			3655.4	
31	4496			6237.0			3659.8	
Mean	4475			6228.7			3655.5	

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

GEOMAGNETIC ACTIVITY INDICES

January 1986

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	D5	3+	4-	4-	3+	5	4	3+	4	30+	25	1.2	3-	3	3	3+	4+	3+	3	3	36	50	29	30	50	
2		4-	4	3	3	4	4-	3-	2	26	18	1.0	3-	3	3-	2+	4	3+	2+	1+	27	31	23	24	30	
3		2-	2-	1+	3+	3+	3-	1+	2-	17	10	0.5	1	1	1	3	3	2	1+	1+	14	17	13	13	17	
4	Q8	2+	2-	1-	0+	1+	1+	1	1+	10	5	0.2	2-	1+	0+	0+	1+	2-	1-	1+	7	7	8	7	9	CC
5	Q6	2-	1-	1+	1	1+	1	1-	1	9-	4	0.1	1+	0+	1+	1	1	1-	0	1-	5	7	8	10	6	CC
6		1	0+	1-	1-	3-	2-	5-	6+	18	20	1.1	1-	1-	1-	1-	3-	2	5-	5	29	34	34	7	61	
7	D2	6-	6-	4	4-	3+	3+	3-	4-	32	32	1.3	5	5-	4-	3+	3+	3	3-	3+	46	44	47	61	29	
8		4+	2+	1+	2+	2-	2+	2+	2-	18+	11	0.6	4-	2	2-	2	2-	3-	2-	1+	17	19	13	20	13	
9		2+	2	1	1+	1+	3	5-	4+	20	14	0.8	2-	1+	1	1+	1+	3	4	4-	23	35	15	8	43	
10		4+	4-	2-	2+	2+	1-	1	0+	16+	11	0.6	3+	3	1	2+	3-	1	1-	0+	15	18	18	27	9	
11	Q4	1-	2-	1+	1	1	1	0+	1-	8-	4	0.1	1+	1+	1-	1	1+	1+	1-	1	7	7	6	7	7	CC
12	Q7	2	1	2	1	1-	1-	1+	1+	10	5	0.2	2-	1	2-	1-	1-	1-	1+	2-	8	10	6	9	8	CC
13	Q2	1	0	1	1	1-	1	1	1-	6+	3	0.1	1-	1-	1+	1	1-	1	1+	0+	6	6	6	6	7	CC
14	Q3	1	1-	1-	1+	1	1	1	1-	7+	4	0.1	1	1	1	1	1-	1	1-	1-	6	5	6	6	6	CC
15	Q9	0+	1-	1+	2	1+	2+	2-	0+	10	5	0.2	1-	2-	2-	3-	2-	3-	2	0+	13	10	14	11	13	KC
16	Q1	0+	1-	1	1-	0+	1-	1-	0+	5-	3	0.0	1	1-	1	1	1-	1+	1	0+	6	3	3	3	3	CC
17	Q10K	0	1-	1	1+	1+	2-	2+	3	11+	6	0.3	0	1	1	1+	1	2-	3-	3-	12	14	11	4	21	KK
18		3-	2	2	3	1+	1-	1	1+	14	7	0.4	2+	2-	2+	3	1-	1-	1	1+	13	15	14	22	8	
19	Q5	2-	1+	1-	1-	1-	1-	1	2-	8+	4	0.1	1+	1+	1	1	1	1-	1	1+	7	9	10	9	11	CK
20		3	3+	3+	3-	3	1	2+	4	23-	15	0.8	2	3-	3	3+	3	2-	3-	4-	26	30	21	25	27	
21		6-	2-	1-	1+	3	5-	5	4+	26+	27	1.2	5-	1	1-	1+	3+	4	4	4	38	57	28	21	64	
22		3+	3-	2+	3-	2	2+	3-	3-	21-	11	0.7	3	2+	2	3-	3-	2+	3-	3-	21	28	16	17	28	
23		3-	2-	3	3	3+	4	4-	4-	25	17	0.9	2+	2	3-	3	3-	4-	3+	3+	29	29	26	18	38	
24		3	3-	3+	3+	3-	1	2+	3-	21	12	0.7	2+	2+	3-	3+	3	1	2+	2+	21	25	19	27	17	
25	D4	2+	4-	4-	3	4-	4-	5+	5-	30	26	1.2	2+	3	3+	3	4-	4-	5-	4-	42	52	41	30	62	
26		4	3-	2+	3-	3	2	1+	2-	20-	12	0.7	3	2+	2	3-	3	2+	2-	2-	19	22	15	23	15	
27	D1	2+	5+	5	4-	5+	4+	4+	5-	35	37	1.4	2	4	4+	3+	5	4+	4	4+	56	68	44	45	67	
28	D3	4+	5-	4	4-	4	5-	4	4	33+	30	1.3	4-	4-	3+	4-	4	4+	4	4-	49	56	44	41	59	
29		3+	4-	2	2+	4	4-	3+	4+	27-	19	1.0	3-	3	2-	2	4	3+	3	3	30	37	23	19	41	
30		4	4-	3	3-	2	3-	3-	2+	23	14	0.8	3+	3	3-	3-	3-	3-	2+	2	25	24	27	25	26	
31		2+	3	2+	2	2	2-	1	1-	15	8	0.4	2-	2+	2-	2+	2-	2-	1	1-	12	14	9	16	8	CK
Mean											14	0.64									21.5	25.3	19.4	22.4	

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	3	3	3+	4-	5-	3+	3+	4-	42	2+	3-	3	3+	4-	3	3	3-	30	67.0	0	0	10	AT	-
2	3-	3+	3-	2+	4+	3+	2+	1+	30	3	3	3-	2	4	3	2+	1+	25	67.6	0	0	11	AT	-
3	1+	1	1+	3	3+	2+	1+	1+	15	0+	1+	1	3-	3-	2-	1+	2-	13	68.4	0	0	12	AT	-
4	2-	1	0+	0+	1+	2-	1-	1	7	2	1+	1-	0+	2-	2-	1	2-	9	69.5	0	0	13	T	-
5	1+	0+	1+	1	1	1-	0+	1-	6	1+	0+	1+	1	1	0+	0	1	5	70.7	0	0	14	A	-
6	1-	1-	0+	1-	3-	2	5-	5	28	1	1-	1-	1-	3-	2	5	5	30	72.2	0	0	16	A	-
7	5-	5-	4-	3+	4-	3+	3	3+	47	5	5-	3+	3+	3	3-	3-	3	45	71.6	0	0	15	T	-
8	4-	2	1+	2+	2	3-	2	1	18	4-	2+	2-	2	2-	2+	2-	2-	17	71.2	0	0	15	T	-
9	2-	1+	1	1+	1+	3+	4+	4	26	2	1+	1	1+	1	3	4-	4-	20	72.7	0	0	17	T	-
10	3	3	1+	2	3-	1	1	0	15	3+	3	1-	2+	3-	1-	0+	1	15	72.2	0	0	16	T	-
11	1-	1+	1	1	1+	1+	1-	1-	6	2-	1+	0+	1+	1	2-	1	1+	8	71.9	0	0	16	A	-
12	2-	1-	2	1	1-	1-	1	1+	8	2	1+	2-	0+	0+	1	1+	2	9	71.2	0	0	15	A	-
13	1-	0	1+	1	0+	1	1	0+	5	1	1+	1+	1+	1	1-	1+	0+	7	74.3	13	15	18	TA	-
14	1	1-	1-	1	1	1	1-	0+	5	1	1+	1	1	1-	1	1	1	7	76.4	14	16	21	AT	-
15	0+	1	2-	3-	1+	3-	2-	1-	12	1	2	2-	3-	2	2+	2+	0+	14	75.1	12	11	19	A	-
16	0+	0+	1	1	1-	1+	1	0+	5	1+	1	1	1	0+	1	1	0+	6	75.5*	8	7	20	A	-
17	0	1-	1+	1+	1	2-	3-	3-	11	0	1+	1	2-	1+	2	3	3	14	74.4	0	0	18	AT	-
18	2	2-	2	3	1	1	0+	1+	13	2+	2-	3-	3+	0+	0+	1+	1+	14	73.1	0	0	17	T	-
19	1	1	1-	1-	1	1-	1	1+	6	1+	2-	1+	1	1	0+	1+	1+	8	70.2	0	0	14	T	-
20	2+	3-	3	3	3	2-	3-	4-	27	2	2+	3	4-	3	2-	2+	3+	26	69.2	0	0	13	A	-
21	5-	1+	1-	1+	4-	4+	4	4+	40	5-	1	0+	1+	3+	4-	4	4	35	67.9	0	0	11	T	-
22	3	2	2+	3-	3-	2+	3	3-	22	3	2+	2	2+	3-	2	2+	2+	20	67.3	0	0	11	A	-
23	2+	2	3-	3	3	4	3+	3+	31	2+	2	3-	3	3-	3	3+	3+	28	67.0	0	0	10	AT	-
24	3-	3-	3	3+	3	1+	3-	3-	24	2+	2-	3-	3	3-	0+	1+	2+	18	66.9	0	0	10	A	-
25	2+	3+	4-	3+	4	4-	5	4	50	3-	3-	3	3	4-	3+	4	3+	35	68.0	0	0	11	A	-
26	3+	2	2	2+	3	2+	1+	2-	19	3	3-	2	3-	3	2+	2	2	20	67.7	7	0	11	A	-
27	2	4+	4+	4-	6-	5-	4+	5-	65	2	3+	4+	3+	4+	4	3+	4	46	67.2	0	0	11	-	-
28	4+	4	3+	4-	4+	5-	4+	4-	56	3+	3+	4-	3+	3+	4	4-	4-	41	70.0	0	0	14	-	-
29	3	3+	2-	2	4+	4-	3+	4-	36	2+	3	2	2+	4-	3-	3-	3-	24	71.2	0	0	15	-	-
30	3+	3	3-	3-	3-	3	3-	2	26	3+	3	3-	3-	3-	3-	2+	2+	25	73.7	8	10	18	-	-
31	2	3-	2	2	2	2+	1+	1-	14	2-	2+	1+	2+	2-	1-	0+	1	10	76.6	8	12	21	-	-
Mean									23.1									20.1	70.9	2.3	2.3	14.6		

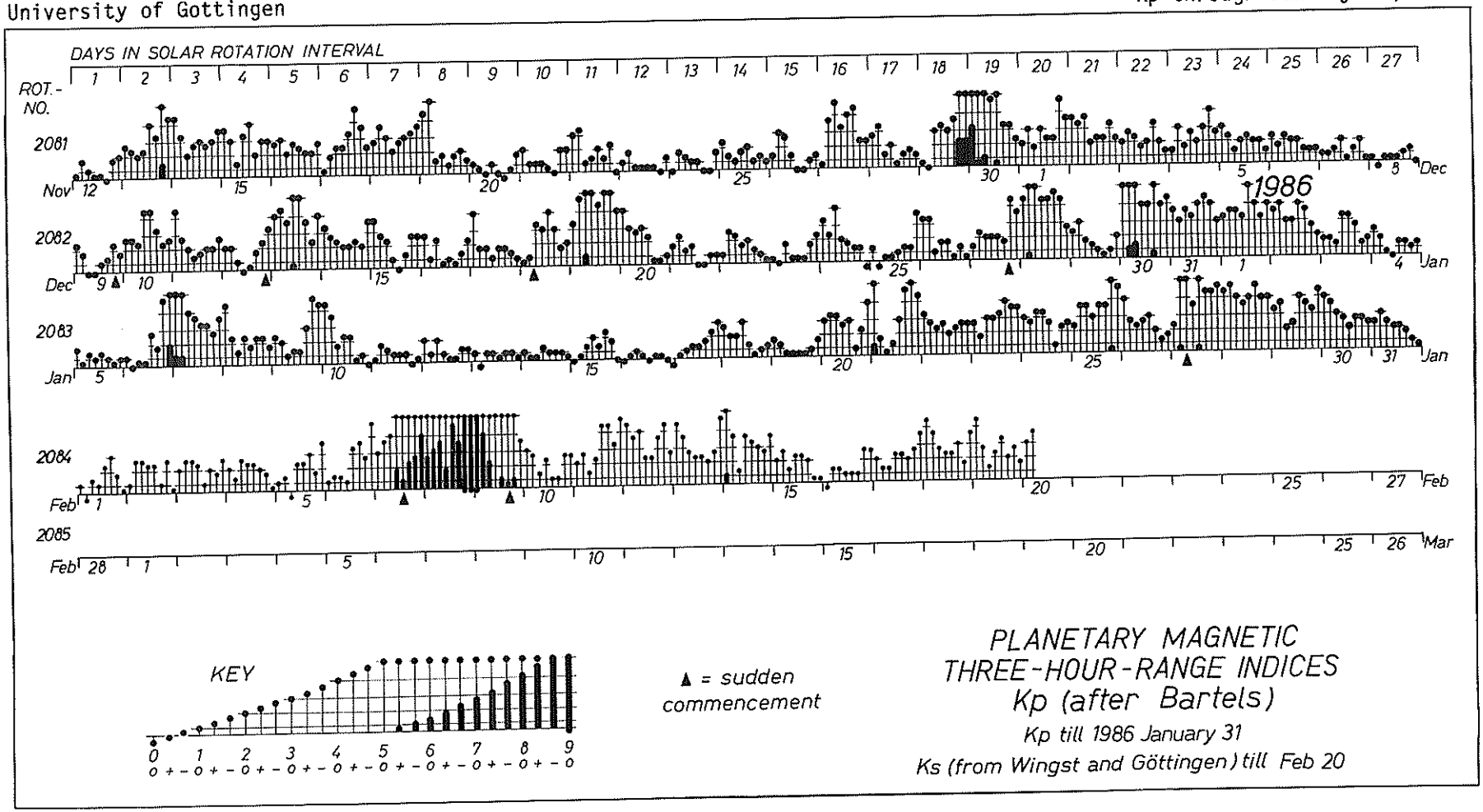
DAILY AVERAGE INDICES Ap

Day	1985 Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	1986 Jan
1	15	16	23	10	18	14	18	6	3	15	15	25
2	11	22	16	38	6	3	11	4	5	32	14	18
3	8	14	20	6	4	6	6	4	11	28	9	10
4	3	10	17	10	5	33	6	2	12	16	12	5
5	21	42	7	7	5	16	4	3	66	10	8	4
6	46	24	5	10	25	21	3	9	41	13	7	20
7	20	22	7	8	30	19	4	9	27	7	5	32
8	24	27	15	8	16	16	6	10	16	6	3	11
9	19	4	38	8	22	8	5	12	6	14	5	14
10	24	10	11	4	30	8	7	12	6	19	17	11
11	13	6	11	5	11	10	5	9	16	10	11	4
12	11	7	5	12	10	48	27	5	12	4	7	5
13	11	4	6	11	4	20	41	5	20	24	30	3
14	16	7	10	8	4	16	11	29	8	17	11	4
15	9	14	4	15	5	7	12	18	18	16	10	5
16	7	11	8	11	3	5	9	33	17	10	6	3
17	12	8	5	8	7	20	9	13	15	14	8	6
18	4	11	4	9	4	13	12	5	22	15	12	7
19	7	9	21	9	3	8	12	35	14	14	41	4
20	10	5	53	5	13	8	12	29	6	3	11	15
21	8	5	103	8	7	5	10	23	16	5	5	27
22	7	4	11	5	6	4	28	13	17	8	6	11
23	7	5	12	4	7	13	17	9	13	4	4	17
24	18	6	17	5	5	12	7	17	8	4	10	12
25	12	5	21	8	12	12	18	18	9	6	6	26
26	5	8	30	9	21	16	14	19	4	6	8	12
27	19	10	33	5	13	15	15	17	4	20	12	37
28	60	14	61	5	18	13	13	6	4	8	35	30
29		6	17	4	13	5	17	4	11	37	7	19
30		7	42	3	10	11	10	5	3	52	46	14
31		10		7		36	32		6		22	8
Mean	15	11	21	9	11	14	13	13	14	15	13	14

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

University of Gottingen

Kp through January 31, 1986



P R I N C I P A L M A G N E T I C S T O R M S

JANUARY 1986

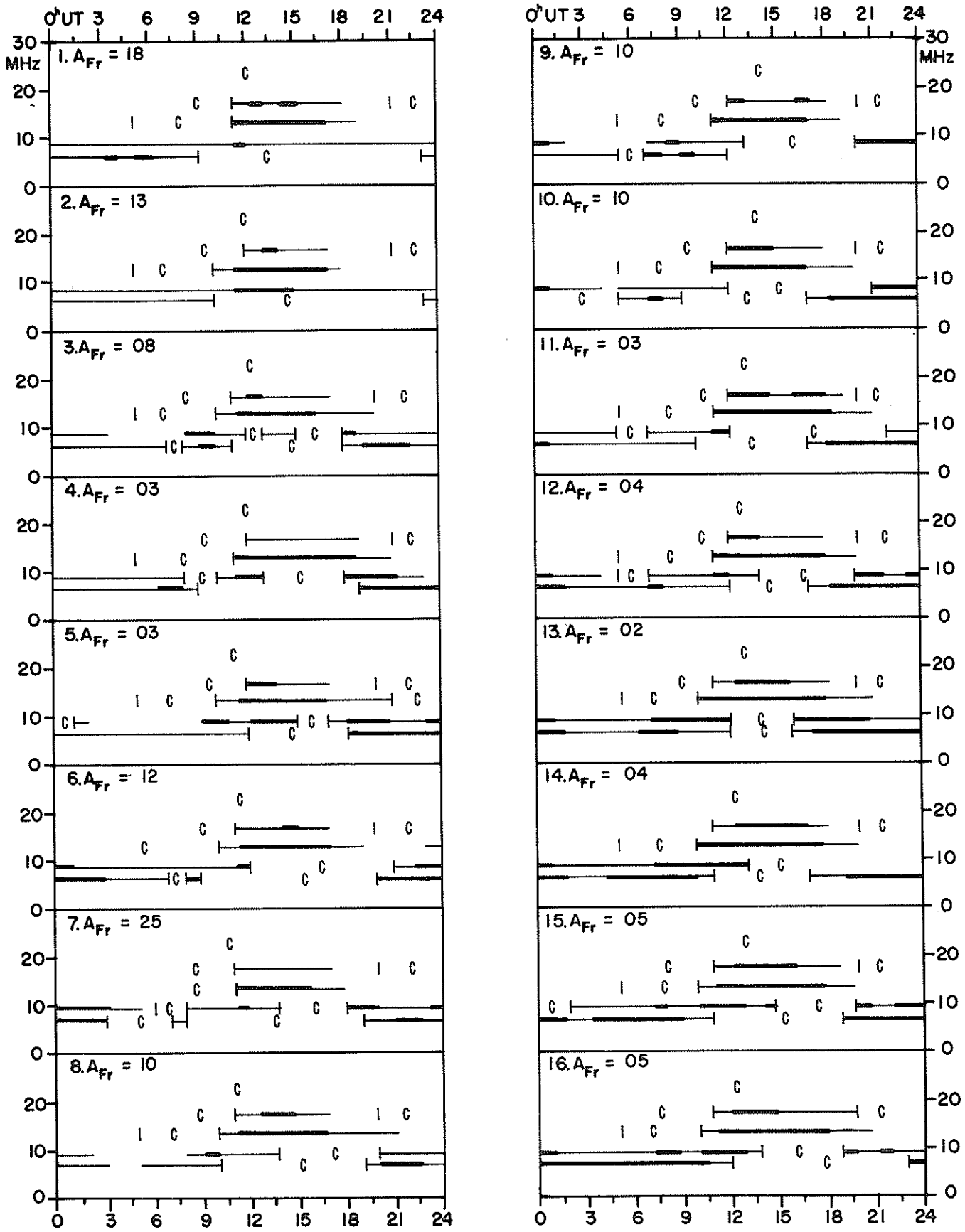
Sta	Geomag Lat	Commencement Day	Commencement Time (UT)	Type	SC Amplitudes D (Min)	SC Amplitudes H (Gamma)	SC Amplitudes Z (Gamma)	Maximum 3-Hour K Index Day(3-Hour Periods)	K	Ranges D (Min)	Ranges H (Gamma)	Ranges Z (Gamma)	End Day	End Hour (UT)
COL	64.6N	06	19--	..	..	..	..	07(4)	6	87	1060	480	08	04
WIT	54.2N	06	1931	SC*	1 *	- 39	..	06(8)	6	36	117	37	08	01
FRD	49.6N	06	17--	..	..	..	..	06(8) 07(1,2)	5	28	158	76	08	--
BJI	28.5N	06	17--	..	..	..	..	06(7)	5	8	106	16	07	19
HON	21.1N	06	1433	SC	..	11	3	06(8)	5	10	1443	38	07	17
JAI	17.3N	06	1430	SC	- 0.5	19	- 3			4	125	20	07	24
KRC	16.4N	06	1429	SC	- 1	26	10	06(7,8)	6	4	148	51	10	19
UJJ	13.5N	06	1430	SC	- 0.3	21	- 4			3	129	19	07	24
ABG	09.5N	06	1430	SC	- 0.5	18	- 4	06(7)	6	3	129	22	07	24
HYB	07.6N	06	1432	SC	- 0.3	19	- 1	06(7,8)	6	3	131	14	07	19
GUA	04.0N	06	1433	..	..	..	..	06(7)	5	--	110	30	07	18
TRD	01.1S	06	1430	SC	- 0.1	18	22			3	126	99	07	24
HER	33.7S	06	14--	..	..	..	..	06(7,8) 07(2)	5	22	102	138	07	14
CNB	43.9S	06	17--	..	..	..	..	06(7,8) 07(1)	5	11	121	47	07	15
KGL	56.5S	06	14--	..	..	..	..	06(8)	8	79	543	336	08	02
WIT	54.2N	09	1700	..	..	..	..	09(7)	6	24	200	35	10	06
HYB	07.6N	20	0100	..	..	..	..	20(4,5) 21(1)	4	3	46	9	21	03
HER	33.7S	20	20--	..	..	..	..	21(1)	5	18	54	78	21	03
WIT	54.2N	21	1300	..	..	..	..	21(6,7,8)	5	28	135	95	22	01
JAI	17.3N	21	1000	..	..	..	..			6	128	20	23	21
KRC	16.4N	21	08--	..	..	..	..	21(5,7)	5	5	114	40	25	01
UJJ	13.5N	21	1000	..	..	..	..			4	123	14	23	21
ABG	09.5N	21	1000	..	..	..	..	21(5,7) 23(6)	5	5	132	24	23	21
HYB	07.6N	21	0900	..	..	..	..	21(6)	6	4	119	9	22	22
TRD	01.1S	21	1000	..	..	..	..			3	147	79	23	21
HER	33.7S	21	13--	..	..	..	..	21(6)	5	21	99	122	22	01
COL	64.6N	25	08--	..	..	..	..	25(5)	6	95	920	370	26	16
WIT	54.2N	25	1400	..	..	..	..	25(7)	6	30	190	40	26	02
BJI	28.5N	25	0236	SC	0.1	11	..	25(3)	5	9	76	14	26	19
JAI	17.3N	25	0200	..	..	..	..			4	111	19	26	02
KRC	16.4N	25	0241	SC	- 1	17	10	25(7)	6	6	92	57	01	02
UJJ	13.5N	25	0200	..	..	..	..			3	113	13	26	02
ABG	09.5N	25	0200	..	..	..	..	25(7)	6	5	122	23	26	02
HYB	07.6N	25	0235	SC	- 0.5	14	- 1	25(7)	6	4	137	9	26	02
GUA	04.0N	25	0235	SC	..	06	..	25(3)	5	--	80	30	26	07
TRD	01.1S	25	0200	..	..	..	..			4	140	88	26	02
HER	33.7S	25	0235	SC	1	13	8	25(3,7)	5	33	95	95	25	24
COL	64.6N	27	03--	..	..	..	..	27(3,5)	7	327	2340	870	30	14
WIT	54.2N	27	0747	SC	3	- 20	..	27(7)	6	23	210	55	29	03
FRD	49.6N	27	02--	..	..	..	..	27(2,3,5,8) 28(1,2,6)	5	23	117	29	30	--
JAI	17.3N	27	0700	..	..	..	..			8	70	21	29	23
UJJ	13.5N	27	0700	..	..	..	..			6	68	21	29	23
ABG	09.5N	27	0700	..	..	..	..	27(7) 28(6)	5	6	74	27	29	23
HYB	07.6N	27	0200	..	..	..	..	27(5,6,7) 28(5,6)	5	5	94	19	28	22
GUA	04.0N	27	0252	..	..	..	..	27(5)	5	--	130	20	27	19
TRD	01.1S	27	0700	..	..	..	..			4	133	71	29	23
HER	33.7S	27	02--	..	..	..	..	27(5)	5	29	92	72	28	02
CNB	43.9S	27	03--	..	..	..	..	27(5)	5	17	142	41	28	24
KGL	56.5S	27	0631	SC	2	- 4	- 0	06(3,4,5,6,7,8) 07(1,2,5,6,7,8)	4	27	156	105	29	00

Stations Reporting:

ABG = ALIBAG
BJI = BEIJING
CNB = CANBERRA
COL = COLLEGE
FRD = FREDERICKSBURG
GUA = GUAM
HER = HERMANUS
HON = HONOLULU
HYB = HYDERABAD
JAI = JAIPUR
KRC = KARACHI
KGL = KERGUELEN
TRD = TRIVANDRUM
UJJ = UJJAIN
WIT = WITTEVEEN

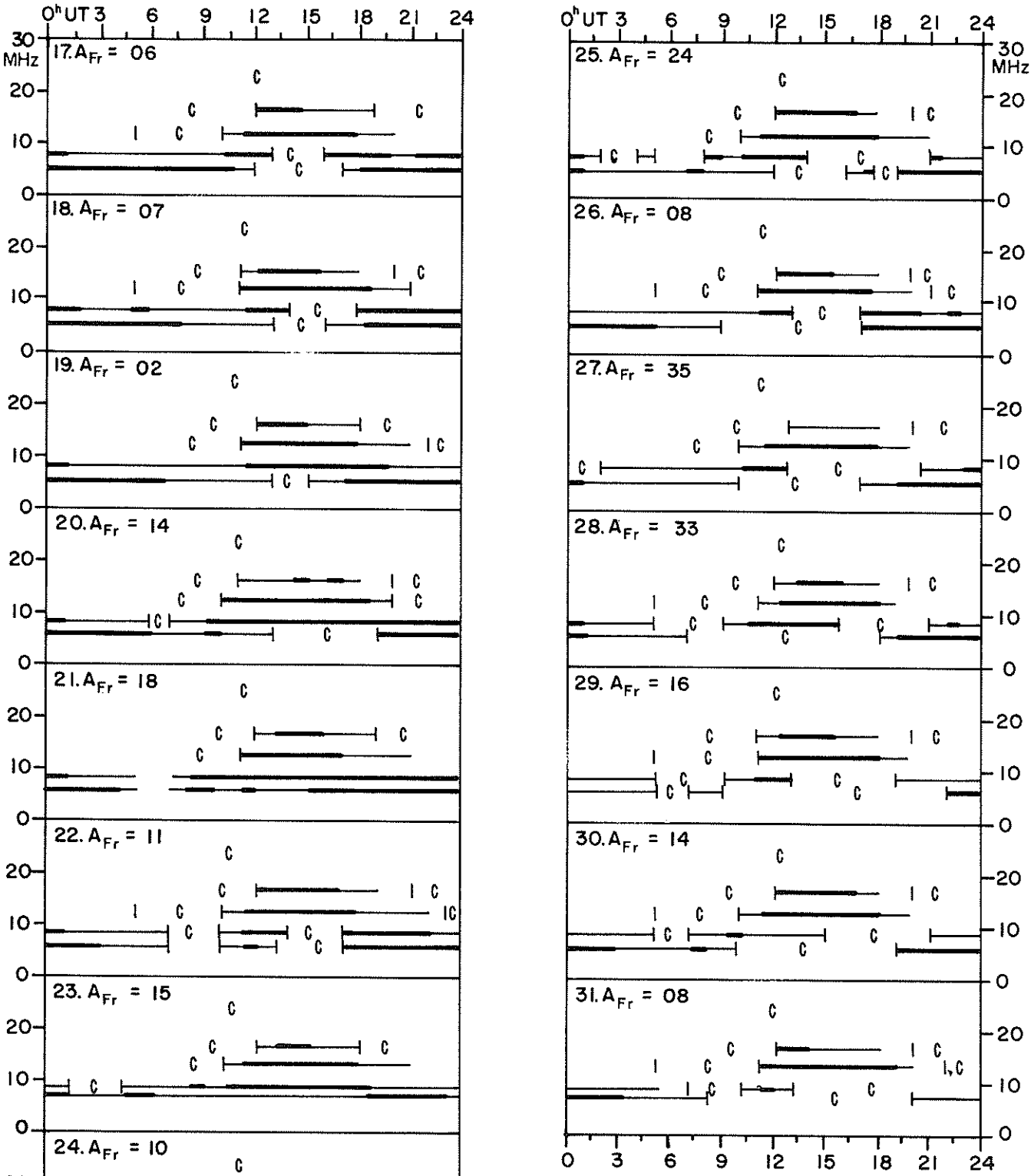
TRANSMISSION FREQUENCY RANGES -- NORTH ATLANTIC PATH

JANUARY 1986



TRANSMISSION FREQUENCY RANGES -- NORTH ATLANTIC PATH

JANUARY 1986



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

RADIO PROPAGATION QUALITY INDICES

JANUARY 1986

Day	Bracknell	Teheran	New York	Tokyo	Johannesburg	Canberra
1	4.7	4.5	3.5	6.5	4.3	4.6
2	4.3	1.3	3.5	6.3	4.3	3.7
3	4.7	4.5	3.0	6.6	4.6	3.9
4	4.7	6.2	5.1	5.5	5.1	3.9
5	4.4	3.4	5.6	7.2	6.0	3.8
6	4.4	5.2	6.1	6.5	3.7	4.6
7	4.5	7.6	4.3	6.6	4.6	4.9
8	4.5	7.2	4.4	6.1	6.5	5.0
9	4.6	4.8	5.6	8.7	3.1	5.7
10	4.3	6.1	5.7	7.7	4.4	5.7
11	4.3	4.6	6.0	7.4	5.1	4.2
12	5.5	9.1	5.2	6.1	5.1	2.2
13	5.5	5.1	6.4	6.8	5.4	5.1
14	4.9	6.7	6.5	4.1	4.9	5.4
15	6.2	5.5	7.9	7.0	5.8	6.9
16	6.6	3.1	7.2	5.3	4.2	6.6
17	6.6	1.6	7.9	6.0	4.6	6.1
18	5.4	6.7	7.4	6.0	6.1	7.4
19	5.7	1.7	7.5	4.9	5.7	5.8
20	6.8	5.7	8.6	5.1	5.7	7.1
21	8.1	7.1	7.9	7.6	6.4	6.4
22	8.0	7.6	6.4	5.3	7.7	5.7
23	5.8	5.5	5.1	5.3	7.0	6.7
24	7.8	6.0	6.4	4.9	5.8	7.2
25	7.2	2.2	6.4	4.3	7.3	7.1
26	5.5	5.6	5.0	3.5	6.9	6.2
27	6.8	7.6	4.7	2.4	7.3	6.3
28	6.5	3.8	5.0	0.9	6.8	5.4
29	5.4	2.6	4.6	1.3	5.4	5.6
30	5.1	2.9	4.6	1.3	7.4	5.7
31	5.0	4.3	4.2	0.8	5.8	4.7
Mean	5.6	5.0	5.7	5.3	5.6	5.5

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 499 Part I

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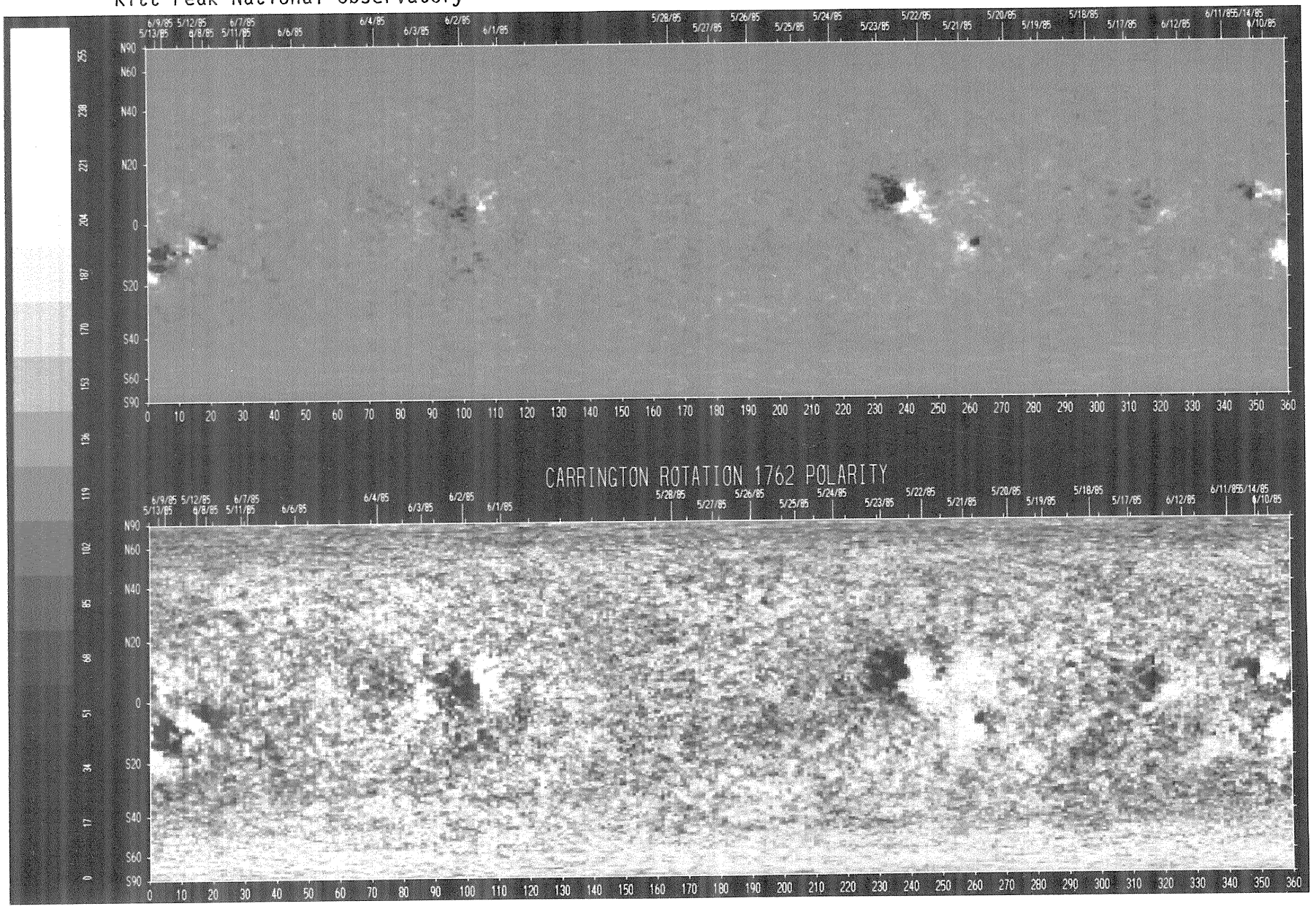
SOLAR MAGNETIC FIELD SYNOPTIC CHART

CARRINGTON ROTATION NUMBER 1762
(May 13 to June 10, 1985)

Kitt Peak National Observatory

Dates of Observations

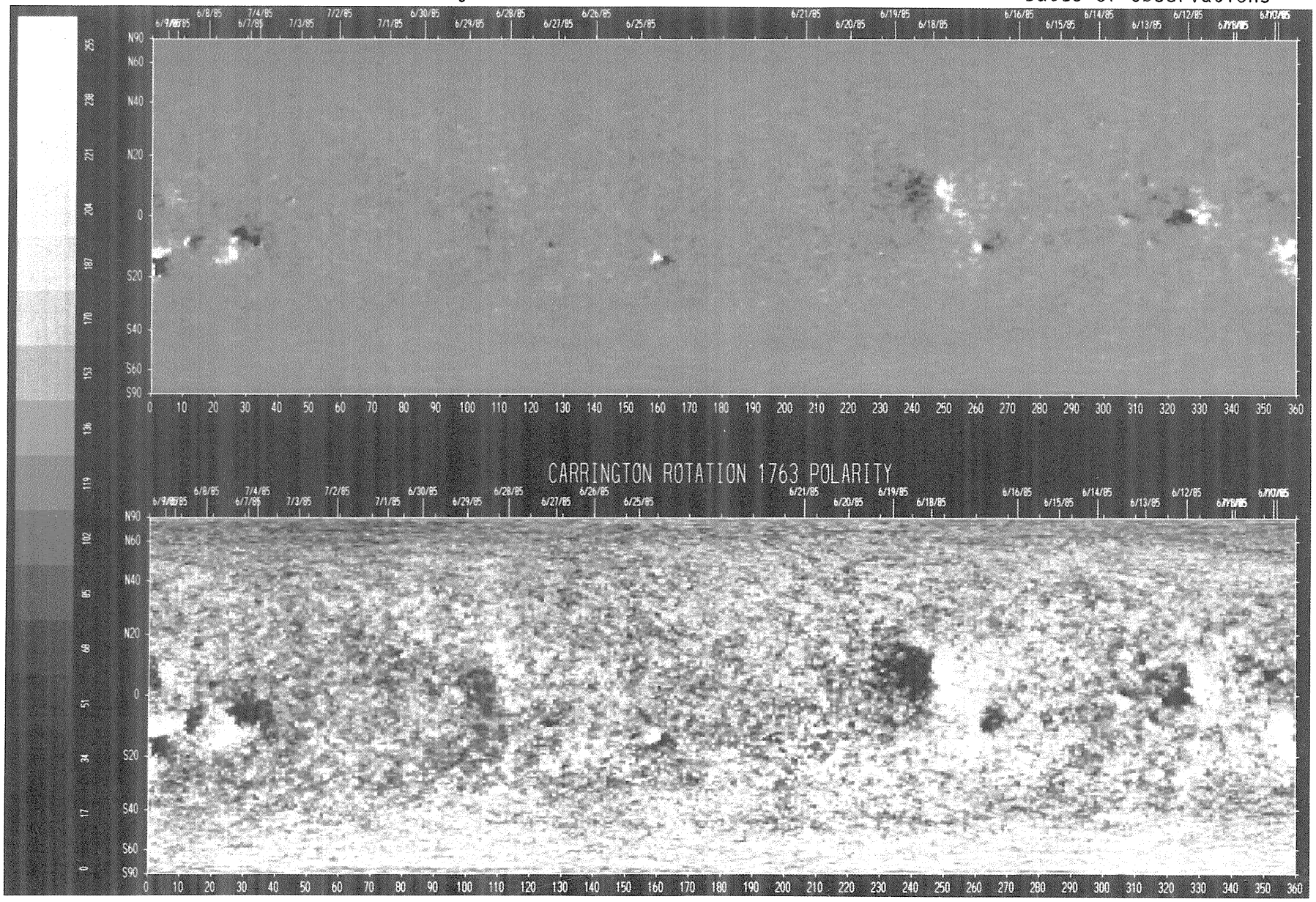


SOLAR MAGNETIC FIELD SYNOPTIC CHART

CARRINGTON ROTATION NUMBER 1763
(June 10 to July 7, 1985)

Kitt Peak National Observatory

Dates of Observations



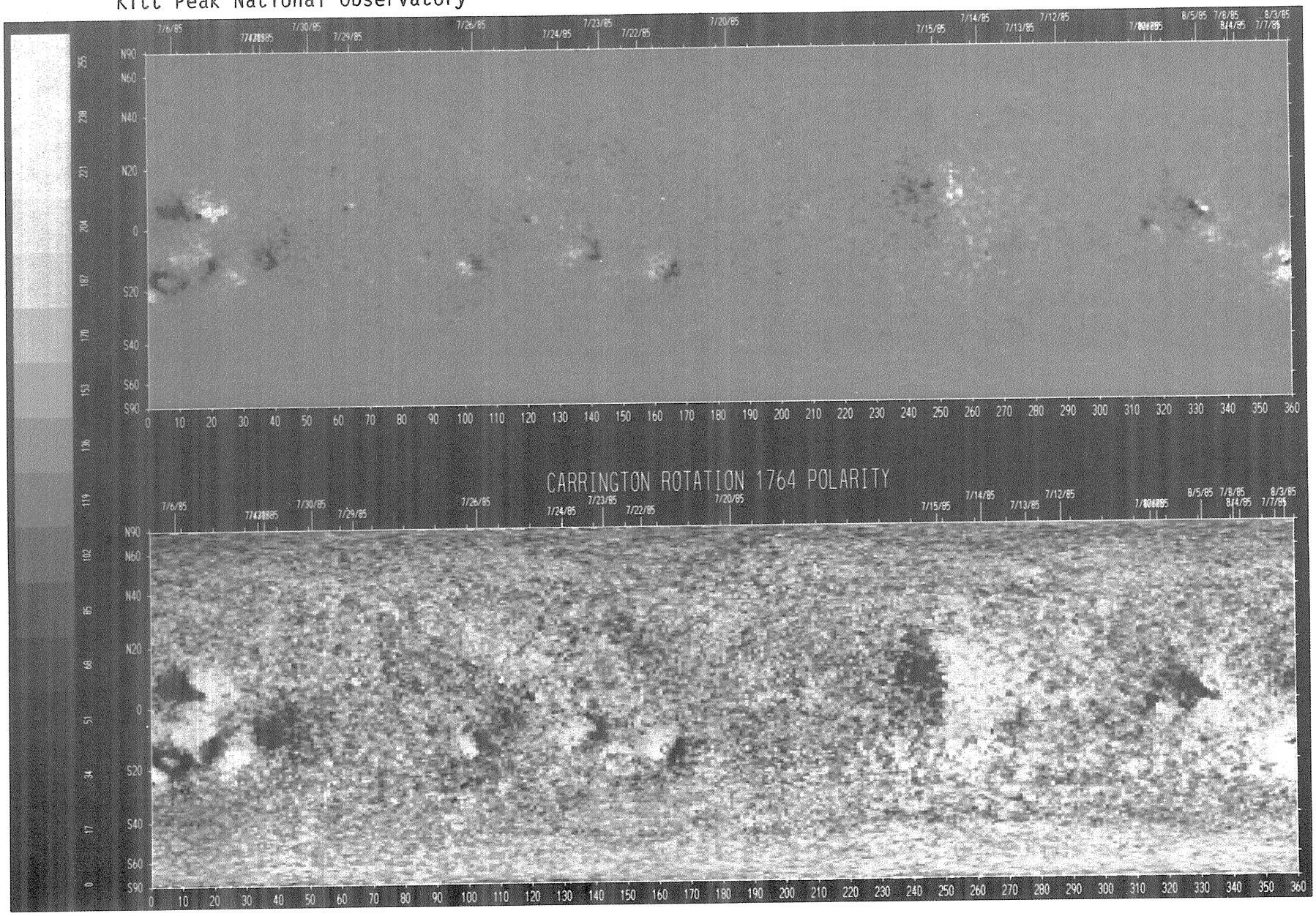
81
Late
Jun 85

SOLAR MAGNETIC FIELD SYNOPTIC CHART

CARRINGTON ROTATION NUMBER 1764
(July 7 to August 3, 1985)

