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Solar - Geophysical Data

NO. 383 JULY 1976

Part I (Prompt Reports)

DATA FOR

JUNE 1976

MAY 1976

**NATIONAL GEOPHYSICAL AND SOLAR - TERRESTRIAL DATA CENTER
BOULDER, COLORADO**

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SOLAR - GEOPHYSICAL DATA

No. 383

Issued in two parts

Hope I. Leighton, Editor

J. Virginia Lincoln, Director
Solar - Terrestrial Data Services Division

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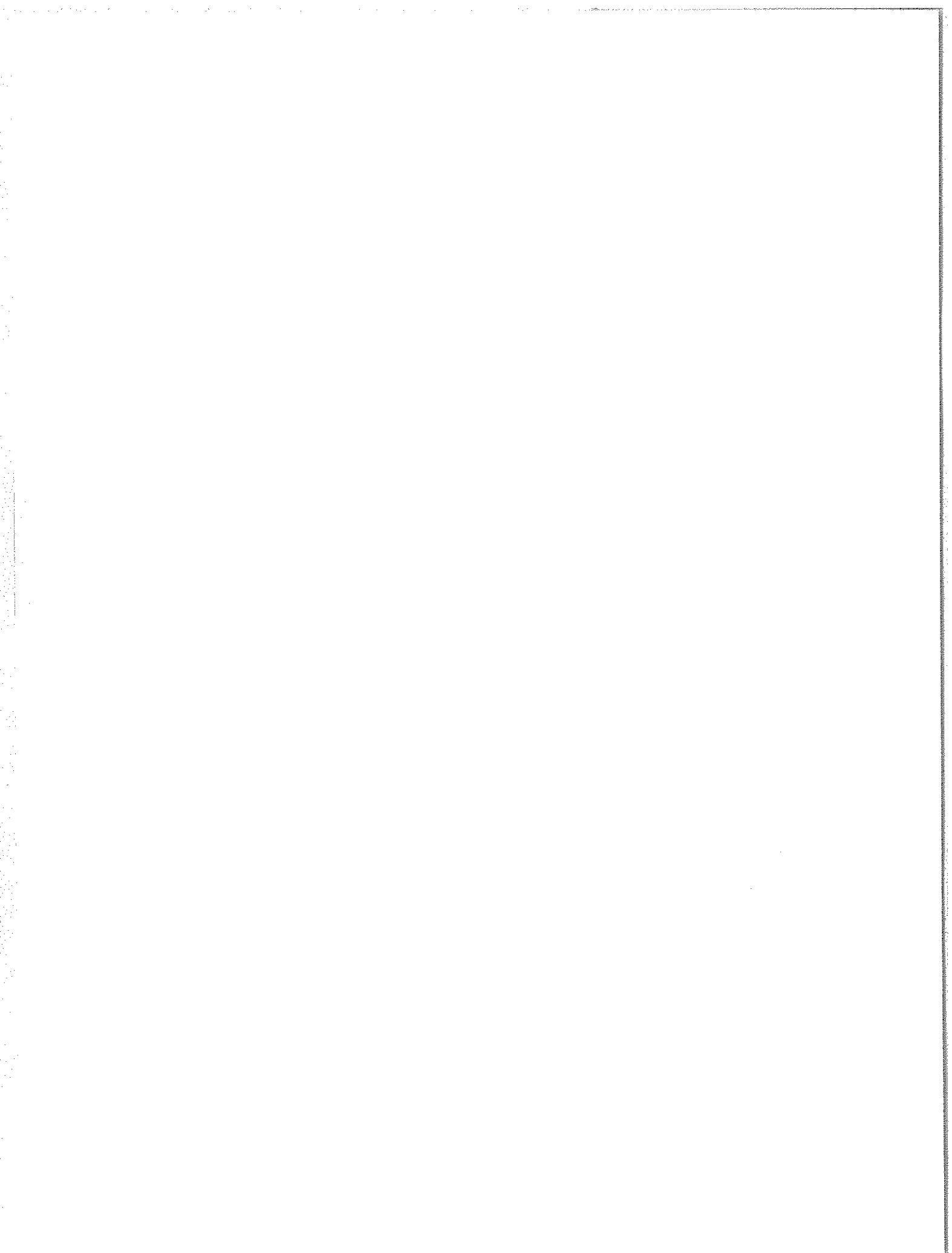
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JUNE 1976 DATA

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ALERT PERIODS
INTERNATIONAL URSIGRAM
AND WORLD DAYS SERVICE

JUNE 1976

PRESTO MESSAGES (THE RAPID REPORT OF MAJOR EVENTS)
BOULDER 11/0500Z MAGSTORM BEGINS 11/0000Z WEAK MAGSTORM IN PROGRESS 11/0500Z.

SUMMARY OF THE GEOALERT WWA MESSAGES

Message serial number	Date of issue	Date of observation	Wolf number	10 cm solar flux	A index	Active Regions				Outstanding events	Forecasts			Alert Situations
						Location		No. of Flares			Date	Location	Desc*	
						Lat-Long	Total	M	X						Lat-Long
153	01	31	00	66	09	-	-	-	-	01	SPOTNIL	-	SOLQUIET MAGALERT MINOR 01	
154	02	01	00	67	06	-	-	-	-	02	SPOTNIL	-	SOLQUIET MAGNIL	
155	03	02	00	66	06	-	-	-	-	03	SPOTNIL	-	SOLQUIET MAGQUIET	
156	04	03	00	66	07	-	-	-	-	04	SPOTNIL	-	SOLQUIET MAGQUIET	
157	05	04	00	66	20	-	-	-	-	05	SPOTNIL	-	SOLQUIET MAGQUIET	
158	06	05	00	67	18	-	-	-	-	06	SPOTNIL	-	SOLQUIET MAGQUIET	
159	07	06	11	67	09	S04E05	0	0	0	07	S04E05	Q	SOLQUIET MAGQUIET	
160	08	07	00	67	11	-	-	-	-	08	SPOTNIL	-	SOLQUIET MAGQUIET	
161	09	08	20	69	10	S25W34	0	0	0	09	S25W34	Q	SOLQUIET MAGQUIET	
162	10	09	13	68	06	S25W47	0	0	0	10	S25W47	Q	SOLQUIET MAGQUIET	
163	11	10	13	69	05	S15W59	0	0	0	11	S25W59	Q	SOLQUIET MAGALERT 11/13 GRADUAL COMMENCEMENT 11/0000Z	
164	12	11	12	69	25	S44E34	0	0	0	12	S44W34	Q	SOLQUIET MAGALERT 12/12	
165	13	12	13	70	09	S45E22	0	0	0	13	S45E22	Q	SOLQUIET MAGNIL	
166	14	13	12	70	06	S46E09	0	0	0	14	S46E09	Q	SOLQUIET MAGQUIET	
167	15	14	27	71	05	S46W01 N03E69	0 0	0 0	0 0	15	S45W01 N03E69	Q Q	SOLQUIET MAGQUIET	
168	16	15	12	72	03	N04E53	1	0	0	16	N04E53	Q	SOLQUIET MAGALERT 16/18	
169	17	16	20	75	08	N03E41	3	0	0	17	N03E41	E	SOLQUIET MAGALERT 17/19	
170	18	17	25	75	14	N03E28	3	0	0	18	N03E28	E	SOLQUIET MAGALERT 18/19	
171	19	18	32	75	20	N03E13	0	0	0	19	N03E13	Q	SOLQUIET MAGALERT 19	
172	20	19	33	74	08	N03E02	0	0	0	20	N03E02	Q	SOLQUIET MAGNIL	
173	21	20	52	74	06	N03W12 N01W29	0 0	0 0	0 0	21	N03W12 N01W29	Q Q	SOLQUIET MAGQUIET	
174	22	21	38	75	04	N03W25 N01W41	0 0	0 0	0 0	22	N03W25 N01W41	Q Q	SOLQUIET MAGQUIET	
175	23	22	44	76	03	N04W42 N01W56 S26E59	0 0 0	0 0 0	0 0 0	23	N04W42 N01W56 S26E59	Q Q Q	SOLQUIET MAGQUIET	
176	24	23	42	74	04	N03W54 N01W70 S27E46	0 0 0	0 0 0	0 0 0	24	N03W54 N01W70 S27E46	Q Q Q	SOLQUIET MAGALERT 24/26	
177	25	24	36	73	11	N04W68 S01W36 S26E31	0 0 0	0 0 0	0 0 0	25	N04W68 S01W36 S26E31	Q Q Q	SOLQUIET MAGALERT 25/26	
178	26	25	26	72	14	S01W50 S27E19	0 0	0 0	0 0	26	S01W50 S27E19	Q Q	SOLQUIET MAGALERT 26/XX	
179	27	26	26	72	05	S01W64 S27E07	0 0	0 0	0 0	27	S01W64 S27E07	Q Q	SOLQUIET MAGNIL	
180	28	27	11	70	08	S27W07	0	0	0	28	S27W07	Q	SOLQUIET MAGQUIET	
181	29	28	13	69	06	S27W19	0	0	0	29	S27W19	Q	SOLQUIET MAGQUIET	
182	30	29	12	69	09	S27W30	0	0	0	30	S27W30	Q	SOLQUIET MAGQUIET	
183	01	30	12	68	22	S27W40	0	0	0	01	S27W40	Q	SOLQUIET MAGALERT MINOR 01/02	

* Q=Quiet E=Eruptive A=Active P=Proton C=Caution D=Doubtful O.G.=Other Groups MF=Major Flare

Note: Beginning with June 22, 1976 Presto Messages for Magnetic Storms are issued only for Strong Magnetic Storms (A ≥ 50).

RELATIVE SUNSPOT NUMBERS

ZURICH, R_Z

DAY	1975 FINAL						1976 PROVISIONAL					
	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN
1	23	37	14	15	0	7	0	0	0	26	35	0
2	18	36	16	8	0	23	0	0	0	25	26	0
3	22	46	19	9	7	20	0	0	0	22	25	0
4	16	78	29	10	18	23	0	0	0	13	8	0
5	23	93	25	8	22	21	0	0	0	12	22	0
6	33	104	24	10	27	18	0	0	10	9	10	0
7	23	102	24	9	30	20	0	0	12	0	10	0
8	19	89	23	16	33	18	0	0	7	0	9	11
9	16	83	17	15	30	8	0	0	10	8	8	10
10	23	80	10	8	26	0	0	0	12	10	10	7
11	29	72	10	8	30	0	0	0	13	15	16	7
12	33	45	16	10	24	0	20	0	13	17	17	8
13	43	52	19	21	22	0	26	13	13	17	23	8
14	46	34	17	26	29	7	36	16	22	19	30	15
15	43	31	8	21	28	7	20	18	16	19	17	18
16	39	26	14	18	28	7	22	11	11	19	12	12
17	25	19	14	16	30	9	24	8	30	24	18	18
18	32	16	18	16	33	8	20	15	45	27	8	24
19	36	8	13	15	36	7	18	10	51	27	20	23
20	28	22	30	10	35	0	16	12	51	30	20	17
21	30	23	27	7	31	0	11	8	48	39	14	30
22	27	7	23	0	23	0	10	7	36	20	7	31
23	19	14	0	0	12	0	10	0	28	17	15	23
24	30	8	0	7	11	18	0	7	25	16	8	26
25	33	11	0	0	9	14	0	0	22	17	8	19
26	30	16	0	0	7	8	0	0	42	28	7	19
27	29	18	0	0	0	0	7	7	46	23	0	9
28	26	10	0	0	0	0	0	0	50	21	0	16
29	20	10	0	0	0	0	14	0	42	26	0	11
30	27	21	7	0	0	0	3	0	32	38	0	10
31	34	21		0		0	0		27		0	
MEAN	28.2	39.7	13.9	9.1	19.4	7.8	8.5	4.6	23.0	19.5	12.7	12.4

1975 yearly mean = 15.5

DAILY SOLAR FLUX AT 2800 MHz
OTTAWA ARO

FLUX ADJUSTED TO 1 A.U., S_a

DAY	1975						1976					
	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN
1	78.7	91.6	87.0	76.4	70.4	72.1	72.1	68.6	67.7	79.6	77.6	68.4
2	76.8	95.4	87.9	78.1	71.4	74.8	71.2	68.6	68.1	76.8	74.2	67.9
3	77.1*	97.0*	87.8	78.4	73.0	74.3	71.3	68.4	67.4	76.1	71.9	68.1
4	76.8	104.6	92.8	76.3	75.4	74.1	71.8	68.4	67.4	74.7	71.5	68.4
5	76.8	107.9	94.4	76.1	78.9	77.4	71.9	67.6	67.6	73.0	71.1	68.7
6	76.1	120.0*	94.0	75.1	80.1	75.8	71.7	68.1	67.5	71.3	69.9	69.3
7	74.1	123.2	91.1	74.3	80.5	73.7	71.6	69.3	67.9	70.3	70.3	69.0
8	74.0	123.7	88.5	74.0	80.9	76.0	70.9	68.4	67.9	71.9	70.2	70.7
9	73.3	115.9	84.3	75.4	78.8	73.3	69.4	68.3	68.2	74.1	70.6	70.1
10	73.0	116.5	82.5	74.3	78.9	73.3	70.5	68.5	68.4	75.3	71.7	71.0
11	77.6	107.3	81.1	73.3	78.6	74.3	72.1	68.4	68.8	77.1	72.5	71.4
12	82.7	104.5*	78.2*	74.8	79.9	73.4	76.9	67.8	68.9	78.1	72.6	71.7
13	88.5*	98.0	75.2	79.0	79.2	72.8	80.0	69.7	70.9	79.6	73.6	72.0
14	89.0	90.9*	74.2	80.0	82.7	71.8	82.1*	69.9	70.1	79.5	74.2	73.7
15	85.6	86.0	74.1	80.3	83.7	71.8	80.4	69.6	69.1	79.2	76.9	74.3
16	83.6	82.8	74.3	78.5	87.6	70.5	78.1	69.7	72.5	80.6	79.2	77.1
17	81.2	79.0	74.8	78.9	88.9	70.5	76.6	69.9	74.4*	80.5	76.5	77.1
18	82.8	76.4	76.2	79.2	90.8*	69.6	76.7	70.1	79.0	80.5	75.6*	77.9
19	81.9	76.7	76.2	78.0	93.0*	69.1	75.2	70.1	81.6*	79.8	73.8	76.9
20	83.3	77.2	76.5	77.1	90.9	69.7	74.6	70.0	85.0	80.0	73.0	76.9
21	83.1	80.0	76.7	75.7	86.6	69.0	72.1	68.8	91.2	78.0	74.0	77.7
22	82.7	78.5	79.3	74.2	81.5	68.9	70.9	68.9	83.0	76.2*	72.5	78.9
23	82.0	76.8	76.1	74.3	77.2	69.6	70.2	69.2	86.9	75.7	71.9	76.5
24	79.3	77.0	76.8	72.7*	74.7	71.4	68.5	69.6	82.2*	76.8	70.8	75.2
25	79.8	80.6	76.7	72.1	73.7	71.0	68.2	68.4	85.1	75.7	69.8	74.9
26	80.0	81.3	76.7	71.9	71.9	71.8	68.2	68.5	84.1*	75.7	69.5	74.3
27	78.5	83.6	75.7	72.1	70.7	72.5	67.2	68.5	85.5	74.6	69.6	72.8
28	76.5	83.3	76.1	71.7	70.4	71.5	67.1	67.9	87.1*	73.4	69.0	71.8
29	75.5	84.7	75.9	70.8	70.9	72.5	67.4	67.4	84.0	79.5	68.0	71.3
30	78.9	86.2	75.8	70.2	70.6	71.9	68.9		82.4	79.5*	68.1	70.3
31	81.9*	86.7		69.9		72.1	69.1		82.7		68.7	
MEAN	79.7	92.7	80.4	75.3	79.1	72.3	72.4	68.8	75.8	76.7	72.2	72.8

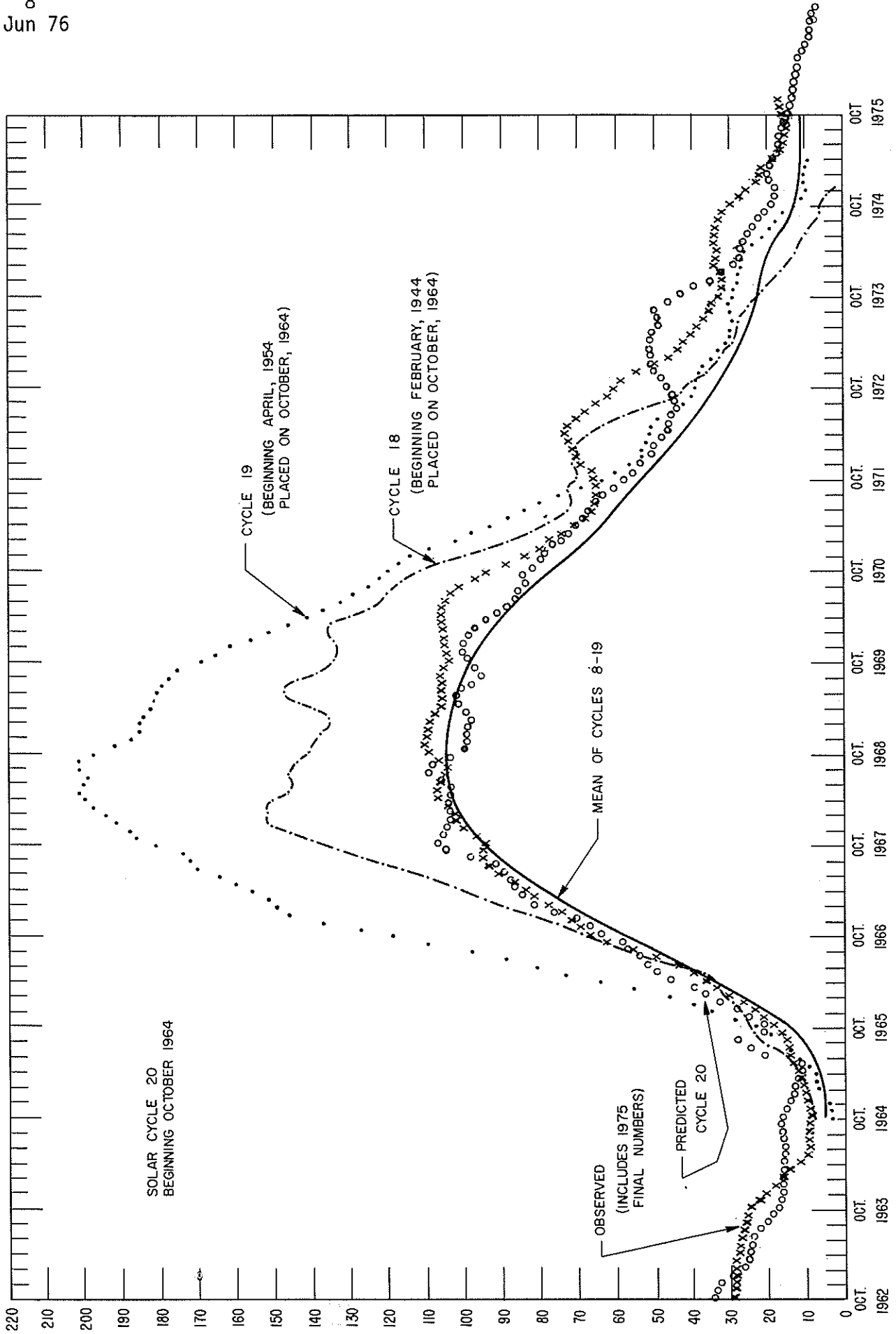
* adjusted for burst

DAILY SOLAR INDICES

JUNE 1976

JUN 1976	YEAR DAY	BARTELS 27-DAY CYCLE NUMBER	SUNSPOT NUMBERS		OBSERVED FLUX OTTAWA 2800	SOLAR FLUX ADJUSTED TO 1 A.U.								
			R Z	R A'		AFGL 15400	AFGL 8800	AFGL 4995	OTTAWA 2800	AFGL 2695	AFGL 1415	AFGL 606	AFGL 410	AFGL 245
1	153	6	0	0	66.5	526	271	111	68.4	66.8	40.6	33.2	21.1	7.8
2	154	7	0	0	66.0	516	271	111	67.9	65.7	41.9	32.9	23.0	8.0
3	155	8	0	0	66.2	515	268	110	68.1	65.6	39.4	34.3	20.0	8.0
4	156	9	0	0	66.5	515	270	112	68.4	65.6	40.5	34.8	19.4	11.2
5	157	10	0	0	66.7	511	269	112	68.7	66.7				
6	158	11	0	0	67.3				69.3					
7	159	12	0	0	67.0	508	264	112	69.0	66.2	43.3	34.4	20.3	8.1
8	160	13	11	9	68.6	512	268	112	70.7	67.1	43.0	35.0	20.2	8.4
9	161	14	10	10	68.0	517	273	114	70.1	68.4	42.7	37.8	21.3	8.2
10	162	15	7	9	68.9	507	268	113	71.0	66.8	43.5	35.9	21.0	8.6
11	163	16	7	6	69.3	519	268	113	71.4	68.0	44.1	35.7	20.7	8.9
12	164	17	8	4	69.5	519	274	113	71.7	70.2	45.0	37.7	21.8	8.6
13	165	18	8	4	69.8	519	276	114	72.0	70.0	45.2	37.0	22.0	8.2
14	166	19	15	14	71.4	521	272	116	73.7	70.9	46.7	39.9	21.2	8.6
15	167	20	18	17	72.0	512	273	115	74.3	70.8	46.1	35.9	21.2	8.5
16	168	21	12	16	74.7	522	275	118	77.1	73.5	49.6	36.6	21.5	9.3
17	169	22	18	21	74.7	518	273	119	77.1	73.9	47.2	36.8	21.9	9.6
18	170	23	24	22	75.4	517	266	119	77.9	75.3	48.9	37.7	21.6	7.6
19	171	24	23	20	74.4	524	270	117	76.9	74.1	49.2	38.0	22.8	9.3
20	172	25	17	23	74.4	517	268	117	76.9	75.3	47.2	38.9	20.3	8.4
21	173	26	30	27	75.2	516	269	118	77.7	74.5	47.7	38.2	20.2	8.0
22	174	27	31	24	76.4	518	273	118	78.9	75.5	49.9	36.0	22.1	8.4
23	175	1	23	21	74.1	527	273	116	76.5	72.4	46.6	35.4	20.4	8.8
24	176	2	26	15	72.8	521	274	116	75.2	71.4	44.8	35.3	19.9	8.1
25	177	3	19	13	72.5	519	267	117	74.9	71.7	45.9	35.2	19.9	8.3
26	178	4	19	16	71.9	510	273	116	74.3	71.2	45.9	36.2	20.3	8.5
27	179	5	9	8	70.4	521	270	113	72.8	69.1	42.3	34.9	20.5	8.3
28	180	6	16	11	69.4	523	267	112	71.8	68.5	42.9	34.3	19.1	8.0
29	181	7	11	9	69.0	512	267	114	71.3	68.8	44.1	34.6	19.1	8.1
30	182	8	10	9	68.0	518	264	112	70.3	67.0	43.2	34.2	20.9	8.5
MEAN			12.4	10.9	70.6	517	270	114	72.8	70.0	44.9	36.0	20.9	8.5

* Adjusted for burst.



PREDICTED AND OBSERVED SUNSPOT NUMBERS

SMOOTHED OBSERVED AND PREDICTED SUNSPOT NUMBERS
CYCLE 20

MONTH	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEPT.	OCT.	NOV.	DEC.
1964										9.6	10.2	11.0
1965	11.7	12.0	12.5	13.6	14.6	15.0	15.5	16.4	17.4	19.7	22.3	24.5
1966	27.7	31.3	34.5	37.4	40.4	44.6	50.3	56.6	63.1	67.6	70.2	72.7
1967	75.0	78.8	82.2	84.6	87.4	91.3	94.1	95.3	95.3	95.0	97.1	100.6
1968	102.6	102.9	104.7	107.2	107.6	106.6	105.2	104.8	107.0	109.9	110.6	110.1
1969	110.0	109.6	108.0	106.4	106.2	106.1	105.8	106.4	105.4	104.1	104.6	104.9
1970	105.6	106.0	106.2	106.1	105.8	105.3	103.8	101.0	97.2	93.9	89.4	84.1
1971	80.4	77.8	74.4	70.9	68.1	66.7	65.4	64.6	65.8	66.2	66.0	69.4
1972	70.8	71.2	72.4	73.4	72.9	70.5	68.2	65.5	62.2	60.6	58.7	55.1
1973	50.9	46.5	44.2	42.7	40.7	39.1	37.5	36.1	34.4	32.6	31.0	31.5
1974	32.7	34.4	34.0	33.9	34.6	34.5	34.0	33.1	32.1	30.3	27.6	25.2
1975	23.9	22.2	21.3	18.6	16.9	16.0	15.0	14.3	14.5	15.6	16.3	16.5
1976	15.0 (--)	13.4 (--)	12.2 (--)	11.1 (--)	10.2 (--)	9.4 (--)	8.6 (--)	8.1 (--)	7.5 (--)	7.0 (--)	6.6 (--)	6.1 (--)

For each month, the upper figure is the observed or predicted Zürich smoothed sunspot number. The lower figure in parenthesis is the corresponding absolute value of the 90% prediction interval, an indication of the uncertainty above and below the predicted number. Observed numbers are those with no prediction intervals. The observed smoothed sunspot numbers are based on final Zürich numbers through 1975.

The predicted sunspot numbers are derived from a regression analysis based on cycles 8 through 19. Tests indicate that earlier cycles are from a different statistical population. From July 1968 - February 1970 a regression analysis based on cycles 1 through 19 was used because it had not then been proven that two populations exist.

10
Jun 76

H α SOLAR FLARES

JUNE 1976

OBSERVATORY	OBSERVED UT				LOCATION				DURATION MIN.	IM- POR- TANCE	OBS. COND. TYPE	MEASUREMENTS			REMARKS	
	DATE JUN	START	MAX. PHASE	END	APPROX.		CENTRAL DISTANCE	MCMATH PLAGE REGION				CMP DAY	TIME UT	MEAS. AREA ML of Disk		CORR. AREA Sq. Deg.
					LAT.	MER. DIST.										
WEND	08	1228		1244	S25	W30	.588		6.3	16	SN					
WEND	08	1304		1312	S24	W29	.569		6.4	8	SF					
MCMA	08	1510	1514	1516	S13	E24	.432	14259	10.4	6	SF	C	1514	30	.4	DH
MCMA	08	1640	1650	17150	S25	W33	.620	14259	6.2	350	SN	C	1650	30	.4	DH
HTPR	08	1647	1651	1713	S24	W35	.636		6.1	26	SF	C	1651	20	.2	
HTPR	09	0908	0913	0920	S22	W44	.726		6.1	12	SN	C	0913	10	.1	
UPIC	09	0910	0915	0915U	S23	W43	.719		6.2	5U	SF	P	0915	41		
CATA	09	0910	0910	0925	S24	W43	.723		6.2	15	SN	2	0910	28	.4	
UPIC	10	0449	0505	0525	S23	W53	.818		6.2	36	SF	P	0505	20		
HTPR	10	0639	0642	0650	S23	W54	.827		6.2	11	SF	C	0642	10	.2	
RAMY	10	1044	1050	1055	S26	W55	.842		6.3	11	SF	3	C	44		
HTPR	10	1045	1045	1055	S24	W56	.846		6.2	10	SN	C	1045	20	.3	
HTPR	11	1542	1554	1624	S45	E40	.815		14.7	42	SF	C	1554	10	.1	
CATA	12	0740	0750	0815	S46	E30	.769		14.6	35	SF	2	0750	56	1.0	E
HTPR	12	0745	0748	0754	S45	E30	.761		14.6	9	SF	C	0748	30	.4	DE
ATHN	12	0747E	0748	0751	S45	E29	.756		14.5	40	SN	4	C	32		E
HTPR	12	1230	1234	1240	S45	E28	.751		14.6	10	SF	C	1234	30	.4	
ISTA	14	0720		0745	N02	E80	.985		20.3	25	SN					D
ISTA	15	0735		0755	N02	E67	.921		20.3	20	SN					E
HTPR	15	1206	1208	1212	N02	E60	.867		20.0	6	SF	C	1208	20	.3	
MCMA	15	1314E	1337	14140	N02	E66	.915	14275	20.5	600	SF	C	1337	25	.6	D
HTPR	15	1317	1335	1416	N01	E62	.884		20.2	59	SN	C	1335	20	.3	
ATHN	15	1323E	1324U	1329	N 2	E64	.900		20.4	60	SF	3	C	19		DE
CATA	15	1330	1335	14000	N01	E65	.907		20.4	300	SN	2	1335	28	.7	DE
RAMY	15	1630E	1630U	1636	N 3	E58	.850		20.0	60	SF	3	C	45		
HTPR	16	1023	1032	1041	N03	E50	.769		20.2	18	SF	C	1030	10	.1	
HTPR	16	1154	1207	1240	N02	E50	.768		20.2	46	SB	C	1207	20	.3	E
ATHN	16	1204E	1207U	1238	N 1	E51	.778		20.3	340	SN	4	C	80		F
ATHN	16	1204E	1207U	1238	N 1	E51	.778		20.3	340	SN	4	V	80		F
RAMY	16	1213E	1214U	1234	N 4	E56	.832	14275	20.7	210	IN	2	C	224		U
HTPR	16	1636	1641	1701	N02	E48	.746		20.3	25	SF	C	1641	30	.5	E
HTPR	16	1708	1709	1714	S42	W24	.706		14.9	6	SF	C	1709	10	.1	
HTPR	16	1744		17510	N02	E46	.722		20.2	70	SN	C	1747	70	1.0	E
MCMA	16	1937E	1940	20200	S46	W25	.750	14267	14.9	430	SN	C	1940	40	.7	EH
PALE	16	2314	2315	23200	N 3	E43	.686		20.2	60	SF	2	C	95		F
PALE	17	0308E	0312	03160	N 3	E40	.648		20.1	80	SF	2	C	50		
KODA	17	0447E	0447	0456	N04	E42	.675		20.3	90	SN	V	0447			ED
HTPR	17	0537	0540	0550	N03	E40	.648		20.2	13	SF	C	0540	20	.2	E
HTPR	17	0613	0618	0700	N02	E40	.646		20.3	47	SB	C	0618	60	.7	E
ISTA	17	0710		0745	N02	E40	.646		20.3	35	SN					F
CATA	17	0715	0720	0735	N01	E40	.645		20.3	20	SB	2	0720	84	1.1	
HTPR	17	0801	0808	0822	N02	E39	.633		20.3	21	SF	C	0808	30	.3	E
CATA	17	0805	0810	08200	N02	E36	.592		20.0	150	SB	2	0810	84	1.1	
ATHN	17	1523	1525	1536	N 1	E32	.533		20.0	13	SB	4	V	48		Z
MCMA	17	1524E		15240	N03	E33	.551	14275	20.1		SB	P	1524	35	.4	DH
RAMY	17	1527E	1527U	1531	N 3	E32	.537		20.0	40	SF	2	C	45		DE
MCMA	17	1641E	1645	16550	N03	E32	.537	14275	20.1	140	SF	C	1645	100	1.2	E
MCMA	17	2155	2159	22490	N03	E31	.522	14275	20.2	540	SF	C	2159	40	.5	D
UPIC	18	0945	1000	1030	N03	E25	.431		20.3	45	SF	P	1000	82		
MCMA	18	1106E		13000	N03	E23	.400	14275	20.2	1140	SN	C	1120	40	.5	D
UPIC	18	1115	1130	11350	N02	E24	.413		20.3	200	SF	P	1130	61		
HTPR	19	0910	0913	0917	N02	E09	.173		20.1	7	SF	C	0913	20	.2	E
HTPR	19	1534	1535	1541	N02	E07	.142		20.2	7	SF	C	1535	20	.2	E
CATA	20	0910	0930	1010	N03	W22	.384		18.7	60	SF	2	0930	56	.6	
ATHN	21	1402E	1404	1412	N 3	W19	.336		20.2	100	SF	4	C	48		DE
HTPR	22	0815	0818	0825	S27	E70	.948		27.6	10	SN	C	0818	30	.6	
ARCE	22	0820E		0830	S25	E69	.941		27.5	100	SN	C	0825	29		H
MCMA	22	1328E		14080	N02	W52	.789	14282	18.7	400	SN	C	1329	25	.5	D
HTPR	22	1404	1412	1425	S27	E67	.932		27.6	21	SN	C	1412	50	.9	

H α SOLAR FLARES

JUNE 1976

OBSERVATORY	OBSERVED UT				LOCATION				DURATION MIN.	IM-POR-TANCE	OBS.		MEASUREMENTS			REMARKS	
	DATE JUN	START	MAX. PHASE	END	APPROX.		CENTRAL DISTANCE	MC MATH PLAGE REGION			CMP DAY	CORD.	TYPE	TIME UT	MEAS. AREA Mill of Disk		CORR. AREA Sq. Deg.
					LAT.	MER. DIST.											
^A L MCMA	22	1405		1408D	S25	E68	.936	14287	27.7	30	SN	P	1408	30	.9	EH	
HTPR	23	0536	0542	0544	S28	E58	.876		27.6	8	SF	C	0542	10	.1		
HTPR	25	0800	0805	0808	S01	W45	.707		22.0	8	SF	C	0805	10	.1		
HTPR	26	1632		1644	N06	W80	.985		20.7	12	SF	C	1635	10	.2		

"Remarks":

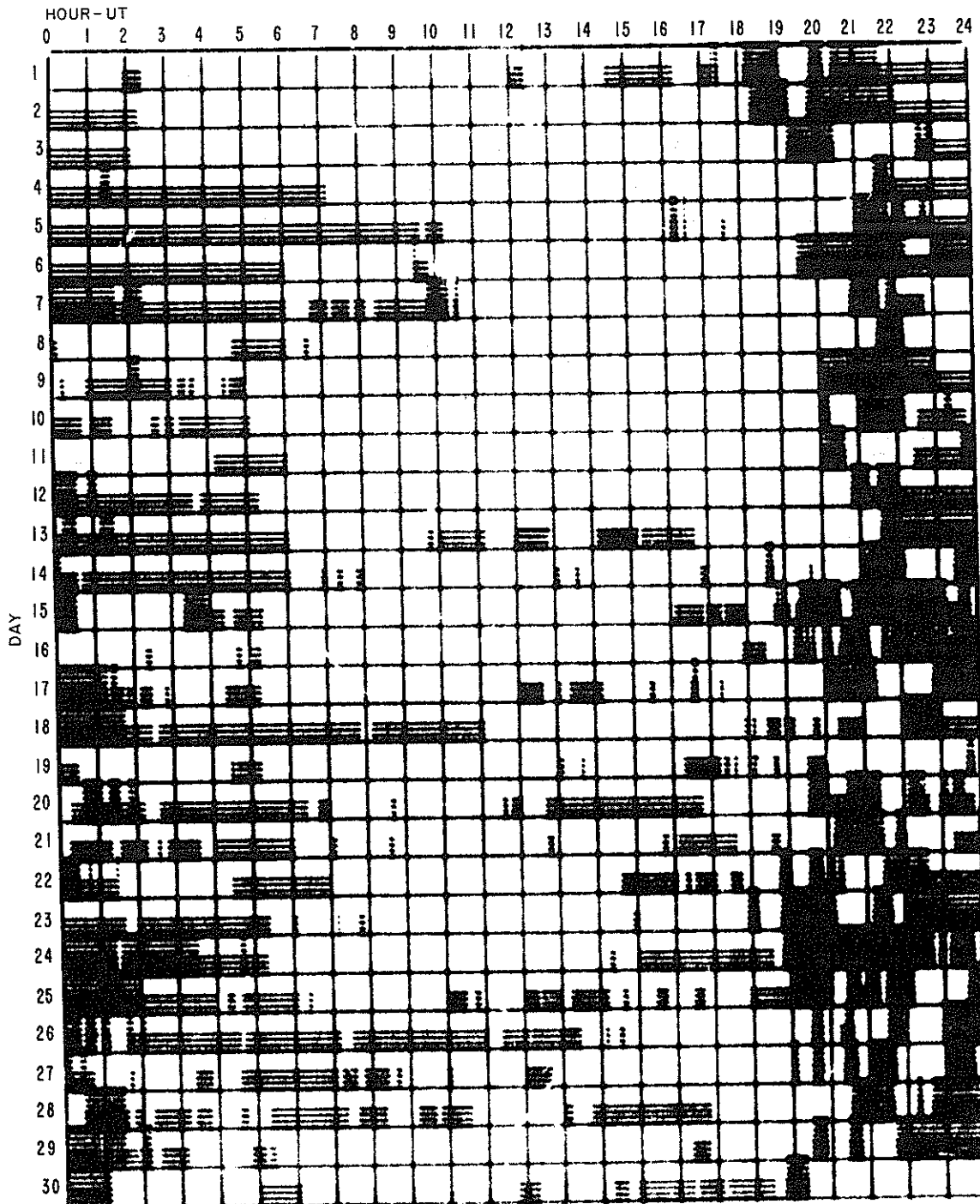
- A = Eruptive prominence whose base is less than 90° from central meridian.
- B = Probably the end of a more important flare.
- C = Invisible 10 minutes before.
- D = Brilliant point.
- E = Two or more brilliant points.
- F = Several eruptive centers.
- G = No visible spots in the neighborhood.
- H = Flare accompanied by a high speed dark filament.
- I = Active region very extended.
- J = Distinct variations of plage intensity before or after the flare.
- K = Several intensity maxima.
- L = Existing filaments show signs of sudden activity.
- M = White-light flare.

- N = Continuous spectrum shows effects of polarization.
- O = Observations have been made in the calcium II lines H and K.
- P = Flare shows helium D₃ in emission.
- Q = Flare shows the Balmer continuum in emission.
- R = Marked asymmetry in H α line suggests ejection of high velocity material.
- S = Brightness follows disappearance of filament (same position).
- T = Region active all day.
- U = Two bright branches, parallel (||) or converging (Y).
- V = Occurrence of an explosive phase: important and abrupt expansion in about a minute with or without important intensity increase.
- W = Great increase in area after time of maximum intensity.
- X = Unusually wide H α line.
- Y = System of loop-type prominences.
- Z = Major sunspot umbra covered by flare.

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INTERVALS OF NO FLARE PATROL OBSERVATION
FOR PRECEDING SOLAR FLARE TABLE

JUNE 1976



Observatories included in total patrol:

Arcetri	Catania	Huancayo	Manila	Ramey
Athenes	Haute Provence	Istanboul	McMath-Hulbert	Tehran
Bucharest	Herstmonceux	Kodaikanal	Mitaka	Upice
			Palehua	Wendelstein

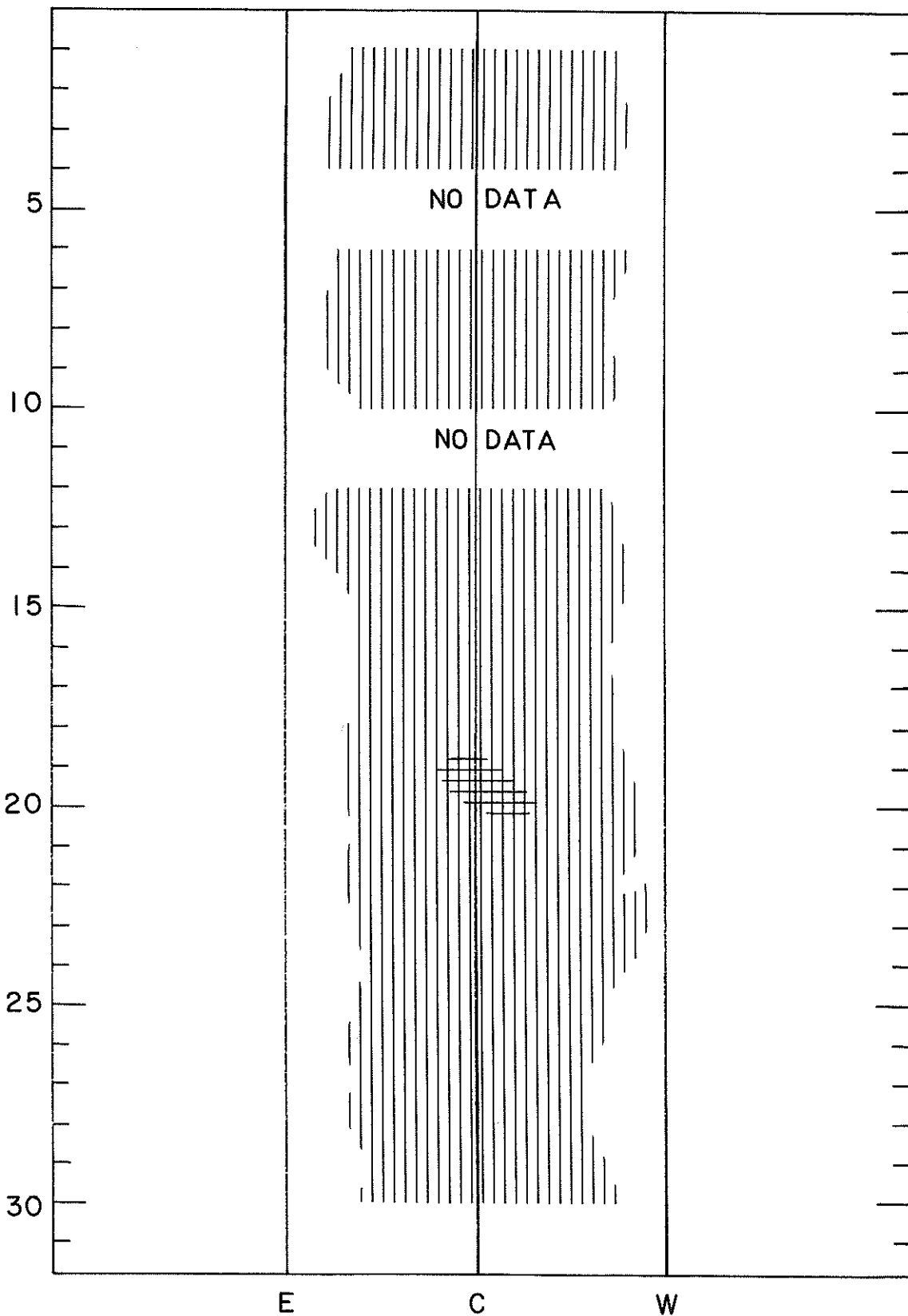
Times of no flare patrol are shown by the shaded area for each day divided into times of no cinematographic patrol (bottom half of day) and times of neither visual nor cinematographic patrol (top half of day).

SOLAR RADIO EMISSION INTERFEROMETRIC OBSERVATION

JUNE 1976

Nangay

169 MHz



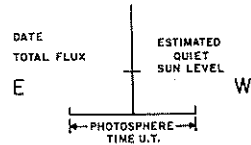
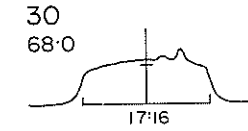
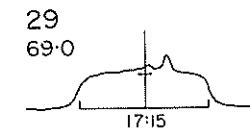
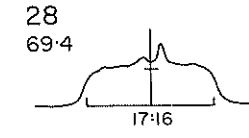
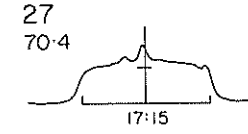
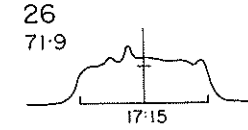
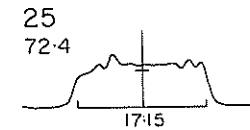
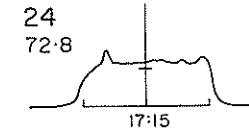
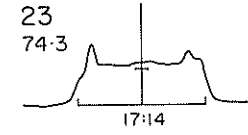
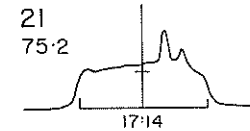
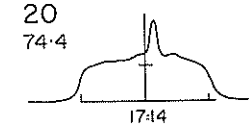
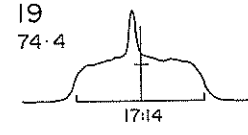
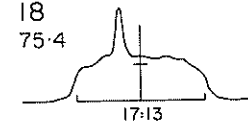
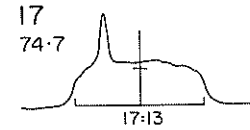
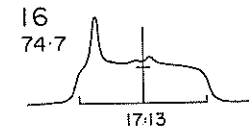
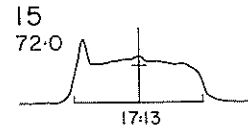
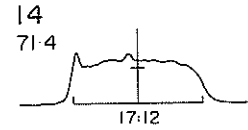
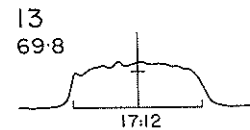
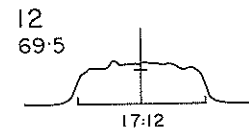
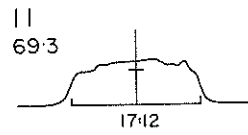
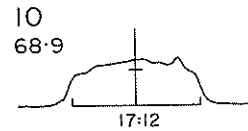
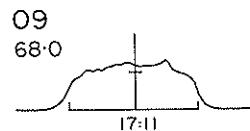
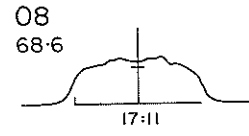
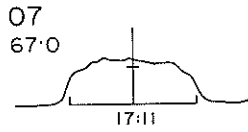
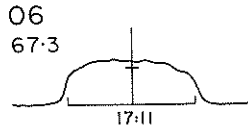
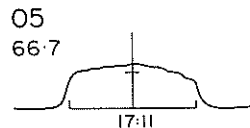
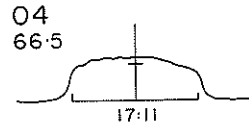
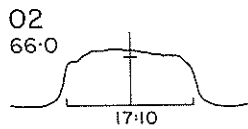
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EAST-WEST SOLAR SCANS

JUNE, 1976

ALGONQUIN RADIO OBSERVATORY
CANADA

10.7 cm
Fan Beam with 1.5 minutes of arc
E-W Resolution



EAST-WEST SOLAR SCANS

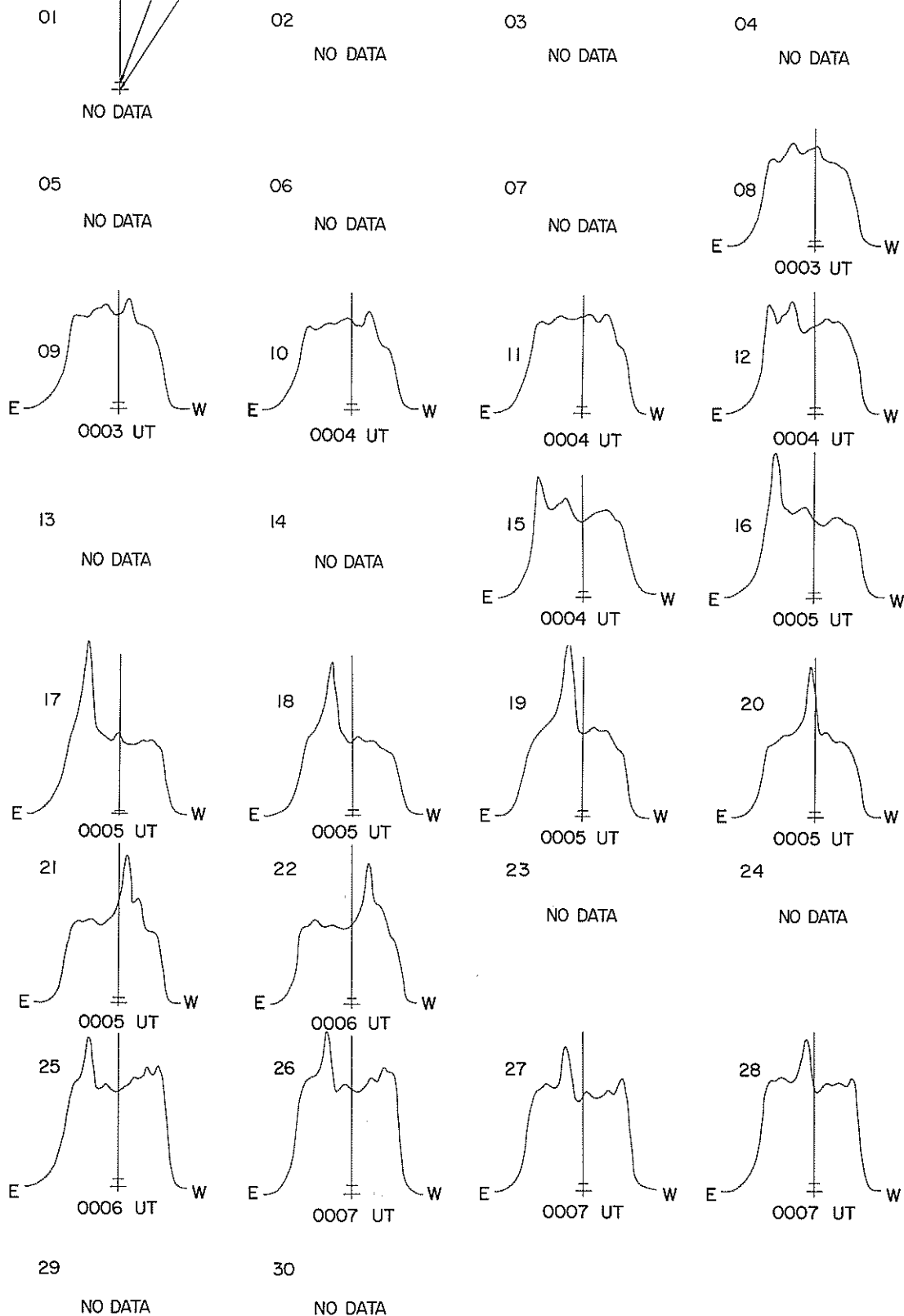
JUNE 1976

Fleurs, Australia

ESTIMATED QUIET SUN LEVEL

COLD SKY LEVEL

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



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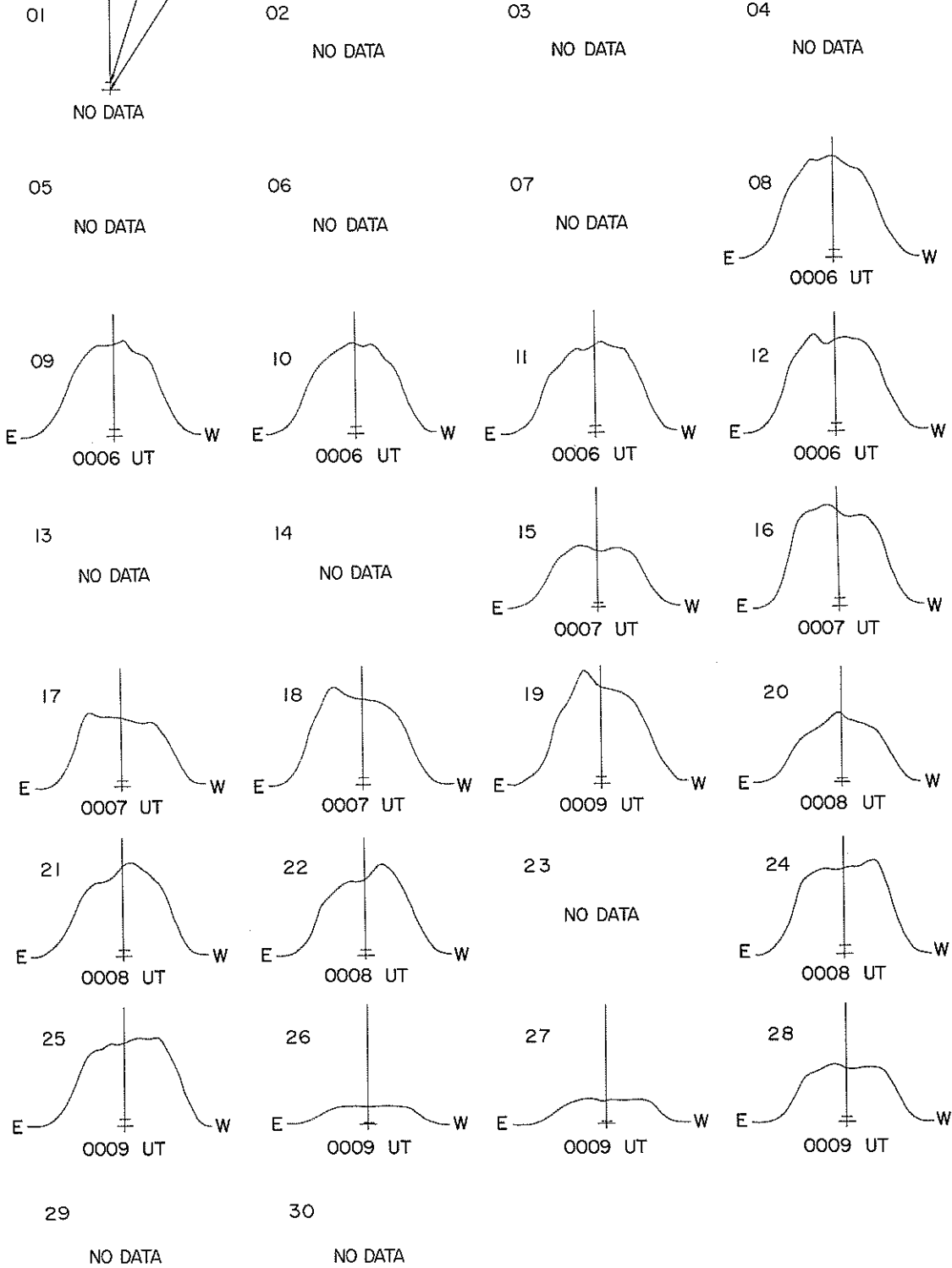
EAST-WEST SOLAR SCANS

JUNE 1976

Fleurs, Australia

ESTIMATED QUIET SUN LEVEL
COLD SKY LEVEL

43 cm
Fan-Beam with 4 minutes of arc
E-W Resolution



SOLAR RADIO EMISSION SELECTED FIXED FREQUENCY EVENTS

JUNE 1976

	FREQUENCY STATION	TYPE	STARTING TIME	TIME OF MAXIMUM	DURATION	FLUX DENSITY $10^{-22} \text{ Wm}^{-2} \text{ Hz}^{-1}$		INT	REMARKS
			UT	UT	MINUTES	PEAK	MEAN		
2	2695 BOUL	8 S	1856	1856.5	2.5	39	13		
	2695 BOUL	8 S	1901	1901.5	1	21	7		
7	2695 BOUL	1 S	1712	1713.5	3	3	1		
11	2695 SGMR	4 S/F	1929.8	1930.4	1.3	23.2	7		
16	2800 OTTA	1 S	1158	1159	8	2.8	1.6		
	2800 OTTA	2 S/F	1225 E	1225.5	4 D	9.8			
	2695 SGMR	2 S/F	1224.1	1225.6	5.1	8.5	2.5		
	2800 OTTA	20 GRF	1311.8	1312.1	16	1.8	0.8		
	2800 OTTA	32 ABS	1410	1520	110	1.8	0.9		
	2800 OTTA	32 ABS	1720	1820	140	1.8	0.9		
	2800 OTTA	8 S	1951.2	1951.2	0.5	0.8	0.4		
	2800 OTTA	1 S	2030	2031.5	3	1	0.5		
	2800 OTTA		2030		60	0.8			
	2695 BOUL	8 S	2045	2046.5	2	6	2		
	2695 BOUL	8 S	2119.5	2120.5	1.5	4	1		
	2800 OTTA	20 GRF	2205	2221	30	1.2	0.6		
	2695 PENT	21 GRF	2307	2320	95	2.8	1.4		
	17	2695 MANI	4 S/F	2311	2316	17.5	12.6	3.8	
2800 MANI		4 S/F	2312.7	2316	15.8	30.7	7.1		
2695 PENT		2 S/F	2312.7	2316	7	9	3		
2695 BOUL		45 C	2313	2317	11.5	10	3		
2800 OTTA		27 RF	1215		205	1.4	1		
18	2800 OTTA	24 R	1215	1245	30	1.4	0.8		
	2800 OTTA	24P R	1245		90	1.4			
	2695 BOUL	3 S	1343.5	1344	2	3	1		
	2800 OTTA	26A FAL	1415	1540	85	1.4	0.7		
	2695 SGMR	2 S/F	1523.7	1523.8	1.2	2	0.6		
	2800 OTTA	1 S	1527	1527.1	1	1.8	0.8		
	2695 BOUL	1 S	2256	2256.5	1.5	4	1		
	2695 BOUL	8 S	1502.5	1504.5	3	7	2		
22	2695 BOUL	8 S	1616.5	1617.5	3	11	4		
	2695 BOUL	8 S	1619.5	1620.5	4	16	5		
	2800 OTTA	20 GRF	1410	1440	115	1	0.5		
23	2695 BOUL	2 SF	1935.5	1937.5	3.5	4	1		

Observatories:

BOUL = Boulder

MANI = Manila

OTTA = Ottawa ARO

PENT = Penticton

SGMR = Sagamore Hill

Explanation of Type Code:

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

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SOLAR WIND
Interplanetary Scintillations

JUNE 1976

UCSD 74 MHZ SCINTILLATIONS

DAY	3C48 VEL ERR	3C144 VEL ERR	3C147 VEL ERR	3C161 VEL ERR	3C237 VEL ERR	3C273 VEL ERR	3C298 VEL ERR	3C459 VEL ERR
1	572 96		328 155	564 51				
2	744 57			479 32	294 73			
3	647 147		444 199	462 44		320 24		
4	913 41		523 134			318 60	282 38	
5	1288 125			497 31		0 0		
6	1057 52			404 78	170 15	373 42		
7	1038 35			567 63	224 2			
8	987 56			387 35				
9	1015 271			437 33				
10	988 199			429 9	227 48	199 36		
11	956 99		548 25	435 49		394 6		
12	930 186		526 75	364 36	218 37	0 0		
13	831 96			378 37	187 7	300 27	316 54	
14	913 50		651 *	439 26	272 1			
15	837 114		593 176	435 53	308 39			
16	736 156		421 51	509 40	350 45			
17	672 21		497 80	438 87	371 86	363 32	388 65	473 92
18			671 14	378 11	173 7	498 79	363 72	407 132
19	856 153		559 55	414 34				
20			571 33	446 114	191 10	297 42		
21	753 141		671 39	427 46	318 8	294 36		
22			596 145	516 130	385 56	271 20	318 115	
23	624 106		739 53	433 50	403 42	334 58	326 22	
24	492 189		619 72	451 101		368 19	311 14	
25				540 164	275 31			
26			430 38					
27	653 65		1032 47	554 127				
28	835 255	971 184	851 96	523 194	234 32	167 42	259 25	362 166
29	771 136		512 89	391 44	278 23	237 40	180 28	
30	574 13	501 27	699 26	409 110	368 *	380 *	275 83	

JUNE	5	15	25
	UT LAT DIST DLON	UT LAT DIST DLON	UT LAT DIST DLON
3C48	17. 25. 0.71 38.	16. 20. 0.80 32.	15. 16. 0.88 25.
3C144	21. -16. 0.14 -81.	20. -35. 0.03 87.	19. 0. 0.19 79.
3C147	20. 50. 0.48 -41.	19. 63. 0.45 -20.	18. 63. 0.46 18.
3C161	22. -46. 0.58 -32.	21. -54. 0.52 -21.	21. -58. 0.49 4.
3C237	2. -3. 0.97 -17.	1. -3. 0.91 -24.	0. -4. 0.83 -33.
3C273	4. 0. 1.14 -14.	3. 0. 1.09 -16.	2. 1. 1.05 -17.
3C298	6. 3. 1.22 -10.	5. 4. 1.19 -12.	4. 5. 1.15 -13.
3C459	14. 4. 1.02 17.	13. 5. 1.06 16.	13. 6. 1.11 15.

