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Solar - Geophysical Data

Part I (Prompt Reports)

NO. 471 NOVEMBER 1983

DATA FOR
OCTOBER 1983
SEPTEMBER 1983

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

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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 471

(Issued in Two Parts)

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C O N T E N T S

PART I (PROMPT REPORTS)

PART II (COMPREHENSIVE REPORTS)

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

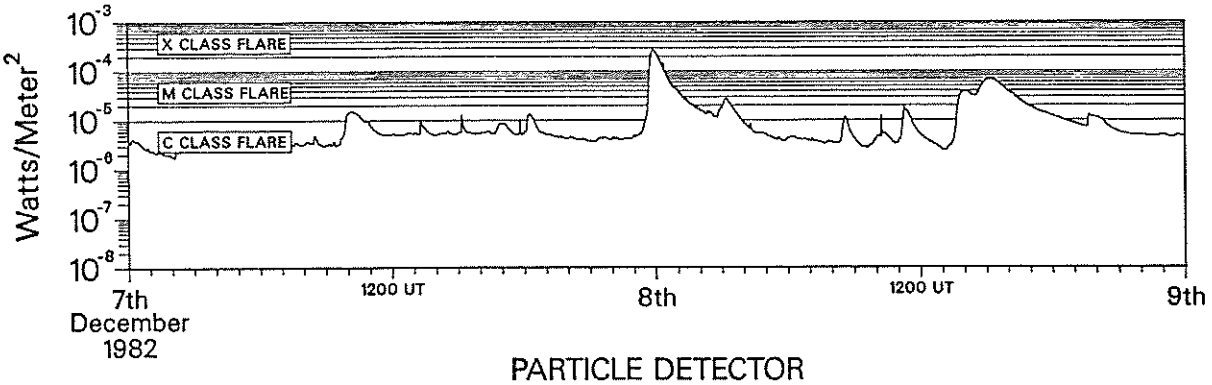
C O N T E N T S

Prompt Reports DATA FOR OCTOBER 1983 Number 471 Part I

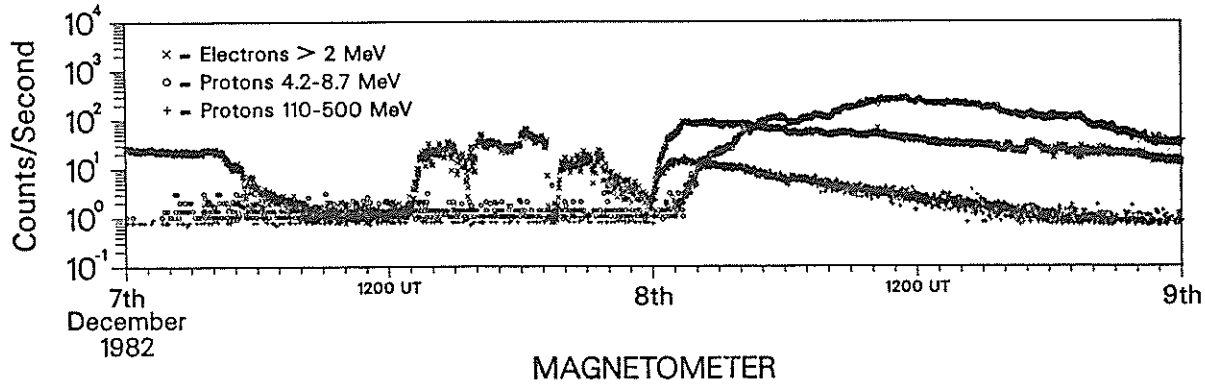
GOES-2 SPACE ENVIRONMENT MONITOR

(108° West Longitude)

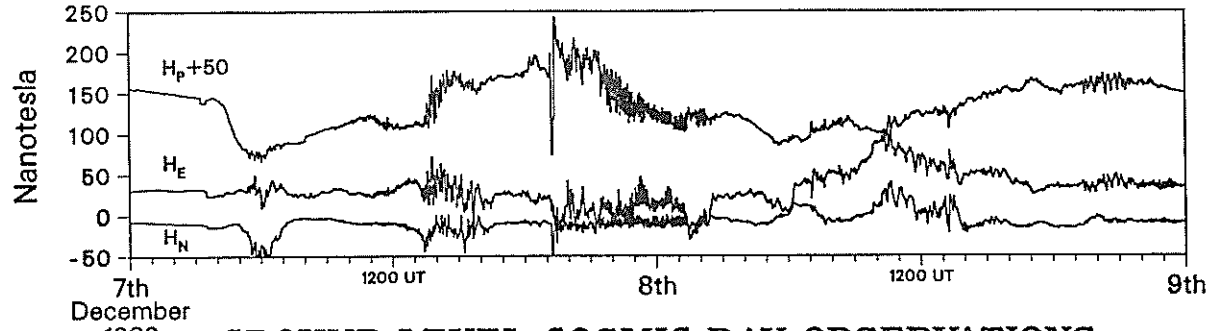
X-RAY DETECTOR (1-8 Angstrom)



PARTICLE DETECTOR

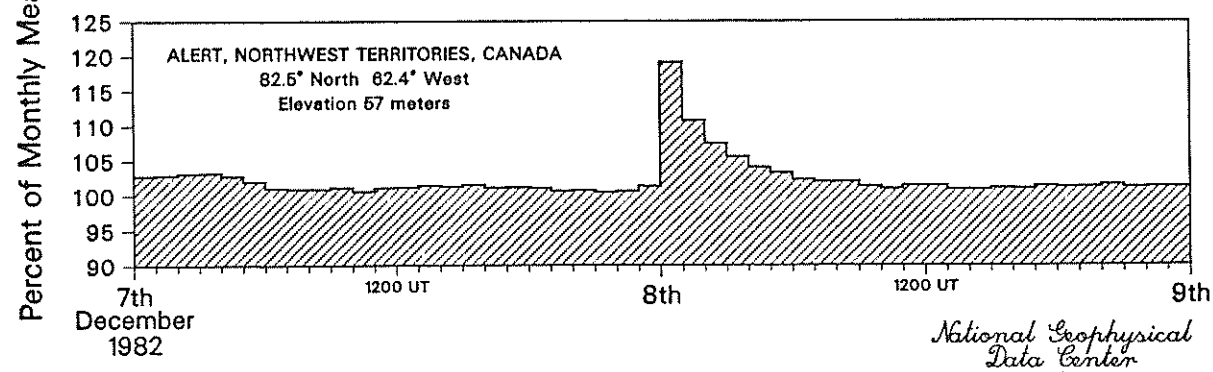


MAGNETOMETER



GROUND LEVEL COSMIC RAY OBSERVATIONS

NEUTRON MONITOR



National Geophysical Data Center
D.C. Wilkinson

ALERT PERIODS
INTERNATIONAL URSIGRAM AND WORLD DAYS SERVICE

SUMMARY OF THE GEOALERT MESSAGES OCTOBER 1983

NO	DI	DO	WOLF	10CM	A	LOC	TOT	M	X	OUTSTANDING EVENTS	DA	LOC	DE	ALERTS
274	01	30	047	114	005	S19W33	3	0	0		01	S19W33	E	SOLQUIET
						S15W01	1	0	0			S15W01	E	MAGQUIET
275	02	01	058	117	011	S19W46	3	0	0		02	S19W46	E	SOLQUIET
						N06E83	0	0	0			N06E83	Q	MAGQUIET
						N20E85	0	0	0			N20E85	Q	
276	03	02	075	120	018	S19W60	2	1	0	PRESTO TENFLARE 170 FLUX UNITS	03	S19W60	E	SOLQUIET
						N12E15	0	0	0	02/0556Z DURATION 47 MINUTES		N12E15	Q	MAGQUIET
						N19E69	0	0	0			N19E69	Q	
						N06E71	1	0	0			N06E71	E	
277	04	03	094	123	021	S20W72	1	0	0		04	S20W72	E	SOLQUIET
						N13E02	3	0	0			N13E02	E	MAGQUIET
						N20E57	0	0	0			N20E57	Q	
						N07E63	0	0	0			N07E63	E	
278	05	04	092	125	027	S20W85	1	0	0		05	S20W85	Q	SOLQUIET
						N13W12	0	0	0			N13W12	Q	MAGQUIET
						N19E44	0	0	0			N19E44	Q	
						N07E50	1	0	0			N07E50	E	
						N13E69	0	0	0			N13E69	Q	
279	06	05	094	127	011	N12W24	0	0	0	PRESTO TENFLARE 290 FLUX UNITS	06	N12W24	Q	SOLQUIET
						S14E23	0	0	0	05/1459Z DURATION 19 MINUTES		S14E23	Q	MAGQUIET
						N20E31	0	0	0			N20E31	Q	
						N08E36	2	1	0			N08E36	E	
						N13E56	1	0	0			N13E56	Q	
280	07	06	115	133	019	N12W42	0	0	0		07	N12W42	Q	SOLQUIET
						S14E10	0	0	0			S14E10	Q	MAGQUIET
						N21E18	1	0	0			N21E18	Q	
						N07E22	3	0	0			N07E22	E	
						N14E42	1	0	0			N14E42	Q	
						S09E65	4	0	0			S09E65	Q	
281	08	07	115	134	011	S15W05	2	0	0		08	S15W05	Q	SOLQUIET
						N19E04	0	0	0			N19E04	Q	MAGQUIET
						S04E04	0	0	0			S04E04	Q	
						N07E09	13	0	0			N07E09	E	
						N14E28	0	0	0			N14E28	Q	
						S09E50	2	0	0			S09E50	Q	
282	09	08	189	134	011	S09W51	0	0	0		09	S09W51	Q	SOLQUIET
						S14W18	0	0	0			S14W18	Q	MAGQUIET
						N18W11	0	0	0			N18W11	Q	
						S04W10	0	0	0			S04W10	Q	
						N08W04	1	0	0			N08W04	E	
						N13E17	0	0	0			N13E17	Q	
						N07E18	0	0	0			N07E18	Q	
						S08E38	0	0	0			S08E38	Q	
						N23E57	2	0	0			N23E57	Q	
283	10	09	166	131	007	N07W17	6	0	0		10	N07W17	E	SOLQUIET
						S15W04	0	0	0			S15W04	Q	MAGQUIET
						N13E04	1	0	0			N13E04	Q	
						N06E05	0	0	0			N06E05	Q	
						S09E24	0	0	0			S09E24	Q	
						S15E33	1	0	0			S15E33	Q	
						N22E44	4	0	0			N22E44	Q	
284	11	10	140	137	008	S15W46	3	0	0		11	S15W46	Q	SOLQUIET
						N07W30	4	0	0			N07W30	E	MAGQUIET
						S16W17	1	0	0			S16W17	Q	
						N13W10	1	0	0			N13W10	Q	
						N06W08	0	0	0			N06W08	Q	

ALERT PERIODS
INTERNATIONAL URSIGRAM AND WORLD DAYS SERVICE

SUMMARY OF THE GEOALERT MESSAGES OCTOBER 1983

NO	DI	DO	WOLF	10CM	A	LOC	TOT	M	X	OUTSTANDING EVENTS	DA	LOC	DE	ALERTS
						S09E11	0	0	0			S09E11	Q	
						N21E29	8	0	0			N21E29	Q	
285	12	11	154	139	007	S16W59	7	0	0		12	S16W59	Q	SOLQUIET
						N08W44	3	0	0			N08W44	E	MAGQUIET
						S15W32	3	0	0			S15W32	Q	
						N14W23	1	0	0			N14W23	Q	
						N06W21	1	0	0			N06W21	Q	
						S08W05	1	0	0			S08W05	Q	
						N21E15	6	0	0			N21E15	Q	
						S12E66	0	0	0			S12E66	Q	
						S09E76	0	0	0			S09E76	Q	
286	13	12	159	134	005	S14W73	2	0	0		13	S14W73	Q	SOLQUIET
						N08W58	4	0	0			N08W58	E	MAGALERT
						S14W46	0	0	0			S14W46	Q	13/14
						N13W37	0	0	0			N13W37	Q	RECURRENCE
						N06W36	0	0	0			N06W36	Q	
						S08W19	0	0	0			S08W19	Q	
						N22E02	5	0	0			N22E02	Q	
						S12E52	0	0	0			S12E52	Q	
						S07E62	0	0	0			S07E62	Q	
287	14	13	140	140	023	S15W85	4	0	0		14	S15W85	Q	SOLQUIET
						N06W71	1	0	0			N06W71	Q	MAGALERT
						S15W56	0	0	0			S15W56	Q	MINOR 14/XX
						N06W51	0	0	0			N06W51	Q	RECURRENCE
						N13W50	0	0	0			N13W50	Q	
						S08W31	0	0	0			S08W31	Q	
						N22W12	6	0	0			N22W12	E	
						S12E39	0	0	0			S12E39	Q	
						S06E48	0	0	0			S06E48	Q	
288	15	14	097	133	020	N06W84	5	0	0		15	N06W84	Q	SOLQUIET
						N06W64	0	0	0			N06W64	Q	MAGALERT
						N13W63	5	0	0			N13W63	Q	MINOR 15/16
						N21W26	6	1	0			N21W26	E	RECURRENCE
						S12E25	0	0	0			S12E25	Q	
						S06E34	3	0	0			S06E34	Q	
289	16	15	100	128	025	N07W91	4	0	0		16	N07W91	Q	SOLQUIET
						N13W76	2	0	0			N13W76	Q	MAGALERT
						N21W39	10	0	0			N21W39	E	MINOR 16/XX
						S12E12	0	0	0			S12E12	Q	RECURRENCE
						S05E21	1	0	0			S05E21	Q	
						S16E66	0	0	0			S16E66	Q	
290	17	16	095	112	015	N14W90	0	0	0		17	N14W90	Q	SOLQUIET
						N21W53	14	1	0			N21W53	E	MAGNIL
						S12W01	0	0	0			S12W01	Q	
						S05E08	2	0	0			S05E08	E	
						S12E30	0	0	0			S12E30	Q	
						S16E53	1	0	0			S16E53	Q	
291	18	17	107	114	031	N21W67	14	0	0		18	N21W67	E	SOLQUIET
						S11W15	0	0	0			S11W15	Q	MAGALERT
						S05W06	3	0	0			S05W06	E	18/19
						N02E14	0	0	0			N02E14	Q	RECURRENCE
						S12E17	0	0	0			S12E17	Q	
						S16E40	0	0	0			S16E40	Q	
292	19	18	080	102	031	N21W80	5	0	0		19	N21W80	E	SOLQUIET
						S12W28	0	0	0			S12W28	Q	MAGALERT
						S04W19	0	0	0			S04W19	E	19/XX
						S11E03	0	0	0			S11E03	Q	
						S16E27	0	0	0			S16E27	Q	

ALERT PERIODS
INTERNATIONAL URSIGRAM AND WORLD DAYS SERVICE

OCTOBER 1983

NO	DI	DO	WOLF	10CM	A	LOC	TOT	M	X	OUTSTANDING EVENTS	DA	LOC	DE	ALERTS
293	20	19	066	106	009	N21W91	4	2	0	PRESTO TENFLARE 240 FLUX UNITS	20	N21W91	E	SOLQUIET
						S12W42	0	0	0	19/2006Z DURATION 11 MINUTES		S12W42	Q	MAGNIL
						S04W33	0	0	0			S04W33	Q	
						S11W13	0	0	0			S11W13	Q	
						S15E13	0	0	0			S15E13	Q	
294	21	20	036	100	005	S12W55	0	0	0		21	S12W55	Q	SOLQUIET
						S04W47	0	0	0			S04W47	Q	MAGQUIET
						S10W27	0	0	0			S10W27	Q	
295	22	21	023	090	015	S04W61	0	0	0		22	S04W61	Q	SOLQUIET
						S07E65	0	0	0			S07E65	Q	MAGALERT
														MINOR 22/23
														RECURRENCE
296	23	22	033	088	018	S04W75	0	0	0		23	S04W75	Q	SOLQUIET
						N01W23	0	0	0			N01W23	Q	MAGALERT
						S07E52	0	0	0			S07E52	Q	MINOR 23/XX
														RECURRENCE
297	24	23	023	089	015	S12E33	0	0	0		24	S12E33	Q	SOLQUIET
						S07E39	0	0	0			S07E39	Q	MAGNIL
298	25	24	024	090	017	S21W55	0	0	0		25	S21W55	Q	SOLQUIET
						S07E25	0	0	0			S07E25	Q	MAGQUIET
299	26	25	063	090	008	S22W69	0	0	0		26	S22W69	Q	SOLQUIET
						S25E01	0	0	0			S25E01	Q	MAGQUIET
						S12E08	0	0	0			S12E08	Q	
						S07E11	0	0	0			S07E11	Q	
						S06E56	0	0	0			S06E56	Q	
300	27	26	036	090	005	S22W07	0	0	0		27	S22W07	Q	SOLQUIET
						S08W02	0	0	0			S08W02	Q	MAGQUIET
						S05E44	0	0	0			S05E44	Q	
301	28	27	027	090	005	S08W19	0	0	0		28	S08W19	Q	SOLQUIET
						S05E29	0	0	0			S05E29	Q	MAGQUIET
302	29	28	037	092	011	S18E07	0	0	0		29	S18E07	Q	SOLQUIET
						S06E14	0	0	0			S06E14	Q	MAGALERT
						S17E69	0	0	0			S17E69	Q	29/XX
														RECURRENCE
303	30	29	022	091	032	S17W02	0	0	0		30	S17W02	Q	SOLQUIET
						S16E56	0	0	0			S16E56	Q	MAGALERT
														MINOR 30/01
304	31	30	029	094	022	S19W21	0	0	0		31	S19W21	Q	SOLQUIET
						S16E47	0	0	0			S16E47	Q	MAGNIL
305	01	31	017	094	015	S19W35	0	0	0		01	S19W35	Q	SOLQUIET
														MAGQUIET

NO=MESSAGE SERIAL NUMBER, DI=DATE OF ISSUE, DO=DATE OF OBSERVATION, WOLF=WOLF NUMBER, 10CM=10CM SOLAR FLUX, A=A INDEX, LOC=LOCATION LAT-LONG, 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.

OCTOBER 1983

PRESTO MESSAGES (THE RAPID REPORT OF MAJOR EVENTS)

02 OCTOBER 1983 BOULDER 02/0810Z TENFLARE 170 FLUX UNITS 02/0556Z DURATION 47 MINUTES
05 OCTOBER 1983 BOULDER 05/1502Z TENFLARE 290 FLUX UNITS 05/1459Z DURATION 19 MINUTES
19 OCTOBER 1983 BOULDER 19/2118Z TENFLARE 240 FLUX UNITS 19/2006Z DURATION 11 MINUTES

INTERNATIONAL* (R_I) RELATIVE SUNSPOT NUMBERS

Day	1982 Final Nov	1982 Final Dec	1983 Final Jan	1983 Final Feb	Mar	Apr	May	Jun	1983 Prov Jul	Aug	Sep	Oct
01	80	88	60	103	109	53	114	61	62	131	46	32
02	88	125	65	85	93	70	104	72	59	128	56	51
03	75	132	55	88	86	61	94	73	61	105	59	63
04	100	137	63	94	93	53	85	68	87	103	69	74
05	100	137	82	82	113	36	95	77	80	79	81	65
06	76	174	103	71	88	49	88	85	79	47	78	75
07	98	175	109	72	77	64	92	104	74	60	72	87
08	86	184	126	63	68	59	98	100	82	70	72	99
09	102	152	100	39	74	59	110	100	69	69	74	106
10	109	166	83	26	55	64	114	86	59	63	77	108
11	112	171	90	21	49	69	101	73	68	88	65	130
12	83	194	77	18	32	65	114	66	86	103	41	122
13	98	172	89	11	12	64	132	72	85	101	36	100
14	116	160	92	10	24	64	125	88	88	97	36	75
15	116	166	77	24	44	53	130	92	92	93	42	72
16	100	140	89	17	63	54	99	84	93	80	38	61
17	108	118	102	22	74	63	93	79	96	72	35	60
18	117	102	86	32	88	75	99	78	98	71	45	63
19	122	79	93	33	82	110	88	103	96	54	40	46
20	118	63	81	32	82	90	105	117	101	40	32	26
21	131	87	74	39	87	87	110	117	109	52	38	18
22	141	88	73	33	70	83	104	136	114	50	38	22
23	120	96	59	40	66	91	102	143	95	51	42	22
24	96	100	58	50	60	92	111	122	105	44	46	20
25	75	122	75	67	48	123	98	122	85	52	45	18
26	73	116	77	70	70	118	100	110	58	56	50	22
27	71	126	75	88	72	126	85	92	49	51	46	12
28	74	120	89	98	48	146	68	83	40	55	48	11
29	82	98	99		44	142	88	68	77	63	48	16
30	76	79	101		54	137	68	63	89	59	33	15
31		69	110		37		60		110	42		19
Mean	98	127	84	51	66	81	99	91	82	72	51	55

*International sunspot numbers have replaced the Zurich values since January 1981.
The yearly mean sunspot number equaled 115.9 in 1982.

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

ALGONQUIN RADIO OBSERVATORY, OTTAWA

Day	Nov 82	Dec	Jan 83	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct
01	159.6	167.8	131.4	162.6	145.4	100.7	142.0	131.3	124.1*	151.1	110.5*	117.5
02	154.5	166.3	131.4	156.5*	138.7	101.2	145.4	139.0*	125.4	145.4*	110.9	120.4
03	147.4	181.6	136.2	145.5	141.0	101.4*	139.4	139.3	131.5	139.4*	106.4	123.1
04	143.4	194.5	138.2	156.8	143.7	100.8	132.9	149.2	137.2	136.5	110.5	125.1
05	136.4	195.9*	154.6	154.3*	146.6	98.7	130.8	167.9*	132.1	136.5	117.6	126.6*
06	142.1	210.4	161.6*	152.3	139.3	99.5	125.8*	191.4	132.4	142.0	120.7	132.7
07	142.3	244.3	163.3	142.2	132.3	102.2	117.4	179.5	132.7	141.9	118.6	133.9
08	144.8	241.7*	155.9*	133.3	128.1	104.1*	127.0	173.7	127.9	141.0	118.4	131.1*
09	147.5A	258.6	150.0	121.9	122.0	106.1	132.2*	159.5*	123.1	142.9	115.3	130.4
10	152.9	273.5*	144.2	113.4	115.1	103.3	143.5*	150.5*	123.1	151.6	109.7	133.6*
11	154.1	259.3*	139.3	106.9	103.0	104.4	159.3*	139.2	125.7	151.3	110.5	138.3
12	164.9	251.1	135.7	99.8	99.5*	107.7	160.4*	134.5	124.7	156.7*	104.9*	133.7
13	161.2	239.0	135.1	95.5	95.8	109.1	154.4	128.3	123.5	147.3	104.4	133.5*
14	159.5	235.6	137.2	91.7	95.9	111.7	153.5*	126.4*	124.4	141.6*	105.2	131.5*
15	157.0*	221.9	141.0	88.5	100.6*	103.6	145.7	128.7	124.6	135.8*	106.3*	127.0
16	163.3	213.2*	140.2	89.7	107.8	105.1	134.0*	128.8*	121.3	132.1	106.3*	117.2A
17	158.0	200.5*	138.0	91.9	114.5	113.5	131.7*	130.7	120.0	126.8	105.1	110.9*
18	170.2*	186.5	134.8	97.2	117.7	120.7	137.6	130.5	116.4*	122.2	102.5	103.6
19	182.3	176.8*	127.4	94.6	118.3	125.0	146.8	133.8	119.5	117.7	101.2	105.2
20	189.2	159.2	120.5	97.3	120.7	127.4	151.8*	136.9	125.1	118.7	100.4	99.1
21	200.9	149.4	116.1	101.6	118.8*	133.3	149.8	144.0	128.1*	114.2	103.0	89.3
22	231.1*	150.1*	113.5	106.2	117.2	139.7	152.0	148.9	138.9	110.8	106.0	87.2
23	196.1	157.0*	115.4	112.0	116.2	140.4	143.7	149.8	132.9*	110.8	112.6	87.8
24	172.9	166.8	114.1	114.3	117.1	142.7	140.5	141.7*	136.3*	108.7	111.8	88.6
25	164.8	170.6	122.7	120.3	114.2*	145.6	138.8	141.4	136.7*	104.2	110.5*	89.2
26	168.8*	168.7	132.6	126.2	114.7*	146.8	132.3	144.1A	128.9*	105.8	114.6*	89.1
27	158.6	166.2	133.6	138.3	109.6	149.6	130.5	137.1	123.1	103.7	119.8	88.9
28	160.3*	157.0	140.6	137.6	104.9	156.4*	133.1	129.4*	127.1	102.8	114.8	90.4
29	161.4	147.3	148.9		98.9	148.4	139.0	128.9	138.5*	105.7	114.5	90.7
30	164.8	142.5	154.8		100.7	147.2	135.4*	126.8	144.3	104.0	113.0	92.6
31		134.4	161.9		98.7		138.0*		153.1*	104.2		95.5*
Mean	163.7	193.2	137.7	119.6	117.3	119.9	140.2	143.0	129.1	127.5	110.2	111.7

A = interpolated value.
*Adjusted for burst in progress at time of measurement.
The yearly mean 2800 MHz flux adjusted to 1 astronomical unit equaled 175.1 in 1982.

DAILY SOLAR INDICES

OCTOBER 1983

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	275	11	32	33	117.3	565	266	148	117.5	105	97	79	37	22
02	276	12	51	57	120.3	566	266	152	120.4	106	97	75	34	19
03	277	13	63	69	123.0	---	---	---	123.1	---	---	--	--	--
04	278	14	74	73	125.1	585	271	156	125.1	110	99	76	33	15
05	279	15	65	59	126.6*	586	286	160	126.6*	121	103	80	33	23
06	280	16	75	76	132.8	592	277	161	132.7	127	106	82	34	17
07	281	17	87	86	134.0	596	281	158	133.9	103	109	87	36	19
08	282	18	99	89	131.4*	582	280	157	131.1*	113	111	87	36	22
09	283	19	106	100	130.8	580	276	156	130.4	109	112	85	39	36
10	284	20	108	113	134.0*	601	277	160	133.6*	115	119	84	35	24
11	285	21	130	134	138.9	593	271	164	138.3	121	118	83	37	19
12	286	22	122	114	134.2	570	265	157	133.7	110	113	73	32	16
13	287	23	100	94	134.2*	554	296	173	133.5*	121	114	87	37	15
14	288	24	75	73	132.2*	618	299	175	131.5*	119	110	82	35	16
15	289	25	72	64	127.8	---	---	---	127.0	---	---	--	--	--
16	290	26	61	55	118.0A	605	284	161	117.2A	101	99	75	32	16
17	291	27	60	53	111.7*	588	282	152	110.9*	97	95	76	35	20
18	292	1	63	57	104.4	587	268	138	103.6	89	86	68	31	17
19	293	2	46	36	106.0	591	278	142	105.2	93	89	73	33	15
20	294	3	26	24	100.0	589	274	132	99.1	83	87	72	31	15
21	295	4	18	18	90.1	589	265	125	89.3	79	84	69	30	15
22	296	5	22	25	88.1	580	256	121	87.2	79	77	71	30	13
23	297	6	22	16	88.7	565	257	123	87.8	75	79	70	31	18
24	298	7	20	19	89.6	536	246	121	88.6	73	79	72	30	14
25	299	8	18	17	90.3	566	254	122	89.2	81	84	70	28	13
26	300	9	22	13	90.2	579	262	126	89.1	80	79	73	30	14
27	301	10	12	13	90.1	575	265	126	88.9	83	80	--	31	14
28	302	11	11	12	91.6	578	256	124	90.4	84	79	74	34	15
29	303	12	16	0	92.0	571	259	124	90.7	78	76	68	29	14
30	304	13	15	8	93.9	565	252	124	92.6	82	80	50	26	14
31	305	14	19	15	97.0*	585	262	128	95.5*	86	83	73	28	15
Mean			55	52	112.4	581	270	143	111.7	97	95	76	32	17

*Adjusted for burst in progress at time of measurement.

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

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

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

OBSERVED AND PREDICTED SOLAR ACTIVITY INDICES

OCTOBER 1983

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	2800 MHz RADIO FLUX Adjusted to 1 AU (S_a) Smoothed
Nov 79	183.3	162	176.5	149	182.9	149	226.8	196
Dec	176.3	164	157.6	152	151.0	152	197.2	199
Jan 80	159.6	164	145.3	153	153.6	154	199.6	200
Feb	155.0	163	133.9	154	148.7	155	195.1	200
Mar	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	**83**	67.5	85	119.9	136
May	99.2	**79(5)***	97.7	**80**	86.1	**83**	137.1	---
Jun	91.1	**77(9)***	93.1	**77**	92.4	**80**	143.0	---
Jul	82.1†	**76(11)***	82.2	**76**	77.4	**79**	129.1	---
Aug	71.9†	**75(13)***	69.2	**75**	75.7	**78**	127.5	---
Sep	50.9†	**74(15)***	47.4	**74**	57.0	**77**	110.2	---
Oct	55.2†	**74(16)***	---	**75**	58.6	**78**	111.7	---
Nov	---	**74(17)***	---	**75**	---	**78**	---	---
Dec	---	**73(18)***	---	**74**	---	**77**	---	---
Jan 84	---	**72(19)***	---	**73**	---	**76**	---	---
Feb	---	**69(19)***	---	**70**	---	**73**	---	---
Mar	---	**65(21)***	---	**65**	---	**68**	---	---
Apr	---	**61(23)***	---	**61**	---	**64**	---	---

*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

OCTOBER 1983

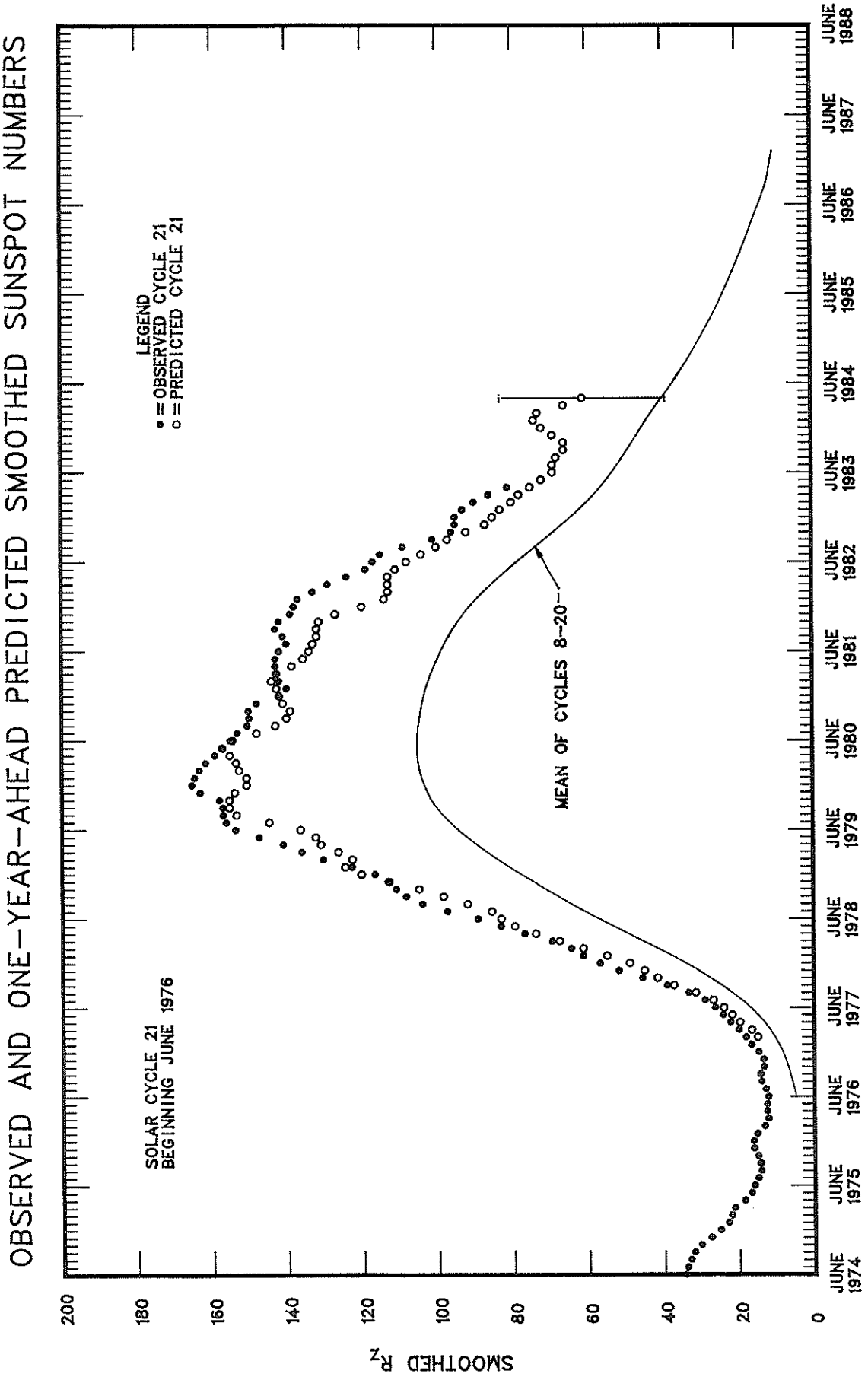
Month	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1976	15	13	12	13	13	12	13	14	14	13	14	15
1977	17	18	20	22	24	26	29	33	39	46	52	57
1978	61	65	70	77	83	89	97	104	108	111	113	118
1979	124	131	137	141	147	153	155	155	156	158	162	165*
1980	164	163	161	159	156	155	153	150	150	150	148	143
1981	140	142	143	143	143	142	140	141	143	142	139	138
1982	137	133	129	124	119	117	115	109	101	96	95	95
1983	93	90	86	82	79 (5)	77 (9)	76 (11)	75 (13)	74 (15)	74 (16)	74 (17)	73 (18)
1984	72 (19)	69 (19)	65 (21)	61 (23)	59 (24)	59 (25)	58 (25)	56 (25)	54 (25)	51 (25)	48 (24)	46 (25)
1985	44 (25)	43 (24)	43 (23)	42 (23)	41 (23)	38 (22)	37 (21)	35 (20)	35 (20)	34 (21)	34 (21)	33 (22)
1986	33 (22)	31 (22)	30 (22)	28 (21)	26 (21)	23 (21)	21 (20)	19 (19)	18 (18)	18 (17)	17 (15)	16 (14)

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 April 1983, and on provisional international numbers thereafter. Some table entries after the June 1976 value will change slightly, when we incorporate final data for 1983.

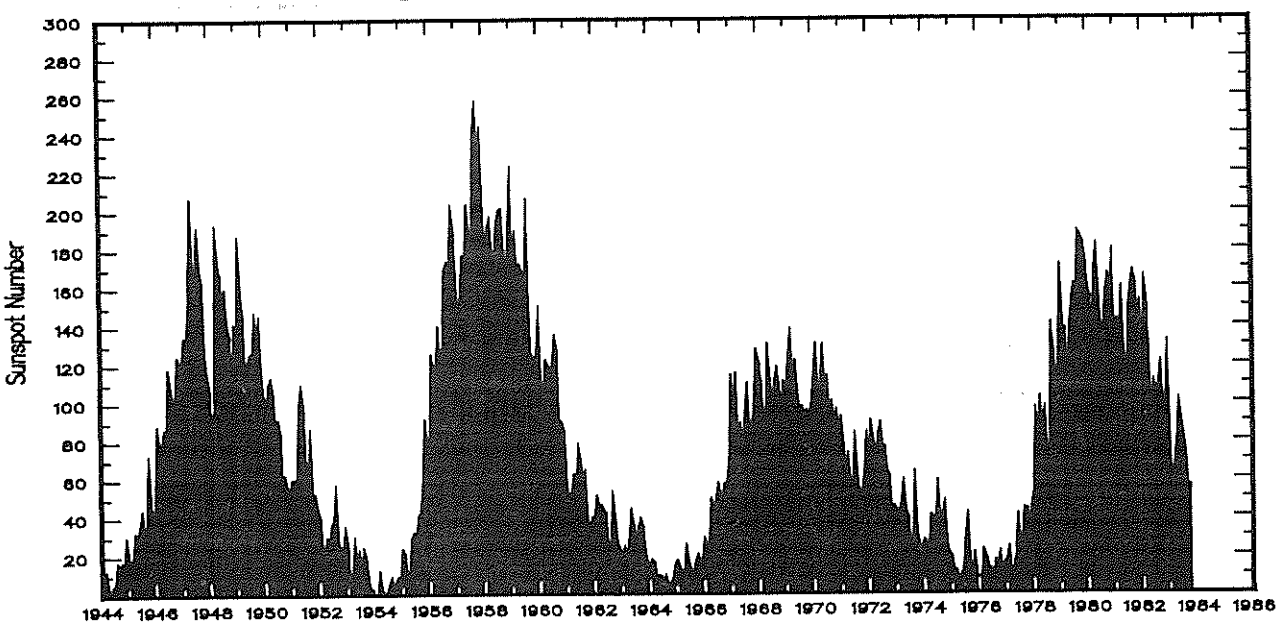
The entries with numbers in parentheses below them denote predictions by the McNish-Lincoln method. (See page 9 in the February 1983 edition of the "Solar-Geophysical Data" supplement.) By adding to and subtracting from each prediction the number in parentheses, one generates the 90% confidence interval. Consider, for example, the April 1984 prediction tabulated above. There exists a 90% chance that in April 1984 the actual smoothed sunspot number will fall somewhere between 38 and 84.

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.

*MAXIMUM OF SUNSPOT CYCLE 21. The maximum smoothed sunspot number occurred in December 1979.


OBSERVED AND ONE-YEAR-AHEAD PREDICTED SMOOTHED SUNSPOT NUMBERS
LEGEND
• = OBSERVED CYCLE 21
○ = PREDICTED CYCLE 21
SOLAR CYCLE 21
BEGINNING JUNE 1976
MEAN OF CYCLES 8-20
SMOOTHED R_Z
0
20
40
60
80
100
120
140
160
180
200
JUNE 1974
JUNE 1975
JUNE 1976
JUNE 1977
JUNE 1978
JUNE 1979
JUNE 1980
JUNE 1981
JUNE 1982
JUNE 1983
JUNE 1984
JUNE 1985
JUNE 1986
JUNE 1987
JUNE 1988

MONTHLY MEAN SUNSPOT NUMBERS
January 1944 – October 1983



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	82.1*	71.9*	50.9*	55.2*		

*Provisional

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

OCTOBER 1983

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	Area Measurement Time (UT)	Area Measurement Apparent (10^{-6} Disk)	Area Measurement Corr (Sq Deg)	Remarks
LEAR	01	0139	0141	0147	S19	W35	4324	09	28.4	8	SF		3	C		46		
LEAR	01	0605	0614	0643	S21	W36	4324	09	28.5	38	SF	C 1.1	3	C		70		F
GOES	01	0658	0701	0708						10		C 1.9						
RAMY	01	1157	1209	1216	S23	W38	4324	09	28.6	19	SN	C 1.9	3	C		35		
GOES	01	1741	1749	1750						9		B 9.3						
GOES	01	1913	1916	1922						9		C 1.0						
GOES	01	2016	2019	2021						5		C 2.0						
GOES	02	0200	0206	0212						12		C 1.1						
GOES	02	0517	0547	0604			4328			47		C 1.8						
LEAR	02	0543	0547	0549	N07	E75	4328	10	7.9	6	SF		3	C		13		
LEAR	02	0558	0603	0604	N02	E86	4328	10	8.7	6	SF		3	C		18		
LEAR	02	0612	0642	0848	S18	W53	4324	09	28.2	156	2N	M 1.1	3	C		362		F K
LEAR	02	0612	0646	0848	S18	W53	4324	09	28.2	156	1N		3	C		360		K
LEAR	02	0614	0620	0923	S16	W60	4323	09	27.7	189	SF		3	C		52		K
LEAR	02	0614	0646	0923	S16	W60	4323	09	27.7	189	1N		3	C		239		UFK
CATA	02	0645E	0715	0800D	S18	W59		09	27.8	75D	2		2	P	0715	506	11.6	
BUCA	02	0700E		0835	S16	W60		09	27.7	95D	2N			P	0705	322	7.5	B
GOES	02	1001	1004	1007						6		C 1.9						
GOES	02	1016	1020	1023						7		C 1.8						
GOES	02	1029	1032	1035						6		C 2.1						
RAMY	02	1224	1227	1310	S18	W55	4324	09	28.3	46	SF	B 9.7	3	C		31		
LEAR	03	0454	0458	0518	N12	E12	4330	10	4.1	24	SF		3	C		27		
GOES	03	0645	0647	0652						7		B 7.3						
LEAR	03	0746	0747	0749	S20	W65	4324	09	28.4	3	SF	B 9.0	3	C		18		
GOES	03	0853	0906	0915						22		C 4.1						
BUCA	03	0900	0903U	0925	S20	W65		09	28.4	25	1F			P	0903	107	3.0	E
RAMY	03	1817	1819	1828	N13	E05	4330	10	4.1	11	SF		3	C		51		
GOES	03	2004	2008	2013						9		B 8.3						
GOES	04	0006	0010	0012						6		B 8.0						
GOES	04	0104	0108	0113						9		C 1.2						
LEAR	04	0334	0335	0340	S21	W74	4324	09	28.5	6	SF		3	C		10		
GOES	04	2105	2110	2115						10		B 9.7						
LEAR	04	2327	2329	2341	N08	E49	4328	10	8.7	14	SF	B 7.6	3	C		32		
GOES	05	0151	0201	0211						20		C 1.6						
GOES	05	0556	0602	0607						11		B 7.2						
GOES	05	0710	0715	0718						8		B 6.4						
GOES	05	0947	0952	0958						11		B 7.8						
WEND	05	1040	1042	1046	S14	E29		10	7.6	6	SF			C	1042	14	.2	D
GOES	05	1100	1110	1121			4331			21		C 2.9						
RAMY	05	1110E	1118	1226	N21	E62	4331	10	10.2	76D	SF		3	C		36		
WEND	05	1111	1124	1158	N21	E63		10	10.3	47	SF			C	1124	48	1.2	
WEND	05	1217	1219	1223	S14	E28		10	7.6	6	SF			C	1219	17	.2	D
HOLL	05	1458	1506	1716	N07	E41	4328	10	8.7	138	1B	M 2.0	3	C		396		FE
RAMY	05	1729	1747	1920D	N08	E37	4328	10	8.5	111D	1B	C 6.2	3	C		279		F
HOLL	05	1742	1745	1840D	N07	E38	4328	10	8.6	58D	SB	C 6.2	3	C		177		K
HOLL	05	1742	1749	1840D	N07	E38	4328	10	8.6	58D	1B	C 6.2	3	C		231		U K
GOES	05	1958	2002	2014						16		B 8.2						
RAMY	06	1150	1154	1204	S07	E70		10	11.7	14	SN		3	C		21		
CATA	06	1155	1155	1205	S08	E72		10	11.9	10	S		1	C	1155	56		
RAMY	06	1240	1246	1306	S07	E71		10	11.8	26	SN		3	C		19		
HOLL	06	1558	1602	1635	N05	E26	4328	10	8.6	37	SN	C 1.1	3	C		70		
RAMY	06	1559	1607	1618	N07	E27	4328	10	8.7	19	SN	C 1.1	3	C		41		
RAMY	06	1746	1754	1823	S07	E69	4333	10	11.9	37	SN	B 9.1	3	C		39		
HOLL	06	1754	1755	1800	S09	E69	4333	10	11.9	6	SN	B 9.1	3	C		16		
HOLL	06	1857	1858	1904	S09	E67	4333	10	11.8	7	SF		3	C		36		
HOLL	06	1946	1948	2010	N06	E25	4328	10	8.7	24	SF	B 9.6	3	C		50		
GOES	06	2056	2059	2102						6		B 8.7						
HOLL	06	2144	2147	2201	N05	E22	4328	10	8.6	17	SF		3	C		68		F
HOLL	06	2205	2207	2216D	N18	E19	4329	10	8.4	11D	SF	B 9.5	3	C		97		F
HOLL	06	2305E	2319U	2327	N18	E42	4331	10	10.2	22D	SF		3	C		18		
LEAR	07	0033	0039	0044	S08	E65	4333	10	11.9	11	SF		3	C		14		
LEAR	07	0113	0117	0136	N08	E25	4328	10	8.9	23	SF		3	C		53		F
PALE	07	0149	0149	0155	S14	E07	4332	10	7.6	6	SF		3	C		56		
LEAR	07	0150	0150	0155	S15	E07	4332	10	7.6	5	SF		3	C		80		
LEAR	07	0153	0155	0203	N07	E25	4328	10	9.0	10	SF	B 9.4	3	C		47		F

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OCTOBER 1983

Sta	Day	Start (UT)	Max (UT)	End (UT)	Lat	CMD	NOAA/ USAF Region	CMP Mo	CMP Day	Dur (Min)	Imp Opt	Imp Xray	Imp See	Obs Type	Area Measurement Time (UT)	Area Measurement Apparent (10^{-6} Disk)	Area Measurement Corr (Sq Deg)	Remarks
PALE	07	0211	0214	0216	N07	E21	4328	10	8.7	5	SF		3	C		31		
LEAR	07	0334	0336	0348	N08	E23	4328	10	8.9	14	SF	B 8.7	3	C		49		F
LEAR	07	0351	0351	0359	N06	E18	4328	10	8.5	8	SF		3	C		22		
LEAR	07	0508	0510	0512	S07	E63	4333	10	11.9	4	SF		3	C		29		
LEAR	07	0523	0524	0531	S14	E06	4332	10	7.7	8	SF		3	C		22		FE
ISTA	07	0711	0725		S14	W90		09	30.5		1B							U
ISTA	07	0803	0810		N06	E11		10	8.2		SF							D
CATA	07	0805	0805	0810	N07	E11		10	8.2	5	S		1	C	0805	28	.3	H
CATA	07	0950	0950	0955	N05	E09		10	8.1	5	S		1	C	0950	56	.6	
RAMY	07	1416	1416	1424	N08	E16	4328	10	8.8	8	SN	B 7.1	3	C		28		F
RAMY	07	1430	1433	1451	N06	E15	4328	10	8.7	21	SN	C 1.9	3	C		96		F
HOLL	07	1556	1600	1605	N06	E06	4328	10	8.1	9	SF		3	C		49		
RAMY	07	1749	1750	1812	N08	E13	4328	10	8.7	23	SN	B 8.3	3	C		77		F K
RAMY	07	1749	1757	1812	N08	E13	4328	10	8.7	23	SN		3	C		93		K
HOLL	07	1749	1749	1818	N08	E13	4328	10	8.7	29	SN		3	C		85		F
PALE	07	1750E	1759U	1816	N08	E13	4328	10	8.7	26D	SF		3	C		104		F
GOES	07	1753	1758	1800			4328			7		B 7.7						
HOLL	07	1846	1848	1912	N08	E13	4328	10	8.8	26	SN		3	C		62		
HOLL	07	2148E	2152U	2201	N07	E09	4328	10	8.6	13D	SF		3	C		66		U
LEAR	07	2303	2304	2318	N08	E04	4328	10	8.3	15	SF		3	C		29		F
MANI	07	2304	2305	2315	N09	E04		10	8.3	11	SF		1	V	2	5 3		F
LEAR	07	2356	2357	0002	N08	E06	4328	10	8.4	6	SF		3	C		28		
MANI	07	2356	2357	0003	N08	E05		10	8.4	7	SF		1	V	2	0 2		
LEAR	08	0017	0018	0021	N06	E01	4328	10	8.1	4	SF		3	C		35		
LEAR	08	0146	0146	0151	N08	E04	4328	10	8.4	5	SB	B 7.5	3	C		71		F
PURP	08	0147E	0147	0148D	N07	E05		10	8.4	1D	SB	B 7.5		C	0147	41	.4	
LEAR	08	0316	0317	0330	N06	W00	4328	10	8.1	14	SF		3	C		53		F
LEAR	08	0446	0446	0454	N08	E03	4328	10	8.4	8	SN		3	C		92		
LEAR	08	0628	0629	0632	N03	W01	4328	10	8.2	4	SF	B 6.7	3	C		32		
LEAR	08	0636	0636	0641	N03	W01	4328	10	8.2	5	SF		3	C		53		
ISTA	08	0733	0744		N05	W03		10	8.1		SN							D
BUCA	08	0735	0739	0756	N06	W04		10	8.0	21	SN	C 1.3		C	0739	107	1.1	D
CATA	08	0745E	0745	0755	N06	W04		10	8.0	10D	S		2	P	0745	56	.6	
RAMY	08	1140E	1141	1157	N23	E61		10	13.2	17D	SF		3	C		19		
HOLL	08	1623	1623	1632	N06	E00	4328	10	8.7	9	SF		3	C		27		F
HOLL	08	1652	1652	1656	N04	W07	4328	10	8.2	4	SF		3	C		35		
RAMY	08	1659	1700	1713	N03	W07	4328	10	8.2	14	SN	C 2.0	3	C		54		F
HOLL	08	1659	1700	1714	N03	W07	4328	10	8.2	15	SN	C 2.0	3	C		55		F
HOLL	08	2315	0002	0004D	N22	E56	4335	10	13.3	49D	SN		3	C		44		K
HOLL	08	2315	2342	0004D	N22	E56	4335	10	13.3	49D	SF		3	C		25		K
LEAR	08	2358	2358	0003	N03	W12	4328	10	8.1	5	SN		3	C		41		F
PURP	09	0033	0055U	0113	N16	E16		10	10.2	40	SN			C	0055	82	.9	
LEAR	09	0037	0039	0100	N16	E18	4331	10	10.4	23	SF	B 6.7	3	C		51		F
LEAR	09	0105	0109	0116	N06	W01	4328	10	9.0	11	SF		3	C		37		
LEAR	09	0118	0123	0124	N22	E55	4335	10	13.3	6	SF		3	C		19		U
PURP	09	0202E	0213	0230	N22	E57		10	13.5	28D	1N	C 6.0		C	0213	129	2.4	
LEAR	09	0204	0215	0226	N21	E54	4335	10	13.2	22	SB	C 6.0	3	C		112		
PALE	09	0259	0302	0320D	N07	W02	4328	10	9.0	21D	SF	C 1.3	3	C		69		F
LEAR	09	0300	0303	0323	N07	W02	4328	10	9.0	23	SN	C 1.3	3	C		79		F
PURP	09	0301	0305	0323	N06	E00		10	9.1	22	SB	C 1.3		C	0305	54	.6	E
LEAR	09	0410	0412	0414	N07	W05	4328	10	8.8	4	SF		3	C		25		
GOES	09	0528	0542	0547						19		C 2.4						
LEAR	09	0531	0540	0551	N04	W15	4328	10	8.1	20	SN		3	C		77		
PURP	09	0534E	0534	0548D	N03	W16		10	8.0	14D	SN			P	0534	61	.7	
LEAR	09	0824	0825	0845	N22	E49	4335	10	13.1	21	SF	C 1.1	3	C		58		
BUCA	09	0855	0856	0911	N05	W18		10	8.0	16	SN			C	0856	86	.9	E
CATA	09	0855	0900	0915	N03	W17		10	8.1	20	S		2	C	0900	112	1.2	
CATA	09	1145	1145	1205	N04	W19		10	8.1	20	1		2	C	1145	394	4.3	H
HOLL	09	2225	2228	2235	N23	E44	4335	10	13.3	10	SF	C 1.1	3	C		24		
LEAR	09	2312	2313	2317	S15	W30	4332	10	7.7	5	SF		3	C		19		
PALE	10	0045	0048	0055	S16	W05	4338	10	9.7	10	SF		3	C		36		
PURP	10	0046E	0048	0056	S17	W03		10	9.8	10D	SN			C	0048	27	.3	D
PURP	10	0048	0056	0101	S10	E26		10	12.0	13	SN			C	0056	54	.6	E
LEAR	10	0203	0217	0255	N23	E44	4335	10	13.5	52	SF		3	C		130		F
LEAR	10	0234	0237	0240	N11	E02	4331	10	10.3	6	SF		3	C		38		
LEAR	10	0336	0339	0354	N22	E42	4335	10	13.4	18	SF		3	C		29		
LEAR	10	0413	0415	0417	S16	W33	4332	10	7.7	4	SF		3	C		22		
PURP	10	0745	0818	0823D	N21	E42		10	13.5	38D	SB			P	0818	88	1.3	

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OCTOBER 1983

Sta	Day	Start (UT)	Max (UT)	End (UT)	Lat	CMD	NOAA/ USAF Region	CMP Mo	CMP Day	Dur (Min)	Imp Opt	Imp Xray	See	Obs Type	Area Measurement Time (UT)	Area Measurement Apparent (10^{-6} Disk)	Area Measurement Corr (Sq Deg)	Remarks
LEAR	10	0745	0817	0910	N23	E39	4335	10	13.3	85	1B		3	C		315		ZUK
LEAR	10	0745	0826	0910	N23	E39	4335	10	13.3	85	1B		3	C		265		K
WEND	10	0805	0818	0848	N23	E38		10	13.3	43	SN			C	1818	113	1.6	E
GOES	10	0808	0818	0843			4335			35		C 8.3						
BUCA	10	0810	0815	0909	N22	E42		10	13.6	59	1N			C	0815	215	3.0	E
CATA	10	0815	0830	0920	N22	E39		10	13.3	65	1		1	C	0830	197	2.7	
GOES	10	1044	1113	1142						58		C 2.6						
RAMY	10	1149E	1154U	1237	N07	W25	4328	10	8.6	48D	SF		3	C		42		
RAMY	10	1150E	1151U	1159	N23	E37	4335	10	13.3	9D	SF		3	C		55		
RAMY	10	1152E	1154U	1207	S16	W37	4332	10	7.7	15D	SF		3	C		47		
RAMY	10	1208	1224	1256	S16	W37	4332	10	7.7	48	SF		3	C		56		
RAMY	10	1220	1252	1359	N23	E33	4335	10	13.1	99	SN		2	C		99		
RAMY	10	1404	1408	1510	N23	E33	4335	10	13.1	66	SB		2	C		135		
HOLL	10	1405	1407	1501	N21	E36	4335	10	13.3	56	SB		3	C		95		UE
RAMY	10	1439	1441	1510	N23	E37	4335	10	13.5	31	SF		2	C		46		
RAMY	10	1622	1623	1723	N06	W26	4328	10	8.7	61	SN		3	C		110		
HOLL	10	1622	1623	1726	N07	W27	4328	10	8.7	64	SN		3	C		99		F
RAMY	10	1933	1934	1952	N23	E34	4335	10	13.4	19	SF		3	C		32		
HOLL	10	1934	1934	1948	N21	E33	4335	10	13.3	14	SN		3	C		32		F
HOLL	10	2031	2032	2035	N09	W27	4328	10	8.8	4	SF		3	C		25		F
HOLL	10	2249	2254	2324	N22	E31	4335	10	13.3	35	SF		3	C		41		
HOLL	10	2353	2355		N10	W28	4328	10	8.9		SF		2	C		58		
PALE	11	0138	0143	0146	N06	W09	4337	10	10.4	8	SF		3	C		24		
LEAR	11	0146E	0153	0227	S15	W19	4338	10	9.6	41D	SF		3	C		49		
LEAR	11	0216	0226	0253	N08	W33	4328	10	8.6	37	SF		3	C		61		
PALE	11	0228	0231	0248	N06	W32	4328	10	8.7	20	SF		3	C		46		F
GOES	11	0302	0306	0308						6		B 9.1						
LEAR	11	0408	0413	0431	S15	W21	4338	10	9.6	23	SN		3	C		59		
LEAR	11	0419	0426	0433	N21	E24	4335	10	13.0	14	SF		3	C		69		
LEAR	11	0449	0453	0509	N23	E27	4335	10	13.3	20	SF		3	C		55		
LEAR	11	0711	0714	0717	S15	W51	4332	10	7.4	6	SF		3	C		24		
BUCA	11	0740	0745	0800	S15	W23		10	9.6	20	SN			P	0745	43	.5	D
LEAR	11	0842	0849	0851	S14	W52	4332	10	7.4	9	SF		3	C		20		
GOES	11	0923	0926	0930						7		C 1.0						
GOES	11	0950	0955	1002						12		C 1.1						
CATA	11	1120	1120	1240	N20	W17		10	10.2	80	S		2	C	1120	56	.6	
CATA	11	1125	1125	1205	N22	W20		10	9.9	40	S		2	C	1125	39	.4	
RAMY	11	1302	1303	1314	S15	W26	4338	10	9.6	12	SN		3	C		36		
RAMY	11	1336	1338	1435	N22	E21	4335	10	13.2	59	SN		3	C		39		K
RAMY	11	1336	1352	1435	N22	E21	4335	10	13.2	59	SN		3	C		34		K
GOES	11	1350	1356	1403			4335			13		C 1.3						
GOES	11	1409	1412	1414			4335			5		C 1.8						
RAMY	11	1428	1433	1452	N05	W40	4328	10	8.6	24	SF		3	C		53		
HOLL	11	1445	1448	1455	S15	W55	4332	10	7.5	10	SF		3	C		14		F
HOLL	11	1716	1722	1725	S15	W57	4332	10	7.4	9	SF		3	C		28		
RAMY	11	1721	1721	1727	S17	W57	4332	10	7.4	6	SN		3	C		22		
HOLL	11	1803	1815	1953	N14	W19	4331	10	10.3	110	SF		2	C		153		F
HOLL	11	1926	1934	1950	S07	E00	4333	10	11.8	24	SF		2	C		39		
HOLL	11	1935	1937	1939	N10	W36	4328	10	9.1	4	SF		2	C		28		
HOLL	11	2012	2014	2043	N20	E15	4335	10	13.0	31	SN		2	C		38		F
HOLL	11	2109	2112	2114	S14	W57	4332	10	7.6	5	SF		2	C		22		
HOLL	11	2155	2213	2241	N21	E17	4335	10	13.2	46	SN		2	C		156		F
HOLL	11	2225	2226	2241	S15	W60	4332	10	7.4	16	SF		2	C		21		F
LEAR	11	2318E	2326	0005	S15	W60	4332	10	7.4	47D	1B		3	C		235		FE
HOLL	11	2318	2326	2352	S16	W60	4332	10	7.4	34	1B		2	C		204		ZF
LEAR	12	0119E	0120	0123D	N21	E14	4335	10	13.1	4D	SF		2	C		26		
GOES	12	0127	0133	0141						14		B 8.8						
GOES	12	0304	0306	0311						7		B 7.4						
GOES	12	0333	0335	0338						5		B 8.7						
LEAR	12	0350	0351	0353	N22	E14	4335	10	13.2	3	SF		3	C		27		
GOES	12	0510	0515	0518						8		C 1.2						
LEAR	12	0542	0552	0623	N21	E08	4335	10	12.9	41	1B		3	C		347		F
MANI	12	0547E	0551	0553D	N21	E07		10	12.8	6D	1B		1	V		340	3.7	F
PURP	12	0549E	0559	0604D	N19	E10		10	13.0	15D	SB			P	0559	48	.5	
LEAR	12	0647	0649	0657	N12	W42	4328	10	9.1	10	SN		3	C		74		
ISTA	12	0650	0700		N12	W41		10	9.2		SN							D
LEAR	12	0734	0735	0738	N12	W42	4328	10	9.2	4	SF		3	C		26		
CATA	12	0925	0930	0940	N06	W42		10	9.2	15	S		2	C	0930	84	1.2	
CATA	12	0930	0930	0940	N12	W43		10	9.2	10	S		2	C	0930	56	.8	

H - ALPHA SOLAR FLARES

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Sta	Day	Start (UT)	Max (UT)	End (UT)	Lat	CMD	NOAA/ USAF Region	CMP Mo	CMP Day	Dur (Min)	Imp Opt	Imp Xray	See	Obs Type	Area Measurement Time (UT)	Area Measurement Apparent (10^{-6} Disk)	Area Measurement Corr (Sq Deg)	Remarks
RAMY	12	1153	1154	1214	N21	E10	4335	10	13.3	21	SN		3	C		32		
GOES	12	1442	1456	1515						33		C 1.4						
RAMY	12	1524	1528	1553	S17	W66	4332	10	7.6	29	SF		3	C		24		
RAMY	12	1708	1709	1746D	N07	W53	4328	10	8.7	38D	SB		3	C		122		FEK
RAMY	12	1708	1743	1746D	N07	W53	4328	10	8.7	38D	1N		3	C		290		K
HOLL	12	1708	1710	1826	N09	W52	4328	10	8.8	78	1N		2	C		180		K
HOLL	12	1708	1744	1826	N09	W52	4328	10	8.8	78	1N		2	C		314		F K
HOLL	12	1725	1726	1748	N21	E07	4335	10	13.3	23	SF		2	C		24		F
GOES	12	1737	1747	1758			4328			21		C 4.8						
PALE	12	1751E	1753U	1817	N08	W52	4328	10	8.8	26D	SF		3	C		136		F
LEAR	12	2335	2339	2357	S15	W74	4332	10	7.4	22	SF		3	C		29		
LEAR	13	0043	0049	0052	N26	W02	4335	10	12.9	9	SF		3	C		26		
LEAR	13	0306	0353	0415	N22	W00	4335	10	13.1	69	SF	C 1.1	3	C		63		FE
MANI	13	0335	0337	0342	S13	W79		10	7.2	7	SF	C 1.3	1	V		25	.6	
LEAR	13	0336	0338	0341	S13	W78	4332	10	7.3	5	SF	C 1.3	3	C		15		
GOES	13	0420	0423	0428						8		B 8.3						
MANI	13	0552	0556	0605	S13	W80		10	7.2	13	SF		1	V		30	.8	
LEAR	13	0553	0557	0606	S13	W80	4332	10	7.2	13	SF		3	C		24		
MANI	13	0627	0631	0640	S15	W78		10	7.4	13	1N	C 7.6	1	V		110	2.8	F
WEND	13	0712	0722	0747	N20	W06		10	12.8	35	SN			C	0722	22	.2	
BUCA	13	0713	0717	0805	N20	W06		10	12.8	52	SN			P	0717	54	.6	D
LEAR	13	0723	0723	0731	N20	W06	4335	10	12.8	8	SF		3	C		29		
MANI	13	0724	0724	0735	N20	W05		10	12.9	11	SF		1	V		25	.3	
WEND	13	0812	0817	0844	N06	W64		10	8.6	32	SN			C	0817	50	1.2	
LEAR	13	0815	0815	0819	N07	W65	4328	10	8.5	4	SF		3	C		20		F
MANI	13	0815	0816	0819	N07	W66		10	8.4	4	SF		1	V		15	.3	F
BUCA	13	0815E		0900	N05	W62		10	8.7	45D	1F			P	0825	107	2.3	E
GOES	13	1014	1017	1021			4332			7		B 9.7						
RAMY	13	1115	1123	1425	S15	W69	4332	10	8.2	190	SN		3	C		80		K
RAMY	13	1115	1357	1425	S15	W69	4332	10	8.2	190	SN		3	C		23		K
HOLL	13	1327E	1327U	1421	N03	W21	4335	10	12.0	54D	SN		2	C		25		F K
HOLL	13	1327E	1327U	1421	N21	W06	4335	10	13.1	54D	SN	C 1.9	2	C		25		F K
HOLL	13	1327E	1358	1421	N03	W21	4335	10	12.0	54D	SN		2	C		47		K
HOLL	13	1327E	1358	1421	N21	W06	4335	10	13.1	54D	SN		2	C		47		K
RAMY	13	1342	1342	1351	N21	W09	4335	10	12.9	9	SN		3	C		37		
HOLL	13	1627	1636	1652	N20	W10	4335	10	12.9	25	SN	C 2.6	3	C		60		F
RAMY	13	1628	1632	1651	N20	W11	4335	10	12.8	23	SB	C 2.6	3	C		61		FE
LEAR	13	2324	2332	0014	N21	W16	4335	10	12.7	50	1B	C 9.1	3	C		279		UFK
LEAR	13	2324	2342	0014	N21	W16	4335	10	12.7	50	SN		3	C		166		K
HOLL	13	2324	2330	0005D	N21	W15	4335	10	12.8	41D	1B		3	C		283		UE
GOES	14	0024	0035	0045						21		C 1.1						
LEAR	14	0105	0112	0158	N14	W70	4328	10	8.8	53	SF	C 2.1	3	C		106		F
PALE	14	0112	0115	0137D	N12	W66	4328	10	9.1	25D	SF	C 2.1	3	C		43		F
LEAR	14	0129	0131	0150	N22	W11	4335	10	13.2	21	SF	C 2.2	3	C		74		
LEAR	14	0235	0235	0242	N22	W12	4335	10	13.2	7	SF		3	C		24		
LEAR	14	0318	0321	0328	N15	W49	4331	10	10.4	10	SF		3	C		30		
LEAR	14	0327	0329	0334	N10	W68	4328	10	9.0	7	SN	C 1.7	3	C		51		F
LEAR	14	0441	0443	0452	N15	W50	4331	10	10.4	11	SF		3	C		44		
LEAR	14	0551	0553	0558	N10	W69	4328	10	9.1	7	SF		3	C		29		
ISTA	14	0625E	0636		S20	W90		10	7.4	D	SN							G
LEAR	14	0644	0644	0652	N10	W70	4328	10	9.0	8	SF		3	C		32		
ISTA	14	0702	0717		S20	W90		10	7.4		SN							G
LEAR	14	0715	0727	0738	N14	W55	4331	10	10.1	23	SF		3	C		34		F
ISTA	14	0720	0735		N12	W15		10	13.2		SB							E
BUCA	14	0720	0728U	0745	N12	W56		10	10.1	25	SF			P	0728	86	1.6	E
LEAR	14	0852	0909	0938	N21	W20	4335	10	12.8	46	1B	M 1.3	3	C		423		ZU
WEND	14	0858E	0908	0936	N19	W19		10	12.9	38D	SN	M 1.3		C	0908	168	1.9	
BUCA	14	0903E	0908	0950	N20	W20		10	12.8	47D	1N	M 1.3		P	0908	259	2.7	E
WEND	14	0906	0909	0927	N20	W25		10	12.5	21	SF			C	0909	100	1.2	
WEND	14	1125	1127	1136	N13	W53		10	10.5	11	SF			C	1127	25	.4	
RAMY	14	1425	1426	1434	S04	E41	4340	10	17.7	9	SF		3	C		22		
RAMY	14	1529	1530	1541	N04	W79	4328	10	8.7	12	SN		3	C		11		
RAMY	14	1535	1537	1550	S05	E40	4340	10	17.6	15	SN		3	C		72		
RAMY	14	1537	1537	1551	N22	W23	4335	10	12.9	14	SN		3	C		30		
RAMY	14	1543	1548	1604	N07	W77	4328	10	8.9	21	1B		3	C		170		
HOLL	14	1544	1548	1558	N09	W76	4328	10	9.0	14	1F		2	C		153		
RAMY	14	1547	1552	1814	N14	W57	4331	10	10.3	147	1B		3	C		343		K
RAMY	14	1547	1559	1814	N14	W57	4331	10	10.3	147	2B	C 8.4	3	C		624		FEK
HOLL	14	1548	1559	1711D	N15	W55	4331	10	10.5	83D	2B	C 8.4	2	C		522		US

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

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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	Obs See	Obs Type	Area Measurement Time (UT)	Area Measurement Apparent (10^{-6} Disk)	Area Measurement Corr (Sq Deg)	Remarks
RAMY	14	1607	1612	1653	N20	W22	4335	10	13.0	46	SF		3	C		45		
RAMY	14	1956	1957	2010D	S05	E34	4340	10	17.4	14D	SF		3	C		24		
GOES	14	2001	2004	2016						15		C 1.6						
GOES	14	2117	2124	2131						14		C 2.1						
PALE	14	2223	2223	2228D	N14	W60	4331	10	10.4	5D	SF	C 1.4	3	C		17		F
HOLL	14	2224	2224	2235	N13	W64	4331	10	10.1	11	SF	C 1.4	3	C		92		F
LEAR	14	2321	2321	2336	S04	E32	4340	10	17.4	15	SF		3	C		30		F
LEAR	14	2336	2344	0009	N21	W28	4335	10	12.8	33	SF		3	C		42		
PALE	14	2342	2346	2349	N20	W27	4335	10	12.9	7	SF		3	C		30		
LEAR	15	0059	0101	0111	N08	W76	4328	10	9.3	12	SN	C 2.3	3	C		57		F
PALE	15	0101E	0101U	0104	N09	W80	4328	10	9.0	3D	SF	C 2.3	3	C		23		
GOES	15	0314	0319	0324						10		C 1.3						
LEAR	15	0425	0428	0432	N10	W79	4328	10	9.2	7	1N	C 7.1	3	C		124		F
LEAR	15	0439	0440	0444	N10	W80	4328	10	9.2	5	SF		3	C		27		
LEAR	15	0610	0636	0750	N21	W31	4335	10	12.9	100	SF	C 1.9	3	C		136		
LEAR	15	0649	0652	0702	N10	W91	4328	10	8.4	13	1N	C 3.9	3	C		111		
ISTA	15	0715E	0724		N20	W30		10	13.0	D	SF							D
BUCA	15	0835	0854U	0919	N21	W32		10	12.9	44	SF			C	0854	107	1.1	
CATA	15	0835E	0845	0915D	N21	W30		10	13.1	40D	1		2	P	0845	225	2.8	
ISTA	15	0837	0910		N20	W29		10	13.1		1B							EZ
LEAR	15	0838	0838	0928D	N21	W31	4335	10	13.0	50D	SN	C 4.7	3	C		100		UF
MONT	15	0845E	0849	0923	N21	W31		10	13.0	38D	SN			C	0849	220		
LEAR	15	0857	0858	0903	N13	W67	4331	10	10.3	6	SF		3	C		63		
GOES	15	1218	1222	1226						8		C 1.8						
GOES	15	1229	1249	1303						34		C 5.1						
HOLL	15	1440	1459	1515	N21	W34	4335	10	13.0	35	SN	C 2.3	3	C		97		F
RAMY	15	1529	1534	1549	N19	W34	4335	10	13.1	20	SN	C 2.0	3	C		51		F
HOLL	15	1602	1603	1613	S04	E22	4340	10	17.3	11	SF		3	C		31		F
HOLL	15	1619	1620	1645D	N15	W68	4331	10	10.5	26D	SF		3	C		55		
HOLL	15	1811	1814	1821	N19	W35	4335	10	13.1	10	SF		3	C		24		F
HOLL	15	1824	1840	1911	N20	W35	4335	10	13.1	47	SN	C 1.0	3	C		45		
GOES	15	1930	1934	1940			4335			10		C 1.7						
HOLL	15	1934E	1938U	1946	N20	W39	4335	10	12.8	12D	SF		3	C		56		F
PALE	15	2204	2204	2214	N19	W37	4335	10	13.1	10	SF		3	C		32		
HOLL	15	2307	2312	2339	N19	W38	4335	10	13.1	32	SN		3	C		36		
PALE	15	2312	2349	2355	N20	W38	4335	10	13.1	43	SN		3	C		130		
HOLL	15	2325	2329	2350	S07	W57	4333	10	11.7	25	SF		3	C		20		F
LEAR	15	2341	2348	0001	N20	W39	4335	10	13.0	20	SN	C 1.8	3	C		161		
HOLL	15	2345	2348	2354	N20	W38	4335	10	13.1	9	SN	C 1.8	3	C		106		
GOES	16	0123	0145	0200						37		C 7.3						
LEAR	16	0156	0204	0212	S02	E18	4340	10	17.4	16	SF		3	C		27		
LEAR	16	0218	0219	0225	N21	W39	4335	10	13.1	7	SF		3	C		36		F
LEAR	16	0305	0309	0318	N20	W39	4335	10	13.1	13	SB	C 2.0	3	C		107		
LEAR	16	0422	0426	0436	N22	W42	4335	10	13.0	14	SN		3	C		82		
LEAR	16	0444	0447	0455	N19	W41	4335	10	13.1	11	SF	B 8.9	3	C		26		
LEAR	16	0553	0553	0611	N20	W44	4335	10	12.9	18	SN	B 8.4	2	C		29		F.
BUCA	16	0727	0728	0755	N21	W48		10	12.6	28	SN			C	0728	107	1.6	E
LEAR	16	0728	0731	0740	N21	W47	4335	10	12.7	12	SN	C 1.1	2	C		58		F
CATA	16	0730E	0730	0750	N20	W47		10	12.7	20D	S		2	P	0730	112	1.7	
LEAR	16	0845	0853	0923	S03	E13	4340	10	17.3	38	1N	C 3.5	1	C		185		ZF
BUCA	16	0845	0850	0920D	S01	E14		10	17.4	35D	1N	C 3.5		C	0850	215	2.3	
CATA	16	0845	0850	0920	S03	E13		10	17.3	35	1		2	C	0850	281	3.0	
CATA	16	1015	1030	1035	N17	E85		10	22.9	20	1		2	C	1030	56		
GOES	16	1018	1022	1029						11		B 7.7						
CATA	16	1025	1030	1035	S08	E76		10	22.1	10	S		2	C	1030	28		
GOES	16	1050	1059	1101						11		C 1.9						
CATA	16	1055	1100	1110	N21	W50		10	12.6	15	1		2	C	1100	169	2.7	
GOES	16	1235	1239	1243						8		B 7.2						
GOES	16	1307	1311	1315						8		B 5.7						
RAMY	16	1344	1346	1355	N16	W46	4335	10	13.1	11	SN		3	C		30		
RAMY	16	1404	1407	1510	N18	W47	4335	10	13.0	66	SF		3	C		20		K
RAMY	16	1404	1422	1510	N18	W47	4335	10	13.0	66	SB	C 1.9	3	C		100		K
HOLL	16	1418	1422	1447	N20	W47	4335	10	13.0	29	SB	C 1.9	3	C		65		F
HOLL	16	1630	1649U	1652	N20	W50	4335	10	12.9	22	SF		3	C		29		F
RAMY	16	1648	1653	1709	S16	E57	4341	10	21.0	21	1B	B 8.1	3	C		211		FE
HOLL	16	1649E	1652U	1702	S17	E56	4341	10	21.0	13D	SN	B 8.1	3	C		127		F
HOLL	16	1654E	1701	1732	N21	W49	4335	10	12.9	38D	SB	C 3.8	3	C		90		FE
RAMY	16	1700	1701	1703D	N18	W49	4335	10	13.0	3D	SB	C 3.8	3	C		67		
PALE	16	1848	1853	1855	N20	W50	4335	10	13.0	7	SF		3	C		22		