Kitt Peak National Observatory

Dates of Observations

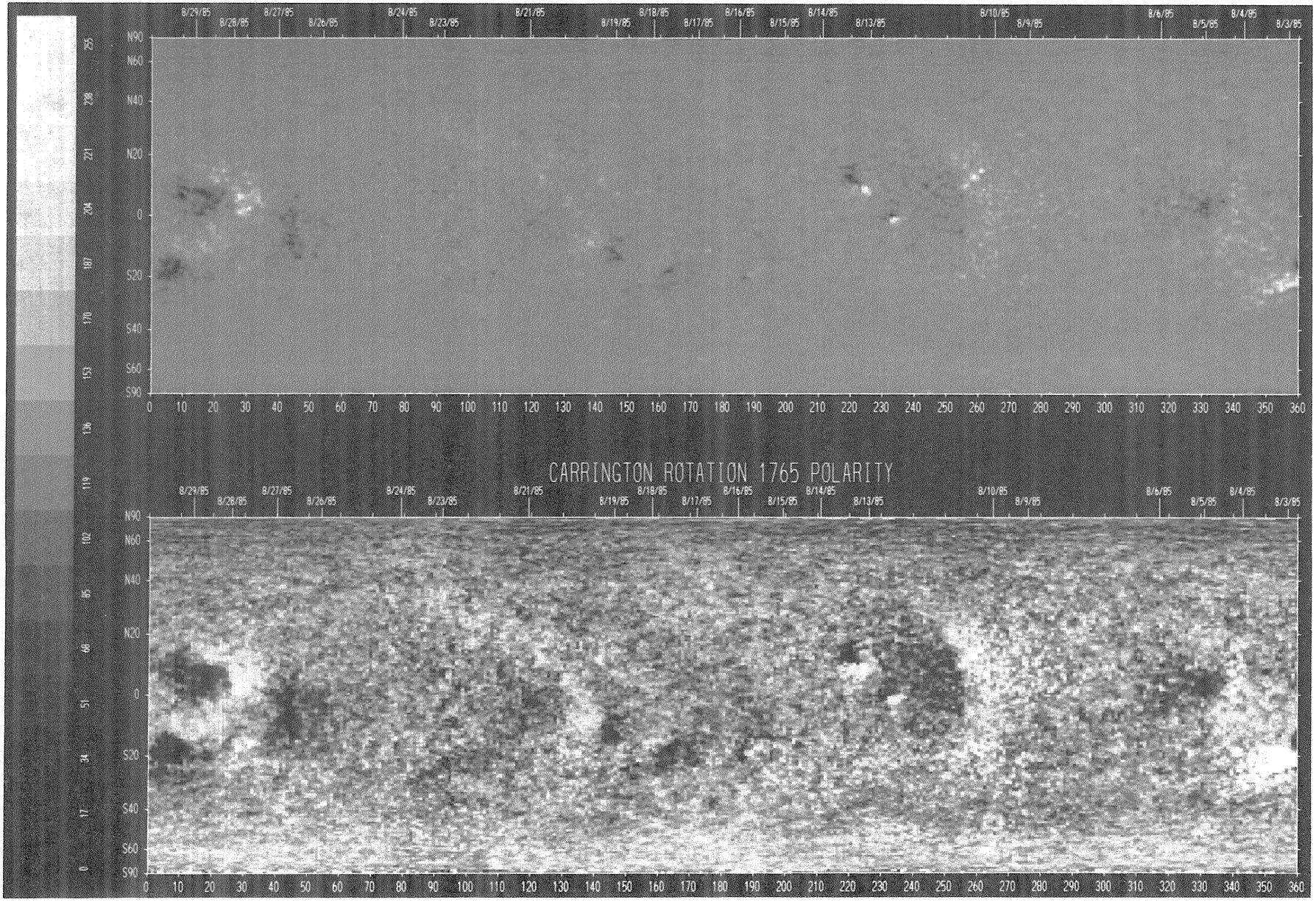


S O L A R M A G N E T I C F I E L D S Y N O P T I C C H A R T

CARRINGTON ROTATION NUMBER 1765
(August 3 to August 30, 1985)

Kitt Peak National Observatory

Dates of Observations



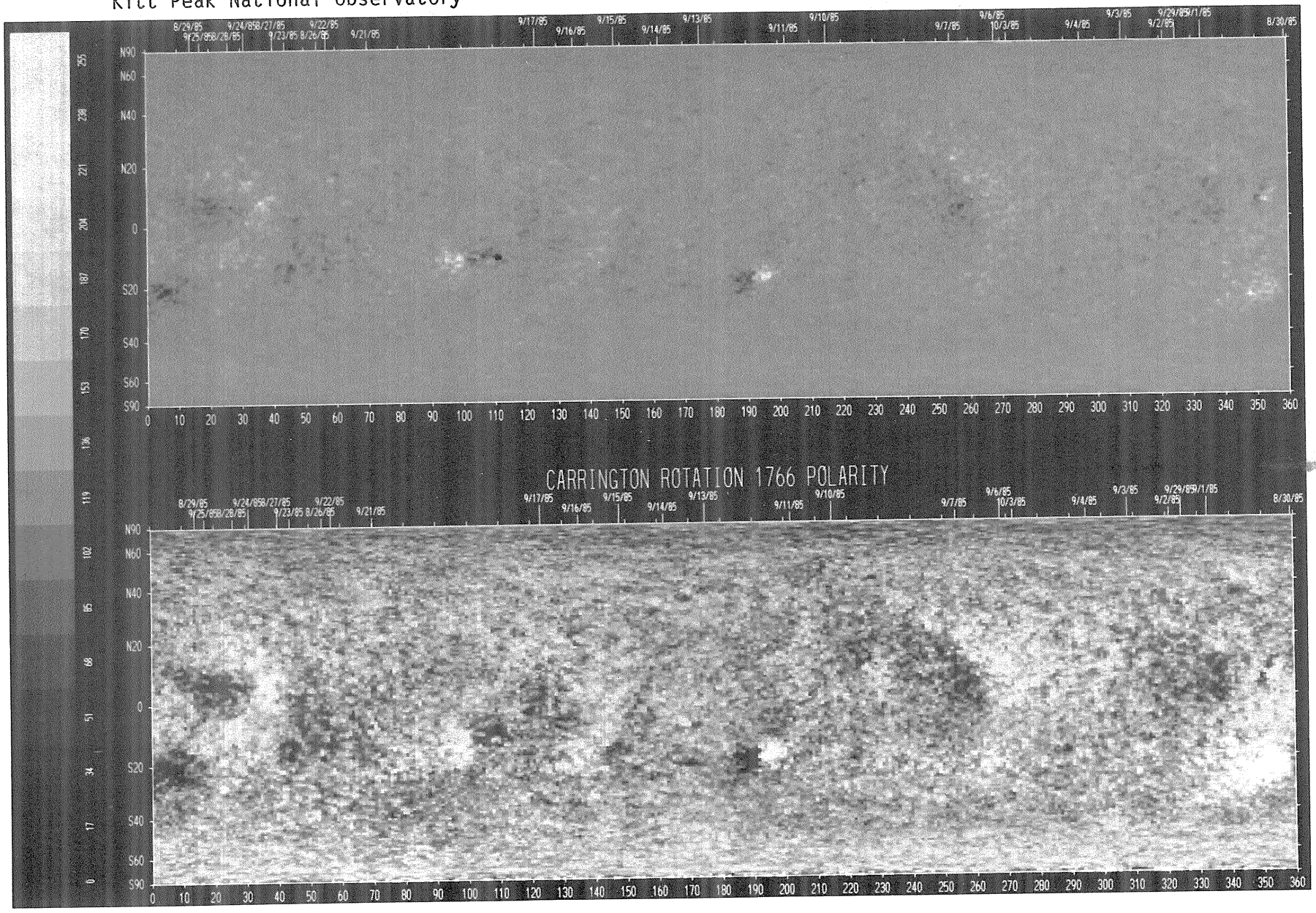
83
Late
Aug 85

SOLAR MAGNETIC FIELD SYNOPTIC CHART

CARRINGTON ROTATION NUMBER 1766
(August 30 to September 26, 1985)

Kitt Peak National Observatory

Dates of Observations

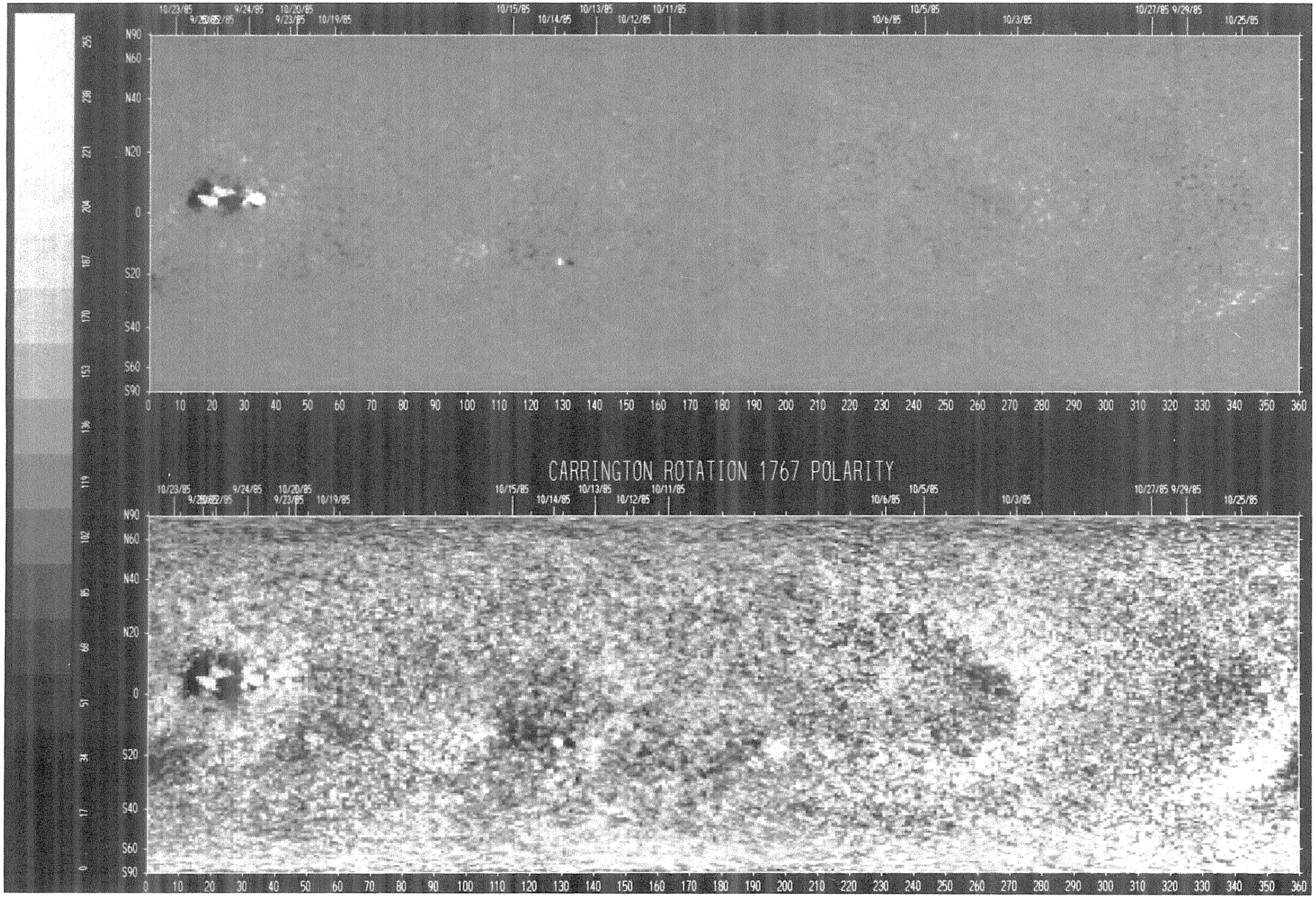


S O L A R M A G N E T I C F I E L D S Y N O P T I C C H A R T

CARRINGTON ROTATION NUMBER 1767
(September 26 to October 24, 1985)

Kitt Peak National Observatory

Dates of Observations



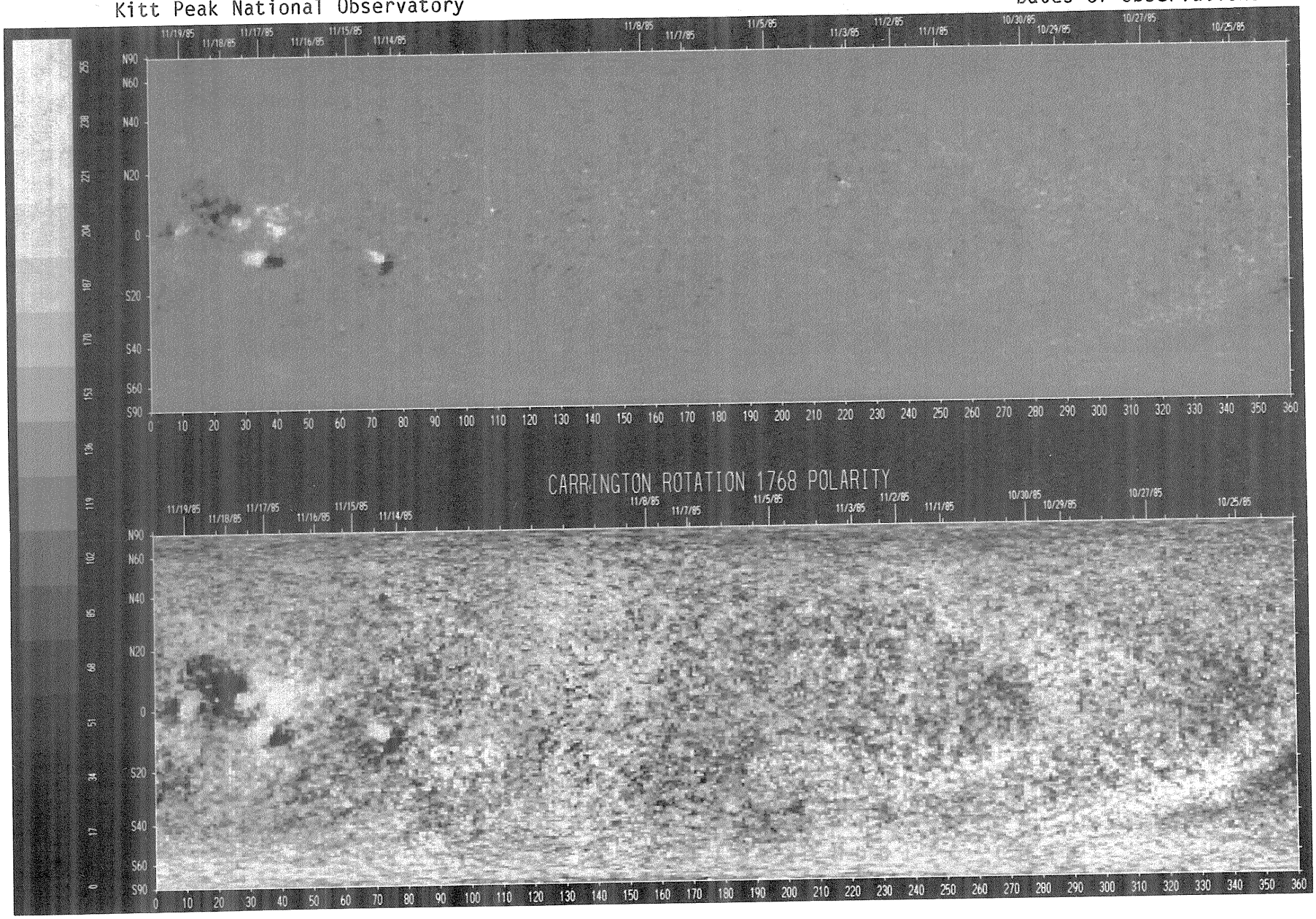
85
Late
Oct 85

SOLAR MAGNETIC FIELD SYNOPTIC CHART

CARRINGTON ROTATION NUMBER 1768
(October 24 to November 20, 1985)

Kitt Peak National Observatory

Dates of Observations

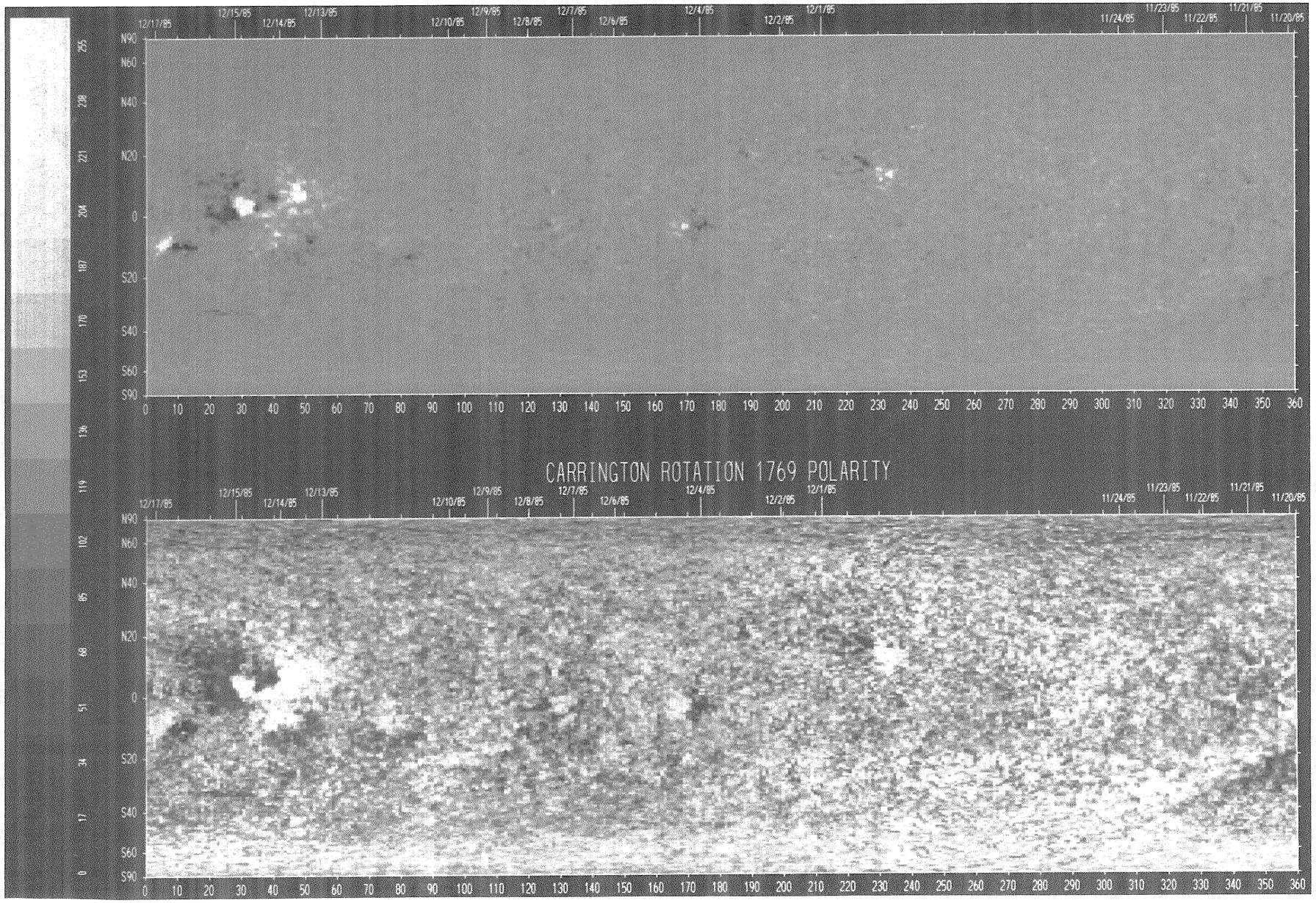


SOLAR MAGNETIC FIELD SYNOPTIC CHART

CARRINGTON ROTATION NUMBER 1769
(November 20 to December 17, 1985)

Kitt Peak National Observatory

Dates of Observations



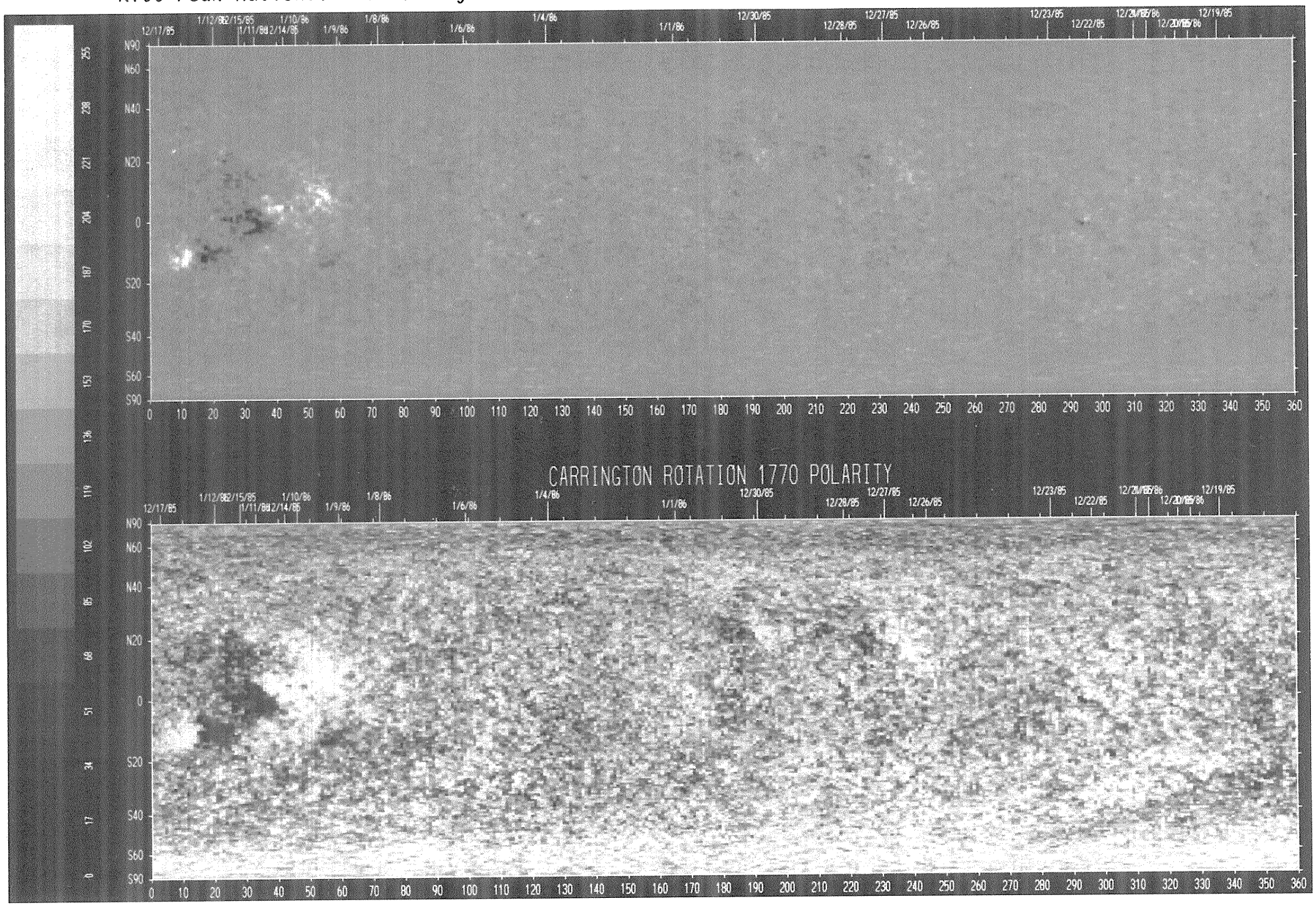
87
Late
Dec 85

SOLAR MAGNETIC FIELD SYNOPTIC CHART

CARRINGTON ROTATION NUMBER 1770
(December 17, 1985, to January 14, 1986)

Kitt Peak National Observatory

Dates of Observations

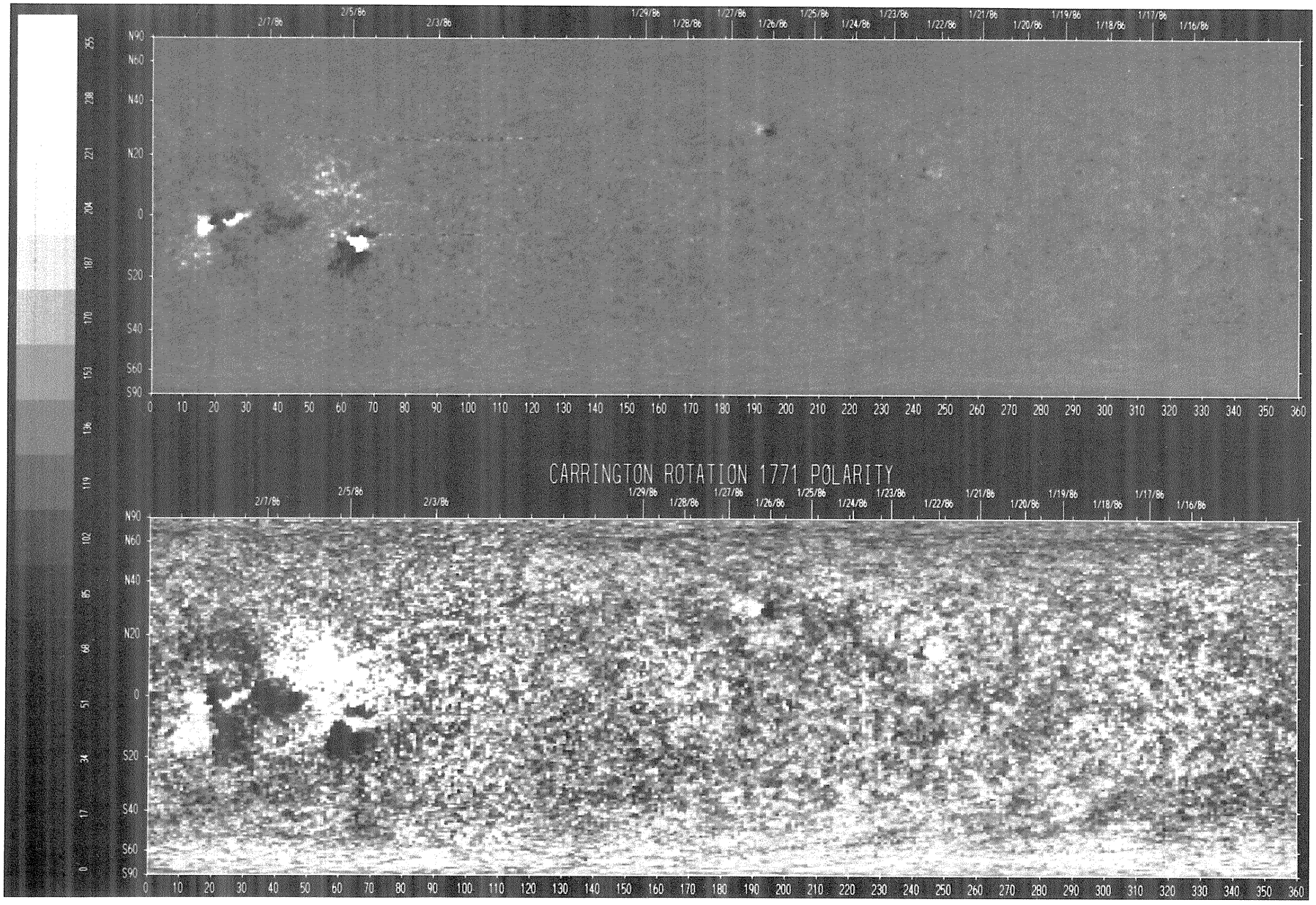


SOLAR MAGNETIC FIELD SYNOPTIC CHART

CARRINGTON ROTATION NUMBER 1771
(January 14 to February 10, 1986)

Kitt Peak National Observatory

Dates of Observations



89
Late
Jan 86

SOLAR RADIO EMISSION
SPECTRAL OBSERVATIONS

JUNE 1985

Day	Observation Start (UT)	Observation End (UT)	Sta	Decimetric Band Start (UT)	Decimetric Band End (UT)	Decimetric Band Int (1-3)	Metric Band Start (UT)	Metric Band End (UT)	Metric Band Int (1-3)	Dekametric Band Start (UT)	Dekametric Band End (UT)	Dekametric Band Int (1-3)	Spectral Type
02	2250	2400	CULG										
03	0000	0207	CULG										
	2240	2311	CULG										
05	2244	2400	CULG										
06	0000	0730	CULG										
	2030	2400	CULG										
07	0000	0713	CULG										
	2115	2400	CULG										
08	0000	0730	CULG				0021.5	0025.5	1				IIIG,V
			CULG				0029.5	0058.0	3	0034.0	0040.5	1	II
			CULG				0319.0	0319.5	2				IIIG,U
	2031	2400	CULG										
09	0000	0730	CULG	0119.0		1	0119.0		2				IIIB
	2032	2400	CULG				2228.5		1				IIIB
10	0000	0731	CULG				0208.0		2				IIIG
			CULG				0608.0	0608.5	1				IIIG,U
	2031	2400	CULG				2147.0		1				IIIB
			CULG				2329.0	2330.0	2				IIIG,U
			CULG				2355.5	2356.0	1				IIIG
11	0000	0720	CULG				0051.5		1				IIIB
			CULG	0302.0	0304.5		0259.0	0306.0					IIIS,W
			CULG				0546.5	0547.5	1				IIIG
	2032	2400	CULG				2212.5	2215.5	2				IIIG
12	0000	0700	CULG				0000.5	0007.0	2				II
	2102	2400	CULG										
13	0000	0705	CULG				0046.0	0046.5	2				IIIG
	2108	2400	CULG										
14	0000	0732	CULG										
	2032	2400	CULG										
15	0000	0732	CULG	0159.5	0201.5	1	0158.5	0202.0	1				IIIS
			CULG	0246.0	0246.5	1							IIIG
			CULG	0321.5	0322.0	1							IIIG
	2032	2400	CULG				2114.0	2119.5	1				IIIS
			CULG				2226.5		1				IIIB
16	0000	0730	CULG										
	2033	2400	CULG										
17	0000	0730	CULG				0014.0	0017.0	2				IIIG
			CULG				0017.0	0033.0	2				II
	2034	2400	CULG										
18	0000	0730	CULG										
	2034	2400	CULG										
19	0000	0730	CULG										
	2034	2400	CULG										
20	0000	0733	CULG										
	2034	2400	CULG										
21	0000	0709	CULG										
	2034	2400	CULG										
22	0000	0734	CULG										
	2034	2400	CULG										
23	0000	0734	CULG										
	2034	2400	CULG										

SOLAR RADIO EMISSION
SPECTRAL OBSERVATIONS

JUNE 1985

Day	Observation Start (UT)	Observation End (UT)	Sta	Decimetric Band Start (UT)	Decimetric Band End (UT)	Decimetric Band Int (1-3)	Metric Band Start (UT)	Metric Band End (UT)	Metric Band Int (1-3)	Dekametric Band Start (UT)	Dekametric Band End (UT)	Dekametric Band Int (1-3)	Spectral Type
24	0000	0734	CULG										
	2034	2400	CULG										
25	0000	0734	CULG										
	2035	2400	CULG										
26	0000	0627	CULG										
	2036	2400	CULG				2211.0		1				IIIB
			CULG				2246.5		1				IIIB
			CULG				2248.0	2248.5	1	2248.5		1	IIIG
			CULG				2332.0		1				IIIB
27	0000	0735	CULG				0022.0						IIIB,W
			CULG				0027.0						IIIB,W
			CULG				0331.5						IIIB,W
			CULG				0434.5	0435.0					IIIB,W
			CULG				0605.5						IIIB,W
	2035	2400	CULG				2113.0	2114.0	1				IIIG
			CULG				2119.0	2124.5	1				IIIS
			CULG				2121.5	2129.5	2				IIIN
			CULG				2248.0		1				IIIG
			CULG				2310.5	2312.0	3				IIIG,V
			CULG				2313.0		1				IIIB
28	0000	0735	CULG				0215.5		1				IIIB
	2035	2400	CULG				2106.5	2235.5	1				IIIN
			CULG				2138.5	2139.0	2				IIIB,U
29	0000	0735	CULG										
	2035	2400	CULG										
30	0000	0735	CULG										
	2035	2400	CULG				2107.0	2109.0	1				UNCLF

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

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

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

SOLAR RADIO EMISSION
SPECTRAL OBSERVATIONS

JULY 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	0000	0734	CULG				0132.5		2					III B
			CULG				0310.0	0310.5	1					III B
	2039	2400	CULG											
02	0000	0736	CULG											
	2036	2400	CULG	2118.0	2118.5	1	2116.0	2119.0	2					III G
			CULG				2119.5	2122.5	3	2119.5	2122.5	3		III G,V
			CULG	2119.5	2130.0	1								CONT
			CULG				2120.0	2150.5	3	2126.0	2137.0	2	II	,H
			CULG				2120.0	2217.0	2				IV	
			CULG							2122.0	2150.0			SWF,W
			CULG				2128.5	2200.0	2					P
			CULG				2223.5	2224.0	1					III G
			CULG				2337.0	2337.5	1					III G
03	0000	0736	CULG											
	2036	2400	CULG											
04	0000	0736	CULG											
	2036	2400	CULG											
05	0000	0736	CULG											
	2035	2400	CULG											
06	0000	0659	CULG				0352.0	0652.0	1					III G
			CULG				0426.0		1					III G
	0038	2400	CULG	2351.0		1								III G
07	0000	0736	CULG	0002.5	0658.5	1	0045.5	0244.0	1					IN
			CULG	0222.0	0222.5	1	0222.5		1					III G
	2037	2400	CULG	2119.5		1								III B
			CULG	2234.0		1								I
			CULG	2249.0		1								I
08	0000	0736	CULG	0028.0	0058.0	1								IN
			CULG				0412.0	0608.0	1					IN
			CULG				0608.0	0708.5	1					IS
	2037	2400	CULG	2228.0	2326.0	1								IN
09	0000	0737	CULG	0031.0	0032.0	1								I
			CULG				0129.5	0130.0	2					III B,U
			CULG	0139.5	0200.0	1								CONT
			CULG	0146.0		1								III G
			CULG	0149.0	0217.0	2								CONT
			CULG							0150.0	0220.0	1		SWF
			CULG				0152.5	0154.5	2	0154.0	0154.5	1		III G,Z
			CULG				0154.5	0221.0	3	0157.5	0222.5	3	II	,H
			CULG	0200.0	0705.0	2	0200.0	0656.0	2				IV	
			CULG	0212.5	0342.0	2								DCIM,N
			CULG	0310.5	0311.0	2								UNCLF
			CULG				0351.5	0457.0	2					III S
			CULG	0425.5	0631.5	1	0344.0	0705.0	1					IS,C,DC
			CULG				0457.0	0542.0	2					III N
			CULG				0457.0	0646.0	1					III S
			CULG				0515.0	0516.0	1					III G
			CULG	0517.0	0517.5	1	0517.0	0517.5	1					III G
			CULG	0624.0	0625.0	1								DCIM
	0037	2400	CULG	2136.0	2400.0	1								IN
			CULG				2314.5		1					III B
10	0000	0737	CULG	0000.0	0458.0	1								IN
			CULG	0458.0	0705.0	1	0455.5	0552.0	1					IS,C
			CULG				0516.0		1					III B
			CULG				0549.0	0653.0	1					III N
			CULG				0552.0	0708.5	2					IS,C,SCINT
			CULG	0557.0	0539.5	1								DCIM
			CULG	0604.5	0607.5	2								DCIM,CONT
			CULG				0637.0	0646.0	2					III N
	2037	2400	CULG	2141.0	2307.0	1								IS
			CULG	2307.0	2400.0	1								IN
			CULG	2357.0	2335.7	2								III G
11	0000	0655	CULG	0000.0	0628.0	1								IN
			CULG	0004.0		1								III B
			CULG				0019.5		1					III B

SOLAR RADIO EMISSION
SPECTRAL OBSERVATIONS

JULY 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
11			CULG				0354.5	0355.0	1				I
			CULG				0442.0		1				IIIB
			CULG	0613.0		1							IIIG
	2040	2400	CULG	2112.0	2400.0	1							IS
12	0000	0737	CULG	0000.0	0010.5	1							IS
			CULG	0010.5	0700.0	1							IN
			CULG				0528.5		1				IIIB
	2037	2400	CULG				2152.0		1				IIIG
13	0000	0737	CULG				0515.5	0516.5	1				IIIG
	2037	2400	CULG										
14	0000	0737	CULG				0028.5	0027.0	1				IIIB
	2038	2400	CULG										
15	0000	0738	CULG										
	2038	2400	CULG				2343.0	2343.5	1				IIIG
16	0000	0725	CULG										
	2040	2400	CULG										
17	0000	0738	CULG										
	0000	0738	CULG	0325.5	0326.0	1	0325.5	0405.5	2				II
			CULG							0328.0	0338.0	1	IS
	2038	2400	CULG										
18	0000	0738	CULG				0238.5	0239.0	1				IIIG
	2038	2400	CULG										
19	2038	2400	CULG				2351.5	2400.0	2				II
20	0000	0738	CULG				0000.0	0026.0	1				II
	2038	2400	CULG										
21	0000	0658	CULG										
	2040	2400	CULG										
22	0000	0738	CULG										
	2038	2400	CULG										
23	0000	0738	CULG										
	2038	2400	CULG										
24	0000	0738	CULG										
	2038	2400	CULG										
25	0000	0738	CULG										
	2038	2400	CULG										
26	0000	0707	CULG										
	2038	2400	CULG				2234.0		1				IIIB
			CULG				2236.5		1				IIIB
27	0000	0738	CULG										
	2038	2400	CULG										
28	0000	0738	CULG										
	0038	2400	CULG										
29	0000	0738	CULG	0103.5	0707.5	1							IN
			CULG				0234.5	0235.0	1				IIIB
			CULG	0606.5	0607.5	2	0606.5	0607.0	3	0607.0	0607.5	2	IIIG,V
			CULG				0628.0		1				IIIB
	2038	2400	CULG	2103.5	2350.0	1							IN
			CULG				2152.0		1				IIIB
			CULG				2153.5		1				IIIB
30	0000	0738	CULG	0021.0	0715.5	1							IN
	2038	2400	CULG										
31			CULG	0536.0	0537.5	2	0536.0	0537.5	3	0536.5	0537.0	1	IIIG,V
			CULG				0542.0	0543.0	1				II
	0000	0633	CULG	0833.5	0336.5	1							IIIG
	2040	2400	CULG										

SOLAR RADIO EMISSION
SPECTRAL OBSERVATIONS

AUGUST 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	0000	0738	CULG	0426.0		1							I
	2038	2400	CULG										
02	0000	0738	CULG	0414.5	0424.0	1							IN
	2038	2400	CULG	2059.5	2209.5	1							IN
			CULG	2140.0	2206.0	1							IIIN
03	0000	0738	CULG	0153.0		1							I
	2038	2400	CULG				2052.5	2217.0	1				IS
			CULG	2119.5	2328.0	1	2217.0	2400.0	1				IN
04	0000	0738	CULG				0002.5	0015.5	1				IN
			CULG	0216.0		1							I
			CULG	0342.0		1							I
			CULG	0613.0	0620.5	1							IS
05	0000	0625	CULG										
	2038	2400	CULG										
	2040	2400	CULG										
06	0000	0737	CULG										
	2038	2400	CULG	2058.5	2117.5	1	2103.5	2108.6	1				IIIN
			CULG	2229.0	2229.5	2	2229.0	2229.5	2				IIIG
07	0000	0737	CULG	0236.5	0137.0	1							DCIM
			CULG	0309.0	0312.0	1							DCIM
			CULG				0309.5	0310.0	1				IIIB
			CULG	0310.5		1							IIIB
			CULG	0348.0	0348.5	1							DCIM
			CULG	0535.0	0535.5	1							IIIG
	2037	2400	CULG										
08	0000	0737	CULG										
	2037	2400	CULG	2125.0	2126.0	1							DCIM
			CULG	2330.5	2333.0	1							IIIS
09	0000	0737	CULG	0132.0		1	0132.0		1				I
			CULG	0407.0		1	0407.0	0407.5	2				IIIB,V
			CULG				0635.5	0636.5	1				IIIG
	2036	2400	CULG										
10	0000	0655	CULG										
	2110	2400	CULG										
11	0000	0736	CULG										
	2036	2400	CULG										
12	0000	0736	CULG										
	2037	2400	CULG										
13	0000	0736	CULG										
	2036	2400	CULG										
14	0000	0736	CULG										
	2036	2400	CULG										
15	0000	0736	CULG										
	2036	2400	CULG										
16	0000	0730	CULG										
	2038	2400	CULG										
17	0000	0736	CULG										
	2036	2400	CULG										
18	0000	0736	CULG										
	2035	2400	CULG										
19	0000	0735	CULG										
	2035	2400	CULG										
20	0000	0735	CULG										

SOLAR RADIO EMISSION
SPECTRAL OBSERVATIONS

AUGUST 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
20	2035	2400	CULG										
21	0000	0650	CULG										
	2036	2400	CULG										
22	0000	0735	CULG										
	2035	2400	CULG										
23	0000	0735	CULG										
	2035	2400	CULG										
24	0000	0734	CULG										
	2034	2400	CULG										
25	0000	0734	CULG										
	2050	2400	CULG										
26	0000	0720	CULG										
	2035	2400	CULG										
27	0000	0733	CULG										
	2033	2400	CULG										
28	0000	0733	CULG										
	2033	2400	CULG										
29	0000	0732	CULG										
	2032	2400	CULG										
30	0000	0732	CULG										
	2032	2400	CULG										
31	0000	0705	CULG										
	2033	2400	CULG										

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

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

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

SOLAR RADIO EMISSION
SPECTRAL OBSERVATIONS

SEPTEMBER 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	0000	0731	CULG										
	0031	2400	CULG										
02	0000	0731	CULG										
	2031	2400	CULG										
03	0000	0731	CULG										
	2031	2400	CULG										
04	0000	0731	CULG										
	2031	2400	CULG										
05	0000	0657	CULG										
	2030	2400	CULG										
06	0000	0730	CULG										
	2030	2400	CULG										
07	0000	0730	CULG										
	2030	2400	CULG										
08	0000	0730	CULG										
	2030	2400	CULG										
09	0000	0730	CULG										
	2030	2400	CULG										
10	0000	0730	CULG										
	2030	2400	CULG										
11	0000	0730	CULG										
	2045	2400	CULG										
12	0000	0730	CULG										
	2030	2258	CULG										
13	2030	2400	CULG										
14	0000	0315	CULG										
	0000	0730	CULG										
	0603	0727	CULG										
	2030	2400	CULG										
15	0000	0730	CULG										
	2030	2400	CULG										
16	0000	0510	CULG										
	0643	0730	CULG										
	2030	2400	CULG										
17	0000	0730	CULG										
	2030	2400	CULG										
18	0000	0730	CULG				0309.0	0309.5	2				III G
	2030	2400	CULG				2211.0	2211.5	2	2211.0	2211.5	1	III G
19	2030	2400	CULG				2139.0	2142.5	3				III G
20	0000	0730	CULG										
	2030	2400	CULG										
21	0000	0730	CULG										
	2030	2400	CULG										
22	0000	0058	CULG										
23	0145	0730	CULG										
	2030	2400	CULG										
24	0000	0730	CULG										
	2030	2400	CULG										

SOLAR RADIO EMISSION SPECTRAL OBSERVATIONS

SEPTEMBER 1985

Observation			Decimetric Band			Metric Band			Dekametric Band			
Day	Start (UT)	End (UT)	Sta	Start (UT)	End (UT)	Int (1-3)	Start (UT)	End (UT)	Int (1-3)	Start (UT)	End (UT)	Int (1-3)	Spectral Type
25	0000	0720	CULG										
	2030	2400	CULG										
26	0000	0730	CULG										
	2030	2400	CULG										
27	0000	0730	CULG										
	2030	2400	CULG										
28	0000	0730	CULG										
	2030	2400	CULG										
29	0000	0730	CULG										
	2030	2400	CULG										
30	0000	0730	CULG										
	2030	2400	CULG										

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

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

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

SOLAR RADIO EMISSION SPECTRAL OBSERVATIONS

OCTOBER 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	0000	0730	CULG										
	2030	2400	CULG										
02	0000	0730	CULG										
	2030	2400	CULG										
03	0000	0730	CULG										
	2030	2400	CULG										
04	0000	0730	CULG										
	2030	2400	CULG										
05	0000	0730	CULG										
	2020	2400	CULG										
06	0000	0720	CULG										
	2020	2400	CULG										
07	0000	0720	CULG										
	2020	2400	CULG										
08	0000	0720	CULG										
	2020	2400	CULG										
09	0000	0720	CULG										
	2020	2400	CULG										
10	0000	0720	CULG										
11	0000	0720	CULG										
	2020	2400	CULG										
12	0000	0600	CULG										
	2020	2400	CULG										
13	0000	0720	CULG										
	2020	2400	CULG										
14	0000	0720	CULG				0607.0		2				III B
	2020	2400	CULG										
15	0000	0720	CULG										
	2020	2400	CULG										
16	0000	0720	CULG										
	2020	2400	CULG										
	2020	2400	CULG				2031.0		1				III B
			CULG				2103.0		1				III B
17	0000	0720	CULG										
	2020	2400	CULG										
18	0000	0720	CULG				0607.0		1				III B
	2020	2400	CULG				2230.0	2257.0	1				IS
19	0000	0720	CULG				0437.0	0438.0	1				III G
			CULG				0459.0	0459.5	2				III G
			CULG				0528.0	0529.0	2				III G
	2020	2400	CULG										
20	0020	0720	CULG										
	2020	2400	CULG				2105.0	2116.0	3				III GG
			CULG				2157.5	2158.0	2				III B
			CULG				2231.0	2232.0	2				III G
			CULG				2244.0	2329.0	1				III N
			CULG				2257.0	2258.0	2				III G
21	0000	0720	CULG				0004.5	0605.5	1				III N
			CULG				0133.5	0135.0	2				III G
			CULG				0353.0	0355.5	2				III G
			CULG				0450.0	0452.5	2				III G