* indicates data for which no error estimate is available, because only two antennas were operating.

SOLAR X-RAYS BY SATELLITE
SMS GOES

JUNE 1976

		.5 - 4Å Hourly Averages (10 ⁻⁶ watts/m ²)																												
MO	DA	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Mean				
6/	1	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B			
6/	2	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M			
6/	3	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B			
6/	4	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M			
6/	5	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B			
6/	6	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B			
6/	7	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M			
6/	8	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B			
6/	9	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B			
6/	10	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B			
6/	11	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B			
6/	12	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B			
6/	13	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B			
6/	14	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B			
6/	15	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B			
6/	16	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B			
6/	17	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B			
6/	18	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B			
6/	19	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M			
6/	20	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M			
6/	21	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M			
6/	22	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M			
6/	23	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M			
6/	24	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M			
6/	25	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B			
6/	26	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B			
6/	27	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B			
6/	28	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M			
6/	29	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B			
6/	30	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B			

0.01

Note: "B" indicates the flux was below the cut-off levels.
"M" denotes periods of missing data.

SOLAR X-RAYS BY SATELLITE
SMS GOES

JUNE 1976

1 - 8Å Hourly Averages (10^{-5} watts/m²)

MO	DA	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Mean
6/	1	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B
6/	2	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	B
6/	3	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B
6/	4	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	B
6/	5	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B
6/	6	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B
6/	7	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	B
6/	8	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B
6/	9	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B
6/	10	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B
6/	11	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B
6/	12	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B
6/	13	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B
6/	14	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B
6/	15	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B
6/	16	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B
6/	17	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B
6/	18	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B
6/	19	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	B
6/	20	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	B
6/	21	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	B
6/	22	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B
6/	23	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B
6/	24	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	B
6/	25	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B
6/	26	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B
6/	27	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B
6/	28	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	B
6/	29	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B
6/	30	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B

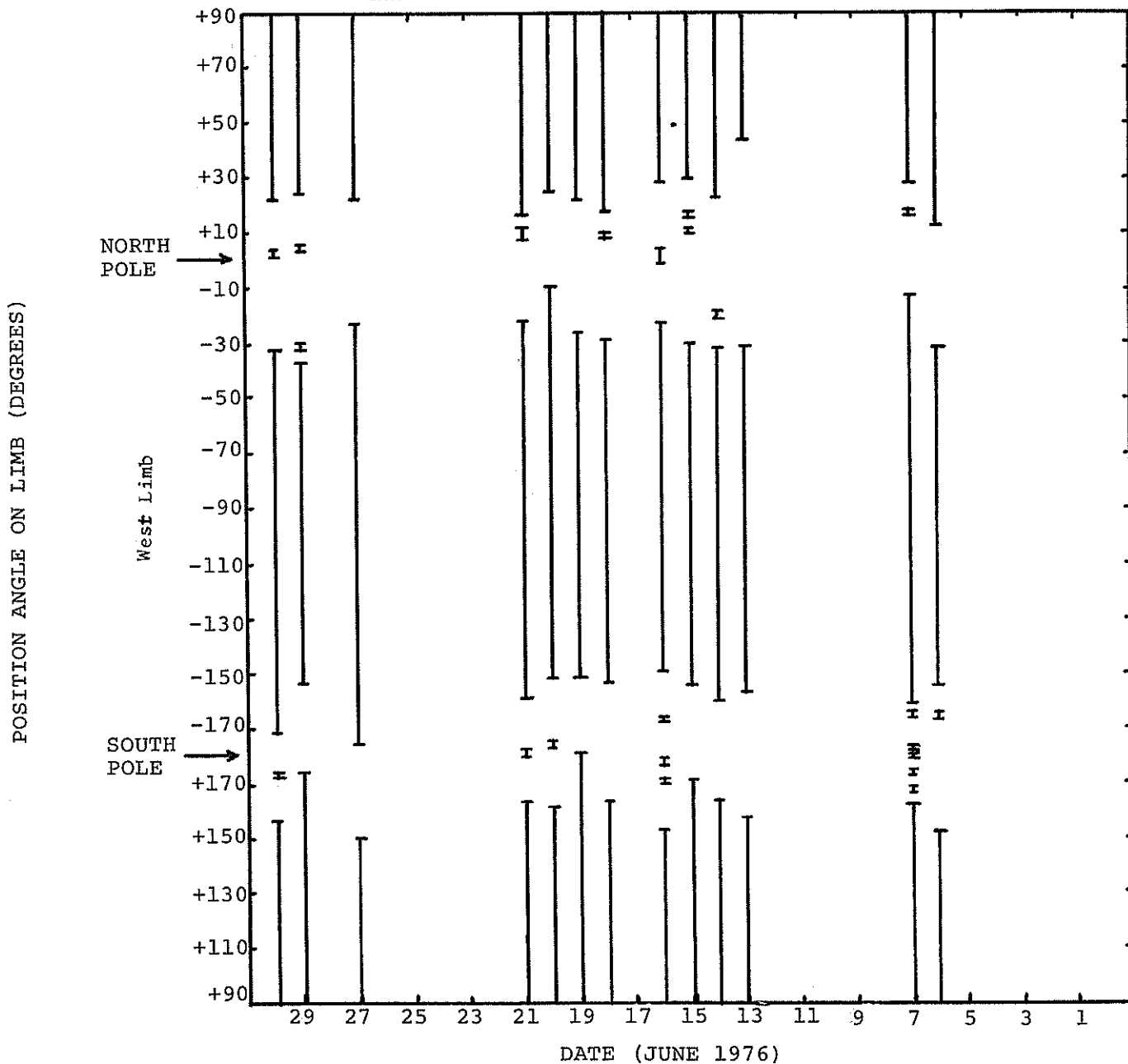
Note: "B" indicates the flux was below the cut-off levels.
"M" denotes periods of missing data.

CORONAL HOLES

Helium D3 Chromosphere at Solar Limb

JUNE 1976

OBSERVATIONS OF D3 CHROMOSPHERE AT SOLAR LIMB



INFERRED IP MAGNETIC FIELD

BARTELS ROTATION	DATE	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									
1935	1975 JAN 27	T	T	T	A	T	A	T	A	T	A	T	A	T	-	T	T	A	T	T	T	T	A	T	A	T	A	A	A								
1936	FEB 23	T	A	A	A	A	A	A	A	A	A	A	A	A	T	T	T	A	T	A	T	T	A	T	A	T	T	T	A	A							
1937	MAR 22	A	A	A	T	T	A	A	A	A	A	A	T	*	T	T	T	*	T	A	A	T	T	A	T	T	T	A	A	A							
1938	APR 18	A	A	A	A	A	A	A	A	A	A	A	T	A	A	T	-	T	T	T	T	A	A	T	T	-	A	T	A	T	T						
1939	MAY 15	T	A	A	T	A	A	A	A	A	A	A	A	-	-	-	-	-	-	-	-	-	-	*	-	*	T	T	T	A	A						
1940	JUN 11	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	T	T	T	A	A	T	T	T	T	T	A	A	A						
1941	JUL 8	A	A	A	A	A	A	A	A	A	A	T	A	A	A	*	A	A	T	T	T	T	A	A	T	T	T	T	A	T	A	A	A				
1942	AUG 4	A	A	A	A	A	T	A	A	A	A	A	A	A	A	T	-	A	T	T	T	T	T	T	-	A	T	T	A	A	A	A	A				
1943	AUG 31	A	A	A	T	A	A	A	T	A	A	A	A	A	A	A	A	A	A	T	T	T	T	T	T	T	T	T	T	A	A	A	A	A			
1944	SEP 27	A	T	A	A	A	A	T	A	A	A	A	A	A	A	A	T	A	A	A	A	T	T	A	T	T	T	T	T	T	A	A	A	A	-		
1945	OCT 24	T	T	T	T	T	T	A	A	A	A	A	A	A	A	A	A	A	A	A	A	T	T	T	T	T	T	T	T	T	T	T	T	T	T		
1946	NOV 20	A	T	A	*	T	T	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	T	T	T	T	T	T	T	T	T	T	T	T	T		
1947	DEC 17	T	-	T	T	T	T	T	T	A	T	A	*	A	A	A	A	A	A	A	A	T	T	T	T	T	T	T	T	A	T	A	T	T	T		
1948	1976 JAN 13	T	A	T	T	T	T	T	A	A	A	A	A	A	A	A	A	A	A	A	A	A	T	T	T	T	T	T	T	T	T	T	T	T	T	T	
1949	FEB 9	T	A	T	A	T	T	-	T	A	A	T	A	T	A	A	A	A	A	A	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	
1950	MAR 7	T	A	T	A	T	T	T	T	T	A	A	A	A	A	A	A	A	A	A	A	A	A	T	T	T	T	T	T	T	T	T	T	T	T	T	
1951	APR 3	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	
1952	APR 30	T	T	A	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	
1953	MAY 27	T	-	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	
1954	JUN 23	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T

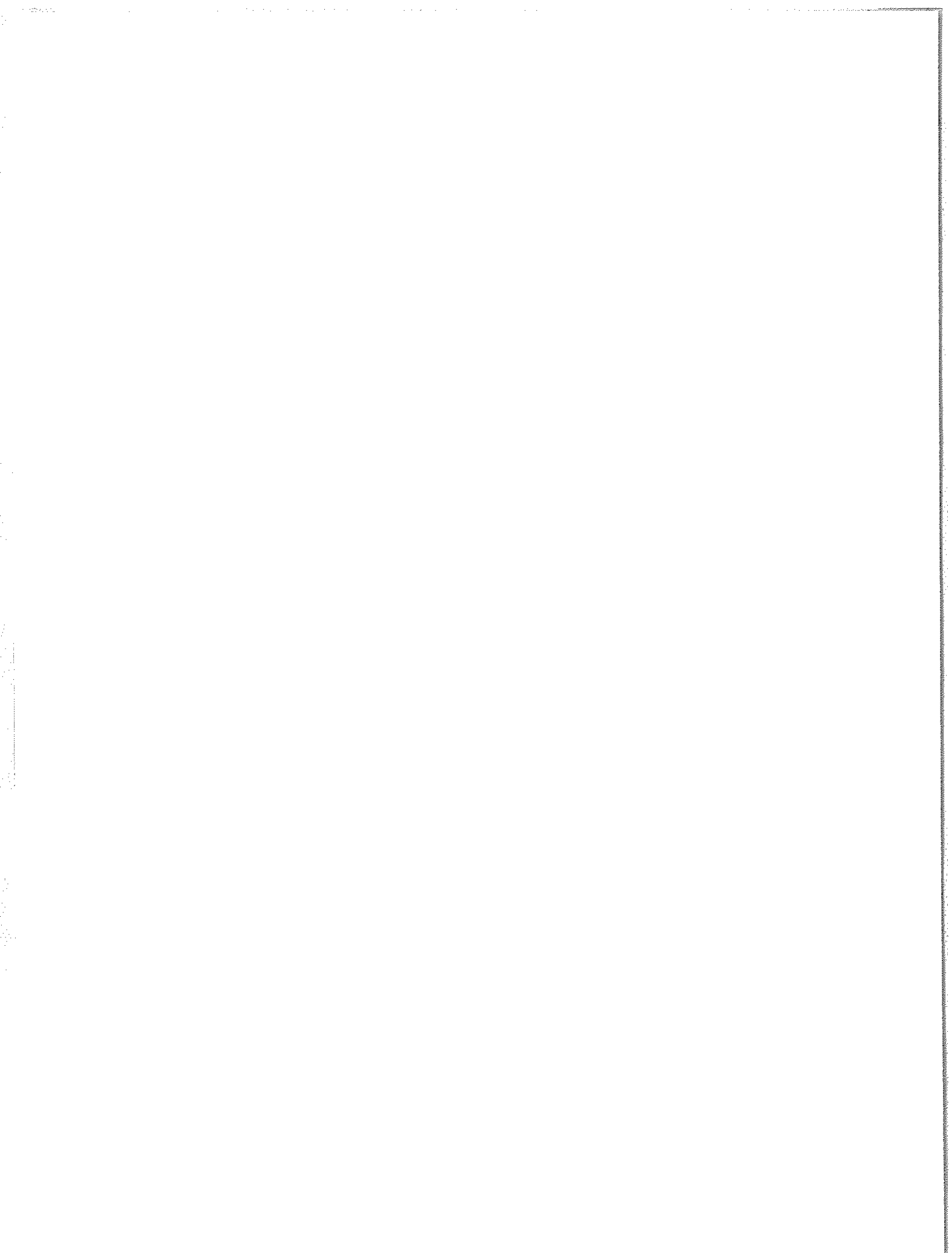
T = towards the sun A = away from the sun * = effect doubtful or not discernable - = missing data

The table shows daily inferences of the polarity of the interplanetary magnetic field. The first half of the day is based principally on magnetograms produced by the magnetometer at the Vostok Antarctic Station of the USSR. The magnetometer of the U.S. Air Weather Service operated by the Air Force Geophysics Laboratories at the Thule Geopole Station is used for the second half of the day.

MAY 1976 DATA

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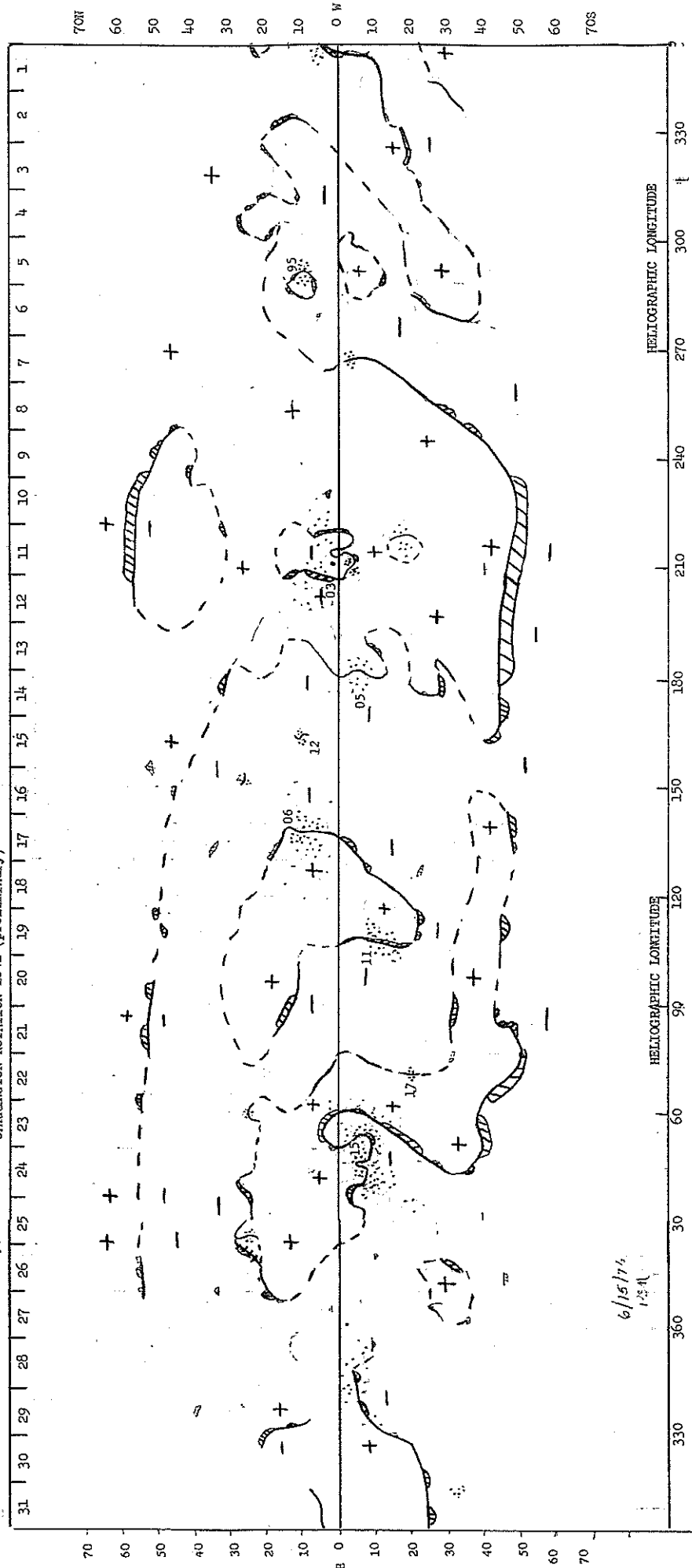


H α SYNOPSIS CHART

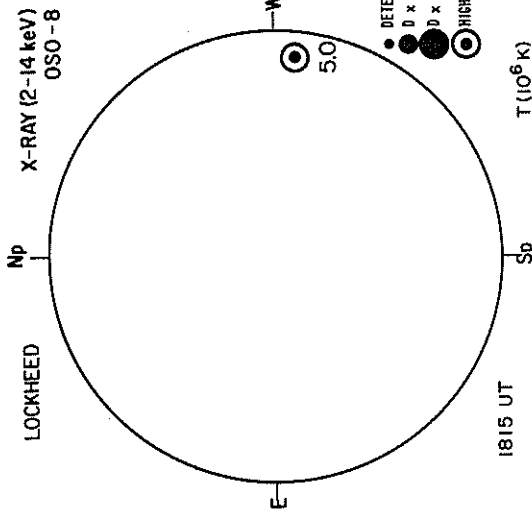
MAY 1976

CARRINGTON ROTATION 1641 (preliminary)

MAY 1976



MAY 1, 1976 (P = -24.16, B₀ = -4.12, L₀ = 353.75)



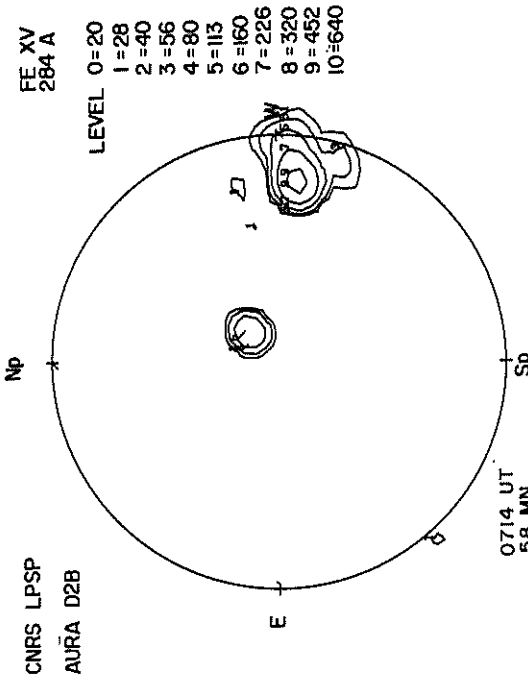
- DETECTABLE (10)
- 0 x 20
- 0 x 500
- HIGHLY VARIABLE

MAGNETOGRAM
Bright - Plus
Dark - Minus

KITT PEAK

NO MAGNETOGRAMS WERE PRODUCED AT KITT PEAK OBSERVATORY DURING THE MONTH OF MAY 1976.

Sp



MAGNETOGRAM
Solid-Plus
Dotted-Minus

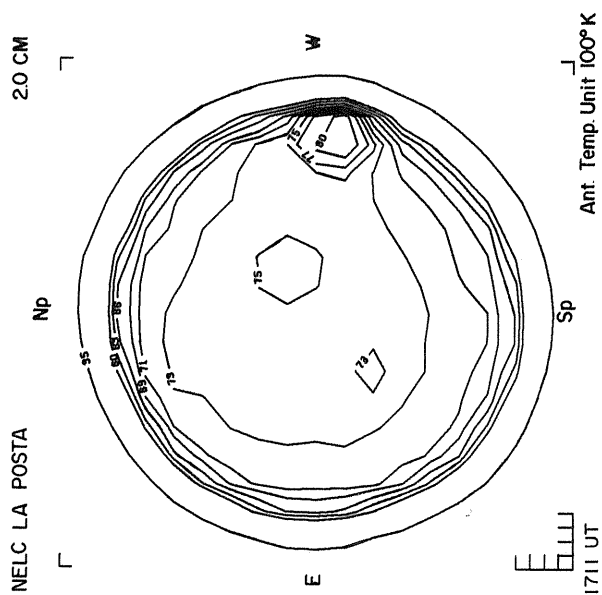
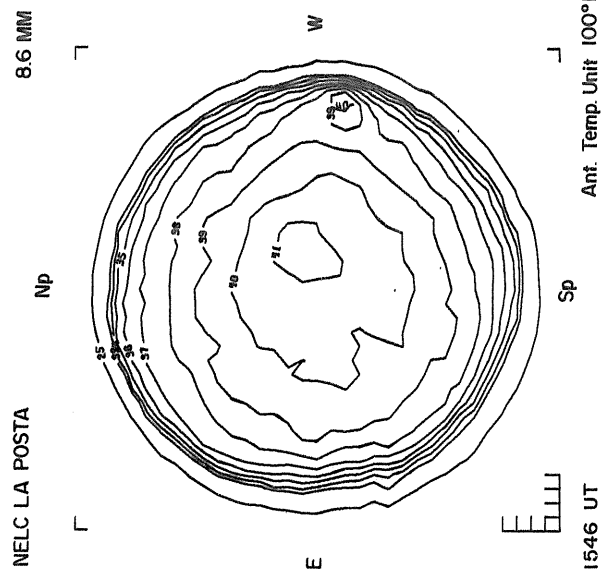
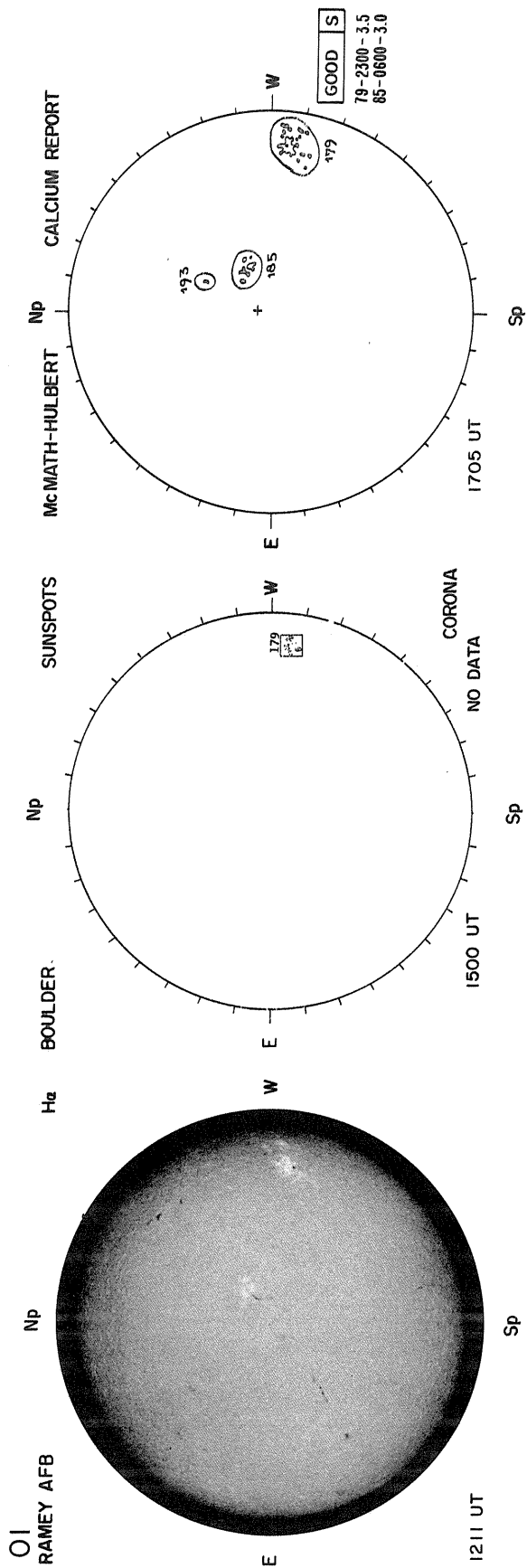
DELTA TAY = 12.7
DELTA TAX = 9.4

MT. WILSON

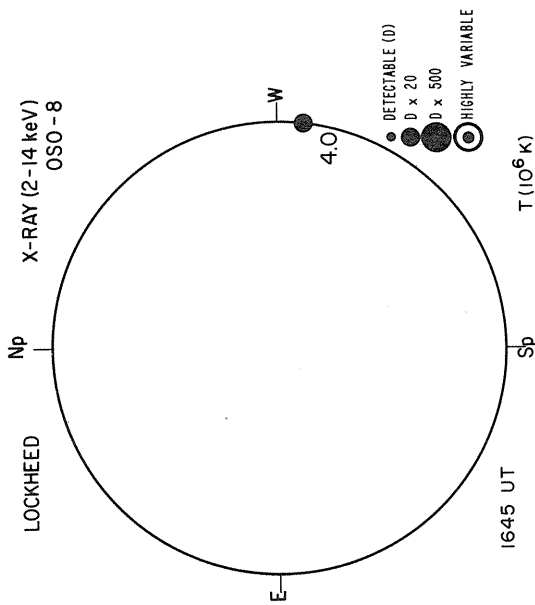
17.18 - 18.57 UT

- Levels
- ± 5
 - ± 10
 - ± 20
 - ± 40
 - ± 80

E

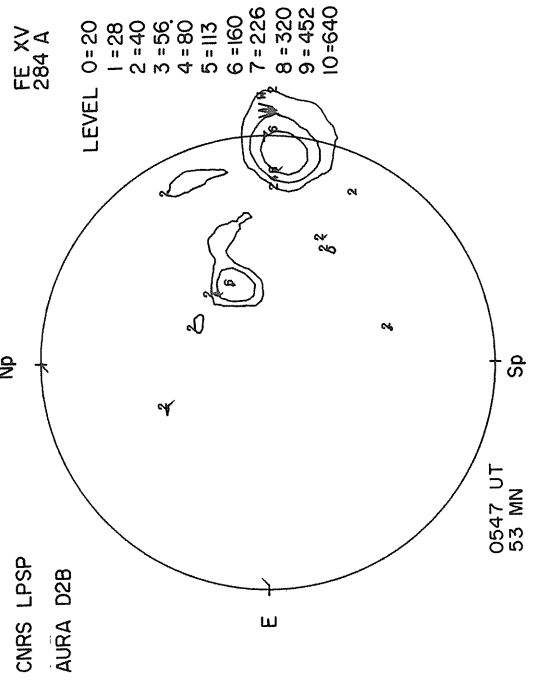


MAY 2, 1976 (P = -23.97, B₀ = -4.02, L₀ = 340.53)



KITT PEAK

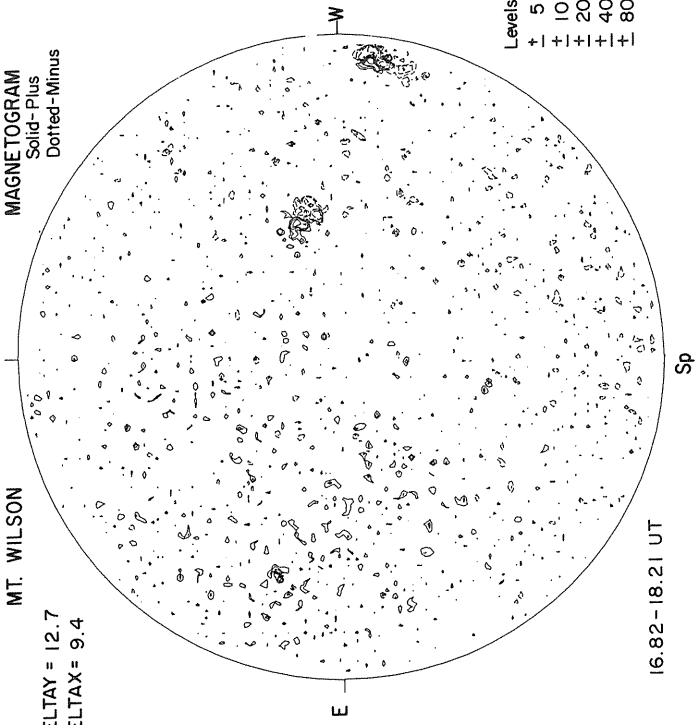
MAGNETOGRAM
 Bright - Plus
 Dark - Minus



MT. WILSON

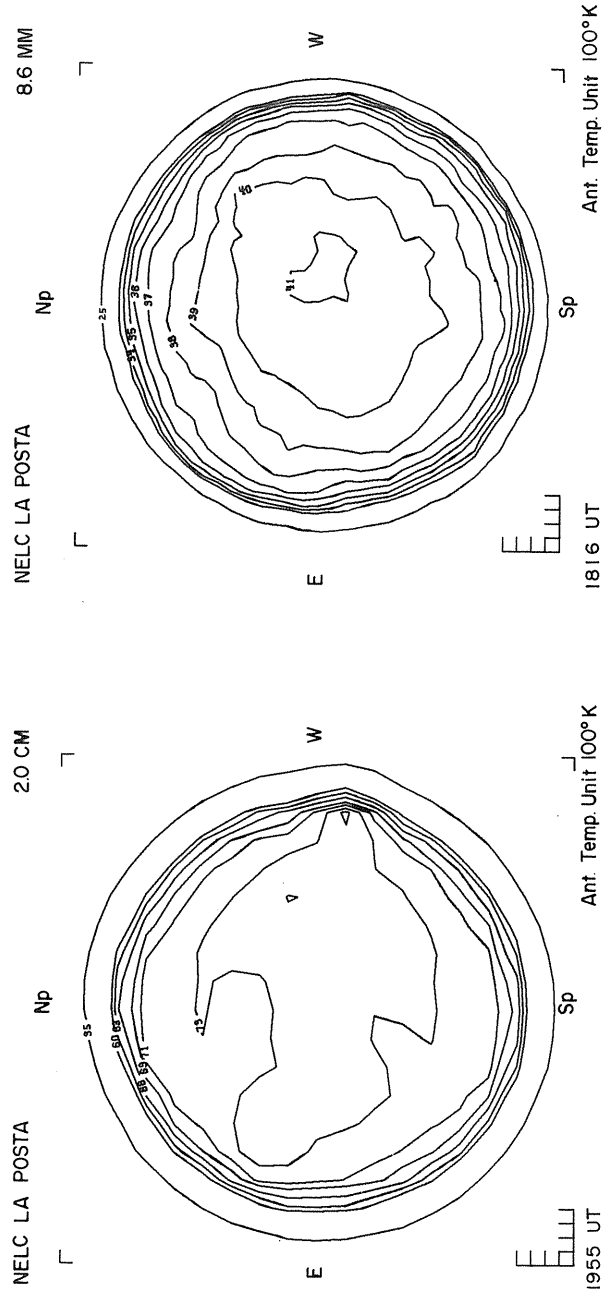
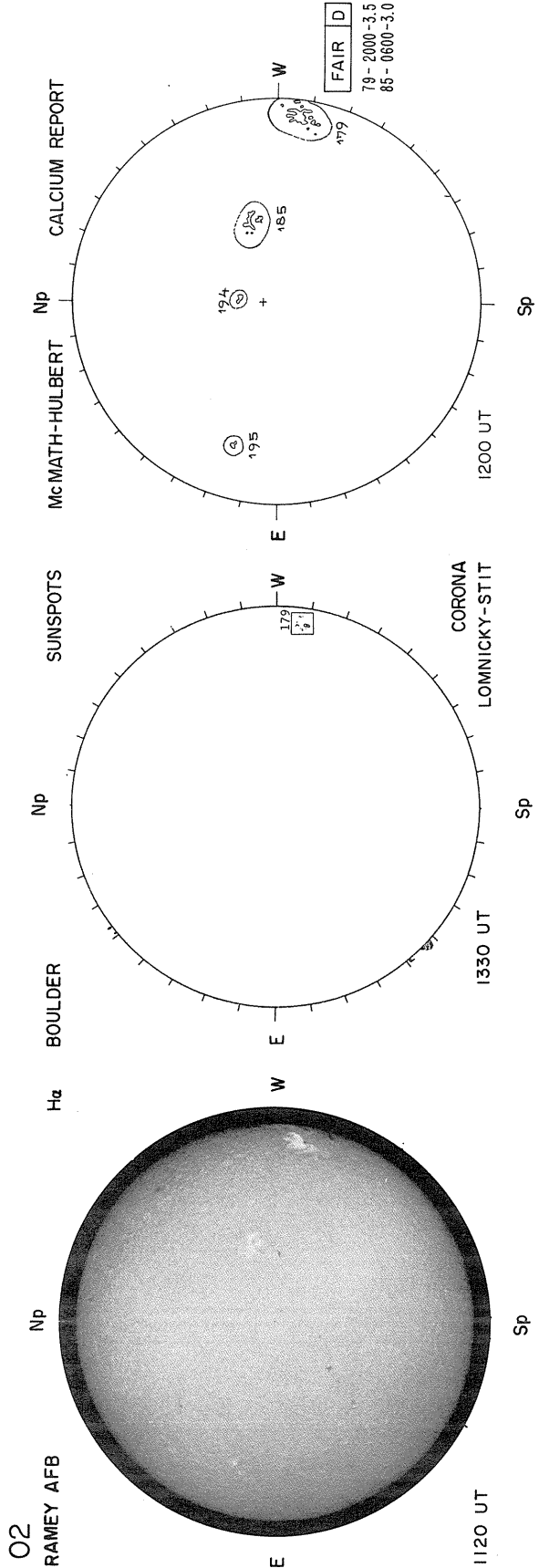
MAGNETOGRAM
 Solid - Plus
 Dotted - Minus

DELTA Y = 12.7
 DELTA X = 9.4

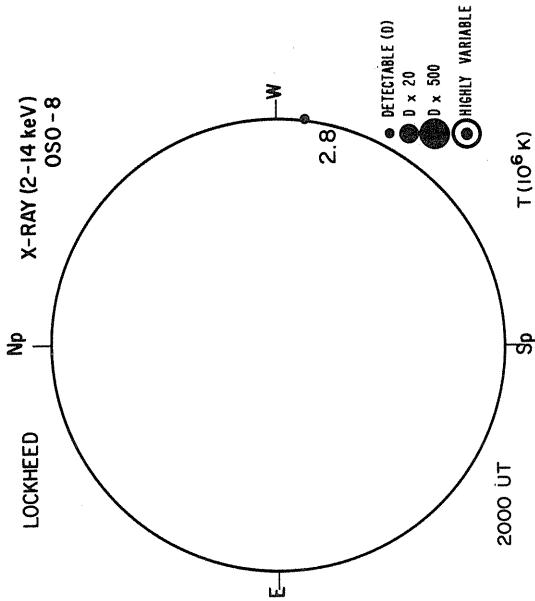


Sp

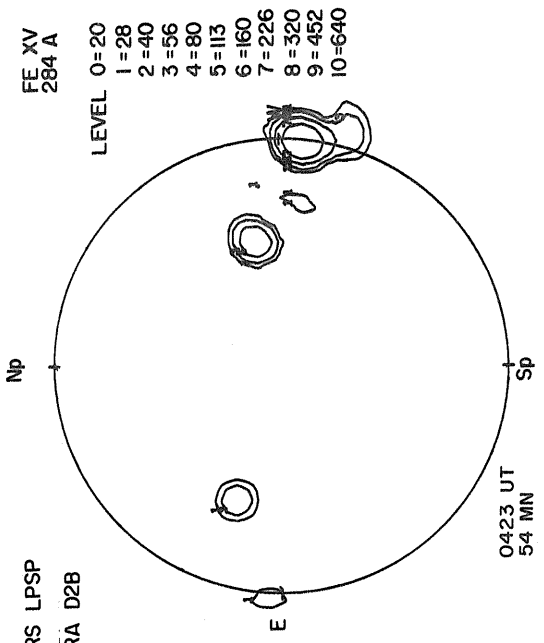
E



MAY 3, 1976 (P = -23.78, B₀ = -3.9I, L₀ = 327.31)

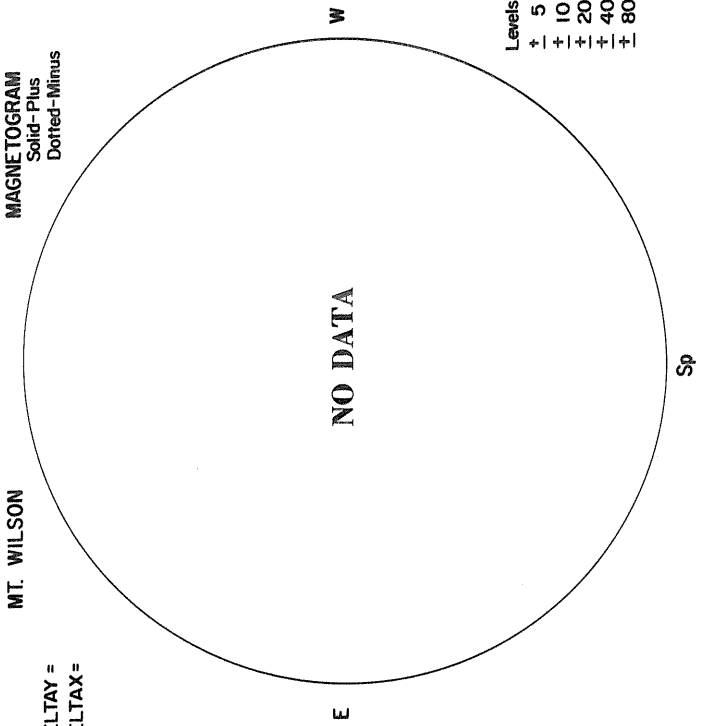


KITT PEAK
MAGNETOGRAM
Bright - Plus
Dark - Minus



MT. WILSON
MAGNETOGRAM
Solid - Plus
Dotted - Minus

DELTAY =
DELTAX =

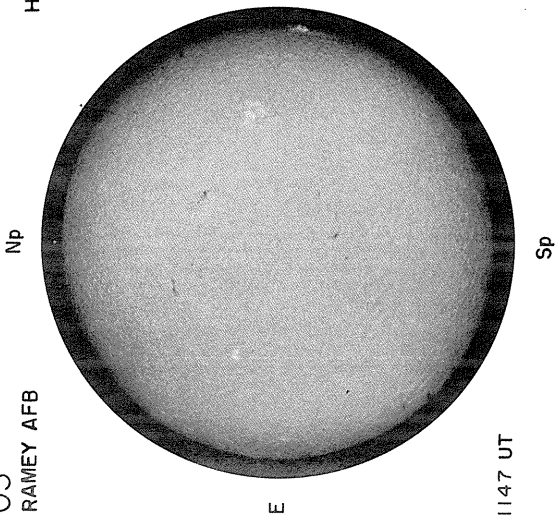


Levels
± 5
± 10
± 20
± 40
± 80

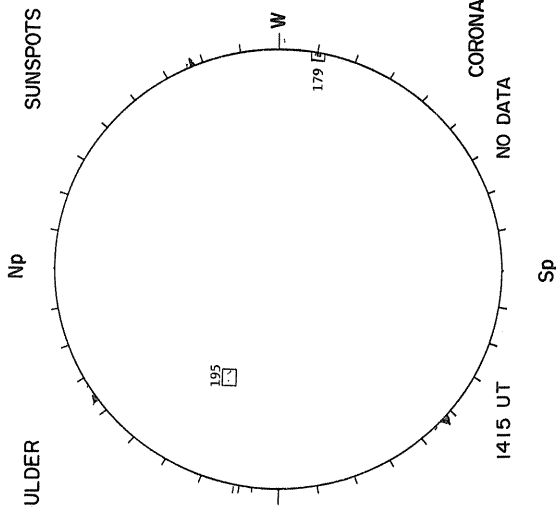
Sp

E

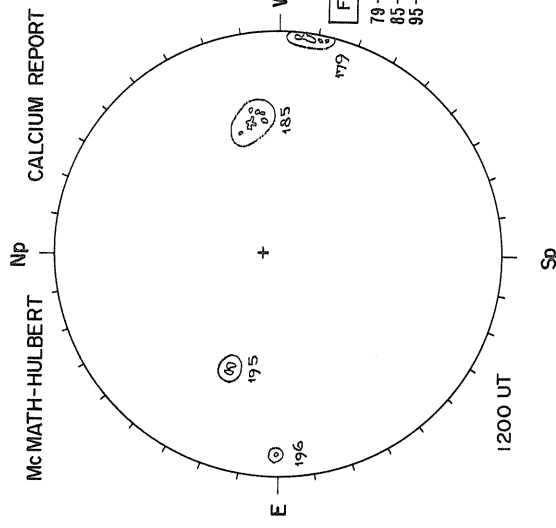
O3
RAMEY AFB



H α BOULDER



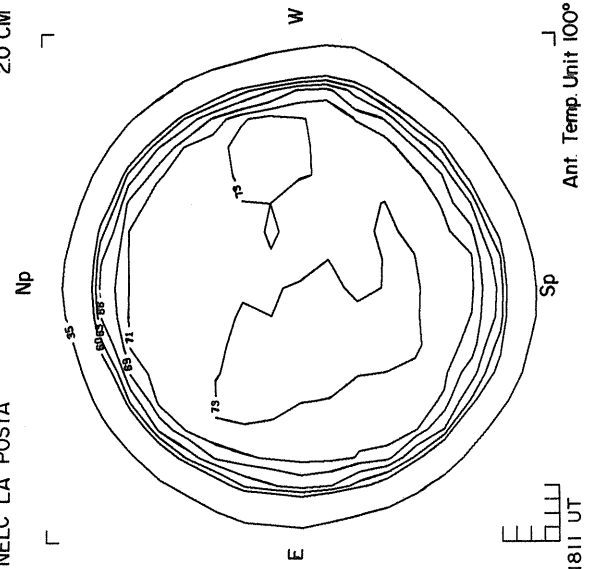
SUNSPOTS



FAIR D
79 - 1500-3.5
85 - 0600-3.0
95 - 0500-2.5

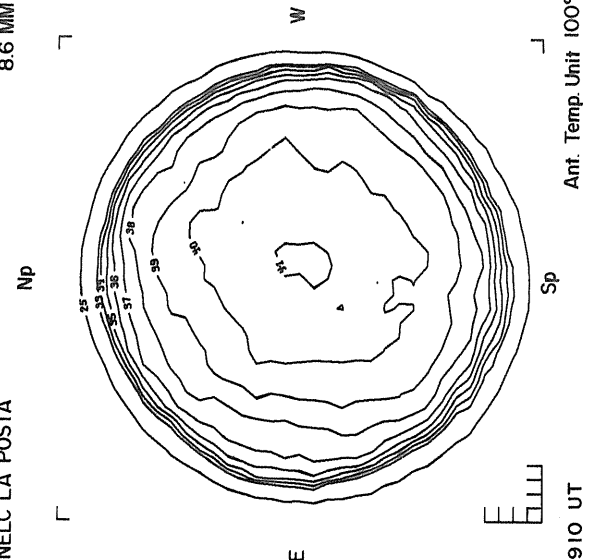
NELC LA POSTA

2.0 CM



NELC LA POSTA

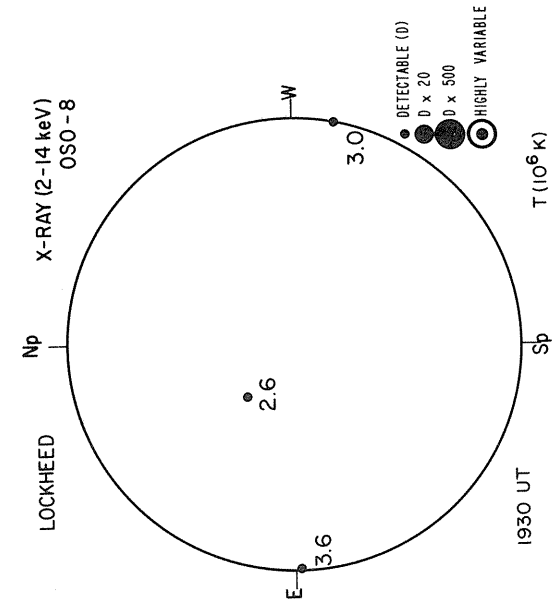
8.6 MM



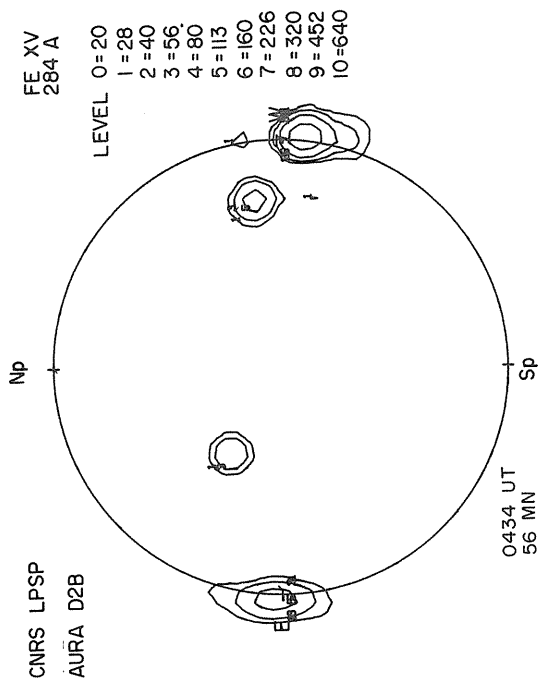
Ant. Temp. Unit 100°K

Ant. Temp. Unit 100°K

MAY 4, 1976 (P = -23.59, B₀ = -3.81, L₀ = 314.10)

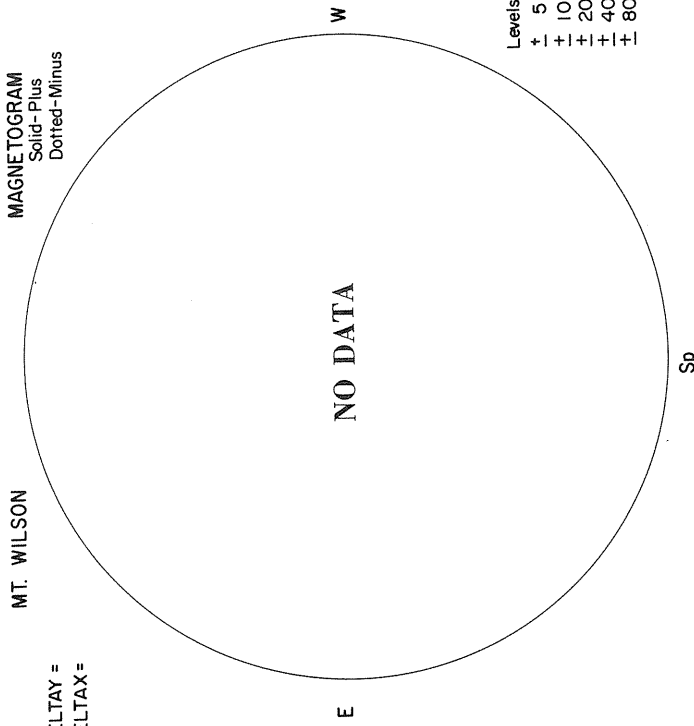


KITT PEAK



MT. WILSON

DELTA Y =
DELTA X =

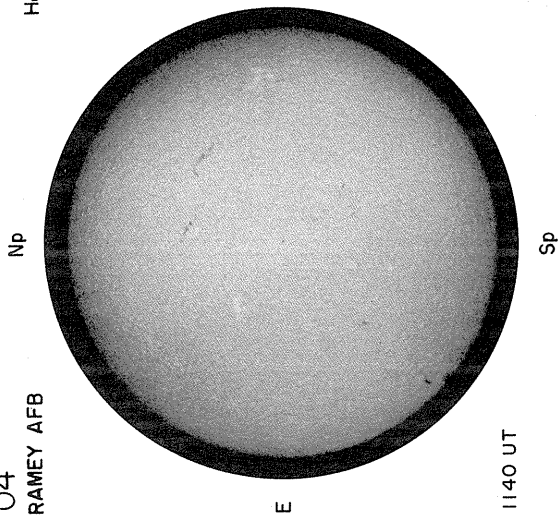


Sp

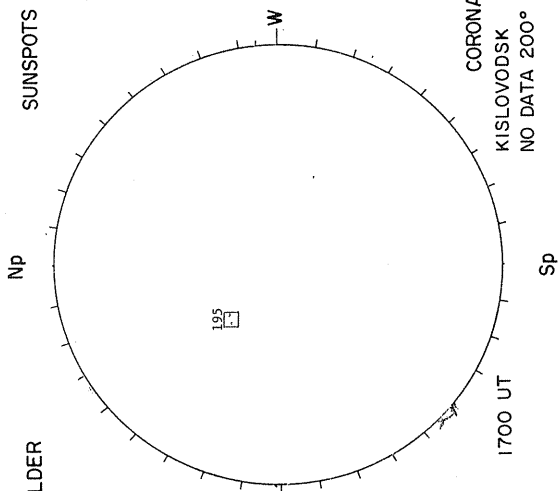
E

W

O4
RAMEY AFB

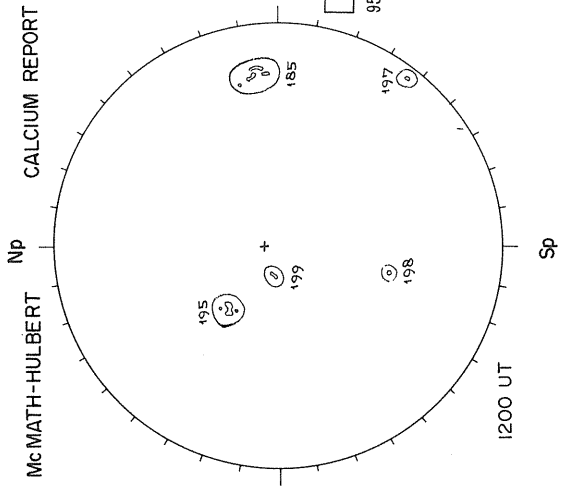


H α BOULDER



SUNSPOTS

CORONA
KISLOVODSK
NO DATA 200°

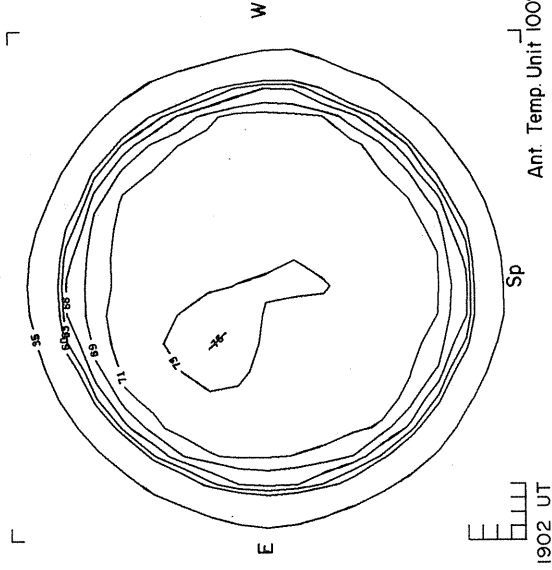


McMATH-HULBERT

CALCIUM REPORT

FAIR D
95-0300-2.5

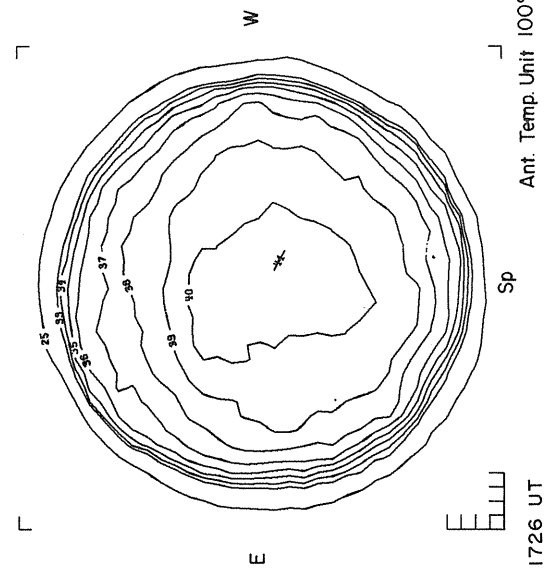
NELC LA POSTA



2.0 CM

Ant. Temp. Unit 100°K

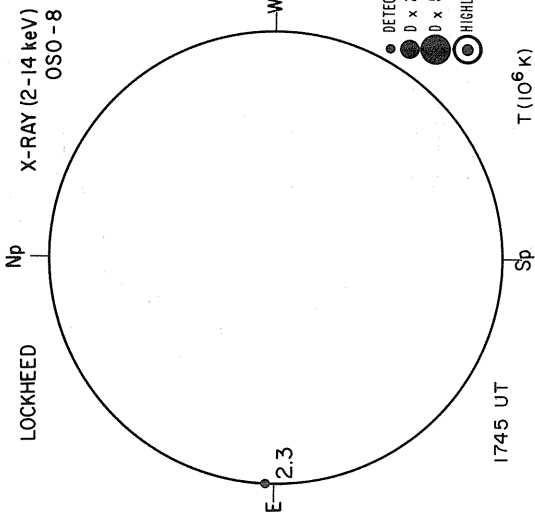
NELC LA POSTA



8.6 MM

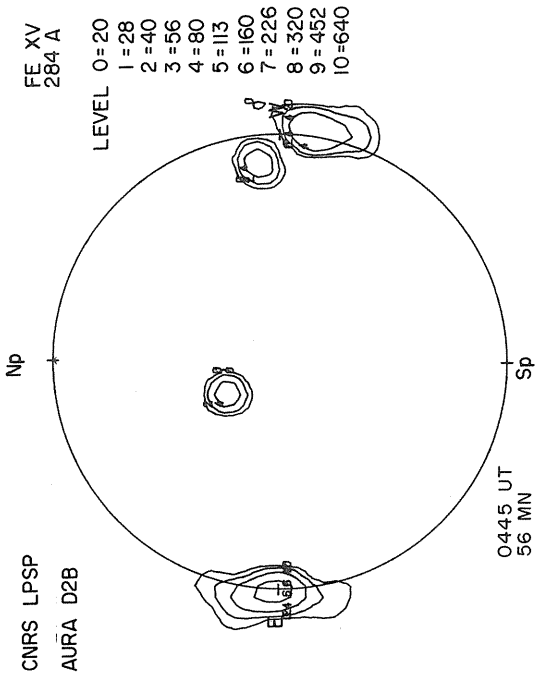
Ant. Temp. Unit 100°K

MAY 5, 1976 (P = -23.38, B₀ = -3.71, L₀ = 300.88)



