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ENVIRONMENTAL DATA SERVICE
Thomas S. Austin, Director

Solar - Geophysical Data

NO. 356 APRIL 1974

Part I (Prompt Reports)

DATA FOR
MARCH 1974
FEBRUARY 1974

NATIONAL GEOPHYSICAL AND SOLAR - TERRESTRIAL DATA CENTER
BOULDER, COLORADO

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SOLAR - GEOPHYSICAL DATA

No. 356

Issued in two parts

Hope I. Leighton, Editor

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

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For explanations of the data contained herein see *Descriptive Text* published as supplement to February 1974 *Solar-Geophysical Data* (Number 354).

ALERT PERIODS

INTERNATIONAL URSIGRAM
AND WORLD DAYS SERVICE

MARCH 1974

PRESTO MESSAGES (THE RAPID REPORT OF MAJOR EVENTS)

Date	
16	BOULDER 162100Z MAGSTORM BEGINS MINOR 16/1200Z
20	BOULDER 202300Z MINOR RECURRENT MAGSTORM BEGINS 202140Z GRADUAL COMMENCEMENT

SUMMARY OF THE GEOALERT WWA MESSAGES

Message serial number	Date of issue	Date of observation	Wolf number	10cm solar flux	A index	Active Regions: Location Lat-Long	No. of Flares: Total	M	X	Outstanding events	Forecasts: Date	Location Lat-Long	Desc*	Alert Situations
060	01	28	049	077	18	N13W16 N09E03 N07E35 N11W07	0 0 0 0	0 0 0 0	0 0 0 0		01	N13W16 N09E03 N07E35 N11W07	Q Q Q Q	SOLQUIET MAGQUIET. STRATWARM ALERT/FRIDAY/STRATWARM EXISTS CHUKCHI SEA WITH WARM AIR AT 30 MB AND 10 MB FROM CENTRAL SIBERIA NORTHWESTWARD TO CANADIAN ARCTIC.
061	02	01	012	078	17	N05E22	0	0	0		02	N05E22	Q	SOLQUIET MAGQUIET. STRATWARM ALERT/SATURDAY/ STRATWARM EXISTS ARCTIC OCEAN WITH WARM SYSTEM SLOPING UPWARD FROM NORTH OF BERING SEA AT 10 MB TO BARENTS SEA AT 02 MB. CIRCULATION REVERSAL POSSIBLE.
062	03	02	014	078	17	N05E10	1	0	0		03	N05E10	Q	SOLQUIET MAGQUIET. STRATWARM ALERT/SUNDAY/STRATWARM EXISTS IN ARCTIC.
063	04	03	000	078	15	-	0	0	0		04	SPOTNIL		SOLQUIET MAGQUIET. STRATWARM ALERT/MONDAY/STRATWARM EXISTS ALASKAN ARCTIC.
064	05	04	011	080	09	N12E62	0	0	0		05	N12E62	Q	SOLQUIET MAGQUIET. STRATWARM ALERT/TUESDAY/STRATWARM EXISTS SIBERIAN ARCTIC.
065	06	05	022	080	13	N12E50	0	0	0		06	N12E50	Q	SOLQUIET MAGQUIET. STRATWARM ALERT/WEDNESDAY/STRATWARM EXISTS SIBERIAN ARCTIC.
066	07	06	024	079	21	N12E37 N07E62	0 0	0 0	0 0		07	N12E37 N07E62	Q Q	SOLQUIET MAGQUIET. STRATWARM ALERT/THURSDAY/STRATWARM EXISTS SIBERIAN-ALASKAN ARCTIC
067	08	07	024	077	07	N12E24 N06E50	0 0	0 0	0 0		08	N12E24 N06E50	Q Q	SOLQUIET MAGQUIET. STRATWARM ALERT/FRIDAY/STRATWARM EXISTS SIBERIAN-CANADIAN ARCTIC. SLOWLY DIMINISHING. MAXIMUM STRATOSPHERIC TEMPERATURES 26 FEB-01 MAR.
068	09	08	013	078	14	N06E37	0	0	0		09	N06E37	Q	SOLQUIET MAGALERT 09/14. STRATWARM ALERT/SATURDAY/ STRATWARM ENDS. WEAK DIMINISHING WARM AREA GREENLAND TO SIBERIAN ARCTIC.
069	10	09	026	081	18	N06E24 N01E07	0 0	0 0	0 0		10	N06E24 N01E07	Q Q	SOLQUIET MAGALERT 10/15
070	11	10	036	086	27	N07E10 N03W07	1 0	0 0	0 0	A MINOR MAGNETIC DISTURBANCE IS IN PROGRESS	11	N07E10 N03W07	Q Q	SOLQUIET MAGALERT 11/15

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

ALERT PERIODS

INTERNATIONAL URSIGRAM
AND WORLD DAYS SERVICE

MARCH 1974

SUMMARY OF THE GEOALERT WWA MESSAGES

Message serial number	Date of issue	Date of obser-vation	Wolf number	10cm solar flux	A index	Active Regions Location Lat-Long	No. of Flares Total	M	X	Outstanding events	Forecasts Date	Location Lat-Long	Desc*	Alert Situations
071	12	11	043	087	23	N05W02	0	0	0	A MINOR MAGNETIC	12	N05W02	Q	SOLQUIET MAGALERT 12/15
						N03W21				DISTURBANCE IS		N03W21	Q	
						S17E66	1	0	0	EXPECTED TO DECREASE		S17E66	Q	
072	13	12	049	087	13	N05W16	1	0	0	MINOR MAGNETIC	13	N05W16	Q	SOLQUIET MAGNIL
						N02W34	0	0	0	DISTURBANCE		N02W34	Q	
						S16E51	0	0	0	DECREASING		S16E51	Q	
						S17E60	0	0	0			S17E60	Q	
073	14	13	024	085	10	N02W49	0	0	0		14	N02W49	Q	SOLQUIET MAGQUIET
						S17E40	0	0	0			S17E40	C	
074	15	14	043	083	10	N02W64	0	0	0		15	N02W64	Q	SOLQUIET MAGQUIET
						S17E25	0	0	0			S17E25	Q	
						S03E61	0	0	0			S03E61	Q	
075	16	15	034	084	02	N02W76	0	0	0		16	N02W76	Q	SOLQUIET MAGQUIET
						S17E13	0	0	0			S17E13	Q	
						S03E51	0	0	0			S03E51	Q	
076	17	16	034	083	22	N02W90	0	0	0	A MINOR MAGSTORM	17	N02W90	Q	SOLQUIET MAGALERT MINOR 17
						S16E05	0	0	0	STARTED 16/1400Z		S16E05	Q	
						S01E35	0	0	0			S01E35	Q	
077	18	17	025	083	09	S12W36	0	0	0	MINOR MAGSTORM	18	S12W36	Q	SOLQUIET MAGNIL
						S16E21	0	0	0	ENDED 17/13XX		S16E21	Q	
078	19	18	047	081	02	S19W20	0	0	0		19	S19W20	Q	SOLQUIET MAGALERT MINOR 20/25
						S12W49	0	0	0			S12W49	Q	
						S16E10	0	0	0			S16E10	Q	
						S08E76	0	0	0			S08E76	Q	
079	20	19	012	080	01	S10E63	1	0	0		20	S10E63	Q	SOLQUIET MAGALERT MINOR 20/25
080	21	20	023	080	08	S07E49	0	0	0	MINOR RECURRENT GEO-	21	S07E49	Q	SOLQUIET MAGALERT MINOR 21/25
						N14W44	0	0	0	MAGNETIC STORM BEGAN		N14W44	Q	
										GRADUALLY 20/2140Z				
081	22	21	011	080	39	S08E34	1	0	0	MAGNETIC STORM	22	S08E34	Q	SOLQUIET MAGALERT 21/25
										CONTINUES				
082	23	22	043	081	29	S15W77	0	0	0	GEOMAGNETIC STORM	23	S15W77	Q	SOLQUIET MAGALERT 23/25
						S08E22	0	0	0	CONTINUES MINOR		S08E22	Q	
						N14W34	4	0	0			N14W34	Q	
083	24	23	026	080	27	S08E08	1	0	0	MINOR MAGNETIC STORM	24	S08E08	Q	SOLQUIET MAGALERT 24/25
						N15W47	1	0	0	CONTINUES		N15W47	Q	
084	25	24	024	077	21	N16W59	0	0	0	MINOR MAGSTORM	25	N16W59	Q	SOLQUIET MAGALERT 25/27
						S09W09	1	0	0	CONTINUES		S09W09	Q	
085	26	25	021	075	21	S08W18	0	0	0	MINOR MAGSTORM	26	S08W18	Q	SOLQUIET MAGALERT 26/27
										CONTINUES				
086	27	26	011	073	18	S09W30	0	0	0	MINOR MAGSTORM	27	S09W30	Q	SOLQUIET MAGALERT 27/28
										CONTINUES				
087	28	27	023	072	19	S09W45	0	0	0	MINOR MAGSTORM	28	S09W45	Q	SOLQUIET MAGALERT 28
						N05W17	0	0	0	CONTINUES		N05W17	Q	
088	29	28	028	071	16	S10W58	0	0	0	MAGSTORM ENDS	29	S10W58	Q	SOLQUIET MAGQUIET
						N07W41	3	0	0			N07W41	Q	
089	30	29	030	072	21	S06W71	0	0	0		30	S06W71	Q	MAGNIL 29 MARCH 1974, MAGQUIET
						N08W56	4	0	0			N08W56	Q	30 MARCH 1974, SOLQUIET
090	31	30	033	072	14	S07W83	0	0	0		31	S07W83	Q	SOLQUIET MAGQUIET
						N08W69	0	0	0			N08W69	Q	
						S10E44	1	0	0			S10E44	Q	

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

RELATIVE SUNSPOT NUMBERS

ZURICH, R_Z

	1973 FINAL								1974 PROVISIONAL			
DAY	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR
1	65	24	8	29	36	89	68	31	46	18	13	25
2	79	46	8	31	28	124	66	33	24	15	12	16
3	93	64	16	39	21	130	52	23	24	13	8	16
4	93	77	14	32	28	121	50	20	0	12	7	17
5	75	92	7	42	34	108	44	7	0	8	0	18
6	75	68	16	56	40	84	38	0	0	0	0	19
7	76	82	37	57	42	77	30	0	0	0	8	20
8	71	52	41	50	40	72	22	0	7	29	16	16
9	85	30	31	38	38	75	23	0	8	36	22	20
10	65	25	38	32	27	58	8	0	16	44	21	30
11	62	26	60	23	23	42	0	7	9	49	21	37
12	46	18	58	14	0	22	0	0	9	60	36	38
13	41	7	52	15	0	0	8	9	8	45	50	30
14	37	7	54	10	0	0	10	11	8	74	26	42
15	35	25	48	16	0	13	16	12	17	77	46	37
16	29	33	45	9	0	26	18	13	26	64	48	23
17	16	34	36	28	0	20	19	16	40	65	47	20
18	15	41	18	42	7	16	15	16	43	52	46	32
19	30	42	38	23	7	8	0	22	41	58	45	20
20	37	46	51	8	7	30	0	16	47	49	43	9
21	45	52	75	8	15	39	0	23	51	37	37	16
22	62	56	66	14	10	48	16	29	51	36	45	31
23	73	47	54	0	17	58	28	39	47	28	35	27
24	71	57	51	9	22	63	36	38	51	16	29	21
25	67	64	49	14	28	74	53	46	53	0	17	18
26	67	49	46	8	38	78	59	62	57	8	20	10
27	65	51	43	9	37	78	53	60	26	0	42	9
28	60	32	42	10	47	80	62	61	12	8	35	17
29	54	29	51	17	56	75	65	64	0	7		19
30	42	21	33	11	64	71	55	59	0	0		25
31		17		22	82		37		0	0		26
MEAN	57.7	42.4	39.5	23.1	25.6	59.3	30.7	23.9	23.3	29.3	27.7	22.7

1973 yearly mean = 38.0

DAILY SOLAR FLUX AT 2800 MHz
OTTAWA ARO

FLUX ADJUSTED TO 1 A.U., S_a

	1973									1974		
DAY	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR
1	115.0	111.9*	85.2	90.9	86.9	114.9	109.0	87.0	86.9	71.5	71.8	76.4
2	118.1*	115.0*	83.1	93.1	86.8	129.2*	106.1	83.9	86.3	73.2	73.1	76.5
3	129.4	117.3	81.5	93.5	85.0	136.5	103.5	81.1	82.7	73.3	73.1	77.1
4	122.3	115.9*	81.0	94.9	86.2	135.0*	94.9	77.4	78.6	72.5	72.9	79.0
5	117.7	115.0*	82.5	97.9	85.1	135.1*	90.6*	73.9	73.6	72.1	74.0	78.6
6	112.7*	109.7	85.1	99.4	88.8	130.9	85.9	73.2	70.9	74.7	75.4	77.5
7	110.3	103.4	85.3	99.9	90.8	121.7*	82.2	72.1	70.4	76.0	77.4	76.0
8	121.0	100.0	87.4	97.6*	87.5	115.7	80.1	70.4	70.9	79.7	78.8	77.0
9	120.5	95.1	88.9	98.6*	87.1	113.1*	79.1	70.4	71.2	84.9	80.8	80.2
10	115.5	90.9*	91.0	100.5	83.4	106.7*	77.0	70.7	72.3*	89.2	80.5	86.1
11	110.3*	87.0	92.9	94.0	78.9	96.8	74.9	71.2	71.9	91.0*	77.5	85.9
12	103.4*	86.8	93.6	85.4	76.3	89.5	72.0	70.7	72.5	94.6	76.5	86.2
13	99.4*	85.2	96.3	80.3	74.7	84.6	70.5	72.6	73.1	94.8*	77.3	84.5
14	92.7*	89.3	97.7*	79.5	74.1	82.9	72.7	73.8	73.8	98.7	76.3	81.9
15	89.5	90.1	98.2	78.7	72.6	82.6	75.7	75.0	76.6	91.8	83.7	82.9
16	85.0	89.5	95.2	79.5	74.1	83.9	75.6	75.6	79.7	90.0	84.7	81.8
17	82.1	91.4	89.8	78.1	75.0	81.8	79.5	75.3	82.1	89.2	85.9	82.7
18	80.9	95.4	91.4	83.6	75.3	84.6	78.3	75.5	84.9	87.1	87.5	80.2
19	82.8	99.4	99.2	81.6	75.4	86.6	76.7	75.4	87.8	85.8	82.7	80.0
20	86.4	104.7*	105.4	79.5	76.8	92.0	73.4	76.8	89.9	84.4	82.2	79.6
21	95.2	102.2	108.8	79.4	80.4*	94.9	80.0	80.7	97.6	79.7	82.2	79.1
22	105.0	103.1	109.4	77.6	80.4	99.5	85.0	84.7	96.7*	83.5*	82.2	80.0
23	109.2	99.6	108.8	78.6	81.8	103.9	89.9	86.5	96.0	81.0	84.2	79.8
24	109.0*	104.5	106.1	81.6	85.3	106.2	97.6*	87.0	98.1	77.8	80.9	76.6
25	109.2*	104.7	101.3	83.8	88.9	112.7	101.0	88.0*	97.6	74.1	78.6	74.3
26	110.1*	101.1	100.3	85.0	91.2	115.5	101.0	91.8*	92.9	71.5	76.2	72.6
27	111.6*	99.9	94.8	85.5	95.1	115.9	101.7*	88.8	88.6	70.7	76.4	71.8
28	112.6	94.1	95.2	84.2	97.5	118.1	100.7	90.7	81.7*	70.8	75.8	70.4
29	109.5*	93.3	95.1	89.5*	100.8	116.5	99.1	94.9	76.4	70.7		71.5
30	106.2*	90.8	94.1*	86.1	101.3	116.5*	97.4*	95.7*	74.1	70.8		72.1
31		87.2		86.6	109.6		90.5		72.0	71.3		72.9
MEAN	105.8	99.1	94.2	87.2	84.9	106.8	87.1	79.7	81.5	80.4	78.9	78.4

* adjusted for burst

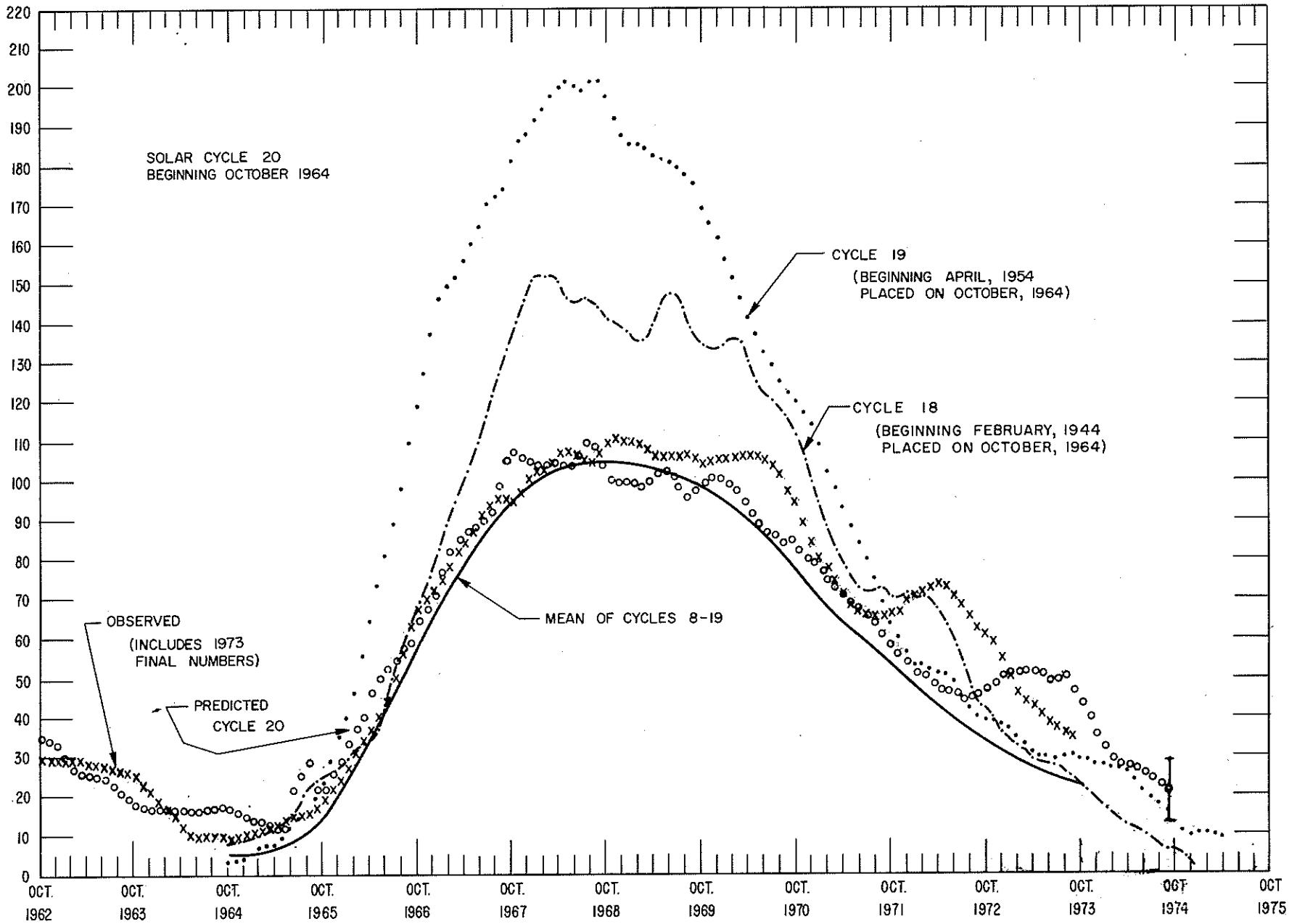
Errata: The solar flux value for April 12, 1973 has heretofore been reported incorrectly as 130.4.

DAILY SOLAR INDICES

MARCH 1974

MAR 1974	YEAR DAY	BARTELS 27-DAY CYCLE NUMBER	SUNSPOT NUMBERS		OBSERVED FLUX	SOLAR FLUX ADJUSTED TO 1 A.U.								
			R_Z	$R_{A'}$	OTTAWA 2800	AFCRL 15400	AFCRL 8800	AFCRL 4995	OTTAWA 2800	AFCRL 2695	AFCRL 1415	AFCRL 606	AFCRL 410	AFCRL 245
1	60	20	25	16	77.8	504	265	122	76.4	74.9	52.7	37.6	18.0	8.1
2	61	21	16	9	77.8	509	268	122	76.5	75.4	52.1	37.6	18.5	7.9
3	62	22	16	9	78.4	510	271	123	77.1	77.2	48.9	37.3	19.4	8.2
4	63	23	17	10	80.3	517	263	125	79.0	75.9	52.8	37.7	18.4	8.3
5	64	24	18	13	79.9	520	265	125	78.6	77.2	52.4	36.7	18.3	8.2
6	65	25	19	20	78.7	510	266	122	77.5	75.1	51.2	39.3	17.9	8.1
7	66	26	20	16	77.2	519	266	121	76.0	74.4	51.9	37.6	17.9	8.2
8	67	27	16	12	78.1	517	273	121	77.0	75.9	51.6	38.0	18.5	8.6
9	68	1	20	19	81.3	513	275	123	80.2	78.9	55.4	40.1	21.2	9.5
10	69	2	30	31	87.2	512	275	128	86.1	82.9	56.2	39.4	18.7	9.0
11	70	3	37	37	87.0	511	279	126	85.9	84.2	56.4	40.8		
12	71	4	38	36	87.2	515	280	126	86.2	85.9	60.0	41.9		
13	72	5	30	23	85.5	515	279	124	84.5	82.6	58.9	40.5		
14	73	6	42	28	82.8	514	275	124	81.9	82.3	58.3	40.1	18.5	8.9
15	74	7	37	27	83.8	513	277	124	82.9	80.5	59.7	42.9	20.1	8.7
16	75	8	23	23	82.6	519	279	125	81.8	82.6	60.6	41.3	19.2	8.6
17	76	9	20	17	83.5	522	276	124	82.7	81.4	60.1	40.9	15.1	7.5
18	77	10	32	19	80.9	523	277	124	80.2	80.2	57.4	41.7	18.4	8.5
19	78	11	20	19	80.6	514	273	122	80.0	77.6	58.0	38.2	18.8	9.0
20	79	12	9	10	80.2	510	273	121	79.6	77.4	54.5	38.1	18.6	8.3
21	80	13	16	14	79.7	519	272	121	79.1	74.3	56.7	38.7	19.7	8.5
22	81	14	31	25	80.6	511	274	124	80.0	78.4	52.4	38.8	19.8	8.3
23	82	15	27	24	80.3	517	274	124	79.8	78.1	53.4	38.2	20.5	8.3
24	83	16	21	17	77.1	521	272	123	76.6	74.4	51.9	38.6	18.1	8.0
25	84	17	18	11	74.7	511	271	119	74.3	72.8	49.0	37.1	21.4	8.4
26	85	18	10	8	72.9	507	266	115	72.6	69.5	48.3	36.7	20.1	8.7
27	86	19	9	8	72.1	515	270	117	71.8	71.5	47.6	35.0	21.5	8.4
28	87	20	17	15	70.6	509	271	117	70.4	69.1	44.9	35.3	19.3	8.6
29	88	21	19	21	71.7	514	271	117	71.5	69.0	45.5	37.5	22.8	9.6
30	89	22	25	26	72.2	513	265	116	72.1	70.0	47.6	36.8	19.8	8.8
31	90	23	26	30	73.0	513	264	118	72.9	71.0	46.9	37.0	19.4	8.5
MEAN			22.7	19.1	79.2	514	272	122	78.4	76.8	53.3	38.6	19.2	8.5

* Corrected 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	40.7	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	66.8	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	37.6	36.3	34.7	33.4 (2)	31.8 (3)	30.3 (3)
1974	28.9 (4)	27.7 (5)	26.8 (6)	26.1 (6)	25.7 (6)	24.9 (7)	23.6 (7)	22.1 (8)	20.6 (8)	19.3 (8)	18.0 (9)	17.0 (9)
1975	16.3 (9)	15.4 (9)	14.8 (9)	14.3 (8)	13.7 (8)	13.3 (9)	13.2 (11)					

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 1973.

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.

SOLAR FLARES

Date, time (UT) and coordinates of Subflares not included in preceding table.

MARCH 1974

02	0612	N05	E32	02	1633	N07	E14	03	1340	S02	E14	09	2006	N01	E13	10	1612	N05	E17	10	1739	N05	E16
10	1739	N05	E16	10	1752	S15	E89	11	0958	N01	W15	11	1237	S01	W17	11	1602	S17	E76	12	0946	N03	W28
12	2342	N 4	W12	13	0710E	S01	W42	13	1812	N06	W25	13	2242	S12	E29	13	2249E	S11	E27	14	1032	S24	E60
16	0955	S12	W05	16	1000	S13	W06	17	1328	S15	E28	19	0602E	S07	E74	19	0815E	S09	E73	19	1402	S21	W27
19	1403	S22	W31	19	1505E	S22	W29	20	0015E	S21	W34	20	1237	S15	W46	21	0422E	S08	E49	21	0906	S07	E48
21	1000E	S14	W59	21	1133E	S08	E45	22	0125	N14	W23	22	0150	N14	W23	22	0209	N14	W23	22	0352E	N14	W24
22	0605	N15	W25	23	0247	S19	W89	23	0303E	S07	E24	23	0311E	S15	W81	23	0452E	N13	W38	23	0453E	N15	W38
23	1201	N16	W38	23	1402	N15	W40	23	1411E	N15	W39	24	0247E	S17	W89	25	0310	N16	W61	25	0601	N14	W66
28	1100	N07	W34	28	1920	N08	W38	28	2150	N08	W39	28	2150	N06	W39	28	2325	N08	W40	28	2335E	N09	W42
28	2354	N07	W42	29	0029	N08	W42	29	0029	N08	W41	29	0056E	N08	W41	29	0102	N09	W42	29	0119	N08	W42
29	0252E	N13	E78	29	0314E	N08	W43	29	1514	N27	W69	30	1148E	S12	E53	30	1327E	S12	E53	30	1750	S13	E48

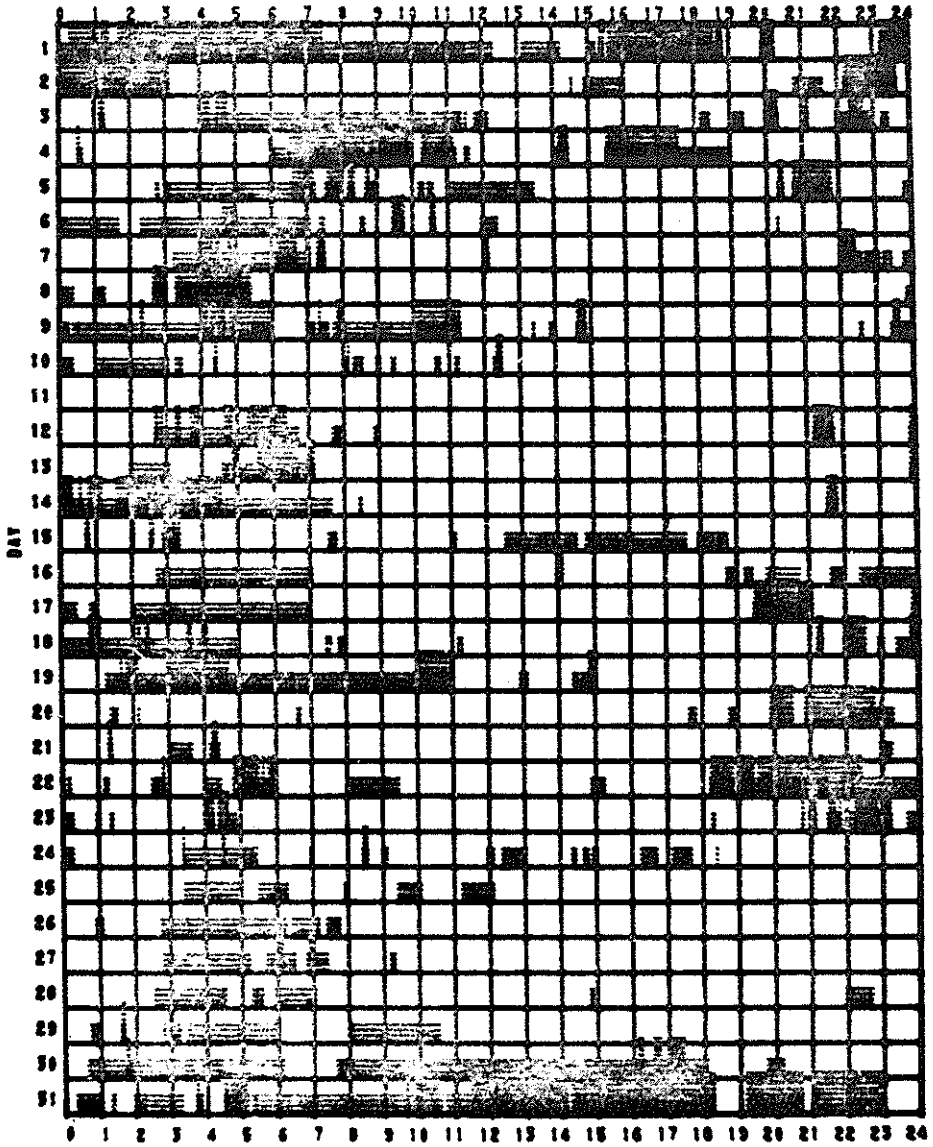
Note: No flares of Importance 1 or greater have been reported for March 1974.

INTERVALS OF NO FLARE PATROL OBSERVATION

FOR PRECEDING SOLAR FLARE TABLE

MARCH 1974

HOUR–UT



Observatories included in total patrol:

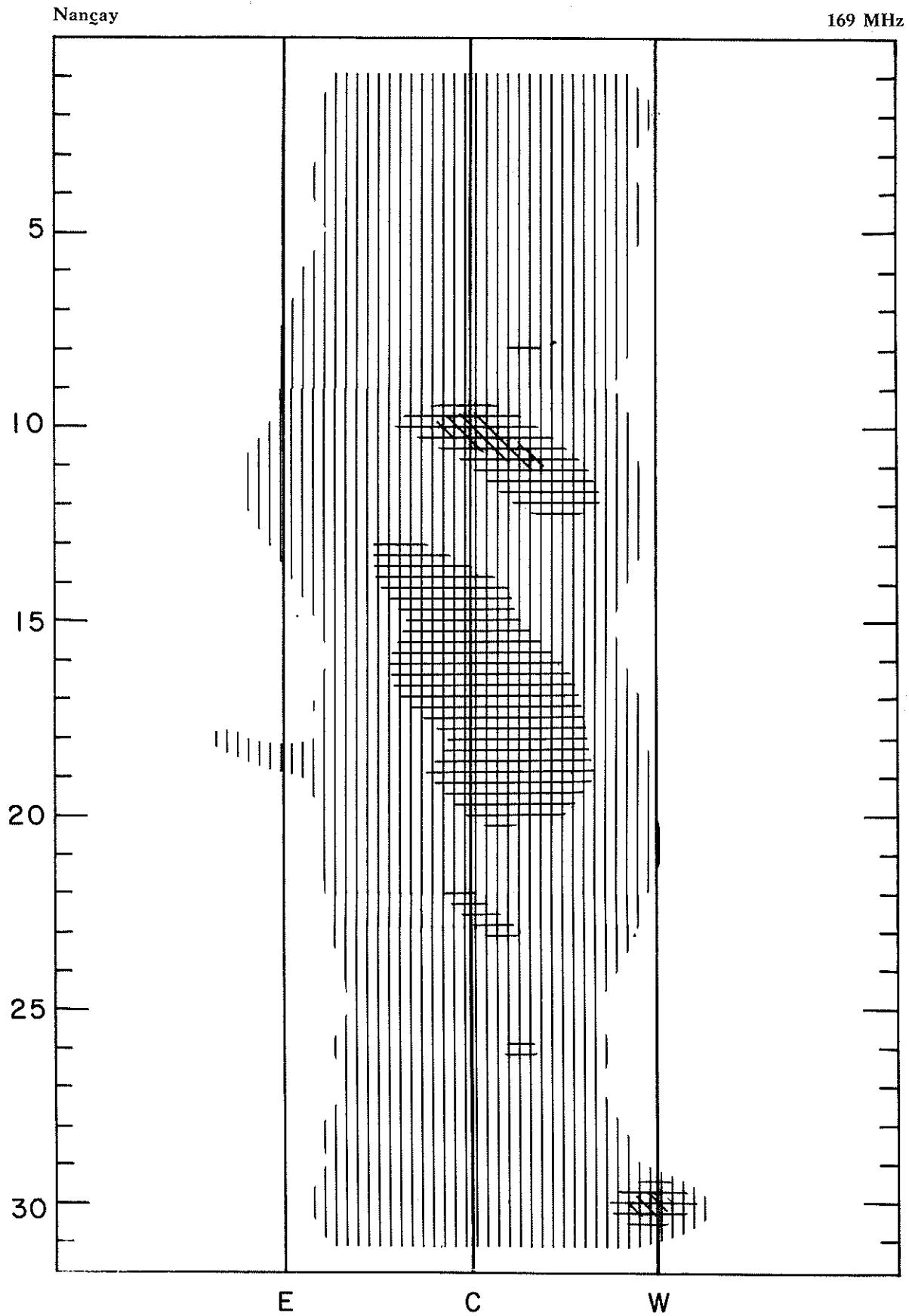
Arcetri	Bucharest	Hurbanova	McMath-Hulbert	Ramey
Athenes	Catania	Kodaikanal	Mitaka	Teheran
Boulder	Herstmonceux	Manila	Monte Mario	Upice
			Palehua	Wendelstein

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).

12
Mar 74

SOLAR RADIO EMISSION
INTERFEROMETRIC OBSERVATION

MARCH 1974

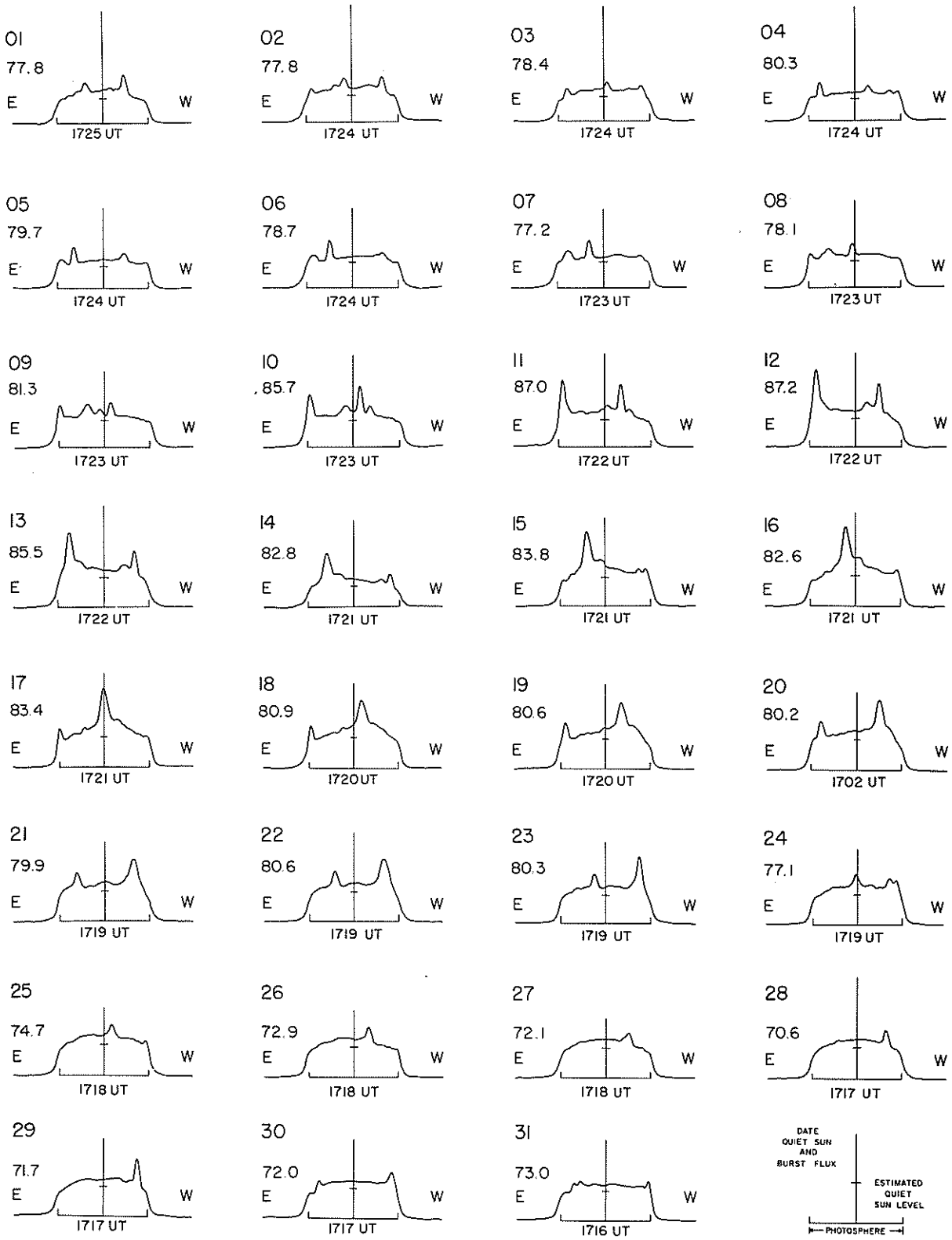


EAST - WEST SOLAR SCANS

March 1974

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

ALGONQUIN RADIO OBSERVATORY
CANADA



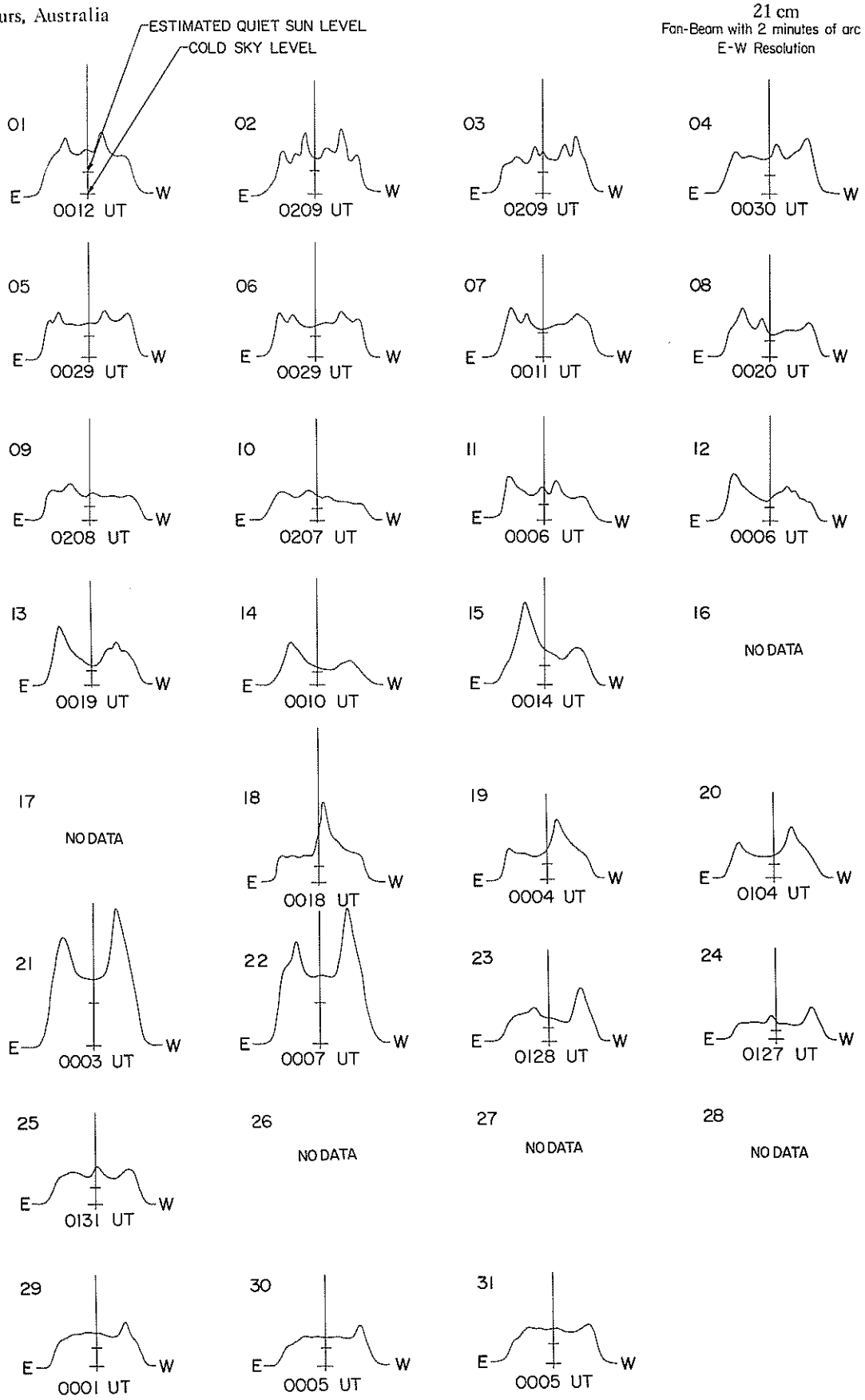
14
Mar 74

EAST-WEST SOLAR SCANS

MARCH 1974

Fleurs, Australia

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

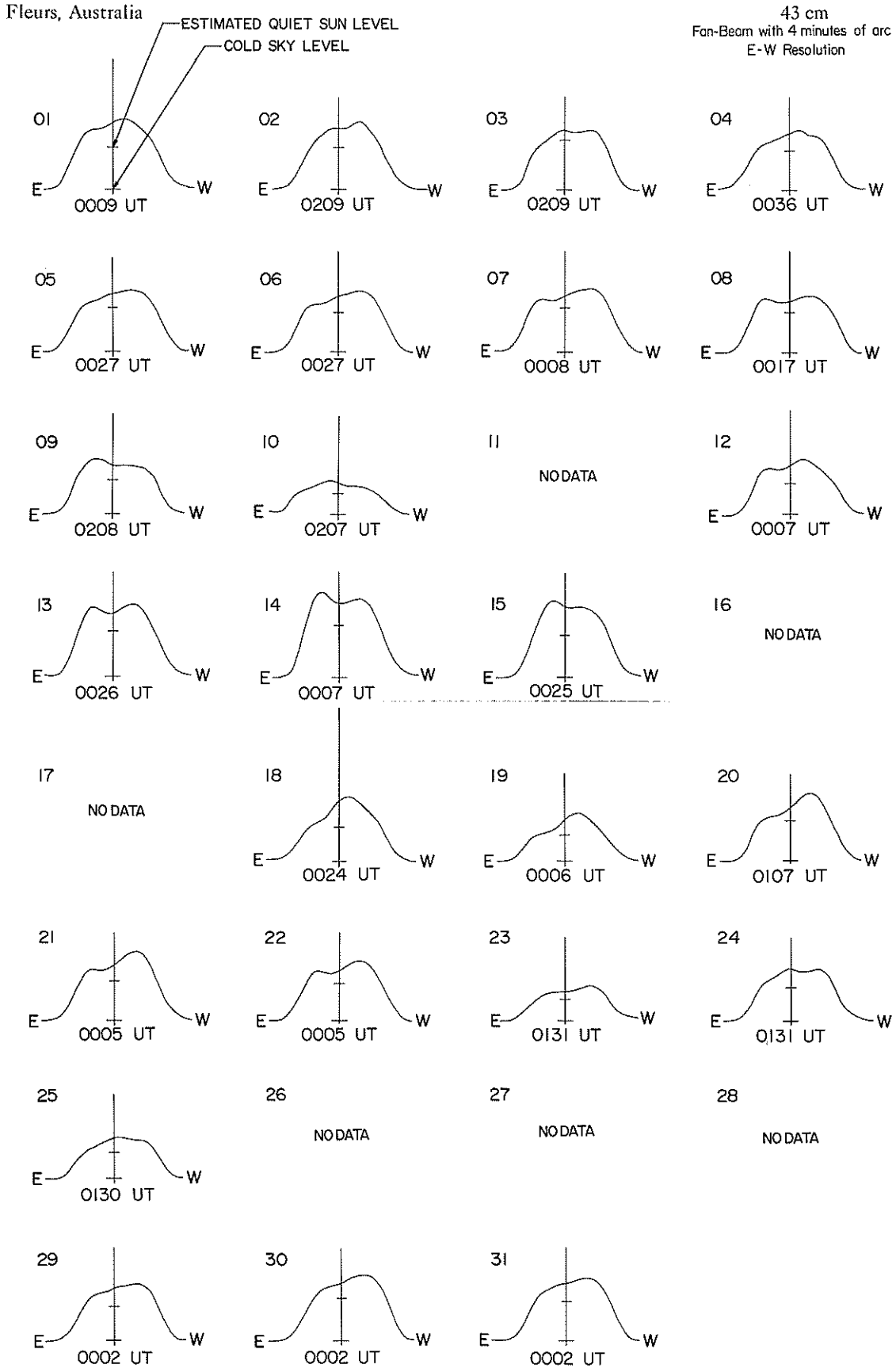


EAST-WEST SOLAR SCANS

MARCH 1974

Fleurs, Australia

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



SOLAR RADIO EMISSION
SELECTED FIXED FREQUENCY EVENTS

MARCH 1974

MAR 1974	FREQUENCY STATION	TYPE	STARTING TIME UT	TIME OF MAXIMUM UT	DURATION MINUTES	FLUX DENSITY $10^{-22} Wm^{-2} Hz^{-1}$ PEAK	MEAN	INT	REMARKS
1	2800 OTTA	8	1806.9	1806.9	.1	1.0			
	2800 OTTA	29	1807	1807	10	.7	0.4		
4	2800 OTTA	1	1738.5	1740	5	1.0	0.5		
10	2800 OTTA	20	1520	1545	85	1.4	0.7		
	2800 OTTA	20	1740	1824	85	1.4	0.7		
11	2800 OTTA	8	1341	1341.2	.5	2.6			
	2800 OTTA	20	1500	1525	100	1.6	0.8		
13	2695 PENT	24	2230	2245	15	1.6	0.8		
	2695 PENT	24	2245		100 D	1.6			
14	2800 OTTA	1	1533.5	1534.3	2	.8	0.4		
15	2800 OTTA	1	2153.5	2154.2	2.5	.6	0.3		
18	2800 OTTA	22	1942	1946.5	10	1.4	0.7		
19	2695 BOUL	8	1404	1404.5	1.5	23.0	9.0		
	2695 SGMR	22	1447.8	1508.4	109.6	7.8	4.3		
	2800 OTTA	23	1450	1512	130	4.0	1.8		
	2695 BOUL	45	1503.5	1506.5	7.5	5.0	2.0		
	2800 OTTA	1	1505.5	1506	1	7.0	3.5		
	2800 OTTA	1	1508.5	1509.2	2.5	2.6	1.1		
	2800 OTTA	2	1519	1519.7	5	2.6	1.3		
	2800 OTTA	1	1537.5	1539	3.5	1.0	0.5		
	2695 BOUL	3	2139	2139.5	2	5.0	2.0		
20	2800 OTTA	20	1353	1410	120	1.6	0.8		
	2800 OTTA	22	1711	1715	11	2.6	1.2		
	2800 OTTA	1	1728	1729	4	.6	0.3		
	2800 OTTA	20	1902	1924	58	1.4	0.7		
	2695 PENT	1	2028.5	2029	7	.6	0.3		
21	2800 OTTA	1	2138.5	2139.5	3	2.6	1.0		
24	2800 OTTA	20	1955	2010	45	.6	0.3		
28	2800 OTTA	24	2142	2158	16	1.4	0.6		
	2695 PENT	24	2158		180 D	1.4			

Observatories:

BOUL = Boulder MANI = Manila OTTA = Ottawa ARO PENT = Penticton SGMR = Sagamore Hill

Explanation of Type Code:

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

PIONEER VI

MARCH 1974

Date Mar. 1974	DSN Coverage (UT)	Data Time (UT)	ESP (°)	SOLAR WIND AMES[1] U_{H^+} (km/sec)	SOLAR WIND AMES[1] TAU (days)	SOLAR WIND MIT[2] U_{H^+} (km/sec)	SOLAR WIND MIT[2] N_{H^+} (H^+/cc)	COSMIC RAY PROTONS[3] (particles/sec) 6-13 (Mev*)	13-175 (Mev**)	>175 (Mev)
13	0722-1656	0800	-161.8	361.	-11.6	364.	60.2	11.8	0.074	1.02
		0900		361.		355.	57.	11.8	.122	1.
		1000		383.		360.	36.2	22.2	.131	1.08
		1100		383.		363.	41.8	16.5	.135	1.03
		1200		383.		373.	27.1	13.	.162	.98
		1300		383.		349.	66.7	20.5	.212	1.08
		1400		383.		374.	34.9	27.5	.143	1.11
		1500		383.		378.	31.8	27.9	.118	1.05
		1600		383.		383.	34.1	22.8	.103	1.03
14	0651-1656	0700	-162.6	383.	-11.6	404.	6.	24.4	.128	1.08
		0800		383.		383.	9.3	26.6	.123	1.08
		0930		383.		381.	9.9	25.4	.135	1.1
		1100		383.		376.	9.9	26.2	.174	1.16
		1200		383.		372.	10.8	25.1	.135	1.09
		1300		383.		378.	16.8	23.4	.139	1.08
		1400		383.		371.	13.	22.5	.13	1.08
		1500		383.		381.	26.3	20.7	.142	1.02
		1600		383.		376.	27.1	19.8	.145	1.02
15	0651-1656	0700	-162.3	383.	-11.6	382.	32.7	7.7	.141	1.05
		0800		383.		377.	30.8	6.8	.112	1.03
		0900		383.		376.	31.8	6.1	.136	1.11
		1000		383.		371.	33.9	6.6	.123	1.09
		1100		383.		374.	31.6	6.4	.143	1.11
		1200		383.		373.	33.6	5.5	.126	1.06
		1300		383.		368.	30.9	6.1	.131	1.08
		1400		383.		381.	26.	5.1	.106	.98
		1500		383.		378.	33.	5.2	.118	1.08
		1600		383.		376.	23.7	5.	.128	1.08
17	0750-1226	0800	-162.8	383.	-11.7	363.	34.1	1.8	.124	1.11
		0900		383.		358.	25.5	1.7	.126	1.14
		1000		383.		360.	23.7	1.8	.116	1.11
		1100		383.		353.	27.9	1.8	.123	1.11
		1200		361.		352.	32.3	1.8	.124	1.11
18	0733-1230	0800	-163.	383.	-11.7	378.	16.3	2.	.121	1.05
		0900		383.		382.	23.7	1.6	.129	.91
		1000		383.		383.	23.8	1.3	.144	1.14
		1100		383.		366.	23.4	1.2	.112	1.06
		1200		383.		384.	35.5	1.3	.131	1.08

[1] Wolfe - NASA/ARC
[2] Lazarus - MIT
[3] Simpson - University of Chicago

* Includes He 0.6-13 Mev/nucleons and electrons ∿0.5 Mev - see J. Retzler and J. A. Simpson, J. Geophys. Res., 74, 9, 2149-2160, 1969 for discussion of the electron response of Pioneer VII.

** Includes He >13 Mev/nucleons.
Q used to indicate that a rate is at its quiescent level.

Note: The notes published with the March 1972 data continue to apply to the current data.

ESP = Earth-Sun Probe Angle.

Note: Radial alignment of Pioneer 6 with both Pioneer 10 and Pioneer 11 occurred on 11 March 1974.

Data sampled hourly unless otherwise noted.

PIONEER IX

MARCH 1974

Date Mar. 1974	DSN Coverage (UT)	Data Time (UT)	ESP (°)	SOLAR WIND[1]				IP E-FIELD[2]	IMP[3]		COSMIC RAY PROTONS[4] (particles/sec)	
				U_{H^+} (km/sec)	N_{H^+} (H^+/cc)	T_{H^+} ($\times 10^6$ °K)	TAU (days)	400 Hz (mv)	$\lvert B \rvert$ (γ)	φ (°)	>13.9 Mev	>40 Mev
6	1924-2032	2000	-074.8	565.**	---	---	-4.88	0.19	4.7	273	6.24	0.7

[1] Wolfe - NASA/ARC
[2] Scarf - TRW, Inc.
[3] Sonett and Colburn - NASA/ARC
[4] Webber - Univ. of N. H.

ESP = Earth-Sun Probe Angle.

Data sampled hourly unless otherwise noted.

** Peak velocity.

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
1893	1971 DEC 20	T	A	A	A	A	A	A	A	T	T	T	T	-	T	T	T	T	T	T	T	T	T	T	-	T	T	T
1894	1972 JAN 16	T	A	A	A	A	T	T*	T	T	T	T	T	T	T	T	T	T	A	A	A	T	T	T	T	T	TA	A
1895	FEB 12	A	T	A	A	A	A	T	T	T	TA	A	-	A	T	T	T	T	TA	A	T	T	T	T	T	TA	A	A
1896	MAR 10	A	A	A	A	A	A	A	A	A	A	A	T	A	T	T	T	T	A	A	T	T	T	T	T	T	A	A
1897	APR 6	A	T	T	A	T	T	T	T	T	T	T	T	T	A	T	T	A	A	A	A	A	-	A	A	T	TA	A
1898	MAY 3	A	A	A	-	A	T	T	T	T	T	T	T	T	A	A	T	A	A	A	A	A	T	A	T	T	A	T
1899	MAY 30	A	A	*	A	A*	T	T	A	T	T	T	A	-	-	-	-	-	T	-	A	A	T	T	T	T	TA	A
1900	JUN 26	A	A	A	A	A	A	A	AT	T	T	T	TA	A	T	T	A	A	A*	A*	A	T*	T	T	T	T	T	TA
1901	JUL 23	A*	A*	A*	A	A	A	A	A*	T	T	A	A	A	-	A	T	T	T	T	T	A	T	T	T	T	A	-
1902	AUG 19	-	-	A	A	A	A	A	T	A	A	A	A	T	A	A	A	T	T	T	T	A	A	T	A	A	A	-
1903	SEP 15	A	T*	A	A	A	A	A	T	A	A	A	-	-	-	-	-	T	T	T	T	T	-	T	A	A	A	T
1904	OCT 12	T	-	-	A*	T	T	T	A	A	T	A	A	A	A	A	AT	T	AT	T*	T	-	A*	AT	T	T	*	A
1905	NOV 8	A	A	A	AT	AT	AT	T	T*	A	A	A*	AT	A	A	AT	T	T	TA	T	T	T	A	A	A	A	AT	T
1906	DEC 5	T	T	AT	-	-	T	T	AT	-	T	T	A	-	-	T	TA	A	T	T	T	A*	T	T	T	T	AT	T
1907	1973 JAN 1	T	T	T	T	T	T	T	-	AT	T	-	-	TA	A	A	A	A	A	T	-	-	T	-	T	-	T	T
1908	JAN 28	T	A	T	T	T	T	T	T	A	TA	A	A	AT	TA	AT	TA	AT	-	A	A	T	T	T	T	T	T	T
1909	FEB 24	T	T	TA	T	T	-	TA	A	A	T	A	A	A	AT	A	A	A	TA	A	A	TA	A	A	T	T	T	T
1910	MAR 23	T	T	T	A	T	T	T	TA	A	TA	A	A	-	A	A	TA	A	A	AT	T-	-	T	T	T	T	T*	T*
1911	APR 19	T	AT	T-	T	T	T	A	T	T	TA	A	A	A*	A	AT	TA	A*	T	A	TA	T*	AT	A	T	A	T	A*
1912	MAY 16	T	T	T	T	T	T	TA	T	A	AT	T	A	A	A	A	A	A*	A	A	A	A	T*	-A	A	-	T	T
1913	JUN 12	T*	T	-	T	T*	A	T	T*	T*	T	T	AT	A	A	T	-	T	A	A	A	A*	AT	-	T	A	A	T
1914	JUL 9	T	T	A	T	T	A	T*	T*	A	AT	-	A	T	TA	T	T	T	A	A*	A	A*	TA	A	TA	T*	T*	T
1915	AUG 5	T	A	A	AT	A	T	T*	T	*	AT	T	AT	T	A	TA	T	T	A	A	AT	A*	AT	A	A	TA	A*	A
1916	SEP 1	TA*	T	T	AT	A	TA*	A	*	T	T	T	A	A	A	T	T	T	A	T	A	A*	A	T*	A	A	A*	A
1917	SEP 28	A*	A	AT	T	T	A*	A	A	A	A	T*	A	AT	A*	AT	T*	AT	AT	T	T	T*	T	T	T*	T*	T	T*	T
1918	OCT 25	T*	T	T*	T	A	TA	A*	A	A*	T	A	T*	T	A	T	A	A*	A	A*	A	T	A	TA	T	T*	T	T*	T
1919	NOV 21	A	*	T*	T	T	-	A	A	A*	A	AT	T	A	T	A*	T*	A	TA	A*	A	A*	A	T	TA	T	T	T	T*	T
1920	DEC 18	T	T	AT	A	A	T	A*	T	A	TA	A*	T	A*	*	A	A	A	*	AT	T	T*	T	T	T	T	T	*	T	T
1921	1974 JAN 14	T	A	A*	T	-	T	T	A	A	T	A	A	A	A	A*	A	-	A	A	-	AT	-	T*	T	T*	TA	T	*	T
1922	FEB 10	A	-	A	-	-	*	A	A	A	A	A	A	A	A	TA	T	-	A	-	A	-	*	T	T	T	T	T	T	-
1922	MAR 9	-	A	-	A	A	A	A	A	A	A	-	A	T	T	-	TA	-	AT	*	A	-	A	-	A	-	TA	-	A	-

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 made from magnetograms produced by magnetometers at the Vostok Antarctic Station of the USSR and the Thule Geopole Station of the U.S. Air Weather Service.