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

OCTOBER 1983

Sta	Day	Start (UT)	Max (UT)	End (UT)	Lat	CMD	NOAA/ USAF Region	CMP Mo	CMP Day	Dur (Min)	Imp Opt	Imp Xray	Imp See	Obs Type	Area Measurement Time (UT)	Area Measurement Apparent (10^{-6} Disk)	Area Measurement Corr (Sq Deg)	Remarks
HOLL	16	1853	2010	2123	N21	W50	4335	10	13.0	150	1B	C 1.9	3	C		304		Z K
HOLL	16	1853	2112	2123	N21	W50	4335	10	13.0	150	SN		3	C		36		K
GOES	16	1921	1947	2002			4335			41		C 3.1						
PALE	16	1923	1930	1934	N19	W50	4335	10	13.0	11	SF		3	C		24		
GOES	16	2004	2010	2030			4335			26		M 2.9						
PALE	16	2007	2009	2057	N20	W50	4335	10	13.0	50	1B		3	C		210		Z
HOLL	16	2159	2201	2206	N18	W51	4335	10	13.0	7	SN	B 7.2	3	C		43		
LEAR	16	2242	2247	2250	N20	W54	4335	10	12.8	8	SF		3	C		23		
HOLL	16	2242	2242	2353	N21	W53	4335	10	12.9	71	SN		3	C		24		K
HOLL	16	2242	2300	2353	N21	W53	4335	10	12.9	71	SB	B 8.3	3	C		43		K
GOES	16	2257	2303	2309			4335			12		C 2.2						
LEAR	16	2300	2300	2321	N20	W54	4335	10	12.8	21	SN	B 8.3	3	C		32		F
LEAR	16	2333	2333	2342	N20	W54	4335	10	12.9	9	SF	B 8.1	3	C		27		
GOES	16	2356	0026	0030						34		C 7.1						
LEAR	17	0003	0006	0117	N20	W54	4335	10	12.9	74	SF	C 7.1	3	C		32		K
LEAR	17	0003	0025	0117	N20	W54	4335	10	12.9	74	1B		3	C		192		F K
LEAR	17	0128	0147U	0240	N20	W54	4335	10	12.9	72	SN	C 2.6	3	C		133		F
GOES	17	0159	0204	0206			4335			7		C 2.8						
GOES	17	0217	0229	0235			4335			18		C 4.2						
LEAR	17	0333	0336	0337	N20	W54	4335	10	13.0	4	SF		3	C		23		
LEAR	17	0347	0350	0405	S01	E04	4340	10	17.5	18	SF		3	C		41		
LEAR	17	0454	0506	0521	S01	E01	4340	10	17.3	27	SF		3	C		98		F
LEAR	17	0519	0524	0533	N20	W57	4335	10	12.9	14	SN	C 1.9	3	C		32		
LEAR	17	0553	0557	0620	N20	W57	4335	10	12.9	27	SB		3	C		119		E
LEAR	17	0700	0702	0710	N20	W59	4335	10	12.8	10	SN		3	C		37		
GOES	17	0813	0817	0821						8		C 1.3						
GOES	17	0911	0923	0928						17		C 2.2						
GOES	17	1023	1026	1028						5		C 2.4						
GOES	17	1117	1122	1144			4335			27		C 1.7						
RAMY	17	1129	1213	1241	N18	W62	4335	10	12.8	72	SB	C 3.2	3	C		86		FE
GOES	17	1251	1255	1302						11		B 9.4						
RAMY	17	1312	1316	1329	N18	W56	4335	10	13.3	17	SN		3	C		21		
RAMY	17	1334	1339	1343	N18	W61	4335	10	12.9	9	SN		3	C		19		
HOLL	17	1347	1358	1401D	N20	W59	4335	10	13.1	14D	SN		3	C		65		F
GOES	17	1539	1545	1548						9		C 3.6						
RAMY	17	1550	1553	1601	N18	W62	4335	10	12.9	11	SN		3	C		26		F
GOES	17	1632	1637	1641						9		C 1.2						
RAMY	17	1659	1659	1701D	S07	E00	4340	10	17.7	2D	SB		3	C		36		
GOES	17	1721	1725	1731						10		B 9.4						
GOES	17	1735	1739	1745						10		C 1.0						
HOLL	17	1753	1800	1817	N20	W62	4335	10	13.0	24	SF		3	C		31		K
HOLL	17	1753	1808	1817	N20	W62	4335	10	13.0	24	SN	B 9.1	3	C		29		K
RAMY	17	1759	1800	1806	N18	W62	4335	10	13.0	7	SN		3	C		17		
GOES	17	1839	1842	1844						5		B 8.2						
RAMY	17	1857	1858	1909	N18	W63	4335	10	13.0	12	SN	C 1.2	3	C		34		
GOES	17	1920	1926	1930						10		C 1.8						
GOES	17	2122	2126	2134						12		B 7.6						
GOES	17	2137	2140	2144						7		B 9.7						
GOES	17	2228	2233	2238						10		B 7.5						
GOES	17	2328	2342	2346						18		B 9.6						
GOES	18	0000	0006	0012						12		C 1.9						
LEAR	18	0144	0145	0234	N21	W67	4335	10	12.9	50	SF	C 2.8	3	C		86		F
LEAR	18	0237	0244	0302	N20	W69	4335	10	12.8	25	SF		3	C		39		K
LEAR	18	0237	0252	0302	N20	W69	4335	10	12.8	25	SN	B 8.6	3	C		57		F K
LEAR	18	0350	0356	0416	N22	W66	4335	10	13.1	26	SF	C 1.2	3	C		56		F
LEAR	18	0644	0644	0655	N20	W72	4335	10	12.8	11	SF		3	C		19		
LEAR	18	0725	0740	0815	N22	W72	4335	10	12.8	50	SF		3	C		117		K
LEAR	18	0725	0748	0815	N22	W72	4335	10	12.8	50	SN	B 8.5	3	C		74		F K
ISTA	18	0745	0800		N22	W70		10	12.9		SF							E
GOES	18	0825	0828	0832						7		B 7.2						
GOES	18	1001	1005	1008						7		C 1.6						
GOES	18	1330	1334	1337						7		B 4.1						
GOES	18	1353	1356	1409						16		B 5.0						
GOES	18	1619	1625	1640						21		B 4.4						
GOES	18	1733	1747	1802						29		B 8.2						
GOES	18	1922	1928	1934						12		C 1.1						
GOES	18	2028	2032	2036						8		B 5.5						
GOES	18	2054	2057	2059						5		C 2.2						
GOES	18	2105	2110	2116						11		C 1.1						

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

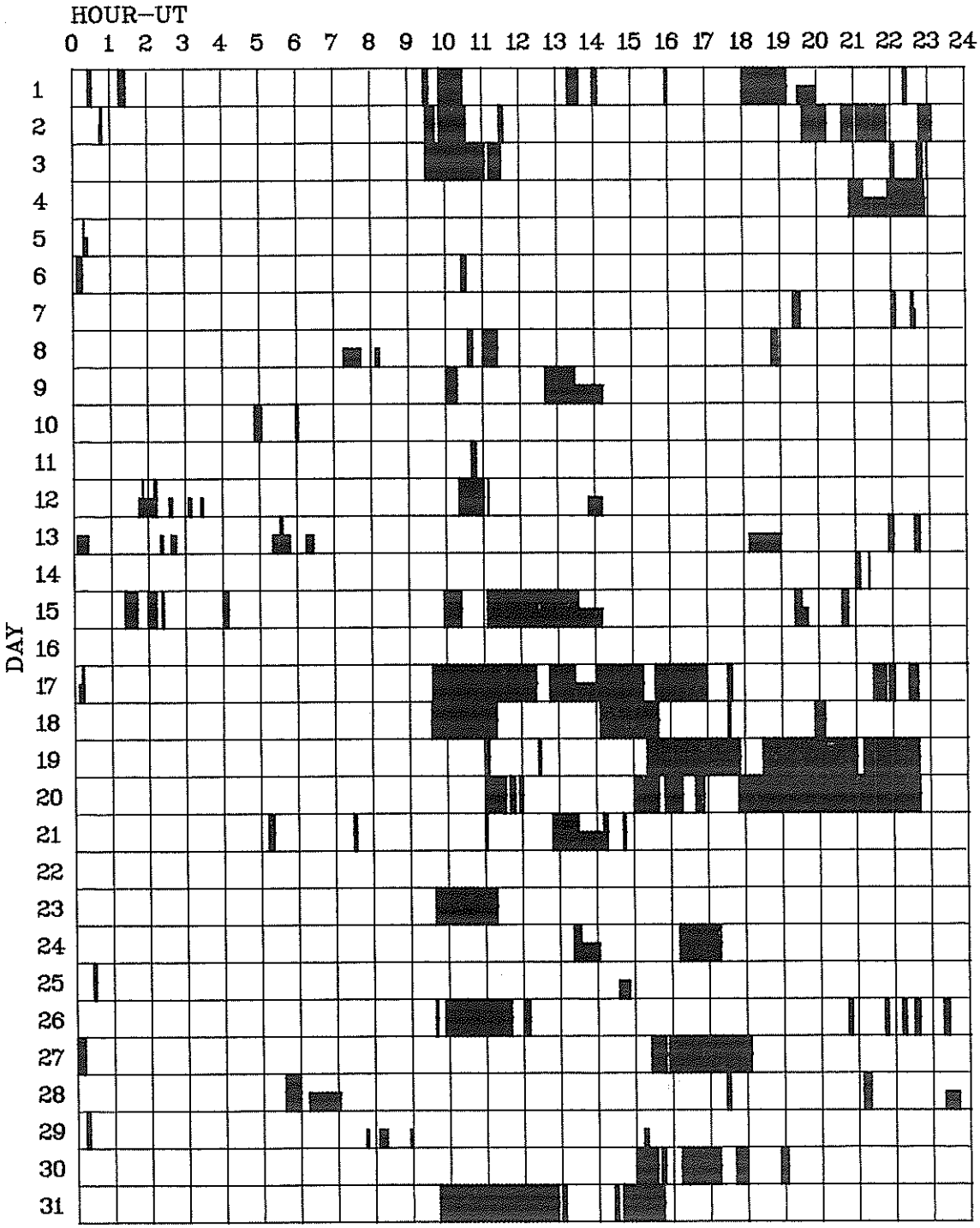
OCTOBER 1983

Sta	Day	Start (UT)	Max (UT)	End (UT)	Lat	CMD	NOAA/ USAF Region	CMP Mo	CMP Day	Dur (Min)	Imp Opt	Imp Xray	See	Obs Type	Area Measurement Time (UT)	Area Measurement Apparent (10^{-6} Disk)	Area Measurement Corr (Sq Deg)	Remarks
GOES	18	2222	2234	2251						29		B 7.2						
GOES	19	0200	0213	0222			4335			22		C 1.1						
LEAR	19	0512	0514	0520	N20	W84	4335	10	12.8	8	SF		3	C		29		
GOES	19	0534	0553	0612						38		C 1.0						
LEAR	19	0628	0631	0647	N19	W89	4335	10	12.5	19	SF		3	C		55		K
LEAR	19	0628	0638	0647	N19	W89	4335	10	12.5	19	SN	C 3.1	3	C		57		F K
GOES	19	0742	0754	0801						19		C 1.1						
GOES	19	0841	0901	0922						41		C 1.3						
GOES	19	1002	1008	1013						11		C 2.0						
GOES	19	1051	1116	1125						34		C 1.1						
GOES	19	1129	1142	1159						30		C 2.7						
RAMY	19	1219	1220	1225	S22	E82		10	25.8	6	SF	C 1.4	3	C		13		
GOES	19	1330	1351	1401						31		C 2.0						
BOUL	19	1427E	1459U	1517	N20	W89	4335	10	12.8	50D	SN	C 6.4	3	C				
RAMY	19	1754E	1755U	1759	N18	W88	4335	10	13.0	5D	SF	M 1.4	3	C		23		
GOES	19	1957	2016	2048			4335			51		M 4.8						
GOES	19	2348	2357	0006						18		C 5.0						
GOES	20	0316	0319	0323			4335			7		C 1.8						
GOES	20	0423	0428	0432						9		C 1.9						
GOES	20	0457	0502	0509						12		C 1.0						
GOES	20	0539	0547	0556						17		C 3.8						
GOES	20	0744	0751	0800						16		C 1.2						
GOES	20	0910	0928	0931						21		C 1.7						
GOES	20	1020	1031	1051						31		C 2.3						
GOES	20	1255	1257	1302						7		B 9.8						
GOES	21	0752	0801	0832			4335			40		B 6.7						
GOES	21	1647	1655	1738						51		B 3.5						
GOES	25	0200	0210	0221						21		B 2.7						
CATA	27	0855	0855	0910	S10	W41		10	24.3	15	S		2	C	0855	84	1.2	
ISTA	27	0856	0903		N04	E50		10	31.1		SF							
GOES	28	0656	0704	0709						13		B 8.2						
ISTA	28	0700	0713		S05	E26		10	30.2		1B							E
BUCA	28	0703E		0730	S05	E24		10	30.1	27D	SN			C	0703	86	.9	E
CATA	28	0705E	0705	0740	S05	E27		10	30.3	35D	S		2	P	0705	112	1.3	
PEKG	28	0711E	0711	0725	S05	E27		10	30.3	14D	1N			P	0711	181	2.1	E
CATA	28	1015	1020	1040	S15	E90		11	4.2	25	2		2	P	1020	281		A
WEND	28	1017	1019	1027	S03	E51		11	1.2	10	SF			C	1019	25	.4	G
WEND	28	1027	1031	1038	S17	E75		11	3.1	11	SF			C	1031	25		G
GOES	28	1028	1034	1041						13		B 7.3						
GOES	28	1939	1955	2004						25		B 2.1						
GOES	29	0728	0731	0733						5		B 2.2						
GOES	29	1107	1111	1113						6		B 2.6						
GOES	29	1923	1932	1940						17		B 8.1						
LEAR	31	0106	0106	0135	S17	E49	4351	11	3.8	29	SF		3	C		18		
RAMY	31	1309	1310	1316	S19	E41	4351	11	3.7	7	SF		3	C		37		
RAMY	31	1614	1621	1859D	S18	E41	4351	11	3.8	165D	1B		3	C		273		FEK
RAMY	31	1614	1630	1859D	S18	E41	4351	11	3.8	165D	SN		3	C		125		K
GOES	31	1654	1708	1803			4351			69		C 2.6						
HOLL	31	1731E	1731U	1839D	S18	E37	4351	11	3.5	68D	SF		3	C		177		F
GOES	31	2105	2152	2223			4351			78		C 2.1						
HOLL	31	2215	2218	2225	S15	E31	4351	11	3.3	10	SF		3	C		19		
LEAR	31	2320	2321	2328	S16	E33	4351	11	3.5	8	SF		3	C		25		

INTERVALS OF NO FLARE PATROL OBSERVATION

FOR PRECEDING SOLAR FLARE TABLE

OCTOBER 1983



Observatories included in total patrol:

Bucharest	Holloman	Learmonth	Palehua	Purple Mt.
Catania	Istanbul	Monte Mario	Peking	Ramey
				Wendelstein

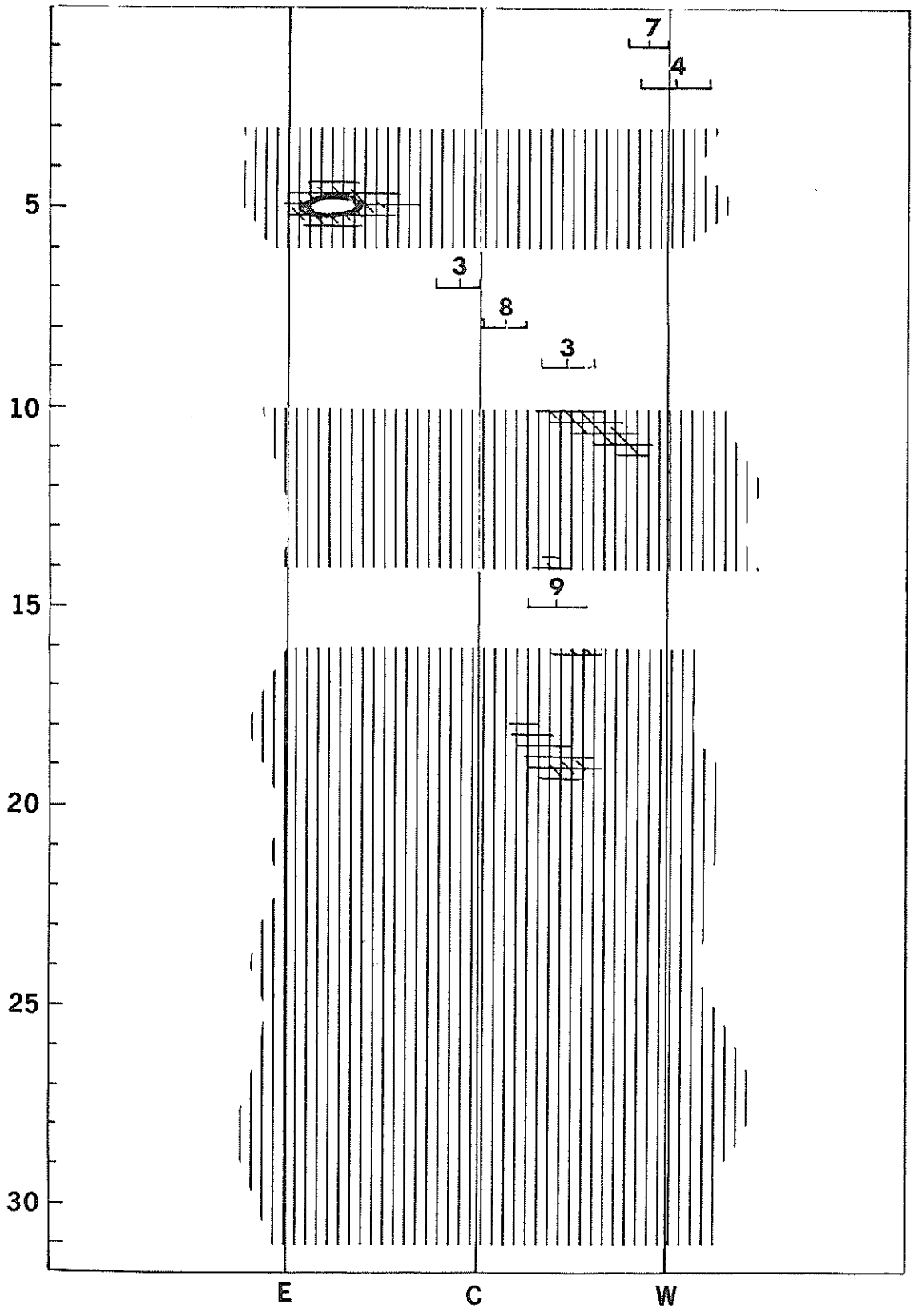
Times of no flare patrol are shown by the shaded area for each day divided into times of no cinematographic patrol (bottom half of day) and times of neither visual nor cinematographic patrol (top half of day).

22
Oct 83

SOLAR RADIO EMISSION
INTERFEROMETRIC OBSERVATION
OCTOBER 1983

Nançay

169 MHz

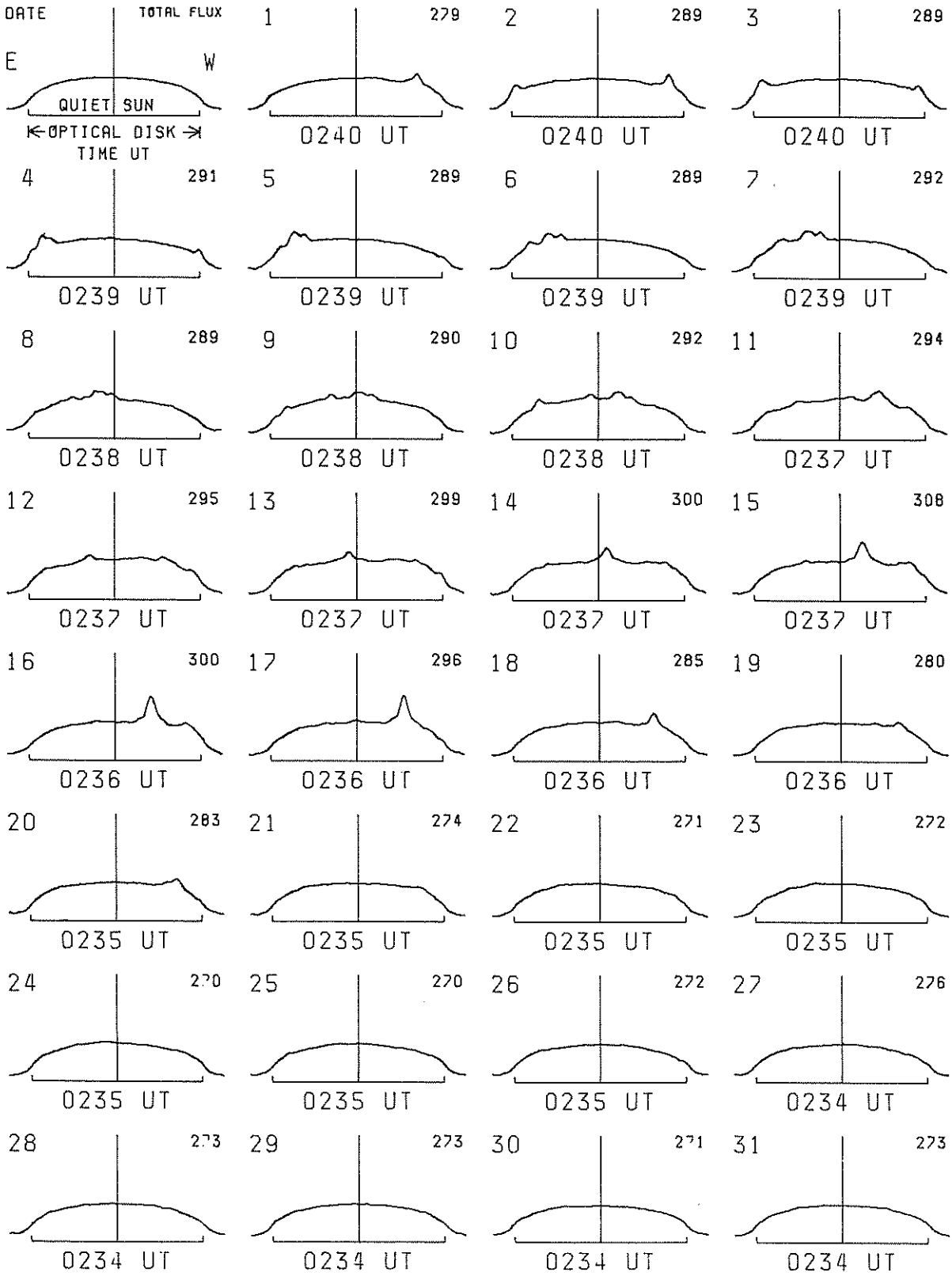


EAST-WEST SØLAR SCANS

ØCTØBER 1983

TØYØKAWA, JAPAN

3 CM
FAN BEAM WITH 1.1 MINUTES ØF ARC



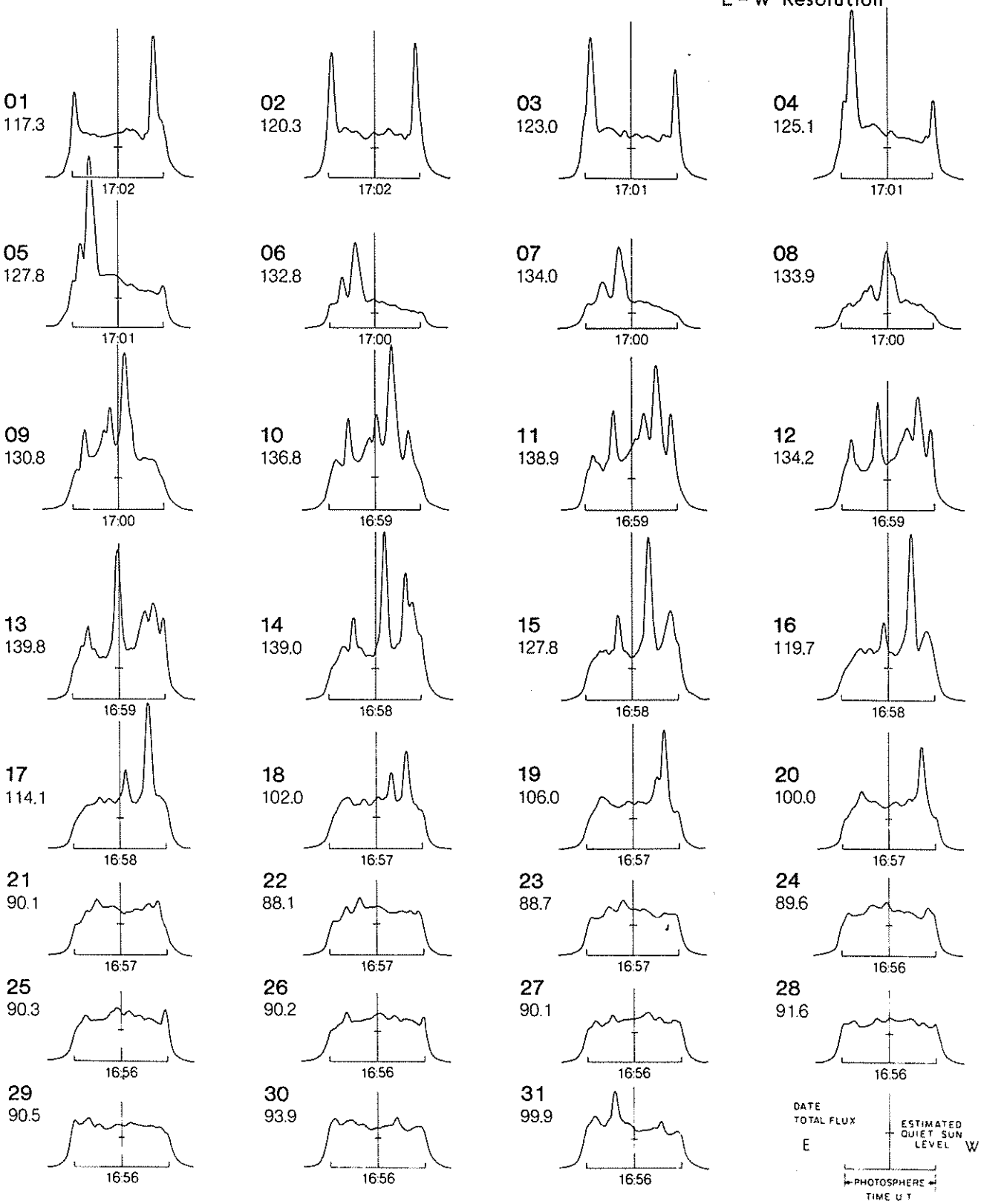
24
Oct 83

EAST-WEST SOLAR SCANS

OCTOBER 1983

ALGONQUIN RADIO OBSERVATORY
CANADA

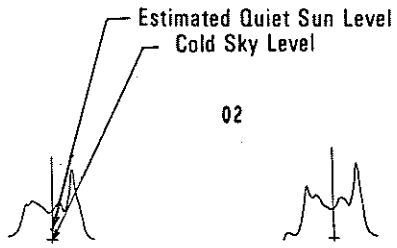
10·7 cm
Fan Beam with 1·5 minutes of arc
E-W Resolution



EAST-WEST SOLAR SCANS
OCTOBER 1983

Fleurs, Australia

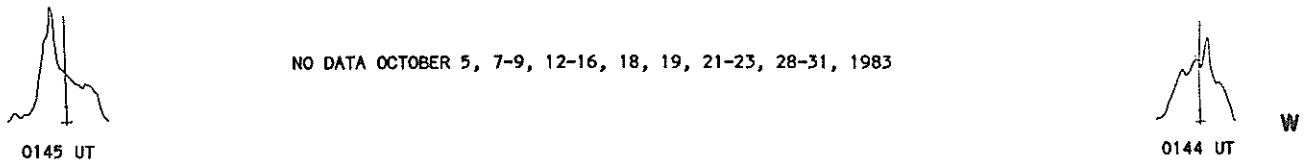
21 cm
Fan-Beam with 2 minutes of arc
E-W Resolution



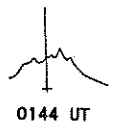
01 02 03 04 05

06 07 08 09 10

NO DATA OCTOBER 5, 7-9, 12-16, 18, 19, 21-23, 28-31, 1983



11 12 13 14 15



W

16 17 18 19 20

21 22 23 24 25

26 27 28 29 30

W

31

E W

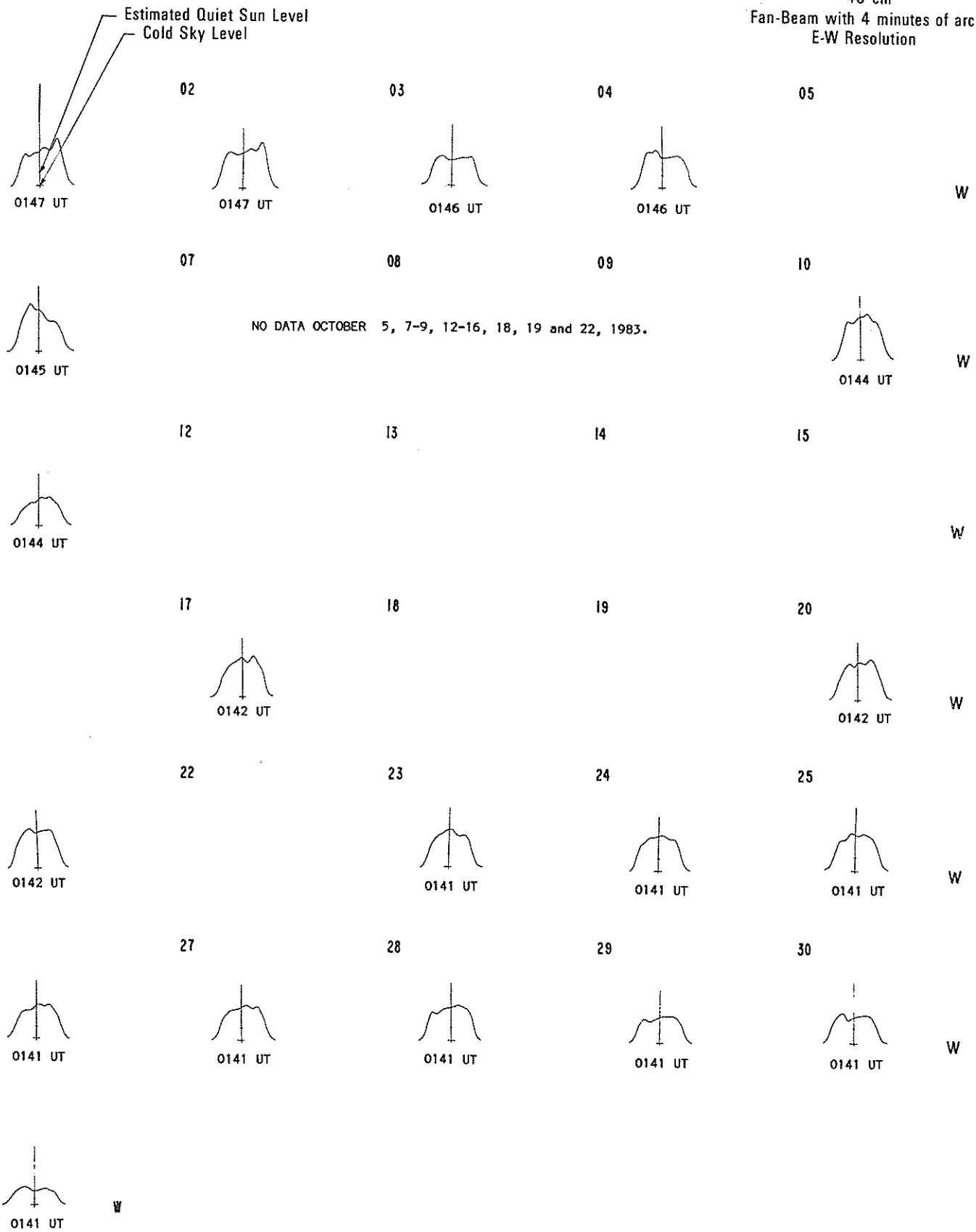
26
Oct 83

EAST-WEST SOLAR SOLAR SCANS

OCTOBER 1983

Fleurs, Australia

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



NO DATA OCTOBER 5, 7-9, 12-16, 18, 19 and 22, 1983.

SOLAR RADIO EMISSION
SELECTED FIXED FREQUENCY EVENTS

OCTOBER 1983

Day	Freq	Sta	Type		Start (UT)	Time of Maximum (UT)	Duration (Min)	Flux Density Peak (10 -22 W/m 2 Hz)	Flux Density Mean (10 -22 W/m 2 Hz)	Int	Remarks
01	2800	OTTA	1	S	1747.0	1750.0	8.0	1.4	.7		
02	2695	LEAR	47	GB	0550.8	0559.1	19.0	30.0			QL=6 ST=3 TYP=5
	8800	LEAR	20	GRF	0551.3	0609.6	18.5	24.0			QL=6 ST=3 TYP=2
	8800	ATHN	4	S/F	0553.6	0614.3	29.4D	34.0			QL=6 ST=3 TYP=3
	2695	ATHN	47	GB	0556.1	0612.6	26.9D	139.0			QL=6 ST=3 TYP=5
	8800	LEAR	4	S/F	0558.0	0600.6	11.8	11.0			QL=6 ST=2 TYP=3
	2695	LEAR	47	GB	0609.8	0612.6	32.7	169.0			QL=6 ST=2 TYP=5
	8800	LEAR	20	GRF	0609.8	0614.0	32.7	28.0			QL=6 ST=3 TYP=2
	2800	OTTA	1	S	1749.5	1749.8	1.0	2.2	1.1		
	2800	OTTA	8	S	2121.9	2122.0	.7	2.4			
03	8800	ATHN	20	GRF	0451.6	0506.6	26.0	26.0			QL=6 ST=3 TYP=2
	2695	LEAR	8	S	0921.8	0922.0	.3	8.0			QL=6 ST=2 TYP=3
	8800	LEAR	8	S	0921.8	0922.0	.3	18.0			QL=6 ST=2 TYP=3
	2800	OTTA	27	RF	1335.0		195.0	2.0	1.8		
	2800	OTTA	24	R	1335.0	1345.0	10.0	2.0	1.0		
	2800	OTTA	24P	R	1345.0		160.0	2.0			
	2800	OTTA	26	FAL	1625.0	1650.0	25.0	-2.0	-1.0		
	2800	OTTA	20	GRF	1705.0	1730.0	55.0	2.0	1.0		
04	8800	ATHN	47	GB	0421.6	0433.3	23.0	160.0			QL=2 ST=2 TYP=5
	2695	ATHN	47	GB	0421.6	0433.3	23.2	94.0			QL=2 ST=2 TYP=5
	2800	OTTA	32	ABS	1440.0	1555.0	120.0	-2.4	-1.2		
05	2800	OTTA	40	F	1357.0	1357.4	.7	19.6			
	2800	OTTA	3	S	1456.0	1502.0	16.0	290.0	66.6		
	2695	ATHN	47	GB	1456.6	1501.6	14.7	260.0			QL=6 ST=3 TYP=5
	8400	BERN	3	S	1457.0U	1501.5U	60.0D	260.0U			ONLY PAPER REC
	8800	ATHN	47	GB	1457.1	1501.6	11.5	95.0			QL=6 ST=3 TYP=5
	2695	SGMR	47	GB	1458.8	1501.6	19.0	290.0			QL=6 ST=2 TYP=5
	8800	SGMR	47	GB	1459.6	1501.6	29.4	180.0			QL=6 ST=2 TYP=5
	2800	OTTA	29	PBI	1512.0	1512.0	123.0	17.0	5.7		
	2800	OTTA	4	S/F	1742.0	1748.0	10.0	17.8	8.6		
	8800	PALE	4	S/F	1744.6	1745.1	8.5	19.0			QL=6 ST=2 TYP=3
	8800	SGMR	8	S	1744.8	1745.1	.5	15.0			QL=6 ST=2 TYP=3
	2695	PALE	8	S	1744.8	1745.3	.5	16.0			QL=6 ST=2 TYP=3
	2695	SGMR	8	S	1747.0	1747.8	1.0	16.0			QL=6 ST=2 TYP=3
	8800	SGMR	8	S	1747.1	1747.6	1.5	19.0			QL=6 ST=2 TYP=3
	2800	OTTA	29	PBI	1752.0	1752.0	100.0	7.8	3.9		
06	2800	OTTA	27A	RF	1525.0		320.0	2.4	2.3		
	2800	OTTA	24	R	1525.0	1530.0	5.0	2.4	1.2		
	2800	OTTA	24P	R	1530.0		295.0	2.4			
	2800	OTTA	20	GRF	1557.0	1603.0	50.0	2.6	1.8		
	2800	OTTA	20	GRF	1703.0	1735.0	65.0	2.4	1.2		
	2800	OTTA	20	GRF	1940.0	1945.0	40.0	2.0	1.0		
	2800	OTTA	26	FAL	2025.0	2045.0	20.0	-2.4	-1.2		
	2695	PENT	20	GRF	2205.0	2240.0	125.0	3.8	2.5		
07	2800	OTTA	240	R	1420.0	1429.0	9.0	2.4	1.2		
	2800	OTTA	20	GRF	1430.0	1432.0	13.0	2.6	1.3		
	2800	OTTA	2	S/F	2303.0	2303.2	2.0	2.6	1.4		
08	2695	PALE	8	S	0145.5	0146.0	1.0	13.0			QL=6 ST=2 TYP=3
	2695	LEAR	8	S	0145.6	0145.8	.5	21.0			QL=6 ST=2 TYP=3
	2695	LEAR	8	S	0445.3	0445.8	.7	11.0			QL=6 ST=2 TYP=3
	2800	OTTA	20	GRF	1225.0	1245.0	60.0	2.8	1.4		
	2800	OTTA	4	S/F	1658.3	1659.0	1.7	17.0	7.6		
	2800	OTTA	30	PBI	1700.0	1700.0	20.0	2.4	1.2		
	2695	PENT	1	S	1704.3	1704.7	1.5	6.4	1.6		
	2695	PENT	20	GRF	2115.0	2135.0	120.0	3.2	2.0		
09	2695	LEAR	8	S	0207.3	0208.1	1.8	15.0			QL=6 ST=2 TYP=3
	2695	PALE	8	S	0207.8	0208.1	.7	19.0			QL=6 ST=2 TYP=3
	8800	LEAR	8	S	0207.8	0208.1	1.2	8.0			QL=6 ST=2 TYP=3
	2695	SGMR	47	GB	1141.1	1141.8	5.7	75.0			QL=5 ST=2 TYP=5
	8800	SGMR	4	S/F	1141.1	1141.8	2.7	22.0			QL=5 ST=2 TYP=3
	2695	ATHN	47	GB	1141.3	1141.8	4.0	66.0			QL=6 ST=2 TYP=5
	8800	ATHN	4	S/F	1141.5	1142.1	6.5	31.0			QL=6 ST=2 TYP=3
	2800	OTTA	20	GRF	1335.0	1415.0	125.0	3.8	2.0		

SOLAR RADIO EMISSION
SELECTED FIXED FREQUENCY EVENTS

OCTOBER 1983

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	LEAR	4	S/F	0810.5	0812.5	4.1	18.0			QL=6 ST=2 TYP=3
	8800	LEAR	4	S/F	0810.6	0813.3	9.9	13.0			QL=1 ST=2 TYP=3
	8800	ATHN	4	S/F	0810.6	0813.8	4.5	17.0			QL=6 ST=2 TYP=3
	2695	ATHN	4	S/F	0810.8	0812.5	5.2	7.0			QL=6 ST=2 TYP=3
	8800	LEAR	47	GB	0840.3	0840.6	.5	100.0			QL=6 ST=2 TYP=5
	8800	LEAR	47	GB	0841.6	0842.3	1.0	96.0			QL=6 ST=2 TYP=5
	2695	SGMR	4	S/F	1405.1	1407.6	3.4	13.0			QL=6 ST=3 TYP=3
	2695	ATHN	4	S/F	1407.3	1408.3	4.2	5.0			QL=3 ST=3 TYP=3
	2800	OTTA	20	GRF	1620.0	1635.0	105.0	4.2	3.0		
11	2800	OTTA	20	GRF	1235.0	1430.0	190.0	3.6	1.8		
	2800	OTTA	240	R	1620.0	1715.0	55.0	5.0	2.5		
	2800	OTTA	20	GRF	1740.0	1830.0	130.0	5.8	2.9		
	2695	PENT	20	GRF	2130.0	2215.0	110.0	3.6	1.8		
12	2800	OTTA	20	GRF	1525.0	1600.0	60.0	2.0	1.0		
	2695	PENT	4	S/F	1707.8	1708.4	1.7	26.0	8.8		
	2800	OTTA	30	PBI	1709.5	1709.5	110.0	4.8	2.4		
	2800	OTTA	1	S	1710.5	1712.0	5.0	9.0	4.4		
	2800	OTTA	20	GRF	1738.0	1750.0	45.0	2.0	1.1		
13	2800	OTTA	21	GRF	1235.0	1341.0	90.0	8.4	2.4		
	2800	OTTA	1	S	1321.0	1322.0	3.0	2.0	1.0		
	2800	OTTA	20	GRF	1605.0	1630.0	175.0	8.6	2.8		
	2695	PENT	4	S/F	2323.0	2327.8	8.0	46.0	20.0		
	2695	PALE	47	GB	2325.3	2327.6	5.3	53.0			QL=6 ST=2 TYP=5
	2695	LEAR	47	GB	2325.6	2327.6	4.7	90.0			QL=6 ST=2 TYP=5
	8800	LEAR	4	S/F	2326.8	2327.8	4.0	48.0			QL=6 ST=2 TYP=3
	8800	PALE	4	S/F	2327.3	2327.6	2.8	46.0			QL=6 ST=2 TYP=3
	2695	PENT	29	PBI	2331.0	2331.0	30.0D	90.0			
14	3200	BERN	21	GRF	0850.0U	0906.0U	70.0D	80.0U			ONLY PAPER REC
	2695	LEAR	20	GRF	0902.6	0906.8	5.5	40.0			QL=6 ST=2 TYP=2
	2695	ATHN	4	S/F	0903.0	0905.6	5.3	30.0			QL=6 ST=2 TYP=3
	8800	ATHN	4	S/F	0904.1	0906.3	4.0	48.0			QL=6 ST=2 TYP=3
	8800	LEAR	4	S/F	0905.0	0906.6	3.6	41.0			QL=6 ST=2 TYP=3
	2800	OTTA	20	GRF	1345.0	1425.0	65.0	3.0	1.5		
	2800	OTTA	20	GRF	1545.0	1615.0	195.0	14.6	4.9		
	2800	OTTA	21	GRF	1920.0	2005.0	170.0	5.0	2.4		
	2695	PENT	1	S	2113.0	2114.0	2.0	1.8	.6		
15	8800	LEAR	8	S	0836.3	0837.0	1.3	24.0			QL=6 ST=2 TYP=3
	8800	LEAR	8	S	0842.1	0843.5	1.5	18.0			QL=6 ST=2 TYP=3
	2800	OTTA	21	GRF	1220.0	1250.0	255.0	15.4	7.4		
	8800	ATHN	20	GRF	1220.1	1248.6	82.0D	27.0			QL=2 ST=3 TYP=2
	8800	SGMR	4	S/F	1245.5	1245.8	5.3	17.0			QL=6 ST=2 TYP=3
	2800	OTTA	20	GRF	1345.0	1405.0	145.0	2.8	1.4		
	8800	ATHN	8	S	1441.0	1441.6	1.5	24.0			QL=6 ST=2 TYP=3
	8800	SGMR	8	S	1441.6	1441.6	.4	20.0			QL=6 ST=2 TYP=3
	8800	SGMR	8	S	1533.5	1533.6	.3	16.0			QL=6 ST=2 TYP=3
	2800	OTTA	240	R	1730.0	1745.0	15.0	2.6	1.3		
	2800	OTTA	20	GRF	1931.5	1933.0	11.0	3.2	1.0		
	2800	OTTA	20	GRF	2005.0	2045.0	170.0	2.8	1.4		
16	8800	LEAR	8	S	0217.8	0218.3	.8	27.0			QL=6 ST=2 TYP=3
	8800	PALE	8	S	0217.8	0218.3	.8	35.0			QL=6 ST=2 TYP=3
	8800	LEAR	4	S/F	0726.6	0727.3	2.4	7.0			QL=6 ST=2 TYP=3
	2800	OTTA	20	GRF	1645.0	1705.0	45.0	2.2	1.0		
	2800	OTTA	22	GRF	1930.0	2020.0	100.0	4.8	2.4		
	8800	PALE	47	GB	2006.3	2006.8	11.7	130.0			QL=6 ST=2 TYP=5
	8800	SGMR	47	GB	2006.3	2007.0	8.2	100.0			QL=6 ST=2 TYP=5
	2695	PENT	260	FAL	2111.0	2151.0	40.0	-3.2	-1.8		
	2695	PENT	1	S	2158.0	2158.8	2.0	1.4	.5		
	8800	LEAR	8	S	2259.6	2300.1	1.0	31.0			QL=6 ST=2 TYP=3
	8800	PALE	8	S	2259.8	2300.1	.7	34.0			QL=6 ST=2 TYP=3
	2695	PENT	1	S	2300.0	2300.2	1.0	2.2	1.3		
	2695	PENT	1	S	2332.0	2332.5	1.0	4.6	2.3		
17	2695	LEAR	4	S/F	0015.5	0019.3	18.3	11.0			QL=6 ST=2 TYP=3
	8800	PALE	8	S	0017.8	0018.1	1.0	38.0			QL=6 ST=3 TYP=3
	2695	LEAR	4	S/F	0145.8	0148.3	3.8	10.0			QL=6 ST=2 TYP=3

SOLAR RADIO EMISSION
SELECTED FIXED FREQUENCY EVENTS

OCTOBER 1983

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
17	8800	LEAR	8	S	0552.1	0552.8	1.7	24.0			QL=6 ST=2 TYP=3
	2695	LEAR	8	S	0552.3	0552.8	.8	10.0			QL=6 ST=2 TYP=3
	8800	LEAR	8	S	0940.1	0940.1	.4	30.0			QL=6 ST=2 TYP=3
	2695	LEAR	8	S	0940.1	0940.1	.5	20.0			QL=6 ST=2 TYP=3
	3200	BERN	4	S/F	1140.5U	1141.0U	4.0D	155.0U			ONLY PAPER REC
	8800	ATHN	4	S/F	1207.8	1213.5	12.8	21.0			QL=6 ST=2 TYP=3
	8800	SGMR	8	S	1213.1	1214.6	1.5	20.0			QL=6 ST=3 TYP=3
	2800	OTTA	21	GRF	1520.0		190.0	2.4			
	2800	OTTA	1	S	1634.0	1634.2	5.0	6.0	1.2		
	2800	OTTA	1	S	1658.0	1658.4	2.0	1.8			
	2800	OTTA	1	S	1718.9	1719.0	1.0	1.8	.8		
	2800	OTTA	8	S	2029.0	2029.3	.5	7.0			
18	8800	LEAR	20	GRF	0143.5	0144.8	7.5	9.0			QL=6 ST=2 TYP=2
	8800	LEAR	8	S	0346.3	0347.0	2.0	10.0			QL=6 ST=2 TYP=3
	8800	LEAR	4	S/F	0350.3	0351.0	8.7	9.0			QL=6 ST=2 TYP=3
	8800	SGMR	47	GB	1924.6	1925.6	3.7	139.0			QL=6 ST=2 TYP=5
	8800	PALE	47	GB	1924.8	1925.6	2.0	119.0			QL=6 ST=2 TYP=5
	2800	OTTA	3	S	2105.0	2106.5	5.0	10.4	4.0		
	2695	PALE	8	S	2106.0	2106.8	1.1	17.0			QL=6 ST=2 TYP=3
	8800	PALE	8	S	2106.3	2106.3	.5	27.0			QL=6 ST=2 TYP=3
19	2800	OTTA	240	R	1426.0	1431.0	5.0	2.4	1.6		
	2800	OTTA	1	S	1444.0	1447.0	7.0	8.0	3.0		
	2800	OTTA	21	GRF	1444.0	1450.0	40.0	2.4	1.2		
	2695	SGMR	8	S	1446.1	1446.6	1.2	16.0			QL=6 ST=2 TYP=3
	8800	SGMR	8	S	1446.5	1446.6	.6	16.0			QL=6 ST=2 TYP=3
	2800	OTTA	21	GRF	1750.0	1905.0	320.0	6.4			
	2800	OTTA	28	PRE	1959.0	2000.0	4.0	3.8	1.9		
	8800	SGMR	47	GB	1959.1	2009.3	15.4	200.0			QL=4 ST=2 TYP=5
	8800	PALE	8	S	1959.6	1959.8	1.0	45.0			QL=6 ST=2 TYP=3
	2695	PENT	4	S/F	2003.0	2009.2	15.0	265.0	34.0		
	8800	PALE	47	GB	2004.0	2006.1	15.6	160.0			QL=6 ST=2 TYP=5
	2695	PALE	47	GB	2005.8	2006.1	11.0	21.0			QL=6 ST=2 TYP=5
	2695	SGMR	47	GB	2005.8	2009.3	9.7	150.0			QL=4 ST=2 TYP=5
	2800	OTTA	29	PBI	2018.0	2018.0	130.0	11.8	4.9		
24	2695	PALE	8	S	1840.1	1840.3	.4	29.0			QL=6 ST=2 TYP=3
29	2800	OTTA	2	S/F	1925.5	1930.8	7.5	6.8	2.6		
	2800	OTTA	29	PBI	1933.0	1933.0	10.0	1.8	.9		
31	2800	OTTA	23	GRF	1610.0	1820.0	300.0D	12.8			
	2800	OTTA	4	S/F	1613.0	1616.1	6.0	30.0	13.0		
	2695	SGMR	4	S/F	1615.1	1616.1	3.0	28.0			QL=6 ST=2 TYP=3
	2800	OTTA	29	PBI	1619.0	1619.0	20.0	5.2	2.6		

Reports are received routinely from the following observatories:

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

Explanation of Type Code:

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

1A Simple 1A
3A Simple 2A
21A Simple 3A GRF
2A Simple 1AF
4A Simple 2AF
240 Rise only
240F Rise only F
24P Post Rise
24PF Post Rise F
16A Fall A
260 Fall Only
26F Fall F
27F Rise and Fall F
27AF Rise and Fall AF
31A Post Burst Decrease A
32A Absorption A
46F Complex F

Remarks:

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

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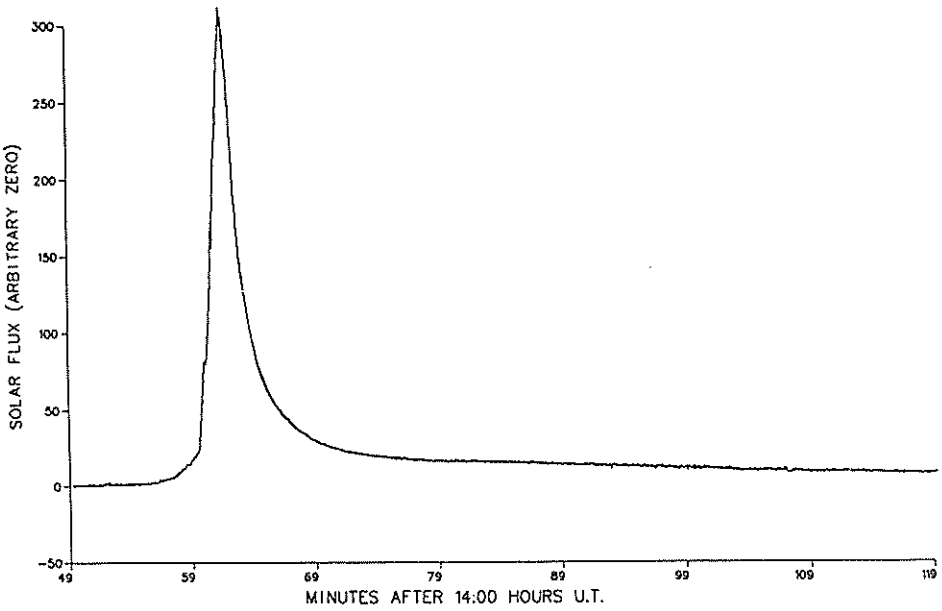
Oct 83

SELECTED SOLAR NOISE BURSTS

OCTOBER 5 - 19, 1983

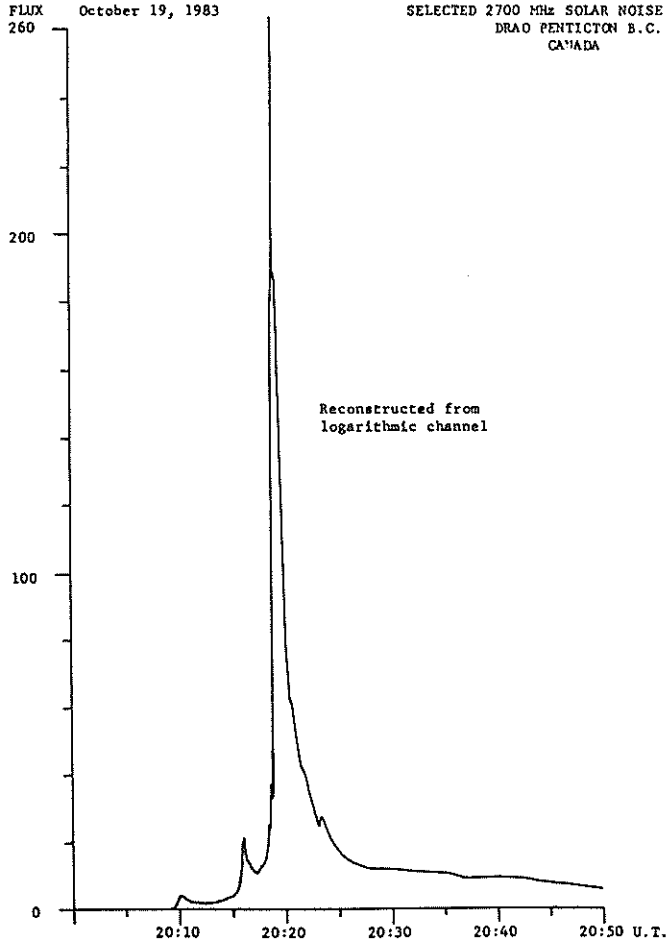
OCTOBER 05, 1983

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



FLUX October 19, 1983

SELECTED 2700 MHz SOLAR NOISE BURST
DRAO PENTICTON B.C.
CANADA



October 1983

DATE	ONSET TIME	DIR	COMMENTS
10/01			Field intermittently unsettled.
	1620		Weak substorm.
10/02			Field intermittently active.
	0330		Weak substorm Lynn Lake.
	0400	East	
	0620	East	
	0735	West	Moderate substorm at College.
	1040	West	
	1200	West	
	1420	West	
10/03			Field intermittently active.
	0625	East	
	0950	West	
	1400	West	
10/04			Field intermittently active.
	0730	West	
	0915	West	Several injections.
	1435	West	Strong substorm.
10/05			Field slightly unsettled.
	0905		Weak substorm, initial onset at Lynn Lake.
10/06			Field unsettled after 0600 UT.
	0645	East	Weak substorm.
	0815	West	Weak substorm.
	1005		Localized substorm Anchorage to Talkeetna.
	1045		Weak substorm.
	1450		Localized substorm vicinity College.
	1555	West	
	1855		Localized substorm at Sachs Harbour.
10/07			Field intermittently unsettled.
	0325	East	
10/08			Field intermittently unsettled.
	1520	West	Initial onset at College, several injections.
10/09			Field slightly unsettled.
10/10			Field intermittently unsettled.
	1135		Weak substorm.
10/11			Field intermittently unsettled.
	0610	East	
10/12			Field slightly unsettled.
10/13			Field active through 1800 UT.
	0040	East	
	0330	East	
	0430	East	
	0720	West	
	1000	West	
	1100	West	Moderate substorm College to Talkeetna to Anchorage.
	1200	West	Several injections.
10/14			Field intermittently active.
	0920	West	
	1105	West	
	1245	West	
	1735		Localized substorm Arctic Village to Inuvik.
10/15			Field intermittently active.
10/15	0450	East	Weak substorm.
	0915	West	Moderate substorm, several injections.
	1250	West	Several injections with recovery near 1600 UT.
10/16			Field intermittently unsettled.
	0445	East	
	1255	West	
10/17			Field at magstorm level 0700 to 1800 UT.
10/18			Field active with intermittent magstorm conditions.
10/19			Field intermittently unsettled.
	0820	West	
10/20			Field slightly unsettled.
	1005		Weak substorm.
	1045		Weak substorm.
10/21			Slow positive impulse H-component all low/mid-latitude stations. Field unsettled balance of day.
	1035	West	
	2340	East	Boulder in partial ring current sector.
10/22			Field intermittently active.
	0500	Center	Initial onset at Ft. Smith.
	0825	West	Initial onset at College, numerous injections follow with recovery near 1330 UT.
10/23			Field intermittently active.
	0955	West	Numerous injections with recovery near 1300 UT.
	1345	West	
	2005		
10/24			Field intermittently active.
	0015	East	Boulder in partial ring current sector.
	0950	West	Slow, weak initial onset, several injections with recovery near 1315 UT.
10/25			Field slightly unsettled.
10/26			Field slightly unsettled.
	1010		Weak substorm.
10/27			Quiet day.
10/28	0050	East	Weak substorm. Field quiet 0300-1600 UT. Strong ring current begins at 2200 UT.
10/29			Field active with magstorm conditions 0600-1500 UT.
10/30	0720	West	Numerous injections keep the field active through 1930 UT.
10/31			Field intermittently unsettled.
	0655	West	Initial onset, weak substorm with several injections.
	0955		Localized substorm at College.
	1300	West	

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

INFERRED IP MAGNETIC FIELD

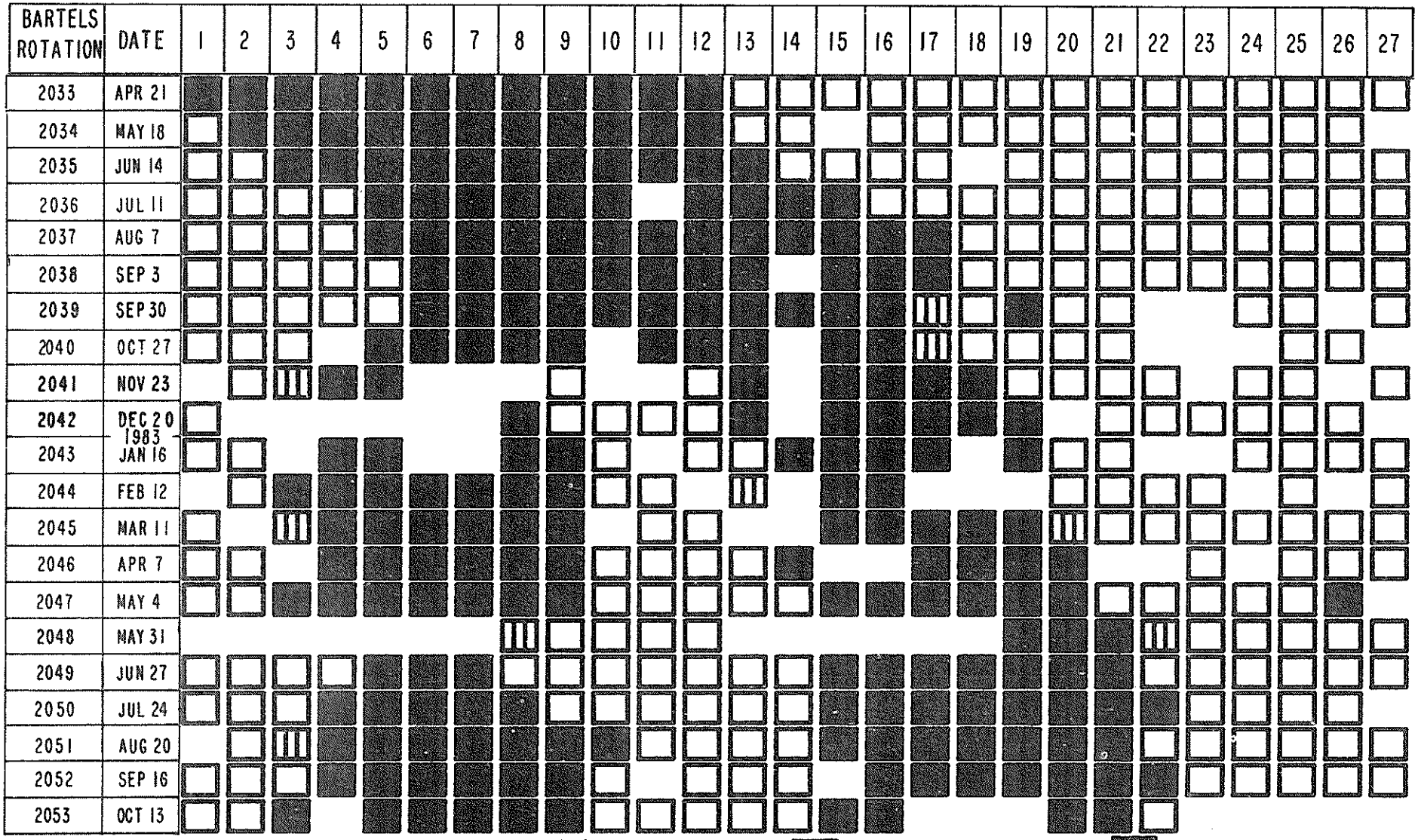
BARTELS ROTATION	DATE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27
2032	MAR 30	–	TA	–	TA	–	–	–	–	–	–	TA	–	–	–	–	–	AT	TA	–	TA	–	–	–	–	–	–	–
2033	APR 26	–	AT	–	–	–	–	–	TA	TA	–	–	–	–	–	–	–	–	–	–	–	–	–	–	AT	AT	–	–
2034	MAY 23	–	–	–	AT	–	TA	–	–	–	–	–	AT	–	–	–	–	–	–	–	–	–	–	–	–	–	TA	–
2035	JUN 19	–	–	–	–	–	–	–	–	–	–	–	–	TA	–	–	–	–	–	–	–	–	–	TA	–	–	–	–
2036	JUL 16	–	–	–	–	–	TA	–	–	–	–	AT	–	–	–	AT	–	–	–	–	–	–	–	X	–	–	–	–
2037	AUG 12	–	–	–	–	–	–	–	–	TA	–	–	TA	TA	TA	–	–	–	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	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–

[ ] = 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)

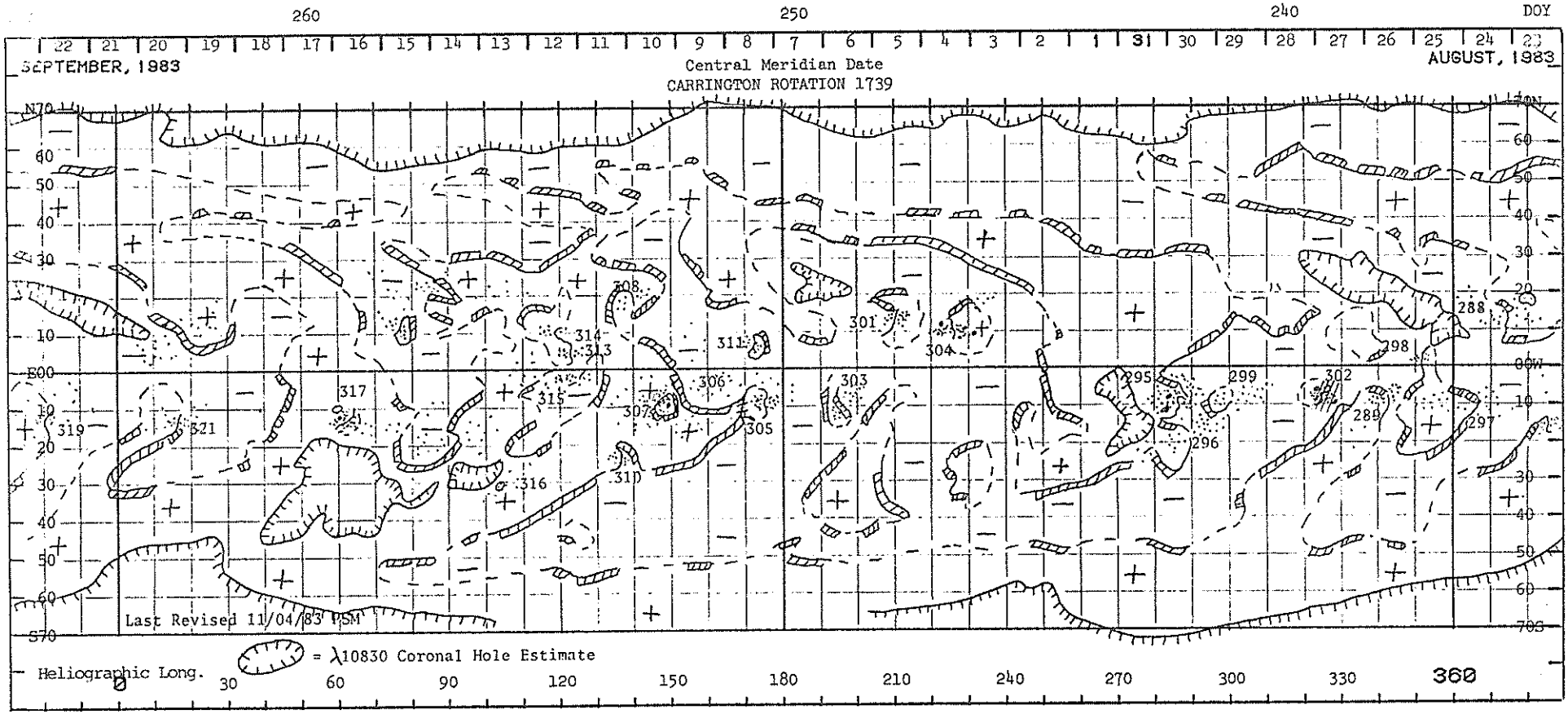
	82		83									
day	Nov.	Dec.	Jan.	Feb.	March	April	May	June	July	Aug.	Sept.	Oct.
01	-31	42	-9	-81	.	25	69	.	-23	9	41	-51
02	-15	.	.	.	.	38	65	.	-50	16	35	-104
03	-18	.	-89	-8	11	52	52	.	-28	3	-3	-117
04	-38	10	-81	15	33	61	35	.	15	13	-59	-100
05	.	-42	-73	45	38	63	12	.	44	20	-99	-68
06	-63	.	-22	.	51	50	-3	.	51	22	-109	-37
07	-61	-90	-2	.	.	29	-15	0	39	-12	-109	-9
08	-68	-64	.	54	65	21	-43	12	17	-49	-89	38
09	.	-29	53	84	.	.	-51	30	33	-81	-42	55
10	-54	-20	46	93	48	-15	-45	45	27	-91	10	46
11	-21	26	37	69	30	-44	-27	28	-4	-83	33	25
12	1	29	53	.	.	-48	-3	.	-60	-73	52	19
13	19	43	84	16	2	-43	10	.	-108	-60	60	10
14	34	28	84	-19	-25	-29	27	.	-120	-10	58	4
15	37	.	.	-22	-44	-11	31	.	-107	19	42	-7
16	52	8	39	-104	-62	9	10	.	-89	56	29	.
17	.	57	10	-102	-27	16	5	.	-20	14	20	-47
18	.	.	.	-67	-19	13	-9	-91	7	78	5	-68
19	.	64	-87	-37	-5	15	-69	-56	27	.	-18	-62
20	22	32	-119	-7	.	-11	-87	-28	41	.	-37	-54
21	33	.	.	24	19	.	-96	-1	97	8	-63	-20
22	.	.	.	27	15	.	-47	23	96	1	-66	10
23	.	.	-25	.	.	-66	-11	53	82	-17	-54	25
24	12	.	-3	-1	.	-59	6	72	25	-34	-17	57
25	-1	.	31	.	-23	-34	36	101	9	-76	12	72
26	-31	.	.	-49	-34	-15	64	67	11	-78	.	48
27	-58	-31	31	-66	-42	.	101	23	-4	-36	52	-9
28	.	6	3	.	-17	.	117	27	-35	-28	71	-58
29	.	42	-14		-20	36	-12	33	-37	-12	54	.
30	.	59	-51		1	.	.	26	-39	7	.	.
31		35	-91		18		.		-21	28		.