- DETECTABLE (D)
- 0 x 20
- 0 x 500
- ⊙ HIGHLY VARIABLE

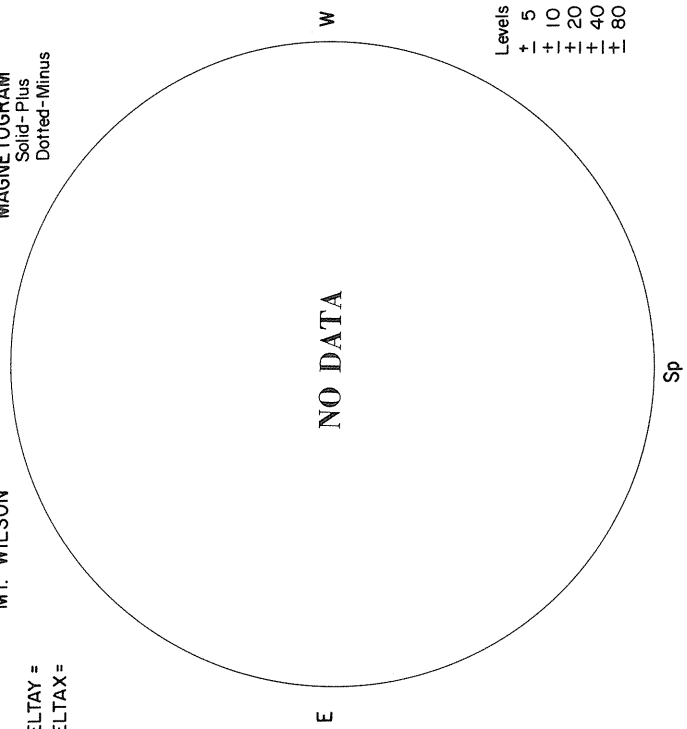
KITT PEAK
MAGNETOGRAM
Bright- Plus
Dark - Minus



- LEVEL 0=20
1=28
2=40
3=56
4=80
5=113
6=160
7=226
8=320
9=452
10=640

MT. WILSON
MAGNETOGRAM
Solid- Plus
Dotted- Minus

DELTA Y =
DELTA X =



- Levels
+ 5
+ 10
+ 20
+ 40
+ 80

W

E

Sp

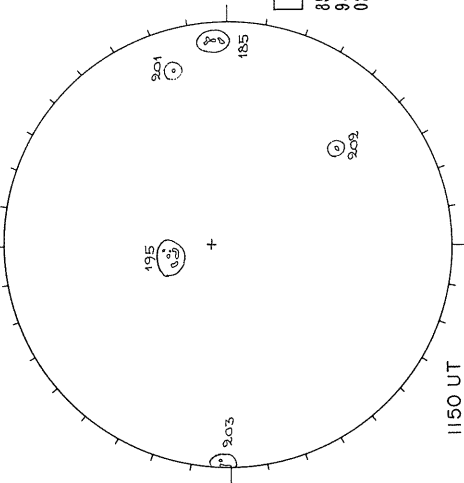
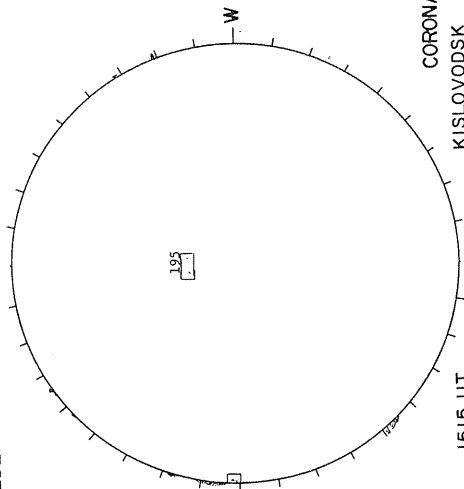
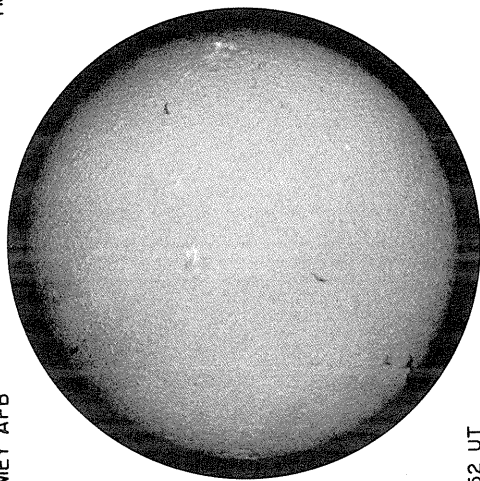
O5
RAMEY AFB

H α BOULDER

SUNSPOTS

Mc MATH-HULBERT

CALCIUM REPORT



FAIR S
85-0400 - 2.5
95-0300 - 2.5
02-0100 - 2.5

1152 UT

1515 UT

1150 UT

NELC LA POSTA

2.0 CM

NELC LA POSTA

8.6 MM

Γ

Np

NO DATA

WEATHER

W



Sp Ant. Temp. Unit 100°K
---- UT

Γ

Np

NO DATA

E



Sp Ant. Temp. Unit 100°K
---- UT

Γ

Np

NO DATA

WEATHER

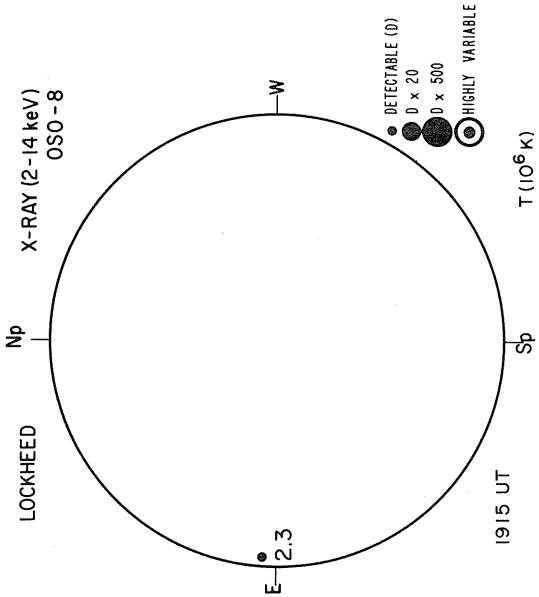
W

Γ

Sp

Ant. Temp. Unit 100°K

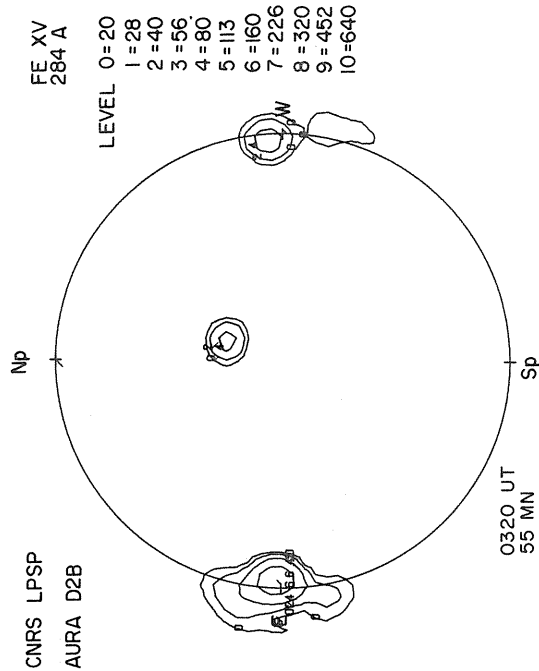
MAY 6, 1976 (P = -23.17, B₀ = -3.60, L₀ = 287.66)



- DETECTABLE (D)
- 0 x 20
- 0 x 500
- HIGHLY VARIABLE

MAGNETOGRAM
Bright - Plus
Dark - Minus

KITT PEAK



- FE XV 284 A
- LEVEL 0=20
1=28
2=40
3=56
4=80
5=113
6=160
7=226
8=320
9=452
10=640

MAGNETOGRAM
Solid - Plus
Dotted - Minus

DELTA Y =
DELTA X =

MT. WILSON

W

E

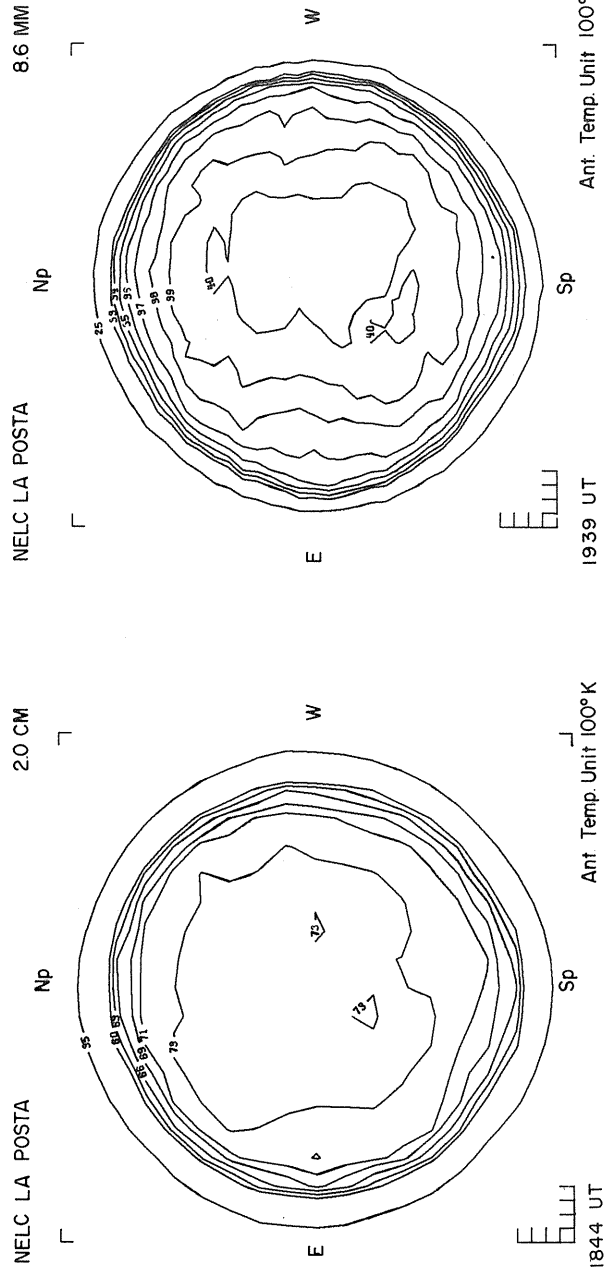
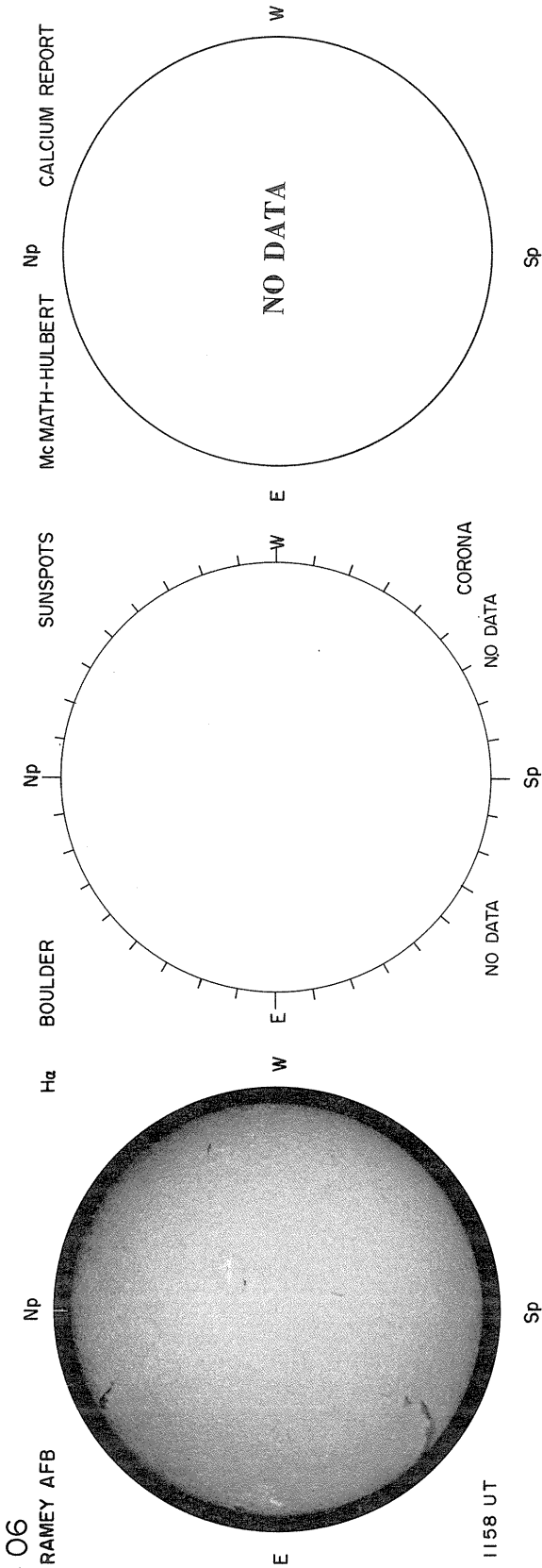
NO DATA

W

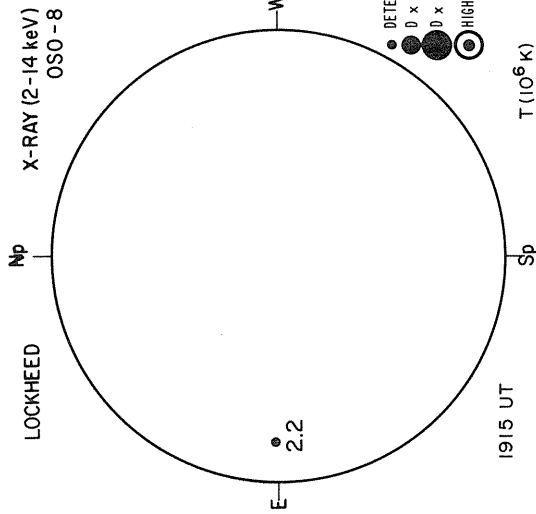
- Levels
- 5
 - +1
 - +10
 - +20
 - +40
 - +80

Sp

Sp

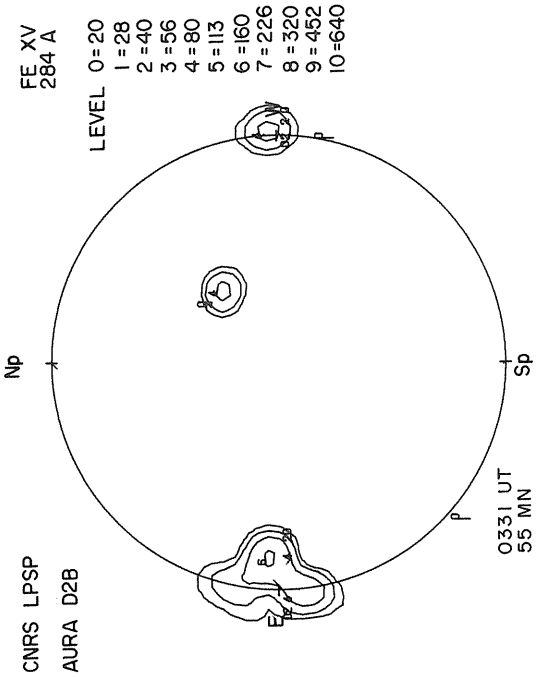


MAY 7, 1976 (P = -22.96, B₀ = -3.49, L₀ = 274.44)



MAGNETOGRAM
Bright- Plus
Dark - Minus

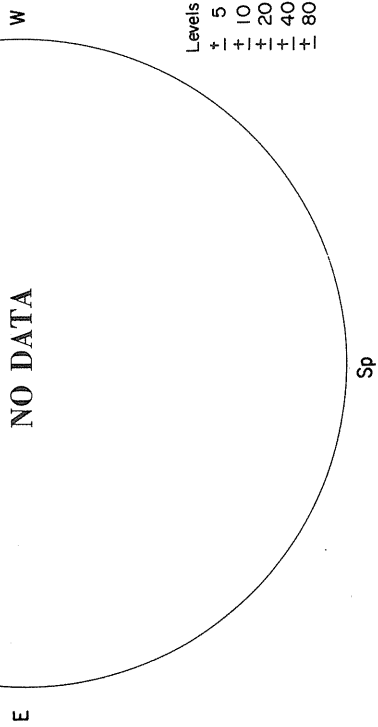
KITT PEAK



MAGNETOGRAM
Solid-Plus
Dotted-Minus

MT. WILSON

DELTA Y =
DELTA X =

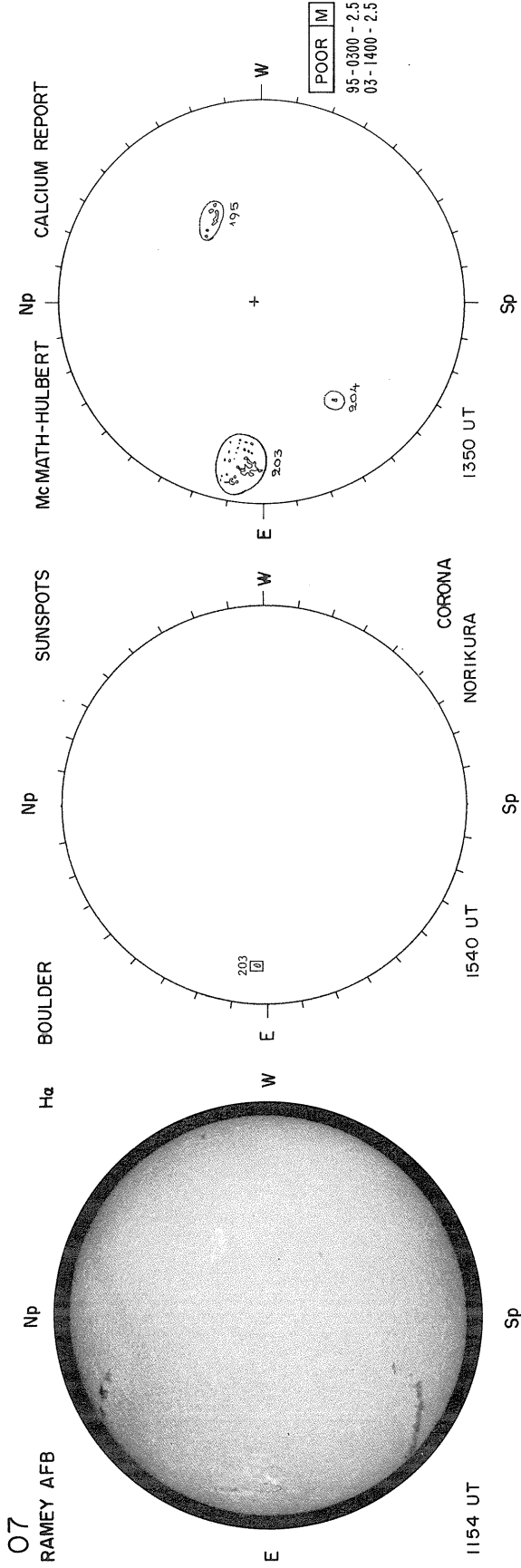


Levels
+ 5
+ 10
+ 20
+ 40
+ 80

W

E

Sp



NELC LA POSTA Np 8.6 MM

NELC LA POSTA Np 2.0 CM

NELC LA POSTA Np 8.6 MM

NO DATA WEATHER NO DATA WEATHER NO DATA WEATHER

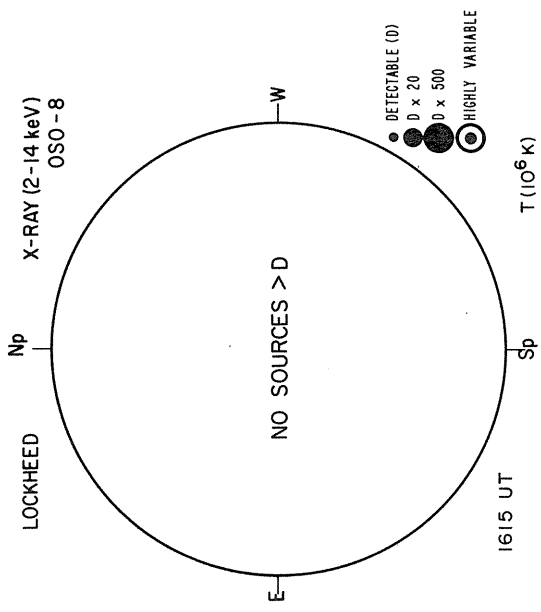
Ant. Temp. Unit 100°K

Sp Ant. Temp. Unit 100°K

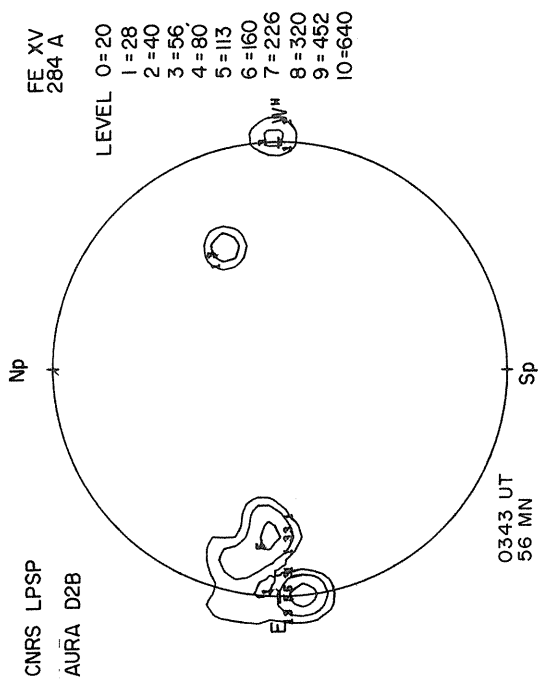
Sp Ant. Temp. Unit 100°K

Sp Ant. Temp. Unit 100°K

MAY 8, 1976 (P = -22.73, B₀ = -3.39, L₀ = 261.22)

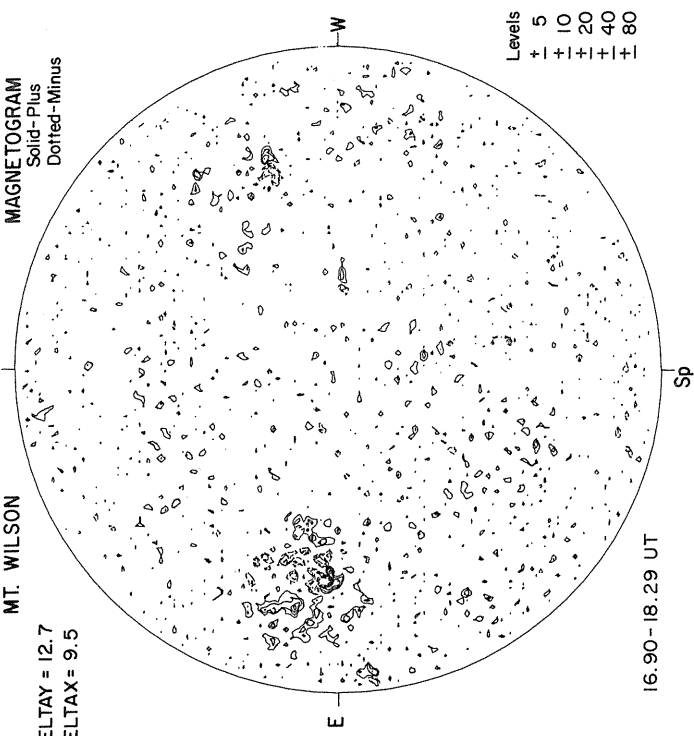


KITT PEAK
MAGNETOGRAM
Bright-Plus
Dark - Minus

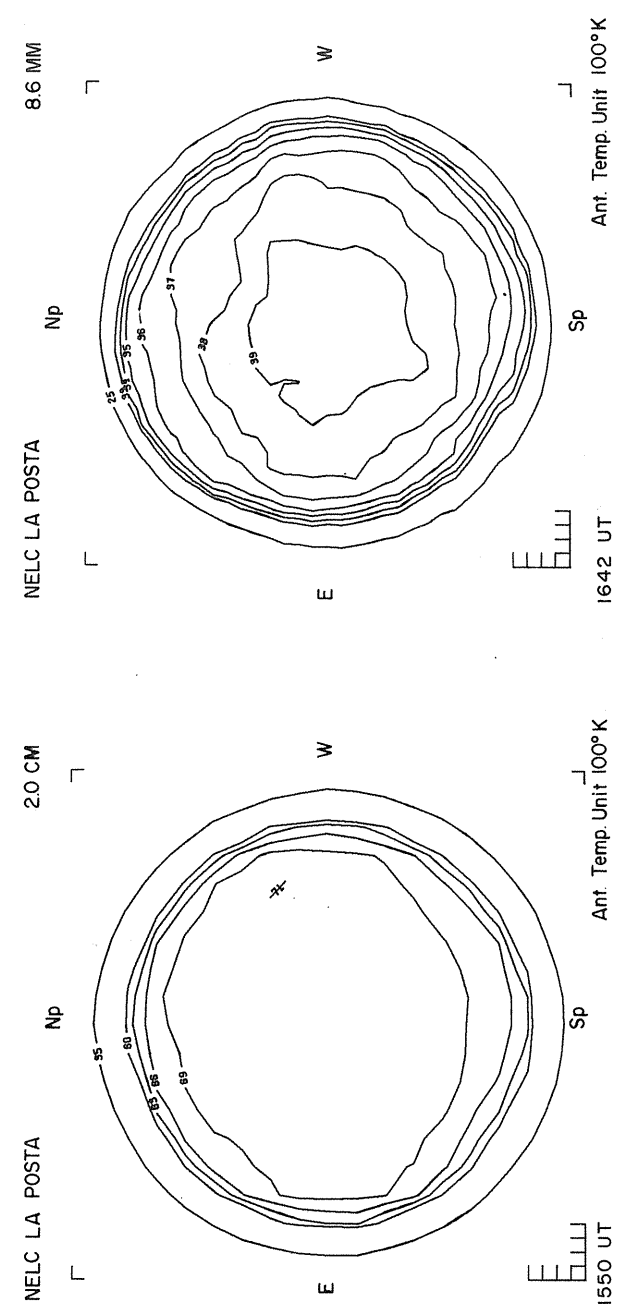
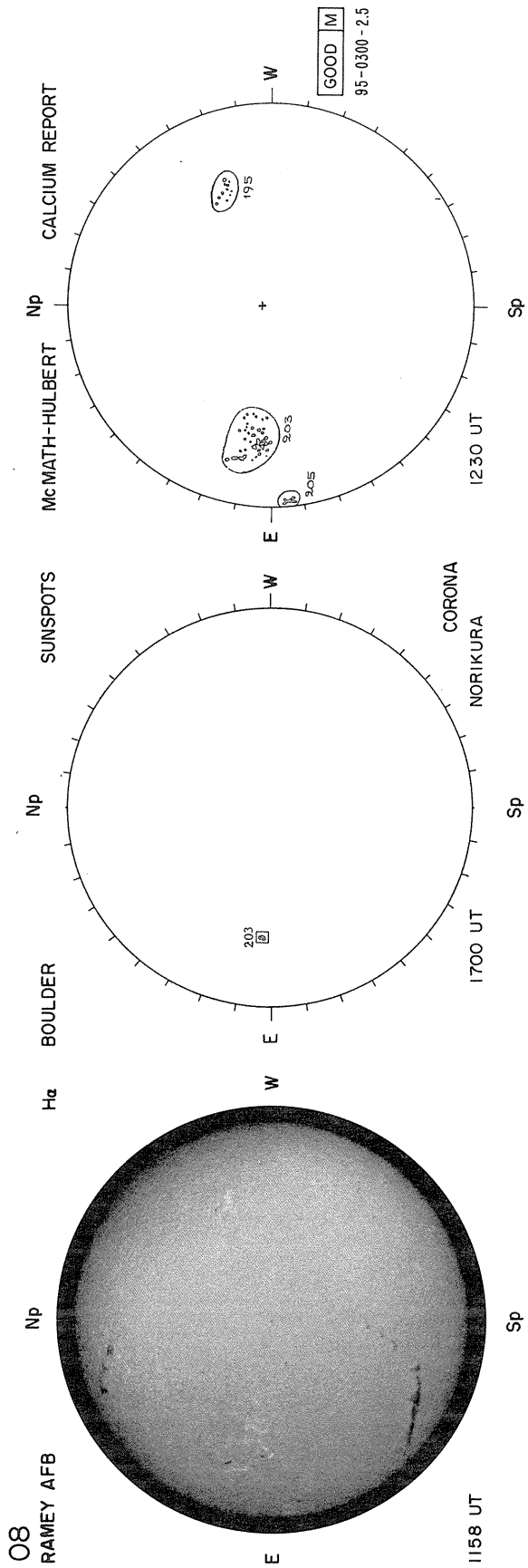


MT. WILSON
MAGNETOGRAM
Solid-Plus
Dotted-Minus

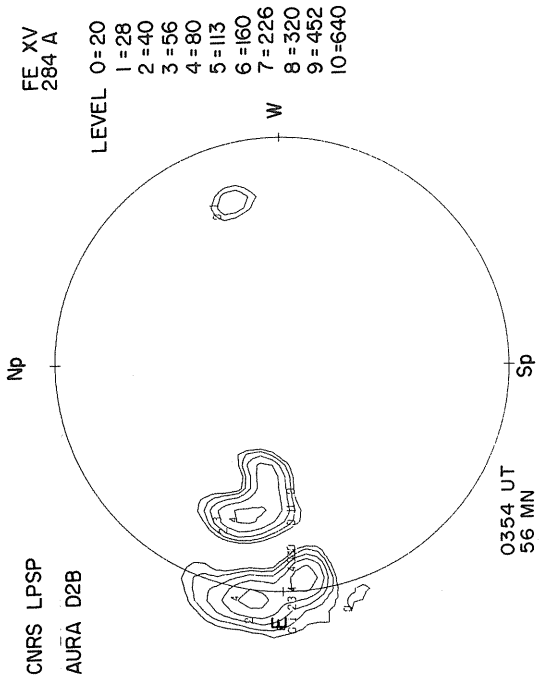
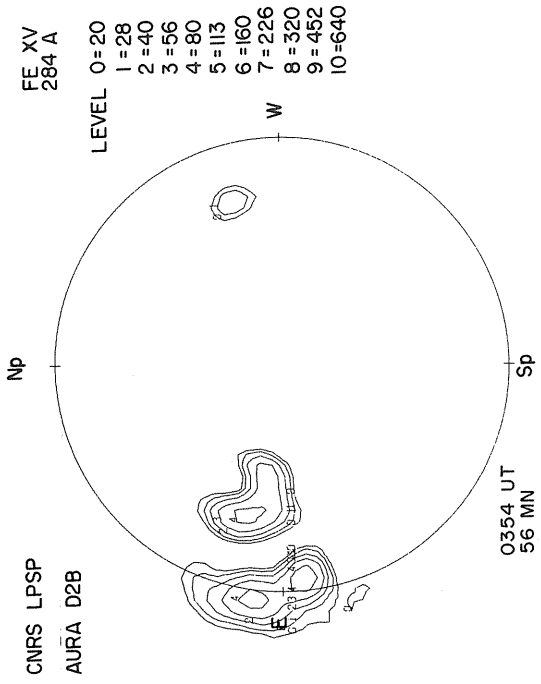
DELTA Y = 12.7
DELTA X = 9.5



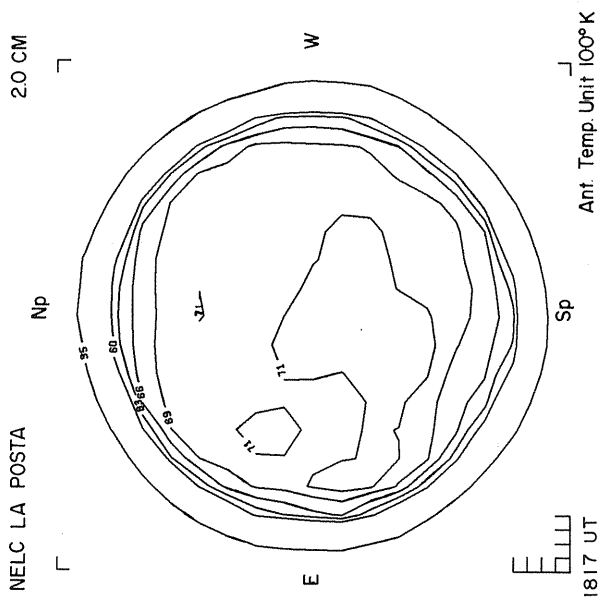
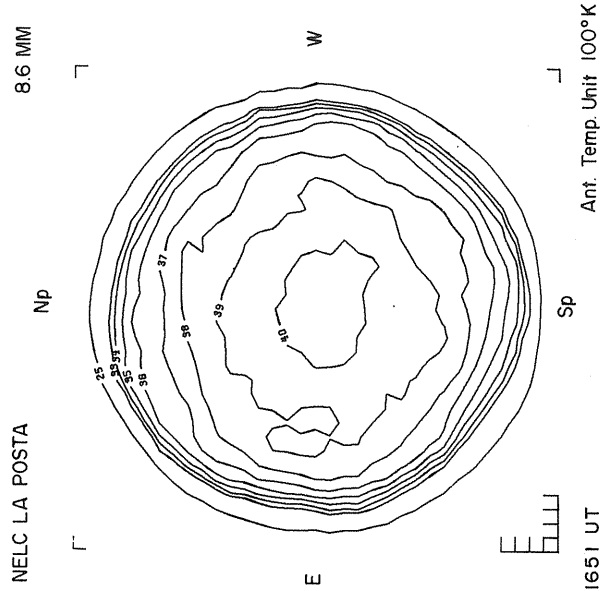
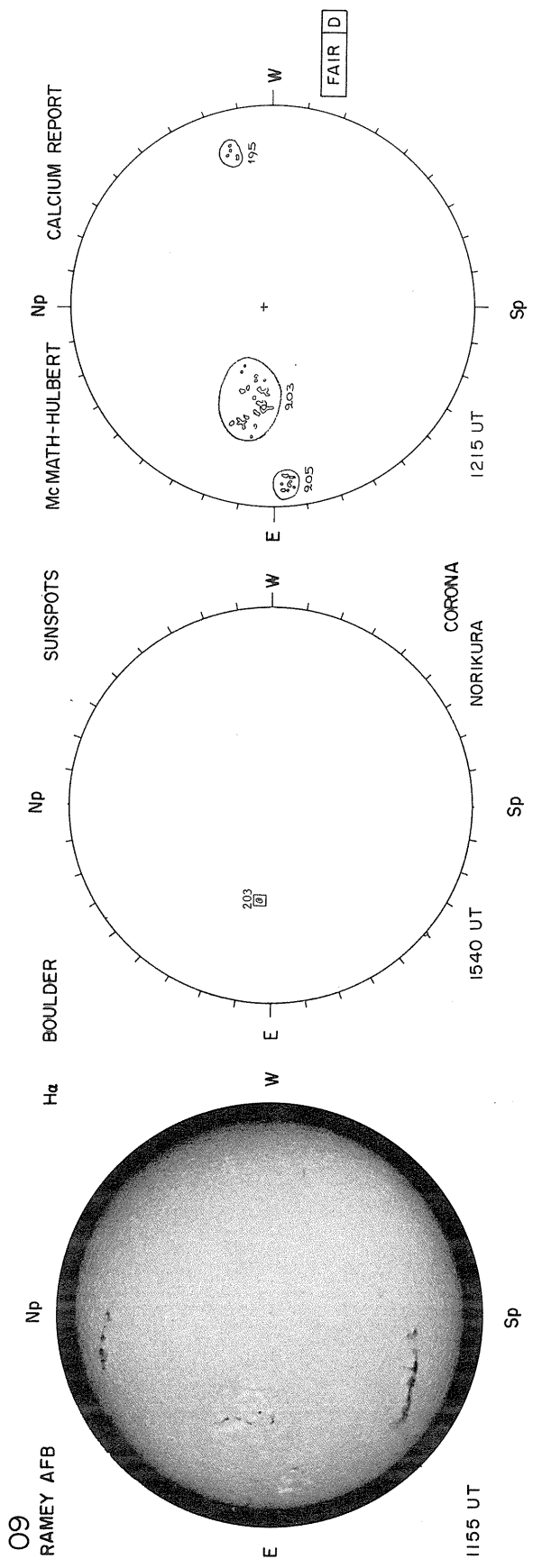
Sp



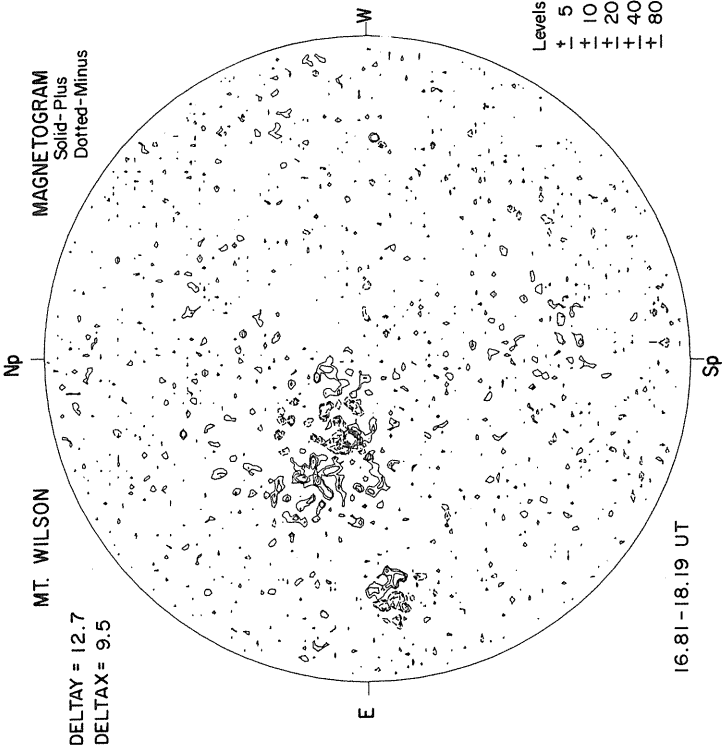
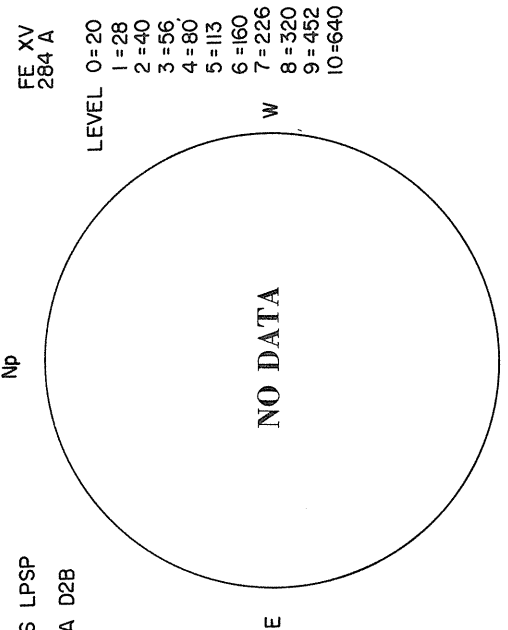
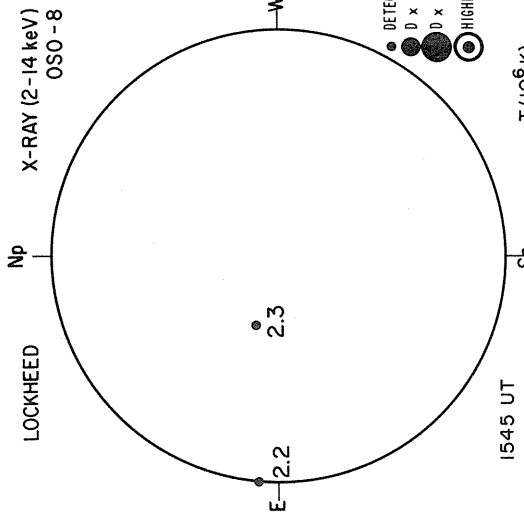
MAY 9, 1976 (P = -22.50, B₀ = -3.28, L₀ = 247.99)

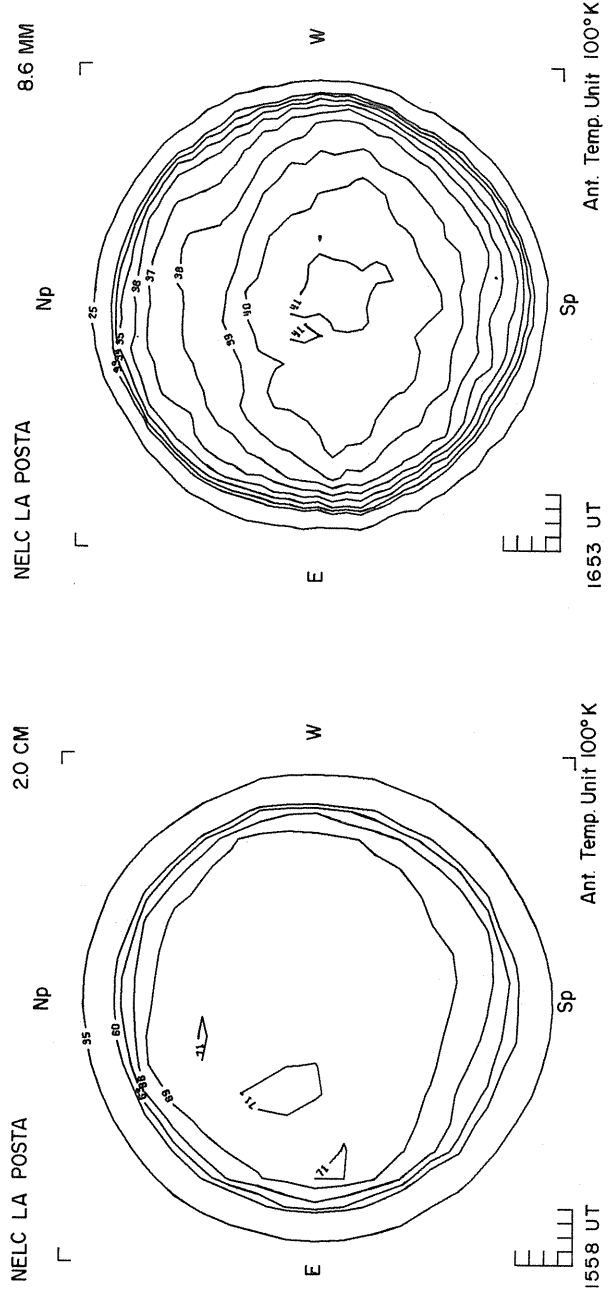
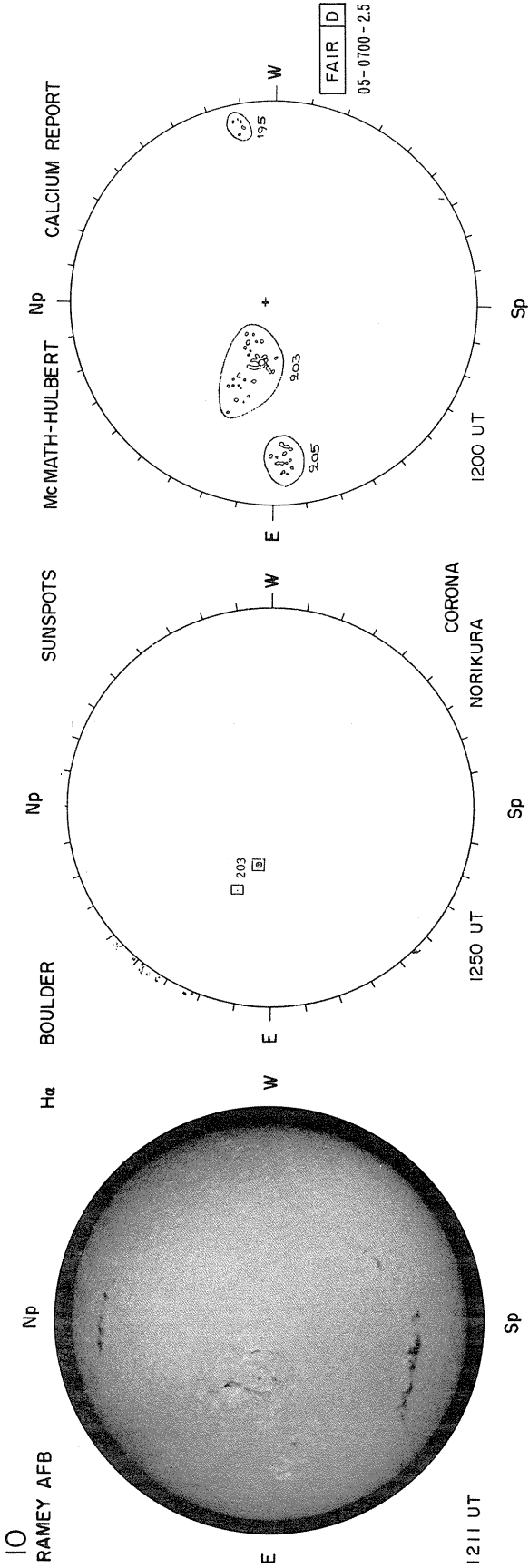


Sp

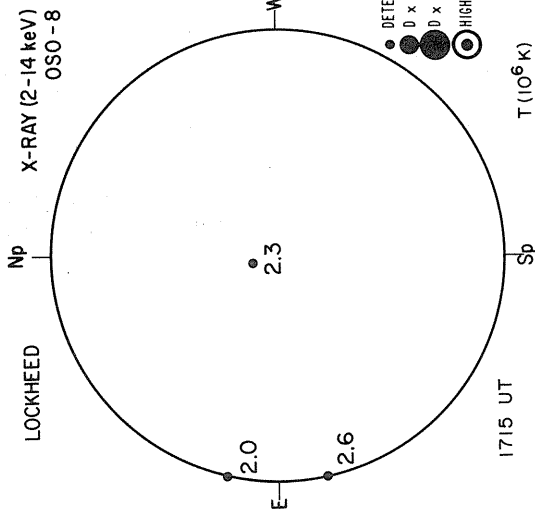


MAY 10, 1976 (P = -22.26, B₀ = -3.17, L₀ = 234.77)





MAY 11, 1976 (P = -22.02, B₀ = -3.06, L₀ = 221.55)

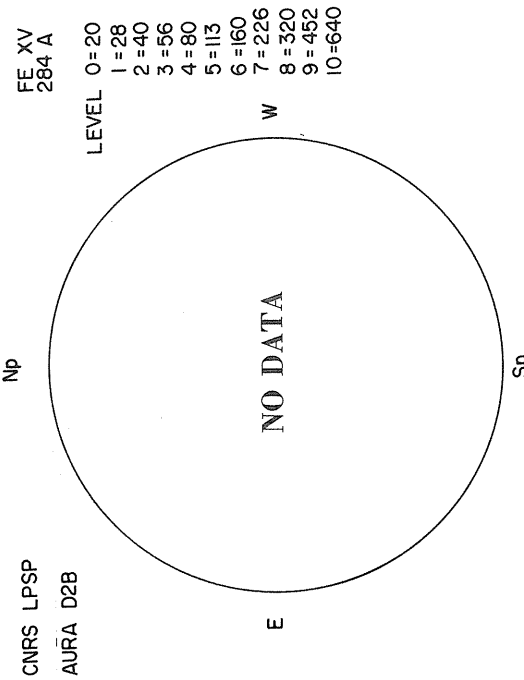


- DETECTABLE (D)
- 0 x 20
- 0 x 500
- HIGHLY VARIABLE

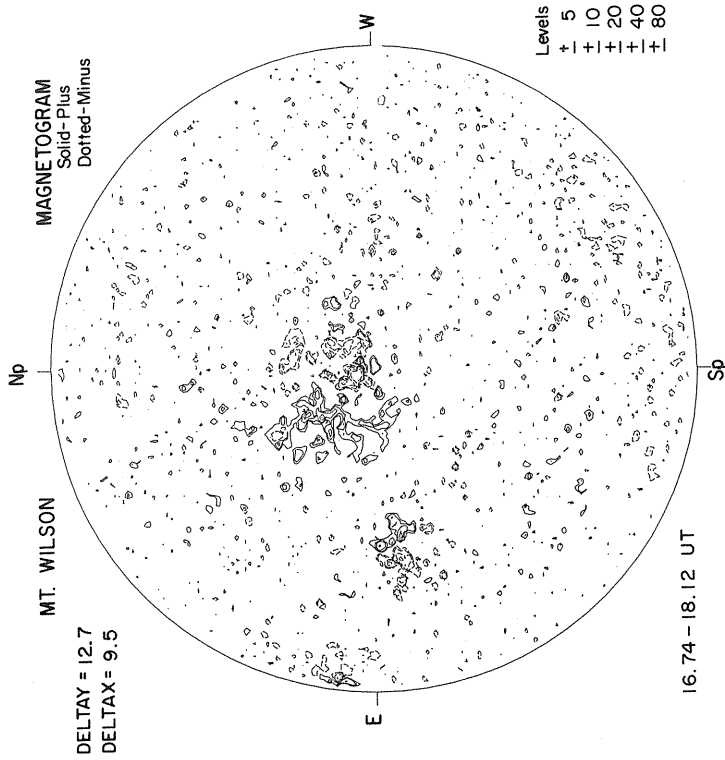
T (10⁶ K)