SOLAR RADIO EMISSION
SPECTRAL OBSERVATIONS

OCTOBER 1985

Observation Day	Start (UT)	End (UT)	Sta	Decimetric Band Start (UT)	End (UT)	Int (1-3)	Metric Band Start (UT)	End (UT)	Int (1-3)	Dekametric Band Start (UT)	End (UT)	Int (1-3)	Spectral Type
21			CULG	0510.0	0522.0	1	0510.0	0542.5	2				IIIS
			CULG				0535.5	0542.0	3				IIIB,V
			CULG				0538.5	0539.0	3				IIIB,V
	2015	2400	CULG				2018.0		1				IIIB
			CULG				2044.0	2045.0	1				IIIG
			CULG				2113.5	2114.0	2				IIIG
			CULG				2232.0	2244.5	2				IIIS
			CULG				2236.0	2236.5	3				IIIB
			CULG				2240.0	2240.5	3				IIIG
			CULG	2314.0	2316.0	1	2309.0	2320.0	2				IIIS
22	0000	0720	CULG				0229.0	0229.5	2				IIIG
			CULG				0315.0	0720.0	1				IS,C
			CULG				0349.0		1				IIIB
			CULG				0502.0	0504.0	2				IIIG
			CULG				0535.5	0536.0	3				IIIG
			CULG				0635.0	0635.5	1				IIIB
	2020	2400	CULG				2054.0	2057.0	2	2054.5	2056.5	2	IIIG
			CULG				2102.5	2103.0	2				IIIG
			CULG				2255.5	2256.0	1				IIIG
			CULG				2259.0	2300.0	2				IIIG,U
			CULG				2305.5		1				IIIG
			CULG				2306.5		1				IIIG
23	0000	0716	CULG										
	2016	2400	CULG				2210.5	2212.0	2	2211.0	2213.0	2	IIIG,V
24	0000	0716	CULG				0043.5		2	0043.5	0044.0	1	IIIB
			CULG							0249.0		1	IIIB
			CULG							0253.0		1	IIIB
			CULG	0609.5	0610.0	1	0609.5	0610.0	1				IIIG
	2016	2400	CULG				2139.5	2140.5	2				IIIG
			CULG				2153.5	2154.0	2	2153.5	2154.0	2	IIIG
			CULG				2210.5	2214.5	2	2211.5	2214.5	2	IIIGG
			CULG				2219.0	2226.0	2	2219.0	2229.0	2	IIIN
25	0000	0716	CULG				0043.0	0043.5	2				IIIB,U
			CULG				0115.0	0133.5	1				IIIN
			CULG				0131.5		1	0131.5	0132.0	1	IIIB
			CULG				0141.5	0142.0	3	0141.5	0142.0	2	IIIB,V
	2016	2400	CULG				2023.0	2023.5	2				IIIG
			CULG				2203.0		1				IIIB
			CULG	2203.0	2205.0	1							DCIM
26	0000	0716	CULG				0449.5	0458.0	1				IN
			CULG				0501.0	0506.5	2				IIIN
	2016	2400	CULG				2265.0		1				IIIB
27	0000	0705	CULG										
	2020	2400	CULG										
			CULG				2327.5	2328.0	2	2328.0		1	IIIB
28	0000	0716	CULG										
	2020	2400	CULG										
29	0000	0716	CULG										
	2020	2400	CULG										
30	0000	0730	CULG										
	2020	2400	CULG										
31	0000	0443	CULG										

SOLAR RADIO EMISSION SPECTRAL OBSERVATIONS

NOVEMBER 1985

Observation Day	Start (UT)	End (UT)	Sta	Decimetric Band Start (UT)	End (UT)	Int (1-3)	Metric Band Start (UT)	End (UT)	Int (1-3)	Dekametric Band Start (UT)	End (UT)	Int (1-3)	Spectral Type
18	0514	0717	CULG										
	2017	2400	CULG				2328.0		2	2328.0		2	IIIB
19	0000	0717	CULG										
	2017	2400	CULG										
20	0000	0717	CULG										
	2017	2400	CULG										
21	0000	0717	CULG										
	2017	2400	CULG										
22	0000	0717	CULG										
29	2047	2400	CULG										
30	0000	0721	CULG				0213.5		1				IIIB
	2024	2400	CULG										

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N = Intermittent activity in this period
U = U-shaped burst of Type III

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

SOLAR RADIO EMISSION SPECTRAL OBSERVATIONS

DECEMBER 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	0000	0721	CULG										
	2021	2400	CULG										
02	0000	0721	CULG										
	2021	2400	CULG										
03	0000	0722	CULG										
	2022	2400	CULG										
04	0000	0249	CULG										
	2318	2400	CULG										
05	0000	0722	CULG										
	2022	2400	CULG										
06	0000	0723	CULG				0013.0						III B,W
	2023	2400	CULG										
07	0000	0724	CULG										
	2024	2400	CULG										
08	0000	0724	CULG										
	2024	2400	CULG										
09	0000	0722	CULG										
10	0000	0725	CULG	0501.5		1	0502.0		1				III B
	2025	2400	CULG										
	2027	2400	CULG										
11	0000	0725	CULG										
	2230	2400	CULG										
12			CULG	0023.5		1	0033.0	0035.0	1				III G
	0000	0726	CULG	0031.0		1	0031.0		1				III B,U
	2152	2400	CULG				2253.0	2253.5	1				I
			CULG	2301.0	2301.5	1							I
			CULG				2304.5	2305.5	1				III G
13	0000	0726	CULG										
	2026	2400	CULG										
14	0000	0132	CULG										
	2030	2400	CULG										
15	0000	0727	CULG	0605.5	0606.5	2							III S
			CULG	0607.5		1	0607.5		1				III B
	2027	2400	CULG	2142.0		1							III G
			CULG				2156.5		1				III G
			CULG	2201.0	2201.5	1							DC IM
			CULG	2204.5	2205.0	1	2204.5	2205.0	2				III G
			CULG	2215.5	2217.5	3	2216.0	2217.0	2				III G
16	0000	0728	CULG	0225.0	0226.0	1							DC IM
			CULG	0228.0		1							DC IM
			CULG	0258.0	0300.0	1							DC IM
			CULG	0349.5	0352.0	2							DC IM
			CULG				0351.0		1				III B
			CULG	0418.0	0419.0	1							III G
	2028	2400	CULG				2243.5		2				III B
17	0000	0728	CULG										
	2027	2400	CULG										
18	0000	0729	CULG										
	2029	2400	CULG										
19	0000	0637	CULG										
20	0030	0729	CULG										
	2030	2400	CULG										

SOLAR RADIO EMISSION SPECTRAL OBSERVATIONS

DECEMBER 1985

Observation				Decimetric Band			Metric Band			Dekametric Band			
Day	Start (UT)	End (UT)	Sta	Start (UT)	End (UT)	Int (1-3)	Start (UT)	End (UT)	Int (1-3)	Start (UT)	End (UT)	Int (1-3)	Spectral Type
21	0000	0730	CULG										
	2031	2400	CULG										
22	0000	0731	CULG										
	2032	2400	CULG										
23	0000	0732	CULG										
	2031	2400	CULG										
24	0000	0732	CULG										
	2031	2227	CULG										
26	2303	2400	CULG										
27	0000	0733	CULG										
	2033	2400	CULG										
28	0000	0733	CULG										
	2034	2400	CULG										
29	0000	0734	CULG										
	2035	2400	CULG										
30	0000	0520	CULG										

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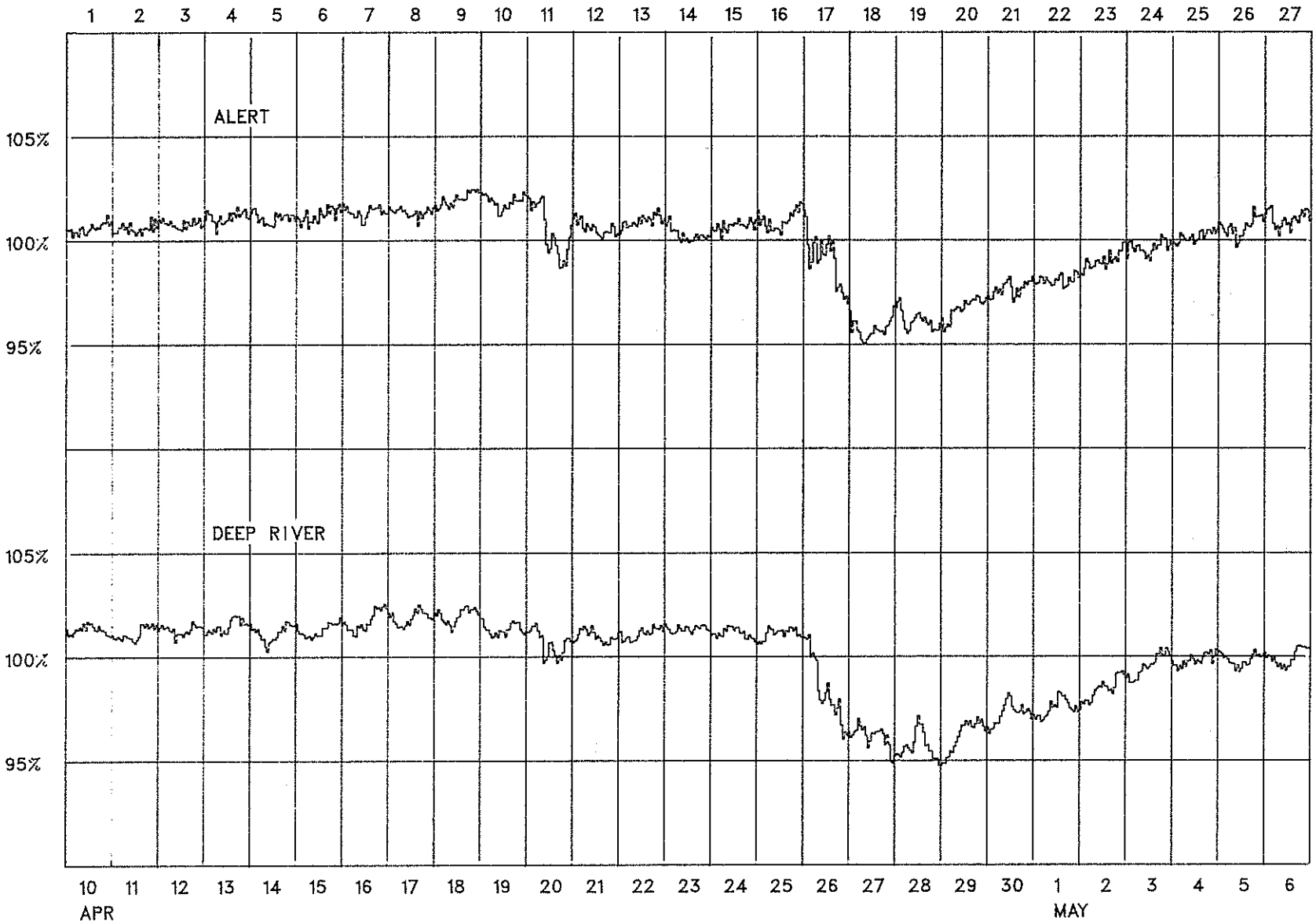
N = intermittent activity in this period
U = U-shaped burst of Type III

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

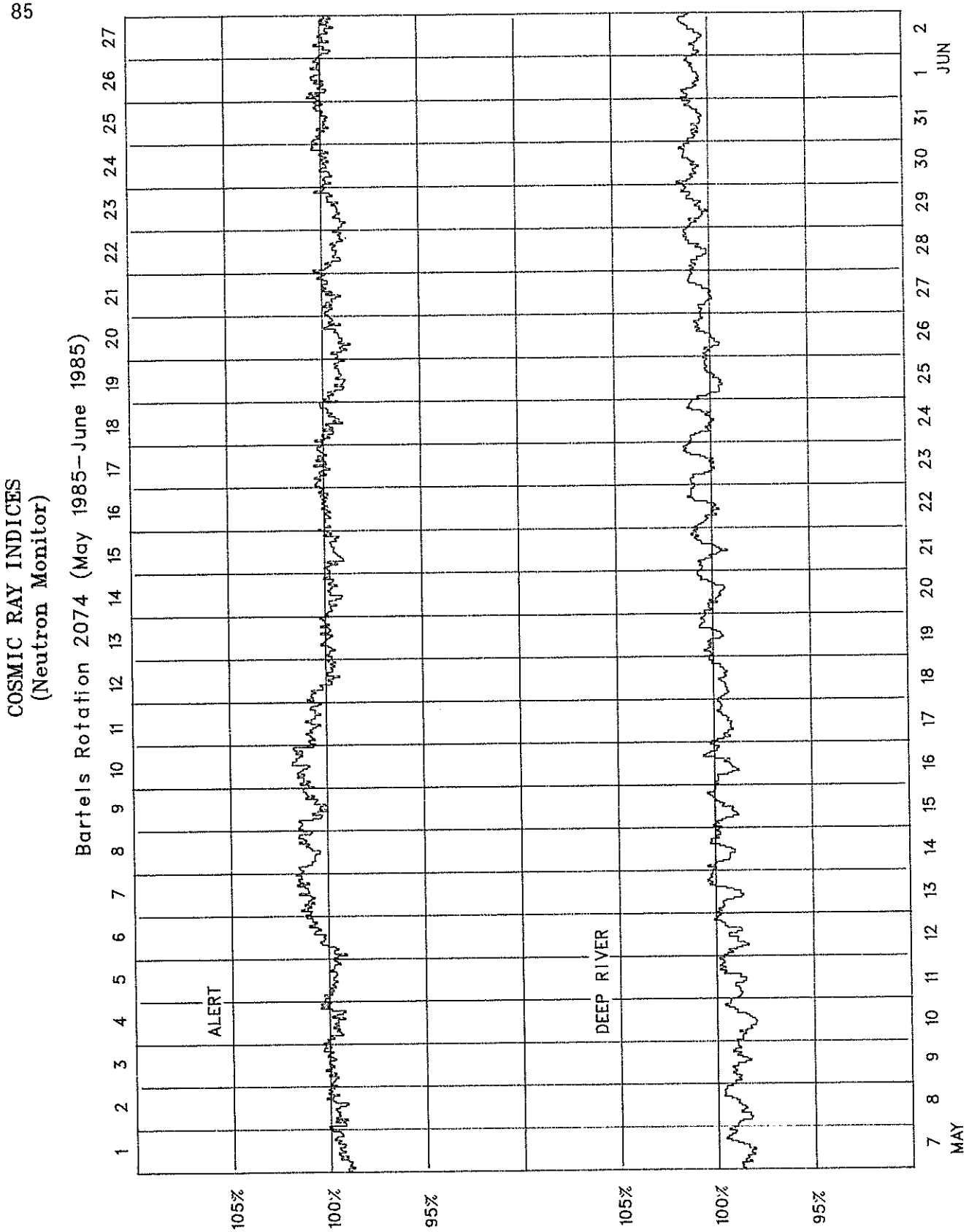
COSMIC RAY INDICES
(Neutron Monitor)

Bartels Rotation 2073 (April 1985–May 1985)



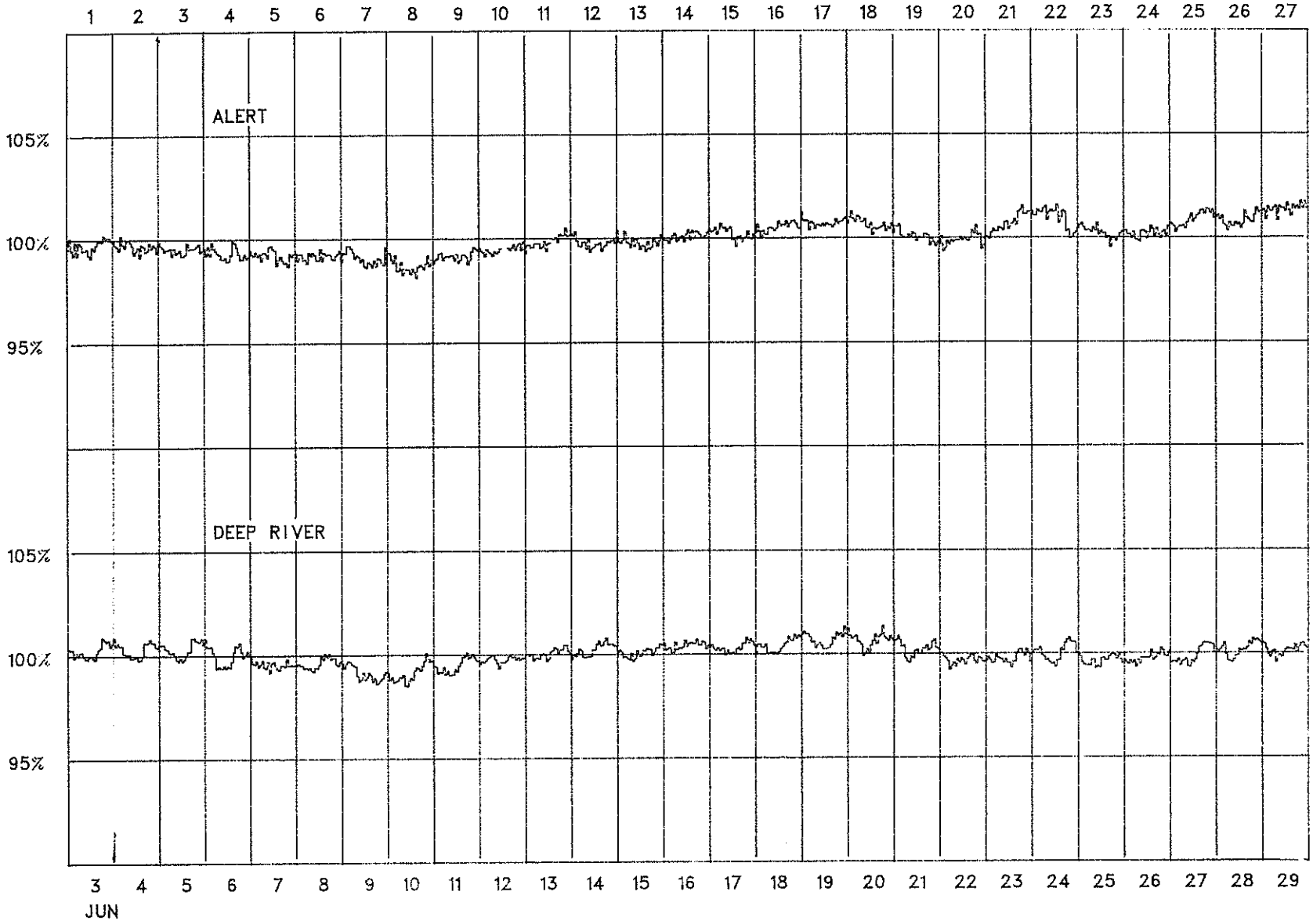
103
Late
Apr-May 85

104
Late
May-Jun 85



COSMIC RAY INDICES
(Neutron Monitor)

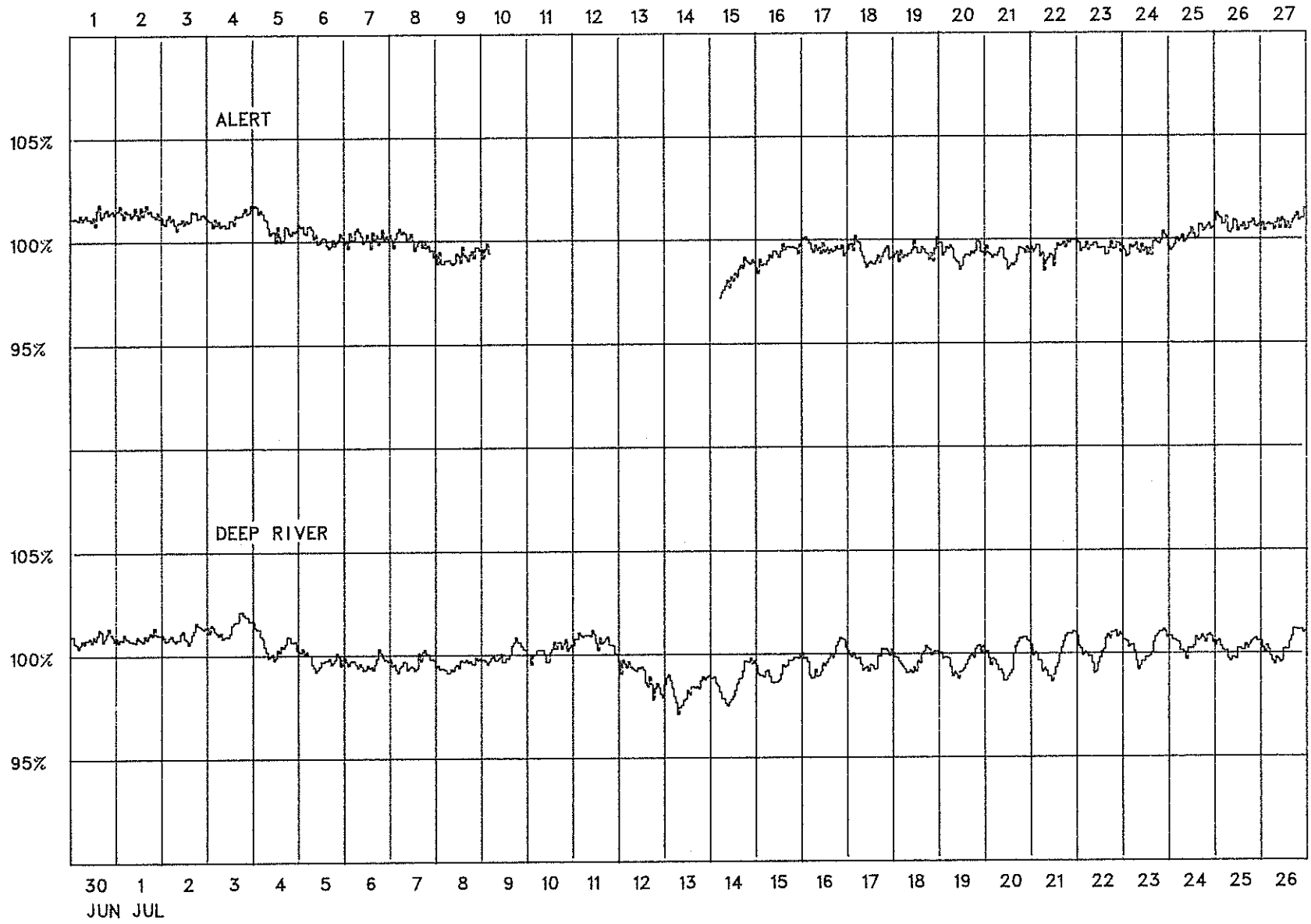
Bartels Rotation 2075 (June 1985)



105
Late
Jun 85

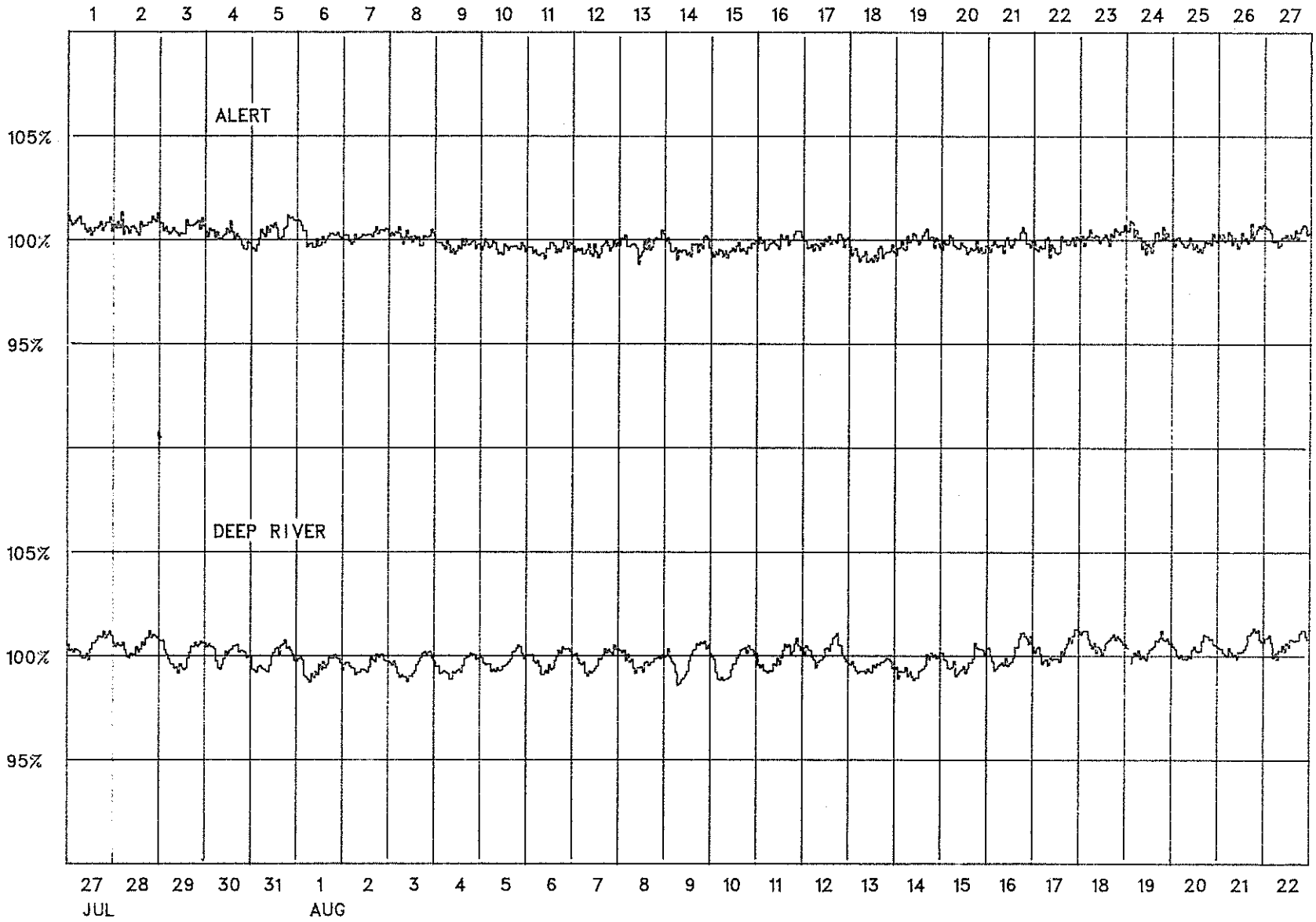
COSMIC RAY INDICES
(Neutron Monitor)

Bartels Rotation 2076 (June 1985–July 1985)



COSMIC RAY INDICES
(Neutron Monitor)

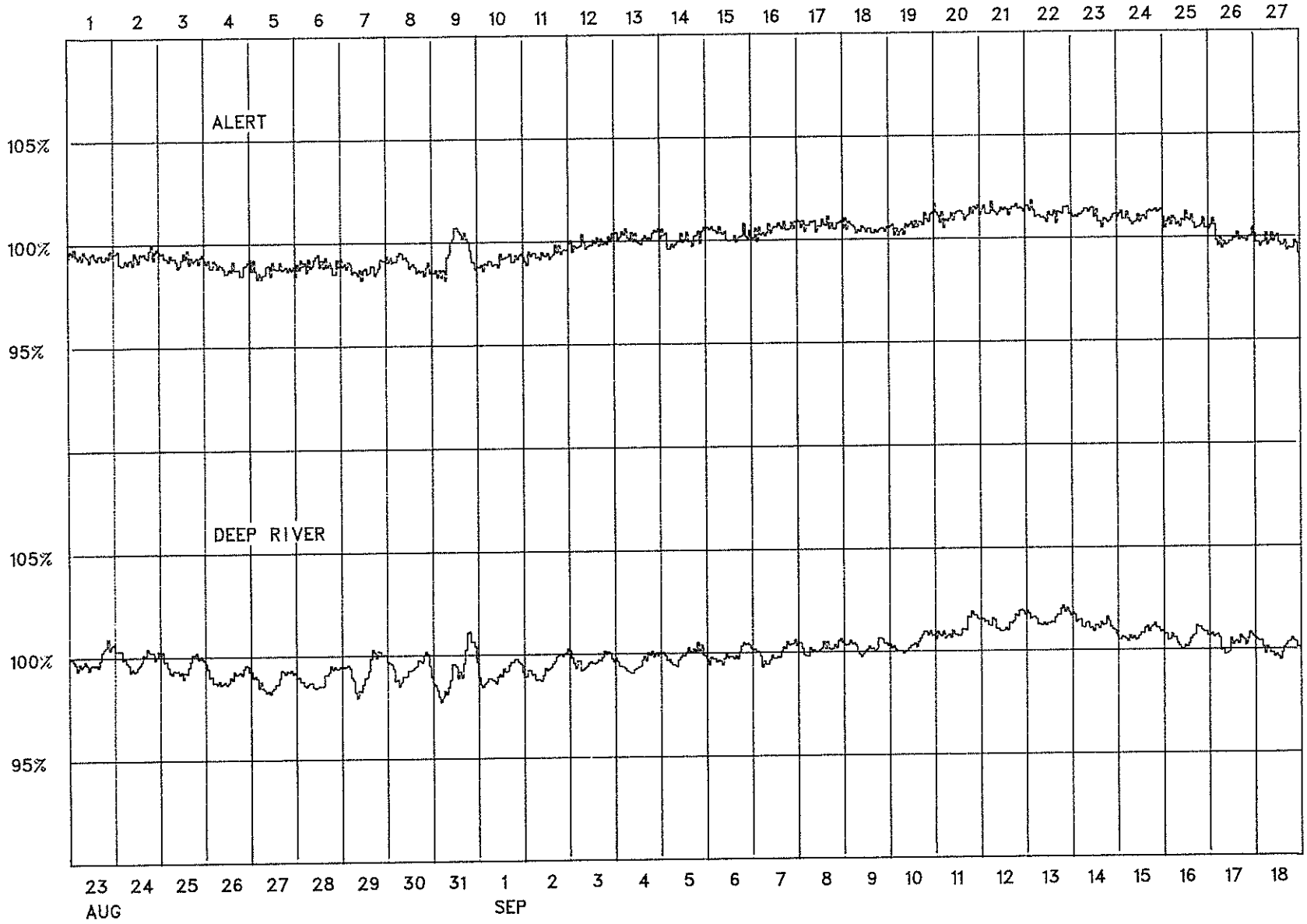
Bartels Rotation 2077 (July 1985–August 1985)



107
Late
Jul-Aug 85

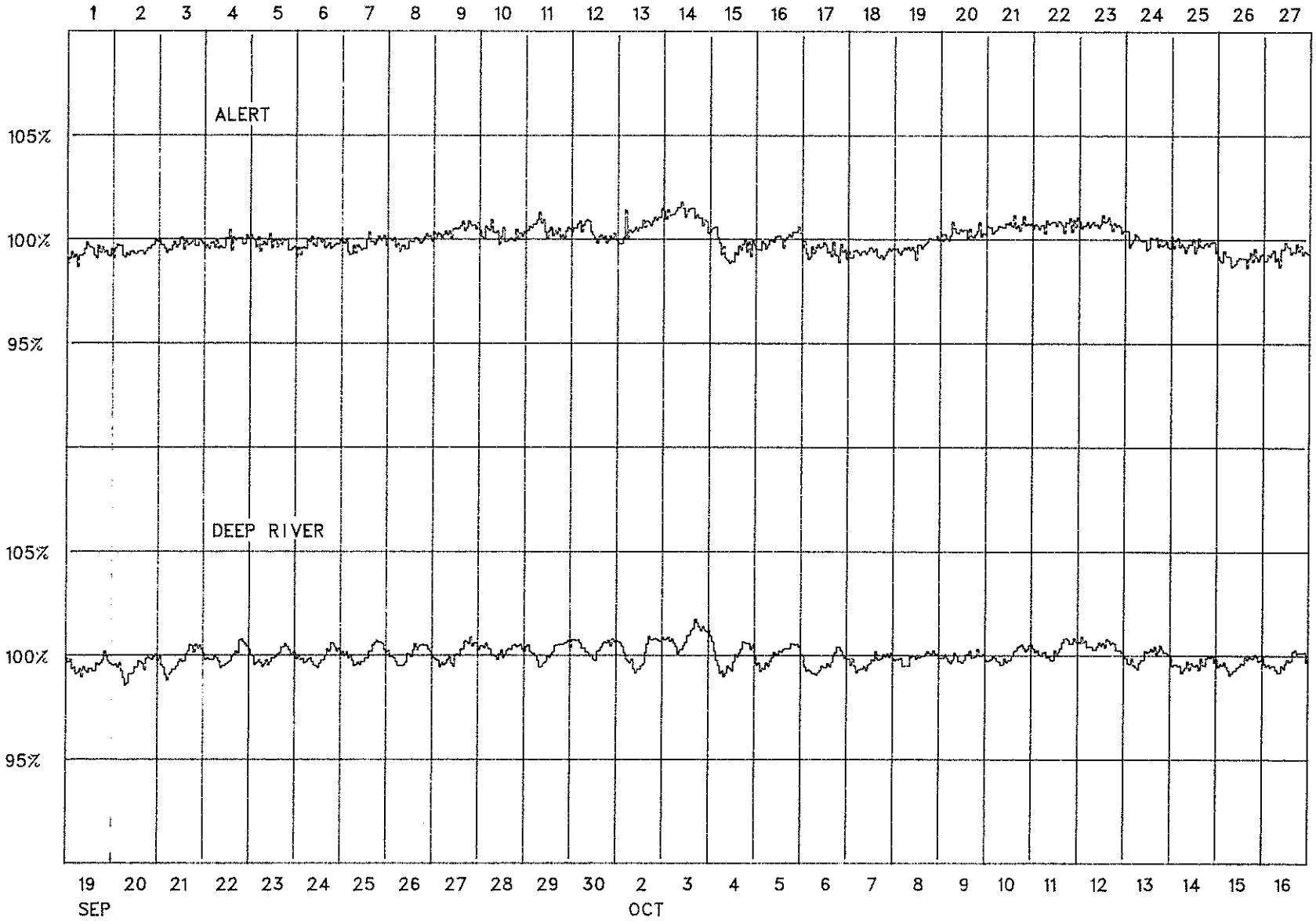
COSMIC RAY INDICES
(Neutron Monitor)

Bartels Rotation 2078 (August 1985–September 1985)



COSMIC RAY INDICES
(Neutron Monitor)

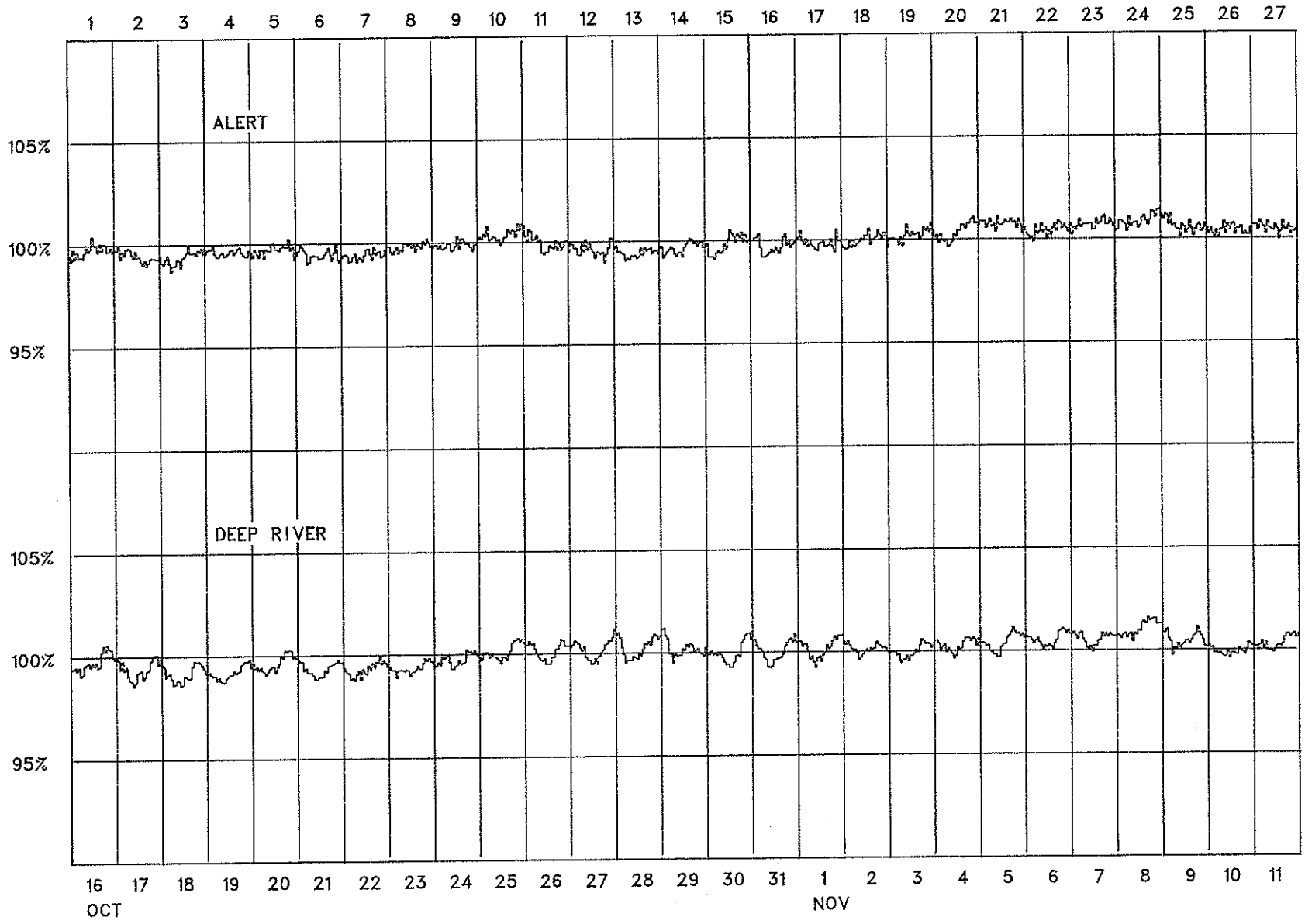
Bartels Rotation 2079 (September 1985–October 1985)



109
Late
Sep-Oct 85

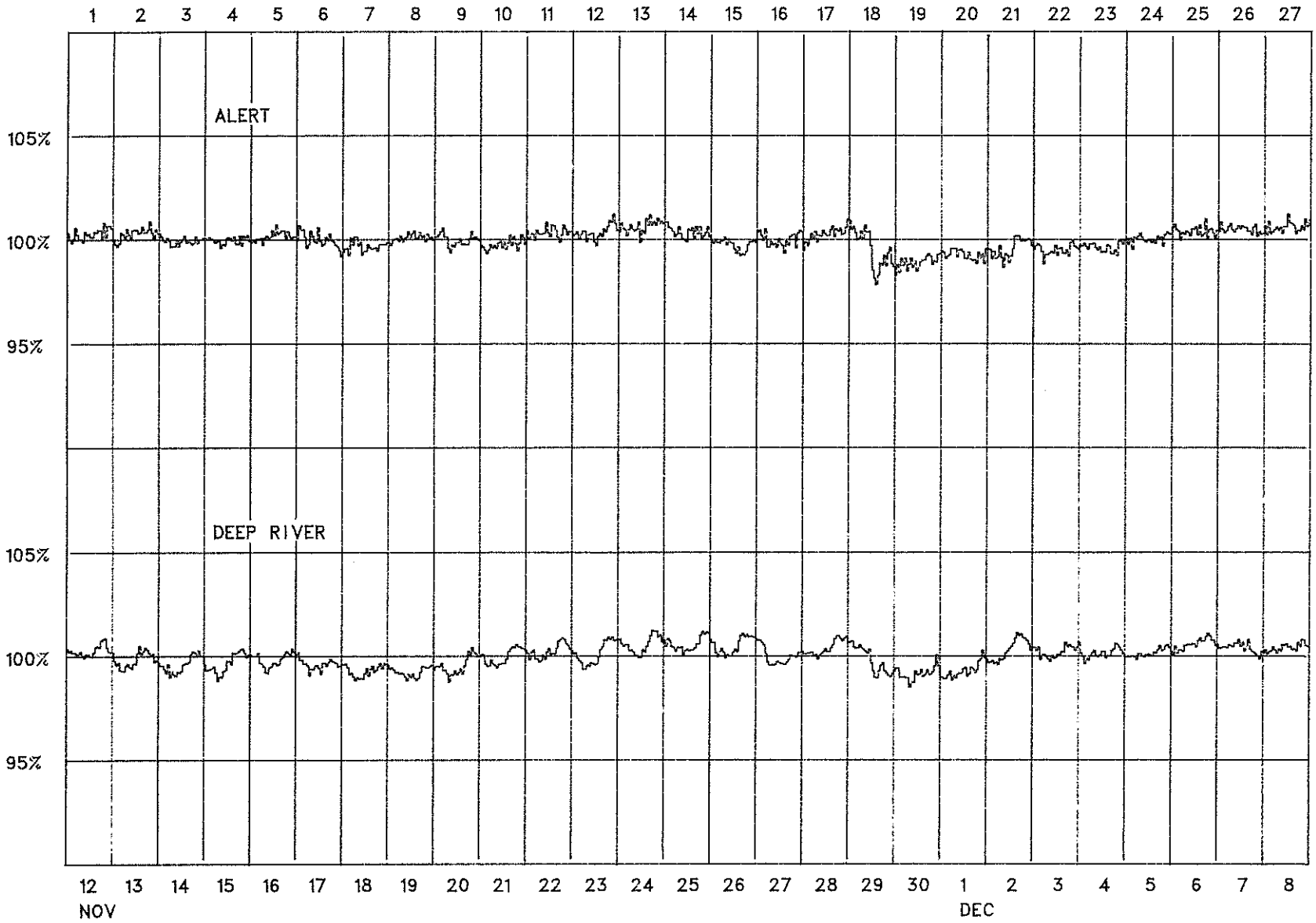
COSMIC RAY INDICES
(Neutron Monitor)

Bartels Rotation 2080 (October 1985–November 1985)



COSMIC RAY INDICES
(Neutron Monitor)