C O N T E N T S

Prompt Reports DATA FOR SEPTEMBER 1983 Number 471 Part I

Hα SYNOPTIC CHART

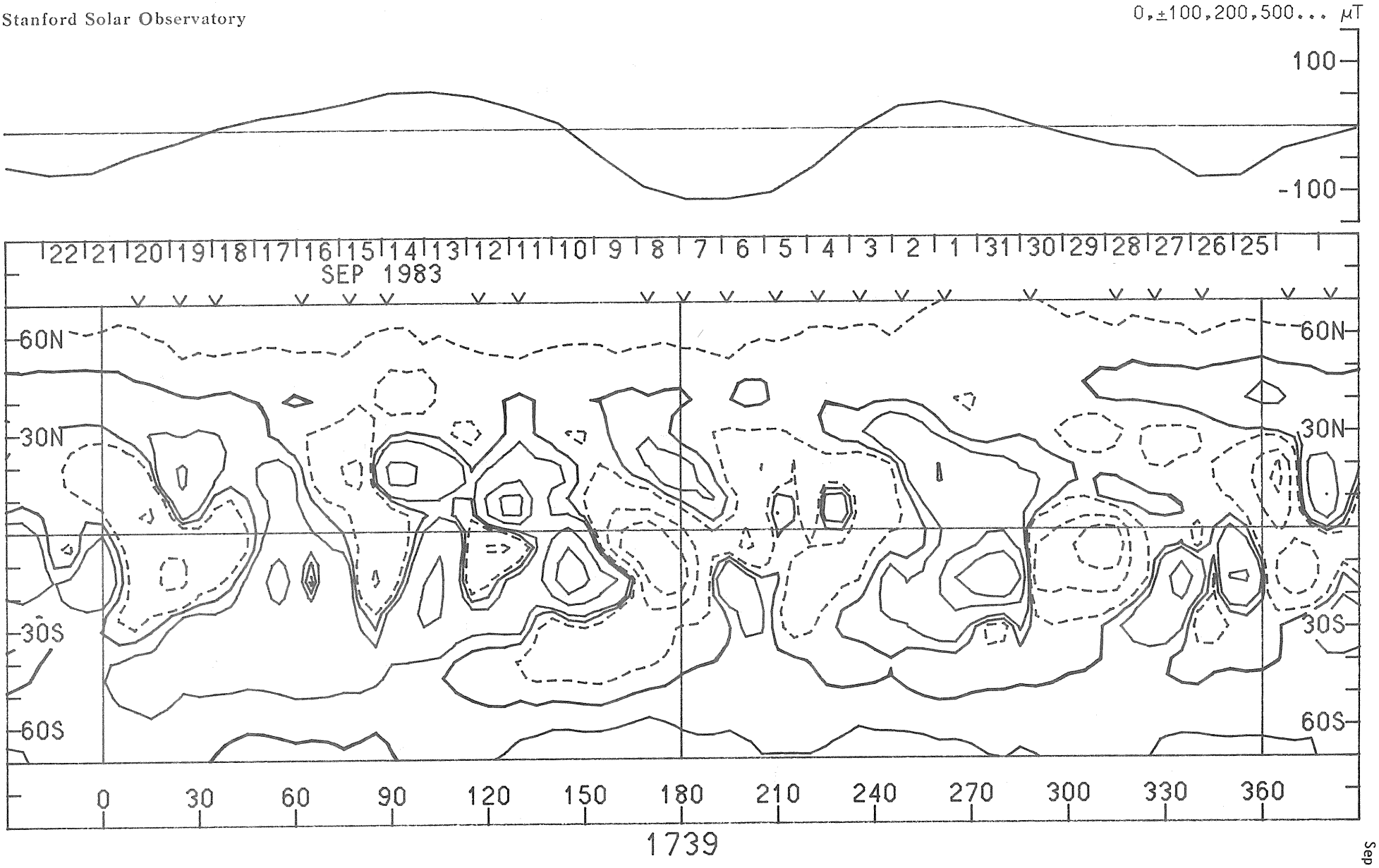
CARRINGTON ROTATION 1739 (PRELIMINARY)

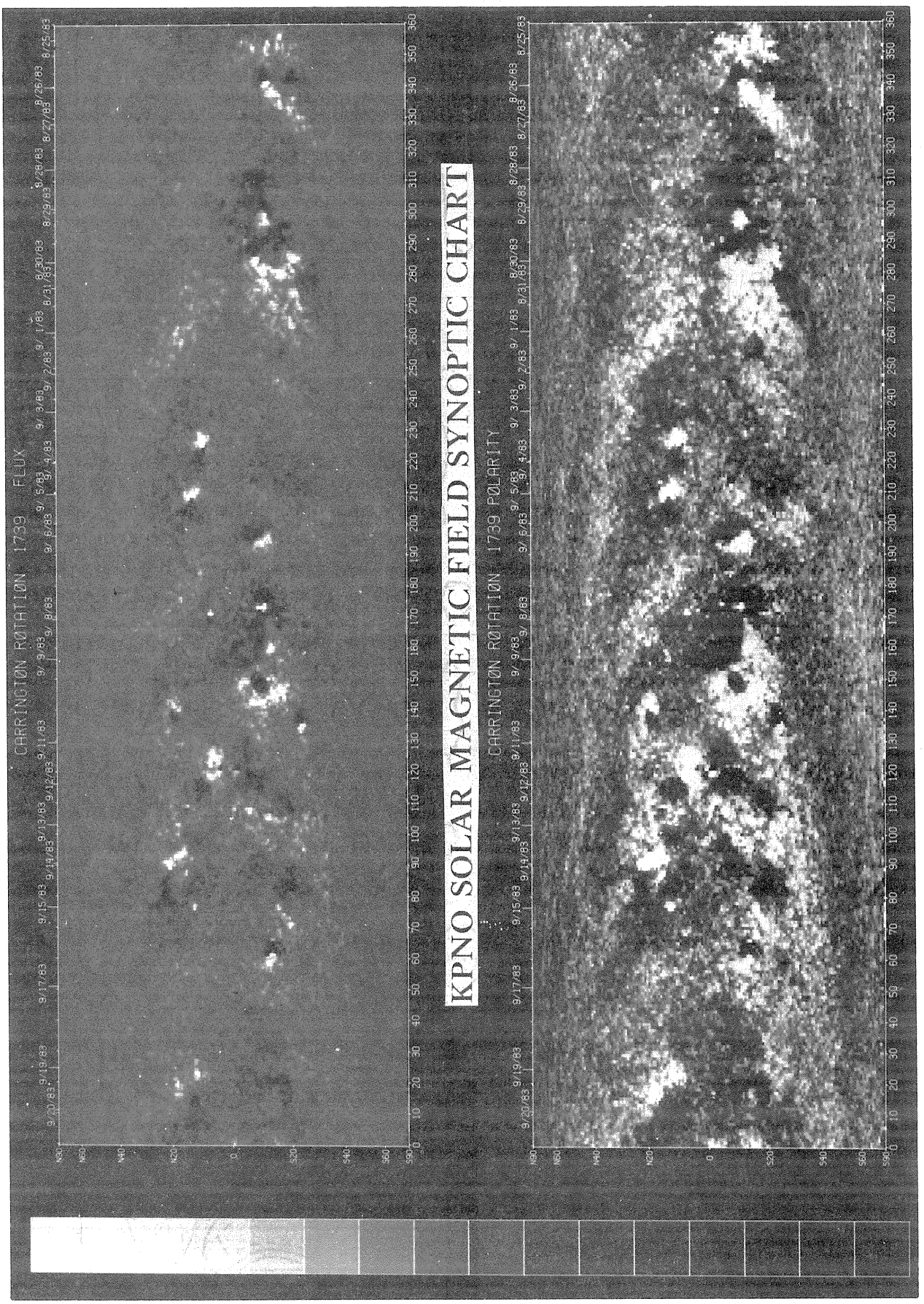


SOLAR MAGNETIC FIELD SYNOPTIC CHART

CARRINGTON ROTATION 1739

Stanford Solar Observatory

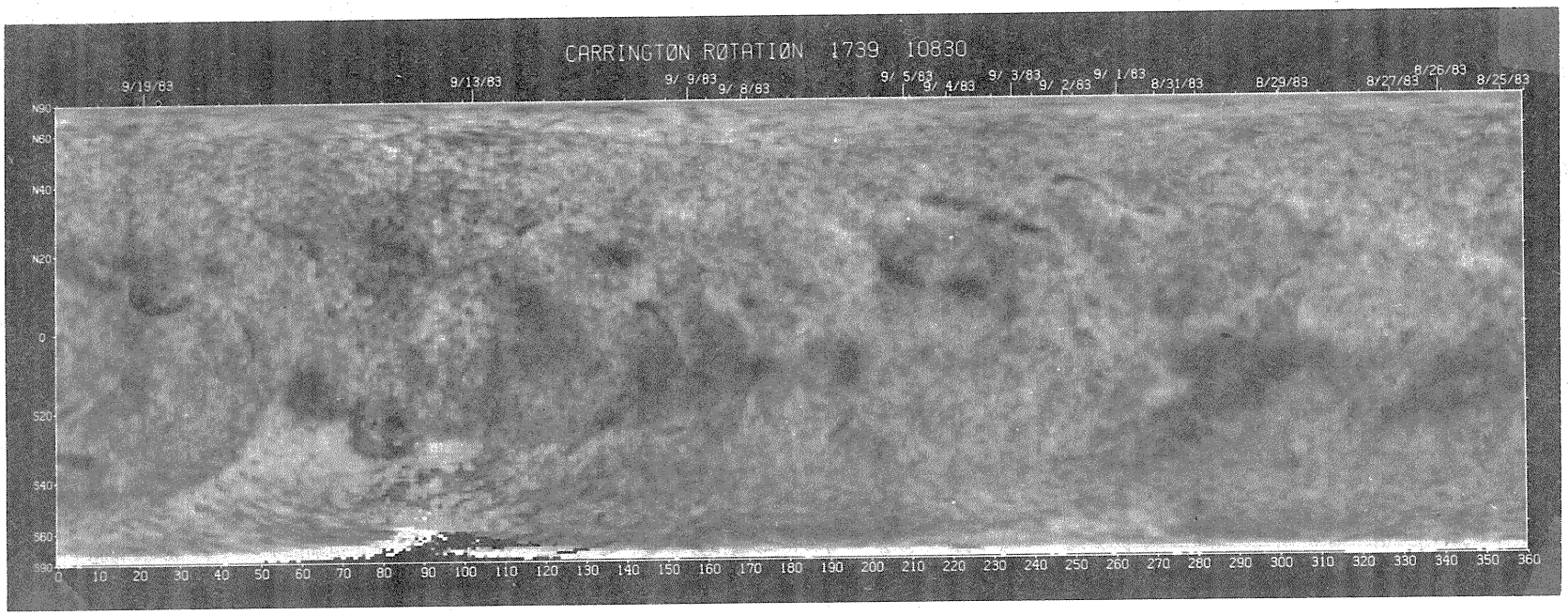



KPNO SOLAR MAGNETIC FIELD SYNOPTIC CHART
CARRINGTON ROTATION 1739 FLUX
CARRINGTON ROTATION 1739 POLARITY

HELIUM 10830Å SYNOPTIC MAPS

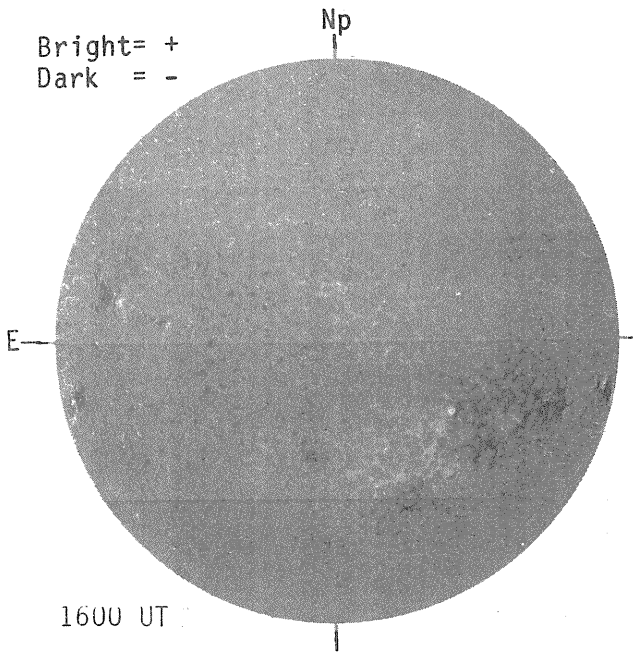
CARRINGTON ROTATION 1739

KITT PEAK NATIONAL OBSERVATORY

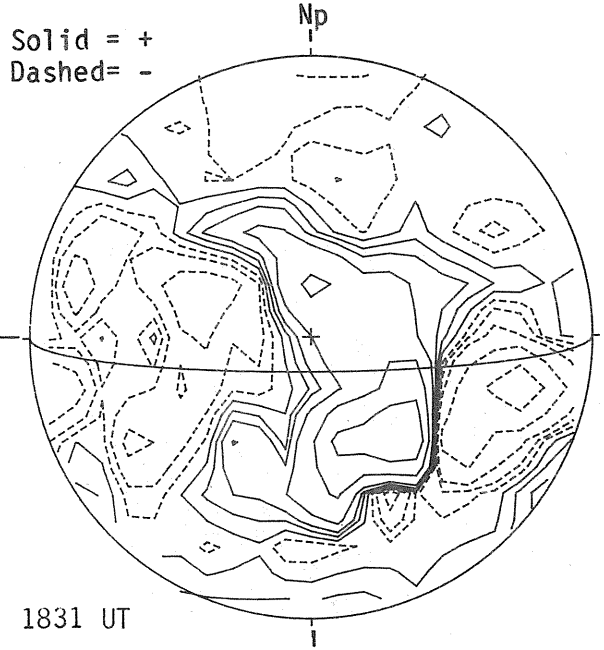


S E P T E M B E R 01, 1 9 8 3 (P= 20.95, B_o= 7.19, L_o= 270.63)

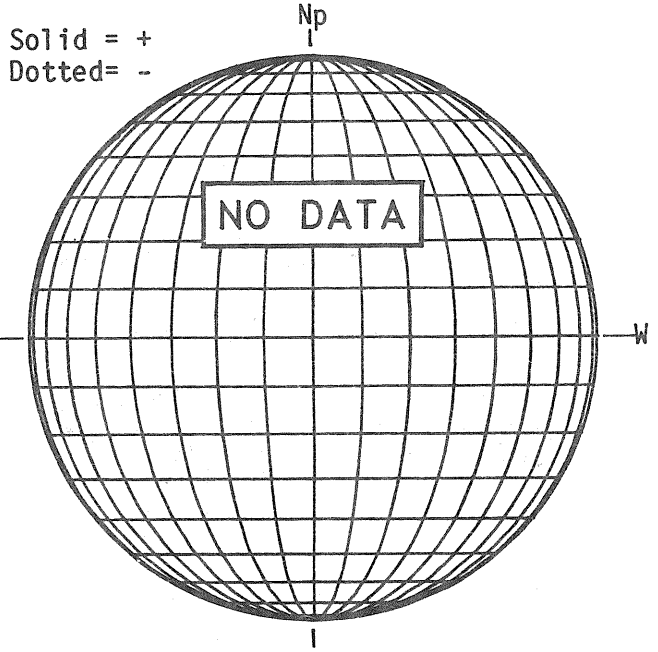
KITT PEAK MAGNETOGRAM



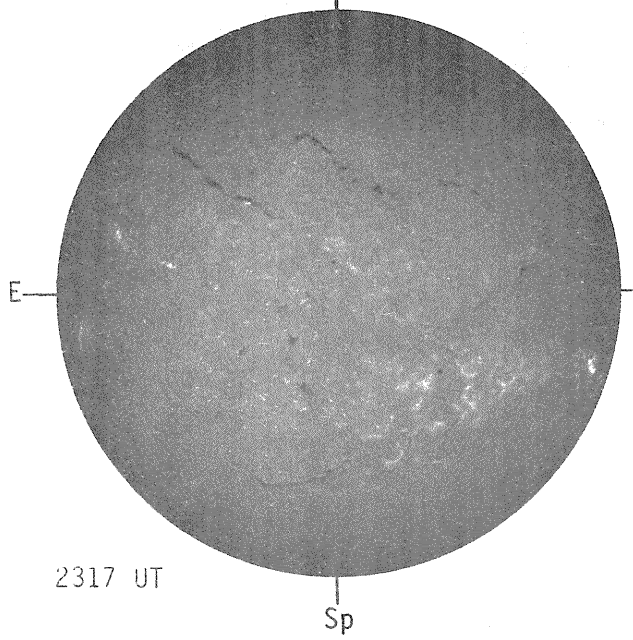
STANFORD MAGNETOGRAM



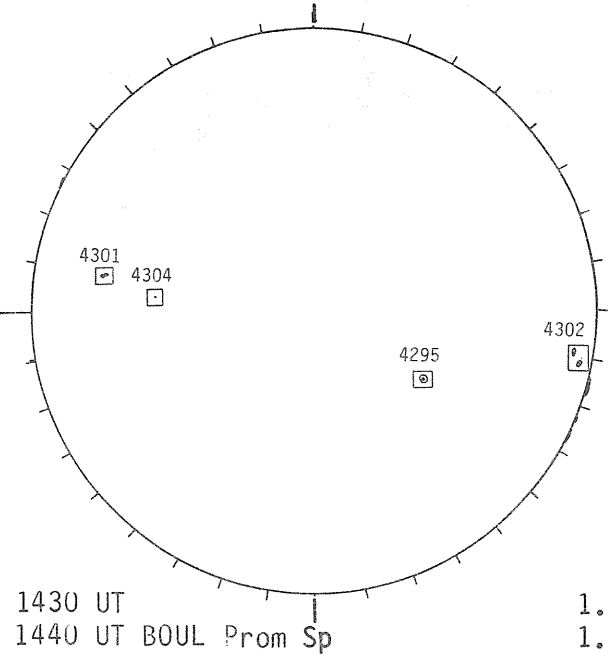
MT. WILSON MAGNETOGRAM



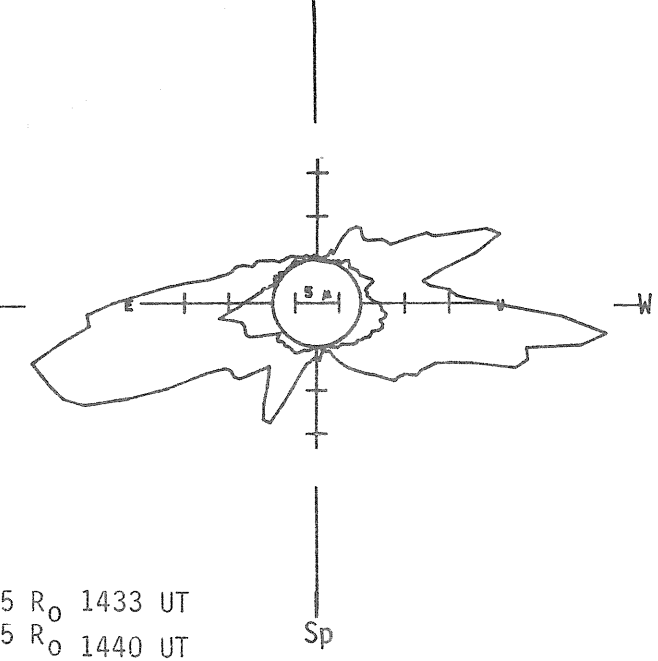
SACRAMENTO PEAK H-ALPHA



BOULDER SUNSPOTS



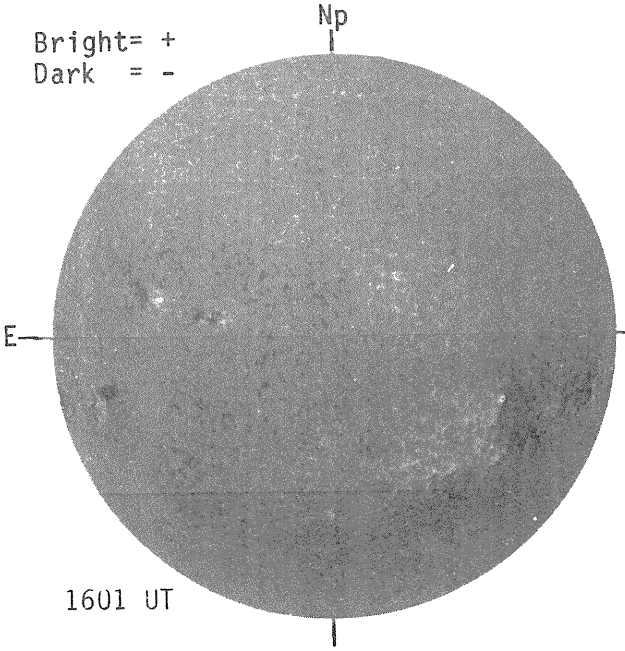
SACRAMENTO PEAK CORONA (5303 Angstrom)



S E P T E M B E R 02, 1 9 8 3 (P= 21.20, B_o= 7.20, L_o= 257.42)

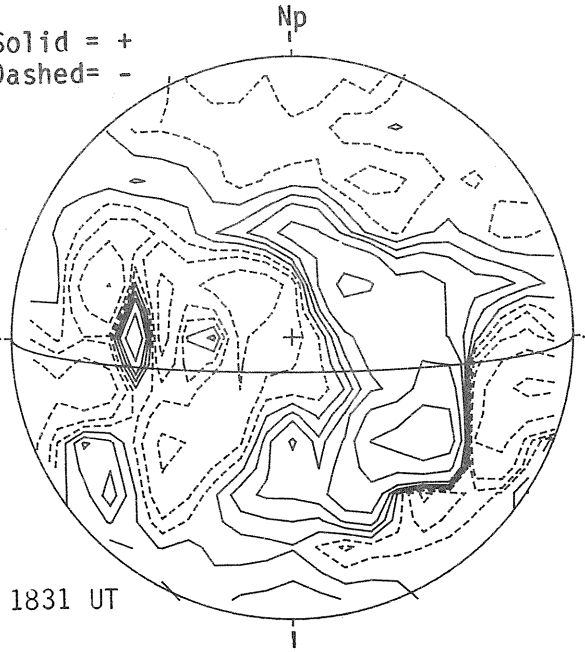
KITT PEAK MAGNETOGRAM

Bright= +
Dark = -



STANFORD MAGNETOGRAM

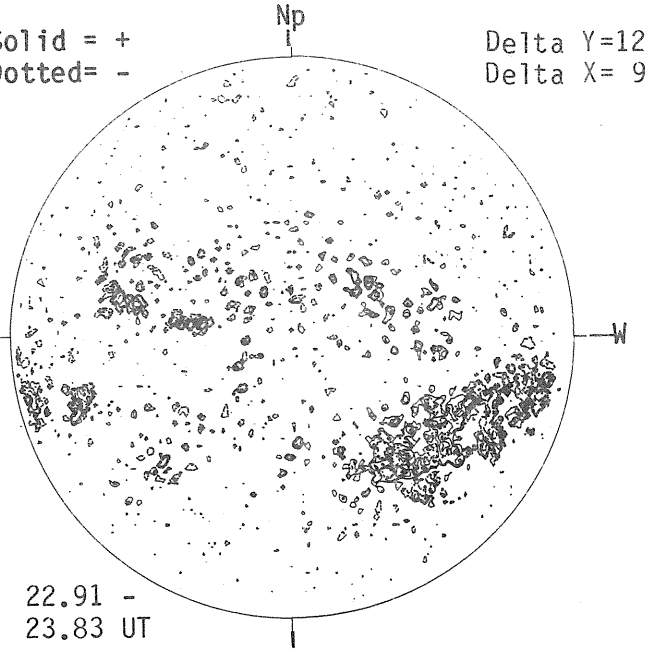
Solid = +
Dashed= -



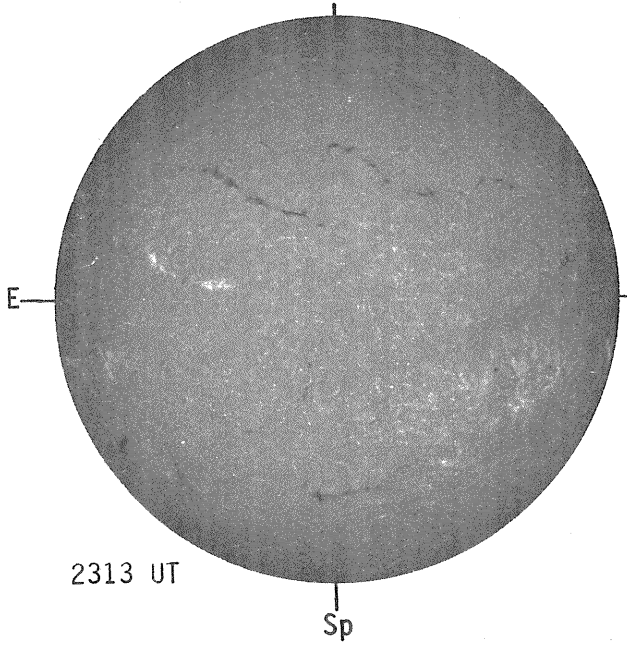
MT. WILSON MAGNETOGRAM

Solid = +
Dotted= -

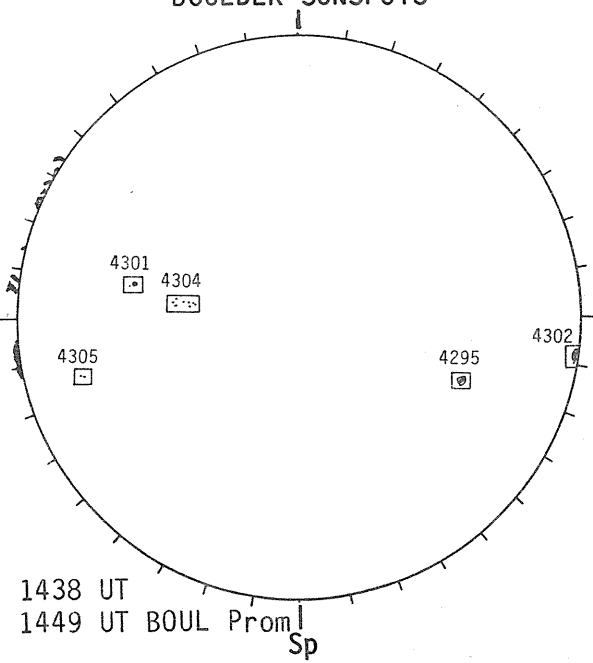
Delta Y=12.6
Delta X= 9.6



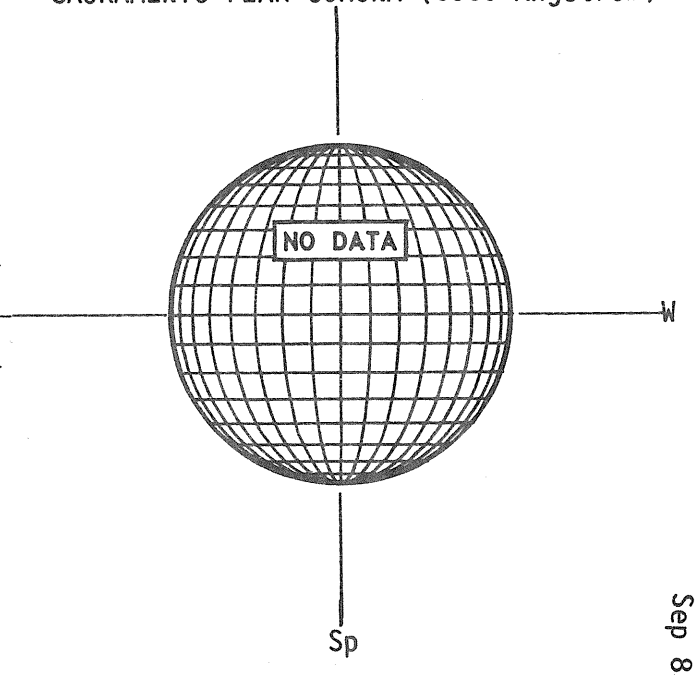
SACRAMENTO PEAK H-ALPHA



BOULDER SUNSPOTS

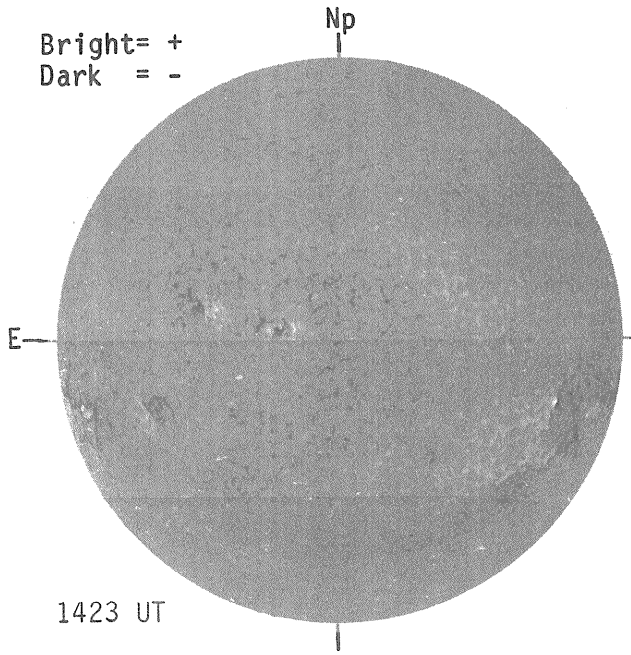


SACRAMENTO PEAK CORONA (5303 Angstrom)

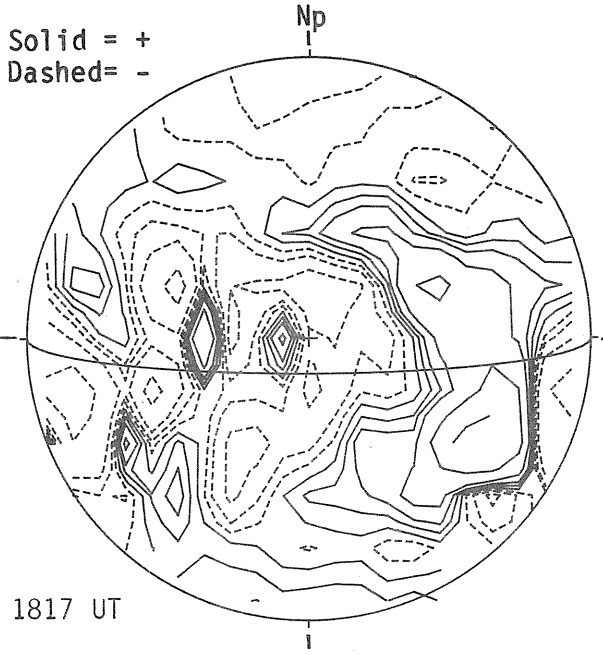


S E P T E M B E R 03, 1 9 8 3 (P= 21.45, B_0= 7.22, L_0= 244.21)

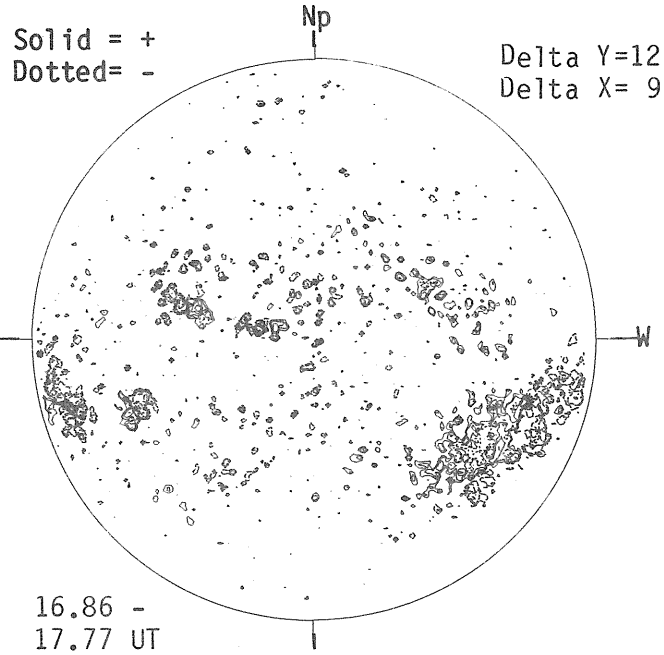
KITT PEAK MAGNETOGRAM



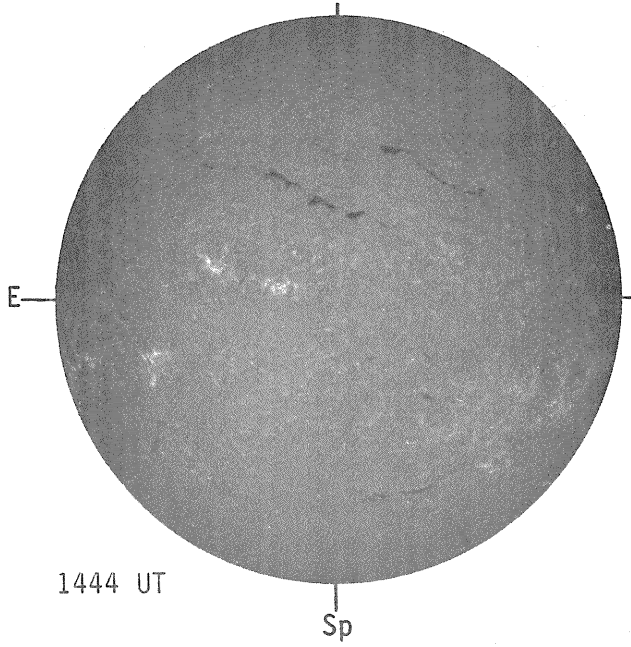
STANFORD MAGNETOGRAM



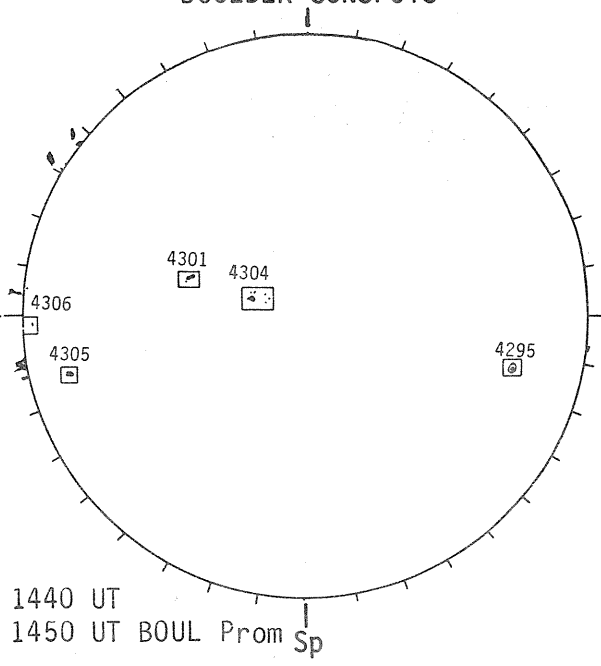
MT. WILSON MAGNETOGRAM



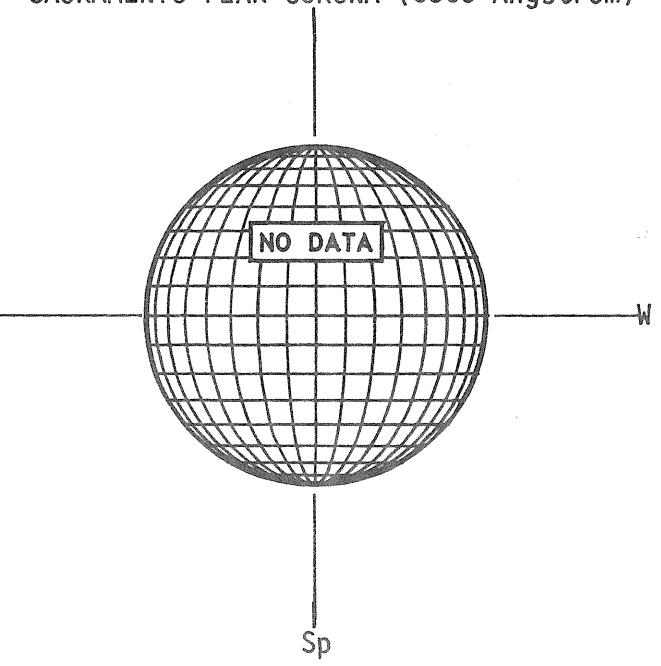
SACRAMENTO PEAK H-ALPHA



BOULDER SUNSPOTS

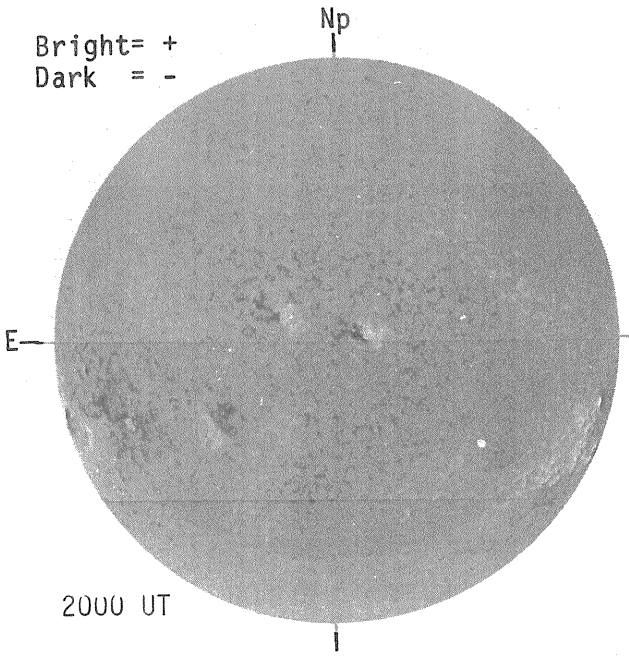


SACRAMENTO PEAK CORONA (5303 Angstrom)

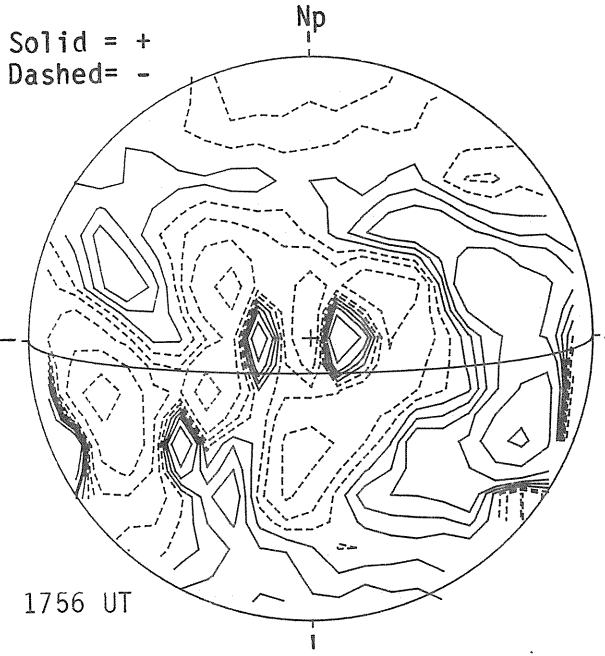


S E P T E M B E R 04, 1 9 8 3 (P= 21.69, B_o= 7.23, L_o= 231.00)

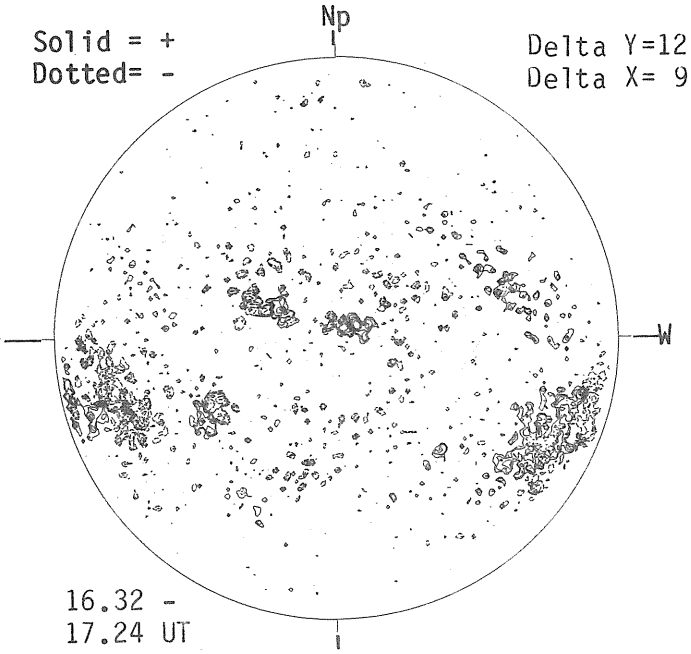
KITT PEAK MAGNETOGRAM



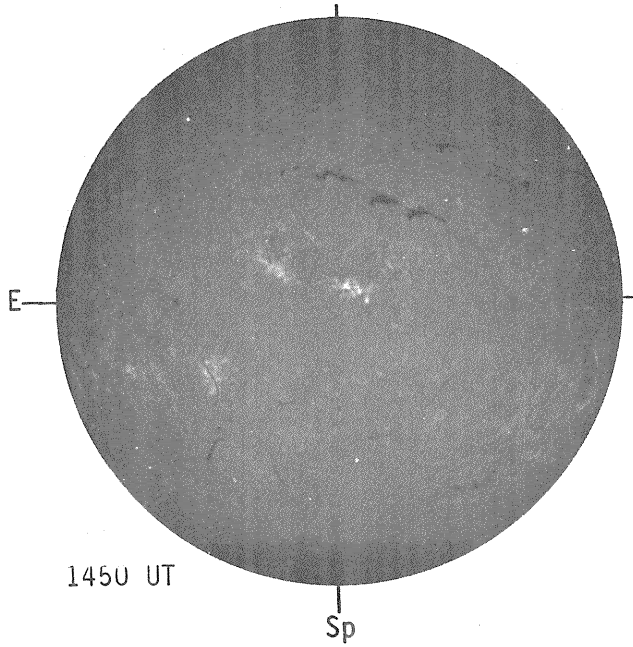
STANFORD MAGNETOGRAM



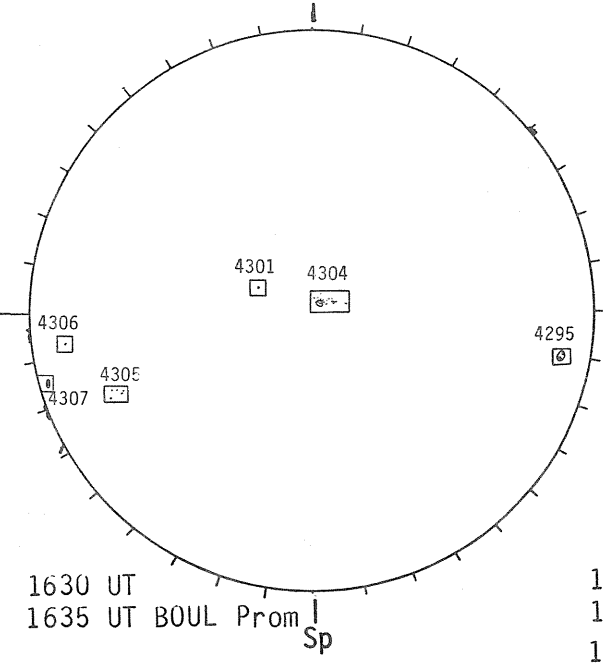
MT. WILSON MAGNETOGRAM



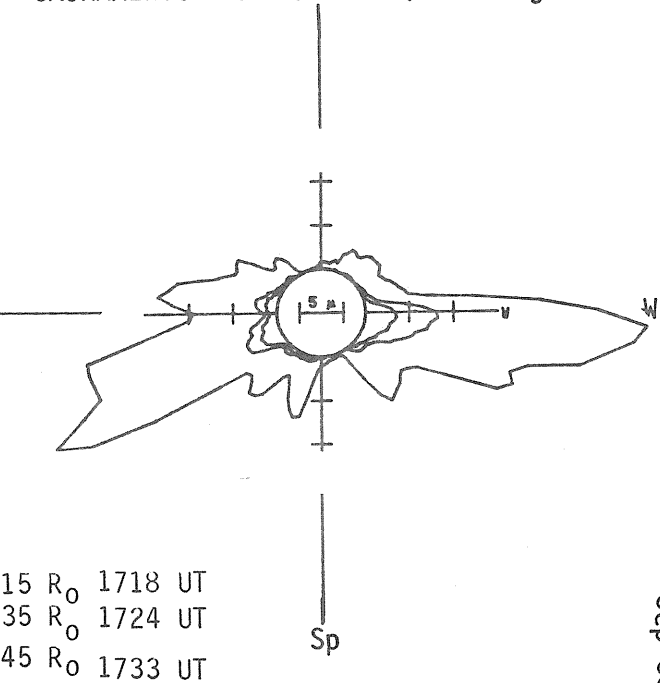
SACRAMENTO PEAK H-ALPHA



BOULDER SUNSPOTS

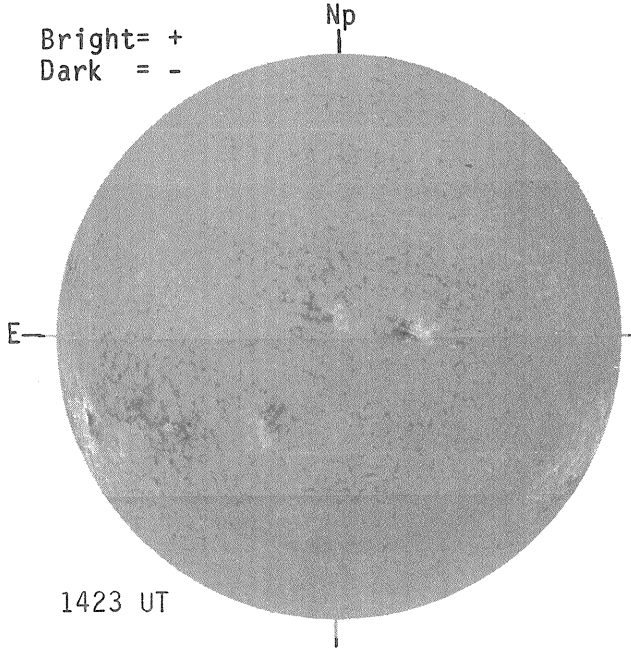


SACRAMENTO PEAK CORONA (5303 Angstrom)

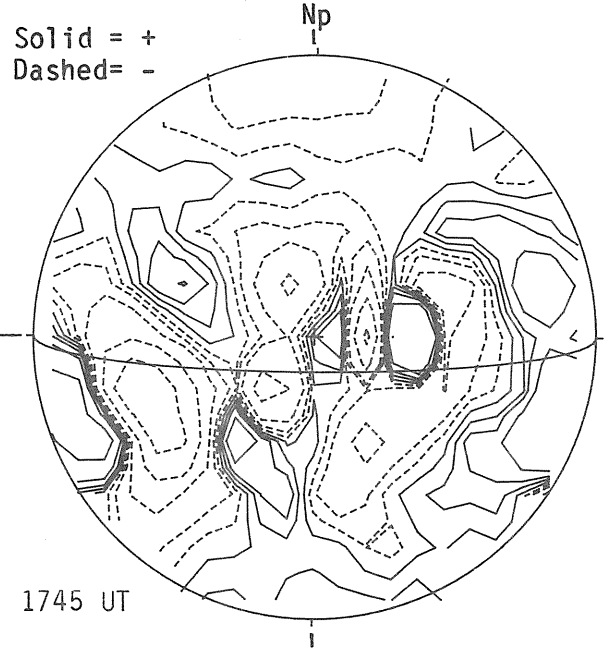


S E P T E M B E R 05, 1 9 8 3 (P= 21.93, B_0= 7.24, L_0= 217.80)

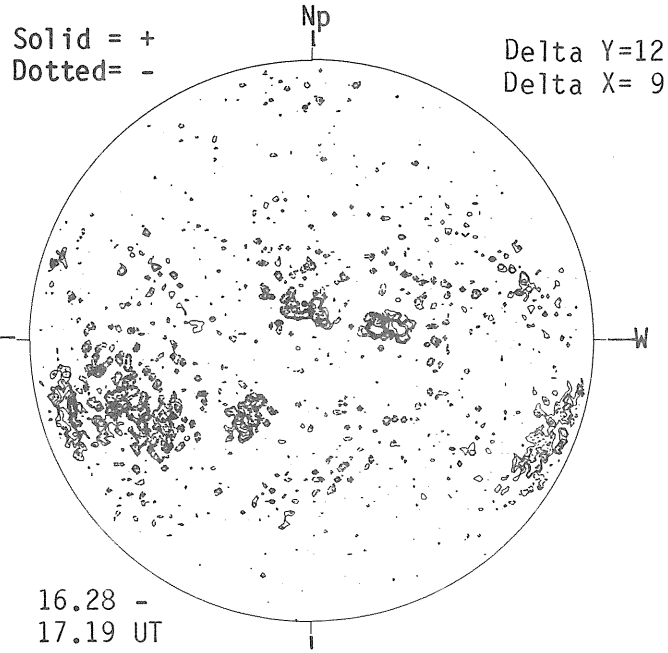
KITT PEAK MAGNETOGRAM



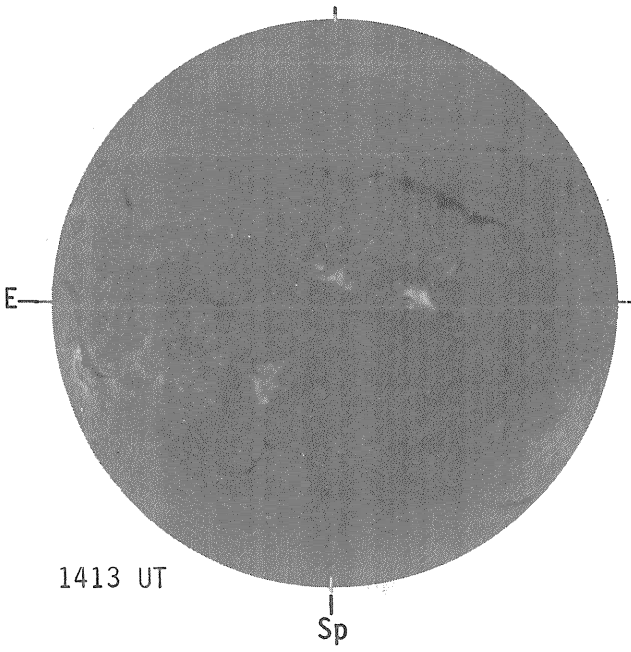
STANFORD MAGNETOGRAM



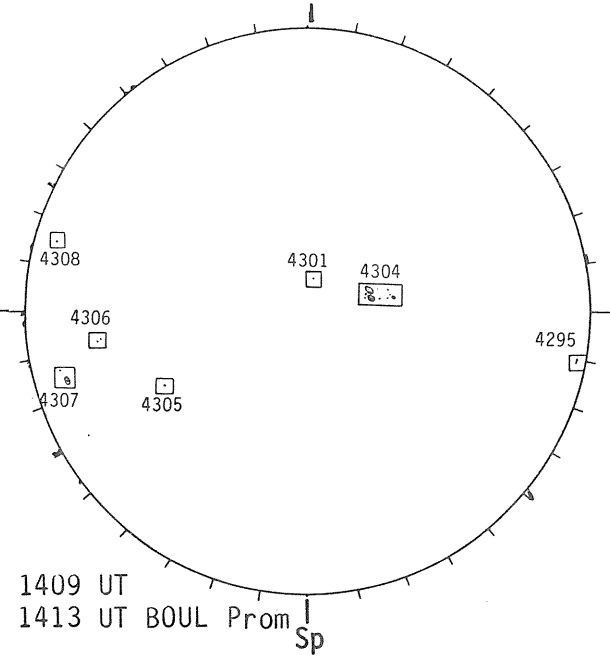
MT. WILSON MAGNETOGRAM



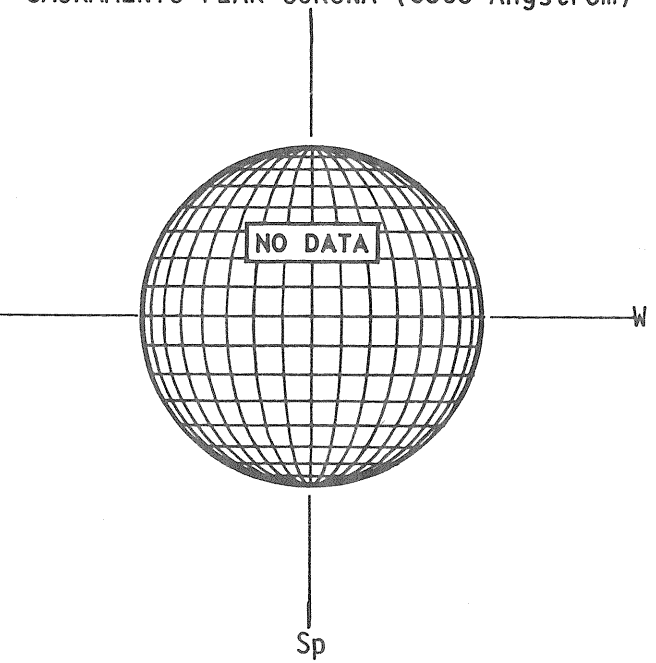
BOULDER H-ALPHA



BOULDER SUNSPOTS



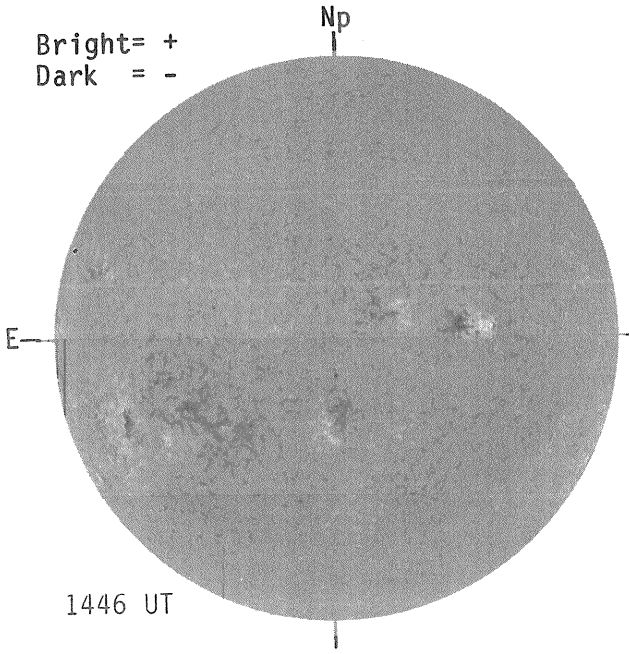
SACRAMENTO PEAK CORONA (5303 Angstrom)



S E P T E M B E R 06, 1 9 8 3 (P= 22.16, B_o= 7.24, L_o= 204.59)

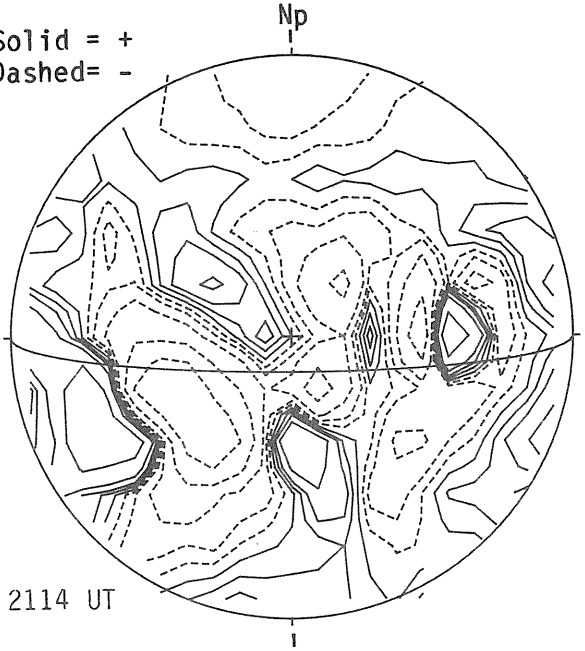
KITT PEAK MAGNETOGRAM

Bright= +
Dark = -



STANFORD MAGNETOGRAM

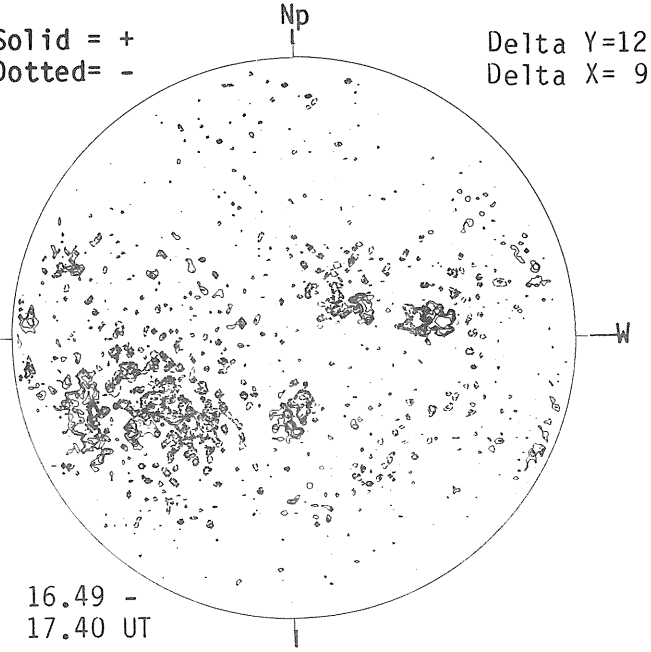
Solid = +
Dashed= -



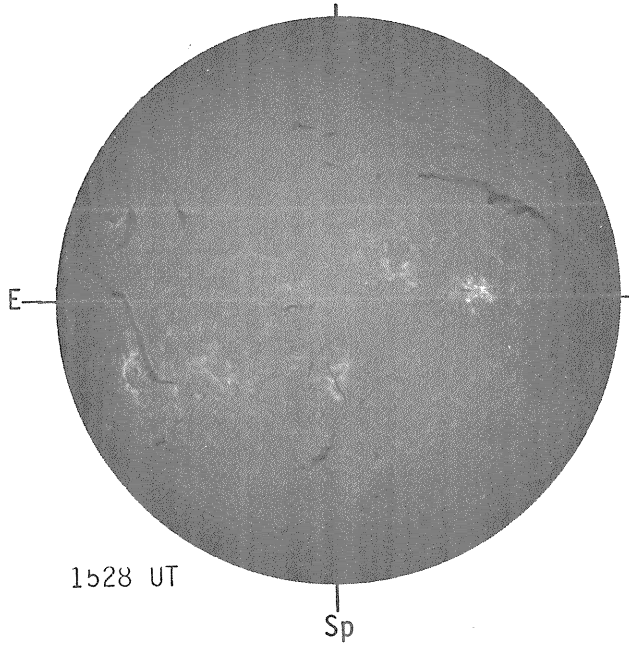
MT. WILSON MAGNETOGRAM

Solid = +
Dotted= -

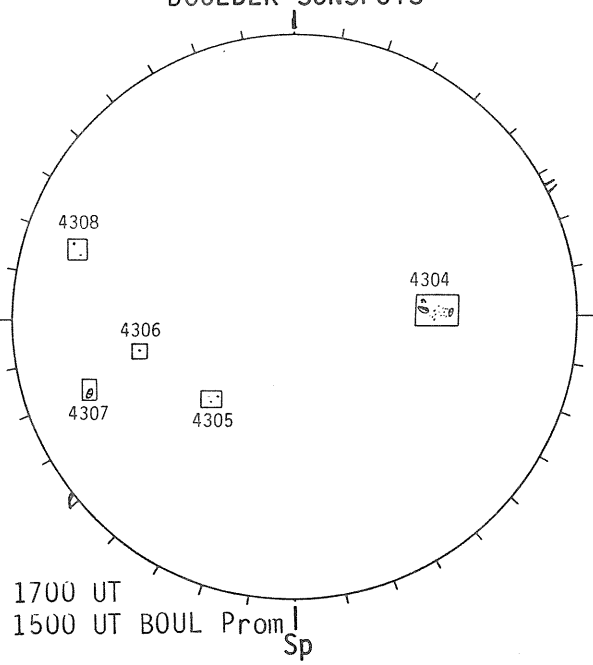
Delta Y=12.6
Delta X= 9.6



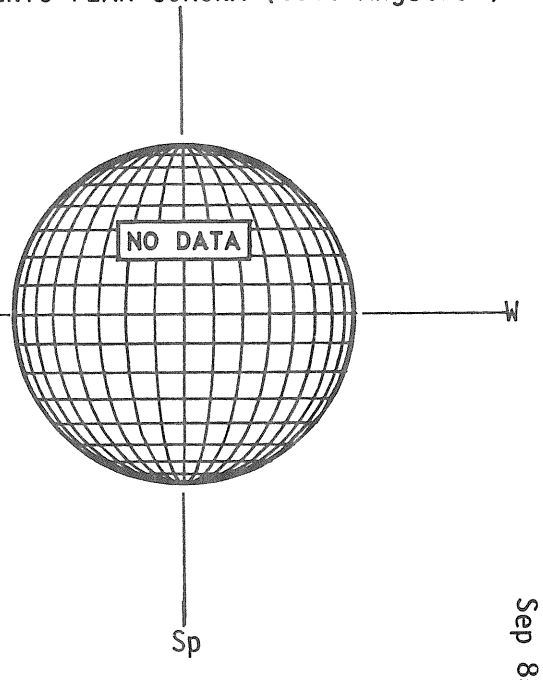
SACRAMENTO PEAK H-ALPHA



BOULDER SUNSPOTS



SACRAMENTO PEAK CORONA (5303 Angstrom)



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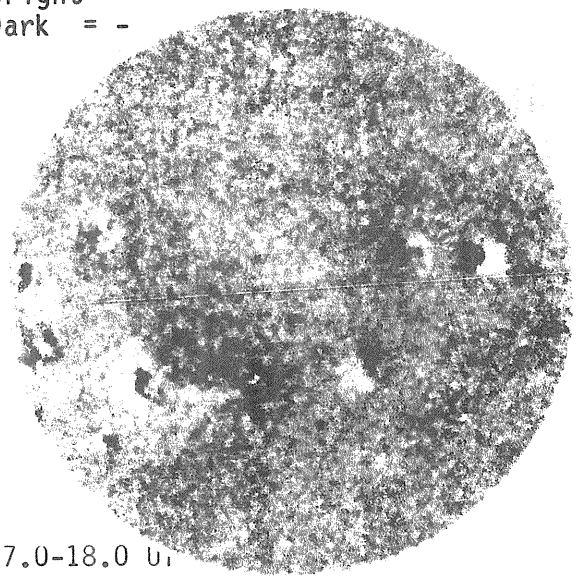
S E P T E M B E R 07, 1 9 8 3 (P= 22.39, B_0= 7.25, L_0= 191.38)

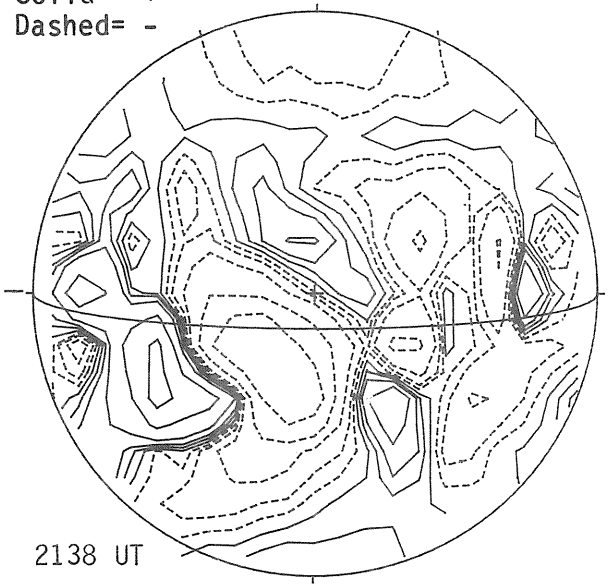
MT. WILSON MAGNETOGRAM

Bright= +
Dark = -



STANFORD MAGNETOGRAM

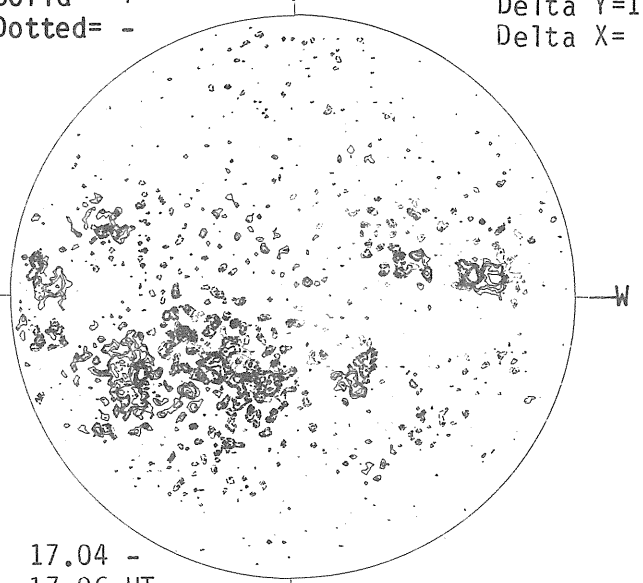
Solid = +
Dashed= -



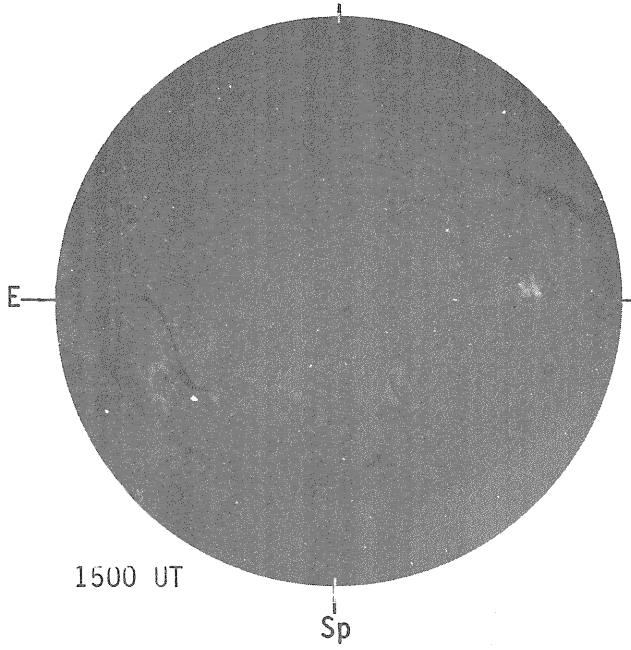
MT. WILSON MAGNETOGRAM

Solid = +
Dotted= -

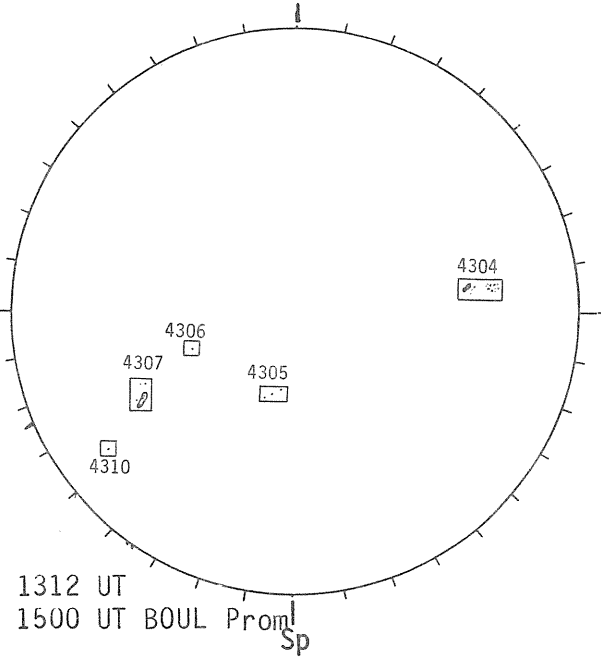
Delta Y=12.6
Delta X= 9.6



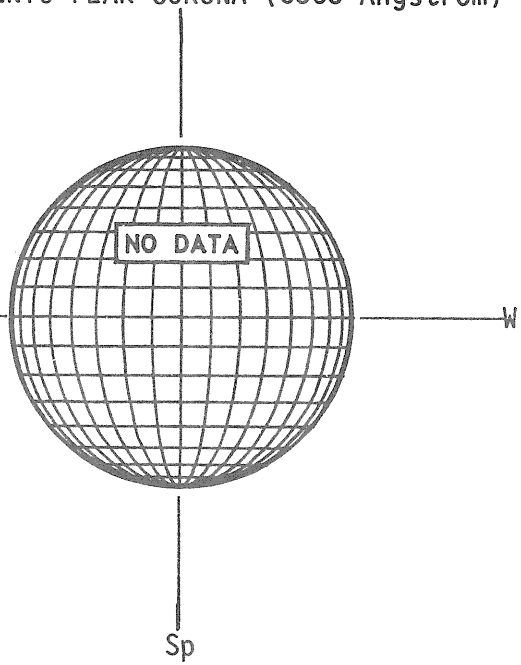
BOULDER H-ALPHA



BOULDER SUNSPOTS



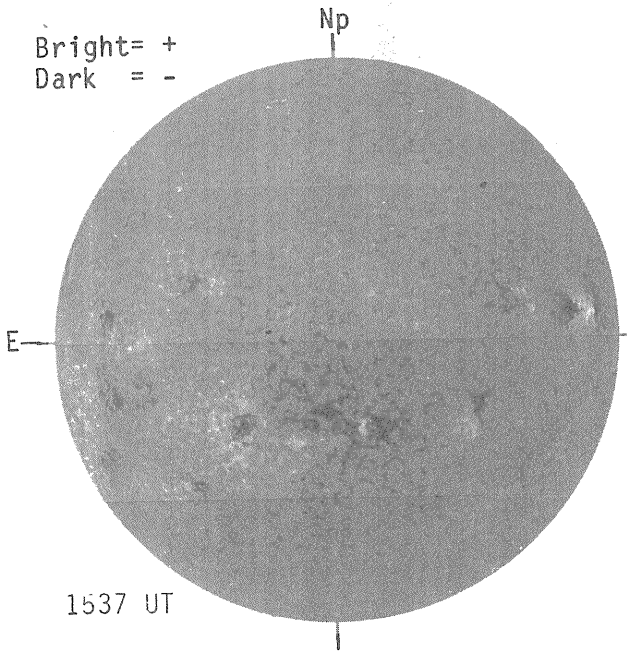
SACRAMENTO PEAK CORONA (5303 Angstrom)



S E P T E M B E R 08, 1 9 8 3 (P= 22.61, B_o= 7.25, L_o= 178.18)

