PB86-176443

Solar-Geophysical Data Number 482, October 1984 Part 1 (Prompt Reports). Data for September 1984, August 1984 and Late Data

(U.S.) National Geophysical Data Center
Boulder, CO

Prepared for

National Aeronautics and Space Administration
Washington, DC

Oct 84

PB86-176443

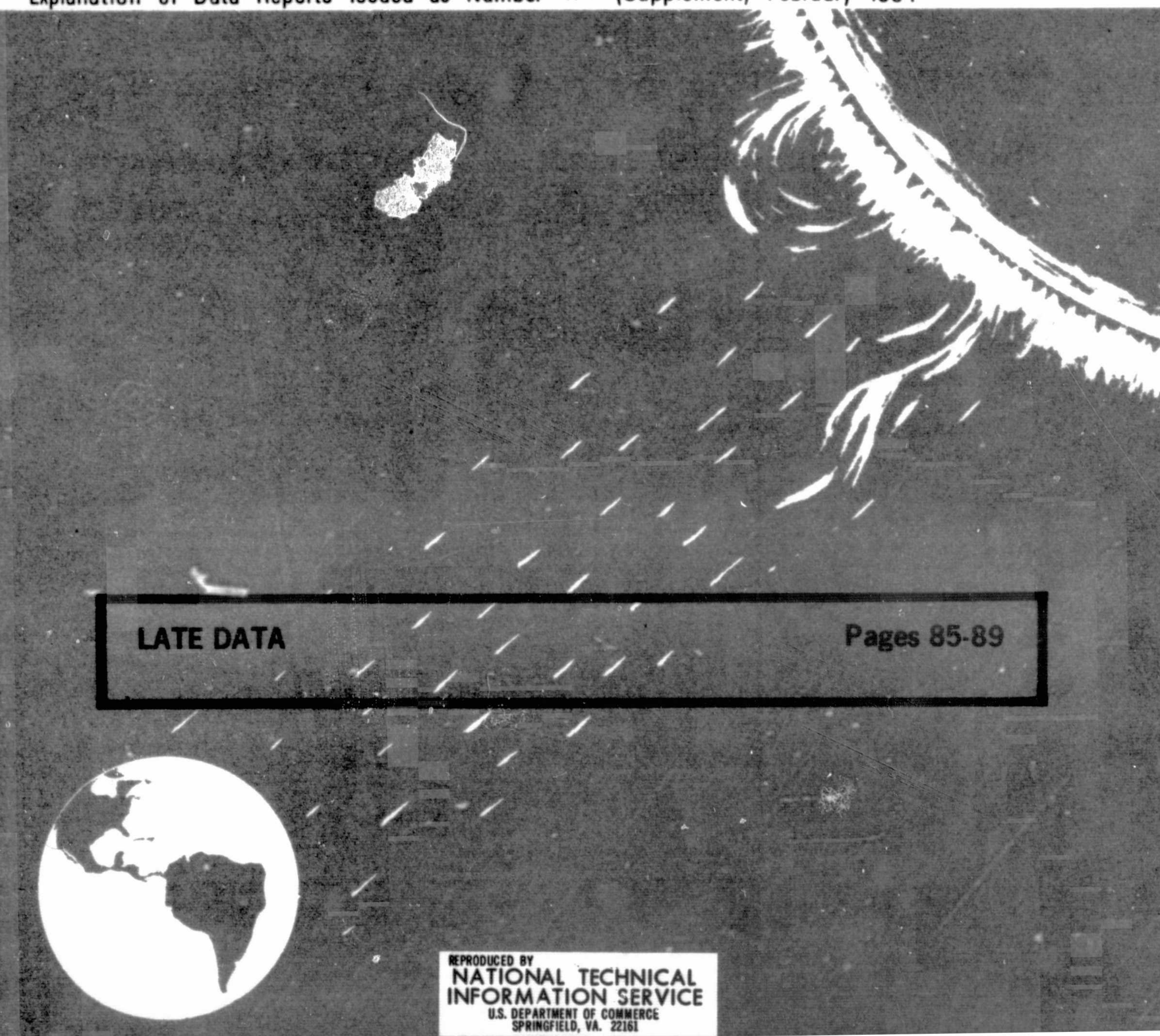
OCTOBER 1984 NUMBER 482 -- Part I

Solar-Geophysical Data prompt reports

DEPARTMENT OF COMMERCE • UNITED STATES OF AMERICA •

Data for September 1984, August 1984 & Late Data

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



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U.S. DEPARTMENT OF COMMERCE
Malcolm Baldrige, Secretary

NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION
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NATIONAL ENVIRONMENTAL SATELLITE, DATA, AND INFORMATION SERVICE
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Solar - Geophysical Data

Part I (Prompt Reports)

NO. 482 OCTOBER 1984

DATA FOR
SEPTEMBER 1984
AUGUST 1984

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

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For sale through the National Geophysical Data Center, NOAA/NESDIS, E/GC2, 325 Broadway, Boulder, Colorado 80303. Subscription Price for the U.S., Canada and Mexico: $70.00 annually for both Part I (Prompt Reports) and Part II (Comprehensive Reports) or $35.00 annually for either part. Annual supplement containing explanation is included. For foreign mailing $90.00 for both parts or $45.00 for either part. We now require prepayment for all orders. Please include with your request a check or money order payable in U.S. currency to the Department of Commerce, NOAA/NGDC. Any bank charges should be paid by the subscriber. Payment may be made through an American Express, Mastercard or VISA credit cards. Please include the correct name of credit card holder, card number and expiration date. Prices are subject to change. UNESCO coupons acceptable.

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BACK ISSUES OF "SOLAR-GEOPHYSICAL DATA"

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by H. E. Coffey.

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Contents--Detailed index for 1984; Data for September 1984--(IUWDS alert periods (Advance and worldwide) Solar activity indices, Solar flares, Solar radio emission, Inferred interplanetary magnetic field polarity graph, Mean solar magnetic field); Data for August 1984--(Solar active regions, Sudden ionospheric disturbances, Solar radio spectral observations, Cosmic ray measurements by neutron monitor, Geomagnetic indices, Radio propagation indices); Late data--(Solar radio emission August 1984 Pioneer XII interplanetary magnetic field magnitudes July 1984, Geomagnetic indices July 1984).

KEYWORDS: *Solar activity.

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SOLAR-GEOPHYSICAL DATA

NUMBER 482

(Issued in Two Parts)

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PART II (COMPREHENSIVE REPORTS)

Published with partial support from NASA (W-15,519) and NSF (ATM-831491).

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The entry "476A 46" under Feb 1984, for example, means that the sunspot drawings for Feb 1984 appear in SOLAR-GEOPHYSICAL DATA No. 476, Part I, and that they begin on page 46. "A" denotes Part I and "B", Part II. Blanks indicate data not yet received and dashes mark unavailable data.

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

Solar Proton Events 1976-1984 -- 476B118

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Prompt Reports | DATA FOR SEPTEMBER 1984 | Number 482 | Part I

ALERT PERIODS
INTERNATIONAL URSIGRAM AND WORLD DAYS SERVICE

SUMMARY OF THE GEOALERT MESSAGES SEPTEMBER 1984

NO	DI	DO	WOLF	10CM	A	LOC	TOT	M	X	OUTSTANDING EVENTS	DA	LOC	DE	ALERTS
245	01	31	056	091	013	S06W14	3	0	0		01	S06W14	Q	SOLQUIET
						N08E54	0	0	0			N08E54	Q	MAGQUIET
246	02	01	070	092	012	S07W28	2	0	0		02	S07W28	E	SOLQUIET
						N12W16	0	0	0			N12W16	Q	MAGQUIET
						N07E41	0	0	0			N07E41	Q	
						N04E70	0	0	0			N04E70	Q	
247	03	02	086	092	021	S07W41	4	0	0		03	S07W41	E	SOLQUIET
						S11W03	2	0	0			S11W03	Q	MAGQUIET
						N07E29	0	0	0			N07E29	Q	
						N02E43	1	0	0			N02E43	Q	
						N04E56	1	0	0			N04E56	Q	
248	04	03	081	093	015	S06W56	3	0	0		04	S06W56	E	SOLQUIET
						S12W18	6	0	0			S12W18	Q	MAGALERT
						N01E30	0	0	0			N01E30	Q	MINOR
						N04E43	0	0	0			N04E43	Q	
249	05	04	080	090	042	S06W70	5	0	0	PRESTO MAGSTORM 04/0740 UT	05	S06W70	Q	SOLQUIET
						S17W64	0	0	0			S17W64	Q	MAGALERT
						S12W32	0	0	0			S12W32	Q	MINOR 05/06
						N02E17	1	0	0			N02W17	Q	
						N04E29	0	0	0			N04E29	Q	
250	06	05	079	088	036	S06W84	0	0	0		06	S06W84	Q	SOLQUIET
						S18W79	1	0	0			S18W79	Q	MAGALERT
						N12W53	0	0	0			N12W53	Q	MINOR
						S12W45	2	0	0			S12W45	Q	
						N02E03	0	0	0			N02E03	Q	
						N04E16	0	0	0			N04E16	Q	
251	07	06	065	085	014	S06W99	0	0	0		07	S06W99	Q	SOLQUIET
						N11W67	6	0	0			N11W67	Q	MAGQUIET
						S12W63	1	0	0			S12W63	Q	
						N01W10	0	0	0			N01W10	Q	
						N03E01	0	0	0			N03E01	Q	
252	08	07	051	085	010	N12W80	1	0	0		08	N12W80	Q	SOLQUIET
						S12W77	0	0	0			S12W77	Q	MAGQUIET
						N01W17	1	0	0			N01W17	Q	
						N05W08	0	0	0			N05W08	Q	
253	09	08	051	082	014	N11W94	0	0	0		09	N11W94	Q	SOLQUIET
						S12W84	0	0	0			S12W84	Q	MAGQUIET
						N08W24	0	0	0			N08W24	Q	
						S04E41	4	0	0			S04E41	Q	
254	10	09	015	081	009	S04E28	0	0	0		10	S04E28	Q	SOLQUIET
														MAGQUIET
255	11	10	014	078	017	S05E15	0	0	0		11	S05E15	Q	SOLQUIET
														MAGALERT
														MINOR 11/XX
256	12	11	013	077	019	N16W00	0	0	0		12	N16W00	Q	SOLQUIET
														MAGNIL
257	13	12	000	011	002		0	0	0		13			SOLQUIET
														MAGQUIET
258	14	13	000	074	012		0	0	0		14			SOLQUIET
														MAGQUIET
259	15	14	000	074	013		0	0	0		15			SOLQUIET
														MAGQUIET

ALERT PERIODS
INTERNATIONAL URSIGRAM AND WORLD DAYS SERVICE

SUMMARY OF THE GEOALERT MESSAGES SEPTEMBER 1984

NO	DI	DO	WOLF	10CM	A	LOC	TOT	M	X	OUTSTANDING EVENTS	DA	LOC	DE	ALERTS
260	16	15	000	073	010		0	0	0		16			SOLQUIET MAGQUIET
261	17	16	023	073	011	N13W50 N13W28	0 0	0 0	0 0		17	N13W50 N13W28	Q Q	SOLQUIET MAGQUIET
262	18	17	000	074	010		0	0	0		18			SOLQUIET MAGQUIET
263	19	18	000	073	007		0	0	0		19			SOLQUIET MAGQUIET
264	20	19	000	074	029		0	0	0	PRESTO MAGSTORM 19/08XX UT	20			SOLQUIET MAGALERT 20/20
265	21	20	000	074	020		0	0	0		21			SOLALERT MAGNIL 21/21
266	22	21	013	075	010	S08W44	0	0	0		22	S08W44	Q	SOLQUIET MAGALERT MINOR 22/24 FILAMENT
267	23	22	011	075	024	S08W58	0	0	0		23	S08W58	Q	SOLQUIET MAGALERT MAJOR 23/24
268	24	23	011	076	070	S08W71	0	0	0	PRESTO MAGSTORM 23/2225 UT	24	S08W71	Q	SOLQUIET MAGALERT MINOR 24/25
269	25	24	000	076	030		0	0	0		25			SOLQUIET MAGALERT 25/26
270	26	25	000	074	023		0	0	0		26			SOLQUIET MAGALERT MINOR 26/26 RECURRENCE
271	27	26	000	074	030		0	0	0		27			SOLQUIET MAGALERT MINOR 27/27 RECURRENCE
272	28	27	000	073	023		0	0	0		28			SOLQUIET MAGQUIET
273	29	28	000	073	011		0	0	0		29			SOLQUIET MAGQUIET
274	30	29	000	069	010		0	0	0		30			SOLQUIET MAGQUIET
275	01	30	011	072	014	S08W23	0	0	0		01	S08W23	Q	SOLQUIET MAGALERT MINOR 01/02

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

PRESTO MESSAGES (THE RAPID REPORT OF MAJOR EVENTS) THE MONTH OF SEPTEMBER 1984.

PRESTO KAKIOKA 05/0150 UT MAGSTORM 04/0740 UT
PRESTO KAKIOKA 20/0055 UT MAGSTORM 19/08XX UT
PRESTO BOULDER 24/0330 UT MAGSTORM 23/2225 UT

INTERNATIONAL* (R_I) RELATIVE SUNSPOT NUMBERS

Day	1983 Final Oct	Nov	Dec	1984 Final Jan	Feb	Mar	Apr	May	Jun	1984 Prov Jul	Aug	Sep
01	29	17	26	10	110	74	103	109	48	33	14	45
02	51	22	23	16	82	78	94	89	44	35	15	50
03	63	37	15	17	67	66	88	69	45	61	14	61
04	74	51	14	18	61	54	81	52	34	80	25	58
05	65	66	17	21	66	65	61	38	30	72	16	53
06	75	74	39	29	76	49	70	27	23	58	24	32
07	87	84	41	37	79	51	50	35	34	64	27	21
08	99	90	48	38	94	64	33	54	31	74	32	20
09	106	70	71	50	115	60	36	72	26	63	32	13
10	121	68	82	44	123	46	12	85	31	70	34	10
11	136	55	76	48	118	65	21	94	37	51	29	9
12	122	43	66	51	108	72	28	100	39	54	30	9
13	100	36	66	48	82	79	24	118	41	44	28	10
14	80	29	52	46	77	88	32	111	50	32	27	0
15	72	28	50	44	80	112	59	85	80	30	23	0
16	61	38	35	46	53	117	60	97	83	25	23	12
17	60	31	46	51	51	105	56	83	73	21	18	0
18	63	36	36	49	50	95	73	70	62	26	17	0
19	46	26	31	51	54	90	82	74	51	28	9	10
20	26	12	25	69	54	103	69	70	53	18	16	0
21	18	18	21	76	76	98	68	65	43	12	12	9
22	22	0	15	64	100	87	55	77	48	22	10	10
23	22	0	20	70	121	89	59	83	54	25	19	8
24	20	0	22	70	117	80	80	86	58	38	24	8
25	18	0	21	99	117	97	99	75	44	30	36	7
26	20	7	23	105	101	97	124	87	49	25	49	0
27	12	10	12	99	78	96	121	86	40	9	41	0
28	15	12	10	106	78	98	125	69	41	9	33	0
29	16	19	11	110	88	94	120	74	50	12	34	0
30	15	21	13	102		107	107	70	42	16	21	8
31	16		9	82		113		63		10	36	
Mean	56	33	33	57	85	84	70	76	46	37	25	15

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

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

ALGONQUIN RADIO OBSERVATORY, OTTAWA

Day	Oct 83	Nov	Dec	Jan 84	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
01	117.5	98.3	90.5	84.3	154.6	143.6	135.7	153.7	116.1	101.7	84.0	94.1
02	120.4	97.6	88.9	87.4	142.0*	138.2	134.6*	139.3*	111.3	103.6	86.3	93.2
03	123.1	96.9	88.5	89.5	131.4	122.5	128.8*	123.1	109.6	104.8	88.4	94.5
04	125.1	103.1	91.9	91.0	126.0	114.4*	129.5	113.5*	106.8	105.7	85.7	91.9
05	126.6*	105.1	92.0	88.2	114.2	109.3	118.7	114.9	104.6	104.4*	85.7	89.8
06	132.7	---	97.1*	85.6	111.8	109.5	112.1*	108.1	98.9	100.3	89.9	85.9
07	133.9	108.5	98.6	86.5	113.6	105.0	107.8	118.3	97.3	100.1	92.4	85.2
08	131.1*	103.5	98.3	92.3	127.2	103.8	100.7	121.9	94.6	101.1	94.0	83.4
09	130.4	99.2	108.2	94.4	139.9	102.4	94.9	138.3	93.6	104.5	94.4	80.6
10	133.6*	100.8	108.0	95.2	136.7*	98.8	93.9	150.9	92.3	101.3	95.4	79.1
11	138.3	96.7	101.7*	96.8	141.1*	98.6	97.3	147.9	93.2	96.8	90.8	77.8
12	133.7	89.6	101.1	101.1	135.8*	102.3*	107.2	148.2*	93.0	94.7	88.0	76.5
13	133.5*	91.9	100.8	102.1	128.4	114.7	113.7	151.4	98.6	92.6	86.5	75.0
14	131.5*	91.0	96.5	99.2	120.3*	121.1	118.8	146.9	110.2	92.2*	84.0	74.5
15	127.0	90.9	92.2	97.8	113.4	134.4	119.7	139.6	116.5*	92.2	82.6	73.3
16	117.2A	90.6	93.5*	96.6*	114.5*	124.0	117.2	137.3	110.3	90.1	83.1	73.4
17	110.9*	85.6	92.0	95.2	116.5	129.1	122.9*	130.1	109.5*	87.3	81.0	74.6
18	103.6	84.4	90.1	95.0	122.2*	125.8*	119.9	131.9	108.9	85.5	79.1	73.8
19	105.2	82.3	86.2	93.4	128.4*	126.5	112.5*	137.6	107.8	84.7	76.2	74.6
20	99.1	80.3	83.6	102.2	134.6	126.3	124.1*	138.0	106.6	84.8	75.6	74.1
21	89.3	79.3	82.3	103.3	143.8	122.4	127.7	145.3*	103.4*	86.7	77.2	75.1
22	87.2	80.1	82.9	110.5	158.0	122.7	130.8	130.1	104.6	86.3	75.7	75.9
23	87.8	78.2	83.0	113.3	166.1	115.1	136.6*	130.0	105.3	87.3	76.0	76.1
24	88.6	78.8	83.1	126.4*	172.9*	113.0	142.9	126.9	103.6	86.8	81.6	76.2
25	89.2	79.2	82.4*	146.8	169.4*	111.6	152.4	125.7*	104.6	85.9	83.0	74.6
26	89.1	80.4	82.9	164.8*	164.2	120.2	174.0	121.0	100.1	83.4	87.7	74.3
27	88.9	84.4	83.5	172.3	154.3	129.1*	183.7*	120.3	101.5	83.0	90.4	73.5
28	90.4	86.6	80.7	168.9	148.8	135.9	182.6*	118.5	99.5	82.5	88.6	73.1
29	90.7	89.4	81.1	174.6	148.1	138.1*	178.2*	121.0	100.3	82.3	90.3	71.7
30	92.6	90.0	81.3	161.5		143.8	170.8	119.7A	101.1	82.2	91.8	72.4
31	95.5*		83.8	169.3		143.7		115.9		83.0	93.1*	
Mean	111.7	90.4	90.5	112.4	137.2	120.8	129.7	131.1	103.5	92.2	85.8	78.9

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

DAILY SOLAR INDICES

SEPTEMBER 1984

Day	Julian Day	Bartels Cycle Day	Sunspot Numbers Int	Sunspot Numbers Amer	Obs Flux Ottawa (2800)	----- Solar Flux Adjusted to 1 Astronomical Unit ----- SGMR (15400)	SGMR (8800)	SGMR (4995)	Ottawa (2800)	SGMR (2695)	SGMR (1415)	SGMR (606)	SGMR (410)	SGMR (245)
01	246	23	45	39	92.4	578	274	131	94.1	100	78	59	27	18
02	247	24	50	46	91.6	574	275	127	93.2	101	76	60	25	16
03	248	25	61	68	92.9	499	278	129	94.5	98	77	62	28	15
04	249	26	58	58	90.4	575	272	124	91.9	94	76	60	26	14
05	250	27	53	49	88.4	576	274	118	89.8	94	75	55	25	12
06	251	1	32	31	84.5	569	270	114	85.9	88	73	50	22	13
07	252	2	21	15	83.9	579	270	116	85.2	86	76	43	21	11
08	253	3	20	17	82.2	578	268	114	83.4	88	72	47	21	12
09	254	4	13	13	79.5	576	261	113	80.6	83	69	47	21	12
10	256	5	10	11	78.0	568	260	111	79.1	82	69	43	21	12
11	257	6	9	1	76.8	558	262	111	77.8	82	67	[illegible]0	20	11
12	258	7	9	0	75.5	576	257	109	76.5	79	64	--	--	--
13	259	8	10	0	74.0	576	266	110	75.0	79	32	44	21	13
14	260	9	0	0	73.5	521	257	104	74.5	74	63	42	20	12
15	261	10	0	0	72.5	550	258	106	73.3	74	59	45	19	15
16	262	11	12	10	72.6	574	262	107	73.4	73	63	44	20	13
17	263	12	0	0	73.9	578	263	110	74.6	74	63	43	19	13
18	264	13	0	0	73.1	580	265	101	73.8	73	62	41	19	17
19	265	14	10	1	73.9	570	256	107	74.6	79	62	41	19	15
20	266	15	0	0	73.5	572	252	106	74.1	73	63	37	18	18
21	267	16	9	10	74.5	578	258	106	75.1	75	63	36	18	11
22	268	17	10	10	75.4	573	257	108	75.9	78	64	40	18	13
23	269	18	8	8	75.6	574	258	108	76.1	78	60	42	20	15
24	270	19	8	10	75.7	569	247	109	76.2	79	64	40	19	12
25	271	20	7	1	74.2	556	253	107	74.6	78	64	42	20	10
26	272	21	0	0	73.9	546	258	107	74.3	77	63	39	20	11
27	273	22	0	0	73.2	579	260	107	73.5	74	64	33	22	11
28	274	23	0	0	72.8	---	---	---	73.1	---	--	--	--	--
29	275	24	0	0	71.5	564	262	107	71.7	75	61	55	24	12
30	276	25	8	9	72.2	571	260	105	72.4	73	61	57	24	12
Mean			15	14	78.1	567	263	111	78.9	81	66	46	21	13

*Adjusted for burst in progress at time of measurement.

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

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

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

OBSERVED AND PREDICTED SOLAR ACTIVITY INDICES

SEPTEMBER 1984

	RELATIVE SUNSPOT NUMBERS						2800 MHz RADIO FLUX	
	Zurich or Internat (Ri)		American (Ra)		Derived (Rs)		Adjusted to 1 AU (Sa)	
Date	Monthly Mean	Smoothed	Monthly Mean	Smoothed	Monthly Mean	Smoothed	Monthly Mean	Smoothed
Oct 80	164.7	150	160.8	149	157.1	154	202.9	200
Nov	147.9	148	149.9	149	168.5	153	213.4	199
Dec	174.4	143	167.5	145	174.3	150	218.8	196
Jan 81	114.0	140	115.4	144	120.5	149	169.0	195
Feb	141.3	142	143.7	146	153.5	152	199.5	198
Mar	135.5	143	149.2	149	157.5	156	203.2	202
Apr	156.4	143	169.2	149	180.7	158	224.7	204
May	127.5	143	141.3	149	152.8	159	198.9	204
Jun	90.9	142	99.0	147	112.9	158	161.9	203
Jul	143.8	140	154.3	146	152.1	157	198.2	203
Aug	158.7	141	170.4	147	182.1	158	226.0	203
Sep	167.3	143	174.5	148	177.7	158	221.9	204
Oct	162.4	142	157.0	146	178.6	156	222.8	202
Nov	137.5	139	138.8	142	157.6	151	203.3	197
Dec	150.1	138	145.0	140	155.5	149	201.4	195
Jan 82	111.1	137	110.4	139	124.2	148	173.4	195
Feb	163.6	133	161.0	134	163.6	144	208.9	191
Mar	153.8	129	155.5	130	163.0	139	208.3	186
Apr	122.0	124	121.9	124	113.9	134	162.9	182
May	82.2	120	82.6	120	97.7	129	147.9	177
Jun	110.4	117	113.5	118	129.6	127	177.4	175
Jul	106.1	115	113.3	117	116.0	125	164.8	174
Aug	107.6	109	110.5	111	123.9	120	172.1	168
Sep	118.8	101	117.8	103	118.5	112	167.1	161
Oct	94.7	96	90.1	97	111.8	106	160.9	155
Nov	98.1	95	93.2	95	114.8	103	163.7	153
Dec	127.0	95	145.0	95	146.7	101	193.2	151
Jan 83	84.3	93	82.8	93	86.7	98	137.7	148
Feb	51.0	90	53.4	90	67.2	94	119.6	145
Mar	66.5	86	60.5	85	64.7	90	117.3	141
Apr	80.7	82	74.5	81	67.5	85	119.9	136
May	99.2	77	97.7	77	86.1	80	137.1	131
Jun	91.1	70	93.1	69	92.4	72	143.0	124
Jul	82.2	66	82.2	63	77.4	66	129.1	118
Aug	71.8	66	69.2	63	75.7	66	127.5	118
Sep	50.3	68	47.4	66	57.0	67	110.2	119
Oct	55.8	68	52.3	66	58.6	67	111.7	120
Nov	33.3	59	30.2	65	35.6	67	90.4	120
Dec	33.4	64	32.3	62	35.7	65	90.5	118
Jan 84	57.0	60*	54.4	58	59.4	61	112.4	115
Feb	85.4	56*	81.5	54	86.2	58	137.2	101
Mar	83.5	53*	83.0	52	68.5	55	120.8	108
Apr	69.7	51(4)*	66.5	49	78.1	53	129.7	---
May	76.4	49(6)*	72.1	48	79.6	51	131.1	---
Jun	46.1	48(8)*	45.2	47	49.8	50	103.5	---
Jul	37.0†	47(9)*	36.2	46	37.6	49	92.2	---
Aug	24.8†	45(11)*	24.5	44	30.7	47	85.8	---
Sep	15.4†	44(12)*	---	42	23.2	46	78.9	---
Oct	---	42(13)*	---	41	---	44	---	---
Nov	---	40(13)*		39		42		
Dec	---	39(13)*	---	37	---	41	---	---
Jan 85	---	37(14)*	---	36	---	39	---	---
Feb	---	36(14)*	---	35	---	37	---	---
Mar	---	34(14)*	---	33	---	36	---	---

*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.

Underlined 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

SEPTEMBER 1984

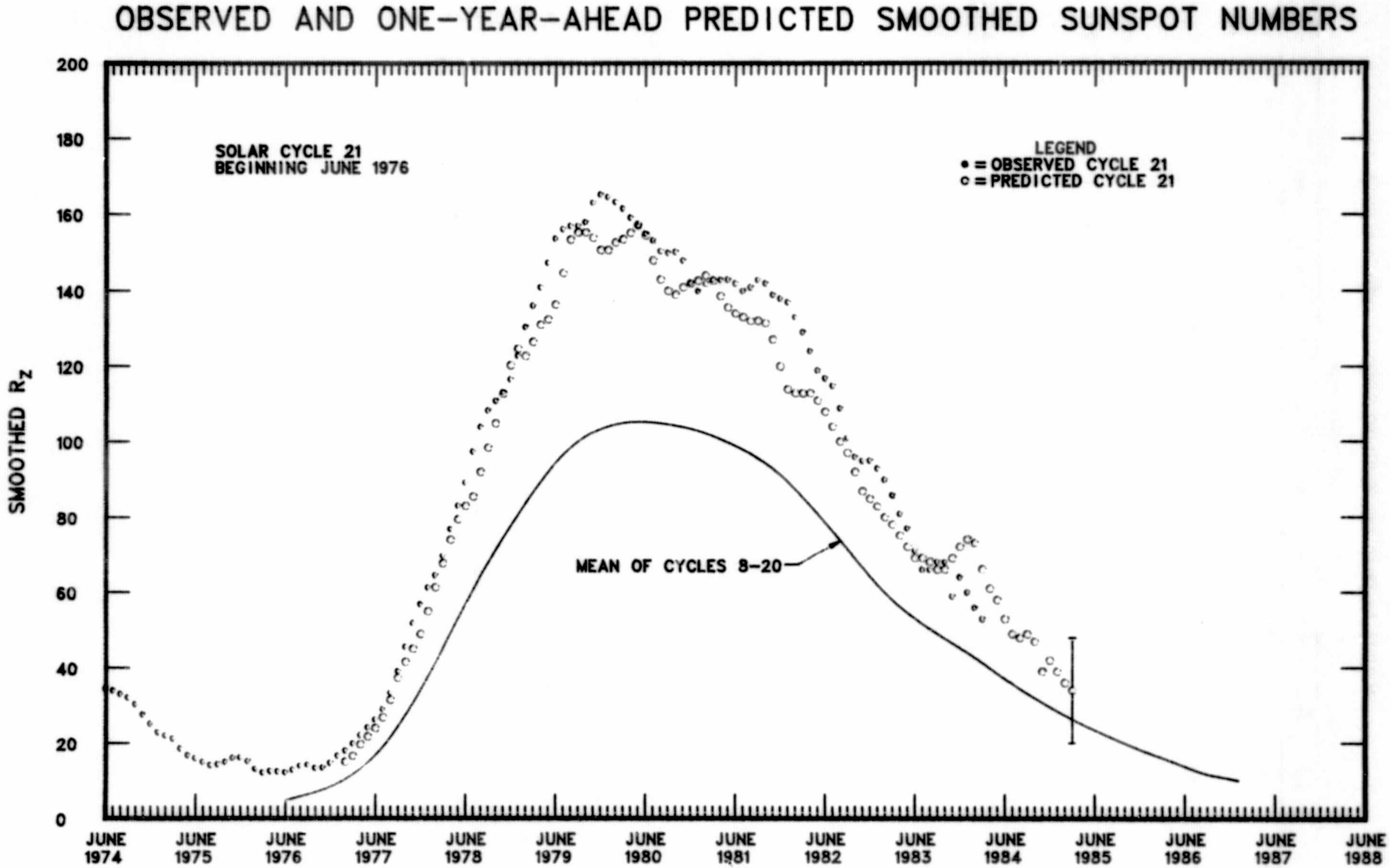
Month	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1976	15	13	12	13	13	12*	13	14	14	13	14	15
1977	17	18	20	22	24	26	29	33	39	46	52	57
1978	61	65	70	77	83	89	97	104	108	111	113	118
1979	124	131	137	141	147	153	155	155	156	158	162	165*
1980	164	163	161	159	156	155	153	150	150	150	148	143
1981	140	142	143	143	143	142	140	141	143	142	139	138
1982	137	133	129	124	119	117	115	109	101	96	95	95
1983	93	90	86	82	71	71	66	66	68	68	59	64
1984	60	56	53	51 (4)	49 (6)	48 (8)	47 (9)	45 (11)	44 (12)	42 (13)	40 (13)	39 (13)
1985	37 (14)	36 (14)	34 (14)	34 (15)	32 (16)	31 (16)	30 (15)	28 (14)	28 (14)	27 (14)	26 (14)	25 (15)
1986	25 (15)	24 (15)	23 (15)	22 (14)	21 (14)	19 (14)	18 (14)	17 (14)	16 (13)	15 (12)	15 (12)	14 (11)

An asterisk marks the minimum and the maximum of Sunspot Cycle 21.

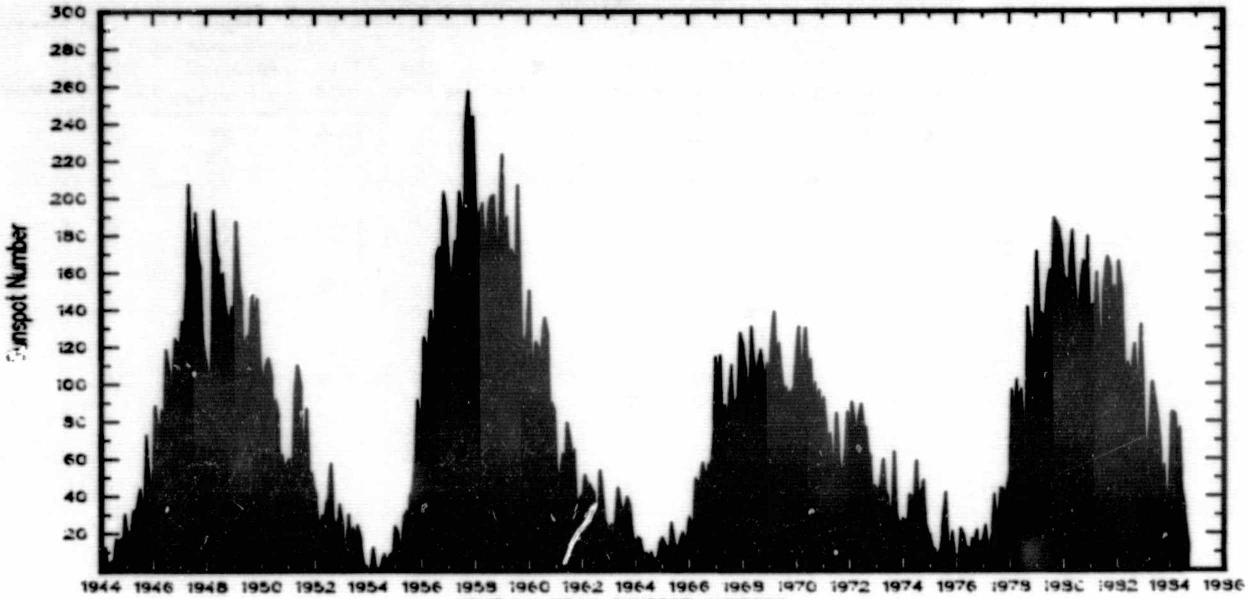
For the current solar cycle, this table gives observed smoothed sunspot numbers up to the one calculated from the most recently measured monthly mean. These smoothed observed values are based on final monthly mean Zurich numbers through 1980, on final international numbers through June 1984, and on provisional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

The entries with numbers in parentheses below them denote predictions by the McNish-Lincoln method. (See page 10 in the February 1984 edition of the "Solar-Geophysical Data" supplement.) Adding the number in parentheses to the predicted value generates the upper limit of the 90% confidence interval; subtracting the number in parentheses from the predicted value generates the lower limit. Consider, for example, the March 1985 prediction tabulated above. There exists a 90% chance that in March 1985 the actual smoothed sunspot number will fall somewhere between 20 and 48.

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


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

MONTHLY MEAN SUNSPOT NUMBERS
January 1944 – September 1984



MONTHLY MEAN SUNSPOT NUMBERS

Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1944	3.7	0.5	11.0	0.3	2.5	5.0	5.0	16.7	14.3	16.9	10.8	28.4
1945	18.5	12.7	21.5	32.0	30.6	36.2	42.6	25.9	34.9	68.8	46.0	27.4
1946	47.6	86.2	76.6	75.7	84.9	73.5	116.2	107.2	94.4	102.3	123.8	121.7
1947	115.7	133.4	129.8	149.8	201.3	163.9	157.9	188.8	169.4	163.6	128.0	116.5
1948	108.5	86.1	94.8	189.7	174.0	167.8	142.2	157.9	143.3	136.3	95.8	138.0
1949	119.1	182.3	157.5	147.0	106.2	121.7	125.8	123.8	145.3	131.6	143.5	117.6
1950	101.6	94.8	109.7	113.4	106.2	83.6	91.0	85.2	51.3	61.4	54.8	54.1
1951	59.9	59.9	55.9	92.9	108.5	100.6	61.5	61.0	83.1	51.6	52.4	45.8
1952	40.7	22.7	22.0	29.1	23.4	36.4	39.3	54.9	28.2	23.8	22.1	34.3
1953	26.5	3.9	10.0	27.8	12.5	21.8	8.6	23.5	19.3	8.2	1.6	2.5
1954	0.2	0.5	10.9	1.8	0.8	0.2	4.8	8.4	1.5	7.0	9.2	7.6
1955	23.1	20.8	4.9	11.3	28.9	31.7	26.7	40.7	42.7	58.5	89.2	76.9
1956	73.6	124.0	118.4	110.7	136.6	116.6	129.1	169.6	173.2	155.3	201.3	192.1
1957	165.0	130.2	157.4	175.2	164.6	200.7	187.2	158.0	235.8	253.8	210.9	239.4
1958	202.5	164.9	190.7	196.0	175.3	171.5	191.4	200.2	201.2	181.5	152.3	187.6
1959	217.4	143.1	185.7	163.3	172.0	168.7	149.6	199.6	145.2	111.4	124.0	125.0
1960	146.3	106.0	102.2	122.0	119.6	110.2	121.7	134.1	127.2	82.8	89.6	85.6
1961	57.9	46.1	53.0	61.4	51.0	77.4	70.2	55.9	63.6	37.7	32.6	40.0
1962	38.7	50.3	45.6	46.4	43.7	42.0	21.8	21.8	51.3	39.5	26.9	23.2
1963	19.8	24.4	17.1	29.3	43.0	35.9	19.6	33.2	38.8	35.3	23.4	14.9
1964	15.3	17.7	16.5	8.6	9.5	9.1	3.1	9.3	4.7	6.1	7.4	15.1
1965	17.5	14.2	11.7	6.8	24.1	15.9	11.9	8.9	16.8	20.1	15.8	17.0
1966	28.2	24.4	25.3	48.7	45.3	47.7	56.7	51.2	50.2	57.2	57.2	70.4
1967	110.9	93.6	111.8	69.5	86.5	67.3	91.5	107.2	76.8	88.2	94.3	126.4
1968	121.8	111.9	92.2	81.2	127.2	110.3	96.1	109.3	117.2	107.7	86.0	109.8
1969	104.4	120.5	135.8	106.8	120.0	106.0	96.8	98.0	91.3	95.7	93.5	97.9
1970	111.5	127.8	102.9	109.5	127.5	106.8	112.5	93.0	99.5	86.6	95.2	83.5
1971	91.3	79.0	60.7	71.8	57.5	49.8	81.0	61.4	50.2	51.7	63.2	82.2
1972	61.5	88.4	80.1	63.2	80.5	88.0	76.5	76.8	64.0	61.3	41.6	45.3
1973	43.4	42.9	46.0	57.7	42.4	39.5	23.1	25.6	59.3	30.7	23.9	23.3
1974	27.6	26.0	21.3	40.3	39.5	36.0	55.8	33.6	40.2	47.1	25.0	20.5
1975	18.9	11.5	11.5	5.1	9.0	11.4	28.2	39.7	13.9	9.1	19.4	7.8
1976	8.1	4.3	21.9	18.8	12.4	12.2	1.9	16.4	13.5	20.6	5.2	15.3
1977	16.4	23.1	8.7	12.9	18.6	38.5	21.4	30.1	44.0	43.8	29.1	43.2
1978	51.9	93.6	76.5	99.7	82.7	95.1	70.4	58.1	138.2	125.1	97.9	122.7
1979	166.6	137.5	138.0	101.5	134.4	149.5	159.4	142.2	188.4	186.2	183.3	176.3
1980	159.6	155.0	126.2	164.1	179.9	157.3	136.3	135.4	155.0	164.7	147.9	174.4
1981	114.0	141.3	135.5	156.4	127.5	90.9	143.8	158.7	167.3	162.4	137.5	150.1
1982	111.2	163.6	153.8	122.0	82.2	110.4	106.1	107.6	118.8	94.7	98.1	127.0
1983	84.3	51.0	66.5	80.7	99.2	91.1	82.2	71.8	50.3	55.8	33.3	33.4
1984	57.0	85.4	83.5	69.7	76.4	46.1	37.0*	24.8*	15.4*			

*Provisional

H - ALPHA SOLAR FLARES

SEPTEMBER 1984

Sta	Day	Start (UT)	Max (UT)	End (UT)	Lat	CMD	NOAA/ USAF Region	CMP Mo	CMP Day	Dur (Min)	Imp Opt	Imp Xray	See	Obs Type	Time (UT)	Area Measurement Apparent (10^{-6} Disk)	Area Measurement Corr (Sq Deg)	Remarks
PEKG	01	0110E	0110	0114	S09	W16		08	30.8	4D	SF			P	0110	29	.3	E
LEAR	01	0229	0229	0248	S07	W17	4567	08	30.8	19	SF		3	C		22		
LEAR	01	0810	0810	0830	S07	W19	4567	08	30.9	20	SN	C 1.0	3	C		83		F
PEKG	02	0001E	0001	0004D	S05	W30		08	30.8	3D	SF			P	0001	42	.5	D
PEKG	02	0331E	0331	0335	S05	W32		08	30.8	4D	SN			P	0331	42	.5	D
LEAR	02	0439	0439	0445	N02	E55		09	6.3	6	SF		3	C		15		
WEND	02	0723	0724	0734	S06	W36		08	30.6	11	SF			C	0724	31	.4	
LEAR	02	0724	0725	0729	S05	W37	4567	08	30.5	5	SN		3	C		40		
ATHN	02	0726E	0727	0730D	S07	W33		08	30.8	4D	SN		3	V	0727	32	.4	
WEND	02	1004	1031	1053	S07	W34		08	30.9	49	1N			C	1031	200	2.5	
ATHN	02	1010E	1012	1044	S07	W33		08	31.0	34D	1B	C 8.5	2	V	1012	207	2.6	
RAMY	02	1041E		1103	S07	W34	4567	08	30.9	22D	SF		3	C				F
RAMY	02	1113	1120	1132	S09	W32	4567	08	31.1	19	SF		3	C		21		
RAMY	02	1249	1249	1308	N02	E50		09	6.3	19	SF		3	C		19		F
HOLL	02	2216	2216	2219	S11	W04	4572	09	2.6	3	SF		3	C		23		
HOLL	02	2254	2302	2313	S12	W04	4572	09	2.7	19	SF		3	C		36		
PEKG	02	2304E	2304	2304D	S12	W05		09	2.6	19D	SF			P	2304	25	.3	D
HOLL	02	2346	2350	2353	S09	W41	4567	08	30.9	7	SN		3	C		28		F
LEAR	02	2348	2349	2353	S09	W41	4567	08	30.9	5	SF		3	C		34		
LEAR	03	0357	0358	0402	S11	W08	4572	09	2.6	5	SF		3	C		30		
PEKG	03	0401E	0401	0404	S13	W08		09	2.6	3D	SF			C	0401	34	.4	D
LEAR	03	0714	0715	0722	S08	W46	4567	08	30.9	8	SF		3	C		28		
LEAR	03	0745	0749	0803	S11	W09	4572	09	2.6	18	SF		3	C		46		
LEAR	03	0808	0809	0820	S07	W47	4567	08	30.8	12	SF		3	C		20		
LEAR	03	0823	0826	0832	S12	W45	4567	08	31.0	9	SF		3	C		29		
PEKG	03	0826E	0829	0836	S12	W45		08	31.0	10D	SF			C	0829	21	.3	E
LEAR	03	0826	0828	0915	S11	W10	4572	09	2.6	49	SF		3	C		26		K
LEAR	03	0826	0904	0915	S11	W10	4572	09	2.6	49	SF		3	C		33		K
PEKG	03	0828E	0828	0845	S12	W10		09	2.6	17D	SF			C	0828	34	.4	E
PEKG	03	0921	0926	0936	N05	E24		09	5.2	15	SF			C	0926	17	.2	E
HOLL	03	1822	1829	1839	S11	W17	4572	09	2.5	17	SF		3	C		39		F
HOLL	03	1851	1904	1907	S11	W16	4572	09	2.6	16	SF		3	C		25		F
HOLL	03	2040	2040	2045	S12	W16	4572	09	2.7	5	SF		3	C		24		
LEAR	04	0024	0024	0027	S07	W60	4567	08	30.5	3	SF		3	C		27		
HOLL	04	0024	0024	0027	S05	W60	4567	08	30.5	3	SF		3	C		18		FH
PEKG	04	0025E	0025	0030	S07	W60		08	30.5	5D	SF			C	0025	42	.9	E
LEAR	04	0419	0419	0424	S06	W59	4567	08	30.8	5	SF		3	C		18		
LEAR	04	0425	0430	0457	S08	W59	4567	08	30.8	32	SF		3	C		61		F
PEKG	04	0427	0431	0443D	S09	W59		08	30.8	16D	SN			C	0431	92	1.9	E
LEAR	04	0814		0818	S06	W65	4567	08	30.5	4	SN		3	C		40		H
ATHN	04	0815E	0816	0825	S05	W64		08	30.6	10D	SF		2	V	0816	80	1.9	
LEAR	04	0923	0923	0934	S07	W62	4567	08	30.7	11	SF		3	C		29		
PALE	04	1823	1824	1827	N03	E21	4573	09	6.3	4	SF		3	C		27		F
PEKG	05	0118	0122	0122D	S01	E15		09	6.2	4D	SF			P	0122	71	.8	E
ATHN	05	0646	0648	0656	S18	W70		08	31.0	10	SN		2	V	0648	48	1.6	
RAMY	05	1309	1309	1319	S12	W38	4572	09	2.7	10	SF		3	C		32		
LEAR	05	2345	2346	2353	S11	W42	4572	09	2.8	8	SF		3	C		23		F
HOLL	05	2345	2346	2353	S10	W41	4572	09	2.9	8	SF		3	C		20		F
PALE	06	1803	1804	1806	N11	W64	4575	09	1.9	3	SF		3	C		20		
HOLL	06	1803	1803	1806	N12	W64	4575	09	1.9	3	SF		3	C		20		
RAMY	06	1951	1954	2011	N10	W65	4575	09	1.9	20	SN		3	C		77		
HOLL	06	1951	1953	2007	N12	W65	4575	09	1.9	16	SN		3	C		76		
PALE	06	1954	1955	2001	N10	W64	4575	09	2.0	7	SN		3	C		55		
HOLL	06	2035	2042	2046	N13	W66	4575	09	1.9	11	SF		3	C		18		
HOLL	06	2047	2049	2052	N13	W65	4575	09	2.0	5	SF		3	C		18		
HOLL	06	2151	2211	2259	N13	W66	4575	09	1.9	68	SF		3	C		62		
PALE	06	2207	2214	2223	N11	W66	4575	09	2.0	16	SF		3	C		34		F
PALE	06	2231	2231	2239	S12	W52	4572	09	3.0	8	SF		3	C		30		F
HOLL	06	2231	2233	2238	S11	W54	4572	09	2.9	7	SF		3	C		26		F
HOLL	06	2301	2453	2505D	N13	W68	4575	09	1.8	124D	SN		3	C		54		
LEAR	07	0057	0100	0110	N11	W66	4575	09	2.1	13	SF		3	C		31		
LEAR	07	0734	0735	0743	N02	W15	4573	09	6.2	9	SF		3	C		25		F
LEAR	07	2358	2401	2404	S03	E53		09	12.0	6	SF		3	C		25		
HOLL	07	2359	2359	2403	S04	E54		09	12.0	4	SF		3	C		13		
LEAR	08	0713	0713	0718	S04	E49		09	12.0	5	SF		3	C		23		

H - ALPHA SOLAR FLARES

SEPTEMBER 1984

Sta	Day	Start (UT)	Max (UT)	End (UT)	Lat	CMD	NOAA/ USAF Region	CMP Mo	CMP Day	Dur (Min)	Imp Opt	Imp Xray	Soe	Obs Type	Area Measurement Time (UT)	Apparent (10^{-6} Disk)	Corr (Sq Deg)	Remarks
LEAR	08	0721	0722	0728	S04	E49		09	12.0	7	SF		3	C		39		
RAMY	08	1310	1313	1334	S03	E47		09	12.1	24	SN		3	C		47		
PALE	08	2018	2020	2023	S03	E44	4576	09	12.1	5	SF		3	C		29		
GOES	08	2111	2119	2124						13		C 1.1						
GOES	08	2350	2359	2404						14		C 2.2						
PEKG	18	0313E	0313	0325D	S18	W20		09	16.6	12D	SF			P	0313	34	.4	E
PEKG	18	0327	0337	0342D	S18	W20		09	16.6	15D	SF			C	0337	34	.4	E
ISTA	18	0727E		0740	S17	W90		09	11.5	13D	SN							AD
LEAR	21	0406	0415	0419	S05	E74		09	26.7	13	SF		3	C		60		

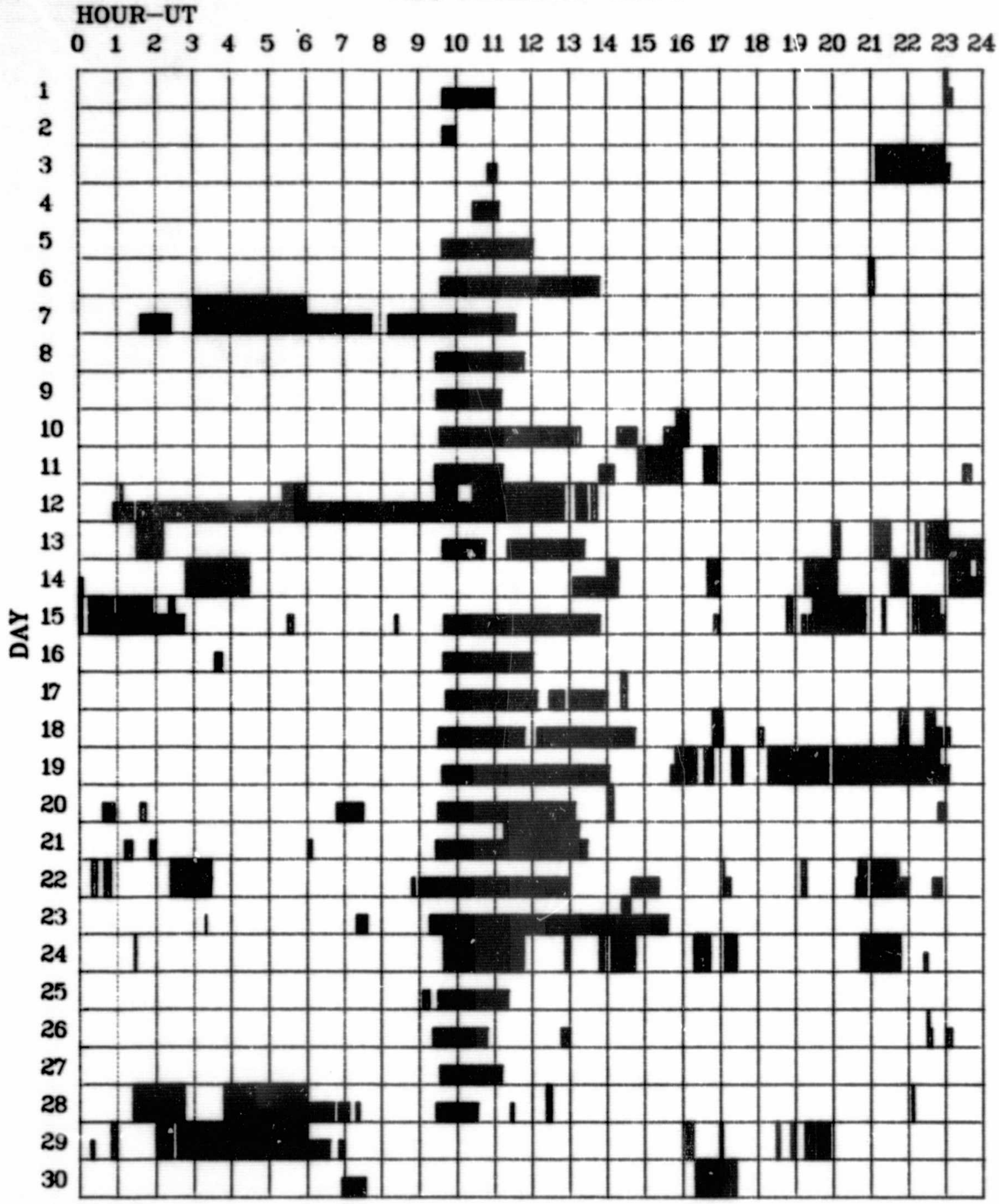
"Remarks":

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

INTERVALS OF NO FLARE PATROL OBSERVATION

FOR PRECEDING SOLAR FLARE TABLE

SEPTEMBER 1984

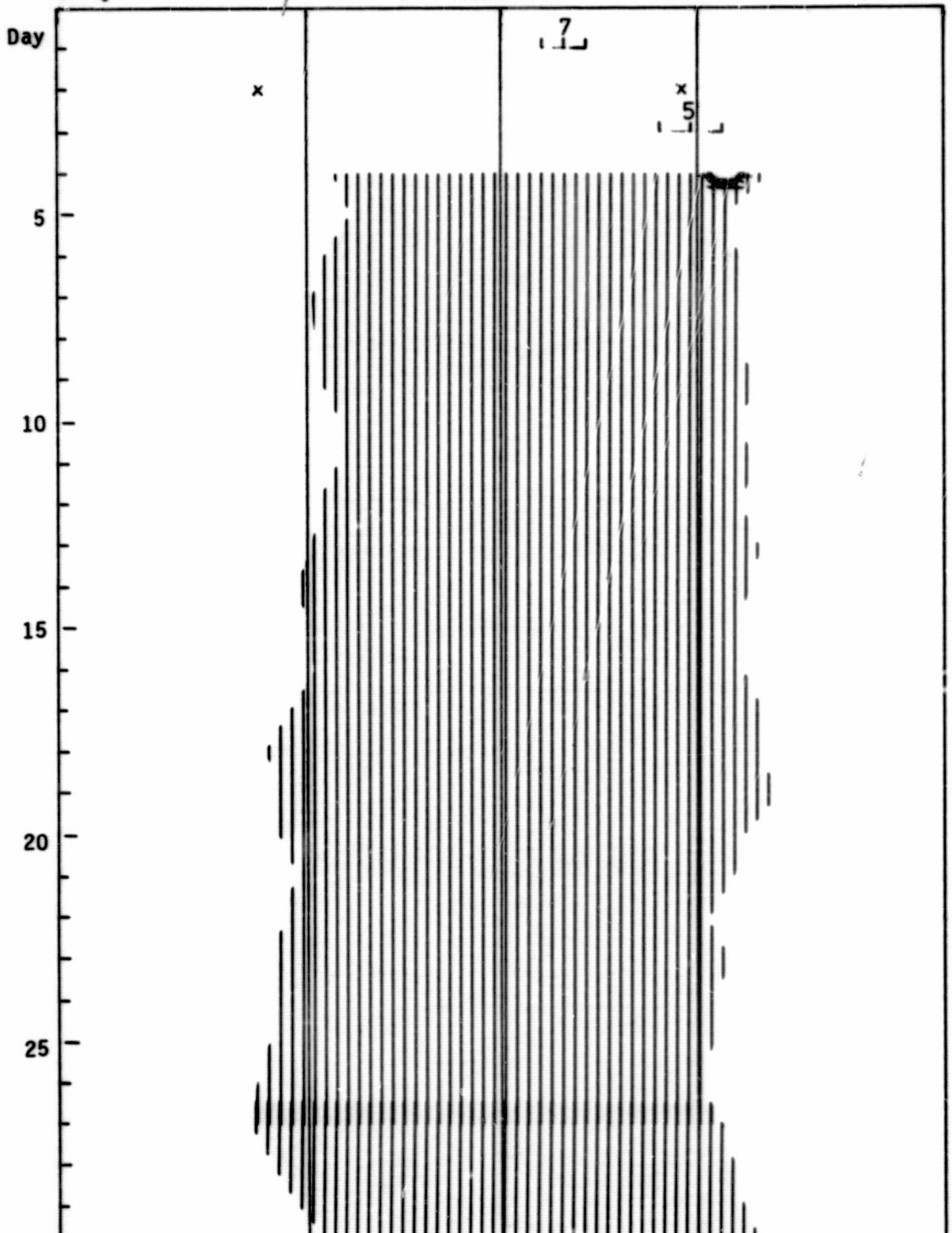


Times of no flare patrol, shown here as shaded areas, combine reports from the observatories listed below. Portions of a panel completely shaded mark dates and times of no patrol of any kind, that is, of neither visual nor cinematographic; portions of a panel with only the bottom half shaded mark times of strictly visual patrol.

