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Solar - Geophysical Data

Part I (Prompt Reports)

NO. 465 MAY 1983

DATA FOR
APRIL 1983
MARCH 1983

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

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Solar-Geophysical Data, 462 Part I (or Part II), pages, February 1983, U.S. Department of Commerce
(Boulder, Colorado, USA 80303).

SOLAR-GEOPHYSICAL DATA

No. 465

Issued in two parts

Helen E. Coffey, Editor

Joe H. Allen, Chief
Solar-Terrestrial Physics Division

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SGD 465 Part I (Prompt)

APRIL 1983 DATA

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Apr 83

ALERT PERIODS
INTERNATIONAL URSIGRAM AND WORLD DAYS SERVICE
APRIL 1983

SUMMARY OF THE GEOALERT MESSAGES

NO	DI	DO	WOLF	10CM	A	LOC	TOT	M	X	OUTSTANDING EVENTS	DA	LOC	DE	ALERTS	
091	01	31	087	099	022	S17W19	0	0	0		01	S17W19	Q	SOLQUIET	
						S12W12	0	0	0			S12W12	Q	MAGQUIET	
						S07W11	0	0	0			S07W11	Q		
						S17E07	1	0	0			S17E07	Q		
						S22E12	0	0	0			S22E12	Q		
						S13E28	0	0	0			S13E28	Q		
092	02	01	094	101	017	S15W51	0	0	0		02	S15W51	Q	SOLQUIET	
						S13W25	1	0	0			S13W25	Q	MAGQUIET	
						S07W24	1	0	0			S07W24	Q		
						S17W06	1	0	0			S17W06	Q		
						S22W01	0	0	0			S22W01	Q		
						S14E14	0	0	0			S14E14	Q		
093	03	02	126	101	017	S14W65	0	0	0		03	S14W65	Q	SOLQUIET	
						S21W44	0	0	0			S21W44	Q	MAGQUIET	
						S06W38	0	0	0			S06W38	Q		
						S13W37	0	0	0			S13W37	Q		
						S19W19	1	0	0			S19W19	Q		
						S22W15	1	0	0			S22W15	Q		
						S14E01	0	0	0			S14E01	Q		
						S12E75	1	0	0			S12E75	Q		
094	04	03	101	100	016	S06W51	0	0	0		04	S06W51	Q	SOLQUIET	
						S13W51	0	0	0			S13W51	Q	MAGQUIET	
						S17W32	2	0	0			S17W32	Q		
						S19W28	0	0	0			S19W28	Q		
						S10W27	0	0	0			S10W27	Q		
						S12E61	1	0	0			S12E61	Q		
095	05	04	073	101	013	S12W67	0	0	0	PRESTO TENFLARE 110 FLUX UNITS 04/1642Z DURATION 2 MINUTES	05	S12W67	Q	SOLQUIET	
						S16W45	5	0	0				S16W45	Q	MAGQUIET
						S19W41	0	0	0				S19W41	Q	
						S12W32	0	0	0				S12W32	Q	
						S11E45	1	0	0				S11E45	Q	
096	06	05	079	099	016	S16W58	6	0	0		06	S16W58	Q	SOLQUIET	
						S20W56	1	0	0			S20W56	Q	MAGQUIET	
						S10E29	0	0	0			S10E29	Q		
						S12E36	0	0	0			S12E36	Q		
						S15E71	2	0	0			S15E71	Q		
097	07	06	109	099	023	S16W72	1	0	0		07	S16W72	Q	SOLQUIET	
						S19W72	0	0	0			S19W72	Q	MAGALERT	
						S06W19	0	0	0			S06W19	Q	MINOR 07/09	
						S10E15	0	0	0			S10E15	Q	RECURRENCE	
						S12E22	2	0	0			S12E22	Q		
						S15E57	1	0	0			S12E57	Q		
S08E75	0	0	0		S08E75	Q									
098	08	07	104	102	022	S16W85	2	0	0		08	S16W85	Q	SOLQUIET	
						S08W35	0	0	0			S08W35	Q	MAGALERT	
						S10E01	4	0	0			S10E01	Q	MINOR 08/09	
						S12E10	1	0	0			S12E10	Q	RECURRENCE	
						S15E45	0	0	0			S15E45	Q		
						S08E62	0	0	0			S08E62	Q		
099	09	08	089	106	023	S10W12	2	0	0		09	S10W12	Q	SOLQUIET	
						S12W02	1	0	0			S12W02	Q	MAGALERT	
						S15E31	8	0	0			S15E31	Q	MINOR 09	
						S08E48	0	0	0			S08E48	Q	RECURRENCE	
100	10	09	090	106	014	S10W27	1	0	0		10	S10W27	Q	SOLQUIET	
						S12W16	1	0	0			S12W16	Q	MAGNIL	
						S16E18	5	0	0			S16E18	Q		
						S08E34	1	0	0			S08E34	Q		

ALERT PERIODS
INTERNATIONAL URSIGRAM AND WORLD DAYS SERVICE
SUMMARY OF THE GEOALERT MESSAGES
APRIL 1983

NO	DI	DO	WOLF	10CM	A	LOC	TOT	M	X	OUTSTANDING EVENTS	DA	LOC	DE	ALERTS
101	11	10	100	103	020	S09W41	2	0	0		11	S09W41	Q	SOLQUIET
						S12W31	0	0	0	S12W31		Q	MAGQUIET	
						S17E04	0	0	0	S17E04		Q		
						S09E21	1	0	0	S09E21		Q		
						S06E74	0	0	0	S06E74		Q		
102	12	11	085	104	011	S09W55	3	0	0		12	S09W55	Q	SOLQUIET
						S16W09	1	0	0	S16W09		Q	MAGQUIET	
						S09E08	1	0	0	S09E08		Q		
						S13E09	0	0	0	S13E09		Q		
						S09E61	0	0	0	S09E61		Q		
103	13	12	089	107	013	S09W66	0	0	0		13	S09W66	Q	SOLQUIET
						S16W22	0	0	0	S16W22		Q	MAGQUIET	
						S08W06	0	0	0	S08W06		Q		
						S12W04	0	0	0	S12W04		Q		
						S08E49	1	0	0	S08E49		Q		
						N21E63	0	0	0	N21E63		Q		
104	14	13	109	108	027	S09W79	3	0	0		14	S09W79	Q	SOLQUIET
						S16W36	0	0	0	S16W36		Q	MAGQUIET	
						S08W21	0	0	0	S08W21		Q		
						S13W17	0	0	0	S13W17		Q		
						S08E34	4	0	0	S08E34		Q		
						N22E54	1	0	0	N22E54		Q		
105	15	14	112	111	027	S10W92	0	0	0		15	S10W92	Q	SOLQUIET
						S17W49	0	0	0	S17W49		Q	MAGALERT	
						S08W34	0	0	0	S08W34		Q	MINOR	
						S13W30	0	0	0	S13W30		Q	15/16	
						S08E19	7	0	0	S08E19		Q		
						S08E26	0	0	0	S08E26		Q		
						N21E41	0	0	0	N21E41		Q		
N07E77	3	0	0	N07E77	Q									
106	16	15	125	103	033	S16W64	1	0	0		16	S16W64	Q	SOLQUIET
						S08W47	0	0	0	S08W47		Q	MAGALERT 16	
						S28W14	0	0	0	S28W14		Q		
						S08E04	0	0	0	S08E04		Q		
						S08E12	0	0	0	S08E12		Q		
						N20E28	1	0	0	N20E28		Q		
						S13W45	0	0	0	S13W45		Q		
						N13E57	0	0	0	N13E57		Q		
						N05E65	5	0	0	N05E65		E		
107	17	16	123	104	024	S15W77	0	0	0		17	S15W77	Q	SOLQUIET
						S08W60	0	0	0	S08W60		Q	MAGNIL	
						S29W28	0	0	0	S29W28		Q		
						S08W08	0	0	0	S08W08		Q		
						S08W02	0	0	0	S08W02		Q		
						S09E10	0	0	0	S09E10		Q		
						N18E14	0	0	0	N18E14		Q		
						N13E44	0	0	0	N13E44		Q		
						N08E52	2	0	0	N08E52		Q		
108	18	17	125	113	017	S16W91	0	0	0	PRESTO SOFLARE CULGOORA SURGE	18	S16W91	Q	SOLALERT
						S29W41	0	0	0	S11E90 WEAK TYPE II AND IV.		S29W41	E	MAGQUIET
						S07W22	0	0	0	SWF SYDNEY. XRAY M6 MAX AT		S07W22	Q	
						S07W16	0	0	0	18/0146Z.		S07W16	Q	
						S11W03	1	0	0			S11W03	Q	
						N23E01	1	0	0			N23E01	Q	
						N08E39	1	0	0			N08E39	Q	
S11E90	1	1	0		S11E90	A								
109	19	18	110	120	011	S29W53	2	0	0		19	S29W53	Q	SOLNIL
						S07W28	0	0	0	S07W28		Q	MAGQUIET	
						S11W14	0	0	0	S11W14		Q		
						N08E26	0	0	0	N08E26		Q		
						N11E43	0	0	0	N11E43		Q		

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Apr 83

ALERT PERIODS
INTERNATIONAL URSIGRAM AND WORLD DAYS SERVICE
APRIL 1983

SUMMARY OF THE GEOALERT MESSAGES

NO	DI	DO	WOLF	10CM	A	LOC	TOT	M	X	OUTSTANDING EVENTS	DA	LOC	DE	ALERTS
						S23E51	2	0	0			S23E51	Q	
						S10E83	1	1	0			S10E83	E	
110	20	19	125	124	009	S32W65	14	0	0		20	S32W65	E	SOLQUIET
						S07W42	0	0	0			S07W42	Q	MAGQUIET
						S11W30	0	0	0			S11W30	Q	
						S09W11	0	0	0			S09W11	Q	
						N08E09	0	0	0			N08E09	Q	
						N11E28	1	0	0			N11E28	Q	
						S22E38	0	0	0			S22E38	Q	
						S11E68	1	0	0			S11E68	E	
111	21	20	123	126	010	S30W79	1	0	0		21	S30W79	E	SOLQUIET
						S07W56	0	0	0			S07W56	Q	MAGQUIET
						S09W45	1	0	0			S09W45	Q	
						S09W24	0	0	0			S09W24	Q	
						N07W07	0	0	0			N07W07	Q	
						N11E13	0	0	0			N11E13	Q	
						S22E25	1	0	0			S22E25	Q	
						S12E56	4	0	0			S12E56	E	
112	22	21	122	132	010	S30W91	0	0	0	PRESTO TENFLARE 130 FLUX UNITS	22	S30W91	E	SOLQUIET
						S07W68	0	0	0	22/0003Z DURATION 10 MINUTES		S07W68	Q	MAGQUIET
						S10W59	0	0	0			S10W59	Q	
						N07W19	2	0	0			N07W19	Q	
						N11W01	0	0	0			N11W01	Q	
						S23E13	0	0	0			S23E13	Q	
						S12E43	1	0	0			S12E43	E	
						S11E81	5	0	0			S11E81	Q	
113	23	22	106	138	018	S10W71	0	0	0		23	S10W71	Q	SOLQUIET
						N08W35	0	0	0			N08W35	Q	MAGQUIET
						N11W17	0	0	0			N11W17	Q	
						S23W02	1	0	0			S23W02	Q	
						S11E28	2	0	0			S11E28	Q	
						N18E52	0	0	0			N18E52	Q	
						S13E70	0	0	0			S13E70	Q	
114	24	23	132	139	016	N08W48	0	0	0		24	N08W48	Q	SOLQUIET
						N11W30	0	0	0			N11W30	Q	MAGALERT
						S23W14	0	0	0			S23W14	Q	MINOR 24/25
						S12E17	2	0	0			S12E17	Q	RECURRENCE
						N18E39	0	0	0			N18E39	Q	
						S13E56	2	0	0			S13E56	E	
						S08E62	0	0	0			S08E62	Q	
						S15E65	0	0	0			S15E65	Q	
115	25	24	169	141	033	S09W74	0	0	0		25	S09W74	Q	SOLQUIET
						N08W62	2	0	0			N08W62	Q	MAGALERT 25
						N13W43	0	0	0			N13W43	Q	
						S23W29	0	0	0			S23W29	Q	
						S12E05	3	0	0			S12E05	E	
						N10E06	0	0	0			N10E06	Q	
						N20E27	0	0	0			N20E27	Q	
						S13E43	2	0	0			S13E43	Q	
						N14E44	0	0	0			N14E44	Q	
						S15E52	12	0	0			S15E52	E	
						S03E72	1	0	0			S03E72	Q	
116	26	25	195	144	022	N08W75	0	0	0		26	N08W75	Q	SOLQUIET
						N11W58	1	0	0			N11W58	Q	MAGALERT 26
						S23W43	0	0	0			S23W43	Q	
						S12W10	2	0	0			S12W10	Q	
						N09W06	0	0	0			N09W06	Q	
						N20E13	0	0	0			N20E13	Q	
						S13E29	1	0	0			S13E29	E	
						N14E31	0	0	0			N14E31	Q	
						N19E33	0	0	0			N19E33	Q	
						S16E40	11	0	0			S16E40	E	

ALERT PERIODS
INTERNATIONAL URSIGRAM AND WORLD DAYS SERVICE
SUMMARY OF THE GEOALERT MESSAGES
APRIL 1983

NO	DI	DO	WOLF	10CM	A	LOC	TOT	M	X	OUTSTANDING EVENTS	DA	LOC	DE	ALERTS
						S04E58	1	0	0			S04E58	E	
117	27	26	144	145	025	N11W73	1	0	0		27	N11W73	Q	SOLQUIET
						S12W24	6	0	0			S12W24	E	MAGALERT
						S12E15	0	0	0			S12E15	Q	27/28
						N14E18	0	0	0			N14E18	Q	
						N18E19	0	0	0			N18E19	Q	
						S17E25	8	0	0			S17E25	E	
						S04E44	3	0	0			S04E44	E	
						S14E55	1	0	0			S14E55	Q	
118	28	27	166	148	017	N11W89	0	0	0		28	N11W89	Q	SOLQUIET
						S11W38	3	0	0			S11W38	E	MAGNIL
						N13E04	0	0	0			N13E04	Q	
						N17E06	1	0	0			N17E06	Q	
						S13E08	6	2	0			S13E08	A	
						S15E23	8	0	0			S15E23	E	
						S05E31	2	0	0			S05E31	E	
						S14E39	0	0	0			S14E39	Q	
119	29	28	171	157	012	S11W51	0	0	0	PRESTO TENFLARE 360 FLUX UNITS	29	S11W51	Q	SOLQUIET
						N14W10	2	0	0	28/1048Z DURATION 5 MINUTES		N14W10	Q	MAGQUIET
						N18W09	1	0	0			N18W09	Q	
						S14W05	4	0	0			S14W05	E	
						S15E09	2	0	0			S15E09	E	
						S04E15	2	1	0			S04E15	E	
						S15E17	0	0	0			S15E17	Q	
						S08E65	0	0	0			S08E65	Q	
120	30	29	177	146	026	S11W64	0	0	0		30	S11W64	Q	SOLQUIET
						N19W23	0	0	0			N19W23	Q	MAGQUIET
						N14W22	0	0	0			N14W22	Q	
						S14W17	2	0	0			S14W17	E	
						S15W04	0	0	0			S15W04	E	
						S03E01	1	0	0			S03E01	Q	
						S16E04	0	0	0			S16E04	Q	
						S08E52	0	0	0			S08E52	Q	
						S09E69	1	0	0			S09E69	E	
121	01	30	131	145	024	S11W78	0	0	0	PRESTO TENFLARE 150 FLUX UNITS	01	S11W78	Q	SOLQUIET
						N19W36	0	0	0	30/0800Z DURATION 40 MINUTES		N19W36	Q	MAGQUIET
						N14W35	0	0	0			N14W35	Q	
						S14W30	2	1	0			S14W30	E	
						S15W17	1	0	0			S15W17	E	
						S03W14	0	0	0			S03W14	Q	
						S08E38	0	0	0			S08E38	Q	
						S09E56	4	0	0			S09E56	E	

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

ALERT PERIODS
INTERNATIONAL URSIGRAM AND WORLD DAYS SERVICE
APRIL 1983

PRESTO MESSAGES (THE RAPID REPORT OF MAJOR EVENTS)

04 APRIL 1983 BOULDER 04/1741Z TENFLARE 110 FLUX UNITS 04/1642Z DURATION 2 MINUTES
18 APRIL 1983 SYDNEY 18/0218Z SOFLARE CULGOORA SURGE S11E90 WEAK TYPE II AND TYPE IV. SWF SYDNEY.
X-RAY M6 MAXIMUM AT 18/0146Z
22 APRIL 1983 TOYOKAWA 22/0020Z TENFLARE 130 FLUX UNITS 22/0003Z DURATION 10 MINUTES
28 APRIL 1983 BOULDER 28/1115Z TENFLARE 360 FLUX UNITS 28/1048Z DURATION 5 MINUTES
01 MAY 1983 TOYOKAWA 01/0015Z TENFLARE 150 FLUX UNITS 30/0800Z DURATION 40 MINUTES

INTERNATIONAL * (R1) RELATIVE SUNSPOT NUMBERS

Day	1982 Final				1983 Prov							
	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr
01	63	70	50	55	115	132	80	88	68	94	109	56
02	57	83	41	68	124	164	88	125	77	85	93	70
03	46	94	33	68	146	143	75	132	55	88	86	62
04	58	104	42	81	176	120	100	137	63	94	93	53
05	63	111	39	97	160	109	100	137	82	82	108	36
06	64	108	32	128	141	55	76	174	110	71	82	49
07	69	115	33	144	117	54	98	175	109	72	77	61
08	89	127	42	150	115	55	86	184	126	63	68	55
09	47	142	61	161	94	54	102	152	100	39	74	59
10	53	147	110	155	81	88	109	166	83	23	55	64
11	58	138	146	157	86	87	112	171	90	21	49	69
12	75	144	187	138	78	92	83	194	77	18	32	61
13	78	139	219	113	81	98	98	172	94	11	12	64
14	58	137	222	100	104	88	116	160	92	10	24	64
15	52	125	246	100	129	71	116	166	92	26	44	53
16	69	128	163	86	133	65	100	140	89	17	63	63
17	76	136	272	93	127	54	108	118	102	22	74	63
18	89	134	270	105	107	33	117	102	85	32	83	75
19	110	134	234	97	117	56	122	79	93	35	82	103
20	112	139	192	77	104	70	118	63	81	32	82	90
21	98	143	138	79	102	95	131	87	74	39	83	87
22	121	146	99	90	95	100	141	88	73	29	70	83
23	107	116	74	71	97	128	120	96	64	40	63	97
24	110	112	27	79	109	145	96	100	58	44	60	104
25	88	92	25	101	118	142	75	122	75	61	48	118
26	117	94	29	98	138	135	73	116	77	70	70	106
27	130	49	22	115	133	131	71	126	70	88	72	131
28	119	36	19	132	132	103	74	120	89	98	48	136
29	112	32	23	134	144	101	82	98	99		50	122
30	77	38	38	144	160	96	76	79	101		72	137
31	82		60	120		73		69	110		37	
Mean	82	110	106	108	119	95	98	127	86	50	66	80

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

ALGONQUIN RADIO OBSERVATORY, OTTAWA

Day	May 82	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan 83	Feb	Mar	Apr
01	151.7	134.2	106.5	123.4	184.3*	205.2	159.6	167.8	131.4	162.6	145.4	100.7
02	147.4	135.1	106.9	138.2*	168.7*	209.4	154.5	166.3	131.4	156.5*	138.7	101.2
03	147.7	141.5	109.4	153.5*	171.0*	197.0	147.4	181.6	136.2	145.5	141.0	101.4*
04	144.7	158.2*	111.5	167.3	188.1*	182.3	143.4	194.5	138.2	156.8	143.7	100.8
05	148.7	156.6*	114.1	180.9	179.4	163.9	136.4	195.9*	154.6	154.3*	146.6	98.7
06	153.0	149.6*	121.3	201.2	172.1	151.9	142.1	210.4	161.6*	152.3	139.3	99.5
07	151.0	158.6*	128.2*	219.6	176.8	140.2	142.3	244.3	163.3	142.2	132.3	102.2
08	150.8	167.3	150.3*	217.5*	178.5	136.9	144.8	241.7*	155.9*	133.3	128.1	104.1*
09	139.8	177.4	176.6*	212.5	179.2	137.4	147.5	258.6	150.0	121.9	122.0	106.1
10	130.7	196.0*	203.5*	209.5	165.6	134.8	152.9	273.5*	144.2	113.4	115.1	103.3
11	132.3	224.2	226.4*	205.0*	158.3	137.3	154.1	259.3*	139.3	106.9	103.0	104.4
12	132.3	238.3*	239.7*	195.2*	152.5*	136.4	164.9	251.1	135.7	99.8	99.5*	107.7
13	129.8	240.2	252.6*	182.9*	151.3	143.9	161.2	239.0	135.1	95.5	95.8	109.1
14	132.2	240.8	269.2*	176.8	147.4	140.4	159.5	235.6	137.2	91.7	95.9	111.7
15	132.1	235.8	274.0	173.0	149.0*	134.1	157.0*	221.9	141.0	88.5	100.6*	103.6
16	139.0	210.6*	269.4*	161.4	147.3	129.8	163.3	213.2*	140.2	89.7	107.8	105.1
17	142.2*	206.0*	273.3	165.1	147.0*	130.1	158.0	200.5*	138.0	91.9	114.5	113.5
18	146.8	200.7*	247.2*	166.4*	143.2	132.8	170.2*	186.5	134.8	97.2	117.7	120.7
19	155.9	207.5	234.7	159.2	142.6*	136.7	182.3	176.8*	127.4	94.6	118.3	125.0
20	155.6*	207.1	196.5	144.7	146.9	146.2	189.2	159.2	120.5	97.3	120.7	127.4
21	165.4*	210.7	173.7*	138.6	145.4	161.4	200.9	149.4	116.1	101.6	118.8*	133.3
22	158.8	197.2*	149.5*	138.8	146.2	168.2	231.1*	150.2*	113.5	106.2	117.2	139.7
23	155.7*	187.3	128.5	141.2	152.6*	177.3	196.1	157.0*	115.4	112.0	116.2	140.4
24	144.8*	168.2	117.8	142.9	165.4*	172.9	190.9	166.8	114.1	114.3	117.1	142.7
25	145.7	159.1*	108.2	158.5	170.3	196.8	164.8	170.6	122.7	120.3	114.2*	145.6
26	158.0	142.3	102.1	166.4	187.3	193.5	168.8*	168.7	132.6	126.2	114.7*	146.8
27	171.5*	127.6	97.8	180.4	191.4	187.7	158.6	166.2	133.6	138.3	109.6	149.6
28	171.3*	123.1	96.4	181.4	196.9	181.4	160.3*	157.0	140.6	137.6	104.9	156.4*
29	170.9*	111.7	97.5	183.4	204.6	170.9	161.4	147.3	148.9		98.9	148.4
30	142.8	108.5	112.4	174.5	202.4	166.7	164.8	142.5	154.8		100.7	147.2
31	136.7		114.4	175.0*		165.1		134.4	161.9		98.7	
Mean	147.9	177.4	164.8	172.1	167.1	160.9	163.7	93.2	137.7	119.6	117.3	119.9

*Adjusted for burst in progress at time of measurement.

DAILY SOLAR INDICES

9
Apr 83

APRIL 1983

Day	Julian Day	Bartels Cycle Day	Sunspot Numbers		Obs Flux Ottawa (2800)	----- Solar Flux Adjusted to 1 Astronomical Unit -----								
			R _I	R _A		AFGL (15400)	AFGL (8800)	AFGL (4995)	Ottawa (2800)	AFGL (2695)	AFGL (1415)	AFGL (606)	AFGL (410)	AFGL (245)
01	91	17	56	54	100.8	558	261	127	100.7	94	91	81	30	13
02	92	18	70	59	101.3	560	245	127	101.2	95	87	74	30	12
03	93	19	62	50	101.4*	533	246	129	101.4*	89	92	71	30	13
04	94	20	53	46	100.7	540	246	129	100.8	91	86	73	29	14
05	95	21	36	41	98.6	559	240	127	98.7	92	83	65	27	14
06	96	22	49	50	99.3	562	249	127	99.5	84	83	65	26	15
07	97	23	61	64	102.0	560	253	131	102.2	92	84	67	28	15
08	98	24	55	61	103.8*	492	257	134	104.1*	103	87	72	28	16
09	99	25	59	56	105.8	556	258	133	106.1	101	86	65	26	14
10	100	26	64	64	102.9	---	---	---	103.3	---	---	---	---	---
11	101	27	69	66	103.9	433	247	128	104.4	105	89	16	9	9
12	102	1	61	68	107.2	539	244	132	107.7	108	93	73	28	15
13	103	2	64	71	108.4	562	249	128	109.1	104	91	72	28	14
14	104	3	64	54	111.0	---	---	---	111.7	---	---	---	---	---
15	105	4	53	48	102.9	---	---	---	103.6	---	---	---	---	---
16	106	5	63	56	104.4	---	---	---	105.1	---	---	---	---	---
17	107	6	63	64	112.6	---	---	---	113.5	---	---	---	---	---
18	108	7	75	80	119.6	---	---	---	120.7	---	---	---	---	---
19	109	8	103	91	123.9	---	---	---	125.0	---	---	---	---	---
20	110	9	90	83	126.1	573	286	154	127.4	115	110	92	39	21
21	111	10	87	72	132.0	578	267	156	133.3	133	117	74	36	19
22	112	11	83	77	138.2	583	277	163	139.7	122	118	89	38	19
23	113	12	97	74	138.9	542	239	157	140.4	132	121	76	33	18
24	114	13	104	83	141.0	520	257	156	142.7	135	118	83	35	31
25	115	14	118	100	143.9	539	287	169	145.6	131	120	92	36	19
26	116	15	106	97	144.9	581	280	170	146.8	144	124	91	35	28
27	117	16	131	119	147.5	586	281	164	149.6	139	127	97	39	18
28	118	17	136	141	154.2*	589	276	173	156.4*	149	134	88	34	17
29	119	18	122	129	146.2	---	---	---	148.4	---	---	---	---	---
30	120	19	137	121	145.0	569	275	162	147.2	131	128	81	30	17
Mean			80	75	118.9	551	260	144	119.9	113	103	75	30	17

*Adjusted for burst in progress at time of measurement.

Numbers in parentheses in the column headings denote frequencies in MHz.
 Equipment problems produced the gaps shown here in the AFGL Sagamore Hill observations.
 The International and American sunspot numbers represent provisional values.

OBSERVED AND PREDICTED SOLAR ACTIVITY INDICES
April 1983

Date	RELATIVE SUNSPOT NUMBERS						2800 MHz RADIO FLUX Adjusted to 1 AU	
	Zurich or Internat (R _I)		American (R _A)		Derived (R _S)		(S _a)	
	Monthly Mean	Smoothed	Monthly Mean	Smoothed	Monthly Mean	Smoothed	Monthly Mean	Smoothed
Feb 79	137.5	131	136.8	123	153.0	124	199.1	172
Mar	138.0	136	132.5	128	136.7	128	184.0	176
Apr	101.5	141	95.8	133	127.0	133	175.0	180
May	134.4	147	121.8	139	120.4	139	168.9	186
Jun	149.5	153	136.4	144	138.9	144	186.0	191
Jul	159.4	155	140.5	145	123.1	145	171.4	192
Aug	142.2	155	125.1	144	129.2	145	177.0	192
Sep	188.4	156	184.0	143	156.5	144	202.3	191
Oct	186.2	158	178.2	144	171.7	145	216.4	192
Nov	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	96	111.8	106	160.9	155
Nov	98.1	91(3)*	93.2	92	114.8	101	163.7	---
Dec	127.0	88(6)*	145.0	88	146.7	97	193.2	---
Jan 83	85.8†	83(7)*	82.8	83	86.7	91	137.7	---
Feb	50.1†	80(9)*	53.4	80	67.2	88	119.6	---
Mar	66.5†	78(10)*	60.5	79	64.7	86	117.3	---
Apr	79.7†	76(13)*	---	76	67.5	83	119.9	---
May	---	73(15)*	---	73	---	80	---	---
Jun	---	70(17)*	---	70	---	76	---	---
Jul	---	68(19)*	---	69	---	74	---	---
Aug	---	67(21)*	---	68	---	73	---	---
Sep	---	66(23)*	---	67	---	72	---	---
Oct	---	66(24)*	---	67	---	73	---	---

*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

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	95 (2)	90 (5)	86 (7)
1983	82 (8)	79 (9)	77 (11)	75 (13)	72 (15)	69 (17)	68 (18)	67 (20)	66 (22)	66 (23)	66 (23)	65 (24)
1984	63 (24)	61 (25)	57 (25)	53 (26)	51 (28)	51 (29)	49 (29)	47 (29)	45 (29)	43 (28)	41 (27)	39 (27)
1985	38 (27)	37 (26)	36 (25)	36 (25)	35 (25)	33 (24)	32 (22)	31 (21)	30 (21)	30 (22)	29 (23)	28 (23)
1986	28 (23)	27 (23)	25 (23)	24 (22)	22 (22)	20 (21)	18 (20)	16 (19)	16 (18)	15 (17)	15 (15)	15 (14)

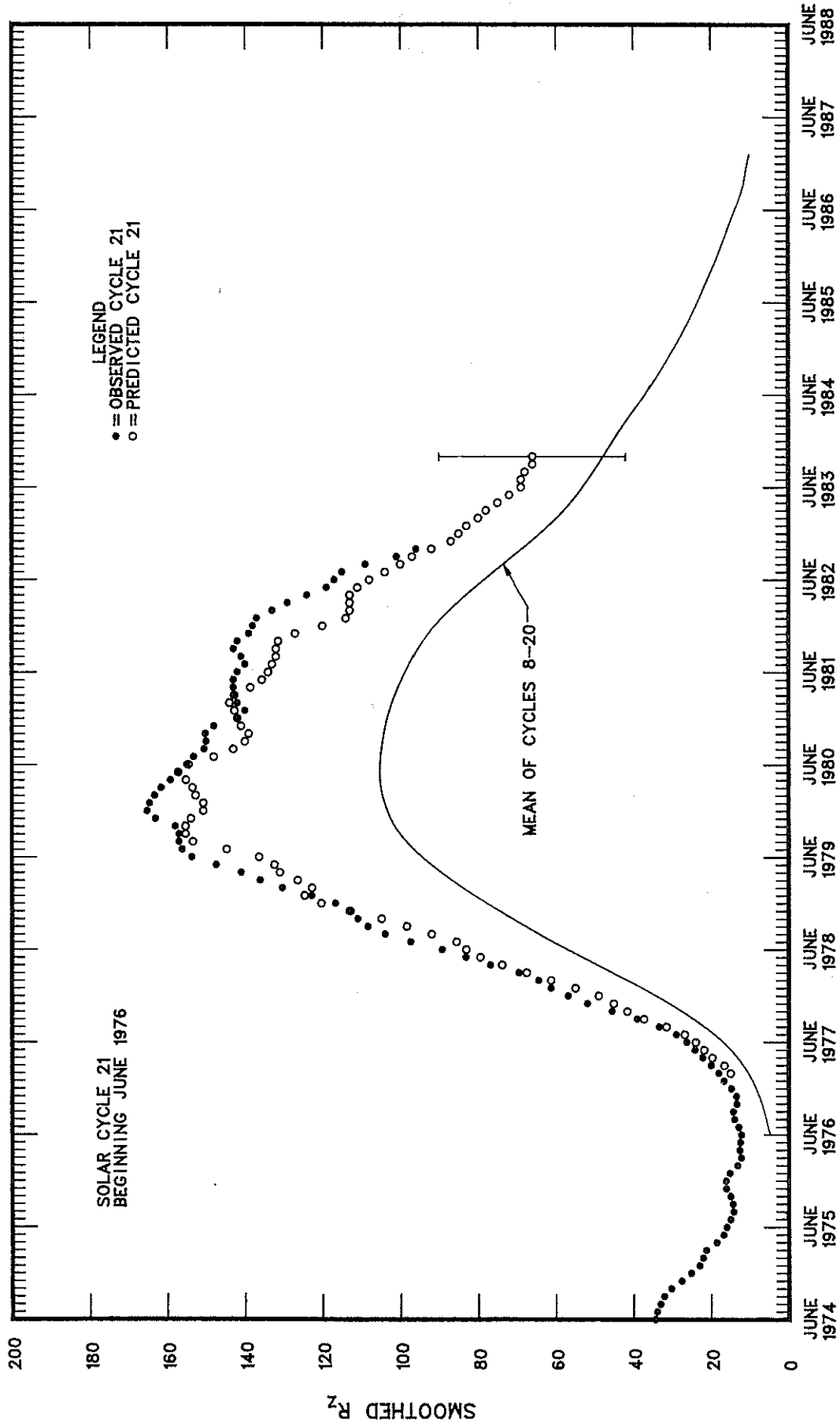
For the current solar cycle, this table gives observed smoothed sunspot numbers up to the one calculated from the most recently measured monthly mean. These smoothed observed values are based on final monthly mean Zurich numbers through 1980, on final international numbers through 1982, and on provisional 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 10 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 October 1983 prediction tabulated above. There exists a 90% chance that in October 1983 the actual smoothed sunspot number will fall somewhere between 42 and 90.

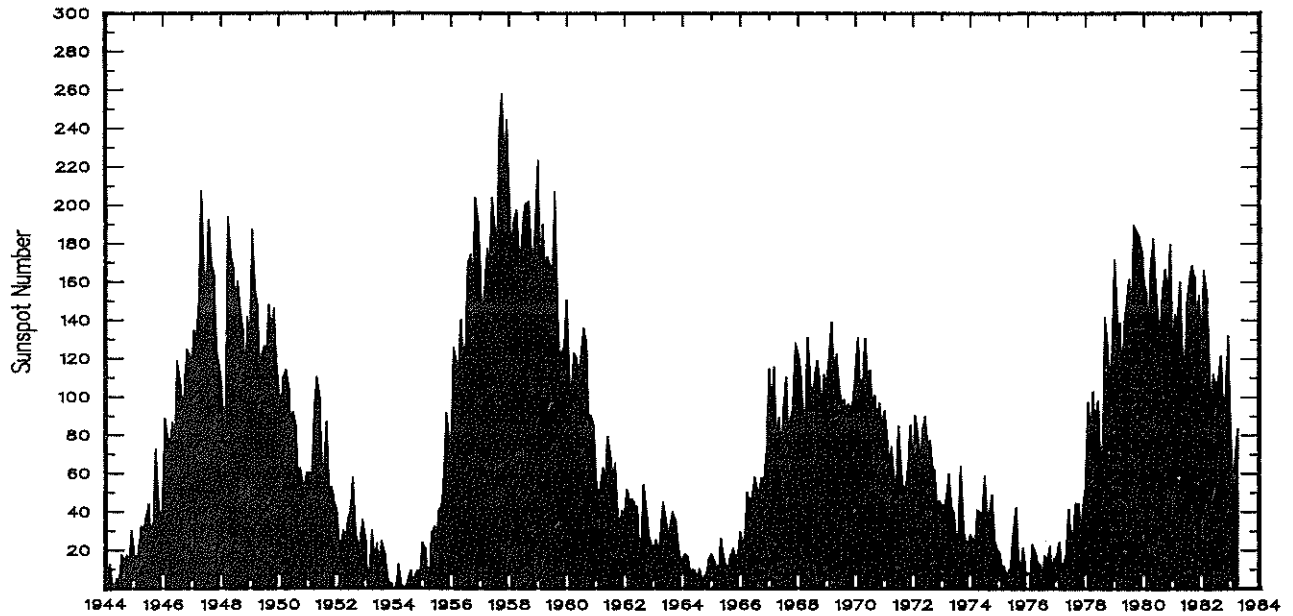
THE MCNISH-LINCOLN PREDICTION METHOD GENERATES USEFUL ESTIMATES OF SMOOTHED SUNSPOT NUMBERS FOR NO MORE THAN 12 MONTHS AHEAD. Beyond a year the predictions regress rapidly toward the mean of all 13 cycles of data used in the computation. Furthermore, the method is very sensitive to the date defined as 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



MONTHLY MEAN SUNSPOT NUMBERS January 1944 - April 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	42.0	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	85.8*	50.1*	66.5*	79.7*								

*Provisional

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Sta	Day	Start (UT)	Max (UT)	End (UT)	Lat	CMD	NOAA/ USAF		Dur (Min)	Imp Opt	Xray	Obs See	Type	Area Measurement			Remarks	
							Region	CMP Mo Day						Time (UT)	Apparent (10 ⁻⁶ Disk)	Corr (Sq Deg)		
GOES	12	1421	1430	1439					18		C	1.8						
HOLL	12	1900	1900	1903	S08	E49	4142	04	16.5	3	SF	C	.4	3	C		24	
[MANI	13	0008	0012	0028	S10	W65		04	8.1	20	SN			1	V		55	1.1
LEAR	13	0022	0023	0031	S10	W65	4137	04	8.1	9	SN			3	C		50	
GOES	13	0432	0436	0448						16	C	.7						
HOLL	13	1525	1525	1537	S09	E36	4142	04	16.3	12	SF	C	.4	3	C		27	F
HOLL	13	1633	1633	1639	S08	W77	4137	04	7.9	6	SF			3	C		9	
HOLL	13	1726	1726	1733	S08	E35	4142	04	16.4	7	SF	C	.5	3	C		24	
HOLL	13	1746	1759	1800	N20	E60	4144	04	18.3	14	SF			3	C		25	
HOLL	13	1747	1747	1755	S08	W77	4137	04	8.0	8	SF			3	C		11	
[PALE	13	2009	2010	2014D	S07	E35	4142	04	16.5	5D	SF			3	C		31	
HOLL	13	2009	2009	2017	S10	E35	4142	04	16.5	8	SF			3	C		36	
HOLL	13	2051	2053	2059	S09	E41	4142	04	16.9	8	SF			3	C		24	
GOES	13	2324	2328	2340						16	C	.5						
GOES	14	0002	0007	0010						8	C	.6						
GOES	14	0210	0213	0216						6	C	.5						
MONT	14	0839E	0848	0946	S13	E51		04	18.2	67D	IN			C	0848	500		B
GOES	14	1234	1237	1243						9	C	2.0						
GOES	14	1424	1427	1430						6	C	.6						
GOES	14	1546	1550	1553						7	C	.7						
GOES	14	2113	2128	2131			4142			18	C	1.1						
GOES	14	2334	2342	2351						17	C	3.7						
MANI	15	0001E	0002U	0010	N07	E80		04	21.0	9D	SF			1	V			
MANI	15	0200E	0210	0221	S12	W90		04	8.3	21D	SB			1	V			
MANI	15	0219E	0219U	0245	N07	E80		04	21.1	26D	SF			1	V			
GOES	15	0408	0412	0427						19	C	.5						
GOES	15	0646	0655	0706						20	C	5.9						
GOES	15	1455	1502	1510						15	C	1.0						
GOES	15	2000	2004	2006						6	C	.5						
GOES	16	0015	0019	0021						6	C	1.0						
WEND	17	1506	1508	1512	S10	W67		04	12.6	6	SF			C	1508	56		
GOES	17	1653	1658	1708						15	C	.7						
MANI	17	2328	2329	0005	S10	W03		04	17.8	37	SF	C	.7	1	V		54	.6
GOES	18	0122	0148	0228			4150			66	M	6.7						
GOES	18	2141	2159	2206						25	C	3.4						
GOES	19	0003	0006	0009						6	C	1.7						
GOES	19	0217	0220	0222						5	C	2.1						
GOES	19	0531	0533	0536						5	C	1.3						
GOES	19	1334	1337	1340						6	C	1.0						
HOLL	19	1412	1412	1422	S29	W60	4148	04	14.9	10	SF			2	C		18	
HOLL	19	1450	1451	1455	S30	W60	4148	04	14.9	5	SF			3	C		16	
HOLL	19	1519	1520	1524	S30	W61	4148	04	14.8	5	SF			3	C		20	
HOLL	19	1545	1602	1637	S31	W61	4148	04	14.8	52	SF	C	.8	3	C		53	
HOLL	19	1552E	1554U	1608	S13	W57		04	15.4	16D	SF			3	C		96	F
[HOLL	19	1639	1642	1817	S30	W62	4148	04	14.8	98	SN			3	C		85	K
HOLL	19	1639	1749	1817	S30	W62	4148	04	14.8	98	SN	C	.8	3	C		66	K
GOES	19	1745	1748	1750			4148			5	C	.8						
[HOLL	19	1819	1824	1843	S29	W62	4148	04	14.9	24	SN			3	C		37	K
HOLL	19	1819	1835	1843	S29	W62	4148	04	14.9	24	SN	C	1.8	3	C		64	K
HOLL	19	1900	1905	1910	S30	W62	4148	04	14.9	10	SN	C	.8	3	C		24	
HOLL	19	1931	1934	1939	S30	W62	4148	04	14.9	8	SN			3	C		42	
GOES	19	2006	2010	2012						6	C	1.0						
HOLL	19	2022E	2022U	2026	S30	W63	4148	04	14.9	4D	SF			3	C		23	
HOLL	19	2123	2127	2130	S30	W63	4148	04	14.9	7	SF			3	C		24	
HOLL	19	2159	2159	2210	S29	W64	4148	04	14.9	11	SF	C	1.2	3	C		29	F
HOLL	19	2236	2240	2243	S30	W64	4148	04	14.9	7	SF			3	C		22	
HOLL	19	2346	2350	0001	N09	E21	4151	04	21.6	15	SF			3	C		21	F
[LEAR	20	0019	0023U	0037	S13	E71	4150	04	25.4	18	SF	C	2.2	3	C		79	
HOLL	20	0020	0024	0037	S14	E72	4150	04	25.5	17	SN	C	2.2	3	C		110	F
MANI	20	0022E	0024	0037	S13	E72		04	25.5	15D	IF			1	V		95	2.2
GOES	20	0142	0145	0148						6	C	1.8						
LEAR	20	0618	0619	0648	S13	E69	4150	04	25.5	30	SF	C	2.1	3	C		47	
LEAR	20	0650	0703	0748	S30	W66	4148	04	15.1	58	SN	C	2.2	3	C		26	

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Sta	Day	Start (UT)	Max (UT)	End (UT)	Lat	CMD	NOAA/ USAF Region	CMP Mo Day	Dur (Min)	Imp Opt Xray	Obs See	Type	Time (UT)	Area Measurement		Remarks	
														Apparent (10-6 Disk)	Corr (Sq Deg)		
LEAR	20	0755	0800	0814	S11	W37	4149	04 17.5	19	SF		3	C		30		U
GOES	20	1220	1234	1240			4152		20		C 1.2						
HOLL	20	1353E	1355	1410	S10	E59	4150	04 25.0	17D	SF		3	C		30		
GOES	20	1551	1555	1559					8		C 1.0						
HOLL	20	1726	1729	1818	S13	E63	4150	04 25.5	52	SF	C 2.7	3	C		134		F
GOES	20	2054	2058	2102					8		C 1.3						
MANI	20	2319E	2322	0001D	S28	W80		04 14.7	42D	SN		1	V				
HOLL	21	0115E	0116U	0121	N09	W46	4146	04 17.6	6D	SF		2	C		20		F
GOES	21	0144	0153	0157					13		C 3.9						
GOES	21	0346	0350	0400					14		C 1.8						
GOES	21	0428	0437	0448					20		C 3.7						
LEAR	21	0515	0517	0538	S13	E57	4150	04 25.5	23	SF		3	C		32		
GOES	21	0644	0648	0702					18		C 3.7						
GOES	21	0905	0908	0910					5		C 2.0						
GOES	21	0921	0924	0927					6		C 2.0						
GOES	21	1007	1010	1012					5		C 2.0						
GOES	21	1030	1039	1044					14		C 2.6						
GOES	21	1117	1120	1122					5		C 1.9						
GOES	21	1127	1132	1138					11		C 3.1						
GOES	21	1243	1246	1248					5		C 1.4						
RAMY	21	1326	1328	1333	S08	E84		04 27.9	7	SF		3	C		11		
GOES	21	1409	1412	1420					11		C 1.4						
GOES	21	1429	1433	1438					9		C 2.5						
GOES	21	1553	1556	1558					5		C 1.9						
GOES	21	1611	1614	1617					6		C 1.8						
GOES	21	1634	1637	1639					5		C 1.8						
HOLL	21	1831	1832	1844	S10	E87	4154	04 28.3	13	SN		3	C		31		
HOLL	21	1844	1846	1906	S13	E52	4150	04 25.7	22	SF		3	C		42		F
PALE	21	1858E	1902	1925D	S08	E87	4154	04 28.3	27D	IN	C 1.3	3	C				
HOLL	21	1933	1935	1950	S10	E84	4154	04 28.1	17	SF	C 1.1	3	C		12		F
HOLL	21	1956	1959	2005	S10	E85	4154	04 28.2	9	SN		3	C		25		F
HOLL	21	2011	2013	2025	S10	E84	4154	04 28.2	14	SF		3	C		8		
HOLL	21	2042	2042	2047	N08	W17	4146	04 20.6	5	SN	C 2.2	3	C		53		F
GOES	21	2048	2104	2109					21		C 7.8						
HOLL	21	2237	2238U	2251D	N07	W18	4146	04 20.6	14D	SF		2	C		46		F
GOES	22	0001	0008	0014					13		C 4.0						
PEKG	22	0003	0015	0040	S18	E90		04 28.9	37	N			C	0015			A
GOES	22	0042	0045	0047					5		C 1.9						
PEKG	22	0110	0120	0130D	S12	E46		04 25.5	20D	SN			P	0120	55	.8	E
GOES	22	0142	0145	0152					10		C 2.2						
LEAR	22	0307	0311	0332	S25	E15	4152	04 23.3	25	SF	C 1.8	1	C		134		
PEKG	22	0314E	0314	0330	S24	E15		04 23.3	16D	IN	C 1.8		C	0314	244	2.7	F
GOES	22	0413	0416	0426					13		C 2.0						
GOES	22	0535	0552	0556					21		C 1.4						
GOES	22	0649	0654	0658					9		C 2.3						
GOES	22	0746	0750	0754					8		C 1.3						
PEKG	22	0823	0826	0831	S13	E35		04 25.0	8	SN			C	0826	29	.4	D
GOES	22	0905	0919	0923					18		C 9.9						
GOES	22	1032	1035	1039					7		C 1.9						
GOES	22	1313	1319	1324					11		C 2.3						
HOLL	22	1338	1339	1356	S12	E37	4150	04 25.4	18	SF		2	C		18		F
GOES	22	1536	1540	1545					9		C 1.9						
GOES	22	1629	1633	1638					9		C 1.2						
HOLL	22	1734	1734	1740	S11	E72	4154	04 28.2	6	SF	C 1.3	3	C		14		F
GOES	22	1943	1944	1951					8		C 1.5						
HOLL	22	2236	2240	2320	S13	E33	4150	04 25.4	44	SF		3	C		82		F
HOLL	22	2243	2244	2251	S21	E78	4154	04 28.9	8	SF	C 1.4	3	C		34		
GOES	23	0123	0136	0147					24		C 2.0						
HOLL	23	0124	0127U	0135D	S18	E59	4156	04 27.6	11D	SN		2	C		110		F
GOES	23	0241	0252	0256					15		C 2.1						
LEAR	23	0516	0517	0555D	S10	E22	4150	04 24.9	39D	SF	C 1.9	3	C		49		F
LEAR	23	0658	0659	0722	S13	E25	4150	04 25.2	24	SF	C 2.3	3	C		49		F
PEKG	23	0700E	0706	0710D	S13	E29		04 25.5	10D	IN			P	0706	218	2.6	F
LEAR	23	0805	0809	0819	S09	E67	4154	04 28.4	14	SF		3	C		20		F
GOES	23	0944	1011	1033					49		C 2.5						
GOES	23	1312	1317	1336					24		C 1.4						
RAMY	23	1428	1430	1433	S17	E58		04 28.0	5	SN		3	C		41		
GOES	23	1750	1808	1819					29		C 2.4						

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Sta	Day	Start (UT)	Max (UT)	End (UT)	Lat	CMD	NOAA/ USAF Region	CMP Mo Day	Dur (Min)	Imp Opt Xray	Obs See Type	Time (UT)	Area Measurement Apparent (10 ⁻⁶ Disk)	Corr (Sq Deg)	Remarks
GOES	23	2126	2130	2134					8	C 1.1					
GOES	23	2219	2300	2301					42	C 2.1					
GOES	23	2236	2239	2241					5	C 2.1					
HOLL	24	0038	0044	0106	S16	E63	4156	04 28.8	28	SF	3 C		44		K
HOLL	24	0038	0057	0106	S16	E63	4156	04 28.8	28	SN	C 2.1 3 C		100		F K
LEAR	24	0056	0057	0109	S17	E68	4156	04 29.2	13	SF	C 2.1 3 C		28		
LEAR	24	0113	0117	0128	N08	W47	4146	04 20.5	15	SF	3 C		35		
LEAR	24	0126	0129	0411	S15	E70	4156	04 29.4	165	SF	3 C		44		K
LEAR	24	0126	0323	0411	S15	E70	4156	04 29.4	165	SN	C 4.1 3 C		56		F K
PURP	24	0128	0147U	0210	S17	E69		04 29.3	42	1B		0147	158		
PEKG	24	0145E	0156	0210	S15	E68		04 29.2	250	SN		0156	101		F
LEAR	24	0624	0625	0629	S13	E15	4150	04 25.4	5	SF	3 C		41		
RAMY	24	1232	1232	1240	N04	W53	4146	04 20.6	8	SN	3 C		28		
GOES	24	1347	1410	1430					43	C .9					
HOLL	24	1508	1509	1534	S12	E09	4150	04 25.3	26	SF	3 C		54		F
RAMY	24	1514	1515	1521	S21	E58	4156	04 29.1	7	SN	C 1.2 3 C		31		
HOLL	24	1515	1515	1521	S20	E55	4156	04 28.8	6	SN	C 1.2 3 C		35		
HOLL	24	1553	1555	1636	S17	E60	4156	04 29.2	43	SF	3 C		12		K
HOLL	24	1553	1607	1636	S17	E60	4156	04 29.2	43	SF	3 C		79		F K
GOES	24	1648	1651	1653					5	C 1.0					
HOLL	24	1748	1750	1755	S19	E54	4156	04 28.9	7	SF	3 C		27		
HOLL	24	1809	1810	1818	S16	E57	4156	04 29.1	9	SF	3 C		51		
RAMY	24	1810	1811	1828	S15	E57	4156	04 29.1	18	SF	3 C		21		K
RAMY	24	1810	1822	1828	S15	E57	4156	04 29.1	18	SF	3 C		17		K
RAMY	24	1858	1902	1908	S20	E53	4156	04 28.8	10	SF	3 C		27		
RAMY	24	1912	1912	1932	S10	E47	4154	04 28.3	20	SN	C 1.2 3 C		98		
HOLL	24	1912	1912	1936	S06	E45	4154	04 28.2	24	SN	C 1.2 3 C		84		
RAMY	24	1921	1924	1929	S19	E53	4156	04 28.9	8	SF	C 1.2 3 C		57		
HOLL	24	1923	1924	1931	S21	E59	4156	04 29.3	8	SF	C 1.2 3 C		45		
HOLL	24	2041	2044	2050	S12	E07	4150	04 25.4	9	SF	C 1.1 3 C		35		F
RAMY	24	2043	2045	2054	S11	E07	4150	04 25.4	11	SF	C 1.1 3 C		50		
HOLL	24	2051	2052	2054	S20	E53	4156	04 28.9	3	SN	3 C		40		
HOLL	24	2105	2105	2110	S05	E75	4157	04 30.5	5	SF	3 C		11		
RAMY	24	2107	2107	2127	S18	E56	4156	04 29.1	20	SF	C 1.7 3 C		27		
HOLL	24	2107	2108	2115	S17	E56	4156	04 29.1	8	SN	C 1.7 3 C		52		F
HOLL	24	2109	2109	2123	S12	E46	4154	04 28.3	14	SF	3 C		19		
HOLL	24	2254	2259	2304	S17	E52	4156	04 28.9	10	SF	3 C		15		
HOLL	25	0028	0032	0036	S17	E54	4156	04 29.1	8	SF	3 C		17		F
LEAR	25	0204	0209	0219	S15	E52	4156	04 29.0	15	SF	3 C		22		F
LEAR	25	0341	0342	0347	S16	E52	4156	04 29.1	6	SN	3 C		35		
LEAR	25	0347	0350	0428	S12	E02	4150	04 25.3	41	SN	3 C		59		
LEAR	25	0428	0430	0437	S16	E51	4156	04 29.1	9	SN	3 C		32		
LEAR	25	0433	0441	0518	S04	E68	4157	04 30.3	45	SN	C 6.3 3 C		64		F
PURP	25	0439E	0452U	0459	S04	E71		04 30.5	200	SB		0452	55		E
PURP	25	0614	0638	0654	S11	E41		04 28.3	40	SB		0638	83	1.1	
LEAR	25	0713	0722	0757	S15	E49	4156	04 29.0	44	SN	C 2.9 3 C		131		F
WEND	25	0714	0718	0727	S17	E51		04 29.2	13	SN	C 2.9	0718	94	1.6	
PURP	25	0719	0722	0725D	S17	E48		04 29.0	60	1B	P	0722	158	2.4	E
ISTA	25	0720		0736	S16	E40		04 28.3		SN					
BUCA	25	0720E		0800	S16	E52		04 29.3	400	1N		0725	161	2.6	
KAND	25	1045	1104	1110	S13	E49		04 29.1	25	SN			29	.5	D
GOES	25	1045	1049	1054					9	C 1.1					
GOES	25	1145	1150	1154					9	C 1.2					
KAND	25	1311	1312	1316	S18	E43		04 28.8	5	SF	C 1.2		21	.3	D
RAMY	25	1314	1314	1320D	S16	E45	4156	04 29.0	60	SB	C 1.2		78		FE
HOLL	25	1533	1533	1536	S16	E42	4156	04 28.8	3	SF	3 C		35		
RAMY	25	1541	1618	1639	S16	E46	4156	04 29.1	58	SF	B 9.2 3 C		98		
HOLL	25	1611	1612	1641	S17	E47	4156	04 29.2	30	SF	B 9.2 3 C		26		FH
HOLL	25	1615	1616	1623	S13	E39	4154	04 28.6	8	SF	C 1.7 3 C		86		
RAMY	25	1616	1618	1623	S12	E39	4154	04 28.6	7	SN	C 1.7 3 C		63		
HOLL	25	1735	1736	1740	S15	E43	4156	04 29.0	5	SF	B 8.6 3 C		21		
HOLL	25	1941	1947	1958	N13	W57	4151	04 21.5	17	SF	3 C		20		
HOLL	25	2100	2101	2117	S12	W04	4150	04 25.6	17	SF	3 C		31		
HOLL	25	2116	2121	2124	S18	E43	4156	04 29.2	8	SF	3 C		23		
HOLL	25	2140	2142	2214	S17	E43	4156	04 29.2	34	SB	C 2.2 3 C		66		
MANI	26	0043	0045	0055	S03	E59		04 30.4	12	SF	C 1.2		50	.9	
HOLL	26	0047E	0047U	0057	S04	E59	4157	04 30.4	100	SF	3 C		58		
PURP	26	0118	0135	0145	S16	E39		04 29.0	27	SB		0135	48	.6	E

H - ALPHA SOLAR FLARES

APRIL 1983

Sta	Day	Start (UT)	Max (UT)	End (UT)	Lat	CMD	NOAA/ USAF Region	CMP Mo	Dur Day	(Min)	Imp Opt	Xray	Obs See	Type	Area Measurement			Remarks
															Time (UT)	Apparent (10 ⁻⁶ Disk)	Corr (Sq Deg)	
LEAR	28	0045	0049	0104	S17	E10	4154	04	28.8	19	SN		3	C		74		F
[	KAND	28	0709	0718	0732	S16	E18		04	29.7	23	SN	C 2.0	C		71	.8	E
	LEAR	28	0716	0718	0753	S15	E17	4162	04	29.6	37	SF	C 2.0	3	C	28		
	LEAR	28	0737	0738	0801	S10	E00	4154	04	28.3	24	SF		3	C	40		
[	MONT	28	0944	0955	1005D	S08	E24		04	30.2	21D	SN		C	0955	220		
	KAND	28	0948	0958	1010	S06	E22		04	30.1	22	SN		C		46	.5	E
	KAND	28	0948	0958	1010	S07	E27		04	30.4	22	SN		C		46	.5	E
	KAND	28	0948	0958	1010	S12	E21		04	30.0	22	SB		C		62	.7	E
	KAND	28	0960	0932	0935	S06	E22		04	30.1	1415	SF		C		21	.2	D
	KAND	28	1050	1052	1109	S03	E24		04	30.2	19	SB	M 1.2	C		166	1.6	E
	KAND	28	1139	1141	1154	S10	W03		04	28.3	15	SF		C		62	.6	E
	GOES	28	1540	1551	1554						14		C 2.2					
	RAMY	28	1638	1639	1700	N14	W07	4159	04	28.2	22	SN		3	C	127		
	GOES	28	1720	1723	1725						5		C 1.6					
	RAMY	28	1727	1744	1758	S16	E14	4162	04	29.8	31	SF	C 2.2	3	C	35		
	RAMY	28	1831	1841	1845D	S18	E04	4154	04	29.1	14D	1N	C 3.4	3	C	275		F
	RAMY	28	1908	1908	1913	S06	E16	4157	04	30.0	5	SN		3	C	57		
	PALE	28	2209	2211	2216	N12	W13	4159	04	27.9	7	SN	C 2.4	3	C	52		F
	GOES	29	0401	0409	0415						14		C 1.1					
[	LEAR	29	0615	0620	0711	S12	E81		05	5.4	56	3N	C 3.5	3	C			K
	LEAR	29	0615	0630	0711	S12	E81		05	5.4	56	2N		3	C			K
	ISTA	29	0625		0640	S20	E77		05	5.2		SN						G
[	ISTA	29	0630		0640	S14	W07		04	28.7		1N						U
	LEAR	29	0635	0636	0713	S17	W06	4154	04	28.8	38	SF		3	C	91		
	GOES	29	1557	1559	1603				04	29.7	6		C 8.2	S				
	GOES	29	1757	1809	1829				04	29.7	32		C 1.4	S				
	GOES	29	2012	2015	2017				04	29.8	5		C 2.1	S				
[	PALE	29	2350	2356U	0006D	S05	W02	4157	04	29.8	16D	SF	C 1.3	3	C	41		F
	MANI	29	2352E	2357	0010	S04	W02		04	29.8	18D	SF	C 1.3	1	V	35	.4	F
[	LEAR	30	0047	0049	0116	S09	E72	4165	05	5.4	29	SN	C 3.0	3	C	45		F
	PALE	30	0058E	0108U	0113D	S09	E68	4165	05	5.1	15D	SF		3	C	119		F
	LEAR	30	0253	0253	0258	S15	W20	4154	04	28.6	5	SF		3	C	27		
	PALE	30	0255E	0316U	0336	S21	W13	4154	04	29.1	41D	SF	C 2.2	3	C	73		
	LEAR	30	0306	0311	0328	S15	W20	4154	04	28.6	22	SF		3	C	55		
[	LEAR	30	0336	0339	0406	S09	E72	4165	05	5.6	30	SN	C 4.2	3	C	60		F
	PEKG	30	0337	0347	0352	S10	E72		05	5.6	15	SF		C	0347	50		E
	GOES	30	0658	0701	0706				04	30.3	8		B 8.8	S				
	LEAR	30	0721	0722	0738	S09	E70	4165	05	5.6	17	SF	C 2.0	3	C	19		F
[	LEAR	30	0803	0806	0900	S09	E68	4165	05	5.4	57	SN		3	C	119		F
	MANI	30	0804	0805	0856	S10	E66		05	5.3	52	SN		1	V	95	2.0	F
	LEAR	30	0805	0818	0915D	S17	W17	4154	04	29.0	70D	2B	M 2.9	3	C	917		ZU
[	MANI	30	0805	0815	0938D	S16	W18		04	29.0	93D	2B	M 2.9	1	V	850	9.4	ZU
	ISTA	30	0808		0855	S17	W17		04	29.0		2N						FI
	MONT	30	0932E	0932	1030D	S19	W15		04	29.3	58D	2B		C	0932	850		
	GOES	30	1428	1430	1435						7		B 8.8					
	GOES	30	1944	1950	2000						16		C 1.3					
	GOES	30	2257	2300	2303						6		B 9.4					
	LEAR	30	2344	2344	2356	S16	W18	4162	04	29.6	12	SN	B 8.0	3	C	50		

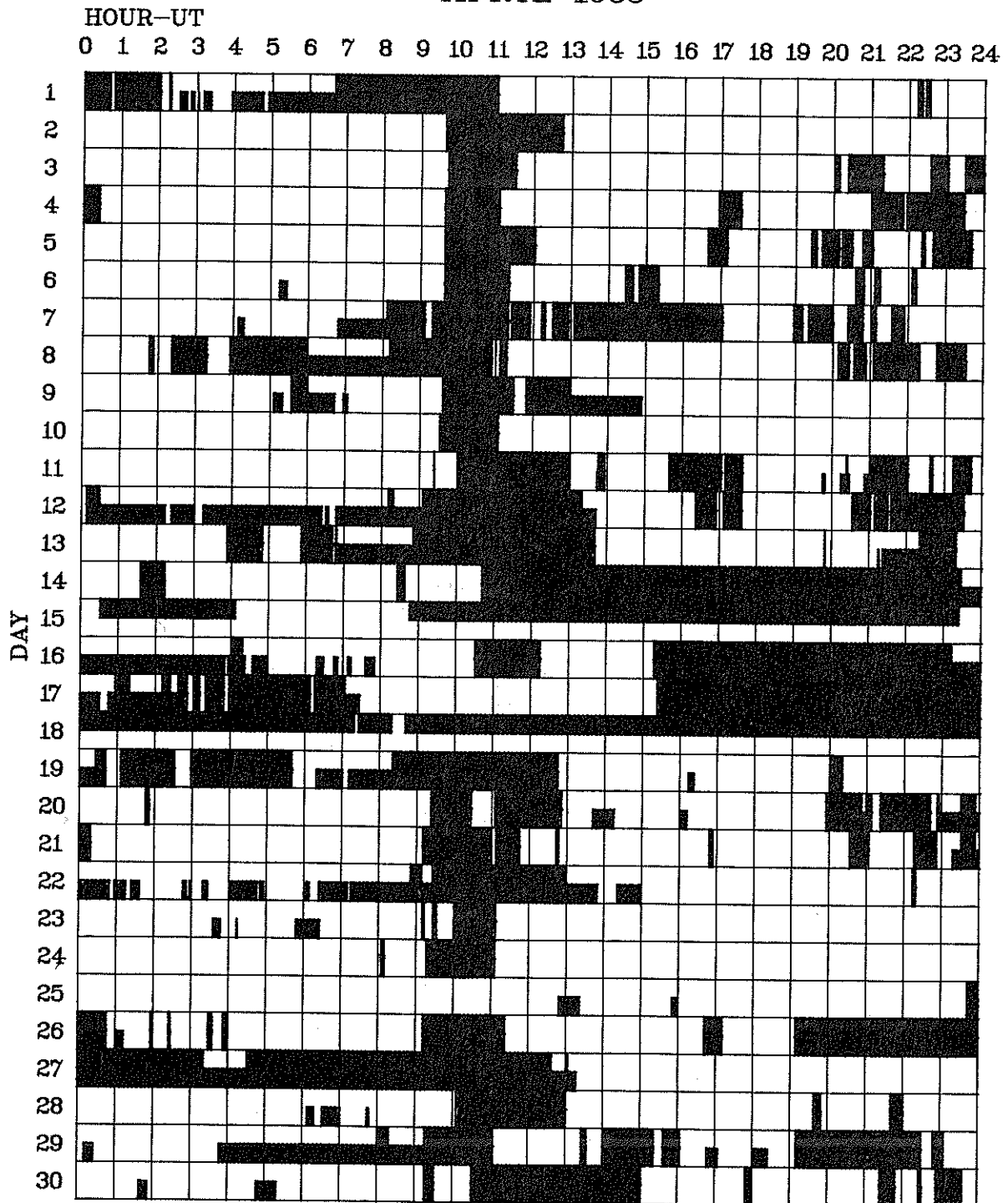
"Remarks":

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

The 4-digit number appearing under "Remarks" denotes the calcium plage region number assigned by the Space Environment Services Center in Boulder, Colorado.

INTERVALS OF NO FLARE PATROL OBSERVATION FOR PRECEDING SOLAR FLARE TABLE

APRIL 1983



Observatories included in total patrol:

Bucharest	Huancayo	Monte Mario	Peking	Ramey
Holloman	Learmonth	Palehua	Purple Mt.	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).