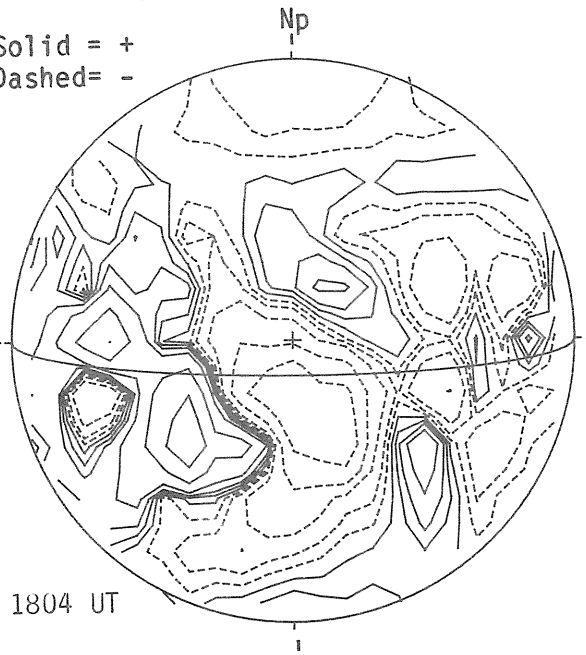
KITT PEAK MAGNETOGRAM

Bright= +
Dark = -



STANFORD MAGNETOGRAM

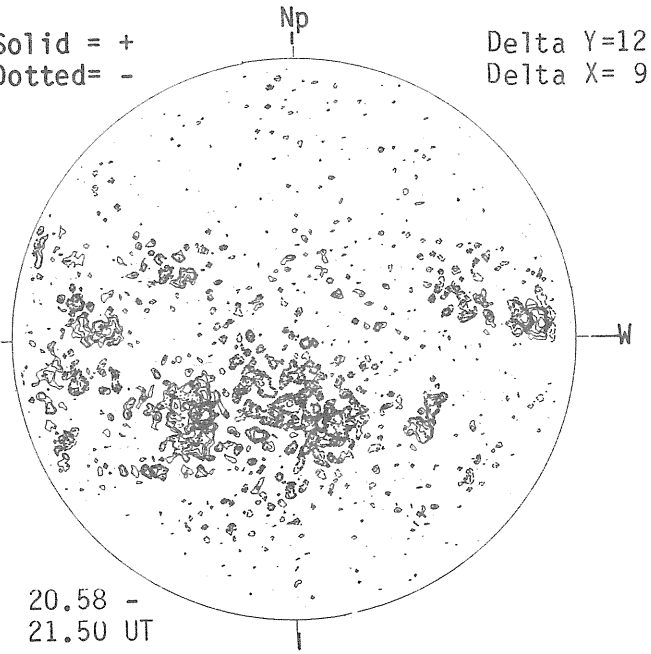
Solid = +
Dashed= -



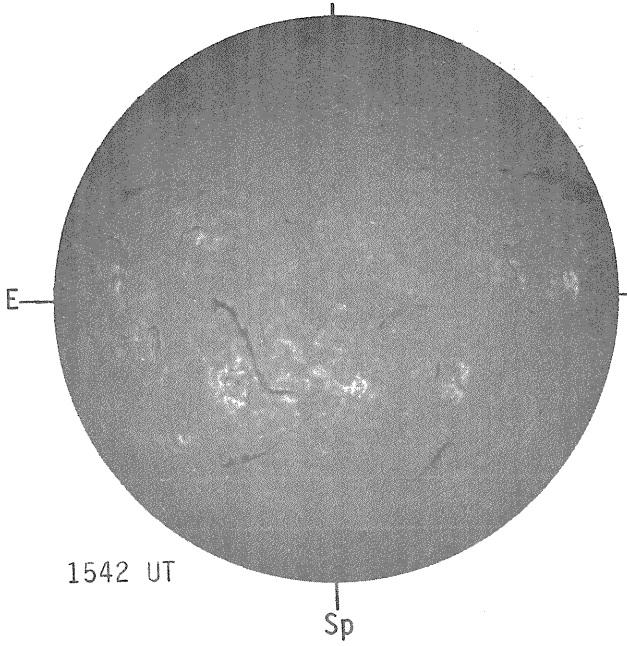
MT. WILSON MAGNETOGRAM

Solid = +
Dotted= -

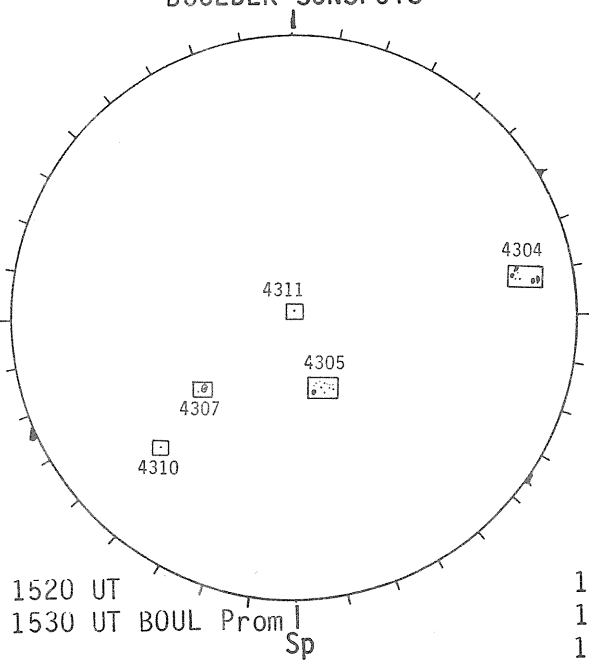
Delta Y=12.6
Delta X= 9.6



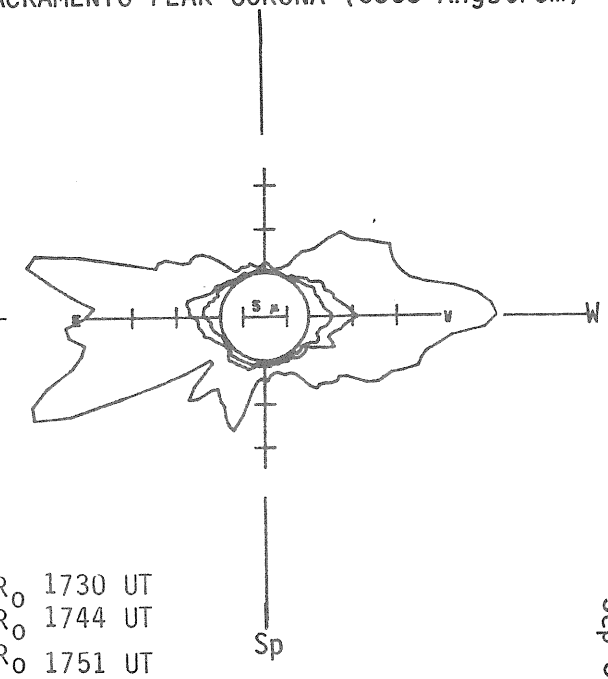
SACRAMENTO PEAK H-ALPHA



BOULDER SUNSPOTS

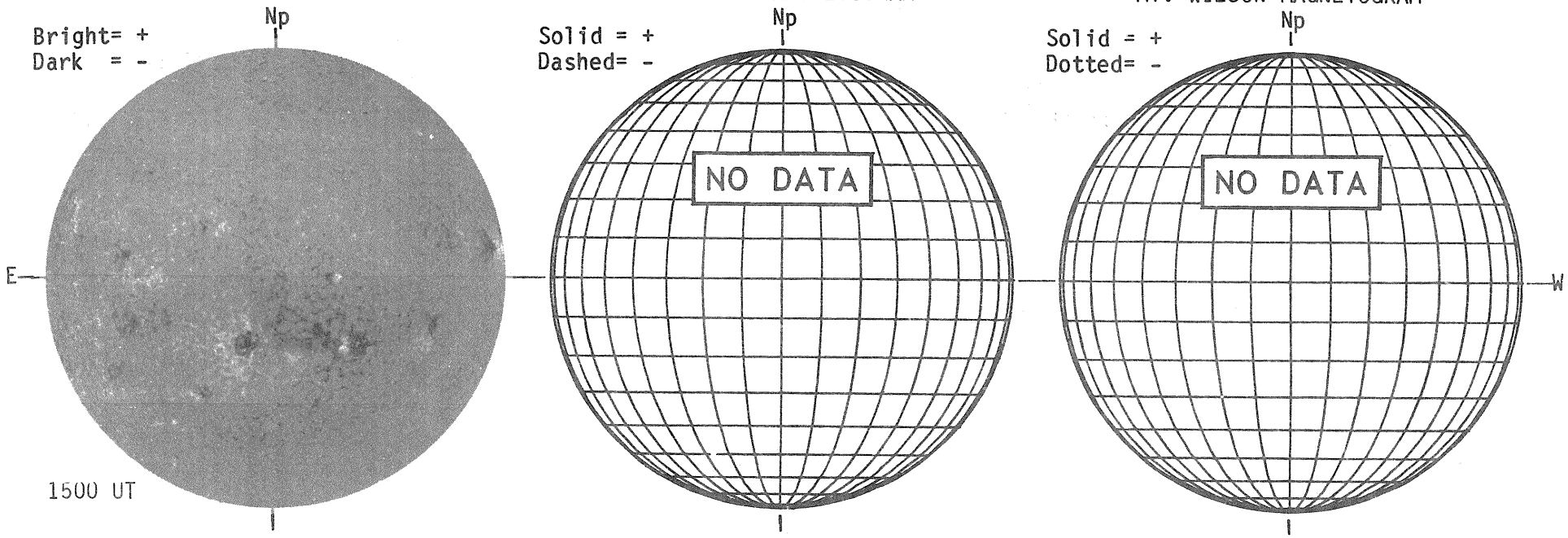


SACRAMENTO PEAK CORONA (5303 Angstrom)



S E P T E M B E R 09, 1 9 8 3 (P= 22.82, B_o= 7.25, L_o= 164.97)

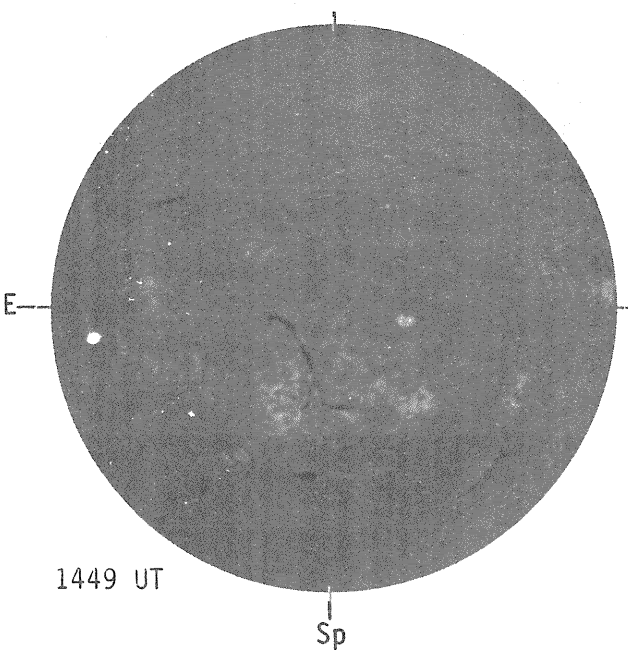
KITT PEAK MAGNETOGRAM



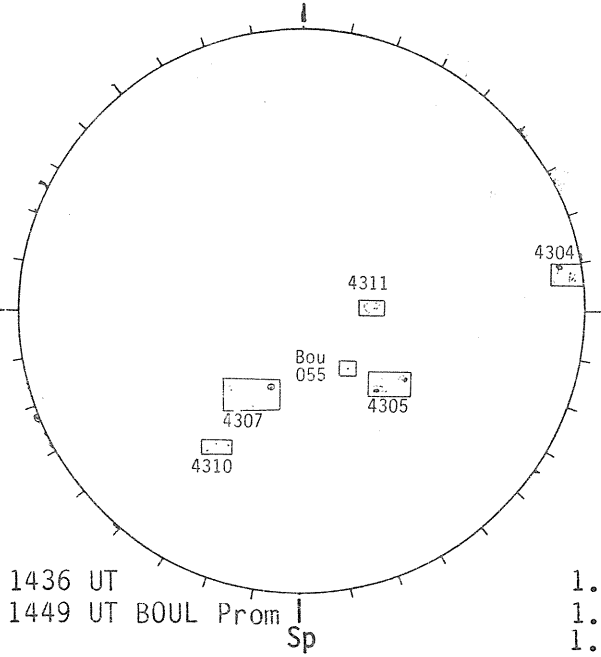
STANFORD MAGNETOGRAM

MT. WILSON MAGNETOGRAM

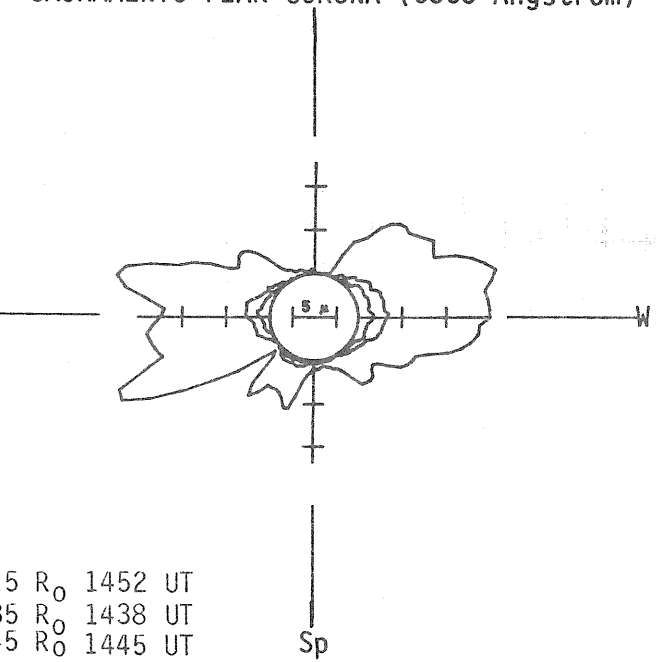
BOULDER H-ALPHA



BOULDER SUNSPOTS



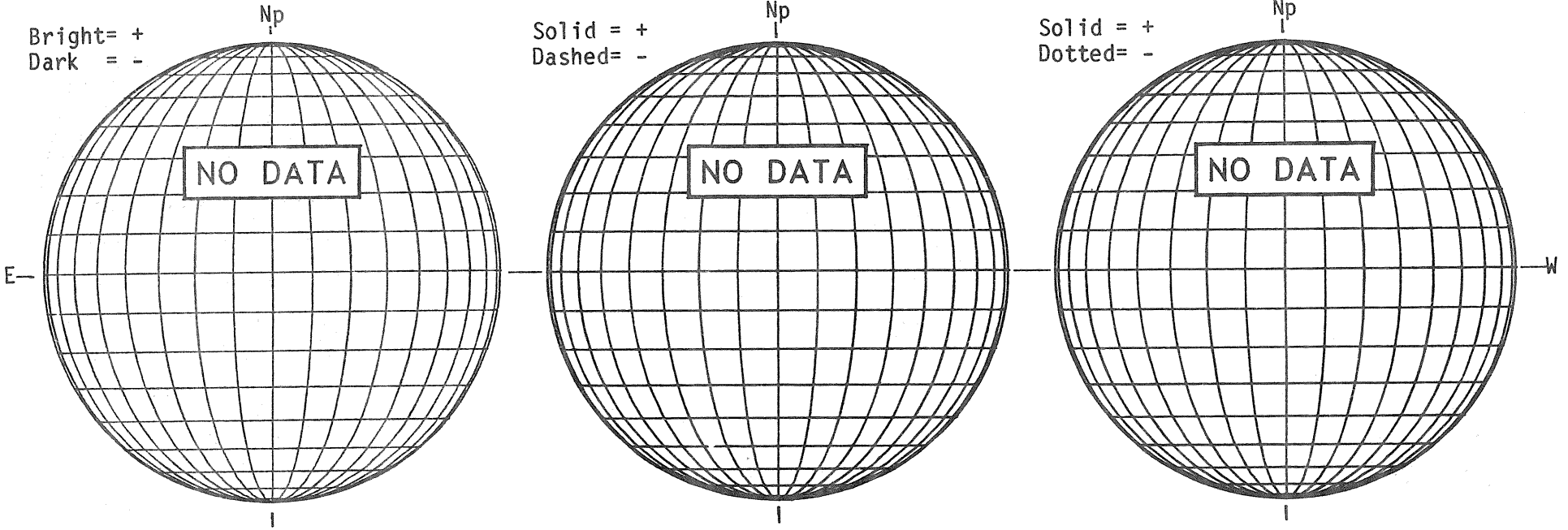
SACRAMENTO PEAK CORONA (5303 Angstrom)



S E P T E M B E R 10, 1 9 8 3 (P= 23.03, B_o= 7.25, L_o= 151.77)

KITT PEAK MAGNETOGRAM

Bright= +
Dark = -



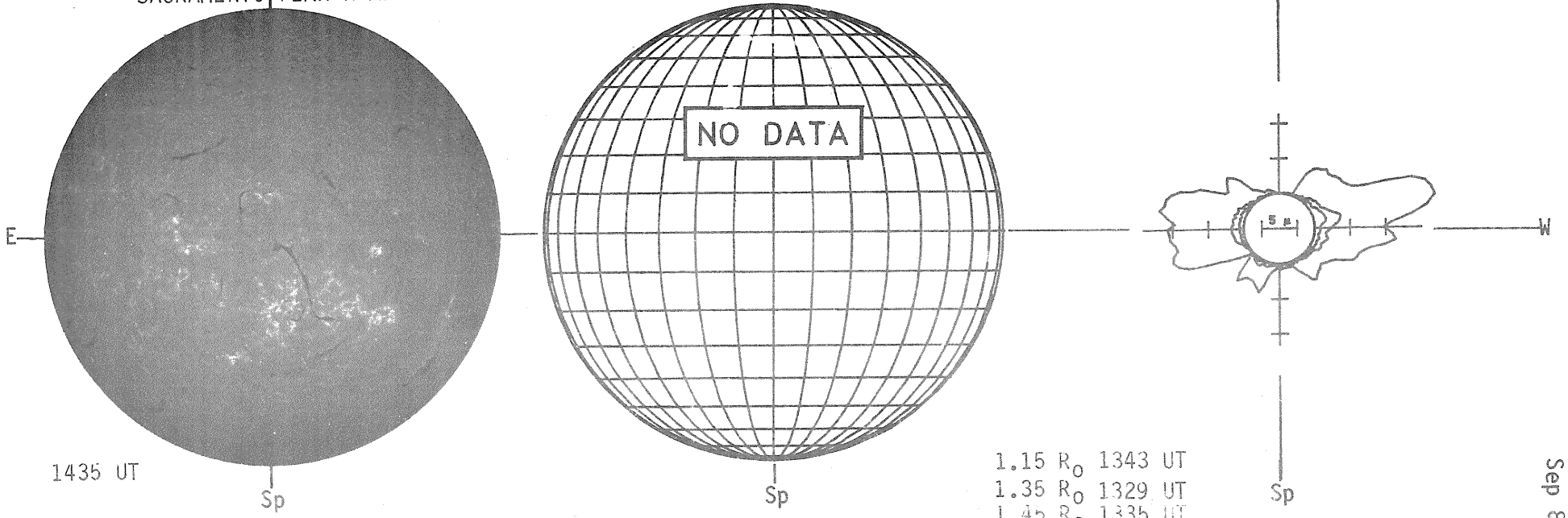
STANFORD MAGNETOGRAM

Solid = +
Dashed= -

MT. WILSON MAGNETOGRAM

Solid = +
Dotted= -

SACRAMENTO PEAK H-ALPHA



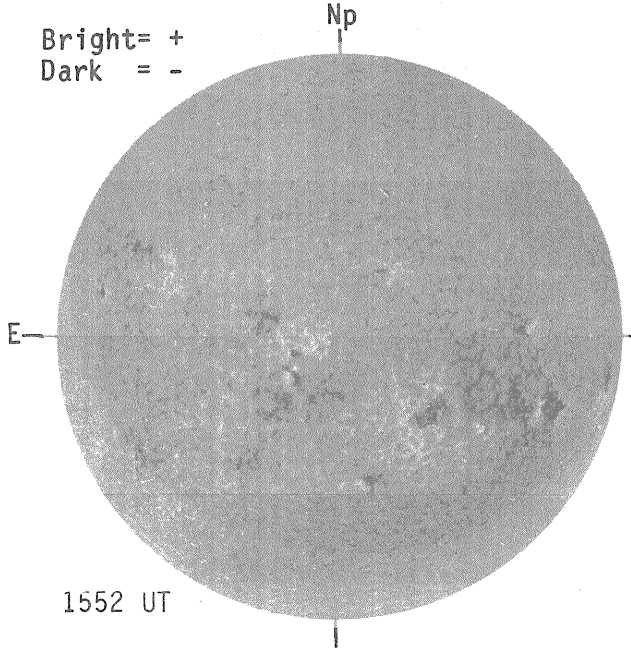
BOULDER SUNSPOTS

SACRAMENTO PEAK CORONA (5303 Angstrom)

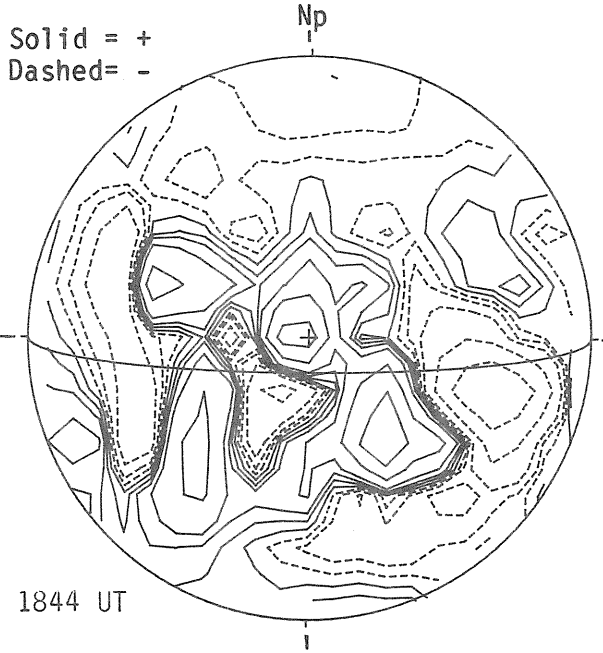
1.15 R_o 1343 UT
1.35 R_o 1329 UT
1.45 R_o 1335 UT

S E P T E M B E R 11, 1 9 8 3 (P= 23.24, B_o= 7.24, L_o= 138.56)

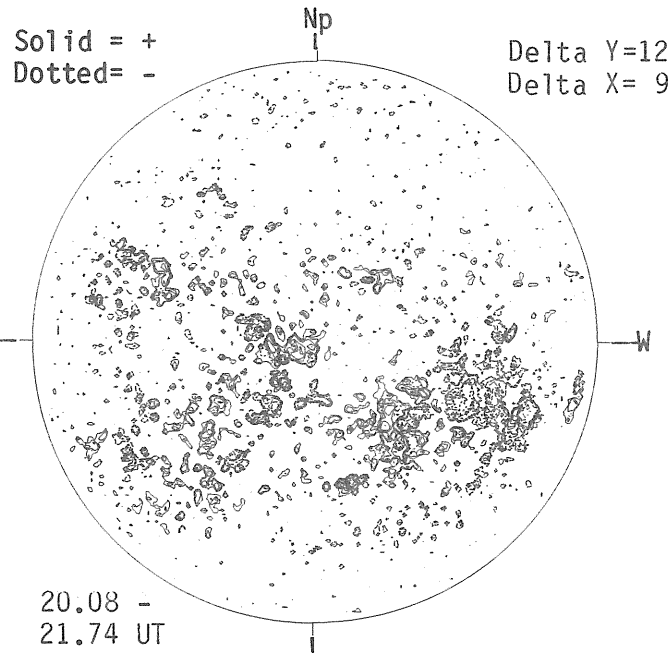
KITT PEAK MAGNETOGRAM



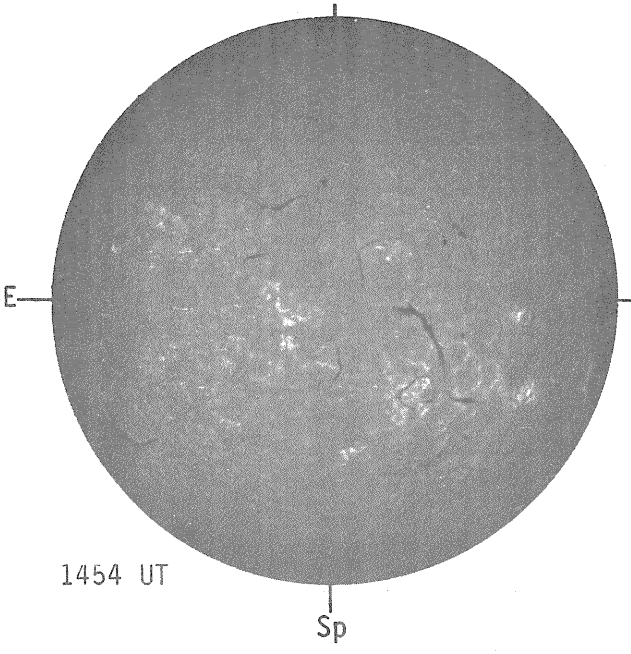
STANFORD MAGNETOGRAM



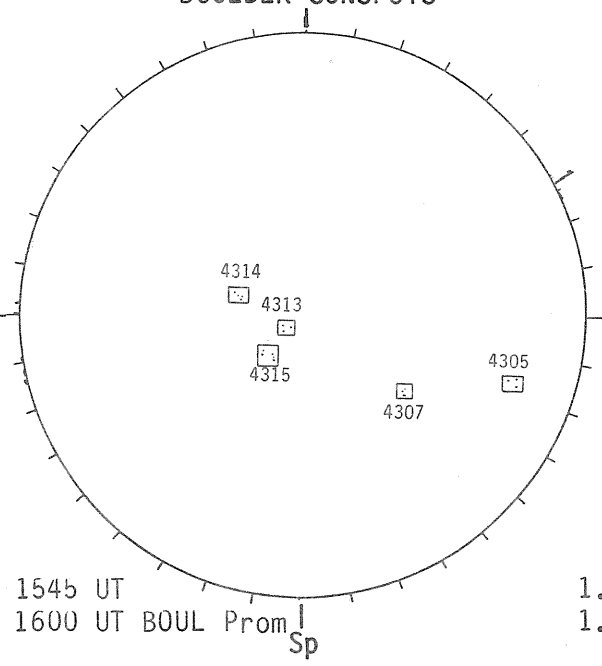
MT. WILSON MAGNETOGRAM



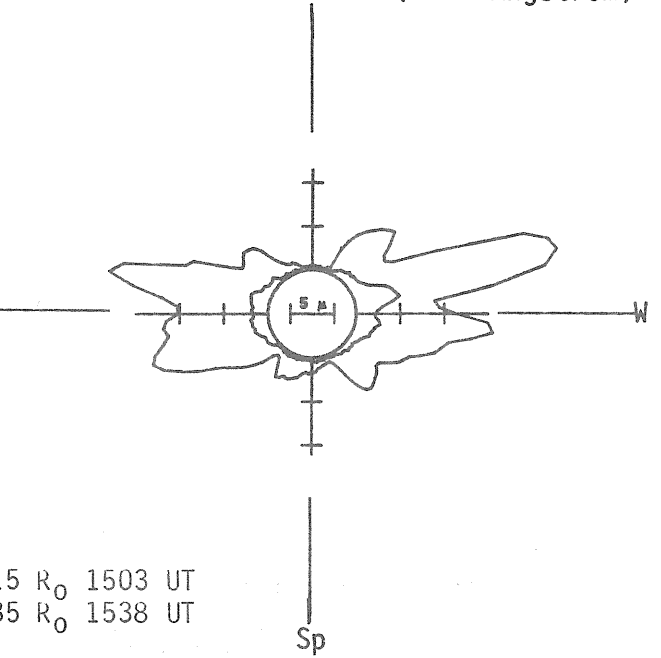
SACRAMENTO PEAK H-ALPHA



BOULDER SUNSPOTS



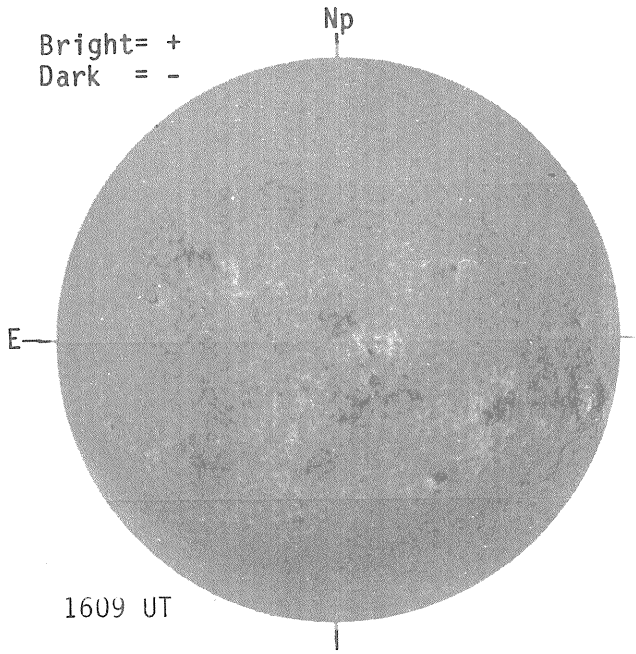
SACRAMENTO PEAK CORONA (5303 Angstrom)



S E P T E M B E R 12, 1 9 8 3 (P= 23.43, B_o= 7.24, L_o= 125.36)

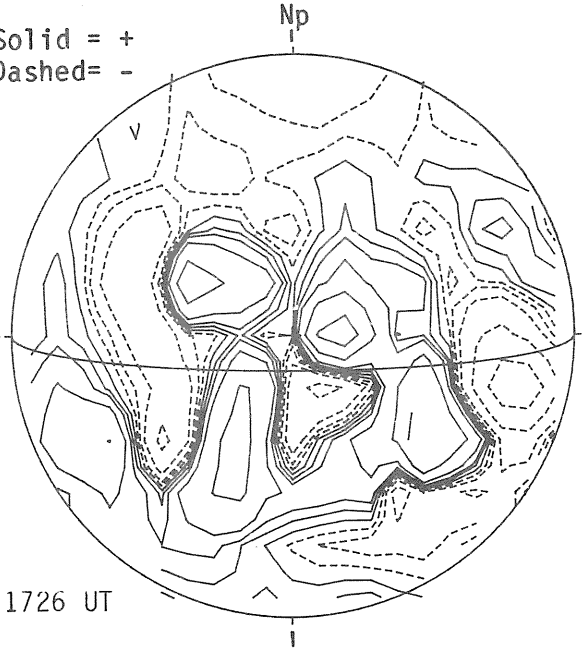
KITT PEAK MAGNETOGRAM

Bright= +
Dark = -



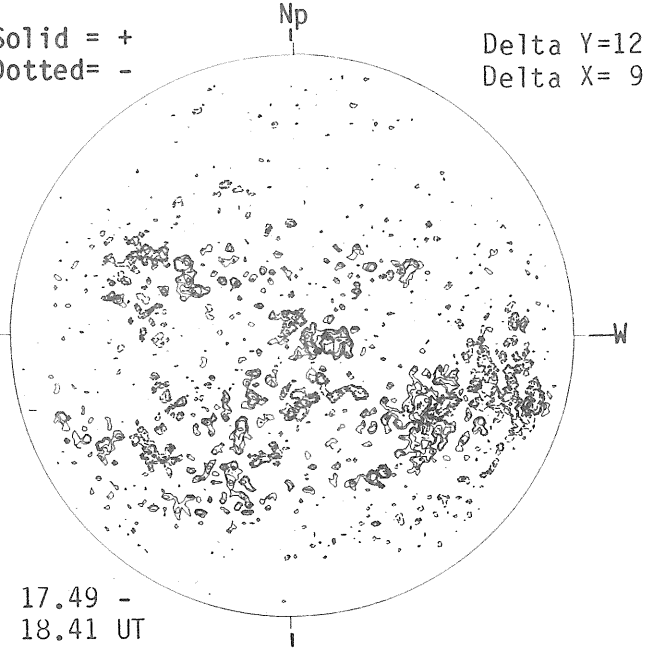
STANFORD MAGNETOGRAM

Solid = +
Dashed= -

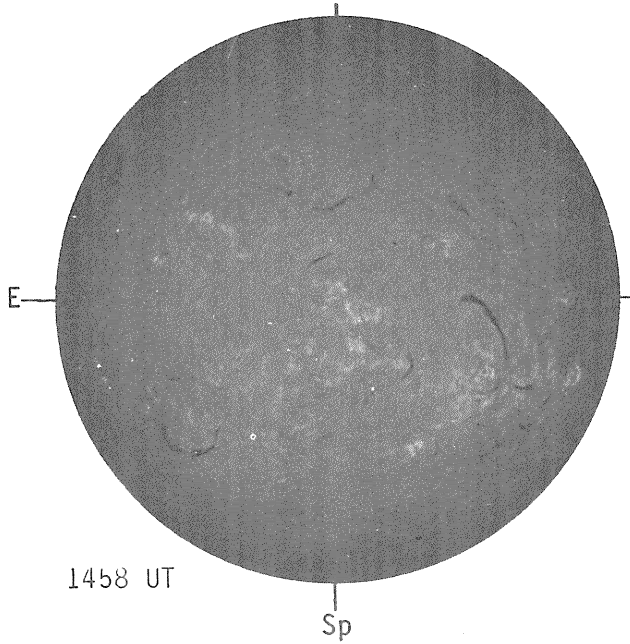


MT. WILSON MAGNETOGRAM

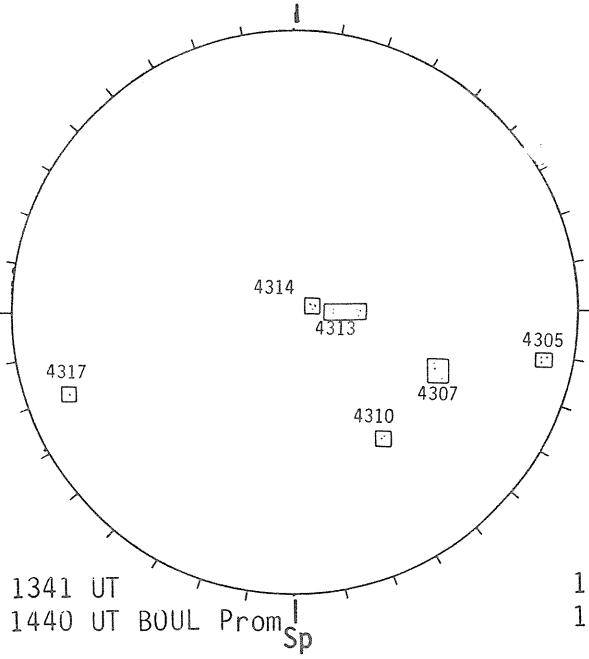
Solid = +
Dotted= -
Delta Y=12.7
Delta X= 9.6



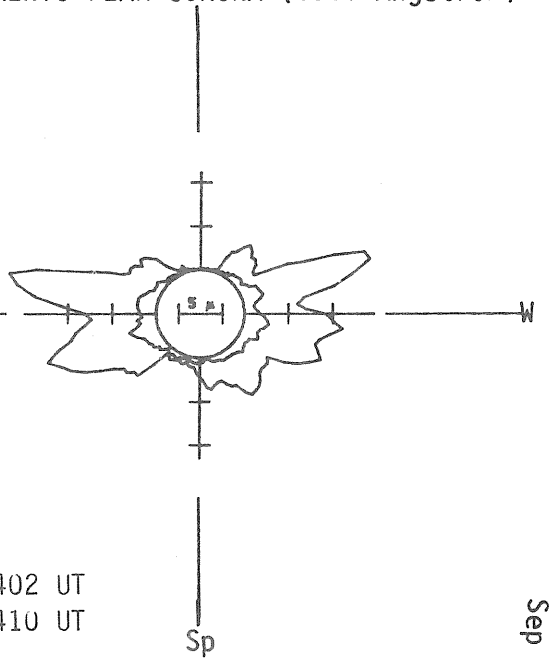
SACRAMENTO PEAK H-ALPHA



BOULDER SUNSPOTS



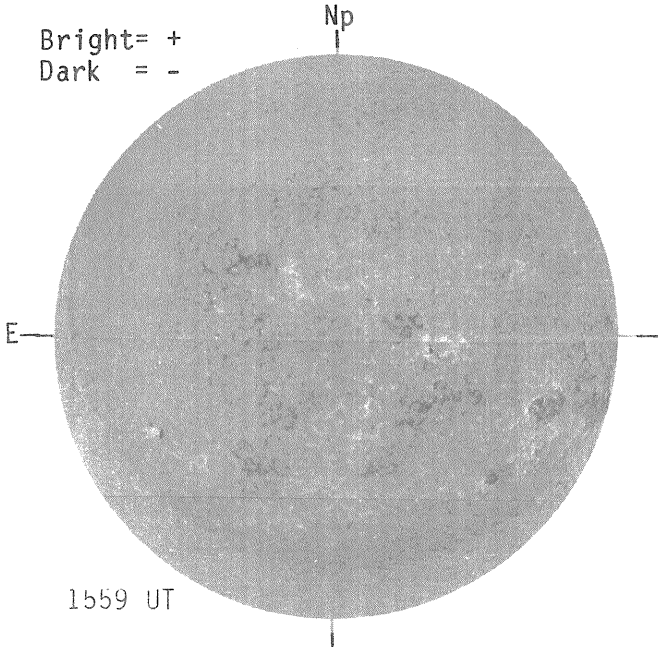
SACRAMENTO PEAK CORONA (5303 Angstrom)



S E P T E M B E R 13, 1 9 8 3 (P= 23.62, B_o= 7.23, L_o= 112.16)

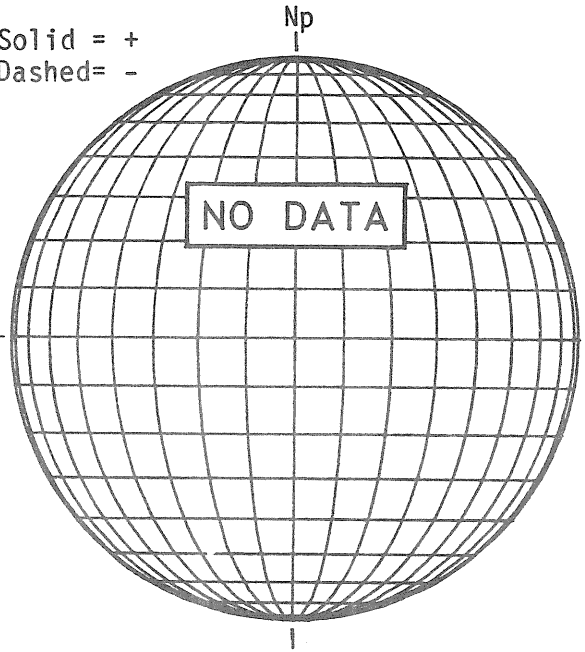
KITT PEAK MAGNETOGRAM

Bright= +
Dark = -



STANFORD MAGNETOGRAM

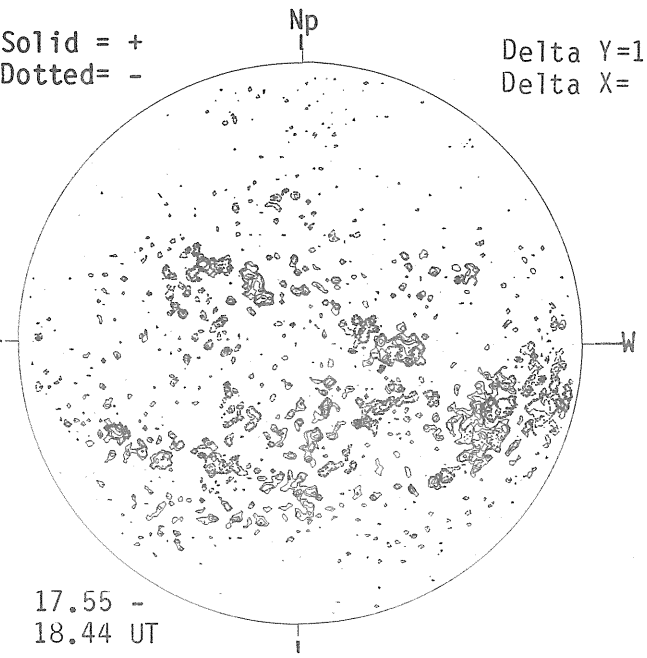
Solid = +
Dashed= -



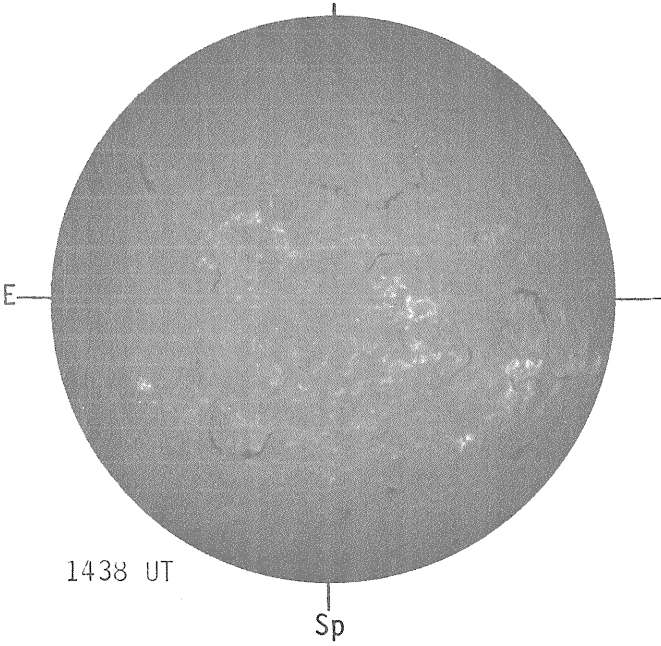
MT. WILSON MAGNETOGRAM

Solid = +
Dotted= -

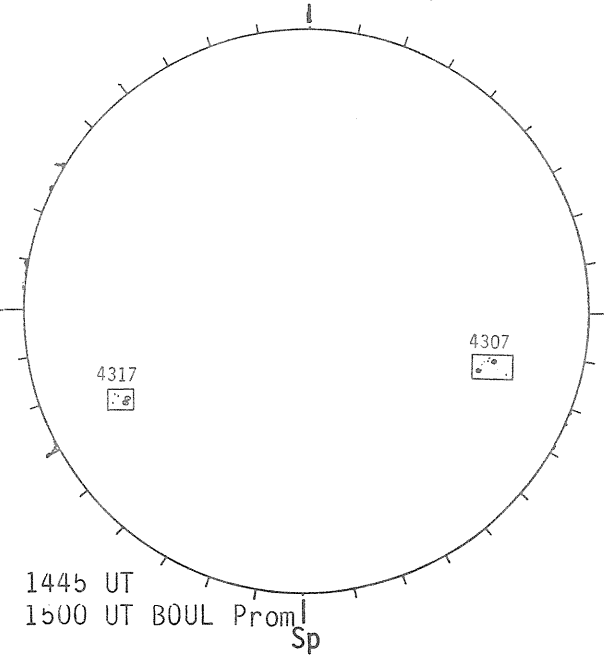
Delta Y=12.7
Delta X= 9.6



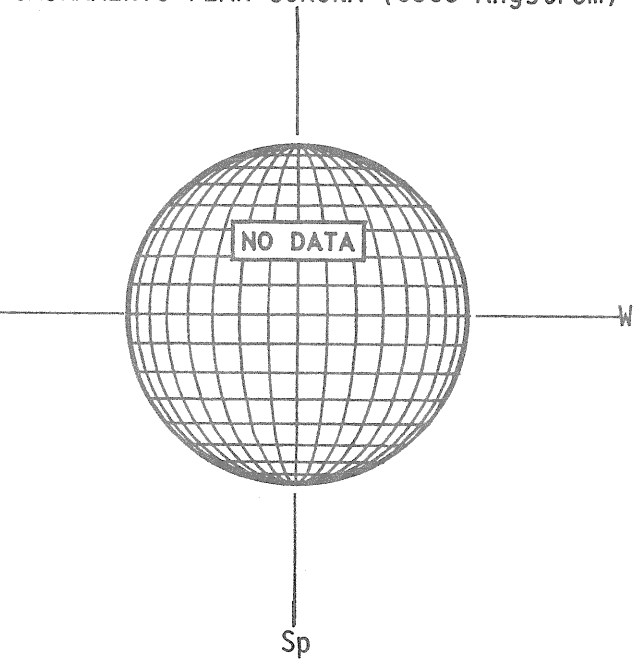
SACRAMENTO PEAK H-ALPHA



BOULDER SUNSPOTS



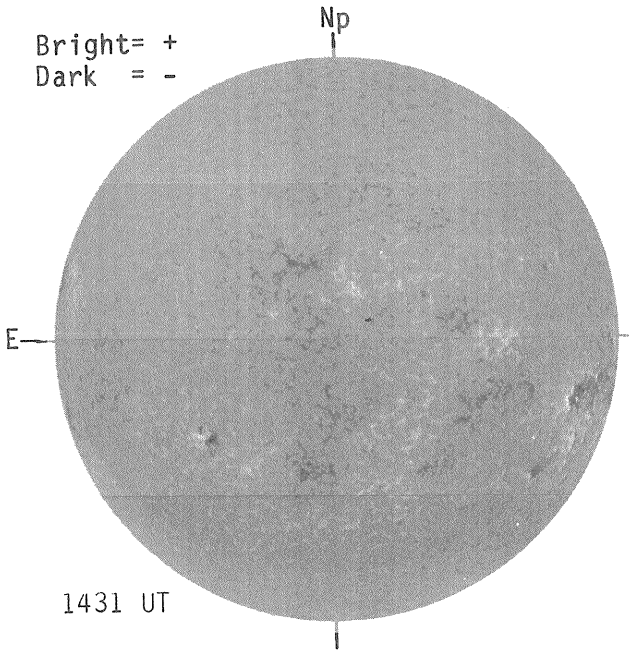
SACRAMENTO PEAK CORONA (5303 Angstrom)



S E P T E M B E R 14, 1 9 8 3 (P= 23.81, B_0= 7.22, L_0= 98.95)

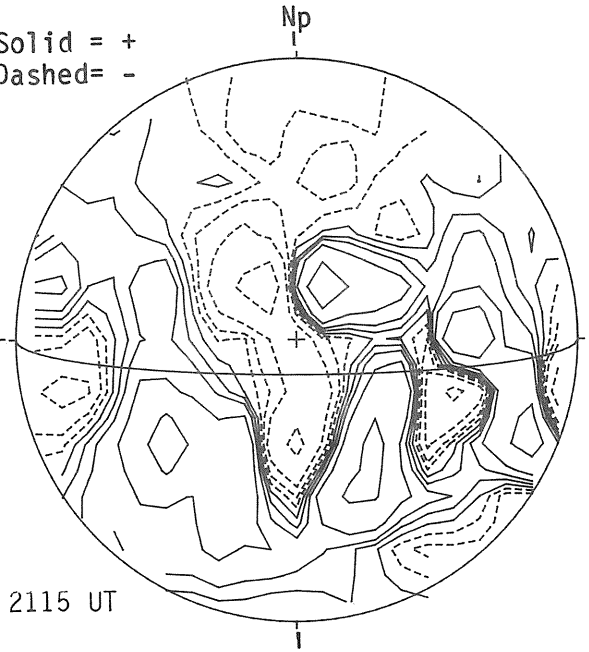
KITT PEAK MAGNETOGRAM

Bright= +
Dark = -



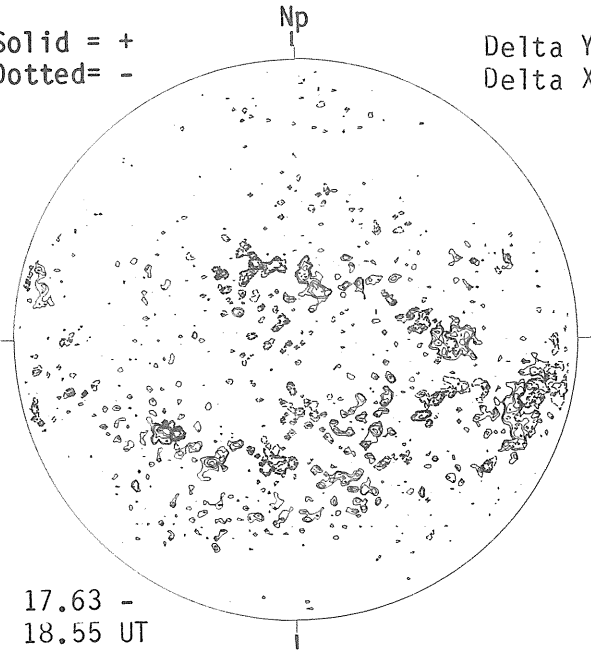
STANFORD MAGNETOGRAM

Solid = +
Dashed= -

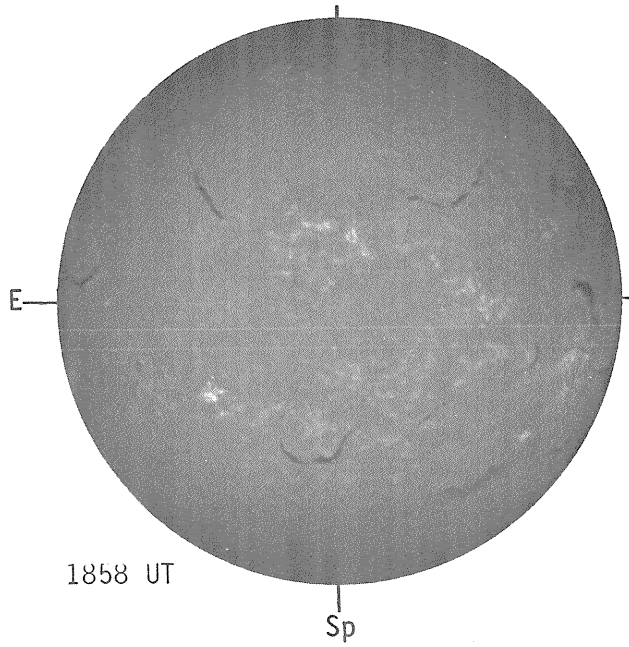


MT. WILSON MAGNETOGRAM

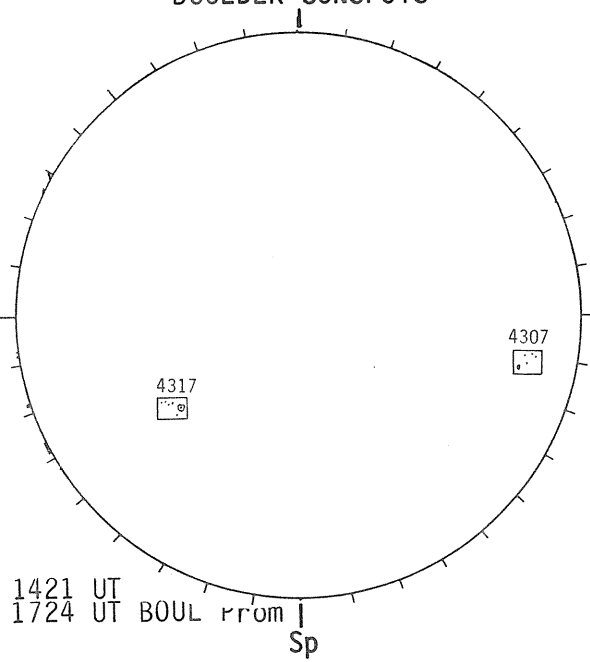
Solid = +
Dotted= -
Delta Y=12.7
Delta X= 9.6



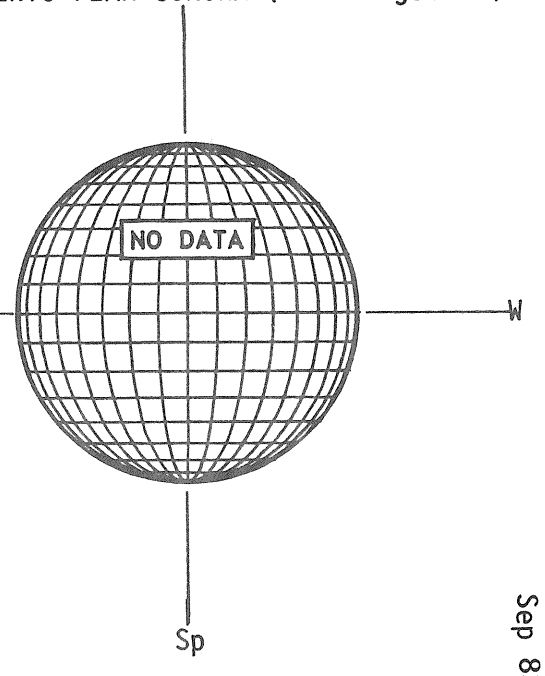
SACRAMENTO PEAK H-ALPHA



BOULDER SUNSPOTS



SACRAMENTO PEAK CORONA (5303 Angstrom)



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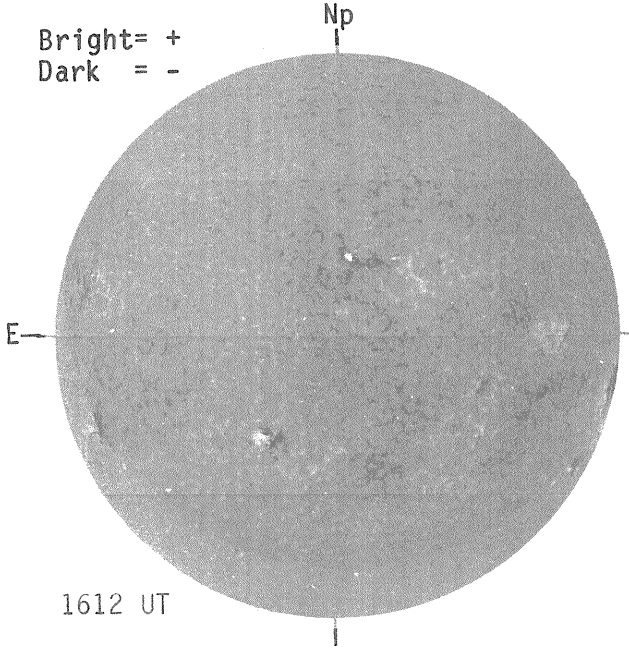
S E P T E M B E R 15, 1 9 8 3 (P= 23.99, B_0= 7.21, L_0= 85.75)

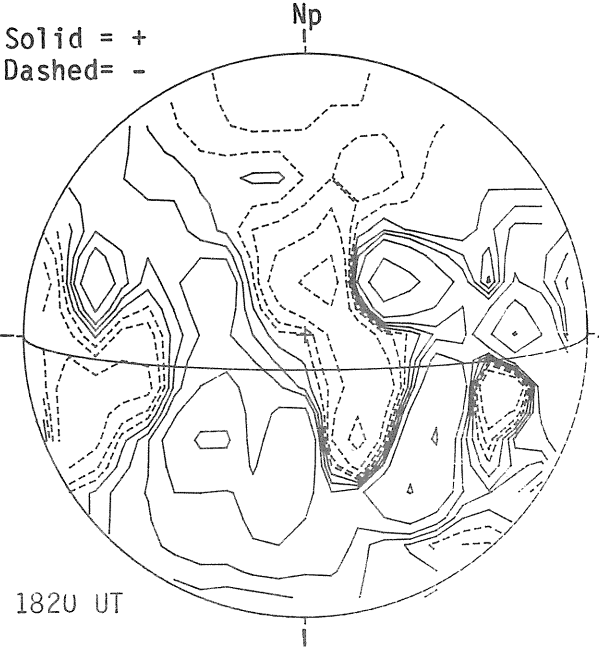
KITT PEAK MAGNETOGRAM

Bright= +
Dark = -



STANFORD MAGNETOGRAM

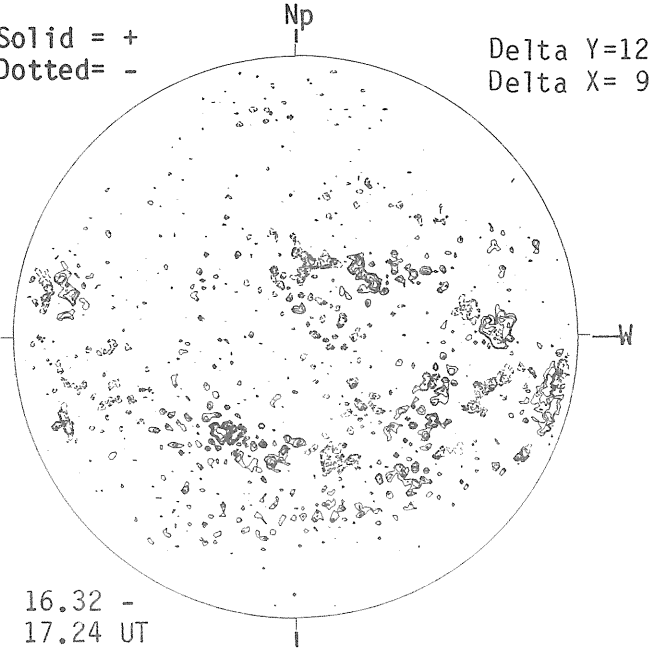
Solid = +
Dashed= -



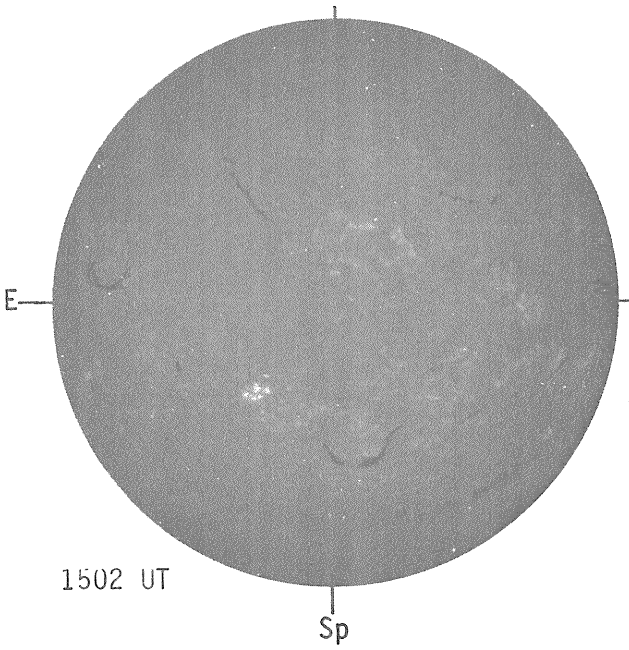
MT. WILSON MAGNETOGRAM

Solid = +
Dotted= -

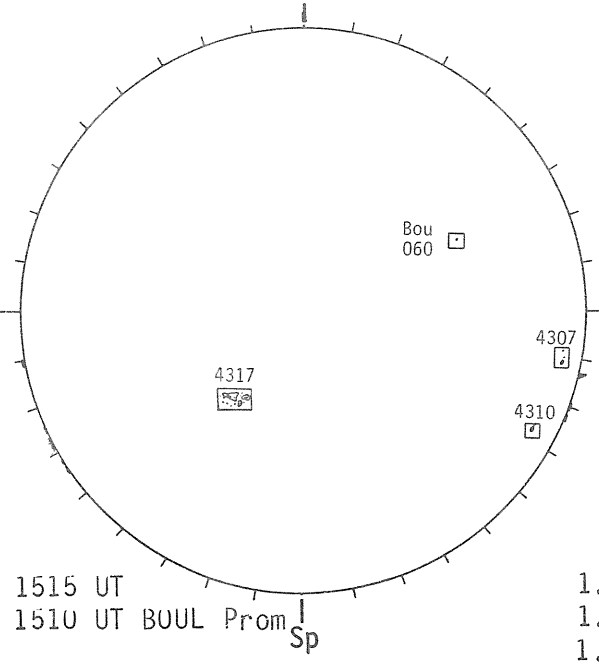
Delta Y=12.7
Delta X= 9.6



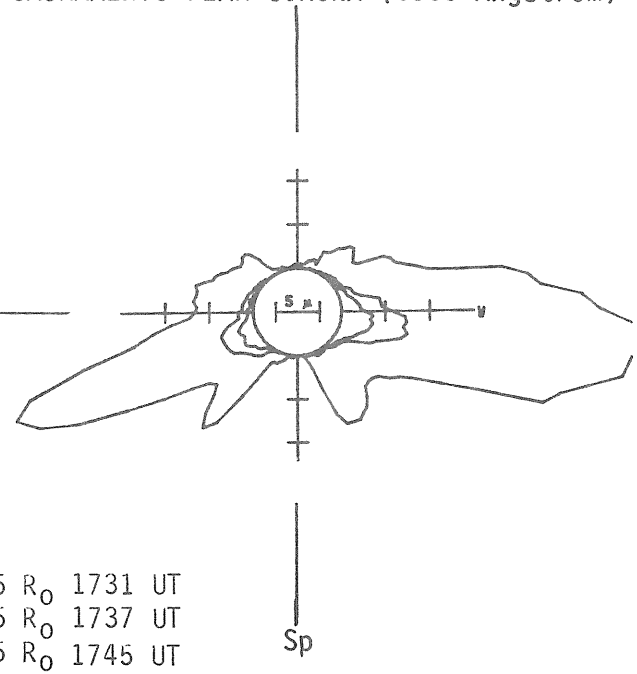
SACRAMENTO PEAK H-ALPHA



BOULDER SUNSPOTS



SACRAMENTO PEAK CORONA (5303 Angstrom)



1.15 R_0 1731 UT
1.35 R_0 1737 UT
1.45 R_0 1745 UT

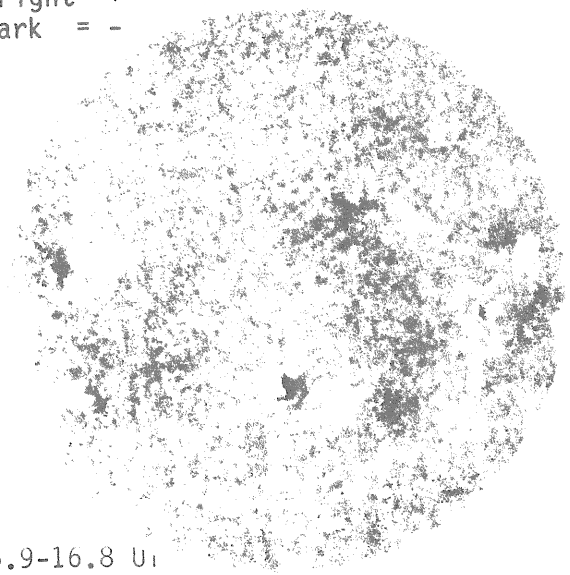
S E P T E M B E R 16, 1 9 8 3 (P= 24.16, B_0= 7.20, L_0= 72.55)

MT. WILSON MAGNETOGRAM

Bright= +
Dark = -

Np

E



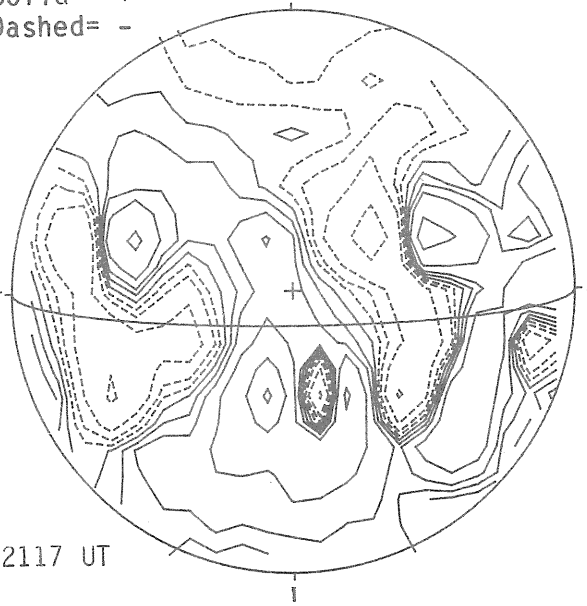
15.9-16.8 UT

Sp

STANFORD MAGNETOGRAM

Solid = +
Dashed= -

Np



2117 UT

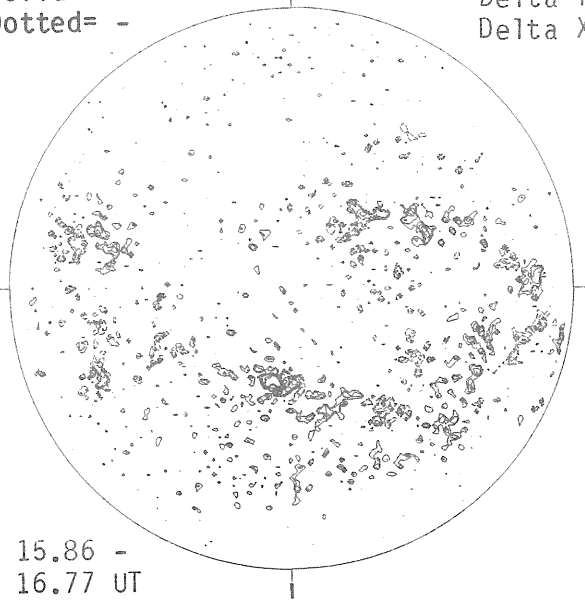
Sp

MT. WILSON MAGNETOGRAM

Solid = +
Dotted= -

Delta Y=12.7
Delta X= 9.6

Np



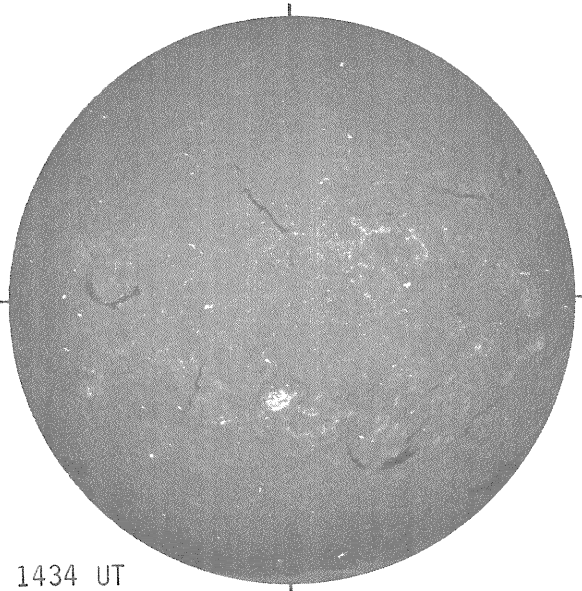
W

15.86 -
16.77 UT

Sp

SACRAMENTO PEAK H-ALPHA

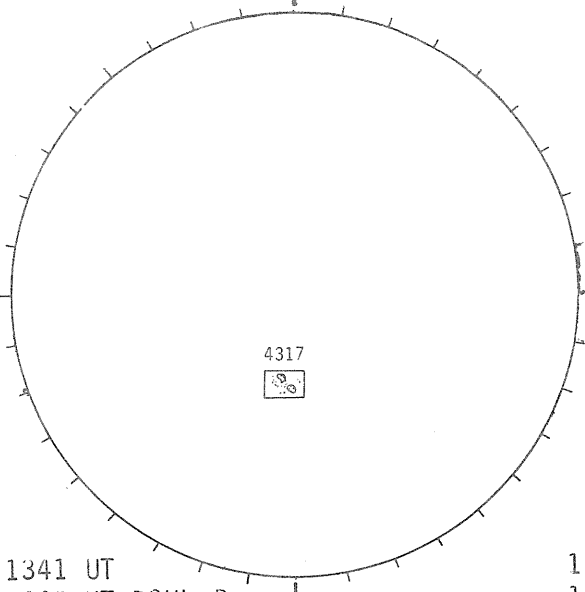
E



1434 UT

Sp

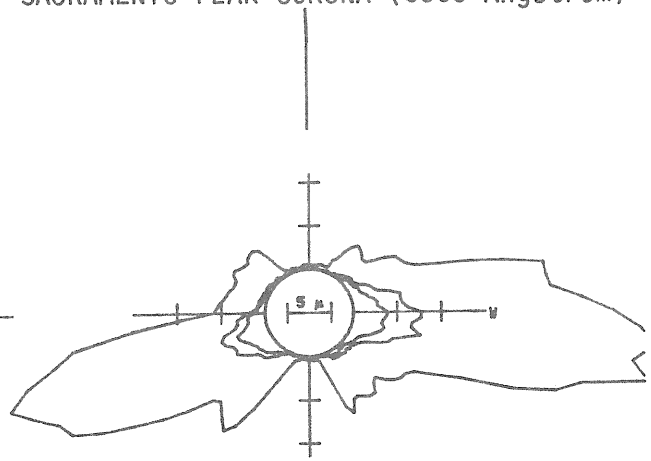
BOULDER SUNSPOTS



1341 UT
1440 UT BOUL Prom

Sp

SACRAMENTO PEAK CORONA (5303 Angstrom)



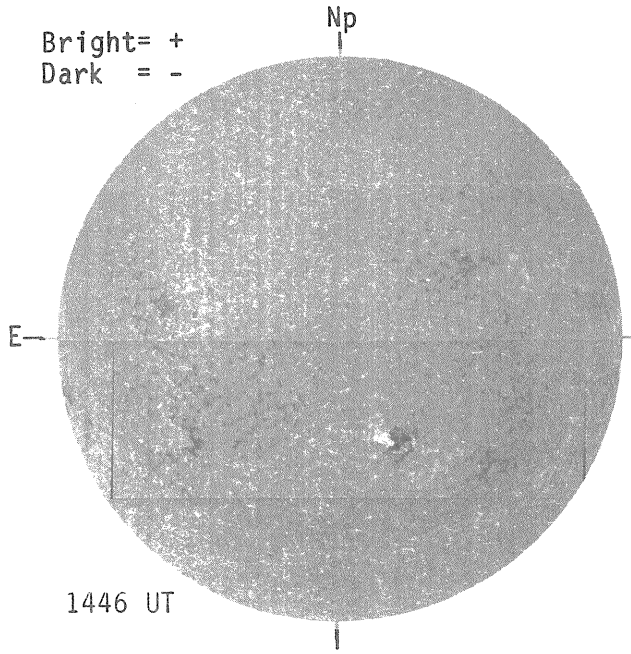
1.15 R_O 1714 UT
1.35 R_O 1632 UT
1.45 R_O 1721 UT

Sp

S E P T E M B E R 17, 1 9 8 3 (P= 24.33, B_0= 7.18, L_0= 59.34)