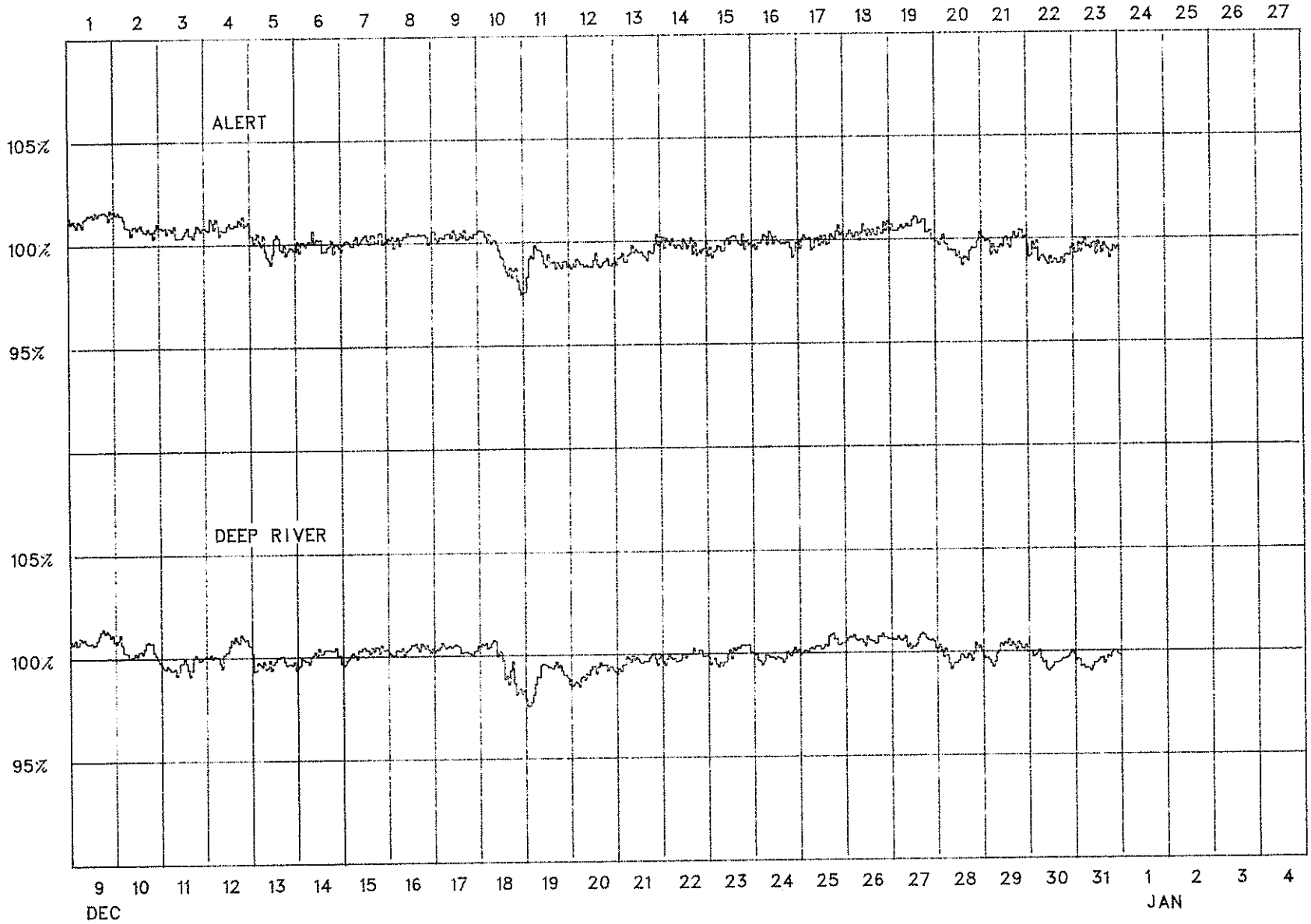
Bartels Rotation 2081 (November 1985–December 1985)



111
Late
Nov-Dec 85

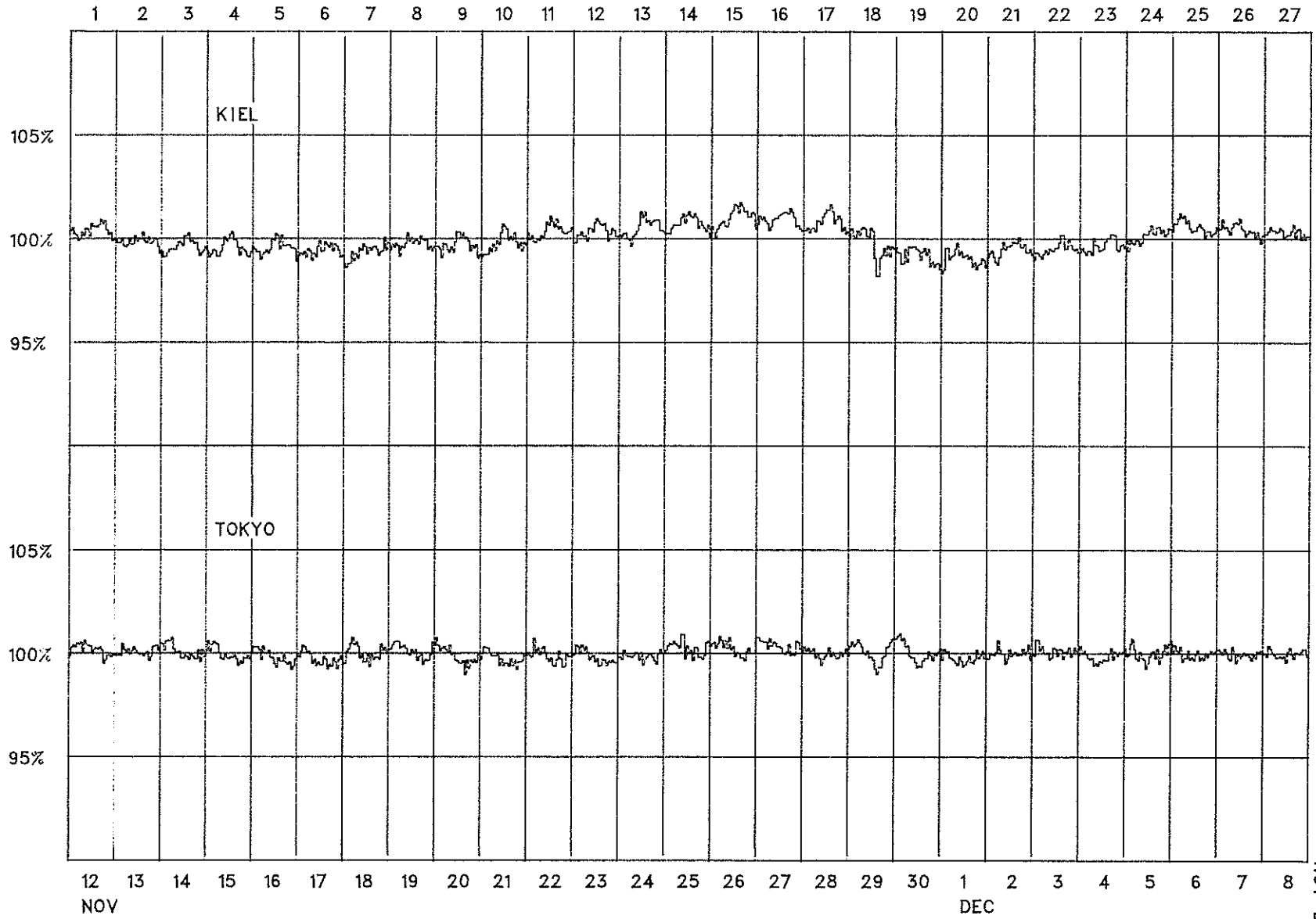
COSMIC RAY INDICES
(Neutron Monitor)

Bartels Rotation 2082 (December 1985–January 1986)



COSMIC RAY INDICES
(Neutron Monitor)

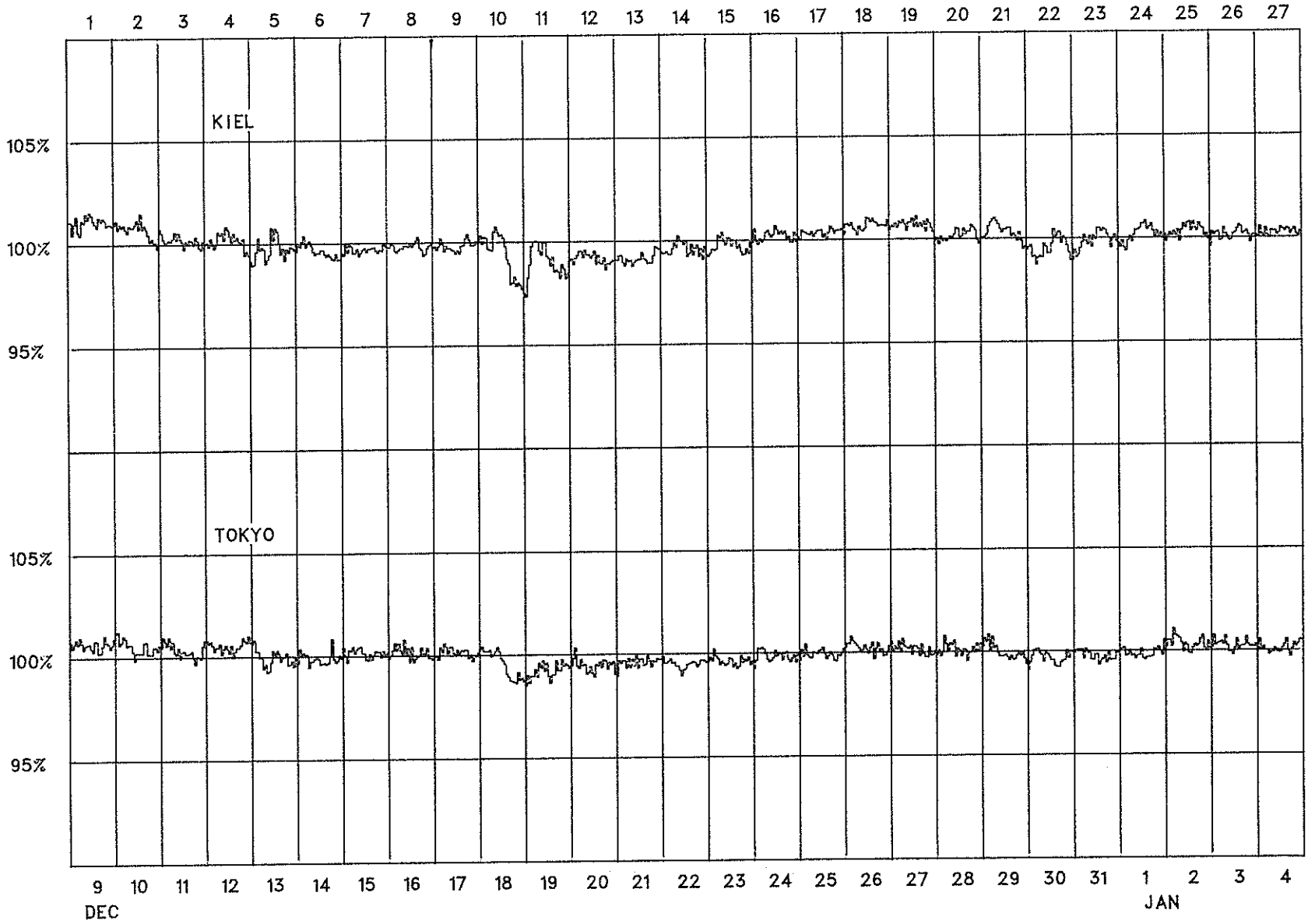
Bartels Rotation 2081 (November 1985–December 1985)



113
Late
Nov-Dec 85

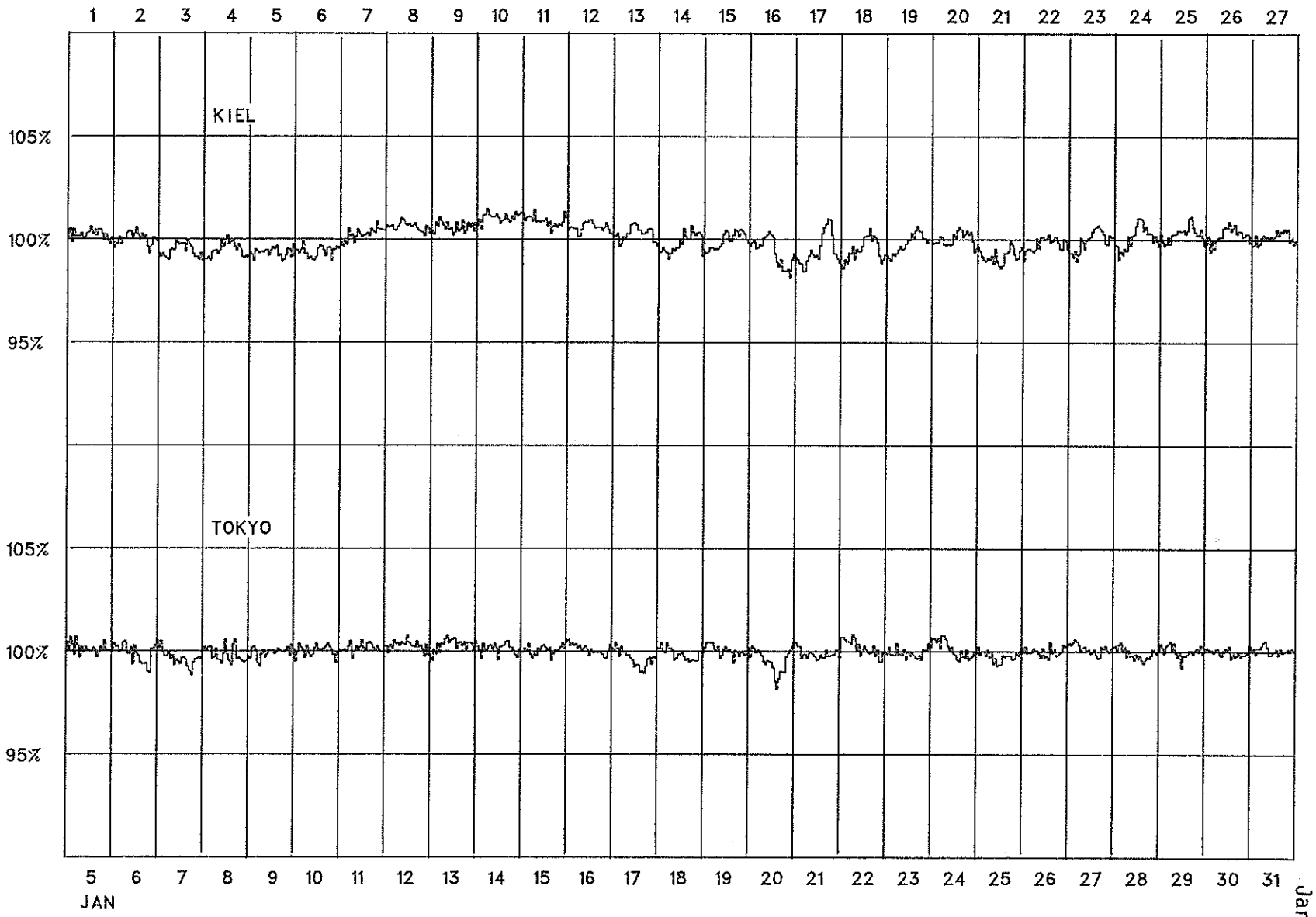
COSMIC RAY INDICES
(Neutron Monitor)

Bartels Rotation 2082 (December 1985–January 1986)



COSMIC RAY INDICES
(Neutron Monitor)

Bartels Rotation 2083 (January 1986)



115
Late
Jan 86

COSMIC RAY INDICES
(Neutron Monitor)

May 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	4206	6873.7	6519.6	5867.1	3819.9	1098	3604.0	
2	4235	6940.2	6579.0	5932.4	3861.7	1106	3619.1	
3	4268	6984.4	6655.5	5942.1	3886.7	1117	3619.5	
4	4285	7020.9	6673.7	5979.3	3917.5	1137	3629.2	
5	4305	7053.8	6674.7	5987.1	3926.0	1153	3618.2	
6	4304	7079.6	6683.4	5985.4	3938.7	1174	3612.4	
7	4301	7100.8	6717.2	5998.5	3948.5	1194	3616.8	
8	4313	7123.3	6730.1	6008.6	3947.2	1198	3628.7	
9	4338	7142.4	6726.2	6031.1	3954.2	1199	3632.1	
10	4321	7130.1	6710.5	6011.8	3962.3	1201	3640.6	
11	4330	7132.9	6742.1	6016.9	3983.9	1204	3652.5	
12	4343	7165.2	6748.1	6044.9	3990.5	1212	3651.3	
13	4365	7228.9	6776.7	6056.8	4022.3	1213	3647.1	
14	4348	7218.5	6780.8	6062.9	4011.8	1214	3640.5	
15	4349	7206.4	6777.6	6057.3	3997.2	1217	3650.3	
16	4359	7240.1	6777.7	6062.5	3998.2	1216	3659.7	
17	4336	7196.0	6763.7	6039.7	3971.2	1212	3643.2	
18	4330	7252.1	6771.4	6045.3	3972.7(36)	1209	3635.7	
19	4359	7140.7	6812.6	6084.8	---	1216	3643.0	
20	4365	7123.1	6804.8	6119.2	4025.1(14)	1218	3638.4	
21	4371	7116.2	6826.2	6118.8	4021.0	1214	3640.1	
22	4381	7144.1	6833.0	6129.6	4024.0	1214	3639.1	
23	4380	7157.7	6844.3	6121.8	4018.9	1214	3644.5	
24	4368	7130.0	6837.5	6096.7	4009.0	1218	3630.0	
25	4362	7093.8	6798.2	6062.3	3963.9(38)	1211	3619.0	
26	4372	7092.9	6815.1	6077.1	3984.8(34)	1217	3636.4	
27	4393	7127.0	6832.0	6109.3	4015.2	1223	3642.7	
28	4389	7103.4	6855.4	6102.2	4022.8	1220	3641.9	
29	4386	7099.3	6853.3	6101.7	4019.3	1219	3640.3	
30	4406	7136.3	6870.4	6126.9	4041.3	1221	3645.1	
31	4409	7146.8	6848.2	6123.8	4035.3	1220	3646.2	
Mean	4341	7116.2	6762.6	6048.5	3975.7	1197	3635.7	

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)

June 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	4410	7156.5	6858.4	6134.6	4052.2(38)	1222	3651.5	
2	4404	7131.1	6855.5	6137.5	4045.0	1224	3648.5	
3	4410	7141.7	6863.2	6147.0	4041.8	1223	3645.2	
4	4409	7138.5	6866.8	6160.2	4037.5	1221	3655.5	
5	4410	7127.8	6867.1	6158.8	4039.3	1222	3665.4	
6	4394	7113.7	6844.7	6139.3	4020.6	1219	3663.2	
7	4378	7105.5	6815.5	6128.3	4007.1	1215	3649.6	
8	4374	7103.9	6819.7	6121.3	4017.2	1214	3649.2	
9	4370	7095.8	6786.5	6134.8	4007.4	1208	3638.7	
10	4372	7070.0	6786.8	6120.0	4028.6	1216	3649.8	
11	4377	7101.3	6811.4	6154.9	4021.9	1215	3649.0	
12	4393	7124.3 (21)	6830.2	6146.4	4032.2	1217	3647.7	
13	4390	7150.3 (23)	6850.4	6132.4	4037.3	1215	3645.1	
14	4409	7146.2	6863.0	6132.4	4045.7	1218	3650.7	
15	4404	7148.2	6852.4	6138.4	4033.8	1216	3655.8	
16	4417	7168.1	6875.3	6076.5	4052.5	1221	3660.5	
17	4426	7178.3	6868.0	6137.6	4049.0	1222	3655.5	
18	4429	7199.6	6874.4	6046.3	4045.5	1220	3640.8	
19	4443	7214.8	6894.2	6171.9	4059.3	1223	3633.8	
20	4434	7211.2	6891.1	6349.7	4059.6	1223	3645.6	
21	4406	7168.7	6862.7	6235.8	4047.0	1215	3629.2	
22	4389	7156.2	6825.4	6385.1	4029.3	1211	3627.9	
23	4409	7211.7	6831.3	6387.3	4046.9	1215	3632.4	
24	4415	7231.4	6850.0	6266.2	4054.5	1214	3627.0	
25	4392	7180.0	6823.9	6096.6	4062.7	1208	3622.4	
26	4391	7176.2	6831.1	6056.1	4069.0	1210	3638.1	
27	4408	7225.6	6838.9	6170.4	4064.1	1215	3636.1	
28	4409	7222.0	6858.7	6229.5	4068.8	1220	3639.2	
29	4420	7260.3	6855.8	6128.3	4062.3	1221	3636.5	
30	4423	7265.1	6863.0	6056.9	4066.3	1224	3638.8	
Mean	4404	7164.2	6847.2	6162.6	4043.3	1218	3644.3	

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)

July 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	4431	7276.0	6864.9	6164.3	4065.6	1224	3647.0	
2	4434	7253.5	6874.1	6147.6	4069.8	1227	3639.1	
3	4443	7252.9	6902.2	6154.4	4078.3	1229	3636.4	
4	4414	7229.3	6843.7	6116.3	4044.8	1222	3629.5	
5	4388	7191.4	6791.4	6094.6	4026.8	1219	3623.0	
6	4378	7186.0	6781.3	6102.7	4022.5	1218	3621.8	
7	4371	7174.6	6781.5	6093.8	4012.7	1212	3625.6	
8	4372	7119.3	6772.3	6096.2	3999.6	1210	3621.2	
9	4384	7141.4 (5)	6807.7	6118.9	4022.7	1216	3635.6	
10	4392	------	6819.7	6119.9	4024.7	1217	3631.6	
11	4372	------	6852.7	6110.6	4035.2	1216	3636.1	
12	4305	------	6735.6	6006.9	3991.4(36)	1201	3625.9	
13	4296	------	6690.5	5974.4	3940.1	1196	3594.5	
14	4326	7056.1 (19)	6714.2	6057.0	3977.3	1207	3627.4	
15	4368	7124.5	6754.1	6087.6	4000.5	1214	3638.3	
16	4372	7148.4	6788.7	6097.1	4005.5	1216	3632.1	
17	4369	7125.3	6789.5	6091.3	4003.5	1214	3628.9	
18	4365	7130.5	6785.5	6108.9	4000.0	1213	3624.2	
19	4382	7129.5	6784.1	6136.1	4016.8	1217	3619.4	
20	4372	7120.8	6793.2	6118.1	4023.5	1214	3615.9	
21	4379	7139.6	6800.7	6112.7	4031.0	1213	3619.7	
22	4391	7148.2	6825.0	6119.3	4022.8(28)	1212	3627.8	
23	4390	7150.5	6827.3	6118.4	4026.1(20)	1217	3629.5	
24	4398	7187.7	6841.0	6114.8	4017.1(18)	1219	3630.0	
25	4402	7226.9	6822.6	6134.0	4029.4	1221	3630.3	
26	4412	7232.6	6830.4	6162.7	3992.9	1223	3630.1	
27	4423	7226.3	6864.3	6164.9	3996.2	1226	3630.6	
28	4419	7225.8	6865.2	6159.2	3984.0(32)	1225	3632.9	
29	4416	7216.6	6833.5	6176.8	---	1225	3632.6	
30	4420	7187.8	6841.4	6155.9	---	1220	3632.1	
31	4409	7203.5	6822.2	6126.9	---	1217	3625.6	
Mean	4387	7178.0	6809.7	6114.9	4016.8	1217	3628.2	

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)

August 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	4390	7184.5	6796.0	6094.9	---	1212	3612.3	
2	4387	7192.3	6800.7	6106.6	4027.7(6)	1212	3616.4	
3	4390	7186.3	6796.8	6115.9	3996.8	1209	3615.2	
4	4385	7156.4	6795.3	6126.9	4006.1	1208	3620.6	
5	4398	7149.5	6812.8	6133.8	4012.0	1209	3619.0	
6	4398	7144.3	6817.0	6137.8	4010.0	1209	3618.5	
7	4393	7144.7	6816.3	6122.5	4013.4	1211	3612.0	
8	4399	7161.3	6814.3	6112.2	4006.0(34)	1208	3615.2	
9	4390	7149.3	6819.6	6108.4	4033.7(6)	1210	3619.1	
10	4385	7139.8	6807.7	6115.0	4011.3	1213	3616.5	
11	4400	7173.3	6823.6	6128.7	4017.7	1214	3612.5	
12	4394	7166.5	6844.2	6123.0	4033.6	1220	3613.3	
13	4371	7126.4	6795.6	6089.9	4025.8	1215	3617.7	
14	4390	7170.4	6791.0	6116.3	4017.1	1201	3620.1	
15	4389	7151.9	6812.6	6131.4	4031.1	1201	3621.1	
16	4396	7166.5	6839.8	6156.8	4041.0	1205	3623.5	
17	4407	7158.8	6846.2	6174.6	4044.3	1225	3628.1	
18	4418	7189.0	6879.5	6193.3	4045.6	1221	3633.8	
19	4414	7184.0	6855.6 (23)	6188.6	4051.1	1222	3631.4	
20	4395	7163.4	6855.2	6148.2	4036.3	1219	3627.4	
21	4414	7189.0	6863.5	6145.9	4039.8	1221	3628.3	
22	4414	7193.2	6874.0	6165.5	4044.2	1215	3633.5	
23	4417	7181.8	6879.9	6167.9	4047.8	1217	3638.5	
24	4421	7177.3	6880.2	6173.7	4048.4	1203	3634.6	
25	4415	7171.7	6859.4	6168.0	4049.3	1221	3635.5	
26	4394	7139.9	6819.8	6147.1	4023.6	1222	3627.0	
27	4390	7131.9	6805.3	6116.9	4016.2	1217	3619.6	
28	4387	7146.0	6809.3	6113.1	4011.2	1218	3612.1	
29	4369	7133.1	6840.0	6101.3	4015.9	1218	3612.5	
30	4378	7148.8	6840.9	6100.1	4020.3	1217	3602.3	
31	4409	7180.4	6832.7	6160.2	4002.7(34)	1225	3603.2	
Mean	4397	7163.0	6829.9	6134.9	4026.0	1214	3620.7	

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)

SEPTEMBER 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	4378	7155.2	6822.9	6148.5		1218	3603.2	
2	4398	7177.2	6841.9	6164.5		1219	3607.1	
3	4422	7216.1	6862.6	6187.4		1214	3613.4	
4	4430	7238.7	6855.3	6179.3		1220	3616.2	
5	4433	7228.0	6878.8	6192.9		1221	3620.6	
6	4434	7244.8	6876.9	6213.0		1229	3627.9	
7	4449	7258.4	6884.0	6205.1		1231	3630.0	
8	4450	7274.9	6899.8	6210.1		1232	3633.9	
9	4447	7259.2	6902.7	6195.2		1231	3633.6	
10	4452	7271.3	6911.9	6182.5		1236	3628.3	
11	4464	7306.5	6959.3	6197.4		1241	3633.1	
12	4476	7320.6	6982.1	6213.0		1244	3637.9	
13	4486	7309.4	6995.8	6235.6		1244	3646.7	
14	4475	7299.1	6971.1	6227.9		1245	3644.2	
15	4472	7297.8	6939.3	6237.7		1242	3629.7	
16	4454	7273.9	6925.2	6222.8		1240	3624.4	
17	4448	7220.5	6912.7	6194.5		1233	3627.5	
18	4434	7200.1	6890.6	6173.6		1230	3617.9	
19	4426	7207.9	6854.9	6172.3		1229	3613.2	
20	4411	7218.5	6852.1	6172.4		1229	3615.5	
21	4438	7238.7	6874.9	6179.7		1232	3620.5	
22	4437	7245.5	6888.8	6184.2		1230	3621.2	
23	4436	7243.5	6886.8	6180.4		1234	3618.1	
24	4424	7236.5	6885.3	6178.6		1233	3608.0	
25	4426	7238.8	6894.5	6172.9		1233	3616.3	
26	4433	7247.9	6894.3	6167.0		1237	3618.8	
27	4450	7289.6	6894.0	6187.3		1238	3628.7	
28	4448	7272.6	6908.3	6199.8		1239	3622.6	
29	4462	7292.5	6901.2	6196.7		1240	3617.1	
30	4465	7280.0	6917.8	6200.8		1239	3625.7	
Mean	4442	7252.2	6898.9	6192.4		1232.8	3623.3	

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)

October 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	4475	7300.0	6900.9	6192.6		1241	3631.7	
2	4486	7343.5	6951.6	6223.8		1243	3643.2	
3	4423	7230.3	6890.3	6162.5		1236	3632.0	
4	4436	7255.6	6890.7	6184.8		1240	3628.7	
5	4419	7217.5	6864.3	6165.4		1241	3632.1	
6	4420	7210.8	6869.5	6149.8		1239	3624.4	
7	4439	7232.9	6882.3	6162.2		1239	3634.7	
8	4463	7278.7	6884.4	6219.3		1237	3642.2	
9	4476	7304.9	6889.2	6234.4		1234	3640.3	
10	4481	7308.7	6911.0	6213.3		1238	3640.4	
11	4479	7308.6	6924.6	6190.7		1236	3631.2	
12	4447	7251.1	6887.8	6170.2		1230	3632.9	
13	4440	7239.0	6862.5	6162.1		1232	3633.4	
14	4414	7190.8	6862.8	6136.5		1229	3635.4	
15	4421	7210.7	6870.3	6156.1		1228	3641.2	
16	4437	7251.2	6910.5	6182.0		1232	3632.6	
17	4441	7230.9	6885.6	6188.4		1229	3630.1	
18	4436	7224.5	6869.4	6178.1		1229	3633.9	
19	4442	7241.5	6871.4	6169.6		1228	3629.2	
20	4445	7249.5	6902.7	6169.3		1229	3625.5	
21	4437	7231.9	6882.5	6156.4		1226	3628.0	
22	4439	7228.4	6879.8	6153.4		1230	3636.8	
23	4444	7257.5	6883.5	6179.4		1233	3644.0	
24	4451	7261.0	6910.5	6197.6		1236	3645.9	
25	4462	7296.1	6935.9	6212.8		1238	3649.6	
26	4445	7268.2	6937.6	6228.2		1241	3650.0	
27	4443	7243.3	6941.8	6242.3		1242	3651.0	
28	4445	7229.5	6947.3	6228.8		1239	3652.9	
29	4447	7246.4	6942.5	6230.2		1244	3646.3	
30	4446	7257.3	6927.2	6243.3		1225	3637.8	
31	4442	7249.9	6932.4	6254.9		1238	3635.6	
Mean	4446	7253.3	6900.1	6191.5		1235	3637.2	

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)

NOVEMBER 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	4438	7261.1	6940.5	6266.4		1235	3640.7	
2	4456	7269.3	6938.0	6285.4		1232	3663.2	
3	4463	7285.0	6928.5	6271.7		1237	3655.5	
4	4482	7294.8	6947.7	6275.4		1240	3656.4	
5	4489	7325.3	6956.1	6309.9		1241	3655.6	
6	4484	7300.2	6966.2	6295.4		1241	3650.7	
7	4493	7320.5	6966.3	6277.4		1241	3653.8	
8	4498	7331.3	7001.0	6272.8		1241	3662.4	
9	4478	7315.7	6960.3	6256.9		1233	3651.7	
10	4468	7297.8	6923.2	62685.2		1234	3653.7	
11	4491	7305.1	6950.3	6286.9		1227	3665.5	
12	4498	7315.0	6965.9	6270.0		1226	3659.5	
13	4488	7315.3	6935.4	6237.4		1217	3656.0	
14	4476	7290.3	6919.5	6222.3		1211	3656.5	
15	4475	7293.2	6923.8	6218.2		1213	3651.2	
16	4485	7306.8	6935.2	6219.8		1217	3646.5	
17	4480	7293.9	6920.2	6210.4		1216	3643.4	
18	4463	7270.7	6898.0	6205.0		1218	3653.0	
19	4484	7301.2	6894.1	6230.6		1222	3656.9	
20	4477	7293.5	6914.8	6226.7		1219	3648.8	
21	4472	7277.3	6945.0	6233.0		1217	3644.2	
22	4492	7319.1	6963.7	6268.4		1210	3648.6	
23	4491	7320.5	6955.0	6267.0		1223	3646.6	
24	4492	7340.3	6985.9	6278.6		1222	3647.9	
25	4479	7321.4	6987.2	6291.1		1221	3662.2	
26	4467	7276.8	6982.5	6308.6		1221	3661.5	
27	4470	7294.1	6947.1	6304.7		1221	3666.3	
28	4489	7313.1	6973.7	6295.3		1220	3652.6	
29	4464	7261.4	6936.6	6231.8		1213	3654.8	
30	4439	7214.7	6888.5	6196.2		1202	3655.1	
Mean	4477	7297.5	6945.0	6259.4		1224	3654.0	

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)

DECEMBER 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	4457	7241	6897	6186.9		1200	3645.5	
2	4464	7263	6967	6213.8		1213	3652.6	
3	4467	7258	6961	6215.3		1226	3656.9	
4	4468	7268	6957	6225.1		1234	3647.7	
5	4470	7297	6956	6256.2		1240	3652.7	
6	4485	7324	6986	6282.7		1248	3652.5	
7	4488	7331	6975	6273.2		1245	3652.4	
8	4494	7339	6975	6265.1		1244	3652.9	
9	4506	7347	6993	6283.4		1247	3667.9	
10	4486	7317	6954	6260.6		1239	3663.3	
11	4476	7296	6904	6227.9		1229	3656.8	
12	4485	7315	6956	6226.2		1224	3664.0	
13	4448	7243	6907	6199.3		1219	3642.4	
14	4446	7246	6932	6193.6		1222	3641.1	
15	4452	7259	6941	6196.1		1220	3649.8	
16	4465	7267	6951	6203.9		1215	3649.8	
17	4466	7274	6951	6206.0		1221	3650.0	
18	4426	7204	6901	6180.1		1212	3629.2	
19	4399	7176	6854	6153.2		1194	3616.4	
20	4410	7172	6866	6165.1		1196	3625.5	
21	4431	7207	6905	6164.0		1180	3630.4	
22	4449	7234	6920	6192.3		1186	3626.8	
23	4454	7235	6924	6199.4		1201	3631.3	
24	4454	7240	6917	6228.9		1209	3639.5	
25	4467	7253	6953	6238.3		1209	3642.5	
26	4468	7275	6973	6259.3		1211	3653.1	
27	4474	7293	6967	6260.9		1209	3550.0	
28	4438	7215	6917	6227.4		1201	3649.1	
29	4452	7241	6932	6237.0		1193	3644.1	
30	4417	7188	6902	6189.7		1178	3633.3	
31	4437	7217	6896	6209.6		1179	3637.0	
Mean	4458	7259	6935	6220.0		1214	3645.4	

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

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)

SEPTEMBER 1983

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
19042	BIGB	08	29	2059	N04	E67	09	3.9	1.0	0200	4304C		
19042	BIGB	08	30	1445	N04	E54	09	3.6	1.0	0200	4304C		
19042	BIGB	08	31	1500	N04	E39	09	3.5	1.5	0100	4304C		
19042	BIGB	09	01	1505	N06	E26	09	3.6	1.0	0100	4304C		
19050	BIGB	09	01	1505	N10	E39	09	4.5	2.5	0200	4304		
19050	BIGB	09	02	1515	N10	E26	09	4.6	2.5	0900	4304		
19050	BIGB	09	03	1843	N10	E10	09	4.5	3.0	1000	4304		
19050	BIGB	09	04	1701	N10	W04	09	4.4	3.0	1500	4304		
19050	BIGB	09	05	1855	N10	W19	09	4.4	3.0	1800	4304		
19050	BIGB	09	06	2142	N10	W33	09	4.4	3.0	1800	4304		
19050	BIGB	09	07	2205	N10	W46	09	4.5	3.5	1950	4304		
19050	BIGB	09	08	2302	N10	W60	09	4.4	3.0	1600	4304		
19043	BIGB	08	30	1445	N10	E80	09	5.6	2.5	0500	4301		
19043	BIGB	08	31	1500	N12	E65	09	5.5	2.5	0500	4301		
19043	BIGB	09	01	1505	N15	E55	09	5.8	2.5	1000	4301		
19043	BIGB	09	02	1515	N14	E41	09	5.7	3.0	1000	4301		
19043	BIGB	09	03	1843	N14	E26	09	5.7	2.5	1000	4301		
19043	BIGB	09	04	1701	N14	E14	09	5.8	2.5	0900	4301		
19043	BIGB	09	05	1855	N14	W03	09	5.6	2.0	0600	4301		
19043	BIGB	09	06	2142	N14	W15	09	5.8	2.0	0700	4301		
19043	BIGB	09	07	2205	N14	W27	09	5.9	2.0	0650	4301		
19043	BIGB	09	08	2302	N14	W39	09	6.0	2.0	0650	4301		
19044	BIGB	08	31	1500	S10	E73	09	6.1	3.0	0600	4303		
19044	BIGB	09	01	1505	S08	E65	09	6.5	3.0	1200	4303		
19044	BIGB	09	02	1515	S09	E54	09	6.7	3.0	1500	4303		
19044	BIGB	09	03	1843	S09	E39	09	6.7	2.5	1700	4303		
19044	BIGB	09	04	1701	S09	E26	09	6.7	2.5	1000	4303		
19044	BIGB	09	05	1855	S08	E10	09	6.5	2.5	0900	4303		
19044	BIGB	09	06	2142	S09	W04	09	6.6	2.5	0900	4303		
19044	BIGB	09	07	2205	S09	W17	09	6.6	2.5	1000	4303		
19044	BIGB	09	08	2302	S09	W31	09	6.6	2.5	0900	4303		
19047	BIGB	09	02	1515	S13	E73	09	8.1	2.5	1000	4305		
19047	BIGB	09	03	1843	S13	E61	09	8.4	3.0	1700	4305		
19047	BIGB	09	04	1701	S12	E45	09	8.1	3.0	1500	4305		
19047	BIGB	09	05	1855	S11	E29	09	8.0	2.5	1200	4305		
19047	BIGB	09	06	2142	S11	E16	09	8.1	2.5	1200	4305		
19047	BIGB	09	07	2205	S10	E02	09	8.1	2.5	1100	4305		
19047	BIGB	09	08	2302	S10	W12	09	8.0	3.5	1300	4305		
19047	BIGB	09	12	1751	S09	W63	09	8.0	3.5	1300	4305		
19047	BIGB	09	13	1520	S10	W78	09	7.8	3.0	1450	4305		
19047	BIGB	09	14	1653	S08	W79	09	8.8	1.0	0850	4305		
19053	BIGB	09	08	2302	N06	W04	09	8.7	2.5	0150	4311		
19053	BIGB	09	12	1751	N08	W54	09	8.7	2.5	0450	4311		
19053	BIGB	09	13	1520	N08	W69	09	8.5	2.0	0450	4311		
19053	BIGB	09	14	1653	N08	W80	09	8.7	1.0	0300	4311		
19049	BIGB	09	03	1843	S15	E80	09	9.8	2.5	0800	4312A		
19049	BIGB	09	04	1701	S14	E59	09	9.2	2.5	1500	4312A		
19049	BIGB	09	05	1855	S14	E45	09	9.2	2.5	1500	4312A		
19049	BIGB	09	06	2142	S13	E31	09	9.2	2.5	1700	4312A		
19049	BIGB	09	07	2205	S13	E17	09	9.2	2.5	1700	4312A		
19049	BIGB	09	08	2302	S12	E03	09	9.2	2.5	1800	4312A		
19049	BIGB	09	12	1751	S12	W46	09	9.3	2.5	1650	4312A		
19049	BIGB	09	13	1520	S13	W60	09	9.1	2.0	1300	4312A		
19049	BIGB	09	14	1653	S13	W62	09	10.0	1.5	1300	4312A		
19049	BIGB	09	15	1500	S13	W71	09	10.3	1.0	1000	4312A		
19054	BIGB	09	08	2302	N07	E07	09	9.5	1.5	0075			
19048	BIGB	09	02	1515	S04	E77	09	8.4	1.5	0700	4306		
19048	BIGB	09	03	1843	S05	E73	09	9.2	2.5	1300	4306		
19048	BIGB	09	04	1701	S05	E65	09	9.6	2.0	1200	4306		
19048	BIGB	09	05	1855	S03	E47	09	9.3	2.0	1000	4306		
19048	BIGB	09	06	2142	S03	E37	09	9.7	2.0	1000	4306		
19048	BIGB	09	07	2205	S02	E25	09	9.8	2.0	1000	4306		
19048	BIGB	09	08	2302	S03	E13	09	9.9	2.5	1000	4306		

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)

SEPTEMBER 1983

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
19048	BIGB	09	12	1751	S02	W37	09	10.0	2.0	0850	4306		
19048	BIGB	09	13	1520	S01	W48	09	10.0	1.5	0850	4306		
19048	BIGB	09	14	1653	S02	W58	09	10.4	1.5	0700	4306		
19048	BIGB	09	15	1500	S03	W74	09	10.1	1.5	0750	4306		
19051	BIGB	09	04	1701	S15	E70	09	10.0	3.0	1200	4307		
19051	BIGB	09	05	1855	S13	E59	09	10.2	3.0	2700	4307		
19051	BIGB	09	06	2142	S13	E46	09	10.4	3.0	2500	4307		
19051	BIGB	09	07	2205	S13	E33	09	10.4	3.0	2600	4307		
19051	BIGB	09	08	2302	S13	E19	09	10.4	3.0	2400	4307		
19051	BIGB	09	12	1751	S12	W30	09	10.5	2.5	2400	4307		
19051	BIGB	09	13	1520	S12	W42	09	10.5	3.0	2500	4307		
19051	BIGB	09	14	1653	S12	W54	09	10.6	3.0	2350	4307		
19051	BIGB	09	15	1500	S12	W65	09	10.7	2.5	2400	4307		
19051	BIGB	09	16	1923	S06	W78	09	11.0	1.5	0400	4307		
19052	BIGB	09	04	1701	N17	E79	09	10.7	2.0	0400	4308		
19052	BIGB	09	05	1855	N17	E70	09	11.1	2.5	0600	4308		
19052	BIGB	09	06	2142	N18	E58	09	11.3	2.5	0600	4308		
19052	BIGB	09	07	2205	N19	E40	09	11.0	2.5	0850	4308		
19052	BIGB	09	08	2302	N19	E27	09	11.0	2.0	0800	4308		
19052	BIGB	09	12	1751	N19	W23	09	11.0	1.0	0600	4308		
19052	BIGB	09	13	1520	N18	W35	09	11.0	1.5	0600	4308		
19052	BIGB	09	14	1653	N19	W52	09	10.7	1.5	0350	4308		
19052	BIGB	09	15	1500	N20	W63	09	10.8	1.0	0300	4308		
19055	BIGB	09	06	2142	S24	E56	09	11.2	3.0	0250	4310		
19055	BIGB	09	07	2205	S23	E43	09	11.2	3.0	0525	4310		
19055	BIGB	09	08	2302	S23	E29	09	11.2	2.5	0500	4310		
19055	BIGB	09	12	1751	S23	W21	09	11.1	3.5	0525	4310		
19055	BIGB	09	13	1520	S23	W32	09	11.2	3.0	0500	4310		
19055	BIGB	09	14	1653	S22	W47	09	11.1	3.5	0500	4310		
19055	BIGB	09	15	1500	S21	W59	09	11.1	2.5	0500	4310		
19055	BIGB	09	16	1923	S20	W73	09	11.2	2.5	0500	4310		
19071	BIGB	09	12	1751	S02	W06	09	12.3	2.5	0175			
19071	BIGB	09	13	1520	S03	W18	09	12.3	2.0	0100			
19056	BIGB	09	05	1855	N06	E78	09	11.6	2.0	0700	4313	4314	
19056	BIGB	09	06	2142	N07	E73	09	12.4	3.0	1700	4313	4314	
19056	BIGB	09	07	2205	N07	E61	09	12.5	3.0	2000	4313	4314	
19056	BIGB	09	08	2302	N07	E46	09	12.4	3.0	1850	4313	4314	
19056	BIGB	09	12	1751	N06	W05	09	12.4	2.5	1900	4313	4314	
19056	BIGB	09	13	1520	N07	W17	09	12.4	2.5	1900	4313	4314	
19056	BIGB	09	14	1653	N07	W30	09	12.4	2.5	1800	4313	4314	
19056	BIGB	09	15	1500	N08	W43	09	12.4	2.5	1750	4313	4314	
19056	BIGB	09	16	1923	N09	W58	09	12.4	2.5	1700	4313	4314	
19056	BIGB	09	17	2312	N09	W72	09	12.6	2.0	1500	4313	4314	
19057	BIGB	09	05	1855	S05	E80	09	11.8	1.0	0500	4315		
19057	BIGB	09	06	2142	S05	E71	09	12.2	2.5	1250	4315		
19057	BIGB	09	07	2205	S05	E62	09	12.5	2.5	2000	4315		
19057	BIGB	09	08	2302	S05	E49	09	12.6	2.5	1900	4315		
19057	BIGB	09	12	1751	S05	W04	09	12.4	2.0	1300	4315		
19057	BIGB	09	13	1520	S05	W16	09	12.4	2.0	1400	4315		
19057	BIGB	09	14	1653	S05	W27	09	12.7	1.5	1400	4315		
19057	BIGB	09	15	1500	S04	W40	09	12.6	2.0	1100	4315		
19057	BIGB	09	16	1923	S02	W52	09	12.9	2.0	1100	4315		
19057	BIGB	09	17	2312	S04	W66	09	13.0	2.5	1300	4315		
19057	BIGB	09	18	1645	S07	W73	09	13.2	1.0	0500	4315		
19058	BIGB	09	07	2205	S20	E70	09	13.3	2.0	0825			
19058	BIGB	09	08	2302	S20	E58	09	13.4	1.0	0850			
19058	BIGB	09	12	1751	S18	E06	09	13.2	1.5	0700			
19058	BIGB	09	13	1520	S17	W05	09	13.2	1.5	0750			
19058	BIGB	09	14	1653	S16	W21	09	13.1	1.5	0700			
19058	BIGB	09	15	1500	S15	W33	09	13.1	1.5	0575			
19058	BIGB	09	16	1923	S14	W48	09	13.2	1.5	0575			
19058	BIGB	09	17	2312	S15	W65	09	13.0	1.5	0600			
19058	BIGB	09	18	1645	S16	W72	09	13.2	1.5	0500			
19061	BIGB	09	13	1520	N15	W06	09	13.2	1.0	0100			

