MARCH 1984 NUMBER 475 -- Part I

Solar-Geophysical Data prompt reports

Data for February 1984, January 1984 & Late Data

Explanation of Data Reports Issued as Number 474 (Supplement) February 1984

LATE DATA **Pages 111-120**

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

NUMBER 475

(Issued in Two Parts)

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

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Prompt Reports DATA FOR FEBRUARY 1984 Number 475 Part I

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ALERT PERIODS
INTERNATIONAL URSIGRAM AND WORLD DAYS SERVICE

SUMMARY OF THE GEOALERT MESSAGES FEBRUARY 1984

NO	DI	DO	WOLF	10CM	A	LOC	TOT	M	X	OUTSTANDING EVENTS	DA	LOC	DE	ALERTS
032	01	31	136	174	019	N15W76	0	0	0	PRESTO TENFLARE 220 FLUX UNITS	01	N15W76	Q	SOLALERT
						N16W68	3	1	0	31/0705Z DURATION 35 MINUTES		N16W68	Q	01/XX
						S15W65	0	0	0			S15W65	Q	MAGALERT
						N15W57	8	0	0			N15W57	A	MINOR 01/XX
						N12W35	7	0	0			N12W35	E	
						N13W12	3	0	0			N13W12	E	
						S12E08	0	0	0			S12E08	Q	
						S12E76	0	0	0			S12E76	Q	
033	02	01	135	159	013	N17W82	2	0	0	PRESTO TENFLARE 1894 FLUX UNITS	02	N17W82	Q	SOLALERT
						N14W69	3	0	0	01/1922Z IN PROGRESS		N14W69	A	02/XX
						N12W48	2	0	0			N12W48	E	MAGALERT
						N13W25	10	1	0			N13W25	E	02/XX
						S13W05	0	0	0			S13W05	Q	
						S13E12	0	0	0			S13E12	Q	
						S12E64	0	0	0			S13E64	Q	
034	03	02	099	144	012	N15W81	4	0	0		03	N15W81	E	SOLALERT
						N12W60	9	0	0			N12W60	A	03/XX
						N13W39	5	0	0			N13W39	A	MAGALERT
						S13W20	3	0	0			S13W20	Q	03/04
						S12W02	0	0	0			S12W02	Q	
						S12E51	1	0	0			S12E51	Q	
035	04	03	083	135	016	N11W74	3	0	0		04	N11W74	A	SOLALERT
						N12W53	1	0	0			N12W53	Q	04/XX
						S13W35	1	1	0			S13W35	Q	MAGALERT 04
						S12E38	0	0	0			S12E38	Q	
						S09E73	0	0	0			S09E73	Q	
036	05	04	069	130	037	N11W88	2	2	0		05	N11W88	E	SOLNIL
						N12W70	0	0	0			N12W70	Q	MAGALERT
						S12E23	0	0	0			S12E23	Q	05/XX
						N09E57	0	0	0			N09E57	Q	
						S09E61	0	0	0			S09E61	E	
037	06	05	106	117	015	N12W83	0	0	0	PRESTO MAGSTORM 04/08XXZ	06	N12W83	Q	SOLQUIET
						S13E11	0	0	0			S13E11	Q	MAGALERT
						S17E18	0	0	0			S17E18	Q	MINOR 06/XX
						N09E44	0	0	0			N09E44	Q	
						S09E49	2	0	0			S09E49	E	
						S08E70	0	0	0			S08E70	Q	
						S13E74	0	0	0			S13E74	Q	
038	07	06	111	115	011	N11W94	0	0	0		07	N11W94	Q	SOLQUIET
						S12W03	1	0	0			S12W03	Q	MAGNIL
						S16E06	0	0	0			S16E06	Q	
						N10E30	0	0	0			N10E30	Q	
						S10E35	6	0	0			S10E35	E	
						S08E58	0	0	0			S08E58	Q	
						S12E66	3	0	0			S12E66	Q	
039	08	07	114	117	010	S12W16	2	0	0		08	S12W16	Q	SOLQUIET
						S13W10	0	0	0			S13W10	Q	MAGQUIET
						N11E17	1	0	0			N11E17	Q	
						S10E21	5	0	0			S10E21	E	
						S08E45	0	0	0			S08E45	Q	
						S12E50	7	0	0			S12E50	Q	
						N13E65	0	0	0			N13E65	Q	
040	09	08	093	131	008	S13W29	3	0	0		09	S13W29	Q	SOLQUIET
						N10E02	2	1	0			N10E02	E	MAGQUIET
						S10E10	8	0	0			S10E10	E	
						S08E31	0	0	0			S08E31	Q	
						S13E44	17	0	0			S13E44	E	
041	10	09	148	144	007	S13W46	7	0	0		10	S13W46	Q	SOLQUIET

ALERT PERIODS
INTERNATIONAL URSIGRAM AND WORLD DAYS SERVICE

SUMMARY OF THE GEOALERT MESSAGES FEBRUARY 1984

NO	DI	DO	WOLF	10CM	A	LOC	TOT	M	X	OUTSTANDING EVENTS	DA	LOC	DE	ALERTS
						S15W15	0	0	0			S15W15	Q	MAGQUIET
						N09W12	0	0	0			N09W12	Q	
						S11W05	3	0	0			S11W05	E	
						S09E17	0	0	0			S09E17	Q	
						S13E31	11	0	0			S13E31	E	
042	11	10	162	147	014	S13W60	5	1	0	PRESTO TENFLARE 130 FLUX UNITS	11	S13W60	E	SOLALERT
						S14W33	0	0	0	10/0136Z DURATION 20 MINUTES		S14W33	Q	11/13
						N09W29	1	0	0			N09W29	Q	MAGALERT
						S11W19	3	0	0			S11W19	E	MINOR 11/12
						S09E04	1	0	0			S09E04	Q	
						S13E17	10	0	0			S13E17	E	
043	12	11	170	147	020	S12W74	7	1	0	PRESTO TENFLARE 110 FLUX UNITS	12	S12W74	E	SOLALERT
						S14W46	0	0	0	11/0236Z. DURATION 10 MINUTES		S14W46	Q	12/13
						S09W42	0	0	0			S09W42	Q	MAGNIL
						S11W31	1	0	0			S11W31	E	
						S10W10	0	0	0			S10W10	Q	
						S13E04	8	1	0			S13E04	E	
						S05E68	0	0	0			S05E68	Q	
044	13	12	147	141	010	S12W86	4	0	0		13	S12W86	Q	SOLALERT
						S14W60	1	0	0			S14W60	Q	13/14
						N09W56	1	0	0			N09W56	Q	MAGALERT
						S10W44	1	0	0			S10W44	Q	MINOR 13/14
						S10W22	0	0	0			S10W22	Q	
						S13W10	9	1	0			S13W10	E	
						S06E55	0	0	0			S06E55	Q	
						S04E74	0	0	0			S04E74	Q	
045	14	13	118	132	025	S15W76	1	0	0		14	S15W76	Q	SOLNIL
						N08W71	0	0	0			N08W71	Q	MAGALERT
						S09W59	1	0	0			S09W59	Q	MINOR 14
						S10W37	0	0	0			S10W37	Q	
						S13W24	7	0	0			S13W24	E	
						S07E42	0	0	0			S07E42	Q	
						S04E58	0	0	0			S04E58	Q	
046	15	14	126	129	037	S15W89	0	0	0		15	S15W89	Q	SOLQUIET
						S11W72	2	0	0			S11W72	Q	MAGALERT
						S11W50	0	0	0			S11W50	Q	MINOR 15
						S13W37	2	0	0			S13W37	E	
						S06E28	0	0	0			S06E28	Q	
						S05E45	0	0	0			S05E45	Q	
						N07E63	0	0	0			N07E63	Q	
						S22E71	0	0	0			S22E71	Q	
047	16	15	089	116	013	S10W85	1	0	0		16	S10W85	Q	SOLQUIET
						S09W63	0	0	0			S09W63	Q	MAGNIL
						S12W50	3	0	0			S12W50	Q	
						S05E33	0	0	0			S05E33	Q	
						N07E50	0	0	0			N07E50	Q	
						S21E58	0	0	0			S21E58	Q	
048	17	16	069	117	008	S10W77	0	0	0	PRESTO PROTON EVENT BEGAN	17	S10W77	Q	SOLQUIET
						S13W63	4	0	0	16/0910Z MAX OF 660 P/CM2/SEC/		S13W63	E	MAGQUIET
						S05E18	0	0	0	STER AT > 10MEV AT 16/1005Z		S05E18	Q	
						N07E37	0	0	0	PCA BEGAN 16/1315Z WITH MAX OF		N07E37	Q	
						S22E45	0	0	0	0.8DB AT 16/1545Z END 16/1830Z		S22E45	Q	
049	18	17	080	119	011	S12W89	0	0	0	PRESTO PROTON EVENT WITH MAX OF	18	S12W89	Q	SOLALERT
						S14W73	2	0	0	280 P/CM2/SEC/STER AT >100 MEV		S14W73	E	18/XX
						S05E04	0	0	0	AT 16/0935Z. TENFLARE 17/2231Z		S05E04	Q	MAGQUIET
						N08E23	0	0	0	560 FLUX UNITS 57 MINUTES		N08E23	Q	
						S19E35	0	0	0	DURATION.		S19E35	Q	
						N15E77	2	0	1			N15E77	A	

ALERT PERIODS
INTERNATIONAL URSIGRAM AND WORLD DAYS SERVICE

SUMMARY OF GEOALERT MESSAGES FEBRUARY 1984

NO	DI	DO	WOLF	10CM	A	LOC	TOT	M	X	OUTSTANDING EVENTS	DA	LOC	DE	ALERTS
050	19	18	072	126	016	S14W84	1	0	0	PRESTO TENFLARE 880 FLUX UNITS	19	S14W84	E	SOLALERT
						S05W09	0	0	0	17/2223Z DURATION 95 MINUTES		S05W09	Q	19/XX
						S18E25	1	0	0			S18E25	Q	MAGQUIET
						N15E62	11	2	0			N15E62	A	
051	20	19	090	134	008	S15W98	0	0	0	PRESTO PROTON EVENT BEGAN 19/	20	S15W98	Q	SOLALERT
						S06W24	0	0	0	1310Z MAX 22P/CM2/SEC/STER >10		S06W24	Q	20/22
						S18E11	1	0	0	MEV. PCA REACHED 0.5DB AT 19/		S18E11	Q	MAGQUIET
						N15E48	6	1	0	1745Z ENDED 19/2030Z.		N15E48	A	
						N10E78	0	0	0			N10E78	Q	
052	21	20	090	138	010	S06W49	0	0	0		21	S06W49	Q	SOLALERT
						S22E04	0	0	0			S22E04	Q	21/XX
						N15E37	9	0	0			N15E37	A	MAGALERT
						N10E62	0	0	0			N10E62	Q	21/XX
053	22	21	097	147	014	S06W61	1	0	0		22	S06W61	Q	SOLALERT
						S19W15	0	0	0			S19W15	Q	22/XX
						N15E22	5	0	0			N15E22	A	MAGALERT
						N10E47	0	0	0			N10E47	Q	22/XX
054	23	22	117	162	009	S05W76	0	0	0		23	S05W76	Q	SOLALERT
						S19W30	3	0	0			S19W30	Q	23/XX
						N15E10	9	1	0			N15E10	A	MAGNIL
						N11E36	3	0	0			N11E36	E	
						S12E77	11	0	0			S12E77	Q	
055	24	23	175	170	011	S06W89	0	0	0		24	S06W89	Q	SOLALERT
						S19W43	3	0	0			S19W43	Q	24/XX
						N15W05	8	0	0			N15W05	A	MAGQUIET
						N11E22	2	0	0			N11E22	Q	
						S12E63	13	0	0			S12E63	E	
						N22E67	0	0	0			N22E67	Q	
056	25	24	163	172	011	S19W57	1	0	0		25	S19W57	Q	SOLALERT
						N16W16	10	1	0			N16W16	A	25/XX
						N12E11	5	1	0			N12E11	Q	MAGALERT
						S12E50	8	1	0			S12E50	E	MINOR 25/XX
						N22E53	0	0	0			N22E53	E	STRATWARM
057	26	25	148	174	009	S19W70	2	0	0	PRESTO TENFLARE 630 FLUX UNITS	26	S19W70	Q	SOLALERT
						N16W29	5	0	0	25/0309Z DURATION 10 MINUTES		N16W29	A	26/XX
						N11W02	2	0	0			N11W02	Q	MAGALERT
						S12E36	7	1	0			S12E36	E	MINOR 26/27
						N22E37	0	0	0			N22E37	Q	
058	27	26	148	168	013	S19W86	0	0	0		27	S19W86	Q	SOLALERT
						N16W41	10	0	0			N16W41	E	27/XX
						N11W17	7	0	0			N11W17	E	MAGALERT
						S13W12	0	0	0			S13W12	Q	MINOR 27/XX
						S12E22	8	1	0			S12E22	E	
						N22E23	0	0	0			N22E23	Q	
059	28	27	103	157	028	N16W55	9	1	0		28	N16W55	A	SOLALERT
						N11W29	3	0	0			N11W29	A	28/XX
						S12W14	0	0	0			S12W14	Q	MAGALERT
						S12E10	5	0	0			S12E10	E	MINOR 28 STRATWARM
060	29	28	110	152	009	N15W68	2	0	0		29	N15W68	A	SOLALERT
						N11W42	2	0	0			N11W42	A	29/XX
						S12W27	0	0	0			S12W27	Q	MAGNIL
						S12W04	1	0	0			S12W04	E	STRATWARM
						S16E63	1	0	0			S16E63	Q	
061	01	29	099	151	016	N15W83	5	1	0		01	N15W83	A	SOLALERT
						N11W58	3	0	0			N11W58	A	01/XX

ALERT PERIODS
INTERNATIONAL URSIGRAM AND WORLD DAYS SERVICE

SUMMARY OF THE GEOALERT MESSAGES FEBRUARY 1984

NO	DI	DO	WOLF	10CM	A	LOC	TOT	M	X	OUTSTANDING EVENTS	DA	LOC	DE	ALERTS
						S12W41	1	0	0			S12W41	Q	MAGQUIET
						S12W17	2	0	0			S12W17	E	STRARWARM
						S16E50	2	0	0			S16E50	E	

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

FEBRUARY 1984

PRESTO MESSAGES (THE RAPID REPORT OF MAJOR EVENTS)

PRESTO OTTAWA 01/2000Z TENFLARE 1894 FLUX UNITS 01/1923Z IN PROGRESS
PRESTO BOULDER 01/2000Z TENFLARE 1600 FLUX UNITS 01/1934Z IN PROGRESS
PRESTO KAKIOKA 05/0115Z MAGSTORM 04/08XXZ
PRESTO TOYOKAWA 10/0200Z TENFLARE 130 FLUX UNITS 10/0136Z DURATION 20 MINUTES
PRESTO TOYOKAWA 11/0514Z TENFLARE 110 FLUX UNITS 11/0236Z DURATION 10 MINUTES
PRESTO BOULDER 16/1330Z PROTON EVENT BEGAN AT 16/0910Z 660 PROTONS/CM2/SEC/STER AT > 10MEV AT 16/1005Z AND 280 PROTONS/CM2/SEC/STER AT > 100MEV. PCA BEGAN 16/1315Z WITH MAXIMUM OF 0.8DB AT 16/1545Z END AT 16/1830Z.
PRESTO TOYOKAWA 18/0040Z TENFLARE 880 FLUX UNITS 17/2223Z DURATION 95 MINUTES
PRESTO BOULDER 19/2045Z PROTON EVENT BEGAN 19/1310Z MAX 22P/CM2/SEC/STER >10MEV. PCA REACHED 0.5DB AT 19/1745Z ENDED 19/2030Z
PRESTO BOULDER 25/0400Z TENFLARE 510 FLUX UNITS 25/0311Z DURATION 29 MINUTES
PRESTO TOYOKAWA 25/0405Z TENFLARE 630 FLUX UNITS 25/0309Z DURATION 10 MINUTES

STRATWARM MESSAGES FOR FEBRUARY 1984

24 FEBRUARY
STRATWARM ALERT /FRIDAY/ STRATWARM EXISTS. WARM REGION STRONGLY DEVELOPED OVER SIBERIAN ALEUTIAN REGION LAST WEEK. HAS INTENSIFIED IN MIDDLE AND UPPER STRATOSPHERE AND MOVED OVER POLAR AREA.
28 FEBRUARY
STRATWARM ALERT /MONDAY/ STRATWARM EXISTS. WARM AIR OVER ARCTIC 20-50 KM HIGH PRESSURE MEAN ZONAL EASTERLY POLEWARD OF 60 NORTH ABOVE 28 KM. MAJOR WARMING IN PROGRESS.
29 FEBRUARY
STRATWARM ALERT /TUESDAY/ STRATWARM EXISTS. WARM AIR AND EASTERLILES OVER POLAR REGION DIMINISHING AFTER REACHING PEAK FEBRUARY 23-25.
01 MARCH
STRATWARM ALERT /WEDNESDAY/ STRATWARM ENDS. WARM AIR AND HIGH PRESSURE OVER ARCTIC GRADUALLY DIMINISHING.

INTERNATIONAL* (R_I) RELATIVE SUNSPOT NUMBERS

Day	1983 Final Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	1984 Prov Jan	Feb
01	109	53	114	61	62	131	46	29	17	26	10	110
02	93	70	104	72	59	128	56	51	22	23	16	82
03	86	61	94	73	61	105	59	63	37	15	17	61
04	93	53	85	68	87	103	69	74	51	14	18	61
05	113	36	95	77	80	79	84	65	66	17	26	66
06	88	49	88	85	79	49	78	75	74	39	29	76
07	77	64	92	104	79	60	72	87	84	41	37	79
08	68	59	98	100	82	70	68	99	90	48	36	84
09	74	59	110	100	69	69	74	106	70	71	50	110
10	55	64	114	86	59	63	70	121	68	82	44	120
11	49	69	101	73	68	88	65	136	56	76	48	118
12	32	65	114	66	86	103	41	122	43	66	51	108
13	12	64	132	72	85	104	36	100	36	66	45	82
14	24	64	125	88	88	97	36	80	29	52	46	77
15	44	53	130	92	92	93	42	72	28	50	44	80
16	63	54	99	84	93	80	33	61	38	35	46	53
17	74	63	93	79	96	72	35	60	31	46	51	51
18	88	75	99	78	98	71	45	63	36	36	49	50
19	82	110	88	103	96	54	40	46	26	31	51	57
20	82	90	105	117	101	40	32	26	12	25	69	54
21	87	87	110	117	109	52	36	18	18	21	76	76
22	70	83	104	136	114	50	38	22	0	15	69	100
23	66	91	102	143	95	51	42	22	0	20	70	121
24	60	92	111	122	105	35	46	20	0	22	70	113
25	48	123	98	122	85	52	42	18	0	21	99	117
26	70	118	100	110	58	53	50	20	7	23	98	101
27	72	126	85	92	49	51	51	12	10	12	105	78
28	48	146	68	83	40	55	48	15	12	10	106	78
29	44	142	88	68	73	63	43	16	19	11	118	88
30	54	137	68	63	89	59	33	15	21	13	110	
31	37		60		110	45		16		9	82	
Mean	66	81	99	91	82	72	50	56	33	33	58	84

*International sunspot numbers have replaced the Zurich values since January 1981.
The yearly mean sunspot number equaled 66.6 in 1983.

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

ALGONQUIN RADIO OBSERVATORY, OTTAWA

Day	Mar 83	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan 84	Feb
01	145.4	100.7	142.0	131.3	124.1*	151.1	110.5*	117.5	98.3	90.5	84.3	154.6
02	138.7	101.2	145.4	139.0*	125.4	145.4*	110.9	120.4	97.6	88.9	87.4	142.0*
03	141.0	101.4*	139.4	139.3	131.5	139.4*	106.4	123.1	96.9	88.5	89.5	131.4
04	143.7	100.8	132.9	149.2	137.2	136.5	110.5	125.1	103.1	91.9	91.0	126.0
05	146.6	98.7	130.8	167.9*	132.1	136.5	117.6	126.6*	105.1	92.0	88.2	114.2
06	139.3	99.5	125.8*	191.4	132.4	142.0	120.7	132.7	---	97.1*	85.6	111.8
07	132.3	102.2	117.4	179.5	132.7	141.9	118.6	133.9	108.5	98.6	86.5	113.6
08	128.1	104.1*	127.0	173.7	127.9	141.0	118.4	131.1*	103.5	98.3	92.3	127.2
09	122.0	106.1	132.2*	159.5*	123.1	142.9	115.3	130.4	99.2	108.2	94.4	139.9
10	115.1	103.3	143.5*	150.5*	123.1	151.6	109.7	133.6*	100.8	108.0	95.2	136.7*
11	103.0	104.4	159.3*	139.2	125.7	151.3	110.5	138.3	96.7	101.7*	96.8	141.1*
12	99.5*	107.7	160.4*	134.5	124.7	156.7*	104.9*	133.7	89.6	101.1	101.1	135.8*
13	95.8	109.1	154.4	128.3	123.5	147.3	104.4	133.5*	91.9	100.8	102.1	128.4
14	95.9	111.7	153.5*	126.4*	124.4	141.6*	105.2	131.5*	91.0	96.5	99.2	120.3*
15	100.6*	103.6	145.7	128.7	124.6	135.8*	106.3*	127.0	90.9	92.2	97.8	113.4
16	107.8	105.1	134.0*	128.8*	121.3	132.1	106.3*	117.2A	90.6	93.5*	96.6*	114.5*
17	114.5	113.5	131.7*	130.7	120.0	126.8	105.1	110.9*	85.6	92.0	95.2	116.5
18	117.7	120.7	137.6	130.5	116.4*	122.2	102.5	103.6	84.4	90.1	95.0	122.2*
19	118.3	125.0	146.8	133.8	119.5	117.7	101.2	105.2	82.3	86.2	93.4	128.4*
20	120.7	127.4	151.8*	136.9	125.1	118.7	100.4	99.1	80.3	83.6	102.2	134.6
21	118.8*	133.3	149.8	144.0	128.1*	114.2	103.0	89.3	79.3	82.3	103.3	143.8
22	117.2	139.7	152.0	148.9	138.9	110.8	106.0	87.2	80.1	82.9	110.5	158.0
23	116.2	140.4	143.7	149.8	132.9*	110.8	112.6	87.8	78.2	83.0	113.3	166.1
24	117.1	142.7	140.5	141.7*	136.3*	108.7	111.8	88.6	78.8	83.1	126.4*	172.9*
25	114.2*	145.6	138.8	141.4	136.7*	104.2	110.5*	89.2	79.2	82.4*	146.8	169.4*
26	114.7*	146.8	132.3	144.1A	128.9*	105.8	114.6*	89.1	80.4	82.9	164.8*	164.2
27	109.6	149.6	130.5	137.1	123.1	103.7	119.8	88.9	84.4	83.5	172.3	154.3
28	104.9	156.4*	133.1	129.4*	127.1	102.8	114.8	90.4	86.6	80.7	168.9	148.8
29	98.9	148.4	139.0	128.9	138.5*	105.7	114.5	90.7	89.4	81.1	174.6	148.1
30	100.7	147.2	135.4*	126.8	144.3	104.0	113.0	92.6	90.0	81.3	161.5	
31	98.7		138.0*		153.1*	104.2		95.5*		83.8	169.3	
Mean	117.3	119.9	140.2	143.0	129.1	127.5	110.2	111.7	90.4	90.5	112.4	137.2

A = interpolated value; --- = no observation.
*Adjusted for burst in progress at time of measurement.
The yearly mean 2800 MHz flux adjusted to 1 astronomical unit equaled 119.8 in 1983.

DAILY SOLAR INDICES

FEBRUARY 1984

Day	Julian Day	Bartels Cycle Day	Sunspot Numbers R_I	Sunspot Numbers $R_{A'}$	Obs Flux Ottawa (2800)	Solar Flux Adjusted to 1 Astronomical Unit: SGMR (15400)	SGMR (8800)	SGMR (4995)	Ottawa (2800)	SGMR (2695)	SGMR (1415)	SGMR (606)	SGMR (410)	SGMR (245)
01	32	26	110	98	159.2	628	378	209	154.6	149	111	88	42	39
02	33	27	82	80	146.2*	634	368	187	142.0*	144	108	90	55	59
03	34	1	61	60	135.3	608	335	158	131.4	125	99	82	34	14
04	35	2	61	66	129.6	382	265	137	126.0	123	101	79	33	23
05	36	3	66	66	117.5	493	281	137	114.2	111	93	73	30	17
06	37	4	76	79	115.0	597	300	130	111.8	116	97	74	30	15
07	38	5	79	78	116.8	596	302	143	113.6	112	96	77	32	14
08	39	6	84	87	130.7	---	---	---	127.2	---	---	--	--	--
09	40	7	110	113	143.8	615	337	168	139.9	132	110	89	46	39
10	41	8	120	121	140.3*	609	334	179	136.7*	135	106	84	44	37
11	42	9	118	123	144.9*	606	326	165	141.1*	140	112	81	33	38
12	43	10	108	112	139.4*	609	306	161	135.8*	130	108	82	38	17
13	44	11	82	99	131.7	598	299	151	128.4	120	103	77	31	16
14	45	12	77	82	123.4*	567	306	143	120.3*	119	104	77	31	13
15	46	13	80	76	116.3	533	286	126	113.4	108	94	68	29	16
16	47	14	53	40	117.3*	513	274	129	114.5*	113	97	69	29	15
17	48	15	51	39	119.4	569	309	139	116.5	104	94	76	31	14
18	49	16	50	47	125.1*	576	312	145	122.2*	109	96	60	28	13
19	50	17	57	49	131.4*	614	320	165	128.4*	121	98	77	31	14
20	51	18	54	60	137.6	611	330	178	134.6	125	107	79	34	18
21	52	19	76	86	147.0	608	344	164	143.8	133	110	82	30	17
22	53	20	100	100	161.6	617	326	172	158.0	141	121	85	33	16
23	54	21	121	102	169.7	618	328	202	166.1	150	132	88	34	16
24	55	22	113	118	176.6*	568	328	187	172.9*	158	135	86	34	28
25	56	23	117	107	172.9*	---	---	---	169.4*	---	---	--	--	--
26	57	24	101	95	167.6	---	---	---	164.2	---	---	--	--	--
27	58	25	78	72	157.3	---	---	---	154.3	---	---	--	--	--
28	59	26	78	74	151.7	---	---	---	148.8	---	---	--	--	--
29	60	27	88	78	150.8	---	---	---	148.1	---	---	--	--	--
Mean			84	83	140.6	581	317	159	137.2	127	106	79	34	22

*Adjusted for burst in progress at time of measurement.

The observed and the adjusted Ottawa fluxes tabulated above are the "Series C" daily values reported by an interpolated flux. Numbers in parentheses in the column headings denote frequencies in MHz.

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

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

OBSERVED AND PREDICTED SOLAR ACTIVITY INDICES

FEBRUARY 1984

Date	RELATIVE SUNSPOT NUMBERS: Zurich or Internat (R_I) Monthly Mean	Zurich or Internat (R_I) Smoothed	American (R_A) Monthly Mean	American (R_A) Smoothed	Derived (R_S) Monthly Mean	Derived (R_S) Smoothed	2800 MHz RADIO FLUX Adjusted to 1 AU (S_a) Monthly Mean	Adjusted to 1 AU (S_a) Smoothed
Mar 80	126.2	161	107.9	153	117.8	153	166.5	200
Apr	164.1	159	138.5	151	164.0	152	209.3	198
May	179.7	156	172.3	149	185.4	151	229.1	197
Jun	157.3	155	153.6	149	153.2	151	199.3	198
Jul	136.3	153	136.0	144	144.1	151	190.8	197
Aug	135.4	150	133.0	144	121.9	150	170.3	196
Sep	155.0	150	150.0	146	138.8	152	185.9	198
Oct	164.7	150	160.8	149	157.1	154	202.9	200
Nov	147.9	148	149.9	149	168.5	153	213.4	199
Dec	174.4	143	167.5	145	174.3	150	218.8	196
Jan 81	114.0	140	115.4	144	120.5	149	169.0	195
Feb	141.3	142	143.7	146	153.5	152	199.5	198
Mar	135.5	143	149.2	149	157.5	156	203.2	202
Apr	156.4	143	169.2	149	180.7	158	224.7	204
May	127.5	143	141.3	149	152.8	159	198.9	204
Jun	90.9	142	99.0	147	112.9	158	161.9	203
Jul	143.8	140	154.3	146	152.1	157	198.2	203
Aug	158.7	141	170.4	147	182.1	158	226.0	203
Sep	167.3	143	174.5	148	177.7	158	221.9	204
Oct	162.4	142	157.0	146	178.6	156	222.8	202
Nov	137.5	139	138.8	142	157.6	151	203.3	197
Dec	150.1	138	145.0	140	155.5	149	201.4	195
Jan 82	111.1	137	110.4	139	124.2	148	173.4	195
Feb	163.6	133	161.0	134	163.6	144	208.9	191
Mar	153.8	129	155.5	130	163.0	139	208.3	186
Apr	122.0	124	121.9	124	113.9	134	162.9	182
May	82.2	120	82.6	120	97.7	129	147.9	177
Jun	110.4	117	113.5	118	129.6	127	177.4	175
Jul	106.1	115	113.3	117	116.0	125	164.8	174
Aug	107.6	109	110.5	111	123.9	120	172.1	168
Sep	118.8	101	117.8	103	118.5	112	167.1	161
Oct	94.7	96	90.1	97	111.8	106	160.9	155
Nov	98.1	95	93.2	95	114.8	103	163.7	153
Dec	127.0	95	145.0	95	146.7	101	193.2	151
Jan 83	84.3	93	82.8	93	86.7	98	137.7	148
Feb	51.0	90	53.4	90	67.2	94	119.6	145
Mar	66.5	86	60.5	85	64.7	90	117.3	141
Apr	80.7	82	74.5	81	67.5	85	119.9	136
May	99.2	71	97.7	77	86.1	80	137.1	131
Jun	91.1	70	93.1	69	92.4	72	143.0	124
Jul	82.2	66*	82.2	68	77.4	66	129.1	118
Aug	71.8	66*	69.2	67	75.7	66	127.5	118
Sep	50.3	**65(3)***	47.4	**66**	57.0	**65**	110.2	---
Oct	55.8	**65(5)***	52.3	**66**	58.6	**65**	111.7	---
Nov	33.3	**64(7)***	30.2	**65**	35.6	**64**	90.4	---
Dec	33.4	**63(8)***	32.3	**64**	35.7	**63**	90.5	---
Jan 84	57.6†	**62(9)***	---	**63**	59.4	**62**	112.4	---
Feb	84.5†	**60(10)***	---	**61**	86.2	**60**	137.2	---
Mar	---	**57(12)***	---	**58**	---	**57**	---	---
Apr	---	**54(15)***	---	**54**	---	**54**	---	---
May	---	**52(17)***	---	**52**	---	**52**		
Jun	---	**51(18)***	---	**52**	---	**51**	---	---
Jul	---	**50(19)***	---	**50**	---	**50**	---	---
Aug	---	**48(20)***	---	**49**	---	**48**	---	---

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

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

†International numbers replaced the Zurich values in January 1981.

SMOOTHED OBSERVED AND PREDICTED SUNSPOT NUMBERS FOR CYCLE 21

FEBRUARY 1984

Month	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1976	15	13	12	13	13	12(m)	13	14	14	13	14	15
1977	17	18	20	22	24	26	29	33	39	46	52	57
1978	61	65	70	77	83	89	97	104	108	111	113	118
1979	124	131	137	141	147	153	155	155	156	158	162	165(M)
1980	164	163	161	159	156	155	153	150	150	150	148	143
1981	140	142	143	143	143	142	140	141	143	142	139	138
1982	137	133	129	124	119	117	115	109	101	96	95	95
1983	93	90	86	82	71	71	66	66	65 (3)	65 (5)	64 (7)	63 (8)
1984	62 (9)	60 (10)	57 (12)	54 (15)	52 (17)	51 (18)	50 (19)	48 (20)	46 (21)	44 (21)	42 (20)	40 (20)
1985	39 (21)	37 (20)	36 (20)	35 (20)	34 (20)	32 (20)	31 (19)	29 (19)	29 (18)	28 (19)	27 (19)	26 (20)
1986	26 (20)	26 (20)	24 (19)	23 (19)	22 (18)	20 (18)	18 (17)	17 (17)	16 (16)	16 (14)	15 (13)	15 (12)

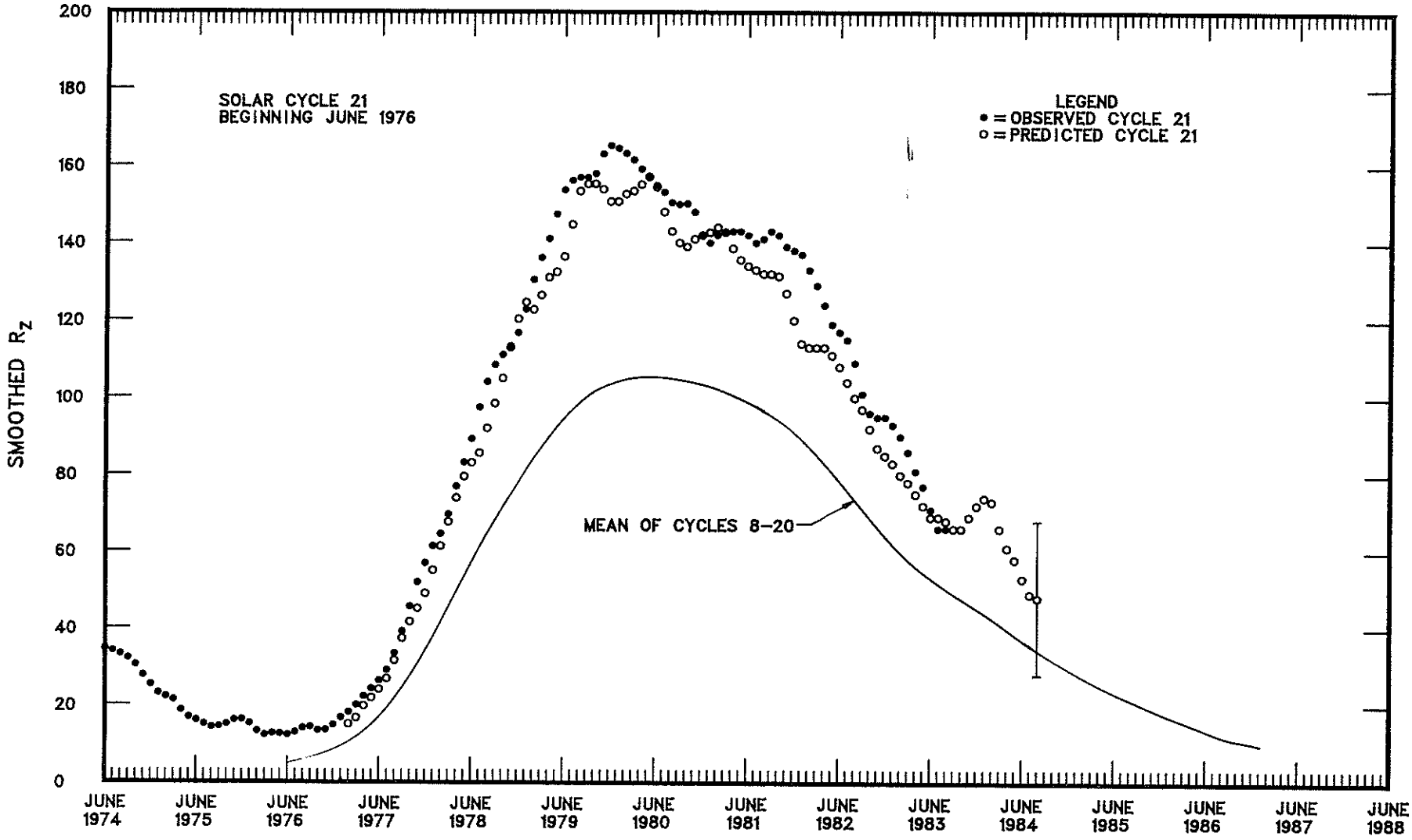
The letter m in parentheses marks the minimum of Sunspot Cycle 21 and M marks the maximum.

For the current solar cycle, this table gives observed smoothed sunspot numbers up to the one calculated from the most recently measured monthly mean. These smoothed observed values are based on final monthly mean Zurich numbers through 1980, on final international numbers through 1983, and on provisional international numbers thereafter. Some table entries after the June 1976 value will change slightly, when we incorporate final data for 1984.

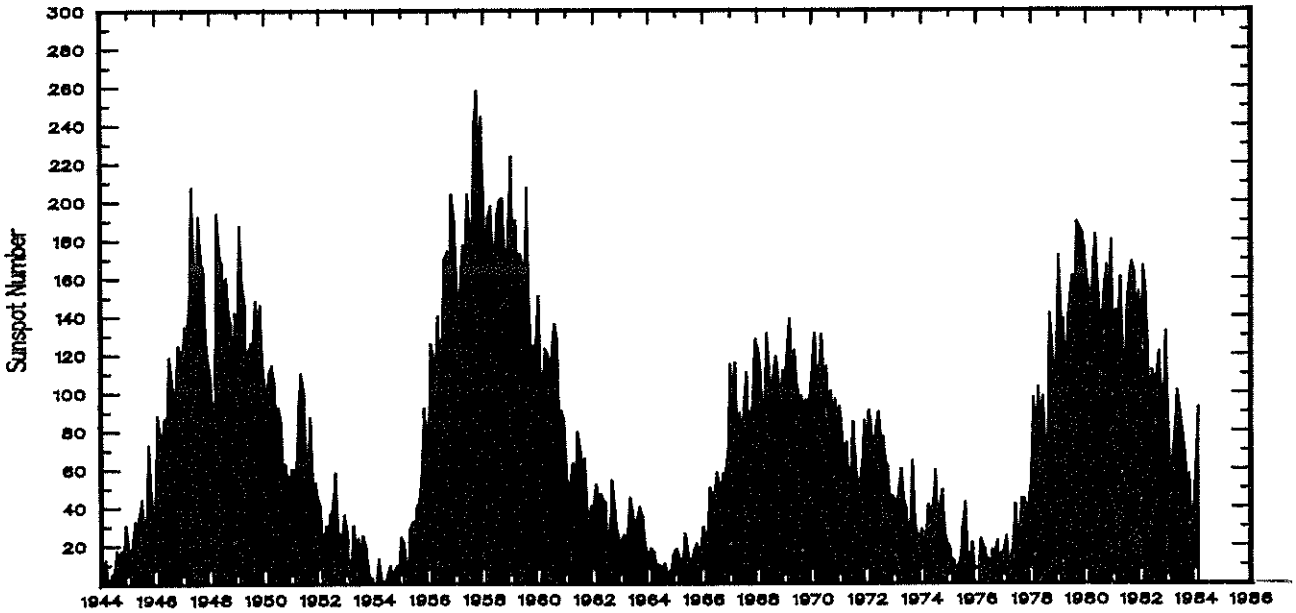
The entries with numbers in parentheses below them denote predictions by the McNish-Lincoln method. (See page 9 in the February 1984 edition of the "Solar-Geophysical Data" supplement.) By adding to and subtracting from each prediction the number in parentheses, one generates the 90% confidence interval. Consider, for example, the August 1984 prediction tabulated above. There exists a 90% chance that in August 1984 the actual smoothed sunspot number will fall somewhere between 28 and 68.

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

OBSERVED AND ONE-YEAR-AHEAD PREDICTED SMOOTHED SUNSPOT NUMBERS



MONTHLY MEAN SUNSPOT NUMBERS
January 1944 – February 1984



MONTHLY MEAN SUNSPOT NUMBERS

Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1944	3.7	0.5	11.0	0.3	2.5	5.0	5.0	16.7	14.3	16.9	10.8	28.4
1945	18.5	12.7	21.5	32.0	30.6	36.2	42.6	25.9	34.9	68.8	46.0	27.4
1946	47.6	86.2	76.6	75.7	84.9	73.5	116.2	107.2	94.4	102.3	123.8	121.7
1947	115.7	133.4	129.8	149.8	201.3	163.9	157.9	188.8	169.4	163.6	128.0	116.5
1948	108.5	86.1	94.8	189.7	174.0	167.8	142.2	157.9	143.3	136.3	95.8	138.0
1949	119.1	182.3	157.5	147.0	106.2	121.7	125.8	123.8	145.3	131.6	143.5	117.6
1950	101.6	94.8	109.7	113.4	106.2	83.6	91.0	85.2	51.3	61.4	54.8	54.1
1951	59.9	59.9	55.9	92.9	108.5	100.6	61.5	61.0	83.1	51.6	52.4	45.8
1952	40.7	22.7	22.0	29.1	23.4	36.4	39.3	54.9	28.2	23.8	22.1	34.3
1953	26.5	3.9	10.0	27.8	12.5	21.8	8.6	23.5	19.3	8.2	1.6	2.5
1954	0.2	0.5	10.9	1.8	0.8	0.2	4.8	8.4	1.5	7.0	9.2	7.6
1955	23.1	20.8	4.9	11.3	28.9	31.7	26.7	40.7	42.7	58.5	89.2	76.9
1956	73.6	124.0	118.4	110.7	136.6	116.6	129.1	169.6	173.2	155.3	201.3	192.1
1957	165.0	130.2	157.4	175.2	164.6	200.7	187.2	158.0	235.8	253.8	210.9	239.4
1958	202.5	164.9	190.7	196.0	175.3	171.5	191.4	200.2	201.2	181.5	152.3	187.6
1959	217.4	143.1	185.7	163.3	172.0	168.7	149.6	199.6	145.2	111.4	124.0	125.0
1960	146.3	106.0	102.2	122.0	119.6	110.2	121.7	134.1	127.2	82.8	89.6	85.6
1961	57.9	46.1	53.0	61.4	51.0	77.4	70.2	55.9	63.6	37.7	32.6	40.0
1962	38.7	50.3	45.6	46.4	43.7	42.0	21.8	21.8	51.3	39.5	26.9	23.2
1963	19.8	24.4	17.1	29.3	43.0	35.9	19.6	33.2	38.8	35.3	23.4	14.9
1964	15.3	17.7	16.5	8.6	9.5	9.1	3.1	9.3	4.7	6.1	7.4	15.1
1965	17.5	14.2	11.7	6.8	24.1	15.9	11.9	8.9	16.8	20.1	15.8	17.0
1966	28.2	24.4	25.3	48.7	45.3	47.7	56.7	51.2	50.2	57.2	57.2	70.4
1967	110.9	93.6	111.8	69.5	86.5	67.3	91.5	107.2	76.8	88.2	94.3	126.4
1968	121.8	111.9	92.2	81.2	127.2	110.3	96.1	109.3	117.2	107.7	86.0	109.8
1969	104.4	120.5	135.8	106.8	120.0	106.0	96.8	98.0	91.3	95.7	93.5	97.9
1970	111.5	127.8	102.9	109.5	127.5	106.8	112.5	93.0	99.5	86.6	95.2	83.5
1971	91.3	79.0	60.7	71.8	57.5	49.8	81.0	61.4	50.2	51.7	63.2	82.2
1972	61.5	88.4	80.1	63.2	80.5	88.0	76.5	76.8	64.0	61.3	41.6	45.3
1973	43.4	42.9	46.0	57.7	42.4	39.5	23.1	25.6	59.3	30.7	23.9	23.3
1974	27.6	26.0	21.3	40.3	39.5	36.0	55.8	33.6	40.2	47.1	25.0	20.5
1975	18.9	11.5	11.5	5.1	9.0	11.4	28.2	39.7	13.9	9.1	19.4	7.8
1976	8.1	4.3	21.9	18.8	12.4	12.2	1.9	16.4	13.5	20.6	5.2	15.3
1977	16.4	23.1	8.7	12.9	18.6	38.5	21.4	30.1	44.0	43.8	29.1	43.2
1978	51.9	93.6	76.5	99.7	82.7	95.1	70.4	58.1	138.2	125.1	97.9	122.7
1979	166.6	137.5	138.0	101.5	134.4	149.5	159.4	142.2	188.4	186.2	183.3	176.3
1980	159.6	155.0	126.2	164.1	179.9	157.3	136.3	135.4	155.0	164.7	147.9	174.4
1981	114.0	141.3	135.5	156.4	127.5	90.9	143.8	158.7	167.3	162.4	137.5	150.1
1982	111.2	163.6	153.8	122.0	82.2	110.4	106.1	107.6	118.8	94.7	98.1	127.0
1983	84.3	51.0	66.5	80.7	99.2	91.1	82.2	71.8	50.3	55.8	33.3	33.4
1984	57.6*	84.5*										

*Provisional

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

FEBRUARY 1984

Sta	Day	Start (UT)	Max (UT)	End (UT)	Lat	CMD	NOAA/ USAF Region	CMP Mo	CMP Day	Dur (Min)	Imp Opt	Imp Xray	See	Obs Type	Time (UT)	Area Measurement Apparent (10^{-6} Disk)	Area Measurement Corr (Sq Deg)	Remarks
YUNN	01	0150	0152	0158	N10	W37		01	29.3	8	SN			P		46	.6	
LEAR	01	0212	0215	0224	N16	W67	4397	01	27.0	12	1B	C 4.3	3	C		118		
YUNN	01	0213E	0213U	0217	N18	W66		01	27.1	4D	1B	C 4.3		P	0213	154		
LEAR	01	0235	0236	0245	N11	W14	4403	01	31.1	10	SF		3	C		30		
LEAR	01	0314	0411	0411D	N16	W79	4404	01	26.1	57D	1F		3	C		139		
LEAR	01	0407	0410	0418	N16	W65	4397	01	27.2	11	1N		3	C		93		
LEAR	01	0546	0547	0556	N12	W15	4403	01	31.1	10	SN		3	C		75		
LEAR	01	0709	0713	0721	N13	W15	4403	01	31.2	12	SN		3	C		64		F
LEAR	01	0749	0749	0758	N13	W15	4403	01	31.2	9	SF	C 1.9	3	C		39		F
LEAR	01	0831	0833	0854	N13	W17	4403	01	31.1	23	SN		3	C		66		K
LEAR	01	0831	0846	0854	N13	W17	4403	01	31.1	23	SN		3	C		39		FK
LEAR	01	0950	0951	0955	N18	W69	4398	01	27.2	5	SF		3	C		35		
GOES	01	1013	1028	1031						18		C 2.7						
RAMY	01	1147E	1216	1247	N11	W20	4403	01	31.0	60D	SN	C 2.1	3	C		86		
RAMY	01	1434	1438	1601	N11	W20	4403	01	31.1	87	SN		3	C		34		K
RAMY	01	1434	1544	1601	N11	W20	4403	01	31.1	87	SN	C 1.9	3	C		47		K
RAMY	01	1626	1627	1701	N11	W22	4403	01	31.0	35	SN	C 1.8	3	C		33		
HOLL	01	1735	1807	1833	N14	W68	4398	01	27.6	58	SF		3	C		24		K
HOLL	01	1735	1823	1833	N14	W68	4398	01	27.6	58	SF		3	C		18		K
HOLL	01	1833	1847	2157	N15	W66	4398	01	27.8	204	SF		3	C		38		K
HOLL	01	1833	1926	2157	N15	W66	4398	01	27.8	204	SN	C 2.0	3	C		35		FK
GOES	01	1914	2122	2359			4403			285		M 1.0						
HOLL	01	1928	1930	2010	N12	W22	4403	01	31.2	42	SF		3	C		40		
HOLL	01	2013	2014	2109	N12	W23	4403	01	31.1	56	SF		3	C		21		K
HOLL	01	2013	2027	2109	N12	W23	4403	01	31.1	56	SF		3	C		62		K
HOLL	01	2153	2153	2214	N11	W47	4399	01	29.4	21	SB		3	C		24		FE
HOLL	01	2221	2229	2243	N10	W47	4399	01	29.4	22	SN		3	C		55		F
PALE	01	2227E	2227U	2251D	N12	W47	4399	01	29.4	24D	SN		3	C		58		
LEAR	02	0037	0037	0050	N10	W49	4399	01	29.3	13	SF		3	C		25		
LEAR	02	0115	0117	0121	N12	W48	4399	01	29.4	6	SF		3	C		26		
YUNN	02	0256	0300	0311	N10	W50		01	29.4	15	SN			C		77	1.3	
LEAR	02	0259	0300	0318	N12	W49	4399	01	29.4	19	SB		3	C		32		
LEAR	02	0443	0447	0548	N11	W29	4403	01	31.0	65	1N	C 9.7	3	C		259		F
GOES	02	0729	0742	0745						16		C 1.9						
GOES	02	0810	0812	0816						6		C 2.0						
GOES	02	0914	0917	0919						5		C 7.7						
LEAR	02	0949	0951	1001	N16	W88	4398	01	26.7	12	SN	C 5.4	3	C		69		
GOES	02	1144	1148	1150						6		C 2.7						
GOES	02	1403	1420	1424						21		C 1.9						
RAMY	02	1557	1558	1615	N11	W33	4403	01	31.2	18	SN	C 2.4	3	C		35		
HOLL	02	1604	1605	1611	N12	W33	4403	01	31.2	7	SF		3	C		27		
HOLL	02	1612	1613	1619	N13	W51	4399	01	29.8	7	SF		3	C		33		
RAMY	02	1632	1649	1717	S15	W13	4406	02	1.7	45	SF		3	C		77		
HOLL	02	1635	1654	1707	N13	W51	4399	01	29.8	32	1N	C 3.1	3	C		161		FH
RAMY	02	1650	1654	1700	N11	W51	4399	01	29.9	10	SB	C 5.7	3	C		92		
RAMY	02	1725	1725	1731	S14	W14	4406	02	1.7	6	SF		3	C		24		
HOLL	02	1727	1728	1744	N12	W35	4403	01	31.1	17	SF		3	C		22		
HOLL	02	1729	1729	1749	N11	W57	4399	01	29.4	20	SF		3	C		26		
RAMY	02	1733	1738	1739	S15	W14	4406	02	1.7	6	SF		3	C		22		
RAMY	02	1750	1753	1808	N12	W73	4398	01	28.2	18	SF		3	C		14		
RAMY	02	1808	1819	1854	N13	W77	4398	01	27.9	46	SF		3	C		17		K
RAMY	02	1808	1841	1854	N13	W77	4398	01	27.9	46	SN	C 6.8	3	C		43		K
HOLL	02	2031	2033	2043	N13	W53	4399	01	29.9	12	SN	C 2.1	3	C		39		F
RAMY	02	2032	2034	2042	N12	W54	4399	01	29.8	10	SN	C 2.1	3	C		42		K
RAMY	02	2032	2038	2042	N12	W54	4399	01	29.8	10	SN		3	C		17		K
GOES	02	2112	2114	2117						5		C 2.8						
HOLL	02	2126	2128	2137	N12	W89	4398	01	27.2	11	SF		3	C		32		F
GOES	02	2144	2148	2152						8		C 2.5						
HOLL	02	2200	2203	2225	N13	W36	4403	01	31.2	25	SN	C 3.5	3	C		49		F
HOLL	02	2208	2208	2214	S16	E57	4408	02	7.2	6	SF		3	C		18		
HOLL	02	2341	2343	2355	N12	W60	4399	01	29.5	14	SN	C 3.7	3	C		41		F
LEAR	02	2343	2343	2357	N09	W62	4399	01	29.3	14	SN	C 3.7	3	C		37		F
LEAR	03	0054	0054	0117	N12	W39	4403	01	31.1	23	SB	C 2.8	3	C		40		F
YUNN	03	0228	0232	0240	N12	W62		01	29.4	12	1N			P		92	2.2	D
GOES	03	0251	0302	0312						21		C 3.2						
YUNN	03	0300	0307	0320	N14	W59		01	29.7	20	SF			C		77	1.7	T
LEAR	03	0313	0313	0321	N13	W59	4399	01	29.7	8	SF		3	C		29		
GOES	03	0404	0410	0420			4398			16		M 1.6						
YUNN	03	0455	0458	0500D	N10	W66		01	29.2	5D	SF			P		31		T

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

FEBRUARY 1984

Sta	Day	Start (UT)	Max (UT)	End (UT)	Lat	CMD	NOAA/ USAF Region	CMP Mo	CMP Day	Dur (Min)	Imp Opt	Imp Xray	See	Obs Type	Time (UT)	Area Measurement Apparent (10^{-6} Disk)	Area Measurement Corr (Sq Deg)	Remarks
LEAR	03	0524	0527	0541	N09	W67	4399	01	29.2	17	SF		3	C		29		
LEAR	03	0556	0557	0626	N06	W79	4400	01	28.3	30	1N	C 5.2	3	C		83		F
LEAR	03	0634	0636	0648	N07	W84	4400	01	28.0	14	SF		3	C		22		F
GOES	03	1016	1020	1022						6		C 1.9						
GOES	03	1104	1108	1112						8		C 3.3						
GOES	03	1117	1126	1136						19		C 9.4						
GOES	03	1156	1159	1201						5		C 2.7						
RAMY	03	1318	1324	1332	N09	W69	4399	01	29.4	14	SF		3	C		12		
GOES	03	1430	1437	1445						15		M 1.0						
GOES	03	1508	1524	1528						20		C 7.4						
GOES	03	1811	1820	1829						18		C 3.1						
GOES	03	1932	1939	1957						25		C 5.3						
GOES	03	2041	2103	2105			4406			24		M 1.1						
GOES	04	0028	0032	0035						7		C 2.0						
GOES	04	0204	0207	0209						5		C 1.8						
YUNN	04	0354	0403U	0437	N16	W80		01	29.1	43				P	0403			A
GOES	04	0445	0450	0459						14		C 1.7						
GOES	04	0552	0555	0604						12		C 2.1						
GOES	04	0814	0817	0821						7		C 1.2						
GOES	04	0954	0958	1009						15		C 2.9						
GOES	04	1126	1133	1137						11		C 1.4						
RAMY	04	1410	1411	1416	N09	E64		02	9.4	6	SF		3	C		25		
GOES	04	1438	1441	1446						8		C 1.2						
GOES	04	1543	1546	1548						5		C 1.8						
GOES	04	1655	1703	1712						17		C 2.0						
HOLL	04	1758	1808	1827	N15	W79	4399	01	29.8	29	1N	M 1.1	3	C		142		F
HOLL	04	1936	1943	1956	N08	E62	4411	02	9.5	20	SF		3	C		17		
PALE	04	2146	2146	2154	N11	W87	4399	01	29.4	8	SN	M 1.4	3	C		25		
HOLL	04	2146	2146	2207	N14	W85	4399	01	29.5	21	SN	M 1.4	3	C		34		
LEAR	05	0013	0014	0025	N15	W83	4399	01	29.7	12	SF	C 1.6	3	C				
PALE	05	0013	0013	0021	N12	W87	4399	01	29.5	8	SF	C 1.6	3	C		19		
LEAR	05	0104	0107	0112	S11	E62	4410	02	9.7	8	SF		3	C		29		
GOES	05	0432	0435	0437						5		C 2.1						
GOES	05	0538	0545	0549						11		C 2.5						
GOES	05	2156	2202	2207						11		C 1.8						
HOLL	05	2251	2308	2343	S09	E52	4410	02	9.9	52	SF	C 1.1	3	C		32		F
GOES	06	0041	0045	0049			4408			8		C 1.0						
LEAR	06	0047	0053	0056	S11	E11	4408	02	6.9	9	SF		3	C		26		
GOES	06	1035	1040	1047						12		C 1.1						
HOLL	06	1533	1533	1553	S11	E41	4410	02	9.7	20	SF		3	C		18		
GOES	06	1643	1649	1656						13		C 1.0						
HOLL	06	1847E	1847U	1856	S12	E38	4410	02	9.6	9D	SF		3	C		22		
HOLL	06	1900	1901	1910	S11	E39	4410	02	9.7	10	SF		3	C		20		F
PALE	06	1907	1916	1931	S09	E35	4410	02	9.4	24	SF		3	C		46		
HOLL	06	1948	1950	2108	S11	E37	4410	02	9.6	80	SF		3	C		29		K
HOLL	06	1948	2039	2108	S11	E37	4410	02	9.6	80	SN		3	C		100		UFK
RAMY	06	1955	2038	2048D	S10	E38	4410	02	9.7	53D	SN		3	C		76		F
PALE	06	1956	1956	2001	S09	E35	4410	02	9.5	5	SF		3	C		31		
GOES	06	2013	2036	2039						26		C 2.2						
HOLL	06	2054	2057	2105	S14	E75	4413	02	12.5	11	SN		3	C		26		
HOLL	06	2115	2116	2122	S14	E70	4413	02	12.2	7	SF		3	C		24		
HOLL	06	2325	2328	0031D	S10	E34	4410	02	9.5	66D	1B	C 5.9	3	C		204		FEK
HOLL	06	2325	2340	0031D	S10	E34	4410	02	9.5	66D	SB		3	C		145		K
LEAR	06	2326	0020	0051	S12	E35	4410	02	9.6	85	SB		3	C		181		UFK
LEAR	06	2326	2328	0051	S12	E35	4410	02	9.6	85	1B		3	C		221		K
PALE	06	2326	2326	0003	S09	E36	4410	02	9.7	37	1B		3	C		185		UEK
PALE	06	2326	2344	0003	S09	E36	4410	02	9.7	37	SN		3	C		177		K
HOLL	06	2329	2339	2342	S14	E69	4413	02	12.2	13	SF		3	C		13		
PALE	07	0017	0020	0042	S09	E32	4410	02	9.4	25	1N	C 3.1	3	C		202		F
LEAR	07	0227	0233	0236	N10	E30	4411	02	9.4	9	SF		3	C		30		
LEAR	07	0230	0231	0240	S12	E70	4413	02	12.4	10	SF		3	C		14		
LEAR	07	0254	0301	0318	S12	E70	4413	02	12.4	24	SF		3	C		14		
LEAR	07	0514	0516	0538	S12	E69	4413	02	12.4	24	SF	C 1.8	3	C		25		
LEAR	07	0638	0648	0658	S10	E33	4410	02	9.8	20	SN		3	C		52		F
LEAR	07	0709	0710	0719	S12	W06	4408	02	6.8	10	SN		3	C		70		F
GOES	07	0847	0853	0858						11		C 2.6						
GOES	07	1023	1033	1046						23		C 3.4						

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Sta	Day	Start (UT)	Max (UT)	End (UT)	Lat	CMD	NOAA/ USAF Region	CMP Mo	CMP Day	Dur (Min)	Imp Opt	Imp Xray	See	Obs Type	Time (UT)	Area Measurement Apparent (10^{-6} Disk)	Area Measurement Corr (Sq Deg)	Remarks
RAMY	07	1322	1328	1330	S15	E63	4413	02	12.3	8	SN		3	C		81		
RAMY	07	1402	1405	1417	S15	E64	4413	02	12.4	15	SN		3	C		109		
RAMY	07	1624	1626	1639	S13	W11	4408	02	6.9	15	SF		3	C		33		
HOLL	07	1736	1736	1756	S12	E27	4410	02	9.8	20	SF		3	C		24		F
HOLL	07	1843	1908	2017	S11	E26	4410	02	9.7	94	SF	C 2.1	3	C		137		F
PALE	07	1846	1911	1942D	S13	E28	4410	02	9.9	56D	SF	C 2.1	3	C		122		F
RAMY	07	1919	1924	1949D	S14	E27	4410	02	9.8	30D	SN		3	C		64		
HOLL	07	2003	2032	2101	S15	E59	4413	02	12.3	58	SF		3	C		19		
HOLL	07	2226	2236	2254	S15	E59	4413	02	12.4	28	SB	C 3.8	3	C		28		FEK
HOLL	07	2226	2243	2254	S15	E59	4413	02	12.4	28	SB		3	C		23		K
LEAR	08	0005	0006	0012	S13	E57	4413	02	12.3	7	SF		3	C		22		
LEAR	08	0007	0007	0015	S13	E25	4410	02	9.9	8	SF		3	C		75		
LEAR	08	0126E	0127U	0204	S11	E21	4410	02	9.6	38D	1N	C 3.0	3	C		364		F
LEAR	08	0232	0256	0334	S15	E59	4413	02	12.6	62	SF		3	C		96		K
LEAR	08	0232	0313U	0334	S15	E59	4413	02	12.6	62	1N	C 5.2	3	C		158		FEK
LEAR	08	0409	0411	0433	S13	E23	4410	02	9.9	24	SF	C 1.4	3	C		111		F
LEAR	08	0427	0427	0434	S13	E56	4413	02	12.4	7	SF		3	C		19		
LEAR	08	0436	0442	0450	S14	E22	4410	02	9.9	14	SF		3	C		29		
GOES	08	0457	0501	0514						17		C 1.8						
LEAR	08	0616	0629	0724	S12	E55	4413	02	12.4	68	SF		3	C		49		K
LEAR	08	0616	0656	0724	~~S12~~	E55	4413	02	12.4	68	SN		3	C		52		FK
LEAR	08	0725	0753	0840	S13	E53	4413	02	12.3	75	SN	C 5.3	3	C		83		F
LEAR	08	0857	0902	0938	S13	E19	4410	02	9.8	41	1B	C 2.2	3	C		283		FH
RAMY	08	1224	1225	1232	S13	E50	4413	02	12.3	8	SN		3	C		50		
RAMY	08	1331	1334	1352	S13	E51	4413	02	12.4	21	SN		3	C		18		F
RAMY	08	1405	1421	1436	N09	E11	4411	02	9.4	31	SB	C 3.6	3	C		106		FE
HOLL	08	1410E	1422	1434	N09	E11	4411	02	9.4	24D	SB	C 3.6	2	C		90		EH
HOLL	08	1509	1535	1549	S13	E48	4413	02	12.3	40	SF	C 1.2	3	C		73		
RAMY	08	1512	1517	1547D	S12	E48	4413	02	12.2	35D	SN		3	C		41		K
RAMY	08	1512	1527	1547D	S12	E48	4413	02	12.2	35D	SN		3	C		23		FK
RAMY	08	1554	1605	1621	N09	E09	4411	02	9.3	27	SB	M 1.0	3	C		139		
RAMY	08	1632	1632	1702	S13	E50	4413	02	12.5	30	SF		3	C		24		K
RAMY	08	1632	1659	1702	S13	E50	4413	02	12.5	30	SN		3	C		33		K
RAMY	08	1636	1636	1651	S12	W29	4408	02	6.5	15	SF		3	C		20		
GOES	08	1655	1658	1701						6		C 1.9						
GOES	08	1734	1747	1803						29		C 1.3						
RAMY	08	1830	1848	2036D	S13	E48	4413	02	12.4	126D	1B	C 4.0	3	C		282		K
RAMY	08	1830	1941	2036D	S13	E48	4413	02	12.4	126D	SN		3	C		99		K
GOES	08	1935	1938	2005			4413			30		C 1.9						
HOLL	08	1942	2040	2128	S14	E47	4413	02	12.4	106	SN		3	C		49		K
HOLL	08	1942	2112	2128	S14	E47	4413	02	12.4	106	1N	C 3.0	3	C		195		FK
HOLL	08	2004	2016	2035	S11	E11	4410	02	9.7	31	SF		3	C		77		F
RAMY	08	2006	2014	2036D	S11	E12	4410	02	9.7	30D	SN		3	C		135		
PALE	08	2009	2019	2037	S10	E09	4410	02	9.5	28	SF		3	C		35		F
PALE	08	2020	2021	2050	S11	E46	4413	02	12.3	30	SF		3	C		98		K
PALE	08	2020	2032	2050	S11	E46	4413	02	12.3	30	SN		3	C		38		K
PALE	08	2103	2112	2122	S12	E47	4413	02	12.4	19	SN		3	C		151		F
HOLL	08	2135	2146	2200	S14	E46	4413	02	12.4	25	SN		3	C		28		F
PALE	08	2145	2145	2153	S12	E47	4413	02	12.4	8	SF		3	C		29		
HOLL	08	2222	2239	2327	S15	E46	4413	02	12.4	65	SN		3	C		79		F
PALE	08	2230	2239	2253	S12	E46	4413	02	12.4	23	SF		3	C		39		
PALE	08	2255	2312	2318	S12	E46	4413	02	12.4	23	SF		3	C		27		
HOLL	08	2255	2255	2302	S12	W33	4408	02	6.5	7	SF		3	C		21		
HOLL	08	2306	2308	2315	S12	W33	4408	02	6.5	9	SF	C 1.0	3	C		32		F
PALE	08	2324	2324	2354	S11	E10	4410	02	9.7	30	SF		3	C		23		
LEAR	09	0004	0015	0021	S14	E45	4413	02	12.4	17	SF		3	C		27		
HOLL	09	0004	0013	0023	S15	E45	4413	02	12.4	19	SF		2	C		21		F
LEAR	09	0104	0107	0118	S12	E09	4410	02	9.7	14	SF		3	C		25		
LEAR	09	0224	0227	0247	S14	E44	4413	02	12.4	23	SF		3	C		20		
PALE	09	0226E	0227U	0237	S12	E43	4413	02	12.3	11D	SF		3	C		104		
PALE	09	0233	0234	0239	S14	W35	4408	02	6.5	6	SF		3	C		22		
LEAR	09	0412	0414	0424	S13	E42	4413	02	12.3	12	SF	C 1.1	3	C		30		
GOES	09	0537	0546	0555						18		C 1.2						
LEAR	09	0615	0616	0623	S11	E37	4413	02	12.0	8	SN	C 3.2	3	C		95		
GOES	09	0939	1004	1014						35		C 2.7						
GOES	09	1124	1155	1155						31		C 4.2						
RAMY	09	1346E	1410	1612	S14	W42	4408	02	6.4	146D	SF		3	C		66		K
RAMY	09	1346E	1541	1612	S14	W42	4408	02	6.4	146D	SN		3	C		75		K
HOLL	09	1431	1438	1459	S15	W42	4408	02	6.4	28	SN		2	C		59		F

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Sta	Day	Start (UT)	Max (UT)	End (UT)	Lat	CMD	NOAA/ USAF Region	CMP Mo	CMP Day	Dur (Min)	Imp Opt	Imp Xray	See	Obs Type	Time (UT)	Area Measurement Apparent (10^{-6} Disk)	Area Measurement Corr (Sq Deg)	Remarks
HOLL	09	1442	1445	1501D	S13	E24	4413	02	11.4	19D	SN		2	C		79		F
HOLL	09	1442	1503	1612	S13	W42	4408	02	6.4	90	SF		3	C		60		K
HOLL	09	1442	1541	1612	S13	W42	4408	02	6.4	90	SN		3	C		43		FK
RAMY	09	1445	1452	1520	S13	E36	4413	02	12.3	35	SN		3	C		30		
RAMY	09	1458	1501	1525	N13	E45	4415	02	13.0	27	SN		3	C		35		
HOLL	09	1500	1501	1523	N13	E40	4415	02	12.6	23	SN		3	C		23		
RAMY	09	1627	1647	1654D	S15	E38	4413	02	12.6	27D	SN		3	C		58		
HOLL	09	1659	1744	1751	S14	E35	4413	02	12.4	52	SN		3	C		130		
HOLL	09	1701	1705	1743	S13	W43	4408	02	6.5	42	SN	C 4.1	3	C		144		FK
HOLL	09	1701	1729	1743	S13	W43	4408	02	6.5	42	SN		3	C		59		K
RAMY	09	1704E		1742	S13	W41	4408	02	6.6	38D	SN		3	C		172		F
RAMY	09	1741	1745	1750D	S13	E34	4413	02	12.3	9D	SF		3	C		31		
PALE	09	1804E	1805U	1809	S14	W45	4408	02	6.4	5D	SF		3	C		27		
PALE	09	1806	1813	1820	S13	E34	4413	02	12.3	14	SF		3	C		26		
PALE	09	1900	1902	1909	S11	W01	4410	02	9.7	9	SF		3	C		24		F
HOLL	09	2007	2011	2019	S14	E33	4413	02	12.3	12	SN	C 2.0	3	C		29		
RAMY	09	2013E		2022D	S13	W06	4410	02	9.4	9D	SF		3	C		151		
PALE	09	2039	2057	2122	S13	W44	4408	02	6.5	43	SF	C 2.7	3	C		124		
GOES	09	2234	2237	2239						5		C 1.8						
LEAR	09	2336	2338	0012	S14	W45	4408	02	6.6	36	SN	C 1.9	3	C		45		F
PALE	09	2337	2338	2346	S15	W46	4408	02	6.5	9	SF	C 1.9	3	C		33		
HOLL	09	2338	2340	2357	S11	W45	4408	02	6.6	19	SF	C 1.9	3	C		25		F
PALE	10	0059	0114	0133	S12	E29	4413	02	12.2	34	SF		3	C		38		K
PALE	10	0059	0128	0133	S12	E29	4413	02	12.2	34	SN	C 5.1	3	C		102		K
LEAR	10	0112	0114	0207	S14	E30	4413	02	12.3	55	SF		3	C		30		K
LEAR	10	0112	0138	0207	S14	E30	4413	02	12.3	55	SB		3	C		81		FK
PALE	10	0136	0138	0213	S12	E30	4413	02	12.3	37	SN		3	C		86		F
YUNN	10	0138	0143	0155	S12	E29		02	12.3	17	SN			C		77	.9	
LEAR	10	0153	0158	0208	S14	W49	4408	02	6.4	15	SF		3	C		32		
PALE	10	0216	0219	0248	S13	E31	4413	02	12.4	32	SF		3	C		148		
LEAR	10	0248	0317	0349	S15	W47	4408	02	6.6	61	1B	M 4.8	3	C		337		ZU
YUNN	10	0303	0320	0338	S13	W48		02	6.5	35	2B	M 4.8		C		354	5.4	
PALE	10	0303	0318	0344D	S15	W46	4408	02	6.6	41D	1B		3	C		297		ZU
GOES	10	0510	0513	0521						11		C 1.8						
GOES	10	0717	0720	0722						5		C 1.9						
GOES	10	0758	0801	0812						14		C 1.9						
LEAR	10	0912	0915	0929	N11	W18	4411	02	9.0	17	SF	C 2.1	2	C		43		F
GOES	10	1023	1036	1046						23		M 1.9						
ATHN	10	1057E		1108D	S15	E24		02	12.3	11D	SN	C 5.4	2	V		95	1.1	
ATHN	10	1251	1255	1312	S16	E26		02	12.5	21	SB	C 3.3	3	V	1255	143	1.7	
GOES	10	1424	1436	1450			4414			26		C 6.8						
HOLL	10	1444	1445	1516	S10	E15	4414	02	11.7	32	SF		2	C		59		
GOES	10	1546	1551	1557						11		C 3.1						
HOLL	10	1712	1718	1734	S13	E20	4413	02	12.2	22	SN	C 3.5	3	C		71		F
HOLL	10	1734	1735	1741	S08	W13	4410	02	9.8	7	SF		3	C		26		F
HOLL	10	1808	1809	1818	S12	E25	4413	02	12.6	10	SN	C 3.0	3	C		40		F
PALE	10	1810E	1810U	1836	S10	E23	4413	02	12.5	26D	SN	C 3.0	3	C		94		F
HOLL	10	1845	1857	1919	S13	W54	4408	02	6.7	34	SN	C 1.9	3	C		22		F
PALE	10	1854	1900	1931	S15	W55	4408	02	6.6	37	SF	C 1.9	3	C		51		F
PALE	10	1906	1907	1923	S15	E24	4413	02	12.6	17	SF		3	C		29		
HOLL	10	1927	1928	1951	S11	E20	4413	02	12.3	24	SF		3	C		33		K
HOLL	10	1927	1942	1951	S11	E20	4413	02	12.3	24	SN		3	C		76		FK
PALE	10	1936E	1938	1951	S10	E24	4413	02	12.6	15D	SN		3	C		61		F
PALE	10	2005	2005	2047	S14	W60	4408	02	6.3	42	SF		3	C		15		
HOLL	10	2005	2007	2107	S11	W59	4408	02	6.4	62	SF		3	C		33		
HOLL	10	2007	2016	2035	S08	W17	4410	02	9.6	28	SF		3	C		68		
PALE	10	2012	2021	2024	S10	W18	4410	02	9.5	12	SF		3	C		21		
PALE	10	2049	2050	2100	S11	E24	4413	02	12.7	11	SN		3	C		88		F
HOLL	10	2049	2050	2105	S13	E19	4413	02	12.3	16	SN	C 2.4	3	C		91		F
GOES	10	2108	2111	2121						13		C 2.0						
GOES	10	2133	2136	2143						10		C 1.7						
PALE	10	2234	2235	2303	S11	E23	4413	02	12.7	29	SF		3	C		68		K
PALE	10	2234	2243	2303	S11	E23	4413	02	12.7	29	SN		3	C		112		FK
HOLL	10	2234	2244	2301	S13	E18	4413	02	12.3	27	SN		3	C		153		K
HOLL	10	2234	2258	2301	S13	E18	4413	02	12.3	27	SN		3	C		41		FK
HOLL	10	2238	2247	2314	S12	W60	4408	02	6.4	36	SB	C 9.1	3	C		128		F
PALE	10	2240	2249	2259	S11	W58	4408	02	6.6	19	SN	C 9.1	3	C		99		UF
HOLL	10	2249	2251	2307	S08	W17	4410	02	9.7	18	SN		3	C		177		F
PALE	10	2250	2252	2306	S09	W19	4410	02	9.5	16	SF		3	C		117		F
LEAR	11	0123	0130	0148	S13	W64	4408	02	6.2	25	SN	C 3.7	4	C		67		F

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Sta	Day	Start (UT)	Max (UT)	End (UT)	Lat	CMD	NOAA/ USAF Region	CMP Mo	CMP Day	Dur (Min)	Imp Opt	Imp Xray	See	Obs Type	Time (UT)	Area Measurement Apparent (10^{-6} Disk)	Area Measurement Corr (Sq Deg)	Remarks
PALE	11	0125	0133	0207	S14	W64	4408	02	6.2	42	SN	C 3.7	3	C		61		F
LEAR	11	0238	0245	0324	S11	E19	4413	02	12.5	46	2B	M 2.9	3	C		643		FE
YUNN	11	0240	0246	0252D	S10	E19		02	12.5	12D	1N	M 2.9		P		461	5.0	
GOES	11	0338	0344	0349						11		C 2.0						
YUNN	11	0343E	0343U	0350	S16	W62		02	6.5	7D	SF			P	0343	31	.7	D
YUNN	11	0355E	0355U	0355D	S15	E14		02	12.2	7D	SF			P	0355	31	.3	D
LEAR	11	0429	0433	0448	S12	E16	4413	02	12.4	19	SN	C 2.1	3	C		93		F
YUNN	11	0431	0435U	0443	S11	E16		02	12.4	12	SF	C 2.1		P	0435	77	.8	
GOES	11	0453	0456	0458						5		C 2.1						
LEAR	11	0455	0456	0459	S12	W62	4408	02	6.5	4	SF		3	C		23		
GOES	11	0607	0611	0614						7		C 1.4						
LEAR	11	0632	0632	0716	S12	E14	4413	02	12.3	44	SF		3	C		103		K
LEAR	11	0632	0648	0716	S12	E14	4413	02	12.3	44	SN	C 2.1	3	C		184		FK
GOES	11	0644	0649	0653			4413			9		C 3.5						
GOES	11	0824	0833	0836						12		C 1.6						
LEAR	11	0855	0906	0926	S09	W23	4410	02	9.6	31	SN	C 2.6	3	C		196		
GOES	11	1000	1009	1015						15		C 1.8						
GOES	11	1045	1048	1056						11		C 2.2						
GOES	11	1212	1216	1221						9		C 3.0						
HOLL	11	1424E	1424U	1452	S11	E09	4413	02	12.3	28D	SN	C 4.8	2	C		65		
HOLL	11	1748	1749	1829	S12	W66	4408	02	6.8	41	SN		3	C		11		K
HOLL	11	1748	1800	1829	S12	W66	4408	02	6.8	41	SN	C 7.9	3	C		16		FK
PALE	11	1800E	1800U	1829	S15	W74	4408	02	6.1	29D	SN		3	C		11		F
PALE	11	2028	2035	2106	S15	W69	4408	02	6.6	38	SN	C 8.4	3	C		35		F
HOLL	11	2028	2041	2106	S12	W68	4408	02	6.7	38	SB		3	C		22		FEK
HOLL	11	2028	2046	2106	S12	W68	4408	02	6.7	38	SB		3	C		26		K
PALE	11	2044	2047	2112	S12	E08	4413	02	12.5	28	SF		3	C		91		F
HOLL	11	2044	2047	2108	S12	E07	4413	02	12.4	24	SN		3	C		80		F
PALE	11	2120	2122	2135	S13	E07	4413	02	12.4	15	SF		3	C		41		F
HOLL	11	2121	2122	2137	S12	E08	4413	02	12.5	16	SN		3	C		59		F
HOLL	11	2210	2210	2217	S09	W67	4408	02	6.9	7	SN		3	C		15		F
HOLL	11	2249	2253	2313	S13	W69	4408	02	6.7	24	SB	M 1.9	3	C		49		FE
PALE	11	2259E	2259U	2312	S15	W70	4408	02	6.7	13D	SN	M 1.9	3	C		92		
PALE	11	2309	2309	2317	S13	E10	4413	02	12.7	8	SF		3	C		21		
PALE	11	2322	2323	2336D	S12	E06	4413	02	12.4	14D	SN		3	C		133		F
HOLL	11	2322	0015	0035D	S12	E06	4413	02	12.4	73D	1B	C 7.9	3	C		206		FEK
HOLL	11	2322	2327	0035D	S12	E06	4413	02	12.4	73D	SN		3	C		161		K
LEAR	12	0005	0006	0030	S12	E05	4413	02	12.4	25	SF		3	C		21		K
LEAR	12	0005	0016	0030	S12	E05	4413	02	12.4	25	SB	C 4.7	3	C		148		UFK
PALE	12	0010E	0017U	0025D	S11	E06	4413	02	12.5	15D	SN	C 4.7	3	C		200		F
GOES	12	0153	0156	0158						5		C 1.9						
YUNN	12	0226E	0226U	0230	S12	E05		02	12.5	4D	SF			P	0226	46	.5	T
GOES	12	0313	0318	0320						7		C 2.5						
GOES	12	0333	0353	0423						50		C 2.9						
YUNN	12	0431	0435	0439	S13	E07		02	12.7	8	SF			C		31	.3	T
LEAR	12	0507	0512	0516	S14	W72	4408	02	6.8	9	SF		3	C		18		
GOES	12	0515	0537	0555						40		C 3.0						
LEAR	12	0521	0523	0533	S13	E02	4413	02	12.4	12	SF		3	C		29		F
LEAR	12	0652	0659	0723	S14	E02	4413	02	12.4	31	SF		3	C		48		F
GOES	12	0832	0836	0839						7		C 1.3						
LEAR	12	0902	0916	0938	S14	W00	4413	02	12.4	36	SB	C 7.9	3	C		141		F
GOES	12	1038	1100	1121						43		C 4.2						
GOES	12	1131	1154	1215						44		C 4.0						
GOES	12	1240	1250	1303						23		C 3.3						
RAMY	12	1449	1510	1536	S12	W02	4413	02	12.5	47	1B	M 1.8	3	C		245		FE
WEND	12	1452	1511	1528	S12	W04		02	12.3	36	1N	M 1.8		C	1511	213	2.3	
HOLL	12	1508	1510	1527D	S12	W02	4413	02	12.5	19D	1B	M 1.8	3	C		319		FE
RAMY	12	1547	1547	1551	S12	W02	4413	02	12.5	4	SN		3	C		35		
RAMY	12	1701	1701	1718	S10	W41	4410	02	9.6	17	SF		3	C		18		F
HOLL	12	1701	1703	1719	S09	W40	4410	02	9.7	18	SF		3	C		23		F
HOLL	12	1707	1709	1716	S12	W03	4413	02	12.5	9	SN	C 2.1	3	C		35		F
GOES	12	1802	1805	1819			4413			17		C 1.9						
PALE	12	1804	1808	1855	S14	W07	4413	02	12.2	51	SF		3	C		81		K
PALE	12	1804	1825	1855	S14	W07	4413	02	12.2	51	SN		3	C		83		FK
RAMY	12	1804		1916D	S12	W08	4413	02	12.2	72D	SN		3	C		42		
HOLL	12	1844	1845	1922D	S11	W09	4413	02	12.1	38D	SN		3	C		77		
GOES	12	1925	1929	1931			4413			6		C 2.4						
HOLL	12	2005	2006	2013	N11	W51	4411	02	9.0	8	SF		3	C		53		
PALE	12	2008	2008U	2019D	S16	W77	4408	02	7.0	11D	SF		3	C				
HOLL	12	2008	2013	2021	S12	W80	4408	02	6.8	13	SF		3	C		18		