Abastumani	Holloman	Istanbul	Palehua	Ramey
		Learmonth	Peking	Wendelstein

SOLAR INTERFEROMETRIC OBSERVATIONS

Nancay SEPTEMBER 1984 169 MHz



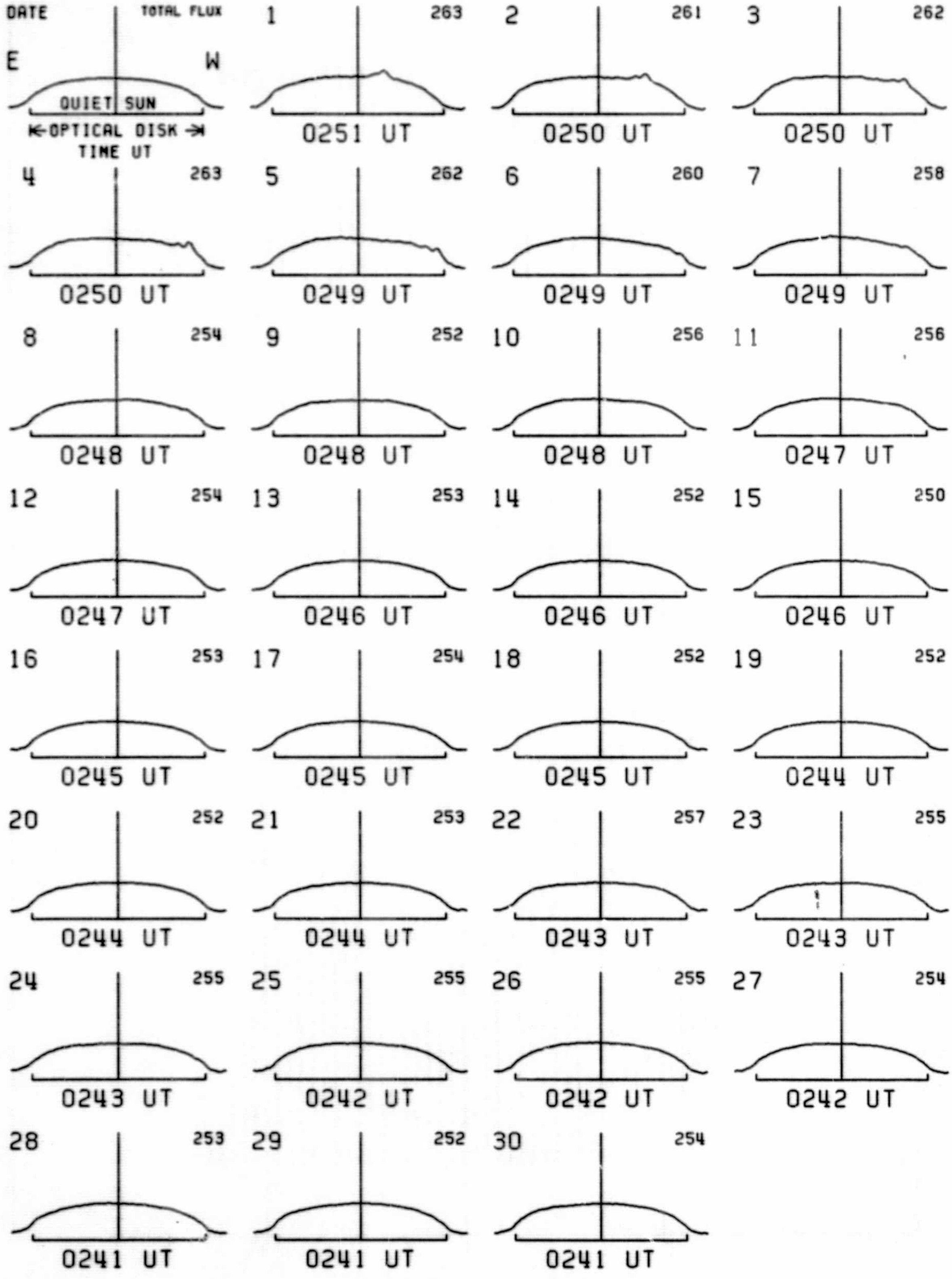
16
Sep 84

EAST-WEST SOLAR SCANS

SEPTEMBER 1984

TOYOKAWA, JAPAN

3 CM
FAN BEAM WITH 1.1 MINUTES OF ARC



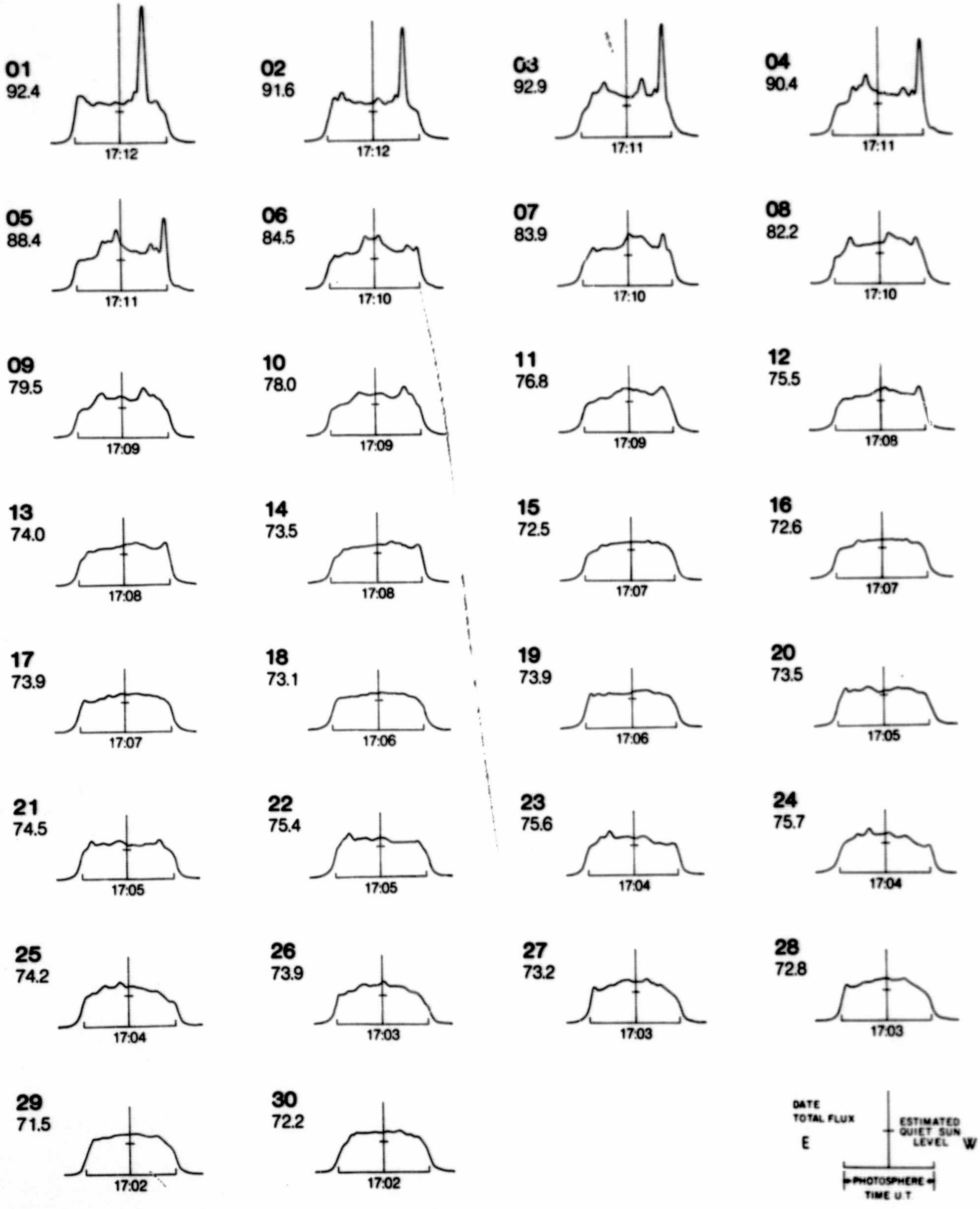
17
Sep 84

EAST-WEST SOLAR SCANS

SEPTEMBER 1984

ALGONQUIN RADIO OBSERVATORY
CANADA

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



EAST-WEST SOLAR SCANS

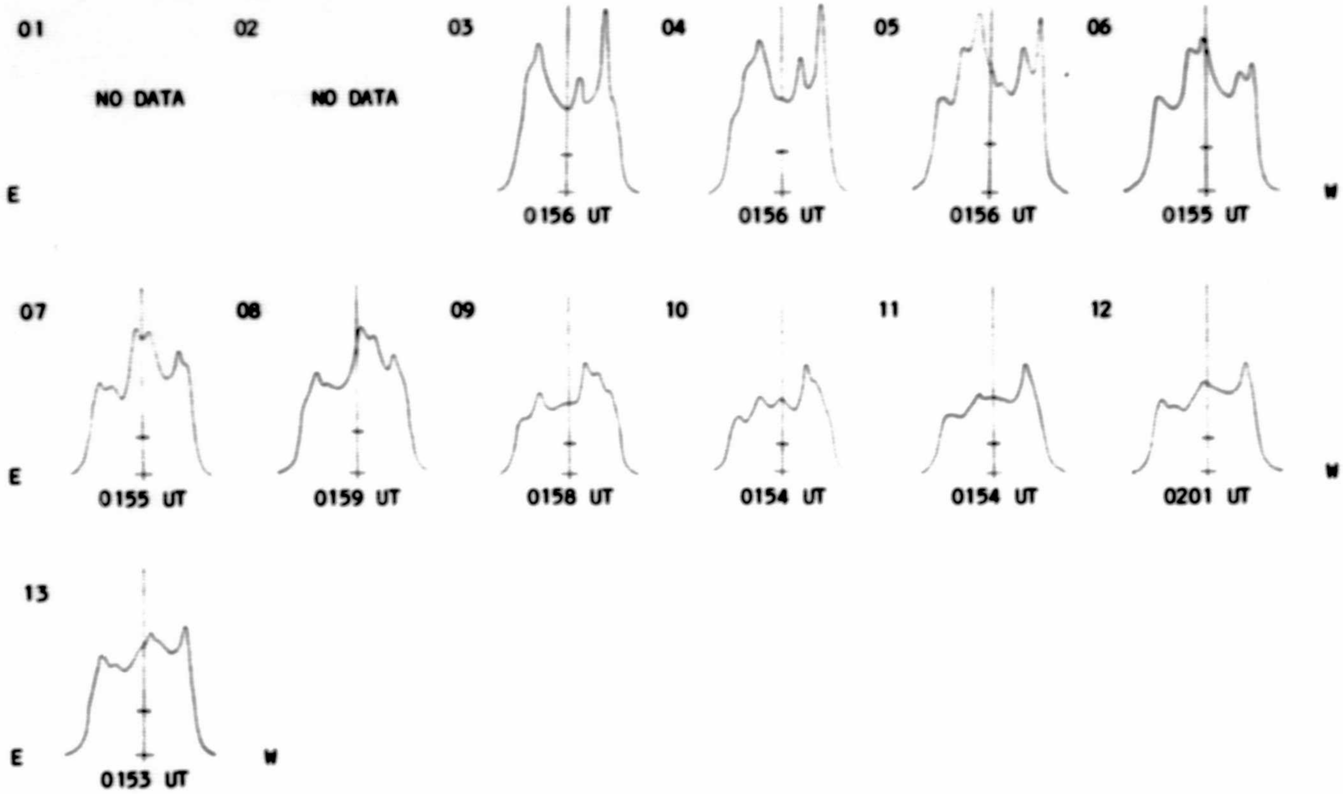
Fleurs, Australia

SEPTEMBER 1984

21 cm

Estimated Quiet Sun Level
Cold Sky Level

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



EAST-WEST SOLAR SCANS

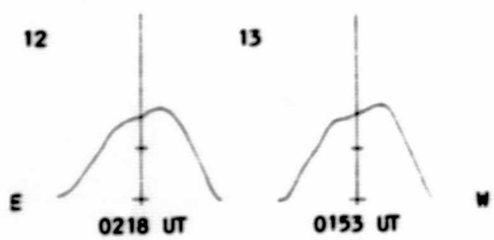
Fleurs, Australia

SEPTEMBER 1984

43 cm

Estimated Quiet Sun Level
Cold Sky Level

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



SOLAR RADIO EMISSION
SELECTED FIXED FREQUENCY EVENTS

SEPTEMBER 1984

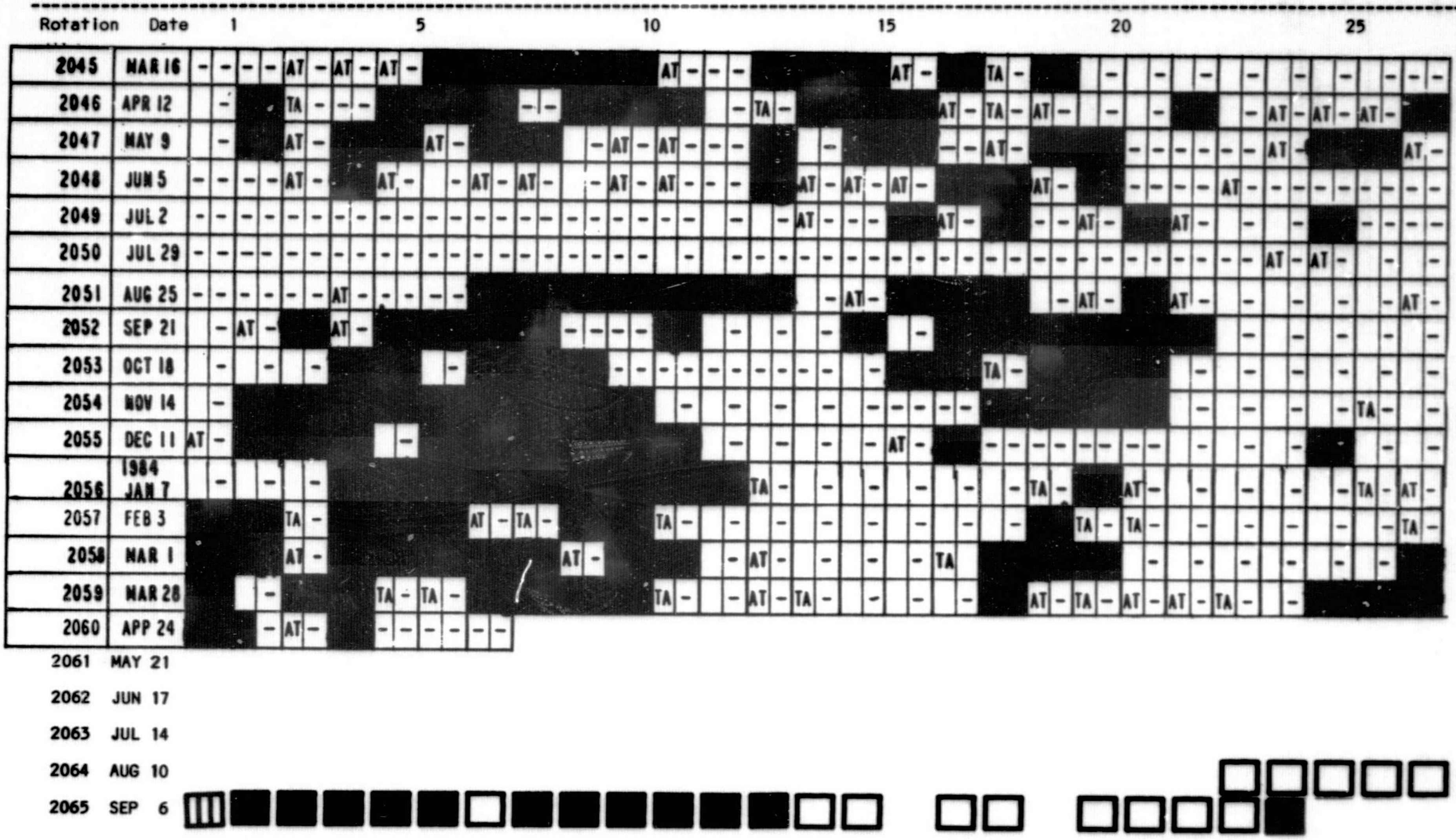
Day	Freq	Sta	Type		Start (UT)	Time of Maximum (UT)	Duration (Min)	Flux Density Peak (10^{-22} W/m^2 Hz)	Flux Density Mean	Int	Remarks
01	8800	LEAR	4	S/F	0809.6	0810.0	9.4	45.0			QL=6 ST=2 TYP=3
02	2800	OTTA	20	GRF	1910.0	1925.0	35.0	1.4	0.7		
04	2695	SGMR	8	S	1312.3	1312.3	.3	10.0			QL=6 ST=2 TYP=3
	2800	OTTA	20	GRF	2010.0	2030.0	55.0	1.6	0.8		
08	2800	OTTA	1	S	1310.0	1310.2	5.0	2.4	0.8		

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

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

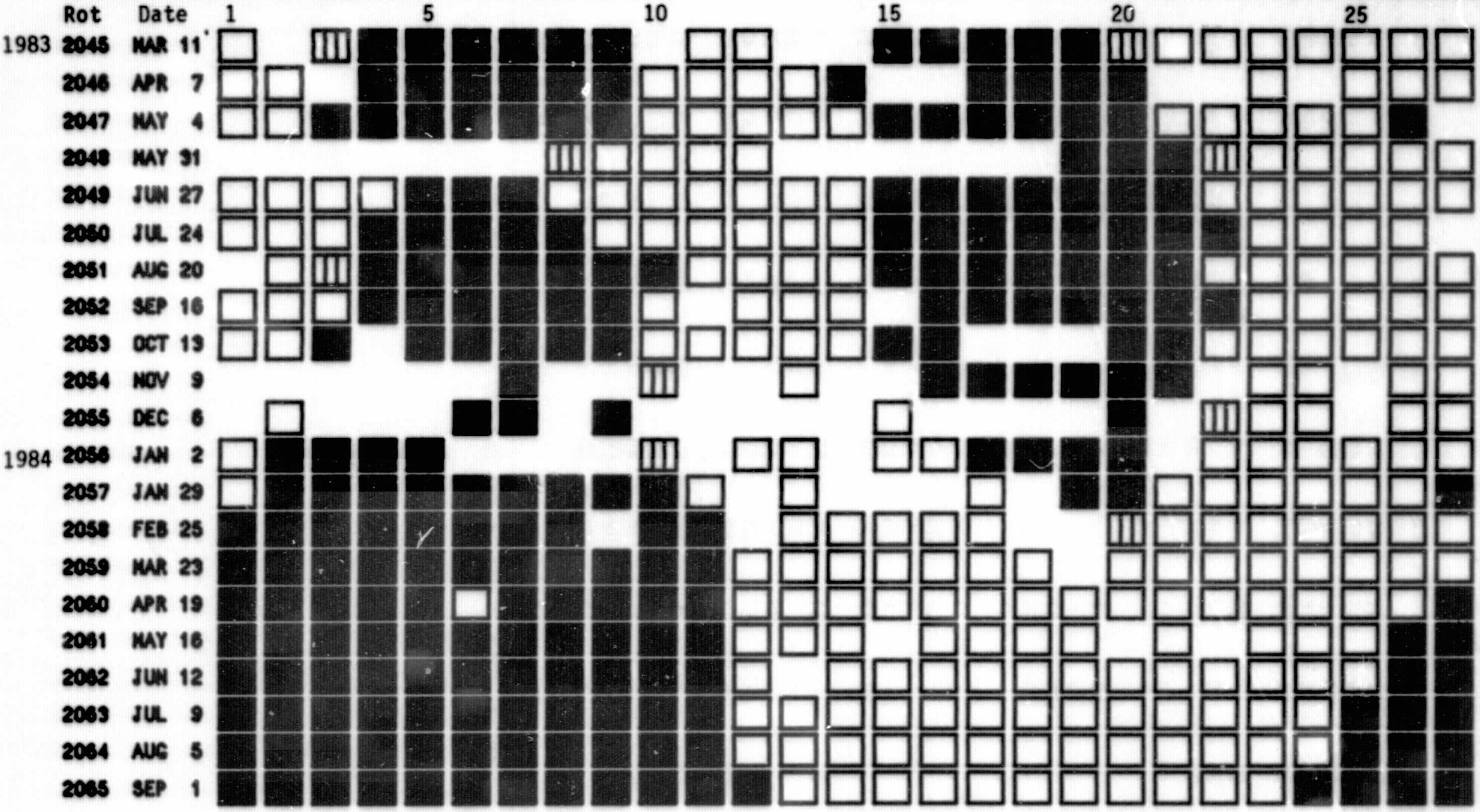
INFERRED INTERPLANETARY MAGNETIC FIELD



T = towards the Sun
A = away from the Sun
- = missing data
* = effect doubtful or not discernible
■ = definitely towards the Sun
□ = definitely away from the Sun

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 on the day. The Thule magnetometer ceased operating in August 1981.

STANFORD MEAN SOLAR MAGNETIC FIELD



Mean Solar Magnetic Field Polarity: ☐ = field > 2 microT; |||| = -2 microT ≤ field ≤ 2 microT

■ = field <-2 microT; No box = no data available

Observations are taken at 2000 UT. Rotation numbers given are the Bartels series, but the dates are not; these dates mark times of occurrence of phenomena on the Sun that affect the Earth during the given Bartels Rotation.

21 Sep 84

STANFORD MEAN SOLAR MAGNETIC FIELD (MICROTESLA)

Day	Oct 83	Nov	Dec	Jan 84	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1	-51	-63	54	41	-41	-79	-34	56	24	38	17	-38
2	-104	-27	79	11	-63	-66	-23	53	27	44	-2	-20
3	-117	32	·	-2	-62	-55	9	40	42	33	-35	-42
4	-100	75	56	-16	-43	·	29	36	·	62	-40	-58
5	-68	70	24	-29	-19	-31	34	24	66	41	-44	-77
6	-37	57	·	-50	-8	-2	31	15	·	5	-37	-86
7	-9	35	3	·	-4	·	38	15	65	-28	-50	-89
8	38	23	·	·	16	62	41	30	53	-41	-82	-95
9	55	·	·	·	·	58	25	7	24	-62	-83	-81
10	46	·	·	·	61	45	·	19	-18	-56	-73	-55
11	25	·	-59	-1	·	47	17	47	-37	-66	-84	-27
12	19	·	-50	·	·	35	31	42	-47	-70	-91	-8
13	10	·	·	47	·	·	46	32	-57	-96	-71	3
14	4	·	-9	56	15	·	56	20	-63	-91	-67	11
15	-7	-53	·	·	·	-1	56	-5	-61	-102	-13	10
16	·	·	·	37	-14	19	52	-39	-75	-93	6	12
17	-47	·	·	20	-23	55	28	-62	-73	-59	11	21
18	-68	0	·	-3	3	76	21	-57	-89	-39	21	23
19	-62	·	·	-14	29	82	-40	-58	-59	-11	18	49
20	-54	·	29	-28	39	87	-53	-62	-66	14	19	52
21	-20	66	·	-34	31	57	-52	-59	-52	9	21	44
22	10	·	·	·	36	4	-18	-66	-31	31	26	34
23	25	·	·	24	19	-33	-14	-68	11	7	39	20
24	57	-52	·	43	-33	-47	9	-79	·	30	47	-5
25	72	-78	-6	33	-59	-59	-17	-76	37	22	52	-26
26	48	-94	·	25	-74	-57	-34	-42	33	26	31	-35
27	-9	-82	1	23	-72	-51	-49	13	16	53	25	-26
28	-58	-59	40	21	-74	-49	-40	57	26	43	11	-19
29	·	-20	60	10	-78	-20	-15	66	15	54	-4	-19
30	·	·	·	-13		-35	28	·	32	36	-13	-30
31	·		47	-22		-21		38		31	-36	

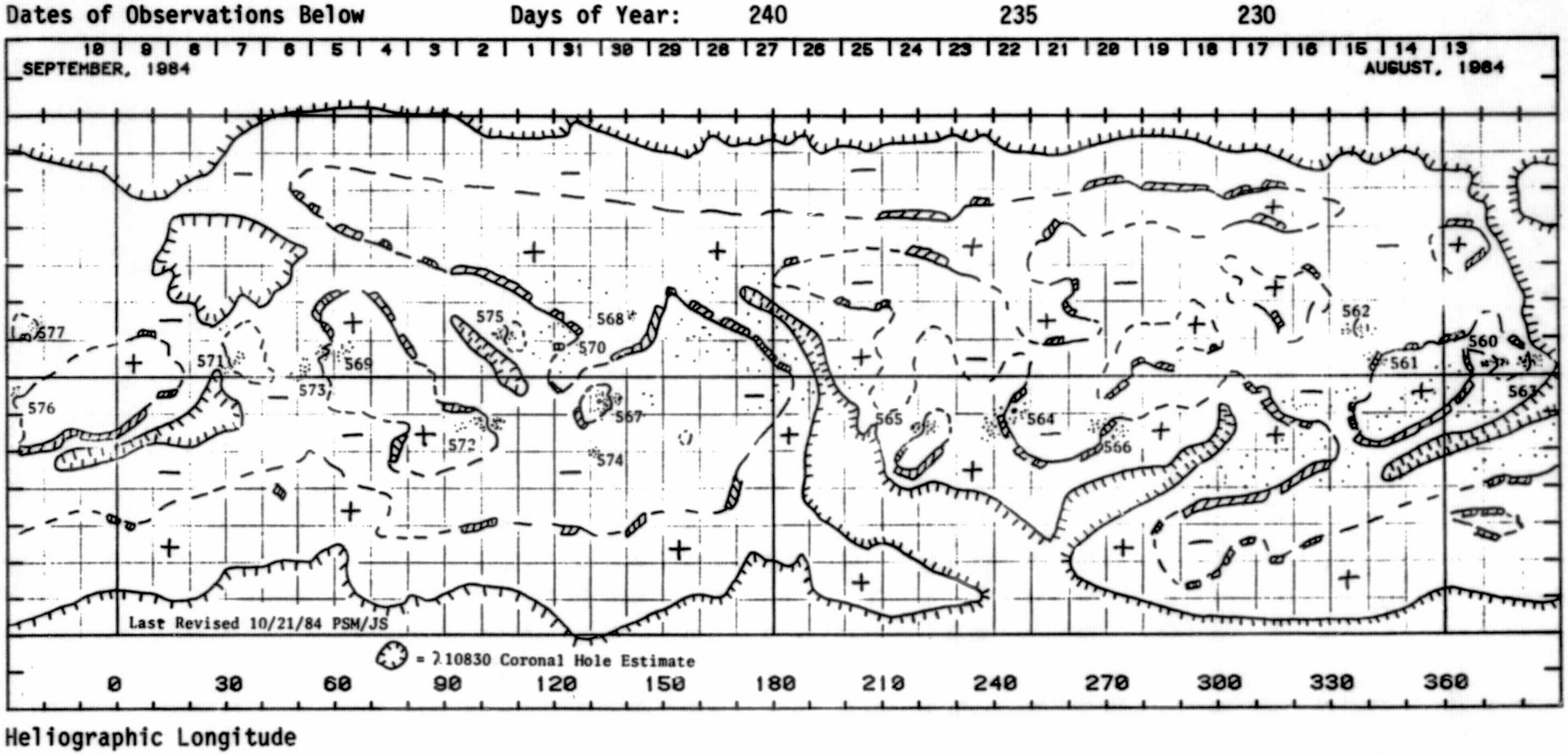
Dot symbol indicates no data available for the day.

CONTENTS

Prompt Reports DATA FOR AUGUST 1984 Number 482 Part I

PRELIMINARY H-ALPHA SOLAR SYNOPTIC CHART

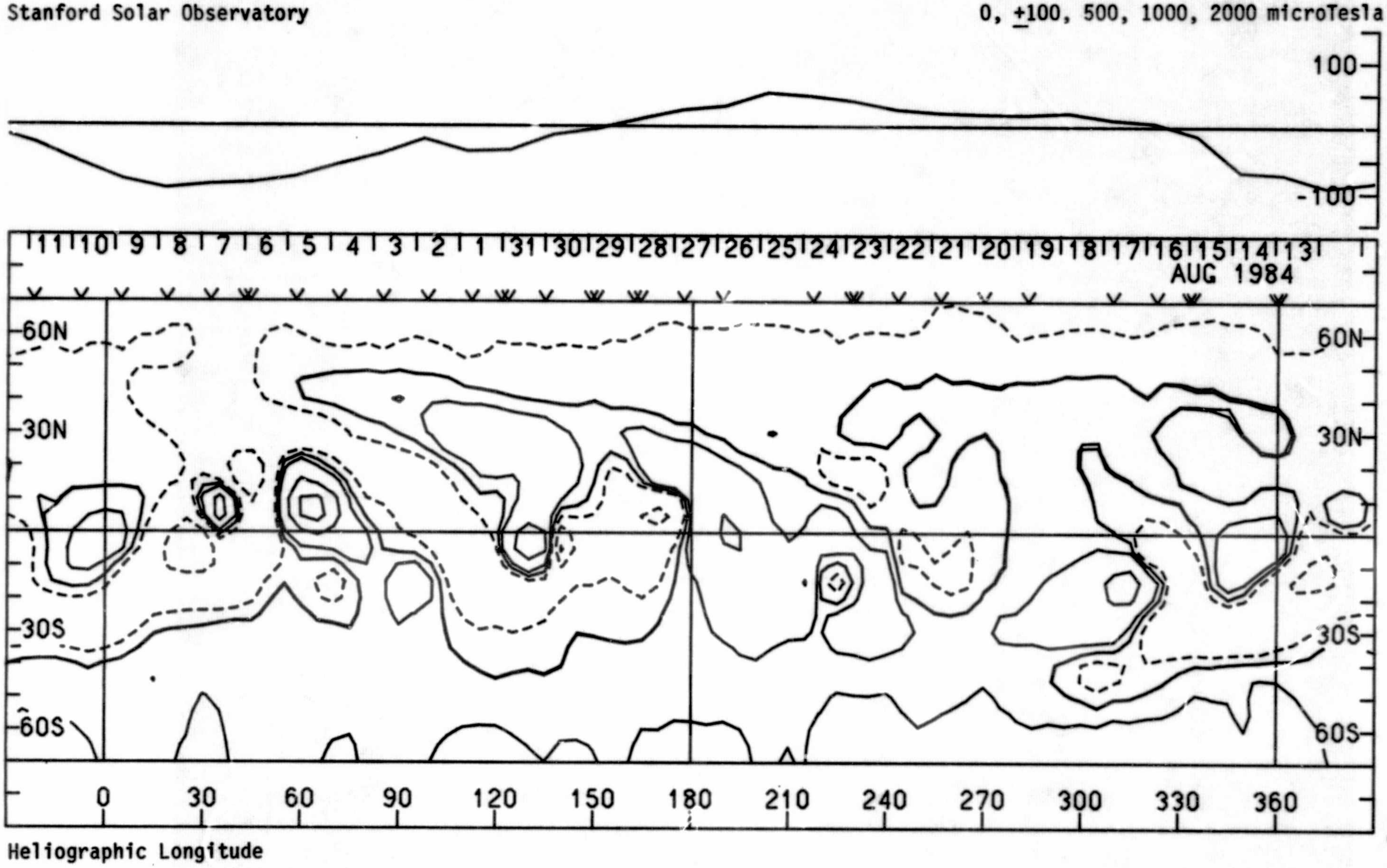
CARRINGTON ROTATION NUMBER 1752
(August 13 to September 10, 1984)



S O L A R   M A G N E T I C   F I E L D   S Y N O P T I C   C H A R T

CARRINGTON ROTATION NUMBER 1752

(August 13 to September 10, 1984)



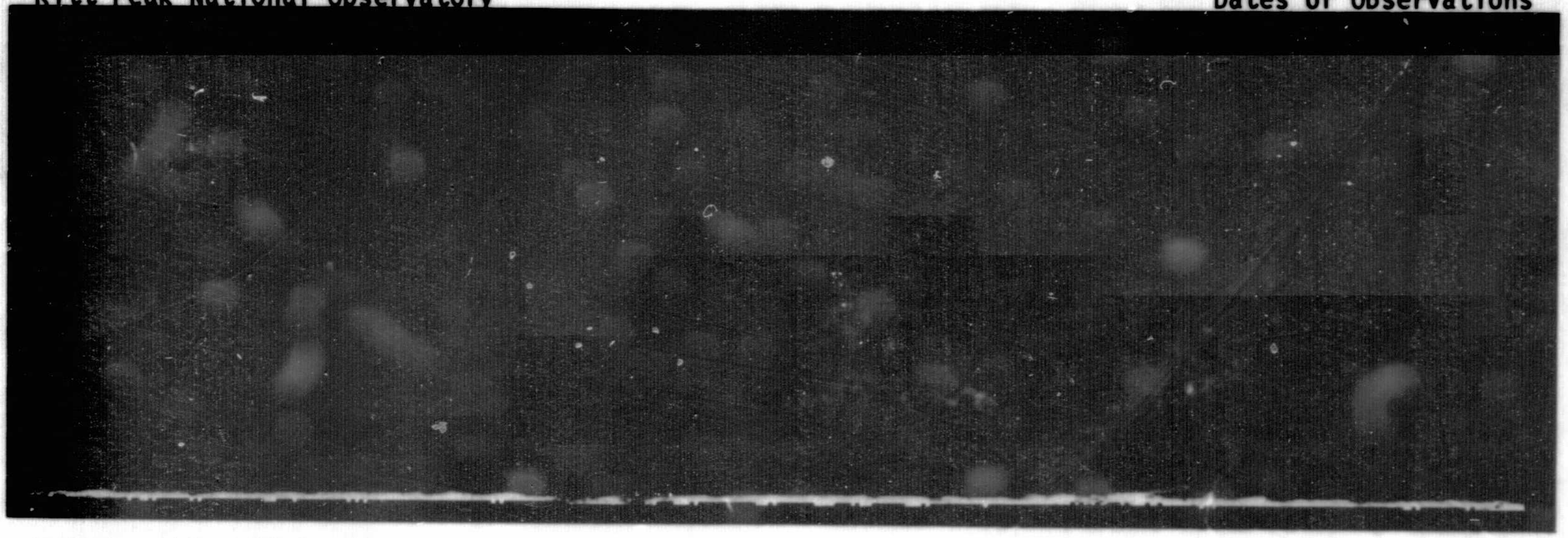
25 Aug 84


KITT PEAK NATIONAL OBSERVATORY - SOLAR MAGNETIC FIELD SYNOPTIC CHART
26 Aug 84

HELIUM 10830 ANGSTROM SYNOPTIC MAP OF THE SOLAR CORONA

CARRINGTON ROTATION NUMBER 1752
(August 13 to September 10, 1984)

Kitt Peak National Observatory | Dates of Observations



Heliographic Longitude

Regions for which no observations were available are black.
Irregularly shaped light areas mark either coronal holes or filament cavities.
Gray-scale display represents the strength of the helium 10830A absorption line.

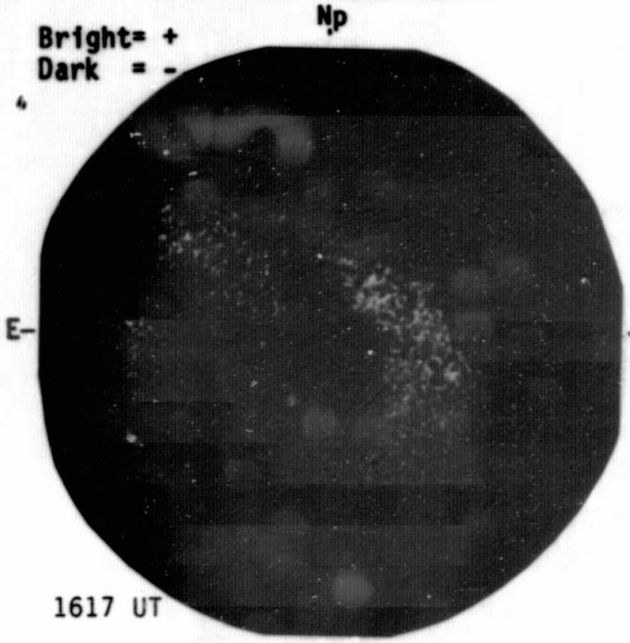
27
Aug 84

AUGUST 01, 1984 (P= 10.91, B_0= 5.80, L_0= 169.63)

28 Aug 84

KITT PEAK MAGNETOGRAM

Bright= +
Dark = -



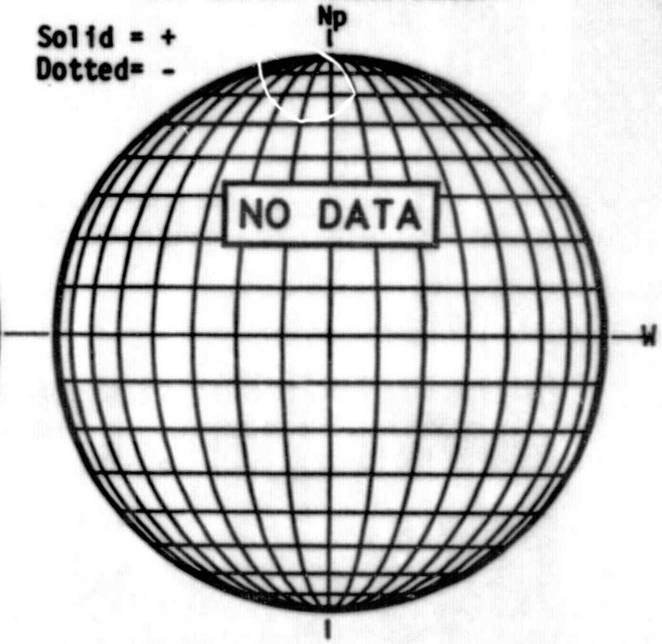
1617 UT

STANFORD MAGNETOGRAM

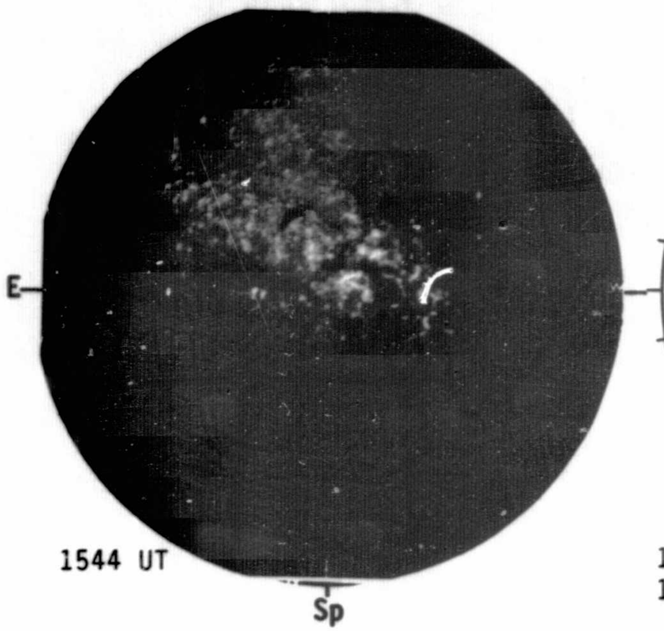
Solid = +
Dashed= -

MT. WILSON MAGNETOGRAM

Solid = +
Dotted= -

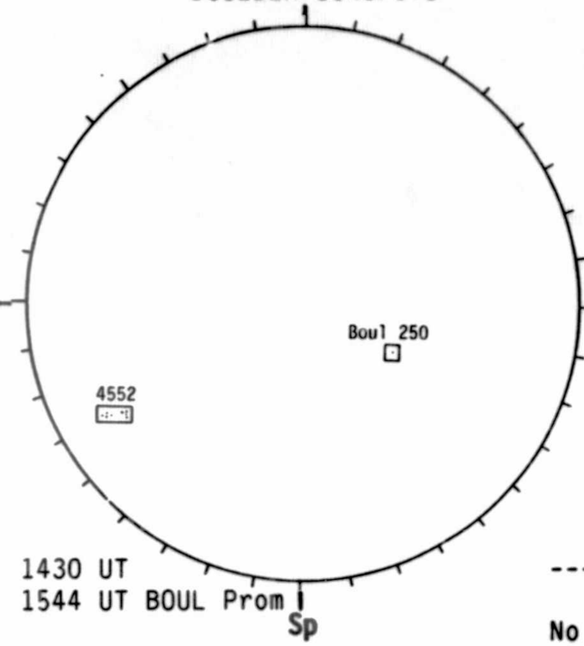


BOULDER H-ALPHA



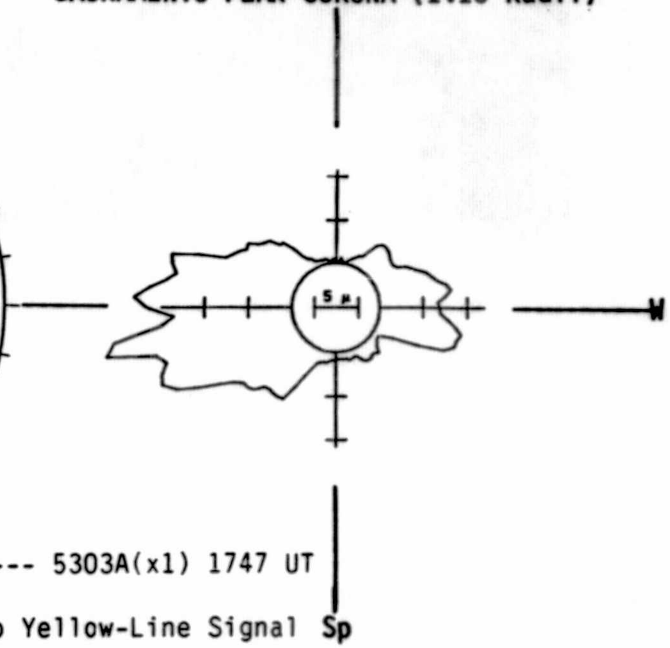
1544 UT

BOULDER SUNSPOTS



1430 UT
1544 UT BOUL Prom

SACRAMENTO PEAK CORONA (1.15 Radii)

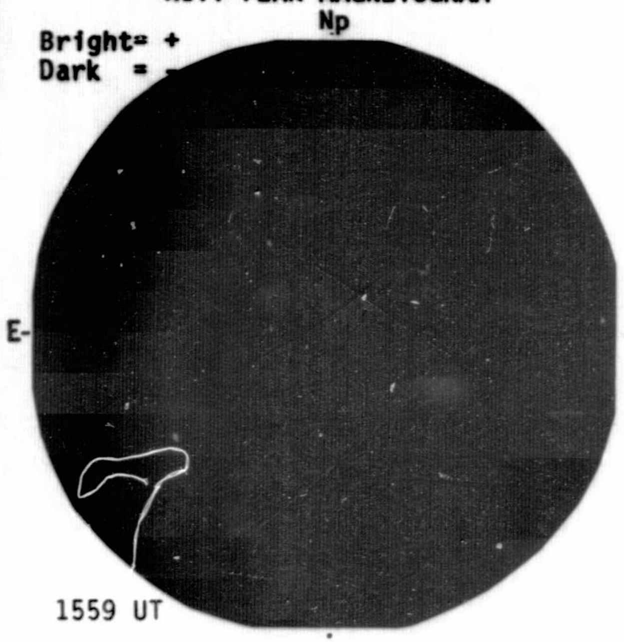


---- 5303A(x1) 1747 UT

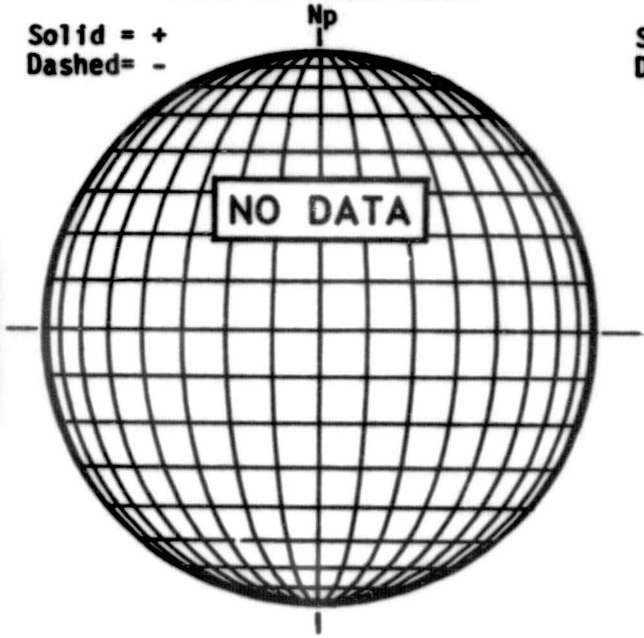
No Yellow-Line Signal

A U G U S T 02, 1 9 8 4 ($P = 11.30$, $B_0 = 5.87$, $L_0 = 156.40$)

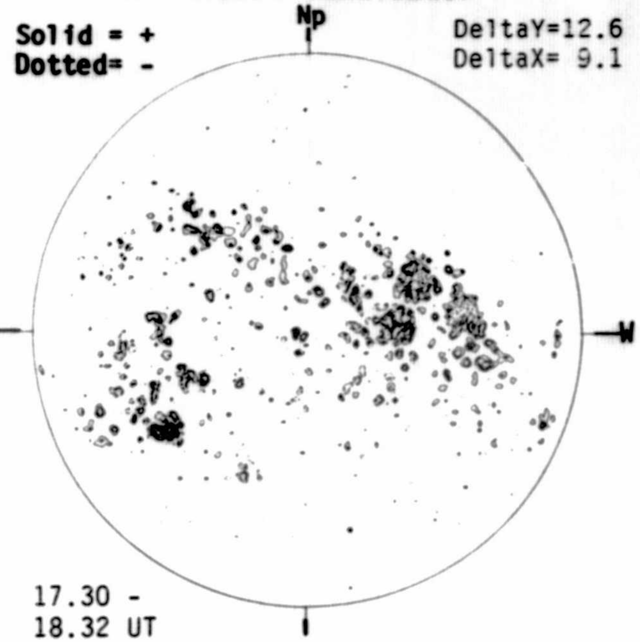
KITT PEAK MAGNETOGRAM



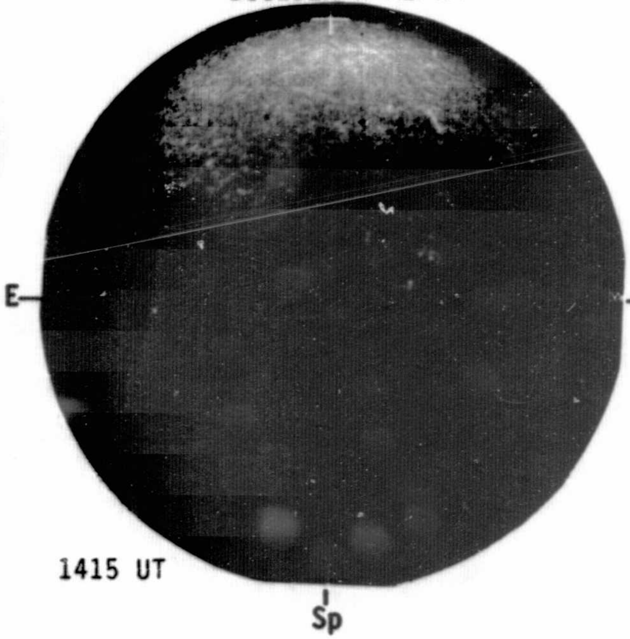
STANFORD MAGNETOGRAM



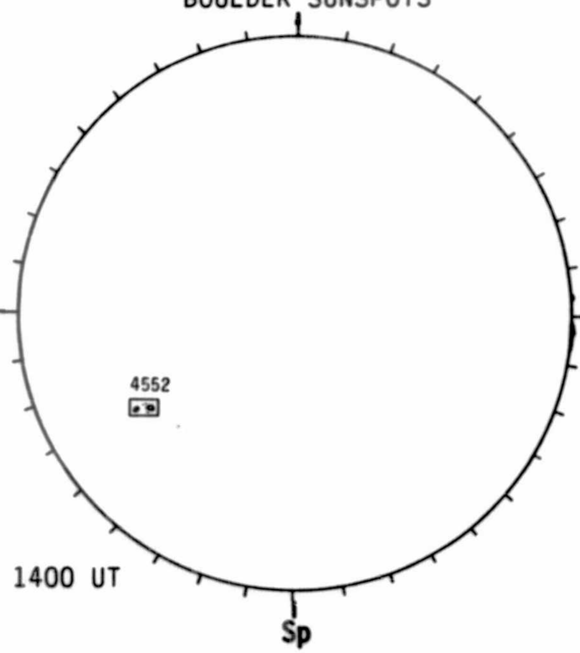
MT. WILSON MAGNETOGRAM



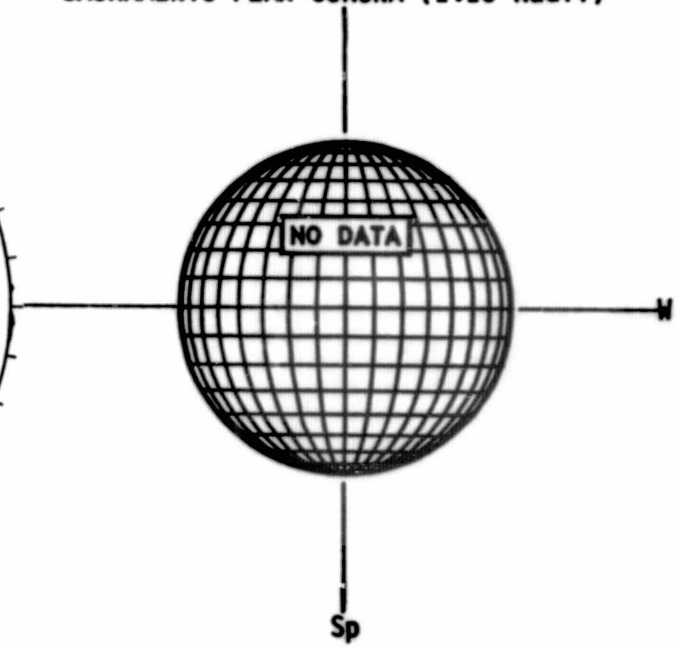
BOULDER H-ALPHA



BOULDER SUNSPOTS



SACRAMENTO PEAK CORONA (1.15 Radii)



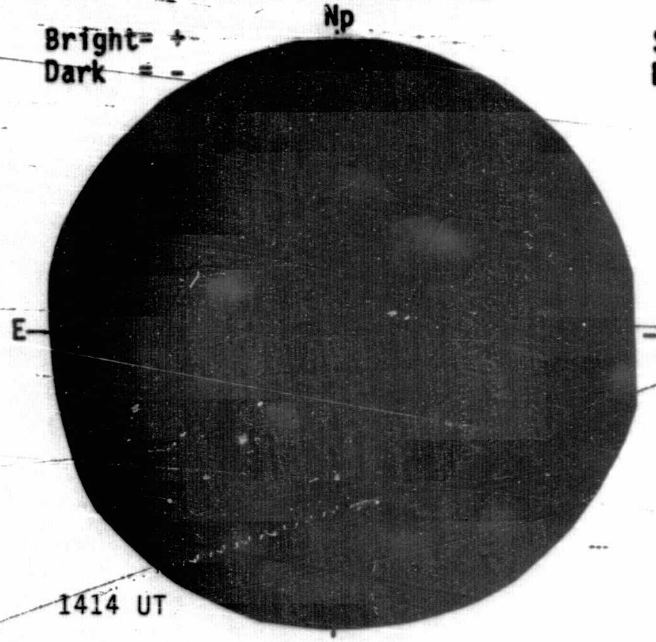
29 Aug 84

A U G U S T 03, 1 9 8 4 (P= 11.70, B_o= 5.94, L_o= 143.18)

30
Aug 84

KITT PEAK MAGNETOGRAM

Bright= +
Dark = -



1414 UT

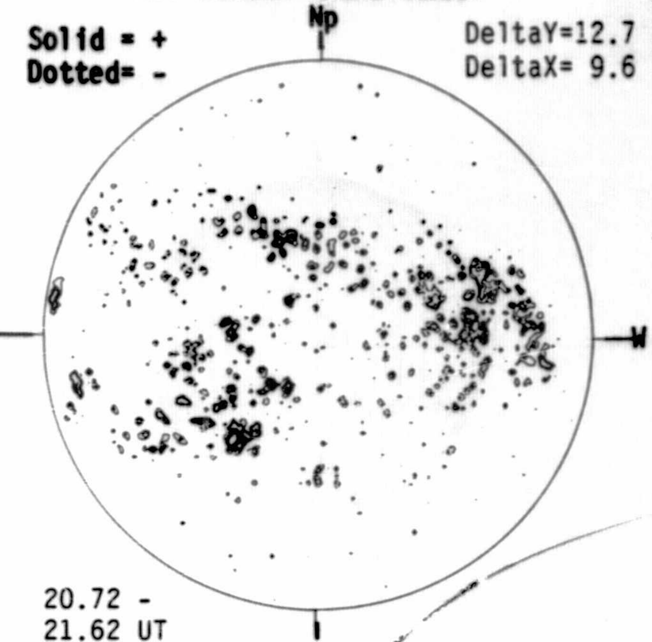
STANFORD MAGNETOGRAM

Solid = +
Dashed= -

MT. WILSON MAGNETOGRAM

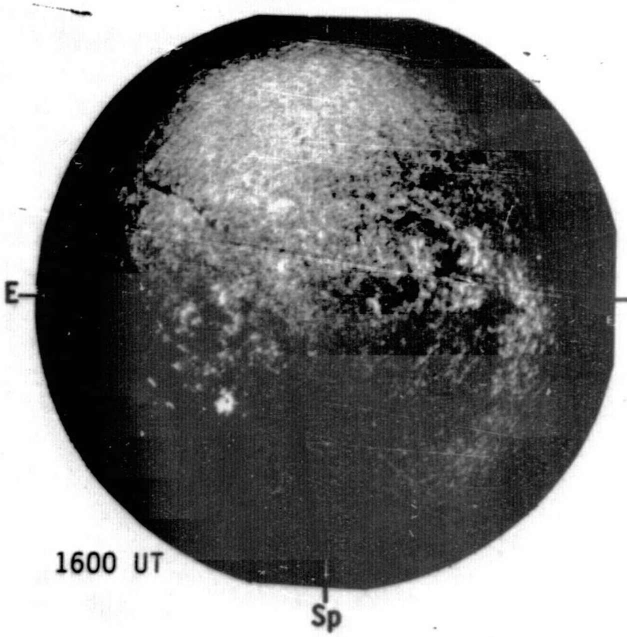
Solid = +
Dotted= -

DeltaY=12.7
DeltaX= 9.6



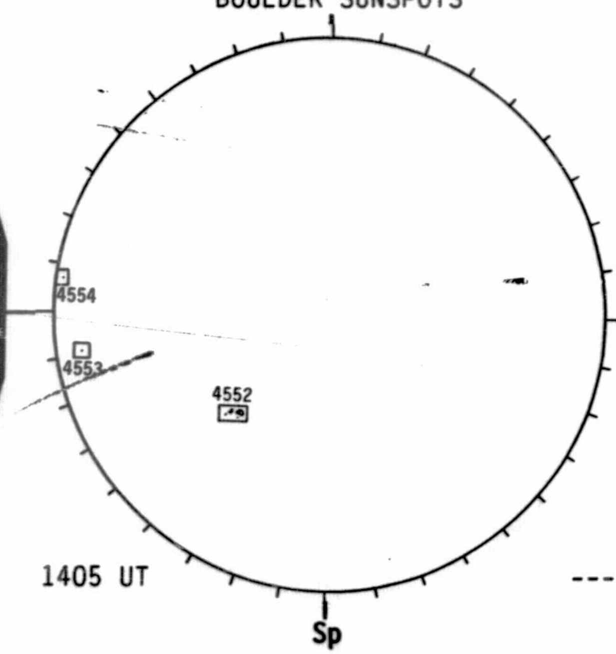
20.72 -
21.62 UT

BOULDER H-ALPHA



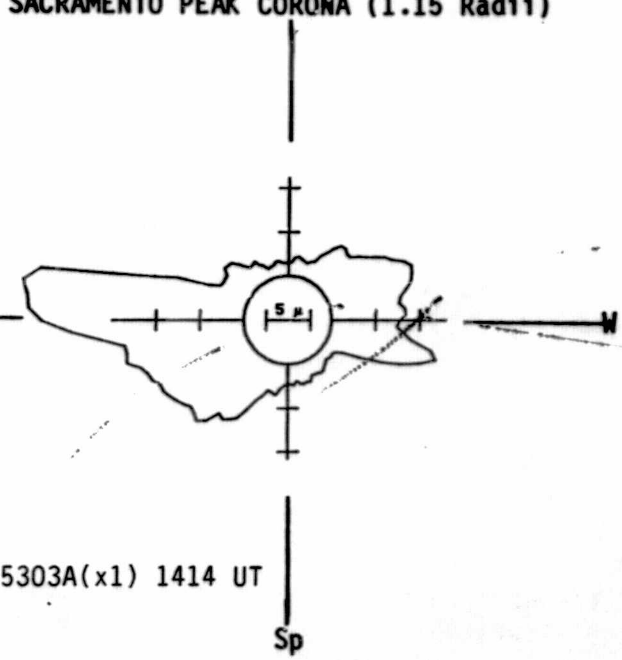
1600 UT

BOULDER SUNSPOTS



1405 UT

SACRAMENTO PEAK CORONA (1.15 Radii)