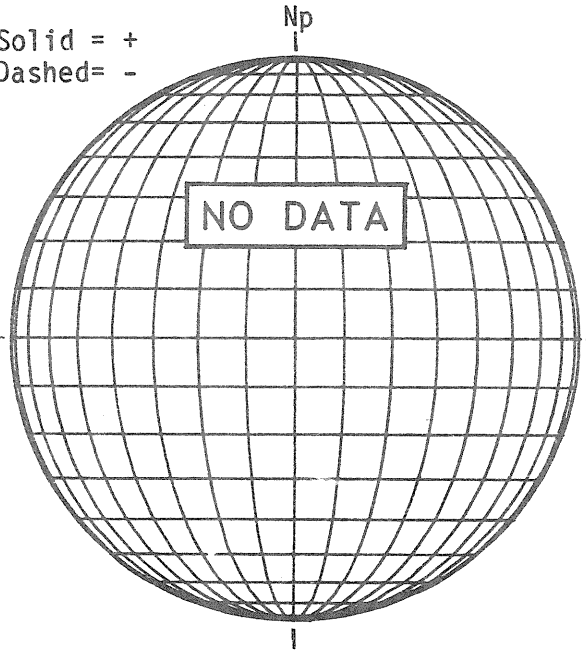
KITT PEAK MAGNETOGRAM

Bright= +
Dark = -



STANFORD MAGNETOGRAM

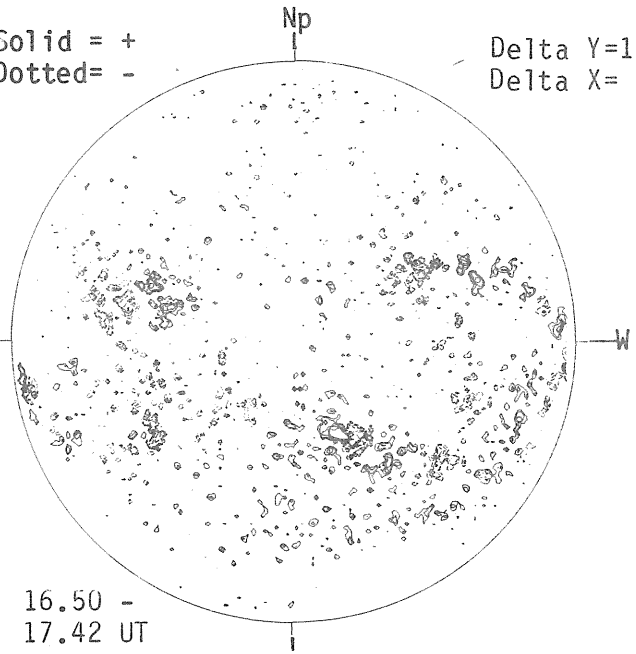
Solid = +
Dashed= -



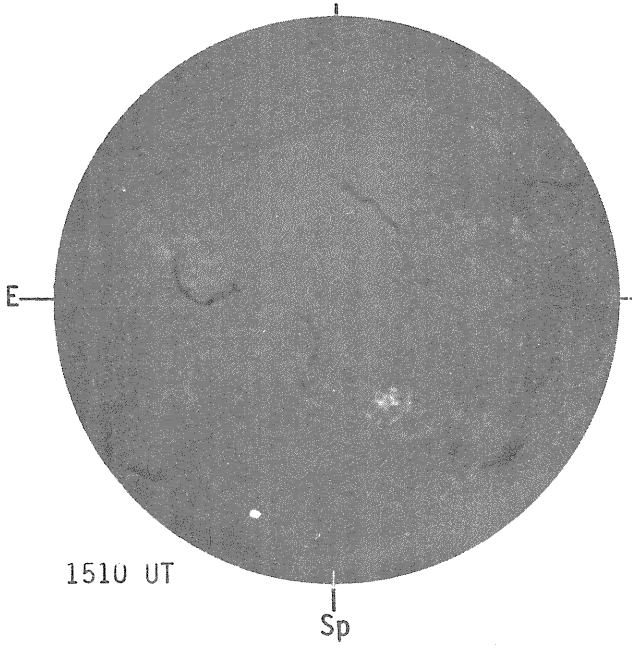
MT. WILSON MAGNETOGRAM

Solid = +
Dotted= -

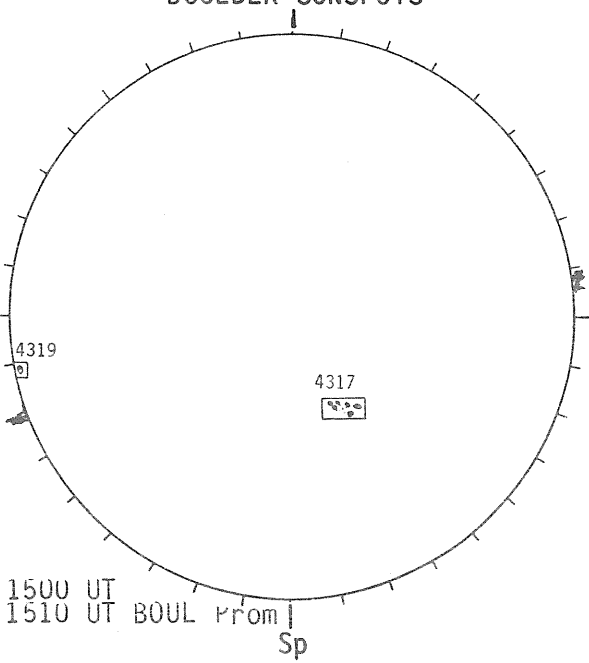
Delta Y=12.7
Delta X= 9.6



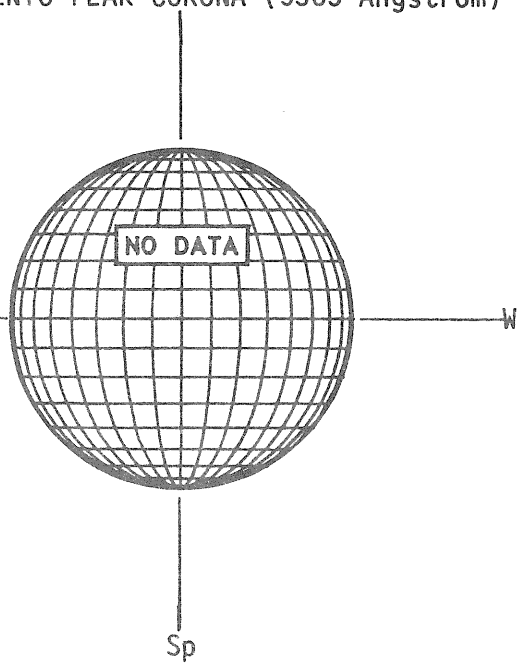
BOULDER H-ALPHA



BOULDER SUNSPOTS

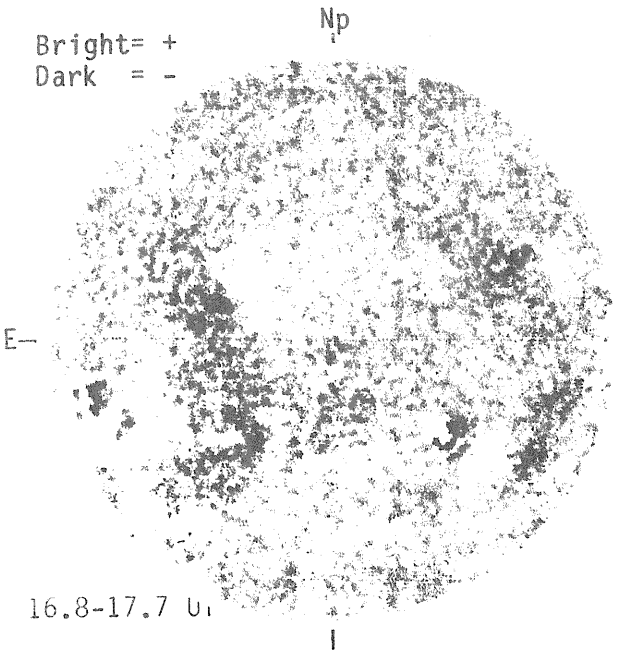


SACRAMENTO PEAK CORONA (5303 Angstrom)

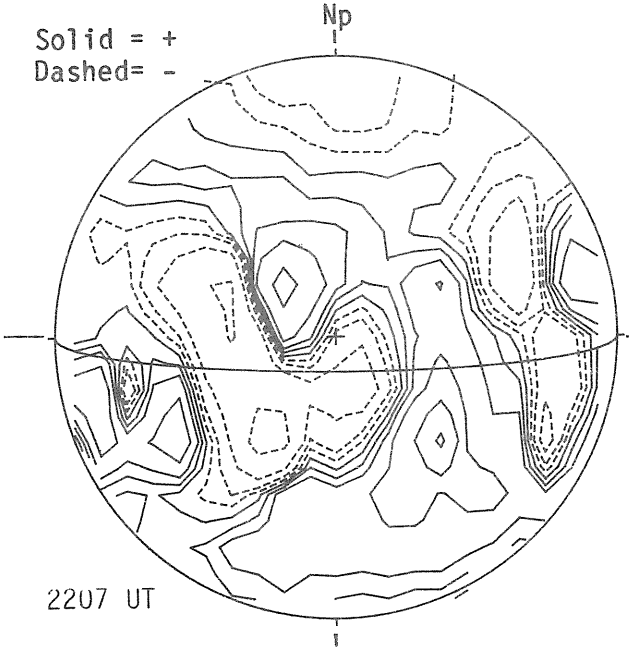


S E P T E M B E R 18, 1 9 8 3 (P= 24.48, B_0= 7.16, L_0= 46.14)

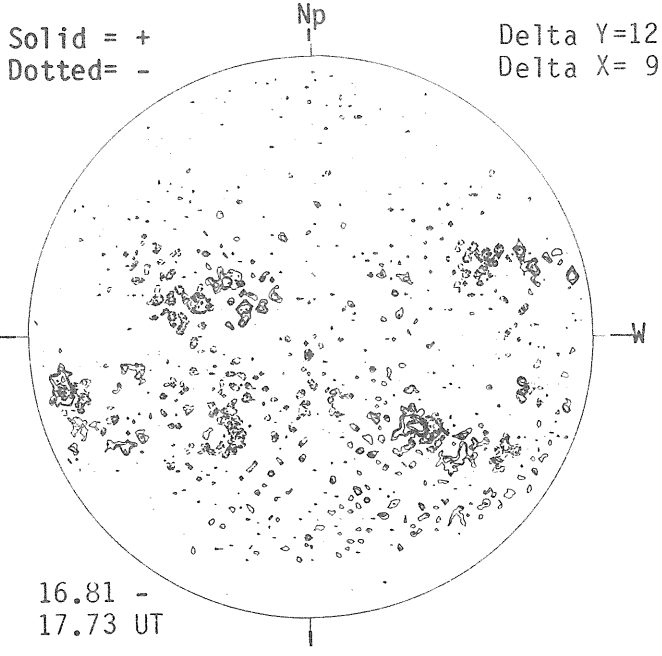
MT. WILSON MAGNETOGRAM



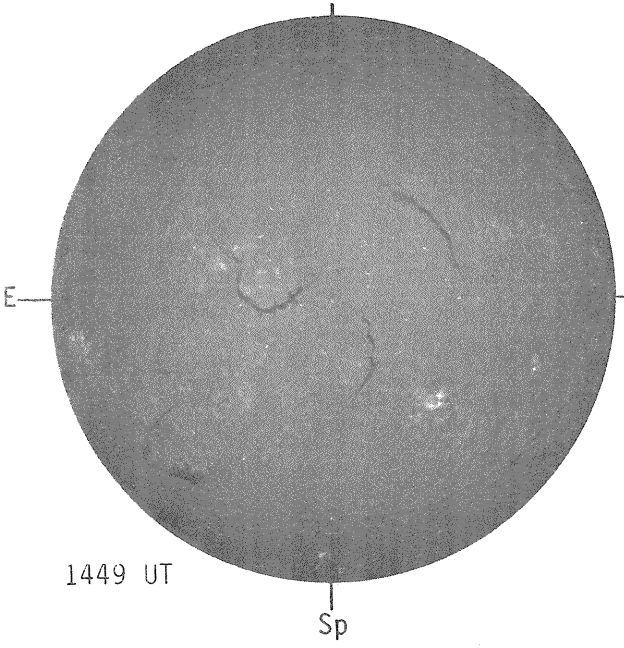
STANFORD MAGNETOGRAM



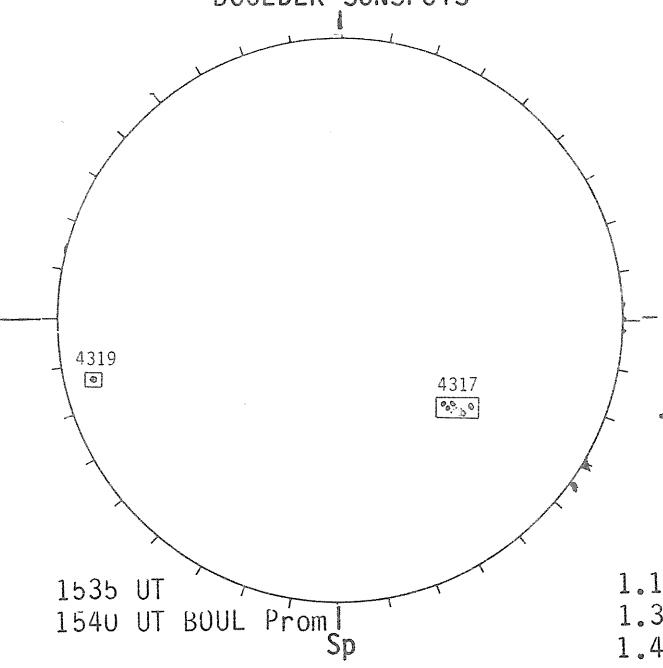
MT. WILSON MAGNETOGRAM



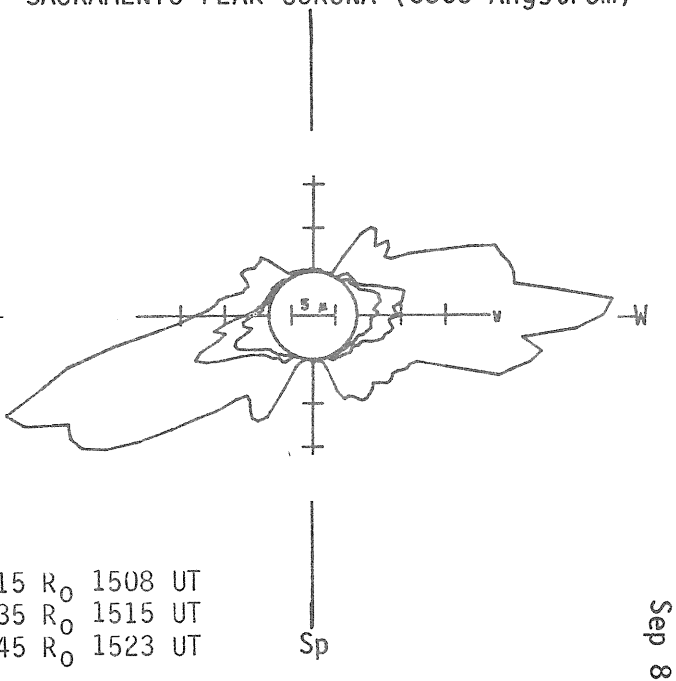
SACRAMENTO PEAK H-ALPHA



BOULDER SUNSPOTS



SACRAMENTO PEAK CORONA (5303 Angstrom)

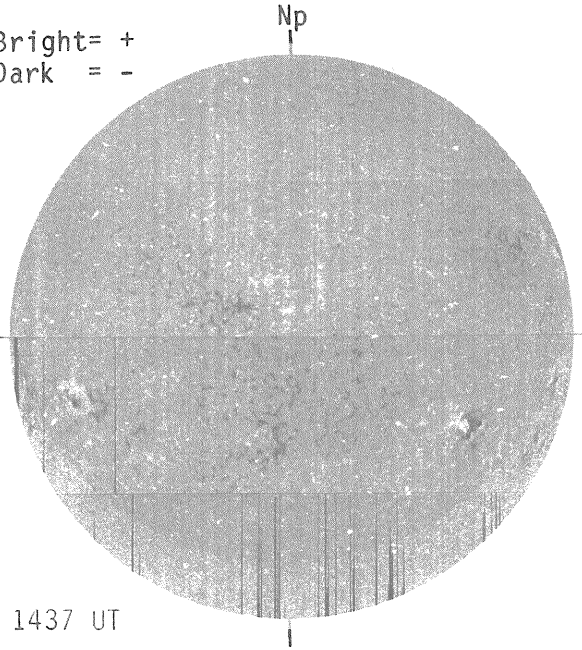


57
Sep 83

S E P T E M B E R 19, 1 9 8 3 (P= 24.64, B_o= 7.14, L_o= 32.94)

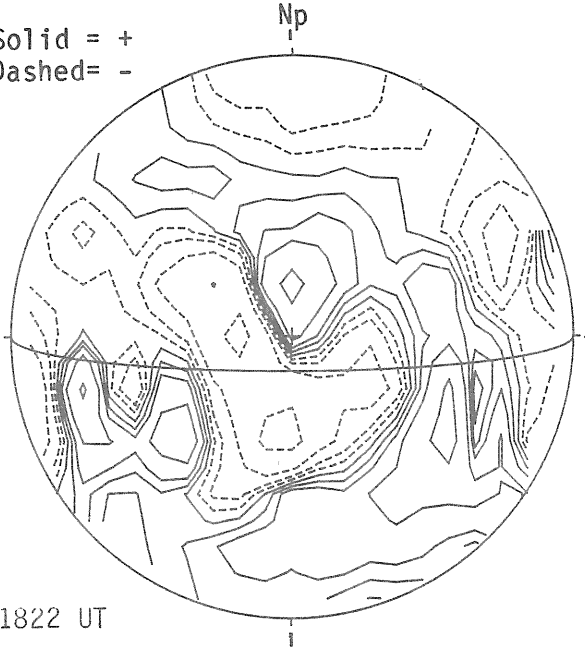
KITT PEAK MAGNETOGRAM

Bright= +
Dark = -



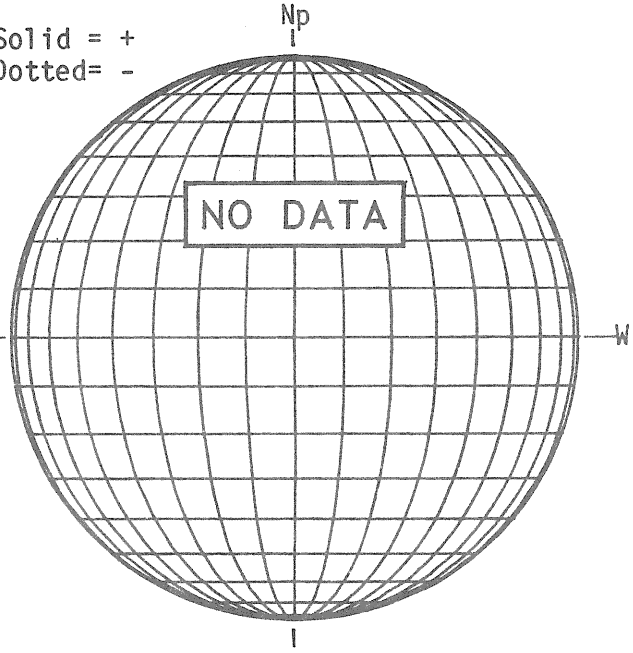
STANFORD MAGNETOGRAM

Solid = +
Dashed= -

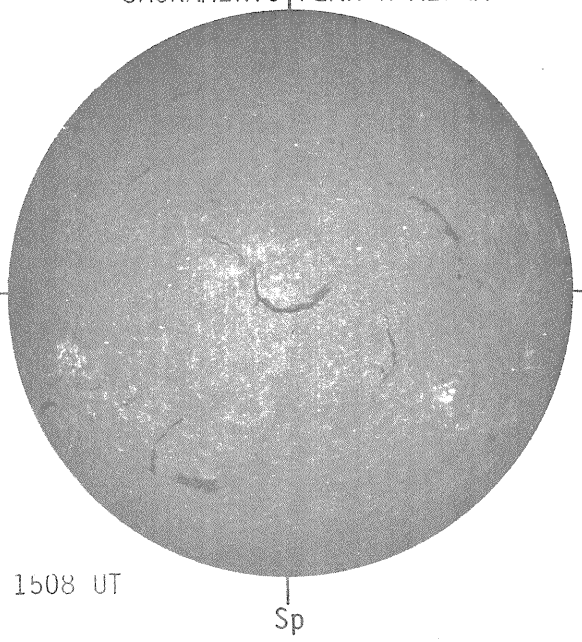


MT. WILSON MAGNETOGRAM

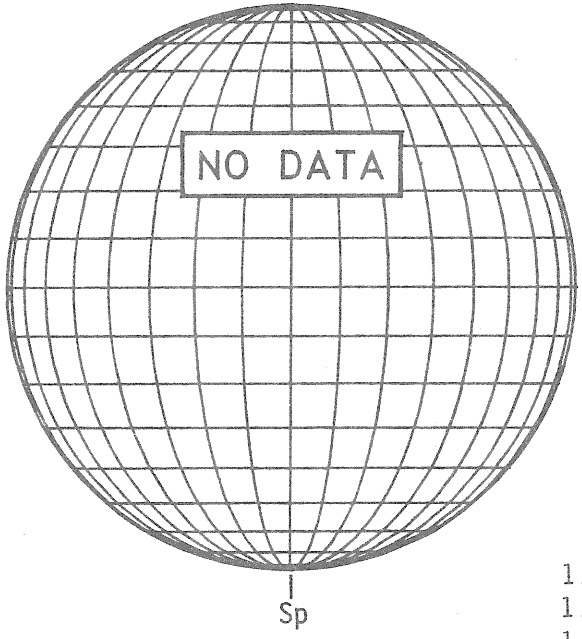
Solid = +
Dotted= -



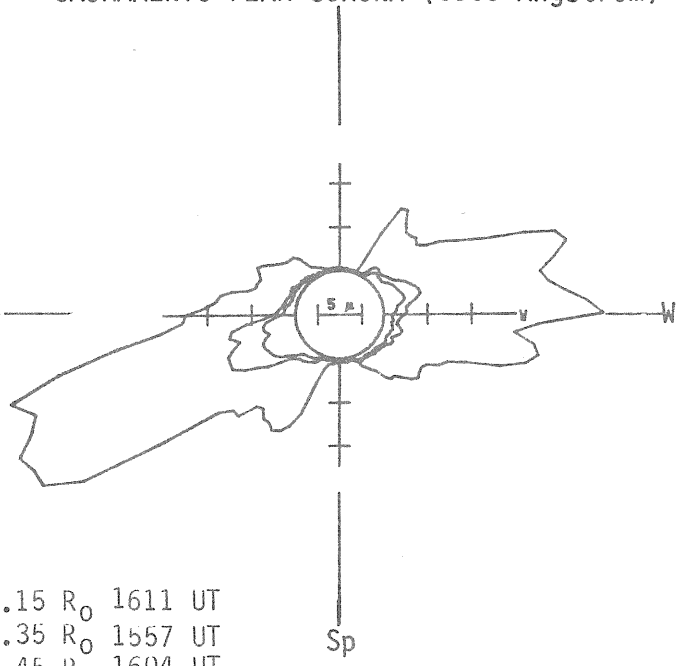
SACRAMENTO PEAK H-ALPHA



BOULDER SUNSPOTS



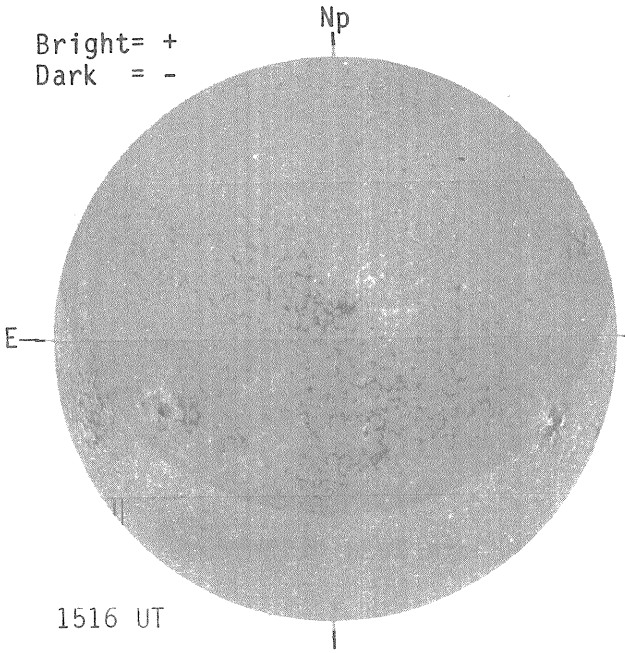
SACRAMENTO PEAK CORONA (5303 Angstrom)



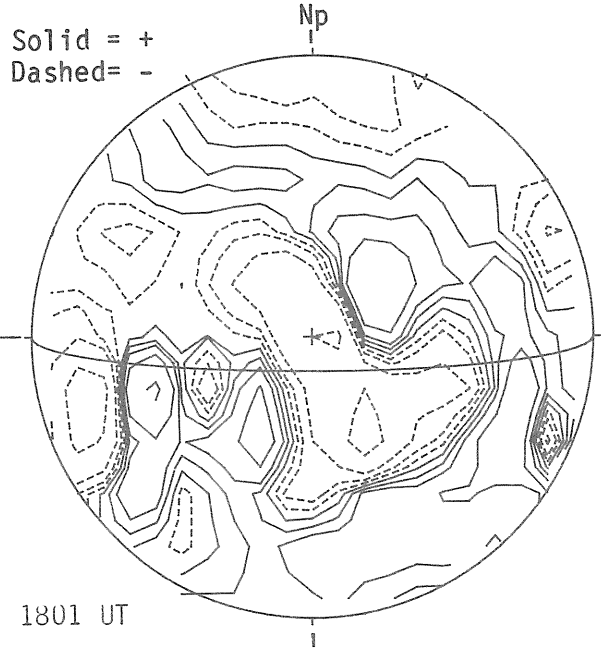
1.15 R_o 1611 UT
1.35 R_o 1557 UT
1.45 R_o 1604 UT

S E P T E M B E R 20, 1 9 8 3 (P= 24.79, B_o= 7.12, L_o= 19.74)

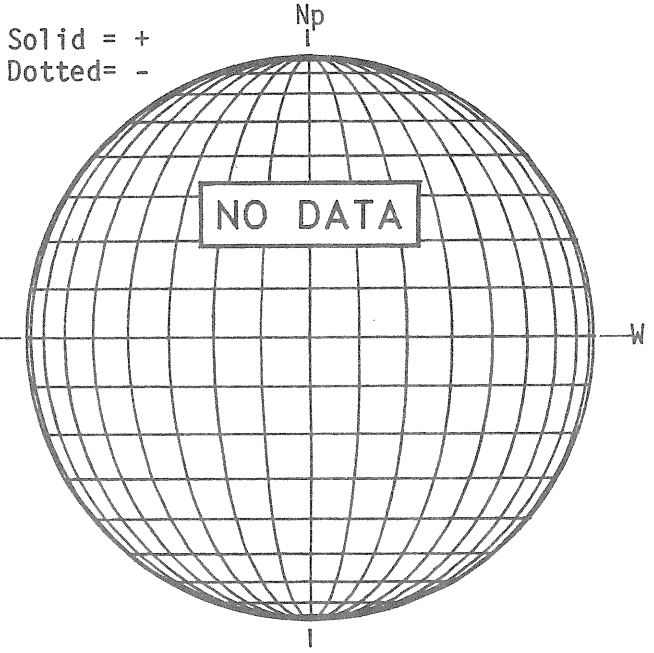
KITT PEAK MAGNETOGRAM



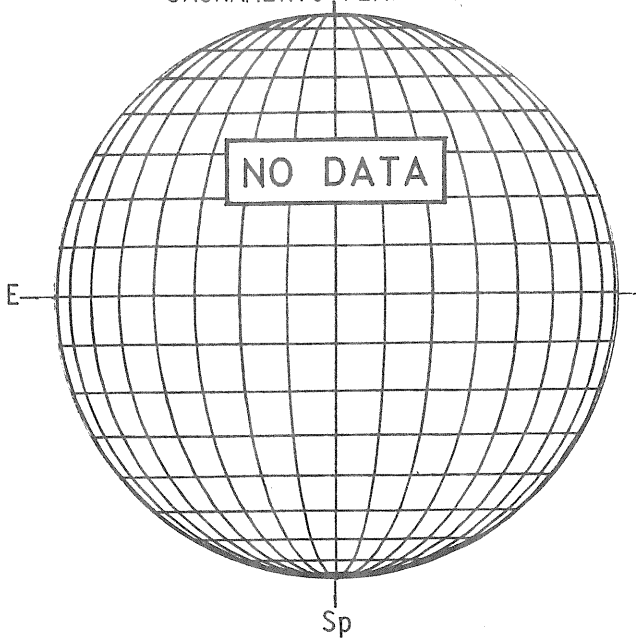
STANFORD MAGNETOGRAM



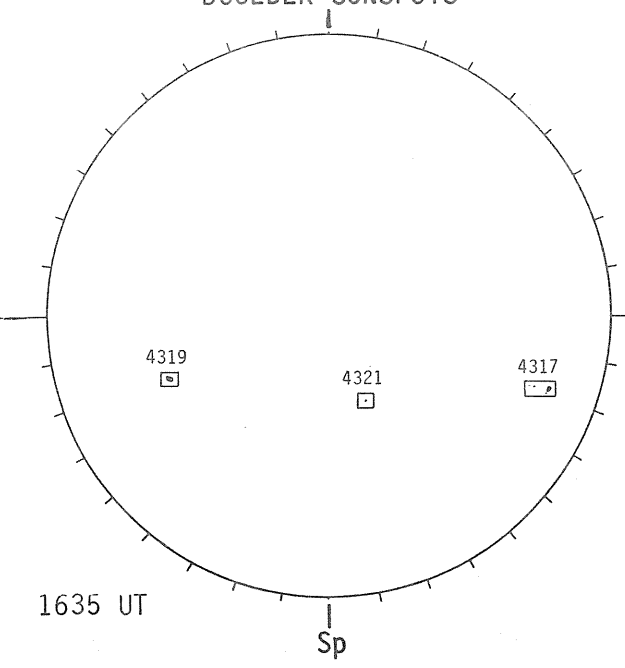
MT. WILSON MAGNETOGRAM



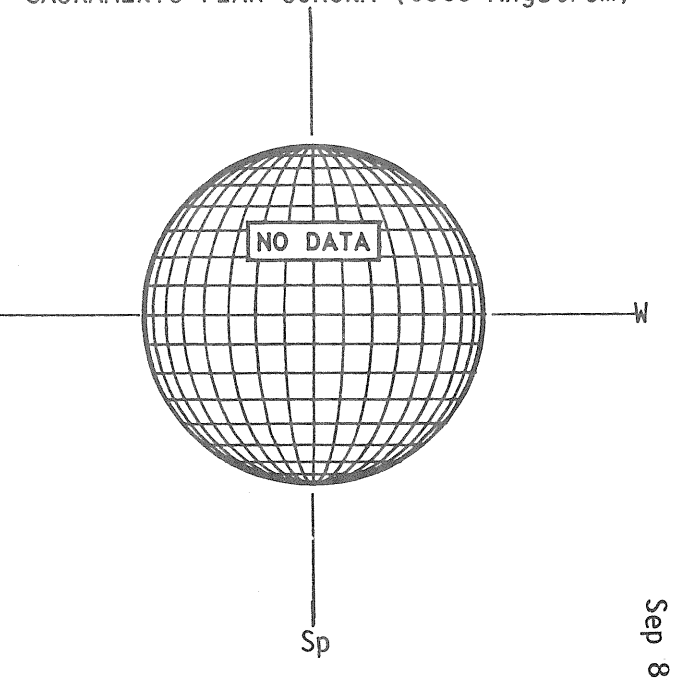
SACRAMENTO PEAK H-ALPHA



BOULDER SUNSPOTS



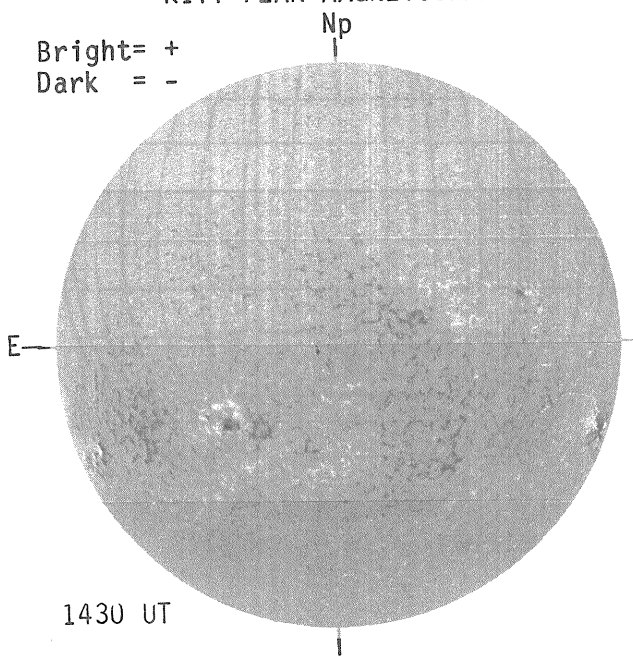
SACRAMENTO PEAK CORONA (5303 Angstrom)



S E P T E M B E R 21, 1 9 8 3 (P= 24.93, B_o= 7.09, L_o= 6.54)

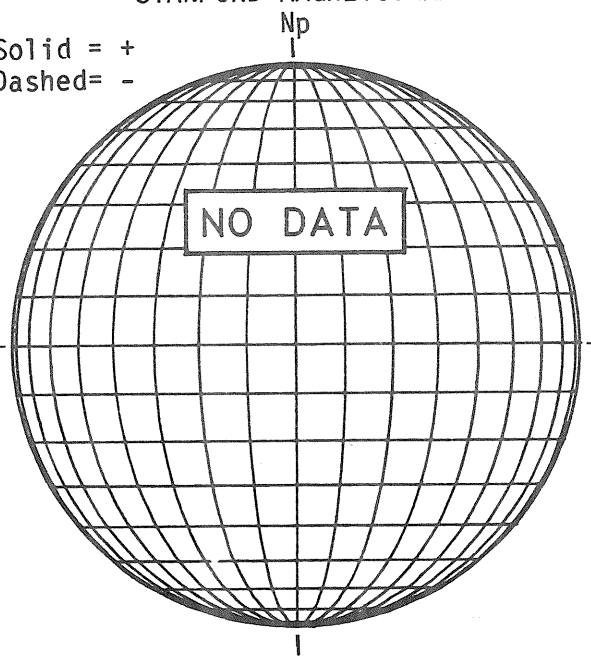
KITT PEAK MAGNETOGRAM

Bright= +
Dark = -



STANFORD MAGNETOGRAM

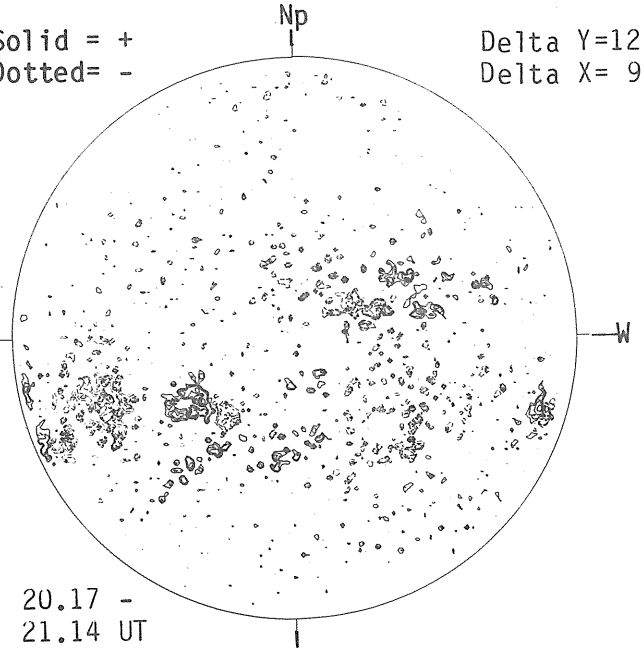
Solid = +
Dashed= -



MT. WILSON MAGNETOGRAM

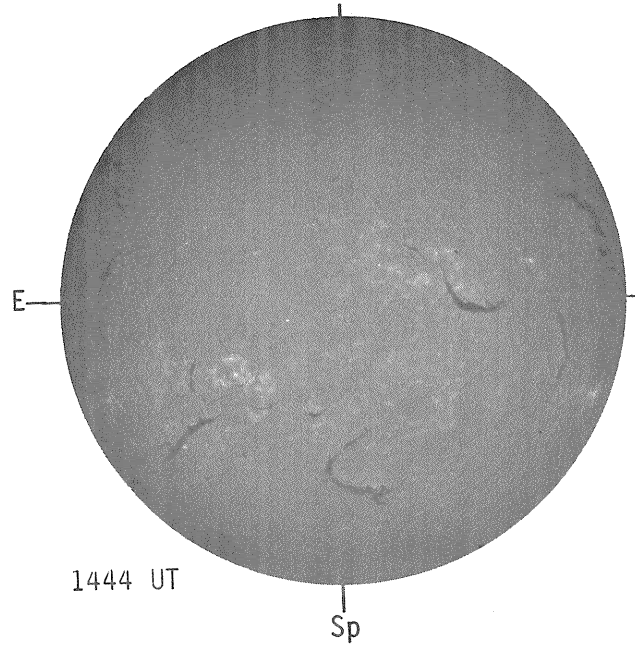
Solid = +
Dotted= -

Delta Y=12.7
Delta X= 9.6

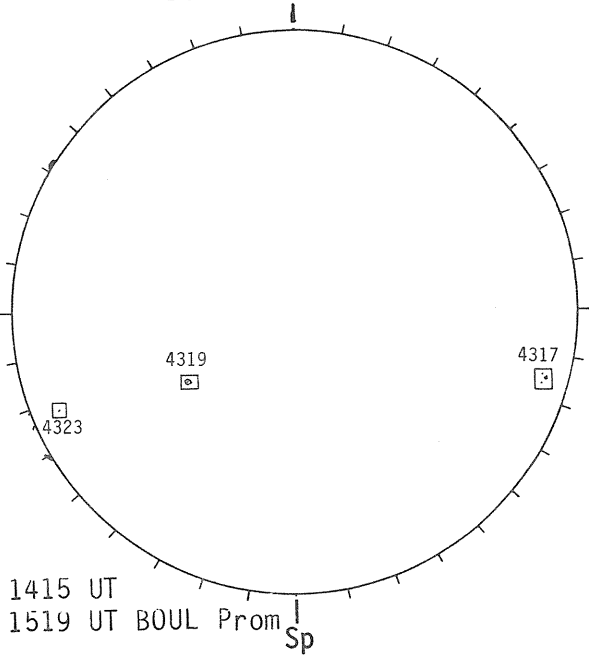


20.17 -
21.14 UT

SACRAMENTO PEAK H-ALPHA

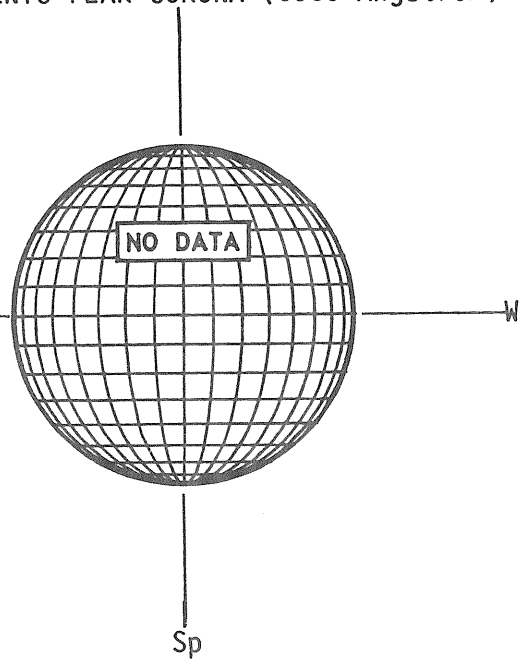


BOULDER SUNSPOTS



1415 UT
1519 UT BOUL Prom

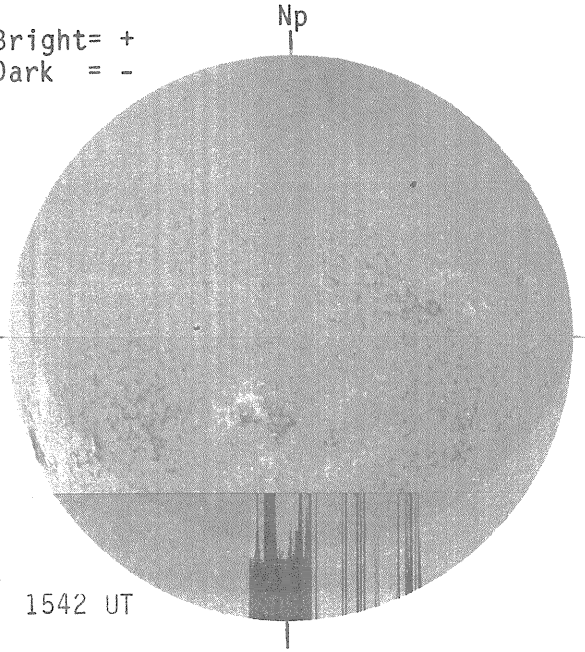
SACRAMENTO PEAK CORONA (5303 Angstrom)



S E P T E M B E R 22, 1 9 8 3 (P= 25.06, B_o= 7.07, L_o= 353.34)

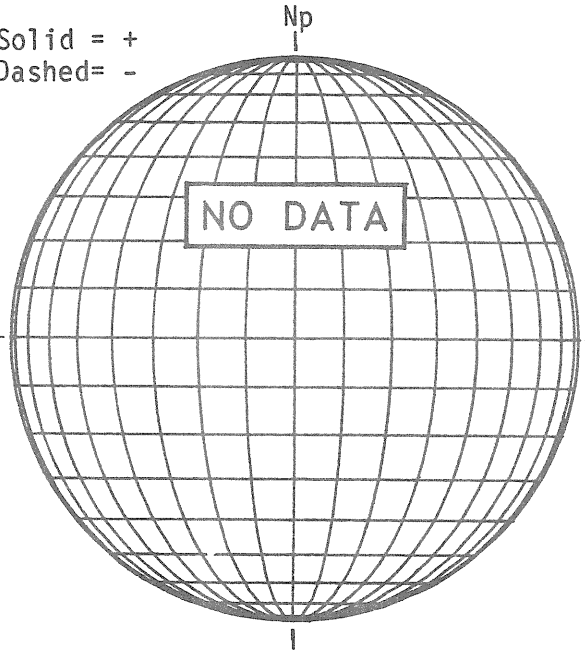
KITT PEAK MAGNETOGRAM

Bright= +
Dark = -



STANFORD MAGNETOGRAM

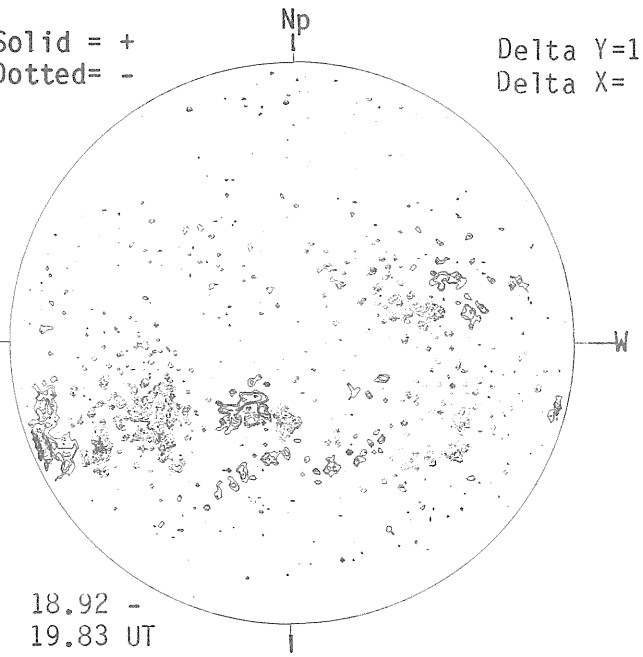
Solid = +
Dashed= -



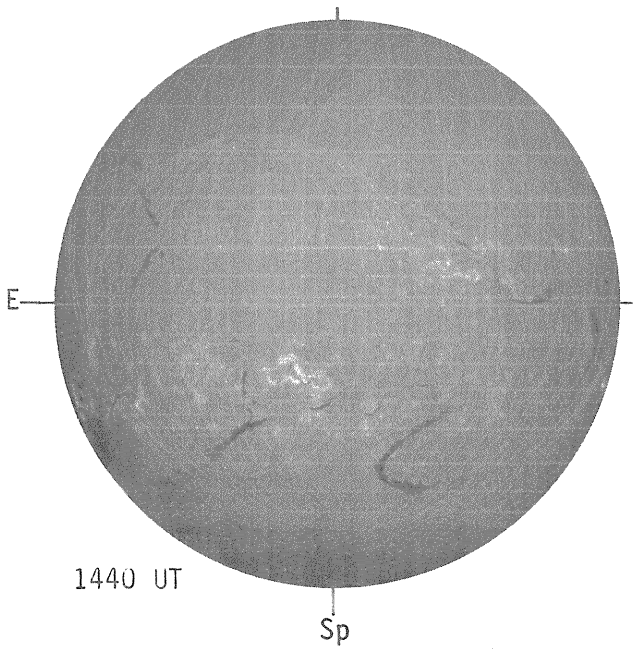
MT. WILSON MAGNETOGRAM

Solid = +
Dotted= -

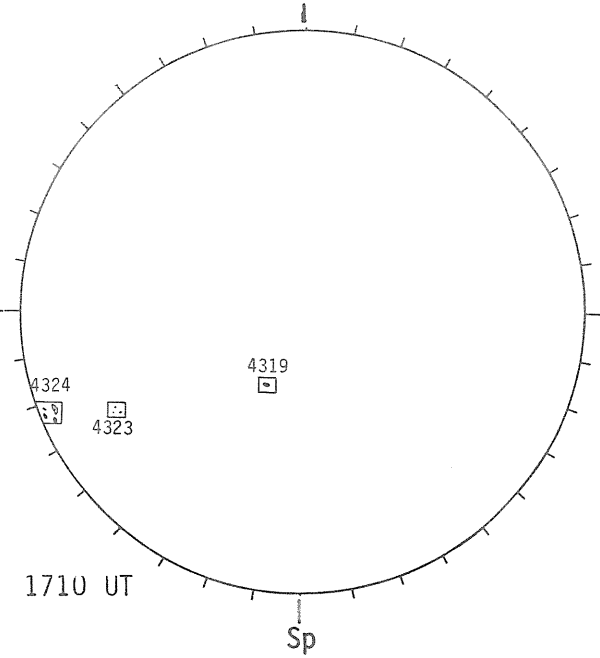
Delta Y=12.7
Delta X= 9.7



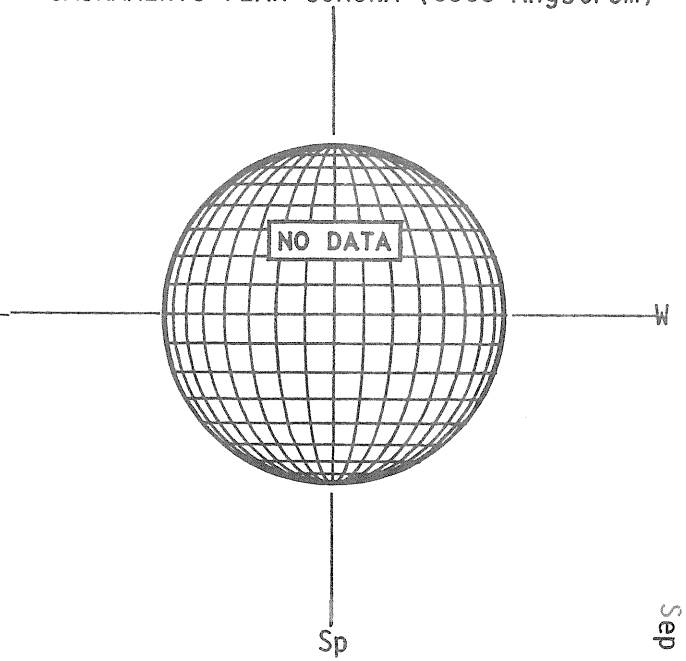
SACRAMENTO PEAK H-ALPHA



BOULDER SUNSPOTS

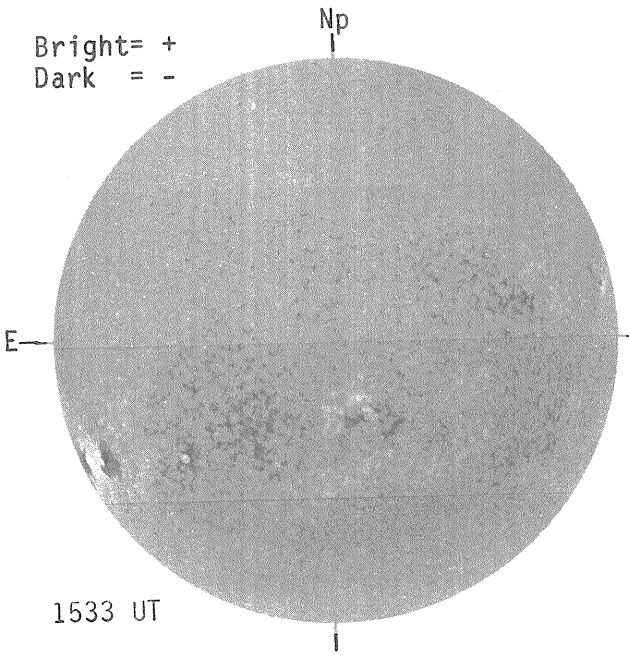


SACRAMENTO PEAK CORONA (5303 Angstrom)

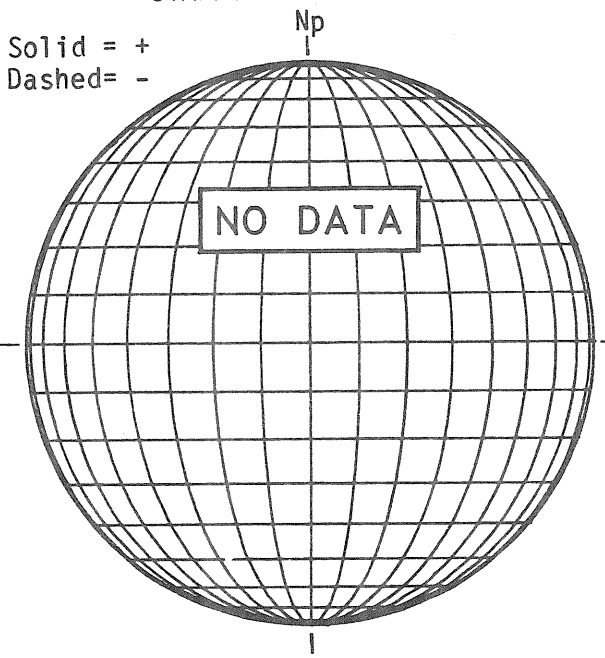


S E P T E M B E R 23, 1 9 8 3 (P= 25.19, B_o= 7.04, L_o= 340.14)

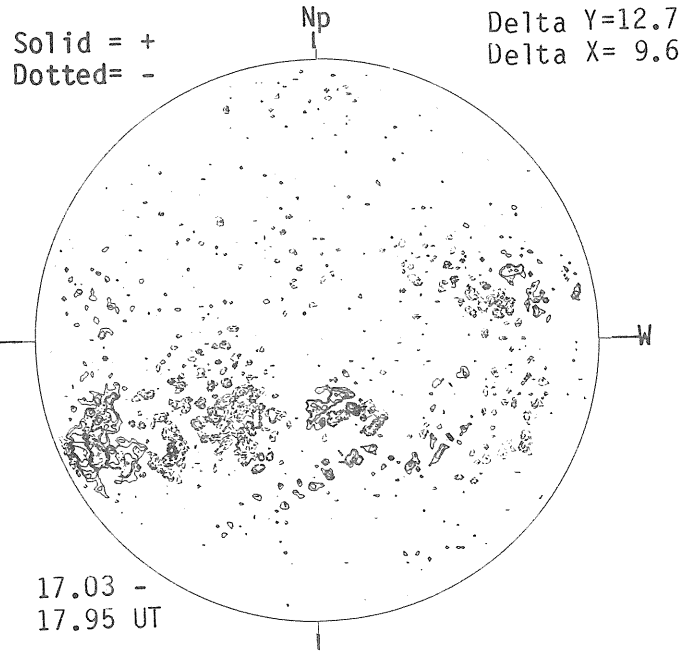
KITT PEAK MAGNETOGRAM



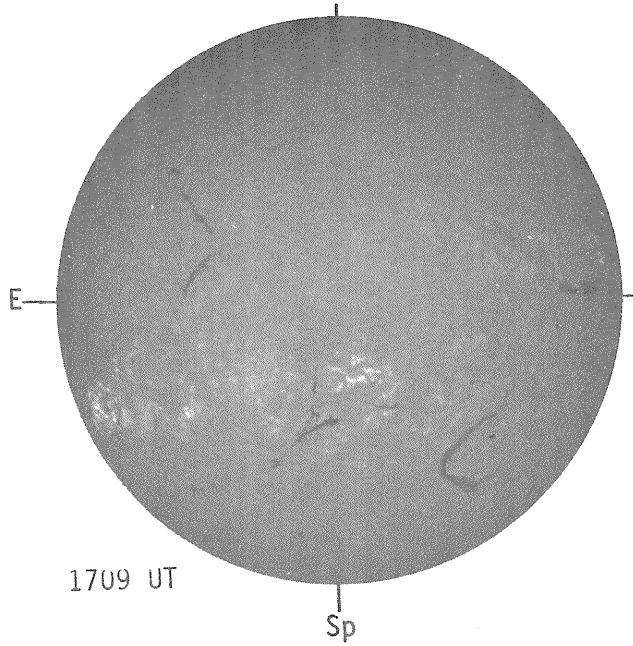
STANFORD MAGNETOGRAM



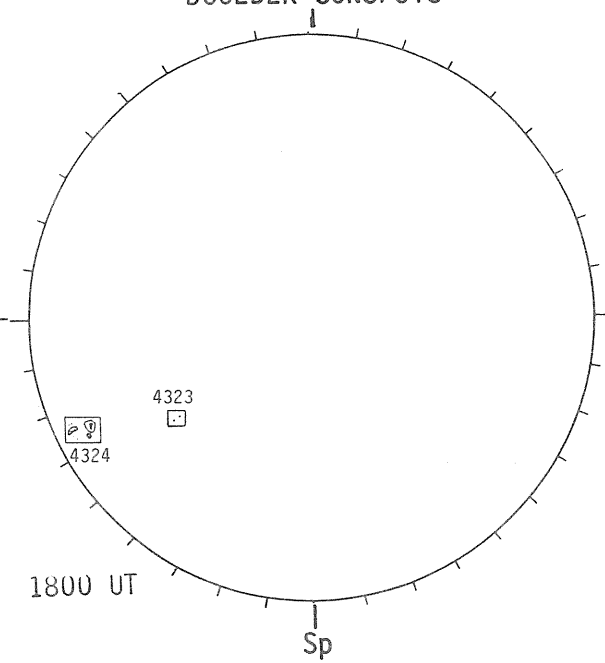
MT. WILSON MAGNETOGRAM



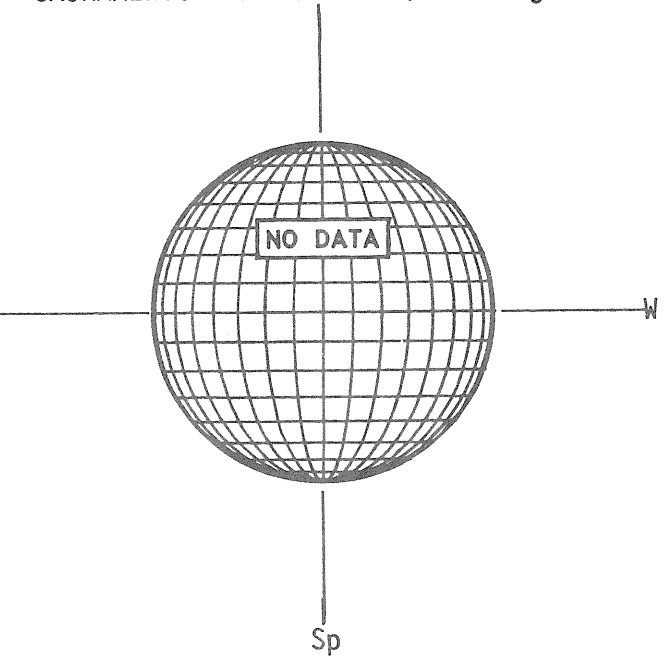
SACRAMENTO PEAK H-ALPHA



BOULDER SUNSPOTS



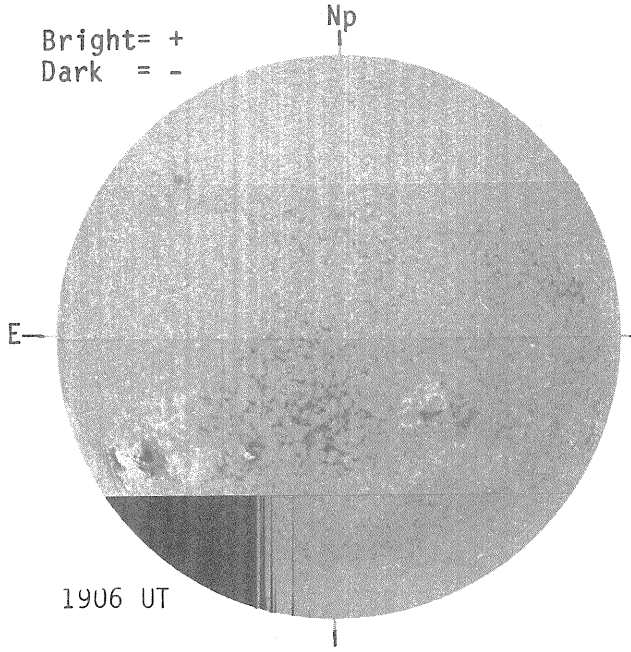
SACRAMENTO PEAK CORONA (5303 Angstrom)



S E P T E M B E R 24, 1 9 8 3 (P= 25.31, B_0= 7.01, L_0= 326.94)

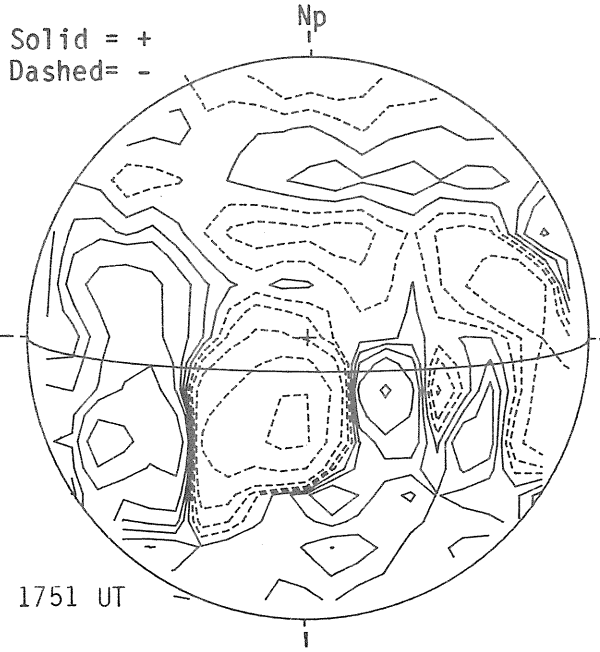
KITT PEAK MAGNETOGRAM

Bright= +
Dark = -



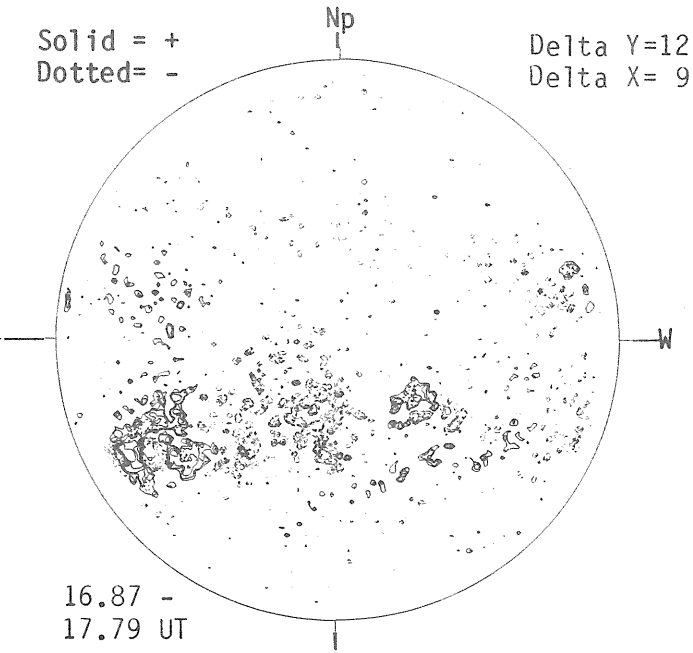
STANFORD MAGNETOGRAM

Solid = +
Dashed= -

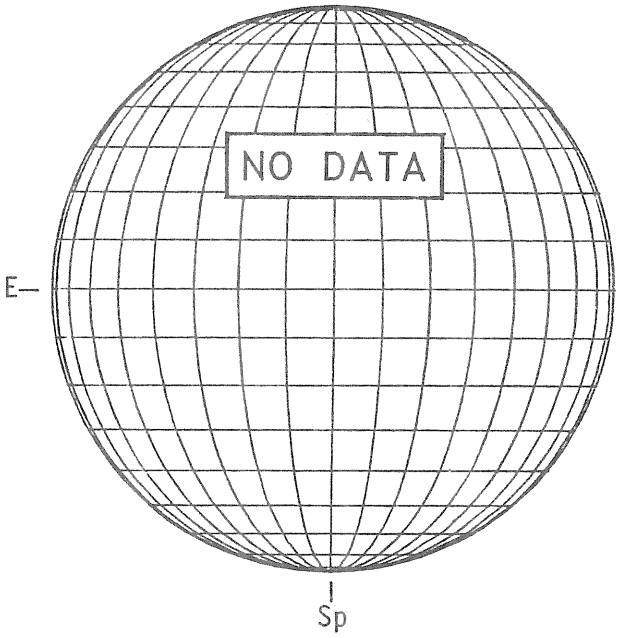


MT. WILSON MAGNETOGRAM

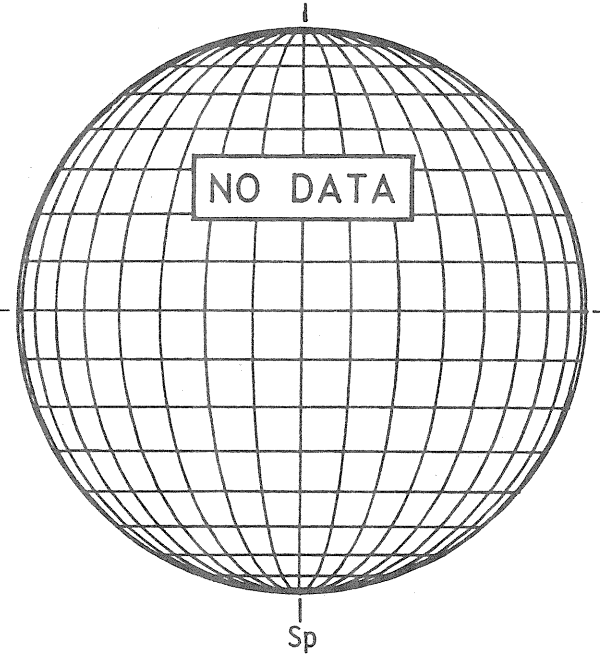
Solid = +
Dotted= -
Delta Y=12.7
Delta X= 9.6



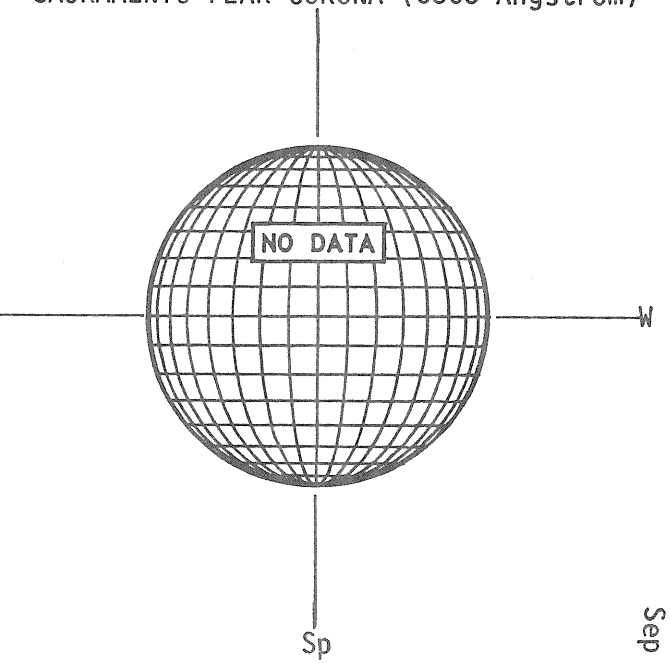
SACRAMENTO PEAK H-ALPHA



BOULDER SUNSPOTS



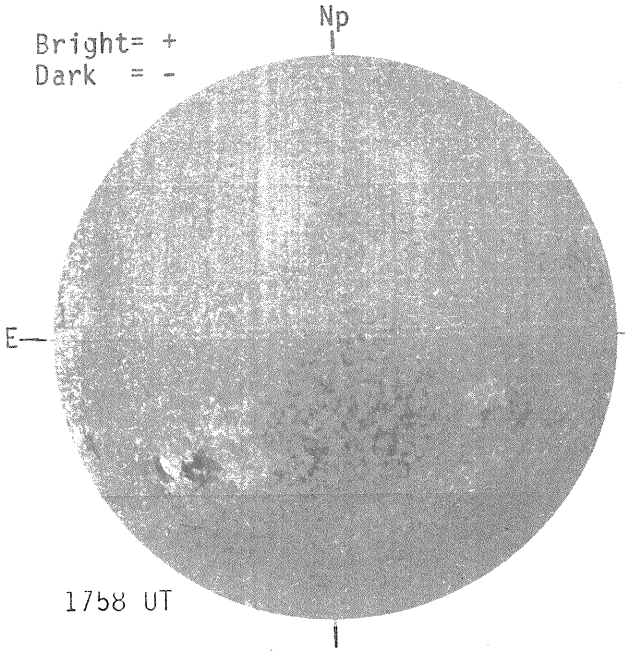
SACRAMENTO PEAK CORONA (5303 Angstrom)



S E P T E M B E R 25, 1 9 8 3 (P= 25.42, B_o= 6.97, L_o= 313.74)

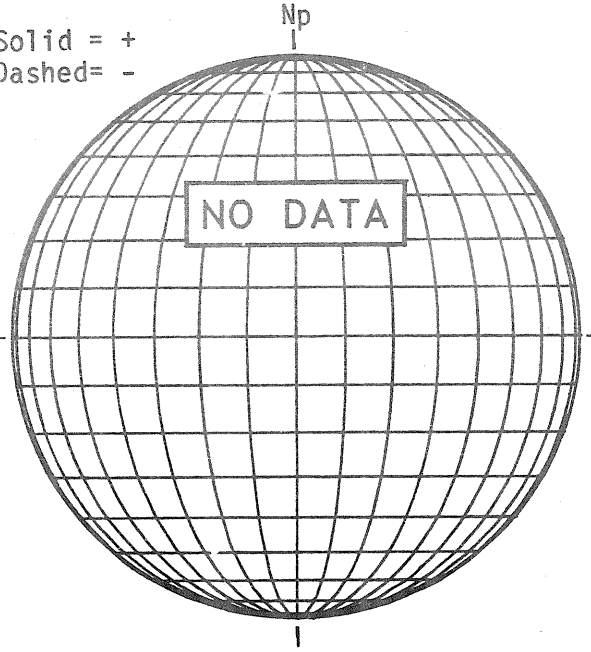
KITT PEAK MAGNETOGRAM

Bright= +
Dark = -



STANFORD MAGNETOGRAM

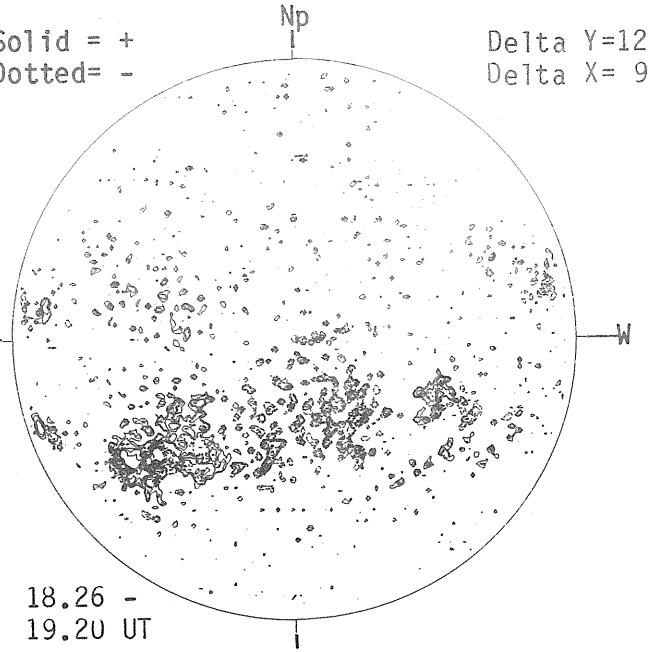
Solid = +
Dashed= -



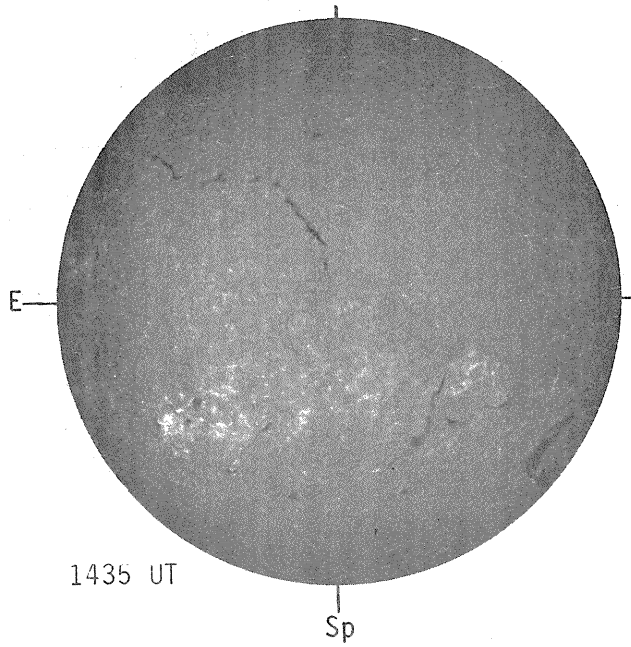
MT. WILSON MAGNETOGRAM

Solid = +
Dotted= -

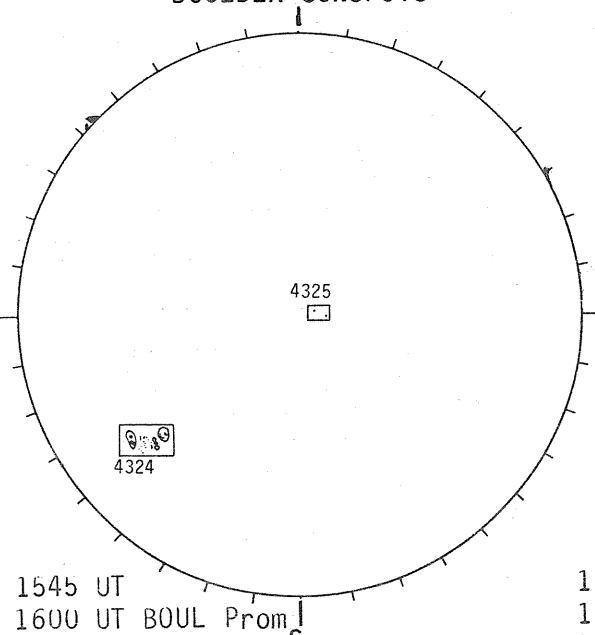
Delta Y=12.7
Delta X= 9.6



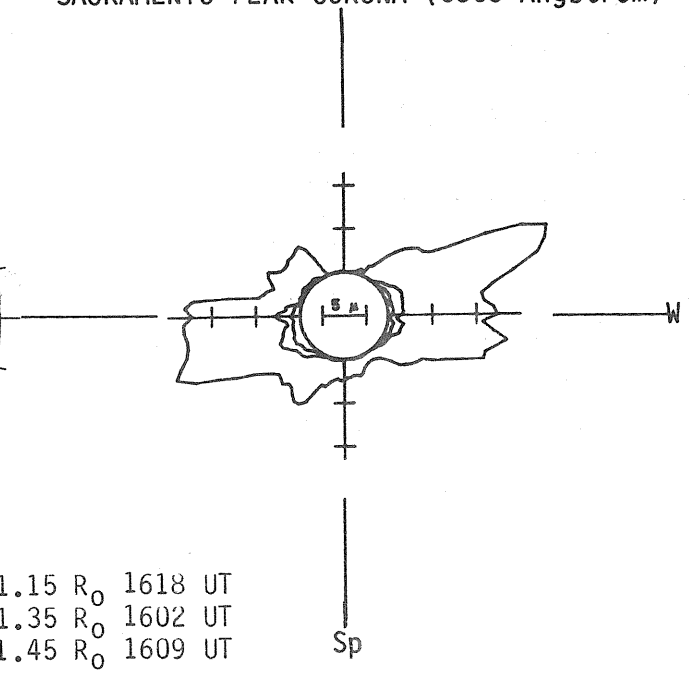
SACRAMENTO PEAK H-ALPHA



BOULDER SUNSPOTS



SACRAMENTO PEAK CORONA (5303 Angstrom)