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Sta	Day	Start (UT)	Max (UT)	End (UT)	Lat	CMD	NOAA/ USAF Region	CMP Mo	CMP Day	Dur (Min)	Imp Opt	Imp Xray	See	Obs Type	Time (UT)	Area Measurement Apparent (10^{-6} Disk)	Corr (Sq Deg)	Remarks
RAMY	12	2015E		2019D	S14	W77	4408	02	7.0	4D	SF		3	C		16		
GOES	12	2043	2047	2050			4408			7		C 1.6						
RAMY	12	2053E	2056	2100	S14	W81	4408	02	6.7	7D	SF		3	C		11		
RAMY	12	2053E	2055	2105	S14	W59	4416	02	8.4	12D	SF		3	C		21		
HOLL	12	2201	2202	2206	S14	W09	4413	02	12.2	5	SF		3	C		34		
HOLL	12	2207	2213	2216	S12	W80	4408	02	6.9	9	SF		3	C		11		
HOLL	13	0020	0021	0025	S13	W58	4416	02	8.6	5	SF		3	C		22		
PALE	13	0139	0144	0148	S12	W13	4413	02	12.1	9	SF	C 1.1	3	C		57		F
GOES	13	0227	0232	0236						9		C 1.2						
YUNN	13	0301	0304	0308	S13	W11		02	12.3	7	SF			P		46	.5	
LEAR	13	0303	0303	0323	S11	W12	4413	02	12.2	20	SN		3	C		66		F
GOES	13	0441	0443	0450						9		C 1.0						
LEAR	13	0612	0616	0620	S13	W07	4413	02	12.7	8	SN		3	C		98		H
LEAR	13	0659	0709	0741	S16	W11	4413	02	12.5	42	SN	C 1.9	3	C		151		F
GOES	13	0931	0945	0948						17		C 4.3						
GOES	13	1209	1212	1216						7		C 1.3						
HOLL	13	1552	1552	1607	S12	W22	4413	02	12.0	15	SF		3	C		26		
HOLL	13	1635	1635	1638	S13	W17	4413	02	12.4	3	SF	C 1.9	3	C		29		
PALE	13	2002	2004U	2010D	S10	W56	4410	02	9.6	8D	SF		3	C		27		
HOLL	13	2003	2004	2014	S08	W55	4410	02	9.7	11	SF		3	C		39		F
HOLL	13	2158	2159	2212	S11	W21	4413	02	12.3	14	SF		3	C		65		F
LEAR	14	0120	0142	0205	S09	W59	4410	02	9.6	45	SB	C 4.2	3	C		121		F
PALE	14	0126	0142	0201	S10	W60	4410	02	9.6	35	SN	C 4.2	3	C		114		F
GOES	14	0314	0332	0333						19		C 1.2						
LEAR	14	0844	0845	0849	S14	W26	4413	02	12.4	5	SF		3	C		36		
GOES	14	1614	1617	1619						5		C 2.0						
RAMY	14	1910	1913	1935D	S10	W69	4410	02	9.6	25D	SN	C 2.9	3	C		61		
PALE	14	1912	1912	1922	S10	W68	4410	02	9.7	10	SF	C 2.9	3	C		52		
RAMY	14	2020	2024	2120	S16	W31	4413	02	12.5	60	SF		3	C		31		
PALE	15	0101	0102	0117	S15	W36	4413	02	12.3	16	SF		3	C		35		
LEAR	15	0216	0218	0222	S10	W75	4410	02	9.5	6	SN		3	C		24		
PALE	15	0251	0252	0256	S16	W34	4413	02	12.5	5	SF		3	C		20		
HOLL	15	2156	2156	2210	S12	W48	4413	02	12.3	14	SF		3	C		25		
PALE	16	0224	0228	0240	S16	W49	4413	02	12.4	16	1N	C 2.0	3	C		209		F
GOES	16	0736	0743	0753						17		C 2.3						
GOES	16	1550	1603	1607						17		C 1.2						
GOES	16	1654	1707	1722						28		C 4.0						
HOLL	16	1734	1734	1755	S11	W62	4413	02	12.1	21	SF		3	C		29		
HOLL	16	2022	2025	2051	S12	W60	4413	02	12.3	29	SF		3	C		15		F
PALE	16	2038	2038	2043	S14	W60	4413	02	12.3	5	SF		3	C		18		F
HOLL	16	2156	2159	2211	S11	W60	4413	02	12.4	15	SN	C 3.1	3	C		79		
GOES	17	0055	0058	0110						15		C 1.7						
PALE	17	0102	0105	0115	S14	W62	4413	02	12.4	13	SF		3	C		29		
PEKG	17	0247E	0247	0249	S13	W62		02	12.4	2D	SF			P	0247	50	1.1	E
LEAR	17	0613E	0615	0638	S11	W62	4413	02	12.6	25D	SN	C 4.5	2	C		78		F
GOES	17	1142	1157	1208						26		M 1.4						
GOES	17	1337	1340	1342						5		C 3.7						
GOES	17	1607	1612	1615						8		C 1.2						
HOLL	17	1623	1634	1642	N12	E79		02	23.6	19	SF	C 1.9	2	C		22		
GOES	17	1717	1720	1732						15		C 2.0						
GOES	17	1835	1839	1847						12		C 2.0						
GOES	17	1945	1952	1958						13		C 5.8						
GOES	17	2139	2142	2144						5		C 1.8						
GOES	17	2151	2158	2206						15		C 3.0						
PALE	17	2226	2229	0002	N16	E82	4421	02	24.2	96	SF		3	C				K
PALE	17	2226	2300	0002	N16	E82	4421	02	24.2	96	2B	X 2.3	3	C				YFK
PALE	18	0033	0039	0043	S13	W76	4413	02	12.3	10	SF		3	C				
YUNN	18	0135E	0135U	0316	N16	E81		02	24.2	101D				P	0135			Y
PALE	18	0203	0207	0217	N14	E72	4421	02	23.5	14	SF	M 1.8	3	C				F
PALE	18	0226	0227	0235	N14	E72	4421	02	23.5	9	SF		3	C				
GOES	18	0420	0423	0426						6		M 1.1						
PEKG	18	0433E	0433	0433	N13	E71		02	23.5	6D	SN			P	0433	88		E
GOES	18	0733	0739	0744						11		C 7.1						
GOES	18	0745	0751	0759						14		C 7.6						
GOES	18	0924	0928	0934						10		C 5.1						

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Sta	Day	Start (UT)	Max (UT)	End (UT)	Lat	CMD	NOAA/ USAF Region	CMP Mo	CMP Day	Dur (Min)	Imp Opt	Imp Xray	See	Obs Type	Time (UT)	Area Measurement Apparent (10^{-6} Disk)	Area Measurement Corr (Sq Deg)	Remarks
GOES	18	0940	0944	0947						7		C 4.8						
GOES	18	1037	1044	1048						11		C 4.8						
RAMY	18	1140E	1144	1158	N12	E74	4421	02	24.1	18D	SF		3	C		27		
RAMY	18	1159	1208	1404	N14	E65	4421	02	23.4	125	SF		3	C		34		K
RAMY	18	1159	1239	1404	N14	E65	4421	02	23.4	125	SN	C 8.6	3	C		57		K
RAMY	18	1200	1205	1216	S18	E30	4420	02	20.8	16	SN		3	C		54		F
GOES	18	1320	1324	1333						13		C 4.0						
RAMY	18	1530	1536	1551	N13	E66	4421	02	23.6	21	SN	C 2.7	3	C		15		
HOLL	18	1538E	1538U	1557	N12	E67	4421	02	23.7	19D	SF	C 2.7	3	C		17		
HOLL	18	1548	1551	1603	N06	E15	4419	02	19.8	15	SF		3	C		28		F
RAMY	18	1608	1611	1623	N14	E67	4421	02	23.7	15	SB	M 1.3	3	C		41		FE
HOLL	18	1608E	1608U	1618	N12	E69	4421	02	23.9	10D	SB	M 1.3	3	C		36		F
GOES	18	1712	1715	1718						6		C 3.2						
GOES	18	1940	1943	1948						8		C 2.0						
RAMY	18	2014		2104D	N12	E62	4421	02	23.5	50D	SF		3	C				
GOES	18	2135	2138	2142			4421			7		C 2.3						
HOLL	18	2141	2142	2146	N12	E64	4421	02	23.7	5	SN		3	C		16		F
PALE	18	2208E	2212U	2229	N15	E61	4421	02	23.5	21D	SF		3	C		28		
HOLL	18	2219	2220	2224	N13	E60	4421	02	23.5	5	SN		3	C		28		
PALE	18	2230	2231	2235	N16	E67	4421	02	24.0	5	SF		3	C		30		
HOLL	18	2239	2242	2314	N12	E63	4421	02	23.7	35	SB	C 8.6	3	C		58		FE
PALE	18	2245E	2255U	2313D	N15	E62	4421	02	23.6	28D	SF		3	C		72		F
HOLL	19	0016	0021	0023	N11	E59	4421	02	23.4	7	SF		3	C		14		F
GOES	19	0156	0159	0203						7		C 1.6						
GOES	19	0210	0215	0218						8		C 1.6						
PALE	19	0225	0242	0320D	N14	E59	4421	02	23.6	55D	SN		3	C		54		K
PALE	19	0225	0247	0320D	N14	E59	4421	02	23.6	55D	SN	M 1.4	3	C		71		FK
LEAR	19	0235E	0249	0252D	N13	E63	4421	02	23.9	17D	1B	M 1.4	3	C		120		F
LEAR	19	0235E	0253	0256D	N13	E63	4421	02	23.9	21D	1B		3	C		124		FK
PEKG	19	0240E	0243	0315	N13	E60		02	23.6	35D	1N			C	0243	147	3.3	E
YUNN	19	0240	0244	0311	N11	E55		02	23.2	31	SN			P		77	1.5	E
LEAR	19	0248E		0400D	N13	E60	4421	02	23.6	72D	1B		3	C		124		F
GOES	19	0345	0348	0351			4421			6		C 1.9						
GOES	19	0719	0727	0732						13		C 3.3						
GOES	19	1247	1253	1300						13		C 2.1						
RAMY	19	1306	1307	1433	N12	E53	4421	02	23.5	87	SF		3	C		24		K
RAMY	19	1306	1409	1433	N12	E53	4421	02	23.5	87	SB	C 2.0	3	C		58		FK
ATHN	19	1334E	1343	1345D	N14	E54		02	23.6	11D	SB		2	V	1343	95	1.7	
GOES	19	1406	1409	1417			4421			11		C 2.0						
RAMY	19	1541	1541	1611	N13	E53	4421	02	23.7	30	SF	C 1.0	3	C		19		
GOES	19	1709	1712	1715						6		C 1.2						
GOES	19	1758	1759	1804						6		C 1.6						
GOES	19	1809	1812	1814						5		C 2.1						
RAMY	19	1835	1835	1851	N12	E53	4421	02	23.8	16	SN	C 1.7	3	C		29		
RAMY	19	1919	1920	1928	S18	E13	4420	02	20.8	9	SF		3	C		45		
GOES	19	2112	2116	2119						7		C 1.2						
GOES	19	2154	2157	2200						6		C 1.2						
PALE	19	2215E	2222	2317	N11	E52	4421	02	23.8	62D	SF		3	C		81		K
PALE	19	2215E	2258U	2317	N11	E52	4421	02	23.8	62D	SN	C 1.1	3	C		76		FK
PALE	19	2322	2322	2332	N14	E50	4421	02	23.8	10	SF		3	C		36		
GOES	19	2340	2343	2345						5		C 1.2						
GOES	19	2358	0002	0015						17		C 1.7						
PALE	20	0005E	0005	0058	N13	E47	4421	02	23.5	53D	SF		3	C		24		K
PALE	20	0005E	0035	0058	N13	E47	4421	02	23.5	53D	SN	C 5.9	3	C		128		FK
PALE	20	0103	0127	0130	N14	E48	4421	02	23.7	27	SF		3	C		26		
GOES	20	0437	0440	0442						5		C 1.8						
GOES	20	0600	0605	0615						15		C 1.1						
GOES	20	0641	0654	0716						35		C 3.4						
WEND	20	0945	0954	1013	N15	E49		02	24.1	28	SN	C 2.5		C	0954	80	1.3	
ATHN	20	0949	0950	0956	N14	E46		02	23.9	7	SN	C 2.5	3	V	0950	95	1.6	
RAMY	20	1146	1149	1220	N12	E44	4421	02	23.8	34	SN	C 2.2	3	C		78		F
WEND	20	1149	1152	1212	N12	E45		02	23.9	23	SN	C 2.2		C	1152	60	.9	
WEND	20	1245	1315	1327	N13	E46		02	24.0	42	SF	C 2.0		C	1315	106	1.6	K
GOES	20	1248	1253	1301						13		C 1.9						
RAMY	20	1312	1313	1345	N12	E43	4421	02	23.8	33	SB	C 2.0	3	C		80		FE
GOES	20	1559	1603	1605						6		C 1.1						
GOES	20	1757	1814	1821						24		C 1.2						
PALE	20	1926	1927	1955	N13	E40	4421	02	23.8	29	SF	C 1.6	3	C		93		F
PALE	20	2157	2158	2206	N20	E42	4421	02	24.1	9	SF		3	C		40		

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Sta	Day	Start (UT)	Max (UT)	End (UT)	Lat	CMD	NOAA/ USAF Region	CMP Mo	Day	Dur (Min)	Imp Opt	Xray	See	Obs Type	Time (UT)	Area Measurement Apparent (10^{-6} Disk)	Corr (Sq Deg)	Remarks
PALE	20	2216	2219	2242	N13	E36	4421	02	23.6	26	SF	C 1.7	3	C		119		F
HOLL	20	2334	2337	0013	N14	E36	4421	02	23.7	39	SN	C 2.6	3	C		38		F
PALE	21	0203	0203	0212	N14	E36	4421	02	23.8	9	SF		3	C		29		F
GOES	21	0554	0557	0611						17		C 1.6						
GOES	21	0642	0645	0648						6		C 1.7						
GOES	21	0736	0744	0745						9		C 1.3						
GOES	21	0749	0752	0755						6		C 2.2						
GOES	21	0759	0804	0817						18		C 3.6						
GOES	21	0902	0906	0910						8		C 3.6						
WEND	21	0906E		0913	N10	E32		02	23.8	7D	SF			C	0906	38	.5	
WEND	21	0929	0934	0938	S06	W53		02	17.4	9	SN			C	0934	20	.3	D
WEND	21	1033	1048	1104	N11	E32		02	23.8	31	1N			C	1048	175	2.2	
GOES	21	1044	1048	1055						11		M 1.3						
RAMY	21	1220	1220	1235	N12	E27	4421	02	23.5	15	SF		3	C		32		
GOES	21	1349	1403	1404			4421			15		C 2.8						
WEND	21	1350	1358	1424D	N12	E30		02	23.8	34D	SF			C	1358	118	1.4	L
HOLL	21	1434	1443U	1457	N13	E29	4421	02	23.8	23	SN	C 2.1	3	C		47		F
RAMY	21	1510	1513	1525	N14	E28	4421	02	23.7	15	SF		3	C		24		K
RAMY	21	1510	1519	1525	N14	E28	4421	02	23.7	15	SB		3	C		53		K
HOLL	21	1519	1519	1523	N14	E26	4421	02	23.6	4	SB		3	C		30		FE
HOLL	21	1758E	1800U	1822	N15	E30	4421	02	24.0	24D	SF		4	C		25		
PALE	21	1938	1943	2004	S06	W59	4417	02	17.4	26	SN		2	C		25		
GOES	21	2039	2050	2054						15		C 1.3						
GOES	21	2316	2317	2322						6		C 1.2						
HOLL	21	2317	2317	2334	N15	E28	4421	02	24.1	17	SF		3	C		30		F
GOES	21	2330	2337	2343						13		C 1.7						
GOES	21	2333	2333	2342						9		C 1.8						
GOES	22	0031	0034	0036						5		C 2.1						
PALE	22	0054	0056	0109	N16	E25	4421	02	23.9	15	SF	C 2.0	3	C		37		
YUNN	22	0129	0141	0152	N12	E18		02	23.4	23	SF			C		92	1.1	
PALE	22	0132	0146	0326	N16	E25	4421	02	24.0	114	SF		3	C		113		K
PALE	22	0132	0206	0326	N16	E25	4421	02	24.0	114	1N	M 1.9	3	C		228		FK
YUNN	22	0205	0213	0243	N14	E25		02	24.0	38	1N			C		338	4.2	
GOES	22	0450	0501	0510						20		C 2.8						
LEAR	22	0613	0614	0633	N13	E22	4421	02	23.9	20	SB	C 2.1	2	C		111		F
ATHN	22	0614	0616	0630	N13	E21		02	23.8	16	SB	C 2.1	2	V	0616	95	1.1	
GOES	22	0638	0641	0649						11		C 1.8						
LEAR	22	0705	0708	0724	N13	E20	4421	02	23.8	19	SF	C 2.0	3	C		33		F
ATHN	22	0711	0712	0721	N11	E19		02	23.7	10	SN	C 2.0	2	V	0712	80	.9	
GOES	22	0733	0736	0738						5		C 1.8						
LEAR	22	0758	0801	0807	S21	W21	4420	02	20.7	9	SN		3	C		48		F
GOES	22	0808	0818	0831						23		C 6.0						
LEAR	22	0837	0838	0848	S14	E84		02	28.7	11	SN		3	C		8		
ATHN	22	0839	0840	0847	S14	E84		02	28.7	8	SN		3	V	0840	19	1.0	
LEAR	22	1017	1025	1029D	N13	E19	4421	02	23.9	12D	SB	C 4.2	2	C		124		FE
ATHN	22	1025	1027	1042	N15	E18		02	23.8	17	SB	C 4.2	3	V	1027	111	1.3	
RAMY	22	1118	1133	1321	S13	E80		02	28.5	123	SF		3	C		33		K
RAMY	22	1118	1249	1321	S13	E80		02	28.5	123	SN		3	C		54		K
RAMY	22	1127	1127	1157	S20	W23	4420	02	20.7	30	SF		3	C		39		F
GOES	22	1359	1417	1417						18		C 1.8						
GOES	22	1431	1433	1436						5		C 2.3						
RAMY	22	1436	1444	1523	S20	W26	4420	02	20.6	47	SB	C 3.0	3	C		141		
HOLL	22	1438	1445	1514	S19	W25	4420	02	20.7	36	SN	C 3.0	3	C		103		F
RAMY	22	1502	1528	1619	N13	E42	4422	02	25.8	77	SF		3	C		55		
HOLL	22	1504	1506	1513	S14	E83		02	28.9	9	SF		3	C		9		
HOLL	22	1623	1635	1642	S14	E83		02	29.0	19	SN		3	C		12		
HOLL	22	1654	1657	1711	S14	E82		02	28.9	17	SF	C 2.0	3	C		11		
HOLL	22	1714	1728	1759	S13	E81	4423	02	28.8	45	SN	C 1.6	3	C		26		F
RAMY	22	1716	1726	1755	S12	E79		02	28.7	39	SN	C 1.6	3	C		18		
HOLL	22	1758E	1800U	1822	N15	E30	4421	02	25.0	24D	SF		4	C		25		
RAMY	22	1800	1806	1841	S12	E81		02	28.9	41	SN		3	C		14		K
RAMY	22	1800	1829	1841	S12	E81		02	28.9	41	SN	C 1.7	3	C		16		K
HOLL	22	1801	1805	1811	S14	E84	4423	02	29.1	10	SN		3	C		17		
HOLL	22	1811	1827	1841	S14	E82	4423	02	29.0	30	SN	C 1.7	3	C		26		F
RAMY	22	1844	1845	1851	N10	E39	4422	02	25.7	7	SF		3	C		65		
RAMY	22	1921	2100	2107	S12	E77		02	28.6	106	SN	C 1.2	3	C		27		
HOLL	22	2033	2034	2107	S14	E80	4423	02	28.9	34	SF		3	C		12		K
HOLL	22	2033	2042U	2107	S14	E80	4423	02	28.9	34	1N	C 4.2	3	C		86		K
HOLL	22	2043	2043	2108	N13	E11	4421	02	23.7	25	SN		3	C		66		F

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Sta	Day	Start (UT)	Max (UT)	End (UT)	Lat	CMD	NOAA/ USAF Region	CMP Mo	CMP Day	Dur (Min)	Imp Opt	Xray	See	Obs Type	Time (UT)	Area Measurement Apparent (10^{-6} Disk)	Corr (Sq Deg)	Remarks
HOLL	22	2110	2128	2140	S14	E80	4423	02	28.9	30	SF	C 2.0	3	C		22		
HOLL	22	2140	2145	2208D	S15	E76	4423	02	28.7	28D	SF		3	C		28		
HOLL	22	2212	2213	2227	N12	E09	4421	02	23.6	15	SF		3	C		43		F
HOLL	22	2212	2218	2231	S15	E79	4423	02	28.9	19	SN		3	C		14		
LEAR	22	2343	2343	0003D	N16	E15	4421	02	24.1	20D	SF		3	C		26		K
LEAR	22	2343	2353	0003D	N16	E15	4421	02	24.1	20D	SB	C 2.0	3	C		41		FEK
PALE	22	2345	2345	2355D	N17	E16	4421	02	24.2	10D	SF		3	C		83		K
PALE	22	2345	2355	2355D	N17	E16	4421	02	24.2	10D	SN	C 2.0	3	C		53		FK
LEAR	22	2357	2358	0003D	N14	E38	4422	02	25.9	6D	SN		3	C		28		F
GOES	23	0057	0103	0110						13		C 1.8						
YUNN	23	0120	0124	0146	S15	E70		02	28.4	26	1N			C		92		T
GOES	23	0125	0141	0150						25		C 2.8						
LEAR	23	0219	0221	0223	S18	E74	4423	02	28.7	4	SN		3	C		11		F
LEAR	23	0246	0248	0300	S14	E74	4423	02	28.7	14	SB	C 2.0	3	C		49		
YUNN	23	0248	0250	0255	S14	E71		02	28.5	7	2B	C 2.0		C		200		T
LEAR	23	0304	0306	0314	S13	E74	4423	02	28.7	10	SN		3	C		14		
LEAR	23	0400	0401	0406	S13	E72	4423	02	28.6	6	SB		3	C		32		F
LEAR	23	0419	0434	0435	S18	W34	4420	02	20.6	16	SF		3	C		20		
LEAR	23	0419	0424	0454	N09	E03	4421	02	23.4	35	SN	C 1.7	3	C		69		
LEAR	23	0442	0447	0450	S13	E72	4423	02	28.6	8	SN		3	C		16		
LEAR	23	0542	0544	0556	S13	E73	4423	02	28.7	14	SN	C 2.8	3	C		29		
LEAR	23	0631	0635	0643	S13	E71	4423	02	28.6	12	SN	C 2.1	3	C		20		
YUNN	23	0654	0658	0710	S13	E68		02	28.4	16	SN			C		31		T
YUNN	23	0725	0731	0745	S13	E68		02	28.4	20	SN			C		46		T
LEAR	23	0726	0727	0735	S14	E71	4423	02	28.7	9	SB		3	C		15		F
ATHN	23	0728E	0732	0738	S14	E76		02	29.1	10D	N		2	V	0732	127	6.5	
LEAR	23	0736	0740	0745	S13	E71	4423	02	28.7	9	SB	C 1.6	3	C		29		F
LEAR	23	0855	0903	0914	N06	E31	4422	02	25.7	19	SF		3	C		38		F
GOES	23	0945	1002	1007						22		C 1.8						
GOES	23	1134	1140	1144						10		C 1.8						
RAMY	23	1158	1211	1219	S12	E67	4423	02	28.5	21	SN		3	C		20		
RAMY	23	1251	1256	1327	N12	E01	4421	02	23.6	36	SN	C 2.2	3	C		50		
RAMY	23	1254	1256	1331	N12	E29	4422	02	25.7	37	SF		3	C		54		F
RAMY	23	1313	1316	1335	S11	E67	4423	02	28.6	22	SB	C 6.8	3	C		67		E
ATHN	23	1315E	1317	1324	S12	E67		02	28.6	9D	1B	C 6.8	2	V	1317	95	2.7	
RAMY	23	1431	1439	1457	S15	E66	4423	02	28.6	26	SN		3	C		41		
HOLL	23	1453	1505	1529	S17	W41	4420	02	20.5	36	SF		3	C		19		
HOLL	23	1516	1516	1527	N14	E03	4421	02	23.9	11	SF		3	C		24		F
HOLL	23	1629	1711	1738	S14	E70	4423	02	29.0	69	SN		3	C		38		
GOES	23	1709	1712	1714						5		C 1.7						
GOES	23	1716	1823	1848						92		C 2.4						
HOLL	23	1717	1718	1724	N09	W04	4421	02	23.4	7	SN		3	C		44		F
RAMY	23	1802	1903	1930	N14	W04	4421	02	23.4	88	SF		3	C		59		
HOLL	23	1903	1903	1928	N14	W03	4421	02	23.6	25	SF		3	C		36		F
HOLL	23	2010	2020	2036	N14	W02	4421	02	23.7	26	SN		3	C		62		F
HOLL	23	2104	2104	2122	N14	W04	4421	02	23.6	18	SN		3	C		22		
GOES	23	2318	2321	2323						5		C 2.1						
LEAR	23	2331	2331	2340	S17	W43	4420	02	20.7	9	SN		3	C		24		
LEAR	24	0013	0013	0026	N12	E24	4422	02	25.8	13	SB	C 3.2	3	C		84		ZF
LEAR	24	0106	0106	0408	N11	W03	4421	02	23.8	182	SB		3	C		147		UFK
LEAR	24	0106	0152	0408	N11	W03	4421	02	23.8	182	2B	C 5.9	3	C		607		K
YUNN	24	0136	0154	0245	N11	W07		02	23.5	69	2N	C 5.9		P		507	5.5	F
GOES	24	0138	0202	0236			4421			58		M 1.7						
YUNN	24	0140E	0140U	0145	S12	E57		02	28.4	5D	SN			P	0140	92	1.7	
LEAR	24	0140	0141	0152	S12	E59	4423	02	28.5	12	SB		3	C		68		
LEAR	24	0214	0214	0221	S11	E63	4423	02	28.8	7	SN		3	C		22		
LEAR	24	0329	0359	0453	S15	E60	4423	02	28.7	84	1B	M 2.0	3	C		293		UF
YUNN	24	0338	0352	0425	S14	E58		02	28.5	47	2B	M 2.0		C		461	8.9	
LEAR	24	0528	0529	0534	S13	E59	4423	02	28.7	6	SN		3	C		29		F
LEAR	24	0643	0646	0708D	N12	W06	4421	02	23.8	25D	SB		2	C		136		K
LEAR	24	0643	0708	0708D	N12	W06	4421	02	23.8	25D	1B	C 3.8	2	C		201		UFK
YUNN	24	0644	0708	0736	N11	W07		02	23.8	52	1N	C 3.8		C		461	5.0	
GOES	24	0704	0710	0716			4421			12		C 6.9						
ATHN	24	0709E	0710	0735D	N11	W02		02	24.1	26D	SB	C 3.8	1	V	0710	191	2.0	
GOES	24	0853	0858	0858						5		C 2.4						
RAMY	24	1317	1332	1441	N13	W12	4421	02	23.6	84	SB	C 5.7	3	C		120		FEK
RAMY	24	1317	1336	1441	N13	W12	4421	02	23.6	84	SN		3	C		165		K
RAMY	24	1341	1344	1346	S05	W84	4417	02	18.3	5	SF		3	C		13		
HOLL	24	1410E	1410U	1446D	N13	W12	4421	02	23.7	36D	SN		3	C		100		F

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Sta	Day	Start (UT)	Max (UT)	End (UT)	Lat	CMD	NOAA/ USAF Region	CMP Mo	Day	Dur (Min)	Imp Opt	Xray	See	Obs Type	Time (UT)	Area Measurement Apparent (10^{-6} Disk)	Corr (Sq Deg)	Remarks
RAMY	24	1454	1458	1516	N11	W12	4421	02	23.7	22	SN	C 1.8	3	C		66		F
HOLL	24	1454	1455	1526	N11	W10	4421	02	23.9	32	SN	C 1.8	3	C		60		F
HOLL	24	1552	1601	1614	N12	W07	4421	02	24.1	22	SF	C 2.1	3	C		59		F
HOLL	24	1652	1701	1704	N13	E19	4422	02	26.1	12	SF		3	C		23		F
RAMY	24	1725	1727	1733D	N16	W09	4421	02	24.0	8D	SF		3	C		40		
RAMY	24	1733		1754D	N14	E16	4422	02	25.9	21D	SB		3	C				FK
RAMY	24	1733	1740	1754D	N14	E16	4422	02	25.9	21D	SN		3	C		71		K
HOLL	24	1739	1741	1743	N13	E16	4422	02	25.9	4	SN	C 2.0	3	C		20		
HOLL	24	1750	1751	1802	N13	E17	4422	02	26.0	12	SB	M 1.1	3	C		74		
HOLL	24	1818	1843	1902	S14	E54	4423	02	28.8	44	SF		3	C		22		
HOLL	24	1826	1826	1851	N11	W13	4421	02	23.8	25	SN	C 2.0	3	C		32		F
RAMY	24	1853	1859	1907D	N10	E13	4422	02	25.8	14D	SB	C 3.0	3	C		132		FE
HOLL	24	1858	1859	1923	N10	E15	4422	02	25.9	25	SB	C 3.0	3	C		64		FEK
HOLL	24	1858	1910	1923	N10	E15	4422	02	25.9	25	SB		3	C		61		K
RAMY	24	2006	2006	2015	N14	W13	4421	02	23.9	9	SN		3	C		22		F
HOLL	24	2006	2008	2026	N15	W12	4421	02	23.9	20	SN		4	C		34		F
PALE	24	2217	2244	2253	N13	W17	4421	02	23.6	36	SF	C 1.7	3	C		52		F
HOLL	24	2235	2237	2249	S12	E51	4423	02	28.8	14	SN		3	C		34		F
PALE	24	2237	2239	2254	S11	E54	4423	02	29.0	17	SF		3	C		43		F
PALE	24	2323	2323	2348D	S13	E52	4423	02	28.9	25D	SF		3	C		41		K
PALE	24	2323	2346	2348D	S13	E52	4423	02	28.9	25D	1N		3	C		210		FK
HOLL	24	2331	2331	2355	N14	W20	4421	02	23.5	24	SF		3	C		22		
HOLL	24	2332	2343	0049D	S15	E48	4423	02	28.6	77D	SB		3	C		145		ZF
GOES	24	2335	2355	0019						44		C 3.0						
HOLL	24	2336	2336	2339	S17	W57	4420	02	20.7	3	SF		2	C		21		
HOLL	25	0015	0017	0021	S16	W58	4420	02	20.6	6	SF		3	C		18		
LEAR	25	0047	0058	0113	S12	E50	4423	02	28.8	26	SN		3	C		22		F
LEAR	25	0121	0131	0251	S16	E49	4423	02	28.8	90	SN		3	C		80		K
LEAR	25	0121	0159	0251	S16	E49	4423	02	28.8	90	SB	C 1.8	3	C		134		FHK
YUNN	25	0124	0129	0141	S15	E48		02	28.7	17	SN			P		92	1.4	T
YUNN	25	0155	0203	0211	S14	E48		02	28.7	16	SN			P		62	.9	T
YUNN	25	0203	0205	0208	N14	E13		02	26.1	5	SF			P		62	.7	
LEAR	25	0203	0205	0217	N14	E15	4422	02	26.2	14	SB		3	C		49		F
LEAR	25	0227	0228	0234	N11	W19	4421	02	23.7	7	SF		3	C		20		F
LEAR	25	0311	0314	0432	S15	E48	4423	02	28.8	81	2B	M 2.5	3	C		706		UFK
LEAR	25	0311	0403	0432	S15	E48	4423	02	28.8	81	1B		3	C		278		K
YUNN	25	0312E	0317	0355	S16	E47		02	28.7	43D	3B			P		1538	23.1	T
LEAR	25	0451	0452	0459	S13	E49	4423	02	28.9	8	SN		3	C		59		
YUNN	25	0623	0625	0630	N19	W15		02	24.1	7	SF			C		92	1.1	
LEAR	25	0833	0843	0938	S12	E44	4423	02	28.7	65	SN		3	C		52		K
LEAR	25	0833	0919	0938	S12	E44	4423	02	28.7	65	1N	C 1.2	3	C		182		FK
GOES	25	0901	0919	0937			4423			36		C 3.6						
LEAR	25	0903	0906	0947	N09	E05	4422	02	25.8	44	SB		3	C		119		ZFK
LEAR	25	0903	0920	0947	N09	E05	4422	02	25.8	44	SN		3	C		164		K
ATHN	25	0909E	0922	0931	N09	E06		02	25.8	22D	SB		2	V	0922	95	1.0	
GOES	25	1012	1015	1017						5		C 2.0						
RAMY	25	1153	1234	1243	N12	W20	4421	02	24.0	50	SB	C 1.2	3	C		51		F
RAMY	25	1307	1313	1336D	N16	W18	4421	02	24.2	29D	SF		3	C		38		F
RAMY	25	1338	1344	1405	S20	W64	4420	02	20.7	27	SF		3	C		44		
RAMY	25	1421	1426	1441	S11	E42	4423	02	28.8	20	SF	C 1.9	3	C		30		F
RAMY	25	1639	1706	2043D	N16	W22	4421	02	24.0	244D	SN		3	C		169		K
RAMY	25	1639	1730	2043D	N16	W22	4421	02	24.0	244D	2N	C 1.1	3	C		544		K
HOLL	25	1704	1705	1741D	N16	W22	4421	02	24.0	37D	SN		3	C		66		K
HOLL	25	1704	1732	1741D	N16	W22	4421	02	24.0	37D	1N		3	C		308		ZFK
GOES	25	1704	1731	1734			4421			30		C 4.3						
HOLL	25	1757	1804	1814	S13	E40	4423	02	28.8	17	SN		3	C		59		
PALE	25	1940	1941	1954	N12	W30	4421	02	23.6	14	SN		3	C		50		
PALE	25	2232	2242U	2250D	N17	W22	4421	02	24.3	18D	SN	C 1.9	3	C		138		F
PEKG	26	0033	0034	0037	S11	E30		02	28.3	4	SN			C	0034	84	1.0	D
LEAR	26	0034	0034	0037	S11	E29	4423	02	28.2	3	SN		3	C		45		
LEAR	26	0037	0037	0052	N10	W04	4422	02	25.7	15	SN		3	C		21		F
GOES	26	0110	0113	0149			4423			39		C 2.0						
PEKG	26	0138E	0143	0154	S15	E35		02	28.7	16D	SF			P	0143	34	.4	D
LEAR	26	0139	0139	0148	S14	E34	4423	02	28.6	9	SN		3	C		19		F
PEKG	26	0200	0203	0203D	N13	W35		02	23.4	3D	SN			P	0203	46	.6	D
LEAR	26	0351	0356	0400	N14	W32	4421	02	23.7	9	SN		3	C		28		
YUNN	26	0407	0411	0414	N11	W34		02	23.6	7	SN			C		41	.4	D
LEAR	26	0414	0416	0439	N14	W32	4421	02	23.8	25	SB	C 1.2	3	C		34		
GOES	26	0606	0614	0622						16		C 1.2						

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Sta	Day	Start (UT)	Max (UT)	End (UT)	Lat	CMD	NOAA/ USAF Region	CMP Mo	CMP Day	Dur (Min)	Imp Opt	Imp Xray	See	Obs Type	Time (UT)	Area Measurement Apparent (10^{-6} Disk)	Corr (Sq Deg)	Remarks
LEAR	26	0800	0802	0812	N14	W34	4421	02	23.8	12	SN	C 1.2	3	C		21		
LEAR	26	0803	0805	0809	S14	E37	4423	02	29.1	6	SF		3	C		30		F
LEAR	26	0843	0847	0854	S14	E36	4423	02	29.1	11	SN	C 1.3	3	C		87		
GOES	26	0855	0858	0902						7		C 1.8						
LEAR	26	0906	0906	0939	N15	W08	4422	02	25.8	33	SN		3	C		23		K
LEAR	26	0906	0915	0939	N15	W08	4422	02	25.8	33	SN		3	C		47		K
LEAR	26	0928	0931	0939	N14	W35	4421	02	23.7	11	SF		3	C		32		
LEAR	26	0942	0947	0951	S14	E35	4423	02	29.0	9	SN	C 2.1	3	C		34		F
GOES	26	1033	1038	1041						8		C 1.9						
GOES	26	1144	1147	1153			4421			9		C 1.6						
RAMY	26	1154E		1243	N13	W37	4421	02	23.7	49D	SF		3	C				F
RAMY	26	1156	1156	1203	S12	E33	4423	02	29.0	7	SF		3	C		30		F
GOES	26	1203	1206	1209						6		C 2.0						
RAMY	26	1218	1252	1515D	S10	E30	4423	02	28.8	177D	1B	M 1.7	3	C		348		UF
RAMY	26	1230	1231	1240	N09	W10	4422	02	25.8	10	SN		3	C		37		F
ATHN	26	1245E	1245	1333D	S13	E31		02	28.9	48D	1B		1	V	1245	175	2.2	
RAMY	26	1350	1351	1435	N14	W37	4421	02	23.8	45	SN		3	C		65		F
RAMY	26	1446	1446	1553	N13	W38	4421	02	23.7	67	SF		3	C		21		
RAMY	26	1727	1735	1748	N11	W13	4422	02	25.7	21	SN		3	C		129		
HOLL	26	1734	1737	1744	N07	W13	4422	02	25.8	10	SF		3	C		40		F
PALE	26	1835	1837	1850	N18	W35	4421	02	24.1	15	SF		3	C		26		
HOLL	26	1848	1854U	1956	N16	W14	4422	02	25.7	68	SN	C 4.9	2	C		198		F
PALE	26	1850	1857	2003	N17	W14	4422	02	25.7	73	SN	C 4.9	3	C		184		F
PALE	26	1924	1934	2007	N20	W36	4421	02	24.1	43	SN		3	C		66		
HOLL	26	1936E	1939	1950	N21	W35	4421	02	24.1	14D	SN		2	C		40		
PALE	26	2001	2002	2009	S14	E30	4423	02	29.1	8	SF		3	C		35		
HOLL	26	2001E	2002	2006	S15	E30	4423	02	29.1	5D	SF		2	C		36		
HOLL	26	2237	2238	2247	N10	W16	4422	02	25.7	10	SF		2	C		28		
PALE	26	2238	2238U	2246D	N09	W17	4422	02	25.7	8D	SF		3	C		26		
GOES	26	2324	2327	2329						5		C 1.1						
HOLL	26	2332	2337	2339	N15	W43	4421	02	23.7	7	SF		3	C		19		
HOLL	26	2338	2338	2347	N10	W16	4422	02	25.8	9	SN		2	C		50		F
GOES	27	0024	0027	0029						5		C 1.9						
YUNN	27	0205	0210	0234	N22	W40		02	24.0	29	SN			P		92	1.5	T
PALE	27	0210E	0211U	0242D	N13	W44	4421	02	23.8	32D	SN	C 1.9	3	C		78		
PEKG	27	0213	0215	0232	N20	W39		02	24.1	19	1N			C	0215	244	3.8	F
GOES	27	0350	0352	0356						6		C 1.1						
LEAR	27	0412	0414	0422	N08	W19	4422	02	25.8	10	SN		3	C		37		
LEAR	27	0424	0425	0439	N08	W19	4422	02	25.8	15	SN		3	C		39		
LEAR	27	0428	0428	0437	S12	E21	4423	02	28.8	9	SN		3	C		29		
YUNN	27	0445	0450	0510	N22	W40		02	24.1	25	SN			P		108	1.7	T
LEAR	27	0449	0450	0502	N21	W40	4421	02	24.1	13	SN		3	C		40		F
YUNN	27	0555	0556	0602	N11	W20		02	25.7	7	SN			P		77	.9	E
LEAR	27	0556	0557	0604	N09	W20	4422	02	25.7	8	SN		3	C		63		
ATHN	27	0603	0605	0622	N14	W42		02	24.1	19	1N		2	V	0605	19	.3	
LEAR	27	0728	0732	0745	N19	W42	4421	02	24.1	17	SB	C 2.2	3	C		150		FE
YUNN	27	0730	0732	0740	N19	W44		02	24.0	10	1N	C 2.2		P		185	3.0	T
ATHN	27	0730	0733	0746	N18	W42		02	24.1	16	1B	C 2.2	2	V	0733	143	2.2	
YUNN	27	0853	0907	0935	N13	W46		02	23.9	42	1N	C 9.9		P		185	3.0	T
LEAR	27	0854	0856	0951D	N14	W46	4421	02	23.9	57D	SB	C 9.9	3	C		113		UFK
LEAR	27	0854	0923	0951D	N14	W46	4421	02	23.9	57D	1N		3	C		179		K
ATHN	27	0854	0856	1008D	N15	W42		02	24.2	74D	1B		2	V	0856	159	2.5	
GOES	27	0936	0937	0947						11		C 3.0						
RAMY	27	1130	1130	1146	S12	E17	4423	02	28.8	16	SF		3	C		41		
GOES	27	1207	1210	1217						10		C 1.7						
GOES	27	1502	1517	1546						44		C 3.2						
HOLL	27	1709	1710	1722	S12	E13	4423	02	28.7	13	SF		3	C		53		F
HOLL	27	1733	1734	1830	N13	W54	4421	02	23.7	57	SN	C 1.7	3	C		110		F
PALE	27	1820	1825	1836	S12	E13	4423	02	28.7	16	SF		3	C		30		
HOLL	27	1826E	1826U	1843	S13	E12	4423	02	28.7	17D	SF		3	C		48		
HOLL	27	1949	1954	2015	N14	W58	4421	02	23.4	26	SF		3	C		18		K
HOLL	27	1949	2003	2015	N14	W58	4421	02	23.4	26	SF	C 1.2	3	C		25		K
GOES	27	2021	2024	2026						5		C 1.9						
HOLL	27	2109E	2113U	2220D	N11	W49	4421	02	24.2	71D	1B	M 2.0	3	C		230		FE
PALE	27	2155E	2157U	2225D	N11	W56	4421	02	23.7	30D	SF		3	C		70		F
PALE	27	2222	2222	2225D	N09	W29	4422	02	25.8	3D	SF		3	C		21		F
PALE	27	2346	2346	2352	S14	E12	4423	02	28.9	6	SF		3	C		98		F
PALE	28	0147	0158	0219	S10	E75		03	4.7	32	SF		3	C				
GOES	28	0321	0327	0328						7		C 1.0						

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

FEBRUARY 1984

Sta	Day	Start (UT)	Max (UT)	End (UT)	Lat	CMD	NOAA/ USAF Region	CMP Mo	CMP Day	Dur (Min)	Imp Opt	Imp Xray	See	Obs Type	Time (UT)	Area Measurement Apparent (10^{-6} Disk)	Area Measurement Corr (Sq Deg)	Remarks
GOES	28	0506	0508	0511						5		C 1.0						
LEAR	28	0520	0524	0601	S15	E77		03	5.1	41	SN		3	C		55		FK
LEAR	28	0520	0547	0601	S15	E77		03	5.1	41	SN		3	C		23		K
LEAR	28	0537	0538	0554	N15	W57	4421	02	23.9	17	SB		3	C		20		E
GOES	28	0723	0726	0729						6		C 1.2						
LEAR	28	0851	0851	0857	N13	W34	4422	02	25.8	6	SF		3	C		32		
GOES	28	1241	1253	1303						22		C 1.1						
GOES	28	1304	1307	1309						5		C 2.0						
GOES	28	1501	1502	1506						5		C 1.0						
HOLL	28	1522	1527	1538	S12	E01	4423	02	28.7	16	SF		3	C		31		
HOLL	28	1536	1537	1549	N15	W38	4422	02	25.8	13	SF		3	C		28		
HOLL	28	2010	2023	2026	S17	E69		03	5.1	16	SF		3	C		24		
GOES	28	2046	2056	2103						17		C 3.9						
HOLL	28	2203E	2204U	2257D	N11	W67	4421	02	23.9	54D	SN		3	C		18		K
HOLL	28	2203E	2218	2257D	N11	W67	4421	02	23.9	54D	SN		3	C		90		K
PALE	28	2210E	2211U	2225	S10	E65	4427	03	4.8	15D	SF		3	C		37		
LEAR	29	0211	0211	0216	N08	W59	4421	02	24.7	5	SF		3	C		26		
LEAR	29	0220	0225	0317	S12	E64	4427	03	4.9	57	1B		3	C		257		K
LEAR	29	0220	0242	0317	S12	E64	4427	03	4.9	57	1B	C 2.1	3	C		165		FEK
GOES	29	0239	0245	0249			4427			10		C 2.3						
LEAR	29	0318	0332	0417	S12	W03	4423	02	28.9	59	SN	C 1.7	3	C		53		
LEAR	29	0347	0347	0357	N11	W42	4422	02	26.0	10	SF		3	C		18		
GOES	29	1122	1143	1151						29		C 2.5						
GOES	29	1334	1337	1340						6		C 1.7						
HOLL	29	1541	1543	1551	S11	W37	4426	02	26.9	10	SF		3	C		22		
HOLL	29	1629	1629	1658	S13	W12	4423	02	28.8	29	SF	C 1.9	3	C		74		
GOES	29	1730	1733	1735						5		C 2.0						
HOLL	29	1741	1741	1800	N16	W52	4421	02	25.8	19	SF		3	C		29		
HOLL	29	1801	1802	1807	N16	W79	4421	02	23.8	6	SF		3	C		8		
HOLL	29	1827	1827	1842	S14	W54	4427	02	25.7	15	SF		3	C		24		
HOLL	29	2103	2105	2117	N11	W52	4422	02	26.0	14	SF		3	C		26		
HOLL	29	2145	2146	2202	N17	W75	4421	02	24.2	17	SN	M 1.4	3	C		16		F
HOLL	29	2204	2206	2228	N17	W75	4421	02	24.2	24	SF		3	C		17		K
HOLL	29	2204	2218	2228	N17	W75	4421	02	24.2	24	SF		3	C		18		FK
HOLL	29	2232	2235	2256	N11	W57	4422	02	25.7	24	SN	C 3.5	3	C		40		F

"Remarks":

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

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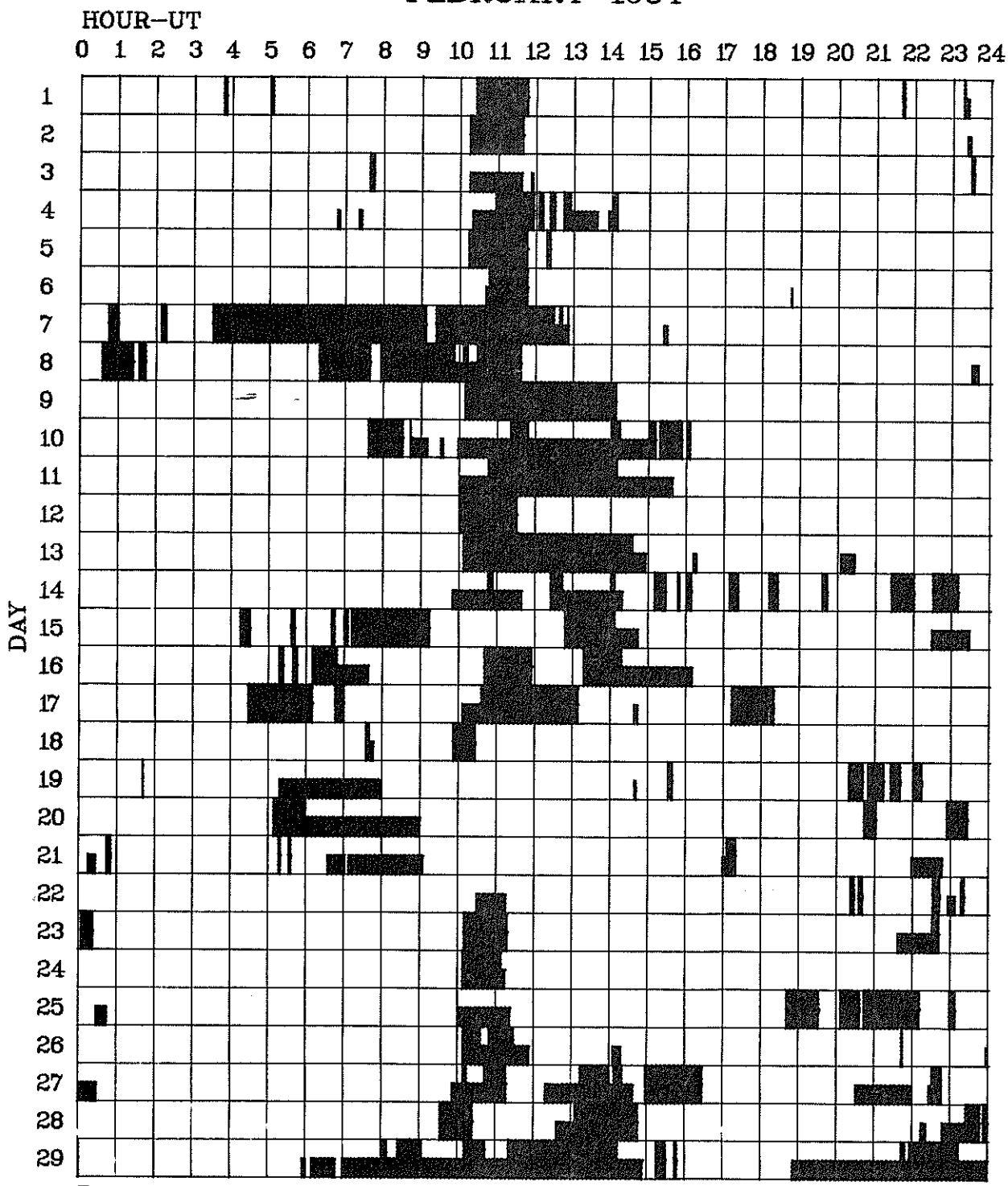
Feb 84

INTERVALS OF NO FLARE PATROL OBSERVATION
FOR PRECEDING SOLAR FLARE TABLE
FEBRUARY 1984



Times of no flare patrol, shown here as shaded areas, combine reports from those observatories listed below. Shaded bottom half of panel for each day marks time of no cinematographic patrol; shaded top half of panel marks time of neither visual nor cinematographic patrol.

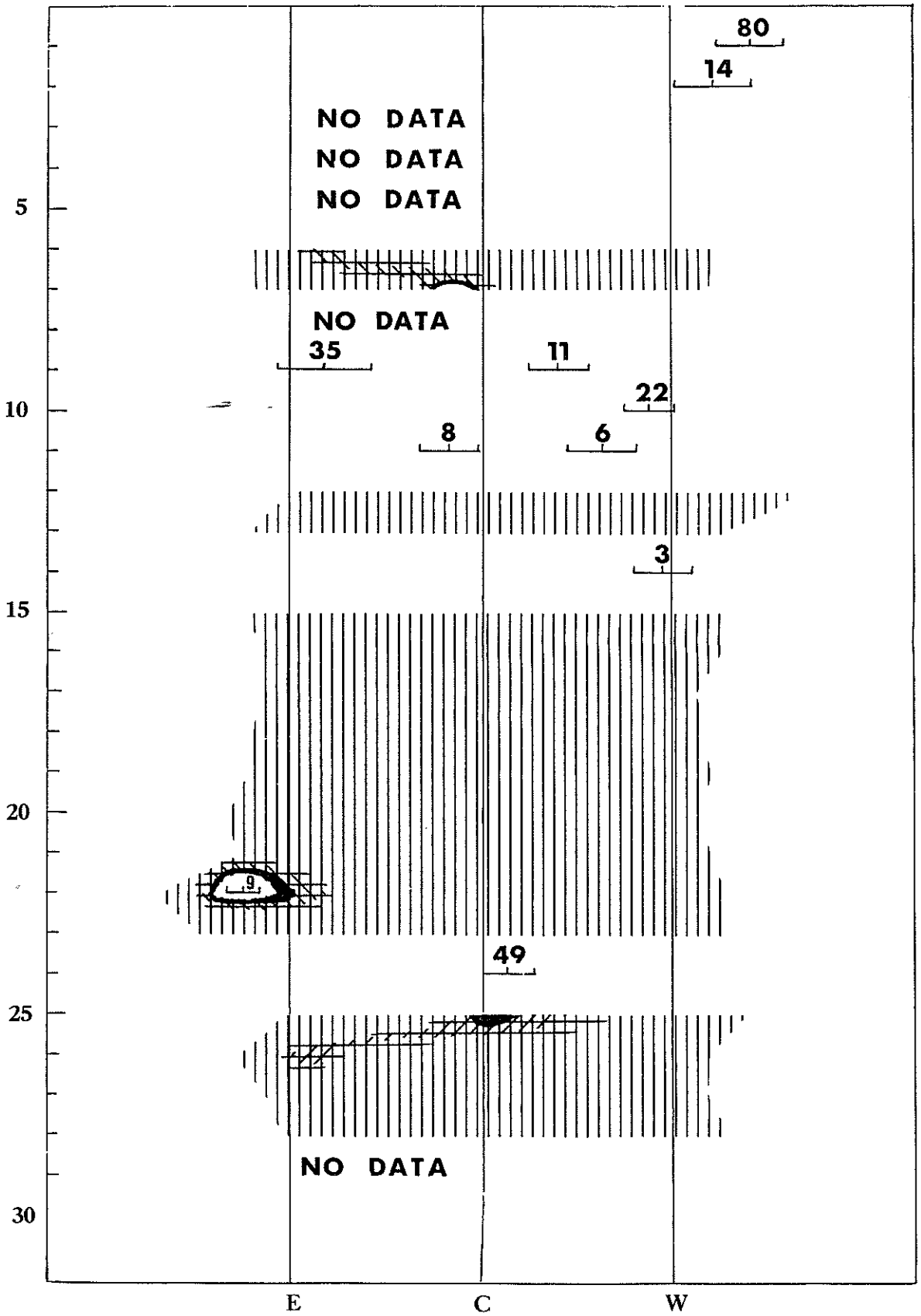
Athens
Holloman
Learmonth
Palehua
Peking
Ramey
Wendelstein
Yunnan

SOLAR RADIO EMISSION
INTERFEROMETRIC OBSERVATION

FEBRUARY 1984

Nançay

169 MHz

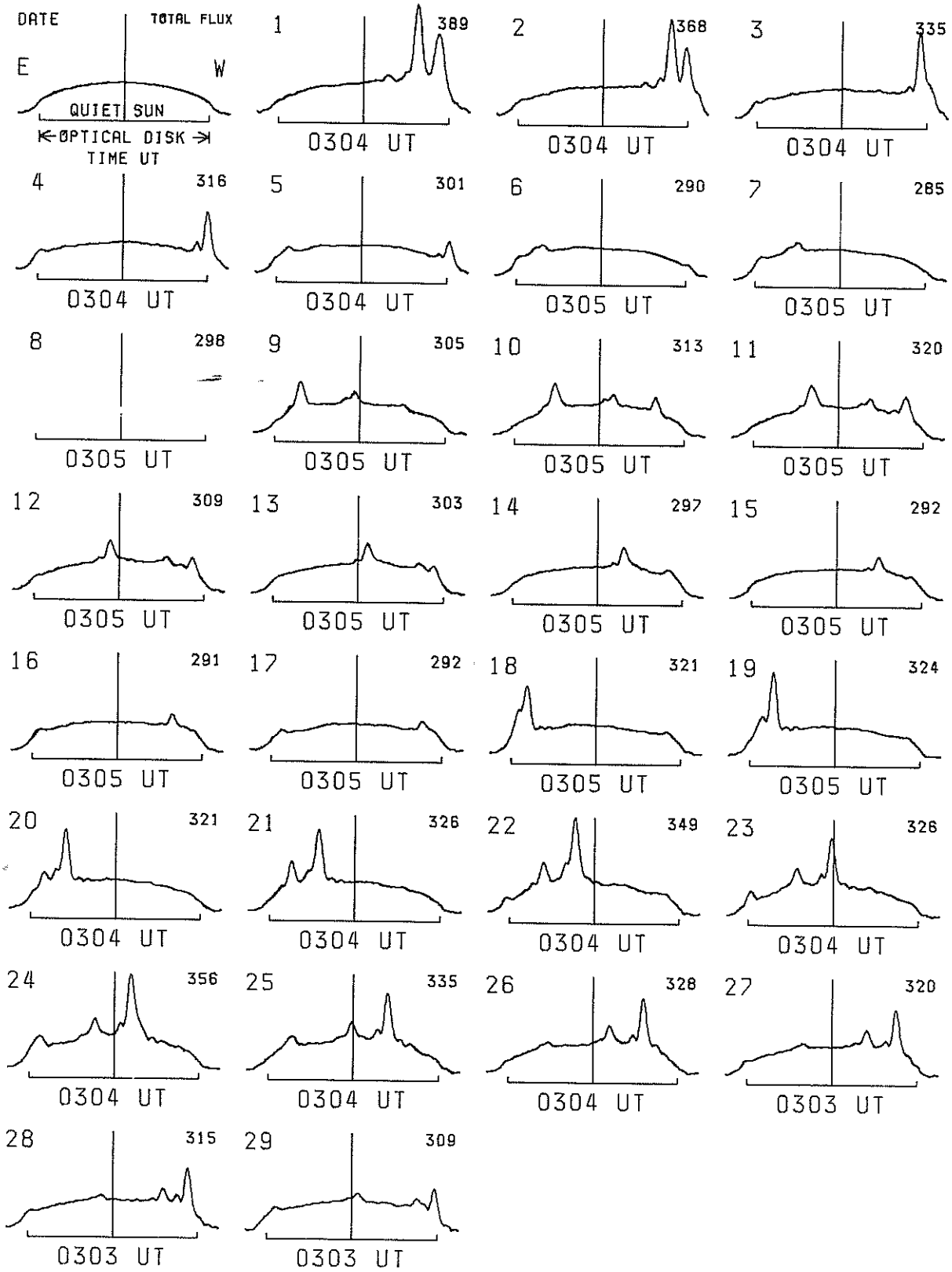


28
Feb 84

EAST-WEST SØLAR SCANS
FEBRUARY 1984

TØYØKAWA, JAPAN

3 CM
FAN BEAM WITH 1.1 MINUTES ØF ARC

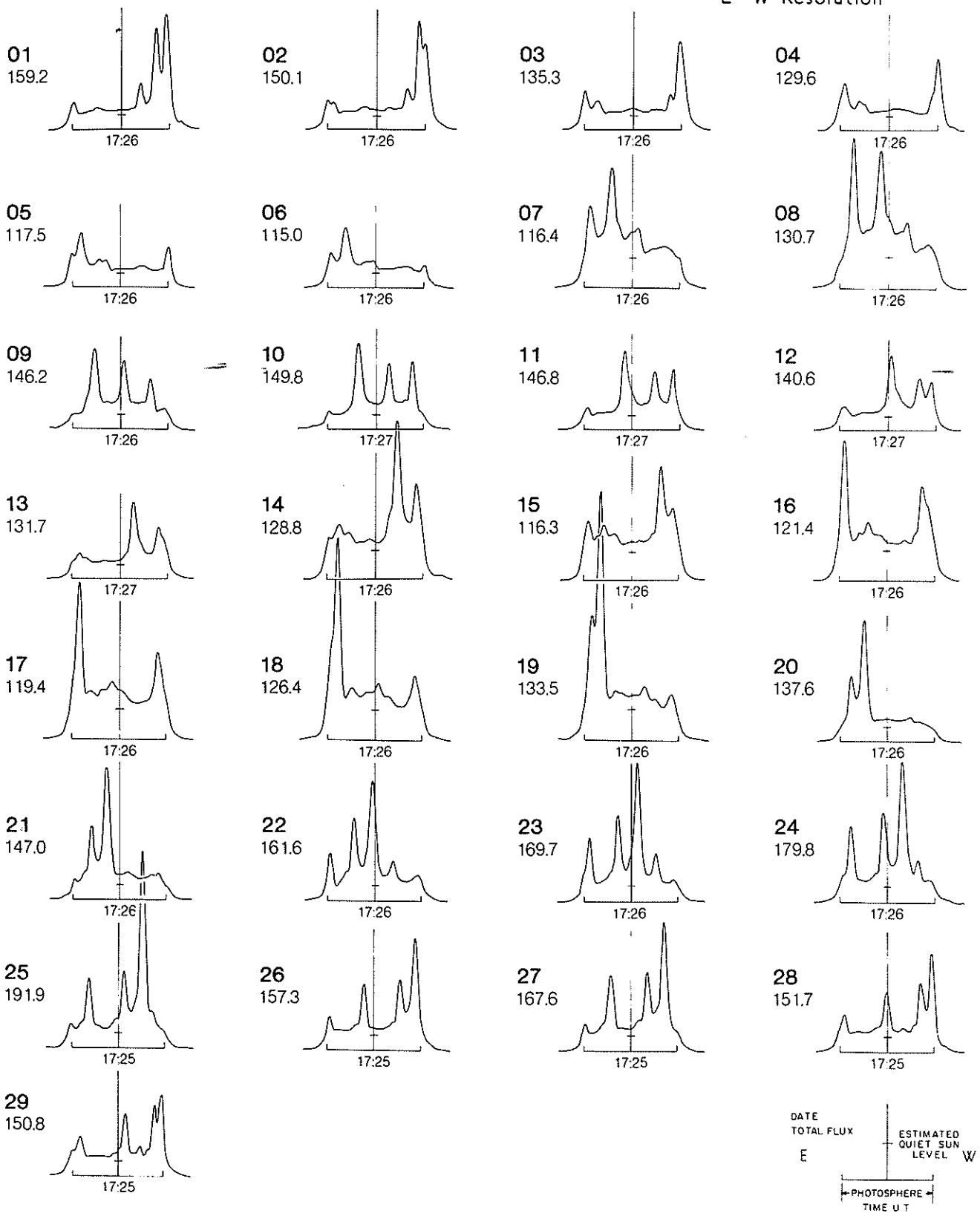


EAST-WEST SOLAR SCANS

FEBRUARY 1984

ALGONQUIN RADIO OBSERVATORY
CANADA

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

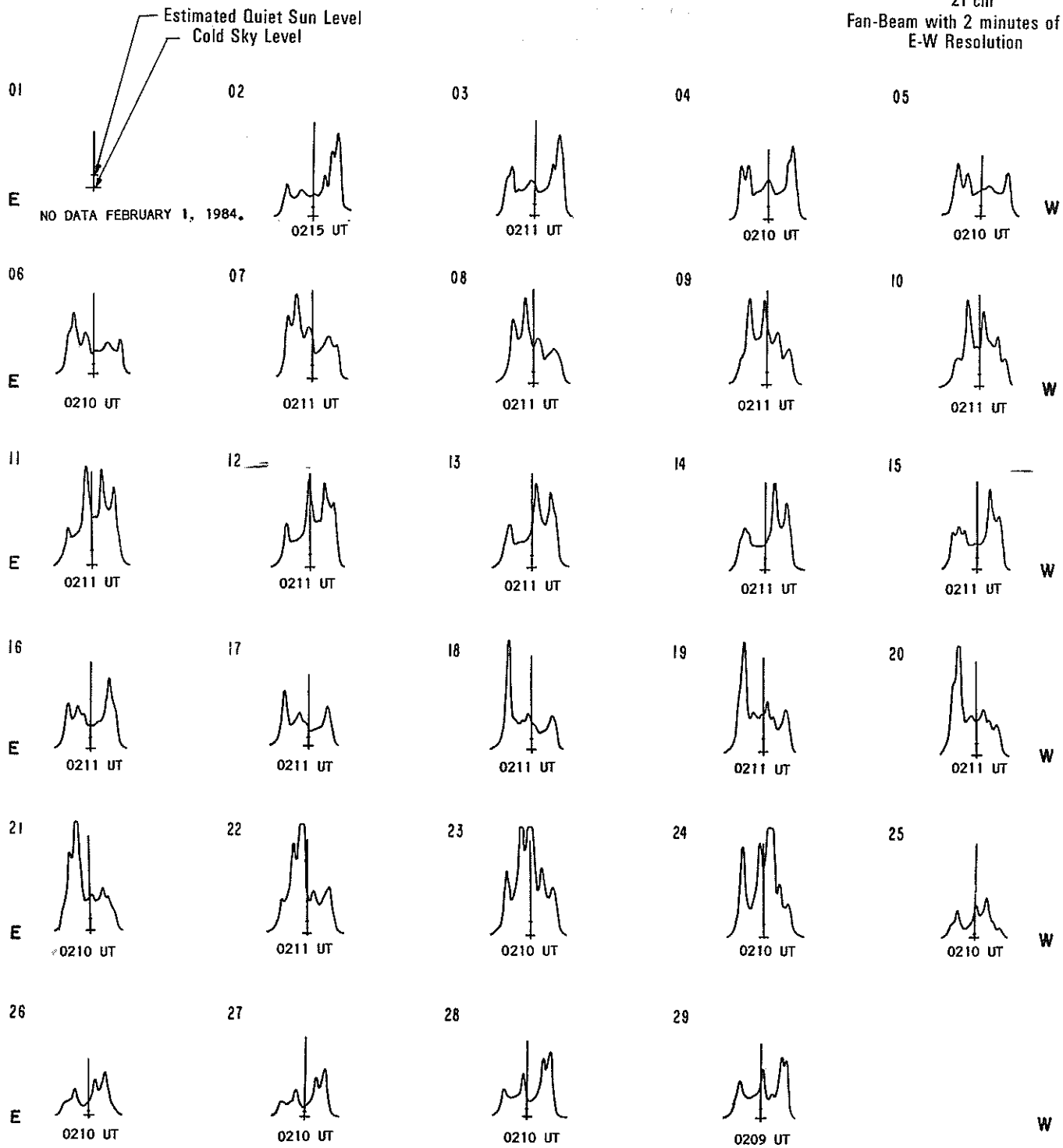


Fleurs, Australia

EAST-WEST SOLAR SCANS

FEBRUARY 1984

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

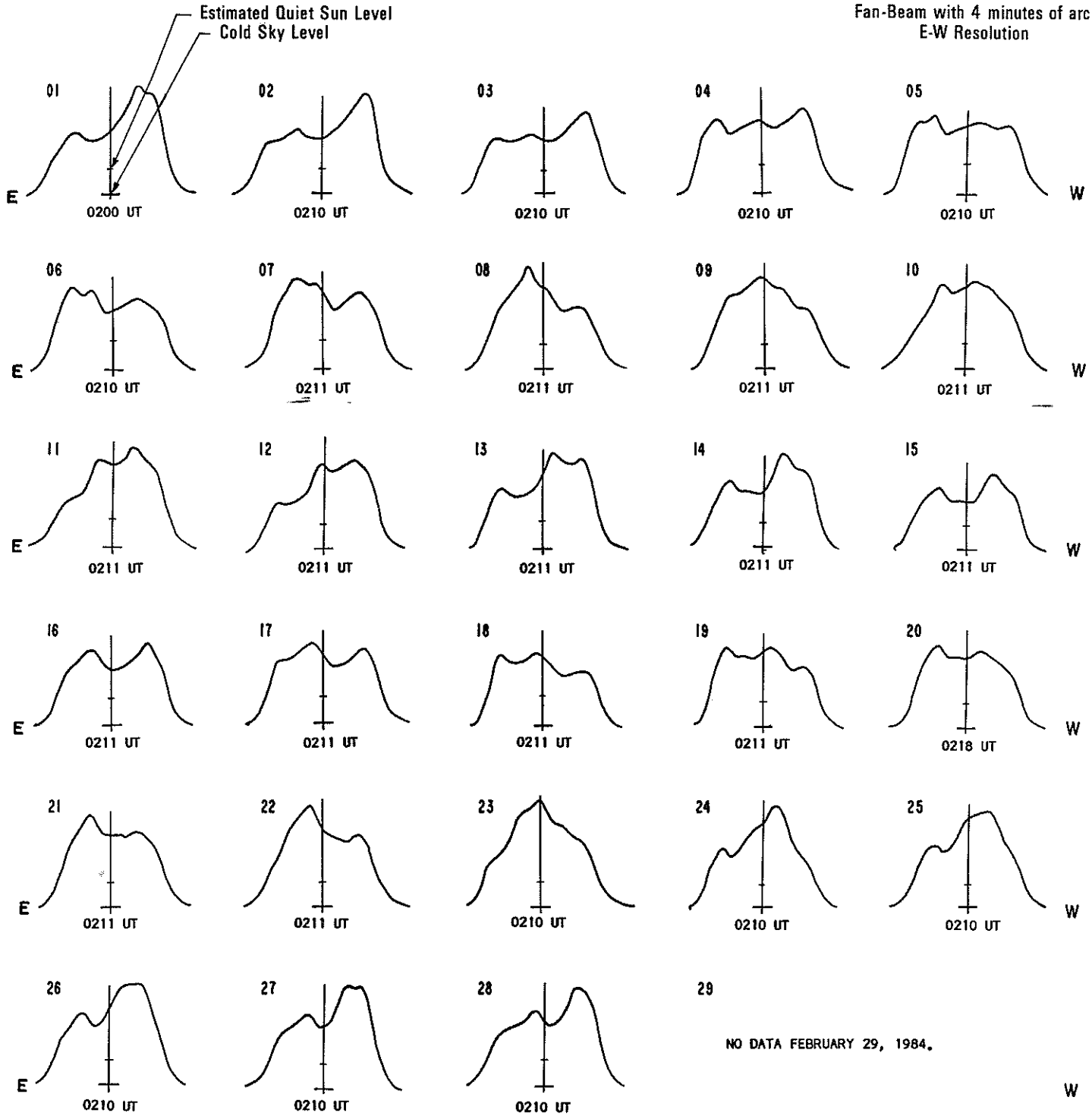


EAST-WEST SOLAR SOLAR SCANS

FEBRUARY 1984

Fleurs, Australia

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



NO DATA FEBRUARY 29, 1984.