FEBRUARY 1974 DATA

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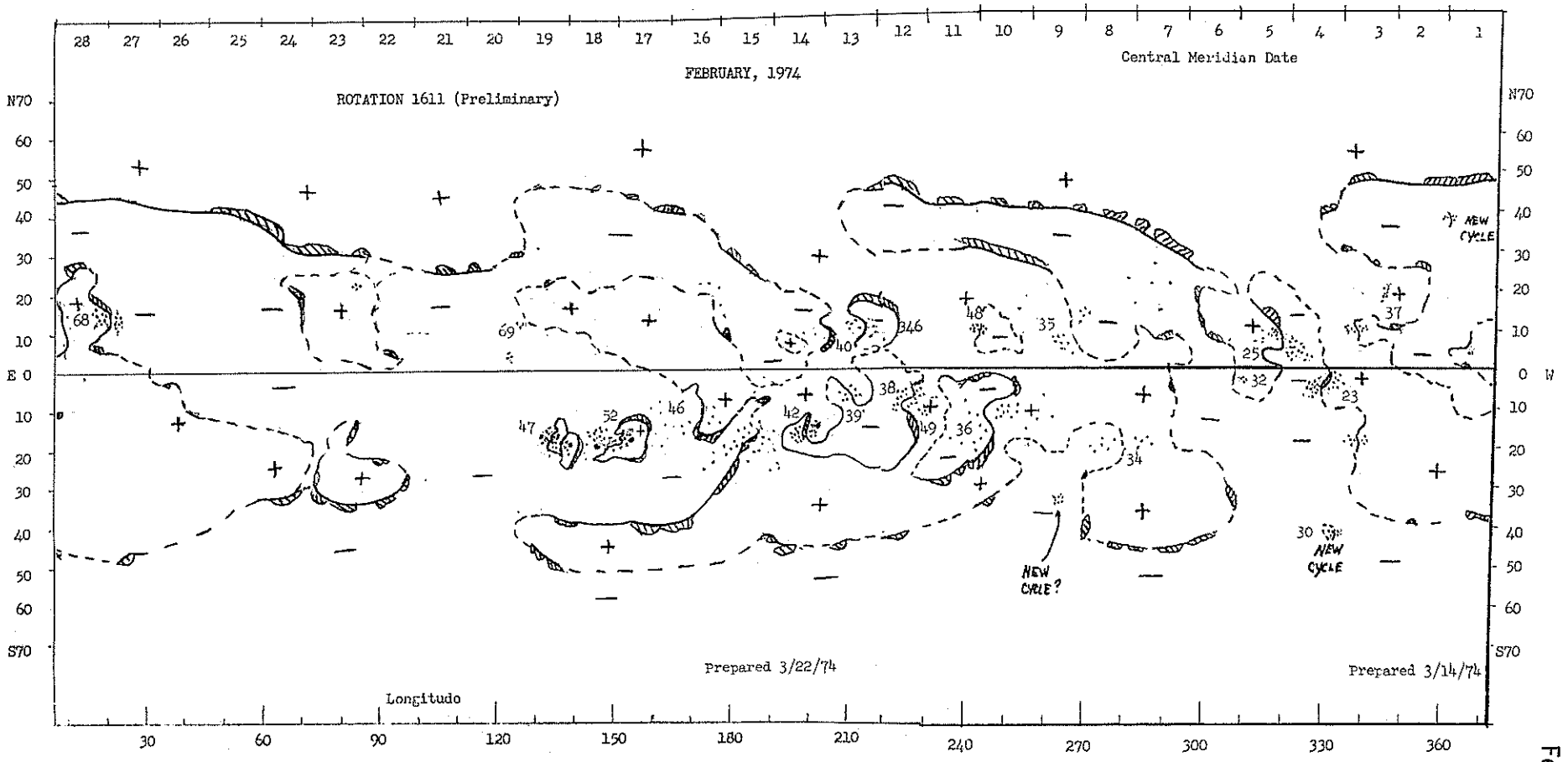
Errata: See page 23.

For explanations of the data contained herein see *Descriptive Text* published as supplement to February 1974 *Solar-Geophysical Data* (Number 354).

Hα SYNOPTIC CHART

FEBRUARY 1974



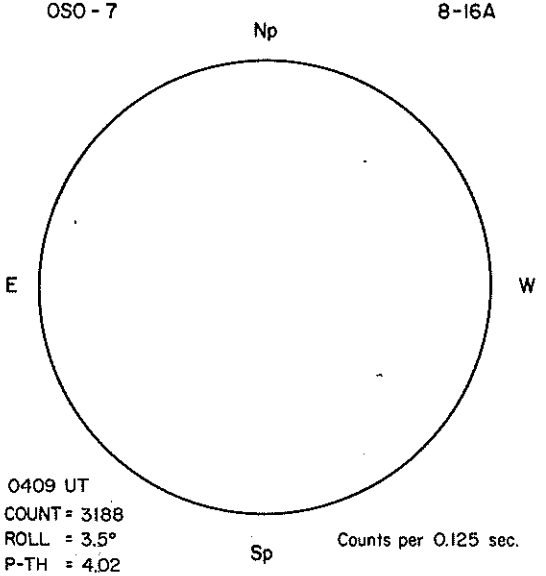
Errata: The longitudes on the synoptic charts have been labeled "Carrington longitude". These longitudes are, in fact, in the heliographic system. This change should also be noted on page 20 of the *Descriptive Text* published February 1974 including the reference to Lo, as shown on the pages of solar maps which follow.

23
Feb 74

FEBRUARY 1, 1974 (P=-12.07, B_o=-6.03, L_o = 15.55)

NASA GSFC
OSO - 7

X-RAY
8-16A



0409 UT
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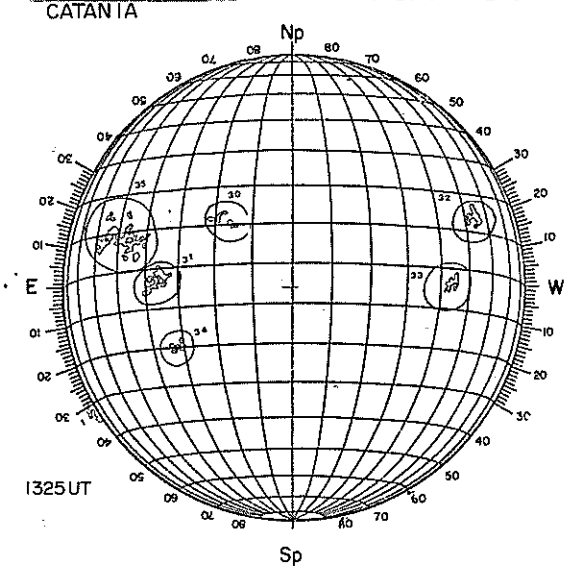
ROLL = 3.5°
P-TH = 4.02

Counts per 0.125 sec.

CATANIA

CALCIUM REPORT

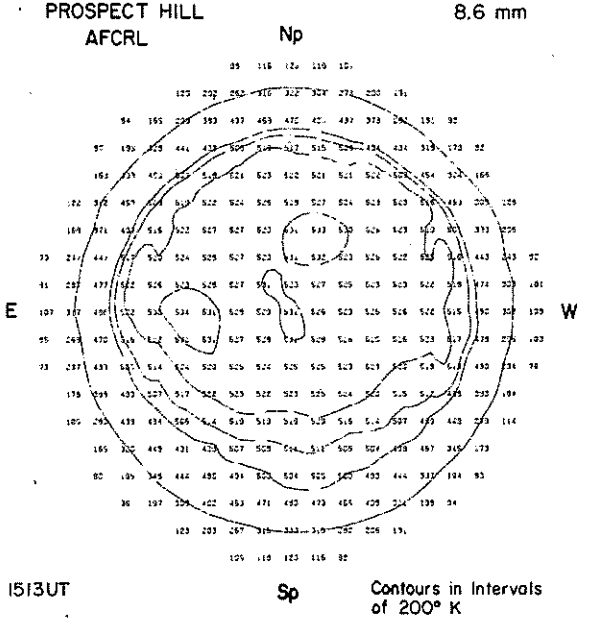


1325UT

FAIR GD

PROSPECT HILL
AFCRL

8.6 mm



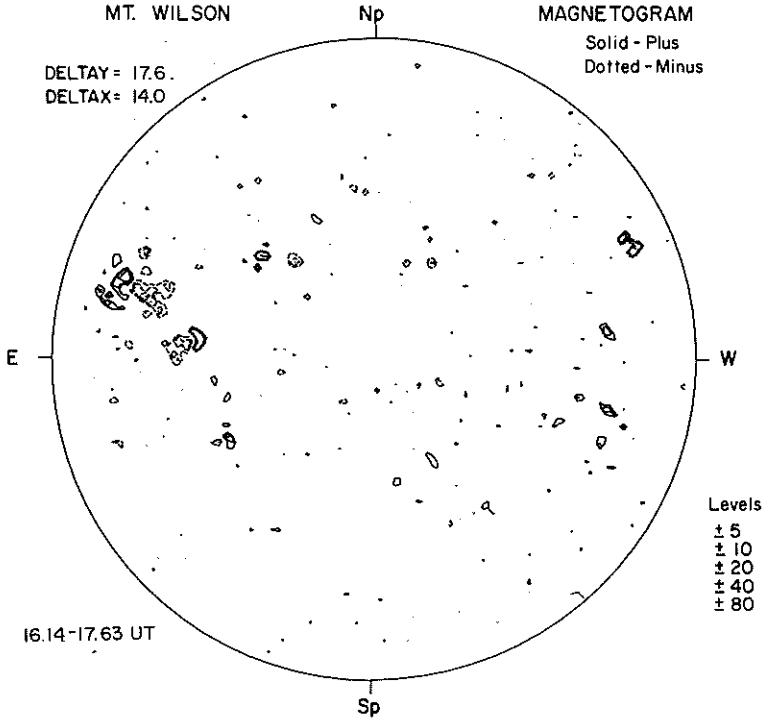
1513UT

Contours in Intervals of 200° K

MT. WILSON

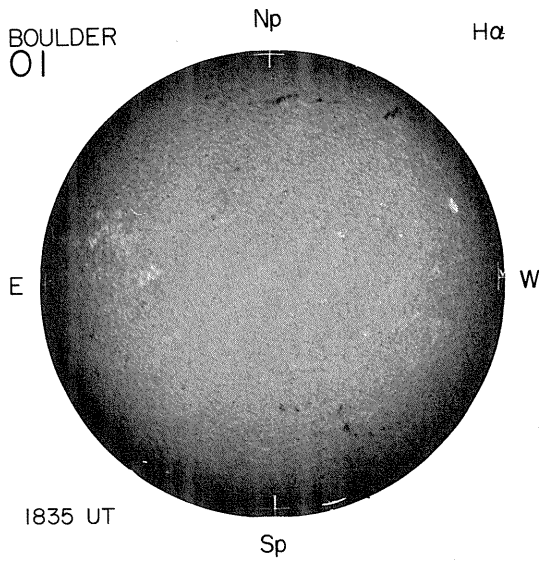
MAGNETOGRAM
Solid - Plus
Dotted - Minus

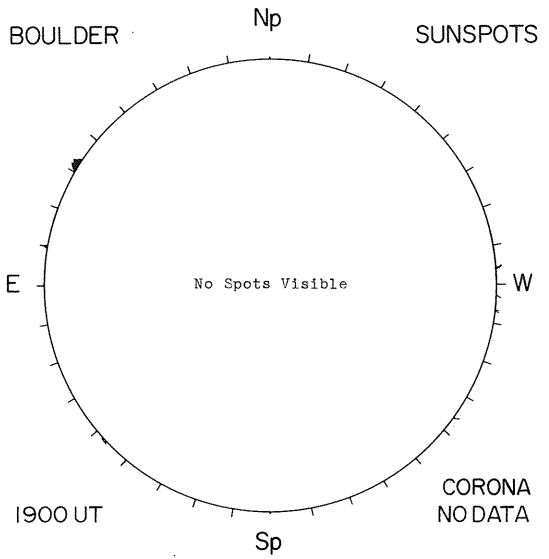
DELTAY = 17.6
DELTAX = 14.0

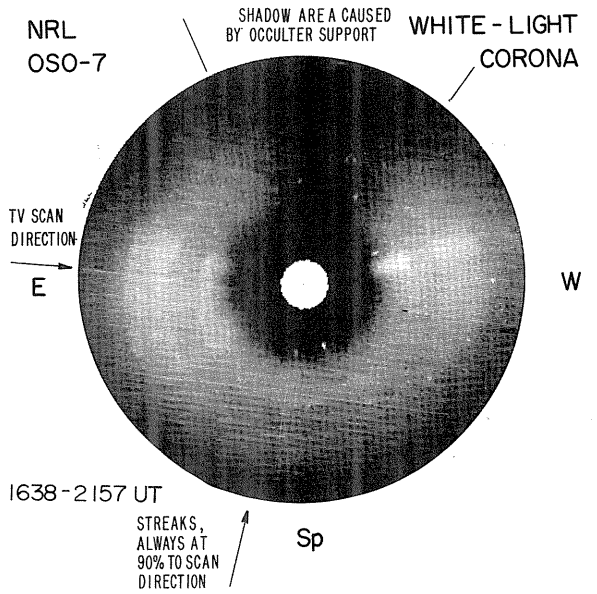


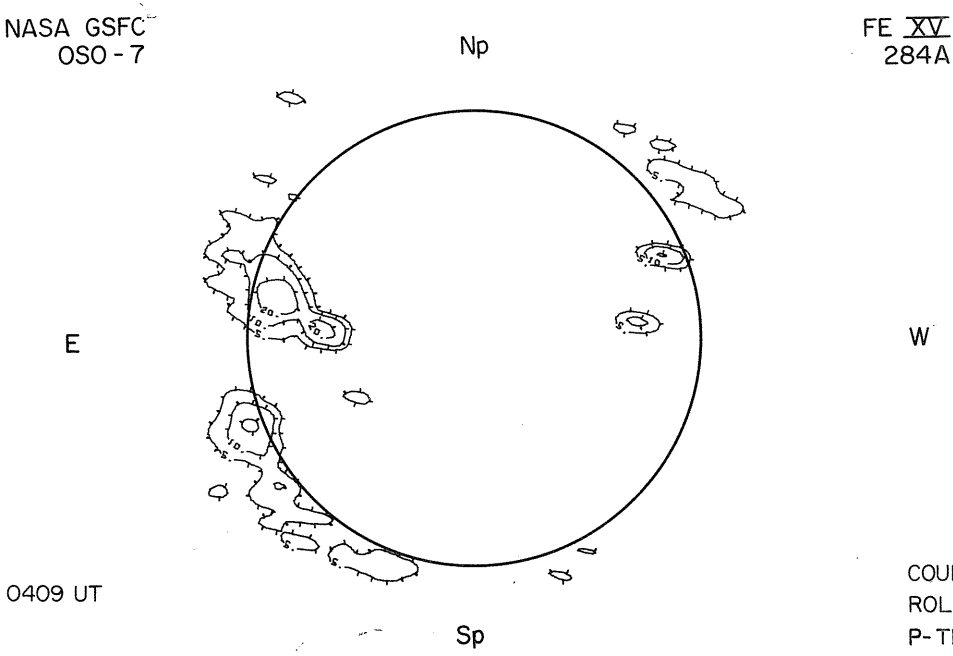
Levels
± 5
± 10
± 20
± 40
± 80

16.14-17.63 UT


BOULDER
OI
Np
Hα
E
W
1835 UT
Sp


BOULDER
Np
SUNSPOTS
E
No Spots Visible
W
CORONA
NO DATA
1900 UT
Sp


NRL
OSO-7
SHADOW AREA CAUSED BY OCCULTER SUPPORT
WHITE - LIGHT CORONA
TV SCAN DIRECTION
E
W
1638-2157 UT
STREAKS, ALWAYS AT 90% TO SCAN DIRECTION
Sp

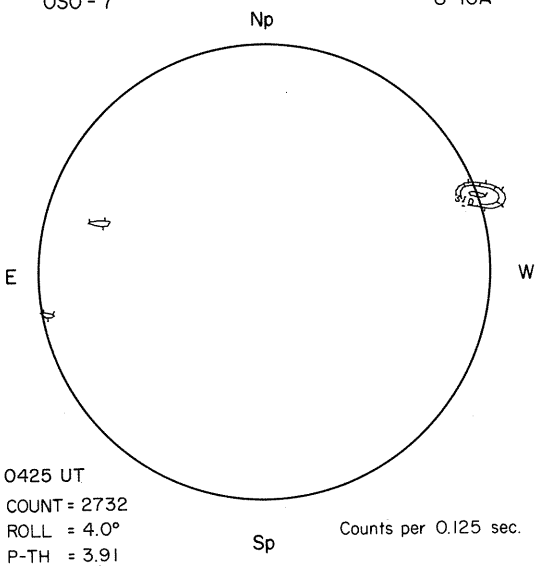

NASA GSFC
OSO - 7
Np
FE XV
284A
E
W
0409 UT
Sp
COUNT = 2762
ROLL = 3.5°
P-TH = 4.02

25
Feb 74

FEBRUARY 2, 1974 (P=-12.48, B_o=-6.10, L_o = 2.39)

NASA GSFC
OSO - 7

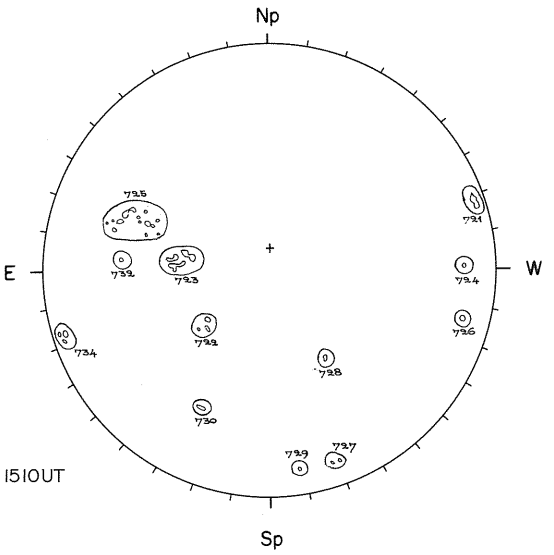
X-RAY
8-16A



0425 UT
COUNT = 2732
ROLL = 4.0°
P-TH = 3.91

Counts per 0.125 sec.

CALCIUM REPORT

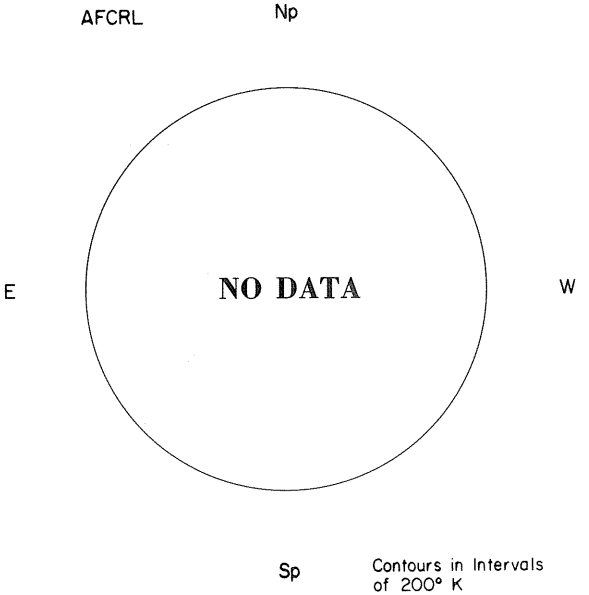


POOR | M

1510UT

PROSPECT HILL
AFCRL

8.6 mm

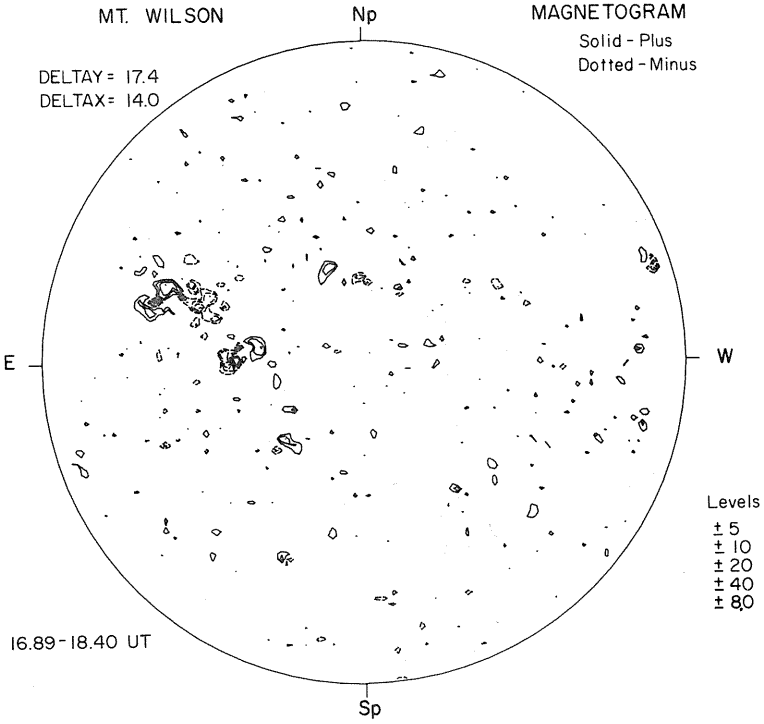


Contours in Intervals
of 200° K

MT. WILSON

MAGNETOGRAM
Solid - Plus
Dotted - Minus

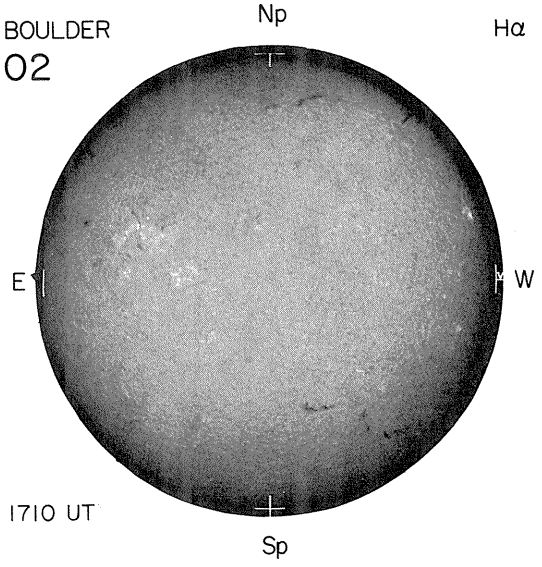
DELTAY = 17.4
DELTAX = 14.0



Levels
± 5
± 10
± 20
± 40
± 80

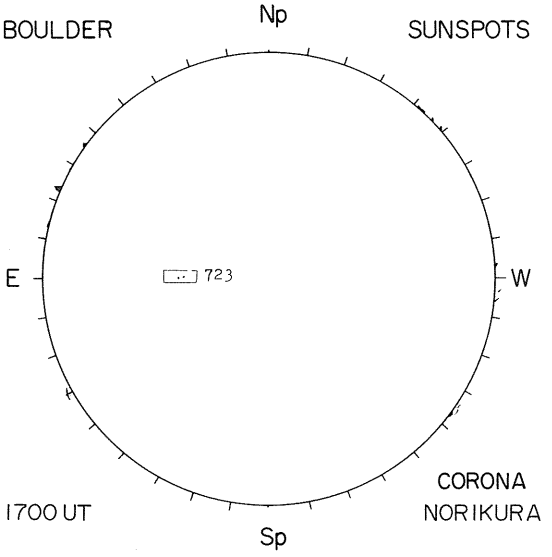
16.89 - 18.40 UT

BOULDER
02



1710 UT

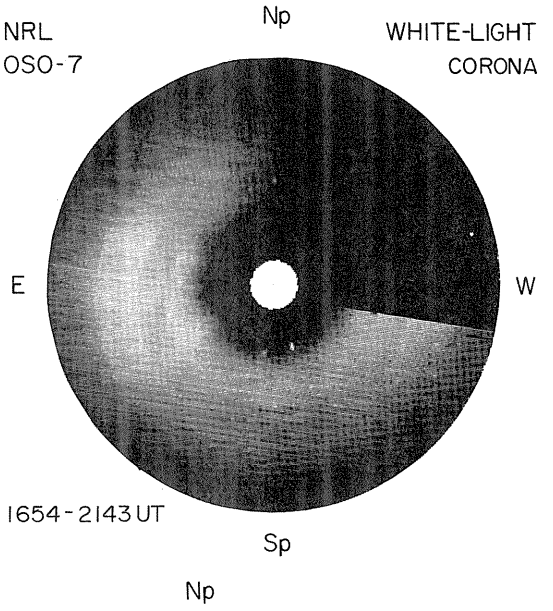
BOULDER



1700 UT

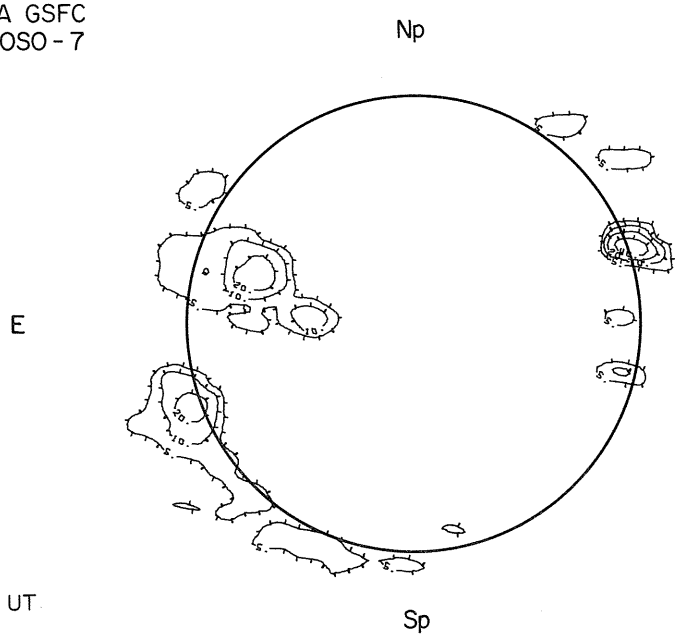
CORONA
NORIKURA

NRL
OSO-7



1654-2143 UT

NASA GSFC
OSO-7



0425 UT

FE XV
284A

COUNT = 3150
ROLL = 4.0°
P-TH = 3.91

27
Feb 74

FEBRUARY 3, 1974 (P=-12.88, B_o=-6.17, L_o= 349.22)

NASA GSFC
OSO - 7

X-RAY
8-16A

Np

E

NO DATA

W

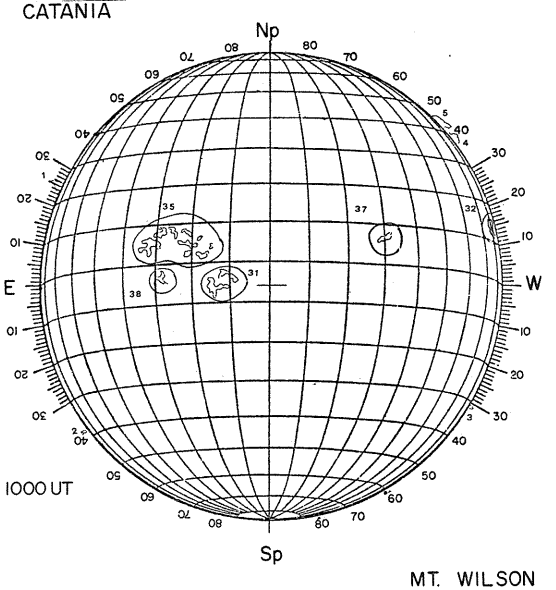
Sp

COUNT =
ROLL =
P-TH =

Counts per 0.125 sec.

CATANIA

CALCIUM REPORT



FAIR | EC

PROSPECT HILL
AFCRL

8.6 mm

Np

E

NO DATA

W

Sp

Contours in Intervals
of 200° K

MT. WILSON

Np

DELTAY =
DELTAX =

MAGNETOGRAM
Solid - Plus
Dotted - Minus

E

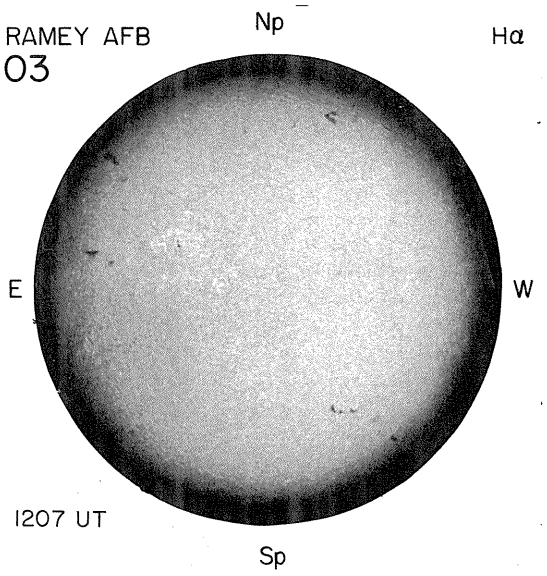
NO DATA

W

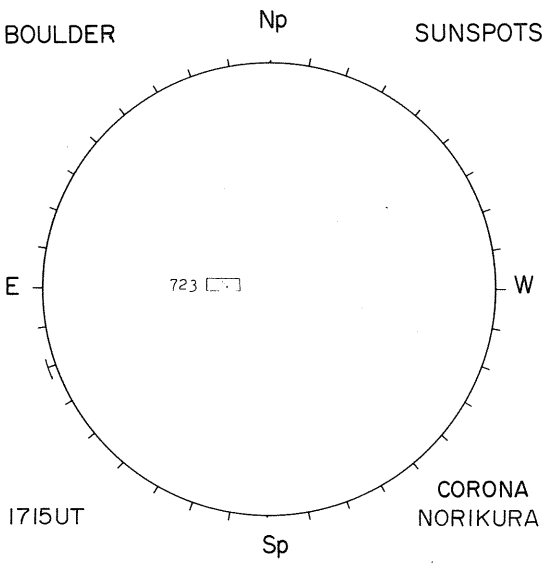
Levels
± 5
± 10
± 20
± 40
± 80

Sp

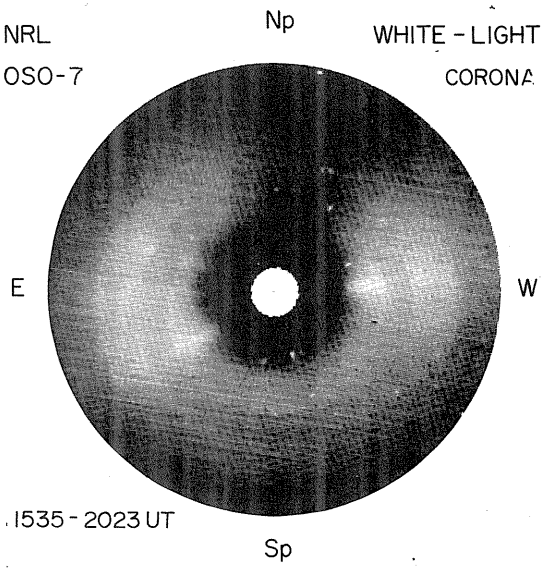
RAMEY AFB
03



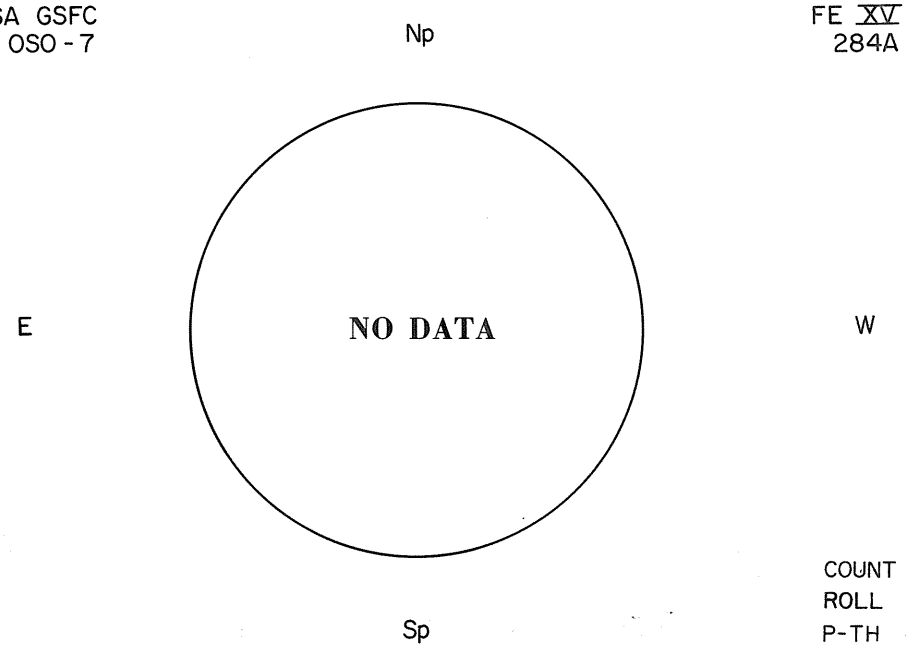
BOULDER



NRL
OSO-7



NASA GSFC
OSO - 7



FE XV
284A

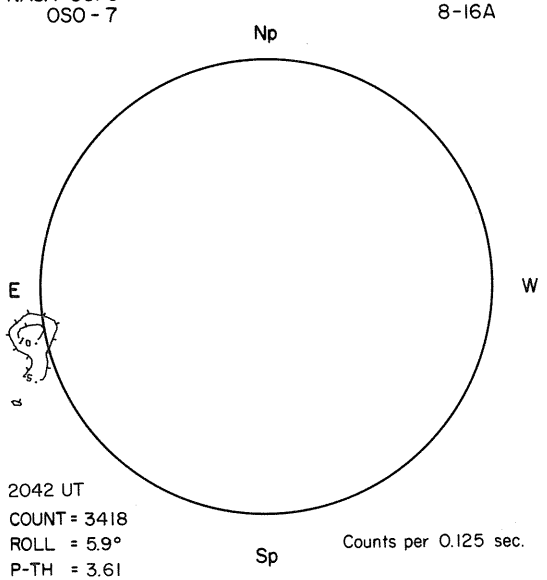
COUNT =
ROLL =
P-TH =

29
Feb 74

FEBRUARY 4, 1974 (P = -13.28, B_o = -6.24, L_o = 336.05)

NASA GSFC
OSO - 7

X-RAY
8-16A



2042 UT
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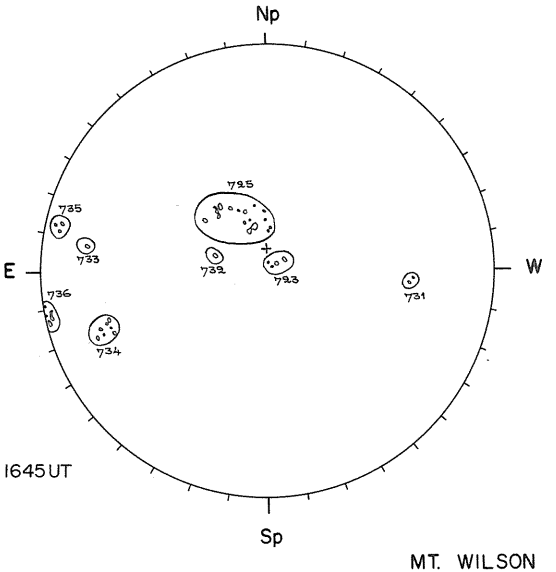
ROLL = 5.9°
P-TH = 3.61

Counts per 0.125 sec.

CALCIUM REPORT

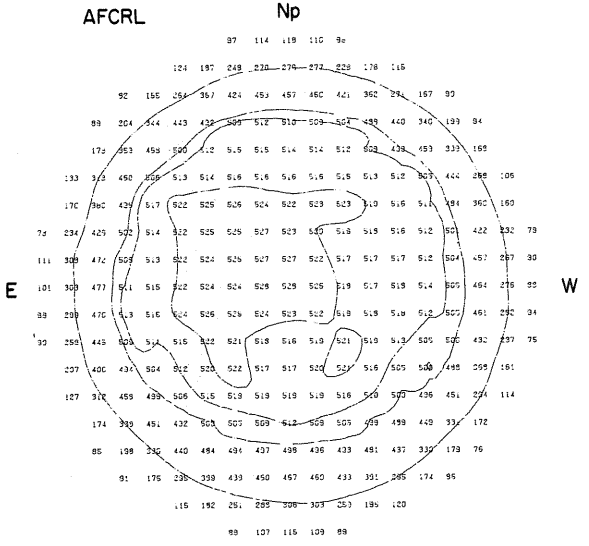


POOR | M

1645 UT

PROSPECT HILL
AFCRL

8.6 mm



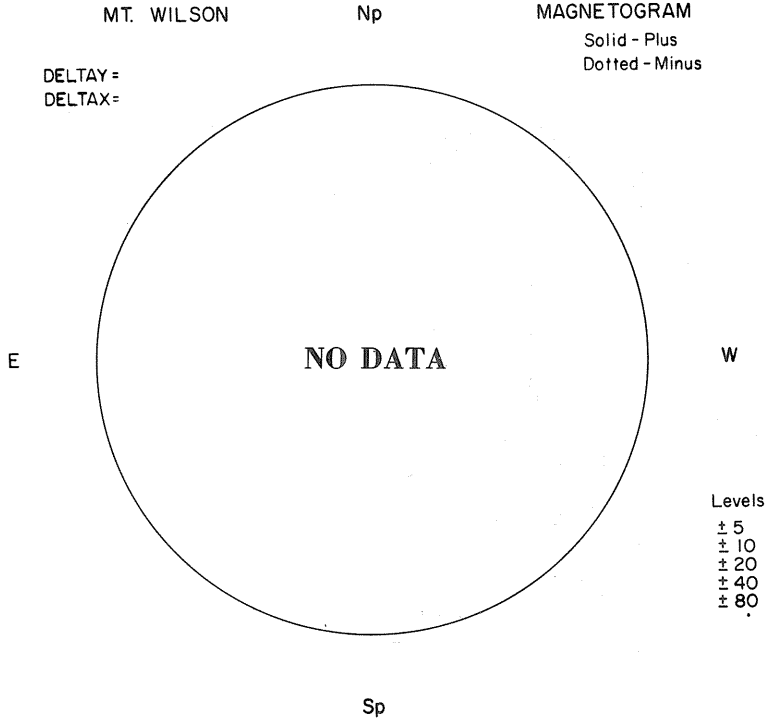
1531 UT

Contours in Intervals
of 200° K

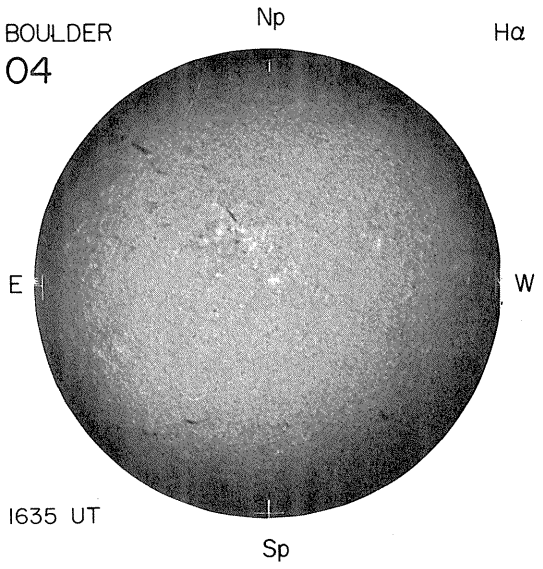
MT. WILSON

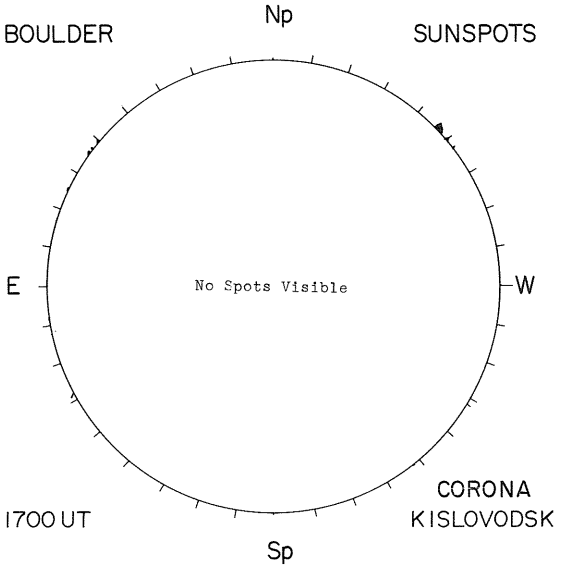
MAGNETOGRAM
Solid - Plus
Dotted - Minus

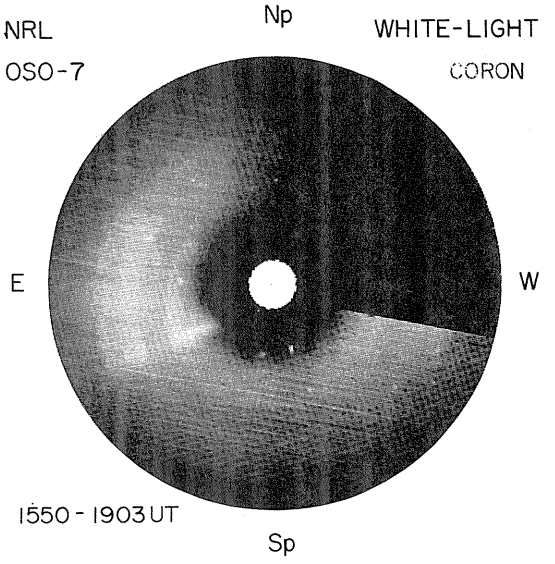
DELTAY =
DELTAX =

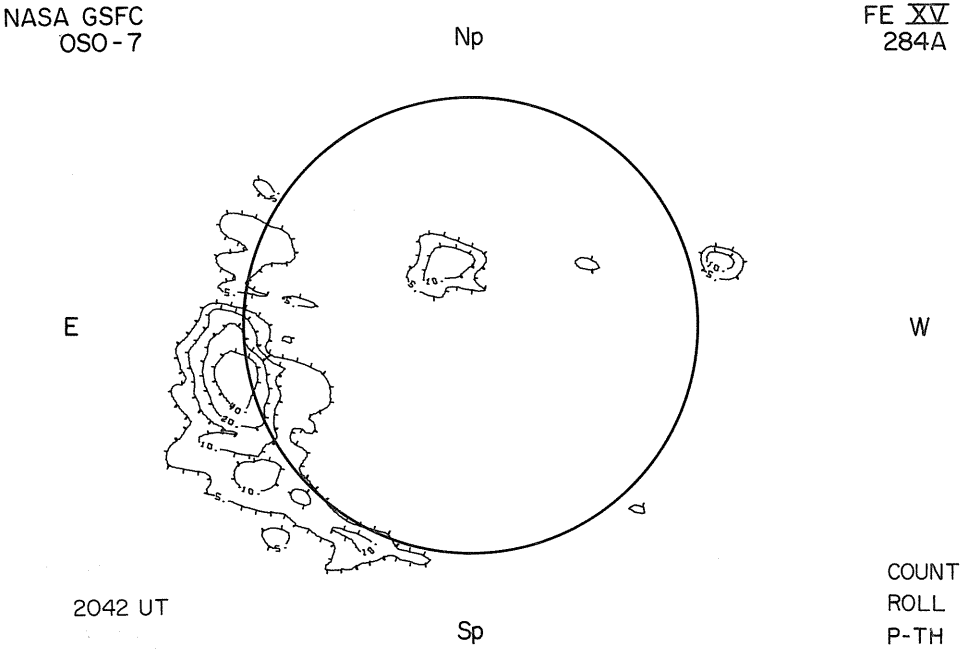


Levels
± 5
± 10
± 20
± 40
± 80


BOULDER
04
Np
Hα
E
W
1635 UT
Sp


BOULDER
Np
SUNSPOTS
E
No Spots Visible
W
CORONA
KISLOVODSK
1700 UT
Sp


NRL
OSO-7
Np
WHITE-LIGHT
CORON
E
W
1550 - 1903 UT
Sp

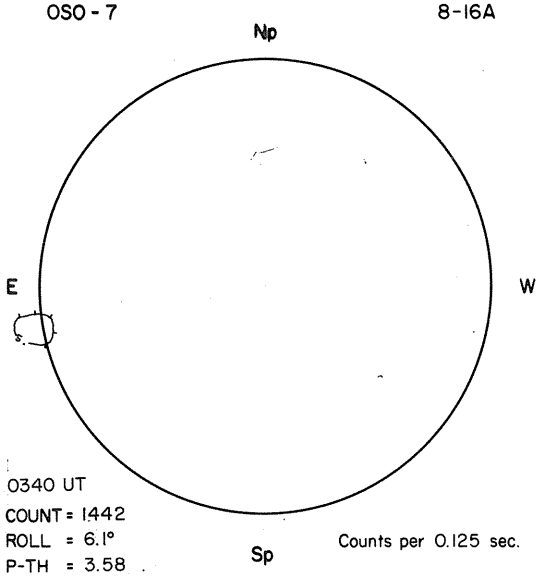

NASA GSFC
OSO-7
Np
FE XV
284A
E
W
2042 UT
Sp
COUNT = 3723
ROLL = 5.9°
P-TH = 3.61

31
Feb 74

FEBRUARY 5, 1974 (P = -13.67, B_o = -6.30, L_o = 322.89)

NASA GSFC
OSO - 7

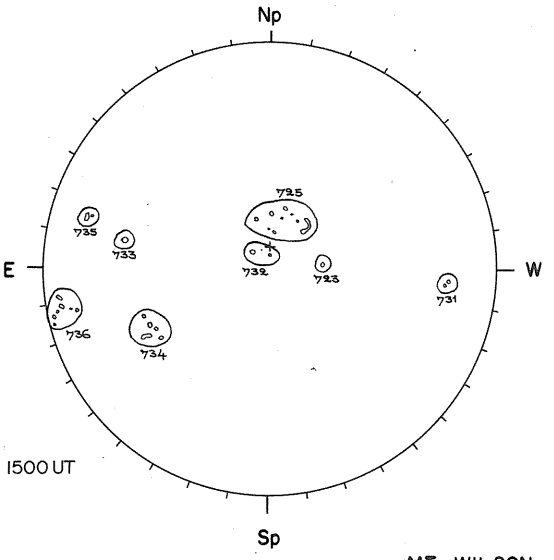
X-RAY
8-16A



0340 UT
COUNT = 1442
ROLL = 6.1°
P-TH = 3.58

Counts per 0.125 sec.

CALCIUM REPORT

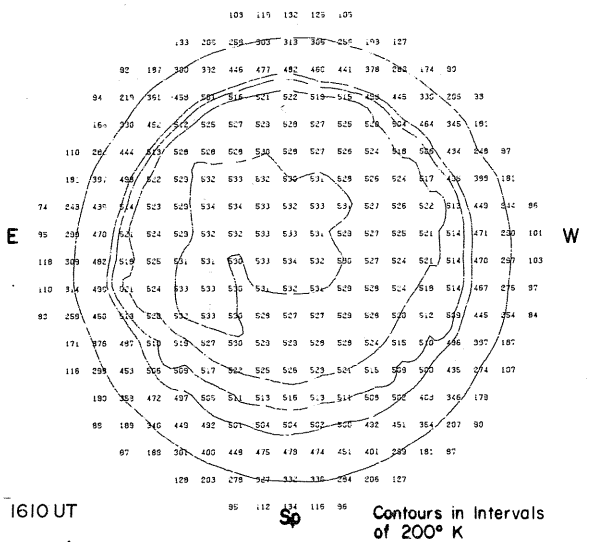


1500 UT

POOR | M

PROSPECT HILL
AFCRL

8.6 mm



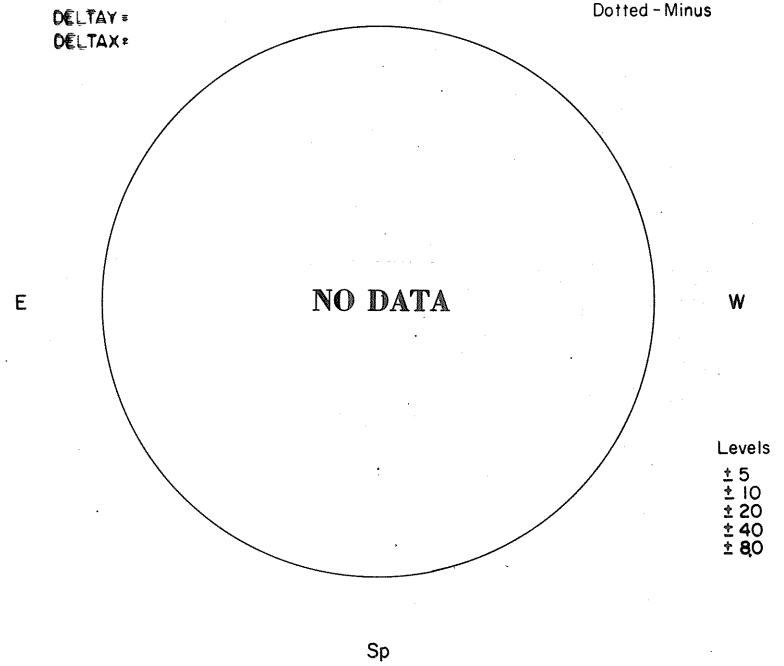
1610 UT

Contours in Intervals of 200° K

MT. WILSON

DELTAY =
DELTAX =

MAGNETOGRAM
Solid - Plus
Dotted - Minus



Levels
± 5
± 10
± 20
± 40
± 80

BOULDER
05

Np

E

NO DATA

Sp

Hα

W

BOULDER

Np

E

W

Sp

SUNSPOTS

CORONA
KISLOVODSK

NRL
OSO-7

Np

WHITE-LIGHT
CORONA

E

W

1608-1918 UT

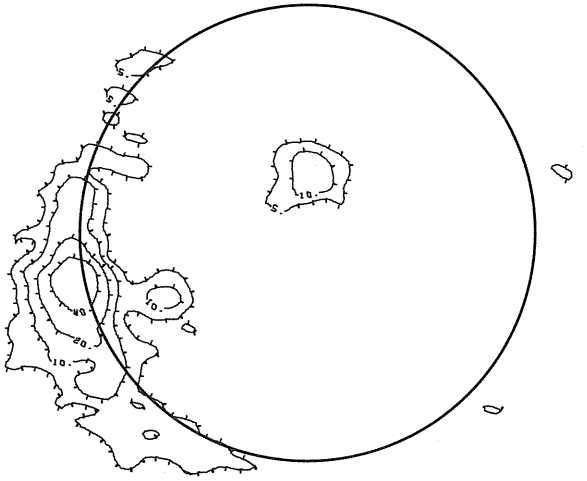
Sp

NASA GSFC
OSO-7

Np

FE XV
284A

E



W

0340 UT

Sp

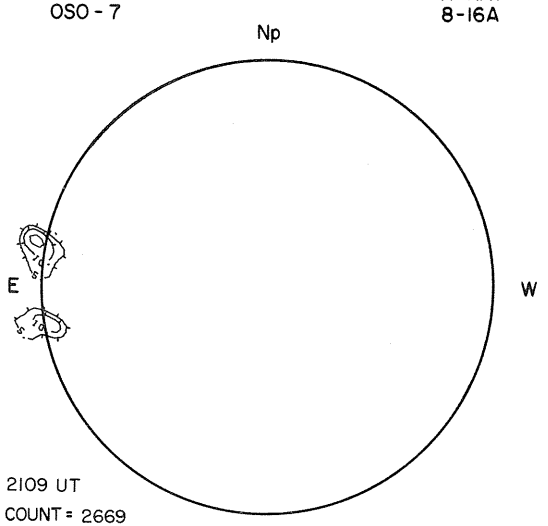
COUNT = 3868
ROLL = 6.1°
P-TH = 3.58

33
Feb 74

FEBRUARY 6, 1974 (P = -14.06, B_o = -6.36, L_o = 309.72)

NASA GSFC
OSO - 7

X-RAY
8-16A

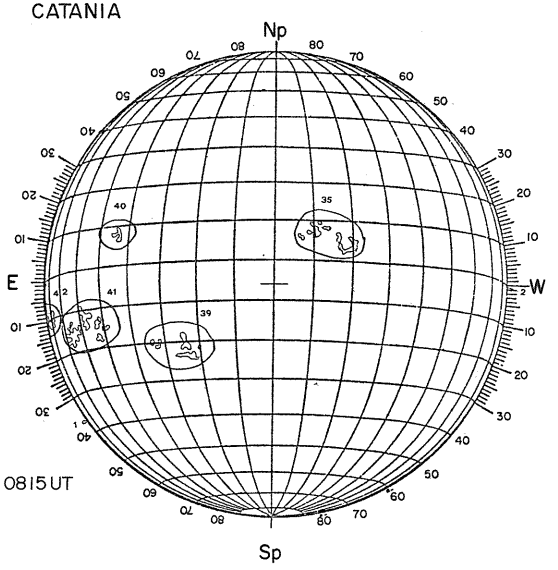


2109 UT
COUNT = 2669
ROLL = 22.4°
P-TH = 3.39

Counts per 0.125 sec.

CATANIA

CALCIUM REPORT

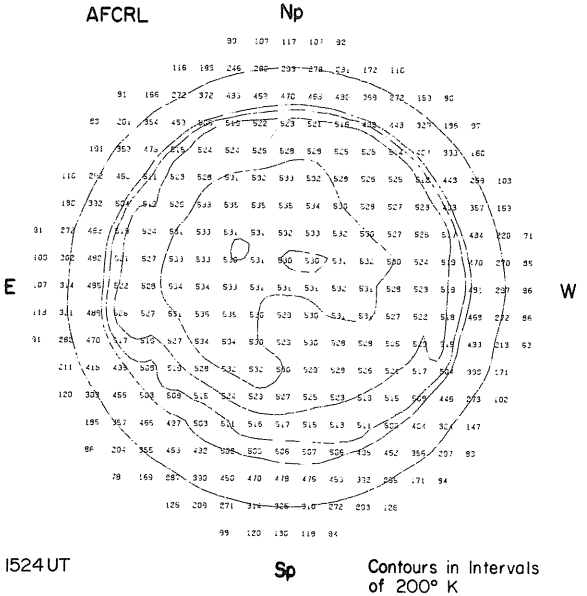


0815 UT

FAIR | EC
42-1197 ---

PROSPECT HILL
AFCRL

8.6 mm



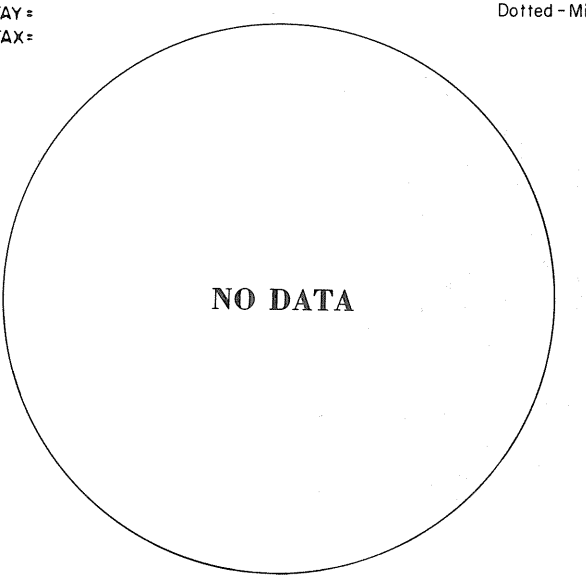
1524 UT

Contours in Intervals of 200° K

MT. WILSON

DELTAY =
DELTAX =

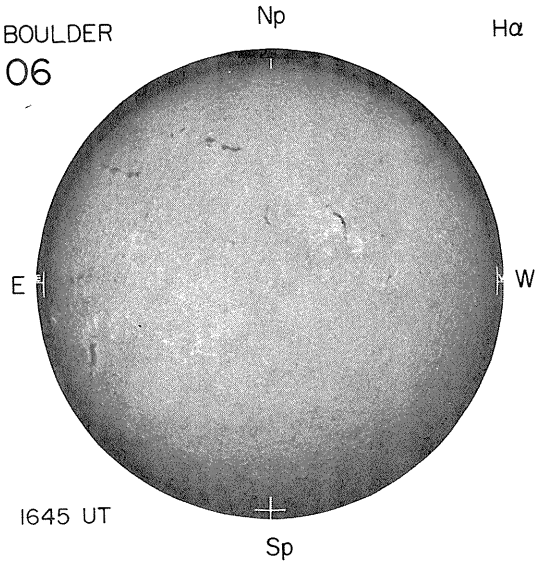
MAGNETOGRAM
Solid - Plus
Dotted - Minus



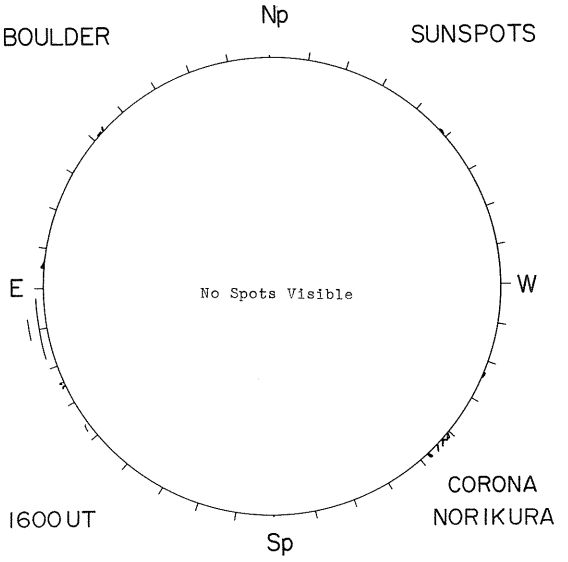
NO DATA

Levels
± 5
± 10
± 20
± 40
± 80

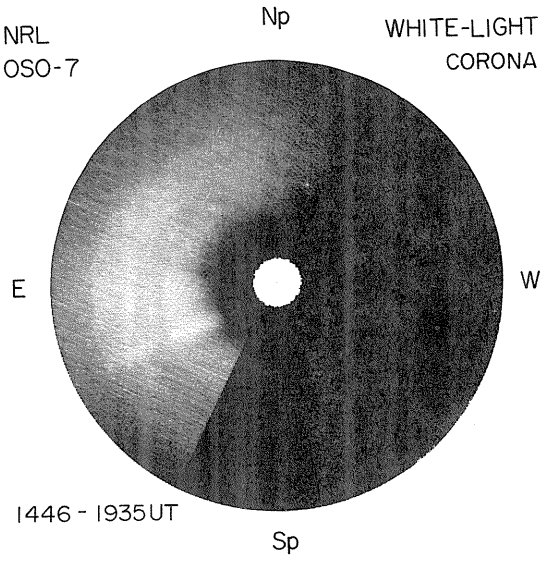
BOULDER
06



BOULDER

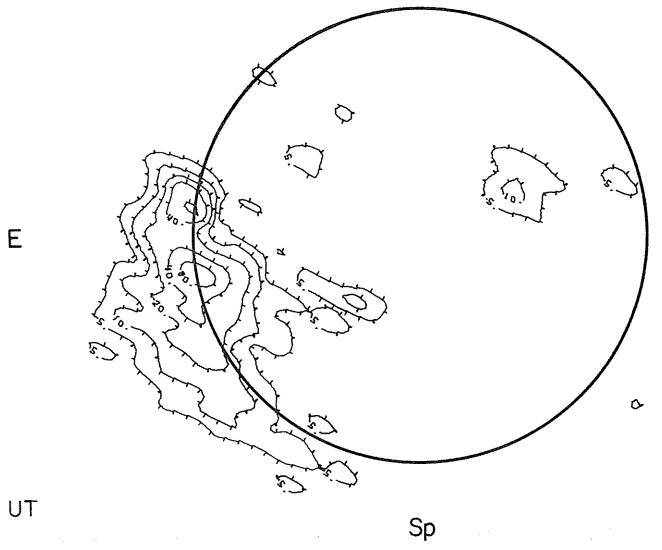


NRL
OSO-7



NASA GSFC
OSO-7

FE XV
284A

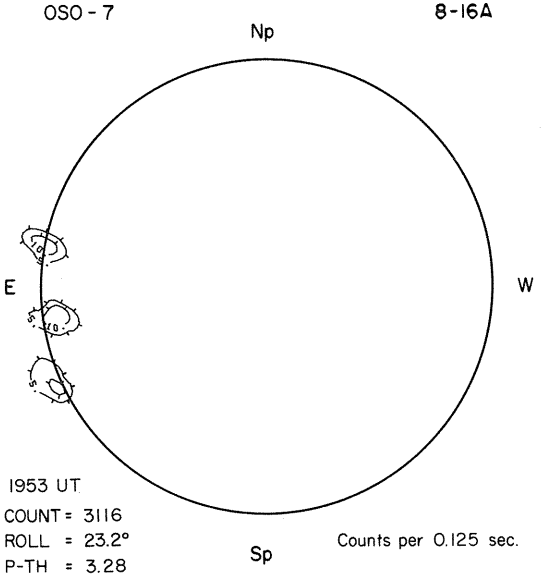


COUNT = 5310
ROLL = 22.4°
P-TH = 3.39

FEBRUARY 7, 1974 (P = -14.45, B_o = -6.42, L_o = 296.55)

NASA GSFC
OSO - 7

X-RAY
8-16A

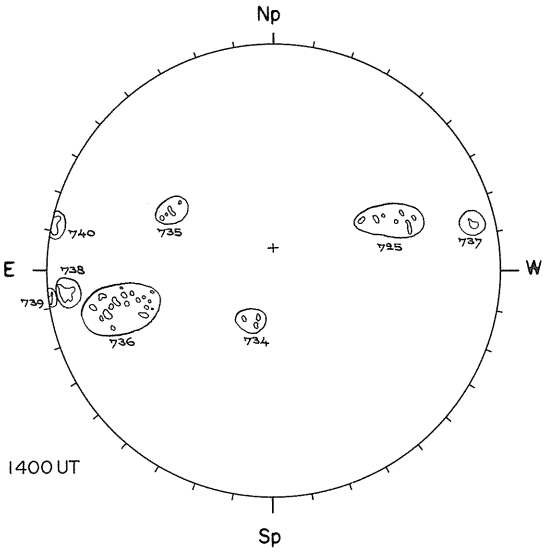


1953 UT
COUNT = 3116
ROLL = 23.2°
P-TH = 3.28

Counts per 0.125 sec.