MAGNETOGRAM
Bright - Plus
Dark - Minus

KITT PEAK

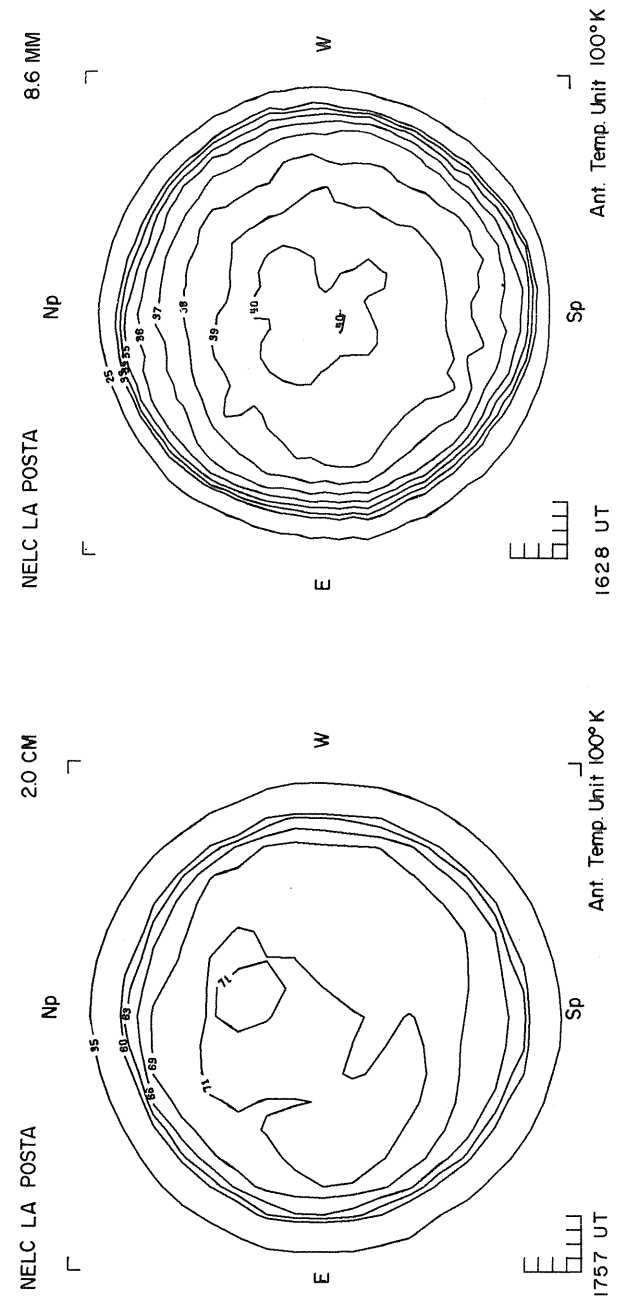
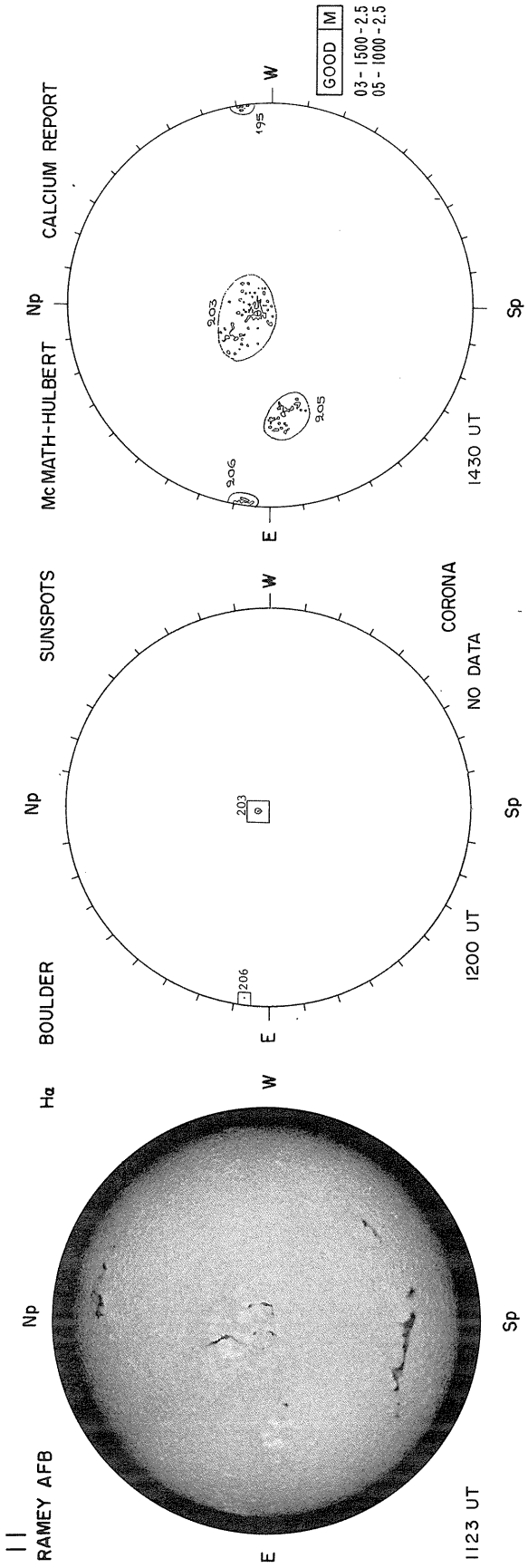


- FE XV 284 A
- LEVEL 0=20
1=28
2=40
3=56
4=80
5=113
6=160
7=226
8=320
9=452
10=640



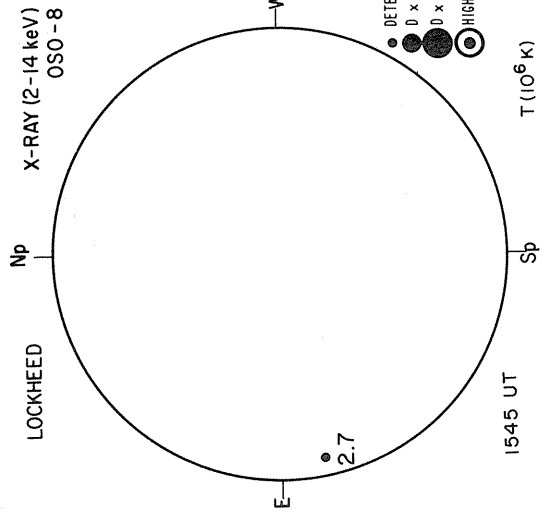
- Levels
+ 5
+ 10
+ 20
+ 40
+ 80

Sp

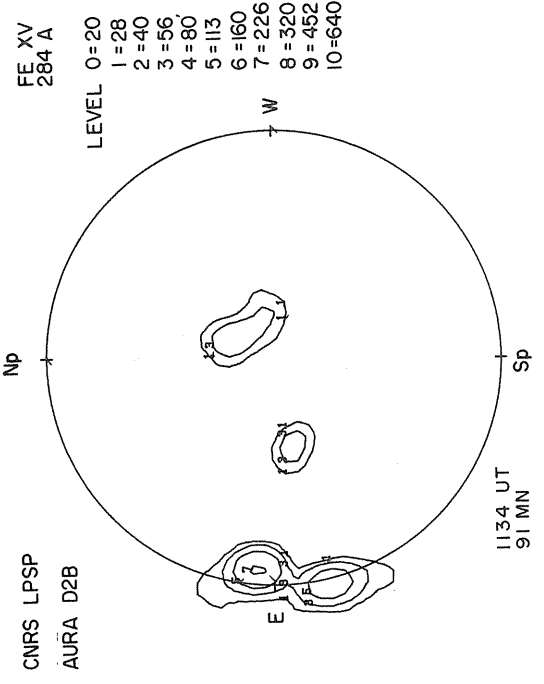


(P = -21.76, B₀ = -2.95, L₀ = 208.32)

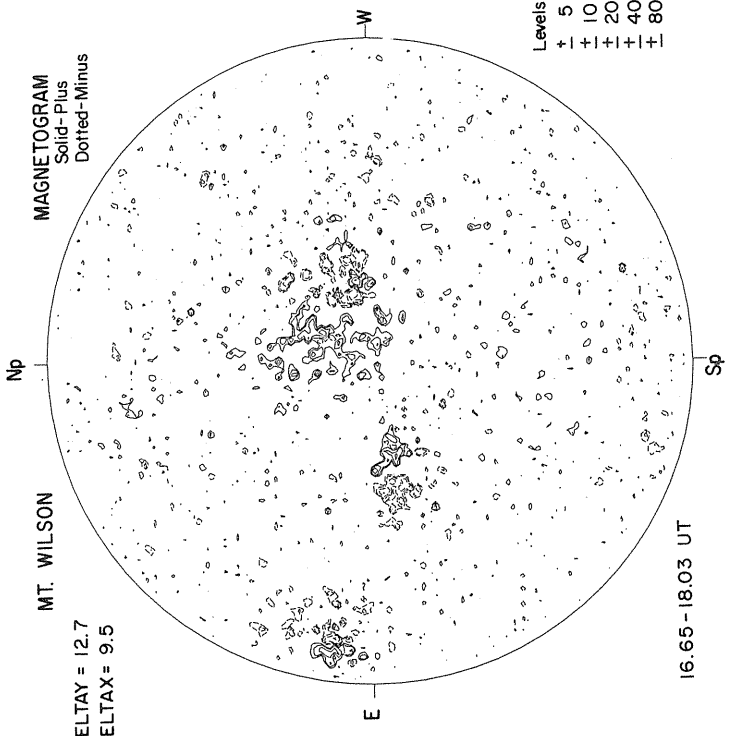
MAY 12, 1976



KITT PEAK
MAGNETOGRAM
Bright - Plus
Dark - Minus



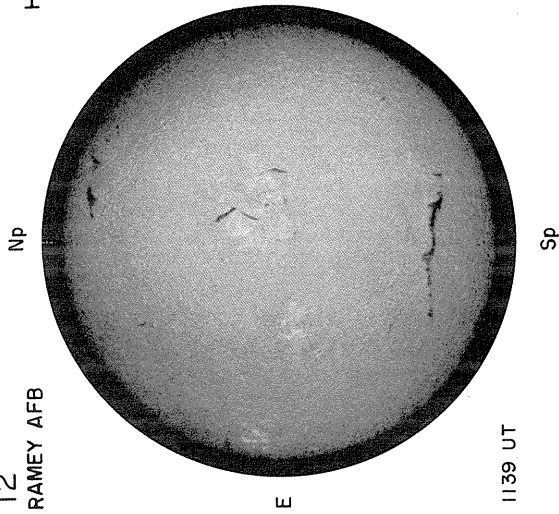
MT. WILSON
DELTA X = 12.7
DELTA Y = 9.5
MAGNETOGRAM
Solid - Plus
Dotted - Minus



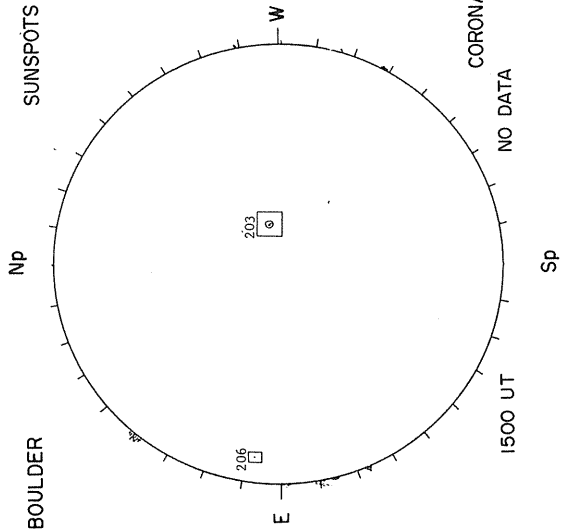
Sp

E

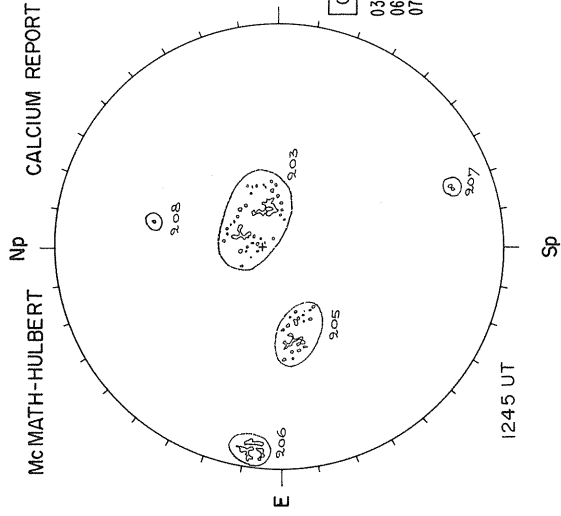
12
RAMEY AFB



H α BOULDER



McMATH-HULBERT



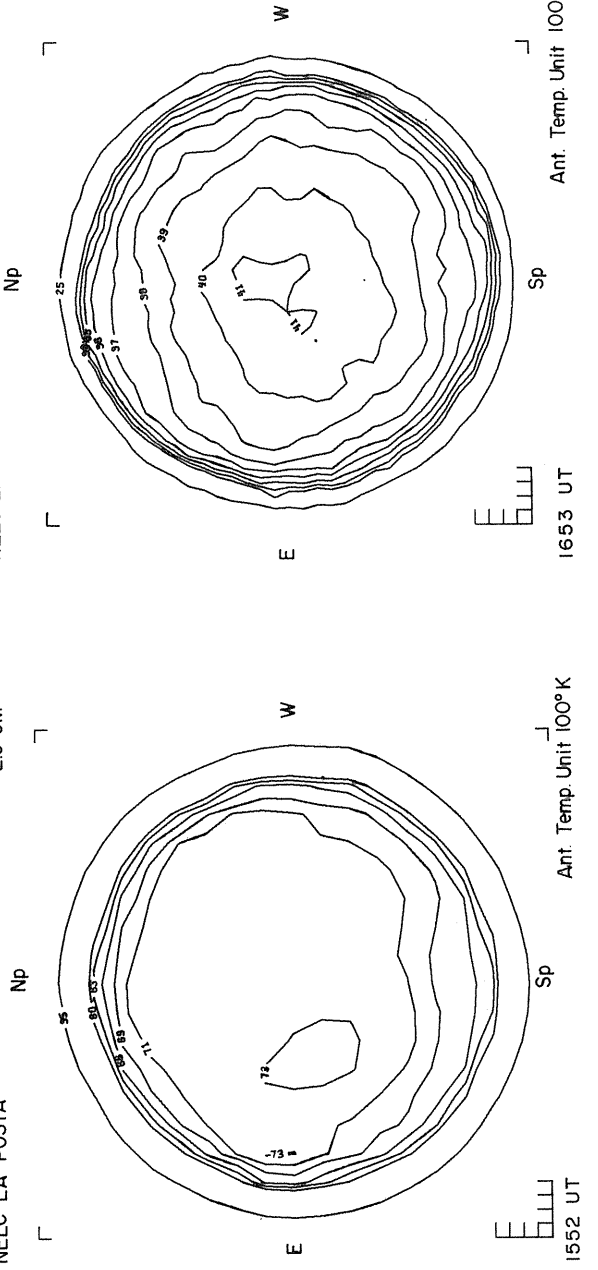
NP
CALCIUM REPORT

NELC LA POSTA

2.0 CM

NELC LA POSTA

8.6 MM



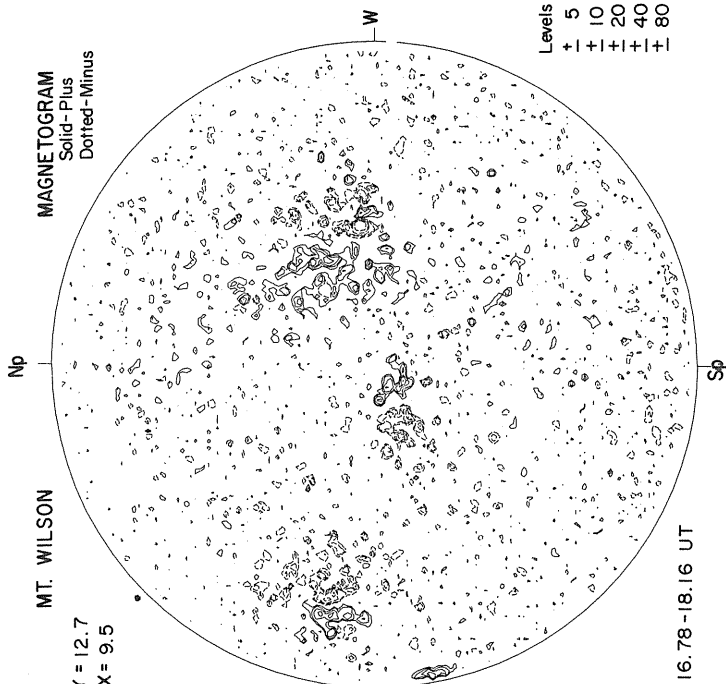
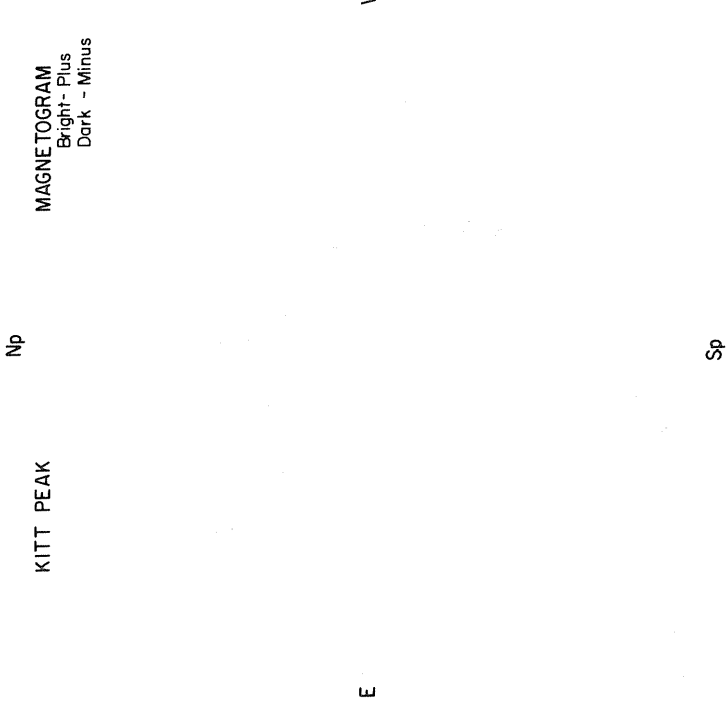
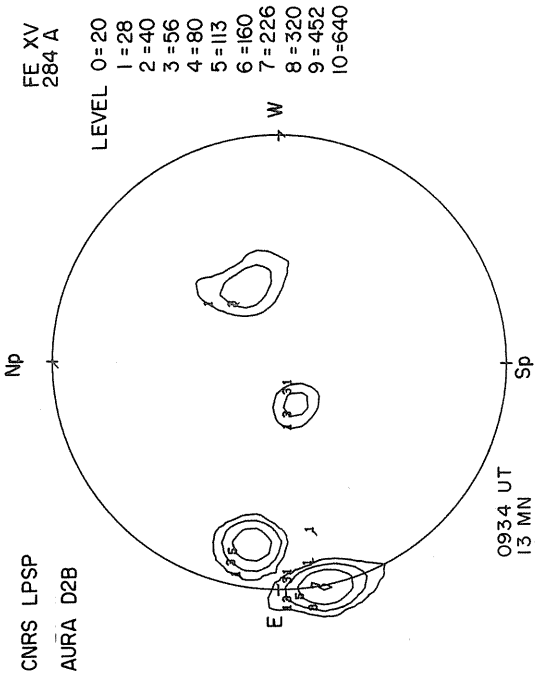
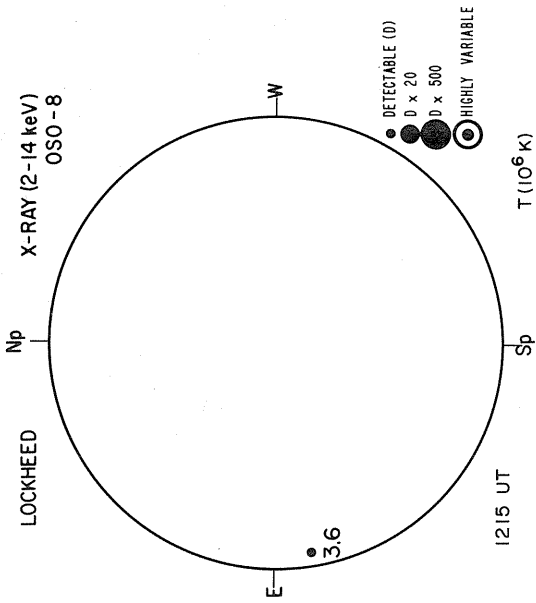
1552 UT

Ant. Temp. Unit 100°K

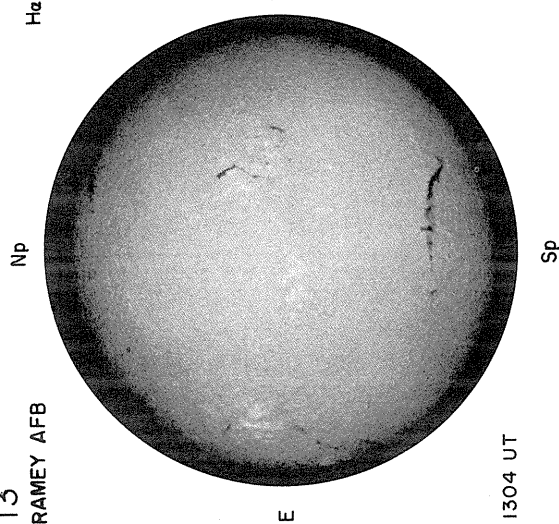
1653 UT

Ant. Temp. Unit 100°K

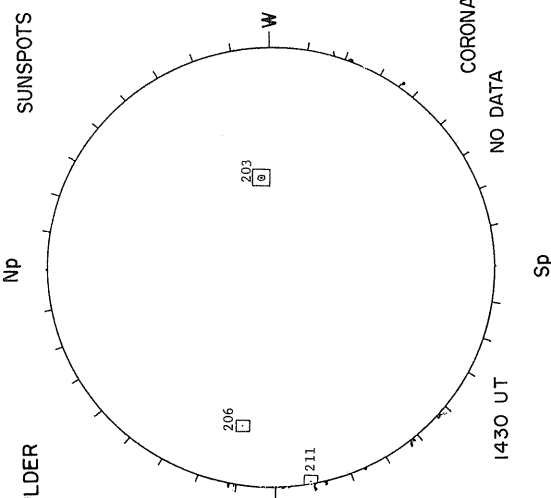
MAY 13, 1976 (P = -21.51, B₀ = -2.83, L₀ = 195.10)



13
RAMEY AFB



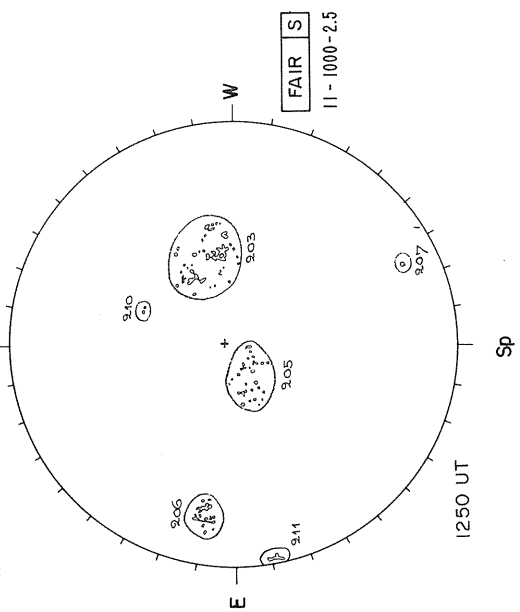
H α BOULDER



CORONA
NO DATA

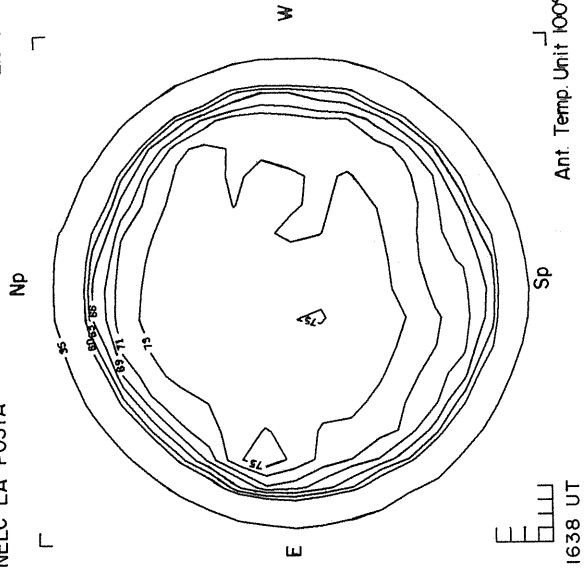
SUNSPOTS

McMATH-HULBERT
CALCIUM REPORT



1304 UT
1250 UT

NELC LA POSTA

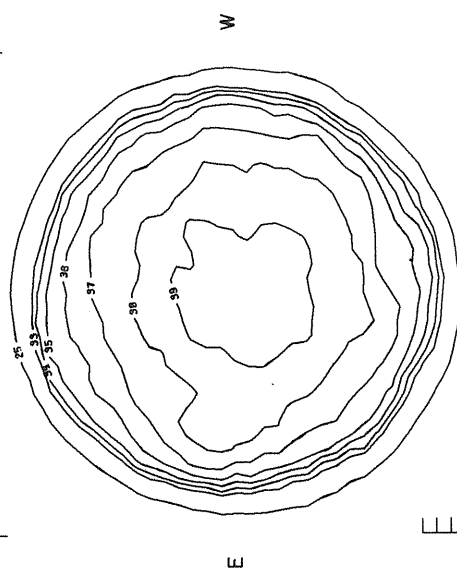


1638 UT

2.0 CM

Ant. Temp. Unit 100°K

NELC LA POSTA

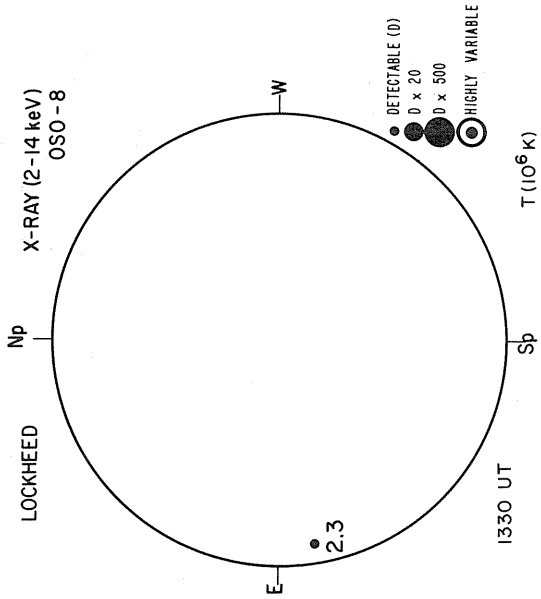


1744 UT

8.6 MM

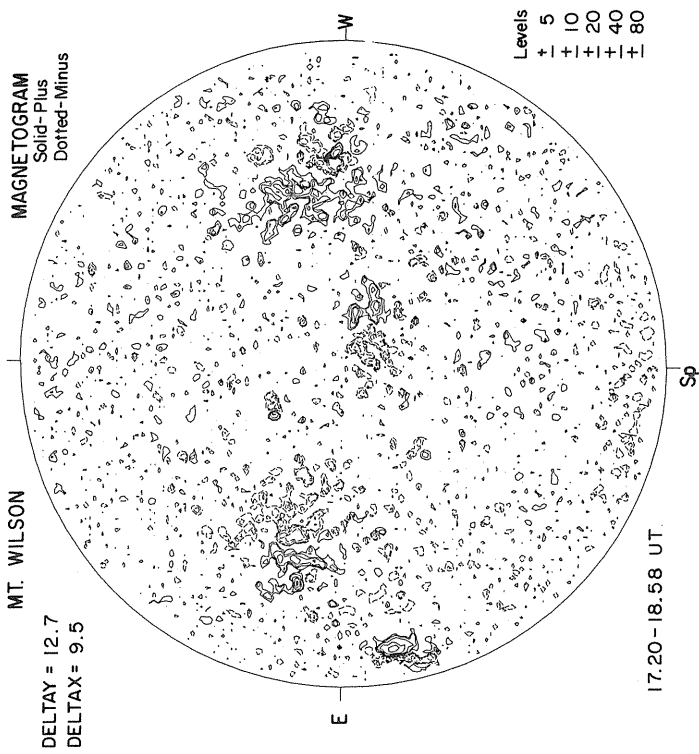
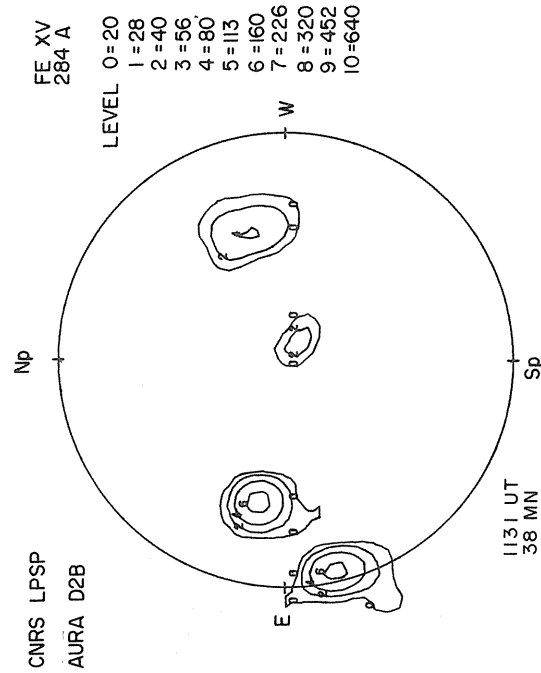
Ant. Temp. Unit 100°K

MAY 14, 1976 (P = -21.24, B₀ = -2.72, L₀ = 181.87)

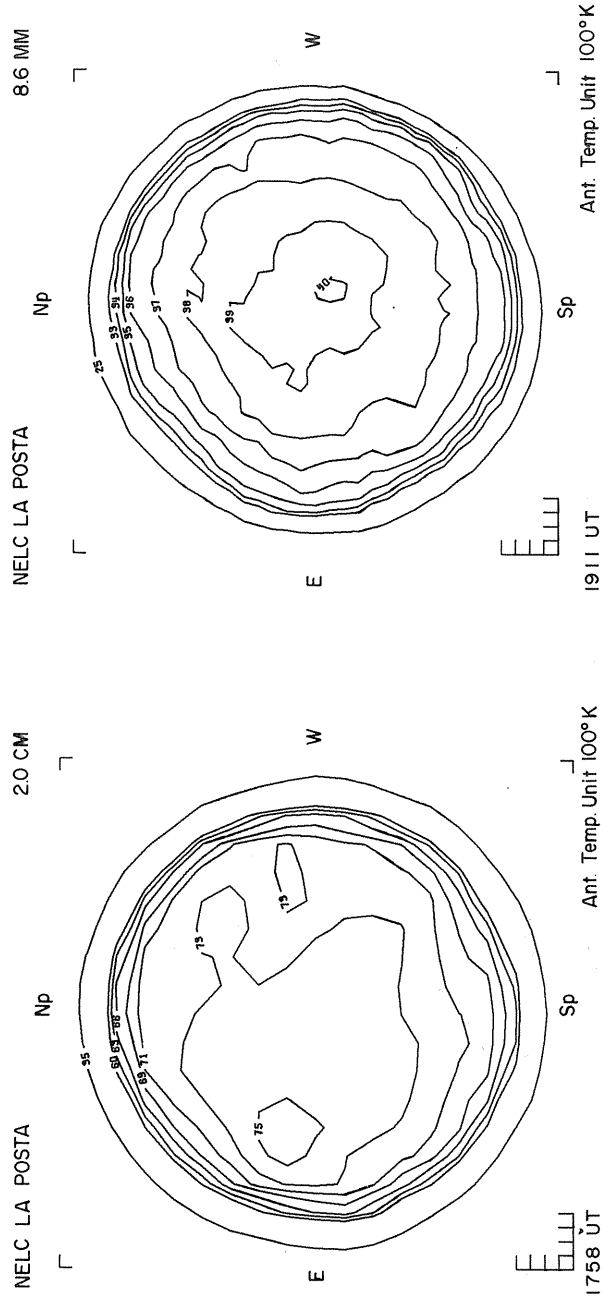
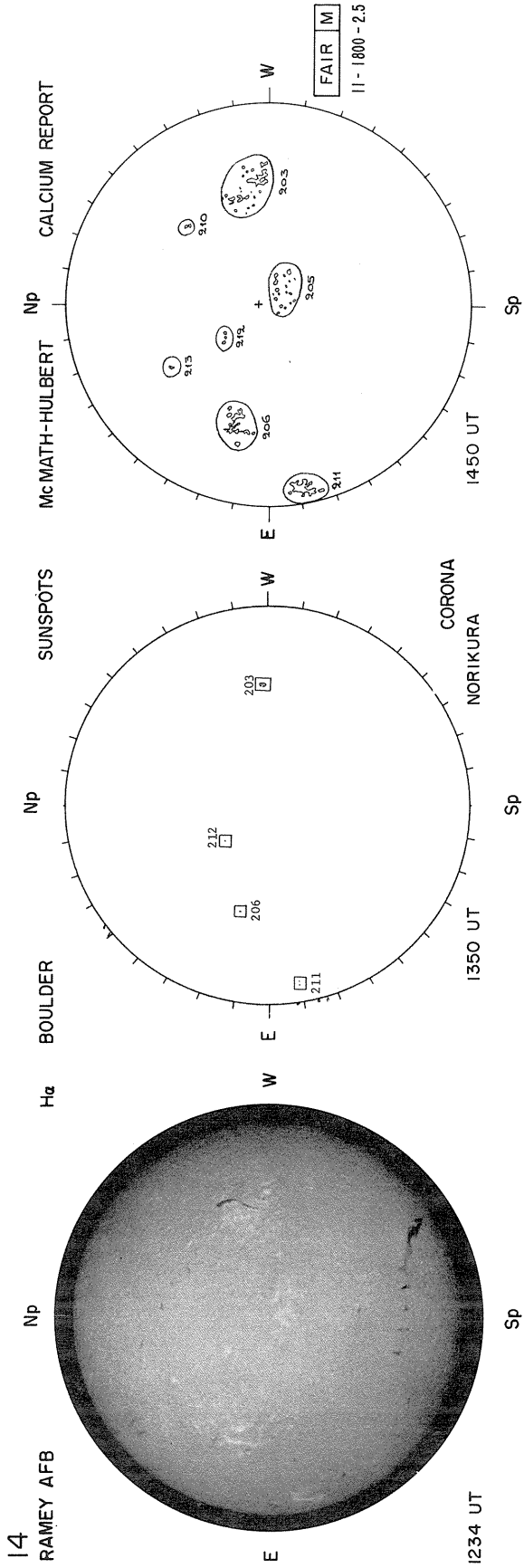


KITT PEAK

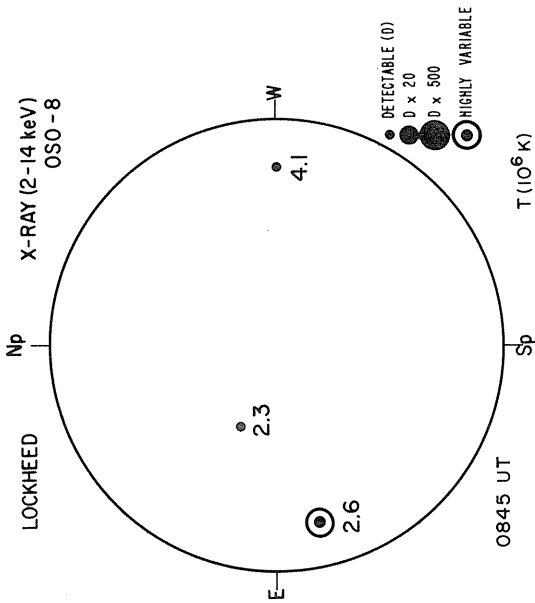
MAGNETOGRAM
Bright - Plus
Dark - Minus



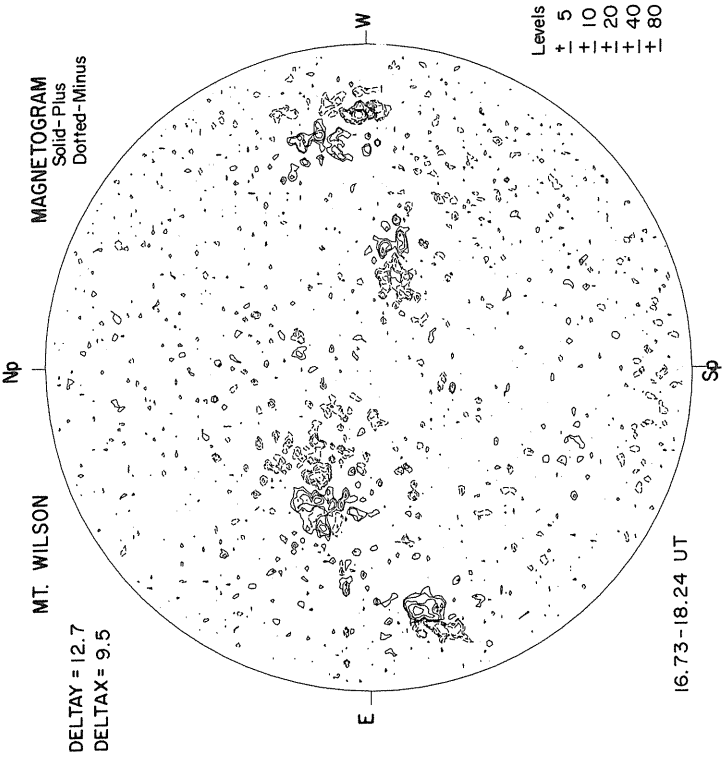
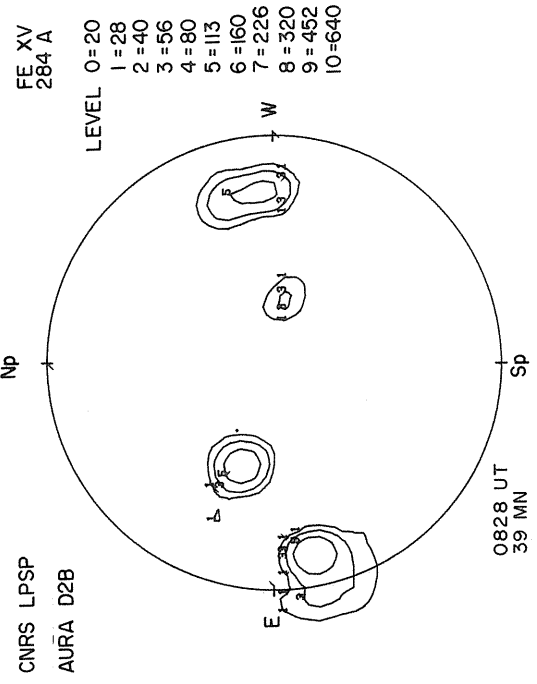
Sp



MAY 15, 1976 (P = -20.97, B₀ = -2.61, L₀ = 168.65)



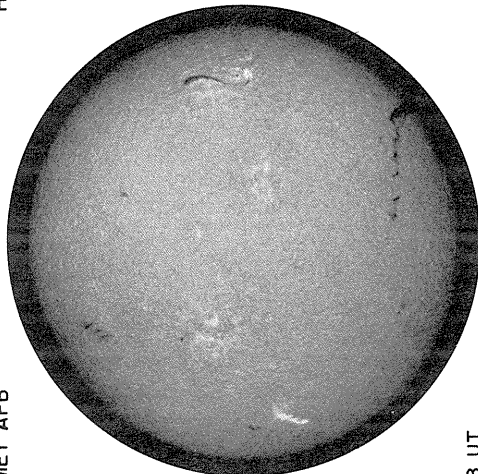
KITT PEAK
 MAGNETOGRAM
 Bright - Plus
 Dark - Minus



E W
 Sp

15
RAMEY AFB

Np



E

1138 UT

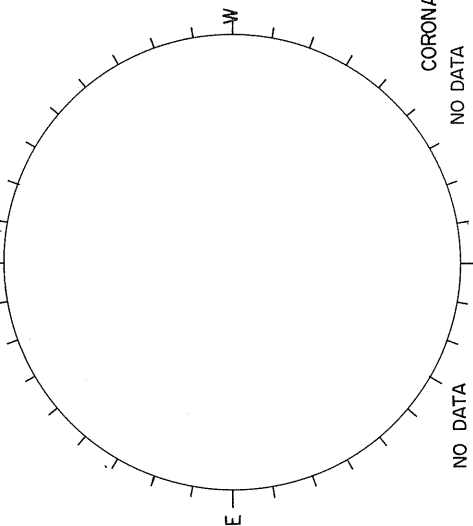
Sp

H α

BOULDER

Np

SUNSPOTS



W

E

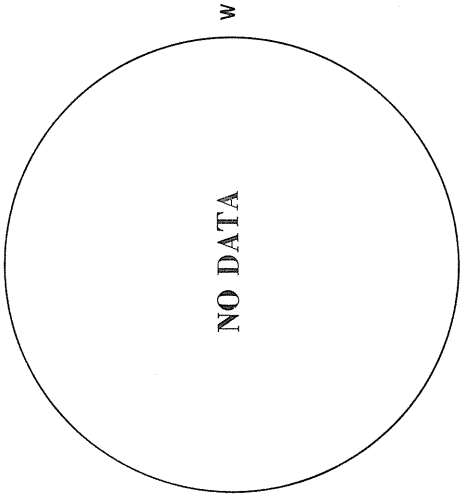
Sp

CORONA

NO DATA

Np

McMATH-HULBERT



E

W

Sp

Np

CALCIUM REPORT

NELC LA POSTA

┌

20 CM

┌

NELC LA POSTA

┌

8.6 MM

┌

Np

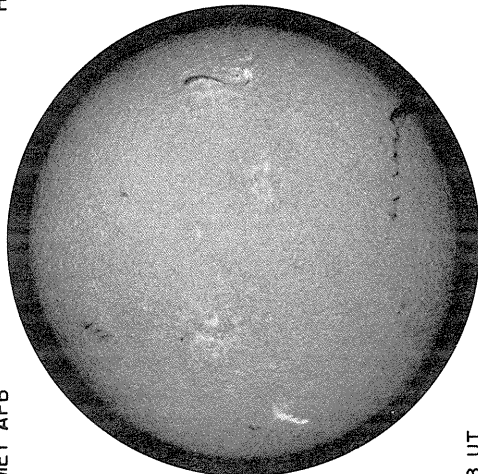
NO DATA

EQUIPMENT

W

15
RAMEY AFB

Np



E

1138 UT

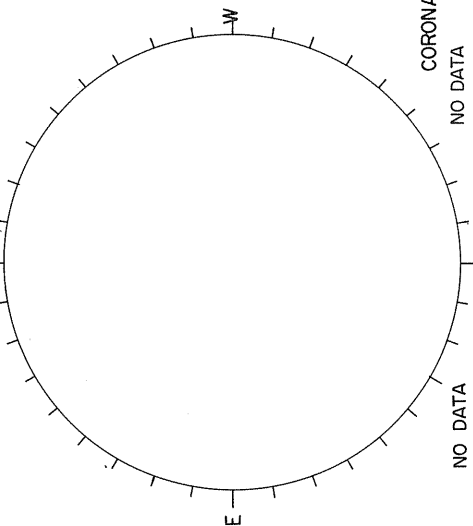
Sp

H α

BOULDER

Np

SUNSPOTS



W

E

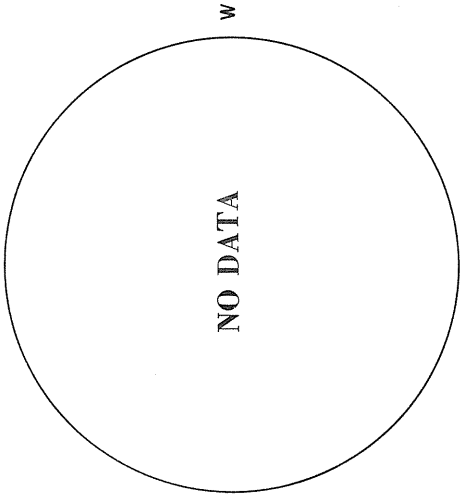
Sp

CORONA

NO DATA

Np

McMATH-HULBERT



E

W

Sp

Np

CALCIUM REPORT

NELC LA POSTA

┌

20 CM

┌

NELC LA POSTA

┌

8.6 MM

┌

Np

NO DATA

EQUIPMENT

W

Sp

Ant. Temp. Unit 100°K

----- UT



Sp

Ant. Temp. Unit 100°K

----- UT

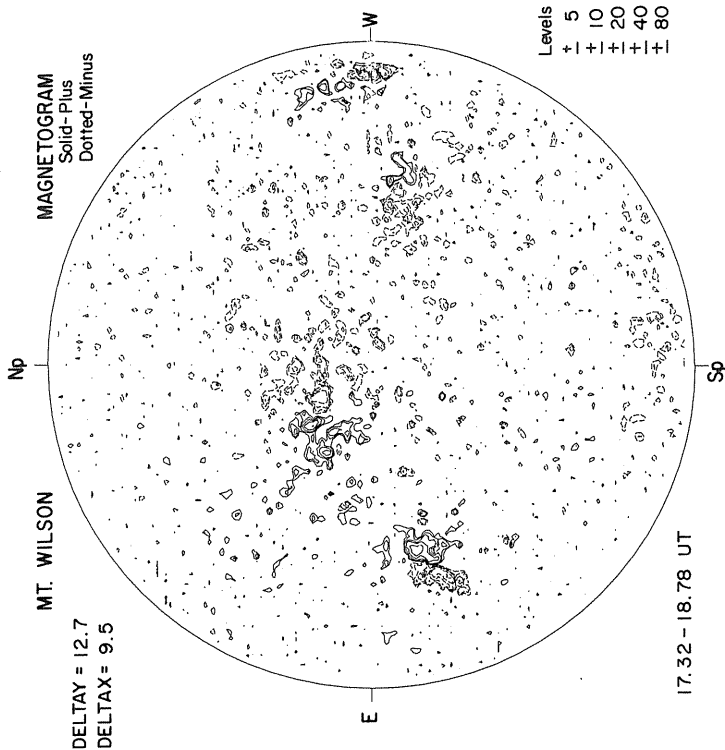
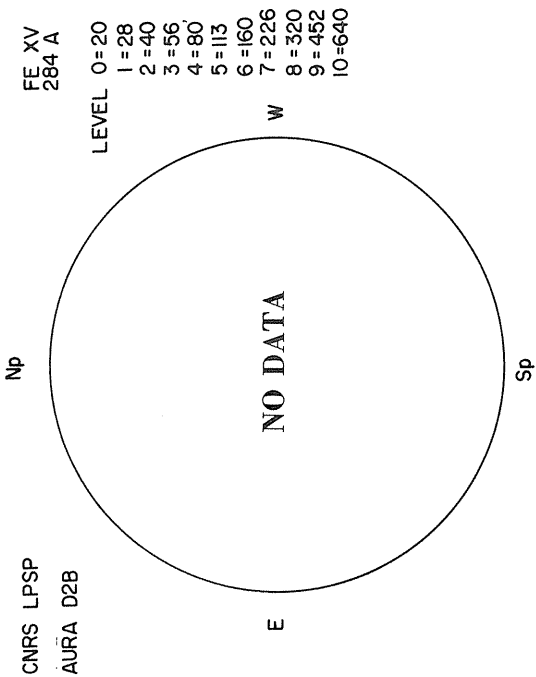
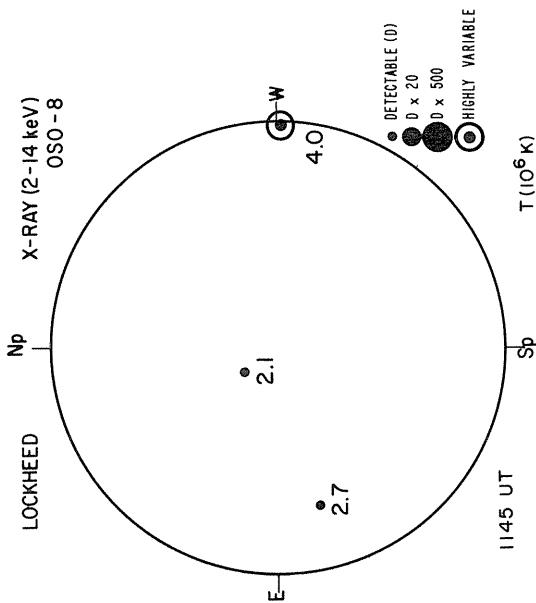
Sp

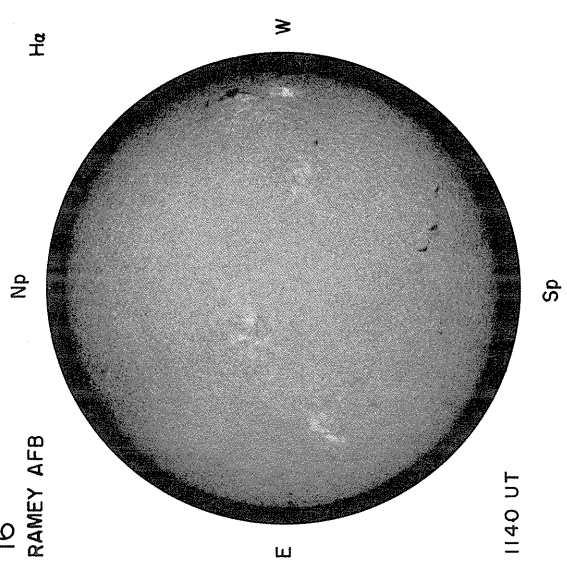
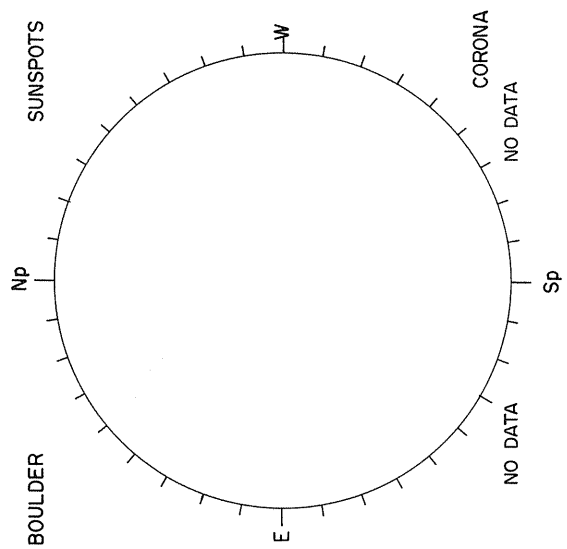
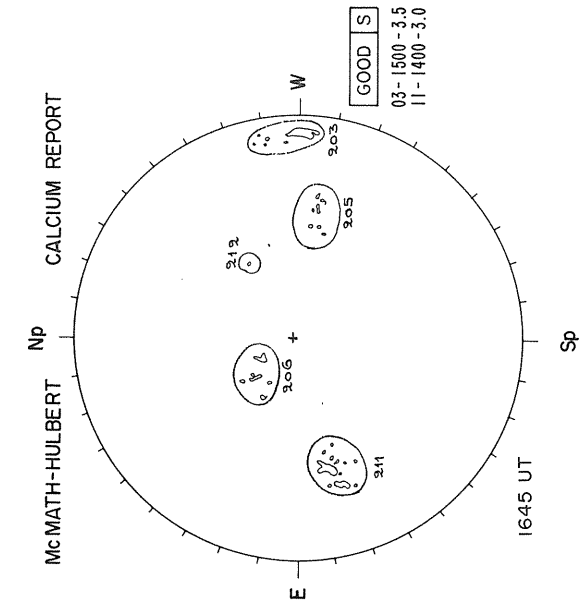
Ant. Temp. Unit 100°K

----- UT



MAY 16, 1976 (P = -20.69, B₀ = -2.50, L₀ = 155.42)





GOOD S
03 - 1500 - 3.5
11 - 1400 - 3.0

NELC LA POSTA

NO DATA

EQUIPMENT

Sp

2.0 CM

NELC LA POSTA

NO DATA

EQUIPMENT

Sp

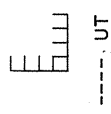
8.6 MM

NELC LA POSTA

NO DATA

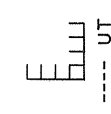
EQUIPMENT

Sp



Ant. Temp. Unit 100°K

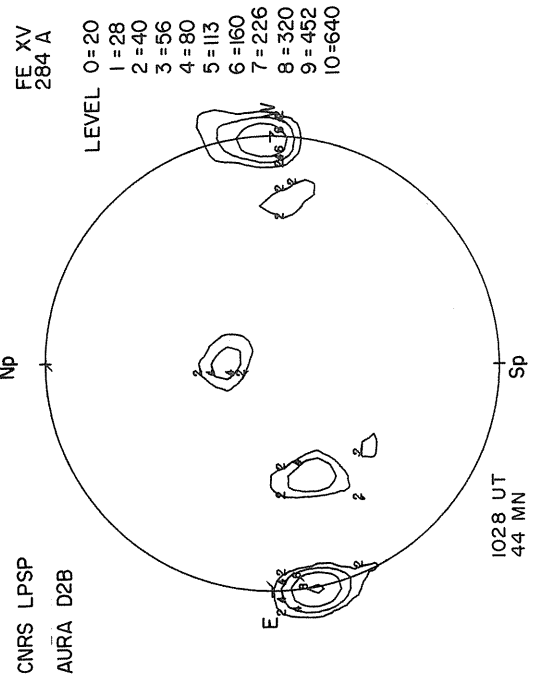
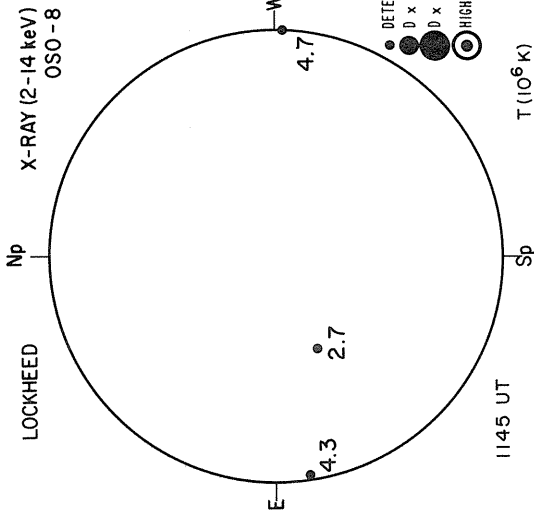
----- UT



Ant. Temp. Unit 100°K

----- UT

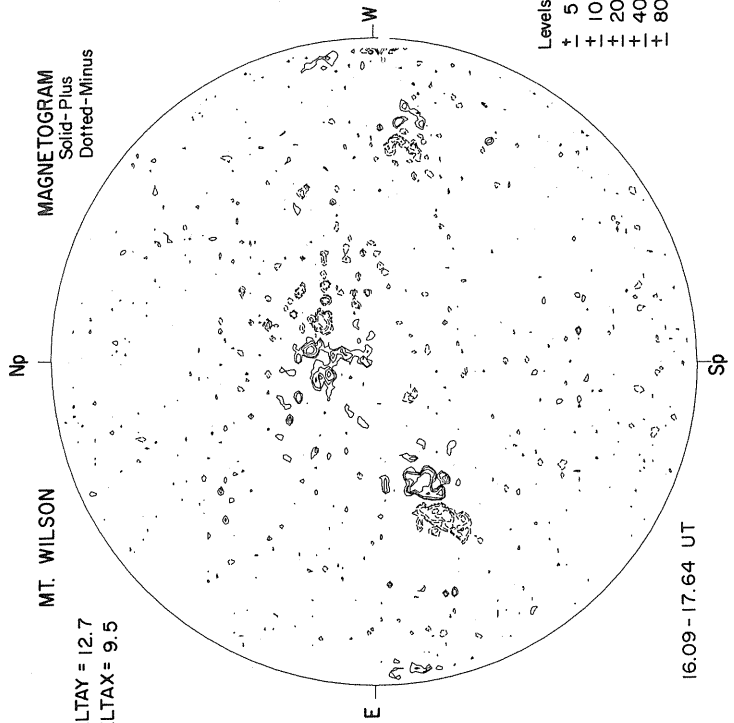
MAY 17, 1976 (P = -20.41, B₀ = -2.38, L₀ = 142.19)