SOLAR RADIO EMISSION
SELECTED FIXED FREQUENCY EVENTS

FEBRUARY 1984

Day	Freq	Sta	Type		Start (UT)	Time of Maximum (UT)	Duration (Min)	Flux Density Peak (10 -22 W/m 2 Hz)	Flux Density Mean (10 -22 W/m 2 Hz)	Int	Remarks
01	2695	LEAR	47	GB	0214.0	0214.6	1.6	73.0			QL=6 ST=2 TYP=5
	8800	LEAR	47	GB	0214.0	0214.6	2.5	67.0			QL=6 ST=2 TYP=5
	2695	PALE	47	GB	0214.0	0214.6	1.8	73.0			QL=6 ST=2 TYP=5
	8800	PALE	47	GB	0214.1	0214.6	1.7	80.0			QL=6 ST=2 TYP=5
	8400	BERN	3	S	1011.2	1013.4	12.0	19.0			
	2800	OTTA	20	GRF	1350.0	1500.0	185.0	5.6	3.0		
	2800	OTTA	28	PRE	1920.0	1935.0	15.0	27.0	9.0		
	8800	PALE	49	GB	1934.1	1934.5	13.5	320.0			QL=6 ST=2 TYP=6
	2800	OTTA	47	GB	1935.5	1955.0	94.5	2025.0	668.0		
	2695	PALE	49	GB	1936.0	1936.5	11.6	60.0			QL=6 ST=2 TYP=6
	2695	SGMR	49	GB	1937.3E	1940.5	13.5D	390.0			QL=6 ST=2 TYP=6
	8800	SGMR	49	GB	1937.3E	1940.5	13.5D	390.0			QL=6 ST=2 TYP=6
	2695	SGMR	49	GB	1950.8	1953.1	13.0	1600.0			QL=6 ST=2 TYP=6
	8800	SGMR	49	GB	1950.8	1953.1	13.0	1199.0			QL=6 ST=2 TYP=6
	8800	SGMR	49	GB	2003.8	2004.0	17.5	820.0			QL=6 ST=2 TYP=6
	2695	SGMR	49	GB	2003.8	2004.0	17.5	1199.0			QL=6 ST=2 TYP=6
	8800	SGMR	47	GB	2021.3	2021.3	38.3	400.0			QL=6 ST=2 TYP=5
	2695	SGMR	49	GB	2021.3	2021.3	53.7	550.0			QL=6 ST=2 TYP=6
	2800	OTTA	29	PBI	2110.0	2110.0	130.0D	50.0			
	8800	PALE	8	S	2152.6	2152.6	.2	21.0			QL=6 ST=2 TYP=3
	8800	PALE	47	GB	2307.3	2307.5	.5	210.0			QL=3 ST=2 TYP=5
	8800	LEAR	8	S	2326.1	2326.5	.5	25.0			QL=6 ST=2 TYP=3
02	8800	PALE	8	S	0130.3	0130.5	.3	27.0			QL=6 ST=2 TYP=3
	8800	LEAR	8	S	0258.8	0259.8	2.0	17.0			QL=6 ST=2 TYP=3
	2695	LEAR	4	S/F	0442.8	0444.0	10.0	39.0			QL=6 ST=3 TYP=3
	8800	LEAR	8	S	0443.1	0443.8	1.2	28.0			QL=6 ST=2 TYP=3
	8800	ATHN	8	S	0949.0	0949.1	1.5	35.0			QL=5 ST=2 TYP=3
	8400	BERN	41	F	0949.1	0949.3	13.0	40.0			
	2800	OTTA	21	GRF	1540.0	1800.0	240.0	8.2	4.1		
	2800	OTTA	1	S	1645.7	1646.0	1.3	7.2	3.0		
	2800	OTTA	4	S/F	1652.5	1652.8	2.0	20.0	7.0		
	8800	SGMR	8	S	1728.0	1728.1	.3	18.0			QL=6 ST=2 TYP=3
	8800	LEAR	8	S	2342.3	2342.8	.8	17.0			QL=6 ST=2 TYP=3
03	2695	LEAR	47	GB	0407.0	0408.8	10.8	78.0			QL=2 ST=2 TYP=5
	8800	LEAR	47	GB	0408.1	0409.8	2.0	58.0			QL=6 ST=2 TYP=5
	8800	LEAR	20	GRF	0629.1	0634.3	44.9	13.0			QL=6 ST=2 TYP=2
	8800	ATHN	8	S	1433.0	1433.5	1.1	23.0			QL=4 ST=2 TYP=3
	8800	SGMR	8	S	1433.1	1433.3	.5	22.0			QL=6 ST=2 TYP=3
	2800	OTTA	4	S/F	1516.0	1517.0	8.0	18.6	4.6		
	2800	OTTA	1	S	1657.9	1658.0	2.0	6.2	2.0		
	2800	OTTA	3	S	1959.0	2000.7	5.0	24.8	7.4		
	2695	SGMR	47	GB	1959.6	2000.3	1.7	66.0			QL=6 ST=2 TYP=5
	2695	PALE	8	S	2000.0	2000.5	1.1	22.0			QL=6 ST=2 TYP=3
	8800	SGMR	8	S	2000.1	2000.1	.4	18.0			QL=6 ST=2 TYP=3
	8800	PALE	8	S	2000.1	2000.1	.4	24.0			QL=6 ST=2 TYP=3
	2695	PENT	3	S	2011.7	2012.0	2.0	10.8	5.0		
	2800	OTTA	23	GRF	2034.0	2037.0	27.0	6.2	3.1		
	2800	OTTA	1	S	2040.0	2041.0	3.0	5.6	2.3		
	2695	LEAR	4	S/F	2259.6	2303.1	4.2	38.0			QL=5 ST=2 TYP=3
	8800	LEAR	4	S/F	2259.8	2301.5	2.2	23.0			QL=6 ST=2 TYP=3
04	2695	LEAR	8	S	0023.8	0024.1	1.5	8.0			QL=5 ST=2 TYP=3
	8800	LEAR	8	S	0023.8	0025.3	2.0	10.0			QL=6 ST=2 TYP=3
	8800	LEAR	4	S/F	0027.8	0031.8	11.0	5.0			QL=6 ST=2 TYP=3
	8800	LEAR	4	S/F	0554.3	0555.3	4.8	15.0			QL=6 ST=2 TYP=3
	2695	LEAR	4	S/F	0554.6	0555.5	2.5	10.0			QL=2 ST=2 TYP=3
	8800	LEAR	4	S/F	0600.1	0606.3	8.9	25.0			QL=6 ST=2 TYP=3
	2695	LEAR	4	S/F	0604.8	0606.6	7.0	36.0			QL=6 ST=2 TYP=3
	8400	BERN	46	C	0955.5	0956.0	15.0U	52.0			
	8800	LEAR	4	S/F	0955.8	0956.0	2.5	48.0			QL=6 ST=2 TYP=3
	8800	ATHN	4	S/F	0955.8	0956.1	2.3	42.0			QL=6 ST=2 TYP=3
	2800	OTTA	240	R	1430.0	1440.0	10.0	2.6	1.3		
	2800	OTTA	22	GRF	1655.0	1730.0	50.0	1.6	0.8		
	2800	OTTA	3	S	1759.0	1800.5	5.0	21.0	7.0		
	8800	SGMR	47	GB	1759.1	1759.6	3.0D	53.0			QL=1 ST=2 TYP=5
	2695	SGMR	8	S	1759.6	1800.6	1.2D	32.0			QL=1 ST=2 TYP=3
	2800	OTTA	29	PBI	1804.0	1804.0	50.0	2.6	1.3		
	2800	OTTA	1	S	2116.0	2117.0	3.0	2.6	1.5		
	8800	PALE	47	GB	2145.6	2146.0	2.5	219.0			QL=6 ST=2 TYP=5

SOLAR RADIO EMISSION
SELECTED FIXED FREQUENCY EVENTS

FEBRUARY 1984

Day	Freq	Sta	Type		Start (UT)	Time of Maximum (UT)	Duration (Min)	Flux Density Peak (10 -22 W/m 2 Hz)	Flux Density Mean	Int	Remarks
05	8800	LEAR	4	S/F	0012.0	0012.6	3.1	21.0			QL=6 ST=2 TYP=3
	8800	PALE	8	S	0012.3	0012.6	1.0	27.0			QL=6 ST=2 TYP=3
	2800	OTTA	4	S/F	1635.0	1636.5	3.0	31.0	10.4		
	2695	SGMR	4	S/F	1635.1	1636.6	2.7	36.0			QL=6 ST=2 TYP=3
06	2800	OTTA	20	GRF	1910.0	2105.0	170.0	3.2	1.6		
	8800	PALE	8	S	2327.0	2327.1	.3	13.0			QL=6 ST=2 TYP=3
07	2800	OTTA	240	R	1427.0	1443.0	16.0	1.8	0.9		
	2800	OTTA	20	GRF	1507.0	1510.0	20.0	1.2	0.8		
	2800	OTTA	20	GRF	1600.0	1610.0	55.0	1.6	1.0		
	2800	OTTA	20	GRF	1845.0	1925.0	135.0	4.8	2.4		
	2695	PENT	4	S/F	2228.0	2234.5	11.0	14.2	5.4		
08	2695	LEAR	4	S/F	0125.0	0125.8	3.0	19.0			QL=6 ST=2 TYP=3
	8800	LEAR	4	S/F	0125.0	0126.6	7.0	19.0			QL=6 ST=2 TYP=3
	2800	OTTA	45	C	1418.5	1420.0	3.0	2.4	1.0		
	8800	SGMR	8	S	1419.8	1420.0	.5	15.0			QL=6 ST=2 TYP=3
	2800	OTTA	240	R	1445.0	1515.0	30.0	2.4	1.2		
	2800	OTTA	240	R	1600.0	1640.0	40.0	3.0	1.5		
	2800	OTTA	20	GRF	1950.0	2015.0	85.0	5.0	2.4		
	2800	OTTA	260	FAL	2120.0	2135.0	15.0	-2.2	-1.1		
09	8800	ATHN	8	S	0555.8	0556.5	1.2	22.0			QL=6 ST=2 TYP=3
	2695	LEAR	8	S	0555.8	0557.3	1.5	10.0			QL=6 ST=2 TYP=3
	8800	LEAR	8	S	0556.5	0556.6	.3	18.0			QL=6 ST=2 TYP=3
	8800	LEAR	8	S	0611.8	0612.1	.7	9.0			QL=6 ST=3 TYP=3
	2695	LEAR	8	S	0611.8	0612.1	.8	8.0			QL=6 ST=3 TYP=3
	2695	LEAR	4	S/F	0614.6	0615.3	5.7	46.0			QL=6 ST=2 TYP=3
	8800	ATHN	8	S	0614.6	0615.3	1.0	43.0			QL=6 ST=3 TYP=3
	8800	LEAR	4	S/F	0614.8	0615.1	2.3	33.0			QL=6 ST=2 TYP=3
	2695	ATHN	8	S	0614.8	0615.5	1.8	43.0			QL=6 ST=3 TYP=3
	8800	ATHN	8	S	0639.6	0640.0	1.4	39.0			QL=6 ST=2 TYP=3
	2695	LEAR	8	S	0912.0	0912.1	.5	6.0			QL=2 ST=2 TYP=3
	8800	LEAR	8	S	0912.0	0912.1	.5	11.0			QL=6 ST=2 TYP=3
	8400	BERN	21	GRF	0940.0	0952.4	50.0U	51.0			
	8800	LEAR	8	S	0951.6	0952.3	1.7	39.0			QL=5 ST=2 TYP=3
	2695	LEAR	8	S	0952.1	0952.3	.7	10.0			QL=2 ST=2 TYP=3
	2800	OTTA	20	GRF	1300.0	1350.0	155.0	6.4	3.2		
	2800	OTTA	21	GRF	1550.0	1640.0	115.0	3.0	2.0		
	2800	OTTA	1	S	1722.0	1724.6	8.0	4.0	1.4		
	2800	OTTA	32	ABS	1755.0	1840.0	75.0	-4.4	-2.9		
	2800	OTTA	21	GRF	2000.0	2050.0	120.0	5.8	3.9		
	2800	OTTA	1	S	2126.0	2128.0	8.0	5.0	1.8		
10	8800	PALE	47	GB	0136.8	0137.8	4.5	119.0			QL=6 ST=2 TYP=5
	2695	PALE	47	GB	0136.8	0138.1	3.8	85.0			QL=6 ST=2 TYP=5
	8800	LEAR	47	GB	0137.0	0137.8	2.0	80.0			QL=6 ST=2 TYP=5
	2695	LEAR	47	GB	0137.0	0138.1	3.1	67.0			QL=6 ST=2 TYP=5
	2695	PALE	8	S	0305.6	0305.6	.4	34.0			QL=6 ST=2 TYP=3
	2695	LEAR	8	S	0305.6	0305.6	.4	39.0			QL=6 ST=2 TYP=3
	8800	LEAR	8	S	0306.6	0307.8	1.5	17.0			QL=6 ST=2 TYP=3
	8800	LEAR	47	GB	0311.6	0313.3	26.9	40.0			QL=6 ST=2 TYP=5
	2695	LEAR	47	GB	0311.6	0317.6	12.2	62.0			QL=6 ST=2 TYP=5
	8800	PALE	47	GB	0312.0	0313.3	13.8	33.0			QL=6 ST=2 TYP=5
	2695	PALE	47	GB	0312.1	0313.1	10.9	24.0			QL=6 ST=2 TYP=5
	8800	LEAR	47	GB	0650.3	0650.8	2.5	53.0			QL=6 ST=2 TYP=5
	8800	ATHN	47	GB	0650.5	0651.0	1.6	57.0			QL=6 ST=2 TYP=5
	8400	BERN	41	F	1031.5	1033.1	40.0	60.0			
	8800	LEAR	8	S	1032.8	1032.8	.8	28.0			QL=5 ST=2 TYP=3
	2800	OTTA	21	GRF	1335.0	1500.0	310.0	12.6	6.3		
	8800	SGMR	8	S	1445.3	1445.6	.8	24.0			QL=6 ST=3 TYP=3
	2800	OTTA	8	S	1445.5	1445.7	.8	7.4			
	2800	OTTA	2	S/F	1540.8	1541.5	4.0	3.0	1.5		
	2800	OTTA	2	S/F	1546.0	1547.5	8.0	3.8	1.4		
	2800	OTTA	22	GRF	1700.0	1725.0	65.0	6.4	3.2		
	8800	SGMR	8	S	1716.1	1716.3	1.5	23.0			QL=6 ST=2 TYP=3
	2800	OTTA	1	S	1806.0	1807.0	5.0	2.0	1.0		
	8800	SGMR	4	S/F	1807.1	1807.3	2.2	25.0			QL=6 ST=2 TYP=3
	2800	OTTA	240	AR	1925.0	2010.0	45.0	5.2	2.6		
	2800	OTTA	40	F	1935.5	1938.0	4.0	6.0			

SOLAR RADIO EMISSION
SELECTED FIXED FREQUENCY EVENTS

FEBRUARY 1984

Day	Freq	Sta	Type		Start (UT)	Time of Maximum (UT)	Duration (Min)	Flux Density Peak (10 -22 W/m 2 Hz)	Flux Density Mean (10 -22 W/m 2 Hz)	Int	Remarks
10	2695	SGMR	8	S	1937.3	1938.1	.8	15.0			QL=6 ST=3 TYP=3
	2800	OTTA	1	S	1947.0	1948.0	4.0	4.2	1.4		
	8800	SGMR	8	S	1947.1	1947.8	1.7	30.0			QL=5 ST=3 TYP=3
	8800	PALE	8	S	1947.6	1947.8	.5	21.0			QL=6 ST=2 TYP=3
	2800	OTTA	21	GRF	2020.0	2113.0	100.0	4.0	2.0		
	2695	PENT	4	S/F	2046.5	2050.0	7.0	32.0	9.0		
	8800	PALE	47	GB	2047.8	2049.8	3.3	150.0			QL=6 ST=2 TYP=5
	2695	PALE	4	S/F	2048.1	2049.8	2.4	34.0			QL=6 ST=2 TYP=3
	8800	SGMR	47	GB	2048.6	2049.8	2.2	119.0			QL=6 ST=2 TYP=5
	2695	SGMR	8	S	2048.8	2049.8	1.7	29.0			QL=6 ST=2 TYP=3
	2695	SGMR	8	S	2111.6	2112.1	.5	15.0			QL=6 ST=2 TYP=3
	2695	SGMR	4	S/F	2129.1	2131.3	3.9	15.0			QL=6 ST=2 TYP=3
	2800	OTTA	45	C	2134.0	2136.9	7.0	14.0	6.0		
	2695	SGMR	8	S	2135.3	2135.3	.3	13.0			QL=6 ST=2 TYP=3
	2695	PALE	8	S	2136.6	2136.8	.4	15.0			QL=6 ST=2 TYP=3
	8800	PALE	4	S/F	2136.6	2137.1	2.7	13.0			QL=6 ST=2 TYP=3
	2695	PENT	21	GRF	2220.0	2252.0	70.0	6.8	3.2		
	2695	PENT	40	F	2227.0	2227.7	20.0	13.0			
	8800	LEAR	8	S	2227.5	2227.8	.5	36.0			QL=5 ST=2 TYP=3
	2695	LEAR	8	S	2227.5	2227.8	.6	22.0			QL=2 ST=2 TYP=3
	8800	PALE	8	S	2227.6	2227.8	.5	42.0			QL=6 ST=2 TYP=3
	2695	PALE	8	S	2227.8	2227.8	.3	15.0			QL=6 ST=2 TYP=3
	2695	LEAR	20	GRF	2238.8	2241.1	3.2	23.0			QL=2 ST=2 TYP=2
11	2695	LEAR	47	GB	0237.3	0239.3	8.5	91.0			QL=2 ST=2 TYP=5
	8800	LEAR	47	GB	0237.6	0238.1	12.5	77.0			QL=6 ST=2 TYP=5
	2695	PALE	47	GB	0237.6	0239.3	8.2	79.0			QL=6 ST=2 TYP=5
	8800	PALE	47	GB	0238.1	0238.1	9.0	59.0			QL=6 ST=2 TYP=5
	8800	LEAR	8	S	0430.3	0430.8	.8	19.0			QL=6 ST=2 TYP=3
	8800	ATHN	8	S	0631.6	0632.0	.5	20.0			QL=6 ST=2 TYP=3
	8800	LEAR	8	S	0647.1	0647.3	.4	15.0			QL=6 ST=2 TYP=3
	8800	ATHN	4	S/F	1420.0	1423.8	7.6	49.0			QL=6 ST=2 TYP=3
	2800	OTTA	46F	C	1421.0	1423.8	8.0	32.0	12.0		
	8400	BERN	4	S/F	1421.5	1423.5	34.0	62.0			
	8800	SGMR	47	GB	1422.6	1423.6	6.0	56.0			QL=6 ST=2 TYP=5
	2695	SGMR	4	S/F	1423.1	1423.6	2.5	30.0			QL=6 ST=2 TYP=3
	2800	OTTA	29	PBI	1429.0	1429.0	20.0	6.4	1.8		
	2695	SGMR	8	S	1448.8	1449.0	.5	34.0			QL=6 ST=2 TYP=3
	2695	SGMR	8	S	1454.8	1454.8	.5	23.0			QL=6 ST=2 TYP=3
	2800	OTTA	20	GRF	1500.0	1510.0	65.0	2.6	1.3		
	2695	SGMR	47	GB	1511.8	1512.0	.3	73.0			QL=6 ST=2 TYP=5
	2800	OTTA	20	GRF	1645.0	1730.0	115.0	3.2	1.8		
	2800	OTTA	32	ABS	1945.0	2000.0	35.0	-2.0	-1.0		
	2800	OTTA	21	GRF	2020.0	2220.0	200.0D	8.0			
	2800	OTTA	40	F	2026.0	2027.2	11.0	2.2			
	2695	PENT	40	F	2248.0	2250.2	21.0	33.0			
	8800	PALE	47	GB	2248.6	2250.1	6.4	55.0			QL=6 ST=2 TYP=5
	2695	PALE	8	S	2249.8	2250.3	.8	30.0			QL=6 ST=2 TYP=3
	8800	LEAR	47	GB	2249.8	2250.3	1.0	50.0			QL=5 ST=2 TYP=5
	2695	LEAR	8	S	2249.8	2250.3	1.0	48.0			QL=2 ST=2 TYP=3
	8800	LEAR	4	S/F	2321.0	2321.1	2.3	38.0			QL=6 ST=2 TYP=3
	8800	PALE	8	S	2321.3	2321.3	1.3	47.0			QL=6 ST=2 TYP=3
12	8800	PALE	47	GB	0015.0	0015.3	.8	110.0			QL=6 ST=2 TYP=5
	8800	LEAR	47	GB	0015.0	0015.3	.8	93.0			QL=6 ST=2 TYP=5
	8400	BERN	3	S	0914.5	0915.8	20.0U	76.0			
	8800	LEAR	47	GB	0915.3	0915.8	1.5	56.0			QL=6 ST=2 TYP=5
	2695	LEAR	8	S	0915.3	0915.8	1.2	33.0			QL=6 ST=2 TYP=3
	2800	OTTA	21	GRF	1425.0	1500.0	185.0	9.6	4.8		
	2695	SGMR	4	S/F	1451.8	1453.6	2.5	22.0			QL=6 ST=2 TYP=3
	2695	SGMR	4	S/F	1456.3	1458.0	4.2	22.0			QL=6 ST=2 TYP=3
	8800	SGMR	47	GB	1508.8	1509.6	2.3	260.0			QL=6 ST=2 TYP=5
	8400	BERN	46	C	1508.8	1509.6	5.0	323.0			
	2800	OTTA	4	S/F	1509.0	1509.7	6.0	23.6	5.6		
	2695	SGMR	8	S	1509.1	1509.6	.7	24.0			QL=6 ST=2 TYP=3
	2800	OTTA	1	S	1824.8	1825.1	2.0	6.8	2.6		
	2800	OTTA	20	GRF	2035.0	2125.0	140.0	2.2	1.1		
13	2695	SGMR	47	GB	1402.5	1402.8	.6	60.0			QL=6 ST=2 TYP=5
	2800	OTTA	22	GRF	1630.0	1635.0	15.0	2.8	0.9		
	2800	OTTA	260	FAL	1720.0	1750.0	30.0	-2.4	-1.2		

SOLAR RADIO EMISSION
SELECTED FIXED FREQUENCY EVENTS

FEBRUARY 1984

Day	Freq	Sta	Type		Start (UT)	Time of Maximum (UT)	Duration (Min)	Flux Density Peak (10 -22 W/m 2 Hz)	Flux Density Mean (10 -22 W/m 2 Hz)	Int	Remarks
14	8800	LEAR	20	GRF	0137.1	0144.6	12.9	6.0			QL=6 ST=2 TYP=2
	8800	SGMR	8	S	1256.8	1257.1	.3	21.0			QL=6 ST=3 TYP=3
	2800	OTTA	20	GRF	1505.0	1645.0	300.0	6.2	2.9		
	2800	OTTA	260	FAL	2030.0	2100.0	30.0	-2.8	-1.4		
15	2695	SGMR	4	S/F	1232.8	1235.6	3.3	18.0			QL=5 ST=2 TYP=3
	2800	OTTA	1	S	1557.2	1558.0	1.2	1.8	0.9		
16	8800	LEAR	4	S/F	0857.8	0859.6	4.5	19.0			QL=5 ST=2 TYP=3
	8400	BERN	3	S	0858.0	0859.7	6.0	25.0			
	2695	LEAR	4	S/F	0858.3	0859.6	6.2	40.0			QL=2 ST=2 TYP=3
	2800	OTTA	21	GRF	1645.0	1705.0	100.0	7.2	3.6		
	2800	OTTA	3	S	1654.0	1657.0	11.0	13.4	6.0		
17	8800	ATHN	4	S/F	1151.3	1152.3	2.7	18.0			QL=6 ST=2 TYP=3
	8800	ATHN	47	GB	1155.8	1157.0	2.7	70.0			QL=6 ST=2 TYP=5
	2800	OTTA	20	GRF	1550.0	1610.0	75.0	2.2	1.7		
	2800	OTTA	20	GRF	1735.0	1750.0	80.0	2.6	1.3		
	2695	PENT	47	GB	2221.0	2327.9	98.0	1920.0	384.0		
	2695	LEAR	49	GB	2231.3	2236.1	21.8	95.0			QL=2 ST=2 TYP=6
	2695	PALE	49	GB	2233.8	2235.3	16.0	93.0			QL=6 ST=2 TYP=6
	8800	PALE	49	GB	2234.5	2235.3	15.3	160.0			QL=6 ST=2 TYP=6
	8800	LEAR	49	GB	2234.6	2234.6	18.5	110.0			QL=5 ST=3 TYP=6
	2695	PALE	49	GB	2249.8	2252.6	20.8	480.0			QL=6 ST=2 TYP=6
	8800	PALE	49	GB	2249.8	2308.5	20.8	480.0			QL=6 ST=3 TYP=6
	8800	LEAR	49	GB	2253.1	2254.3	18.9	540.0			QL=5 ST=2 TYP=6
	2695	LEAR	49	GB	2253.1	2256.1	18.9	600.0			QL=2 ST=2 TYP=6
	2695	PALE	49	GB	2310.6	2310.8	17.4	560.0			QL=6 ST=2 TYP=6
	8800	PALE	49	GB	2310.6	2310.8	17.4	480.0			QL=6 ST=3 TYP=6
	2695	LEAR	49	GB	2312.0	2312.1	3.3	620.0			QL=2 ST=2 TYP=6
	8800	LEAR	47	GB	2325.3	2325.6	40.5	239.0			QL=5 ST=3 TYP=5
	2695	LEAR	49	GB	2325.3	2331.0	40.5	970.0			QL=2 ST=2 TYP=6
	2695	PALE	49	GB	2328.0	2331.0	43.3	820.0			QL=6 ST=2 TYP=6
	2695	PENT	29	PBI	2359.0	2359.0	30.0	70.0			
18	8800	LEAR	47	GB	0044.1	0044.5	1.7	52.0			QL=6 ST=2 TYP=5
	2695	LEAR	8	S	0044.3	0044.6	1.5	17.0			QL=2 ST=2 TYP=3
	2695	PALE	49	GB	0054.6	0054.6	28.2	820.0			QL=6 ST=2 TYP=6
	8800	PALE	49	GB	0054.6	0054.6	28.2	480.0			QL=6 ST=2 TYP=6
	2695	LEAR	4	S/F	0239.3	0244.5	10.3	11.0			QL=2 ST=2 TYP=3
	8800	LEAR	8	S	0734.1	0735.3	1.5	17.0			QL=6 ST=2 TYP=3
	8800	ATHN	4	S/F	0734.3	0735.5	7.3	22.0			QL=6 ST=2 TYP=3
	8800	ATHN	4	S/F	0745.1	0747.1	6.4	28.0			QL=6 ST=2 TYP=3
	8800	LEAR	4	S/F	0746.1	0747.1	2.7	19.0			QL=6 ST=2 TYP=3
	8800	ATHN	47	GB	0813.1	0813.3	.9	50.0			QL=6 ST=2 TYP=5
	2800	OTTA	20	GRF	1315.0	1330.0	55.0	3.4	2.1		
	2800	OTTA	20	GRF	1540.0	1610.0	95.0	2.6	1.3		
	8800	SGMR	4	S/F	1607.8	1608.8	2.5	29.0			QL=6 ST=2 TYP=3
	2800	OTTA	27	RF	1725.0		205.0	2.6	2.3		
	2800	OTTA	24	R	1725.0	1735.0	10.0	2.6	1.3		
	2800	OTTA	24P	R	1735.0		185.0	2.6			
	2800	OTTA	26	FAL	2040.0	2050.0	10.0	-2.6	-1.0		
	8800	PALE	47	GB	2241.0	2241.8	2.1	60.0			QL=6 ST=2 TYP=5
19	8800	PALE	4	S/F	0240.3	0242.6	4.2	20.0			QL=6 ST=2 TYP=3
	8800	PALE	8	S	0247.8	0247.8	.3	20.0			QL=6 ST=2 TYP=3
	2800	OTTA	21	GRF	1310.0	1345.0	80.0	5.2	1.8		
	2800	OTTA	2	S/F	1337.0	1339.0	7.0	9.6	3.2		
	8800	SGMR	4	S/F	1407.3	1408.6	6.3	24.0			QL=6 ST=2 TYP=3
	2800	OTTA	27A	RF	1540.0		185.0	2.6	2.5		
	2800	OTTA	24	R	1540.0	1545.0	5.0	2.6	1.3		
	2800	OTTA	24P	R	1545.0		170.0	2.6			
	2800	OTTA	22	GRF	1810.0	1812.0	15.0	4.8	2.2		
	8800	SGMR	8	S	1833.1	1833.6	1.5	36.0			QL=6 ST=2 TYP=3
	8800	PALE	8	S	1833.3	1833.6	.7	29.0			QL=6 ST=2 TYP=3
	2800	OTTA	26	FAL	1835.0	1845.0	10.0	-2.6	-1.3		
	2695	PENT	20	GRF	2210.0	2217.5	30.0	5.4	1.8		
20	8800	PALE	8	S	0123.3	0123.3	.3	16.0			QL=6 ST=3 TYP=3
	8800	ATHN	4	S/F	0646.0	0647.0	5.3	45.0			QL=5 ST=3 TYP=3
	2695	ATHN	4	S/F	0646.3	0649.0	5.7	7.0			QL=5 ST=3 TYP=3

SOLAR RADIO EMISSION
SELECTED FIXED FREQUENCY EVENTS

FEBRUARY 1984

Day	Freq	Sta	Type		Start (UT)	Time of Maximum (UT)	Duration (Min)	Flux Density Peak (10 -22 W/m 2 Hz)	Flux Density Mean (10 -22 W/m 2 Hz)	Int	Remarks
20	8800	ATHN	4	S/F	0948.3	0949.3	3.3	36.0			QL=6 ST=2 TYP=3
	8800	ATHN	8	S	1148.1	1148.3	.5	23.0			QL=6 ST=2 TYP=3
	2695	ATHN	8	S	1148.3	1148.3	.3	11.0			QL=6 ST=2 TYP=3
	2800	OTTA	21	GRF	1305.0	1323.0	55.0	4.4	2.2		
	2800	OTTA	1	S	1311.0	1312.0	8.0	6.2	3.0		
	2800	OTTA	22	GRF	1420.0		75.0D	2.6			
	2800	OTTA	1	S	1602.0	1602.5	1.0	2.2	1.4		
	2800	OTTA	21	GRF	1753.0	1820.0	145.0	4.6	2.3		
	2800	OTTA	2	S/F	1754.5	1755.2	9.0	3.8	1.8		
	2800	OTTA	1	S	1925.0	1925.3	2.0	4.8	1.8		
	8800	SGMR	8	S	1925.3	1925.3	.3	17.0			QL=6 ST=2 TYP=3
	2695	PENT	21	GRF	2328.0	2340.0	35.0	8.2	4.1		
	2695	PENT	1	S	2333.0	2333.8	2.0	4.8	2.4		
	8800	PALE	4	S/F	2333.0	2333.5	2.1	39.0			QL=6 ST=2 TYP=3
	8800	LEAR	47	GB	2333.3	2333.5	.8	55.0			QL=6 ST=2 TYP=5
	2695	PALE	8	S	2333.3	2333.8	.5	13.0			QL=6 ST=2 TYP=3
	2695	PALE	8	S	2339.3	2339.5	.3	11.0			QL=6 ST=2 TYP=3
	2695	PALE	8	S	2342.6	2344.5	2.0	13.0			QL=6 ST=2 TYP=3
	8800	PALE	8	S	2343.8	2344.6	.8	13.0			QL=6 ST=2 TYP=3
21	8800	LEAR	4	S/F	0250.8	0253.3	2.5	25.0			QL=6 ST=2 TYP=3
	8800	LEAR	8	S	0644.8	0645.1	.7	10.0			QL=6 ST=2 TYP=3
	8800	LEAR	4	S/F	0750.6	0752.0	4.5	20.0			QL=6 ST=2 TYP=3
	8400	BERN	3	S	1045.6	1047.1	19.0	73.0			
	2800	OTTA	23	GRF	1330.0	1350.0	150.0	11.8	5.6		
	8800	ATHN	4	S/F	1334.3	1334.6	2.8	33.0			QL=6 ST=2 TYP=3
	8800	SGMR	8	S	1334.5	1334.6	.6	25.0			QL=6 ST=2 TYP=3
	2800	OTTA	1	S	1452.2	1452.4	1.5	2.8	1.0		
	2800	OTTA	1	S	1519.0	1519.5	1.0	2.0	1.0		
	2800	OTTA	1	S	1643.0	1645.0	8.0	3.0	1.5		
	2800	OTTA	20	GRF	1730.0	1738.0	30.0	3.0	1.4		
	2800	OTTA	20	GRF	1837.0	1850.0	130.0	5.0	1.8		
	2800	OTTA	240	R	2050.0	2110.0	20.0	4.2	2.1		
22	8800	PALE	8	S	0054.0	0054.3	.8	27.0			QL=6 ST=2 TYP=3
	8800	LEAR	8	S	0054.0	0054.3	.8	21.0			QL=6 ST=2 TYP=3
	2695	LEAR	20	GRF	0118.6	0205.0	130.9	45.0			QL=6 ST=3 TYP=2
	2695	PALE	4	S/F	0122.5	0124.1	8.1	24.0			QL=6 ST=2 TYP=3
	2695	PALE	8	S	0205.1	0207.1	2.0	18.0			QL=6 ST=2 TYP=3
	2695	LEAR	4	S/F	0808.3	0813.0	7.5	13.0			QL=5 ST=2 TYP=3
	8800	LEAR	47	GB	1023.1	1024.1	3.0	72.0			QL=5 ST=2 TYP=5
	8400	BERN	3	S	1023.1	1024.1	6.0	100.0			
	2800	OTTA	8	S	1421.3	1421.4	.4	2.8	1.4		
	2800	OTTA	20	GRF	1425.0	1445.0	55.0	3.0	1.5		
	2800	OTTA	1	S	1652.0	1653.5	4.5	2.2	1.0		
	8800	LEAR	4	S/F	2351.1	2357.1	9.7	13.0			QL=6 ST=2 TYP=3
23	8800	LEAR	8	S	0006.6	0007.0	.5	13.0			QL=6 ST=2 TYP=3
	8800	PALE	8	S	0006.8	0007.0	.3	19.0			QL=6 ST=2 TYP=3
	8800	ATHN	4	S/F	0734.6	0736.1	2.5	8.0			QL=2 ST=2 TYP=3
	8800	ATHN	4	S/F	0741.1	0743.0	6.5	33.0			QL=2 ST=2 TYP=3
	8800	ATHN	4	S/F	0842.6	0845.0	8.5	18.0			QL=6 ST=2 TYP=3
	2800	OTTA	21	GRF	1249.0	1304.0	40.0	8.4	4.2		
	2800	OTTA	2	S/F	1250.0	1251.0	4.0	5.6	2.8		
	8800	ATHN	4	S/F	1312.6	1313.3	2.5	10.0			QL=6 ST=2 TYP=3
	2800	OTTA	1	S	1313.0	1313.7	3.0	9.8	3.2		
	8800	SGMR	8	S	1313.3	1313.5	.3	16.0			QL=6 ST=2 TYP=3
	2695	SGMR	8	S	1313.3	1313.6	.7	17.0			QL=6 ST=2 TYP=3
	2695	ATHN	8	S	1313.6	1313.8	1.7	10.0			QL=6 ST=2 TYP=3
	2800	OTTA	1	S	1438.2	1438.7	1.5	3.6	1.4		
	2800	OTTA	27A	RF	1716.0		254.0	3.0	2.8		
	2800	OTTA	24	R	1716.0	1718.0	2.0	3.0	1.5		
	2800	OTTA	24P	R	1718.0		232.0	3.0			
	2800	OTTA	21	GRF	1740.0	1824.0	65.0	6.0	3.0		
	2800	OTTA	45	C	1808.2	1813.0	15.0	18.4	8.0		
	2695	SGMR	4	S/F	1811.5	1813.1	8.5	24.0			QL=6 ST=2 TYP=3
	2695	PALE	4	S/F	1812.0	1813.1	7.5	24.0			QL=6 ST=2 TYP=3
	8800	PALE	8	S	1812.1	1813.1	1.0	17.0			QL=6 ST=2 TYP=3
	8800	SGMR	8	S	1812.8	1813.1	.5	15.0			QL=6 ST=2 TYP=3
	2800	OTTA	26	FAL	2110.0	2130.0	20.0	-3.0	-1.5		
	2800	OTTA	1	S	2152.0	2152.8	2.0	4.4			

SOLAR RADIO EMISSION
SELECTED FIXED FREQUENCY EVENTS

FEBRUARY 1984

Day	Freq	Sta	Type		Start (UT)	Time of Maximum (UT)	Duration (Min)	Flux Density Peak (10 -22 W/m 2 Hz)	Flux Density Mean (10 -22 W/m 2 Hz)	Int	Remarks
23	2695	PENT	45	C	2323.0	2325.0	3.0	2.6	1.4		
24	8800	LEAR	47	GB	0012.3	0012.8	5.7	51.0			QL=6 ST=2 TYP=5
	8800	PALE	47	GB	0012.6	0012.8	3.4	55.0			QL=6 ST=2 TYP=5
	2695	LEAR	47	GB	0105.5	0106.1	4.3	79.0			QL=2 ST=2 TYP=5
	2695	PALE	47	GB	0105.6	0106.1	2.0	76.0			QL=6 ST=2 TYP=5
	8800	PALE	8	S	0105.8	0106.1	.5	20.0			QL=6 ST=2 TYP=3
	8800	LEAR	8	S	0106.1E	0106.3	.7D	21.0			QL=2 ST=2 TYP=3
	2695	LEAR	4	S/F	0124.5	0124.8	21.6	16.0			QL=2 ST=2 TYP=3
	2695	PALE	8	S	0135.8	0137.0		13.0			QL=6 ST=3 TYP=3
	2695	LEAR	4	S/F	0146.1	0146.1	14.2	43.0			QL=2 ST=2 TYP=3
	8800	LEAR	4	S/F	0147.8	0148.0	12.5	11.0			QL=6 ST=2 TYP=3
	8800	LEAR	4	S/F	0200.3	0201.3	15.8	21.0			QL=6 ST=2 TYP=3
	2695	LEAR	4	S/F	0200.3	0208.5	15.8	43.0			QL=2 ST=2 TYP=3
	8800	PALE	8	S	0213.8	0214.0	.3	13.0			QL=6 ST=2 TYP=3
	8800	PALE	8	S	0216.1	0216.3	1.0	21.0			QL=6 ST=2 TYP=3
	2695	LEAR	4	S/F	0236.6	0238.1	14.5	45.0			QL=2 ST=2 TYP=3
	2695	PALE	8	S	0237.6	0238.1	1.7	20.0			QL=3 ST=2 TYP=3
	2695	LEAR	4	S/F	0328.3	0329.1	2.8	13.0			QL=2 ST=2 TYP=3
	8800	LEAR	8	S	0328.6	0329.1	1.0	21.0			QL=6 ST=2 TYP=3
	8800	LEAR	20	GRF	0337.0	0351.5	42.1	16.0			QL=6 ST=2 TYP=2
	2695	ATHN	4	S/F	0641.5	0642.5	3.1	8.0			QL=6 ST=2 TYP=3
	2695	LEAR	8	S	0642.1	0643.6	1.7	16.0			QL=6 ST=2 TYP=3
	2695	ATHN	4	S/F	0706.1	0707.3	4.5	10.0			QL=6 ST=2 TYP=3
	2800	OTTA	21	GRF	1300.0	1340.0	150.0	16.2	8.0		
	2800	OTTA	20	GRF	1327.0	1332.0	11.0	10.2	4.8		
	2695	ATHN	4	S/F	1330.3	1332.0	5.7	6.0			QL=5 ST=2 TYP=3
	2800	OTTA	20	GRF	1453.0	1454.5	12.0	3.4	2.7		
	2800	OTTA	21	GRF	1540.0	1615.0	110.0	7.2	4.0		
	2800	OTTA	8	S	1657.0	1657.2	.4	2.8			
	2800	OTTA	4	S/F	1750.0	1751.0	3.0	48.0	14.0		
	8800	PALE	47	GB	1750.1	1750.8	1.7	119.0			QL=6 ST=2 TYP=5
	2695	PALE	8	S	1750.3	1751.1	1.5	47.0			QL=6 ST=2 TYP=3
	2695	SGMR	8	S	1750.3	1751.1	1.5	47.0			QL=5 ST=2 TYP=3
	8800	SGMR	47	GB	1750.6	1751.0	1.0	94.0			QL=5 ST=2 TYP=5
	2800	OTTA	20	GRF	1803.0	1805.0	14.0	3.6	1.8		
	2800	OTTA	20	GRF	1823.0	1827.0	20.0	4.4	2.2		
	2800	OTTA	21	GRF	1855.0	1925.0	70.0	8.2			
	2800	OTTA	45	C	1857.0	1859.0	5.0	30.0	15.0		
	2695	PALE	4	S/F	1857.6	1859.0	5.7	35.0			QL=6 ST=2 TYP=3
	8800	PALE	8	S	1858.1	1859.1	1.7	19.0			QL=6 ST=2 TYP=3
	2800	OTTA	29	PBI	1902.0	1902.0	13.0	8.6	2.8		
	8800	PALE	8	S	1903.3	1903.5	.5	42.0			QL=6 ST=2 TYP=3
	8800	PALE	4	S/F	2005.5	2006.3	2.3	27.0			QL=6 ST=2 TYP=3
	2800	OTTA	20	GRF	2055.0	2100.0	45.0	2.6	2.0		
	2695	PENT	1	S	2228.8	2229.0	2.0	4.4	2.2		
	2695	PENT	1	S	2253.0	2253.3	1.0	4.0			
	2695	PENT	21	GRF	2330.0	2350.0	40.0	6.4			
	2695	PENT	1	S	2336.0	2340.0	10.0	8.8	4.2		
25	2695	PENT	1	S	0041.0	0041.5	1.5	6.8	3.4		
	8800	PALE	49	GB	0310.6	0313.3	2873.0	650.0			QL=6 ST=2 TYP=6
	2695	PALE	47	GB	0310.6	0313.3	18.5	480.0			QL=6 ST=2 TYP=5
	2695	LEAR	49	GB	0310.6	0313.3	29.5	510.0			QL=6 ST=2 TYP=6
	8800	LEAR	47	GB	0310.8	0313.3	29.3	500.0			QL=6 ST=2 TYP=5
	8400	BERN	3	S	0859.0	0906.0	40.0U	26.0			
	8400	BERN	3	S	1149.5	1154.4	14.0	38.0			
	2800	OTTA	20	GRF	1305.0	1313.0	20.0	4.2	2.1		
	2800	OTTA	21	GRF	1640.0	1740.0	180.0	14.2	6.8		
	2695	PENT	22	GRF	1703.0	1705.0	13.0	7.8	3.9		
	2695	SGMR	4	S/F	1718.8	1721.3	3.7	16.0			QL=6 ST=2 TYP=3
	2800	OTTA	20	GRF	1719.0	1722.5	18.0	8.8	4.4		
	8800	SGMR	8	S	1720.8	1720.8	.3	16.0			QL=6 ST=2 TYP=3
	2800	OTTA	2	S/F	1746.0	1748.0	9.0	7.8	2.8		
	2800	OTTA	21	GRF	2200.0	2210.0	20.0	3.2	1.6		
	2800	OTTA	4	S/F	2205.0	2205.3	2.5	10.6	3.6		
	2695	PENT	28	PRE	2221.0	2226.3	9.0	4.2			
	2695	PENT	3	S	2230.0	2232.7	12.0	27.0	15.0		
	2695	PALE	4	S/F	2231.1	2232.8	7.0	33.0			QL=6 ST=2 TYP=3
	8800	PALE	8	S	2232.1	2232.8	1.0	23.0			QL=6 ST=2 TYP=3
	2695	PENT	29	PBI	2242.0	2242.0	55.0	9.0	5.6		

SOLAR RADIO EMISSION
SELECTED FIXED FREQUENCY EVENTS

FEBRUARY 1984

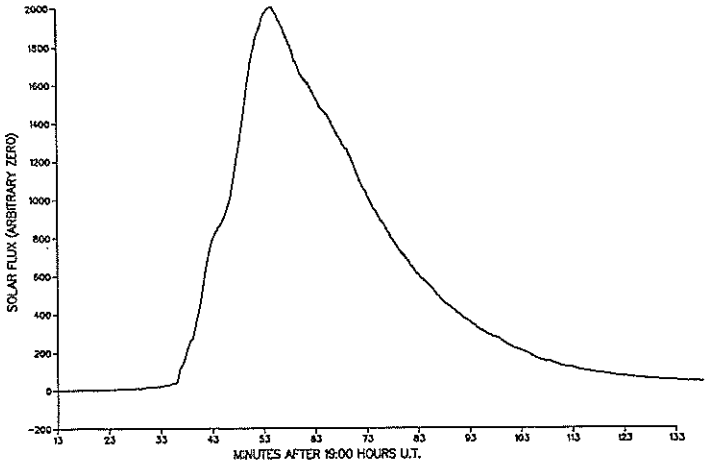
Day	Freq	Sta	Type		Start (UT)	Time of Maximum (UT)	Duration (Min)	Flux Density Peak (10 -22 W/m 2 Hz)	Flux Density Mean (10 -22 W/m 2 Hz)	Int	Remarks
26	8800	LEAR	8	S	0606.1	0606.6	1.5	41.0			QL=6 ST=2 TYP=3
	2695	LEAR	4	S/F	0606.1	0606.8	2.2	11.0			QL=6 ST=2 TYP=3
	8800	LEAR	4	S/F	0637.1	0638.5	2.2	11.0			QL=6 ST=2 TYP=3
	8400	BERN	1	S	0927.0	0927.8	11.0	19.0			
	8800	LEAR	4	S/F	0927.1	0928.0	4.7	15.0			QL=6 ST=2 TYP=3
	8400	BERN	1	S	1033.2	1035.0	4.0	23.0			
	8400	BERN	46	C	1225.0	1250.8	100.0U	99.0			
	8800	ATHN	4	S/F	1229.3	1230.5	2.3	29.0			QL=6 ST=2 TYP=3
	2695	ATHN	47	GB	1231.8	1251.1	27.2	139.0			QL=6 ST=2 TYP=5
	2800	OTTA	46F	C	1233.0	1251.0	27.0	138.0	56.8		
	8800	ATHN	47	GB	1235.6	1251.0	21.2	71.0			QL=6 ST=2 TYP=5
	2800	OTTA	30	PBI	1300.0	1300.0	190.0	17.4	8.7		
	2800	OTTA	1	S	1304.0	1305.0	7.0	4.6	2.0		
	2800	OTTA	20	GRF	1322.0	1327.0	25.0	12.6	5.0		
	2695	ATHN	4	S/F	1323.1	1327.6	7.4	18.0			QL=6 ST=2 TYP=3
	2800	OTTA	40	F	1723.0	1723.8	1.0	7.0			
	2800	OTTA	21	GRF	1830.0	1857.0	230.0	10.4	3.6		
	2800	OTTA	1	S	1830.2	1830.9	3.5	3.2	1.6		
	8800	PALE	8	S	2337.8	2338.0	.5	28.0			QL=6 ST=2 TYP=3
27	8800	LEAR	20	GRF	0316.8	0326.1	21.2	11.0			QL=6 ST=2 TYP=2
	8800	LEAR	8	S	0507.0	0507.8	.8	6.0			QL=6 ST=2 TYP=3
	8800	LEAR	4	S/F	0517.3	0518.8	3.8	6.0			QL=6 ST=2 TYP=3
	8800	LEAR	8	S	0556.0	0556.3	1.8	28.0			QL=6 ST=2 TYP=3
	8800	LEAR	47	GB	0852.0	0853.6	7.8	97.0			QL=6 ST=2 TYP=5
	8400	BERN	45	C	0852.5	0853.6	25.0U	125.0			
	2800	OTTA	21	GRF	1500.0	1512.0	110.0	7.4	2.0		
	2800	OTTA	1	S	1508.0	1509.0	2.0	3.4	1.6		
	8800	ATHN	4	S/F	1512.6	1514.1	3.5	34.0			QL=5 ST=2 TYP=3
	8800	ATHN	8	S	1517.6	1518.1	1.0	15.0			QL=5 ST=2 TYP=3
	8800	ATHN	4	S/F	1522.6	1524.3	2.7	19.0			QL=5 ST=2 TYP=3
	2800	OTTA	4	S/F	1732.0	1733.0	3.0	17.4	9.8		
	2695	SGMR	8	S	1732.3	1732.8	1.7	22.0			QL=6 ST=2 TYP=3
	8800	SGMR	8	S	1732.8	1732.8	1.0	23.0			QL=6 ST=2 TYP=3
	2800	OTTA	29	PBI	1735.0	1735.0	30.0	5.6	1.6		
	2800	OTTA	21	GRF	2100.0	2135.0	70.0	9.2	4.6		
	8800	SGMR	47	GB	2105.6	2109.3	16.0	210.0			QL=6 ST=2 TYP=5
	2800	OTTA	3	S	2106.0	2109.0	5.0	40.0	17.4		
	2695	SGMR	4	S/F	2106.3	2109.1	14.2	49.0			QL=6 ST=2 TYP=3
	8800	PALE	47	GB	2106.6	2109.1	9.2	200.0			QL=6 ST=2 TYP=5
	2695	PALE	4	S/F	2107.1	2109.1	5.9	46.0			QL=6 ST=2 TYP=3
	2800	OTTA	29	PBI	2111.0	2111.0	15.0	11.4	5.7		
28	2800	OTTA	20	GRF	1305.0	1350.0	100.0	4.8	2.2		
	2800	OTTA	22	GRF	1510.0	1540.0	60.0	2.2	1.1		
	2800	OTTA	32A	ABS	1810.0	1825.0	30.0	3.0	1.5		
	2800	OTTA	1	S	1825.0	1827.5	9.0	-2.8	-0.9		
	2800	OTTA	20	GRF	1950.0	2000.0	40.0	2.2	1.6		
	2800	OTTA	20	GRF	2035.0	2050.0	45.0	2.0	1.0		
	2695	PENT	21	GRF	2205.0	2230.0	125.0	6.0	3.0		
	2695	PENT	20	GRF	2211.0	2215.0	18.0	8.8	4.0		
29	2800	OTTA	27A	FRF	1300.0		205.0	3.2	2.8		
	2800	OTTA	24	R	1300.0	1320.0	20.0	3.2	1.6		
	2800	OTTA	24P	R	1320.0		160.0	3.2			
	2800	OTTA			1355.0	1359.0	5.0D	3.4			
	8800	ATHN	47	GB	1408.3	1408.6	13.3	59.0			QL=6 ST=2 TYP=5
	8800	SGMR	47	GB	1408.5	1408.8	1.3	54.0			QL=6 ST=2 TYP=5
	2800	OTTA	26	FAL	1600.0	1625.0	25.0	-3.2	-1.6		
	2800	OTTA	23	GRF	1700.0	1920.0	270.0	8.6	4.0		
	2800	OTTA	1	S	1800.0	1800.5	6.0	2.8	1.3		
	2695	PALE	8	S	1944.6	1944.8	.4	17.0			QL=6 ST=2 TYP=3
	8800	PALE	47	GB	2144.3	2144.8	4.7	130.0			QL=6 ST=2 TYP=5
	2800	OTTA	3	S	2144.5	2144.8	1.5	57.0	14.2		
	2695	SGMR	47	GB	2144.6	2144.8	.7	54.0			QL=6 ST=3 TYP=5
	8800	SGMR	47	GB	2144.6	2144.8	1.0	82.0			QL=6 ST=3 TYP=5
	2695	PALE	47	GB	2144.6	2144.8	.7	55.0			QL=6 ST=2 TYP=5
	2800	OTTA	29	PBI	2146.0	2146.0	28.0	4.2	2.4		

SELECTED SOLAR NOISE BURSTS

FEBRUARY 1-27, 1984

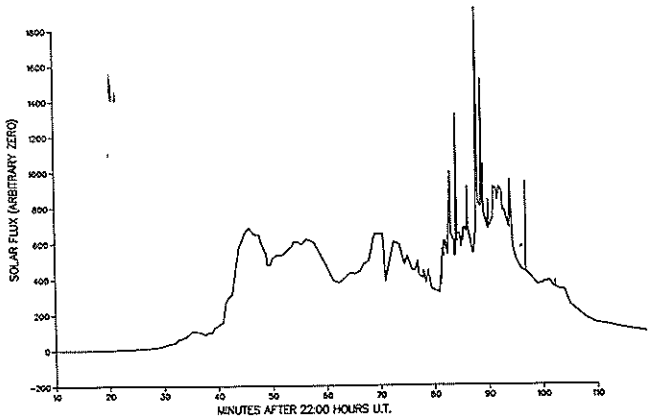
FEBRUARY 01, 1984

SELECTED 2800 MHz SOLAR NOISE BURST
A.R.O. OTTAWA, ONT.
CANADA



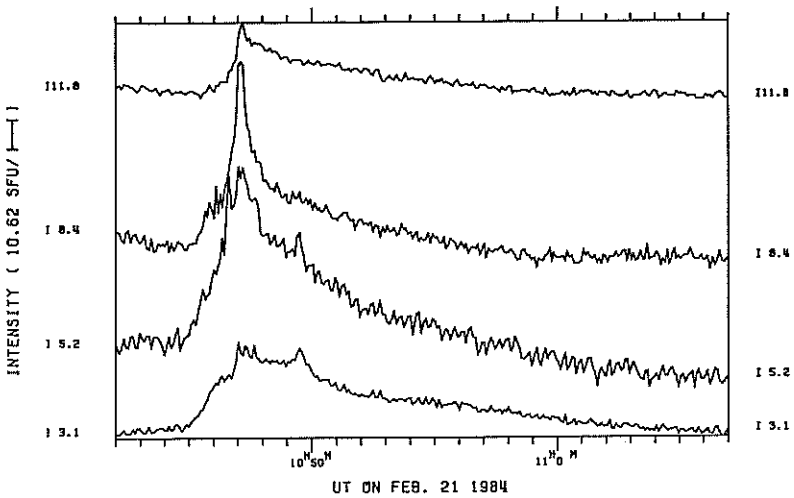
FEBRUARY 17, 1984

SELECTED 2700 MHz SOLAR NOISE BURST
D.R.A.O. PENTICTON, B.C.
CANADA



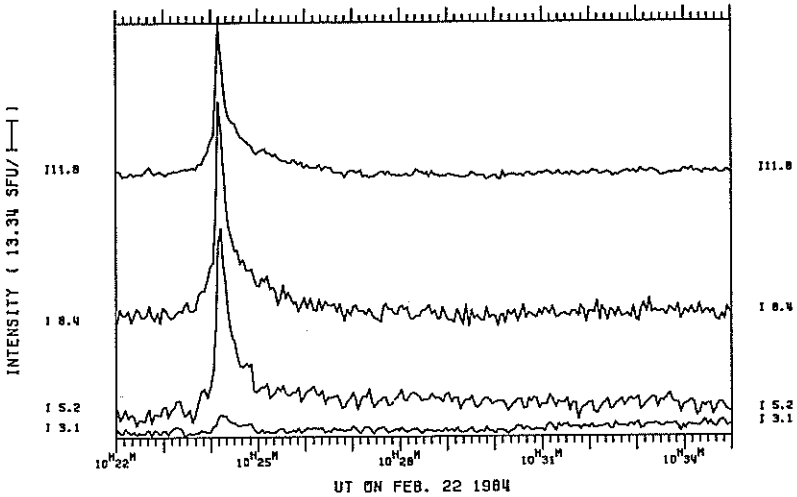
INSTITUTE OF APPLIED PHYSICS, UNIVERSITY OF BERN, SWITZERLAND

INTEGRATION TIME= 5000 MS



INSTITUTE OF APPLIED PHYSICS, UNIVERSITY OF BERN, SWITZERLAND

INTEGRATION TIME= 3000 MS



INFERRED IP MAGNETIC FIELD

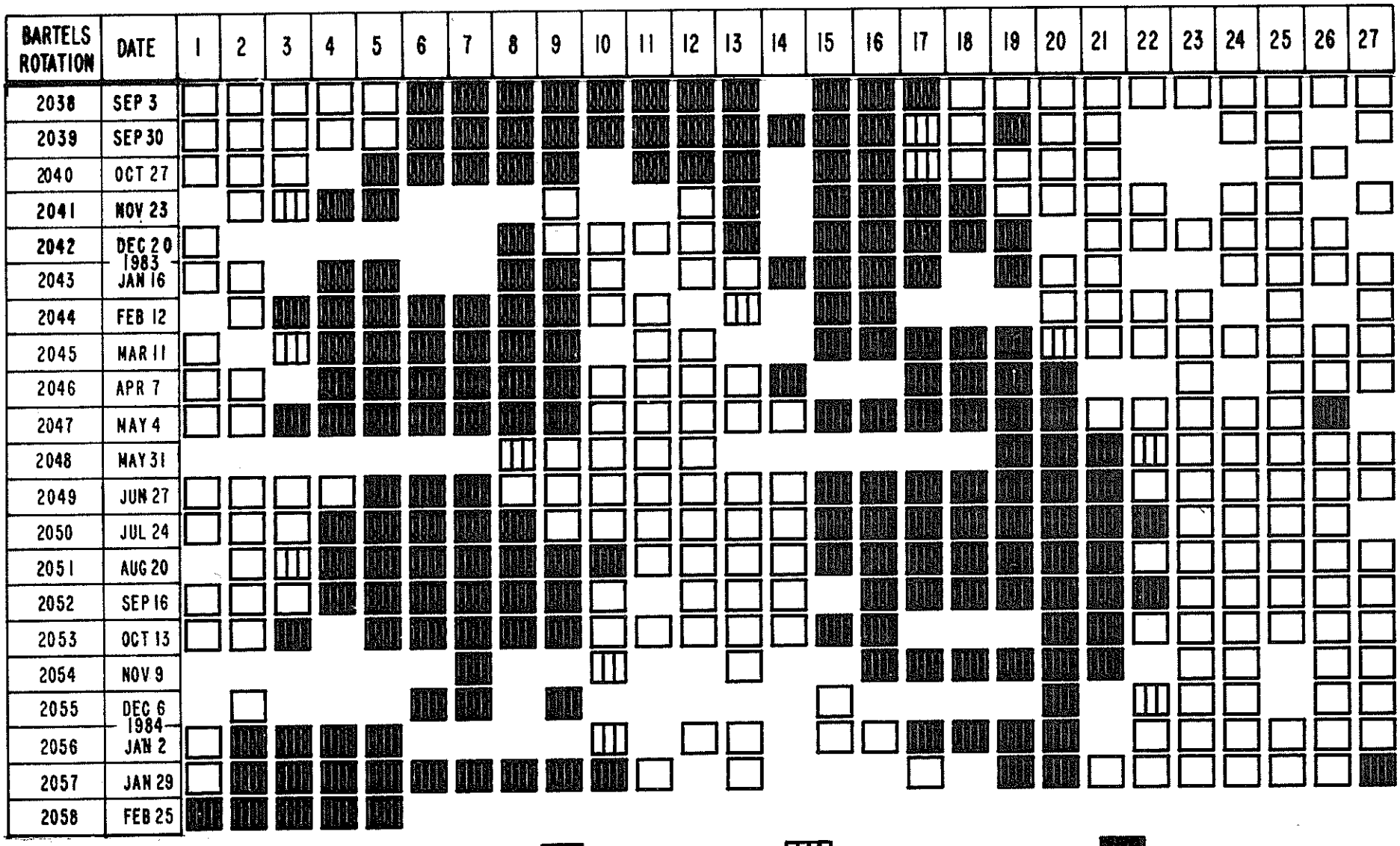
BARTELS ROTATION	DATE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27
2036	JUL 16	-	- -	-	- -	- -	TA -	-	-	-	-	AT -	-	- -	-	AT -	- -	- -	- -	-	- -	- -	- -	-	-	- -	- -	- -
2037	AUG 12	-	- -	-	- -	-	- -	- -	-	TA -	-	- -	TA -	-	-	-	- -	-	- -	-	-	-	-	-	-	-	-	-
2038	SEP 8	TA -	AT -	-	- -	-	- -	-	-	-	-	-	-	TA -	-	AT -	-	-	-	-	-	TA -	-	-	-	-	-	-
2039	OCT 5	-	AT -	-	- AT	-	- -	-	-	-	AT -	TA -	-	- -	-	-	AT -	-	- -	-	-	-	-	TA -	-	-	-	-
2040	NOV 1	AT -	-	-	-	AT -	-	-	-	-	AT -	-	-	-	-	AT -	-	-	TA -	-	-	- -	-	TA -	AT -	-	-	-
2041	NOV 28	TA -	-	- -	- -	-	AT -	-	-	-	-	-	-	TA -	TA -	-	-	-	-	-	-	-	AT -	AT -	-	-	-	-
2042	DEC 25	-	-	- AT	- AT	-	-	-	TA -	-	-	-	-	-	-	-	-	-	TA -	TA -	-	-	-	AT -	-	-	-	-
2043	1983 JAN 21	- -	-	-	-	-	-	-	-	-	TA -	-	-	-	-	TA -	AT -	-	-	-	-	-	-	-	- -	-	-	-
2044	FEB 17	-	-	-	-	-	-	-	-	-	-	TA -	-	-	TA -	-	TA -	TA -	-	AT -	TA -	TA -	-	TA -	- -	-	-	-
2045	MAR 16	- -	- -	AT -	AT -	AT -	-	-	-	-	-	AT -	- -	-	-	-	AT -	-	TA -	-	-	-	-	-	-	-	- -	- -
2046	APR 12	-	-	TA -	- -	-	-	-	- -	-	-	-	-	TA -	-	-	-	AT -	TA -	AT -	-	-	-	-	AT -	AT -	AT -	-
2047	MAY 9	-	-	AT -	-	-	AT -	-	-	-	AT -	AT -	- -	-	-	-	-	- -	AT -	-	-	- -	- -	- -	AT -	-	-	AT -
2048	JUN 5	- -	- -	AT -	-	AT -	-	AT -	AT -	-	AT -	AT -	- -	-	AT -	AT -	AT -	-	-	AT -	-	- -	- -	AT -	- -	- -	- -	- -
2049	JUL 2	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	-	-	AT -	- -	-	AT -	-	- -	AT -	-	-	AT -	-	-	- -	- -
2050	JUL 29	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	-	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	AT -	AT -	-	-
2051	AUG 25	- -	- -	- -	AT -	- -	- -	-	-	-	-	-	-	-	-	AT -	-	-	-	-	AT -	-	AT -	-	-	-	-	AT -
2052	SEP 21	-	AT -	-	AT -	-	-	-	- -	- -	- -	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2053	OCT 18	-	-	-	-	-	-	-	-	-	- -	- -	- -	- -	- -	-	-	-	TA -	-	-	-	-	-	-	-	-	-
2054	NOV 14	-	-	-	-	-	-	-	-	-	-	-	-	-	-	- -	- -	- -	-	-	-	-	-	-	-	-	TA -	-
2055	DEC 11	AT -	-	-	-	-	-	-	-	-	-	-	-	-	-	- AT	-	- -	- -	- -	- -	- -	-	-	-	-	-	-
2056	1984 JAN 7	-	-	-	-	-	-	-	-	-	-	-	- TA	-	-	-	-	-	-	TA -	-	AT -	-	-	-	-	TA -	AT -
2057	FEB 3	-	-	TA -	-	-	-	AT -	TA -	-	-	TA -	-	-	-	-	-	-	-	-	TA -	TA -	-	-	-	-	-	TA -

▒ = definitely towards the sun □ = definitely away from the sun

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

The table shows daily inferences of the polarity of the interplanetary magnetic field. The first half of the day is based principally on magnetograms produced by the magnetometer at the Vostok Antarctic Station of the USSR. The magnetometer of the U.S. Air Weather Service now operated at Thule by the Danish Meteorological Institute is used for the second half of the day. The Thule magnetometer ceased operating in August 1981.

STANFORD MEAN SOLAR MAGNETIC FIELD



POLARITY OF THE MEAN SOLAR MAGNETIC FIELD: □ = FIELD >2μT, ▥ = -2μT ≤FIELD ≤2μT, ■ = FIELD <-2μT
No box visible indicates no data available for that day.

NOTE: Data are taken daily at 2000 UT. Dates given are not Bartels Rotation dates. These earlier dates correspond to the occurrence of phenomena on the Sun that affect the Earth during the given Bartels Rotation.

STANFORD MEAN SOLAR MAGNETIC FIELD (MICROTESLA)

day	83 March	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	84 Jan.	Feb.
01	.	25	69	.	-23	9	41	-51	-63	54	41	-41
02	.	38	65	.	-50	16	35	-104	-27	79	11	-63
03	11	52	52	.	-28	3	-3	-117	32	.	-2	-62
04	33	61	35	.	15	13	-59	-100	75	56	-16	-43
05	38	63	12	.	44	20	-99	-68	70	24	-29	-19
06	51	50	-3	.	51	22	-109	-37	57	.	-50	-8
07	.	29	-15	0	39	-12	-109	-9	35	3	.	-4
08	65	21	-43	12	17	-49	-89	38	23	.	.	16
09	.	.	-51	30	33	-81	-42	55	.	.	.	.
10	48	-15	-45	45	27	-91	10	46	.	.	.	61
11	30	-44	-27	28	-4	-83	33	25	.	-59	-1	.
12	.	-48	-3	.	-60	-73	52	19	.	-50	.	.
13	2	-43	10	.	-108	-60	60	10	.	.	47	.
14	-25	-29	27	.	-120	-10	58	4	.	-9	56	15
15	-44	-11	31	.	-107	19	42	-7	-53	.	.	.
16	-62	9	10	.	-89	56	29	.	.	.	37	-14
17	-27	16	5	.	-20	14	20	-47	.	.	20	-23
18	-19	13	-9	-91	7	78	5	-68	0	.	-3	3
19	-5	15	-69	-56	27	.	-18	-62	.	.	-14	29
20	.	-11	-87	-28	41	.	-37	-54	.	29	-28	39
21	19	.	-96	-1	97	8	-63	-20	66	.	-34	31
22	15	.	-47	23	96	1	-66	10	.	.	.	36
23	.	-66	-11	53	82	-17	-54	25	.	.	24	19
24	.	-59	6	72	25	-34	-17	57	-52	.	43	-33
25	-23	-34	36	101	9	-76	12	72	-78	-6	33	-59
26	-34	-15	64	67	11	-78	.	48	-94	.	25	-74
27	-42	.	101	23	-4	-36	52	-9	-82	1	23	-72
28	-17	.	117	27	-35	-28	71	-58	-59	40	21	-74
29	-20	36	-12	33	-37	-12	54	.	-20	60	10	-78
30	1	.	.	26	-39	7	.	.	.	.	-13	
31	18		.		-21	28		.		47	-22	

DOT SYMBOL INDICATES NO DATA AVAILABLE FOR THE DAY.

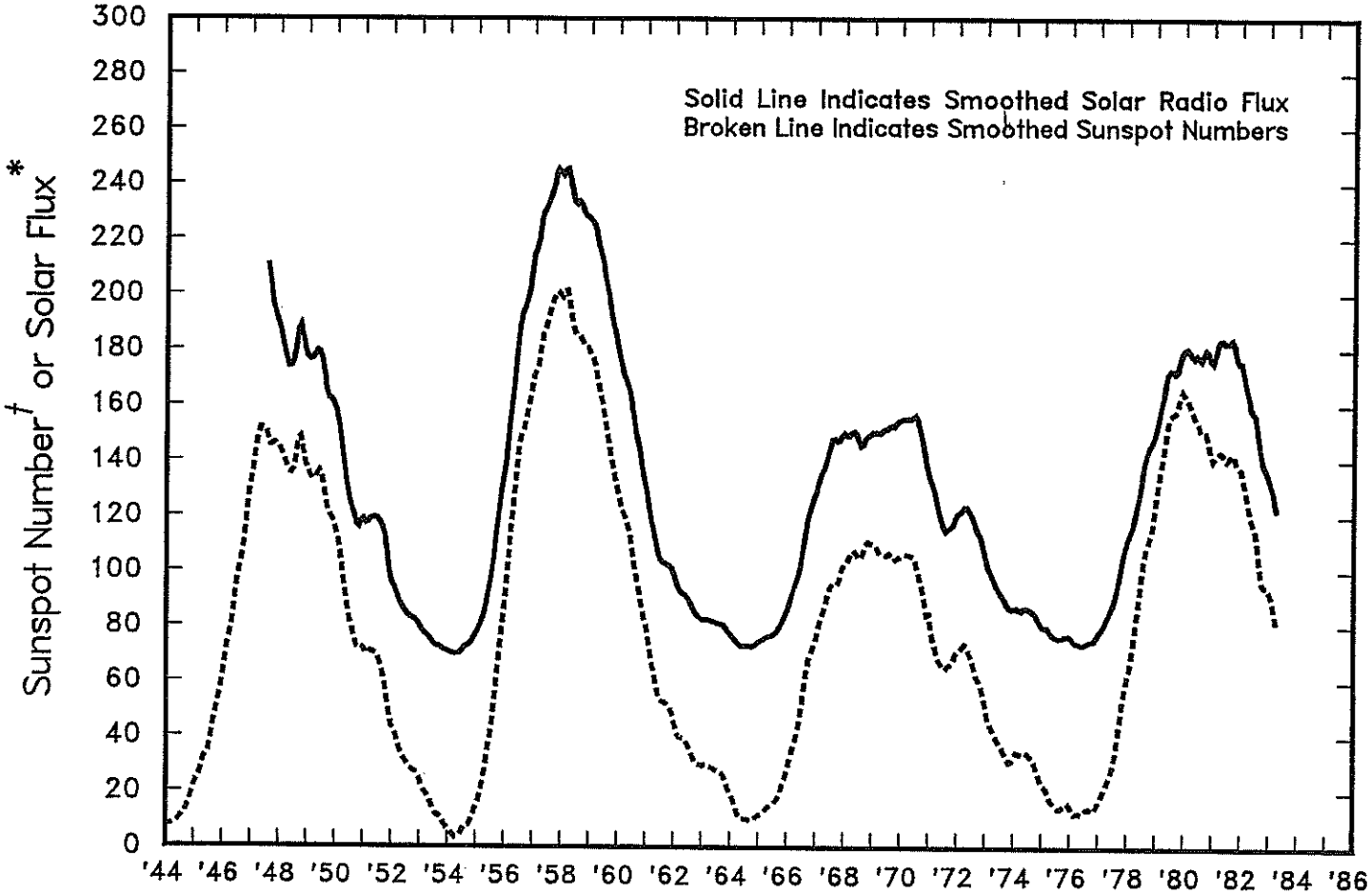
BOULDER GEOMAGNETIC SUBSTORM LOG

February 1984

DATE	ONSET	DIR	COMMENTS
02/01			Field intermittently unsettled.
	0840	West	
	1025	West	
02/02			Field quiet through 0830 UT and then unsettled balance of day.
	1155	West	
	1740	West	
	2110		Localized substorm at NAQ.*
02/03			Field intermittently unsettled.
	0105	East	Weak substorm.
	0235	East	Weak substorm.
02/04			Field active with minor magstorm conditions 0900-1700 UT.
02/05			Field unsettled through 1700 UT and quiet balance of day.
	0410		Localized substorm vicinity NAQ.
	0740		Localized substorm Lynn Lake to Ft. Simpson.
	0905		Localized substorm College to Anchorage.
	1935		Localized substorm College to Anchorage.
02/06			Field unsettled after 0930 UT with no distinctive substorm activity.
02/07			Field intermittently unsettled.
	0825	West	Weak substorm several injections with recovery near 1000 UT.
	1210	West	Weak substorm.
02/08			Field intermittently unsettled.
	0735		Weak substorm.
	1055		Weak substorm.
02/09			Field intermittently unsettled with no distinctive substorm activity.
02/10			Field active after 1000 UT.
	1020	West	
	1615	West	
	1710	West	
	1825	West	
02/11			Field intermittently active through 1600 UT.
	0210	East	
	1320		Localized substorm College to Anchorage.
02/12			Field intermittently unsettled with no distinctive substorm activity.
02/13			Field intermittently active.
	0925	West	Numerous injections follow with final recovery near 1930 UT.
02/14			Field intermittently active.
	0220	East	
	0530	East	
	1105	West	Strong substorm with recovery near 1330 UT.
	1405	West	Moderate substorm with recovery near 1700 UT.
02/15			Field unsettled through 1200 UT.
	0355		Localized substorm at NAQ.
	0520	West	
	1010	West	Weak Substorm
	1035	West	
02/16			Field intermittently unsettled.
	1240	West	Weak substorm.
02/17			Field intermittently unsettled.
	0455	East	Weak substorm.
	0520	East	Weak substorm.
	1005	West	
02/18			Field intermittently active.
	0330	East	Weak substorm.
	0925	West	
	1010	West	
	1325	West	Several injections with recovery near 1600 UT.
02/19			Field intermittently unsettled; substorm activity confined to auroral oval stations.
	1220		Localized substorm at College.
	1340		Several injections with recovery near 1600 UT.
2/20			Field unsettled after after 1500 UT.
	0740	West	Weak substorm.
2/21			Field intermittently active.
	0335	East	Weak substorm.
	1045		Localized substorm at College.
	1210	West	Weak substorm.
	1350	West	Several injections with recovery near 1600 UT.
02/22			Field intermittently unsettled.
	1205		Weak substorm at College.
02/23			Field intermittently active.
	0545	East	Initial onset at Lynn Lake; several injections with recovery near 0745 UT.
	1155	West	Several injections with recovery near 1445 UT.
02/24			Field intermittently unsettled.
	0020		Weak substorm localized at NAQ.
	1045	West	
02/25			Field intermittently unsettled.
	0940	West	
02/26			Field intermittently unsettled.
	1100	West	
	1420		Weak substorm.
	1520		Localized substorm College to Anchorage.
	1640	West	
	1815	West	Weak substorm.
02/27			Field intermittently unsettled.
	0225	East	
	0525	East	Several injections.
	0825		Substorm response confined to Alaskan network.
	0915		Substorm response confined to Alaskan network.
02/28			Field intermittently unsettled.
	0735	West	Initial onset.
	0805	West	Secondary injection.
	1340	West	
02/29			Field unsettled 0730-1830 UT.
	0745	West	Several injections.
	1050	West	
	1625	West	

* Note: Narsarssuaq became operational on 19 April 1983. For convenience, it will be identified by the call letters NAQ.

SUNSPOT NUMBERS AND 10.7 cm SOLAR RADIO FLUX
January 1944 – April 1983



* Solar Flux Units (10^{-22} W/m^2 Hz) Adjusted to 1 A.U., Ottawa Series D.
† Reduced Zürich Sunspot Numbers.

National Geophysical Data Center
D.C. Wilkinson

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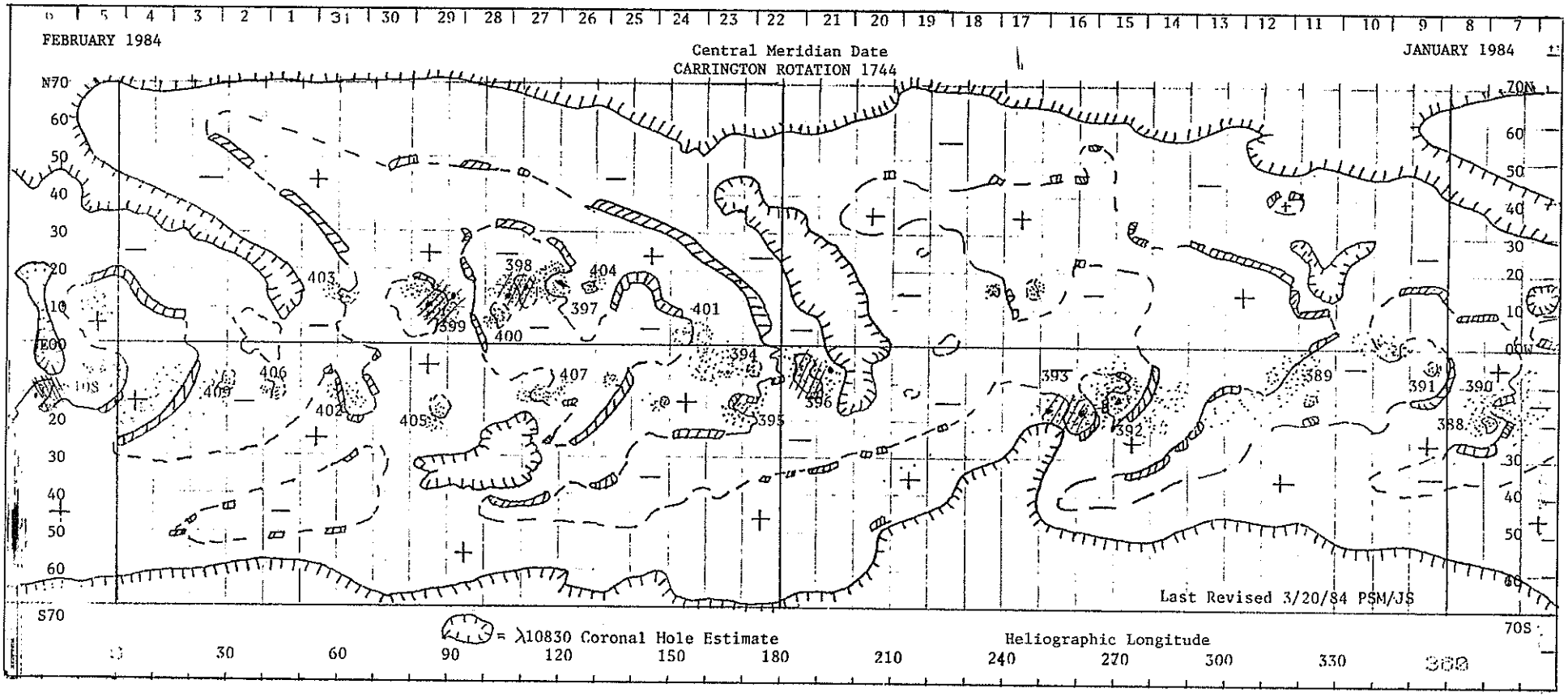
Hα SYNOPTIC CHART

CARRINGTON ROTATION 1744 (PRELIMINARY)

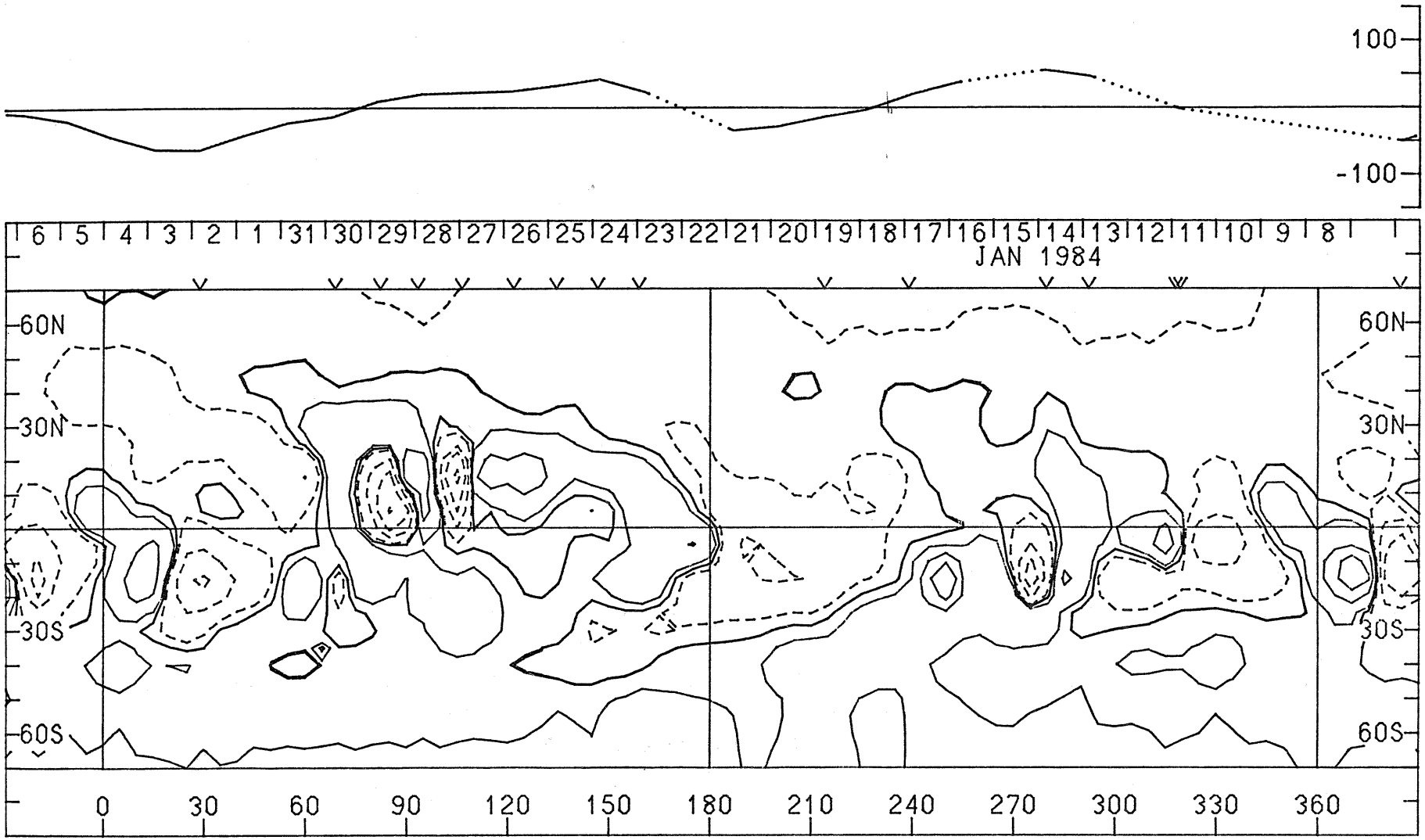


SOLAR MAGNETIC FIELD SYNOPTIC CHART

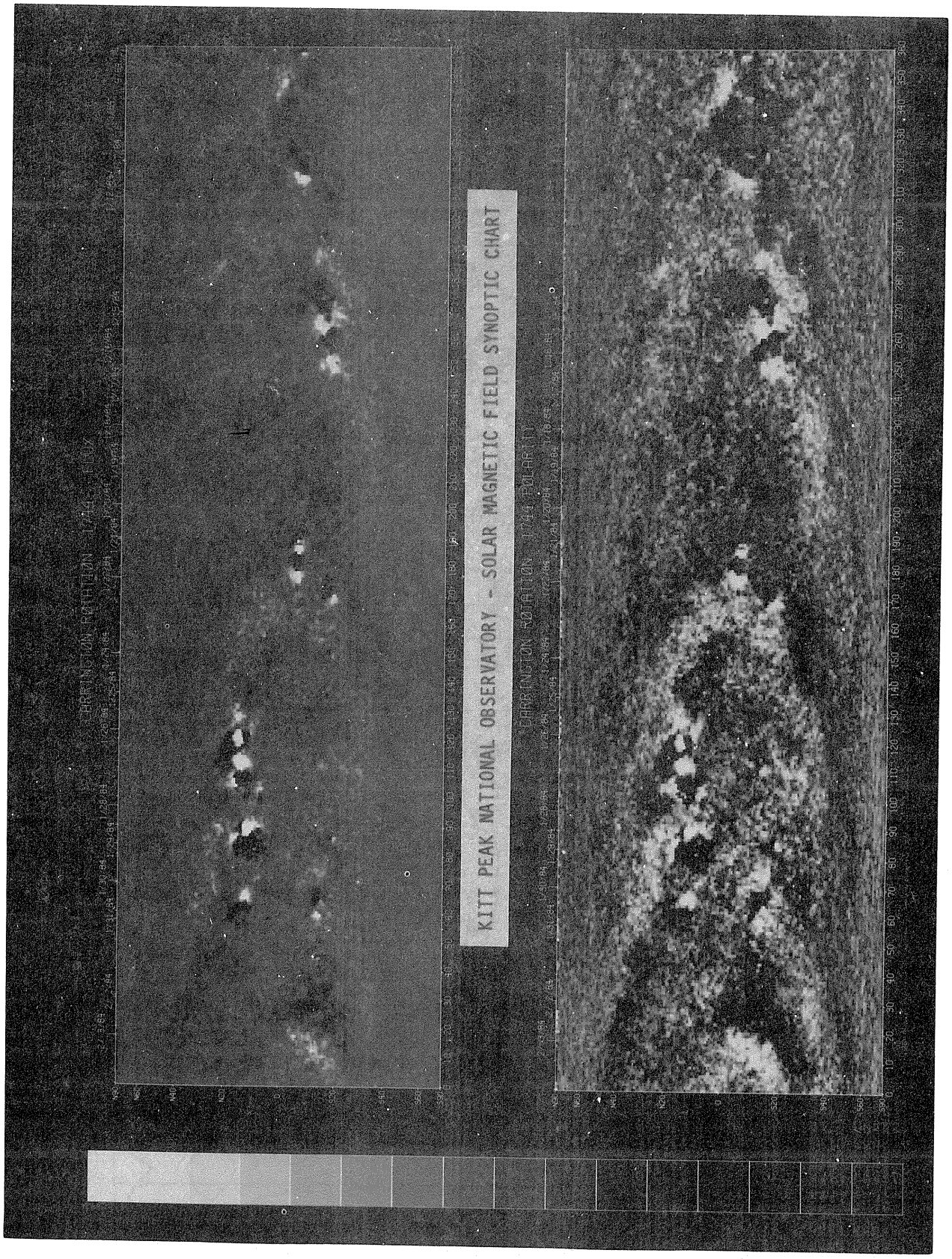
CARRINGTON ROTATION NUMBER 1744
(January 8 to February 5, 1984)

Stanford Solar Observatory

0, ±100, 500, 1000, 2000 microTesla



Heliographic Longitude

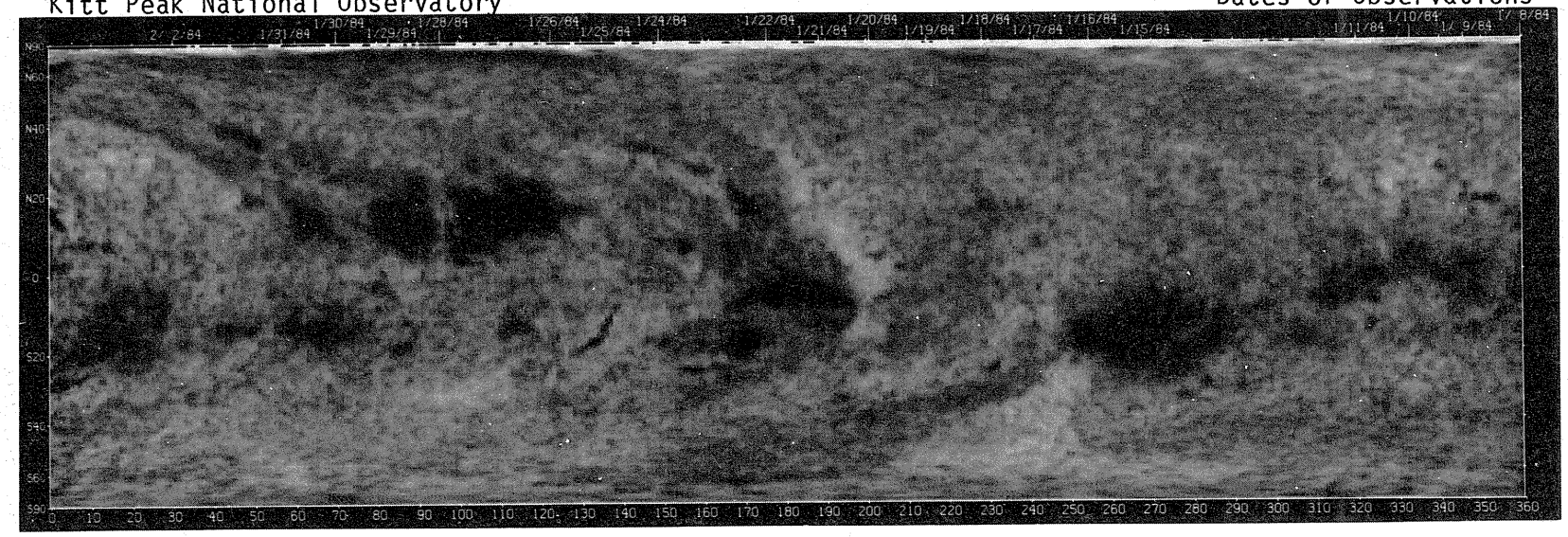

KITT PEAK NATIONAL OBSERVATORY - SOLAR MAGNETIC FIELD SYNOPTIC CHART
CARRINGTON ROTATION 1744 POLARITY

HELIUM 10830 ANGSTROM SYNOPTIC MAP OF THE SOLAR CORONA

CARRINGTON ROTATION NUMBER 1744
(January 8 to February 5, 1984)

Kitt Peak National Observatory

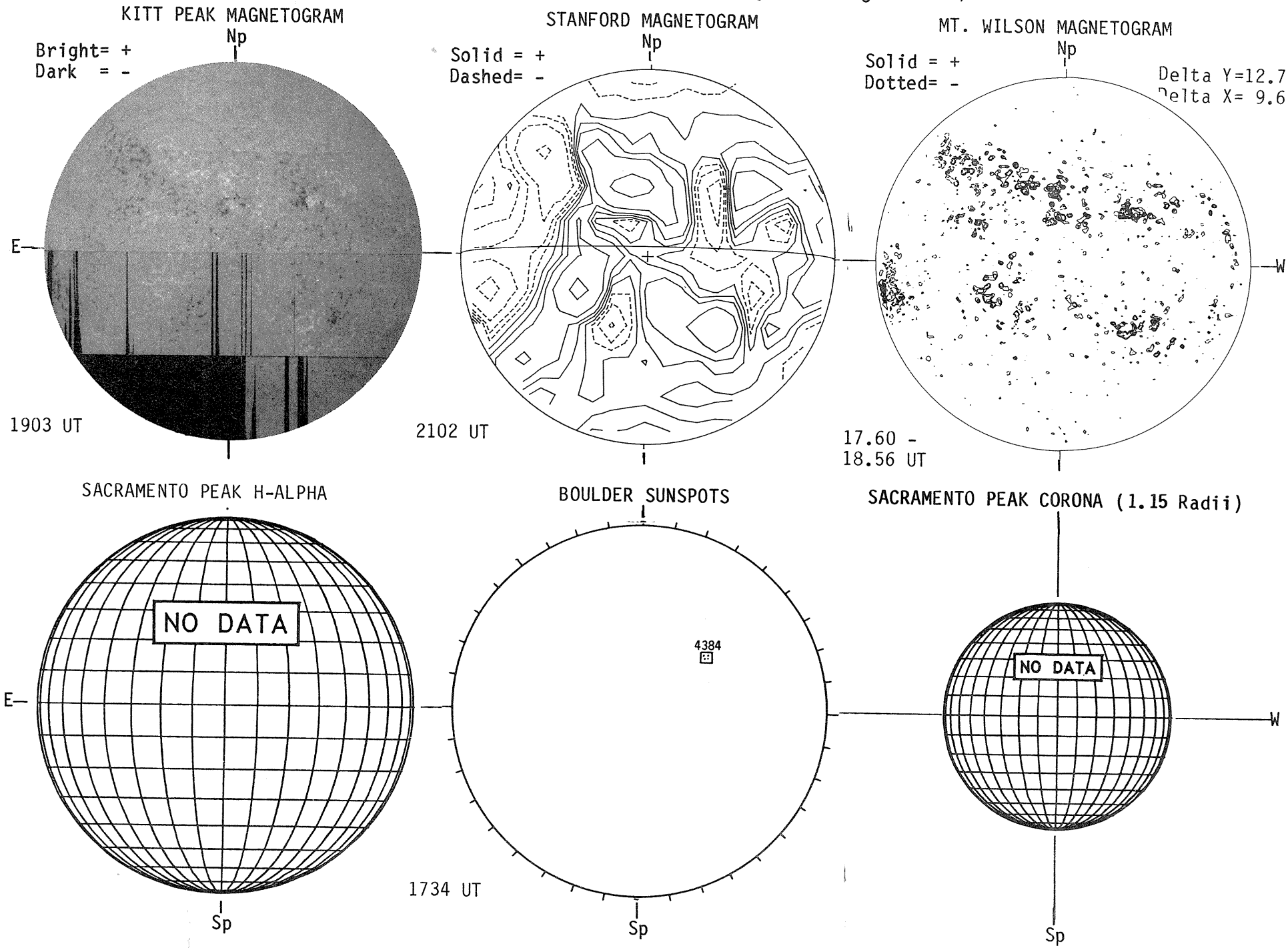
Dates of Observations



Heliographic Longitude

Regions for which no observations were available are black.
Irregularly shaped light areas mark either coronal holes or filament cavities.