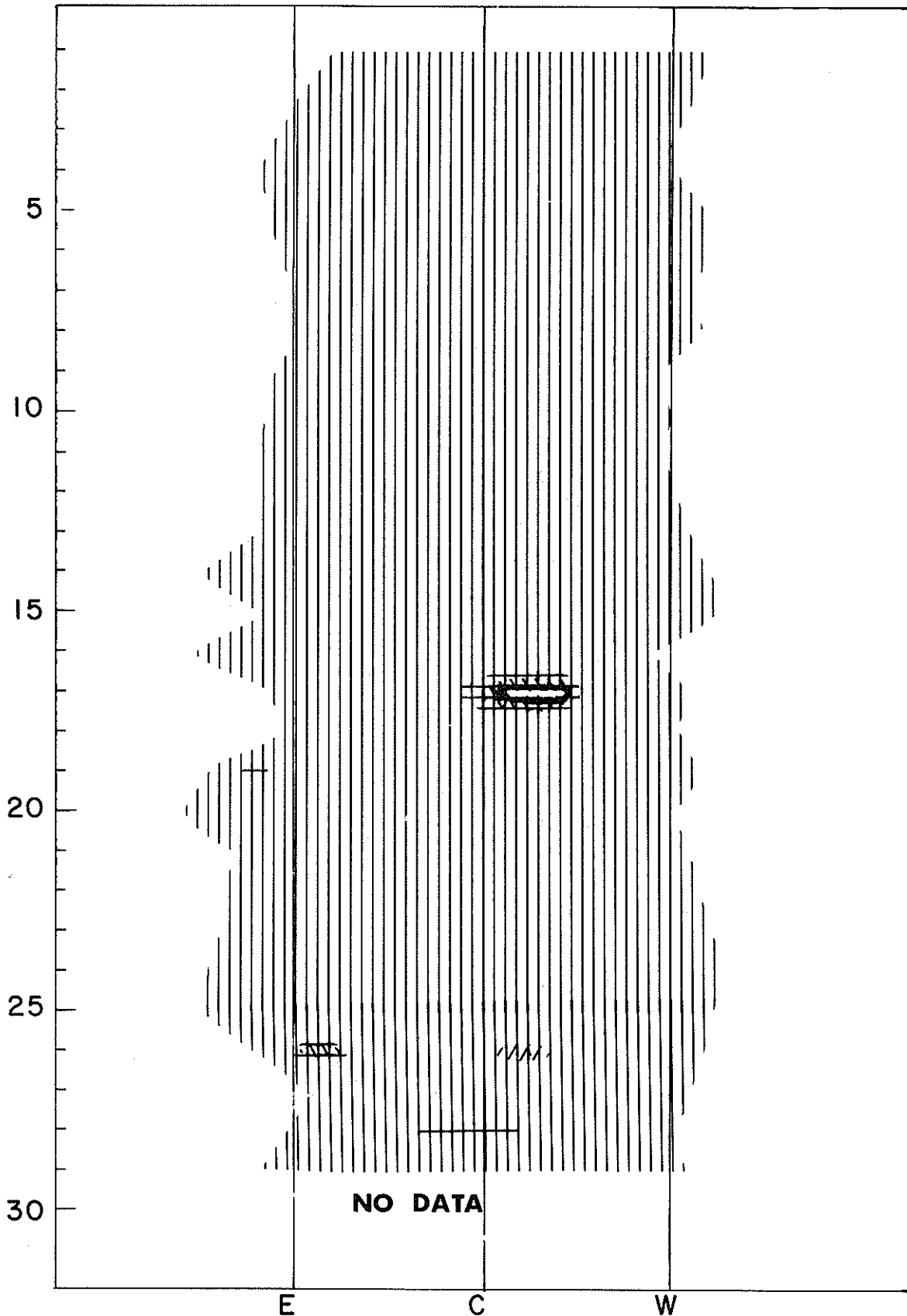
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SOLAR RADIO EMISSION INTERFEROMETRIC OBSERVATION

APRIL 1983

Nangay

169 MHz

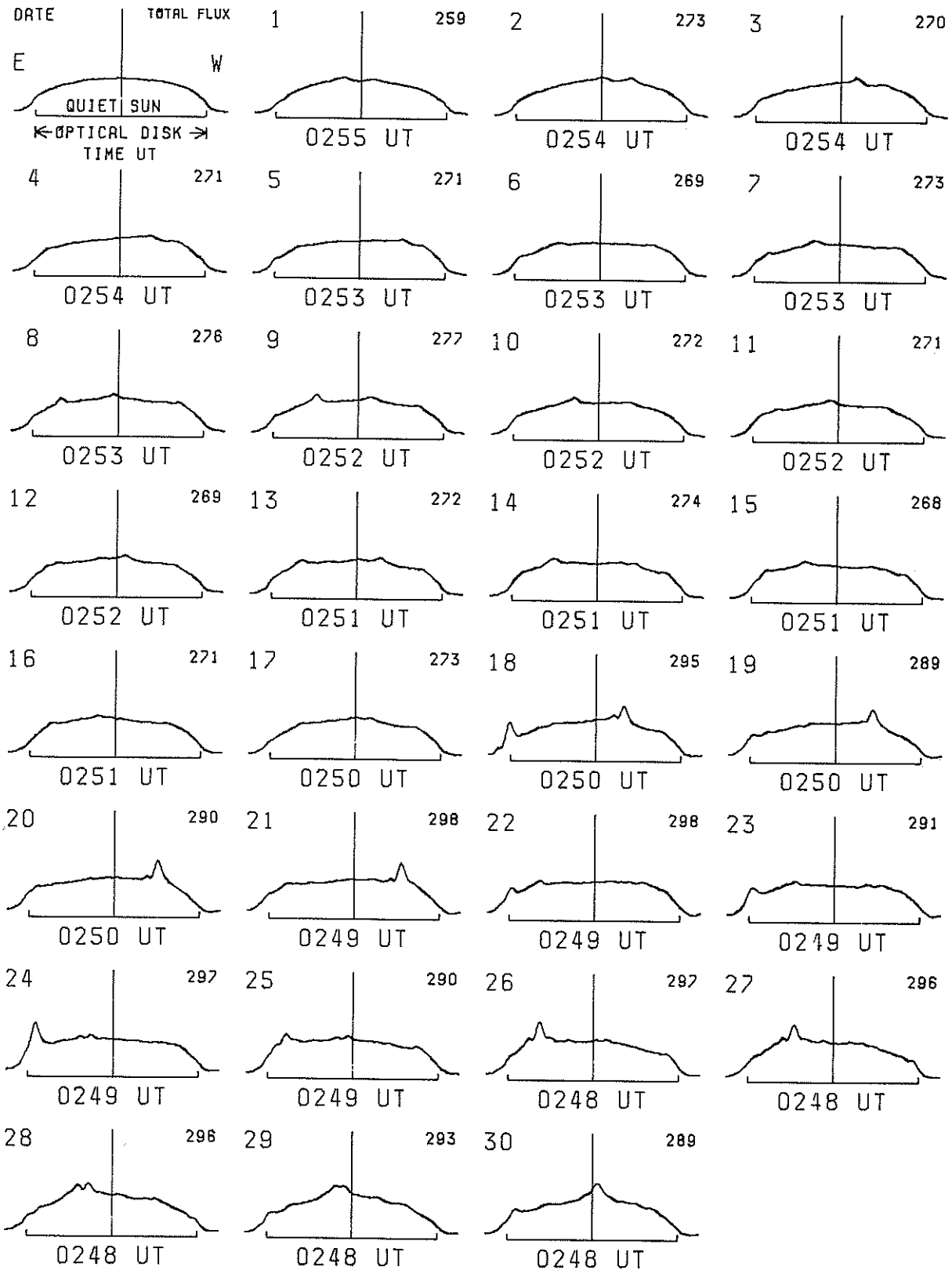


EAST-WEST SOLAR SCANS

APRIL 1983

TOYOKAWA, JAPAN

3 CM
FAN BEAM WITH 1.1 MINUTES OF ARC

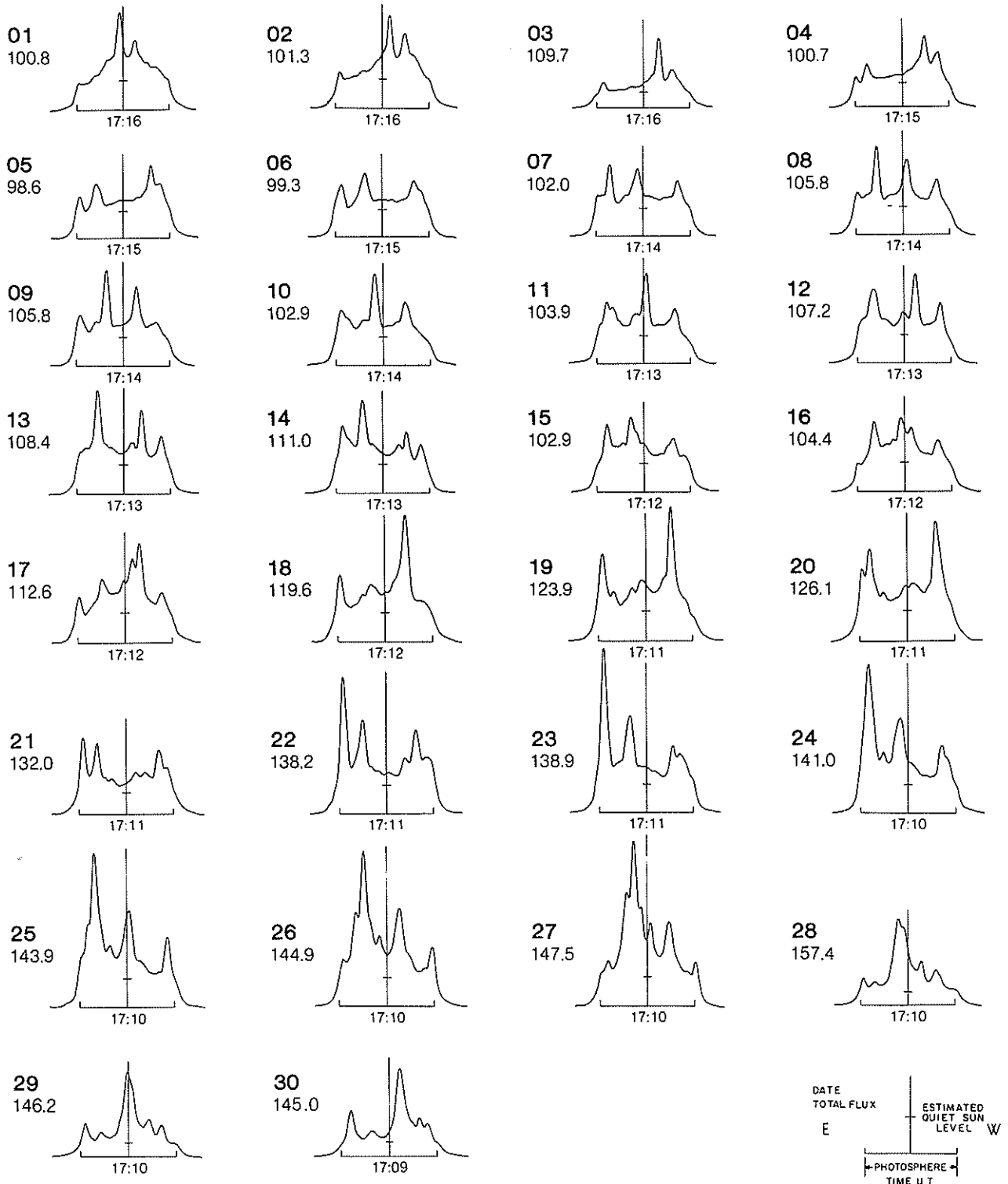


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EAST-WEST SOLAR SCANS APRIL 1983

ALGONQUIN RADIO OBSERVATORY
CANADA

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

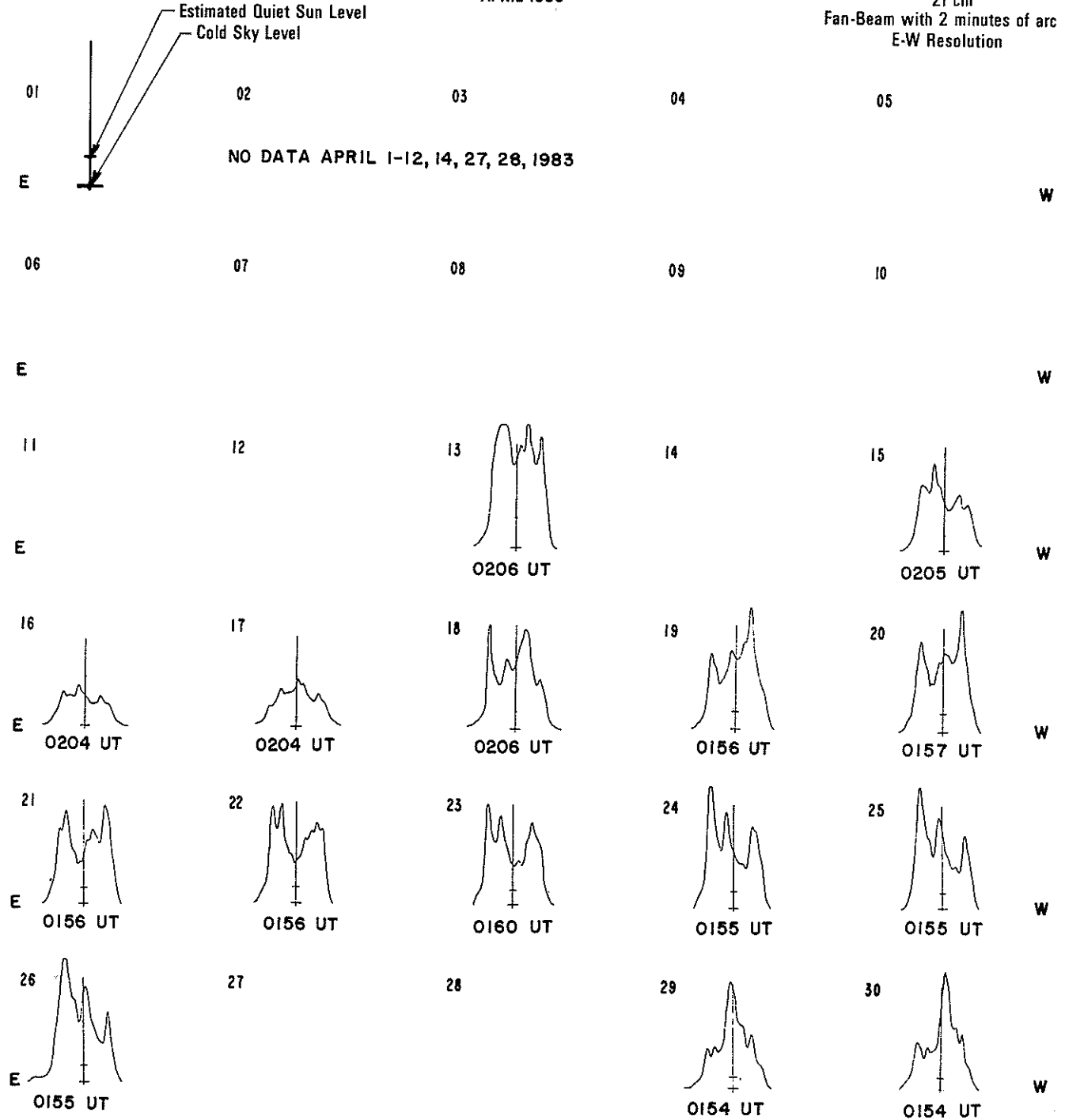


EAST-WEST SOLAR SCANS

Fleurs, Australia

APRIL 1983

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

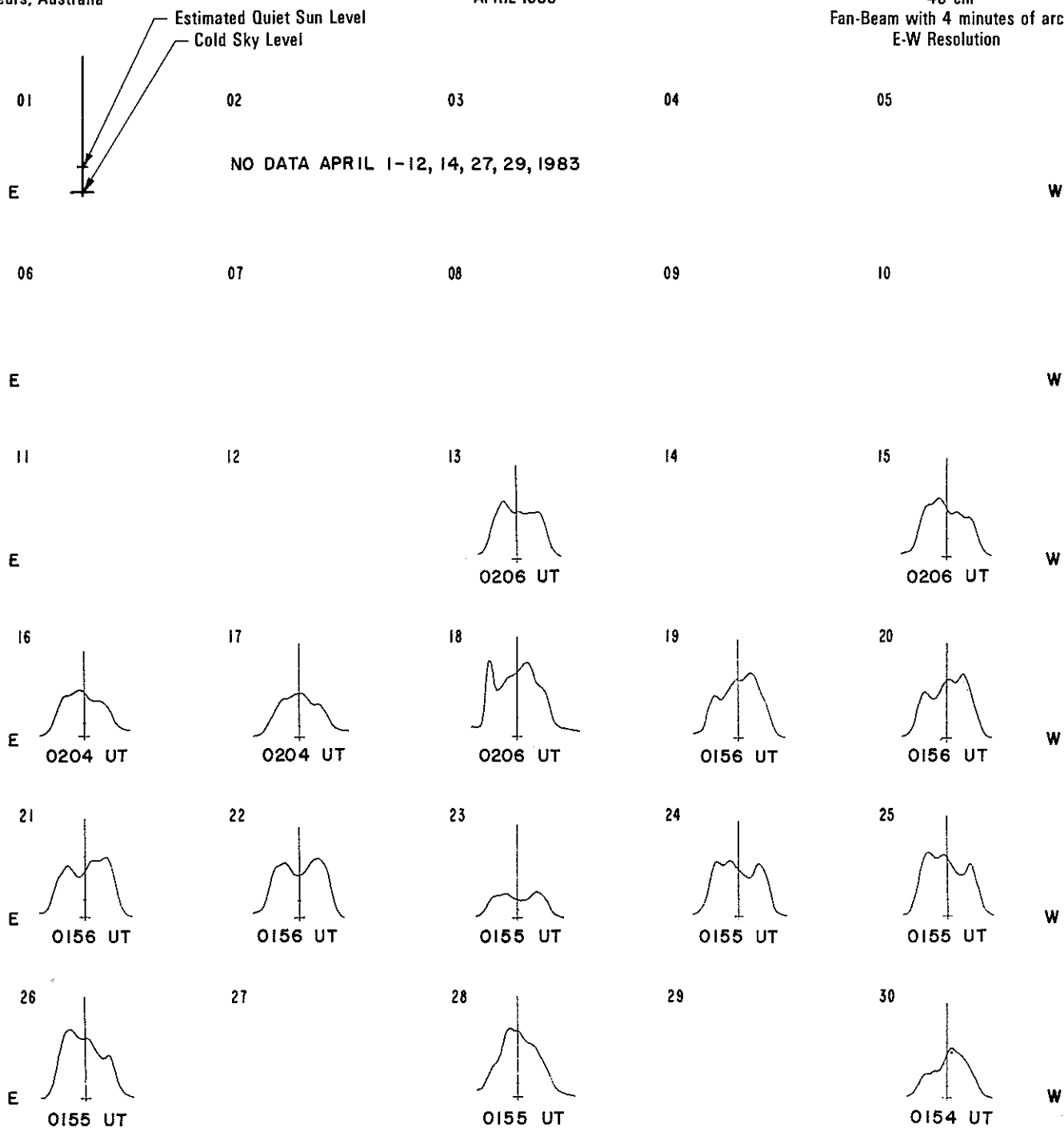


EAST-WEST SOLAR SCANS

Flours, Australia

APRIL 1983

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



S O L A R R A D I O E M I S S I O N
S E L E C T E D F I X E D F R E Q U E N C Y E V E N T S

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A P R I L 1 9 8 3

Day	Freq	Sta	Type	Start (UT)	Time of Maximum (UT)	Duration (Min)	Flux Density		Int	Remarks
							Peak (10 -22 W/m ² Hz)	Mean		
01	2695	LEAR	8 S	0158.3	0158.6	.7	6.0			QL=6 ST=2 TYP=3
	8800	PALE	8 S	0254.8	0255.1	.3	23.0			QL=6 ST=2 TYP=3
	2800	OTTA	8 S	1808.0	1808.3	.5	2.0	1.0		
	2695	PENT	21 GRF	2220.0	2300.0	115.0	1.6	.8		
	2695	PENT	1 S	2250.9	2251.3	1.2	1.0	.5		
02	2800	OTTA	1 S	1942.0	1942.8	2.0	1.6	.8		
03	8800	LEAR	8 S	0453.8	0454.5	1.8	6.0			QL=6 ST=2 TYP=3
	2695	ATHN	8 S	1204.3	1204.6	1.7	27.0			QL=6 ST=2 TYP=3
	8800	ATHN	47 GB	1204.3	1204.6	2.2	110.0			QL=6 ST=2 TYP=5
	2695	ATHN	8 S	1303.6	1304.3	1.4	27.0			QL=6 ST=3 TYP=3
	8800	ATHN	47 GB	1303.6	1304.3	1.9	110.0			QL=6 ST=3 TYP=5
	8800	SGMR	47 GB	1304.1	1304.6	1.5	64.0			QL=6 ST=2 TYP=5
	2695	ATHN	8 S	1304.3	1304.6	1.7	27.0			QL=6 ST=3 TYP=3
	8800	ATHN	47 GB	1304.3	1304.6	2.2	110.0			QL=6 ST=3 TYP=5
	2695	SGMR	8 S	1304.5	1304.6	.6	26.0			QL=6 ST=2 TYP=3
	2800	OTTA	21 GRF	1650.0	1710.0	120.0	8.4	4.0		
2800	OTTA	8 S	1658.9	1658.9	.1	1.8				
04	8800	LEAR	20 GRF	0234.0	0245.3	41.0	11.0			QL=6 ST=2 TYP=2
	8400	BERN	4 S/F	1304.0	1304.8	2.0	88.0			
	2800	OTTA	3 S	1326.2	1326.7	2.0	17.4	5.0		
	2695	SGMR	8 S	1326.6	1326.6	.4	20.0			QL=6 ST=2 TYP=3
	2800	OTTA	4 S/F	1642.0	1643.2	5.0	130.0	17.4		
	2695	ATHN	8 S	1642.3	1643.1	1.3	32.0			QL=1 ST=2 TYP=3
	2695	SGMR	47 GB	1642.6	1643.3	1.5	110.0			QL=6 ST=2 TYP=5
	8800	ATHN	47 GB	1643.0	1643.1	1.0	60.0			QL=1 ST=3 TYP=5
	8800	SGMR	47 GB	1643.1	1643.3	.7	91.0			QL=6 ST=2 TYP=5
	2800	OTTA	21 GRF	2000.0	2030.0	70.0	1.8	.9		
2695	PENT	1 S	2002.5	2003.0	1.5	3.6	1.8			
05	8800	ATHN	8 S	0426.1	0426.6	1.4	33.0			QL=6 ST=2 TYP=3
	2695	ATHN	8 S	0426.6	0426.8	.7	16.0			QL=6 ST=2 TYP=3
	2800	OTTA	21 GRF	1725.0	1750.0	65.0	3.2	1.8		
	2800	OTTA	1 S	1727.5	1728.7	3.0	3.8	1.8		
	2695	PENT	2 S/F	2338.0	2340.5	7.0	3.6	1.6		
	8800	LEAR	4 S/F	2338.8	2340.5	5.0	10.0			QL=6 ST=3 TYP=3
	2695	LEAR	8 S	2339.8	2340.8	1.3	6.0			QL=6 ST=2 TYP=3
08	2800	OTTA	27 RF	1530.0		205.0	2.0	1.7		
	2800	OTTA	24 R	1530.0	1555.0	25.0	2.0	1.5		
	2800	OTTA	24P R	1555.0		145.0	2.0			
	2800	OTTA	26 FAL	1820.0	1855.0	35.0	-2.0	-1.5		
09	2695	LEAR	4 S/F	0455.1	0456.1	6.0	8.0			QL=6 ST=2 TYP=3
	2800	OTTA	22 GRF	1508.0	1512.0	17.0	2.0	1.0		
	2800	OTTA	1 S	1743.0	1745.0	9.0	1.6	.8		
	2695	PENT	20 GRF	2215.0	2250.0	115.0	1.8	1.0		
10	2800	OTTA	20 GRF	1510.0	1520.0	20.0	1.6	.8		
	2695	PENT	1 S	2005.0	2010.0	10.0	1.2	.6		
	2800	OTTA	21 GRF	2220.0	2230.0	80.0	2.0	1.0		
	2800	OTTA	1 S	2222.0	2222.8	4.0	3.8	1.6		
11	2800	OTTA	20 GRF	1850.0	1900.0	50.0	2.0	1.0		
12	2800	OTTA	22 GRF	1402.0	1405.0	40.0	2.4	1.2		
	8800	SGMR	47 GB	1408.5	1408.8	1.1	239.0			QL=6 ST=2 TYP=5
13	2800	OTTA	27 RF	1210.0		375.0	1.2	1.1		
	2800	OTTA	24 R	1210.0	1225.0	15.0	1.2	.6		
	2800	OTTA	24P R	1225.0		335.0	1.2			
	2800	OTTA	26 FAL	1800.0	1825.0	25.0	-1.2	-.8		
14	2800	OTTA	20 GRF	1230.0	1238.0	35.0	2.0	1.0		
	2800	OTTA	20 GRF	2020.0	2030.0	40.0	1.6	1.0		
	2800	OTTA	240 R	2105.0	2115.0	10.0	1.6	.8		
17	2695	PENT	20 GRF	2225.0	0015.0	165.0	3.6	1.8		
18	2695	PENT	26 FAL	0010.0	0050.0	40.0	-3.0	-1.5		

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SOLAR RADIO EMISSION
SELECTED FIXED FREQUENCY EVENTS

APRIL 1983

Day	Freq	Sta	Type	Start (UT)	Time of Maximum (UT)	Duration (Min)	Flux Density		Int	Remarks
							Peak (10 ⁻²² W/m ² Hz)	Mean		
18	2695	PENT	4 S/F	0121.0	0130.8	30.00	41.0			
	2800	OTTA	20 GRF	1315.0	1345.0	105.0	2.0	1.0		
	2800	OTTA	240AR	1835.0	1935.0	60.0	3.0			
	2800	OTTA	2 S/F	1916.0	1917.0	2.0	2.0	1.0		
	2800	OTTA	21 GRF	1916.0	1924.0	16.0	2.0	1.0		
	2800	OTTA	27A RF	2130.0		200.0	3.0	2.6		
	2800	OTTA	24 R	2130.0	2147.0	17.0	3.0	1.2		
	2800	OTTA	24P R	2147.0		143.0	3.0			
	2800	OTTA	2 S/F	2148.5	2151.5	4.5	4.4	2.0		
2800	OTTA	29 PBI	2153.0	2153.0	9.0	2.0	1.4			
19	8400	BERN	3 S	0531.0	0532.0	1.0	22.0			
	8400	BERN	3 S	0820.5	0821.1	1.0	30.0			
	2800	OTTA	20 GRF	1230.0	1300.0	75.0	2.0	1.3		
	2800	OTTA	260 FAL	1425.0	1500.0	35.0	-2.0	-1.0		
	2800	OTTA	20 GRF	1505.0	1605.0	95.0	2.4	1.2		
	2800	OTTA	1 S	2020.0	2021.2	2.2	1.4	.6		
20	2695	PENT	1 S	0010.9	0011.0	1.0	3.4	1.1		
	8800	LEAR	8 S	0018.3	0019.1	1.5	8.0			QL=6 ST=2 TYP=3
	2695	LEAR	8 S	0018.8	0019.6	1.0	15.0			QL=1 ST=2 TYP=3
	2695	PENT	1 S	0033.0	0034.3	2.5	1.8	.8		
	8800	LEAR	4 S/F	0143.3	0144.8	3.0	11.0			QL=6 ST=2 TYP=3
	2695	LEAR	4 S/F	0616.5E	0619.3	6.00	13.0			QL=6 ST=2 TYP=3
	8800	LEAR	4 S/F	0616.6E	0619.5	5.90	5.0			QL=6 ST=2 TYP=3
	8800	ATHN	20 GRF	0708.1	0713.1	9.0	16.0			QL=6 ST=3 TYP=2
	2800	OTTA	22 GRF	1140.0	1235.0	90.0	2.6	1.3		
	2695	PENT	1 S	1411.8	1412.0	10.0	9.0	3.0		
	2800	OTTA	20 GRF	1545.0	1550.0	25.0	2.4	1.7		
	2800	OTTA	21 GRF	1720.0	2030.0	250.0	4.6	2.4		
	2800	OTTA	3 S	1724.0	1728.0	7.0	10.6	6.4		
	2800	OTTA	29 PBI	1731.0	1731.0	35.0	4.8	1.8		
2800	OTTA	1 S	1900.0	1900.5	2.0	2.2	1.0			
2800	OTTA	1 S	2056.0	2057.0	3.0	1.8	.9			
21	8400	BERN	3 S	0646.5	0647.3	2.0	41.0			
	8800	LEAR	8 S	0646.6	0647.1	1.0	26.0			QL=6 ST=2 TYP=3
	2695	LEAR	4 S/F	0646.8	0647.5	9.5	11.0			QL=6 ST=2 TYP=3
	8400	BERN	3 S	1031.2	1032.0	8.0	39.0			
	8800	SGMR	4 S/F	1031.3	1032.1	2.5	38.0			QL=4 ST=2 TYP=3
	2800	OTTA	1 S	1615.0	1615.8	2.0	2.2	1.1		
	2800	OTTA	22 GRF	1630.0	1636.0	20.0	5.2	2.4		
	2800	OTTA	1 S	1844.0	1845.0	5.0	2.0	.9		
	8800	SGMR	8 S	2033.3	2033.5	.3	21.0			QL=6 ST=2 TYP=3
	2800	OTTA	2 S/F	2055.5	2056.2	3.0	4.4	2.2		
	2800	OTTA	21 GRF	2223.0	2225.0	35.0	2.0	1.2		
	2800	OTTA	1 S	2223.7	2224.0	1.5	3.2	1.4		
	22	2695	PENT	1 S	0000.0	0000.5	1.5	8.8	4.0	
8800		LEAR	47 GB	0002.6	0004.6	9.2	51.0			QL=5 ST=2 TYP=5
2695		LEAR	47 GB	0002.8	0004.6	9.0	86.0			QL=6 ST=2 TYP=5
2695		PENT	3 S	0003.5	0004.6	12.5	84.0	16.8		
8800		PALE	47 GB	0004.3	0004.6	2.3	51.0			QL=6 ST=2 TYP=5
2695		PENT	29 PBI	0016.0	0016.0	35.0	3.4	1.7		
2695		PENT	1 S	0104.0	0104.2	1.0	2.6	1.3		
8800		ATHN	8 S	0532.5	0533.0	1.1	18.0			QL=6 ST=2 TYP=3
8400		BERN	3 S	0533.5	0533.8	1.0	33.0			
8800		LEAR	8 S	0533.8	0533.8	.3	19.0			QL=6 ST=2 TYP=3
2695		LEAR	8 S	0533.8	0534.0	.3	13.0			QL=6 ST=2 TYP=3
8400		BERN	22 GRF	0907.0	0918.0	30.0	65.0			
2695		LEAR	4 S/F	0916.8	0918.0	3.8	30.0			QL=6 ST=2 TYP=3
8800		ATHN	8 S	0917.6	0918.0	1.5	22.0			QL=6 ST=2 TYP=3
8800		LEAR	8 S	0917.8	0918.0	1.8	28.0			QL=6 ST=2 TYP=3
2800		OTTA	3 S	1148.0	1148.4	1.0	12.6	4.2		
2800		OTTA	4 S/F	1559.0	1559.6	2.0	10.0	3.4		
2800		OTTA	2 S/F	1836.0	1837.3	7.0	5.0	1.8		
2800	OTTA	1 S	1952.0	1952.3	1.0	1.4	.6			
2695	PENT	20 GRF	2230.0	2315.0	120.0	3.4				
23	8400	BERN	3 S	0654.0	0659.6	15.0	36.0			
	8800	ATHN	20 GRF	0655.6	0659.5	6.7	13.0			QL=5 ST=2 TYP=2

S O L A R R A D I O E M I S S I O N
S E L E C T E D F I X E D F R E Q U E N C Y E V E N T S

29
Apr 83

A P R I L 1 9 8 3

Day	Freq	Sta	Type	Start (UT)	Time of Maximum (UT)	Duration (Min)	Flux Density		Int	Remarks
							Peak (10 -22 W/m ² Hz)	Mean (2 Hz)		
23	8800	LEAR	4 S/F	0658.0	0659.5	3.1	18.0			QL=6 ST=2 TYP=3
	2695	LEAR	4 S/F	0658.1	0659.5	3.2	23.0			QL=6 ST=2 TYP=3
	8800	LEAR	8 S	0730.8	0731.0	.3	9.0			QL=6 ST=2 TYP=3
	2800	OTTA	20 GRF	1318.0	1335.0	40.0	2.6	1.5		
	2800	OTTA	260 FAL	1430.0	1510.0	40.0	-2.8			
	2800	OTTA	2 S/F	1556.0	1556.5	1.0	1.8			
	2800	OTTA	21 GRF	1735.0	1810.0	50.0	2.2	1.1		
	2800	OTTA	40 F	1750.8	1750.8	.6	10.6			
24	2695	PENT	22 GRF	0123.5	0125.0	12.0	8.8			
	2695	LEAR	4 S/F	0123.6	0128.0	9.7	18.0			QL=6 ST=2 TYP=3
	8800	LEAR	4 S/F	0124.0	0127.0	9.3	23.0			QL=6 ST=2 TYP=3
	8800	PALE	4 S/F	0125.6	0126.8	2.4	33.0			QL=6 ST=2 TYP=3
	8800	PALE	8 S	0130.6	0132.3	2.0	22.0			QL=6 ST=2 TYP=3
	2800	OTTA	20 GRF	1503.0	1508.0	17.0	2.6	1.0		
	2800	OTTA	20 GRF	1805.0	1810.0	20.0	2.0	1.0		
	2800	OTTA	1 S	1911.5	1916.0	4.5D	2.4	.8		
	8800	LEAR	8 S	2340.5	2340.6	.3	11.0			QL=6 ST=2 TYP=3
	2695	LEAR	8 S	2340.6	2340.8	.4	11.0			QL=6 ST=2 TYP=3
25	8800	ATHN	4 S/F	0431.0	0432.3	5.0	8.0			QL=5 ST=2 TYP=3
	2695	LEAR	4 S/F	0431.5	0433.3	8.1	42.0			QL=6 ST=2 TYP=3
	8800	LEAR	4 S/F	0432.0	0433.0	6.1	11.0			QL=6 ST=2 TYP=3
	2695	LEAR	47 GB	0720.5	0720.6	.1	75.0			QL=6 ST=2 TYP=3
	8800	LEAR	47 GB	0720.5	0720.6	.1	84.0			QL=5 ST=2 TYP=5
	8800	ATHN	4 S/F	1312.0	1312.6	4.5	16.0			QL=5 ST=2 TYP=3
	8800	SGMR	4 S/F	1312.5	1312.8	2.1	18.0			QL=5 ST=3 TYP=3
	2800	OTTA	2 S/F	1312.8	1313.0	1.0	2.0			QL=6 ST=2 TYP=3
	2800	OTTA	2 S/F	1532.0	1532.3	1.0	6.8			
	2800	OTTA	23 GRF	1535.0	1615.0	75.0	5.2	2.0		
	2800	OTTA	1 S	1548.0	1550.0	7.0	2.8	1.0		
	2800	OTTA	240 R	1820.0	1840.0	20.0	2.8	1.9		
	2800	OTTA	240 R	1925.0	1940.0	15.0	2.6	1.1		
	2800	OTTA	21 GRF	2138.0	2152.0	30.0	2.8	1.4		
2800	OTTA	1 S	2139.0	2142.5	6.0	3.8	1.8			
26	8800	LEAR	4 S/F	0311.3	0311.6	9.3	17.0			QL=6 ST=2 TYP=3
	8800	ATHN	4 S/F	0809.3	0811.5	19.0	13.0			QL=5 ST=3 TYP=3
	8400	BERN	21 GRF	0810.0	0811.5	26.0	37.0			
	2695	ATHN	4 S/F	0810.0	0811.6	16.3	28.0			QL=2 ST=3 TYP=3
	8800	LEAR	4 S/F	0811.0	0811.5	6.6	24.0			QL=6 ST=2 TYP=3
	2695	LEAR	4 S/F	0811.0	0811.6	6.6	30.0			QL=6 ST=2 TYP=3
	2695	LEAR	8 S	0829.6	0829.8	.4	11.0			QL=6 ST=2 TYP=3
	8800	LEAR	8 S	0829.6	0829.8	.4	17.0			QL=6 ST=2 TYP=3
	2800	OTTA	1 S	1140.0	1142.0	4.0	2.0	1.0		
	2800	OTTA	20 GRF	1755.0	1810.0	50.0	2.4	1.2		
	8800	LEAR	4 S/F	2335.6	2337.6	3.2	47.0			QL=6 ST=2 TYP=3
	2695	PENT	3 S	2336.0	2337.7	4.0	82.0	20.4		
	2695	LEAR	47 GB	2336.5	2337.6	3.3	93.0			QL=6 ST=2 TYP=5
8800	PALE	8 S	2337.5	2337.6	.3	25.0			QL=6 ST=2 TYP=3	
8800	LEAR	4 S/F	2359.6	0001.1	2.5	13.0			QL=5 ST=2 TYP=3	
27	2695	LEAR	8 S	0000.8	0001.1	1.3	9.0			QL=6 ST=3 TYP=3
	2695	PENT	8 S	0014.0	0014.1	.5	8.2	3.0		
	2695	LEAR	47 GB	0252.3	0254.1	9.3	78.0			QL=6 ST=2 TYP=5
	8800	LEAR	47 GB	0253.1	0254.8	9.0	160.0			QL=6 ST=2 TYP=5
	8800	PALE	47 GB	0254.3	0254.8	2.3	83.0			QL=6 ST=2 TYP=5
	2800	OTTA	4 S/F	1349.0	1349.5	2.0	10.4	4.0		
	8800	ATHN	47 GB	1349.3	1355.3	10.0	50.0			QL=6 ST=2 TYP=5
	2695	ATHN	4 S/F	1349.3	1356.1	10.8	41.0			QL=2 ST=2 TYP=3
	8400	BERN	45 C	1349.5	1355.3	14.0	61.0			
	2800	OTTA	46F C	1354.0	1356.0	6.0	45.0	20.8		
	2800	OTTA	31 ABS	1400.0	1435.0	70.0	-3.2	-1.6		
	2800	OTTA	20 GRF	1705.0	1720.0	40.0	2.8	1.4		
	2800	OTTA	20 GRF	1748.0	1810.0	70.0	2.8	1.4		
	2800	OTTA	20 GRF	2105.0	2125.0	40.0	2.8	1.4		
	2695	PENT	20 GRF	2205.0	2350.0	230.0D	11.0			
28	2695	ATHN	47 GB	1048.0	1049.1	5.3	340.0			QL=2 ST=3 TYP=5
	2695	SGMR	47 GB	1048.3	1048.8	3.8	360.0			QL=4 ST=1 TYP=5
	8800	ATHN	47 GB	1048.3	1049.6	5.0	119.0			QL=2 ST=3 TYP=5

SOLAR RADIO EMISSION
SELECTED FIXED FREQUENCY EVENTS

APRIL 1983

Day	Freq	Sta	Type	Start (UT)	Time of Maximum (UT)	Duration (Min)	Flux Density		Int	Remarks
							Peak (10 -22 W/m ² Hz)	Mean		
28	8400	BERN	4 S/F	1048.4	1049.6	120.0D	152.0			
	8800	SGMR	47 GB	1048.5	1049.6	9.1	119.0			QL=4 ST=1 TYP=5
	2800	OTTA	21 GRF	1120.0E	1255.0	520.0D	27.6			
	2800	OTTA	1 S	1139.0	1140.5	4.0	5.6	1.9		
	2800	OTTA	20 GRF	1540.0	1545.0	40.0	5.6	2.8		
	2800	OTTA	22 GRF	1830.0	1840.0	55.0	8.4	3.0		
	2800	OTTA	22 GRF	2115.0	2118.0	15.0	2.2	1.0		
	2800	OTTA	21 GRF	2200.0	2220.0	160.0	4.8	2.0		
	2800	OTTA	40 F	2207.0	2207.0	1.8	9.4			
29	2800	OTTA	20 GRF	1428.0	1430.0	20.0	2.2	1.0		
	2695	SGMR	4 S/F	1439.3	1440.3	22.7	28.0			QL=6 ST=2 TYP=3
	2695	SGMR	20 GRF	1502.0	1504.1	29.1	42.0			QL=6 ST=2 TYP=2
	2800	OTTA	20 GRF	1800.0	1830.0	70.0	2.2	1.1		
	2800	OTTA	20 GRF	2015.0	2018.0	40.0	2.8	1.4		
30	2695	LEAR	8 S	0757.6	0757.8	2.0	7.0			QL=6 ST=2 TYP=3
	8800	LEAR	8 S	0757.6	0757.8	1.7	10.0			QL=6 ST=2 TYP=3
	2695	ATHN	47 GB	0802.5	0809.3	57.5	100.0			QL=6 ST=3 TYP=5
	2695	LEAR	47 GB	0802.6	0806.0	13.5	44.0			QL=6 ST=2 TYP=5
	8800	ATHN	4 S/F	0803.6	0815.3	56.4	51.0			QL=6 ST=3 TYP=3
	8800	LEAR	8 S	0803.8	0804.3	.8	17.0			QL=6 ST=2 TYP=3
	8400	BERN	45 C	0805.0	0815.2	120.0D	90.0			
	2800	OTTA	20 GRF	1940.0	1945.0	40.0	2.4	1.2		

Observatories:

BERN = Berne MANI = Manila OTTA = Ottawa ARO PENT = Penticton SGMR = Sagamore Hill
LEAR = Learmonth ATHN = Athens PALE = Palehua

Explanation of Type Code:

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

Remarks:

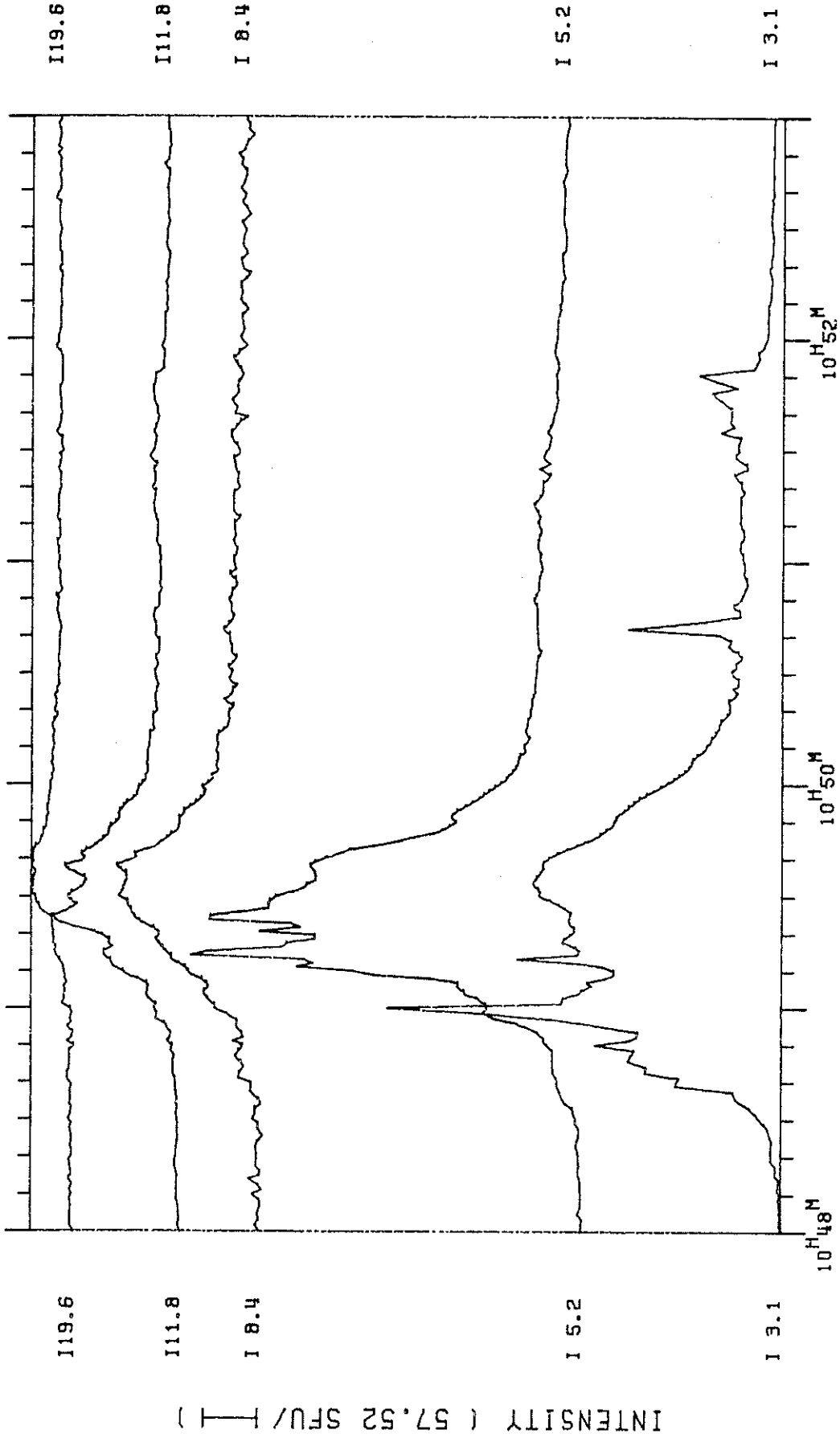
QL = Quality (1=poor to 6=excellent)

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)

INSTITUTE OF APPLIED PHYSICS, UNIVERSITY OF BEAN, SWITZERLAND

INTEGRATION TIME= 1000 MS



UT ON APR. 28 1983

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
2025	SEP 22	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2026	OCT 19	TA	TA	-	-	-	-	-	TA	TA	-	TA	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2027	NOV 15	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2028	DEC 12	TA	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1982	JAN 8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2030	FEB 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2031	MAR 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2032	MAR 30	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2033	APR 26	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2034	MAY 23	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2035	JUN 19	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2036	JUL 16	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2037	AUG 12	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2038	SEP 8	TA	AT	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2039	OCT 5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2040	NOV 1	AT	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2041	NOV 28	TA	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2042	DEC 25	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1983	JAN 21	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2044	FEB 17	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2045	MAR 16	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2046	APR 12	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

☐ = 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

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	
2027	NOV 10	□	□	□	□	□	□	□	□	□	□	□	□	□	□	□	□	□	□	□	□	□	□	□	□	□	□	□	□
2028	DEC 7	□	□	□	□	□	□	□	□	□	□	□	□	□	□	□	□	□	□	□	□	□	□	□	□	□	□	□	□
2029	JAN 3	□	□	□	□	□	□	□	□	□	□	□	□	□	□	□	□	□	□	□	□	□	□	□	□	□	□	□	□
2030	JAN 30	□	□	□	□	□	□	□	□	□	□	□	□	□	□	□	□	□	□	□	□	□	□	□	□	□	□	□	□
2031	FEB 26	□	□	□	□	□	□	□	□	□	□	□	□	□	□	□	□	□	□	□	□	□	□	□	□	□	□	□	□
2032	MAR 25	□	□	□	□	□	□	□	□	□	□	□	□	□	□	□	□	□	□	□	□	□	□	□	□	□	□	□	□
2033	APR 21	□	□	□	□	□	□	□	□	□	□	□	□	□	□	□	□	□	□	□	□	□	□	□	□	□	□	□	□
2034	MAY 18	□	□	□	□	□	□	□	□	□	□	□	□	□	□	□	□	□	□	□	□	□	□	□	□	□	□	□	□
2035	JUN 14	□	□	□	□	□	□	□	□	□	□	□	□	□	□	□	□	□	□	□	□	□	□	□	□	□	□	□	□
2036	JUL 11	□	□	□	□	□	□	□	□	□	□	□	□	□	□	□	□	□	□	□	□	□	□	□	□	□	□	□	□
2037	AUG 7	□	□	□	□	□	□	□	□	□	□	□	□	□	□	□	□	□	□	□	□	□	□	□	□	□	□	□	□
2038	SEP 3	□	□	□	□	□	□	□	□	□	□	□	□	□	□	□	□	□	□	□	□	□	□	□	□	□	□	□	□
2039	SEP 30	□	□	□	□	□	□	□	□	□	□	□	□	□	□	□	□	□	□	□	□	□	□	□	□	□	□	□	□
2040	OCT 27	□	□	□	□	□	□	□	□	□	□	□	□	□	□	□	□	□	□	□	□	□	□	□	□	□	□	□	□
2041	NOV 23	□	□	□	□	□	□	□	□	□	□	□	□	□	□	□	□	□	□	□	□	□	□	□	□	□	□	□	□
2042	DEC 20	□	□	□	□	□	□	□	□	□	□	□	□	□	□	□	□	□	□	□	□	□	□	□	□	□	□	□	□
2043	JAN 16	□	□	□	□	□	□	□	□	□	□	□	□	□	□	□	□	□	□	□	□	□	□	□	□	□	□	□	□
2044	FEB 12	□	□	□	□	□	□	□	□	□	□	□	□	□	□	□	□	□	□	□	□	□	□	□	□	□	□	□	□
2045	MAR 11	□	□	□	□	□	□	□	□	□	□	□	□	□	□	□	□	□	□	□	□	□	□	□	□	□	□	□	□
2046	APR 7	□	□	□	□	□	□	□	□	□	□	□	□	□	□	□	□	□	□	□	□	□	□	□	□	□	□	□	□
2047	MAY 4	□	□	□	□	□	□	□	□	□	□	□	□	□	□	□	□	□	□	□	□	□	□	□	□	□	□	□	□

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)

1983

1982

day	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	March	April
01	-6	•	•	49	89	22	-31	42	-9	-81	•	25
02	-6	33	85	19	102	53	-15	•	•	•	•	38
03	23	38	75	19	84	37	-18	•	-39	-8	11	52
04	43	54	71	52	66	18	-38	10	-81	15	33	61
05	48	80	53	85	68	-6	•	-42	-73	45	38	63
06	16	82	35	105	55	-41	-63	•	-22	•	51	50
07	41	77	29	81	30	-54	-61	-90	-2	•	•	29
08	69	80	42	63	-27	-76	-68	-64	•	54	65	21
09	74	68	54	59	-55	-90	•	-29	53	84	•	•
10	70	54	63	33	-74	-93	-54	-20	46	93	48	-15
11	65	50	87	-30	-93	-96	-21	26	37	69	30	-44
12	79	58	79	-87	-124	-100	1	29	53	•	•	-48
13	87	•	43	-118	-125	-70	19	43	84	16	2	-43
14	77	78	9	-121	-120	-35	34	28	84	-19	-25	-29
15	72	51	-39	-144	-112	-7	37	•	•	-22	-44	-11
16	51	-13	-112	-149	•	-1	52	8	39	-104	-62	9
17	38	-51	-164	-141	-49	4	•	57	10	-102	-27	16
18	27	-93	-193	-124	-28	-43	•	•	•	-67	-19	13
19	-15	-184	-201	-93	-14	55	•	64	•	-37	-5	15
20	-57	-237	-189	-59	12	33	22	32	-119	-7	•	-11
21	-68	-225	•	-32	40	•	33	•	•	24	19	•
22	-93	-170	-128	-16	44	•	•	•	•	27	15	•
23	-132	-123	-71	-12	26	17	12	•	-25	•	•	-66
24	-158	-69	-29	5	10	45	-1	•	-3	-1	•	-59
25	-151	-56	-5	32	8	•	-1	•	31	•	-23	-34
26	-118	-40	12	39	18	54	-31	•	•	-49	-34	-15
27	-26	11	28	47	36	55	-58	-31	31	-66	-42	•
28	-26	37	38	46	72	34	•	6	3	•	-17	•
29	-10	46	48	25	57	20	•	42	-14	•	-20	36
30	19	59	61	39	52	•	•	59	-51	•	1	•
31	46	64	53	64	•	-11	•	35	-91	•	18	•

BOULDER GEOMAGNETIC
SUBSTORM LOG

April 1983

DATE	ONSET TIME	DIR	COMMENTS	DATE	ONSET TIME	DIR	COMMENTS
04/01	0335 0620 0955 1215	East Center West West	Field Intermittently active. Several injections with recovery near 1630 UT.	04/15	1350 2315	West East	Numerous injections with recovery near 1930 UT. Boulder in partial ring current sector.
04/02	0540 1040	East West	Field Intermittently unsettled.	04/16	0220 0540 1020	East West West	Field Intermittently active. Weak substorm. Initial onset at College, numerous injections with recovery near 1730 UT.
04/03	0355 0700 1205	East West West	Field Intermittently unsettled. Weak substorm.	04/17	0740 1535	West West	Field unsettled all day. Slow onset.
04/04	0420 1030 1055 1610	East West West	Field Intermittently unsettled. Localized substorm College to Anchorage. Localized substorm vicinity Norman Wells.	04/18	0405 0435 1140 1510	East East West	Field unsettled all day. Weak substorm. Weak substorm. Localized substorm vicinity College. Weak substorm.
04/05	0110	East	Field Intermittently unsettled. Boulder in partial ring current sector.	04/19	0515 0815 0900	East West West	Field active 0800-1800 UT. Weak substorm. Weak substorm.
04/06	0440 0805 1130 1330	East West West	Field Intermittently active. Initial onset at College, several injections with recovery near 1100 UT. Localized substorm College to Anchorage.	04/20	0105 0750 1305	East West West	Field unsettled all day. Weak substorm. Weak substorm. Several injections with recovery near 1530 UT.
04/07	1045 1445	West	Field unsettled all day. Moderate substorm. Localized substorm vicinity College.	04/21			Field unsettled all day with no significant substorm activity.
04/08	0705 0805 0835 1050 1525	East West West West	Field unsettled all day. Weak substorm. Localized substorm Cape Parry to Sachs Harbour. Localized substorm Cape Parry to Sachs Harbour. Weak substorm. Weak substorm.	04/22	0655 0820 0910	East West	Field unsettled through 1100 UT. Localized substorm vicinity Narsarsuaq, Greenland.* Initial onset at Lynn Lake.
04/09	0525 1230 1605	East West West	Field unsettled all day. Moderate substorm. Weak substorm.	04/23	0235 0835 1115 2045 2145	East West West	Field Intermittently unsettled. Weak substorm. Weak substorm. Weak substorm, several injections. Moderate bays, H component at Sachs Harbor and Cape Parry. Moderate bays, H component at Sachs Harbor and Cape Parry, and all mid/low latitude stations.
04/10	0155 0520 0740 1125	East Center West West	Field unsettled all day. Boulder in partial ring current sector. Weak substorm.	04/24			Field active to storm level all day.
04/11	0500 0715 0810	East West West	Field Intermittently unsettled. Weak substorm. Weak substorm. Weak substorm.	04/25	0955		Field slightly active all day with numerous minor injections. Moderate substorm College to Anchorage.
04/12	0855	West	Field unsettled all day.	04/26	0330 0525 1220	East Center	Field unsettled all day. Weak substorm. Strongest response Lynn Lake to Ft. Smith. Initial onset at College, numerous injections with recovery near 1700 UT. Response confined to oval stations.
04/13	0415 0510 1100 1150 1330	East East SSC West	Field unsettled all day. Localized substorm College to Anchorage.	04/27	0055 0400	East East	Field unsettled through 1700 UT. Initial onset at Lynn Lake, several injections with recovery near 0545 UT.
04/14			Field unsettled with strong active conditions 0700-1800 UT. Substorm activity varied temporarily and spatially during active period.	04/28	0210 1200	East West	Field Intermittently unsettled. Weak substorm, several injections. Weak substorm.
04/15	0345 0620 0710 1020	West West	Field active through 1930 UT. Weak substorm. Localized substorm vicinity College.	04/29			Field Intermittently active with storm level 1200-2030 UT.
				04/30	0455	East	Field Intermittently active.

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



SGD 465 Part I (Prompt)

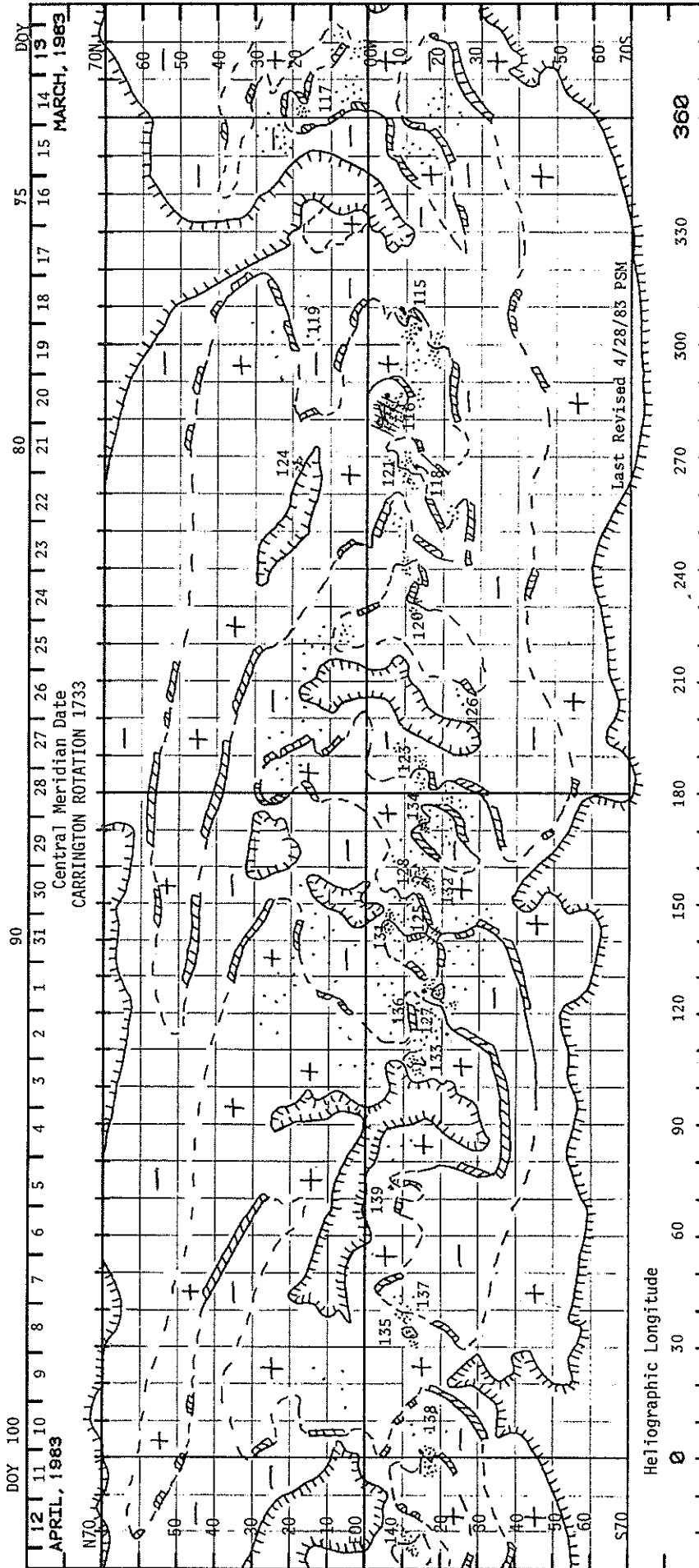
MARCH 1983 DATA

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H α SYNOPSIS CHART

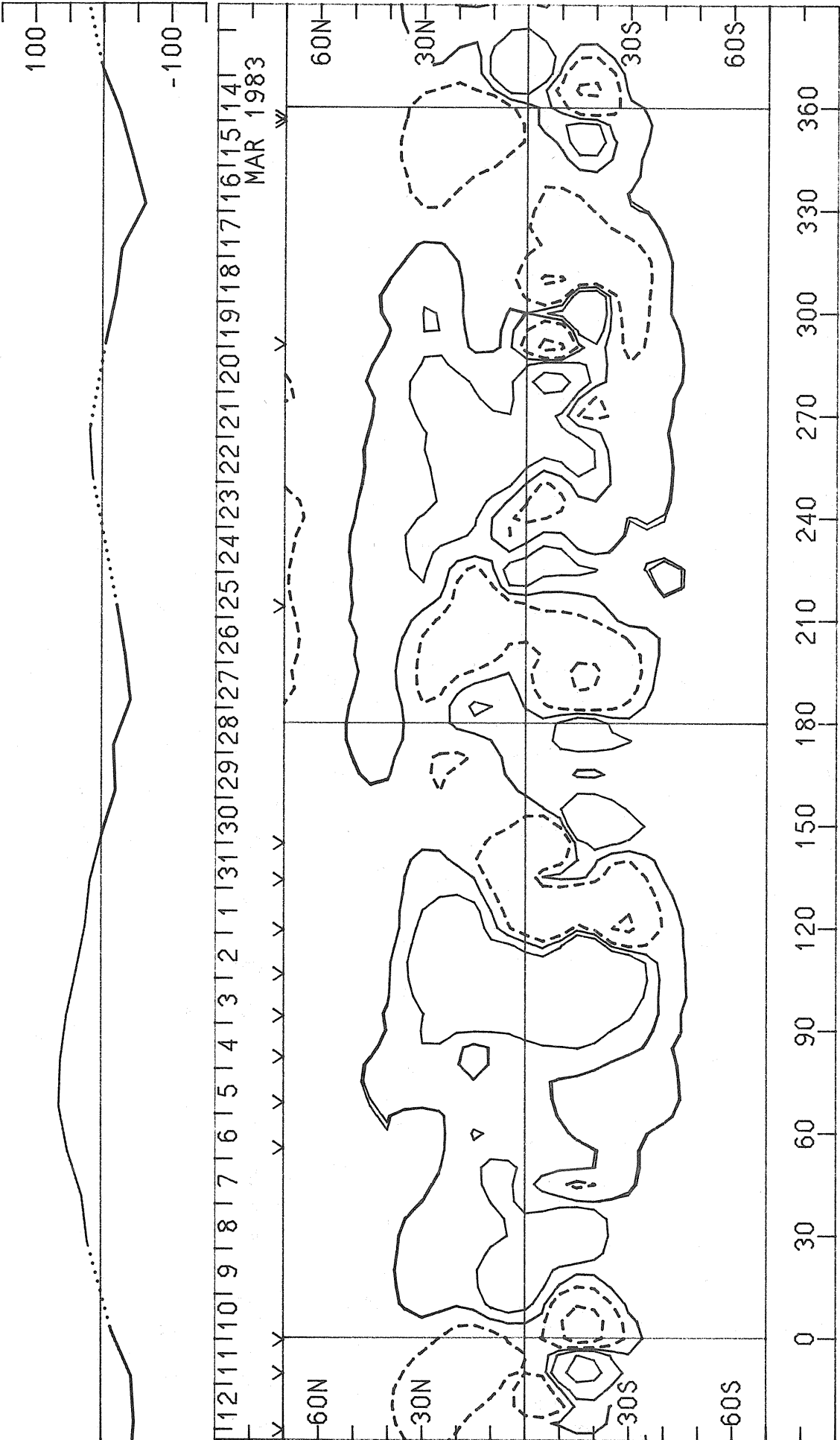
CARRINGTON ROTATION 1733 (PRELIMINARY)



SOLAR MAGNETIC FIELD SYNOPSIS CHART
 CARRINGTON ROTATION 1733

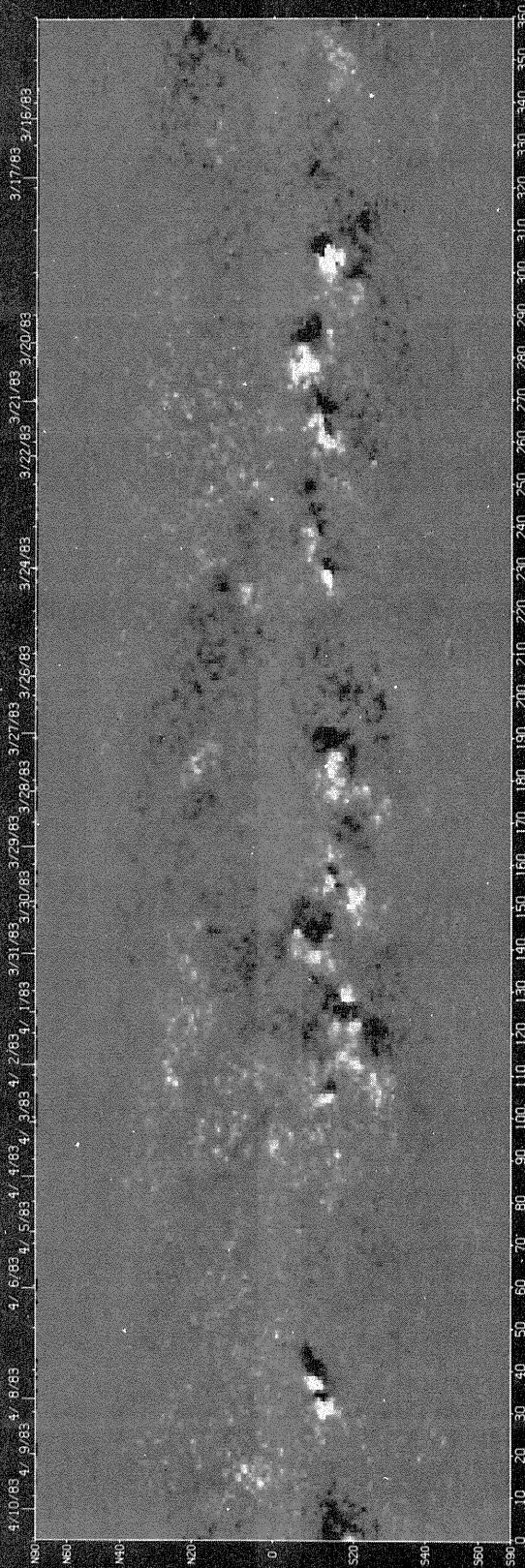
Stanford Solar Observatory

0, ±100, 200, 500, ... μT



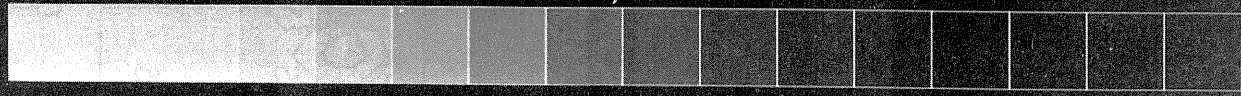
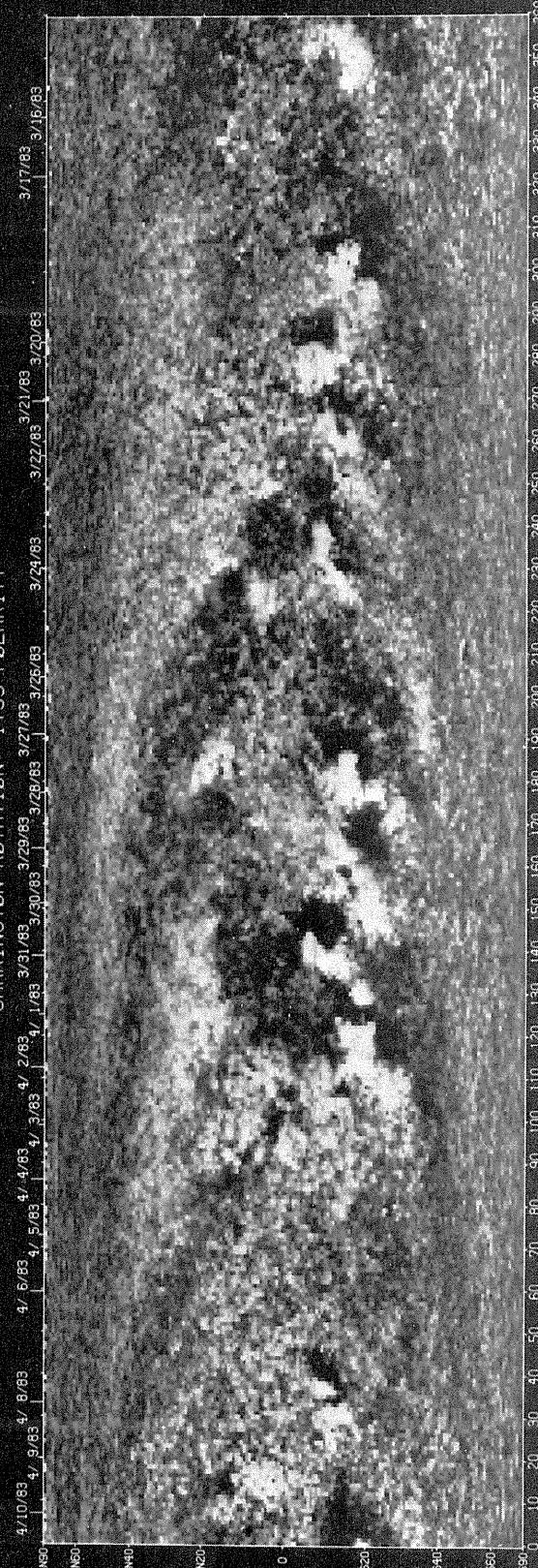
1733

CARRINGTON ROTATION 1733 FLUX



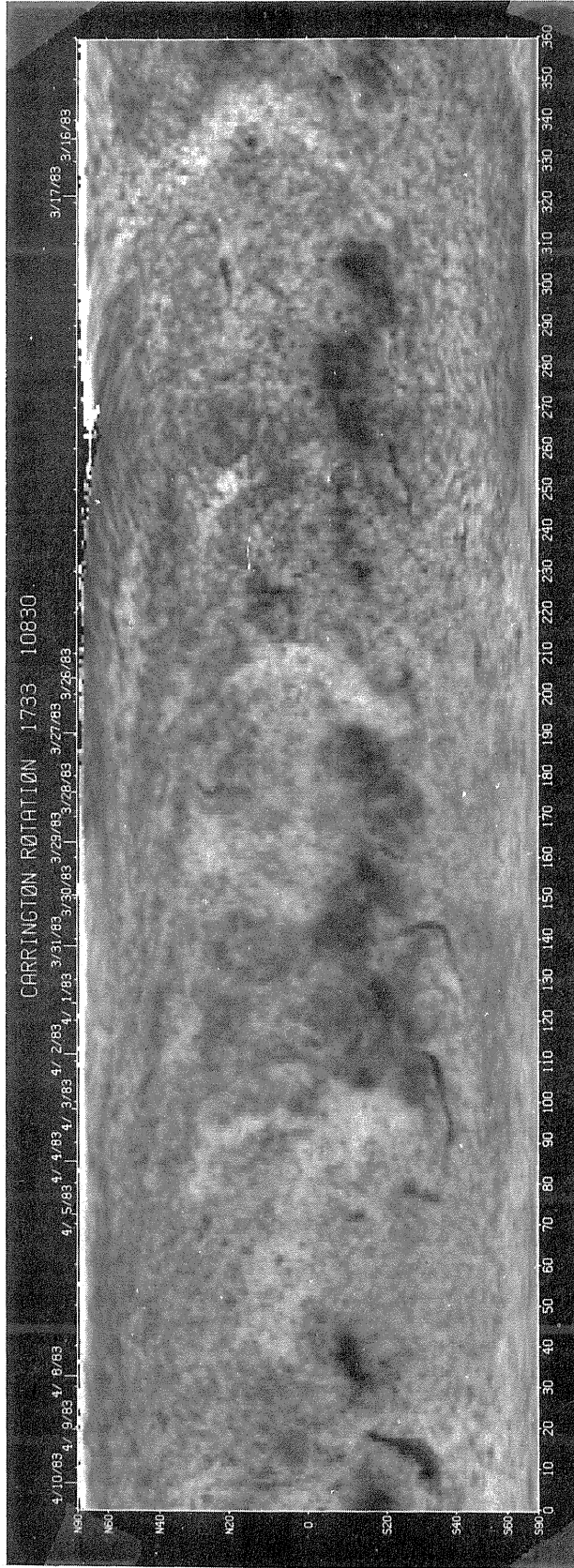
KPNO SOLAR MAGNETIC FIELD SYNOPTIC CHART

CARRINGTON ROTATION 1733 POLARITY



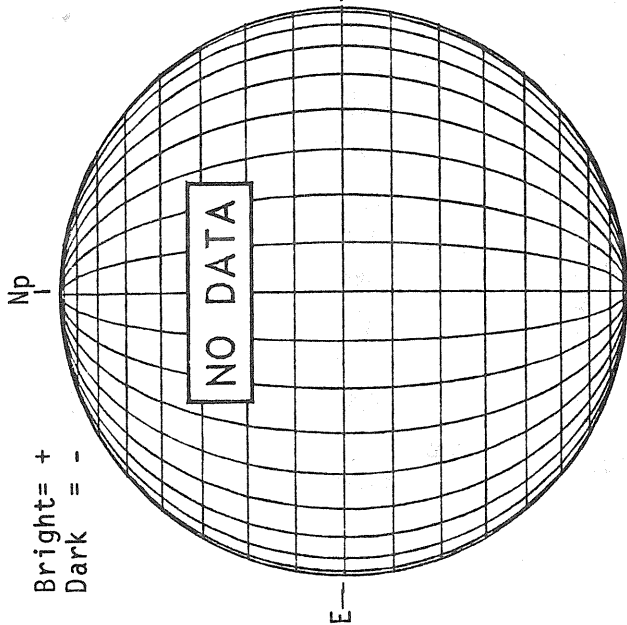
HELIUM 10830Å SYNOPTIC MAPS CARRINGTON ROTATION 1733