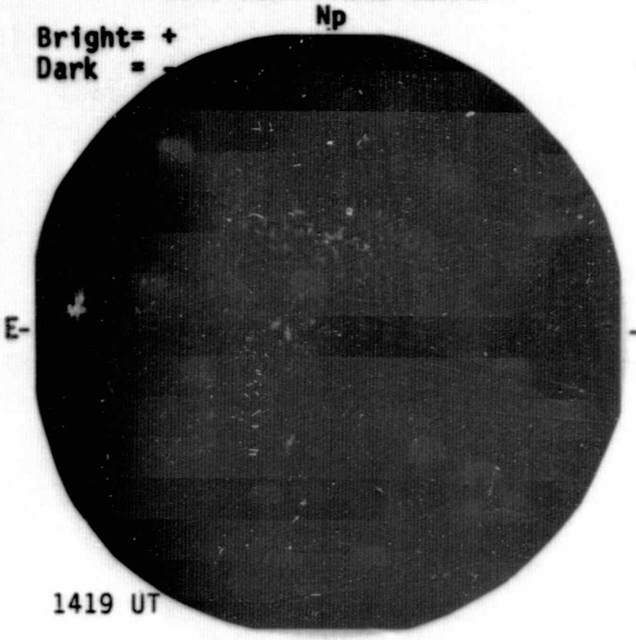


---- 5303A(x1) 1414 UT

AUGUST 04, 1984 (P= 12.08, B_0= 6.01, L_0= 129.95)

KITT PEAK MAGNETOGRAM

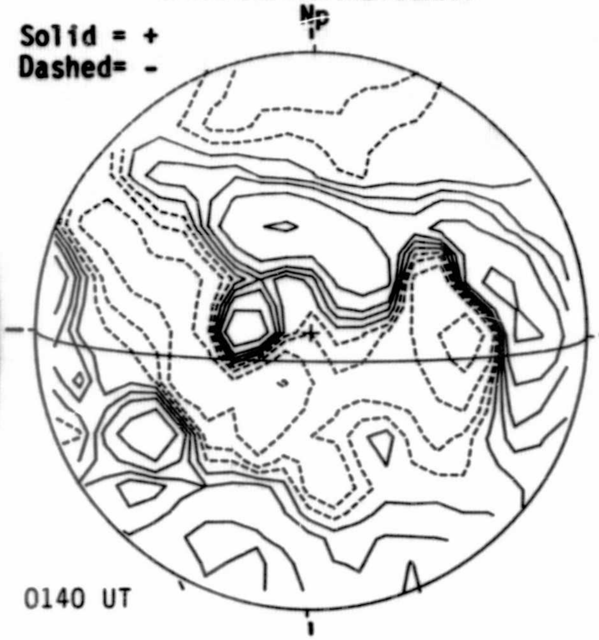
Bright= +
Dark = -



1419 UT

STANFORD MAGNETOGRAM

Solid = +
Dashed= -

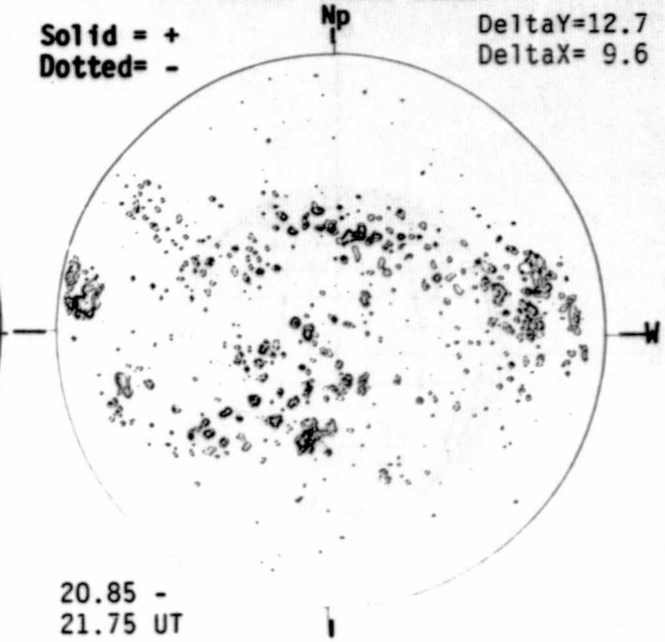


0140 UT

MT. WILSON MAGNETOGRAM

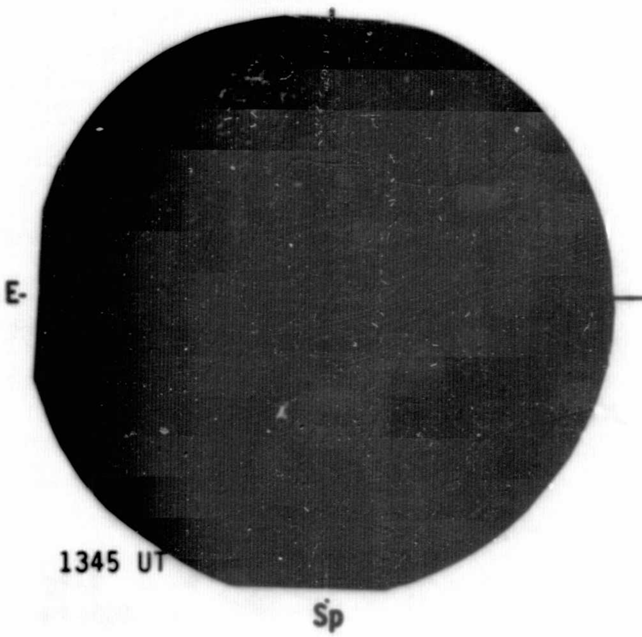
Solid = +
Dotted= -

DeltaY=12.7
DeltaX= 9.6



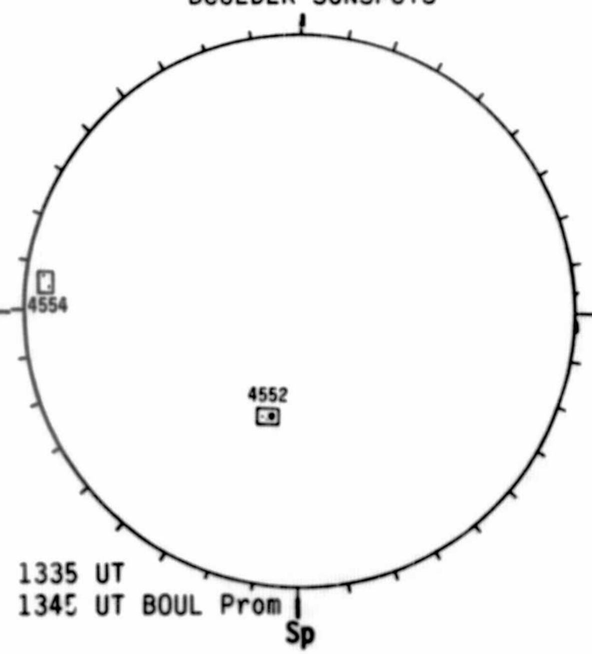
20.85 -
21.75 UT

BOULDER H-ALPHA



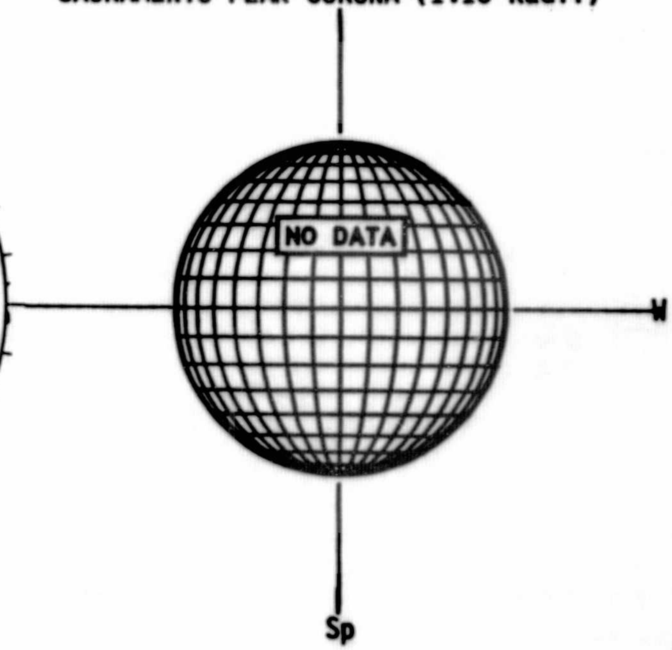
1345 UT

BOULDER SUNSPOTS



1335 UT
1345 UT BOUL Prom

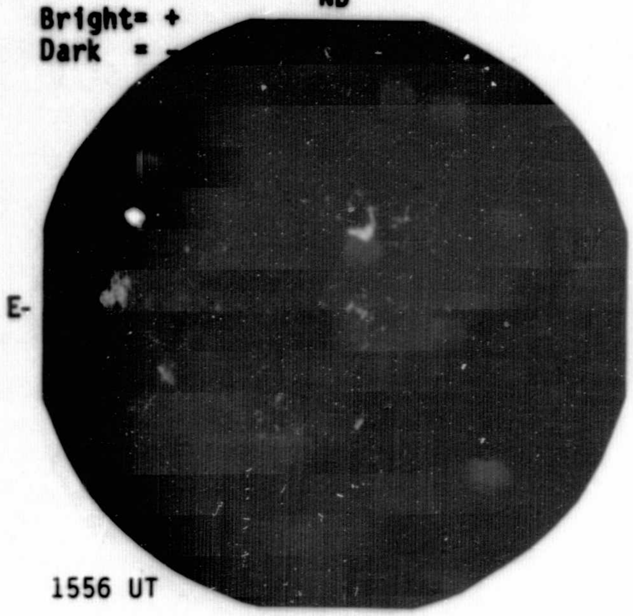
SACRAMENTO PEAK CORONA (1.15 Radii)



AUGUST 05, 1984 (P= 12.47, B_0= 6.08, L_0= 116.73)

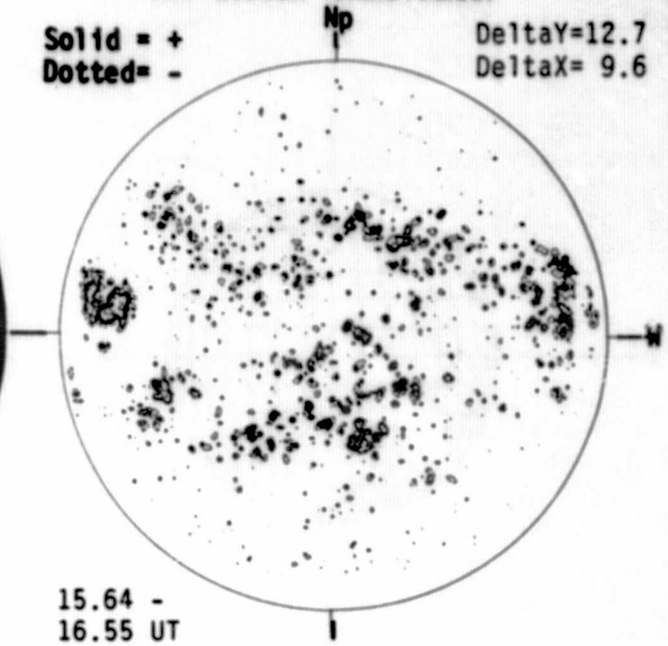
Aug 84 32

KITT PEAK MAGNETOGRAM

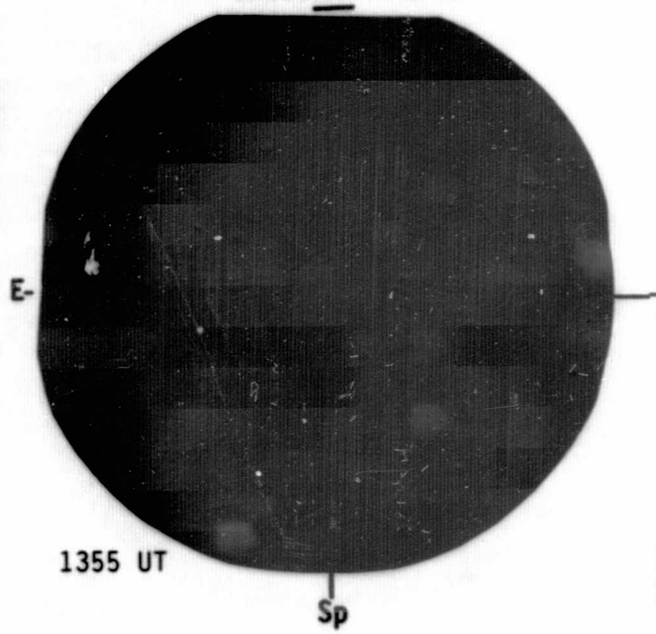


STANFORD MAGNETOGRAM

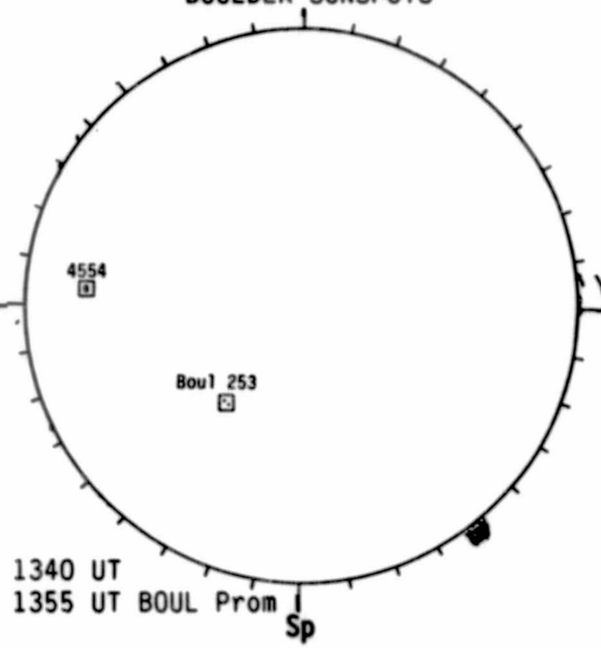
MT. WILSON MAGNETOGRAM



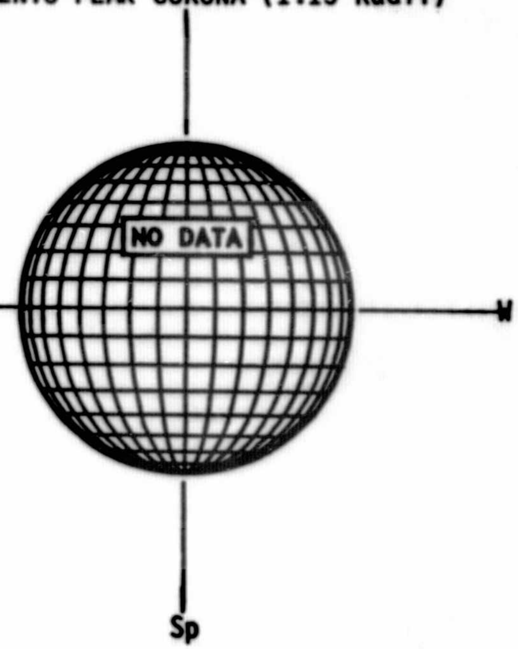
BOULDER H-ALPHA



BOULDER SUNSPOTS

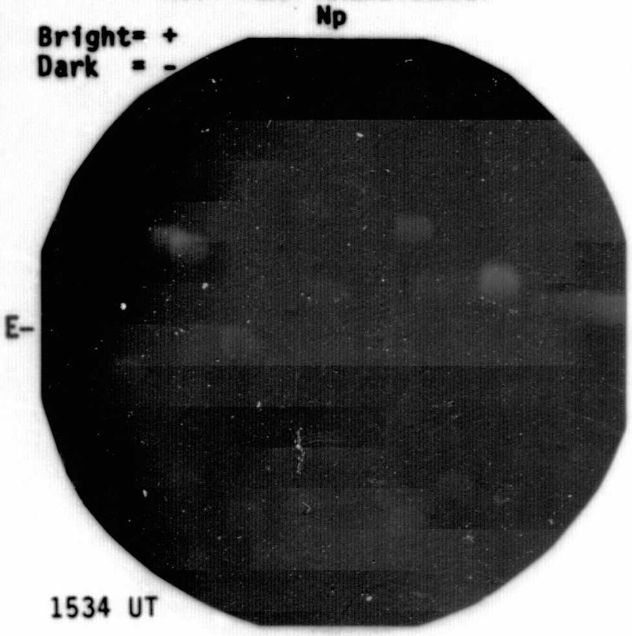


SACRAMENTO PEAK CORONA (1.15 Radii)

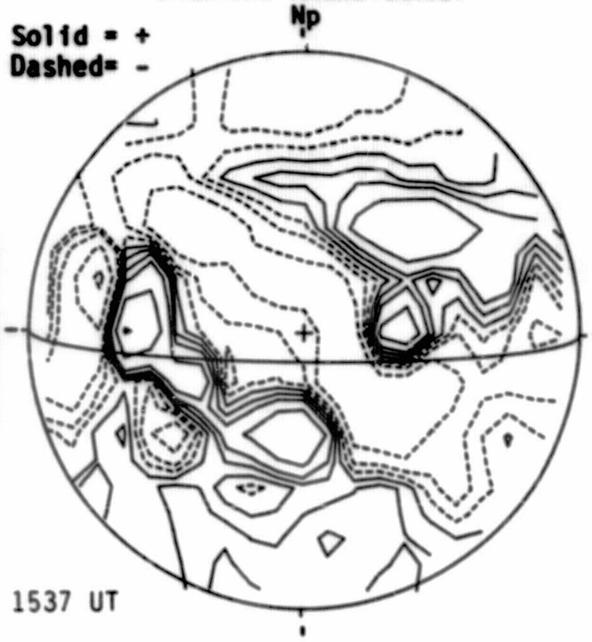


AUGUST 06, 1984 (P= 12.85, B_0= 6.14, L_0= 103.50)

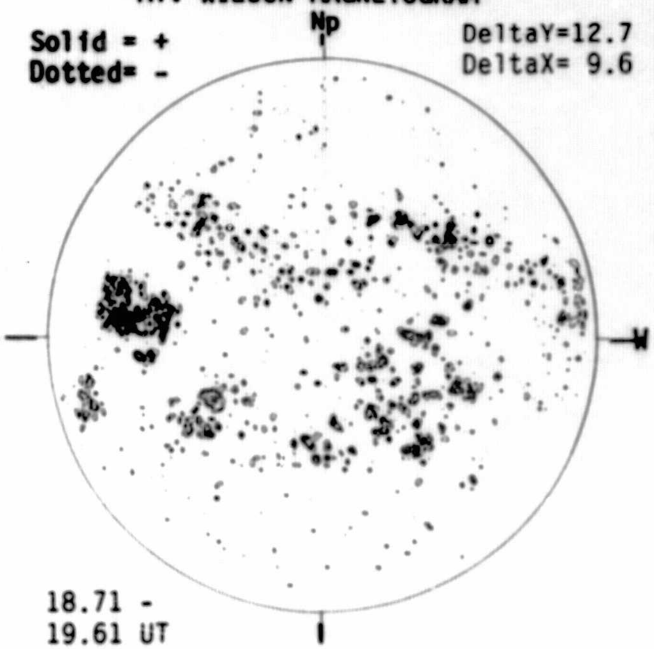
KITT PEAK MAGNETOGRAM



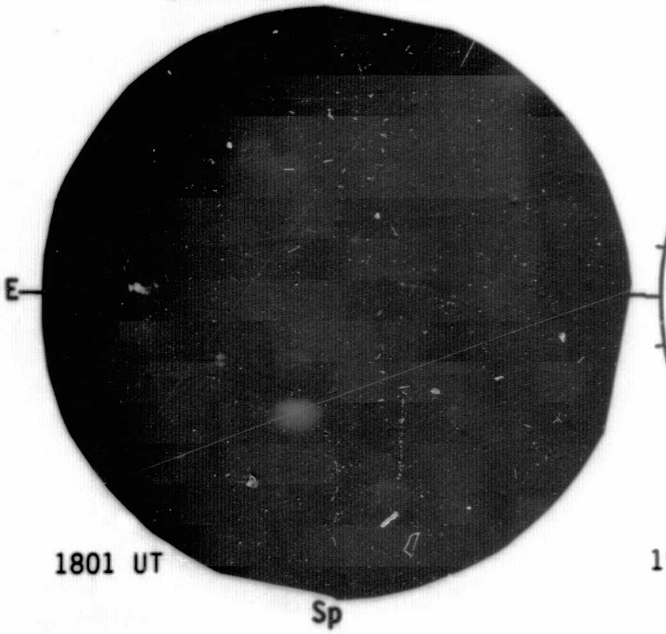
STANFORD MAGNETOGRAM



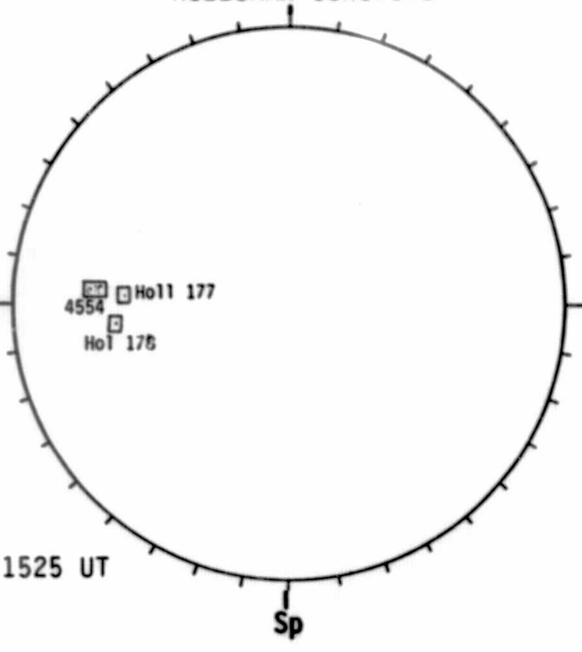
MT. WILSON MAGNETOGRAM



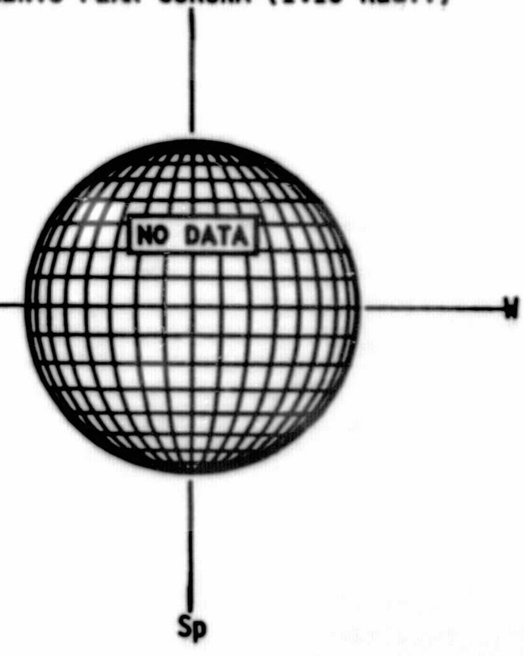
SACRAMENTO PEAK H-ALPHA



HOLLOMAN SUNSPOTS



SACRAMENTO PEAK CORONA (1.15 Radii)



A U G U S T 07, 1 9 8 4 (P= 13.22, B_o= 6.20, L_o= 90.28)

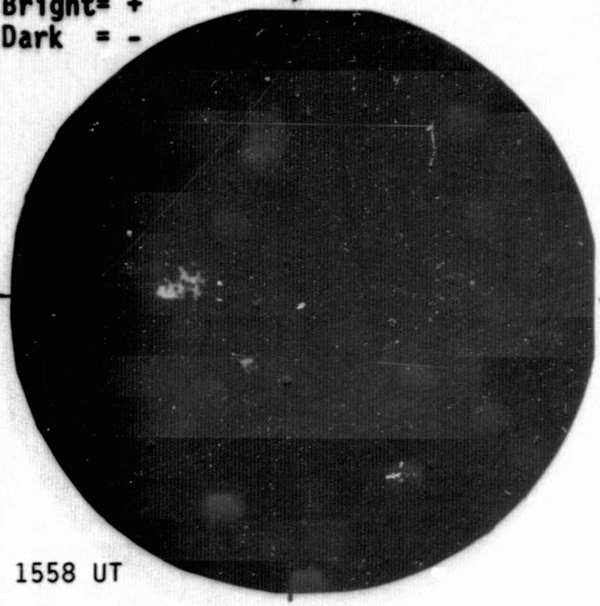
34
Aug 84

KITT PEAK MAGNETOGRAM

Np

Bright= +
Dark = -

E

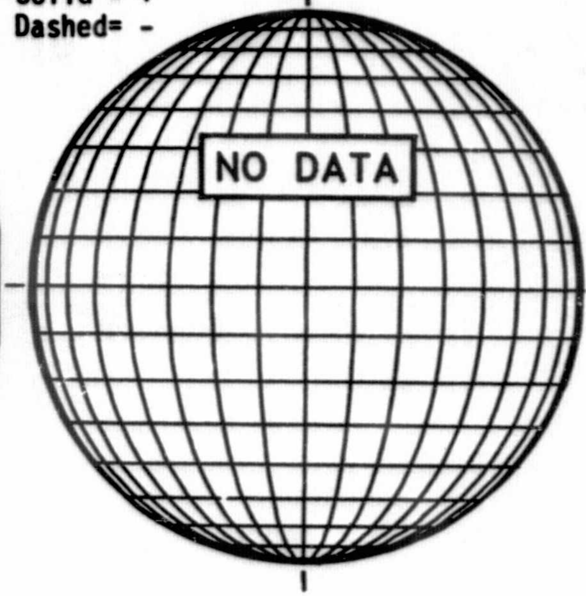


1558 UT

STANFORD MAGNETOGRAM

Np

Solid = +
Dashed= -

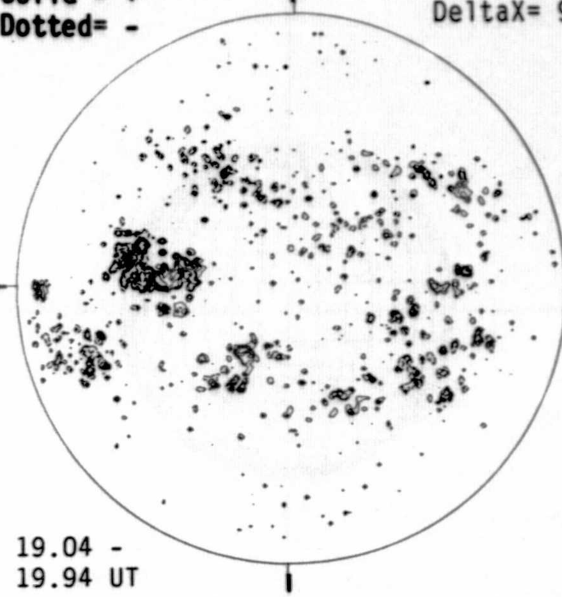


MT. WILSON MAGNETOGRAM

Np

Solid = +
Dotted= -

DeltaY=12.7
DeltaX= 9.6

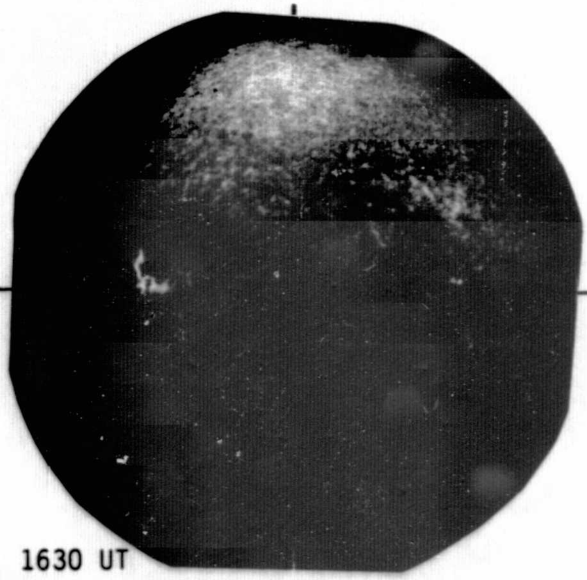


W

19.04 -
19.94 UT

BOULDER H-ALPHA

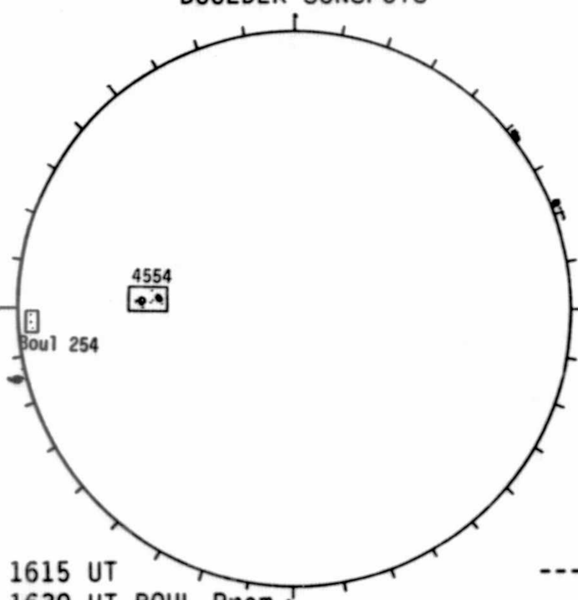
E



1630 UT

Sp

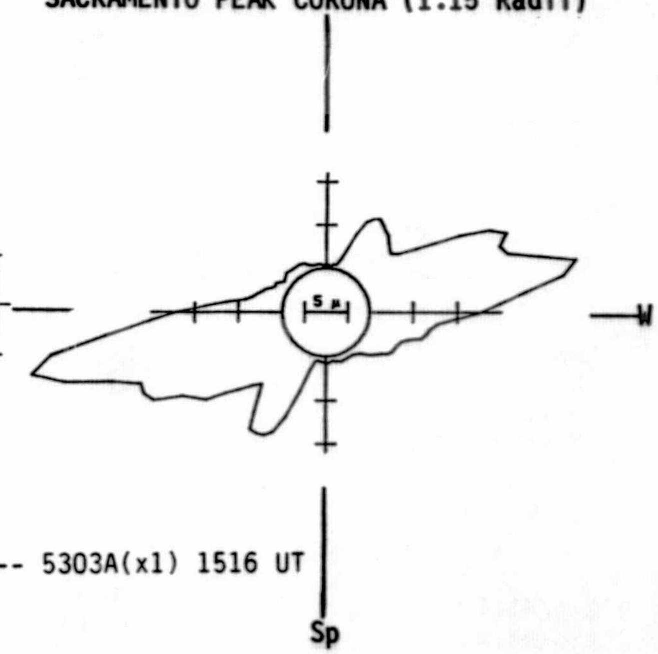
BOULDER SUNSPOTS



1615 UT
1630 UT BOUL Prom

Sp

SACRAMENTO PEAK CORONA (1.15 Radii)



W

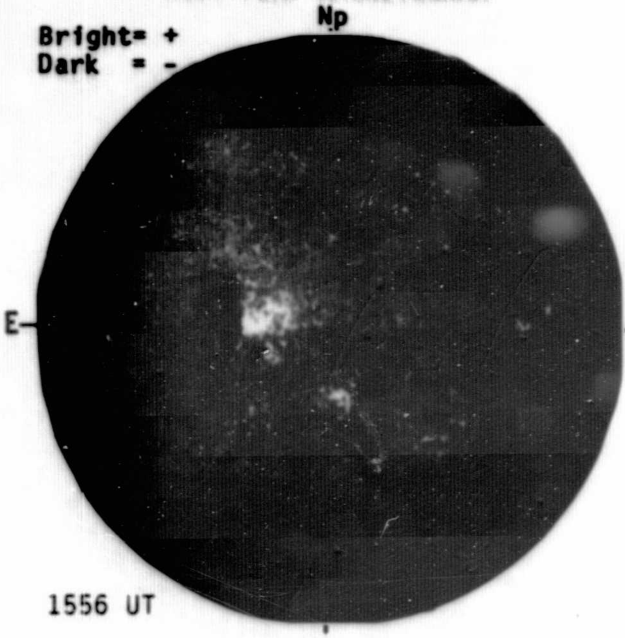
---- 5303A(x1) 1516 UT

Sp

AUGUST 08, 1984 (P= 13.60, B_0= 6.27, L_0= 77.06)

KITT PEAK MAGNETOGRAM

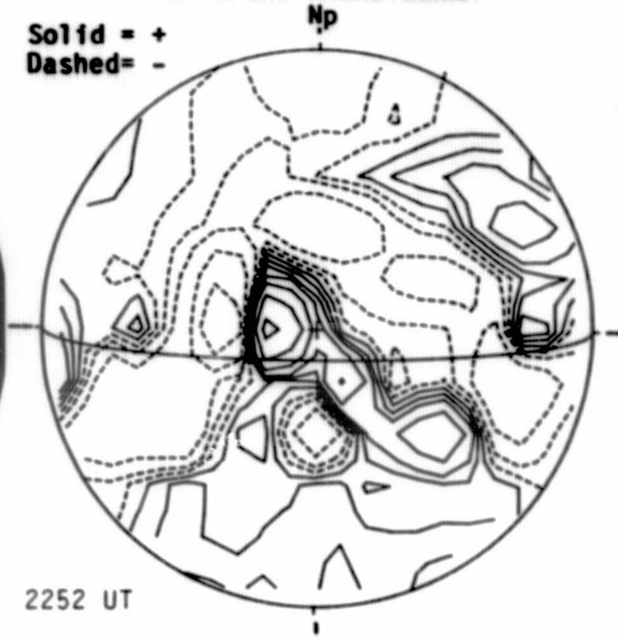
Bright= +
Dark = -



1556 UT

STANFORD MAGNETOGRAM

Solid = +
Dashed= -

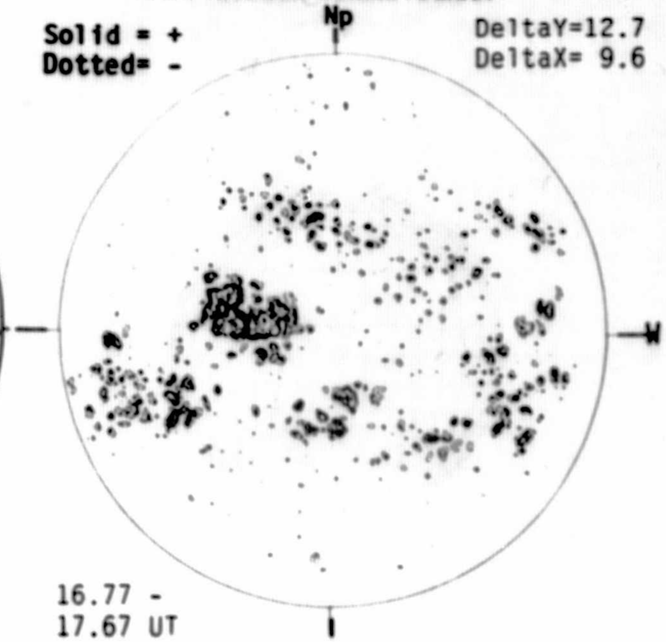


2252 UT

MT. WILSON MAGNETOGRAM

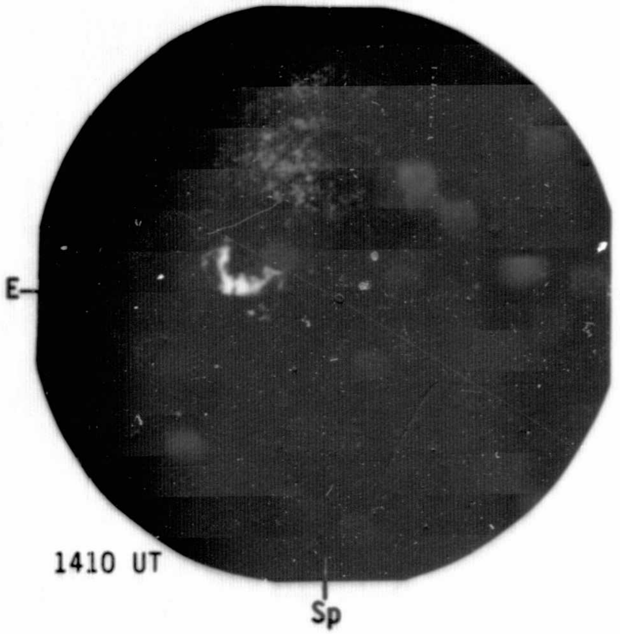
Solid = +
Dotted= -

DeltaY=12.7
DeltaX= 9.6



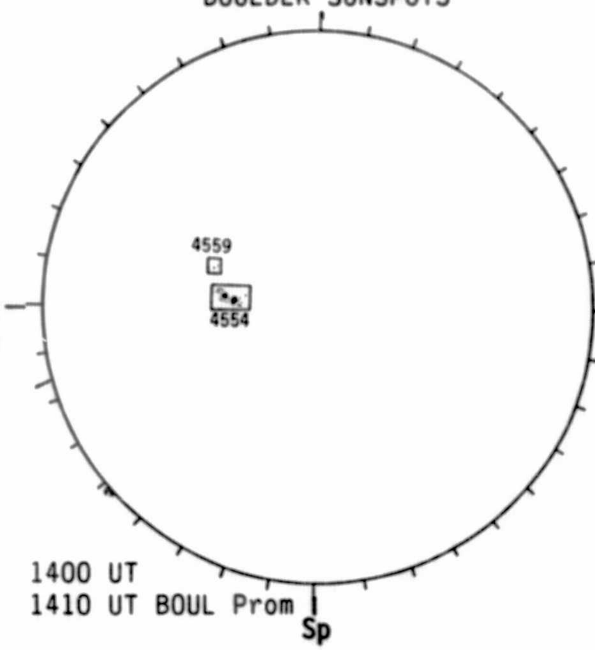
16.77 -
17.67 UT

BOULDER H-ALPHA



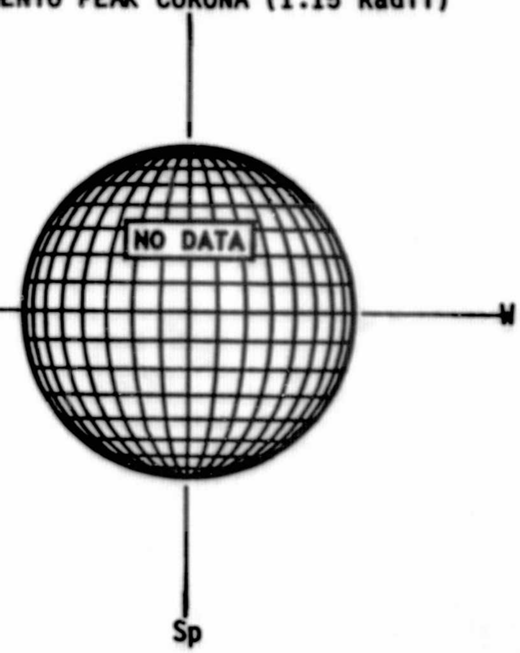
1410 UT

BOULDER SUNSPOTS



1400 UT
1410 UT BOUL Prom

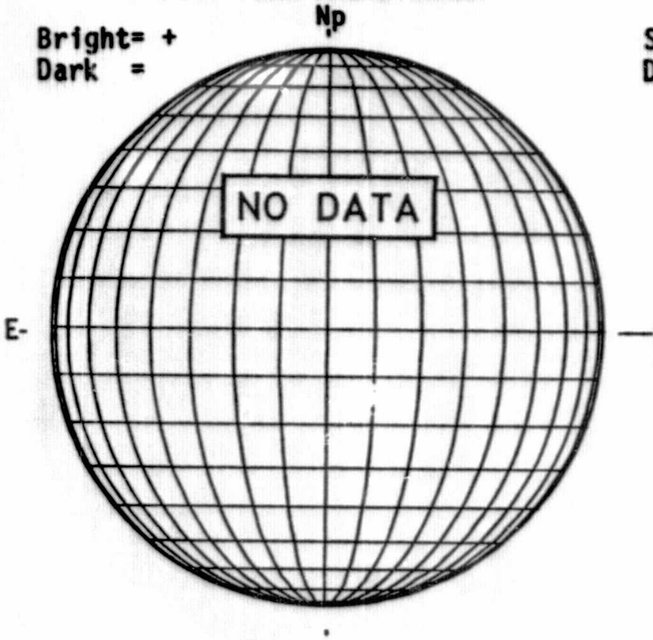
SACRAMENTO PEAK CORONA (1.15 Radii)



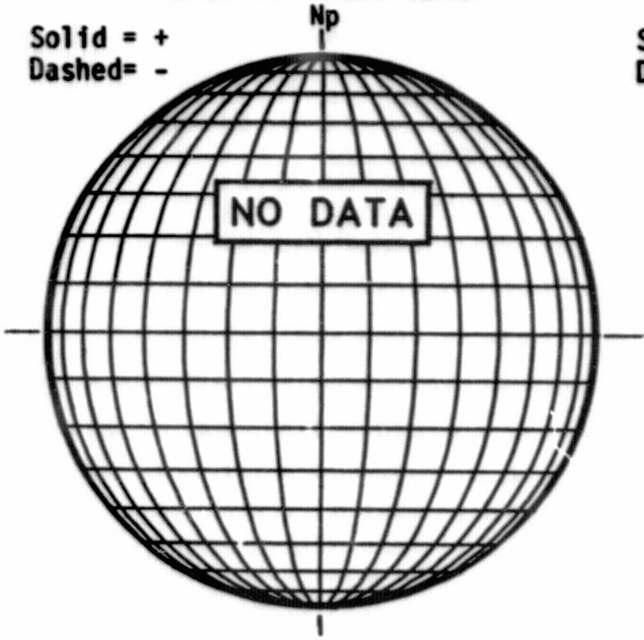
AUGUST 09, 1984 (P= 13.96, B_0= 6.33, L_0= 63.84)

36
Aug 84

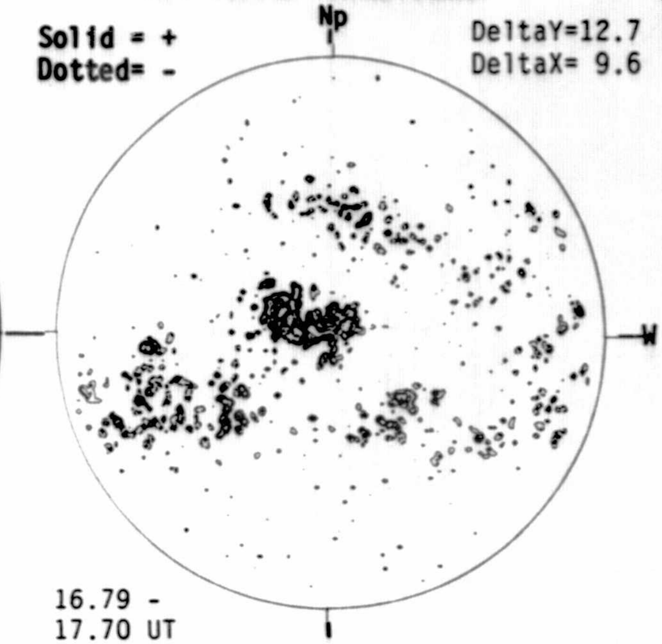
KITT PEAK MAGNETOGRAM



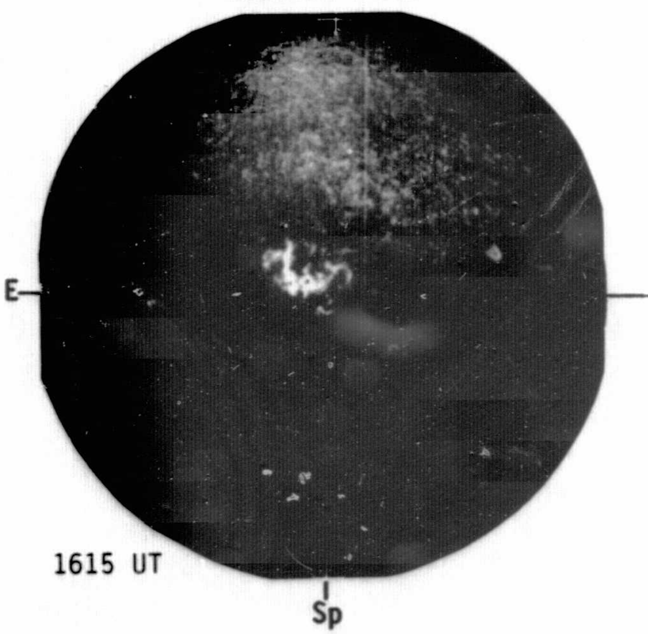
STANFORD MAGNETOGRAM



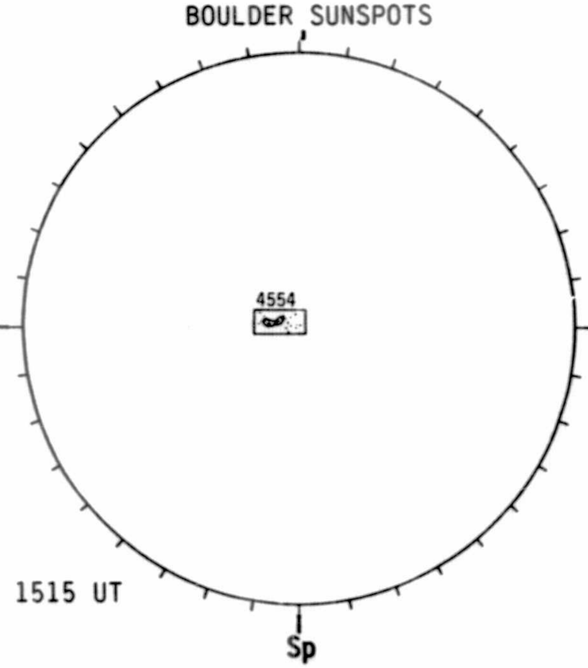
MT. WILSON MAGNETOGRAM



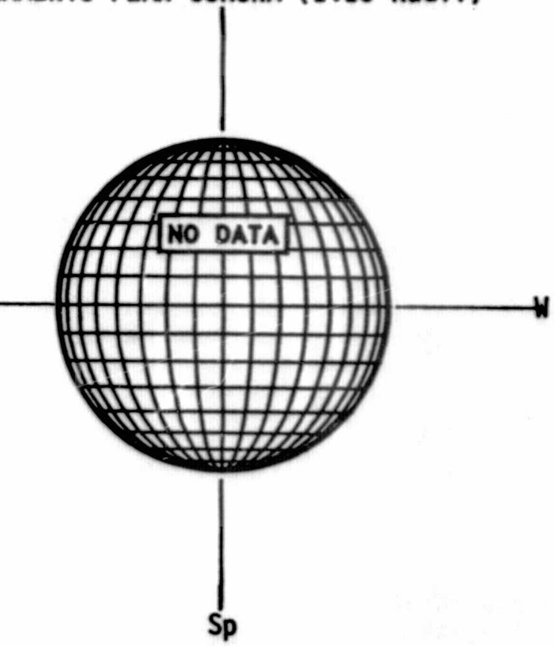
BOULDER H-ALPHA



BOULDER SUNSPOTS

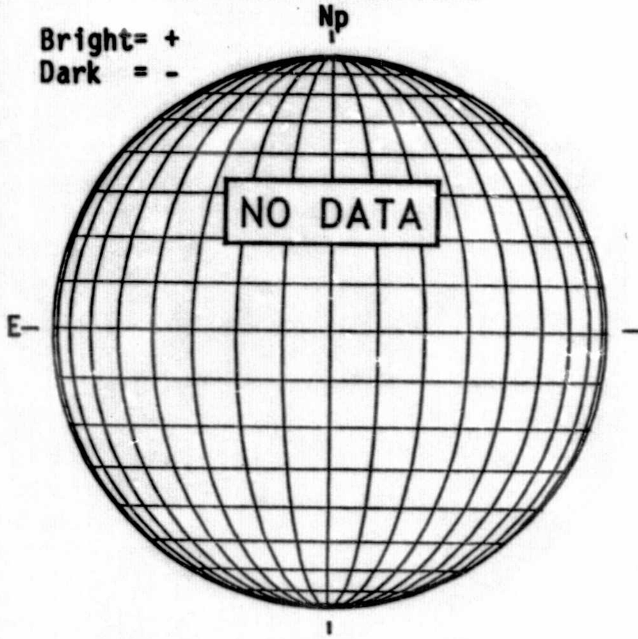


SACRAMENTO PEAK CORONA (1.15 Radii)

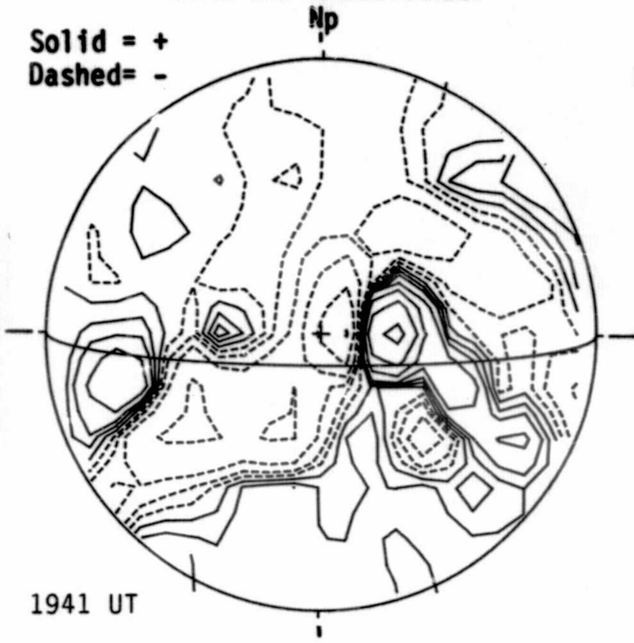


AUGUST 10, 1984 ($P = 14.33$, $B_0 = 6.38$, $L_0 = 50.61$)

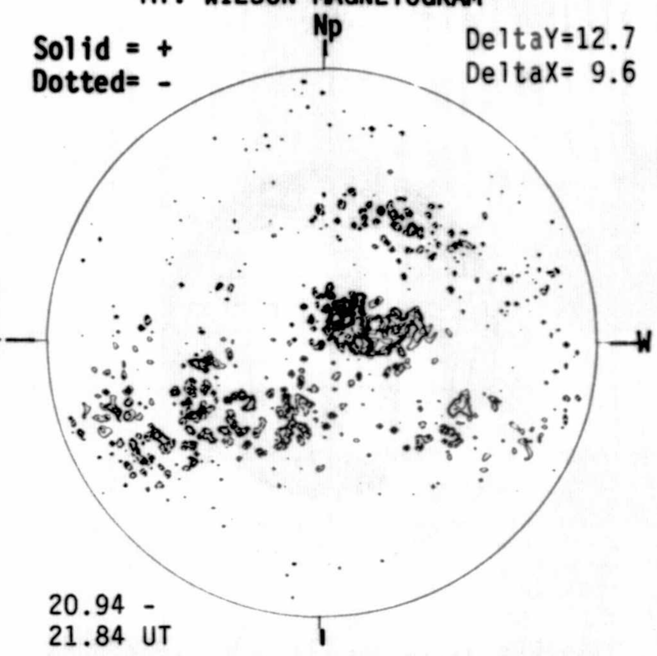
KITT PEAK MAGNETOGRAM



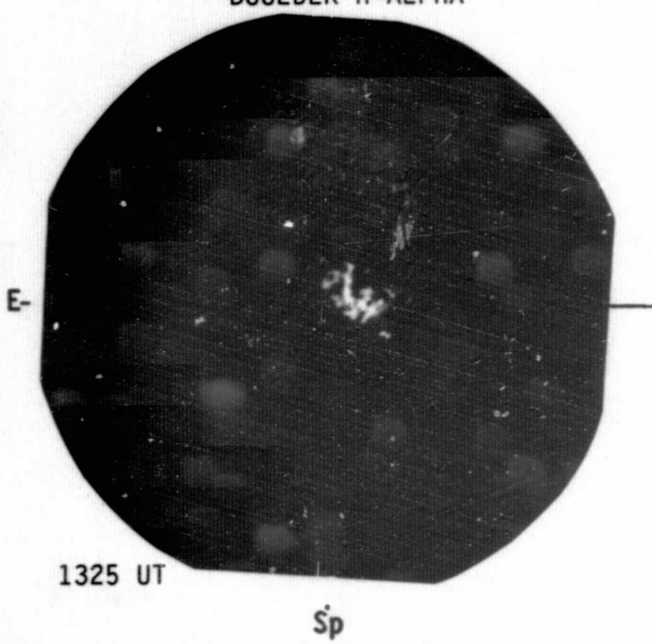
STANFORD MAGNETOGRAM



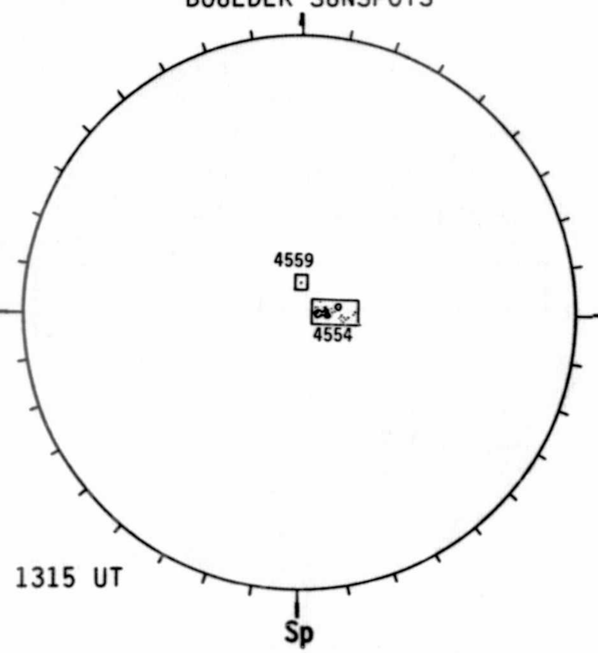
MT. WILSON MAGNETOGRAM



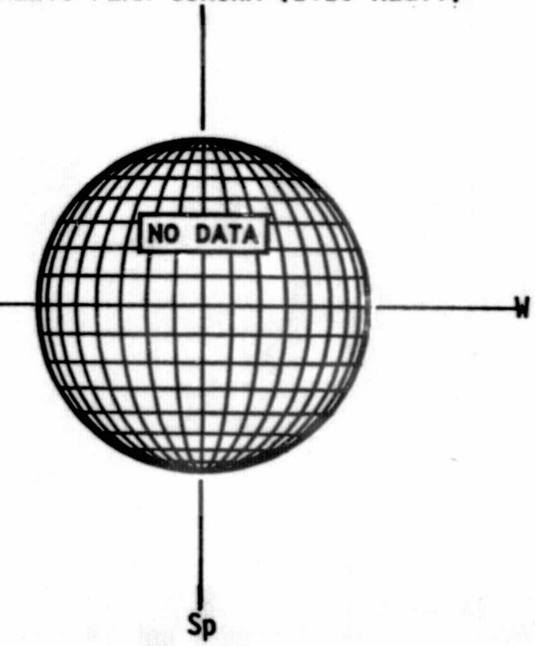
BOULDER H-ALPHA



BOULDER SUNSPOTS



SACRAMENTO PEAK CORONA (1.15 Radii)