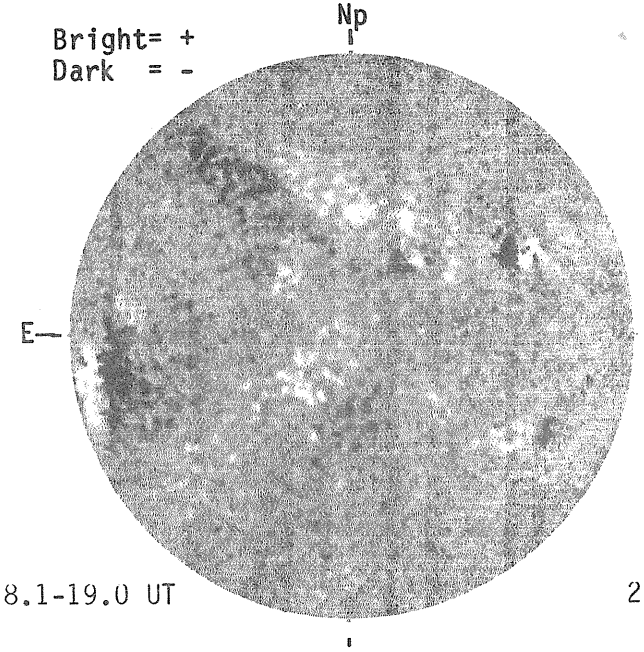
JANUARY 01, 1984 (P= 2.41, B_0=-2.96, L_0= 101.78)



J A N U A R Y 02, 1 9 8 4 (P= 1.92, B_0=-3.08, L_0= 88.61)

MT. WILSON MAGNETOGRAM

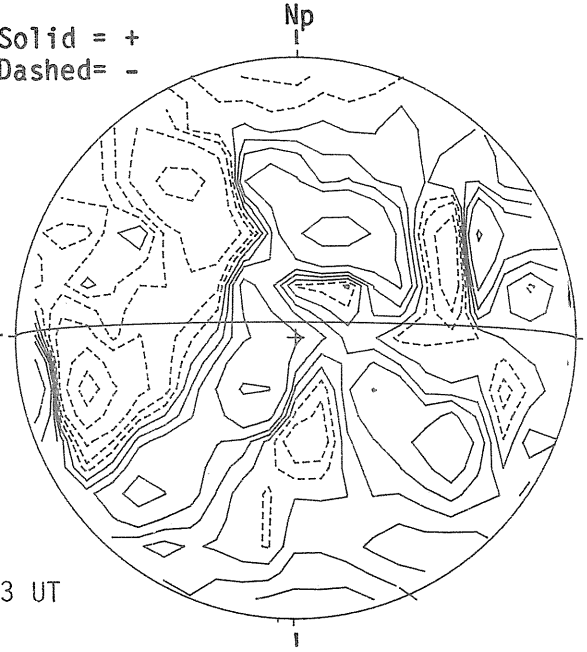
Bright= +
Dark = -



18.1-19.0 UT

STANFORD MAGNETOGRAM

Solid = +
Dashed= -

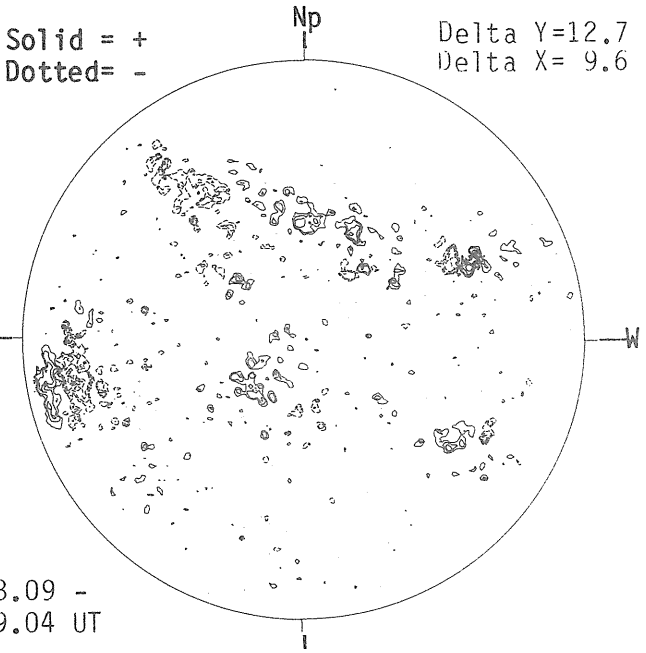


2113 UT

MT. WILSON MAGNETOGRAM

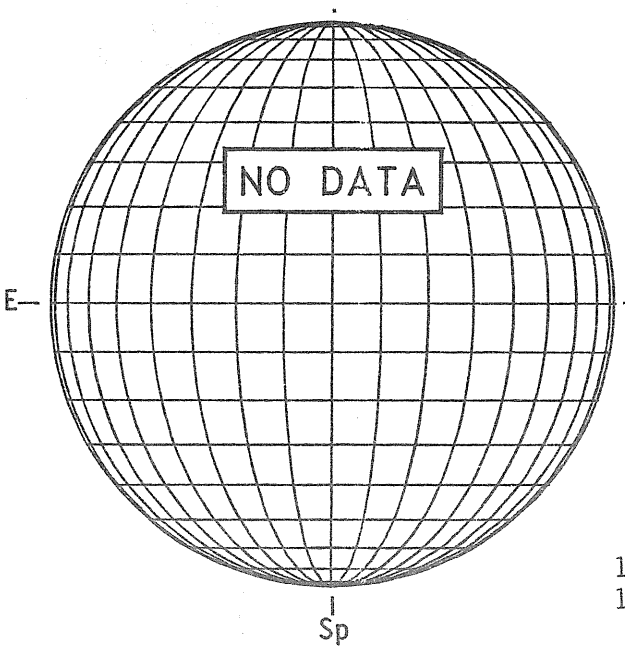
Solid = +
Dotted= -

Delta Y=12.7
Delta X= 9.6

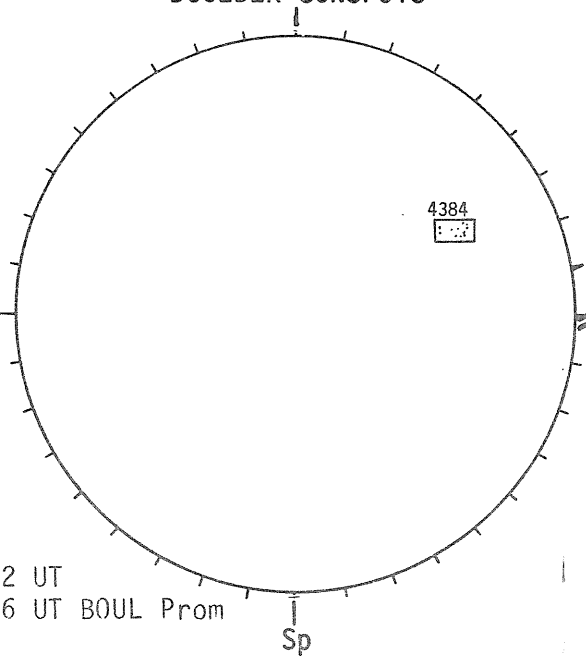


18.09 -
19.04 UT

SACRAMENTO PEAK H-ALPHA

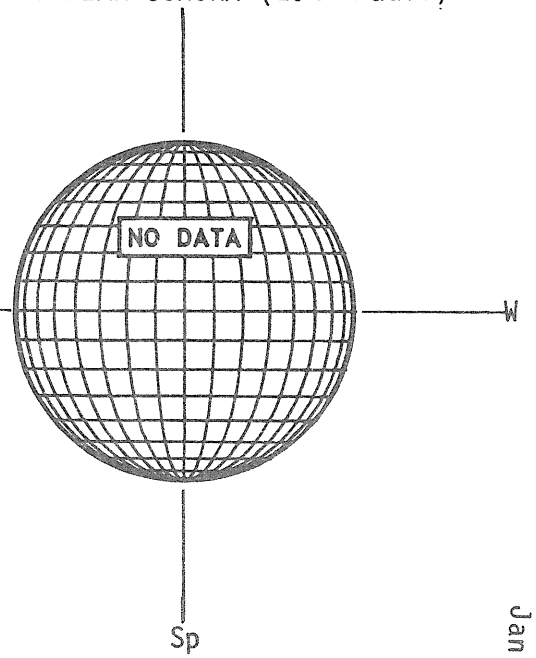


BOULDER SUNSPOTS

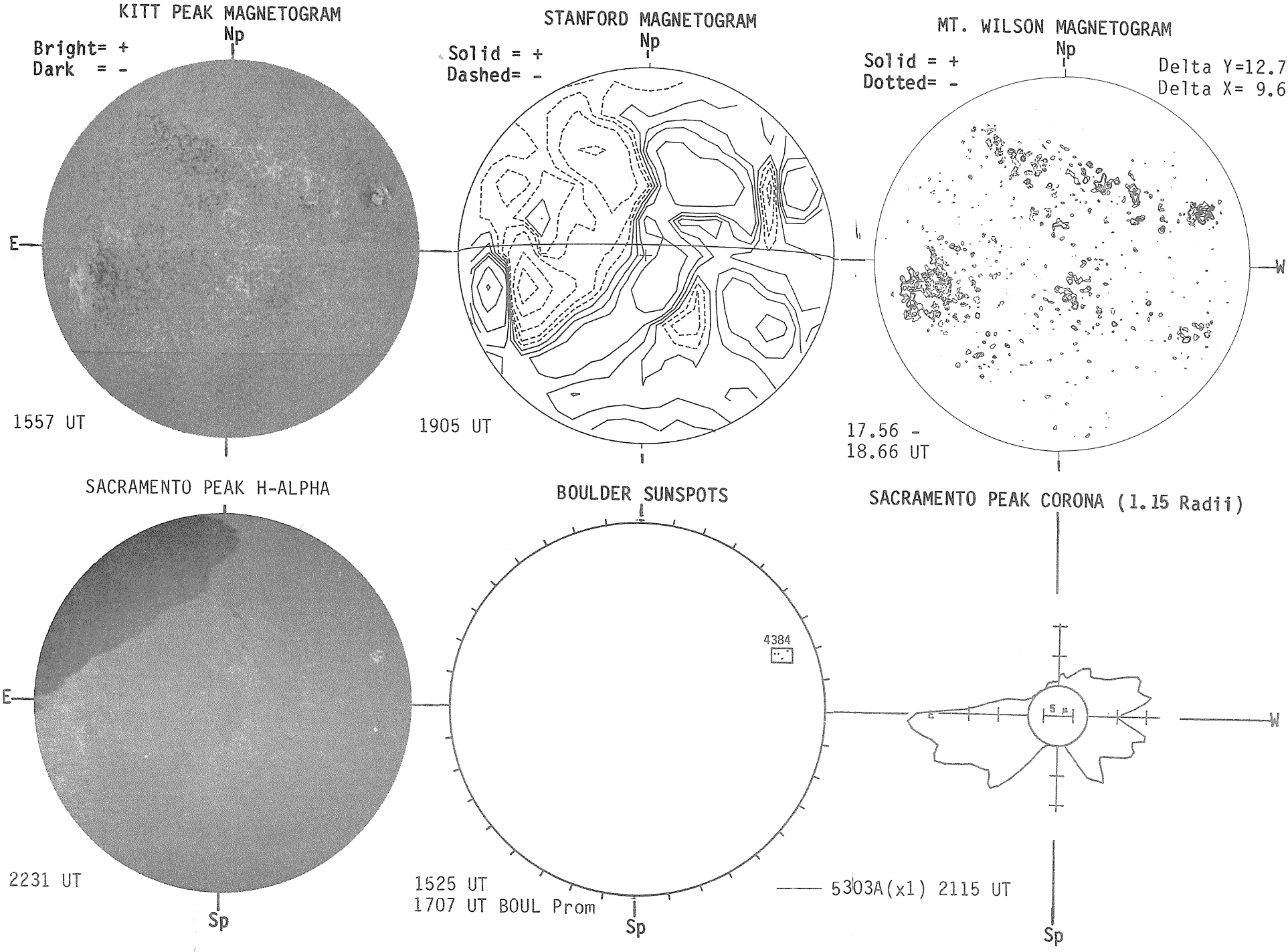


1542 UT
1656 UT BOUL Prom

SACRAMENTO PEAK CORONA (1.15 Radii)



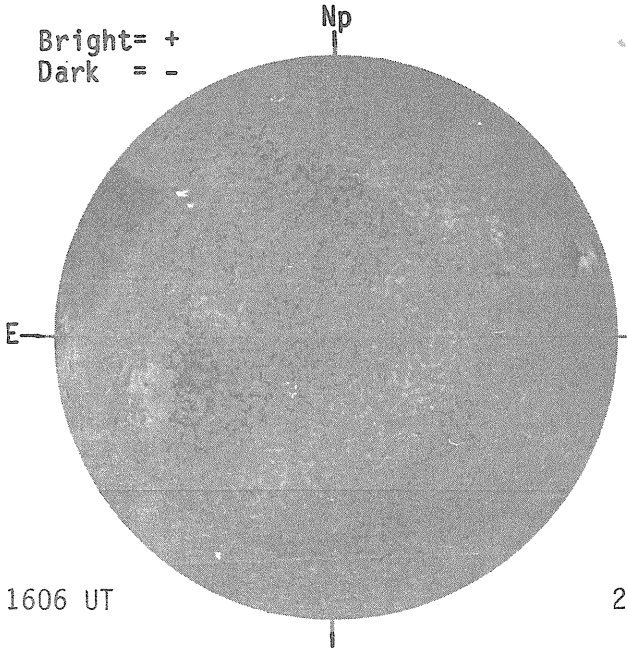
J A N U A R Y 03, 1 9 8 4 (P= 1.44, B_0=-3.19, L_0= 75.44)



J A N U A R Y 04, 1 9 8 4 (P= 0.95, B_0=-3.31, L_0= 62.27)

KITT PEAK MAGNETOGRAM

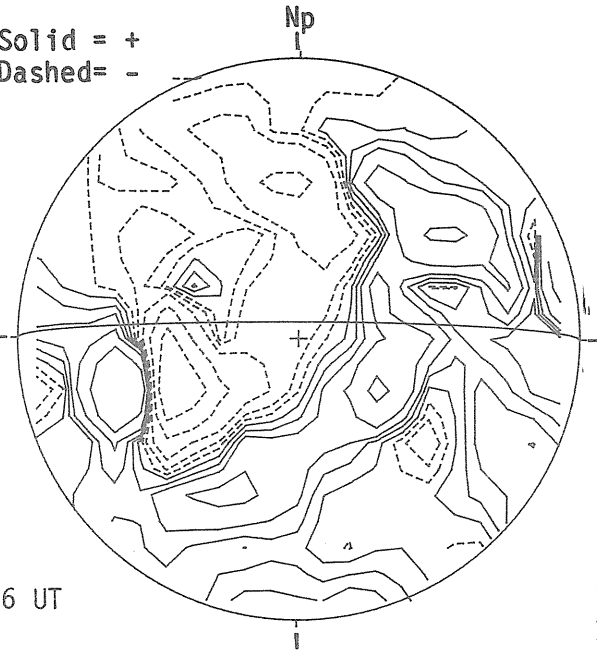
Bright= +
Dark = -



1606 UT

STANFORD MAGNETOGRAM

Solid = +
Dashed= -

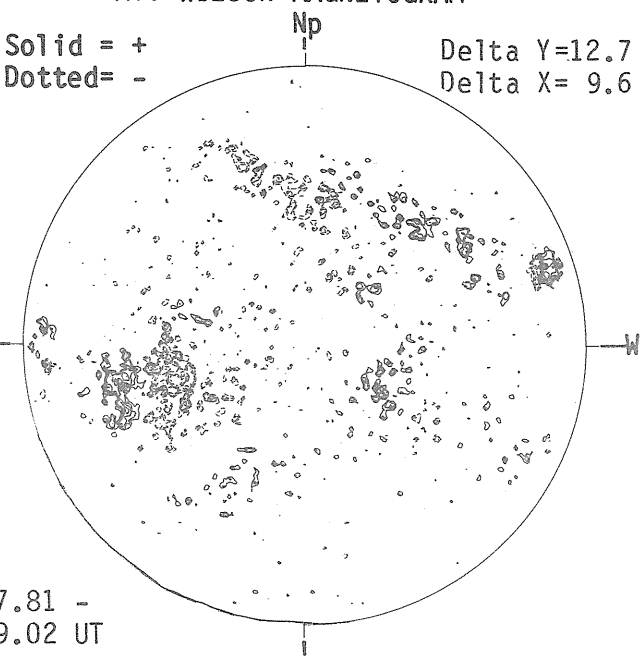


2106 UT

MT. WILSON MAGNETOGRAM

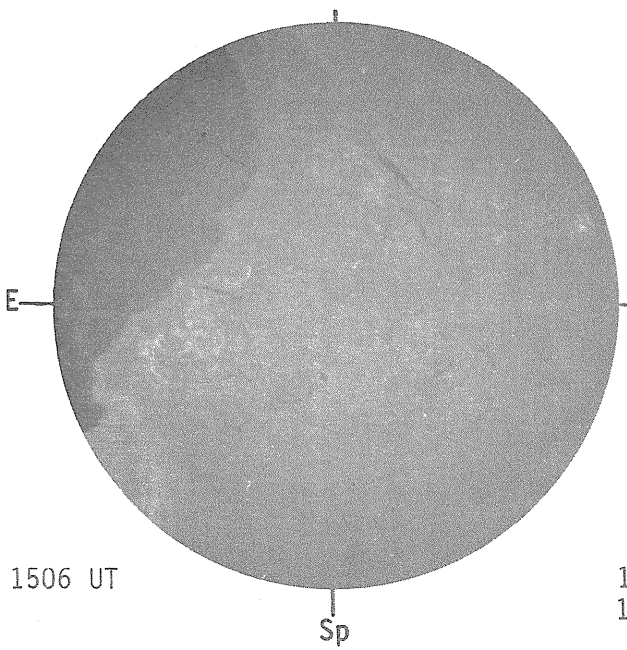
Solid = +
Dotted= -

Delta Y=12.7
Delta X= 9.6



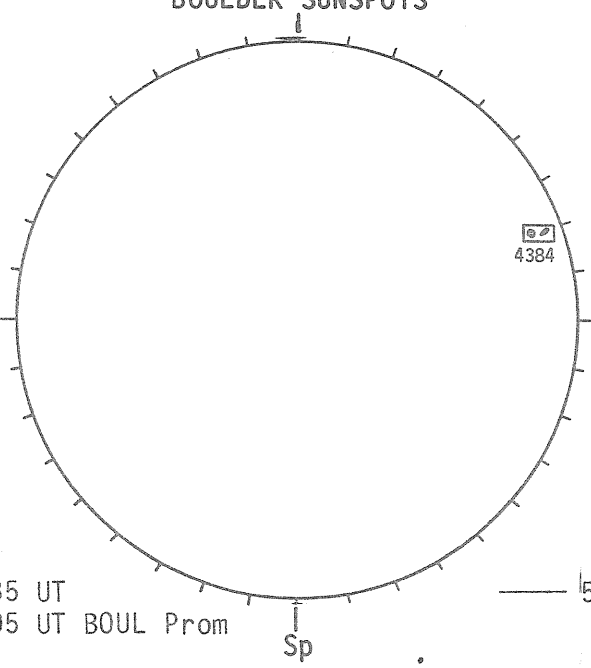
17.81 -
19.02 UT

SACRAMENTO PEAK H-ALPHA



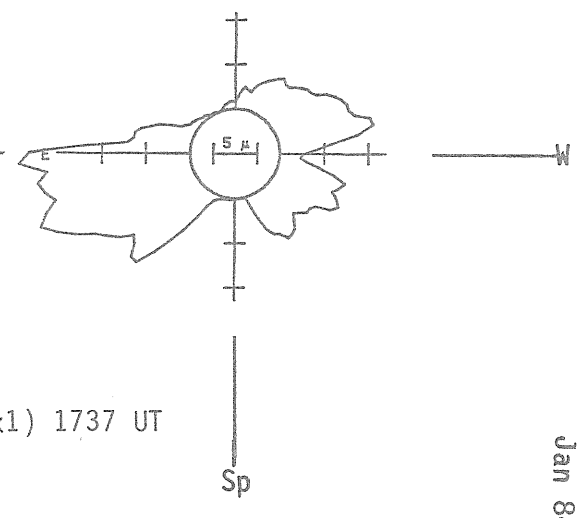
1506 UT

BOULDER SUNSPOTS



1535 UT
1605 UT BOUL Prom

SACRAMENTO PEAK CORONA (1.15 Radii)

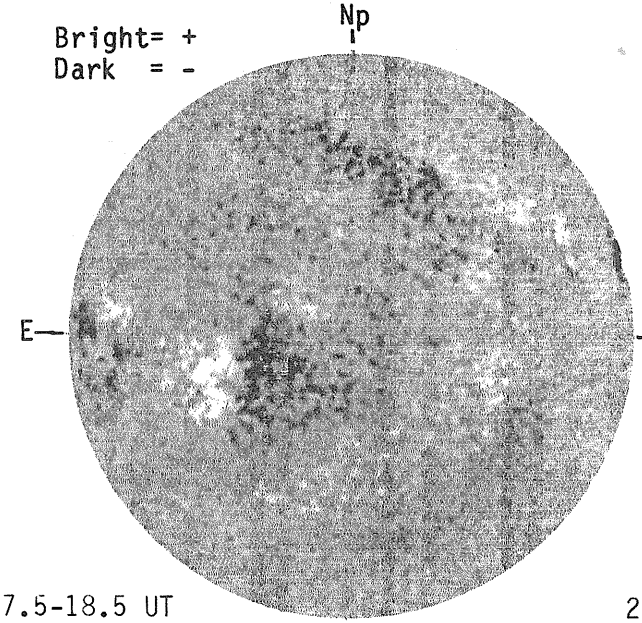


5303A(x1) 1737 UT

J A N U A R Y 05, 1 9 8 4 (P= 0.46, B_0=-3.42, L_0= 49.10)

MT. WILSON MAGNETOGRAM

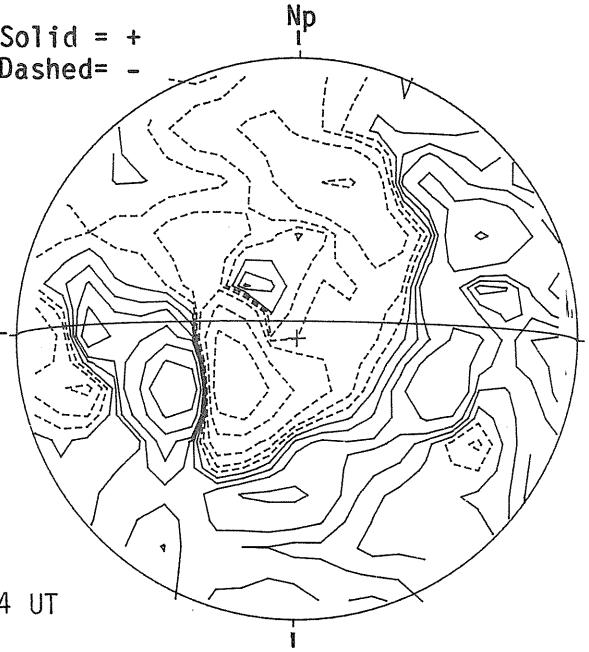
Bright= +
Dark = -



17.5-18.5 UT

STANFORD MAGNETOGRAM

Solid = +
Dashed= -

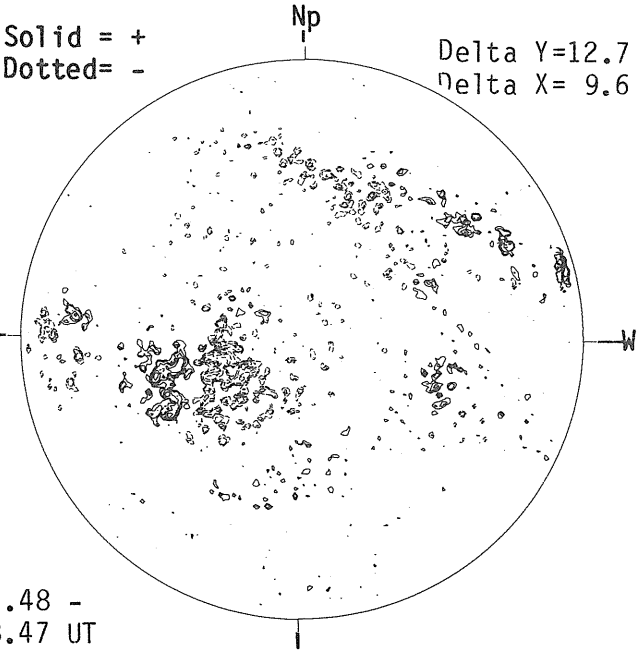


2144 UT

MT. WILSON MAGNETOGRAM

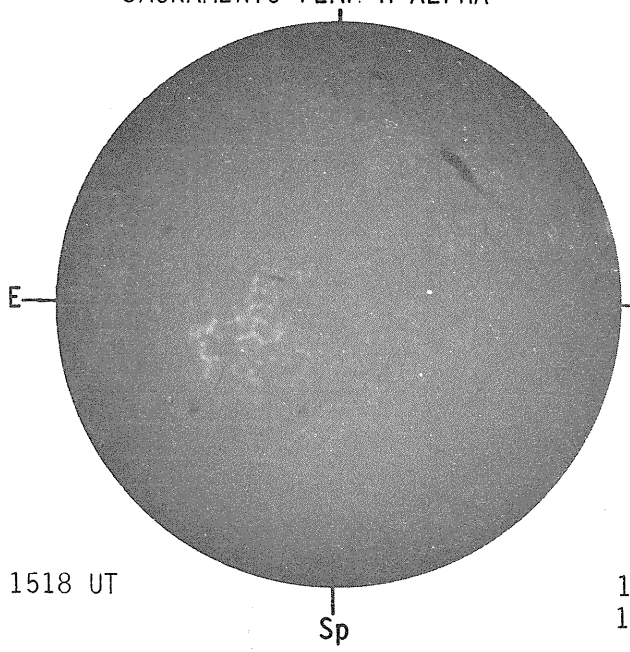
Solid = +
Dotted= -

Delta Y=12.7
Delta X= 9.6



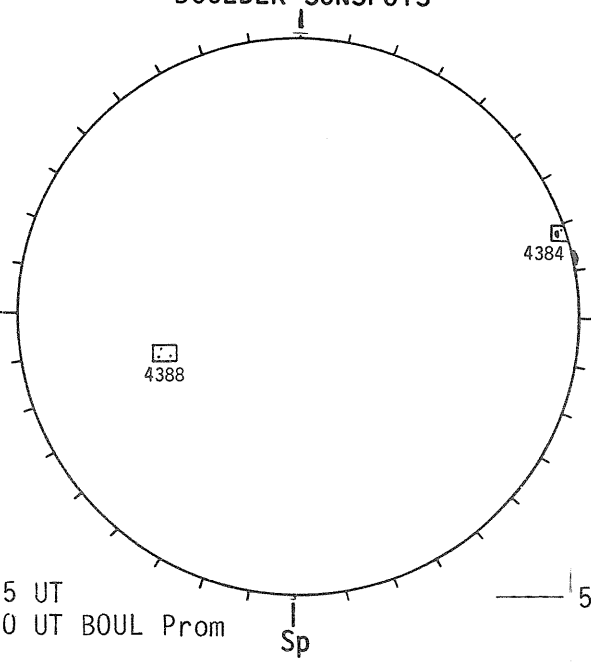
17.48 -
18.47 UT

SACRAMENTO PEAK H-ALPHA



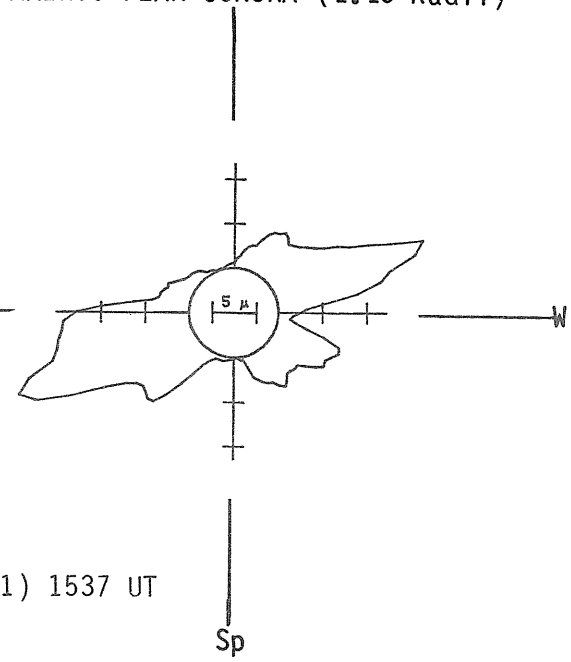
1518 UT

BOULDER SUNSPOTS



1625 UT
1700 UT BOUL Prom

SACRAMENTO PEAK CORONA (1.15 Radii)

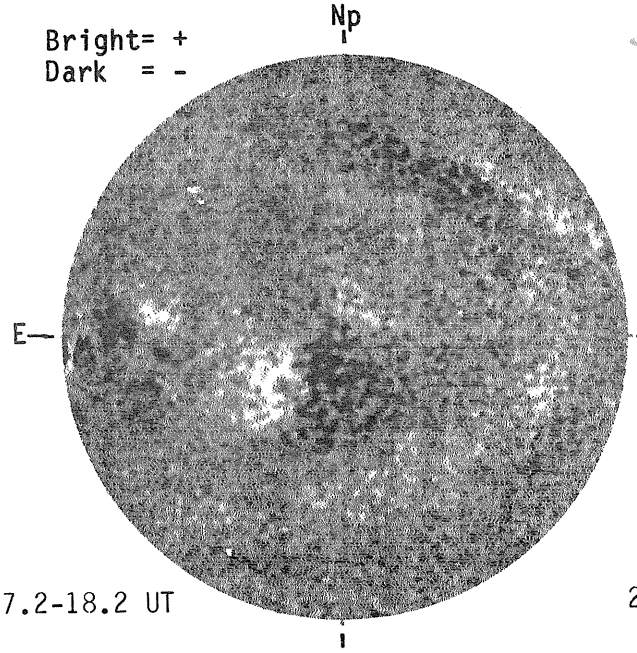


5303A(x1) 1537 UT

J A N U A R Y 06, 1 9 8 4 (P= -0.02, B_0=-3.53, L_0= 35.93)

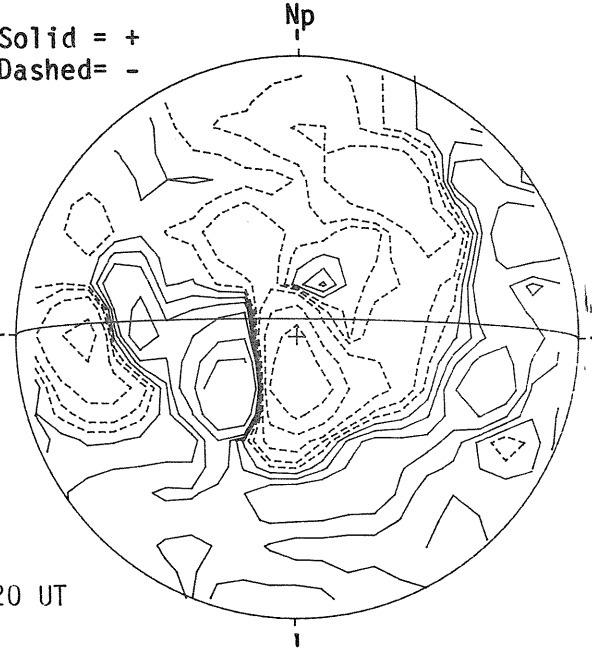
MT. WILSON MAGNETOGRAM

Bright= +
Dark = -



STANFORD MAGNETOGRAM

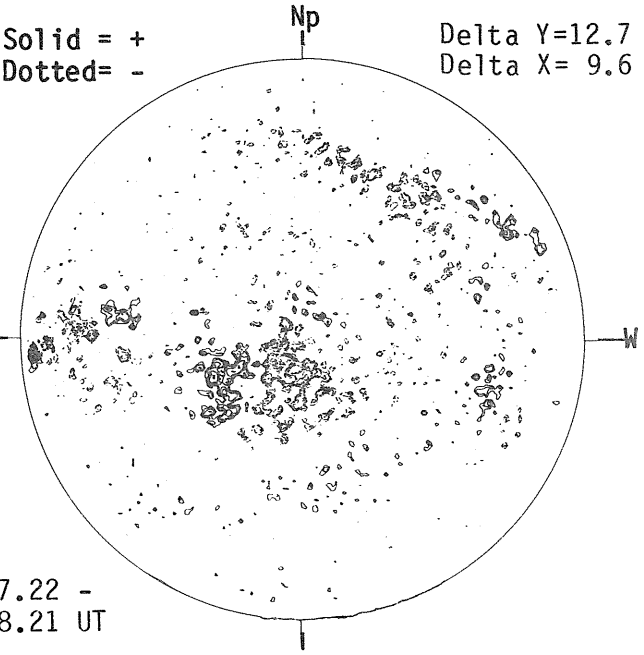
Solid = +
Dashed= -



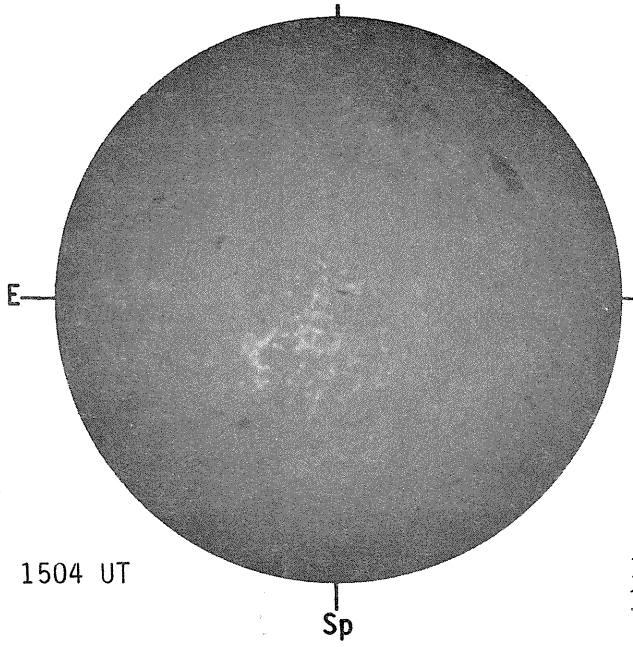
MT. WILSON MAGNETOGRAM

Solid = +
Dotted= -

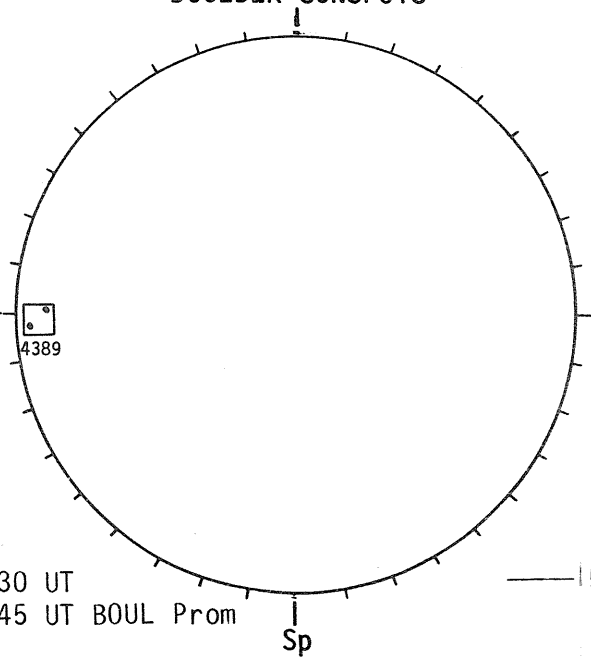
Delta Y=12.7
Delta X= 9.6



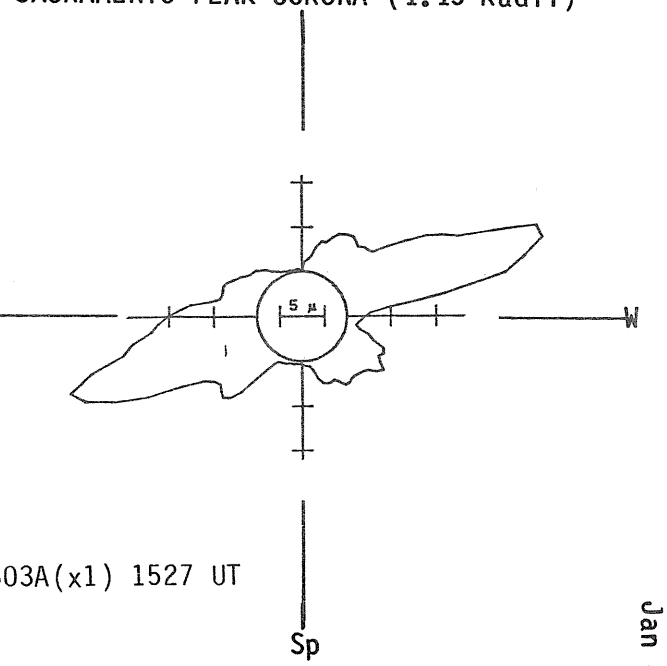
SACRAMENTO PEAK H-ALPHA



BOULDER SUNSPOTS



SACRAMENTO PEAK CORONA (1.15 Radii)

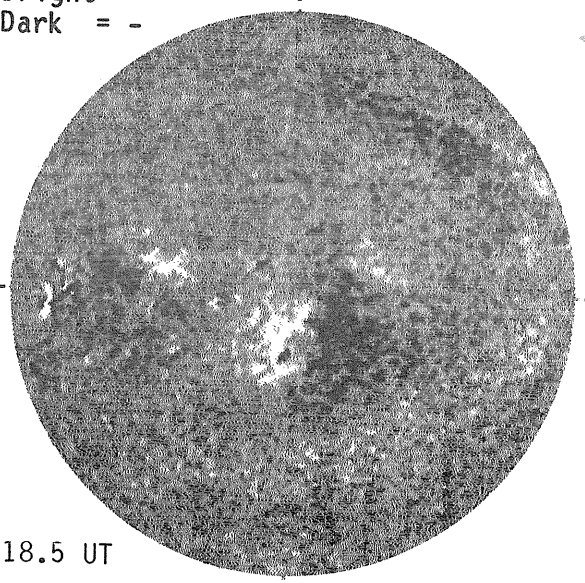


55
Jan 84

JANUARY 07, 1984 (P= -0.51, B_0=-3.64, L_0= 22.76)

MT. WILSON MAGNETOGRAM

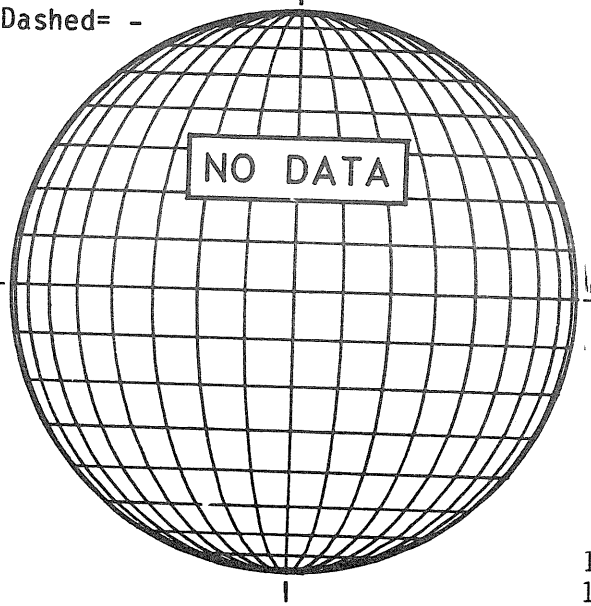
Bright= +
Dark = -



17.1-18.5 UT

STANFORD MAGNETOGRAM

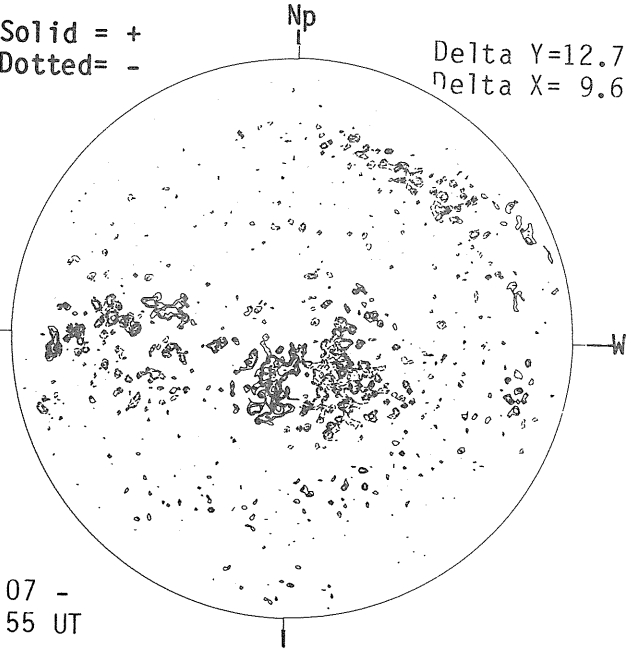
Solid = +
Dashed= -



MT. WILSON MAGNETOGRAM

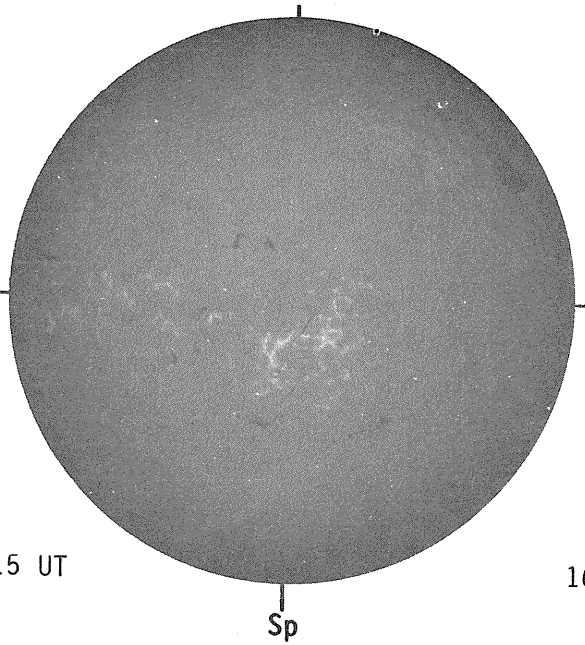
Solid = +
Dotted= -

Delta Y=12.7
Delta X= 9.6



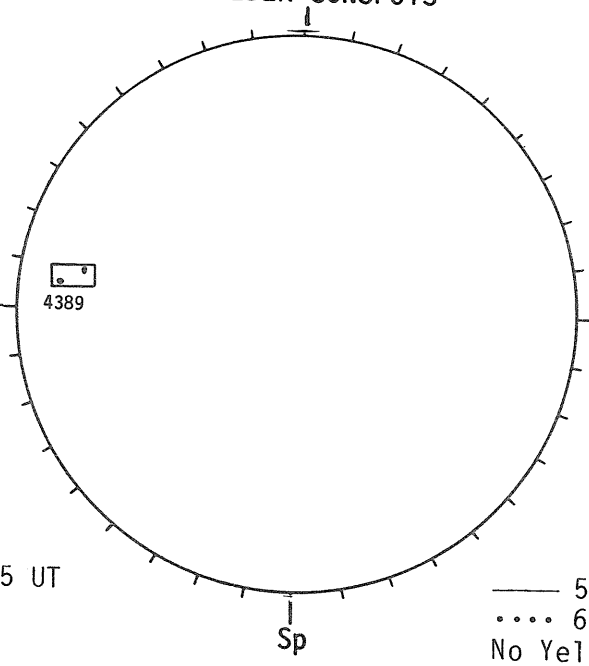
17.07 -
18.55 UT

SACRAMENTO PEAK H-ALPHA



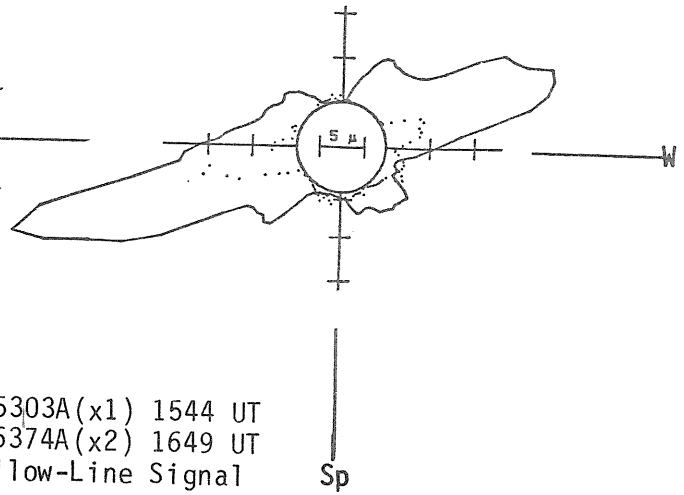
1515 UT

BOULDER SUNSPOTS



1645 UT

SACRAMENTO PEAK CORONA (1.15 Radii)

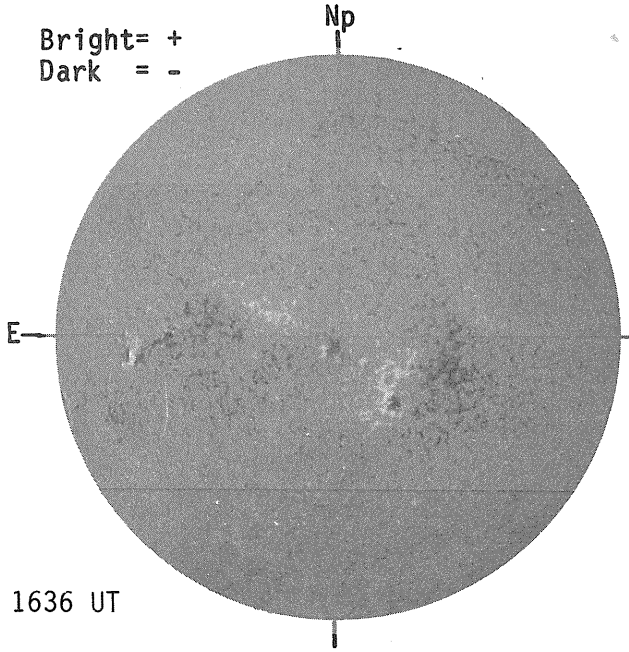


—— 5303A(x1) 1544 UT
.... 6374A(x2) 1649 UT
No Yellow-Line Signal

J A N U A R Y 08, 1 9 8 4 (P= -0.99, B_0=-3.76, L_0= 9.60)

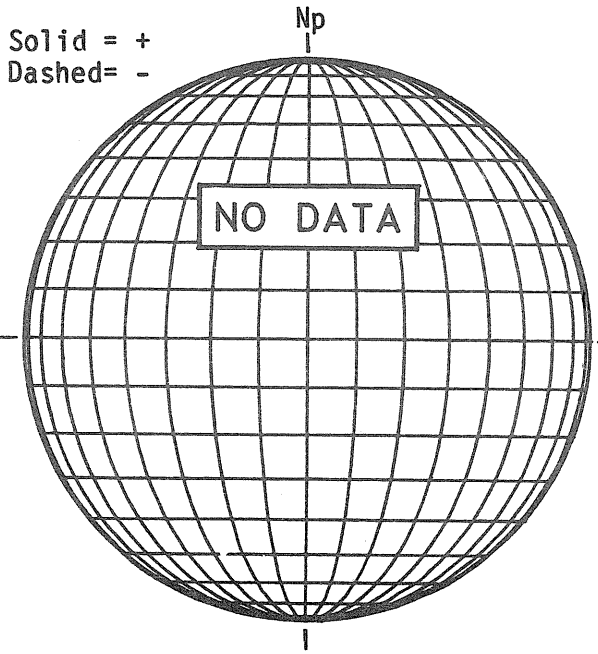
KITT PEAK MAGNETOGRAM

Bright= +
Dark = -



STANFORD MAGNETOGRAM

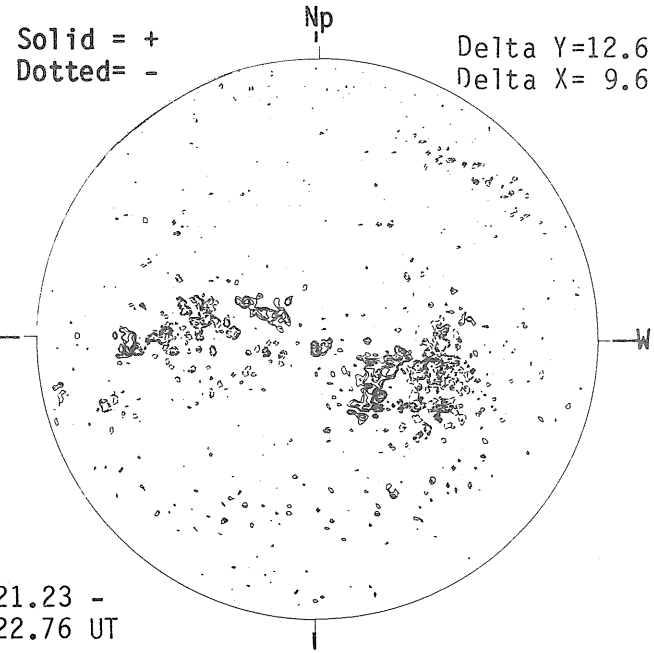
Solid = +
Dashed= -



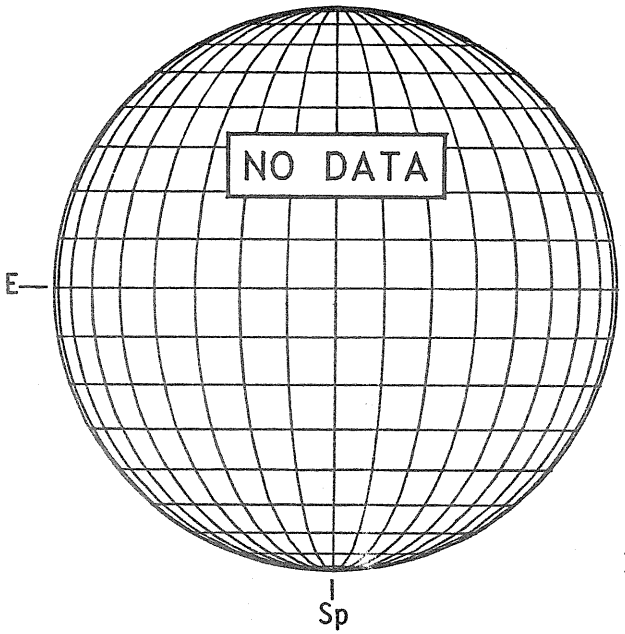
MT. WILSON MAGNETOGRAM

Solid = +
Dotted= -

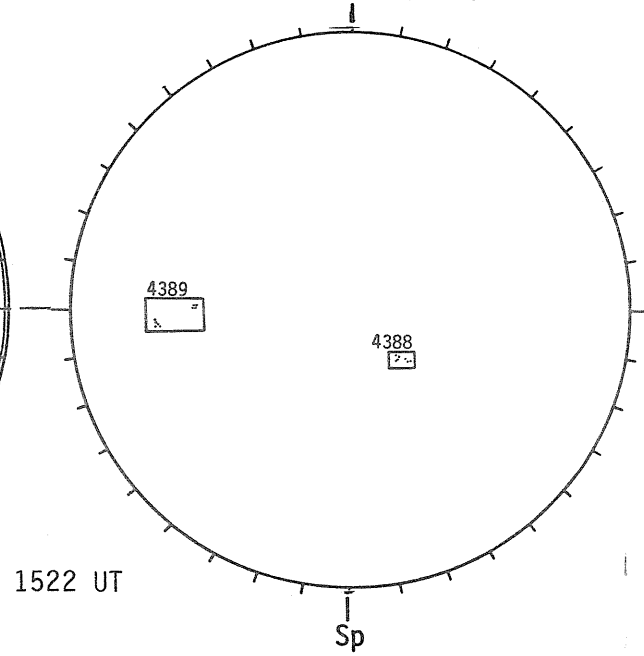
Delta Y=12.6
Delta X= 9.6



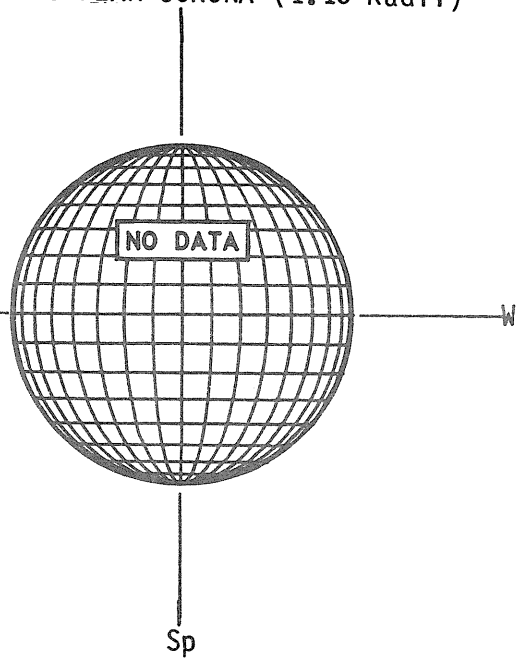
SACRAMENTO PEAK H-ALPHA



BOULDER SUNSPOTS



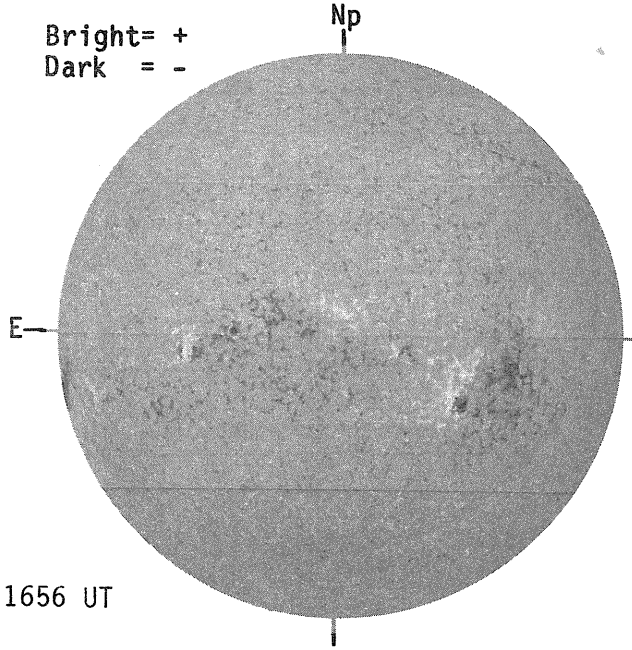
SACRAMENTO PEAK CORONA (1.15 Radii)



JANUARY 09, 1984 (P= -1.47, B_0=-3.86, L_0= 356.43)

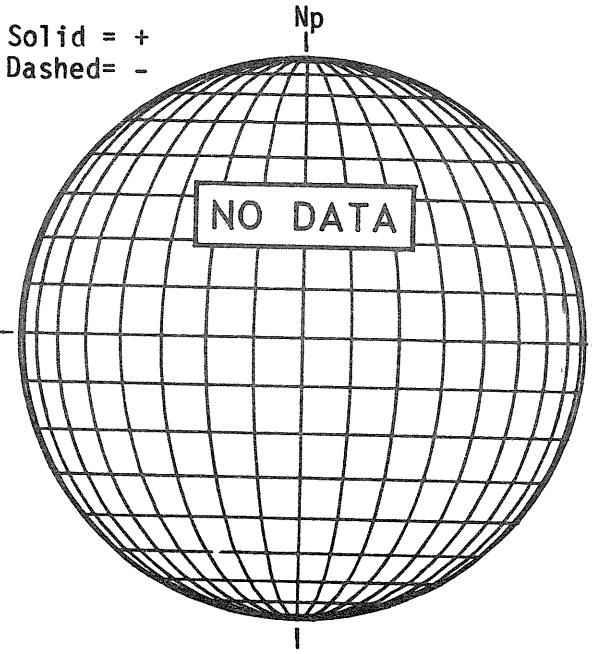
KITT PEAK MAGNETOGRAM

Bright= +
Dark = -



STANFORD MAGNETOGRAM

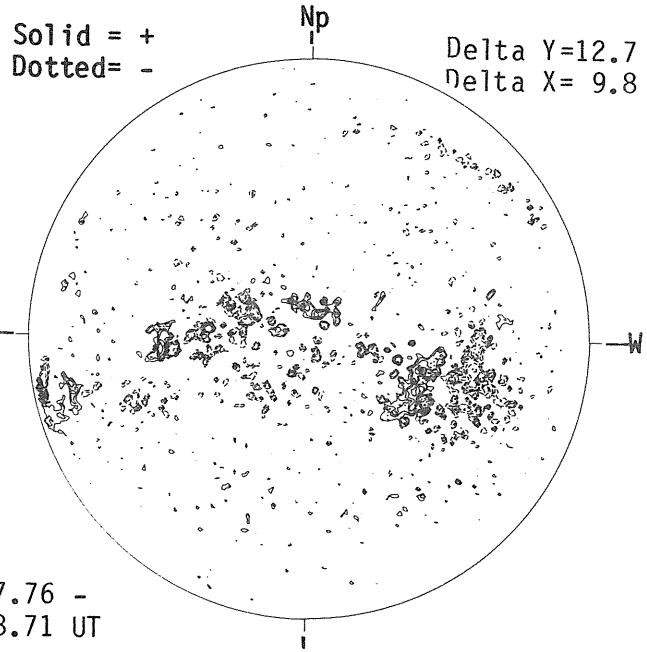
Solid = +
Dashed= -



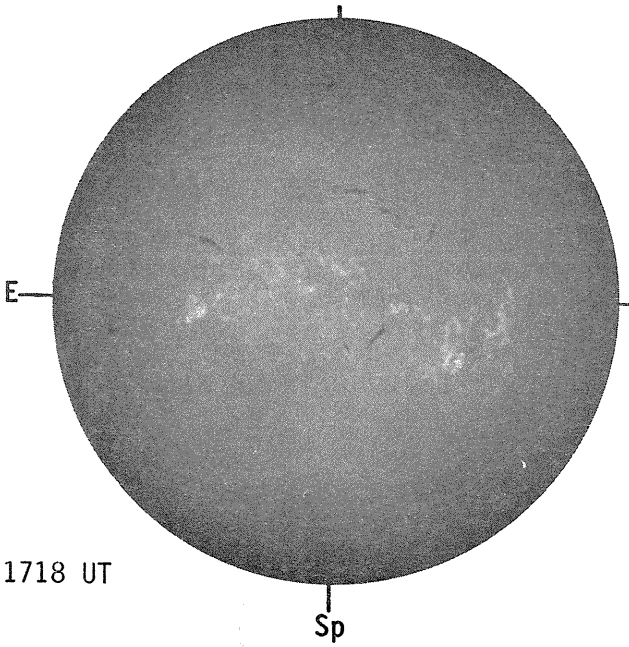
MT. WILSON MAGNETOGRAM

Solid = +
Dotted= -

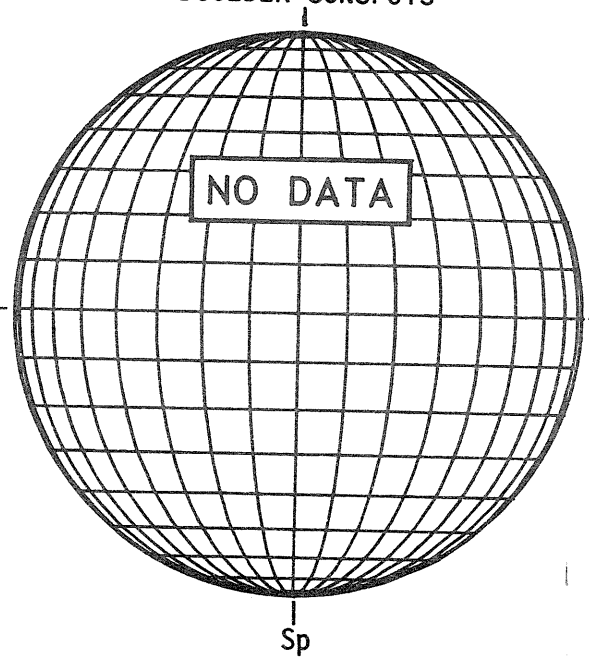
Delta Y=12.7
Delta X= 9.8



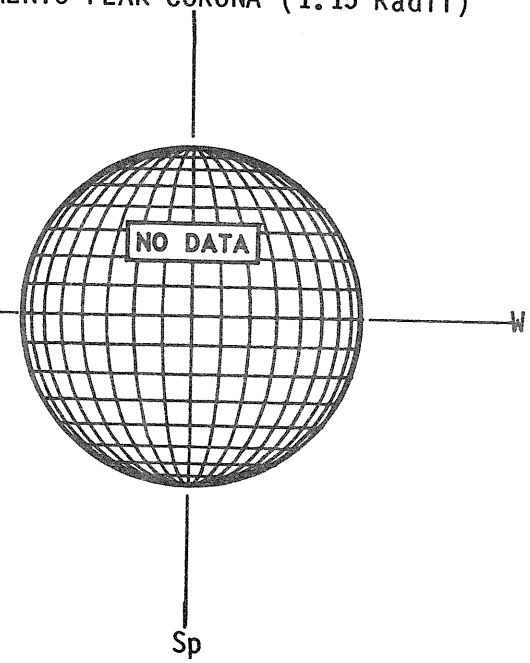
SACRAMENTO PEAK H-ALPHA



BOULDER SUNSPOTS



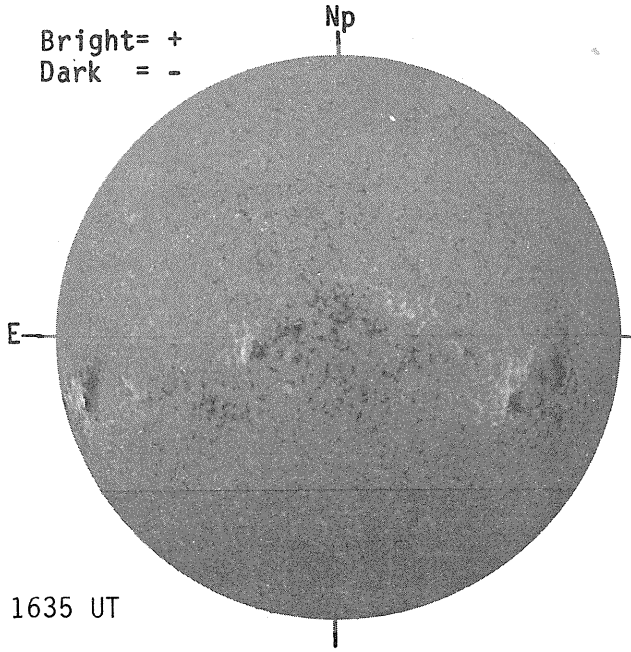
SACRAMENTO PEAK CORONA (1.15 Radii)



JANUARY 10, 1984 (P= -1.95, B_0=-3.97, L_0= 343.26)

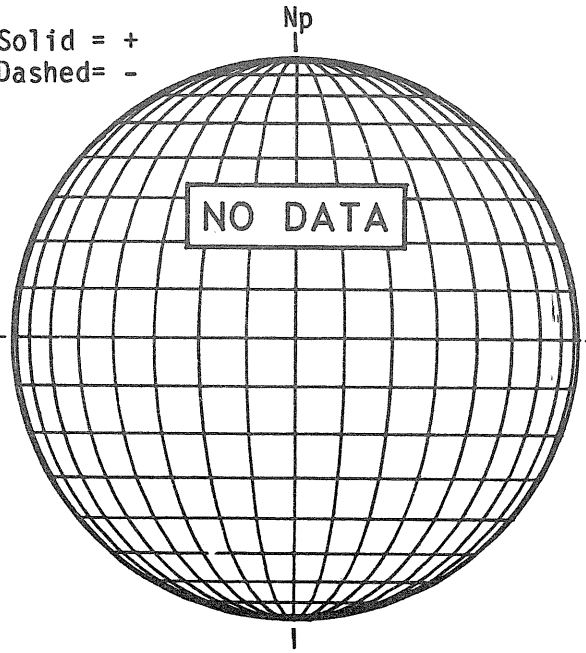
KITT PEAK MAGNETOGRAM

Bright= +
Dark = -



STANFORD MAGNETOGRAM

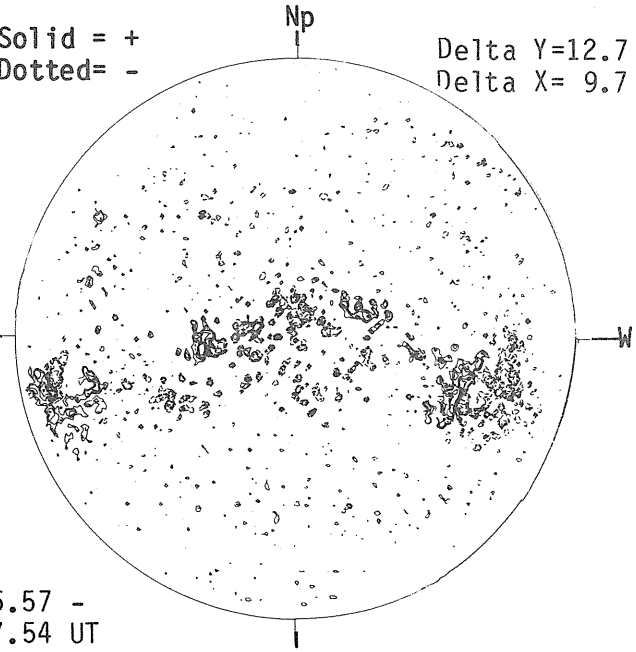
Solid = +
Dashed= -



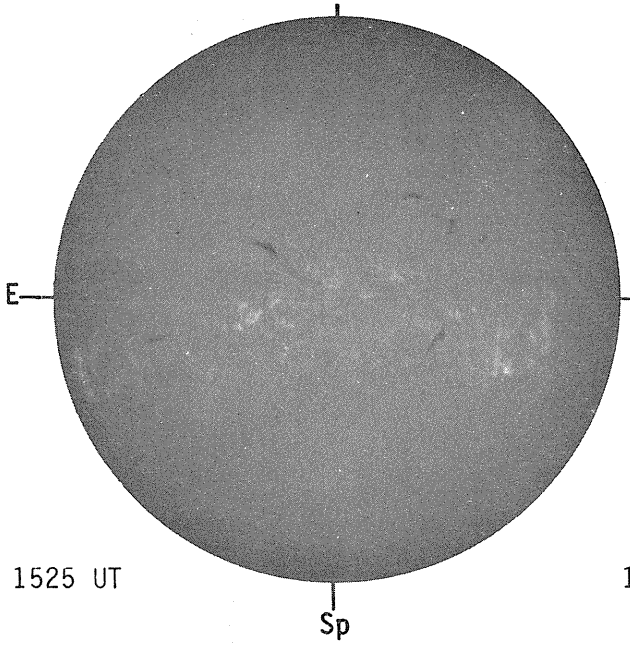
MT. WILSON MAGNETOGRAM

Solid = +
Dotted= -

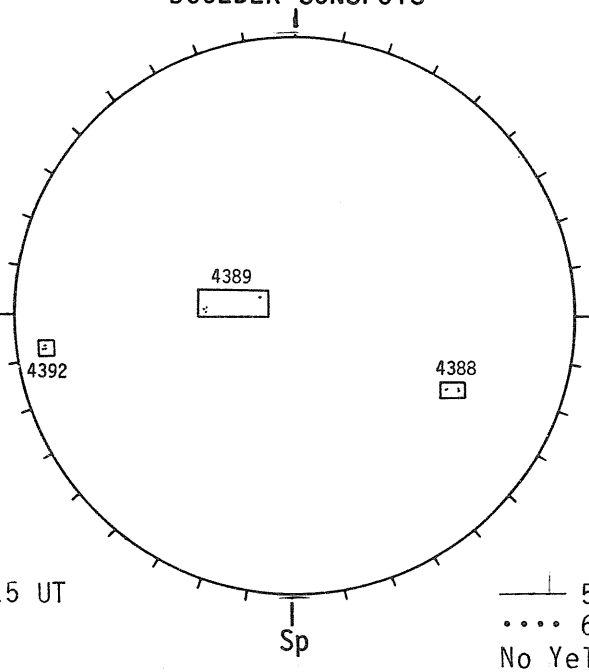
Delta Y=12.7
Delta X= 9.7



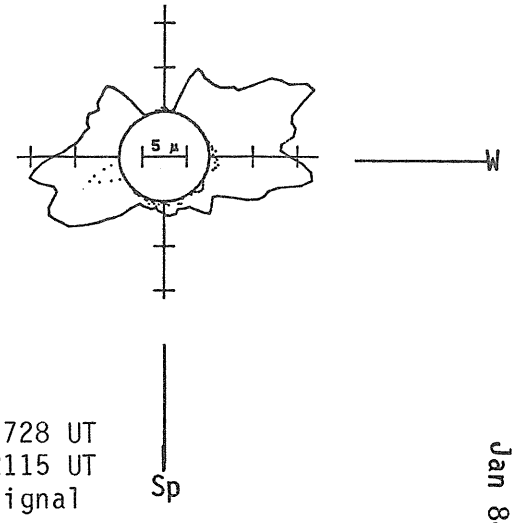
SACRAMENTO PEAK H-ALPHA



BOULDER SUNSPOTS



SACRAMENTO PEAK CORONA (1.15 Radii)

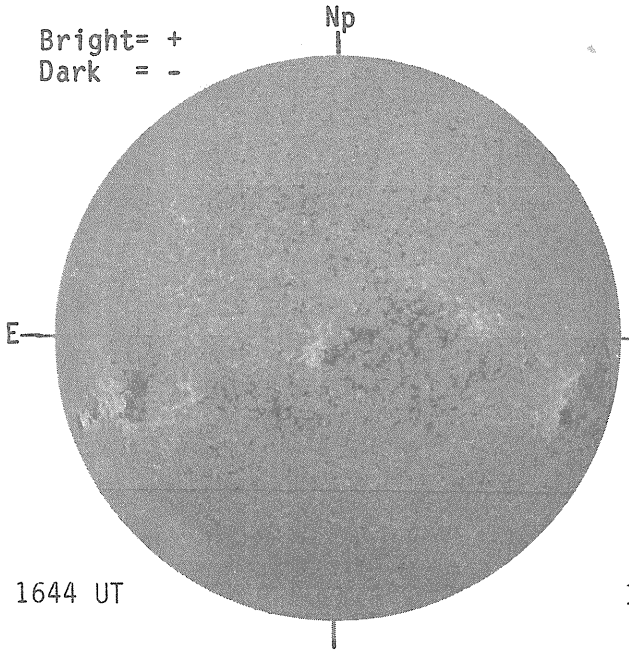


5303A(x1) 1728 UT
6374A(x2) 2115 UT
No Yellow-Line Signal

J A N U A R Y 11, 1 9 8 4 (P= -2.43, B_0=-4.08, L_0= 330.09)

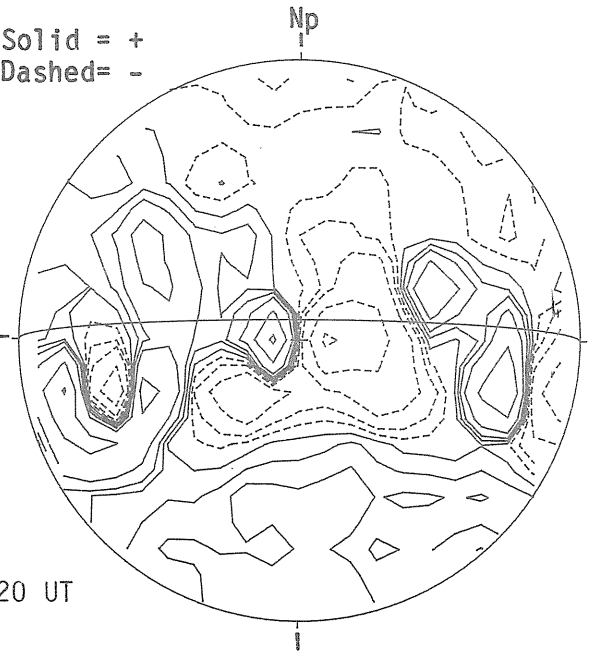
KITT PEAK MAGNETOGRAM

Bright= +
Dark = -



STANFORD MAGNETOGRAM

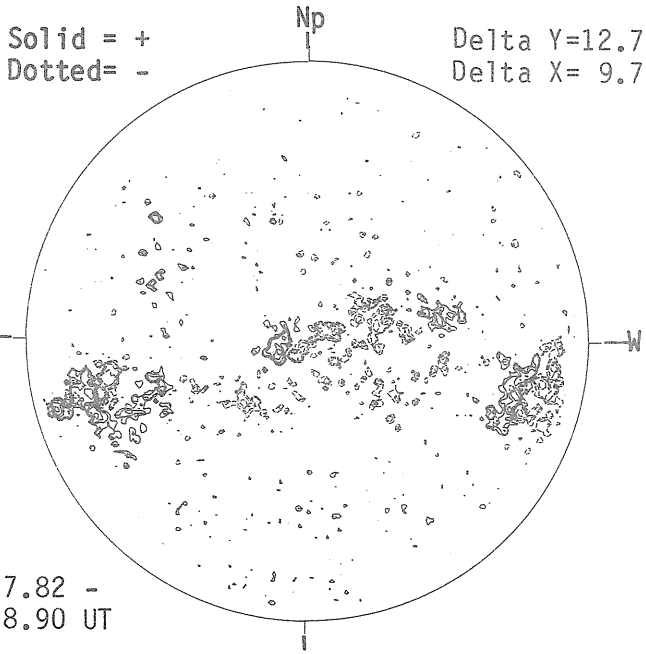
Solid = +
Dashed= -



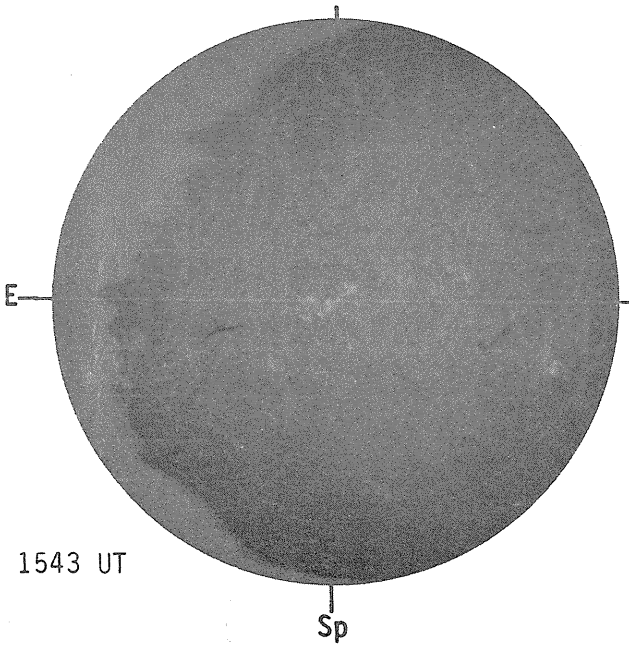
MT. WILSON MAGNETOGRAM

Solid = +
Dotted= -

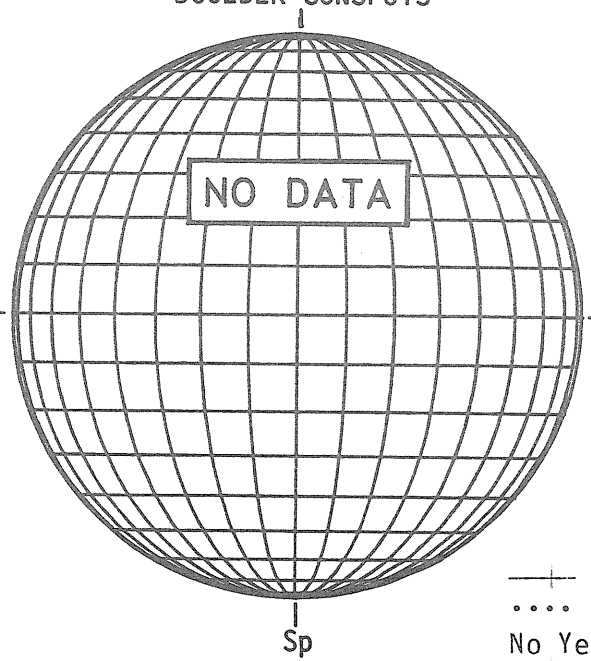
Delta Y=12.7
Delta X= 9.7



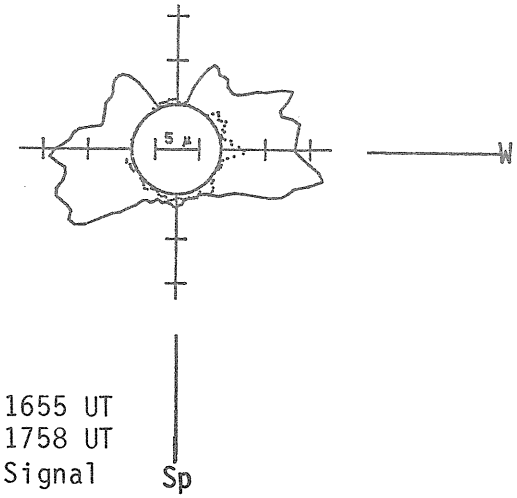
SACRAMENTO PEAK H-ALPHA



BOULDER SUNSPOTS



SACRAMENTO PEAK CORONA (1.15 Radii)