McMATH-HULBERT

CALCIUM REPORT

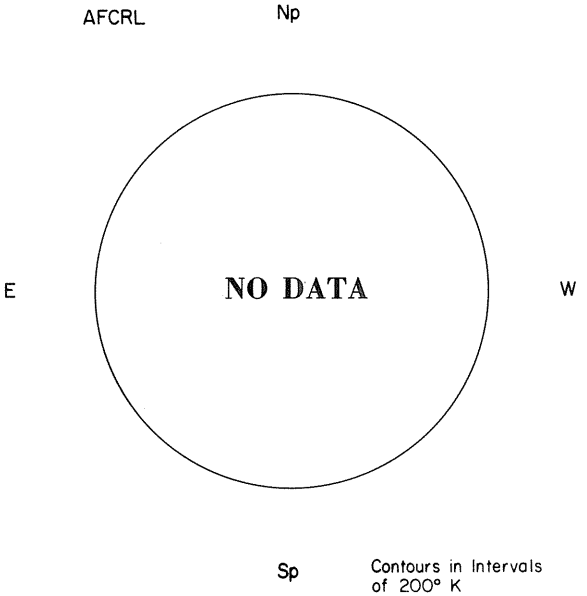


1400 UT

POOR	M
38 - 1600	- 3.0
39 - 0500	- 2.5
40 - 1400	- 3.5

PROSPECT HILL
AFCRL

8.6 mm

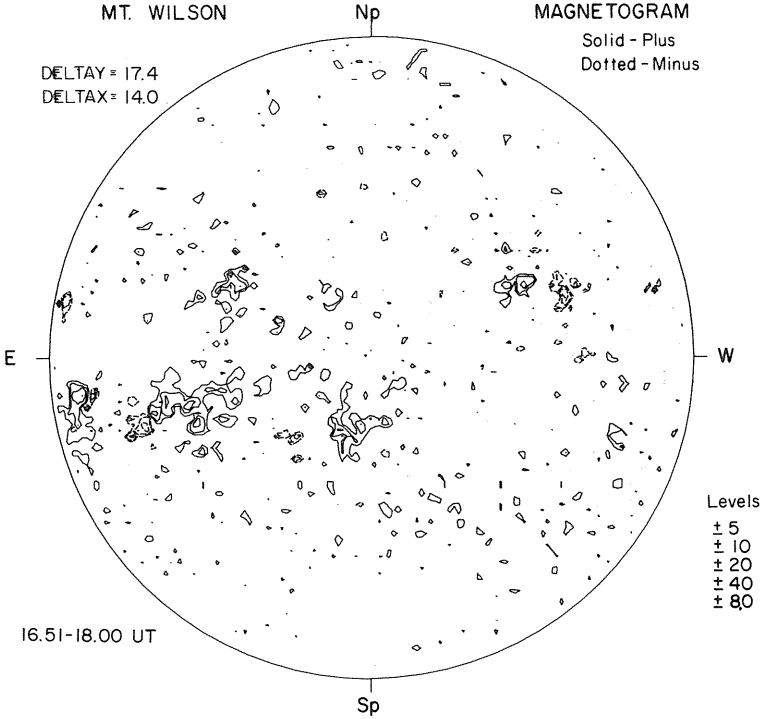


Contours in Intervals
of 200° K

MT. WILSON

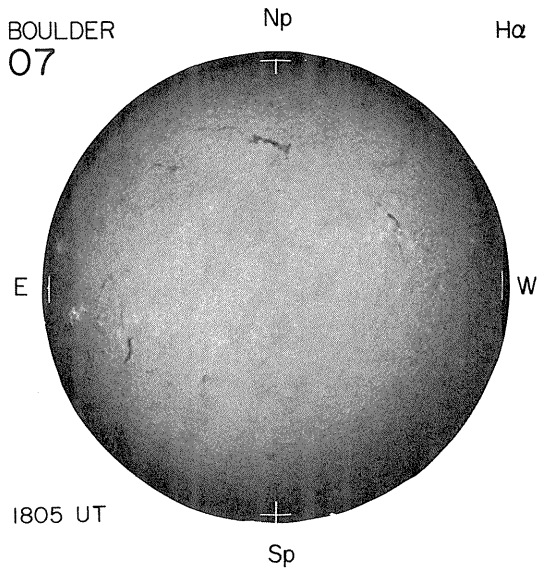
MAGNETOGRAM
Solid - Plus
Dotted - Minus

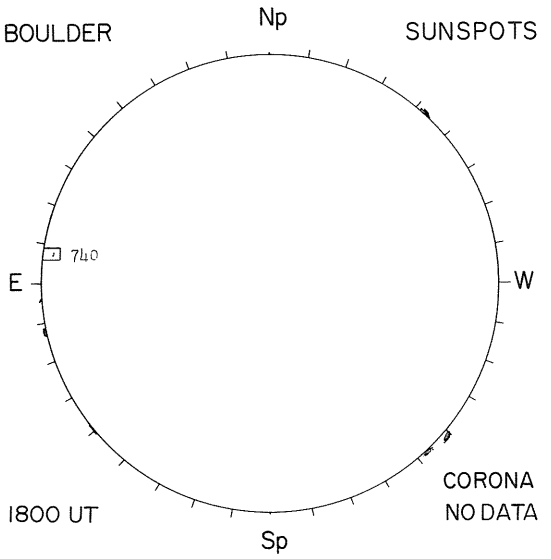
DELTAY = 17.4
DELTAX = 14.0

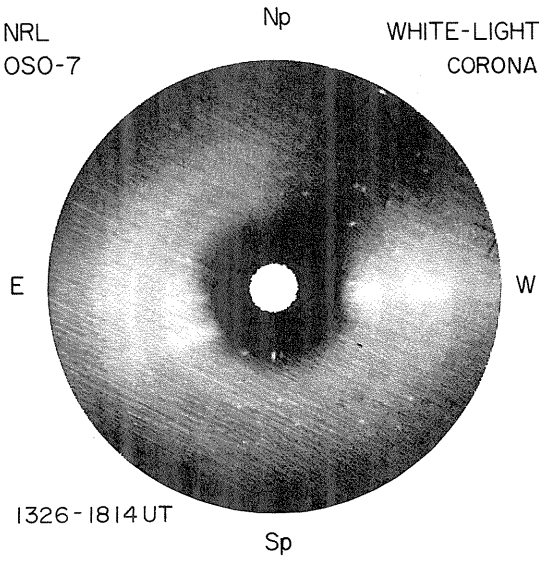


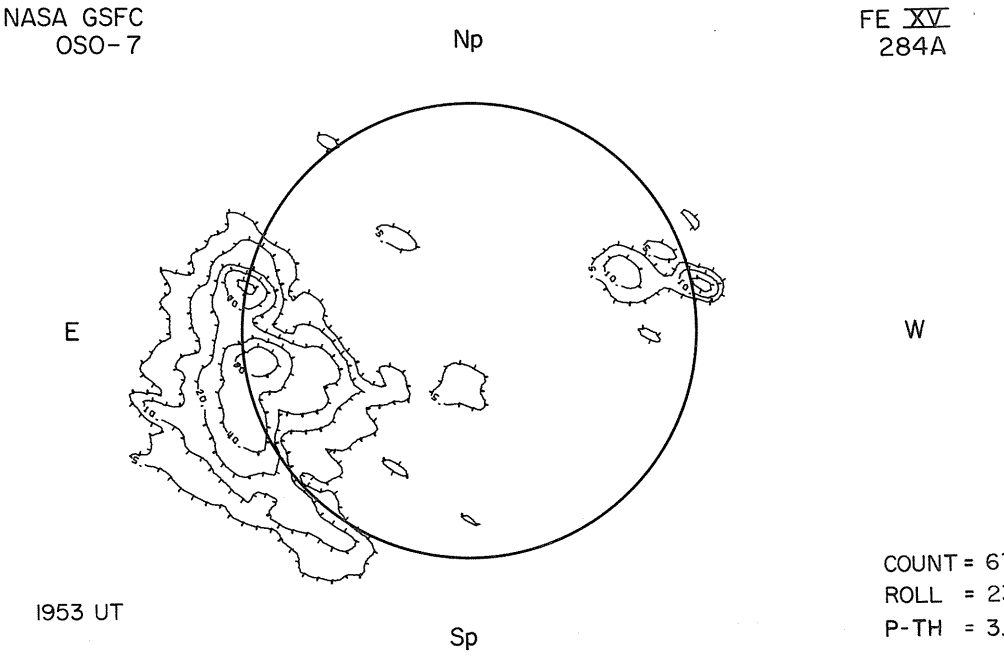
16.51-18.00 UT

Levels
± 5
± 10
± 20
± 40
± 80


BOULDER
07
Np
Hα
E
W
1805 UT
Sp


BOULDER
Np
SUNSPOTS
740
E
W
CORONA
NO DATA
1800 UT
Sp


NRL
OSO-7
Np
WHITE-LIGHT
CORONA
E
W
1326-1814 UT
Sp

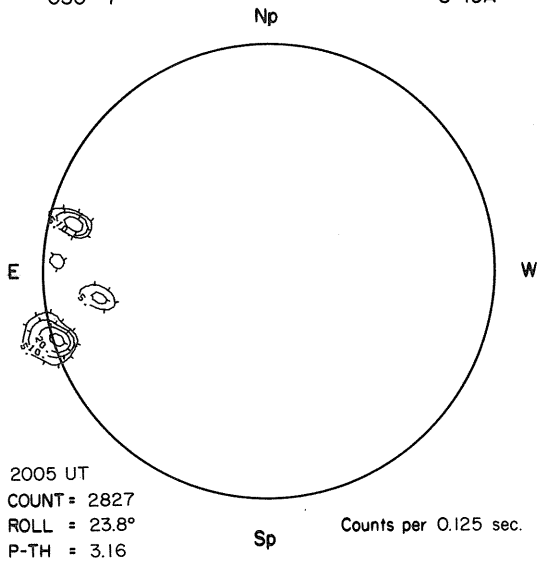

NASA GSFC
OSO-7
Np
FE XV
284A
E
W
1953 UT
Sp
COUNT = 6787
ROLL = 23.2°
P-TH = 3.28

37
Feb 74

FEBRUARY 8, 1974 (P = -14.82, B_o = -6.48, L_o = 283.39)

NASA GSFC
OSO - 7

X-RAY
8-16A

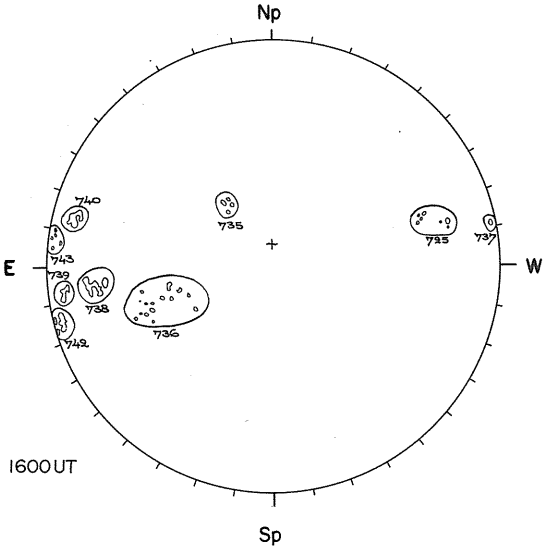


2005 UT
COUNT = 2827
ROLL = 23.8°
P-TH = 3.16

Counts per 0.125 sec.

McMATH-HULBERT

CALCIUM REPORT

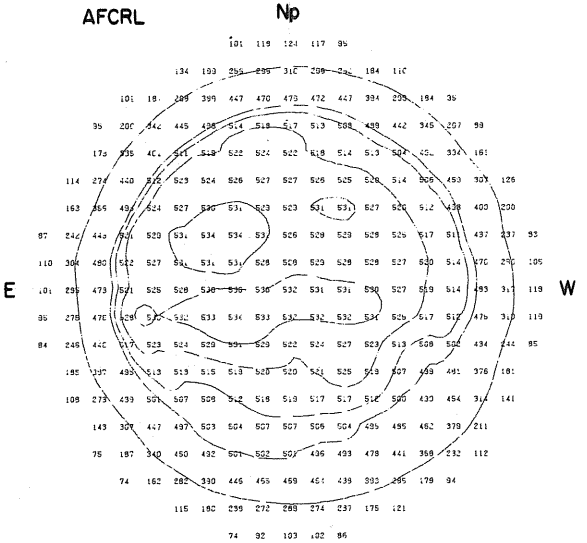


FAIR	M
38 - 1200 - 2.5	
40 - 0900 - 3.0	
42 - 1600 - 3.5	

1600 UT

PROSPECT HILL
AFCRL

8.6 mm



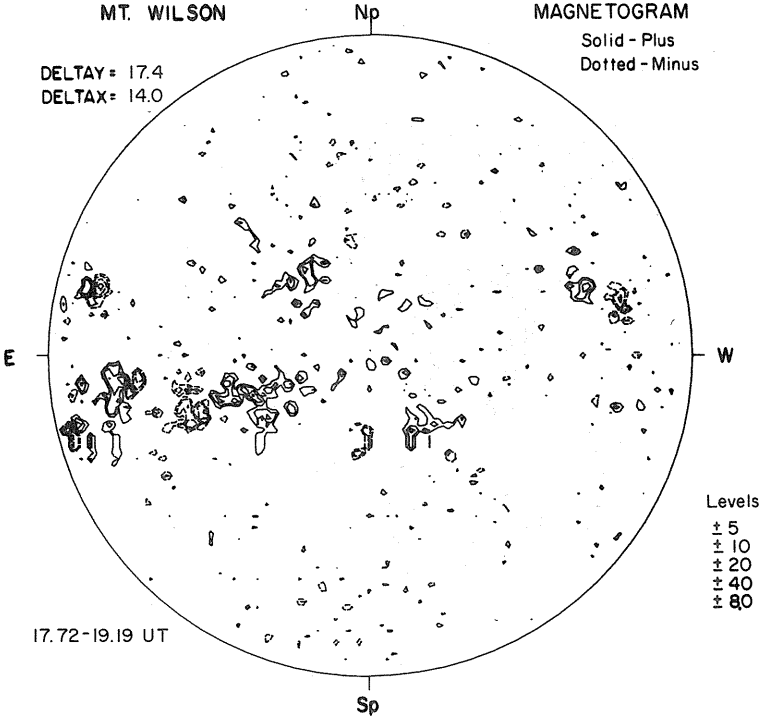
1813 UT

Contours in Intervals of 200° K

MT. WILSON

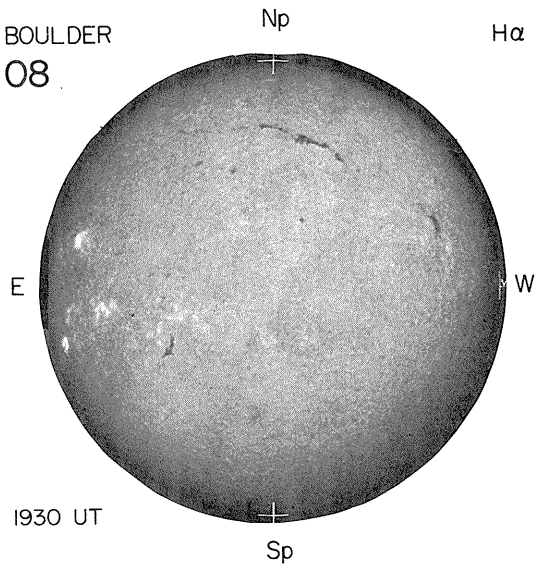
MAGNETOGRAM
Solid - Plus
Dotted - Minus

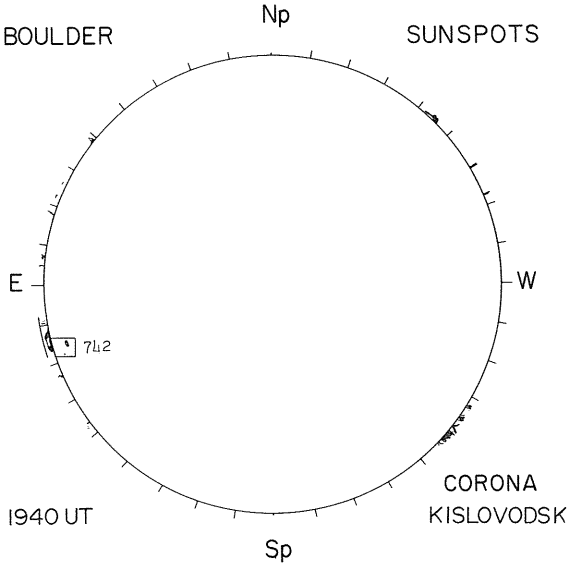
DELTAY = 17.4
DELTAX = 14.0

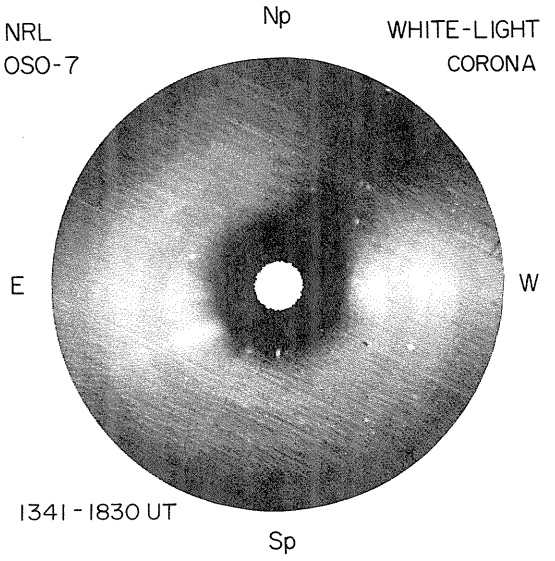


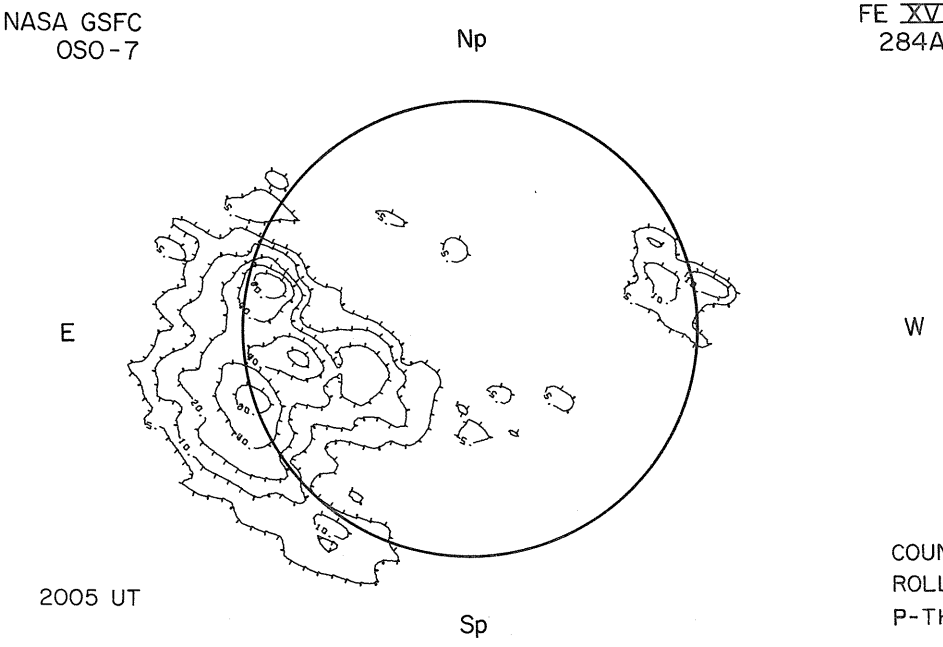
Levels
± 5
± 10
± 20
± 40
± 80

17.72-19.19 UT


BOULDER
08
Np
Hα
E
W
1930 UT
Sp


BOULDER
Np
SUNSPOTS
E
W
7142
CORONA
KISLOVODSK
1940 UT
Sp


NRL
OSO-7
Np
WHITE-LIGHT
CORONA
E
W
1341 - 1830 UT
Sp

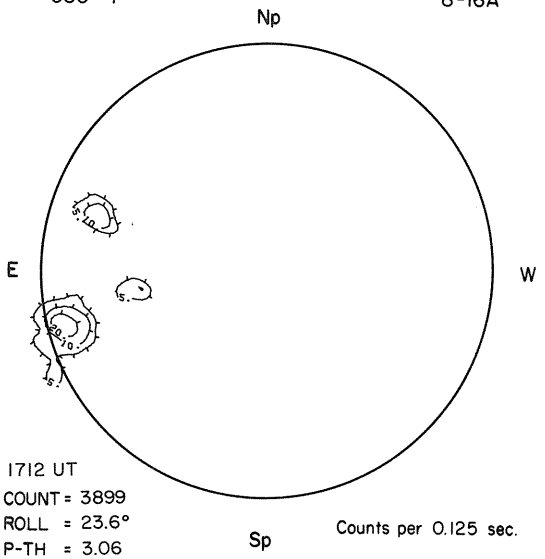

NASA GSFC
OSO-7
Np
FE XV
284A
E
W
2005 UT
Sp
COUNT = 7837
ROLL = 23.8°
P-TH = 3.16

39
Feb 74

FEBRUARY 9, 1974 (P = -15.20, B_o = -6.54, L_o = 270.22)

NASA GSFC
OSO - 7

X-RAY
8-16A

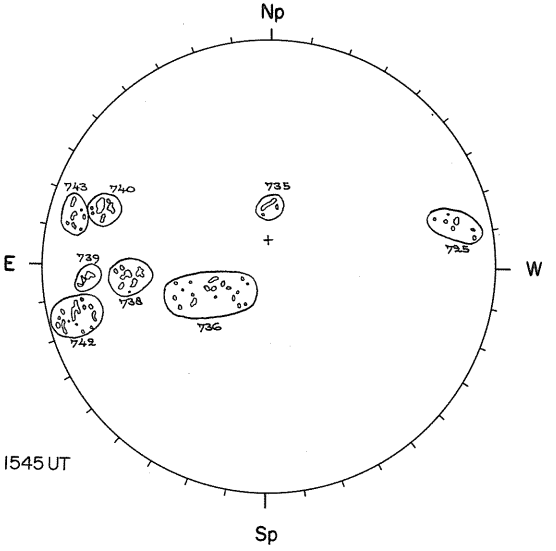


1712 UT
COUNT = 3899
ROLL = 23.6°
P-TH = 3.06

Counts per 0.125 sec.

McMATH-HULBERT

CALCIUM REPORT

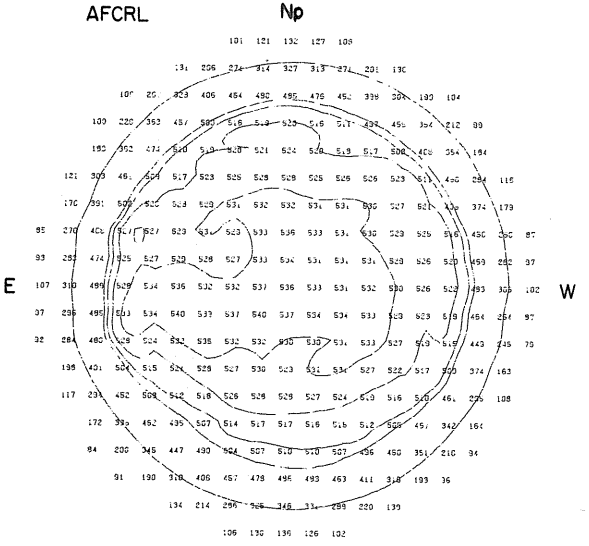


1545 UT

FAIR	S
38 - 0800	- 2.5
40 - 1000	- 3.5
42 - 1600	- 3.0

PROSPECT HILL
AFCRL

8.6 mm



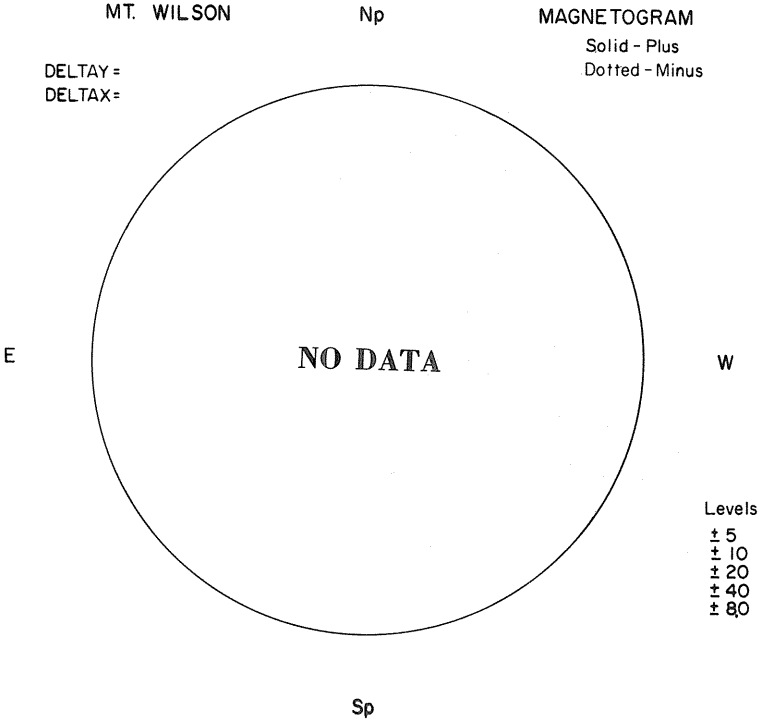
1447 UT

Contours in Intervals of 200° K

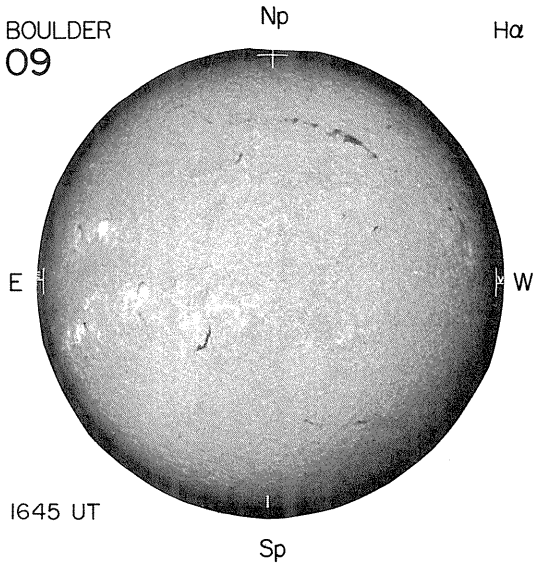
MT. WILSON

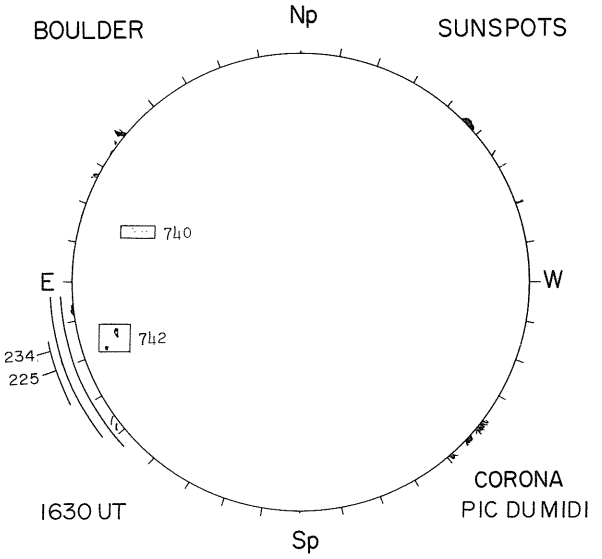
MAGNETOGRAM
Solid - Plus
Dotted - Minus

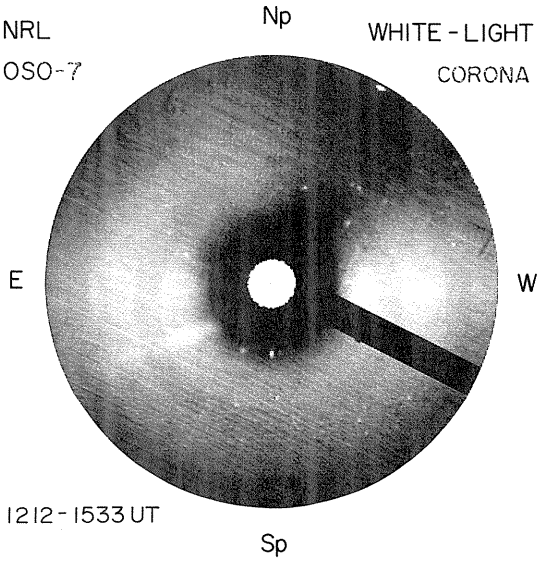
DELTAY =
DELTAX =

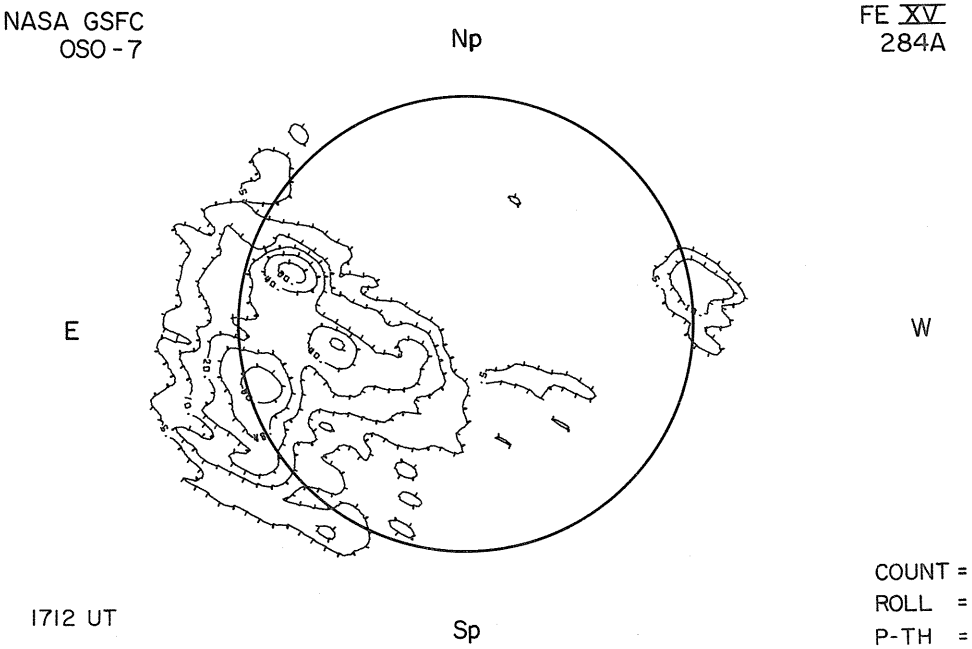


Levels
± 5
± 10
± 20
± 40
± 80


BOULDER
09
Np
Hα
E
W
1645 UT
Sp


BOULDER
Np
SUNSPOTS
740
742
E
W
234
225
CORONA
PIC DU MIDI
1630 UT
Sp

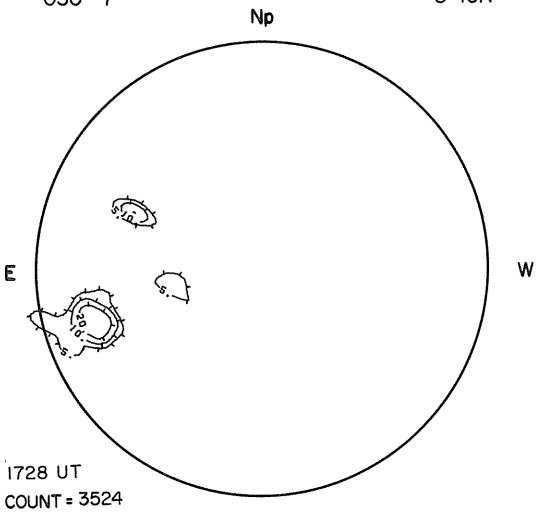

NRL
OSO-7
Np
WHITE-LIGHT
CORONA
E
W
1212-1533 UT
Sp


NASA GSFC
OSO-7
Np
FE XV
284A
E
W
1712 UT
Sp
COUNT = 8117
ROLL = 23.6°
P-TH = 3.06

FEBRUARY 10, 1974 (P = -15.57, B_o = -6.59, L_o = 257.05)

NASA GSFC
OSO - 7

X-RAY
8-16A

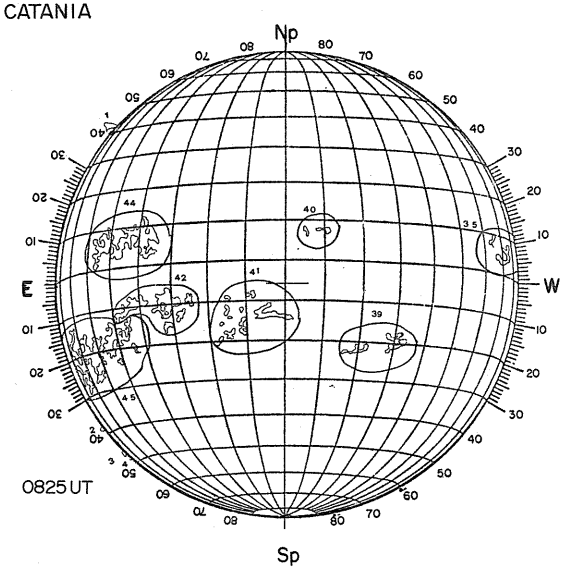


1728 UT
COUNT = 3524
ROLL = 23.3°
P-TH = 2.94

Counts per 0.125 sec.

CATANIA

CALCIUM REPORT

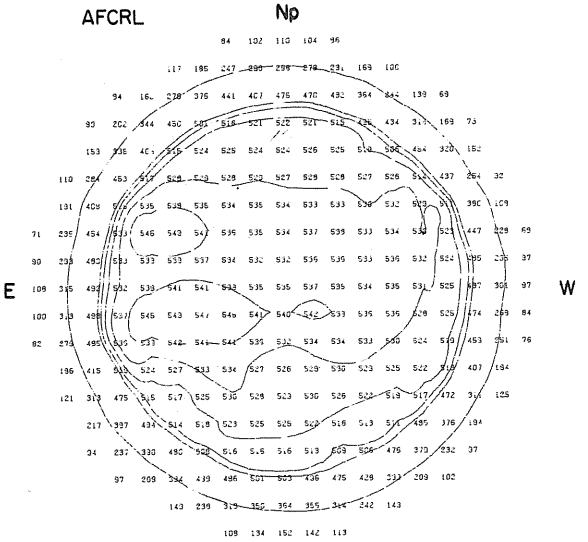


0825 UT

FAIR	EC
42 - 2694	---
44 - 3887	---
45 - 5916	---

PROSPECT HILL
AFCRL

8.6 mm



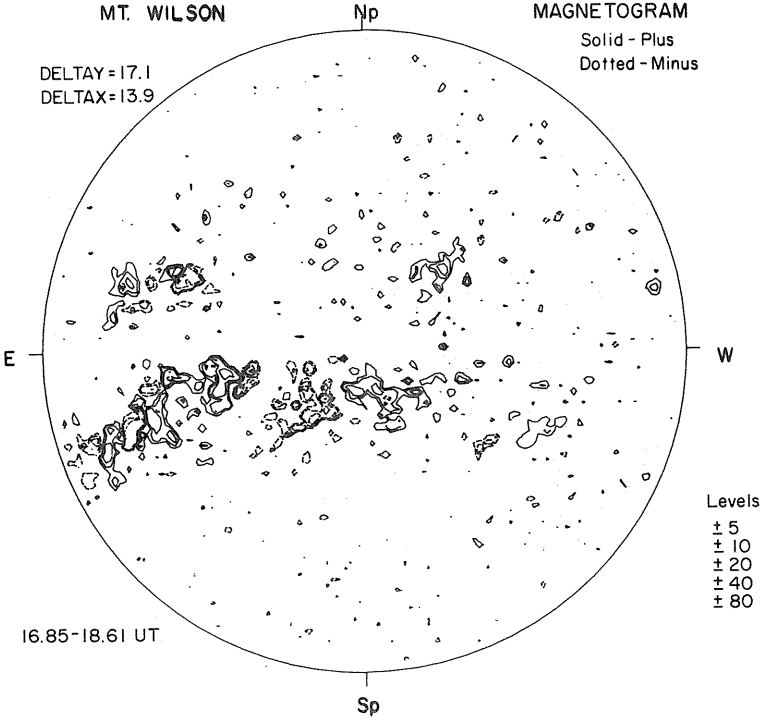
1612 UT

Contours in Intervals of 200° K

MT. WILSON

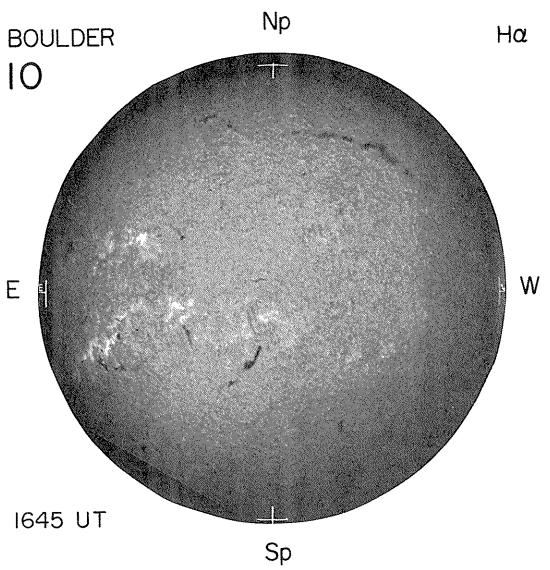
MAGNETOGRAM
Solid - Plus
Dotted - Minus

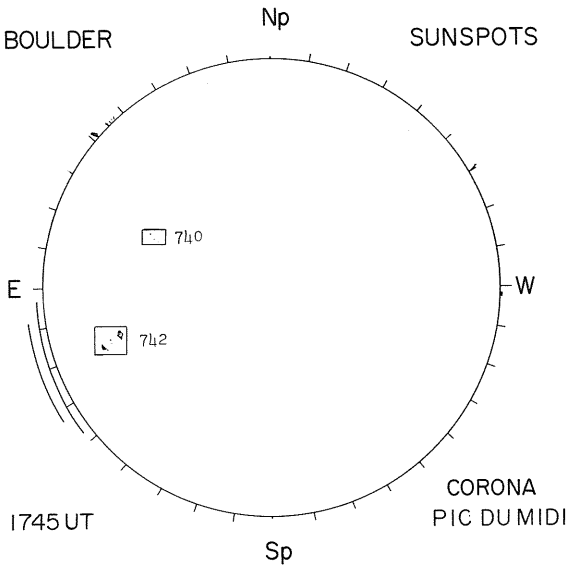
DELTAY = 17.1
DELTAX = 13.9

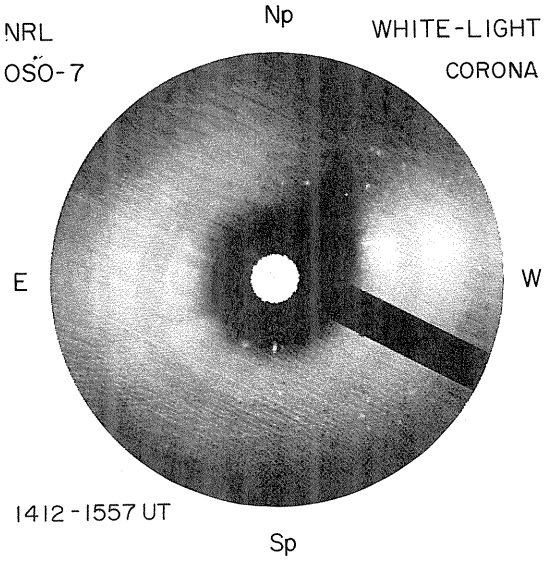


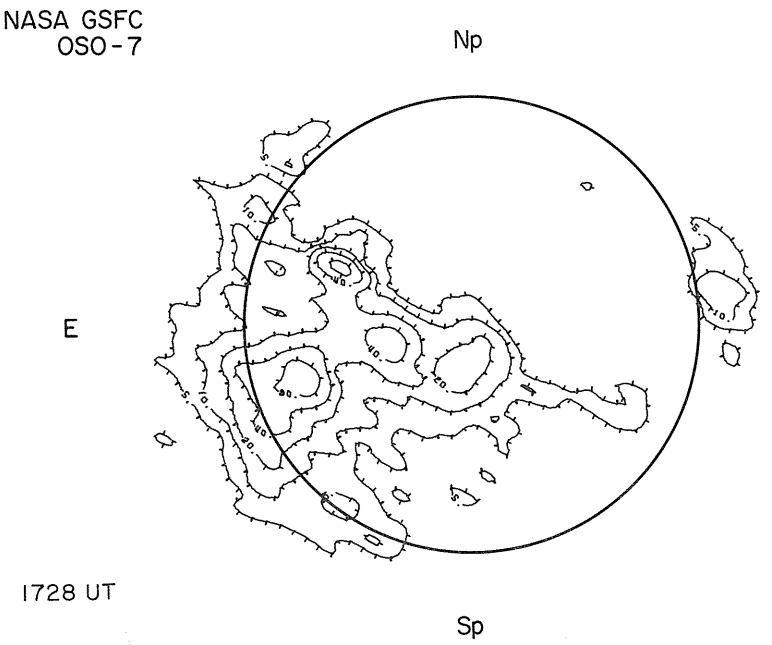
Levels
± 5
± 10
± 20
± 40
± 80

16.85-18.61 UT


BOULDER
10
Np
Hα
E
W
1645 UT
Sp


BOULDER
Np
SUNSPOTS
740
742
E
W
CORONA
PIC DU MIDI
1745 UT
Sp


NRL
OSO-7
Np
WHITE-LIGHT
CORONA
E
W
1412-1557 UT
Sp

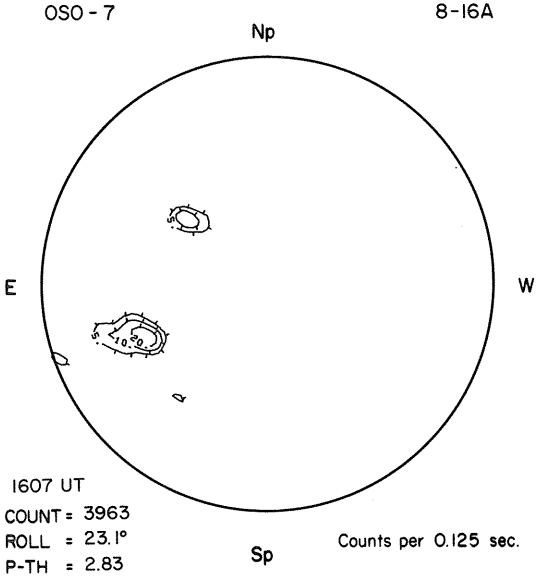

NASA GSFC
OSO-7
Np
FE XV
284A
E
W
1728 UT
Sp
COUNT = 8304
ROLL = 23.3°
P-TH = 2.94

43
Feb 74

FEBRUARY 11, 1974 (P = -15.93, B_o = -6.64, L_o = 243.89)

NASA GSFC
OSO - 7

X-RAY
8-16A

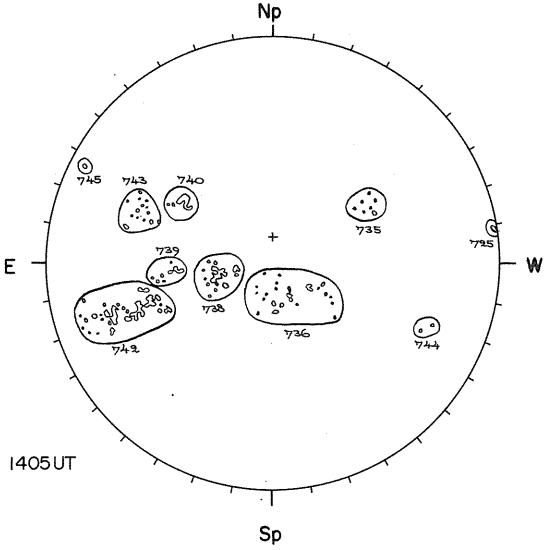


1607 UT
COUNT = 3963
ROLL = 23.1°
P-TH = 2.83

Counts per 0.125 sec.

McMATH-HULBERT

CALCIUM REPORT

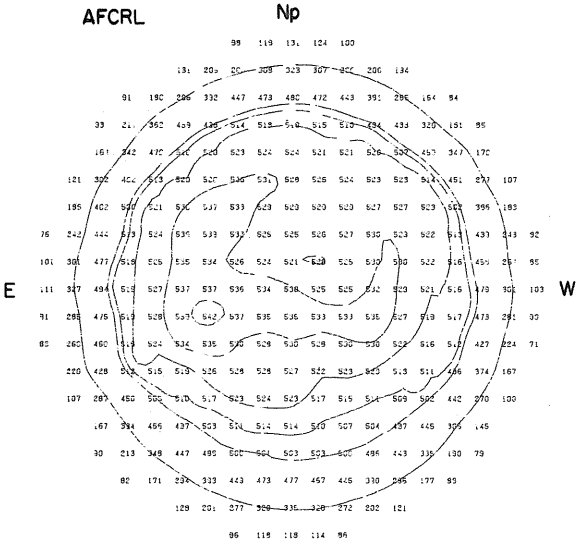


1405UT

FAIR	M
38 - 0800	- 2.5
40 - 0600	- 3.5
42 - 1800	- 3.0

PROSPECT HILL
AFCRL

8.6 mm



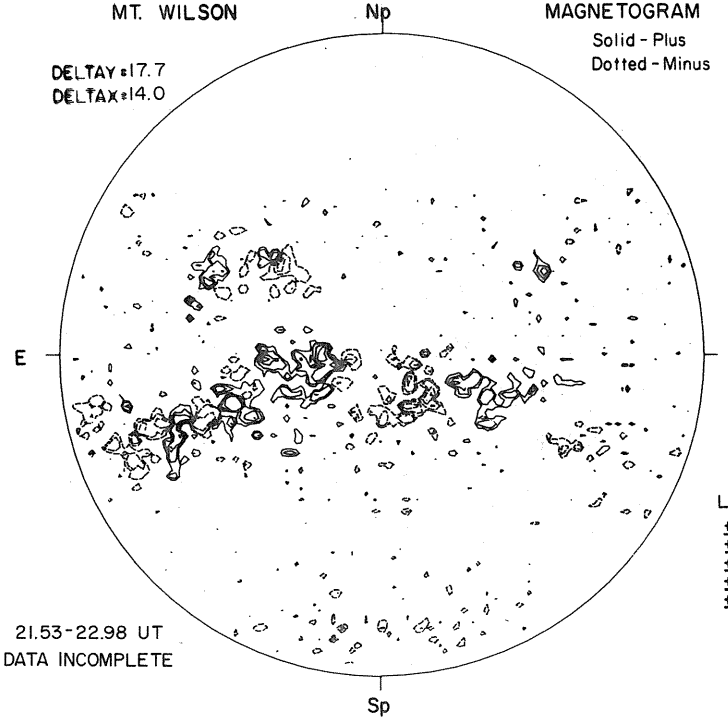
1507 UT

Contours in Intervals of 200° K

MT. WILSON

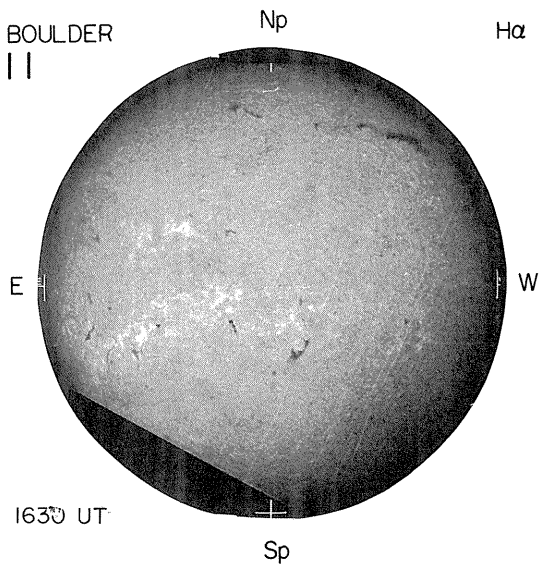
MAGNETOGRAM
Solid - Plus
Dotted - Minus

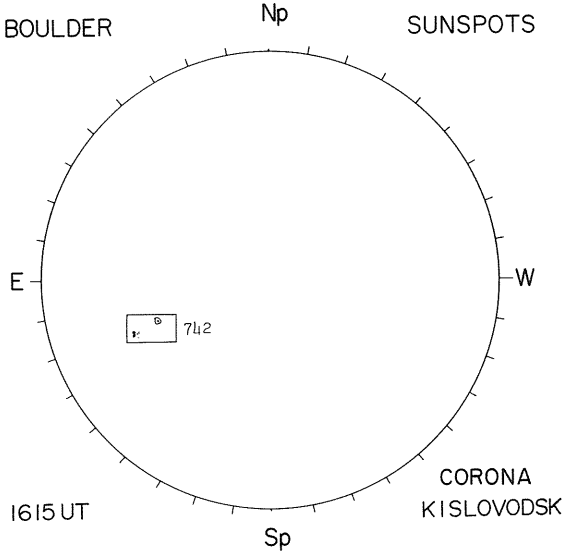
DELTAY = 17.7
DELTAX = 14.0

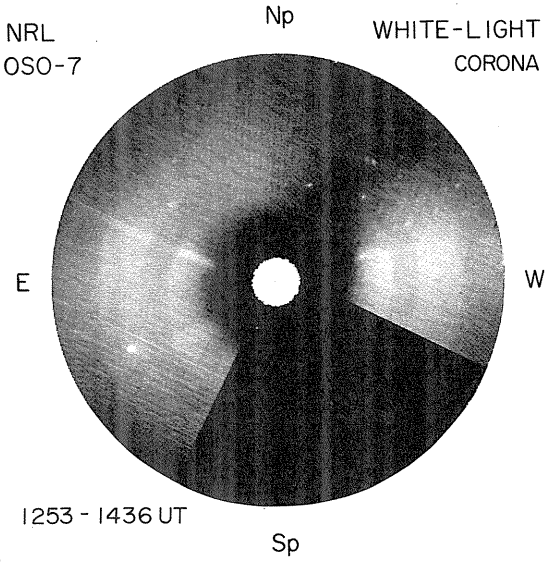


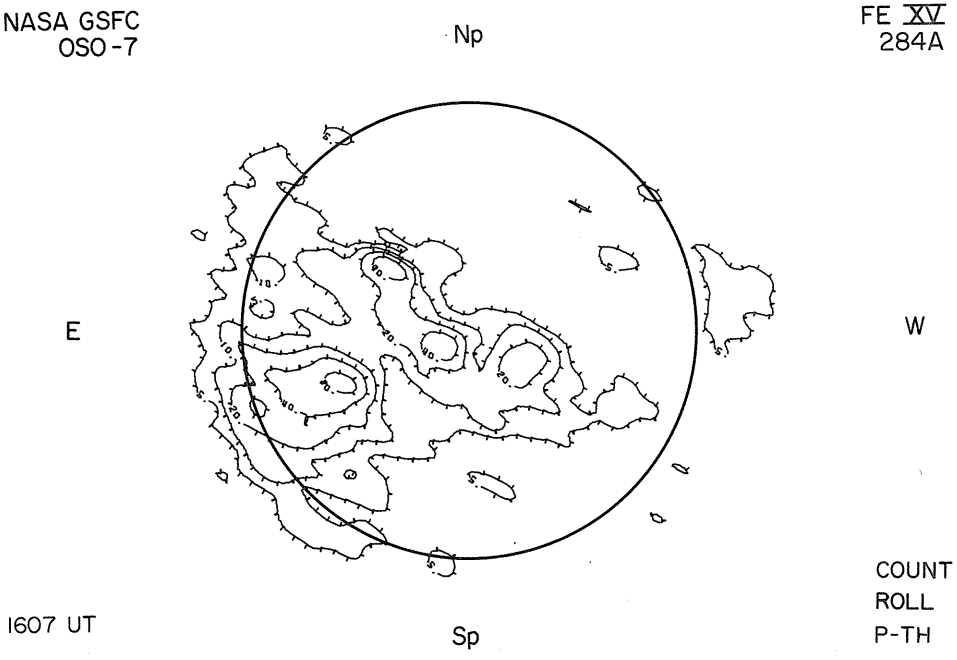
Levels
± 5
± 10
± 20
± 40
± 80

21.53-22.98 UT
DATA INCOMPLETE


BOULDER
Np
Hα
E
W
1630 UT
Sp


BOULDER
Np
SUNSPOTS
E
W
742
CORONA
KISLOVODSK
1615 UT
Sp


NRL
OSO-7
Np
WHITE-LIGHT
CORONA
E
W
1253 - 1436 UT
Sp

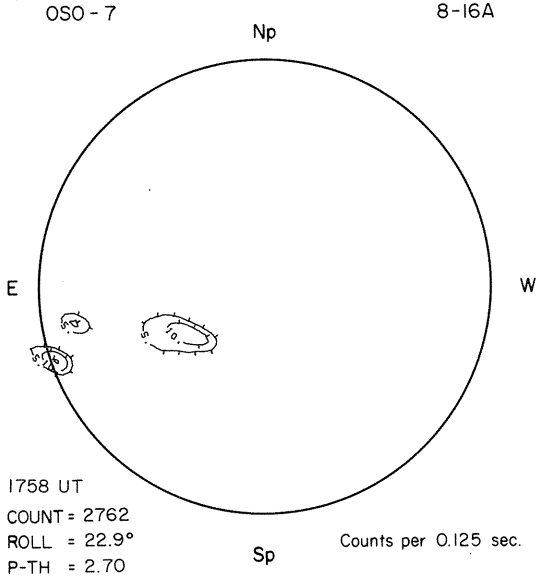

NASA GSFC
OSO-7
Np
FE XV
284A
E
W
1607 UT
Sp
COUNT = 7523
ROLL = 23.1°
P-TH = 2.83

45
Feb 74

FEBRUARY 12, 1974 (P = -16.29, B_o = -6.69, L_o = 230.72)

NASA GSFC
OSO-7

X-RAY
8-16A

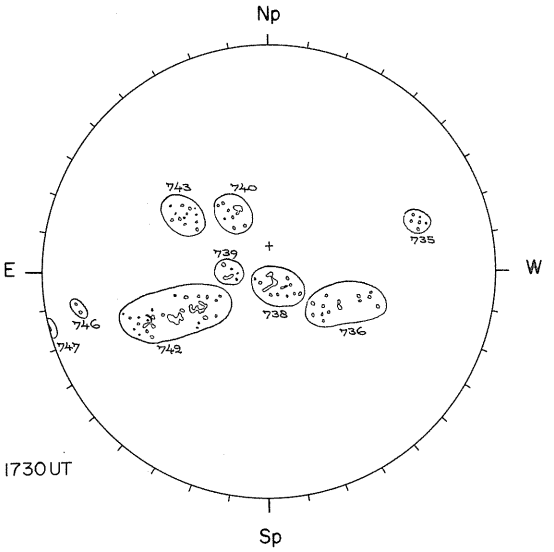


1758 UT
COUNT = 2762
ROLL = 22.9°
P-TH = 2.70

Counts per 0.125 sec.