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)

SEPTEMBER 1983

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
19061	BIGB	09	14	1653	N15	W19	09	13.3	1.0	0125			
19061	BIGB	09	15	1500	N16	W32	09	13.2	1.0	0125			
19061	BIGB	09	16	1923	N16	W46	09	13.3	2.5	0150			
19061	BIGB	09	17	2312	N16	W64	09	13.1	3.0	0350			
19061	BIGB	09	18	1645	N15	W78	09	12.8	3.5	0700			
19069	BIGB	09	15	1500	S03	W27	09	13.6	2.0	0375	4315D		
19069	BIGB	09	16	1923	S03	W42	09	13.7	2.5	0450	4315D		
19070	BIGB	09	15	1500	N13	W22	09	14.0	1.0	0125			
19063	BIGB	09	13	1520	S03	E15	09	14.7	1.5	0125	4318	4320	
19063	BIGB	09	14	1653	S03	E01	09	14.8	1.0	0100	4318	4320	
19063	BIGB	09	15	1500	S02	W12	09	14.7	1.0	0100	4318	4320	
19063	BIGB	09	16	1923	S03	W27	09	14.8	1.0	0100	4318	4320	
19063	BIGB	09	17	2312	S04	W40	09	15.0	3.0	0275	4318	4320	
19063	BIGB	09	18	1645	S05	W51	09	14.9	3.0	0600	4318	4320	
19062	BIGB	09	13	1520	N08	E19	09	15.1	1.5	0175			
19059	BIGB	09	07	2205	N16	E80	09	14.0	1.0	0400			
19059	BIGB	09	08	2302	N17	E75	09	14.6	2.0	1300			
19059	BIGB	09	12	1751	N18	E30	09	15.0	2.5	1300			
19059	BIGB	09	13	1520	N20	E16	09	14.9	2.5	1400			
19059	BIGB	09	14	1653	N20	E06	09	15.2	2.5	1400			
19059	BIGB	09	15	1500	N22	W06	09	15.2	2.5	1400			
19059	BIGB	09	16	1923	N20	W22	09	15.1	2.5	1300			
19059	BIGB	09	17	2312	N21	W36	09	15.2	2.5	1400			
19059	BIGB	09	18	1645	N19	W48	09	15.0	2.5	1400			
19059	BIGB	09	21	2203	N20	W80	09	15.8	1.5	0550			
19064	BIGB	09	12	1751	S21	E35	09	15.4	1.5	0600			
19064	BIGB	09	13	1520	S19	E23	09	15.4	2.0	0800			
19064	BIGB	09	14	1653	S17	E09	09	15.4	2.0	1100			
19064	BIGB	09	15	1500	S18	W04	09	15.3	2.0	1000			
19064	BIGB	09	16	1923	S19	W19	09	15.3	2.0	0800			
19064	BIGB	09	17	2312	S17	W33	09	15.4	2.0	0850			
19064	BIGB	09	18	1645	S19	W40	09	15.6	2.0	0850			
19060	BIGB	09	12	1751	N12	E40	09	15.7	2.5	0200	4320A		
19060	BIGB	09	13	1520	N13	E27	09	15.7	2.0	0250	4320A		
19060	BIGB	09	14	1653	N13	E13	09	15.7	1.0	0200	4320A		
19060	BIGB	09	15	1500	N13	W02	09	15.5	1.5	0250	4320A		
19065	BIGB	09	12	1751	S14	E55	09	16.9	3.0	0225	4317		
19065	BIGB	09	13	1520	S13	E41	09	16.7	3.5	0800	4317		
19065	BIGB	09	14	1653	S13	E27	09	16.7	3.5	0800	4317		
19065	BIGB	09	15	1500	S13	E14	09	16.7	3.5	1000	4317		
19065	BIGB	09	16	1923	S14	W01	09	16.7	3.0	0900	4317		
19065	BIGB	09	17	2312	S13	W16	09	16.7	3.5	1200	4317		
19065	BIGB	09	18	1645	S13	W24	09	16.9	3.5	1300	4317		
19065	BIGB	09	21	2203	S13	W66	09	16.9	3.5	1200	4317		
19065	BIGB	09	22	1910	S13	W73	09	17.3	3.5	1000	4317		
19076	BIGB	09	21	2203	N14	W47	09	18.4	2.0	0525	4322		
19076	BIGB	09	22	1910	N15	W58	09	18.4	2.0	0650	4322		
19076	BIGB	09	23	1630	N15	W71	09	18.3	2.0	0650	4322		
19076	BIGB	09	24	1715	N13	W85	09	18.3	2.0	0600	4322		
19066	BIGB	09	13	1520	N03	E69	09	18.8	1.5	0200			
19066	BIGB	09	14	1653	N04	E56	09	18.9	1.5	0200			
19068	BIGB	09	14	1653	S14	E70	09	20.0	3.0	1300	4321		
19068	BIGB	09	15	1500	S14	E57	09	19.9	2.5	0750	4321		
19068	BIGB	09	16	1923	S16	E52	09	20.7	2.5	0800	4321		
19068	BIGB	09	17	2312	S15	E37	09	20.8	2.0	1300	4321		
19068	BIGB	09	18	1645	S14	E28	09	20.8	1.5	1350	4321		
19068	BIGB	09	21	2203	S14	W12	09	21.0	1.5	1300	4321		
19068	BIGB	09	22	1910	S14	W25	09	20.9	1.0	1000	4321		
19068	BIGB	09	23	1630	S14	W36	09	21.0	1.0	0900	4321		
19068	BIGB	09	24	1715	S14	W48	09	21.1	1.0	0900	4321		

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)

SEPTEMBER 1983

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
19068	BIGB	09	25	1755	S13	W65	09	20.8	1.0	0900	4321		
19067	BIGB	09	13	1520	N14	E80	09	19.7	1.0	0700			
19067	BIGB	09	14	1653	N14	E71	09	20.1	2.0	1400			
19067	BIGB	09	15	1500	N13	E61	09	20.2	1.5	1300			
19067	BIGB	09	16	1923	N13	E47	09	20.3	2.0	1500			
19067	BIGB	09	17	2312	N14	E31	09	20.3	2.0	1600			
19067	BIGB	09	18	1645	N15	E21	09	20.3	2.0	1600			
19067	BIGB	09	21	2203	N16	W19	09	20.5	1.5	1400			
19067	BIGB	09	22	1910	N15	W25	09	20.9	1.5	1500			
19067	BIGB	09	23	1630	N15	W41	09	20.6	1.5	1500			
19067	BIGB	09	24	1715	N15	W58	09	20.3	1.5	1600			
19067	BIGB	09	25	1755	N15	W69	09	20.5	1.5	1600			
19073	BIGB	09	16	1923	S16	E75	09	22.5	1.0	0550			
19073	BIGB	09	17	2312	S15	E60	09	22.5	1.5	0525			
19073	BIGB	09	18	1645	S15	E52	09	22.6	2.0	0850			
19073	BIGB	09	21	2203	S14	E08	09	22.5	1.0	0700			
19073	BIGB	09	22	1910	S14	W03	09	22.6	1.5	0550			
19073	BIGB	09	23	1630	S14	W14	09	22.6	1.0	0550			
19073	BIGB	09	24	1715	S14	W28	09	22.6	1.0	0450			
19073	BIGB	09	25	1755	S15	W42	09	22.6	1.0	0450			
19084	BIGB	09	27	1804	S13	W66	09	22.8	3.5	1000	4327		
19084	BIGB	09	28	2041	S14	W79	09	22.9	3.0	1000	4327		
19072	BIGB	09	16	1923	S12	E79	09	22.7	1.0	0300	4319		
19072	BIGB	09	17	2312	S10	E69	09	23.1	3.0	1750	4319		
19072	BIGB	09	18	1645	S06	E60	09	23.2	3.5	1900	4319		
19072	BIGB	09	21	2203	S07	E18	09	23.3	3.0	1900	4319		
19072	BIGB	09	22	1910	S07	E06	09	23.2	2.5	1850	4319		
19072	BIGB	09	23	1630	S07	W06	09	23.2	2.5	1850	4319		
19072	BIGB	09	24	1715	S06	W20	09	23.2	2.0	1650	4319		
19072	BIGB	09	25	1755	S07	W33	09	23.3	2.0	1500	4319		
19072	BIGB	09	27	1804	S06	W60	09	23.3	2.0	1500	4319		
19072	BIGB	09	28	2041	S06	W71	09	23.5	1.0	1500	4319		
19074	BIGB	09	18	1645	S08	E78	09	24.5	2.0	0200			
19080	BIGB	09	23	1630	S17	E12	09	24.6	1.5	0150			
19080	BIGB	09	24	1715	S17	W00	09	24.7	1.5	0200			
19080	BIGB	09	25	1755	S17	W15	09	24.6	1.5	0200			
19075	BIGB	09	21	2203	S11	E39	09	24.8	2.5	1850			
19075	BIGB	09	22	1910	S11	E27	09	24.8	2.5	1900			
19075	BIGB	09	23	1630	S08	E17	09	25.0	2.0	2000			
19075	BIGB	09	24	1715	S08	E03	09	24.9	2.5	1850			
19075	BIGB	09	25	1755	S09	W07	09	25.2	2.5	1850			
19075	BIGB	09	27	1804	S10	W35	09	25.1	2.0	1850			
19075	BIGB	09	28	2041	S11	W47	09	25.3	2.5	1850			
19083	BIGB	09	25	1755	N07	W04	09	25.4	1.5	0300	4325		
19078	BIGB	09	21	2203	S17	E56	09	26.2	3.0	0825	4323A		
19078	BIGB	09	22	1910	S16	E43	09	26.0	3.0	0900	4323A		
19078	BIGB	09	23	1630	S16	E32	09	26.1	3.5	0850	4323A		
19078	BIGB	09	24	1715	S16	E17	09	26.0	3.0	0850	4323A		
19078	BIGB	09	25	1755	S17	E05	09	26.1	3.0	0850	4323A		
19078	BIGB	09	27	1804	S16	W23	09	26.0	3.0	0600	4323A		
19078	BIGB	09	28	2041	S16	W35	09	26.2	2.5	0650	4323A		
19077	BIGB	09	21	2203	S11	E60	09	26.4	2.0	1400			
19077	BIGB	09	22	1910	S11	E50	09	26.6	2.0	2000			
19077	BIGB	09	23	1630	S11	E40	09	26.7	3.0	3000			
19077	BIGB	09	24	1715	S11	E30	09	27.0	3.0	3000			
19077	BIGB	09	25	1755	S14	E17	09	27.0	3.0	3000			
19077	BIGB	09	27	1804	S14	W09	09	27.1	2.5	3000			
19077	BIGB	09	28	2041	S14	W23	09	27.1	2.5	3000			
19077	BIGB	10	02	1751	S16	W74	09	27.2	1.6	2490			
19079	BIGB	09	21	2203	S20	E83	09	28.3	2.5	2000	4324		

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)

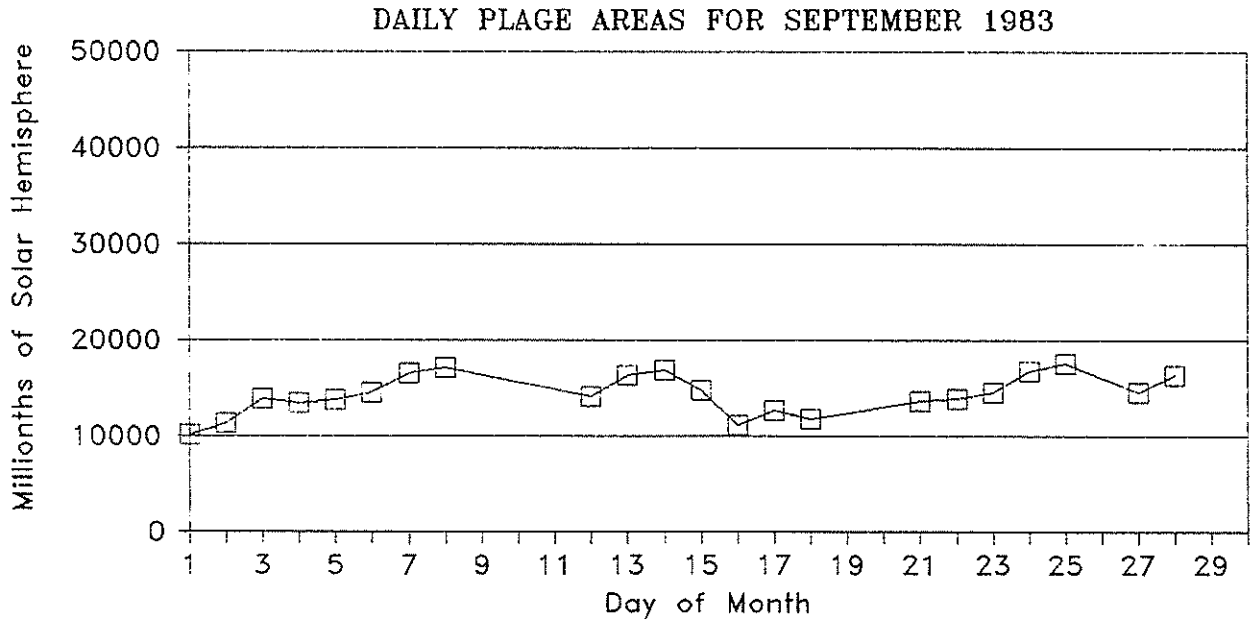
SEPTEMBER 1983

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
19079	BIGB	09	22	1910	S18	E68	09	28.0	3.5	2500	4324		
19079	BIGB	09	23	1630	S17	E57	09	28.0	3.5	3100	4324		
19079	BIGB	09	24	1715	S20	E48	09	28.4	4.0	3400	4324		
19079	BIGB	09	25	1755	S20	E35	09	28.4	4.0	3300	4324		
19079	BIGB	09	27	1804	S20	E08	09	28.4	3.5	3100	4324		
19079	BIGB	09	28	2041	S20	W04	09	28.5	3.5	3500	4324		
19079	BIGB	10	02	1751	S22	W55	09	28.6	3.2	4500	4324		
19079	BIGB	10	03	1924	S22	W71	09	28.4	3.5	4488	4324		
19081	BIGB	09	24	1715	N08	E78	09	30.6	2.0	1200	4324C		
19081	BIGB	09	25	1755	N08	E70	10	1.0	2.5	1800	4324C		
19081	BIGB	09	27	1804	N08	E44	10	1.0	2.5	1800	4324C		
19081	BIGB	09	28	2041	N10	E30	10	1.1	2.5	1700	4324C		
19081	BIGB	10	02	1751	N10	W26	09	30.8	.7	0730	4324C		
19081	BIGB	10	03	1924	N10	W40	09	30.8	1.0	0679	4324C		
19081	BIGB	10	05	1710	N10	W68	09	30.6	1.2	0679	4324C		
19082	BIGB	09	24	1715	S15	E74	09	30.3	2.5	1100	4326		
19082	BIGB	09	25	1755	S15	E65	09	30.7	2.5	1800	4326		
19082	BIGB	09	27	1804	S16	E42	09	30.9	3.0	1600	4326		
19082	BIGB	09	28	2041	S14	E27	09	30.9	3.0	1600	4326		
19082	BIGB	10	02	1751	S16	W25	09	30.8	.8	1193	4326		
19082	BIGB	10	03	1924	S16	W40	09	30.8	1.2	0938	4326		
19082	BIGB	10	05	1710	S19	W71	09	30.3	1.5	0718	4326		

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

SEPTEMBER 1983

Day	Sta	Plage Index	Plage Count	Smallest Plage (Millionths	Largest Plage of Solar	Total Area Hemisphere)	Smallest Intensity	Largest Intensity
01	BIGB	14.4	12	100	2000	10150	1.0	3.0
02	BIGB	16.1	11	500	2000	11400	1.5	3.0
03	BIGB	18.3	11	500	1800	13900	1.0	3.0
04	BIGB	20.8	12	400	1900	13500	2.0	3.0
05	BIGB	20.9	13	500	2700	13800	1.0	3.0
06	BIGB	24.6	13	250	2500	14550	1.0	3.0
07	BIGB	30.9	13	400	2600	16600	1.0	3.5
08	BIGB	33.5	15	75	2400	17075	1.0	3.5
09	No Observations This Day							
10	No Observations This Day							
11	No Observations This Day							
12	BIGB	26.6	15	175	2400	14175	1.0	3.5
13	BIGB	26.5	20	100	2500	16350	1.0	3.5
14	BIGB	23.8	19	100	2350	16875	1.0	3.5
15	BIGB	20.6	18	100	2400	14800	1.0	3.5
16	BIGB	15.7	15	100	1700	11125	1.0	3.0
17	BIGB	18.0	12	275	1750	12650	1.5	3.5
18	BIGB	18.1	12	200	1900	11750	1.0	3.5
19	No Observations This Day							
20	No Observations This Day							
21	BIGB	18.6	11	525	2000	13650	1.0	3.5
22	BIGB	21.1	10	550	2500	13850	1.0	3.5
23	BIGB	26.3	10	150	3100	14550	1.0	3.5
24	BIGB	29.5	12	200	3400	16800	1.0	4.0
25	BIGB	33.1	12	200	3300	17550	1.0	4.0
26	No Observations This Day							
27	BIGB	31.2	9	150	3100	14600	2.0	3.5
28	BIGB	31.8	10	300	3500	16400	1.0	3.5
29	No Observations This Day							
30	No Observations This Day							



BIG BEAR SOLAR OBSERVATORY
ACTIVE REGION SUMMARY
SEPTEMBER 1983

REGION	IDENTIFICATION	AGE	FIRST SEEN	DURATION
19042	19007	2	830829	03 days
050	New	1	830901	>09
043	New	1	830830	>10
044	New	1	830901	>09
047	New	1	830902	13
053	New	1	830908	07
048	19015	2	830902	14
049	19014	2	830903	13
054	New	1	830908	>01
051	19016	2	830904	>12
052	New	1	830904	>12
055	New	1	830906	>10
056	New (vic. of 19017)	1	830905	>13
057	19019	3	830905	>13
071	New	1	830912	>02
058	19018	2	830907	>11
061	New	1	830913	07
069	New	1	830915	02
070	New	1	830915	01
059	19023	2	830907	15
062	New	1	830913	01
063	New	1	830913	>06
060	New	1	830912	>04
064	19025	3	830912	>07
065	New	1	830912	>11
076	New	1	830921	>05
066	New	1	830913	02
067	19030	2	830913	>13
068	19031	7	830914	>12
073	19032	2	830916	>10
084	New	1	830927	>02
072	19046	2	830916	>13
074	New	1	830918	>01
080	New	1	830923	>03
075	19034	3	830921	>08
083	New	1	830925	>01
078	19045	2	830921	>08
077	19036/19041	5	830921	>08
079	New	1	830921	>08

1. No CaK Observations at BBSO on Sept. 1, 2, 9-11, 13, 15, 19, 20, 22-26, 29, 30.

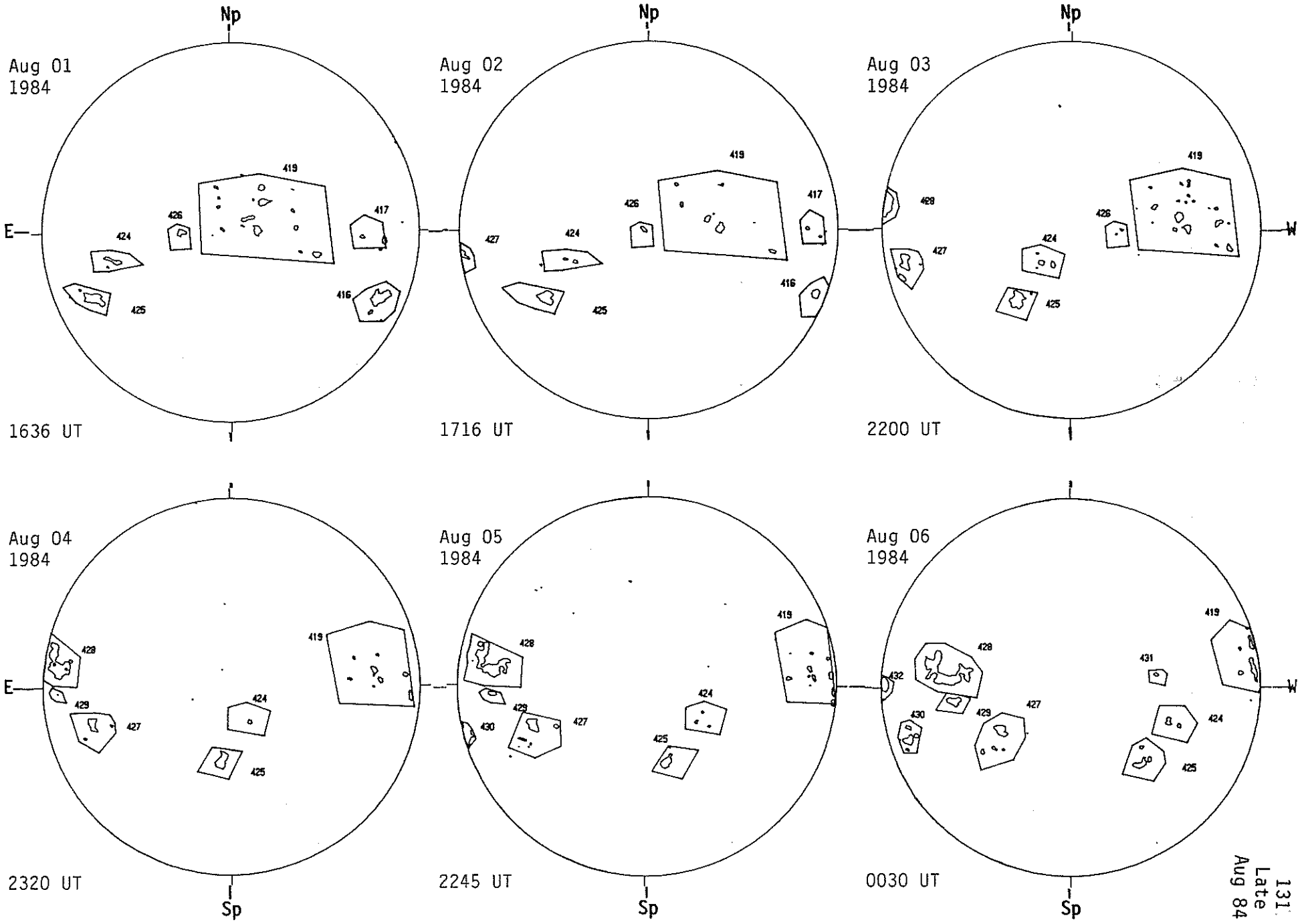
2. No CaK Prints on Sept. 9-11, 19, 20, 26, 29, 30.

3. No KPNO Magnetograms on Sept. 2, 4, 6, 7, 10-12, 16, 18, 29, 30.

4. Contiguous Plages: 19034/19036/19039/19041/19045, 19048/19049, 19057/19058, 19068/19073, 19075/19077/19080.

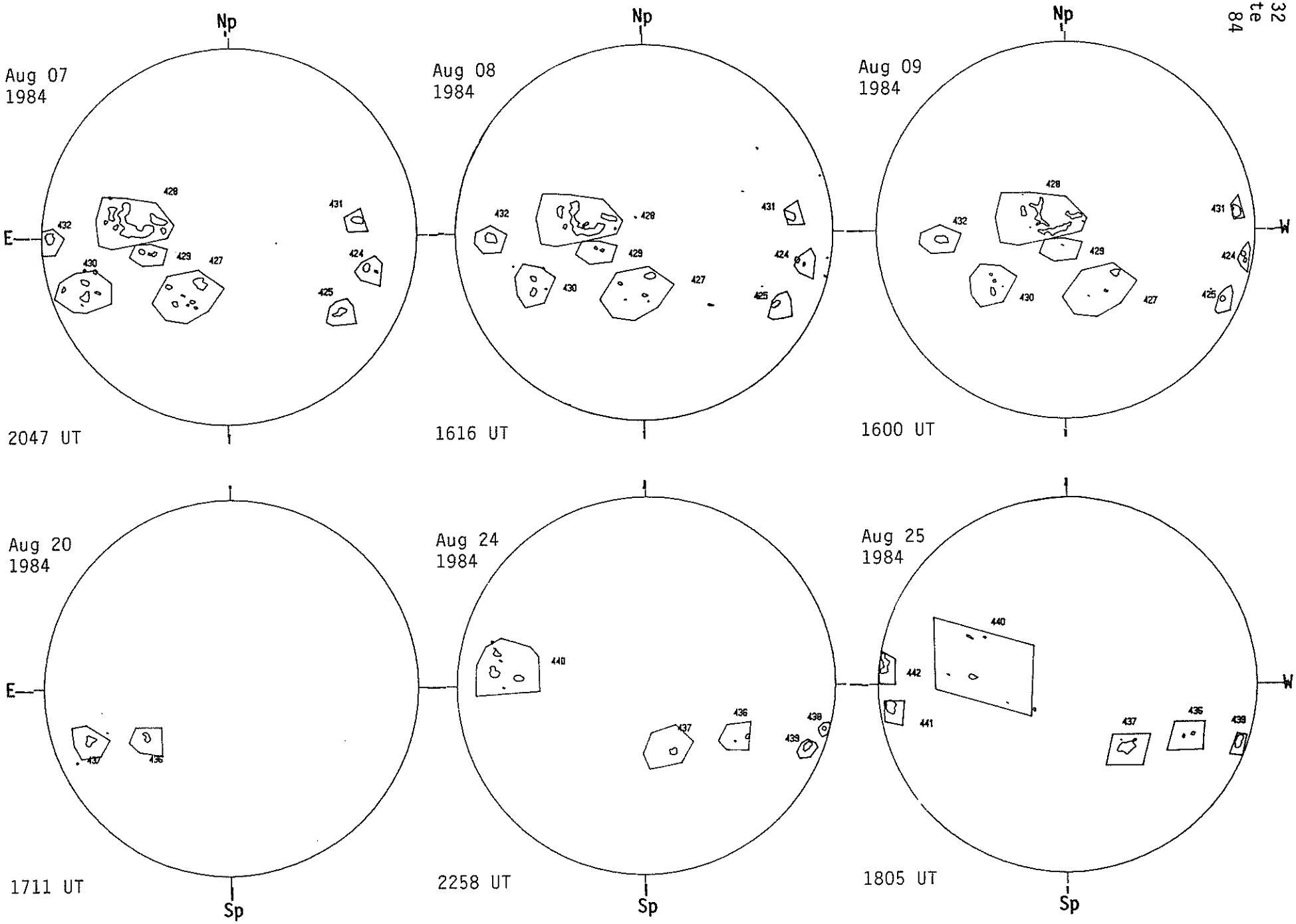
5. Mt. Wilson CaK Prints were used on Sept. 1, 2, 13, 15, 2-25.

BIG BEAR SOLAR CALCIUM PLAGE REGIONS

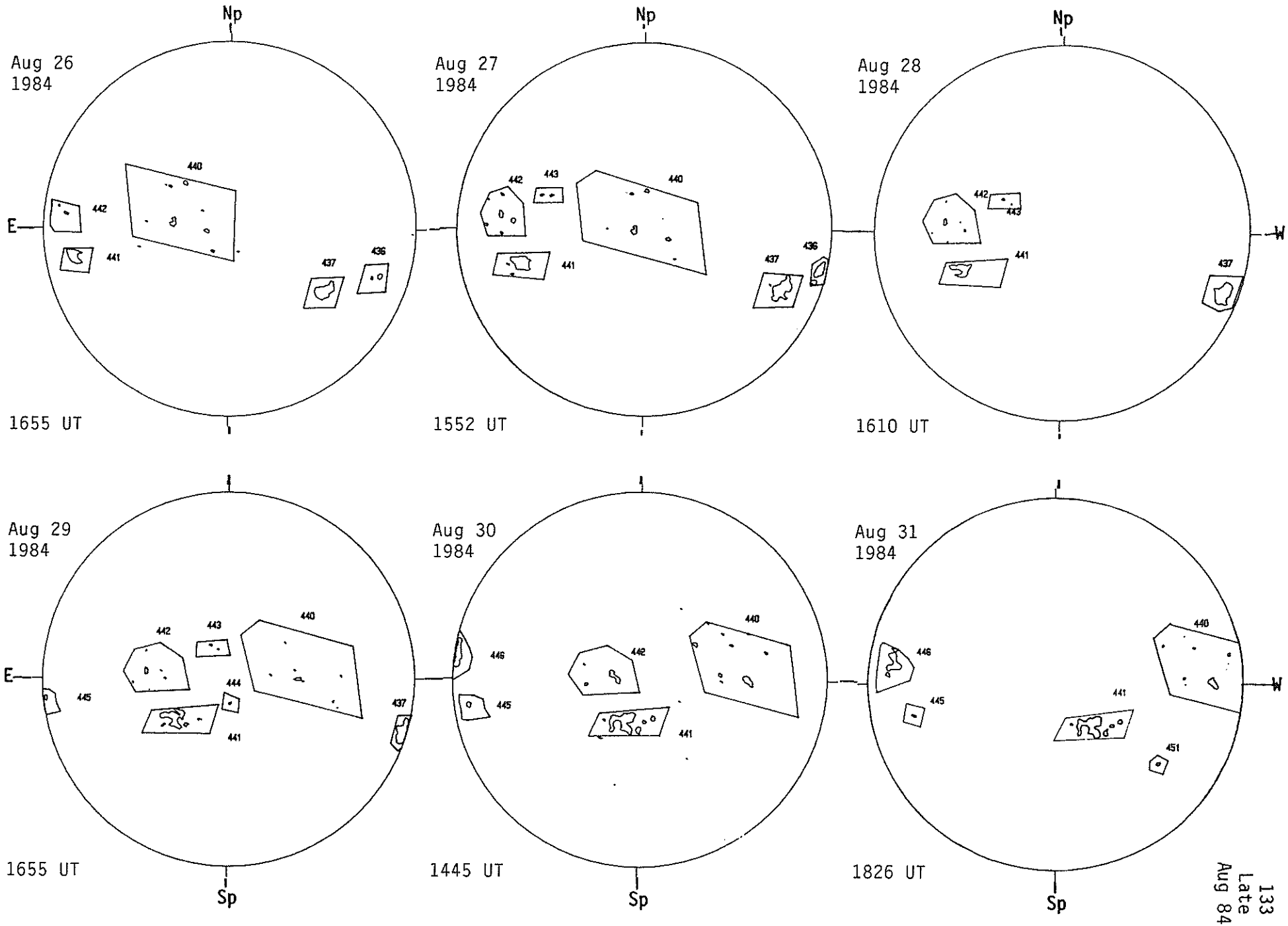


131
Late
Aug 84

BIG BEAR SOLAR CALCIUM PLAGE REGIONS

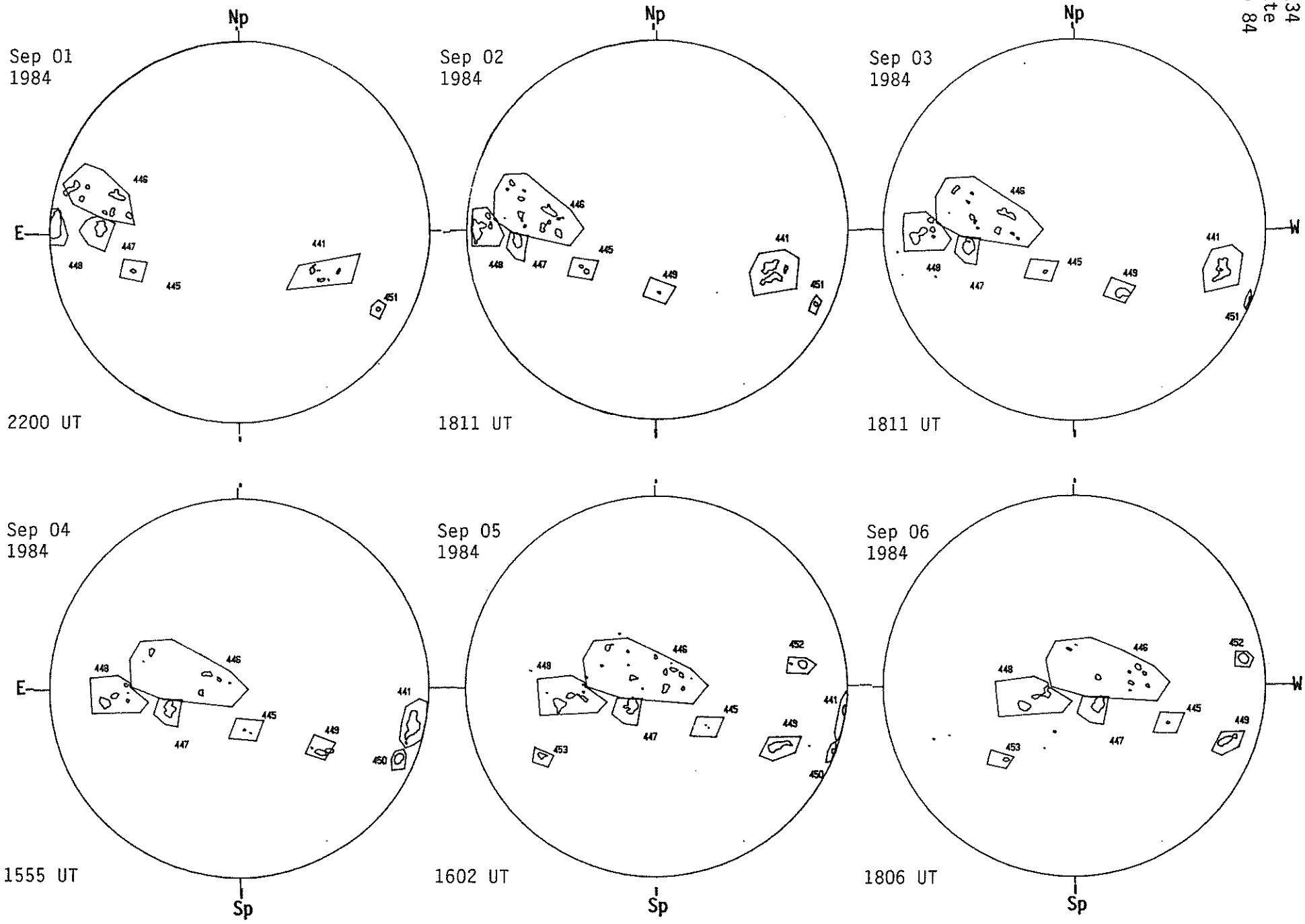


BIG BEAR SOLAR CALCIUM PLAGE REGIONS

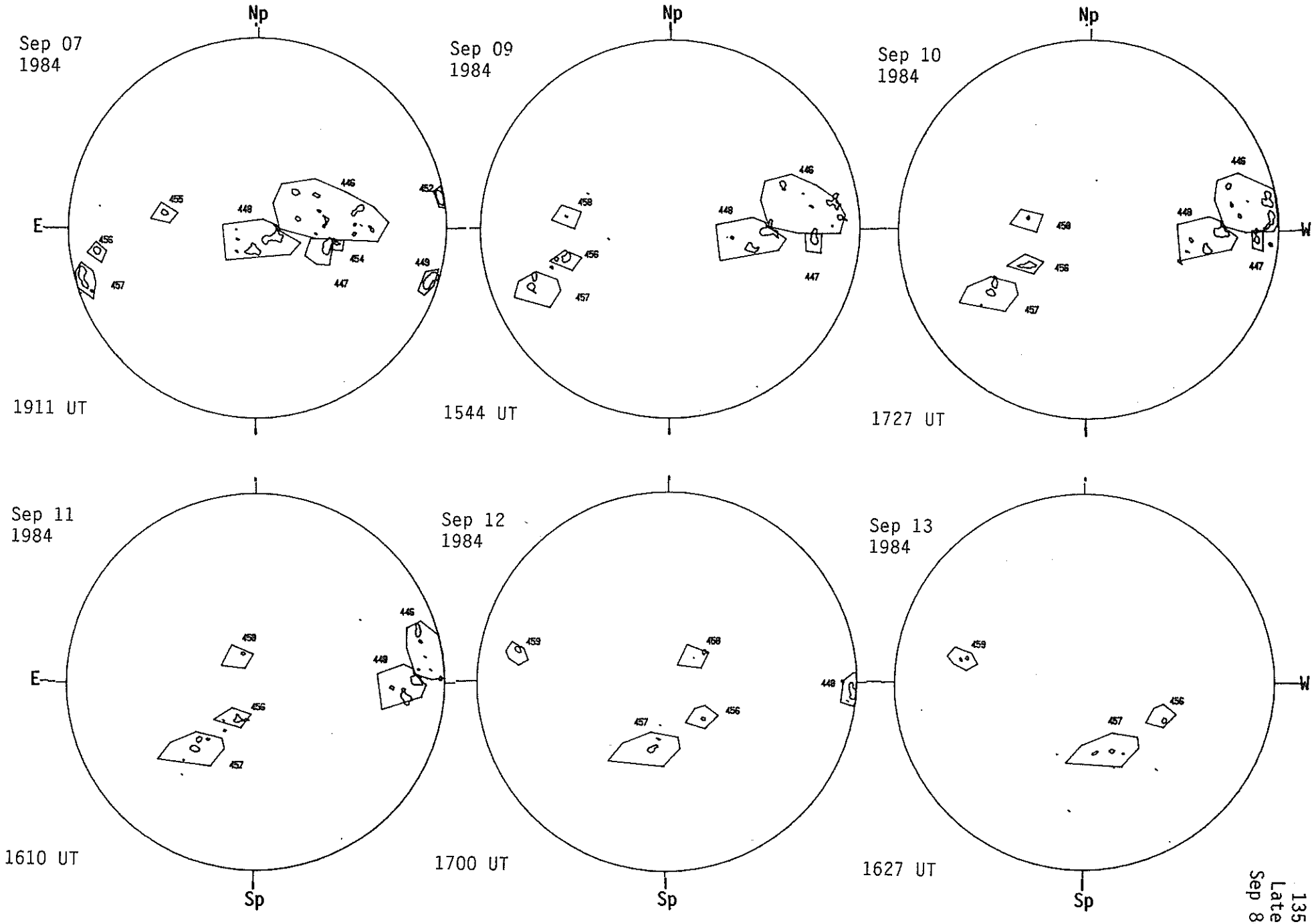


133
Late
Aug 84

BIG BEAR SOLAR CALCIUM PLAGE REGIONS



BIG BEAR SOLAR CALCIUM PLAGE REGIONS



135
Late
Sep 84

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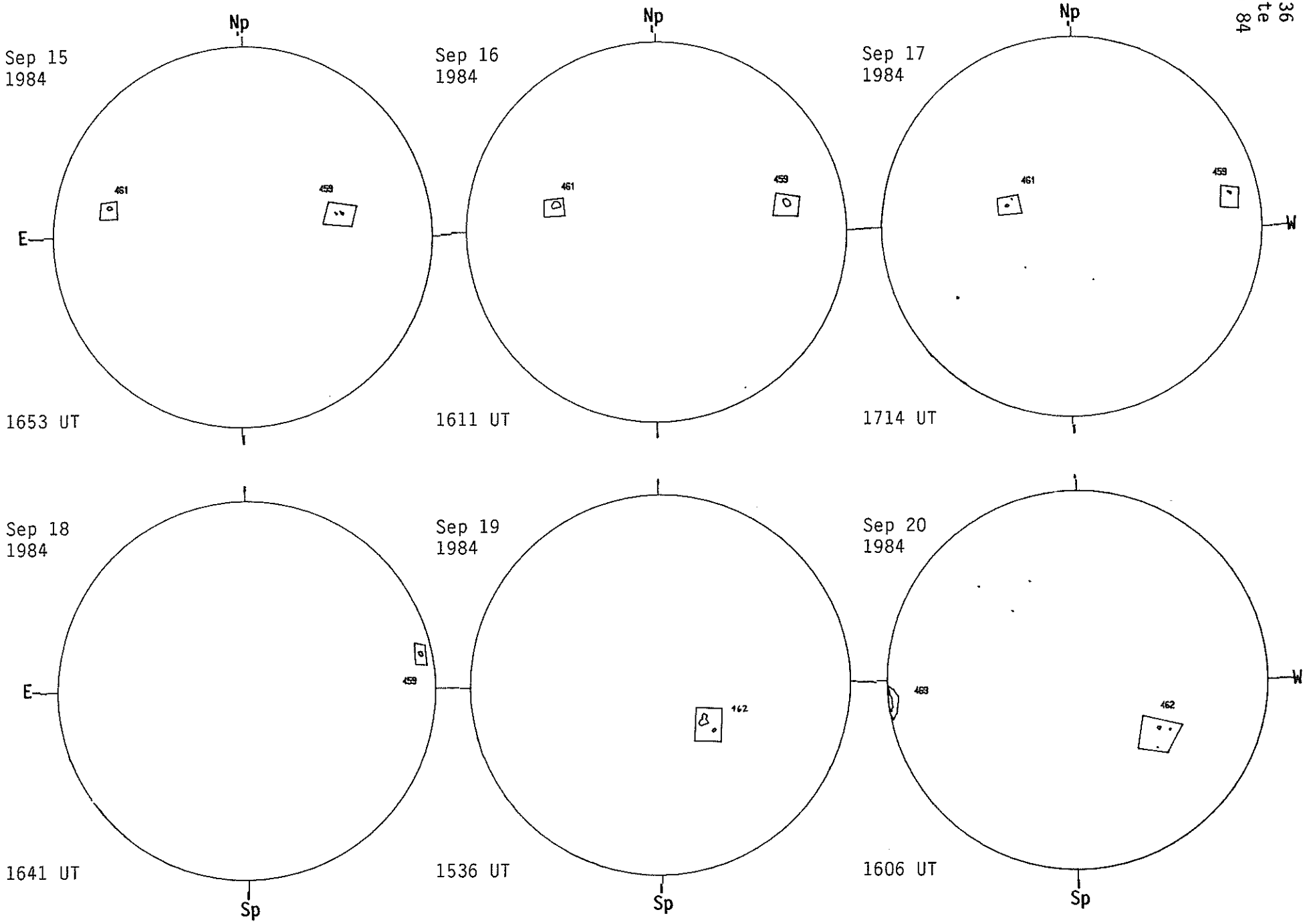
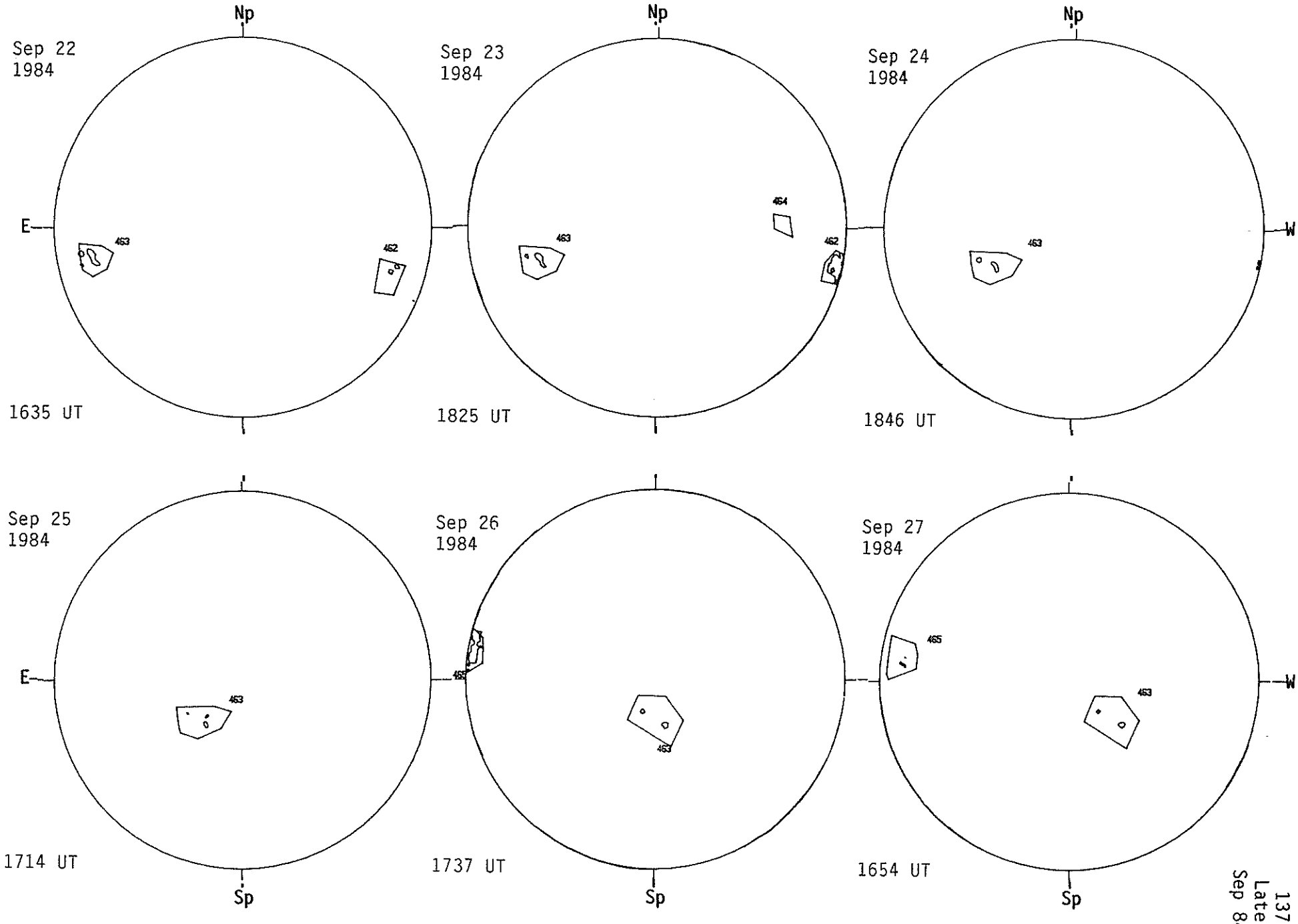
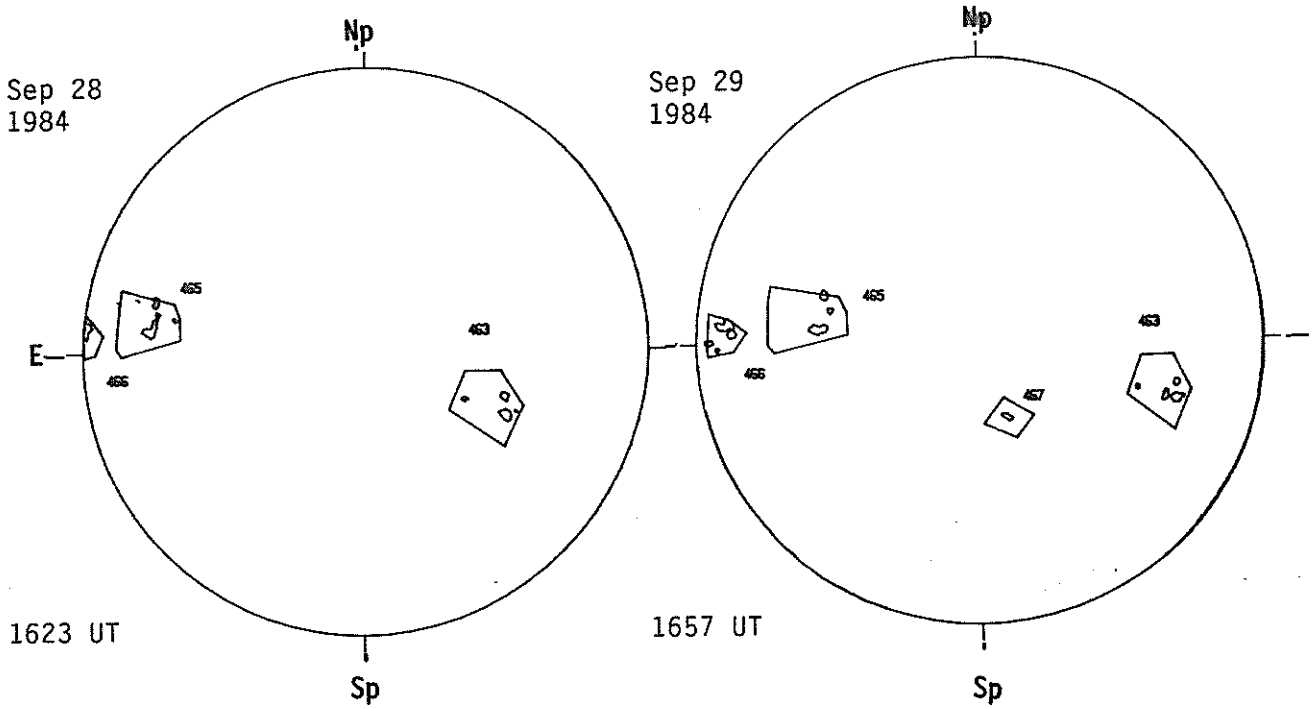