KITT PEAK NATIONAL OBSERVATORY

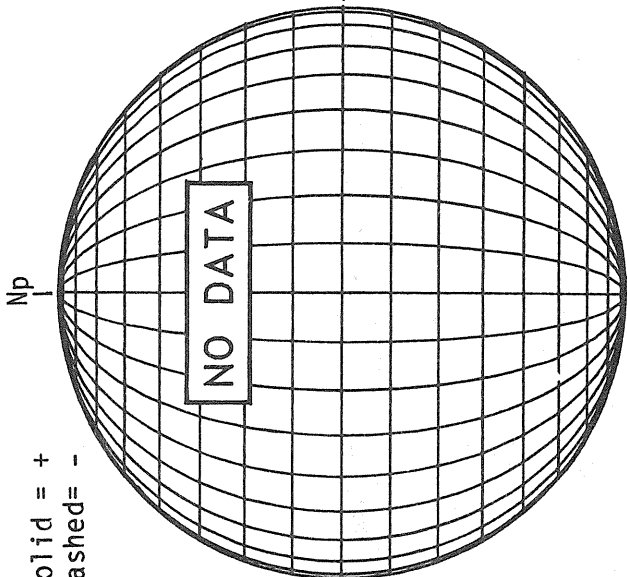


MARCH 01, 1983 (P=-21.42, B₀=-7.21, L₀=182.41)

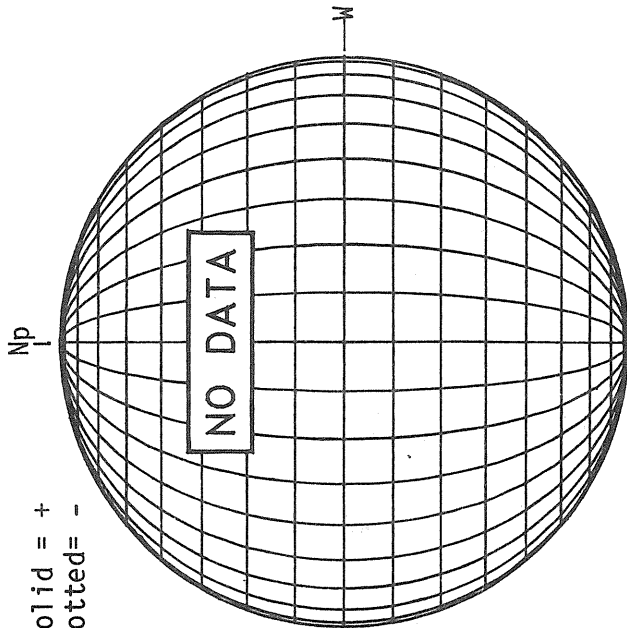
KITT PEAK MAGNETOGRAM



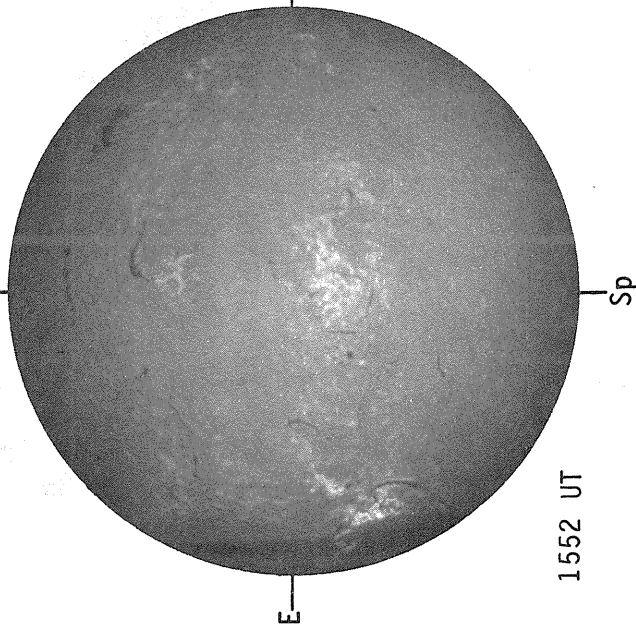
STANFORD MAGNETOGRAM



MT. WILSON MAGNETOGRAM

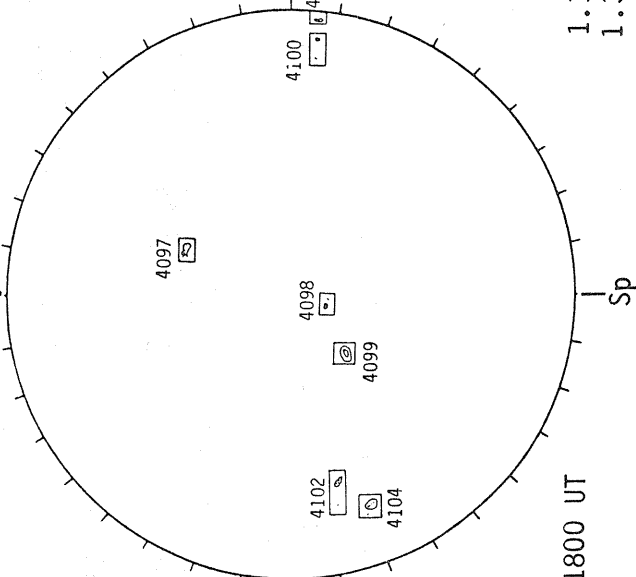


SACRAMENTO PEAK H-ALPHA



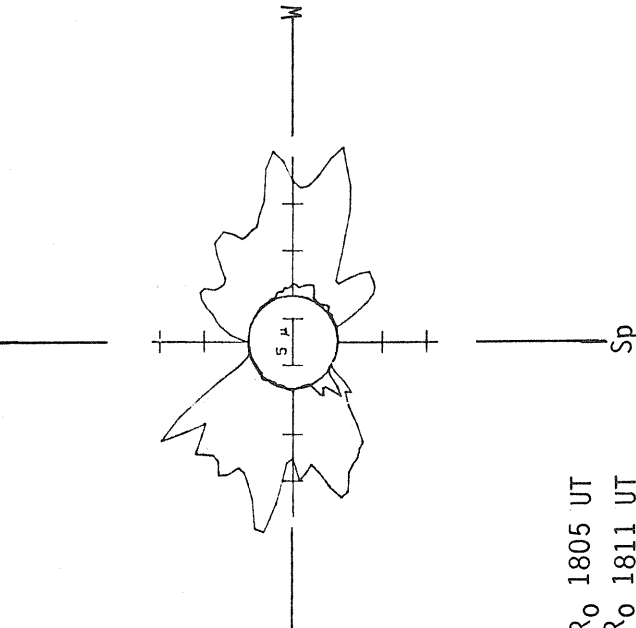
1552 UT

BOULDER SUNSPOTS



1800 UT

SACRAMENTO PEAK CORONA (5303 Angstrom)

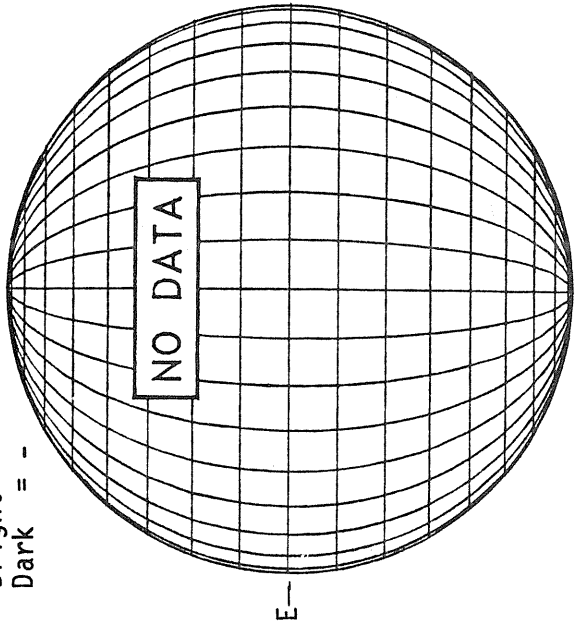


1.15 R₀ 1805 UT
1.35 R₀ 1811 UT

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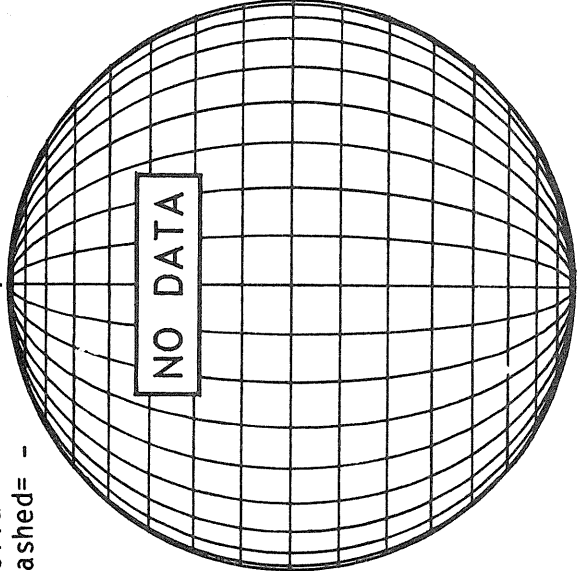
KITT PEAK MAGNETOGRAM

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Dark = -



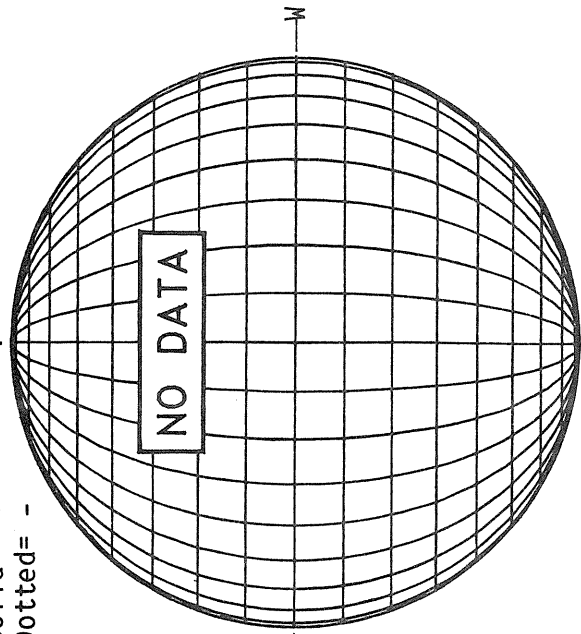
STANFORD MAGNETOGRAM

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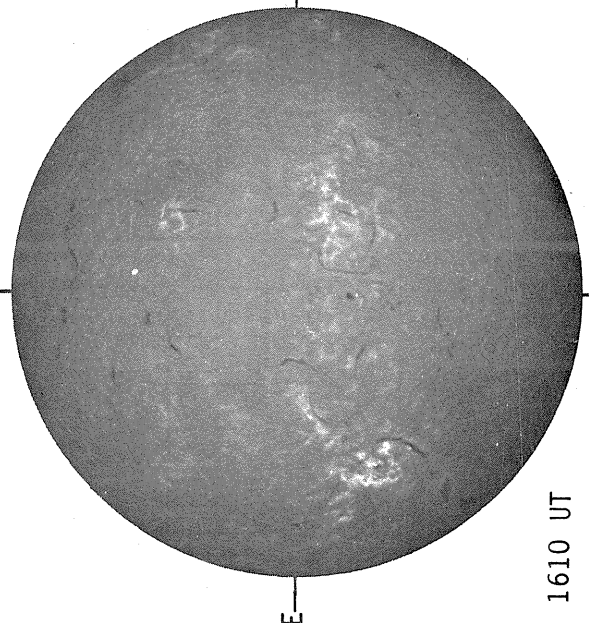


MT. WILSON MAGNETOGRAM

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Dotted = -

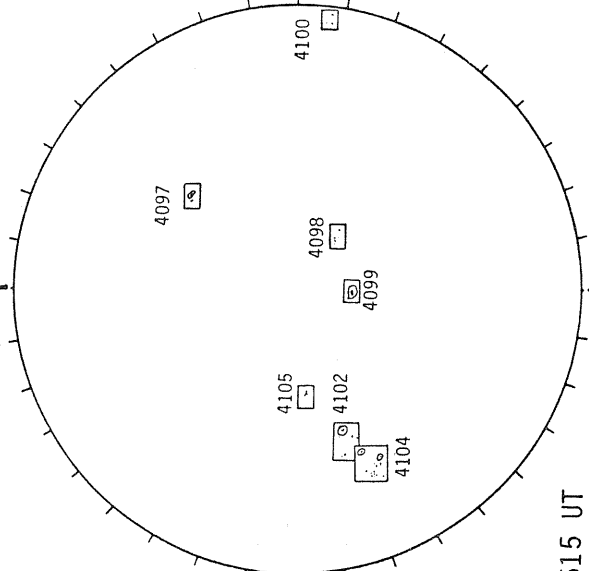


SACRAMENTO PEAK H-ALPHA



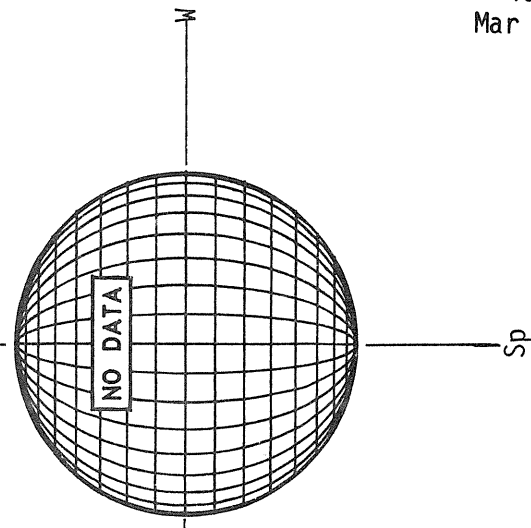
1610 UT

BOULDER SUNSPOTS



1615 UT

SACRAMENTO PEAK CORONA (5303 Angstrom)



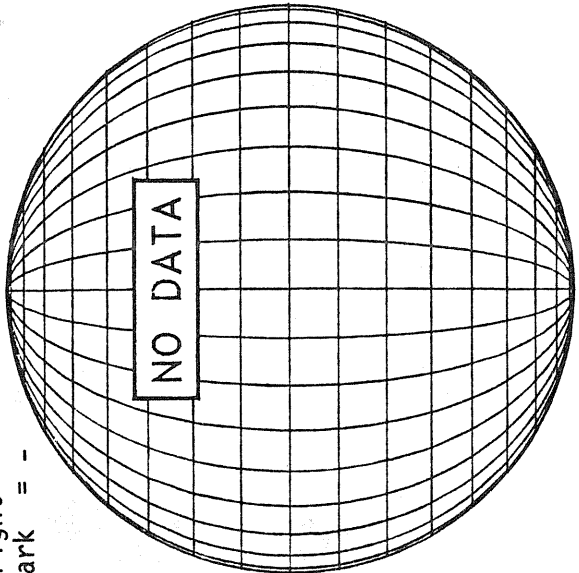
1610 UT

M A R C H 03, 1 9 8 3 (P=-21.92, B₀=-7.23, L₀= 156.06)

KITT PEAK MAGNETOGRAM

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Dark = -

Np

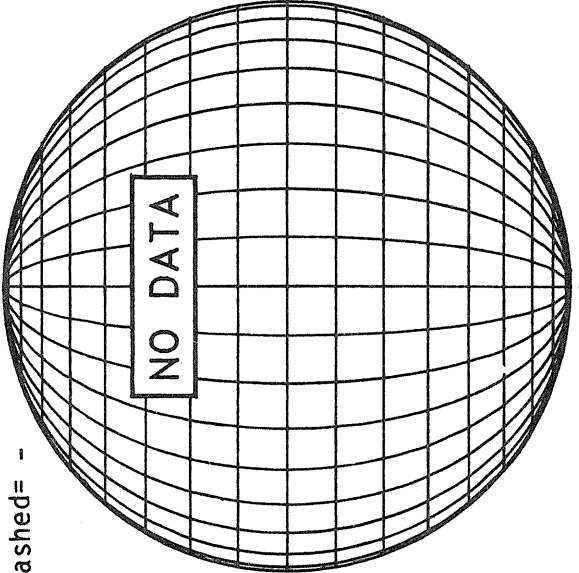


E

STANFORD MAGNETOGRAM

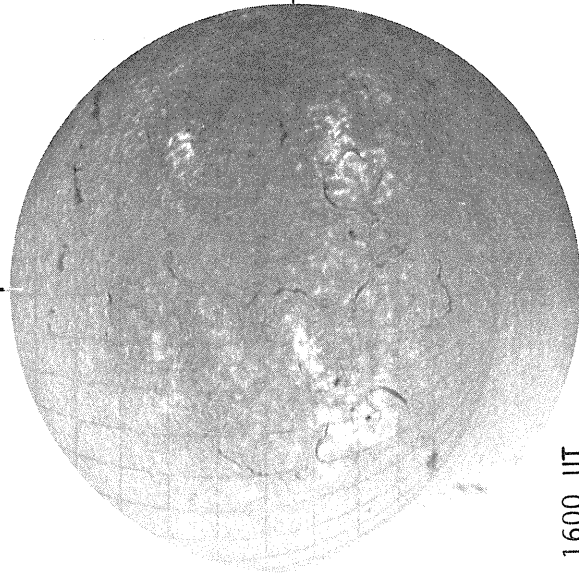
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Np



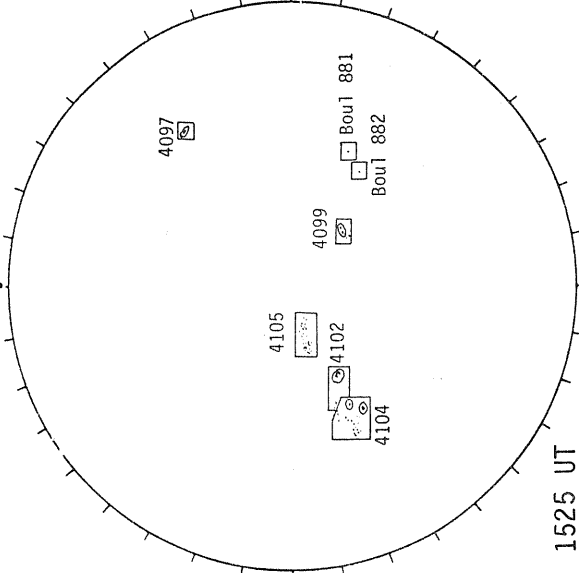
BOULDER SUNSPOTS

SACRAMENTO PEAK CORONA (5303 Angstrom)



E

1600 UT



1525 UT

Np

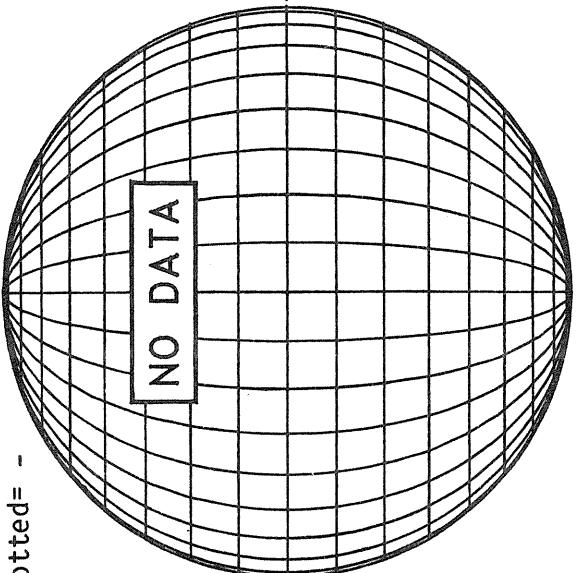
Sp

Sp

MT. WILSON MAGNETOGRAM

Np

Solid = +
Dotted = -



W

NO DATA

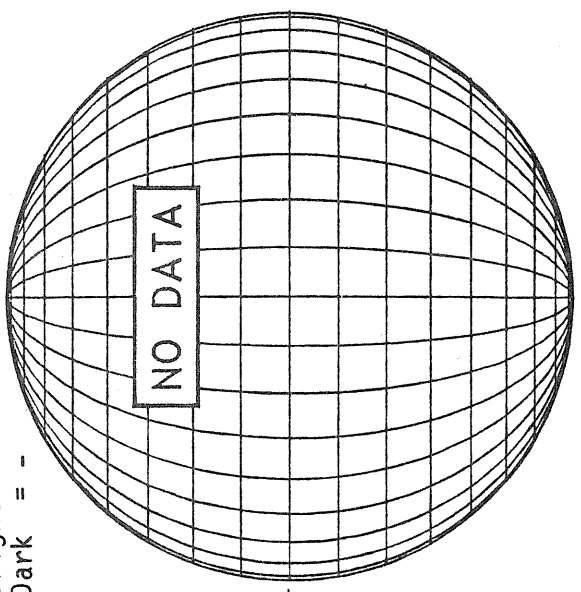
W

M A R C H 04, 1 9 8 3 (P=-22.16, B₀=-7.24, L₀= 142.89)

KITT PEAK MAGNETOGRAM

Bright= +
Dark = -

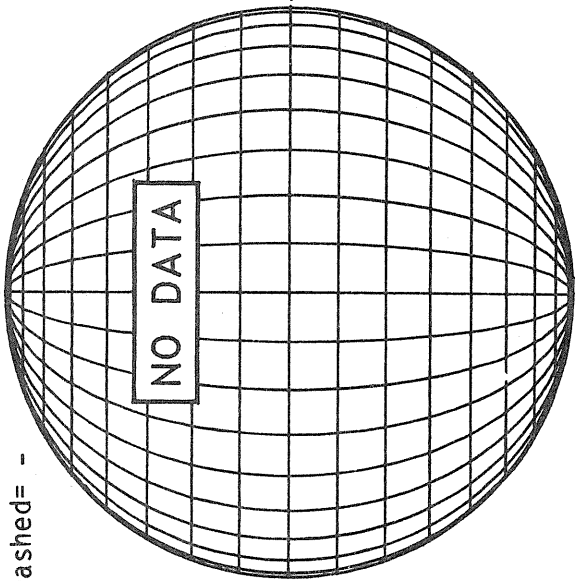
Np



STANFORD MAGNETOGRAM

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Dashed = -

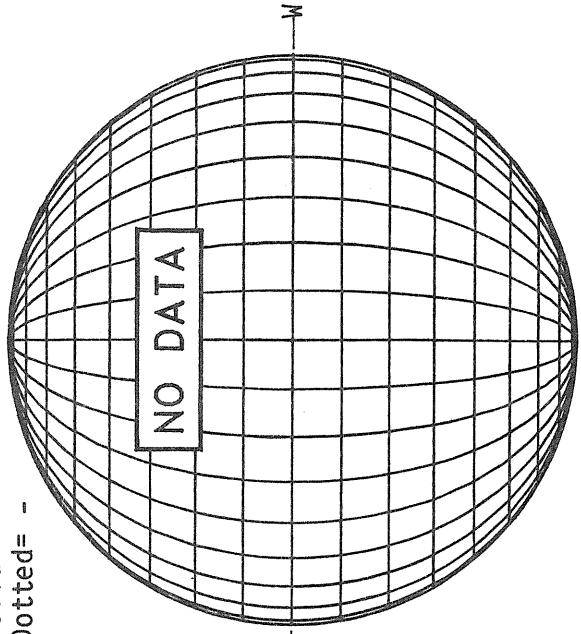
Np



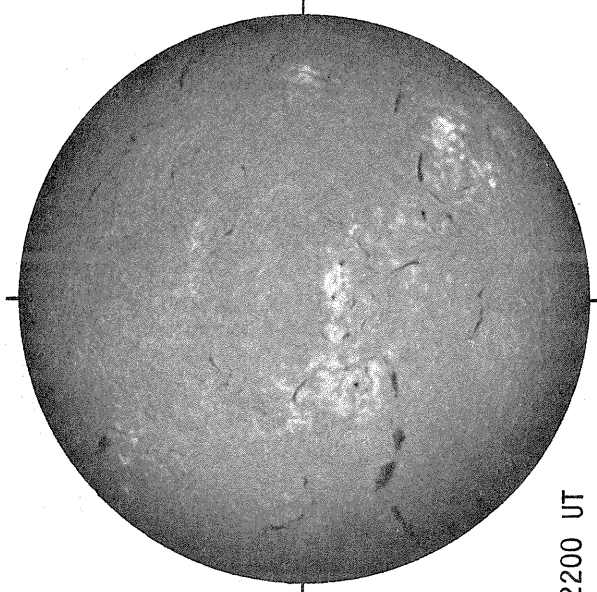
MT. WILSON MAGNETOGRAM

Solid = +
Dotted = -

Np

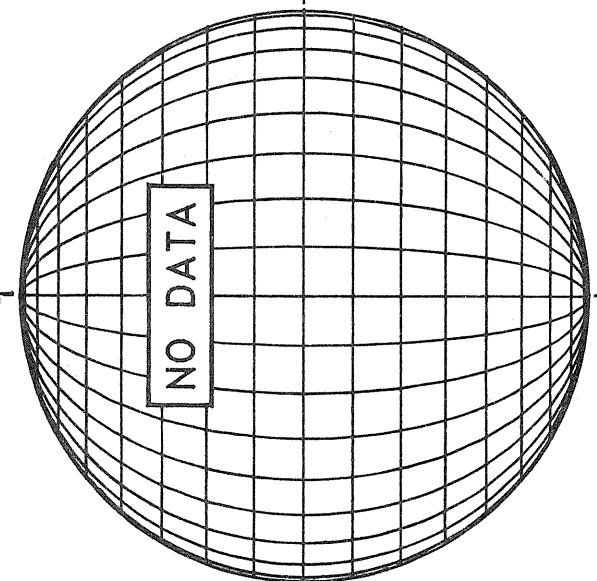


SAN FERNANDO H-ALPHA

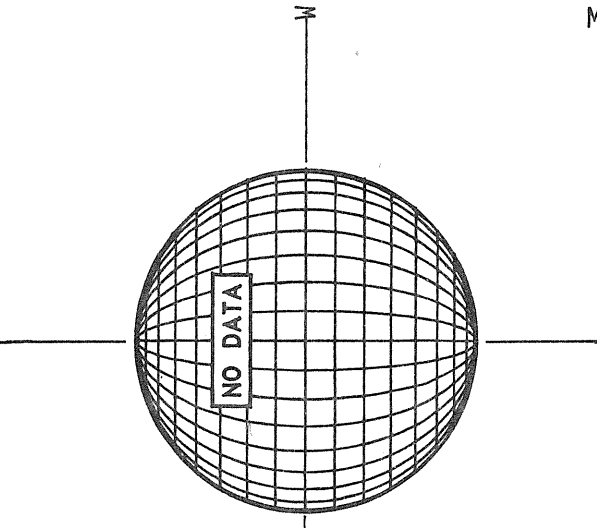


2200 UT

BOULDER SUNSPOTS



SACRAMENTO PEAK CORONA (5303 Angstrom)



E

E

Sp

Sp

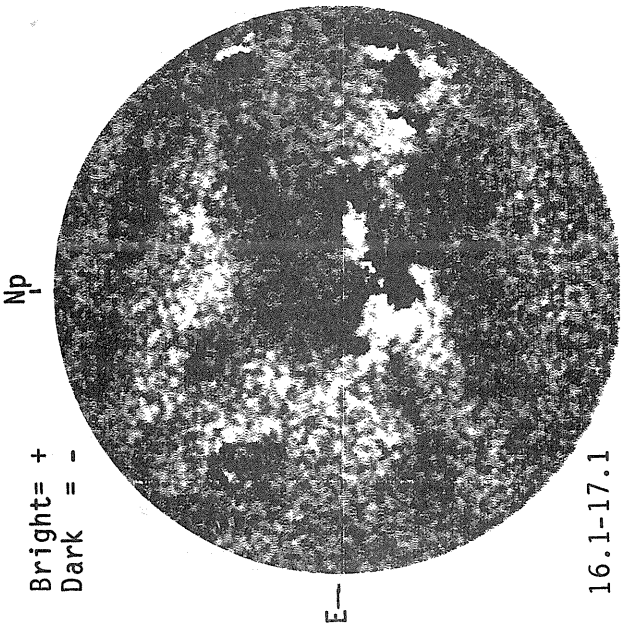
Sp

W

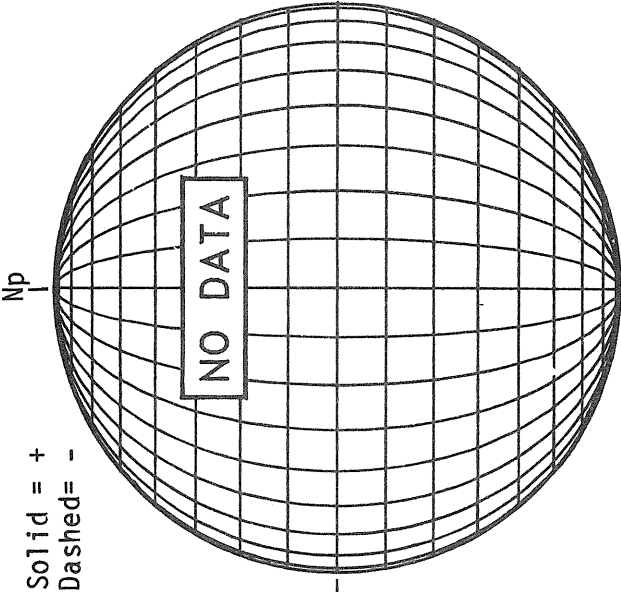
W

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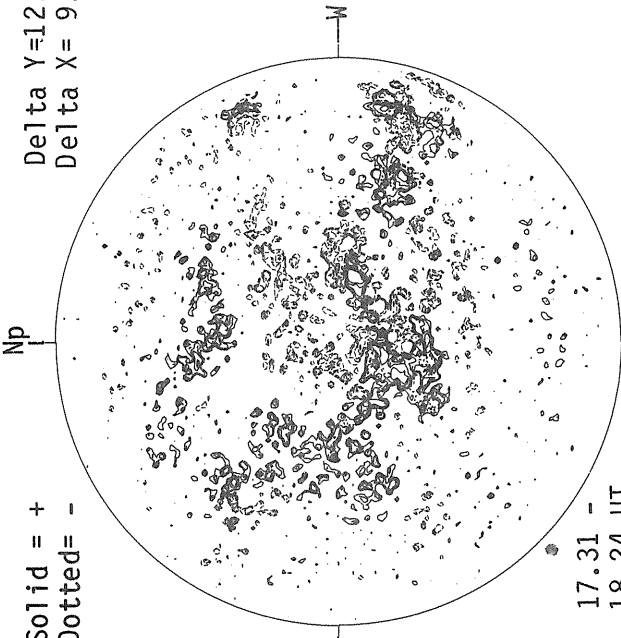
MT. WILSON MAGNETOGRAM



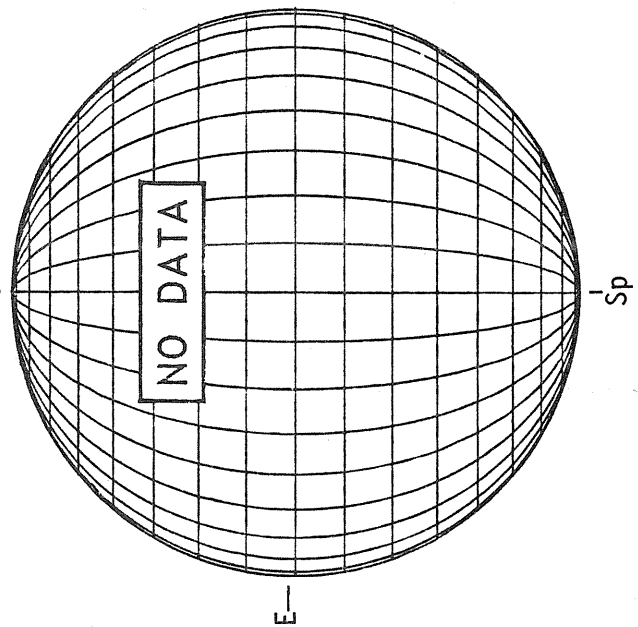
STANFORD MAGNETOGRAM



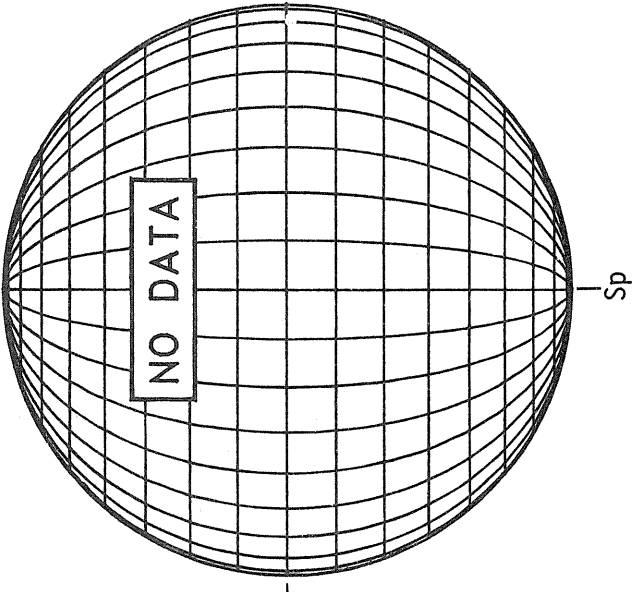
MT. WILSON MAGNETOGRAM



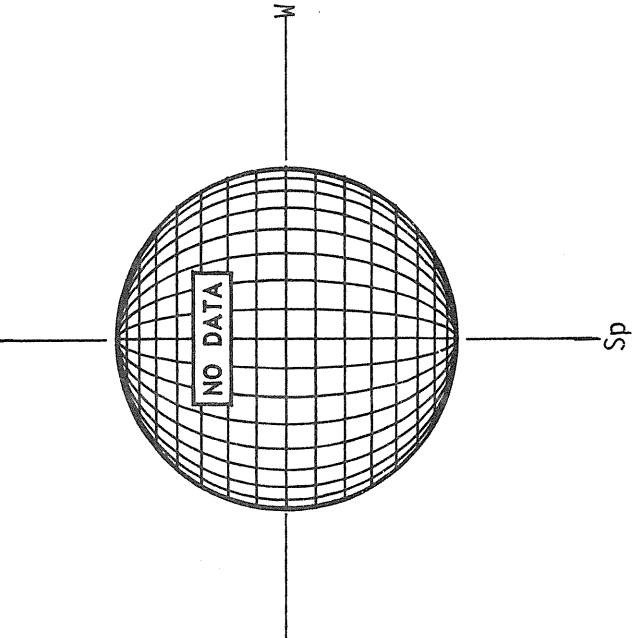
SACRAMENTO PEAK H-ALPHA



BOULDER SUNSPOTS



SACRAMENTO PEAK CORONA (5303 Angstrom)

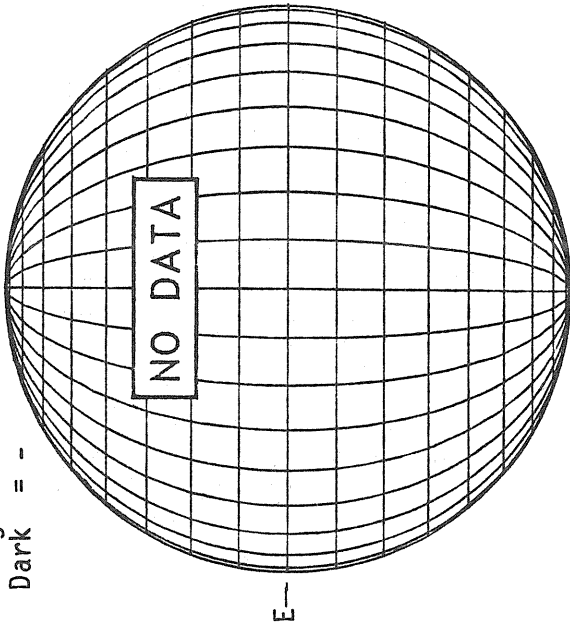


M A R C H 06, 1 9 8 3 (P=-22.62, B₀=-7.25, L₀= 116.54)

KITT PEAK MAGNETOGRAM

Np

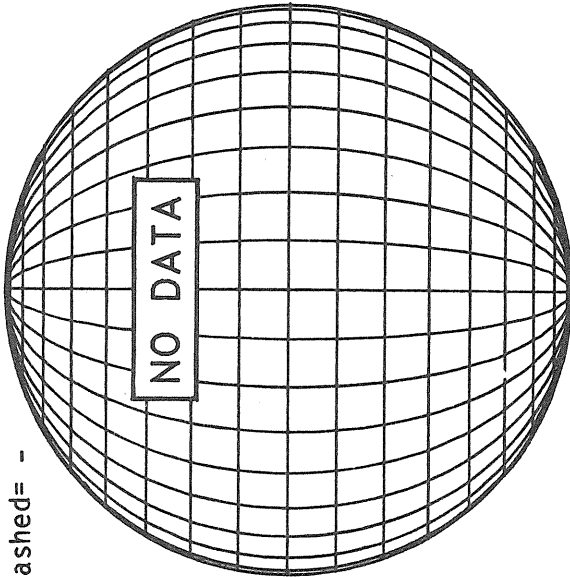
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STANFORD MAGNETOGRAM

Np

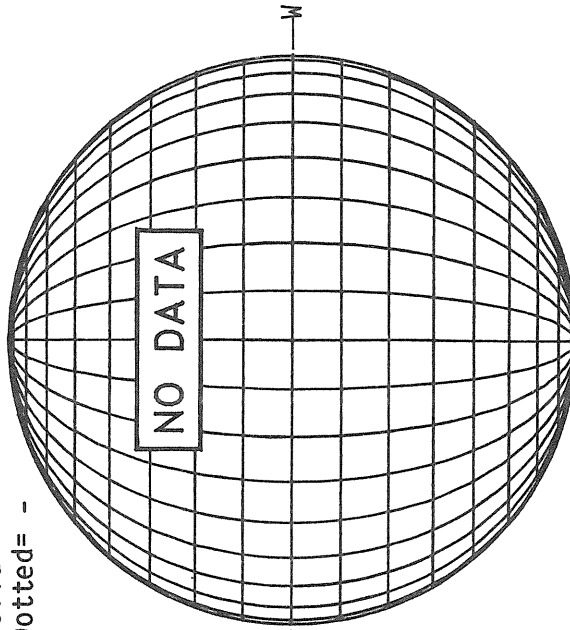
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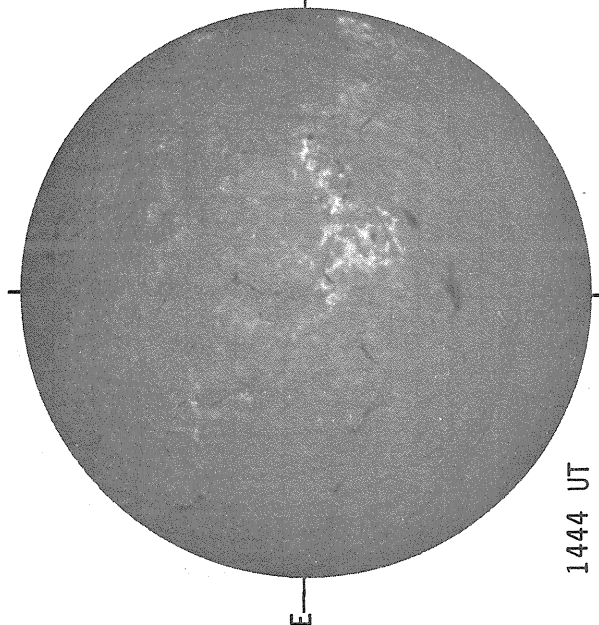
MT. WILSON MAGNETOGRAM

Np

Solid = +
Dotted = -

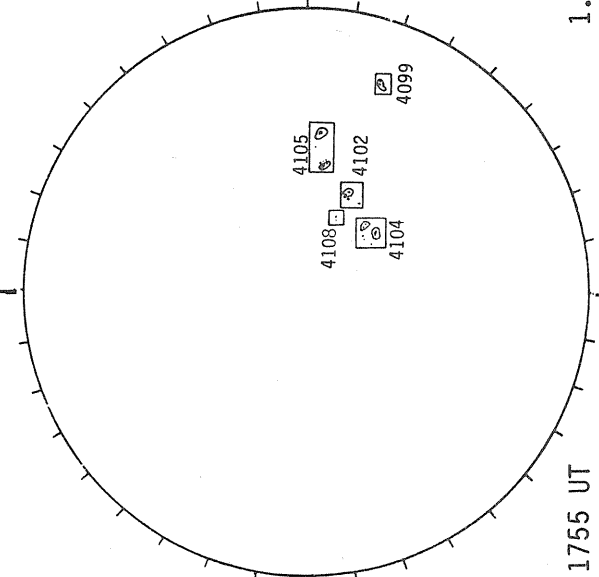


SACRAMENTO PEAK H-ALPHA



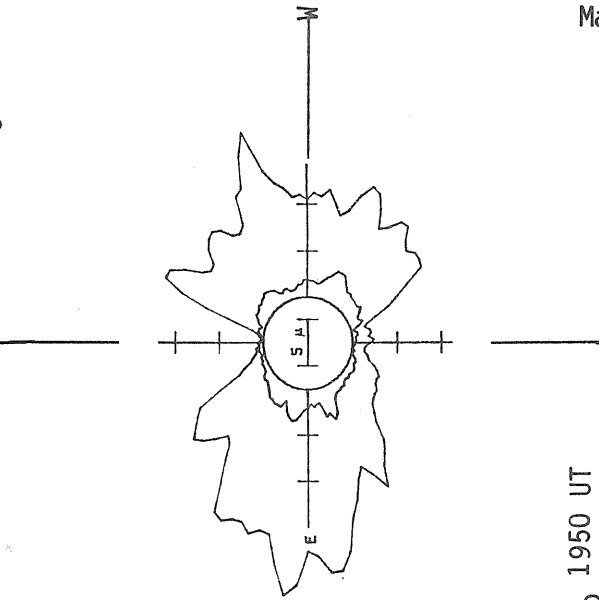
1444 UT

BOULDER SUNSPOTS



1755 UT

SACRAMENTO PEAK CORONA (5303 Angstrom)

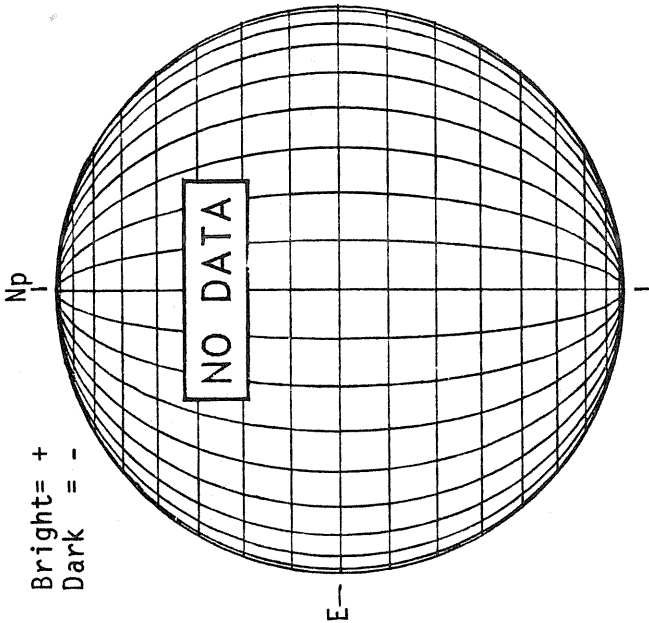


1.15 R₀ 1950 UT
1.35 R₀ 1956 UT

M A R C H 07, 1 9 8 3 (P=-22.84, B₀=-7.25, L₀= 103.37)

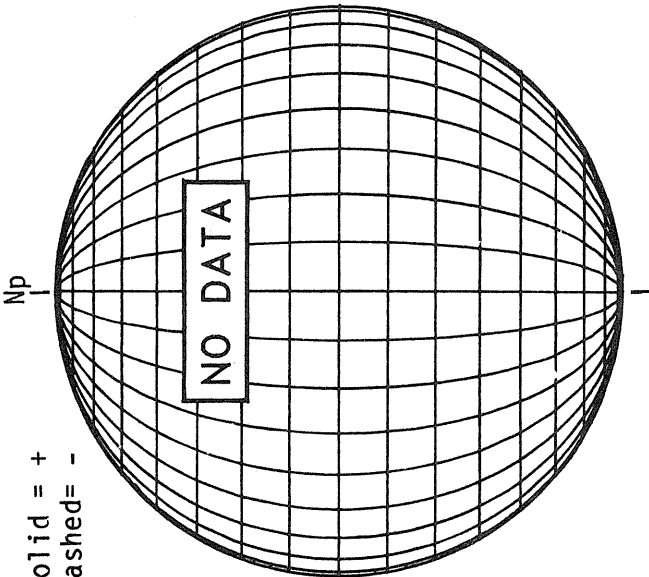
KITT PEAK MAGNETOGRAM

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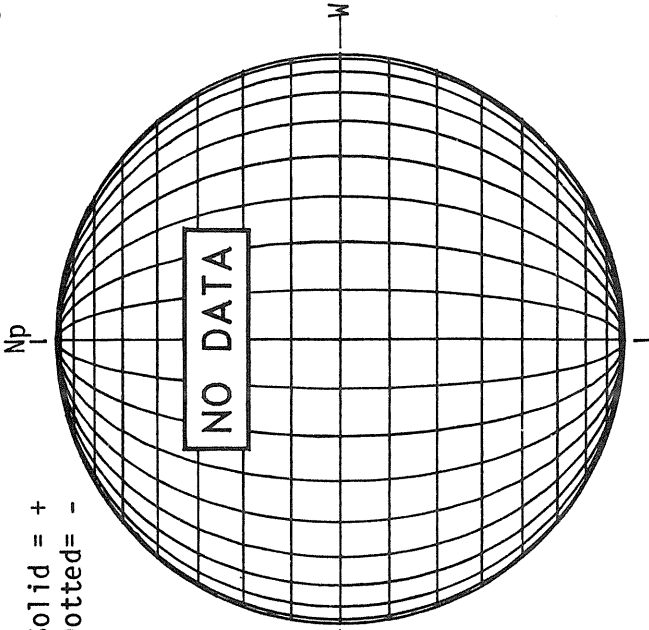
STANFORD MAGNETOGRAM

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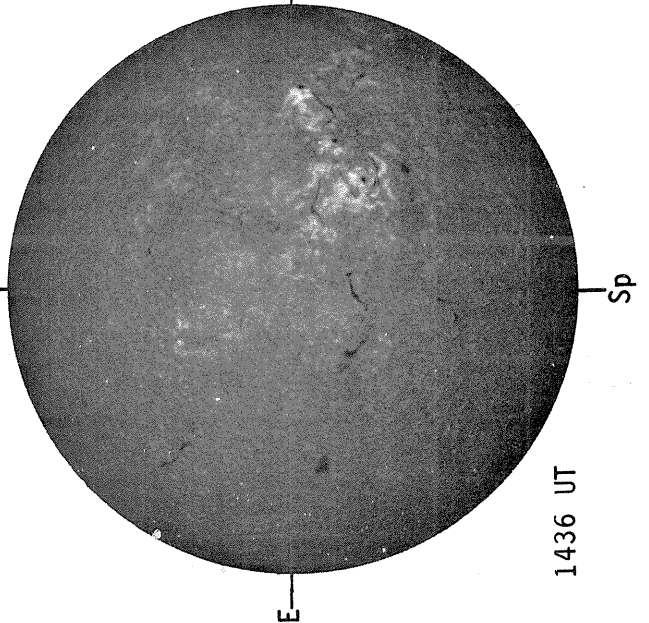


MT. WILSON MAGNETOGRAM

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Dotted = -

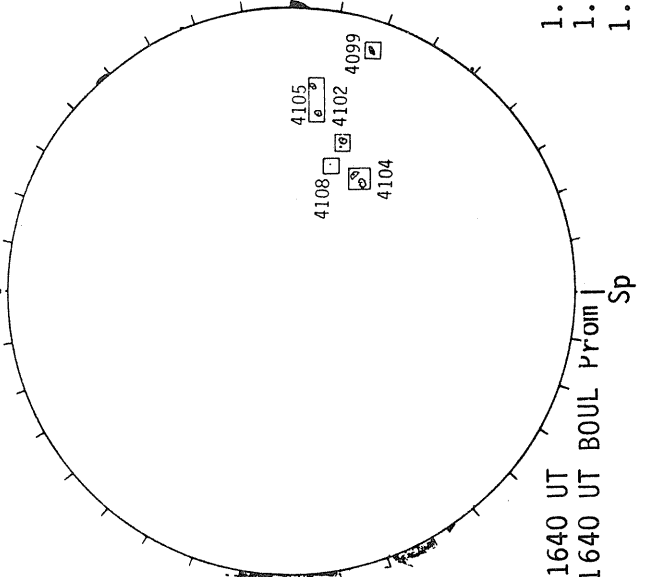


SACRAMENTO PEAK H-ALPHA



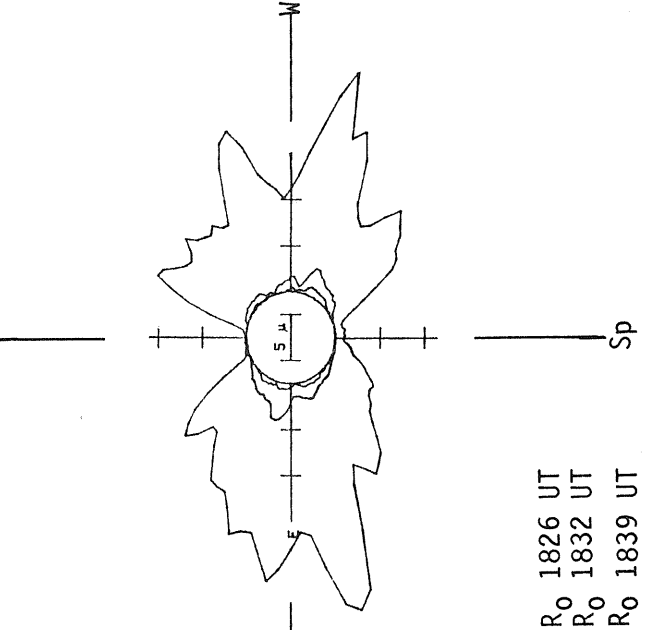
1436 UT

BOULDER SUNSPOTS



1640 UT
1640 UT BOUL Prom

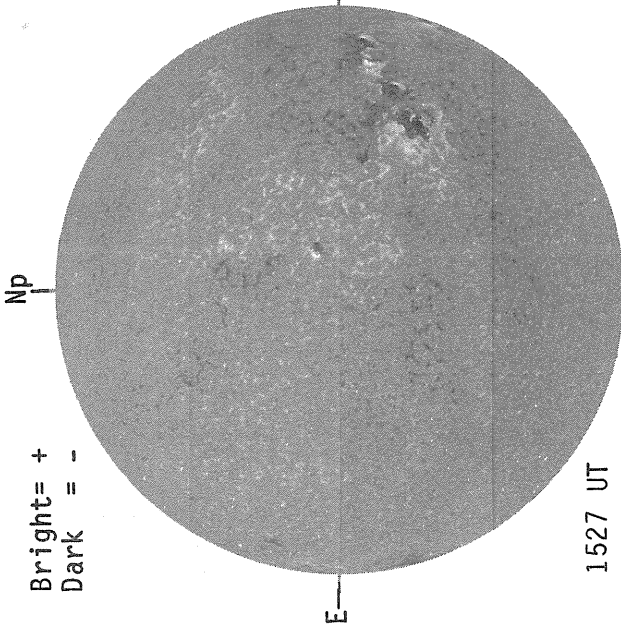
SACRAMENTO PEAK CORONA (5303 Angstrom)



1.15 R₀ 1826 UT
1.35 R₀ 1832 UT
1.55 R₀ 1839 UT

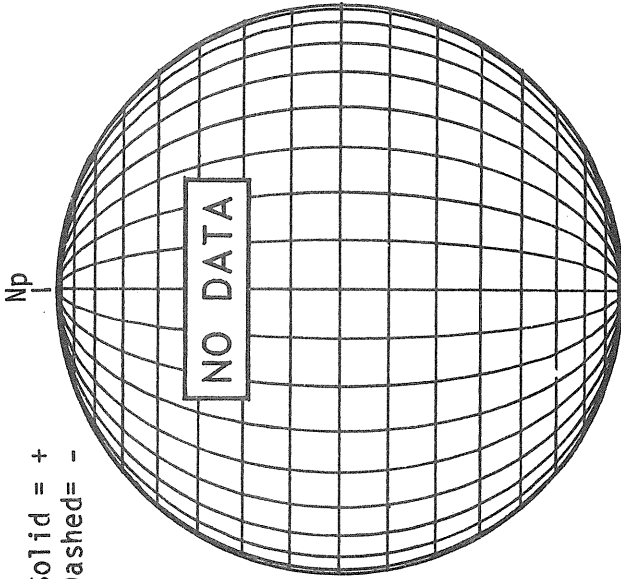
M A R C H 08, 1 9 8 3 (P=-23.06, B₀=-7.25, L₀= 90.19)

KITT PEAK MAGNETOGRAM



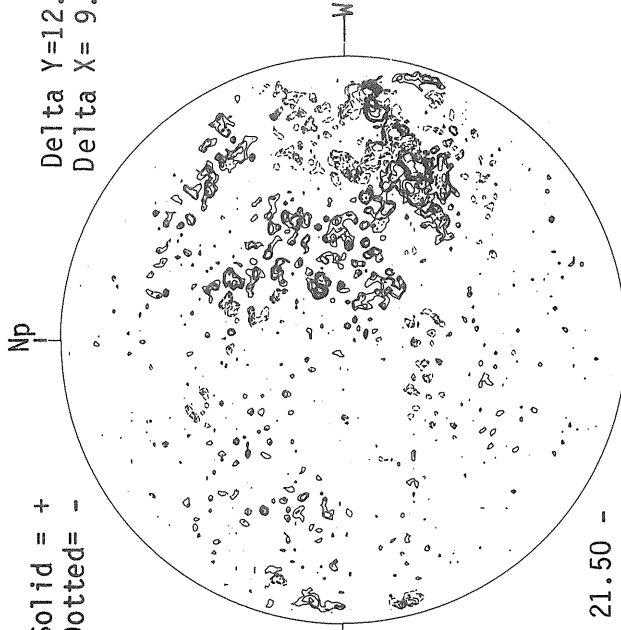
Bright= +
Dark = -

STANFORD MAGNETOGRAM



Solid = +
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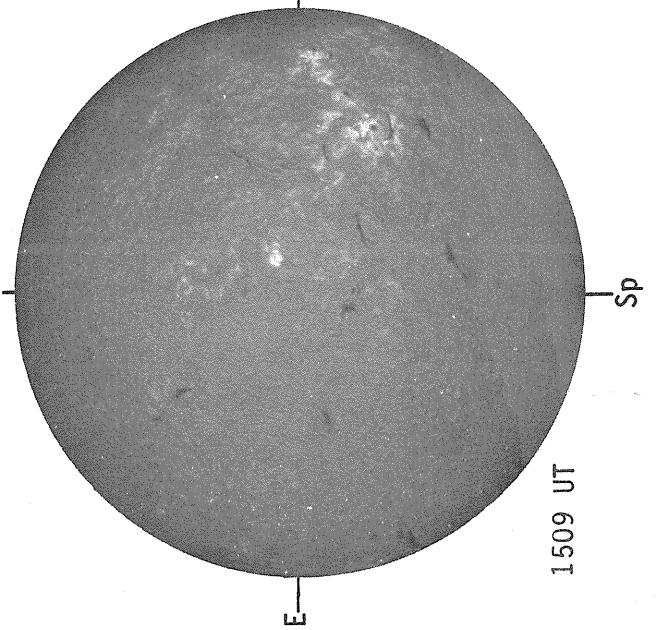
MT. WILSON MAGNETOGRAM



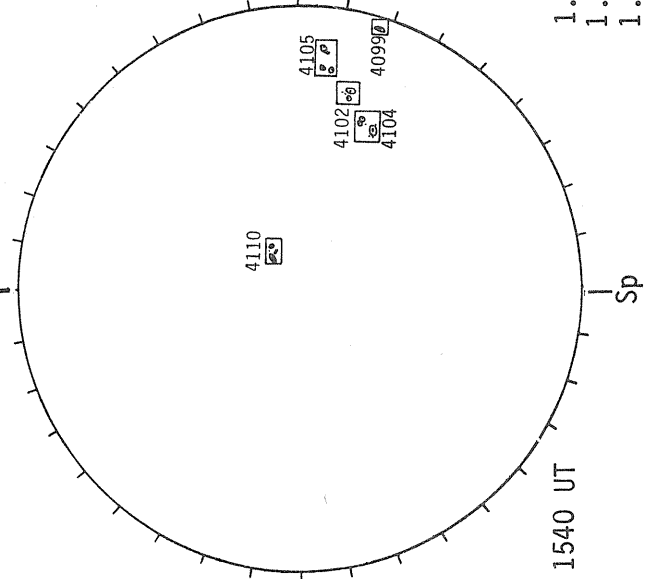
Solid = +
Dotted = -

Delta Y=12.7
Delta X= 9.6

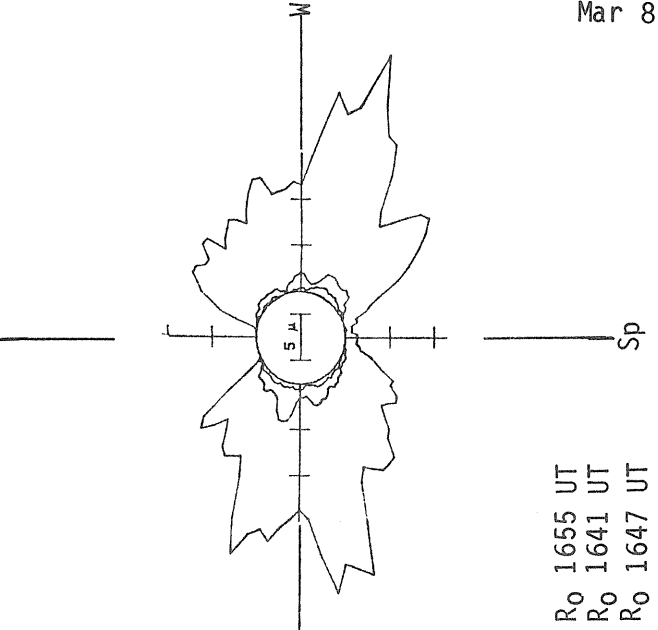
SACRAMENTO PEAK H-ALPHA



BOULDER SUNSPOTS



SACRAMENTO PEAK CORONA (5303 Angstrom)



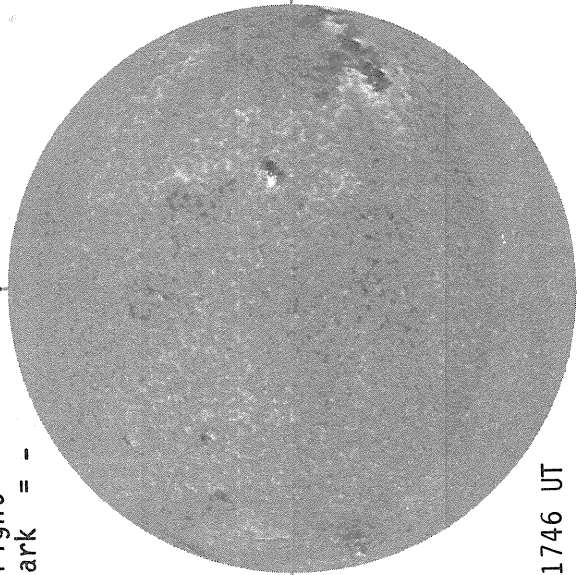
1.15 R₀ 1655 UT
1.35 R₀ 1641 UT
1.55 R₀ 1647 UT

M A R C H 09, 1 9 8 3 (P=-23.27, B₀=-7.24, L₀= 77.01)

KITT PEAK MAGNETOGRAM

Np

Bright= +
Dark = -

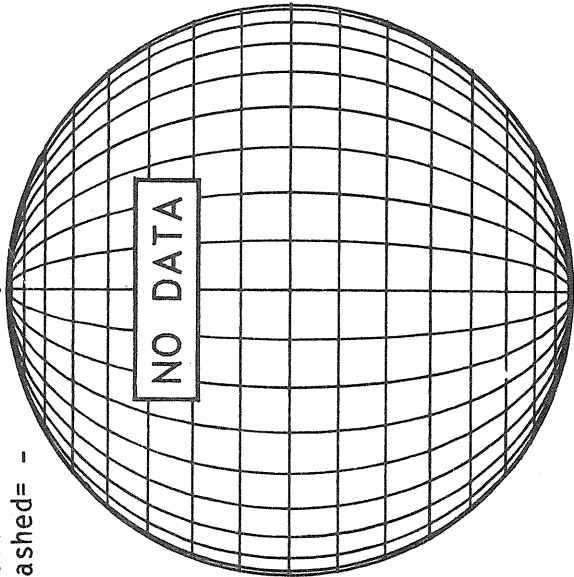


1746 UT

STANFORD MAGNETOGRAM

Np

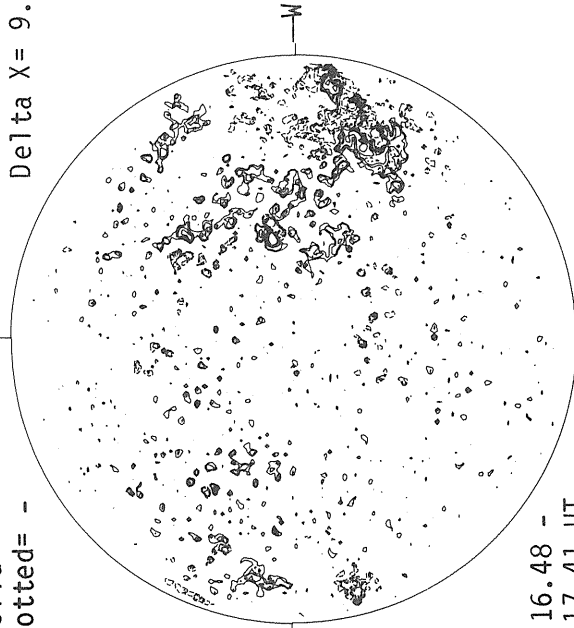
Solid = +
Dashed = -



MT. WILSON MAGNETOGRAM

Np

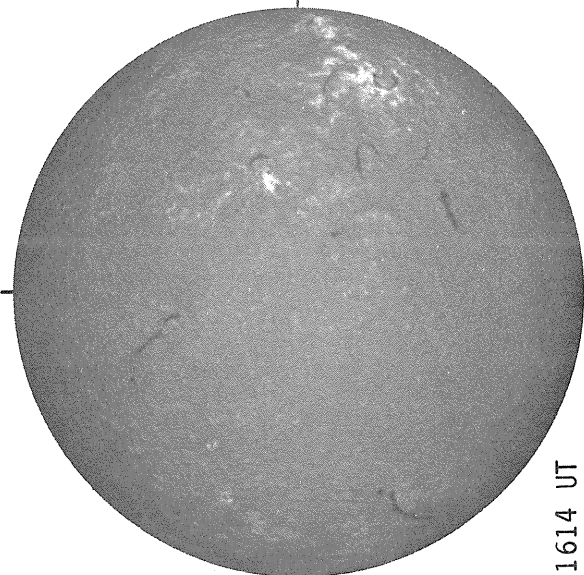
Solid = +
Dotted = -



16.48 -
17.41 UT

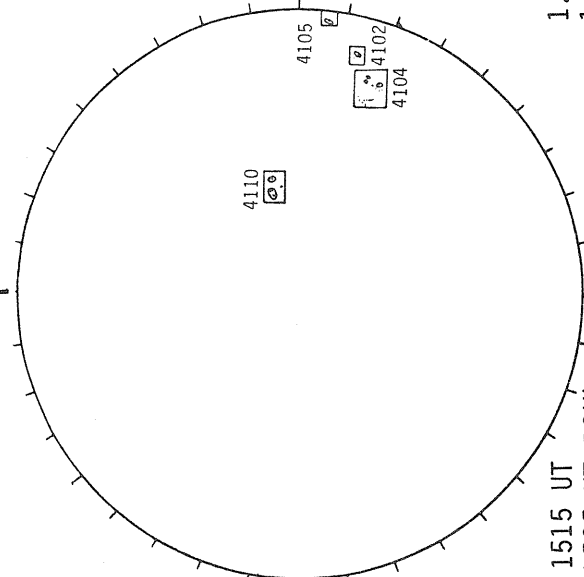
Delta Y=12.7
Delta X= 9.6

SACRAMENTO PEAK H-ALPHA



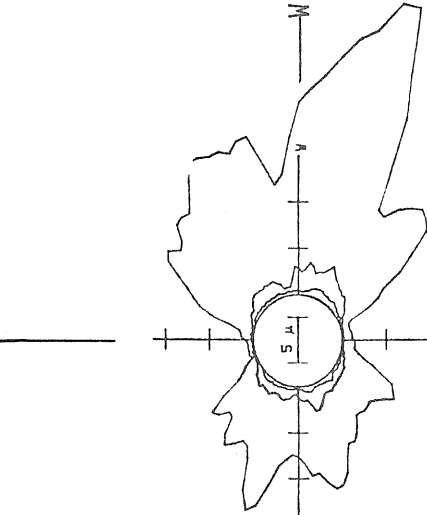
1614 UT

BOULDER SUNSPOTS



1515 UT
1525 UT BOUL FROM
Sp

SACRAMENTO PEAK CORONA (5303 Angstrom)



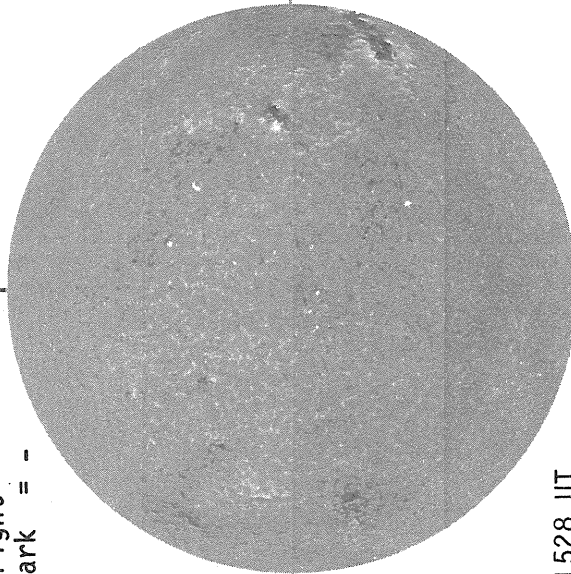
1.15 R_o 2034 UT
1.35 R_o 2019 UT
1.55 R_o 2026 UT
Sp

MARCH 10, 1983 (P=-23.47, B₀=-7.24, L₀= 63.84)