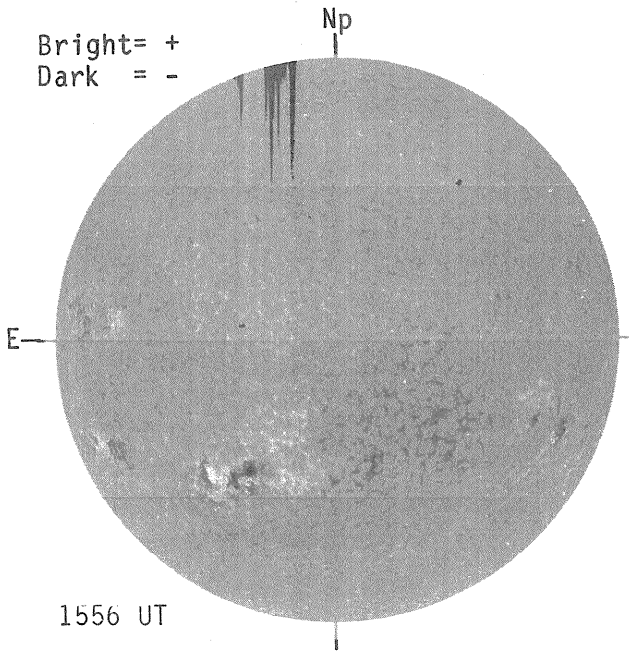


1.15 R_o 1618 UT
1.35 R_o 1602 UT
1.45 R_o 1609 UT

S E P T E M B E R 26, 1 9 8 3 (P= 25.53, B_o= 6.94, L_o= 300.55)

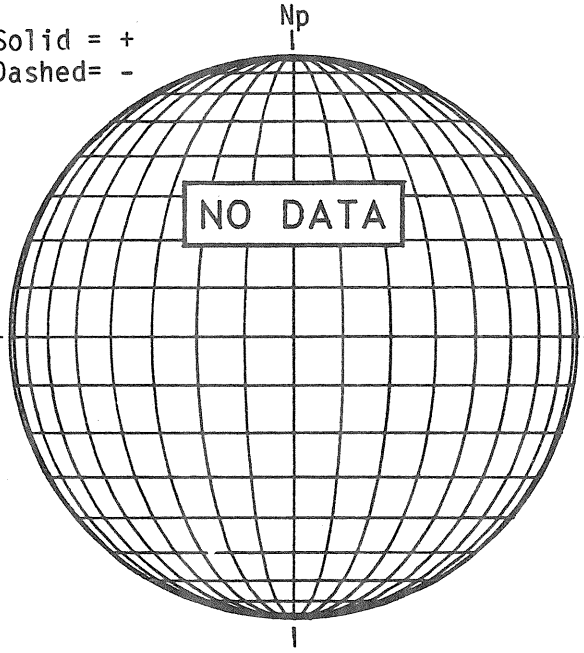
KITT PEAK MAGNETOGRAM

Bright= +
Dark = -



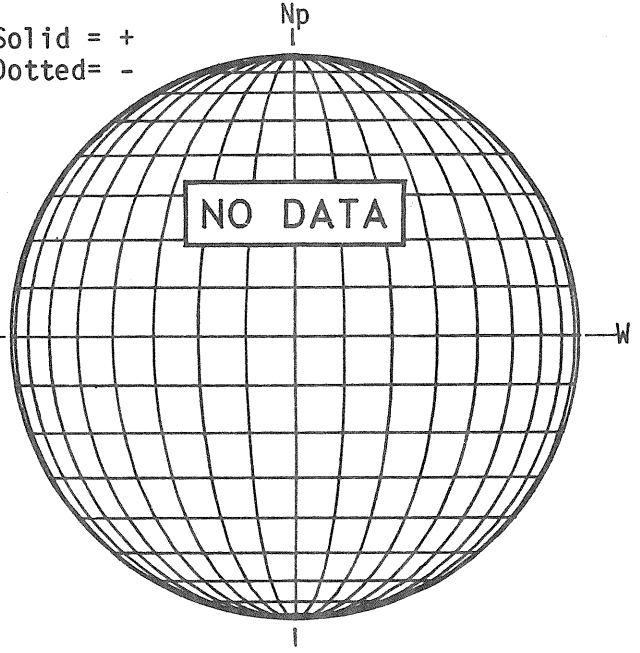
STANFORD MAGNETOGRAM

Solid = +
Dashed= -

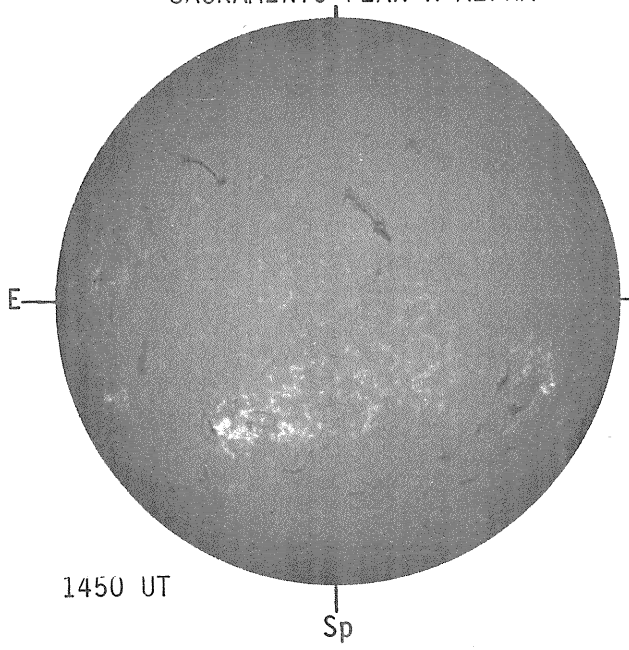


MT. WILSON MAGNETOGRAM

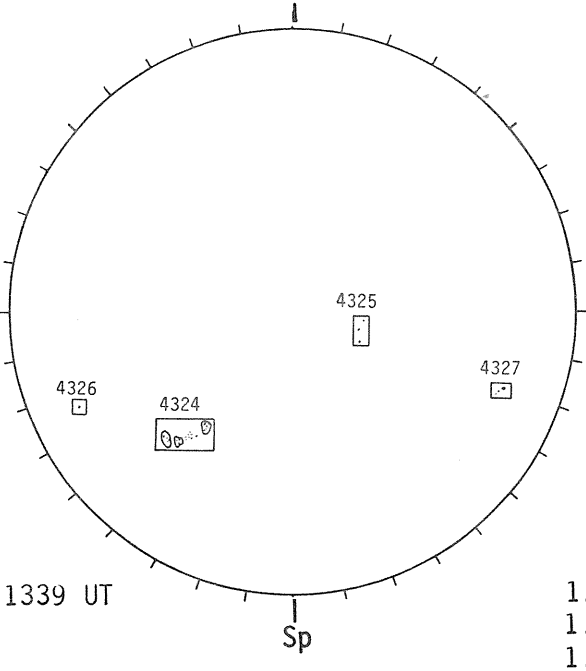
Solid = +
Dotted= -



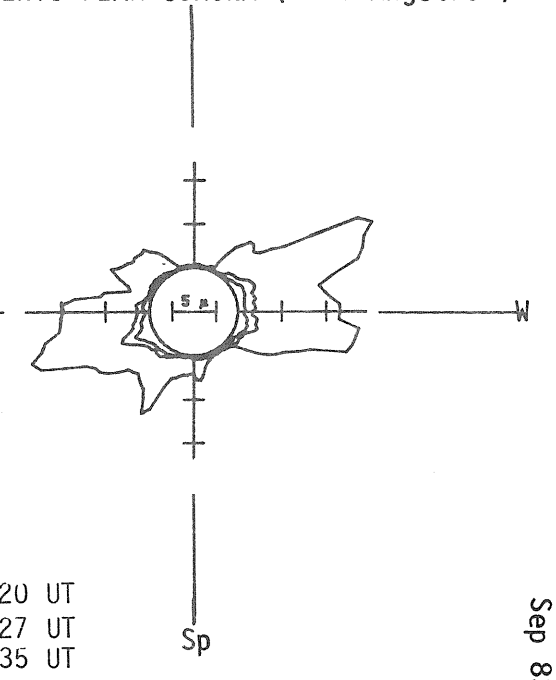
SACRAMENTO PEAK H-ALPHA



BOULDER SUNSPOTS



SACRAMENTO PEAK CORONA (5303 Angstrom)

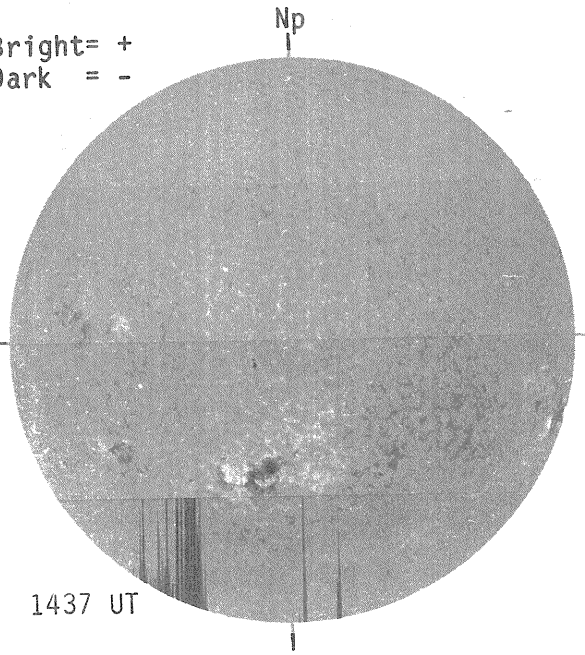


1.15 R_o 1420 UT
1.35 R_o 1427 UT
1.45 R_o 1435 UT

S E P T E M B E R 27, 1 9 8 3 (P= 25.63, B_0= 6.90, L_0= 287.35)

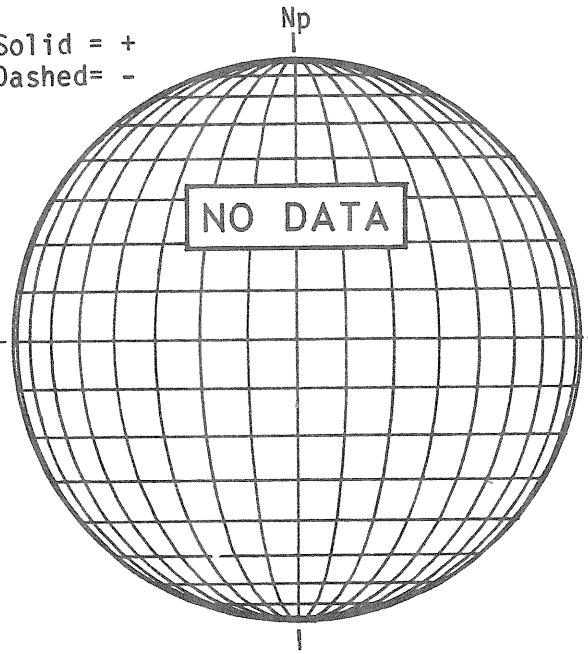
KITT PEAK MAGNETOGRAM

Bright= +
Dark = -



STANFORD MAGNETOGRAM

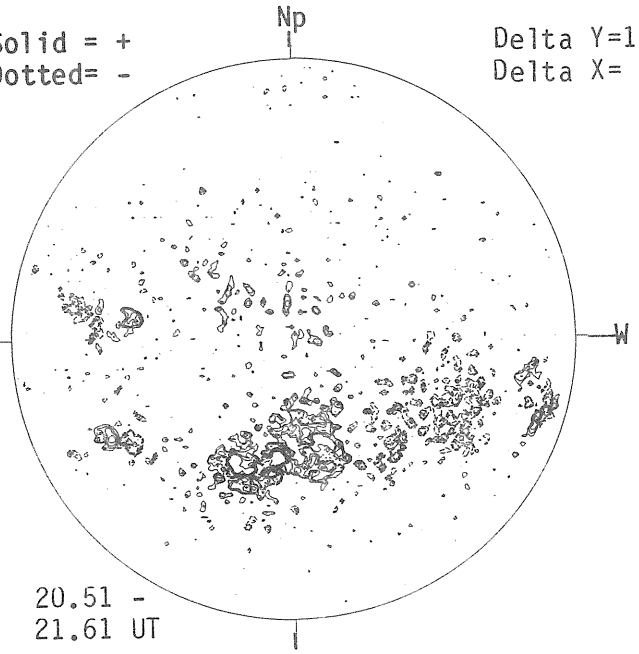
Solid = +
Dashed= -



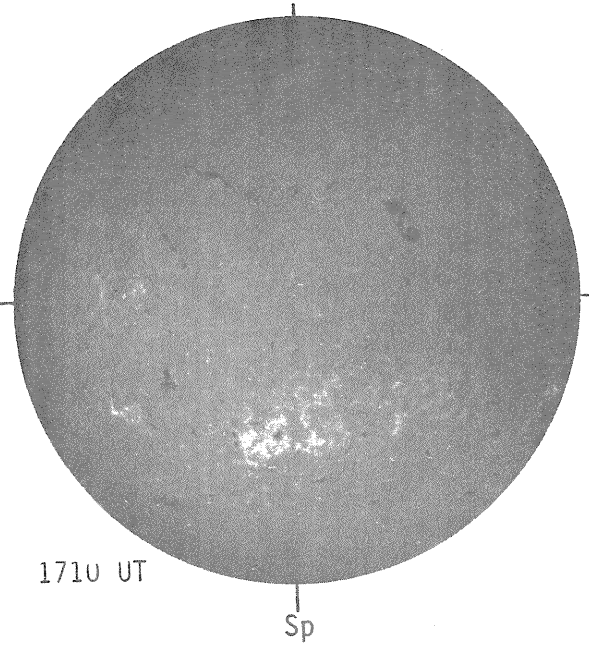
MT. WILSON MAGNETOGRAM

Solid = +
Dotted= -

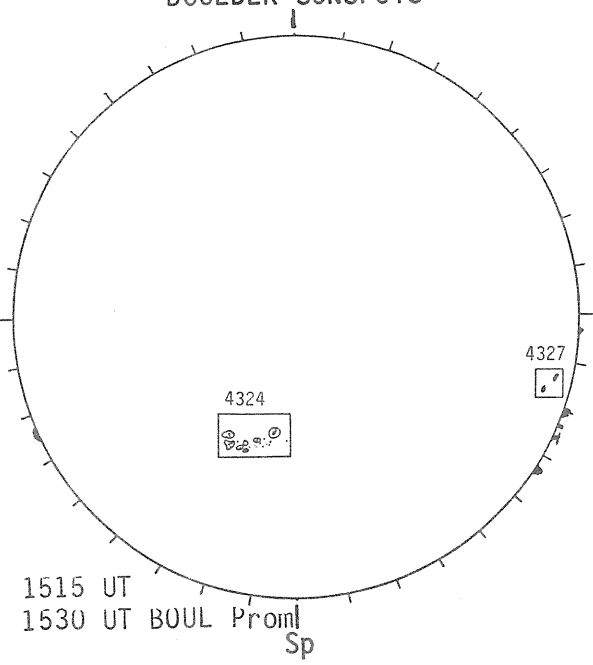
Delta Y=12.6
Delta X= 9.6



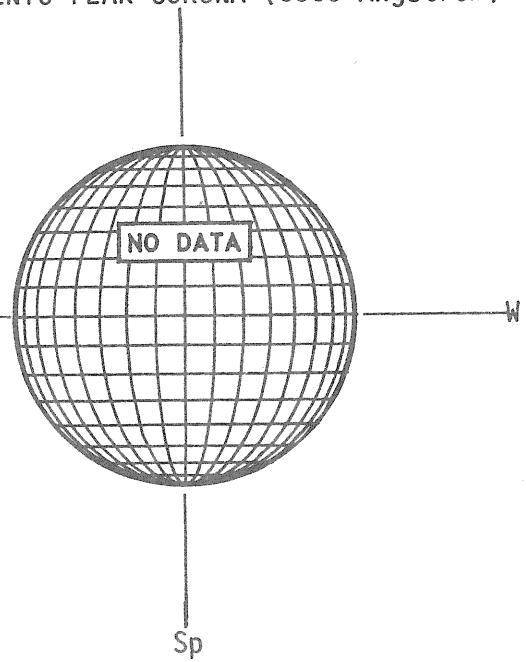
SACRAMENTO PEAK H-ALPHA



BOULDER SUNSPOTS

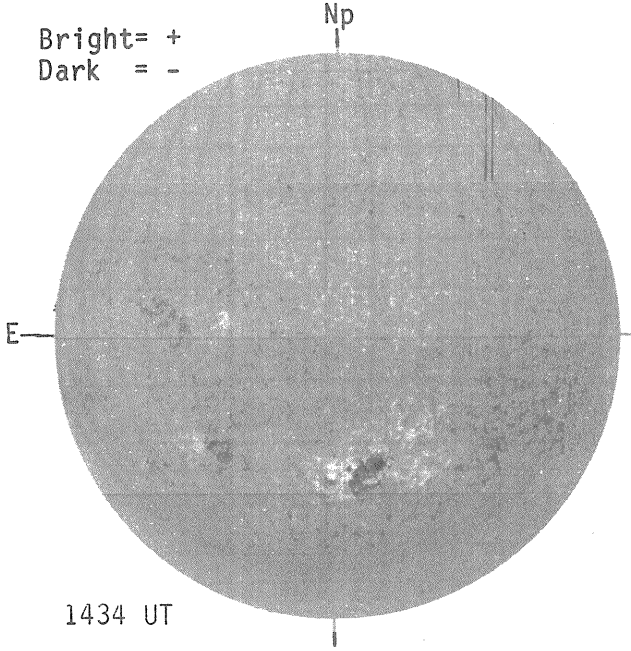


SACRAMENTO PEAK CORONA (5303 Angstrom)

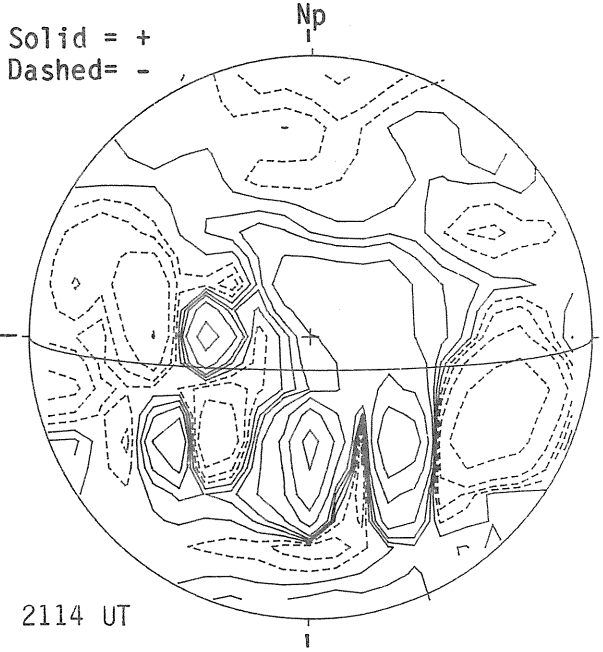


S E P T E M B E R 28, 1 9 8 3 (P= 25.73, B_0= 6.86, L_0= 274.15)

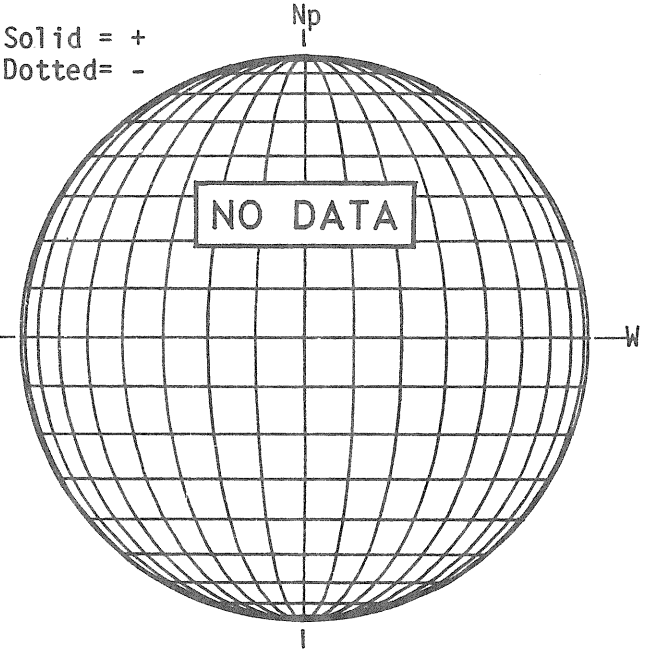
KITT PEAK MAGNETOGRAM



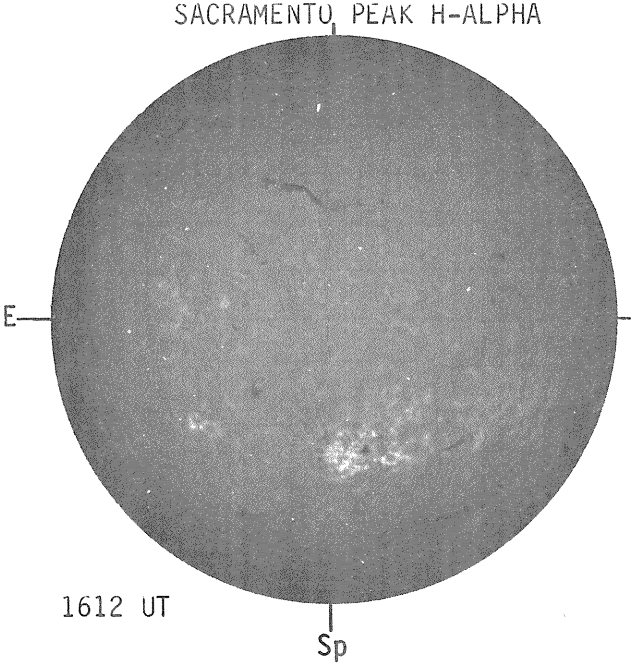
STANFORD MAGNETOGRAM



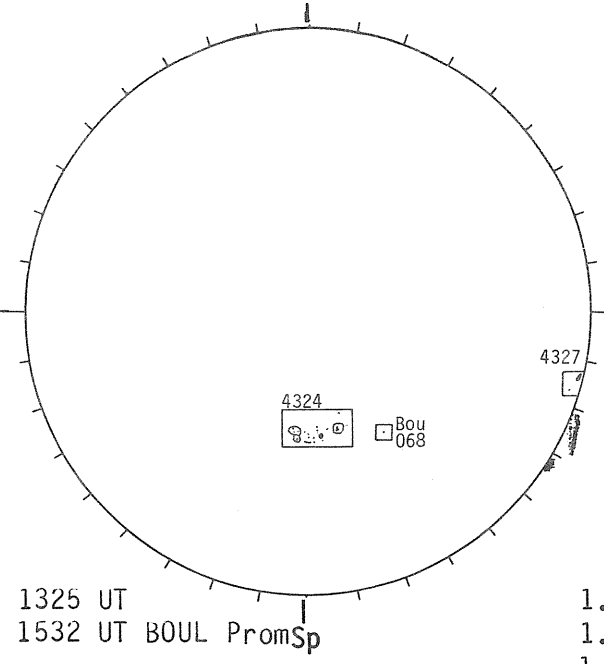
MT. WILSON MAGNETOGRAM



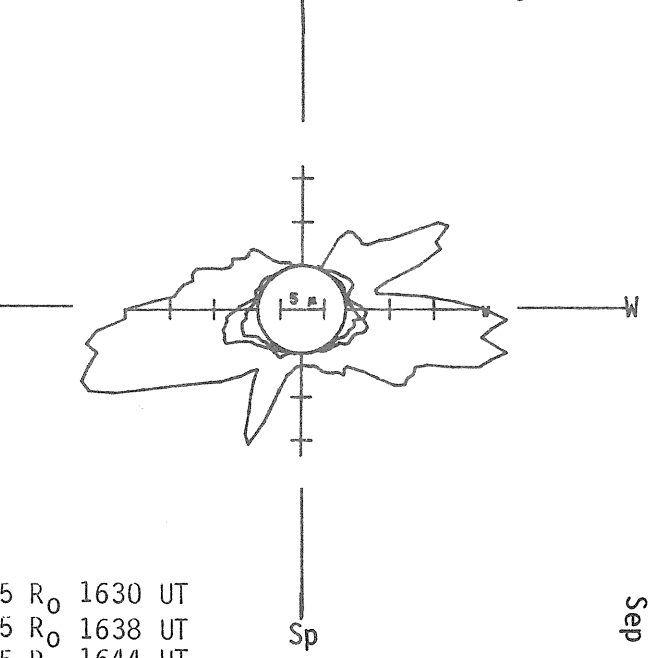
SACRAMENTO PEAK H-ALPHA



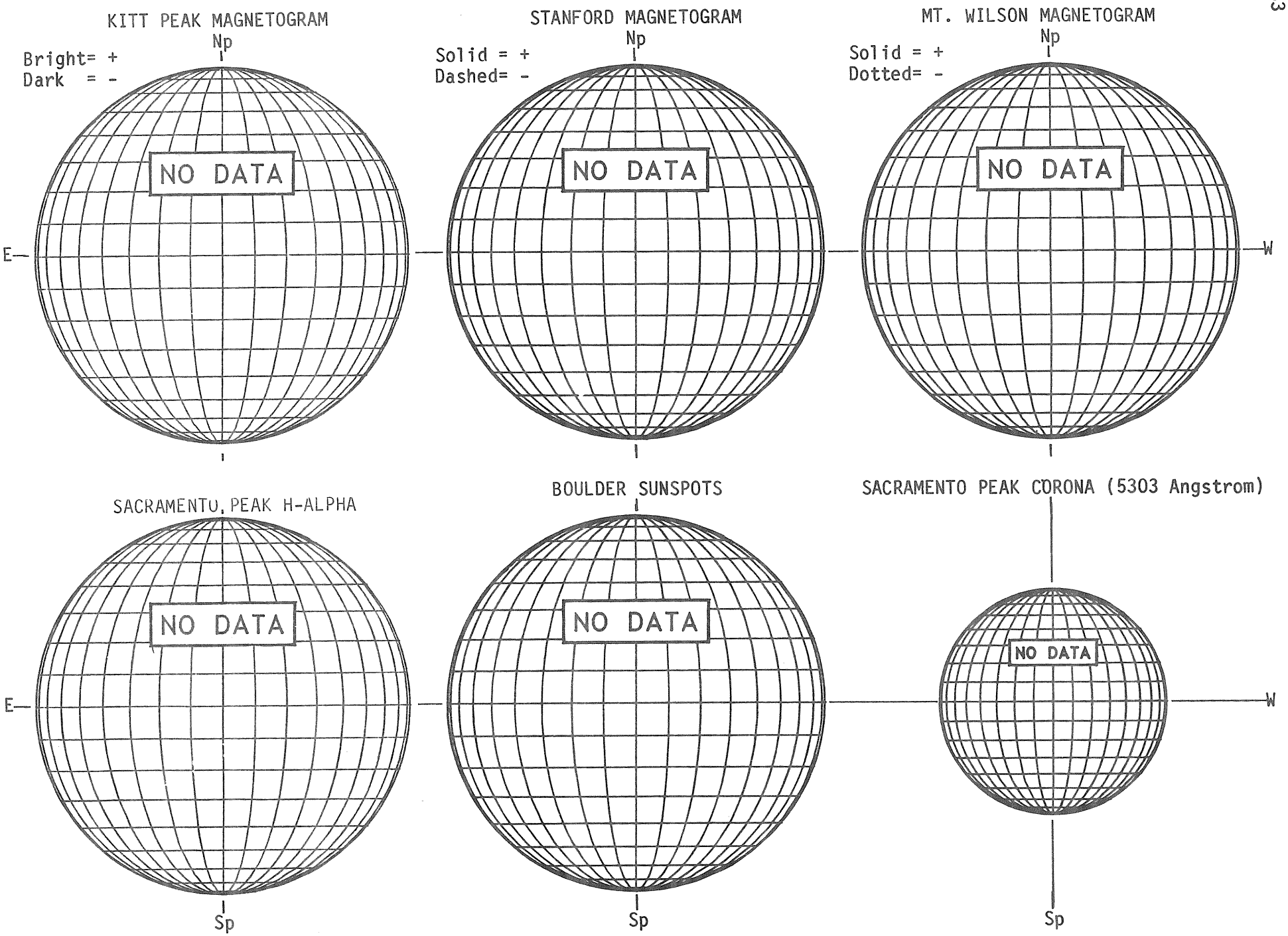
BOULDER SUNSPOTS



SACRAMENTO PEAK CORONA (5303 Angstrom)



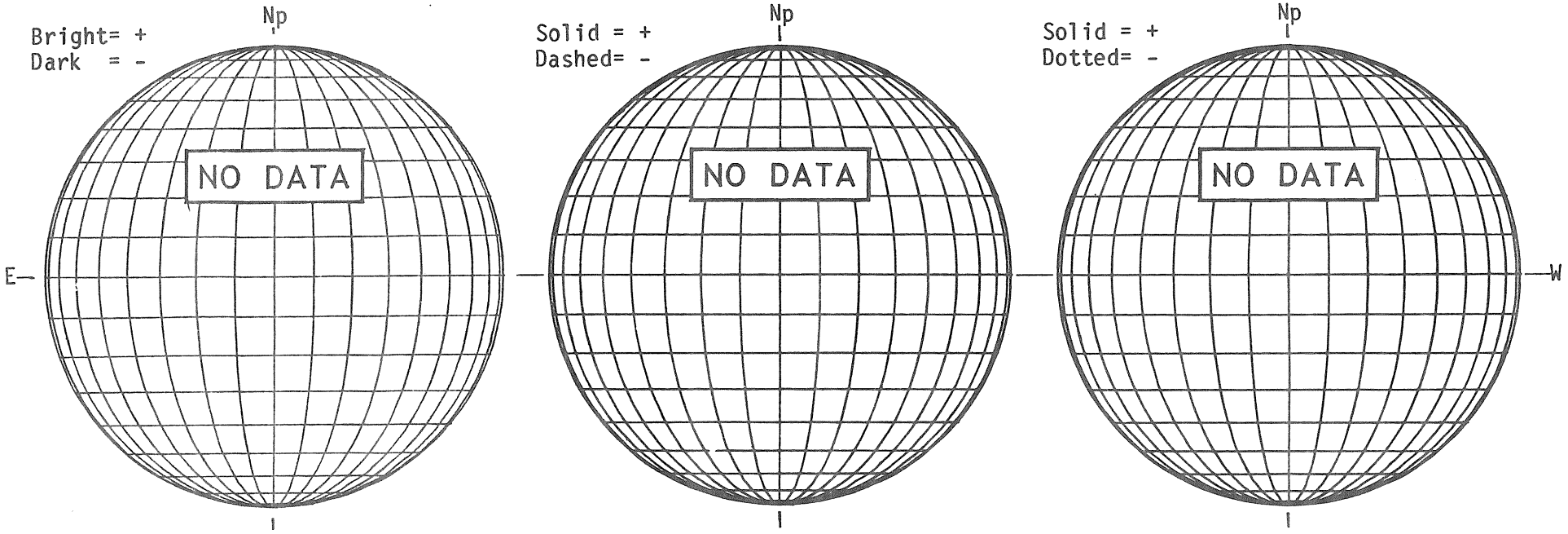
S E P T E M B E R 29, 1 9 8 3 (P= 25.81, B_0= 6.82, L_0= 260.95)



S E P T E M B E R 30, 1 9 8 3 (P= 25.90, B_0= 6.78, L_0= 247.76)

KITT PEAK MAGNETOGRAM

Bright= +
Dark = -



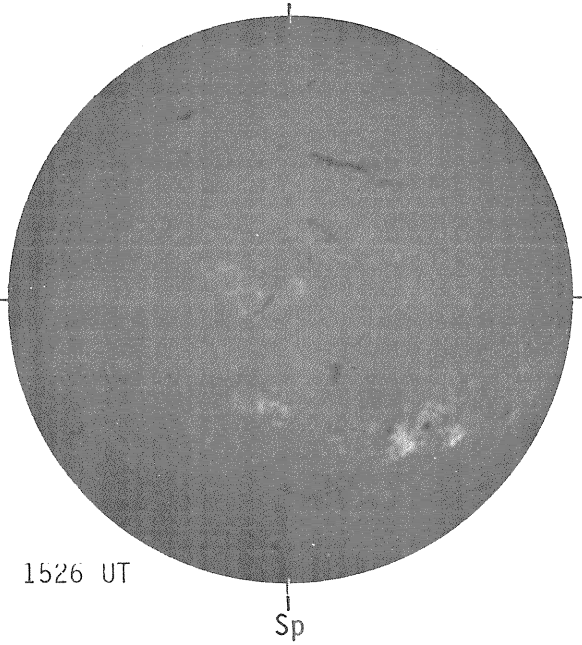
STANFORD MAGNETOGRAM

Solid = +
Dashed= -

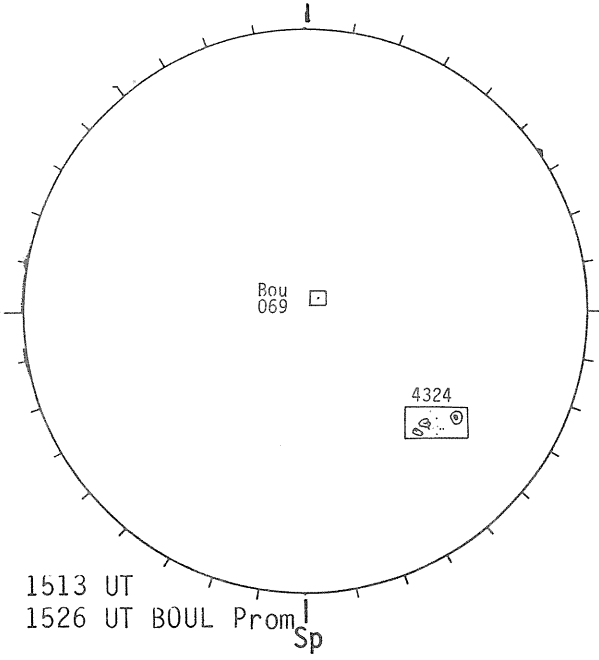
MT. WILSON MAGNETOGRAM

Solid = +
Dotted= -

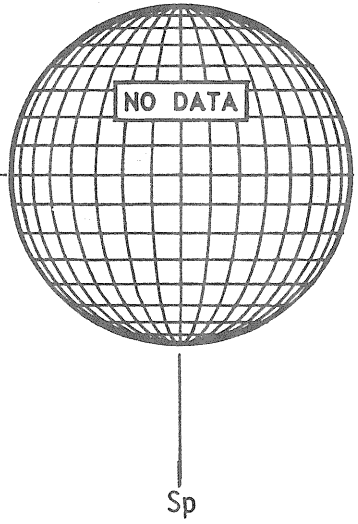
BOULDER H-ALPHA



BOULDER SUNSPOTS



SACRAMENTO PEAK CORONA (5303 Angstrom)



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Sep 83

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

SEPTEMBER 1983

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
		BOUL	08	31	1304	S12	E09	09	.1.2		A	AXX		1	1	2
	23815	MWIL	08	30	1500	S22	E22	09	1.3	3	(AF)					
		LEAR	08	30	0045	N07	E62	09	3.7		A	AXX		1	1	2
4304		BOUL	09	01	1430	N09	E36	09	4.3		A	AXX	10	1		3
4304	23820	MWIL	09	01	1500	N10	E37	09	4.4	3	(AP)					
4304		HOLL	09	01	1633	N10	E37	09	4.5		A	AXX		1		3
4304		PALE	09	01	1800	N10	E35	09	4.4		A	AXX		1		3
4304		MANI	09	02	0145	N10	E31	09	4.4			BXO	20	6	4	3
4304		ATHN	09	02	0630	N10	E30	09	4.5		A	BXO	10	3	3	3
4304		BOUL	09	02	1438	N09	E25	09	4.5		B	BXI	30	8	6	3
4304		HOLL	09	02	1504	N09	E25	09	4.5		B	BXO	50	12	7	4
4304	23820	MWIL	09	02	1530	N09	E25	09	4.5	4	(BY)					
4304		RAMY	09	02	1540	N09	E25	09	4.5		B	DAO	40	12	6	2
4304		PALE	09	02	1804	N09	E23	09	4.5		B	BXO	20	9	6	4
4304		LEAR	09	03	0200	N09	E19	09	4.5		B	DRO	30	9	7	2
4304		MANI	09	03	0224	N09	E18	09	4.5			BXO	30	11	8	3
4304		ATHN	09	03	0613	N09	E16	09	4.5		BG	BXO	30	6	7	3
4304		RAMY	09	03	1355	N10	E13	09	4.6		B	DAO	40	13	7	3
4304		BOUL	09	03	1440	N11	E10	09	4.4		B	CSO	40	7	4	2
4304	23820	MWIL	09	03	1600	N09	E09	09	4.3	4	(BY)					
4304		PALE	09	03	1737	N09	E09	09	4.4		B	CSO	30	8	5	4
4304		HOLL	09	03	1808	N09	E09	09	4.4		BG	DSO	40	9	5	4
4304		LEAR	09	04	0100	N09	E04	09	4.3		BG	DAI	60	8	5	3
4304		ATHN	09	04	0730	N08	E01	09	4.4		BG	DSO	60	3	4	3
4304		HOLL	09	04	1453	N09	W02	09	4.5		B	DAO	110	21	6	3
4304		RAMY	09	04	1527	N09	W03	09	4.4		B	DAO	110	15	7	4
4304	23820	MWIL	09	04	1530	N09	W03	09	4.4	4	(B)					
4304		BOUL	09	04	1630	N09	W02	09	4.5		B	DAO	150	18	6	3
4304		PALE	09	04	1740	N09	W04	09	4.4		B	DAO	120	23	7	4
4304		MANI	09	05	0209	N09	W09	09	4.4			DAO	180	29	6	2
4304		LEAR	09	05	0325	N10	W08	09	4.5		B	DAO	120	22	7	2
4304		ATHN	09	05	1100	N08	W11	09	4.6		B	DAO	90	7	7	2
4304		BOUL	09	05	1409	N10	W17	09	4.3		B	DAO	140	12	8	2
4304	23820	MWIL	09	05	1500	N09	W15	09	4.5	5	(B)					
4304		HOLL	09	05	1620	N09	W17	09	4.4		B	DKO	180	25	8	2
4304		PALE	09	05	1908	N09	W19	09	4.4		B	DAI	230	31	8	2
4304		ATHN	09	06	0600	N09	W22	09	4.6		B	DSO	210	9	8	3
4304		RAMY	09	06	1105	N10	W28	09	4.4		B	DAO	200	38	9	3
4304		HOLL	09	06	1430	N09	W29	09	4.4		B	CAO	230	28	8	3
4304	23820	MWIL	09	06	1530	N09	W30	09	4.4	5	(B)					
4304		BOUL	09	06	1700	N08	W30	09	4.5		B	DSI	200	20	9	2
4304		PALE	09	06	1810	N09	W31	09	4.4		B	DAO	220	24	9	3
4304		LEAR	09	07	0015	N09	W35	09	4.4		B	DSO	210	30	9	3
4304		ATHN	09	07	0615	N10	W37	09	4.5		B	DAO	230	20	9	3
4304		RAMY	09	07	1130	N10	W41	09	4.4		BG	DAO	180	43	9	3
4304		BOUL	09	07	1312	N10	W41	09	4.5		B	DAI	180	20	10	2
4304		HOLL	09	07	1513	N09	W44	09	4.3		B	DSO	170	30	9	3
4304	23820	MWIL	09	07	1530	N09	W43	09	4.4	4	(B)					
4304		PALE	09	07	1745	N08	W45	09	4.4		B	DSO	180	22	10	3
4304		LEAR	09	08	0046	N10	W50	09	4.3		B	DSO	230	18	10	3
4304		ATHN	09	08	0606	N10	W50	09	4.5		B	DKO	220	13	10	3
4304		RAMY	09	08	1150	N10	W55	09	4.4		B	DAO	280	33	10	3
4304	23820	MWIL	09	08	1445	N09	W57	09	4.3	4	(B)					
4304		BOUL	09	08	1520	N11	W55	09	4.5		B	DSO	110	8	10	2
4304		HOLL	09	08	1528	N09	W57	09	4.4		B	DSO	260	15	10	4
4304		PALE	09	08	1900	N08	W59	09	4.4		B	ESO	160	11	11	3
4304		LEAR	09	09	0100	N10	W64	09	4.2		B	DAO	190	17	9	3
4304		ATHN	09	09	1030	N11	W66	09	4.5		B	DAO	130	7	9	2
4304		RAMY	09	09	1250	N09	W70	09	4.3		B	DAO	220	7	10	3
4304		BOUL	09	09	1436	N11	W68	09	4.5		B	CSO	180	11	8	3
4304		HOLL	09	09	1438	N10	W70	09	4.3		B	DSO	200	11	10	4
4304		PALE	09	09	1745	N09	W73	09	4.3		B	ESO	190	7	11	2
4304		LEAR	09	10	0130	N08	W79	09	4.1		B	DSO	30	4	9	3
4304		ATHN	09	10	0715	N12	W77	09	4.5		B	DSO	150	2	4	2
4304		RAMY	09	10	1257	N11	W80	09	4.5		A	HSX	60	1	1	2
4304		HOLL	09	10	1422	N11	W81	09	4.5		A	HSX	40	2	2	3
4301		RAMY	08	30	1145	N11	E78	09	5.4		A	HAX	60	1	2	3

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

SEPTEMBER 1983

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
4301		HOLL	08	30	1424	N12	E78	09	5.5		A	HSX	80	1	2	4
4301	23816	MWIL	08	30	1500	N12	E78	09	5.5	4	(AP)					
4301		BOUL	08	30	1551	N12	E76	09	5.4		A	HSX	30	1	1	2
4301		PALE	08	30	1940	N12	E77	09	5.6		A	HSX	80	1	2	3
4301		ATHN	08	31	0900	N11	E67	09	5.4		A	HSX	40	1	1	1
4301		RAMY	08	31	1300	N12	E67	09	5.6		B	CAO	50	3	3	3
4301		BOUL	08	31	1304	N09	E64	09	5.3		A	HSX	40	3	2	2
4301	23816	MWIL	08	31	1500	N13	E65	09	5.5	4	(AP)					
4301		PALE	08	31	1810	N12	E64	09	5.6		B	CAO	50	4	3	4
4301		LEAR	09	01	0015	N12	E60	09	5.5		B	CSO	80	4	3	3
4301		ATHN	09	01	0600	N16	E52	09	5.2		A	HHX	50	1	2	1
4301		RAMY	09	01	1240	N12	E53	09	5.5		B	CAO	70	4	3	3
4301		BOUL	09	01	1430	N12	E51	09	5.4		A	HSX	30	2	2	3
4301	23816	MWIL	09	01	1500	N13	E51	09	5.5	4	(AP)					
4301		HOLL	09	01	1633	N14	E51	09	5.5		A	HSX	60	5	2	3
4301		PALE	09	01	1800	N13	E51	09	5.6		B	DSO	50	2	2	3
4301		LEAR	09	02	0137	N12	E46	09	5.5		B	DSO	50	3	3	3
4301		MANI	09	02	0145	N14	E47	09	5.6			HSX	110	3	2	3
4301		ATHN	09	02	0630	N12	E40	09	5.3		A	CSO	40	2	1	3
4301		BOUL	09	02	1438	N12	E39	09	5.5		A	HSX	20	2	2	3
4301		HOLL	09	02	1504	N13	E38	09	5.5		A	HSX	40	4	2	4
4301	23816	MWIL	09	02	1530	N13	E38	09	5.5	4	(AP)					
4301		RAMY	09	02	1540	N12	E38	09	5.5		B	DAO	80	2	2	2
4301		PALE	09	02	1804	N13	E37	09	5.5		B	DSO	30	2	3	4
4301		LEAR	09	03	0200	N13	E32	09	5.5		A	HSX	40	3	2	2
4301		MANI	09	03	0224	N14	E31	09	5.4			DSO	110	4	3	3
4301		ATHN	09	03	0613	N11	E30	09	5.5		B	CAO	30	3	2	3
4301		RAMY	09	03	1355	N13	E26	09	5.5		B	DAO	50	7	3	3
4301		BOUL	09	03	1440	N14	E25	09	5.5		A	CSO	30	3	3	2
4301	23816	MWIL	09	03	1600	N13	E25	09	5.6	4	(AP)					
4301		PALE	09	03	1737	N13	E24	09	5.5		B	CSO	30	3	3	4
4301		HOLL	09	03	1808	N13	E24	09	5.6		B	CRO	30	6	2	4
4301		LEAR	09	04	0100	N13	E20	09	5.6		B	CSO	20	4	2	3
4301		ATHN	09	04	0730	N12	E15	09	5.4		B	CAO	30	3	2	3
4301		HOLL	09	04	1453	N13	E14	09	5.7		B	CRO	20	2	3	3
4301		RAMY	09	04	1527	N12	E12	09	5.5		A	HAX	20	1	1	4
4301	23816	MWIL	09	04	1530	N13	E12	09	5.6	4	(AP)					
4301		BOUL	09	04	1630	N12	E11	09	5.5		A	AXX	10	1	1	3
4301		PALE	09	04	1740	N12	E11	09	5.6		A	HRX	20	1	1	4
4301		MANI	09	05	0209	N13	E06	09	5.5			HSX	50	2	2	2
4301		LEAR	09	05	0325	N12	E05	09	5.5		B	CRO	10	2	3	2
4301		ATHN	09	05	1100	N12	E02	09	5.6		A	HRX	20	1	1	2
4301		BOUL	09	05	1409	N13	W02	09	5.4		A	AXX	10	1		2
4301	23816	MWIL	09	05	1500	N13	W01	09	5.5	4	(AP)					
4301		HOLL	09	05	1620	N13	W03	09	5.5		A	AXX		1		2
4301		PALE	09	05	1908	N13	W04	09	5.5		A	AXX		1		2
4303		RAMY	08	31	1300	S09	E80	09	6.5		A	AXX	30	2	1	3
4303		HOLL	08	31	1400	S08	E81	09	6.8		A	HSX	40	3	2	4
4303	23818	MWIL	08	31	1500	S07	E79	09	6.5	3	(AP)					
4303		PALE	08	31	1810	S09	E79	09	6.7		A	AXX	20	2	2	4
4303		LEAR	09	01	0015	S08	E78	09	6.9		A	HRX	10	1	2	3
4303		RAMY	09	01	1240	S09	E69	09	6.7		A	AXX	30	2	1	3
4303	23818	MWIL	09	01	1500	S07	E66	09	6.6	4	(AP)					
4303		HOLL	09	01	1633	S07	E65	09	6.6		A	AXX	10	1	1	3
4303		PALE	09	01	1800	S08	E66	09	6.7		A	HSX	20	1	1	3
4303		LEAR	09	02	0137	S08	E61	09	6.6		A	HSX	20	1	2	3
4303		MANI	09	02	0145	S07	E60	09	6.6			AXX	20	1	1	3
4303		ATHN	09	02	0630	S08	E57	09	6.5		A	AXX	20	1	1	3
4303		BOUL	09	02	1438	S08	E53	09	6.6		A	AXX	10	2	2	3
4303		HOLL	09	02	1504	S07	E53	09	6.6		A	AXX	10	2	2	4
4303	23818	MWIL	09	02	1530	S07	E52	09	6.5	3	(AP)					
4303		RAMY	09	02	1540	S09	E52	09	6.6		A	HAX	20	1	1	2
4303		PALE	09	02	1804	S08	E53	09	6.7		A	AXX	10	1	1	4
4303		LEAR	09	03	0200	S08	E47	09	6.6		A	HRX	10	1	1	2
4303		MANI	09	03	0224	S07	E49	09	6.8			HAX	90	2	1	3
4303		ATHN	09	03	0613	S09	E42	09	6.4		A	AXX	10	1	1	3
4303		RAMY	09	03	1355	S09	E39	09	6.5		A	AXX	10	1	1	3
4303		BOUL	09	03	1440	S07	E56	09	7.8		A	HSX	20	1	1	2
4305		HOLL	09	02	1504	S09	E74	09	8.2		A	AXX		1	1	4

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

SEPTEMBER 1983

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
4305	23821	MWIL	09	02	1530	S09	E74	09	8.2	3	(AP)					
4305		PALE	09	02	1804	S10	E74	09	8.3		A	AXX	10	1	1	4
4305		LEAR	09	03	0200	S10	E67	09	8.1		A	HRX	10	1	1	2
4305		MANI	09	03	0224	S08	E71	09	8.4			HAX	110	2	2	3
4305		ATHN	09	03	0613	S11	E63	09	8.0		A	AXX	10	1	1	3
4305		RAMY	09	03	1355	S11	E61	09	8.2		B	CAO	50	9	7	3
4305	23821	MWIL	09	03	1600	S09	E57	09	7.9	4	(AP)					
4305		PALE	09	03	1737	S10	E59	09	8.2		B	CSO	40	2	4	4
4305		HOLL	09	03	1808	S09	E58	09	8.1		B	CRO	20	4	4	4
4305		LEAR	09	04	0100	S11	E53	09	8.0		B	CRO	20	3	4	3
4305		ATHN	09	04	0730	S10	E46	09	7.8		A	AXX	30	1	1	3
4305		HOLL	09	04	1453	S10	E47	09	8.2		B	CRO	20	2	6	3
4305		RAMY	09	04	1527	S12	E46	09	8.1		B	CAO	30	2	5	4
4305	23821	MWIL	09	04	1530	S09	E44	09	7.9	4	(AP)					
4305		BOUL	09	04	1630	S11	E45	09	8.1		B	BXO	40	5	3	3
4305		PALE	09	04	1740	S11	E45	09	8.1		B	CSO	40	3	5	4
4305		MANI	09	05	0209	S09	E40	09	8.1			CSO	50	5	3	2
4305		LEAR	09	05	0325	S10	E40	09	8.1		B	CSO	20	3	7	2
4305		ATHN	09	05	1100	S10	E33	09	7.9		B	HSX	20	1	1	2
4305		BOUL	09	05	1409	S09	E30	09	7.8		A	AXX	10	1	1	2
4305	23821	MWIL	09	05	1500	S09	E31	09	8.0	4	(AP)					
4305		HOLL	09	05	1620	S09	E32	09	8.1		B	CRO	10	2	3	2
4305		PALE	09	05	1908	S09	E31	09	8.1		B	CRO	20	3	5	2
4305		ATHN	09	06	0600	S10	E23	09	8.0		B	DSO	70	2	3	3
4305		RAMY	09	06	1105	S10	E21	09	8.0		B	CAO	20	5	3	3
4305		HOLL	09	06	1430	S09	E18	09	8.0		B	CRO	30	5	3	3
4305	23821	MWIL	09	06	1530	S09	E18	09	8.0	4	(AP)					
4305		BOUL	09	06	1700	S10	E17	09	8.0		B	BXO	30	3	2	2
4305		PALE	09	06	1810	S09	E17	09	8.0		B	CSO	20	4	3	3
4305		LEAR	09	07	0015	S10	E12	09	7.9		B	CSO	40	5	4	3
4305		ATHN	09	07	0615	S08	E10	09	8.0		B	CRO	30	2	3	3
4305		RAMY	09	07	1130	S10	E06	09	7.9		B	CAO	20	2	2	3
4305		BOUL	09	07	1312	S10	E05	09	7.9		B	BXO	20	3	4	2
4305		HOLL	09	07	1513	S09	E04	09	7.9		B	BXO	10	2	2	3
4305	23821	MWIL	09	07	1530	S09	E06	09	8.1	3	(BP)					
4305		PALE	09	07	1745	S10	E05	09	8.1		B	BXO	20	6	6	3
4305		LEAR	09	08	0046	S09	E03	09	8.3		B	BXO	20	6	6	3
4305		ATHN	09	08	0606	S09	W02	09	8.1		B	DAO	90	8	8	3
4305		RAMY	09	08	1150	S09	W05	09	8.1		B	DAO	80	22	8	3
4305	23821	MWIL	09	08	1445	S09	W05	09	8.2	4	(B)					
4305		BOUL	09	08	1520	S09	W06	09	8.2		B	DSI	40	12	5	2
4305		HOLL	09	08	1528	S09	W05	09	8.3		B	CAO	80	16	5	4
4305		PALE	09	08	1900	S10	W07	09	8.3		B	DSO	70	16	6	3
4305		LEAR	09	09	0100	S09	W10	09	8.3		B	DRO	60	20	6	3
4305		ATHN	09	09	1030	S09	W17	09	8.2		B	DAO	70	7	6	2
4305		RAMY	09	09	1250	S10	W17	09	8.3		B	DAO	60	20	6	3
4305		BOUL	09	09	1436	S08	W18	09	8.3		B	DSI	80	14	8	3
4305		HOLL	09	09	1438	S09	W18	09	8.3		B	DSO	90	18	7	4
4305		PALE	09	09	1745	S10	W20	09	8.2		B	DSO	60	10	8	2
4305		LEAR	09	10	0130	S10	W25	09	8.2		B	DAO	90	13	9	3
4305		ATHN	09	10	0715	S08	W28	09	8.2		B	DSO	60	5	6	2
4305		RAMY	09	10	1257	S11	W32	09	8.1		B	DAO	60	7	8	2
4305		HOLL	09	10	1422	S10	W33	09	8.1		B	CSO	50	14	7	3
4305		LEAR	09	11	0125	S10	W39	09	8.1		B	CSO	20	3	7	2
4305		RAMY	09	11	1308	S08	W46	09	8.1		B	CSO	30	6	5	2
4305		HOLL	09	11	1430	S09	W48	09	8.0		B	BXO	20	5	6	3
4305		BOUL	09	11	1545	S08	W47	09	8.1		B	BXO	30	3	3	2
4305	23821	MWIL	09	11	1730	S09	W48	09	8.1	4	(BP)					
4305		PALE	09	11	1956	S10	W49	09	8.1		B	BXO	20	2	3	3
4305		LEAR	09	12	0020	S09	W52	09	8.1		B	CAO	20	3	4	3
4305		ATHN	09	12	0600	S08	W54	09	8.2		A	HSX	30	1	2	3
4305		RAMY	09	12	1205	S08	W59	09	8.1		A	HAX	40	1	1	3
4305		BOUL	09	12	1341	S07	W61	09	8.0		B	BXO	20	3	4	3
4305		HOLL	09	12	1447	S08	W62	09	8.0		A	AXX		1		3
4305	23821	MWIL	09	12	1530	S09	W61	09	8.1	3	(AP)					
4305		PALE	09	12	1810	S10	W64	09	7.9		B	BXO	20	3	3	4
4305		MANI	09	13	0048	S10	W68	09	7.9			AXX	10	1	1	2
4311		RAMY	09	08	1150	N07	E02	09	8.6		A	AXX	10	1	1	3
4311	23826	MWIL	09	08	1445	N06	E01	09	8.7	2	(AP)					
4311		BOUL	09	08	1520	N09	E01	09	8.7		A	AXX		1	1	2

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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
4311		HOLL	09	08	1528	N07	W01	09	8.6		A	AXX		1		4
4311		PALE	09	08	1900	N07	W02	09	8.6		A	AXX	10	2	1	3
4311		LEAR	09	09	0100	N07	W06	09	8.6		B	BXO	10	2	2	3
4311		ATHN	09	09	1030	N08	W11	09	8.6		B	BRO	20	5	3	2
4311		RAMY	09	09	1250	N07	W13	09	8.6		B	DAO	80	10	3	3
4311		BOUL	09	09	1436	N08	W14	09	8.6		B	BXO	50	10	3	3
4311		HOLL	09	09	1438	N07	W13	09	8.6		B	BXO	50	12	3	4
4311		PALE	09	09	1745	N07	W16	09	8.5		B	BXO	40	8	4	2
4311		LEAR	09	10	0130	N06	W20	09	8.6		B	CRO	60	10	3	3
4311		ATHN	09	10	0715	N08	W23	09	8.6		B	BXO	30	5	4	2
4311		RAMY	09	10	1257	N07	W27	09	8.5		B	CAO	50	8	5	2
4311		HOLL	09	10	1422	N07	W27	09	8.6		B	BXO	20	10	4	3
4311		LEAR	09	11	0125	N06	W33	09	8.6		B	BXO	10	2	3	2
4311		RAMY	09	11	1308	N07	W37	09	8.8		B	BXO	30	5	6	2
4311	23830	MWIL	09	13	1515	N08	W70	09	8.4	2	(AP)					
4312		BOUL	09	09	1436	S05	W09	09	8.9		A	AXX	10	1		3
4312		HOLL	09	09	1438	S06	W11	09	8.8		A	AXX		1		4
4312		PALE	09	09	1745	S07	W12	09	8.8		A	AXX	10	1		2
4312		LEAR	09	10	0130	S06	W16	09	8.9		A	AXX	10	2	1	3
4312		HOLL	09	10	1422	S06	W24	09	8.8		A	AXX	10	2	2	3
0001		HOLL	09	06	1430	S12	E37	09	9.4		A	AXX	10	1		3
0001		PALE	09	06	1810	S13	E36	09	9.5		A	AXX	10	3	2	3
0001		HOLL	09	08	1528	S13	E08	09	9.2		A	AXX		1		4
4306		RAMY	09	03	1355	S02	E76	09	9.3		A	HSX	30	1	1	3
4306		BOUL	09	03	1440	N01	E74	09	9.1		A	AXX	30	1	1	2
4306	23822	MWIL	09	03	1600	S01	E75	09	9.3	3	(AP)					
4306		PALE	09	03	1737	S01	E74	09	9.3		A	AXX	10	1	1	4
4306		HOLL	09	03	1808	N00	E73	09	9.2		A	HSX	20	1	2	4
4306		LEAR	09	04	0100	S01	E68	09	9.1		A	HSX	20	1	1	3
4306		ATHN	09	04	0730	S02	E63	09	9.0		A	AXX	40	1	1	3
4306		HOLL	09	04	1453	S01	E62	09	9.3		A	HSX	20	1	1	3
4306		RAMY	09	04	1527	S02	E61	09	9.2		A	HSX	40	1	1	4
4306	23822	MWIL	09	04	1530	S01	E61	09	9.2	4	(AP)					
4306		BOUL	09	04	1630	S02	E60	09	9.2		B	AXX	20	2	1	3
4306		PALE	09	04	1740	S02	E61	09	9.3		A	AXX	20	1	1	4
4306		MANI	09	05	0209	S01	E56	09	9.3			HSX	60	1	2	2
4306		LEAR	09	05	0325	S02	E55	09	9.3		A	HRX	10	1	1	2
4306		ATHN	09	05	1100	S02	E50	09	9.2		A	AXX	20	1	1	2
4306		BOUL	09	05	1409	S02	E47	09	9.8		A	AXX	10	1		2
4306	23822	MWIL	09	05	1500	S01	E48	09	9.2	4	(AP)					
4306		HOLL	09	05	1620	S01	E48	09	9.3		A	AXX	10	1		2
4306		PALE	09	05	1908	S01	E47	09	9.3		A	HRX	20	1	1	2
4306		ATHN	09	06	0600	S02	E39	09	9.2		A	HSX	30	1	1	3
4306		RAMY	09	06	1105	S03	E38	09	9.3		B	CAO	30	2	4	3
4306		HOLL	09	06	1430	N01	E36	09	9.3		A	AXX		1		3
4306	23822	MWIL	09	06	1530	S01	E34	09	9.2	4	(AP)					
4306		BOUL	09	06	1700	S02	E33	09	9.2		A	AXX	10	1	1	2
4306		PALE	09	06	1810	S01	E33	09	9.2		A	HSX	20	1	1	3
4306		LEAR	09	07	0015	S03	E29	09	9.2		A	AXX	10	1	2	3
4306		ATHN	09	07	0615	S00	E26	09	9.2		A	HSX	10	1	1	3
4306		RAMY	09	07	1130	S02	E23	09	9.2		A	HAX	20	2	1	3
4306		BOUL	09	07	1312	S02	E21	09	9.1		A	AXX	10	1		2
4306		HOLL	09	07	1513	S01	E22	09	9.3		A	AXX		2	1	3
4306	23822	MWIL	09	07	1530	S01	E21	09	9.2	2	(AP)					
4306		PALE	09	07	1745	S02	E21	09	9.3		A	AXX	10	1	1	3
4306		LEAR	09	08	0046	S03	E16	09	9.2		A	AXX	10	1	2	3
4306		ATHN	09	08	0606	S01	E14	09	9.3		B	BXO	10	2	3	3
4306		RAMY	09	08	1150	S02	E09	09	9.2		A	AXX	10	1	1	3
4307		HOLL	09	03	1808	S10	E88	09	10.4		A	HSX	120	1	2	4
4307		LEAR	09	04	0100	S11	E80	09	10.1		A	HHX	190	1	3	3
4307		ATHN	09	04	0730	S12	E73	09	9.8		A	HHX	130	1	3	3
4307		HOLL	09	04	1453	S11	E74	09	10.2		A	HSX	140	1	2	3
4307		RAMY	09	04	1527	S12	E73	09	10.1		A	HKX	160	1	3	4
4307	23823	MWIL	09	04	1530	S10	E73	09	10.1	4	(AP)					
4307		BOUL	09	04	1630	S12	E72	09	10.1		A	HSX	160	1	2	3
4307		PALE	09	04	1740	S11	E72	09	10.2		A	HSX	170	1	2	4
4307		MANI	09	05	0209	S11	E69	09	10.3			HSX	170	1	3	2

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

SEPTEMBER 1983

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
4307		LEAR	09	05	0325	S11	E67	09	10.2		B	CSO	140	4	2	2
4307		ATHN	09	05	1100	S10	E63	09	10.2		A	CAO	130	2	4	2
4307		BOUL	09	05	1409	S10	E60	09	10.1		B	CSO	110	4	3	2
4307	23823	MWIL	09	05	1500	S10	E60	09	10.1	4	(BP)					
4307		HOLL	09	05	1620	S10	E60	09	10.2		B	DSO	170	6	4	2
4307		PALE	09	05	1908	S10	E60	09	10.3		B	DAO	220	8	8	2
4307		ATHN	09	06	0600	S11	E51	09	10.1		B	DAO	200	3	8	3
4307		RAMY	09	06	1105	S10	E49	09	10.1		B	DAO	130	7	5	3
4307		HOLL	09	06	1430	S08	E47	09	10.1		B	CSO	130	5	5	3
4307	23823	MWIL	09	06	1530	S10	E47	09	10.2	4	(BP)					
4307		BOUL	09	06	1700	S11	E47	09	10.2		B	CSO	100	4	3	2
4307		PALE	09	06	1810	S09	E46	09	10.2		B	CSO	110	5	4	3
4307		LEAR	09	07	0015	S11	E43	09	10.2		B	DHO	100	8	5	3
4307		ATHN	09	07	0615	S09	E38	09	10.1		B	CAO	130	7	3	3
4307		RAMY	09	07	1130	S10	E35	09	10.1		B	DAO	80	9	4	3
4307		BOUL	09	07	1312	S13	E33	09	10.0		B	CSO	110	6	2	2
4307		HOLL	09	07	1513	S07	E33	09	10.1		B	CSO	150	4	4	3
4307	23823	MWIL	09	07	1530	S09	E33	09	10.1	4	(BP)					
4307		PALE	09	07	1745	S10	E33	09	10.2		B	DSO	140	3	3	3
4307		LEAR	09	08	0046	S10	E28	09	10.1		B	CKO	140	4	3	3
4307		ATHN	09	08	0606	S10	E24	09	10.1		B	CAO	120	2	4	3
4307		RAMY	09	08	1150	S10	E23	09	10.2		B	DAO	110	8	3	3
4307	23823	MWIL	09	08	1445	S10	E22	09	10.3	5	(AP)					
4307		BOUL	09	08	1520	S09	E20	09	10.1		A	HSX	40	2	2	2
4307		HOLL	09	08	1528	S09	E21	09	10.2		A	HSX	90	4	3	4
4307		PALE	09	08	1900	S09	E20	09	10.3		A	HSX	50	3	2	3
4307		LEAR	09	09	0100	S12	E16	09	10.2		B	CSO	100	5	6	3
4307		ATHN	09	09	1030	S09	E09	09	10.1		B	CSO	80	2	2	2
4307		RAMY	09	09	1250	S12	E10	09	10.3		B	DAO	100	7	6	3
4307		BOUL	09	09	1436	S09	E11	09	10.4		B	CSO	80	5	9	3
4307		HOLL	09	09	1438	S11	E10	09	10.4		B	CAO	80	3	6	4
4307		PALE	09	09	1745	S11	E08	09	10.3		B	CAO	70	4	7	2
4307		LEAR	09	10	0130	S11	E03	09	10.3		B	DAO	80	8	3	3
4307		ATHN	09	10	0715	S09	W02	09	10.2		B	CSO	50	2	3	2
4307		RAMY	09	10	1257	S11	W04	09	10.2		B	DAO	50	6	3	2
4307		HOLL	09	10	1422	S09	W05	09	10.2		B	CAO	70	6	3	3
4307		LEAR	09	11	0125	S11	W11	09	10.2		B	CAO	30	6	3	2
4307		RAMY	09	11	1308	S10	W18	09	10.2		B	CAO	20	3	2	2
4307		HOLL	09	11	1430	S10	W18	09	10.3		B	CRO	10	4	4	3
4307		BOUL	09	11	1545	S08	W20	09	10.2		B	CRO	20	3	1	2
4307	23823	MWIL	09	11	1730	S10	W20	09	10.2	4	(AP)					
4307		PALE	09	11	1956	S10	W22	09	10.2		A	AXX	10	2	1	3
4307		LEAR	09	12	0020	S07	W24	09	10.2		B	CRO	10	5	4	3
4307		ATHN	09	12	0600	S09	W25	09	10.4		A	HAX	30	1	2	3
4307		RAMY	09	12	1205	S08	W33	09	10.0		B	CAO	30	2	3	3
4307		BOUL	09	12	1341	S08	W29	09	10.4		B	BXO	10	3	2	3
4307		HOLL	09	12	1447	S09	W33	09	10.1		A	AXX		1		3
4307	23823	MWIL	09	12	1530	S10	W32	09	10.2	3	(AP)					
4307		PALE	09	12	1810	S10	W32	09	10.4		B	BXO	20	3	6	4
4307		MANI	09	13	0048	S10	W35	09	10.4			BXO	10	4	6	2
4307		LEAR	09	13	0144	S08	W37	09	10.3		B	BXO	20	3	8	2
4307		ATHN	09	13	0600	S09	W39	09	10.3		B	BXO	40	4	8	3
4307		RAMY	09	13	1310	S07	W42	09	10.4		B	DAO	50	7	8	3
4307		BOUL	09	13	1445	S06	W38	09	10.8		B	BXO	40	10	5	2
4307	23831	MWIL	09	13	1515	S07	W40	09	10.6	5	(BF)					
4307	23823	MWIL	09	13	1515	S10	W46	09	10.2	3	(AP)					
4307		PALE	09	13	1808	S08	W42	09	10.6		B	BXO	40	8	5	3
4307		HOLL	09	13	1852	S07	W43	09	10.6		B	CAO	40	4	6	2
4307		LEAR	09	14	0045	S07	W47	09	10.5		B	DSO	70	7	6	3
4307		MANI	09	14	0125	S07	W46	09	10.6			CRO	40	5	6	2
4307		ATHN	09	14	0715	S06	W47	09	10.8		B	BXO	20	2	4	2
4307		BOUL	09	14	1421	S07	W54	09	10.6		B	BXO	50	5	6	2
4307		RAMY	09	14	1440	S08	W54	09	10.6		B	DAO	90	12	6	3
4307	23831	MWIL	09	14	1600	S07	W53	09	10.7	4	(B)					
4307		HOLL	09	14	1617	S07	W45	09	11.3		B	DRO	50	13	8	2
4307		PALE	09	14	1817	S08	W56	09	10.6		B	CSO	50	11	7	3
4307		MANI	09	14	2303	S06	W59	09	10.5			DRO	80	13	6	3
4307		LEAR	09	15	0100	S06	W60	09	10.6		B	DRO	30	6	6	3
4307		ATHN	09	15	1030	S08	W64	09	10.6		A	HRX	20	1	1	1
4307		RAMY	09	15	1145	S07	W65	09	10.6		B	DAO	50	5	6	3
4307		BOUL	09	15	1515	S07	W65	09	10.8		B	CRO	40	4	4	3