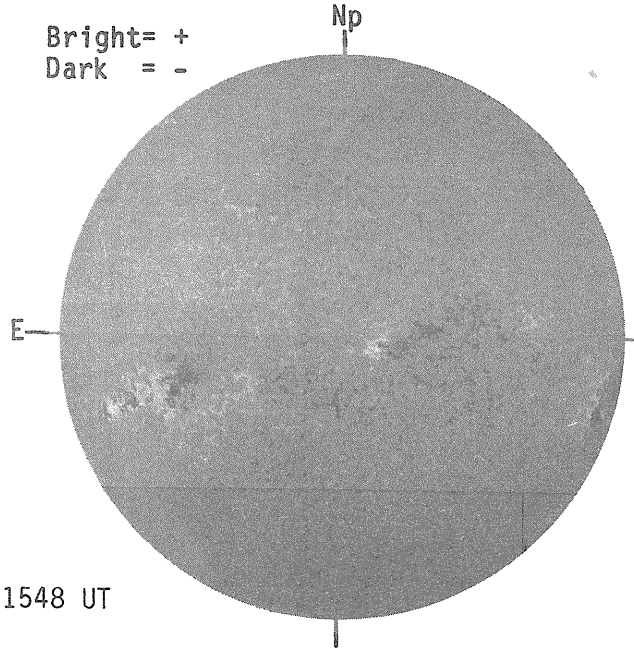


5303A(x1) 1655 UT
6374A(x2) 1758 UT
No Yellow-Line Signal

J A N U A R Y 12, 1 9 8 4 (P= -2.91, B_0=-4.19, L_0= 316.92)

KITT PEAK MAGNETOGRAM

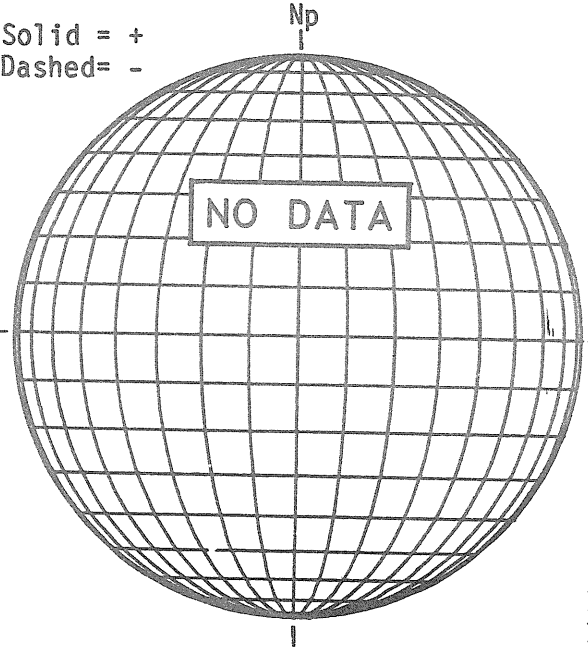
Bright= +
Dark = -



1548 UT

STANFORD MAGNETOGRAM

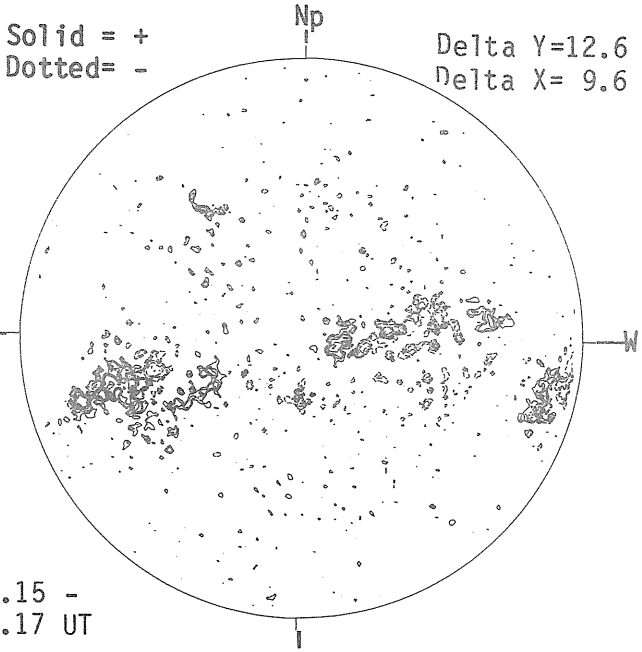
Solid = +
Dashed= -



MT. WILSON MAGNETOGRAM

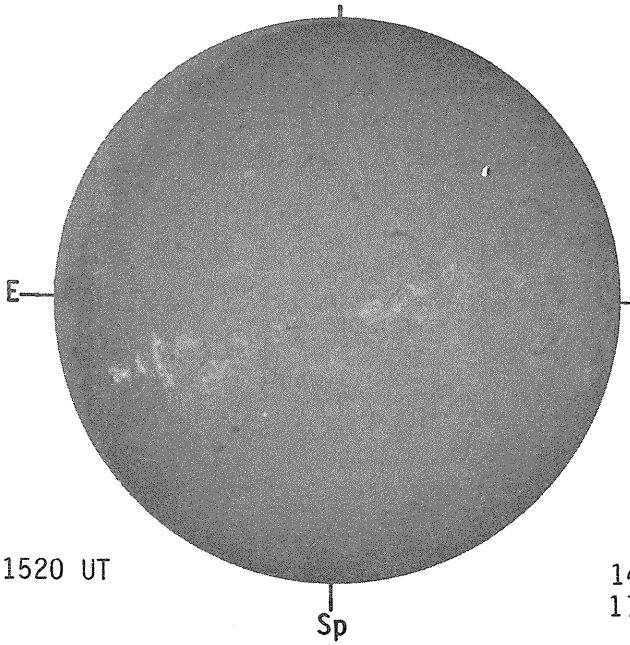
Solid = +
Dotted= -

Delta Y=12.6
Delta X= 9.6



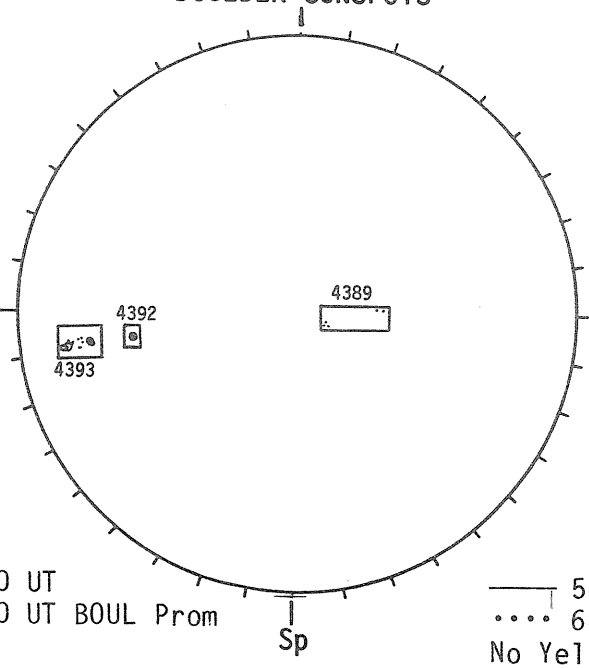
18.15 -
19.17 UT

SACRAMENTO PEAK H-ALPHA



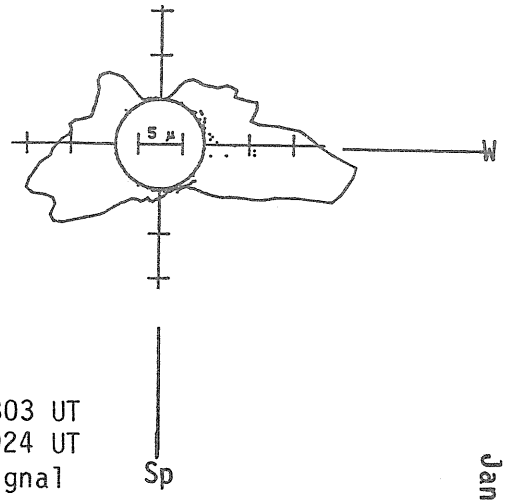
1520 UT

BOULDER SUNSPOTS



1400 UT
1740 UT BOUL Prom

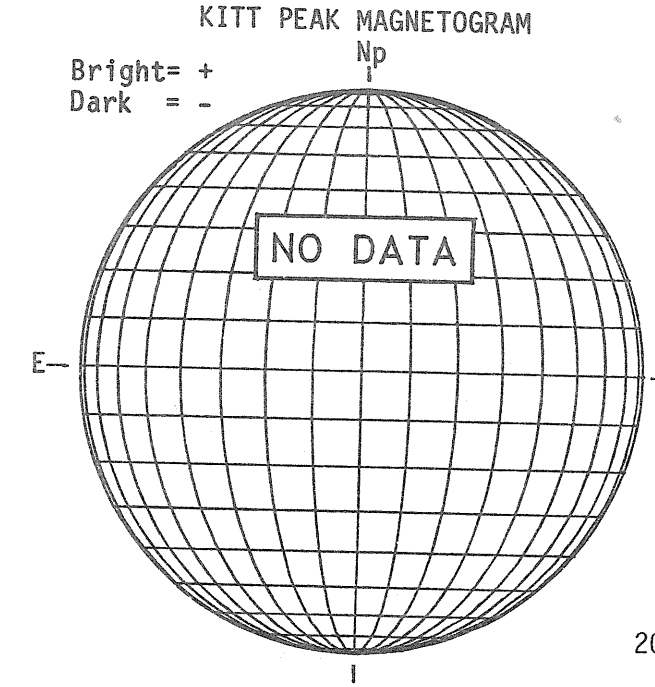
SACRAMENTO PEAK CORONA (1.15 Radii)

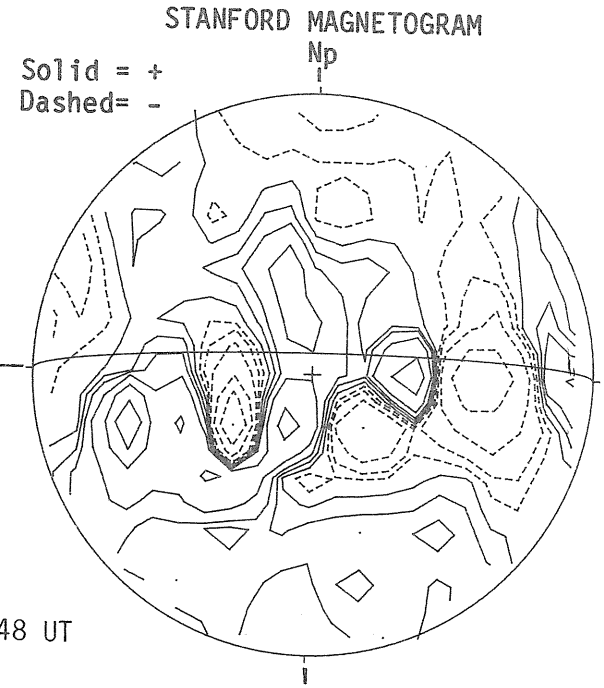


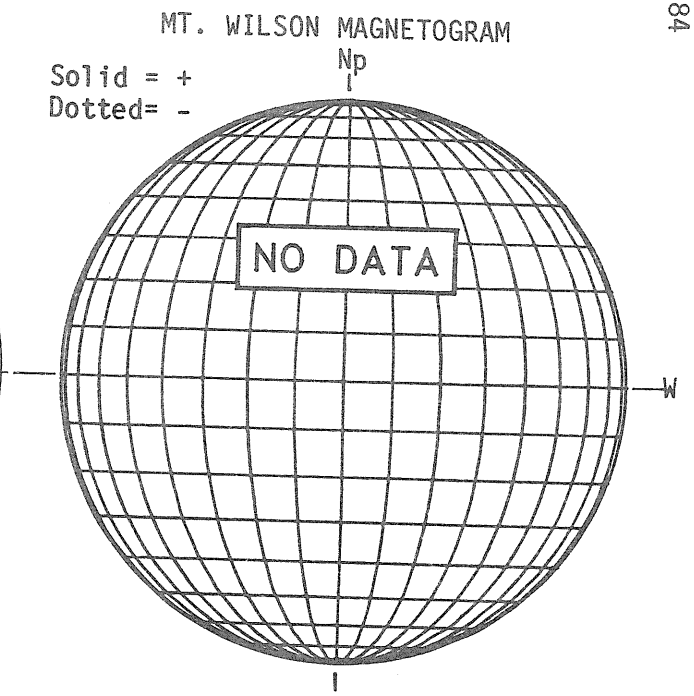
—— 5303A(x1) 1803 UT
···· 6374A(x2) 1924 UT
No Yellow-Line Signal

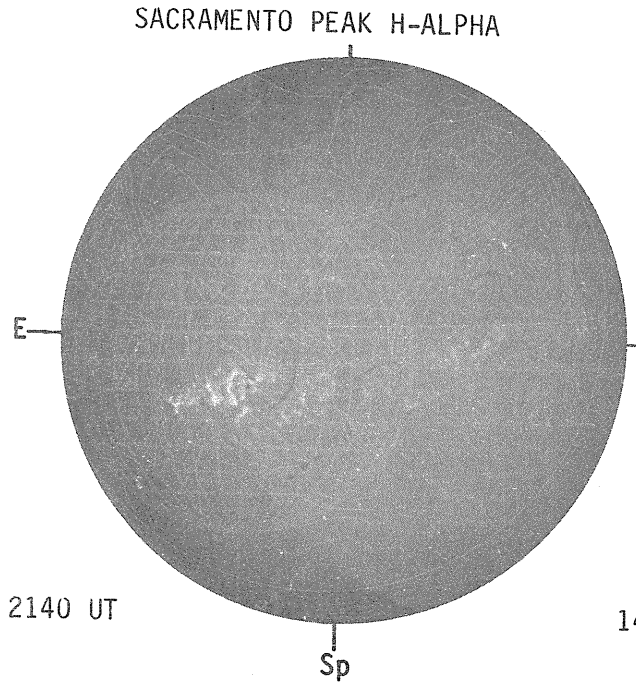
61
Jan 84

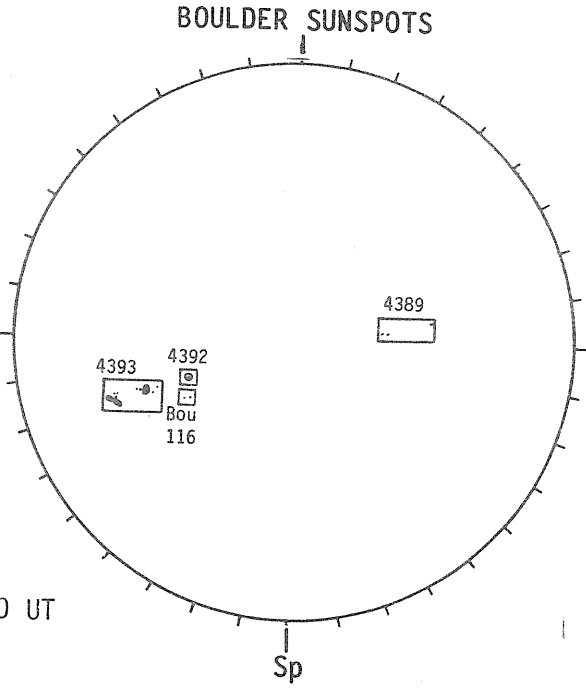
JANUARY 13, 1984 (P= -3.39, B_0=-4.29, L_0= 303.75)

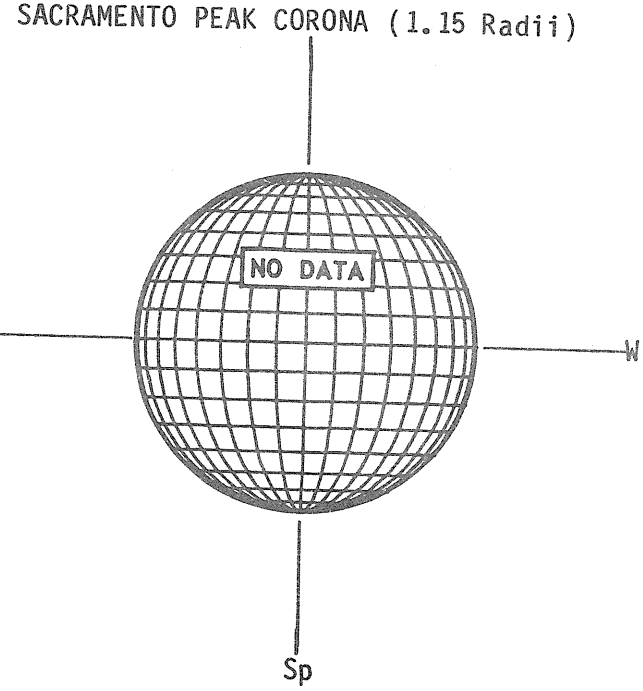




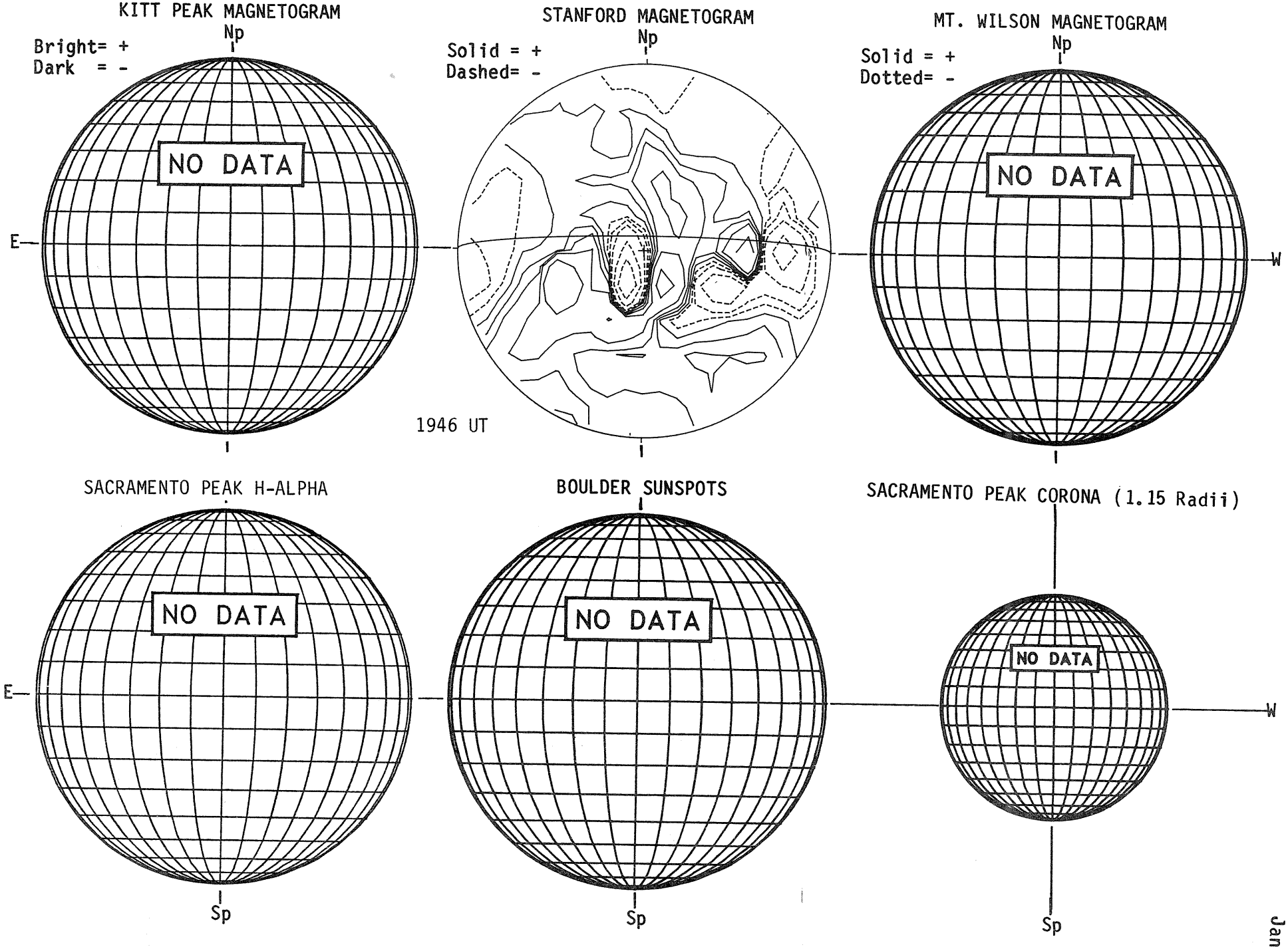








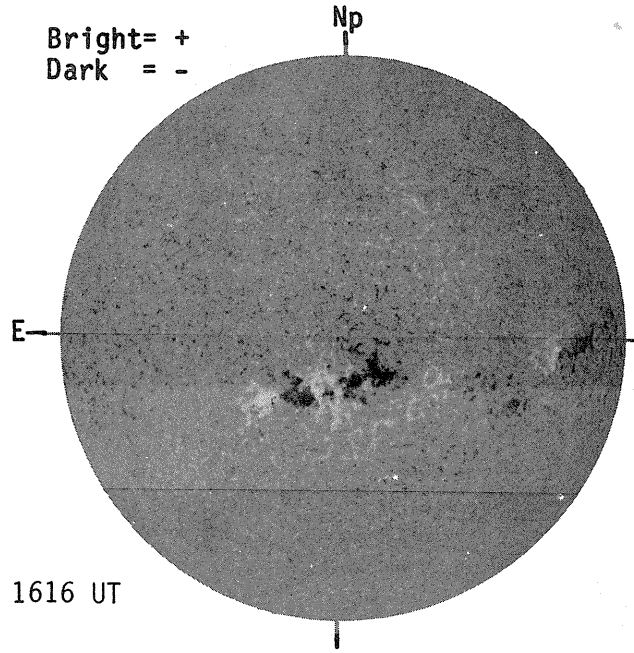
JANUARY 14, 1984 (P= -3.86, B_0=-4.39, L_0= 290.59)



JANUARY 15, 1984 (P= -4.33, B_0=-4.49, L_0= 277.42)

KITT PEAK MAGNETOGRAM

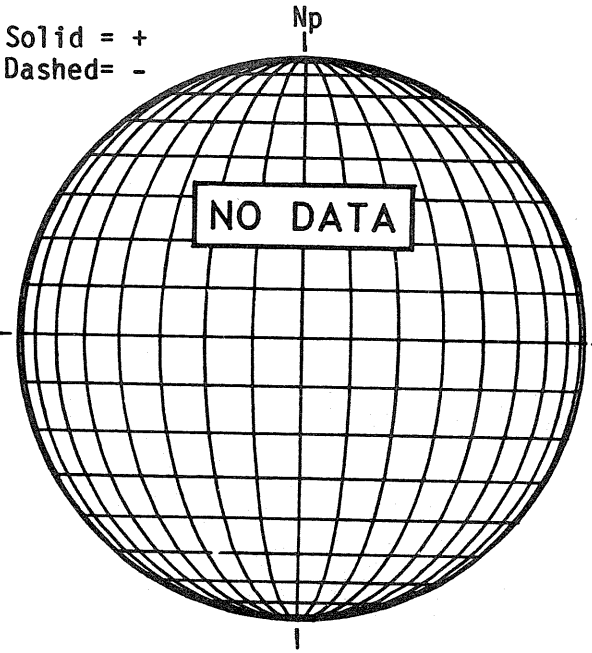
Bright= +
Dark = -



1616 UT

STANFORD MAGNETOGRAM

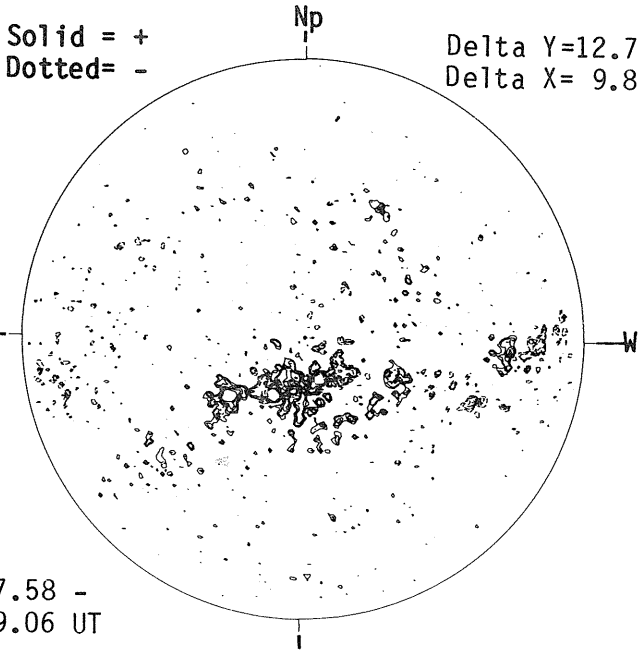
Solid = +
Dashed= -



MT. WILSON MAGNETOGRAM

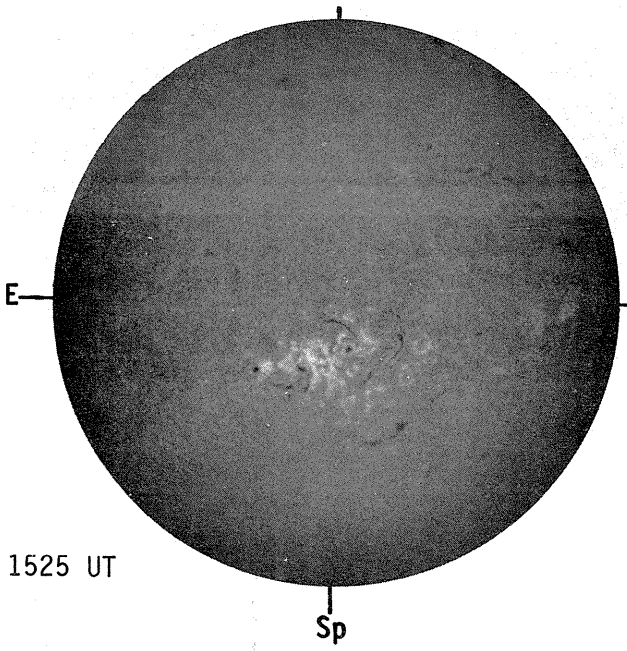
Solid = +
Dotted= -

Delta Y=12.7
Delta X= 9.8



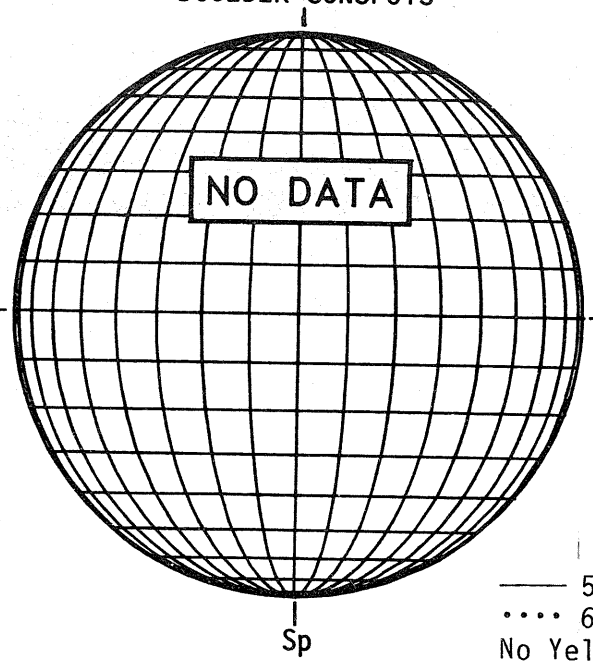
17.58 -
19.06 UT

SACRAMENTO PEAK H-ALPHA

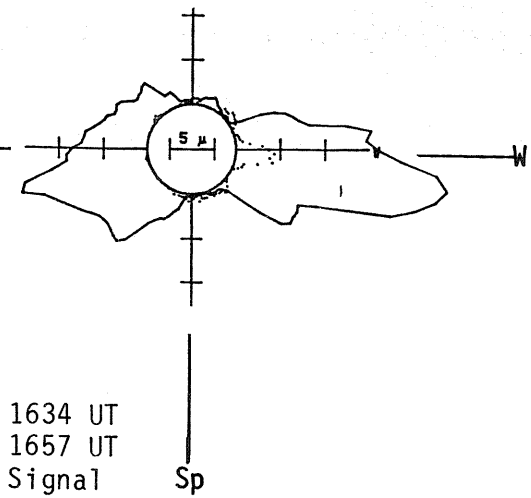


1525 UT

BOULDER SUNSPOTS



SACRAMENTO PEAK CORONA (1.15 Radii)

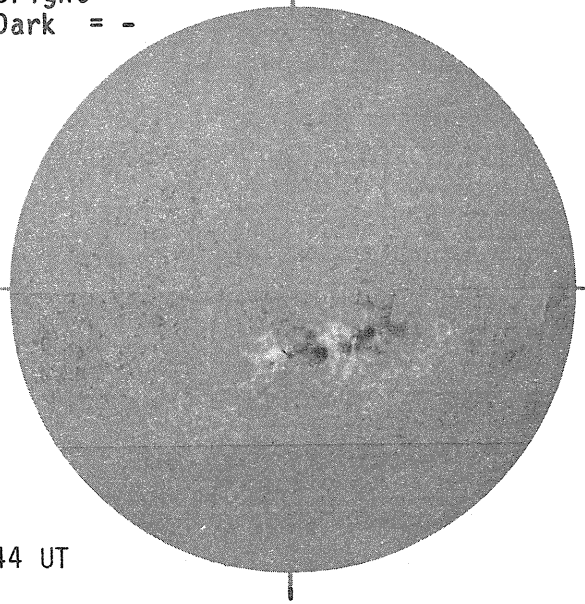


—— 5303A(x1) 1634 UT
···· 6374A(x2) 1657 UT
No Yellow-Line Signal

J A N U A R Y 16, 1 9 8 4 (P= -4.80, B_0=-4.59, L_0= 264.25)

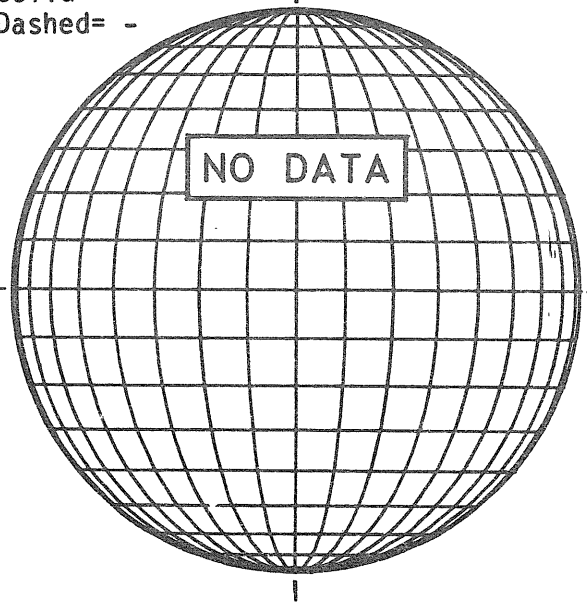
KITT PEAK MAGNETOGRAM

Bright= +
Dark = -



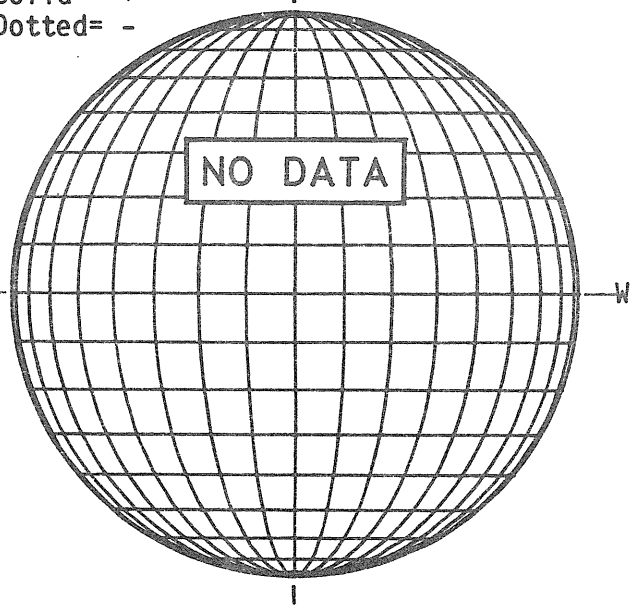
STANFORD MAGNETOGRAM

Solid = +
Dashed= -

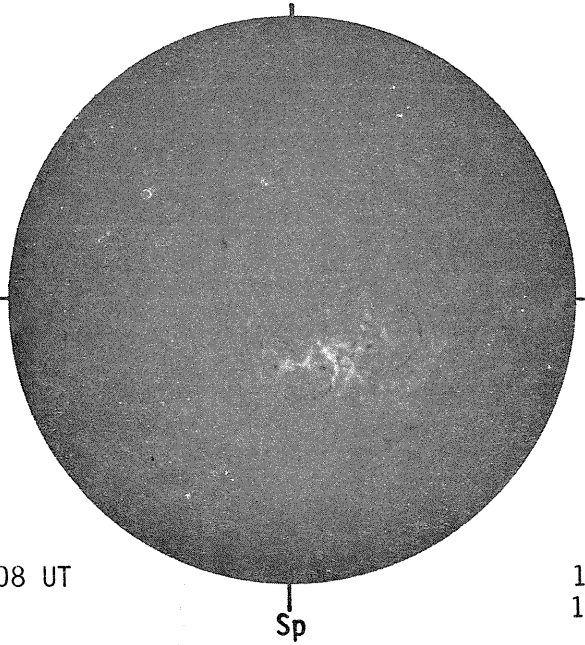


MT. WILSON MAGNETOGRAM

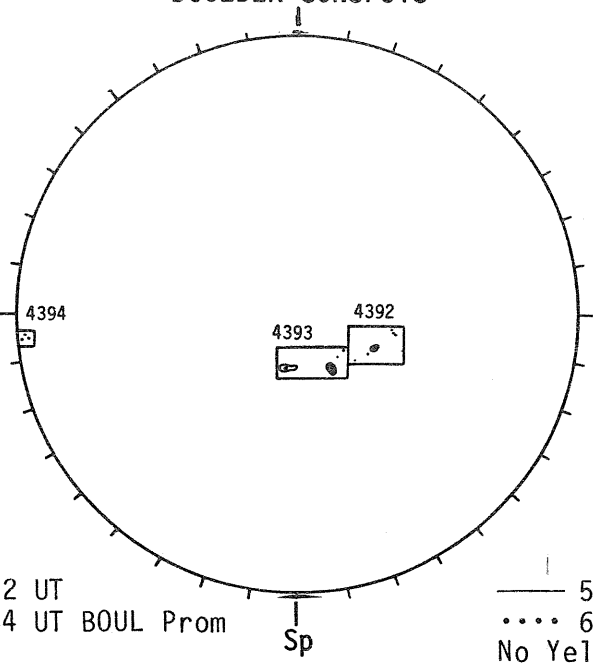
Solid = +
Dotted= -



SACRAMENTO PEAK H-ALPHA

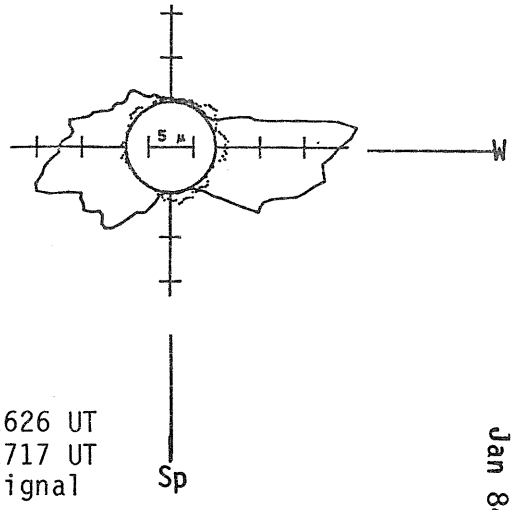


BOULDER SUNSPOTS



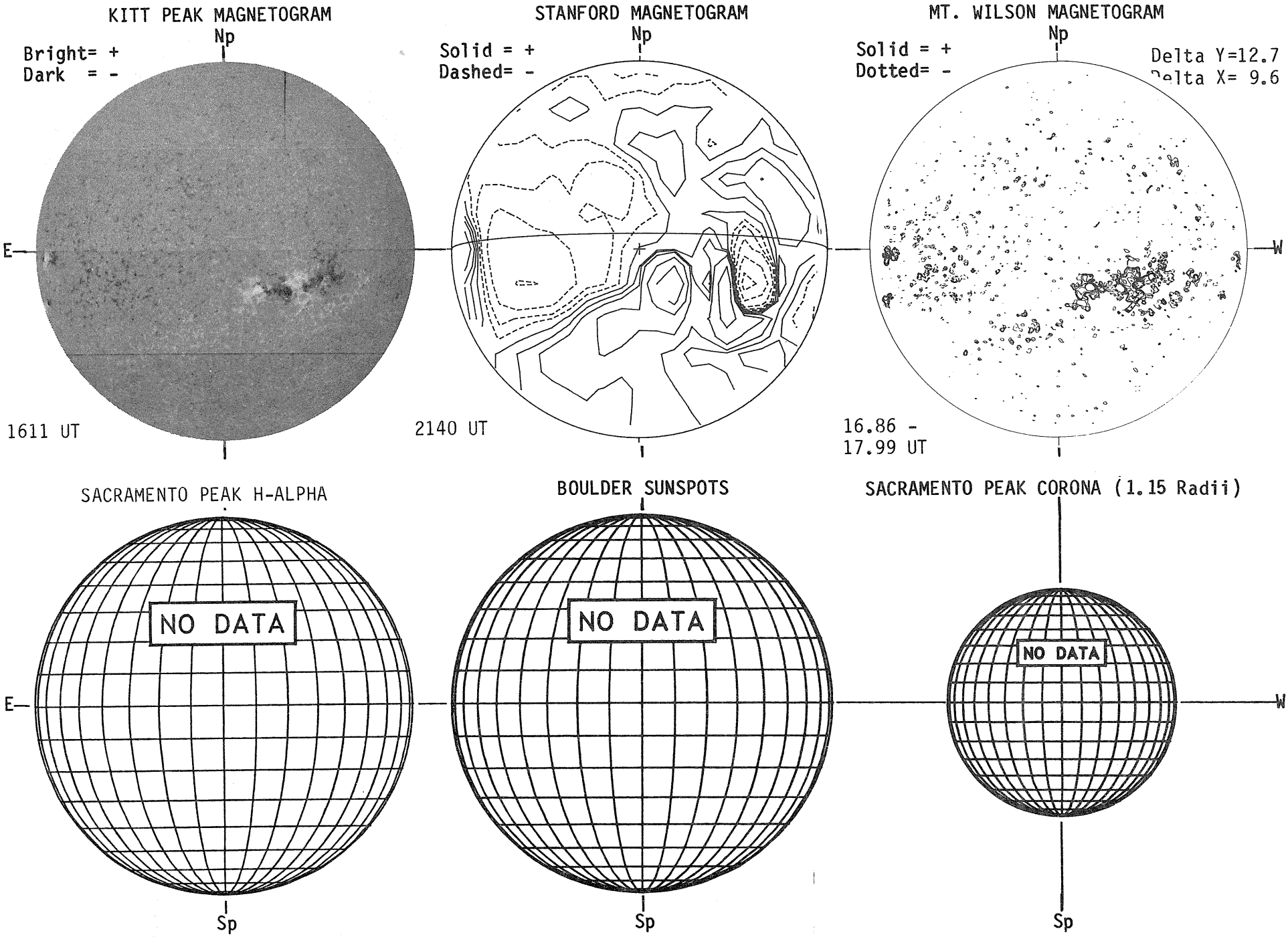
1552 UT
1634 UT BOUL Prom

SACRAMENTO PEAK CORONA (1.15 Radii)



—— 5303A(x1) 1626 UT
···· 6374A(x2) 1717 UT
No Yellow-Line Signal

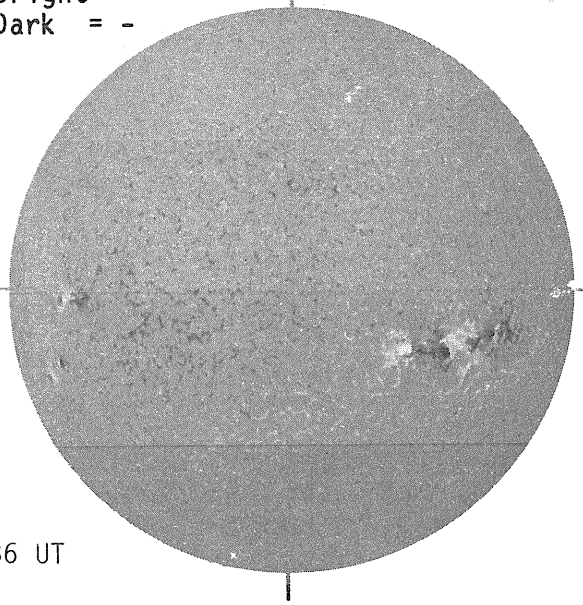
J A N U A R Y 17, 1 9 8 4 (P= -5.27, B_0=-4.69, L_0= 251.08)



J A N U A R Y 18, 1 9 8 4 (P= -5.73, B_0=-4.79, L_0= 237.91)

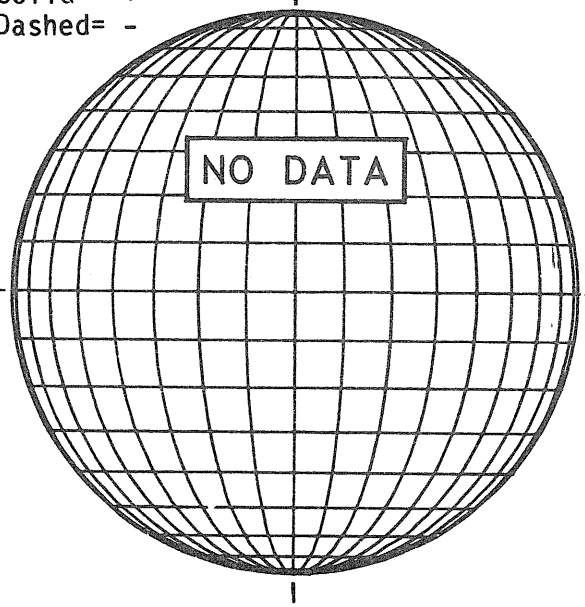
KITT PEAK MAGNETOGRAM

Bright= +
Dark = -



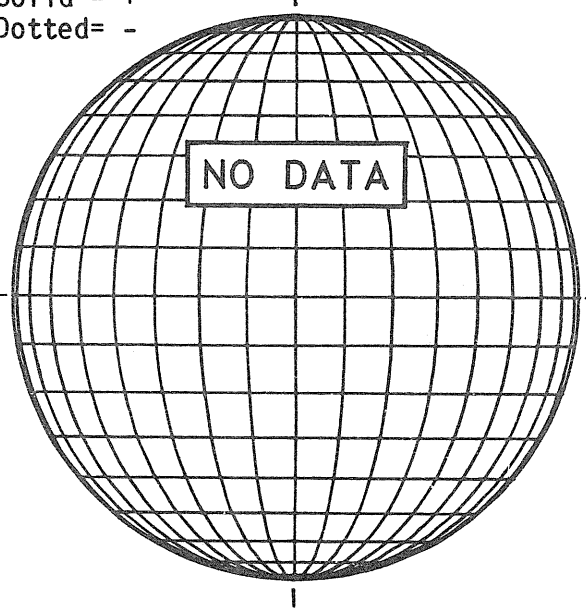
STANFORD MAGNETOGRAM

Solid = +
Dashed= -

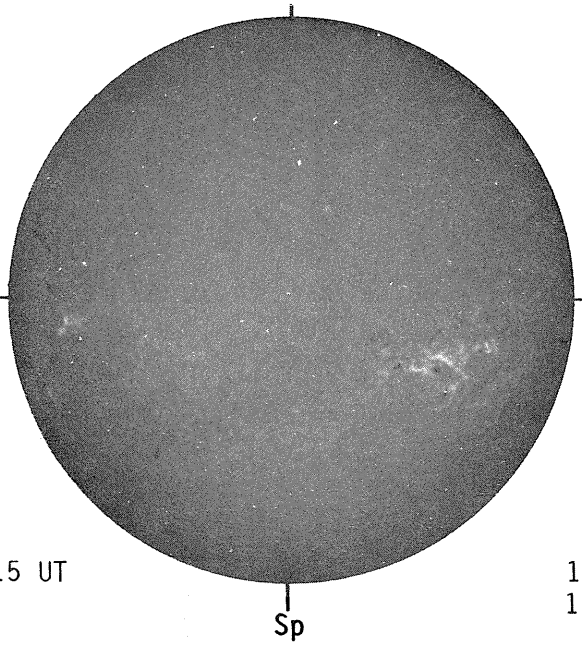


MT. WILSON MAGNETOGRAM

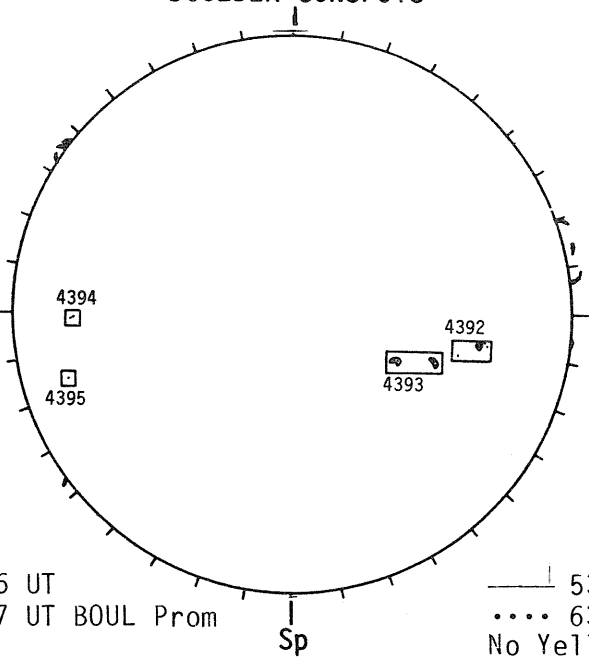
Solid = +
Dotted= -



SACRAMENTO PEAK H-ALPHA

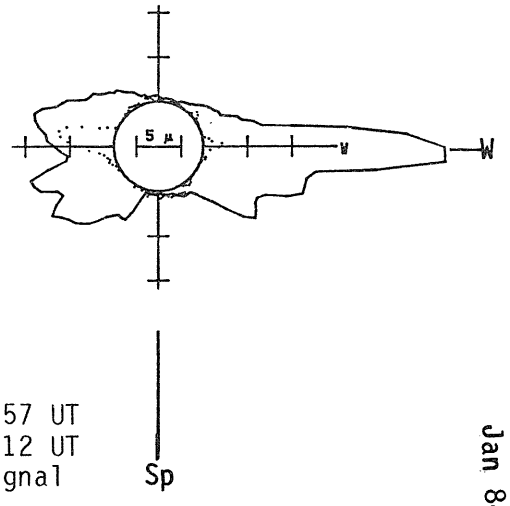


BOULDER SUNSPOTS



1546 UT
1657 UT BOUL Prom

SACRAMENTO PEAK CORONA (1.15 Radii)



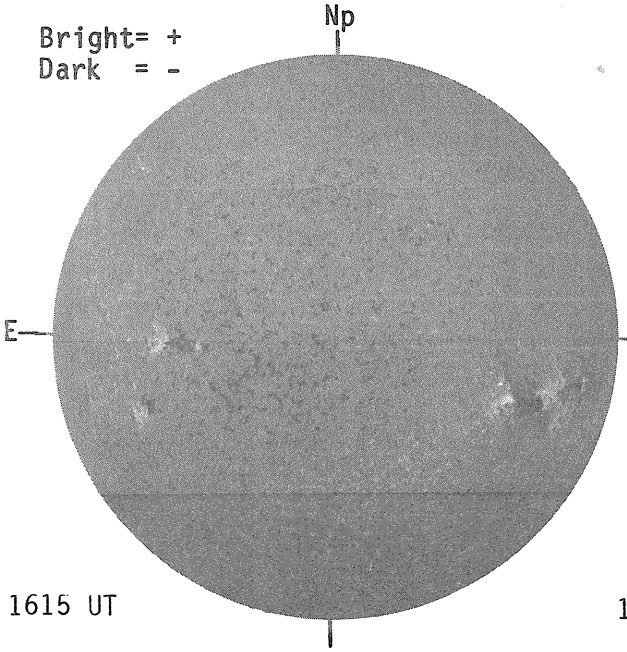
—— 5303A(x1) 1557 UT
···· 6374A(x2) 1712 UT
No Yellow-Line Signal

67
Jan 84

J A N U A R Y 19, 1 9 8 4 (P= -6.19, B_0=-4.88, L_0= 224.75)

KITT PEAK MAGNETOGRAM

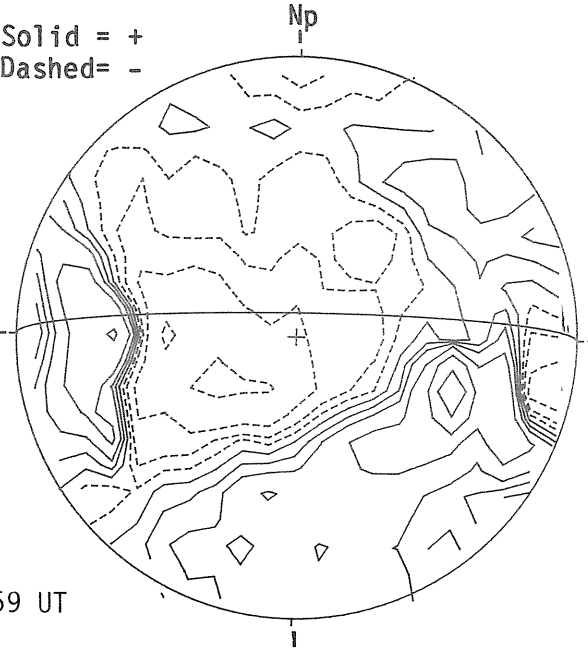
Bright= +
Dark = -



1615 UT

STANFORD MAGNETOGRAM

Solid = +
Dashed= -

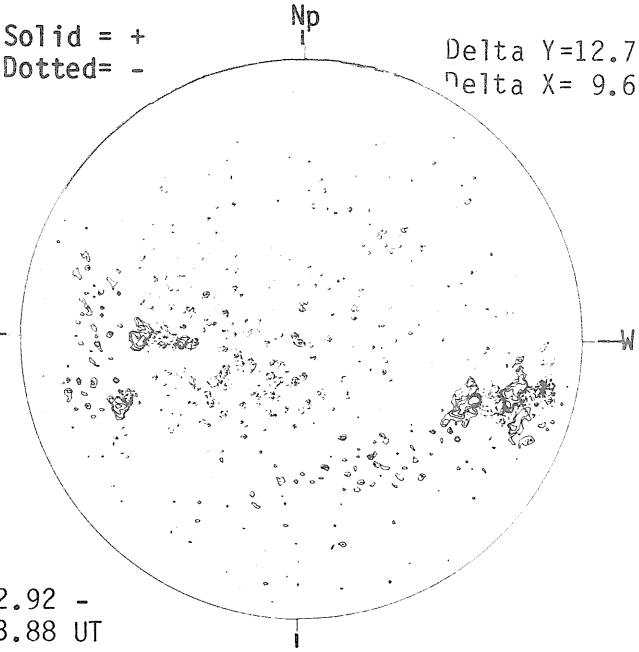


1859 UT

MT. WILSON MAGNETOGRAM

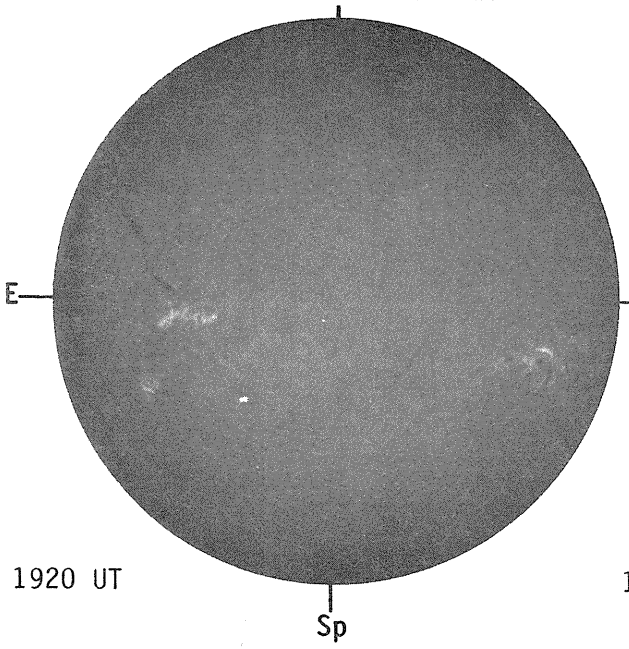
Solid = +
Dotted= -

Delta Y=12.7
Delta X= 9.6



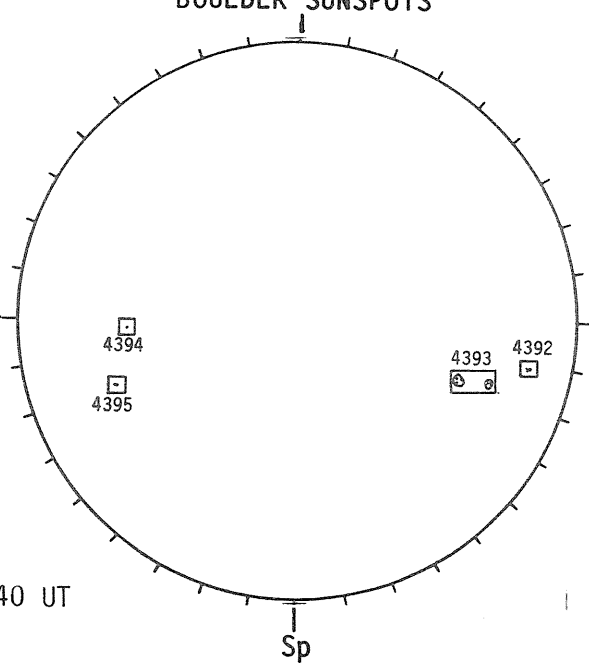
22.92 -
23.88 UT

SACRAMENTO PEAK H-ALPHA



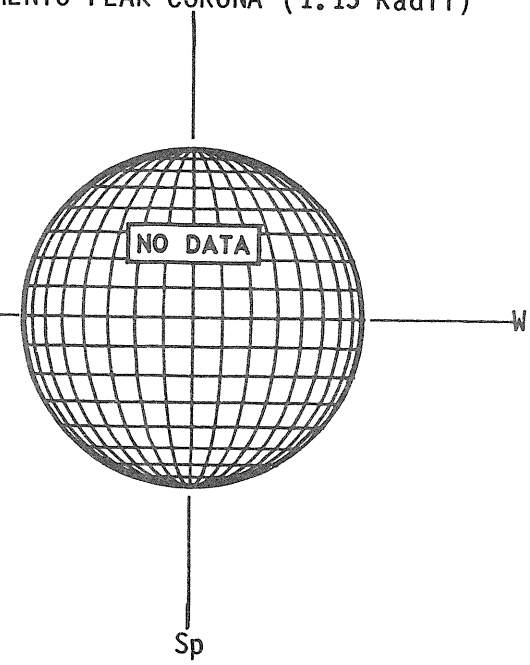
1920 UT

BOULDER SUNSPOTS



1640 UT

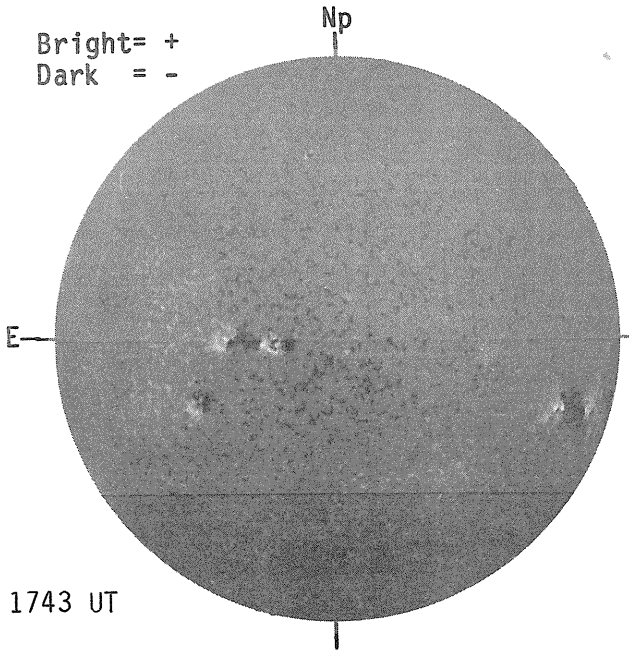
SACRAMENTO PEAK CORONA (1.15 Radii)



J A N U A R Y 20, 1 9 8 4 (P= -6.65, B_0=-4.98, L_0= 211.58)

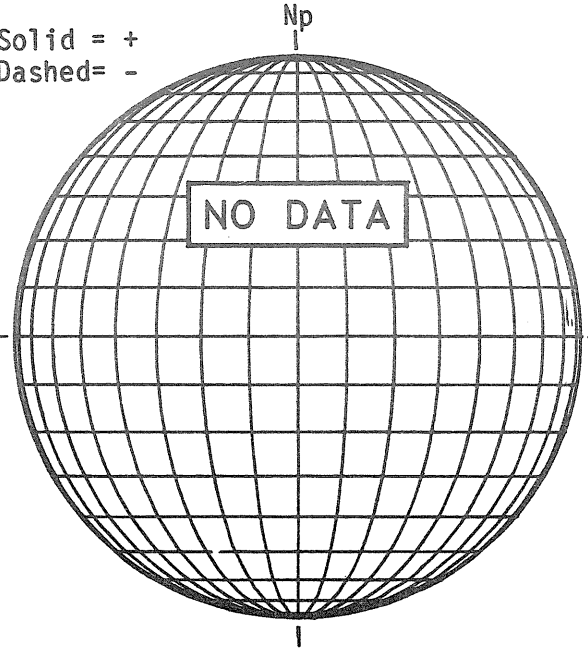
KITT PEAK MAGNETOGRAM

Bright= +
Dark = -



STANFORD MAGNETOGRAM

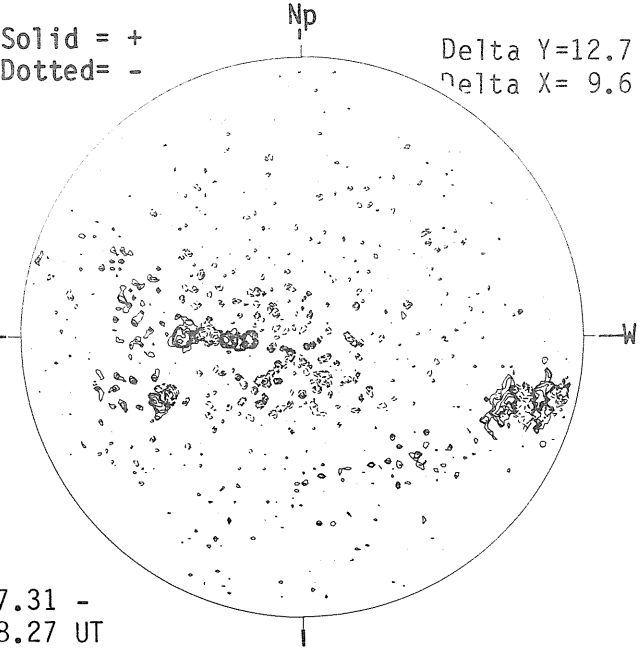
Solid = +
Dashed= -



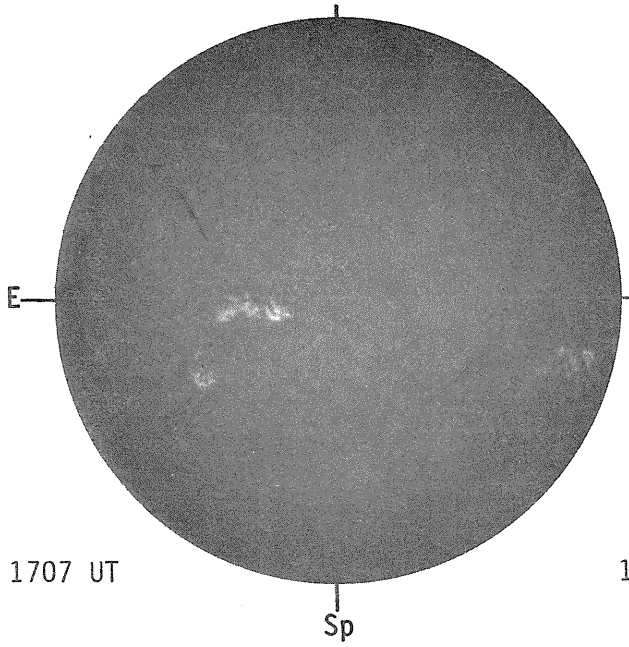
MT. WILSON MAGNETOGRAM

Solid = +
Dotted= -

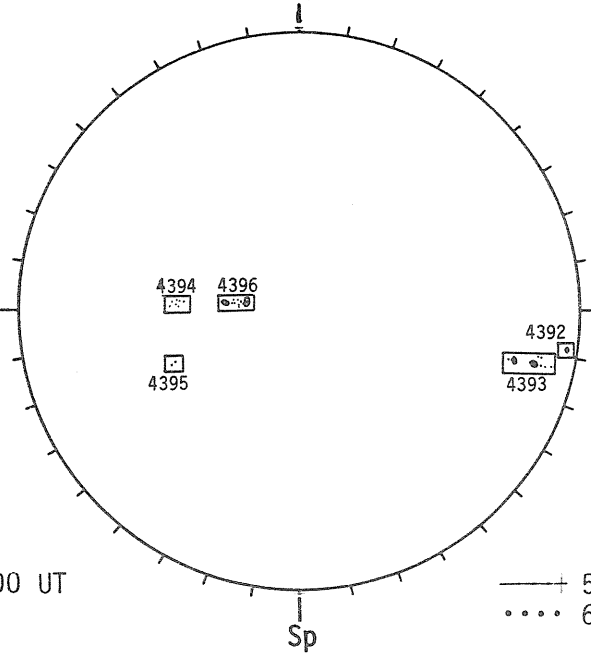
Delta Y=12.7
Delta X= 9.6



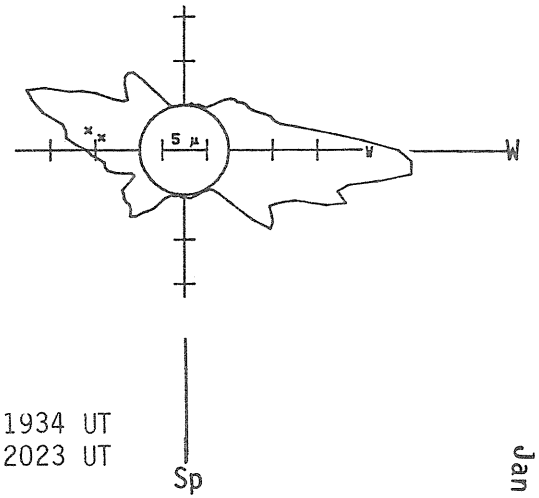
SACRAMENTO PEAK H-ALPHA



BOULDER SUNSPOTS



SACRAMENTO PEAK CORONA (1.15 Radii)

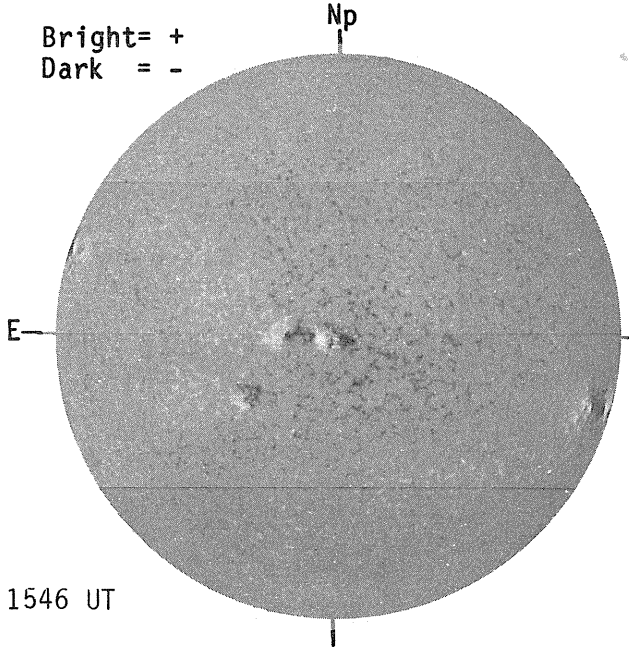


—+— 5303A(x1) 1934 UT
•••• 6374A(x2) 2023 UT

J A N U A R Y 21, 1 9 8 4 (P= -7.11, B_0=-5.07, L_0= 198.41)

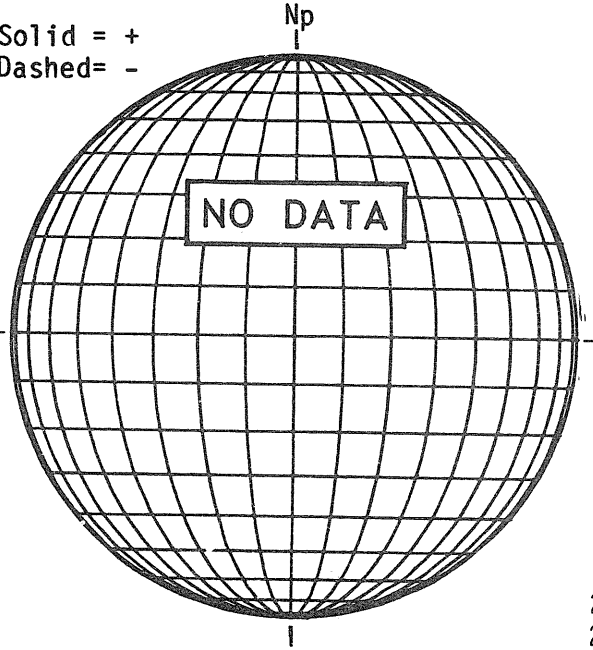
KITT PEAK MAGNETOGRAM

Bright= +
Dark = -



STANFORD MAGNETOGRAM

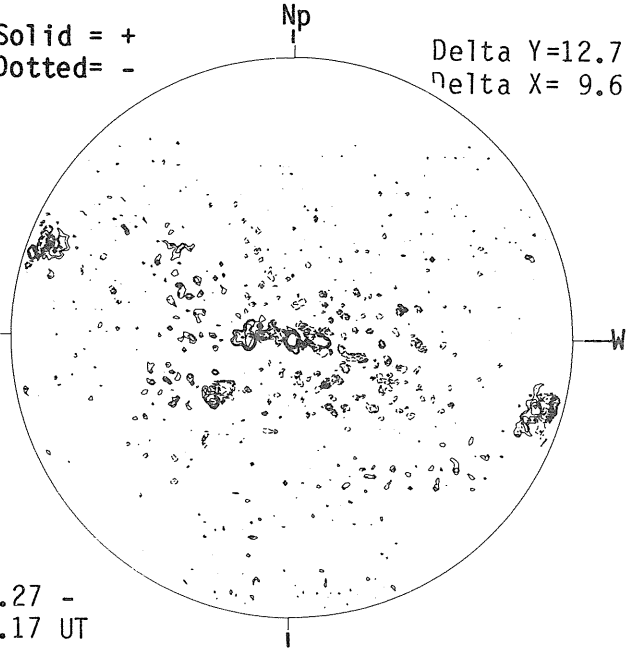
Solid = +
Dashed= -



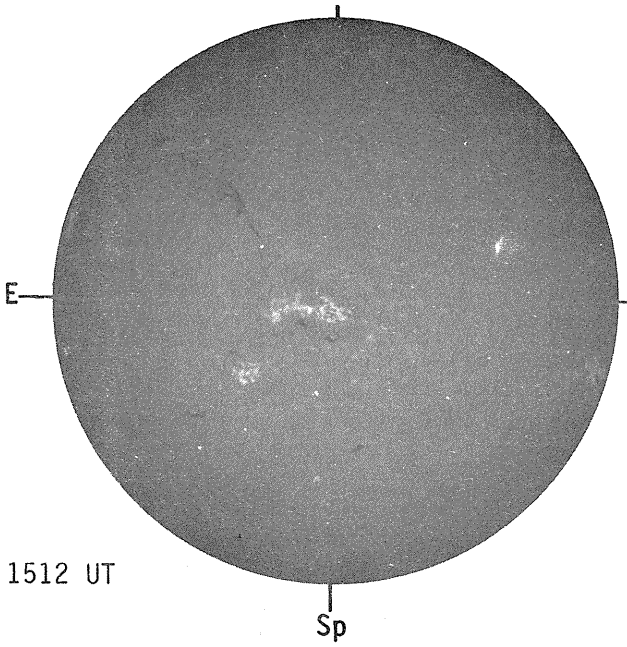
MT. WILSON MAGNETOGRAM

Solid = +
Dotted= -

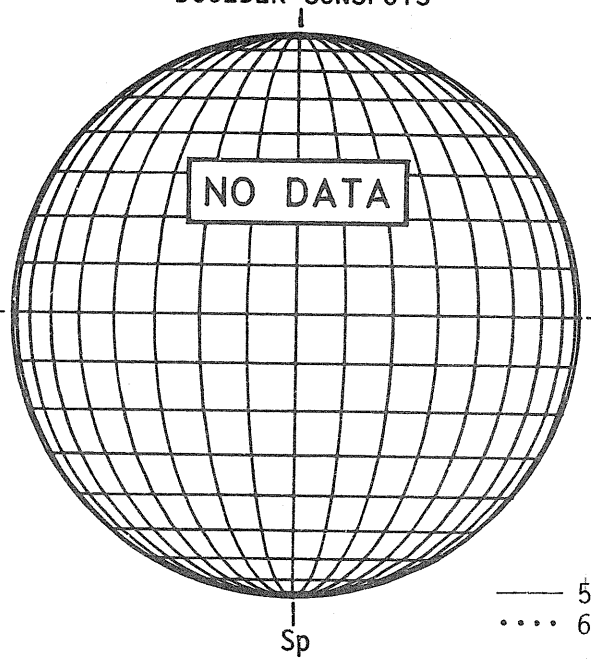
Delta Y=12.7
Delta X= 9.6



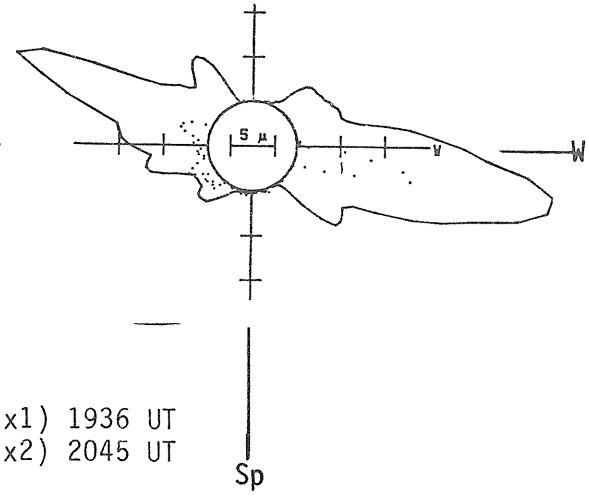
SACRAMENTO PEAK H-ALPHA



BOULDER SUNSPOTS

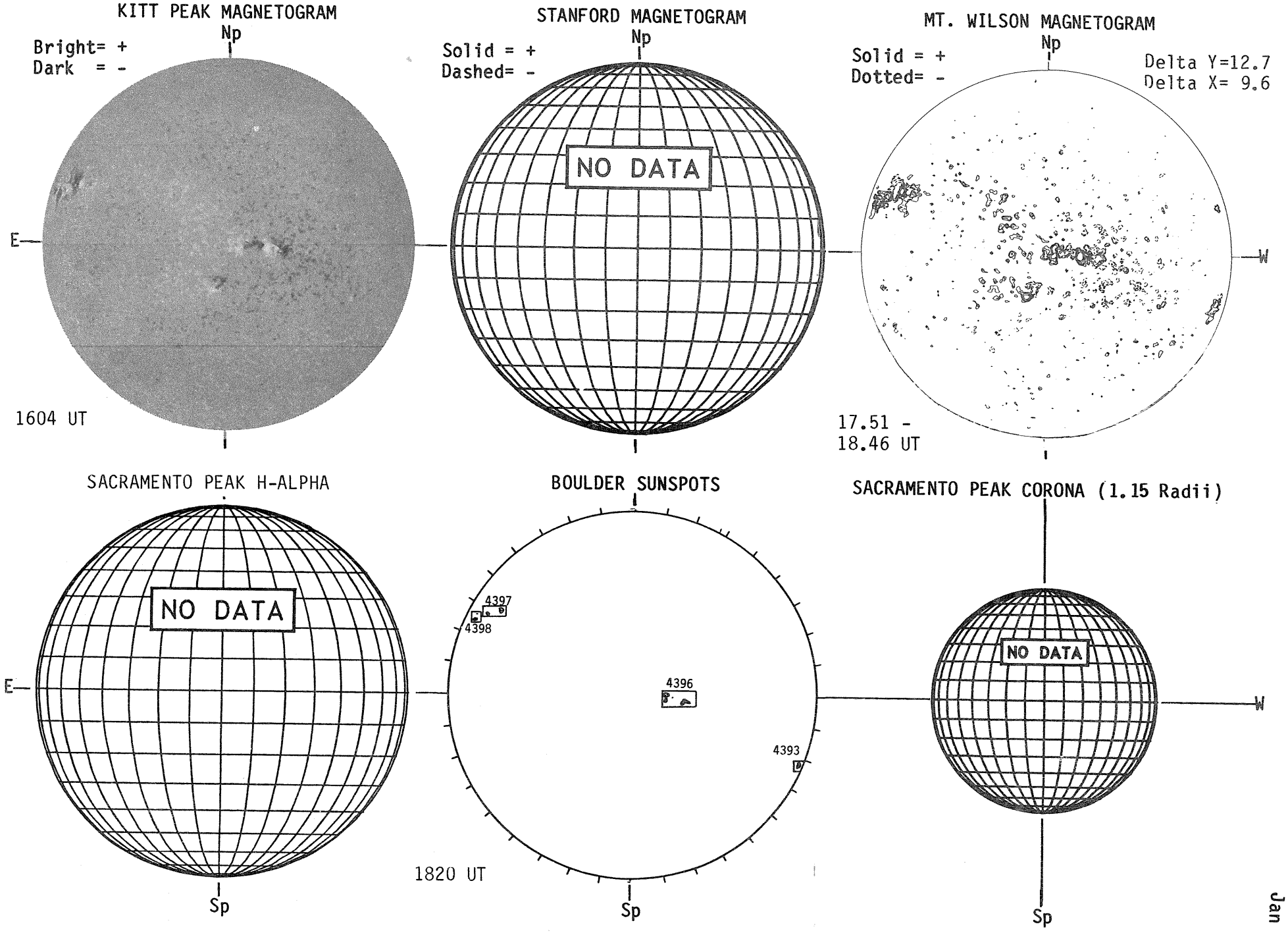


SACRAMENTO PEAK CORONA (1.15 Radii)

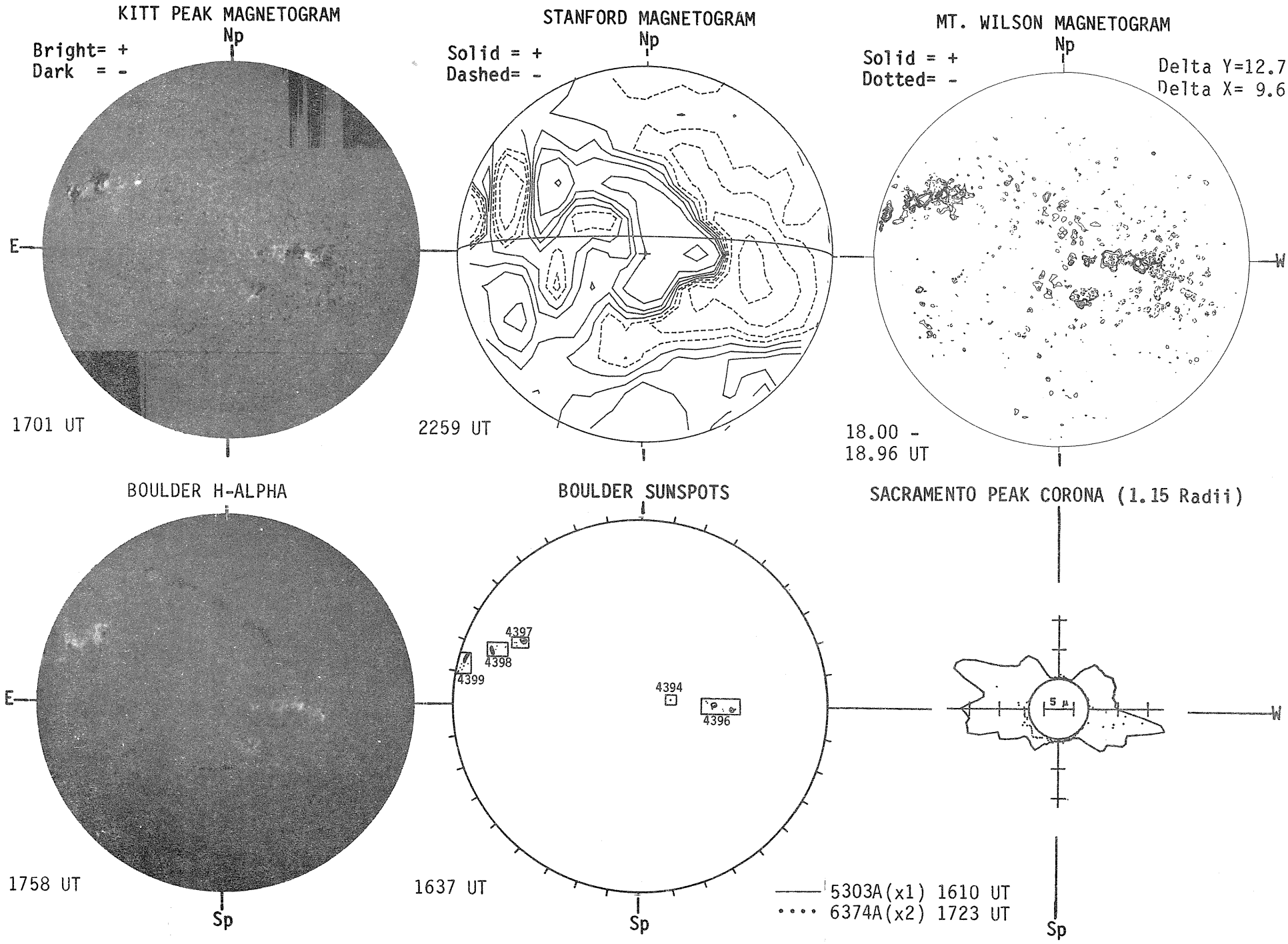


—— 5303A(x1) 1936 UT
···· 6374A(x2) 2045 UT

JANUARY 22, 1984 (P= -7.56, B_0=-5.16, L_0= 185.25)