MAGNETOGRAM
 Bright-Plus
 Dark-Minus

MAGNETOGRAM
 Solid-Plus
 Dotted-Minus

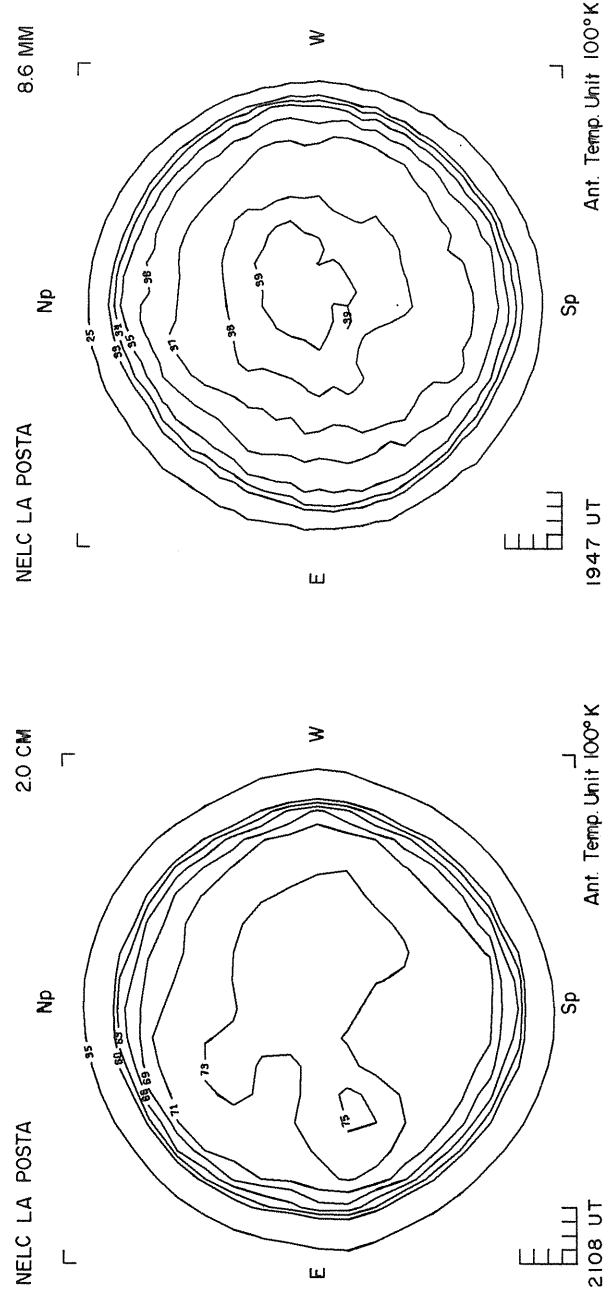
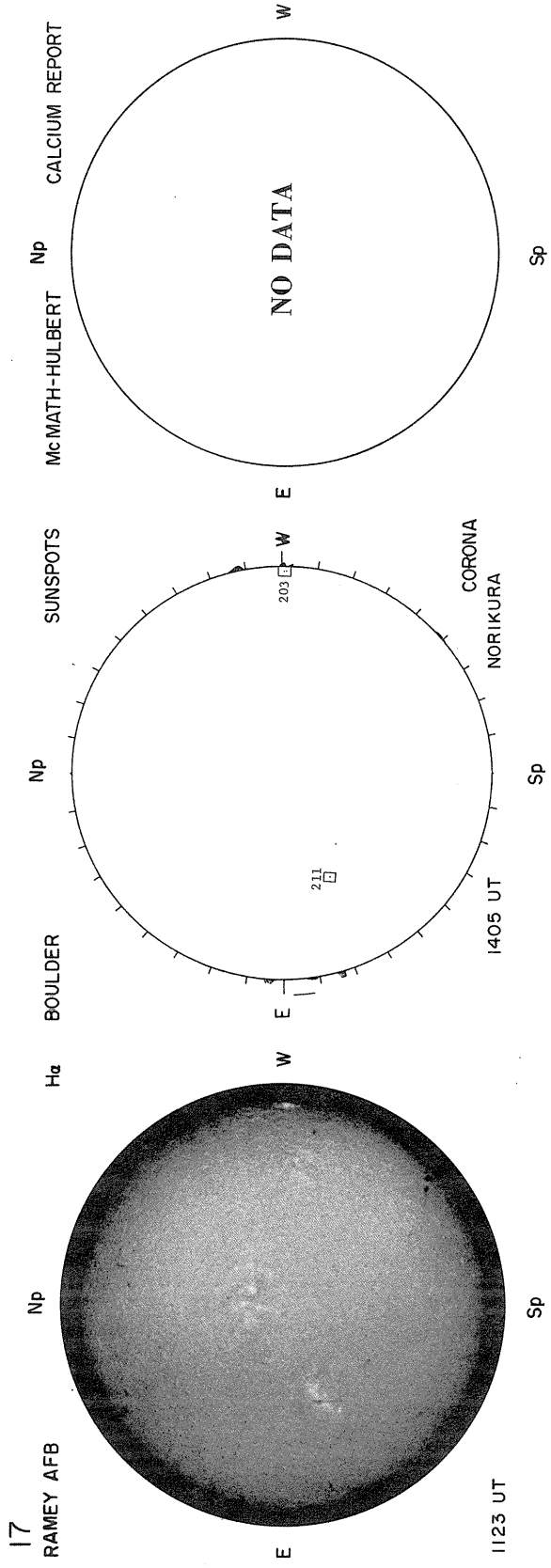
MT. WILSON
 DELTAY = 12.7
 DELTAX = 9.5



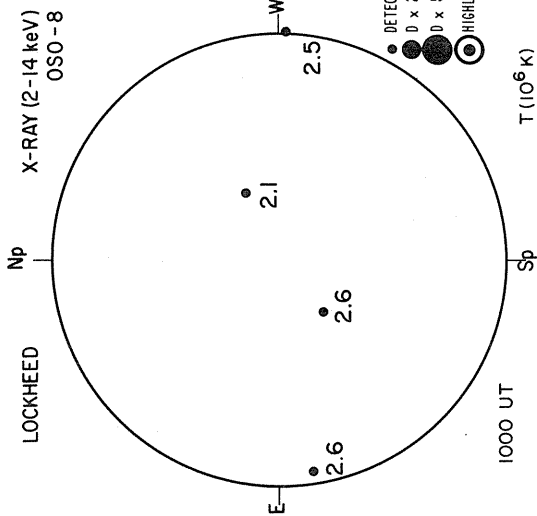
Sp

W

E

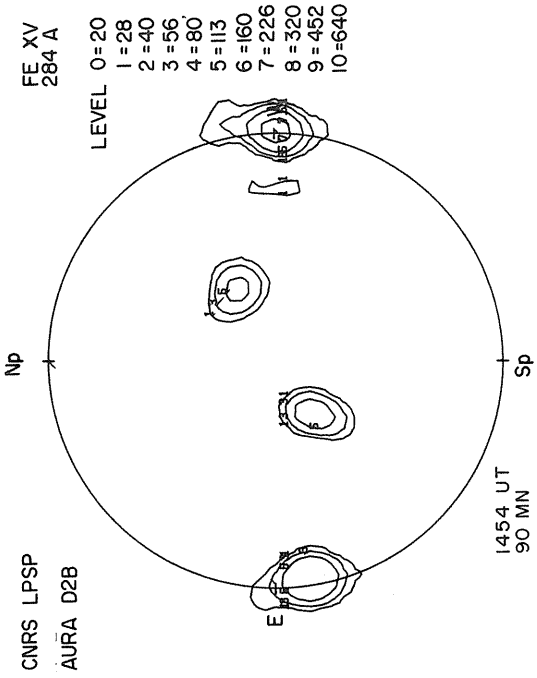


MAY 18, 1976 (P = -20.11, B₀ = -2.27, L₀ = 128.97)

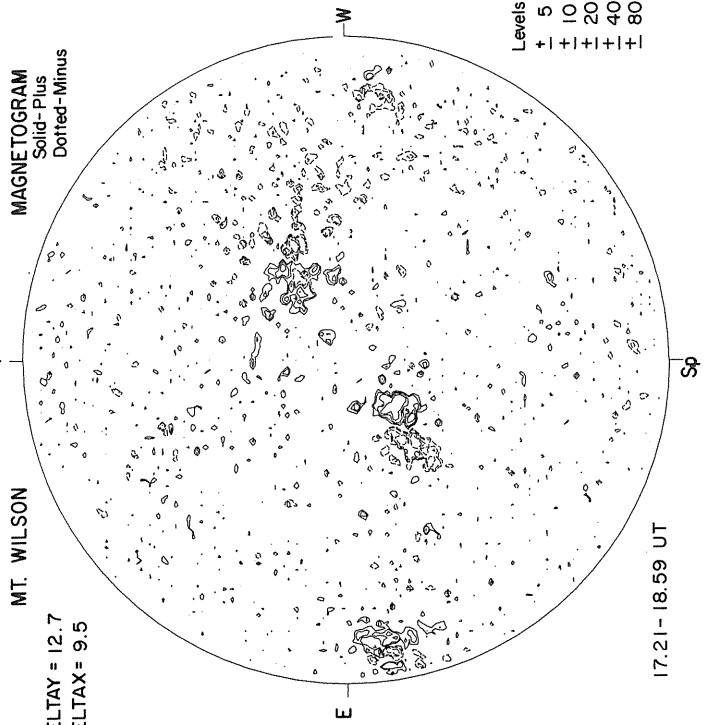


DETECTABLE (D)
● 0 x 20
● 0 x 500
○ HIGHLY VARIABLE

MAGNETOGRAM
Bright - Plus
Dark - Minus



MT. WILSON
DELTA Y = 12.7
DELTA X = 9.5

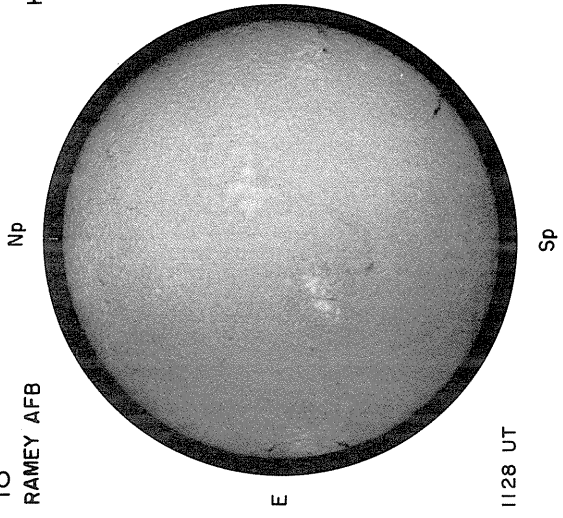


W

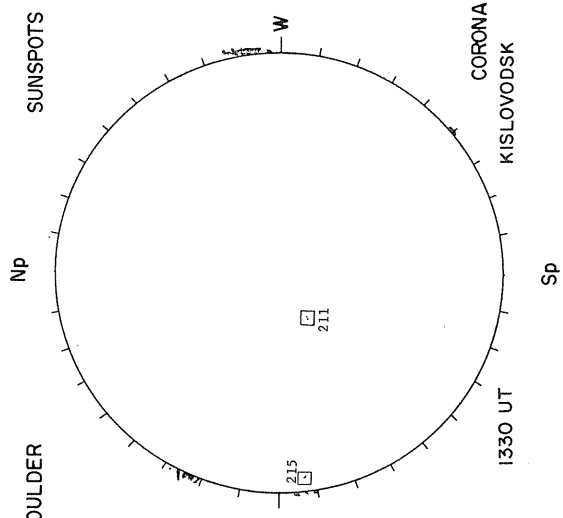
E

Sp

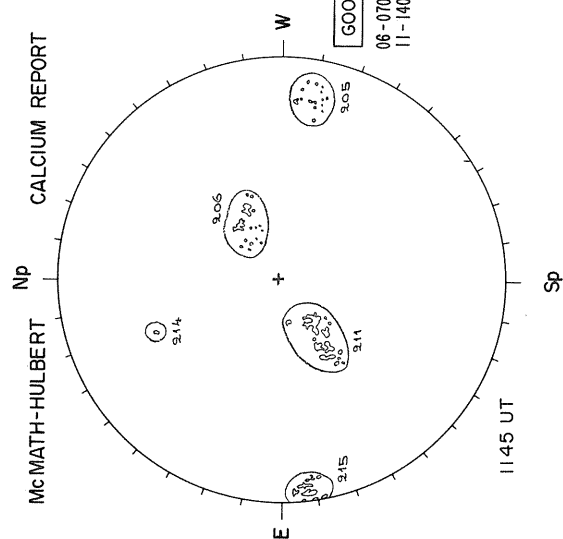
18
RAMEY AFB



H_α BOULDER

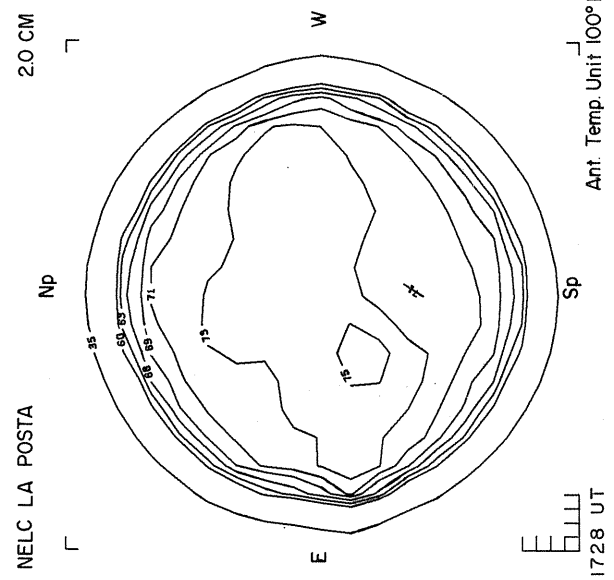


McMATH-HULBERT



CALCIUM REPORT

NELC LA POSTA



2.0 CM

NELC LA POSTA

8.6 MM

Np

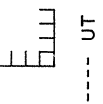
NO DATA

EQUIPMENT

W

Ant. Temp. Unit 100°K

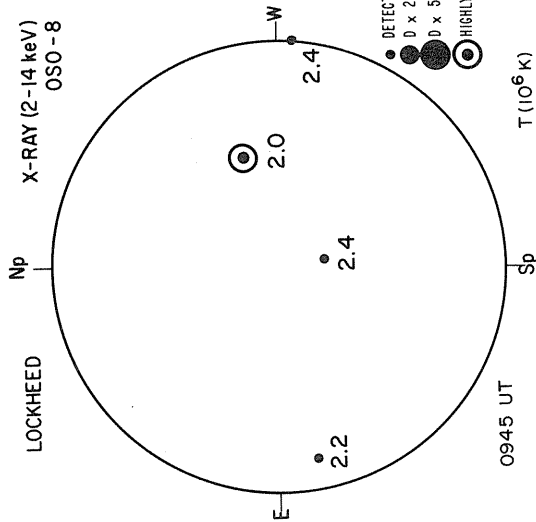
Ant. Temp. Unit 100°K



---- UT

MAY 19, 1976 (P = -19.82, B₀ = -2.15, L₀ = 115.74)

LOCKHEED X-RAY (2-14 keV)
OSO-8

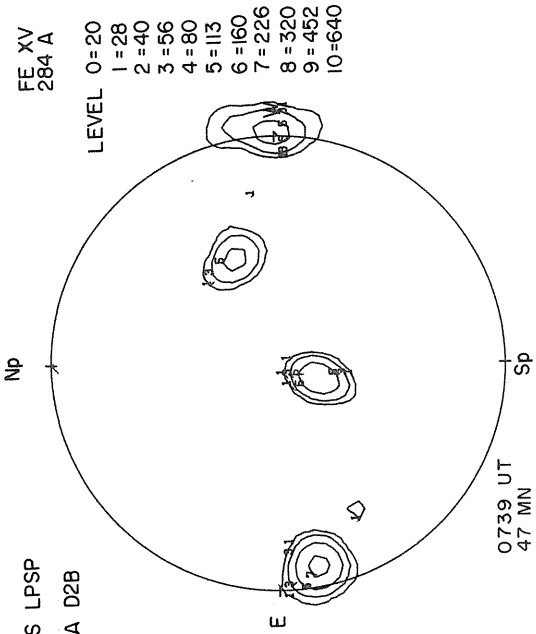


0945 UT

KITT PEAK

MAGNETOGRAM
Bright-Plus
Dark-Minus

CNRS LPSP
AURA D2B

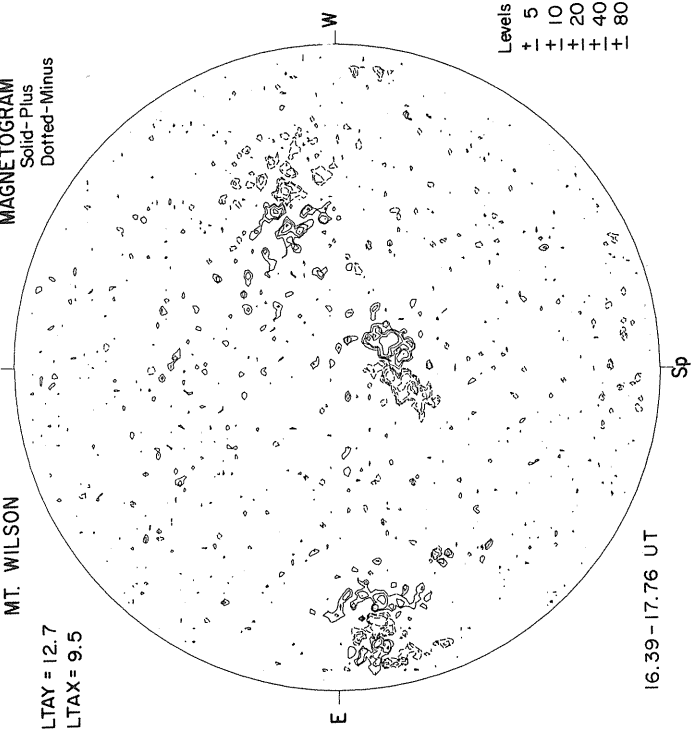


0739 UT
47 MN

MT. WILSON

DELTA T = 12.7
DELTA T AX = 9.5

MAGNETOGRAM
Solid-Plus
Dotted-Minus



16.39-17.76 UT

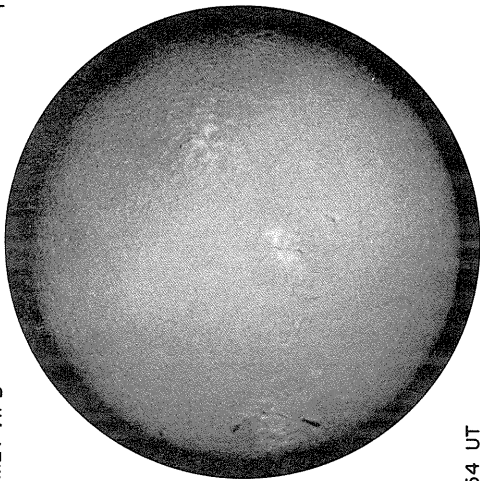
Sp

W

E

19
RAMEY AFB

Np

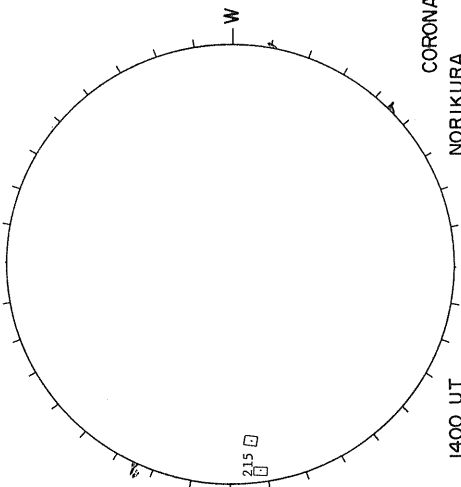


E

1154 UT

H α BOULDER

Np

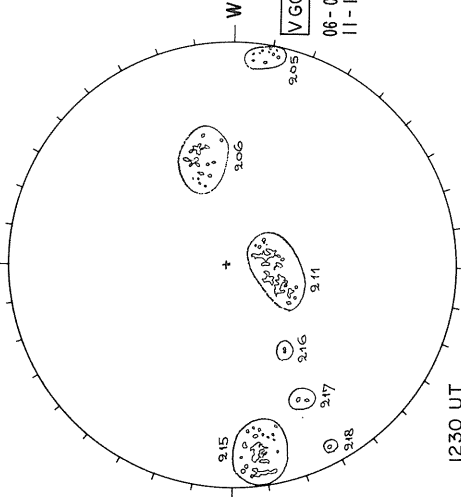


E

1400 UT

SUNSPOTS

Np

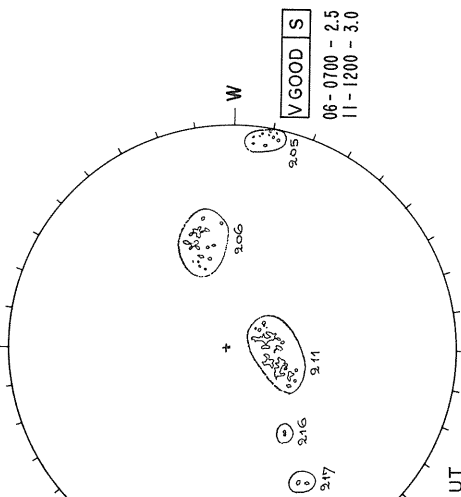


E

1230 UT

McMATH-HULBERT

Np

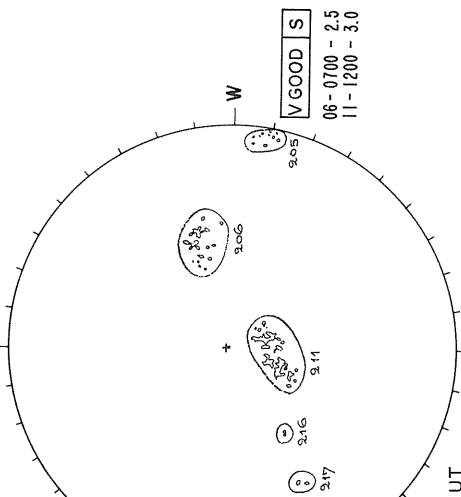


E

1230 UT

CALCIUM REPORT

Np



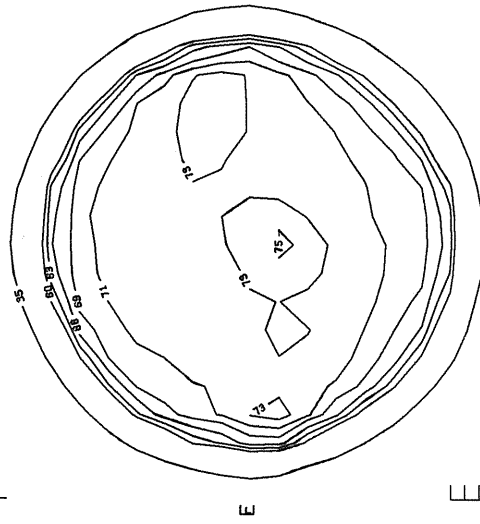
E

1230 UT

V GOOD S
06-0700 - 2.5
11-1200 - 3.0

NELC LA POSTA

Np



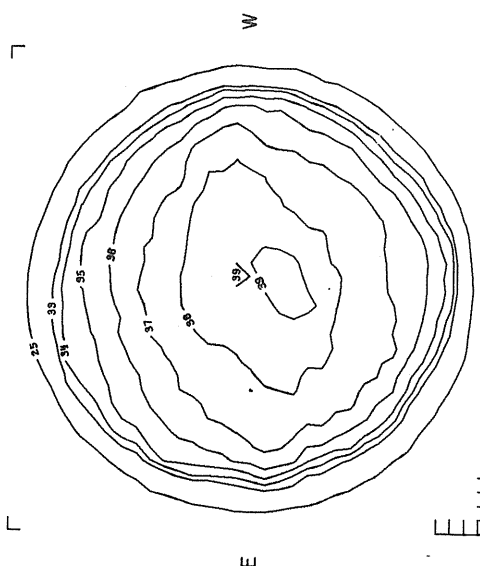
2.0 CM

E

1650 UT

NELC LA POSTA

Np



8.6 MM

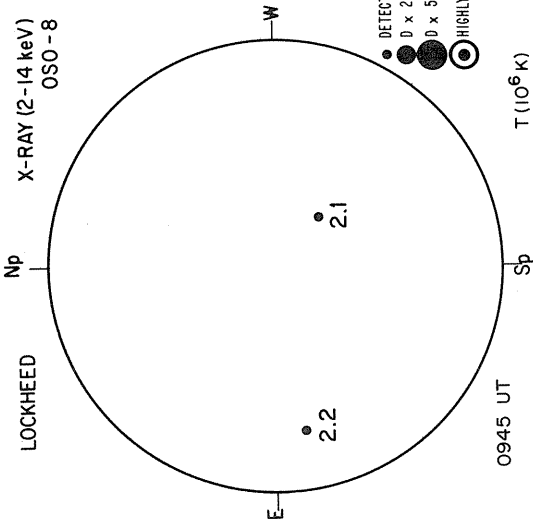
E

1751 UT

Ant. Temp. Unit 100°K

MAY 20, 1976 (P = -19.51, B₀ = -2.03, L₀ = 102.51)

LOCKHEED
X-RAY (2-14 keV)
OSO-8



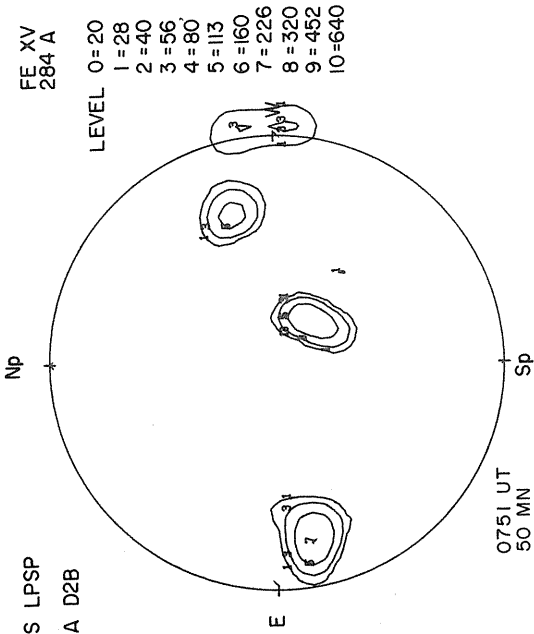
KITT PEAK

MAGNETOGRAM
Bright- Plus
Dark - Minus

0945 UT

T (10⁵ K)

CNRS LPSP
AURA D2B

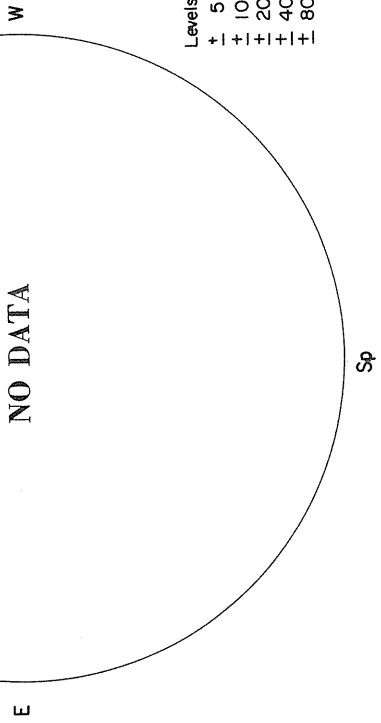


MT. WILSON

MAGNETOGRAM
Solid- Plus
Dotted- Minus

0751 UT
50 MN

DELTA Y =
DELTA X =



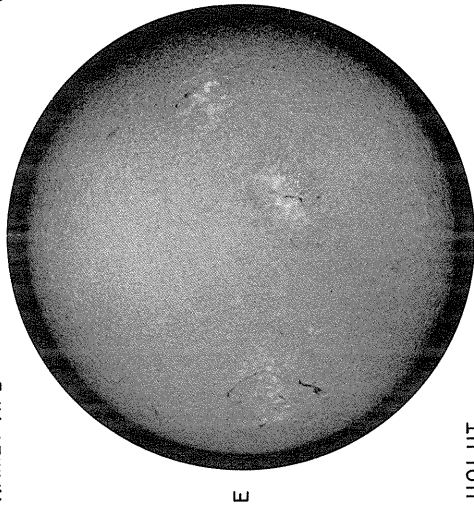
Levels
 ± 5
 ± 10
 ± 20
 ± 40
 ± 80

W

E

Sp

20
RAMEY AFB



H α BOULDER

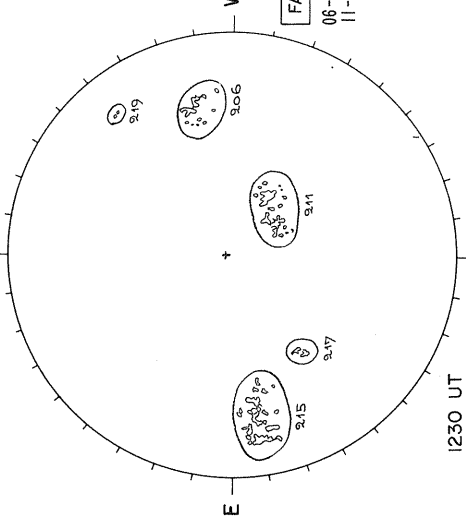
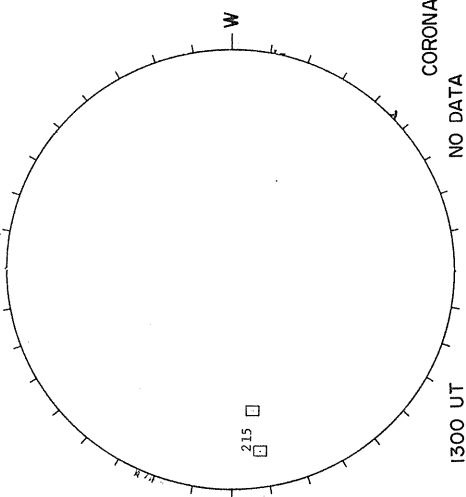
Np

SUNSPOTS

McMATH-HULBERT

Np

CALCIUM REPORT



FAIR	S
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06-0900-2.5
11-1200-3.0

1101 UT

1300 UT

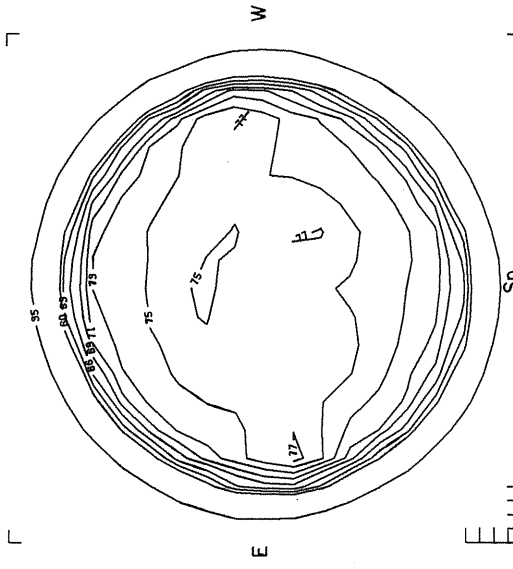
1230 UT

NELC LA POSTA

2.0 CM

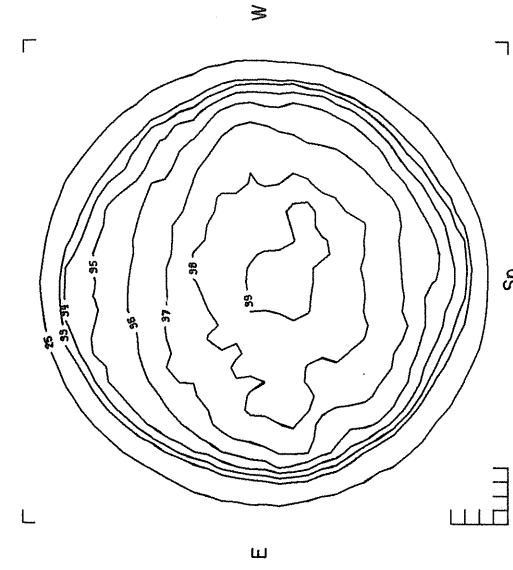
NELC LA POSTA

8.6 MM



Ant. Temp. Unit 100°K

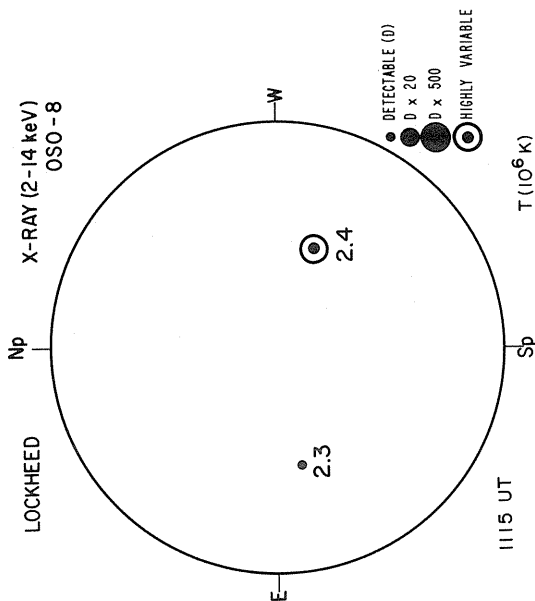
1605 UT



Ant. Temp. Unit 100°K

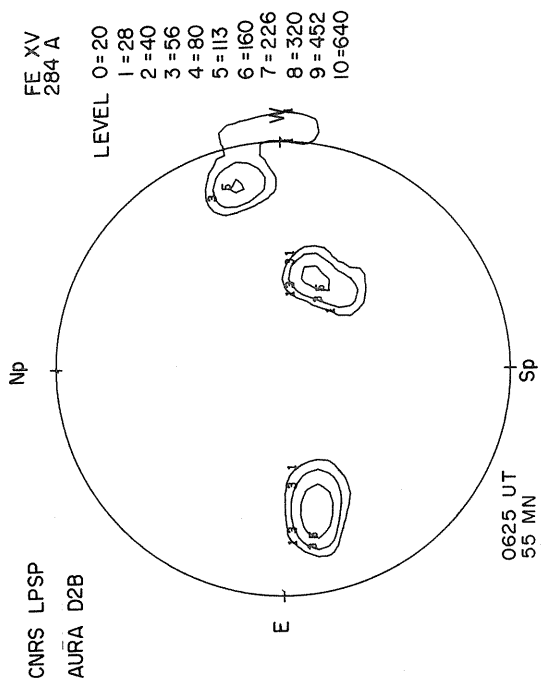
1700 UT

MAY 21, 1976 (P = -19.20, B₀ = -1.92, L₀ = 89.28)



KITT PEAK

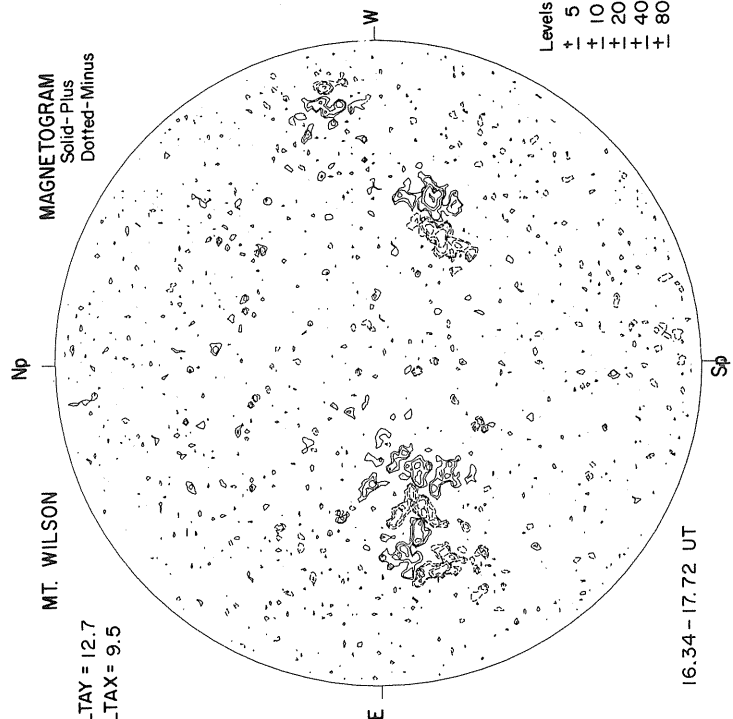
Sp



MAGNETOGRAM

MT. WILSON

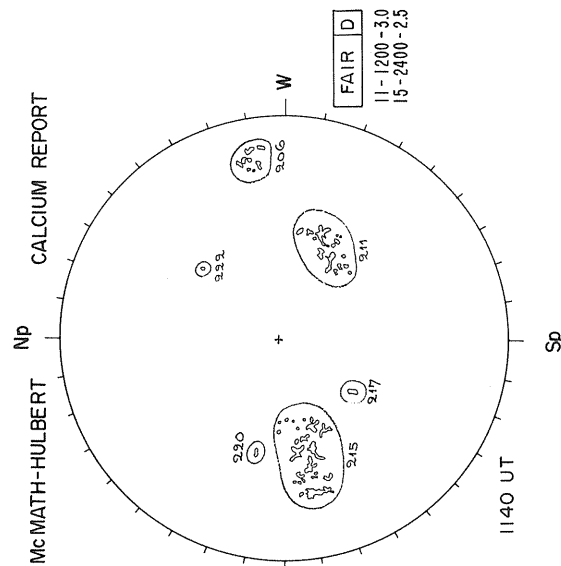
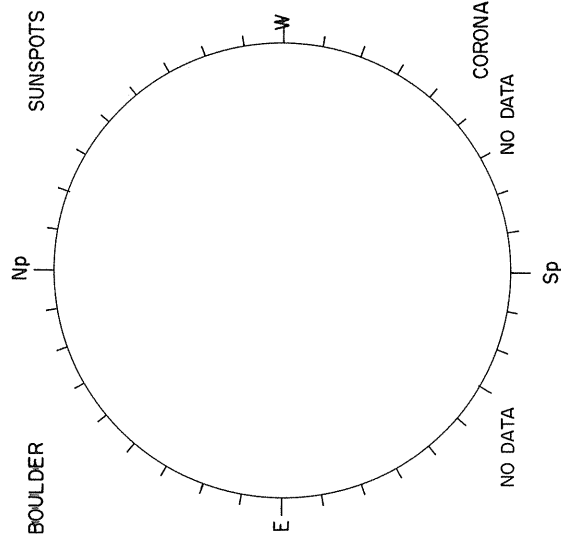
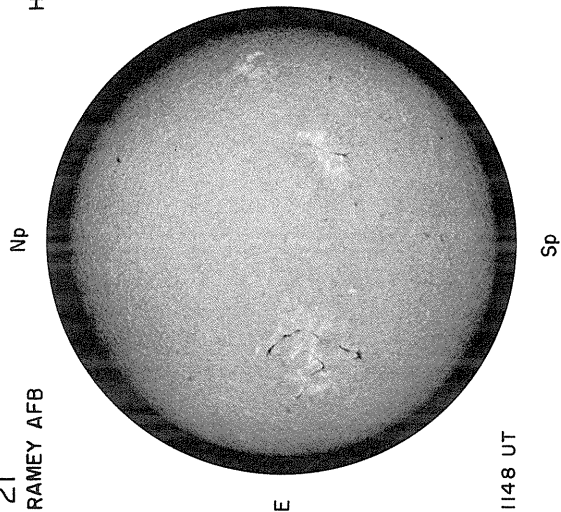
DELTA Y = 12.7
 DELTA X = 9.5



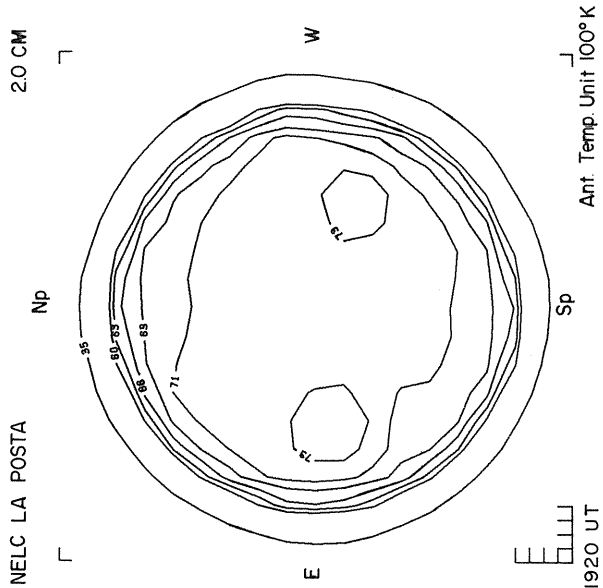
Levels
 + 5
 + 10
 + 20
 + 40
 + 80

16.34 - 17.72 UT

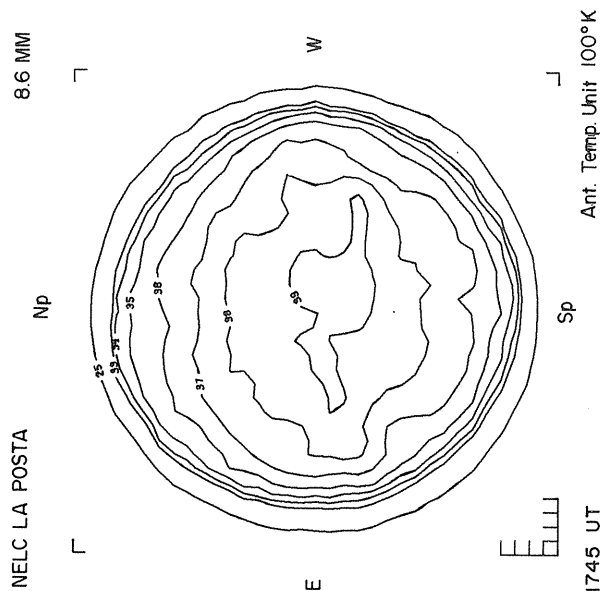
21
RAMEY AFB



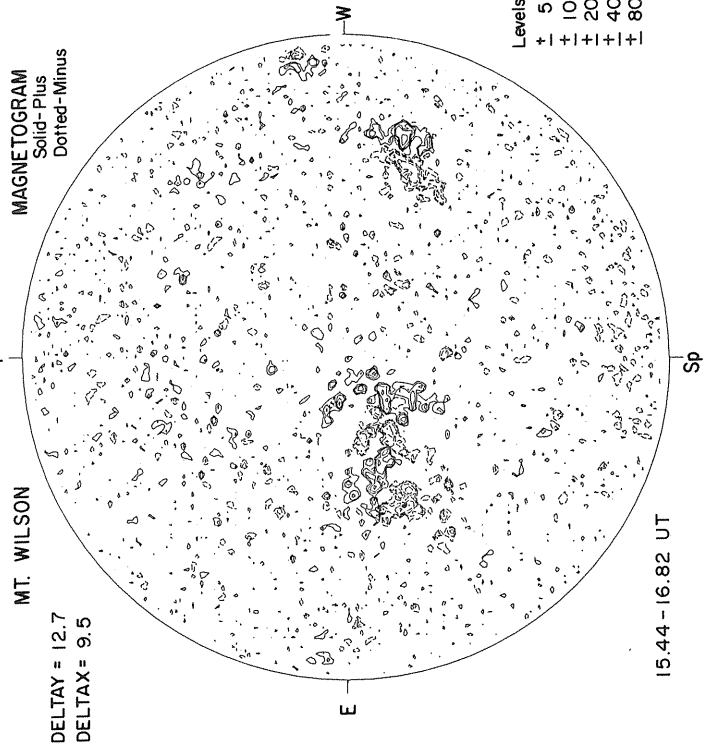
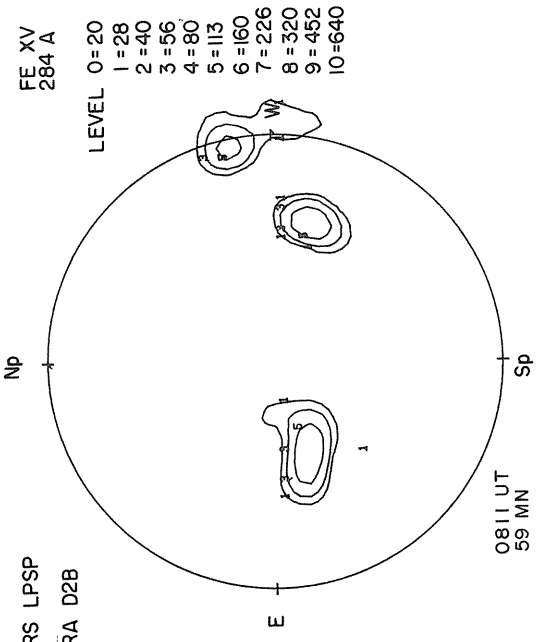
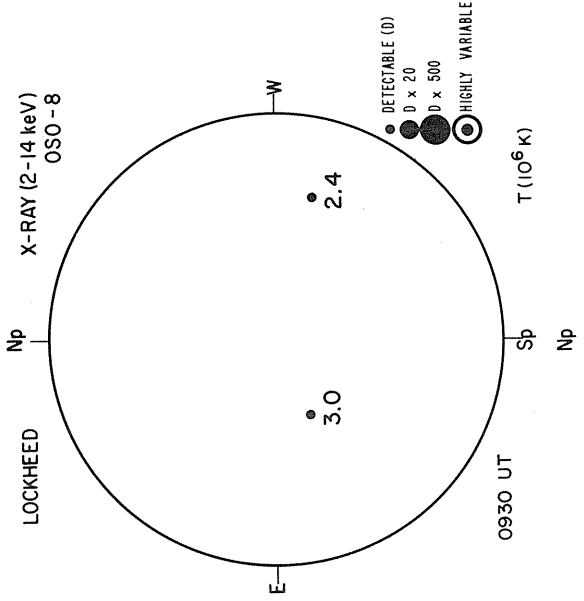
NELC LA POSTA
1920 UT



NELC LA POSTA
1745 UT

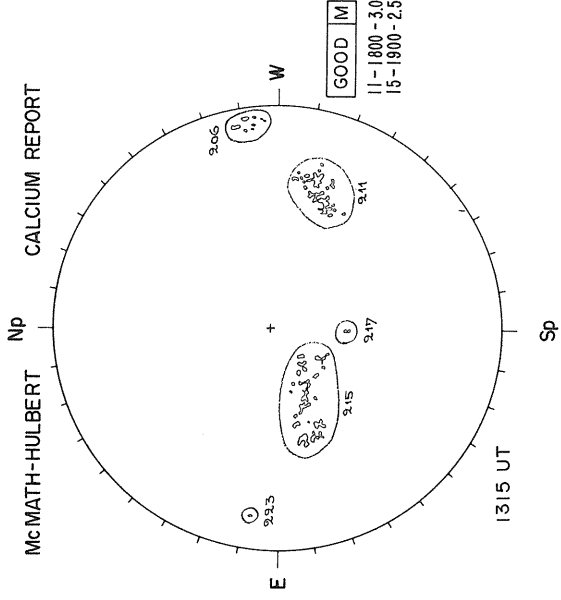
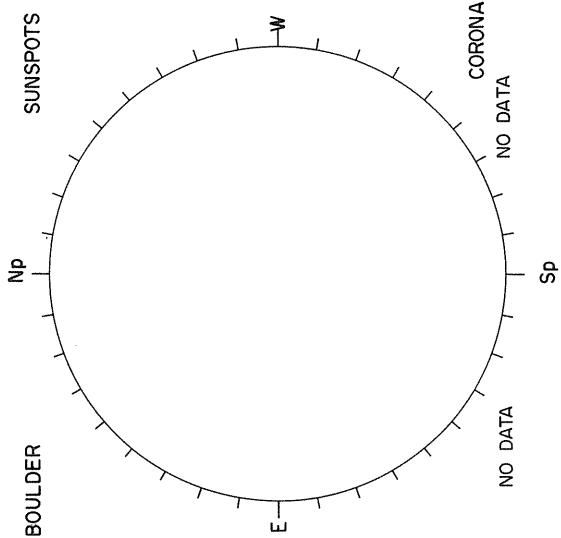
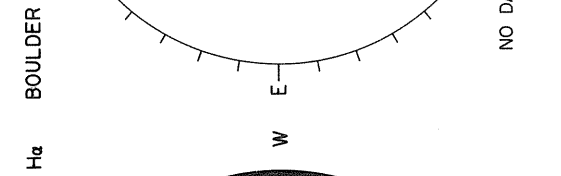
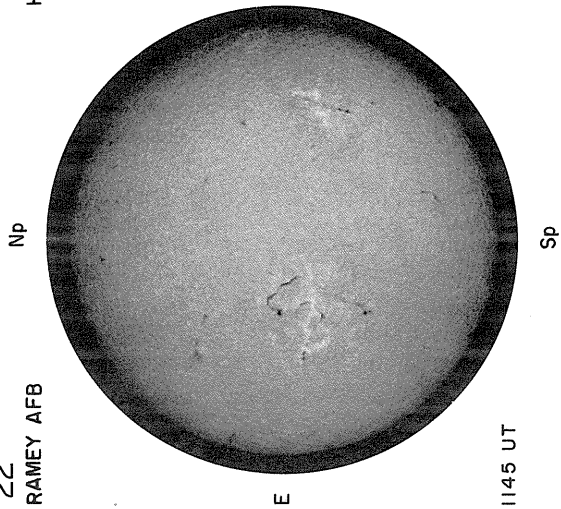


MAY 22, 1976 (P = -18.89, B₀ = -1.80, L₀ = 76.05)

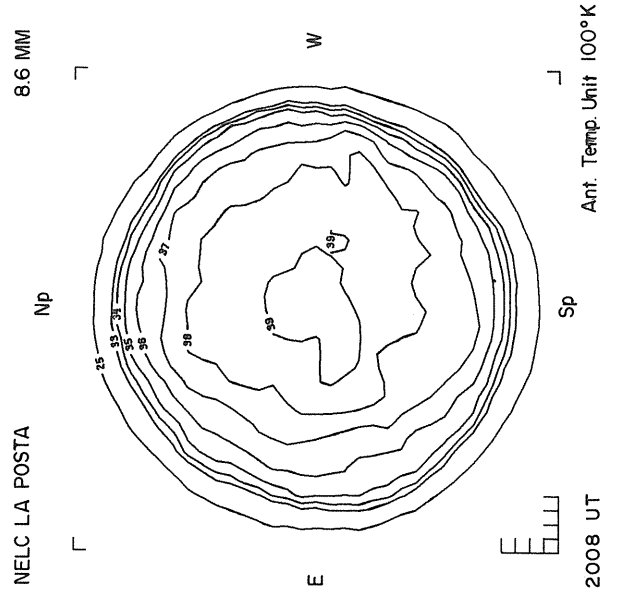
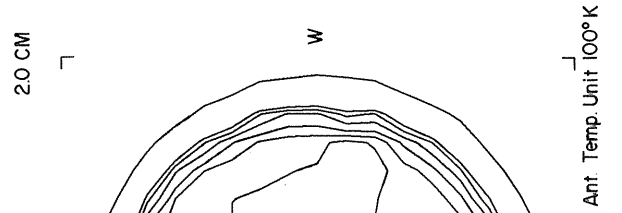
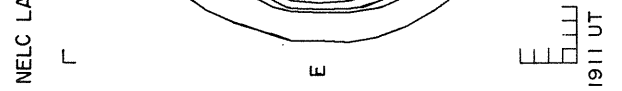


Sp

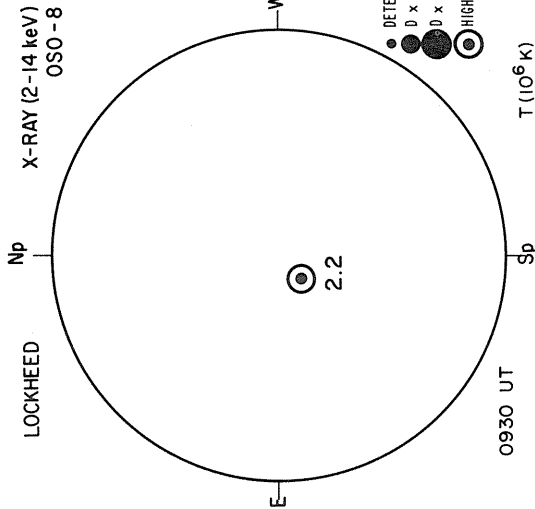
22
RAMEY AFB



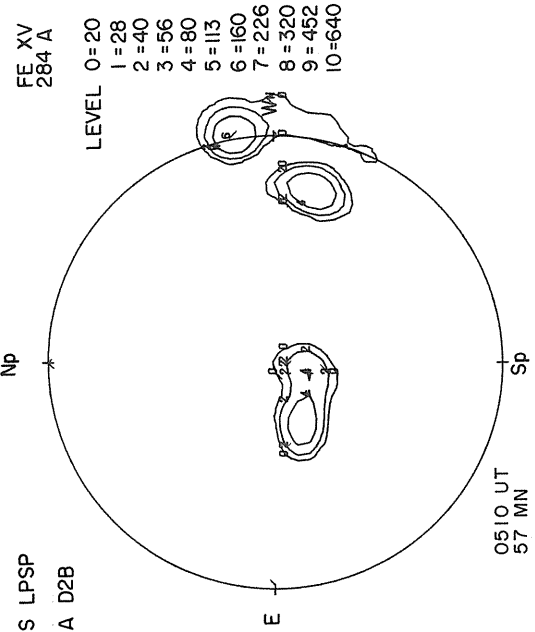
CALCIUM REPORT



MAY 23, 1976 (P = -18.56, B₀ = -1.68, L₀ = 62.82)