KITT PEAK MAGNETOGRAM

Np

Bright = +
Dark = -

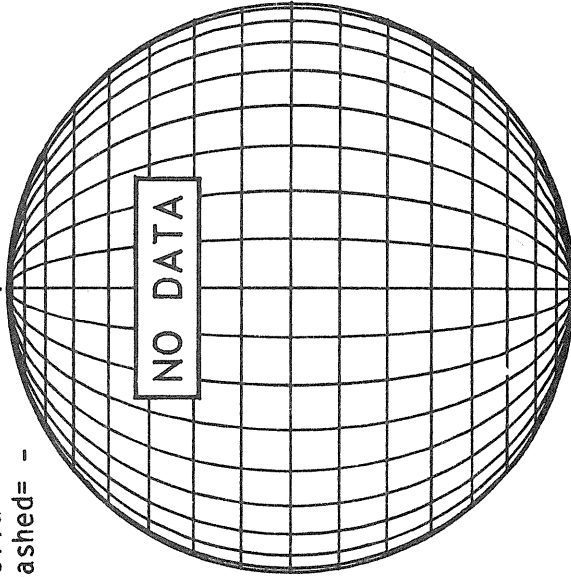


1528 UT

STANFORD MAGNETOGRAM

Np

Solid = +
Dashed = -

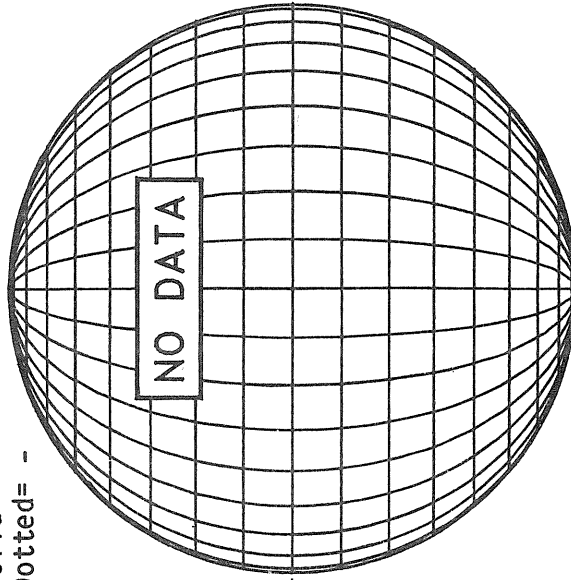


NO DATA

MT. WILSON MAGNETOGRAM

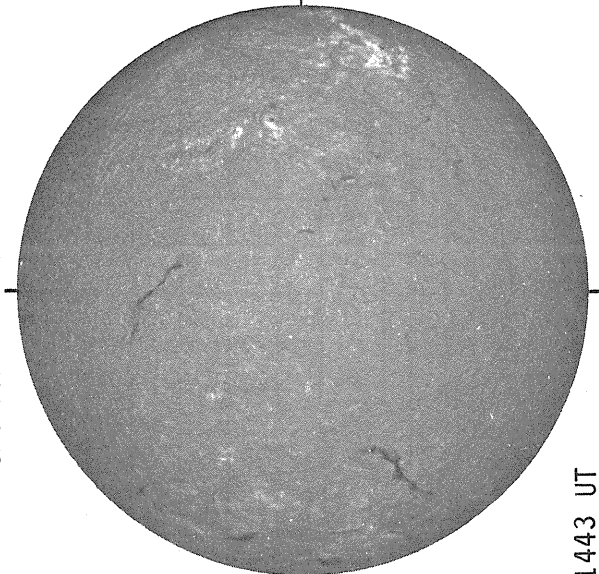
Np

Solid = +
Dotted = -



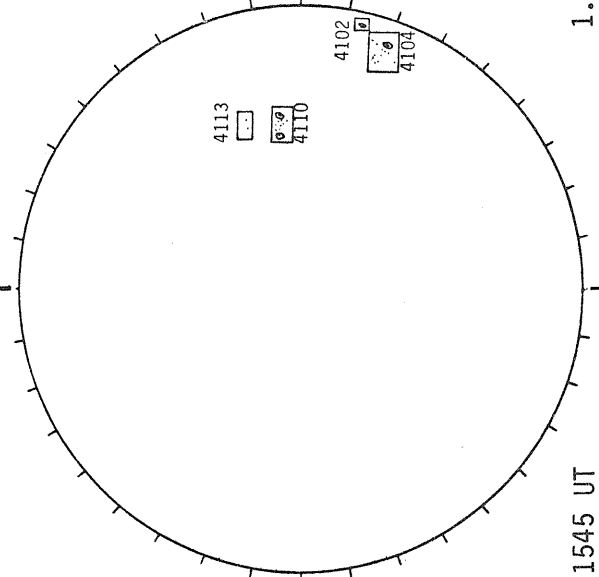
NO DATA

SACRAMENTO PEAK H-ALPHA



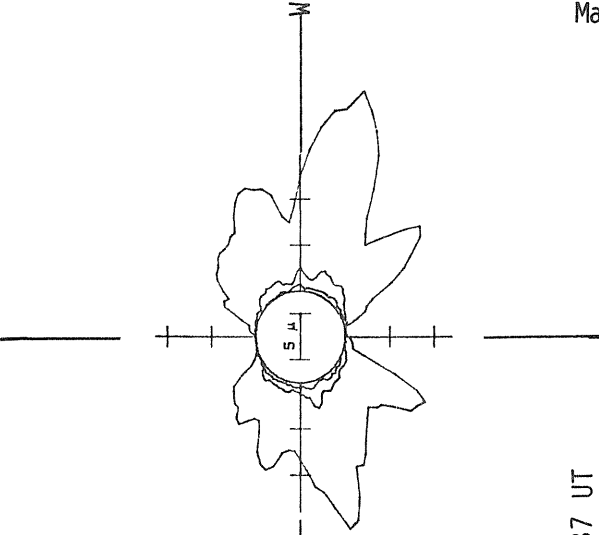
1443 UT

BOULDER SUNSPOTS



1545 UT

SACRAMENTO PEAK CORONA (5303 Angstrom)



1.15 R₀ 1437 UT
1.35 R₀ 1443 UT
1.55 R₀ 1449 UT

E

E

Sp

Sp

Sp

M

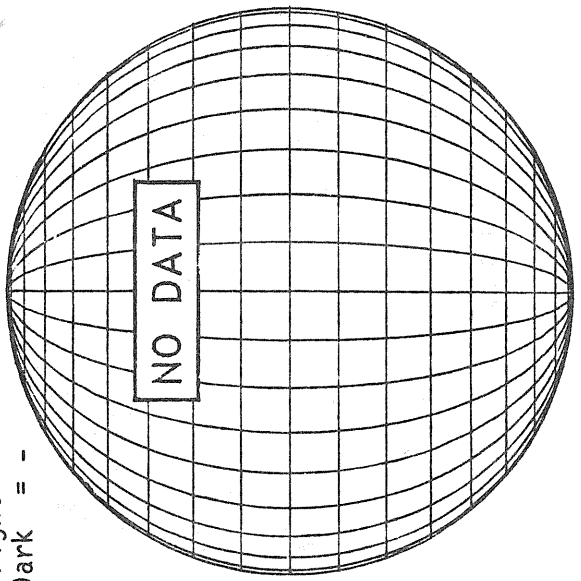
M

M A R C H 11, 1 9 8 3 (P=-23.66, B₀=-7.23, L₀= 50.66)

KITT PEAK MAGNETOGRAM

Bright= +
Dark = -

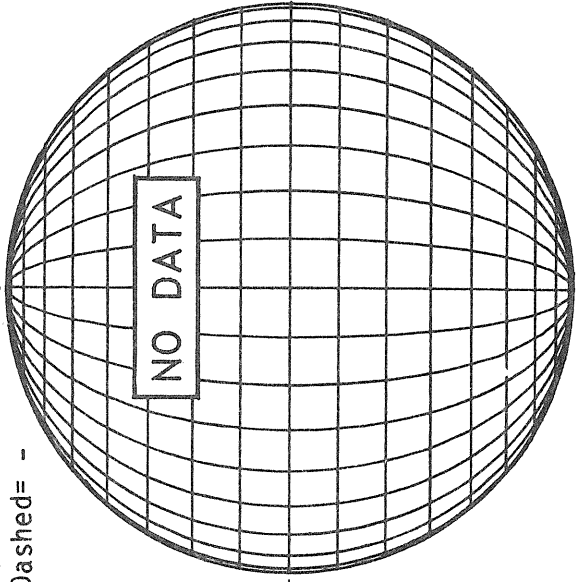
Np



STANFORD MAGNETOGRAM

Solid = +
Dashed = -

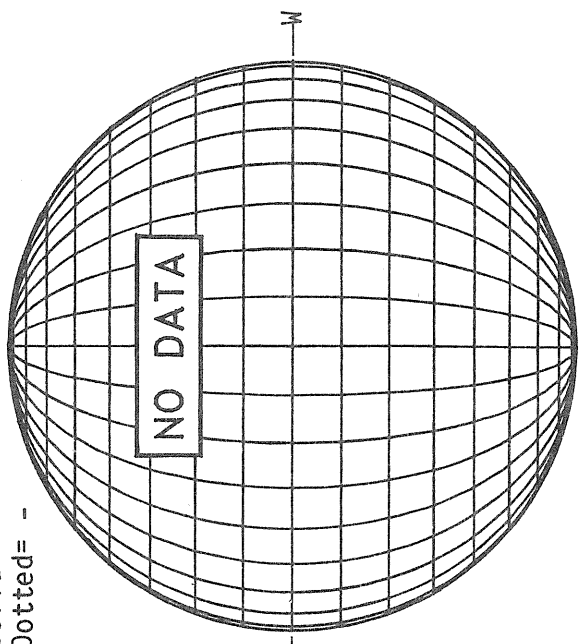
Np



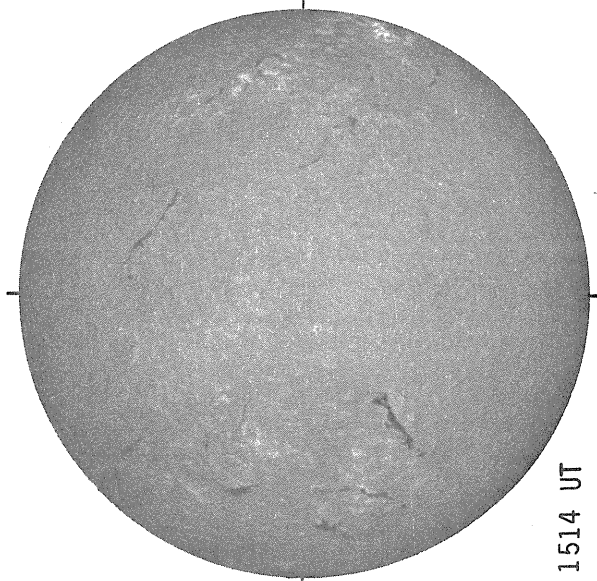
MT. WILSON MAGNETOGRAM

Solid = +
Dotted = -

Np



SACRAMENTO PEAK H-ALPHA

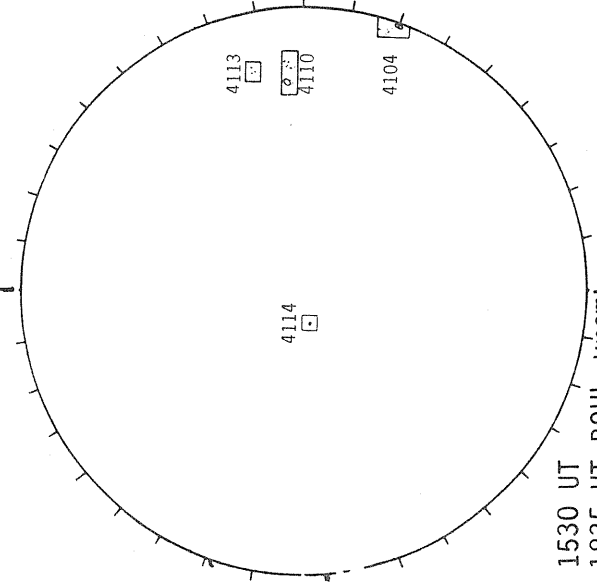


1514 UT

E

Sp

BOULDER SUNSPOTS

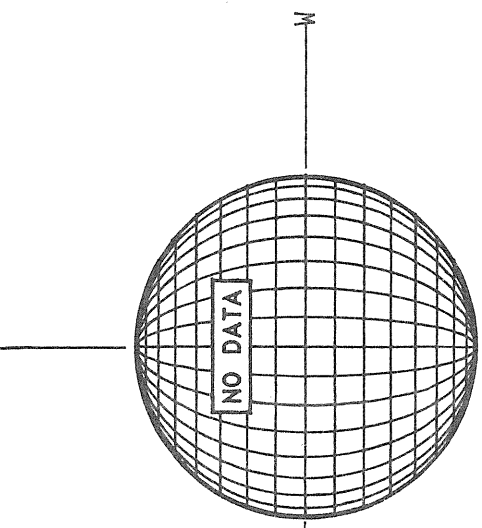


1530 UT

1835 UT BOUL PROM

Sp

SACRAMENTO PEAK CORONA (5303 Angstrom)



N

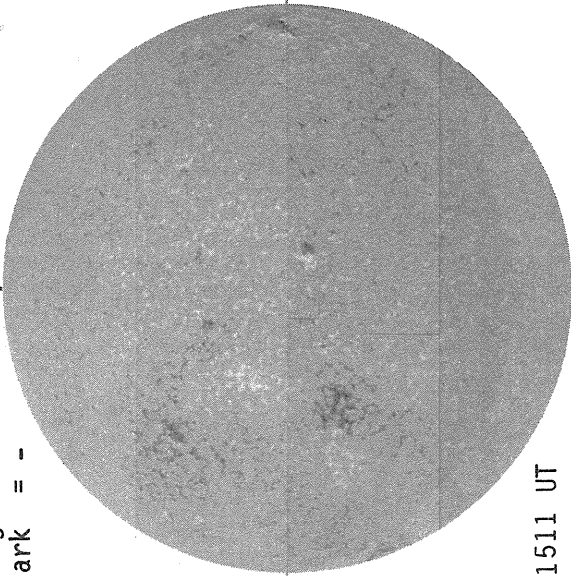
Sp

MARCH 12, 1983 (P=-23.85, B₀=-7.22, L₀= 37.48)

KITT PEAK MAGNETOGRAM

Bright = +
Dark = -

Np

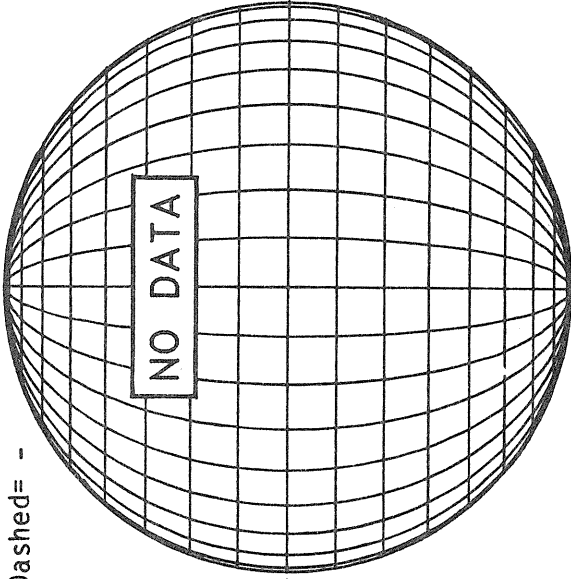


1511 UT

STANFORD MAGNETOGRAM

Solid = +
Dashed = -

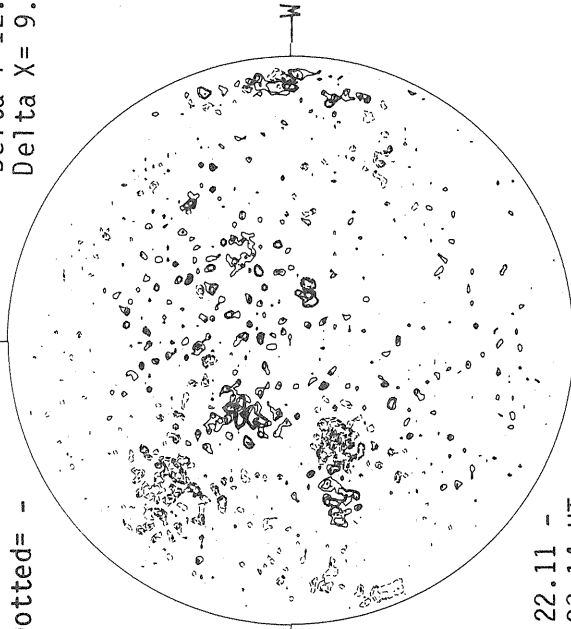
Np



MT. WILSON MAGNETOGRAM

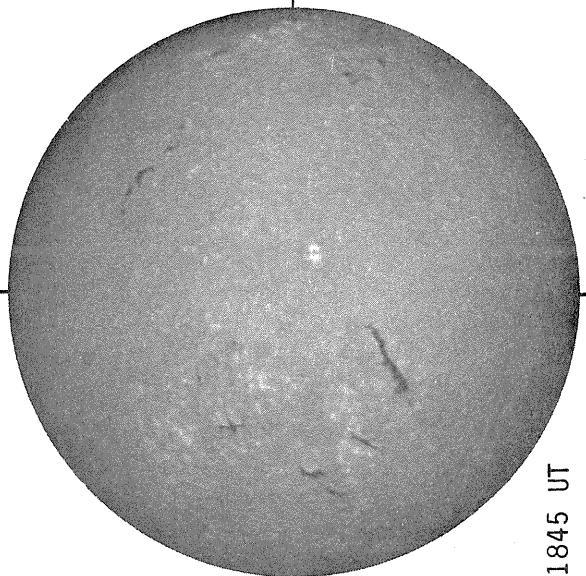
Solid = +
Dotted = -

Np



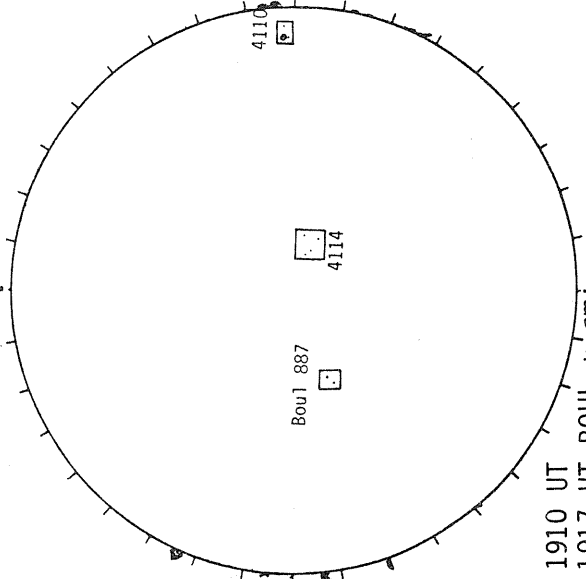
22.11 -
23.14 UT

SACRAMENTO PEAK H-ALPHA



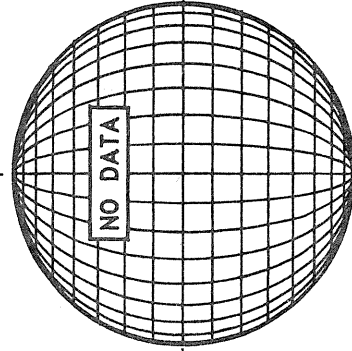
1845 UT

BOULDER SUNSPOTS



1910 UT
1917 UT BOUL FROM

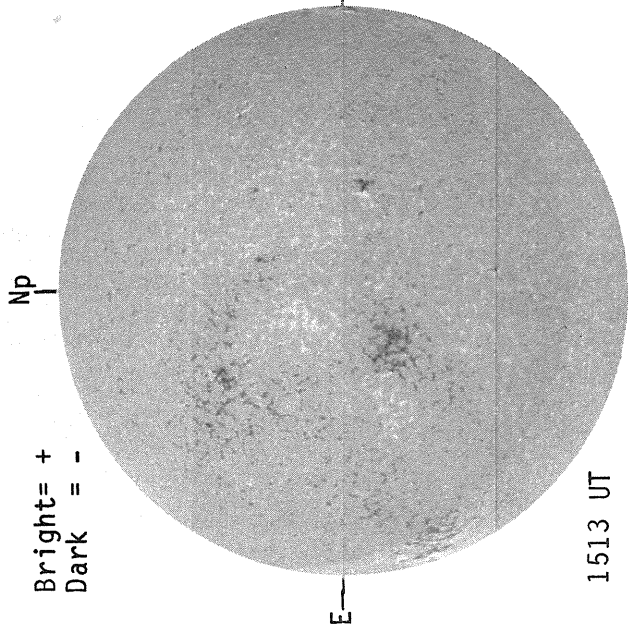
SACRAMENTO PEAK CORONA (5303 Angstrom)



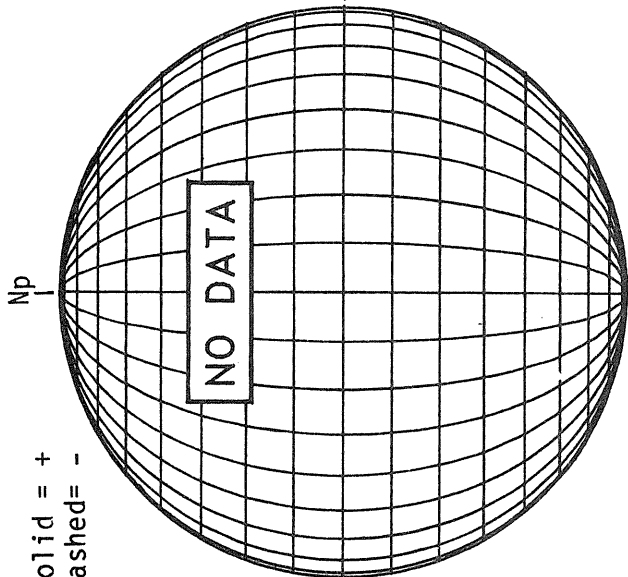
Sp

MARCH 13, 1983 (P=-24.03, B₀=-7.21, L₀= 24.30)

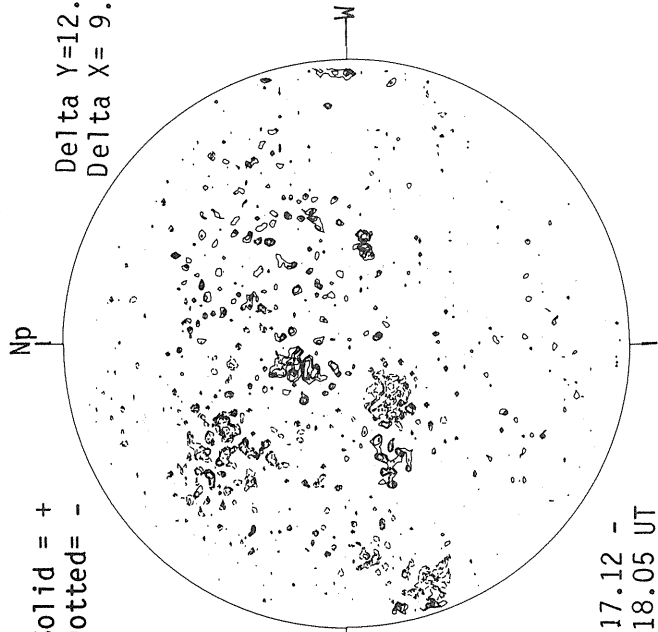
KITT PEAK MAGNETOGRAM



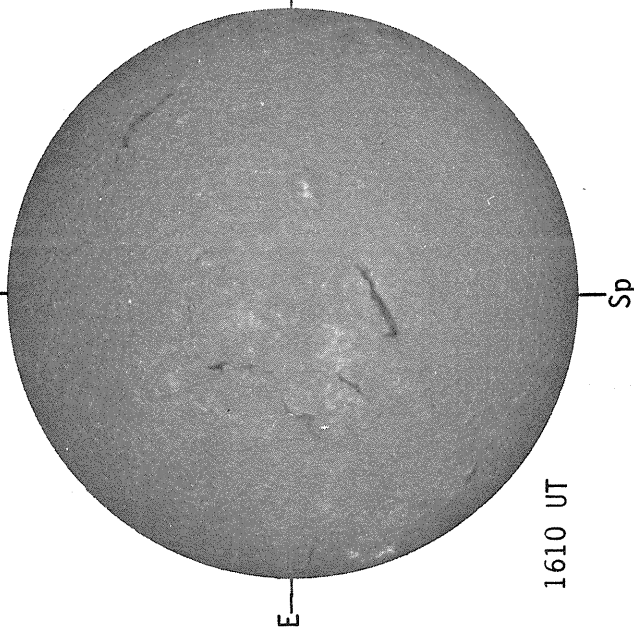
STANFORD MAGNETOGRAM



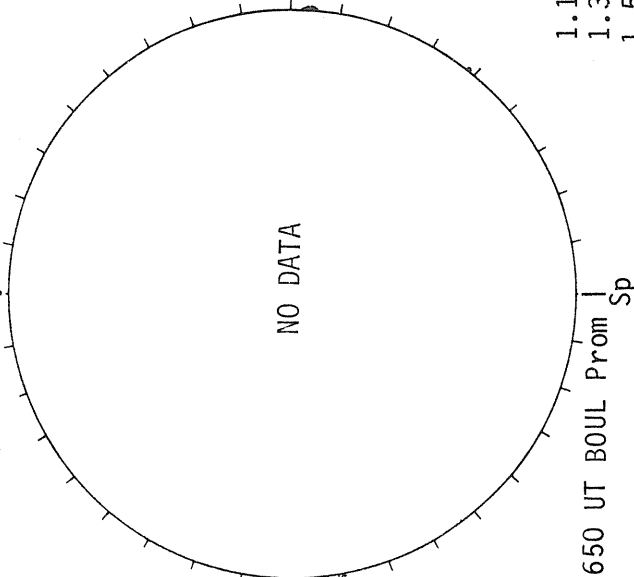
MT. WILSON MAGNETOGRAM



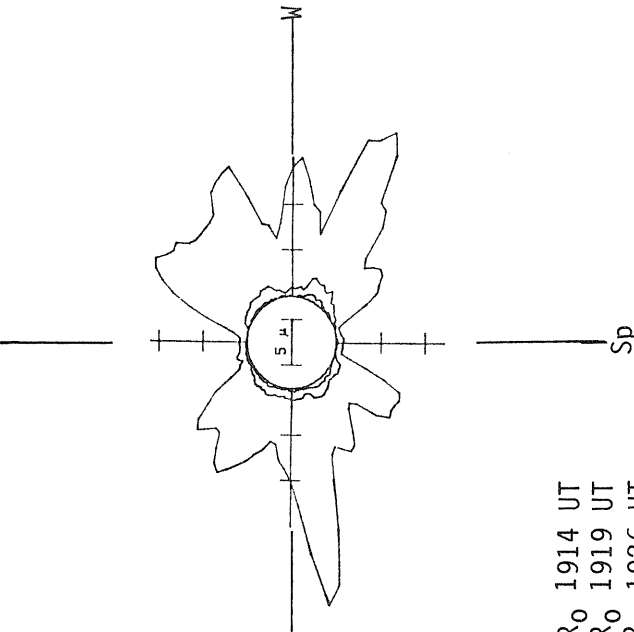
SACRAMENTO PEAK H-ALPHA



BOULDER SUNSPOTS



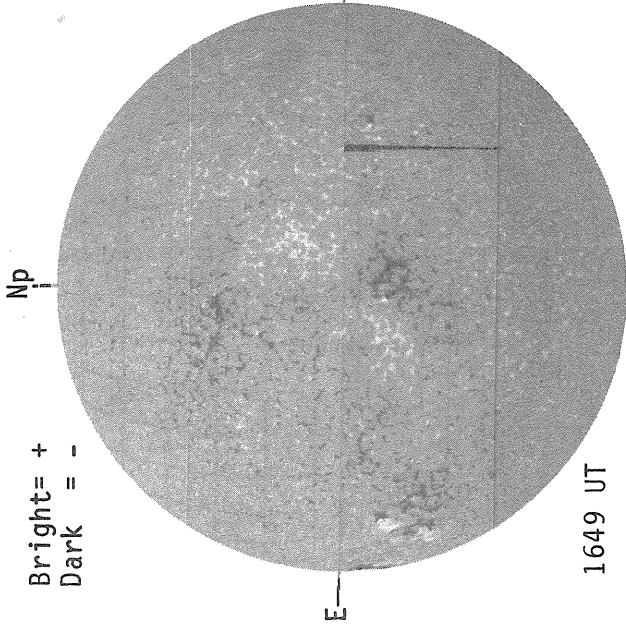
SACRAMENTO PEAK CORONA (5303 Angstrom)



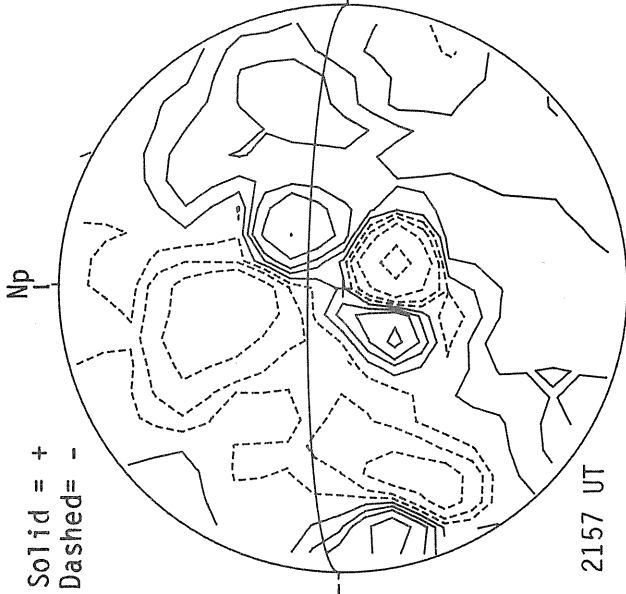
1.15 R₀ 1914 UT
1.35 R₀ 1919 UT
1.55 R₀ 1926 UT

MARCH 14, 1983 (P=-24.21, B₀=-7.19, L₀= 11.13)

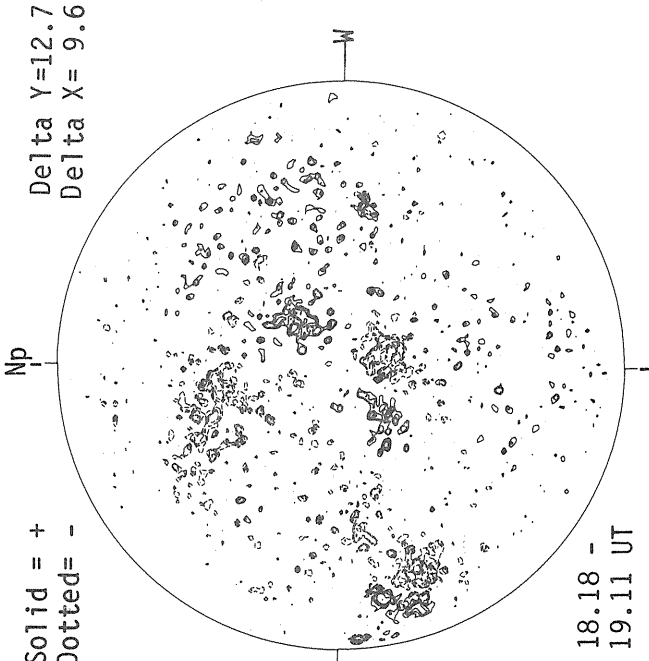
KITT PEAK MAGNETOGRAM



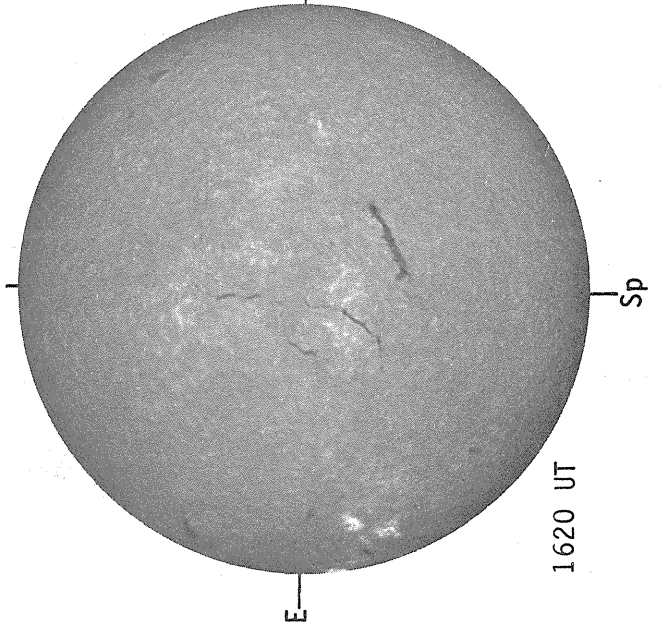
STANFORD MAGNETOGRAM



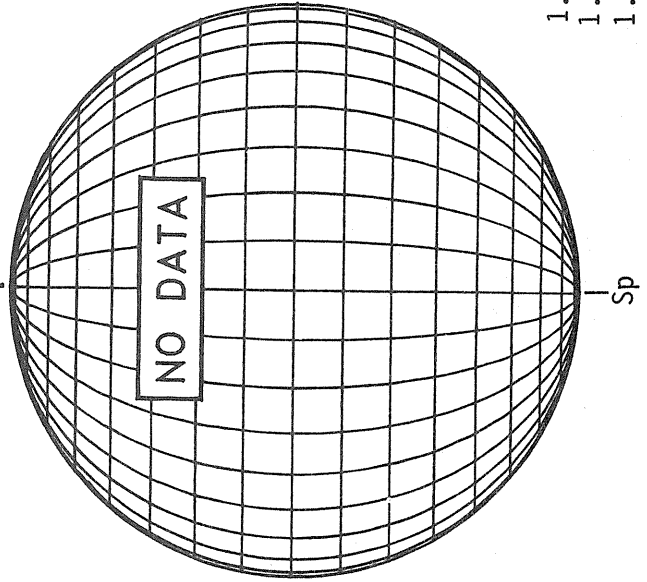
MT. WILSON MAGNETOGRAM



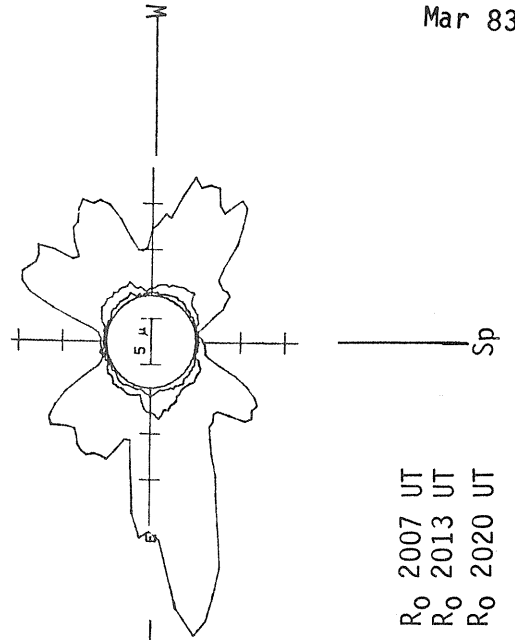
SACRAMENTO PEAK H-ALPHA



BOULDER SUNSPOTS



SACRAMENTO PEAK CORONA (5303 Angstrom)

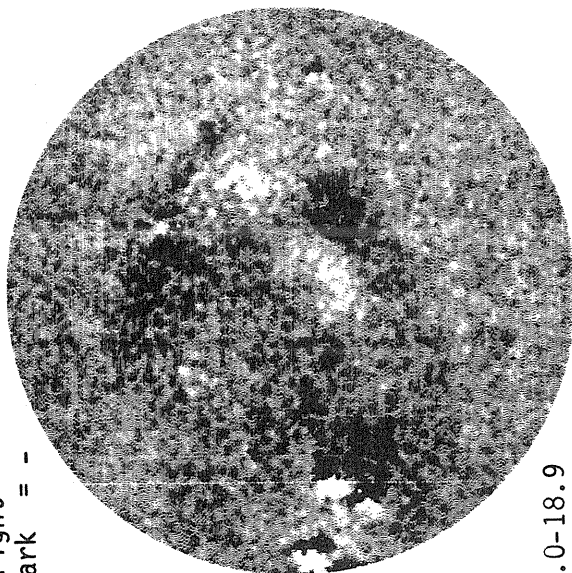


MARCH 15, 1983 (P=-24.37, B₀=-7.17, L₀= 357.95)

MT. WILSON MAGNETOGRAM

Np

Bright= +
Dark = -

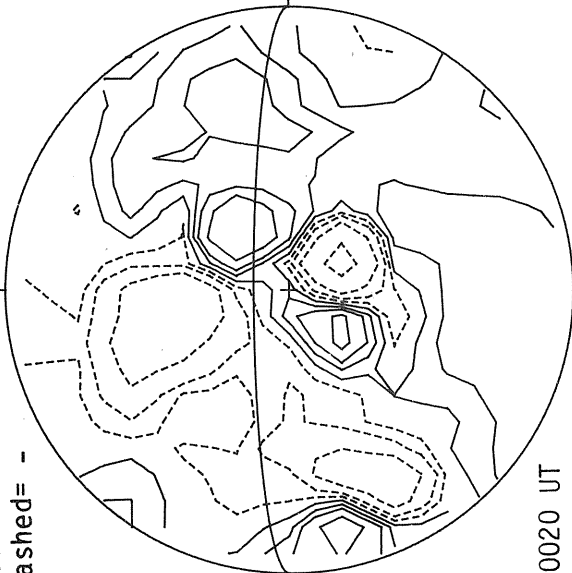


18.0-18.9

STANFORD MAGNETOGRAM

Np

Solid = +
Dashed = -

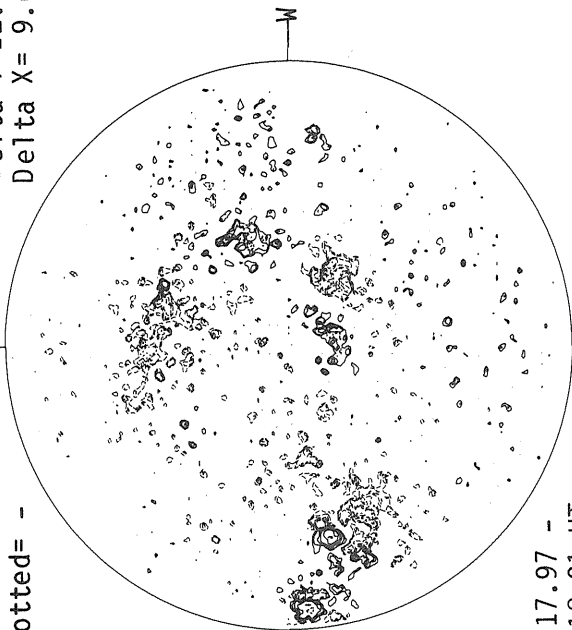


0020 UT

MT. WILSON MAGNETOGRAM

Np

Solid = +
Dotted = -



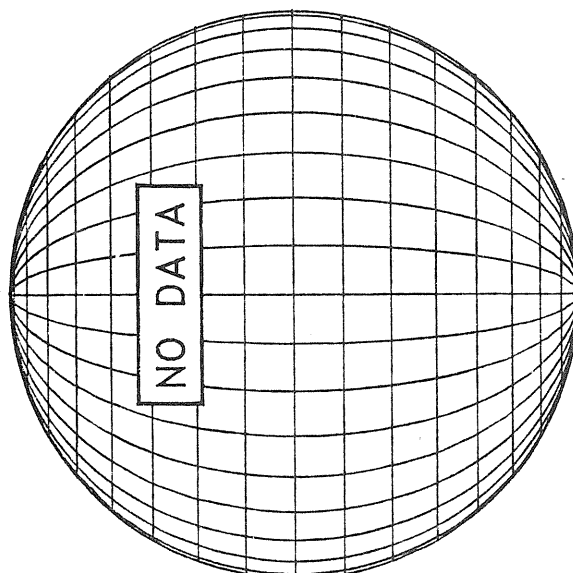
17.97 -
18.91 UT

Delta Y=12.7
Delta X= 9.6

E

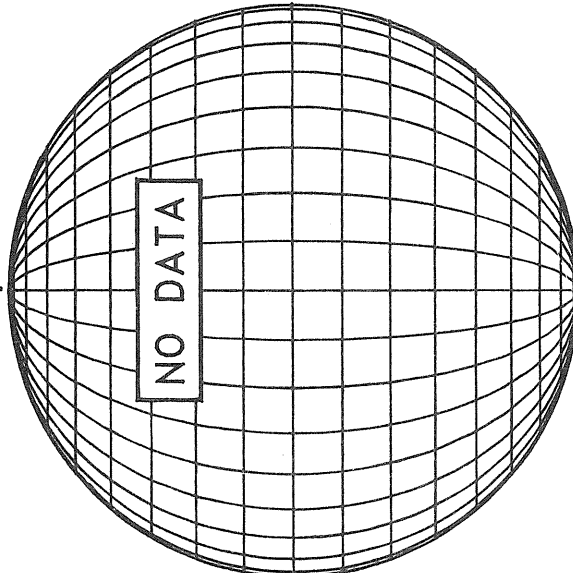
SACRAMENTO PEAK H-ALPHA

E



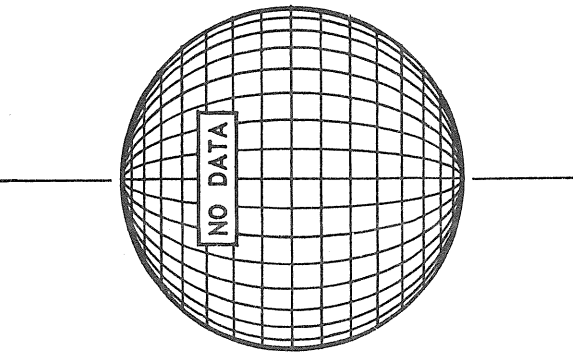
BOULDER SUNSPOTS

Sp



SACRAMENTO PEAK CORONA (5303 Angstrom)

Sp

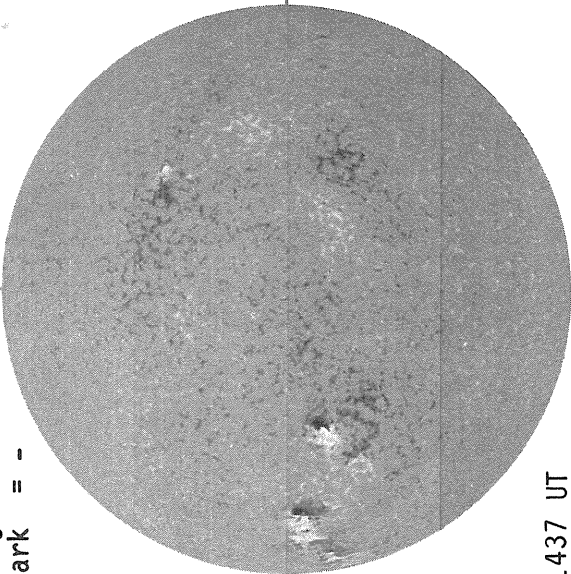


M A R C H 16 1983 (P=-24.54, B₀=-7.15, L₀= 344.77)

KITT PEAK MAGNETOGRAM

Np

Bright = +
Dark = -

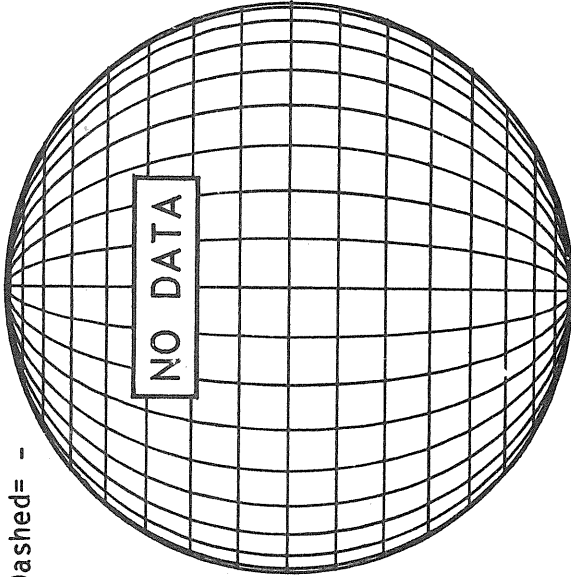


1437 UT

STANFORD MAGNETOGRAM

Np

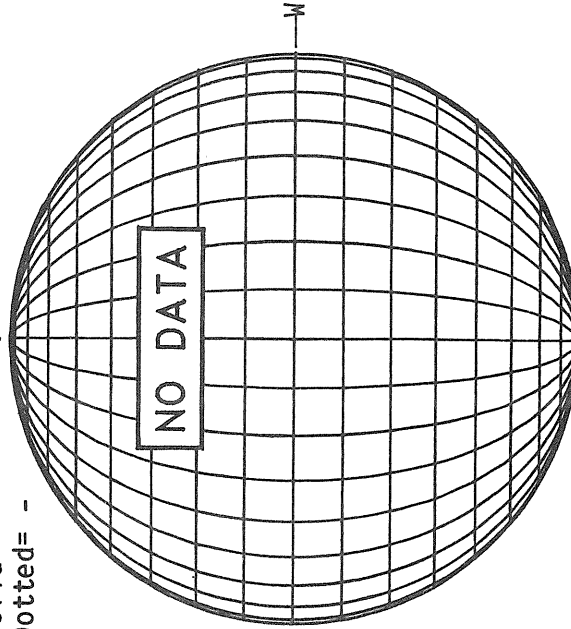
Solid = +
Dashed = -



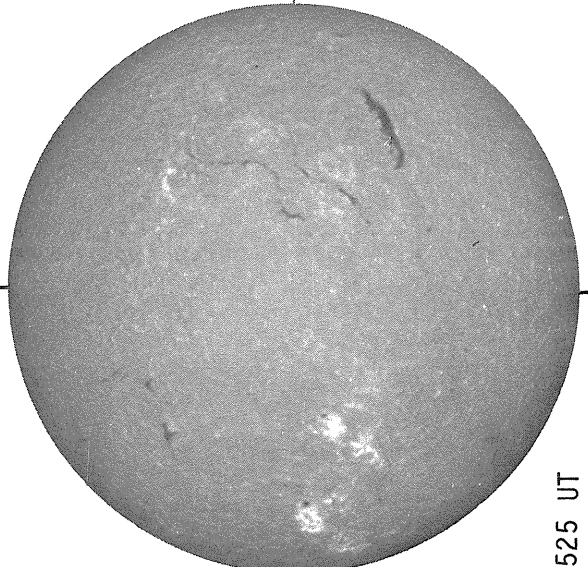
MT. WILSON MAGNETOGRAM

Np

Solid = +
Dotted = -

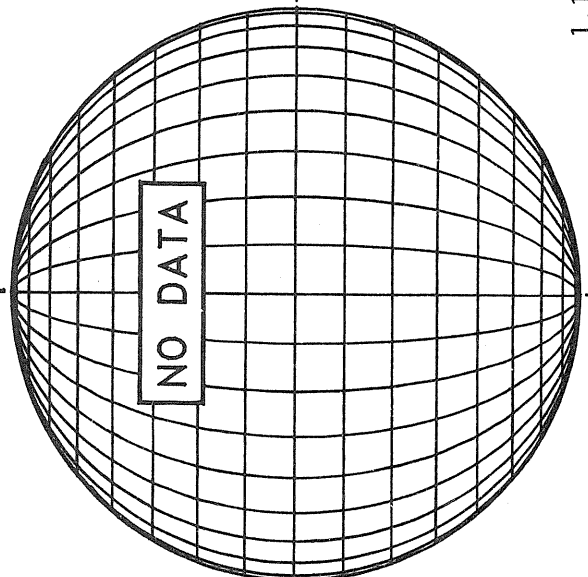


SACRAMENTO PEAK H-ALPHA

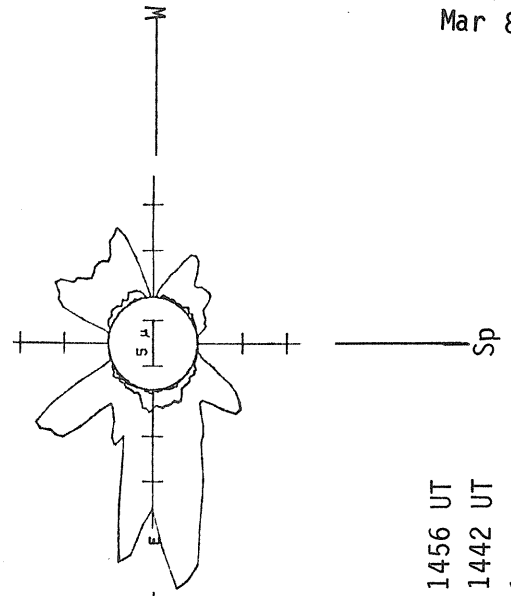


1525 UT

BOULDER SUNSPOTS



SACRAMENTO PEAK CORONA (5303 Angstrom)



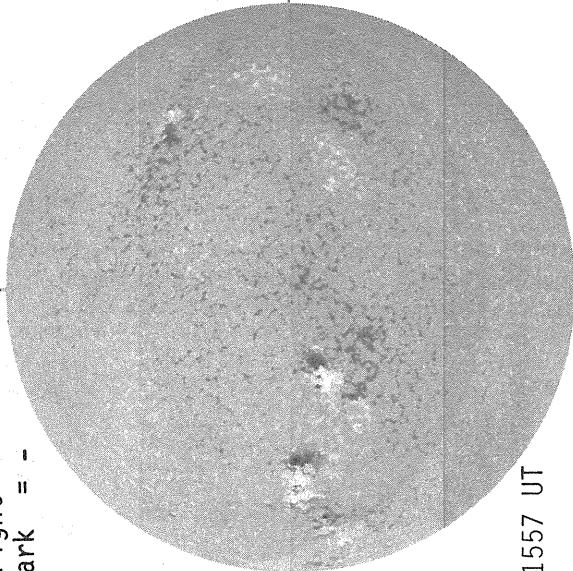
1.15 R₀ 1456 UT
1.35 R₀ 1442 UT
1.55 R₀ 1448 UT

MARCH 17, 1983 (P=-24.69, B₀=-7.13, L₀= 331.59)

KITT PEAK MAGNETOGRAM

Bright= +
Dark = -

Np

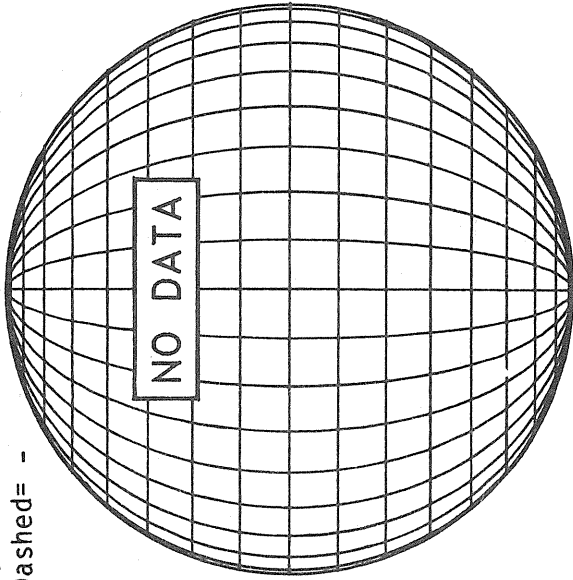


1557 UT

STANFORD MAGNETOGRAM

Solid = +
Dashed = -

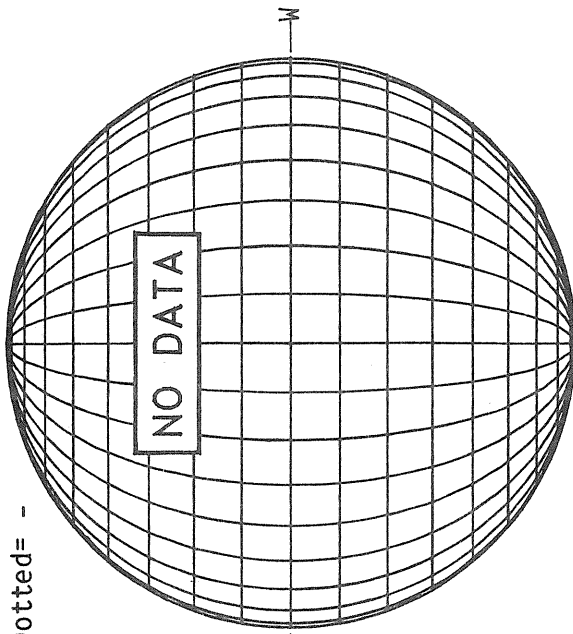
Np



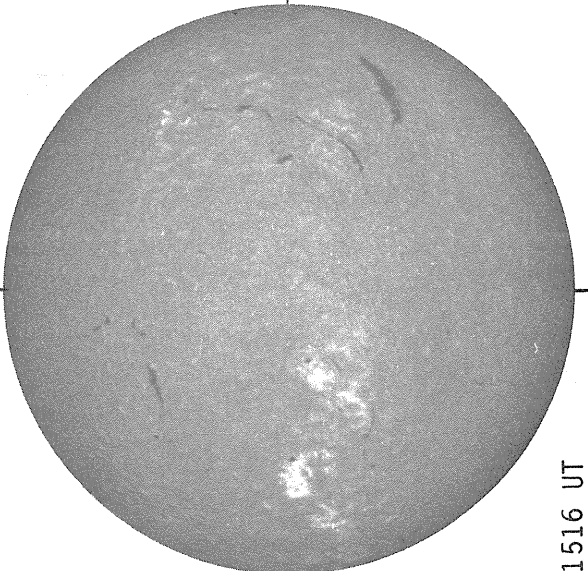
MT. WILSON MAGNETOGRAM

Solid = +
Dotted = -

Np

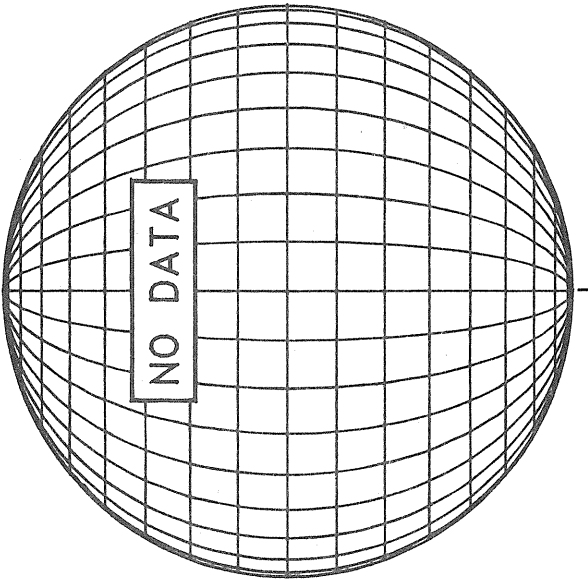


SACRAMENTO PEAK H-ALPHA

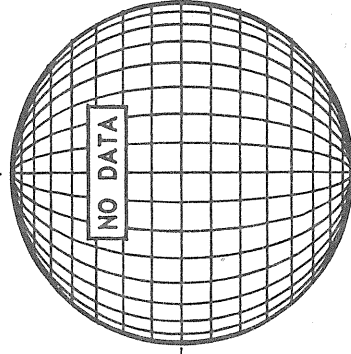


1516 UT

BOULDER SUNSPOTS



SACRAMENTO PEAK CORONA (5303 Angstrom)



NO DATA

NO DATA

NO DATA

N

N

E

E

Sp

Sp

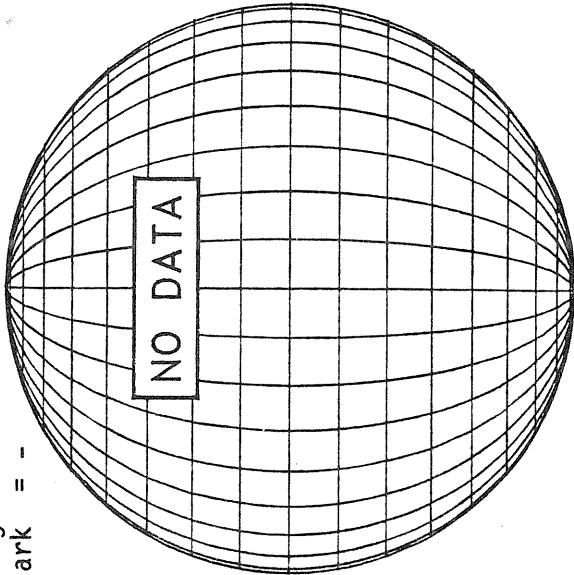
Sp

M A R C H 18, 1983 (P=-24.84, B₀=-7.11, L₀= 318.40)

KITT PEAK MAGNETOGRAM

Np

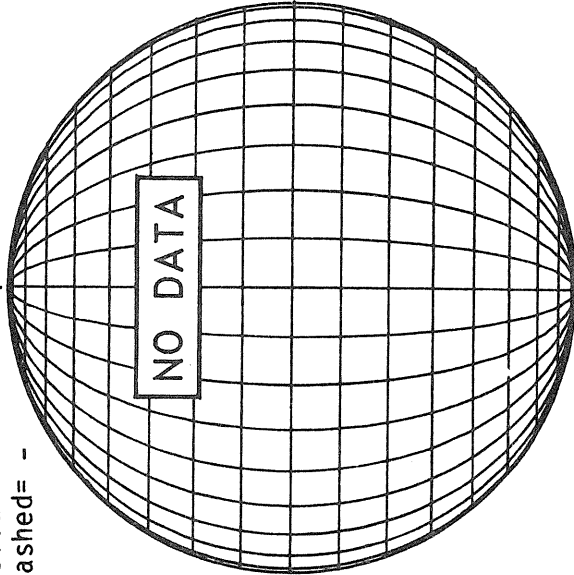
Bright= +
Dark = -



STANFORD MAGNETOGRAM

Np

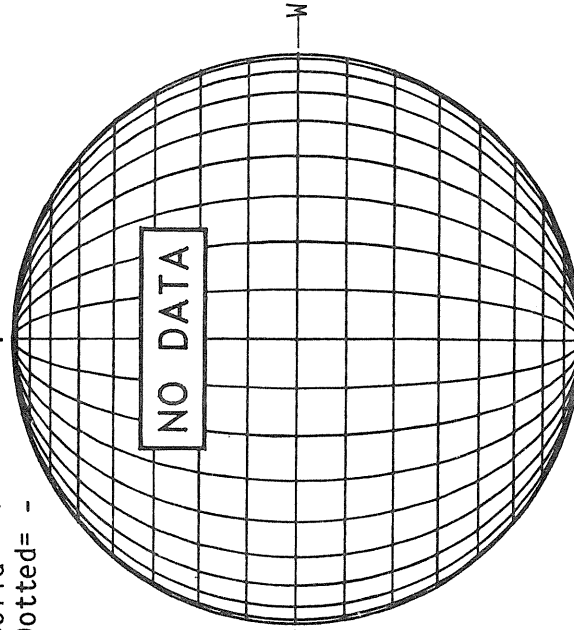
Solid = +
Dashed = -



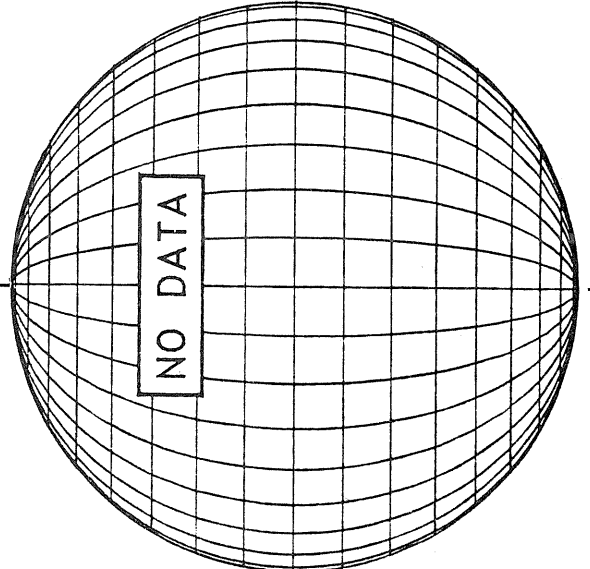
MT. WILSON MAGNETOGRAM

Np

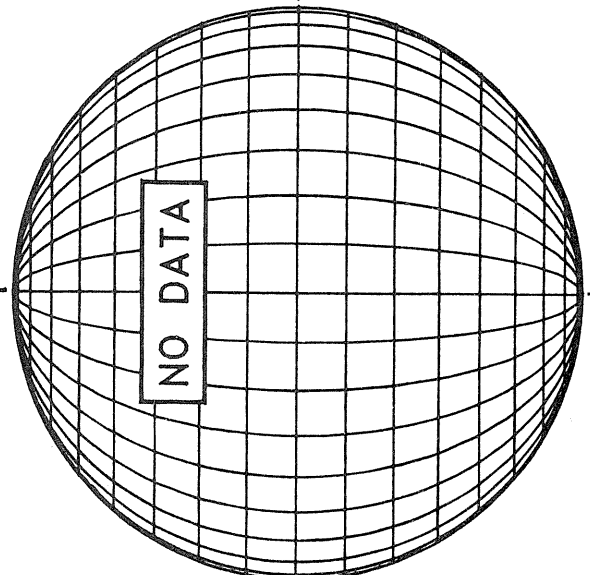
Solid = +
Dotted = -



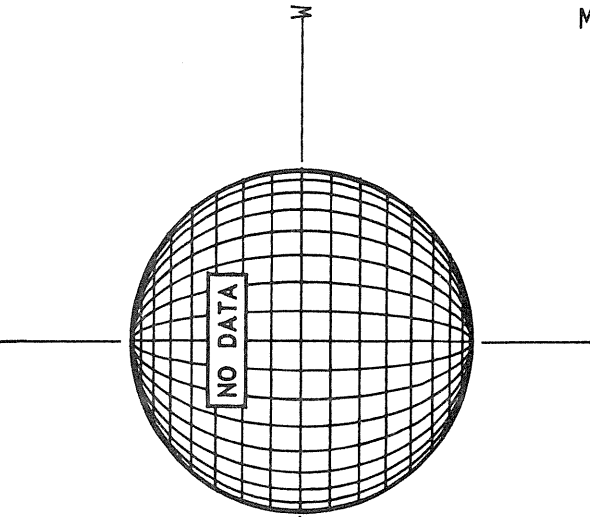
SACRAMENTO PEAK H-ALPHA



BOULDER SUNSPOTS



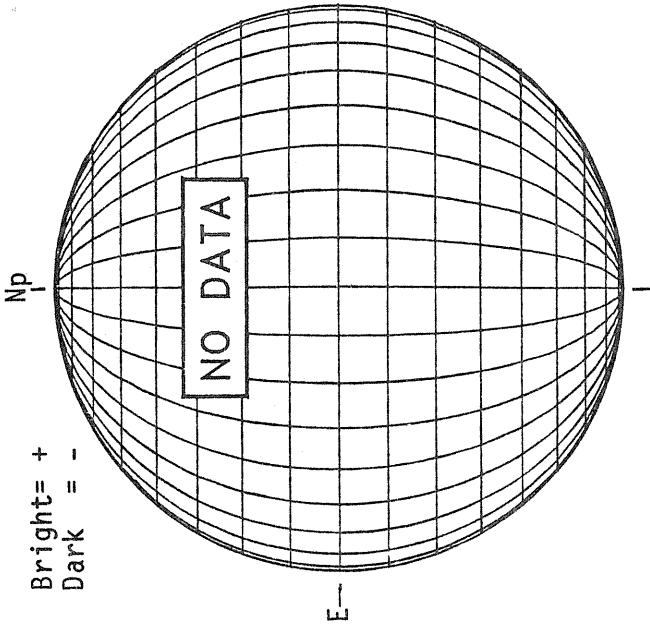
SACRAMENTO PEAK CORONA (5303 Angstrom)



MARCH 19, 1983 (P=-24.98, B₀=-7.08, L₀= 305.22)

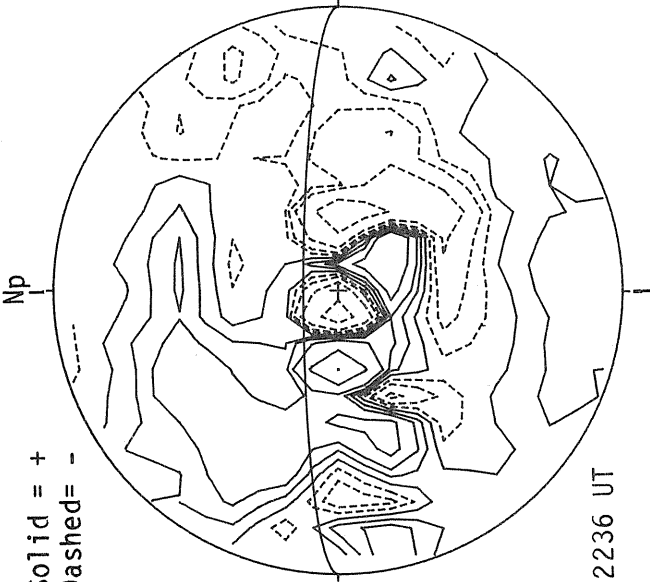
KITT PEAK MAGNETOGRAM

Bright= +
Dark = -



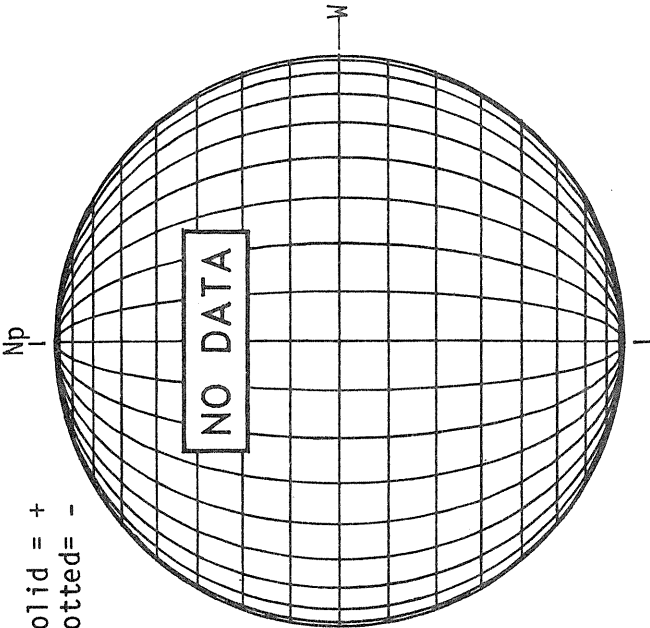
STANFORD MAGNETOGRAM

Solid = +
Dashed = -

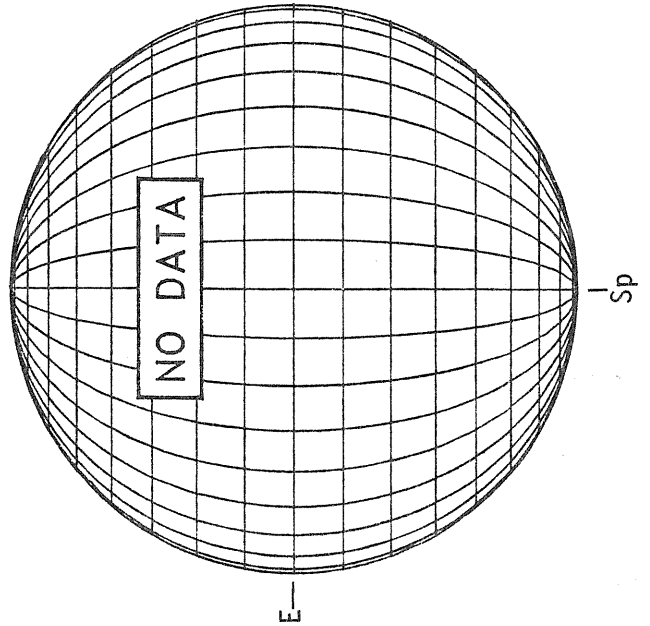


MT. WILSON MAGNETOGRAM

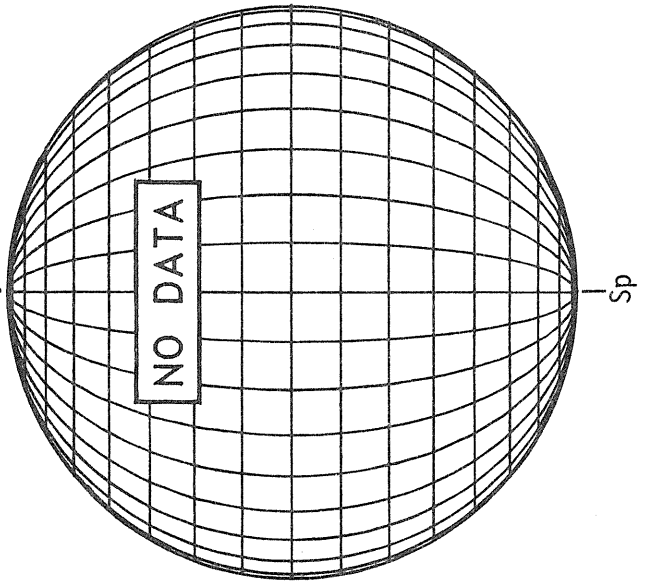
Solid = +
Dotted = -



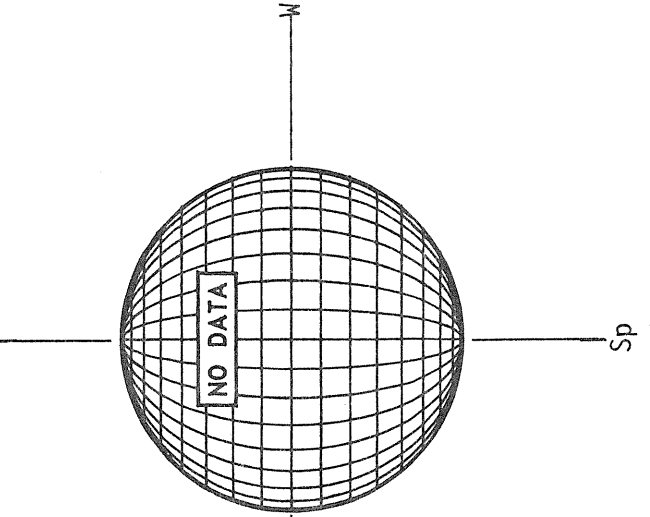
SACRAMENTO PEAK H-ALPHA



BOULDER SUNSPOTS

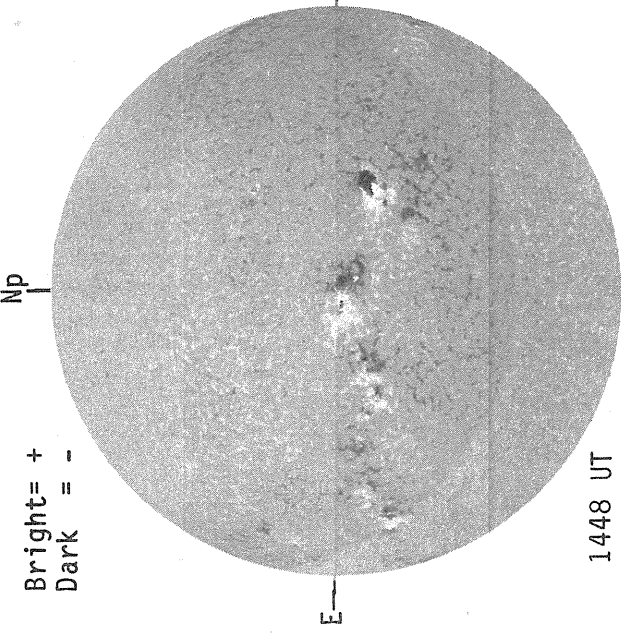


SACRAMENTO PEAK CORONA (5303 Angstrom)