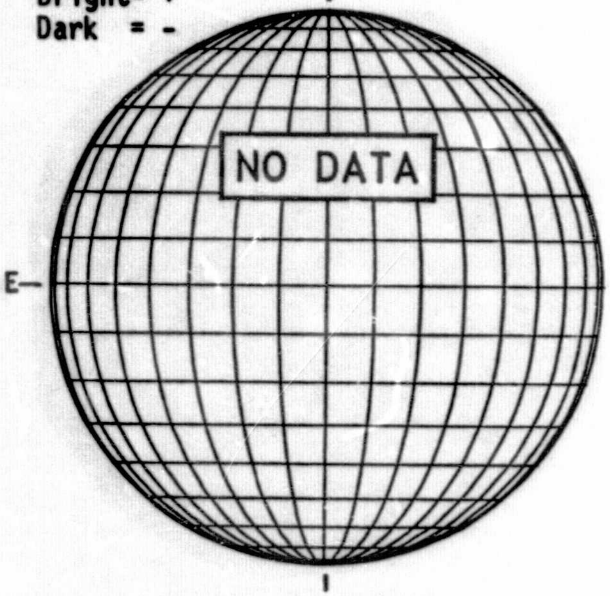


A U G U S T 11, 1 9 8 4 (P= 14.69, B_o= 6.44, L_o= 37.39)

KITT PEAK MAGNETOGRAM

Bright= +
Dark = -

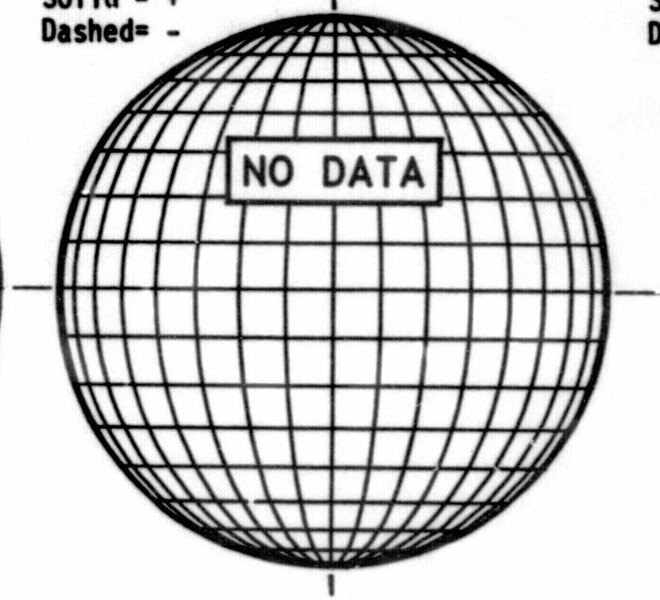
Np



STANFORD MAGNETOGRAM

Solid = +
Dashed= -

Np

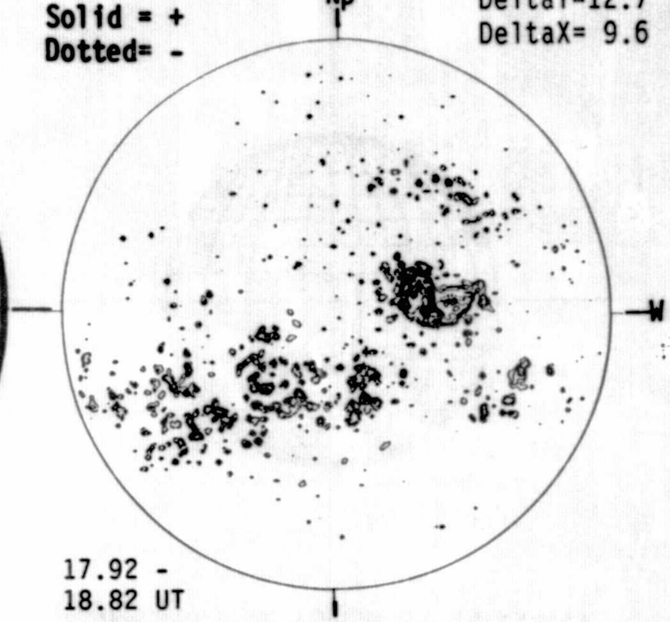


MT. WILSON MAGNETOGRAM

Solid = +
Dotted= -

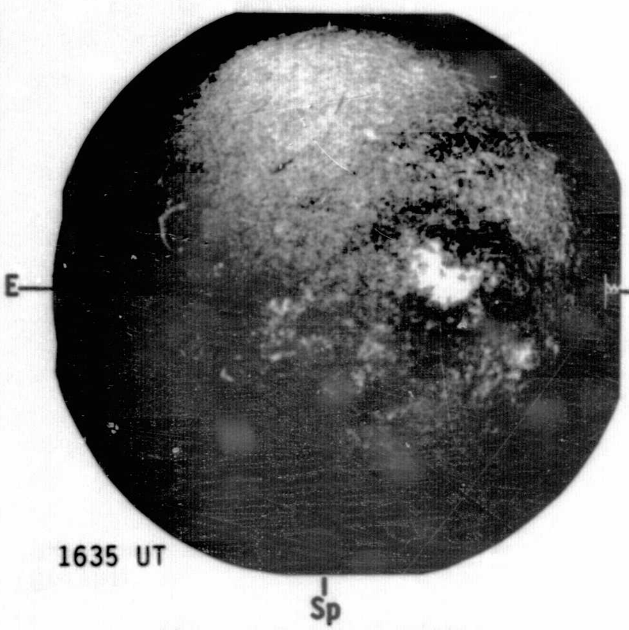
Np

DeltaY=12.7
DeltaX= 9.6



17.92 -
18.82 UT

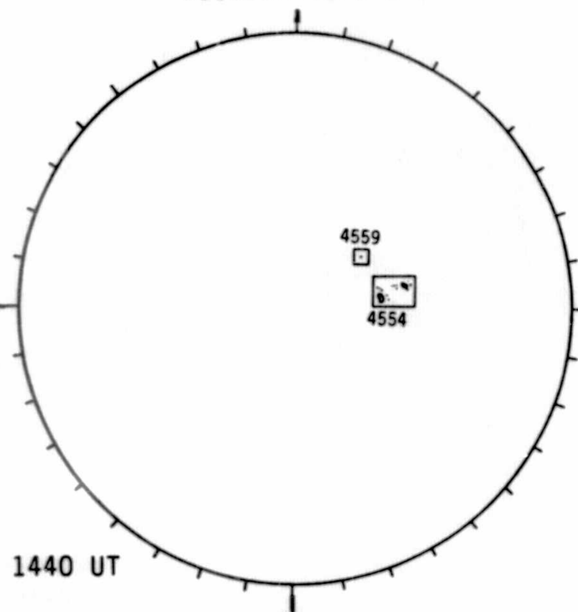
BOULDER H-ALPHA



1635 UT

Sp

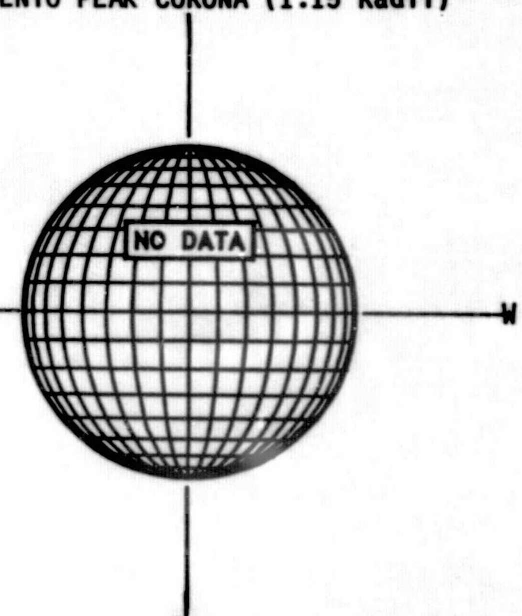
BOULDER SUNSPOTS



1440 UT

Sp

SACRAMENTO PEAK CORONA (1.15 Radii)

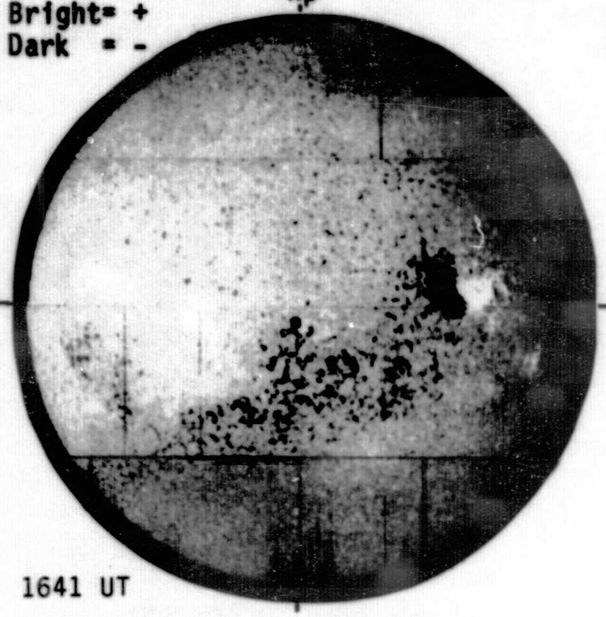


Sp

AUGUST 12, 1984 (P= 15.04, B_o= 6.49, L_o= 24.17)

KITT PEAK MAGNETOGRAM

Bright= +
Dark = -



1641 UT

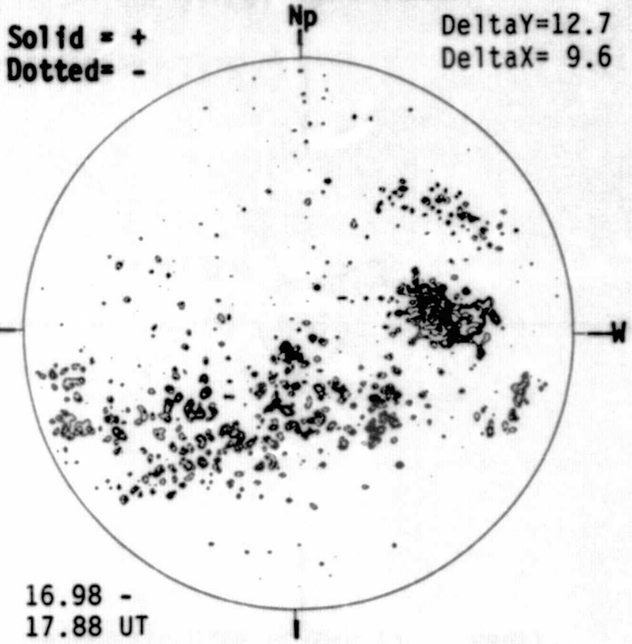
STANFORD MAGNETOGRAM

Solid = +
Dashed= -

MT. WILSON MAGNETOGRAM

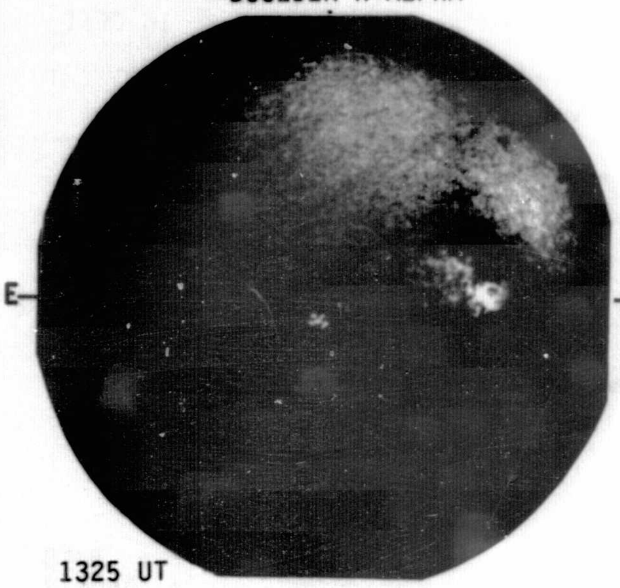
Solid = +
Dotted= -

DeltaY=12.7
DeltaX= 9.6



16.98 -
17.88 UT

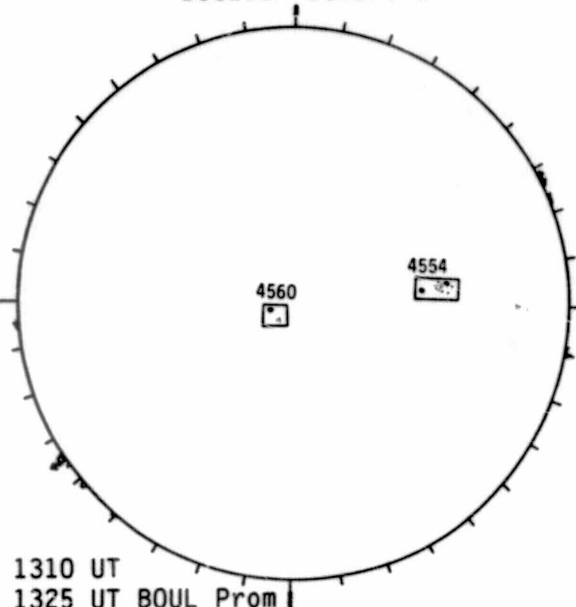
BOULDER H-ALPHA



1325 UT

Sp

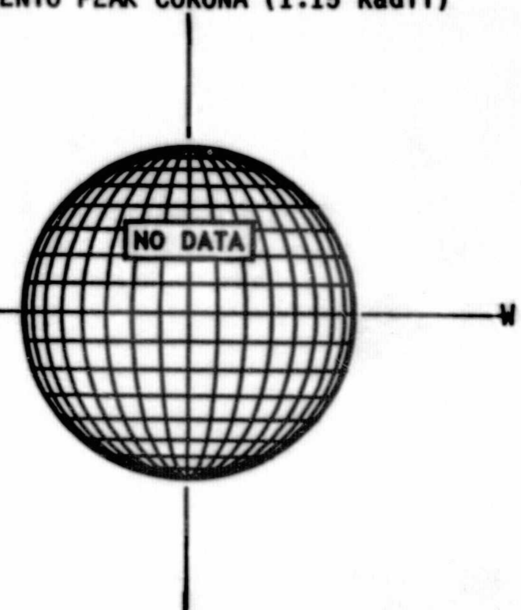
BOULDER SUNSPOTS



1310 UT
1325 UT BOUL Prom

Sp

SACRAMENTO PEAK CORONA (1.15 Radii)

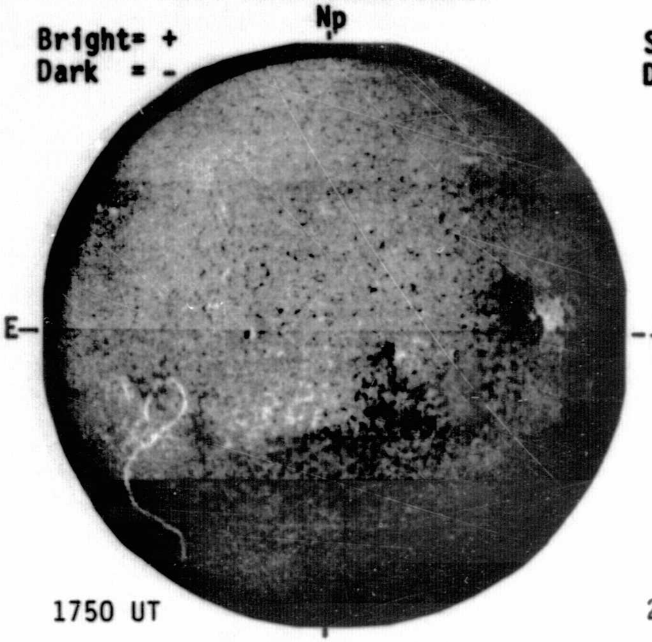


Sp

A U G U S T 13, 1 9 8 4 (P= 15.39, B_o= 6.55, L_o= 10.95)

KITT PEAK MAGNETOGRAM

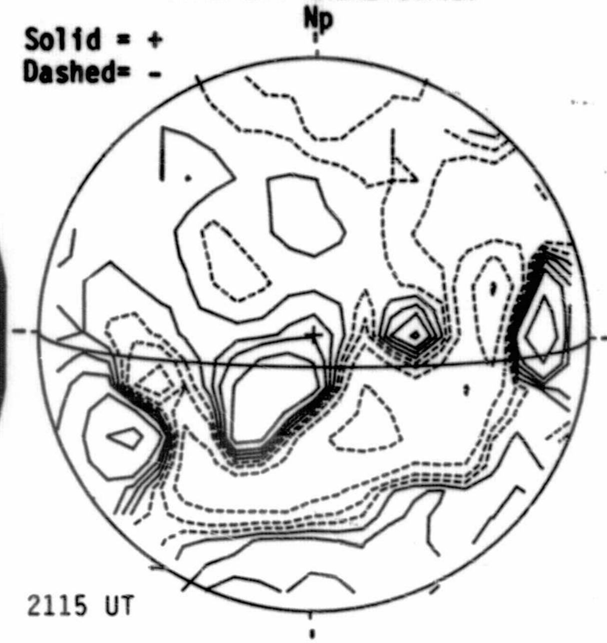
Bright= +
Dark = -



1750 UT

STANFORD MAGNETOGRAM

Solid = +
Dashed= -

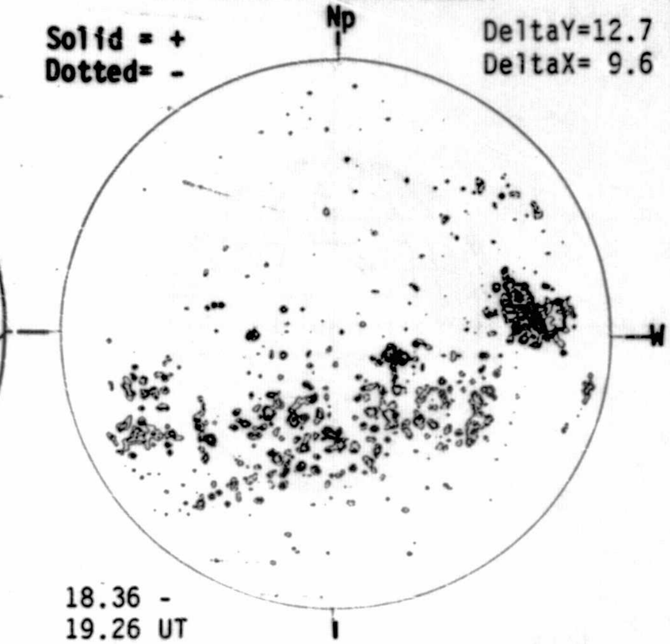


2115 UT

MT. WILSON MAGNETOGRAM

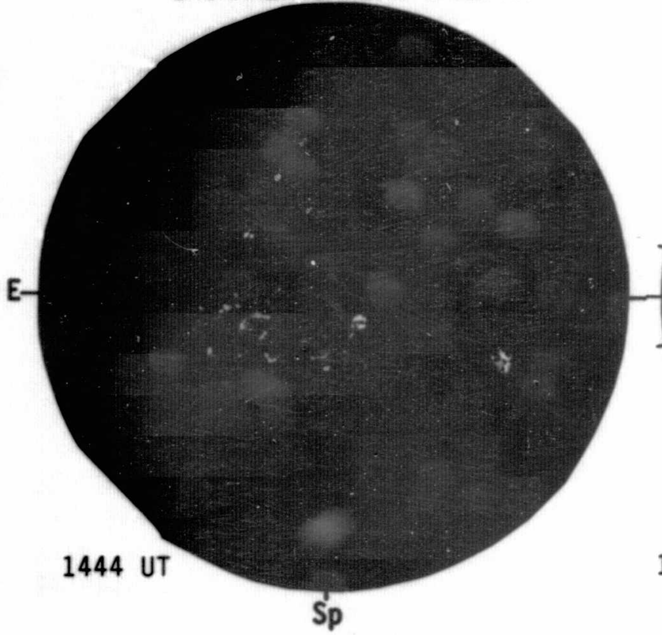
Solid = +
Dotted= -

DeltaY=12.7
DeltaX= 9.6



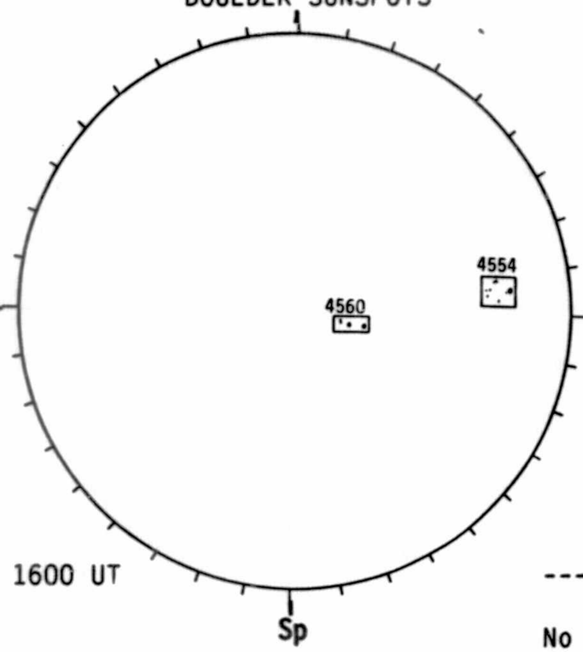
18.36 -
19.26 UT

SACRAMENTO PEAK H-ALPHA



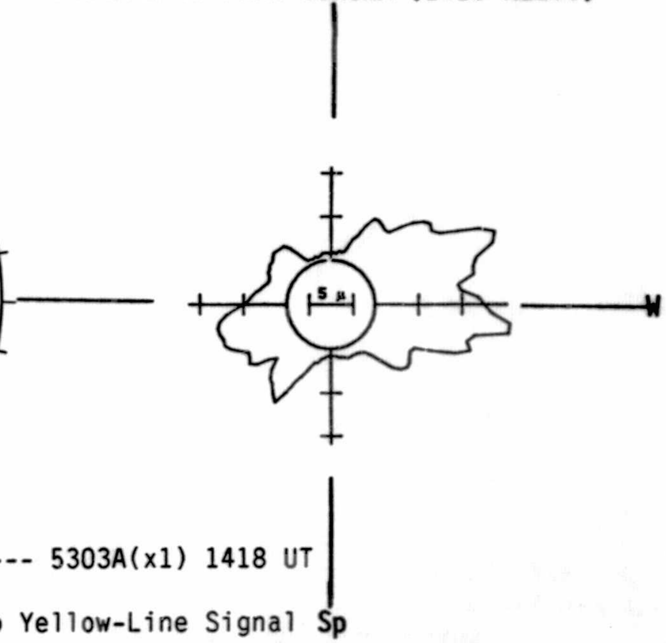
1444 UT

BOULDER SUNSPOTS



1600 UT

SACRAMENTO PEAK CORONA (1.15 Radii)



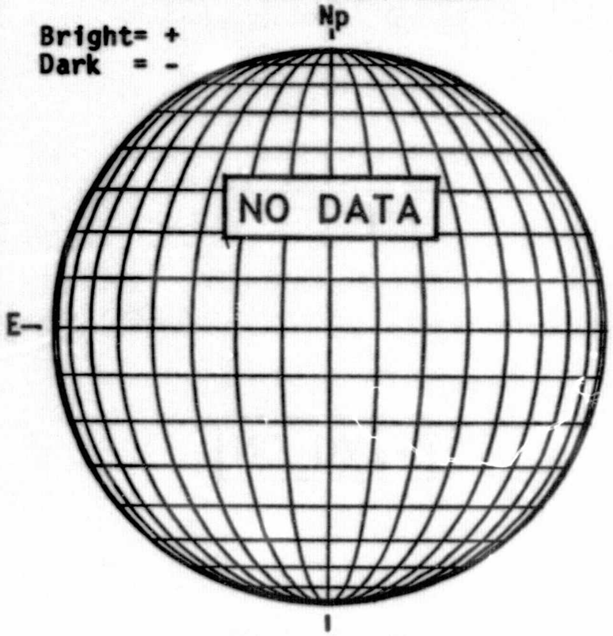
---- 5303A(x1) 1418 UT

No Yellow-Line Signal

AUGUST 14, 1984 (P= 15.74, B_0= 6.60, L_0= 357.73)

KITT PEAK MAGNETOGRAM

Bright= +
Dark = -



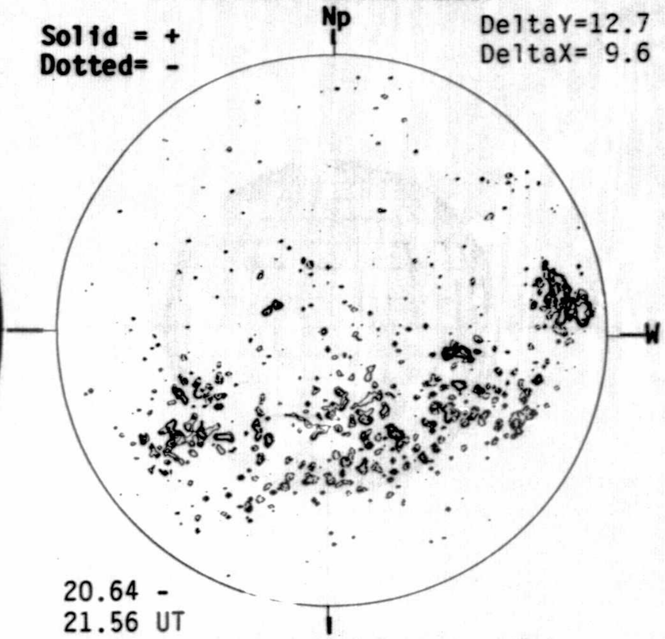
STANFORD MAGNETOGRAM

Solid = +
Dashed= -

MT. WILSON MAGNETOGRAM

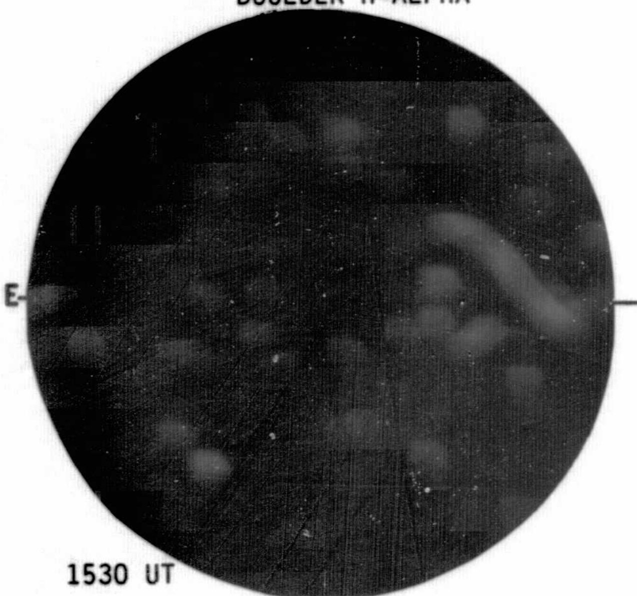
Solid = +
Dotted= -

DeltaY=12.7
DeltaX= 9.6



20.64 -
21.56 UT

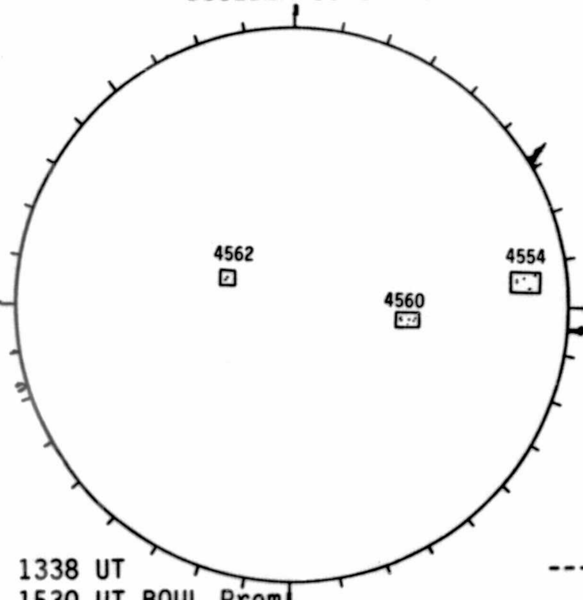
BOULDER H-ALPHA



1530 UT

Sp

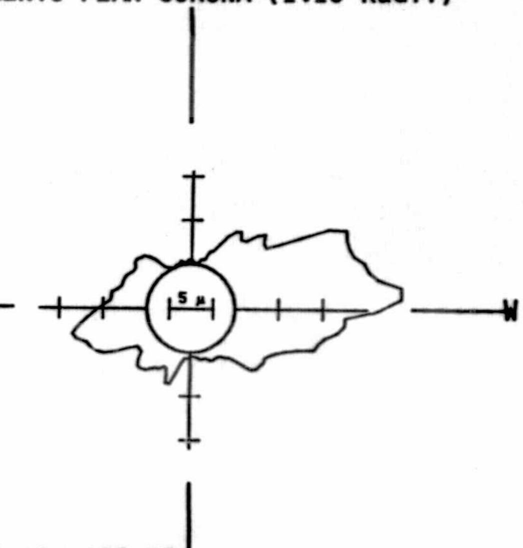
BOULDER SUNSPOTS



1338 UT
1530 UT BOUL Prom

Sp

SACRAMENTO PEAK CORONA (1.15 Radii)



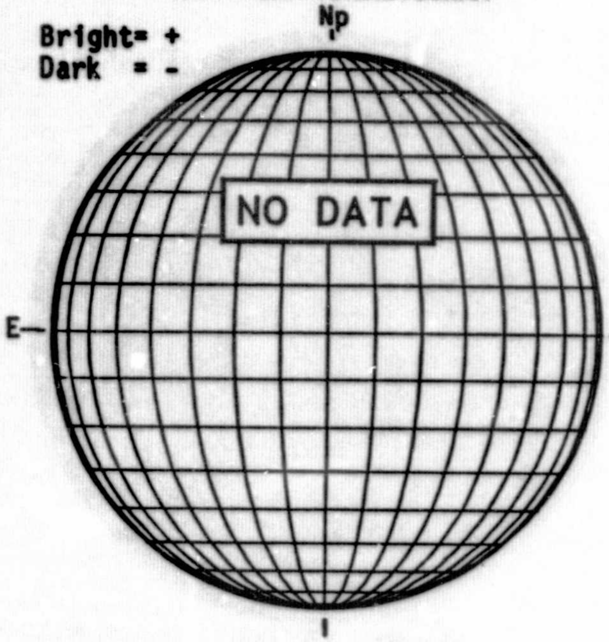
---- 5303A(x1) 1407 UT

Sp

A U G U S T 15, 1 9 8 4 (P= 16.08, B_o= 6.65, L_o= 344.51)

KITT PEAK MAGNETOGRAM

Bright= +
Dark = -



STANFORD MAGNETOGRAM

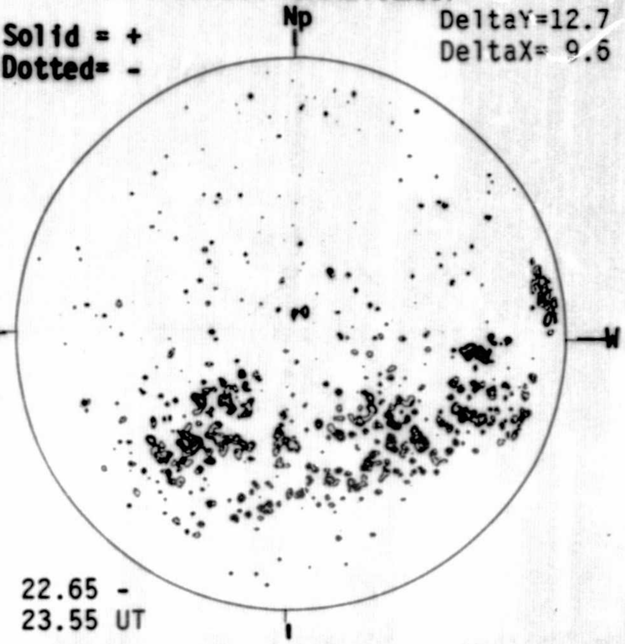
Solid = +
Dashed= -

2137 UT

MT. WILSON MAGNETOGRAM

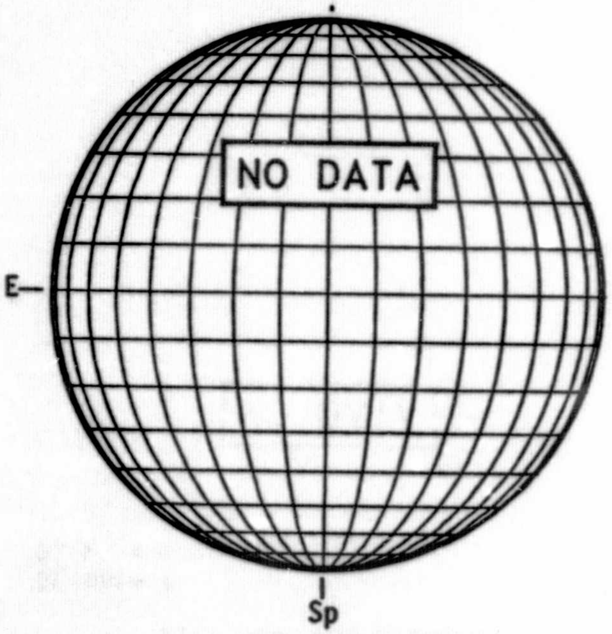
Solid = +
Dotted= -

DeltaY=12.7
DeltaX= 9.6

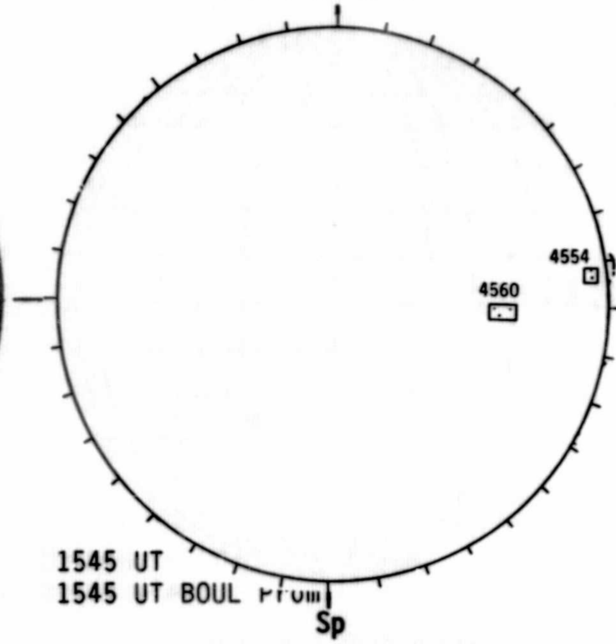


22.65 -
23.55 UT

BOULDER H-ALPHA

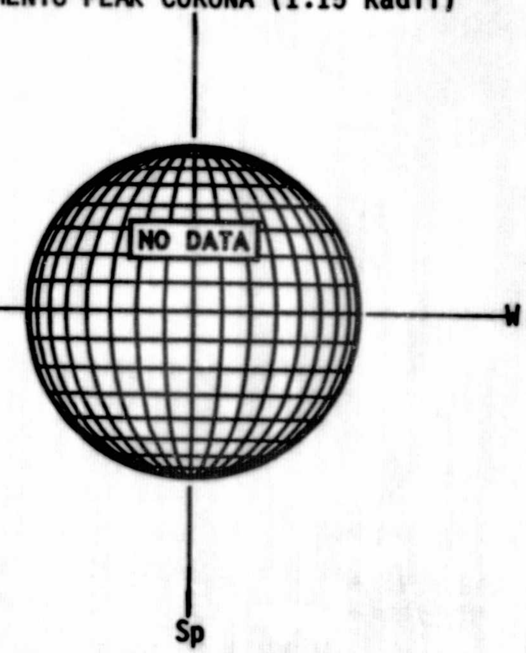


BOULDER SUNSPOTS



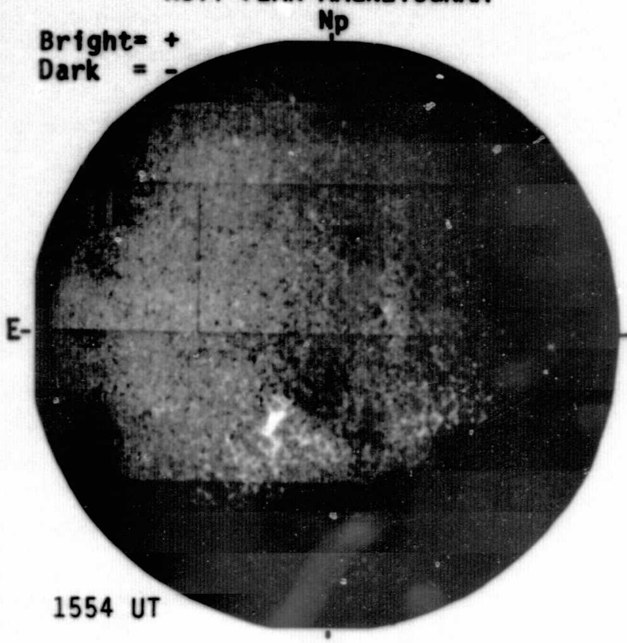
1545 UT
1545 UT BOUL Prom

SACRAMENTO PEAK CORONA (1.15 Radii)



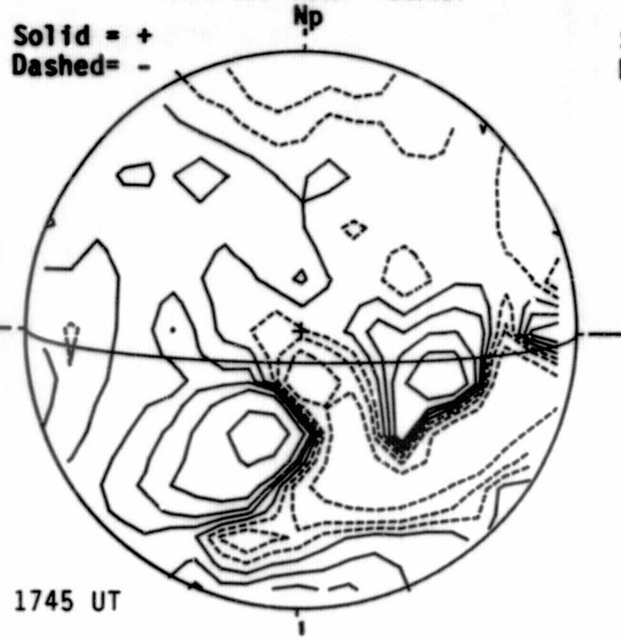
AUGUST 16, 1984 (P= 16.42, B_0= 6.69, L_0= 331.30)

KITT PEAK MAGNETOGRAM



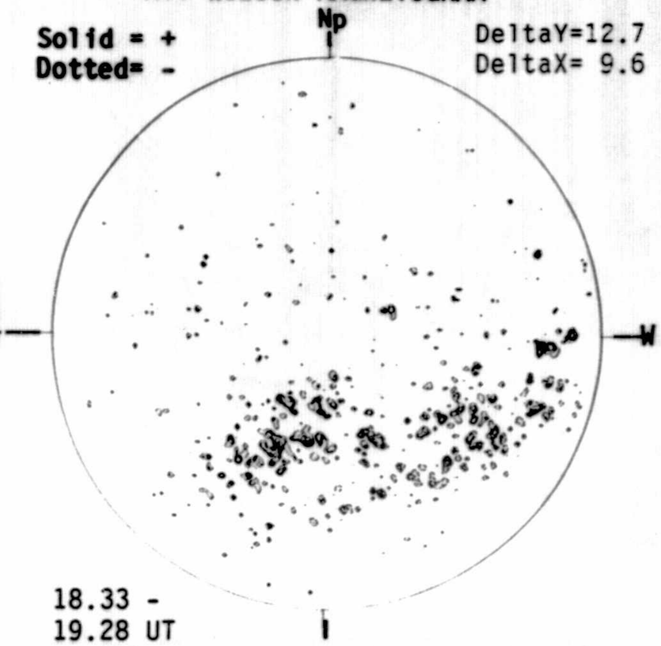
1554 UT

STANFORD MAGNETOGRAM



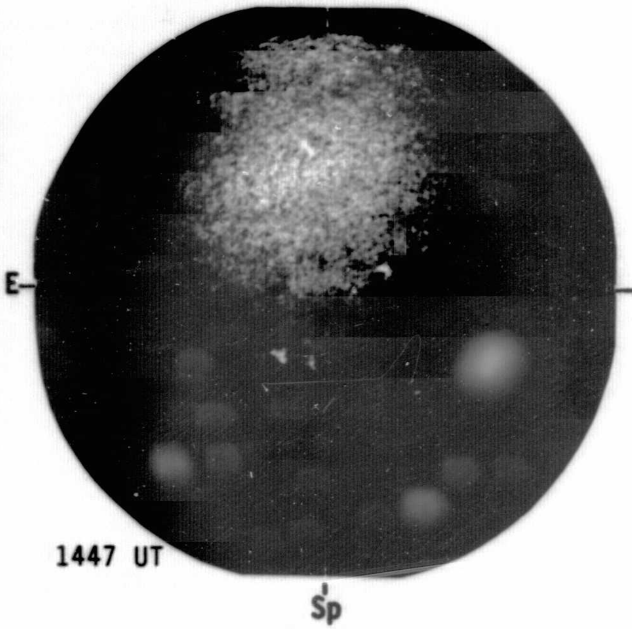
1745 UT

MT. WILSON MAGNETOGRAM



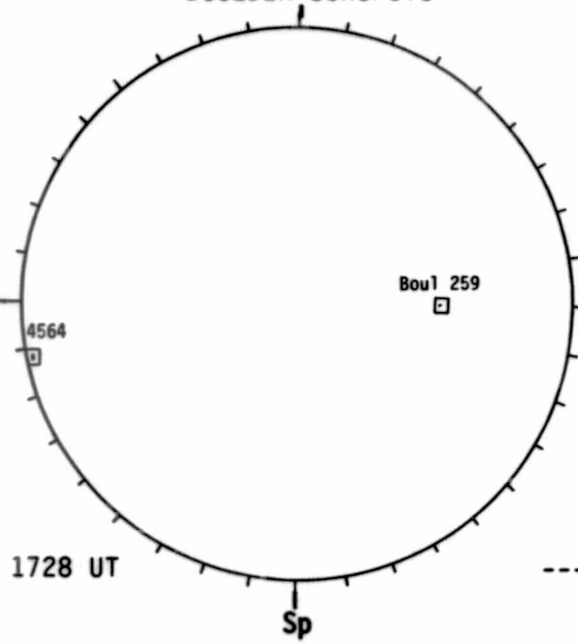
18.33 -
19.28 UT

BOULDER H-ALPHA



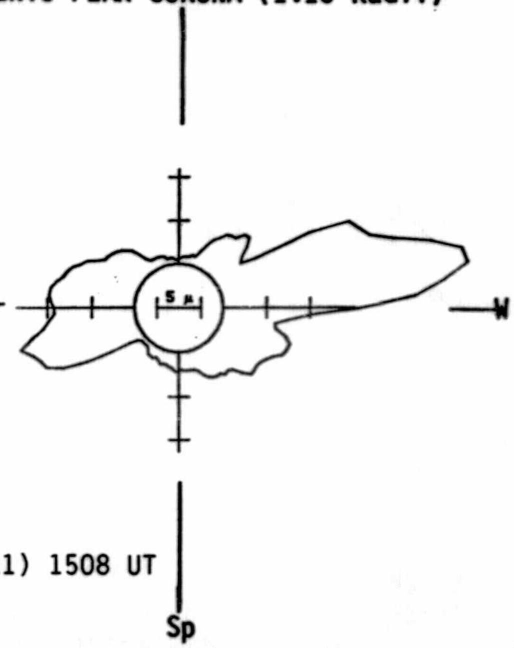
1447 UT

BOULDER SUNSPOTS



1728 UT

SACRAMENTO PEAK CORONA (1.15 Radii)



---- 5303A(x1) 1508 UT

A U G U S T 17, 1 9 8 4 (P= 16.75, B_0= 6.74, L_0= 318.08)

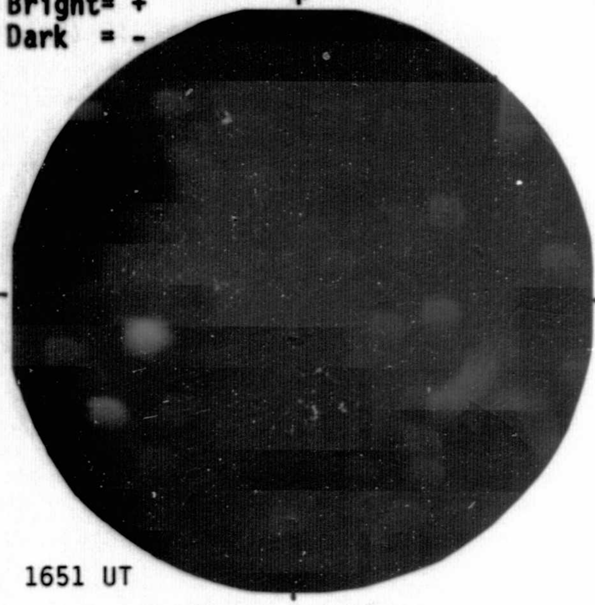
44 Aug 84

KITT PEAK MAGNETOGRAM

Bright= +
Dark = -

Np

E—



1651 UT

STANFORD MAGNETOGRAM

Solid = +
Dashed= -

Np

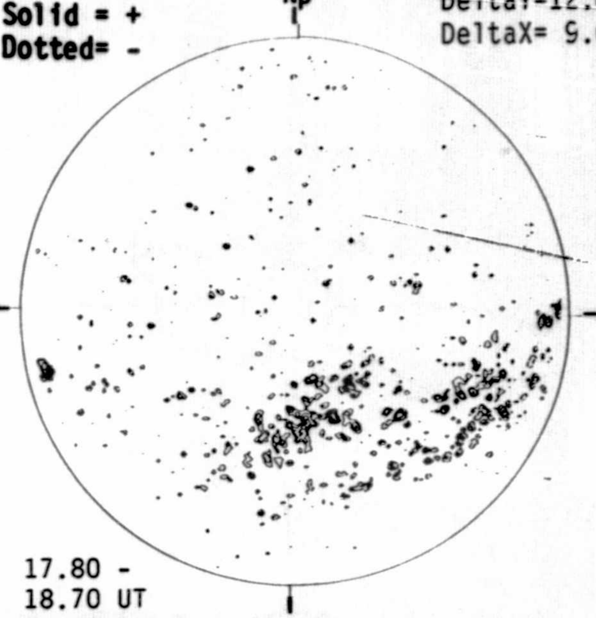
1813 UT

MT. WILSON MAGNETOGRAM

Solid = +
Dotted= -

Np

DeltaY=12.6
DeltaX= 9.6

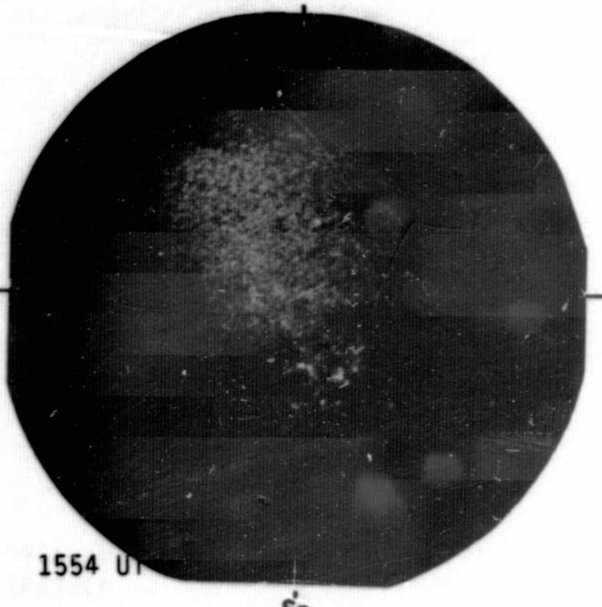


—W

17.80 -
18.70 UT

BOULDER H-ALPHA

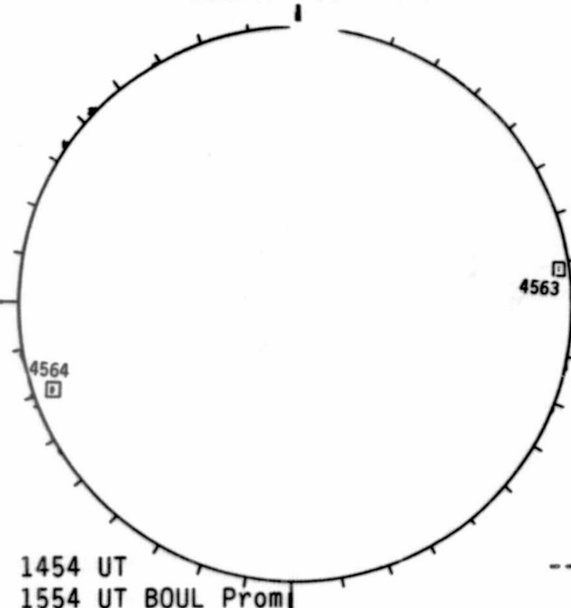
E—



1554 UT

Sp

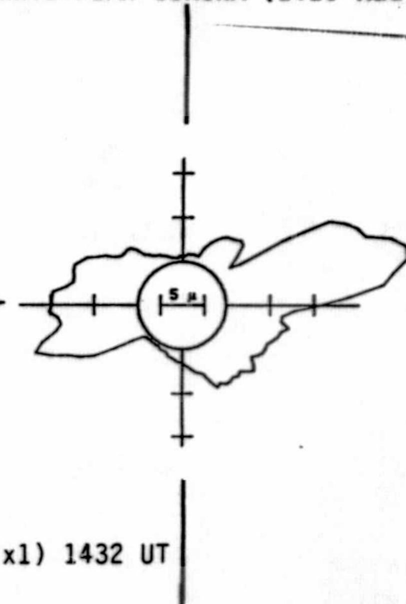
BOULDER SUNSPOTS



1454 UT
1554 UT BOUL Prom

Sp

SACRAMENTO PEAK CORONA (1.15 Radii)



—W

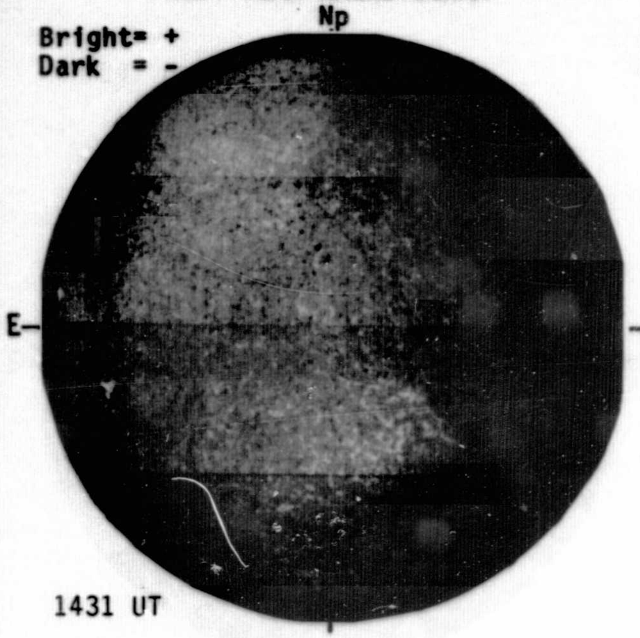
---- 5303A(x1) 1432 UT

Sp

AUGUST 18, 1984 (P= 17.08, B_0= 6.78, L_0= 304.86)