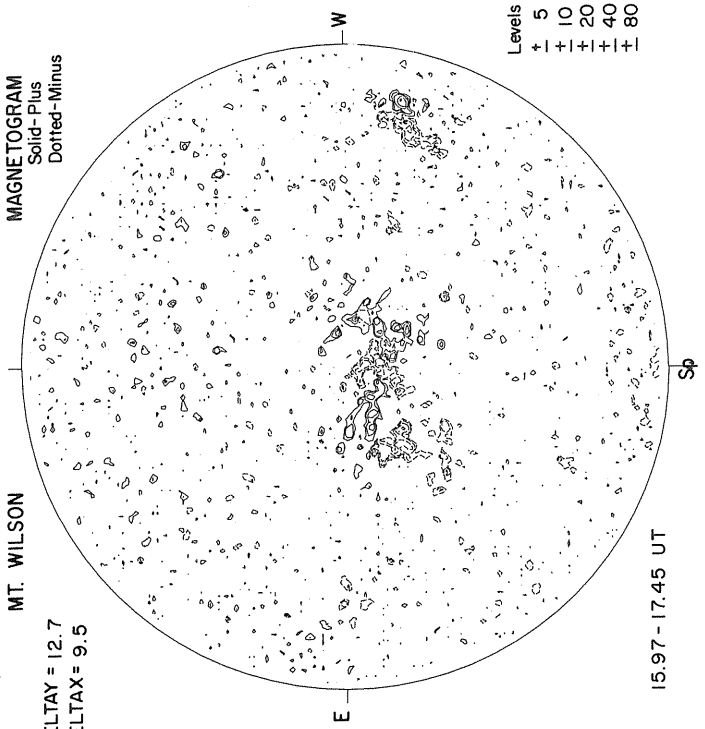


KITT PEAK
MAGNETOGRAM
Bright - Plus
Dark - Minus



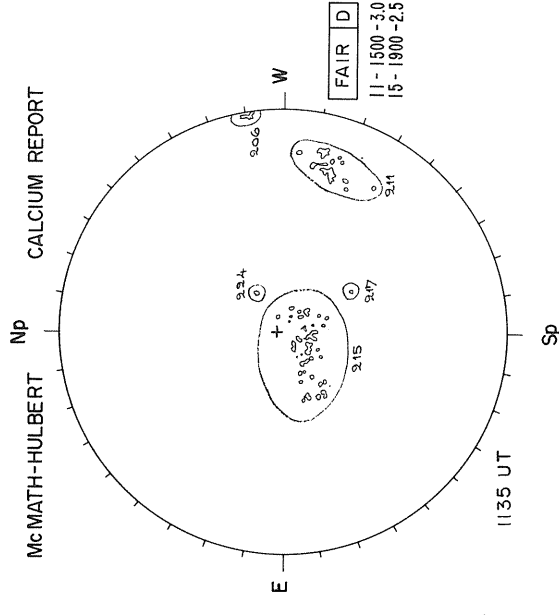
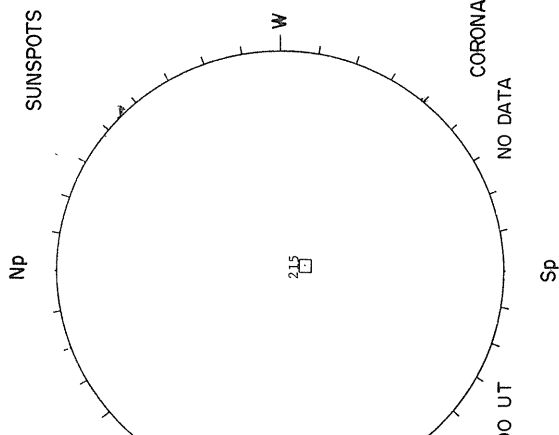
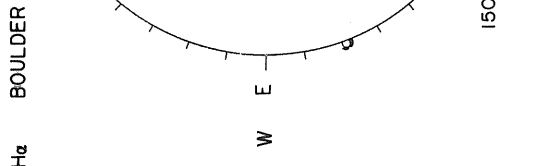
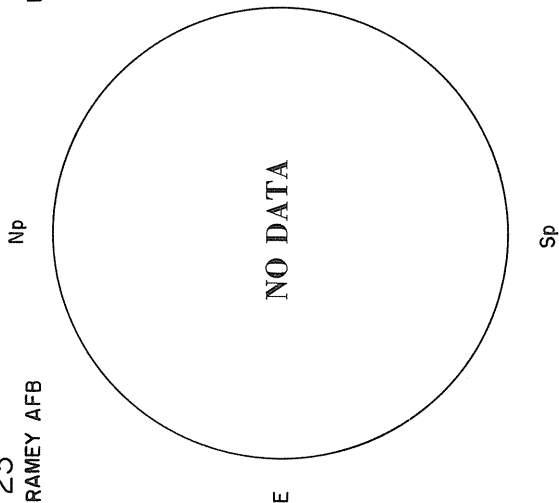
MT. WILSON
MAGNETOGRAM
Solid-Plus
Dotted-Minus

DELTA T = 12.7
DELTA X = 9.5

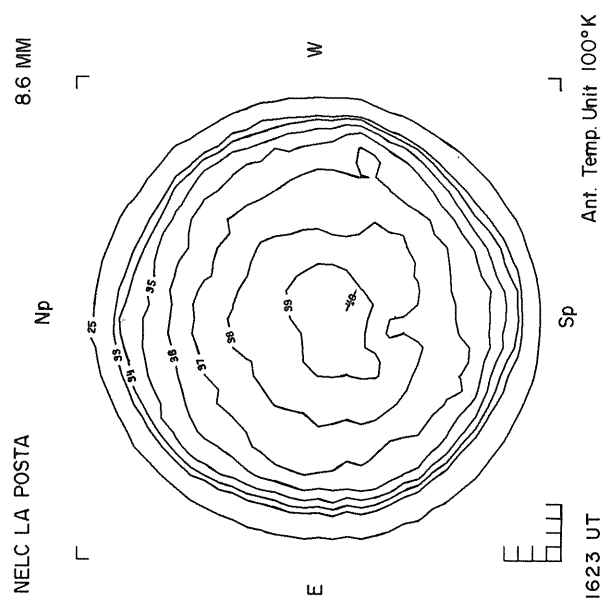
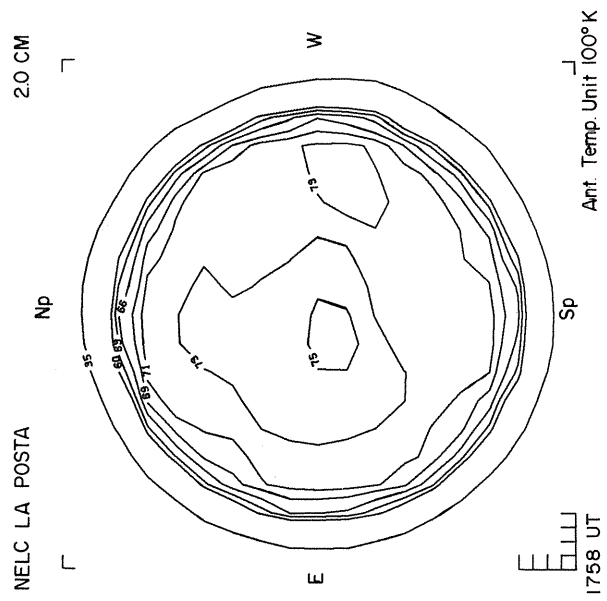


Sp

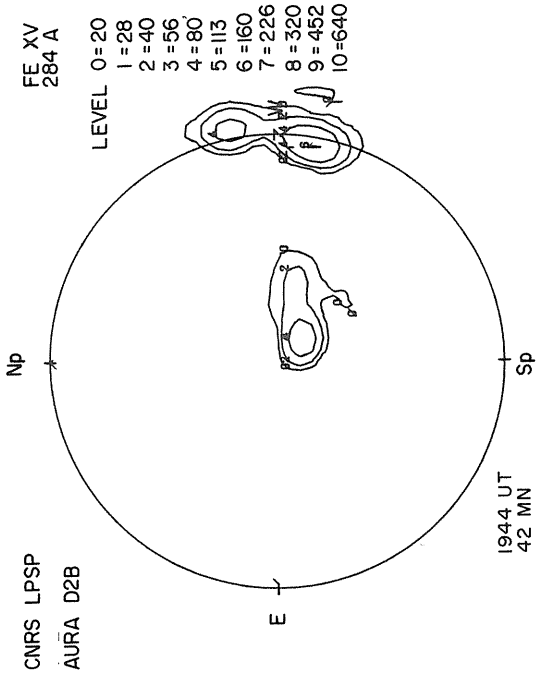
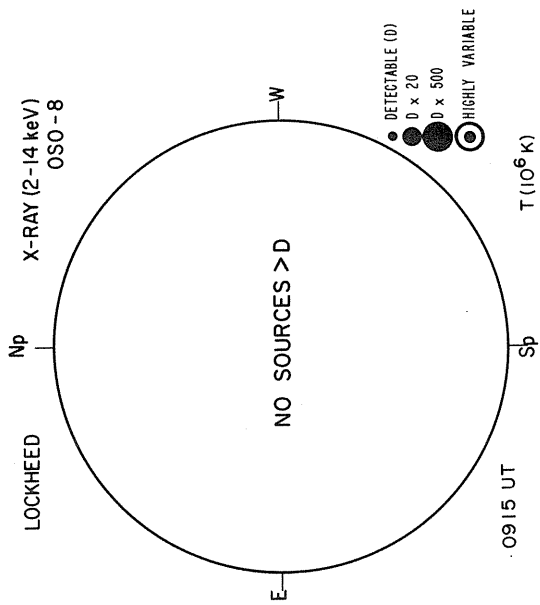
23
RAMEY AFB



CALCIUM REPORT

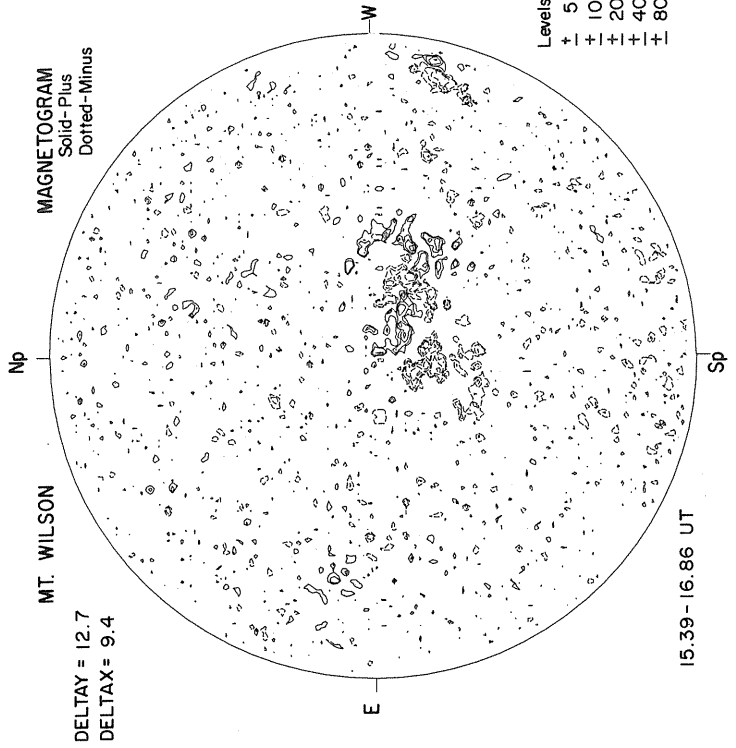


MAY 24, 1976 (P = -18.23, B₀ = -1.56, L₀ = 49.59)

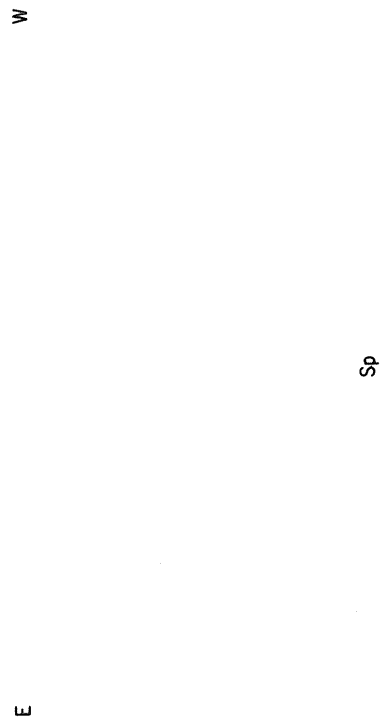


MT. WILSON

DELTA Y = 12.7
 DELTA X = 9.4



KITT PEAK

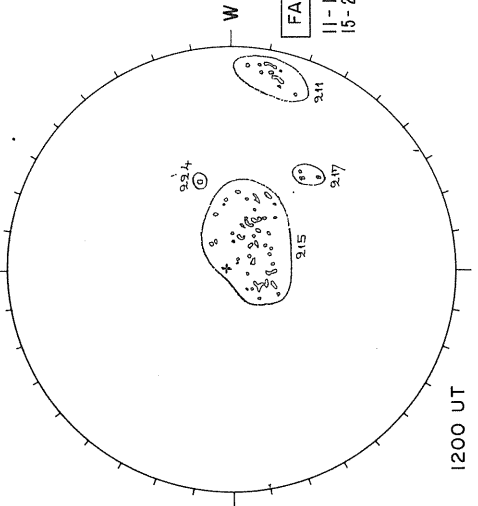
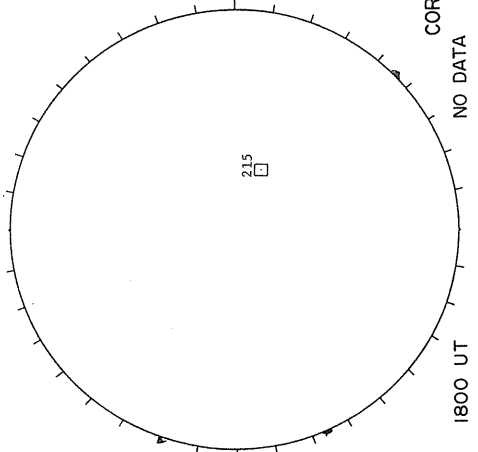
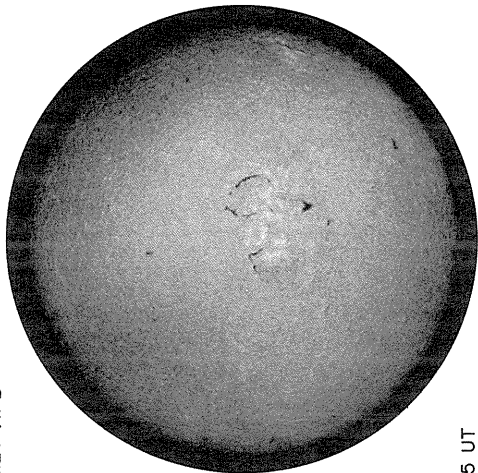


24
RAMEY AFB

H_α BOULDER

SUNSPOTS

Mc MATH-HULBERT
CALCIUM REPORT



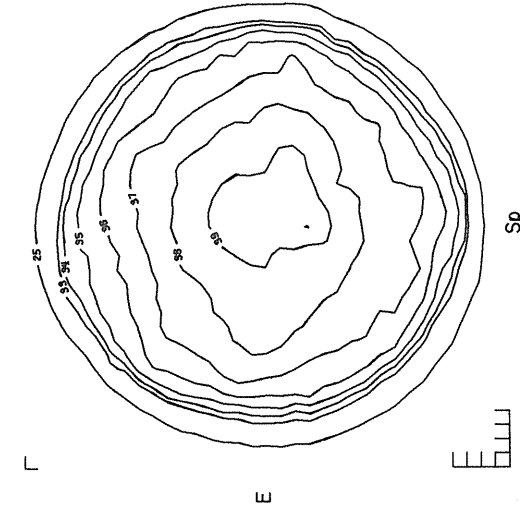
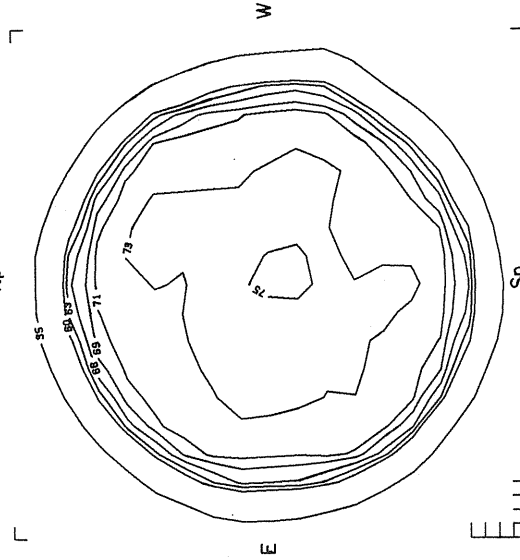
1135 UT

NELC LA POSTA

2.0 CM

NELC LA POSTA

8.6 MM



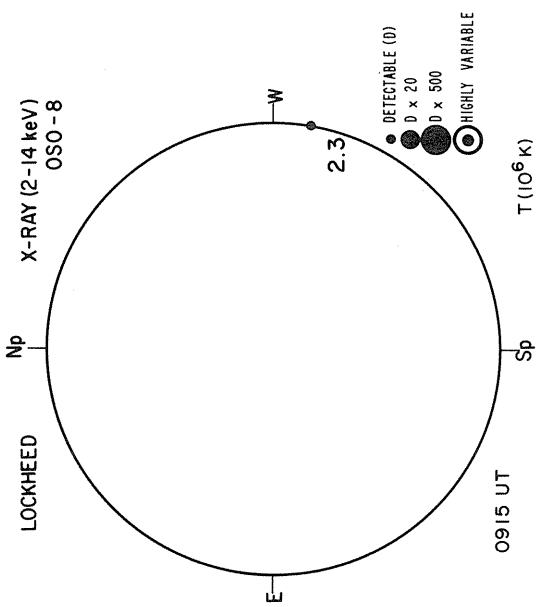
1901 UT

Ant. Temp Unit 100°K

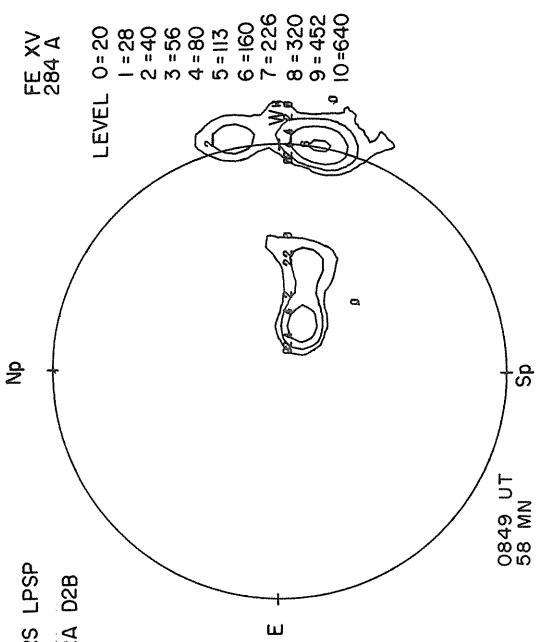
1727 UT

Ant. Temp Unit 100°K

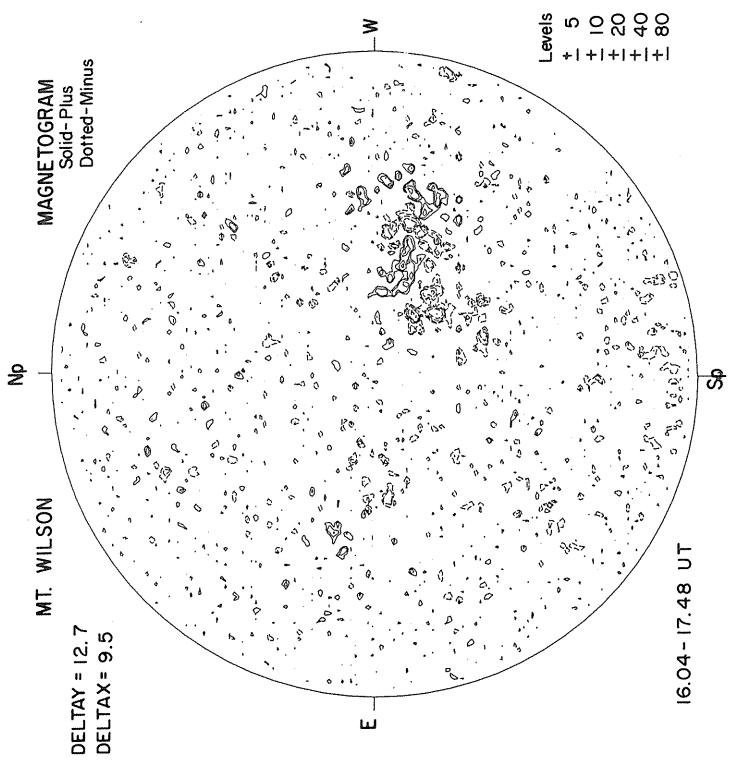
MAY 25, 1976 (P = -17.90, B₀ = -1.44, L₀ = 36.36)



KITT PEAK
MAGNETOGRAM
Bright - Plus
Dark - Minus

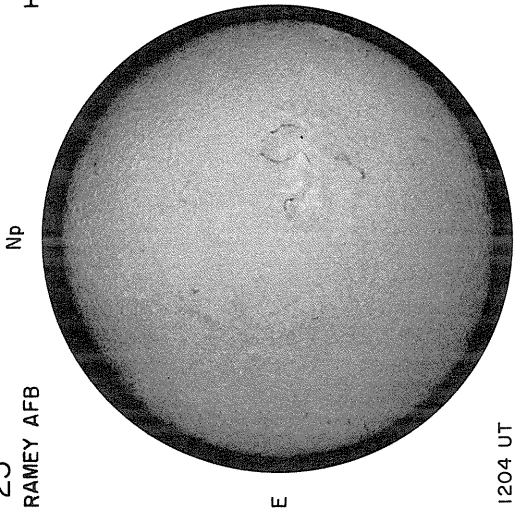


MT. WILSON
MAGNETOGRAM
Solid-Plus
Dotted-Minus

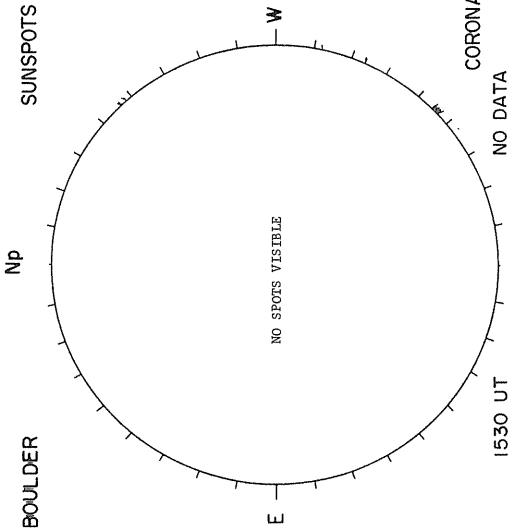


Sp

25
RAMEY AFB



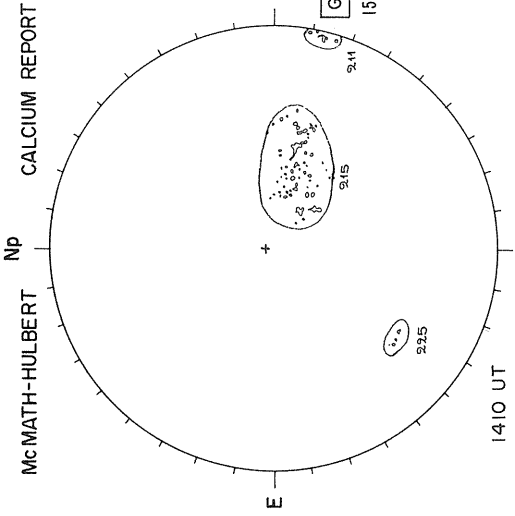
H α BOULDER



SUNSPOTS

CORONA

NO DATA



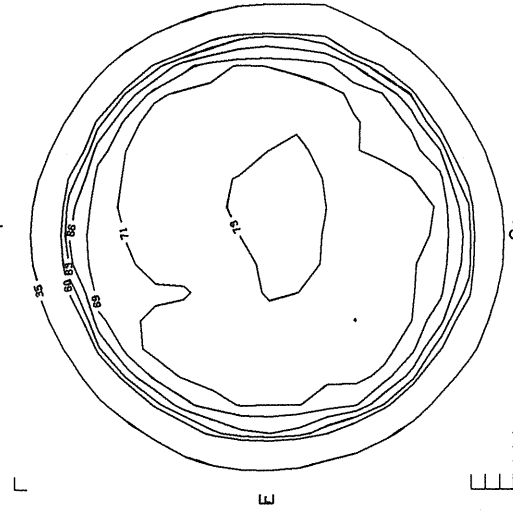
McMATH-HULBERT

GOOD M
15-1800 - 2.5

25
RAMEY AFB

Np

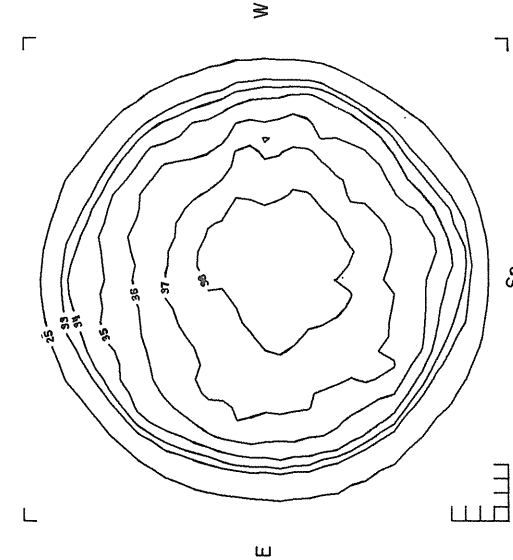
NELC LA POSTA



Ant. Temp. Unit 100°K

2.0 CM

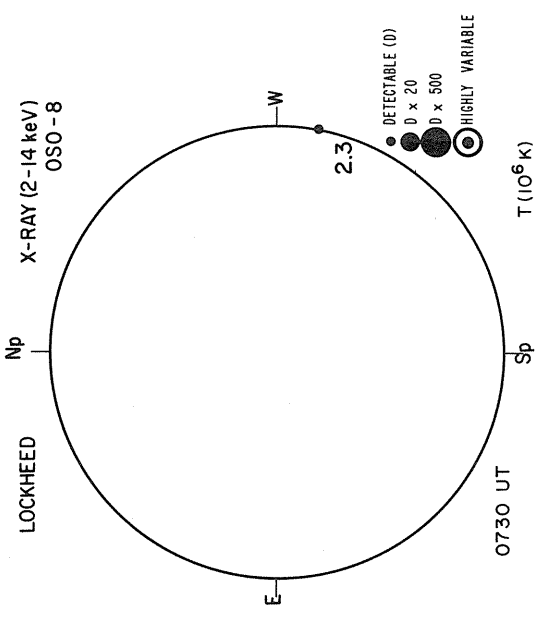
NELC LA POSTA



Ant. Temp. Unit 100°K

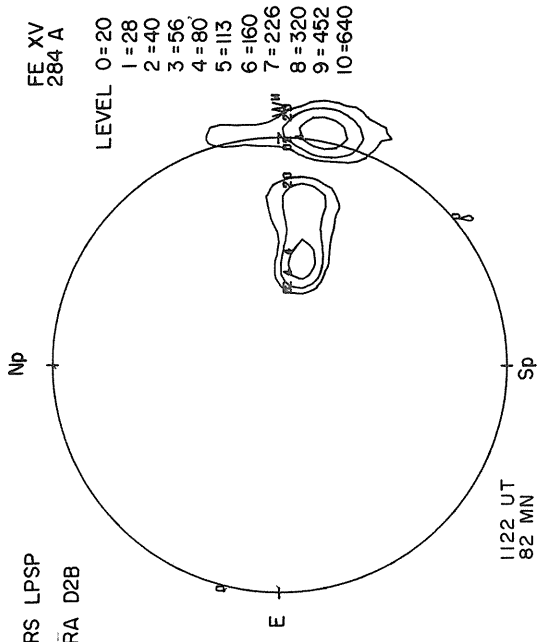
8.6 MM

MAY 26, 1976 (P = -17.56, B₀ = -1.33, L₀ = 23.13)

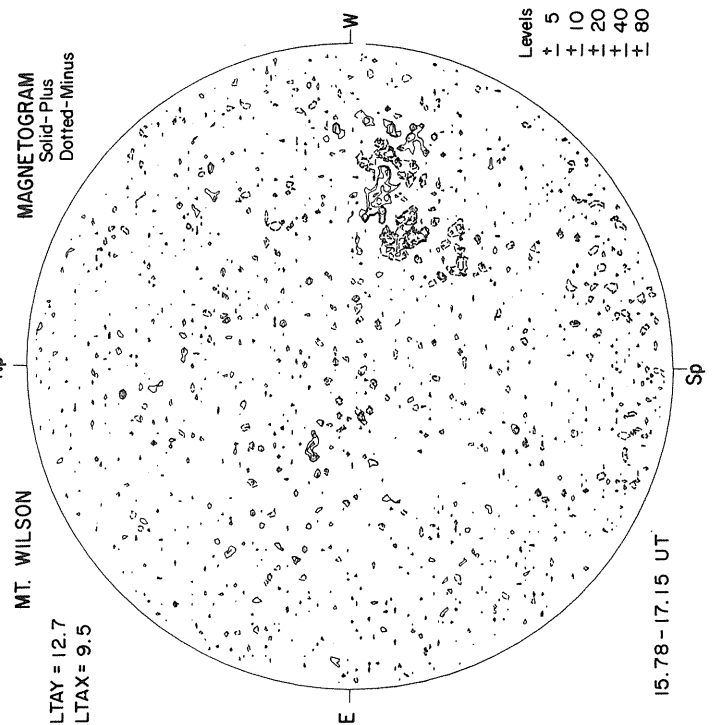


- DETECTABLE (0)
- 0 x 20
- 0 x 500
- ⊙ HIGHLY VARIABLE

MAGNETOGRAM
Bright-Plus
Dark -Minus

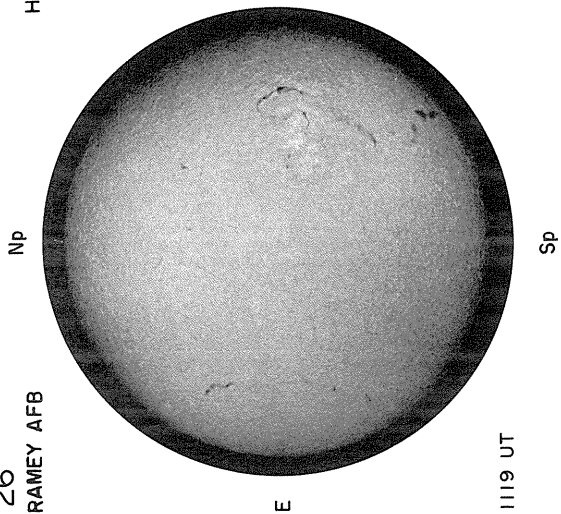


MAGNETOGRAM
Solid-Plus
Dotted-Minus
DELTA T = 12.7
DELTA X = 9.5

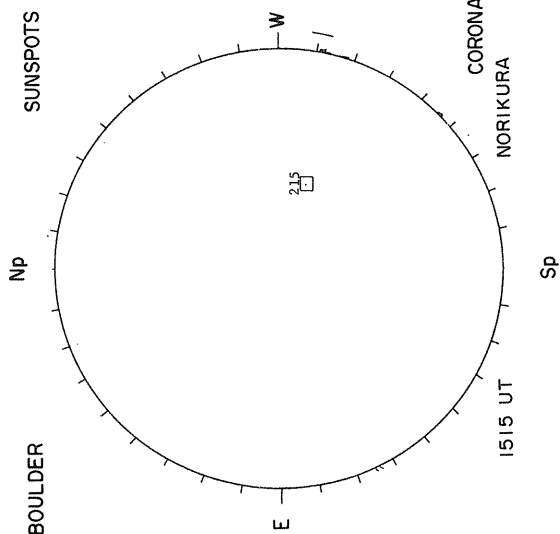


- Levels
- + 5
- + 10
- + 20
- + 40
- + 80

26
RAMEY AFB

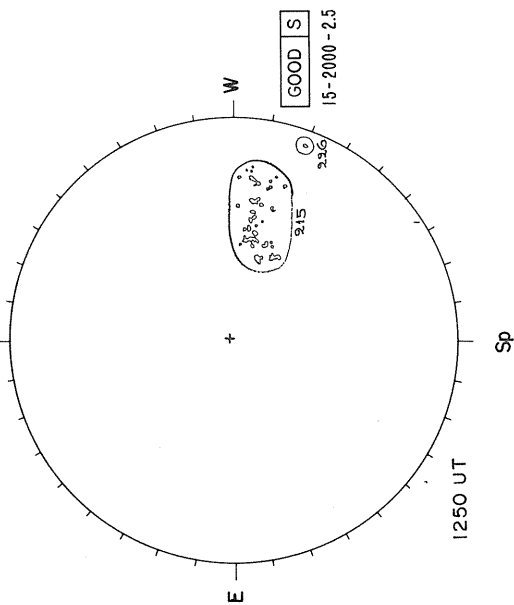


H α BOULDER



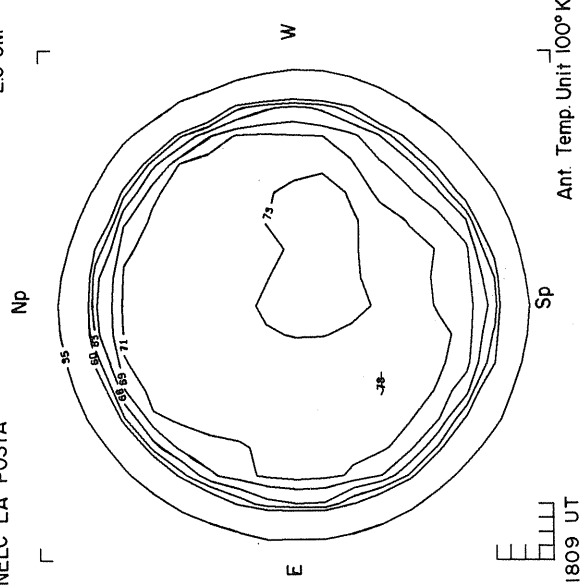
SUNSPOTS

McMATH-HULBERT
CALCIUM REPORT



NELC LA POSTA

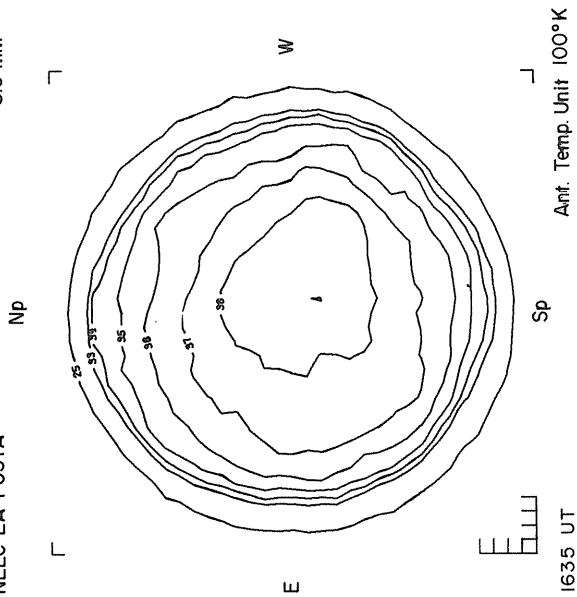
2.0 CM



Ant. Temp. Unit 100°K

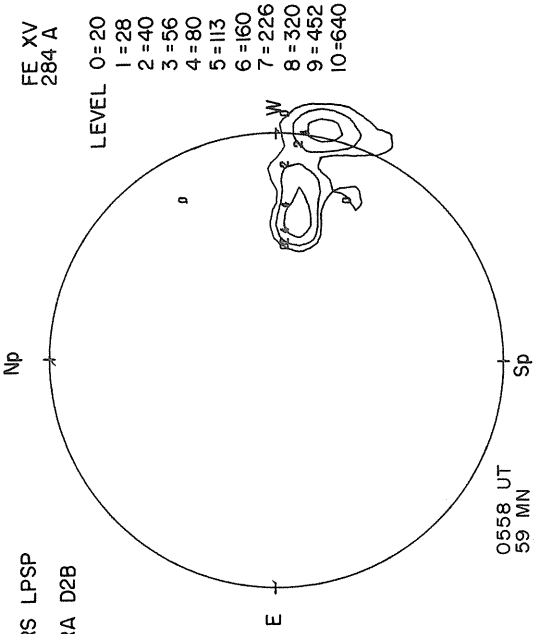
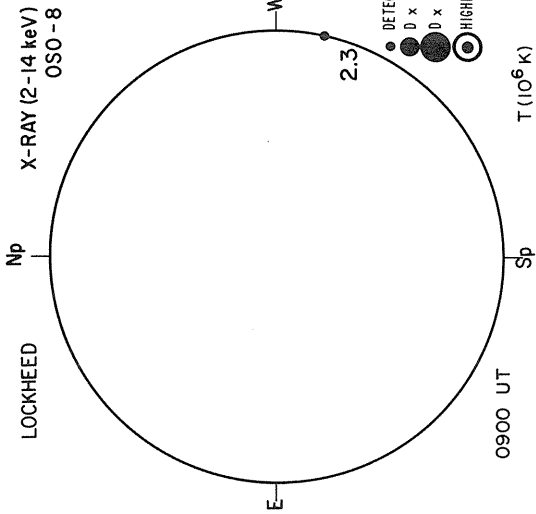
NELC LA POSTA

8.6 MM



Ant. Temp. Unit 100°K

MAY 27, 1976 (P = -17.22, B₀ = -1.21, L₀ = 9.90)



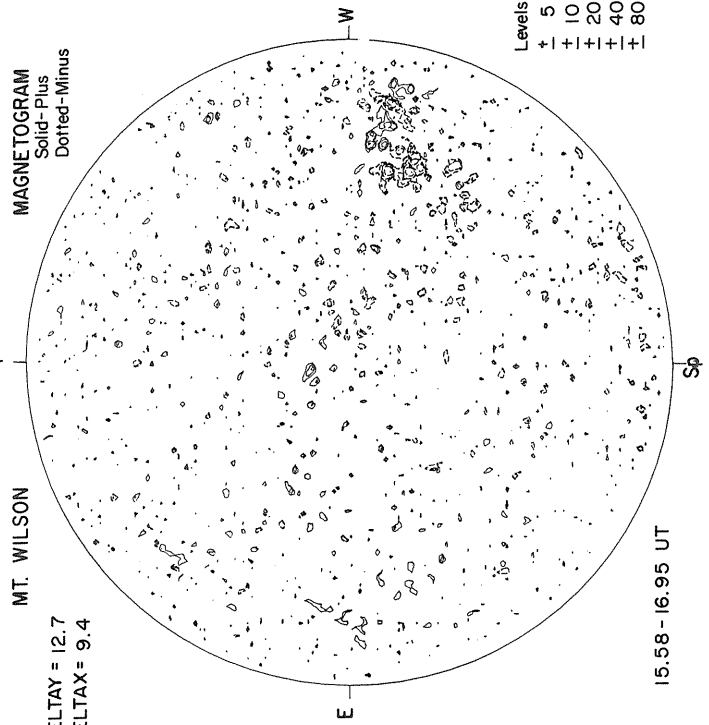
KITT PEAK

MAGNETOGRAM
 Bright-Plus
 Dark - Minus

MT. WILSON

MAGNETOGRAM
 Solid-Plus
 Dotted-Minus

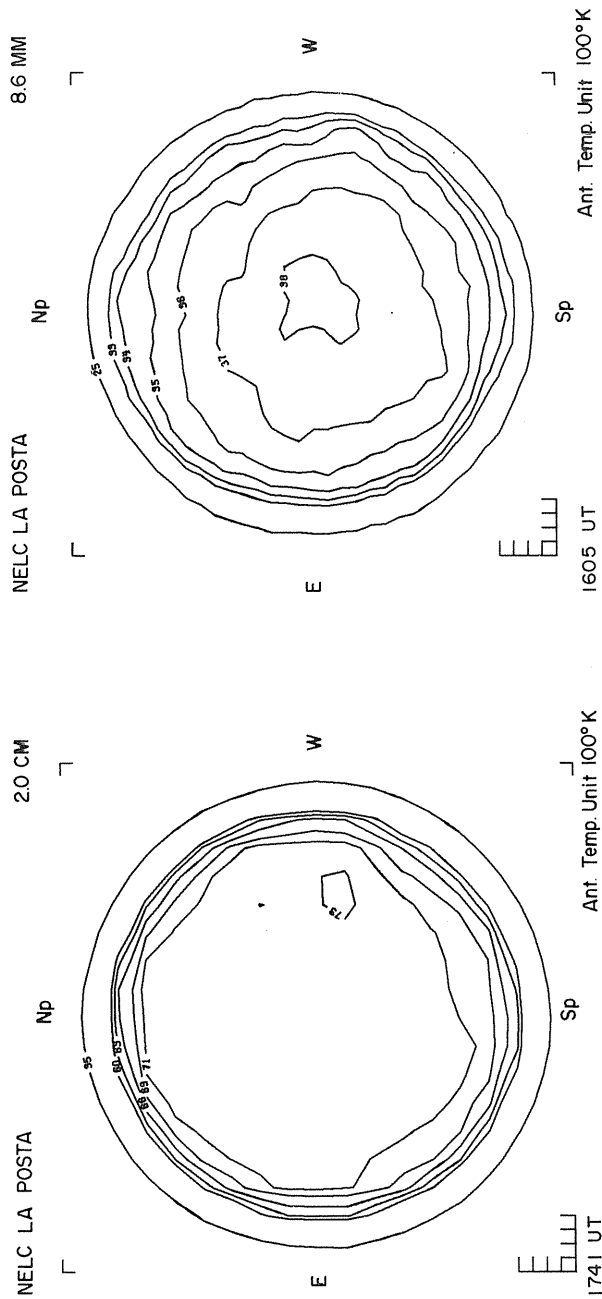
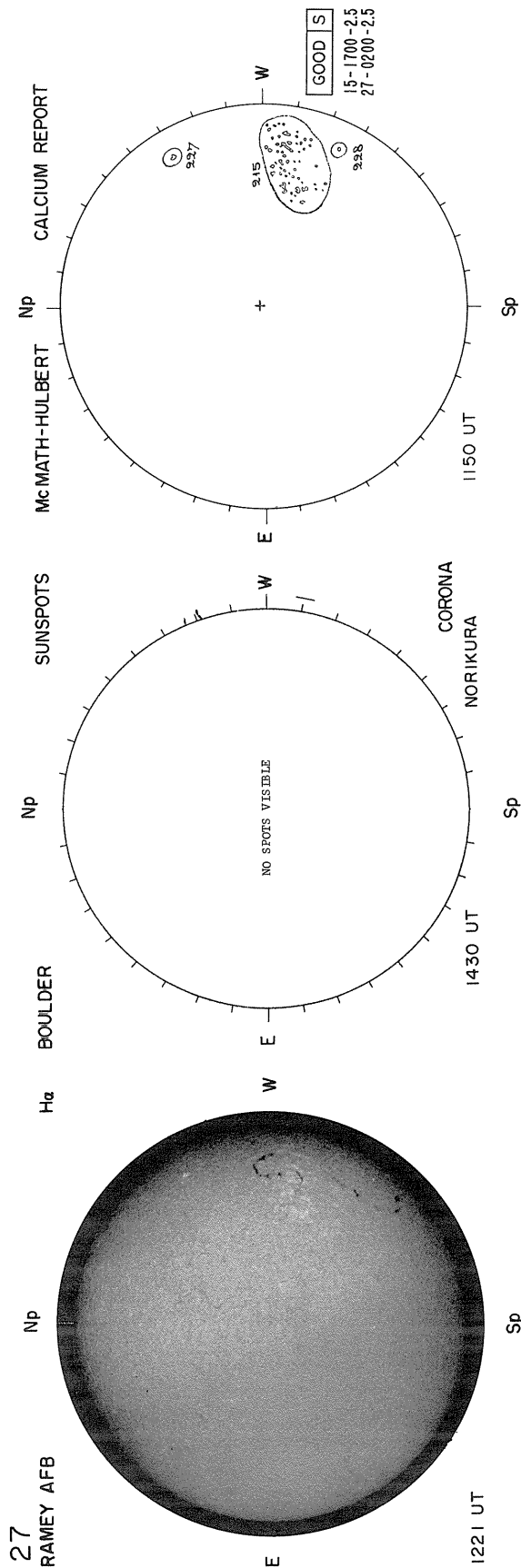
DELTA Y = 12.7
 DELTA X = 9.4



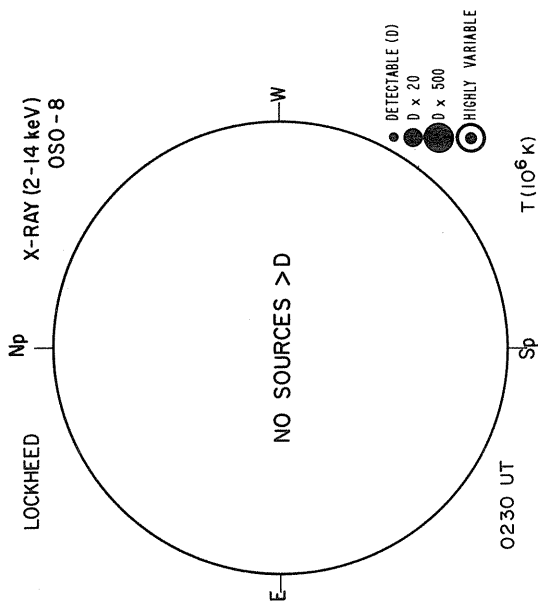
E

W

Sp



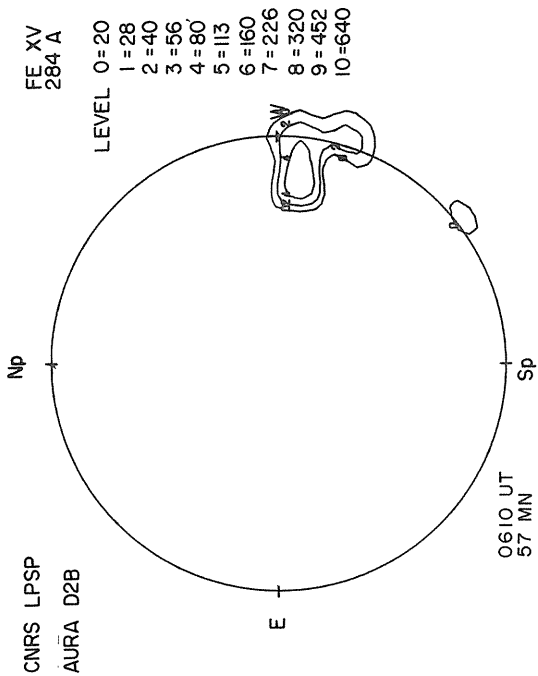
MAY 28, 1976 (P = -16.86, B₀ = -1.09, L₀ = 356.67)



KITT PEAK

MAGNETOGRAM

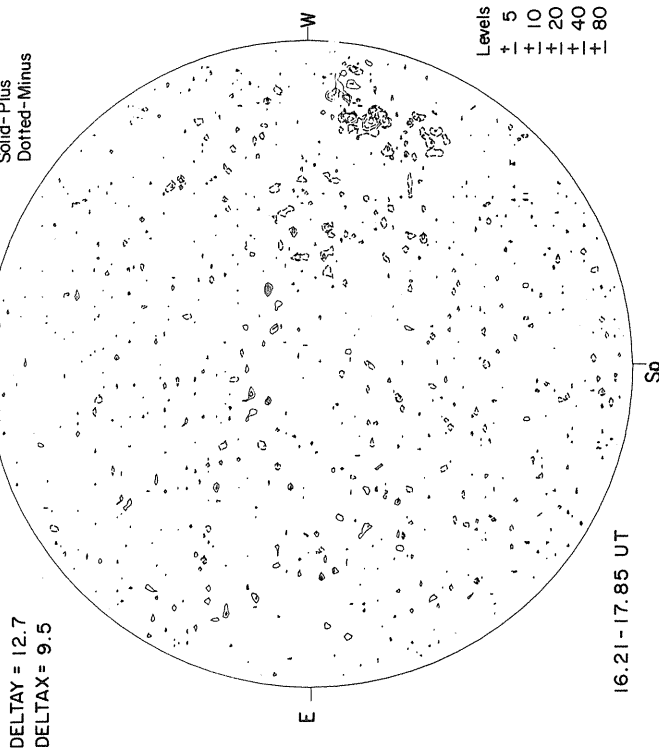
Bright - Plus
Dark - Minus



MT. WILSON

MAGNETOGRAM

Solid-Plus
Dotted-Minus



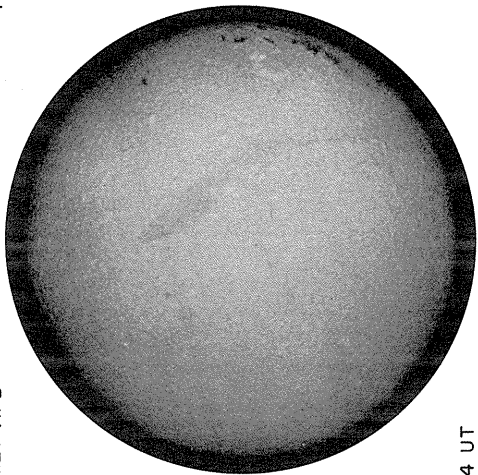
W

E

Sp

28
RAMEY AFB

Np

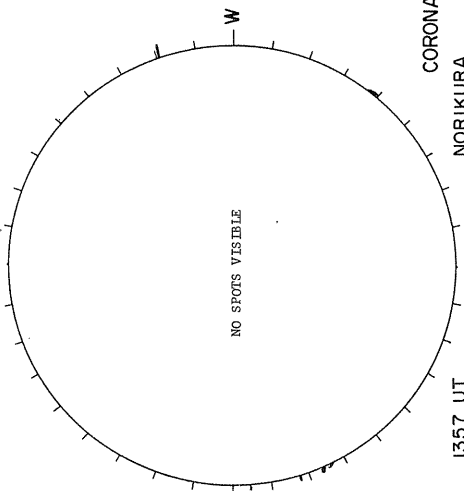


E

1614 UT

H α BOULDER

Np



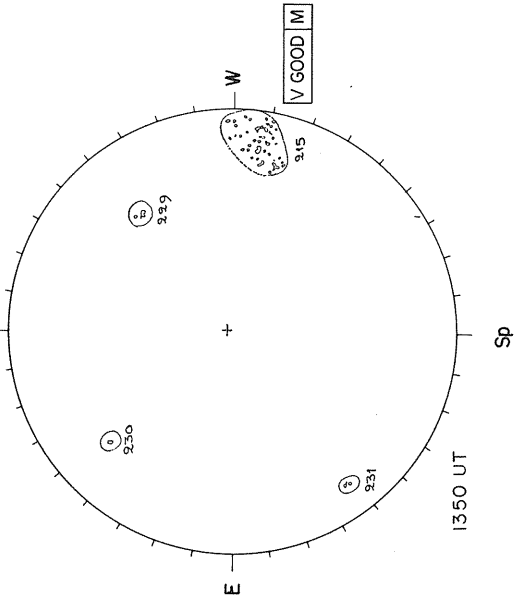
E

1357 UT

SUNSPOTS

Mc MATH-HULBERT

CALCIUM REPORT



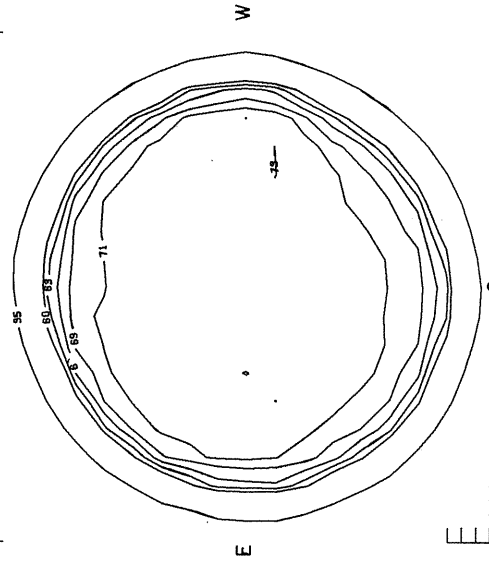
E

1350 UT

CORONA
NORIKURA

NELC LA POSTA

Np



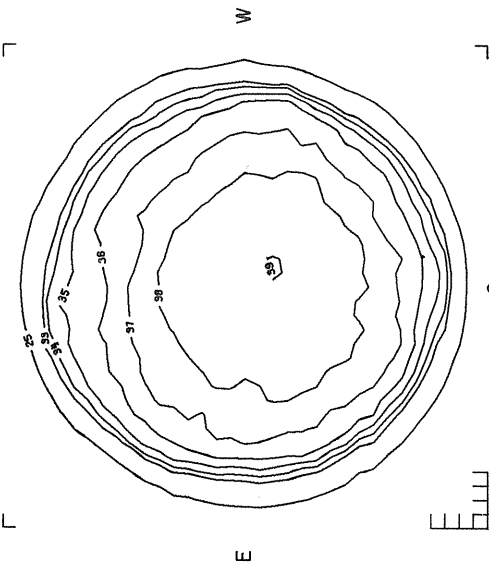
E

1641 UT

Ant. Temp. Unit 100°K

NELC LA POSTA

Np

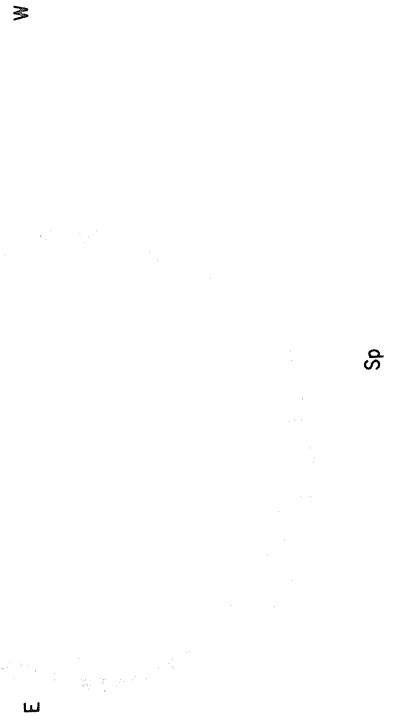
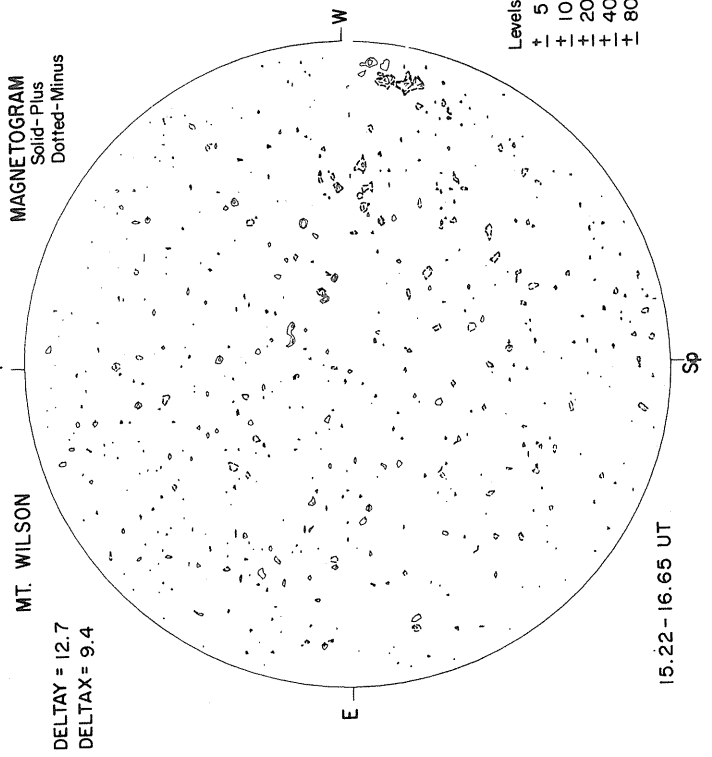
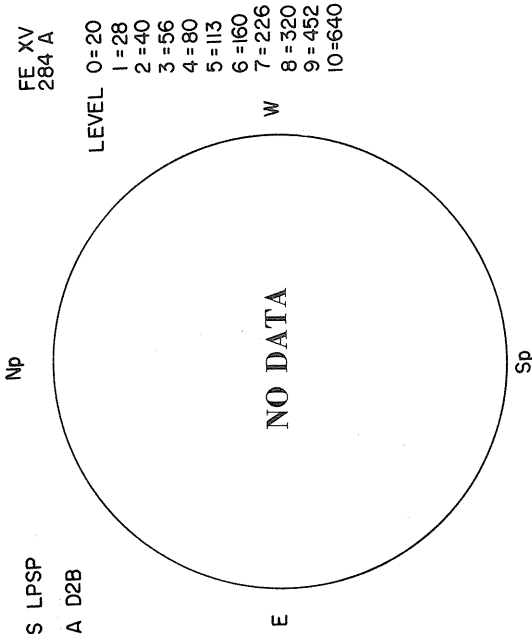
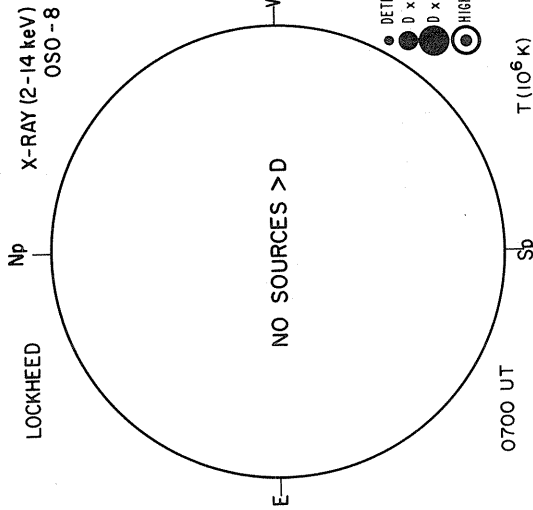