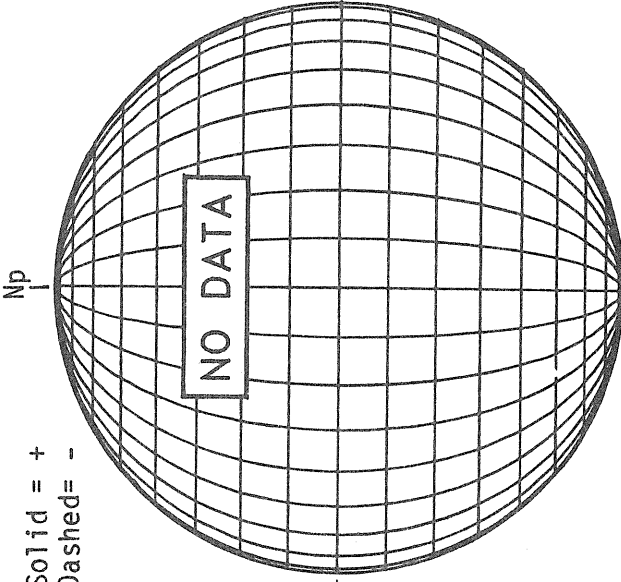
M A R C H 20, 1 9 8 3 (P=-25.11, B₀=-7.05, L₀= 292.04)

KITT PEAK MAGNETOGRAM



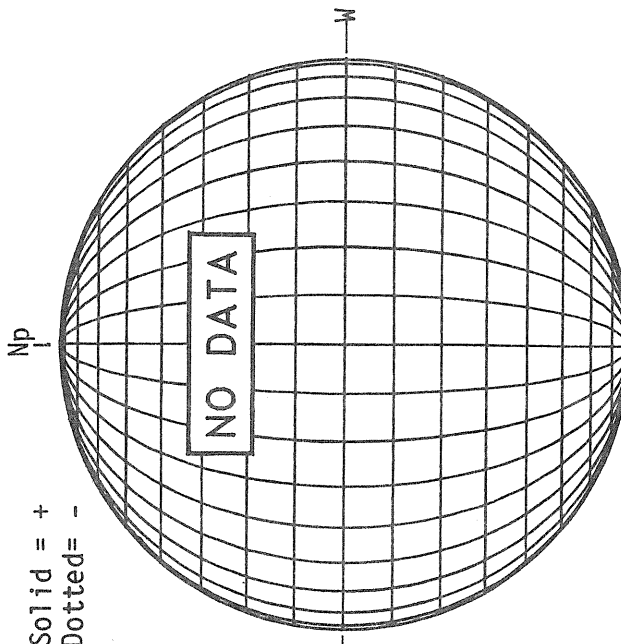
Bright= +
Dark = -

STANFORD MAGNETOGRAM



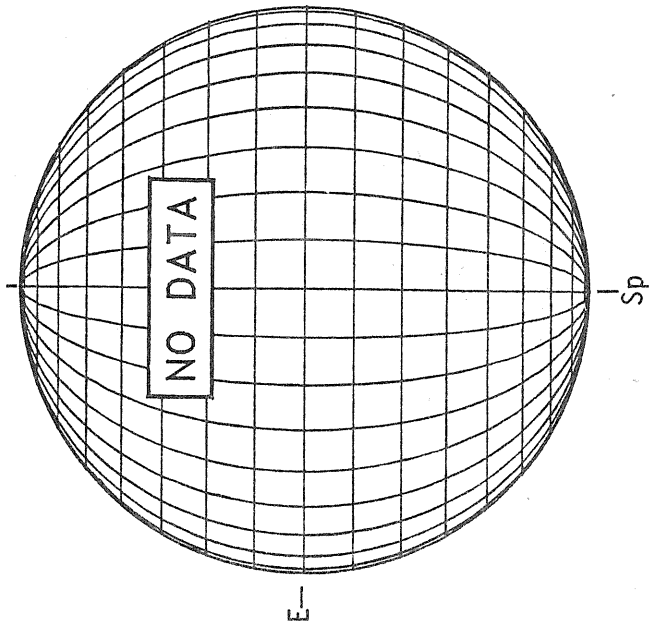
Solid = +
Dashed = -

MT. WILSON MAGNETOGRAM

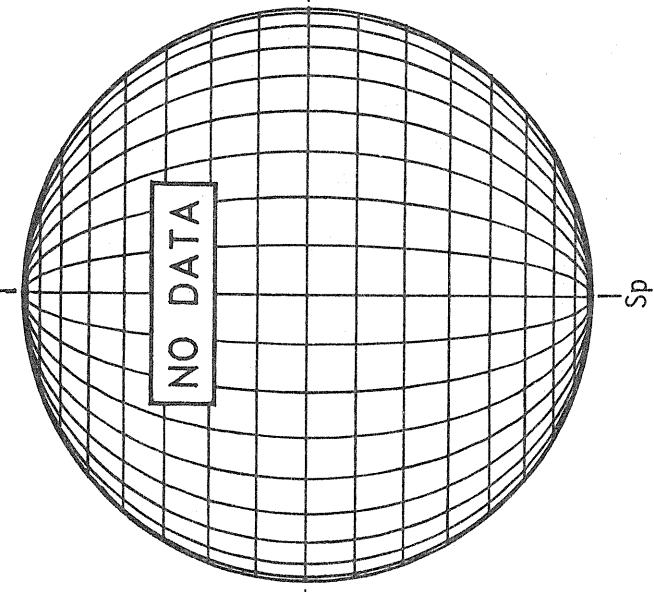


Solid = +
Dotted = -

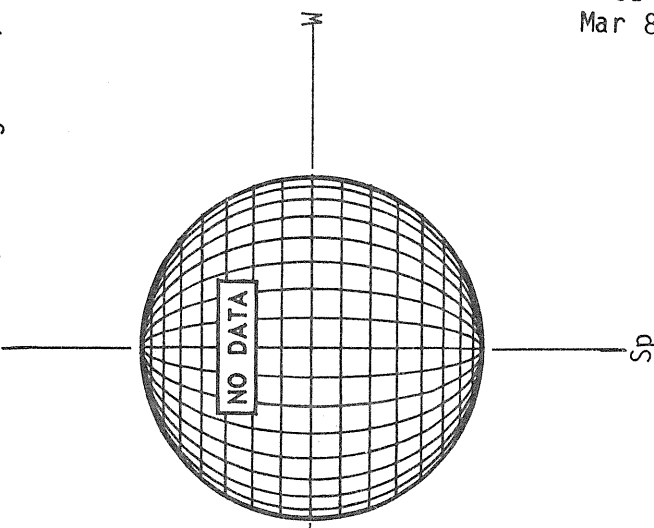
SACRAMENTO PEAK H-ALPHA



BOULDER SUNSPOTS



SACRAMENTO PEAK CORONA (5303 Angstrom)

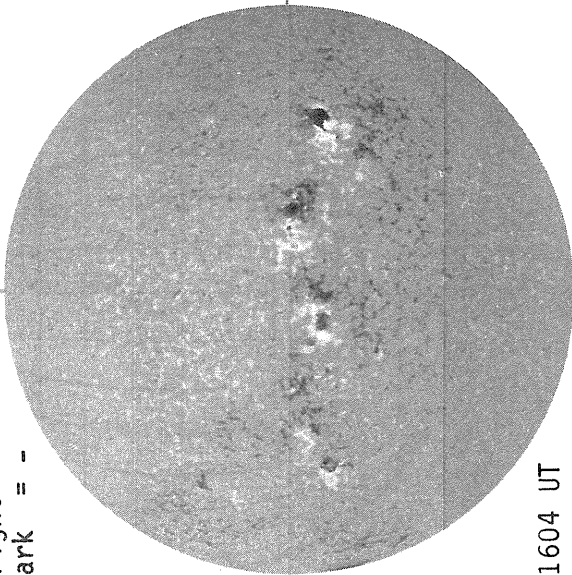


M A R C H 21, 1 9 8 3 (P=-25.24, B₀=-7.02, L₀= 278.86)

KITT PEAK MAGNETOGRAM

Bright = +
Dark = -

Np

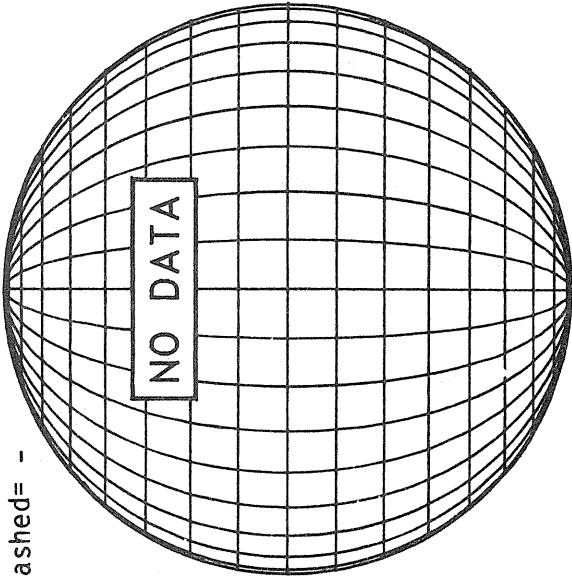


1604 UT

STANFORD MAGNETOGRAM

Solid = +
Dashed = -

Np

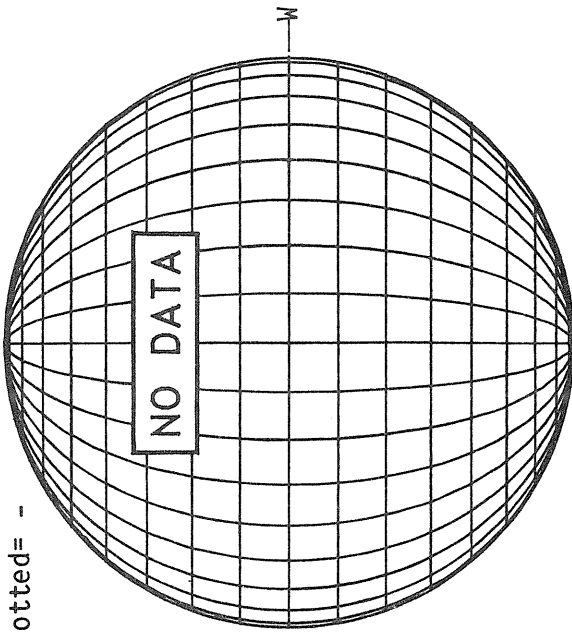


NO DATA

MT. WILSON MAGNETOGRAM

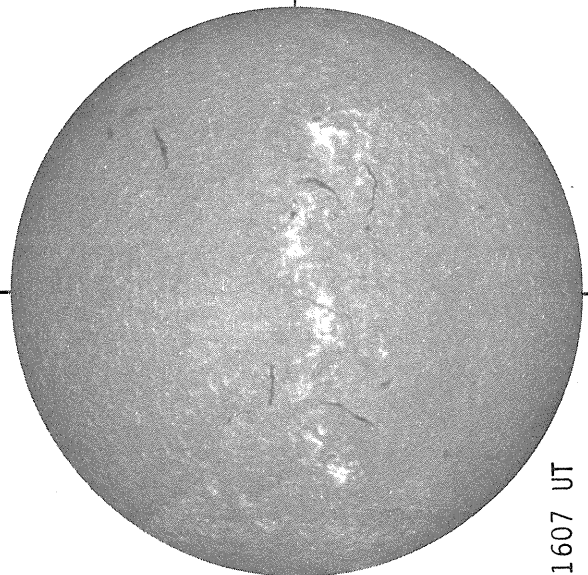
Solid = +
Dotted = -

Np



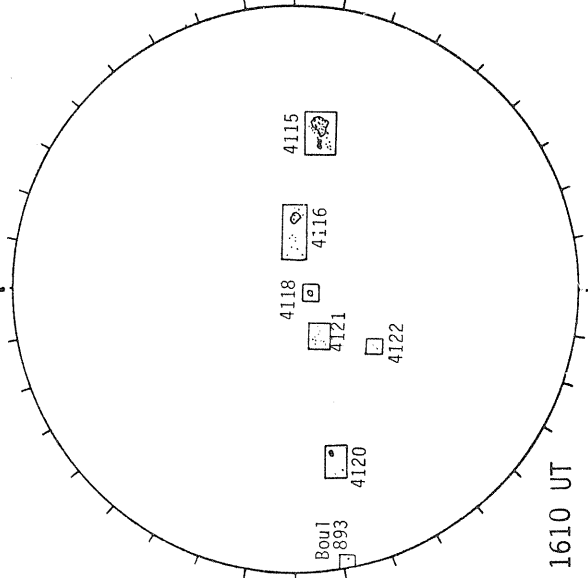
NO DATA

SACRAMENTO PEAK H-ALPHA



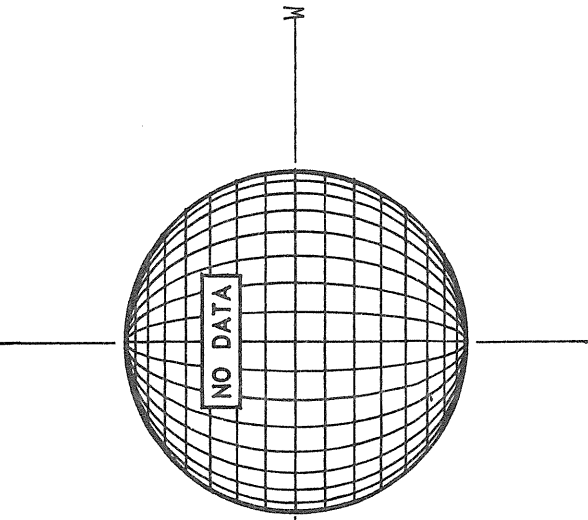
1607 UT

BOULDER SUNSPOTS



1610 UT

SACRAMENTO PEAK CORONA (5303 Angstrom)



NO DATA

Np

Np

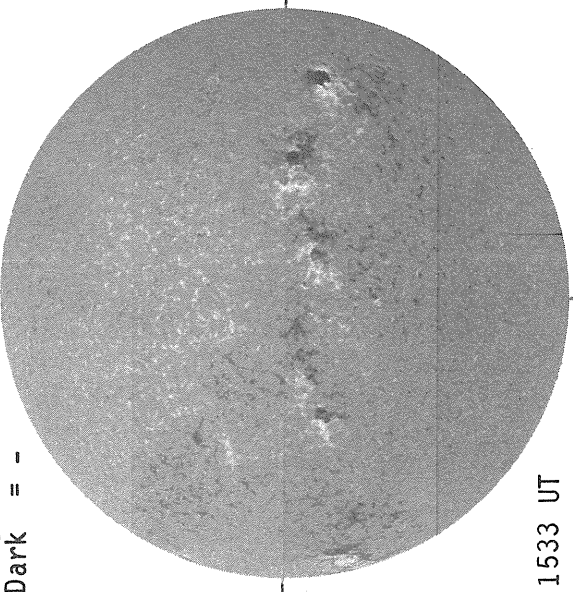
Np

M A R C H 22, 1 9 8 3 (P=-25.36, B₀=-6.99, L₀= 265.67)

KITT PEAK MAGNETOGRAM

Np

Bright= +
Dark = -

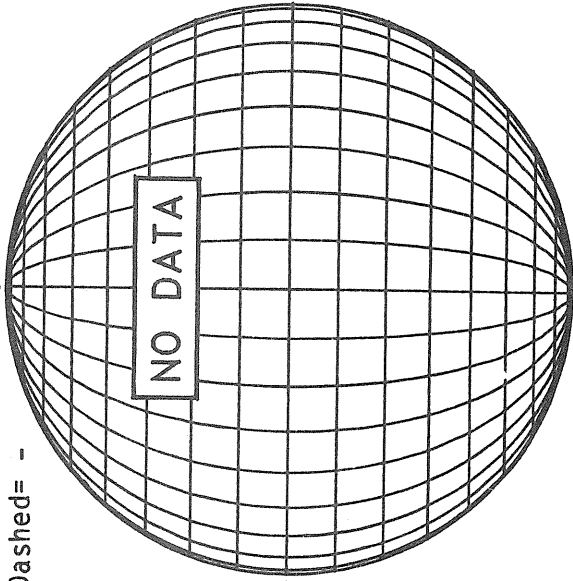


1533 UT

STANFORD MAGNETOGRAM

Np

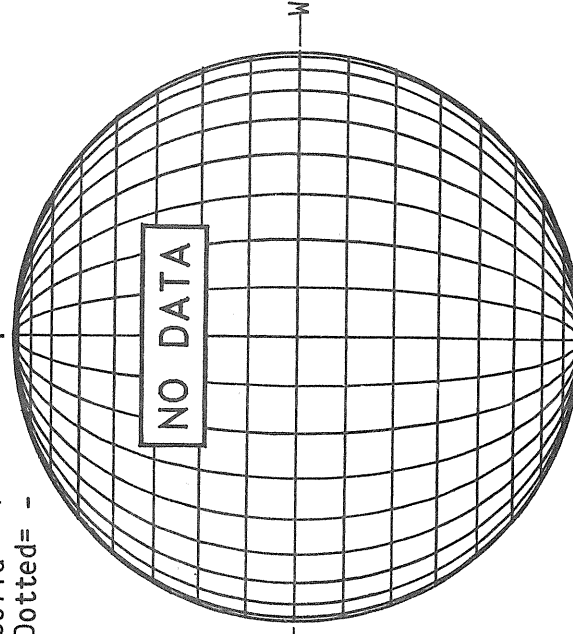
Solid = +
Dashed = -



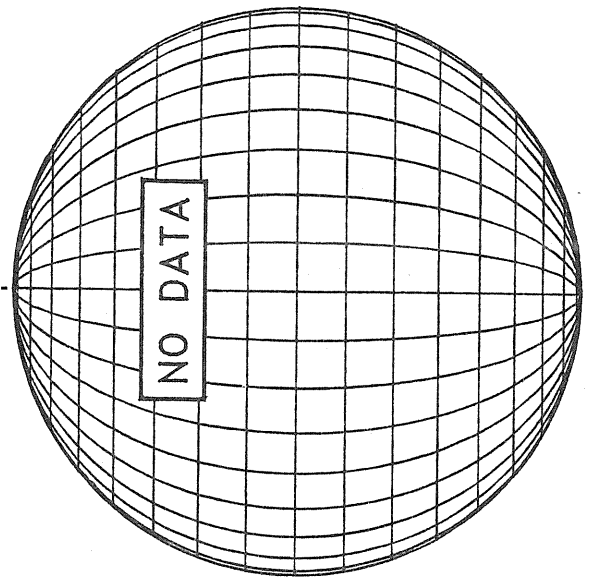
MT. WILSON MAGNETOGRAM

Np

Solid = +
Dotted = -

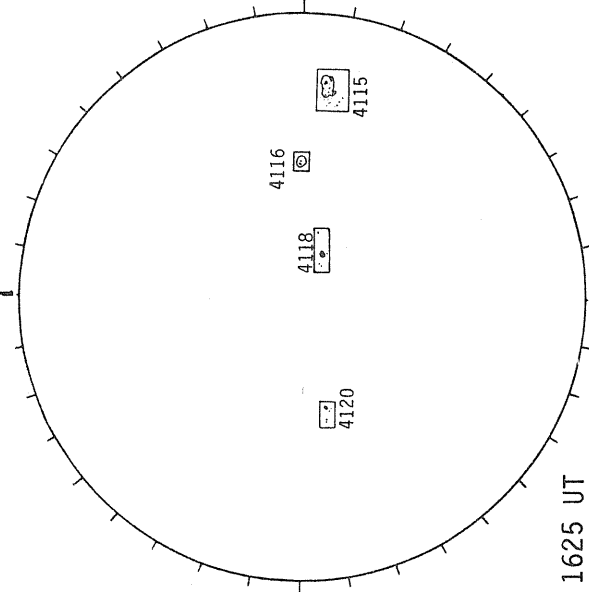


SACRAMENTO PEAK H-ALPHA



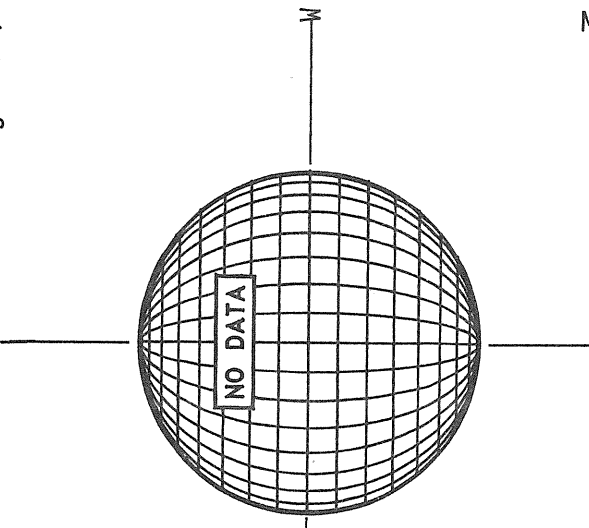
E

BOULDER SUNSPOTS



1625 UT

SACRAMENTO PEAK CORONA (5303 Angstrom)



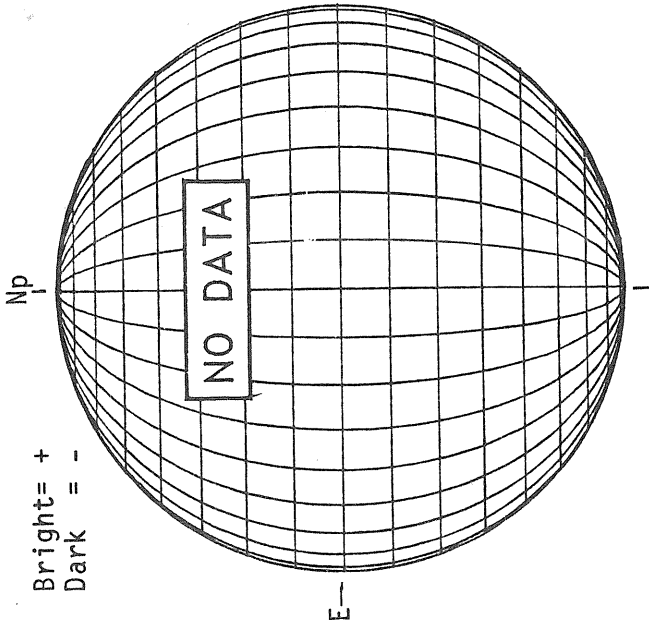
Sp

Sp

Sp

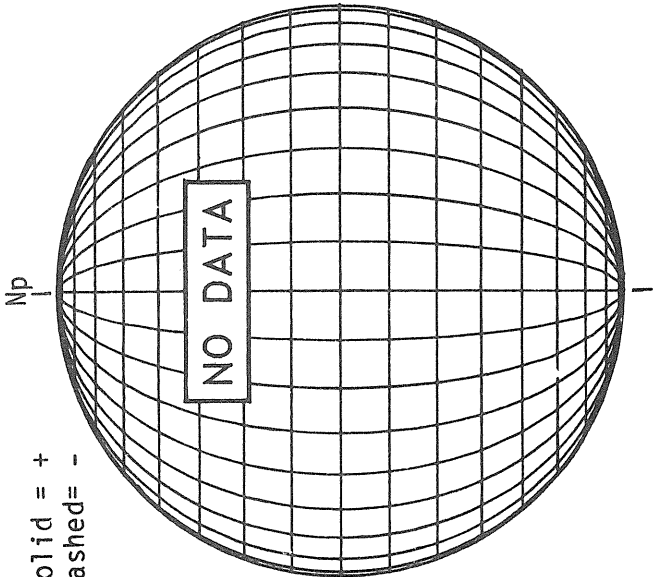
MARCH 23, 1983 (P=-25.47, B₀=-6.96, L₀=252.49)

KITT PEAK MAGNETOGRAM



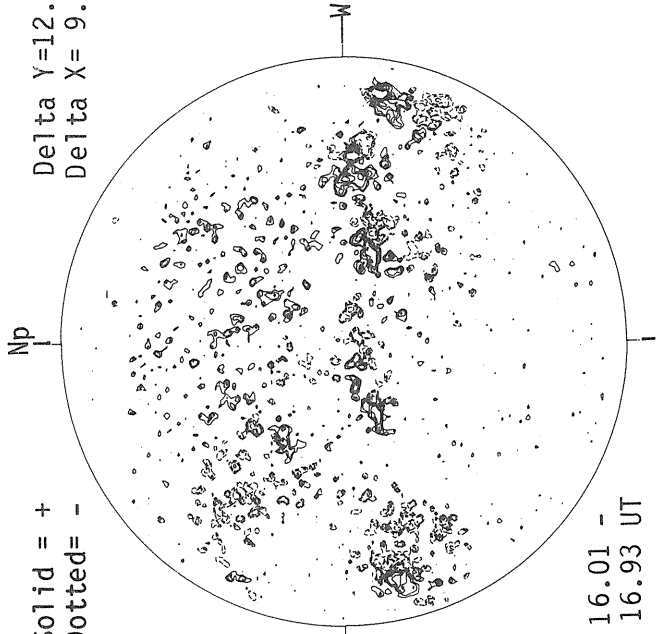
Bright = +
Dark = -

STANFORD MAGNETOGRAM



Solid = +
Dashed = -

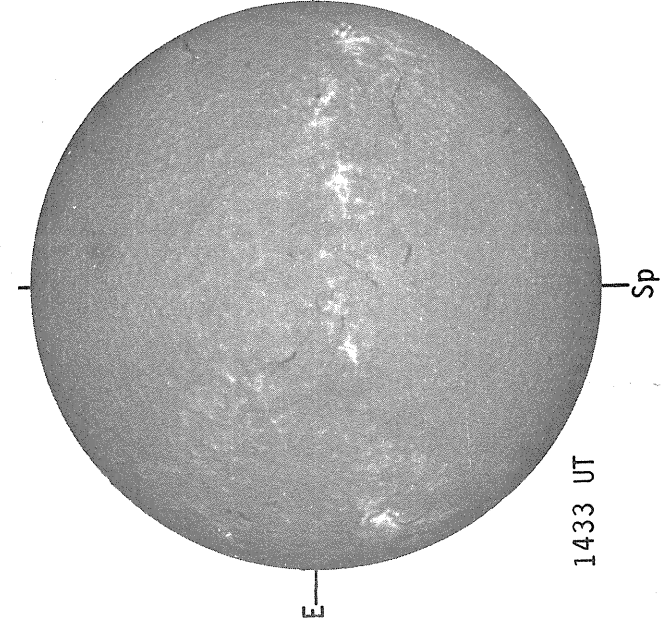
MT. WILSON MAGNETOGRAM



Solid = +
Dotted = -

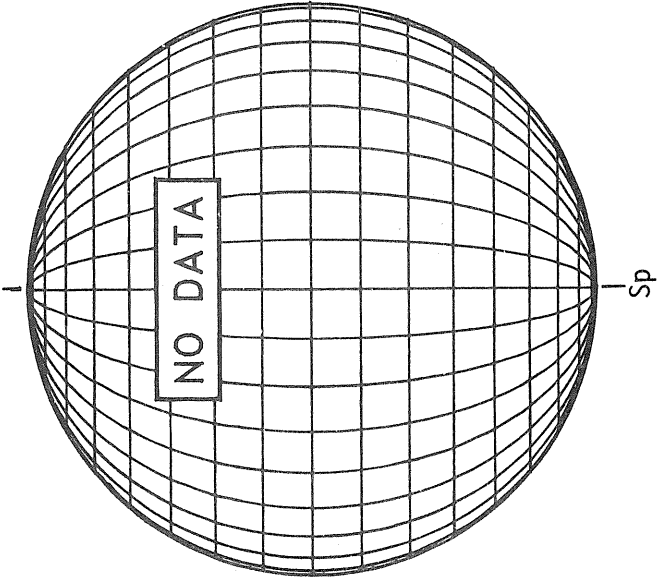
Delta Y = 12.7
Delta X = 9.6

SACRAMENTO PEAK H-ALPHA

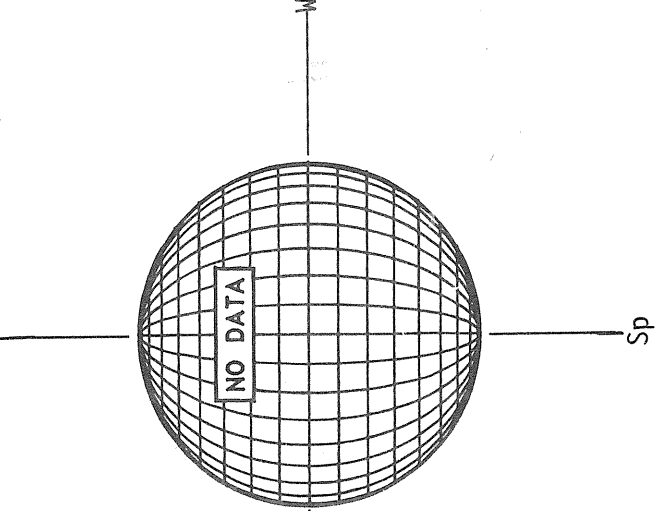


1433 UT

BOULDER SUNSPOTS



SACRAMENTO PEAK CORONA (5303 Angstrom)

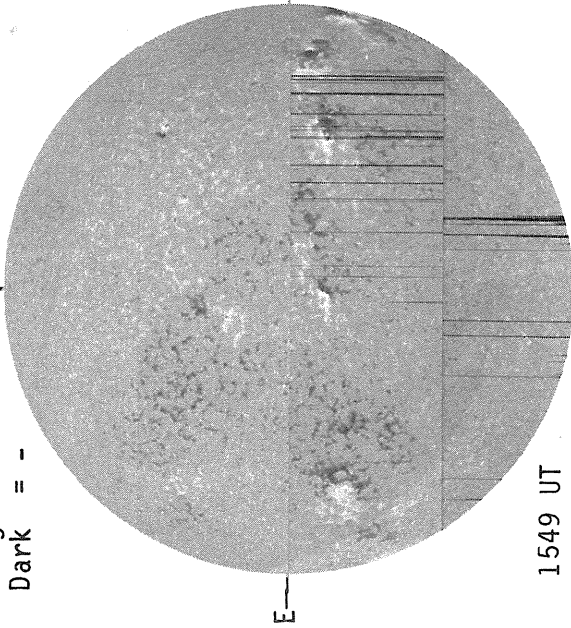


MARCH 24, 1983 (P=-25.58, B₀=-6.92, L₀= 239.30)

KITT PEAK MAGNETOGRAM

Np

Bright= +
Dark = -

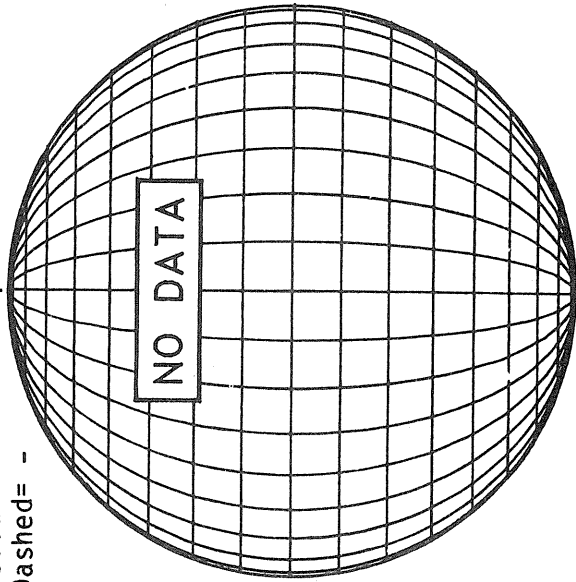


1549 UT

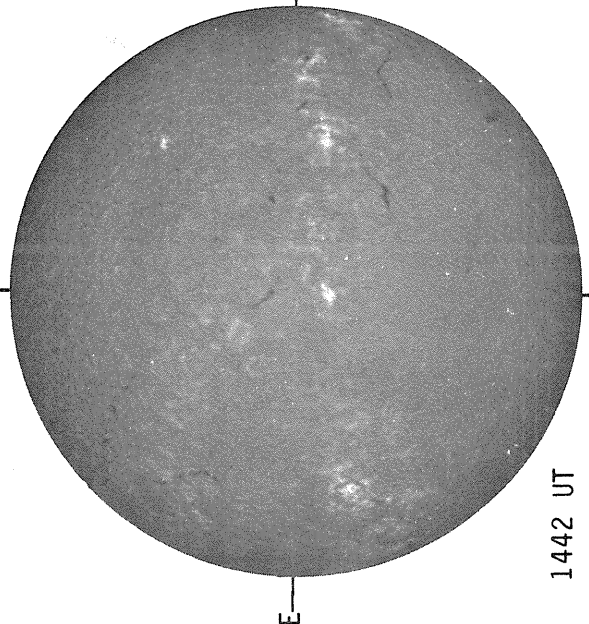
STANFORD MAGNETOGRAM

Np

Solid = +
Dashed = -



SACRAMENTO PEAK H-ALPHA

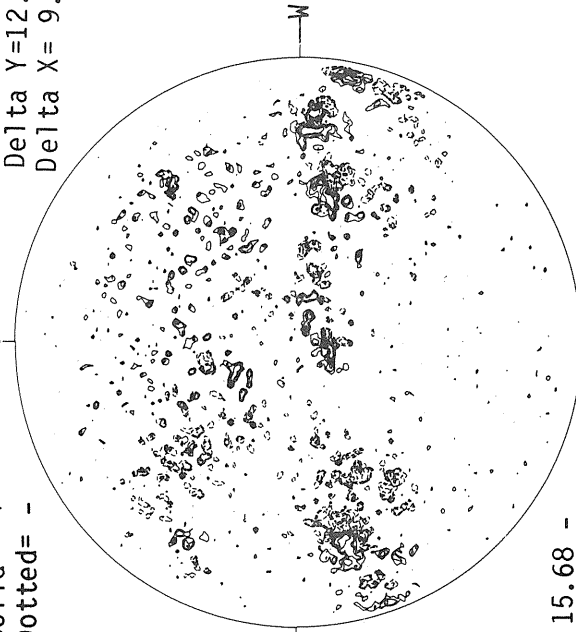


1442 UT

MT. WILSON MAGNETOGRAM

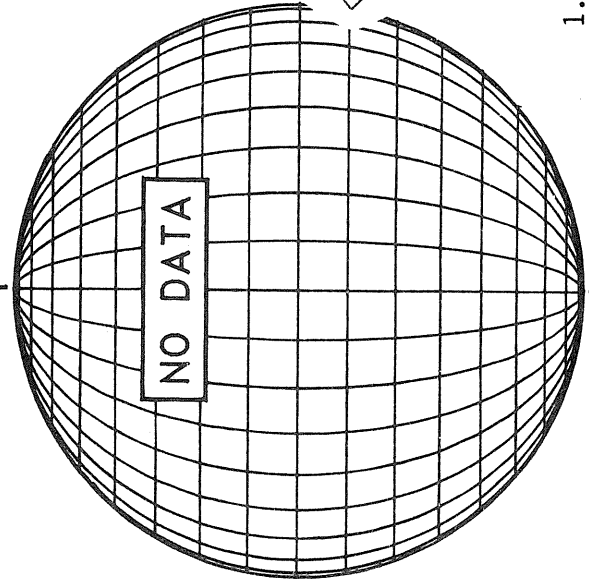
Np

Solid = +
Dotted = -

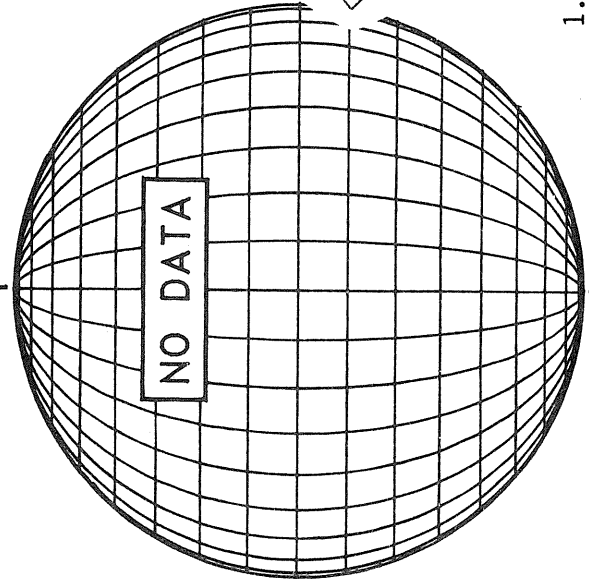


15.68 -
16.66 UT

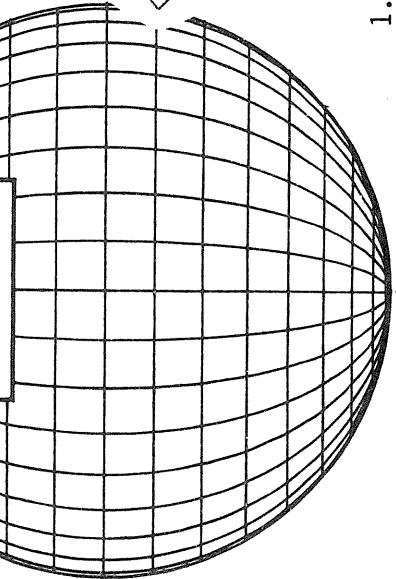
SACRAMENTO PEAK CORONA (5303 Angstrom)



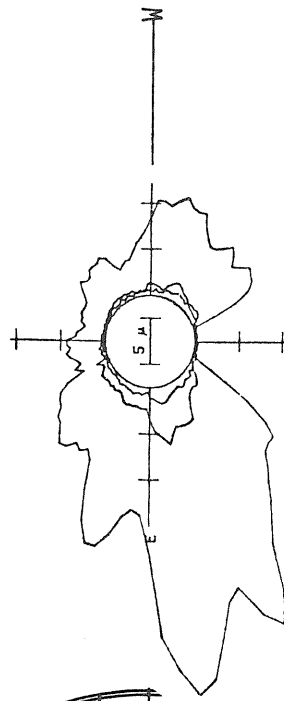
BOULDER SUNSPOTS



NO DATA



Sp

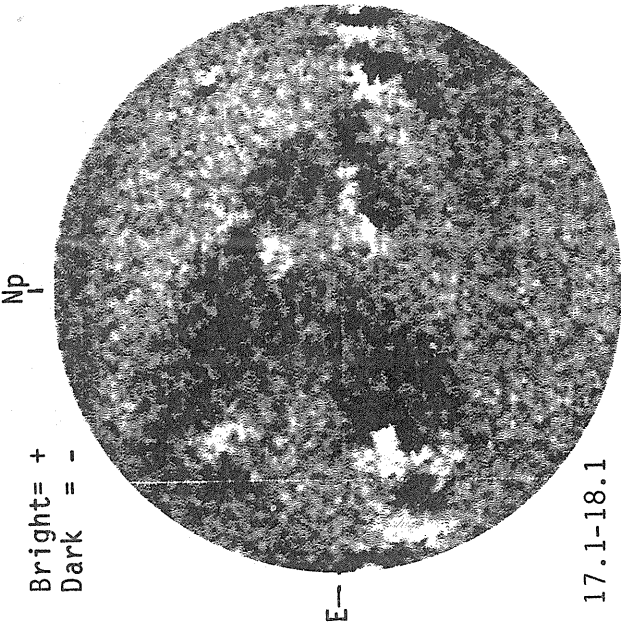


Sp

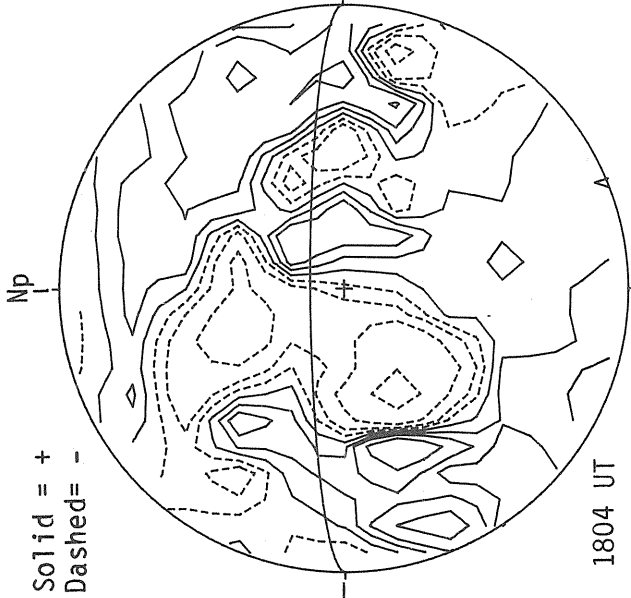
1.15 R₀ 1757 UT
1.35 R₀ 1743 UT
1.55 R₀ 1750 UT

M A R C H 25, 1 9 8 3 (P=-25.68, B₀=-6.88, L₀= 226.11)

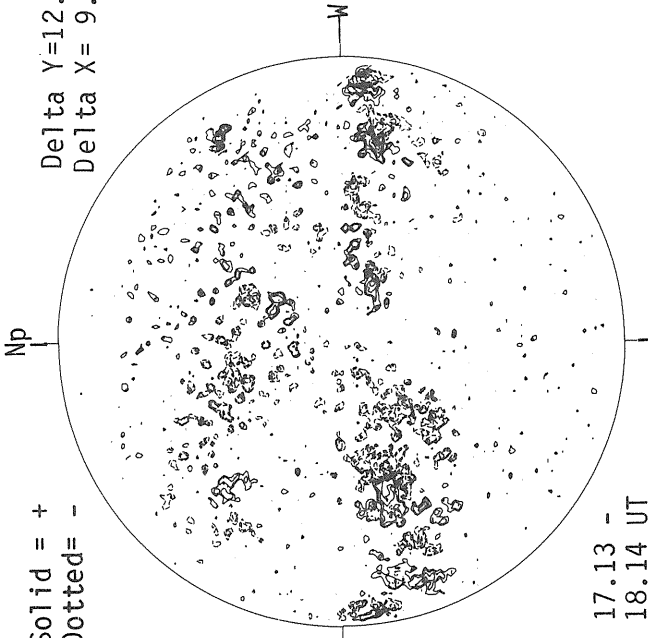
MT. WILSON MAGNETOGRAM



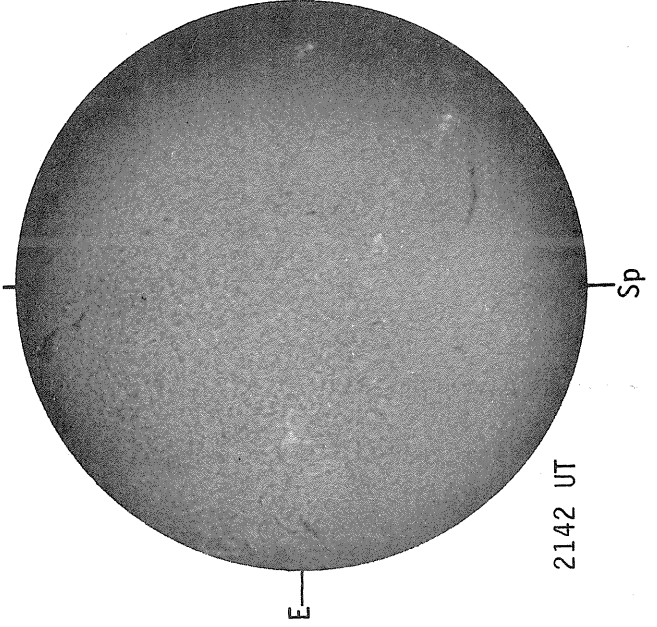
STANFORD MAGNETOGRAM



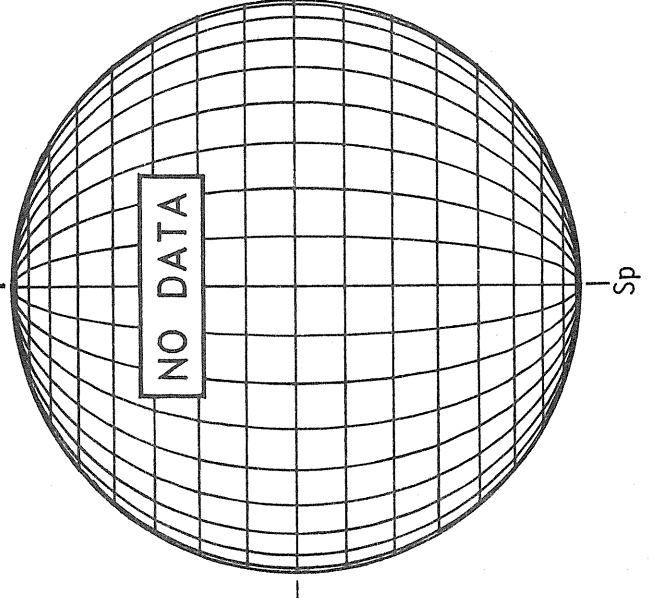
MT. WILSON MAGNETOGRAM



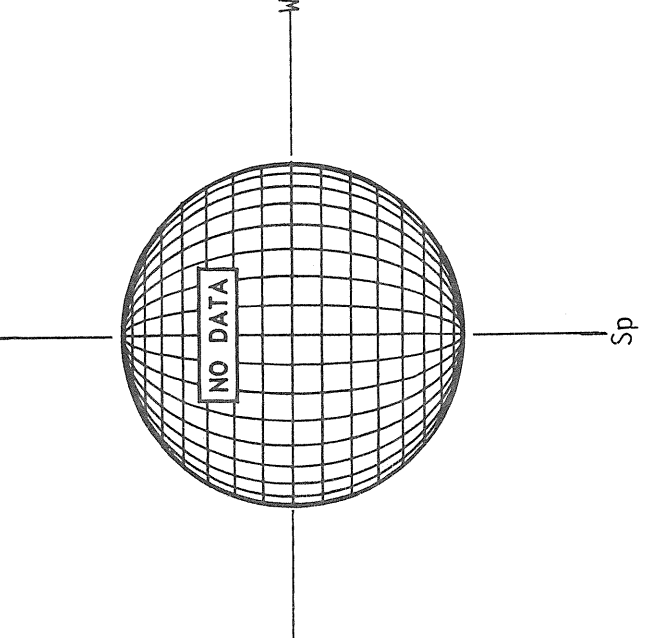
SAN FERNANDO H-ALPHA



BOULDER SUNSPOTS



SACRAMENTO PEAK CORONA (5303 Angstrom)

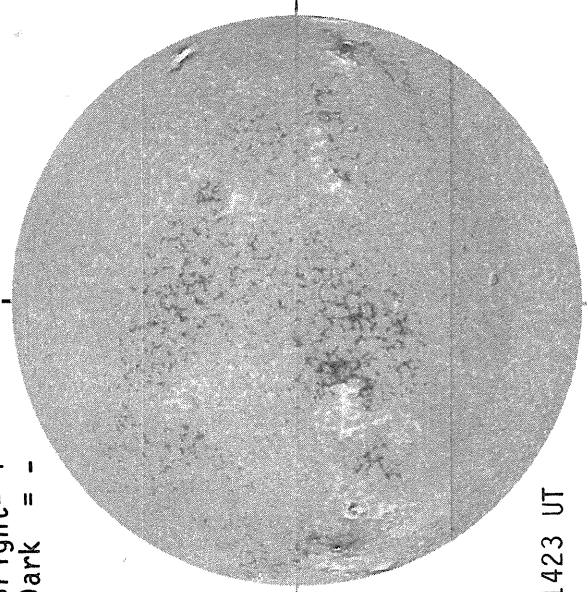


M A R C H 26, 1 9 8 3 (P=-25.77, B₀=-6.84, L₀= 212.93)

KITT PEAK MAGNETOGRAM

Np

Bright= +
Dark = -

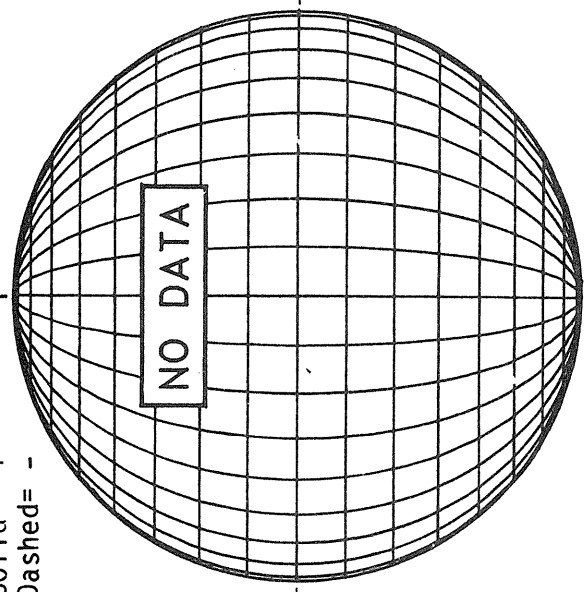


1423 UT

STANFORD MAGNETOGRAM

Np

Solid = +
Dashed = -

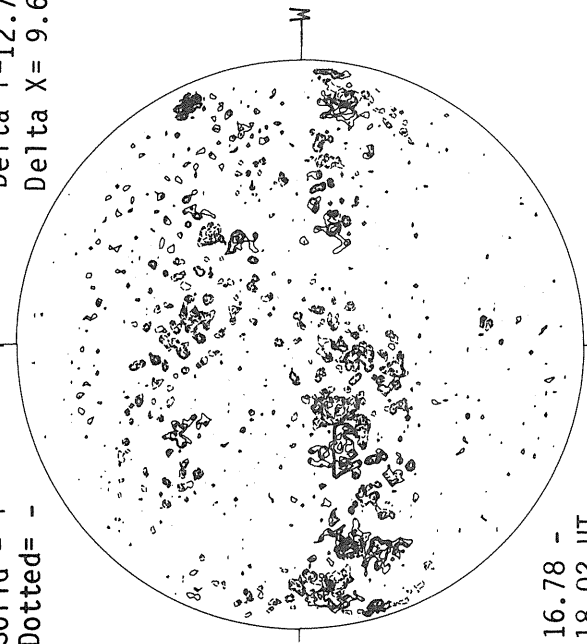


MT. WILSON MAGNETOGRAM

Np

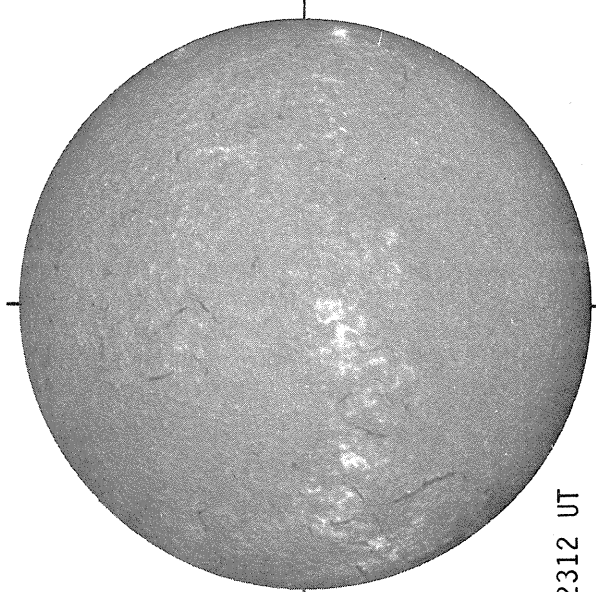
Solid = +
Dotted = -

Delta Y=12.7
Delta X= 9.6



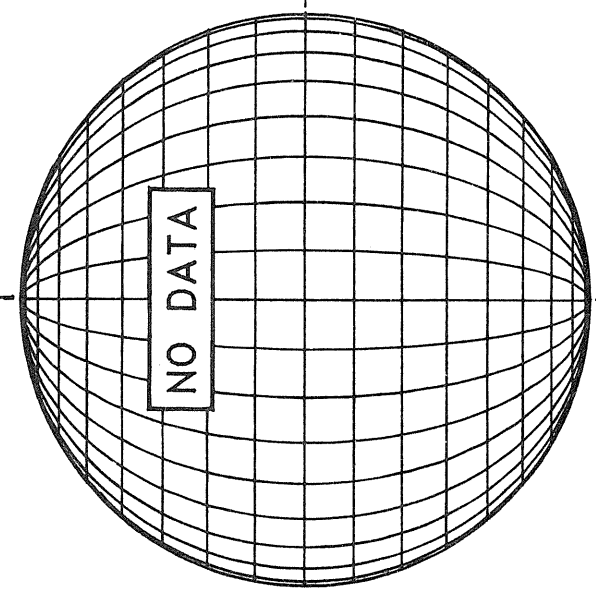
16.78 -
18.02 UT

SAN FERNANDO H-ALPHA

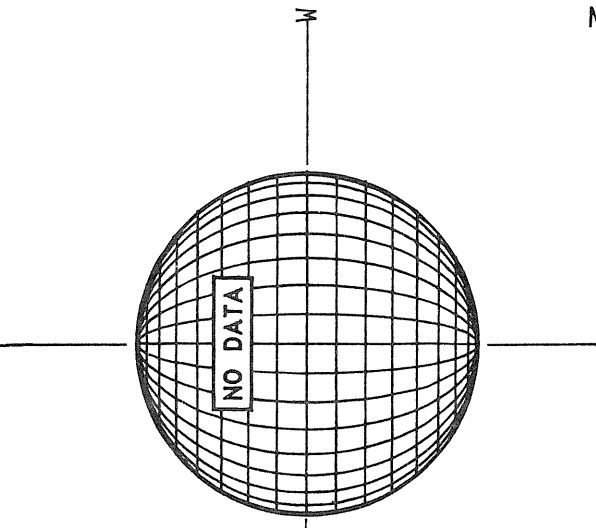


2312 UT

BOULDER SUNSPOTS

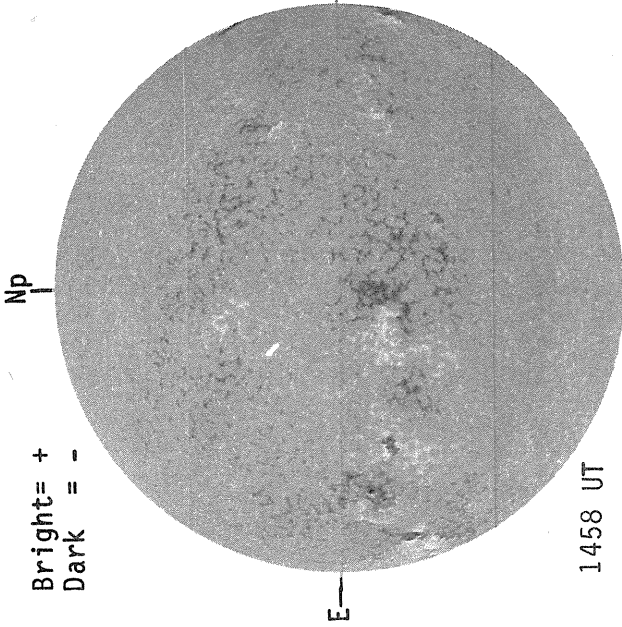


SACRAMENTO PEAK CORONA (5303 Angstrom)

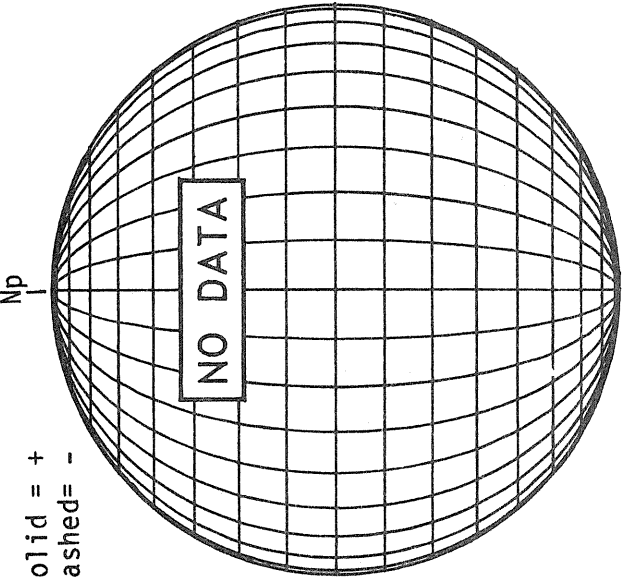


MARCH 27, 1983 (P=-25.86, B₀=-6.80, L₀=199.74)

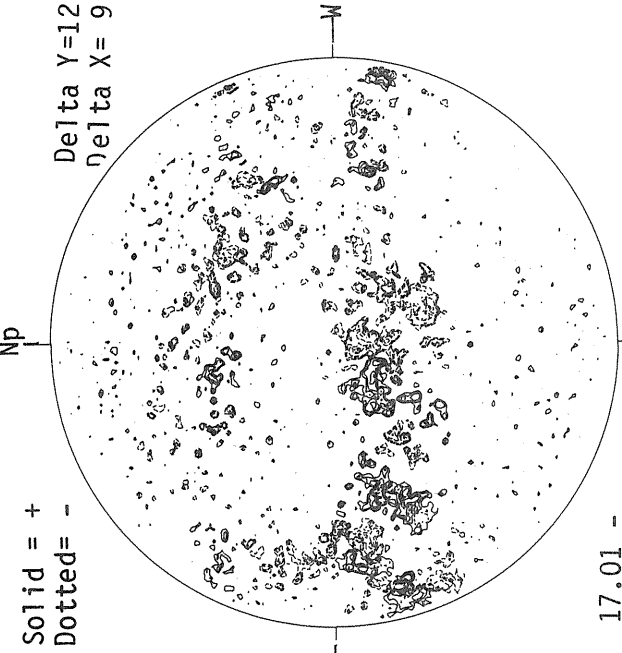
KITT PEAK MAGNETOGRAM



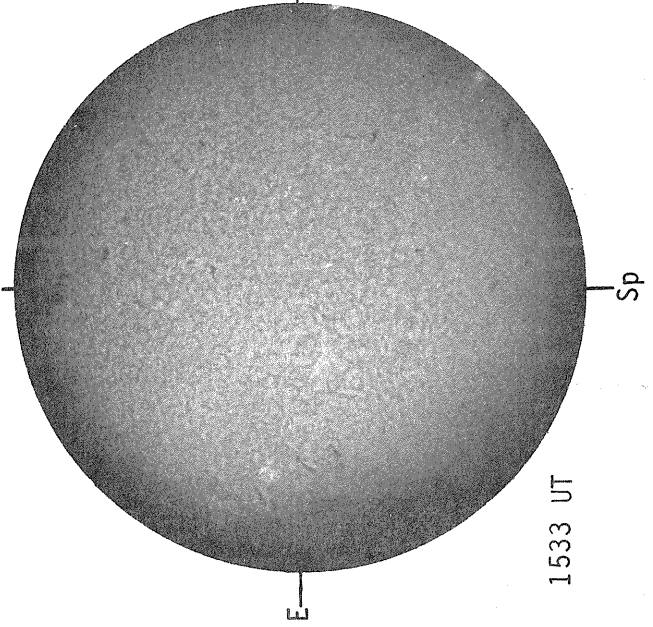
STANFORD MAGNETOGRAM



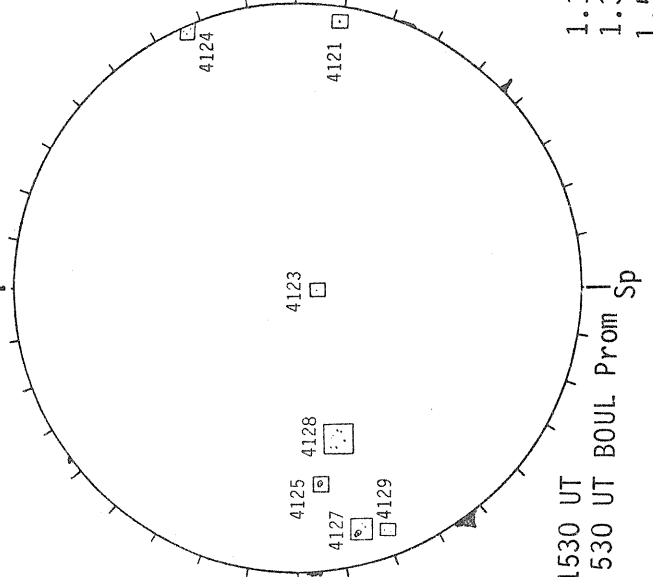
MT. WILSON MAGNETOGRAM



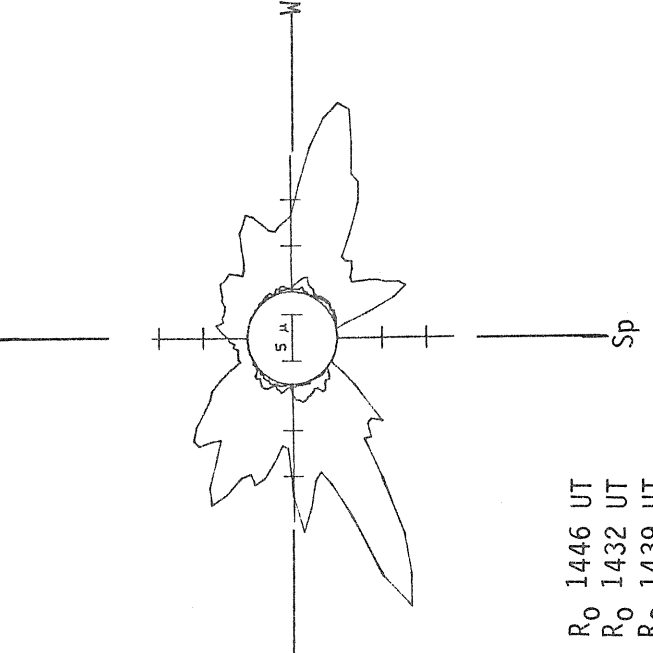
SACRAMENTO PEAK H-ALPHA



BOULDER SUNSPOTS



SACRAMENTO PEAK CORONA (5303 Angstrom)

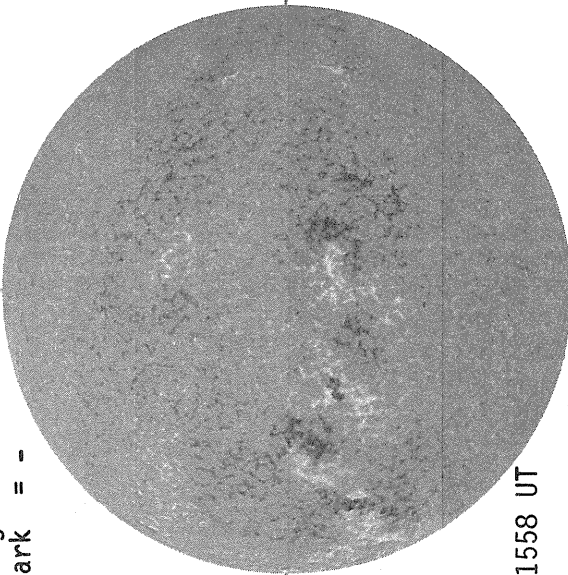


M A R C H 28, 1 9 8 3 (P=-25.93, B₀=-6.76, L₀= 186.55)

KITT PEAK MAGNETOGRAM

Np

Bright= +
Dark = -

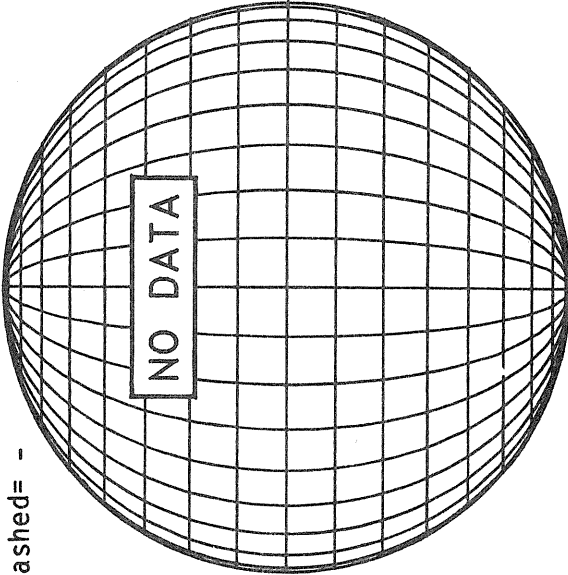


1558 UT

STANFORD MAGNETOGRAM

Np

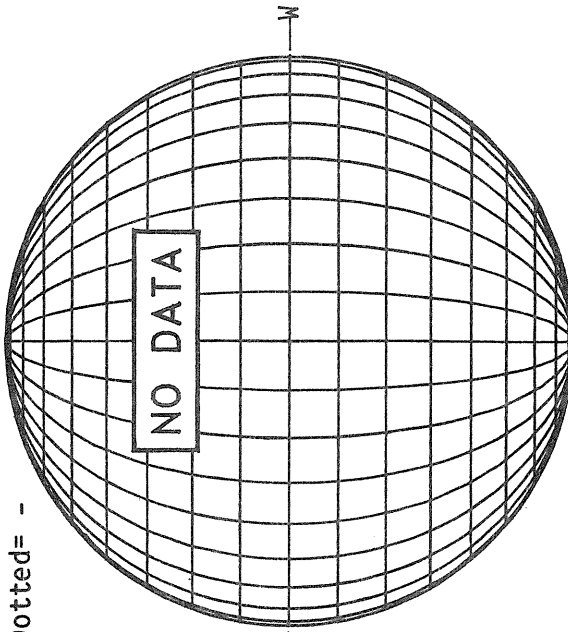
Solid = +
Dashed = -



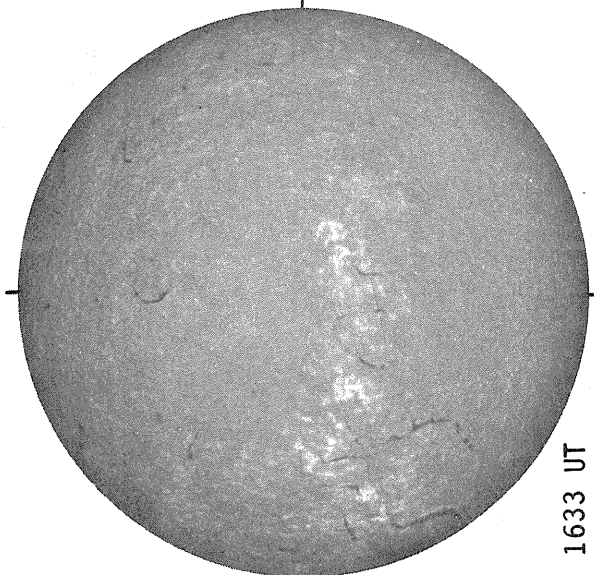
MT. WILSON MAGNETOGRAM

Np

Solid = +
Dotted = -

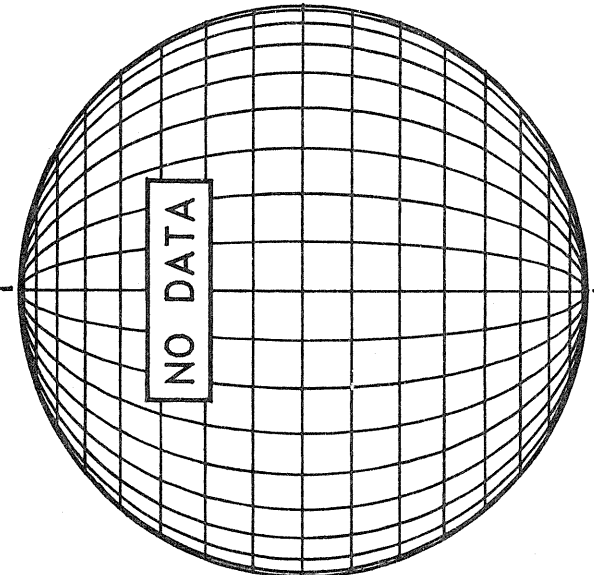


SACRAMENTO PEAK H-ALPHA

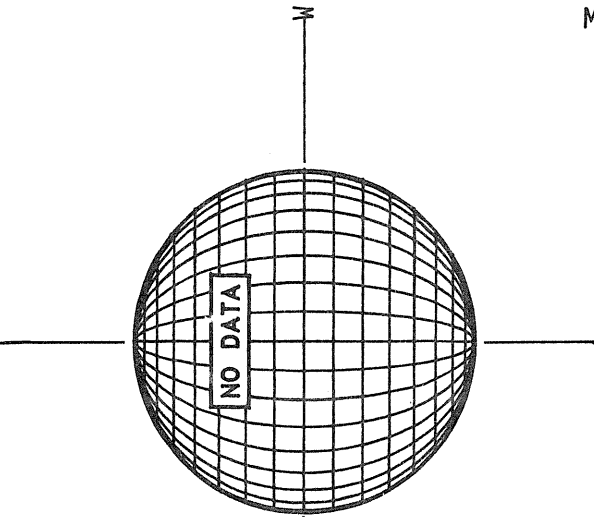


1633 UT

BOULDER SUNSPOTS



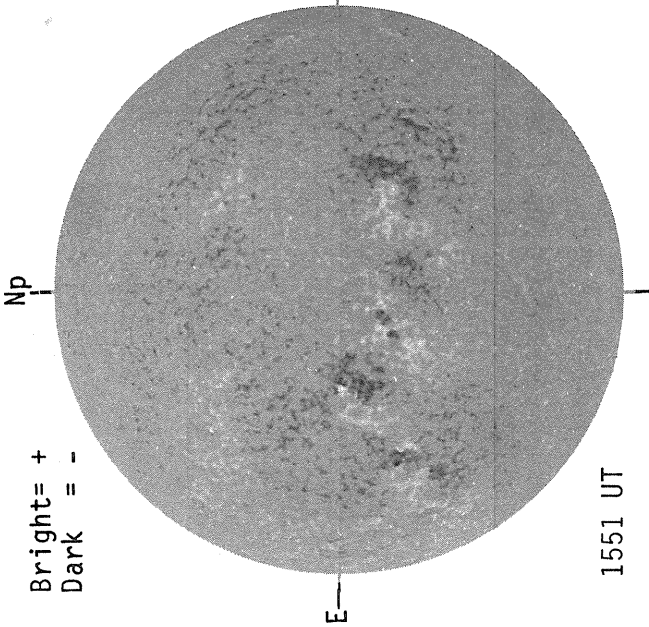
SACRAMENTO PEAK CORONA (5303 Angstrom)