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4307	23831	MWIL	09	15	1515	S08	W65	09	10.8	4	(AF)					
4307		HOLL	09	15	1602	S08	W67	09	10.6		B	BXO	10	3	4	4
4307		PALE	09	15	1900	S11	W68	09	10.7		A	AXX		1		3
4307		LEAR	09	16	0040	S07	W70	09	10.8		A	AXX	10	1	1	2
4307		MANI	09	16	0226	S08	W71	09	10.8			AXX	20	1	1	2
4307		HOLL	09	16	1420	S08	W78	09	10.7		A	AXX		1		4
4307	23831	MWIL	09	16	1500	S08	W79	09	10.7	3	(AF)					
0002		LEAR	09	09	0100	S04	E17	09	10.3		A	AXX	10	1	1	3
0002	23832	MWIL	09	14	1600	S04	W62	09	10.0	2	(AF)					
0002		HOLL	09	14	1617	S04	W62	09	10.0		A	AXX		1		2
4308		HOLL	09	04	1453	N18	E85	09	11.1		A	AXX		1		3
4308		RAMY	09	04	1527	N17	E80	09	10.7		A	HSX	30	1	1	4
4308		PALE	09	04	1740	N18	E81	09	10.9		A	AXX	10	1	1	4
4308		MANI	09	05	0209	N16	E77	09	10.9			AXX	20	1	1	2
4308		LEAR	09	05	0325	N17	E75	09	10.8		A	AXX	10	1	1	2
4308		BOUL	09	05	1409	N17	E68	09	10.8		A	AXX	20	1		2
4308	23824	MWIL	09	05	1500	N17	E68	09	10.8	3	(AP)					
4308		HOLL	09	05	1620	N18	E67	09	10.8		A	AXX		1		2
4308		PALE	09	05	1908	N18	E65	09	10.7		A	AXX	10	1	1	2
4308		RAMY	09	06	1105	N17	E56	09	10.7		B	BXO	20	2	3	3
4308		HOLL	09	06	1430	N19	E55	09	10.8		B	BXO	10	2	3	3
4308	23824	MWIL	09	06	1530	N18	E55	09	10.8	3	(AP)					
4308		BOUL	09	06	1700	N18	E54	09	10.8		A	AXX	10	2	1	2
4308		PALE	09	06	1810	N19	E53	09	10.8		B	BXO	10	3	3	3
4308		LEAR	09	07	0015	N18	E48	09	10.7		A	AXX	10	1	2	3
4308		ATHN	09	07	0615	N19	E44	09	10.6		A	AXX	10	1	1	3
4308		RAMY	09	07	1130	N18	E43	09	10.8		B	BXO	10	3	3	3
4308		HOLL	09	07	1513	N19	E42	09	10.8		B	BXO	10	3	3	3
4308		RAMY	09	08	1150	N19	E30	09	10.8		A	AXX	10	1	1	3
4310		LEAR	09	07	0015	S24	E56	09	11.3		A	AXX	10	2	2	3
4310		ATHN	09	07	0615	S21	E49	09	11.0		A	AXX	10	1	1	3
4310		RAMY	09	07	1130	S24	E48	09	11.2		A	HAX	40	2	2	3
4310		BOUL	09	07	1312	S24	E45	09	11.0		A	AXX	10	1		2
4310		HOLL	09	07	1513	S23	E46	09	11.2		A	AXX		1		3
4310	23825	MWIL	09	07	1530	S23	E46	09	11.2	3	(AP)					
4310		PALE	09	07	1745	S23	E46	09	11.3		A	AXX	10	1	1	3
4310		LEAR	09	08	0046	S23	E42	09	11.3		A	AXX	10	1	1	3
4310		ATHN	09	08	0606	S22	E34	09	10.9		A	AXX	10	1	1	3
4310		RAMY	09	08	1150	S23	E34	09	11.1		A	HAX	10	1	1	3
4310	23825	MWIL	09	08	1445	S23	E33	09	11.2	3	(AP)					
4310		BOUL	09	08	1520	S22	E31	09	11.0		A	AXX		1	1	2
4310		HOLL	09	08	1528	S23	E32	09	11.1		A	AXX	10	1	1	4
4310		PALE	09	08	1900	S22	E31	09	11.2		A	AXX		1	1	3
4310		LEAR	09	09	0100	S23	E26	09	11.0		A	AXX	10	1	1	3
4310		RAMY	09	09	1250	S24	E23	09	11.3		B	CRO	10	2	3	3
4310		BOUL	09	09	1436	S22	E18	09	11.0		B	BXO	10	3	4	3
4310		HOLL	09	09	1438	S23	E22	09	11.3		B	BXO	10	2	3	4
4310		PALE	09	09	1745	S22	E18	09	11.1		A	AXX		1		2
4310		LEAR	09	10	0130	S24	E13	09	11.1		A	AXX		2	1	3
4310		ATHN	09	10	0715	S22	E10	09	11.1		A	AXX	10	1		2
4310		RAMY	09	10	1257	S23	E07	09	11.1		A	HAX	10	1	1	2
4310		HOLL	09	10	1422	S23	E07	09	11.1		A	AXX		2	2	3
4310		LEAR	09	11	0125	S23	E03	09	11.3		B	CRO	10	3	3	2
4310		HOLL	09	11	1430	S23	W06	09	11.1		B	BXO	10	6	5	3
4310	23825	MWIL	09	11	1730	S23	W07	09	11.2	3	(B)					
4310		PALE	09	11	1956	S23	W07	09	11.3		B	CRO	20	3	3	3
4310		LEAR	09	12	0020	S23	W10	09	11.2		B	CRO	20	3	3	3
4310		RAMY	09	12	1205	S22	W18	09	11.1		B	CAO	20	4	1	3
4310		BOUL	09	12	1341	S21	W19	09	11.1		B	BXO	10	2	1	3
4310		HOLL	09	12	1447	S22	W19	09	11.2		B	BXO	10	3	3	3
4310	23825	MWIL	09	12	1530	S23	W19	09	11.2	4	(BP)					
4310		PALE	09	12	1810	S21	W21	09	11.1		B	BXO	20	4	5	4
4310		MANI	09	13	0048	S23	W24	09	11.2			BXO	10	3	3	2
4310		LEAR	09	13	0144	S22	W28	09	10.9		A	AXX	10	2	2	2
4310		RAMY	09	13	1310	S22	W34	09	10.9		A	AXX	10	1	1	3
4310	23825	MWIL	09	13	1515	S23	W34	09	11.0	3	(AP)					
4310		HOLL	09	13	1852	S22	W36	09	11.0		A	AXX		1		2
4310		MANI	09	14	2303	S22	W50	09	11.1			BXO	20	2	3	3

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4310		LEAR	09	15	0100	S22	W50	09	14.2		B	BXO	10	3	3	3
4310		RAMY	09	15	1145	S22	W58	09	11.0		B	CAO	40	3	3	3
4310		BOUL	09	15	1515	S21	W61	09	11.0		A	HRX	30	1	1	3
4310		HOLL	09	15	1602	S23	W60	09	11.0		A	AXX		1		4
4310		PALE	09	15	1900	S24	W62	09	11.0		A	AXX		1		3
4310		LEAR	09	16	0040	S22	W65	09	11.0		A	AXX	10	1	1	2
	23833	MWIL	09	15	1515	S22	W55	09	11.4	4	(AP)					
4313		RAMY	09	10	1257	N04	E21	09	12.1		A	HAX	10	1	1	2
4313		HOLL	09	10	1422	N05	E21	09	12.2		A	AXX	10	2	2	3
4313		LEAR	09	11	0125	N02	E15	09	12.2		B	CRO	20	7	7	2
4313		RAMY	09	11	1308	N04	E07	09	12.1		B	CRO	20	2	3	2
4313		HOLL	09	11	1430	N06	E04	09	11.9		B	BXO	10	6	3	3
4313		BOUL	09	11	1545	N05	E04	09	12.0		B	BXO	20	3	3	2
4313	23827	MWIL	09	11	1730	N05	E04	09	12.0	2	(AP)					
4313		PALE	09	11	1956	N04	E03	09	12.1		B	BXO	10	3	3	3
4313		LEAR	09	12	0020	N05	E01	09	12.1		B	BXO	10	2	3	3
4313		ATHN	09	12	0600	N04	W03	09	12.0		B	CAO	20	2	2	3
4313		RAMY	09	12	1205	N04	W02	09	12.4		A	AXX	10	1	1	3
4313		BOUL	09	12	1341	N06	W10	09	11.8		B	BXO	30	6	8	3
4313	23827	MWIL	09	12	1530	N05	W07	09	12.1	3	(AP)					
4313		PALE	09	12	1810	N06	W09	09	12.1		B	BXO	30	10	8	4
4313		MANI	09	13	0048	N06	W12	09	12.1			BXO	20	9	8	2
4313		LEAR	09	13	0144	N07	W15	09	11.9		B	BXO	10	3	6	2
4313	23827	MWIL	09	13	1515	N05	W22	09	12.0	3	(AP)					
4313		LEAR	09	14	0045	N07	W27	09	12.0		A	AXX		1	1	3
4313		ATHN	09	14	0715	N07	W29	09	12.1		A	AXX	10	1		2
4314		RAMY	09	10	1257	N10	E29	09	12.7		A	AXX	10	2	1	2
4314		HOLL	09	10	1422	N12	E28	09	12.7		A	AXX		2	2	3
4314		RAMY	09	11	1308	N10	E15	09	12.7		B	BXO	20	4	3	2
4314		HOLL	09	11	1430	N11	E14	09	12.7		A	AXX		2	2	3
4314		BOUL	09	11	1545	N11	E15	09	12.8		B	BXO	20	4	3	2
4314		PALE	09	11	1956	N11	E12	09	12.7		A	AXX	10	2	2	3
4314		LEAR	09	12	0020	N11	E08	09	12.6		A	AXX	10	1	1	3
4314		BOUL	09	12	1341	N08	W04	09	12.3		B	BXO	10	3	2	3
4314		RAMY	09	13	1310	N13	W13	09	12.6		A	AXX	10	2	1	3
4314		RAMY	09	18	1255	N15	W78	09	12.6		A	HAX	60	1	1	3
4314		HOLL	09	18	1420	N14	W76	09	12.9		A	AXX		1		4
4314		PALE	09	18	1740	N14	W77	09	12.9		B	BXO	10	2	3	3
4314		LEAR	09	19	0019	N15	W80	09	13.0		A	AXX	10	3	5	2
4315		RAMY	09	11	1308	S02	E11	09	12.4		B	BXO	30	7	4	2
4315		HOLL	09	11	1430	S01	E09	09	12.3		B	BXO	20	8	4	3
4315		BOUL	09	11	1545	S02	E08	09	12.3		B	BXO	30	5	4	2
4315	23828	MWIL	09	11	1730	S01	E07	09	12.3	2	(B)					
4315		PALE	09	11	1956	S02	E08	09	12.4		B	BXO	10	2	3	3
4315		LEAR	09	12	0020	S02	E04	09	12.3		B	BXO	10	3	3	3
4315		RAMY	09	16	1345	S05	W61	09	12.0		B	CSO	20	2	3	3
4315		HOLL	09	16	1420	S04	W62	09	12.0		A	AXX		1		4
4315	23834	MWIL	09	16	1500	S05	W62	09	12.0	3	(B)					
4315		PALE	09	16	1730	S05	W63	09	12.0		A	AXX		1		3
4315		MANI	09	16	2347	S06	W59	09	12.6			AXX	10	1		3
4315		HOLL	09	17	1407	S04	W77	09	11.8		B	BXO		2	3	3
4315	23834	MWIL	09	17	1515	S05	W77	09	11.9	3	(B)					
4315		PALE	09	17	1950	S05	W78	09	12.0		A	AXX	10	1		2
4315		MANI	09	18	0012	S05	W79	09	12.1			AXX	10	1		2
	23838	MWIL	09	18	1530	N14	W76	09	12.9	3	(B)					
		BOUL	09	15	1515	N20	W35	09	13.0		A	AXX		1		3
0003		LEAR	09	12	0020	S30	E19	09	13.5		A	HRX	10	1	1	3
0003		RAMY	09	12	1205	S31	E13	09	13.5		A	AXX	10	2	2	3
0004		LEAR	09	16	0040	S04	W33	09	13.6		A	AXX	10	1	1	2
0004		HOLL	09	16	1420	S04	W38	09	13.8		A	AXX		1		4
0004	23835	MWIL	09	16	1500	S05	W39	09	13.7	3	(AF)					
		ATHN	09	13	0600	S02	E19	09	14.7		A	AXX	10	1	1	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
		LEAR	09	15	0100	N20	W05	09	14.7		B	BXO	10	4	3	3
4318		RAMY	09	18	1255	S05	W48	09	14.9		B	CAO	30	4	3	3
4318		HOLL	09	18	1420	S06	W48	09	15.0		A	AXX	10	1		4
4318		PALE	09	18	1740	S07	W50	09	15.0		A	AXX	10	2	1	3
4320		MANI	09	18	0012	S05	W40	09	15.0			BXO	30	5	3	2
4320		LEAR	09	18	0045	S06	W40	09	15.0		B	BXO	30	5	3	3
4320		ATHN	09	18	0800	S05	W42	09	15.2		A	AXX	10	1	1	2
4320	23839	MWIL	09	18	1530	S06	W48	09	15.1	4	(AP)					
4320		LEAR	09	19	0019	S06	W54	09	14.9		A	AXX		2	1	2
4320		RAMY	09	19	1240	S06	W64	09	14.7		B	BXO	20	2	3	3
4320		HOLL	09	19	1414	S06	W62	09	15.0		A	AXX		2	1	3
4320		PALE	09	19	1739	S06	W65	09	14.9		A	AXX	10	1	1	3
4320		LEAR	09	20	0025	S06	W68	09	14.9		A	AXX		1	1	3
0005		HOLL	09	10	1422	N12	E69	09	15.8		A	AXX		1		3
0005		LEAR	09	11	0125	N13	E64	09	15.9		A	AXX		1	1	2
	23836	MWIL	09	16	1500	S20	W06	09	16.2	2	(AF)					
4317		BOUL	09	12	1341	S13	E55	09	16.7		A	AXX	20	1		3
4317		HOLL	09	12	1447	S13	E56	09	16.8		A	AXX		1		3
4317	23829	MWIL	09	12	1530	S14	E56	09	16.9	3	(AP)					
4317		PALE	09	12	1810	S13	E54	09	16.8		B	BXO	20	2	3	4
4317		MANI	09	13	0048	S13	E51	09	16.9			BXO	20	2	3	2
4317		LEAR	09	13	0144	S13	E49	09	16.8		B	BXO	30	2	3	2
4317		ATHN	09	13	0600	S13	E43	09	16.5		B	BXO	30	3	3	3
4317		RAMY	09	13	1310	S15	E43	09	16.8		B	DAO	60	9	4	3
4317		BOUL	09	13	1445	S13	E42	09	16.8		B	BXO	30	6	5	2
4317	23829	MWIL	09	13	1515	S13	E41	09	16.7	4	(B)					
4317		PALE	09	13	1808	S13	E41	09	16.8		B	CRO	50	7	4	3
4317		HOLL	09	13	1852	S13	E40	09	16.8		B	CRO	40	11	4	2
4317		LEAR	09	14	0045	S13	E37	09	16.8		B	DAO	150	14	4	3
4317		MANI	09	14	0125	S13	E37	09	16.9			CAO	100	10	5	2
4317		ATHN	09	14	0715	S13	E33	09	16.8		B	CAO	70	3	4	2
4317		BOUL	09	14	1421	S14	E27	09	16.6		B	CRO	110	7	5	2
4317		RAMY	09	14	1440	S13	E29	09	16.8		B	DAO	110	9	5	3
4317	23829	MWIL	09	14	1600	S13	E28	09	16.8	5	(B)					
4317		PALE	09	14	1817	S14	E27	09	16.8		B	DAO	110	15	5	3
4317		MANI	09	14	2303	S13	E24	09	16.8			DAO	140	17	5	3
4317		LEAR	09	15	0100	S13	E23	09	16.8		B	DAO	140	14	5	3
4317		ATHN	09	15	1030	S13	E18	09	16.8		B	DAO	110	6	5	1
4317		RAMY	09	15	1145	S14	E18	09	16.8		B	DKO	200	27	6	3
4317	23829	MWIL	09	15	1515	S13	E15	09	16.8	5						
4317		BOUL	09	15	1515	S13	E15	09	16.8		B	DKI	240	23	5	3
4317		HOLL	09	15	1602	S13	E16	09	16.9		BD	DAI	220	22	6	4
4317		PALE	09	15	1900	S13	E14	09	16.8		B	DSI	140	17	7	3
4317		LEAR	09	16	0040	S13	E10	09	16.8		BD	DKI	190	15	7	2
4317		MANI	09	16	0226	S13	E10	09	16.9			AXX	10	1	1	2
4317		MANI	09	16	0226	S13	E10	09	16.9			DAI	170	19	7	2
4317		ATHN	09	16	1000	S12	E08	09	17.0		BD	DAO	240	7	6	1
4317		HOLL	09	16	1341	S13	E03	09	16.8		BD	DAI	180	26	7	2
4317		RAMY	09	16	1345	S13	E05	09	17.0		B	DKO	240	23	6	3
4317		HOLL	09	16	1420	S13	E04	09	16.9		BD	DAI	270	22	6	4
4317	23829	MWIL	09	16	1500	S13	E03	09	16.9	5						
4317		PALE	09	16	1730	S13	E02	09	16.9		BD	DAI	230	25	7	3
4317		MANI	09	16	2347	S13	W02	09	16.8			DAI	200	23	7	3
4317		LEAR	09	17	0043	S12	W03	09	16.8		B	DKI	330	26	7	3
4317		ATHN	09	17	0630	S11	W05	09	16.9			DAI	180	15	7	2
4317		RAMY	09	17	1207	S09	W13	09	16.5		B	DAO	230	20	8	3
4317		HOLL	09	17	1407	S13	W09	09	16.9		B	DAI	310	25	7	3
4317		BOUL	09	17	1500	S12	W11	09	16.8		B	DHI	190	17	7	2
4317	23829	MWIL	09	17	1515	S13	W10	09	16.9	5	(B)					
4317		PALE	09	17	1950	S13	W12	09	16.9		B	DAI	180	21	8	2
4317		MANI	09	18	0012	S13	W16	09	16.8			DAI	270	16	8	2
4317		LEAR	09	18	0045	S13	W16	09	16.8		B	DAI	280	27	8	3
4317		ATHN	09	18	0800	S12	W19	09	16.9		B	DAO	180	13	8	2
4317		RAMY	09	18	1255	S13	W22	09	16.9		B	DAO	90	26	9	3
4317		HOLL	09	18	1420	S13	W23	09	16.9		B	DSI	140	22	7	4
4317	23829	MWIL	09	18	1530	S13	W24	09	16.8	5	(B)					

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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
4317		BOUL	09	18	1535	S11 W23	09	16.9		B	DSO	140	11	7	2
4317		PALE	09	18	1740	S13 W24	09	16.9		B	DSO	90	21	7	3
4317		LEAR	09	19	0019	S12 W28	09	16.9		B	DSO	150	16	8	2
4317		ATHN	09	19	0730	S12 W31	09	17.0		B	DSO	110	7	7	2
4317		RAMY	09	19	1240	S12 W36	09	16.8		BG	DAO	130	18	8	3
4317		HOLL	09	19	1414	S13 W37	09	16.8		B	CSI	70	13	7	3
4317		PALE	09	19	1739	S13 W37	09	16.9		B	CSO	70	11	7	3
4317		LEAR	09	20	0025	S14 W42	09	16.8		B	CSO	90	8	8	3
4317		MANI	09	20	0317	S13 W44	09	16.8			CSO	270	8	6	2
4317		ATHN	09	20	0615	S13 W42	09	17.1		B	CAO	80	6	5	1
4317		RAMY	09	20	1300	S12 W48	09	16.9		B	DAO	100	10	7	3
4317	23829	MWIL	09	20	1530	S13 W50	09	16.9	4	B					
4317		BOUL	09	20	1635	S10 W50	09	16.9		B	DSO	40	4	5	2
4317		PALE	09	20	1740	S13 W50	09	17.0		B	DSO	50	6	7	3
4317		HOLL	09	20	2135	S13 W54	09	16.8		B	CSO	60	9	8	2
4317		MANI	09	20	2321	S13 W56	09	16.7			CSO	170	6	7	2
4317		LEAR	09	21	0015	S12 W55	09	16.9		B	BXO	50	5	9	3
4317		BOUL	09	21	1415	S12 W65	09	16.7		B	BXO	50	4	3	2
4317		PALE	09	21	1740	S13 W67	09	16.7		B	BXO	30	2	3	3
4317	23829	MWIL	09	21	1915	S13 W69	09	16.6	4	(BP)					
4317		LEAR	09	22	0028	S13 W72	09	16.6		A	AXX	20	3	3	3
4317		ATHN	09	22	0630	S12 W72	09	16.8		A	AXX	20	1	1	2
4317		RAMY	09	22	1212	S12 W77	09	16.7		A	HAX	30	1	1	3
4317		PALE	09	22	1745	S12 W78	09	16.9		A	AXX		1		3
		LEAR	09	16	0040	S22 E14	09	17.1		A	AXX	10	1	1	2
4322	23840	MWIL	09	20	1530	N16 W28	09	18.5	2	X					
4322		PALE	09	20	1740	N16 W30	09	18.5		A	AXX		1		3
4322		HOLL	09	20	2135	N16 W32	09	18.5		B	BXO	10	3	3	2
4322		MANI	09	20	2321	N16 W35	09	18.3			BXO	10	3	3	2
4322		LEAR	09	21	0015	N17 W33	09	18.5		B	BXO	20	5	4	3
4322		ATHN	09	21	0800	N16 W38	09	18.5		B	DSO	40	2	2	1
4322	23840	MWIL	09	21	1915	N16 W41	09	18.7	3	(B)					
4322	23840	MWIL	09	23	1530	N13 W69	09	18.4	2	(AF)					
	23841	MWIL	09	20	1530	S12 W16	09	19.4	3	X					
4321		LEAR	09	15	0100	S13 E67	09	20.1		A	AXX		1	1	3
4321		RAMY	09	20	1300	S11 W06	09	20.1		B	CAO	10	2	2	3
4321		BOUL	09	20	1635	S11 W09	09	20.0		A	AXX	10	1	1	2
4321		PALE	09	20	1740	S11 W08	09	20.1		A	AXX	10	2	1	3
4321		LEAR	09	21	0015	S12 W12	09	20.1		A	AXX	10	1	1	3
4327		RAMY	09	26	1140	S13 W48	09	22.9		B	CRO	20	4	3	4
4327		BOUL	09	26	1339	S12 W47	09	23.0		B	BXO	30	3	4	3
4327		HOLL	09	26	1442	S12 W49	09	22.9		B	CRO	40	4	3	3
4327		PALE	09	26	2343	S12 W56	09	22.8		B	CRO	60	5	4	3
4327		LEAR	09	27	0022	S12 W55	09	22.9		B	CSO	110	6	4	3
4327		RAMY	09	27	1146	S13 W63	09	22.7		B	DAO	280	12	7	3
4327		BOUL	09	27	1515	S11 W66	09	22.7		B	DSO	40	2	7	2
4327		HOLL	09	27	1656	S13 W65	09	22.8		B	DSO	140	3	8	2
4327	23849	MWIL	09	27	1700	S13 W64	09	22.9	4	(B)					
4327		PALE	09	27	1820	S13 W68	09	22.6		B	DSO	130	3	7	3
4327		LEAR	09	28	0010	S13 W69	09	22.8		B	DSO	110	3	6	3
4327		BOUL	09	28	1325	S14 W75	09	22.9		B	CRO	90	2	10	3
4327		HOLL	09	28	1505	S14 W77	09	22.8		B	DSO	90	2	6	2
4327		PALE	09	28	1830	S13 W81	09	22.7		B	DSO	80	2	7	3
4327		MANI	09	29	0005	S13 W84	09	22.7			DSO	370	2	7	3
4327		LEAR	09	29	0130	S14 W80	09	23.0		A	HSX	30	1	2	3
4319		RAMY	09	17	1207	S09 E79	09	23.4		A	HSX	60	2	2	3
4319		HOLL	09	17	1407	S08 E79	09	23.5		A	HSX	60	1	2	3
4319		BOUL	09	17	1500	S08 E74	09	23.2		A	HSX	120	1	2	2
4319	23837	MWIL	09	17	1515	S08 E77	09	23.4	3	(AP)					
4319		PALE	09	17	1950	S07 E77	09	23.6		A	HRX	30	2	1	2
4319		MANI	09	18	0012	S08 E72	09	23.4			HSX	110	2	2	2
4319		LEAR	09	18	0045	S08 E71	09	23.4		A	HSX	90	3	2	3
4319		ATHN	09	18	0800	S08 E69	09	23.5		A	HRX	30	1	1	2
4319		RAMY	09	18	1255	S09 E65	09	23.4		B	DAO	100	4	3	3
4319		HOLL	09	18	1420	S08 E63	09	23.3		A	HAX	60	3	2	4

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4319	23837	MWIL	09	18	1530	S08 E63	09	23.4	4	(AP)					
4319		BOUL	09	18	1535	S08 E62	09	23.3		A	HSX	80	1	2	2
4319		PALE	09	18	1740	S08 E64	09	23.5		B	DSO	70	8	4	3
4319		LEAR	09	19	0019	S09 E60	09	23.5		B	DSO	70	4	5	2
4319		ATHN	09	19	0730	S09 E53	09	23.3		A	HAX	50	2	2	2
4319		RAMY	09	19	1240	S09 E51	09	23.4		B	DAO	100	4	3	3
4319		HOLL	09	19	1414	S08 E50	09	23.3		A	HSX	50	2	2	3
4319		PALE	09	19	1739	S08 E49	09	23.4		A	HSX	60	2	2	3
4319		LEAR	09	20	0025	S09 E46	09	23.5		A	HSX	70	3	2	3
4319		MANI	09	20	0317	S08 E44	09	23.4			HSX	60	2	2	2
4319		ATHN	09	20	0615	S09 E39	09	23.2		A	HAX	70	1	2	1
4319		RAMY	09	20	1300	S08 E40	09	23.5		B	CAO	80	3	6	3
4319	23837	MWIL	09	20	1530	S08 E37	09	23.4	5	AP					
4319		BOUL	09	20	1635	S08 E35	09	23.3		A	HSX	20	2	2	2
4319		PALE	09	20	1740	S08 E36	09	23.4		A	HSX	50	2	3	3
4319		HOLL	09	20	2135	S08 E33	09	23.4		A	HSX	50	2	2	2
4319		MANI	09	20	2321	S08 E31	09	23.3			HSX	50	2	2	2
4319		LEAR	09	21	0015	S09 E32	09	23.4		B	CSO	60	3	3	3
4319		ATHN	09	21	0800	S09 E28	09	23.5		A	HAX	40	1	2	1
4319		BOUL	09	21	1415	S08 E22	09	23.2		A	HSX	20	2	2	2
4319		PALE	09	21	1740	S09 E22	09	23.4		A	HAX	50	2	2	3
4319	23837	MWIL	09	21	1915	S08 E18	09	23.2	4	(AP)					
4319		LEAR	09	22	0028	S08 E18	09	23.4		B	DSO	30	2	3	3
4319		ATHN	09	22	0630	S08 E15	09	23.4		A	CSO	20	2	2	2
4319		RAMY	09	22	1212	S09 E12	09	23.4		A	HAX	20	2	1	3
4319		HOLL	09	22	1415	S08 E11	09	23.4		A	HSX	30	2	2	2
4319		BOUL	09	22	1710	S08 E09	09	23.4		A	HSX	10	1	1	2
4319	23845	MWIL	09	22	1745	S07 E10	09	23.5	4	(BP)					
4319		PALE	09	22	1745	S08 E11	09	23.6		B	BXO	10	4	3	3
4319		LEAR	09	23	0030	S08 E06	09	23.5		B	CSO	10	2	3	3
4319		ATHN	09	23	0600	S08 E02	09	23.4		A	AXX	10	1	1	3
4319	23845	MWIL	09	23	1530	S09 W03	09	23.4	4	(AP)					
4319		PALE	09	23	1756	S08 W04	09	23.4		A	AXX		1		3
4319		RAMY	09	24	1230	S10 W14	09	23.5		A	AXX	10	2	2	3
4319	23845	MWIL	09	24	1530	S09 W15	09	23.5	3	(AP)					
4319		PALE	09	24	1750	S09 W18	09	23.4		B	BXO	20	4	3	3
4319		MANI	09	25	0327	S09 W22	09	23.5			BXO	10	3	3	2
	23847	MWIL	09	25	1515	S05 W13	09	24.7	3	(AP)					
4325		RAMY	09	25	1205	N07 W02	09	25.4		B	BXO	10	3	3	4
4325		HOLL	09	25	1430	N07 W02	09	25.5		B	BXO	20	3	3	4
4325	23848	MWIL	09	25	1515	N07 W03	09	25.4	4	(B)					
4325		BOUL	09	25	1545	N07 W04	09	25.4		B	BXO	10	2	3	3
4325		PALE	09	25	1730	N08 W06	09	25.3		A	AXX	10	1		3
4325		LEAR	09	26	0050	N07 W11	09	25.2		A	AXX	10	1	1	4
4325		LEAR	09	26	0050	N08 W12	09	25.1		B	BXO	10	5	4	4
4323A		BOUL	09	21	1415	S17 E61	09	26.2		A	AXX	20	1	1	2
4323A		PALE	09	21	1740	S17 E58	09	26.1		B	BXO	20	2	3	3
4323A	23842	MWIL	09	21	1915	S16 E53	09	25.8	4	(AP)					
4323A		LEAR	09	22	0028	S17 E54	09	26.1		A	AXX	10	1	1	3
4323A		ATHN	09	22	0630	S15 E48	09	25.9		B	AXX	10	1	1	2
4323A		RAMY	09	22	1212	S16 E48	09	26.1		B	DAO	50	4	3	3
4323A		HOLL	09	22	1415	S16 E47	09	26.2		B	BXO	10	4	3	2
4323A		BOUL	09	22	1710	S15 E44	09	26.0		B	BXO	40	3	3	2
4323A	23842	MWIL	09	22	1745	S16 E45	09	26.2	4	(B)					
4323A		PALE	09	22	1745	S17 E46	09	26.2		B	BXO	20	3	3	3
4323A		LEAR	09	23	0030	S16 E41	09	26.1		B	CSO	20	5	4	3
4323A		ATHN	09	23	0600	S16 E38	09	26.1		B	BXO	20	2	2	3
4323A	23842	MWIL	09	23	1530	S16 E34	09	26.2	4	(B)					
4323A		PALE	09	23	1756	S16 E32	09	26.2		B	CRO	20	3	3	3
4323A		BOUL	09	23	1800	S15 E39	09	26.7		B	BXO	10	2	2	2
4323A		LEAR	09	24	0033	S17 E14	09	25.1		B	BXO	10	3	2	4
4323A		ATHN	09	24	0700	S16 E23	09	26.0		B	BXO	20	2	3	2
4323A		RAMY	09	24	1230	S17 E22	09	26.2		B	DAO	50	6	3	3
4323A	23842	MWIL	09	24	1530	S16 E20	09	26.2	4	(B)					
4323A		PALE	09	24	1750	S17 E18	09	26.1		B	CRO	30	5	3	3
4323A		MANI	09	25	0327	S16 E13	09	26.1			BXO	10	3	3	2
4323B		BOUL	09	28	1325	S19 W16	09	27.3		A	AXX	10	1	1	3

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

SEPTEMBER 1983

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
4323B		HOLL	09	28	1505	S21	W17	09	27.3		A	HRX	10	1	1	2
4323B		PALE	09	28	1830	S21	W19	09	27.3		A	AXX		1		3
4323B		MANI	09	29	0005	S21	W22	09	27.3			AXX	10	1	1	3
4323B		LEAR	09	29	0130	S20	W24	09	27.2		A	AXX	10	1	1	3
4323B		ATHN	09	29	0700	S18	W24	09	27.5		A	AXX	10	1		3
0006		RAMY	09	26	1140	S12	E16	09	27.7		B	BXO	10	5	2	4
0006		RAMY	09	27	1146	S13	E02	09	27.6		B	BXO	10	3	3	3
0006		RAMY	09	29	1152	S13	W26	09	27.5		A	AXX	20	3	2	4
0006		HOLL	09	29	1725	S13	W28	09	27.6		A	AXX		1		2
0006		RAMY	09	30	1145	S13	W39	09	27.5		A	AXX	10	3	2	4
	23844	MWIL	09	22	1745	S12	E75	09	28.4	4	(AF)					
4324		PALE	09	21	1740	S19	E88	09	28.5		A	AXX	10	1	1	3
4324	23843	MWIL	09	21	1915	S19	E80	09	27.9	3	AP					
4324		LEAR	09	22	0028	S18	E85	09	28.5		A	HHX	160	2	4	3
4324		ATHN	09	22	0630	S17	E74	09	27.9		A	DAO	90	2	2	2
4324		RAMY	09	22	1212	S20	E79	09	28.6		B	EKO	310	8	14	3
4324		HOLL	09	22	1415	S19	E78	09	28.5		B	FHO	400	6	19	2
4324		BOUL	09	22	1710	S20	E75	09	28.5		B	EHO	390	5	13	2
4324	23843	MWIL	09	22	1745	S19	E75	09	28.5	4	(B)					
4324		PALE	09	22	1745	S20	E80	09	28.9		B	FHO	430	7	18	3
4324		LEAR	09	23	0030	S20	E70	09	28.4		BG	DHO	690	10	9	3
4324		ATHN	09	23	0600	S19	E66	09	28.3		B	EHO	530	7	12	3
4324	23843	MWIL	09	23	1530	S19	E62	09	28.4	4	(B)					
4324		PALE	09	23	1756	S20	E61	09	28.4		BG	EKI	950	18	12	3
4324		BOUL	09	23	1800	S22	E60	09	28.4		B	EKI	530	15	12	2
4324		ATHN	09	24	0700	S21	E53	09	28.4		BG	EKI	950	6	13	2
4324		RAMY	09	24	1230	S21	E53	09	28.6		BG	EKI	640	31	13	3
4324	23843	MWIL	09	24	1530	S19	E50	09	28.5	5	(B)					
4324		PALE	09	24	1750	S21	E48	09	28.4		BG	EKI	700	36	13	3
4324		MANI	09	25	0327	S20	E44	09	28.5			EKI	790	32	13	2
4324		ATHN	09	25	0630	S20	E41	09	28.4		BD	EKI	680	18	11	3
4324		RAMY	09	25	1205	S20	E39	09	28.5		BG	EKI	860	37	11	4
4324		HOLL	09	25	1430	S20	E37	09	28.4		BG	EKI	790	22	12	4
4324	23843	MWIL	09	25	1515	S19	E37	09	28.5	5	(B)					
4324		BOUL	09	25	1545	S20	E35	09	28.3		B	EHI	550	32	12	3
4324		PALE	09	25	1730	S20	E35	09	28.4		BG	EKI	730	30	12	3
4324		LEAR	09	26	0050	S20	E30	09	28.3		BG	EKI	610	31	13	4
4324		ATHN	09	26	0600	S22	E28	09	28.4		BG	EKO	650	13	11	2
4324		RAMY	09	26	1140	S19	E26	09	28.5		BG	EKI	990	51	11	4
4324		BOUL	09	26	1339	S20	E25	09	28.5		B	EKI	870	36	12	3
4324		HOLL	09	26	1442	S19	E25	09	28.5		BG	EKI	930	30	13	3
4324		PALE	09	26	2343	S20	E19	09	28.4		BG	EKI	740	30	11	3
4324		LEAR	09	27	0022	S19	E19	09	28.5		BG	EKI	740	38	12	3
4324		RAMY	09	27	1146	S20	E12	09	28.4		BG	EKI	780	46	13	3
4324		BOUL	09	27	1515	S20	E13	09	28.6		B	EHI	820	27	12	2
4324		HOLL	09	27	1656	S20	E09	09	28.4		BG	EHI	750	32	12	2
4324	23843	MWIL	09	27	1700	S19	E10	09	28.5	5	(BY)					
4324		PALE	09	27	1820	S20	E08	09	28.4		B	EHI	790	29	12	3
4324		LEAR	09	28	0010	S20	E05	09	28.4		B	EHI	700	42	13	3
4324		ATHN	09	28	0800	S20	E03	09	28.6			EKI	570	10	14	1
4324		BOUL	09	28	1325	S20	W03	09	28.3		B	EHI	500	25	12	3
4324		HOLL	09	28	1505	S19	W02	09	28.5		BG	EHI	770	41	13	2
4324		PALE	09	28	1830	S20	W05	09	28.4		BG	EHI	700	30	13	3
4324		MANI	09	29	0005	S20	W08	09	28.4			EKI	720	34	15	3
4324		LEAR	09	29	0130	S20	W09	09	28.4		BG	EHI	690	34	12	3
4324		ATHN	09	29	0700	S19	W10	09	28.5		BG	EHI	560	19	13	3
4324		RAMY	09	29	1152	S20	W15	09	28.3		BG	EKO	680	39	14	4
4324		HOLL	09	29	1725	S19	W16	09	28.5		B	EHO	700	20	14	2
4324		PALE	09	29	2312	S19	W20	09	28.4		B	EHO	630	19	12	2
4324		LEAR	09	30	0019	S20	W19	09	28.6		BG	EKO	640	25	13	2
4324		ATHN	09	30	0700	S19	W23	09	28.5		BG	EKO	560	12	13	3
4324		RAMY	09	30	1145	S19	W27	09	28.4		BG	EKI	830	43	13	4
4324		BOUL	09	30	1513	S18	W27	09	28.6		B	EHI	560	18	12	2
4324		PALE	09	30	1840	S19	W31	09	28.4		B	DHO	580	25	10	3
4324		HOLL	09	30	2101	S18	W31	09	28.5		B	EHO	660	16	13	2
4324		LEAR	10	01	0119	S19	W33	09	28.5		BG	EHO	540	28	12	5
4324		ATHN	10	01	0630	S19	W37	09	28.4		BG	EKO	670	13	14	3
4324		RAMY	10	01	1335	S20	W40	09	28.5		BG	EKI	860	31	12	3

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

SEPTEMBER 1983

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
4324		BOUL	10	01	1540	S18	W40	09	28.6		B	EHO	620	19	12	1
4324		HOLL	10	01	2008	S19	W43	09	28.6		B	EHO	640	19	12	3
4324		PALE	10	01	2150	S20	W45	09	28.5		B	EHO	640	18	12	3
4324		LEAR	10	02	0025	S19	W48	09	28.4		BG	EHO	580	28	12	5
4324		ATHN	10	02	0615	S17	W50	09	28.5		BG	EHO	550	15	12	2
4324		RAMY	10	02	1300	S20	W53	09	28.5		BG	EKO	740	24	13	3
4324		BOUL	10	02	1400	S20	W52	09	28.7		B	EHO	620	14	12	2
4324	23843	MWIL	10	02	1445	S20	W53	09	28.6	5	(BY)					
4324		PALE	10	02	2030	S20	W57	09	28.5		BG	EKO	600	17	11	3
4324		LEAR	10	03	0014	S21	W57	09	28.6		BG	EHO	490	19	11	3
4324		MANI	10	03	0150	S21	W69	09	27.8			EHO	1640	21	15	3
4324		ATHN	10	03	0800	S20	W65	09	28.4		BG	EHO	500	4	12	1
4324		RAMY	10	03	1255	S20	W66	09	28.5		BG	EHO	550	20	13	3
4324		BOUL	10	03	1343	S19	W66	09	28.5		B	DSO	200	9	10	2
4324	23843	MWIL	10	03	1450	S20	W69	09	28.3	5	(B)					
4324		PALE	10	03	1800	S20	W70	09	28.4		BG	EKO	450	21	14	3
4324		HOLL	10	03	2215	S20	W70	09	28.6		B	EKO	670	10	11	3
4324		LEAR	10	04	0020	S19	W71	09	28.6		BG	EHO	270	7	13	3
4324		ATHN	10	04	0700	S20	W75	09	28.6		BG	EHO	480	6	12	3
4324		RAMY	10	04	1349	S20	W84	09	28.2		B	CAO	60	3	11	4
4324		BOUL	10	04	1430	S20	W73	09	29.0		A	HSX	90	2	2	2
4324	23843	MWIL	10	04	1515	S20	W74	09	29.0	3	(AF)					
4324		PALE	10	04	1810	S21	W80	09	28.6		B	CSO	100	2	6	2
		LEAR	09	26	0050	S25	E52	09	30.1		A	AXX		1	1	4
		LEAR	10	02	0025	N05	W24	09	30.2		A	AXX		1	1	5
0007		LEAR	09	24	0033	N09	E82	09	30.2		A	AXX	10	1	1	4
0007		PALE	09	24	1750	N09	E78	09	30.6		A	AXX	10	1	1	3
0007		MANI	09	25	0327	N09	E75	09	30.8			AXX	20	1		2
0007		LEAR	09	26	0050	N08	E60	09	30.5		A	AXX		1	1	4
0007		RAMY	09	29	1152	N11	E13	09	30.5		A	AXX	20	4	2	4
0007		BOUL	09	30	1513	N09	W02	09	30.5		A	AXX	10	1		2
0007		LEAR	10	02	0025	N13	W20	09	30.5		B	BX	10	3	3	5
0007		LEAR	10	02	0025	N13	W20	09	30.5		B	BXO	10	3	3	5
4326		LEAR	09	24	0033	S17	E74	09	29.6		A	AXX		1	1	4
4326	23846	MWIL	09	24	1530	S15	E79	09	30.6	3	(AP)					
4326		RAMY	09	25	1205	S16	E67	09	30.6		A	AXX	30	1	1	4
4326		HOLL	09	25	1430	S15	E65	09	30.5		A	AXX		1		4
4326	23846	MWIL	09	25	1515	S15	E65	09	30.6	3	(AP)					
4326		LEAR	09	26	0050	S16	E59	09	30.5		A	AXX		1	1	4
4326		RAMY	09	26	1140	S15	E54	09	30.6		A	HRX	20	1	1	4
4326		BOUL	09	26	1339	S15	E52	09	30.5		A	AXX	10	1	1	3
4326		HOLL	09	26	1442	S16	E53	09	30.6		A	AXX		1		3
4326		RAMY	09	30	1145	S15	E06	09	30.9		B	BXO	10	2	2	4
4326		PALE	09	30	1840	S14	E02	09	30.9		A	AXX	10	2	1	3
4326		LEAR	10	02	0025	S15	W23	09	30.3		B	BXO		2	3	5

SUDDEN IONOSPHERIC DISTURBANCES

September 1983

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	1318	1325	1338	1	1		1				NF	
02	0743	0756	0830	1	1		2				NF	
02	0900	0915	0936	1	1		1				NF	
02	1240	1324	1542	2	1		1				NF	
02	1310	1325	1540	2	1		1				*	
02	1602	1611	1630	1	5	2	1			9	1605	4302
02	2253	2303	0021	2	5	3		1		7	2255	4302
03	1355	1400	1440	2	1		1				NF	
03	2236	2254	2358	1-	1			1			2230	4303
04	0334	0350	0400D	1-	1				1		0349	4304
04	0640	0711	0750	1	3		2				NF	
04	0810	0825	0840D	1-	1				1		NF	
04	1108	1110	1139	1	3		2				NF	
05	0304	0308	0316	1-	1			1			0305E	No data
05	0556	0606	0636	1-	1			1			0554	X-ray
05	1540	1541	1600	1	1					1	1536	X-ray
05	2005	2012	2106	1-	3	1		1		6	2007	X-ray
06	1139U	1158	1218	1-	1		1				NF	
06	1616	1618	1632	1-	1		1				NF	
07	0141	0149	0208	1-	1			1			0138	X-ray
08	0433	0442	0517	1-	1			1			0427	4307
08	1130	1140	1205	1-	1		1				NF	
10	1109	1150U	1253	1-	1		2				*	
10	2158	2211	2226	1-	1			1			2158	X-ray
11	0042	0050	0102U	1-	1				1		NF	
11	2349	0004	0019	1-	1				1		NF	
12	1415	1419	1435	1-	1		1				NF	
12	1615	1630	1800	1+	3	3				8	1619	4312
15	0452	0455	0521	1-	3			1	1	1	0452	4317
15	1413	1420	1530	2	5	3	1		1	8	1413E	4317
15	1421	1424	1429	1-	1	1					NF	
16	1155	1157	1215	1	3					2	*	
19	0846	0900	0933	1	1		1				NF	
20	0430		0445	1-	1		1				0428E	No data
20	1325	1340	1400	2	1					1	*	
20	2237	2242	2306	1-	1			1			*	
21	0017	0027	0050	1-	1			1			0016	X-ray
21	0145	0155	0314	1	3	1	1	1		1	0144	X-ray
21	0641	0647	0702	1-	1			1			0639	No data
22	0305	0314	0337	1-	1			1			0305	X-ray
22	0557	0601	0618	1-	1			1			NF	
23	0054	0102	0120	1-	1				1		0104	X-ray
23	1808	1812	1823	1-	3	2				7	1806	4324
24	0413	0420	0456	1-	1			1			0414	4324
25	0150	0218	0310	1-	3		1	1	1		0157E	No data
25	0209	0220	0250	1-	1				1		*	

SUDDEN IONOSPHERIC DISTURBANCES

September 1983

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
25	0500	0504	0522	1-	3		1	1			0501	4324
25	0524	0525	0546	1-	1			1			0524	4324
25	0618	0622	0648	1-	1			1			0613	X-ray
25	1925	1928	2020	1	3					3	1923	4324
25	2259	2305	2330	1-	1			1			2258	4324
26	1101	1113	1118	1	1		1				1055	4324
26	1156	1202	1220	1	1		1				1210	X-ray
27	0150E	0150	0215	1-	1				1		*	
27	0700	0707	0749	1	1		1				NF	
27	0941	0951	1041	1	1		1				*	
27	1148	1205	1248	1	1		1				NF	
28	0110	0116	0130U	1-	3			1	1		0112	4324
28	0640	0710	0650	1-	3		2				NF	
28	0750	0755	0810	1-	1		1				NF	
29	0523	0531	0606	1-	3			1	1	1	0519	4324
29	1434	1442	1515	1-	1		1				NF	
30	0318	0320	0332	1-	1				1		0319	4324
30	1437	1442	1514	1-	1		1				NF	

OBSERVATORIES REPORTING FOR SEPTEMBER 1983*

Ayrshire, Scotland (AY)	SES	Maui, Hawaii, USA (MI)	SWF
Darmstadt, GFR (DA)	SWF	Missoula, Montana, USA (A31)	SES, SWF
Farsta, Sweden (FA)	SES	Panska Ves, Czechoslovakia (PU)	SEA, SWF
Hiraiso, Japan (HI)	SWF	Patterson, New Jersey, USA (A46)	SES
Hobart, Tasmania, Australia (TA)	SEA	Portage, Michigan, USA (A51)	SES
Houston, Texas, USA (A50)	SES	San Antonio, Texas, USA (SA)	SES
Huancayo, Peru (HU)	SWF	St. Cloud, Minnesota, USA (SC)	SES
Inubo, Japan (IN)	SPA	Tavares, Florida, USA (A49)	SES
Juliusruh, GDR (JU)	SWF	Trenton, New Jersey, USA (NJ)	SES
Kuhlungsborn, GDR (KU)	SPA, SEA	Upice, Czechoslovakia (UI)	SEA
Lake Hiawatha, New Jersey, USA (A32)	SES	Valley Cottage, New York, USA (A01)	SES
Latrobe, Pennsylvania, USA (A19)	SES	Vsetin, Czechoslovakia (VS)	SEA
Lintong, China (LT)	SPA		

*Observations are not necessarily continuous for each reporting station.

SIDs by NOAA/SESC REGION

September 1983

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																															
4302		2																													
4303			1																												
4304				1																											
4307								1																							
4312												1																			
4317															2																
4324																							1	1	4	1		1	1	1	
X-Ray					3		1			1											2	1	1		1	1					
No Flare	1	3	1	3		2		1			2	1			1				1			1					2	2	1	1	
No Flare Patrol		1								1						1				2					1		2				
No Data					1															1	1				1						
Event Totals	1	6	3	4	4	2	1	2		2	2	2			3	1			1	3	3	2	2	1	7	2	4	3	2	2	

SOLAR RADIO EMISSION
SPECTRAL OBSERVATIONS

SEPTEMBER 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			SGMR				1521.0	1645.5	1				CONT
	0517	1726	WEIS				1521.7	1521.9	1				III B
02	0518	0911	WEIS										
	0915	1725	WEIS				1040.7	1041.0	1				III B
			WEIS				1126.8	1126.9	1				III B
			WEIS				1234.3	1234.4	1				III B
			WEIS				1235.8	1235.9	1				III B
			SGMR				1416.8	1417.1	1				V
			WEIS				1417.1	1417.3	2				III B
			PALE				1952.8	2002.1	2				III
			SGMR				2001.6	2002.1	1				V
	2033	2400	CULG				2043.0	2950.0	1				III N
			CULG				2201.0	2201.5	2				III G
			CULG				2236.0	2237.0	1				POSS II
			CULG				2241.0	2242.0	3				III G
03	0000	0731	CULG				0103.5	0104.0	3	0103.5	0104.0	2	III G
			LEAR				0103.5	0103.8	1				III
			CULG				0136.0	0257.5	1	0144.0	0257.5	1	III N
			LEAR				0136.3	0137.1	1				III
			LEAR				0143.8	0145.0	1				V
			LEAR				0238.3	0257.6	1				V
			CULG				0256.0	0256.5	3				III G
	0519	1708	WEIS				0609.0	0609.6	2				III G
			LEAR				0708.8	0709.5	1				V
			CULG				0709.0	0709.5	2				III G
			LEAR				0801.1	0808.1	2				III
			WEIS				0801.7	0808.6	3				III GG
			WEIS				0805.1	0808.3	3				III GG
			LEAR				0817.6	0818.6	1				III
			WEIS				0817.7	0818.7	2				III G
			WEIS				1240.6	1240.9	1				III G
			WEIS				1407.9	1408.6	1				III G
	2109	2400	CULG				2232.0	2238.0	2				III GG
			CULG	2235.5	2238.0	1							CONT P
			CULG				2240.5	2244.5	1				IS
04	0000	0730	CULG	0208.5	0209.5	2	0208.5	0209.5	2				III GG
			LEAR				0208.5	0208.6	1				III
			CULG	0444.5		1	0444.5		1				III B
			CULG				0601.5	0602.0	1				III G
			LEAR				0601.8	0602.1	1				III
	0520	1721	WEIS				0601.9	0602.2	1				III G
			LEAR				0804.1	0804.3	1				III.
			WEIS				0804.1	0804.3	1				III G
			LEAR				0857.8	0858.8	1				III
			WEIS				0858.0	0858.8	3				III G
			WEIS				0936.8	0937.6	3				III G
			LEAR				0937.0	0937.5	1				III
			WEIS				1002.8	1003.3	3				III G
			WEIS				1456.6	1456.8	1				III B
			WEIS				1632.8	1633.1	1				III G
			PALE				1948.6	1949.3	1				III
			SGMR				1948.8	1949.3	1				V
			PALE				2038.3	2038.6	1				III
			SGMR				2038.3	2038.6	1				V
	2115	2400	CULG	2220.5		2	2220.5		2				III G
			CULG	2223.5		3	2223.5		3				III G,U
			CULG				2226.0	2227.0	1				III G
			CULG				2347.0	2348.0	1				III G
			LEAR				2347.6	2347.8	1				III
05	0000	0730	CULG				0352.0		1				III B
			CULG				0419.5		2				III B
			CULG	0440.5	0441.5	3	0440.5	0441.5	3				III G,V
			LEAR				0440.8	0441.3	1				III
			CULG				0536.0		1				III B,U
			WEIS				0553.0	0615.0	1				I
			CULG				0653.0	0654.0	3				III G,U
			LEAR				0653.1	0653.5	1				III

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05			LEAR				0800.8	0803.1	1				III
	0521	1203	WEIS				0801.9	0803.2	2				IIIG
			LEAR				0831.1	0832.6	2				III
			WEIS				0831.3	0832.7	3				IIIGG
			LEAR				0849.3	0850.1	1				III
			WEIS				0849.4	0850.0	2				IIIG
			WEIS				0912.4	0913.0	3				IIIG
	1307	1721	WEIS										
			PALE				1820.8	1821.6	1				V
			SGMR				1820.8	1821.8	1				V
	2031	2400	CULG				2213.0	2215.0	1				IIIG
			CULG				2215.5		2				IIIB
			CULG				2344.5	2345.0	2				IIIB,U
			LEAR				2344.6	2345.0	1				III
06	0000	0730	CULG	0113.5	0114.5	2	0113.5	0114.5	3				IIIG,U
			LEAR				0113.6	0114.5	1				III
			CULG	0127.0	0127.5	1							IS
			LEAR				0127.3	0130.1	2				III
			CULG				0127.5	0128.5	3				IIIG,V
			PALE				0127.5	0128.3	2				III
			CULG	0129.5	0130.0	1	0129.5	0130.0	2				IIIG
			CULG				0359.0		1				IIIB
			CULG				0511.3	0512.0	2				IIIG
			CULG				0537.0	0538.5	2				IIIG,V
			LEAR				0537.5	0538.8	1				III
	0522	1719	WEIS				0654.4	0654.6	1				IIIB
			CULG				0654.5	0708.5	1				IIIN
			WEIS				1159.9	1200.3	1				IIIG
			WEIS				1225.6	1225.9	2				IIIB
			WEIS				1436.7	1436.8	2				IIIB
			SGMR				1441.0	1441.6	1				V
			WEIS				1441.2	1441.9	3				IIIG
			WEIS				1606.8	1607.0	2				IIIB
			WEIS				1609.8	1610.4	3				IIIG
	2030	2400	CULG				2211.0	2212.0	1				IIIG
07	0000	0730	CULG				0010.0	0010.5	1				IIIB
			CULG				0246.5	0247.0	1				DC
	0522	0922	WEIS				0813.9	0814.0	1				IIIB
	0927	1716	WEIS										
	2031	2400	CULG										
08			LEAR				0138.3	0139.1	1				III
	0000	0730	CULG				0138.5	0139.0	2	0139.0	0139.5	1	IIIG
	0526	1526	WEIS				1312.6	1312.7	1				IIIB
			WEIS				1324.3	1325.6	1				IIIG
			SGMR				1324.6	1325.0	1				V
			WEIS				1329.4	1329.7	1				IIIB
	1533	1715	WEIS										
	2030	2400	CULG										
09	0000	0631	CULG				0324.0		1				IIIB
	0525	1712	WEIS										
	2030	2400	CULG										
10	0000	0651	CULG	0416.0	0416.5	1							IIIG
	0527	1159	WEIS										
	1513	1711	WEIS										
	2029	2400	CULG										
11	0000	0729	CULG										
	0529	1709	WEIS										
	2029	2400	CULG										
12	0000	0725	CULG				0157.5		1				IIIB
	0530	1649	WEIS				1259.2	1259.7	2				IIIG,U
	2029	2400	CULG										
13	0000	0728	CULG				0318.0		1				IIIB
	0620	1705	WEIS				1113.2	1114.6	3				IIIGG,U

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13	2028	2400	CULG				2213.0		2				III B
14	0000	0728	CULG				0026.5	0027.0	1				III G,U
			LEAR				0026.8	0027.1	1				III
	0532	0950	WEIS				0935.1	0937.9	3				DCIM,RS
			WEIS				0935.3	0939.7	3				III GG/V
			LEAR				0935.6	0939.1	1			II	
	0954	1703	WEIS				1440.7	1441.4	1				III G
	2028	2400	CULG	2149.0	2400.0								IS,W
15	0000	0727	CULG	0000.0	0285.0								IS,W
			CULG				0008.0	0057.0	1				IN
			LEAR				0056.8	0057.3	1				III
			CULG				0057.0		1	0057.0		1	III B
			CULG	0128.5	0305.0	1							IS
			CULG				0231.0	0232.0	1				III G
			CULG	0305.0	0420.0	1							IN
			CULG	0450.5	0454.5	3	0450.5	0454.5	3				III G,U,V
			LEAR				0450.6	0455.1	2				III
			CULG	0451.0	0452.5	2							CONT
			CULG				0458.5	0725.0	1				IS,C
			LEAR				0458.6	0459.8	1				III
			CULG				0459.0		1				III B
	0534	1701	WEIS				0825.2	0826.1	1				III GG
			WEIS				0901.2	0902.3	2				III G
			WEIS				0938.3	0938.6	2				III G
			WEIS				0940.3	0940.7	1				III G
			WEIS				1010.3	1010.6	1				III B
			WEIS				1057.8	1058.0	1				III B
			WEIS				1108.7	1108.9	1				III B
			WEIS				1112.9	1113.6	3				III G
			WEIS				1115.3	1115.7	1				III G
			WEIS				1138.3	1141.8	3				III GG
			SGMR				1140.0	1141.3	1				V
			WEIS				1148.2	1148.3	1				III B
			WEIS				1222.7	1222.9	1				III B
			WEIS				1412.8	1418.7	3				III GG/V
			SGMR				1413.3	1417.0	2				V
			WEIS				1417.2	1418.7	2				III GG
			WEIS				1419.9	1424.7	3				III GG,DCIM
			SGMR				1422.8	1423.1	1				III
			WEIS				1426.3	1426.5	2				DCIM
			WEIS				1428.0	1621.0	2				III N
			SGMR				1434.0	1549.5	1				CONT
			PALE				1811.6	1811.8	1				III
			SGMR				1811.8	1812.0	1				III
	2027	2400	CULG	2027.0	2400.0	1	2027.0	2339.5	1				IS
			CULG				2049.0		1				III B
			CULG				2124.0		1				III B
16	0000	0727	CULG	0000.0	0727.0	1							IS
			CULG				0156.0	0720.0	1				IN
			CULG				0222.0	0602.5	1				III N
			LEAR				0222.0	0222.1	1				III
			LEAR				0236.8	0237.1	1				III
			CULG				0418.0		2				III B,U
			LEAR				0419.8	0420.1	1				III
	0556	0719	WEIS										
			CULG				0721.5	0727.00					III S,W
			LEAR				0740.5	0740.6	1				III
	0724	1700	WEIS				0740.6	0740.8	1				III G
			LEAR				0906.1	0907.3	1				III
			LEAR				0923.0	0923.6	1				III
			WEIS				0923.0	0924.7	2				III GG
			WEIS				0945.7	0945.9	1				III G
			CULG	2026.5	2354.0	1	2026.5	2346.0	1				IS,C
	2026	2400	CULG				2026.5	2046.0	2				III S
			CULG				2038.5	2044.0	2				IS,DC
			CULG				2046.0	2127.5					III S,W
			CULG				2046.0	2250.0	1				III N
			CULG				2149.0	2149.5	2				III G

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17	0000	0726	CULG	0000.0	0725.0	1	0003.5	0705.0	1				IN
	0537	0755	WEIS										
			CULG				0659.5		1				IIIB
	0805	1658	WEIS				1023.4	1023.5	1				IIIB
			WEIS				1026.7	1026.8	1				IIIB
			WEIS				1120.7	1120.8	1				IIIB
			WEIS				1154.3	1154.4	1				IIIB
			WEIS				1339.8	1339.9	1				IIIB
			WEIS				1341.2	1341.6	1				IIIG
			WEIS				1622.7	1622.8	2				IIIB
	2027	2400	CULG										
18			LEAR				0340.8	0341.0	1				III
	0000	0719	CULG				0341.0		1				IIIB
			CULG	0345.0	0351.0	1							IS
			CULG				0440.0	0503.0	1				IN
			CULG				0454.0		1				IIIB
	0538	1656	WEIS				1013.8	1013.9	2				IIIG
			WEIS				1031.3	1031.4	1				IIIB
			WEIS				1348.5	1348.6	1				IIIB
			WEIS				1403.3	1403.8	2				IIIG
			WEIS				1423.4	1423.5	1				IIIB
			WEIS				1546.2	1546.3	2				IIIB
			WEIS				1555.4	1555.5	2				IIIB
			PALE				1821.8	1826.8	1				III
			SGMR				1821.8	1822.1	1				V
			SGMR				1826.3	1826.6	1				V
			SGMR				1924.8	1926.0	1				V
			PALE				1947.3	1947.5	2				III
			SGMR				1947.3	1947.6	1				III
	2026	2400	CULG				2034.0	2201.0					IS,W
			CULG				2055.5	2310.5	1				IN
			CULG				2056.0	2209.0	1				IIIN
			CULG				2119.5		2				IIIB
19	0000	0726	CULG				0041.0	0042.0	1				IS
			CULG				0424.5		1				IIIB
			SGMR				1125.3	1125.5	1				III
	0547	1654	WEIS				1125.4	1125.9	3				IIIG
	2025	2400	CULG										
20	0000	0725	CULG				0429.5	0605.5	1				IS
			CULG				0616.0		2				IIIB
	0541	1430	WEIS				0934.0	0934.2	1				IIIB
			SGMR				1321.0	1322.0	1				V
			SGMR				1336.0	1337.0	1				V
	1434	1652	WEIS				1336.7	1637.7	2				IIIG
			SGMR				1539.6	1541.0	1				V
			WEIS				1540.0	1541.9	2				IIIG
			SGMR				1614.6	1617.1	2				V
			WEIS				1614.9	1617.2	3				IIIG/V
	2025	2400	CULG				2151.0		1				IIIB
			LEAR				2351.5	2353.3	1				III
21	0000	0725	CULG				0243.5	0244.0	2				IIIG
			LEAR				0243.6	0244.1	1				III
			LEAR				0400.8	0402.6	1				III
			CULG				0404.5	0403.0	1				IIIG
			CULG				0411.5	0412.0	1				IIIG
			CULG	0414.5	0415.5	1	0414.0	0417.0	3				IIIG
			LEAR				0414.8	0417.3	1				III
			LEAR				0442.3	0443.0	1				III
			CULG				0443.0		2				IIIB
			CULG				0647.5	0725.00	1				IS
			LEAR				0648.3	0648.6	2				III
			CULG				0648.5		2				IIIG
	0542	1648	WEIS				0648.6	0648.8	2				IIIG
			WEIS				1520.4	1520.7	2				IIIG
	2025	2400	CULG				2045.0	2230.0	1				IS
22	0000	0720	CULG										

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22			LEAR				0130.0	0730.0	1				CONT
	0546	1220	WEIS				1018.3	1019.4	3				III G
	1225	1650	WEIS				1232.0	1603.0	2				III N
	2025	2400	CULG				2027.0	2335.5					III S,W
			CULG				2048.0	2232.0					IS,W
23	0000	0724	CULG				0009.0	0706.0	1				III N
			CULG				0109.0		2				III B
			LEAR				0330.0	0830.0	1				CONT
	0545	1259	WEIS				0636.0	1629.0	2				III N
			LEAR				0928.3	0928.6	1				III
			SGMR				1315.3	1315.5	1				V
	1329	1645	WEIS										
			SGMR				1726.0	1729.0	1				V
	2024	2400	CULG				2024.0	2130.0	2				IS,C,DC
			CULG				2031.0	2129.0					III S,W
			CULG				2049.5	2358.0	1				III N
			CULG				2102.0		2				III B
			CULG				2130.0	2301.0	1				IN
			LEAR				2330.0	0000.0	1				CONT
			LEAR				2339.3	2345.3	1				III
24			LEAR				0137.5	0146.1	1				III
			LEAR				0224.8	0241.1	1				G
	0000	0924	CULG				0431.5		1				III B
	0548	1020	WEIS				0645.0	1553.0	1				III N
			CULG				0650.0		1				III G
	1025	1643	WEIS										
	2024	2400	CULG										
25			LEAR				0156.0	0730.0	1				CONT
	0000	0723	CULG				0205.0	0228.0					III S,W
			CULG				0211.0	0220.5	1				III N
			CULG				0223.0	0255.0	2				IS,C
			CULG				0255.0	0416.5	1				IS,C
	0546	1641	WEIS				1148.6	1148.8	2				III B
			WEIS				1211.8	1212.0	1				III B
			WEIS				1239.5	1239.6	2				III B
			WEIS				1254.6	1254.8	1				III B
			WEIS				1534.7	1534.8	2				III B
	2023	2400	CULG				2023.0	2228.0	1				IS
			LEAR				2355.0	1004.0	1				CONT
26	0000	0923	CULG										
	0551	0808	WEIS				0702.8	0702.9	1				III B
			WEIS				0749.1	0749.2	1				III B
	0846	1639	WEIS				1018.0	1625.0	1				III N
	2023	2400	CULG				2114.0	2259.0	2				IS
			LEAR				2226.0	1004.0	1				CONT
27	0000	0719	CULG				0007.5	0708.5	1				III N
	0550	1503	WEIS				0641.0	1502.0	2				III N,RS
	2023	2400	CULG				2023.0	2352.0					III S,W
			CULG				2036.5	2347.0	1				S,RSDP
			CULG				2059.5		1				III B
			LEAR				2225.0	1004.0	1				CONT
28	0000	0722	CULG	0055.0	0713.0	1							IS
			CULG				0108.0	0324.5	1				RSDP,N
			CULG				0122.5	0548.0	1				III N
			CULG				0127.5	0335.0					III S,W
	0553	0720	WEIS										
			CULG				0616.5	0722.5					IS,W
			CULG				0635.5	0722.5					III S,W
	0726	1635	WEIS				0726.0	1635.0	2				III S,DP,RS
			SGMR				1308.8	2211.0	1				CONT
			WEIS				1532.0	1607.0	1				CONT,P
			PALE				1657.0	0342.0	1				CONT
			CULG				2022.5	2400.0	1				S,RSDP
	2022	2400	CULG				2022.5	2400.0					III S,W
			CULG	2148.5	2400.0	1	2022.5	2400.0	3				IS,C,DC

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28		LEAR				2224.0	1005.0	1				CONT
29		CULG				0000.0	0054.0	3				IS,C,DC
0000	0722	CULG				0000.0	0722.0					IIIS,W
		CULG				0002.0	0427.0	1				RSDP,N
		CULG				0035.0	0449.5	1				IIIN
		CULG	0332.0	0722.0	1	0054.0	0722.0	2				IS,C,DC
		CULG				0436.5	0438.0	3				IIIG
		LEAR				0437.3	0438.3	2				III
		CULG				0527.5	0542.0	3				IIIG,N
		LEAR				0527.8	0528.1	1				III
0552	1400	WEIS				0552.0	1022.0	3				IS,DC
		WEIS				0558.0	1400.0					IIIS,DP,RS
		SGMR				1152.0	0000.0	1				CONT
		PALE				1702.0	0348.0	1				CONT
		CULG				2211.0	2400.0	1				S,RSDP
2211	2400	CULG				2211.0	2400.0					IIIS,W
		CULG	2225.0	2350.0	1	2255.0	2400.0	1				IS
		CULG				2226.0	2352.0	1				IIIN
30		CULG				0000.0	0720.0	1				S,RSDP
		CULG				0000.0	0722.0					IIIS,W
0000	0722	CULG				0000.0	0722.0	1				IS
		CULG				0011.0	0702.5	1				IIIN
		CULG				0139.5	0147.5	2				IIIN
		CULG	0413.0	0722.0	1							IS
		LEAR				0816.6	0818.1	2				III
		LEAR				0829.5	0830.1	2				III
0835	1120	WEIS				0837.0	1629.0	2				IIIS,DP,RS
1124	1631	WEIS										
		SGMR				1309.0	1548.8	1				CONT
		CULG				2022.0	2038.0	1				RSDP,N
2022	2400	CULG	2022.0	2241.5	1	2022.0	2400.0	2				IS,C,DC
		CULG				2050.0	2120.5	1				IIIN

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

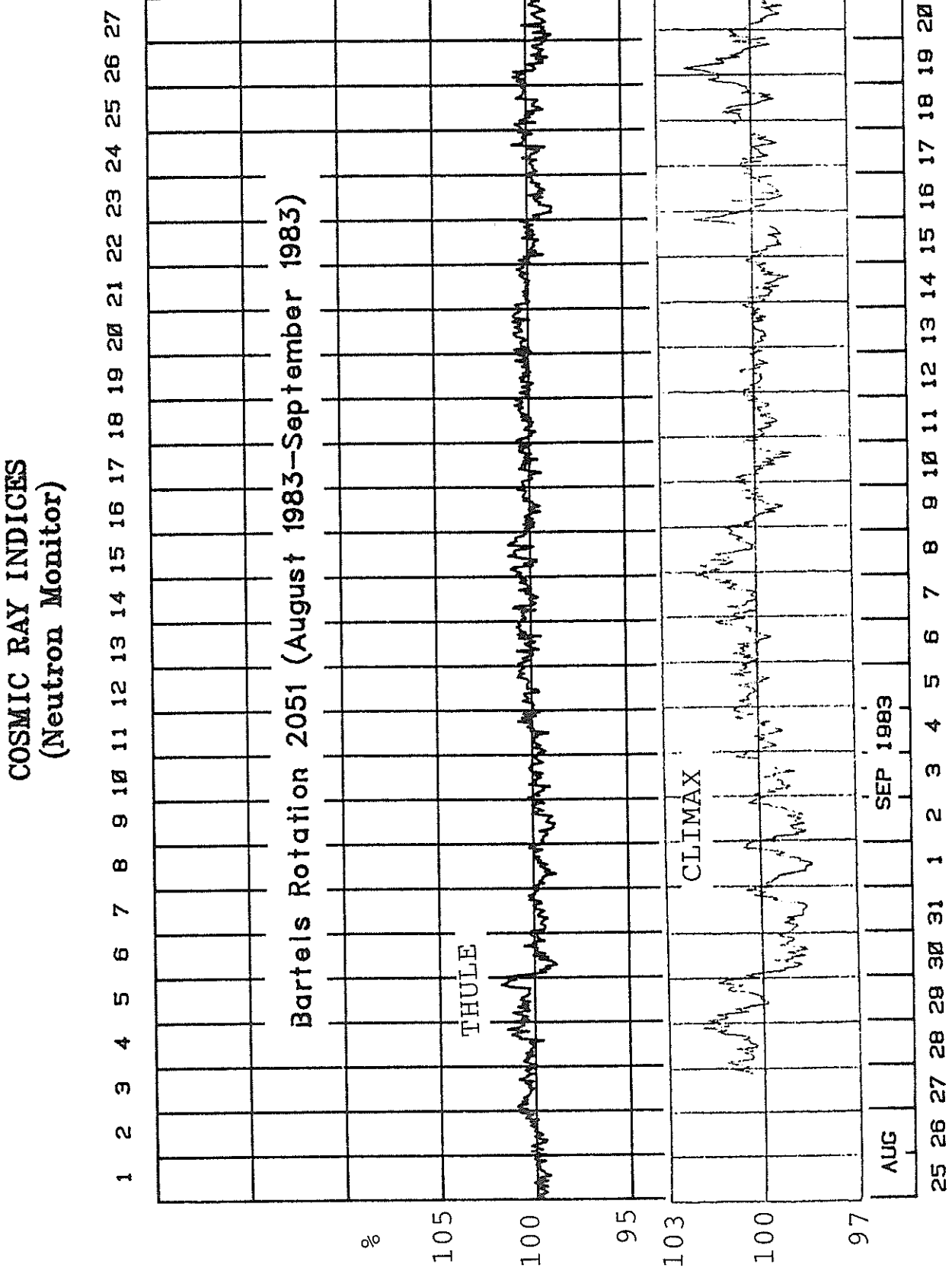
B = Single burst
G = Small group (< 10) of bursts
GG = Large group (> 10) of burst
C = Underlying continuum (particularly with Type I)
S = Storm in the sense of intermittent but apparently connected activity
N = Intermittent activity in this period
U = U-shaped burst of Type III
RS = Reverse slope burst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

SEPTEMBER 1983

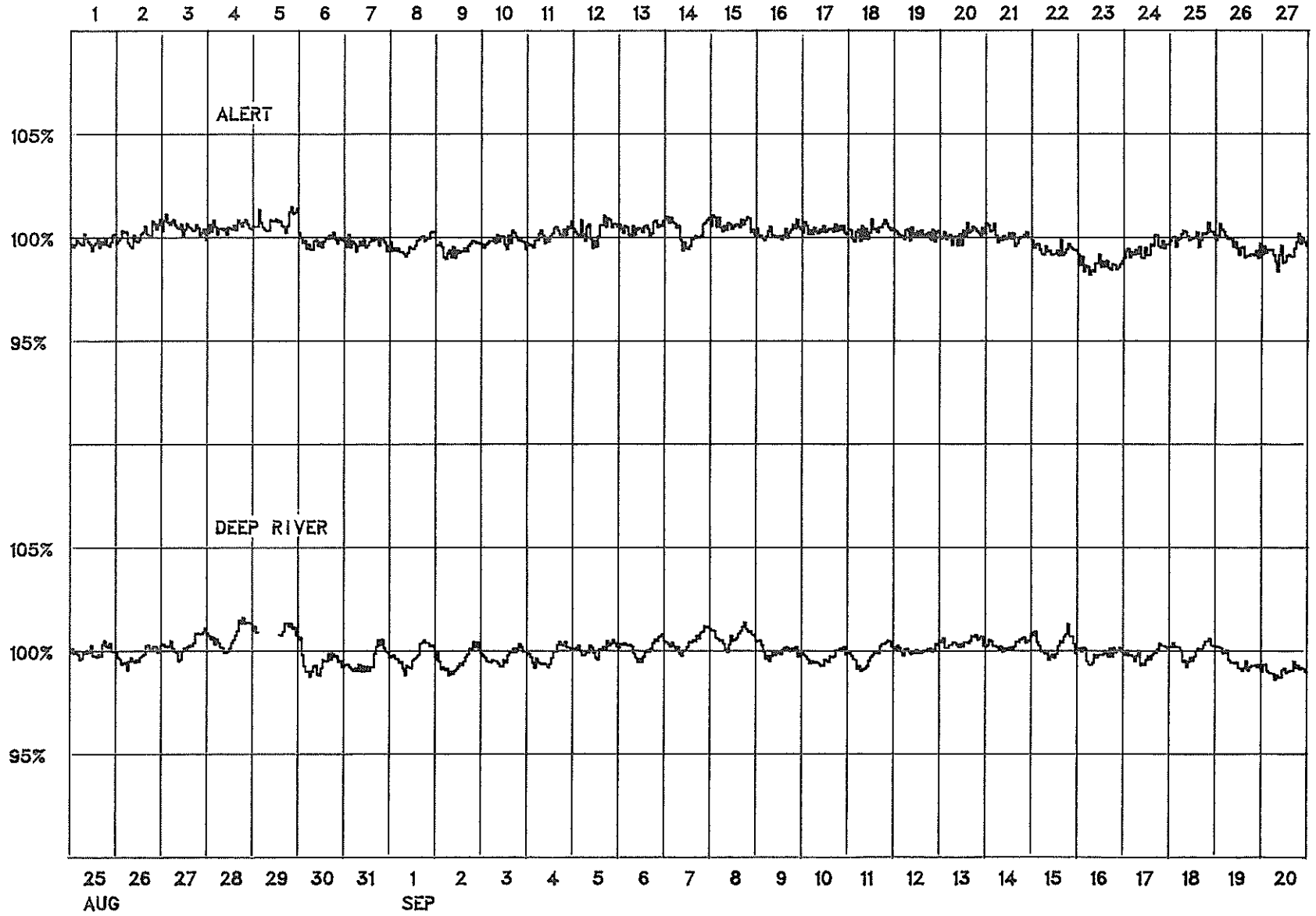
Day	THULE Average (cts/h)/100	ALERT Average (cts/h)/100	DEEP RIVER Average (cts/h)/300	KIEL Average (cts/h)/100	CLIMAX Average (cts/h)/100	TOKYO Average (cts/h)/256
1	4172	6740.3	6400.7		3768.5	
2	4165	6726.3	6385.7		3764.5	
3	4178	6752.0	6398.7		3780.2	
4	4182	6769.2	6402.1		3792.4	
5	4197	6786.6	6422.1		3803.7	
6	4199	6792.1	6425.5		3805.0	
7	4197	6781.3	6444.2		3817.3	
8	4209	6804.0	6461.7		3823.5	
9	4189	6778.2	6416.2		3791.2	
10	4193	6787.9	6395.1		3786.3	
11	4196	6786.3	6402.2		3784.1	
12	4194	6774.3	6418.2		3790.7	
13	4205	6772.0	6443.5		3787.8	
14	4194	6768.9	6435.5		3777.4	
15	4180	6723.3	6435.1		3787.8	
16	4160	6672.7	6406.8		3782.1	
17	4181	6724.5	6405.7		3787.6	
18	4184	6766.7	6418.2		3803.4	
19	4171	6737.1	6385.4		3815.8	
20	4158	6717.0	6354.2		3777.8	
21	4174	6779.3	6384.4		3791.3	
22	4191	6796.2	6429.5		3791.2	
23	4201	6799.0	6463.2		3805.3	
24	4204	6812.0	6460.9		3792.0	
25	4198	6769.5	6455.0		3810.7	
26	4216	6800.5	6459.1		3830.7	
27	4220	6814.9	6454.0		3836.6	
28	4217	6809.8	6463.7		3835.4	
29	4207	6804.9	6452.5		3834.7	
30	4197	6784.5	6441.4		3820.5	
Mean	4191	6771.1	6424.0		3799.4	

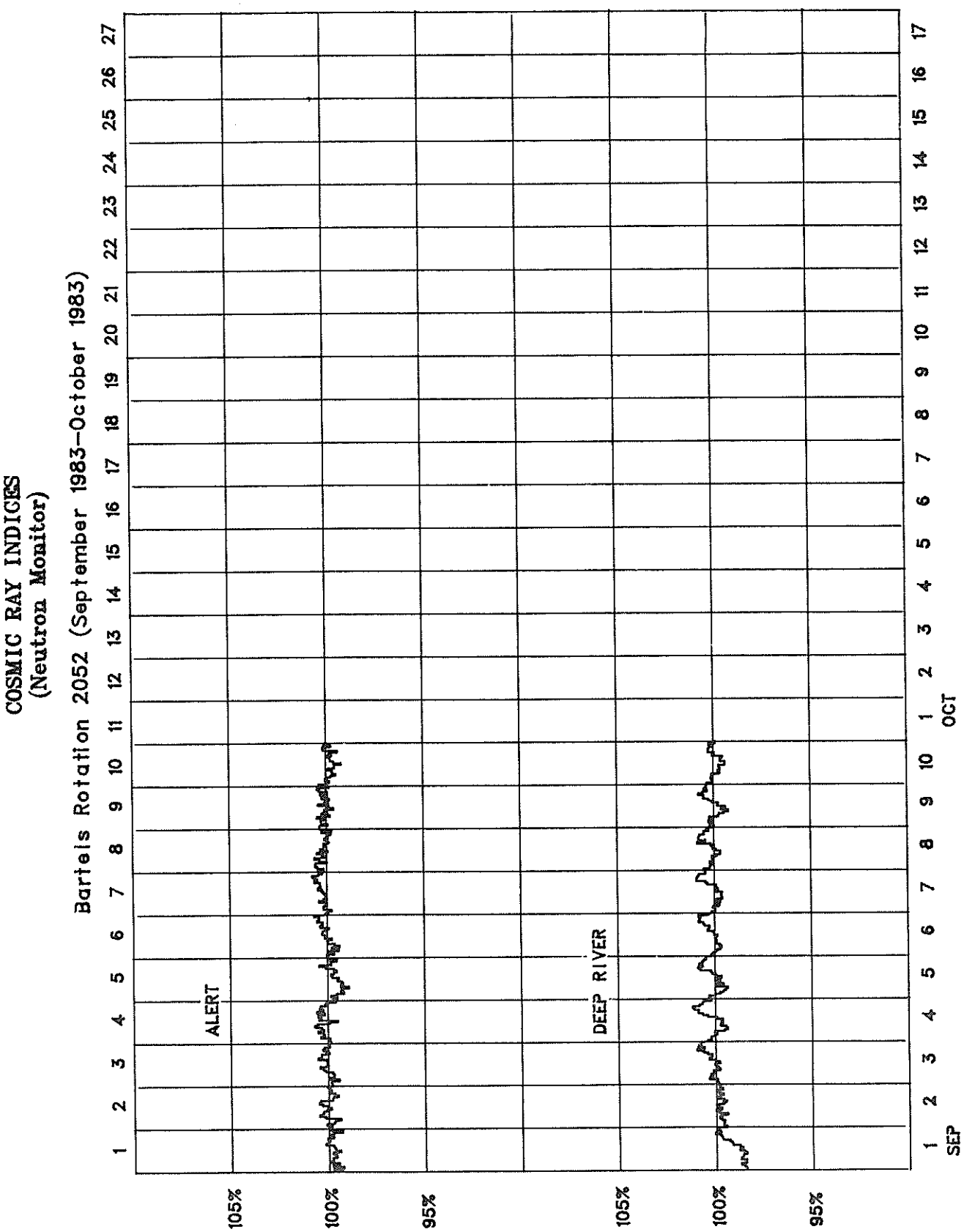
For less than 24-hour coverage, parentheses enclose the number of hours for which data are available.
For Climax and Huancayo, parenthese enclose the number of section hours whenever the sum of both sections falls below 40 hours.