E

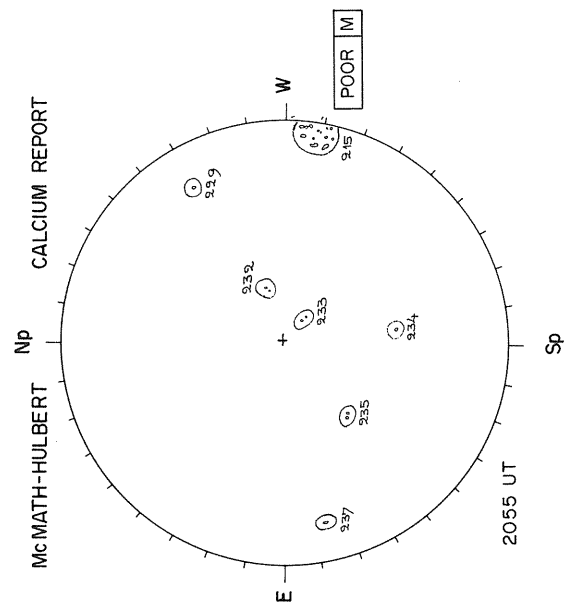
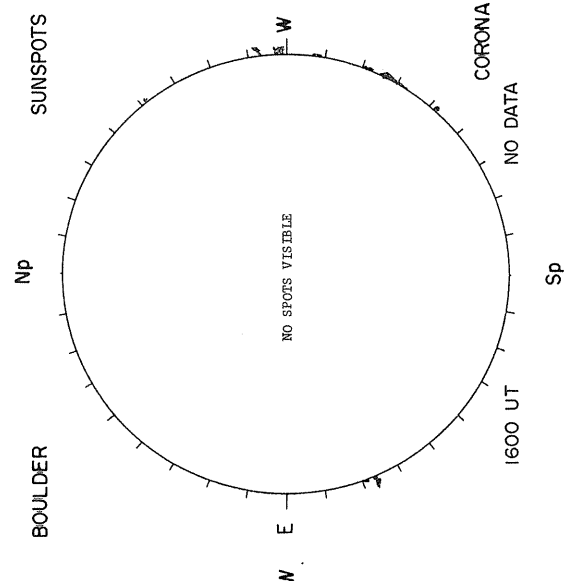
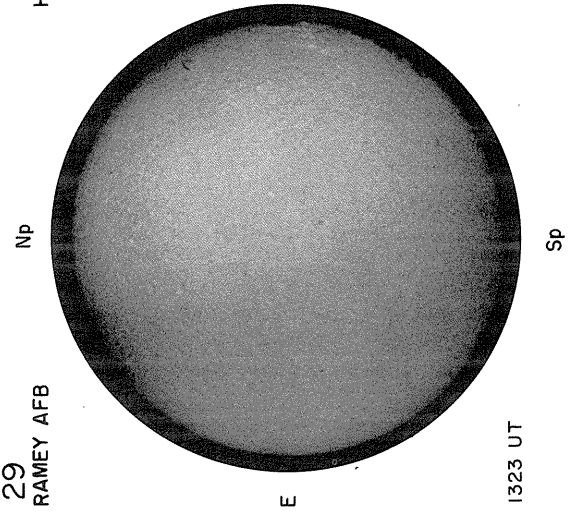
1737 UT

Ant. Temp. Unit 100°K

MAY 29, 1976 (P = -16.51, B₀ = -0.97, L₀ = 343.43)



29
RAMEY AFB



NELC LA POSTA
┌

Np NO DATA WEATHER

20 CM
┌

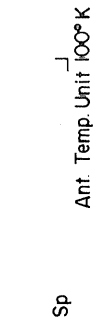
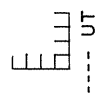
Np NO DATA WEATHER

NELC LA POSTA
┌

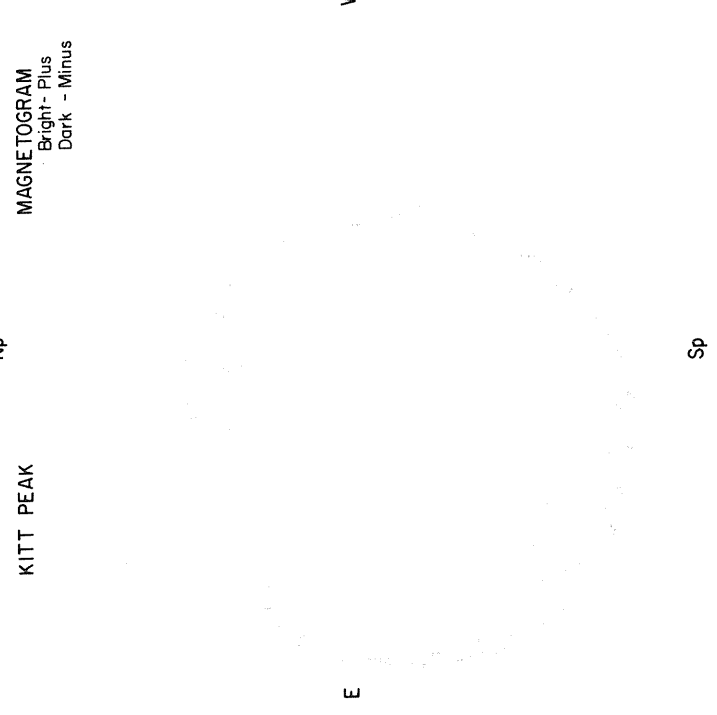
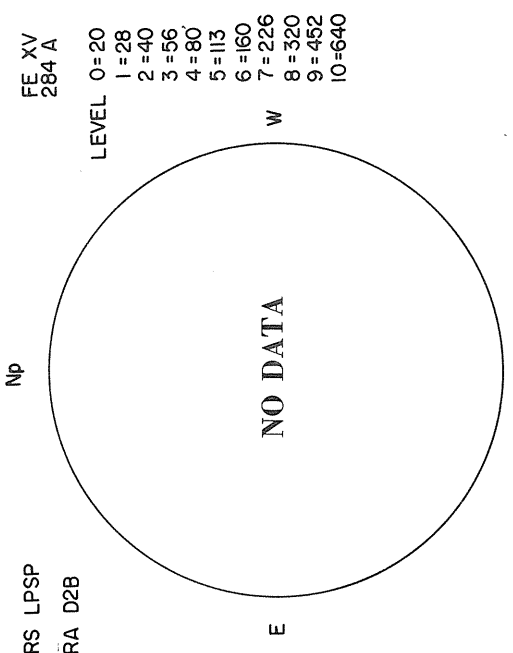
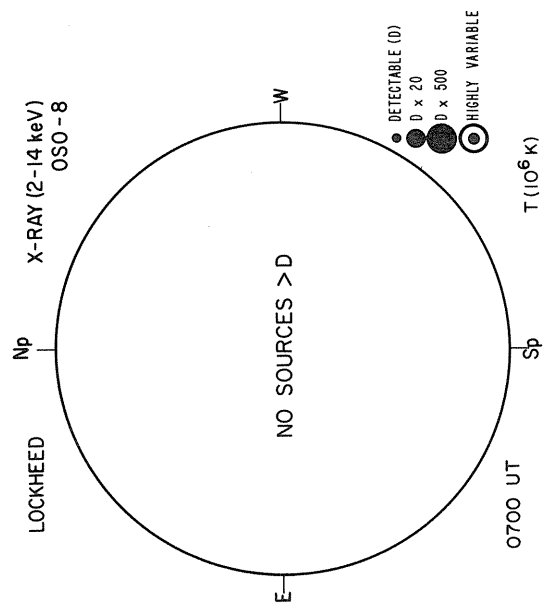
Np NO DATA WEATHER

8.6 MM
┌

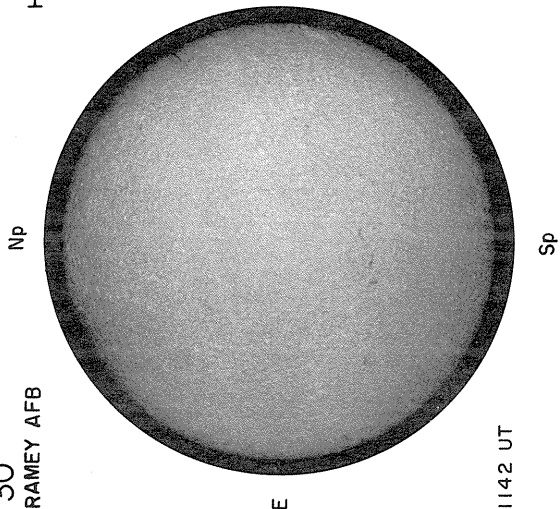
Np NO DATA WEATHER



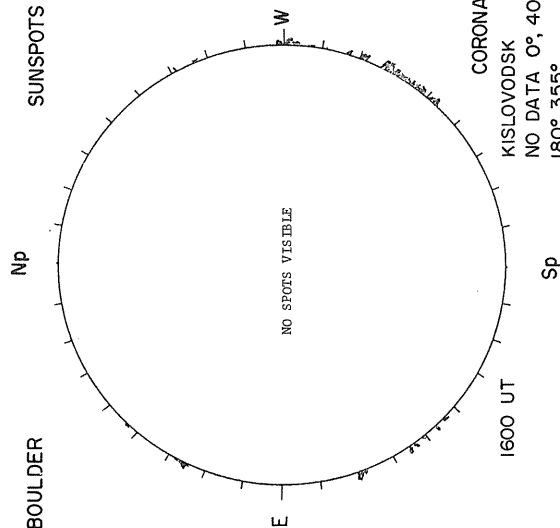
MAY 30, 1976 (P = -16.15, B₀ = -0.85, L₀ = 330.20)



30
RAMEY AFB



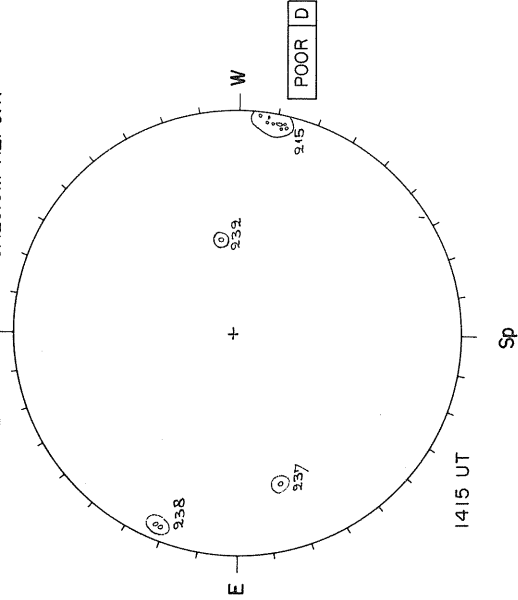
H α BOULDER



SUNSPOTS

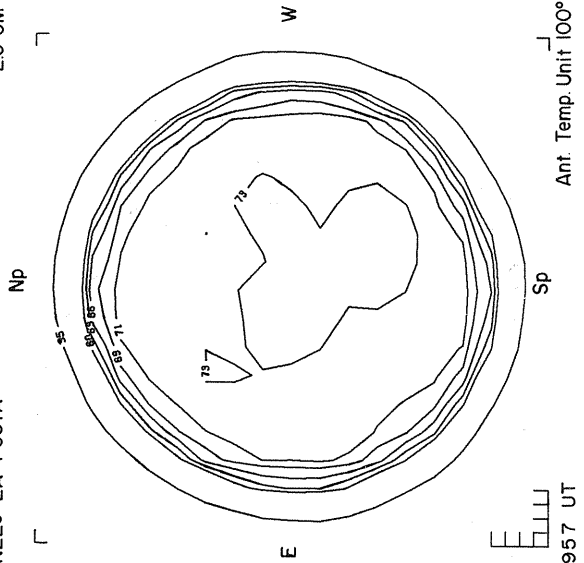
CORONA
KISLOVODSK
NO DATA 0°, 40°,
180°, 355°

McMATH-HULBERT
CALCIUM REPORT



NELC LA POSTA

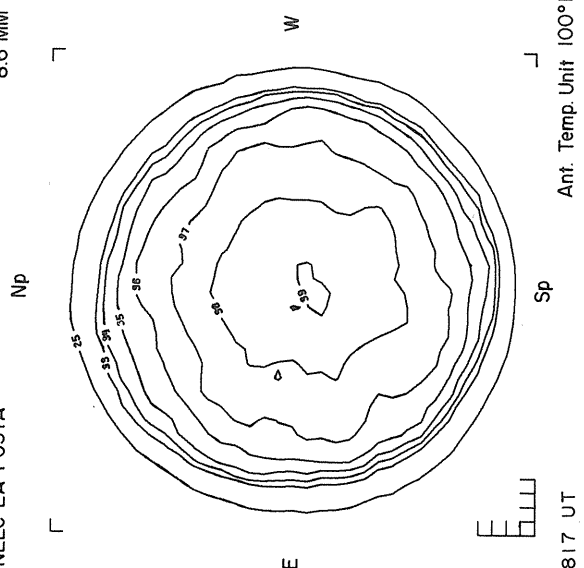
2.0 CM



Ant. Temp. Unit 100°K

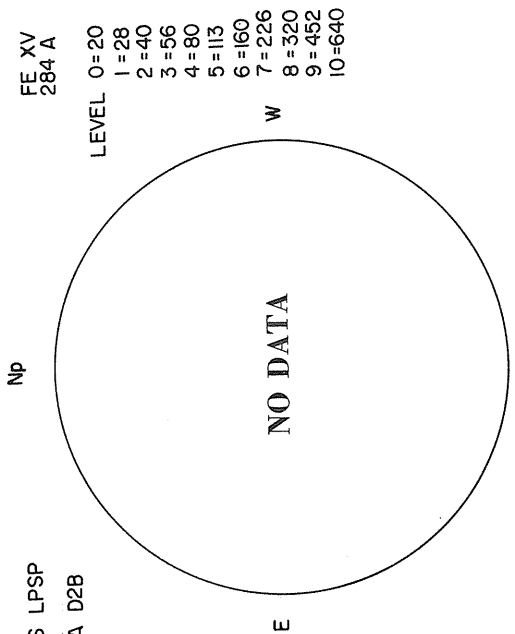
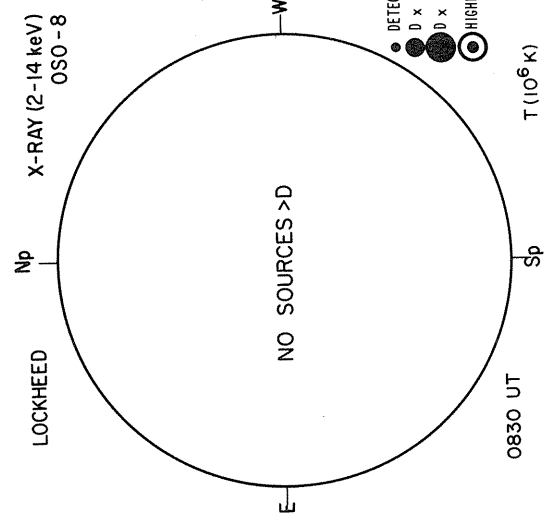
NELC LA POSTA

8.6 MM

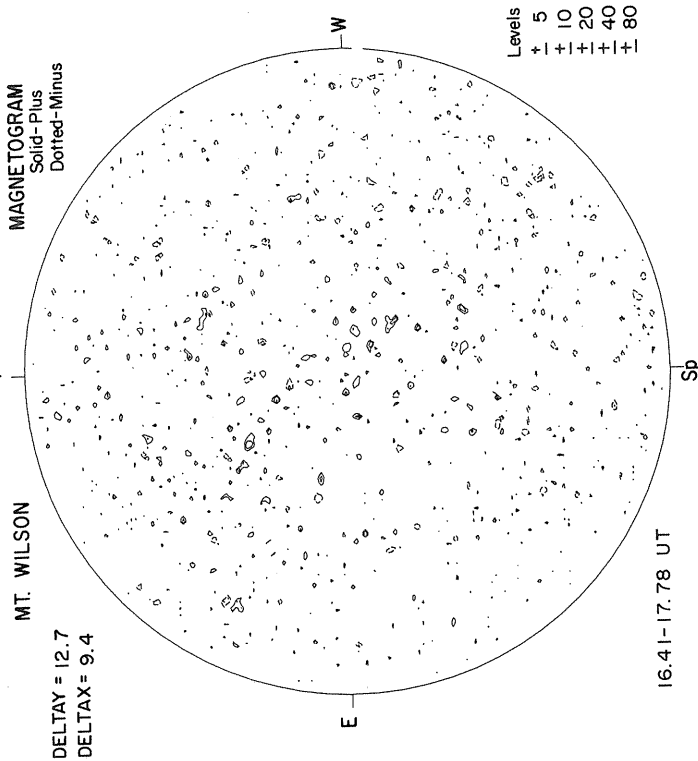


Ant. Temp. Unit 100°K

MAY 31, 1976 (P = -15.78, B₀ = -0.73, L₀ = 316.97)



KITT PEAK
MAGNETOGRAM
Bright- Plus
Dark - Minus

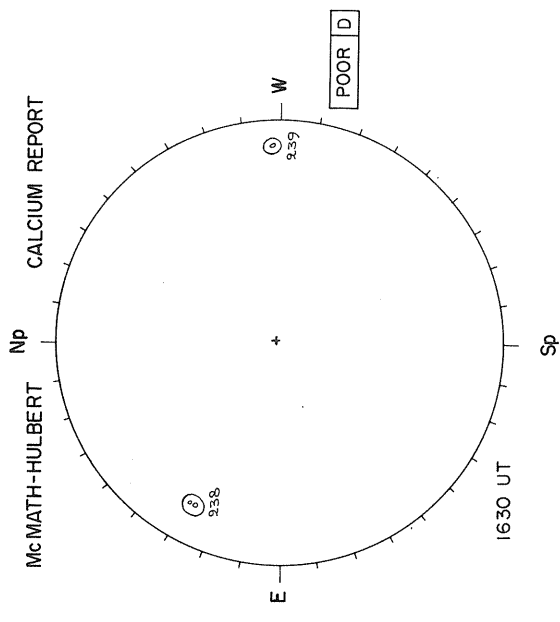
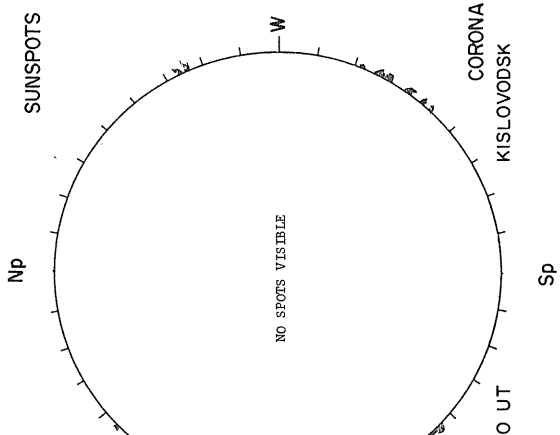
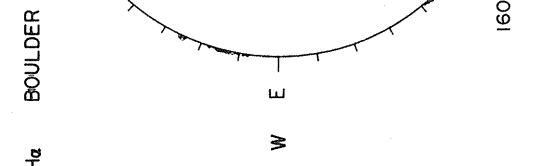
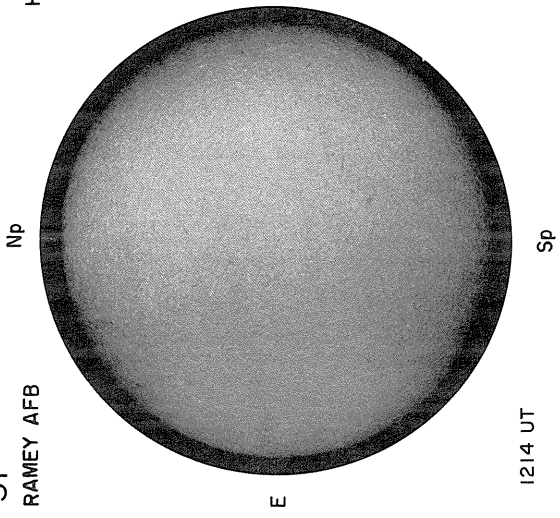


W

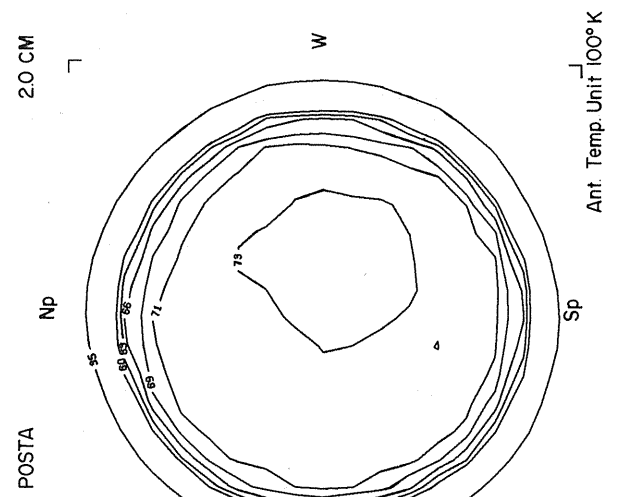
E

Sp

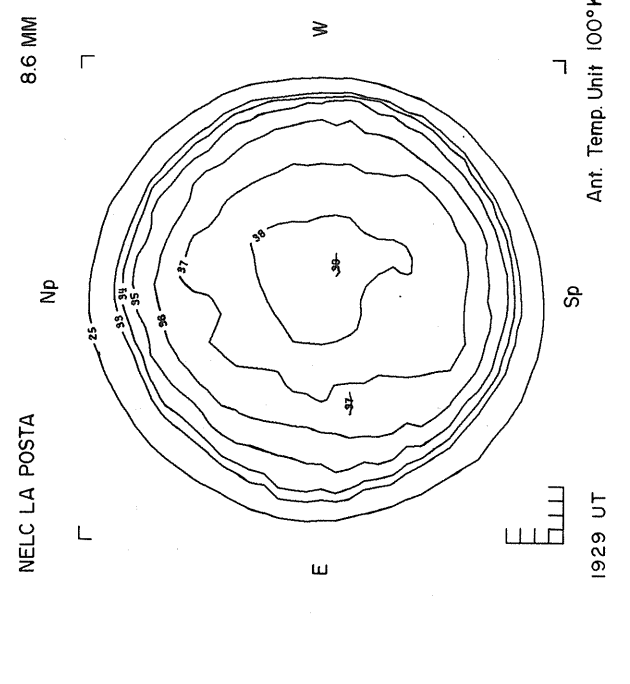
31
RAMEY AFB



NELC LA POSTA
NP
E
2107 UT



Ant. Temp. Unit 100° K



Ant. Temp. Unit 100° K

CORONA
KISLOVODSK

REGIONS OF SOLAR ACTIVITY

MAY 1976

MCMATH REGION 14198				CMP DATE 5.1				CALCIUM PLAGE DATA				SUNSPOT DATA				
YR	MO	DA	MC NO.	LAT CMD	L	AREA	INT	MW NO.	LAT CMD	L	MAG.	H	STA	AREA	CNT	CLASS
76	5	4	14198	S33 E08	299	100	1.5									

MCMATH REGION 14195				CMP DATE 5.8				CALCIUM PLAGE DATA				SUNSPOT DATA				
YR	MO	DA	MC NO.	LAT CMD	L	AREA	INT	MW NO.	LAT CMD	L	MAG.	H	STA	AREA	CNT	CLASS
76	5	2	14195	N10 E45	288	200	2.0	19681	N09 E42	285	BF					
76	5							19681	N09 E39	288	(B)	2				
76	5	3	14195	N10 E32	288	300	2.5	19681	N09 E28	290	BP		B	10	4	BXI
76	5	4	14195	N09 E17	290	300	2.5	19681	N10 E14	291	(B)	2	B	10	7	BX0
76	5	5	14195	N10 E04	290	300	2.5		N09 W01				B	10	5	BX0
76	5	7	14195	N10 W25	291	300	2.5									
76	5	8	14195	N10 W38	292	300	2.5									
76	5	9	14195	N10 W52	293	300	1.5									
76	5	10	14195	N10 W64	292	300	1.0									
76	5	11	14195	N08 W80	294	300	1.0									

MCMATH REGION 14196				CMP DATE 8.3				CALCIUM PLAGE DATA				SUNSPOT DATA				
YR	MO	DA	MC NO.	LAT CMD	L	AREA	INT	MW NO.	LAT CMD	L	MAG.	H	STA	AREA	CNT	CLASS
76	5	3	14196	S01 E64	256	100	1.0									

MCMATH REGION 14204				CMP DATE 10.2				CALCIUM PLAGE DATA				SUNSPOT DATA				
YR	MO	DA	MC NO.	LAT CMD	L	AREA	INT	MW NO.	LAT CMD	L	MAG.	H	STA	AREA	CNT	CLASS
76	5	7	14204	S25 E34	232	100	1.5									

MCMATH REGION 14207				CMP DATE 10.6				CALCIUM PLAGE DATA				SUNSPOT DATA				
YR	MO	DA	MC NO.	LAT CMD	L	AREA	INT	MW NO.	LAT CMD	L	MAG.	H	STA	AREA	CNT	CLASS
76	5	12	14207	S53 W26	227	100	2.5									
76	5	13	14207	S52 W35	222	100	1.0									

MCMATH REGION 14203				CMP DATE 11.8				RETURN OF REGION 14161				ROTATION 3				
YR	MO	DA	MC NO.	LAT CMD	L	AREA	INT	MW NO.	LAT CMD	L	MAG.	H	STA	AREA	CNT	CLASS
76	5	5	14203	N02 E85	209	500	1.5		N01 E30				B	120	2	HSX
76	5	6							N03 E70				R	100	2	HSX
76	5	7	14203	N03 E57	209	1400	2.5	19682	N01 E51	210	(AP)	5	B	120	2	HSX
76	5	8	14203	N03 E44	210	1300	2.0	19682	N01 E42	210	(AP)	5	B	130	1	HSX
76	5	9	14203	N03 E30	211	1500	2.0	19682	N00 E28	211	(AP)	5	B	100	2	HRX
76	5	10	14203	N03 E17	211	1500	2.0	19682	N00 E15	211	(AP)	5	B	10	3	HSX
76	5							19683	N06 E22	204	A		B	0	1	AXX
76	5	11	14203	N03 E03	211	1500	2.5	19684	N03 E02	211	(B)	1				
76	5							19682	N00 E02	211	(AP)	5	B	120	2	HSX
76	5								N01 E16				B	10	3	HSX
76	5	12	14203	N03 W09	210	1300	2.5	19682	N00 W12	211	(AP)	5				
76	5	13	14203	N04 W22	209	1300	2.0	19682	N00 W26	212	(AP)	5	B	120	2	HSX
76	5	14	14203	N04 W36	209	1200	2.0	19682	N00 W38	211	(AP)	4	B	70	3	HSX
76	5	15						19687	S03 W53	213	(Y)	3	R	10	4	BX0
76	5							19682	N00 W52	212	(AP)	4	R	80	2	HSX
76	5	16	14203	N01 W67	213	1500	3.5	19682	N00 W66	212	(AP)	3	R	70	1	HSX
76	5							19687	S02 W66	212	(BY)	3	R	20	5	BX0
76	5	17						19687	S02 W79	212	(B)					
76	5							19682	N00 W78	211	(AP)	3	B	70	2	HSX

REGIONS OF SOLAR ACTIVITY

MAY 1976

MCMATH REGION 14223 CMP DATE 27.0

				CALCIUM PLAGE DATA				SUNSPOT DATA							
YR	MO	DA	MC NO.	LAT CMD	L	AREA	INT	MW NO.	LAT CMD	L	MAG.	H STA	AREA	CNT	CLASS
76	5	22	14223	N06 E59	9	100	2.0								

MCMATH REGION 14225 CMP DATE 27.8

				CALCIUM PLAGE DATA				SUNSPOT DATA							
YR	MO	DA	MC NO.	LAT CMD	L	AREA	INT	MW NO.	LAT CMD	L	MAG.	H STA	AREA	CNT	CLASS
76	5	25	14225	S35 E29	0	200	1.5								

MCMATH REGION 14243 CMP DATE 27.9

				CALCIUM PLAGE DATA				SUNSPOT DATA							
YR	MO	DA	MC NO.	LAT CMD	L	AREA	INT	MW NO.	LAT CMD	L	MAG.	H STA	AREA	CNT	CLASS
76	6	1	14243	S27 W26		200	1.0								
76	6	2	14243	S27 W36		100	1.0								

MCMATH REGION 14232 CMP DATE 28.8

				CALCIUM PLAGE DATA				SUNSPOT DATA							
YR	MO	DA	MC NO.	LAT CMD	L	AREA	INT	MW NO.	LAT CMD	L	MAG.	H STA	AREA	CNT	CLASS
76	5	29	14232	N03 W14	347	100	2.0								
76	5	30	14232	N04 W25	349	100	1.5								

MCMATH REGION 14233 CMP DATE 29.4

				CALCIUM PLAGE DATA				SUNSPOT DATA							
YR	MO	DA	MC NO.	LAT CMD	L	AREA	INT	MW NO.	LAT CMD	L	MAG.	H STA	AREA	CNT	CLASS
76	5	29	14233	S05 W06	339	100	2.0								

MCMATH REGION 14234 CMP DATE 29.5

				CALCIUM PLAGE DATA				SUNSPOT DATA							
YR	MO	DA	MC NO.	LAT CMD	L	AREA	INT	MW NO.	LAT CMD	L	MAG.	H STA	AREA	CNT	CLASS
76	5	29	14234	S31 W05	338	100	2.0								

MCMATH REGION 14242 CMP DATE 30.7

				CALCIUM PLAGE DATA				SUNSPOT DATA							
YR	MO	DA	MC NO.	LAT CMD	L	AREA	INT	MW NO.	LAT CMD	L	MAG.	H STA	AREA	CNT	CLASS
76	6	1	14242	N03 W63		100	1.5								

MCMATH REGION 14230 CMP DATE 31.3

				CALCIUM PLAGE DATA				SUNSPOT DATA							
YR	MO	DA	MC NO.	LAT CMD	L	AREA	INT	MW NO.	LAT CMD	L	MAG.	H STA	AREA	CNT	CLASS
76	5	28	14230	N32 E36	314	100	2.0								

MCMATH REGION 14235 CMP DATE 31.3

				CALCIUM PLAGE DATA				SUNSPOT DATA							
YR	MO	DA	MC NO.	LAT CMD	L	AREA	INT	MW NO.	LAT CMD	L	MAG.	H STA	AREA	CNT	CLASS
76	5	29	14235	S18 E19	314	100	2.0								

Note: Region 14211 is new plage that has developed near the location of 14171 and 14184 of the previous rotation. No calcium spectroheliograms were secured at the McMath-Hulbert Observatory on May 6, 15 and 17, 1976. No sunspot observations were made at Mt. Wilson Observatory on May 5 and 6, 1976.

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May 76

DAILY CALCIUM PLAGE INDEX

MAY 1976

YR	MO	DAY	INDEX	YR	MO	DAY	INDEX	YR	MO	DAY	INDEX
76	5	1	6.2	76	5	11	6.1	76	5	21	9.9
76	5	2	4.6	76	5	12	6.6	76	5	22	9.0
76	5	3	2.8	76	5	13	5.8	76	5	23	7.6
76	5	4	1.7	76	5	14	6.5	76	5	24	7.5
76	5	5	1.5	76	5	15	*	76	5	25	4.5
76	5	6	*	76	5	16	7.3	76	5	26	4.0
76	5	7	2.6	76	5	17	*	76	5	27	3.1
76	5	8	2.6	76	5	18	6.9	76	5	28	2.1
76	5	9	3.3	76	5	19	7.7	76	5	29	1.2
76	5	10	4.0	76	5	20	8.7	76	5	30	0.4
76	5	31	0.2					76	5	31	*

* NO OBSERVATIONS

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May 76

SOLAR RADIO EMISSION SPECTRAL OBSERVATIONS

MAY 1976

MAY 1976	TIMES OF OBSERVATION		STATION	EVENTS									SPECTRAL TYPE		
	START UT	END UT		DECIMETRIC BAND			METRIC BAND			DEKAMETRIC BAND					
				START UT	END UT	INT	START UT	END UT	INT	START UT	END UT	INT			
10	0931	2349	SGMR												
	1208	2400	BOUL												
	1247	2245	HARV												
	1340	1400	WEIS												
	1425	1436	WEIS												
	1520	1807	WEIS												
	2029	2400	CULG				2128	2130							IIIG,W
	2133	2400	MANI												
11	0000	1011	MANI												
	0000	0200	BOUL												
	0429	1126	WEIS												
	0440	1834	DURN												
	0000	0728	CULG				0709								IIIB,W
	0930	2350	SGMR												
	1132	1458	WEIS												
	1247	2245	HARV												
	1627	1808	WEIS												
	1130	2400	BOUL				1936	2145	1						IS
			BOUL				2019.7	2020.0	1						III
			BOUL				2033.1	2033.9	1						III
	2029	2400	CULG				2102	2103							IIIG,W
	2133	2400	MANI												
12	0000	0728	CULG				0114.5	0653							IIIN,W
	0000	0553	MANI							0147.3	0147.6	2			III
	0000	0200	BOUL							0147.4	0147.8	1			III
			CULG				0147.4	0147.8	1						IIIG,V
			CULG				0147	0148	2						IIIG,U
			CULG				0211	0212	2						IIIG,W
			MANI				0242	0243							III
			CULG				0244	0246	2	0244.1	0245.8	3			IIIGG,V
			CULG				0403	0404		0244	0245	2			IIIG,W
	0603	1011	MANI												
	0427	1808	WEIS				0629	0651	1						IIIG
			WEIS				0950.8	0951.8	1						IIIG
			WEIS				1202.6	1203.4	2						IIIG
	1130	2400	BOUL				1202.6	1203.2	2	1202.6	1203.2	2			IIIG
	0929	2351	SGMR							1202.7	1203.4	2			III
			BOUL				1236.0	1236.4	2						IIIG
			SGMR							1236.2	1247.5	1			IIIG
			BOUL				1239.4	1241.2	1	1239.4	1241.2	1			IIIG
	0439	1835	DURN	1246.5	1246.7	1	1246.5	1246.7	1						IIIG
			BOUL				1246.6	1247.2	1	1246.6	1247.2	1			IIIG
			SGMR							1300.9	1301.2	1			III
			BOUL				1328.8	1333.4	2	1328.8	1333.4	2			IIIG
			WEIS				1330.7	1331.3	2						IIIG
	1247	2255	HARV				1331		1						IIIB
			WEIS				1333.4	1333.5	1						IIIB
			BOUL				1341.4	1343.8	1	1341.4	1343.8	1			IIIG
			BOUL				1444.5	1444.9	1						IIIG
			BOUL				1512.5	1512.7	1						III
			BOUL				1813.4	1817.8	1						IIIG
			HARV				1834		2	1834		2			IIIB
			BOUL				1838.2	1841.7	2	1838.2	1841.7	2			IIIG
			HARV				1838	1839	2						IIIG
			BOUL				2048.5	2048.6	1						III
			BOUL				2051.9	2052.0	1	2051.9	2052.0	1			III
			BOUL				2054.3	2056.1	3	2054.3	2056.1	3			IIIG
			SGMR							2054.4	2056.1	2			V
	2028	2400	CULG	2054	2113	1	2052	2116.5	2	2054	2056	1			IIIG
			HARV				2054	2057	3	2054	2057	3			IIIGG
			SGMR							2105.4	2105.6	1			III
			HARV				2105		2	2105		2			IIIB
			BOUL				2111.1	2113.6	2	2111.1	2113.6	2			III
			SGMR							2111.6	2111.8	1			III
			HARV				2111	2113	2	2111	2113	2			IIIG
	2132	2400	MANI												
13	0000	0728	CULG				0000	0613	1						IIIN

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SOLAR RADIO EMISSION SPECTRAL OBSERVATIONS

MAY 1976

MAY 1976	TIMES OF OBSERVATION		STATION	EVENTS									SPECTRAL TYPE	
	START UT	END UT		DECIMETRIC BAND			METRIC BAND			DEKAMETRIC BAND				
				START UT	END UT	INT	START UT	END UT	INT	START UT	END UT	INT		
29	0000	1012	MANI											IIIB,W
	0000	0729	CULG				0123.5							
	0409	1308	WEIS											
	0430	1842	DURN											
	0914	2407	SGMR											
	1230	2245	HARV											
	1130	1930	BOUL				1300.7	1302.2	1	1300.7	1302.2	1		
	2030	2400	CULG											
	2129	2400	MANI											
30	0000	1012	MANI											
	0000	0716	CULG											
	0000	0230	BOUL											
	0430	1842	DURN											
	0914	2408	SGMR											
	1230	2245	HARV											
	1130	2400	BOUL							1628.2	1628.7	1		
	2030	2400	CULG											
	2129	2400	MANI											
31	0000	1012	MANI											
	0000	0230	BOUL											
	0000	0730	CULG				0257.5	0300						
	0429	0628	DURN											
	0636	1842	DURN											
	0651	1625	WEIS											
	0913	2409	SGMR											
	1130	2400	BOUL											
	1230	2245	HARV											
	1641	1829	WEIS											
	2030	2400	CULG											
	2129	2400	MANI											

The symbols used in connection with the spectral type in describing the important bursts are as follows:

- | | |
|--|---|
| <ul style="list-style-type: none"> B = Single burst G = Small group (< 10) of bursts GG = Large group (> 10) of bursts 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 | <ul style="list-style-type: none"> RS = Reverse slope burst DP = Drifting pairs DC = Drifting Chains H = Herringbone W = Weak P = Pulsations CONT = Continuum UNCLF = Unclassified activity |
|--|---|

SELECTED SOLAR EVENTS

MAY 1976

Culgoora

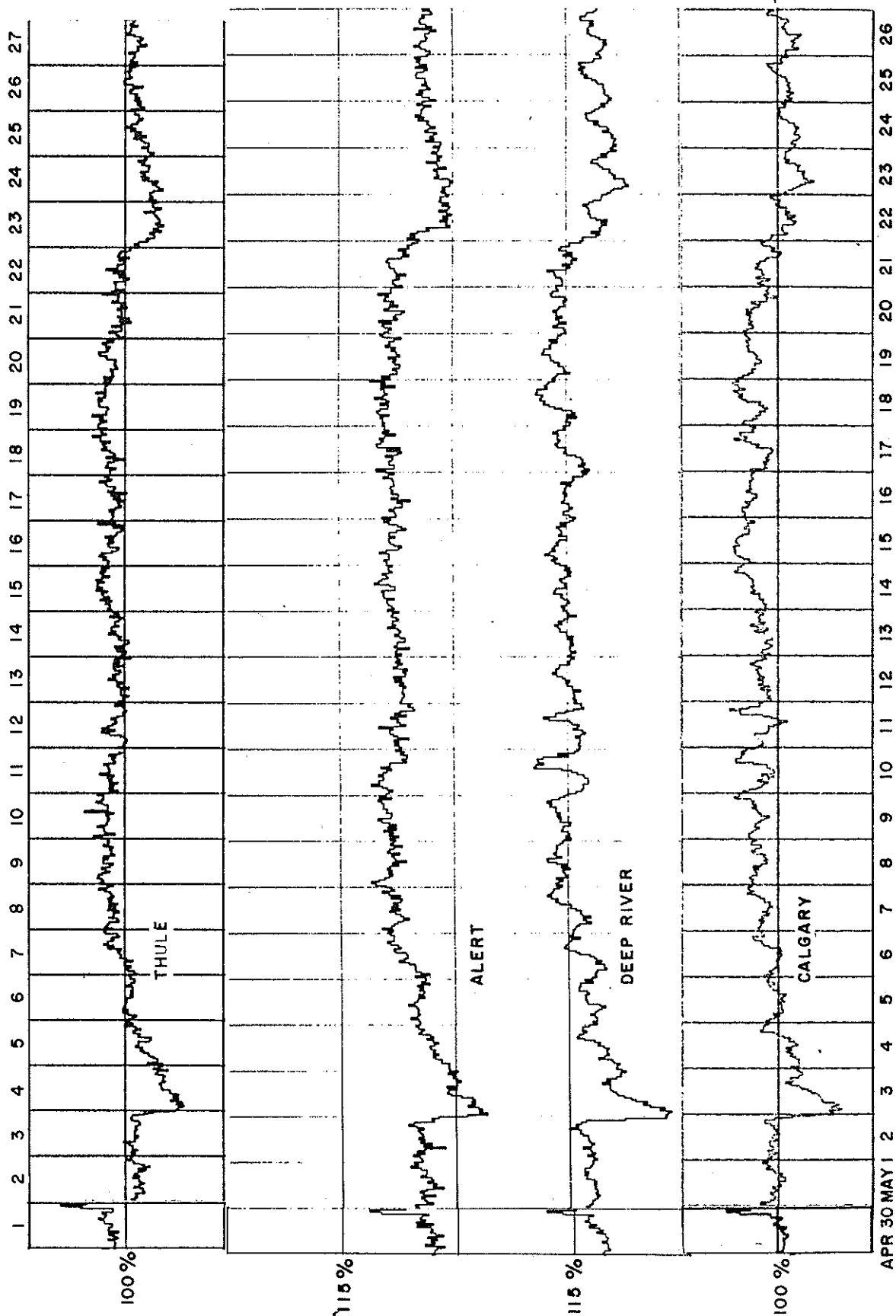
UT Date 1976. MAY	HELIOGRAPH EVENT							Spectral Type	REMARKS
	Start (UT)	End (UT)	Freq. (MHz)	Positions		Polarization	Intensity (1-3)		
				Central Dist. (R _o)	Position Angle (Deg.)				
1	0148	0153	160	0.9	250	0	2)	IIIGG	*
			80	1.2	260	0	3)		
			43	1.5	250	-	3)		
12	0147	0148	160	1.2	70	0	2)	IIIG, V	*
			80	1.5	80	0	3)		
			43	1.8	80	-	3)		
13	0233	0235	160	1.2	70	0	3)	IIIG	*
			80	1.3	70	0	3)		
			43	1.6	70	-	3)		
15	0243	0246	160	1.0	60	0	1)	IIIG	Two events in succession at 80 MHz
			80	(1.1	40)	0	2)		
				(0.9	240)				
16	0209	0210	160	1.1	230	0	3	IIIB	*
			80	1.1	230	0	3		
	0240	0241	160	0.7	60	0	3	IIIB	
			80	0.8	50	0	3		

Days without Heliograph observations: ..Nil.....

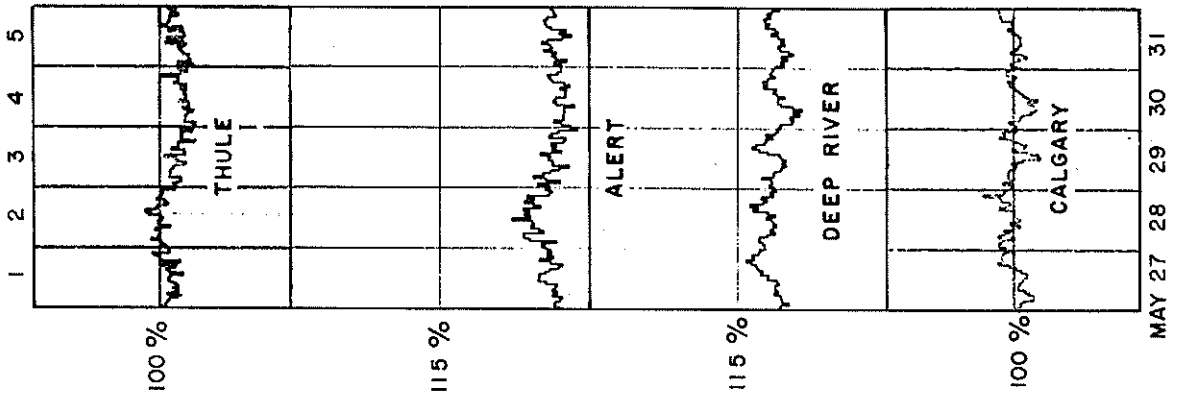
* Other Type III's observed at same positions during day

COSMIC RAY INDICES (Neutron Monitors)

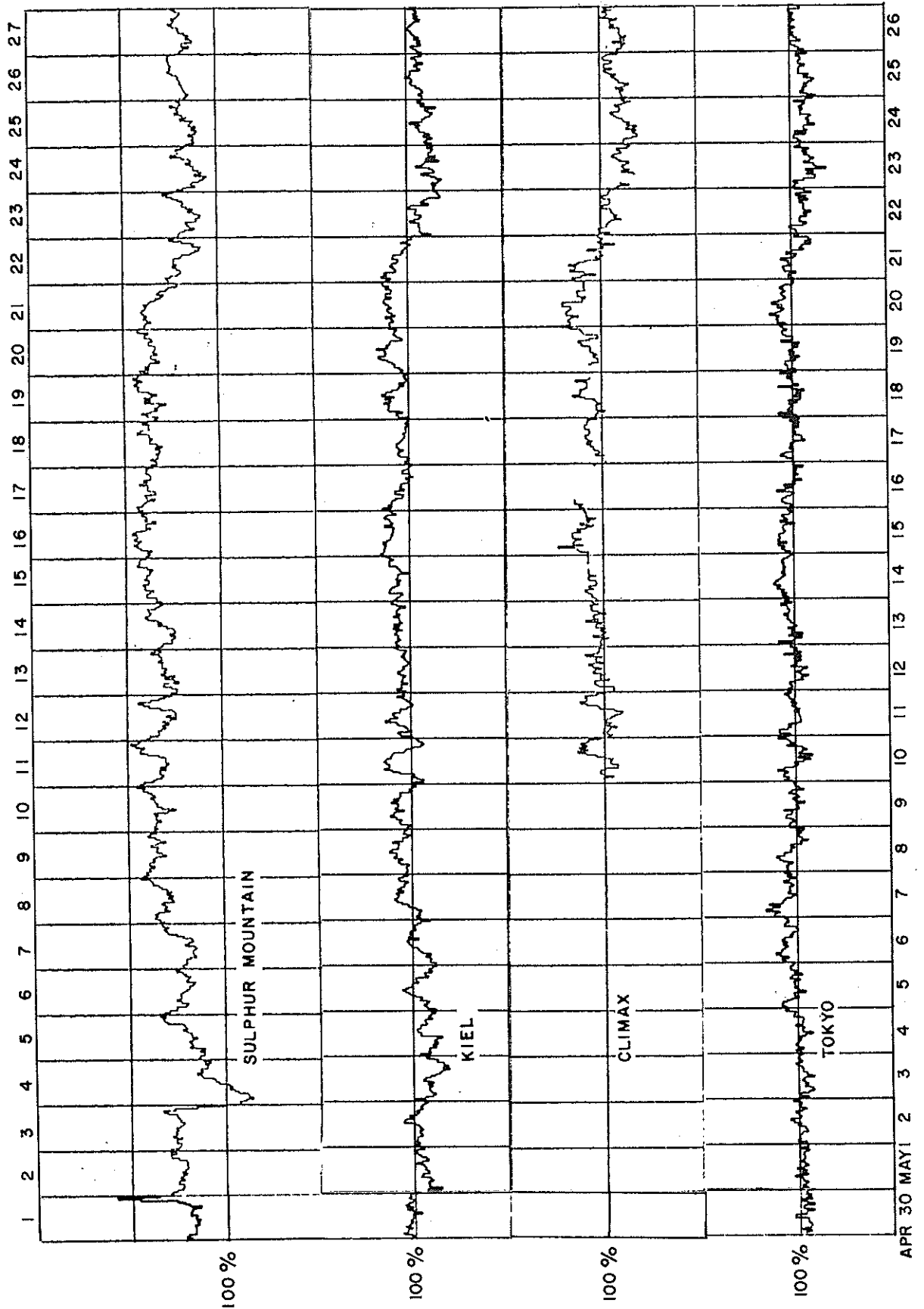
Bartel's Rotation 1952 (APR - MAY 1976)



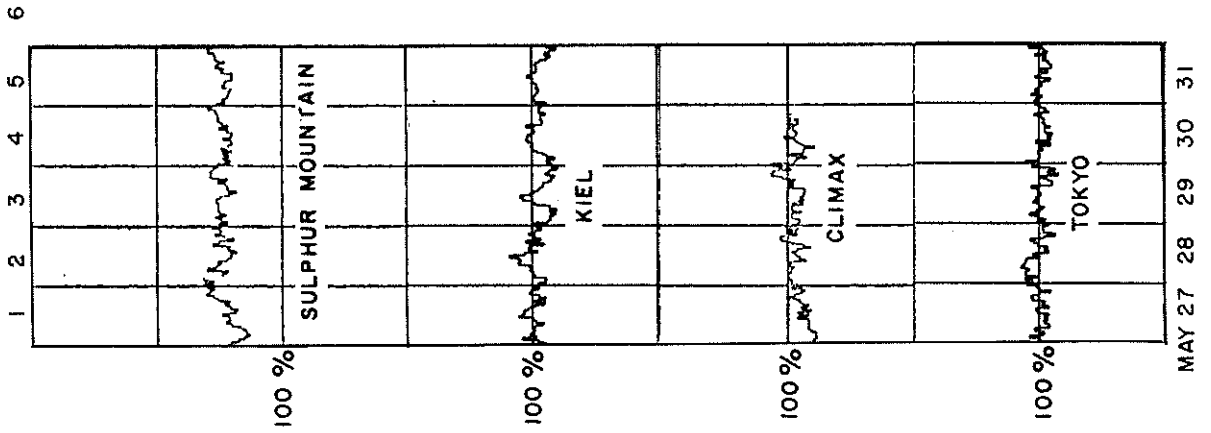
COSMIC RAY INDICES
(Neutron Monitors)
Bartel's Rotation 1953 (May 1976)



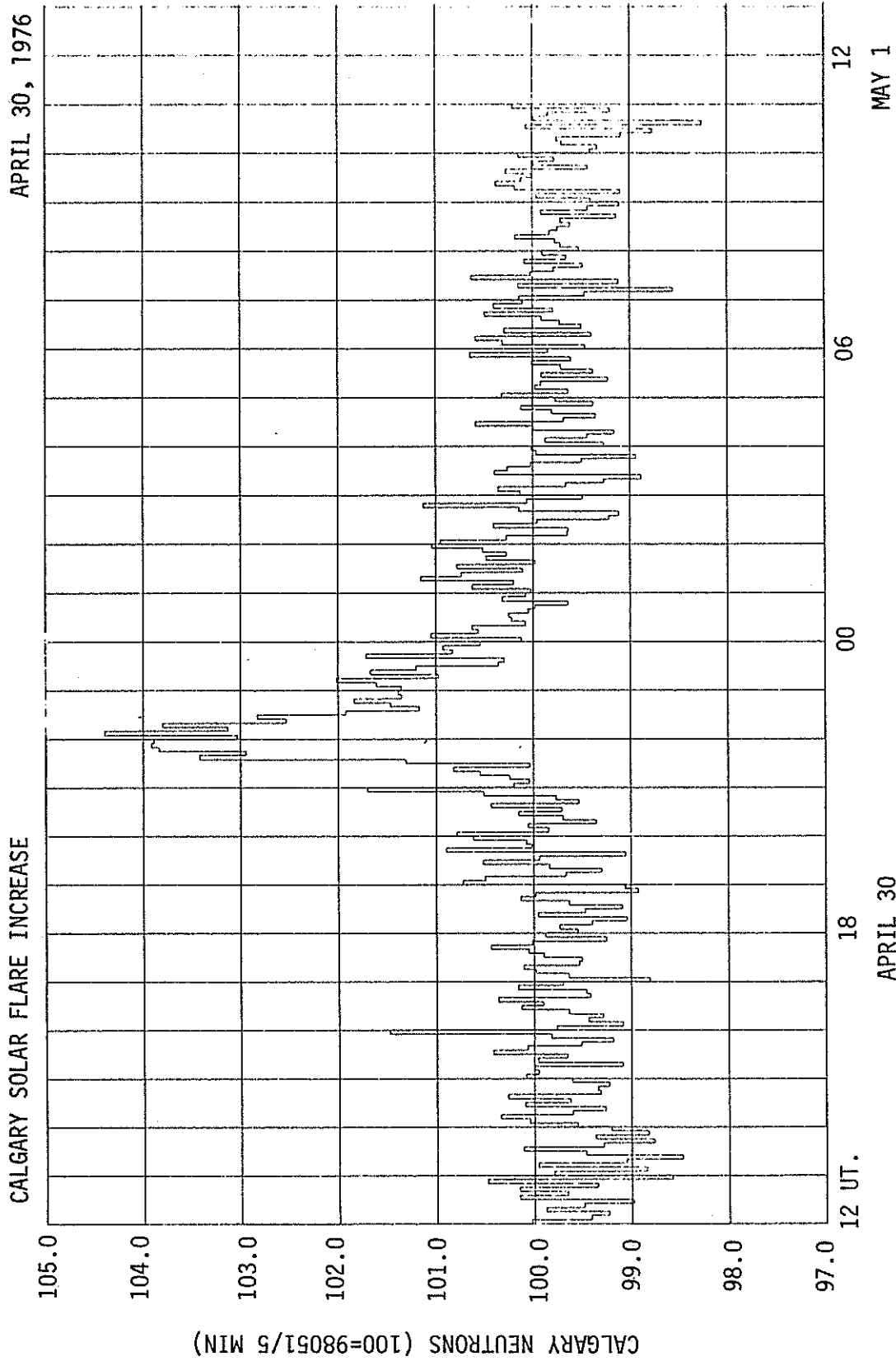
COSMIC RAY INDICES
(Neutron Monitors)
Bartel's Rotation 1952 (APR - MAY 1976)



COSMIC RAY INDICES
(Neutron Monitors)
Bartel's Rotation 1953 (May 1976)

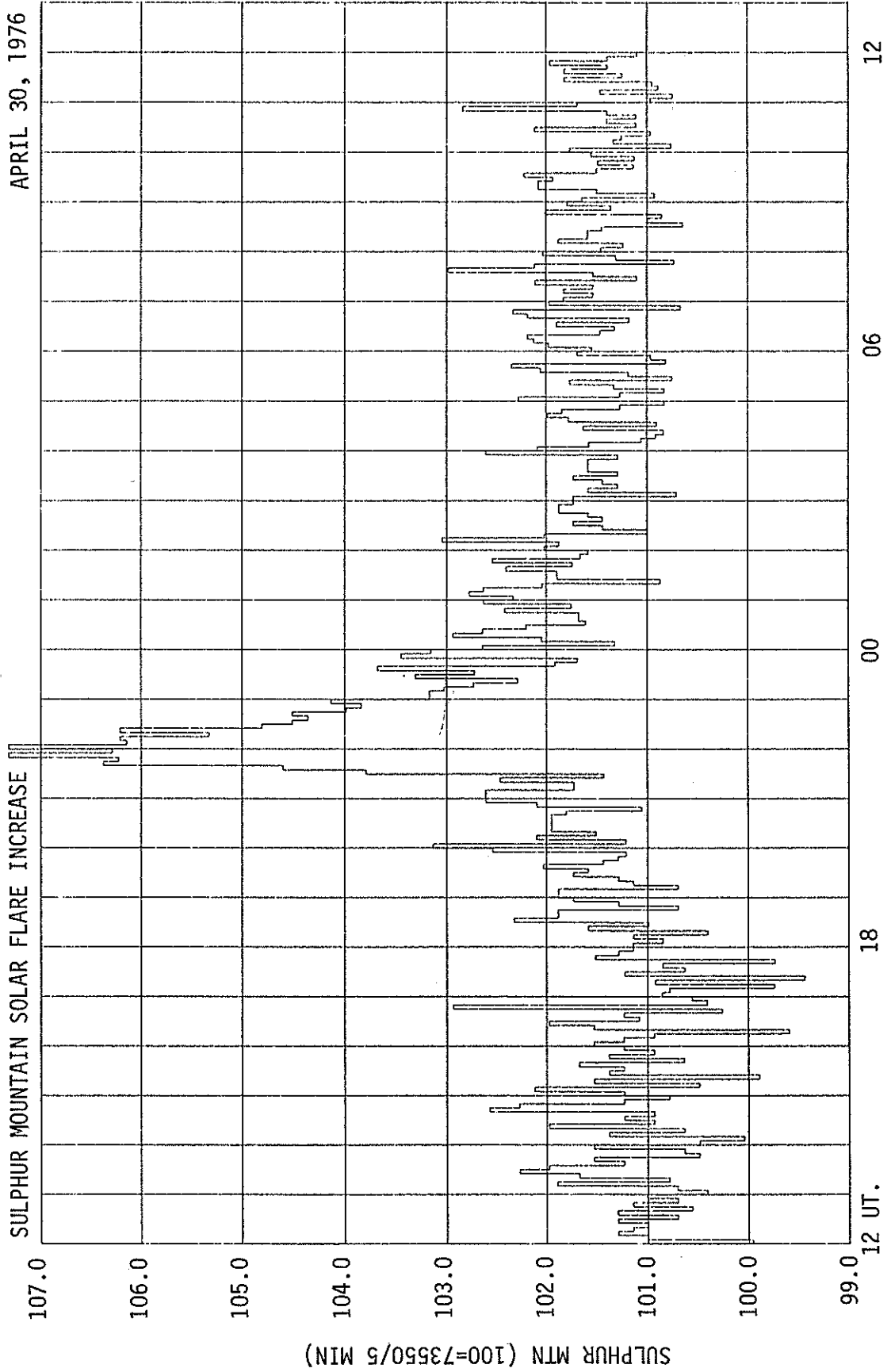


COSMIC RAY INDICES
(Neutron Monitors)



Five minute values are given for the period 1200 UT, April 30, 1976 to 1200 UT, May 1, 1976. The onset of the Forbush Decrease late on May 2, 1976 can be seen from the plot for the month of May 1976.