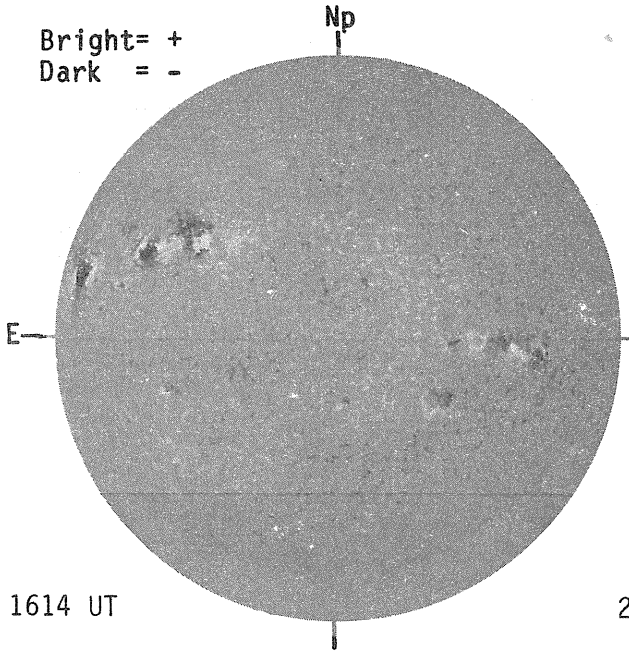
JANUARY 23, 1984 (P= -8.01, B_0=-5.25, L_0= 172.08)



J A N U A R Y 24, 1 9 8 4 (P= -8.46, B_0=-5.34, L_0= 158.91)

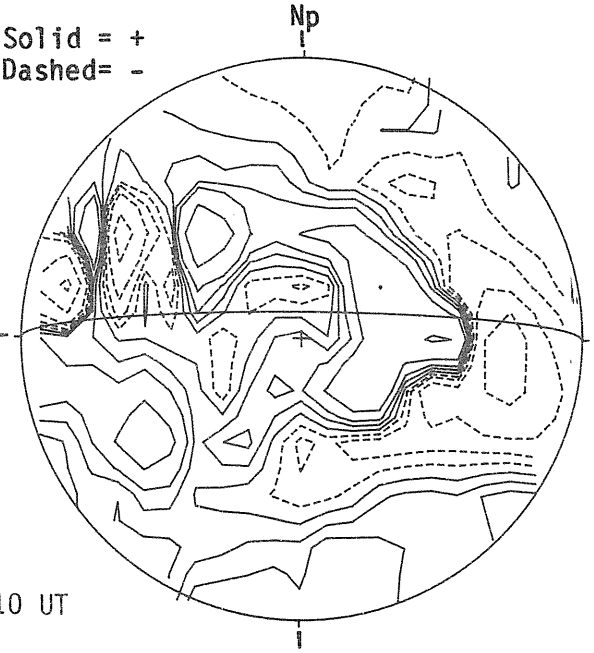
KITT PEAK MAGNETOGRAM

Bright= +
Dark = -



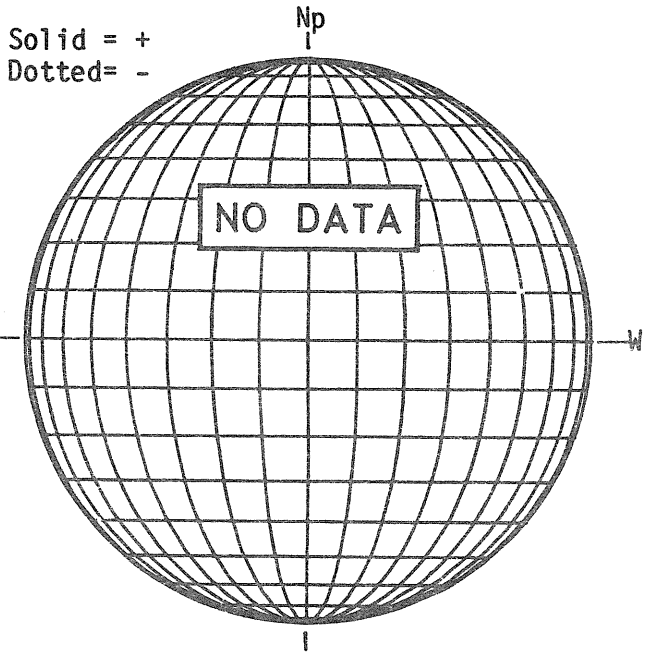
STANFORD MAGNETOGRAM

Solid = +
Dashed= -

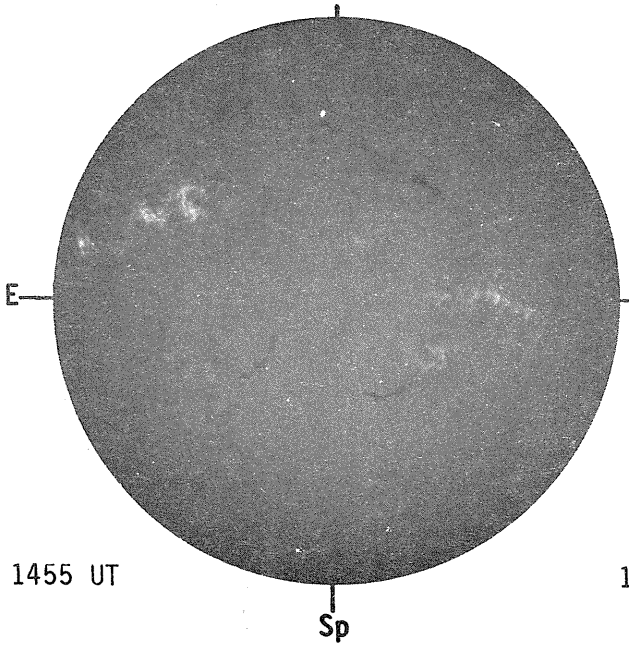


MT. WILSON MAGNETOGRAM

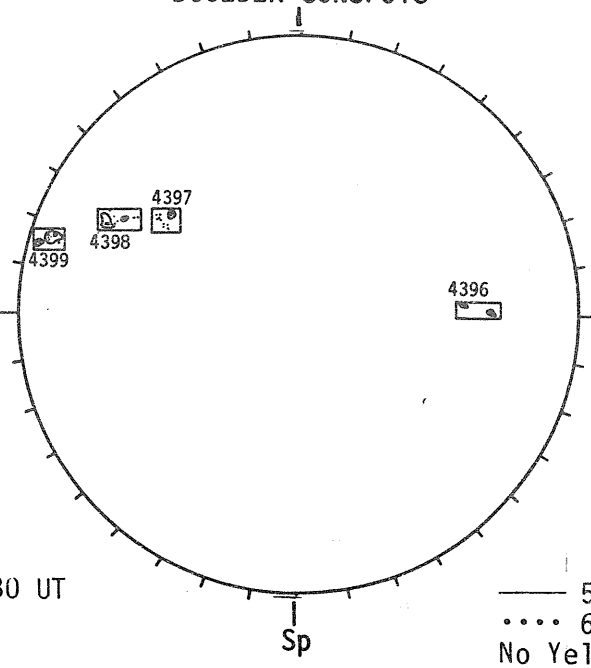
Solid = +
Dotted= -



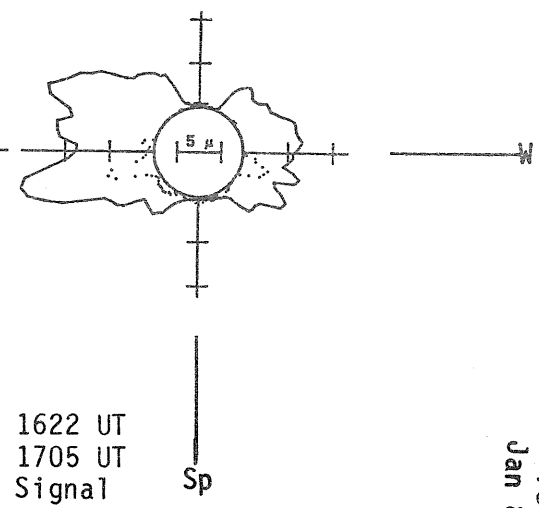
SACRAMENTO PEAK H-ALPHA



BOULDER SUNSPOTS



SACRAMENTO PEAK CORONA (1.15 Radii)



—— 5303A(x1) 1622 UT
···· 6374A(x2) 1705 UT
No Yellow-Line Signal

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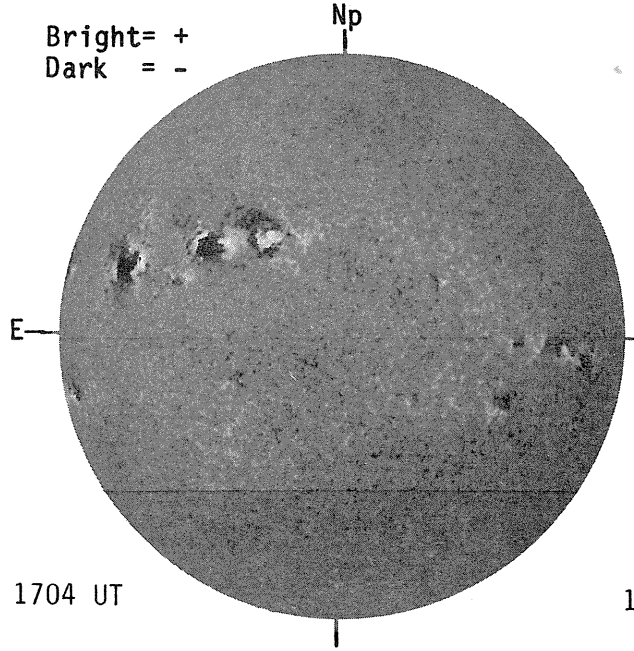
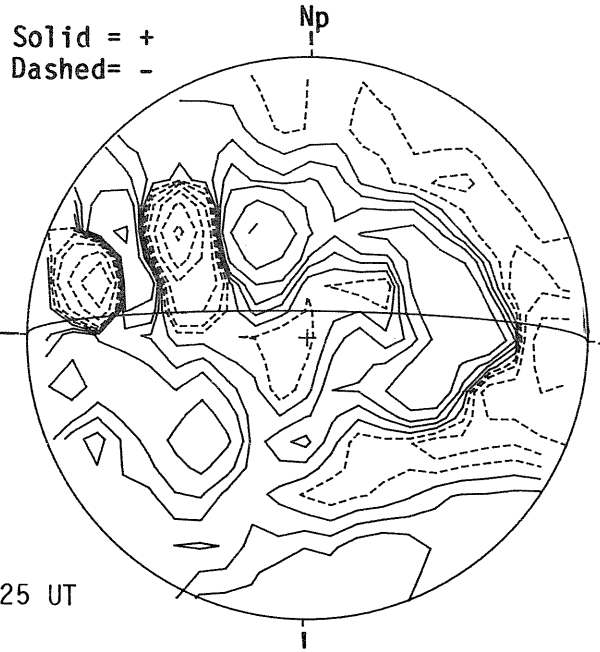
Jan 84

JANUARY 25, 1984 (P= -8.90, B_0=-5.42, L_0= 145.75)

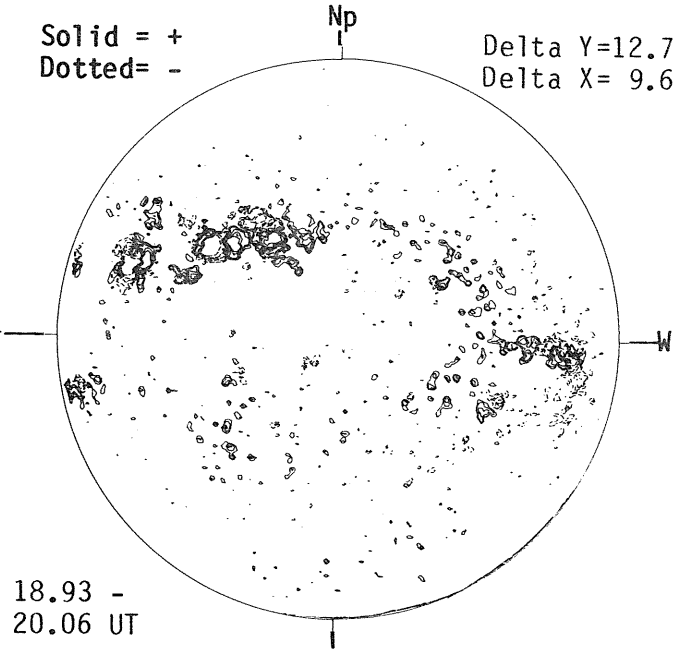
KITT PEAK MAGNETOGRAM



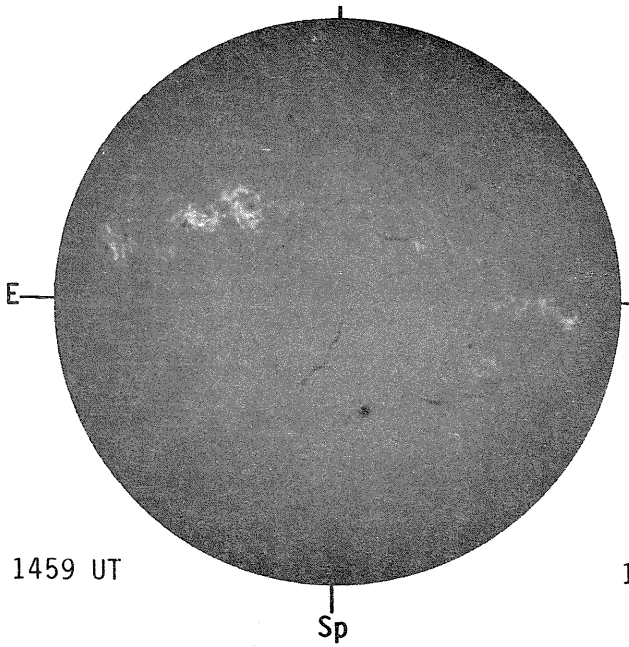
STANFORD MAGNETOGRAM



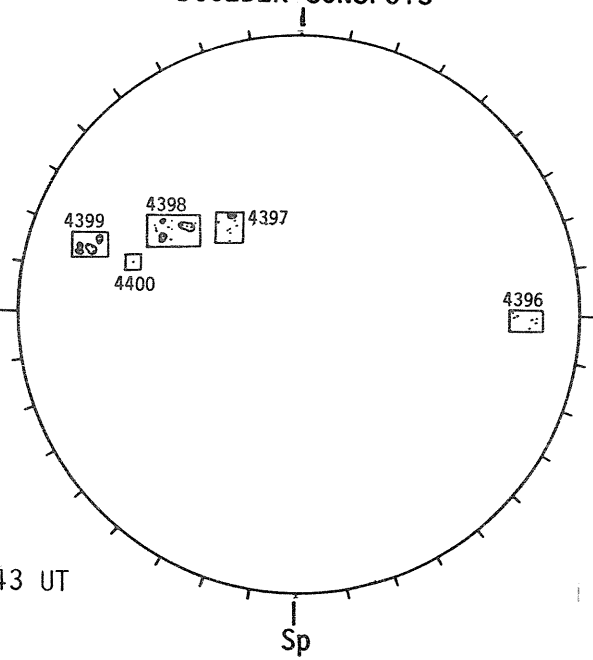
MT. WILSON MAGNETOGRAM



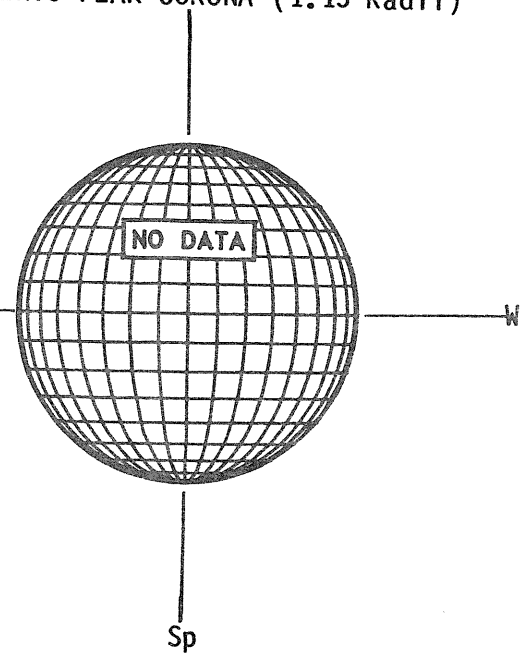
SACRAMENTO PEAK H-ALPHA



BOULDER SUNSPOTS

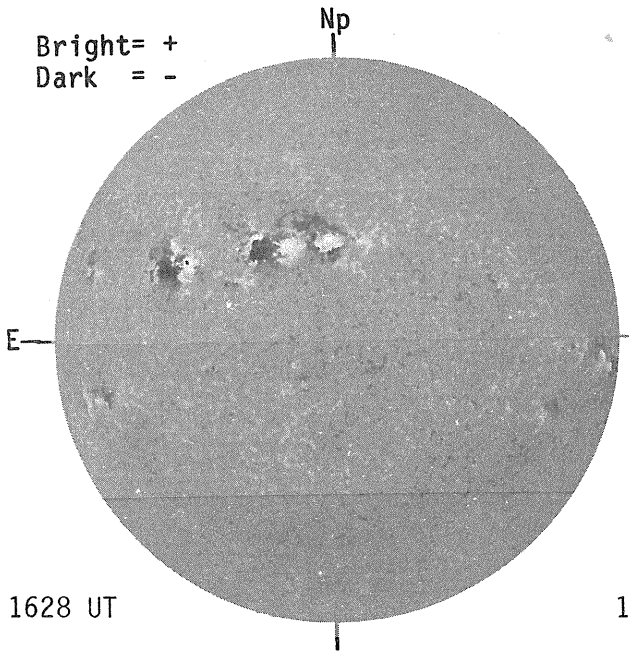


SACRAMENTO PEAK CORONA (1.15 Radii)

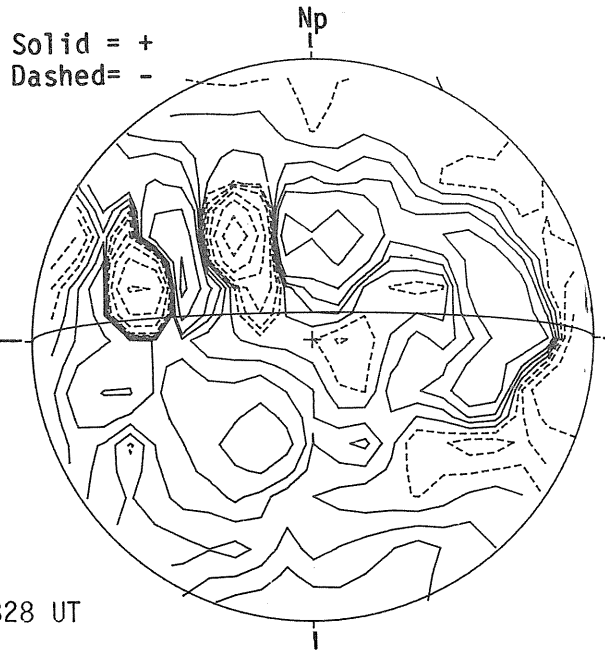


J A N U A R Y 26, 1 9 8 4 (P= -9.34, B_0=-5.51, L_0= 132.58)

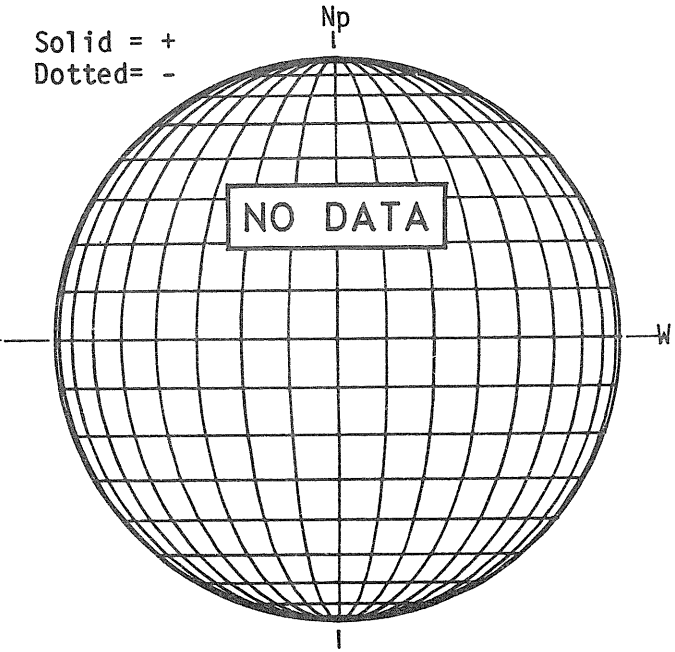
KITT PEAK MAGNETOGRAM



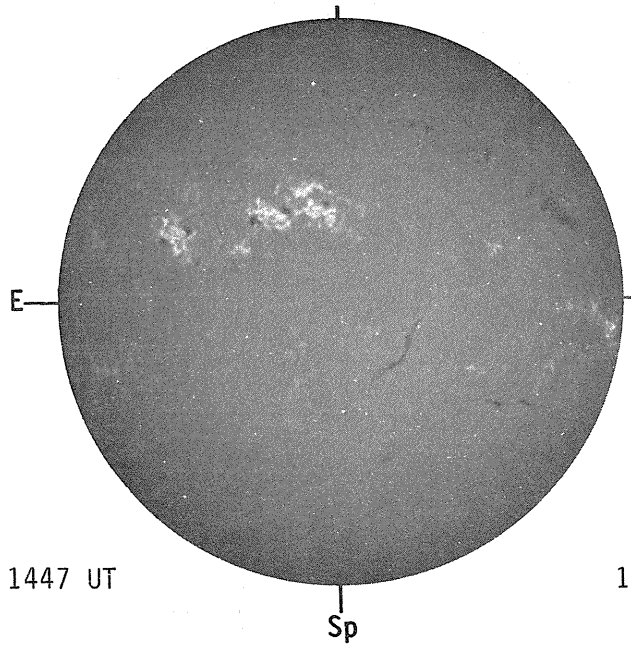
STANFORD MAGNETOGRAM



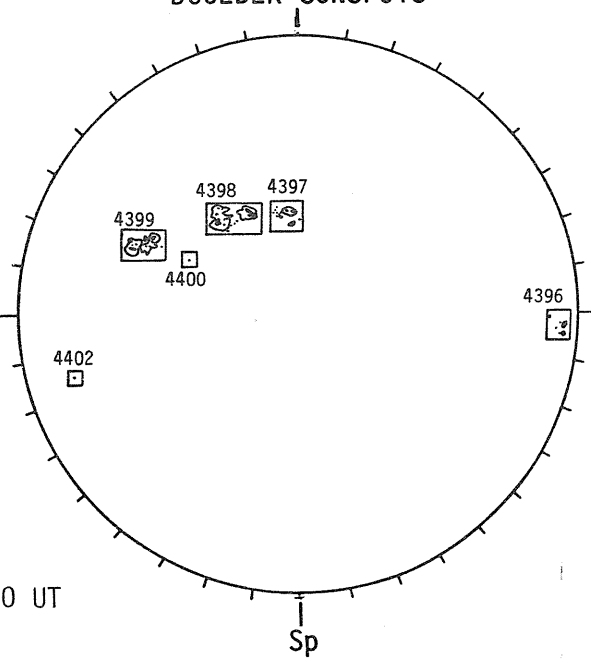
MT. WILSON MAGNETOGRAM



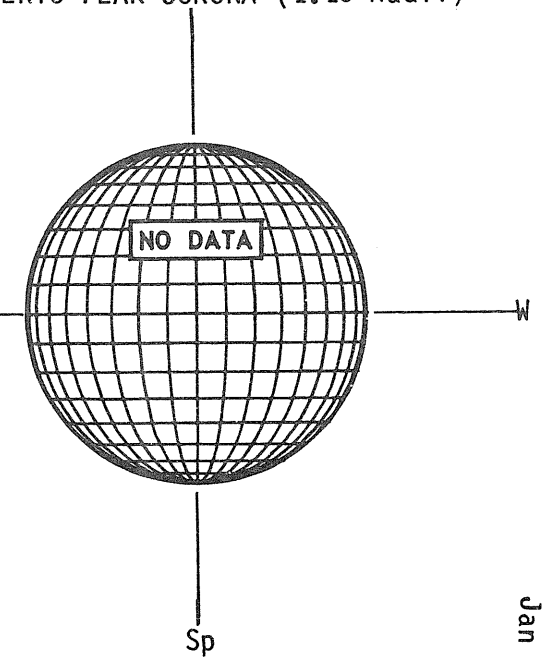
SACRAMENTO PEAK H-ALPHA



BOULDER SUNSPOTS



SACRAMENTO PEAK CORONA (1.15 Radii)



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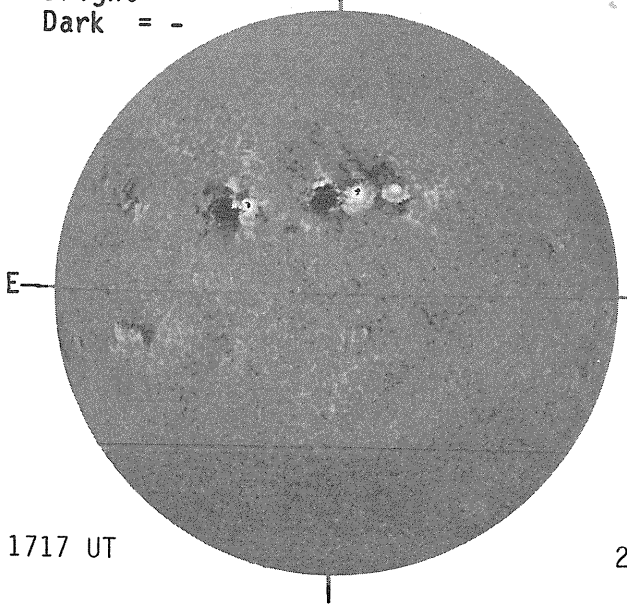
Jan 84

JANUARY 27, 1984 (P= -9.77, B_0=-5.90, L_0= 119.41)

KITT PEAK MAGNETOGRAM

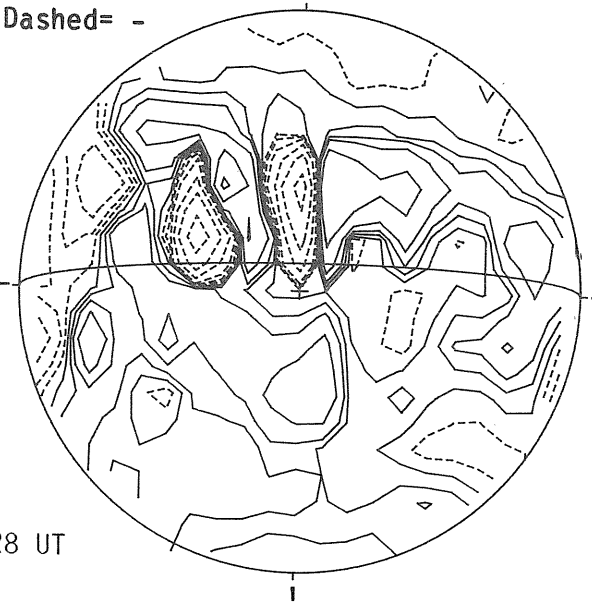
Bright= +
Dark = -



1717 UT

STANFORD MAGNETOGRAM

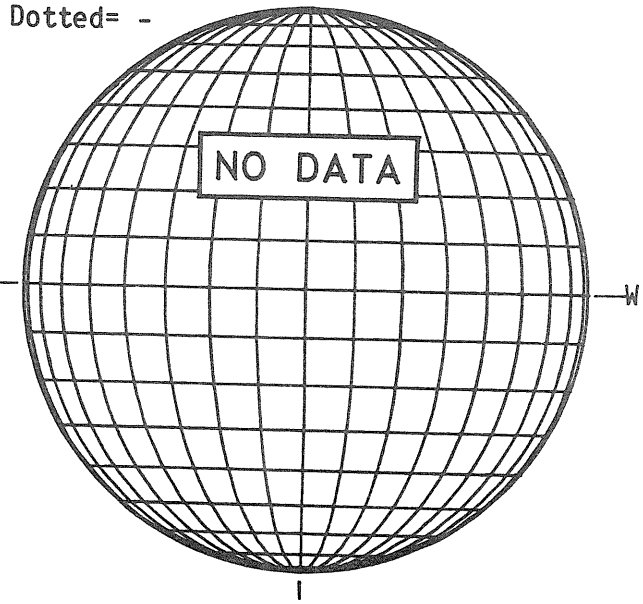
Solid = +
Dashed= -



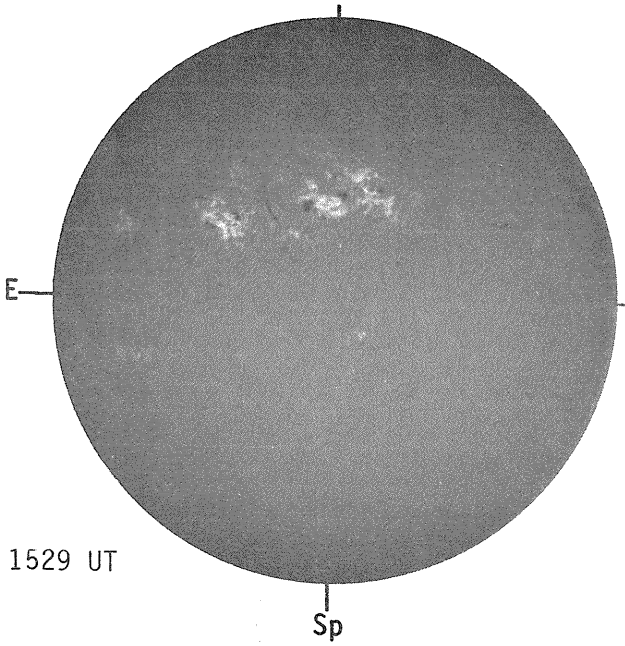
2228 UT

MT. WILSON MAGNETOGRAM

Solid = +
Dotted= -

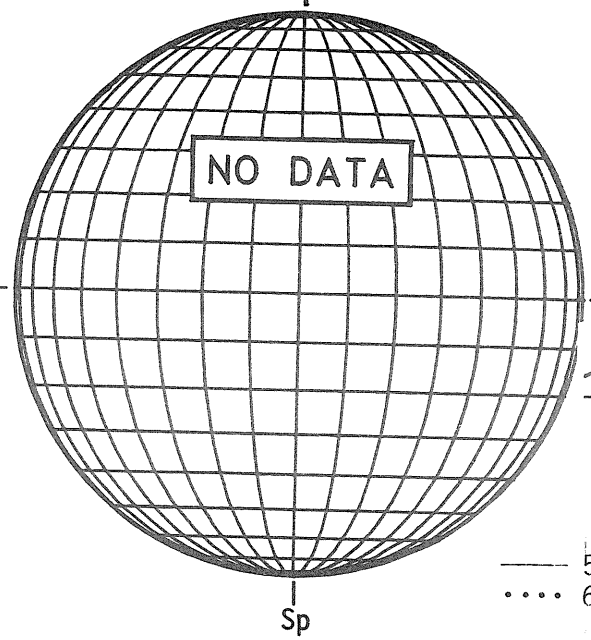


SACRAMENTO PEAK H-ALPHA

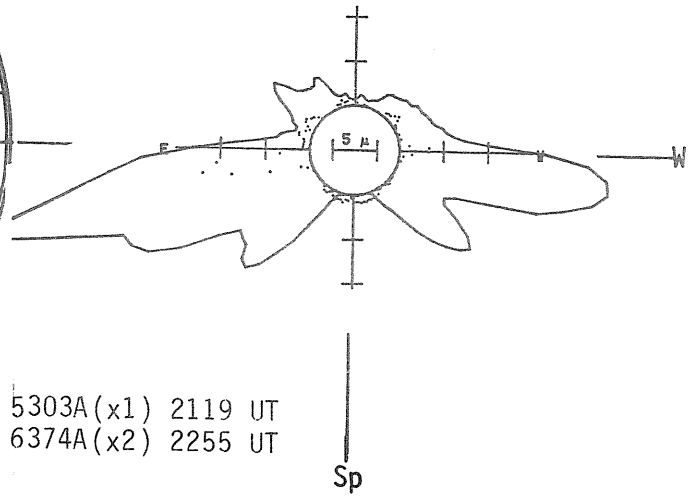


1529 UT

BOULDER SUNSPOTS



SACRAMENTO PEAK CORONA (1.15 Radii)

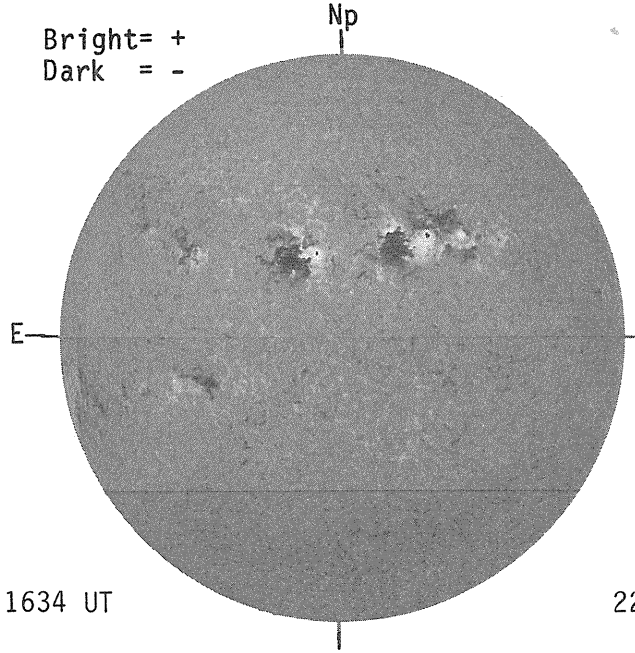


—— 5303A(x1) 2119 UT
···· 6374A(x2) 2255 UT

J A N U A R Y 28, 1 9 8 4 (P=-10.20, B_0=-5.67, L_0= 106.25)

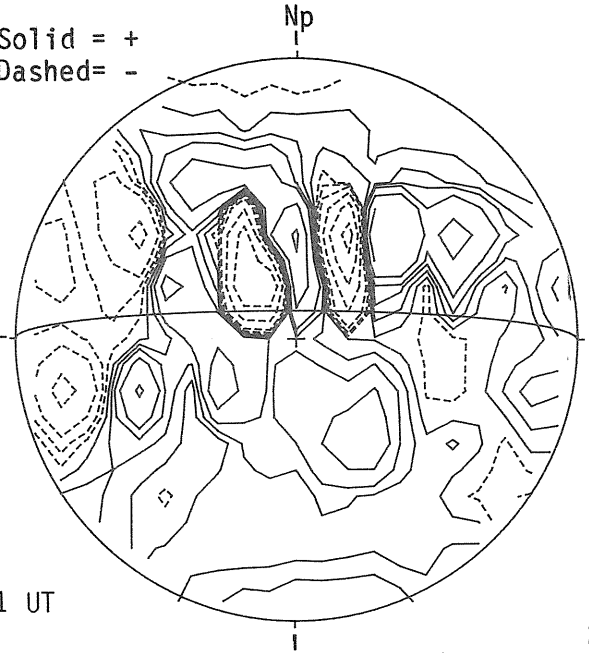
KITT PEAK MAGNETOGRAM

Bright= +
Dark = -



STANFORD MAGNETOGRAM

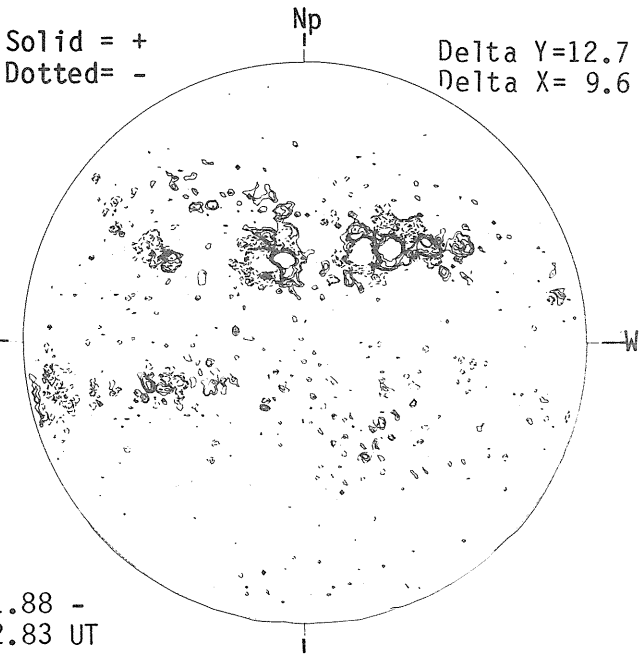
Solid = +
Dashed= -



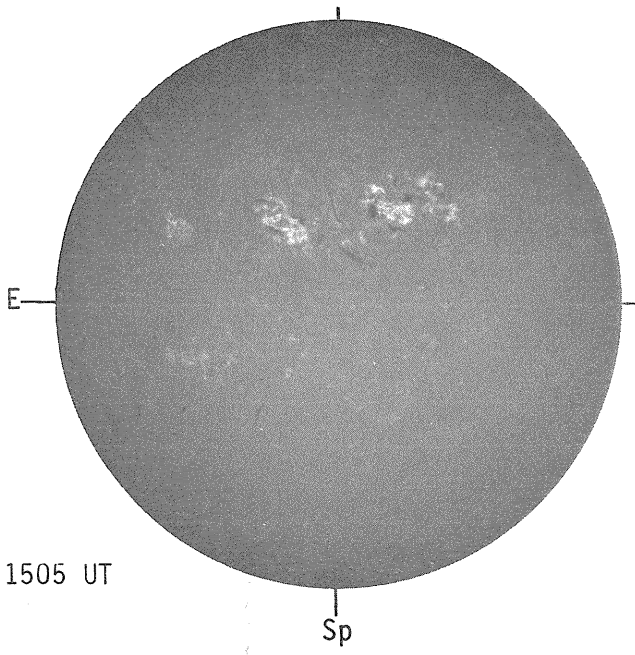
MT. WILSON MAGNETOGRAM

Solid = +
Dotted= -

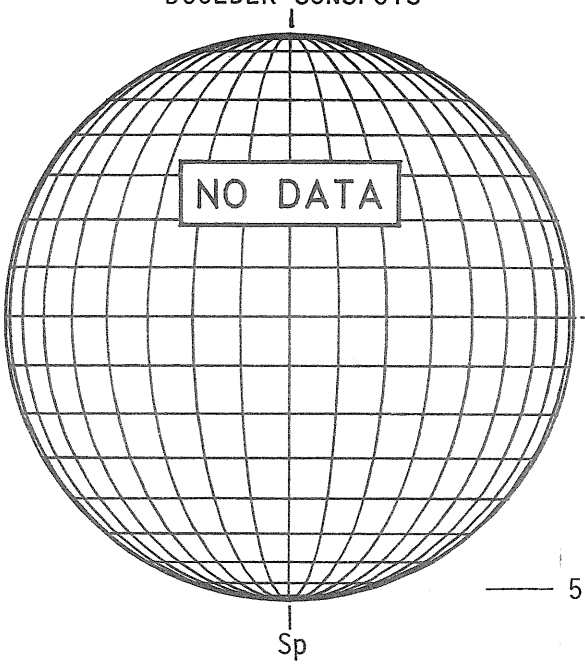
Delta Y=12.7
Delta X= 9.6



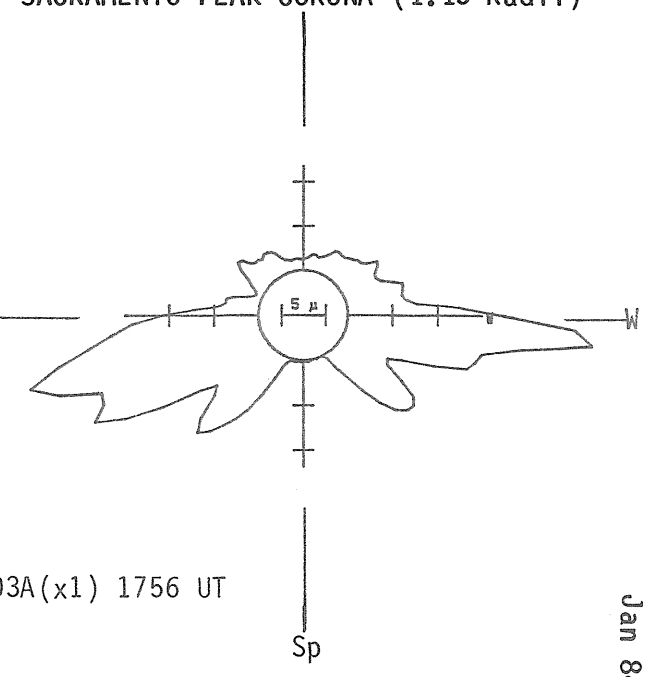
SACRAMENTO PEAK H-ALPHA



BOULDER SUNSPOTS



SACRAMENTO PEAK CORONA (1.15 Radii)



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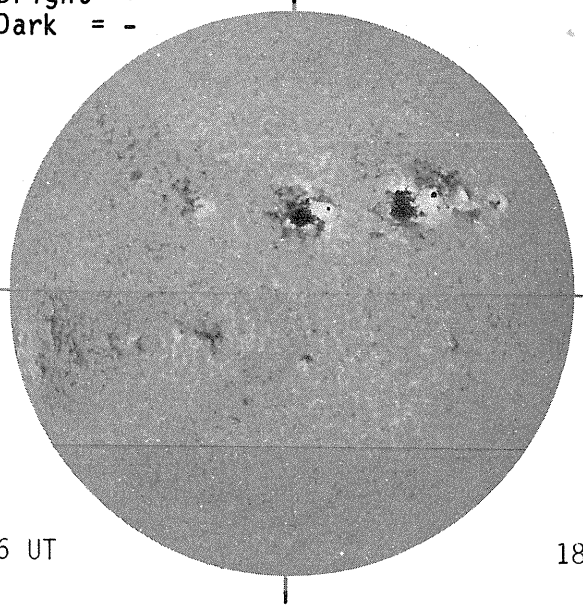
Jan 84

JANUARY 29, 1984 (P=-10.63, B_0=-5.75, L_0= 93.08)

KITT PEAK MAGNETOGRAM

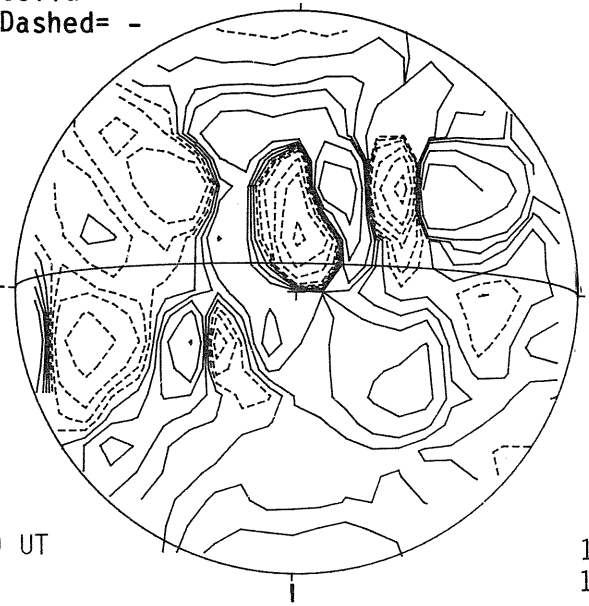
Bright= +
Dark = -



1646 UT

STANFORD MAGNETOGRAM

Solid = +
Dashed= -

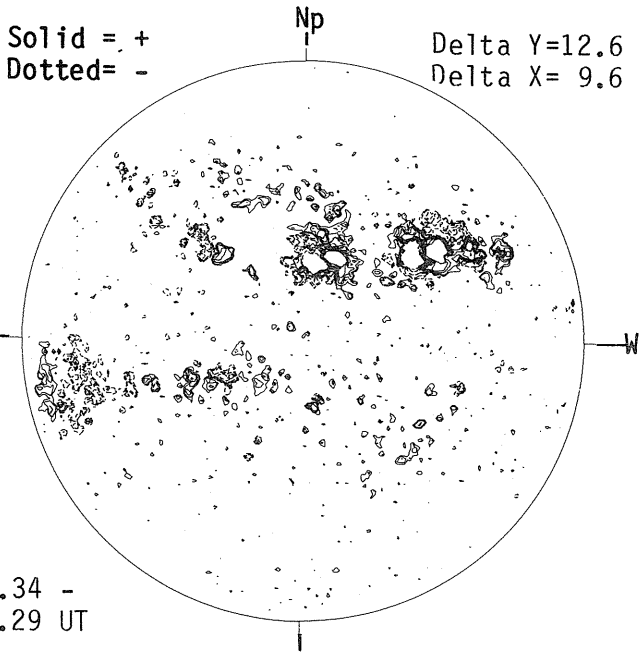


1830 UT

MT. WILSON MAGNETOGRAM

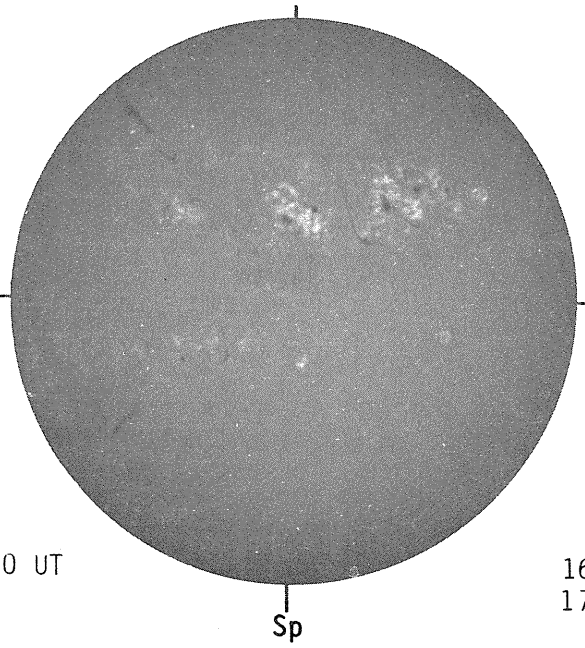
Solid = +
Dotted= -

Delta Y=12.6
Delta X= 9.6



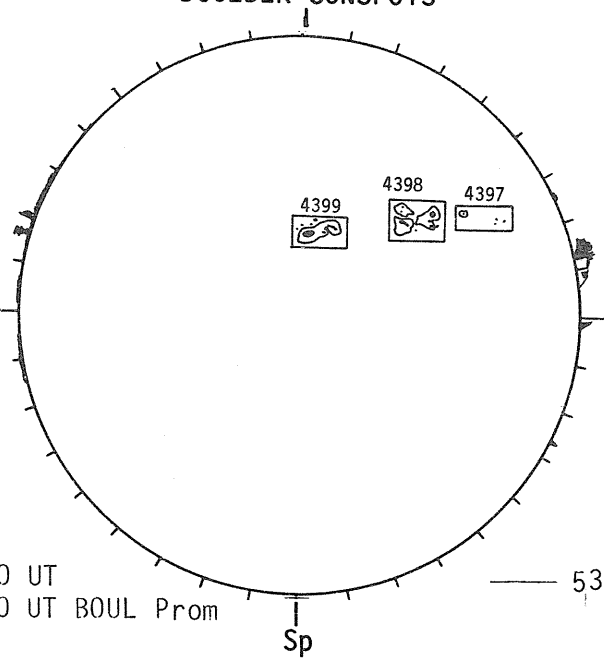
18.34 -
19.29 UT

SACRAMENTO PEAK H-ALPHA



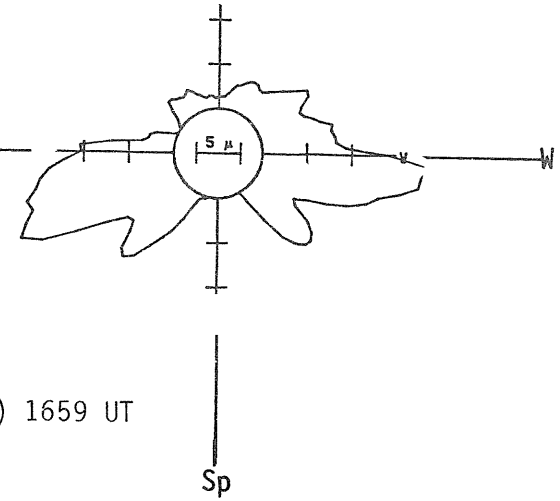
1440 UT

BOULDER SUNSPOTS



1650 UT
1710 UT BOUL Prom

SACRAMENTO PEAK CORONA (1.15 Radii)

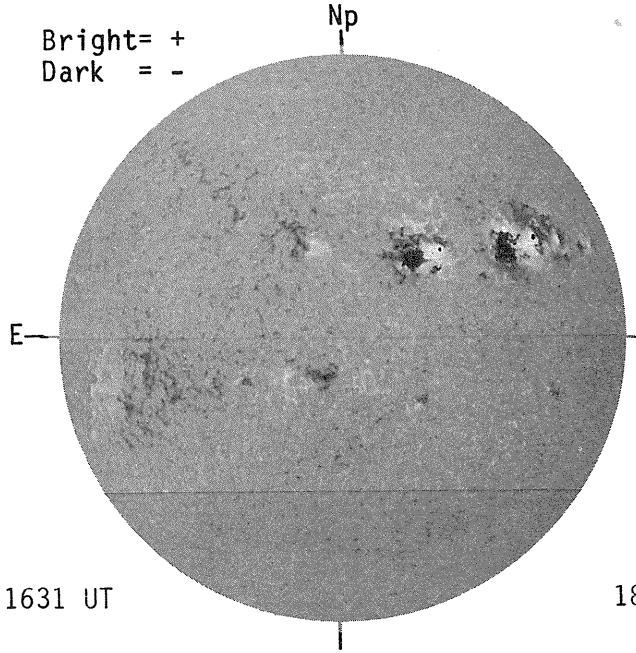


5303A(x1) 1659 UT

J A N U A R Y 30, 1 9 8 4 (P=-11.05, B_0=-5.83, L_0= 79.91)

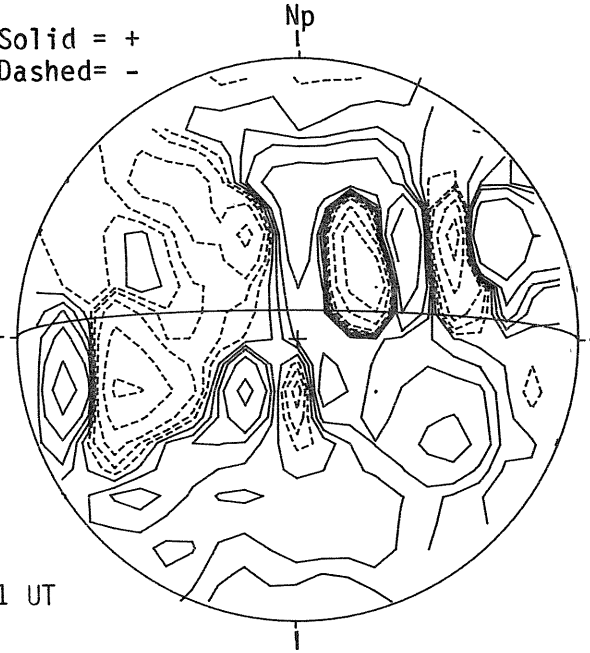
KITT PEAK MAGNETOGRAM

Bright= +
Dark = -



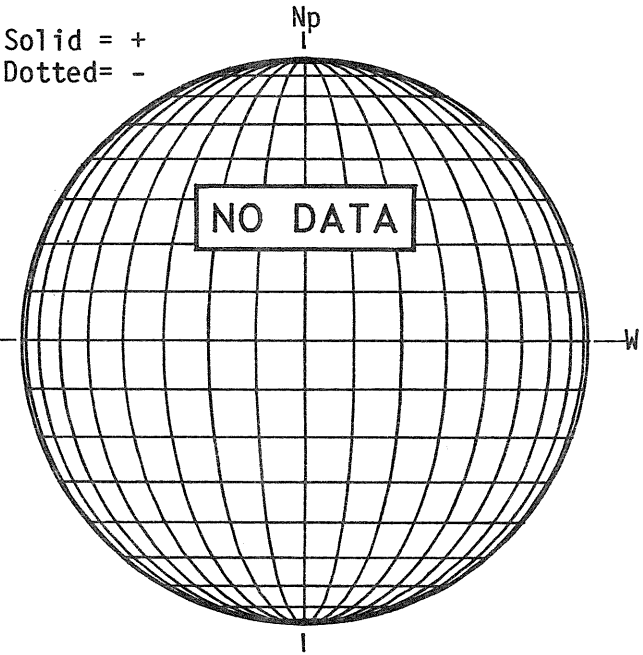
STANFORD MAGNETOGRAM

Solid = +
Dashed= -

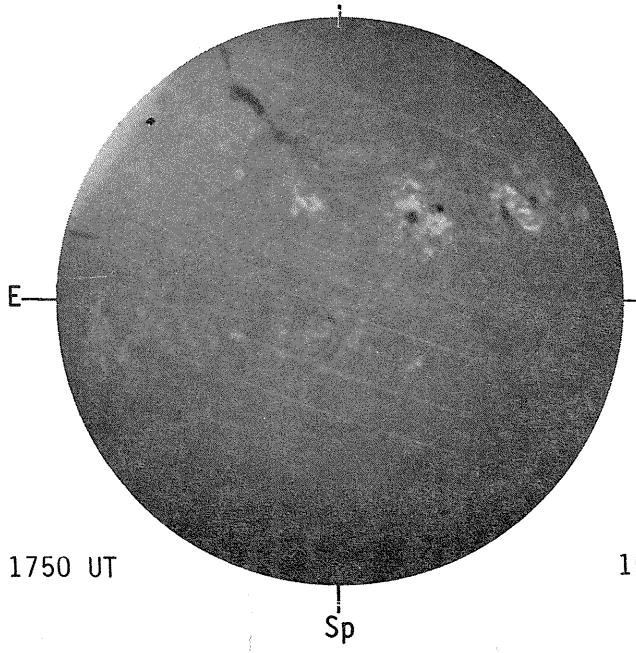


MT. WILSON MAGNETOGRAM

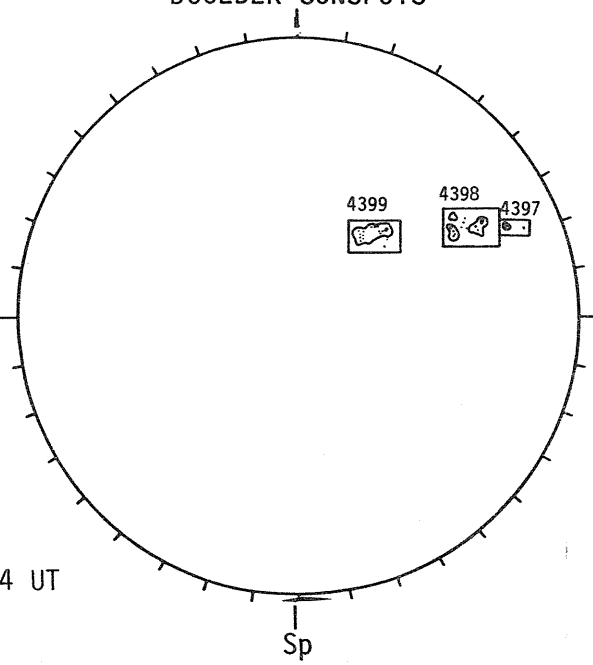
Solid = +
Dotted= -



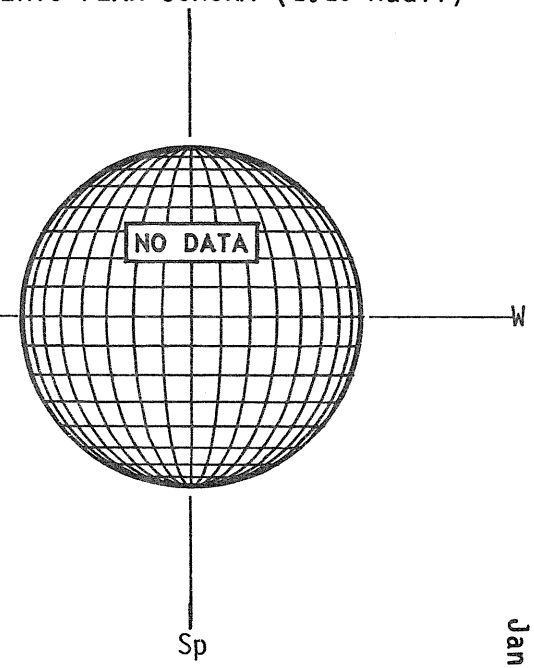
BOULDER H-ALPHA



BOULDER SUNSPOTS



SACRAMENTO PEAK CORONA (1.15 Radii)



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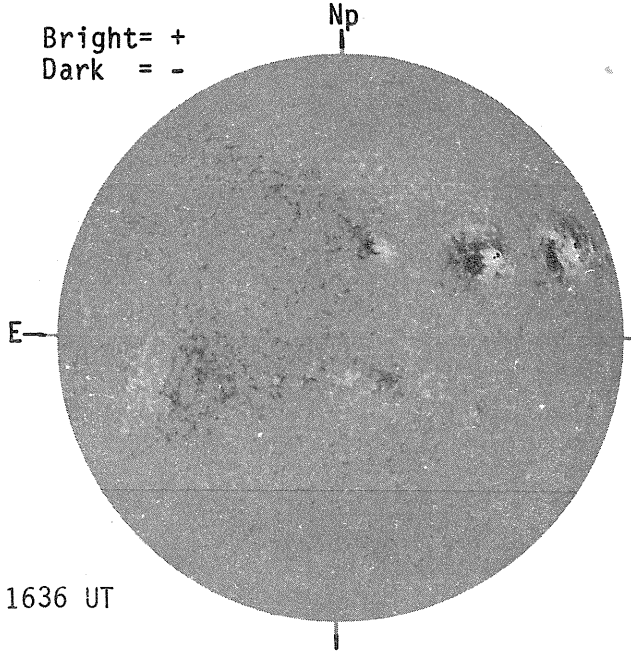
Jan 84

J A N U A R Y 31, 1 9 8 4 (P=-11.47, B_0=-5.90, L_0= 66.75)

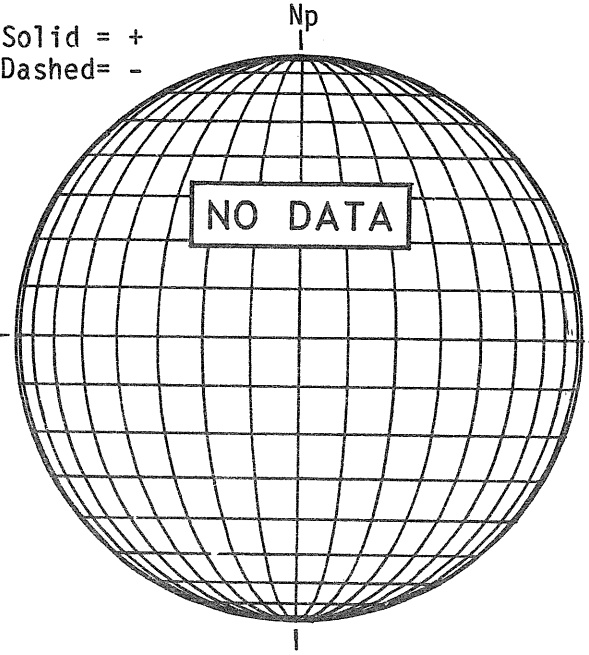
KITT PEAK MAGNETOGRAM

Bright= +
Dark = -



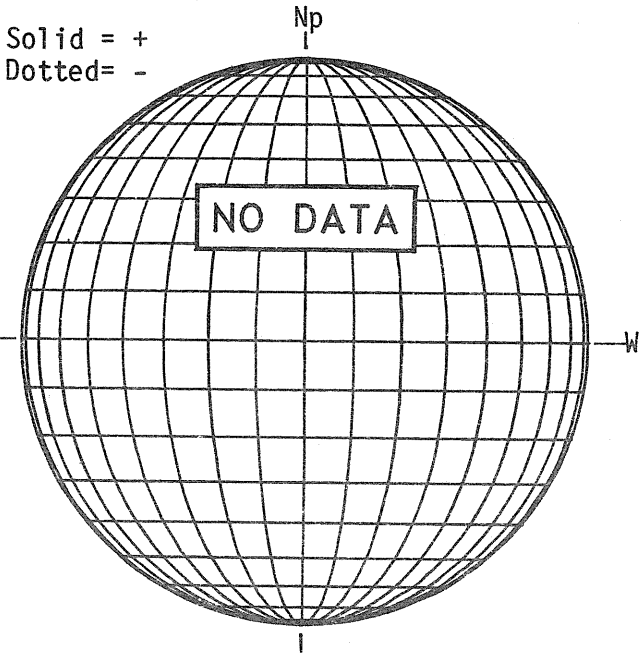
STANFORD MAGNETOGRAM

Solid = +
Dashed= -

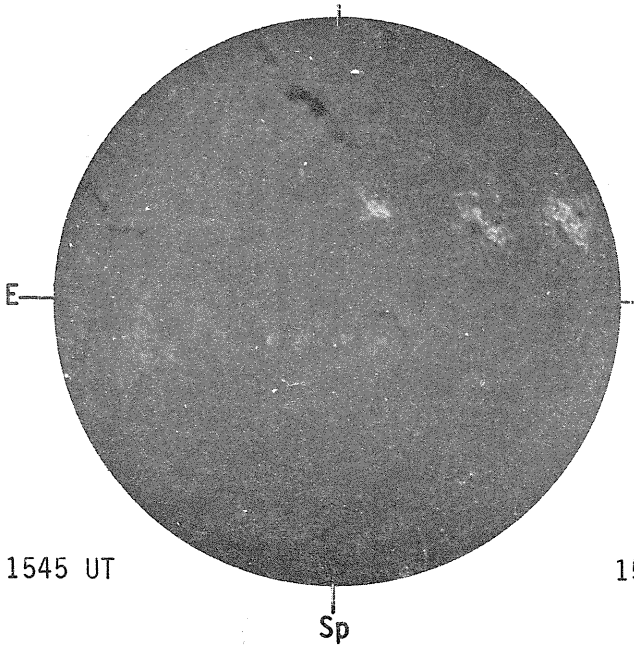


MT. WILSON MAGNETOGRAM

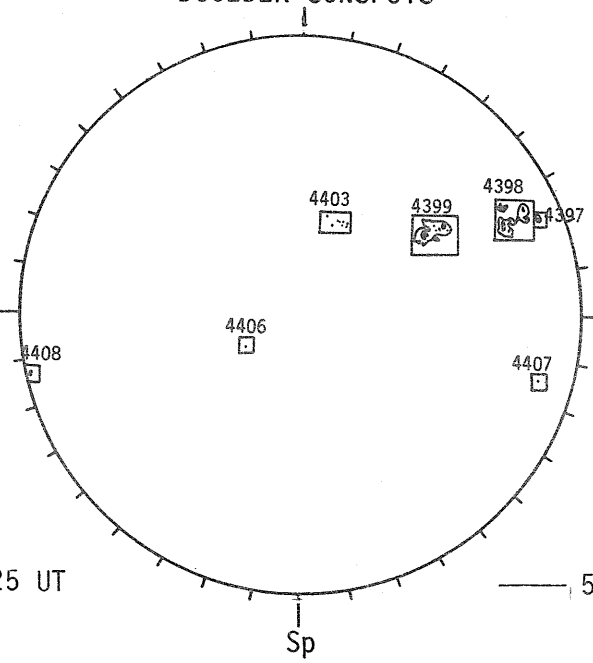
Solid = +
Dotted= -



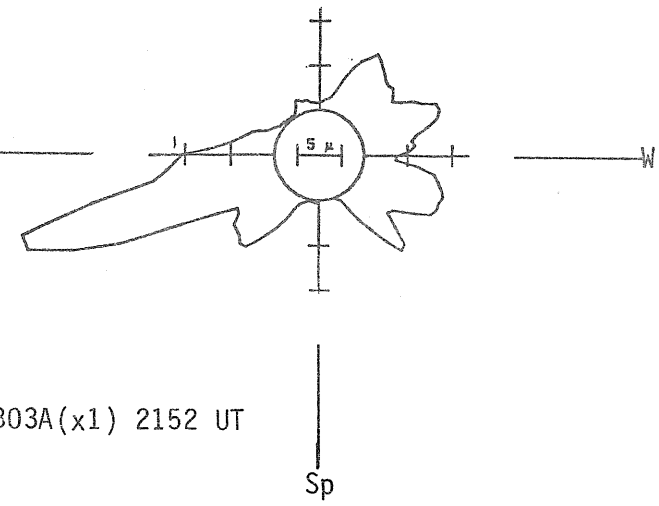
BOULDER H-ALPHA



BOULDER SUNSPOTS



SACRAMENTO PEAK CORONA (1.15 Radii)



REGIONS OF SUNSPOT ACTIVITY
(ORDERED BY CENTRAL MERIDIAN PASSAGE DATE)

JANUARY 1984

NOAA/ USAF Region	Mt Wilson Region	Sta	Observation Mo	Day	Time (UT)	Lat	CMD	CMP Mo	Day	Max H	Mag Class	Spot Class	Corrected Area (10-6 Hemi)	Spot Count	Long. Extent (Deg)	Qual
4387		LEAR	12	27	0037	N12	E76	01	1.8		A	AXX		1		3
4387		RAMY	12	27	1325	N12	E64	01	1.4		A	AXX	30	1	1	1
4387	23907	MWIL	12	27	1600	N12	E70	01	1.9	2	(B)					
4387		HOLL	12	27	1930	N11	E69	01	2.0		B	BXO	10	3	3	2
4387		LEAR	12	28	0004	N11	E61	01	1.6		B	BXO		2	8	3
4387		RAMY	12	28	1250	N12	E55	01	1.7		B	BXO	20	2	9	3
4387		LEAR	12	29	0045	N11	E52	01	1.9		B	BXO	10	3	4	3
4387		RAMY	12	30	1418	N09	E27	01	1.6		B	BXO	20	5	3	4
4387		LEAR	01	02	0053	N12	W01	01	2.0		B	BXO	10	3	4	3
4390	23911	MWIL	01	06	1615	S10	E05	01	7.1	3	(AP)					
4390		HOLL	01	06	2022	S08	E02	01	7.0		A	AXX		2	2	3
4390		RAMY	01	07	1320	S10	W08	01	7.0		B	BXO	10	2	3	4
4390		RAMY	01	09	1545	S12	W37	01	6.9		A	AXX	10	1	1	2
4390	23916	MWIL	01	09	1630	S13	W37	01	6.9	3	(AP)					
		RAMY	01	07	1320	N03	W04	01	7.3		A	AXX	10	3	2	4
4388		RAMY	01	03	1305	S12	E58	01	7.9		A	AXX	20	1	1	4
4388		RAMY	01	05	1450	S11	E34	01	8.2		A	HAX	20	6	2	2
4388		HOLL	01	05	1542	S10	E32	01	8.1		A	AXX	10	1	1	2
4388		BOUL	01	05	1625	S10	E30	01	7.9		B	BXO	10	3	3	2
4388		LEAR	01	06	0114	S11	E27	01	8.1		A	AXX	10	1	1	3
4388		RAMY	01	06	1505	S11	E08	01	7.2		B	BXO	10	4	4	3
4388	23910	MWIL	01	06	1615	S11	E18	01	8.0	2	(AF)					
4388		PALE	01	06	1838	S10	E05	01	7.2		A	AXX		1		2
4388		HOLL	01	06	2022	S12	E16	01	8.1		A	AXX	10	3	2	3
4388		RAMY	01	07	1320	S14	E05	01	7.9		B	BXO	10	8	4	4
4388		HOLL	01	07	1537	S14	E04	01	8.0		B	BXO	20	5	3	4
4388	23914	MWIL	01	07	1615	S15	E04	01	8.0	4	(AF)					
4388		PALE	01	07	1810	S14	E03	01	8.0		B	BXO	10	3	3	3
4388		MANI	01	07	2325	S14	W02	01	7.8			CRO	40	4	4	3
4388		LEAR	01	08	0006	S15	W02	01	7.9		B	CSO	60	13	5	3
4388		ATHN	01	08	0700	S16	W05	01	7.9		B	CSO	40	3	3	3
4388		RAMY	01	08	1311	S16	W08	01	7.9		B	BXO	30	12	3	3
4388		BOUL	01	08	1522	S14	W11	01	7.8		B	BXO	30	7	4	2
4388	23914	MWIL	01	08	1630	S17	W10	01	7.9	3	(B)					
4388		PALE	01	08	1815	S16	W11	01	7.9		B	BXO	40	14	4	3
4388		HOLL	01	08	2140	S16	W13	01	7.9		B	DAO	50	8	4	2
4388		LEAR	01	09	0056	S15	W15	01	7.9		B	DAO	130	12	4	3
4388		ATHN	01	09	0815	S16	W19	01	7.9		B	BXO	30	10	3	3
4388		RAMY	01	09	1545	S15	W23	01	7.9		B	CRO	50	14	5	2
4388		HOLL	01	09	1623	S16	W24	01	7.9		B	BXO	20	16	6	4
4388	23914	MWIL	01	09	1630	S17	W23	01	7.9	4	(B)					
4388		PALE	01	09	1832	S15	W25	01	7.9		B	CRO	50	14	6	3
4388		MANI	01	09	2332	S17	W28	01	7.9			CRO	40	15	6	3
4388		LEAR	01	10	0117	S18	W29	01	7.8		B	CRO	50	10	6	2
4388		ATHN	01	10	1000	S17	W34	01	7.8		B	BXO	40	7	5	2
4388		RAMY	01	10	1250	S17	W36	01	7.8		B	DAO	80	14	5	4
4388	23914	MWIL	01	10	1545	S17	W36	01	7.9	4	(B)					
4388		BOUL	01	10	1615	S19	W37	01	7.9		A	AXX	20	3	4	2
4388		HOLL	01	10	1639	S16	W37	01	7.9		B	BXO	10	5	5	2
4388		PALE	01	10	1840	S16	W38	01	7.9		B	CRO	20	4	4	3
4388		LEAR	01	11	0028	S19	W41	01	7.9		B	CRO	40	6	6	2
4388		RAMY	01	11	1300	S16	W49	01	7.8		B	CRO	30	9	6	4
4388		HOLL	01	11	1628	S16	W51	01	7.8		B	BXO	30	4	5	3
4388		PALE	01	11	1840	S17	W53	01	7.8		B	BXO	20	3	6	3
4388		RAMY	01	12	1315	S17	W63	01	7.8		B	BXO	20	5	5	4
4388		HOLL	01	12	1621	S16	W65	01	7.8		B	BXO	10	2	5	3
4388	23914	MWIL	01	12	1630	S17	W65	01	7.7	3	(B)					
4388		PALE	01	12	1955	S16	W66	01	7.8		B	BXO	10	2	5	2
	23910	MWIL	01	05	1630	S11	E32	01	8.1	2	(AF)					
4391		RAMY	01	07	1320	S05	E16	01	8.8		B	BXO	10	5	4	4
4391		HOLL	01	07	1537	S04	E15	01	8.8		A	AXX		1		4
4391	23915	MWIL	01	07	1615	S05	E15	01	8.8	3	(AP)					
4391		PALE	01	07	1810	S05	E14	01	8.8		B	BXO	10	3	3	3
4391		MANI	01	07	2325	S05	E13	01	8.9			BXO	10	3	3	3
4391		LEAR	01	08	0006	S06	E12	01	8.9		B	CSO	40	5	3	3
4391		RAMY	01	08	1311	S05	E04	01	8.8		B	BXO	20	3	3	3

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NOAA/ USAF Region	Mt Wilson Region	Sta	Observation Time Mo	Day	(UT)	Lat CMD	CMP Mo	Day	Max H	Mag Class	Spot Class	Corrected Area (10-6 Hemi)	Spot Count	Long. Extent (Deg)	Qual
4391		LEAR	01	09	0056	S06 W03	01	8.8		B	BXO	110	4	3	3
0001	23912	MWIL	01	06	1615	S03 E65	01	11.5	4	(AP)					
0001	23912	MWIL	01	07	1615	S02 E49	01	11.3	4	(AP)					
0001	23912	MWIL	01	08	1630	S02 E36	01	11.4	4	(AP)					
0001	23912	MWIL	01	09	1630	S02 E22	01	11.3	4	(AP)					
0001	23912	MWIL	01	10	1545	S02 E09	01	11.3	4	(AP)					
0001	23912	MWIL	01	11	1645	S02 W05	01	11.3	3	(AP)					
0001	23912	MWIL	01	12	1630	S01 W19	01	11.3	3	(AP)					
0001	23912	MWIL	01	13	1630	S02 W30	01	11.4	3	(AP)					
	23919	MWIL	01	10	1545	S12 E11	01	11.5	3	(AP)					
4389		BOUL	01	05	2036	S09 E84	01	12.2		B	CAO	30	2	9	3
4389		LEAR	01	06	0114	S04 E76	01	11.7		B	BXX	10	3	9	3
4389		RAMY	01	06	1505	S04 E69	01	11.8		B	DAO	150	3	9	3
4389		BOUL	01	06	1530	S01 E67	01	11.6		B	DSO	100	2	8	2
4389		PALE	01	06	1838	S03 E68	01	11.9		B	DSO	70	3	9	2
4389		HOLL	01	06	2022	S03 E67	01	11.9		B	ESO	60	3	11	3
4389		LEAR	01	07	0142	S13 E65	01	12.0		B	DSO	150	2	10	3
4389		RAMY	01	07	1320	S03 E56	01	11.7		B	EAO	120	5	11	4
4389		HOLL	01	07	1537	S04 E55	01	11.8		B	ESO	60	3	11	4
4389		BOUL	01	07	1645	S04 E54	01	11.7		B	CSO	70	4	10	4
4389		PALE	01	07	1810	S04 E53	01	11.7		B	CSO	50	4	11	3
4389		MANI	01	07	2325	S05 E50	01	11.7			ESO	160	7	11	3
4389		LEAR	01	08	0006	S05 E48	01	11.6		B	ESO	140	9	11	3
4389		ATHN	01	08	0700	S04 E39	01	11.2		B	CRO	20	2	1	3
4389		RAMY	01	08	1311	S04 E43	01	11.8		B	ESO	70	6	11	3
4389		BOUL	01	08	1522	S03 E40	01	11.6		B	BXO	60	8	11	2
4389		PALE	01	08	1815	S04 E40	01	11.8		B	ESO	80	11	12	3
4389		HOLL	01	08	2140	S04 E38	01	11.7		B	EAO	100	4	11	2
4389		LEAR	01	09	0056	S03 E35	01	11.7		B	EAO	130	10	11	3
4389		ATHN	01	09	0815	S04 E31	01	11.7		B	ESO	70	6	11	3
4389		RAMY	01	09	1545	S04 E27	01	11.7		B	EAO	80	7	11	2
4389		HOLL	01	09	1623	S04 E27	01	11.7		B	EAO	70	6	13	4
4389		PALE	01	09	1832	S04 E25	01	11.6		B	ESO	90	7	12	3
4389		MANI	01	09	2332	S05 E23	01	11.7			ESO	130	6	12	3
4389		LEAR	01	10	0117	S06 E21	01	11.6		B	ESO	140	8	13	2
4389		ATHN	01	10	1000	S06 E17	01	11.7		B	ESO	60	7	12	2
4389		RAMY	01	10	1250	S04 E16	01	11.7		B	EAO	60	21	13	4
4389		BOUL	01	10	1615	S03 E13	01	11.6		B	BXO	30	5	12	2
4389		HOLL	01	10	1639	S04 E14	01	11.7		B	ESO	60	9	12	2
4389		PALE	01	10	1840	S04 E13	01	11.7		B	ESO	90	9	12	3
4389		LEAR	01	11	0028	S04 E09	01	11.7		B	ESO	80	7	12	2
4389		RAMY	01	11	1300	S03 E02	01	11.7		B	EAO	50	15	13	4
4389		HOLL	01	11	1628	S03 E01	01	11.8		B	ESO	60	5	12	3
4389		PALE	01	11	1840	S03 W01	01	11.7		B	CRO	40	5	11	3
4389		LEAR	01	12	0101	S04 W05	01	11.7		B	CRO	20	5	12	2
4389		RAMY	01	12	1315	S04 W10	01	11.8		B	CAO	20	14	13	4
4389		BOUL	01	12	1400	S04 W11	01	11.8		B	BXO	20	5	13	3
4389		HOLL	01	12	1621	S04 W12	01	11.8		B	CRO	40	6	14	3
4389		PALE	01	12	1955	S05 W07	01	12.3		B	CRO	30	8	4	2
4389		LEAR	01	13	0049	S06 W12	01	12.1		A	HRX	40	6	2	2
4389		ATHN	01	13	0815	S06 W14	01	12.3		B	BXO	20	2	2	1
4389		RAMY	01	13	1320	S03 W24	01	11.8		B	CRO	20	13	13	4
4389		BOUL	01	13	1400	S01 W25	01	11.7		B	BXO	20	3	11	3
4389		PALE	01	13	2049	S05 W22	01	12.2		B	BXO	10	3	3	2
4389		LEAR	01	14	0103	S04 W30	01	11.8		B	CSO	40	7	12	3
4389		RAMY	01	14	1309	S06 W34	01	12.0		B	BXO	40	8	7	4
4389		LEAR	01	15	0006	S05 W39	01	12.1		A	AXO	10	3	2	3
		ATHN	01	08	0700	S07 E48	01	11.9		B	CRO	30	2	1	3
0002	23913	MWIL	01	06	1615	S05 E74	01	12.2	3	(AF)					
0002	23913	MWIL	01	07	1615	S05 E59	01	12.1	4	(AF)					
0002	23913	MWIL	01	08	1630	S06 E46	01	12.1	5	(BF)					
0002	23913	MWIL	01	09	1630	S06 E33	01	12.2	4	(BF)					
0002	23913	MWIL	01	10	1545	S06 E19	01	12.1	5	(BF)					
0002	23913	MWIL	01	11	1645	S07 E06	01	12.1	3	(AF)					
0002	23913	MWIL	01	12	1630	S06 W07	01	12.2	4	(AF)					
0002	23913	MWIL	01	13	1630	S06 W19	01	12.3	3	(AF)					