McMATH-HULBERT

CALCIUM REPORT

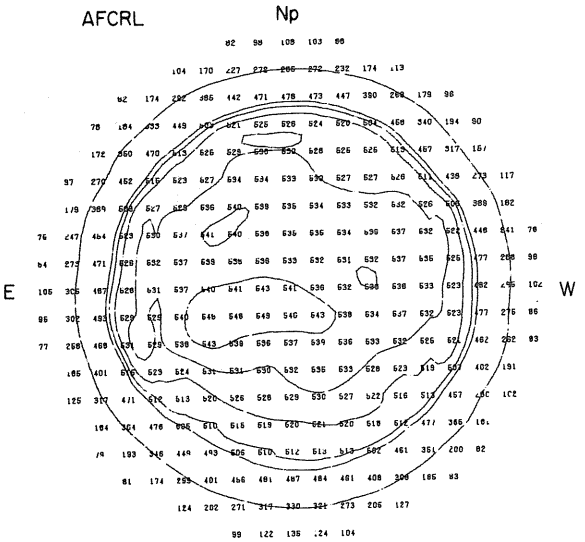


GOOD	M
38 - 0500	- 2.5
40 - 0500	- 3.0
42 - 1300	- 3.0
47 - 0500	- 2.5

1730UT

PROSPECT HILL
AFCRL

8.6 mm



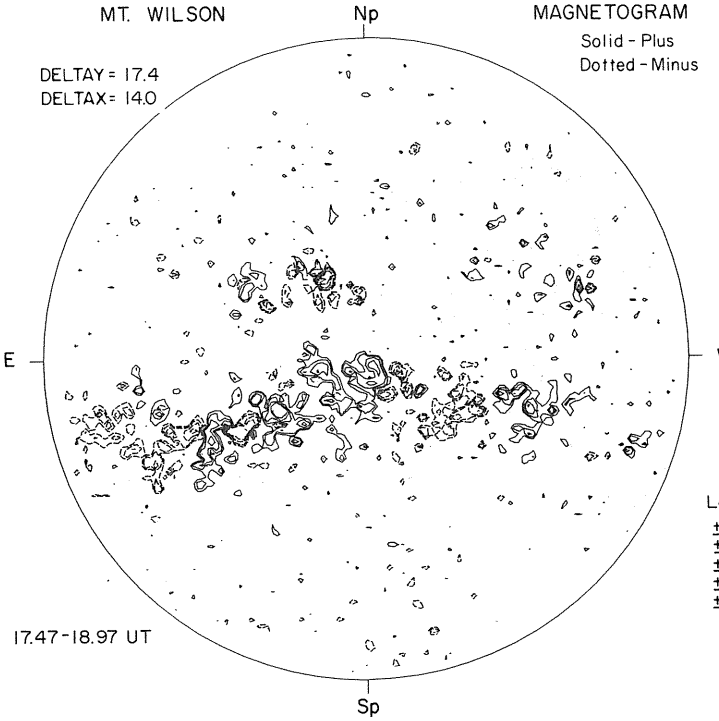
1458UT

Contours in Intervals of 200° K

MT. WILSON

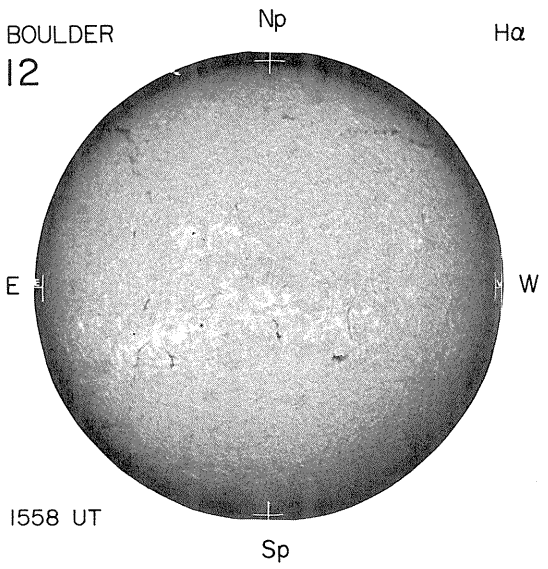
MAGNETOGRAM
Solid - Plus
Dotted - Minus

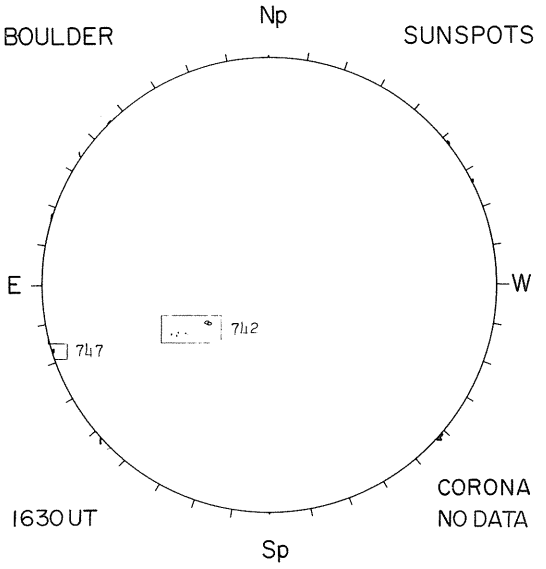
DELTAY = 17.4
DELTAX = 14.0

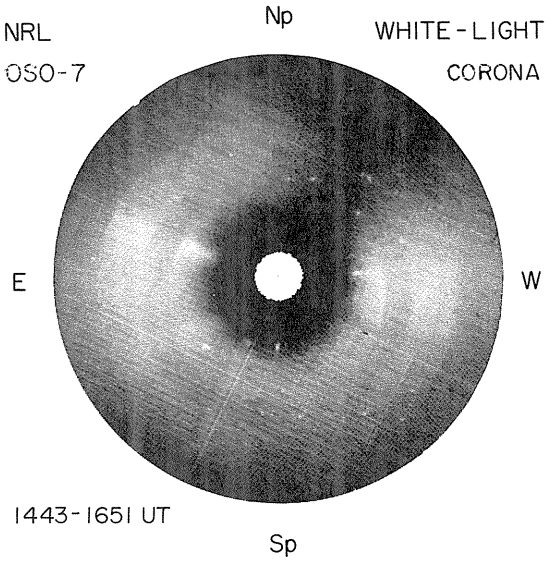


Levels
± 5
± 10
± 20
± 40
± 80

17.47-18.97 UT

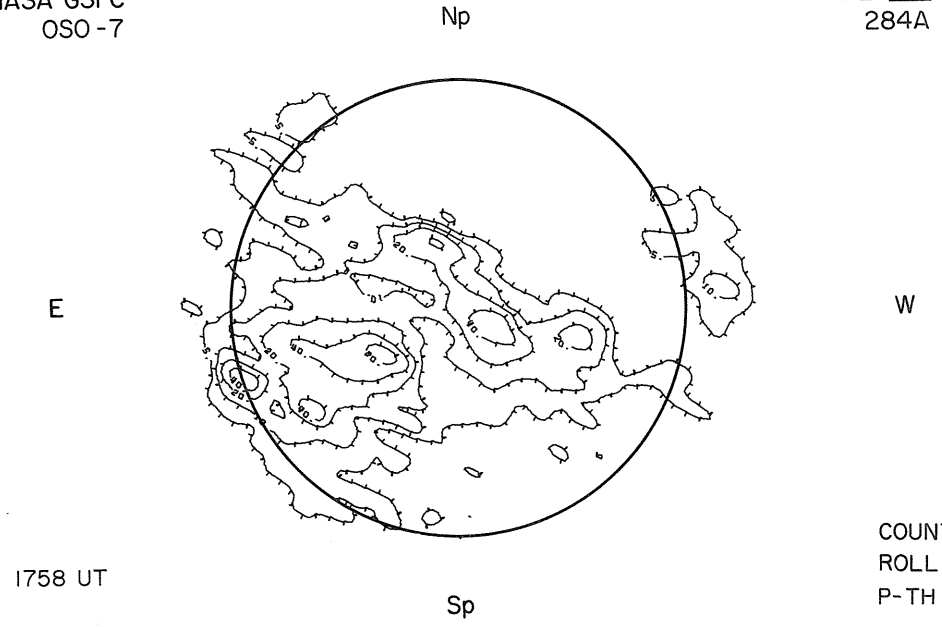






NASA GSFC
OSO-7

FE XV
284A

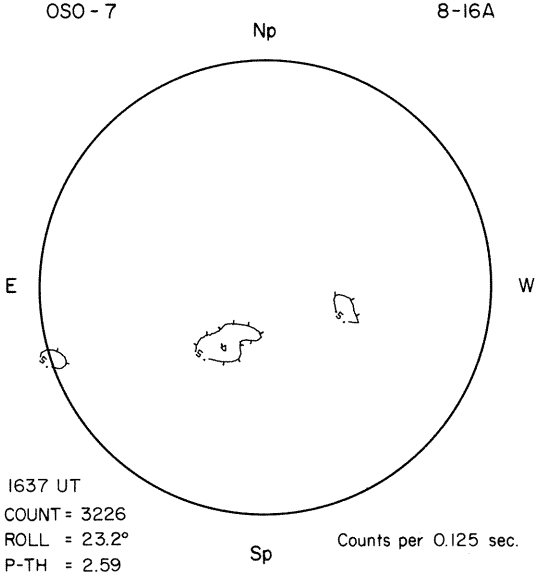


COUNT = 7559
ROLL = 22.9°
P-TH = 2.70

FEBRUARY 13, 1974 (P = -16.64, B_o = -6.74, L_o = 217.55)

NASA GSFC
OSO - 7

X-RAY
8-16A

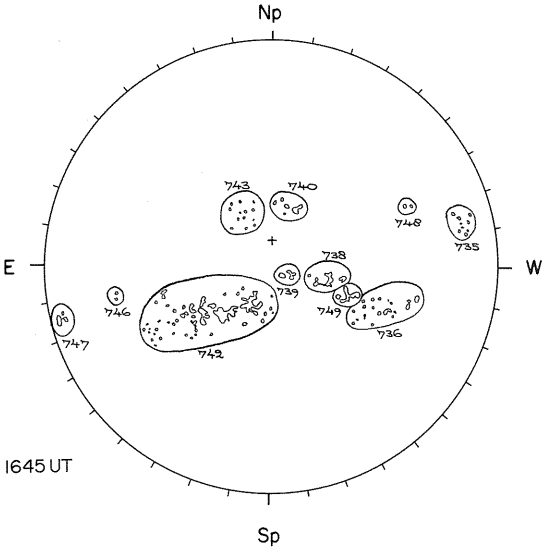


1637 UT
COUNT = 3226
ROLL = 23.2°
P-TH = 2.59

Counts per 0.125 sec.

McMATH-HULBERT

CALCIUM REPORT

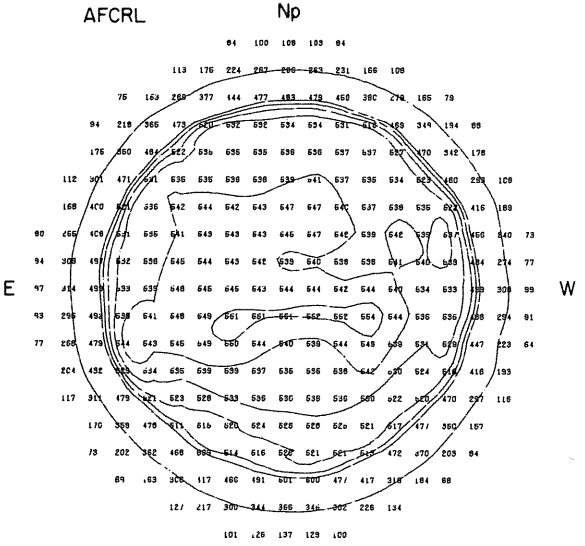


1645 UT

GOOD	M
38 - 0500	- 2.5
39 - 0400	- 2.5
42 - 1500	- 3.0
47 - 0600	- 3.0
48 - 0100	- 2.5
49 - 0500	- 2.5

PROSPECT HILL
AFCRL

8.6 mm



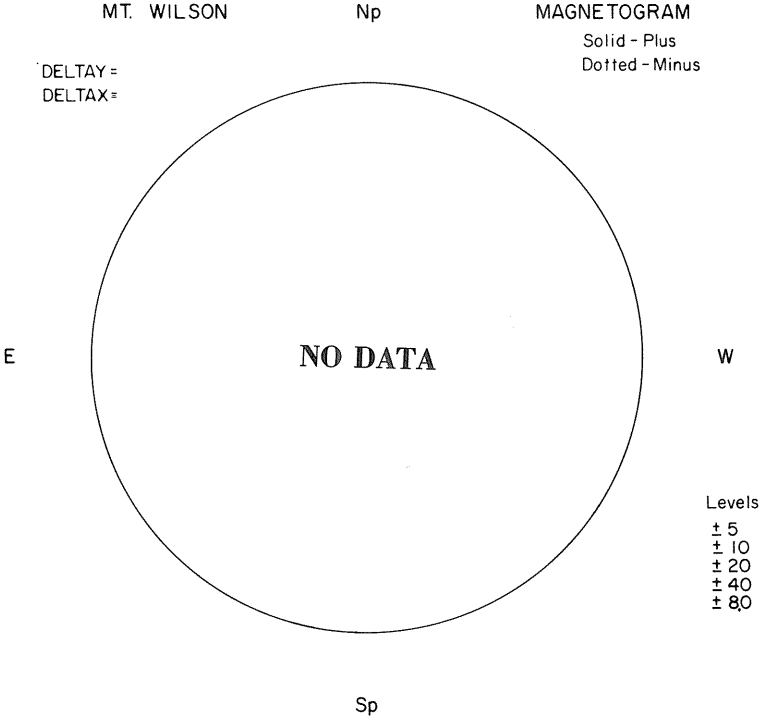
1456 UT

Contours in Intervals of 200° K

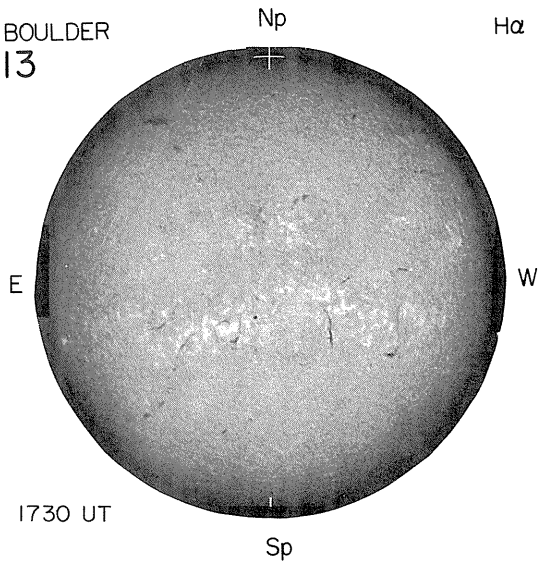
MT. WILSON

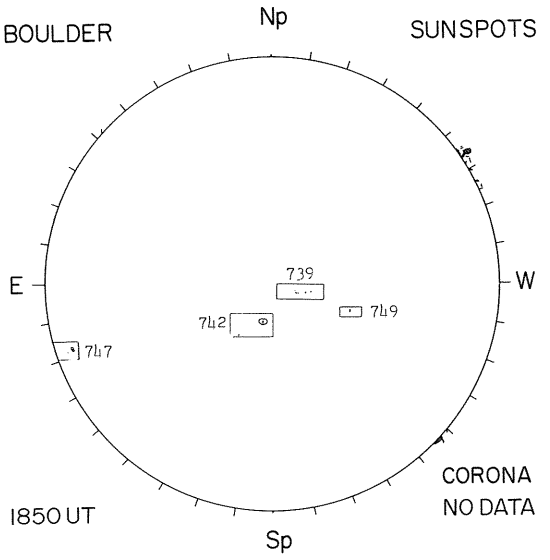
MAGNETOGRAM
Solid - Plus
Dotted - Minus

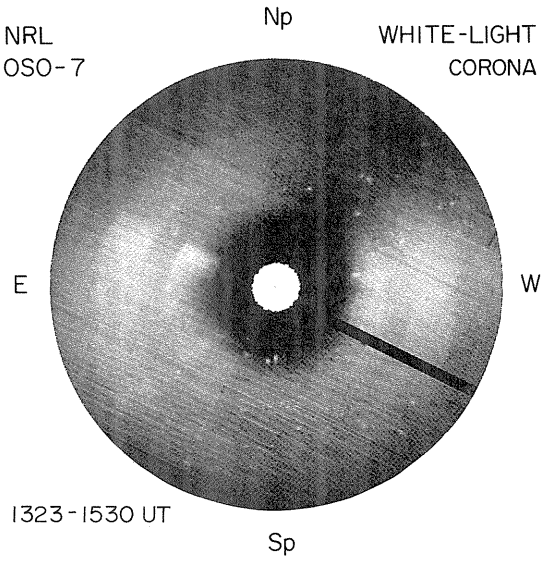
DELTAY =
DELTAX =

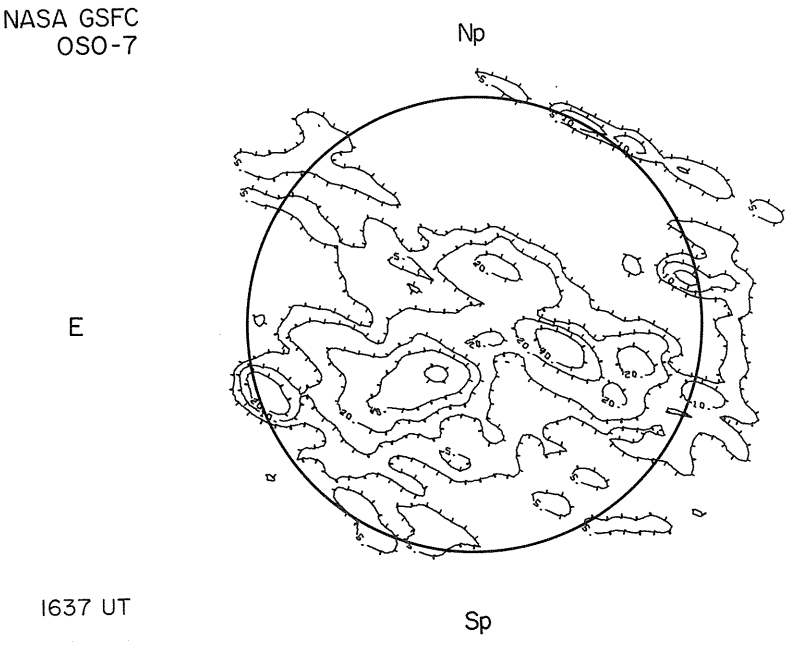


Levels
± 5
± 10
± 20
± 40
± 80


BOULDER
13
Np
Hα
E
W
1730 UT
Sp


BOULDER
Np
SUNSPOTS
E
W
739
742
749
747
CORONA
NO DATA
1850 UT
Sp

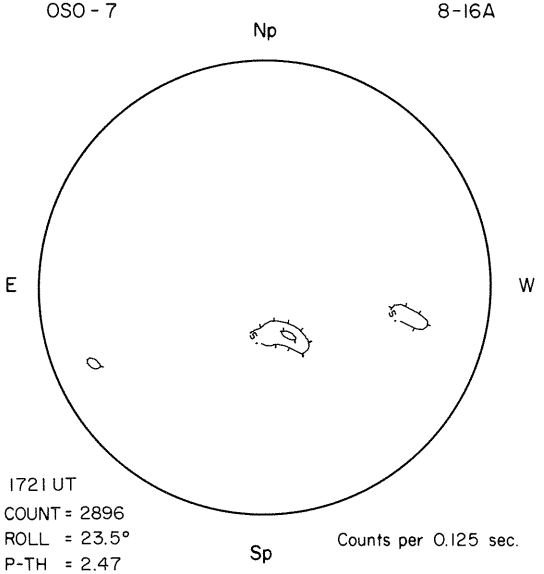

NRL
OSO-7
Np
WHITE-LIGHT
CORONA
E
W
1323-1530 UT
Sp


NASA GSFC
OSO-7
Np
FE XV
284A
E
W
1637 UT
Sp
COUNT = 7925
ROLL = 23.2°
P-TH = 2.59

FEBRUARY 14, 1974 (P = -16.98, B_o = -6.79, L_o = 204.38)

NASA GSFC
OSO - 7

X-RAY
8-16A

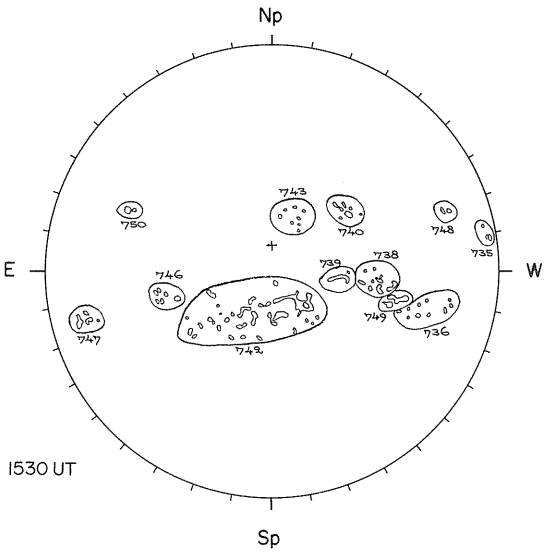


1721 UT
COUNT = 2896
ROLL = 23.5°
P-TH = 2.47

Counts per 0.125 sec.

McMATH-HULBERT

CALCIUM REPORT

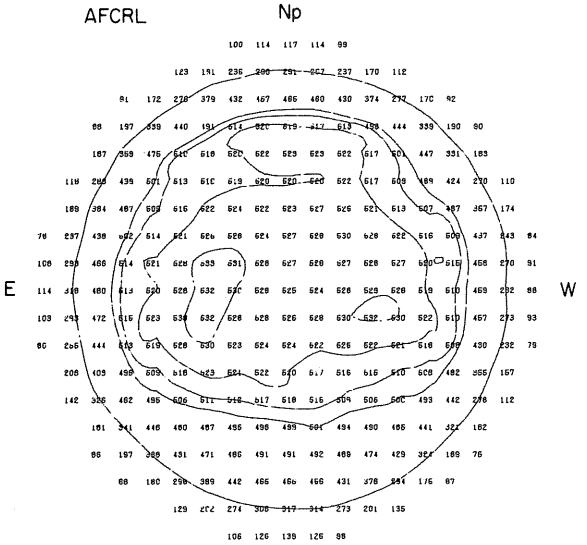


1530 UT

FAIR	M
38 - 0700	- 2.5
39 - 0300	- 2.5
40 - 0500	- 2.5
42 - 2000	- 3.0
47 - 0500	- 3.0
49 - 0500	- 2.5

PROSPECT HILL
AFCRL

8.6 mm



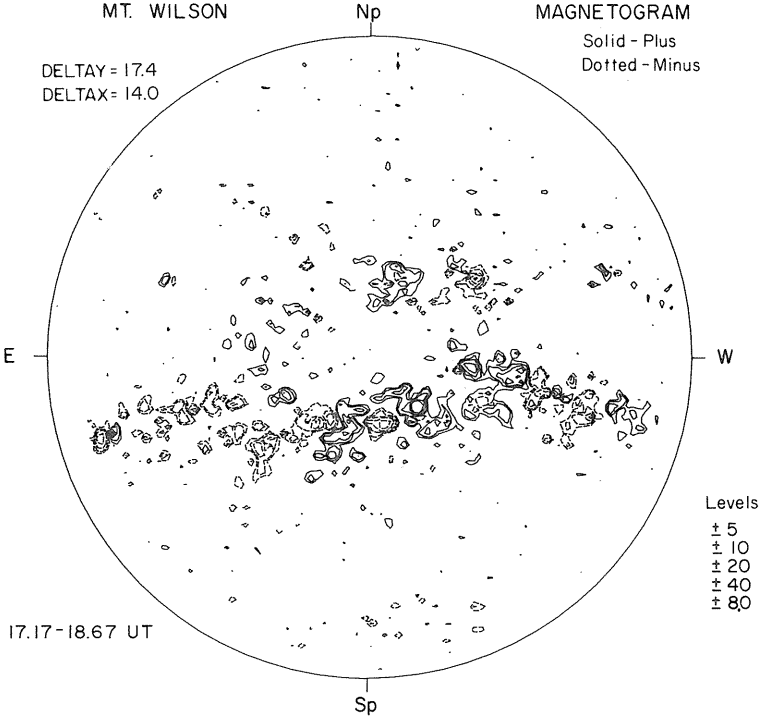
1452 UT

Contours in Intervals of 200° K

MT. WILSON

MAGNETOGRAM
Solid - Plus
Dotted - Minus

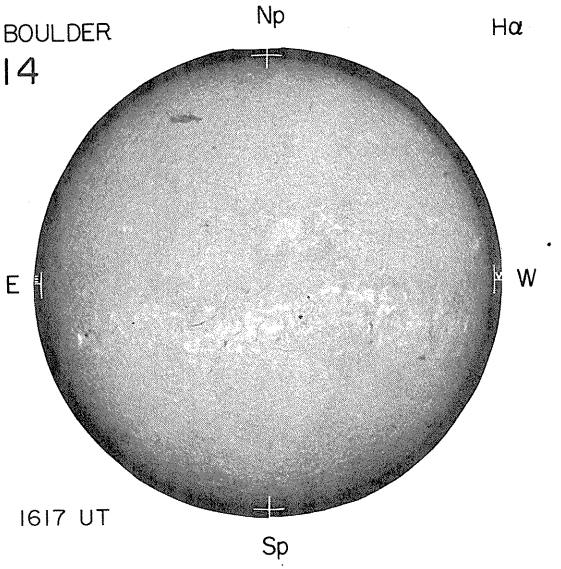
DELTAY = 17.4
DELTAX = 14.0



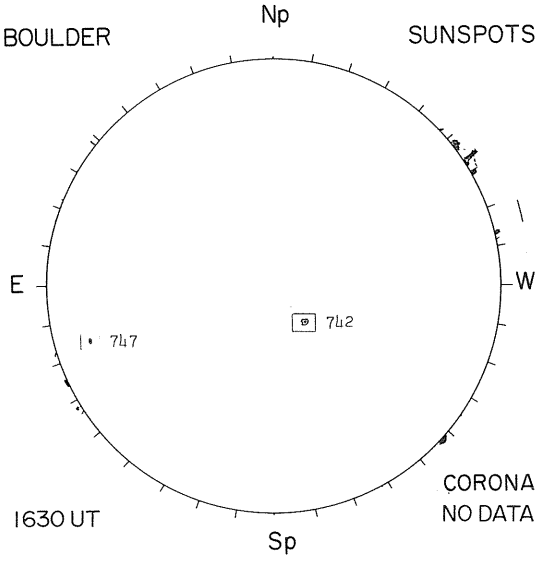
17.17 - 18.67 UT

Levels
± 5
± 10
± 20
± 40
± 80

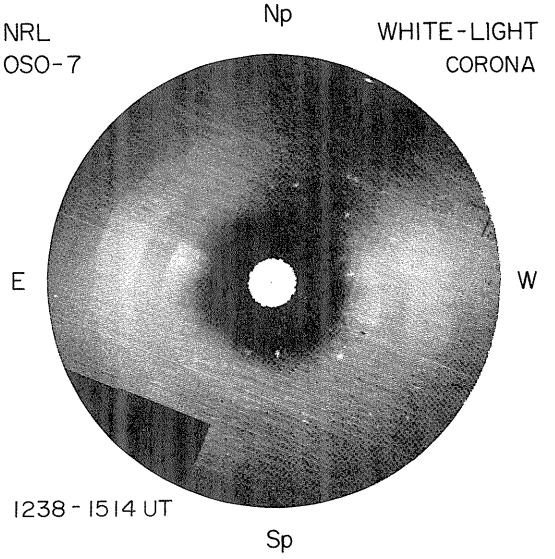
BOULDER
14



BOULDER

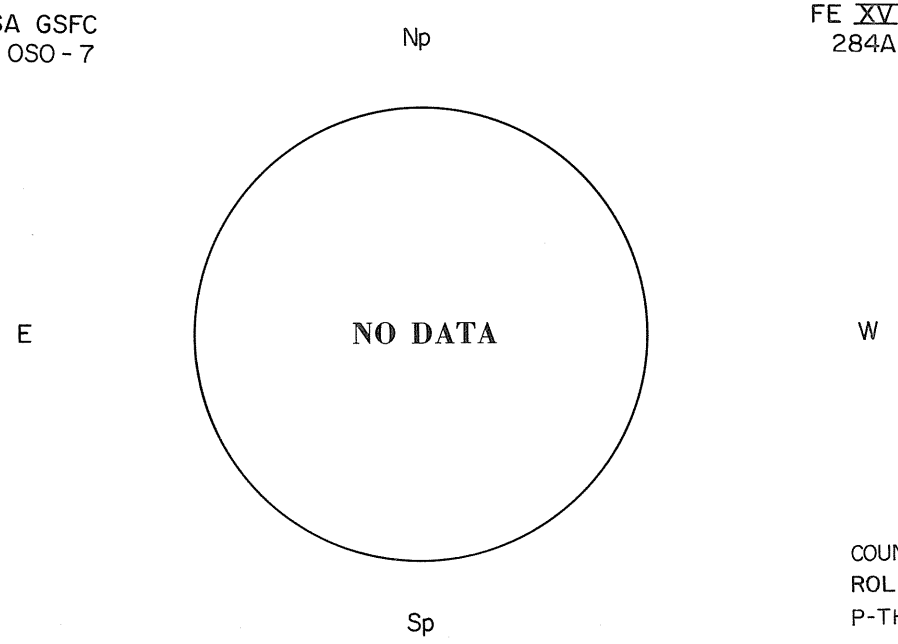


NRL
OSO-7



NASA GSFC
OSO - 7

FE XV
284A



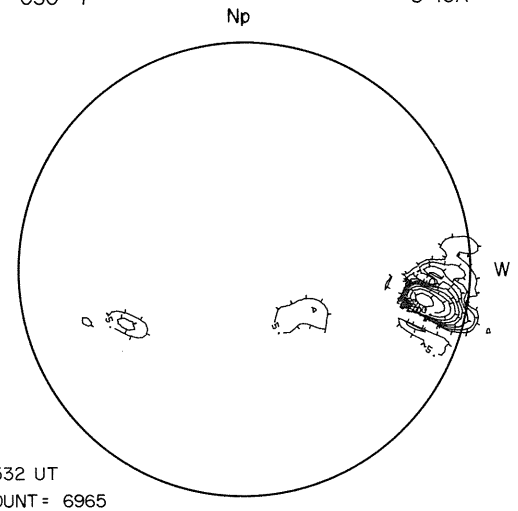
COUNT =
ROLL =
P-TH =

51
Feb 74

FEBRUARY 15, 1974 (P = -17.33, B_o = -6.83, L_o = 191.21)

NASA GSFC
OSO - 7

X-RAY
8-16A

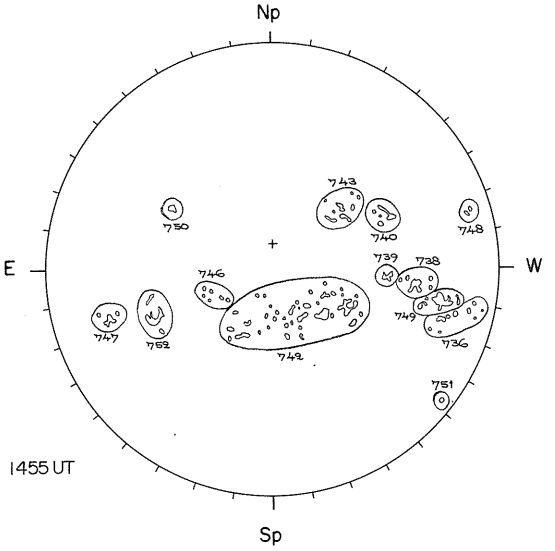


1532 UT
COUNT = 6965
ROLL = 23.7°
P-TH = 2.35

Counts per 0.125 sec.

McMATH-HULBERT

CALCIUM REPORT

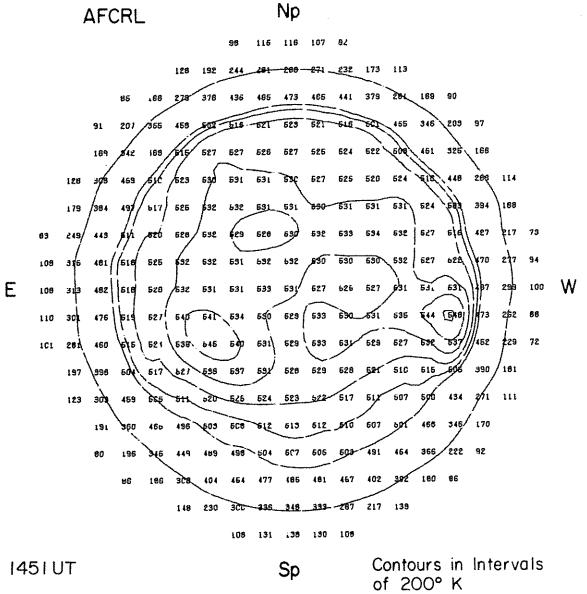


1455 UT

GOOD	S
38 - 0700	- 2.5
39 - 0300	- 2.5
42 - 2500	- 3.0
47 - 0500	- 3.5
49 - 1000	- 3.5
52 - 0600	- 2.5

PROSPECT HILL
AFCRL

8.6 mm



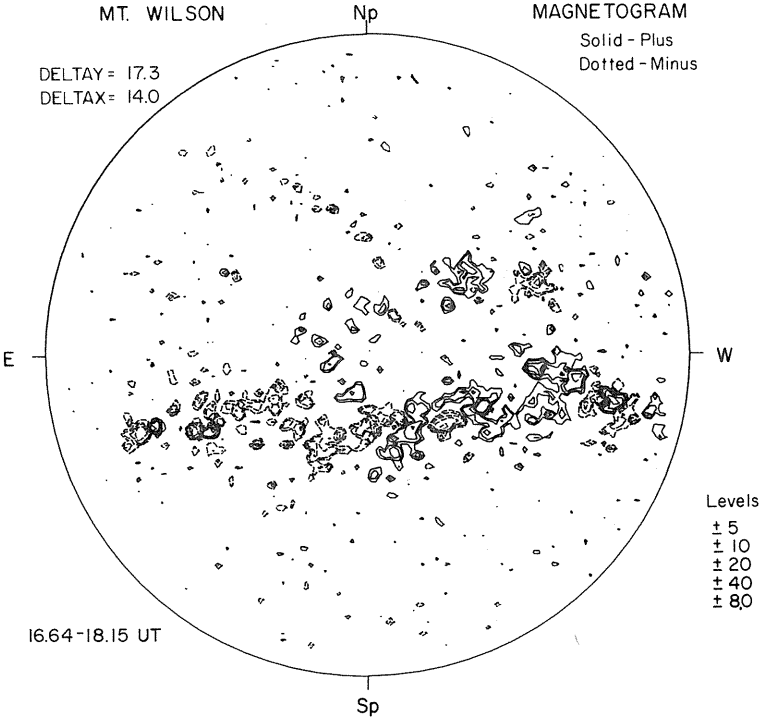
1451 UT

Contours in Intervals of 200° K

MT. WILSON

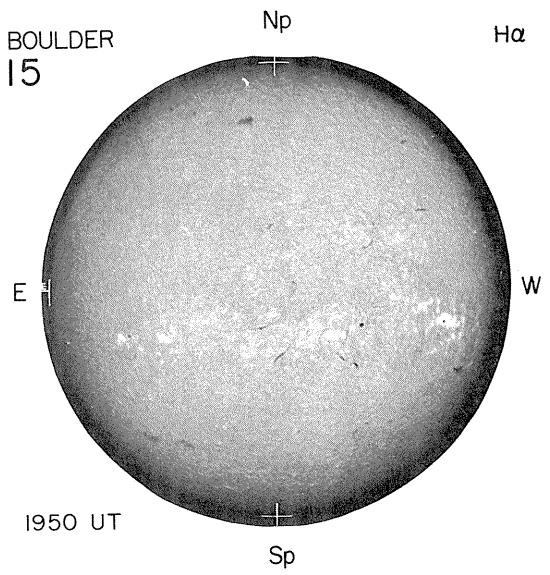
MAGNETOGRAM
Solid - Plus
Dotted - Minus

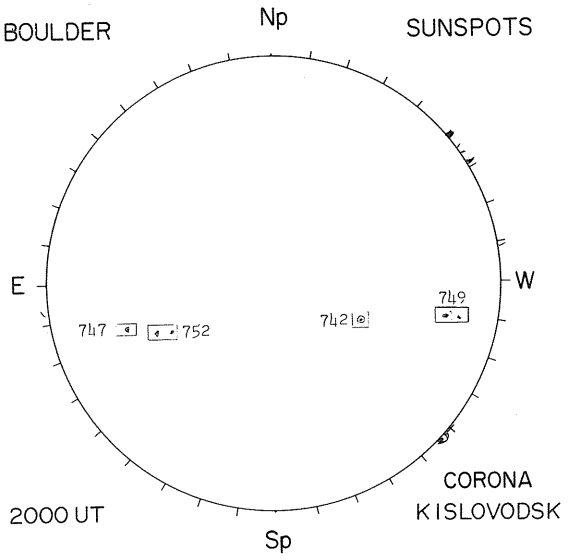
DELTAY = 17.3
DELTAX = 14.0

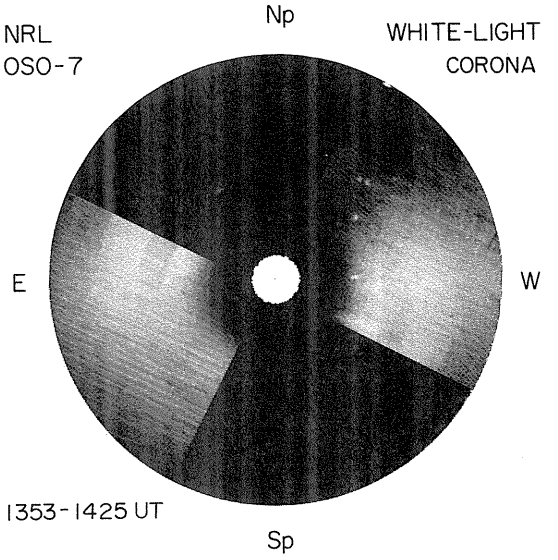


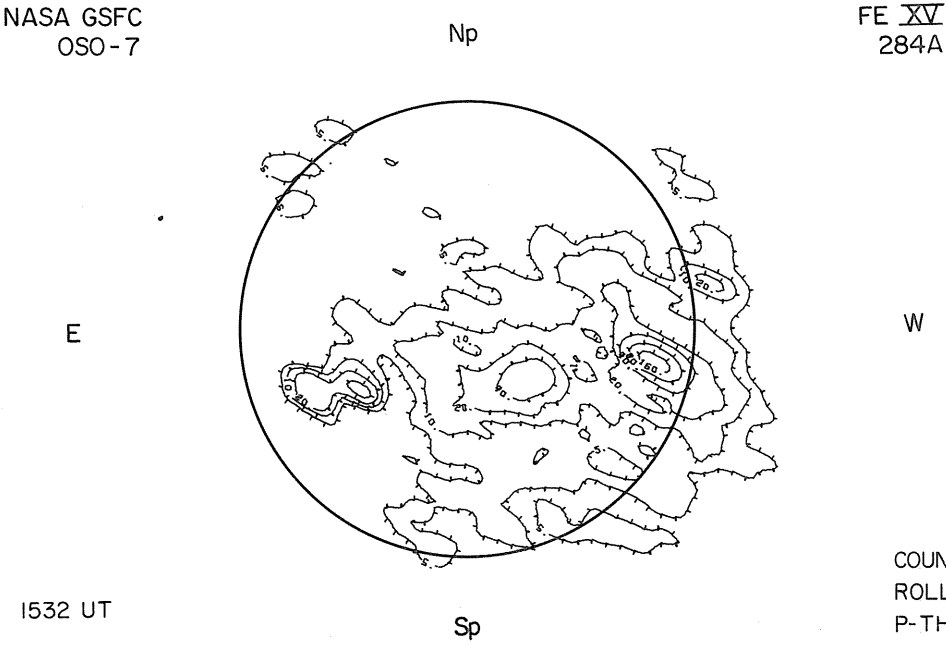
16.64 - 18.15 UT

Levels
± 5
± 10
± 20
± 40
± 80


BOULDER
15
Np
Hα
E
W
1950 UT
Sp


BOULDER
Np
SUNSPOTS
E
W
747
752
742
749
CORONA
KISLOVODSK
2000 UT
Sp


NRL
OSO-7
Np
WHITE-LIGHT
CORONA
E
W
1353-1425 UT
Sp

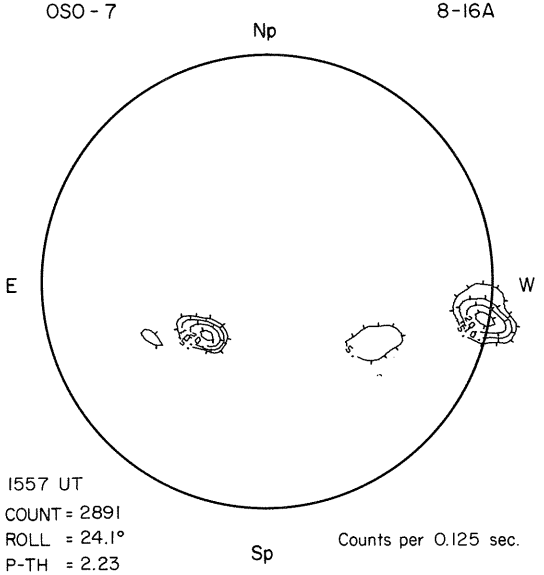

NASA GSFC
OSO-7
Np
FE XV
284A
E
W
1532 UT
Sp
COUNT = 7956
ROLL = 23.7°
P-TH = 2.35

53
Feb 74

FEBRUARY 16, 1974 (P=-17.66, B_o=-6.87, L_o=178.05)

NASA GSFC
OSO-7

X-RAY
8-16A

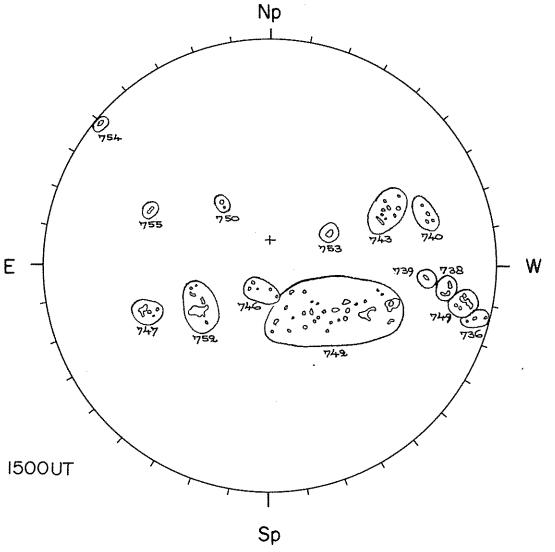


1557 UT
COUNT = 2891
ROLL = 24.1°
P-TH = 2.23

Counts per 0.125 sec.

McMATH-HULBERT

CALCIUM REPORT

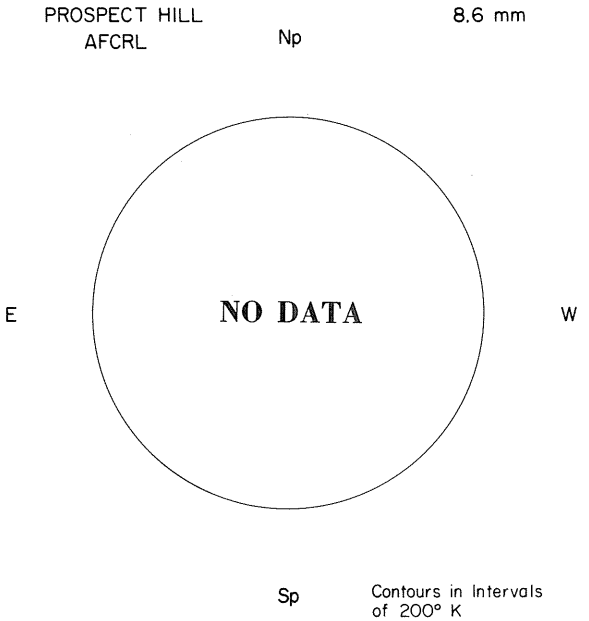


1500UT

POOR	S
42 - 2200	- 3.0
47 - 0400	- 3.0
49 - 0800	- 3.0
52 - 0600	- 3.5
53 - 0100	- 2.5

PROSPECT HILL
AFCRL

8.6 mm

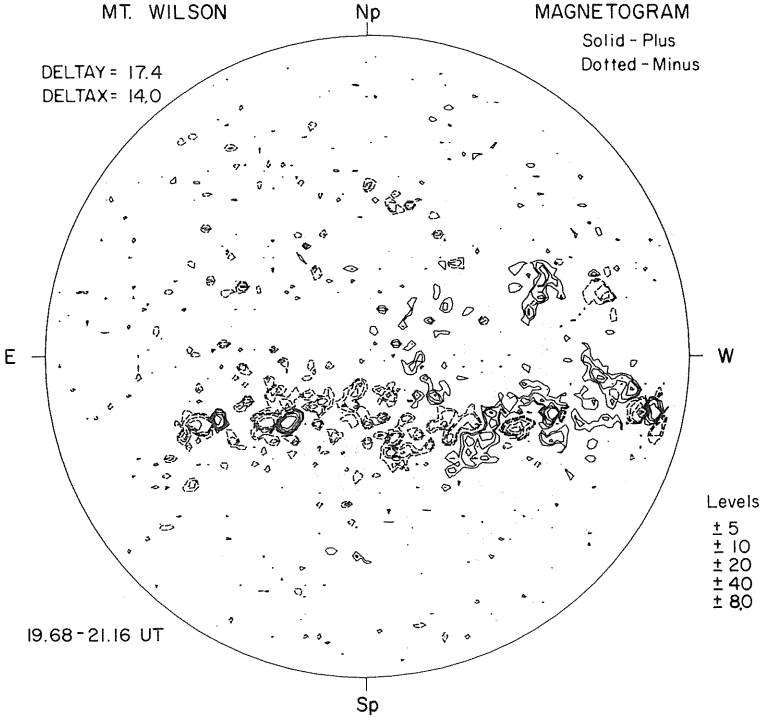


Contours in Intervals
of 200° K

MT. WILSON

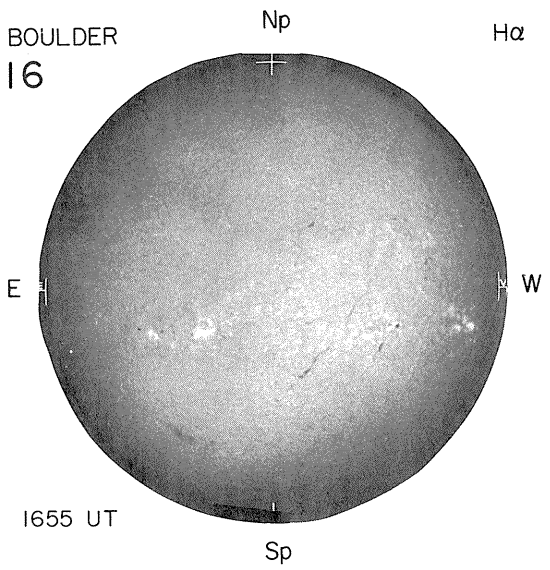
MAGNETOGRAM
Solid - Plus
Dotted - Minus

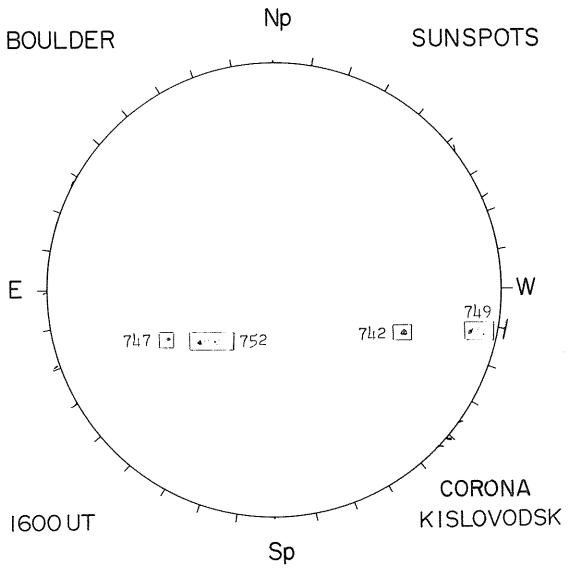
DELTAY = 17.4
DELTAX = 14.0

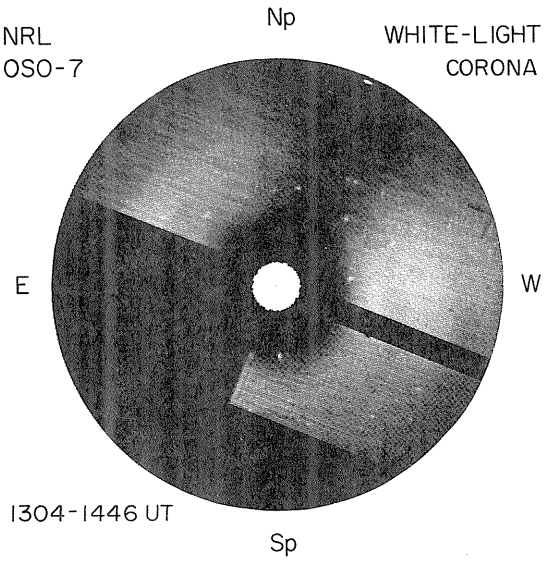


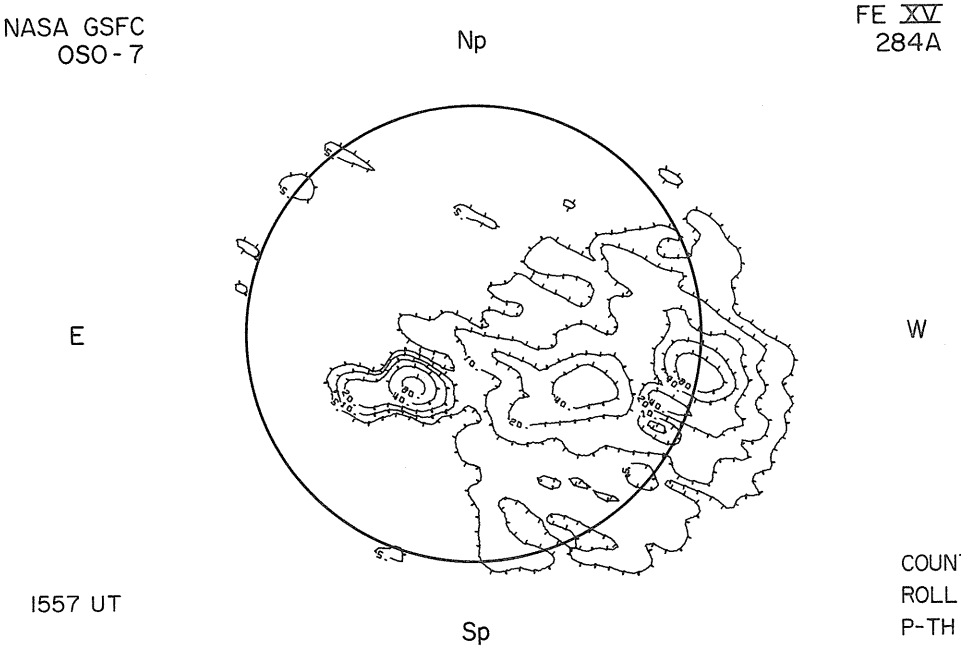
19.68 - 21.16 UT

Levels
± 5
± 10
± 20
± 40
± 80


BOULDER
16
Np
Hα
E
W
1655 UT
Sp


BOULDER
Np
SUNSPOTS
E
W
747
752
742
749
CORONA
KISLOVODSK
1600 UT
Sp


NRL
OSO-7
Np
WHITE-LIGHT
CORONA
E
W
1304-1446 UT
Sp

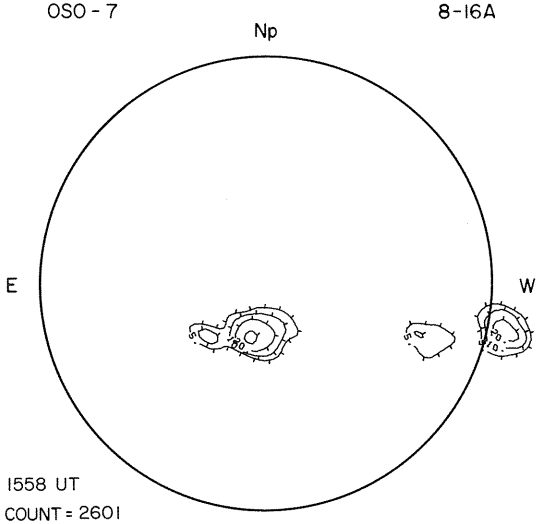

NASA GSFC
OSO-7
Np
FE XV
284A
E
W
1557 UT
Sp
COUNT = 8343
ROLL = 24.1°
P-TH = 2.23

55
Feb 74

FEBRUARY 17, 1974 (P = -17.99, B_o = -6.91, L_o = 164.88)

NASA GSFC
OSO - 7

X-RAY
8-16A

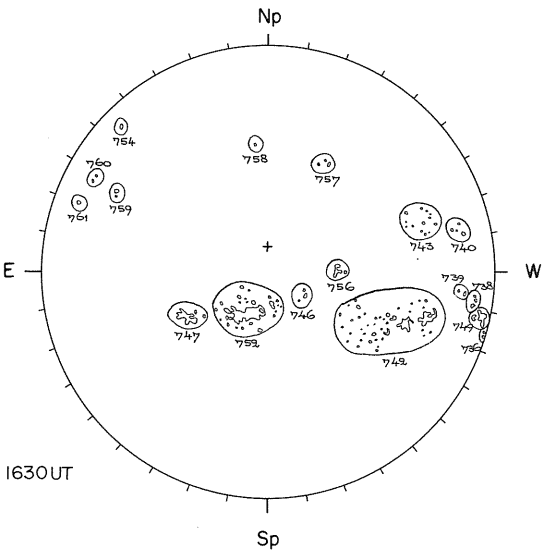


1558 UT
COUNT = 2601
ROLL = 24.5°
P-TH = 2.11

Counts per 0.125 sec.