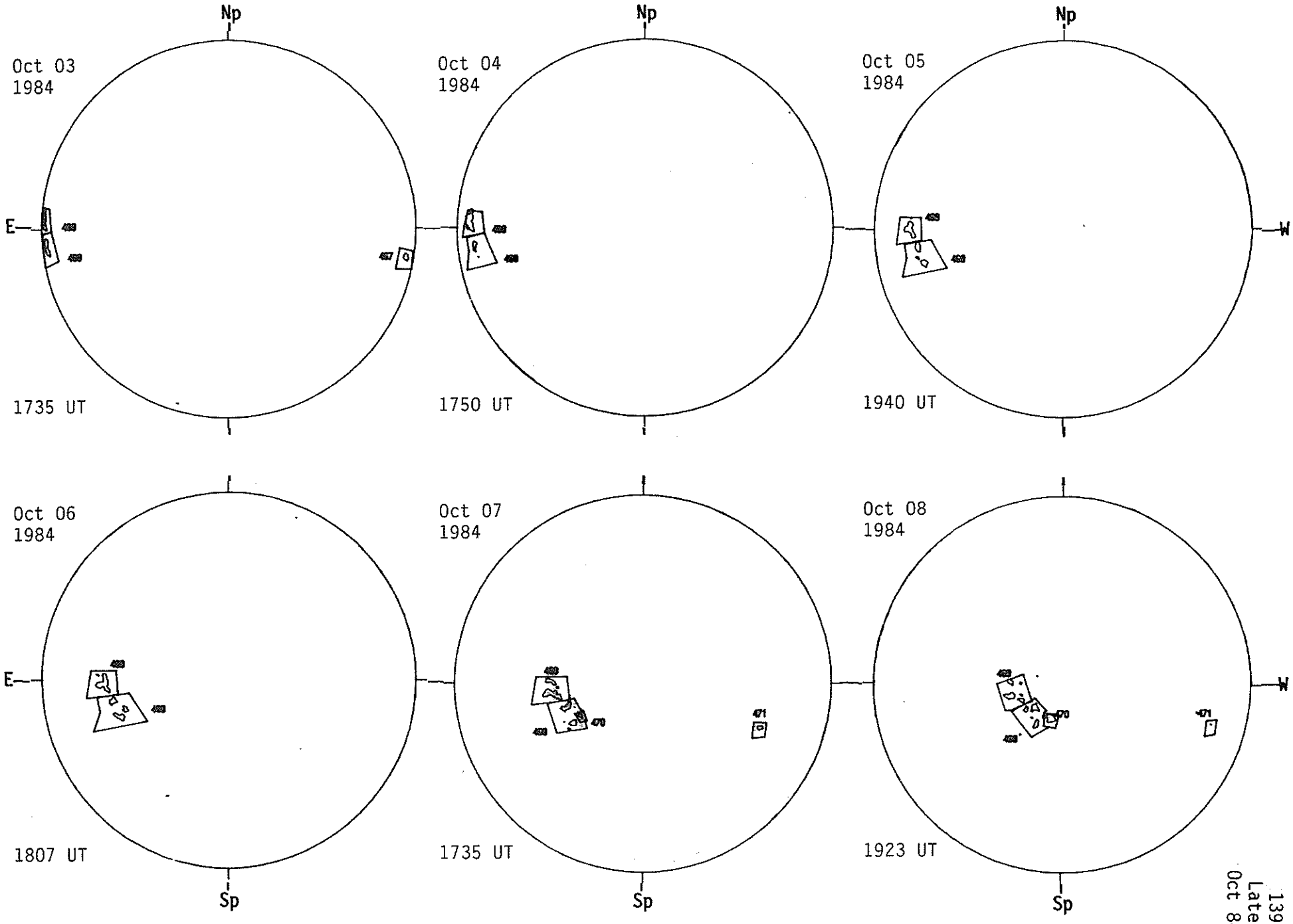
BIG BEAR SOLAR CALCIUM PLAGE REGIONS



BIG BEAR SOLAR CALCIUM PLAGE REGIONS

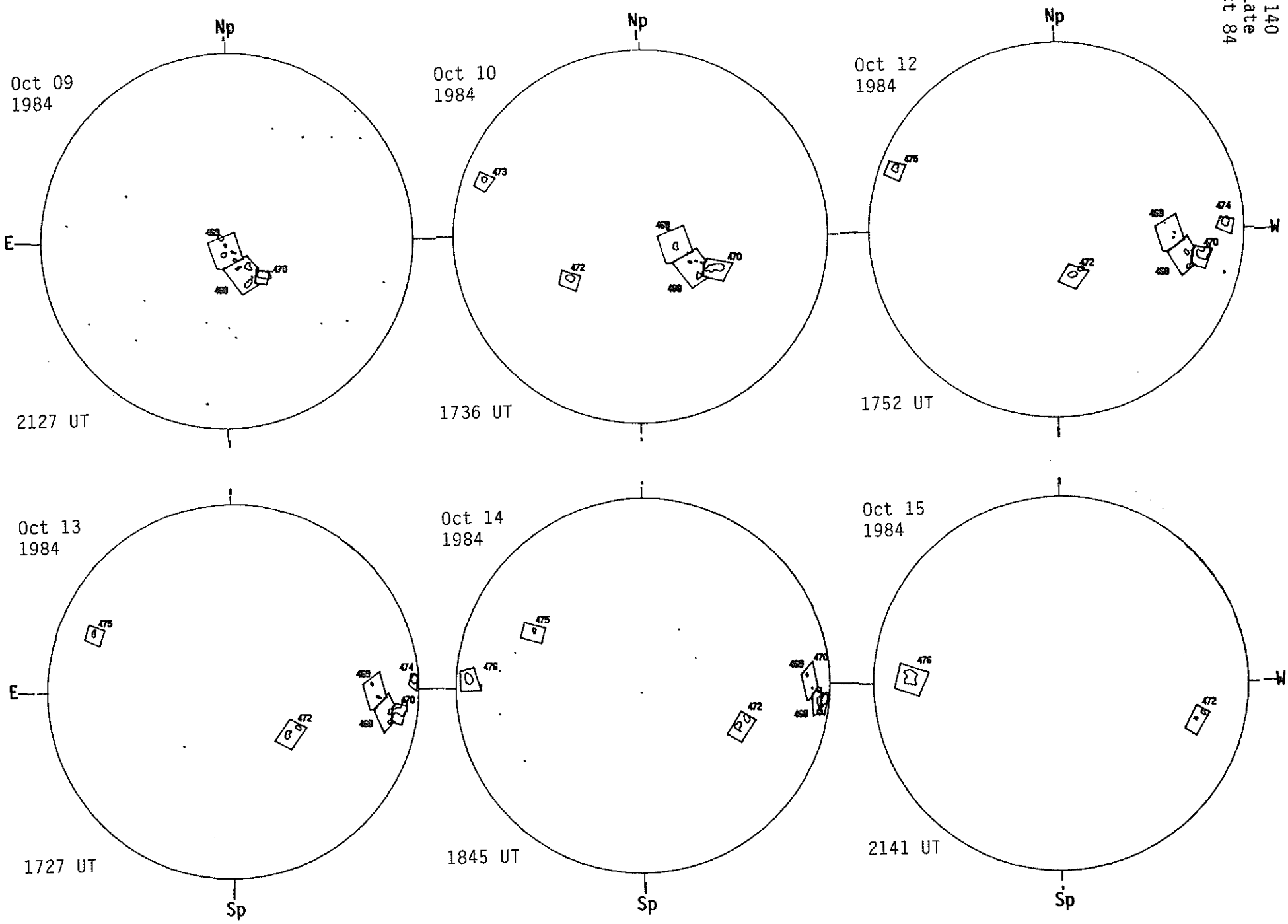


BIG BEAR SOLAR CALCIUM PLAGE REGIONS



139
Late
Oct 84

BIG BEAR SOLAR CALCIUM PLAGE REGIONS



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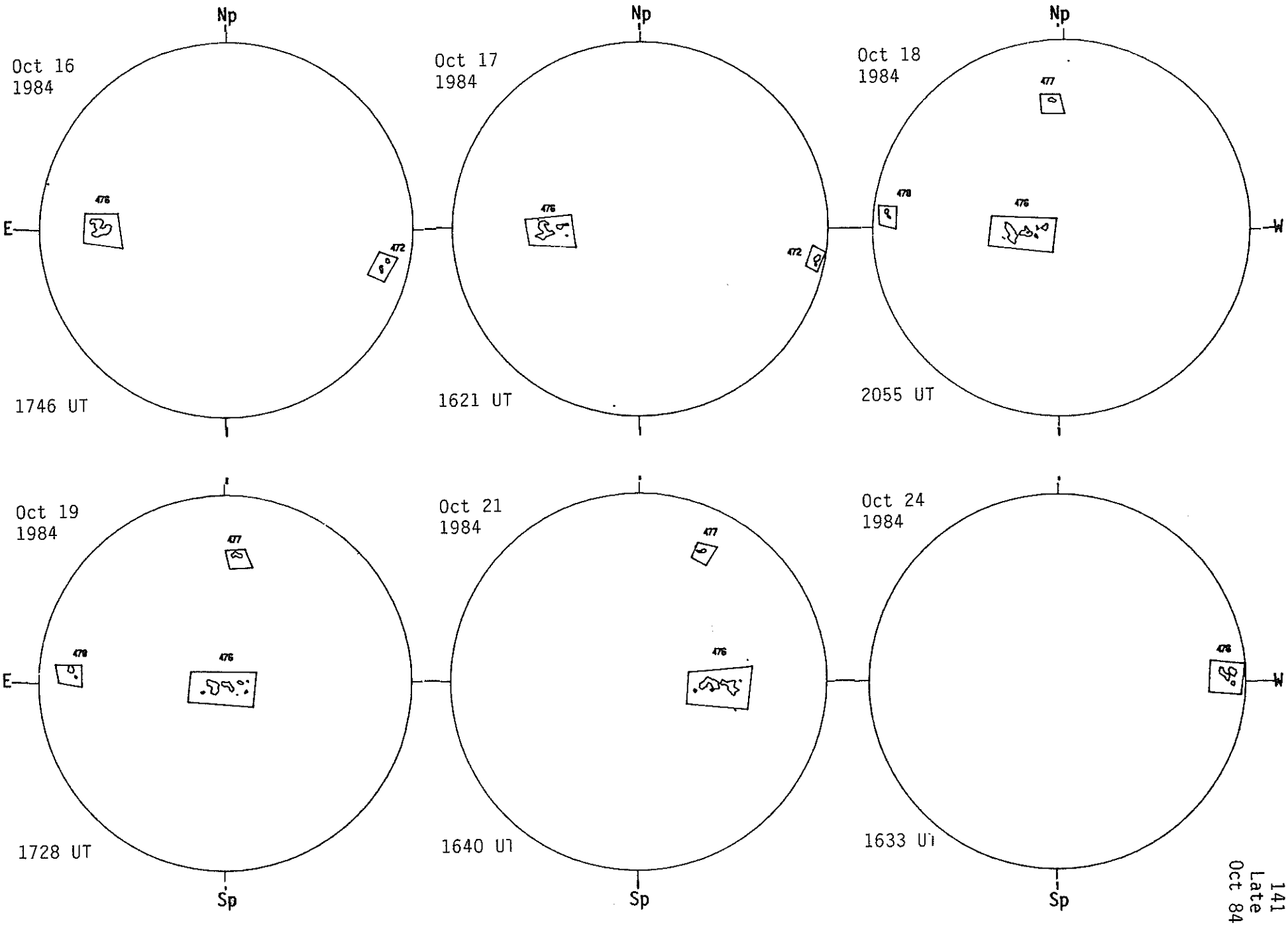
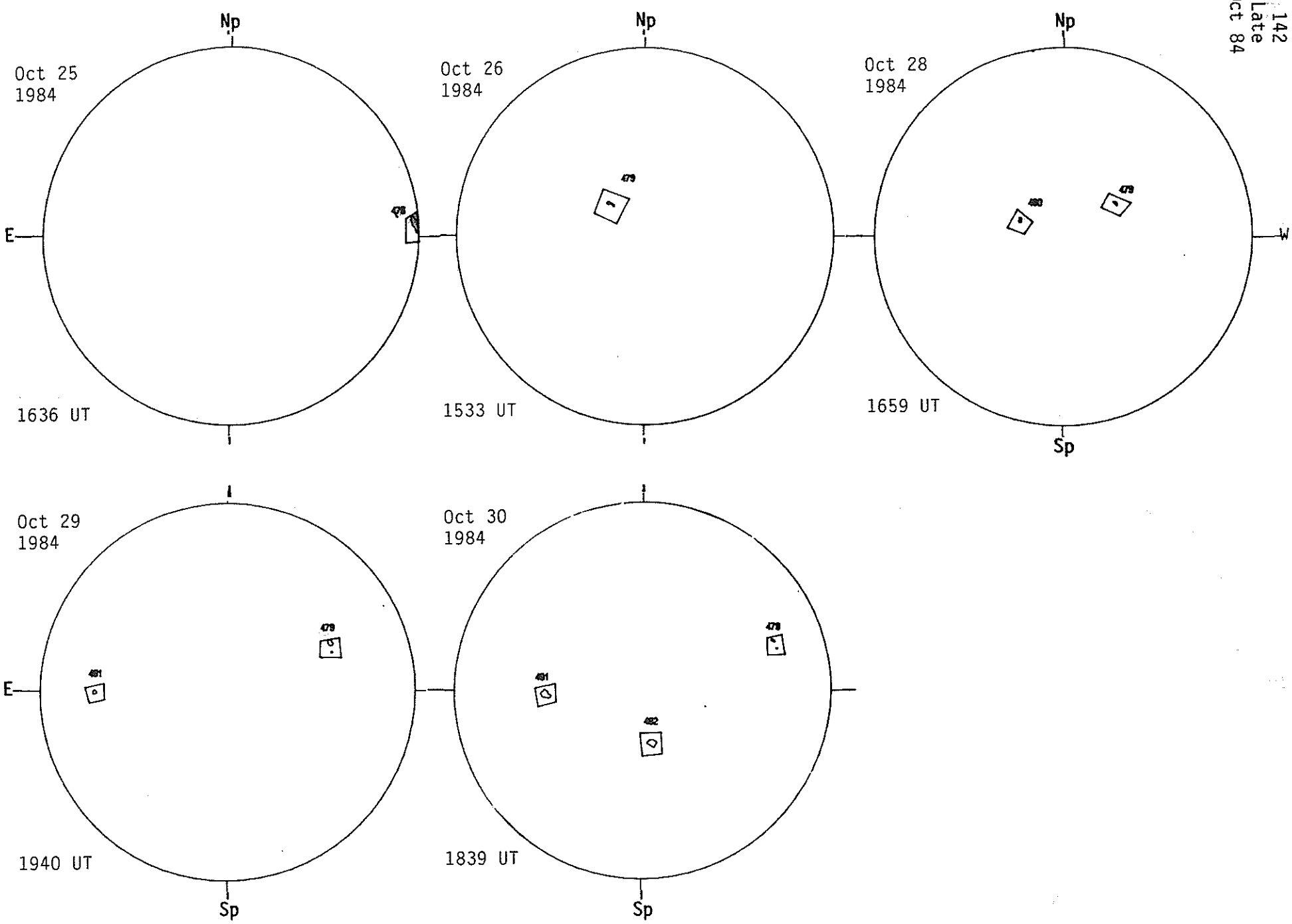


141
Late
Oct 84

BIG BEAR SOLAR CALCIUM PLAGE REGIONS



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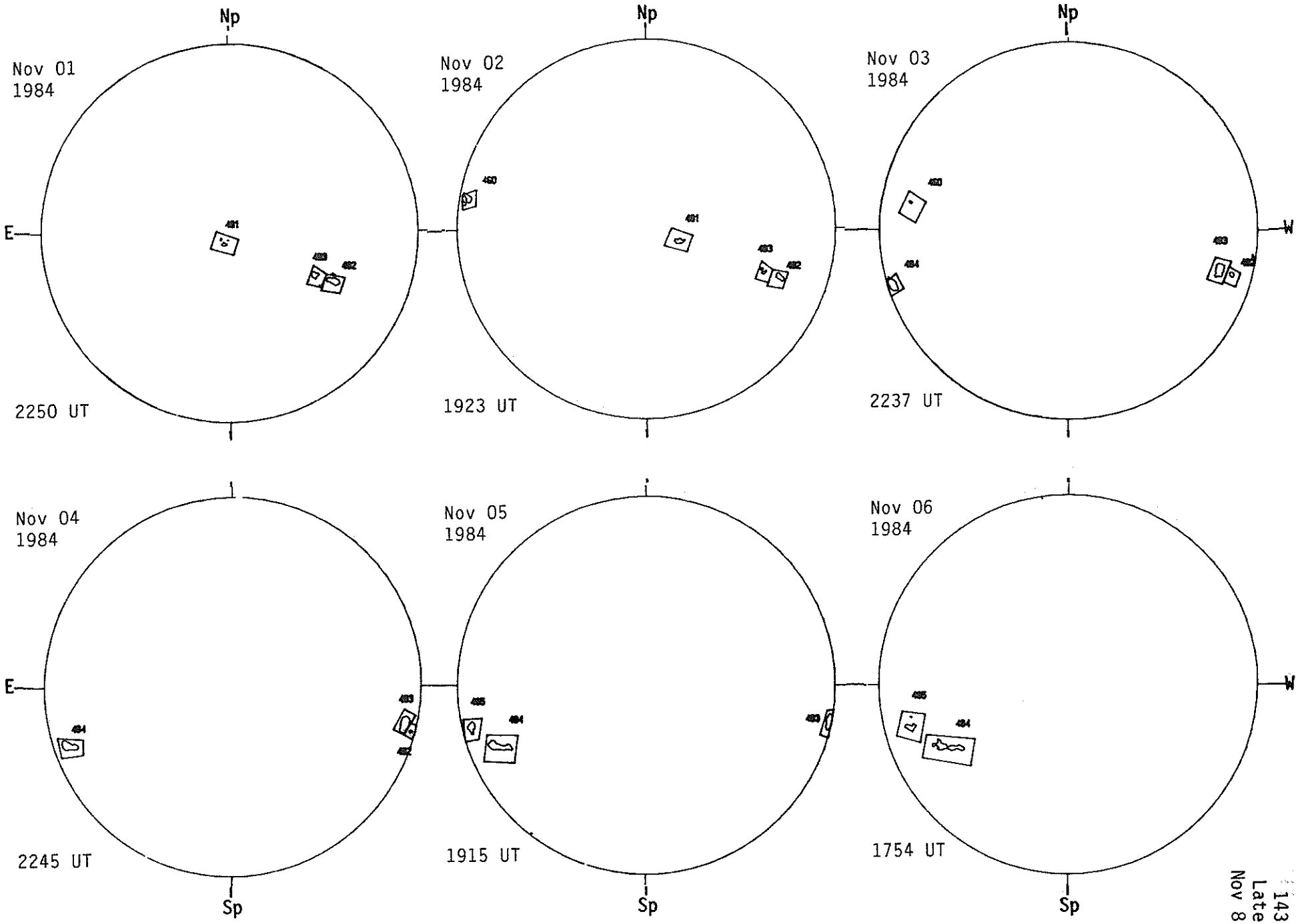
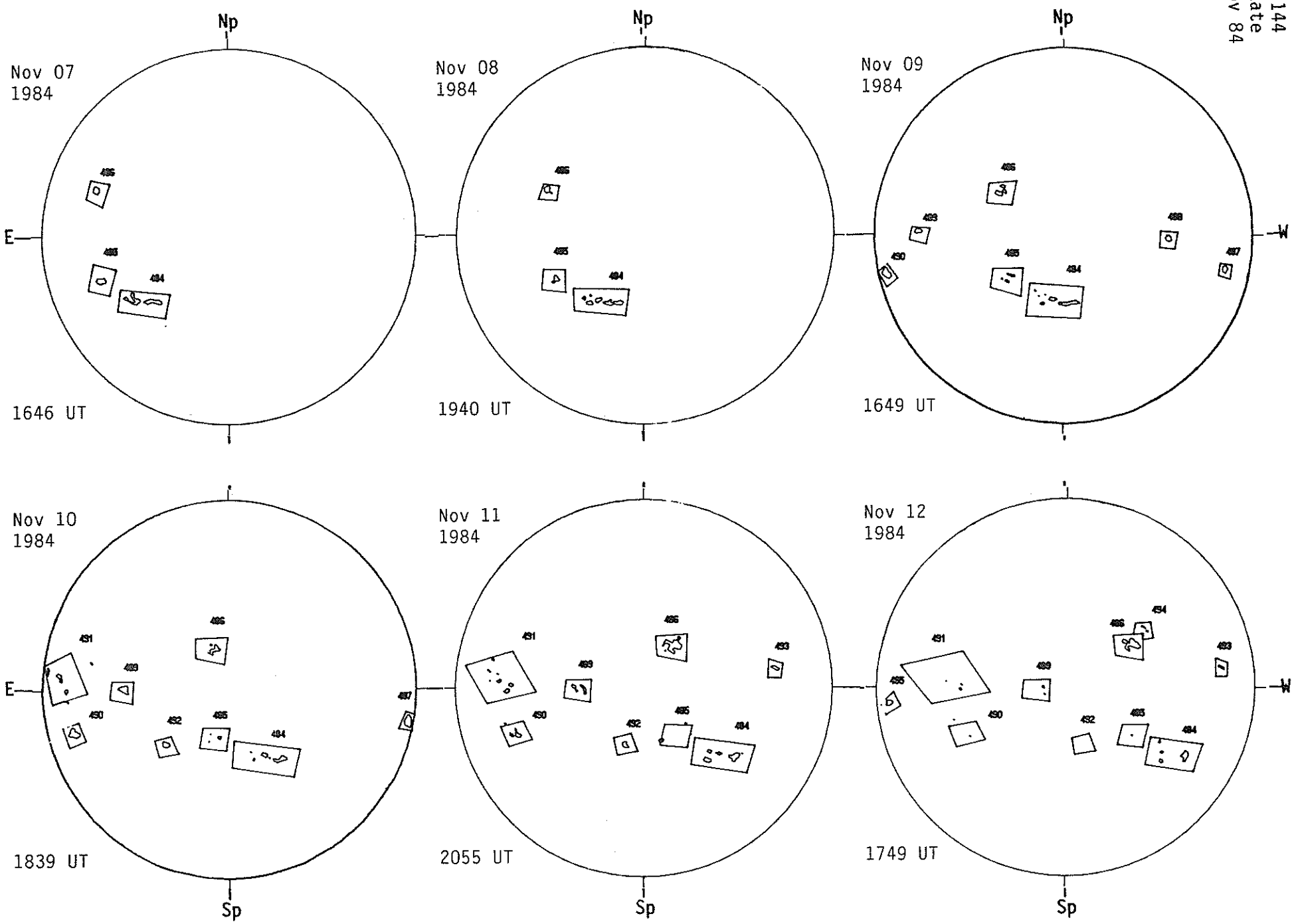
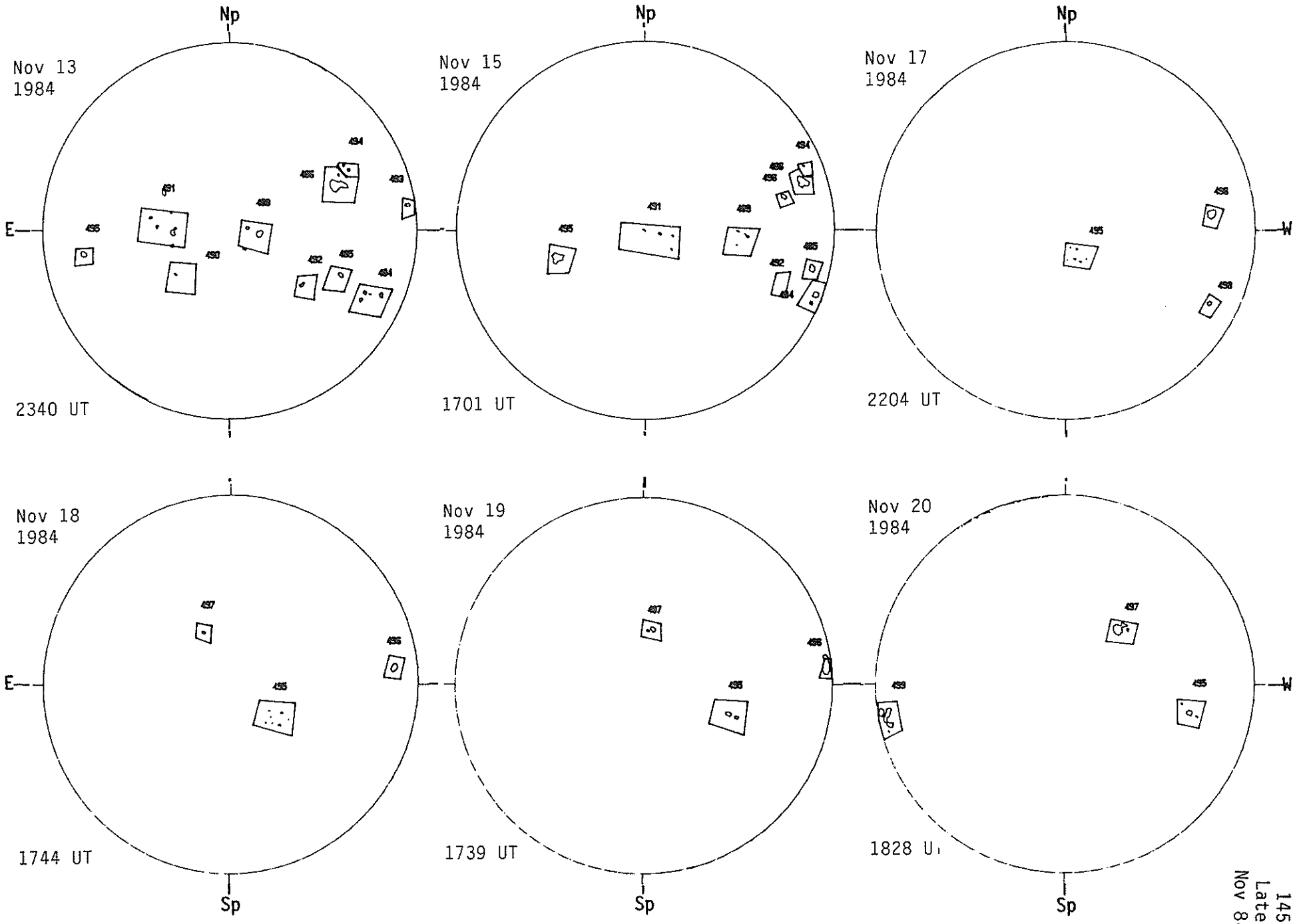


143
Late
Nov 84

BIG BEAR SOLAR CALCIUM PLAGE REGIONS

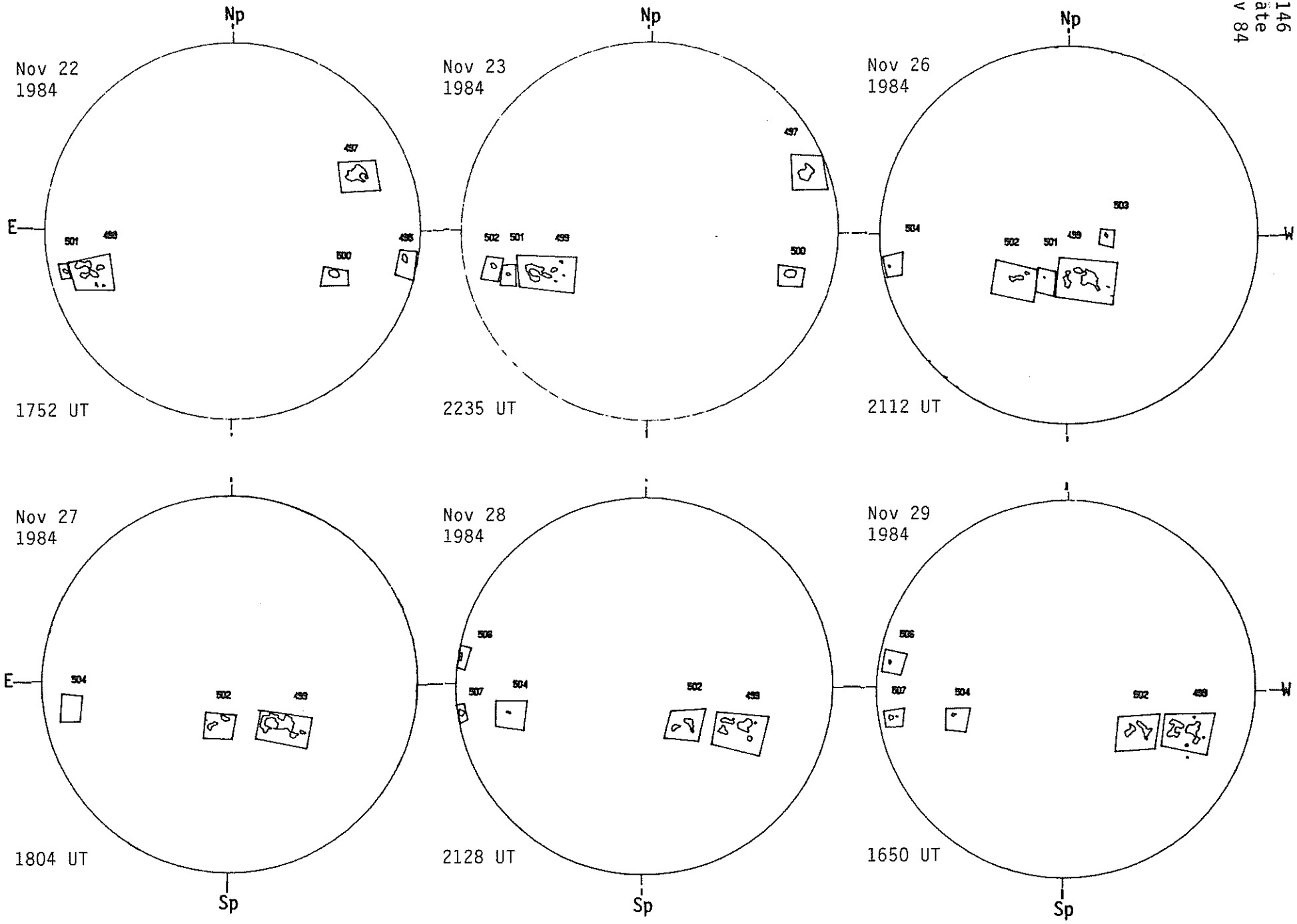


BIG BEAR SOLAR CALCIUM PLAGE REGIONS

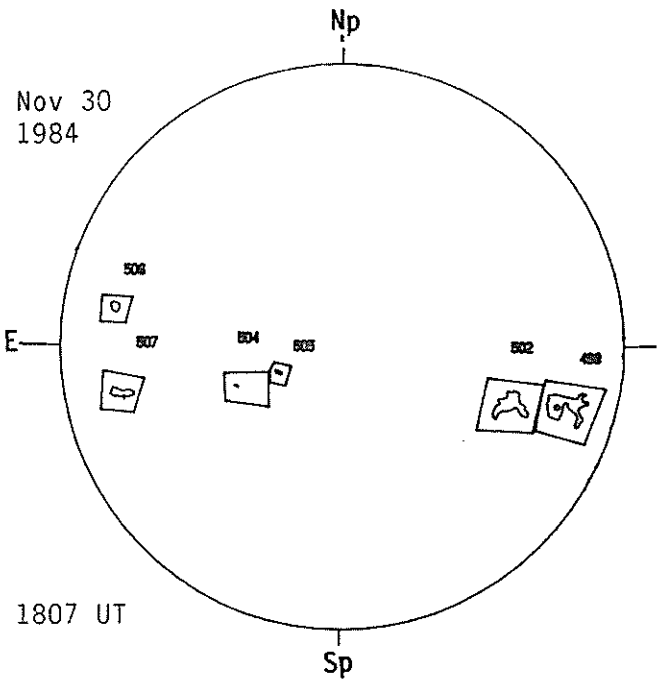


145
Late
Nov 84

BIG BEAR SOLAR CALCIUM PLAGE REGIONS

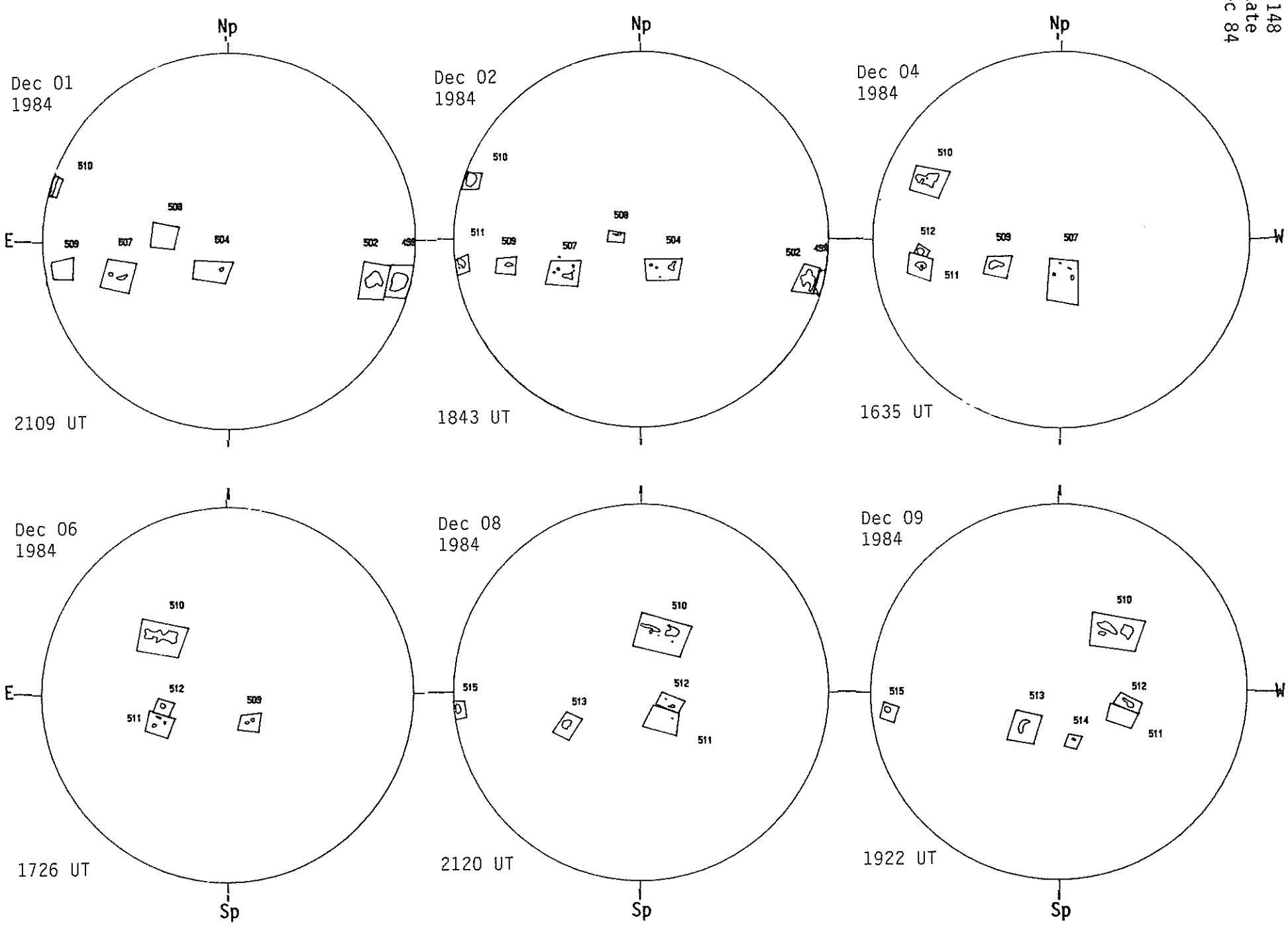


BIG BEAR SOLAR CALCIUM PLAGE REGIONS

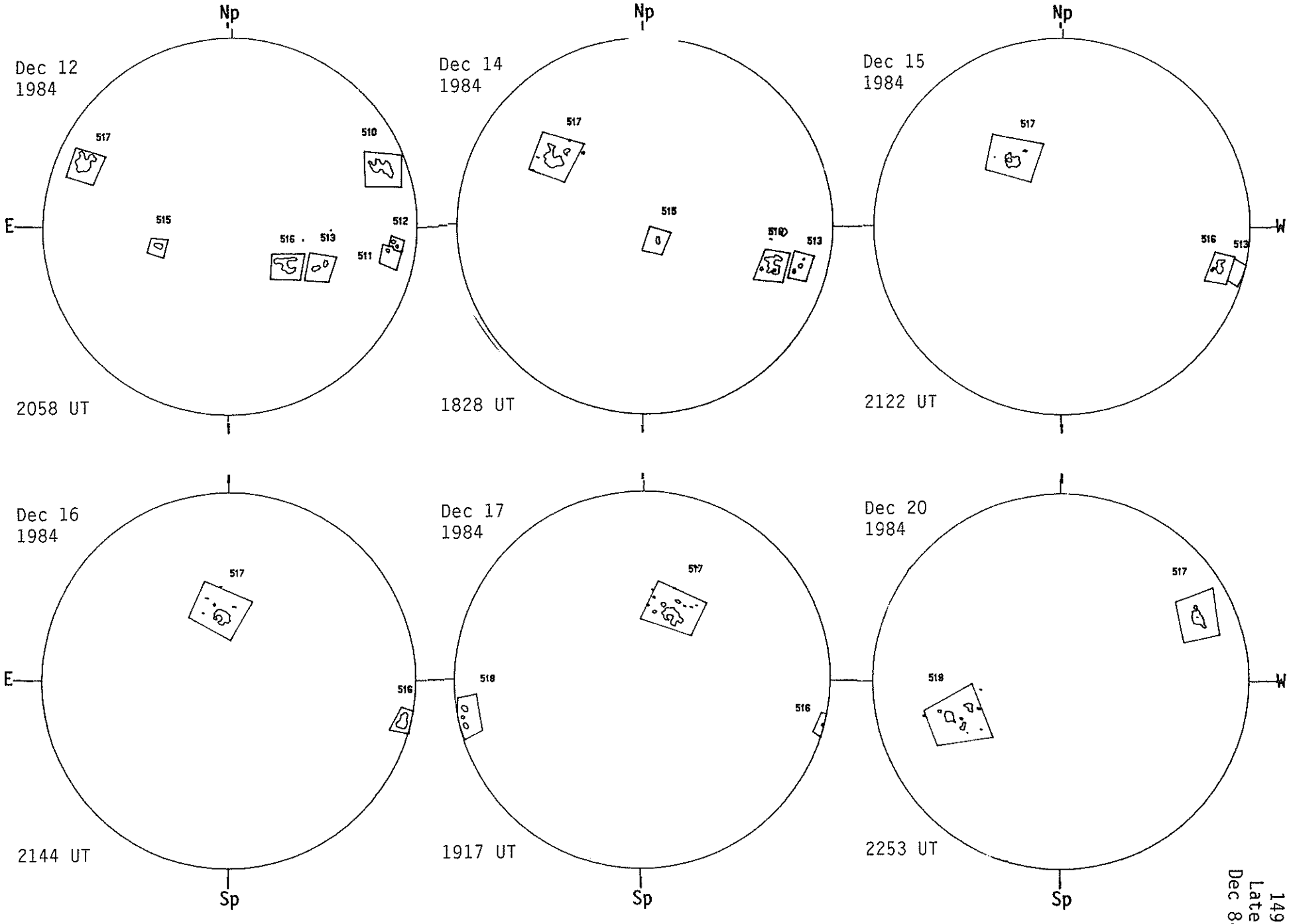


147
Late
Nov 84

BIG BEAR SOLAR CALCIUM PLAGE REGIONS



BIG BEAR SOLAR CALCIUM PLAGE REGIONS



149
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Dec 84

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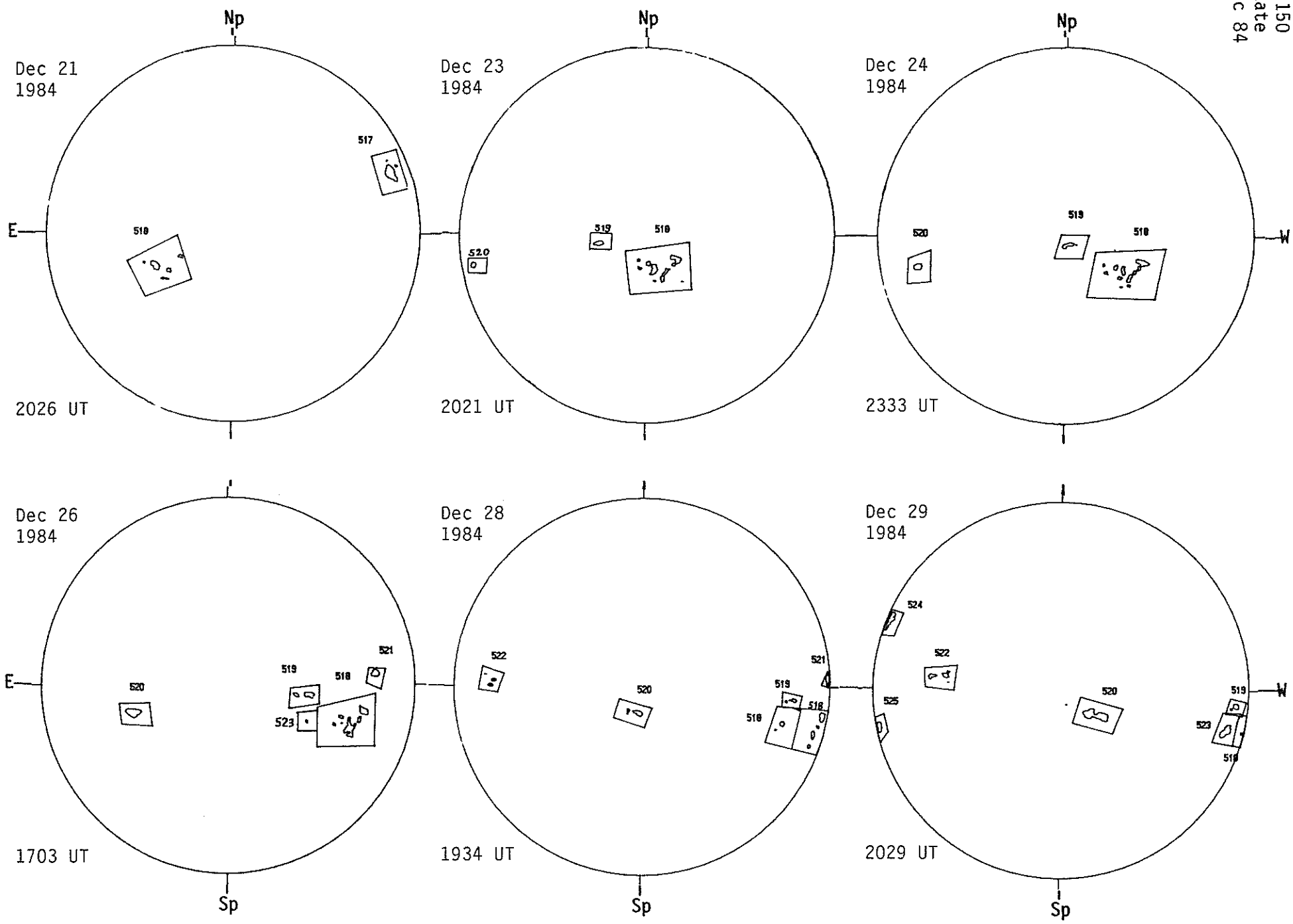