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0002	23913	MWIL	01	14	1630	S06	W34	01	12.1	2	(AF)					
		RAMY	01	13	1320	S11	E09	01	14.2		A	AXX	10	1	1	4
	23917	MWIL	01	09	1630	S07	E72	01	15.1	3	(AP)					
4392		LEAR	01	09	0056	S14	E79	01	15.0		B	CKO	350	3	5	3
4392		ATHN	01	09	0815	S14	E77	01	15.2		B	CSO	50	2	2	3
4392		RAMY	01	09	1545	S13	E76	01	15.4		A	HAX	190	3	2	2
4392		HOLL	01	09	1623	S09	E73	01	15.2		B	CHO	250	6	8	4
4392	23918	MWIL	01	09	1630	S13	E77	01	15.5	4	(AP)					
4392		PALE	01	09	1832	S13	E72	01	15.2		B	CHO	120	2	3	3
4392		MANI	01	09	2332	S12	E69	01	15.2			CHO	310	3	5	3
4392		LEAR	01	10	0117	S11	E70	01	15.3		B	CKO	200	4	5	2
4392		ATHN	01	10	1000	S17	E69	01	15.7		A	HHX	120	1	2	2
4392		RAMY	01	10	1250	S13	E65	01	15.4		B	CAO	190	7	4	4
4392	23917	MWIL	01	10	1545	S13	E63	01	15.4	5	(AP)					
4392		BOUL	01	10	1615	S09	E64	01	15.5		B	CRO	40	3	2	2
4392		HOLL	01	10	1639	S13	E63	01	15.4		A	HKX	250	1	3	2
4392		PALE	01	10	1840	S13	E61	01	15.4		A	HKX	270	1	3	3
4392		LEAR	01	11	0028	S09	E58	01	15.4		B	CKO	230	3	4	2
4392		RAMY	~~01~~	11	1300	S12	E51	01	15.4		B	CAO	230	7	6	4
4392		HOLL	01	11	1628	S12	E48	01	15.3		B	CKO	190	2	5	3
4392	23917	MWIL	01	11	1645	S14	E50	01	15.5	4	(AP)					
4392		PALE	01	11	1840	S13	E47	01	15.3		B	CKO	200	3	4	3
4392		LEAR	01	12	0101	S15	E45	01	15.4		A	HHX	190	2	3	2
4392		RAMY	01	12	1315	S12	E38	01	15.4		B	CKO	210	10	6	4
4392		BOUL	01	12	1400	S08	E37	01	15.4		A	HSX	70	2	2	3
4392		HOLL	01	12	1621	S13	E37	01	15.5		A	HKX	210	4	3	3
4392	23917	MWIL	01	12	1630	S14	E37	01	15.5	5	(AP)					
4392		PALE	01	12	1955	S13	E36	01	15.5		B	CHO	180	4	4	2
4392		LEAR	01	13	0049	S14	E32	01	15.5		B	CHO	250	3	3	2
4392		ATHN	01	13	0815	S15	E27	01	15.4		A	HSX	70	1	2	1
4392		RAMY	01	13	1320	S15	E24	01	15.4		B	CKO	160	9	8	4
4392		BOUL	01	13	1400	S11	E22	01	15.2		A	HSX	110	1	2	3
4392		BOUL	01	13	1400	S15	E23	01	15.3		A	AXX	10	2	2	3
4392	23917	MWIL	01	13	1630	S14	E24	01	15.5	5	(AP)					
4392		PALE	01	13	2049	S12	E19	01	15.3		B	CSO	160	5	6	2
4392		LEAR	01	14	0103	S13	E18	01	15.4		B	EAO	220	13	12	3
4392		ATHN	01	14	1100	S13	E13	01	15.4		B	CSO	80	4	3	2
4392		RAMY	01	14	1309	S12	E10	01	15.3		B	CKO	240	18	8	4
4392	23917	MWIL	01	14	1630	S13	E10	01	15.4	5	(BP)					
4392		HOLL	01	14	1755	S13	E08	01	15.4		B	CSO	160	4	3	2
4392		LEAR	01	15	0006	S12	E02	01	15.2		B	DKO	250	15	9	3
4392		ATHN	01	15	0630	S14	E04	01	15.6		B	CSO	120	8	3	3
4392		RAMY	01	15	1335	S13	W04	01	15.3		B	DKO	160	23	8	3
4392		HOLL	01	15	1540	S13	W06	01	15.2		B	CSO	170	8	7	3
4392	23917	MWIL	01	15	1630	S12	W03	01	15.5	5	(BP)					
4392		PALE	01	15	1937	S13	W07	01	15.3		B	CSO	150	8	8	3
4392		LEAR	01	16	0037	S13	W08	01	15.4		B	CAO	140	9	8	3
4392		MANI	01	16	0150	S13	W10	01	15.3			CSO	110	10	7	3
4392		RAMY	01	16	1315	S13	W17	01	15.3		B	CAO	170	6	6	4
4392		BOUL	01	16	1552	S10	W18	01	15.3		B	CSO	70	7	6	3
4392		HOLL	01	16	1611	S14	W17	01	15.4		B	CSO	160	8	7	2
4392		LEAR	01	17	0029	S13	W22	01	15.4		A	HHX	190	2	3	3
4392		MANI	01	17	0510	S13	W22	01	15.6			HSX	100	3	3	3
4392		ATHN	01	17	0700	S14	W26	01	15.3		A	HHX	130	2	3	3
4392		RAMY	01	17	1311	S13	W28	01	15.4		A	HAX	110	5	2	4
4392	23917	MWIL	01	17	1545	S13	W30	01	15.4	4	(BP)					
4392		LEAR	01	18	0133	S13	W35	01	15.4		A	HSX	110	5	2	3
4392		ATHN	01	18	0715	S14	W39	01	15.4		A	HSX	120	1	2	3
4392		RAMY	01	18	1245	S13	W43	01	15.3		B	CAO	110	7	4	3
4392	23917	MWIL	01	18	1530	S13	W43	01	15.4	5	(BY)					
4392		BOUL	01	18	1546	S11	W42	01	15.5		B	CSO	60	5	9	2
4392		HOLL	01	18	1615	S13	W46	01	15.2		B	CAO	80	6	4	4
4392		MANI	01	19	0000	S13	W47	01	15.5			CAO	90	6	3	3
4392		LEAR	01	19	0133	S12	W48	01	15.4		A	HAX	90	7	6	3
4392		ATHN	01	19	0705	S13	W52	01	15.4		B	CSO	80	3	4	3
4392		RAMY	01	19	1355	S13	W58	01	15.2		B	DAO	110	6	5	4
4392		BOUL	01	19	1640	S12	W57	01	15.4		B	CSO	30	3	2	1
4392		HOLL	01	19	1705	S13	W59	01	15.3		B	CSO	120	5	4	2

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4392	23917	MWIL	01	19	1800	S13 W58	01	15.4	5	(BP)					
4392		PALE	01	19	2015	S12 W62	01	15.2		B	CAO	100	5	7	3
4392		LEAR	01	20	0011	S14 W60	01	15.5			CSO	50	6	6	4
4392		ATHN	01	20	0805	S14 W65	01	15.4		B	CSO	60	3	3	2
4392		RAMY	01	20	1341	S13 W70	01	15.3		B	CSO	130	3	3	4
4392		BOUL	01	20	1600	S09 W72	01	15.3		A	HSX	30	1	2	2
4392	23917	MWIL	01	20	1600	S13 W70	01	15.4	4	(AP)					
4392		HOLL	01	20	1800	S13 W72	01	15.3		B	CSO	50	2	3	3
4392		LEAR	01	21	0048	S13 W76	01	15.3		B	CSO	70	3	3	4
4392		MANI	01	21	0552	S13 W75	01	15.6			CSO	150	2	2	3
4392		RAMY	01	21	1234	S13 W81	01	15.4		A	HAX	40	1	2	4
	23921	MWIL	01	13	1630	S18 E25	01	15.6	3	(AF)					
4393	23920	MWIL	01	10	1545	S13 E79	01	16.6	5	(AP)					
4393		HOLL	01	10	1639	S15 E79	01	16.7		A	AXX		1		2
4393		PALE	01	10	1840	S15 E78	01	16.7		A	AXX		1		3
4393		LEAR	01	11	0028	S12 E75	01	16.7		B	BXO	10	3	5	2
4393		RAMY	01	11	1300	S14 E68	01	16.7		BG	DAO	200	18	7	4
4393		HOLL	01	11	1628	S15 E67	01	16.8		B	DAO	350	5	8	3
4393	23920	MWIL	01	11	1645	S16 E66	01	16.7	4	(B)					
4393		PALE	01	11	1840	S15 E64	01	16.6		B	DAO	250	6	8	3
4393		LEAR	01	12	0101	S17 E60	01	16.6		B	DHO	240	7	8	2
4393		RAMY	01	12	1315	S16 E53	01	16.6		B	EKO	470	23	11	4
4393		BOUL	01	12	1400	S09 E52	01	16.5		B	EAO	160	12	11	3
4393		HOLL	01	12	1621	S16 E52	01	16.6		B	EKI	430	17	12	3
4393	23920	MWIL	01	12	1630	S16 E53	01	16.7	5	(B)					
4393		PALE	01	12	1955	S16 E51	01	16.7		B	EKI	520	17	11	2
4393		LEAR	01	13	0049	S16 E47	01	16.6		B	EKI	390	21	11	2
4393		ATHN	01	13	0815	S17 E43	01	16.6		B	EKO	380	6	11	1
4393		RAMY	01	13	1320	S16 E39	01	16.5		BG	EKO	550	31	14	4
4393		BOUL	01	13	1400	S14 E36	01	16.3		B	EAO	140	12	13	3
4393	23920	MWIL	01	13	1630	S17 E28	01	15.8	5	(D)					
4393		PALE	01	13	2049	S16 E35	01	16.5		B	FKI	500	17	16	2
4393		LEAR	01	14	0103	S15 E32	01	16.5		BGD	FKO	600	33	17	3
4393		ATHN	01	14	1100	S15 E26	01	16.4		BG	EHO	290	11	12	2
4393		RAMY	01	14	1309	S15 E24	01	16.4		BG	FKO	660	35	16	4
4393	23920	MWIL	01	14	1630	S16 E25	01	16.6	5	(B)					
4393		HOLL	01	14	1755	S16 E21	01	16.3		BG	EHO	390	13	15	2
4393		LEAR	01	15	0006	S15 E18	01	16.4		BG	EKO	490	21	15	3
4393		ATHN	01	15	0630	S17 E17	01	16.6		BG	FHO	490	19	16	3
4393		RAMY	01	15	1335	S16 E12	01	16.5		BG	FKO	520	31	17	3
4393		HOLL	01	15	1540	S16 E10	01	16.4		BG	EHO	460	24	13	3
4393	23920	MWIL	01	15	1630	S16 E11	01	16.5	5	(BY)					
4393		PALE	01	15	1937	S16 E08	01	16.4		BG	FHO	440	30	17	3
4393		LEAR	01	16	0037	S16 E04	01	16.3		BG	FAO	500	19	17	3
4393		MANI	01	16	0150	S16 E05	01	16.5			FKO	240	35	15	3
4393		ATHN	01	16	0700	S19 E01	01	16.4		BGD	FHO	490	13	16	1
4393		RAMY	01	16	1315	S16 W02	01	16.4		BG	FKO	400	31	17	4
4393		BOUL	01	16	1552	S16 W05	01	16.3		B	FHO	230	14	16	3
4393		HOLL	01	16	1611	S16 W04	01	16.4		BG	FHO	450	20	18	2
4393		LEAR	01	17	0029	S17 W08	01	16.4		BG	EKO	540	16	14	3
4393		MANI	01	17	0510	S16 W07	01	16.7			FKO	220	17	13	3
4393		ATHN	01	17	0700	S12 W18	01	15.9		BG	EKO	490	12	15	3
4393		RAMY	01	17	1311	S16 W15	01	16.4		BG	EKO	460	24	15	4
4393	23920	MWIL	01	17	1545	S17 W15	01	16.5	5	(B)					
4393		LEAR	01	18	0133	S18 W20	01	16.5		B	FHO	420	14	18	3
4393		ATHN	01	18	0715	S17 W25	01	16.4		BG	EKO	370	6	12	3
4393		RAMY	01	18	1245	S16 W29	01	16.3		BG	FKO	500	12	18	3
4393	23920	MWIL	01	18	1530	S17 W27	01	16.6	6	(B)					
4393		BOUL	01	18	1546	S13 W27	01	16.6		B	FHO	170	6	11	2
4393		HOLL	01	18	1615	S16 W32	01	16.3		BG	FKO	470	10	17	4
4393		MANI	01	19	0000	S16 W33	01	16.5			FKO	310	9	14	3
4393		LEAR	01	19	0133	S17 W36	01	16.3		B	FHO	460	8	17	3
4393		ATHN	01	19	0705	S17 W37	01	16.5		BG	EKO	440	6	11	3
4393		RAMY	01	19	1355	S17 W39	01	16.6		BG	EKO	490	9	11	4
4393		BOUL	01	19	1640	S15 W42	01	16.5		B	EAO	140	10	10	1
4393		HOLL	01	19	1705	S17 W42	01	16.5		B	EKO	320	5	12	2
4393	23920	MWIL	01	19	1800	S17 W44	01	16.4	6	(BY)					
4393		PALE	01	19	2015	S16 W45	01	16.4		B	EKO	320	7	12	3
4393		LEAR	01	20	0011	S17 W45	01	16.6			ESO	330	19	13	4

REGIONS OF SUNSPOT ACTIVITY
(ORDERED BY CENTRAL MERIDIAN PASSAGE DATE)

JANUARY 1984

NOAA/ USAF Region	Mt Wilson Region	Sta	Observation Time Mo	Day	(UT)	Lat	CMD	CMP Mo	Day	Max H	Mag Class	Spot Class	Corrected Area (10-6 Hemi)	Spot Count	Long. Extent (Deg)	Qual
4393		ATHN	01	20	0805	S17	W50	01	16.5		BG	EHO	260	11	12	2
4393		RAMY	01	20	1341	S17	W53	01	16.5		BG	ESO	360	15	13	4
4393		BOUL	01	20	1600	S13	W57	01	16.4		BG	FHO	200	8	17	2
4393	23920	MWIL	01	20	1600	S17	W56	01	16.4	5	(B)					
4393		HOLL	01	20	1800	S16	W56	01	16.5		BG	ESO	240	8	14	3
4393		LEAR	01	21	0048	S17	W58	01	16.6		BG	EAO	280	10	13	4
4393		MANI	01	21	0552	S15	W61	01	16.6			EKO	470	9	14	3
4393		ATHN	01	21	0730	S16	W65	01	16.4		BG	EHO	240	10	14	3
4393		RAMY	01	21	1234	S17	W66	01	16.5		BG	EAO	350	9	13	4
4393		HOLL	01	21	1543	S17	W68	01	16.5		B	EAO	270	9	13	3
4393	23920	MWIL	01	21	1800	S15	W69	01	16.5	4	(B)					
4393		PALE	01	21	1848	S16	W70	01	16.5		B	ESO	170	6	12	4
4393		MANI	01	21	2352	S15	W73	01	16.5			EAO	650	8	14	3
4393		LEAR	01	22	0050	S16	W71	01	16.6		BG	EAO	250	8	12	3
4393		ATHN	01	22	0745	S16	W78	01	16.4		BG	EHO	230	2	12	2
4393		RAMY	01	22	1405	S16	W79	01	16.6		BG	DAO	100	3	8	4
4393	23920	MWIL	01	22	1630	S16	W81	01	16.5	3	B					
4393		BOUL	01	22	1820	S22	W79	01	16.7		A	HSX	100	1	2	2
4393		PALE	01	22	1958	S17	W80	01	16.8		A	HSX	50	1	2	2
4393		HOLL	01	22	2200	S17	W84	01	16.5		A	HSX	60	1	2	4
4393		LEAR	01	23	0015	S17	W80	01	16.9		A	HSX	80	1	2	3
0003		LEAR	01	20	0011	S22	W04	01	19.7			BXO	10	4	3	4
0003		LEAR	01	21	0048	S23	W13	01	20.0		B	BXO	10	3	4	4
		HOLL	01	19	1705	S14	E04	01	20.0		A	AXX		2	2	2
0004		HOLL	01	20	1800	S06	W04	01	20.5		A	AXX		1		3
0004		MANI	01	21	0552	S06	W09	01	20.6			AXX	10	1		3
4396		LEAR	01	20	0011	S05	E22	01	21.7			DSO	40	9	8	4
4396		ATHN	01	20	0805	S07	E18	01	21.7		B	DSO	60	5	8	2
4396		RAMY	01	20	1341	S05	E15	01	21.7		B	DSO	110	14	5	4
4396		BOUL	01	20	1600	S03	E12	01	21.6		B	DSO	80	12	6	2
4396	23924	MWIL	01	20	1600	S05	E14	01	21.7	5	(B)					
4396		HOLL	01	20	1800	S05	E14	01	21.8		B	DAO	180	18	7	3
4396		LEAR	01	21	0048	S07	E09	01	21.7		BG	DAI	420	37	9	4
4396		MANI	01	21	0552	S04	E07	01	21.8			DKI	250	13	9	3
4396		ATHN	01	21	0730	S08	E06	01	21.8		B	DSO	320	11	7	3
4396		RAMY	01	21	1234	S05	E03	01	21.7		B	DAO	250	29	8	4
4396		HOLL	01	21	1543	S05	E02	01	21.8		B	DAO	250	23	8	3
4396	23924	MWIL	01	21	1800	S06	W01	01	21.7	5	(B)					
4396		PALE	01	21	1848	S05	W01	01	21.7		B	DKI	270	23	8	4
4396		MANI	01	21	2352	S04	W05	01	21.6			DAO	270	25	9	3
4396		LEAR	01	22	0050	S05	W04	01	21.7		BG	DKO	360	24	8	3
4396		ATHN	01	22	0745	S06	W08	01	21.7		B	DKO	300	18	9	2
4396		RAMY	01	22	1405	S05	W12	01	21.7		B	DAO	200	23	10	4
4396	23924	MWIL	01	22	1630	S06	W14	01	21.6	5	(B)					
4396		BOUL	01	22	1820	S05	W13	01	21.8		B	DHI	170	12	8	2
4396		PALE	01	22	1958	S06	W15	01	21.7		B	DAI	200	11	9	2
4396		HOLL	01	22	2200	S05	W16	01	21.7		B	EAO	180	20	12	4
4396		LEAR	01	23	0015	S06	W18	01	21.7		BG	DSO	290	15	8	3
4396		ATHN	01	23	1250	S04	W24	01	21.7		B	DAO	230	12	9	1
4396		RAMY	01	23	1420	S05	W25	01	21.7		B	EAO	190	22	12	3
4396		HOLL	01	23	1622	S05	W24	01	21.9		BG	EAO	210	21	15	4
4396		BOUL	01	23	1637	S04	W26	01	21.7		B	ESO	140	15	11	3
4396	23924	MWIL	01	23	1745	S06	W27	01	21.7	5	(B)					
4396		PALE	01	23	1845	S06	W28	01	21.7		B	ESO	180	19	11	4
4396		LEAR	01	24	0109	S06	W32	01	21.7		B	EAO	260	10	12	1
4396		BOUL	01	24	1530	S03	W39	01	21.7		B	DSO	100	2	8	2
4396		HOLL	01	24	1617	S05	W41	01	21.6		B	DSO	220	5	9	2
4396	23924	MWIL	01	24	1750	S05	W38	01	21.9	4	B					
4396		RAMY	01	24	1822	S06	W41	01	21.7		B	EAO	160	12	11	3
4396		PALE	01	24	1940	S05	W42	01	21.7		B	DSO	170	12	9	3
4396		LEAR	01	25	0130	S06	W45	01	21.7		B	DSO	190	13	10	1
4396		ATHN	01	25	0920	S07	W54	01	21.3		B	DSO	150	11	8	1
4396		RAMY	01	25	1410	S06	W54	01	21.5		B	EAO	210	23	11	3
4396		BOUL	01	25	1543	S04	W56	01	21.5		B	BXO	40	7	9	2
4396	23924	MWIL	01	25	1600	S06	W53	01	21.7	4	(B)					
4396		HOLL	01	25	1750	S06	W54	01	21.7		B	DSO	200	8	10	2
4396		PALE	01	25	1840	S06	W56	01	21.6		B	BXO	60	5	8	3

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JANUARY 1984

NOAA/ USAF Region	Mt Wilson Region	Sta	Observation Time Mo	Day	(UT)	Lat	CMD	CMP Mo	Day	Max H	Mag Class	Spot Class	Corrected Area (10-6 Hemi)	Spot Count	Long. Extent (Deg)	Qual
4396		LEAR	01	26	0221	S06	W60	01	21.6		BG	ESO	300	10	11	2
4396		ATHN	01	26	0730	S05	W55	01	22.2		B	DHO	180	4	10	2
4396		RAMY	01	26	1236	S06	W66	01	21.6		B	DAO	250	14	10	4
4396		HOLL	01	26	1556	S06	W68	01	21.6		B	DSO	160	13	9	3
4396	23924	MWIL	01	26	1600	S06	W67	01	21.7	3	(BP)					
4396		BOUL	01	26	1650	S04	W69	01	21.5		B	DSO	110	6	9	2
4396		PALE	01	26	1915	S07	W69	01	21.6		B	CSO	120	9	10	3
4396		LEAR	01	27	0133	S08	W73	01	21.6		BG	DSO	100	5	11	3
4396		ATHN	01	27	0700	S02	W80	01	21.3		B	CSO	90	5	4	3
4396		RAMY	01	27	1343	S07	W80	01	21.6		B	CAO	80	6	14	4
4394		RAMY	01	16	1315	S04	E78	01	22.4		B	CAO	20	4	5	4
4394		BOUL	01	16	1552	S06	E76	01	22.3		B	BXO	60	3	6	3
4394		HOLL	01	16	1611	S04	E76	01	22.4		B	CSO	60	3	6	2
4394		LEAR	01	17	0029	S03	E72	01	22.4		B	DSO	90	2	7	3
4394		MANI	01	17	0510	S06	E72	01	22.6			BXO	30	2	3	3
4394		ATHN	01	17	0700	S06	E69	01	22.5		B	DSO	60	2	7	3
4394		RAMY	01	17	1311	S03	E65	01	22.4		B	CAO	50	7	8	4
4394	23922	MWIL	01	17	1545	S04	E63	01	22.4	4	(B)					
4394		LEAR	01	18	0133	S02	E58	01	22.4		B	DSO	40	2	9	3
4394		ATHN	01	18	0715	S06	E55	01	22.4		B	CSO	70	2	8	3
4394		RAMY	01	18	1245	S03	E51	01	22.3		B	DAO	50	4	7	3
4394	23922	MWIL	01	18	1530	S04	E50	01	22.4	4	(BF)					
4394		BOUL	01	18	1546	S04	E52	01	22.5		A	AXX	10	2	1	2
4394		HOLL	01	18	1615	S04	E47	01	22.2		B	CAO	30	3	6	4
4394		MANI	01	19	0000	S04	E47	01	22.5			HRX	40	2	3	3
4394		LEAR	01	19	0133	S03	E48	01	22.7		A	HSX	20	2	1	3
4394		ATHN	01	19	0705	S05	E41	01	22.4		B	CSO	20	3	3	3
4394		RAMY	01	19	1355	S04	E35	01	22.2		B	EAO	50	11	11	4
4394		BOUL	01	19	1640	S05	E38	01	22.5		A	AXX	10	1	1	1
4394		HOLL	01	19	1705	S04	E36	01	22.4		B	CSO	40	6	6	2
4394	23922	MWIL	01	19	1800	S04	E36	01	22.4	4	(B)					
4394		PALE	01	19	2015	S05	E31	01	22.2		B	CSO	50	10	13	3
4394		LEAR	01	20	0011	S05	E32	01	22.4			DSO	130	11	7	4
4394		ATHN	01	20	0805	S07	E29	01	22.5		B	CRO	30	3	4	2
4394		RAMY	01	20	1341	S05	E25	01	22.4		B	CAO	60	15	8	4
4394		BOUL	01	20	1600	S02	E26	01	22.6		B	BXO	40	7	4	2
4394	23922	MWIL	01	20	1600	S04	E25	01	22.5	3	(B)					
4394		HOLL	01	20	1800	S04	E24	01	22.5		B	CSO	40	5	4	3
4394		LEAR	01	21	0048	S05	E19	01	22.5		B	DSO	70	12	5	4
4394		MANI	01	21	0552	S04	E17	01	22.5			CRO	30	6	4	3
4394		ATHN	01	21	0730	S06	E17	01	22.6		B	CSO	50	4	4	3
4394		RAMY	01	21	1234	S05	E12	01	22.4		B	CAO	50	8	6	4
4394		HOLL	01	21	1543	S05	E10	01	22.4		B	CRO	30	7	7	3
4394	23922	MWIL	01	21	1800	S05	W07	01	21.2	4	(AP)					
4394		PALE	01	21	1848	S04	E08	01	22.4		B	BXO	30	7	6	4
4394		MANI	01	21	2352	S04	E05	01	22.4			CRO	20	4	4	3
4394		LEAR	01	22	0050	S05	E06	01	22.5		B	CSO	20	3	4	3
4394		HOLL	01	22	2200	S05	W06	01	22.5		A	AXX	10	3	2	4
4394		LEAR	01	23	0015	S05	W07	01	22.5		A	AXX	10	2	1	3
4394		RAMY	01	23	1420	S05	W11	01	22.8		B	BXO	20	4	10	3
4394		HOLL	01	23	1622	S04	W10	01	22.9		A	AXX		1		4
4394		BOUL	01	23	1637	S03	W09	01	23.0		A	AXX	10	1	1	3
4394		PALE	01	23	1845	S05	W14	01	22.7		B	BXO	10	3	6	4
4394		LEAR	01	24	0109	S04	W14	01	23.0		A	AXX		1	1	1
4394		LEAR	01	25	0130	S04	W26	01	23.1		A	AXX		1	1	1
4394		RAMY	01	25	1410	S05	W34	01	23.0		A	AXX	10	1	1	3
4394		HOLL	01	25	1750	S05	W37	01	23.0		A	AXX	10	2	2	2
4395		ATHN	01	17	0700	S18	E78	01	23.2		A	HRX	20	1	3	3
4395		RAMY	01	17	1311	S15	E71	01	22.9		A	HAX	60	2	2	4
4395	23923	MWIL	01	17	1545	S16	E69	01	22.9	3	(AP)					
4395		LEAR	01	18	0133	S15	E66	01	23.1		A	HSX	20	2	1	3
4395		ATHN	01	18	0715	S18	E61	01	22.9		A	HSX	60	1	2	3
4395		RAMY	01	18	1245	S16	E59	01	23.0		A	HAX	40	1	2	3
4395	23923	MWIL	01	18	1530	S16	E56	01	22.9	4	(AP)					
4395		BOUL	01	18	1546	S15	E56	01	22.9		A	AXX	10	1	1	2
4395		HOLL	01	18	1615	S16	E55	01	22.8		A	HAX	20	1	1	4
4395		MANI	01	19	0000	S16	E51	01	22.9			HRX	30	2	3	3
4395		LEAR	01	19	0133	S16	E52	01	23.0		A	HSX	20	2	1	3
4395		ATHN	01	19	0705	S17	E48	01	22.9		A	HSX	20	2	2	3

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4395		RAMY	01	19	1355	S17 E46	01	23.1		B	DAO	70	7	5	4
4395		BOUL	01	19	1640	S17 E42	01	22.9		A	AXX	10	1	1	1
4395		HOLL	01	19	1705	S17 E43	01	23.0		B	BXO	20	5	3	2
4395	23923	MWIL	01	19	1800	S16 E42	01	22.9	4	(AP)					
4395		PALE	01	19	2015	S17 E41	01	23.0		B	CSO	30	4	3	3
4395		LEAR	01	20	0011	S15 E38	01	22.9			DSO	50	6	2	4
4395		ATHN	01	20	0805	S18 E37	01	23.2		B	CRO	30	3	6	2
4395		RAMY	01	20	1341	S15 E30	01	22.8		B	CAO	30	6	4	4
4395		BOUL	01	20	1600	S15 E28	01	22.8		B	BXO	20	2	3	2
4395	23923	MWIL	01	20	1600	S16 E30	01	22.9	4	(AP)					
4395		HOLL	01	20	1800	S17 E18	01	22.1		B	BXO	20	3	3	3
4395		LEAR	01	21	0048	S15 E25	01	22.9		B	CAO	50	5	2	4
4395		MANI	01	21	0552	S16 E23	01	23.0			CRO	20	3	4	3
4395		ATHN	01	21	0730	S16 E23	01	23.1		B	CAO	50	2	2	3
4395		RAMY	01	21	1234	S17 E20	01	23.0		B	CAO	20	5	5	4
4395		HOLL	01	21	1543	S17 E17	01	22.9		B	BXO	10	4	4	3
4395	23923	MWIL	01	21	1800	S16 E17	01	23.0	3	(AP)					
4395		PALE	01	21	1848	S15 E15	01	22.9		A	AXX	10	1	1	4
4395		PALE	01	21	1848	S18 E18	01	23.2		A	AXX	10	2	1	4
4395		MANI	01	21	2352	S16 E11	01	22.8			BXO	10	3	4	3
4395		LEAR	01	22	0050	S15 E12	01	22.9		A	AXX	10	1	1	3
4395		ATHN	01	22	0745	S18 E09	01	23.0		B	BXO	10	2	1	2
4395		HOLL	01	22	2200	S18 E03	01	23.1		A	AXX		2	2	4
4395		LEAR	01	23	0015	S18 E03	01	23.2		A	AXX	10	2	2	3
4401		PALE	01	24	1940	N07 W08	01	24.2		A	AXX		1		3
4401		RAMY	01	25	1410	N08 W19	01	24.2		B	CRO	10	4	3	3
4401	23929	MWIL	01	25	1600	N08 W19	01	24.2	3	(AP)					
4401		HOLL	01	25	1750	N07 W21	01	24.2		A	AXX		2		2
4401		PALE	01	25	1840	N08 W22	01	24.1		A	AXX		1		3
4401		LEAR	01	27	0133	N07 W41	01	24.0		A	AXX	20	3	2	3
4404		PALE	01	28	2015	N16 W36	01	26.1		B	BXO	10	3	3	3
4404		LEAR	01	29	0016	N15 W38	01	26.1		B	DSO	80	5	5	3
4404		RAMY	01	29	1253	N15 W46	01	26.1		B	CAO	30	10	4	4
4404		HOLL	01	29	1714	N15 W47	01	26.2		B	BXO	40	7	5	3
4404		PALE	01	29	1850	N16 W48	01	26.1		B	BXO	30	5	4	3
4404		LEAR	01	30	0047	N15 W52	01	26.1		B	BXO	10	6	5	3
4404		RAMY	01	30	1345	N15 W59	01	26.1		B	DRO	30	6	4	4
4404		HOLL	01	30	1655	N15 W60	01	26.2		B	BXO	10	2	4	2
4404		LEAR	01	31	0155	N14 W64	01	26.2		A	AXX		1	1	3
4404		RAMY	01	31	1515	N15 W71	01	26.3		A	AXX	10	1	1	4
4404	23935	MWIL	01	31	1730	N14 W71	01	26.4	3	(AF)					
4397		RAMY	01	20	1341	N17 E80	01	26.6		A	HAX	60	1	2	4
4397	23925	MWIL	01	20	1600	N16 E86	01	27.2	2	AP					
4397		HOLL	01	20	1800	N18 E79	01	26.8		A	HSX	100	1	2	3
4397		LEAR	01	21	0048	N16 E72	01	26.5		A	HAX	150	2	2	4
4397		MANI	01	21	0552	N17 E74	01	26.9			HSX	170	1	2	3
4397		RAMY	01	21	1234	N16 E75	01	27.2		B	CAO	190	5	10	4
4397		HOLL	01	21	1543	N16 E76	01	27.4		B	CAO	220	4	13	3
4397	23925	MWIL	01	21	1800	N16 E74	01	27.4	4	(AP)					
4397		PALE	01	21	1848	N17 E72	01	27.3		B	CSO	170	4	9	4
4397		MANI	01	21	2352	N16 E63	01	26.8			CAO	140	9	5	3
4397		LEAR	01	22	0050	N18 E63	01	26.8		A	HHX	150	3	4	3
4397		ATHN	01	22	0745	N16 E67	01	27.4		B	CSO	140	2	9	2
4397		RAMY	01	22	1405	N17 E60	01	27.1		B	DAO	270	4	9	4
4397	23925	MWIL	01	22	1630	N17 E57	01	27.0	5	(BP)					
4397		PALE	01	22	1958	N18 E55	01	27.0		B	CSO	130	2	4	2
4397		HOLL	01	22	2200	N17 E52	01	26.9		A	HSX	250	1	2	4
4397		LEAR	01	23	0015	N17 E53	01	27.0		B	CHO	170	3	4	3
4397		ATHN	01	23	1250	N16 E47	01	27.1		B	CSO	110	3	4	1
4397		RAMY	01	23	1420	N16 E47	01	27.2		B	DKO	330	8	9	3
4397		HOLL	01	23	1622	N17 E43	01	26.9		B	CHO	250	9	5	4
4397	23925	MWIL	01	23	1745	N17 E43	01	27.0	5	(BP)					
4397		PALE	01	23	1845	N17 E42	01	27.0		B	DSO	210	8	5	4
4397		LEAR	01	24	0109	N18 E39	01	27.0		B	CHO	300	4	6	1
4397		BOUL	01	24	1530	N17 E30	01	26.9		B	CHO	170	9	4	2
4397		HOLL	01	24	1617	N16 E29	01	26.9		B	DKO	310	17	5	2
4397	23925	MWIL	01	24	1750	N17 E28	01	26.9	4	B					
4397		RAMY	01	24	1822	N17 E32	01	27.2		B	DKO	360	20	9	3

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NOAA/ USAF Region	Mt Wilson Region	Sta	Observation Mo	Day	Time (UT)	Lat CMD	CMP Mo Day	Max H	Mag Class	Spot Class	Corrected Area (10-6 Hemi)	Spot Count	Long. Extent (Deg)	Qual
4397		PALE	01	24	1940	N17 E27	01 26.9		B	DAI	310	27	5	3
4397		LEAR	01	25	0130	N17 E25	01 27.0		B	DHI	320	13	4	1
4397		ATHN	01	25	0920	N15 E17	01 26.7		B	DHI	390	13	5	1
4397		RAMY	01	25	1410	N17 E18	01 27.0		B	DHO	340	27	6	3
4397		BOUL	01	25	1543	N13 E14	01 26.7		B	CHI	70	11	4	2
4397	23925	MWIL	01	25	1600	N17 E15	01 26.8	4	(B)					
4397		HOLL	01	25	1750	N16 E15	01 26.9		B	DSO	310	19	6	2
4397		PALE	01	25	1840	N14 E14	01 26.8		B	DHI	180	12	5	3
4397		LEAR	01	26	0221	N13 E11	01 26.9		BG	DHI	150	20	6	2
4397		ATHN	01	26	0730	N15 E08	01 26.9		B	DSO	200	6	5	2
4397		RAMY	01	26	1236	N15 E05	01 26.9		B	DSO	210	15	5	4
4397		HOLL	01	26	1556	N16 E04	01 27.0		B	DSO	280	16	6	3
4397	23925	MWIL	01	26	1600	N17 E02	01 26.8	3	(BP)					
4397		BOUL	01	26	1650	N16 E03	01 26.9		B	DSO	160	14	7	2
4397		PALE	01	26	1915	N14 E02	01 27.0		B	DSO	230	20	7	3
4397		LEAR	01	27	0133	N16 W03	01 26.8		B	DHO	300	15	5	3
4397		ATHN	01	27	0700	N15 W05	01 26.9		B	DHO	200	7	6	3
4397		RAMY	01	27	1343	N15 W09	01 26.9		B	CAO	210	16	6	4
4397	23925	MWIL	01	27	1700	N16 W12	01 26.8	4	(BP)					
4397		HOLL	01	27	1825	N15 W13	01 26.8		B	CSO	220	15	6	3
4397		PALE	01	27	1845	N14 W12	01 26.9		B	CAO	120	13	5	3
4397		LEAR	01	28	0016	N15 W15	01 26.9		B	CSO	150	15	6	3
4397		ATHN	01	28	0730	N15 W18	01 26.9		B	CSO	130	4	6	2
4397		RAMY	01	28	1335	N15 W24	01 26.7		B	CAO	140	6	5	3
4397		HOLL	01	28	1538	N15 W26	01 26.7		B	CSO	190	4	6	3
4397		PALE	01	28	2015	N16 W26	01 26.9		B	CSO	110	3	4	3
4397		LEAR	01	29	0016	N16 W29	01 26.8		B	CSO	150	3	4	3
4397		ATHN	01	29	0815	N15 W35	01 26.7		B	EHO	230	4	11	2
4397		RAMY	01	29	1253	N17 W35	01 26.9		B	CAO	160	3	4	4
4397	23931	MWIL	01	29	1645	N15 W41	01 26.6	4	(BF)					
4397		BOUL	01	29	1650	N17 W43	01 26.4		B	CSO	180	4	10	2
4397		HOLL	01	29	1714	N16 W38	01 26.8		A	HSX	140	1	2	3
4397		PALE	01	29	1850	N16 W39	01 26.8		A	HSX	90	1	2	3
4397		LEAR	01	30	0047	N16 W43	01 26.8		B	CSO	250	2	3	3
4397		RAMY	01	30	1345	N16 W49	01 26.9		B	CSO	170	4	3	4
4397		HOLL	01	30	1655	N17 W48	01 27.1		B	CSO	150	2	4	2
4397	23931	MWIL	01	30	2345	N15 W66	01 26.0	2	BF					
4397		LEAR	01	31	0155	N17 W56	01 26.8		A	HHX	180	1	3	3
4397		RAMY	01	31	1515	N16 W63	01 26.9		B	CAO	170	2	5	4
4397		BOUL	01	31	1525	N19 W63	01 26.8		A	HSX	50	1	1	3
4397		HOLL	01	31	1815	N16 W64	01 26.9		A	HSX	140	1	2	2
4397		PALE	01	31	1910	N16 W65	01 26.9		A	HSX	90	1	2	3
4397		LEAR	02	01	0123	N17 W69	01 26.8		A	HSX	70	1	1	1
4397		RAMY	02	01	1319	N17 W77	01 26.7		A	HSX	90	1	2	3
4397		HOLL	02	01	1512	N16 W76	01 26.9		A	HSX	40	1	2	4
4407		LEAR	01	30	0047	S15 W39	01 27.1		A	AXX	10	1	1	3
4407		RAMY	01	30	1345	S15 W49	01 26.9		A	AXX	10	1	1	4
4407		BOUL	01	31	1525	S15 W60	01 27.1		A	AXX		1		3
4398	23926	MWIL	01	21	1800	N13 E88	01 28.4	2	AP					
4398		PALE	01	21	1848	N14 E81	01 27.9		A	HSX	30	1	2	4
4398		LEAR	01	22	0050	N14 E75	01 27.7		B	DSO	130	7	8	3
4398		RAMY	01	22	1405	N15 E70	01 27.9		B	DAO	70	3	3	4
4398	23926	MWIL	01	22	1630	N16 E68	01 27.8	4	(B)					
4398		PALE	01	22	1958	N15 E66	01 27.8		B	CRO	60	7	10	2
4398		HOLL	01	22	2200	N14 E63	01 27.7		B	DSO	80	8	8	4
4398		LEAR	01	23	0015	N14 E63	01 27.8		B	DSO	110	7	9	3
4398		ATHN	01	23	1250	N15 E62	01 28.2		B	CAO	150	9	4	1
4398		RAMY	01	23	1420	N15 E58	01 28.0		B	DAO	220	8	5	3
4398		HOLL	01	23	1622	N15 E54	01 27.8		B	CAO	110	10	10	4
4398		BOUL	01	23	1637	N14 E58	01 28.1		B	CHO	100	6	9	3
4398	23926	MWIL	01	23	1745	N16 E54	01 27.8	5	(B)					
4398		PALE	01	23	1845	N15 E52	01 27.7		B	CKO	280	10	10	4
4398		LEAR	01	24	0109	N17 E48	01 27.7		B	CHO	280	7	8	1
4398		BOUL	01	24	1530	N17 E43	01 27.9		B	EKI	500	9	11	2
4398		HOLL	01	24	1617	N16 E41	01 27.8		BGD	DKI	600	26	10	2
4398	23926	MWIL	01	24	1750	N15 E41	01 27.8	4	BY					
4398		RAMY	01	24	1822	N16 E41	01 27.9		B	DKI	470	18	7	3
4398		PALE	01	24	1940	N16 E39	01 27.8		BG	DKI	510	30	9	3
4398		LEAR	01	25	0130	N17 E36	01 27.8		BGD	DKI	590	21	10	1

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NOAA/ USAF Region	Mt Wilson Region	Sta	Observation Time Mo	Day	(UT)	Lat CMD	CMP Mo	Day	Max H	Mag Class	Spot Class	Corrected Area (10-6 Hemi)	Spot Count	Long. Extent (Deg)	Qual
4398		ATHN	01	25	0920	N14 E28	01	27.5		BGD	DHI	630	12	8	1
4398		RAMY	01	25	1410	N15 E29	01	27.8		BGD	DKI	910	37	9	3
4398		BOUL	01	25	1543	N13 E28	01	27.8		B	DKI	330	18	10	2
4398	23926	MWIL	01	25	1600	N16 E27	01	27.7	5	(B)					
4398		HOLL	01	25	1750	N16 E26	01	27.7		BGD	DKI	870	17	9	2
4398		PALE	01	25	1840	N15 E27	01	27.8		B	DKI	450	16	10	3
4398		LEAR	01	26	0221	N14 E23	01	27.8		BGD	DKO	510	30	9	2
4398		ATHN	01	26	0730	N14 E20	01	27.8		BGD	DHO	720	10	10	2
4398		RAMY	01	26	1236	N16 E17	01	27.8		BGD	EKI	1290	35	11	4
4398		HOLL	01	26	1556	N16 E14	01	27.7		BGD	EKI	1170	31	12	3
4398	23926	MWIL	01	26	1600	N16 E15	01	27.8	4	(B)					
4398		BOUL	01	26	1650	N15 E14	01	27.8		B	DKI	1280	20	10	2
4398		PALE	01	26	1915	N15 E12	01	27.7		BGD	EKI	1310	38	11	3
4398		LEAR	01	27	0133	N14 E09	01	27.7		BGD	EKI	1690	36	11	3
4398		ATHN	01	27	0700	N15 E06	01	27.7		BGD	EKI	1540	20	11	3
4398		RAMY	01	27	1343	N13 E03	01	27.8		BGD	EKC	1730	44	11	4
4398	23926	MWIL	01	27	1700	N15 W00	01	27.7	5	(B)					
4398		HOLL	01	27	1825	N14 W00	01	27.8		BGD	EKI	1410	32	12	3
4398		PALE	01	27	1845	N13 E01	01	27.9		BGD	DKI	1420	23	9	3
4398		LEAR	01	28	0016	N14 W05	01	27.6		BGD	EKI	1830	64	12	3
4398		ATHN	01	28	0730	N12 W08	01	27.7		BGD	EKI	1560	21	12	2
4398		RAMY	~~01~~	28	1335	N15 W11	01	27.7		BGD	EKO	1970	58	11	3
4398	23926	MWIL	01	28	1515	N15 W18	01	27.3	5	(B)					
4398		HOLL	01	28	1538	N14 W12	01	27.7		BGD	EKI	2050	35	11	3
4398		PALE	01	28	2015	N14 W15	01	27.7		BGD	EKI	1930	30	14	3
4398		LEAR	01	29	0016	N14 W17	01	27.7		BGD	EKO	2230	59	14	3
4398		ATHN	01	29	0815	N14 W20	01	27.8		BGD	EHI	2200	18	12	2
4398		RAMY	01	29	1253	N14 W24	01	27.7		BGD	EKI	1980	75	12	4
4398	23926	MWIL	01	29	1645	N13 W26	01	27.7	6	(D)					
4398		BOUL	01	29	1650	N15 W25	01	27.8		B	EKC	2010	10	11	2
4398		HOLL	01	29	1714	N14 W26	01	27.8		BGD	EKI	2210	39	13	3
4398		PALE	01	29	1850	N14 W28	01	27.7		BGD	EKI	2160	48	12	3
4398		LEAR	01	30	0047	N14 W32	01	27.6		BGD	EKI	2200	46	13	3
4398		RAMY	01	30	1345	N15 W39	01	27.6		BGD	EKI	2310	70	14	4
4398		HOLL	01	30	1655	N14 W39	01	27.8		BGD	EKC	2010	24	11	2
4398	23926	MWIL	01	30	2345	N13 W42	01	27.8	6	D					
4398		LEAR	01	31	0155	N14 W45	01	27.7		BGD	EKI	2220	19	15	3
4398		RAMY	01	31	1515	N14 W51	01	27.8		BGD	EKI	2120	53	13	4
4398		BOUL	01	31	1525	N17 W52	01	27.7		BD	EKI	1050	14	13	3
4398	23926	MWIL	01	31	1730	N13 W52	01	27.8	5	(D)					
4398		HOLL	01	31	1815	N14 W44	01	28.4		BG	EKI	1740	20	12	2
4398		PALE	01	31	1910	N14 W54	01	27.7		BG	EKC	1680	28	12	3
4398		LEAR	02	01	0123	N14 W56	01	27.8		BGD	EKC	2150	9	12	1
4398		RAMY	02	01	1319	N15 W64	01	27.7		BGD	EKI	2190	38	14	3
4398		HOLL	02	01	1512	N14 W64	01	27.8		BG	EKI	1750	23	12	4
4398	23926	MWIL	02	01	1630	N13 W65	01	27.8	6	(6)					
4398		BOUL	02	01	1701	N18 W67	01	27.6		B	DSO	240	10	20	2
4398		RAMY	02	02	1223	N14 W74	01	27.9		BGD	EKO	1040	11	12	3
4398	23926	MWIL	02	02	1545	N13 W77	01	27.8	5	(D)					
4398		HOLL	02	02	1549	N14 W75	01	28.0		BG	DKI	870	6	10	2
4398		BOUL	02	02	1600	N18 W82	01	27.4		B	FKO	1320	4	16	3
4398		PALE	02	02	1925	N12 W80	01	27.8		BG	DKI	900	3	8	2
4398		LEAR	02	03	0031	N14 W79	01	28.1		B	DKO	870	6	5	3
4400	23928	MWIL	01	24	1750	N09 E50	01	28.5	2	AP					
4400		RAMY	01	24	1822	N08 E48	01	28.4		B	BXX	20	2	3	3
4400		PALE	01	24	1940	N08 E47	01	28.3		A	AXX	10	1	1	3
4400		LEAR	01	25	0130	N08 E43	01	28.3		B	BXO	20	4	4	1
4400		ATHN	01	25	0920	N05 E35	01	28.0		B	BXO	20	2	1	1
4400		RAMY	01	25	1410	N08 E36	01	28.3		B	CAO	30	3	3	3
4400		BOUL	01	25	1543	N06 E36	01	28.3		A	AXX	10	1	1	2
4400	23928	MWIL	01	25	1600	N08 E37	01	28.4	2	(AP)					
4400		HOLL	01	25	1750	N08 E36	01	28.4		A	AXX	10	1	1	2
4400		PALE	01	25	1840	N08 E35	01	28.4		A	AXX		1		3
4400		LEAR	01	26	0221	N05 E31	01	28.4		A	AXX		1	1	2
4400		ATHN	01	26	0730	N06 E29	01	28.5		A	AXX	20	1	1	2
4400		RAMY	01	26	1236	N08 E26	01	28.5		A	AXX	10	1	1	4
4400		HOLL	01	26	1556	N08 E24	01	28.5		A	AXX	10	1	1	3
4400	23928	MWIL	01	26	1600	N08 E24	01	28.5	2	(AP)					
4400		BOUL	01	26	1650	N08 E23	01	28.4		A	HRX	10	1		2
4400		PALE	01	26	1915	N08 E23	01	28.5		A	AXX	10	1	1	3

R E G I O N S O F S U N S P O T A C T I V I T Y
(ORDERED BY CENTRAL MERIDIAN PASSAGE DATE)

JANUARY 1984

NOAA/ USAF Region	Mt Wilson Region	Sta	Observation Mo	Day	Time (UT)	Lat	CMD	CMP Mo	Day	Max H	Mag Class	Spot Class	Corrected Area (10-6 Heml)	Spot Count	Long. Extent (Deg)	Qual
4400		LEAR	01	27	0133	N07	E18	01	28.4		A	AXX	10	1	1	3
4400		ATHN	01	27	0700	N07	E16	01	28.5		A	AXX	10	1	1	3
4400		RAMY	01	27	1343	N07	E12	01	28.5		A	AXX	10	1	1	4
4400	23928	MWIL	01	27	1700	N08	E10	01	28.5	3	(AP)					
4400		HOLL	01	27	1825	N07	E09	01	28.4		A	AXX		1		3
4400		PALE	01	27	1845	N08	E10	01	28.5		A	AXX	10	1	1	3
4400		LEAR	01	28	0016	N08	E06	01	28.5		A	AXX	10	2	2	3
4400		RAMY	01	28	1335	N07	W05	01	28.2		A	AXX	10	1	1	3
4400		HOLL	01	28	1538	N07	W01	01	28.6		A	AXX		1		3
4400		LEAR	01	31	0155	N01	W32	01	28.7		A	AXX		1	1	3
4399		HOLL	01	22	2200	N12	E82	01	29.1		A	HHX	350	1	4	4
4399		LEAR	01	23	0015	N12	E82	01	29.2		A	HKX	330	1	5	3
4399		ATHN	01	23	1250	N11	E80	01	29.6		A	HSX	20	1	3	1
4399		RAMY	01	23	1420	N12	E78	01	29.5		B	DAO	300	8	8	3
4399		HOLL	01	23	1622	N12	E75	01	29.3		B	DKI	860	6	10	4
4399		BOUL	01	23	1637	N13	E76	01	29.4		B	CHI	270	8	9	3
4399	23927	MWIL	01	23	1745	N12	E78	01	29.6	4	(B)					
4399		PALE	01	23	1845	N12	E74	01	29.4		B	DKI	480	15	9	4
4399		LEAR	01	24	0109	N13	E71	01	29.4		B	CKI	770	6	8	1
4399		BOUL	01	24	1530	N14	E70	01	29.9		B	EKC	850	6	12	2
4399		HOLL	01	24	1617	N12	E62	01	29.3		BD	EKC	1030	10	11	2
4399	23927	MWIL	01	24	1750	N14	E63	01	29.5	4	B					
4399		RAMY	01	24	1822	N13	E62	01	29.4		B	DKC	720	14	9	3
4399		PALE	01	24	1940	N12	E61	01	29.4		BD	DKC	980	21	9	3
4399		LEAR	01	25	0130	N13	E58	01	29.4		BD	DKI	950	10	8	1
4399		ATHN	01	25	0920	N09	E47	01	28.9		BD	DHI	840	14	7	1
4399		RAMY	01	25	1410	N13	E50	01	29.4		BD	DKO	1150	28	9	3
4399		BOUL	01	25	1543	N10	E50	01	29.4		B	DKI	320	12	7	2
4399	23927	MWIL	01	25	1600	N14	E50	01	29.4	5	(B)					
4399		HOLL	01	25	1750	N12	E48	01	29.4		B	DKO	910	18	9	2
4399		PALE	01	25	1840	N12	E48	01	29.4		B	DKI	510	11	7	3
4399		LEAR	01	26	0221	N11	E43	01	29.3		BD	DKO	640	22	9	2
4399		ATHN	01	26	0730	N10	E42	01	29.5		BG	DHI	570	10	8	2
4399		RAMY	01	26	1236	N12	E38	01	29.4		BD	DKI	1270	33	9	4
4399		HOLL	01	26	1556	N12	E36	01	29.4		BD	DKI	1260	30	9	3
4399	23927	MWIL	01	26	1600	N13	E37	01	29.5	4	(B)					
4399		BOUL	01	26	1650	N11	E34	01	29.3		B	DKI	880	16	8	2
4399		PALE	01	26	1915	N12	E34	01	29.4		BD	DKI	1250	33	10	3
4399		LEAR	01	27	0133	N11	E29	01	29.2		BD	DKC	1280	24	9	3
4399		ATHN	01	27	0700	N10	E29	01	29.5		BD	DHC	1130	21	10	3
4399		RAMY	01	27	1343	N13	E25	01	29.5		BD	EKI	1160	41	11	4
4399	23927	MWIL	01	27	1700	N13	E22	01	29.4	5	(D)					
4399		HOLL	01	27	1825	N13	E22	01	29.4		BD	DKI	710	30	9	3
4399		PALE	01	27	1845	N11	E22	01	29.4		BD	CKI	1040	29	9	3
4399		LEAR	01	28	0016	N12	E18	01	29.4		BD	DKO	1300	47	8	3
4399		ATHN	01	28	0730	N09	E15	01	29.4		BD	DKI	1100	18	10	2
4399		RAMY	01	28	1335	N12	E11	01	29.4		BD	DKI	1200	51	10	3
4399	23927	MWIL	01	28	1515	N12	E09	01	29.3	4	(B)					
4399		HOLL	01	28	1538	N12	E10	01	29.4		BD	DKI	1280	41	9	3
4399		PALE	01	28	2015	N12	E08	01	29.4		BD	DKI	1020	38	9	3
4399		LEAR	01	29	0016	N12	E15	01	30.1		BD	DKO	1320	55	10	3
4399		ATHN	01	29	0815	N09	E03	01	29.6		BD	EHI	1500	21	10	2
4399		RAMY	01	29	1253	N11	W02	01	29.4		BD	DKO	1480	61	9	4
4399	23927	MWIL	01	29	1645	N11	W04	01	29.4	6	(D)					
4399		BOUL	01	29	1650	N13	W05	01	29.3		B	DKI	1400	12	8	2
4399		HOLL	01	29	1714	N12	W04	01	29.4		BD	DKC	1700	37	10	3
4399		PALE	01	29	1850	N12	W05	01	29.4		BD	DKC	1380	39	10	3
4399		LEAR	01	30	0047	N12	W09	01	29.4		BGD	DKC	1710	27	10	3
4399		RAMY	01	30	1345	N12	W15	01	29.4		BGD	DKI	1520	51	10	4
4399		HOLL	01	30	1655	N12	W17	01	29.4		BGD	DKC	1590	23	10	2
4399	23927	MWIL	01	30	2345	N11	W21	01	29.4	6	D					
4399		LEAR	01	31	0155	N12	W22	01	29.4		BGD	DKC	1840	13	10	3
4399		RAMY	01	31	1515	N12	W29	01	29.5		BGD	DKI	1670	45	9	4
4399		BOUL	01	31	1525	N13	W28	01	29.5		BD	DKC	1250	10	8	3
4399	23927	MWIL	01	31	1730	N11	W31	01	29.4	6	(BY)					
4399		HOLL	01	31	1815	N12	W32	01	29.3		G	DKC	1330	11	10	2
4399		PALE	01	31	1910	N12	W32	01	29.4		G	DKI	1260	9	9	3
4399		LEAR	02	01	0123	N11	W35	01	29.4		G	DKC	1560	4	9	1
4399		RAMY	02	01	1319	N12	W42	01	29.4		BGD	EKI	1620	38	11	3
4399		HOLL	02	01	1512	N12	W43	01	29.4		BD	DKC	1540	14	10	4

REGIONS OF SUNSPOT ACTIVITY
(ORDERED BY CENTRAL MERIDIAN PASSAGE DATE)

JANUARY 1984

NOAA/ USAF Region	Mt Wilson Region	Sta	Observaton Mo	Day	Time (UT)	Lat CMD	CMP Mo Day	Max H	Mag Class	Spot Class	Corrected Area (10-6 Hemi)	Spot Count	Long. Extent (Deg)	Qual
4399	23927	MWIL	02	01	1630	N13 W44	01 29.4	6	(BY)					
4399		BOUL	02	01	1701	N13 W43	01 29.5		BG	DHO	980	4	10	2
4399		RAMY	02	02	1223	N12 W53	01 29.5		BGD	EKI	1430	13	11	3
4399	23927	MWIL	02	02	1545	N11 W56	01 29.4	5	(D)					
4399		HOLL	02	02	1549	N12 W55	01 29.5		BD	DKC	1400	15	9	2
4399		BOUL	02	02	1600	N13 W55	01 29.5		B	DKC	1780	15	10	3
4399		PALE	02	02	1925	N10 W59	01 29.4		BD	DKC	1300	8	9	2
4399		LEAR	02	03	0031	N11 W60	01 29.5		BGD	DKO	1720	26	8	3
4399		ATHN	02	03	0935	N12 W65	01 29.5			DKO	960	6	10	1
4399		HOLL	02	03	1530	N11 W69	01 29.5		BD	DKI	1500	10	10	3
4399		BOUL	02	03	1544	N13 W78	01 28.8		B	DKO	390	6	10	2
4399		PALE	02	03	1835	N11 W72	01 29.4		BD	EKI	1100	7	11	3
4399	23927	MWIL	02	03	2245	N11 W71	01 29.6	5	D					
4399		MANI	02	03	2350	N11 W73	01 29.5			EKC	1760	9	11	3
4399		LEAR	02	04	0050	N12 W73	01 29.5		BD	EKO	1610	10	11	3
4399		RAMY	02	04	1345	N09 W81	01 29.5		BD	DAO	440	7	7	2
4399		HOLL	02	04	1542	N11 W81	01 29.6		BD	DKI	140	2	6	2
4399	23927	MWIL	02	04	1600	N10 W82	01 29.5	4	AF					
4399		BOUL	02	04	1640	N12 W85	01 29.3		A	HHO	270	4	5	3
4399		PALE	02	04	1835	N11 W87	01 29.2		B	CKO	250	4	5	3
4405		RAMY	01	29	1253	S18 W01	01 29.5		B	CAO	20	3	3	4
4405	23932	MWIL	01	29	1645	S19 W02	01 29.5	4	(B)					
4405		HOLL	01	29	1714	S18 W03	01 29.5		B	BXO	10	3	3	3
4405		PALE	01	29	1850	S18 W03	01 29.6		B	BXO	10	2	3	3
4405		LEAR	01	30	0047	S18 W07	01 29.5		A	AXX		1	1	3
4402		RAMY	01	25	1410	S12 E71	01 30.9		A	AXX	10	1	1	3
4402		LEAR	01	26	0221	S15 E67	01 31.2		B	BXO	10	3	2	2
4402		RAMY	01	26	1236	S13 E60	01 31.1		B	BXO	40	3	2	4
4402		HOLL	01	26	1556	S13 E59	01 31.1		B	BXO	10	3	3	3
4402		BOUL	01	26	1650	S15 E55	01 30.9		A	AXX		1		2
4402		PALE	01	26	1915	S13 E57	01 31.1		B	BXO	10	2	4	3
4402		RAMY	01	27	1343	S14 E45	01 31.0		A	AXX	20	2	2	4
4402		HOLL	01	27	1825	S14 E42	01 30.9		B	BXO	10	4	3	3
4402		PALE	01	27	1845	S16 E42	01 31.0		A	AXX	10	3	2	3
4402		RAMY	01	29	1253	S13 E17	01 30.8		B	BXO	10	3	3	4
4403	23930	MWIL	01	27	1700	N14 E46	01 31.2	2	(B)					
4403		HOLL	01	27	1825	N14 E45	01 31.2		B	BXO	10	3	3	3
4403		PALE	01	27	1845	N12 E47	01 31.3		A	AXX	10	3	2	3
4403		LEAR	01	28	0016	N14 E43	01 31.3		B	CRO	40	4	4	3
4403		RAMY	01	28	1335	N13 E36	01 31.3		B	CAO	30	5	5	3
4403	23930	MWIL	01	28	1515	N15 E33	01 31.1	3	(B)					
4403		HOLL	01	28	1538	N13 E34	01 31.2		B	BXO	10	6	5	3
4403		PALE	01	28	2015	N13 E32	01 31.3		B	CRO	20	7	5	3
4403		LEAR	01	29	0016	N13 E29	01 31.2		B	CSO	40	5	6	3
4403		ATHN	01	29	0815	N10 E22	01 31.0		A	AXX	10	1	1	2
4403		RAMY	01	29	1253	N13 E22	01 31.2		B	CAO	20	4	5	4
4403	23930	MWIL	01	29	1645	N13 E18	01 31.1	3	(BP)					
4403		HOLL	01	29	1714	N13 E19	01 31.2		B	BXO	20	5	4	3
4403		PALE	01	29	1850	N13 E17	01 31.1		B	BXO	10	2	3	3
4403		LEAR	01	30	0047	N15 E13	01 31.0		B	BXO	20	4	5	3
4403		RAMY	01	30	1345	N14 E07	01 31.1		B	BXO	10	5	3	4
4403		HOLL	01	30	1655	N13 E06	01 31.2		A	AXX	10	2	1	2
4403	23930	MWIL	01	30	2345	N12 E02	01 31.1	2	B					
4403		LEAR	01	31	0155	N12 E02	01 31.2		B	BXO	30	7	5	3
4403		RAMY	01	31	1515	N13 W07	01 31.1		B	DAO	70	18	4	4
4403		BOUL	01	31	1525	N14 W07	01 31.1		B	CRO	20	8	5	3
4403	23930	MWIL	01	31	1730	N12 W08	01 31.1	5	(B)					
4403		HOLL	01	31	1815	N13 W08	01 31.2		B	BXO	30	15	5	2
4403		PALE	01	31	1910	N13 W09	01 31.1		B	BXO	40	11	5	3
4403		LEAR	02	01	0123	N13 W14	01 31.0		B	DAI	180	8	5	1
4403		RAMY	02	01	1319	N13 W18	01 31.2		B	DAI	200	42	8	3
4403		HOLL	02	01	1512	N13 W20	01 31.1		B	DRO	80	19	8	4
4403	23930	MWIL	02	01	1630	N12 W21	01 31.1	5	(BY)					
4403		BOUL	02	01	1701	N15 W21	01 31.1		BG	ESO	70	7	8	2
4403		RAMY	02	02	1223	N13 W31	01 31.2		BG	DAO	120	18	8	3
4403	23930	MWIL	02	02	1545	N11 W33	01 31.2	5	(B)					
4403		HOLL	02	02	1549	N13 W34	01 31.1		B	DAO	110	14	8	2
4403		BOUL	02	02	1600	N15 W35	01 31.0		B	DRI	130	13	8	3

REGIONS OF SUNSPOT ACTIVITY
(ORDERED BY CENTRAL MERIDIAN PASSAGE DATE)

JANUARY 1984

NOAA/ USAF Region	Mt Wilson Region	Sta	Observation Mo	Day	Time (UT)	Lat	CMD	CMP Mo	Day	Max H	Mag Class	Spot Class	Corrected Area (10-6 Hemi)	Spot Count	Long. Extent (Deg)	Qual
4403		PALE	02	02	1925	N12	W37	01	31.0		B	DAO	50	6	7	2
4403		LEAR	02	03	0031	N12	W38	01	31.2		B	DSO	140	21	7	3
4403		ATHN	02	03	0730	N10	W62	01	29.7		A	HSX	80	1	3	3
4403		ATHN	02	03	0935	N11	W35	01	31.8		B	BXO	20	2	2	1
4403		HOLL	02	03	1530	N12	W47	01	31.1		B	CSO	60	9	6	3
4403		BOUL	02	03	1544	N12	W51	01	30.8		A	AXX	10	2	1	2
4403		PALE	02	03	1835	N12	W51	01	30.9		B	CSO	60	4	6	3
4403	23930	MWIL	02	03	2245	N12	W54	01	30.9	4	BP					
4403		MANI	02	03	2350	N12	W54	01	30.9			CSO	110	4	6	3
4403		LEAR	02	04	0050	N12	W55	01	30.9		B	DAO	90	6	6	3
4403		RAMY	02	04	1345	N11	W65	01	30.7		B	CAO	50	2	1	2
4403		HOLL	02	04	1542	N12	W64	01	30.8		A	HSX	20	2	2	2
4403	23930	MWIL	02	04	1600	N11	W64	01	30.9	4	(B)					
4403		BOUL	02	04	1640	N12	W66	01	30.7		A	HSX	40	1	1	3
4403		PALE	02	04	1835	N12	W66	01	30.8		A	HSX	50	2	2	3
4403		LEAR	02	05	0110	N12	W69	01	30.9		A	HSX	10	3	2	3
4403		RAMY	02	05	1320	N11	W78	01	30.7		A	AXX	20	1	1	4
4403	23930	MWIL	02	05	1600	N11	W77	01	30.9	3	(AP)					
4403		PALE	02	05	1820	N12	W80	01	30.7		A	AXX	30	1	1	3
4403		LEAR	02	06	0013	N11	W81	01	30.9		A	AXX		1		3
	23933	MWIL	01	29	1645	S14	E24	01	31.5	3	(AF)					

S U D D E N I O N O S P H E R I C D I S T U R B A N C E S

JANUARY 1984

Day	Start (UT)	Max (UT)	End (UT)	Imp	Wide-spread Index	Number of Station Reports by Type SWF	SEA	SPA	LF-SPA	SES	Known Flare	NOAA/SESC Region
01	0935	0943	1055	2	1		1				NF	
05	0438	0452	0536	1-	1			1			0435	X-ray
05	1033	1108U	1148	1	1		1				NF	
06	0539	0543	0602	1	1					1	NF	
06	0658		0800		1		1				NF	
07	2144	2152	2237	1-	1			1			*	
08	2016	2018	2055	1	3					2	2016	X-ray
09	0100		0120		1		1				NF	
10	0528	0538	0609	1-	1			1			NF	
10	1351	1454U	1420	1	1		1				NF	
11	0852	0901U	0919	1	1		1				NF	
11	1350	1359	1427U	1	1		1				1359	4393
11	1831	1836	1914	1+	3					2	1829	4393
12	0349	0357	0412	1-	1			1			0350	X-ray
12	0417	0421	0452	1-	1			1			0416	No data
12	1912	1915	1922	1	1					1	1912	4393
12	2138	2150	2256	1-	3			1		1	2135	4393
13	0102	0109	0119	1-	1				1		0114E	No data
13	0136	0140	0154	1	1			1			0137	4393
13	0237	0252	0438	2+	3	1		1	1	1	0234	4393
13	0619	0632	0826	1-	3			1	1	1	0615	4393
13	1148	1153U	1242	1	1		1				*	
13	1659	1701	1714	1-	3					3	1659	4393
14	0851	0854	0910	1-	1					1	NF	
14	1130	1133	1145	1-	1					1	1127	X-ray
15	1308	1323	1430	1	1					1	NF	
15	2240		2300		1		1				NF	
16	0346	0355	0410	1-	1			1			0350	No data
16	1005	1017	1057	1	1		1				NF	
16	1112	1118	1129	1	1		1				*	
16	1249	1253U	1336	1	1		1				NF	
17	1032	1049U	1101	1	1		1				NF	
19	2143	2154	2214	1-	1			1			NF	
20	0859	0907	0936	1-	3			1		1	0857	4393
20	1352	1417	1500	2	3					3	1350	4392
20	1736	1745	1805	1+	3					5	1737	4393
20	2318	2343	0018	1-	1			1			2320	4393
20	2340	2342	0000	1	3					2	2335	X-ray
21	0351	0406	0512	1-	3			1	1	1	0342	4393
21	1559	1600	1605	1-	3					3	NF	
21	1946	1951	2002	1-	1					1	1949	4393
21	2206	2218	2236	1-	1			1			*	
22	0140	0144	0150U	1-	1				1		0141	4393
22	0218	0228	0334	1-	3	1		1	1	1	0220	X-ray
22	0429	0433	0455	1-	1			1			0433	No data
22	0447	0448	0500	1-	1					1	NF	
22	0611	0618	0648	1-	3			1	1	2	0609	X-ray

S U D D E N I O N O S P H E R I C D I S T U R B A N C E S

January 1984

Day	Start (UT)	Max (UT)	End (UT)	Imp	Wide-spread Index	Number of Station Reports by Type SWF	SEA	SPA	LF-SPA	SES	Known Flare	NOAA/SESC Region
22	1313	1315	1325	1-	1					1	NF	
22	2056	2058	2115	1	3					2	2053	X-ray
23	0246	0253	0316	1-	1			1			0245	No data
23	0338	0344	0410	1-	1			1			0336	X-ray
23	0416	0418	0434	1-	1			1			0414	No data
23	0514	0520	0553	1-	1			1			0518	4399
23	0831	0838	0934	2	3	1		1		4	0829	No data
23	1007	1012U	1037	1	1		1				NF	
23	1036	1043	1055	1-	3			1		1	1034	X-ray
23	1348	1355	1410U	1	1		1				NF	
23	1559	1601	1615	1-	3					2	1555	4399
23	1651	1653	1710	1	3					2	1647	X-ray
24	0410	0414	0450	1-	3	1		1	1	2	0408	4399
24	0502	0505	0531	1-	1			1			0500	X-ray
24	0624	0628	0704	1-	3			1	1	1	0622	4396
24	0708	0722	0744	1-	3		1	1			0711	4398
24	0804	0809	0833	1-	3			1		2	0804	4398
24	0856	0902	0935	1-	3			1		2	0845	4398
25	0140	0147	0201	1-	1			1			0140	4396
25	0248	0252	0322	1-	1			1			0249	4398
25	0326	0346	0419	1-	1			1			0325	No data
25	0736	0803	0850	1-	3			1		2	0734	No data
25	0759	0801	0816	1	3					3	0756	4397
25	1730	1750	1916	1	1			1			1740	No data
25	2154	2206	2225	1-	1			1			2155	4396
25	2252	2301	2316	1-	3			1		1	2252	4397
26	0035	0044	0347	2	3	1		1	1	1	0035	No data
26	0300	0308	0320U	1-	1				1	1	0300	4397
26	0541	0549	0651	1-	3			1		1	0541	4399
26	1531	1534	1600	1+	3					5	1532	4396
26	1626	1630	1705	2	3					5	1622	4396
26	1722	1724	1743	1	3					2	1721	4396
26	2302	2308	2327	1-	1			1			2303	X-ray
26	2335	2344	0033	1-	3			1		1	2333	4397
27	0222	0236	0311	1-	3			1	1	1	0214	X-ray
27	0316	0334	0424	1	3	1		1	1	1	0317	4398
27	0441	0444	0509	1-	3			1	1		0440	X-ray
27	0654	0706	0904	2+	3	1		1	1	2	0655	4398
27	0921	0932	0952	1	1		1				NF	
27	1200	1201	1207	1-	3			1		2	1156	X-ray
27	1251	1255	1340	1	3					3	1251	No data
27	1404	1410	1435	1	3					4	1403	4398
27	1442	1444	1500	1-	3					2	1441	No data
27	1658	1659	1707	1-	3					2	1656	4399
27	1903	1904	1912	1	3					5	1903	4398
27	2153	2200	2250	1-	1			1			2200	4399
27	2245	2248	2314	1-	1			1			2249E	4398
28	0020	0027	0107	1-	1			1			0023	4399
28	0304	0315	0346	1-	1			1			*	
28	0406	0412	0453	1-	3			1	1		0403	X-ray
28	0501	0550	0556	1-	1			1			*	
28	0559	0611	0653	1-	1			1			0600	X-ray
28	0714	0740	0836	1	3			1	1	2	0715	4398
28	0845	0855	0930	1-	1					1	NF	
28	1302	1318	1350	1	1		1				NF	
28	1528	1538	1615	1	3					3	1535	4398
28	1751	1801	1816	1	3					4	1748	X-ray
28	2155	2202	2242	1-	3			1		3	2154	4398
28	2343	2348	0019	1-	3			1		1	2344	4398

S U D D E N I O N O S P H E R I C D I S T U R B A N C E S

January 1984

Day	Start (UT)	Max (UT)	End (UT)	Imp	Wide-spread Index	Number of Station Reports by Type: SWF	SEA	SPA	LF-SPA	SES	Known Flare	NOAA/SESC Region
29	0049	0054	0114	1-	1			1			NF	
29	0127	0132	0207	1-	1			1			0127	X-ray
29	0318	0330	0410	1-	3			1	1		0319	4398
29	0543	0545	0624	1-	3			1	1	1	0545	4398
29	0817	0821	0850	1	1		1			1	NF	
29	1235	1238	1255	1	1					1	1232E	No data
29	2226	2248	2327	1	1			1			2223	4399
29	2241	2247	2313	1-	3			1		3	2223	4399
30	0202	0208	0308	1-	3			1	1	1	0203	4398
30	0429	0443	0650	3+	3	1		1	1	2	0430	4399
30	0719	0732	0825	1-	3			1	1		0710	4398
30	0912	0921	0957	1-	3			1		1	0910	4399
30	1018	1020	1030	1-	1					1	*	
30	1052	1059	1129	1-	3		1	1		1	1055E	No data
30	1206	1210	1222	1	1		1				NF	
30	1235	1249U	1302	1	1		1				1233	X-ray
30	1309	1315	1400	1-	1					2	1310	4398
30	2128	2136	2156	1-	1			1			2124	4399
31	0048	0054	0120	1-	1			1			0042	4397
31	0421	0439	0451D	1-	3	1		1	1		0420	4398
31	0444	0452	0510	1-	3	1		1	1		NF	
31	0538	0548	0710	1+	3	1		1	1		0539	4398
31	0709	0732	0939	2	3			1		2	0710E	4398
31	0720	0738	0820	2+	3		1		1		0730E	No data
31	1029	1033	1050	1-	1					1	NF	
31	1053	1108	1154	1-	1			1			1050E	No data
31	1300	1302	1315	1	3		1			2	1256	4397
31	1318	1328	1400	1	1					1	NF	
31	2210	2214	2247	1-	1			1			2213	4399

SIDs by NOAA/SESC REGION

January 1984

Day	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
Region Number																															
4392																				1											
4393											2	2	4							3	2	1									
4396																								1	2	3					
4397																									2	2					2
4398																								3	1		5	4	2	3	3
4399																							2	1		1	2	1	2	3	1
X-Ray					1			1				1		1	2					1		3	3	1		1	3	3	1	1	
No Flare	1				1	2			1	2	1			1		2	1	1			1	2	2				1	2	2	1	3
No Flare Patrol							1						1			1					1							2		1	
No Data												1	1			1						1	3		3	1	2		1	1	2
Event Totals	1				2	2	1	1	1	2	3	4	6	2	2	4	1	1		5	4	7	10	6	8	8	13	12	8	10	11

OBSERVATORIES REPORTING FOR JANUARY 1984*

Ayrshire, Scotland (AY)	SES	Louisville, Kentucky, USA (A26)	SES
Darmstadt, GFR (DA)	SWF	Maui, Hawaii, USA (MI)	SWF
Edenvale, South Africa (A52)	SES	Mayfield Village, Ohio, USA (A28)	SES
Farsta, Sweden (FA)	SES	Panska Ves, Czechoslovakia (PU)	SEA, SWF, SES
Glenorchy, Tasmania, Australia (GN)	SES	Patterson, New Jersey, USA (A46)	SES
Hiraiso, Japan (HI)	SWF	Sofia, Bulgaria (SF)	SES
Hobart, Tasmania, Australia (TA)	SEA	St. Cloud, Minnesota, USA (SC)	SES
Houston, Texas, USA (A50)	SES	Tournai, Belgium (TB)	SES
Inubo, Japan (IN)	SPA	Tucson, Arizona, USA (A9)	SES
Lake Hiawatha, New Jersey, USA (A01)	SES	Upice, Czechoslovakia (UI)	SEA
Latrobe, Pennsylvania, USA (A19)	SES	Valley Cottage, New York, USA (A01)	SES
Lintong, China (LT)	SPA		

*Observations are not necessarily continuous for each reporting station.