McMATH-HULBERT

CALCIUM REPORT

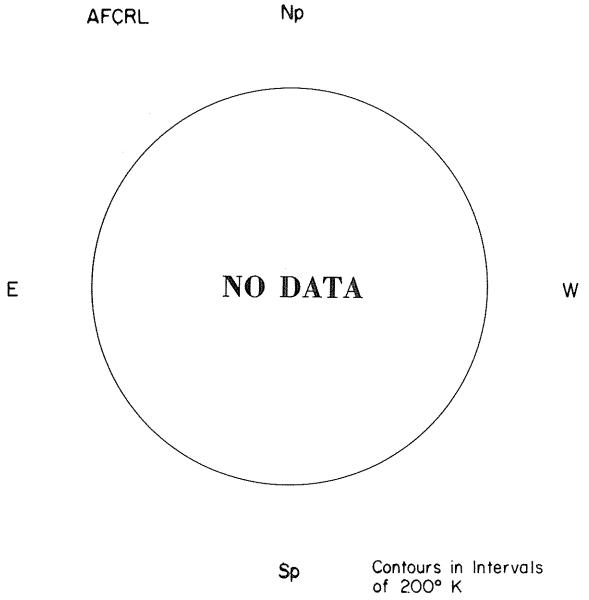


1630UT

GOOD	M
42 - 2100	- 3.0
47 - 0500	- 3.0
49 - 0900	- 2.5
52 - 1200	- 3.5
56 - 0200	- 2.5

PROSPECT HILL
AFCRL

8.6 mm

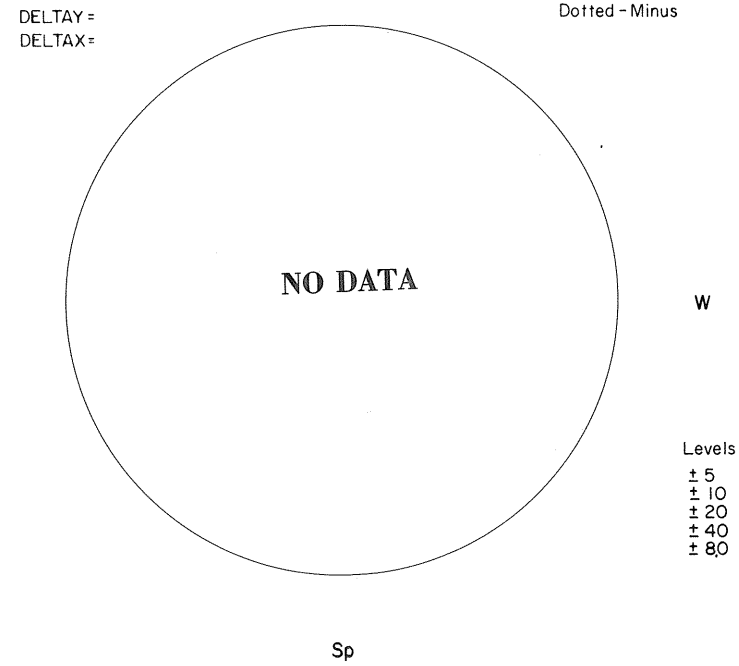


Contours in Intervals
of 200° K

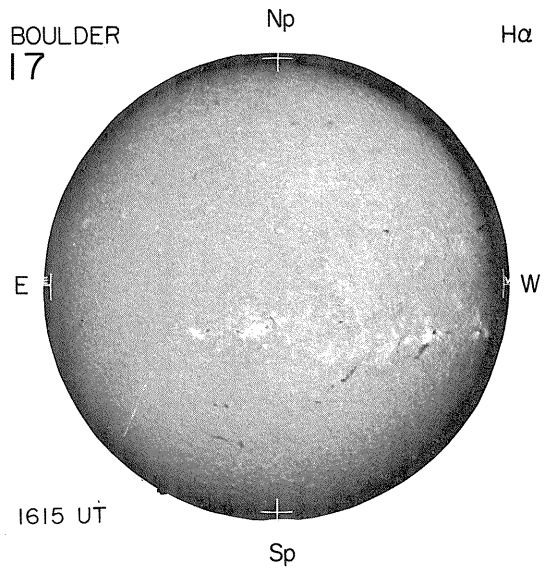
MT. WILSON

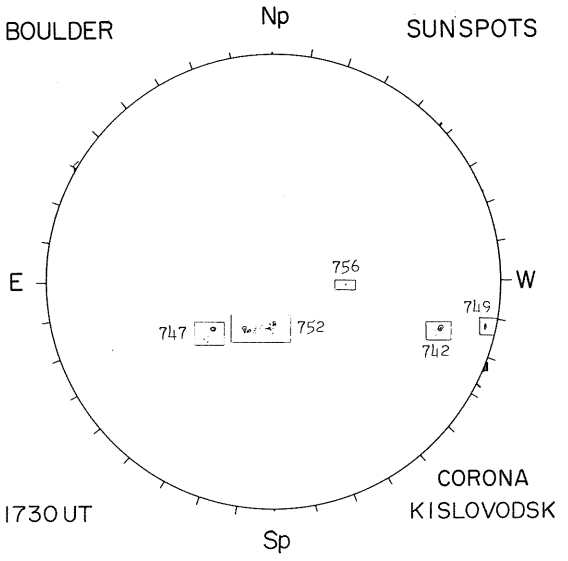
DELTAY =
DELTAX =

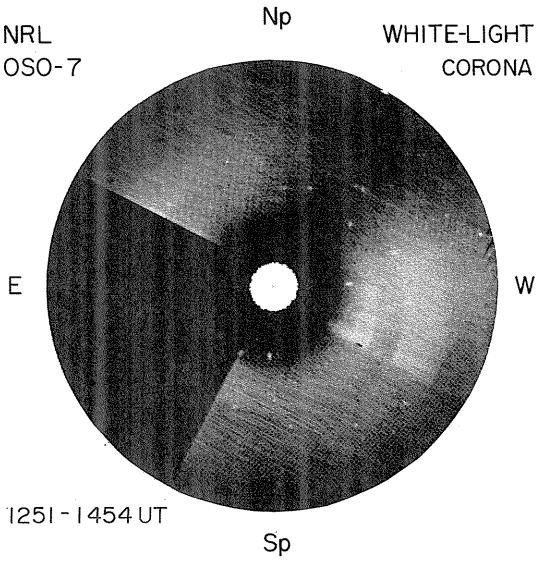
MAGNETOGRAM
Solid - Plus
Dotted - Minus

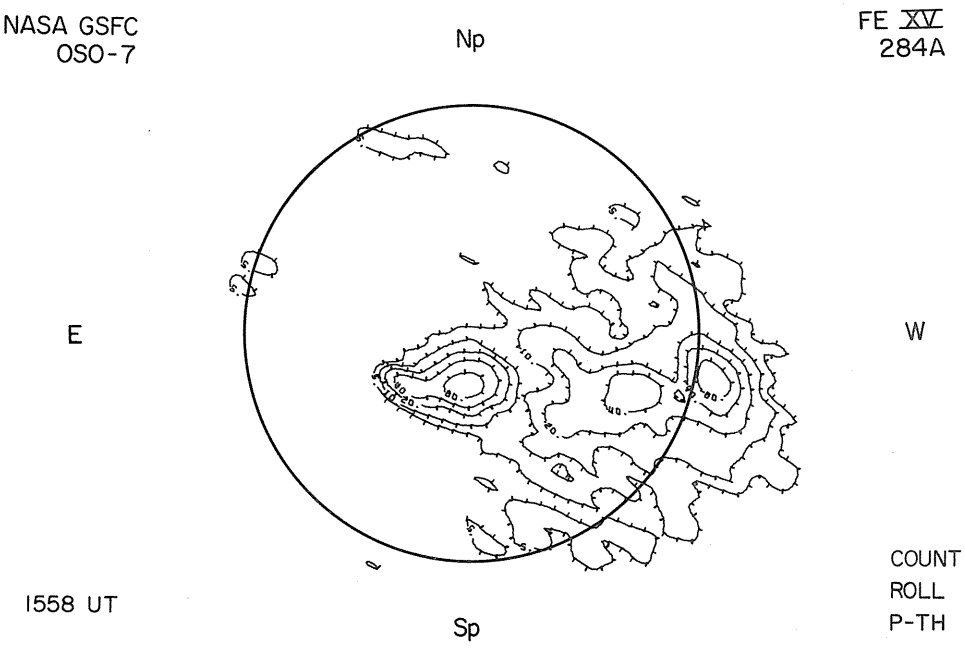


Levels
± 5
± 10
± 20
± 40
± 80


BOULDER
17
Np
Hα
E
W
1615 UT
Sp


BOULDER
Np
SUNSPOTS
E
W
756
747
752
749
742
CORONA
KISLOVODSK
1730 UT
Sp


NRL
OSO-7
Np
WHITE-LIGHT
CORONA
E
W
1251-1454 UT
Sp

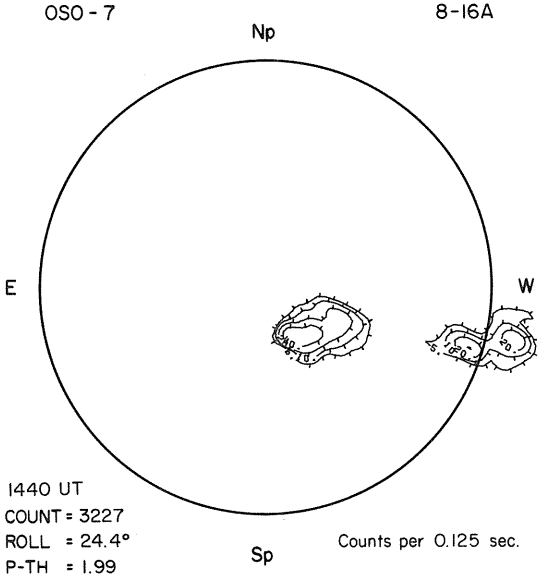

NASA GSFC
OSO-7
Np
FE XV
284A
E
W
1558 UT
Sp
COUNT = 7748
ROLL = 24.5°
P-TH = 2.11

57
Feb 74

FEBRUARY 18, 1974 (P = -18.32, B_o = -6.95, L_o = 151.71)

NASA GSFC
OSO - 7

X-RAY
8-16A

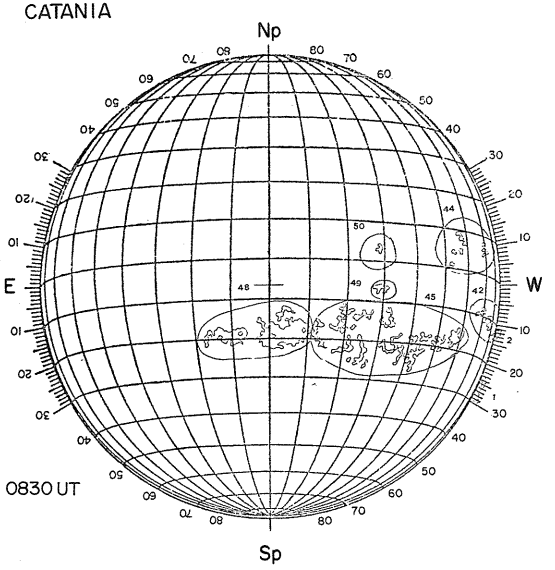


1440 UT
COUNT = 3227
ROLL = 24.4°
P-TH = 1.99

Counts per 0.125 sec.

CATANIA

CALCIUM REPORT

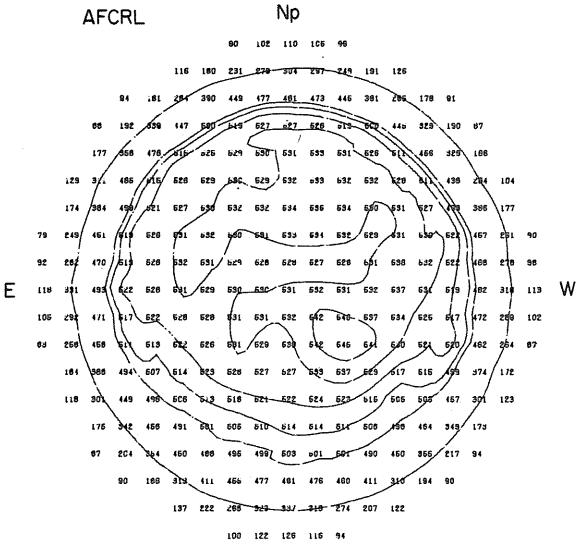


0830 UT

FAIR	EC
42 - 1640	---
45 - 5885	---
49 - 0290	---
48 - 4399	---

PROSPECT HILL
AFCRL

8.6 mm



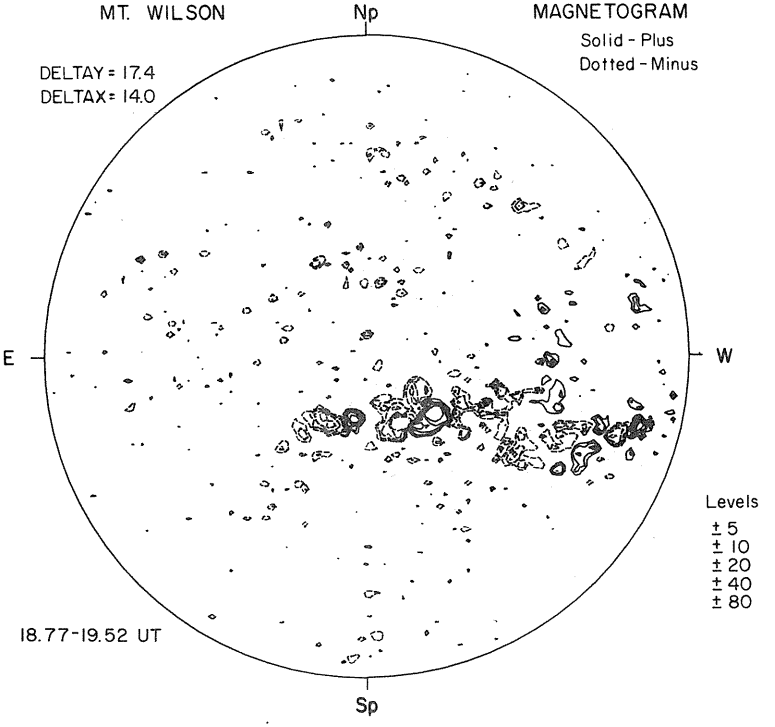
1436 UT

Contours in Intervals
of 200° K

MT. WILSON

MAGNETOGRAM
Solid - Plus
Dotted - Minus

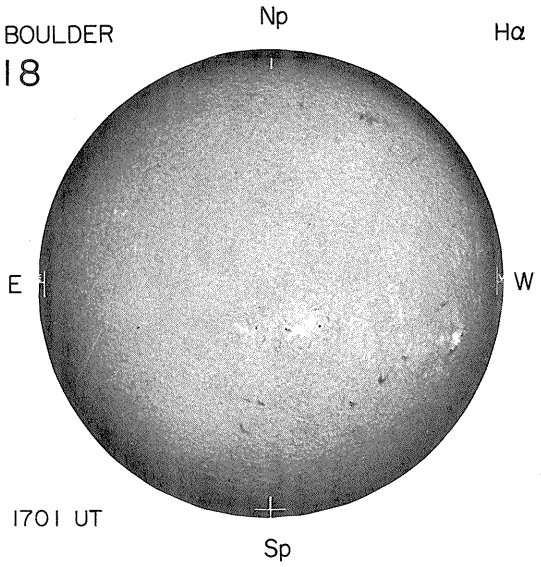
DELTAY = 17.4
DELTAX = 14.0



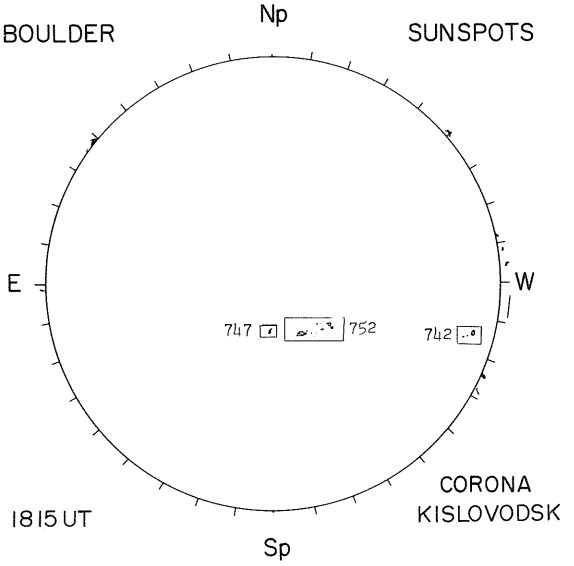
Levels
± 5
± 10
± 20
± 40
± 80

18.77-19.52 UT

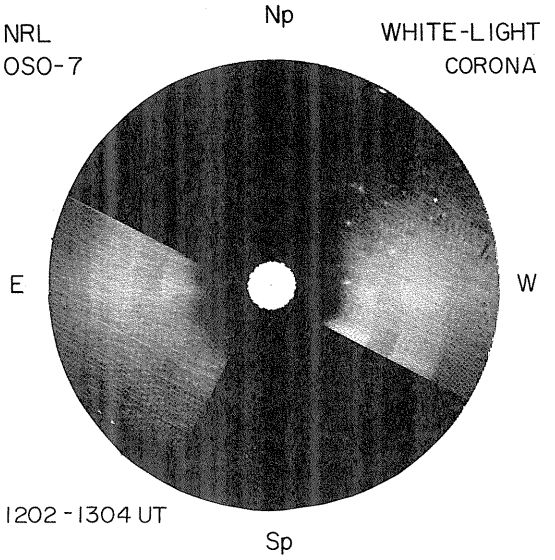
BOULDER
18



BOULDER

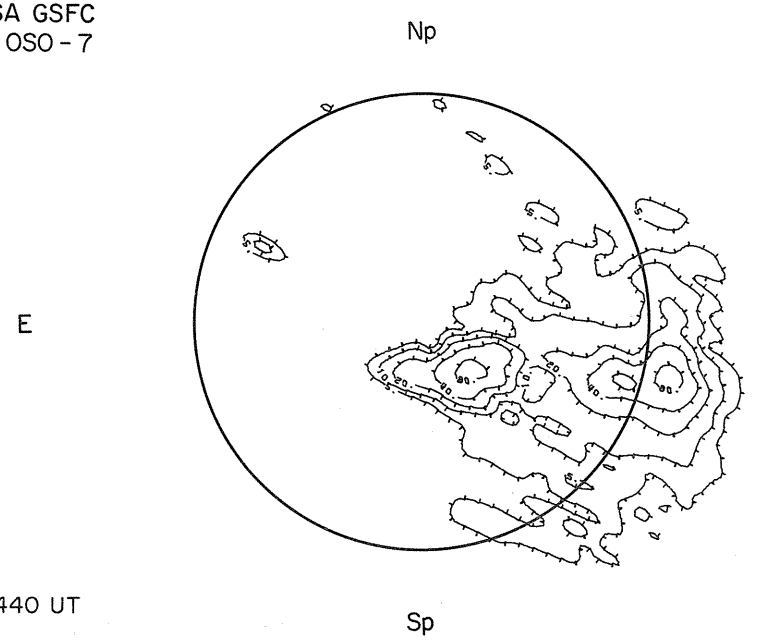


NRL
OSO-7



NASA GSFC
OSO-7

FE XV
284A

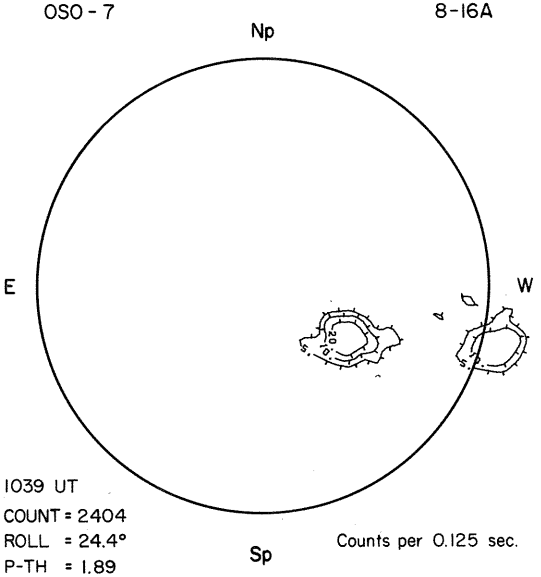


COUNT = 7349
ROLL = 24.4°
P-TH = 1.99

FEBRUARY 19, 1974 (P = -18.63, B_o = -6.99, L_o = 138.54)

NASA GSFC
OSO - 7

X-RAY
8-16A

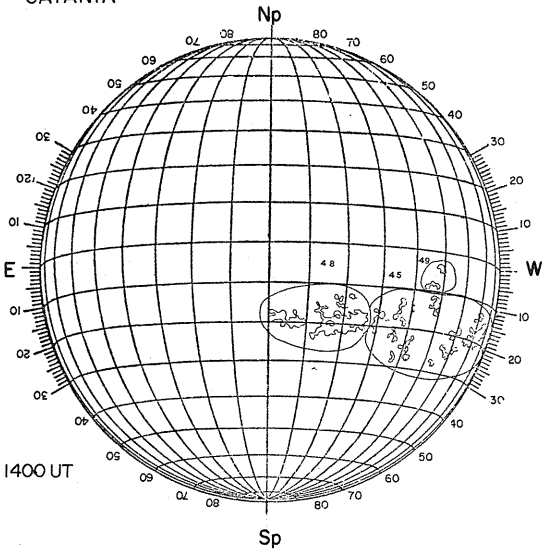


1039 UT
COUNT = 2404
ROLL = 24.4°
P-TH = 1.89

Counts per 0.125 sec.

CATANIA

CALCIUM REPORT

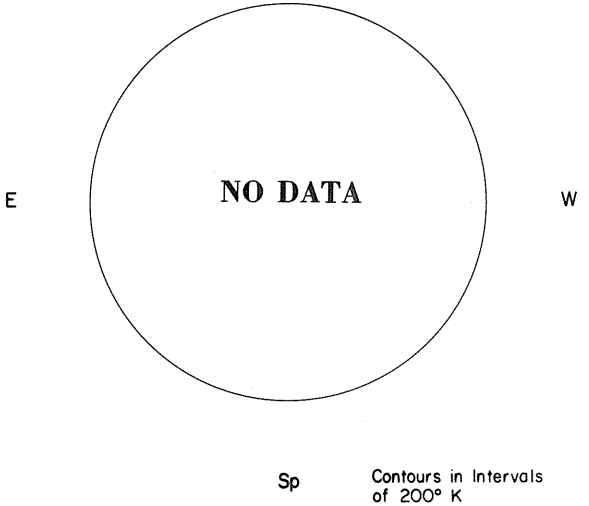


1400 UT

FAIR	GD
45 - 4193 ---	
48 - 3409 ---	

PROSPECT HILL
AFCRL

8.6 mm

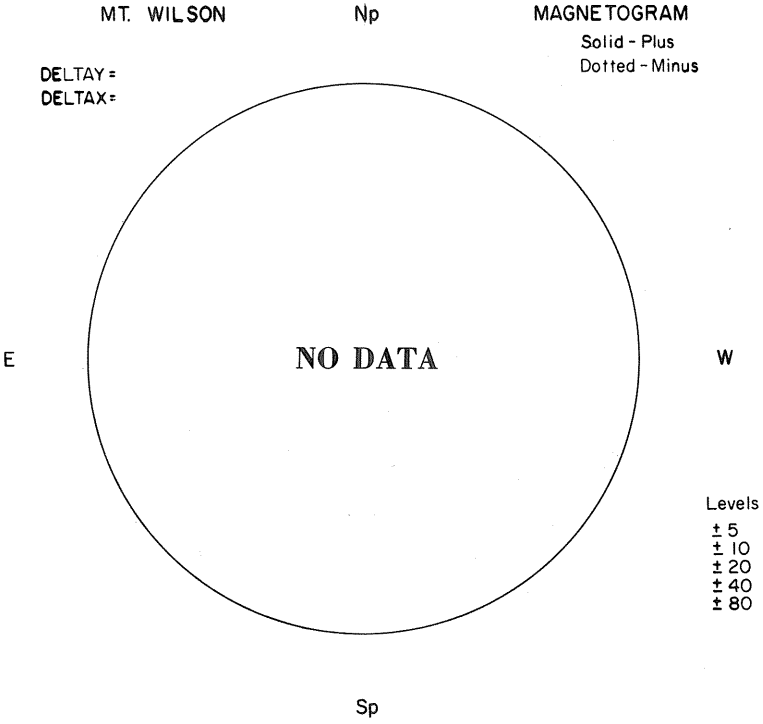


Contours in Intervals
of 200° K

MT. WILSON

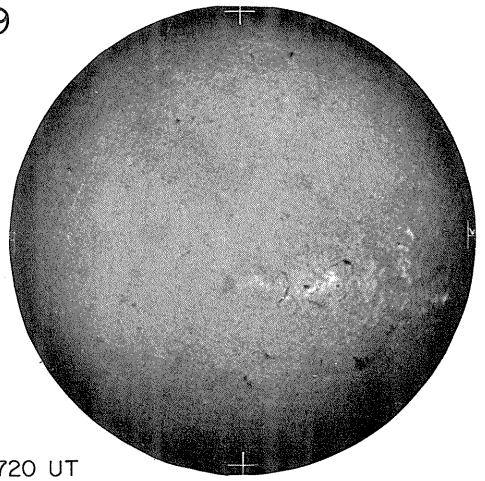
DELTAY =
DELTAX =

MAGNETOGRAM
Solid - Plus
Dotted - Minus



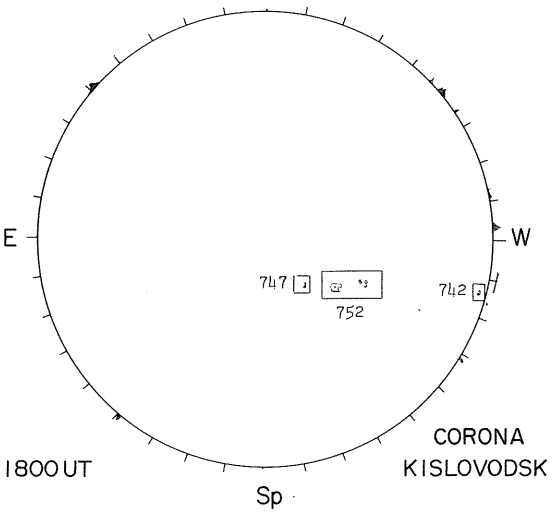
Levels
± 5
± 10
± 20
± 40
± 80

BOULDER
19



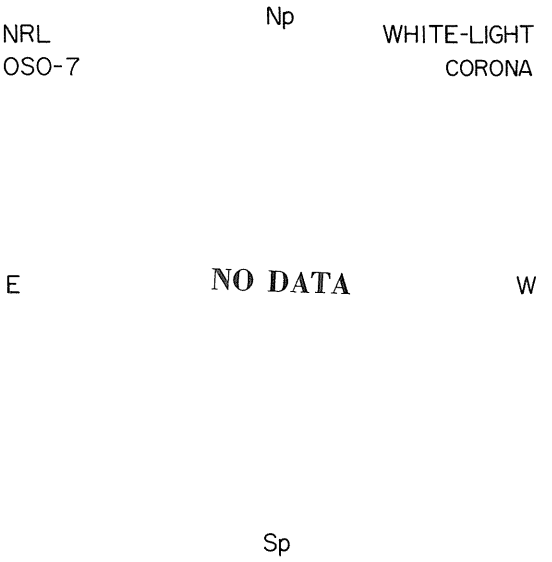
1720 UT

BOULDER



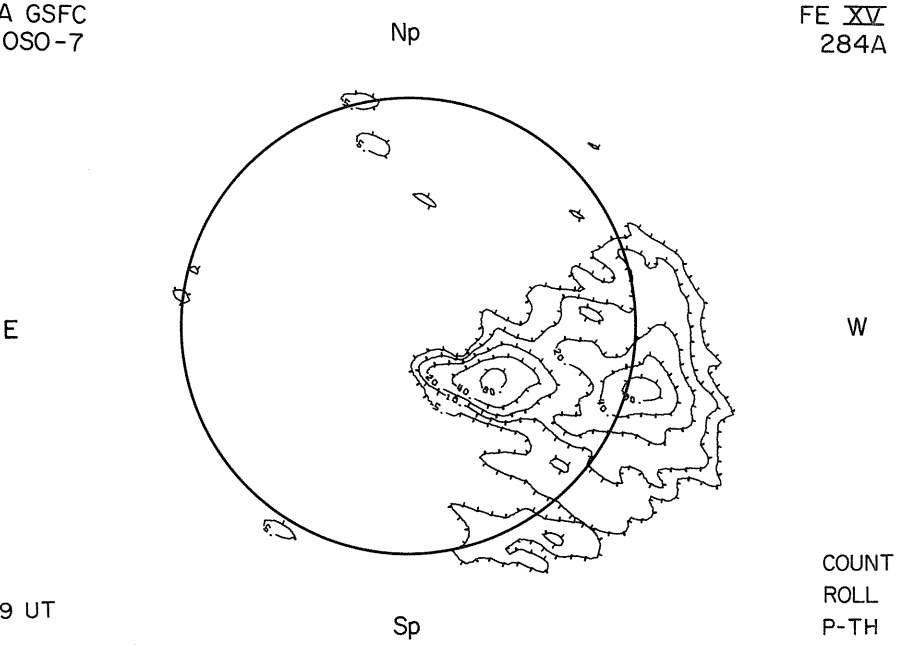
1800 UT

NRL
OSO-7



NASA GSFC
OSO-7

FE XV
284A



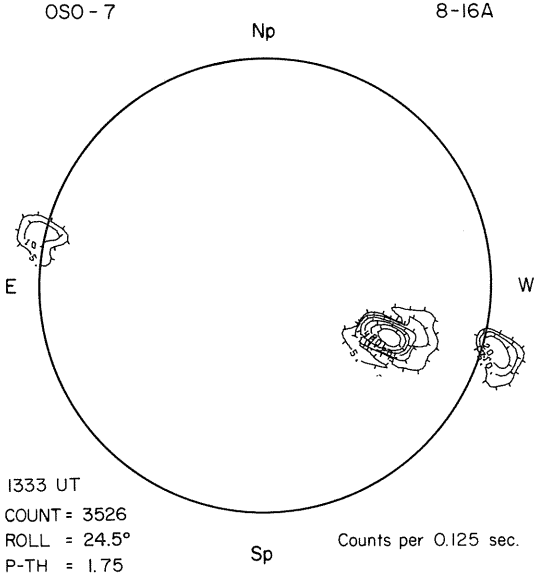
1039 UT

COUNT = 6597
ROLL = 24.4°
P-TH = 1.89

FEBRUARY 20, 1974 (P = -18.95, B_o = -7.02, L_o = 125.37)

NASA GSFC
OSO - 7

X-RAY
8-16A

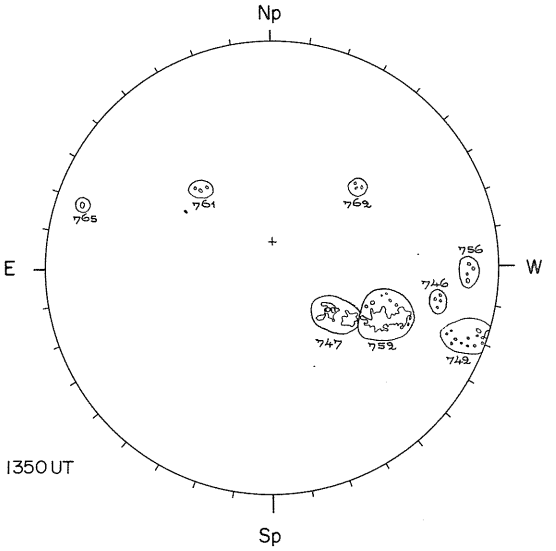


1333 UT
COUNT = 3526
ROLL = 24.5°
P-TH = 1.75

Counts per 0.125 sec.

McMATH-HULBERT

CALCIUM REPORT

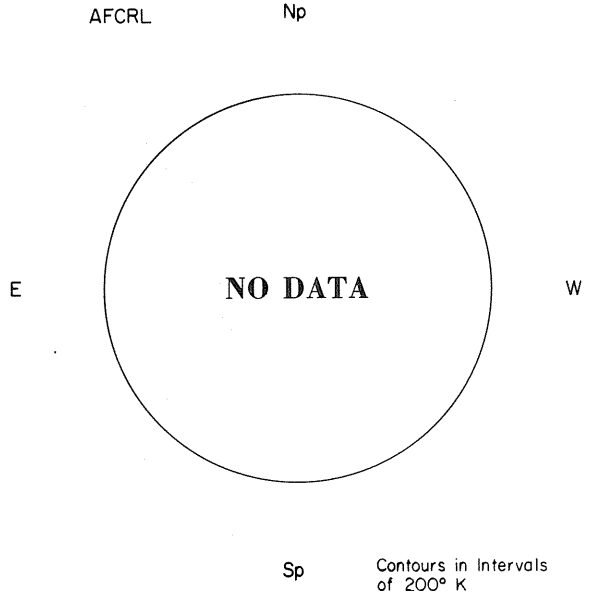


GOOD	M
42 - 1500	- 2.5
47 - 0900	- 3.0
52 - 1800	- 3.5

1350 UT

PROSPECT HILL
AFCRL

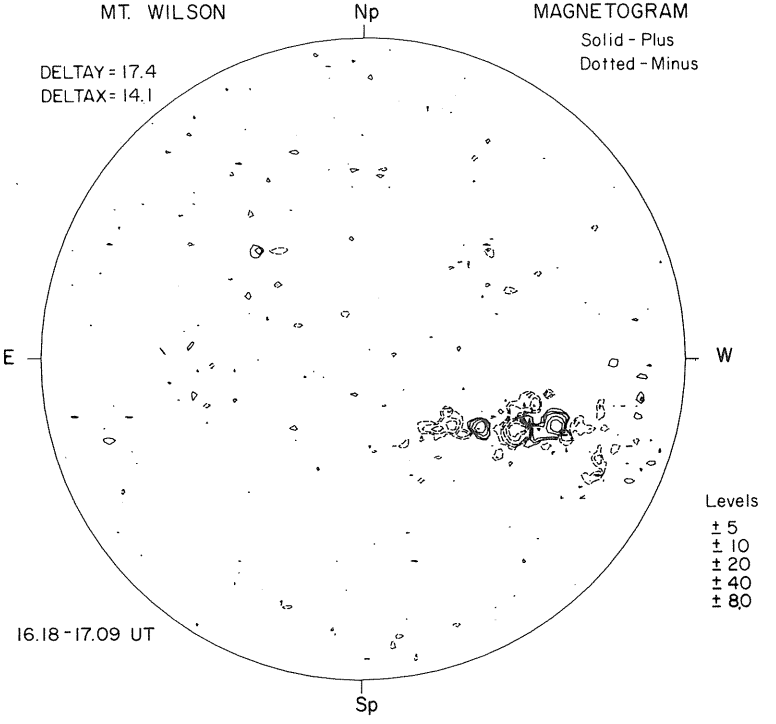
8.6 mm



Contours in Intervals of 200° K

MT. WILSON

DELTAY = 17.4
DELTAX = 14.1

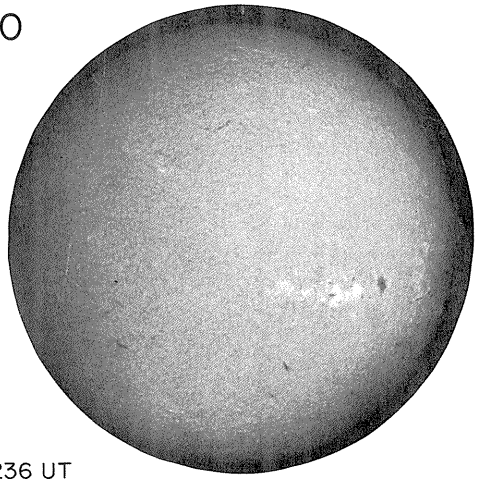


MAGNETOGRAM
Solid - Plus
Dotted - Minus

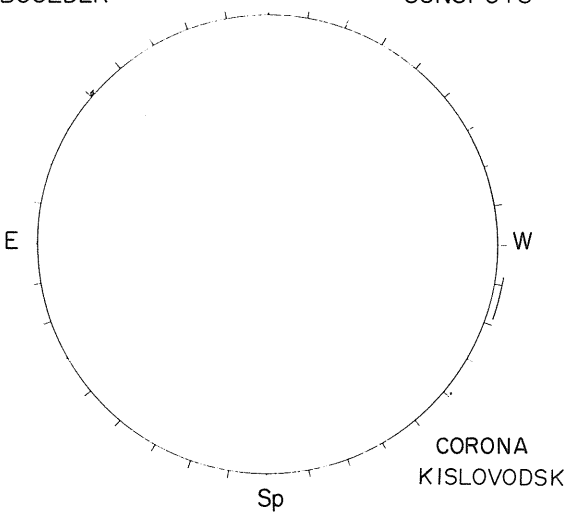
Levels
± 5
± 10
± 20
± 40
± 80

16.18 - 17.09 UT

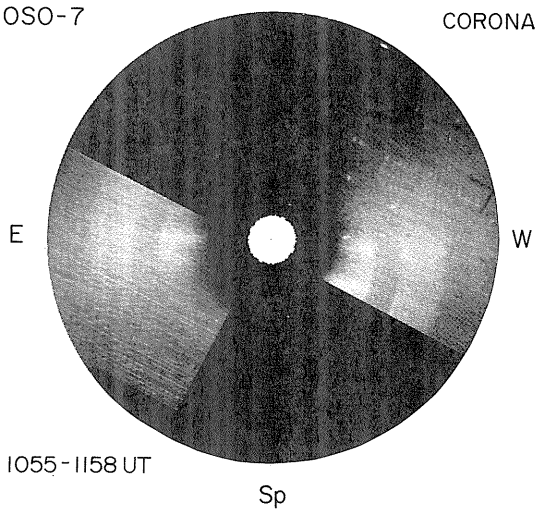
RAMEY AFB
20



BOULDER

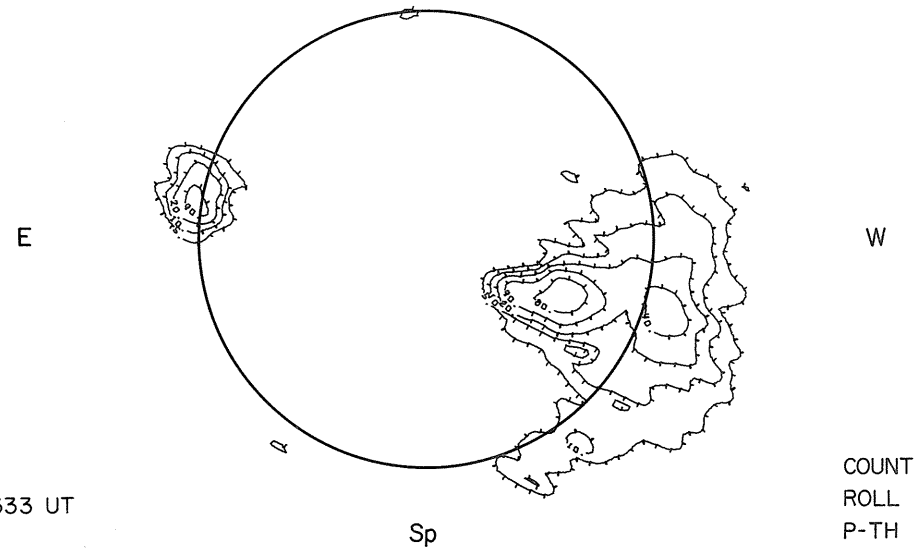


NRL
OSO-7



NASA GSFC
OSO-7

FE XV
284A



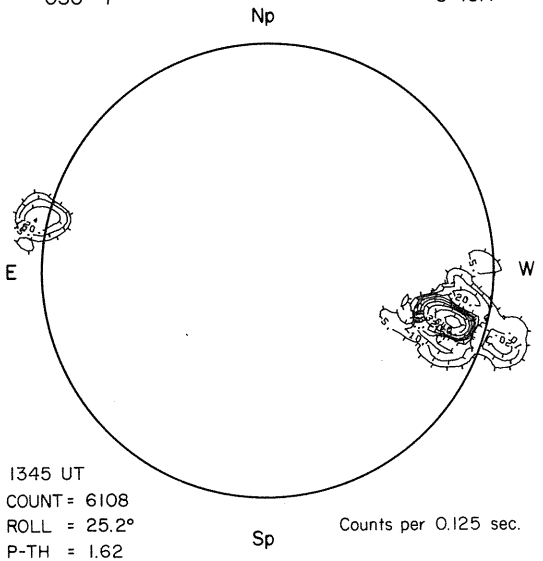
COUNT = 6362
ROLL = 24.5°
P-TH = 1.75

63
Feb 74

FEBRUARY 21, 1974 (P = -19.25, B_o = -7.05, L_o = 112.20)

NASA GSFC
OSO - 7

X-RAY
8-16A

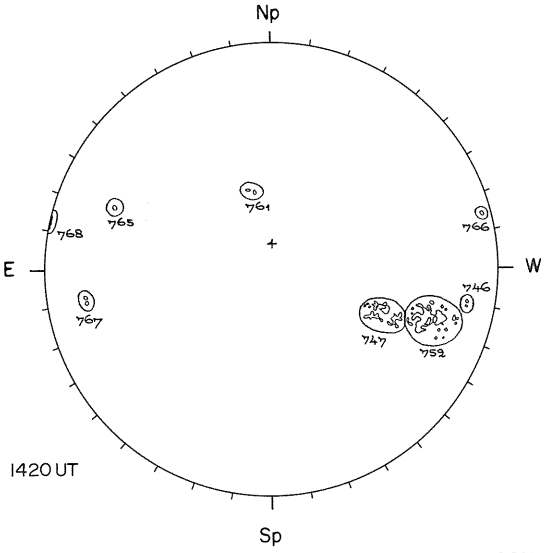


1345 UT
COUNT = 6108
ROLL = 25.2°
P-TH = 1.62

Counts per 0.125 sec.

McMATH-HULBERT

CALCIUM REPORT

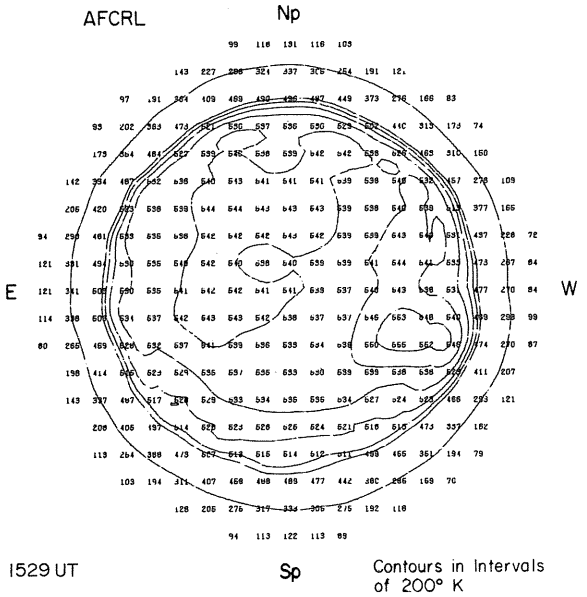


1420 UT

GOOD	M
47 - 0800	- 2.5
52 - 1900	- 3.0

PROSPECT HILL
AFCRL

8.6 mm



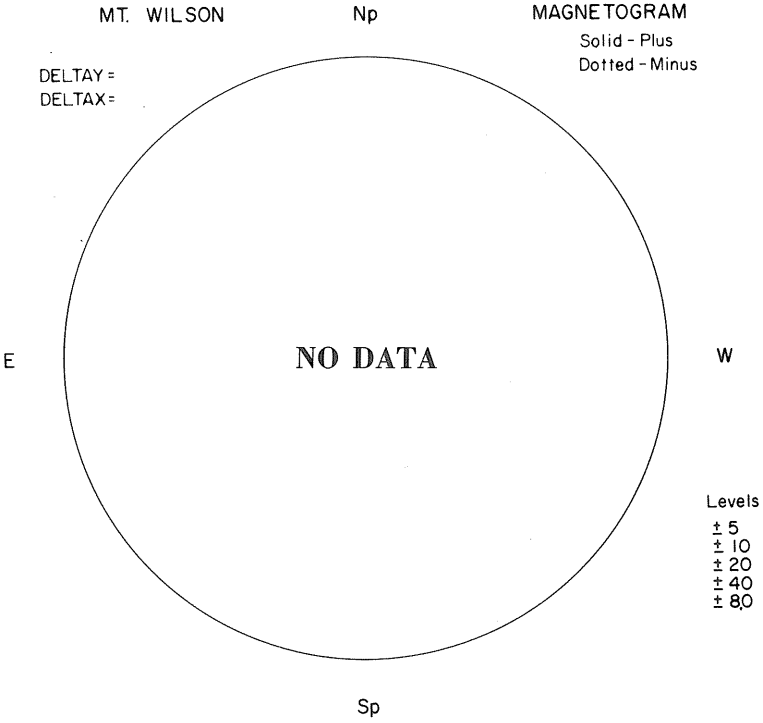
1529 UT

Contours in Intervals of 200° K

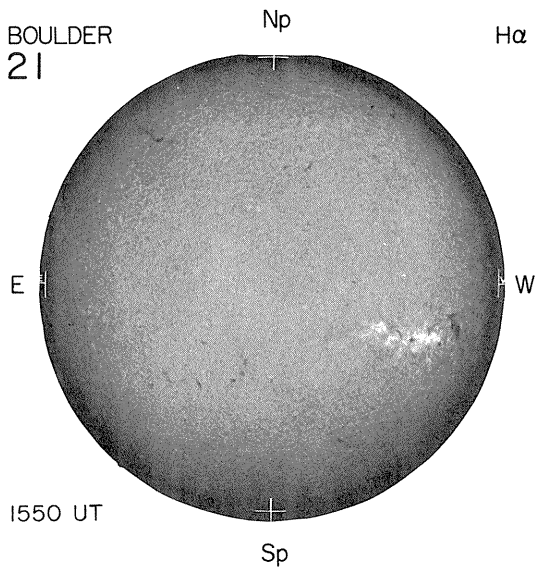
MT. WILSON

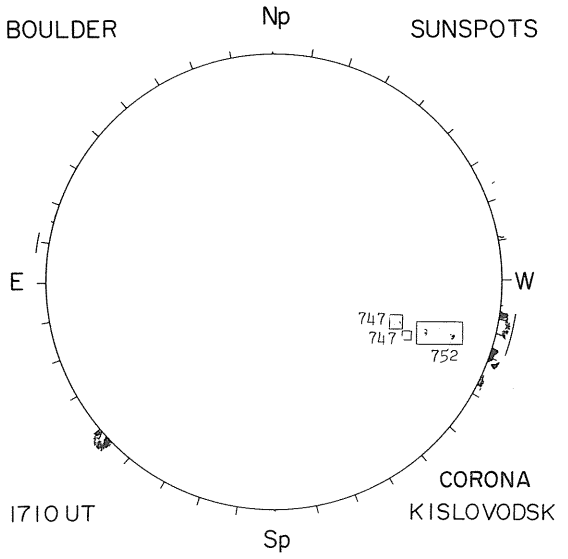
MAGNETOGRAM
Solid - Plus
Dotted - Minus

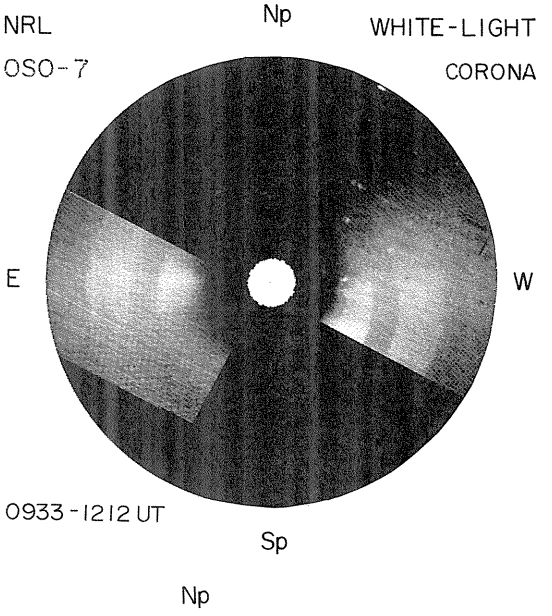
DELTAY =
DELTAX =

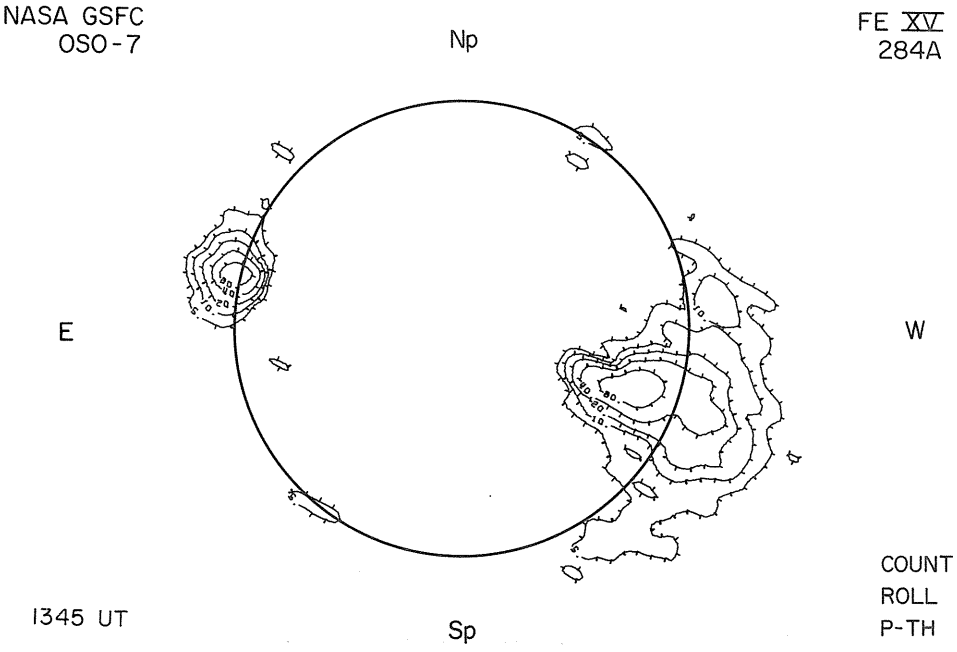


Levels
± 5
± 10
± 20
± 40
± 80


BOULDER
21
Np
Hα
E
W
1550 UT
Sp


BOULDER
Np
SUNSPOTS
E
W
747
747
752
CORONA
KISLOVODSK
1710 UT
Sp

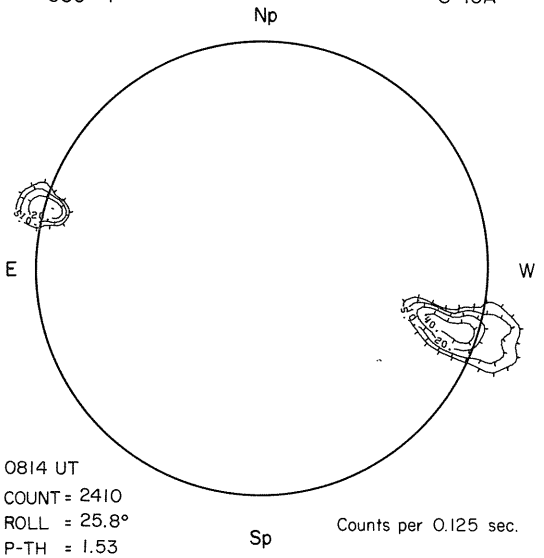

NRL
OSO-7
Np
WHITE-LIGHT
CORONA
E
W
0933-1212 UT
Sp
Np


NASA GSFC
OSO-7
Np
FE XV
284A
E
W
COUNT = 6608
ROLL = 25.2°
P-TH = 1.62
1345 UT
Sp

FEBRUARY 22, 1974 (P = -19.55, B_o = -7.08, L_o = 99.03)

NASA GSFC
OSO - 7

X-RAY
8-16A

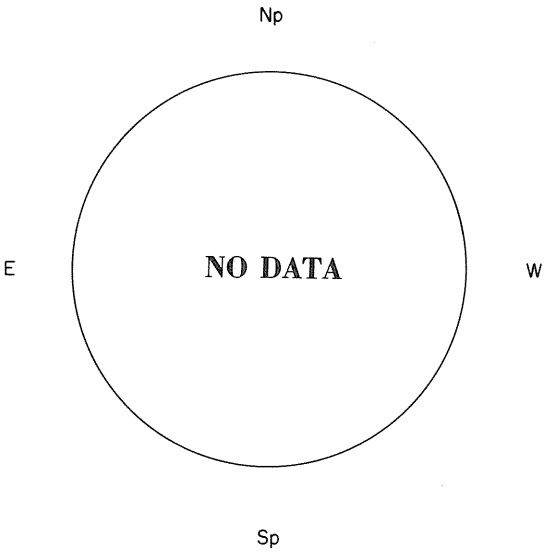


0814 UT
COUNT = 2410
ROLL = 25.8°
P-TH = 1.53

Counts per 0.125 sec.

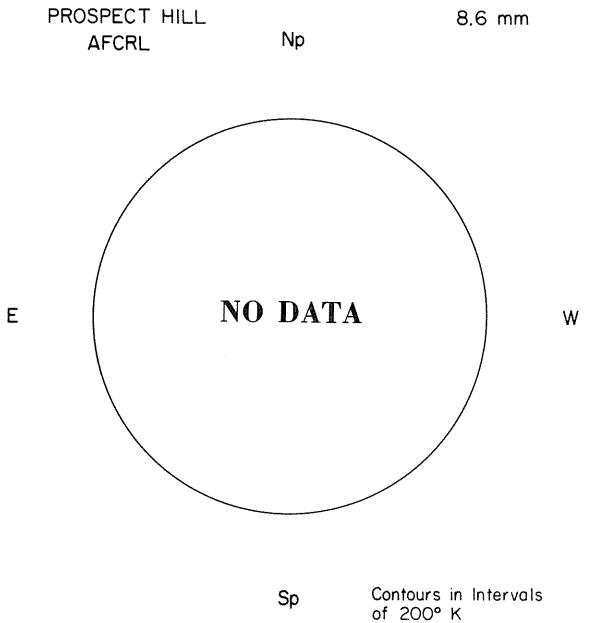
McMATH-HULBERT

CALCIUM REPORT



PROSPECT HILL
AFCRL

8.6 mm

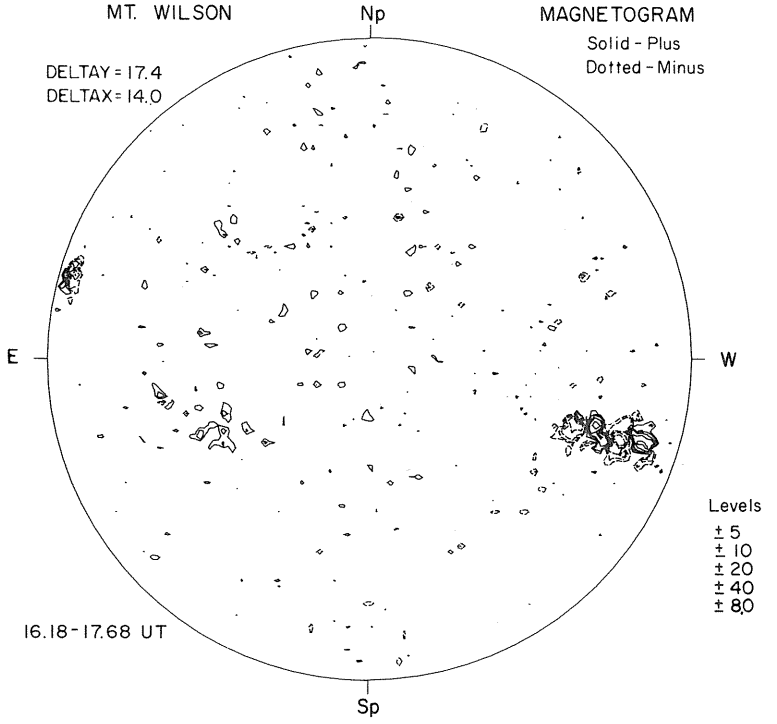


Contours in Intervals
of 200° K

MT. WILSON

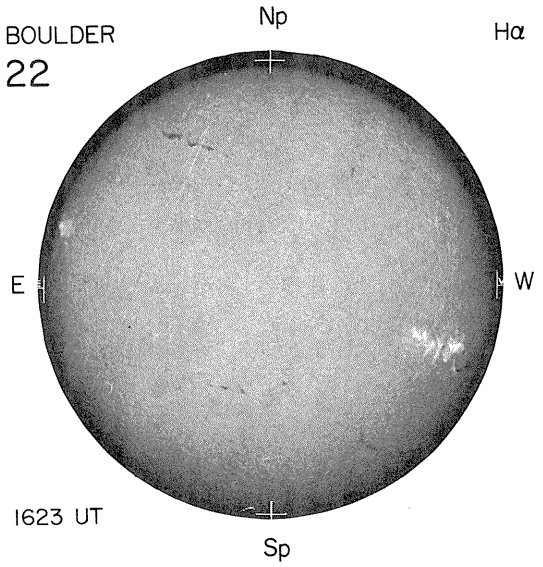
MAGNETOGRAM
Solid - Plus
Dotted - Minus

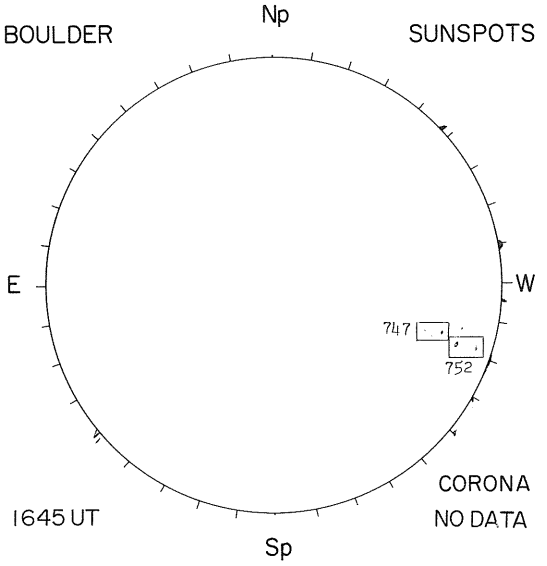
DELTAY = 17.4
DELTAX = 14.0

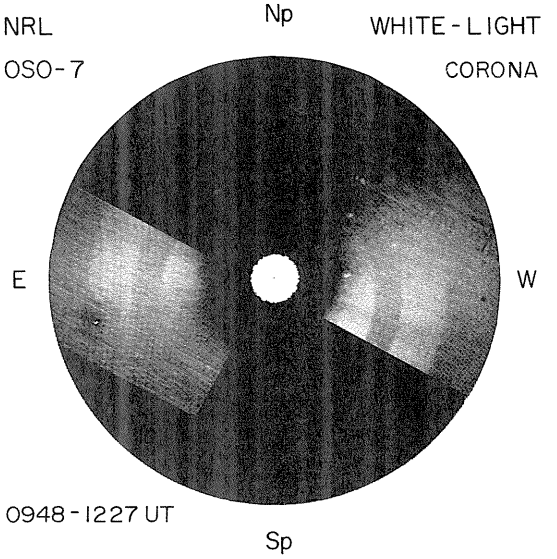


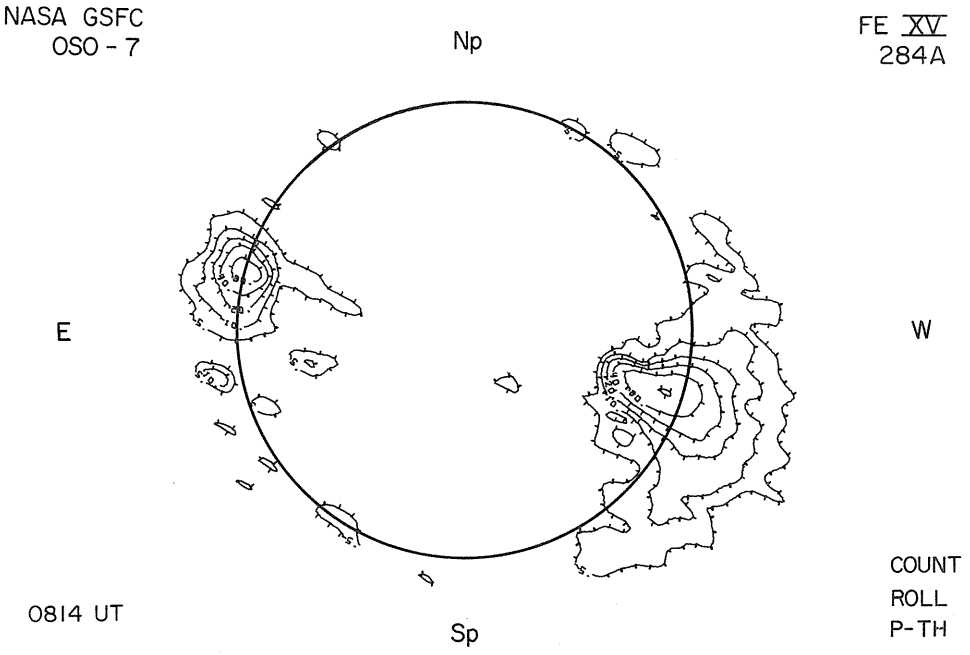
16.18 - 17.68 UT

Levels
± 5
± 10
± 20
± 40
± 80


BOULDER
22
Np
Hα
E
W
1623 UT
Sp


BOULDER
Np
SUNSPOTS
E
W
747
752
CORONA
NO DATA
1645 UT
Sp


NRL
OSO-7
Np
WHITE-LIGHT
CORONA
E
W
0948-1227 UT
Sp

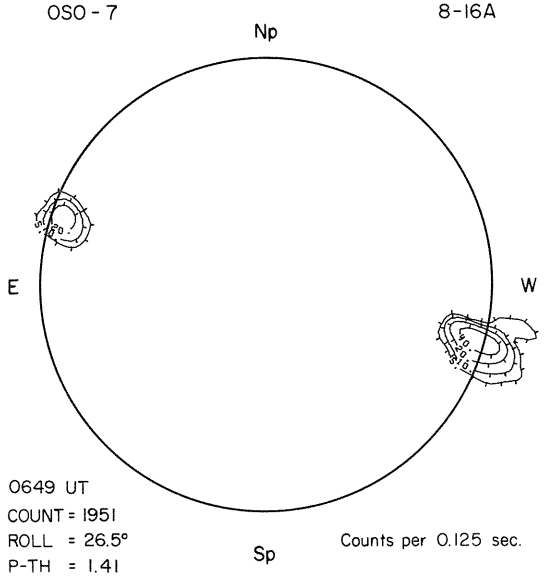

NASA GSFC
OSO-7
Np
FE XV
284A
E
W
0814 UT
Sp
COUNT = 8763
ROLL = 25.8°
P-TH = 1.53

67
Feb 74

FEBRUARY 23, 1974 (P = -19.85, B_o = -7.11, L_o = 85.87)

NASA GSFC
OSO - 7

X-RAY
8-16A

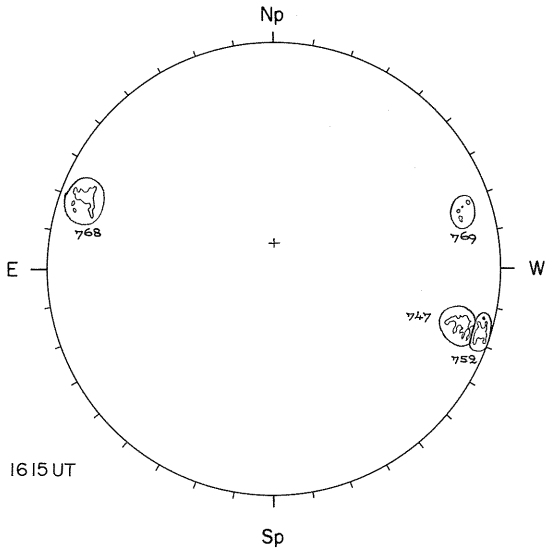


0649 UT
COUNT = 1951
ROLL = 26.5°
P-TH = 1.41

Counts per 0.125 sec.