COSMIC RAY INDICES
(Neutron Monitor)
Bartels Rotation 2051 (August 1983–September 1983)
THULE
CLIMAX
%
105
100
95
103
100
97
AUG
SEP 1983
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
25 26 27 28 29 30 31 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20

COSMIC RAY INDICES
(Neutron Monitor)

Bartels Rotation 2051 (August 1983–September 1983)




COSMIC RAY INDICES
(Neutron Monitor)
Bartels Rotation 2052 (September 1983–October 1983)
ALERT
DEEP RIVER
105%
100%
95%
SEP
OCT

GEOMAGNETIC ACTIVITY INDICES

SEPTEMBER 1983

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	Am	N	aa Provisional S	M		
1		4+	5-	2-	3-	2+	2+	3	3-	24-	17	0.9									29	29	22	29	22	
2	Q8	2	2-	1+	1+	1	2	2	2+	14-	6	0.3				D					12	14	11	10	15	C
3	Q6	2	2+	2+	1-	1+	1+	1	0+	11+	6	0.2				A					11	12	8	11	9	CC
4	Q2	1-	0	0+	1-	0+	0+	1+	2-	5+	3	0.1				T					5	8	5	4	9	CC
5	Q3	2-	0+	0	0	1	1	1+	2-	7	3	0.1				A					5	9	4	5	8	CC
6	Q5	2	2	1	1	1	1+	2-	2-	12-	5	0.2				N					11	13	7	9	11	CC
7		2-	2	2	4-	4+	5+	4	3	26	22	1.1				O					30	46	24	19	52	
8		2+	2	4-	4-	3+	3-	3+	3-	24-	15	0.8				T					28	29	21	23	28	
9	Q9A	3	3-	2+	3	3	3	4	4-	25-	16	0.9									25	31	23	24	31	
10		3+	2	2	3-	2+	3-	3+	2+	21-	12	0.7				A					20	24	18	18	25	
																V										
11		3+	2	2	3-	3-	3-	4-	2+	21+	12	0.7				A					20	27	16	19	25	
12		2+	3	3+	3+	4-	1	2-	2+	21-	13	0.7				I					25	21	25	25	21	
13	Q9A	3-	2-	2	1+	2+	2-	1	2+	15	7	0.4				L					18	14	16	13	18	
14	Q7	2	1+	2	1	1+	2+	2-	2	14-	6	0.3				A					11	17	12	11	19	
15		3+	2	3	3-	2	5-	5-	4+	27-	21	1.1				B					39	39	39	23	55	
																L										
16	D4	3-	4	4+	4-	4	5-	4	3+	31-	26	1.2				E					46	31	47	37	41	
17	D5	4	5+	5	4-	2	3+	3-	3-	29-	25	1.2									37	43	33	51	25	
18		3	3-	2+	2-	2	2+	3	3+	20+	11	0.7				A					19	27	16	16	28	
19	D1	5-	5	4	5-	5	5-	6+	6+	41-	54	1.6				T					67	76	50	36	91	
20		4+	4+	3+	3+	4	4	3-	2+	28+	22	1.1									36	40	28	33	36	
																T										
21		3+	3-	3+	1+	2+	3-	1+	2+	19+	11	0.6				I					21	23	18	18	24	
22		3+	3-	3+	4+	2	2-	1	2	20+	13	0.7				M					21	24	21	31	14	
23	Q4	1	1	0+	1+	2-	1+	1-	1	8+	4	0.1				E					7	9	8	7	11	CC
24		3	1+	1	2-	3-	3	2-	2+	17-	9	0.5									16	18	20	14	24	
25	D2	5-	4+	4-	3+	4+	5+	5-	4	34+	33	1.3				O					46	62	36	36	62	
																F										
26	D3	5	5+	5-	4+	3+	2	2+	3-	30-	28	1.2									42	40	43	58	25	
27		4	2+	2+	3-	3-	2	2	4-	22-	13	0.8				P					23	23	17	18	23	
28		4	3	1-	1+	2+	2+	2	2+	18	10	0.6				U					21	23	17	20	21	
29	Q10A	4-	3+	1	2	1-	1-	1+	1+	14	8	0.5				B.					14	13	10	16	7	CK
30	Q1	1-	0	0+	1-	1	0+	1-	1+	5	3	0.0									5	7	5	4	8	CC
Mean											14	0.7									24	26	21		24	

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									30									27	110.5*	46	42	57	T	-
2					D				14					D				10	110.9	56	46	58	T	-
3					A				13					A				8	106.4	59	56	53	T	-
4					T				5					T				4	110.5	69	64	57	T	-
5					A				7					A				4	117.6	81	83	65	T	-
6					N				11					N				10	120.7	78	79	68	T	-
7					O				36					O				24	118.6	72	72	66	A	-
8					T				32					T				23	118.5	72	67	66	AT	-
9									26									24	115.3	74	64	63	T	-
10					A				21					A				20	109.7	77	67	56	T	-
					V									V										
11					A				21					A				19	110.5	65	45	57	T	-
12					I				28					I				23	104.9*	41	33	51	A	-
13					L				17					L				18	104.4	36	36	51	AT	-
14					A				12					A				11	105.3	36	31	52	T	-
15					B				40					B				37	106.3*	42	35	53	AT	-
					L									L										
16					E				52					E				41	106.3*	38	34	53	A	-
17									40									33	105.1	35	34	52	A	-
18					A				20					A				18	102.5	45	45	49	A	-
19					T				71					T				64	101.2	40	36	47	A	-
20									41									30	100.4	32	31	46	AT	-
					T									T										
21					I				22					I				20	103.0	38	34	49	A	-
22					M				22					M				20	106.0	38	40	52	AT	-
23					E				7					E				8	112.6	42	44	60	T	-
24									16									16	111.8	46	37	59	AT	-
25					O				46					O				47	110.5*	45	39	57	T	-
					F									F										
26									42									42	114.6*	50	45	62	T	-
27					P				23					P				23	119.8	46	53	67	T	-
28					U				19					U				23	114.8	48	51	62	T	-
29					B.				15					B.				13	114.5	48	45	62	-	-
30									5									4	113.0*	33	33	60	-	-
Mean									25									22	110.2	51	47	57		

DAILY AVERAGE INDICES Ap

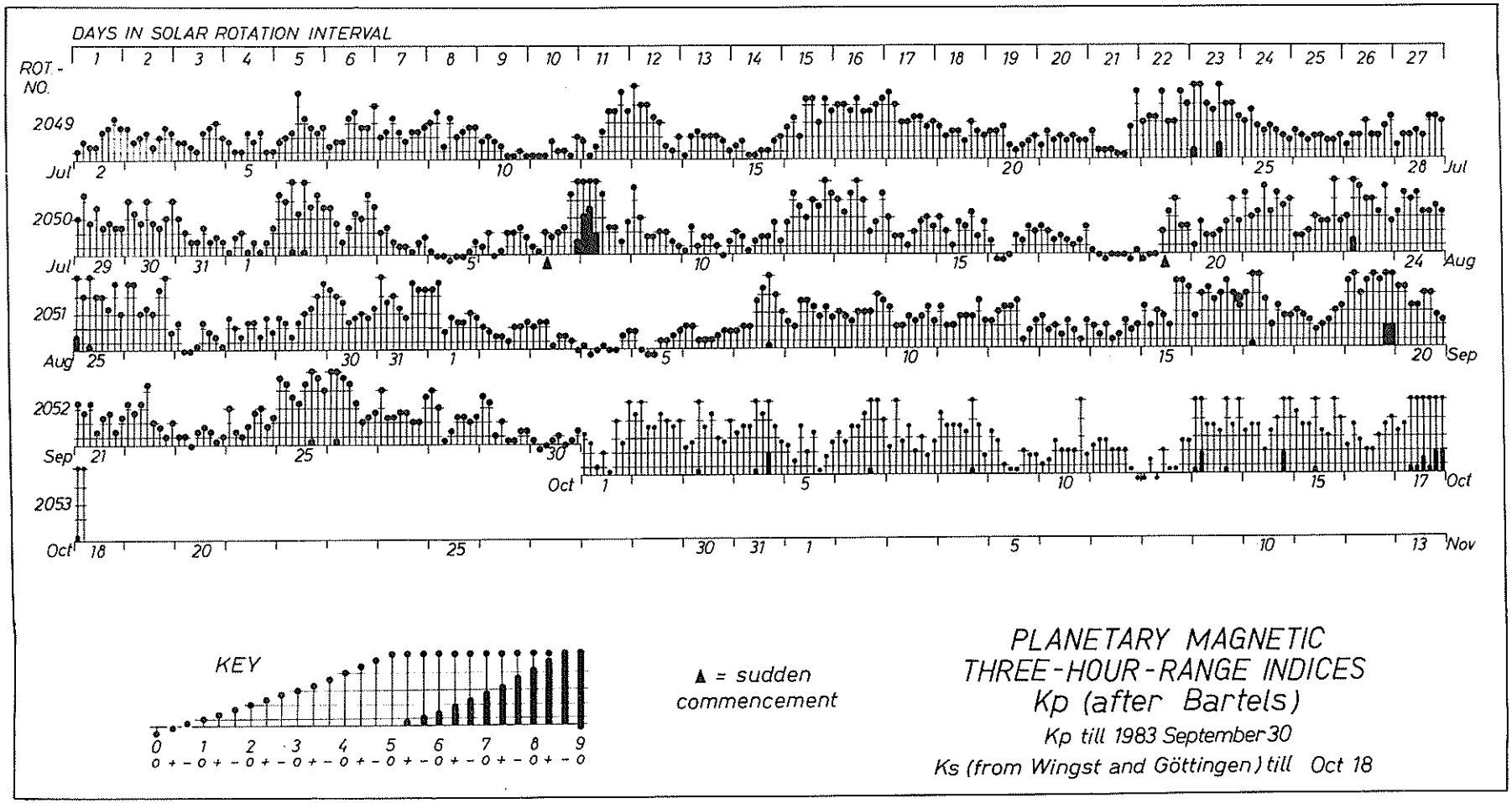
DAY	1982 OCT	NOV	DEC	1983 JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	28	36	2	11	11	21	20	24	13	6	5	17
2	24	32	4	7	5	86	16	14	8	9	33	6
3	10	21	9	11	7	36	15	10	6	8	17	6
4	10	8	13	9	59	26	16	26	3	8	5	3
5	9	9	11	6	143	28	17	24	6	6	2	3
6	19	11	3	3	47	12	35	14	11	14	6	5
7	35	4	29	4	43	7	34	8	6	14	18	22
8	21	12	27	9	18	6	25	11	12	10	62	15
9	6	8	18	20	18	8	19	6	20	12	11	16
10	15	11	46	78	23	7	22	8	37	5	5	12
11	14	20	20	11	24	24	8	50	10	4	6	12
12	15	16	14	18	33	53	11	52	16	16	26	13
13	34	18	6	8	35	24	36	37	70	19	25	7
14	30	12	8	8	28	26	45	23	12	6	9	6
15	8	13	11	22	25	15	59	20	17	5	10	21
16	14	9	13	25	30	11	33	9	8	21	4	26
17	21	6	62	25	16	11	19	64	17	26	6	25
18	23	12	41	32	14	20	11	12	37	20	2	11
19	17	10	34	17	10	28	9	5	20	9	9	54
20	14	6	46	14	41	32	13	10	17	7	11	22
21	11	25	37	12	36	12	12	29	20	6	25	11
22	8	30	42	8	21	9	17	51	20	10	15	13
23	5	36	26	10	17	9	17	38	17	23	32	4
24	5	83	19	22	14	10	61	77	6	40	23	9
25	15	54	14	16	6	50	32	11	5	12	36	33
26	30	26	9	12	5	13	28	10	13	7	26	28
27	16	17	18	10	7	3	14	11	8	10	5	13
28	10	28	21	10	8	37	12	5	12	11	8	10
29	35	32	20	16		40	39	5	13	15	17	8
30	27	13	15	19		27	26	9	7	18	18	3
31	34		7	13		28		11		7	29	
MEAN	18	21	21	16	27	23	24	22	16	12	16	14

Footnote for GEOMAGNETIC ACTIVITY INDICES TABLE (see preceding page)

The Geophysikalisches Institut, University of Goettingen, prepares the quiet (Q) and disturbed (D) days, the geomagnetic planetary 3-hour-range indices (Kp), the average amplitude (Ap) and the magnetic character figures (Cp). The 10 most quiet days (Q1-Q10) and the five most disturbed days (D1-D5) are ordered from most quiet and from most disturbed, respectively. A and K mark quiet days that are not really quiet; an asterisk marks disturbed days that are not really disturbed. Geomagnetic 3-hour indices Km, Kn, Ks; daily mean values Am, An, As; and indices aa are prepared by M. Menvielle of the Institut de Physique du Globe, Paris, France. For the aa indices, daily north (N) and south (S) values and half-daily antipodal mean (M) values are given; quiet 24- and 48-hour intervals centered on 1200 UT are indicated by C if they are really quiet and by K if they are quiet with some slightly disturbed 3-hour periods.

Provisional sunspot numbers (Ri) are prepared by A. Koeckelenbergh, Observatoire Royal de Belgique, Bruxelles, Belgique. Sunspot numbers (Ra) are prepared by the American Association of Variable Star Observers. Sunspot numbers (Rs) are computed from the daily Sa values by WDC-A for Solar-Terrestrial Physics. The inferred interplanetary magnetic field (IMF) directions are prepared from Vostok observations for the first half-day by the Institute for Terrestrial Magnetism, Ionosphere and Radio Propagation, Moscow, USSR; and for the second half-day they are prepared from Thule observations by the Space Environment Services Center, NOAA, Boulder, Colorado, USA. T = toward sun, A = away from sun, * = effect doubtful or not discernable, - = missing data.

GEOMAGNETIC ACTIVITY INDICES



PRINCIPAL MAGNETIC STORMS

SEPTEMBER 1983

Sta	Geomag Lat	Commencement Day	Time (UT)	Type	SC Amplitudes D (Min)	H (Gamma)	Z (Gamma)	Maximum 3-Hour K Index Day(3-Hour Periods)	K	Ranges D (Min)	H (Gamma)	Z (Gamma)	End Day	Hour (UT)
HYB	07.6N	06	1800	..	..	..	..	07(6)	5	8	157	37	07	22
KGL	56.5S	07	0721	SC	1	8	- 2	07(6)	5	32	120	135	08	05
HYB	07.6N	08	0630	..	..	..	..	08(4,5)	4	9	89	46	10	06
HYB	07.6N	10	1400	..	..	..	..	12(4,5)	4	7	85	44	12	16
GUA	04.0N	11	2331	..	..	..	..	12(5)	5	10	100	50	12	16
COL	64.6N	15	16--	..	..	..	..	17(3)	7	183	1210	930	17	11
FRD	49.6N	15	----	..	..	..	..	19(8)	6	28	123	82	22	--
BJI	28.5N	15	01--	..	..	..	..	16(5)	6	11	110	26	17	19
HYB	07.6N	15	0114	SC	0	12	0	15(7)	6	5	123	31	17	18
GUA	04.0N	15	0111	..	..	..	..	15(7)	5	--	130	20	16	02
HER	33.7S	15	01--	..	..	..	..	15(6)	6	17	116	114	15	24
GNA	43.2S	15	01--	..	..	..	..	15(6,7),16(4,5,6)	5	19	120	120	17	21
GUA	04.0N	16	0857	..	..	..	..	16(4)	5	--	70	20	16	23
HYB	07.6N	18	1500	..	..	..	..	19(6)	5	6	83	28	20	18
COL	64.6N	19	01--	..	..	..	..	19(4,5,6),20(4,5)	6	125	1490	800	20	19
SIT	60.0N	19	01--	..	..	..	..	19(4)	7	--	--	680	20	14
WIT	54.2N	19	1100	..	..	..	..	19(7)	7	41	220	105	20	01
GUA	04.0N	19	0106	..	..	..	..	19(8)	5	10	110	50	20	15
HER	33.7S	19	01--	..	..	..	..	19(7,8)	5	26	93	86	20	01
CNB	43.9S	19	01--	..	..	..	..	19(7)	5	16	119	43	20	18
KGL	56.5S	19	01--	..	..	..	..	19(7,8)	7	--	--	--	21	04
HYB	07.6N	24	0600	..	..	..	..	25(6)	5	6	100	33	27	20
WIT	54.2N	25	0100	..	..	..	..	25(6)	6	30	123	63	26	14
FRD	49.6N	25	00--	..	..	..	..	26(1,2,3)	5	20	118	42	29	--
GUA	04.0N	25	2137	..	..	..	..	25(8)	5	--	80	20	26	16
HER	33.7S	25	01--	..	..	..	..	25(1)	5	21	101	85	26	13
KGL	56.5S	25	2153	SC	1	- 5	0	25(6)	6	--	--	--	27	05
KGL	56.5S	26	0644	SC	- 3	25	3	27(1)	5	20	135	75	27	05

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

RADIO PROPAGATION QUALITY INDICES

SEPTEMBER 1983

Day	Tokyo	New York	Teheran	Oslo	Bracknell
1	4.9	6.7	3.4	4.5	3.3
2	7.2	7.4	6.8	5.5	6.0
3	6.7	7.4	6.0	7.0	5.3
4	7.4	8.0	6.0	6.6	6.7
5	8.1	8.8	5.0	6.5	5.3
6	7.8	6.7	6.0	6.1	5.5
7	6.4	6.9	4.0	5.2	6.0
8	5.9	7.3	4.4	5.1	4.5
9	6.2	6.7	6.1	4.1	6.5
10	6.7	6.6	6.7	3.4	6.0
11	7.0	7.7	5.0	2.8	6.6
12	5.9	7.3	7.3	4.2	5.3
13	6.2	8.6	6.7	5.5	6.4
14	7.2	8.1	7.4	4.8	6.2
15	6.3	5.6	6.1	4.3	5.3
16	4.9	2.0	6.1	3.1	4.1
17	3.3	1.4	6.7	4.3	4.4
18	4.3	3.5	7.3	3.7	3.8
19	3.4	2.0	2.7	2.0	2.8
20	2.4	0.8	3.5	1.8	2.9
21	2.4	2.1	4.4	3.5	3.6
22	2.5	3.3	2.6	2.6	2.6
23	6.5	4.5	7.7	5.3	4.6
24	5.4	5.8	6.3	6.0	4.7
25	5.4	5.8	7.0	5.3	5.3
26	4.2	3.7	3.6	4.1	5.3
27	4.4	5.8	7.7	5.1	6.3
28	6.3	7.4	7.6	6.8	6.6
29	7.0	7.1	6.1	6.8	7.0
30	6.9	7.0	2.9	5.8	6.1
Mean	5.6	5.7	5.6	4.7	5.2

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).

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

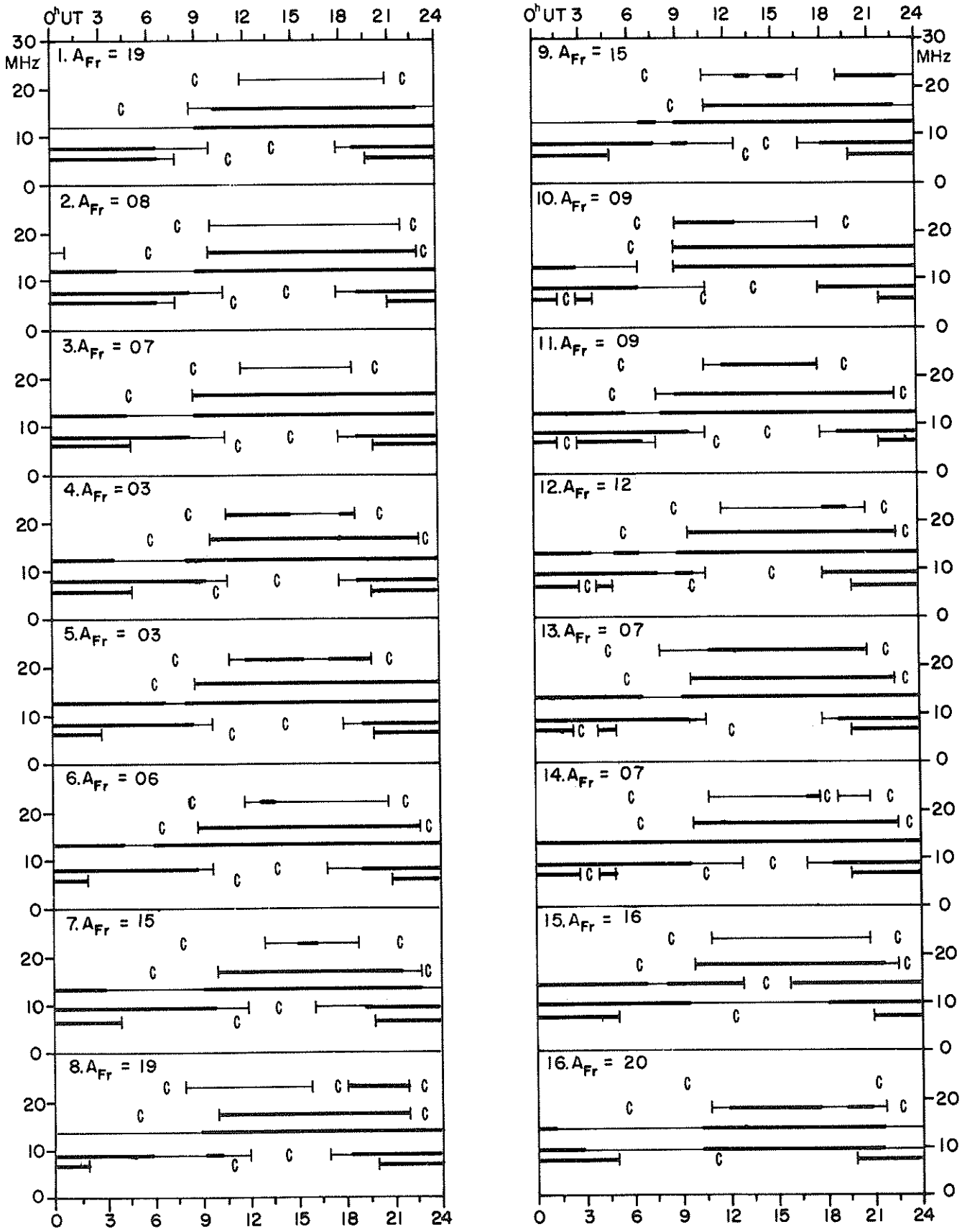
The quality indices vary from 0.0 to 9.9 where 6.0 is normal. Conditions are "normal" (index = 6.0), if they correspond to the average of the preceeding 27 days.

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

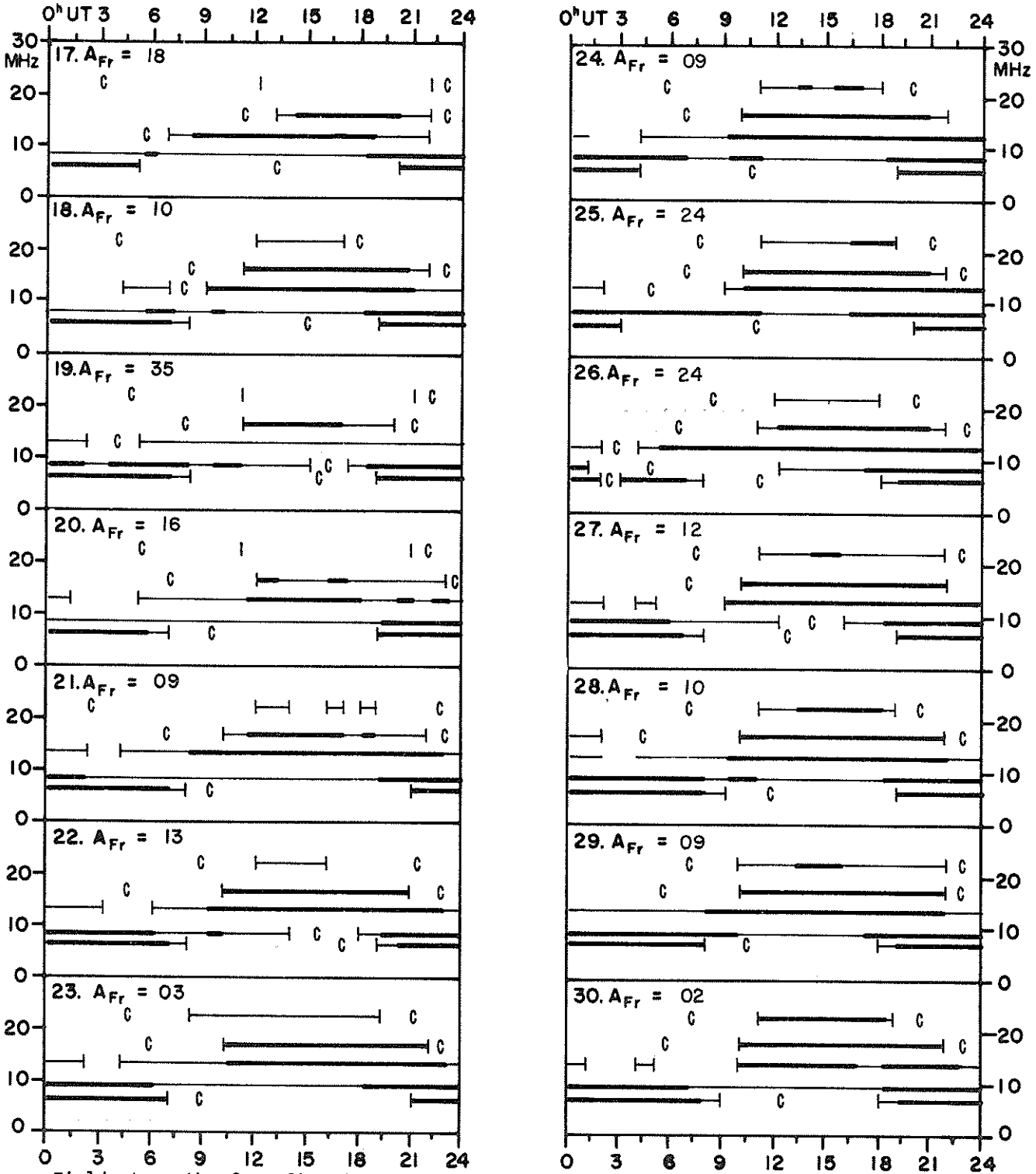
TRANSMISSION FREQUENCY RANGES -- NORTH ATLANTIC PATH

SEPTEMBER 1983

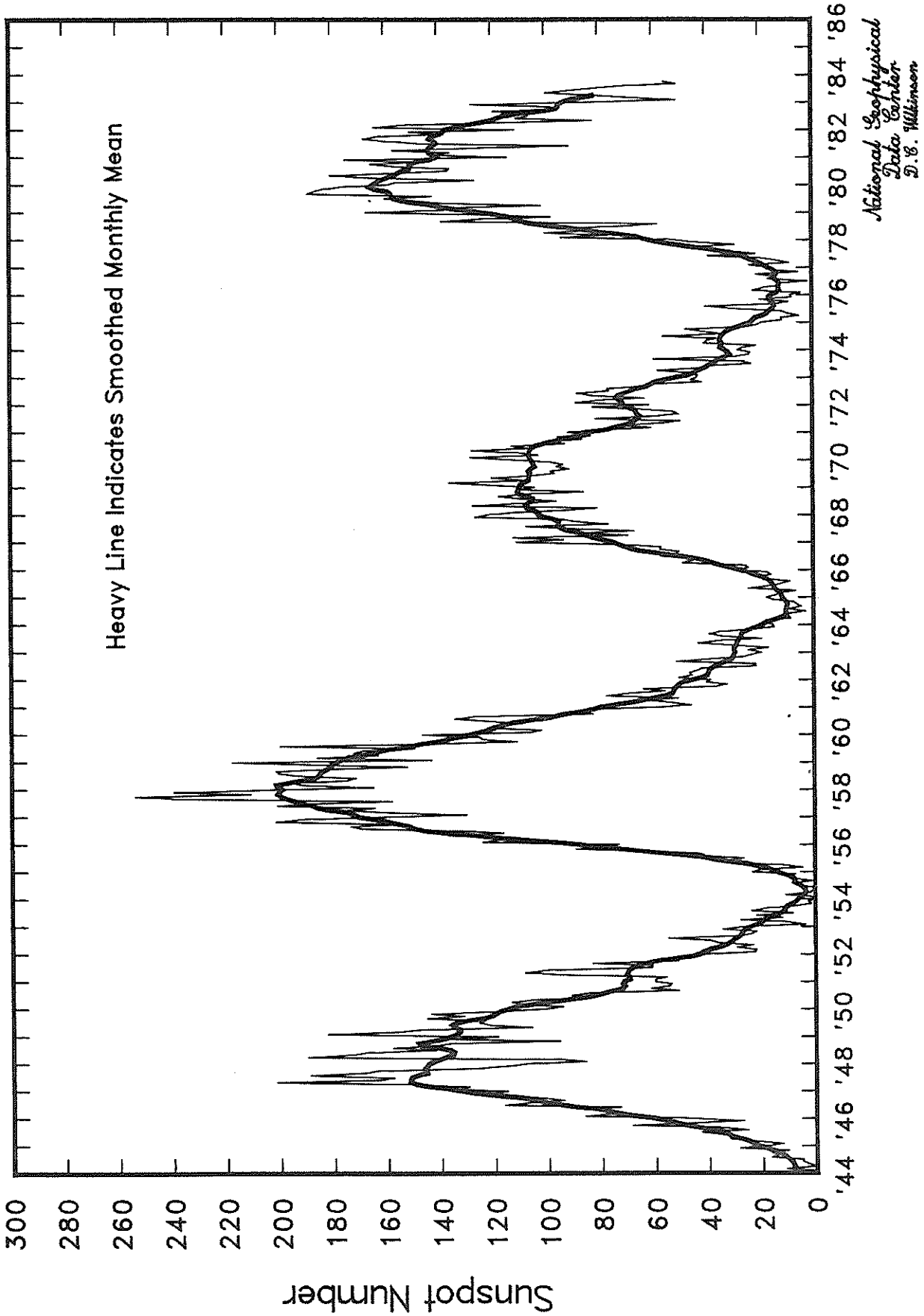


TRANSMISSION FREQUENCY RANGES -- NORTH ATLANTIC PATH

SEPTEMBER 1983



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 ≥ -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.


MONTHLY MEAN SUNSPOT NUMBERS
January 1944 – October 1983
Heavy Line Indicates Smoothed Monthly Mean
Sunspot Number
300
280
260
240
220
200
180
160
140
120
100
80
60
40
20
0
'44 '46 '48 '50 '52 '54 '56 '58 '60 '62 '64 '66 '68 '70 '72 '74 '76 '78 '80 '82 '84 '86
National Geophysical Data Center D.B. Willimsen

CONTENTS

Prompt Reports LATE DATA Number 471 Part I

GEOMAGNETIC ACTIVITY INDICES

JULY 1983

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	Am	N	aa Provisional S	M		
1	Q5	2+	2	1	1+	2-	1+	2	1+	13	6	0.3	2	2-	1+	1+	1+	1	1+	1+	9	17	5	13	10	CC
2		1	2-	1+	1+	2+	3-	3+	3-	16+	9	0.5	1	1+	2-	1+	2-	2	2	2	12	20	7	7	20	KK
3		3-	2-	2	2+	1+	2	3-	2+	17	8	0.5	3-	2-	2+	3-	1	2-	2	2	16	22	9	17	15	
4		2-	2-	1+	1	2+	3-	3	2	16-	8	0.4	2-	2-	1+	1+	2-	2	2+	2-	12	20	7	9	19	C
5	Q4	2-	1	1	2+	2-	2+	1	1	12	6	0.3	2	2+	1+	2+	1+	2	1	1-	12	17	8	11	14	C
6		2-	2	2+	5-	3+	3-	2+	3-	22-	14	0.8	2-	2+	3-	4	3	3-	2+	2+	25	29	22	25	27	
7		1+	2-	2-	3+	4-	3-	3-	4	21	14	0.8	2-	2	1+	3	3	3-	2+	3+	22	27	14	14	27	
8		2	2+	3+	2+	2-	2+	2+	3-	19	10	0.6	3-	2+	3+	2+	2+	2+	2+	3-	22	26	18	21	24	
9		3	4-	1+	3+	2	2+	3-	3-	21	12	0.7	3	4-	2	3+	2	2-	2+	3	25	29	18	26	20	
10	Q2	2-	2	2-	1+	1-	1-	1	1-	10-	5	0.2	2-	2+	2	2	1-	1-	1	1-	10	11	6	10	7	CK
11	Q1	1-	1-	1-	2-	1	1	1-	2	8+	4	0.1	0+	0+	1+	2	1	1	1	2	8	13	5	9	10	CC
12		2-	1-	1+	2+	4-	4-	5-	4-	22-	16	0.9	2-	1-	1	2-	3	3	4-	3+	22	32	16	11	38	
13		5	4	4	3+	3	1+	1	2	24-	19	1.0	5-	4	4	4-	3	2-	1	2-	35	30	27	43	15	
14	Q6	1-	2	2+	2	2	2	2-	1	14-	6	0.3	1+	2	3-	2+	2-	2-	2-	1	14	18	8	12	14	CK
15	Q3	1+	2-	1-	1-	1	1	2-	2	10	5	0.2	1+	2	1	1+	1	1	2-	2	10	14	5	8	11	C
16	D4	3-	3+	2	4+	4+	3	4+	4-	28-	21	1.1	3-	3+	2+	3	4-	2+	3+	3+	31	43	16	23	37	
17	D2	4	4	4-	4+	4-	4-	4	4+	32-	26	1.2	4+	4-	4	4	3+	4-	4-	4	50	45	44	38	51	
18	D5	5-	4	3	3	3+	3+	3-	3	27	20	1.0	4+	4	3+	3	3-	3	3-	3-	36	43	32	43	33	
19		3-	2	2+	2+	2-	3	2+	2	18+	9	0.5	3-	2+	2+	2+	2-	3	2+	2	20	20	18	16	23	
20	Q9A	2+	2+	3-	1+	1	1+	2-	2	15-	7	0.4	2+	3-	3	2	1	1+	1+	2	15	17	11	15	13	
21	Q7	1+	2+	2-	2	2-	2	2-	2-	14+	6	0.3	2	3	2	2+	2-	2	1+	1+	16	16	17	19	15	
22		2+	1	1	1	1-	1-	3-	5-	14	10	0.5	3-	1+	2-	1+	1	1	2+	4+	19	26	15	11	30	
23	D3	3	3+	3+	5-	3	3	5-	4	29	23	1.1	3-	3	4-	5-	3-	3+	4+	4-	43	47	35	36	46	
24	D1	6-	5	4	4-	6	4	4	3+	36-	40	1.4	5+	5-	5-	4	5	4-	3+	3+	67	48	45	43	51	
25		3	4-	3-	2+	3-	2+	2	2-	20+	12	0.7	3	4-	3-	3-	2+	2	2	1+	23	24	15	22	18	
26	Q10A	2+	2	2-	2	2	2-	2-	2	15+	7	0.3	2+	2	2+	2	3-	2-	1+	2-	15	15	11	13	13	C
27		1+	2	2	3	2	2	3-	3+	18+	10	0.5	2-	1+	2+	3+	2	2-	2+	3	19	22	10	14	18	
28		1+	2	2	2+	2	3+	3+	3	19+	11	0.6	2-	2	2+	2+	2-	3-	3-	3-	19	23	13	12	24	
29		3	4+	3-	4-	2+	3-	2+	2+	23+	15	0.8	3	4	3-	3	3-	2+	2+	2+	27	29	20	31	18	
30		4	3+	3-	4	3-	2+	3	4	26	18	1.0	4	3+	3-	4+	3-	2	3-	3+	35	36	25	35	27	
31	Q8A	3	2	1+	1+	2+	1+	2-	1+	14+	7	0.4	3-	2	2-	2	2+	2-	2-	1+	15	14	14	14	14	
Mean											12	0.6									23	26	17	21		

Day	Kn Three-Hourly Indices 1	2	3	4	5	6	7	8	An	Ks Three-Hourly Indices 1	2	3	4	5	6	7	8	As	S_a	Prov R_I	R_a	R_s	IMF	
1	2+	2	2-	2-	2-	1+	2-	2-	13	1+	1+	1	1	1-	1-	1-	1	6	124.1*	62	59	72	-	-
2	1+	2-	2	1+	2	3-	3-	2+	16	1-	1-	1+	1+	2-	1+	1	2-	8	125.4	59	59	73	-	-
3	3	2	3-	3	1+	2+	3-	3-	20	2+	1+	2	3-	0+	1+	1+	2-	12	131.5	61	69	80	-	-
4	2	2-	2-	2-	2+	3-	3-	2+	17	1	2	1	1-	1	1+	2	1-	8	137.2	87	84	86	-	-
5	2+	2-	2-	3-	2	2+	1+	1	14	2-	3-	1+	2	1	1+	1-	0+	10	132.1	80	81	81	-	-
6	2-	2+	3	5-	3-	3-	3-	2+	27	2	2+	2	4-	3	3-	2+	2+	22	132.4	79	82	81	-	-
7	2-	2-	2-	3+	3+	3-	3-	3+	24	1+	2	1	3	3-	3-	2	3+	20	132.7	74	77	81	-	-
8	2+	2	3+	3-	2+	3-	2+	3	23	3-	2+	3+	2+	2+	1+	2+	3-	21	127.9	82	76	76	-	-
9	3	3+	2+	4-	2+	2	3-	3	28	3-	4-	2-	3-	1+	1+	2-	3	22	123.1	69	72	71	-	-
10	2-	2+	2	2+	1+	1+	1+	1-	13	2	2	2-	1+	0	0+	0+	1-	8	123.1	59	58	71	-	-
11	1-	1-	2-	2+	1+	2-	1+	3-	11	0+	0	0+	2-	1	0+	0+	1	5	125.7	68	75	74	-	-
12	2+	1	1	2	3+	4-	4	4-	29	1+	0+	1-	2-	3-	2+	3+	3	16	124.7	86	88	73	-	-
13	4+	4	4-	4-	3	2	2-	2	36	5-	4	4	4-	3-	1+	1-	1	34	123.5	85	86	71	A	-
14	1+	2+	3-	2+	2	2	2	1+	16	1+	2	2+	2+	1+	2-	1	1-	11	124.4	88	85	72	A	-
15	2-	2	1	2-	1+	1+	2	2+	12	1+	2+	1	1	0	1-	1+	2-	8	124.6	92	89	73	AT	-
16	3-	3+	3-	4-	4+	3	4	3+	39	3-	3+	2+	2	2+	2-	3-	3	23	121.3	93	89	69	-	-
17	4+	4-	4	4+	3+	4-	4-	4-	49	4	3+	4	4-	3	4-	4-	4+	50	120.0	96	92	68	T	-
18	4	4-	3+	3	3	3	3-	3-	36	4+	4+	3+	3	2	3-	2+	3-	36	116.4*	98	103	64	AT	-
19	3-	2+	3-	3	2-	3	2+	2	21	3-	3-	2+	2	2-	3	3-	2	20	119.5	96	88	67	T	-
20	2	3-	3	2+	1+	2-	2-	2	17	2+	3-	3	2-	0	1-	1	2	14	125.1	101	110	73	-	-
21	2-	3-	2	2+	2-	2+	1+	2-	15	2	3	2+	3-	2	1+	1+	1+	16	128.1*	109	115	76	AT	-
22	2	1	2-	2-	1+	1+	3-	4+	19	3-	2-	1+	1+	1-	1-	2-	5-	19	138.9	114	112	88	T	-
23	3	3+	4-	5-	3	3	4	4-	46	3-	3	3+	4+	2-	3+	4+	4	41	132.9*	95	92	82	AT	-
24	5+	5-	5-	4+	5+	4-	4	3	72	5+	5	4+	3+	5-	3+	3-	3+	61	136.3*	105	103	85	A	-
25	3	4-	3-	3	3-	2	2	2-	24	3+	3+	3-	3-	2	2	2	1+	22	136.7*	85	77	86	A	-
26	2+	2+	2+	2+	3-	2+	2-	2	17	2	2	2	2-	3-	1+	1	1+	13	128.9*	58	58	77	T	-
27	2	2-	3-	3+	2+	2+	3-	3	22	1+	1	2	3+	2-	1+	2-	3-	15	123.1	49	48	71	-	-
28	2-	2	2+	3-	2	3	3-	3	21	2-	2	2+	2	1+	2+	3	2+	17	127.1	40	40	75	-	-
29	3	4	3-	4-	3	3-	2+	3-	32	3	4	3-	3-	2+	2+	2	1+	23	138.5*	77	78	88	-	-
30	4-	3+	3-	5-	3	2+	3	4-	36	4	3+	3-	4+	2+	2	2	3	33	144.3	89	92	94	-	-
31	3-	2+	2-	2+	3-	2+	2-	2	18	2+	2-	2	2-	2+	1	1+	0+	12	153.1*	110	112	103	-	-
Mean									25									20	129.1	82	82	77		

GEOMAGNETIC ACTIVITY INDICES

AUGUST 1983

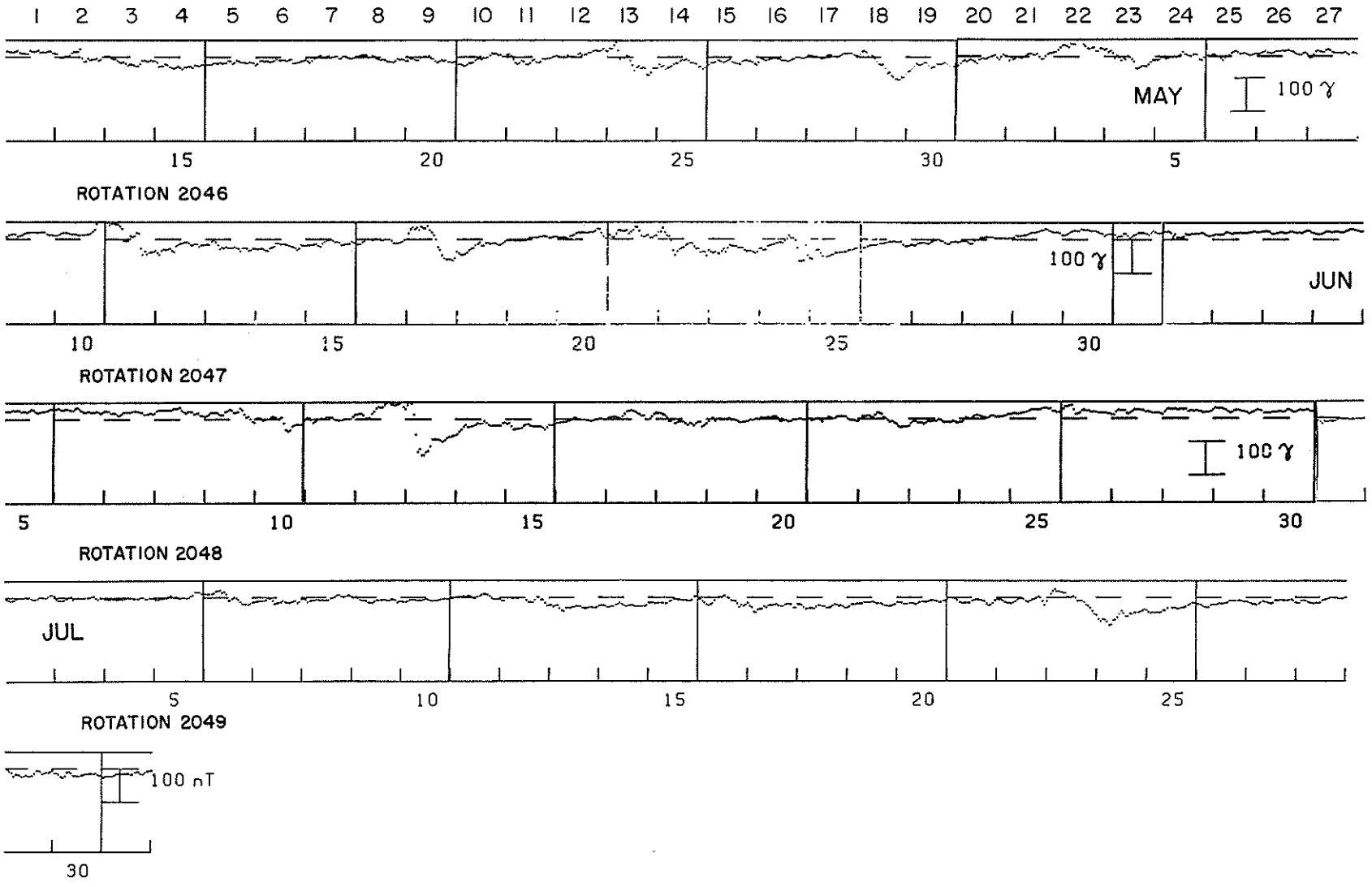
Day		Kp Three-Hourly Indices 1	2	3	4	5	6	7	8	Sum	Ap	Cp	Km Three-Hourly Indices 1	2	3	4	5	6	7	8	Am	N	aa Provisional S	M		
1	Q6	1-	2-	2	1-	1+	1-	1+	2+	11-	5	0.2	1-	2	2+	1-	1	0+	1+	2	9	13	7	8	13	C
2	D3	4+	4	5+	3+	5+	4-	4+	4-	34	33	1.3	4	4-	5-	3	5-	4-	4	3	52	52	40	43	50	
3		4-	3-	1+	2+	3+	3	4+	4-	24+	17	0.9	3+	3	2-	2+	3-	3-	4-	4-	29	33	22	20	36	
4	Q7	2	2+	1+	1	1	1-	1+	2-	11+	5	0.2	2	3-	2-	1	1-	0+	1	2-	10	13	7	12	9	C
5	Q2	1-	0+	0+	0	0+	0+	1-	1+	4	2	0.0	1+	0+	1-	0	0	0+	1-	1	4	6	2	3	5	CC
6	Q8	1	2	0+	1-	2	2	2+	2-	12	6	0.3	1-	2+	0+	1-	2	2	2+	1+	11	16	6	7	15	CC
7		1	1-	2	2-	2	2+	4+	6	20	18	1.0	1+	1+	2	2-	2	1+	4-	5	27	35	14	12	38	
8	D1	7+	8-	6+	4+	2+	2+	1+	3-	34+	62	1.7	6	7-	5+	4	2+	2	1	2	76	71	37	93	15	
9		5-	3	2-	2-	2	2	1+	1	17+	11	0.6	4	3-	2	2	2+	2-	1-	1+	19	22	14	25	11	
10	Q4	1-	2+	1	2-	2-	1	0+	1+	10	5	0.2	1	3-	2-	2	2-	1-	0+	1+	10	9	5	8	7	CC
11	Q9	2	2-	1-	1+	2-	2-	3-	1+	13	6	0.3	2-	2-	1-	1+	2-	1+	3-	1+	11	13	8	9	13	C
12		3-	4+	4-	3	4	4-	5	4+	31-	26	1.2	3-	4	4-	3+	4-	3	4	4-	40	48	26	28	47	
13		4	3+	4+	5	4	2	3-	4+	30-	25	1.2	4-	4-	4+	4+	3+	2	3-	4	45	41	36	51	26	
14		3	2-	2-	1	2	3-	3	2+	17+	9	0.5	4-	2-	2	1+	3-	2+	3-	2+	20	21	15	15	21	
15		3	2	1	3-	2+	3+	2-	3-	19-	10	0.6	3+	2	2-	3	2+	4-	1	2+	22	21	24	22	23	
16	Q3	1+	0	0	0+	2-	1+	2+	2	9	4	0.1	2-	0	0	0+	1+	2-	2	2	9	12	6	4	14	CK
17	Q10	2+	2	1+	2-	1+	1	1+	2+	13+	6	0.3	2-	2-	2	2	1	1	1-	2	11	13	8	13	9	CC
18	Q1	1-	0+	0	0+	0+	0+	0	1-	3-	2	0.0	1-	1-	0	0	1-	0	0	1	3	5	4	4	5	CC
19		0	0+	0+	2	3+	4	2+	2+	15-	9	0.5	0+	0+	0+	2+	4-	3+	2+	2	17	20	16	6	30	K
20		1	3-	2-	2-	2	3-	4	3-	18+	11	0.6	1+	3	2-	2	3-	3-	3+	3	22	24	19	13	31	
21		4+	3	3+	5-	3+	4+	4-	4	31-	25	1.2	4	3-	4-	5-	3+	4-	3+	4-	47	40	39	37	41	
22		2-	2-	2	3	3-	3-	5	3-	21+	15	0.8	2-	2	2+	3	2+	3-	4+	3-	26	32	27	17	43	
23	D4	3	6	5-	4	4	3+	5-	3-	32+	32	1.3	3	6-	4+	4-	3+	3+	4	3	52	42	33	38	36	
24		3+	4+	4	4+	3+	3+	4-	3+	30-	23	1.1	3	4	4-	4+	3	3	3+	4-	41	38	38	44	33	
25	D2	6	4	5+	4	4	3+	5-	3	34+	36	1.4	5-	4	5-	4+	4	3+	4+	3	58	52	50	63	39	
26		5-	5-	3	3+	3	4+	5	2-	30-	26	1.2	4	4	3	3+	3	4-	4	2-	40	44	33	39	38	
27	Q5	2+	0+	0+	1-	2+	2-	1+	1-	10-	5	0.2	2+	1-	0+	0+	2	2	1+	1	9	12	8	8	12	C
28		3-	2	1+	2+	2+	1+	3-	2-	16+	8	0.4	2	2	2-	3-	2-	1+	2	2-	14	20	10	15	15	
29		3-	2+	1+	2+	3	3+	4	5-	24-	17	0.9	2+	2-	2-	3-	3-	3	4-	4+	29	36	23	15	45	
30		4+	4	4-	2+	3-	3	3-	3+	26	18	1.0	4+	4-	3+	3-	2+	3-	3-	3	33	36	27	36	28	
31	D5	5	4-	4	3+	3-	5-	4+	4+	32	29	1.3	5-	4-	4-	3-	2+	4+	3+	4	48	43	47	47	43	
Mean											16	0.7									27	29	21		25	

Day	Kn Three-Hourly Indices 1	2	3	4	5	6	7	8	An	Ks Three-Hourly Indices 1	2	3	4	5	6	7	8	As	S_a	Prov R_I	R_a	R_s	IMF	
1	1	2	3-	1+	1	1-	1+	2+	12	0+	2-	2+	0+	1-	0	1-	2-	7	151.1	131	128	101	-	-
2	4	4-	5	3+	5-	4-	4-	3+	55	4	3+	4+	3-	4+	3+	4+	3	49	145.4*	128	126	95	-	-
3	3+	3	2-	3-	3	3	4-	3+	29	3	3	1+	1+	2+	2+	3+	4	28	139.4*	105	108	89	-	-
4	2	3-	2-	1	1	1	2-	2	12	2+	3-	1+	1-	0+	0	0+	1	8	136.5	103	96	85	-	-
5	1+	1-	1-	0+	0	0+	1-	2-	5	1	0	0+	0	0	0	0+	0+	2	136.5	79	69	85	-	-
6	1	2+	1-	1+	3-	2+	2+	2-	14	0+	2	0	0	1	1+	2	1	7	142.0	47	61	91	-	-
7	1+	1	2+	2-	3-	2+	4	5	31	1	1+	2	2	1+	0+	3	5	24	141.9	60	66	91	-	-
8	6	7-	6-	4+	3-	2+	1+	3-	86	6-	7-	5	4	2	1	1-	1	66	141.0	70	67	90	A	-
9	4-	3	2+	2	3-	2	1+	2-	21	4	3-	2	2-	2-	1+	0	1	17	142.9	69	78	92	A	-
10	2-	3-	2-	2	2	1-	0+	2-	12	0+	2	2-	2	1+	1-	1-	1-	8	151.6	63	69	102	-	-
11	2-	2-	1	2	2-	2	3	2-	14	1+	1+	0+	1-	1+	1-	2	1	8	151.3	88	92	101	-	-
12	3-	4	4-	3	4	3+	4+	4-	44	3-	4-	3+	3+	3+	3-	4-	4-	37	156.7*	103	102	107	-	-
13	4-	4-	5-	5-	3+	2	3	3+	45	3+	4	4+	4	4-	2-	2+	5-	45	147.3	101	100	97	-	-
14	3-	2	2+	2	2+	3-	3-	3-	20	4	2-	2	1-	3-	2+	3-	2+	21	141.6*	97	98	91	-	-
15	3-	2	1+	3	2+	3+	1+	2+	20	4-	2	2-	3+	2	4-	1	2	24	135.8*	93	89	85	-	-
16	1	0+	0	0+	2-	2-	2+	2+	9	2	0	0	0	1+	2-	2	2-	8	132.1	80	80	81	-	-
17	2	2-	2-	2+	1+	1+	1+	2+	13	2-	1+	2	1+	1-	0+	0	2	9	126.8	72	66	75	-	-
18	1-	0+	0	0+	1-	0+	0	2-	4	1-	1	0	0	0+	0	0	0	2	122.2	71	66	70	-	-
19	1-	0+	1	3-	4-	3+	3-	2+	21	0	0+	0	2	3+	3	2-	2-	14	117.7	54	48	65	-	-
20	1+	3	2-	2	3-	3-	3+	3	22	1	3+	2-	2-	3-	3-	3	3	22	118.7	40	40	66	-	-
21	4	3-	4	5-	3+	4-	3+	4-	47	4	3	4-	5-	4-	4-	3+	4-	47	114.2	52	46	61	AT	-
22	2	2-	2	3	2+	3-	4	2+	24	2-	2	3-	3-	2	3-	5-	3-	27	110.8	50	44	58	AT	-
23	3	6-	4+	4-	4-	3	4	3	54	3-	6-	4	4-	3	4-	4-	3-	50	110.8	51	42	58	A	-
24	3	4	4-	4+	3	3	3+	3+	41	3	4	4-	4+	3	3-	3+	4-	41	108.7	44	41	55	A	-
25	5	4	5	4+	4	3	4	3	61	4+	4-	5-	4+	4-	3+	5-	3	56	104.2	52	43	51	-	-
26	4+	4+	3+	3+	3	4	4	2	46	4-	4-	3-	3+	3	3+	4	1+	35	105.8	56	49	52	-	-
27	2+	0+	0+	1-	2+	2	1+	1+	10	2	1-	1-	0	1+	2	1	1-	8	103.7	51	45	50	-	-
28	2+	2	2-	3	2+	2-	2+	2	17	2	2	2	3-	1	1-	2	1+	13	102.8	55	50	49	AT	-
29	2+	2-	1+	3	3	3	4	5-	32	2+	2-	2-	2+	2+	3-	4-	4	26	105.7	63	52	52	-	-
30	4	4-	4-	3-	3-	3-	3-	3	35	4+	3+	3	3-	2	3-	2+	3+	31	104.0	59	43	50	-	-
31	4+	4-	4-	3-	3-	4+	3+	4-	45	5	4	4-	3-	2+	5-	4-	4+	51	104.2	42	40	51	T	-
Mean									29									26	128.5	72	69	76		

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.

HOURLY EQUATORIAL Dst VALUES (PROVISIONAL)

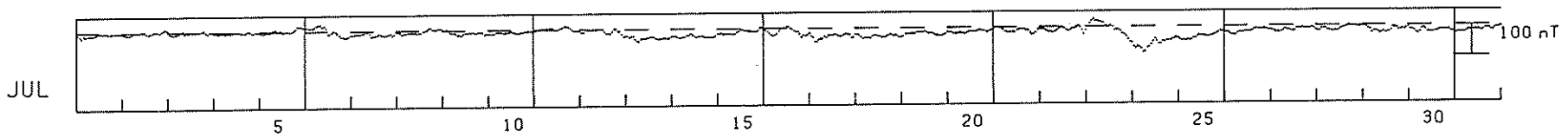
NASA/GODDARD SPACE FLIGHT CENTER

JULY 1983

(Time-UT)

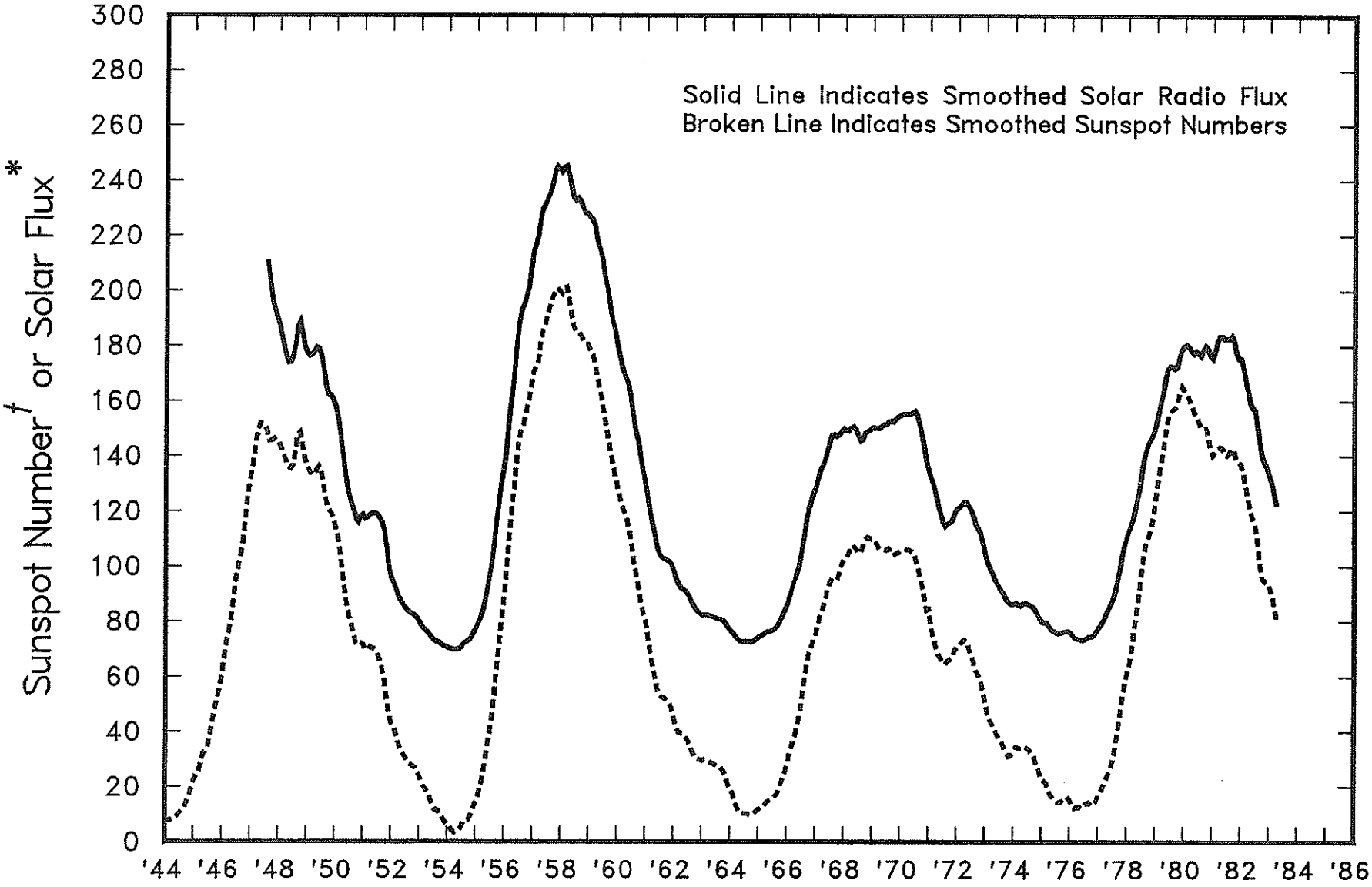
(Units-Gammas)

DAY	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
1	-9	-13	-18	-11	-13	-12	-11	-12	-12	-9	-5	-2	-4	-5	-4	-4	-6	-5	-5	-4	-3	-4	-4	-4
2	-7	-9	-11	-10	-7	-3	-1	-2	-2	1	0	0	-5	-7	-5	-3	1	1	0	-2	3	8	9	5
3	-6	-9	-10	-9	-7	-4	1	3	-7	-2	-3	-1	-1	-2	-1	0	0	3	4	-2	-7	-1	-1	-4
4	-5	-7	-7	-5	-5	-7	-6	-4	-7	-3	-1	-2	-2	-4	-5	-5	-3	0	0	-5	-6	-1	-3	-4
5	-7	-8	-4	-4	-2	-2	3	6	2	0	2	-3	-3	-1	-2	-3	0	4	8	16	17	15	12	12
6	11	10	10	11	13	19	21	22	14	18	10	-10	-10	-4	0	-3	-8	-13	-19	-20	-21	-21	-18	-13
7	-13	-12	-12	-10	-11	-9	-7	-2	-4	-10	-19	-15	-16	-13	-10	-13	-15	-16	-13	-12	-10	-16	-12	-4
8	-4	-7	-13	-10	-9	-7	-7	-7	-9	-7	-10	-8	-8	-2	-1	2	8	9	2	1	3	7	5	2
9	-1	3	-2	-8	-10	-10	-11	-16	-15	-17	-12	-8	-10	-8	-8	-7	-10	-11	-6	-6	-9	-15	-12	-12
10	-13	-13	-12	-8	-7	-8	-9	-10	-9	-9	-7	-5	-8	-10	-11	-10	-9	-8	-6	-5	-4	-4	-5	-2
11	-2	0	1	3	3	4	3	4	6	2	-2	-2	3	5	9	12	12	9	4	-2	-5	-5	-4	-6
12	-10	-9	0	-1	-1	-2	-1	-1	-1	1	0	-1	-8	-13	-13	-14	-7	2	1	-7	-7	-16	-24	-22
13	-21	-27	-23	-22	-33	-39	-41	-32	-30	-32	-29	-28	-25	-25	-27	-31	-33	-32	-30	-29	-30	-31	-29	-24
14	-23	-23	-26	-29	-28	-26	-25	-21	-19	-15	-20	-24	-27	-23	-23	-22	-26	-27	-26	-27	-27	-26	-22	-15
15	-15	-14	-18	-17	-16	-15	-16	-18	-16	-12	-9	-4	-5	-7	-7	-9	-9	-10	-11	-10	-7	3	4	-6
16	-7	-11	-15	-21	-23	-20	-16	-8	-1	1	2	6	6	0	-3	-9	-11	-12	-16	-28	-21	-25	-20	-15
17	-25	-30	-44	-45	-37	-34	-34	-26	-31	-23	-22	-23	-20	-19	-24	-26	-26	-20	-18	-18	-21	-31	-30	-19
18	-20	-22	-29	-35	-32	-32	-31	-33	-26	-22	-23	-26	-26	-31	-29	-28	-23	-19	-21	-25	-23	-27	-31	-29
19	-26	-19	-19	-19	-17	-17	-17	-13	-14	-14	-14	-12	-14	-18	-16	-16	-21	-24	-24	-26	-26	-22	-19	-13
20	-14	-15	-19	-19	-19	-16	-16	-18	-20	-16	-13	-12	-13	-13	-12	-9	-8	-11	-12	-14	-14	-10	-9	-4
21	0	-1	-3	-5	-9	-14	-16	-16	-16	-15	-15	-10	-8	-6	-7	-8	-11	-12	-19	-24	-21	-16	-9	-5
22	-7	-7	-11	-14	-16	-16	-18	-14	-11	-6	-2	-2	-6	-11	-13	-10	-6	-5	-1	3	-1	-12	-23	-11
23	0	12	20	25	18	18	15	14	13	1	0	1	3	-2	-12	-10	-10	-14	-22	-25	-32	-41	-50	-53
24	-65	-71	-64	-67	-73	-85	-82	-68	-66	-59	-49	-40	-48	-57	-56	-48	-50	-45	-45	-45	-42	-39	-36	-38
25	-44	-47	-44	-47	-44	-46	-44	-38	-38	-32	-29	-31	-32	-32	-35	-33	-30	-29	-26	-23	-19	-15	-17	-18
26	-20	-21	-25	-29	-30	-29	-22	-20	-21	-20	-17	-18	-17	-16	-14	-10	-9	-11	-10	-10	-9	-11	-13	-12
27	-14	-16	-20	-20	-22	-18	-14	-11	-13	-14	-17	-18	-15	-9	-9	-8	-7	-10	-9	-10	-8	-6	-10	-15
28	-17	-16	-10	-9	-11	-14	-16	-17	-19	-15	-17	-14	-10	-7	-6	-3	0	-1	-2	-2	-4	-4	-4	-1
29	-3	-5	-10	-14	-24	-18	-18	-21	-26	-23	-19	-24	-23	-21	-15	-7	-7	-10	-13	-15	-12	-13	-10	-6
30	-14	-14	-18	-25	-28	-22	-12	-10	-14	-22	-22	-23	-23	-19	-18	-15	-15	-14	-15	-16	-13	-19	-21	-23
31	-27	-23	-22	-23	-23	-20	-16	-15	-18	-15	-14	-15	-15	-18	-16	-11	-10	-11	-15	-17	-12	-8	-7	-5



Baseline adjustments were made at the beginning of July 1983. Therefore there is a discontinuity in (provisional) Dst between the last hour of the previous month and the first hour of this month.

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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FOR
SOLAR-TERRESTRIAL PHYSICS

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

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