KITT PEAK MAGNETOGRAM

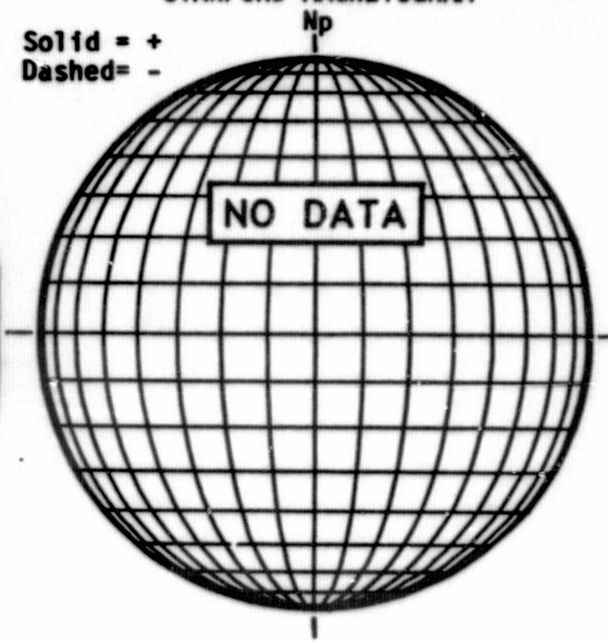
Bright= +
Dark = -



1431 UT

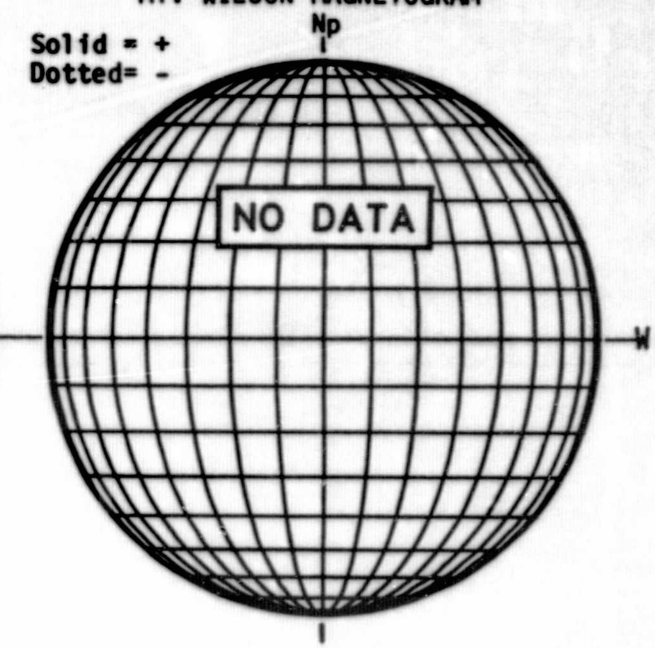
STANFORD MAGNETOGRAM

Solid = +
Dashed= -

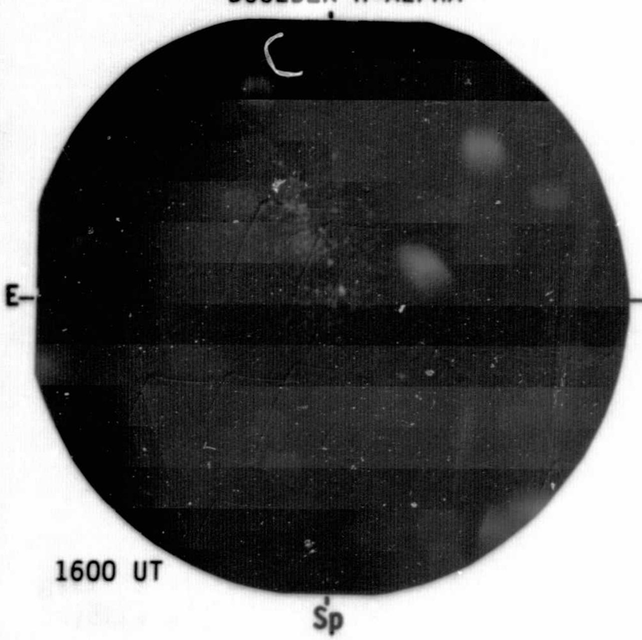


MT. WILSON MAGNETOGRAM

Solid = +
Dotted= -

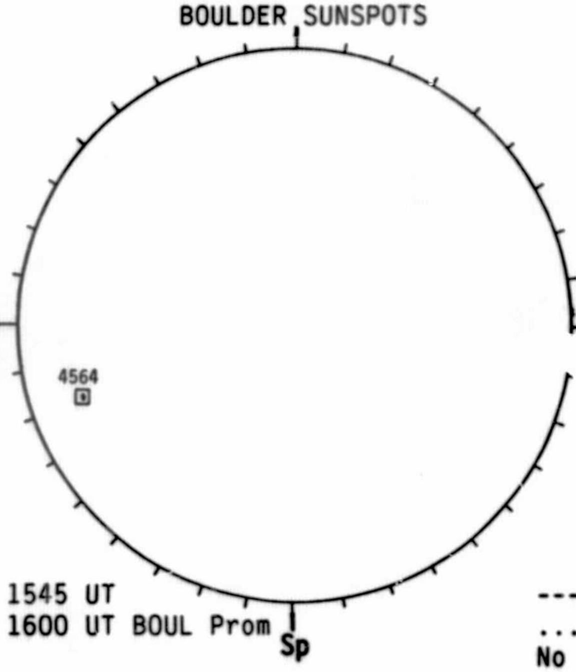


BOULDER H-ALPHA



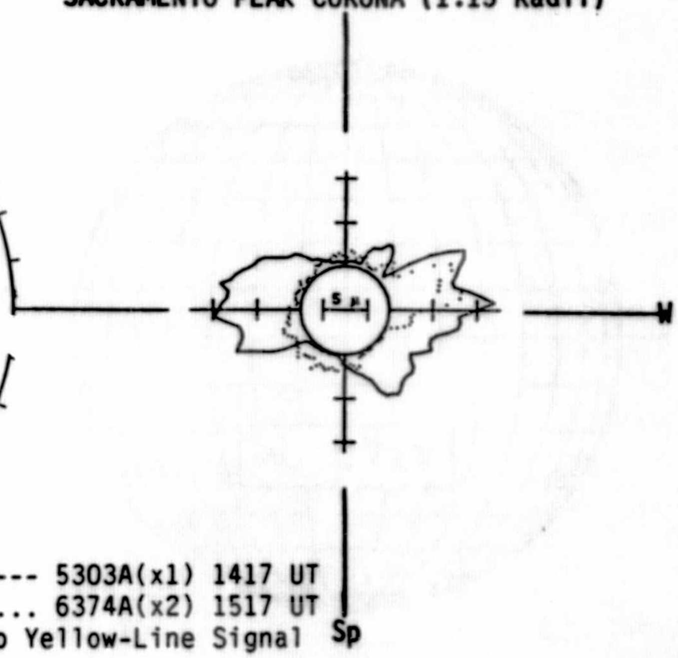
1600 UT

BOULDER SUNSPOTS



1545 UT
1600 UT BOUL Prom

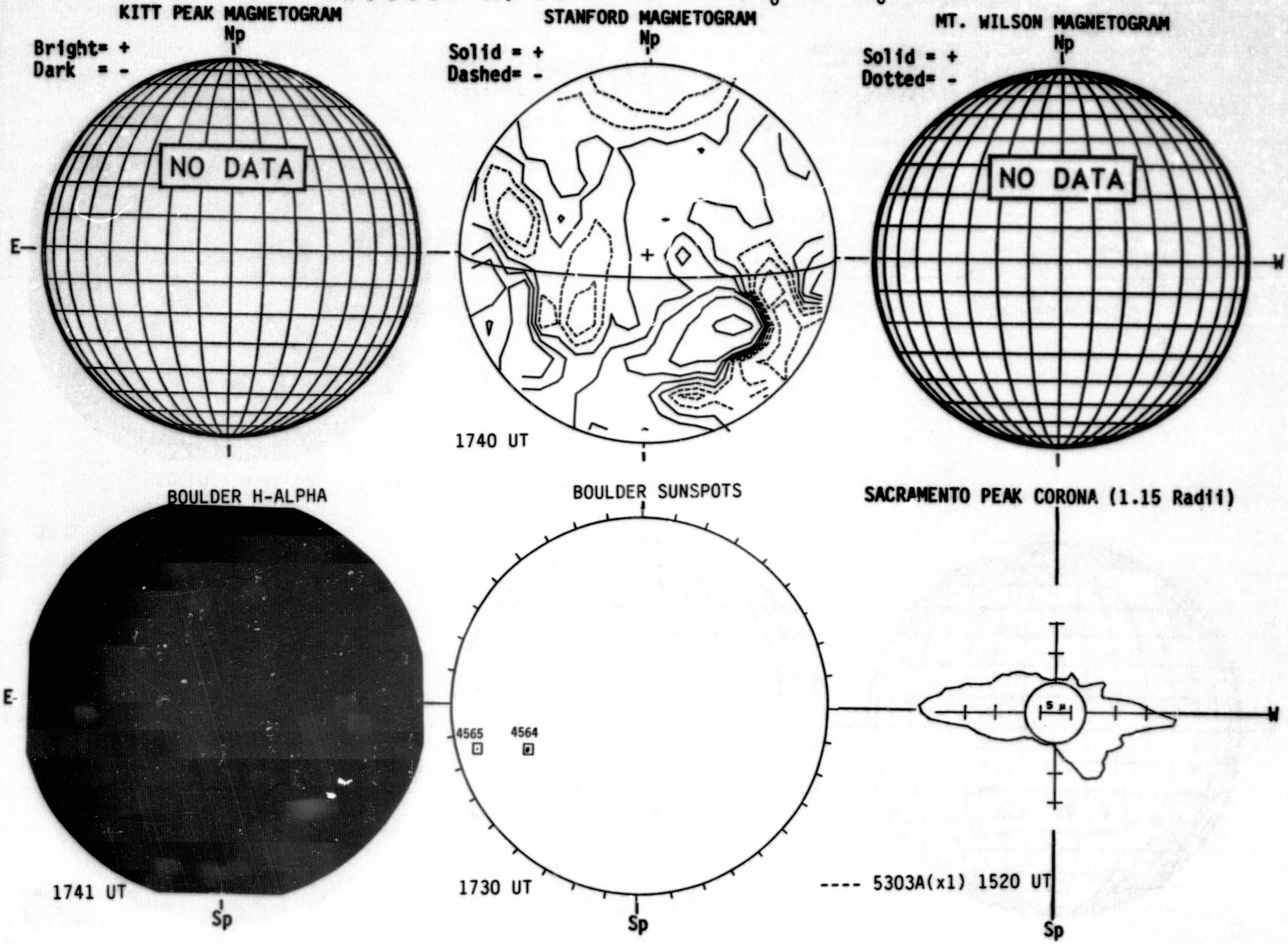
SACRAMENTO PEAK CORONA (1.15 Radii)



---- 5303A(x1) 1417 UT
.... 6374A(x2) 1517 UT
No Yellow-Line Signal

A U G U S T 19, 1 9 8 4 (P= 17.40, B_0= 6.82, L_0= 291.64)

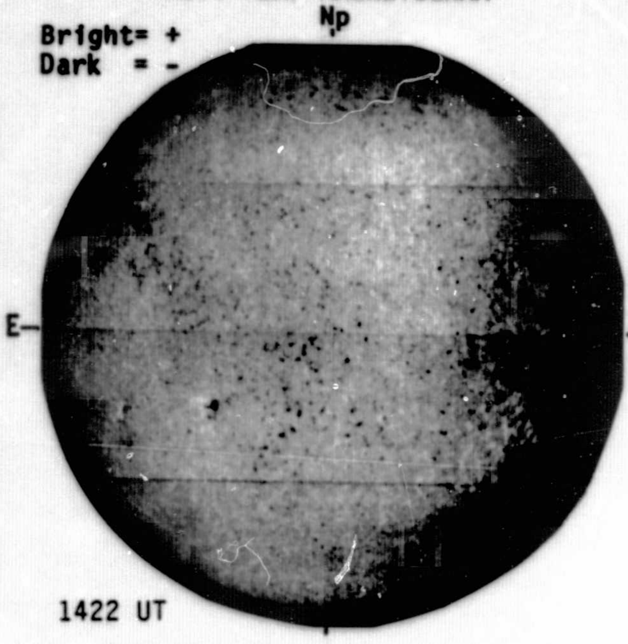
46
Aug 84



AUGUST 20, 1984 (P= 17.72, B_0= 6.86, L_0= 278.43)

KITT PEAK MAGNETOGRAM

Bright= +
Dark = -



1422 UT

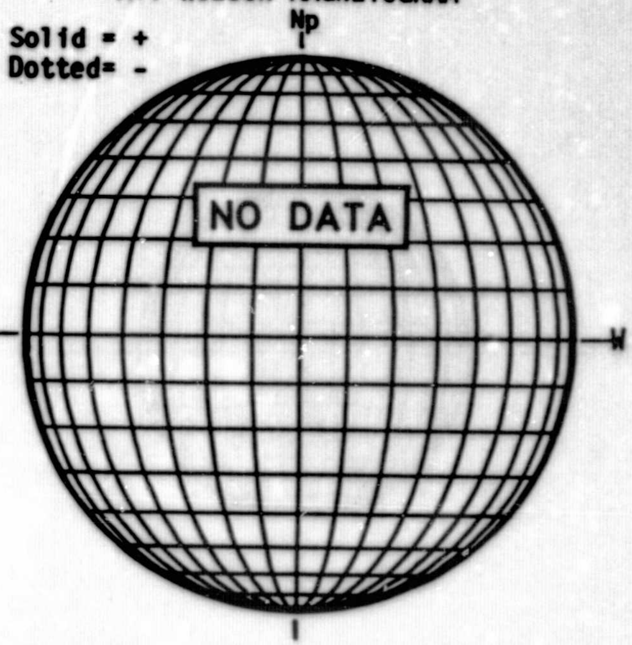
STANFORD MAGNETOGRAM

Solid = +
Dashed= -

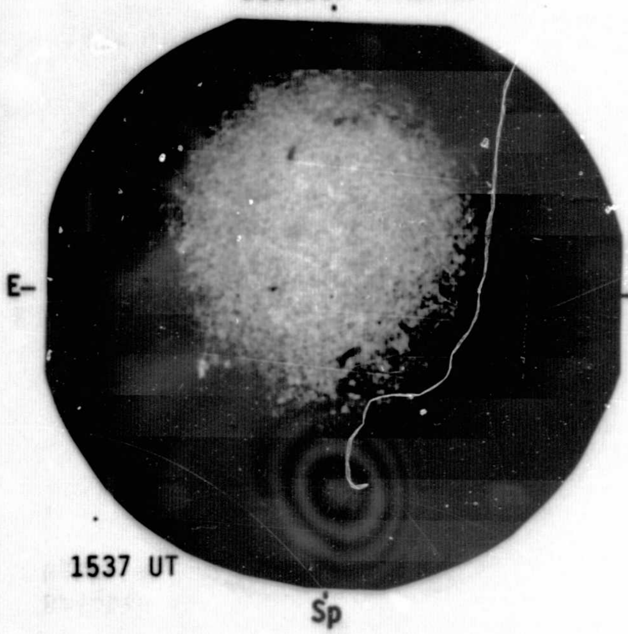
1818 UT

MT. WILSON MAGNETOGRAM

Solid = +
Dotted= -

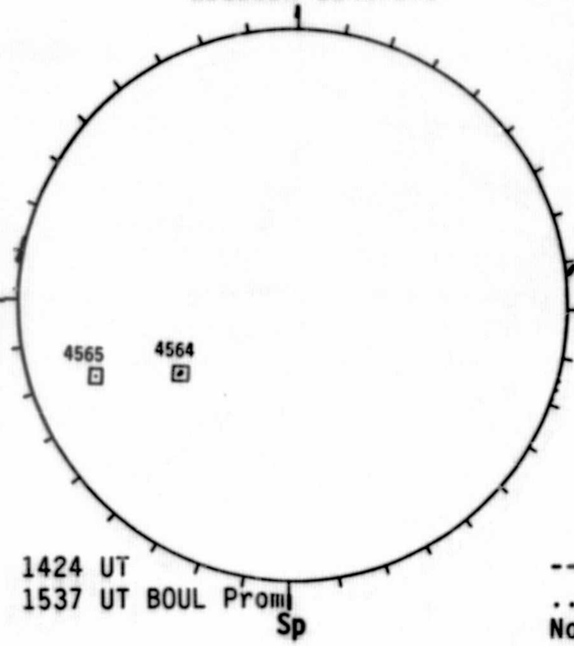


BOULDER H-ALPHA



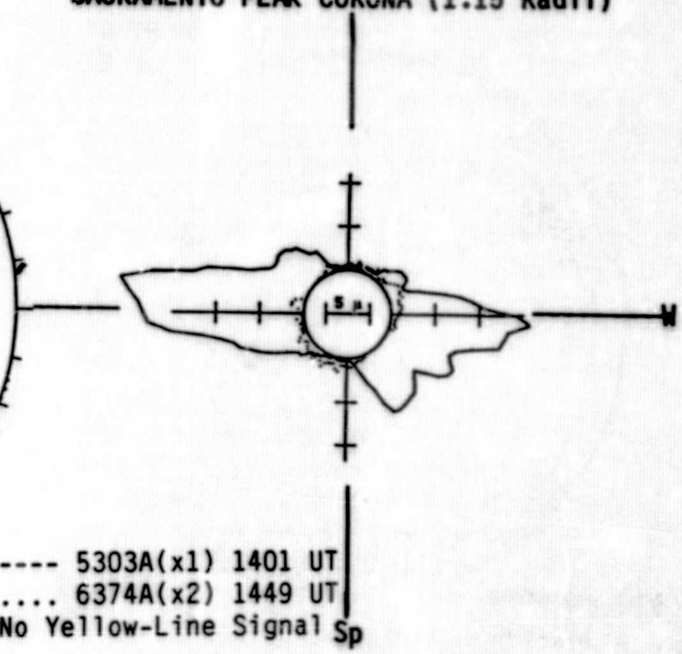
1537 UT

BOULDER SUNSPOTS



1424 UT
1537 UT BOUL Prom

SACRAMENTO PEAK CORONA (1.15 Radii)

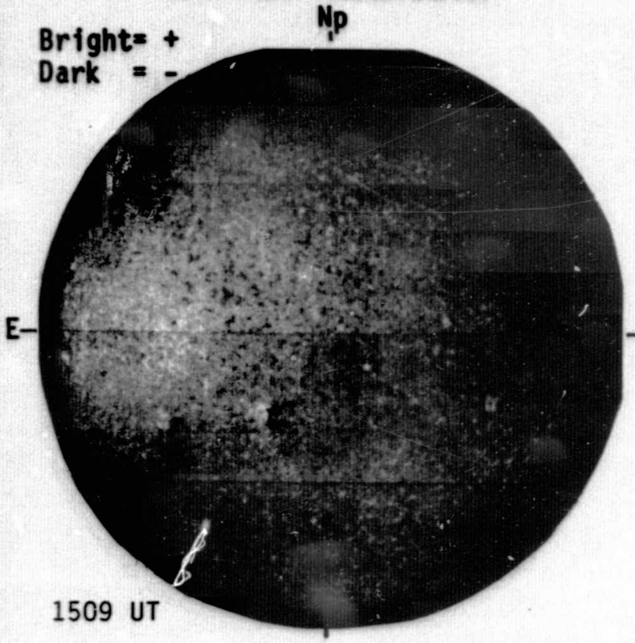


---- 5303A(x1) 1401 UT
.... 6374A(x2) 1449 UT
No Yellow-Line Signal

A U G U S T 21, 1 9 8 4 (P= 18.03, B_0= 6.90, L_0= 265.21)

KITT PEAK MAGNETOGRAM

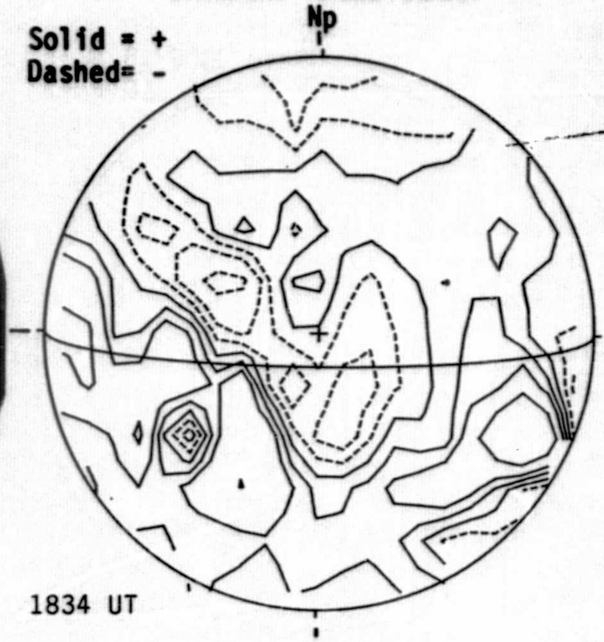
Bright= +
Dark = -



1509 UT

STANFORD MAGNETOGRAM

Solid = +
Dashed= -

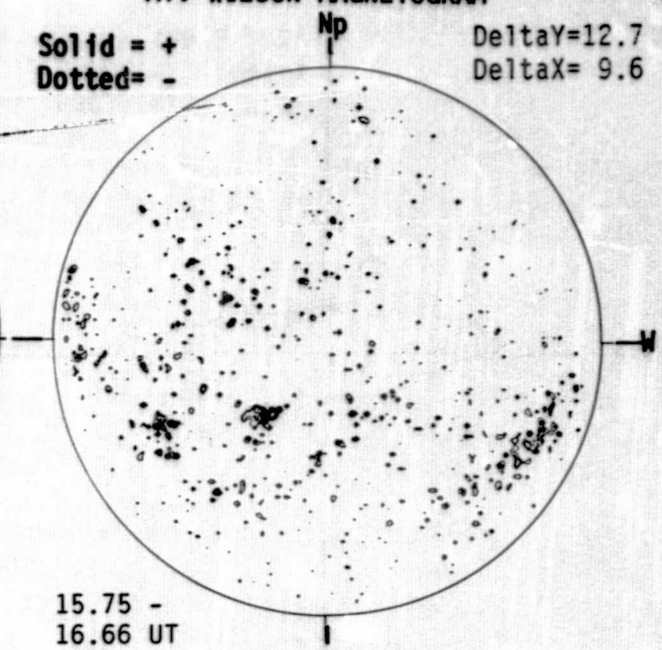


1834 UT

MT. WILSON MAGNETOGRAM

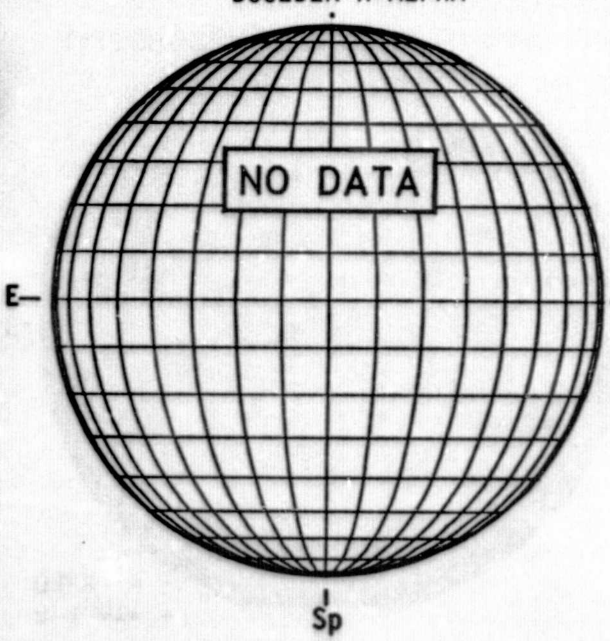
Solid = +
Dotted= -

DeltaY=12.7
DeltaX= 9.6

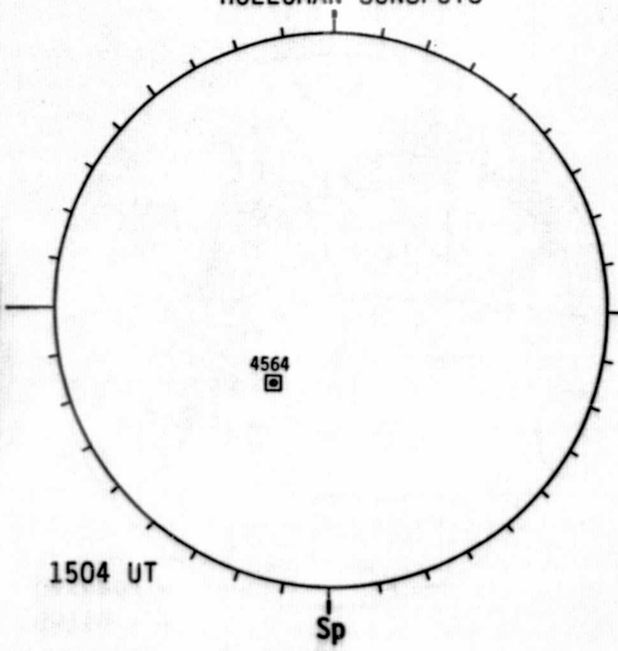


15.75 -
16.66 UT

BOULDER H-ALPHA

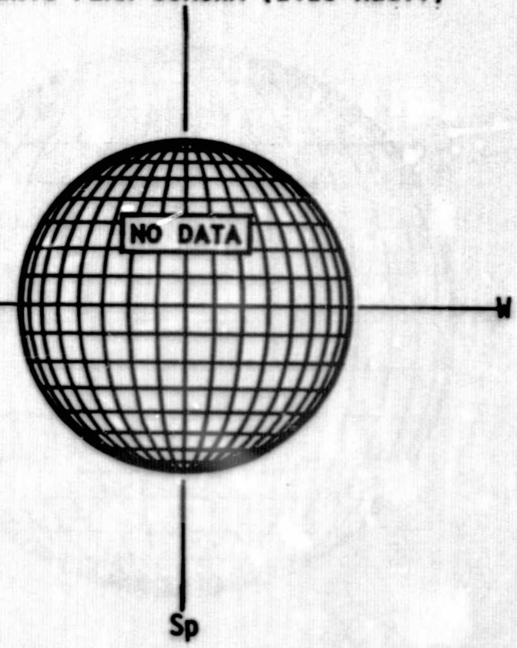


HOLLOMAN SUNSPOTS



1504 UT

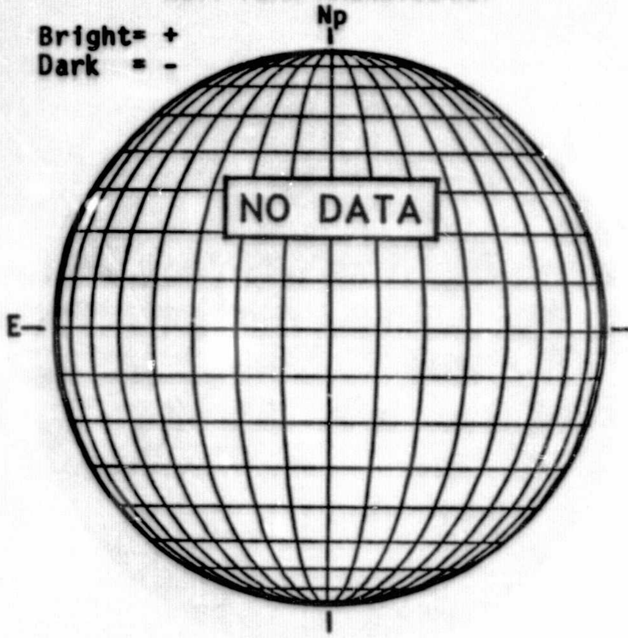
SACRAMENTO PEAK CORONA (1.15 Radii)



AUGUST 22, 1984 (P= 18.34, B_0= 6.94, L_0= 252.00)

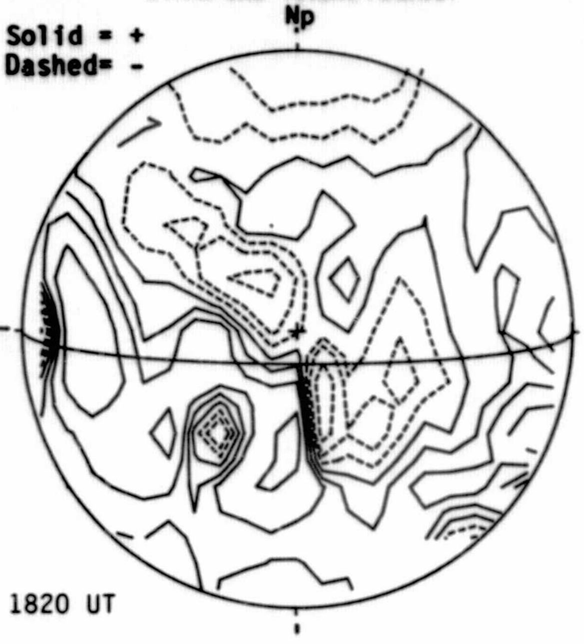
KITT PEAK MAGNETOGRAM

Bright= +
Dark = -



STANFORD MAGNETOGRAM

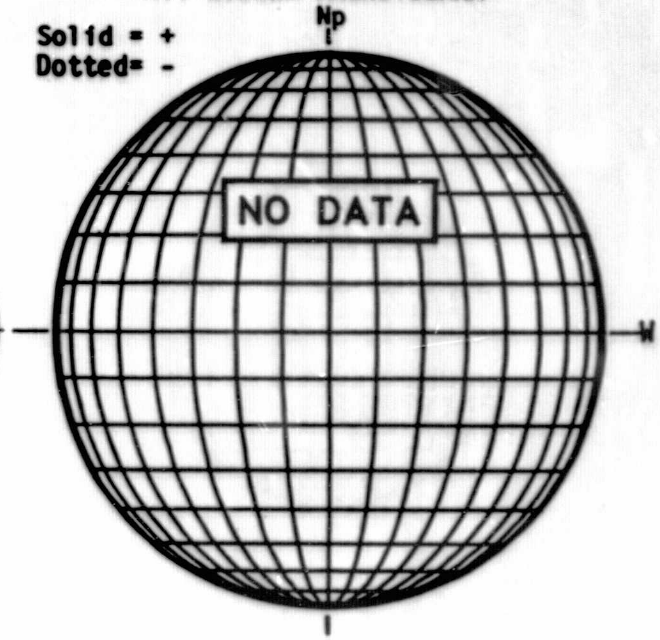
Solid = +
Dashed= -



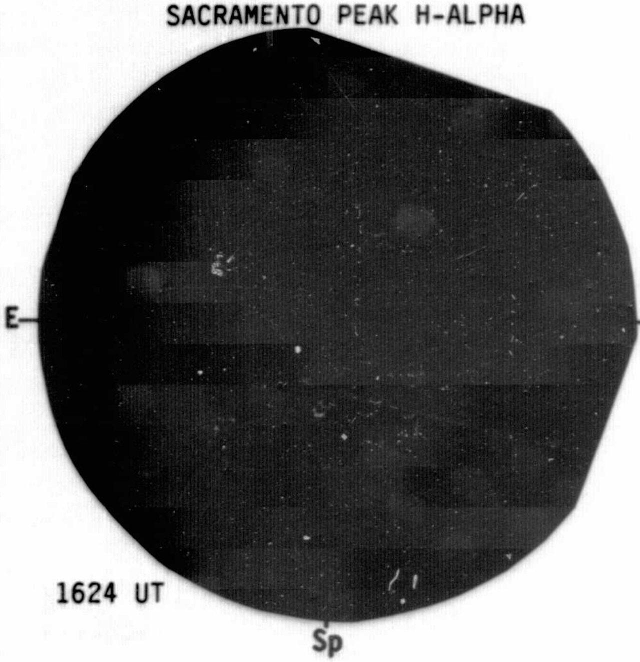
1820 UT

MT. WILSON MAGNETOGRAM

Solid = +
Dotted= -

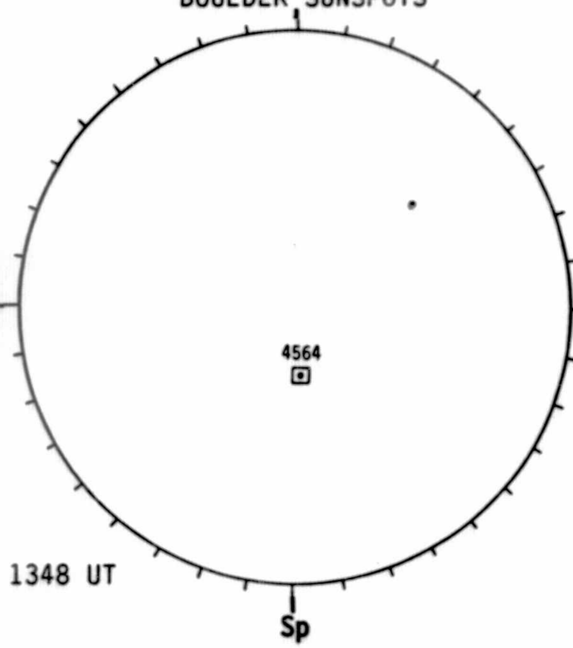


SACRAMENTO PEAK H-ALPHA



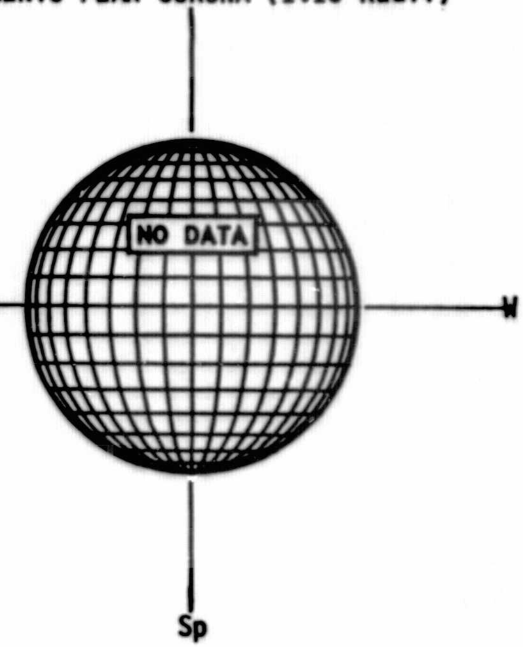
1624 UT

BOULDER SUNSPOTS



1348 UT

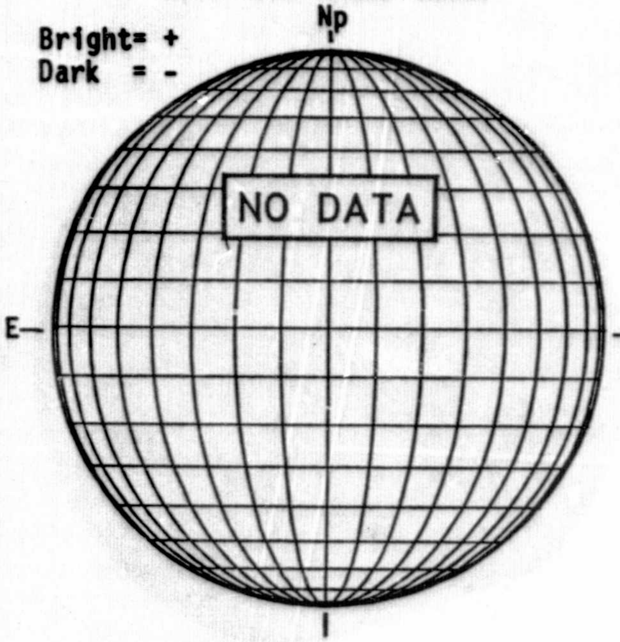
SACRAMENTO PEAK CORONA (1.15 Radii)



AUGUST 23, 1984 (P= 18.65, B_o= 6.97, L_o= 238.78)

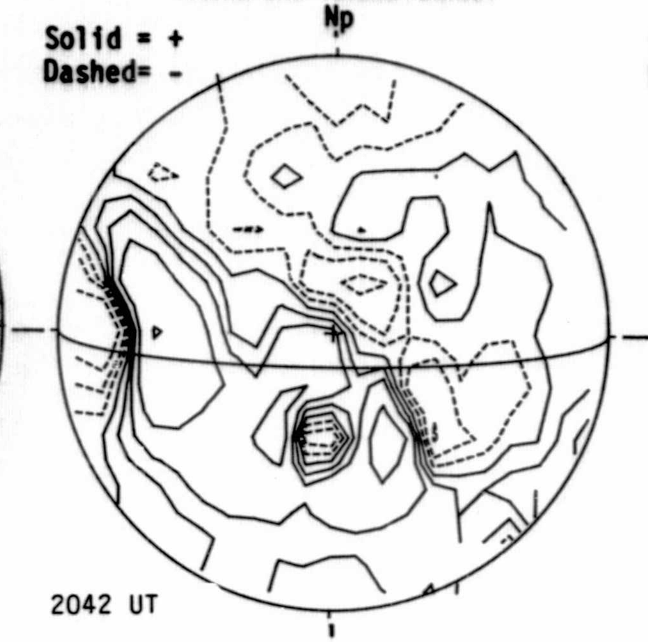
KITT PEAK MAGNETOGRAM

Bright= +
Dark = -



STANFORD MAGNETOGRAM

Solid = +
Dashed= -

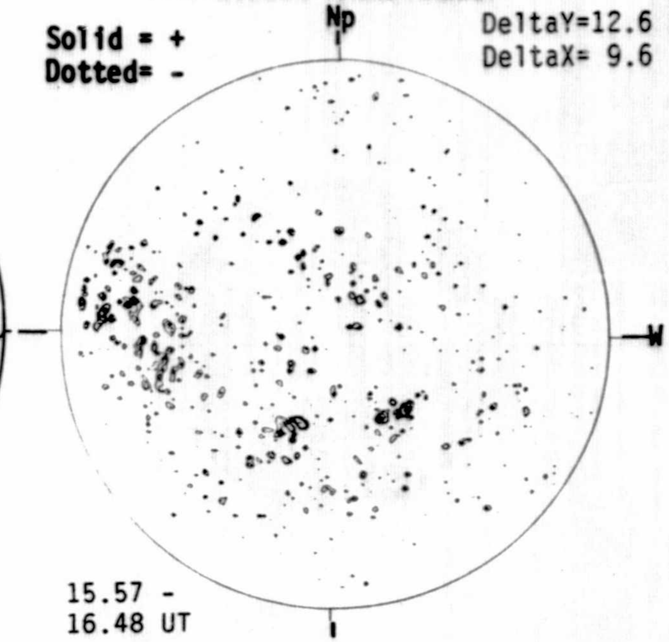


2042 UT

MT. WILSON MAGNETOGRAM

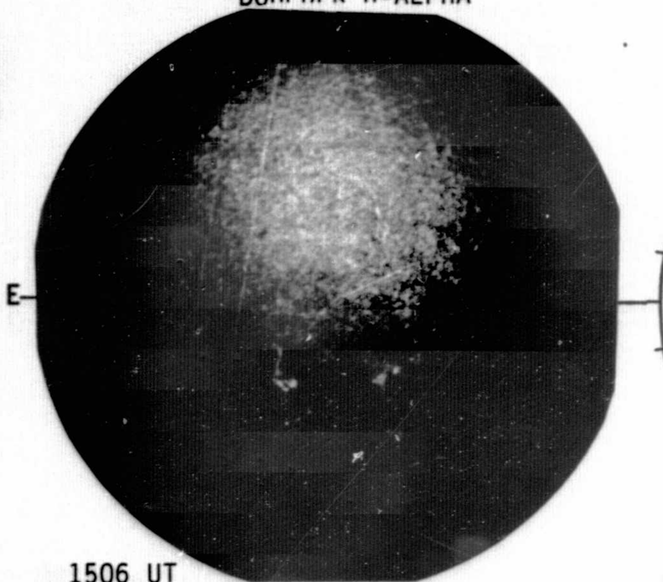
Solid = +
Dotted= -

DeltaY=12.6
DeltaX= 9.6



15.57 -
16.48 UT

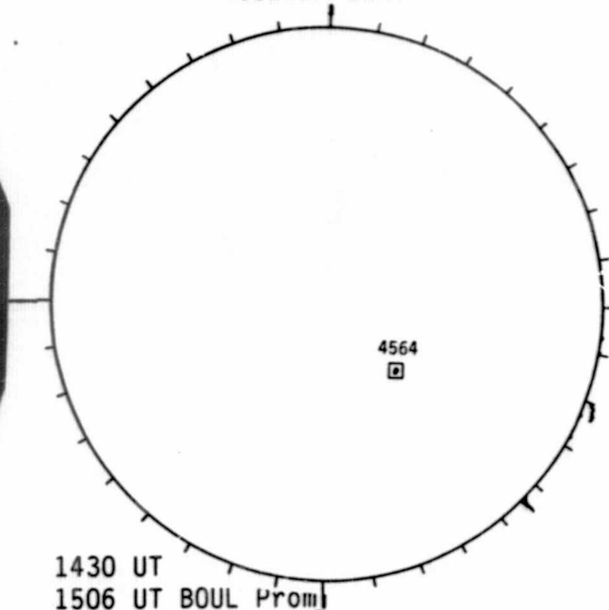
BOULDER H-ALPHA



1506 UT

Sp

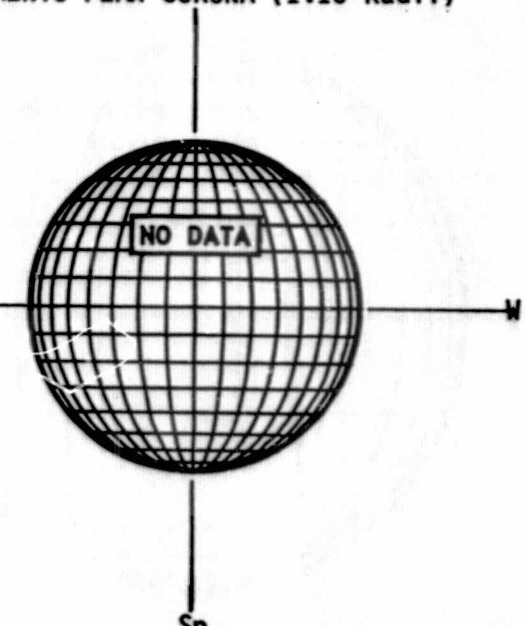
BOULDER SUNSPOTS



1430 UT
1506 UT BOUL Prom

Sp

SACRAMENTO PEAK CORONA (1.15 Radii)

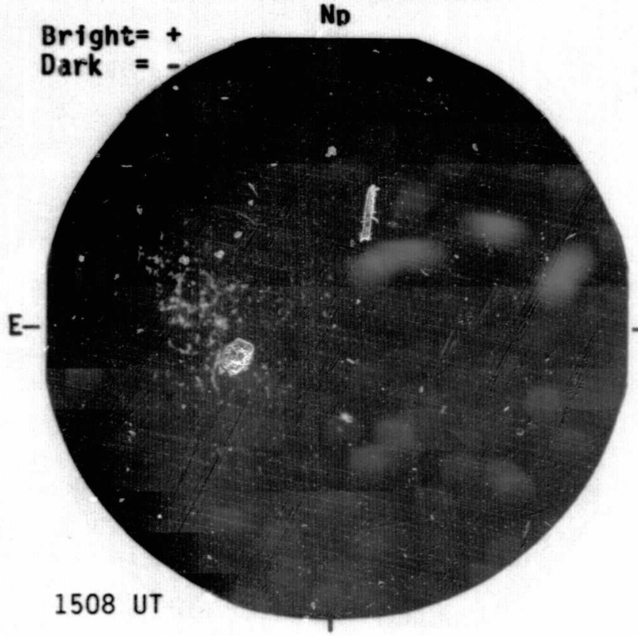


Sp

AUGUST 24, 1984 (P= 18.94, B_0= 7.00, L_0= 225.57)

KITT PEAK MAGNETOGRAM

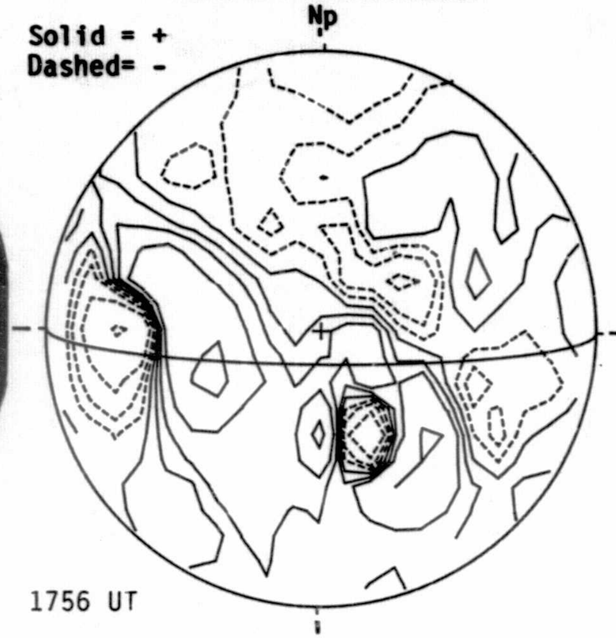
Bright= +
Dark = -



1508 UT

STANFORD MAGNETOGRAM

Solid = +
Dashed= -

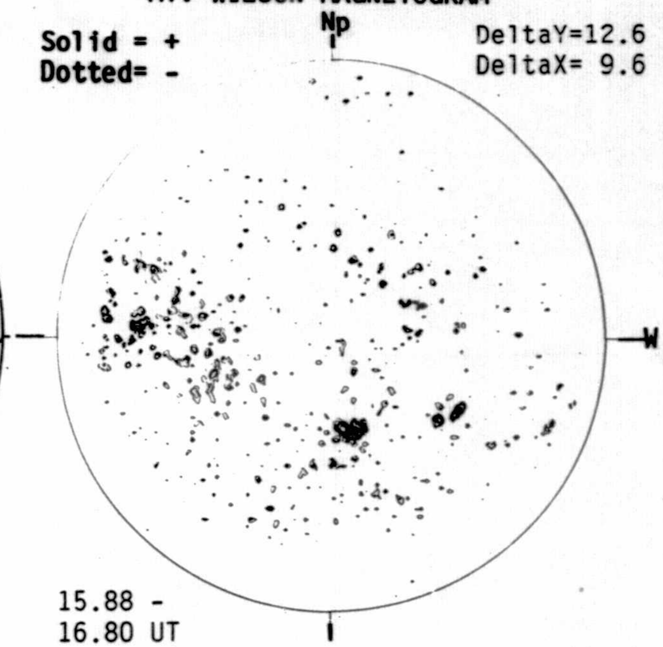


1756 UT

MT. WILSON MAGNETOGRAM

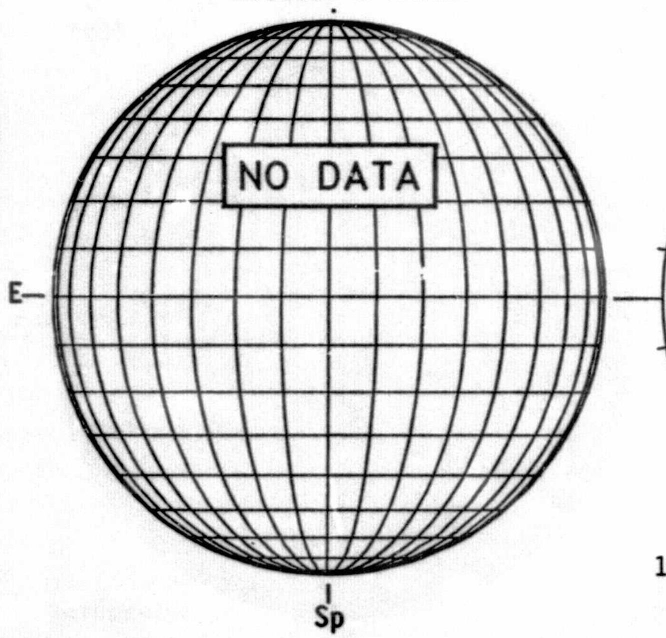
Solid = +
Dotted= -

DeltaY=12.6
DeltaX= 9.6

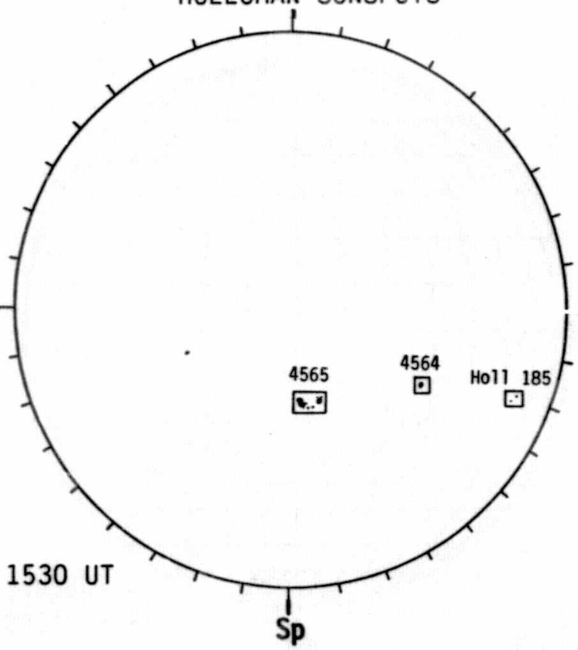


15.88 -
16.80 UT

BOULDER H-ALPHA

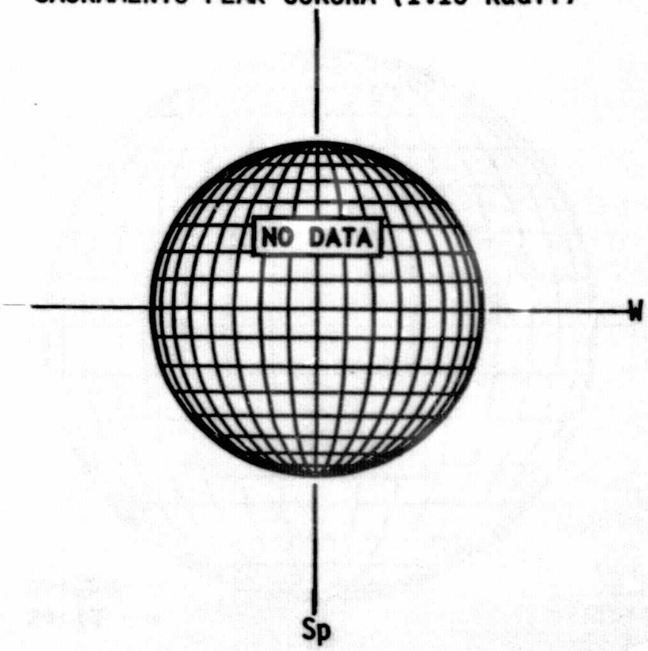


HOLLOMAN SUNSPOTS



1530 UT

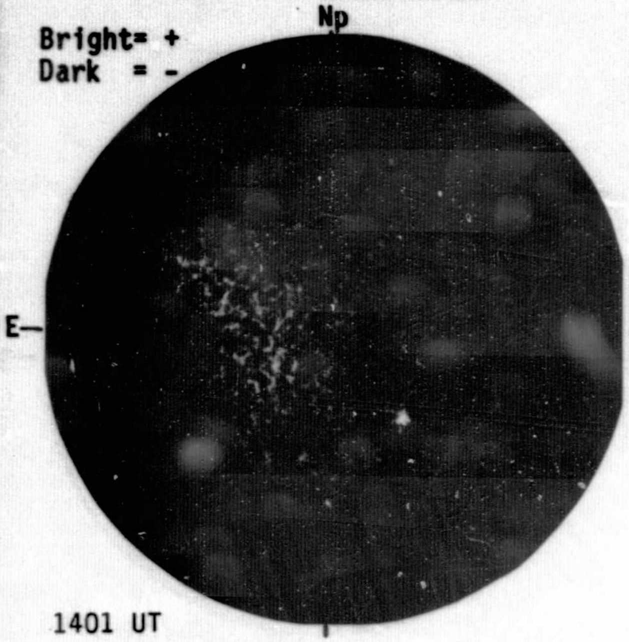
SACRAMENTO PEAK CORONA (1.15 Radii)



AUGUST 25, 1984 (P= 19.24, B_0= 7.03, L_0= 212.36)

KITT PEAK MAGNETOGRAM

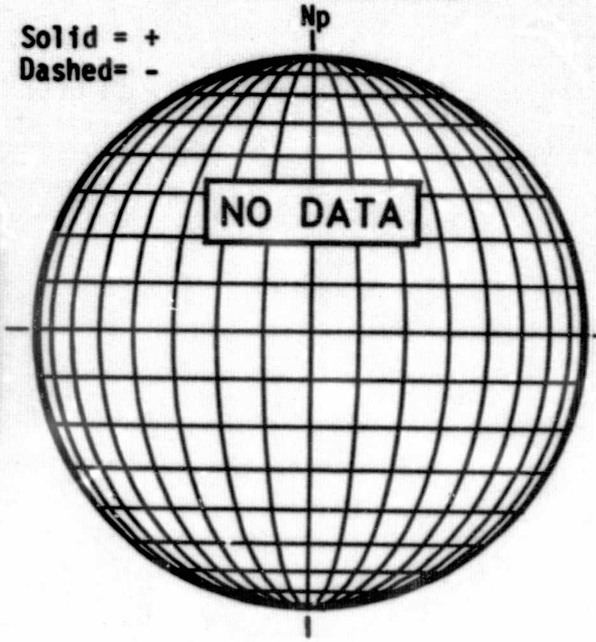
Bright= +
Dark = -



1401 UT

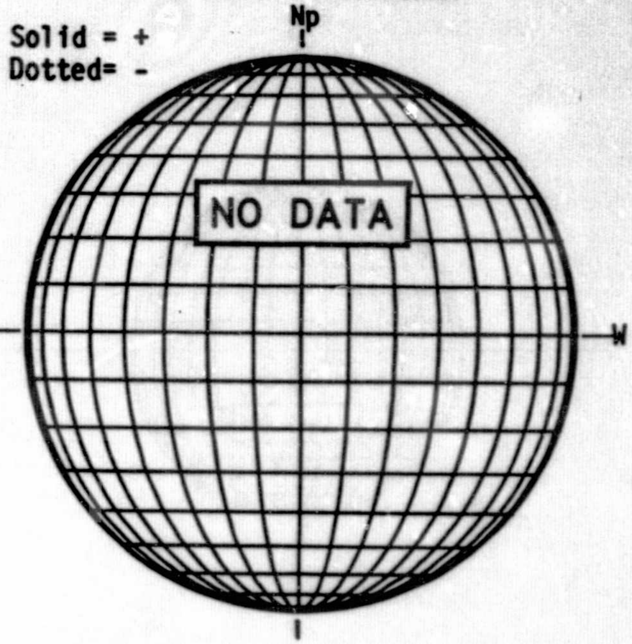
STANFORD MAGNETOGRAM

Solid = +
Dashed= -

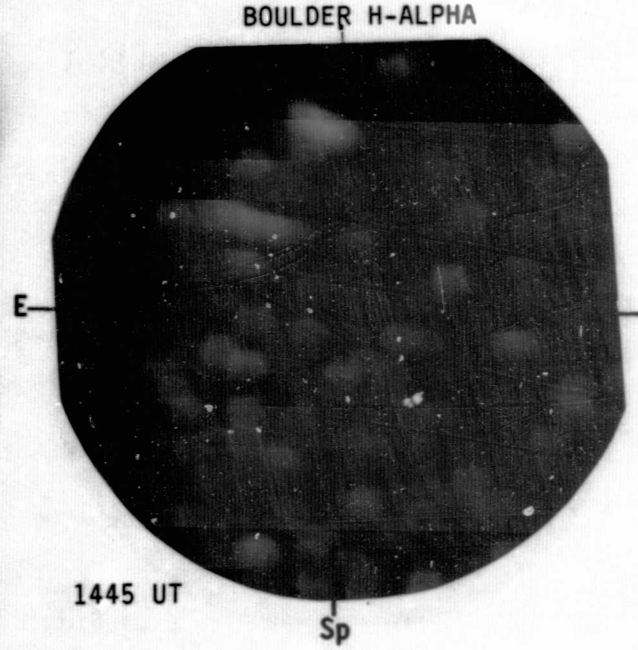


MT. WILSON MAGNETOGRAM

Solid = +
Dotted= -

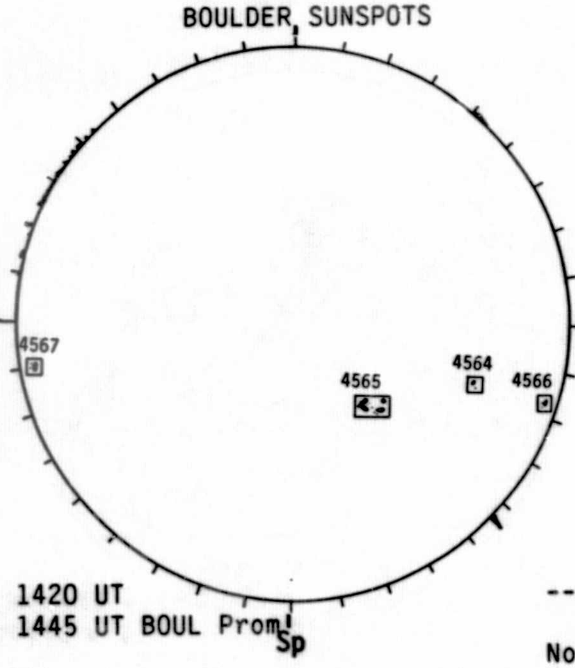


BOULDER H-ALPHA



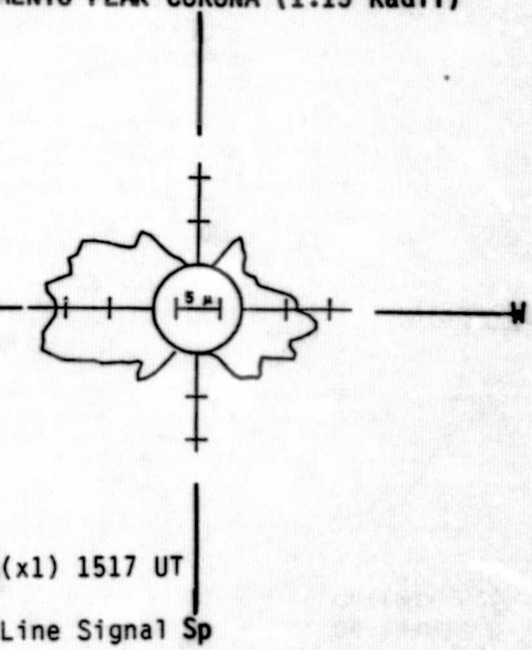
1445 UT

BOULDER SUNSPOTS



1420 UT
1445 UT BOUL Prom

SACRAMENTO PEAK CORONA (1.15 Radii)



---- 5303A(x1) 1517 UT

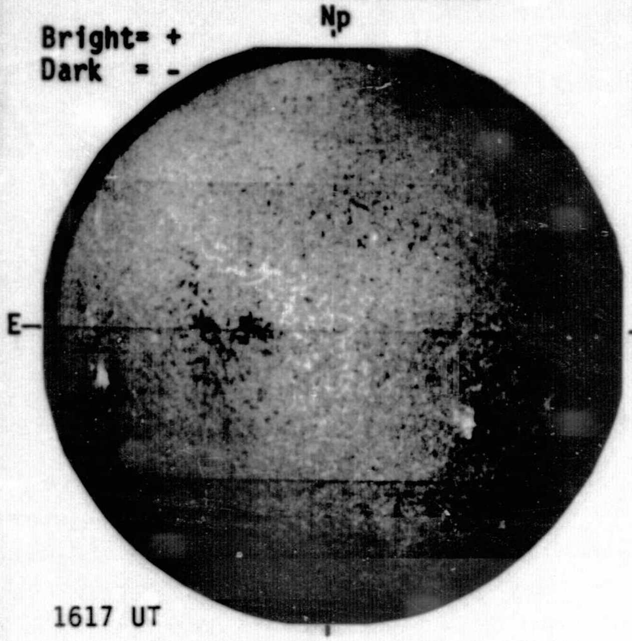
No Yellow-Line Signal

A U G U S T 26, 1 9 8 4 ($P= 19.52$, $B_o= 7.06$, $L_o= 199.15$)