McMATH-HULBERT

CALCIUM REPORT

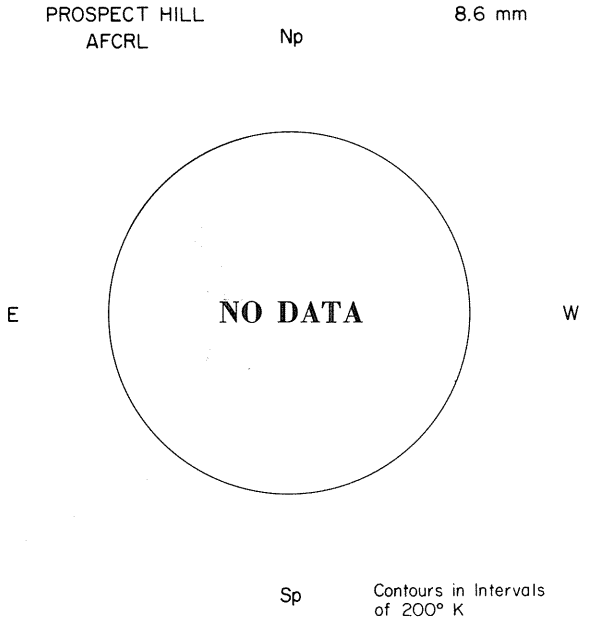


1615 UT

FAIR	S
47 - 1500	- 3.5
68 - 2000	- 3.5

PROSPECT HILL
AFCRL

8.6 mm

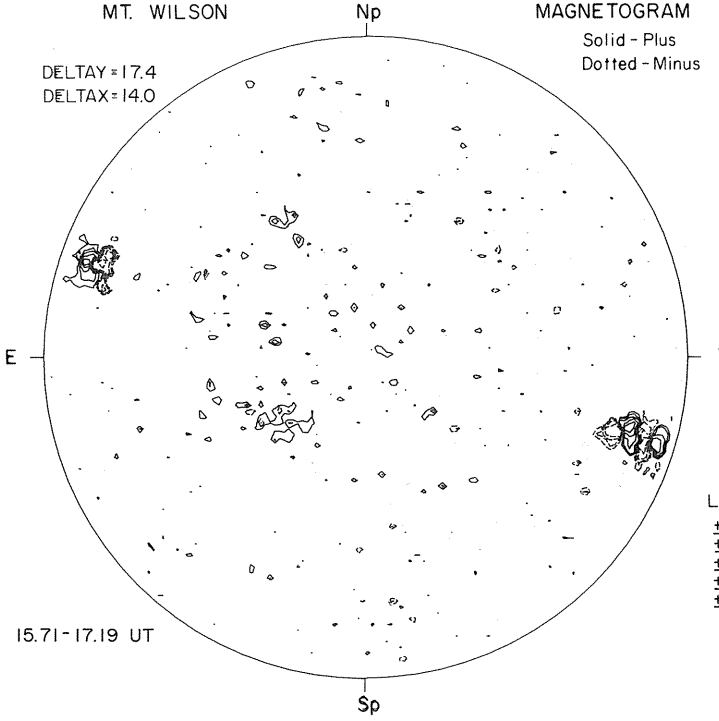


Contours in Intervals
of 200° K

MT. WILSON

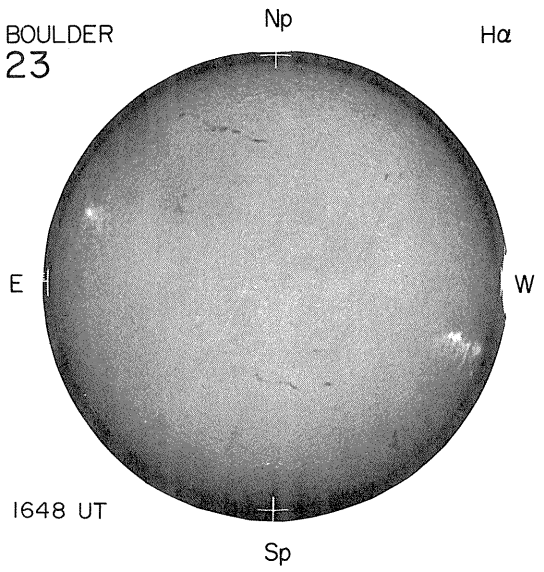
MAGNETOGRAM
Solid - Plus
Dotted - Minus

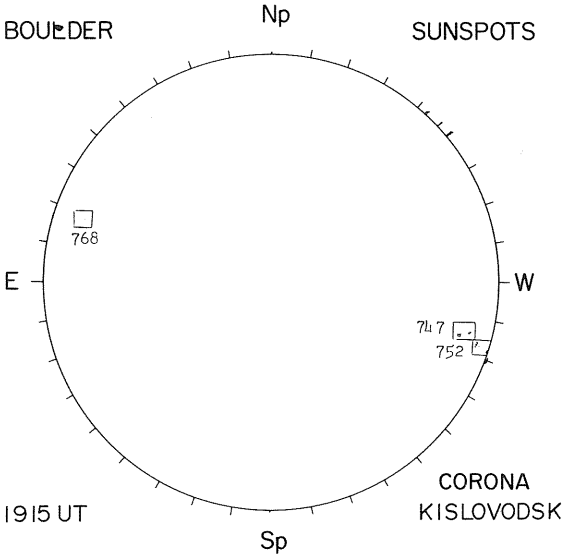
DELTAY = 17.4
DELTAX = 14.0

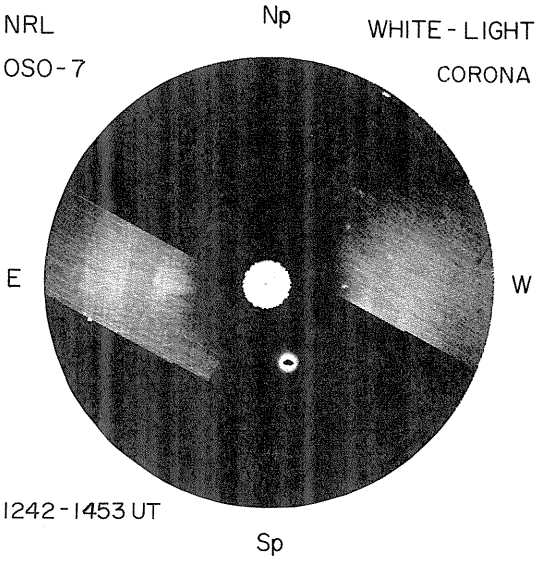


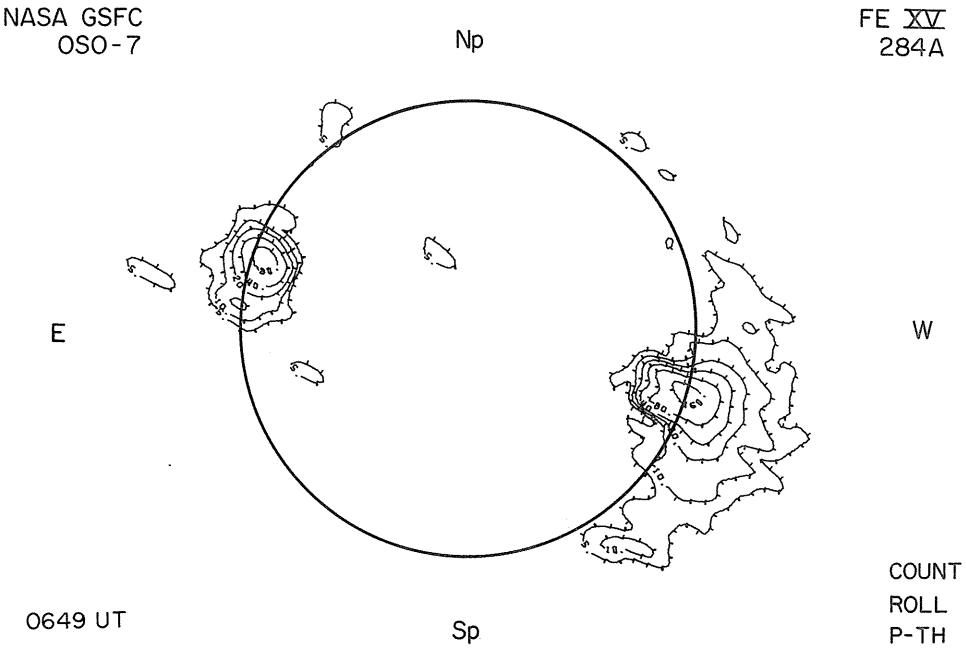
15.71 - 17.19 UT

Levels
± 5
± 10
± 20
± 40
± 80


BOULDER
23
Np
Hα
E
W
1648 UT
Sp


BOULDER
Np
SUNSPOTS
768
E
W
747
752
CORONA
KISLOVODSK
1915 UT
Sp


NRL
OSO-7
Np
WHITE-LIGHT
CORONA
E
W
1242-1453 UT
Sp

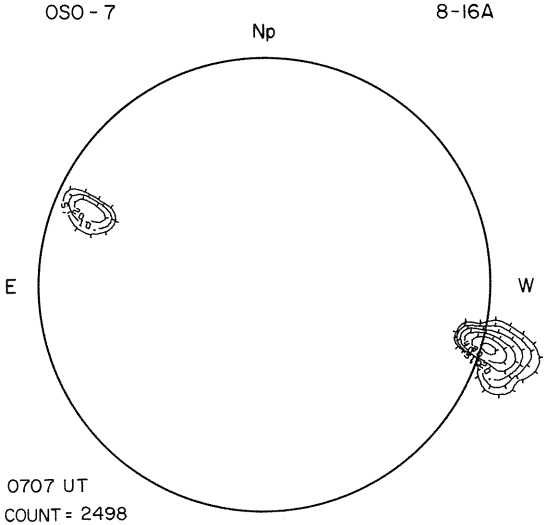

NASA GSFC
OSO-7
Np
FE XV
284A
E
W
0649 UT
Sp
COUNT = 6256
ROLL = 26.5°
P-TH = 1.41

69
Feb 74

FEBRUARY 24, 1974 (P = -20.14, B_o = -7.13, L_o = 72.70)

NASA GSFC
OSO - 7

X-RAY
8-16A

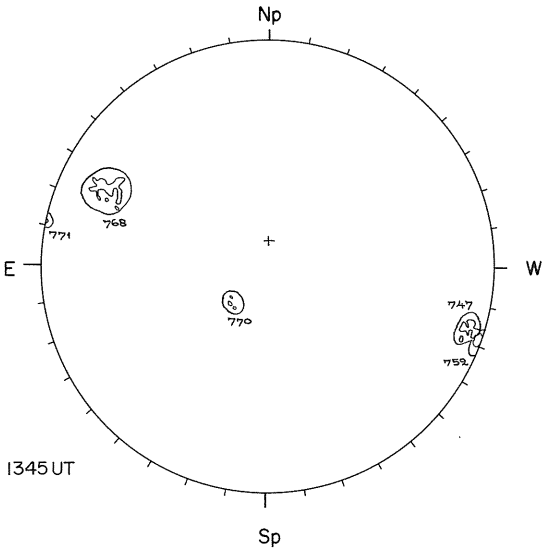


0707 UT
COUNT = 2498
ROLL = 27.3°
P-TH = 1.28

Counts per 0.125 sec.

McMATH-HULBERT

CALCIUM REPORT

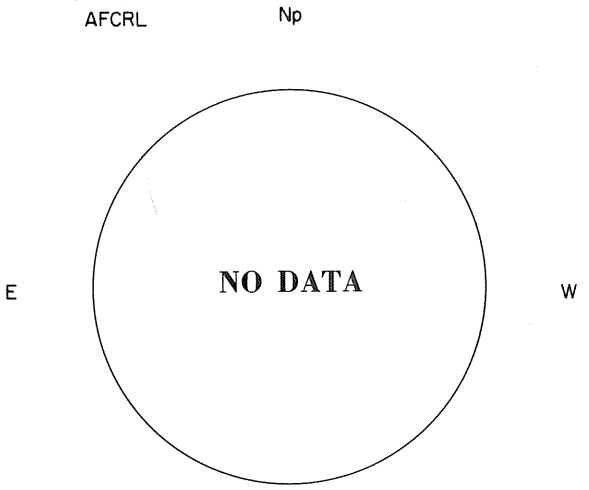


1345 UT

FAIR	M
47 - 1700	- 3.0
52 - 1700	- 2.5
68 - 2100	- 3.5

PROSPECT HILL
AFCRL

8.6 mm



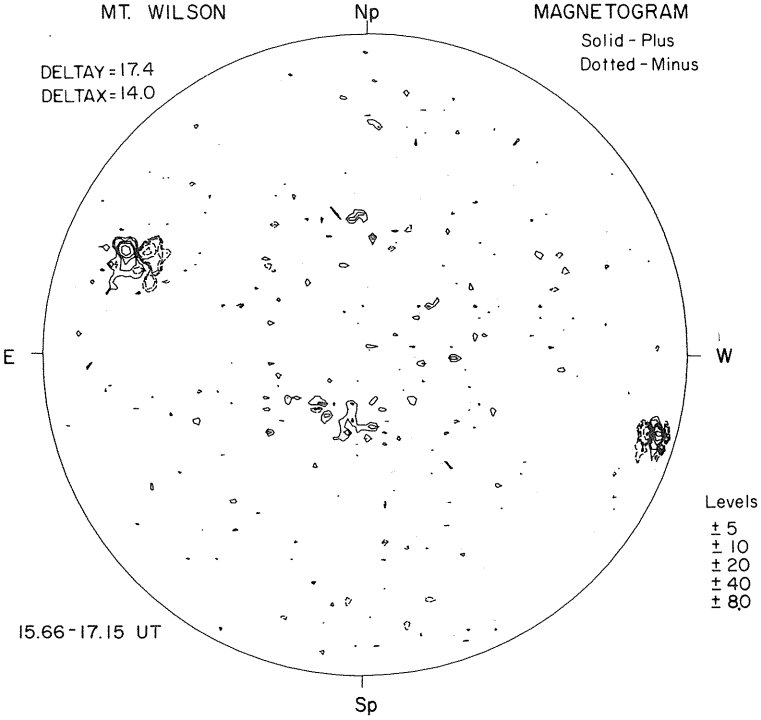
NO DATA

Contours in Intervals
of 200° K

MT. WILSON

MAGNETOGRAM
Solid - Plus
Dotted - Minus

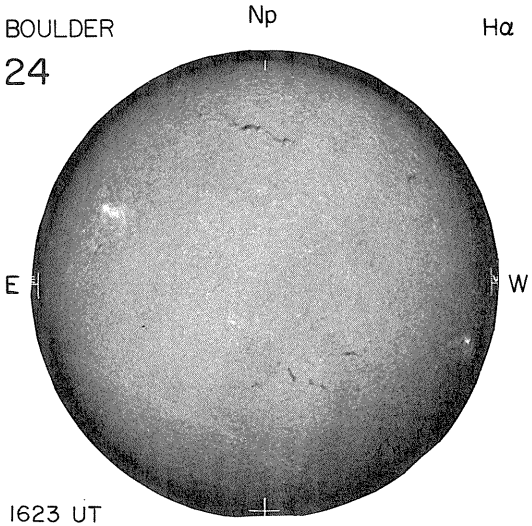
DELTAY = 17.4
DELTAX = 14.0



15.66 - 17.15 UT

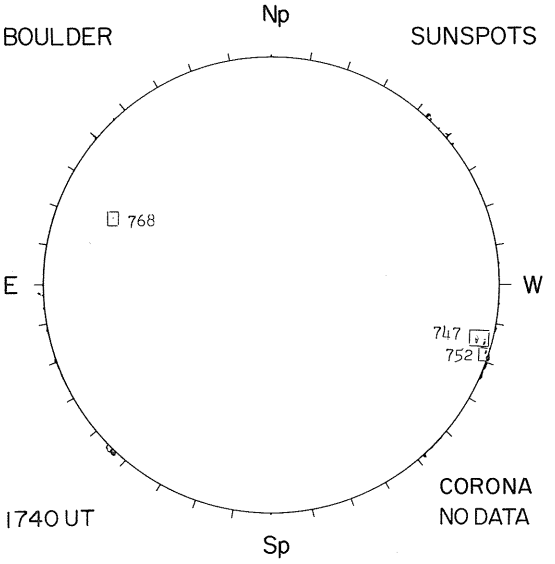
Levels
± 5
± 10
± 20
± 40
± 80

BOULDER
24



1623 UT

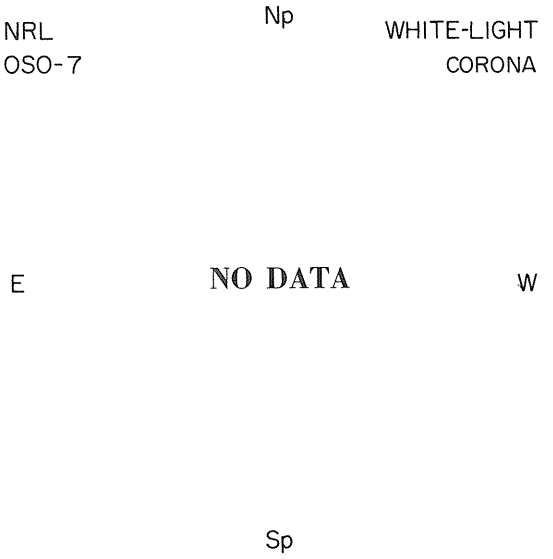
BOULDER



1740 UT

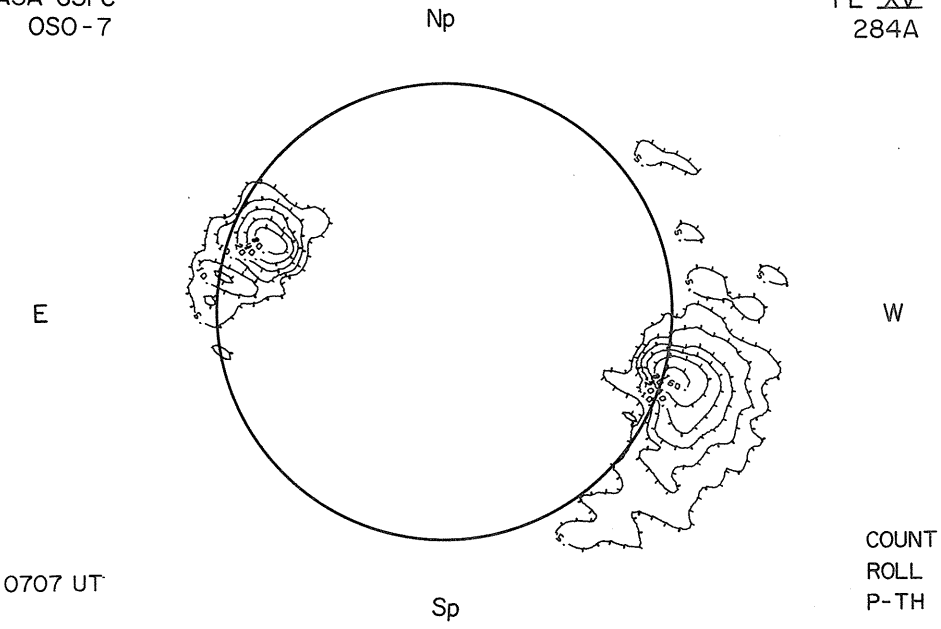
CORONA
NO DATA

NRL
OSO-7



NASA GSFC
OSO-7

FE XV
284A



0707 UT

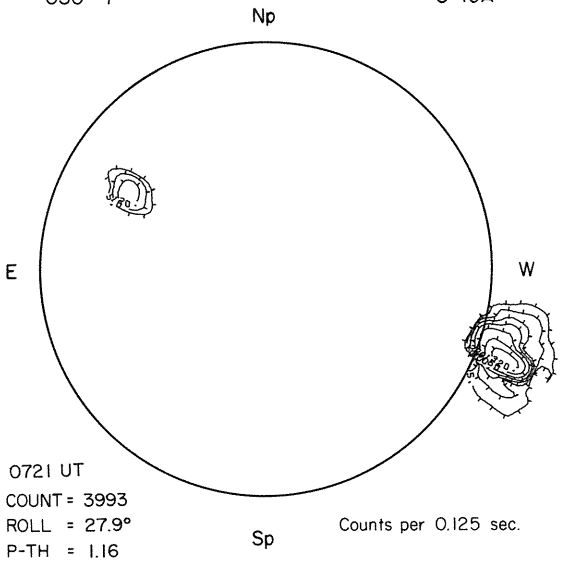
COUNT = 5535
ROLL = 27.3°
P-TH = 1.28

71
Feb 74

FEBRUARY 25, 1974 (P = - 20.42, B_o = - 7.15, L_o = 59.52)

NASA GSFC
OSO - 7

X-RAY
8-16A

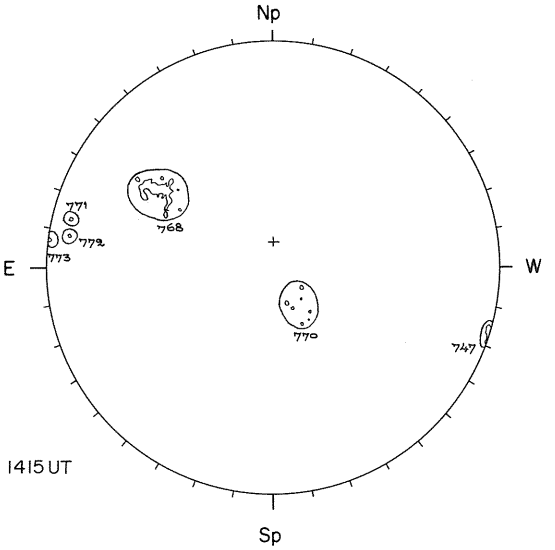


0721 UT
COUNT = 3993
ROLL = 27.9°
P-TH = 1.16

Counts per 0.125 sec.

McMATH-HULBERT

CALCIUM REPORT

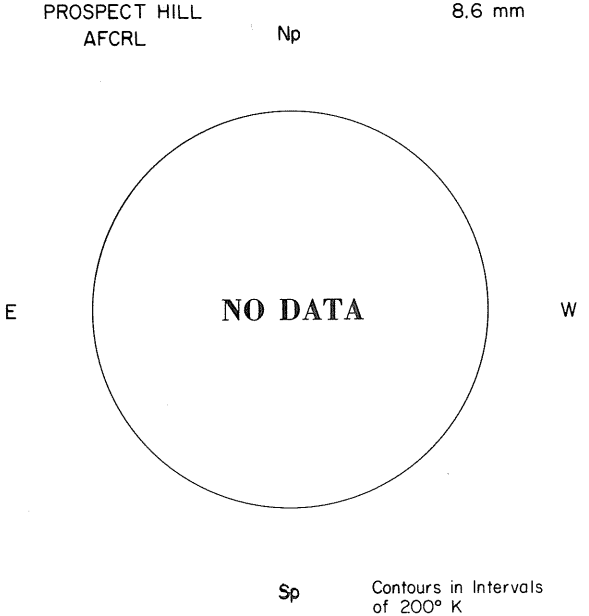


1415 UT

FAIR	M
47 - 1200	- 3.0
68 - 1900	- 3.0

PROSPECT HILL
AFCRL

8.6 mm

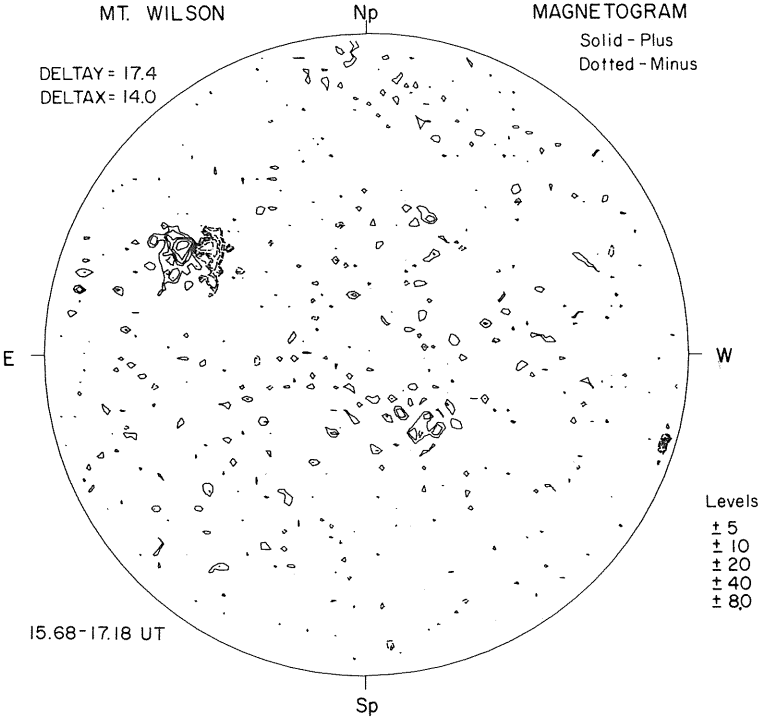


Contours in Intervals
of 200° K

MT. WILSON

DELTAY = 17.4
DELTAX = 14.0

MAGNETOGRAM
Solid - Plus
Dotted - Minus



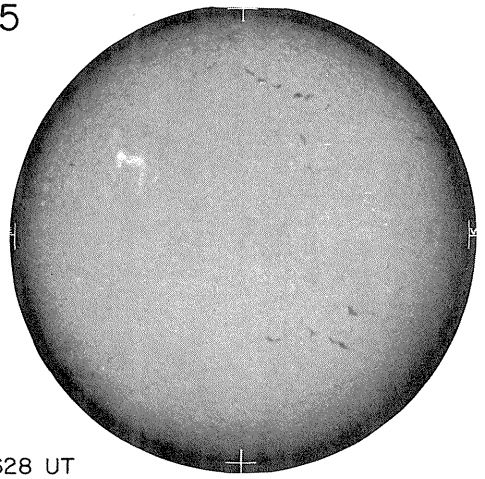
15.68 - 17.18 UT

Levels
± 5
± 10
± 20
± 40
± 80

BOULDER
25

Np

Hα



E

W

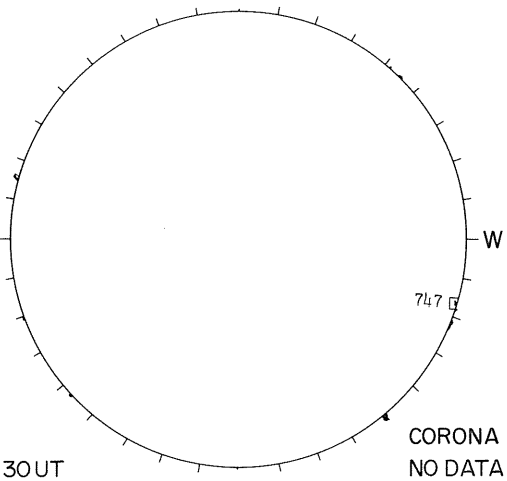
1628 UT

Sp

BOULDER

Np

SUNSPOTS



E

W

1730 UT

Sp

CORONA
NO DATA

NRL
OSO-7

Np

WHITE-LIGHT
CORONA

E

NO DATA

W

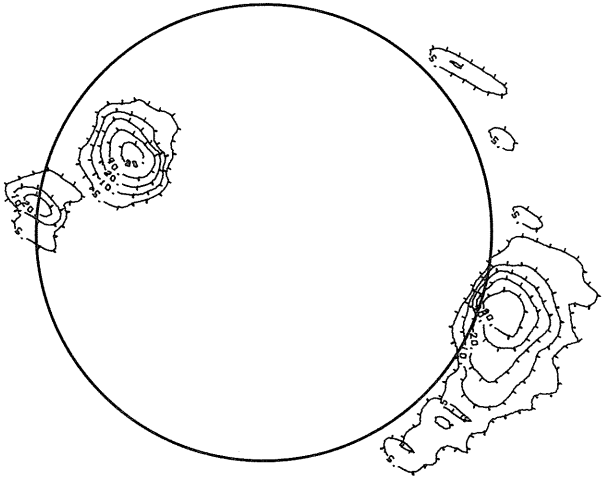
Sp

NASA GSFC
OSO-7

Np

FE XV
284A

E



W

0721 UT

Sp

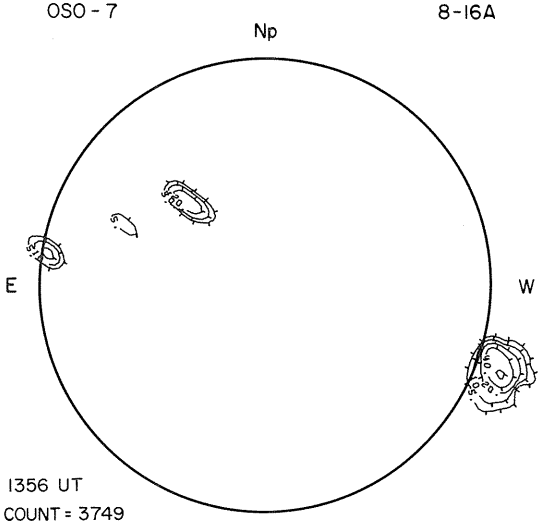
COUNT = 5205
ROLL = 27.9°
P-TH = 1.16

73
Feb 74

FEBRUARY 26, 1974 (P = - 20.70, B_o = - 7.17, L_o = 46.35)

NASA GSFC
OSO - 7

X-RAY
8-16A

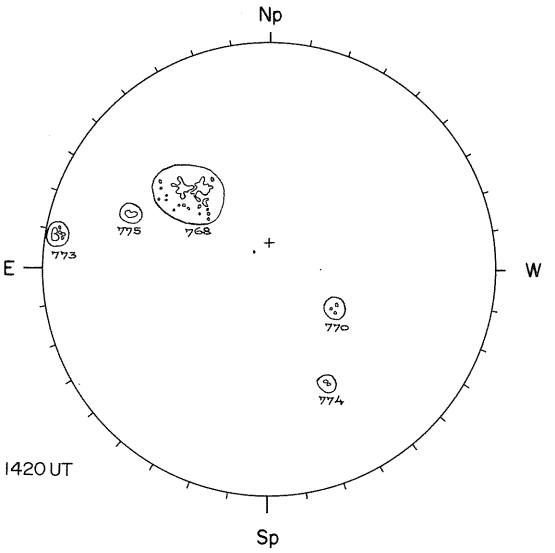


1356 UT
COUNT = 3749
ROLL = 34.3°
P-TH = 0.99

Counts per 0.125 sec.

McMATH-HULBERT

CALCIUM REPORT

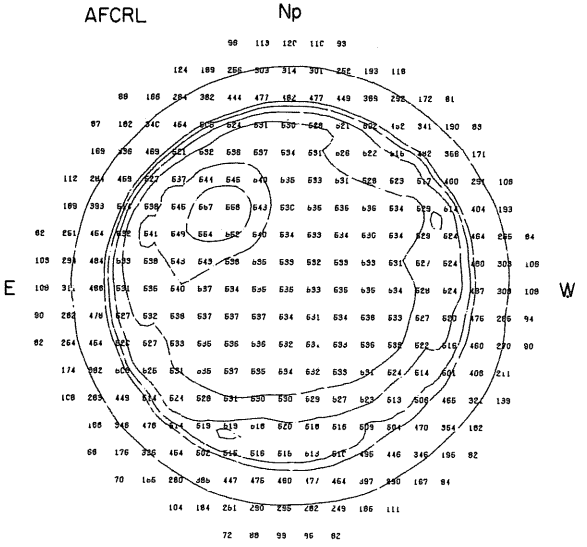


1420 UT

GOOD	M
68 - 1800	- 3.0
73 - 0800	- 3.0
75 - 0300	- 3.0

PROSPECT HILL
AFCRL

8.6 mm



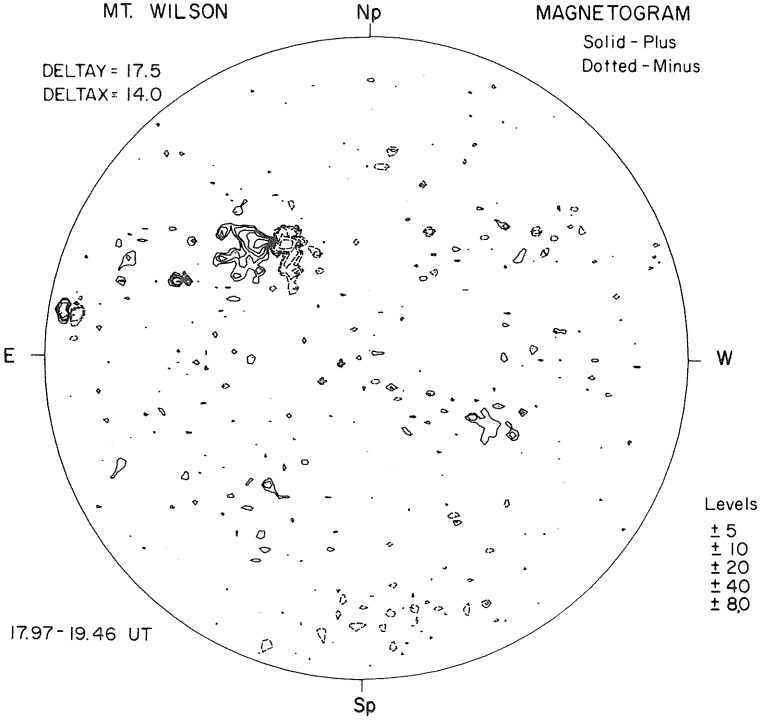
1802 UT

Contours in Intervals of 200° K

MT. WILSON

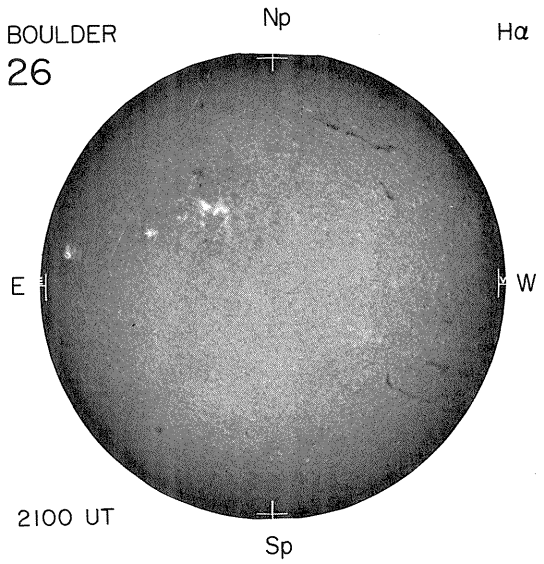
MAGNETOGRAM
Solid - Plus
Dotted - Minus

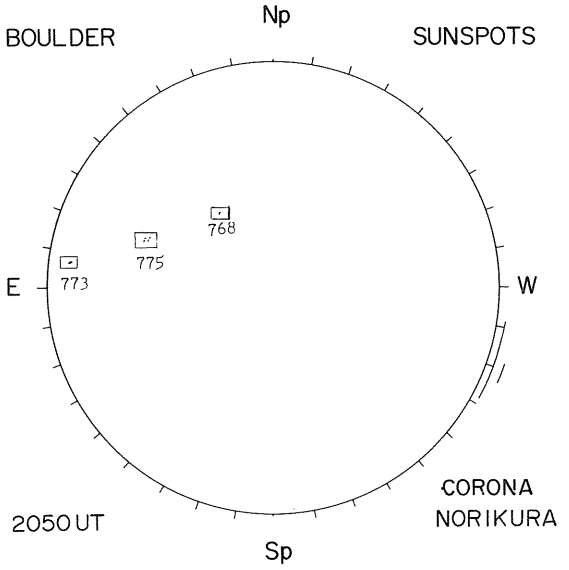
DELTAY = 17.5
DELTAX = 14.0

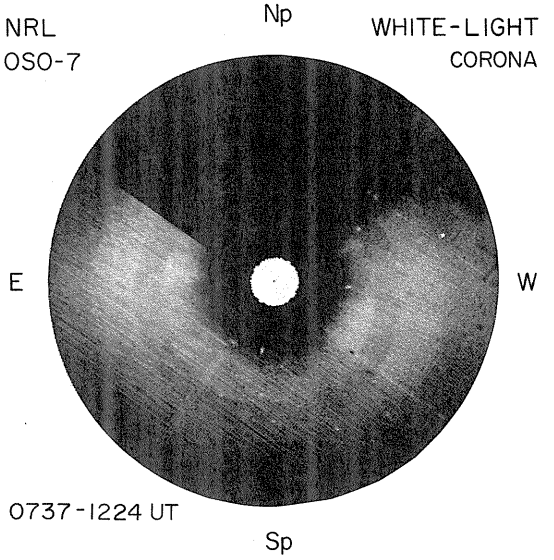


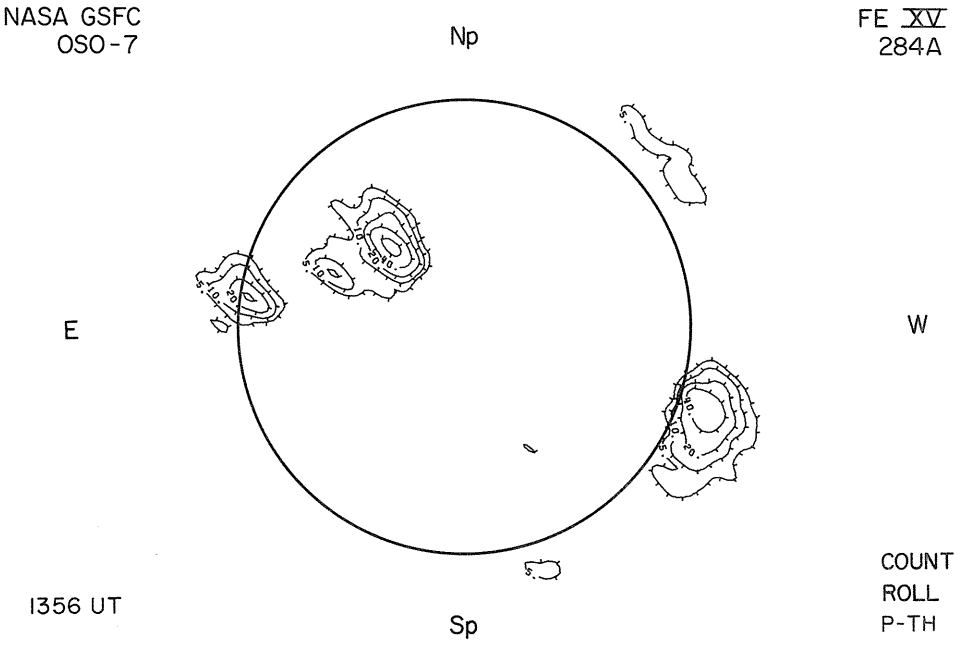
17.97 - 19.46 UT

Levels
± 5
± 10
± 20
± 40
± 80


BOULDER
26
Np
Hα
E
W
2100 UT
Sp


BOULDER
Np
SUNSPOTS
768
775
773
E
W
CORONA
NORIKURA
2050 UT
Sp


NRL
OSO-7
Np
WHITE-LIGHT
CORONA
E
W
0737-1224 UT
Sp

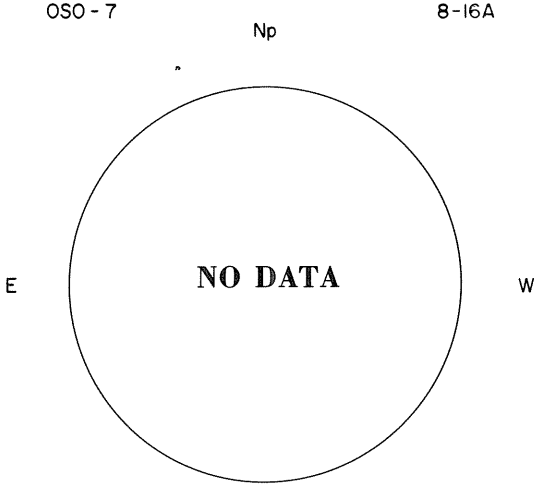

NASA GSFC
OSO-7
Np
FE XV
284A
E
W
1356 UT
Sp
COUNT = 3558
ROLL = 34.3°
P-TH = 0.99

75
Feb 74

FEBRUARY 27, 1974 (P = - 20.97, B_o = - 7.19, L_o = 33.18)

NASA GSFC
OSO - 7

X-RAY
8-16A

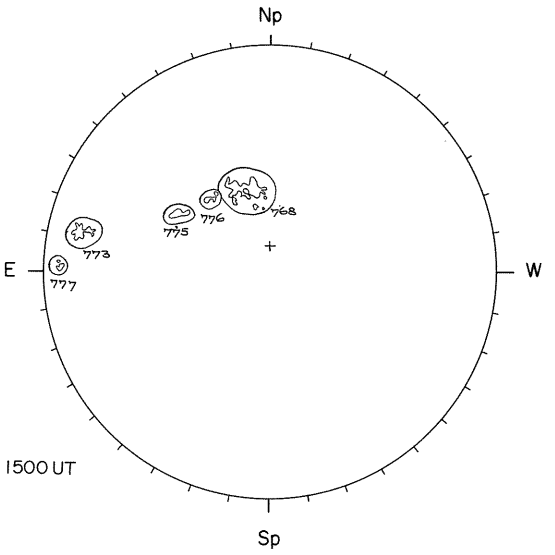


COUNT =
ROLL =
P-TH =

Counts per 0.125 sec.

McMATH-HULBERT

CALCIUM REPORT

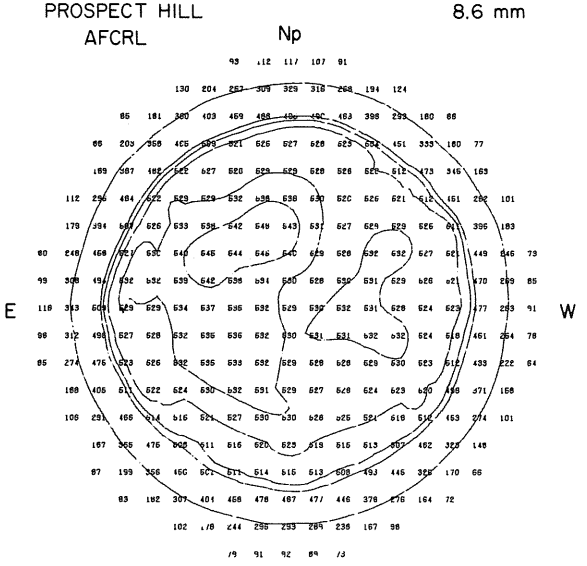


1500 UT

FAIR	M
68 - 1700	- 3.0
73 - 1000	- 3.0
75 - 0400	- 3.0
77 - 0300	- 2.5

PROSPECT HILL
AFCRL

8.6 mm



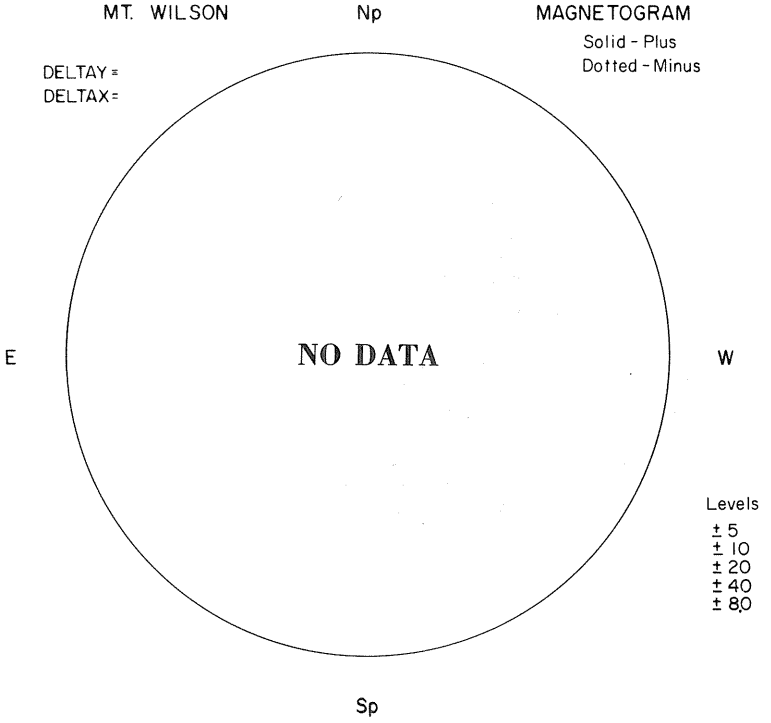
1623 UT

Contours in Intervals of 200° K

MT. WILSON

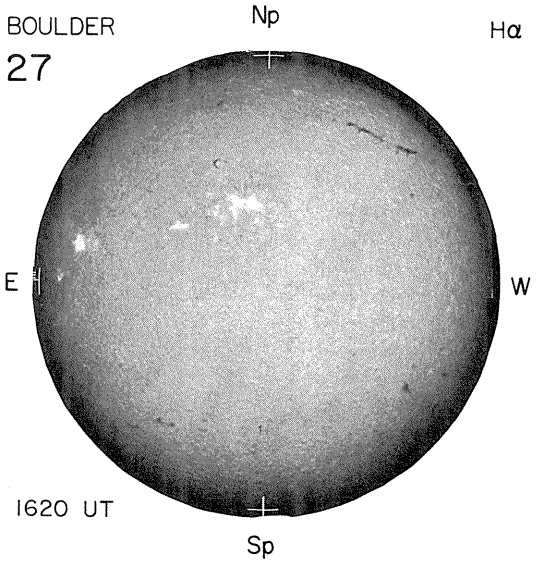
MAGNETOGRAM
Solid - Plus
Dotted - Minus

DELTAY =
DELTAX =

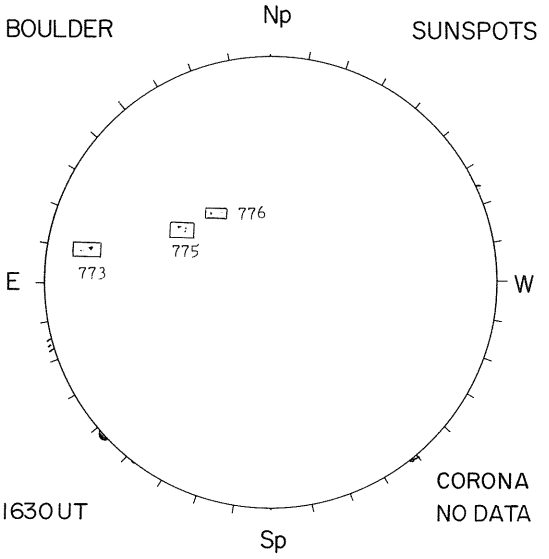


Levels
± 5
± 10
± 20
± 40
± 80

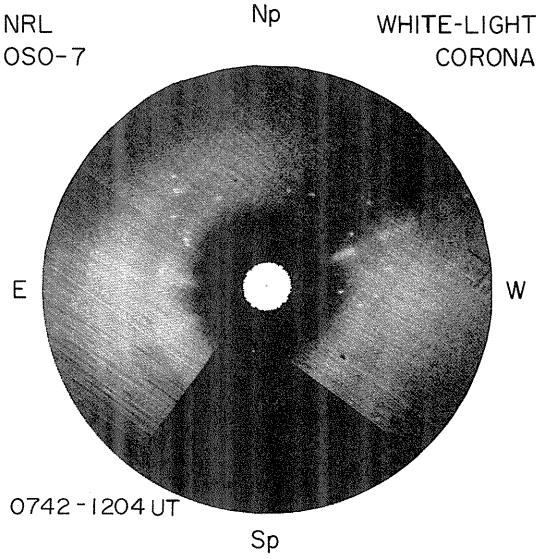
BOULDER
27



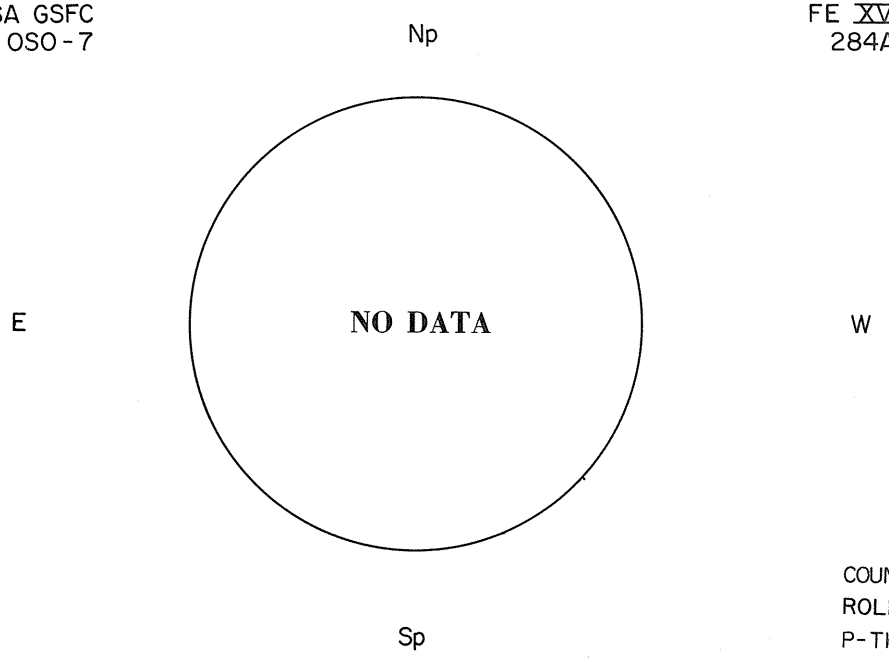
BOULDER



NRL
OSO-7



NASA GSFC
OSO - 7



FE XV
284A

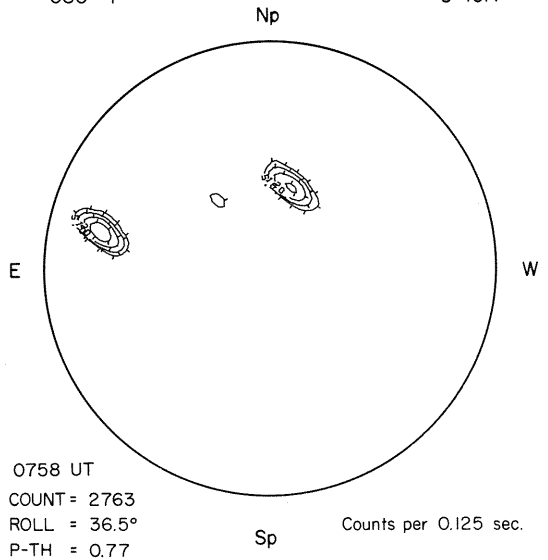
COUNT =
ROLL =
P-TH =

77
Feb 74

FEBRUARY 28, 1974 (P = - 21.23, B_o = - 7.20, L_o = 20.01)

NASA GSFC
OSO - 7

X-RAY
8-16A



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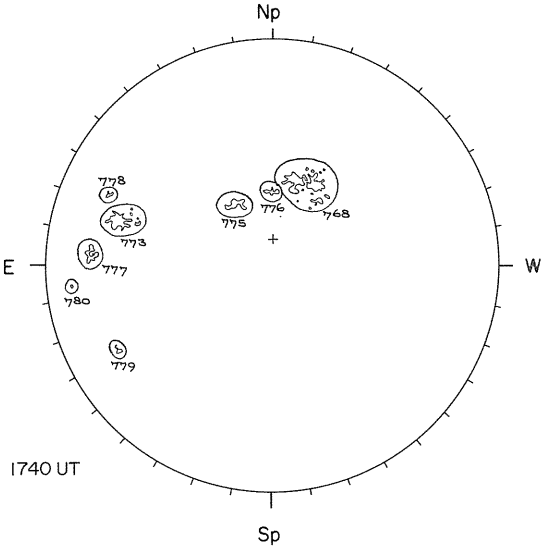
Counts per 0.125 sec.