SOLAR RADIO EMISSION SPECTRAL OBSERVATIONS

JANUARY 1984

Day	Observation Start (UT)	Observation End (UT)	Sta	Decimetric Band Start (UT)	Decimetric Band End (UT)	Decimetric Band Int (1-3)	Metric Band Start (UT)	Metric Band End (UT)	Metric Band Int (1-3)	Dekametric Band Start (UT)	Dekametric Band End (UT)	Dekametric Band Int (1-3)	Spectral Type
01	0000	0735	CULG										
	1017	1454	WEIS										
	2035	2400	CULG										
02	0000	0735	CULG										
			LEAR				0434.0	0453.1	1				CONT
	0757	1455	WEIS										
	2036	2400	CULG										
03	0000	0735	CULG										
	0757	1456	WEIS										
04	0757	0937	WEIS										
	0943	1457	WEIS										
05			LEAR				0703.0	1054.0	1				CONT
	0756	1458	WEIS										
06	0756	1459	WEIS										
			PALE				2214.3	2215.1	1				III
07	0756	0839	WEIS										
	1135	1500	WEIS										
08	0756	1501	WEIS										
09	0755	1505	WEIS										
10	0854	1031	WEIS										
	1037	1506	WEIS										
11			LEAR				0400.0	0400.3	1				III
	0754	1508	WEIS										
12			LEAR				0147.0	1055.0	1				CONT
	0841	1508	WEIS										
			PALE				2113.3	2113.6	1				III
13			LEAR				0240.3	0243.1	1				III
	0752	0915	WEIS										
	0921	1509	WEIS				1205.1	1205.2	1				IIIB
			WEIS				1347.7	1347.8	1				IIIB
14			LEAR				0130.8	0259.1	1				CONT
			LEAR				0555.0	0658.0	1				CONT
			LEAR				0803.5	0803.6	1				III
	0752	1510	WEIS				0851.0	1508.0	1				IN
			WEIS				1002.9	1003.0	1				IIIB
			WEIS				1021.4	1022.2	1				IIIG
			WEIS				1057.7	1057.8	2				IIIB
			WEIS				1154.2	1154.4	2				IIIG
			WEIS				1154.3	1151.7	2				IIIG
			WEIS				1418.0	1418.5	1				IIIG
			LEAR				2332.1	2332.5	2				III
			PALE				2332.1	2332.6	2				V
15			LEAR				0005.5	0005.8	1				III
			LEAR				0037.6	0045.5	1				III
			LEAR				0100.0	0102.1	1				III
			LEAR				0614.3	0614.6	1				III
			LEAR				0702.0	0822.0	1				CONT
			WEIS				0821.0	1440.0	1				IN
	0751	1441	WEIS				1026.2	1028.8	2				DCIM
			WEIS				1027.7	1028.7	2				IIIG
			WEIS				1115.0	1115.2	1				IIIB
			WEIS				1125.6	1125.7	1				IIIB
			WEIS				1258.7	1258.8	1				IIIB
16			LEAR				0055.0	1056.0	1				CONT
			WEIS				1000.0	1510.0	2				IN
	0755	1513	WEIS				1416.1	1416.2	1				IIIB

SOLAR RADIO EMISSION
SPECTRAL OBSERVATIONS

JANUARY 1984

Day	Observation Start (UT)	Observation End (UT)	Sta	Decimetric Band Start (UT)	Decimetric Band End (UT)	Decimetric Band Int (1-3)	Metric Band Start (UT)	Metric Band End (UT)	Metric Band Int (1-3)	Dekametric Band Start (UT)	Dekametric Band End (UT)	Dekametric Band Int (1-3)	Spectral Type
16			PALE				2026.3	2026.6	1				III
			PALE				2039.6	2039.8	1				III
			LEAR				2337.0	1056.0	1				CONT
17	0748	1515	WEIS										
18			LEAR				0822.8	0826.5	1				III
	0747	1315	WEIS				1133.1	1133.2	3				IIIG
	1322	1516	WEIS										
19	0748	1518	WEIS										
			PALE				1937.1	1937.6	1				III
20			LEAR				0107.6	0117.5	1				III
			LEAR				0137.6	0141.3	2				V
			PALE				0137.8	0141.1	1				III
			LEAR				0521.8	0522.1	1				III
			LEAR				0657.6	0659.3	1				III
			LEAR				0732.6	0733.0	1				III
	0745	0911	WEIS										
	0934	1520	WEIS										
			SGMR				1400.0	1401.0	1				III
			PALE				1937.8	0141.1	1				III
21			LEAR				0222.6	0222.8	1				III
			LEAR				0340.6	0340.8	1				III
			LEAR				0404.8	0520.0	1				CONT
			LEAR				0716.6	0803.0	1				CONT
	0745	1027	WEIS										
	1030	1521	WEIS				1504.9	1505.9	1				DCIM
22			LEAR				0125.3	0125.6	1				III
	0744	1523	WEIS				1244.8	1245.0	1				IIIB
			SGMR				1328.0	1328.3	1				III
23	0743	1459	WEIS										
24	0746	1526	WEIS				1208.3	1208.9	3				IIIG
			WEIS				1211.3	1212.0	3				IIIG
			PALE				2104.1	0346.0	1				CONT
25			LEAR				0328.8	0329.3	1				V
			LEAR				0606.5	0607.0	1				III
			LEAR				0754.8	1055.0	1				CONT
	0743	1528	WEIS				0756.7	0757.9	2				IIIG
			WEIS				0806.0	1308.0	2				IN
			WEIS				0825.6	0826.7	2				IIIG
			WEIS				1102.2	1103.4	2				IIIG
			WEIS				1102.4	1103.3	2				DCIM
			WEIS				1122.3	1122.7	3				IIIG
			WEIS				1207.7	1209.7	3				DCIM,RS
			WEIS				1208.2	1208.3	1				IIIB
			WEIS				1228.4	1228.7	2				DCIM
			WEIS				1310.2	1310.7	3				IIIGG
			WEIS				1347.7	1349.2	3				DCIM
			SGMR				2010.8	2011.0	1				V
			PALE				2011.6	2011.8	2				III
			SGMR				2021.8	2022.0	1				V
			PALE				2022.8	2022.8	2				III
			PALE				2154.3	2154.6	2				III
			PALE				2211.8	2212.1	1				III
			PALE				2254.3	2254.6	2				III
26			LEAR				0026.5	0027.3	2				III
			PALE				0026.6	0027.1	2				III
			LEAR				0042.3	0046.3	1				III
			LEAR				0052.0	0102.0	1				II
			LEAR				0055.0	0700.0	1				IV
			LEAR				0058.0	0059.3	3				III
			PALE				0058.1	0059.1	2				III
			PALE				0106.3	0106.6	2				III

SOLAR RADIO EMISSION
SPECTRAL OBSERVATIONS

JANUARY 1984

Observation Day	Start (UT)	End (UT)	Sta	Decimetric Band Start (UT)	End (UT)	Int (1-3)	Metric Band Start (UT)	End (UT)	Int (1-3)	Dekametric Band Start (UT)	End (UT)	Int (1-3)	Spectral Type
26			LEAR				0107.1	0107.8	2				III
			PALE				0116.1	0241.0	1				CONT
			LEAR				0240.3	0242.5	2				III
			PALE				0241.0	0241.1	2				III
			LEAR				0413.8	0414.1	1				III
			LEAR				0600.1	0605.0	2				V
			LEAR				0645.1	0653.6	2				III
			LEAR				0734.0	0737.6	2				III
	0739	0939	WEIS										
			LEAR				0746.0	0802.1	1				G
			LEAR				0804.1	0810.5	1				II
			LEAR				0831.1	0804.3	1				III
			LEAR				0853.5	0908.5	1				G
			LEAR				0927.0	0935.3	1				III
			SGMR				1310.0	1310.3	1				V
	1439	1530	WEIS				1453.9	1457.3	3				IIIGG
			WEIS				1516.4	1516.7	2				IIIG
			WEIS				1520.3	1524.7	2				IIIGG,U
			SGMR				1620.0	1621.0	1				V
			SGMR				1641.6	1642.0	1				III
			PALE				1822.3	1822.6	1				III
			SGMR				1901.6	1903.1	1				V
			PALE				1942.0	1942.1	1				III
			SGMR				1942.0	1942.1	1				III
			SGMR				2042.8	2042.8	1				III
			SGMR				2056.6	2057.5	1				V
			PALE				2057.6	2058.3	2				V
			LEAR				2327.0	2328.1	1				III
			LEAR				2351.8	0003.6	1				GG
27			LEAR				0016.3	0037.8	2				GG
			LEAR				0055.1	0103.5	1				III
			LEAR				0154.8	0200.8	1				III
			LEAR				0238.6	0248.1	1				III
			LEAR				0251.6	0320.1	2				GG
			PALE				0256.0	0257.5	1				V
			PALE				0319.6	0320.0	1				III
			LEAR				0331.5	0338.5	1				III
			LEAR				0430.0	1054.0	1				CONT
			LEAR				0844.8	0845.3	2				III
	0738	1256	WEIS				0844.8	0845.3	2				IIIG
			LEAR				0903.5	0904.3	2				III
			WEIS				0903.6	0904.0	2				IIIG
			WEIS				0917.0	1530.0	2				IN
			WEIS				1014.8	1015.0	2				IIIG
			WEIS				1020.2	1020.9	2				IIIG
			WEIS				1039.8	1040.9	3				IIIG
			WEIS				1116.3	1116.9	3				IIIG
			WEIS				1233.6	1233.8	3				IIIG
			WEIS				1243.2	1243.4	1				IIIG
	1327	1532	WEIS				1419.7	1422.1	3				IIIGG
			SGMR				1420.8	1423.6	1				V
			SGMR				1544.3	1544.8	1				V
			PALE				1742.3	1742.6	1				III
			SGMR				1742.3	1742.8	1				V
			LEAR				2219.0	1047.0	1				CONT
			LEAR				2327.0	2328.1	1				III
			LEAR				2336.8	2337.3	2				V
			PALE				2336.8	2337.5	3				V
			LEAR				2351.8	0003.6	1				GG
28			PALE				0002.6	0003.1	2				V
			LEAR				0117.6	0119.8	2				V
			PALE				0117.6	0119.5	2				V
			LEAR				0243.8	0244.8	2				V
			PALE				0244.0	0244.3	2				V
			LEAR				0352.8	0409.6	2				G
			LEAR				0816.1	0817.5	2				V
	1028	1539	WEIS				1032.8	1033.9	2				IIIG
			WEIS				1241.4	1241.9	2				IIIG
			WEIS				1402.2	1403.1	1				IIIG,U

SOLAR RADIO EMISSION
SPECTRAL OBSERVATIONS

JANUARY 1984

Day	Observation Start (UT)	Observation End (UT)	Sta	Decimetric Band Start (UT)	Decimetric Band End (UT)	Decimetric Band Int (1-3)	Metric Band Start (UT)	Metric Band End (UT)	Metric Band Int (1-3)	Dekametric Band Start (UT)	Dekametric Band End (UT)	Dekametric Band Int (1-3)	Spectral Type
28			WEIS				1522.2	1539.0	1				IIIN
			LEAR				2220.0	1054.0	1				CONT
			PALE				2336.8	2337.5	3				V
29			LEAR				0042.3	0043.5	2				III
			PALE				0042.5	0042.6	2				III
			PALE				0209.5	0209.8	1				III
			LEAR				0229.1	0231.6	2				V
			PALE				0229.5	0229.6	1				III
	0908	1541	WEIS				0931.0	1541.0					I
			WEIS				1032.3	1032.9	1				IIIG
			WEIS				1037.2	1037.3	1				IIIB
			WEIS				1055.2	1055.7	1				IIIG
			WEIS				1226.8	1234.1	2				IIIG
			SGMR				1411.3	1411.8	1				V
			WEIS				1411.6	1412.8	1				IIIG
			WEIS				1432.7	1435.7	1				IIIG
			WEIS				1445.3	1539.0	2				IIIN
			SGMR				1533.3	1533.8	1				V
			SGMR				1837.5	2127.0	1				CONT
			PALE				1906.0	0403.0	1				CONT
30			LEAR				0202.6	0203.5	2				III
			LEAR				0300.6	0301.1	2				III
	0730	1340	WEIS				0801.0	1526.0	1				INDC
			LEAR				1006.1	1006.5	2				III
			WEIS				1006.2	1006.4	2				IIIG
			WEIS				1107.6	1107.8	2				IIIG
			WEIS				1157.1	1157.3	2				IIIB
	1347	1543	WEIS				1411.4	1411.7	1				IIIG
			SGMR				1411.8	1413.0	1				V
			WEIS	1439.6	1442.3	1							DCIM
31			LEAR				0537.5	0541.0	2				III
			LEAR				0544.6	0600.0	1				II
			LEAR				0600.0	0621.3	1				IV
			LEAR				0703.0	1053.0	2				IV
	0746	1539	WEIS				0749.0	1539.0	2				IS
			WEIS				0900.0	1240.0	3				IV
			WEIS				1229.0	1539.0	2				IIIS
			WEIS				1257.2	1259.8	3				IIIGG
			SGMR				1257.6	1259.3	1				V
			SGMR				1259.3	1534.0	1				CONT
			LEAR				2302.3	1053.0	1				CONT

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

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

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

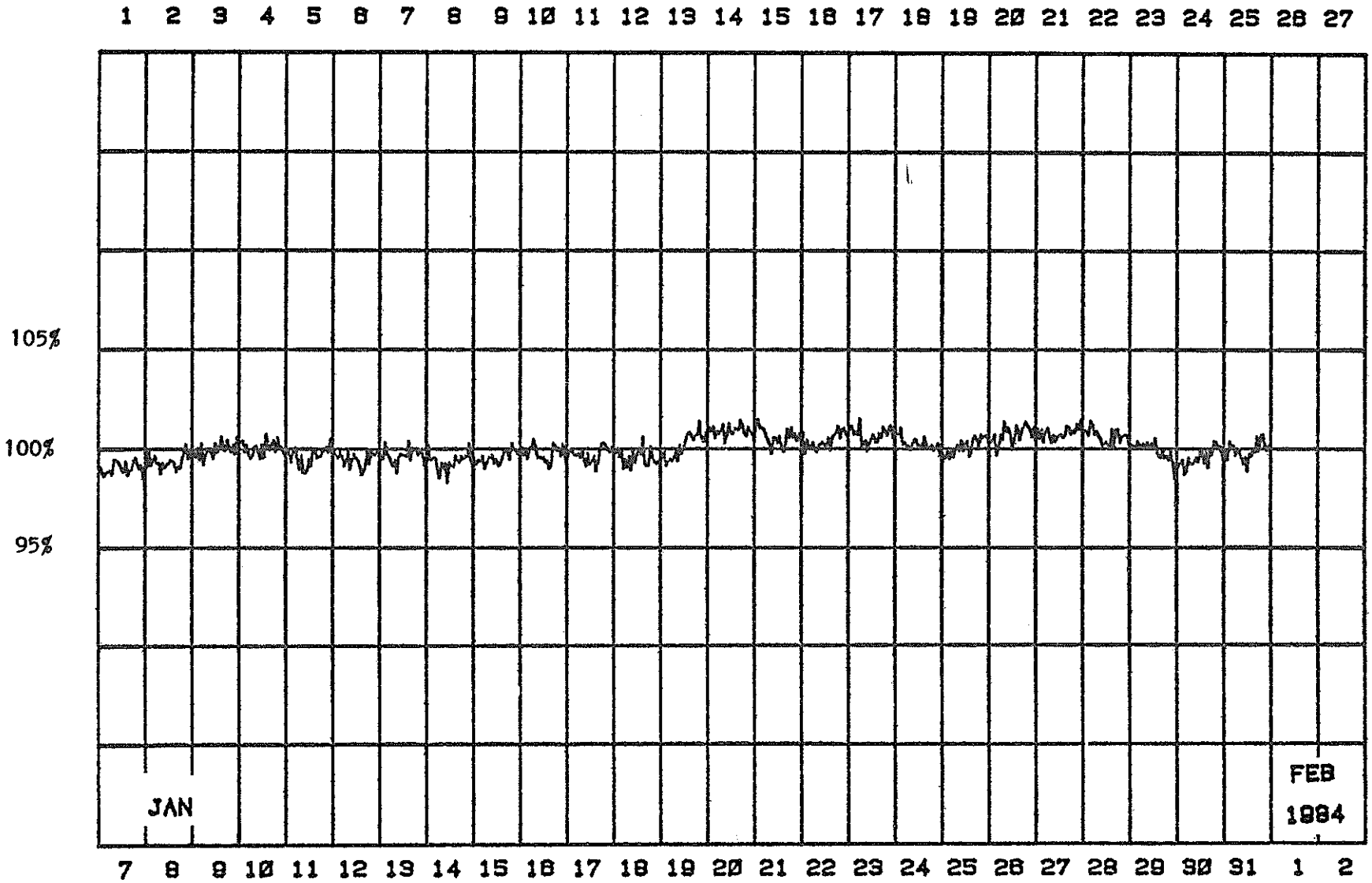
COSMIC RAY INDICES
(Neutron Monitor)

January 1984

Day	THULE Average (cts/h)/100	ALERT Average (cts/h)/100	DEEP RIVER Average (cts/h)/300	KIEL Average (cts/h)/100	CLIMAX Average (cts/h)/100	PREDIGTSTUHL Average (cts/h)/100	TOKYO Average (cts/h)/256	HUANCAYO Average (cts/h)/100
1	4173					1155		
2	4176					1153		
3	4147					1156		
4	4117					1143		
5	4086					1132		
6	4135					1130		
7	4172					1134		
8	4187					1145		
9	4211					1158		
10	4213					1162		
11	4197					1154		
12	4191					1155		
13	4197					1145		
14	4186					1137		
15	4194					1142		
16	4202					1139		
17	4200					1131		
18	4194					1126		
19	4219					1133		
20	4250					1138		
21	4238					1134		
22	4230					1128		
23	4242					1128		
24	4222					1128		
25	4217					1129		
26	4242					1136		
27	4245					1153		
28	4237					1152		
29	4206					1138		
30	4194					1139		
31	4208					1142		
Mean	4198					1141		

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

THULE NEUTRON MONITOR



BARTELS ROTATION 2056

101
Jan 84

GEOMAGNETIC ACTIVITY INDICES

January 1984

Day		Kp Three-Hourly Indices 1	2	3	4	5	6	7	8	Sum	Ap	Cp	Km Three-Hourly Indices 1	2	3	4	5	6	7	8	aa Provisional Am	N	S	M	
1	D3	5-	4+	5-	3+	4	4	4-	4-	32+	28	1.2	4	3	4-	3	4	4	4-	4-	46	50	39	38	51	
2		4	4	4	3+	5-	3-	2-	2	26+	20	1.0	3-	3	4-	3	4	3-	2+	2+	30	34	30	36	29	
3		3+	3+	4	3-	4	4	3	3-	27	20	1.0	2+	3-	3+	2+	4-	4-	3+	3-	31	43	26	23	47	
4	D1	4	4-	6	4	3	3-	4+	4	32-	30	1.3	3	3	5	4	3+	3+	4	4-	48	48	63	64	48	
5	D4	5+	5+	4-	3-	4	2+	3-	3-	29-	26	1.2	4	4+	3	2+	4	2+	3-	3-	36	41	29	40	31	
6		3-	3	3-	3+	3+	3+	2+	2+	23	14	0.8	2+	2+	2+	3-	3	3+	2	2	22	33	18	23	29	
7	Q3	1	2+	1+	2-	1	1	1	2-	11	5	0.2	1	2-	1+	2-	2-	1+	1	1+	10	11	10	11	10	C
8	Q1	1	0+	1+	1+	0+	1-	0+	0+	6-	3	0.1	1-	0+	1-	1+	0+	1-	0	0	4	4	7	8	3	CC
9	Q2	0+	2-	1-	1	0+	1	1	2	8	4	0.1	0+	1-	0+	1+	0+	1+	1-	2-	6	7	7	7	8	CC
10		2+	3-	1+	1+	1+	3+	4	4	20+	14	0.8	2	2	1+	2-	2	4-	4	4-	26	29	26	12	43	
11		3	2+	2-	2	2-	2-	3+	3	19-	10	0.6	3-	2-	1	2	2-	2	3	3-	17	24	18	18	25	
12	Q5	2+	2	1+	1	1-	2-	1-	2-	11+	5	0.2	2-	1+	1+	1	1+	2-	0+	1+	8	11	11	11	12	C
13		1-	1+	1+	1-	3	3+	2+	3	16-	9	0.5	1	1+	1+	1-	3+	3+	3-	3-	18	27	15	9	33	
14	Q8	1+	2	1-	1	3-	1	2	2	13-	6	0.3	1+	1+	1	1+	2	2-	2+	2+	12	12	12	10	14	C
15	Q4	2-	1	3-	1-	1+	1+	1	1+	11	6	0.2	1+	1	2	1	2-	2	1+	1+	10	10	14	11	14	KC
16	Q9	1	2-	1+	1-	2	2+	2	2	13	6	0.3	1	1	1+	1	2+	3-	2-	2+	13	12	14	9	17	C
17		4-	3-	1+	1	1-	1-	1	1-	12-	7	0.4	3+	1+	1+	1-	1	1	1+	1-	11	16	11	20	8	K
18	Q1OK	0	1-	0+	1+	2-	2-	2+	3+	11+	6	0.3	0+	0+	1-	2	2	2+	2+	3	13	16	13	7	22	
19		4+	4-	4-	3+	3+	3	2	3	26+	19	1.0	3+	3	4-	3+	4-	2+	2	3	32	34	32	34	32	
20		3-	3+	2-	3+	1	1	1-	1+	15	9	0.5	2	3-	2-	3	1	1+	1-	1	13	17	14	24	7	
21		2+	4-	3	4-	1	1	3-	3-	20	12	0.7	2-	3	2+	3+	1+	1+	3-	2+	21	23	17	24	16	
22		4-	3-	3	3-	2+	2	2+	2-	20+	12	0.7	3	2	3-	3-	2+	2	2+	1+	19	23	14	22	16	
23	Q7	2+	2	1	1	2	2-	2	1	13	6	0.3	2-	1+	1-	1	2-	2+	2+	1+	11	13	11	9	15	C
24	Q6K	3	2	2+	1-	0+	0	0+	0+	9	5	0.2	2+	1+	2+	1+	0+	0	1-	1+	9	10	11	14	7	CC
25		0+	2	3-	2	2-	3-	3-	3+	17+	10	0.5	1	1+	3-	2+	2-	3+	3	3-	20	25	17	12	31	
26		3+	4	4+	2	2+	3	3-	2+	24	16	0.9	3	3	4	2	3-	3	3-	2	28	28	20	23	26	
27		2-	3	2-	1	1+	2+	2-	3-	15+	8	0.4	2-	2+	1+	1	2	3-	2-	3-	15	15	14	13	17	
28		3	3	4-	4+	3+	4+	3+	4-	29-	22	1.1	3-	3-	3+	4	3	4	3+	3	37	40	37	34	43	
29		5	4-	3+	4	3	2-	3-	3+	27-	21	1.1	5-	3	2+	4-	3	2-	3-	3	33	36	27	41	23	
30	D2	4+	5-	3+	4+	4+	5-	5-	4-	34	32	1.3	4-	4-	3-	3+	4-	4+	5-	3+	47	62	41	41	62	
31	D5	3	3	3	3+	4-	5	4-	4	29-	23	1.1	2+	3-	2	3+	4-	5-	4-	4-	38	43	32	22	53	
Mean											13	0.65									22.1	25.8	20.9	23.5		

Day	Kn Three-Hourly Indices 1	2	3	4	5	6	7	8	An	Ks Three-Hourly Indices 1	2	3	4	5	6	7	8	As	Sa	Prov RI	Ra	Rs	IMF	
1	4+	4-	4-	3-	4+	4+	4-	3+	49	4-	3-	3+	3+	4-	4	4-	4	42	84.3	10	7	29	A	-
2	3	3+	3+	3	4+	3-	2-	2	31	2+	3	4-	3	4	2+	3-	3-	29	87.4	16	16	32	A	-
3	2+	3	4-	3-	4+	4	4-	3-	37	2+	2+	3	2	3+	3	3	3-	25	89.5	17	16	35	A	-
4	3	3-	5	4-	3+	3	4	3+	43	3	4-	5	4	4-	4-	4	4-	53	91.0	18	18	36	T	-
5	4+	5-	3	2	4+	2+	2+	3-	40	4-	4-	3	3-	4-	2+	3	3-	33	88.2	26	17	33	A	-
6	2+	2+	2+	3	3+	3+	2	2	23	2	3-	2	3-	3-	3	2	2	20	85.6	29	24	30	A	-
7	1-	2-	1+	2	2-	1+	1-	1+	9	1+	1+	2-	1+	2-	1+	1+	1+	10	86.5	37	22	31	A	-
8	1-	0+	1-	2-	1-	1	0+	0	4	1	0+	1-	1+	0+	1-	0	0	4	92.3	36	35	38	A	-
9	0+	1	0+	1	0+	1+	1	2-	6	0+	1-	0+	2-	1-	1+	0+	2-	6	94.4	50	47	40	A	-
10	2	2	1+	1+	2+	4-	4+	3+	25	2	2	2-	2	2	4-	4-	4	28	95.2	44	47	41	T	-
11	2+	2-	1	2-	1+	2	3+	3-	16	3	2-	1	2	2	2	3	3-	18	96.8	48	44	43	T	-
12	2-	1+	1+	1	1	2	0+	1	8	2-	1+	1+	1	2-	2-	0+	2-	9	101.1	51	47	47	T	-
13	1-	1	1	1-	4-	3+	3-	3-	18	1	2-	2-	1	3	3	3-	3	18	102.1	45	44	48	T	-
14	1+	2-	1-	1	2	1+	2	2-	11	1	1+	1	2	2	2-	2+	2+	13	99.2	46	42	45	T	-
15	1+	1	2	1-	1+	2-	1	1+	9	2-	1	2	1+	2	2+	1+	2-	12	97.8	44	38	44	T	-
16	1	1	1	1-	2	3-	2	2-	11	1-	1+	1+	1+	3-	3	2-	3-	14	96.6*	46	42	42	T	-
17	3	2-	1+	1-	1	1	1+	1-	11	3+	1	1+	1	1	1	1+	1	11	95.2	51	49	41	T	-
18	0	0+	1-	2	2	2	3-	3	13	1-	0+	1	2	2	3-	2+	3	14	95.0	49	49	41	T	-
19	3+	3+	4	3+	4	3-	2	3	35	4-	3	4-	3+	3+	2+	2	3-	30	93.4	51	53	39	TA	-
20	2	3-	2-	3+	1-	1+	1-	1-	13	2	3-	2-	3-	1+	1+	1	1+	13	102.2	69	62	48	A	-
21	2-	3+	3-	4-	1	1+	3	2+	22	2-	3	2+	3	1+	1+	3-	3-	20	103.3	76	65	50	A	-
22	3	2	3-	3-	3-	2	2+	1+	20	3	2-	2+	2+	2	2	2	1+	17	110.5	69	65	57	A	-
23	1+	1+	1-	1	2-	2+	2+	1+	11	2	2-	0+	1	2-	2+	2+	1+	12	113.3	70	65	60	A	-
24	3-	2-	3-	1	0	0	1-	0+	9	2+	1+	2	1+	1-	0+	1-	2	10	126.4*	70	75	75	A	-
25	1-	1+	3-	2+	2-	3	3	3-	19	1+	2-	3-	2	2	3+	3+	3-	22	146.8	99	99	97	TA	-
26	3	3+	4	2	2+	3+	3	2	28	3	3	4	2	3-	3-	2+	2+	27	164.8*	98	106	116	T	-
27	1+	2+	1	1	2	3-	2-	2+	14	2-	2+	2-	1+	2-	3-	1+	3-	15	172.3	105	102	124	AT	-
28	2+	3-	3	4	3	4+	3+	3+	37	3-	3	4-	4	3	4	3+	3	38	168.9	106	98	120	A	-
29	5-	3	2+	4-	3+	2-	3-	3+	35	5-	3+	2+	3+	3-	2-	3-	3	31	174.6	118	108	127	A	-
30	3+	4+	3-	3+	4-	5-	4+	3+	49	4-	3	3-	3+	4	4	5-	3+	45	161.5	110	93	112	A	-
31	2+	3-	2+	3+	4-	5	4	3+	41	2+	3-	2	3+	4-	4+	4-	4-	36	169.3	82	90	121	A	-
Mean									22.5									21.8	112.4	57.6	54.4	59.4		

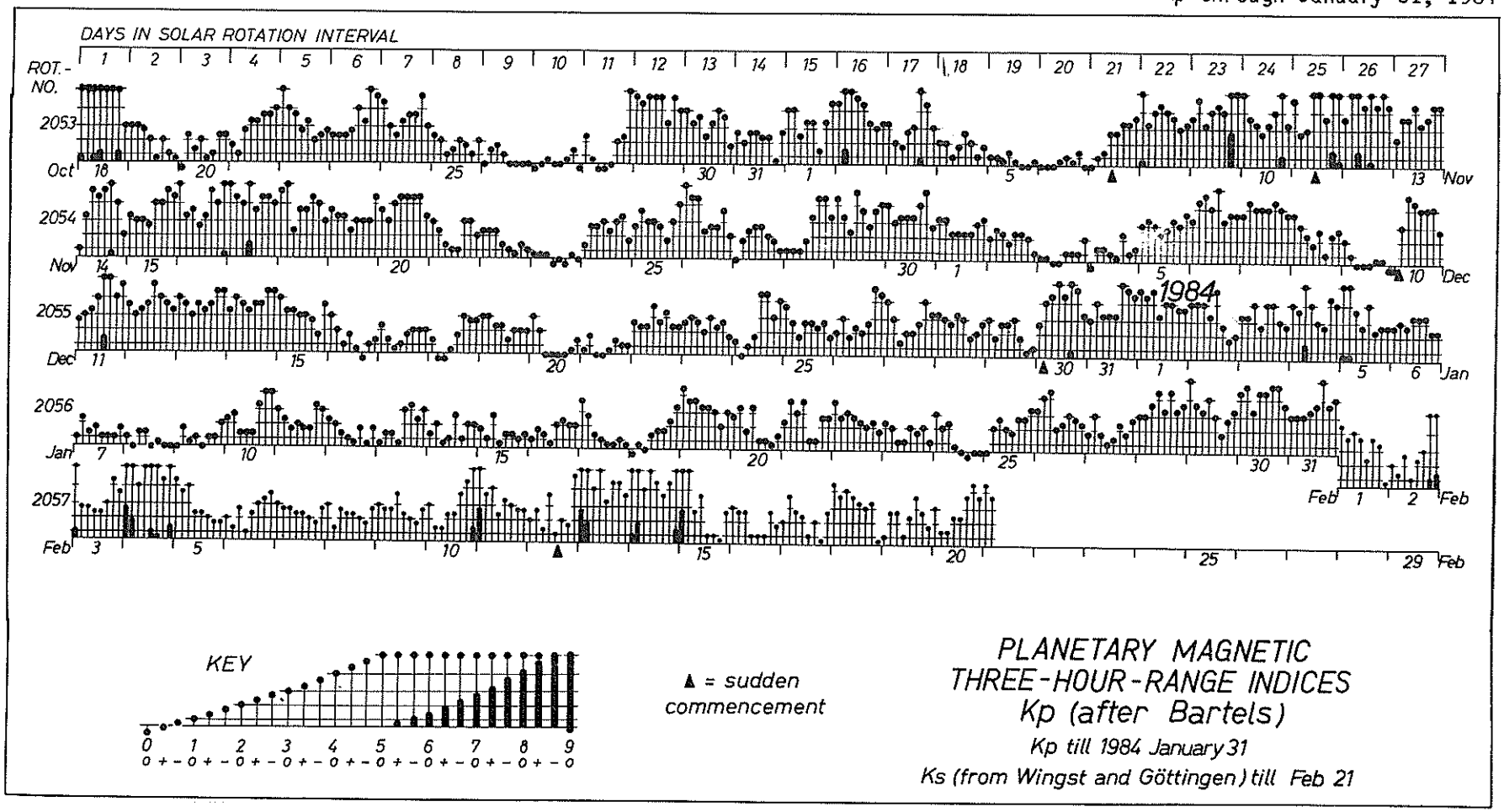
DAILY AVERAGE INDICES Ap

DAY	1983 FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	1984 JAN
1	11	21	20	24	13	6	5	17	11	19	13	28
2	5	86	16	14	8	9	33	6	23	35	8	20
3	7	36	15	10	6	8	17	6	18	20	4	20
4	59	26	16	26	3	8	5	3	43	7	4	30
5	143	28	17	24	6	6	2	3	8	3	16	26
6	47	12	35	14	11	14	6	5	22	3	28	14
7	43	7	34	8	6	14	18	22	11	12	27	5
8	18	6	25	11	12	10	62	15	16	27	11	3
9	18	8	19	6	20	12	11	16	5	43	3	4
10	23	7	22	8	37	5	5	12	7	29	22	14
11	24	24	8	50	10	4	6	12	6	40	33	10
12	33	53	11	52	16	16	26	13	4	44	23	5
13	35	24	36	37	70	19	25	7	30	24	24	9
14	28	26	45	23	12	6	9	6	22	28	24	6
15	25	15	59	20	17	5	10	21	19	23	17	6
16	30	11	33	9	8	21	4	26	13	30	6	6
17	16	11	19	64	17	26	6	25	48	38	6	7
18	14	20	11	12	37	20	2	11	51	27	7	6
19	10	28	9	5	20	9	9	54	8	18	9	19
20	41	32	13	10	17	7	11	22	6	26	5	9
21	36	12	12	29	20	6	25	11	16	9	4	12
22	21	9	17	51	20	10	15	13	19	6	12	12
23	17	9	17	38	17	23	32	4	21	2	11	6
24	14	10	61	77	6	40	23	9	22	12	15	5
25	6	50	32	11	5	12	36	33	6	16	11	10
26	5	13	28	10	13	7	26	28	3	22	16	16
27	7	3	14	11	8	10	5	13	2	7	15	8
28	8	37	12	5	12	11	8	10	10	15	13	22
29		40	39	5	13	15	17	8	34	23	9	21
30		27	26	9	7	18	18	3	19	22	33	32
31		28		11		7	29		10		27	23
MEAN	27	23	24	22	16	12	16	14	17	21	15	13

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

University of Gottingen

Kp through January 31, 1984



DAILY GEOMAGNETIC CHARACTER FIGURES (C9) AND 3-DAY MEAN SUNSPOT NUMBERS (R9)

(by 27-day Solar Rotation Interval)

R9	Rot.-No.	1st day	C9
[redacted] 677756	19	D26	,3. 234 422 422 ,3, 25. ,,232. ... 222 222
778 [redacted] [redacted]7	81	J22	222 222 442 545 426754 5.3 3,. 33, ,,2,,3
878 [redacted] [redacted]77		F18	,,2,,3 566 536 623 735 3.2 ,36754 552 22,
678 [redacted] [redacted]	2018	M17	552 22, ..6643 546534 3.3 232 268 862 454
[redacted] 766 [redacted]	19	A13	862 454 777 665 577 452 42, ..., 36 674 357
[redacted]7 666654	2020	M10	674 357 747 573 ,55 62, 3,, 222 4,, 474 ,,,
456767 78[redacted]	21	J6	474 ,,, ... 352 232 2,, 344 326445 223 542
756 [redacted] [redacted]	22	J3	223 542 ,,3 522 .26223 ,663876 2, 235 453
877 78[redacted] [redacted]	23	J30	235 453 442 .,4 422 232 652 243764 265 544
[redacted] [redacted] [redacted]	24	A26	265 544 ,52 342 ,33 253 332 2,56 22 4.2 365
[redacted] [redacted] [redacted]	2025	S22	4.2 365 ,44 256 4,, 665 673 475 25, 576765
[redacted]76 7[redacted] [redacted]	26	O19	576765 523 533 ,2,2,3 256 ,466,6 546644
765 47[redacted] [redacted]	27	N15	546644 435 262 ,,,,2 232 ..4 32, 53,,.2
[redacted]65 557776	2028	D12	53,,.2 42,,,,32,,3 6652 253 ,33 2.....
645 876 [redacted]	19	J8	2..,,,.34 34.,46552 234 366776 766654
[redacted] 877 78[redacted]	82	F4	766654 677775 ,66665 766773 378 434 ..3
[redacted]7 [redacted] [redacted]		M3	434 ..3 543 233 ,,4 533 562 353 2,3 455 775
[redacted]7 [redacted]66[redacted]	2032	M30	455 775 55, 33774 3 ,23 532 565 247 265 665
754 555 467	33	A26	265 665 675 4,.,2,2,, 252 353 22. ..2 677
776 677 [redacted]	34	M23	..2 677 666 552 ,,4 424 767 766 3,, 652 555
875 333 4[redacted]	35	J19	652 555 446 656 53,..4 543 267 [redacted]6 765 663
[redacted]5 225 6[redacted]	36	J16	765 663 437 566 555 637 645 68, 566 53,..4
766 567 78[redacted]	37	A12	53,..4 423 464 555 336 642 356 [redacted]7 373 444
667 777 [redacted]	38	S8	373 444 433 366 678 653 774 236 623 2565,4
556 546 876	39	O5	2565,4 446 624 554 432,,4 643 666 665 223
666 777 775	2040	N1	665 223 .32 354 533 2,3 3,6667 764 663 ..2
578 [redacted] 756	41	N28	663 ..2 33. 665 754 ,23 477 676 765 425 554
765 576 666	19	D25	425 554 232 32, ..2 573 522 566 644 322 543
556 765 322	83	J21	322 543 324 533 ,27[redacted]77 555 566 666 443 765
234 666 542		F17	443 765 44,,22 576 663 2,2,67 664 335 663
565 544 445	2045	M16	335 663 223 73. 666 654 444 666 552 367 765
546 678 766	46	A12	367 765 323 344 766 436 654 366 423 ,27 765
777 677 655	47	M9	,27 765 5,7 3,3 676 732 3,, 233 2,. ,3,356
665 667 765	48	J5	,3,356 347 342 465 455 4,, 323 3,, 222 ,44
555 566 764	49	J2	222 .44 33,.45 ,,5 652 2,2 563 ,23 452 ,64
675 566 544	2050	J29	452 ,64 ,,, 573 ,,6623 ... 236 465 66, 245
444 555 333	51	A25	66, 245 64, ... ,54 433 32, 566 375 33. 266
344 356 765	52	S21	33. 266 432 .35 572 534 ,2, .65 537 72, 455
322 ,23 554	53	O18	72, 455 5,. .26 525 65, ..3 676 675 656 665
33, .,2 235	54	N14	656 665 62, .34 524 554 2.. 466 3.5 655 64,
543 222 ,,2	2055	D11	655 64, ,,2 ,.3 343 443 266 655 664 ,..43,
343 455 77	19	J7	...43, 2,, ,2. 523 3,, 242 556 5 56
	84	F3	574 332 356 377 622 534 pre-
		M1	liminary

Symbol			2	3	4	5	6	7	8	9
$\bar{R}$ =	0	1-15	16-30	31-45	46-60	61-80	81-100	101-130	131-170	171...
R9,C9 =	0	1	2	3	4	5	6	7	8	9
Cp =	0.0-0.1	0.2-0.3	0.4-0.5	0.6-0.7	0.8-0.9	1.0-1.1	1.2-1.4	1.5-1.8	1.9	2.0-2.5

Prepared by the University of Gottingen

PRINCIPAL MAGNETIC STORMS

JANUARY 1984

Sta	Geomag Lat	Commencement Day	Commencement Time (UT)	Type	SC Amplitudes D (Min)	SC Amplitudes H (Gamma)	SC Amplitudes Z (Gamma)	Maximum 3-Hour K Index Day(3-Hour Periods)	K	Ranges D (Min)	Ranges H (Gamma)	Ranges Z (Gamma)	End Day	End Hour (UT)
GUA	04.0N	01	0700	..	..	..	..	01(5)	5	--	100	10	02	04
COL	64.6N	03	07--	..	..	..	..	03(5)	7	174	1520	800	06	18
JAI	17.3N	03	1500	..	..	..	..			4	101	13	05	03
SHL	14.7N	03	1500	..	..	..	..			4	99	16	05	03
UJJ	13.5N	03	1500	..	..	..	..			5	105	15	05	03
ABG	09.5N	03	1500	..	..	..	..	04(3)	6	5	99	29	05	03
HYB	07.6N	03	0700	..	..	..	..	04(3)	6	5	108	31	05	19
ANN	01.5N	03	1500	..	..	..	..			5	141	82	05	03
TRD	01.2S	03	1500	..	..	..	..			6	163	131	05	03
BJI	28.5N	04	03--	..	..	..	..	04(3)	6	8	130	16	05	20
GUA	04.0N	04	0226	..	..	..	..	04(3)	6	10	160	30	05	04
PMG	18.6S	04	03--	..	..	..	..	04(3)	6	10	140	90	05	15
HER	33.7S	04	06--	..	..	..	..	04(3)						
CNB	43.9S	04	04--	..	..	..	..	04(3)	6	23	141	70	05	14
KGL	56.5S	04	0300	..	..	..	..	04(7)	5	--	--	--	05	21
HYB	07.6N	10	0100	..	..	..	..	10(7)	5	4	97	19	11	23
JAI	17.3N	18	1700	..	..	..	..			4	75	17	19	23
SHL	14.7N	18	1700	..	..	..	..			3	81	16	19	23
UJJ	13.5N	18	1700	..	..	..	..			3	74	19	19	23
ABG	09.5N	18	1700	..	..	..	..	19(4)	5	4	79	28	19	23
HYB	07.6N	18	1000	..	..	..	..	19(4)	5	4	96	21	20	12
TRD	01.2S	18	1700	..	..	..	..			3	123	70	19	23
KGL	56.5S	18	1730	SC	2	20	10	19(1)	5	13	140	80	19	18
GUA	04.0N	19	0009	..	..	..	..	19(5)	5	--	100	10	19	18
HYB	07.6N	25	0500	..	..	..	..	26(6)	5	4	135	29	27	04
COL	64.6N	28	09--	..	..	..	..	28(4,5,6) 29(4) 30(4,6) 31(4,5,6) 01(4)	6	148	1390	620	01	21
FRD	49.6N	28	----	..	..	..	..	29(1)	5	19	136	26	01	06
JAI	17.3N	28	0500	..	..	..	..			8	85	28	29	12
SHL	14.7N	28	0500	..	..	..	..			6	86	17	29	12
UJJ	13.5N	28	0500	..	..	..	..			6	79	29	29	12
ABG	09.5N	28	0500	..	..	..	..	28(4)	5	6	80	32	29	12
HYB	07.6N	28	0100	..	..	..	..	28(4,6) 30(4,6,7) 31(6)	5	5	99	36	31	21
TRD	01.2S	28	0500	..	..	..	..			5	139	86	29	12
HER	33.7S	28	00--	..	..	..	..	28(4)						
WIT	54.2N	29	2200	..	..	..	..	30(7) 31(6)	6	26	175	55	31	21
HER	33.7S	29	17--	..	..	..	..	30(7)						
JAI	17.3N	30	0400	..	..	..	..			3	58	23	30	22
SHL	14.7N	30	0400	..	..	..	..			3	56	21	30	22
UJJ	13.5N	30	0400	..	..	..	..			2	59	26	30	22
ABG	09.5N	30	0400	..	..	..	..	30(4,6,7)	5	3	67	27	30	22
TRD	01.2S	30	0400	..	..	..	..			2	97	75	30	22
KGL	56.5S	30	1501	SC	5	- 40	20	30(6,7)	5	39	250	--	31	09

RADIO PROPAGATION QUALITY INDICES

JANUARY 1984

Day	Tokyo	New York	Teheran	Oslo	Bracknell
1	5.0	4.1	3.1	4.7	4.0
2	5.1	4.3	3.0	4.4	3.7
3	6.5	4.8	4.4	4.7	4.7
4	6.2	4.9	3.7	5.0	4.5
5	4.8	3.6	3.7	5.3	4.2
6	4.5	4.4	3.0	4.6	3.8
7	5.9	5.7	5.2	3.6	5.8
8	4.7	4.8	4.6	3.6	5.1
9	5.1	5.5	6.7	4.1	4.6
10	5.9	5.2	6.6	5.4	5.8
11	7.1	5.5	6.4	6.1	5.5
12	6.1	5.2	5.6	5.7	6.5
13	5.7	5.2	8.6	6.3	7.1
14	5.6	7.5	7.1	7.0	6.8
15	6.0	6.5	7.3	7.2	7.7
16	6.3	5.4	8.1	7.8	8.5
17	5.9	7.5	6.6	6.7	6.1
18	4.6	5.8	7.8	6.0	6.1
19	5.0	6.3	5.3	6.3	5.1
20	5.8	3.7	5.6	5.6	6.1
21	7.1	7.2	5.5	5.5	7.3
22	6.8	5.1	5.5	6.2	5.4
23	5.1	5.1	4.3	6.1	6.0
24	4.7	5.2	6.0	5.4	6.0
25	5.8	7.2	8.0	6.0	6.3
26	5.8	6.8	7.6	5.3	6.2
27	4.7	4.4	5.4	6.0	5.0
28	6.7	5.1	6.1	6.0	5.5
29	5.9	5.4	5.9	5.6	6.5
30	5.5	4.4	3.6	4.2	4.9
31	5.3	5.4	5.2	4.2	3.7
Mean	5.7	5.4	5.7	5.5	5.6

CALCULATION OF QUALITY INDICES (Q)

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

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

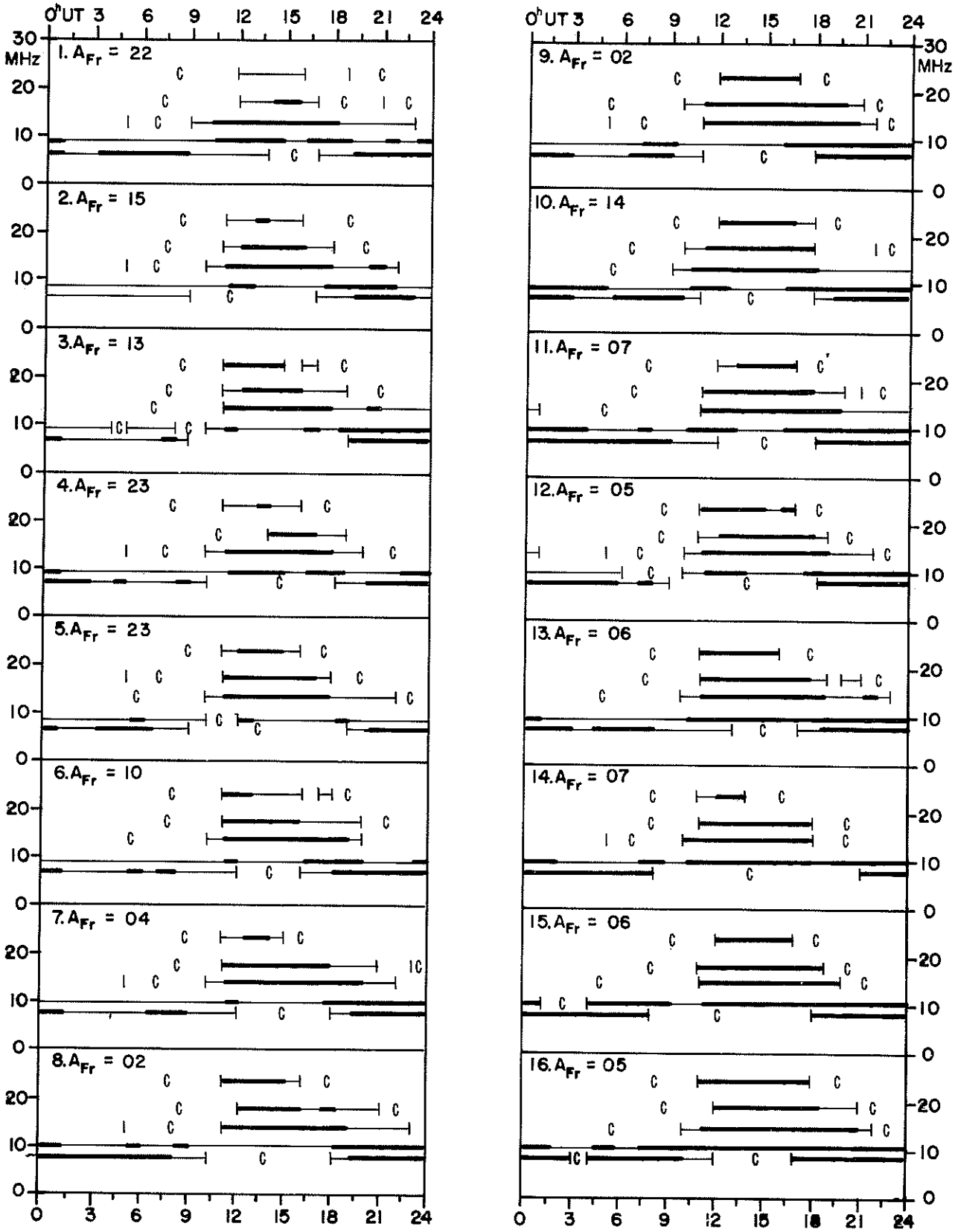
The quality indices vary from 0.0 to 9.9 where 6.0 is normal. Conditions are "normal" (index = 6.0), if they correspond to the average of the preceeding 27 days.

SCALE FOR QUALITY INDICES

0.0 - 1.0 = very poor
1.1 - 3.0 = poor
3.1 - 5.0 = fair
5.1 - 7.0 - normal
7.1 - 9.0 = good
9.1 - 9.9 = very good

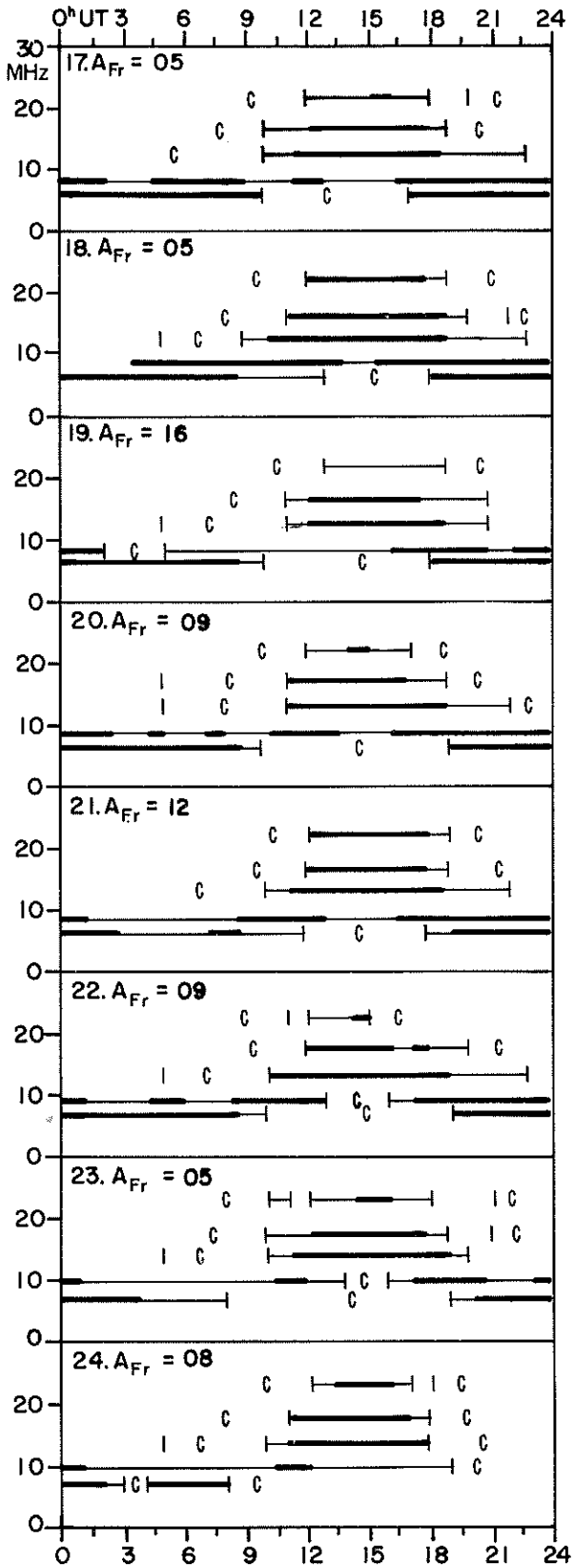
TRANSMISSION FREQUENCY RANGES -- NORTH ATLANTIC PATH

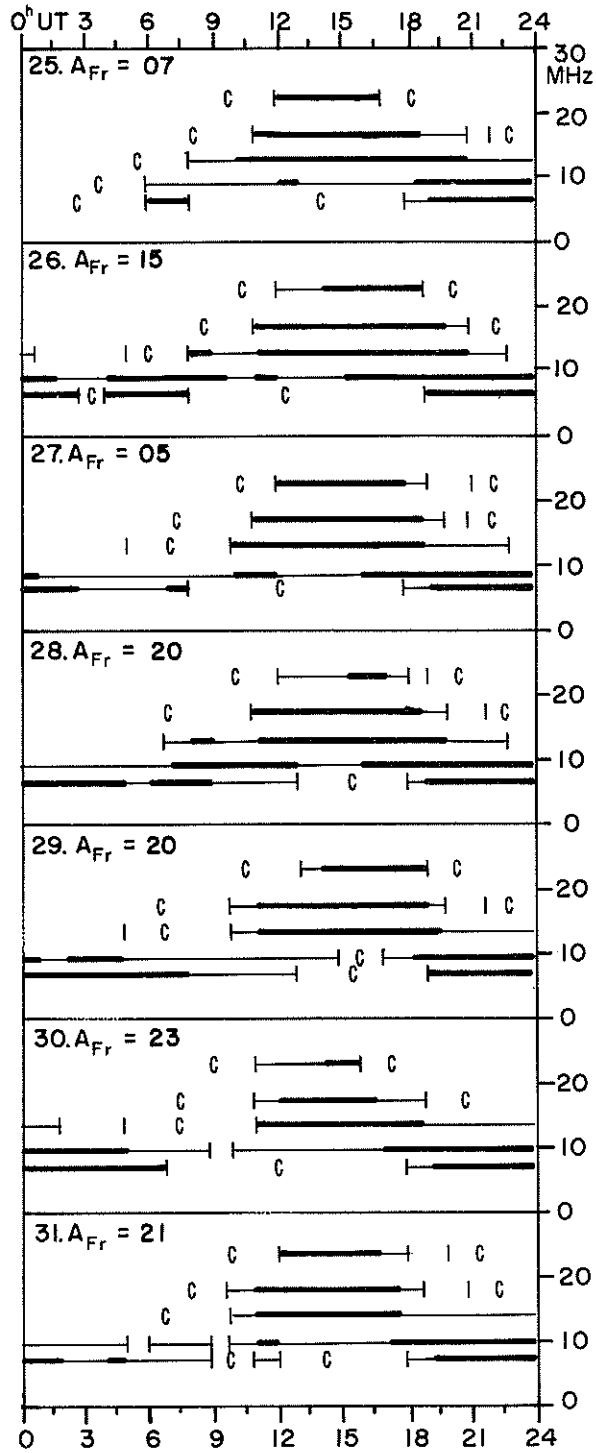
JANUARY 1984



TRANSMISSION FREQUENCY RANGES -- NORTH ATLANTIC PATH

JANUARY 1984





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

SOME OTHER SOURCES OF DATA

Data Available: Some data available in publication form are cited here. A list is given, along with addresses of the responsible institutions. The WDC-A for Solar-Terrestrial Physics publishes the Toyokawa, Ottawa and Penticton radio data in its monthly publication, *Solar-Geophysical Data*. The WDC-A for Solar-Terrestrial Physics also receives most of the periodicals when they become available.

Belgium: *Bulletin d'Observations: Activite Solaire - Observations Radio-electriques Solaires - 600 MHz (Humain, Belgium)* Observatoire Royal de Belgique, Ave. Circulaire 3, Brussels, Belgium (monthly since 1962)

Canada: *Solar Noise Observations at 2800 Mc/s (Ottawa - ARO) and 2700 Mc/s (Penticton - DRAO)* Series C Monthly Report, National Research Council, Radio Astronomy Section Ottawa 7, Ontario, Canada (since 1947)

France: *Carte Synoptiques de la Chromosphere Solaire* Observatoire de Paris, 92 Meudon, France (monthly since 1931)

Germany: *Daily Mean Value of Solar Flux Density* Heinrich-Hertz Institut, 1199 Berlin-Adlershof, Rudower Chaussee 5, G.D.D. (monthly since Jul 1957)

Italy: *Solar Phenomena - Monthly Bulletin and Photographic Supplement* Osservatorio Astronomica di Roma, Monte Mario, Rome, Italy (monthly since 1958) *Osservazion Solari, Solar Flux and Distinctive Events* Osservatorio Astronomico Di Trieste (quarterly since 1965) *Solar Observations made at Catania Astrophysical Observatory* (annually since 1967)

Japan: *Monthly Report of Solar Radio Emission* Radio Astronomy Section, Research Institute of Atmospherics, Nagoya University, Toyokawa, Japan (since 1956) *Solar Activity Chart* WDC-C2, Toyokawa Observatory, Nagoya University, Toyokawa, Japan (annually since 1968) *IAU Quarterly Bulletin on Solar Activity* Tokyo Astronomical Observatory, Mitaka, Tokyo, Japan (since 1978)

Netherlands: *Geomagnetic Data* IAGA Bulletin No. 12 (1932-69), No. 32 (since 1970) IUGG Publications Office, 39 ter, Rue Gay-Lussac, Paris V, France (annually)

Taiwan: *Report on Sunspot Observations* Taiwan Provincial Weather Bureau Observatory, Taipei, Taiwan (quarterly since 1957)

USSR: СОЛНЕЧНЫЕ ДАННЫЕ *(Solar Data)* USSR Academy of Science (monthly since 1958) КОСМИЧЕСКИЕ ДАННЫЕ *(Cosmic Data)* (monthly since 1962) *Magnetic Fields of Sunspots* (bimonthly since 1964)

USA: *Preliminary Report and Forecast of Solar-Geophysical Activity* Space Environment Services Center, NOAA, Boulder, Colorado 80303 USA (weekly) *Solar-Geophysical Data* NOAA, Boulder, Colorado 80303 USA (monthly since November 1956)

C O N T E N T S

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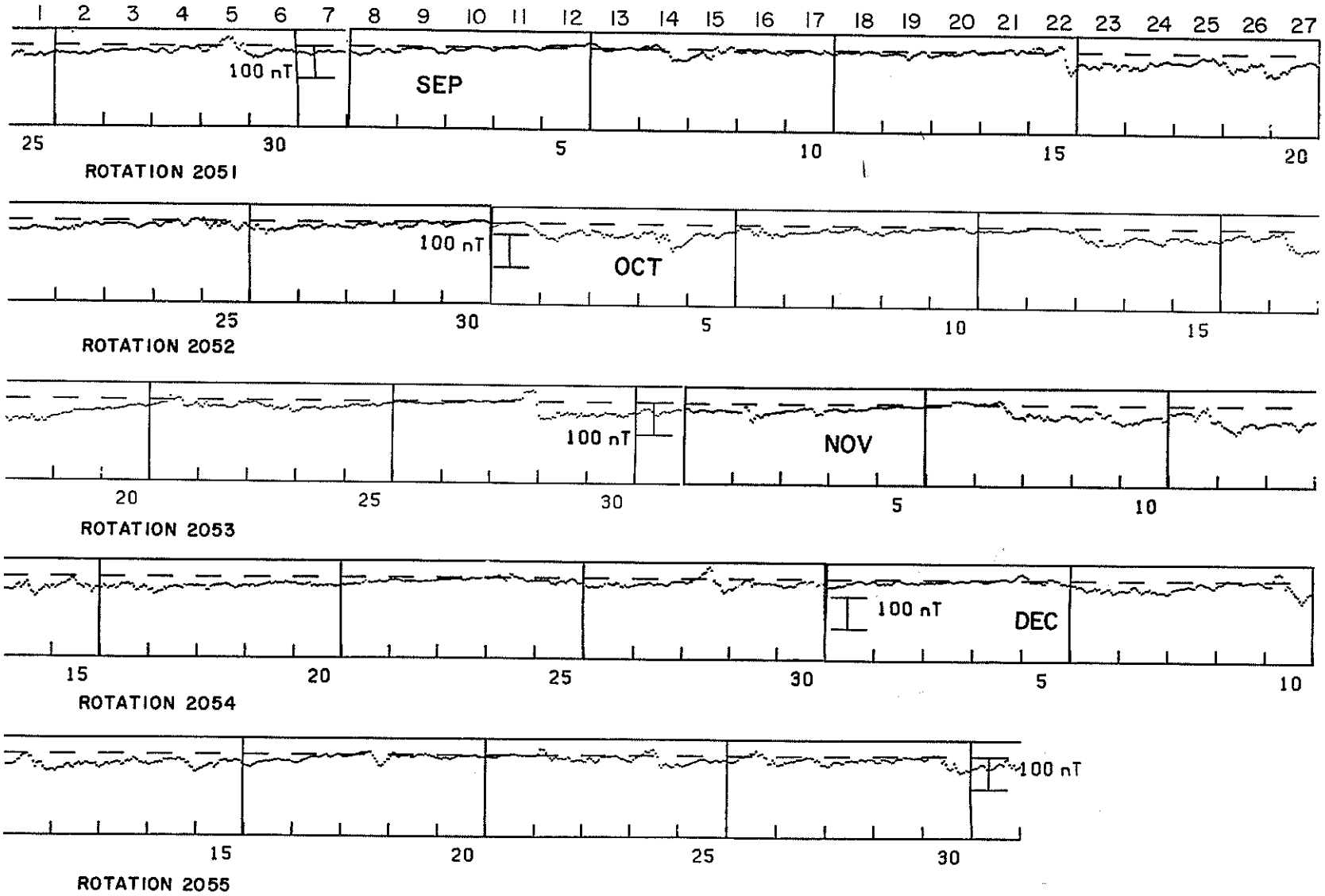
GEOMAGNETIC ACTIVITY INDICES
Hourly Equatorial Dst
by Bartels Rotation



Note: Both the sensitivity indicator placed on the last day of the month and the zero reference level change from month to month.

SUDDEN COMMENCEMENTS AND SOLAR FLARE EFFECTS

DECEMBER 1983

PRELIMINARY REPORT ON RAPID VARIATIONS

Sudden Commencements (ssc)

10	03 13	A: COI LNP MPO; B: SOD DOB WNG DOU GCK AQU SPT FRD ALM GNA CAA KGL DUM; C: WIT NKG VAL HAD BDV CLF MMB EBR KAK HTY KNY AMS
11	08 53	C: WNG CLF MMB KAK HTY KNY LNP (si: B: DOU)
30	03 47	A: SOD DOB NUR DOU COI LNP MPO; B: WNG CLF GCK AQU SPT FRD ALM GNA CAA; C: WIT NGK VAL HAD BDV MMB EBR KAK HTY KNY

Solar Flare Effects (sfe)

02	12 04 - 12 12	MPO
07	00 44 - 00 55	MMB KAK HTY KNY
17	02 06 - 02 09	LNP
19	07 25 - 07 44	NGK MPO
19	10 27 - 10 49	ALM MPO
26	07 03 - 07 12	LNP (ssc: C: CZT DUM)
31	12 32 - 12 39	MPO

Reporting Observatories:

SOD DOB NUR WNG WIT NGK VAL HAD DOU BDV CLF GCK MMB AQU EBR COI

SPT FRD ALM KAK HTY KNY LNP MPO GNA CAA CZT KGL DUM AMS

COSMIC RAY INDICES
(Neutron Monitor)

November 1983

Day	THULE Average (cts/h)/100	ALERT Average (cts/h)/100	DEEP RIVER Average (cts/h)/300	KIEL Average (cts/h)/100	CLIMAX Average (cts/h)/100	PREDIGTSTUHL Average (cts/h)/100	TOKYO Average (cts/h)/256	HUANCAYO Average (cts/h)/100
1	4222	6888.8	6524.5	5867.0	3862.3(38)	1170	3593.4	1742.5(38)
2	4212	6866.1	6488.3	5843.7	3841.0	1165	3592.2	1740.5
3	4198	6849.4	6488.5	5847.8	3829.8	1164	3575.7	1735.3(38)
4	4193	6832.3	6456.6	5844.1	3822.4	1162	3569.8	1731.2
5	4191	6841.9	6478.7	5851.9	3817.3	1164	3570.1	1733.8
6	4195	6851.0	6489.6	5836.7	3813.4(38)	1163	3576.0	1735.1
7	4212	6873.0	6488.8	5848.7	3819.8(8)	1165	3583.7	1732.4(36)
8	4157	6790.3	6428.8	5811.2	3805.3	1162	3583.9	1731.2
9	4124	6732.7	6383.5	5758.2	3769.0	1154	3563.6	1728.5(28)
10	4137	6756.4	6404.9	5790.2	3771.5	1158	3562.2	1736.8(10)
11	4088	6676.0	6331.6	5713.7	3711.1	1140	3541.2	1719.9
12	4071	6662.1	6333.0	5730.7	3725.0	1146	3551.7	1722.8
13	4099	6731.6	6377.0	5772.5	3751.4	1155	3571.8	1733.0
14	4111	6752.5	6440.1	5820.2	3789.1	1169	3582.7	1737.5
15	4155	6795.5	6456.7	5867.4	3793.8	1173	3581.5	1739.1
16	4163	6836.5	6488.1	5873.7	3811.9(36)	1177	3587.9	1742.3
17	4154	6863.1	6495.4	5873.1	3826.2(34)	1182	3597.5	1741.0
18	4138	6843.2	6473.9	5848.2	3849.7	1177	3575.9	1738.3
19	4139	6820.2	6464.2	5838.6	3850.5	1171	3579.2	1741.1
20	4137	6832.4	6451.2	5872.5	3858.0	1171	3587.0	1741.0
21	4147	6838.5	6487.9	5897.6	3875.5	1176	3591.4	1742.8
22	4166	6883.5	6510.2	5904.4	3896.4	1180	3600.8	1748.0
23	4172	6892.0	6524.0	5914.7	3908.0	1183	3595.8	1749.3
24	4178	6877.5	6535.9	5924.2	3902.6	1183	3591.5	1748.8(36)
25	4161	6874.0	6531.9	5894.5	3890.4	1172	3580.2	1744.6
26	4180	6908.3	6521.6	5903.7	3913.3	1169	3588.2	1741.6
27	4193	6923.8	6552.2	5939.0	3912.1	1170	3598.2	1745.8
28	4184	6910.0	6531.1	5908.4	3908.7	1166	3592.7	1745.3
29	4158	6872.5	6506.8(23)	5879.2	3908.7	1136	3590.6	1743.9
30	4163	6863.8	6515.0	5885.0	3910.2	1136	3583.5	1739.4
Mean	4160	6831.3	6472.0	5852.0	3840.2	1165	3581.3	1738.5

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

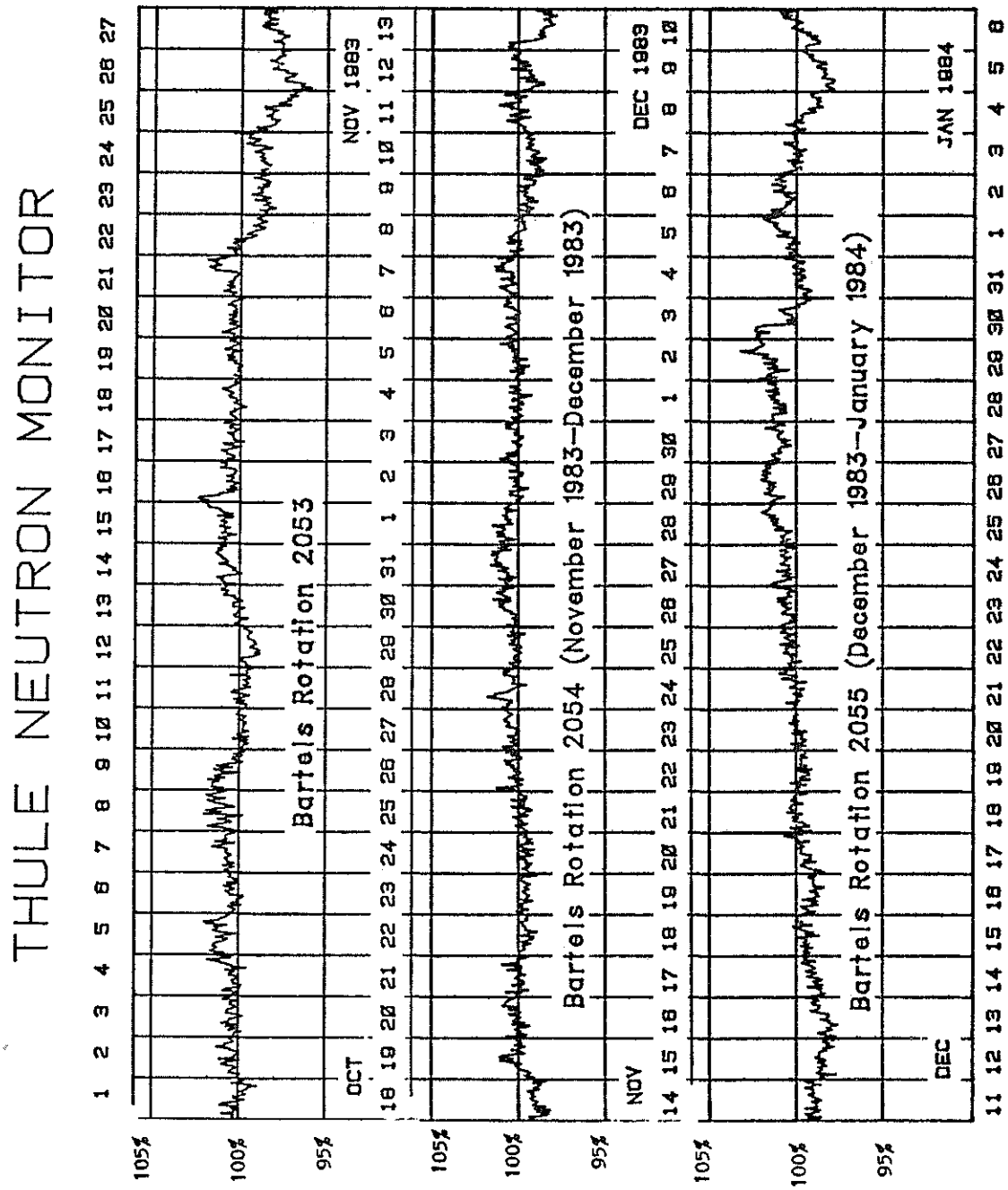
COSMIC RAY INDICES
(Neutron Monitor)

December 1983

Day	THULE Average (cts/h)/100	ALERT Average (cts/h)/100	DEEP RIVER Average (cts/h)/300	KIEL Average (cts/h)/100	CLIMAX Average (cts/h)/100	PREDIGTSTUHL Average (cts/h)/100	TOKYO Average (cts/h)/256	HUANCAYO Average (cts/h)/100
1	4156	6840.8	6506.8	5870.9		1144		
2	4160	6824.7	6512.7	5872.0		1147		
3	4169	6841.6	6525.0	5889.0		1150		
4	4180	6882.4	6560.6	5912.1		1153		
5	4155	6844.1	6498.4	5869.2		1148		
6	4130	6802.6	6447.8	5847.8		1143		
7	4118	6795.5	6453.1	5832.8		1143		
8	4156	6822.3	6486.2	5849.9		1130		
9	4137	6810.8	6472.5	5862.9		1123		
10	4107	6751.1	6404.5	5803.4		1118		
11	4103	6765.0	6410.0	5779.8		1114		
12	4080	6736.7	6355.3	5766.3		1112		
13	4081	6736.4	6374.3	5762.0		1114		
14	4103	6769.3	6410.4	5790.0		1124		
15	4126	6801.0	6412.0	5801.9		1133		
16	4106	6757.0	6414.2	5807.1		1130		
17	4125	6783.9	6442.4	5826.0		1135		
18	4142	6815.8	6476.0	5844.2		1136		
19	4130	6801.8	6464.5	5841.6		1134		
20	4141	6807.9	6500.0	5840.8		1132		
21	4150	6782.8	6508.5	5867.8		1136		
22	4160	6868.5	6496.3	5885.0		1140		
23	4168	6852.5	6530.6	5894.3		1141		
24	4170	6876.0	6567.3	5883.2		1139		
25	4189	6913.0	6576.5	5875.9		1139		
26	4206	6956.1	6561.5	5895.4		1149		
27	4186	6918.2	6525.1	5869.6		1150		
28	4193	6908.1	6522.0	5867.7		1148		
29	4216	6938.9	6559.0	5916.7		1158		
30	4176	6873.0	6509.0	5872.1		1153		
31	4137	6800.0	6469.2	5830.1		1149		
Mean	4147	6828.4	6482.3	5849.3		1138		

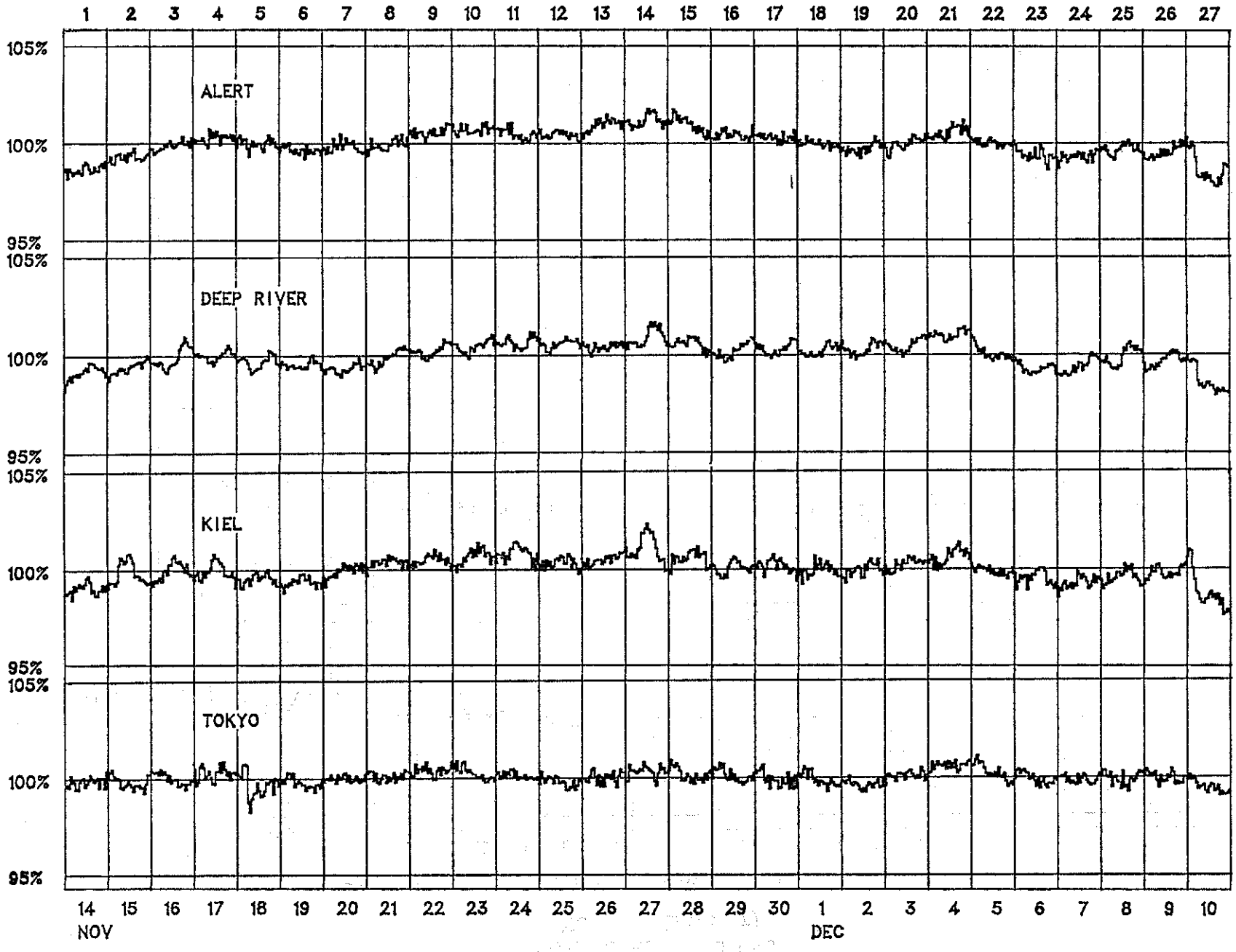
For less than 24-hour coverage, parentheses enclose the number of hours for which data are available.
For Climax and Huancayo, parenthese enclose the number of section hours whenever the sum of both sections falls below 40 hours.

116
Late
Nov 83



COSMIC RAY INDICES
(Neutron Monitor)

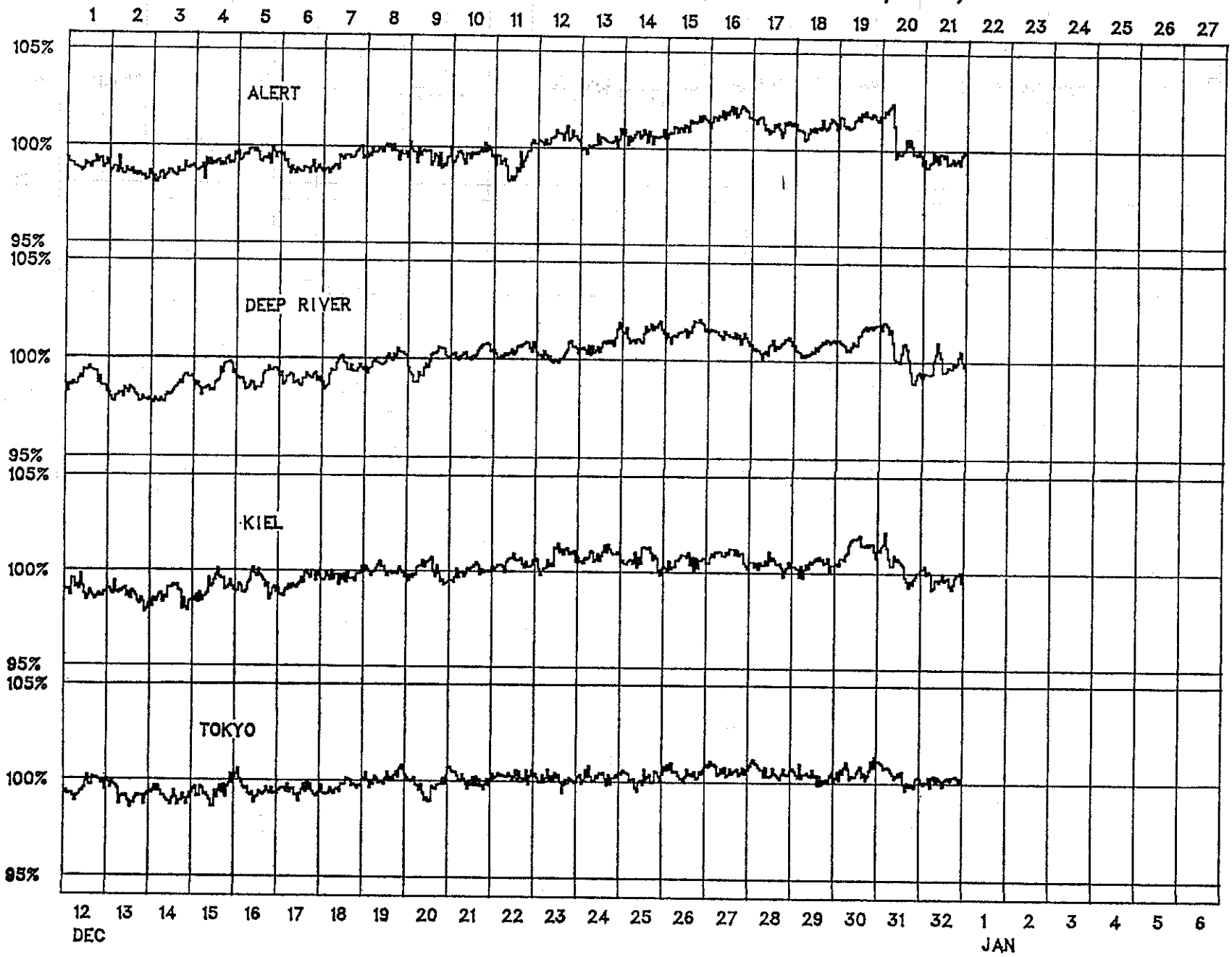
Bartels Rotation 2054 (November 1983–December 1983)



117
Late
Nov 83

COSMIC RAY INDICES
(Neutron Monitor)

Bartels Rotation 2055 (December 1983–January 1984)



SOLAR RADIO EMISSION SPECTRAL OBSERVATIONS

DECEMBER 1983

Day	Observation Start (UT)	Observation End (UT)	Sta	Decimetric Band Start (UT)	Decimetric Band End (UT)	Decimetric Band Int (1-3)	Metric Band Start (UT)	Metric Band End (UT)	Metric Band Int (1-3)	Dekametric Band Start (UT)	Dekametric Band End (UT)	Dekametric Band Int (1-3)	Spectral Type
01	0000	0722	CULG				0041.0		1				III B
	2056	2400	CULG										
02	0000	0721	CULG										
	2021	2400	CULG										
03	0000	0721	CULG										
	2021	2400	CULG										
04	0000	0720	CULG				0128.0	0128.5	3				III G,U
	2025	2400	CULG										
05	0000	0722	CULG										
	2023	2400	CULG										
06			CULG				0313.5		1				III G
	0000	0722	CULG				0313.5	0314.0	1				IS
			CULG	0622.5	0623.0	1							III G
			CULG	0703.5	0705.5	1							III S
			CULG				0704.0	0705.0	1				III G
			CULG				0704.5		2				III B
	2023	2400	CULG										
07	0000	0733	CULG							0057.0	0102.0	1	SWF
			CULG				0431.5		1	0431.5		1	III B
			CULG				0640.0		1				III B
	2024	2400	CULG				2350.0	2351.0	1	2350.0	2351.0	1	III G
08	0000	0724	CULG				0116.5	0124.5	1				IS
	2024	2400	CULG										
09	0000	0720	CULG										
	2025	2400	CULG										
10	0000	0724	CULG										
			CULG				0703.5	0704.0	2				III G
	2024	2400	CULG										
11	0000	0724	CULG										
	2025	2400	CULG										
12	0000	0725	CULG										
	2025	2400	CULG				2234.5		2				III B
13	0000	0726	CULG	0029.0	0030.0	2	0029.0	0030.0	2	0029.0	0031.0	2	III G
			CULG	0102.0		1	0102.0	0102.5	2	0102.5		1	III G,V
	2026	2400	CULG										
14	0000	0725	CULG										
	2059	2400	CULG										
15	0000	0727	CULG										
	2027	2400	CULG										
16	0000	0727	CULG										
	2027	2400	CULG										
17	0000	0728	CULG				0353.0		1				III B
			CULG				0354.5		1				III B
			CULG	0553.0		1	0553.0	0554.5	3	0553.0	0554.5	1	III G,V
			CULG	0614.0	0618.0	1	0614.0	0617.0	1				III S
	2028	2400	CULG	2034.0	2035.0	1	2034.0	2035.0	1	2034.5		1	III G,Z
			CULG				2132.5	2133.5	3	2132.5	2133.0	3	III G
			CULG	2132.5	2133.0	1							IS
			CULG	2243.5	2244.5	1	2244.0	2244.5	1				III G
18	0000	0728	CULG				0049.5	0052.0	1				III N
			CULG				0050.0	0050.5	2	0050.0	0050.5	1	III G
			CULG	0542.5	0659.0	1							IS
	2028	2400	CULG				2127.5	2128.5	2				III G
			CULG	2314.5	2317.5	1							IS

SOLAR RADIO EMISSION SPECTRAL OBSERVATIONS

DECEMBER 1983

Day	Observation Start (UT)	Observation End (UT)	Sta	Decimetric Band Start (UT)	Decimetric Band End (UT)	Decimetric Band Int (1-3)	Metric Band Start (UT)	Metric Band End (UT)	Metric Band Int (1-3)	Dekametric Band Start (UT)	Dekametric Band End (UT)	Dekametric Band Int (1-3)	Spectral Type
19			CULG				0016.0	0017.0	3	0016.0	0016.5	2	IIIG,U
	0000	0727	CULG	0016.0	0017.0	1							DCIM
			CULG	0018.5	0019.0	1	0018.5	0019.0	2	0018.5	0019.0	2	IIIG
			CULG				0226.0		2				IIIB
			CULG				0555.5		1				IIIB
	2032	2400	CULG	2250.0	2330.0								IS,W
20	0000	0729	CULG										
	2030	2400	CULG										
21	0000	0730	CULG										
	2030	2400	CULG										
22	0000	0730	CULG										
	2030	2400	CULG										
23	0000	0730	CULG										
	2030	2400	CULG										
24	0000	0730	CULG										
	2030	2400	CULG										
25	0000	0732	CULG										
	2032	2400	CULG										
26	2032	2400	CULG										
27	0000	0732	CULG										
	2033	2400	CULG										
28	0000	0733	CULG										
	2033	2400	CULG										
29	0000	0715	CULG										
	2035	2400	CULG										
30	0000	0733	CULG										
	2033	2400	CULG										
31	0000	0734	CULG										
	2035	2400	CULG										

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WORLD DATA CENTER A
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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."