KITT PEAK MAGNETOGRAM

Np

Bright= +
Dark = -

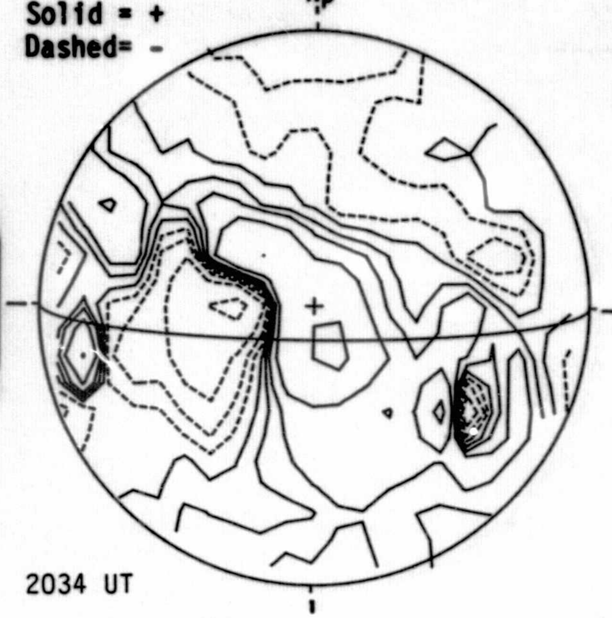


1617 UT

STANFORD MAGNETOGRAM

Np

Solid = +
Dashed= -



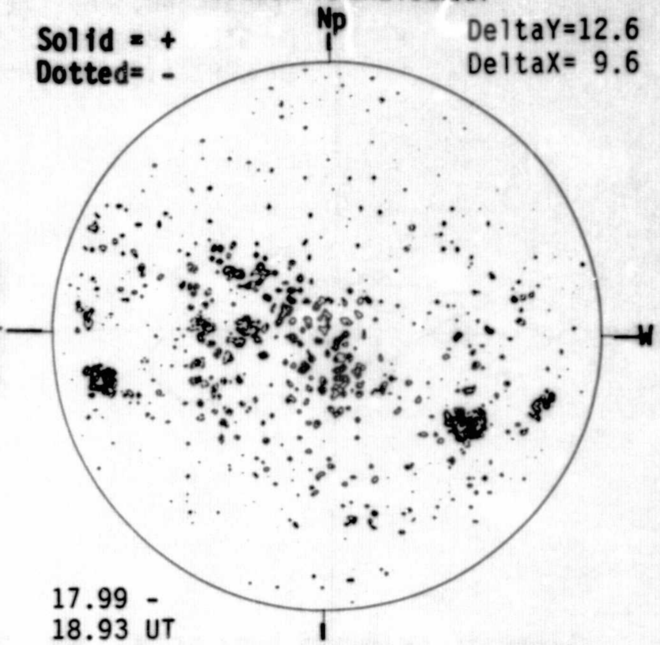
2034 UT

MT. WILSON MAGNETOGRAM

Np

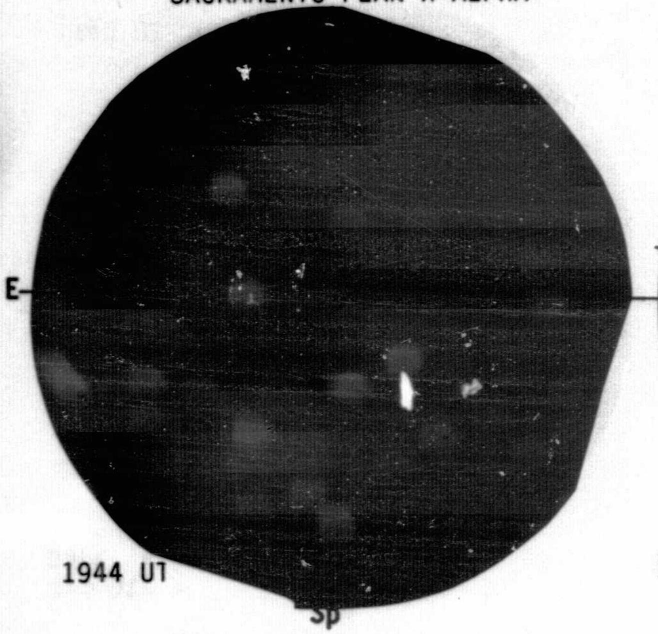
Solid = +
Dotted= -

DeltaY=12.6
DeltaX= 9.6



17.99 -
18.93 UT

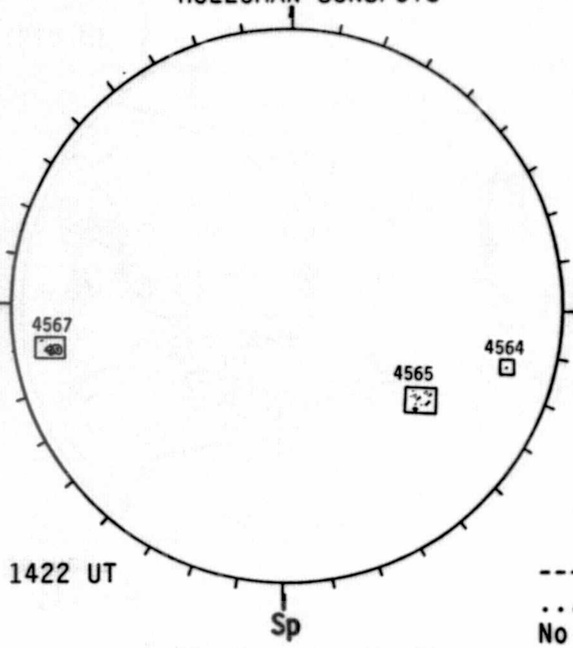
SACRAMENTO PEAK H-ALPHA



1944 UT

Sp

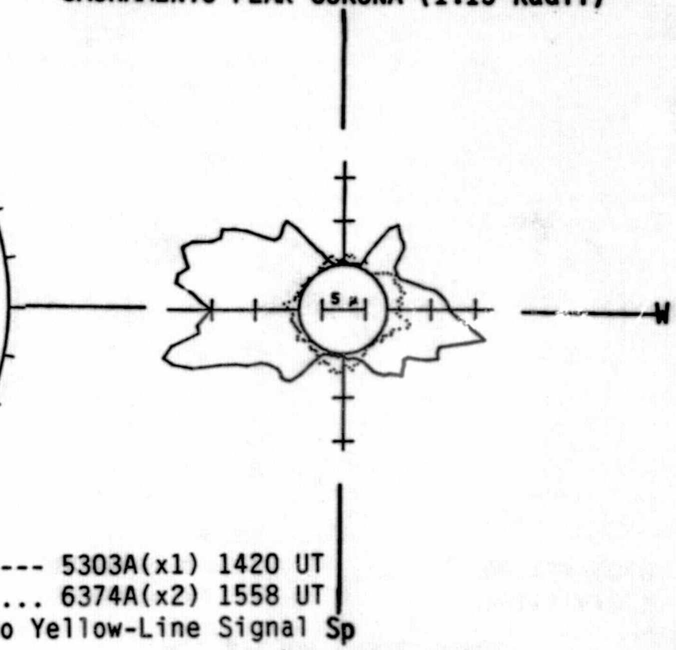
HOLLOMAN SUNSPOTS



1422 UT

Sp

SACRAMENTO PEAK CORONA (1.15 Radii)

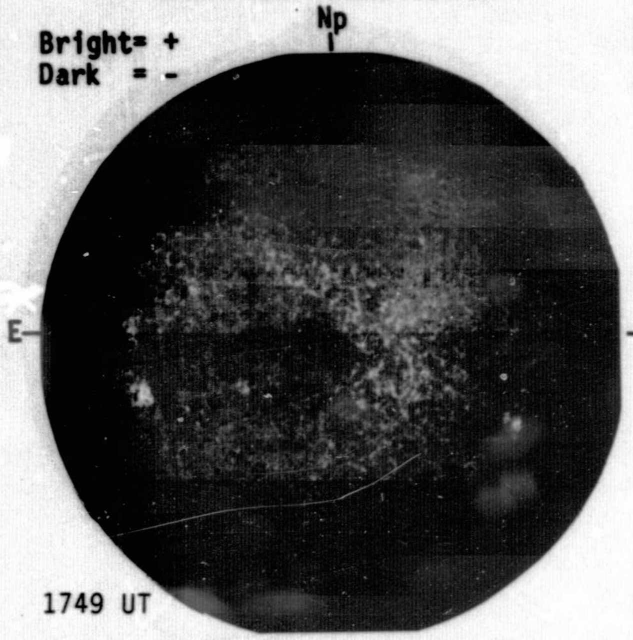


---- 5303A(x1) 1420 UT
.... 6374A(x2) 1558 UT
No Yellow-Line Signal Sp

A U G U S T 27, 1 9 8 4 (P= 19.81, B_o= 7.08, L_o= 185.93)

KITT PEAK MAGNETOGRAM

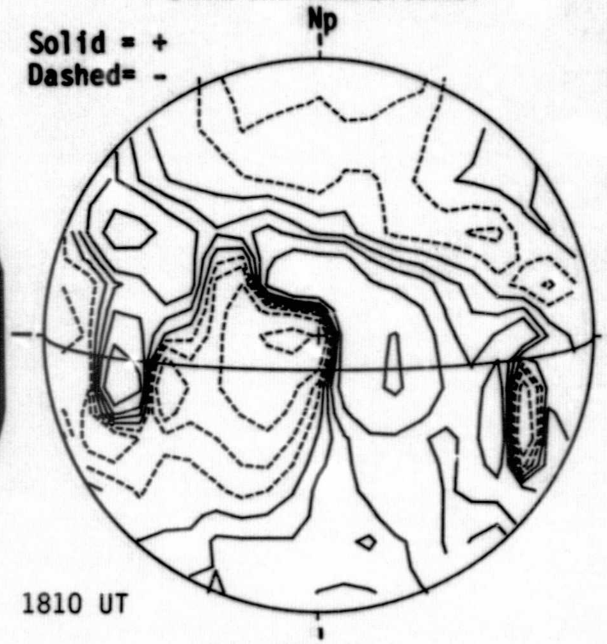
Bright= +
Dark = -



1749 UT

STANFORD MAGNETOGRAM

Solid = +
Dashed= -

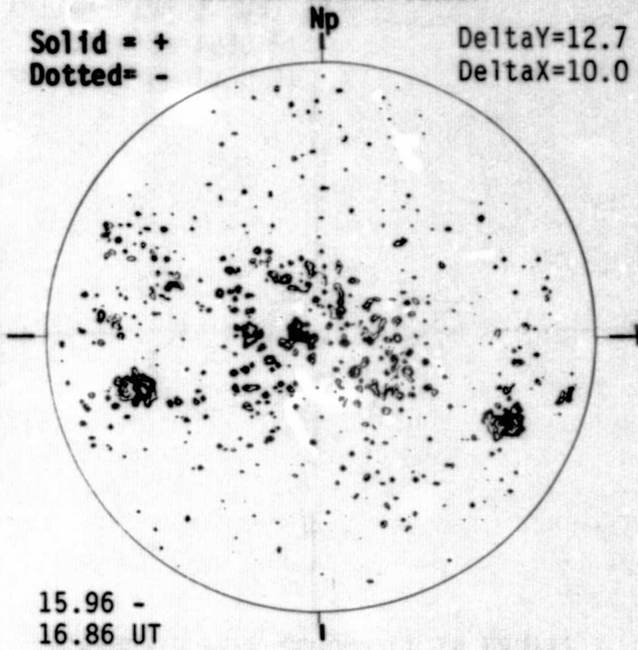


1810 UT

MT. WILSON MAGNETOGRAM

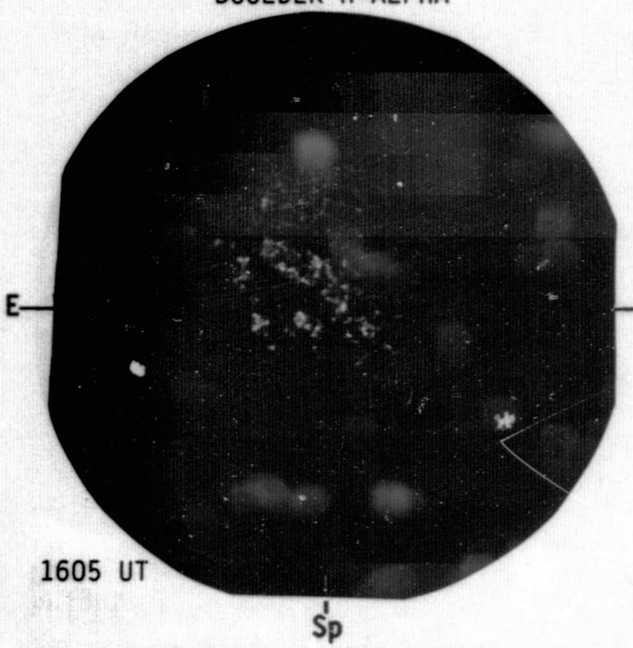
Solid = +
Dotted= -

DeltaY=12.7
DeltaX=10.0



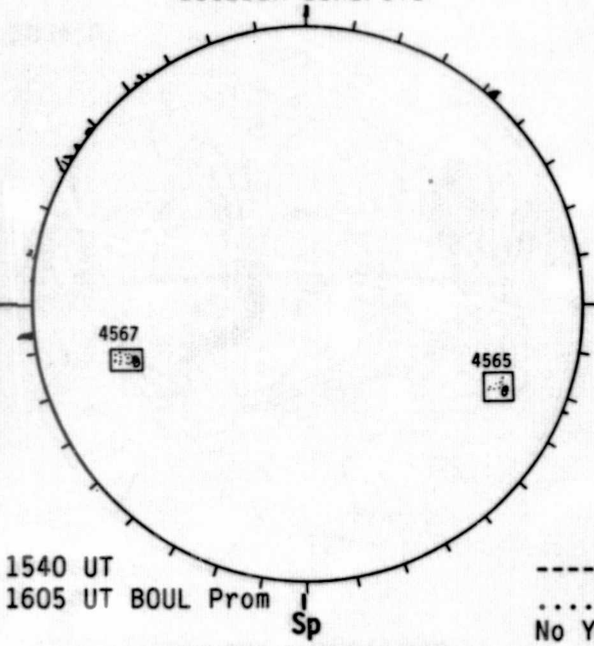
15.96 -
16.86 UT

BOULDER H-ALPHA



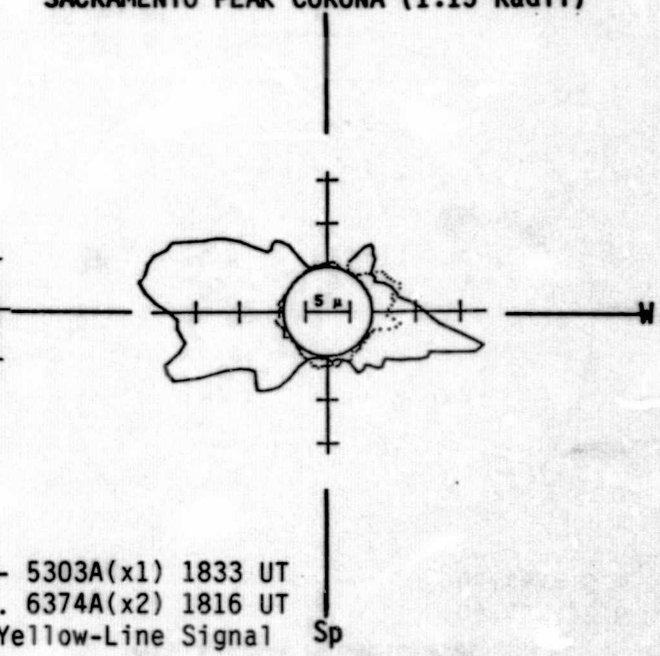
1605 UT

BOULDER SUNSPOTS



1540 UT
1605 UT BOUL Prom

SACRAMENTO PEAK CORONA (1.15 Radii)

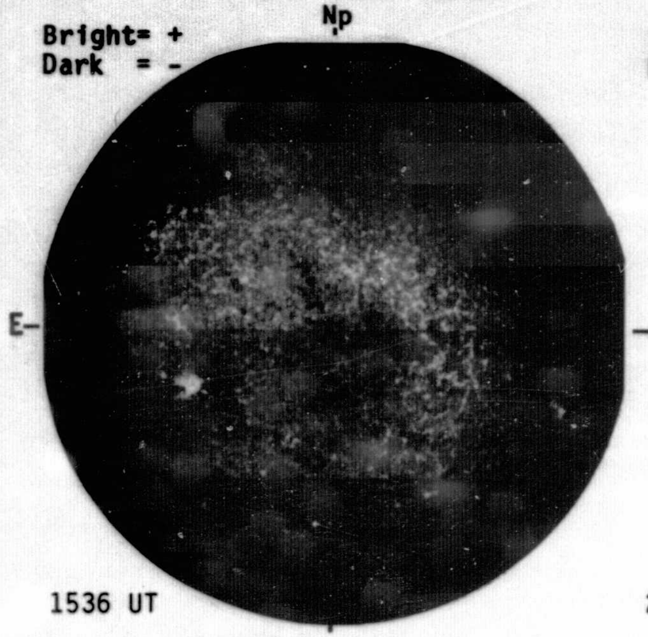


---- 5303A(x1) 1833 UT
.... 6374A(x2) 1816 UT
No Yellow-Line Signal

A U G U S T 28, 1 9 8 4 (P= 20.08, B_0= 7.11, L_0= 172.72)

KITT PEAK MAGNETOGRAM

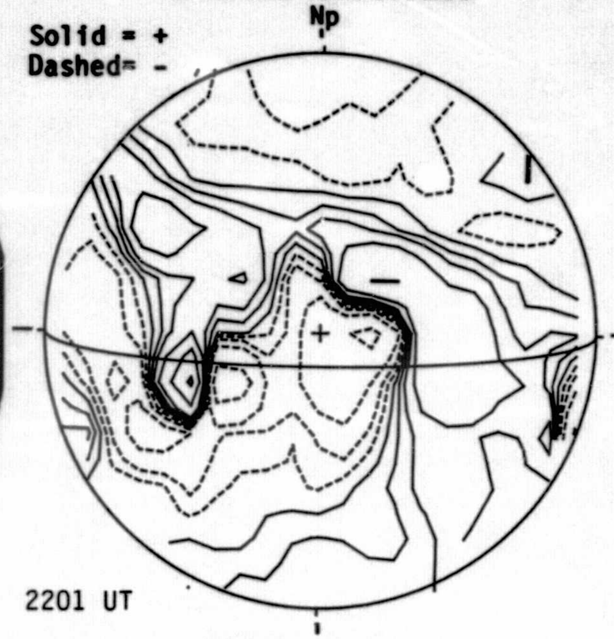
Bright= +
Dark = -



1536 UT

STANFORD MAGNETOGRAM

Solid = +
Dashed= -

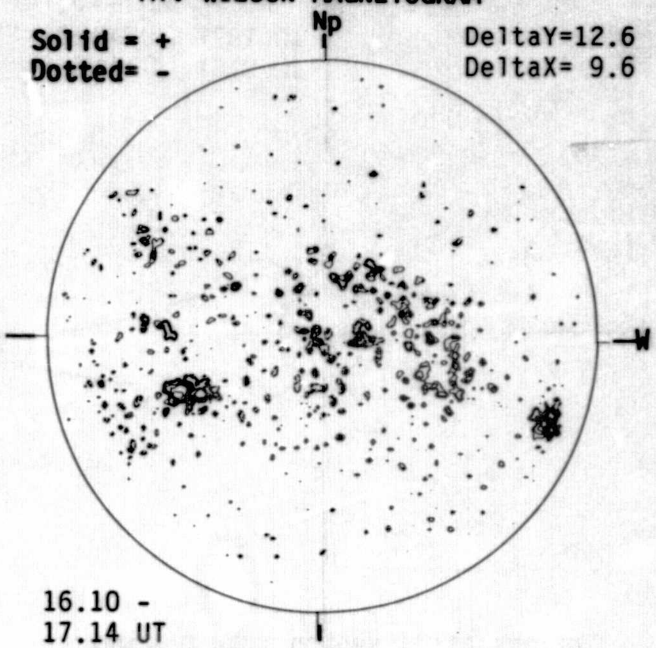


2201 UT

MT. WILSON MAGNETOGRAM

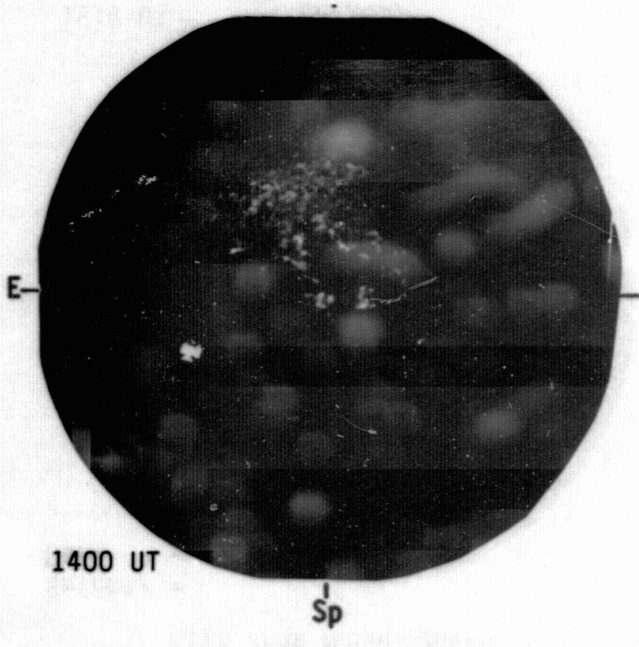
Solid = +
Dotted= -

DeltaY=12.6
DeltaX= 9.6



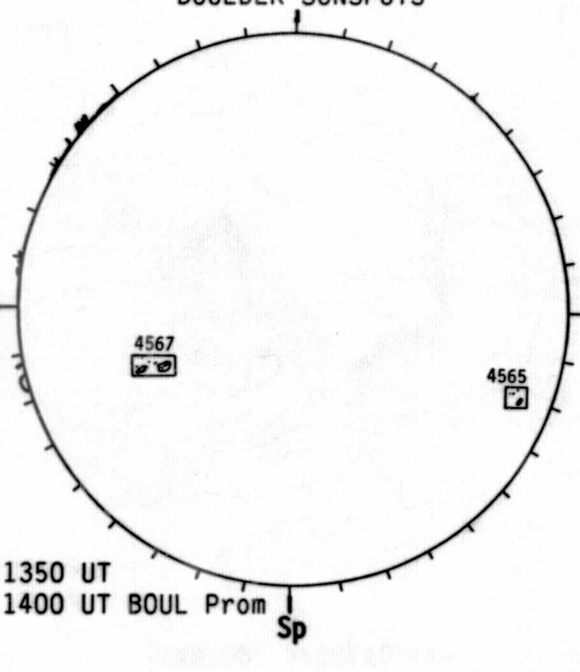
16.10 -
17.14 UT

BOULDER H-ALPHA



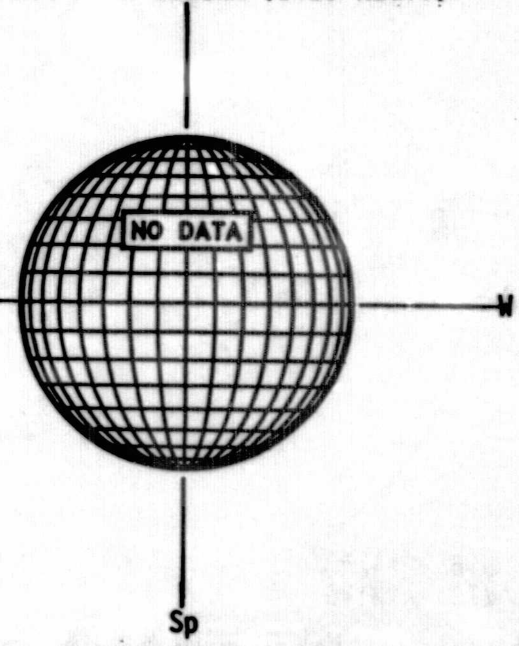
1400 UT

BOULDER SUNSPOTS



1350 UT
1400 UT BOUL Prom

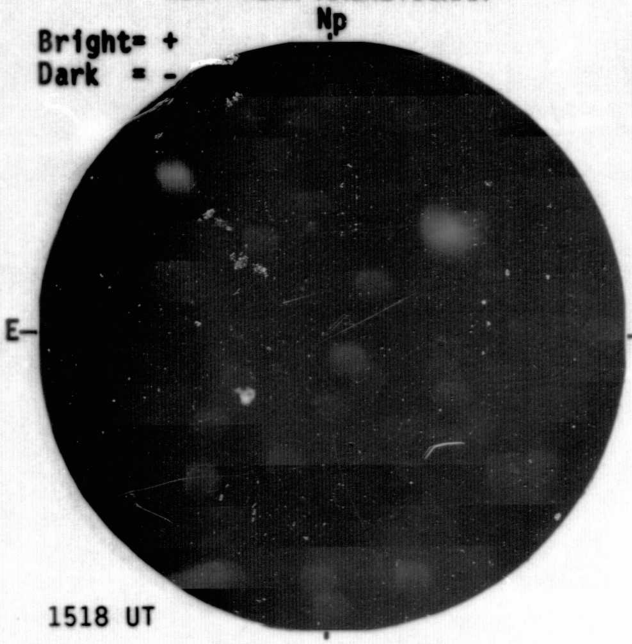
SACRAMENTO PEAK CORONA (1.15 Radii)



AUGUST 29, 1984 (P= 20.36, B_0= 7.13, L_0= 159.51)

KITT PEAK MAGNETOGRAM

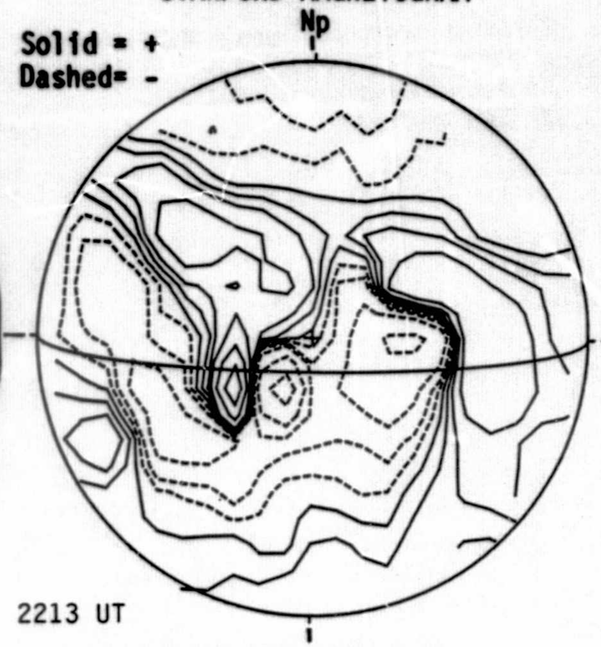
Bright= +
Dark = -



1518 UT

STANFORD MAGNETOGRAM

Solid = +
Dashed= -

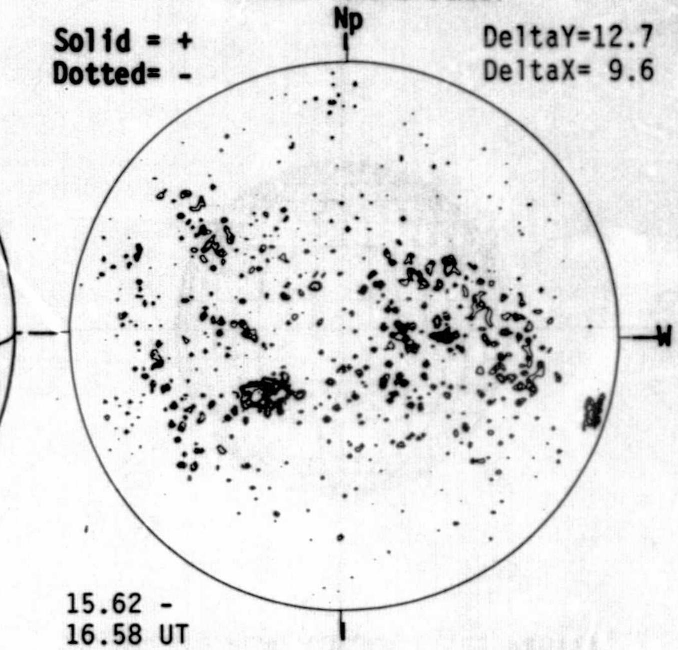


2213 UT

MT. WILSON MAGNETOGRAM

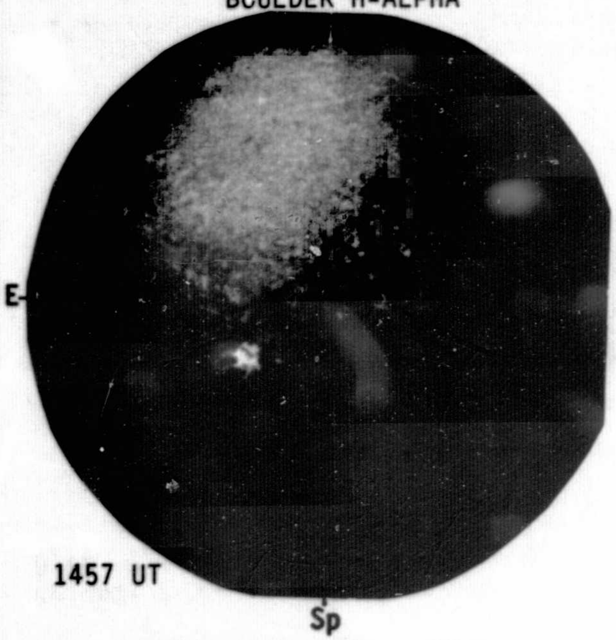
Solid = +
Dotted= -

DeltaY=12.7
DeltaX= 9.6



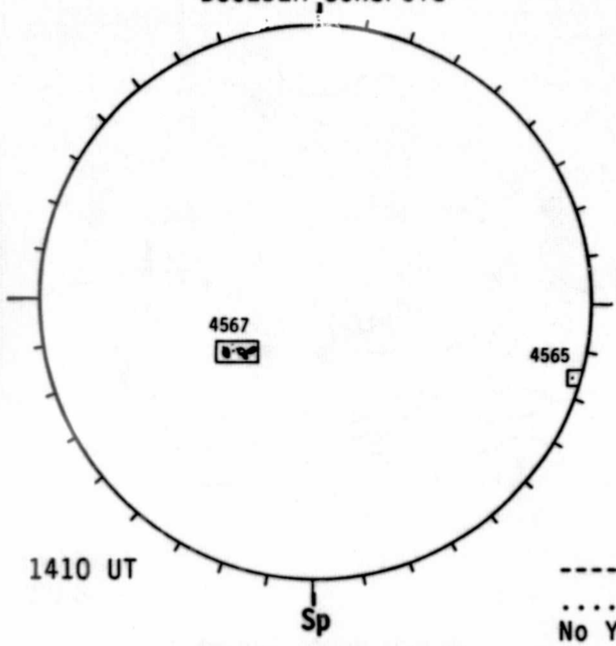
15.62 -
16.58 UT

BOULDER H-ALPHA



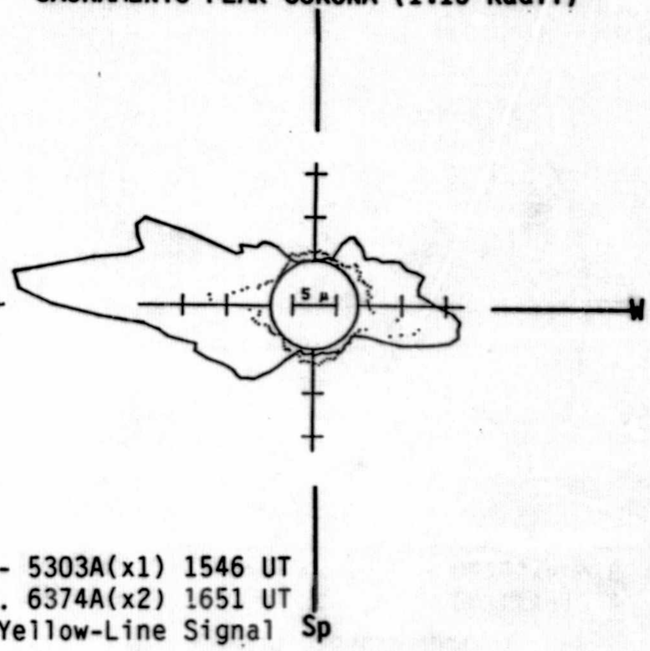
1457 UT

BOULDER SUNSPOTS



1410 UT

SACRAMENTO PEAK CORONA (1.15 Radii)

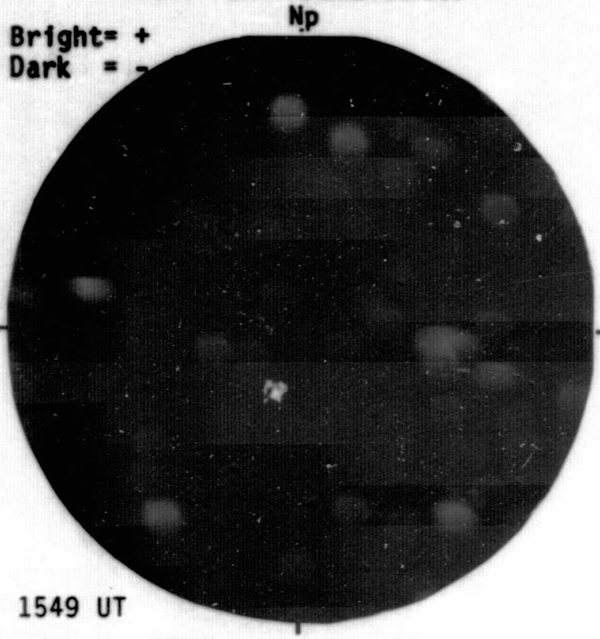


---- 5303A(x1) 1546 UT
.... 6374A(x2) 1651 UT
No Yellow-Line Signal

AUGUST 30, 1984 (P= 20.62, B_o= 7.15, L_o= 146.30)

KITT PEAK MAGNETOGRAM

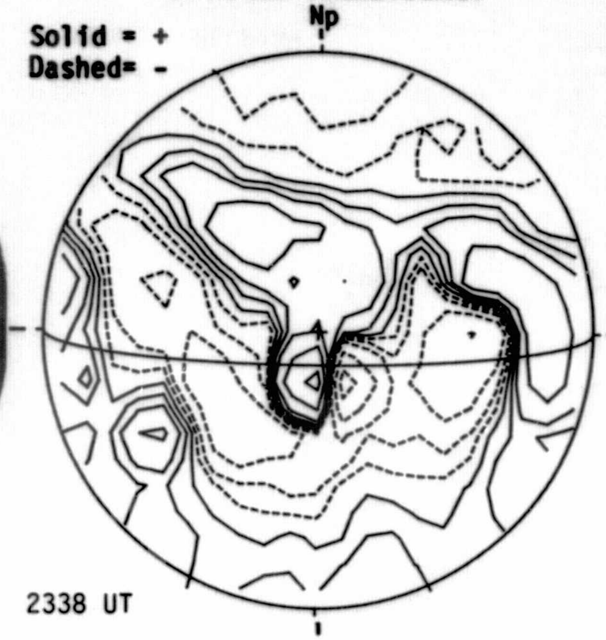
Bright= +
Dark = -



1549 UT

STANFORD MAGNETOGRAM

Solid = +
Dashed= -

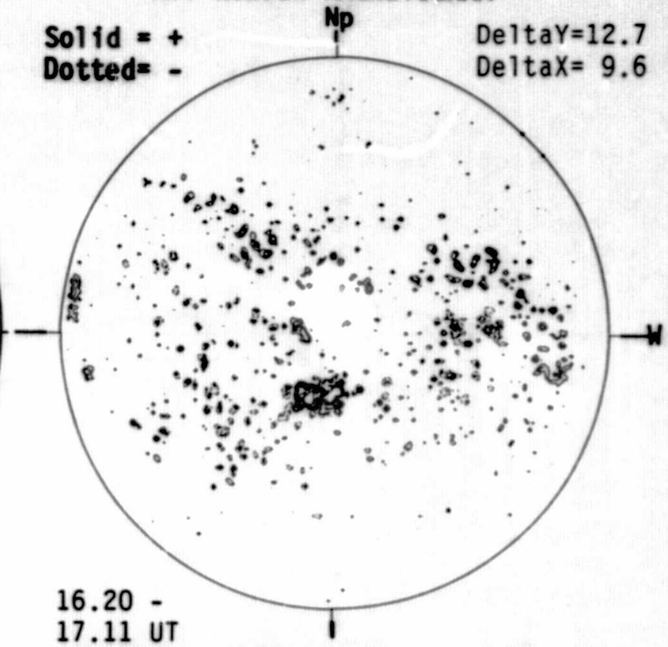


2338 UT

MT. WILSON MAGNETOGRAM

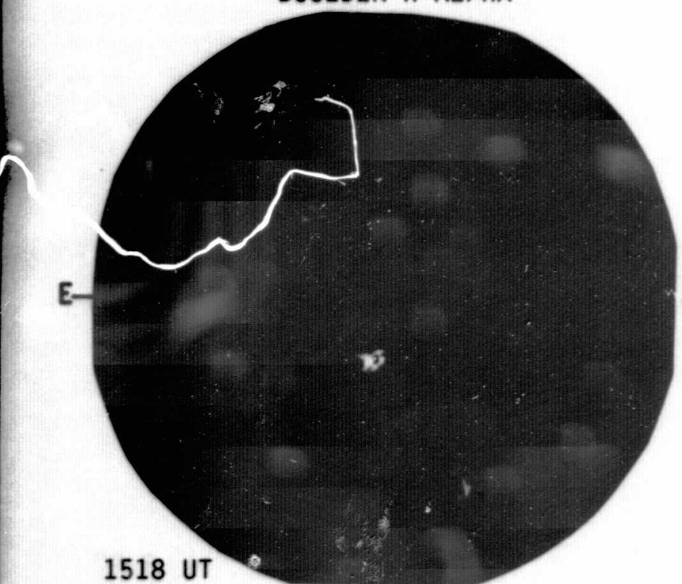
Solid = +
Dotted= -

DeltaY=12.7
DeltaX= 9.6



16.20 -
17.11 UT

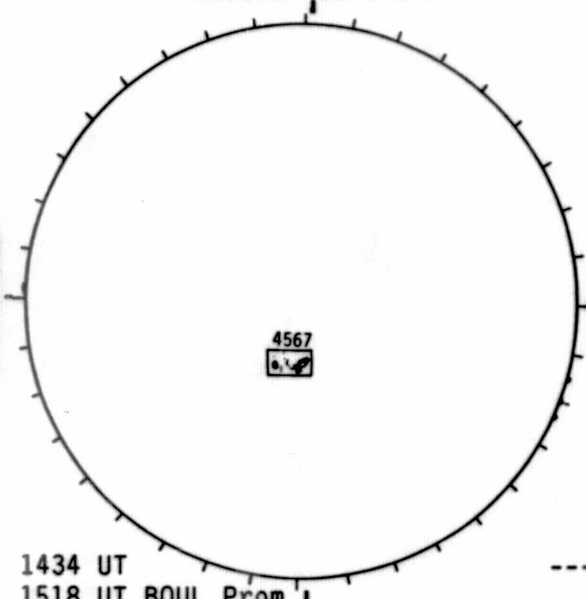
BOULDER H-ALPHA



1518 UT

Sp

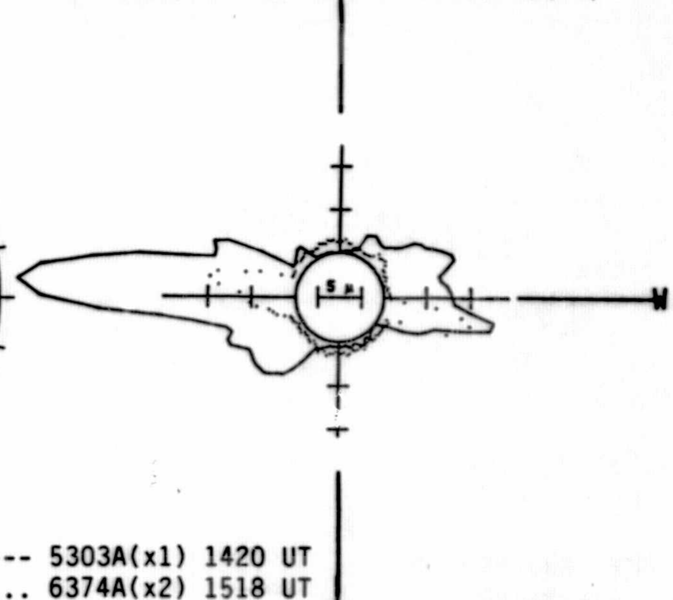
BOULDER SUNSPOTS



1434 UT
1518 UT BOUL Prom

Sp

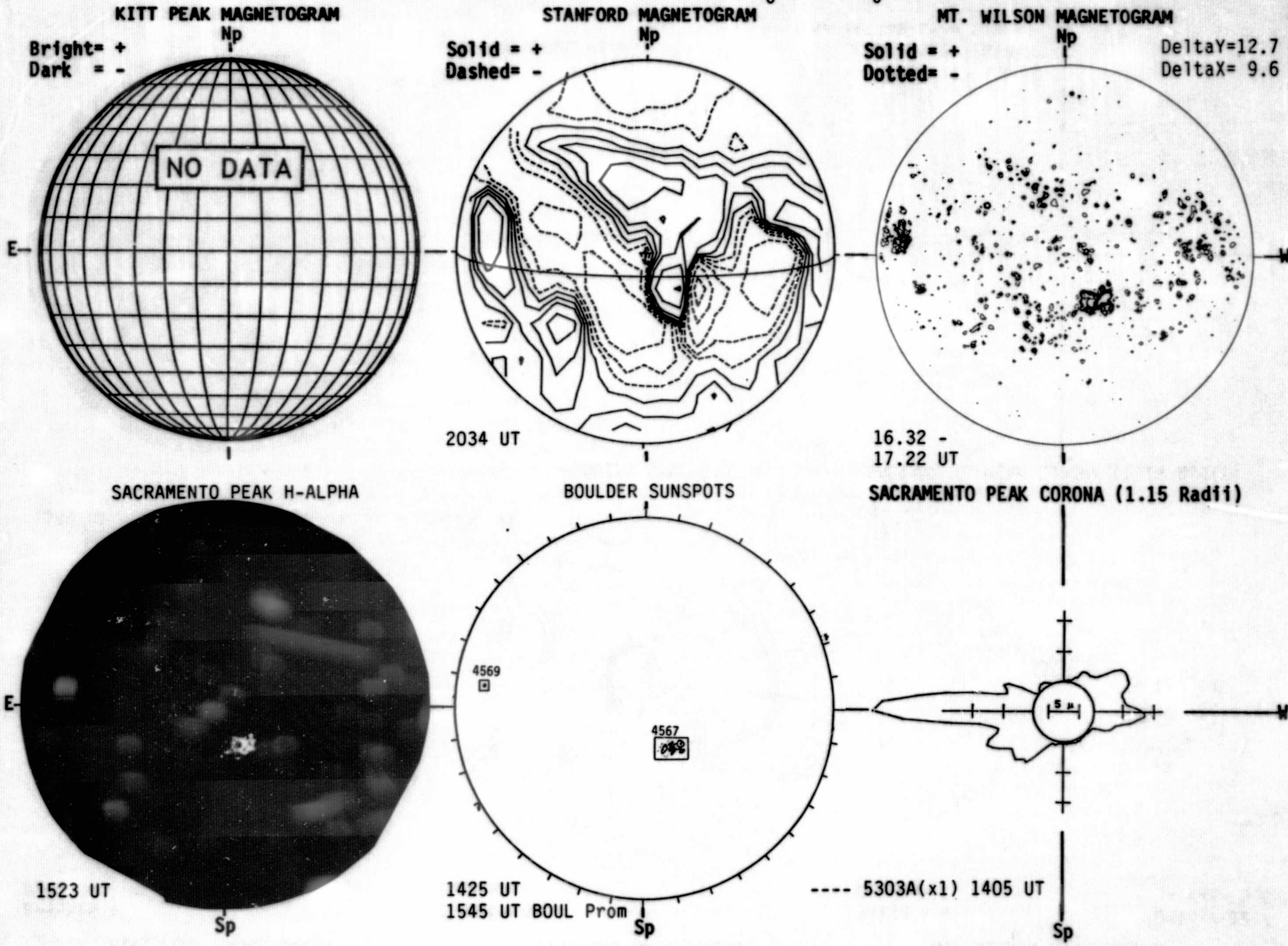
SACRAMENTO PEAK CORONA (1.15 Radii)



---- 5303A(x1) 1420 UT
.... 6374A(x2) 1518 UT
No Yellow-Line Signal

Sp

AUGUST 31, 1984 (P= 20.88, B_o= 7.17, L_o= 133.09)



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

AUGUST 1984

NOAA/ USAF Region	Mt Wilson Region	Sta	Observation Mo	Observation Day	Observation Time (UT)	Lat	CMD	CMP Mo	CMP Day	Max H	Mag Class	Spot Class	Corrected Area (10-6 Hemi)	Spot Count	Long. Extent (Deg)	Qual
4558A		RAMY	07	31	1330	N08	E07	08	1.1		B	BXO	20	5	2	3
4558A		LEAR	08	01	0014	N06	E02	08	1.2		A	AXX	20	3	7	3
4558B		RAMY	07	30	1349	N12	E31	08	1.9		A	AXX	10	1	1	3
4558B	24124	MWIL	07	30	1445	N12	E30	08	1.9	3	(AF)					
4558C		PALE	08	06	1915	N09	W39	08	3.9		A	AXX	10	1	1	3
4558		RAMY	08	06	1235	N09	W21	08	4.9		A	AXX	10	1	1	4
4558		ATHN	08	07	0630	N09	W31	08	4.9		A	AXX	10	1		2
4558		RAMY	08	07	1240	N09	W36	08	4.8		A	AXX	10	2	2	3
4558		HOLL	08	07	1550	N09	W38	08	4.8		B	BXO	10	2	3	4
4558	24130	MWIL	08	07	1600	N09	W36	08	5.0	2	(B)					
4558		PALE	08	07	1915	N09	W39	08	4.9		A	AXX	10	1	1	3
4558		LEAR	08	08	0019	N10	W42	08	4.9		A	AXX	10	1	1	3
4558	24130	MWIL	08	08	1515	N08	W52	08	4.7	3	(B)					
4558	24130	MWIL	08	09	1515	N08	W65	08	4.8	2	(AP)					
4558		LEAR	08	10	0051	N09	W73	08	4.6		A	AXX	10	2	1	3
4552	24125	MWIL	07	30	1445	S17	E75	08	5.3	3	(AP)					
4552		LEAR	07	31	0203	S16	E66	08	5.1		A	AXO	10	3	2	3
4552		RAMY	07	31	1330	S17	E62	08	5.3		B	CAO	50	4	5	3
4552	24125	MWIL	07	31	1445	S17	E60	08	5.2	4	(B)					
4552		HOLL	07	31	1515	S15	E59	08	5.1		B	BXO	10	4	5	3
4552		PALE	07	31	1802	S17	E60	08	5.3		B	DAO	50	4	7	4
4552		LEAR	08	01	0014	S17	E56	08	5.3		B	CSO	50	6	2	3
4552		ATHN	08	01	1035	S18	E48	08	5.1			H X	50	1	1	3
4552		RAMY	08	01	1355	S16	E49	08	5.3		B	CAO	50	9	5	3
4552		BOUL	08	01	1430	S18	E47	08	5.2		B	CRO	30	8	8	3
4552	24125	MWIL	08	01	1500	S16	E47	08	5.2	4	(B)					
4552		PALE	08	01	1740	S21	E45	08	5.2		B	CAO	40	4	6	3
4552		HOLL	08	01	1752	S17	E46	08	5.2		B	CAO	50	6	6	3
4552		LEAR	08	02	0148	S14	E41	08	5.2		B	CAO	50	5	5	3
4552		ATHN	08	02	0630	S17	E37	08	5.1		B	CSO	60	5	5	3
4552		BOUL	08	02	1400	S16	E33	08	5.1		B	DAO	60	9	5	2
4552	24125	MWIL	08	02	1500	S16	E33	08	5.1	5	(B)					
4552		PALE	08	02	1745	S20	E30	08	5.0		B	DAO	60	12	5	3
4552		HOLL	08	02	1915	S17	E33	08	5.3		B	DAO	60	12	5	3
4552		RAMY	08	02	1935	S16	E31	08	5.2		B	DAO	100	16	5	3
4552		LEAR	08	03	0037	S17	E27	08	5.1		B	DSO	80	11	6	3
4552		ATHN	08	03	0645	S17	E24	08	5.1		B	DRO	60	4	3	2
4552		RAMY	08	03	1225	S17	E23	08	5.3		B	DAO	60	21	5	3
4552		BOUL	08	03	1405	S15	E20	08	5.1		B	DAO	50	10	4	3
4552	24125	MWIL	08	03	1445	S16	E21	08	5.2	4	(BP)					
4552		HOLL	08	03	1456	S17	E22	08	5.3		B	CAO	50	12	4	3
4552		PALE	08	03	1915	S18	E15	08	4.9		B	CAO	60	10	4	3
4552		LEAR	08	04	0101	S17	E12	08	5.0		B	CSO	50	8	4	3
4552		ATHN	08	04	0700	S16	E10	08	5.1		B	CAO	30	4	3	3
4552		BOUL	08	04	1335	S16	E07	08	5.1		B	CAO	20	4	3	3
4552		RAMY	08	04	1342	S17	E08	08	5.2		B	CAO	30	6	3	3
4552		HOLL	08	04	1427	S17	E08	08	5.2		B	CAO	30	10	4	3
4552	24125	MWIL	08	04	1545	S16	E07	08	5.2	5	(BP)					
4552		PALE	08	04	1940	S17	E02	08	5.0		B	CAO	40	4	3	3
4552		LEAR	08	05	0038	S17	E04	08	5.3		B	CSO	50	7	4	4
4552		ATHN	08	05	0615	S15	W03	08	5.0			BXO	30	3	3	2
4552A		BOUL	08	05	1340	S14	E16	08	6.8		A	AXX	10	2	2	2
4553		RAMY	08	03	1225	S07	E65	08	8.4		A	AXX	20	1	1	3
4553		BOUL	08	03	1405	S05	E65	08	8.4		A	AXX		1	1	3
4553	24126	MWIL	08	03	1445	S06	E65	08	8.5	3	(AP)					
4553		HOLL	08	03	1456	S08	E66	08	8.6		A	AXX	10	1	1	3
4553		PALE	08	03	1915	S13	E60	08	8.3		A	AXX	10	1	1	3
4553		LEAR	08	04	0101	S12	E58	08	8.4		A	AXX	10	1	1	3
4553		RAMY	08	04	1342	S08	E52	08	8.5		A	AXX	10	1	1	3
4553		HOLL	08	04	1427	S07	E52	08	8.5		A	AXX		1	1	3
4553	24126	MWIL	08	04	1545	S07	E50	08	8.4	3	(AP)					
4553		PALE	08	04	1940	S12	E48	08	8.4		A	AXX	40	1	1	3
4553		RAMY	08	09	1330	S08	W14	08	8.5		A	AXX	10	3	2	4
4553A		HOLL	08	06	1525	N07	E37	08	9.4		A	AXX		1		3

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

AUGUST 1984

NOAA/ USAF Region	Mt Wilson Region	Sta	Observation Mo	Day	Time (UT)	Lat	CMD	CMP Mo	Day	Max H	Mag Class	Spot Class	Corrected Area (10-6 Hemi)	Spot Count	Long. Extent (Deg)	Qual
4553B	24133	MWIL	08	08	1515	N13	E12	08	9.5	3	(AP)					
4556	24128	MWIL	08	06	1430	N02	E40	08	9.6	4	(AP)					
4556		HOLL	08	06	1525	N03	E40	08	9.6		A	AXX		1		3
4556		PALE	08	06	1815	N01	E39	08	9.7		B	BXO	10	2	3	3
4556		LEAR	08	07	0104	S01	E33	08	9.5		A	AXX	10	1	1	3
4554		RAMY	08	03	1225	N09	E80	08	9.5		A	HAX	20	1	1	3
4554		BOUL	08	03	1405	N08	E80	08	9.6		A	HSX	30	1	1	3
4554		HOLL	08	03	1456	N09	E84	08	9.9		A	HSX	20	1	1	3
4554		PALE	08	03	1915	N03	E79	08	9.7		A	HRX	20	1	1	3
4554		LEAR	08	04	0101	N03	E77	08	9.8		A	AXX	10	1	1	3
4554		ATHN	08	04	0700	N07	E72	08	9.7		A	HSX	30	1	1	3
4554		BOUL	08	04	1335	N09	E69	08	9.7		B	BXO	30	2	4	3
4554		RAMY	08	04	1342	N09	E69	08	9.7		B	CSO	30	2	3	3
4554		HOLL	08	04	1427	N10	E67	08	9.6		B	CSO	30	2	4	3
4554	24127	MWIL	08	04	1545	N08	E67	08	9.7	5	(AP)					
4554		PALE	08	04	1940	N03	E65	08	9.7		A	AXX	20	1	2	3
4554		LEAR	08	05	0038	N08	E61	08	9.6		B	CSO	20	2	2	4
4554		ATHN	08	05	0615	N09	E55	08	9.4			HRX	20	1	1	2
4554		RAMY	08	05	1336	N08	E55	08	9.7		A	HSX	20	1	1	4
4554		BOUL	08	05	1340	N08	E52	08	9.5		A	HSX	10	1	1	2
4554	24127	MWIL	08	05	1430	N08	E53	08	9.6	3	(AP)					
4554		HOLL	08	05	1750	N08	E52	08	9.6		B	BXO	10	2	3	3
4554		PALE	08	05	2026	N08	E44	08	9.2		B	CAO	20	2	9	3
4554		LEAR	08	06	0141	N07	E52	08	10.0		B	CRO	30	6	9	3
4554		ATHN	08	06	0625	N07	E53	08	10.2			HAX	20	1	1	2
4554		RAMY	08	06	1235	N05	E45	08	9.9		B	EAO	90	13	12	4
4554	24129	MWIL	08	06	1430	N08	E47	08	10.1	4	(B)					
4554	24127	MWIL	08	06	1430	N09	E39	08	9.5	3	(AP)					
4554		HOLL	08	06	1525	N08	E46	08	10.1		B	BXO	60	10	4	3
4554		PALE	08	06	1815	N07	E46	08	10.2		B	DSO	60	13	5	3
4554		PALE	08	06	1915	N08	E31	08	9.1		B	DAO	80	11	7	3
4554		LEAR	08	07	0104	N07	E41	08	10.1		B	CRO	140	13	7	3
4554		ATHN	08	07	0630	N08	E37	08	10.0		B	CRO	50	6	5	2
4554		RAMY	08	07	1240	N08	E34	08	10.1		B	DAO	70	20	6	3
4554		HOLL	08	07	1550	N08	E33	08	10.1		B	DAO	60	17	5	4
4554	24129	MWIL	08	07	1600	N08	E32	08	10.1	4	(B)					
4554		BOUL	08	07	1615	N07	E32	08	10.1		B	DAI	110	9	5	3
4554		PALE	08	07	1915	N08	E31	08	10.1		B	DAO	80	11	7	3
4554		LEAR	08	08	0019	N07	E27	08	10.0		B	CAO	120	32	8	3
4554		ATHN	08	08	0730	N08	E22	08	10.0		B	BXO	60	9	6	1
4554		BOUL	08	08	1400	N08	E18	08	9.9		B	DAO	120	33	8	3
4554	24129	MWIL	08	08	1515	N08	E20	08	10.1	4	(B)					
4554		PALE	08	08	1800	N07	E19	08	10.2		B	DAO	170	33	9	3
4554		HOLL	08	08	1803	N08	E18	08	10.1		B	DAO	100	32	8	3
4554		LEAR	08	09	0032	N07	E15	08	10.1			DAI	160	41	9	3
4554		ATHN	08	09	0700	N06	E09	08	10.0			DAI	140	18	9	2
4554		RAMY	08	09	1330	N08	E06	08	10.0		B	DKO	140	39	9	4
4554	24129	MWIL	08	09	1515	N07	E07	08	10.2	5	(B)					
4554		BOUL	08	09	1515	N08	E05	08	10.0		B	DSC	220	29	9	3
4554		LEAR	08	10	0051	N08	W01	08	10.0			DAC	190	45	10	3
4554		ATHN	08	10	0610	N06	W04	08	10.0			DAC	180	32	9	2
4554		RAMY	08	10	1240	N08	W06	08	10.1		B	EAO	160	39	12	4
4554		BOUL	08	10	1315	N07	W07	08	10.0		B	DAI	240	30	10	2
4554		BOUL	08	10	1315	N09	W05	08	10.2		B	EAC	250	32	12	2
4554	24129	MWIL	08	10	1530	N07	W07	08	10.1	5	(B)					
4554		PALE	08	10	1745	N09	W10	08	10.0		B	DHI	200	25	10	3
4554		HOLL	08	10	1839	N07	W11	08	10.0		B	DAI	180	30	10	3
4554		LEAR	08	11	0040	N09	W14	08	10.0		B	DSO	100	25	10	3
4554		ATHN	08	11	0640	N06	W18	08	9.9			DAO	110	10	9	2
4554		RAMY	08	11	1345	N06	W20	08	10.1		B	DAO	80	31	8	4
4554		BOUL	08	11	1440	N11	W20	08	10.1		B	DAI	110	18	3	2
4554	24129	MWIL	08	11	1500	N07	W20	08	10.1	5	(B)					
4554		PALE	08	11	1912	N08	W23	08	10.1		B	EAO	80	8	11	3
4554		LEAR	08	12	0150	N09	W24	08	10.3		B	ESO	50	11	11	3
4554		ATHN	08	12	0615	N08	W27	08	10.2		B	DRO	50	8	8	3
4554		RAMY	08	12	1254	N07	W33	08	10.1		B	DAO	80	15	8	3
4554		BOUL	08	12	1310	N09	W31	08	10.2		B	DSI	60	14	8	3
4554	24129	MWIL	08	12	1430	N07	W34	08	10.1	5	(B)					
4554		HOLL	08	12	1815	N08	W36	08	10.1		B	BXO	20	9	6	4