MARCH 29, 1983 (P=-26.00, B₀=-6.71, L₀=173.36)

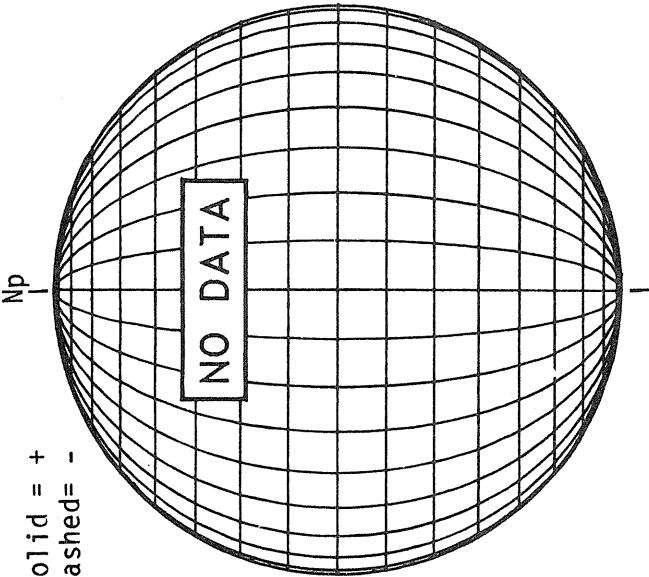
KITT PEAK MAGNETOGRAM

Bright = +
Dark = -



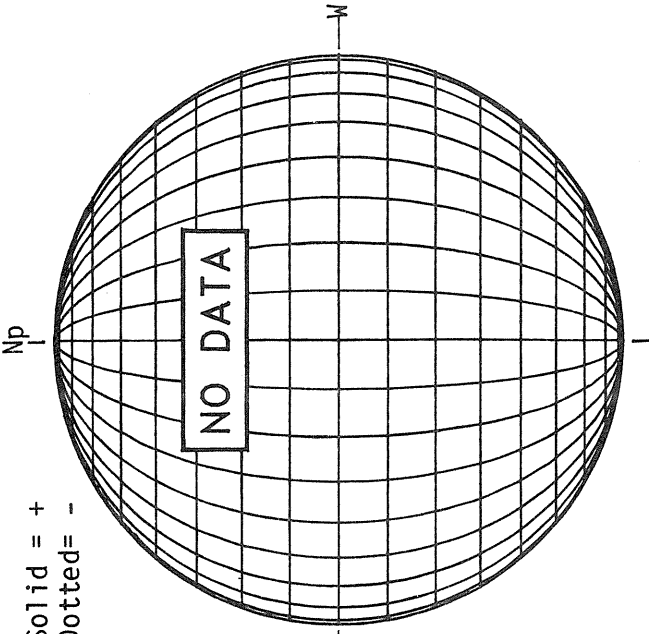
STANFORD MAGNETOGRAM

Solid = +
Dashed = -



MT. WILSON MAGNETOGRAM

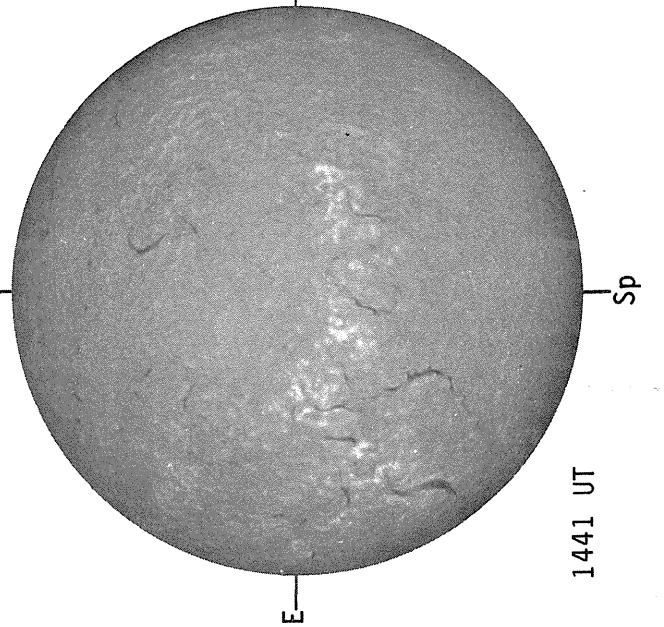
Solid = +
Dotted = -



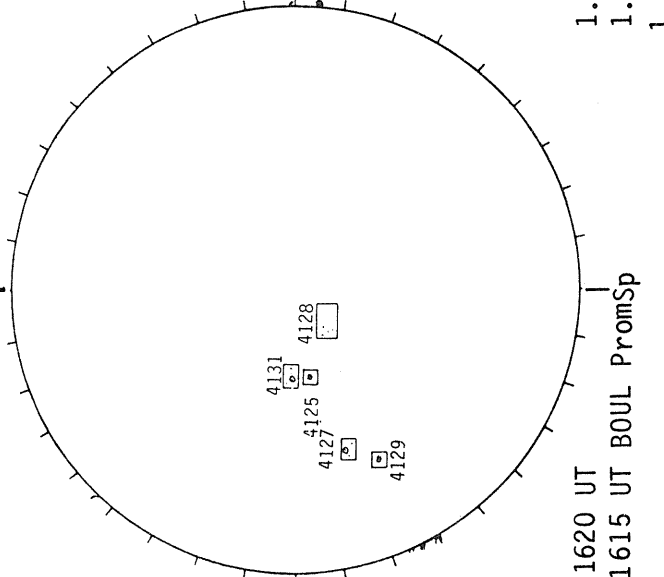
NO DATA

NO DATA

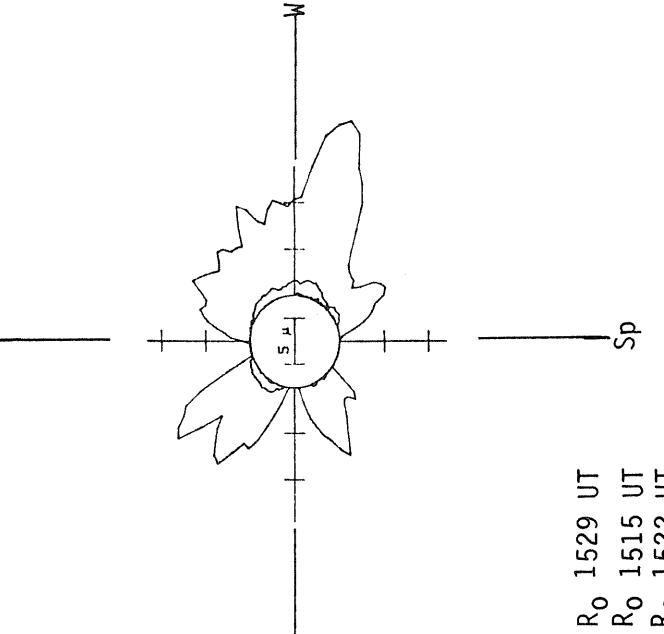
SACRAMENTO PEAK H-ALPHA



BOULDER SUNSPOTS



SACRAMENTO PEAK CORONA (5303 Angstrom)



1.15 R₀ 1529 UT
1.35 R₀ 1515 UT
1.55 R₀ 1522 UT

1620 UT
1615 UT BOUL PromSp

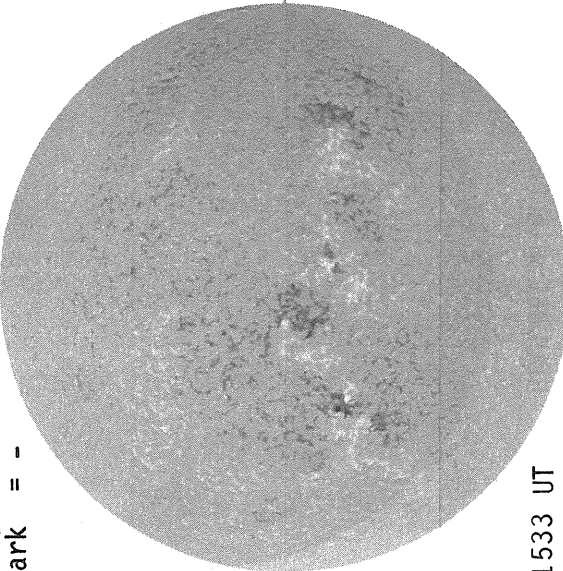
1441 UT

MARCH 30, 1983 (P=-26.07, B₀=-6.66, L₀=160.17)

KITT PEAK MAGNETOGRAM

Bright = +
Dark = -

Np

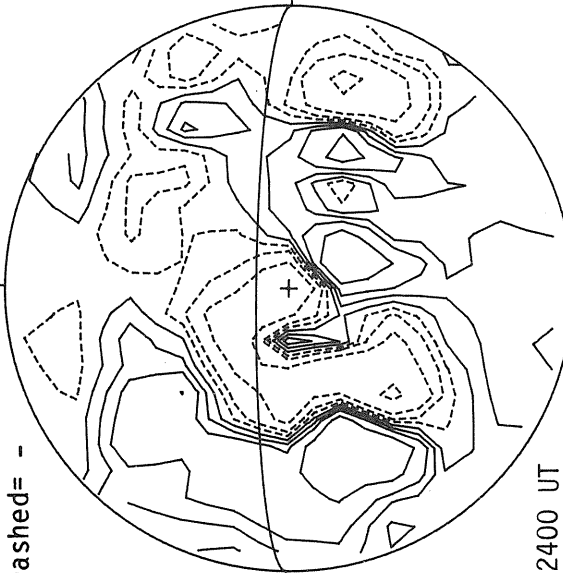


1533 UT

STANFORD MAGNETOGRAM

Solid = +
Dashed = -

Np

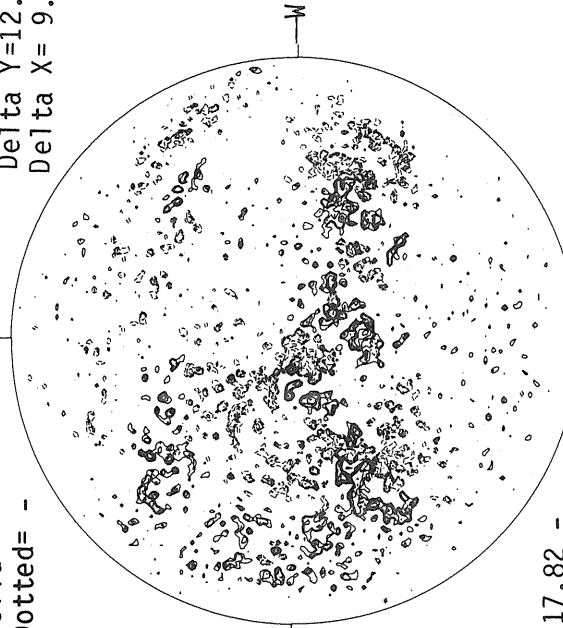


2400 UT

MT. WILSON MAGNETOGRAM

Solid = +
Dotted = -

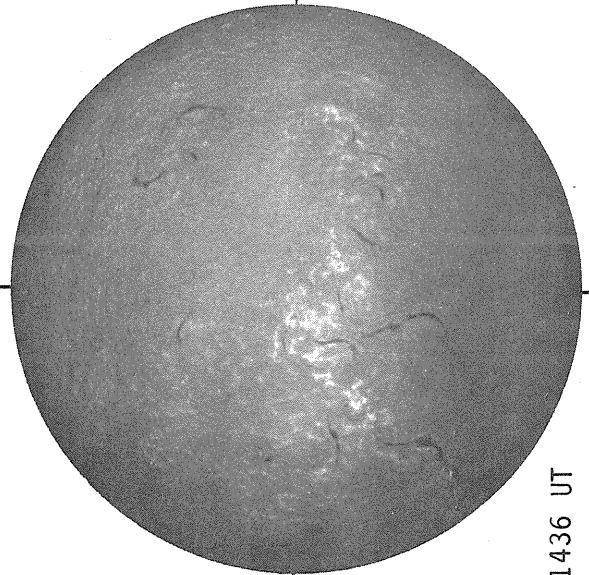
Np



17.82 -
18.77 UT

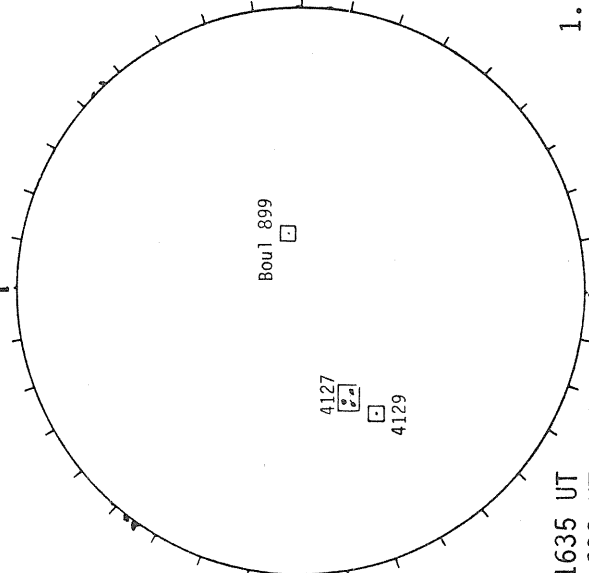
Delta Y = 12.7
Delta X = 9.6

SACRAMENTO PEAK H-ALPHA



1436 UT

BOULDER SUNSPOTS

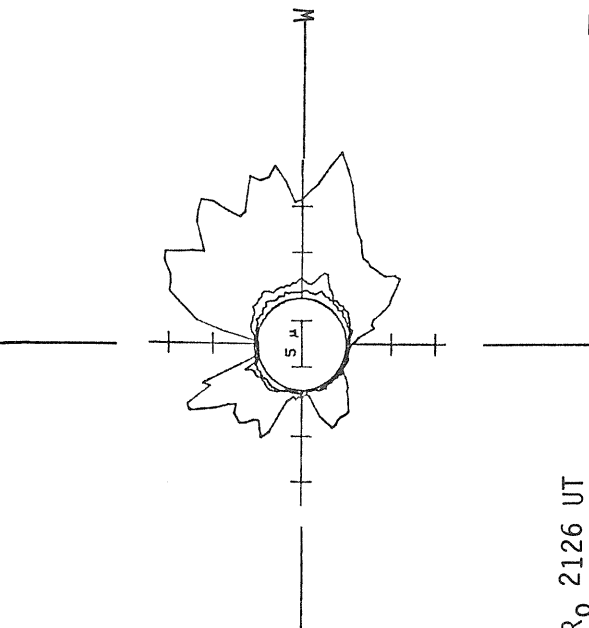


1635 UT

1620 UT BOUL Prom

Sp

SACRAMENTO PEAK CORONA (5303 Angstrom)

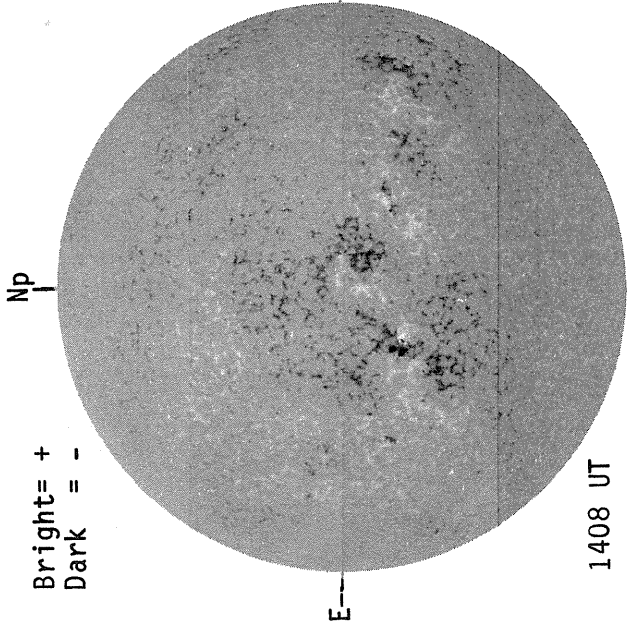


1.15 R₀ 2126 UT
1.35 R₀ 2132 UT
1.55 R₀ 2106 UT

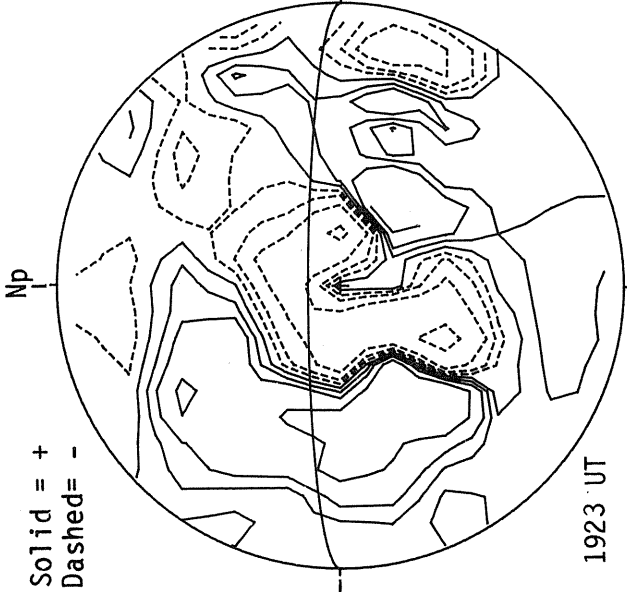
Sp

MARCH 31, 1983 (P=-26.13, B₀=-6.61, L₀=146.98)

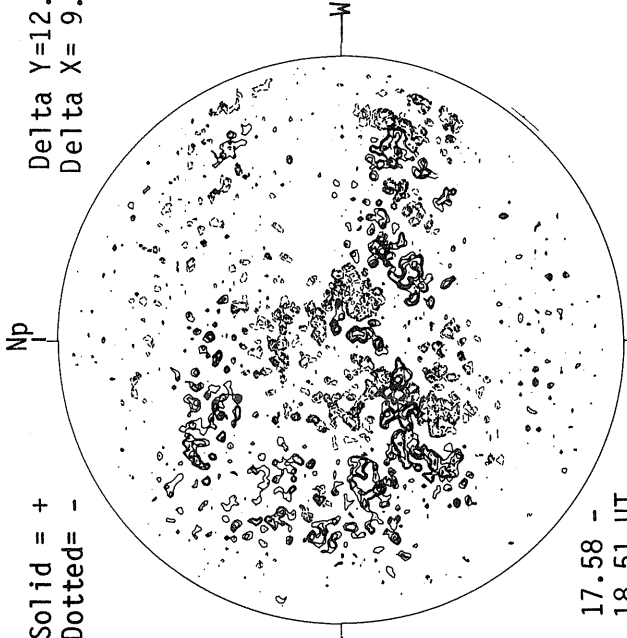
KITT PEAK MAGNETOGRAM



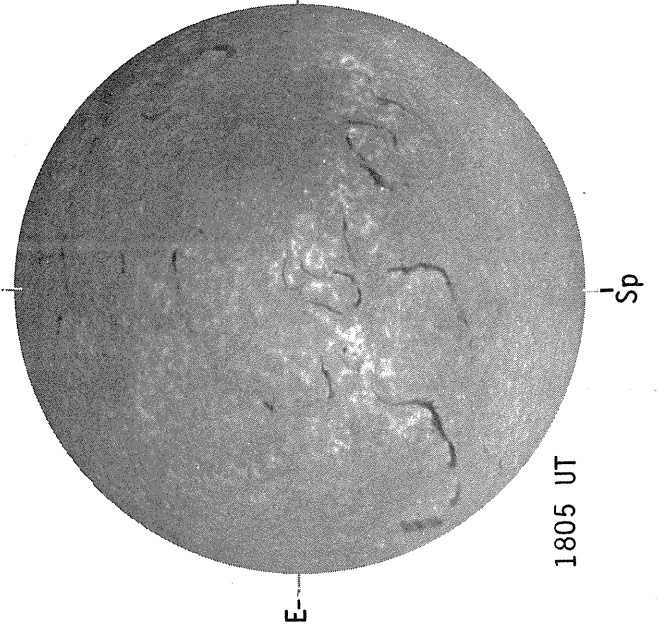
STANFORD MAGNETOGRAM



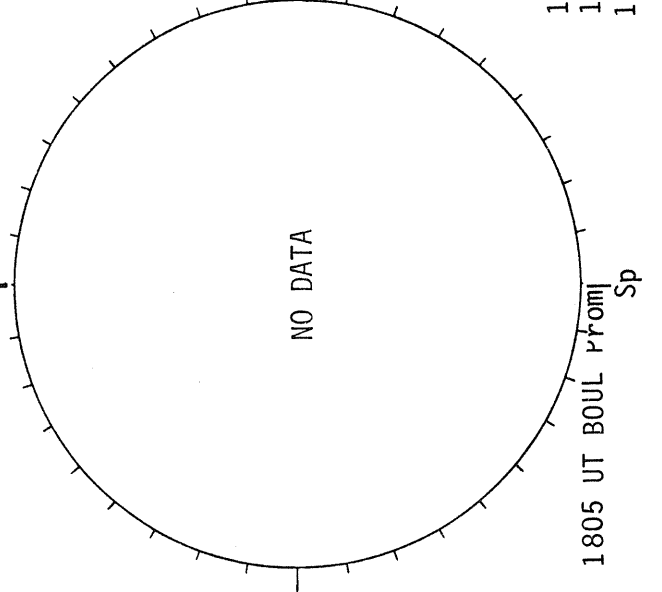
MT. WILSON MAGNETOGRAM



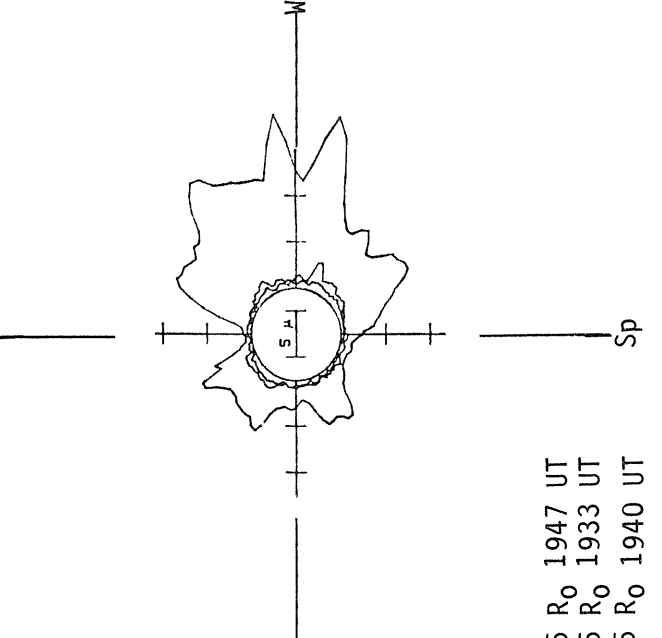
BOULDER H-ALPHA



BOULDER SUNSPOTS



SACRAMENTO PEAK CORONA (5303 Angstrom)



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

73
Mar 83

MARCH 1983

NOAA/ USAF Region	Mt Wilson Region	Sta	Observation Time (UT)			Lat	CMD	CMP Mo	Day	Max H	Mag Class	Spot Class	Corrected Area (10-6 Hemi)	Spot Count	Long. Extent (Deg)	Qual
4103		HOLL	02	24	2216	S13	E54	03	1.0		B	BXO	10	2	3	3
4103		HOLL	02	27	1530	S16	E18	03	1.0		B	CRO	50	9	5	4
4103		BOUL	02	27	1700	S14	E17	03	1.0		B	CSO	30	7	3	4
4103		RAMY	02	27	1809	S15	E17	03	1.0		B	DAO	80	8	5	1
4103		PALE	02	27	1815	S15	E16	03	1.0		B	DRO	50	9	4	3
4103		LEAR	02	28	0015	S16	E13	03	1.0		B	CSO	20	9	4	3
4103		RAMY	02	28	1313	S16	E06	03	1.0		B	CSO	50	7	5	2
4103		BOUL	02	28	1520	S14	E04	02	28.9		B	BXO	20	4	3	3
4103		HOLL	02	28	1522	S15	E06	03	1.1		B	BXO	20	4	4	4
4103		PALE	02	28	1925	S14	E03	03	1.0		B	BXO	20	4	5	3
4103		LEAR	03	01	0125	S13	W01	03	1.0		B	BXO	40	5	4	3
4103		RAMY	03	01	1349	S12	W09	02	28.9		A	AXX	10	2	1	2
4103		RAMY	03	02	1415	S15	W19	03	1.2		A	AXX	10	2	1	3
4103		PALE	03	02	1829	S16	W21	03	1.2		B	BXO	10	2	1	4
4103	23577	MWIL	03	04	1600	S13	W46	03	1.2	3	(B)					
4103	23577	MWIL	03	05	1530	S13	W59	03	1.2	3	(BP)					
4103	23577	MWIL	03	06	1530	S13	W74	03	1.1	3	(AP)					
0001	23587	MWIL	03	05	1530	S18	W60	03	1.1	3	(B)					
0001	23587	MWIL	03	06	1530	S16	W73	03	1.1	3	(AP)					
4097		LEAR	02	23	0020	N17	E80	03	1.1		A	HSX	140	2	2	3
4097		RAMY	02	23	1248	N15	E75	03	1.2		A	HKX	130	1	5	2
4097		BOUL	02	23	1438	N17	E70	02	28.9		A	HSX	50	1	2	3
4097		HOLL	02	23	1540	N17	E74	03	1.3		B	DAO	190	5	8	3
4097		PALE	02	23	1919	N17	E74	03	1.4		B	CKO	190	7	12	4
4097		LEAR	02	24	0016	N17	E70	03	1.3		B	EAO	180	7	11	3
4097		RAMY	02	24	1345	N17	E63	03	1.4		B	EAO	330	7	11	2
4097		BOUL	02	24	1500	N17	E60	03	1.2		B	EAO	240	5	12	3
4097		PALE	02	24	1811	N16	E60	03	1.3		B	EAO	260	7	11	4
4097		HOLL	02	24	2216	N17	E59	03	1.4		B	DSO	180	5	10	3
4097		LEAR	02	25	0027	N15	E56	03	1.3		B	EHO	210	6	10	3
4097		BOUL	02	25	1535	N16	E47	03	1.2		B	EAO	190	6	11	3
4097		HOLL	02	25	1812	N16	E47	03	1.3		B	DAO	210	6	9	4
4097		PALE	02	25	1825	N16	E46	03	1.3		B	DAO	240	7	10	4
4097		LEAR	02	26	0018	N17	E44	03	1.4		B	DHO	210	6	10	2
4097		RAMY	02	26	1310	N16	E36	03	1.3		B	CKO	160	5	10	3
4097		BOUL	02	26	1615	N15	E33	03	1.2		B	EHO	180	5	10	3
4097		HOLL	02	26	1830	N15	E33	03	1.3		B	CAO	190	4	11	3
4097	23578	MWIL	02	26	1830	N16	E33	03	1.3	5	(B)					
4097		PALE	02	26	1901	N16	E32	03	1.2		B	EAO	160	5	11	3
4097		LEAR	02	27	0020	N16	E31	03	1.4		B	CKO	190	4	10	3
4097		HOLL	02	27	1530	N16	E17	02	28.9		B	DAO	130	2	3	4
4097		BOUL	02	27	1700	N15	E17	03	1.0		A	HHX	150	2	3	4
4097		RAMY	02	27	1809	N16	E17	03	1.0		A	HKX	160	2	3	1
4097		PALE	02	27	1815	N16	E17	03	1.1		A	HKX	110	2	3	3
4097		LEAR	02	28	0015	N14	E15	03	1.1		B	CSO	160	5	7	3
4097		RAMY	02	28	1313	N16	E07	03	1.1		B	CKO	170	5	6	2
4097		BOUL	02	28	1520	N15	E07	03	1.2		B	CHO	130	5	5	3
4097		HOLL	02	28	1522	N16	E07	03	1.2		B	CAO	190	5	7	4
4097		PALE	02	28	1925	N16	E04	03	1.1		B	CAO	100	3	5	3
4097		LEAR	03	01	0125	N16	E01	03	1.1		B	CAO	140	8	5	3
4097		RAMY	03	01	1349	N17	W08	03	1.0		B	CKO	140	4	3	2
4097		PALE	03	01	1815	N16	W09	03	1.1		B	CKO	110	10	4	4
4097		HOLL	03	01	1920	N16	W10	03	1.0		B	CKO	110	8	3	3
4097		MANI	03	02	0010	N17	W12	03	1.1			CAO	130	7	3	3
4097		RAMY	03	02	1415	N18	W20	03	1.1		B	CAO	90	5	2	3
4097		BOUL	03	02	1615	N16	W21	03	1.1		B	CSO	80	4	3	2
4097		PALE	03	02	1829	N17	W23	03	1.0		B	DAO	120	6	3	4
4097	23578	MWIL	03	04	1600	N16	W47	03	1.1	4	(AP)					
4097	23578	MWIL	03	05	1530	N16	W60	03	1.1	3	(AP)					
4097	23578	MWIL	03	06	1530	N15	W72	03	1.2	3	(AP)					
		PALE	03	02	1829	S20	W15	03	1.6		A	AXX	10	3	2	4
4098		RAMY	02	23	1248	S18	E85	03	2.0		B	CKO	20	2	7	2
4098		BOUL	02	23	1438	S16	E81	03	1.8		A	HRX	40	2	2	3
4098		HOLL	02	23	1540	S15	E78	03	1.6		B	DSO	60	2	4	3
4098		PALE	02	23	1919	S15	E78	03	1.7		B	DSO	40	3	3	4
4098		LEAR	02	24	0016	S16	E75	03	1.7		B	DSO	110	2	4	3
4098		RAMY	02	24	1345	S17	E66	03	1.6		B	DAO	50	2	3	2

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

MARCH 1983

NOAA/ USAF Region	Mt Wilson Region	Sta	Observation Time			Lat	CMD	CMP Mo	Day	Max H	Mag Class	Spot Class	Corrected Area (10-6 Hemi)	Spot Count	Long- Extent (Deg)	Qual
4098		BOUL	02	24	1500	S16	E67	03	1.7		B	DSO	90	4	4	3
4098		PALE	02	24	1811	S14	E60	03	1.3		B	CAO	60	6	11	4
4098		HOLL	02	24	2216	S15	E64	03	1.8		B	DSO	40	4	4	3
4098		LEAR	02	25	0027	S16	E62	03	1.7		B	CSO	20	2	3	3
4098		BOUL	02	25	1535	S16	E53	03	1.7		B	CRO	40	3	3	3
4098		HOLL	02	25	1812	S18	E52	03	1.7		B	CRO	20	2	4	4
4098		PALE	02	25	1825	S15	E47	03	1.3		B	CSO	50	3	11	4
4098		LEAR	02	26	0018	S16	E49	03	1.7		A	HSX	50	2	1	2
4098		RAMY	02	26	1310	S16	E40	03	1.6		B	CAO	30	3	4	3
4098		BOUL	02	26	1615	S16	E38	03	1.6		B	CRO	10	3	4	3
4098		HOLL	02	26	1830	S16	E37	03	1.6		B	BXO	10	3	4	3
4098	23579	MWIL	02	26	1830	S16	E38	03	1.7	4	(B)					
4098		PALE	02	26	1901	S16	E36	03	1.5		B	CRO	30	4	4	3
4098		LEAR	02	27	0020	S17	E34	03	1.6		B	CSO	50	5	6	3
4098		HOLL	02	27	1530	S15	E27	03	1.7		B	CRO	50	11	6	4
4098		BOUL	02	27	1700	S15	E25	03	1.6		B	CSO	30	6	2	4
4098		RAMY	02	27	1809	S14	E22	03	1.4		B	EAO	130	13	13	1
4098		PALE	02	27	1815	S15	E26	03	1.7		B	DRO	40	6	4	3
4098		LEAR	02	28	0015	S16	E22	03	1.7		B	DSI	70	12	8	3
4098		RAMY	02	28	1313	S15	E17	03	1.8		B	DSO	80	9	6	2
4098		BOUL	02	28	1520	S13	E13	03	1.6		B	CRI	50	8	4	3
4098		HOLL	02	28	1522	S15	E14	03	1.7		B	BXO	50	13	6	4
4098		PALE	02	28	1925	S15	E12	03	1.7		B	DRO	60	8	5	3
4098		LEAR	03	01	0125	S15	E07	03	1.6		B	BXO	50	12	8	3
4098		RAMY	03	01	1349	S15	E01	03	1.7		B	DSO	90	11	9	2
4098		PALE	03	01	1815	S15	W00	03	1.8		B	BXO	20	7	8	4
4098		HOLL	03	01	1920	S15	W01	03	1.7		B	BXO	20	6	7	3
4098		MAN I	03	02	0010	S15	W05	03	1.6		B	BXO	30	4	7	3
4098		RAMY	03	02	1415	S14	W11	03	1.8		B	CAO	10	7	5	3
4098		BOUL	03	02	1615	S14	W13	03	1.7		B	BXO	10	4	4	2
4098		PALE	03	02	1829	S15	W10	03	2.0		B	BXO	10	3	3	4
4099		LEAR	02	24	0016	S18	E88	03	2.7		A	HHX	190	2	3	3
4099		RAMY	02	24	1345	S19	E78	03	2.5		A	HAX	250	1	2	2
4099		BOUL	02	24	1500	S18	E79	03	2.6		A	HSX	180	1	2	3
4099		PALE	02	24	1811	S17	E78	03	2.7		A	HHX	250	1	3	4
4099		HOLL	02	24	2216	S18	E77	03	2.8		A	HSX	200	1	2	3
4099		LEAR	02	25	0027	S18	E74	03	2.7		A	HHX	250	1	3	3
4099		BOUL	02	25	1535	S18	E66	03	2.7		A	HSX	170	1	2	3
4099		HOLL	02	25	1812	S18	E65	03	2.7		A	HHX	250	1	3	4
4099		PALE	02	25	1825	S18	E65	03	2.7		A	HHX	220	1	3	4
4099		LEAR	02	26	0018	S18	E62	03	2.7		A	HHX	250	1	3	2
4099		RAMY	02	26	1310	S18	E54	03	2.7		A	HXX	240	1	3	3
4099		BOUL	02	26	1615	S18	E52	03	2.6		A	HSX	190	1	3	3
4099	23580	MWIL	02	26	1830	S18	E52	03	2.7	5	(AF)					
4099		HOLL	02	26	1830	S19	E51	03	2.7		A	HHX	210	1	3	3
4099		PALE	02	26	1901	S18	E51	03	2.7		A	HSX	220	1	2	3
4099		LEAR	02	27	0020	S18	E48	03	2.7		A	HSX	160	1	2	3
4099		HOLL	02	27	1530	S18	E40	03	2.7		A	HSX	220	1	2	4
4099		BOUL	02	27	1700	S19	E39	03	2.7		A	HHX	120	1	3	4
4099		RAMY	02	27	1809	S19	E39	03	2.7		A	HHX	180	1	3	1
4099		PALE	02	27	1815	S18	E38	03	2.7		A	HHX	200	1	3	3
4099		LEAR	02	28	0015	S18	E36	03	2.8		A	HHX	360	1	3	3
4099		RAMY	02	28	1313	S19	E29	03	2.8		A	HXX	180	1	3	2
4099		BOUL	02	28	1520	S19	E27	03	2.7		A	HSX	210	2	3	3
4099		HOLL	02	28	1522	S18	E28	03	2.8		B	CHO	220	3	3	4
4099		PALE	02	28	1925	S19	E25	03	2.7		A	HHX	200	2	3	3
4099		LEAR	03	01	0125	S18	E22	03	2.7		A	HSX	220	1	2	3
4099		RAMY	03	01	1349	S19	E15	03	2.7		A	HHX	220	1	3	2
4099		PALE	03	01	1815	S18	E12	03	2.7		B	CAO	210	3	3	4
4099		HOLL	03	01	1920	S18	E13	03	2.8		A	HHX	190	2	3	3
4099		MAN I	03	02	0010	S18	E10	03	2.8			HHX	210	2	3	3
4099		RAMY	03	02	1415	S18	E02	03	2.7		A	HXX	180	1	3	3
4099		BOUL	03	02	1615	S18	E00	03	2.7		A	HSX	190	1	2	2
4099		PALE	03	02	1829	S19	W00	03	2.8		A	HHX	230	2	3	4
4099	23580	MWIL	03	04	1600	S19	W25	03	2.8	5	(AF)					
4099	23580	MWIL	03	05	1530	S19	W37	03	2.8	5	(AF)					
4099	23580	MWIL	03	06	1530	S19	W50	03	2.8	4	(AF)					
4099	23580	MWIL	03	07	2300	S19	W67	03	2.8	4	(AF)					
4099		LEAR	03	08	0029	S18	W68	03	2.8		A	HSX	60	2	2	2
4099		RAMY	03	08	1315	S18	W74	03	2.9		A	HAX	160	2	2	3

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

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Mar 83

MARCH 1983

NOAA/ USAF Region	Mt Wilson Region	Sta	Observation		Lat	CMD	CMP		Max H	Mag Class	Spot Class	Corrected		Spot Count	Long. Extent (Deg)	Qual
			Mo	Day			Time (UT)	Mo				Day	Area (10 ⁻⁶)				Hemi
4099	23580	MWIL	03	08	1530	S19 W76	03	2.8	3	(AF)						
4099		BOUL	03	08	1540	S18 W77	03	2.8		A	HSX	150	3	3	2	
4099		PALE	03	08	1730	S18 W78	03	2.8		B	CSO	80	3	2	3	
4099		HOLL	03	08	1823	S18 W79	03	2.7		A	HSX	100	2	2	2	
4099		LEAR	03	09	0048	S19 W79	03	3.0		A	HSX	100	2	1	3	
0002	23582	MWIL	03	04	1600	S07 W14	03	3.6	4	(B)						
0002	23582	MWIL	03	05	1530	S07 W26	03	3.7	3	(AF)						
4105		HOLL	03	01	1920	S09 E42	03	5.0		A	AXX		1	1	3	
4105		RAMY	03	02	1415	S08 E24	03	4.4		A	AXX	10	3	2	3	
4105		BOUL	03	02	1615	S08 E23	03	4.4		B	BXO	10	6	3	2	
4105		PALE	03	02	1829	S09 E22	03	4.4		B	BXO	20	9	5	4	
4105	23583	MWIL	03	04	1600	S09 W04	03	4.4	5	(B)						
4105	23583	MWIL	03	05	1530	S09 W16	03	4.4	5	(B)						
4105	23583	MWIL	03	06	1530	S10 W29	03	4.5	5	(BY)						
4105	23583	MWIL	03	07	2300	S09 W47	03	4.4	5	(B)						
4105		LEAR	03	08	0029	S09 W48	03	4.4		B	ESO	240	8	12	2	
4105		RAMY	03	08	1315	S07 W56	03	4.4		B	DKO	330	13	9	3	
4105	23583	MWIL	03	08	1530	S08 W57	03	4.4	4	(B)						
4105		BOUL	03	08	1540	S10 W55	03	4.5		B	DAO	180	4	9	2	
4105		PALE	03	08	1730	S09 W57	03	4.4		B	DAO	130	5	8	3	
4105		HOLL	03	08	1823	S08 W58	03	4.4		B	DAO	200	6	10	2	
4105		LEAR	03	09	0048	S09 W62	03	4.4		B	DSO	230	9	9	3	
4105		ATHN	03	09	0600	S09 W68	03	4.1			HHX	110	1	4	4	
4105		RAMY	03	09	1225	S07 W71	03	4.2			CAO	220	3	3	3	
4105	23583	MWIL	03	09	1515	S08 W71	03	4.3	5	(BP)						
4105		BOUL	03	09	1515	S09 W71	03	4.3		A	HSX	120	1	2	3	
4105		PALE	03	09	1830	S09 W72	03	4.4		B	CAO	130	3	10	4	
4105		MANI	03	09	2310	S08 W78	03	4.1			HSX	150	2	2	3	
4105		LEAR	03	10	0003	S08 W78	03	4.2		A	HSX	150	2	2	3	
4105		ATHN	03	10	0600	S06 W79	03	4.3			HKX	150	1	3	2	
4102		BOUL	02	26	1615	S15 E85	03	5.1		A	HSX	120	1	3	3	
4102	23581	MWIL	02	26	1830	S15 E85	03	5.2	3	(AP)						
4102		HOLL	02	26	1830	S16 E82	03	5.0		A	HSX	210	1	2	3	
4102		PALE	02	26	1901	S15 E83	03	5.1		A	HHX	170	1	3	3	
4102		LEAR	02	27	0020	S16 E79	03	5.0		A	HSX	140	1	3	3	
4102		HOLL	02	27	1530	S15 E73	03	5.2		B	DAO	280	5	10	4	
4102		BOUL	02	27	1700	S18 E75	03	5.4		B	DHO	340	5	10	4	
4102		RAMY	02	27	1809	S16 E75	03	5.4		B	DKO	560	4	10	1	
4102		PALE	02	27	1815	S16 E72	03	5.2		B	DHO	360	6	10	3	
4102		LEAR	02	28	0015	S17 E70	03	5.3		B	DSO	370	6	9	3	
4102		RAMY	02	28	1313	S17 E65	03	5.5		B	EKO	650	5	11	2	
4102		BOUL	02	28	1520	S18 E60	03	5.2		B	CSO	160	3	9	3	
4102		HOLL	02	28	1522	S15 E59	03	5.1		B	CSO	150	4	3	4	
4102		PALE	02	28	1925	S15 E59	03	5.3		B	CHO	200	4	8	3	
4102		LEAR	03	01	0125	S14 E54	03	5.1		A	HHX	180	4	3	3	
4102		LEAR	03	01	0125	S14 E54	03	5.1		A	HXX	180	4	3	3	
4102		RAMY	03	01	1349	S16 E51	03	5.4		B	DKO	390	9	10	2	
4102		PALE	03	01	1815	S14 E47	03	5.3		B	DSO	270	10	10	4	
4102		HOLL	03	01	1920	S15 E44	03	5.1		B	DHO	160	3	4	3	
4102		MANI	03	02	0010	S14 E41	03	5.1			DHO	200	6	3	3	
4102		RAMY	03	02	1415	S16 E34	03	5.2		B	CKO	250	6	4	3	
4102		BOUL	03	02	1615	S15 E33	03	5.2		B	CSO	130	6	7	2	
4102		PALE	03	02	1829	S15 E34	03	5.3		B	DHO	260	12	9	4	
4102	23581	MWIL	03	04	1600	S15 E05	03	5.0	5	(BP)						
4102	23581	MWIL	03	05	1530	S15 W06	03	5.2	5	(BP)						
4102	23581	MWIL	03	06	1530	S15 W27	03	4.6	5	(BP)						
4102	23581	MWIL	03	07	2300	S15 W37	03	5.2	5	(BY)						
4102		LEAR	03	08	0029	S15 W38	03	5.1		A	HSX	140	5	3	2	
4102		RAMY	03	08	1315	S14 W45	03	5.1		B	DAO	160	8	3	3	
4102	23581	MWIL	03	08	1530	S15 W46	03	5.2	5	(AP)						
4102		BOUL	03	08	1540	S15 W46	03	5.2		B	DSI	140	7	3	2	
4102		PALE	03	08	1730	S15 W47	03	5.2		B	DSO	100	7	3	3	
4102		HOLL	03	08	1823	S15 W48	03	5.1		A	HSX	120	6	3	2	
4102		LEAR	03	09	0048	S15 W51	03	5.2		A	HSX	150	9	4	3	
4102		ATHN	03	09	0600	S14 W54	03	5.2			HHO	130	4	4	4	
4102		RAMY	03	09	1225	S14 W58	03	5.1		B	CAO	130	6	3	3	
4102		BOUL	03	09	1515	S15 W59	03	5.2		B	CSO	60	4	4	3	
4102	23581	MWIL	03	09	1515	S15 W59	03	5.2	5	(AP)						

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

MARCH 1983

NOAA/ USAF Region	Mt Wilson Region	Sta	Observation Time			Lat CMD	CMP		Max H	Mag Class	Spot Class	Corrected Area (10-6 Hemi)	Spot Count	Long. Extent (Deg)	Qual	
			Mo	Day	(UT)		Mo	Day								
4102		PALE	03	09	1830	S15 W61	03	5.1		B	CSO	80	5	3	4	
4102		MANI	03	09	2310	S15 W65	03	5.0			CSO	180	4	3	3	
4102		LEAR	03	10	0003	S15 W65	03	5.1		A	HSX	110	2	2	3	
4102		ATHN	03	10	0600	S15 W62	03	5.6			CKO	170	3	11	2	
4102		RAMY	03	10	1220	S15 W72	03	5.1		B	CAO	100	4	4	4	
4102		BOUL	03	10	1545	S15 W73	03	5.1		A	HSX	90	2	3	3	
4102	23581	MWIL	03	10	1730	S15 W75	03	5.0	4	(AP)						
4102		PALE	03	10	1900	S15 W75	03	5.1		A	HSX	70	1	2	3	
4102		MANI	03	10	2322	S15 W78	03	5.1			HSX	150	1	2	3	
4102		MANI	03	11	0001	S15 W78	03	5.1			HSX	150	1	2	3	
4102		LEAR	03	11	0017	S16 W78	03	5.1		A	HSX	140	3	3	3	
4102		ATHN	03	11	0730	S16 W77	03	5.5			HRX	50	1	1	3	
4102		HOLL	03	11	1445	S15 W87	03	5.0		A	AXX	20	1	1	3	
4112		LEAR	03	09	0048	N25 W52	03	5.0			A	AXX		1		3
4112		RAMY	03	09	1225	N25 W58	03	5.0			A	AXX	10	1	1	3
4112	23589	MWIL	03	09	1515	N23 W60	03	5.0	3	(AP)						
4112		PALE	03	09	1830	N24 W63	03	4.9		A	AXX		1		4	
4108	23584	MWIL	03	04	1600	S15 E14	03	5.7	4	(BP)						
4108	23584	MWIL	03	05	1530	S13 W00	03	5.6	3	(B)						
4108	23584	MWIL	03	06	1530	S15 W12	03	5.7	4	(B)						
4108		LEAR	03	08	0029	S13 W34	03	5.5		A	AXX	10	2	1	2	
4104		RAMY	02	28	1313	S22 E71	03	6.0		A	AXX	10	1	2	2	
4104		BOUL	02	28	1520	S22 E65	03	5.6		B	CSO	140	2	4	3	
4104		HOLL	02	28	1522	S18 E68	03	5.8		B	CSO	180	5	8	4	
4104		PALE	02	28	1925	S20 E65	03	5.8		B	DSO	160	4	8	3	
4104		LEAR	03	01	0125	S19 E62	03	5.8		B	CSO	170	11	9	3	
4104		RAMY	03	01	1349	S11 E59	03	6.0		B	CHO	550	11	6	2	
4104		PALE	03	01	1815	S19 E54	03	5.9		B	DAO	410	17	9	4	
4104		HOLL	03	01	1920	S17 E55	03	6.0		BD	EKI	420	30	11	3	
4104		MANI	03	02	0010	S17 E52	03	6.0			DKO	460	17	9	3	
4104		RAMY	03	02	1415	S20 E44	03	6.0		B	EAO	560	20	11	3	
4104		BOUL	03	02	1615	S20 E42	03	5.9		B	DSI	260	14	10	2	
4104		PALE	03	02	1829	S20 E43	03	6.1		B	DAI	470	26	9	4	
4104	23585	MWIL	03	04	1600	S19 E14	03	5.7	6	(BY)						
4104	23585	MWIL	03	05	1530	S19 E03	03	5.9	5	(BP)						
4104	23585	MWIL	03	06	1530	S21 W09	03	6.0	5	(BP)						
4104	23585	MWIL	03	07	2300	S20 W29	03	5.7	5	(BP)						
4104		LEAR	03	08	0029	S19 W29	03	5.8		B	ESO	210	10	11	2	
4104		RAMY	03	08	1315	S19 W38	03	5.7		BG	DAO	210	12	5	3	
4104	23585	MWIL	03	08	1530	S20 W37	03	5.8	5	(BY)						
4104		BOUL	03	08	1540	S20 W38	03	5.7		BG	DSO	190	7	5	2	
4104		PALE	03	08	1730	S20 W40	03	5.7		BG	DSO	150	8	4	3	
4104		HOLL	03	08	1823	S20 W40	03	5.7		B	DSO	190	10	8	2	
4104		HOLL	03	08	1823	S22 W33	03	6.2		A	AXX		2		2	
4104		LEAR	03	09	0048	S20 W41	03	5.9		B	DSO	230	18	9	3	
4104		ATHN	03	09	0600	S19 W46	03	5.7			DKO	160	6	9	4	
4104		RAMY	03	09	1225	S19 W48	03	5.9		BG	DAO	190	19	9	3	
4104		BOUL	03	09	1515	S20 W50	03	5.8		BG	DSI	140	15	9	3	
4104	23585	MWIL	03	09	1515	S20 W53	03	5.6	5	(BY)						
4104		PALE	03	09	1830	S20 W51	03	5.9		B	DSO	170	16	10	4	
4104		MANI	03	09	2310	S20 W54	03	5.8			DAO	240	17	10	3	
4104		LEAR	03	10	0003	S20 W55	03	5.8		B	DSO	180	16	10	3	
4104		ATHN	03	10	0600	S18 W54	03	6.1			DKO	210	66	9	2	
4104		RAMY	03	10	1220	S20 W60	03	5.9		BG	EAO	150	8	11	4	
4104		BOUL	03	10	1545	S20 W63	03	5.8		BG	DSI	140	21	10	3	
4104	23585	MWIL	03	10	1730	S20 W63	03	5.9	4	(B)						
4104		PALE	03	10	1900	S20 W65	03	5.8		BG	DSO	160	10	10	3	
4104		MANI	03	10	2322	S20 W67	03	5.8			DSO	210	12	10	3	
4104		MANI	03	11	0001	S20 W67	03	5.9			DSO	210	12	10	3	
4104		LEAR	03	11	0017	S20 W66	03	6.0		B	DSO	130	11	9	3	
4104		ATHN	03	11	0730	S20 W69	03	6.0			DSO	140	3	10	3	
4104		HOLL	03	11	1445	S21 W75	03	5.9		B	CSO	100	7	11	3	
4104		BOUL	03	11	1530	S19 W76	03	5.8		B	DSO	120	10	10	2	
4104	23585	MWIL	03	11	1800	S20 W76	03	5.9	3	B						
4104		LEAR	03	12	0013	S21 W79	03	5.9		B	DSO	60	5	9	3	
	23586	MWIL	03	04	1600	S11 E25	03	6.5	3	(B)						
4110		RAMY	03	08	1315	S02 W08	03	8.0		B	DAO	40	8	3	3	

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

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NOAA/ USAF Region	Mt Wilson Region	Sta	Observation Time			Lat	CMD	CMP		Max H	Mag Class	Spot Class	Corrected Area (10-6 Hemi)	Spot Count	Long. Extent (Deg)	Qual
			Mo	Day	(UT)			Mo	Day							
4110	23588	MWIL	03	08	1530	S02	W08	03	8.0	4	(B)					
4110		BOUL	03	08	1540	S02	W09	03	8.0		B	DSI	60	8	4	2
4110		PALE	03	08	1730	S02	W09	03	8.1		B	DSO	50	6	3	3
4110		HOLL	03	08	1823	S02	W10	03	8.0		B	DAO	60	9	4	2
4110		LEAR	03	09	0048	S02	W13	03	8.1		B	DAI	90	17	4	3
4110		ATHN	03	09	0600	S02	W16	03	8.1			DKI	130	4	5	4
4110		RAMY	03	09	1225	S02	W20	03	8.0		B	DAO	180	14	5	3
4110	23588	MWIL	03	09	1515	S02	W21	03	8.1	5	(B)					
4110		BOUL	03	09	1515	S02	W22	03	8.0		B	DSO	130	9	5	3
4110		PALE	03	09	1830	S02	W23	03	8.1		B	DAO	200	22	5	4
4110		MANI	03	09	2310	S02	W27	03	7.9			DSO	240	11	6	3
4110		LEAR	03	10	0003	S02	W27	03	8.0		B	DSO	230	9	6	3
4110		ATHN	03	10	0600	S01	W27	03	8.2			DKO	230	7	6	2
4110		RAMY	03	10	1220	S02	W33	03	8.0		B	DAO	190	8	6	4
4110		BOUL	03	10	1545	S02	W35	03	8.0		B	DSO	200	11	7	3
4110	23588	MWIL	03	10	1730	S02	W36	03	8.0	4	(B)					
4110		PALE	03	10	1900	S02	W38	03	8.0		B	DSO	180	13	6	3
4110		MANI	03	10	2322	S02	W41	03	7.9			DSO	230	9	6	3
4110		MANI	03	11	0001	S02	W41	03	7.9			DSO	230	9	6	3
4110		LEAR	03	11	0017	S02	W41	03	7.9		B	DSO	220	13	9	3
4110		ATHN	03	11	0730	S02	W43	03	8.1			DSO	150	3	7	3
4110		HOLL	03	11	1445	S02	W49	03	8.0		B	DSO	110	7	6	3
4110		BOUL	03	11	1530	S01	W49	03	8.0		B	DSO	130	13	7	2
4110	23588	MWIL	03	11	1800	S02	W52	03	7.9	4	B					
4110		LEAR	03	12	0013	S02	W54	03	8.0		B	DSO	130	9	9	3
4110		ATHN	03	12	0625	S03	W58	03	7.9		B	CSO	30	2	5	3
4110	23588	MWIL	03	12	1645	S02	W65	03	7.8	3	(B)					
4110		HOLL	03	12	1805	S02	W67	03	7.7		B	CSO	40	3	7	3
4110		BOUL	03	12	1910	S02	W65	03	7.9		B	CSO	90	3	7	3
4110		MANI	03	12	2335	S02	W68	03	7.9			CRO	30	4	6	3
4110		LEAR	03	13	0412	S02	W69	03	8.0		A	HAX	20	1	1	2
4110		RAMY	03	13	1318	S01	W75	03	7.9		A	AXX	10	1	1	2
4110		HOLL	03	13	1437	S02	W76	03	7.9		A	AXX		1		2
4110	23588	MWIL	03	13	1630	S02	W77	03	7.9	3	(AP)					
4110		PALE	03	13	1900	S02	W77	03	8.0		A	AXX		1		4
4110		MANI	03	13	2316	S02	W80	03	8.0			AXX	10	1		3
4113		RAMY	03	10	1220	N06	W33	03	8.0		A	AXX	10	1	1	4
4113		BOUL	03	10	1545	N06	W36	03	8.0		B	BXO	10	4	4	3
4113	23591	MWIL	03	10	1730	N07	W37	03	8.0	3	(B)					
4113		PALE	03	10	1900	N07	W38	03	7.9		B	BXO	10	2	4	3
4113		MANI	03	10	2322	N07	W41	03	7.9			BXO	10	3	4	3
4113		MANI	03	11	0001	N07	W41	03	7.9			BXO	10	3	4	3
4113		HOLL	03	11	1445	N05	W52	03	7.7		A	AXX	10	1		3
4113		BOUL	03	11	1530	N07	W50	03	7.9		B	BXO	10	3	4	2
4113	23591	MWIL	03	11	1800	N05	W54	03	7.7	3	AP					
4113		LEAR	03	12	0013	N06	W56	03	7.8		B	BXO		2	3	3
4111		RAMY	03	09	1225	N12	E36	03	12.2		A	AXX	10	1	1	3
4111	23590	MWIL	03	09	1515	N11	E34	03	12.2	3	(B)					
4111		PALE	03	09	1830	N12	E32	03	12.2		B	BXO	20	4	3	4
4111		RAMY	03	10	1220	N10	E21	03	12.1		A	AXX	10	1	1	4
4114		BOUL	03	11	1530	S08	E07	03	12.2		A	AXX		1		2
4114	23592	MWIL	03	11	1800	S10	E07	03	12.3	2	B					
4114		LEAR	03	12	0013	S11	E03	03	12.2		B	BXO	40	10	3	3
4114		ATHN	03	12	0625	S10	E01	03	12.3		B	CRO	20	3	4	3
4114	23592	MWIL	03	12	1645	S10	W08	03	12.1	3	(B)					
4114		HOLL	03	12	1805	S10	W09	03	12.1		B	BXO	20	4	3	3
4114		BOUL	03	12	1910	S10	W09	03	12.1		B	BXO	30	4	5	3
4114		MANI	03	12	2335	S10	W10	03	12.2			AXX		1		3
4114		LEAR	03	13	0412	S10	W15	03	12.0		B	BXO	10	2	2	2
4114	23592	MWIL	03	13	1630	S10	W22	03	12.0	2	(B)					
4114		LEAR	03	14	0239	S10	W26	03	12.2		B	BXO	10	2	2	2
4117		MANI	03	14	2348	N20	W01	03	14.9			CRO	30	7	3	3
4117		PALE	03	14	2355	N20	W01	03	14.9		B	BXO	20	7	4	3
4117		LEAR	03	15	0057	N19	W01	03	15.0		B	CRO	20	10	3	3
4117		ATHN	03	15	0805	N18	W04	03	15.0		B	DSO	20	4	5	2
4117		HOLL	03	15	1507	N20	W09	03	14.9		B	BXO	30	6	4	4
4117	23595	MWIL	03	15	1630	N20	W11	03	14.8	4	(B)					

REGIONS OF SUNSPOT ACTIVITY
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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
4117		RAMY	03 15 1650	N20 W10	03 14.9		B	DAO	70	7	5	2
4117		PALE	03 15 2033	N20 W12	03 14.9		B	DAO	30	5	5	2
4117		LEAR	03 16 0018	N20 W15	03 14.9		B	DRO	50	7	5	3
4117		MANI	03 16 0220	N20 W15	03 14.9			DSO	50	9	6	3
4117		RAMY	03 16 1240	N20 W21	03 14.9		B	DAO	50	8	7	3
4117		HOLL	03 16 1702	N19 W25	03 14.8		B	DAO	40	7	8	2
4117	23595	MWIL	03 16 1730	N17 W25	03 14.8	4	(B)					
4117		PALE	03 16 1810	N20 W25	03 14.8		B	DAO	30	5	8	3
4117		LEAR	03 17 0014	N19 W28	03 14.9		B	CRO	20	4	8	3
4117		HOLL	03 17 1630	N19 W41	03 14.6		A	AXX	10	2	1	3
4117		LEAR	03 18 0025	N19 W42	03 14.8		B	BXO	10	2	6	3
4117		MANI	03 18 0049	N20 W43	03 14.7			BXO	20	3	8	3
4117		RAMY	03 18 1355	N13 W52	03 14.7		A	AXX	10	1	1	3
4117		HOLL	03 18 1540	N13 W53	03 14.7		A	AXX		1		2
4117		PALE	03 18 1930	N14 W55	03 14.7		A	HSX	30	1	1	4
4117		MANI	03 19 0001	N20 W56	03 14.7		A	AXX	10	1		3
4117		LEAR	03 19 0016	N14 W58	03 14.6		A	AXX		2	1	3
4115		LEAR	03 14 0239	S12 E64	03 18.9		B	BXO	10	2	2	2
4115		HOLL	03 14 1613	S13 E57	03 19.0		B	BXO	30	8	6	4
4115	23593	MWIL	03 14 1645	S12 E55	03 18.8	4	(AP)					
4115		MANI	03 14 2348	S13 E52	03 18.9			CAO	70	9	6	3
4115		PALE	03 14 2355	S13 E53	03 19.0		B	CSO	50	5	5	3
4115		LEAR	03 15 0057	S12 E51	03 18.9		B	CAO	60	7	5	3
4115		ATHN	03 15 0805	S14 E48	03 19.0		B	CSO	60	3	3	2
4115		HOLL	03 15 1507	S12 E43	03 18.9		B	DSI	170	22	7	4
4115	23593	MWIL	03 15 1630	S12 E42	03 18.9	5	(B)					
4115		RAMY	03 15 1650	S15 E43	03 19.0		B	DAO	160	10	6	2
4115		PALE	03 15 2033	S13 E41	03 19.0		B	DSO	110	7	6	2
4115		LEAR	03 16 0018	S12 E38	03 18.9		B	DAI	280	26	7	3
4115		MANI	03 16 0220	S13 E38	03 19.0			DSO	190	16	6	3
4115		RAMY	03 16 1240	S14 E33	03 19.0		B	DKO	260	21	7	3
4115		HOLL	03 16 1702	S12 E30	03 19.0		B	DKI	360	32	7	2
4115	23593	MWIL	03 16 1730	S13 E28	03 18.8	5	(D)					
4115		PALE	03 16 1810	S13 E29	03 18.9		B	DKI	380	29	8	3
4115		LEAR	03 17 0014	S13 E25	03 18.9		B	DKO	420	31	7	3
4115		HOLL	03 17 1630	S13 E17	03 19.0		B	DKI	350	29	7	3
4115		LEAR	03 18 0025	S13 E14	03 19.1		B	DKI	370	22	8	3
4115		MANI	03 18 0049	S13 E13	03 19.0			DKI	550	33	8	3
4115		RAMY	03 18 1355	S13 E07	03 19.1		B	EKI	440	39	9	3
4115		HOLL	03 18 1540	S12 E04	03 19.0		B	DAI	340	26	7	2
4115		PALE	03 18 1930	S13 E03	03 19.0		B	DAI	350	30	8	4
4115		MANI	03 18 2336	S12 W00	03 19.0			DKI	560	30	8	3
4115		MANI	03 19 0001	S12 W00	03 19.0		B	DKI	560	30	8	3
4115		LEAR	03 19 0016	S12 E01	03 19.1		B	DHI	320	48	8	3
4115		ATHN	03 19 1016	S13 W04	03 19.1		B	DKC	350	30	8	2
4115	23593	MWIL	03 19 1745	S12 W09	03 19.1	5	(D)					
4115		PALE	03 19 2245	S12 W11	03 19.1		BG	DKI	610	38	8	3
4115		MANI	03 20 0005	S12 W13	03 19.0			DKC	650	39	8	3
4115		LEAR	03 20 0008	S13 W13	03 19.0		BD	DKI	620	54	9	3
4115		ATHN	03 20 0600	S13 W13	03 19.3			DKO	540	21	9	2
4115		RAMY	03 20 1200	S13 W20	03 19.0		BGD	DKI	600	44	9	3
4115		HOLL	03 20 1452	S12 W21	03 19.0		BGD	DKI	730	28	9	2
4115		PALE	03 20 1804	S12 W22	03 19.1		BGD	DKC	640	57	8	5
4115		MANI	03 20 2255	S13 W26	03 19.0			DKC	770	41	8	3
4115		LEAR	03 21 0018	S12 W26	03 19.1		BD	DKC	690	53	8	3
4115		ATHN	03 21 0645	S12 W30	03 19.0			DKI	540	19	9	3
4115		RAMY	03 21 1210	S11 W34	03 18.9		BGD	EKI	530	42	11	4
4115		HOLL	03 21 1540	S11 W36	03 18.9		BGD	DKI	580	27	9	4
4115		BOUL	03 21 1610	S12 W35	03 19.0		BGD	DKI	550	41	8	3
4115		PALE	03 21 1820	S12 W36	03 19.0		BGD	DKI	420	41	8	3
4115		LEAR	03 22 0016	S12 W40	03 19.0		B	DKI	560	28	8	3
4115		MANI	03 22 0120	S12 W40	03 19.0			DKC	600	29	8	3
4115		ATHN	03 22 0700	S12 W39	03 19.4			DKI	550	23	9	3
4115		RAMY	03 22 1210	S12 W47	03 19.0		BGD	DKI	440	23	8	3
4115		BOUL	03 22 1625	S10 W49	03 19.0		BGD	DKI	630	32	10	2
4115		PALE	03 22 1855	S12 W50	03 19.0		BGD	DKI	520	18	7	3
4115		MANI	03 23 0025	S12 W54	03 18.9			DKC	370	19	8	3
4115		LEAR	03 23 0043	S11 W54	03 19.0		B	DKO	410	17	8	3
4115		ATHN	03 23 0700	S11 W58	03 18.9			DKI	540	6	8	3
4115		RAMY	03 23 1235	S12 W60	03 19.0		BGD	DKI	430	18	9	3

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

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NOAA/ USAF Region	Mt Wilson Region	Sta	Observation Time		Lat	CMD	CMP Mo	Day	Max H	Mag Class	Spot Class	Corrected Area (10 ⁻⁶ Hemi)	Spot Count	Long. Extent (Deg)	Qual
4115	23593	MWIL	03	23	1500	S12 W61	03	19.0	4	(D)					
4115		PALE	03	23	1810	S11 W64	03	18.9		BGD	DKI	550	17	8	3
4115		HOLL	03	23	2110	S11 W64	03	19.1		BGD	DKI	280	10	8	2
4115		MANI	03	24	0010	S12 W69	03	18.8			DKC	650	9	8	3
4115		LEAR	03	24	0042	S11 W67	03	19.0		B	DKO	250	7	5	3
4115		ATHN	03	24	0600	S11 W71	03	18.9			DKI	410	11	8	3
4115		RAMY	03	24	1200	S12 W75	03	18.8		BGD	DKO	180	10	7	3
4115		HOLL	03	24	1447	S11 W78	03	18.7		BD	DAO	150	6	6	4
4115	23593	MWIL	03	24	1500	S12 W75	03	19.0	4	(BP)					
4115		PALE	03	24	1810	S11 W79	03	18.8		BD	DAO	160	6	6	4
4115		MANI	03	24	2336	S11 W82	03	18.8			DAO	590	7	6	3
4115		LEAR	03	25	0905	S11 W86	03	18.9		B	DSO	60	2	5	3
4119		LEAR	03	18	0025	N12 E16	03	19.2		B	BXO	20	4	3	3
4119		MANI	03	18	0049	N11 E16	03	19.2			BXX	10	2	1	3
4119		RAMY	03	18	1355	N11 E07	03	19.1		A	AXX	10	1	1	3
4119		HOLL	03	18	1540	N12 E07	03	19.2		B	BXO	10	2	3	2
4119		PALE	03	18	1930	N11 E05	03	19.2		A	AXX	10	1		4
4119		MANI	03	18	2336	N11 E02	03	19.1			AXX		1		3
4116		HOLL	03	14	1613	S07 E77	03	20.4		B	DSO	130	5	5	4
4116	23594	MWIL	03	14	1645	S05 E79	03	20.6	4	(B)					
4116		MANI	03	14	2348	S07 E74	03	20.5			DAO	190	10	10	3
4116		PALE	03	14	2355	S07 E76	03	20.7		B	CSO	100	6	12	3
4116		LEAR	03	15	0057	S06 E75	03	20.7		B	DAO	160	13	11	3
4116		ATHN	03	15	0805	S07 E75	03	21.0		B	DKO	160	5	8	2
4116		HOLL	03	15	1507	S07 E68	03	20.7		B	ESO	180	9	12	4
4116	23594	MWIL	03	15	1630	S06 E65	03	20.6	4	(B)					
4116		RAMY	03	15	1650	S08 E69	03	20.9		B	EAO	210	8	11	2
4116		PALE	03	15	2033	S07 E65	03	20.7		B	ESO	160	8	11	2
4116		LEAR	03	16	0018	S05 E63	03	20.7		B	EAO	230	21	12	3
4116		MANI	03	16	0220	S07 E63	03	20.8			EAO	290	19	12	3
4116		RAMY	03	16	1240	S07 E56	03	20.7		BG	EKO	20	18	11	3
4116		HOLL	03	16	1702	S05 E55	03	20.8		B	EAO	350	17	11	2
4116	23594	MWIL	03	16	1730	S06 E53	03	20.7	5	(B)					
4116		PALE	03	16	1810	S07 E53	03	20.7		B	EAO	360	15	13	3
4116		LEAR	03	17	0014	S05 E50	03	20.8		B	EAO	330	18	11	3
4116		HOLL	03	17	1630	S06 E41	03	20.8		BG	EAI	340	27	12	3
4116		LEAR	03	18	0025	S05 E38	03	20.9		B	EHO	360	21	12	3
4116		MANI	03	18	0049	S07 E37	03	20.8			EAI	340	22	13	3
4116		RAMY	03	18	1355	S08 E30	03	20.8		BG	EAO	340	21	12	3
4116		HOLL	03	18	1540	S06 E28	03	20.7		BG	CSO	220	20	12	2
4116		PALE	03	18	1930	S07 E27	03	20.8		B	CSO	190	20	12	4
4116		MANI	03	18	2336	S07 E23	03	20.7			EHO	190	20	14	3
4116		MANI	03	19	0001	S07 E23	03	20.7		BG	EHO	190	20	14	3
4116		LEAR	03	19	0016	S06 E25	03	20.9		BG	EAO	270	23	13	3
4116		ATHN	03	19	1016	S08 E17	03	20.7		B	CHO	110	6	8	2
4116	23594	MWIL	03	19	1745	S06 E12	03	20.6	5	(BP)					
4116		PALE	03	19	2245	S07 E11	03	20.8		B	DSO	220	15	10	3
4116		MANI	03	20	0005	S07 E09	03	20.7			CHO	190	9	7	3
4116		LEAR	03	20	0008	S07 E12	03	20.9		BG	EHO	280	23	12	3
4116		ATHN	03	20	0600	S07 E03	03	20.5			CHO	120	3	4	2
4116		RAMY	03	20	1200	S07 E01	03	20.6		BG	DHO	210	15	10	3
4116		HOLL	03	20	1452	S07 W00	03	20.6		B	CSO	240	11	9	2
4116		PALE	03	20	1804	S03 W03	03	20.5		B	CHO	220	19	10	5
4116		MANI	03	20	2255	S07 W05	03	20.6			CHO	250	15	10	3
4116		LEAR	03	21	0018	S07 W06	03	20.6		B	CHO	270	21	10	3
4116		ATHN	03	21	0645	S08 W10	03	20.5			CHO	240	6	8	3
4116		RAMY	03	21	1210	S07 W11	03	20.7		BG	EKO	230	13	11	4
4116		HOLL	03	21	1540	S07 W12	03	20.8		BG	ESO	230	18	11	4
4116		BOUL	03	21	1610	S07 W12	03	20.8		BG	CHO	180	16	11	3
4116		PALE	03	21	1820	S08 W14	03	20.7		B	CSO	170	16	11	3
4116		LEAR	03	22	0016	S08 W18	03	20.7		B	CHO	230	8	10	3
4116		MANI	03	22	0120	S07 W18	03	20.7			CHO	230	10	10	3
4116		ATHN	03	22	0700	S07 W22	03	20.6			CHO	100	3	3	3
4116		RAMY	03	22	1210	S07 W28	03	20.4		BG	CKO	130	5	4	3
4116		BOUL	03	22	1625	S05 W29	03	20.5		A	HSX	150	2	2	2
4116		PALE	03	22	1855	S06 W28	03	20.7		B	CSO	200	7	9	3
4116		MANI	03	23	0025	S07 W31	03	20.7			CHO	170	5	9	3
4116		LEAR	03	23	0043	S06 W30	03	20.8		B	CSO	200	8	9	3
4116		ATHN	03	23	0700	S08 W38	03	20.4			HHO	220	2	4	3