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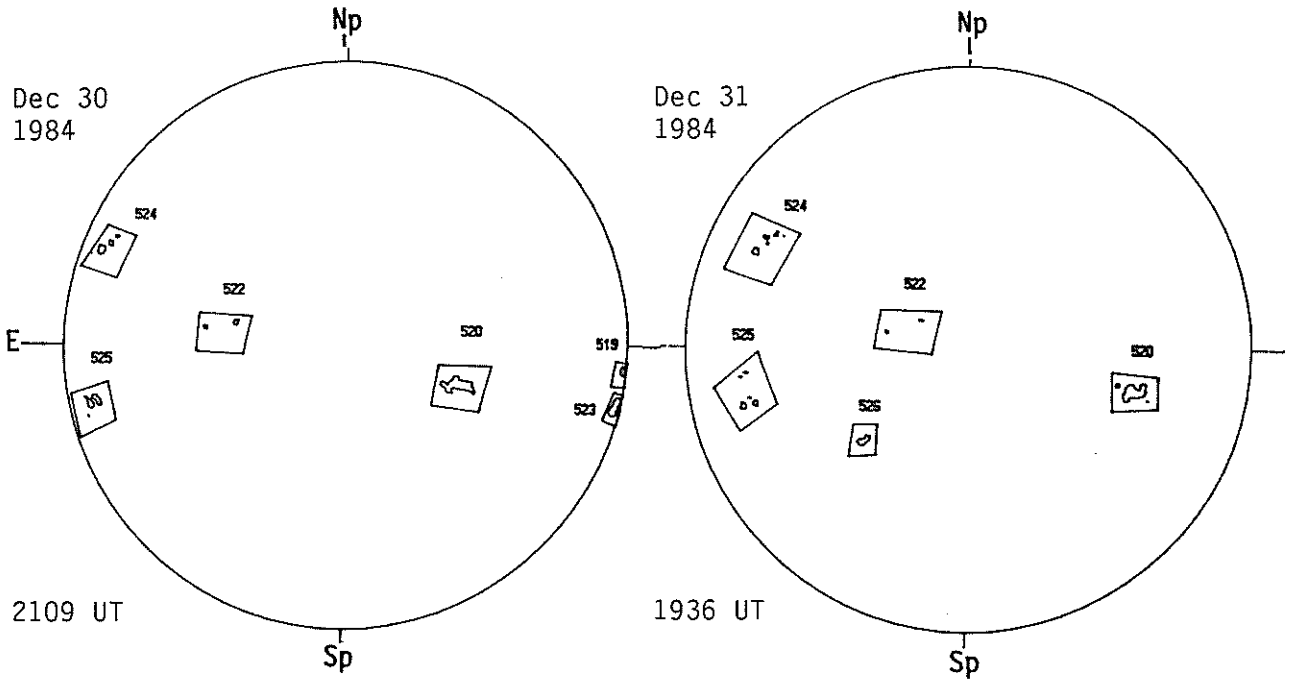

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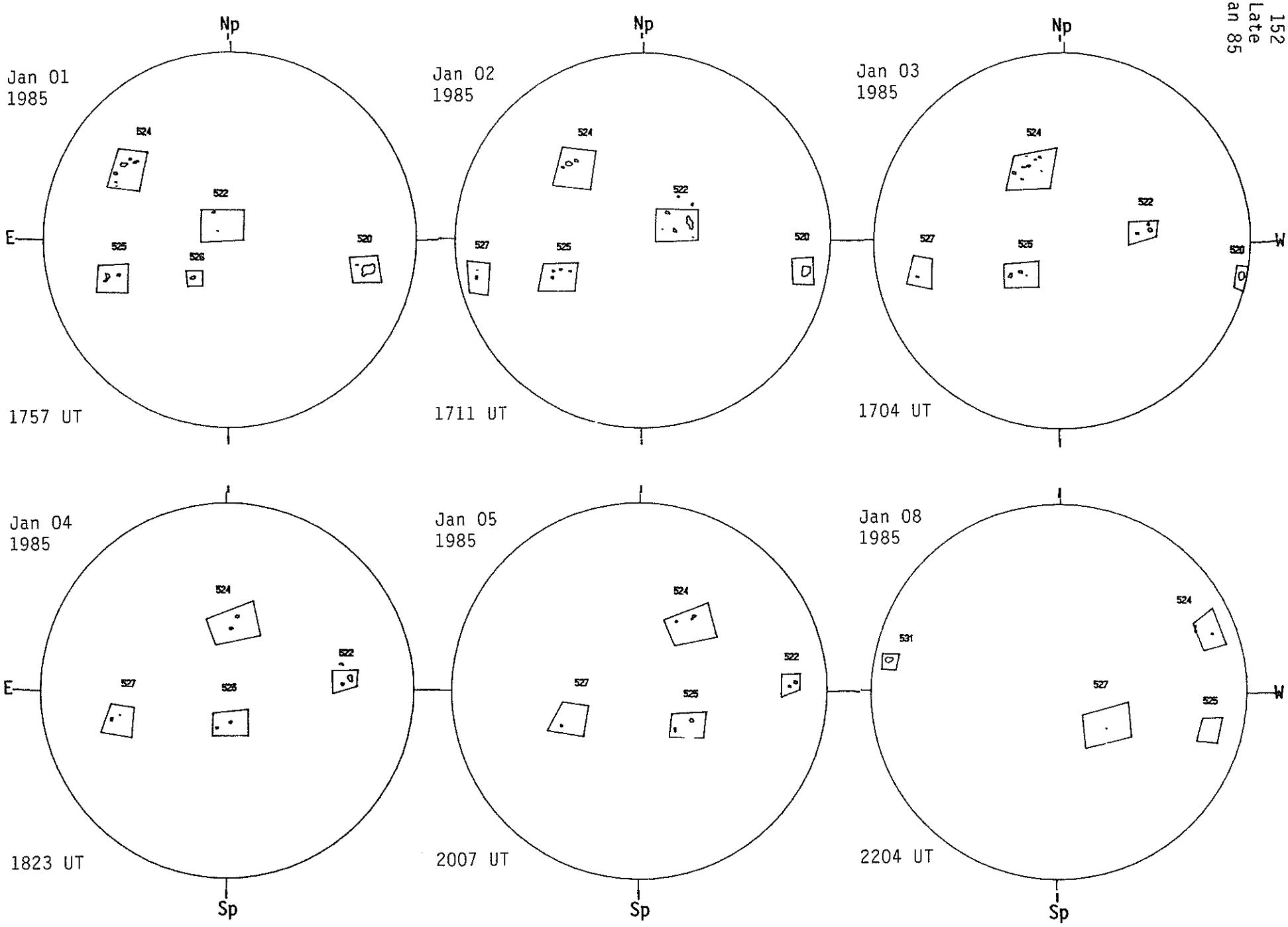

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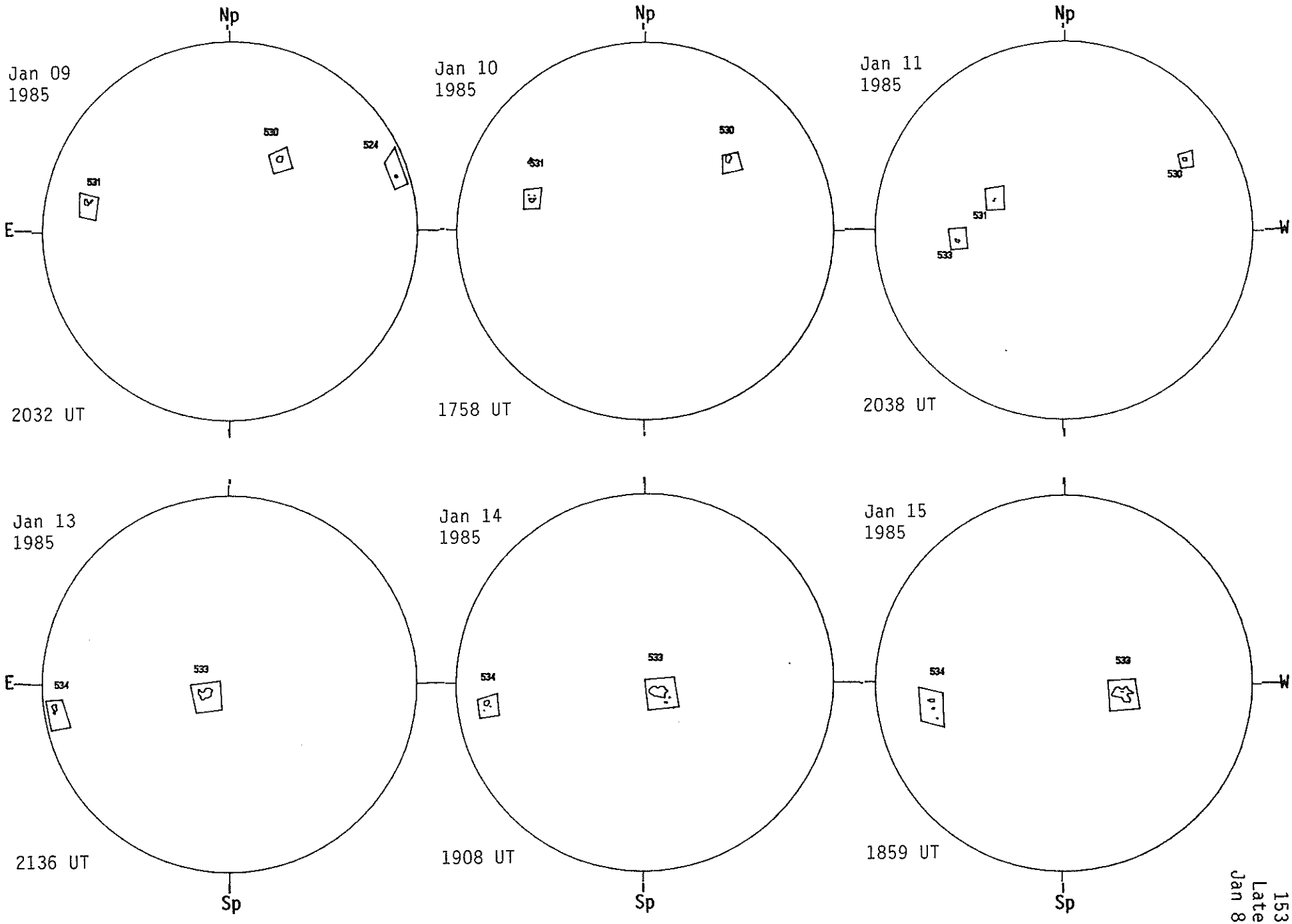

153
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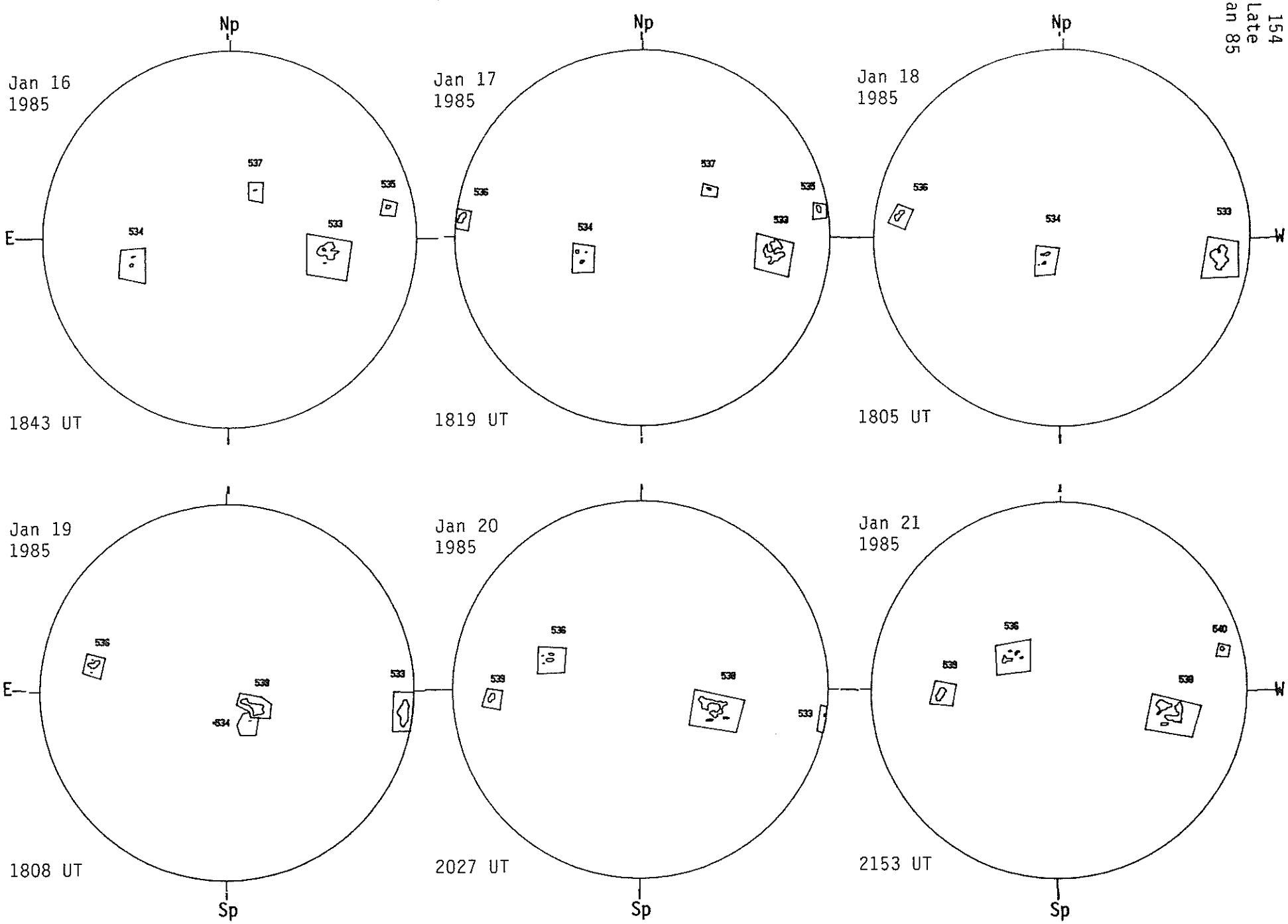

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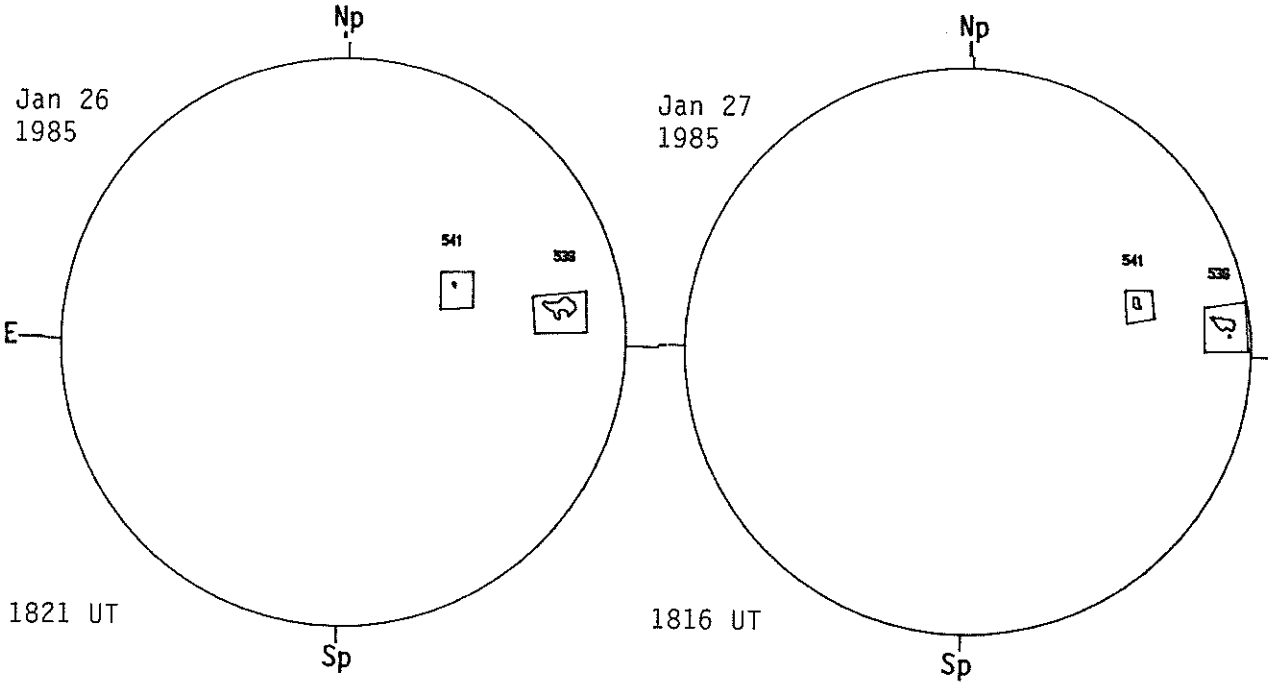

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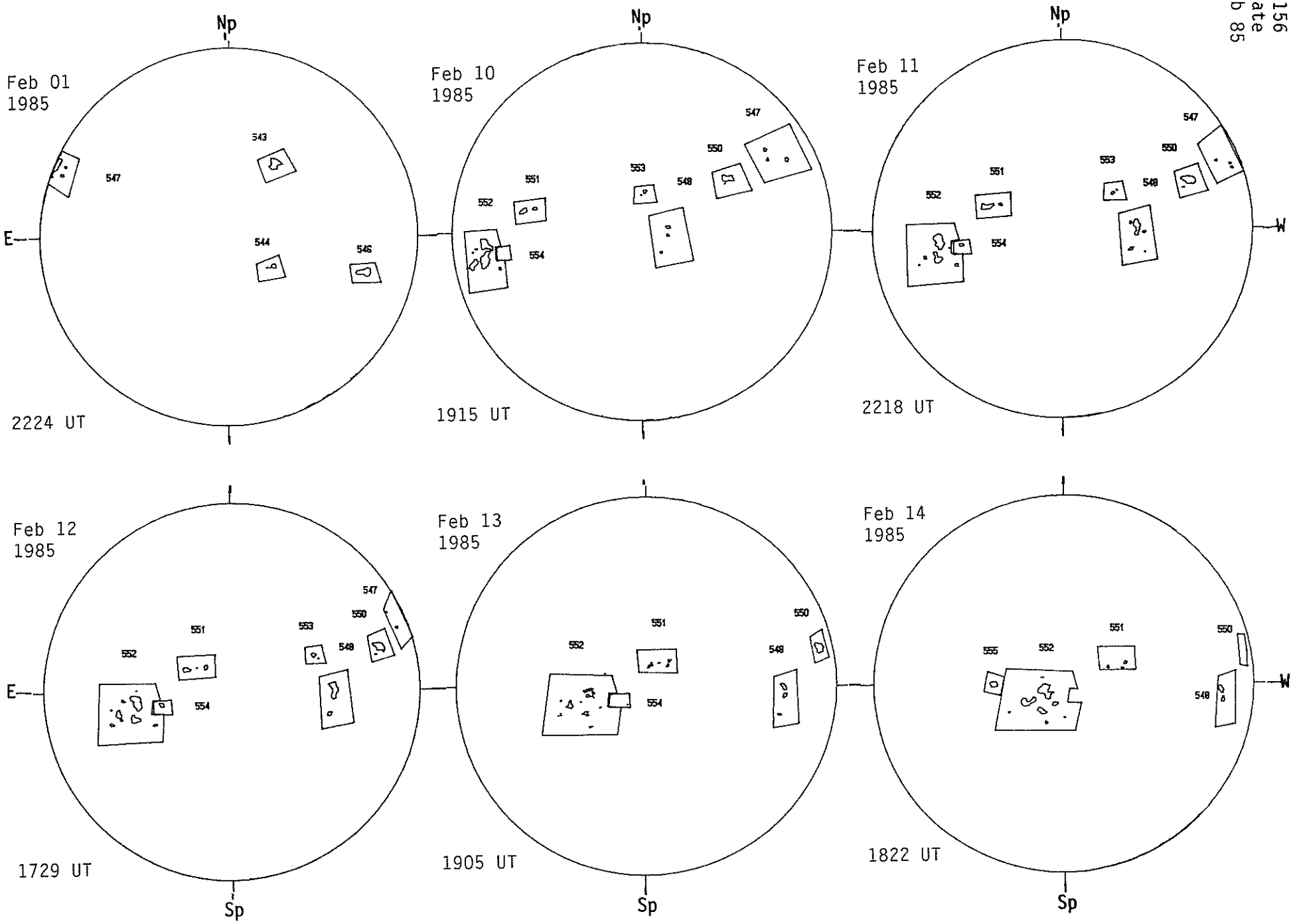

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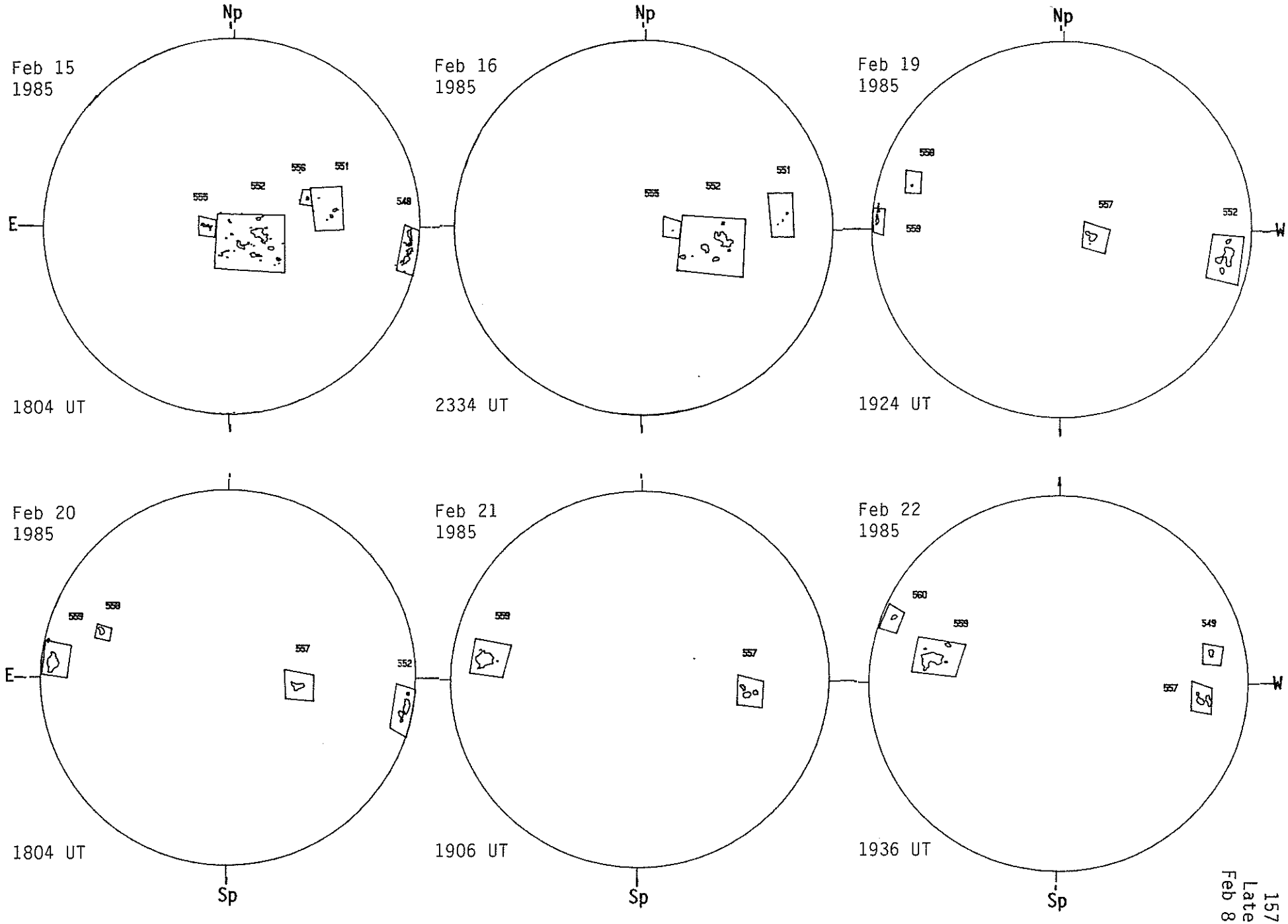

157
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Feb 85

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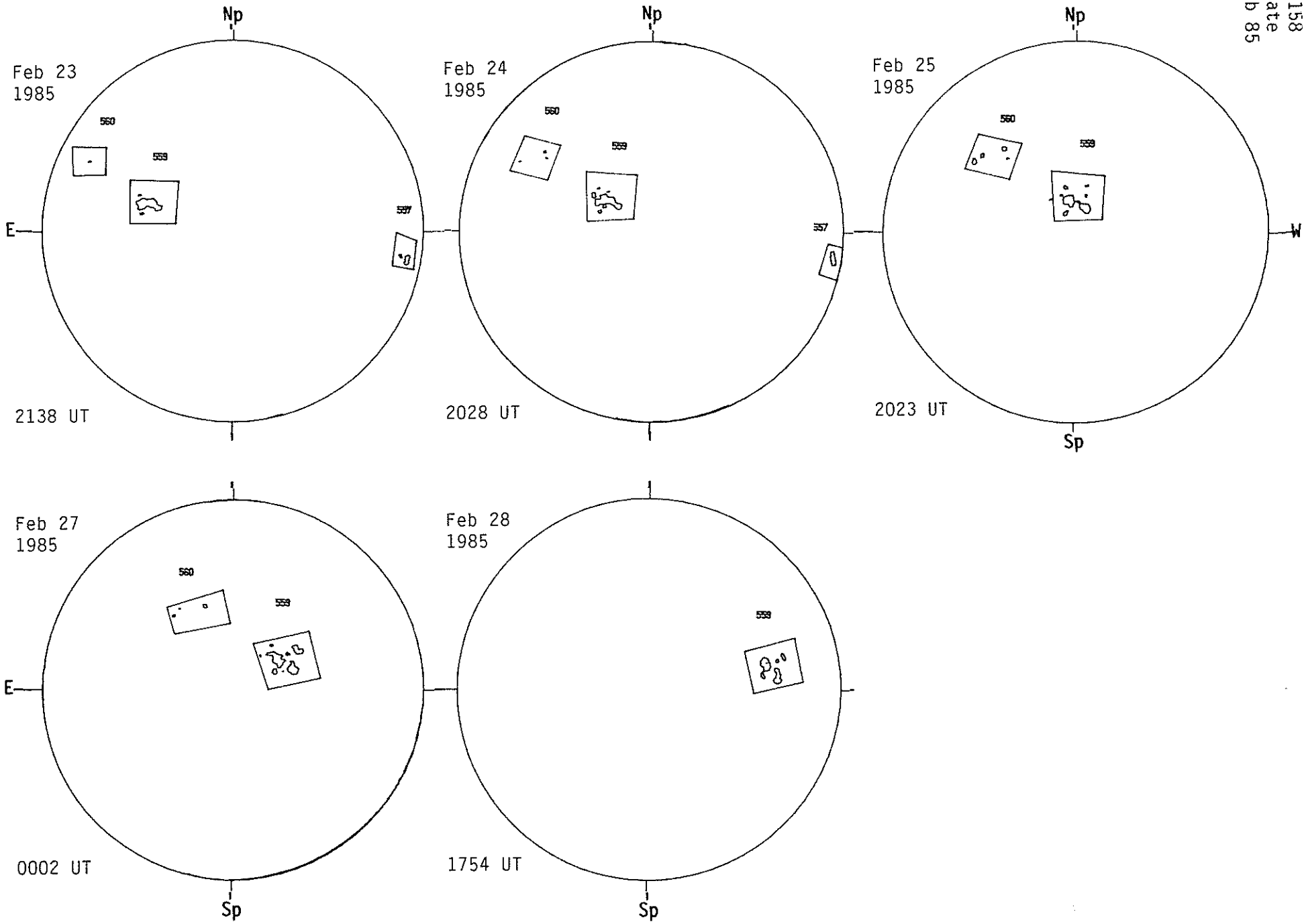

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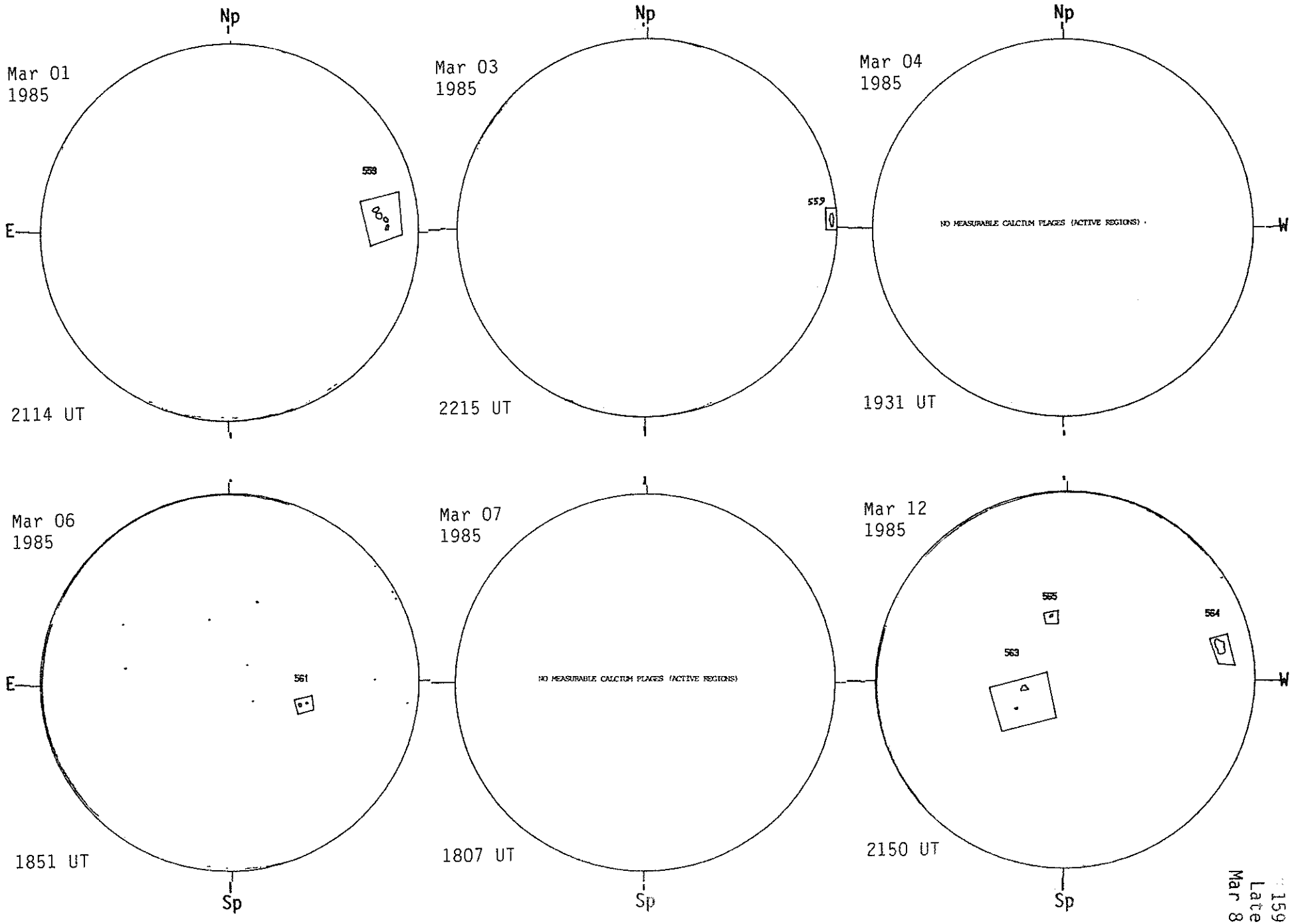

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Mar 85

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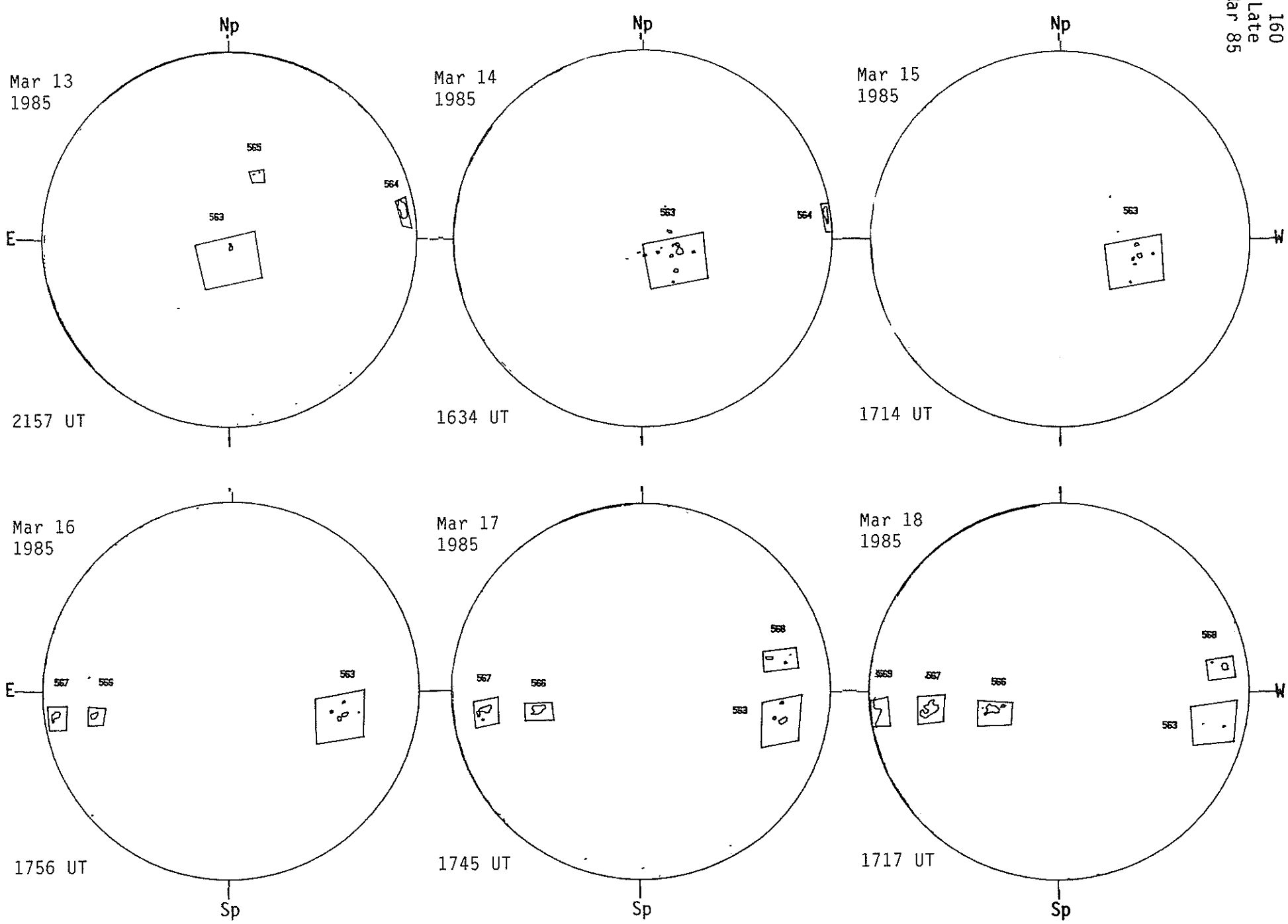

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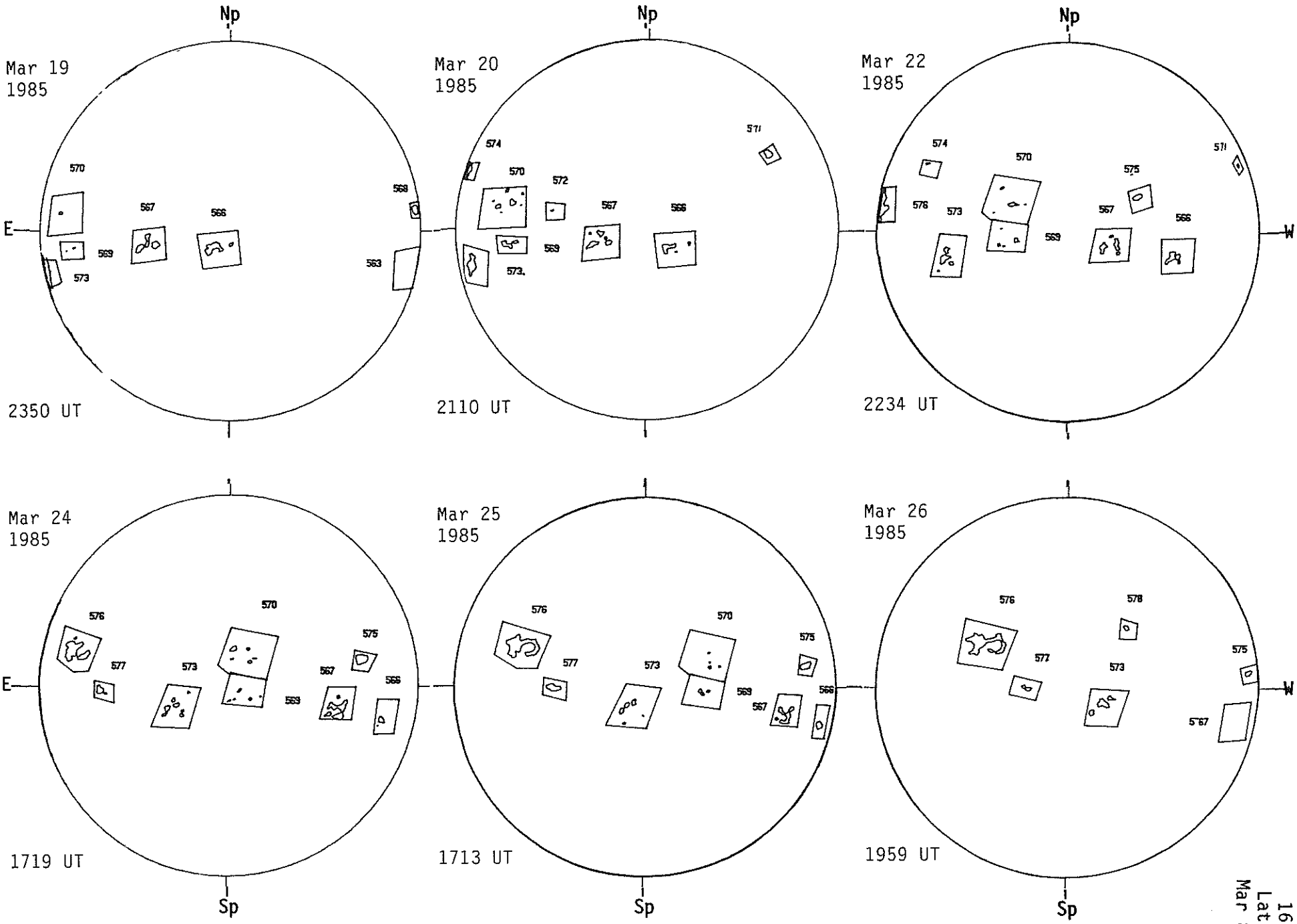