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NOAA/ USAF Region	Mt Wilson Region	Sta	Observation Mo	Day	Time (UT)	Lat	CMD	CMP Mo	CMP Day	Max H	Mag Class	Spot Class	Corrected Area (10-6 Hemi)	Spot Count	Long. Extent (Deg)	Qual
4554		PALE	08	12	1815	N08	W36	08	10.1		B	BXO	20	9	6	4
4554		PALE	08	12	2126	N08	W38	08	10.0		B	DAO	50	10	8	3
4554		LEAR	08	13	0039	N08	W38	08	10.2		B	CRO	60	10	9	2
4554		ATHN	08	13	0615	N08	W40	08	10.3		B	DAO	40	7	7	4
4554		RAMY	08	13	1230	N07	W45	08	10.2		B	DAO	70	10	7	4
4554	24129	MWIL	08	13	1500	N07	W47	08	10.1	4	(B)					
4554		HOLL	08	13	1509	N07	W46	08	10.2		B	CRO	10	9	7	3
4554		BOUL	08	13	1600	N09	W47	08	10.1		B	CRO	30	10	8	3
4554		PALE	08	13	1800	N07	W48	08	10.2		B	BXO	60	12	9	3
4554		LEAR	08	14	0024	N08	W52	08	10.1		B	CRO	50	7	13	3
4554		ATHN	08	14	0645	N08	W54	08	10.2		B	CAO	40	5	6	2
4554		RAMY	08	14	1230	N06	W58	08	10.2		B	CAO	40	6	6	3
4554		BOUL	08	14	1338	N09	W58	08	10.2		B	BXO	10	6	4	3
4554	24129	MWIL	08	14	1430	N07	W59	08	10.2	4	(B)					
4554		HOLL	08	14	1446	N07	W60	08	10.1		B	BXO	20	6	8	3
4554		PALE	08	14	1900	N07	W60	08	10.3		B	BXO	20	4	4	3
4554		LEAR	08	15	0029	N08	W63	08	10.3		B	BXO	20	3	4	3
4554		ATHN	08	15	0700	N09	W63	08	10.6			AXX	20	1	1	2
4554		RAMY	08	15	1510	N07	W69	08	10.5		A	HAX	30	1	1	3
4554		BOUL	08	15	1545	N09	W70	08	10.4		B	BXO	10	2	3	3
4554		PALE	08	15	1754	N07	W71	08	10.4		A	AXX	20	1	1	2
4554		LEAR	08	16	0029	N08	W77	08	10.2		A	AXX		1	1	3
4559		HOLL	08	07	1550	N13	E37	08	10.5		B	BXO	10	5	5	4
4559	24131	MWIL	08	07	1600	N14	E35	08	10.3	4	(AF)					
4559		LEAR	08	08	0019	N13	E32	08	10.4		B	BXO	20	4	2	3
4559		BOUL	08	08	1400	N14	E23	08	10.3		A	AXX	10	2	2	3
4559		HOLL	08	08	1803	N14	E20	08	10.3		A	AXX		1		3
4559		RAMY	08	10	1240	N14	W00	08	10.5		B	CAO	20	3	3	4
4559		BOUL	08	10	1315	N11	W01	08	10.5		A	AXX	10	2	2	2
4559	24131	MWIL	08	10	1530	N13	W04	08	10.3	3	(AF)					
4559		PALE	08	10	1745	N13	W03	08	10.5		A	AXX	20	2	2	3
4559		LEAR	08	11	0040	N14	W09	08	10.3		B	BXO	10	4	4	3
4559		RAMY	08	11	1345	N13	W15	08	10.4		A	AXX	10	1	1	4
4559		BOUL	08	11	1440	N19	W14	08	10.5		A	AXX		1	1	2
4559	24131	MWIL	08	11	1500	N14	W15	08	10.5	3	(AF)					
4559		PALE	08	11	1912	N14	W18	08	10.4		A	AXX	10	1	1	3
4559		RAMY	08	12	1254	N10	W26	08	10.6		A	AXX	20	4	2	3
4559A		PALE	08	08	1800	S13	E36	08	11.5		A	AXO	10	2	2	3
4559A	24134	MWIL	08	12	1430	S12	W17	08	11.3	3	(AP)					
4563		LEAR	08	16	0029	N05	W55	08	11.9		A	AXX		1	1	3
4563		LEAR	08	17	0617	N04	W69	08	12.1		A	AXX	10	1	1	3
4563		ATHN	08	17	0630	N05	W71	08	12.0		A	BXX	10	1		3
4563		RAMY	08	17	1132	N04	W72	08	12.1		A	HAX	50	2	2	3
4563		BOUL	08	17	1454	N06	W76	08	11.9		A	AXX	10	2	2	2
4563		PALE	08	17	1817	N03	W75	08	12.2		A	HSX	60	1	2	3
4563		LEAR	08	18	0022	N05	W81	08	12.0		B	BXO	20	3	7	3
4560A	24132	MWIL	08	07	1600	N03	E66	08	12.6	2	X					
4560		LEAR	08	12	0150	N03	E11	08	12.9		B	BXO	10	2	2	3
4560		ATHN	08	12	0615	N03	E06	08	12.7		B	BXO	20	5	5	3
4560		RAMY	08	12	1254	N02	E04	08	12.8		B	CRO	20	4	3	3
4560		BOUL	08	12	1310	N04	E03	08	12.8		B	CSO	20	4	3	3
4560	24135	MWIL	08	12	1430	N03	E03	08	12.8	4	(B)					
4560		HOLL	08	12	1815	N04	E01	08	12.8		B	BXO	40	4	3	4
4560		PALE	08	12	1815	N04	E01	08	12.8		B	BXO	40	4	3	4
4560		PALE	08	12	2126	N03	W02	08	12.7		B	CRO	20	4	5	3
4560		LEAR	08	13	0039	S03	W03	08	12.8		B	CRO	30	5	3	2
4560		ATHN	08	13	0615	N03	W07	08	12.7		B	CAO	30	4	3	4
4560		RAMY	08	13	1230	N02	W10	08	12.8		B	CAO	20	4	4	4
4560	24135	MWIL	08	13	1500	N03	W12	08	12.7	4	(B)					
4560		HOLL	08	13	1509	N02	W12	08	12.7		B	BXO	10	4	4	3
4560		BOUL	08	13	1600	N04	W12	08	12.8		B	CRO	30	6	6	3
4560		PALE	08	13	1800	N01	W12	08	12.9		B	CRO	30	9	6	3
4560		LEAR	08	14	0024	N03	W17	08	12.7		B	BXO	40	7	5	3
4560		ATHN	08	14	0645	N03	W21	08	12.7		B	CAO	30	3	3	2
4560		RAMY	08	14	1230	N02	W23	08	12.8		B	DAO	20	3	5	3
4560		BOUL	08	14	1338	N04	W25	08	12.7		B	BXO	10	7	4	3

R E G I O N S O F S U N S P O T A C T I V I T Y
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4560	24135	MWIL	08	14	1430	N02	W25	08	12.7	4	(BP)					
4560		HOLL	08	14	1446	N02	W25	08	12.7		B	BXO	10	8	6	3
4560		PALE	08	14	1900	N03	W27	08	12.8		B	BXO	30	5	4	3
4560		LEAR	08	15	0029	N03	W30	08	12.8		B	BXO	20	4	5	3
4560		ATHN	08	15	0700	N04	W30	08	13.0			AXX	10	1	1	2
4560		RAMY	08	15	1510	N03	W38	08	12.8		B	DAO	30	2	4	3
4560		BOUL	08	15	1545	N04	W37	08	12.9		B	BXO	20	3	6	3
4560		PALE	08	15	1754	N02	W40	08	12.8		B	BXO	30	2	3	2
4560		LEAR	08	16	0029	N03	W43	08	12.8		A	AXX		1	1	3
4560		RAMY	08	16	1413	N03	W52	08	12.7		B	BXO	20	2	3	2
4560		BOUL	08	16	1728	N06	W52	08	12.8		A	AXX	10	1	1	2
4560B		BOUL	08	07	1615	S01	E73	08	13.1		B	BXO		3	3	3
4560C		RAMY	08	13	1230	N06	E20	08	15.0		B	BXO	20	3	2	4
4560C		PALE	08	13	1800	N07	E17	08	15.0		A	AXX	10	1		3
4562		BOUL	08	14	1338	N12	E13	08	15.5		A	AXX	10	2	1	3
4562	24136	MWIL	08	14	1430	N13	E15	08	15.7	2	(AP)					
4562		HOLL	08	14	1446	N13	E15	08	15.7		A	AXX		2	1	3
4562		PALE	08	14	1900	N15	E13	08	15.8		A	AXX	10	1	1	3
4562		LEAR	08	15	0029	N12	E09	08	15.7		A	AXX	10	1	1	3
4562		ATHN	08	15	0700	N13	E07	08	15.8			AXX	10	1	1	2
4566		RAMY	08	24	1255	S14	W54	08	20.5		B	BXO	20	2	3	3
4566	24141	MWIL	08	24	1500	S14	W56	08	20.4	4	(B)					
4566		HOLL	08	24	1530	S14	W55	08	20.5		B	BXO	10	2	2	3
4566		PALE	08	24	1828	S14	W58	08	20.4		B	BXO	20	2	4	3
4566		LEAR	08	25	0014	S14	W63	08	20.2		B	BXO	20	2	3	3
4566		ATHN	08	25	0600	S17	W70	08	19.9			AXX	10	1	1	3
4566		RAMY	08	25	1303	S14	W66	08	20.6		A	AXX	10	1	1	4
4566		BOUL	08	25	1420	S14	W69	08	20.4		B	CSO	50	3	3	3
4566		HOLL	08	25	1439	S15	W67	08	20.5		B	CRO	10	2	4	3
4566	24141	MWIL	08	25	1530	S15	W68	08	20.5	3	(B)					
4566		PALE	08	25	1805	S16	W70	08	20.4		B	BXO	50	4	5	3
4566		LEAR	08	26	0023	S14	W72	08	20.6		B	BXO	20	4	4	3
4564		RAMY	08	16	1413	S10	E86	08	23.1		A	HSX	30	1	2	2
4564		HOLL	08	16	1545	S09	E78	08	22.5		A	HSX	80	1	2	3
4564		BOUL	08	16	1728	S10	E78	08	22.6		A	AXX	30	1	2	2
4564		LEAR	08	17	0617	S10	E70	08	22.5		A	HSX	30	2	2	3
4564		ATHN	08	17	0630	S10	E68	08	22.4		A	HRX	80	1	3	3
4564		RAMY	08	17	1132	S09	E68	08	22.6		A	HAX	50	1	1	3
4564		BOUL	08	17	1454	S10	E68	08	22.7		A	HSX	50	1	1	2
4564		HOLL	08	17	1530	S08	E66	08	22.6		A	HAX	60	1	2	3
4564		PALE	08	17	1817	S09	E65	08	22.6		A	HAX	50	1	2	3
4564		LEAR	08	18	0022	S09	E61	08	22.6		A	HRX	10	1	3	3
4564		ATHN	08	18	0730	S09	E57	08	22.6		A	HSX	50	1	1	2
4564		HOLL	08	18	1500	S09	E54	08	22.7		A	HSX	30	1	2	3
4564		BOUL	08	18	1545	S11	E51	08	22.5		B	HSX	30	1	2	4
4564		PALE	08	18	1823	S09	E52	08	22.7		A	HSX	50	1	2	3
4564		LEAR	08	19	0050	S09	E47	08	22.6		A	HSX	20	1	2	3
4564		RAMY	08	19	1325	S09	E41	08	22.6		A	HAX	50	1	1	4
4564	24138	MWIL	08	19	1430	S09	E39	08	22.5	6	(AP)					
4564		HOLL	08	19	1437	S09	E39	08	22.5		A	HSX	80	1	2	3
4564		BOUL	08	19	1730	S08	E37	08	22.5		A	HSX	30	1	2	3
4564		PALE	08	19	1815	S10	E38	08	22.6		A	HSX	50	1	2	3
4564		LEAR	08	20	0004	S09	E34	08	22.6		A	HSX	60	1	2	3
4564		RAMY	08	20	1240	S08	E27	08	22.6		A	HAX	50	1	2	3
4564		HOLL	08	20	1413	S09	E26	08	22.5		A	HSX	60	1	2	3
4564		BOUL	08	20	1424	S08	E25	08	22.5		A	HSX	20	1	2	2
4564	24138	MWIL	08	20	1500	S09	E26	08	22.6	5	(AP)					
4564		PALE	08	20	1855	S10	E24	08	22.6		B	CSO	50	2	3	2
4564		LEAR	08	21	0006	S09	E21	08	22.6		B	CHO	60	2	3	3
4564		ATHN	08	21	0655	S08	E18	08	22.6			HSX	40	1	2	3
4564		RAMY	08	21	1305	S09	E13	08	22.5		A	HSX	60	1	2	3
4564	24138	MWIL	08	21	1430	S09	E12	08	22.5	5	(AP)					
4564		HOLL	08	21	1504	S08	E13	08	22.6		A	HSX	50	1	2	4
4564		PALE	08	21	1805	S09	E12	08	22.7		A	HSX	50	2	4	3
4564		PALE	08	21	1805	S09	E12	08	22.7		B	CSO	50	2	4	3
4564		LEAR	08	22	0001	S08	E07	08	22.5		A	HSX	40	2	2	3

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

AUGUST 1984

NOAA/ USAF Region	Mt Wilson Region	Sta	Observation Mo	Day	Time (UT)	Lat	CMD	CMP Mo	Day	Max H	Mag Class	Spot Class	Corrected Area (10-6 Hemi)	Spot Count	Long. Extent (Deg)	Qual
4564		ATHN	08	22	1004	S09	E02	08	22.6		A	HRX	30	1	2	1
4564		RAMY	08	22	1248	S09	W01	08	22.5		A	HSX	40	1	1	4
4564		BOUL	08	22	1348	S07	W03	08	22.4		A	HSX	30	1	2	3
4564	24138	MWIL	08	22	1445	S09	W02	08	22.5	4	(AP)					
4564		HOLL	08	22	1800	S07	W04	08	22.5		A	HSX	30	1	2	2
4564		PALE	08	22	1837	S09	W04	08	22.5		A	HSX	20	1	2	3
4564		LEAR	08	23	0224	S08	W08	08	22.5		A	HSX	10	2	1	2
4564		ATHN	08	23	0615	S11	W08	08	22.7		A	HSX	20	1	1	2
4564		RAMY	08	23	1250	S08	W14	08	22.5		A	HRX	20	1	1	4
4564		BOUL	08	23	1430	S07	W15	08	22.5		A	HSX	10	1	2	2
4564	24138	MWIL	08	23	1430	S09	W15	08	22.5	4	(AP)					
4564		HOLL	08	23	1445	S08	W15	08	22.5		A	HSX	30	1	2	3
4564		PALE	08	23	1835	S09	W15	08	22.6		B	CAO	30	6	7	3
4564		LEAR	08	24	0108	S08	W21	08	22.5		A	HSX	10	2	1	3
4564		ATHN	08	24	0700	S08	W24	08	22.5		A	HRX	20	1	1	3
4564		RAMY	08	24	1255	S09	W28	08	22.4		A	HRX	10	1	1	3
4564	24138	MWIL	08	24	1500	S09	W28	08	22.5	4	(AP)					
4564		HOLL	08	24	1530	S09	W28	08	22.5		A	HSX	20	1	1	3
4564		PALE	08	24	1828	S09	W31	08	22.4		A	HRX	20	1	1	3
4564		LEAR	08	25	0014	S09	W35	08	22.4		A	AXX	20	1	1	3
4564		ATHN	08	25	0600	S10	W37	08	22.5			HRX	10	1	1	3
4564		RAMY	08	25	1303	S09	W40	08	22.5		A	HSX	20	1	1	4
4564		BOUL	08	25	1420	S06	W42	08	22.5		B	CSO	10	2	2	3
4564		HOLL	08	25	1439	S08	W42	08	22.5		A	HRX	10	1	1	3
4564	24138	MWIL	08	25	1530	S09	W42	08	22.5	4	(AP)					
4564		PALE	08	25	1805	S10	W43	08	22.5		B	CRO	10	2	3	3
4564		LEAR	08	26	0023	S09	W47	08	22.5		A	AXX	10	1	1	3
4564		RAMY	08	26	1420	S09	W54	08	22.5		A	AXX	20	1	1	4
4564		HOLL	08	26	1422	S08	W54	08	22.5		A	AXX		1		4
4564	24138	MWIL	08	26	1730	S08	W56	08	22.5	3	(AP)					
4564		PALE	08	26	1807	S10	W55	08	22.6		B	BXO	20	2	4	3
4564		LEAR	08	27	0004	S08	W60	08	22.5		A	AXX	10	1	1	3
4564		ATHN	08	27	0605	S09	W61	08	22.7		A	AXX	10	1		3
4565		RAMY	08	19	1325	S11	E64	08	24.4		A	AXX	20	1	1	4
4565	24139	MWIL	08	19	1430	S11	E65	08	24.5	2	(B)					
4565		HOLL	08	19	1437	S11	E64	08	24.4		B	BXO	10	2	3	3
4565		BOUL	08	19	1730	S10	E60	08	24.2		A	AXX	20	1	1	3
4565		PALE	08	19	1815	S11	E63	08	24.5		B	BXO	20	3	4	3
4565		LEAR	08	20	0004	S12	E57	08	24.3		B	BXO	10	2	3	3
4565		RAMY	08	20	1240	S11	E49	08	24.2		A	AXX	20	1	1	3
4565		HOLL	08	20	1413	S12	E48	08	24.2		A	AXX	10	1		3
4565		BOUL	08	20	1424	S12	E46	08	24.1		A	AXX	10	1	1	2
4565	24139	MWIL	08	20	1500	S11	E47	08	24.2	4	(AP)					
4565		PALE	08	20	1855	S12	E46	08	24.3		A	AXX	10	1	1	2
4565		LEAR	08	21	0006	S12	E43	08	24.2		A	AXX	10	1	1	3
4565		RAMY	08	21	1305	S11	E36	08	24.3		A	AXX	10	3	2	3
4565		LEAR	08	22	0001	S12	E33	08	24.5		A	AXX	10	1	1	3
4565		PALE	08	22	1837	S19	E18	08	24.1		A	AXX	10	1	1	3
4565		LEAR	08	23	0224	S11	E17	08	24.4		B	CRO	10	4	3	2
4565		ATHN	08	23	0615	S12	E13	08	24.2		B	BXO	20	3	4	2
4565		RAMY	08	23	1250	S11	E11	08	24.4		B	BXO	10	3	4	4
4565	24140	MWIL	08	23	1430	S11	E10	08	24.4	3	(B)					
4565		HOLL	08	23	1445	S11	E10	08	24.4		B	BXO	10	2	4	3
4565		PALE	08	23	1835	S12	E06	08	24.2		B	BXO	10	2	4	3
4565		LEAR	08	24	0108	S12	E03	08	24.3		B	DSO	30	6	3	3
4565		ATHN	08	24	0700	S12	W01	08	24.2			DSO	40	6	4	3
4565		RAMY	08	24	1255	S13	W03	08	24.3		B	DAO	70	13	5	3
4565	24140	MWIL	08	24	1500	S12	W04	08	24.3	5	(B)					
4565		HOLL	08	24	1530	S13	W04	08	24.3		B	DAO	80	9	5	3
4565		PALE	08	24	1828	S13	W07	08	24.2		B	DAO	90	11	5	3
4565		LEAR	08	25	0014	S13	W09	08	24.3		B	DAO	80	13	6	3
4565		ATHN	08	25	0600	S13	W12	08	24.3			DAO	60	9	5	3
4565		RAMY	08	25	1303	S13	W15	08	24.4		B	DAO	100	21	7	4
4565		BOUL	08	25	1420	S10	W18	08	24.2		B	DAI	110	20	6	3
4565		HOLL	08	25	1439	S13	W17	08	24.3		B	DAI	40	24	6	3
4565	24140	MWIL	08	25	1530	S12	W17	08	24.4	4	(B)					
4565		PALE	08	25	1805	S13	W19	08	24.3		B	DRO	70	18	6	3
4565		LEAR	08	26	0023	S12	W23	08	24.3		B	DSO	80	18	7	3
4565		ATHN	08	26	0615	S13	W26	08	24.3			DAO	80	10	7	3
4565		RAMY	08	26	1420	S14	W29	08	24.4		B	DAO	50	24	6	4

REGIONS OF SUNSPOT ACTIVITY
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NOAA/ USAF Region	Mt Wilson Region	Sta	Observation Mo	Day	Time (UT)	Lat	CMD	CMP Mo	Day	Max H	Mag Class	Spot Class	Corrected Area (10-6 Hemi)	Spot Count	Long. Extent (Deg)	Qual
4565		HOLL	08	26	1422	S13	W30	08	24.3		B	DRI	40	24	6	4
4565		HOLL	08	26	1422	S13	W30	08	24.3		B	DRI	40	24	6	4
4565	24140	MWIL	08	26	1730	S13	W33	08	24.2	4	(B)					
4565		PALE	08	26	1807	S14	W33	08	24.3		B	DSO	90	18	6	3
4565		LEAR	08	27	0004	S13	W35	08	24.4		B	DSO	70	12	8	3
4565		ATHN	08	27	0605	S12	W39	08	24.3		B	DAO	100	9	6	3
4565		RAMY	08	27	1240	S14	W44	08	24.2		B	DAO	150	15	7	4
4565		HOLL	08	27	1502	S13	W44	08	24.3		B	DHO	180	21	7	4
4565	24140	MWIL	08	27	1515	S13	W45	08	24.2	4	(B)					
4565		BOUL	08	27	1540	S13	W46	08	24.2		B	CSI	150	14	4	4
4565		PALE	08	27	1855	S13	W47	08	24.2		B	CSI	210	16	6	3
4565		LEAR	08	28	0012	S12	W52	08	24.1		B	DAO	90	12	7	4
4565		ATHN	08	28	0744	S13	W51	08	24.5		B	CSO	130	3	5	1
4565		RAMY	08	28	1305	S14	W58	08	24.2		B	CSO	60	8	5	3
4565		BOUL	08	28	1350	S13	W56	08	24.4		B	CSO	50	4	6	2
4565		BOUL	08	28	1350	S13	W56	08	24.4		B	DSO	50	4	6	2
4565		HOLL	08	28	1510	S13	W57	08	24.3		B	CSO	60	10	6	4
4565	24140	MWIL	08	28	1515	S13	W59	08	24.2	4	(B)					
4565		PALE	08	28	1905	S14	W63	08	24.0		B	CAO	80	4	7	3
4565		ATHN	08	29	0700	S15	W75	08	23.6			CAO	60	2	4	1
4565		RAMY	08	29	1221	S15	W72	08	24.1		B	CAO	50	2	6	3
4565		BOUL	08	29	1410	S14	W73	08	24.1		A	AXX	30	1	2	2
4565		HOLL	08	29	1410	S15	W75	08	23.9		B	CAO	70	3	7	3
4565	24140	MWIL	08	29	1430	S14	W74	08	24.0	4	(AP)					
4565		PALE	08	29	1825	S16	W76	08	24.0		B	CSO	30	4	7	3
4565A		PALE	08	27	1855	N17	E33	08	30.3		A	AXX	20	2	2	3
4567		LEAR	08	25	0014	S05	E76	08	30.7		A	AXO	20	2	2	3
4567		RAMY	08	25	1303	S05	E69	08	30.7		A	HAX	40	2	2	4
4567		BOUL	08	25	1420	S07	E70	08	30.8		B	CAO	70	4	3	3
4567		HOLL	08	25	1439	S05	E70	08	30.8		B	CAO	30	3	5	3
4567	24142	MWIL	08	25	1530	S05	E69	08	30.8	4	(BP)					
4567		PALE	08	25	1805	S06	E69	08	30.9		B	DAO	80	4	4	3
4567		LEAR	08	26	0023	S05	E65	08	30.9		B	DSO	70	9	6	3
4567		ATHN	08	26	0615	S08	E60	08	30.8			CAO	100	4	4	3
4567		RAMY	08	26	1420	S05	E59	08	31.0		B	DAO	130	16	7	4
4567		HOLL	08	26	1422	S06	E57	08	30.9		B	DSO	220	14	7	4
4567	24142	MWIL	08	26	1730	S06	E55	08	30.8	5	(B)					
4567		PALE	08	26	1807	S05	E56	08	30.9		B	CSO	190	17	8	3
4567		LEAR	08	27	0004	S07	E54	08	31.0		B	DHO	170	12	9	3
4567		ATHN	08	27	0605	S07	E48	08	30.8		B	DSO	150	9	8	3
4567		RAMY	08	27	1240	S06	E44	08	30.8		B	DAO	150	16	6	4
4567		HOLL	08	27	1502	S06	E44	08	30.9		B	DHO	210	22	7	4
4567	24142	MWIL	08	27	1515	S06	E43	08	30.9	5	(B)					
4567		BOUL	08	27	1540	S06	E40	08	30.6		B	CSI	190	21	7	4
4567		PALE	08	27	1855	S06	E41	08	30.9		B	CSI	200	18	7	3
4567		LEAR	08	28	0012	S07	E37	08	30.8		B	DHI	230	21	8	4
4567		ATHN	08	28	0744	S05	E33	08	30.8		B	DSO	140	5	6	1
4567		RAMY	08	28	1305	S06	E31	08	30.9		B	DKO	280	19	8	3
4567		BOUL	08	28	1350	S07	E30	08	30.8		B	DAI	240	13	8	2
4567		HOLL	08	28	1510	S05	E31	08	31.0		B	DKO	230	23	8	4
4567	24142	MWIL	08	28	1515	S06	E29	08	30.8	5	(B)					
4567		PALE	08	28	1905	S07	E28	08	30.9		B	DAI	230	18	7	3
4567		ATHN	08	29	0700	S05	E19	08	30.7			DAI	200	6	7	1
4567		RAMY	08	29	1221	S06	E18	08	30.9		B	DAO	410	28	8	3
4567		BOUL	08	29	1410	S04	E16	08	30.8		B	DAI	200	15	7	2
4567		HOLL	08	29	1410	S07	E16	08	30.8		B	DHI	290	18	8	3
4567	24142	MWIL	08	29	1430	S06	E15	08	30.7	5	(B)					
4567		PALE	08	29	1825	S07	E15	08	30.9		B	DAI	320	19	8	3
4567		LEAR	08	30	0005	S06	E12	08	30.9		B	DSI	340	18	8	2
4567		ATHN	08	30	0800	S06	E07	08	30.9			DAO	230	10	8	1
4567		RAMY	08	30	1245	S07	E04	08	30.8		B	DAO	360	28	7	4
4567		BOUL	08	30	1434	S05	E04	08	30.9		B	DAI	230	22	8	3
4567		HOLL	08	30	1515	S06	E03	08	30.9		B	DHI	390	23	8	3
4567	24142	MWIL	08	30	1530	S06	E01	08	30.7	5	(D)					
4567		PALE	08	30	1804	S07	E02	08	30.9		B	DSI	310	18	8	3
4567		LEAR	08	31	0011	S07	W04	08	30.7		BD	DKI	440	27	8	3
4567		ATHN	08	31	1035	S06	W06	08	31.0			DAI	280	10	8	3
4567		RAMY	08	31	1240	S07	W08	08	30.9		BD	DAO	390	45	8	4
4567		BOUL	08	31	1425	S05	W08	08	31.0		BD	DAC	410	27	9	2

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4567		HOLL	08	31	1434	S06	W10	08	30.9		B	DKI	400	47	9	3
4567	24142	MWIL	08	31	1500	S06	W11	08	30.8	5	(B)					
4567		LEAR	09	01	0021	S07	W16	08	30.8		BD	DKI	560	35	7	2
4567		ATHN	09	01	0710	S07	W18	08	31.0			DAI	320	10	8	2
4567		RAMY	09	01	1125	S07	W22	08	30.8		BD	DKI	490	44	7	4
4567	24142	MWIL	09	01	1445	S06	W25	08	30.7	6	(BY)					
4567		HOLL	09	01	1453	S07	W23	08	30.9		B	DKI	510	33	7	3
4567		BOUL	09	01	1520	S07	W24	08	30.8		BD	DAC	420	22	7	2
4567		PALE	09	01	1740	S08	W25	08	30.9		B	DAI	490	31	9	3
4567		LEAR	09	02	0007	S07	W28	08	30.9		BGD	DKI	460	34	7	3
4567		ATHN	09	02	0615	S07	W31	08	30.9			DAI	430	10	8	3
4567		RAMY	09	02	1123	S07	W35	08	30.9		BD	DKI	440	38	7	3
4567		HOLL	09	02	1412	S07	W36	08	30.9		B	DKI	480	25	7	4
4567	24142	MWIL	09	02	1515	S06	W37	08	30.9	6	(B)					
4567		BOUL	09	02	1533	S04	W36	08	31.0		BD	DAC	400	31	6	3
4567		PALE	09	02	1925	S07	W39	08	30.9		BD	DAI	350	19	7	2
4567		LEAR	09	03	0007	S07	W43	08	30.8		BD	DKI	340	20	7	2
4567		ATHN	09	03	0645	S05	W45	08	30.9			DKO	350	10	7	2
4567		RAMY	09	03	1315	S06	W53	08	30.6		B	DKO	380	28	8	3
4567		HOLL	09	03	1415	S06	W50	08	30.9		B	DKO	320	25	10	4
4567	24142	MWIL	09	03	1430	S06	W51	08	30.8	6	(BP)					
4567		BOUL	09	03	1432	S06	W48	08	31.0		B	DAC	370	24	8	3
4567		PALE	09	03	2052	S08	W55	08	30.7		B	DAI	320	9	7	2
4567		LEAR	09	04	0011	S06	W57	08	30.7		BD	DKI	220	15	7	2
4567		ATHN	09	04	0630	S06	W60	08	30.8			DKI	300	9	9	1
4567		RAMY	09	04	1345	S06	W65	08	30.7		B	DKO	380	15	9	3
4567		BOUL	09	04	1420	S03	W64	08	30.8		B	DKI	310	14	5	2
4567	24142	MWIL	09	04	1430	S06	W65	08	30.7	6	(BP)					
4567		HOLL	09	04	1530	S05	W65	08	30.8		B	DKO	330	8	7	3
4567		PALE	09	04	1840	S08	W66	08	30.8		B	DKO	340	4	8	3
4567		ATHN	09	05	0630	S08	W73	08	30.8			CAO	210	5	2	2
4567		RAMY	09	05	1245	S06	W70	08	31.3		B	CKO	160	13	3	3
4567		BOUL	09	05	1420	S05	W81	08	30.5		A	HSX	120	4	3	2
4567	24142	MWIL	09	05	1445	S06	W79	08	30.7	6	(AP)					
4567		HOLL	09	05	1538	S05	W79	08	30.7		A	HAX	310	1	2	3
4567		LEAR	09	06	0007	S06	W88	08	30.4		A	AXX	20	1	4	3
4574		ATHN	09	04	0630	S16	W56	08	31.0			BXO	20	2	3	1
4574		RAMY	09	04	1345	S17	W59	08	31.1		B	DAO	50	3	3	3
4574		BOUL	09	04	1420	S15	W57	08	31.3		B	BXO	20	2	3	2
4574	24150	MWIL	09	04	1430	S16	W58	08	31.2	4	(B)					
4574		HOLL	09	04	1530	S16	W58	08	31.2		B	BXO	10	3	4	3
4574		PALE	09	04	1840	S18	W60	08	31.2		B	CAO	30	4	6	3
4574		ATHN	09	05	0630	S18	W69	08	31.0			AXX	30	1	1	2
4574A		RAMY	09	01	1125	N12	W09	08	31.8		A	AXX		1		4
4574A	24145	MWIL	09	01	1445	N13	W11	08	31.8	3	(AP)					
4574A		HOLL	09	01	1453	N13	W11	08	31.8		B	BXO	10	3	3	3

SUDDEN IONOSPHERIC DISTURBANCES

AUGUST 1984

Day	Start (UT)	Max (UT)	End (UT)	Imp	Wide-spread Index	Number of Station Reports by Type SWF	SEA	SPA	LF-SPA	SES	Known Flare	X-ray Class	NOAA/SESC Region
02	0711	0722	0804	1-	1			1			No Flare		
02	2240	2307	0008	1-	1			1			No Flare		
03	1356	1406	1429	1	1		1				No Flare		
03	1601	1611	1629	1	3		2				No Flare		
04	1345	1358	1426	1	3		2				No Flare		
04	1511	1521U	1529U	1	1		1				No Flare		
08	0338	0344	0456	1	1				1		No Flare		
09	0115	0125	0136	1-	1				1		No Flare		
09	0614	0622	0648	1	3		2				No Flare		
10	0944	0953	1012	1	3		2				No Flare		
10	1435	1437	1508	1	1		1				No Flare		
12	0210	0220	0235U	1-	1				1		No Flare		
12	0340		0348	1-	1				1		No Flare		
14	0652	0705	0746	1-	3			1	1	1	0651 UT	1.0	4554
15	0808	0825	0950	1	3		1				No Flare		
15	1554	1558	1618	1	1		1				1601 UT		4554
16	1007	1012	1030U	1	3		2				No Flare		
17	1610	1615	1638	1	3		2				1610 UT		4563
18	0556	0603	0644	1-	1			1			0543 UT	C1.0	
18	0848	0852	0912	1-	1		1				No Flare		
18	0918	0955	1030	1-	3		2				*		
18	1051	1122	1147	1-	3		2				No Flare		
18	1538	1540U	1606	1-	1		1				No Flare		
18	2208	2216	2230	1-	1			1			No Flare		
18	2241	2308	0030	2	5	1		1		6	2239 UT	M1.1	X-ray
18	2301	2305	2313	1	3	1				2	No Flare		
19	0112	0120	0143	1-	3			1	1		No Flare		
19	0201	0222	0322	1-	3			1	1	1	0200 UT	C2.1	4563
19	0219	0223	0238	1-	3				1	1	No Flare		
19	0342	0354	0457	1-	3			1	1	1	0339 UT	C1.7	X-ray
19	0621	0632	0716	1-	1			1			No Flare		
20	0835	0840	0914	1-	1		1				No Flare		
24	1342	1350	1413	1-	1		1				No Flare		
24	2054	2108	2135	1-	1			1			2054 UT	C1.1	4565
25	1258	1317U	1331	1-	1		1				No Flare		
26	0214	0223	0258	1-	3	1		1	1	1	0213EUT	C3.5	4567
26	0525	0539	0622	1-	3			1	1	1	0524 UT	C2.0	4567
26	0628	0637	0700	1-	1			1			0638 UT		4567
26	0844	0858	0945	1-	3		1	1	1	2	0840 UT	C2.0	4567
29	0217	0220	0233	1-	3			1	1		No Flare		
29	0527	0530	0550	1	1					1	No Flare		
29	0921	0937U	1019	1	1		1				No Flare		
29	1803	1806	1816	1-	1					1	No Flare		
30	1120	1139	1217	1-	1		1				No Flare		
30	1638	1707	1728	1-	1		1				No Flare		

* = No Flare Patrol.

SIDs by NOAA/SESC REGION

August 1984

Day	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
Region Number																															
4554														1	1																
4563																	1		1												
4565																								1							
4567																										4					
X-Ray																		2	1												
No Flare		2	2	2				1	2	2		2		1	1	1		5	3	1				1	1				4	2	
No Flare Patrol																		1													
No Data																															
Event Totals		2	2	2				1	2	2		2		1	2	1	1	8	5	1				2	1	4			4	2	

OBSERVATORIES REPORTING FOR AUGUST 1984*

Ayrshire, Scotland (AY)	SES	Lintong, China (LT)	SPA
Cleveland, Ohio, USA (A28)	SES	Louisville, Kentucky, USA (A26)	SES
Darmstadt, GFR (DA)	SWF	Maui, Hawaii, USA (MI)	SWF
Durban, South Africa (A58)	SES	Panska Ves, Czechoslovakia (PU)	SEA, SWF, SES
Edenvale, South Africa (A52)	SES	Paterson, New Jersey, USA (A46)	SES
Farsta, Sweden (FA)	SES	St. Cloud, Minnesota, USA (SC)	SES
Glenorchy, Tasmania, Australia (GN)	SES	Tavares, Florida, USA (A49)	SES
Hiraiso, Japan (HI)	SWF	Tournai, Belgium (TB)	SES
Hobart, Tasmania, Australia (TA)	SEA	Tucson, Arizona, USA (A9)	SES
Inubo, Japan (IN)	SPA	Upice, Czechoslovakia (UI)	SEA
Kuhlungsborn, GDR (KU)	SEA	Vsetin, Czechoslovakia (VS)	SEA
Latrobe, Pennsylvania, USA (A19)	SES		

*Observations are not necessarily continuous for each reporting station.

ERRATA: The July 1984 SID table in SGD 481 Part 1, page 80, September 1984 issue, had an error. The value on the "No Flare Patrol" line should be on the "No Flare" line.

SOLAR RADIO EMISSION
SPECTRAL OBSERVATIONS

AUGUST 1984

Observation				Decimetric Band			Metric Band			Dekametric Band			
Day	Start (UT)	End (UT)	Sta	Start (UT)	End (UT)	Int (1-3)	Start (UT)	End (UT)	Int (1-3)	Start (UT)	End (UT)	Int (1-3)	Spectral Type
01	0436	1820	WEIS										
02	0438	0555	WEIS										
	0612	0814	WEIS										
	0919	1819	WEIS										
03	0420	1301	WEIS										
	1322	1818	WEIS										
04	0439	1815	WEIS										
05	0442	0626	WEIS										
	0837	1816	WEIS										
06	0442	0947	WEIS										
	1010	1515	WEIS										
	0442	0947	WEIS				1152.4	1152.6	2				IIIG
	1527	1815	WEIS										
07			LEAR				0447.5	0447.6	1				III
	0443	1813	WEIS				0447.6	0447.8	1				IIIB
08	0443	0852	WEIS										
	0900	1812	WEIS										
09	0445	1552	WEIS										
	1727	1819	WEIS										
10	0440	1817	WEIS				1618.8	1619.0	2				IIIB
11	0440	1026	WEIS										
	1033	1816	WEIS										
12	1041	1712	WEIS										
13	0726	1158	WEIS										
			SGMR				1628.5	1629.6	1				V
14	0804	1422	WEIS										
	1431	1810	WEIS										
15	0538	1152	WEIS										
	1219	1811	WEIS										
16	0447	0637	WEIS										
	0650	0747	WEIS										
	0822	1757	WEIS										
17	0457	1557	WEIS										
	1611	1755	WEIS										
18	0459	1653	WEIS										
19	0557	1023	WEIS										
	1433	1752	WEIS										
20			LEAR				0447.6	0448.0	1				III
			LEAR				0645.1	0647.0	1				III
	0502	1750	WEIS				0647.3	0647.9	1				IIIG
21	0503	0912	WEIS										
	0927	1747	WEIS										
22	0504	1651	WEIS										
23	0715	1746	WEIS										
24	0505	1437	WEIS										
	1558	1745	WEIS										
25	0712	1743	WEIS										

SOLAR RADIO EMISSION
SPECTRAL OBSERVATIONS

AUGUST 1984

Day	Observation Start (UT)	Observation End (UT)	Sta	Decimetric Band Start (UT)	Decimetric Band End (UT)	Decimetric Band Int (1-3)	Metric Band Start (UT)	Metric Band End (UT)	Metric Band Int (1-3)	Dekametric Band Start (UT)	Dekametric Band End (UT)	Dekametric Band Int (1-3)	Spectral Type
26	0508	1223	WEIS										
27	0755	1739	WEIS										
	0939	1327	BLEN										
	1425	1725	BLEN										
28			LEAR				0411.6	0412.8	2				V
	0500	0832	BLEN										
			LEAR				0513.5	0513.8	1				III
	0710	1535	WEIS				0513.5	0513.6	2				IIIG
			LEAR				0643.3	0644.6	2				III
			WEIS				0643.4	0644.7	2				IIIG
			LEAR				0656.1	0656.8	1				III
			WEIS				0656.1	0656.8	3				IIIG
			LEAR				0717.1	0718.1	1				III
			WEIS				0717.2	0717.7	2				IIIG
			WEIS				0730.1	0730.3	1				IIIB
			LEAR				0741.8	0742.8	1				III
			WEIS				0741.9	0742.7	2				IIIG
			LEAR				0849.3	0849.8	1				III
			WEIS				0849.3	0849.7	2				IIIG,U
			LEAR				0904.8	0905.6	1				III
			WEIS				1006.3	1006.9	2				IIIG
			WEIS				1116.2	1118.8	2				IIIG
			WEIS				1246.2	1246.3	1				IIIB
			WEIS				1513.2	1513.4	2				IIIG
	1649	1725	BLEN										
			SGMR				1726.8	1729.3	1				V
29			LEAR				0515.3	0515.6	1				III
	0500	1725	BLEN				0556.5	0557.0	1				IIIG
			LEAR				0717.6	0717.8	1				III
	0659	1735	WEIS				0717.8	0717.9	2				IIIB
			WEIS				0806.2	0806.3	1				IIIB
			WEIS				0828.4	0829.1	2				IIIB
			LEAR				0828.8	0836.5	1				III
			WEIS				0833.7	0833.2	1				IIIG
			WEIS				0836.3	0836.4	2				IIIB
			WEIS				0854.8	0855.1	1				IIIG
			LEAR				0856.1	0856.6	1				V
			WEIS				0856.3	0856.8	2				IIIG
			WEIS				0958.7	0959.9	2				IIIG
			WEIS				1000.7	1003.4	3				IIIGG
			BLEN				1001.0	1003.2	2				IIIGG
			WEIS				1010.9	1011.3	1				IIIG
			SGMR				1024.3	1025.6	1				V
			WEIS				1054.2	1056.2	3				IIIGG,V
			SGMR				1054.3	1055.6	1				V
			BLEN				1054.7	1055.3	2				IIIG
			SGMR				1117.3	1117.6	1				V
			WEIS				1117.5	1118.1	3				IIIG
			BLEN				1117.7	1117.8	1				IIIB
			WEIS				1154.9	1155.1	1				IIIB
			SGMR				1254.5	1254.8	1				V
			WEIS				1254.6	1257.2	2				IIIGG
			WEIS				1258.4	1300.9	1				IIIG
			SGMR				1313.1	1314.3	2				V
			WEIS				1313.3	1317.6	3				IIIGG
			BLEN				1313.5	1317.4	2				IIIGG
			SGMR				1315.8	1317.3	1				V
			WEIS				1324.6	1325.3	1				IIIG
			SGMR				1331.8	1336.3	1				G
			WEIS				1331.8	1334.2	3				IIIG
			WEIS				1335.7	1336.3	3				IIIG
			BLEN				1336.0	1336.1	3				IIIB
			SGMR				1534.3	1540.1	1				G
			WEIS				1534.3	1540.3	3				IIIGG
30			LEAR				0042.5	0042.8	1				III
			LEAR				0514.6	0515.1	1				III
	0513	1456	WEIS				0514.7	0515.0	2				IIIG

SOLAR RADIO EMISSION
SPECTRAL OBSERVATIONS

AUGUST 1984

Day	Observation Start (UT)	Observation End (UT)	Sta	Decimetric Band Start (UT)	Decimetric Band End (UT)	Decimetric Band Int (1-3)	Metric Band Start (UT)	Metric Band End (UT)	Metric Band Int (1-3)	Dekametric Band Start (UT)	Dekametric Band End (UT)	Dekametric Band Int (1-3)	Spectral Type
30	0510	1720	BLEN				0544.8	0544.9	1				IIIB
	1539	1732	WEIS				0552.7	0553.2	1				IIIG
			BLEN				0553.0	0553.3	2				IIIG
	1744	1837	WEIS				0710.0	0712.2	2				IIIG
			LEAR				0711.3	0711.6	1				III
			WEIS				0753.2	0753.3	1				IIIB
			BLEN				0755.5	0755.6	2				IIIG
			LEAR				0756.1	0756.6	1				III
			WEIS				0756.3	0756.7	3				IIIG
			WEIS				1032.2	1033.3	3				IIIGG
			BLEN				1032.6	1033.3	1				IIIG
			SGMR				1748.8	1750.1	2				V
			PALE				1750.1	1750.6	3				III
			SGMR				2213.8	2215.6	1				V
31			PALE				0033.1	0034.8	3				III
			LEAR				0034.1	0035.8	2				V
			LEAR				0220.5	0228.3	2				V
			PALE				0223.5	0228.6	3				V
			PALE				0249.3	0300.5	3				CONT
			LEAR				0548.6	0549.1	1				III
	0515	1720	BLEN				0549.0	0549.6	1				IIIG
			LEAR				0614.0	0614.6	1				III
			BLEN	0615.1	0617.8	1	0615.1	0617.8	2				IIIGG
			LEAR				0616.3	0617.0	2				III
			LEAR				0624.3	0625.3	2				V
	0801	7330	WEIS				1439.2	1439.9	3				IIIG,U
			WEIS				1443.5	1443.6	1				IIIG
			WEIS				1444.8	1445.1	1				IIIG

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

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

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

COSMIC RAY INDICES
(Neutron Monitor)

August 1984

Day	THULE Average (cts/h)/100	ALERT Average (cts/h)/100	DEEP RIVER Average (cts/h)/300	KIEL Average (cts/h)/100	CLIMAX Average (cts/h)/100	PREDIGTSTUHL Average (cts/h)/100	TOKYO Average (cts/h)/256	HUANCAYO Average (cts/h)/100
1	4149			5768.4		1157	3542.7	
2	4158			5785.0		1154	3540.6	
3	4157			5778.4		1153	3536.0	
4	4166			5783.7		1155	3540.7	
5	4167			5801.0		1156	3539.2	
6	4182			5818.6		1154	3538.4	
7	4203			5824.8		1154	3540.5	
8	4193			5809.4		1147	3537.2	
9	4177			5797.8		1146	3536.4	
10	4187			5828.1		1150	3540.3	
11	4196			5825.1		1151	3537.7	
12	4193			5827.0		1149	3542.2	
13	4203			5850.0		1151	3547.5	
14	4197			5841.6		1152	3540.8	
15	4197			5833.9		1150	3536.2	
16	4197			5845.4		1157	3540.7	
17	4202			5857.6		1163	3550.0	
18	4218			5867.2		1164	3561.7	
19	4244			5864.2		1170	3551.7	
20	4220			5857.7		1168	3571.7	
21	4221			5857.1		1163	3538.1	
22	4218			5846.8		1159	3532.6	
23	4208			5850.3		1159	3539.5	
24	4189			5834.8		1159	3543.0	
25	4192			5841.4		1157	3543.5	
26	4192			5855.7		1159	3544.4	
27	4203			5856.0		1161	3549.7	
28	4206			5869.9		1166	3556.3	
29	4226			5884.2		1168	3558.5	
30	4227			5889.1		1172	3557.7	
31	4232			5885.9		1173	3555.3	
Mean	4197			5836.6		1158	3544.9	

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

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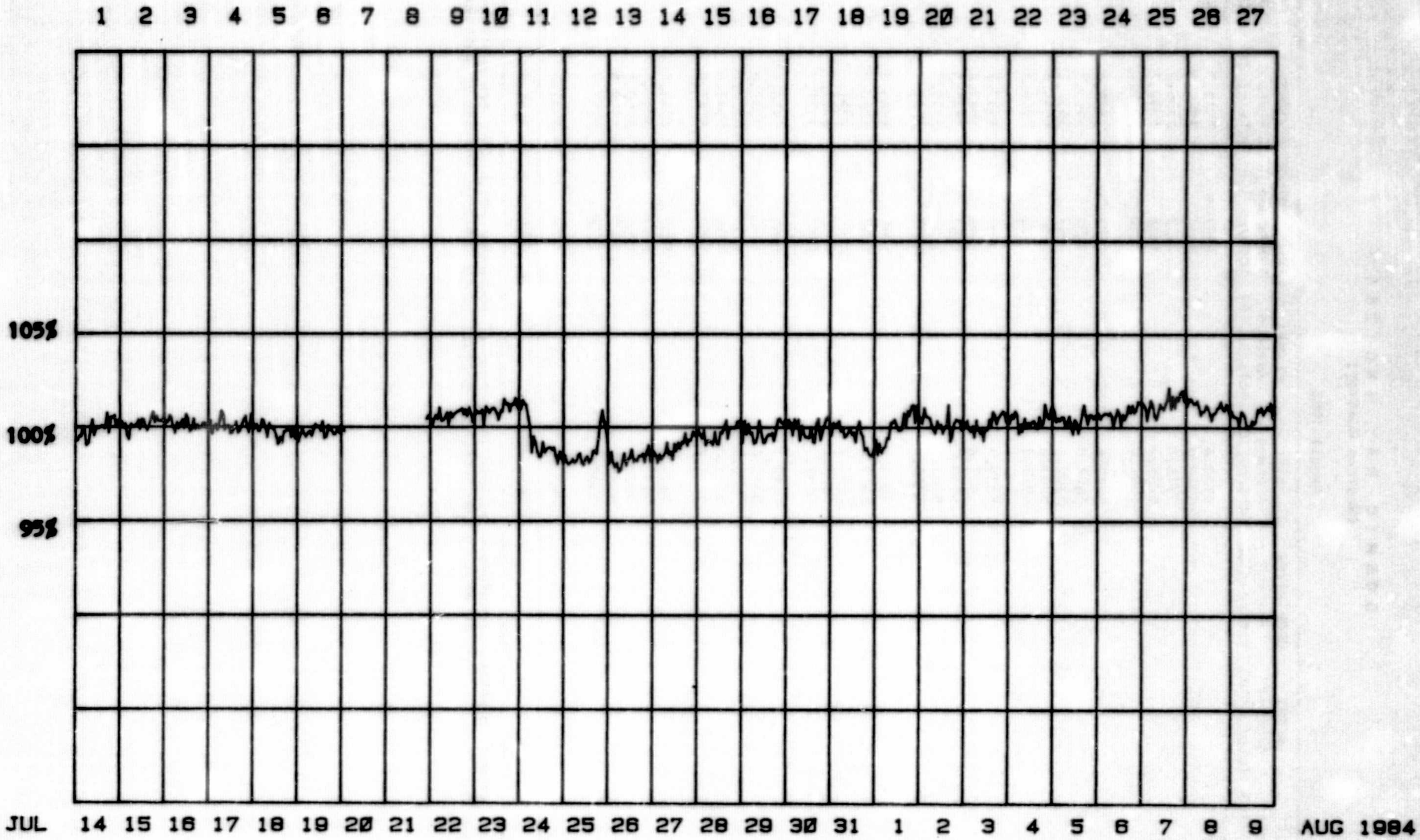
Aug 84