McMATH-HULBERT

CALCIUM REPORT

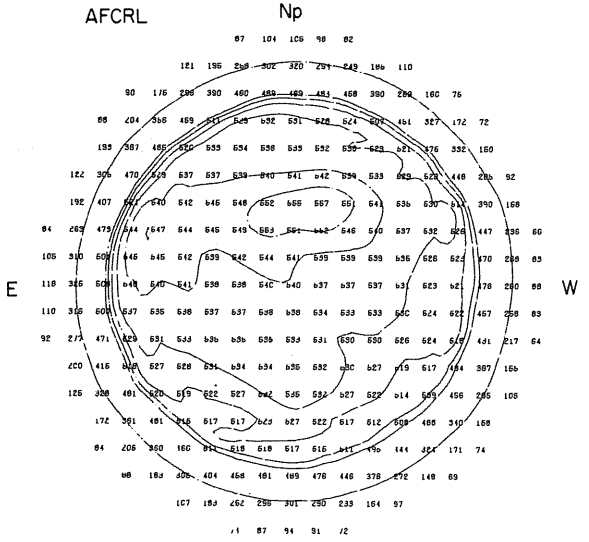


1740 UT

GOOD	M
68 - 1500	- 3.0
73 - 1100	- 3.5
75 - 0500	- 3.0
77 - 0500	- 2.5

PROSPECT HILL
AFCRL

8.6 mm



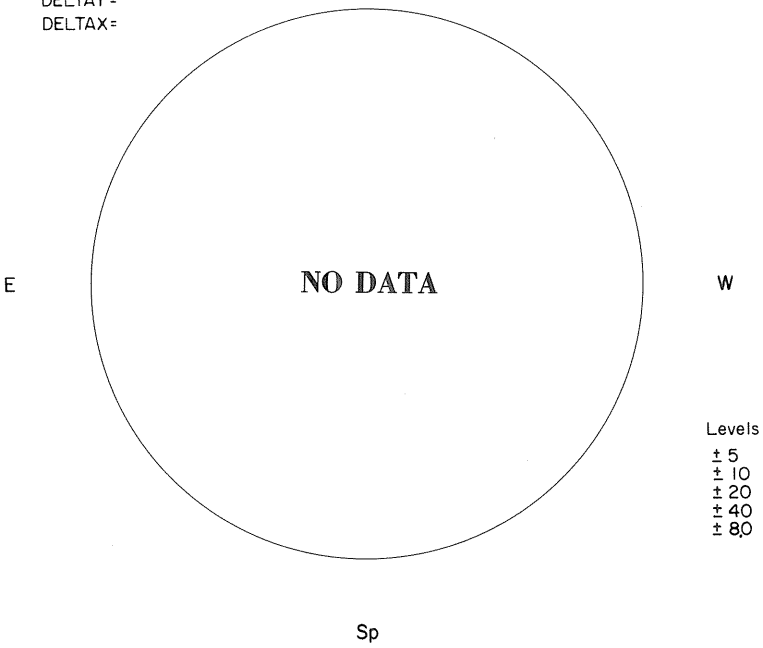
1726 UT

Contours in Intervals of 200° K

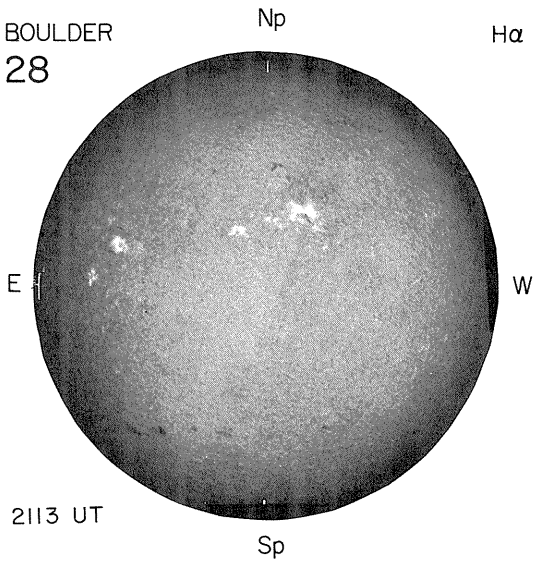
MT. WILSON

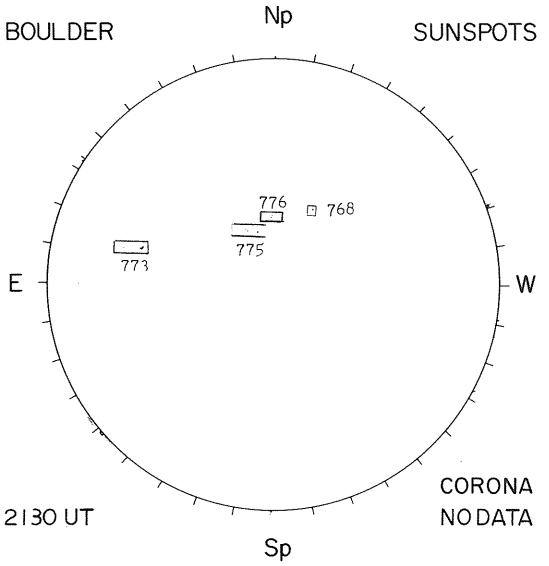
MAGNETOGRAM
Solid - Plus
Dotted - Minus

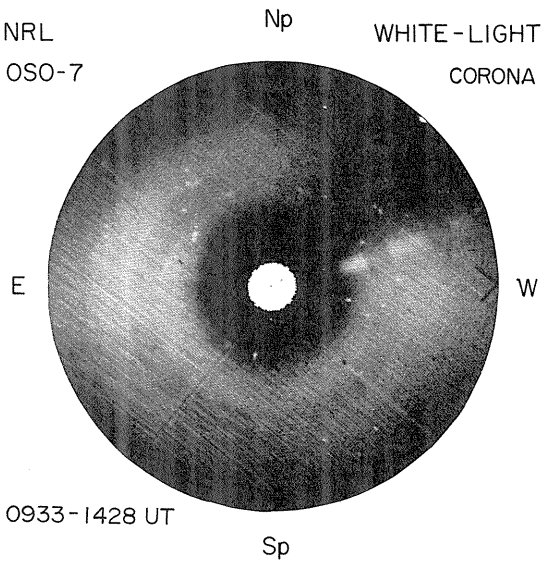
DELTAY =
DELTAX =

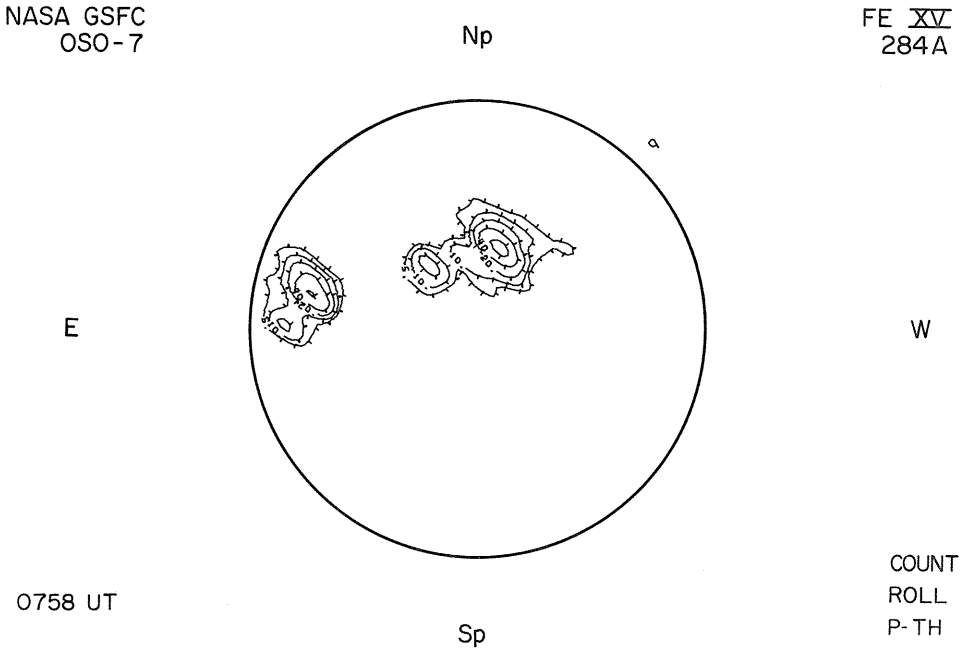


Levels
± 5
± 10
± 20
± 40
± 80


BOULDER
28
Np
Hα
E
W
2113 UT
Sp


BOULDER
Np
SUNSPOTS
776
768
775
773
E
W
CORONA
NO DATA
2130 UT
Sp


NRL
OSO-7
Np
WHITE-LIGHT
CORONA
E
W
0933-1428 UT
Sp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OSO-7
Np
FE XV
284A
E
W
0758 UT
Sp
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ROLL = 36.5°
P-TH = 0.77

79
Feb 74

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MCMATH REGION 12729 CMP DATE 1.1

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
74	2	2	12729	S65 W20	13	100	1.0									

MCMATH REGION 12728 CMP DATE 1.5

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
74	2	2	12728	S28 W15	8	100	1.0									

MCMATH REGION 12731 CMP DATE 1.7

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
74	2	4	12731	S08 W40	7	100	1.0									
74	2	5	12731	S07 W51	6	100	1.0									

MCMATH REGION 12737 CMP DATE 2.9

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
74	2	7	12737	N09 W62	351	400	2.0									
74	2	8	12737	N10 W78	353	300	1.5									

MCMATH REGION 12722 CMP DATE 4.0

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
74	1	30	12722	S18 E58	337	100	1.0									
74	1	31	12722	S18 E45	335	200	1.0									
74	2	2	12722	S18 E18	336	100	1.0									

MCMATH REGION 12723 CMP DATE 4.5

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
74	1	30	12723	S02 E65	330	300	2.0									
74	1	31	12723	S02 E50	330	300	2.0									
74	2	2	12723	S02 E24	330	500	2.0	19329	S05 E23	329	(BF)	2	B	10	2	BXO
74	2	3						19329	S05 E12	329	(AF)	1	B	10	3	BXO
74	2	4	12723	S03 W03	330	200	2.0									
74	2	5	12723	S03 W14	329	100	1.0									

MCMATH REGION 12730 CMP DATE 4.5

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
74	2	2	12730	S42 E25	329	100	1.5									

MCMATH REGION 12725 CMP DATE 5.5 RETURN OF REGION 12686 ROTATION 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
74	1	31	12725	N08 E64	316	300	1.0									
74	2	2	12725	N08 E38	316	500	1.5									
74	2	4	12725	N08 E10	317	500	2.0									
74	2	5	12725	N08 W04	319	600	2.0									
74	2	7	12725	N08 W32	321	700	1.5									
74	2	8	12725	N08 W45	320	400	1.5									
74	2	9	12725	N08 W58	320	500	1.5									
74	2	11	12725	N08 W83	319	300	1.0									

The column marked STA is inserted to indicate the source of data for sunspot area, count and classification.
B = Boulder M = Manila R = Ramey

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MCMATH REGION 12732 CMP DATE 5.6

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
74	2	2	12732	S02 E40	314	100	1.0									
74	2	4	12732	S02 E12	315	100	1.5									
74	2	5	12732	S02 E02	313	100	1.5		S02 E13				M	0	1	AXX

MCMATH REGION 12744 CMP DATE 8.0

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
74	2	11	12744	S22 W47	283	100	1.0									

MCMATH REGION 12734 CMP DATE 8.1 RETURN OF REGION 12690 ROTATION 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
74	2	2	12734	S19 E75	279	300	1.0									
74	2	4	12734	S18 E49	278	400	1.0									
74	2	5	12734	S19 E35	280	300	1.0									
74	2	7	12734	S19 E07	232	300	1.0									

MCMATH REGION 12733 CMP DATE 8.7

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
74	2	4	12733	N02 E54	273	100	1.0									
74	2	5	12733	N02 E40	275	100	1.0									

MCMATH REGION 12735 CMP DATE 9.7 RETURN OF REGION 12700 ROTATION 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
74	2	4	12735	N10 E68	259	200	1.0		N13 E70				R	50	1	HSX
74	2	5	12735	N10 E56	259	100	1.0									
74	2	7	12735	N10 E28	261	200	1.0									
74	2	8	12735	N10 E13	262	300	1.0									
74	2	9	12735	N10 E00	262	300	1.0									
74	2	11	12735	N09 W25	261	300	1.0									
74	2	12	12735	N09 W41	262	200	1.5									
74	2	13	12735	N08 W56	264	300	1.0		N06 W57				B	60	4	CSO
74	2	14	12735	N08 W71	267	300	1.0									

MCMATH REGION 12751 CMP DATE 10.3

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
74	2	15	12751	S37 W70	253	100	1.0									

MCMATH REGION 12748 CMP DATE 10.8

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
74	2	13	12748	N10 W36	246	100	2.5		N13 W21				B	0	2	AXX
74	2	14	12748	N11 W51	247	200	1.5									
74	2	15	12748	N11 W63	246	200	2.0									

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MCMATH REGION 12736 CMP DATE 11.0 RETURN OF REGION 12694 ROTATION 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
74	2	4	12736	S12	E80	247	500	1.0										
74	2	5	12736	S12	E70	245	500	1.0										
74	2	7	12736	S13	E42	247	1100	2.0										
74	2	8	12736	S13	E29	246	900	2.0										
74	2	9	12736	S13	E15	247	1000	2.0										
74	2	11	12736	S14	W08	244	700	2.0										
74	2	12	12736	S14	W21	242	700	1.5										
74	2	13	12736	S14	W34	242	700	1.5										
74	2	14	12736	S14	W47	243	700	1.0										
74	2	15	12736	S14	W60	243	600	1.5										
74	2	16	12736	S16	W70	239	200	1.0		S14	W68				B	70	5	CSO
74	2	17	12736	S16	W84	239	200	1.0										

MCMATH REGION 12749 CMP DATE 12.1

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
74	2	12							19332	S12	W08	229	(BF)	1				
74	2	13	12749	S13	W21	229	500	2.5	19332	S13	W23	230	B					
74	2	14	12749	S13	W34	230	500	2.5										
74	2	15	12749	S13	W50	233	1000	3.5	19332	S12	W53	234	(BF)	4	B	100	8	DSO
74	2	16	12749	S13	W62	231	800	3.0	19332	S13	W65	233	(BF)	3				
74	2	17	12749	S13	W76	231	900	2.5	19332	S12	W75	229	(AF)	3	B	70	1	HSX
74	2	18							19332	S12	W89	232	AF					

MCMATH REGION 12738 CMP DATE 12.7

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
74	2	7	12738	S08	E67	222	1600	3.0										
74	2	8	12738	S08	E53	222	1200	2.5										
74	2	9	12738	S08	E39	223	800	2.5										
74	2	11	12738	S09	E14	222	800	2.5										
74	2	12	12738	S09	W01	222	500	2.5										
74	2	13	12738	S09	W14	222	500	2.5										
74	2	14	12738	S09	W28	224	700	2.5										
74	2	15	12738	S10	W40	223	700	2.5										
74	2	16	12738	S10	W53	222	300	2.0										
74	2	17	12738	S10	W67	222	300	2.0										

MCMATH REGION 12740 CMP DATE 13.4

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
74	2	7	12740	N11	E81	208	1400	3.5	19330	N09	E70	216	(AP)	3	B	20	2	HSX
74	2	8	12740	N10	E64	211	900	3.0	19330	N09	E63	211	(AP)	1				
74	2	9	12740	N10	E49	213	1000	3.5	19330	N10	E43	215	BP		B	10	7	BXO
74	2	10							19330	N09	E34	215	(BP)	2	B	10	3	BXO
74	2	11	12740	N09	E24	212	600	3.5										
74	2	12	12740	N09	E09	212	500	3.0										
74	2	13	12740	N09	W04	212	300	2.0		N09	W08				B	0	6	BXO
74	2	14	12740	N09	W19	215	500	2.5										
74	2	15	12740	N08	W31	214	500	2.0		N08	W29				B	20	2	CRO
74	2	16	12740	N08	W44	213	400	1.5										
74	2	17	12740	N08	W58	213	300	1.0										

MCMATH REGION 12739 CMP DATE 13.6

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
74	2	7	12739	S09	E85	204	500	2.5										
74	2	8	12739	S08	E69	206	600	2.0										
74	2	9	12739	S08	E55	207	500	2.0										
74	2	11	12739	S08	E28	208	400	2.0										
74	2	12	12739	S08	E11	210	300	1.5	19333	S06	E11	210	(AP)	1				
74	2	13	12739	S08	W04	212	400	2.5	19333	S08	W07	214	(AP)	2				
74	2	14	12739	S08	W17	213	300	2.5										
74	2	15	12739	S08	W31	214	300	2.5										
74	2	16	12739	S08	W44	213	200	1.0										
74	2	17	12739	S08	W60	215	100	1.5										

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MCMATH REGION 12743 CMP DATE 14.3 RETURN OF REGION 12708 ROTATION 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
74	2	8	12743	N08 E76	199	500	1.0									
74	2	9	12743	N10 E61	201	600	1.5									
74	2	11	12743	N08 E36	200	500	1.5									
74	2	12	12743	N08 E22	199	500	1.5									
74	2	13	12743	N08 E08	200	500	1.5									
74	2	14	12743	N08 W05	201	300	1.5	19336	N05 E01	194	(B)	1				
74	2	15	12743	N08 W19	202	500	1.0									
74	2	16	12743	N08 W31	200	500	1.0									
74	2	17	12743	N08 W45	200	400	1.0									

MCMATH REGION 12742 CMP DATE 14.7 RETURN OF REGION 12703 ROTATION 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
74	2	8	12742	S15 E75	200	1600	3.5	19331	S17 E73	201	(BP)	4	B	70	3	CSO
74	2	9	12742	S15 E62	200	1600	3.0	19331	S16 E55	203	BP					
74	2	10						19331	S17 E49	200	(BP)	5	B	110	10	DAO
74	2	11	12742	S15 E40	196	1800	3.0	19331	S18 E35	200	(BP)	4	B	130	7	DSO
74	2	12	12742	S15 E25	196	1300	3.0	19331	S18 E21	200	(BP)	5	B	100	6	CSO
74	2	13	12742	S15 E13	195	1500	3.0	19331	S17 E05	202	(BP)	5	B	120	2	CSO
74	2								S11 E11				B	110	13	CSO
74	2	14	12742	S16 E00	196	2000	3.0	19331	S17 W06	201	(BP)	5	B	110	1	HSX
74	2	15	12742	S17 W12	195	2500	3.0	19331	S17 W21	202	(BP)	5	B	120	2	CSO
74	2								S12 W16				B	110	6	CSO
74	2	16	12742	S17 W24	193	2200	3.0	19331	S16 W37	205	(AP)	5	B	100	1	HSX
74	2	17	12742	S17 W38	193	2100	3.0	19331	S17 W49	203	(BP)	4	B	110	5	CSO
74	2	18						19331	S17 W61	204	(AP)	4	B	110	5	CSO
74	2	19						19331	S16 W74	204	(BP	3	B	100	2	HSX
74	2	20	12742	S17 W78	196	1500	2.5									

MCMATH REGION 12753 CMP DATE 15.5

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
74	2	16	12753	N02 W15	184	100	2.5									

MCMATH REGION 12766 CMP DATE 16.1

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
74	2	21	12766	N13 W72	176	100	1.5									

MCMATH REGION 12756 CMP DATE 16.3

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
74	2	17	12756	S06 W18	173	200	2.5		S07 W19				B	0	1	ORX
74	2	20	12756	S06 W61	179	300	1.5									

MCMATH REGION 12745 CMP DATE 16.5

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
74	2	11	12745	N23 E65	171	100	1.0									

MCMATH REGION 12757 CMP DATE 16.6

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
74	2	17	12757	N22 W15	170	100	1.0									

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MCMATH REGION 12746 CMP DATE 16.9 RETURN OF REGION 12706* ROTATION 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
74	2	12	12746	S12 E60	161	100	2.0	19334	S13 E57	164	(B)	1				
74	2	13	12746	S12 E46	162	200	1.0		S15 E38				B	50	6	CAO
74	2	14	12746	S12 E30	166	400	1.0									
74	2	15	12746	S12 E16	167	300	1.0		S16 E11				B	30	2	HSX
74	2	16	12746	S12 E04	165	200	1.0									
74	2	17	12746	S12 W10	165	100	1.0									
74	2	20	12746	S13 W50	168	200	1.0									
74	2	21	12746	S13 W63	167	100	1.0									

MCMATH REGION 12750 CMP DATE 17.5

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
74	2	14	12750	N10 E40	156	200	1.5									
74	2	15	12750	N10 E27	156	200	1.0									
74	2	16	12750	N09 E12	157	200	1.0									

MCMATH REGION 12758 CMP DATE 18.0

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
74	2	17	12758	N26 E04	151	100	1.0									

MCMATH REGION 12752 CMP DATE 18.1

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
74	2	15	12752	S18 E33	150	600	2.5	19337	S19 E31	150	(BF)	4	B	100	3	CSO
74	2								S19 E31				B	70	5	DAO
74	2	16	12752	S18 E20	149	600	3.5	19337	S19 E17	151	(BF)	4	B	60	10	CAO
74	2	17	12752	S18 E06	149	1200	3.5	19337	S19 E04	150	(BF)	4	B	150	45	DSI
74	2	18						19337	S19 W09	152	(BF)	5	B	170	22	ESI
74	2	19						19337	S18 W22	152	(BF)	5	B	220	14	DAO
74	2	20	12752	S18 W33	151	1800	3.5	19337	S18 W35	152	(BF)	3	C	300	16	EKO
74	2								S18 W25				C	10	2	AXX
74	2	21	12752	S17 W46	150	1900	3.0	19337	S18 W48	151	(BP)	4	B	260	8	ESI
74	2	22						19337	S18 W61	151	(BF)	3	B	190	8	ESI
74	2	23	12752	S18 W76	153	1600	2.0	19337	S19 W75	152	(BF)	3	B	190	6	EAI
74	2	24	12752	S18 W86	151	1700	2.5	19337	S18 W85	149	(B)	2	B	130	2	DSO

MCMATH REGION 12762 CMP DATE 18.8

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
74	2	20	12762	N15 W24	142	100	1.0									

MCMATH REGION 12755 CMP DATE 19.0

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
74	2	16	12755	N08 E32	137	100	1.5									

MCMATH REGION 12474 CMP DATE 19.4

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
74	2	12	12474	S14 E88	133	500	2.5									

*An asterisk beside the "Return of Region" number indicates that the new region is only part of the area of the old region.

REGIONS OF SOLAR ACTIVITY

FEBRUARY 1974

MCMATH REGION 12747 CMP DATE 19.4

			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
74	2	12						19335	S17 E84	137	(AP)	3	B	20	1	HSX
74	2	13	12747	S14 E74	134	600	3.0	19335	S17 E59	138	(AP)	3	B	80	4	CAO
74	2								S18 E70				B	50	3	CSO
74	2	14	12747	S16 E61	135	500	3.0	19335	S17 E57	138	(AP)	4	B	70	1	HSX
74	2	15	12747	S17 E49	134	500	3.5	19335	S18 E43	138	(AP)	5	B	60	1	HSX
74	2								S17 E48				B	0	1	AXX
74	2								S13 E56				B	50	2	DRO
74	2	16	12747	S17 E36	133	400	3.0	19335	S18 E30	138	(AP)	4	B	40	1	HSX
74	2	17	12747	S17 E23	132	500	3.0	19335	S19 E17	137	(AP)	4	B	60	5	CSO
74	2	18						19335	S18 E04	139	(AP)	4	B	40	2	HSX
74	2	19						19335	S18 W09	139	(AP)	4	B	40	2	HSX
74	2	20	12747	S17 W16	134	900	3.0	19335	S19 W21	138	(BP	3				
74	2	21	12747	S17 W30	134	800	2.5	19335	S18 W34	137	(AP)	2	B	0	1	AXX
74	2							19338	S16 W33	136	(BP)	3	B	30	2	BXO
74	2	22						19335	S18 W50	140	(AP)	2				
74	2							19338	S16 W45	135	(BP)	3	B	60	5	CRO
74	2	23	12747	S17 W60	137	1500	3.5	19338	S16 W59	136	(BP)	5	B	100	3	DSO
74	2	24	12747	S17 W72	137	1700	3.0	19338	S16 W72	136	(BF)	3	B	170	2	DSO
74	2	25	12747	S17 W85	137	1200	3.0	19338	S16 W81	132		3	B	60	1	HSX

MCMATH REGION 12769 CMP DATE 19.4

			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
74	2	23	12769	N11 W57	134	300	1.0									

MCMATH REGION 12759 CMP DATE 20.9

			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
74	2	17	12759	N15 E43	112	100	1.0									

MCMATH REGION 12754 CMP DATE 21.8

			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
74	2	16	12754	N35 E70	99	200	1.5									
74	2	17	12754	N35 E54	101	100	1.5									

MCMATH REGION 12760 CMP DATE 21.9

			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
74	2	17	12760	N20 E55	100	100	1.5									

MCMATH REGION 12761 CMP DATE 22.0

			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
74	2	17	12761	N14 E59	96	100	1.5									
74	2	20	12761	N13 E16	100	100	2.0									
74	2	21	12761	N13 E05	99	100	1.0									

MCMATH REGION 12765 CMP DATE 25.0

			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
74	2	20	12765	N13 E59	59	100	1.5									
74	2	21	12765	N12 E45	59	100	1.5									

REGIONS OF SOLAR ACTIVITY

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MCMATH REGION 12774 CMP DATE 25.2

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
74	2	26	12774	S37 W19	57	100	1.0									

MCMATH REGION 12770 CMP DATE 25.3

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
74	2	24	12770	S16 E09	56	200	1.0									
74	2	25	12770	S16 W05	57	300	1.0									
74	2	26	12770	S16 W18	56	100	1.0									

MCMATH REGION 12767 CMP DATE 25.9

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
74	2	21	12767	S13 E57	47	200	1.5									

MCMATH REGION 12768 CMP DATE 28.2

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
74	2	21	12768	N13 E89	15	600	1.5									
74	2	22						19339	N14 E78	12						
74	2	23	12768	N15 E59	18	2000	3.5	19339	N13 E61	16	(BP	2	B	0	2	BXO
74	2	24	12768	N15 E47	18	2100	3.5	19339	N14 E48	16	(B)	2	B	0	1	AXX
74	2	25	12768	N15 E34	18	1900	3.0	19339	N14 E35	16	B					
74	2	26	12768	N15 E21	17	1800	3.0	19339	N14 E19	14	B		B	10	1	AXX
74	2	27	12768	N15 E07	17	1700	3.0	19339	N13 E08	15	BP					
74	2	28	12768	N15 W08	18	1500	3.0		N12 W11				B	0	1	AXX
74	3	05	12768	N15 W77		800	2.0									
74	3	06	12768	N16 W90		600	1.0									

MCMATH REGION 12776 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
74	2	27	12776	N13 E15	9	200	2.0	19342	N11 E13	10	(BF)	4	B	10	2	BXO
74	2	28	12776	N13 E01	9	200	2.0		N11 E00				B	0	2	AXX

Note: No calcium spectroheliograms were secured at the McMath-Hulbert Observatory on February 1, 3, 6, 10, 18, 19 and 22, 1974.
No sunspot observations were made at Mt. Wilson Observatory on February 28, 1974.

DAILY CALCIUM PLAGE INDEX

FEBRUARY 1974

YR	MO	DAY	INDEX	YR	MO	DAY	INDEX	YR	MO	DAY	INDEX
74	2	1	*	74	2	11	10.3	74	2	21	5.6
74	2	2	2.5	74	2	12	8.5	74	2	22	*
74	2	3	*	74	2	13	10.6	74	2	23	6.5
74	2	4	2.0	74	2	14	12.5	74	2	24	6.4
74	2	5	2.0	74	2	15	15.7	74	2	25	5.1
74	2	6	*	74	2	16	11.8	74	2	26	6.4
74	2	7	5.6	74	2	17	12.2	74	2	27	8.2
74	2	8	6.9	74	2	18	*	74	2	28	9.8
74	2	9	9.3	74	2	19	*				
74	2	10	*	74	2	20	8.8				

* NO OBSERVATIONS

SOLAR X-RAYS MEASURED BY SATELLITE
SOLRAD 9 – EXPLORER 37

FEBRUARY 1974

NAVAL RESEARCH LABORATORY 1 - 8A HOURLY AVERAGES (10^{-3} ergs/cm^2/sec)

DAY	HOUR 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	0.14	0.13	0.10	0.15	0.11	0.15	0.19	0.13	0.29	0.12	0.18	0.14	0.52	0.87	0.21	0.16	0.14	0.12	0.17	0.12	0.09	0.19	0.11	0.18
2	0.11	0.11	0.12	0.13	0.11	0.12	0.12	0.11	0.15	0.12	0.22	0.15	0.10	0.10	0.09	0.47	0.13	0.19	0.18	0.10	0.13	0.12	0.16	0.12
3	0.09	0.12	0.10	0.13	0.13	0.09	0.10	0.19	0.13	0.27	0.11	0.50	0.14	0.20	0.11	0.25	0.12	0.21	0.16	0.29	0.13	0.13	0.19	0.10
4	0.13	0.14	0.11	0.27	0.12	0.12	0.10	0.23	0.15	0.11	0.10	0.13	0.20	0.10	0.13	0.12	0.23	0.11	0.13	0.17	0.10	0.14	0.12	0.10
5	0.14	0.10	0.09	0.12	0.11	0.11	0.20	0.09	0.19	0.10	0.15	0.14	0.11	0.14	0.13	0.12	0.12	0.11	0.14	0.10	0.23	0.14	0.10	0.12
6	0.13	0.11	0.13	0.10	0.12	0.13	0.11	0.19	0.12	0.13	0.19	0.15	0.14	0.12	0.11	0.12	0.13	0.16	0.11	0.28	0.15	0.13	0.13	0.12
7	0.11	0.15	0.15	0.11	0.13	0.14	0.23	0.15	0.12	0.13	0.12	0.12	0.13	0.10	0.11	0.10	0.14	0.13	0.11	0.13	0.10	0.27	0.11	0.14
8	0.12	0.10	0.11	0.12	0.12	0.11	0.16	0.19	0.13	0.15	0.12	0.19	0.14	0.12	0.14	0.13	0.12	0.14	0.17	0.13	0.14	0.12	0.10	0.11
9	0.11	0.14	0.96	0.12	0.11	0.17	0.13	0.72	0.19	0.17	0.24	0.14	0.17	0.11	0.22	0.16	0.14	0.14	0.12	0.13	0.14	0.10	0.13	0.14
10	0.09	0.12	0.12	0.12	0.15	0.22	0.11	0.12	0.12	0.13	1.97	0.10	0.10	0.10	0.17	0.12	0.12	0.14	0.10	0.13	0.12	0.13	0.16	0.40
11	0.28	0.14	0.10	0.13	0.17	0.11	0.14	0.12	0.13	0.12	0.12	0.10	0.13	0.12	0.18	0.10	0.12	0.11	0.14	0.19	0.10	0.12	0.13	0.09
12	0.11	0.10	0.13	0.14	0.11	0.15	0.24	0.13	0.11	0.11	0.13	0.22	0.12	0.13	0.11	0.16	0.16	0.13	0.13	0.11	0.14	0.12	0.12	0.11
13	0.10	0.11	0.13	0.10	0.11	0.13	0.11	0.17	0.10	0.12	1.03	0.46	0.13	0.13	0.12	0.18	0.13	0.11	0.09	0.14	0.12	0.10	0.13	0.19
14	0.14	0.10	0.17	0.13	0.17	0.11	0.16	0.09	0.13	0.12	0.11	0.14	0.16	0.11	0.16	0.15	0.12	0.16	0.11	0.12	0.12	0.12	0.15	0.15
15	0.13	0.16	0.13	0.17	0.10	0.14	0.12	0.10	0.22	0.12	0.18	0.18	0.14	0.18	0.21	5.66	0.38	0.24	1.83	0.23	0.22	0.14	0.17	0.13
16	0.12	0.13	0.15	2.08	0.27	0.21	0.40	0.86	0.74	0.42	0.21	0.14	0.16	0.15	0.18	0.17	0.28	0.18	0.17	0.20	0.19	0.17	0.17	0.16
17	0.16	0.19	0.26	0.14	0.13	0.12	0.17	0.26	0.20	0.15	0.18	0.18	0.18	0.15	0.15	0.17	0.15	0.11	0.10	0.13	0.17	0.14	0.35	0.23
18	0.16	0.16	0.15	0.41	0.61	0.16	0.17	0.14	0.15	0.17	0.14	0.14	0.14	0.16	0.17	0.15	0.15	0.21	0.54	0.13	0.12	0.24	0.15	0.16
19	0.15	0.14	0.15	0.25	0.14	0.16	0.28	0.18	0.17	0.16	0.17	0.10	0.15	0.10	0.15	0.15	0.14	0.16	0.25	0.11	0.12	0.20	0.13	0.15
20	0.12	0.12	0.16	0.13	0.13	0.14	0.14	0.17	0.14	0.16	0.14	0.14	0.15	0.14	0.12	0.14	0.15	0.15	0.18	0.15	0.12	0.14	0.12	0.56
21	0.41	0.16	0.11	0.16	0.26	0.12	0.23	0.15	0.20	0.34	0.14	0.14	0.12	2.80	0.19	0.14	0.19	0.12	0.12	0.13	0.13	0.15	0.14	0.15
22	0.18	0.27	0.18	0.63	0.48	0.28	0.22	0.17	0.23	0.15	0.17	0.16	0.15	0.18	0.14	0.15	0.14	0.17	0.12	0.12	0.13	0.12	0.16	0.13
23	0.20	0.18	0.15	0.14	0.16	0.27	0.16	0.19	0.19	0.23	0.20	0.17	0.19	0.27	0.21	0.22	0.24	0.20	0.16	0.18	0.23	0.27	0.26	0.20
24	0.19	0.24	0.21	0.25	0.31	0.20	0.27	0.27	0.31	0.25	0.40	0.25	0.34	0.21	0.30	0.27	0.28	0.29	0.34	0.31	0.38	0.31	0.30	0.40

TO COMPENSATE FOR ATTENUATION OF THE MEASURED SOLAR FLUX CAUSED BY VARIATIONS IN THE ORIENTATION OF THE SENSORS WITH RESPECT TO THE SUN LINE, CORRECTION FACTORS HAVE BEEN APPLIED TO THE VALUES FOR FEBRUARY 23-24. FOR THE END OF THE MONTH THE ANGLE HAD INCREASED TO SUCH AN EXTENT THAT THE CALCULATED CORRECTION FACTORS WERE CONSIDERED UNRELIABLE.

SOLAR X-RAYS MEASURED BY SATELLITE
SOLRAD 9 – EXPLORER 37

FEBRUARY 1974

NAVAL RESEARCH LABORATORY 8 - 20A HOURLY AVERAGES (10^{-2} ergs/cm^2/sec)

DAY	HOUR 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	0.10	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.06	0.05	0.06	0.06	0.05	0.05	0.06	0.05	0.06	0.05	0.09	0.06	0.05	0.05	0.06	0.05
2	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.06	0.06	0.05	0.05	0.06	0.06	0.06	0.05	0.06	0.05	0.06	0.06	0.06	0.08	0.05	0.06	0.05
3	0.05	0.05	0.05	0.06	0.06	0.05	0.05	0.05	0.06	0.06	0.06	0.07	0.05	0.05	0.07	0.07	0.06	0.05	0.05	0.06	0.05	0.05	0.06	0.05
4	0.05	0.06	0.06	0.05	0.05	0.05	0.05	0.07	0.05	0.06	0.06	0.06	0.06	0.05	0.05	0.05	0.06	0.05	0.07	0.06	0.05	0.07	0.06	0.05
5	0.06	0.06	0.06	0.05	0.05	0.05	0.06	0.06	0.06	0.06	0.06	0.05	0.06	0.06	0.06	0.06	0.07	0.08	0.11	0.07	0.07	0.06	0.07	0.07
6	0.07	0.07	0.06	0.07	0.07	0.08	0.07	0.09	0.10	0.09	0.09	0.08	0.10	0.09	0.09	0.09	0.08	0.08	0.09	0.10	0.10	0.09	0.09	0.10
7	0.10	0.10	0.11	0.09	0.13	0.15	0.15	0.10	0.10	0.11	0.10	0.11	0.09	0.09	0.08	0.10	0.12	0.11	0.11	0.09	0.09	0.12	0.09	0.08
8	0.08	0.09	0.09	0.10	0.09	0.09	0.11	0.10	0.11	0.11	0.13	0.16	0.17	0.13	0.15	0.14	0.15	0.14	0.14	0.15	0.13	0.14	0.14	0.13
9	0.14	0.15	0.26	0.19	0.15	0.18	0.19	0.39	0.16	0.16	0.22	0.16	0.16	0.15	0.15	0.14	0.13	0.13	0.14	0.13	0.13	0.13	0.12	0.12
10	0.11	0.11	0.11	0.11	0.12	0.11	0.11	0.17	0.12	0.14	0.11	0.12	0.12	0.13	0.13	0.14	0.15	0.14	0.12	0.12	0.12	0.13	0.21	0.41
11	0.36	0.19	0.14	0.13	0.12	0.12	0.10	0.10	0.11	0.12	0.11	0.12	0.11	0.11	0.12	0.11	0.11	0.13	0.12	0.12	0.13	0.13	0.13	0.12
12	0.12	0.11	0.11	0.15	0.13	0.15	0.13	0.12	0.12	0.11	0.10	0.10	0.12	0.14	0.11	0.10	0.13	0.10	0.10	0.10	0.09	0.09	0.10	0.10
13	0.11	0.11	0.11	0.10	0.12	0.22	0.10	0.12	0.11	0.10	0.76	0.47	0.13	0.11	0.10	0.11	0.09	0.09	0.09	0.09	0.12	0.09	0.09	0.10
14	0.09	0.09	0.08	0.09	0.08	0.08	0.08	0.08	0.08	0.09	0.08	0.08	0.10	0.09	0.09	0.08	0.08	0.08	0.08	0.08	0.09	0.08	0.10	0.19
15	0.10	0.11	0.11	0.14	0.13	0.12	0.12	0.11	0.20	0.15	0.17	0.16	0.16	0.20	0.29	2.09	0.43	0.29	1.01	0.32	0.27	0.17	0.18	0.19
16	0.16	0.15	0.16	1.02	0.39	0.24	0.41	0.71	0.66	0.49	0.27	0.23	0.22	0.22	0.25	0.22	0.26	0.25	0.24	0.27	0.32	0.24	0.24	0.27
17	0.30	0.30	0.25	0.23	0.26	0.24	0.30	0.32	0.31	0.30	0.27	0.27	0.29	0.29	0.23	0.22	0.21	0.21	0.19	0.19	0.27	0.27	0.32	0.26
18	0.22	0.25	0.22	0.40	0.52	0.29	0.22	0.20	0.24	0.27	0.22	0.21	0.25	0.25	0.25	0.25	0.23	0.21	0.34	0.21	0.23	0.30	0.24	0.24
19	0.25	0.24	0.24	0.27	0.23	0.25	0.31	0.22	0.24	0.21	0.20	0.18	0.18	0.19	0.18	0.23	0.16	0.18	0.26	0.16	0.14	0.18	0.17	0.19
20	0.17	0.19	0.20	0.19	0.21	0.21	0.22	0.25	0.23	0.21	0.19	0.19	0.18	0.17	0.17	0.18	0.17	0.16	0.17	0.15	0.16	0.18	0.17	0.39
21	0.37	0.16	0.17	0.17	0.16	0.15	0.16	0.16	0.19	0.14	0.14	0.13	0.13	0.83	0.20	0.11	0.11	0.10	0.10	0.11	0.12	0.26	0.25	0.26
22	0.30	0.37	0.31	0.67	0.61	0.41	0.36	0.28	0.26	0.25	0.28	0.26	0.25	0.30	0.25	0.25	0.25	0.21	0.20	0.19	0.19	0.24	0.23	0.24
23	0.25	0.28	0.28	0.24	0.25	0.30	0.29	0.33	0.30	0.35	0.31	0.31	0.32	0.41	0.39	0.40	0.40	0.39	0.36	0.37	0.35	0.37	0.40	0.42
24	0.39	0.41	0.41	0.35	0.41	0.41	0.42	0.41	0.49	0.37	0.52	0.39	0.35	0.34	0.41	0.32	0.31	0.53	0.45	0.52	0.52	0.50	0.50	0.54

TO COMPENSATE FOR ATTENUATION OF THE MEASURED SOLAR FLUX CAUSED BY VARIATIONS IN THE ORIENTATION OF THE SENSORS WITH RESPECT TO THE SUN LINE, CORRECTION FACTORS HAVE BEEN APPLIED TO THE VALUES FOR FEBRUARY 23-24. FOR THE END OF THE MONTH THE ANGLE HAD INCREASED TO SUCH AN EXTENT THAT THE CALCULATED CORRECTION FACTORS WERE CONSIDERED UNRELIABLE.

SOLAR X-RAYS BY SATELLITE
EXPLORER 37

FEBRUARY 1974

NAVAL RESEARCH LABORATORY

OUTSTANDING EVENTS

DAY	START TIME	0.5-3A FLUX XE-5	PEAK TIME	1-8A FLUX XE-4	PEAK TIME	8-20A FLUX XE-3	PEAK TIME	END TIME	COMMENTS
15	1511	60,00	1515	180,00	1517	40,00	1516	1535	
16	0306	11,00	0307	38,00	0308	16,00	0308	0310D	
21	1316E	17,00	1325	45,00	1320	12,00	1329	1338	

SUDDEN IONOSPHERIC DISTURBANCES

FEBRUARY 1974

DAY	UNIVERSAL TIME START	END	MAX	IMP	WIDE SPREAD INDEX	NUMBER OF STATION REPORTS BY TYPE SWF	SCNA	SEA	SPA	LF-SPA	SES	SFD	KNOWN FLARE	McMATH REGION
09	0253	0355	0255	1-	3				3				0251	12742
09	0713	0748	0718	1-	3				2				0713	12742
15	0642E	0656	0643	1-	1			1					*	
15	1511	1545	1518	1+	5	1		3	4	1	10		1511	12749
15	1815	1919	1830	1-	3						6		1814	12749
16	0302	0333	0314	1-	1				1				0259	12749
17	1108	1140	1113	1-	1			1					1111	12742
17	2148	2203D	2150	1-	1	1					1		2148	12738
18	1821	1845	1825	1-	3					1	3		1820	12749
19	1758	1810	1801	1-	1						1		1802	12752
19	1820	1845	1822	1-	3					1	2		1818	12752
20	1513	1540	1518	2-	5			1	4	1	10		1513	12752
20	2320	2345	2324	1-	1	1							2322E	12752
21	0822	0844	0831	1-	1			1					0822	12752
21	1314	1400	1318	2-	5	1		2	4		1		1312E	12752
24	1406	1430	1409	1-	3				1		1		1407E	12747
25	0519	0604	0531	1-	1				1				*	
25	1809	1900	1821	1	5	1			2	1	9		NF	
26	0505	0605	0514	1-	3				2				*	
27	0540	0709	0547	1	1				1				*	
27	0702E	0722	0714U	1-	1			1					*	
28	0535	0615	0547	1-	1				1				*	

STATIONS REPORTING FOR FEBRUARY 1974

AAVSO (A1, A17, A32) (SEA) (A1, A19, A21, A29, A30, A31, A35, A37, A38) (SES) (A31, A38) (SWF)
BOULDER (BO)(SCNA, SEA)
DARMSTADT (DA) (SWF)
HERSTMONCEUX (HC) (SEA)
HIRAISO (HI) (SWF)
HOBART (TA) (SEA)
HUANCAYO (HU) (SWF)
INUBO (IN) (SPA)
JOHANNESBURG (JH) (SPA)
KASUAGI (KA) (SPA)
KUHLUNGSBORN (KA) (SWF, SEA, SPA)
KULA (KL) (SPA)
MANILA (MA) (SCNA, SWF)
PANSKA VES (PU) (SEA)
POITIERS (PO) (SEA)
PRESTON (LO) (SEA)
SAN FERNANDO (SN) (SPA)
SAO PAULO (UM) (SES, SPA)
SOFIA (SF) (SES)
ST CLOUD (SC) (SES)
TABLE MOUNTAIN (TM) (SWF, SPA, LF-SPA)
TORINO (TN) (SPA)
TORTOSA (TA) (SEA)
UPICE (UI) (SEA)

PERIODS OF NO OBSERVATIONS:

DATE	TIME (UT) and STATION
1-14	0000-2400 A29
01-026	0000-2000 A33
01	1400-1614 UM (17 kHz), 1647-1730 UM (17 kHz), 1737-1757 UM (17 kHz)
03-04	1145-1450 BO
05	0814-0924 UM (16 kHz), 1010-1330 UM (16 kHz)
08	1355-1651 UM (17 kHz), 1858-1703 UM (17 kHz), 2255-2331 TM
12	0058-1515 BO, 1009-1345 UM (16 kHz)
13	1200-1353 TM
14	1445-1529 UM (13 kHz)
15	1352-1703 UM (17 kHz), 1646-1711 MC, 1754-1800 TM
19	1010-1347 UM (16 kHz)
20	1010-1642 UM (13 kHz)
21	1421-1520 MC
22	1622-1758 UM (17 kHz), 1842-1924 UM (17 kHz)
26	0400-1345 TM, 1040-1346 UM (16 kHz)
28	1403-1648 TM, 1515-1830 MC

SID's BY McMATH REGION

FEBRUARY 1974

DAY	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28
REGION																												
38																	1											
42									2								1											
47																								1				
49															2	1		1										
52																			2	2	2							
X-RAY																												
UNKNOWN																									1			
NO FP															1										1	1	2	1

SOLAR RADIO EMISSION
SPECTRAL OBSERVATIONS

FEBRUARY 1974

FEB 1974	TIMES OF OBSERVATION		STATION	EVENTS												SPECTRAL TYPE
				CENTIMETRIC BAND			DECIMETRIC BAND			METRIC BAND			DEKAMETRIC BAND			
	START UT	END UT		START UT	END UT	INT.	START UT	END UT	INT.	START UT	END UT	INT.	START UT	END UT	INT.	
01	0000	0030	BOUL													
	0000	0745	CULG													
	0729	1243	WEIS													
	1203	2152	SGHR													
	1305	1525	WEIS													
	1400	2400	BOUL													
	1402	2305	HARV													
	2055	2400	CULG													
02	0000	0745	CULG													
	0000	0030	BOUL													
	0729	1548	WEIS													
	1201	2153	SGHR													
	1400	2400	BOUL													
	1402	2301	HARV													
	2245	2400	CULG													
03	0000	0745	CULG													
	0000	0030	BOUL													
	0731	1549	WEIS													
	1200	2155	SGHR													
	1400	2400	BOUL													
	1402	2400	HARV													
	2045	2400	CULG													
04	0000	0743	CULG													
	0000	0030	BOUL													
	0732	0819	WEIS													
	0838	1352	WEIS													
	1159	2156	SGHR													
	1400	2400	BOUL													
	1402	2315	HARV													
	2055	2400	CULG													
05	0000	0745	CULG													
	0000	0030	BOUL													
	0734	1553	WEIS													
	1156	2157	SGHR													
	1400	2400	BOUL													
	1402	2300	HARV													
	2047	2400	CULG													
06	0000	0745	CULG													
	0000	0030	BOUL													
	0735	1219	WEIS													
	1157	2159	SGHR													
	1235	1554	WEIS													
	1400	2400	BOUL													
	1402	2300	HARV													
	2050	2400	CULG													
07	0000	0746	CULG													
	0000	0030	BOUL													
	0735	1554	WEIS													
	1155	2200	SGHR													
	1400	2400	BOUL													
	1402	2300	HARV													
	2047	2400	CULG													
08	0000	0746	CULG													
	0000	0030	BOUL													
	0721	1251	WEIS													
	1154	2201	SGHR													
	1333	1555	WEIS													
	1400	2000	BOUL													
	1402	2300	HARV													
	2047	2400	CULG													
09	0000	0506	CULG													
	0000	0030	BOUL													
	0519	0746	CULG													
	0727	1553	WEIS													
	1153	2203	SGHR													
	1400	2400	BOUL													
	1402	2400	HARV													
	2047	2400	CULG													
10	0000	0746	CULG													
	0000	0030	BOUL													
	0000	0010	HARV													
	0720	1532	WEIS													
	1152	2204	SGHR													
	1400	2400	BOUL													
	1403	2400	HARV													
	2047	2400	CULG													
11	0000	0746	CULG													
	0000	0030	BOUL													
	0000	0010	HARV													
	0815	1600	WEIS													

SOLAR RADIO EMISSION
SPECTRAL OBSERVATIONS

FEBRUARY 1974

FEB 1974	TIMES OF OBSERVATION		STATION	EVENTS												SPECTRAL TYPE
				CENTIMETRIC BAND			DECIMETRIC BAND			METRIC BAND			DEKAMETRIC BAND			
	START UT	END UT		START UT	END UT	INT.	START UT	END UT	INT.	START UT	END UT	INT.	START UT	END UT	INT.	
11	1400	2400	BOUL													
	1402	2400	HARV													
	1650	2205	SGMR													
	2047	2400	CULG													
12	0000	0746	CULG													
	0000	0030	BOUL													
	0000	0010	HARV													
	0745	1603	WEIS													
	1057	1417	DWIN													
	1149	2207	SGMR													
	1402	2400	HARV													
	2047	2400	CULG							2316.5	2317.5	2	2316.5	2317.5	2	IIIG
	1400	2400	BOUL							2316.8	2317.2	2	2316.8	2317.2	2	III
13	0000	0030	BOUL													
	0000	0010	HARV													
	0000	0746	CULG							0111.5	0113	1				IIIG
			CULG							0252.5	0253	1				IIIG
			CULG							0518.5						IIIB,W
	0714	1604	WEIS							1040.9	1941.2	1				IIIG
			WEIS							1044.3	1044.4	1				IIIB
	1400	1905	BOUL													
	1402	2400	HARV													
	1700	2208	SGMR													
	2047	2400	CULG													
14	0000	0702	CULG													
	0000	0011	HARV													
	0716	1038	WEIS													
	1046	1603	WEIS													
	1146	2209	SGMR													
	1402	2400	HARV													
	2047	2400	CULG													
15	0000	0012	HARV													
	0000	0746	CULG				0221	0222	1	0221	0223	1				IIIG
			CULG				0231.5	0233	1	0231.5	0233	1	0232	0233	1	IIIG
			CULG							0239						IIIB,W
			CULG							0321.5	0324	2				IIIG,U
			CULG							0326.5		1				IIIB
			CULG							0341.5	0343	1				IIIG
			CULG							0706		1				IIIB
	0711	1345	WEIS													
			CULG							0730.5	0734	1				IIIG
			CULG							0734.5	0738.5	1				IIIG
			CULG							0740	0741.5	1				IIIG
	1036	1603	DWIN							1132.2		2				IIIB
	1403	2400	HARV				1510	1515	3	1511	1516	2	1511	1513	2	IIIGG
			HARV	1511	1515	2	1511	1515	2							IV
			DWIN				1511	1514	2	1511	1515.6	2				IIIGG
	1417		WEIS							1511.0	1513.3	2				IIIG
	1145	2211	SGMR										1511.2	1514.6	2	V
			HARV							1512	1517	2				II
			WEIS							1514.5	1516.0	2				UNCLF
			WEIS							1515.3	1516.0	1				IIIG
			DWIN				1520.5	1521.5	1							IV
			DWIN				1530	1603	1	1530	1603	1				I
			HARV				1531	1532	2	1531		1				IIIG
			WEIS				1531.0	1531.1	1							IIIB
			DWIN				1531.0	1531.1	3							IIIG
			HARV				1646	1650	2							IIIGG
			HARV							1655	1752	1				IN
			HARV							1737	1752	2	1737	1752	2	IIIS
			HARV							1753	1819	1	1753	1819	1	IIIN
			HARV				1813	1819	2							IIIGG
			HARV				2023	2026	1	2024	2025	3	2024	2025	3	IIIGG,V
			SGMR										2024.0	2025.3	1	III
	2047	2400	CULG							2047	2400	1				IS
	2115	2400	BOUL							2120.5	2220	1	2120.5	2220	1	CONT
			CULG							2122.5	2348	1				IIIS
			BOUL							2122.8	2131.5	2	2122.8	2131.5	2	IIIG
			HARV							2123	2144	1	2123	2144	1	IIIN
			BOUL							2140.4	2141.7	2	2140.4	2141.7	2	III
			BOUL										2220	2340	1	CONT
16	0000	0030	BOUL													
	0000	0746	CULG							0000	0746					IS,W
	0000	0012	HARV													
			CULG							0011.5	0736	1				IIIN
			CULG							0022	0023	1	0022.5	0023	1	IIIG
			CULG							0108		2				IIIB,U
			CULG							0310	0312	2	0310.5	0312	2	IIIG
			CULG							0553	0606	1				IIIGG
	0713	1605	WEIS													
	1144	2212	SGMR													
	1402	2400	HARV							1402	1442	1				I
	1400	2400	BOUL							1515	1908.9	1	1515	1908.9	1	CONT
			HARV							1610	2030	1				I
			HARV							1742	1900	1	1742	1900	1	IIIN

SOLAR RADIO EMISSION
SPECTRAL OBSERVATIONS

FEBRUARY 1974

FEB 1974	TIMES OF OBSERVATION		STATION	EVENTS												SPECTRAL TYPE
				CENTIMETRIC BAND			DECIMETRIC BAND			METRIC BAND			DEKAMETRIC BAND			
	START UT	END UT		START UT	END UT	INT.	START UT	END UT	INT.	START UT	END UT	INT.	START UT	END UT	INT.	
16			HARV							1901	2015	2	1901	2015	2	IIIS
			BOUL							1908.9	2400	2	1908.9	2400	2	CONT
			HARV							2016	2243	1	2016	2243	1	IIIN
			HARV							2030	2400	2				I
			CULG							2047	2400	2				IIIS
	2047	2400	CULG							2047	2400	2				IS
			CULG							2106	2400	2				N,RS,DP
			HARV							2230	2232	2	2230	2232	2	IIIG
			CULG							2230.5	2233	1	2230.5	2231.5	1	IIIG,V
			CULG							2242.5	2243.5	1				IIIG,V
17	0000	0746	CULG							0000	0746	2				IS
			CULG							0000	0555	2				IIIS
	0000	0100	BOUL							0000	0016	2	0000	0016	2	CONT
	0000	0013	HARV							0000	0013	1				I
			CULG							0006.5	0505	1				N,RS,DP
			CULG							0232	0233.5	2	0232.5	0233	2	IIIG,V
			CULG							0410	0411	2				IIIB,U
	0714	1608	WEIS							0717.0	1507.0	2				IS
			WEIS							0801.8	0802.0	1				IIIG
			WEIS							0836.7	0836.8	1				IIIB
			WEIS							1037.7	1038.8	1				IIIG
			WEIS							1042.8	1042.9	1				IIIB
			WEIS							1110.5	1113.6	2				IIIGG
			WEIS							1128.3	1128.5	1				IIIG
	1142	2213	SGMR													
			WEIS							1239.6	1239.7	1				IIIB
			WEIS							1349.7	1453.5	2				IIIGG
	1402	2400	HARV							1402	1444	1				I
			WEIS							1403.2	1403.3	1				IIIB
			HARV							1408	1410	2				IIIGG
			WEIS							1409.0	1409.5	1				IIIG
	1400	2400	BOUL							1409.0	2400	1	1409.0	2400	1	CONT
			HARV							1444	1533	1				IN
			WEIS							1447.2	1447.3	1				IIIB
			WEIS							1458.8	1459.4	2				IIIG
			HARV				1459	1500	1	1459	1500	2				IIIG
			HARV							1512	1514	1				IIIGG
			WEIS							1513.5	1513.8	1				IIIG
			HARV							1517	1520	1	1518		2	IIIG
			WEIS							1517.9	1518.3	1				IIIB
			WEIS							1522.2	1552.3	1				IIIB
			HARV							1533	1713	1				I
			WEIS							1546.8	1547.1	1				IIIG
			HARV							1547	1552	1	1547	1552	1	IIIG
			HARV							1555	1556	3	1555	1556	3	IIIG,V
			WEIS							1555.3	1555.5	1				IIIG
			HARV							1611	1945	1	1611	1945	1	IIIN
			HARV							1655	1658	2	1656	1658	1	IIIGG
			HARV							1713	2240	1				IN
			HARV							1723	1724	3	1723	1724	3	IIIG,V
			HARV							1803	1804	2	1803	1804	2	IIIG
			HARV							1807	1808	2	1807	1808	2	IIIG
			HARV							1947	2022	2	1947	2022	2	IIIS
			HARV							2026	2217	1	2026	2217	1	IIIN
			CULG							2047	2400	1	2048	2400	1	IIIS
	2047	2400	CULG							2047	2400	1				IS
			CULG				2116	2116.5	1	2116	2117	1	2116.5	2117	1	IIIG
			HARV							2224	2226	2	2224	2226	2	IIIGG
			CULG				2224.5	2225.5	1	2224.5	2226	2	2224.5	2225.5	1	IIIG
			CULG							2234		1				RS,DP
			HARV							2240	2400	1				I
			HARV							2245	2252	1				IIIGG
18	0000	0013	HARV							0000	0011	1				I
			CULG							0000	0746	1				IIIS
	0000	0100	BOUL										0000	0100	1	CONT
			CULG							0043	0044	1	0043	0044	1	IIIG,U
			CULG							0119	0120	3	0119	0119.5	1	IIIG,U
			CULG				0351	0355.5	1	0351	0355.5	1				IIIG,U
			CULG				0547.5	0548.5	1	0546.5	0549.5	3				IIIG,U
	0000	0746	CULG				0548.5	0746	1	0000	0746	1				IS
	0715	0816	WEIS													
	0806	1610	OWIN				0806	1610	1	0806	1610	1				IC
	0818	1518	WEIS							0853.7	0853.8	1				IIIG
			OWIN							0910.6	0911.7	2				IIIG
			OWIN							0918.0	0919.3	2				IIIG
			WEIS							0925.0	1125.0	1				IS
			WEIS							1103.6	1103.8	2				IIIB
	1141	2214	SGMR													
			WEIS							1235.0	1515.0	3				IS
			WEIS							1301.7	1302.0	1				IIIB
	1402	2400	HARV							1402	2204	1				IN
			HARV							1529	1720	1	1529	1720	1	IIIN,RS,DP
			HARV										1530	2222	1	I
	1330	2400	BOUL										1616	1720	1	CONT
			BOUL										1720	1836.4	1	CONT
			HARV							1720	2142	3	1720	2142	3	IIIS,RS,DP
			HARV				1802	2348	1							IN
			HARV				1819	1821	2	1820	1822	3	1820	1822	3	IIIGG,U,V

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FEB 1974	TIMES OF OBSERVATION		STATION	EVENTS												SPECTRAL TYPE
				CENTIMETRIC BAND			DECIMETRIC BAND			METRIC BAND			DEKAMETRIC BAND			
	START UT	END UT		START UT	END UT	INT.	START UT	END UT	INT.	START UT	END UT	INT.	START UT	END UT	INT.	
18			BCUL							1820.2	1822.2	3	1820.2	1822.2	3	IIIG
			HARV							1822	1823	2				UNCL
			BCUL							1836.4	2400	2	1836.4	2400	2	CONT
			HARV							1853	1854	2				IIIGG
			HARV							1917	1919	3	1917	1919	3	IIIGG
			HARV							2027	2029	2	2027	2029	2	IIIGG
			HARV							2046	2047	2	2046	2047	2	IIIG
	2046	2400	CULG				2046	2126	1	2046	2400	1				IS
			CULG										2046	2400	1	IIIN
			CULG							2046	2400	1				IIIS
			CULG							2046	2400	2				S,RS,DP
			CULG				2108	2109	1	2108	2109.5	1	2108	2109.5	1	IIIG
			HARV							2150	2242	2	2150	2242	2	IIIN,RS
			CULG				2220	2230	1	2220	2230	1	2220	2230	1	IIIGG
			HARV							2224	2229	2	2224	2229	2	IIIGG
			HARV							2246	2247	1	2246	2247	1	IIIG
19	0000	0014	HARV													
	0000	0745	CULG							0000	0745	1				IS
			CULG							0000	0745	1				S,RS,DP
			CULG							0000	0745	1				IIIS
	0000	0100	BCUL										0000	0029	1	CONT
			CULG				0115.5	0126.5	1	0115.5	0127	2	0116	0126.5	2	IIIGG
			CULG							0141	0141.5	2	0141	0142	1	IIIG
			CULG							0237	0239.5	1				IIIG
			CULG							0306	0308	2	0306.5	0307	1	IIIG
			CULG				0417.5	0421	1	0417	0422.5	3	0417	0421	1	IIIGG
			CULG							0558.5	0601.5	2				IIIG
	0741	1602	DWIN				0741	1602	1	0741	1602	1				I
	0713	1605	WEIS							0815.5	0815.6	1				IIIB
			DWIN				0821.1	0823.0	3	0821.1	0823.0	3				IIIG
			WEIS							0822.2	0823.1	2				IIIG
			WEIS							0932.9	0933.1	2				IIIG
			DWIN				1043.0	1044.6	1	1043.0	1044.6	1				IIIG
			DWIN				1045.8	1045.9	1	1045.8	1045.9	1				IIIG
			DWIN							1215.0	1215.5	1				IIIG
			WEIS							1331.3	1332.0	1				IIIG
			DWIN							1336.4	1337.2	2				IIIG
			WEIS							1337.1	1337.2	1				IIIB
	1330	2400	BCUL							1353	2400	2	1353	2400	2	CONT
	1402	2400	HARV							1402	2235	1				IN
			WEIS							1435.5	1536.5	2				I
			HARV				1449	1453	1							I
			HARV							1508	1509	3	1508	1509	3	IIIGG
			BOUL							1508.0	1508.7	3	1508.0	1508.7	3	IIIG
			WEIS							1508.2	1508.5	1				IIIG
			HARV							1524	1800	1	1524	1800	1	IIIN,RS,DP
			HARV										1531	2235	3	I
	1540	2215	SGMR										1540.0	2215.0	1	CONT
			BCUL							1547.5	1551.8	3	1547.5	1551.8	3	IIIG
			SGMR										1548.7	1549.5	2	III
			WEIS							1548.8	1550.0	2				IIIGG
			DWIN				1548.9	1549.5	3	1548.8	1549.5	3				IIIGG
			HARV				1549	1550	2	1548	1552	3	1548	1552	3	IIIGG
			HARV							1730	1735	3	1730	1735	3	IIIGG
			HARV							1800	2054	2	1800	2054	2	IIIS,RS
			HARV	1819	1820	1	1819	1820	1							IIIG
			HARV							2056	2235	2	2056	2235	2	IIIN,RS,DP
			CULG							2057	2400	2				S,RS,DP
			CULG							2057	2400	1	2057	2400	1	IIIS
			CULG				2057	2400								IS,W
	2057	2400	CULG							2057	2400	1				IS
			CULG							2114	2115	2				IIIG
			HARV							2114	2115	2	2114	2115	3	IIIG
			HARV							2314	2316	1				IIIG
			CULG							2314.5	2316.5	2				IIIG
			CULG							2324	2324.5	2				IIIB,U
			CULG							2342	2343	2	2342	2343	2	IIIG
20			CULG							0000	0746	2				N,RS,DP
			CULG							0000	0746	1	0000	0708	1	IIIS
			CULG				0000	0425								IS,W
	0000	0746	CULG							0000	0746	1				IS
	0000	0100	BCUL										0000	0012	1	CONT
	0000	0015	HARV													
			CULG							0019.5	0020.5	2	0019.5	0020.5	2	IIIG
			CULG							0059	0100.5	2				IIIG
			CULG				0102	0102.5	1	0102	0103	2	0102	0103	2	IIIG
			CULG							0220.5	0221	2	0220.5	0221	2	IIIG
			CULG							0250	0251.5	2				IIIG
			CULG							0303.5	0304.5	2	0303.5	0304.5	2	IIIG
			CULG							0318.5	0319.5	2	0318.5	0319.5	2	IIIB
			CULG							0325.5	0326	1	0325.5	0326	1	IIIG
			CULG							0435	0437	2	0435	0437	1	IIIG,V
			CULG							0440.5		2				IIIB,V
			CULG							0449		2				IIIB
			CULG							0450		2				IIIB
			CULG				0458	0502	1	0458	0502	2	0458	0502	2	IIIGG
			CULG							0640	0640.5	2				IIIG
			CULG							0644	0644.5	2				IIIG