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

MARCH 1983

NOAA/ USAF Region	Mt Wilson Region	Sta	Observation Time (UT)		Lat CMD	CMP Mo Day	Max H	Mag Class	Spot Class	Corrected Area (10-6 Hemi)	Spot Count	Long. Extent (Deg)	Qual
4116		RAMY	03	23	1235	S07 W36	03 20.8	B	CKO	190	8	8	3
4116	23594	MWIL	03	23	1500	S07 W40	03 20.6	5	(BP)				
4116		PALE	03	23	1810	S07 W40	03 20.8	B	CHO	180	7	8	3
4116		HOLL	03	23	2110	S06 W42	03 20.7	B	CSO	180	3	8	2
4116		MANI	03	24	0010	S07 W45	03 20.6		CHO	280	6	8	3
4116		LEAR	03	24	0042	S06 W45	03 20.7	B	CSO	180	5	8	3
4116		ATHN	03	24	0600	S07 W48	03 20.7		HFO	200	2	6	3
4116		RAMY	03	24	1200	S07 W55	03 20.4		BG CKO	160	2	4	3
4116		HOLL	03	24	1447	S07 W52	03 20.7		B CSO	180	3	6	4
4116	23594	MWIL	03	24	1500	S07 W54	03 20.6	4	(B)				
4116		PALE	03	24	1810	S07 W54	03 20.7		B CSO	170	5	8	4
4116		MANI	03	24	2336	S07 W58	03 20.6		CSO	240	5	8	3
4116		ATHN	03	25	0900	S09 W64	03 20.6		CKO	240	3	6	2
4116		LEAR	03	25	0905	S08 W62	03 20.7		B CSO	140	3	7	3
4116		RAMY	03	25	1255	S07 W64	03 20.7		B CAO	140	4	7	3
4116	23594	MWIL	03	25	1530	S07 W68	03 20.5	4	(BP)				
4116		HOLL	03	25	1605	S08 W68	03 20.6		B CSO	70	3	5	3
4116		PALE	03	25	1849	S08 W70	03 20.5		B CSO	140	3	7	4
4116		MANI	03	25	2305	S07 W71	03 20.6		CSO	170	3	6	3
4116		RAMY	03	26	1215	S06 W78	03 20.7		A HAX	180	1	2	4
4116		HOLL	03	26	1448	S08 W82	03 20.5		A HSX	60	1	2	2
4116	23594	MWIL	03	26	1600	S07 W80	03 20.7	4	(AP)				
4116		PALE	03	26	1816	S07 W89	03 20.1		A HSX	100	1	2	3
4116		MANI	03	26	2312	S07 W89	03 20.3		HSX	420	1	2	3
4118		HOLL	03	15	1507	S11 E79	03 21.6		A HSX	30	1	1	4
4118	23596A	MWIL	03	15	1630	S10 E79	03 21.6	3	(AP)				
4118		RAMY	03	15	1650	S14 E79	03 21.7		A HAX	60	1	1	2
4118		PALE	03	15	2033	S12 E77	03 21.7		A HSX	30	1	2	2
4118		LEAR	03	16	0018	S10 E76	03 21.7		A HRX	20	1	1	3
4118		MANI	03	16	0220	S12 E74	03 21.7		HSX	90	1	2	3
4118		RAMY	03	16	1240	S12 E68	03 21.7		A HAX	50	1	1	3
4118		HOLL	03	16	1702	S10 E65	03 21.6		A HAX	30	1	1	2
4118	23596A	MWIL	03	16	1730	S11 E66	03 21.7	3	(AP)				
4118		PALE	03	16	1810	S11 E65	03 21.7		A HAX	30	1	1	3
4118		LEAR	03	17	0014	S11 E61	03 21.6		A HSX	50	1	1	3
4118		HOLL	03	17	1630	S11 E52	03 21.6		A HSX	40	1	1	3
4118		LEAR	03	18	0025	S11 E48	03 21.6		A HSX	30	1	1	3
4118		MANI	03	18	0049	S11 E49	03 21.7		A HSX	60	1	1	3
4118		RAMY	03	18	1355	S11 E41	03 21.7		A HSX	30	1	1	3
4118		HOLL	03	18	1540	S11 E39	03 21.6		A HSX	20	1	1	2
4118		PALE	03	18	1930	S12 E38	03 21.7		A HSX	20	1	1	4
4118		MANI	03	18	2336	S11 E36	03 21.7		HSX	40	1	1	3
4118		MANI	03	19	0001	S11 E36	03 21.7		A HSX	40	1	1	3
4118		LEAR	03	19	0016	S10 E36	03 21.7		A HSX	30	1	1	3
4118		ATHN	03	19	1016	S11 E31	03 21.8		A HSX	20	3	1	2
4118	23596A	MWIL	03	19	1745	S11 E26	03 21.7	4	(AP)				
4118		PALE	03	19	2245	S12 E23	03 21.7		A HSX	20	2	2	3
4118		MANI	03	20	0005	S11 E22	03 21.7		HRX	30	1	1	3
4118		LEAR	03	20	0008	S11 E22	03 21.7		A HSX	20	1	1	3
4118		ATHN	03	20	0600	S12 E19	03 21.7		HSX	30	1	2	2
4118		RAMY	03	20	1200	S11 E15	03 21.6		B CAO	10	2	1	3
4118		HOLL	03	20	1452	S11 E14	03 21.7		A HRX	20	1	2	2
4118		PALE	03	20	1804	S11 E13	03 21.7		A HSX	20	1	1	5
4118		MANI	03	20	2255	S11 E10	03 21.7		HSX	30	1	1	3
4118		LEAR	03	21	0018	S11 E09	03 21.7		A HRX	10	1	1	3
4118		ATHN	03	21	0645	S11 E06	03 21.7		AXX	20	1	1	3
4118		RAMY	03	21	1210	S11 E03	03 21.7		A HRX	20	1	1	4
4118		HOLL	03	21	1540	S11 W00	03 21.7		A HSX	10	1	1	4
4118		BOUL	03	21	1610	S10 E00	03 21.7		A HRX	20	1	1	3
4118		PALE	03	21	1820	S12 W02	03 21.6		A HRX	10	1	1	3
4118		LEAR	03	22	0016	S11 W05	03 21.6		A HRX	10	1	1	3
4118		MANI	03	22	0120	S11 W05	03 21.7		HRX	20	1	1	3
4118		RAMY	03	22	1210	S11 W11	03 21.7		A HAX	20	2	1	3
4118		PALE	03	22	1855	S11 W15	03 21.7		A HRX	20	1	1	3
4118		MANI	03	23	0025	S11 W18	03 21.7		HRX	10	1	1	3
4118		LEAR	03	23	0043	S11 W18	03 21.7		A AXX	1	1	1	3
4118		ATHN	03	23	0700	S11 W20	03 21.8		AXX	10	1	1	3
4118		RAMY	03	23	1235	S10 W25	03 21.6		A HRX	20	1	1	3
4118		PALE	03	23	1810	S11 W28	03 21.6		A HRX	10	1	1	3
4118		HOLL	03	23	2110	S11 W29	03 21.7		A AXX	1	1	1	2

REGIONS OF SUNSPOT ACTIVITY
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NOAA/ USAF Region	Mt Wilson Region	Sta	Observation Time (UT)			Lat CMD	CMP Mo Day	Max H	Mag Class	Spot Class	Corrected Area (10-6 Heml)	Spot Count	Long. Extent (Deg)	Qual
4118		MANI	03	24	0010	S11 W32	03 21.6			HRX	10	1	2	3
4118		LEAR	03	24	0042	S11 W32	03 21.6		A	AXX		1	1	3
4118		ATHN	03	24	0600	S11 W34	03 21.7			AXX	10	1		3
4118		HOLL	03	24	1447	S11 W40	03 21.6		A	AXX	10	1		4
4118		PALE	03	24	1810	S11 W42	03 21.6		A	AXX		1		4
4118		MANI	03	24	2336	S11 W45	03 21.6			AXX	10	1		3
4124		RAMY	03	24	1200	N21 W35	03 21.8		A	HAX	30	2	1	3
4124		HOLL	03	24	1447	N21 W36	03 21.9		B	BXO	20	4	3	4
4124	23598	MWIL	03	24	1500	N20 W36	03 21.9	3	(BP)					
4124		PALE	03	24	1810	N21 W38	03 21.8		B	BXO	30	6	4	4
4124		MANI	03	24	2336	N21 W41	03 21.8			BXO	20	6	4	3
4124		LEAR	03	25	0905	N21 W47	03 21.8		B	CRO	20	5	6	3
4124		RAMY	03	25	1255	N21 W48	03 21.9		B	CAO	20	2	5	3
4124	23598	MWIL	03	25	1530	N21 W52	03 21.7	3	(B)					
4124		HOLL	03	25	1605	N19 W50	03 21.9		B	CRO	20	4	4	3
4124		PALE	03	25	1849	N20 W54	03 21.7		B	CRO	40	10	7	4
4124		MANI	03	25	2305	N20 W56	03 21.7			CRO	60	9	7	3
4124		RAMY	03	26	1215	N22 W63	03 21.7		B	DAO	130	11	6	4
4124		HOLL	03	26	1448	N21 W66	03 21.6		B	DAO	100	5	7	2
4124	23598	MWIL	03	26	1600	N20 W65	03 21.7	3	(B)					
4124		PALE	03	26	1816	N21 W68	03 21.5		B	DAO	120	10	7	3
4124		MANI	03	26	2312	N21 W70	03 21.6			DAO	220	8	7	3
4124		LEAR	03	27	0228	N21 W70	03 21.7		B	DAI	160	9	7	2
4124		HOLL	03	27	1525	N20 W79	03 21.6		B	DAO	70	4	5	4
4124	23598	MWIL	03	27	1530	N20 W75	03 21.9	3	(B)					
4124		BOUL	03	27	1530	N21 W75	03 21.9		B	CRO	90	3	5	3
4124		PALE	03	27	1745	N21 W81	03 21.5		B	DAO	50	4	8	4
4124		MANI	03	27	2314	N21 W84	03 21.5			HRX	210	2	5	3
4121		PALE	03	19	2245	S14 E32	03 22.4		B	BXO	10	2	4	3
4121		MANI	03	20	0005	S14 E33	03 22.5			BXO	10	4	4	3
4121		LEAR	03	20	0008	S12 E31	03 22.3		B	CSO	30	3	3	3
4121		ATHN	03	20	0600	S15 E30	03 22.5			AXX	20	1	1	2
4121		RAMY	03	20	1200	S14 E24	03 22.3		B	CAO	20	7	4	3
4121		HOLL	03	20	1452	S14 E24	03 22.4		B	CRO	20	4	3	2
4121		PALE	03	20	1804	S13 E22	03 22.4		B	BXO	20	8	3	5
4121		MANI	03	20	2255	S13 E19	03 22.4			BXO	20	7	3	3
4121		LEAR	03	21	0018	S13 E18	03 22.4		B	CRO	20	7	4	3
4121		RAMY	03	21	1210	S13 E11	03 22.3		B	CRO	30	9	4	4
4121		HOLL	03	21	1540	S12 E08	03 22.3		B	CSO	40	13	5	4
4121		BOUL	03	21	1610	S13 E10	03 22.4		B	BXI	20	18	5	3
4121		PALE	03	21	1820	S13 E08	03 22.4		B	BXO	30	12	5	3
4121		LEAR	03	22	0016	S12 E03	03 22.2		B	BXO	20	8	4	3
4121		MANI	03	22	0120	S13 E04	03 22.4			BXO	20	7	6	3
4121		RAMY	03	22	1210	S12 W05	03 22.1		B	DAO	40	4	3	3
4121		PALE	03	22	1855	S12 W08	03 22.2		B	CRO	40	8	5	3
4121		MANI	03	23	0025	S13 W10	03 22.3			CRO	50	13	6	3
4121		LEAR	03	23	0043	S11 W11	03 22.2		B	BXO	50	12	6	3
4121		ATHN	03	23	0700	S12 W17	03 22.0			CRO	40	4	8	3
4121		RAMY	03	23	1235	S12 W17	03 22.2		B	DAO	60	26	9	3
4121	235968	MWIL	03	23	1500	S12 W22	03 22.0	4	(B)					
4121		PALE	03	23	1810	S12 W21	03 22.2		B	DRO	50	17	8	3
4121		HOLL	03	23	2110	S12 W23	03 22.1		B	BXO	50	11	7	2
4121		MANI	03	24	0010	S12 W26	03 22.0			BXO	50	16	8	3
4121		LEAR	03	24	0042	S12 W25	03 22.1		B	BXO	60	14	8	3
4121		ATHN	03	24	0600	S12 W29	03 22.1			CRO	50	6	7	3
4121		RAMY	03	24	1200	S12 W34	03 21.9		B	DAO	50	11	9	3
4121		HOLL	03	24	1447	S12 W34	03 22.1		B	CRO	70	14	6	4
4121	235968	MWIL	03	24	1500	S12 W34	03 22.1	3	(BP)					
4121		PALE	03	24	1810	S12 W36	03 22.0		B	DRO	70	14	7	4
4121		MANI	03	24	2336	S12 W39	03 22.0			DRO	60	15	7	3
4121		ATHN	03	25	0900	S13 W42	03 22.2			CHO	170	7	8	2
4121		LEAR	03	25	0905	S12 W44	03 22.1		B	BXO	30	11	7	3
4121		RAMY	03	25	1255	S12 W46	03 22.1		B	DRO	70	13	8	3
4121	235968	MWIL	03	25	1530	S12 W49	03 22.0	4	(BP)					
4121		HOLL	03	25	1605	S12 W47	03 22.1		B	CAO	80	12	7	3
4121		PALE	03	25	1849	S12 W50	03 22.0		B	CSO	60	14	7	4
4121		MANI	03	25	2305	S12 W52	03 22.0			CSO	90	11	7	3
4121		RAMY	03	26	1215	S11 W58	03 22.1		B	CAO	40	6	6	4
4121		HOLL	03	26	1448	S12 W61	03 22.0		B	CRO	20	2	5	2

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

MARCH 1983

NOAA/ USAF Region	Mt Wilson Region	Sta	Observation			Lat CMD	CMP Mo Day	Max H	Mag Class	Spot Class	Corrected Area (10-6 Hemi)	Spot Count	Long. Extent (Deg)	Qual
			Mo	Day	Time (UT)									
4121	235968	MWIL	03	26	1600	S12 W61	03 22.1	3	(B)					
4121		PALE	03	26	1816	S12 W63	03 22.0		B	CRO	20	3	7	3
4121		MANI	03	26	2312	S12 W66	03 22.0			BXO	20	3	6	3
4121		LEAR	03	27	0228	S12 W68	03 22.0		B	CRO	30	6	6	2
4121		HOLL	03	27	1525	S12 W75	03 22.0		A	HAX	30	1	1	4
4121		BOUL	03	27	1530	S11 W71	03 22.3		A	AXX	30	1	1	3
4121	235968	MWIL	03	27	1530	S12 W72	03 22.2	3	(AP)					
4121		PALE	03	27	1745	S12 W76	03 22.0		B	BXO	10	2	3	4
4121		MANI	03	27	2314	S12 W79	03 22.0			BXO	40	3	3	3
4120		RAMY	03	18	1355	S13 E79	03 24.5		A	HAX	60	1	2	3
4120		HOLL	03	18	1540	S13 E79	03 24.6		B	CSO	30	3	8	2
4120		PALE	03	18	1930	S14 E78	03 24.7		B	DSO	30	1	8	4
4120		LEAR	03	19	0016	S13 E74	03 24.6		B	DSO	90	2	7	3
4120		ATHN	03	19	1016	S14 E74	03 25.0		B	CSO	60	4	8	2
4120	23597	MWIL	03	19	1745	S13 E65	03 24.6	3	(B)					
4120		PALE	03	19	2245	S14 E63	03 24.7		B	DSO	50	6	6	3
4120		MANI	03	20	0005	S13 E63	03 24.8			DAO	110	9	6	3
4120		LEAR	03	20	0008	S13 E62	03 24.7		B	DSO	50	8	8	3
4120		ATHN	03	20	0600	S13 E58	03 24.6			CHO	80	1	5	2
4120		RAMY	03	20	1200	S14 E55	03 24.7		B	DAO	50	6	7	3
4120		HOLL	03	20	1452	S13 E54	03 24.7		B	CRO	40	5	7	2
4120		PALE	03	20	1804	S13 E54	03 24.8		B	CRO	40	9	6	5
4120		MANI	03	20	2255	S12 E50	03 24.7			CRO	60	7	6	3
4120		LEAR	03	21	0018	S13 E49	03 24.7		B	CRO	30	5	6	3
4120		ATHN	03	21	0645	S15 E44	03 24.6			CRO	50	2	5	3
4120		RAMY	03	21	1210	S13 E40	03 24.5		A	HRX	30	3	1	4
4120		HOLL	03	21	1540	S12 E40	03 24.7		B	CAO	30	5	6	4
4120		BOUL	03	21	1610	S13 E39	03 24.6		B	CRO	30	3	6	3
4120		PALE	03	21	1820	S13 E37	03 24.6		A	HAX	30	3	1	3
4120		LEAR	03	22	0016	S12 E33	03 24.5		A	HRX	30	4	1	3
4120		MANI	03	22	0120	S13 E33	03 24.5			HRX	30	3	1	3
4120		ATHN	03	22	0700	S13 E32	03 24.7			AXX	10	1	1	3
4120		RAMY	03	22	1210	S13 E27	03 24.5		A	HAX	40	4	1	3
4120		BOUL	03	22	1625	S11 E24	03 24.5		B	CRO	30	6	4	2
4120		PALE	03	22	1855	S12 E23	03 24.5		A	HSX	20	2	1	3
4120		MANI	03	23	0025	S13 E20	03 24.5			HRX	30	2	1	3
4120		LEAR	03	23	0043	S12 E21	03 24.6		A	AXX	10	2	1	3
4120		ATHN	03	23	0700	S12 E14	03 24.3			ARX	10	1	1	3
4120		RAMY	03	23	1235	S13 E14	03 24.6		B	CRO	30	9	4	3
4120	23597	MWIL	03	23	1500	S13 E13	03 24.6	4	(B)					
4120		PALE	03	23	1810	S12 E11	03 24.6		B	BXO	20	2	3	3
4120		HOLL	03	23	2110	S13 E09	03 24.6		B	BXO	10	2	4	2
4120		MANI	03	24	0010	S12 E06	03 24.5			BXO	20	6	5	3
4120		LEAR	03	24	0042	S13 E08	03 24.6		B	BXO	20	4	4	3
4120		RAMY	03	24	1200	S14 E01	03 24.6		B	BXO	10	6	3	3
4120		HOLL	03	24	1447	S12 E01	03 24.7		B	BXO	10	2	2	4
4120	23597	MWIL	03	24	1500	S13 E01	03 24.7	2	(B)					
4120		PALE	03	24	1810	S12 W01	03 24.7		B	BXO	20	4	3	4
4120		MANI	03	24	2336	S12 W04	03 24.7			BXO	10	5	4	3
4120		LEAR	03	25	0905	S12 W09	03 24.7		B	BXO	10	6	3	3
4120		RAMY	03	25	1255	S13 W13	03 24.6		B	BXO	20	7	5	3
4120		HOLL	03	25	1605	S12 W13	03 24.7		B	BXO	10	2	3	3
4120		PALE	03	25	1849	S12 W15	03 24.7		B	BXO	10	3	3	4
4126	23599	MWIL	03	25	1530	S25 E13	03 26.7	3	(AP)					
4126		HOLL	03	25	1605	S24 E12	03 26.6		A	AXX		1		3
4126		PALE	03	25	1849	S25 E11	03 26.6		A	AXX	10	1	1	4
4126		MANI	03	25	2305	S25 E08	03 26.6			AXX	10	1	1	3
4126		RAMY	03	26	1215	S25 E00	03 26.5		A	AXX	10	1	1	4
4126		HOLL	03	26	1448	S24 W02	03 26.5		A	AXX	10	1		2
4126	23599	MWIL	03	26	1600	S25 W02	03 26.5	2	(AP)					
4126		PALE	03	26	1816	S25 W03	03 26.5		A	AXX	10	1	1	3
4126		MANI	03	26	2312	S25 W06	03 26.5			AXX	10	1	1	3
4126		LEAR	03	27	0228	S25 W08	03 26.5		A	AXX		1		2
4126		HOLL	03	27	1525	S25 W16	03 26.4		A	AXX	10	1		4
	23606	MWIL	03	27	1530	S22 W10	03 26.9	2	(AP)					
4123		BOUL	03	21	1610	S11 E78	03 27.5		A	AXX	10	1	1	3
4123		RAMY	03	25	1255	S15 E29	03 27.7		B	BXO	10	2	3	3

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

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Mar 83

MARCH 1983

NOAA/ USAF Region	Mt Wilson Region	Sta	Mo	Day	Time (UT)	Lat	CMD	CMP Mo	Day	Max H	Mag Class	Spot Class	Corrected Area (10 ⁻⁶ Heml)	Spot Count	Long. Extent (Deg)	Qual
4123	23601	MWIL	03	26	1600	S12	E12	03	27.6	3	(AP)					
4123		LEAR	03	27	0228	S09	E08	03	27.7		A	AXX		1		2
4123		HOLL	03	27	1525	S11	W00	03	27.6		A	AXX		1		4
4123		BOUL	03	27	1530	S12	E01	03	27.7		A	AXX		1		3
4123	23601	MWIL	03	27	1530	S13	W01	03	27.6	2	(AP)					
		RAMY	03	22	1210	S18	E68	03	27.7		A	AXX	30	1		3
		RAMY	03	31	1316	S02	W43	03	28.3		A	AXX	10	2	1	2
0003		HOLL	03	29	1456	S14	W17	03	28.3		A	AXX		1		4
0003	23607	MWIL	03	29	1530	S14	W17	03	28.4	2	(AF)			1		4
0003		PALE	03	29	1805	S13	W19	03	28.3		A	AXX		1		4
	23602	MWIL	03	26	1600	N27	E33	03	29.2	2	(AF)					
4134		RAMY	04	01	1210	S16	W45	03	29.1		B	BXO	10	4	3	4
4134		HOLL	04	01	1528	S15	W47	03	29.1		B	BXO	10	3	3	3
4134		BOUL	04	01	1537	S13	W44	03	29.3		B	BXO	10	3	3	2
4134	23614	MWIL	04	01	1600	S15	W46	03	29.2	3	(B)					
4134		PALE	04	01	1815	S14	W47	03	29.2		B	BXO	10	2	3	4
4134		MANI	04	02	0049	S14	W50	03	29.3			BXO	20	3	3	3
4134		LEAR	04	02	0058	S15	W51	03	29.2		B	BXO	10	2	3	3
4134		RAMY	04	02	1330	S15	W60	03	29.0		B	BXO	20	2	3	2
4134		HOLL	04	02	1605	S13	W62	03	29.0		A	AXX	10	2	1	3
4134		LEAR	04	03	0110	S14	W66	03	29.1		A	AXX		1	1	3
		BOUL	03	30	1635	S04	W12	03	29.8		A	AXX	10	1	1	2
		RAMY	03	31	1316	S20	W23	03	29.8		B	BXO	20	1	2	2
4128		RAMY	03	26	1215	S15	E50	03	30.3		B	DAO	80	9	3	4
4128	23603	MWIL	03	26	1600	S15	E47	03	30.2	4	(D)					
4128		PALE	03	26	1816	S14	E46	03	30.2		B	DAO	50	8	4	3
4128		MANI	03	26	2312	S14	E44	03	30.3			DSO	70	7	4	3
4128		LEAR	03	27	0228	S14	E42	03	30.3		B	DRO	30	6	4	2
4128		HOLL	03	27	1525	S14	E35	03	30.3		BG	DAI	80	12	6	4
4128		BOUL	03	27	1530	S14	E33	03	30.1		BG	BXO	40	8	5	3
4128	23603	MWIL	03	27	1530	S15	E34	03	30.2	3	(BY)					
4128		PALE	03	27	1745	S14	E34	03	30.3		B	CRO	40	9	6	4
4128		MANI	03	27	2314	S14	E31	03	30.3			CRO	40	2	5	3
4128		MANI	03	29	0001	S14	E17	03	30.3			CRO	30	6	6	3
4128		HOLL	03	29	1456	S13	E07	03	30.2		B	BXO	10	2	5	4
4128	23603	MWIL	03	29	1530	S15	E05	03	30.0	3	(AP)					
4128		BOUL	03	29	1620	S12	E07	03	30.2		B	BXO	10	6	6	3
4128		PALE	03	29	1805	S13	E06	03	30.2		B	BXO	10	3	7	4
4128		MANI	03	30	0020	S14	E04	03	30.3			BXO	10	1	7	3
4128		LEAR	03	30	0705	S13	W01	03	30.2		B	BXO	20	4	2	3
4128		RAMY	03	31	1316	S15	W09	03	30.9		A	AXX	10	1	1	2
	23608	MWIL	03	29	1530	S13	E10	03	30.4	2	(AF)					
	23612	MWIL	03	31	1545	S16	W15	03	30.5	2	(AF)					
4132		MANI	03	29	0001	S23	E20	03	30.5			BXO	10	3	3	3
4132		HOLL	03	30	1444	S22	W01	03	30.5		A	AXX	10	3	2	3
4132	23610	MWIL	03	30	1530	S22	W01	03	30.6	3	(AF)					
4132		PALE	03	30	1820	S22	W02	03	30.6		A	AXX	10	3	2	4
4132		LEAR	04	02	0058	S21	W29	03	30.8		A	AXX		1	1	3
4125		HOLL	03	24	1447	S10	E82	03	30.8		A	HSX	70	1	2	4
4125		PALE	03	24	1810	S10	E83	03	31.0		A	HSX	90	1	2	4
4125		MANI	03	24	2336	S09	E81	03	31.1			HSX	170	1	2	3
4125		ATHN	03	25	0900	S10	E80	03	31.4			HKX	150	1	3	2
4125		LEAR	03	25	0905	S09	E74	03	30.9		A	HSX	60	1	2	3
4125		RAMY	03	25	1255	S10	E72	03	31.0		A	HAX	50	1	1	3
4125	23600	MWIL	03	25	1530	S10	E70	03	30.9	3	(AP)					
4125		HOLL	03	25	1605	S09	E72	03	31.1		A	HSX	80	1	2	3
4125		PALE	03	25	1849	S09	E69	03	31.0		A	HSX	40	1	1	4
4125		MANI	03	25	2305	S09	E68	03	31.1			HSX	70	1	2	3
4125		RAMY	03	26	1215	S11	E60	03	31.0		A	HAX	60	1	1	4

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

MARCH 1983

NOAA/ USAF Region	Mt Wilson Region	Sta	Observation			CMP Mo Day	Max H	Mag Class	Spot Class	Corrected Area (10-6 Hemi)	Spot Count	Long. Extent (Deg)	Qual	
			Mo	Day	Time (UT)									Lat	CMD
4125		HOLL	03	26	1448	S09 E58	03 31.0		A	HSX	50	1	2	2
4125	23600	MWIL	03	26	1600	S10 E58	03 31.0	4	(AP)					
4125		PALE	03	26	1816	S10 E57	03 31.0		A	HSX	40	1	1	3
4125		MANI	03	26	2312	S10 E55	03 31.1		A	HSX	60	1	2	3
4125		LEAR	03	27	0228	S09 E53	03 31.1		A	HSX	70	1	1	2
4125		HOLL	03	27	1525	S10 E45	03 31.0		A	HAX	40	1	1	4
4125		BOUL	03	27	1530	S10 E44	03 31.0		A	HSX	30	1	2	3
4125	23600	MWIL	03	27	1530	S10 E46	03 31.1	4	(AP)					
4125		PALE	03	27	1745	S09 E44	03 31.0		A	HRX	30	1	1	4
4125		MANI	03	27	2314	S10 E42	03 31.1		A	HSX	40	1	2	3
4125		MANI	03	29	0001	S10 E28	03 31.1		A	HRX	30	1	1	3
4125		HOLL	03	29	1456	S10 E18	03 31.0		A	HSX	20	1	2	4
4125	23600	MWIL	03	29	1530	S10 E18	03 31.0	4	(AP)					
4125		BOUL	03	29	1620	S09 E17	03 31.0		A	HRX	20	1	1	3
4125		PALE	03	29	1805	S10 E18	03 31.1		A	HSX	20	3	1	4
4125		MANI	03	30	0020	S10 E15	03 31.1		A	AXX	10	2	1	3
4125		LEAR	03	30	0705	S12 E12	03 31.2		A	AXX	10	1		3
4125		HOLL	03	30	1444	S08 E02	03 30.8		A	AXX		1		3
4125		HOLL	03	30	1444	S13 E07	03 31.1		B	BXO	10	2	4	3
4125	23611	MWIL	03	30	1530	S14 E06	03 31.1	2	(AP)					
4125		PALE	03	30	1820	S09 E06	03 31.2		A	AXX		1		4
4125		LEAR	03	31	0009	S12 E03	03 31.2		A	AXX	10	2	1	3
4125		RAMY	03	31	1316	S15 W09	03 30.9		A	AXX	10	1	1	2
4125		HOLL	03	31	1513	S12 W07	03 31.1		A	AXX	10	3	2	3
4125	23611	MWIL	03	31	1545	S12 W07	03 31.1	3	(AP)					
4125		PALE	03	31	1743	S11 W09	03 31.1		A	AXX	10	1	1	4
4125		LEAR	04	01	0010	S12 W12	03 31.1		B	BXO	20	4	3	3
4125		MANI	04	01	0134	S12 W11	03 31.2		A	AXX		1		2
4125		RAMY	04	01	1210	S14 W19	03 31.1		A	HAX	20	1	1	4
4125		HOLL	04	01	1528	S13 W20	03 31.1		B	BXO	10	4	4	3
4125		BOUL	04	01	1537	S12 W18	03 31.3		B	BXO	20	2	3	2
4125	23611	MWIL	04	01	1600	S14 W20	03 31.2	3	(BP)					
4125		PALE	04	01	1815	S13 W21	03 31.2		B	BXO	20	6	3	4
4125		MANI	04	02	0049	S13 W25	03 31.1		A	CRO	50	6	4	3
4125		LEAR	04	02	0058	S13 W24	03 31.2		B	BXO	20	7	3	3
4125		ATHN	04	02	0715	S13 W26	03 31.3		A	BXO	20	2	3	2
4125		RAMY	04	02	1330	S13 W33	03 31.1		B	DAO	50	2	4	2
4125		HOLL	04	02	1605	S13 W33	03 31.2		B	DAO	40	5	5	3
4125		PALE	04	02	1753	S13 W35	03 31.1		B	CRO	30	4	5	3
4125	23611	MWIL	04	02	1815	S14 W35	03 31.1	4	(B)					
4125		LEAR	04	03	0110	S13 W38	03 31.2		B	CRO	10	3	4	3
4125		ATHN	04	03	0850	S14 W43	03 31.1		B	CSO	10	4	4	3
4125		RAMY	04	03	1150	S13 W45	03 31.1		B	CAO	30	2	5	3
4125		HOLL	04	03	1520	S12 W46	03 31.2		B	CRO	30	3	6	3
4125	23611	MWIL	04	03	1530	S12 W49	03 31.0	4	(AP)					
4125		PALE	04	03	1805	S13 W48	03 31.1		B	CRO	30	4	5	4
4125		MANI	04	03	2357	S13 W50	03 31.2		A	CRO	60	4	5	3
4125		LEAR	04	04	0100	S12 W55	03 30.9		A	AXX	10	1		3
4125		RAMY	04	04	1130	S12 W60	03 31.0		A	HAX	40	1	1	3
4125	23611	MWIL	04	04	1600	S12 W62	03 31.0	3	(AP)					
4125		PALE	04	04	1810	S12 W64	03 30.9		A	AXX	10	2	1	3
4125		MANI	04	05	0003	S12 W67	03 31.0		A	AXX	30	2	1	3
4131		MANI	03	29	0001	S05 E28	03 31.1			CRO	10	4	3	3
4131		HOLL	03	29	1456	S06 E19	03 31.0		B	BXO	20	5	3	4
4131	23609	MWIL	03	29	1530	S06 E18	03 31.0	3	(B)					
4131		BOUL	03	29	1620	S06 E18	03 31.0		B	CRO	20	5	4	3
4131		PALE	03	29	1805	S06 E17	03 31.0		B	CRO	20	5	3	4
4131		MANI	03	30	0020	S07 E14	03 31.1		A	CRO	40	11	5	3
4131		LEAR	03	30	0705	S07 E11	03 31.1		B	CAO	50	10	3	3
4131		HOLL	03	30	1444	S06 E06	03 31.1		B	BXO	20	4	4	3
4131	23609	MWIL	03	30	1530	S06 E06	03 31.1	3	(B)					
4131		PALE	03	30	1820	S06 E04	03 31.1		B	BXO	10	4	3	4
4131		LEAR	03	31	0009	S07 E02	03 31.2		B	BXO	10	3	3	3
4131		RAMY	03	31	1316	S12 W05	03 31.2		B	BXO	20	2	2	2
4131		MANI	04	01	0134	S07 W13	03 31.1		A	BXO	10	5	4	2
4131		HOLL	04	01	1528	S07 W19	03 31.2		B	BXO	10	4	3	3
4131		BOUL	04	01	1537	S07 W18	03 31.3		B	BXO	10	2	3	2
4131	23615	MWIL	04	01	1600	S07 W19	03 31.2	3	(B)					
4131		PALE	04	01	1815	S07 W21	03 31.2		B	BXO	20	6	3	4
4131		MANI	04	02	0049	S07 W24	03 31.2		A	DRO	70	7	4	3

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

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MARCH 1983

NOAA/ USAF Region	Mt Wilson Region	Sta	Observation Time		Lat	CMD	CMP Mo	Day	Max H	Mag Class	Spot Class	Corrected Area (10-6 Hemi)	Spot Count	Long. Extent (Deg)	Qual
4131		LEAR	04	02	0058	S07 W24	03	31.2		B	BXO	20	8	3	3
4131		ATHN	04	02	0715	S06 W26	03	31.4			DSO	50	2	3	2
4131		RAMY	04	02	1330	S07 W34	03	31.0		B	CAO	50	4	3	2
4131		HOLL	04	02	1605	S06 W34	03	31.1		B	CAO	30	4	3	3
4131		PALE	04	02	1753	S05 W35	03	31.1		B	BXO	30	8	4	3
4131	23615	MWIL	04	02	1815	S07 W35	03	31.1	4	(BP)					
4131		LEAR	04	03	0110	S06 W38	03	31.2		B	BXO	10	5	3	3
4131		ATHN	04	03	0850	S07 W42	03	31.2		B	CRO	10	3	2	3
4131		RAMY	04	03	1150	S06 W46	03	31.0		B	DAO	60	6	3	3
4131		HOLL	04	03	1520	S06 W45	03	31.3		B	BXO	30	5	4	3
4131	23615	MWIL	04	03	1530	S07 W47	03	31.1	3	(B)					
4131		PALE	04	03	1805	S06 W48	03	31.2		B	BXO	20	5	3	4
4131		MANI	04	03	2357	S06 W51	03	31.2			BXO	30	5	4	3
4131		LEAR	04	04	0100	S06 W52	03	31.1		A	AXX		1		3
	23616	MWIL	04	01	1600	S02 W16	03	31.5	2	(AP)					

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

March 1983

Day	Start (UT)	Max (UT)	End (UT)	Imp	Wide-spread Index	Number of Station Reports by Type					Known Flare	NOAA/SESC Region
						SWF	SEA	SPA	LF-SPA	SES		
01	0025	0028	0046	1-	3			1		1	0021	4102
01	0135	0145	0215	1-	1					1	NF	
01	0211	0220	0256	1-	3			1	1	1	0211	4104
01	0714	0719	0740	1-	3		1	1	1	2	0715	No data
01	1046	1052	1125	1+	5		4		1	5	*	
01	2054	2100	2110	1	3					7	2058	4104
01	2112	2120	2200	1	3	1				1	2103	4098
01	2206	2214	2245	1-	3			1		5	2206	4104
01	2315	2322	2347	1-	3			1		3	2313	4104
02	0140	0144	0155D	1-	3			1	1	1	0138	4104
02	0348	0354	0414	1-	3			1	1		0355	4104
02	0420	0427	0500	1-	3			2	1	1	0420	No data
02	0713	0717	0749	1-	3		2	1		1	0713	No data
02	0931	0938	1000	1+	3		1	1	1		0932	No data
02	1134	1137	1145	1-	3		1		1		1125	No data
03	1035	1040	1050	1-	1				1		1034	No data
04	0700	0718	0830	1-	3		1	1	1	1	0706E	No data
04	1336	1338	1355	1-	3	1			1		1331	No data
04	1956	2001	2030	1	3					2	*	
04	2027	2045	2115	1	3					2	*	
04	2119	2127	2200	1	1					1	*	
05	0645	0658	0712	2	1		1				NF	
05	0922	0927	0947	1-	1			1			NF	
05	2315	2321	0000	1-	1					1	*	
06	0721	0732	0821D	1	5		1	1	2	2	0720	No data
06	1512	1530	1615	1	3					3	*	
06	2134	2140	2209	1-	1			1			*	
07	0344	0350	0359U	1-	3			1	1		NF	
08	0455	0458	0518	1-	1			1			0454	4104
08	0550	0555	0626	1-	1			1			0551	4104
08	0847	0852	0900	1-	3	1		1	1		0847	4104
08	1113	1119	1130	1-	3	1			1		1112	No data
09	0010	0020	0050D	1-	3			1	1		0011E	4104
09	0050E	0058	0119	1-	3			1	1		NF	
09	0455	0500	0520	1-	1				1		NF	
09	1340	1405	1430	1	1		1				1340	4110
09	1852	1900	1920	1-	1					1	NF	
09	2234	2235	2250	1-	1		1				NF	
10	0008	0044	0226	2+	3			1		1	0007	4105
10	0105	0112	0125U	1	1				1		0102	4110
10	0838	0940	1050	2	3	1	1	1	1		0835	No data
10	0900	0925	1020	1	3		2				0850	No data
11	1848	1911	1925	1+	3					2	NF	
12	1420	1429	1520	2	5	3	4		1	18	NF	
12	1553	1628	1800	3	3					2	NF	
12	1615	1637	1800	2	1					1	NF	
12	2304	2331	0122	1+	5			1		6	NF	
13	0538	0557	0707	1-	3			1	1		NF	
13	2201	2207	2242	1-	3			1		5	NF	
13	2247	2253	2320	1-	1			1			NF	
13	2320	2336	0014	1-	1			1			NF	
14	0748	0756	0836	1-	3		1	1	2		NF	
14	1141	1159	1230	1	5		3	1	1	2	1150	No data

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

March 1983

Day	Start (UT)	Max (UT)	End (UT)	Imp	Wide- spread Index	Number of Station Reports by Type					Known Flare	NOAA/SESC Region
						SWF	SEA	SPA	LF- SPA	SES		
14	1537	1552	1630	1	3					2	NF	
14	1803	1809	1845	1-	3					12	NF	
14	2008	2030	2100	1	3					2	NF	
15	1445	1500	1530	1	1					1	NF	
15	1900	1902	1915	1-	3					2	1854	4116
16	0104	0116	0132	1-	3			1	1		0110	4116
16	0313	0326	0339D	1-	3			1	1		0315	4115
16	0338E	0351	0430D	1-	3	1		1	1		0338	4115
16	0430	0434	0450	1-	3			1	1		0435E	No data
16	2158	2207	2322	1	5			1		12	*	
17	0036	0052	0139	1-	3			1	1	3	0031	No data
17	0222	0237	0407	2+	5	1		2	2	6	0224	4116
17	0440E	0447	0526	1	3			2	1	2	0441	4116
17	0723	0729	0810	1-	5	1	1	1	2	2	0724E	No data
17	0900	0910	1100	3	5	4	3	1	2	5	0900	4116
17	1100	1109	1145	1+	5	4	2	1	1	2	1100	No data
17	1227	1238	1300	1-	1		1		1		1223	No data
17	1334	1343	1450	2+	5	4	3		1	12	1334	No data
17	1457	1502	1515	1-	3				1	1	1458	4116
17	2011	2020	2116	2+	5	1		1		13	2011	4116
17	2326	2334	0037	1	3			2		7	2330	4116
18	0050	0106	0140	1+	3			2	1	4	0053E	No data
18	0153	0205	0336	2	3	1		1	1	4	0154	4116
18	0438	0446	0628	2+	5	1	1	2	1	6	0441E	4116
18	0807	0817	0858	1-	5			1	2	3	0810E	No data
18	1049	1056	1120	1-	1		1		1		1047	No data
18	1417	1424	1450	1	3				1	5	1416	4116
18	1514	1522	1548	1	3		2				1507E	4116
18	1855	1858	2000	1	3					12	1851	4116
19	0307	0315	0341	1-	3			1	1		0308	4115
20	0040	0044	0102	1-	1			1			0046	4115
20	0253	0300	0330	1-	3			1	1	1	0254	4115
20	0336	0346	0417	1-	3			1	1		0348E	No data
20	0525	0535	0650	1-	3			2	1	2	0525	4115
20	1325	1349	1413	1	3		2				NF	
21	2015	2026	2040	1-	3					2	2014	4115
21	2123	2129	2156	1-	3			1		3	2123	4115
21	2142	2148	2215	1-	1					1	NF	
22	0155	0201	0223	1-	1			1			0157	4115
22	0245	0250	0306	1-	3			1	1		0246	4115
22	0344	0350	0414	1-	3			1	1		0345	4118
22	1218	1229	1253	1	1		1				NF	
23	0120	0136	0256	1	3			1	1	1	0124	4121
23	1853	1858	1930	1-	3					11	1853	4115
25	0030	0046	0130	1-	3	1		1	1	1	NF	
25	0241	0254	0420	1	3	1	1	2	1	1	0247E	No data
25	1125	1130	1143	1-	1					1	NF	
26	0228	0250	0320	1-	3			1	1		0230	4124
26	0603	0612	0650	1-	3			1	1	2	0559	No data
26	1422	1447	1452	1	1		1				NF	
27	1412	1447	1450	1	1		1				NF	
27	1551	1559	1621	1	1		1				NF	
28	0425	0434	0530	1-	3			1	1		NF	

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

March 1983

Day	Start (UT)	Max (UT)	End (UT)	Imp	Wide-spread Index	Number of Station Reports by Type					Known Flare	NOAA/SESC Region
						SWF	SEA	SPA	LF-SPA	SES		
28	1010	1017	1049	1	1		1				NF	
29	0914	0925	0941	1	3			1	1		NF	
30	1226	1237	1302	1	1		1				NF	
31	0116	0122	0232	1-	1				1		NF	
31	0842	0901U	0920	1	1		1				NF	
31	0932	0934	1020	2	1				1		NF	

* = No Flare Patrol
 NF= No Flare Reported
 X-ray = Event observed only at X-ray wavelengths

OBSERVATORIES REPORTING FOR MARCH 1983*

Ayrshire, Scotland (AY)	SES	Lintong, China (LT)	SPA
Darmstadt, GFR (DA)	SWF	Louisville, Kentucky, USA (A26)	SES
Durham, North Carolina, USA (A54)	SES	Maui, Hawaii, USA (MI)	SWF
Edenvale, South Africa (A52)	SES	Missoula, Montana, USA (A31)	SES, SWF
Farsa, Sweden (FA)	SES	Panska Ves, Czechoslovakia (PU)	SEA, SWF
Frenchtown, Montana, USA (A56)	SES	Patterson, New Jersey, USA (A46)	SES
Glenorchy, Tasmania, Australia (GN)	SES	Portage, Michigan, USA (A51)	SES
Hiraiso, Japan (HI)	SWF	Roswell, New Mexico, USA (RW)	SES
Hobart, Tasmania, Australia (TA)	SEA	San Antonio, Texas, USA (SA)	SES
Houston, Texas, USA (A50)	SES	St. Cloud, Minnesota, USA (SC)	SES
Inubo, Japan (IN)	SPA	Travares, 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
		Walla Walla, Washington, (USA) (A55)	SES

*Observations are not necessarily continuous for each reporting station.

SIDs by NOAA/SESC REGION

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																															
4098	1																														
4102	1																														
4104	4	2						3	1																						
4105											1																				
4110									1	1																					
4115															2				1	3	2	2	1								
4116													1	1	6	5															
4118																							1								
4121																								1							
4124																											1				
X-Ray																															
No Flare	1				2		1	4		1	4	4	4	1							1	1	1		2		2	2	1	1	3
No Flare Patrol	1			3	1	2								1																	
No Data	1	4	1	2		1	1		2				1		1	5	3				1				1	1					
Event Totals	9	6	1	5	3	3	1	4	6	4	1	4	4	5	2	5	11	8	1	5	3	4	2		3	2	2	2	1	1	3

S O L A R R A D I O E M I S S I O N
S P E C T R A L O B S E R V A T I O N S

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MARCH 1983

Observation Day	Start End		Sta	Decimetric Band			Metric Band			Dekametric Band			Spectral Type	
	(UT)	(UT)		Start (UT)	End (UT)	Int (1-3)	Start (UT)	End (UT)	Int (1-3)	Start (UT)	End (UT)	Int (1-3)		
01	0000	0744	CULG	0000.0	0146.0	1	0000.0	0159.0	1				IS,C,DC	
			CULG	0139.0		1							DCIM	
			CULG	0146.0	0743.5	1	0159.0	0643.0	1				IIIN	
			CULG				0643.0	0744.5	1				IS	
	0710	1607	BLEN	0914.5	0914.6	1							IIIG	
			WEIS				1056.0	1315.0	1				IN	
	0640	1243	BLEN	1314.4	1320.0	1							IIIG	
			WEIS	1319.4	1319.8	1							DCIM	
	1251	1628	WEIS	1448.2	1449.2	2	1448.2	1449.2	2				IIIG	
			BLEN				1448.8	1449.1	1				DCIM	
			WEIS				1503.9	1505.3	1				IIIG	
			BLEN				1602.3	1602.5	1				III	
			SGMR				1602.4	1602.7	3				IIIB	
			WEIS				1942.8	1943.1	1				V	
			SGMR				2110.8	2112.0	2				V	
			PALE				2111.0	2112.0	1				V	
			SGMR				2112.0	2120.5	1				III	
PALE						2253.0	0000.0	1					CONT	
02	0300	0744	CULG				0303.0	0303.5	1				IIIG	
			LEAR				0314.0	0349.0	1				CONT	
			CULG				0316.5	0345.0	1				IS,DC	
	0642	1630	WEIS				1035.0	1532.0	1				IN	
			BLEN	1045.0	1608.0	1	1045.0	1608.0	2				I,DC,N	
03	0000	0743	CULG											
			WEIS											
			BLEN	1016.2	1018.0	2	1016.2	1018.0	3				IIIGG	
	0706	1610	BLEN				1039.0	1118.0	2				I	
			WEIS											
1326	1632	WEIS												
		CULG	2044	2400										
04	0000	0743	CULG											
			BLEN				0704.0E	0725.0	1				I	
			CULG				0713.0	0725.5	3				II H	
	0635	1633	WEIS				0713.0	1629.0	1				IN	
			WEIS				0713.3	0726.3	2				II HARM	
				CULG	0724.0	0743.5	1	0719.0	0743.5	1				IV
				BLEN				1045.8	1046.3	2				IIIG
2044	2400	CULG												
05	0000	0743	CULG											
			BLEN	1220.0	1610.0D		1010.0E	1610.0D	3				I	
			WEIS				1221.0	1634.0	1				IN	
	0633	1456	BLEN				1254.5	1257.9	3				IIIGG	
			BLEN	1327.2	1327.4	2							IIIG	
	1458	1634	WEIS				1509.7	1509.8	2				IIIB	
			WEIS	1544.4	1544.5	2							DCIM	
2044	2400	WEIS				1554.3	1600.8	3				IIIGG/V		
		CULG												
06	0000	0743	CULG				0041.0		1				IIIG,U	
			CULG	0352.5	0353.0	1	0352.5	0355.0	1				IIIG	
			CULG				0357.5		2				IIIB	
			WEIS				0634.0	0702.0	1				I	
	0700	1610	BLEN				0700.0E	1610.0D	3				I	
			WEIS				0705.3	0705.4	1				U	
	0531	0754	CULG				0705.5		1				IIIB,U	
			BLEN	0720.3	0726.5	3	0720.7	0729.7	3				IV	
				WEIS				0720.6	0722.8	3				DCIM
				CULG	0721.0	0723.0	2	0722.0	0723.0	1				IIIGG,U,V
2044	2400	CULG	2118.5	2400.0	1	2055.0	2400.0	1				IS		
07	0000	0743	CULG	0000.0	0030.5	1							IN	
			CULG				0000.0	0108.5	1				IS	
			CULG				0420.0	0424.0	1				IS	
	0621	1638	WEIS	0518.0	0640.0	1							IN	
			CULG				0621.0	1637.0	2				IS	
	0655	1615	CULG	0640.0	0743.0	1	0640.0	0743.0	1				IS	
BLEN						0700.0E	1615.0D	2				I		

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SOLAR RADIO EMISSION
SPECTRAL OBSERVATIONS

MARCH 1983

Day	Observation		Sta	Decimetric Band			Metric Band			Dekametric Band			Spectral Type
	Start (UT)	End (UT)		Start (UT)	End (UT)	Int (1-3)	Start (UT)	End (UT)	Int (1-3)	Start (UT)	End (UT)	Int (1-3)	
07			WEIS				1103.2	1103.3	1				IIIG
			WEIS				1220.4	1226.8	1				IIIG
			WEIS				1239.3	1239.5	1				IIIB
	2043	2400	CULG	2136.0	2400.0	1							IS
08	0000	0743	CULG	0000.0	0050.0	1							IS
			CULG	0050.0	0147.0	1							IN
			CULG	0550.5	0552.0	1							DCIM
			CULG	0619.0	0635.0	1							IN
	1051	1615	BLEN				1051.0E	1615.0D					I,DC
	0627	1314	WEIS				1205.4	1207.3	2				IIIG
			BLEN	1349.3	1351.8	2							DCIM
			BLEN	1359.6	1359.8	2							DCIM
			SGMR				1502.3	1512.6	2				GG
	1318	1640	WEIS				1502.6	1508.8	2				IIIGG
			WEIS				1511.7	1513.8	3				IIIG
			BLEN				1531.8	1532.5	2				IIIG
			BLEN	1542.7	1549.1	1							DCIM
	2043	2400	CULG	2049.0	2400.0	1	2043.0	2400.0	1				IS
			CULG				2115.5		2				IIIB
		CULG	2141.0	2141.5	2	2140.5	2141.5	3				IIIG, G, U	
		CULG	2145.0	2145.5	1	2145.0	2145.5	2				IIIG	
09			CULG	0000.0	0742.5	1							IS
	0000	0743	CULG				0000.0	0315.0	1				IN
			LEAR				0101.0	1029.0	1				CONT
			CULG				0308.0		1				IIIB
			CULG				0311.0	0743.0					IIIS, W
			CULG				0315.0		1				IS
			CULG				0319.5	0738.5	1				IIIN
			CULG				0604.5	0737.0	1				IIIG, N
			CULG				0622.5	0737.0	2				IIIN
			WEIS				0626.0	1640.0	3				IIIS
	0625	1641	WEIS				0631.0	1602.0	2				IS
	0650	1615	BLEN				0650.0E	1615.0D					I
			WEIS				0829.0	0957.0	2				CONT
			LEAR				0837.1	0841.3	3				III
			SGMR				1428.5	1541.0	1				CONT
			WEIS	1524.2	1528.8	3							DCIM
	2043	2400	CULG	2043.0	2235.0	1	2043.0	2349.0					IIIS, W
			CULG				2043.0	2400.0	1				IS, C
			CULG				2048.5	2348.5	1				IIIN
			CULG				2048.5	2359.0	1				RSDP, N
			CULG				2057.0	2349.0	2				IIIN
		CULG	2235.0	2400.0	1							IN	
		LEAR				2302.0	0353.0	2				CONT	
		CULG				2349.0	2400.0	2				IIIS	
10			CULG				0000.0	0035.0	2				IIIS
	0000	0742	CULG	0000.0	0618.0	1							IN
			CULG				0000.0	0143.5	1				IS, C, DC
			PALE				0003.8	0018.6	2				G
			CULG				0004.0		3				IIIB
			CULG				0006.5	0011.5	3	0008.0	0012.0	2	IIIG, G, U
			CULG				0012.0	0012.5	3				IIIG
			CULG				0014.5	0736.5	1				RSDP, N
			CULG				0035.0	0135.5					IIIS, W
			CULG				0046.5	0131.0	1				IIIN
			CULG				0303.0	0459.0	1				IN
			CULG	0447.0	0535.0	2							IN
			LEAR				0447.0	0939.0	1				CONT
			CULG				0452.5	0720.5	2				IIIN
			CULG				0452.5	0737.5	1				IIIN
			CULG				0452.5	0742.0					IIIS, W
			CULG				0453.0	0453.5	1				IIIG
			CULG				0459.0	0741.5	1				IS, C, DC
	0622	1402	WEIS				0625.0	1431.0	1				IN
	1407	1643	WEIS				0641.4	0641.5	1				IIIB
	0648	1617	BLEN				0648.0E	1617.0D					I, DC
		WEIS				0648.8	0649.0	1				IIIB	
		WEIS				0756.3	0756.9	1				IIIG	

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S P E C T R A L O B S E R V A T I O N S

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Day	Observation		Sta	Decimetric Band			Metric Band			Dekametric Band			Spectral Type	
	Start (UT)	End (UT)		Start (UT)	End (UT)	Int (1-3)	Start (UT)	End (UT)	Int (1-3)	Start (UT)	End (UT)	Int (1-3)		
10			WEIS				0839.0	0854.8	2				IIIGG	
			WEIS				0850.4	0910.1	2				II	
			LEAR				0851.8	0901.8	1				II	
			WEIS				1106.2	1106.3	1				IIIB	
			BLEN				1125.0	1132.3	2				III,G	
			WEIS				1201.4	1201.5	1				IIIB	
			BLEN				1204.6	1214.6	2				III,G	
			WEIS				1204.7	1204.8	1				IIIB	
			WEIS				1210.0	1212.3	3				IIIGG	
			WEIS				1231.3	1231.4	1				IIIB	
			WEIS				1234.1	1234.2	1				IIIB	
			WEIS				1239.0	1239.3	1				IIIB	
			BLEN	1353.3	1412.0	2							DCIM	
		2042	2400	CULG				2042.5	2151.5	1				IIIN
			CULG				2042.5	2105.5					IIIS,W	
			CULG				2153.0	2158.5	1				IS	
11	0000	0742	CULG										I	
			CULG	0055.5	0056.0	1							IIIS,W	
			CULG				0111.0	0159.5					IN	
			CULG				0111.0	0647.0	1				III	
			LEAR				0111.1	0120.8	1				IIIN	
			CULG				0111.5	0739.5	1				CONT	
			LEAR				0131.8	0206.0	1				IIIB	
			CULG				0132.5		2				IIIB	
			CULG				0137.0		2				G	
			LEAR				0556.0	0609.5	1				CONT	
			CULG				0631.8	0717.6	1				IIIN	
		0621	1644	WEIS				0632.0	0645.5	2				IIIG
				WEIS				0632.1	0634.4	2				IIIG
				WEIS				0640.5	0642.0	1				IIIG
				WEIS				0643.8	0645.4	1				IIIG
				LEAR				0649.2	0649.4	1				III
		0645	1620	BLEN				0746.1	0746.8	1				III,GG
			BLEN				1224.7	1227.9	3				IIIG	
	2042	2400	CULG	2254.5	2255.0	1							IIIG	
12	0000	0612	CULG											
	0614	1255	WEIS											
	0645	1630	BLEN	1420.4	1420.8	3							DCIM	
	1506	1646	WEIS											
	2042	2400	CULG											
13	0000	0741	CULG											
	0617	1647	WEIS											
	0645	1630	BLEN											
2041	2400	CULG												
14	0000	0721	LEAR				0115.8	0117.0	1				III	
			CULG				0116.0	0116.5	3				IIIG,U,V	
			CULG				0505.0	0515.0	1				IIIS	
			LEAR				0507.5	0514.0	1				III	
			CULG	0510.0	0511.5	1								
	0645	1630	BLEN											
	0615	1358	WEIS				1151.4	1151.6	2				IIIG	
1435	1649	WEIS												
2041	2400	CULG	2106.0	2106.5	1	2106.5		1				IIIG		
15	0000	0741	CULG											
	0612	1651	WEIS											
	0645	1056	BLEN											
16	0021	0741	CULG											
	0610	1312	WEIS											
	1123	1630	BLEN											
	1321	1345	WEIS											
	2042	2400	CULG	2159.0		1							DCIM	
		CULG				2224.5		2				IIIB		
		CULG	2227.0	2227.5	2	2227.5	2228.0	2				IIIG		
		CULG	2259.0		2	2259.0	2259.5	3				IIIG,U		

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Observation			Decimetric Band			Metric Band			Dekametric Band			Spectral Type	
Day	Start (UT)	End (UT)	Start (UT)	End (UT)	Int (1-3)	Start (UT)	End (UT)	Int (1-3)	Start (UT)	End (UT)	Int (1-3)		
16						2259.0	2259.6	1				III	
			CULG	2322.0	2323.0	3	2322.0	2323.0	3			IIIG	
17	0000	0740	CULG	0057.0	0057.5	1	0057.0	0057.5	1			IIIG	
			LEAR				0057.1	0057.5	1			III	
			CULG				0217.5		2			IIIB	
			CULG	0304.0		1	0304.0	0304.5	3			IIIG,V	
			CULG				0347.5		1			IIIG	
	0635	1630	BLEN				0639.5	0639.7	3			IIIG	
			BLEN	0654.4	0654.7	3	0654.4	0654.7	3			IIIG	
			CULG	0654.5		1	0654.5		1			IIIG	
			CULG	0727.5		1	0727.5	0728.0	1			IIIG	
			BLEN	0727.6	0734.5	3	0727.6	0734.5	3			IIIGG,V	
			CULG	0731.0	0732.0	2	0731.5	0732.0	3			IIIGG	
			CULG	0734.0	0734.5	2	0734.0		2			IIIG	
			BLEN				0811.5	0811.8	3			IIIG	
			BLEN	0824.9	0825.5	2						DCIM	
			BLEN	0900.5	0902.1	2						DCIM	
			BLEN	1033.3	1033.6	3	1022.5	1033.6	3			IIIG	
			BLEN	1059.6	1100.4	2	1056.6	1100.4	3			IIIG,DCIM	
	1004	1653	WEIS				1133.4	1133.6	3			IIIG	
			BLEN				1201.8	1202.6	2			IIIG	
			BLEN	1222.2	1222.4	2						DCIM	
			WEIS				1233.3	1235.0	3			DCIM	
			BLEN	1234.3	1253.3	2	1233.4	1238.5	3			IIIGG,V,DCIM	
			BLEN	1334.5	1337.0	3						DCIM	
	2041	2400	CULG				2111.0	2137.0	1			IN	
			CULG	2339.5	2400.0		2340.0	2400.0				IS,W	
18	0000	0740	CULG				0000.0	0015.0				IS,W	
			CULG				0015.0	0549.0	1			IN	
			LEAR				0121.6	0211.5	1			CONT	
			CULG				0127.0	0324.0	1			IIIN	
			CULG				0150.5		2			IIIB	
			LEAR				0229.8	0231.1	1			III	
			CULG				0230.0	0231.0	3			IIIG	
			CULG				0315.5		2			IIIG	
			LEAR				0315.6	0316.0	1			III	
			CULG	0338.0	0518.0	1						IN	
			LEAR				0534.8	0556.6	1			G	
			CULG				0536.5	0538.5	3			IIIG	
			CULG				0715.0	0716.0	3			IIIGG	
			LEAR				0715.1	0716.1	2			III	
	0630	1630	BLEN				0715.3	0715.9	2			IIIGG	
	0605	1202	WEIS				0715.3	0716.3	3			IIIGG	
			LEAR				0802.0	0802.3	1			III	
			LEAR				0831.6	0832.0	1			III	
			WEIS				0831.7	0832.0	2			IIIG	
			WEIS				0940.3	0941.3	2			IIIG	
			WEIS				1025.0	1025.9	3			IIIG	
			WEIS				1028.7	1029.2	3			IIIG	
			WEIS				1136.5	1139.4	3			IIIGG	
			WEIS				1154.2	1154.6	3			IIIG	
	1210	1655	WEIS									V	
			PALE				1818.8	1820.8	2				
	2040	2400	CULG										
19	0000	0740	CULG				0113.0	0117.0	1			IIIS	
			LEAR				0113.0	0113.1	1			III	
			CULG	0140.0	0140.5	1	0140.0	0140.5	2			IIIG	
			LEAR				0140.1	0140.5	1			III	
			PALE				0140.1	0140.5	1			III	
			CULG				0209.0		1			IIIB	
			PALE				0219.8	0220.5	2			III	
			CULG				0220.0	0220.5	3	0220.0	0220.5	3	IIIG
			LEAR				0220.0	0220.6	2			III	
			CULG				0247.5	0252.5	1			IIIS	
			CULG				0300.5	0301.0	3	0301.0		2	IIIB
			LEAR				0300.6	0301.0	2			III	
			CULG	0312.5	0612.5	1						IN	
			CULG				0431.5	0438.5	3	0431.5	0436.5	2	IIIS

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Day	Observation		Sta	Decimetric Band			Metric Band			Dekametric Band			Spectral Type	
	Start (UT)	End (UT)		Start (UT)	End (UT)	Int (1-3)	Start (UT)	End (UT)	Int (1-3)	Start (UT)	End (UT)	Int (1-3)		
19			LEAR				0431.6	0437.5	3				III	
			CULG				0506.0	0637.0					IIIS,W	
			CULG				0506.5	0721.5	1				IIIN	
			LEAR				0506.5	0506.8	1				III	
			LEAR				0509.5	0745.0	1				CONT	
			CULG				0524.0	0712.5	1				IN	
		0604	1655	WEIS			0612.0	1646.0	2				IIIN	
				CULG			0616.0		2				IIIB	
				WEIS			0641.9	0642.1	3				IIIG	
				CULG			0704.5		3				IIIB	
				WEIS			0704.7	0704.8	3				IIIB	
				CULG			0721.5	0722.5	2				IIIG	
		0630	1630	BLEN			1043.5	1630.0D					I,N	
				BLEN	1420.3	1420.4	1						IIIG	
				WEIS			1421.3	1422.8	2				IIIG	
		2040	2400	CULG			2040.0	2145.0	1				IS	
				CULG			2145.0	2335.0	1				IN	
				CULG	2338.5	2347.0	1	2335.0	2400.0	1			IS	
	20	0000	0739	CULG				0000.0	0729.0					IS,DC
			LEAR				0207.1	0207.8	1				III	
			LEAR				0347.0	0347.3	1				III	
			CULG				0351.5	0352.5	3	0351.5	0352.0	3	IIIG	
			LEAR				0351.6	0352.6	2				III	
		0602	1021	WEIS			0628.0	1654.0	1				IN	
				LEAR			0630.0	0650.0	1				CONT	
				LEAR			0710.0	0812.0	1				CONT	
		1045	1658	WEIS			0739.0	1236.0	1				IIIN	
				LEAR			0924.8	0925.1	1				III	
				WEIS			0924.8	0925.0	1				RS	
		0630	1630	BLEN	1314.9	1324.0	1	0630.0E	1630.0D	2			I,N	
		2040	2400	CULG	2040.0	2400.0	1	2040.0	2400.0	1			IS,C,DC	
21		0000	0730	CULG	0000.0	0154.0	1	0000.0	0156.0	1				IS
				LEAR				0111.3	0111.5	1				III
				LEAR				0220.5	0220.6	1				III
				LEAR				0517.6	0517.8	1				III
			0630	1630	BLEN			0630.0E	1630.0D	2				I,N
					BLEN	0829.8	0830.2	3						DCIM
				WEIS			0851.8	0851.9	1				RS	
		0600	1659	WEIS			0927.0	1654.0	1				IN	
				WEIS			1328.7	1328.8	1				IIIB	
				WEIS			1330.6	1330.7	1				IIIB	
		2040	2400	CULG										
	22	0000	0739	CULG	0106.0	0319.0	1							IN,DC
		0630	1630	BLEN				0630.0E	0715.0	1				I,N
0552		0908	WEIS				0639.0	0715.0	1				I	
			WEIS				1019.2	1019.3	1				IIIB	
			WEIS				1131.0	1152.0	1				I	
		0912	1700	WEIS			1426.5	1426.9	1				IIIG	
				SGMR			1723.5	1724.0	1				V	
				SGMR			1732.5	1740.0	1				V	
				SGMR			1848.6	1849.6	1				V	
				PALE			1850.3	1850.6	2				V	
		2040	2400	CULG										
23		0630	0714	BLEN										
		0000	0738	CULG				0648.0		1				IIIB
			LEAR				0652.5	0652.6	1				III	
			LEAR				0853.0	0853.3	1				III	
		0556	1701	WEIS			0853.1	0853.4	3				IIIG	
				WEIS			0928.2	0928.3	1				IIIG	
				LEAR			0943.8	0944.1	1				III	
				WEIS			0943.9	0944.6	3				IIIG	
				WEIS			1026.7	1027.1	2				IIIG	
				WEIS			1029.6	1029.7	1				IIIB	
				WEIS			1203.2	1205.2	2				IIIG	
				WEIS			1216.6	1216.8	1				IIIB	
				WEIS			1232.7	1233.3	3				IIIG	
			WEIS			1347.6	1349.7	3				IIIG/VU		