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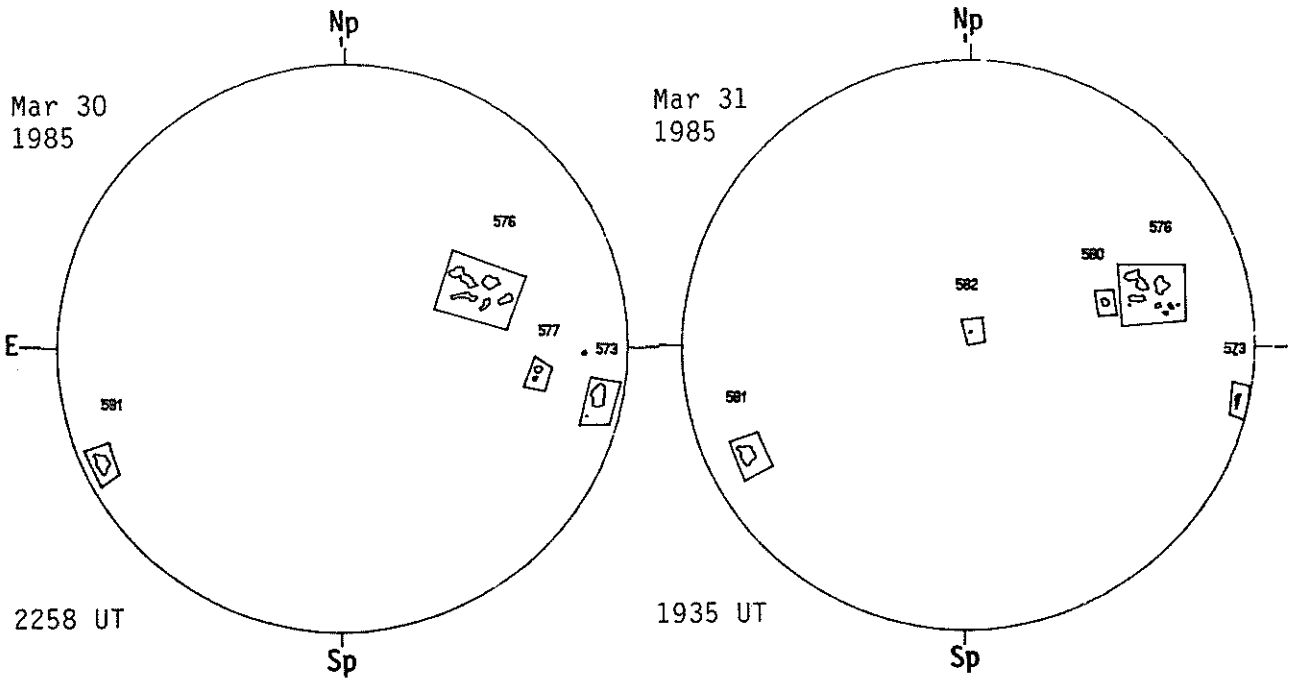

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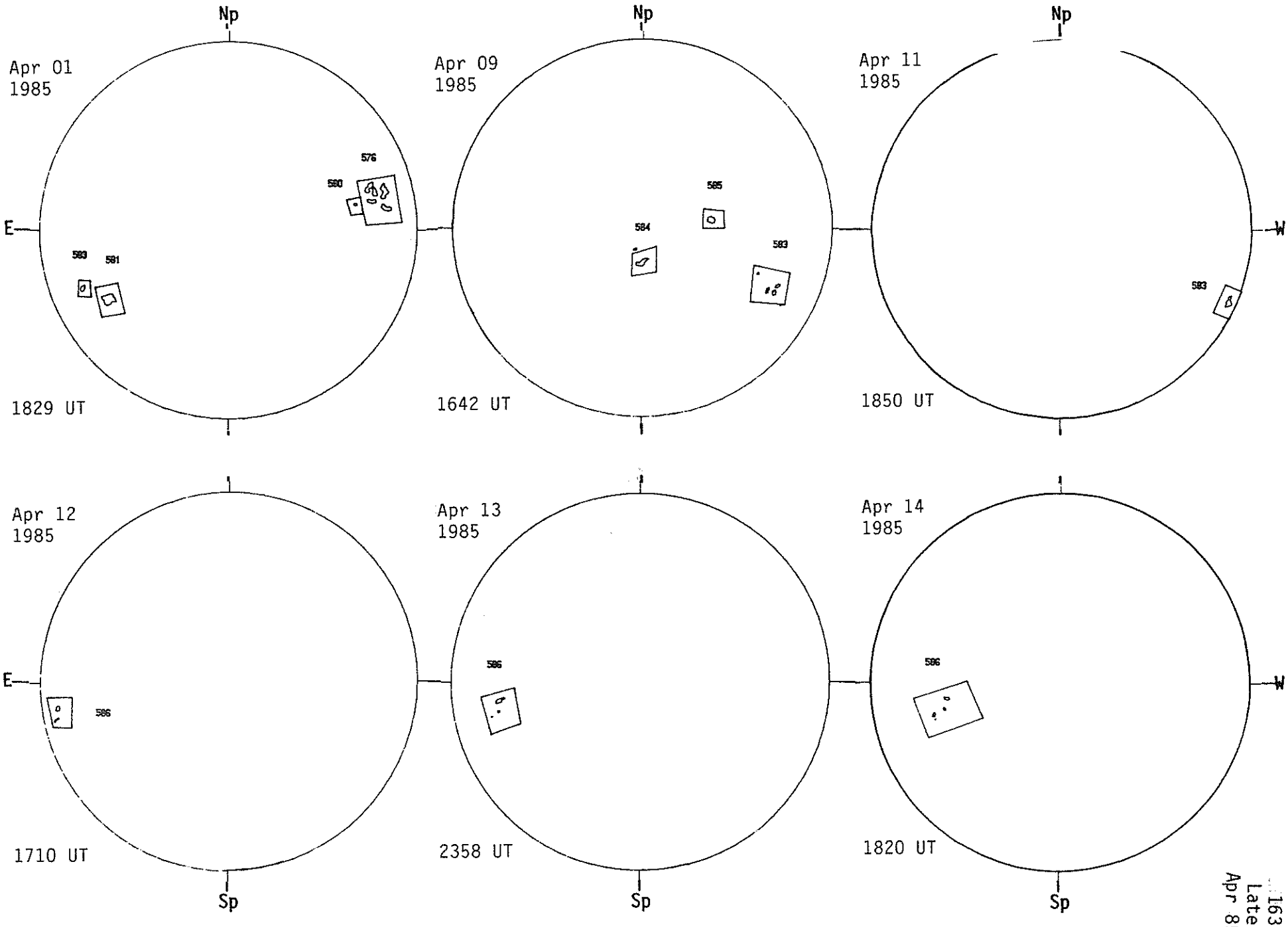

163
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Apr 85

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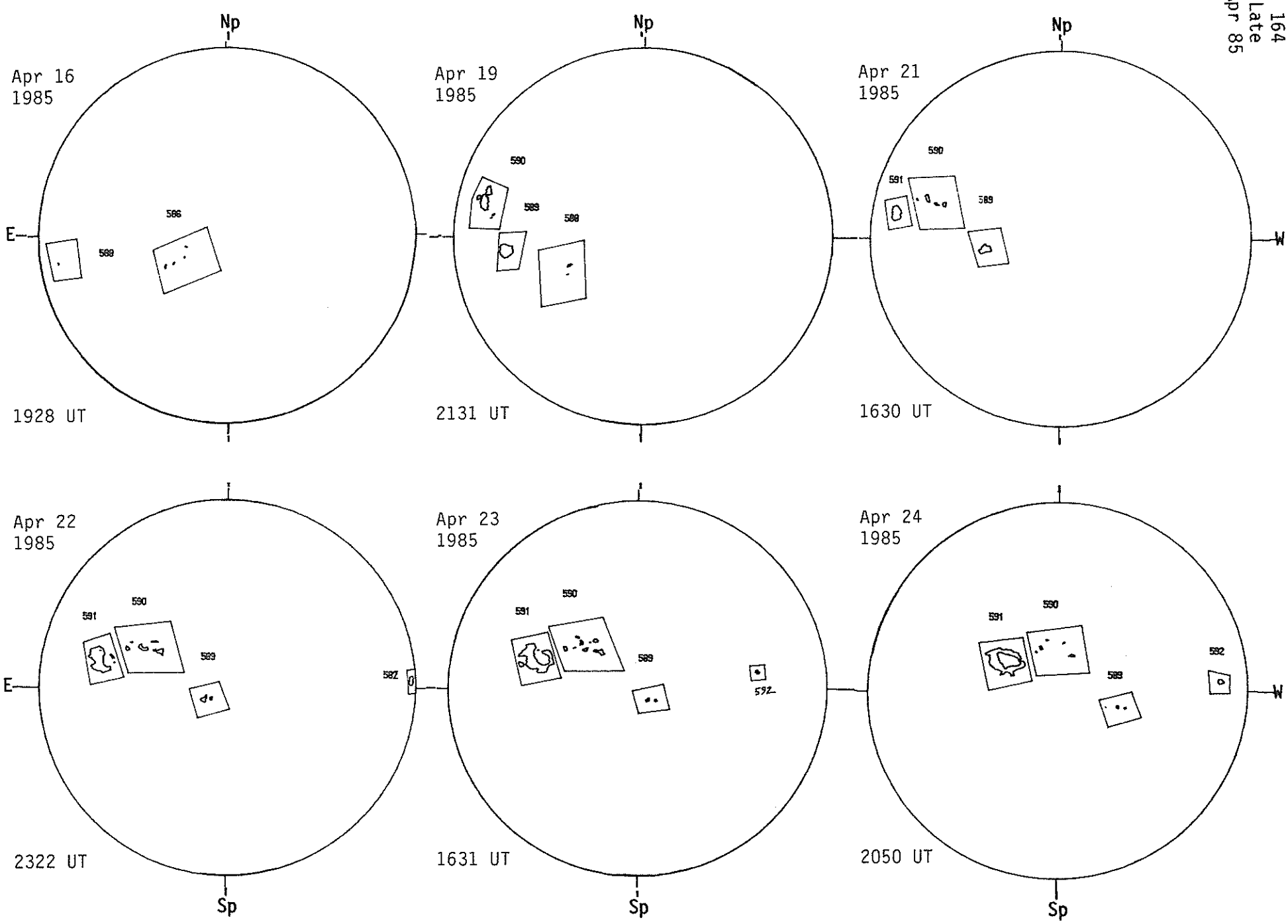

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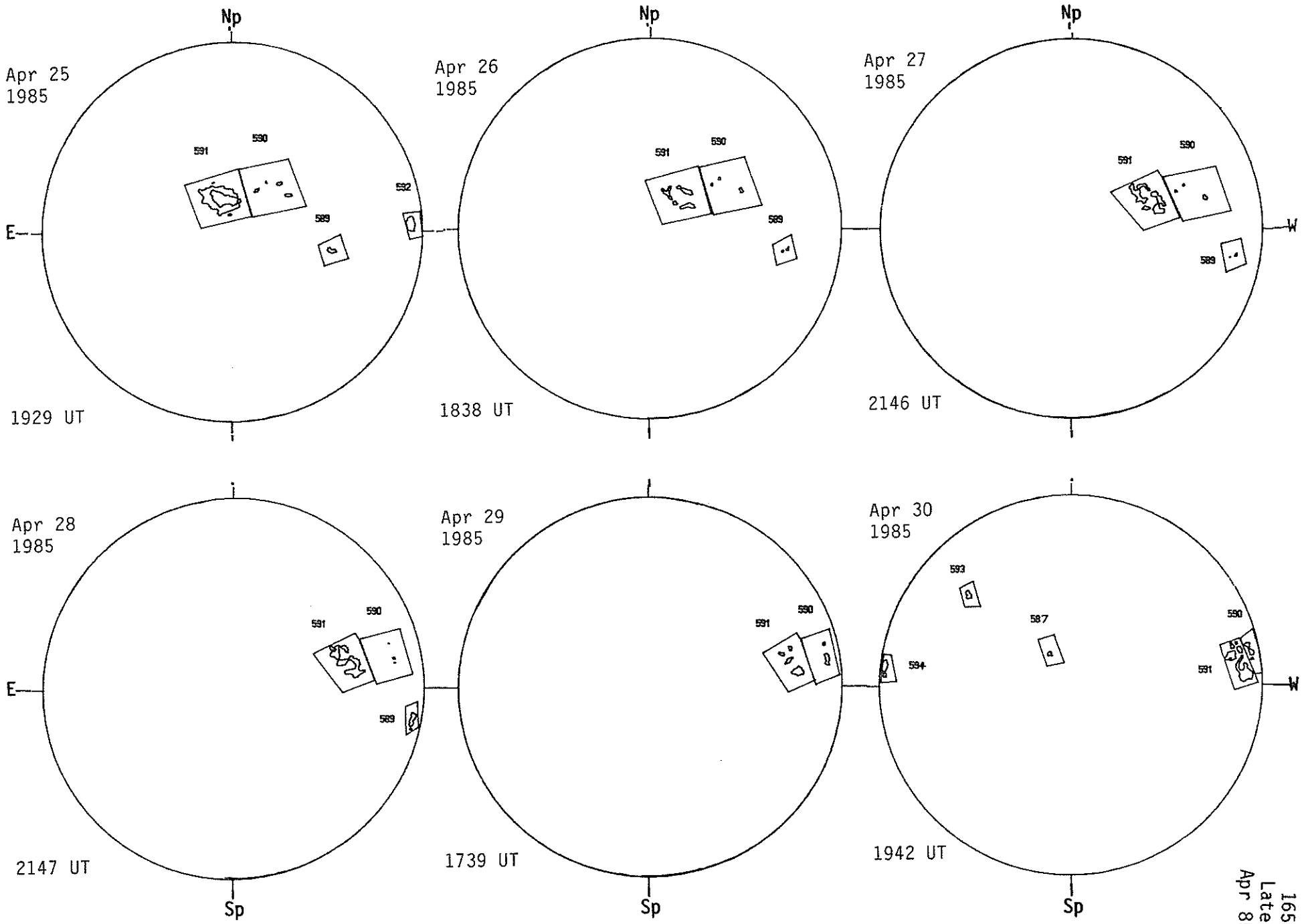

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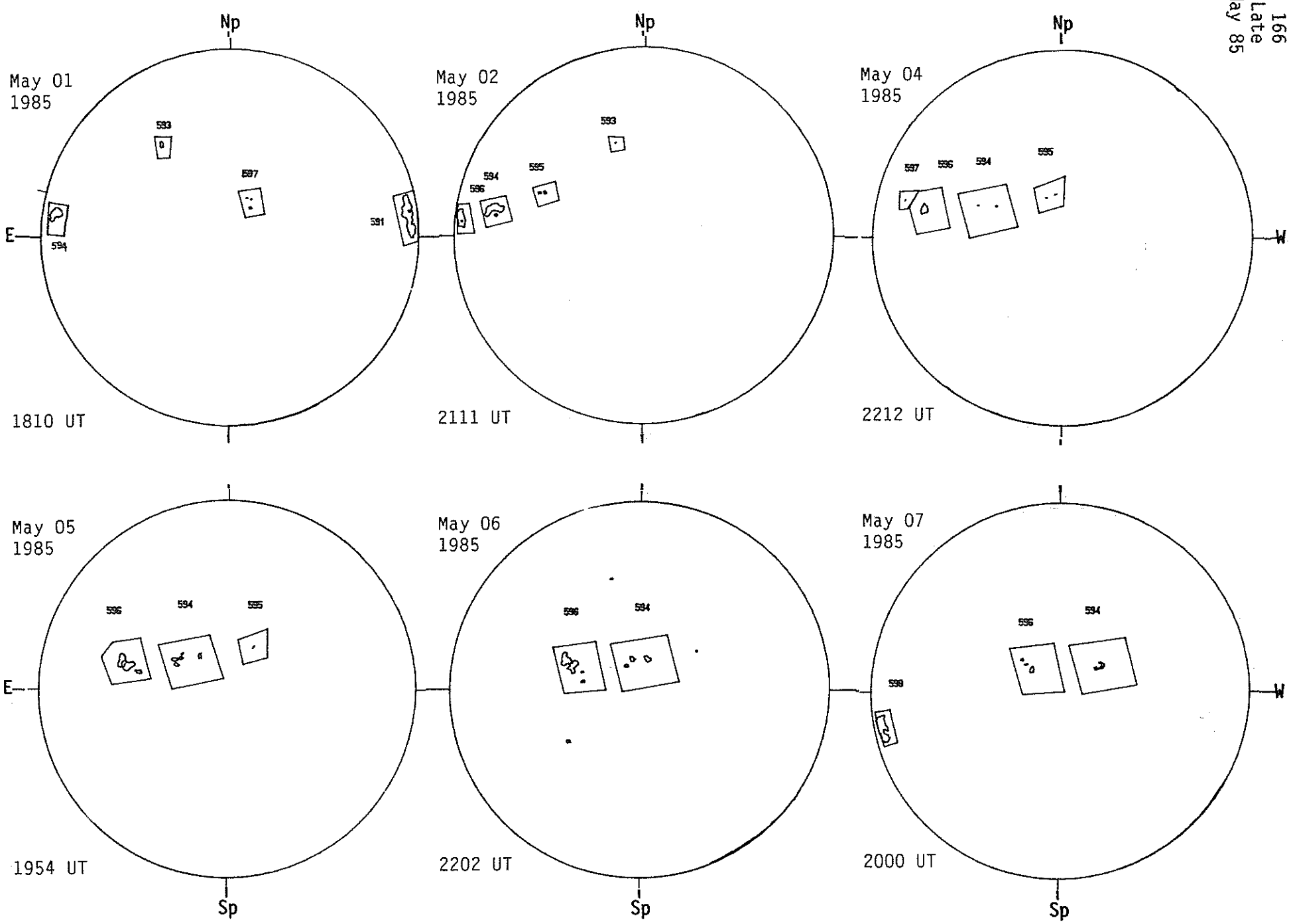

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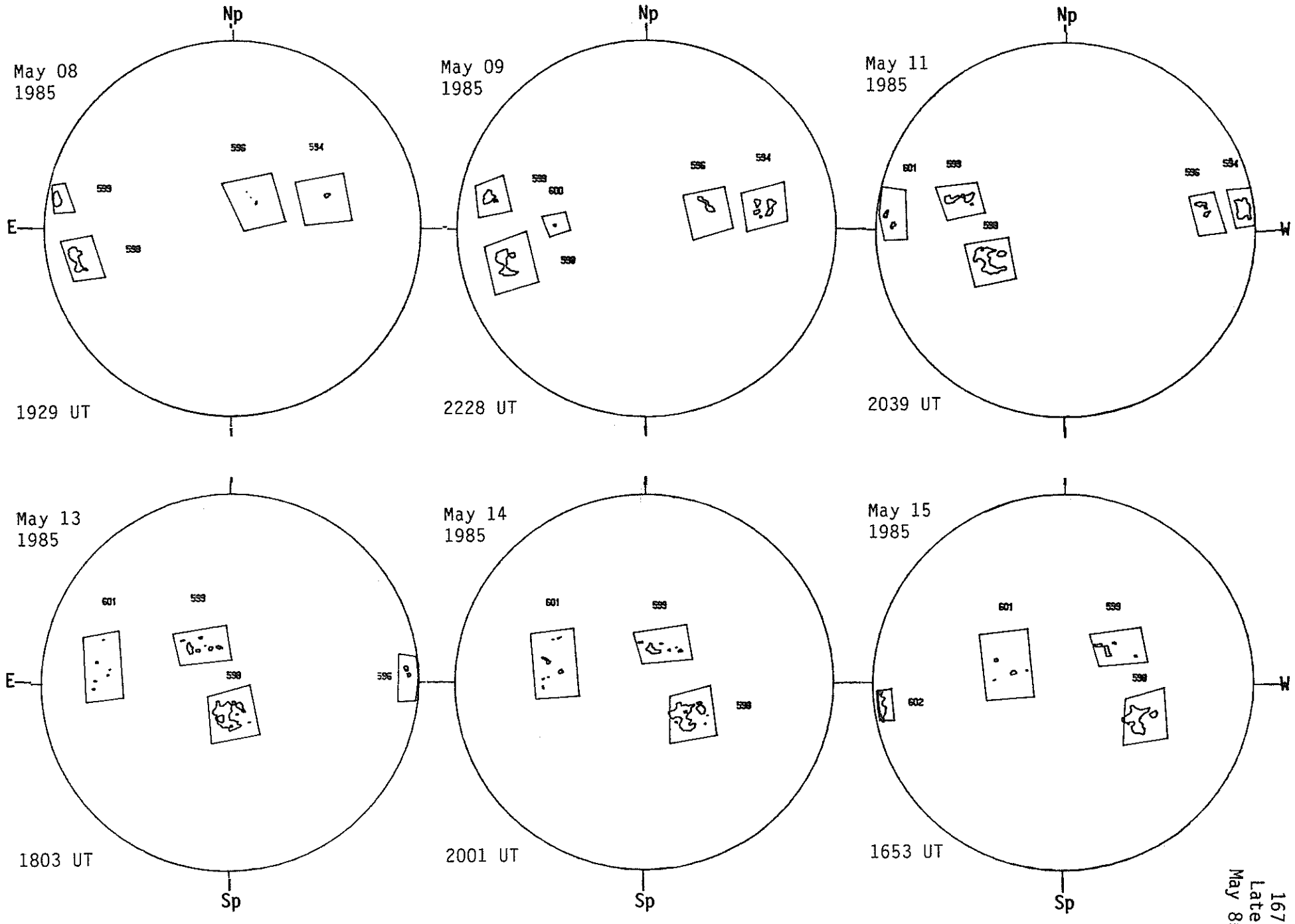

167
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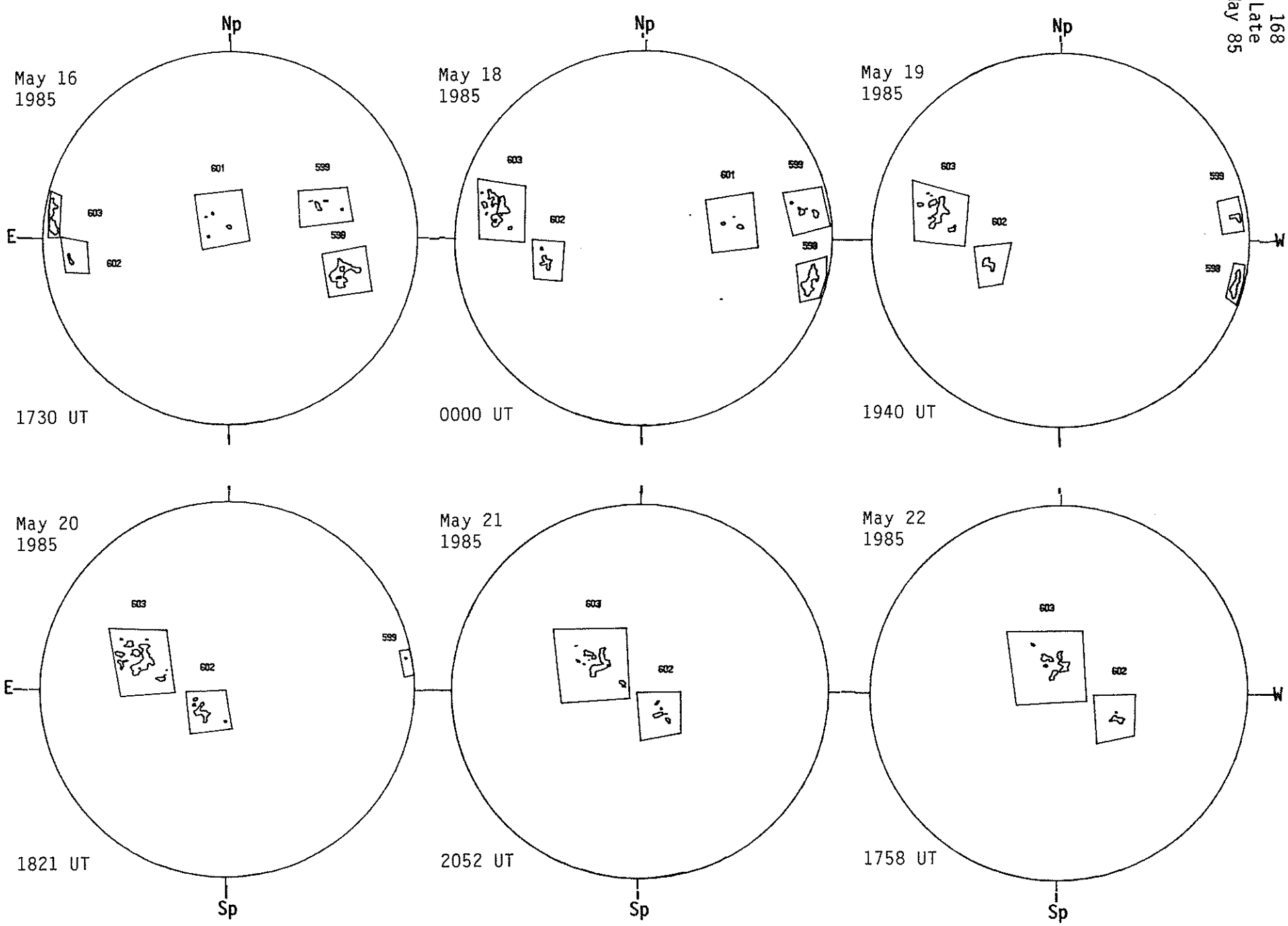

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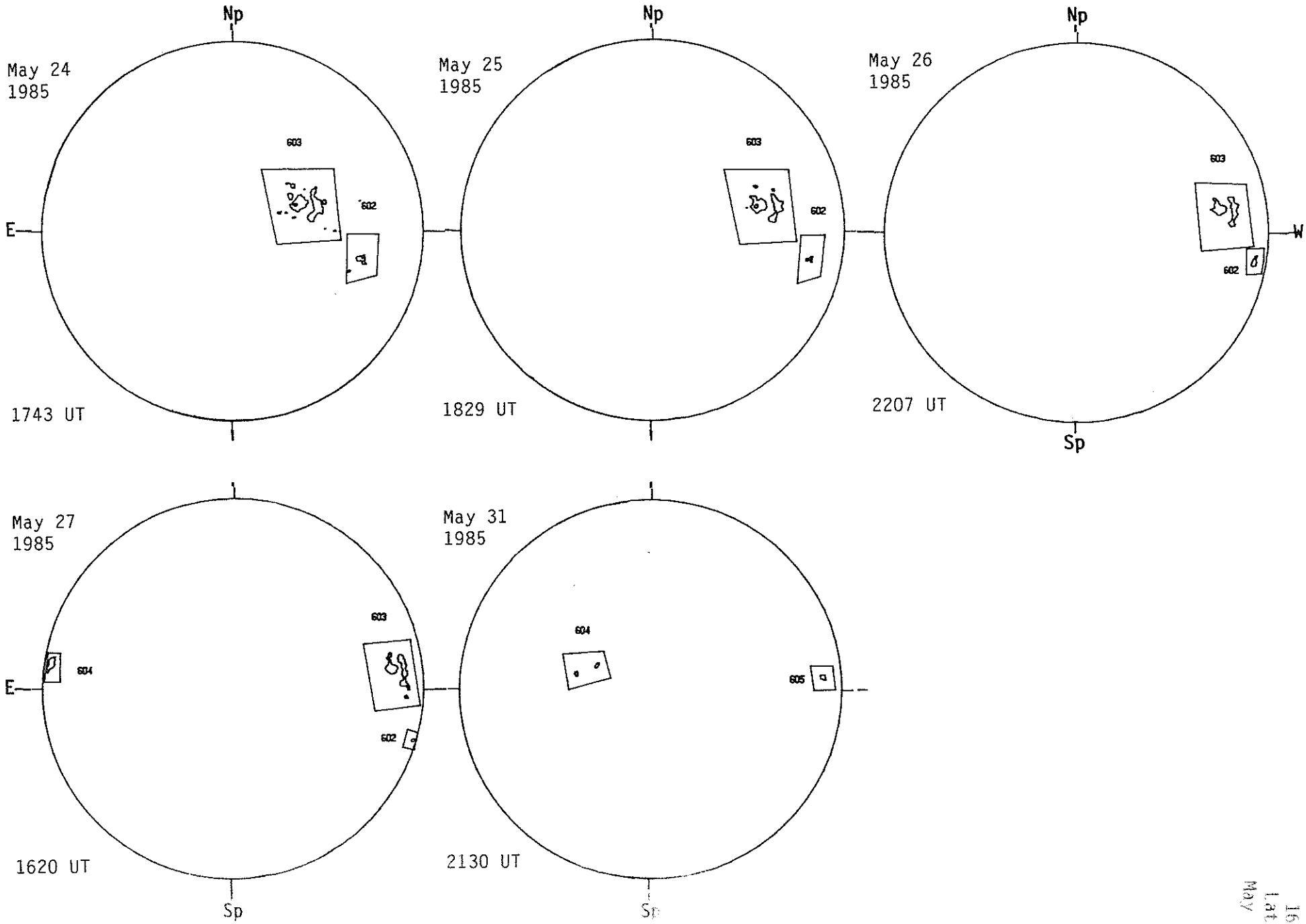

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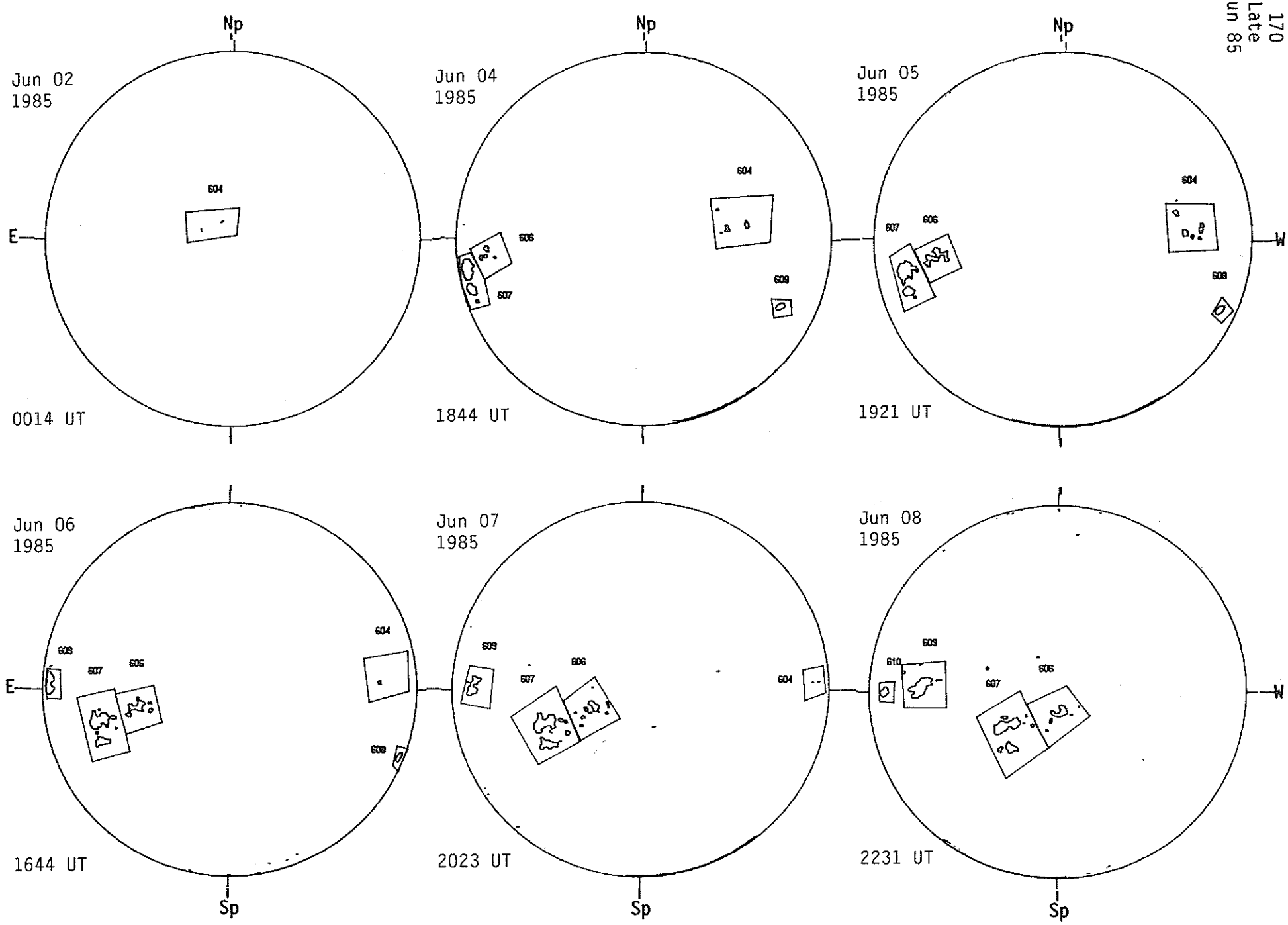

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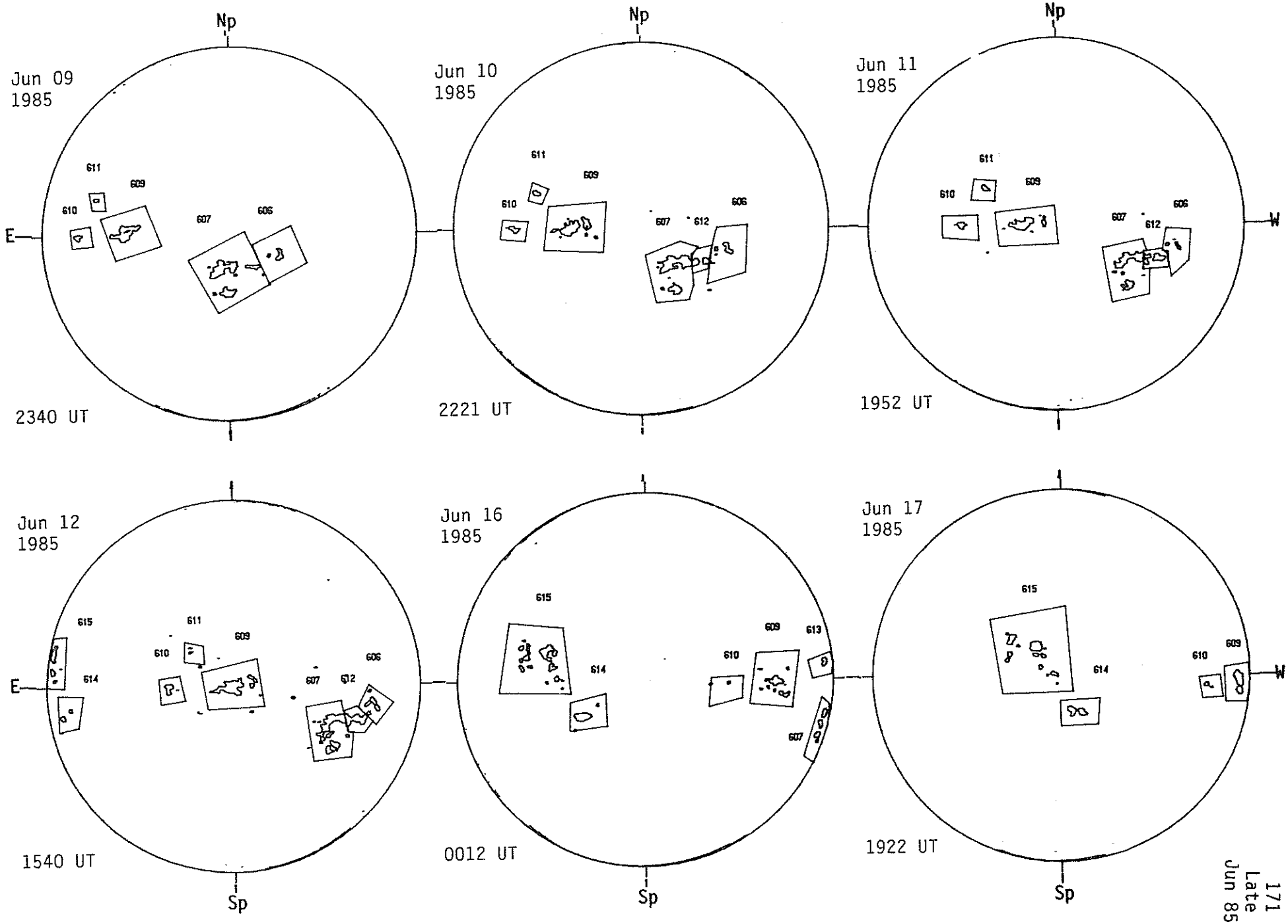

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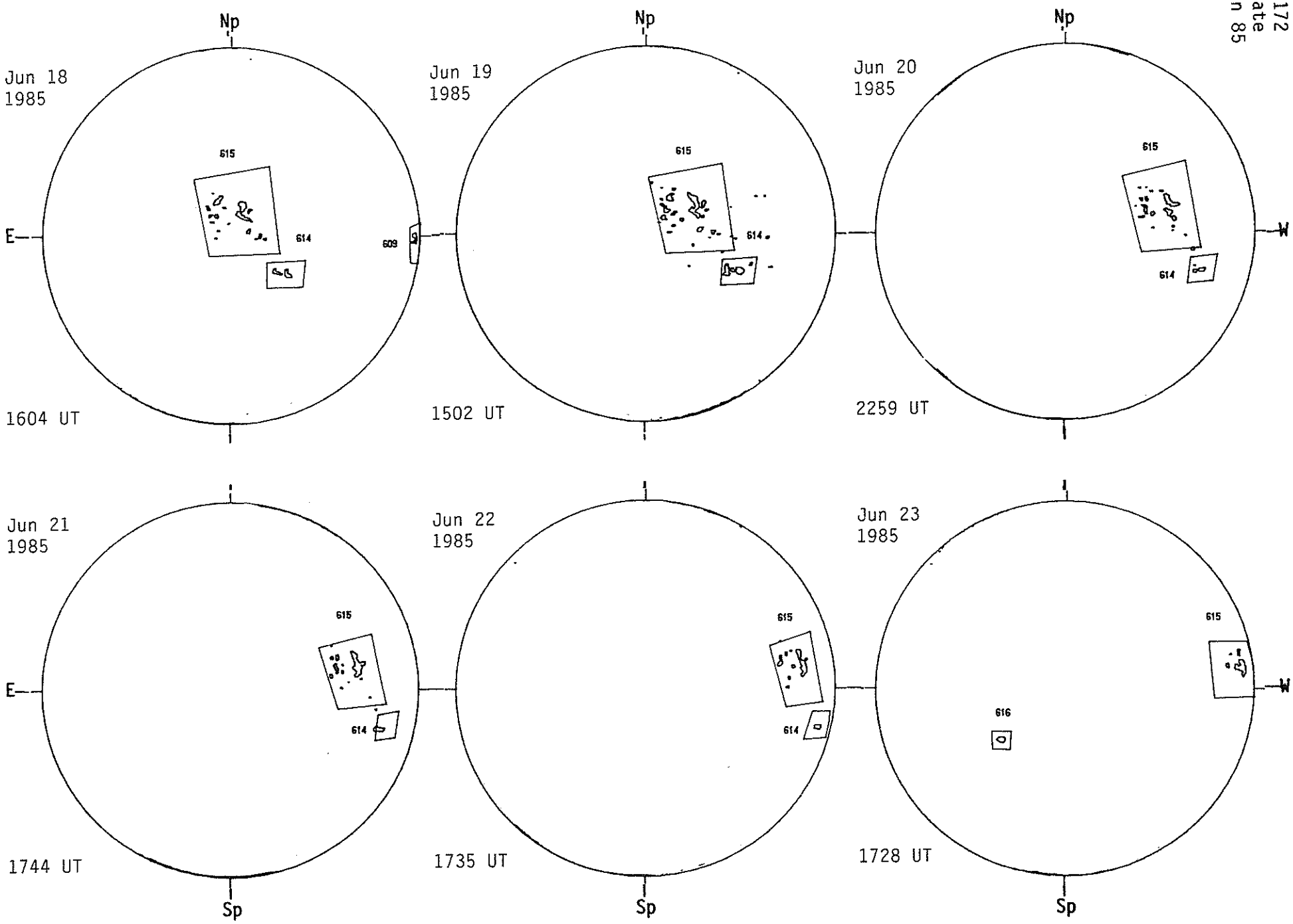

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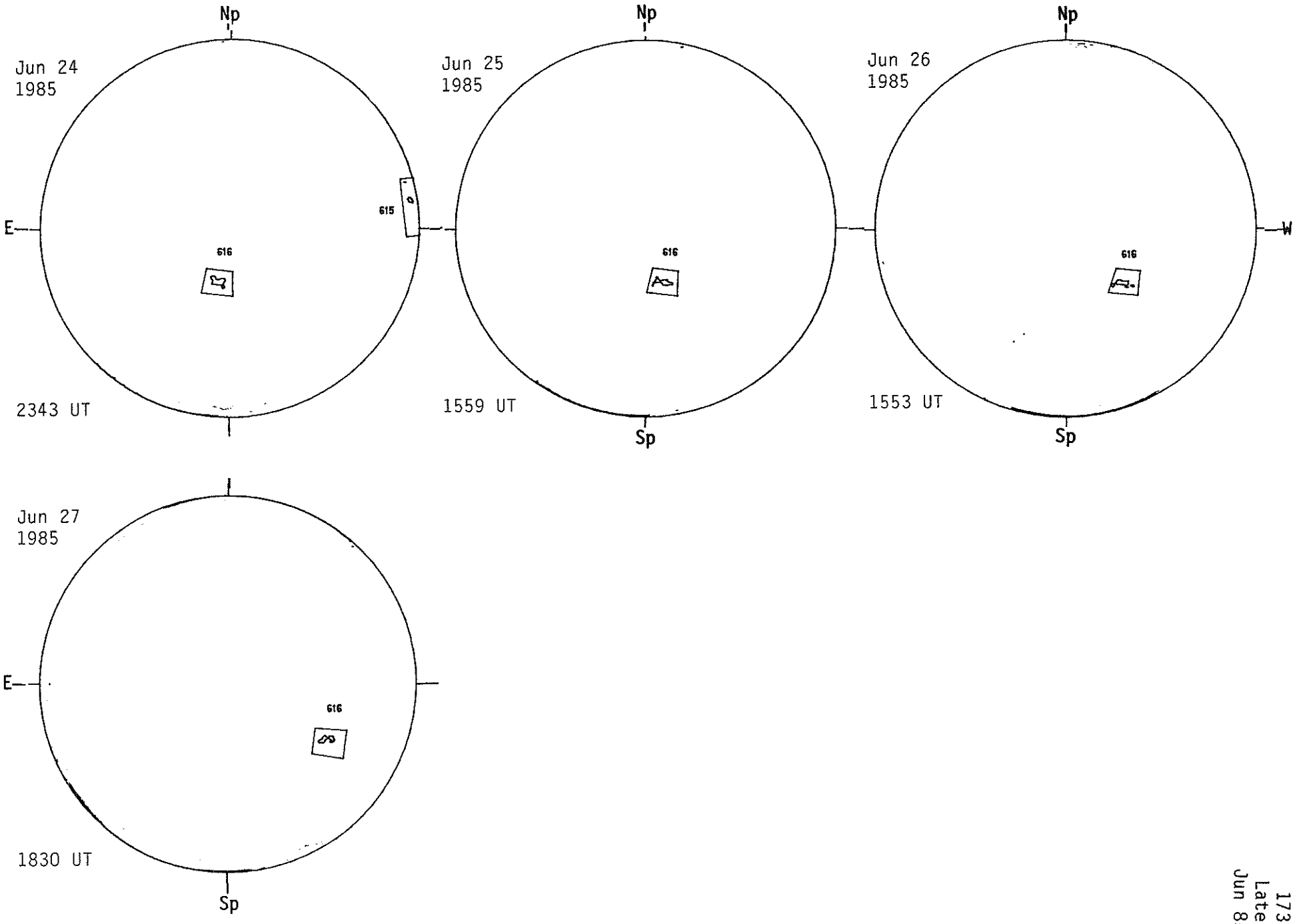

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Jun 85

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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."