COSMIC RAY INDICES
(Neutron Monitors)



APRIL 30

MAY 1

Note: Five minute values are given for the period 1200 UT, April 30, 1976 to 1200 UT, May 1, 1976. The onset of the Forbush Decrease late on May 2, 1976 can be seen from the plot for the month of May 1976.

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May 76

COSMIC RAY INDICES
(Neutron Monitors)
MAY 1976

May 1976	THULE Average cts/hr	ALERT Average cts/hr	DEEP RIVER Average cts/hr	CALGARY Average cts/hr	SULPHUR MT Average cts/hr	KIEL Average cts/hr	CLIMAX Average cts/hr	TOKYO Average cts/hr
1	4550.9	7437.1	7017.2	11704.3	8977.2	6287.9	-- (0)	3531.2
2	4557.6	7442.0	7017.3	11699.4	8978.5	6310.9	-- (0)	3537.8
3	4479.6	7324.6	6910.5	11469.7	8780.9	6257.4	-- (0)	3529.3
4	4539.3	7410.0	6993.8	11634.0	8941.4	6272.8	-- (0)	3537.6
5	4570.8	7451.8	7018.2	11688.4	8959.2	6296.5	-- (0)	3548.3
6	4594.0	7492.3	7030.3	11725.1	8956.9	6303.6	-- (0)	3560.2
7	4613.3	7520.3	7071.5	11783.6	9051.4	6344.3	-- (0)	3563.2
8	4624.7	7533.0	7099.4	11804.7	9086.1	6359.2	-- (0)	3548.1
9	4630.5	7540.7	7096.0	11828.8	9078.4	6357.8	-- (0)	3544.5
10	4610.8	7534.0	7076.2	11811.2	9084.4	6349.1	4225.8	3545.2
11	4596.8	7506.2	7060.1	11774.8(22)	9045.2	6353.6	4215.5	3545.4
12	4593.9	7499.1	7074.7	11773.5	9024.7	6349.1	4223.7	3537.2
13	4595.5	7509.8	7076.2	11766.7	9038.6	6366.2	4226.3	3548.8
14	4629.1	7538.5	7084.5	11832.9	9101.9	6371.3	4243.3	3560.5
15	4613.2	7526.0	7097.7	11894.2	9121.3	6393.3	4264.1	3557.0
16	4608.7	7517.0	7069.5	11850.2	9103.0	6351.2	4256.1(14)	3544.0
17	4622.3	7535.1	7069.9	11801.6	9076.7	6341.7	4238.6	3539.7
18	4634.7	7548.6	7108.8	11858.9	9097.3	6365.5	4241.0	3541.4
19	4618.3	7521.0	7106.5	11842.7	9082.2	6380.5	4241.8	3545.2
20	4594.6	7529.4	7094.5	11805.3	9064.3	6389.0	4272.9	3558.9
21	4593.0	7503.0	7080.3	11756.4	8936.8	6357.0	4238.0	3534.1
22	4516.7	7391.1	6998.6	11650.1	8913.4	6273.5	4198.5	3520.1
23	4524.9	7381.7	6956.3	11571.7	8887.8(23)	6243.1	4165.3	3510.5
24	4545.5	7419.0	6976.3	11605.8	8902.4	6264.6	4160.6	3515.4
25	4563.2	7433.7	6996.5	11645.5	8947.2	6291.1	4183.7	3514.5
26	4558.9	7427.2	6999.3	11622.4	8926.5	6295.9	4181.1	3532.5
27	4564.5	7430.5	7012.3	11659.0	8951.7	6319.3	4185.6	3537.6
28	4580.9	7468.2	7016.3	11708.6	8979.5(23)	6324.4	4205.6	3544.7
29	4549.3	7426.0	7004.8	11671.5	8979.9	6294.1	4205.7	3537.8
30	4539.7	7409.0	6988.9	11650.3	8969.5	6308.4	4203.0	3535.9
31	4550.8	7426.0	6994.9	11682.4	8973.6	6305.9	-- (0)	3537.1
MEAN	4579.5	7472.0	7038.6	11728.2	9000.6	6325.1	4216.4	3540.1

() Number of hours for which data are available if less than 24. Number of Section Hours at Climax if sum of both sections is less than 40 hours.

Thule, Alert, Calgary, Sulphur Mountain, Kiel and Climax Scaling Factors = 100.
Deep River Scaling Factor = 300.
Tokyo Scaling Factor = 128.

GEOMAGNETIC ACTIVITY INDICES

MAY 1976

Day	Three-Hourly Indices Kp									Three-Hourly Indices Km								Ap	aa				Cp		
		1	2	3	4	5	6	7	8	Sum	1	2	3	4	5	6	7		8	N	S	M			
1		3+	2-	2-	1+	2-	2+	3-	3	18-	3	2-	2	1+	2-	2+	2+	3	10	21	16	15	23		0.5
2	D	4	4-	2	4	5+	3+	7	8-	37	4	4-	2-	4	5-	3+	5+	6+	58	72	77	41	109		1.7
3	D	8+	8-	7-	7-	5	4+	4-	2+	45-	7	6+	6+	6	5-	4-	3	3-	94	105	107	167	44		1.9
4	D	2+	4-	4-	3	3	4+	4+	3	27+	2+	4-	4-	3	3-	4	3+	3	20	32	39	31	40		1.0
5		4+	4	2+	2+	3-	1+	2	2+	21+	5-	4	2	2+	2+	1+	3-	2+	14	23	27	32	18		0.8
6		2+	3	2+	2	2-	1+	1+	3-	17-	3-	3-	3-	3-	2	2-	2-	3-	8	18	16	18	17		0.5
7		4-	2+	2-	2-	1+	2	2-	3	17+	4-	2	2-	2-	2	2+	2-	3	10	25	16	20	22		0.5
8		3+	3	2+	1+	3-	2	2-	1+	18-	3	3-	3-	2-	3-	2-	2-	1+	10	22	11	20	13		0.5
9	QQ	3-	2-	1	0+	1-	1	0+	1-	8+	2+	2-	1+	0+	1-	1-	0+	1-	4	12	4	11	6	CC	0.2
10	Q	0+	2	1+	1	2	3	2-	1-	12	0+	2-	1+	2-	2	3	1	1-	6	14	15	10	19	K	0.3
11		2	2	3	2	2	2	4-	3	20-	2-	2	3-	2+	2+	2+	3+	3	11	21	19	17	24		0.6
12		3	2-	2-	2-	2-	2-	1+	2-	15-	3-	2-	2-	2	2-	1+	1+	2	7	18	12	17	13		0.4
13		1+	2-	2-	1	3-	2	2-	1+	13+	1+	2	2-	1	2+	2-	1	1+	6	18	11	14	16	K	0.3
14	QQ	1+	1+	1	0+	2-	1	1-	0+	8-	1+	1	1+	0+	1	1-	0+	0+	4	9	4	8	6	CC	0.1
15	Q	1-	1+	0+	0+	2	2-	1-	3	10	1-	1	0+	1-	1+	1+	1	3	5	13	10	6	18	KK	0.2
16	QQ	2	2	1-	2	1+	1	1-	0+	10	2-	2-	1	2+	2-	1	1-	0+	5	16	7	16	7	CK	0.2
17	QQ	0+	1	1	1+	1-	0+	1	1+	7	1-	1	1	1+	1-	1-	1	1+	4	12	7	11	9	CC	0.1
18	QQ	0+	0+	0	1-	1	1	1-	1-	5-	0+	0+	0+	1-	1	1	1-	1-	3	8	4	5	7	CC	0.0
19		1-	1-	1-	1-	1	3+	4	4+	15+	1-	1-	1	1	1	3-	4-	4-	12	30	14	8	36		0.7
20	D	4-	4+	4-	3-	2+	2+	4+	3-	26	3+	4	4-	3-	2+	2+	4-	3-	19	31	28	31	29		1.0
21		4-	3-	2-	2-	3-	2+	3-	2+	20-	3+	2+	2+	2+	3-	3-	2	2+	11	27	20	20	27		0.6
22		2+	2	3+	2-	2+	2	3	3	20	2	2	3	2-	2+	3-	3-	3-	11	25	25	21	30		0.6
23		1	1	4	3+	4-	3	3-	2	21	1	1	4-	4-	3+	3-	2+	2	14	29	29	30	28		0.8
24	Q	2	2	2-	2-	1-	2-	1-	2+	13-	2	2-	2-	2-	1	1+	1-	2	6	13	12	14	11	C	0.3
25		3-	3-	2+	2-	2-	3-	3-	1-	17	2	2+	2	2+	2	3-	2	1-	9	25	14	19	21		0.5
26	Q	2-	2	1+	1+	1+	2+	2	1	12+	2	2	1-	1+	1+	2-	2-	1+	6	16	8	12	12	C	0.3
27	Q	0	2	1+	2	1+	1	2-	1	10+	0	2	1+	2-	1+	1	2-	1+	5	14	9	12	12	C	0.2
28		2+	3	4-	3	3	3	3	2-	23-	2	3	3+	3+	3	3	3-	2-	14	26	30	30	26		0.8
29	D	3	3	2	3-	2	3-	5+	5	26-	2+	3	2	3+	2+	3-	5-	4+	22	40	42	27	55		1.1
30		4	3	2+	4+	3-	2	3+	3	25-	4	3	2+	4-	3-	2	3	3-	17	32	32	37	28		0.9
31		2	3-	3-	1+	2+	2-	2	3-	17+	2	3-	3-	2	2-	2	2-	3	9	21	18	21	18		0.5
											Mean						14	25.4	22.1	23.9				0.58	

Day	Three-Hourly Indices Kn								Three-Hourly Indices Ks							
	1	2	3	4	5	6	7	8	1	2	3	4	5	6	7	8
1	3	2-	2-	2-	2-	2+	3-	3	3	2-	2	1	2-	3-	2	3
2	4-	3+	2-	3+	5-	3+	5+	6+	4+	4	1+	5-	5	4-	5+	7-
3	7-	7-	6	6-	5-	4-	3	2	7	6	6+	6+	5-	3+	3	3
4	2+	3+	4	3	3	4-	3+	3-	2	4-	4-	3+	3-	4	3+	3+
5	4	4-	2+	3-	2+	1+	2	2+	5-	4+	2-	2+	2	1+	3-	3-
6	2	3	3-	3-	2-	2-	1+	2+	3-	3-	3-	3-	2	2-	2	3
7	3	2	1+	2-	2-	2+	1+	3-	4+	2	2-	2-	2	3-	2-	3+
8	3	3-	2+	2-	3	2	2-	2-	3+	3-	3-	2-	3-	1+	2-	1+
9	2	2-	2-	0+	1-	1	1-	1	2+	2-	1+	0+	1-	1-	0+	0
10	0+	2-	2-	2-	2+	3-	2-	1	0	1+	1+	2-	2-	4-	1-	0+
11	2-	2-	3-	2+	3-	2+	3	3	2-	2+	2+	2+	2	2	3+	3
12	3-	2-	2	2	2-	2-	1+	2-	3-	2	2-	2	2-	1+	1	2+
13	1+	2	2	1	3-	2	1+	2-	1+	2	2-	1+	2	1+	1-	1
14	1+	1	2-	1-	1+	1	0+	0+	2-	1	1-	0+	1-	0+	0+	0+
15	1	1+	0+	1	2-	1+	1+	3-	0+	1	0+	0+	1	1+	1-	3
16	2	2-	1+	2+	2	1	1-	1-	1+	2-	1	2-	2-	1-	0+	0
17	1-	1+	1+	1+	1-	1-	1+	2-	0+	1-	1-	1	1-	0+	1-	1
18	1-	1-	0+	1	1	1+	1	1	0+	0+	1-	0+	1	1-	0+	0+
19	1	1	1+	1+	1+	3+	3+	4-	0+	0+	1	1	1	2-	4-	4-
20	3	4-	3	3-	2+	2+	3+	3	3+	4+	4-	3-	2	2+	4-	3-
21	3+	2	2-	2+	3-	3-	2+	2+	4-	2+	3-	2+	3-	2+	2	2
22	2	2	3+	2	3-	3-	3-	2+	2+	2	3	2-	2	3-	3	3-
23	1	1+	4-	3+	3+	3	2+	2	1-	0+	4	4-	4-	3-	2+	2-
24	2-	2-	2-	2	1	1+	1	2+	2+	2-	2-	2-	1	1	1-	2-
25	2+	3-	2+	2+	2	3-	2+	1	2	2	2-	2+	2-	2+	2-	0+
26	2-	2-	1	2-	2-	2+	2	2-	2	2+	0+	1-	1-	1+	2-	1
27	0+	2+	2-	2	2-	1+	2	1+	0	2-	1+	2-	1	1	1+	1
28	2-	3	3+	4-	3+	3	2+	2-	2+	3	3+	3	3	3	3-	2-
29	3-	3-	2+	3+	2+	2+	4	4-	2+	3+	2	3+	2+	3-	5	5-
30	3+	3-	2+	4-	3-	2+	3-	3	4+	3+	2+	4-	3-	2	3	3-
31	2-	2+	3-	2	2+	2-	2	3-	2+	3	3-	2+	1+	2+	1+	3

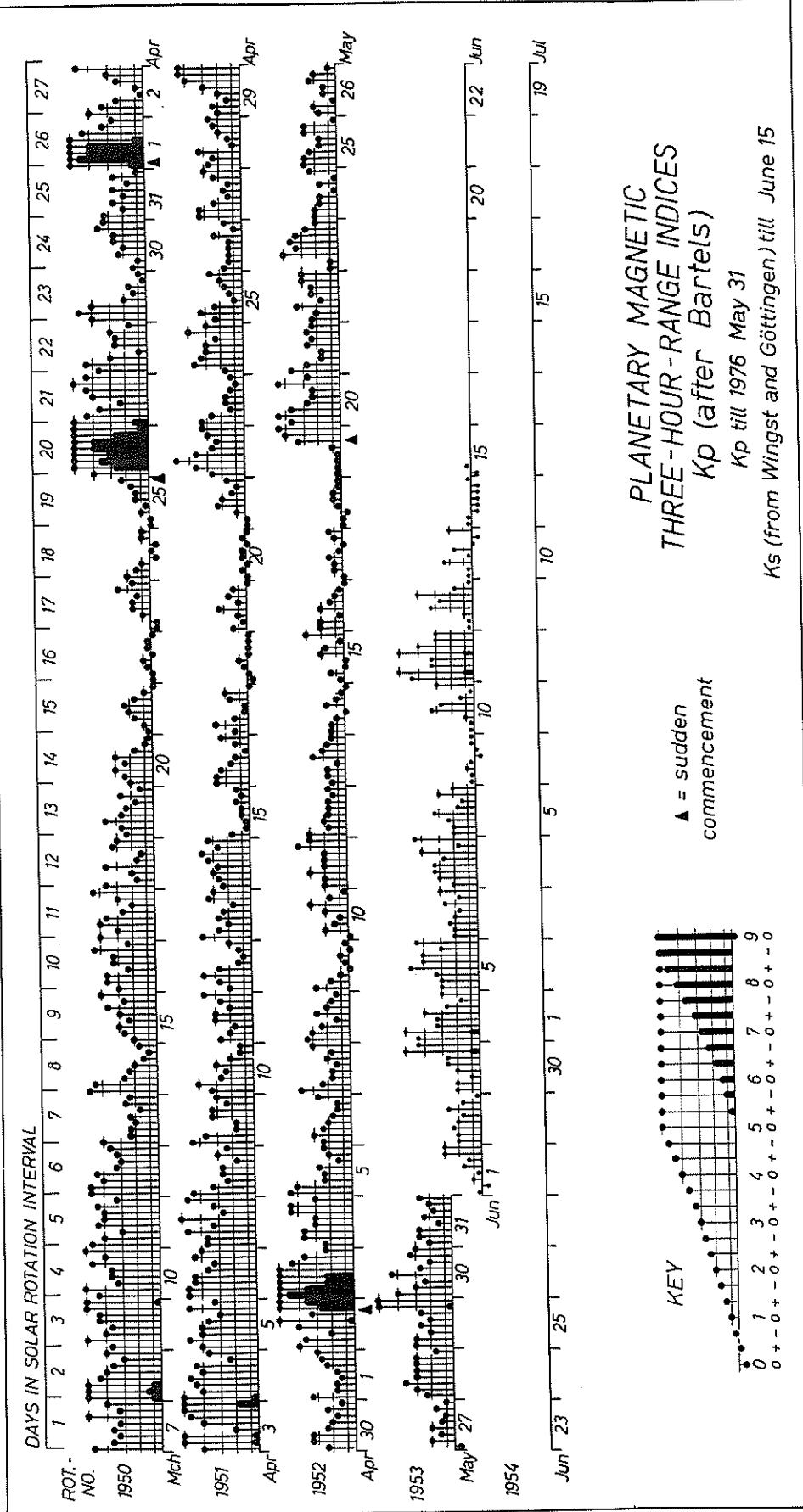
DAILY AVERAGE INDICES AP

1976

1975

DAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY
1	24	12	9	7	6	7	32	4	23	17	107	10
2	28	6	7	6	2	36	27	4	20	32	16	58
3	12	7	5	3	11	65	12	15	16	27	44	94
4	11	6	6	3	9	41	13	10	12	12	30	20
5	12	5	29	4	6	22	8	9	8	15	27	14
6	11	6	7	13	25	11	7	13	8	33	30	8
7	6	12	5	7	38	10	4	11	21	26	27	10
8	4	37	14	6	45	7	18	5	29	42	14	10
9	5	35	15	24	37	37	16	4	24	36	16	4
10	4	17	15	26	24	20	8	47	24	32	12	6
11	14	18	7	26	8	13	5	40	12	27	12	11
12	27	5	4	19	12	9	3	13	17	26	9	7
13	14	10	5	17	7	4	3	9	22	11	13	6
14	8	13	16	13	9	3	6	11	17	14	15	4
15	13	15	18	8	5	4	9	7	8	15	4	5
16	17	12	5	6	10	6	14	10	6	18	8	5
17	12	14	9	13	8	17	9	14	14	20	5	4
18	12	15	6	14	4	7	6	9	22	13	2	3
19	12	9	4	8	3	8	6	8	25	11	5	12
20	6	6	15	7	5	9	3	11	19	8	2	19
21	9	6	17	6	6	18	9	20	14	5	5	11
22	5	6	12	4	6	50	10	23	14	3	19	11
23	4	6	10	4	7	8	7	20	4	5	8	14
24	3	6	6	4	4	13	2	21	3	4	16	6
25	4	33	9	3	4	15	18	10	4	4	9	9
26	5	19	5	14	5	14	34	5	9	138	6	6
27	4	11	6	14	5	5	31	6	26	35	11	5
28	4	10	5	8	9	9	15	5	20	15	10	14
29	26	4	27	5	12	29	15	6	34	15	17	22
30	22	5	14	2	9	36	11	9		12	10	17
31		5	6		19		7	29		10		9
MEAN	11	12	10	10	12	18	12	13	16	22	17	14

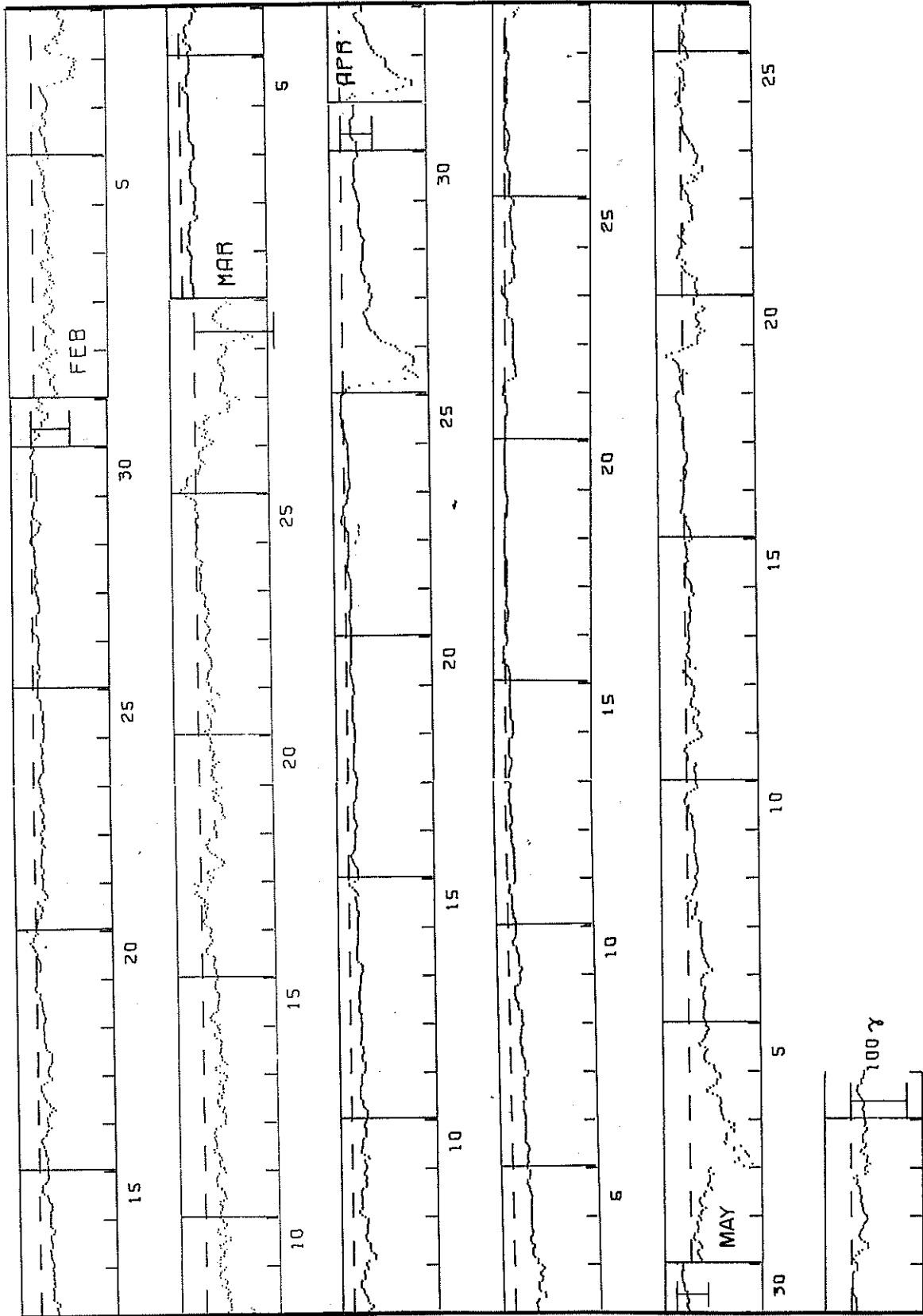
GEOMAGNETIC ACTIVITY INDICES



GEOMAGNETIC ACTIVITY INDICES

Hourly Equatorial Dst

1976



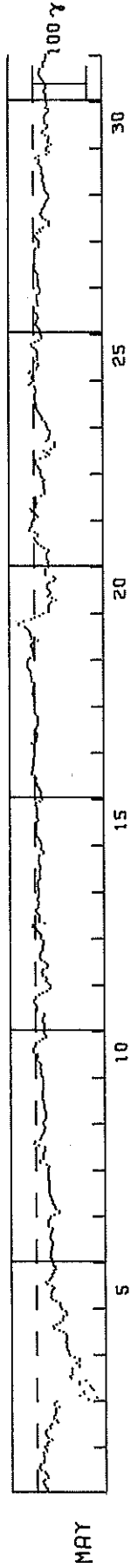
Note the changes in sensitivity as well as the changing 0 reference level.

HOURLY EQUATORIAL DST VALUES (PROVISIONAL)

MAY 1976

NASA/GODDARD SPACE FLIGHT CENTER

DAY	(Time-UT)																															(Units-Gammas)
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24								
1	-18	-20	-15	-14	-12	-11	-15	-20	-17	-14	-7	-5	-6	-8	-13	-13	-13	-15	-13	-12	-13	-19	-17	-14								
2	-20	-19	-23	-28	-20	-18	-16	-15	-19	-26	-24	-28	-40	-36	-31	-32	-28	-36	-35	-35	-42	-32	-32	-37								
3	-95	-110	-77	-87	-84	-104	-99	-96	-76	-78	-30	-62	-60	-65	-63	-66	-65	-79	-79	-72	-78	-77	-68	-59								
4	-57	-58	-55	-54	-55	-56	-52	-56	-55	-55	-53	-48	-40	-31	-30	-37	-43	-48	-49	-50	-55	-54	-52	-45								
5	-43	-42	-42	-34	-29	-26	-28	-26	-29	-31	-34	-28	-19	-17	-24	-27	-30	-30	-33	-33	-36	-33	-30	-32								
6	-30	-27	-25	-29	-26	-26	-29	-29	-31	-30	-29	-26	-27	-27	-27	-29	-31	-29	-22	-21	-24	-24	-27	-28								
7	-34	-43	-42	-35	-34	-32	-30	-30	-27	-27	-25	-24	-23	-26	-25	-25	-26	-25	-22	-21	-21	-23	-24	-21								
8	-21	-25	-19	-7	-9	-14	-15	-14	-14	-18	-18	-5	3	0	-10	-11	-12	-14	-17	-16	-19	-16	-13									
9	-14	-18	-20	-20	-20	-20	-17	-16	-15	-16	-14	-14	-12	-13	-14	-12	-14	-15	-14	-14	-15	-15	-13	-13								
10	-11	-10	-10	-11	-9	-10	-9	-6	-2	-4	-5	-3	3	4	3	0	-2	-3	-9	-14	-19	-19	-16	-15								
11	-15	-18	-15	-15	-13	-14	-15	-18	-15	0	-4	-4	-2	0	3	1	-2	-1	-9	-15	-22	-27	-29	-26								
12	-23	-19	-22	-19	-13	-12	-12	-16	-23	-25	-21	-17	-11	-9	-9	-11	-12	-15	-15	-15	-17	-15	-14	-10								
13	-12	-12	-7	-4	-2	4	2	-19	-7	-8	-10	-9	-5	-2	-2	-7	-7	-9	-8	-4	-7	-9	-9	-7								
14	-6	-6	-5	-5	-6	-8	-11	-10	-9	-9	-10	-12	-11	-9	-7	-7	-8	-10	-17	-18	-12	-13	-12	-12								
15	-12	-10	-8	-6	-3	-2	-2	-3	-4	-4	-4	-5	-8	-5	-3	-6	-4	-4	-4	-3	-1	-4	-11	-15								
16	-14	-11	-11	-11	-9	-7	-4	-4	-1	-3	-5	0	5	6	2	3	1	0	2	0	0	-1	-2	0								
17	-2	-1	1	1	5	-4	-5	-6	-7	-4	-2	-1	-5	-7	-8	-8	-8	-7	-6	-5	-2	0	0	-2								
18	-2	-3	-2	1	1	7	2	2	2	1	-1	1	5	4	7	4	5	7	9	12	13	12	11	9								
19	6	1	0	2	3	4	6	5	1	-9	5	6	7	7	9	12	15	28	26	17	3	-2	-12	-18								
20	-28	-28	-28	-26	-30	-33	-41	-32	-25	-30	-32	-27	-24	-24	-26	-30	-39	-41	-35	-20	-23	-20	-22	-27								
21	-29	-25	-28	-23	-22	-24	-24	-28	-27	-18	-13	-7	-5	-2	0	-8	-9	-2	8	5	2	3	3	0								
22	-3	-8	-5	-2	3	6	-5	-5	-7	-3	-3	-5	-15	-20	-19	-20	-18	-18	-18	-17	-21	-16	-13	-12								
23	-12	-12	-9	-7	-3	-4	-4	-14	-24	-29	-24	-19	-33	-40	-39	-38	-23	-29	-29	-31	-32	-30	-26	-24								
24	-23	-22	-20	-16	-16	-13	-11	-8	-6	-4	-4	-5	-3	-2	-1	-1	-4	-6	-6	-3	-1	8	3	-1								
25	2	3	0	0	4	-7	-8	-11	-8	-2	-8	-7	-8	-8	-8	-5	-1	3	4	-5	-11	-16	-16	-13								
26	-12	-11	-10	-7	-4	-7	-7	-10	-9	-7	-5	-1	0	-3	-10	-7	-7	-6	-6	-7	-12	-14	-13	-11								
27	-9	-9	-9	-9	-7	-10	-9	-5	-3	-1	-4	-4	-2	-2	-3	-3	-4	-3	-4	-6	-11	-12	-12	-12								
28	-7	-4	-2	-0	-15	-12	-20	-31	-29	-28	-23	-18	-15	-13	-17	-18	-20	-23	-22	-25	-27	-30	-30	-27								
29	-24	-21	-20	-21	-10	-19	-17	-18	-20	-20	-16	-17	-16	-15	-13	-10	-13	-12	-5	-12	-27	-31	-25	-26								
30	-30	-35	-28	-29	-31	-28	-22	-17	-20	-25	-28	-26	-21	-21	-20	-22	-24	-27	-30	-30	-24	-27	-27	-24								
31	-25	-23	-24	-23	-20	-23	-25	-25	-23	-20	-18	-15	-13	-11	-11	-14	-15	-20	-19	-20	-24	-25	-26	-26								



MAY

PRINCIPAL MAGNETIC STORMS

MAY 1976

OBS. 2 letter IAGA code	GEOMAG- NETIC LATI- TUDE	COMMENCEMENT			SC - AMPLITUDES			MAXIMUM 3 HOUR - INDEX K		RANGES			UT END	
		DAY	hr min (UT)	TYPE	D(')	H(γ)	Z(γ)	DAY (3 HOUR PERIOD)	K	D(')	H(γ)	Z(γ)	DAY	HOURL
HD	07.6N	1	1200	..	..	..	..	02(5)	6	7	97	22	02	17
CO	64.6N	2	08--	..	..	..	..	02(4) 03(3,4)	7	295	1950	1530	03	22
SI	60.0N	2	01--	..	..	..	..	03(4)	8	140	--	900	03	18
NE	55.1N	2	1828	SC*	8	45	3	03(2)	9	131	840	717	05	14
WI	54.2N	2	1829	SC	+ 4	+60	0	03(1)	8	60	495	185	03	22
FR	49.6N	2	09--	..	..	..	..	02(8) 03(2)	7	79	235	260	05	04
BD	48.9N	2	02--	..	..	..	..	03(2)	8	74	258	224	03	18
TU	40.4N	2	09--	..	..	..	..	03(2)	8	30	270	75	05	15
SJ	29.9N	2	1828	SC	+ 1	+14	+ 3	03(1)	6	12	144	44	03	21
HO	21.1N	2	10--	..	..	..	..	03(3)	7	14	157	58	03	17
AL	09.5N	2	06--	..	..	..	..	02(8) 03(1,2)	6	9	178	56	03	17
HD	07.6N	2	1828	SC	- 0.3	+31	- 2	03(1,2,3)	6	7	181	32	03	22
GU	04.0N	2	1828	SC	..	15	-04	03(4)	6	0	170	30	03	18
AN	01.5N	2	06--	..	..	..	..	--	-	9	197	78	03	17
HU	00.6S	2	1130	..	..	..	..	03(1,2,3)	6	10	307	70	05	04
TV	01.1S	2	06--	..	..	..	..	--	-	7	244	189	03	17
AP	16.0S	2	0140	..	..	..	..	02(8) 03(1,4)	6	6	180	61	03	19
PM	18.6S	2	00--	..	..	..	..	03(4)	7	6	190	60	04	12
HR	33.7S	2	02--	..	..	..	..	03(1)	7	47	190	187	03	18
GN	43.2S	2	03--	..	..	..	..	03(4)	7	36	160	200	05	09
TO	46.7S	2	1829	SC	+ 3.5	+14	+ 3	03(4)	7	44	270	80	03	22
KG	56.5S	2	18--	..	..	..	..	02(8) 03(1)	8	--	--	--	03	17
HR	33.7S	5	00--	..	..	..	..	05(1,2)	5	18	34	45	05	10
HD	07.6N	11	0530	..	..	..	..	11(3,4,5,7) 12(1)	3	5	63	27	12	18
NE	55.1N	19	16--	..	..	..	..	19(8) 20(2) 21(1) 22(3)	5	33	89	83	23	01
HD	07.6N	19	1647	SC	- 0.1	+ 8	0	19(6,7,8) 20(7)	4	5	88	22	20	23
HR	33.7S	19	1649	SC	0	+ 3	+ 1	20(2,7)	5	19	78	52	21	03
GN	43.2S	19	17--	..	..	..	..	23(5)	5	14	70	80	24	00
KG	56.5S	19	16--	..	..	..	..	20(7)	5	--	--	--	21	00
HD	07.6N	21	1200	..	..	..	..	23(3)	4	5	118	18	23	19
NE	55.1N	23	06--	..	..	..	..	23(3,4,5)	5	24	76	90	24	13
HR	33.7S	29	19--	..	..	..	..	29(7,8)	5	15	72	82	30	01

Reports were received from the following observatories:

College	Witteveen	Tucson	Alibag	Annamaingar	Trivandrum	Gnangara
Sitka	Fredericksburg	San Juan	Hyderabad	Huancayo	Port Moresby	Toolangi
Newport	Boulder	Honolulu	Guam	Apia	Hermanus	Port-aux-Francais

SUDDEN COMMENCEMENTS AND SOLAR FLARE EFFECTS

MAY 1976

PRELIMINARY REPORT ON RAPID MAGNETIC VARIATIONS (by Dr. A. Romáňá)
The meaning of the station symbols is given in the IAGA-Bulletin nr. 32.
Times of ssc are mean values.

Sudden commencements followed by a magnetic storm or a period of storminess (ssc)

02 1829 A: WI FU? VI LG IK EB CI TL LM; B: WN MT KA SS KY GN TO; C: NI

Solar-flare effects (sfe)

Effects confirmed by ionospheric or solar observations are underlined.

05 0901 - 0911 TL

16 0604 - 0628 SS

16 1154 - 1204 LG

RADIO PROPAGATION QUALITY FIGURES AND FORECASTS

MAY 1976

North Atlantic

MAY 1976	WHOLE DAY INDICES NORTH ATLANTIC	ADVANCE FORECASTS (JC- REPORTS) FOR WHOLE DAY	NORTH ATLANTIC								GEOMAGNETIC INDICES		
			6-HOURLY QUALITY FIGURES				SHORT-TERM FORECASTS ISSUED ABOUT ONE HOUR IN ADVANCE OF				K _{FR}		A _{FR}
			00 TO 06	06 TO 12	12 TO 18	18 TO 24	02	08	14	20	HALF DAY (1) (2)		OBSERVED
01	6-	5	5+	5+	6+	6+	5	5	5	5	3	2	11
02	6-	5	6-	5-	60	60	5	5	6	6	3	(5)	37
03	40	5	50	3+	4+	4-	4	4	4	4	(6)	3	56
04	4+	5	3+	3+	50	6-	4	4	5	5	(4)	3	20
05	5+	5	6-	5+	5+	50	5	5	6	5	3	2	14
06	60	5	6-	60	6+	6-	5	5	6	5	3	1	10
07	6-	5	6-	50	60	6+	5	5	6	6	2	2	7
08	6+	6	60	60	6+	6+	6	6	6	6	3	2	12
09	60	6	60	6-	60	7-	6	5	6	5	1	1	3
10	6+	6	6+	60	6+	60	6	5	6	6	1	2	5
11	6+	6	60	60	6+	6+	6	6	6	6	3	2	11
12	60	6	5+	60	60	6+	6	6	6	6	2	2	7
13	7-	6	6+	7-	7-	7-	6	6	6	6	2	2	6
14	6+	6	6+	60	6+	6+	6	6	6	7	1	1	3
15	6+	6	70	7-	60	6-	6	6	6	6	1	2	5
16	6+	6	60	6+	7-	6-	6	6	6	6	2	1	5
17	60	6	6-	60	70	60	6	6	6	7	1	1	3
18	6-	6	6-	5+	60	6+	6	6	6	7	1	1	3
19	60	6	6+	60	60	60	6	6	6	6	1	3	8
20	6-	6	6-	5+	60	60	6	5	5	6	3	2	15
21	6-	6	60	50	60	60	5	5	6	6	3	2	10
22	60	6	60	6-	60	6+	6	6	6	6	3	2	11
23	60	6	60	60	6-	60	6	6	6	6	2	3	14
24	6+	6	60	60	7-	6+	6	6	6	6	2	2	8
25	7-	6	6+	6+	70	6+	6	6	7	6	3	2	9
26	6+	6	60	60	70	6+	6	6	6	6	2	2	6
27	6+	6	60	60	7-	7-	6	6	6	6	2	2	6
28	7-	6	7-	60	6+	70	6	5	5	5	3	2	14
29	60	5	7-	5+	60	6+	5	5	5	5	3	3	16
30	60	4	60	5+	60	6+	5	5	6	6	(4)	2	16
31	60	4	60	50	6+	6+	5	5	6	6	3	2	10

RADIO PROPAGATION QUALITY INDICES

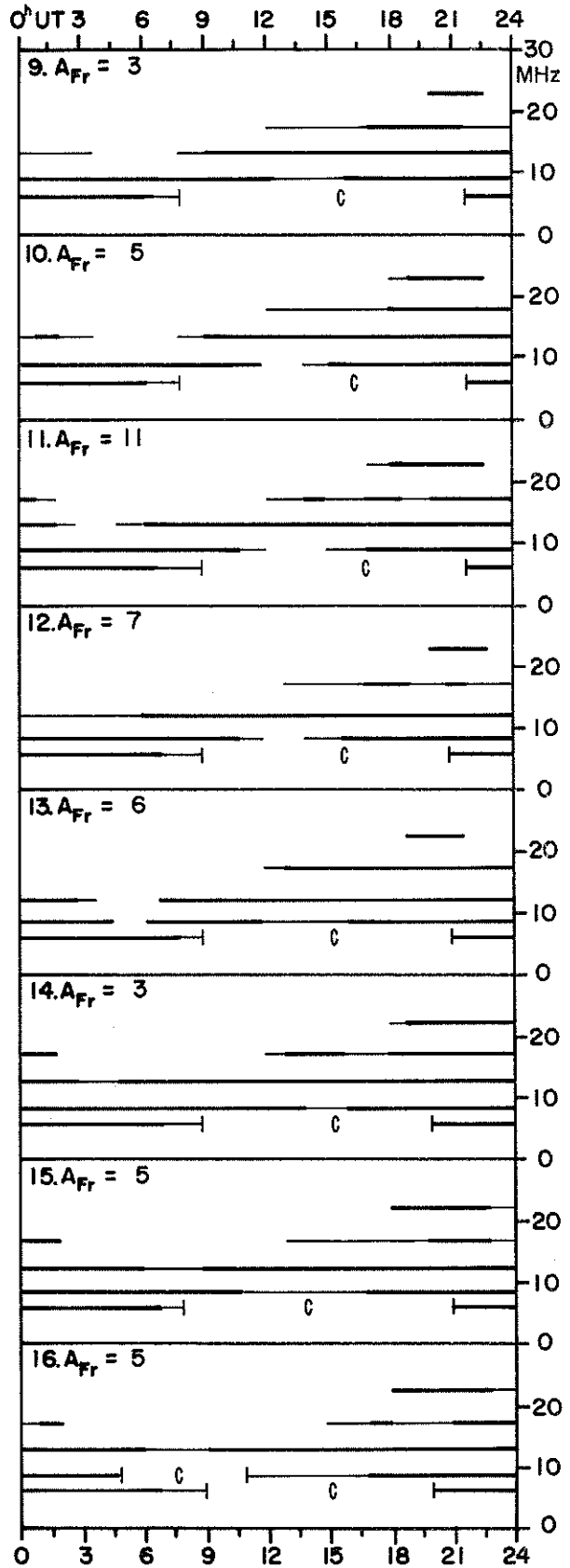
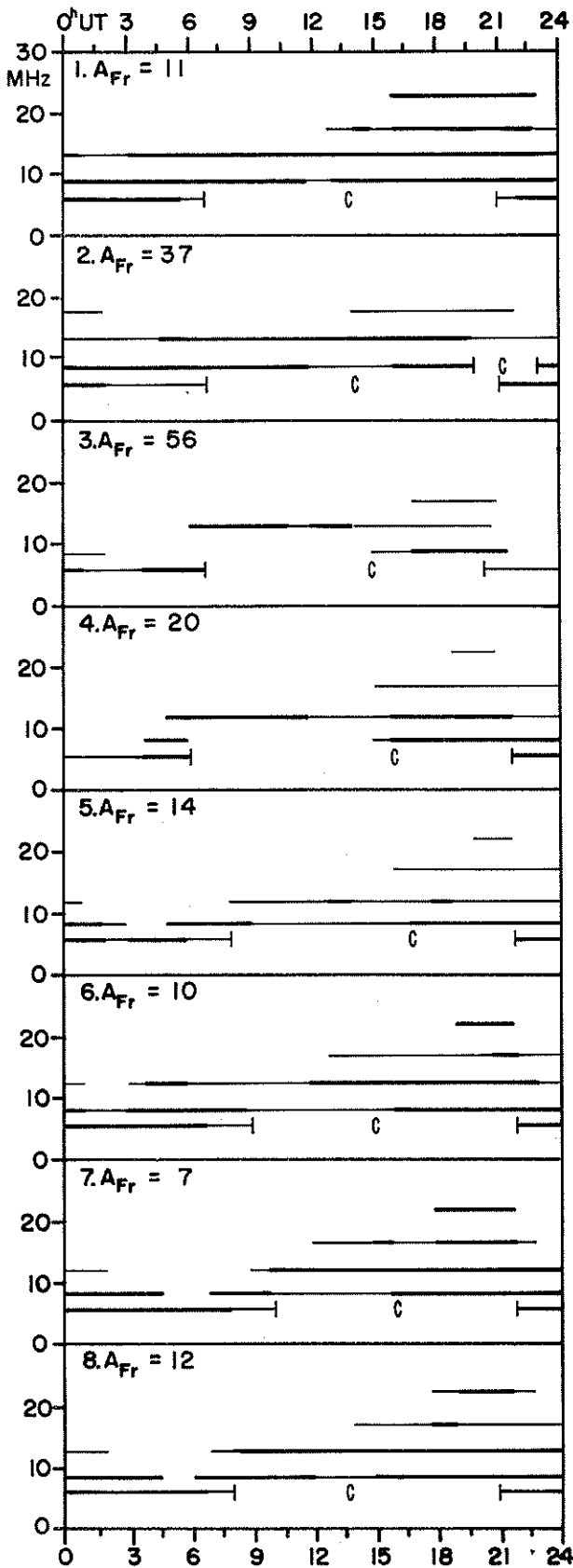
MAY 1976

Quality Indices calculated for reception at Lüchow

	TOKYO	HALIFAX	MOSCOW	CANBERRA	BRACKNELL
1	4.2	7.8	12.8	5.3	12.7
2	3.1	6.1	12.0	4.8	12.2
3	1.4	3.4	11.1	3.1	11.9
4	2.8	5.2	12.4	4.3	12.1
5	2.2	5.0	12.1	3.4	12.3
6	3.7	6.0	12.3	3.5	12.5
7	4.7	6.3	12.1	4.4	12.6
8	5.4	6.6	12.1	4.9	12.5
9	6.4	7.2	12.4	5.6	12.2
10	6.0	7.6	12.9	5.0	12.8
11	5.3	7.6	12.9	4.9	13.2
12	6.3	7.3	13.1	5.7	13.0
13	6.6	8.2	13.3	5.4	13.4
14	7.1	8.3	13.4	5.1	13.5
15	7.0	8.0	13.1	5.1	13.5
16	6.5	8.2	13.6	5.3	13.2
17	7.2	8.4	13.3	5.4	12.9
18	8.1	8.9	13.1	5.4	13.1
19	6.4	7.9	13.5	5.6	13.2
20	5.3	7.8	13.2	5.2	12.4
21	5.9	7.4	13.2	6.2	12.7
22	6.4	7.3	13.0	5.8	13.2
23	5.9	7.7	13.0	5.3	13.0
24	6.8	8.3	13.2	5.1	12.4
25	7.2	8.5	13.3	5.5	13.2
26	6.5	8.5	13.4	6.1	13.6
27	7.4	8.5	13.2	5.8	13.4
28	5.9	7.9	13.2	6.0	13.2
29	5.7	7.6	12.9	5.4	13.4
30	4.7	7.5	12.9	5.0	12.7
31	5.2	8.2	12.9	5.2	12.2
MEAN	5.6	7.4	12.9	5.1	12.8

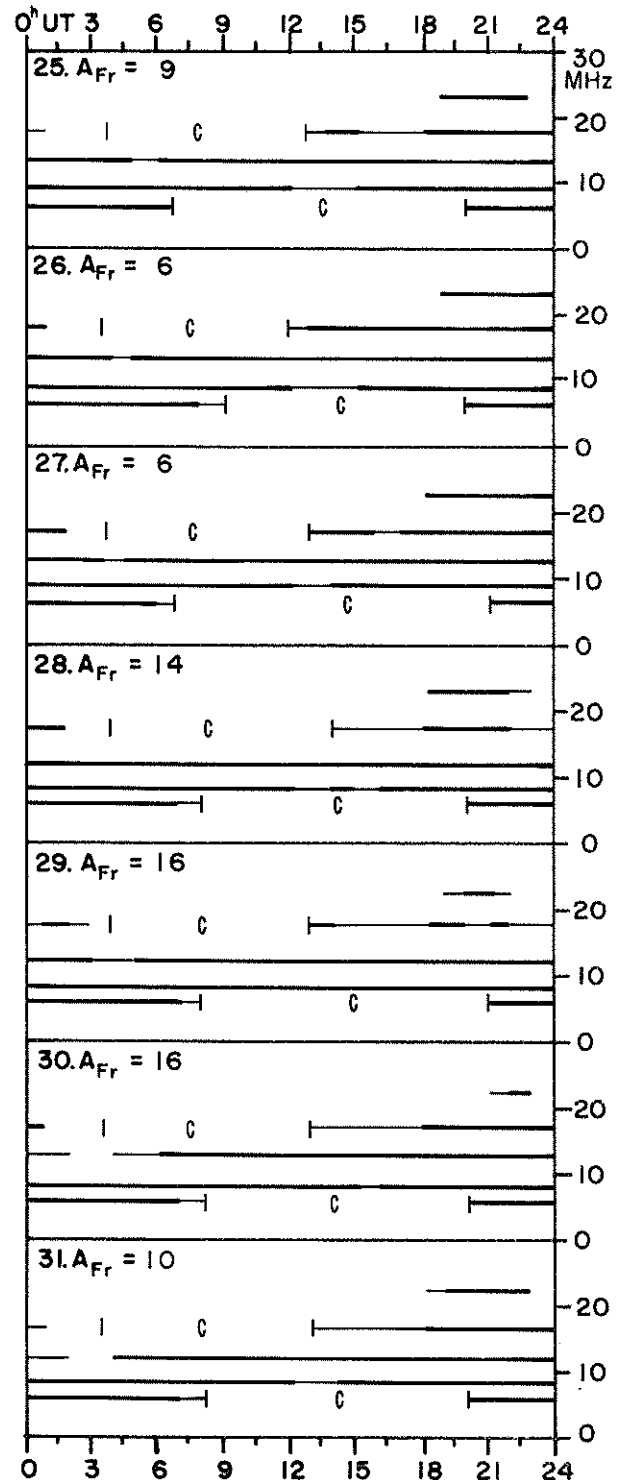
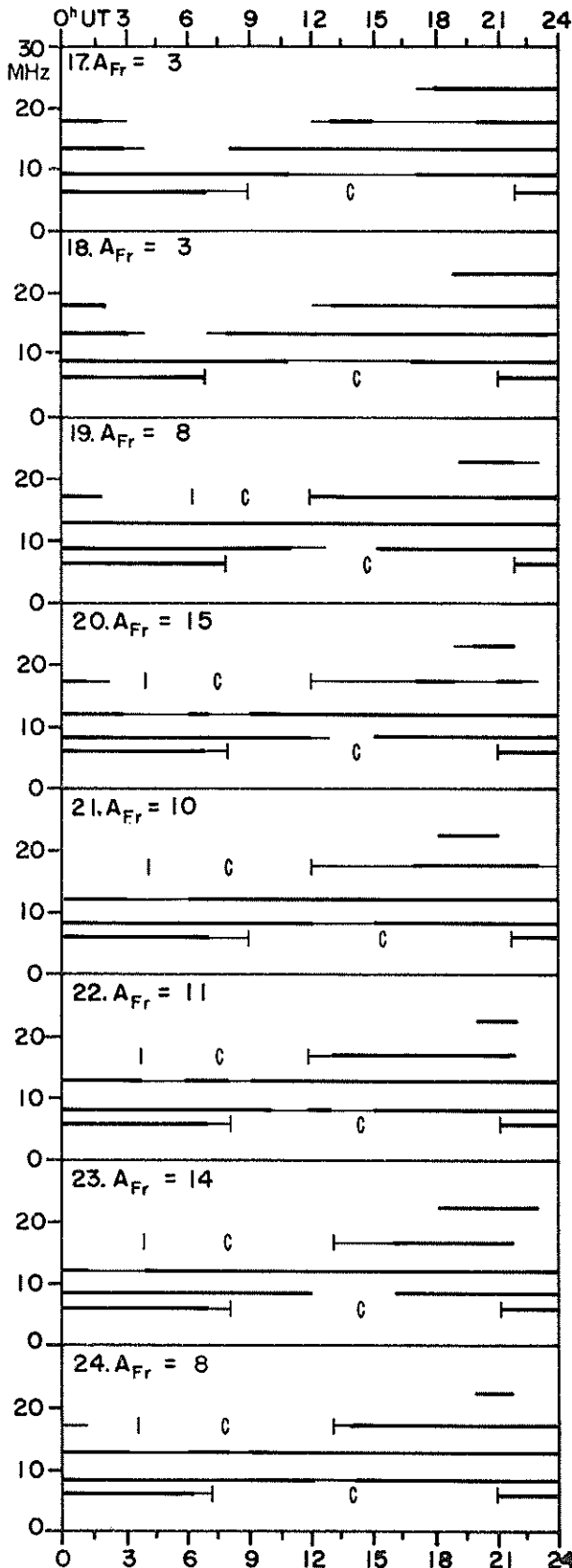
TRANSMISSION FREQUENCY RANGES -- NORTH ATLANTIC PATH

MAY 1976

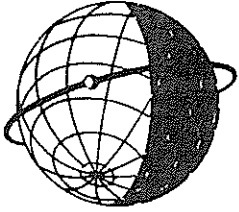


TRANSMISSION FREQUENCY RANGES -- NORTH ATLANTIC PATH

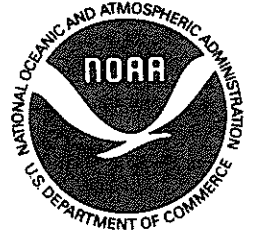
MAY 1976



Field strengths from five frequencies, 6.425, 8.542, 12.813, 17.084 and 22.378 MHz, observed on a Lüchow.-Halifax circuit are represented above. Heavy solid lines represent field strengths ≥ -12 dB above $1 \mu\text{V/m}$ (transmitter power reduced to 1 kw). Observed field strengths between -12 dB above $1 \mu\text{V/m}$ and -40 dB above $1 \mu\text{V/m}$ are represented by the fine line. Adapted from Observations by Deutsche Bundespost



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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."