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Day	Observation		Sta	Decimetric Band			Metric Band			Dekametric Band			Spectral Type
	Start (UT)	End (UT)		Start (UT)	End (UT)	Int (1-3)	Start (UT)	End (UT)	Int (1-3)	Start (UT)	End (UT)	Int (1-3)	
23			SGMR				1347.8	1349.1	3				V
			SGMR				1351.0	1353.1	2				V
			WEIS				1351.0	1354.3	3				IIIG
			SGMR				1454.1	1454.8	1				V
			WEIS				1454.2	1454.8	3				IIIG
	1531	1630	BLEN				1531.0E	1630.0D	2				I
			WEIS				1630.2	1630.3	2				IIIG
			WEIS				1654.8	1656.9	2				IIIG
			SGMR				1656.1	1656.6	1				V
			SGMR				1731.3	1731.5	1				III
			PALE				1813.8	1814.0	2				III
			SGMR				1813.8	1814.1	1				III
			SGMR				1847.0	1847.1	1				III
			PALE				1847.1	1847.3	1				III
			PALE				1852.3	1854.1	3				V
			SGMR				1852.5	1854.3	3				V
			PALE				1854.6	1854.8	1				V
			SGMR				1854.6	1854.8	1				III
			PALE				1906.3	1906.5	2				III
			SGMR				1906.3	1906.5	1				III
			SGMR				1934.1	1934.3	1				III
	2039	2400	CULG				2045.5	2051.5	3				II N,U
			PALE				2045.5	2045.6	1				III
		SGMR				2045.6	2045.8	1				III	
		CULG				2122.0	2209.0	2				IIIN	
		CULG	2123.5	2338.0	1							IN	
		CULG				2140.5	2339.5	1				IIIN	
		CULG				2154.0	2156.5	3	2154.0	2155.5	3	IIIG,V	
		SGMR				2154.0	2155.6	2				V	
		PALE				2154.1	2155.8	3				V	
		CULG				2235.0		3				IIIB,U	
		LEAR				2300.3	2302.6	2				III	
		CULG	2302.0		3	2300.5	2303.0	3				IIIGG,V	
		PALE				2302.0	2302.8	3				V	
		LEAR				2339.8	2340.5	2				III	
		CULG				2340.0		3				IIIG	
		PALE				2340.0	2340.5	2				III	
24	0000	0738	CULG				0026.5	0027.5	3				IIIG,U
			LEAR				0026.5	0027.6	1				III
			CULG				0027.5	0424.0	1				IIIN
			CULG	0101.0	0533.0	1							IN
			CULG				0241.5	0342.5	2				IIIN
			LEAR				0241.6	0243.8	1				III
			PALE				0241.6	0242.0	2				III
			LEAR				0342.3	0342.6	1				III
			CULG				0359.5	0401.5	3				IIIG,V
			LEAR				0359.6	0401.6	2				III
	0551	0659	WEIS										I
	0630	1630	BLEN				1235.0	1301.4	1				I
	0703	1704	WEIS				1454.8	1454.9	1				IIIB
			WEIS				1546.9	1547.3	1				IIIG
	2039	2400	CULG				2116.5		1				IIIB
			CULG				2124.5		1				IIIB
25	0000	0738	LEAR				0031.3	0033.8	2				III
			CULG				0031.5	0032.0	3	0031.5		1	IIIG
			CULG				0033.5	0034.0	1				IIIG
			LEAR				0207.0	0207.6	1				III
			LEAR				0247.3	0250.1	1				III
			CULG				0247.5	0249.0	1				IIIG
			CULG				0259.0	0314.0	3				II
			LEAR				0259.3	0315.0	1				II
			PALE				0302.1	0310.8	2				II
			LEAR				0340.8	0341.1	1				III
			LEAR				0357.8	0358.3	1				III
			CULG				0358.0		2				IIIB
			CULG	0412.5	0548.5	1							IS
			CULG				0420.0		1				IIIB
		LEAR				0543.6	0544.3	1				III	
		CULG				0544.0		1				IIIB	

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Observation Day	Start (UT)	End (UT)	Sta	Decimetric Band			Metric Band			Dekametric Band			Spectral Type
				Start (UT)	End (UT)	Int (1-3)	Start (UT)	End (UT)	Int (1-3)	Start (UT)	End (UT)	Int (1-3)	
25			LEAR				0608.3	0611.1	2				III
	0549	1607	CULG				0610.5		2				IIIB
			WEIS				0610.6	0611.0	3				IIIG
			LEAR				0629.6	0629.8	1				III
			WEIS				0629.6	0629.8	1				IIIG
			LEAR				0753.3	0754.1	1				III
			WEIS				0754.0	0754.3	1				IIIB
			LEAR				0822.8	0823.3	1				III
			WEIS				0822.9	0823.3	2				IIIB
			LEAR				0855.8	0856.1	1				III
			WEIS				0855.9	0856.2	2				IIIG
	0630	1630	WEIS				1431.0	1449.6	3				II
			BLEN	1435.4	1439.4	3	1434.0	1440.6	3				IV
			WEIS				1435.4	1440.4	2				
			WEIS				1553.1	1553.6	2				CONTP
			SGMR				1610.1	1610.8	1				IIIG
			SGMR				1658.3	1659.1	1				V
	1619	1705	WEIS				1658.6	1659.3	2				V
			PALE				1926.6	1927.1	2				IIIG
			SGMR				1926.8	1951.6	1				III
			PALE				1950.1	1951.8	2				GG
	2038	2400	CULG	2043.0	2240.0	1							III
			CULG				2109.5	2156.0	3	2121.5	2155.5	2	IS
			CULG				2109.5	2219.0	1				IIIN,U
			PALE				2150.6	2151.1	2				IIIN
			SGMR				2150.8	2151.8	1				III
			PALE				2151.6	2152.8	3				V
			CULG				2152.0		3	2152.0		2	V
			PALE				2155.0	2155.3	2				IIIG,V
			CULG				2228.0	2228.5	2				V
													IIIG
26	0000	0737	CULG	0111.0	0348.5	1							IN
			CULG				0214.0	0216.5	1				IIIG
			LEAR				0214.0	0216.6	1				III
			CULG				0237.0	0706.5	1				IIIN
			CULG				0338.5		2				IIIG
			LEAR				0359.1	0359.6	1				III
			LEAR				0447.0	0448.1	1				III
			LEAR				0507.8	0508.6	1				III
			LEAR				0532.8	0533.1	1				III
			LEAR				0557.6	0610.1	1				III
	0548	1707	WEIS				0609.7	0609.9	2				G
			WEIS				0617.7	0619.4	2				IIIG
			CULG				0618.0	0713.5	2				IIIG
			LEAR				0618.1	0619.6	1				IIIN
			LEAR				0634.8	0639.0	1				III
			WEIS				0634.9	0635.2	2				III
			LEAR				0708.1	0708.6	1				IIIB
			WEIS				0708.2	0708.6	2				III
			WEIS				0741.4	0741.9	3				IIIG
			LEAR				0741.5	0744.1	1				IIIG
			LEAR				0754.6	0755.3	1				III
			WEIS				0754.6	0755.2	2				III
			WEIS				0830.4	0830.6	1				IIIG
			LEAR				0831.8	0832.6	2				IIIB
			WEIS				0831.9	0832.4	2				III
			WEIS				1243.1	1243.2	1				IIIG
			WEIS				1246.1	1249.8	3				IIIB
	0630	1630	BLEN				1248.5	1249.4	2				IIIGG
			SGMR				1248.6	1249.1	1				IIIG
			WEIS				1317.1	1317.2	1				III
			WEIS				1319.7	1319.8	1				IIIB
			WEIS				1324.7	1325.0	1				IIIB
	2039	2400	CULG										IIIG
27	0000	0737	CULG										
	0000	0737	CULG				0706.0		1				IIIB
	0630	1630	BLEN				0833.2	0843.6	3				IIIG
			LEAR				0833.3	0833.8	2				III
	0545	1549	WEIS				0833.3	0833.7	3				IIIG
			LEAR				0839.1	0839.3	1				III

SOLAR RADIO EMISSION
SPECTRAL OBSERVATIONS

MARCH 1983

Day	Observation		Sta	Decimetric Band			Metric Band			Dekametric Band			Spectral Type
	Start (UT)	End (UT)		Start (UT)	End (UT)	Int (1-3)	Start (UT)	End (UT)	Int (1-3)	Start (UT)	End (UT)	Int (1-3)	
27			WEIS				0839.2	0839.3	1				IIIB
			LEAR				0843.0	0844.1	2				III
			WEIS				0843.1	0843.1	2				IIIG
			WEIS				0847.8	0847.9	1				IIIB
			LEAR				0849.3	0849.5	1				III
			WEIS				0849.3	0849.5	2				IIIG
			WEIS				0902.8	0903.6	2				IIIG
			LEAR				0903.3	0903.3	1				III
			BLEN				1048.1	1048.2	1				IIIB
			WEIS				1140.6	1140.9	1				IIIB
			WEIS				1211.6	1211.8	2				IIIB
			WEIS				1250.2	1250.3	2				IIIB
			WEIS				1312.9	1313.6	1				IIIG
			BLEN				1327.3	1327.6	2				IIIG
			WEIS				1548.1	1548.4	1				IIIG
	2038	2400	CULG										
	2158	2400	CULG										
28	0630	1630	BLEN										
	0543	1710	WEIS				0706.2	0706.3	1				IIIB
29	0000	0737	CULG										
	0630	1630	BLEN										
	0642	1118	WEIS										
	1220	1710	WEIS										
	2037	2400	CULG										
30	0000	0736	CULG										
			CULG	0128.5		1	0128.5		1				IIIB
			CULG				0208.5	0426.0	1				IIIN
	0541	1711	WEIS										
			CULG				0708.0	0711.5	1				IIIG
			PALE				2335.3	2336.1	2				III
	2037	2400	CULG				2335.5		2				IIIB,U
			LEAR				2335.5	2336.0	1				III
		CULG	2336.5	2338.5	1	2336.5	2339.0	1				IIIS	
31	0000	0735	CULG										
	0540	0754	WEIS										
	0758	1713	WEIS										
	2043	2400	CULG										

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

- | | |
|--|-------------------------------|
| B = Single burst | RS = Reverse slope burst |
| G = Small group (< 10) of bursts | DP = Drifting pairs |
| GG = Large group (> 10) of burst | DC = Drifting Chains |
| C = Underlying continuum (particularly with Type I) | H = Herringbone |
| S = Storm in the sense of intermittent but apparently connected activity | W = Weak |
| N = Intermittent activity in this period | P = Pulsations |
| U = U-shaped burst of Type III | CONT = Continuum |
| | UNCLF = Unclassified activity |
| | DCIM = Fast drift |

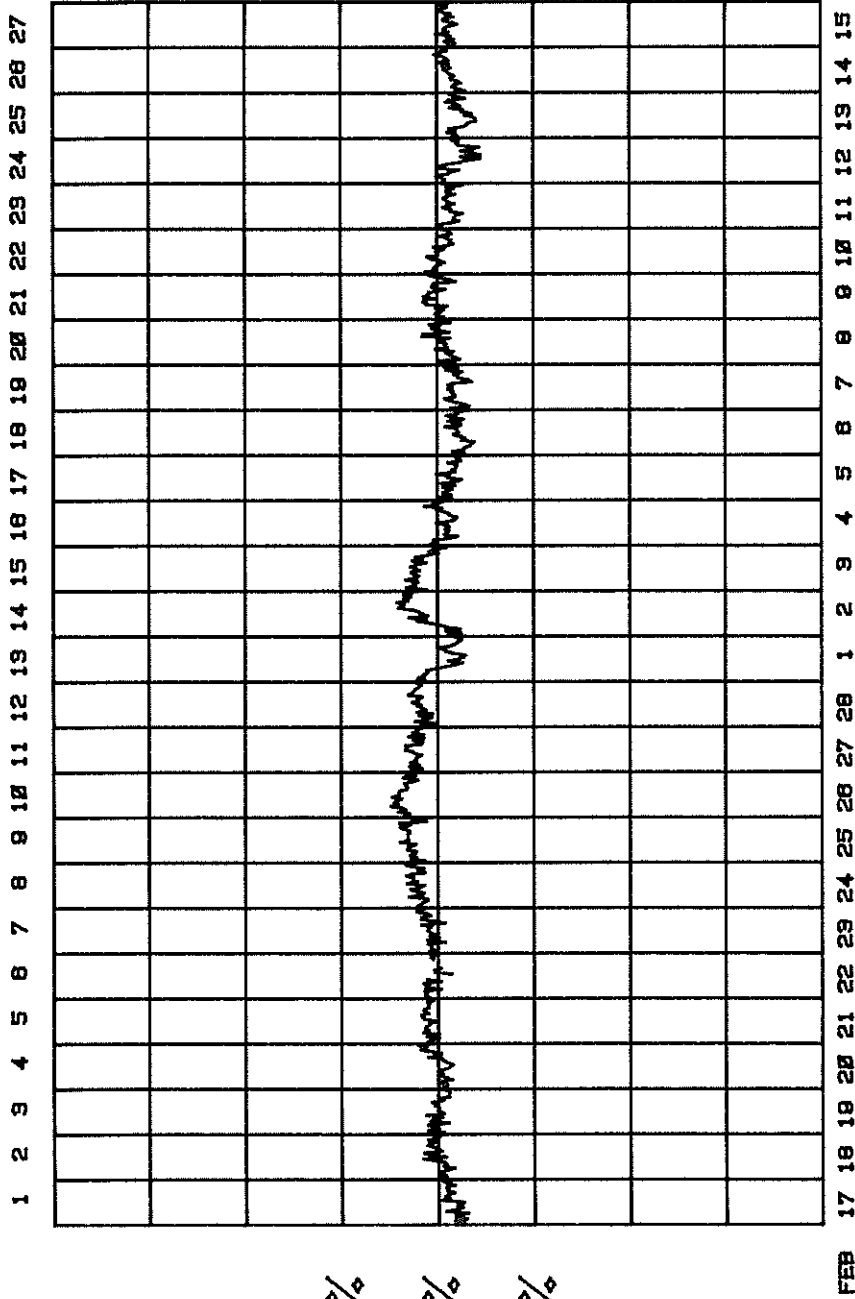
C O S M I C R A Y I N D I C E S
(Neutron Monitors)
March 1983

97
Mar 83

Mar 1983	THULE Average (cts/h)/100	KIEL Average (cts/h)/100	TOKYO Average (cts/h)/100
1	4050	5619.6	3542.4
2	4101	5692.4	3562.6
3	4104	5686.7	3562.9
4	4054	5635.4	3542.0
5	4038	5606.3	3544.9
6	4020	5617.4	3556.3
7	4030	5636.2	3562.9
8	4056	5671.8	3575.9
9	4070	5706.2	3574.8
10	4060	5675.0	3559.2
11	4041	5656.5	3549.0
12	4027	5659.1	3554.4
13	4020	5642.4	3547.0
14	4043	5654.2	3537.5
15	4047	5664.8	3535.8
16	4050	5663.9	3531.9
17	4059	5675.1	3546.0
18	4074	5696.1	3560.8
19	4089	5726.5	3566.0
20	4079	5731.0	3561.7
21	4086	5747.8	3557.7
22	4082	5769.0	3561.5
23	4110	5765.5	3550.7
24	4107	5753.0	3554.5
25	4102	5795.2	3580.0
26	4054	5713.7	3552.5
27	4082	5734.2	3547.7
28	4109	5789.9	3565.5
29	4150	5800.2	3586.4
30	4120	5781.1	3578.5
31	4114	5776.1	3578.5
MEAN	4072	5701.4	3557.7

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

THULE NEUTRON MONITOR



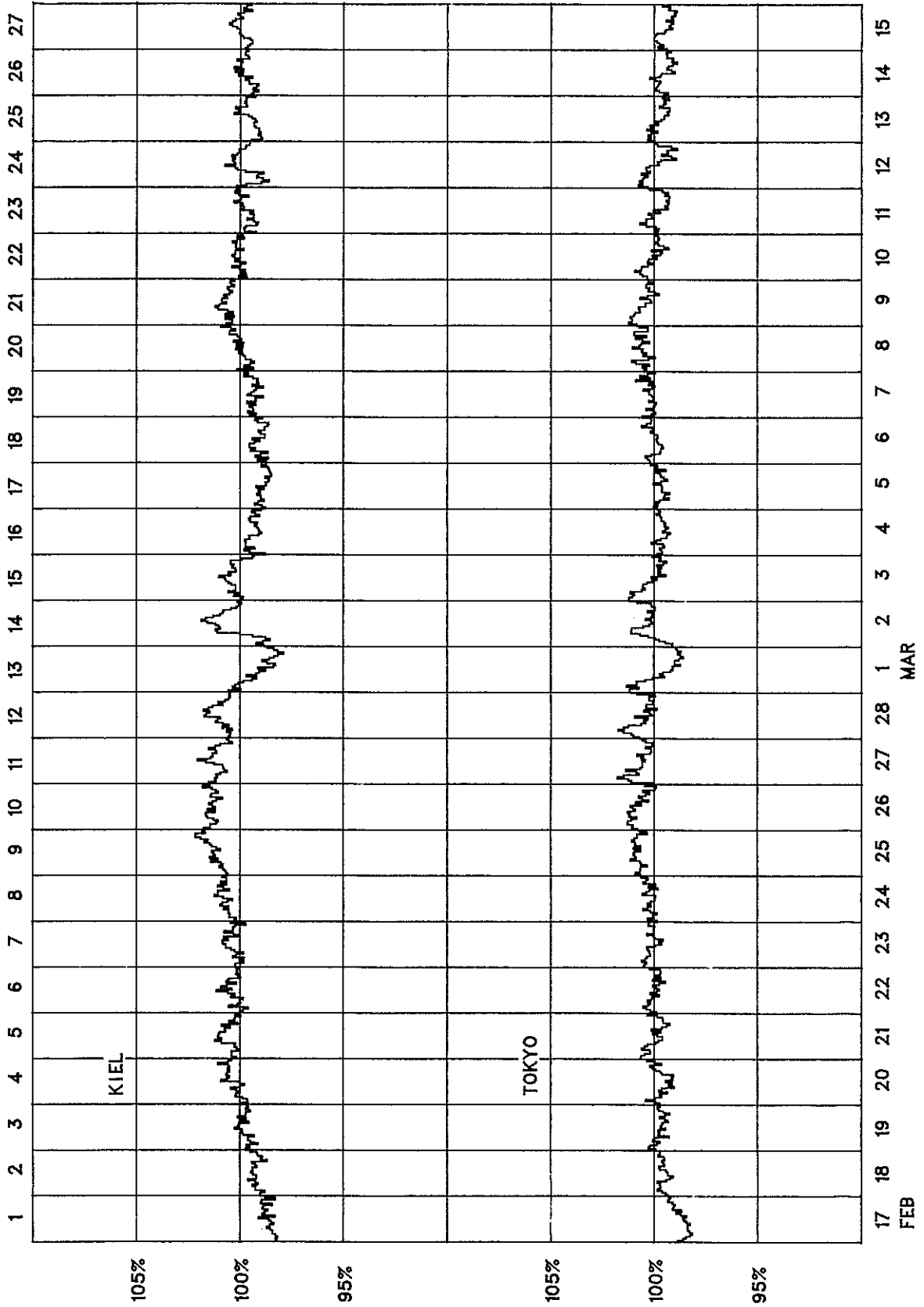
105%
100%
95%

FEB 17 18 19 20 21 22 23 24 25 26 27 28 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 MAR 1983

BARTELS ROTATION 2044

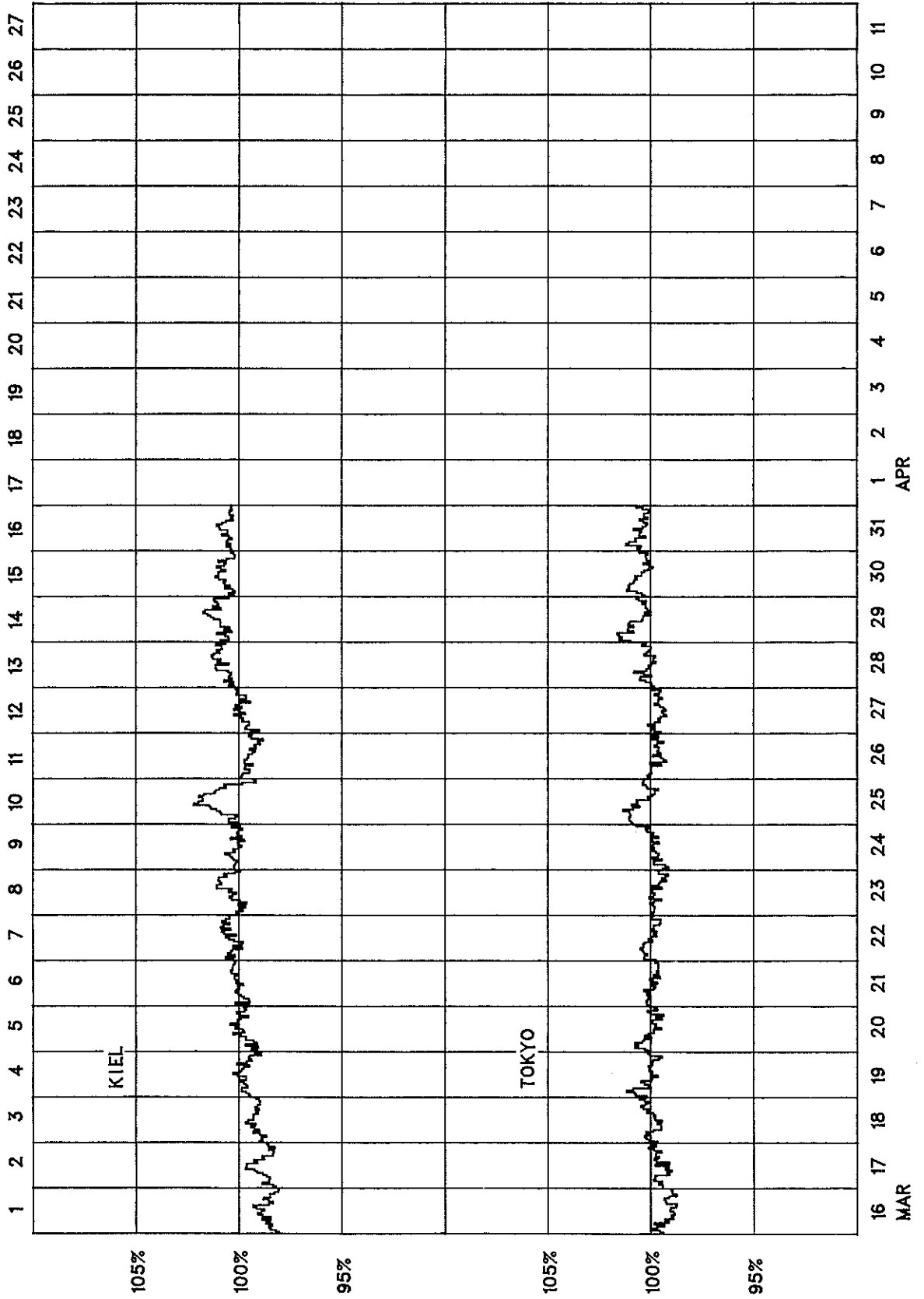
COSMIC RAY INDICES
(Neutron Monitor)

Bartels Rotation 2044 (February 1983-March 1983)



COSMIC RAY INDICES
(Neutron Monitor)

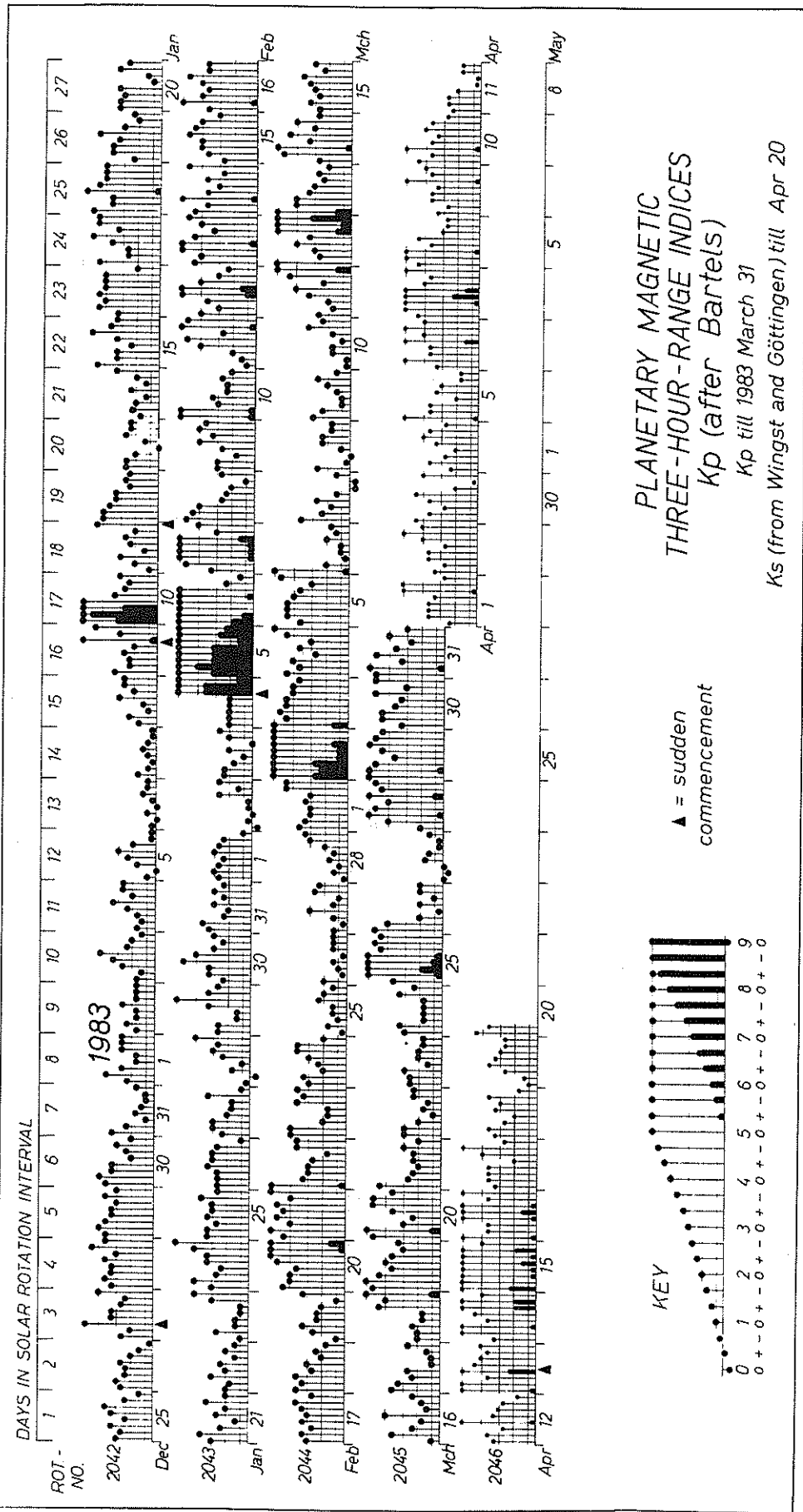
Bartels Rotation 2045 (March 1983—April 1983)



DAILY AVERAGE INDICES A_p

DAY	1982										1983		
	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	
1	20	22	20	18	12	9	28	36	2	11	11	21	
2	42	30	18	10	55	12	24	32	4	7	5	86	
3	48	45	9	6	26	21	10	21	9	11	7	36	
4	22	19	7	2	15	32	10	8	13	9	59	26	
5	21	14	6	4	18	39	9	9	11	6	143	28	
6	18	6	14	15	25	199	19	11	3	3	47	12	
7	5	4	14	21	107	88	35	4	29	4	43	7	
8	12	5	9	15	6	12	21	12	27	9	18	6	
9	10	8	16	10	23	50	6	8	18	20	18	8	
10	61	5	51	10	27	10	15	11	46	78	23	7	
11	47	9	32	36	28	13	14	20	20	11	24	24	
12	15	6	59	48	22	14	15	16	14	18	33	53	
13	11	6	62	144	10	15	34	18	6	8	35	24	
14	6	8	24	153	7	14	30	12	8	8	28	26	
15	10	20	26	36	3	12	8	13	11	22	25	15	
16	11	10	10	50	6	12	14	9	13	25	30	11	
17	19	12	6	24	16	11	21	6	62	25	16	11	
18	12	20	7	24	16	30	23	12	41	32	14	20	
19	8	12	24	28	10	28	17	10	34	17	10	28	
20	20	8	18	24	12	24	14	6	46	14	41	32	
21	32	8	9	11	15	76	11	25	37	12	36	12	
22	18	4	20	16	24	135	8	30	42	8	21	9	
23	9	2	20	12	17	26	5	36	26	10	17	9	
24	15	4	21	50	18	22	5	83	19	22	14	10	
25	52	8	17	22	20	13	15	54	14	16	6	50	
26	7	24	16	27	20	84	30	26	9	12	5	13	
27	24	54	32	27	11	42	16	17	18	10	7	3	
28	21	56	27	21	12	14	10	28	21	10	8	37	
29	31	35	19	22	38	9	35	32	20	16		40	
30	30	35	39	23	28	12	27	13	15	19		27	
31		31		25	16		34		7	13		28	
MEAN	22	17	22	30	21	36	18	21	21	16	27	23	

GEOMAGNETIC ACTIVITY INDICES



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Mar 83

PRINCIPAL MAGNETIC STORMS

MARCH 1983

Sta	Geomag Lat	Commencement		SC Amplitudes			Maximum 3-Hour K Index Day(3-Hour Periods)	Ranges			End Hour Day (UT)	
		Time Day (UT)	Type	D (Min)	H (Gamma)	Z (Gamma)		D K (Min)	H (Gamma)	Z (Gamma)		
COL 64.6N	01	19--	..	..	..	..	02(3,4) 03(4) 05(4)	7	296	1850	1390	06 03
SIT 60.0N	01	23--	..	..	..	..	02(3)	8	--	--	1110	06 03
WIT 54.2N	01	1154	SC*	- 20	- 3	0	02(1,2,3,6) 04(7,8)	6	40	245	185	04 23
IRK 41.0N	01	0218	SC	4.4	15	0	02(1,4,5,6) 03(4)	6	36	204	81	03 21
JAI 17.3N	01	0400	..	..	..	..	..	-	8	248	36	03 02
UJJ 13.5N	01	0400	..	..	..	..	..	-	7	258	28	03 02
ABG 09.5N	01	0400	..	..	..	..	02(6)	6	8	278	30	03 02
TRD 01.1S	01	0400	..	..	..	..	..	-	5	338	122	03 02
HER 33.7S	01	20--	..	..	..	..	02(6)	6	34	169	121	03 03
GNA 43.2S	01	02--	..	..	..	..	02(3)	6	29	160	170	04 04
CNB 43.9S	01	20--	..	..	..	..	02(4)	6	32	177	132	03 20
KGL 56.5S	01	1153	SC	3	25	5	02(6)	9	140	830	470	03 04
GUA 04.0N	02	0031	..	..	..	..	02(4)	6	--	210	30	02 21
GUA 04.0N	03	0733	..	..	..	..	03(5)	5	--	50	20	03 20
HYB 07.6N	04	2000	..	..	..	..	05(5,6)	5	3	86	21	06 03
HER 33.7S	04	19--	..	..	..	..	04(8)	5	14	70	48	04 22
HYB 07.6N	10	0500	..	..	..	..	12(6,8) 14(3)	5	6	194	29	14 22
WIT 54.2N	11	18--	..	..	..	..	12(7)	8	42	220	165	-- --
FRD 49.6N	11	12--	..	..	..	..	12(8) 13(1)	6	30	165	124	16 --
GUA 04.0N	11	0454	..	..	..	..	11(4)	5	--	100	10	12 04
COL 64.6N	12	07--	..	..	..	..	12(6)	7	362	1550	1050	15 22
IRK 41.0N	12	0800	..	..	..	..	12(8)	6	32	129	86	14 22
GUA 04.0N	12	1649	..	..	..	..	12(8)	6	--	80	10	13 13
HER 33.7S	12	16--	..	..	..	..	12(8)	6	19	90	118	13 02
KGL 56.5S	12	10--	..	..	..	..	12(6)	9	148	1200	305	13 18
FRD 49.6N	17	2011	SC	- 1	- 8	1	18(8) 19(2) 20(1)	5	22	100	51	26 06
COL 64.6N	18	15--	..	..	..	..	18(6) 19(5) 20(5,6)	6	230	1500	820	21 18
WIT 54.2N	18	17--	..	..	..	..	18(8)	6	31	160	85	20 23
HYB 07.6N	18	0500	..	..	..	..	18(6,8)	5	4	124	24	20 22
HER 33.7S	18	17--	..	..	..	..	18(8)	5	13	85	97	19 03
COL 64.6N	24	19--	..	..	..	..	25(4,5)	7	229	1460	860	26 05
FRD 49.6N	24	18--	..	..	..	..	25(3)	6	33	162	117	-- --
GNA 43.2S	24	18--	..	..	..	..	25(4,5)	6	28	170	210	26 03
SIT 60.0N	25	03--	..	..	..	..	25(4)	7	--	--	740	26 03
IRK 41.0N	25	0543	SC	2.1	24	2	25(3,4,7)	6	34	168	76	26 10
BJI 28.5N	25	0544	SC	.6	12	0	25(3)	7	16	163	44	26 10
HON 21.1N	25	0542	SC	..	6	3	25(3)	6	8	185	32	26 05
JAI 17.3N	25	0545	SC	- .3	15	- 3	..	-	7	165	37	26 03
UJJ 13.5N	25	0545	SC	- .1	19	- 4	..	-	6	173	37	26 03
ABG 09.5N	25	0545	SC	- .4	17	- 7	25(3)	6	5	186	44	26 03
HYB 07.6N	25	0544	SC	- .2	19	- 2	25(4,5)	6	6	203	30	26 10
GUA 04.0N	25	0544	SC*	..	13	- 5	25(3)	6	--	150	20	25 21
GUA 04.0N	25	2234	..	..	40	- 11	26(1)	6	--	110	40	26 09
TRD 01.1S	25	0545	SC	- .1	44	45	..	-	3	282	173	26 03
HER 33.7S	25	05--	..	..	..	..	25(3,7) 26(1)	5	26	145	117	26 03
CNB 43.9S	25	04--	..	..	..	..	25(3)	6	28	174	103	26 03
KGL 56.5S	25	0543	SC	- 6	- 40	- 5	25(5)	7	74	560	345	26 06
HYB 07.6N	27	2100	..	..	..	..	28(3)	6	7	270	32	31 22
COL 64.6N	28	04--	..	..	..	..	28(6)	7	424	1910	1040	01 21
WIT 54.2N	28	06--	..	..	..	..	..	-	28	140	110	30 01
IRK 41.0N	28	0400	..	..	..	..	28(3,6,8) 29(6)	6	27	160	41	30 21
BJI 28.5N	28	04--	..	..	..	..	28(3)	6	12	185	44	31 22
JAI 17.3N	28	0400	..	..	..	..	..	-	8	229	44	29 03
UJJ 13.5N	28	0400	..	..	..	..	..	-	7	236	38	29 03
ABG 09.5N	28	0400	..	..	..	..	..	7	8	251	36	29 03
GUA 04.0N	28	0408	..	..	..	..	28(3)	6	--	180	60	28 20
TRD 01.1S	28	0400	..	..	..	..	..	-	--	--	--	29 03
HER 33.7S	28	04--	..	..	..	..	28(3) 29(6)	5	30	176	122	30 01
GNA 43.2S	28	04--	..	..	..	..	28(3,6) 29(3,4,5)	5	15	120	100	29 20
CNB 43.9S	28	04--	..	..	..	..	28(3,6) 29(4) 31(4)	5	18	158	51	01 20
KGL 56.5S	28	0706	SC	..	..	..	28(5,8) 29(1,8)	6	65	420	340	30 06

Reports were received from the following observatories:

ALIBAG	COLLEGE	GUAM	HYDERABAD	KERGUELEN	UJJAIN
BEIJING	FREDERICKSBURG	HERMANUS	IRKUTSK	SITKA	WITTEVEEN
CANBERRA	GNANGARA	HONOLULU	JAIPUR	TRIVANDRUM	

SUDDEN COMMENCEMENTS AND SOLAR FLARE EFFECTS

MARCH 1983

PRELIMINARY REPORT ON RAPID VARIATIONS

Sudden Commencements (ssc)

Solar Flare Effects (sfe)

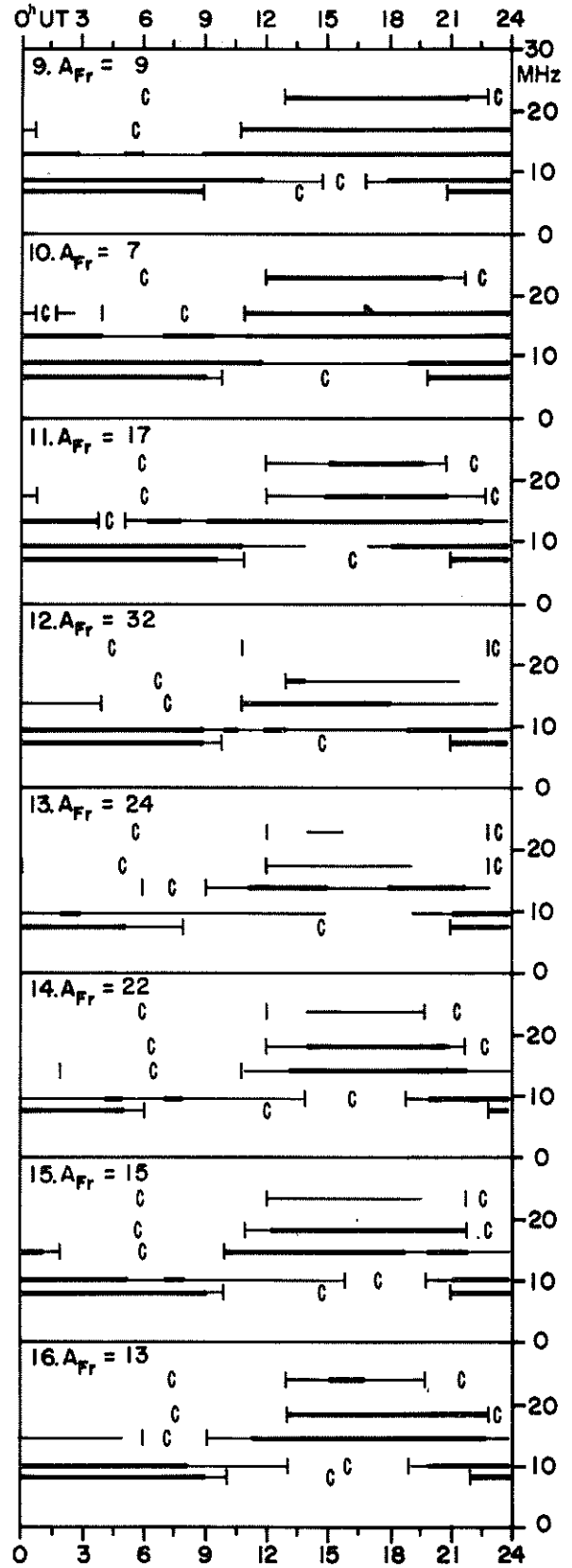
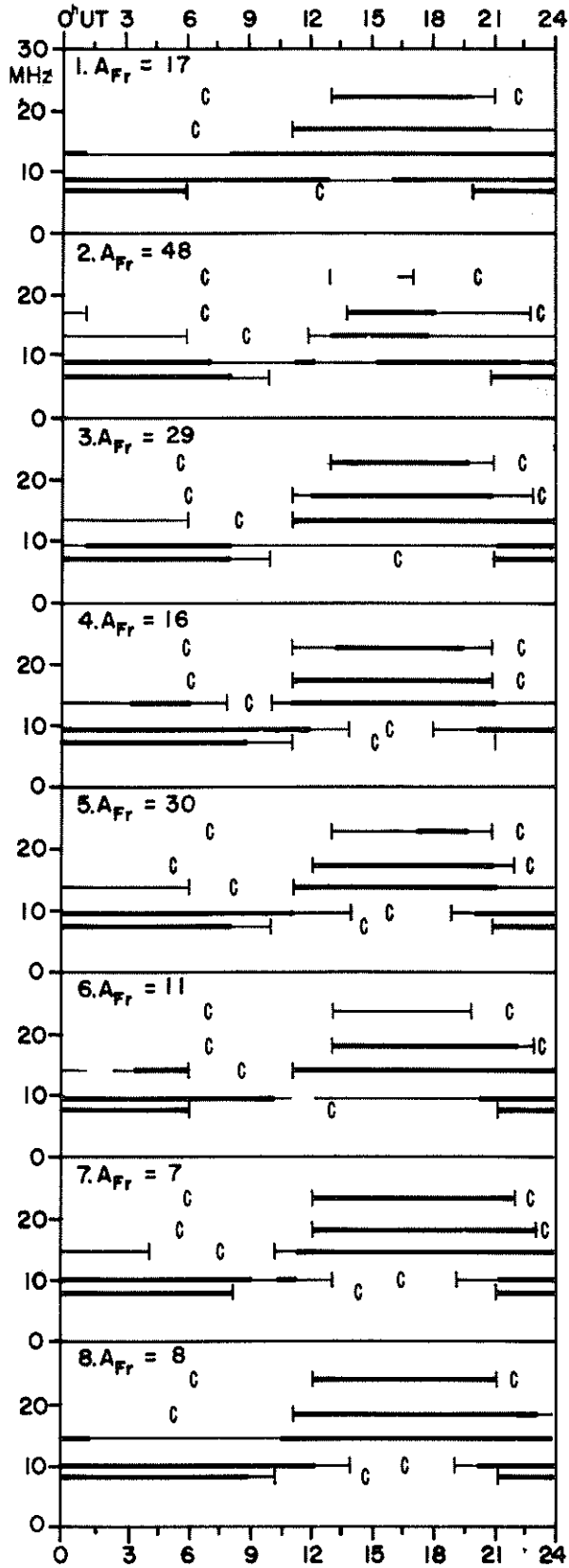
1	11 54	A: COI; B: AMS CZT KGL; C: WIT BDV (si: A: WNG - bps: A: MPO)	10 12 26 - 12 36	SOD
			<u>16 03 42 - 04 00</u>	KNY
			<u>17 09 10 - 09 30</u>	WNG
25	05 44	A: COI LNP; B: KNY MPO KGL; C: BDV MMB KAK HTY AMS CZT DUM (sfe: CLF)	17 10 05 - 10 13	NGK
			<u>17 13 34 - 14 05</u>	WNG BDV MPO (ssc: B: COI)
28	07 06	B: MPO CZT; C: CLF KGL (si: A: COI)	18 01 57 - 02 06	LNP
			<u>18 04 39 - 05 10</u>	KNY LNP
			26 13 12 - 13 38	SOD

Reporting Observatories:

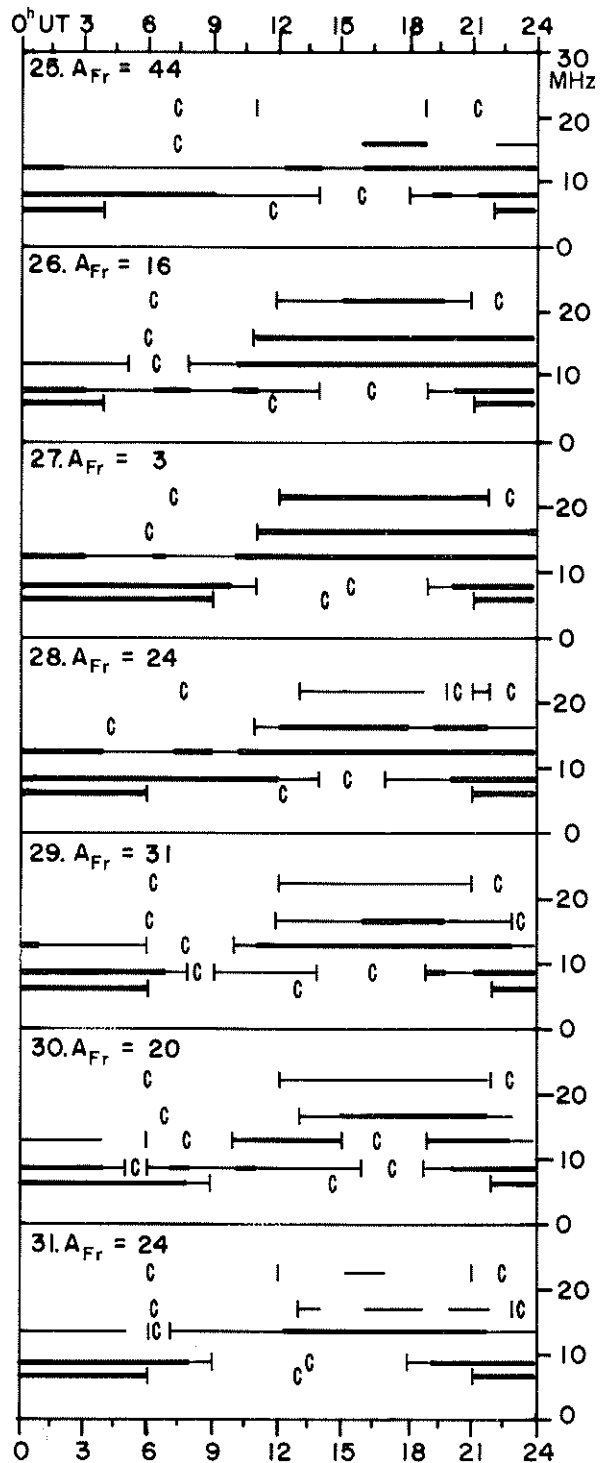
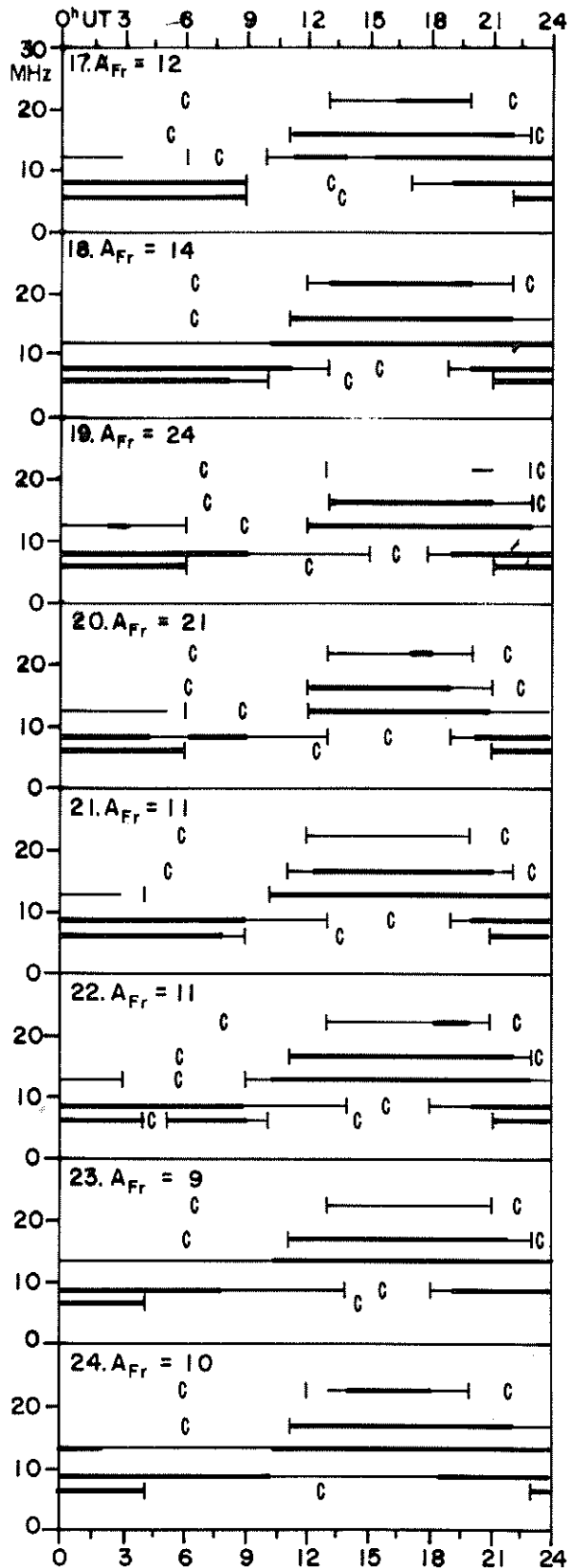
SOD DOB NUR WNG WIT NGK HAD BDV CLF MMB AQU EBR COI FRD KAK
HTY KNY LNP MPO AMS CZT KGL DUM

TRANSMISSION FREQUENCY RANGES -- NORTH ATLANTIC PATH

MARCH 1983



TRANSMISSION FREQUENCY RANGES -- NORTH ATLANTIC PATH
MARCH 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 $1 \mu\text{V/m}$ (transmitter power reduced to 1 kW). Observed field strengths between -12 dB above $1 \mu\text{V/m}$ and -40 dB above $1 \mu\text{V/m}$ are represented by the fine line.

RADIO PROPAGATION QUALITY INDICES
March 1983

DAY	TOKYO	NEW YORK	TEHERAN	OSLO	BRACKNELL
1	8.0	7.3	6.0	6.6	7.3
2	6.3	3.7	4.7	4.9	6.9
3	7.2	5.9	8.7	8.6	7.6
4	7.5	6.1	7.6	7.2	6.9
5	5.8	5.6	7.2	5.4	4.9
6	6.8	6.2	7.5	6.1	6.6
7	7.1	6.8	7.4	6.7	6.5
8	7.9	8.1	8.6	7.4	6.8
9	7.5	8.8	6.3	7.4	7.7
10	7.6	7.9	5.9	5.8	6.0
11	7.1	6.2	8.7	6.2	6.6
12	3.9	0.4	0.0	2.5	2.9
13	2.2	0.0	0.7	1.8	1.6
14	3.9	1.9	4.7	4.8	4.0
15	5.2	3.1	8.6	5.5	5.0
16	5.9	3.5	7.4	4.8	4.9
17	5.1	4.9	6.9	5.1	4.9
18	6.0	6.1	5.3	5.5	5.3
19	6.0	3.4	7.3	5.1	4.6
20	4.9	3.9	6.6	3.8	5.3
21	5.9	3.4	6.6	4.2	4.6
22	5.5	3.9	7.3	5.5	6.0
23	6.1	5.5	8.1	6.1	6.3
24	6.1	6.2	5.3	6.1	5.5
25	4.1	1.2	5.7	3.4	4.3
26	6.4	6.3	5.0	5.0	5.0
27	7.7	7.6	5.0	6.6	6.4
28	6.2	4.5	7.3	6.0	6.1
29	3.6	3.2	4.9	4.7	4.8
30	5.0	3.6	6.6	6.3	6.2
31	4.6	2.7	6.6	5.8	5.6
MEAN	5.9	4.8	6.3	5.5	5.6

CALCULATION OF QUALITY INDICES (Q)

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

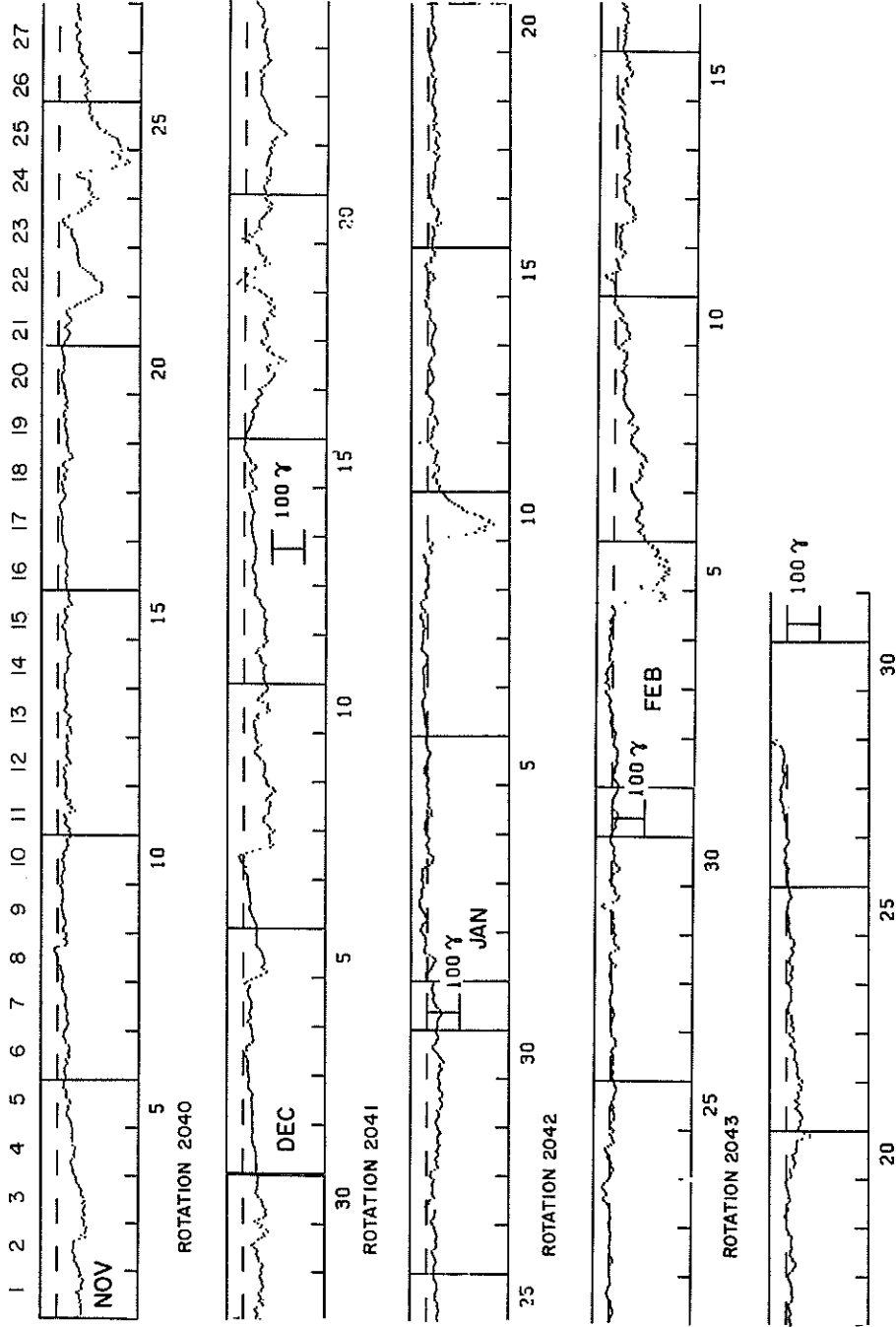
SGD 465 Part I (Prompt)

LATE DATA

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GEOMAGNETIC ACTIVITY INDICES
Hourly Equatorial Dst
by Bartels Rotation



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

HOURLY EQUATORIAL DST VALUES (PROVISIONAL)

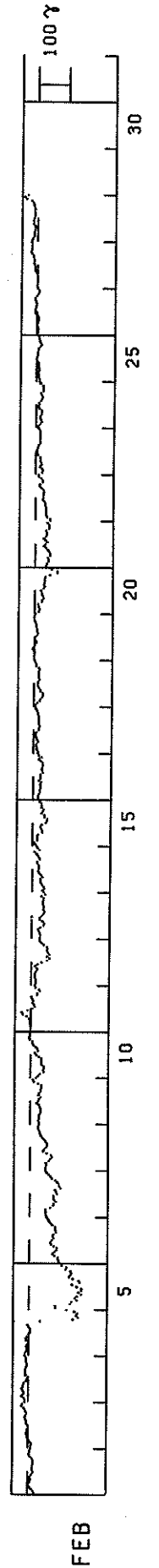
FEBRUARY 1983

NASA/GODDARD SPACE FLIGHT CENTER

(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	-20	-17	-10	-6	-2	-3	-8	-9	-6	-10	-14	-17	-13	-14	-15	-16	-16	-17	-12	-6	-3	-6	-6	-8
2	-9	-10	-9	-4	0	3	5	7	4	2	-1	2	6	6	8	11	8	5	8	11	15	22	19	11
3	10	14	22	16	15	17	21	17	16	14	8	4	0	9	11	10	9	7	4	4	8	8	8	12
4	12	9	5	6	8	4	0	7	10	5	0	-5	-6	-5	0	4	51	-36	-141	-159	-152	-156	-146	-120
5	-85	-83	-132	-137	-154	-148	-155	-168	-159	-168	-169	-153	-138	-163	-159	-140	-127	-133	-136	-132	-117	-120	-104	-106
6	-94	-91	-91	-80	-74	-82	-87	-88	-78	-69	-67	-72	-78	-75	-77	-85	-84	-82	-81	-73	-67	-63	-59	-55
7	-52	-51	-52	-51	-66	-76	-78	-85	-78	-77	-76	-87	-85	-81	-99	-94	-93	-88	-81	-71	-66	-59	-54	-45
8	-48	-51	-53	-51	-59	-65	-70	-67	-53	-42	-45	-51	-55	-54	-50	-45	-39	-35	-32	-30	-27	-25	-26	-25
9	-28	-26	-28	-28	-30	-34	-34	-32	-31	-27	-20	-26	-28	-34	-26	-28	-34	-34	-36	-35	-25	-11	-8	-18
10	-24	-31	-43	-41	-44	-42	-36	-34	-35	-35	-27	-18	-13	-23	-22	-17	-9	-7	-6	3	4	1	2	1
11	1	0	1	2	3	4	6	15	27	30	10	-5	-13	-9	-5	-8	-4	-1	-19	-20	-29	-25	-14	-11
12	-15	-14	-11	-11	-11	-11	-14	-19	-18	-12	-20	-33	-51	-58	-50	-58	-53	-50	-52	-49	-40	-32	-27	-26
13	-27	-28	-25	-23	-21	-28	-38	-41	-34	-25	-26	-32	-39	-41	-37	-38	-38	-36	-35	-37	-38	-31	-43	-35
14	-34	-40	-37	-32	-27	-26	-27	-34	-28	-22	-19	-21	-22	-21	-17	-15	-24	-22	-18	-13	-7	-22	-17	-13
15	-8	-6	-16	-16	-14	-18	-32	-30	-28	-24	-29	-43	-46	-47	-38	-37	-29	-32	-36	-28	-28	-27	-21	-20
16	-16	-16	-19	-23	-20	-24	-25	-22	-26	-19	-24	-24	-24	-32	-28	-27	-30	-31	-30	-24	-17	-26	-18	-13
17	-14	-10	-10	-8	-11	-15	-11	-9	-7	-6	-9	-16	-17	-20	-17	-16	-16	-17	-17	-14	-13	-10	-7	-5
18	-6	-11	-19	-21	-27	-29	-28	-20	-19	-14	-11	-13	-14	-18	-15	-14	-15	-15	-18	-15	-7	-8	-4	-1
19	0	0	-1	-2	2	5	1	-3	-7	-5	0	-4	-9	-12	-8	-8	-6	-5	-4	-2	1	1	1	-3
20	-13	-15	-14	-11	-10	-22	-24	-28	-26	-22	-21	-19	-27	-32	-29	-32	-32	-32	-34	-48	-48	-72	-54	-48
21	-36	-39	-44	-43	-41	-48	-49	-44	-41	-35	-28	-33	-40	-33	-27	-35	-38	-37	-35	-44	-46	-44	-33	-48
22	-47	-38	-35	-33	-34	-34	-34	-31	-32	-29	-24	-25	-25	-26	-28	-25	-19	-13	-14	-23	-22	-18	-10	-9
23	-20	-24	-20	-13	-19	-17	-15	-15	-14	-7	-4	-6	-5	-8	-9	-15	-13	-14	-13	-15	-15	-15	-12	-7
24	-8	-13	-18	-16	-12	-14	-18	-18	-18	-10	-8	-10	-9	-15	-19	-21	-17	-15	-23	-24	-24	-21	-13	-10
25	-10	-8	-7	-6	-7	-9	-8	-6	-6	-5	-1	0	-3	-4	-5	-6	-7	-12	-16	-12	-9	-8	-7	-7
26	-4	-4	-5	-2	-1	-2	-5	-6	-6	-2	4	6	6	3	2	1	3	6	6	1	-4	-7	-7	-1
27	0	0	0	0	0	0	1	3	7	8	7	9	12	10	11	13	14	19	22	18	17	17	17	20
28	17	15	10	11	10	9	7	9	13	12	14	11	9	10	9	7	9	11	13	15	20	37	42	31



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Late
Feb 83

SUDDEN COMMENCEMENTS AND SOLAR FLARE EFFECTS

FEBRUARY 1983

PRELIMINARY REPORT ON RAPID VARIATIONS

Sudden Commencements (ssc)

4 16 15 A: DOB NUR WNG WIT NGK VAL HAD
DOU CLF MMB AQU EBR COI TOL FRD
KAK HTY KNY LNP MPO GNA AMS CZT
KGL DUM
19 04 40 B: DOB WNG FRD; C: AQU EBR TOL -
bp: B: MPO

Solar Flare Effects (sfe)

3 05 42 - TAN
3 05 58 - 07 20 MMB KAK HTY KNY LNP
4 08 48 - 08 57 WIT
5 13 37 - 14 00 WNG
7 03 42 - TAN
8 08 52 - TAN

Reporting Observatories:

DOB NUR WNG WIT NGK VAL HAD DOU CLF MMB AQU EBR COI TOL FRD KAK HTY KNY
LNP TAN MPO GNA AMS CZT KGL DUM

C O S M I C R A Y I N D I C E S
 (Neutron Monitors)
 December 1982

113
 Late
 Dec 82

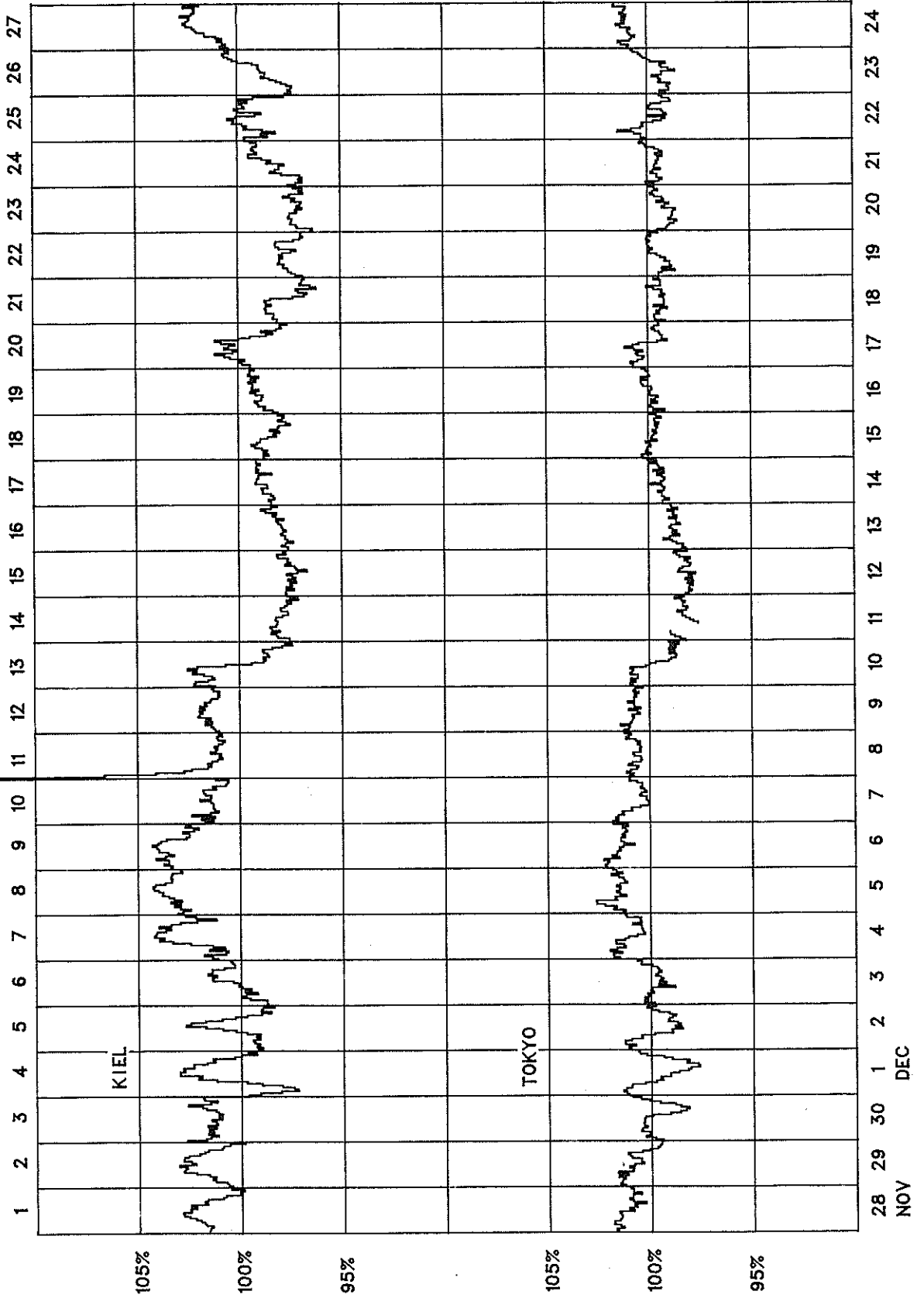
ERRATA

Dec 1982	TOKYO Average (cts/h)/100
1	3438.7
2	3444.5
3	3447.6
4	3489.7
5	3509.2
6	3505.7
7	3477.5
8	3478.2
9	3480.3
10	3445.9
11	3395.9
12	3388.9
13	3409.2
14	3433.0
15	3446.1
16	3449.8
17	3455.2
18	3433.0
19	3436.5
20	3424.1
21	3440.7
22	3445.5
23	3435.6
24	3490.2
25	3490.2
26	3486.9
27	3470.0
28	3430.7
29	3444.5
30	3468.2
31	3484.5
MEAN	3454.1

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

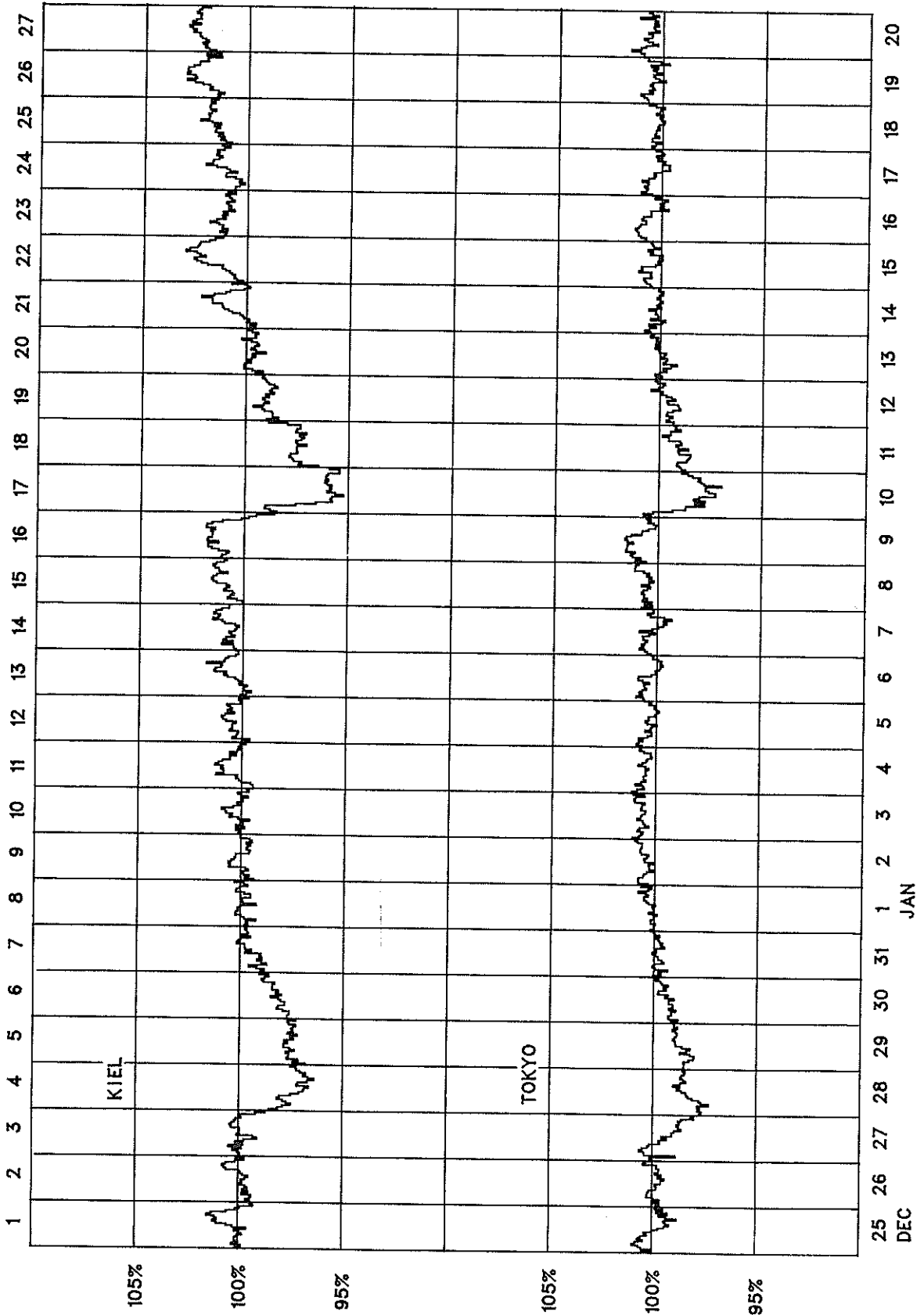
COSMIC RAY INDICES
(Neutron Monitor)

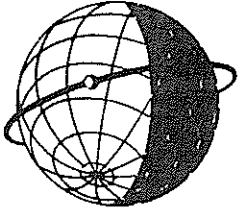
Bartels Rotation 2041 (November 1982-December 1982)



COSMIC RAY INDICES
(Neutron Monitor)

Bartels Rotation 2042 (December 1982-January 1983)





WORLD DATA CENTER A
FOR
SOLAR-TERRESTRIAL PHYSICS



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

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