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FEB 1974	TIMES OF OBSERVATION START UT	TIMES OF OBSERVATION END UT	STATION	EVENTS: CENTIMETRIC BAND START UT	CENTIMETRIC BAND END UT	CENTIMETRIC BAND INT.	DECIMETRIC BAND START UT	DECIMETRIC BAND END UT	DECIMETRIC BAND INT.	METRIC BAND START UT	METRIC BAND END UT	METRIC BAND INT.	DEKAMETRIC BAND START UT	DEKAMETRIC BAND END UT	DEKAMETRIC BAND INT.	SPECTRAL TYPE
20			CULG							0656	0656.5	2				IIIG
			CULG				0659	0707	1	0659	0707.5	3	0659	0707	1	IIIGG,V
	0757	1007	DWIN				0757	0920	1	0757	0920	1				I
			DWIN				0902.0	0904.0	2	0902.0	0904.1	2				IIIG
	0714	1607	WEIS							0902.2	0903.3	2				IIIG
			DWIN				0907.5	0907.9	1	0907.5	0907.9	1				IIIG
			DWIN				0909.6									IIIB
			WEIS							0918.4	0918.6	1				IIIB
			WEIS							0941.0	0941.2	1				IIIB
			WEIS							1038.2	1040.4	3				IIIGG
			WEIS							1041.9	1042.3	2				IIIG
			WEIS							1044.4	1045.5	1				IIIG
			WEIS							1048.5	1049.6	2				IIIG
			WEIS							1113.5	1114.4	2				IIIG
	1055	1540	DWIN							1117.3	1117.5	2				IIIG
			DWIN				1118.5	1150								I
			WEIS							1120.9	1121.3	1				IIIG
			DWIN							1124.0	1124.1	2				IIIG
			DWIN				1127.1	1128.6	2	1127.0	1130.2	2				IIIG
			WEIS							1128.3	1128.6	1				IIIG
			WEIS							1129.6	1129.7	1				IIIG
			WEIS							1131.6	1132.1	2				IIIG
			WEIS							1140.6	1140.7	1				IIIB
			WEIS							1157.5	1158.6	2				IIIG
			DWIN				1157.5	1158.0	1	1157.8	1157.9	2				IIIG
	1138	2217	SGMR										1157.7	1200.0	2	IIIG
			WEIS							1217.4	1217.7	2				IIIG
			SGMR										1217.7	1218.1	1	III
			DWIN				1219.5	1219.6	1	1219.5	1219.6	1				IIIG
			SGMR										1238.1	1711.0	2	CONT
			WEIS							1307.0	1307.4	1				IIIG
			DWIN				1308.4	1308.7	2	1308.4	1308.7	2				IIIG
			WEIS							1308.5	1308.7	1				IIIG
			DWIN							1329.7	1331.6	3				IIIGG
			DWIN				1330.0	1330.4	2							IIIG
			SGMR										1330.1	1333.1	3	V
			WEIS							1330.2	1332.3	3				IIIGG
			DWIN				1330.4	1332	1							IV
	1348	2400	HARV							1408	1409	2				IIIG
			WEIS							1408.5	1409.3	1				IIIG
			DWIN							1408.5	1408.8	2				IIIG
	1330	2400	BCUL							1408.6	1410.0	2	1408.6	1410.0	2	IIIG
			BCUL										1437	2400	1	CONT
			DWIN				1513.6	1518	3	1513.6	1518	3				IIIGG
			BCUL							1513.7	1520.0	3	1513.7	1520.0	3	IIIGG
			WEIS							1513.7	1516.9	3				IIIGG
			SGMR										1513.9	1517.1	3	IV
			HARV	1514	1517	1	1514	1519	3	1514	1520	3	1514	1517	3	IIIGG,V
			HARV							1614	1615	3	1614	1615	3	IIIG
			HARV				1657	1706	2	1655	1703	3	1655	1703	3	IIIGG,V
			BCUL							1657.0	1659.5	2	1657.0	1659.5	2	IIIG
			HARV							1705	2014	1	1705	2014	1	IIIN
			HARV				1904	1906	1							IIIG
	2046	2400	CULG							2046	2400					IIIN,W
			HARV				2319	2321	1							IIIGG
			CULG							2324	2327	1				IIIGG
			HARV				2325	2326	3	2325	2326	1				IIIGG
			CULG							2337.5	2345	1				IIIGG
			CULG							2356	2400	1				IIIGG
			HARV				2359	2400	2							I
21	0000	0015	HARV				0000	0002	2	0000	0002	1				IIIGG
	0000	0746	CULG							0000	0003	1	0002	0003	1	IIIGG
			CULG							0000	0746					IIIN,W
	0000	0100	BCUL							0000.0	0002.3	2	0000.0	0002.3	2	IIIG
			CULG							0527	0527.5	2				IIIG,U
			CULG				0741	0741.5	1	0741	0741.5	1				IIIG
	0727	1553	DWIN				0741.4	0741.6	3	0741.4	0741.6	2				IIIG
	0749	1610	WEIS													
			DWIN				1414.9	1415.0	1							IIIG
	1330	2400	BCUL										1500.0	2117	1	CONT
	1345	2400	HARV							1642	2116	2	1642	2116	2	IIIN
			HARV							1750	1752	3	1750	1752	3	IIIGG
			BCUL							1750.3	1752.6	1	1750.3	1752.6	1	IIIG
			HARV							1803	1805	3	1803	1805	3	IIIGG
			BCUL							1803.3	1804.8	2	1803.3	1804.8	2	IIIG
			BCUL							1811	1813	1	1811	1813	1	IIIG
			HARV							1811	1813	2	1811	1813	2	IIIGG
			BCUL							1818.5	1820	2	1818.5	1820	2	IIIG
			HARV				1819		1	1818	1822	3	1818	1822	3	IIIGG
			HARV							1827	1830	3	1827	1830	3	IIIGG
			BCUL							1827	1830	2	1827	1830	2	IIIGG
	1136	2218	SGMR										1828.1	1829.7	1	IIIG
			HARV							2017	2026	2	2017	2026	2	IIIGG
			SGMR										2024.9	2025.9	1	III
	2045	2400	CULG							2045	2400					IIIN,W
			CULG							2045	2400					IS,W
22	0000	0746	CULG							0000	0746		0044	0652		IIIN,W
	0000	0100	BCUL													

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				CENTIMETRIC BAND			DECIMETRIC BAND			METRIC BAND			DEKAMETRIC BAND			
	START UT	END UT		START UT	END UT	INT.	START UT	END UT	INT.	START UT	END UT	INT.	START UT	END UT	INT.	
22	0000	0016	HARV													
			CULG							0052	0053	1	0052	0053	1	IIIG
			CULG							0143	0144	1	0143	0144	1	IIIG
			CULG							0145.5	0146	1	0145.5	0146	1	IIIG
			CULG							0257	0258	1	0257	0258	1	IIIG
			CULG							0309.5	0311.5	1	0309.5	0311.5	1	IIIGG
			CULG							0320	0450	1				I,CONT
			CULG				0508	0510	1	0508	0510	2	0508	0510	1	IIIGG
			CULG							0633	0633.5	2	0633	0633.5	1	IIIG
	0708	1249	WEIS													
	0808	1343	OWIN				1113.8	1113.9	1	1113.8	1113.9	1				IIIG
	1135	2220	SGMR													
	1322	1612	WEIS													
	1330	2400	BOUL													
	1345	2400	HARV													
	2045	2400	CULG													
23	0000	0100	BOUL													
	0000	0017	HARV													
	0000	0745	CULG							0034						IIIB,W
			CULG							0119	0121	1				IIIG
			CULG							0521		1				IIIB
			CULG							0555		1				IIIB
			CULG							0655	0658	1				IIIG
	0710	1623	WEIS													
	1330	2400	BOUL							1520.7	1520.9	1	1520.7	1520.9	1	III
			BOUL							1524.4	1525.0	1	1524.4	1525.0	1	IIIG
	1133	2221	SGMR										1524.4	1524.8	2	III
			BOUL										1611	1907	1	CONT
	1345	2400	HARV							1633	1634	3	1633	1634	3	IIIG
			BOUL							1633.5	1635.0	2	1633.5	1635.0	2	IIIG
			SGMR										1633.6	1634.2	2	III
	2045	2400	CULG							2141		1				IIIB
			CULG							2143	2146	1				IIIG
			CULG							2151		1				IIIB
			CULG							2253	2258	1	2256	2258	1	IIIG
			BOUL							2256.7	2256.8	1				III
			HARV				2257	2258	2	2257		1	2257		1	IIIG
			HARV				2331	2332	3	2331	2332	3	2331	2332	3	IIIG
			CULG				2331	2332	1	2331	2332	2	2331	2332	2	IIIG
			BOUL							2331.2	2332.1	3	2331.2	2332.1	3	III
24	0000	0100	BOUL													
	0000	0018	HARV													
	0000	0737	CULG							0226.5	0227.5	2	0226.5	0227.5	1	IIIG,V
			CULG							0304.5						IIIB,W
			CULG							0442		1				IIIB
			CULG							0444		1				IIIB
			CULG							0551		1				IIIB
			CULG							0552	0557	1				IIIG
			CULG							0556		1				RS,OP
			CULG							0646		1				IIIB
	0712	1531	WEIS							1006.3	1007.4	1				IIIG
	1132	2222	SGMR													
	1345	2400	HARV				1407	1408	1							IIIG
	1330	2400	BOUL							1536.6	1537.3	1	1536.6	1537.3	1	III
			BOUL							1614.2	1614.7	1	1614.2	1614.7	1	IIIG
			HARV							1618	1619	2	1618	1619	2	IIIG
			BOUL							1618.2	1619.0	1	1618.2	1619.0	1	IIIG
			HARV							1745	2018	1	1745	2018	1	IIIN
			BOUL							1810.5	2156.1	1	1810.5	2156.1	1	CONT
			HARV				1820	1823	2							IIIGG
			HARV							1830	1852	2	1830	1852	2	I
	2045	2400	CULG							2045	2310					IIIN,W
			CULG							2130	2130.5	1				IIIG
			CULG							2154		2	2154		1	IIIB
			HARV							2154		3	2154		3	IIIG
			CULG							2307.5	2308.5	2				IIIG
			BOUL							2307.7	2312.9	1	2307.7	2312.9	1	IIIGG
			BOUL										2312	2400	1	CONT
25	0000	0100	BOUL													
	0000	0019	HARV													
	0000	0745	CULG							0020	0745					IIIN,W
			CULG							0247	0248.5	1	0247	0247.5	1	IIIG,V
			CULG							0327	0327.5	2	0327	0327.5	1	IIIG,V
			CULG							0355	0357	2				IIIG,U
			CULG							0443.5	0445	2	0443.5	0445	1	IIIGG
			CULG				0509	0510	1	0509	0510	1				IIIG
			CULG							0525.5	0528.5	2	0525.5	0528.5	2	IIIGG,V
			CULG				0530.5	0531	1	0530.5	0531.5	2	0530.5	0531	1	IIIGG,V
			CULG							0648.5	0652	2	0649	0651	1	IIIGG,V
			CULG							0737	0737.5	2	0737	0737.5	1	IIIG
	0726	1617	WEIS							0746.3	0746.4	1				IIIG
			WEIS							0747.4	0748.1	1				IIIG
			WEIS							0820.7	0822.2	1				IIIG
			WEIS							0847.8	0848.5	1				IIIG
			WEIS							0854.2	0854.3	1				IIIB
			WEIS							0855.3	0855.4	1				IIIB
			WEIS							0856.2	0857.7	2				IIIG

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FEB 1974	TIMES OF OBSERVATION		STATION	EVENTS													SPECTRAL TYPE
				CENTIMETRIC BAND			DECIMETRIC BAND			METRIC BAND			DEKAMETRIC BAND				
	START UT	END UT		START UT	END UT	INT.	START UT	END UT	INT.	START UT	END UT	INT.	START UT	END UT	INT.		
25			WEIS							0900.7	0901.9	2					IIIG
			WEIS							0910.3	0913.2	2					IIIGG
			WEIS							1105.3	1105.7	2					IIIG
	1130	2223	SGHR										1256.5	1256.7	1		III
			SGHR										1333.8	1334.1	1		III
	1330	2400	BOUL							1348.4	1350.0	1	1348.4	1350.0	1		III
			SGHR										1348.6	1349.9	2		III
			BOUL										1353.2	1357.2	1		IIIG
			BOUL							1451.0	1453.0	1	1451.0	1453.0	1		IIIGG
			BOUL										1803.7	2153	1		CONT
	1347	2400	HARV							1804	1805	2	1804	1805	2		IIIG
			SGHR										1808.8	1811.5	1		V
			BOUL							1808.8	1813.9	2	1808.8	1813.9	2		IIIGG
			HARV				1810	1812	3	1808	1812	3	1808	1812	3		IIIGG
			HARV				1817	1818	1	1817	1820	1	1820		1		IIIGG
			HARV							1824	1827	2	1825	1827	2		IIIG
			HARV							1831		3	1831		3		IIIG
			HARV							2027	2128	1	2027	2128	1		IIIN
	2045	2400	CULG							2045	2400						IIIN,W
			CULG							2101	2102	2					IIIG
26	0000	0020	HARV														
	0000	0100	BOUL														
	0000	0745	CULG							0027	0745						IIIN,W
			CULG							0131	0132	2					IIIG
	0647	1618	WEIS														
	1128	2225	SGHR														
	1330	2400	BOUL														
	1344	2400	HARV														
	2045	2400	CULG														
27	0000	0021	HARV														
	0000	0100	BOUL														
	0000	0745	CULG							0345.5	0347	1					IIIG,V
			CULG							0649	0650	1					IIIG
	0654	0830	WEIS														
	0900	1352	WEIS														
	1127	2226	SGHR														
	1330	2400	BOUL														
	1345	2300	HARV														
	2045	2400	CULG							2334.5	2335.5	1					IIIG,U
			CULG							2343							IIIB,W
28	0000	0100	BOUL														
	0000	0745	CULG							0730	0731	1					IIIG,U
	1125	2227	SGHR														
	0717	1622	WEIS							1212.8	1213.3	1					IIIG
	1330	2400	BOUL														
	1346	2300	HARV														
	2045	2400	CULG														

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

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

SELECTED SOLAR EVENTS

FEBRUARY 1974

Culgoora

UT Date 1974 FEBRUARY	HELIOGRAPH EVENT							Spectral Type	REMARKS
	Start (UT)	End (UT)	Freq. (MHz)	Positions: Central Dist. ($R_\odot$)	Positions: Position Angle (Deg.)	Polarization	Intensity (1-3)		
12	2313	2318	{ 43.25	.5	20	- }			
			{ 80	.2	40	0 }	2	III G	
			{160	.2	150	0 }			
15	0231	0233	{ 43.25	1.6	280	-	3 }		
			{ 80	1.1	280	0	2 }	III G	*
			{160	0.9	260	0	2 }		
	0342	0343	{ 80	1.1	70	0	2 }		
			{160	0.9	70	0	1 }	III G	
15/16	2300	0530	{ 80	1.2	80	r	1 }	I	
			{160	1.0	160	r	1 }		
	0022	0023	{ 43.25	1.5	210	-	3 }	III G	*
			{ 80	0.9	210	0	3 }		
16/17	2300	0530	{ 80	0.8	110	r	1 }	I	
			{160	0.8	130	r	1-2}		
	0058	0102	{ 43.25	1.3	70	0	3 }	III G	*
			{ 80	0.9	130	0	2 }		
17/18	2300	0530	{ 80	0.9	180	0	1 }	I	
			{160	0.7	180	r	2 }		
	0042	0043	{ 43.25	1.4	270	- }	3	IIIG,	U
			{ 80	1.0	270	0 }			
	0118	0120	{ 43.25	1.6	220	-	3 }		
			{ 80	1.1	220	0	3 }	III G,	U *
			{160	0.9	20	0	1 }		

Days without Heliograph observations: none

SELECTED SOLAR EVENTS

FEBRUARY 1974

Culgoora

UT Date 1974 FEBRUARY	HELIOGRAPH EVENT							Spectral Type	REMARKS
	Start (UT)	End (UT)	Freq. (MHz)	Positions: Central Dist. ($R_\odot$)	Positions: Position Angle (Deg.)	Polarization	Intensity (1-3)		
18/19	2300	0530	80	0.5	180	0	1-2	I	
			160	0.4	180	r	1-2		
	0117	0119	43.25	1.1	160	-	3	III GG	*
			80	0.6	180	0	3		
			160	0.4	180	0	2		
20	0101	0103	43.25	0.8	280	-	3	III G	*
			80	0.5	280	0	2		
			160	0.5	280	0	2		
22	0143	0144	43.25	1.4	250	-	3	III G	*
			80	1.0	250	0	3		
			160	0.7	230	0	2		
25	0247	0249	43.25	1.7	220	-	3	IIIG,V	*
			80	1.3	220	0	2		
			160	1.0	220	0	2		

Days without Heliograph observations: .....none.....

COSMIC RAY INDICES
(Neutron Monitors)
FEBRUARY 1974

FEB. 1974	THULE DAILY AVERAGE COUNTS PER HOUR	CALGARY DAILY AVERAGE COUNTS PER HOUR	SULPHUR MT. DAILY AVERAGE COUNTS PER HOUR	KIEL DAILY AVERAGE COUNTS PER HOUR	DALLAS DAILY AVERAGE COUNTS PER HOUR	TOKYO DAILY AVERAGE COUNTS PER HOUR
1	4606.1	12104.3	9043.6	6377.5	6389.0	3573.6
2	4617.9	12174.1	9062.0	6406.2	6416.5	3579.4
3	4630.6	12211.8	9101.1	6412.2	6434.7	3586.8
4	4657.8	12246.8	9133.3	6438.9	6449.5	3584.2
5	4662.2	12273.1	9147.9	6474.9	6453.2	3589.7(16)
6	4652.3	12236.4	9137.6	6507.2	6435.8	3579.7(23)
7	4623.0	12196.8	9014.8	6460.5	6402.2	3578.8(10)
8	4619.3	12179.2	8996.6	6408.7	6407.3	3582.7
9	4619.3	12201.0	9038.7	6413.5	6428.5	3578.4
10	4628.3	12231.4	9063.7	6411.5	6424.9	3580.2
11	4639.1	12220.5	9117.9	6428.0	6441.4	3582.7
12	4636.1	12217.7	9095.4	6437.6	6436.7	3586.9
13	4606.5	12179.0	9077.9	6412.7	6415.8	3574.5
14	4589.3	12046.7	9008.7	6375.2	6374.4	3556.0
15	4576.9	12057.1	8981.0	6360.4	6370.0	3553.5
16	4581.0	12042.4	8997.8	6360.6	6380.4	3553.9
17	4600.0	12052.3	9028.3	6370.0	6389.2	3561.3
18	4621.4	12048.1	9035.6	6374.7	6367.3	3551.4
19	4603.7	12079.6	9056.9	6376.1	6383.5	3547.3
20	4610.3	12142.3	9026.0	6371.5	6380.9	3552.4
21	4595.4	12115.2	8997.2	6356.9	6391.9	3566.5
22	4575.4	12090.4	8997.0	6365.0	6363.7	3556.5
23	4580.9	12076.3	8968.2	6355.9	6364.2	3551.5
24	4597.0	12030.9	8944.0	6334.2	6363.5	3540.2
25	4593.5	11981.3	8934.3	6319.9	6359.1	3539.8
26	4589.3	12012.6	8955.3	6323.4	6375.0	3560.4
27	4595.9	12070.1	8979.7	6341.5	6384.6	3569.5
28	4590.8	12047.0(16)	8986.2	6367.6	6382.5	3570.0
MEAN	4610.7	12127.3	9033.2	6390.8	6398.8	3566.8

( ) Number of hours for which data are available if less than 24.

Thule, Alert, Calgary, Sulphur Mountain and Kiel Scaling Factors = 100.
Deep River Scaling Factor = 300.
Dallas " " = 120.
Tokyo " " = 128.

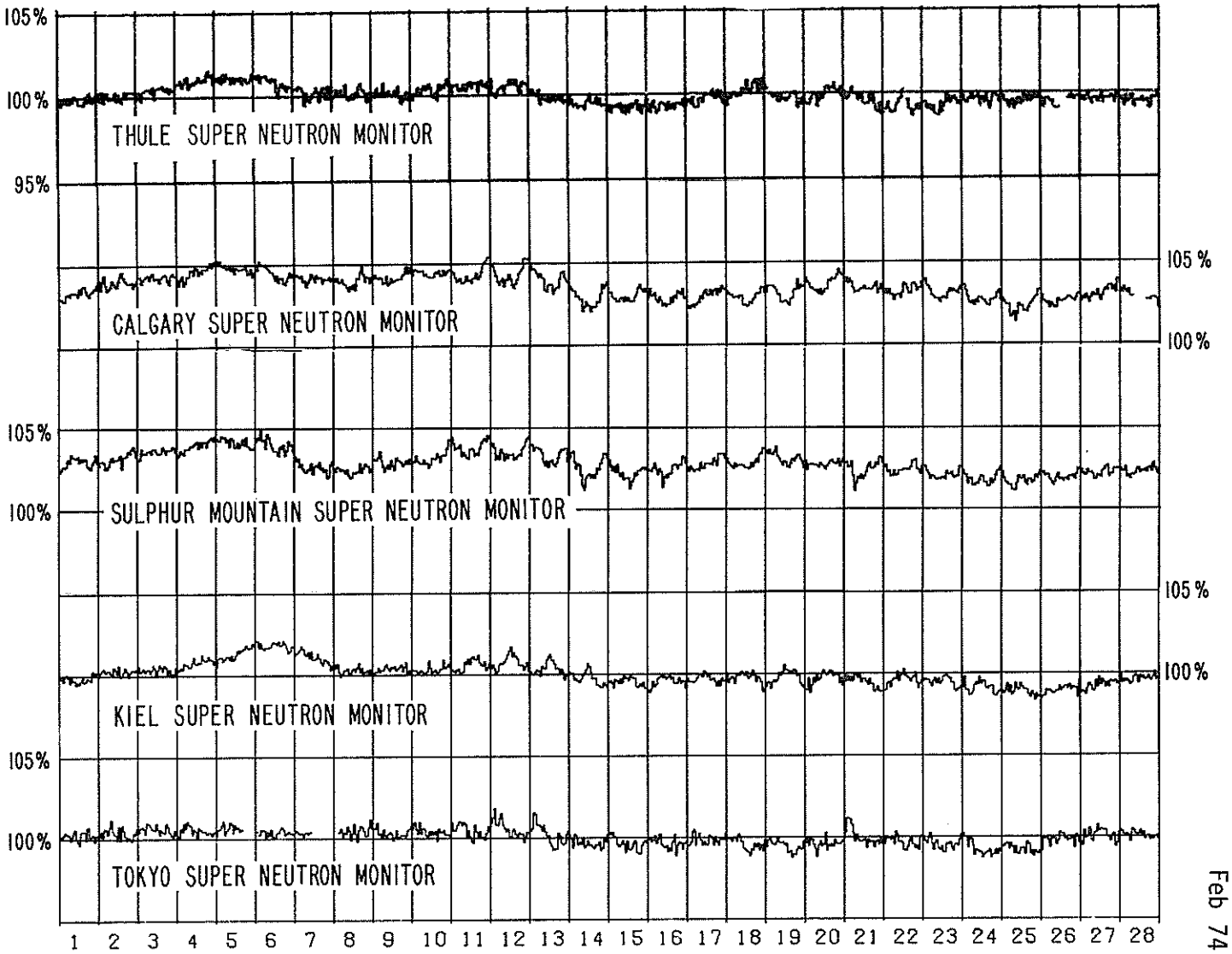
See *Descriptive Text* for other characteristics.

Note: Data from Deep River and Alert not received in time for publication.

COSMIC RAY INDICES

(Pressure Corrected Hourly Totals)

FEBRUARY 1974

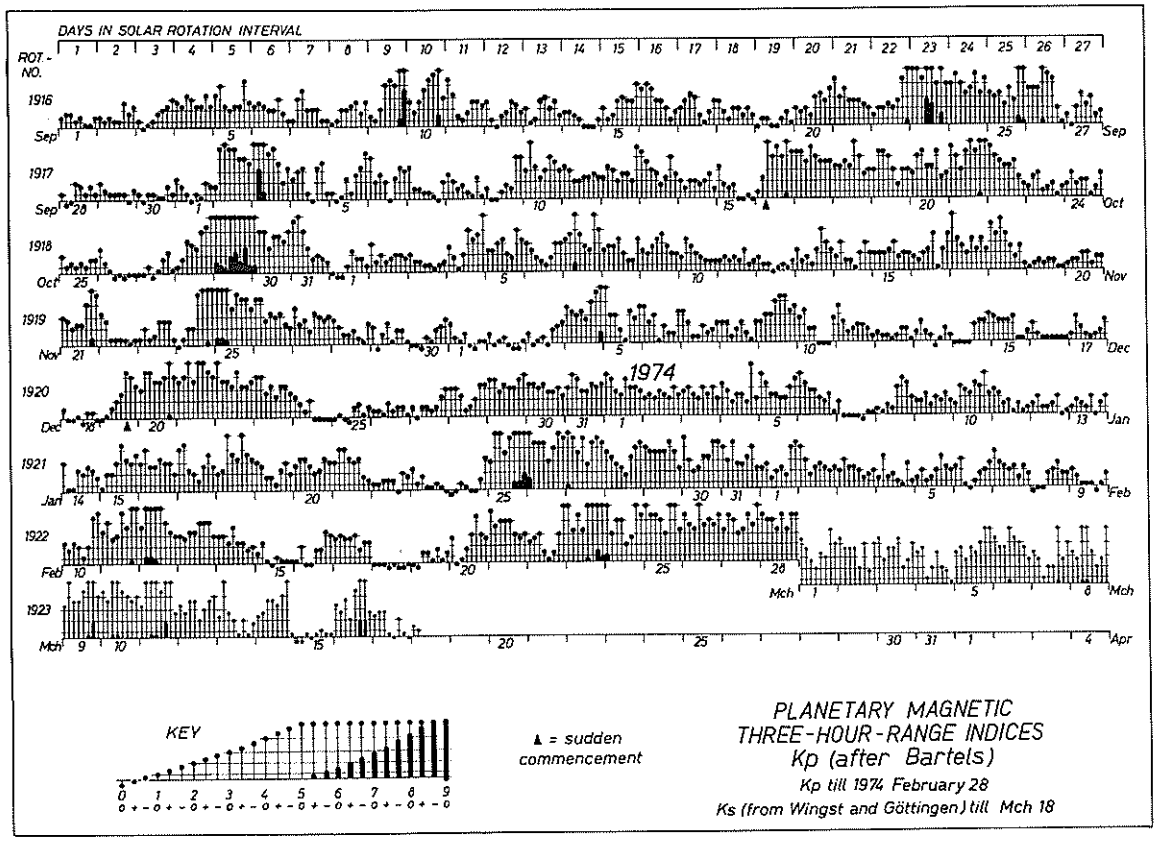


GEOMAGNETIC ACTIVITY INDICES

FEBRUARY 1974

Day	Three-Hour Range Indices Kp 1	2	3	4	5	6	7	8	Sum	Prel Ci	Cp	Ap	aa N	S	M	
1	2+	3-	1+	2	2+	2-	4	4+	21-	0.6	0.8	13	24	23	14 33	
2	4	3	2-	2+	3-	2+	2	2+	20+	0.5	0.7	12	25	15	21 19	
3 Q	2	3	2+	2+	2	1+	2-	2	17-	0.2	0.4	8	14	12	16 11	C
4 Q	1+	3+	1+	2-	1	1-	3-	1	13	0.2	0.4	7	13	11	13 11	KC
5 Q	1+	2	1	1+	2	3+	2+	2	15+	0.3	0.4	8	13	16	8 21	K
6 Q	2+	3	1-	0+	1	2-	2	3-	14-	0.2	0.4	7	12	14	10 16	K
7	4-	3-	2+	2	2+	1+	2+	2-	18+	0.4	0.6	10	16	15	17 15	K
8QQ	0	0+	0+	2-	2	3-	2-	2-	10+	0.3	0.2	5	11	12	7 17	KK
9QQ	2	1+	1-	1-	1-	0	1-	2-	8-	0.1	0.1	4	9	9	10 8	CK
10	2+	2-	2+	2	1	2	4+	5-	20+	0.9	0.8	14	34	26	19 40	
11 D	3+	4	3-	3	5-	4-	5+	5	32-	1.3	1.3	30	46	42	29 59	
12 D	4-	6-	6-	5+	5	4	3+	3	36-	1.4	1.4	40	67	52	68 51	
13	3	3-	3+	3+	4	4	4	3	27+	0.9	1.0	20	40	25	24 41	
14	3	3	2+	4-	2+	2+	2-	2	20+	0.5	0.7	12	18	19	21 17	
15QQ	1+	2+	1-	0+	1	1-	1-	1-	8-	0.0	0.1	4	8	8	9 8	CC
16 Q	1-	2	0+	0+	2-	2-	3+	3	13	0.4	0.4	7	17	13	7 22	
17	3-	3	3-	3-	3	2-	2+	2+	20+	0.6	0.6	11	20	20	20 20	
18QQ	0+	0+	0+	0	0+	0	0	0+	2-	0.0	0.0	1	3	5	5 3	CK
19QQ	0+	0	1+	1+	1-	2-	1-	1+	7+	0.0	0.1	4	6	8	6 8	CC
20	3-	0+	1-	2-	3	4+	3	3-	18+	0.9	0.7	12	23	24	13 34	
21	5-	4-	4	4	4	3	3-	3	29	1.0	1.1	23	31	43	36 38	
22	2+	3-	3	1+	1-	1+	3	5	19+	0.8	0.8	14	24	23	16 31	
23 D	5	3+	4+	3+	5+	5	6	5+	38-	1.5	1.5	44	69	52	40 81	
24	6-	3	4	4	2	3-	5	4+	31-	1.3	1.3	29	44	47	52 40	
25 D	5	4+	4+	4	3	5	5	3+	34	1.3	1.3	34	49	54	49 55	
26 D	4+	4-	3+	5	4-	4	4-	4+	32	1.2	1.2	28	47	49	49 48	
27	3+	4+	4	3	3+	4+	4-	5	31	1.3	1.2	26	43	44	29 58	
28	4+	4	4	3+	4+	3+	4+	4+	32	1.2	1.2	27	44	49	39 55	
									MEAN	0.69	0.74	16	27.5	26.1	26.9	

GEOMAGNETIC ACTIVITY INDICES



DAILY AVERAGE INDICES Ap

	1973										1974	
DAY	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB
1	22	91	17	3	19	12	5	5	4	4	17	13
2	40	54	12	20	11	16	6	31	7	2	9	12
3	14	26	9	14	7	7	6	48	5	5	11	8
4	4	9	8	19	4	8	12	12	18	29	13	7
5	6	7	5	10	4	9	15	10	14	17	14	8
6	28	4	13	8	3	13	9	12	9	10	12	7
7	8	4	16	4	3	8	8	6	28	8	2	10
8	7	8	17	6	13	9	8	6	11	7	10	5
9	11	7	12	9	8	5	44	10	12	21	7	4
10	8	4	7	33	6	4	27	21	8	8	14	14
11	8	24	6	34	6	4	12	11	6	8	6	30
12	14	3	7	30	6	5	7	15	4	4	5	40
13	5	46	20	24	8	10	8	17	10	4	5	20
14	4	57	80	18	8	8	4	7	8	6	8	12
15	3	9	37	13	32	4	12	6	8	8	15	4
16	12	60	32	11	15	3	14	30	10	4	15	7
17	6	51	27	18	6	2	10	27	17	6	16	11
18	20	46	22	30	6	4	7	22	19	3	24	1
19	82	42	21	38	10	6	3	20	4	13	9	4
20	80	46	23	18	9	9	12	20	6	29	14	12
21	58	42	46	6	5	6	15	37	23	34	16	23
22	53	44	20	3	6	12	17	20	7	25	5	14
23	50	25	15	10	14	22	63	6	8	18	4	44
24	49	14	4	34	6	46	28	7	26	4	4	29
25	50	14	6	6	9	29	27	5	42	3	50	34
26	32	28	8	4	36	18	25	3	18	4	38	28
27	28	26	10	4	29	26	8	4	14	6	34	26
28	22	26	8	21	14	28	4	20	6	11	18	27
29	16	59	3	41	18	20	4	86	5	19	22	
30	15	18	3	29	19	13	4	28	4	15	21	
31	33		4		26	9		19		17	19	
MEAN	25	30	17	17	12	12	14	18	12	11	15	16

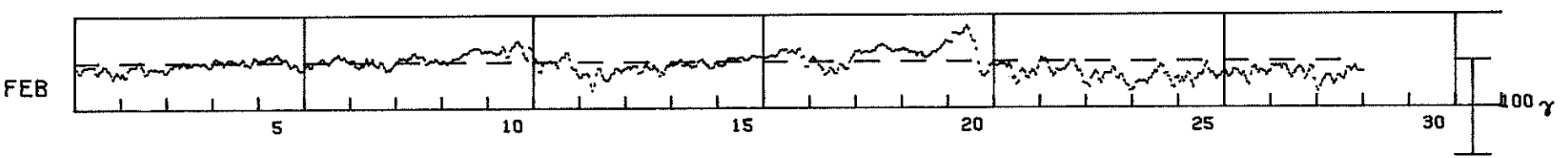
HOURLY EQUATORIAL Dst VALUES (PROVISIONAL)

FEBRUARY 1974

NASA/GODDARD SPACE FLIGHT CENTER

(Time-UT)

DAY	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
1	-6	-10	-11	-7	-5	-5	-4	-4	-4	-4	-10	-12	-9	-7	-4	-4	-7	-9	-12	-17	-13	-10	-12	-14
2	-11	-15	-15	-8	-5	-4	-5	-4	0	1	-4	-7	-12	-11	-7	-6	-7	-6	-7	-8	-7	-7	-10	-10
3	-8	-5	-5	-2	-2	-1	-4	-2	0	-2	-4	-3	-3	-1	0	-1	-1	-2	-1	-1	-3	-5	-5	-3
4	3	4	2	2	1	-3	-1	2	3	3	0	1	-1	-1	1	3	-2	-2	-3	-4	0	5	3	2
5	2	3	2	3	5	6	3	5	7	8	5	3	2	3	2	-2	-5	-4	-2	-3	-7	-9	-9	-8
6	-4	-2	-5	-5	0	-1	0	1	3	3	0	0	-2	1	3	5	6	8	4	3	5	2	1	1
7	2	1	-4	-5	-6	-3	-4	-1	4	-2	0	3	-2	-4	-5	0	-1	-5	-9	-8	-8	-6	-3	-1
8	1	4	3	4	3	2	4	5	8	9	6	5	6	6	4	-2	-1	1	1	1	3	1	-1	-1
9	1	-1	-2	0	1	3	3	4	4	6	8	9	9	10	12	13	14	14	14	13	10	10	11	10
10	11	11	10	9	8	9	10	16	13	5	6	12	15	17	20	21	18	16	9	4	2	15	14	7
11	3	0	-10	-11	-3	-1	-1	0	1	-1	0	-3	-6	2	5	5	9	9	3	-6	-8	-8	-13	-16
12	-16	-13	-13	-12	-14	-24	-32	-24	-13	-7	-8	-14	-18	-22	-19	-17	-13	-12	-7	-7	-9	-11	-9	-7
13	-6	-5	-7	-5	-5	-5	-12	-11	-10	-5	-3	-6	-8	-8	-4	-7	-9	-16	-11	-13	-8	-4	-5	-1
14	-4	-1	-2	0	2	-4	-4	-3	-3	-5	-6	-5	-5	0	1	2	-1	-3	-4	-7	-7	-6	-2	-2
15	-4	-5	-4	-3	1	3	3	3	3	2	3	4	4	2	1	2	3	5	6	5	4	5	4	4
16	3	4	5	6	6	5	6	9	11	12	11	12	9	10	11	9	8	12	13	4	5	-6	-6	0
17	2	4	2	-1	-4	-6	-9	-14	-13	-11	-7	-9	-12	-13	-9	-3	-4	-6	-8	-8	-1	3	6	10
18	10	11	8	9	10	10	9	10	11	11	14	16	16	17	16	15	13	12	10	10	11	11	11	12
19	13	12	11	9	10	9	9	6	8	9	6	4	4	5	6	9	10	9	11	13	15	18	21	20
20	19	19	29	29	28	27	28	29	33	36	33	26	21	20	12	-2	-12	-15	-16	-14	-12	-5	-3	-4
21	-5	-5	-3	-3	-3	-4	-6	-3	-6	-18	-17	-24	-22	-11	-9	-11	-17	-18	-13	-10	-11	-15	-8	-1
22	3	1	2	-2	-8	-12	-16	-14	-9	-10	-10	-9	-9	-6	-4	0	0	0	-6	-11	-10	-15	-23	-24
23	-25	-27	-18	-14	-11	-13	-20	-23	-18	-13	-13	-13	-13	-7	-9	-18	-19	-15	-15	-21	-25	-26	-31	-30
24	-29	-23	-22	-21	-22	-21	-22	-24	-19	-18	-14	-11	-12	-7	-4	-6	-14	-13	-17	-21	-27	-28	-18	-17
25	-23	-18	-22	-18	-13	-14	-22	-28	-19	-18	-14	-15	-13	-6	-2	-10	-13	-13	-16	-19	-17	-16	-13	-10
26	-12	-17	-16	-14	-9	-10	-10	-14	-16	-13	-17	-23	-25	-15	-8	-6	-10	-13	-10	-11	-12	-15	-12	-11
27	-5	-6	-5	-6	-5	-9	-5	-6	-10	-15	-18	-14	-12	-9	-7	-8	-11	-20	-17	-12	-6	-8	-20	-29
28	-32	-27	-22	-19	-16	-16	-16	-21	-25	-22	-16	-16	-18	-20	-16	-8	-8	-11	-9	-6	-11	-12	-11	-12



PRINCIPAL MAGNETIC STORMS

FEBRUARY 1974

OBS. 2 letter IAGA code	GEOMAGNETIC LATITUDE	COMMENCEMENT DAY	hr min (UT)	TYPE	SC - AMPLITUDES D(')	H(γ)	Z(γ)	MAXIMUM 3 HOUR - INDEX K DAY (3 HOUR PERIOD)	K	RANGES D(')	H(γ)	Z(γ)	UT END DAY	HOUR
NE	55.1N	10	15--	..	..	..	..	12(2)	6	53	139	173	13	21
WI	54.2N	10	18--	..	..	..	..	10(7) 11(7)	6	45	205	60	13	23
BD	48.9N	10	20--	..	..	..	..	12(4)	6	42	110	55	14	16
EB	43.9N	10	19--	..	..	..	..	10(7,8) 11(7,8) 12(2,4,5) 13(6)	5	18	116	71	14	03
IR	41.0N	10	16--	..	..	..	..	10(7,8)	6	19	51	16	11	06
TU	40.4N	10	20--	..	..	..	..	12(4)	6	21	110	25	12	18
HD	07.6N	10	1500	..	..	..	..	10(7,8) 11(7) 12(4)	5	4	120	21	12	23
GU	4.0N	10	2119	..	..	..	..	11(05)	5	00	120	30	12	19
PM	18.7S	10	21--	..	..	..	..	11(5) 12(2,3)	5	7	90	50	13	18
HR	33.7S	10	20--	..	..	..	..	10(7) 11(8) 12(4)	5	20	99	87	12	18
GN	43.2S	10	07--	..	..	..	..	10(7) 12(4,5)	5	14	120	120	14	16
KG	56.5S	10	16--	..	..	..	..	10(7)	6	--	--	--	12	19
CO	64.6N	11	11--	..	..	..	..	12(4)	7	284	1460	1060	12	19
FR	49.6N	11	13--	..	..	..	..	12(5)	5	30	115	45	14	13
IR	41.0N	11	10--	..	..	..	..	12(4,5)	6	31	135	30	13	22
NE	55.1N	20	07--	..	..	..	..	21(3,4)	5	27	90	109	22	10
IR	41.0N	20	10--	..	..	..	..	20(6) 21(5)	5	21	88	29	21	24
HD	07.6N	20	0156	SC	- 0.3	+ 2	- 1	20(6)	5	4	131	13	22	01
AL	9.5N	20	0156	SC	- 0.4	9	- 2	20(6)	5	3	126	22	20	21
AN	1.5N	20	0156	SC	- 0.5	10	- 4	--	-	3	126	25	20	21
TV	1.1S	20	0156	SC	0.1	8	7	--	-	3	147	77	20	21
PM	18.7S	20	0157	SC	+ 0.1	+11	+ 9	21(5) 23(5,6) 24(4) 25(6)	5	7	130	100	29	00
HR	33.7S	20	08--	..	..	..	..	20(6)	5	19	95	92	21	17
GN	43.2S	20	07--	..	..	..	..	20(6) 21(5)	5	15	80	120	22	00
CO	64.6N	21	08--	..	..	..	..	21(5)	6	137	1010	640	21	18
CO	64.6N	22	19--	..	..	..	..	23(5,6) 25(6)	7	236	1890	920	01	17
SI	60.0N	22	21--	..	..	..	..	23(5)	7	70	600	470	28	18
NE	55.1N	22	1907	SC	3	18	--	23(1,3,5,6,7)	5	29	184	147	24	04
WI	54.2N	22	19--	..	..	..	..	22(8) 23(7,8) 24(7) 25(7)	6	32	225	85	28	23
FR	49.6N	22	21--	..	..	..	..	23(5)	5	22	140	45	29	06
BD	48.9N	22	21--	..	..	..	..	23(7)	5	23	180	55	04	18
EB	43.9N	22	19--	..	..	..	..	23(7)	6	20	137	71	01	06
IR	41.0N	22	16--	..	..	..	..	23(6)	6	21	123	34	24	13
TU	40.4N	22	19--	..	..	..	..	23(7)	6	10	160	35	01	07
SJ	29.9N	22	2015	..	..	..	..	22(8)	5	8	70	25	24	02
HD	07.6N	22	1700	..	..	..	..	23(6,7) 24(7)	5	3	86	25	25	20
HR	33.7S	22	19--	..	..	..	..	23(7,8) 24(1) 25(7) 26(4)	5	22	102	91	01	02
GN	43.2S	22	19--	..	..	..	..	23(7)	6	23	110	130	01	03
GU	4.0N	23	----	..	..	..	..	23(05)	5	00	80	20	25	21
NE	55.1N	24	0732	SC	2	9	6	24(4) 25(2,3,6) 26(3) 28(3,8)	5	26	171	109	01	07
IR	41.0N	24	15--	..	..	..	..	26(4,5,6)	5	14	95	32	26	23
IR	41.0N	24	15--	..	..	..	..	24(7) 25(6,7)	5	14	95	32	26	23
HD	07.6N	26	0100	..	..	..	..	26(4,5,6)	4	3	76	11	26	21
IR	41.0N	27	01--	..	..	..	..	27(6,8) 28(1,5,7,8)	5	19	81	32	01	05

Reports were received from the following observatories:

College Newport Fredericksburg Ebro Tucson Alibag Guam Trivandrum Hermanus Port-aux-Francais
Sitka Witteveen Boulder Irkutsk San Juan Hyderabad Annamalainagar Port Moresby Gnangara

SUDDEN COMMENCEMENTS AND SOLAR FLARE EFFECTS

FEBRUARY 1974

PRELIMINARY REPORT ON RAPID MAGNETIC VARIATIONS (by Dr. A. Romana)

The meaning of the station symbols is given in the IAGA-Bulletins nr. 12 and 32. Times of ssc, si and bay-commencements are mean values. If given by ten or more stations they are underlined.

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

none

Sudden impulses found in the magnetograms (si)

none

Solar-flare effects (sfe)

Effects confirmed by ionospheric or solar observations are underlined.

01 1311 - 1322 SZ

19 1549 - 1604 HU

26 1103 - 1111 SZ

RADIO PROPAGATION QUALITY FIGURES AND FORECASTS

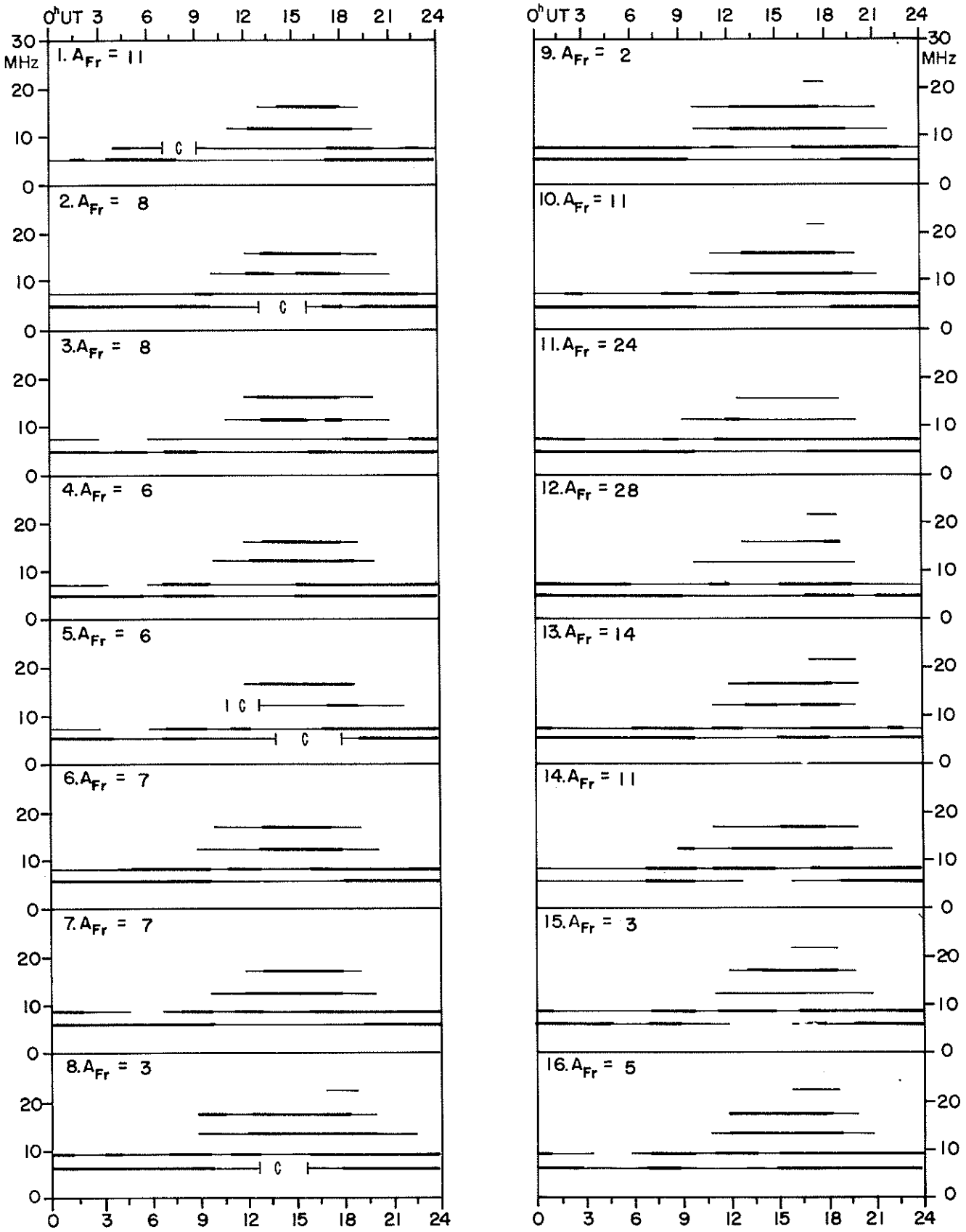
FEBRUARY 1974

North Atlantic

FEB 1974	WHOLE DAY INDICES NORTH ATLANTIC	ADVANCE FORECASTS (JC-REPORTS) FOR WHOLE DAY	NORTH ATLANTIC 6-HOURLY QUALITY FIGURES 00 TO 06	06 TO 12	12 TO 18	18 TO 24	SHORT-TERM FORECASTS ISSUED ABOUT ONE HOUR IN ADVANCE OF 02	08	14	20	GEOMAGNETIC INDICES K_{FR} HALF DAY (1)	(2)	A_{FR} OBSERVED
01	6-	6	5+	5o	7-	6-	5	5	6	6	2	2	11
02	6-	6	5o	4+	6o	6+	6	6	5	5	2	2	8
03	6o	6	6+	5+	6o	6+	6	6	5	5	3	2	8
04	6o	6	6+	5o	7-	6+	6	6	5	6	2	1	6
05	6-	6	5+	5+	6+	6o	6	6	6	6	1	2	6
06	6o	6	6-	4o	7o	7o	6	5	6	6	1	2	7
07	7-	6	7-	6o	7o	7o	6	5	6	6	2	2	7
08	6+	6	6+	5+	7-	6+	6	5	6	6	1	1	3
09	6+	6	6o	7-	7-	6+	6	6	6	6	1	1	2
10	7-	6	7-	6+	7o	7o	6	6	6	6	2	3	11
11	6o	6	6-	5+	7-	7-	6	5	5	5	3	(4)	24
12	5+	6	6o	4-	6+	6o	5	4	4	5	(4)	3	28
13	6-	6	6-	5o	6o	6+	5	4	5	5	3	3	14
14	6-	5	5o	4+	6+	6+	5	5	5	6	3	2	11
15	6o	5	5+	4+	7o	7-	5	5	6	6	1	1	3
16	6+	6	6o	5o	7o	6+	6	6	6	6	1	2	5
17	6o	6	6o	5o	7o	7-	6	6	6	5	3	2	9
18	6-	6	5+	4+	7-	6+	6	6	6	6	0	0	1
19	6+	6	6o	6o	7o	6+	6	6	6	6	1	1	3
20	7-	5	7-	7-	7o	7-	6	6	6	5	1	2	6
21	6-	5	6o	4+	6-	6o	5	5	5	5	(4)	3	21
22	6-	4	6-	6+	6-	6-	5	5	6	6	3	2	13
23	5o	4	6-	5+	5+	4o	5	5	5	5	(4)	(5)	35
24	5o	4	4o	4+	6-	6-	4	4	5	5	(4)	3	21
25	4+	5	4-	4o	5o	6-	5	5	5	5	(4)	(4)	28
26	5-	5	4o	4-	6-	6-	4	4	5	6	(4)	3	20
27	5+	6	5+	4-	6+	6o	5	4	5	6	3	3	17
28	5+	5	5-	5-	6-	6-	5	4	5	6	(4)	(4)	23

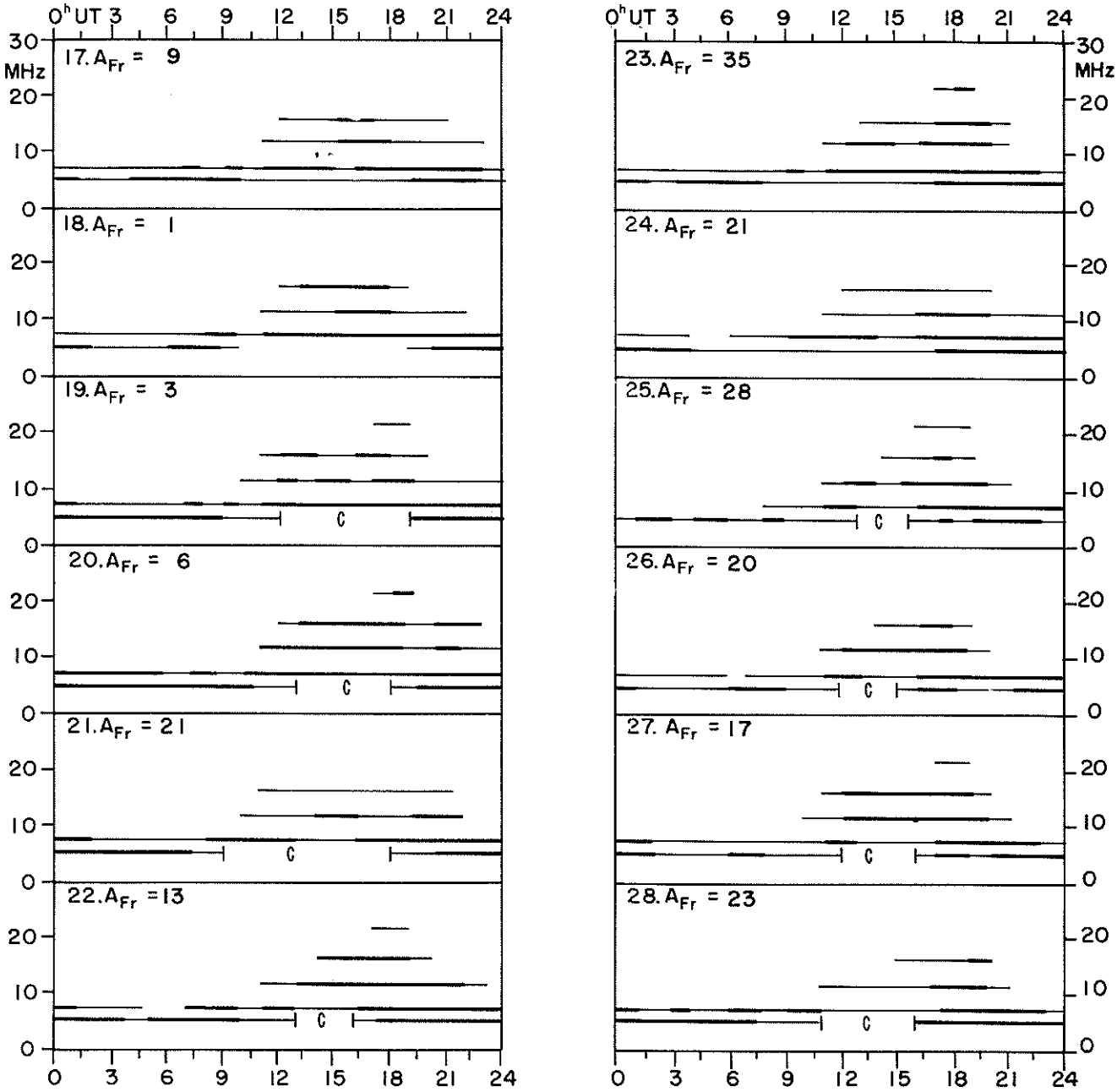
TRANSMISSION FREQUENCY RANGES -- NORTH ATLANTIC PATH

FEBRUARY 1974



TRANSMISSION FREQUENCY RANGES -- NORTH ATLANTIC PATH

FEBRUARY 1974



Field strengths from four frequencies, 8.542, 12.813, 17.084 and 22.378 MHz, as observed on a Lüchow - Halifax circuit are represented above. Heavy solid lines represent field strengths ≥ -12 dB above 1 μv/m (transmitter power reduced to 1 kW). Observed field strengths between -12 dB above 1 μv/m and -40 dB above 1 μv/m are represneted by the fine line.

Adapted from Observations by Deutsche Bundespost

RADIO PROPAGATION QUALITY INDICES

FEBRUARY 1974

Calculated from the records of four frequencies
on the circuit Lüchow - Halifax (Germany - Canada)

Date	Day	Night	D+N
1	4.3	3.8	3.8
2	4.6	3.6	3.8
3	4.8	4.4	4.2
4	5.7	4.0	4.5
5	5.9	5.6	5.4
6	5.5	4.9	4.8
7	5.1	4.9	4.7
8	6.9	6.0	6.0
9	6.2	4.8	5.2
10	6.7	5.6	5.8
11	4.5	5.1	4.5
12	3.7	4.7	4.0
13	5.3	4.4	4.6
14	5.8	4.2	4.7
15	5.9	4.2	4.7
16	6.6	4.2	5.1
17	4.9	3.6	4.0
18	5.6	5.0	4.9
19	6.1	5.5	5.4
20	7.7	5.4	6.0
21	5.2	4.6	4.6
22	6.7	4.3	5.1
23	5.5	3.2	4.1
24	5.1	3.5	4.0
25	4.4	3.5	3.8
26	4.3	3.7	3.8
27	5.9	4.0	4.7
28	4.0	3.1	3.4

USCOMM-NOAA-ASHEVILLE,N.C. 4-26-74-1125

WORLD DATA CENTER A
FOR
SOLAR-TERRESTRIAL PHYSICS

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

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