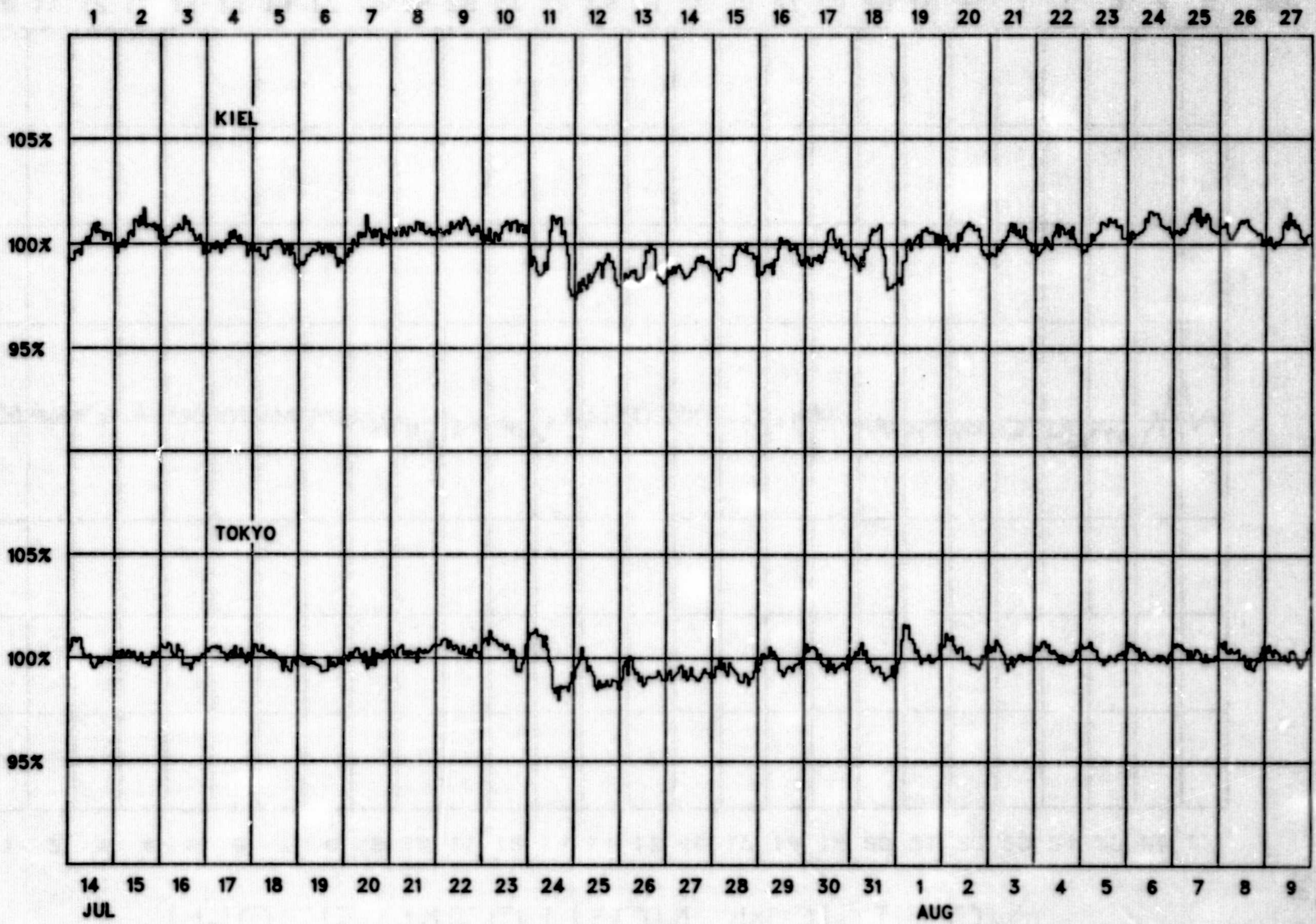
THULE NEUTRON MONITOR



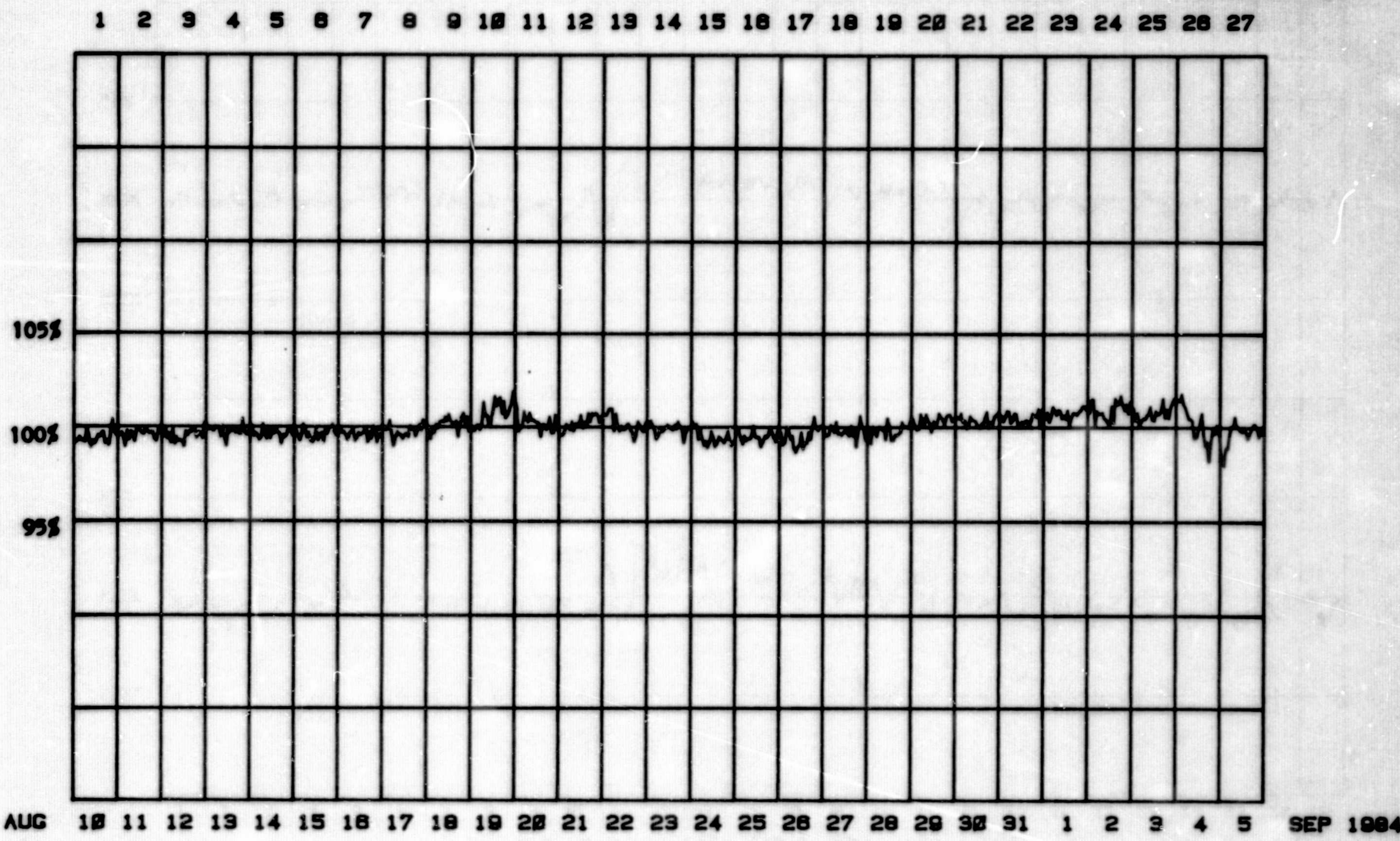
BARTELS ROTATION 2063

COSMIC RAY INDICES
(Neutron Monitor)

Bartels Rotation 2063 (July 1984–August 1984)



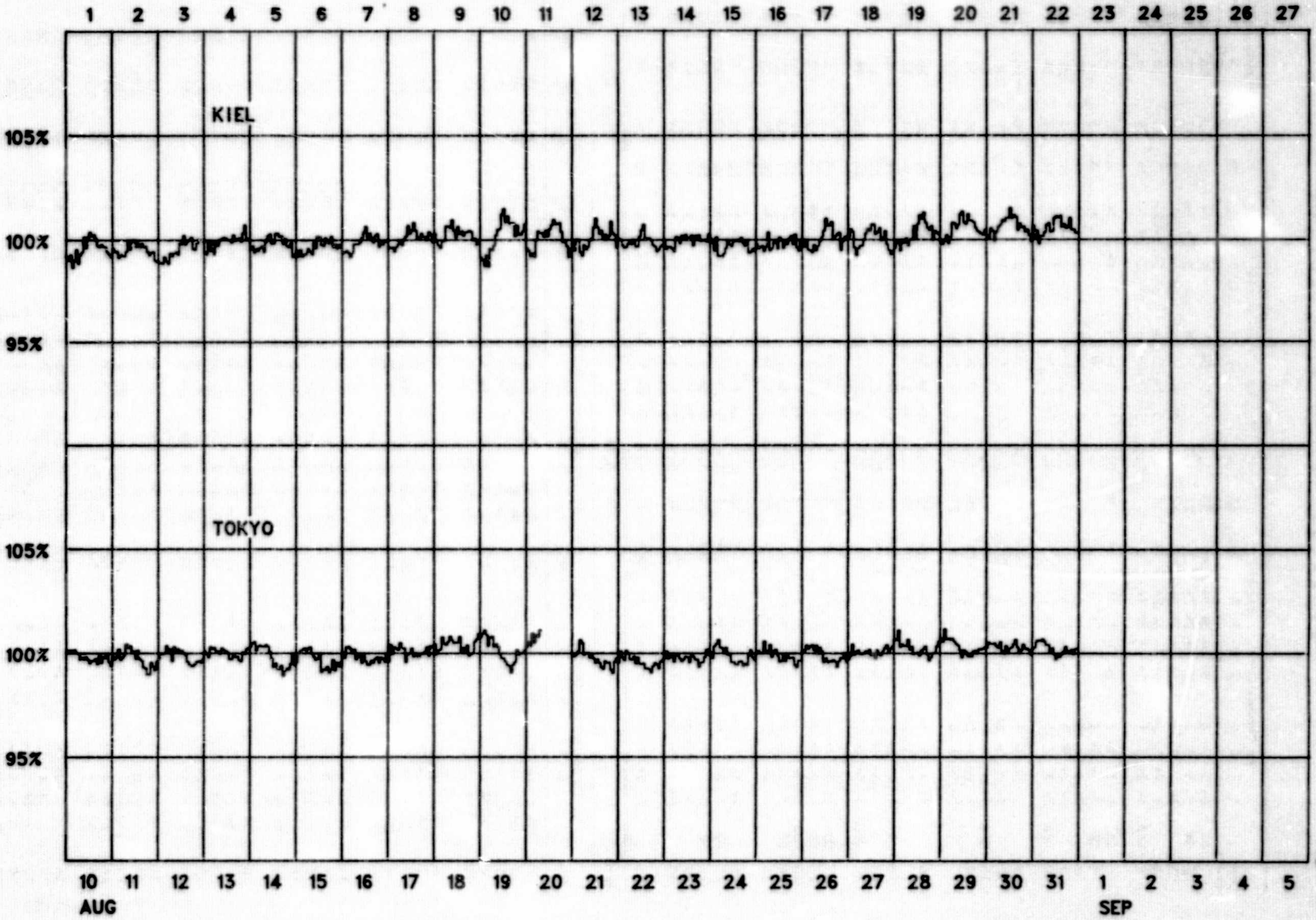
THULE NEUTRON MONITOR



BARTELS ROTATION 2064

COSMIC RAY INDICES
(Neutron Monitor)

Bartels Rotation 2064 (August 1984–September 1984)



GEOMAGNETIC ACTIVITY INDICES

August 1984

Day		Kp Three-Hourly Indices 1 2 3 4	5 6 7 8	Sum	Ap	Cp	Km Three-Hourly Indices 1 2 3 4	5 6 7 8	Am	aa Provisional N	S	M		
1	D1	6- 7 7- 6	5+ 5- 5+ 5+	46	75	1.8	5- 6 6- 5	5- 4 4 4+	86	99	66	103	62	
2	D4	5 5 4 3	4- 3+ 2+ 2+	29-	24	1.2	4+ 4+ 4- 3+	4- 3+ 2+ 2+	40	47	39	50	37	
3		3- 3 3 3+	2+ 3- 2+ 3+	23-	14	0.8	2+ 3- 3 3	2+ 2+ 2 3	23	28	15	22	22	
4		4 2+ 3 2+	3+ 3- 3- 2+	23-	14	0.8	3 2+ 3 3-	3 3- 3- 2+	25	31	18	25	25	
5	Q6A	3- 2+ 2 1	1+ 2+ 2+ 1-	15-	7	0.4	2+ 2+ 2+ 1+	1+ 2- 2+ 1	14	19	8	12	15	
6	Q4	1 1 1- 1	2- 2- 1 1+	9+	4	0.2	1+ 1 1- 1+	1+ 1+ 1- 1+	8	10	5	7	9	CC
7	Q2	1- 1- 1- 1	1 1- 1- 1+	7-	4	0.1	1 1- 0+ 1	1 0+ 1 1+	5	5	4	4	4	CK
8		3+ 3 3- 3+	3+ 2+ 2- 3+	23	14	0.8	3 3+ 3- 3+	3 2+ 2 3+	27	33	27	31	29	
9		2- 2+ 3 3	4- 2+ 2+ 5	23+	17	0.9	2 2+ 3 3	3+ 2 2+ 4	28	34	29	26	38	
10	Q8A	2- 2 2 3	1+ 2- 2+ 2-	16-	8	0.4	2+ 2 2+ 3	1+ 2- 3- 2	17	22	14	19	18	
11		1 2- 3+ 3	2- 2- 3- 4-	19-	11	0.6	1 2- 3+ 3+	2- 2- 3- 3+	23	20	20	21	19	
12		4+ 3- 3- 3+	3- 2- 3 3	23+	15	0.9	4+ 3 3 3	3+ 1+ 3- 2+	30	29	26	33	23	
13	Q7A	3 3 1+ 1	2- 2- 2- 1+	15-	8	0.4	4- 3+ 2 1+	1+ 1+ 2- 1	17	17	13	20	10	
14		1 0+ 1+ 2+	5- 5- 4 5-	23	20	1.0	1 0+ 2- 3-	4 4+ 4- 4	33	30	34	9	56	
15		5- 5- 3 3	3+ 4 3 3-	28+	22	1.1	4 4 3- 3	3+ 4 2+ 3-	37	45	33	41	37	
16		3+ 4 3 3-	4- 2+ 2 2+	23+	15	0.8	4- 3+ 3- 3	3 3- 2+ 3-	29	32	29	33	29	
17		3 3+ 3 2-	2- 2 2 3	20-	11	0.6	3- 3 3- 2	2- 2- 2+ 3-	19	21	16	22	16	
18	Q5	1 2 2- 2	2- 1+ 2+ 1+	13+	6	0.3	0+ 2+ 2 2	2- 1 2 1	11	16	6	10	12	CC
19		1- 1- 1+ 2+	3- 4 5- 3	19+	14	0.8	1 1 1+ 2+	3- 4- 4 3-	23	29	21	8	42	
20	Q10A	3- 3- 4- 1+	1+ 2+ 2+ 1-	17	10	0.5	3- 3 4- 2-	1 2+ 3- 1-	20	19	19	21	17	
21	Q3	1+ 1- 1- 1	1+ 0+ 1- 0+	6+	3	0.1	1 0+ 0+ 1	1 0+ 1 0+	5	7	4	6	6	CK
22	Q1	0 0 0+ 0+	0+ 0+ 0 0+	2-	1	0.0	0 0 0 0+	0+ 0 0 0+	1	3	2	2	3	CC
23	Q9A	1- 0+ 1- 1-	3+ 2+ 2 3+	13+	8	0.4	1- 1- 1- 1-	3- 3- 2+ 3+	14	16	10	5	22	K
24	D5	2+ 4- 5- 4+	4+ 4- 3+ 2+	29-	23	1.1	3- 4- 4 4	4- 3 3 2	37	43	33	36	40	
25		3 4- 3 5	2- 2 3+ 3	25-	18	1.0	3- 3 3- 4	2 2- 3 3-	26	29	15	25	20	
26		2+ 4- 3+ 2-	2 2 1+ 1	17+	10	0.5	2+ 4- 3 2-	2+ 2+ 1+ 1+	20	22	9	18	14	
27	D3	3 2+ 2+ 4-	5- 5+ 5+ 6	33-	36	1.4	3 2+ 2 3	4- 5- 5- 5+	52	57	50	23	84	
28	D2	5 2+ 6- 5-	4- 5- 4- 5-	34+	36	1.4	5 2+ 5 4+	3 4 4- 4-	56	46	47	53	41	
29		3+ 4 5- 3+	3+ 3- 3 4-	28	21	1.1	3+ 4- 4 3+	3+ 2+ 2+ 3	35	36	31	38	29	
30		4- 3+ 3- 3+	4- 3 2+ 3-	25-	16	0.9	3 3 3- 3+	4- 3 3- 3-	30	31	29	29	31	
31		4- 2+ 3- 2-	3 3- 2 2+	20+	12	0.7	3 2+ 3 1+	3- 2+ 2- 2	20	29	14	22	22	
Mean					16	0.74			26.2	29.3	22.3	25.8		

Day	Kn Three-Hourly Indices 1 2 3 4	5 6 7 8	An	Ks Three-Hourly Indices 1 2 3 4	5 6 7 8	As	S_a	Prov R_I	R_a	R_s	IMF
1	5- 6 6- 5	5- 4 4+ 4+	90	5- 6 6- 5	4 4- 4- 4+	82	84.0	14	15	29	- -
2	5- 4+ 4- 4-	4- 3+ 2+ 2+	44	4- 4 3+ 3	4- 3+ 2+ 2+	36	86.3	15	15	31	- -
3	3- 3 3+ 4-	2+ 2+ 2+ 3	27	2+ 2+ 3- 3-	2 2 2- 3-	19	88.4	14	17	33	- -
4	3+ 3- 3+ 3-	3 3- 3 2+	28	3 2 3- 2+	3- 3 2+ 2+	22	85.7	25	22	31	- -
5	3- 2+ 2 2-	2 2- 2+ 1+	15	2+ 2+ 2+ 1-	1 1+ 2 1-	12	85.7	18	12	31	- -
6	1+ 1 1+ 2-	2- 1+ 1 2-	9	1+ 1+ 0+ 1+	1- 1 0+ 1	6	89.9	24	23	35	- -
7	1+ 1- 1- 1+	2- 1- 1+ 2-	8	1- 1- 0 0+	0 0 1- 0+	3	92.4	27	26	38	- -
8	3 3 3- 3+	3 2+ 2 4-	29	3 3+ 2+ 3+	3- 2 2- 3	25	94.0	32	28	40	- -
9	2 3- 3 3	4- 2+ 3- 4	31	2- 2+ 3- 3	3+ 2- 2 4	26	94.4	32	30	40	- -
10	2 2 3- 3	2- 2 3- 2+	19	2+ 2 2 3-	1 1+ 2+ 2-	15	95.4	34	34	41	- -
11	1 2- 4- 3+	2 2 3 4-	26	1- 1+ 3 4-	1+ 1+ 2 3+	20	90.8	29	28	36	- -
12	4 3 3 3+	3+ 2- 3- 3-	30	5- 3 3 3	3 1+ 2+ 2	30	88.0	30	29	33	- -
13	3 3+ 2- 2-	2- 2- 2 1+	18	4 3 2 1-	0+ 1- 2- 1	17	86.5	28	28	31	- -
14	1 1- 2+ 3	5- 4+ 4 4-	37	1- 0 1+ 2+	3 4 4- 4+	30	84.0	27	23	29	- -
15	4+ 4 3 3	3+ 4 3- 3	40	4 4 2+ 3	3+ 4 2 2	34	82.6	23	19	27	- -
16	3+ 4- 3- 3	3+ 3- 2+ 3-	29	4 3+ 3- 3	3- 3- 2+ 3-	28	83.1	23	16	28	- -
17	3- 3 3- 2	2 2 2+ 3-	21	3- 3- 3- 2-	1+ 1+ 2+ 3-	18	81.0	18	17	25	- -
18	1 2+ 2+ 2	2+ 2- 2+ 2-	15	0 2 2 2-	1 0+ 1+ 0+	8	79.1	17	12	23	- -
19	1 1 2- 3-	3 4- 4 3	26	1- 1- 1+ 2	2 4- 4 2+	20	76.2	9	13	20	- -
20	3- 3 4- 2+	1+ 3- 2+ 1+	22	3- 3 4- 1+	0+ 2 3- 0+	18	75.6	16	16	20	- -
21	1+ 1- 1 1+	2- 1- 1+ 1-	7	1- 0+ 0 1-	0+ 0 1- 0	3	77.2	12	11	21	- -
22	0 0 0 1-	1 0 0 1-	2	0 0 0 0	0 0 0 0	0	75.7	10	12	20	- -
23	1 1- 1 1-	3 3- 2+ 3+	16	0+ 0+ 1- 1-	2+ 2 2+ 3	12	76.0	19	16	20	- -
24	2+ 4- 4 4+	4- 3+ 3 2+	40	3 3 4- 4	3+ 3 3 2	34	81.6	24	28	26	- -
25	3- 4- 3 4	2 2 3+ 3	31	2+ 3- 2 4	2 1+ 3- 3-	22	83.0	36	42	28	- -
26	2+ 4 3+ 2-	3- 3- 2- 2-	24	2+ 3 3- 1+	2- 2- 1 1	15	87.7	49	53	33	- -
27	3 2+ 2+ 3	4 5 5- 5+	55	3 2 2- 3+	4- 5- 4+ 6-	49	90.4	41	44	36	- -
28	5 2+ 5 5-	3+ 4 4- 4	60	5 2+ 5- 4-	3- 4 3+ 4-	51	88.6	33	39	34	- -
29	3+ 4- 4 4-	3+ 3- 3- 3	37	3+ 3+ 4 3+	3+ 2+ 2+ 3	34	90.3	34	34	36	- -
30	3 3 3 4-	4- 3 3- 3-	32	3- 3- 2+ 3+	4- 3 2+ 2+	27	91.8	21	28	37	- -
31	3 3- 3 2-	3- 3- 2 2	22	3 2+ 3- 1	3- 2 2- 2-	18	93.1*	36	36	39	- -
Mean			28.7			23.7	85.8	24.8	24.7	30.7	

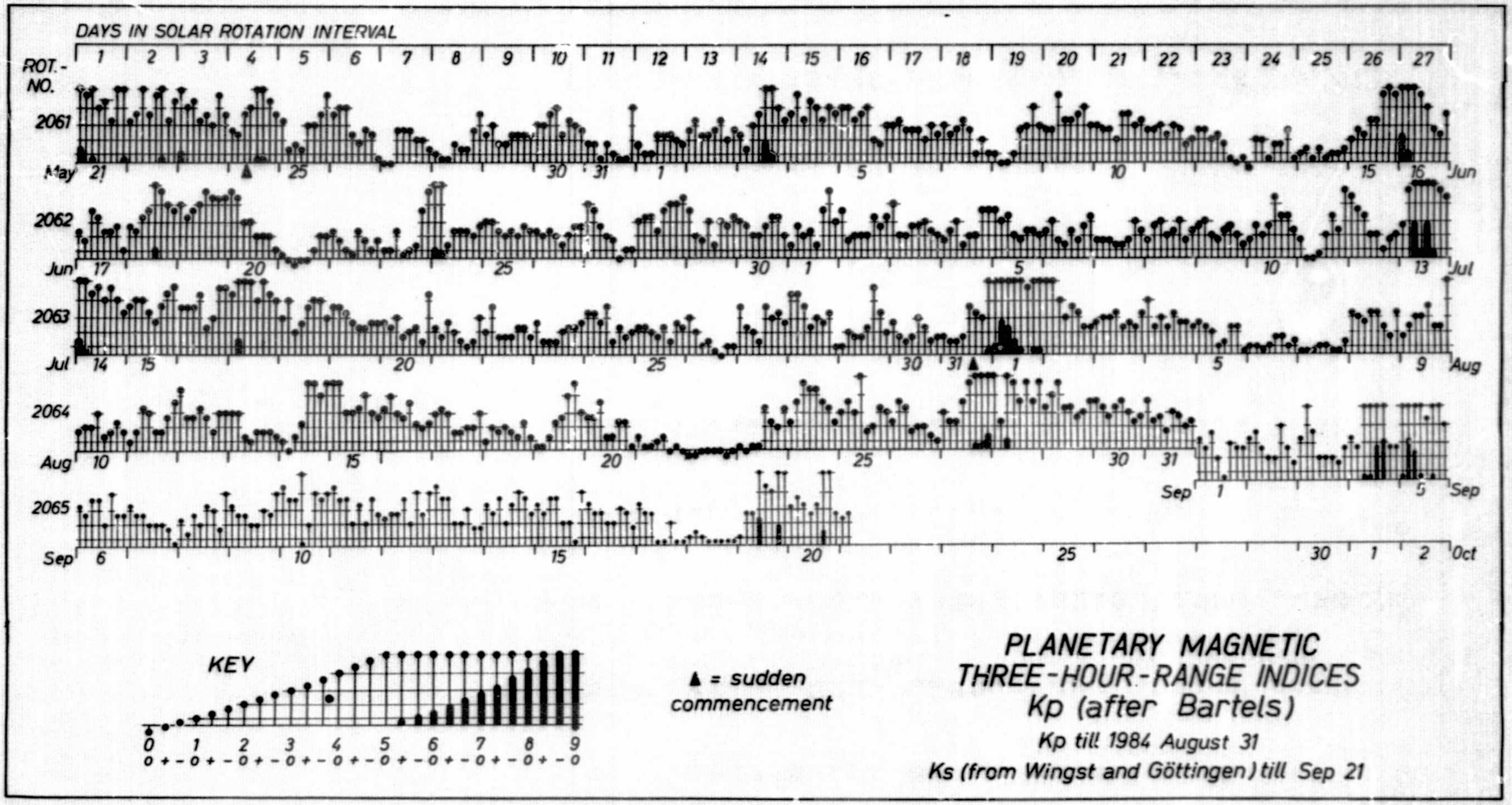
DAILY AVERAGE INDICES Ap

	1983					1984						
DAY	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG
1	17	11	19	13	28	16	32	34	22	7	14	75
2	6	23	35	8	20	20	38	46	13	12	12	24
3	6	18	20	4	20	19	35	42	12	32	12	14
4	3	43	7	4	30	54	9	84	13	26	12	14
5	3	8	3	16	26	14	4	57	27	19	12	7
6	5	22	3	28	14	8	31	12	10	12	10	4
7	22	11	12	27	5	9	26	25	4	10	7	4
8	15	16	27	11	3	7	29	58	5	10	10	14
9	16	5	43	3	4	9	13	37	19	20	9	17
10	12	7	29	22	14	21	17	8	27	15	14	8
11	12	6	40	33	10	21	9	13	10	11	11	11
12	13	4	44	23	5	12	11	15	12	7	13	15
13	7	30	24	24	9	36	19	15	9	6	62	8
14	6	22	28	24	6	43	6	18	12	4	40	20
15	21	19	23	17	6	19	9	10	9	24	25	22
16	26	13	30	6	6	7	16	4	7	42	25	15
17	25	48	38	6	7	9	22	8	32	11	43	11
18	11	51	27	7	6	17	18	7	12	27	19	6
19	54	8	18	9	19	7	12	12	22	29	14	14
20	22	6	26	5	9	13	4	20	30	16	12	10
21	11	16	9	4	12	14	7	11	44	3	8	3
22	13	19	6	12	12	8	21	5	32	6	9	1
23	4	21	2	11	6	15	18	6	30	11	8	8
24	9	22	12	15	5	10	10	6	30	22	12	23
25	33	6	16	11	10	7	34	33	16	10	8	18
26	28	3	22	16	16	16	16	103	14	8	6	10
27	13	2	7	15	8	34	23	26	7	10	14	36
28	10	10	15	13	22	8	60	17	8	21	18	36
29	8	34	23	9	21	10	52	18	9	12	12	21
30	3	19	22	33	32		29	9	17	12	8	16
31		10		27	23		25		7		17	12
MEAN	14	17	21	15	13	17	21	25	17	15	16	16

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

University of Gottingen

Kp through August 31, 1984



NASA/GODDARD SPACE FLIGHT CENTER

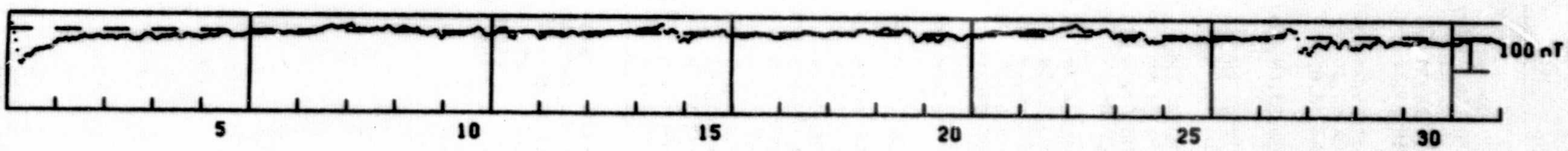
HOURLY EQUATORIAL DST VALUES(PROVISIONAL)

AUGUST 1984

UNIT=NT U.T.

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	18	14	-14	-37	-68	-101	-107	-98	-84	-80	-84	-77	-70	-66	-65	-62	-63	-62	-58	-57	-57	-56	-44	-41
2	-33	-34	-34	-31	-28	-36	-31	-29	-31	-31	-27	-23	-25	-18	-24	-25	-25	-25	-22	-20	-19	-22	-26	-26
3	-22	-24	-23	-22	-26	-29	-23	-23	-21	-23	-20	-21	-26	-29	-30	-28	-29	-26	-20	-15	-14	-15	-15	-21
4	-27	-28	-25	-22	-20	-21	-18	-22	-19	-17	-16	-15	-21	-23	-20	-16	-14	-16	-19	-19	-19	-19	-22	-24
5	-19	-20	-17	-15	-17	-18	-17	-15	-11	-7	-6	-4	-5	-10	-17	-18	-16	-15	-15	-15	-14	-12	-10	-10
6	-6	-8	-10	-10	-9	-8	-6	-5	-7	-7	-7	-5	-3	-5	-7	-8	-9	-7	-5	-5	-6	-8	-8	-9
7	-8	-9	-8	-7	-6	-5	-4	-3	-1	2	5	6	9	12	13	15	15	12	10	10	13	13	10	15
8	18	23	14	4	4	7	3	6	6	1	1	5	5	6	9	4	4	5	10	14	14	7	3	-1
9	2	6	9	13	13	9	6	5	3	4	9	2	-6	-2	-6	-9	-3	-2	0	2	-1	-11	-21	-14
10	-7	-7	-10	-6	-7	-6	-2	-8	-4	-8	-4	0	-1	4	4	8	12	10	4	-6	-11	-10	-10	-10
11	-7	-2	6	10	10	11	11	-4	-15	-17	-19	-9	-1	0	0	1	2	2	1	1	1	-4	-13	-19
12	-14	-13	-3	-5	-3	0	-4	-6	-5	-8	-12	-10	-7	-3	0	1	0	-2	-8	-6	-3	-1	-6	-9
13	-9	-9	-6	-4	-6	-9	-4	-3	1	4	4	5	0	1	2	2	2	5	5	5	7	2	2	1
14	8	9	11	13	13	13	12	13	16	13	21	25	26	4	0	1	7	9	3	1	-13	-26	-20	-19
15	-22	-27	-17	-12	-9	-7	-4	-6	-5	-5	-3	3	0	-2	1	3	0	6	8	7	-2	-6	-8	-12
16	-5	-7	-7	-9	-11	-9	-10	-8	-4	-6	-2	1	-2	-4	-3	-2	-6	-5	-5	-9	-13	-13	-13	-14
17	-11	-10	-7	-4	-8	-3	-4	-6	-4	-1	1	5	5	5	3	0	0	-1	-1	-3	-4	-5	-5	-4
18	0	0	2	3	1	-2	-4	-1	1	0	-2	-3	-3	3	10	9	11	12	11	5	6	6	7	4
19	5	9	14	17	18	17	11	9	6	7	10	7	9	15	10	11	3	1	-8	-19	-20	-15	-11	-8
20	-13	-18	-14	-8	-14	-20	-22	-17	-13	-4	2	0	-2	-4	-5	-9	-14	-14	-14	-10	-5	-1	-2	-1
21	-3	-5	-4	-3	-1	2	5	5	7	9	9	9	7	7	5	6	6	6	5	8	9	9	9	9
22	7	8	11	14	14	15	16	14	14	14	14	14	12	8	8	10	12	15	17	20	21	22	23	24
23	26	27	30	32	28	23	19	13	13	14	15	15	8	6	9	11	16	16	18	17	11	1	-6	-4
24	2	2	5	-9	-15	-10	-4	-11	-14	-6	2	11	7	2	-10	-17	-22	-15	-19	-20	-18	-18	-16	-12
25	-7	-8	-11	-9	-7	-9	-4	-10	-10	-13	-9	-5	-3	-6	-10	-10	-9	-4	-9	-4	-6	-10	-14	-14
26	-12	-12	-11	-9	-7	-7	-7	-8	-8	-5	-3	-3	-5	-6	-10	-10	-7	-7	-7	-5	-3	-2	-6	-9
27	-4	-5	-10	-9	-4	1	[illegible]	5	4	4	7	3	12	24	24	20	16	15	-5	-44	-45	-34	-34	-50
28	-55	-43	-31	-26	-21	-22	-27	-28	-33	-24	-16	-11	-14	-18	-30	-31	-20	-13	-11	-17	-29	-34	-36	-31
29	-35	-36	-28	-21	-24	-25	-30	-22	-17	-15	-11	-9	-12	-17	-26	-25	-20	-19	-16	-13	-15	-15	-15	-19
30	-17	-18	-21	-21	-17	-15	-16	-14	-8	-9	-8	-15	-13	-15	-16	-15	-17	-18	-20	-19	-18	-16	-15	-17
31	-17	-19	-18	-16	-10	-6	-10	-12	-7	-3	-2	-1	-2	-3	-3	-4	-7	-5	1	-3	-6	-10	-10	-14

AUG



PRINCIPAL MAGNETIC STORMS

AUGUST 1984

Sta	Geomag Lat	Commencement Day	Commencement Time (UT)	Commencement Type	SC Amplitudes D (Min)	SC Amplitudes H (Gamma)	SC Amplitudes Z (Gamma)	Maximum 3-Hour K Index Day(3-Hour Periods)	K	Ranges D (Min)	Ranges H (Gamma)	Ranges Z (Gamma)	End Day	End Hour (UT)
BJI	28.5N	31	14--	..	..	..	..	01(2)	7	13	185	44	02	17
HER	33.7S	31	21--	..	..	..	..	01(2,4) 02(2)	5	33	118	81	02	06
SIT	60.0N	01	01--	..	..	..	..	01(2)	8	--	--	--	02	16
GUA	04.0N	01	0041	..	..	..	..	01(2)	6	--	230	40	01	20
PMG	18.6S	01	01--	..	..	..	..	01(3)	6	5	210	60	02	18
HYB	07.6N	08	0000	..	..	..	..	09(5,8)	4	5	79	23	09	23
HYB	07.6N	11	0500	..	..	..	..	11(2,3,4,8) 12(1,2,5)	3	5	101	25	12	15
GUA	04.0N	11	0539	..	..	..	..	11(3)	5	--	80	10	11	12
FRD	49.6N	14	1255	SC*	2	- 4	1	14(6) 15(1,2)	5	26	95	48	18	00
BJI	28.5N	14	07--	..	..	..	..	14(5)	5	10	90	22	15	18
HYB	07.6N	14	0600	..	..	..	..	14(5)	5	6	104	32	16	18
GUA	04.0N	14	1240	..	..	..	..	14(5)	5	10	80	30	15	08
SHL	14.7N	19	0800	..	..	..	..			6	38	19	20	20
UJJ	13.5N	19	0800	..	..	..	..			6	54	24	20	20
ABG	09.5N	19	0800	..	..	..	..	19(6,7) 20(4)	4	6	68	40	20	20
HYB	07.6N	19	0500	..	..	..	..	19(7)	5	6	90	22	20	20
TRD	01.2S	19	0800	..	..	..	..			5	117	66	20	20
HYB	07.6N	23	1300	..	..	..	..	25(4)	5	5	104	25	25	21
COL	64.6N	24	02--	..	..	..	..	24(3)	7	146	1320	570	24	21
COL	64.6N	27	01--	..	..	..	..	27(5) 30(4,5)	7	196	1270	1010	30	18
WIT	54.2N	27	1500	..	..	..	..	27(8)	6	22	195	105	29	01
FRD	49.6N	27	12--	..	..	..	..	27(8)	6	32	119	80	31	09
BJI	28.5N	27	12--	..	..	..	..	27(8)	6	10	162	34	29	16
HYB	07.6N	27	0700	..	..	..	..	27(5,7) 28(4)	5	7	108	41	30	23
GUA	04.0N	27	1115	..	..	..	..	27(7)	5	--	60	20	27	20
GUA	04.0N	27	2144	..	..	..	..	28(3)	5	10	110	20	28	12
PMG	18.6S	27	10--	..	..	..	..	27(8) 28(1)	6	4	100	50	29	18
HER	33.7S	27	11--	..	..	..	..	27(7,8) 28(1)	5	16	106	115	28	02
GNA	43.3S	27	11--	..	..	..	..	27(6)	5	19	150	90	29	19
CNB	43.9S	27	11--	..	..	..	..	27(6,8) 28(3)	5	15	153	40	29	15

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

RADIO PROPAGATION QUALITY INDICES

AUGUST 1984

Day	Bracknell	Teheran	New York	Tokyo	Canberra
1	4.6	6.3	1.9	3.8	4.3
2	5.7	8.3	4.0	5.5	4.3
3	8.7	7.2	3.9	6.7	4.5
4	9.9	6.5	5.1	5.4	5.3
5	9.9	6.5	6.9	6.5	6.8
6	9.5	6.8	6.8	8.0	6.9
7	7.5	6.8	6.8	8.7	7.6
8	6.4	7.8	8.0	6.9	7.6
9	7.3	5.6	7.1	6.8	6.2
10	5.6	6.3	7.7	6.7	5.9
11	8.2	6.5	7.4	7.3	6.5
12	8.3	6.8	6.9	5.4	6.6
13	4.8	6.4	7.5	7.1	6.6
14	2.1	6.3	7.0	5.9	5.1
15	3.2	5.6	4.5	5.2	5.7
16	2.9	4.8	5.8	4.2	5.3
17	2.9	5.5	5.0	5.5	5.7
18	9.2	5.2	5.7	5.9	5.6
19	4.7	5.9	6.3	5.6	4.9
20	5.0	5.5	4.3	5.3	5.0
21	4.0	4.4	3.9	7.7	4.9
22	3.2	5.4	7.3	8.8	5.3
23	3.0	6.1	6.8	6.7	6.1
24	1.0	6.1	2.6	4.5	3.5
25	2.7	7.4	4.1	5.5	3.9
26	3.4	6.9	4.1	4.9	4.9
27	2.4	5.9	3.5	4.6	4.9
28	1.1	3.1	1.8	3.4	4.2
29	0.4	6.1	2.5	3.1	4.8
30	2.1	6.0	3.5	3.8	2.9
31	3.2	6.0	4.0	4.5	3.3
Mean	4.9	6.1	5.3	5.8	5.3

CALCULATION OF QUALITY INDICES (Q)

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

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

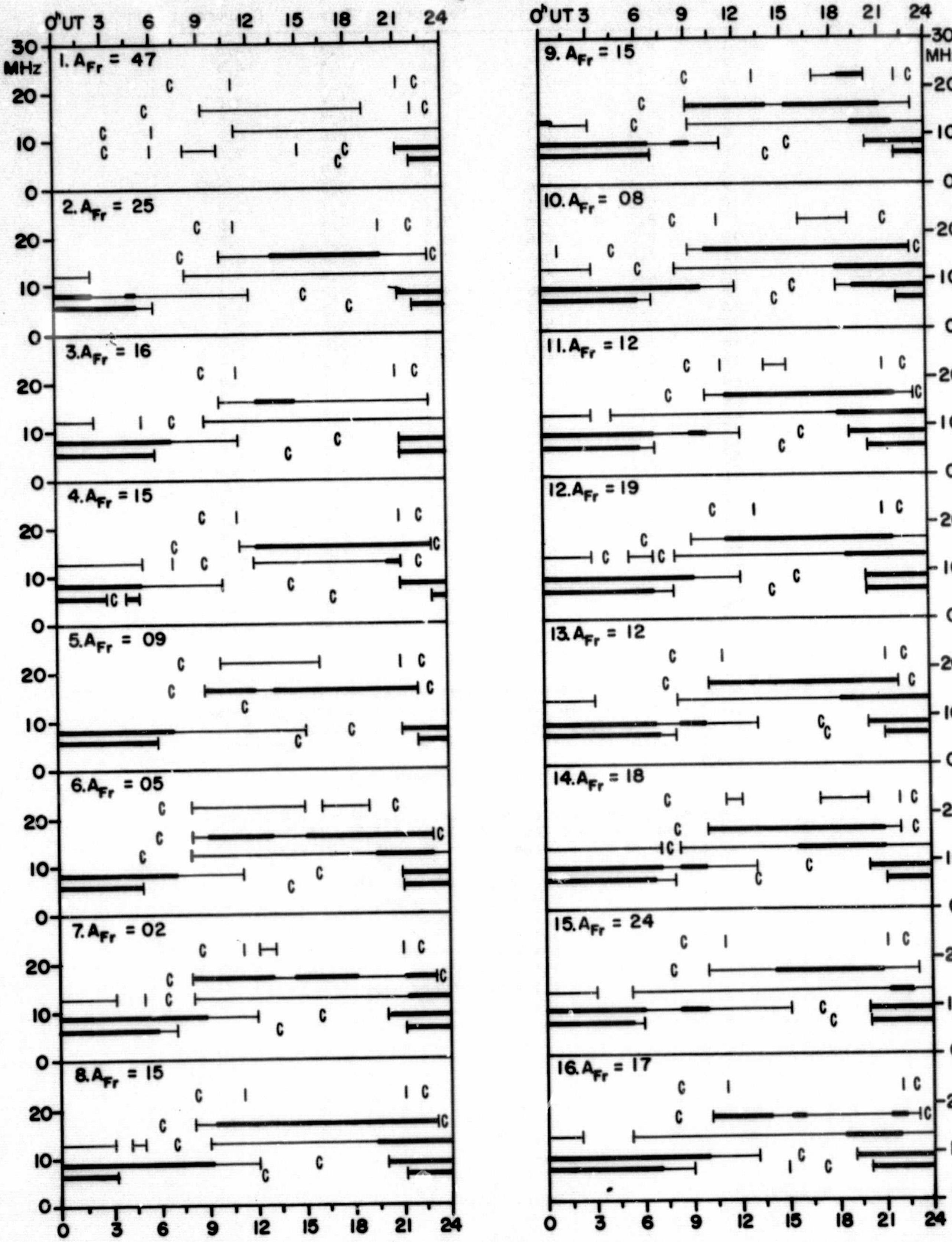
The quality indices vary from 0.0 to 9.9 where 6.0 is normal. Conditions are "normal" (index = 6.0), if they correspond to the average of the preceeding 27 days.

SCALE FOR QUALITY INDICES

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

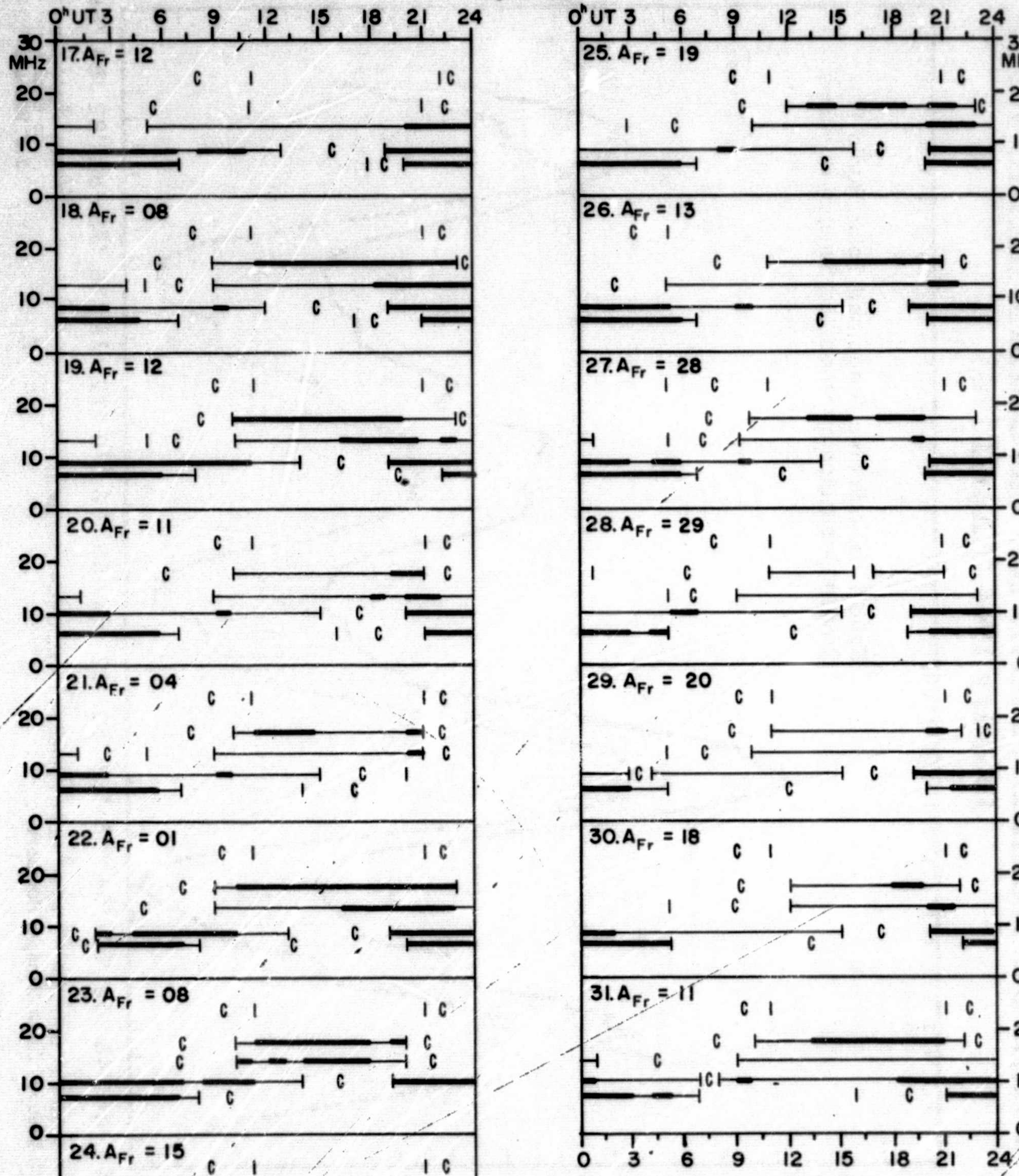
TRANSMISSION FREQUENCY RANGES -- NORTH ATLANTIC PATH

August 1984



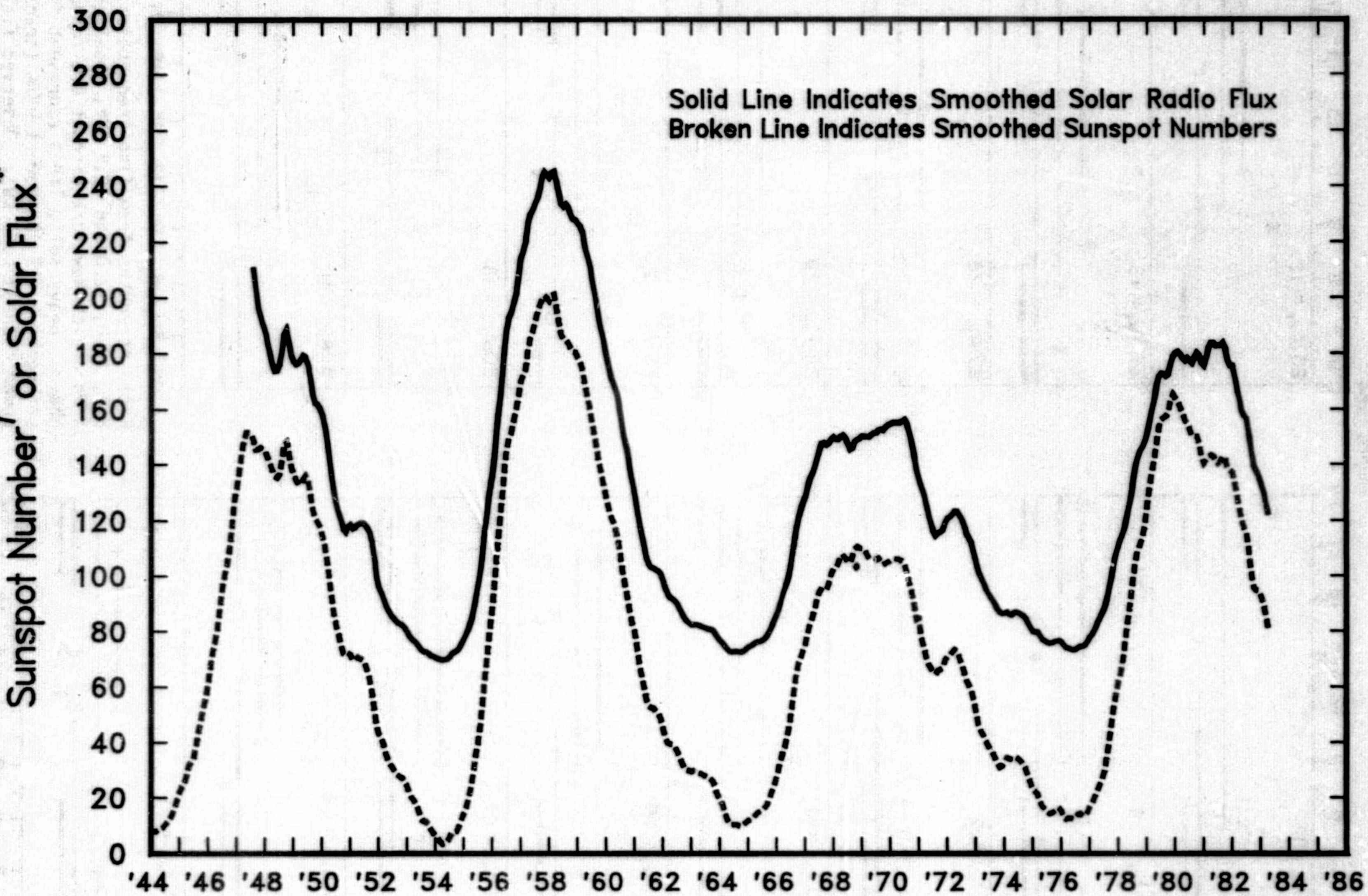
TRANSMISSION FREQUENCY RANGES -- NORTH ATLANTIC PATH

August 1984



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

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



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

National Geophysical Data Center
D.C. Wilkinson

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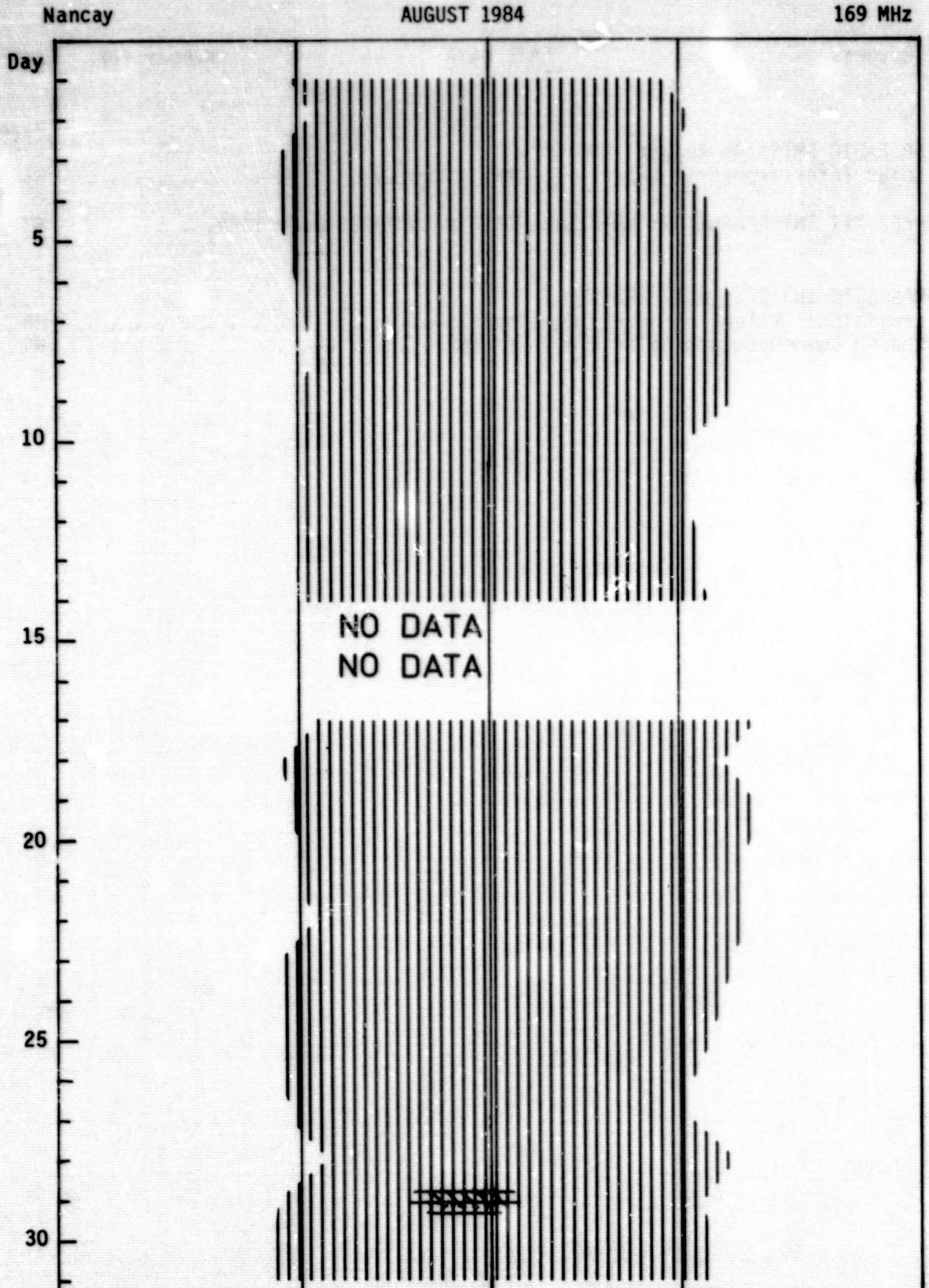
Prompt Reports — LATE DATA — Number 482 Part I

SOLAR INTERFEROMETRIC OBSERVATIONS



PIONEER XII (VENUS ORBITER)
ONE-HOUR MAGNETIC FIELD AVERAGES AT APOAPSIS

JULY 1984

Day	Time (UT)	NanoTeslas in Spacecraft Coordinates (Bx)sc	(By)sc	(Bz)sc	Bt	Region W-Wake
1	1150	9.91	0.80	- 3.60	11.40	
2	1150	8.84	- 4.21	2.68	13.49	
3	1150	8.71	- 4.98	0.98	13.98	
4	1150	12.51	- 4.86	1.44	13.63	
5	1150	9.82	- 9.06	- 2.63	14.19	
6	1150	5.98	- 4.64	0.70	9.57	
7	1150	7.42	-11.10	- 0.12	13.76	
8	1150	12.03	2.73	2.19	13.00	
9	1150	9.17	0.22	0.20	10.96	
10	1150	10.34	0.13	0.48	11.16	
11	1150	13.66	1.74	6.67	15.40	
12	1150	- 3.99	5.75	- 6.32	11.14	
13	1150	-11.00	1.85	- 9.56	17.66	
14	1150	-13.31	1.25	- 0.32	13.95	
15	1150	- 9.15	4.27	- 0.33	12.45	
16	1150	-10.61	1.05	- 2.66	12.04	
17	1150	- 7.99	4.87	- 3.55	11.39	
18	1150	1.54	1.80	0.52	8.68	
19	1140	-11.71	4.18	- 2.39	15.07	
20	1140	- 9.36	- 6.01	2.07	12.38	
21	1140	- 9.74	0.59	- 0.46	11.76	
22	1140	- 8.41	4.69	2.35	10.48	
23	1140	- 1.08	7.10	5.22	11.44	
24	1140	- 8.15	4.52	- 1.73	11.33	
25	1140	11.98	- 6.41	1.03	14.02	
26	----	---	---	---	---	
27	----	---	---	---	---	
28	1140	11.29	- 5.94	- 2.69	15.42	
29	1140	12.37	- 4.58	- 3.29	16.10	
30	----	---	---	---	---	
31	1140	9.33	- 5.52	- 3.15	12.23	

NASA/GODDARD SPACE FLIGHT CENTER

HOURLY EQUATORIAL DST VALUES(PROVISIONAL)

JULY 1984

UNIT=NT

DAY	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	U.T. 24
1	11	12	11	12	7	8	12	12	13	9	8	12	14	15	7	2	4	0	5	-3	-9	-5	1	4
2	5	4	12	16	15	10	7	8	8	8	9	10	14	13	8	8	1	4	13	11	16	15	10	5
3	2	9	11	19	20	20	19	16	13	9	6	5	7	3	4	1	-4	0	2	3	0	-8	-5	0
4	1	0	1	4	8	11	7	10	11	10	5	8	13	12	8	6	9	16	22	21	24	20	13	10
5	7	9	1	0	2	0	-2	-3	-2	-3	-5	-6	-5	-5	-4	-6	-5	2	8	10	13	14	12	8
6	3	-1	-3	-6	-6	0	5	9	8	5	6	5	3	4	4	3	3	3	4	2	-1	2	2	-1
7	1	1	-1	2	3	6	6	7	7	6	6	7	7	7	7	6	11	11	11	4	2	-1	2	7
8	7	3	-1	-3	-1	0	-1	1	-3	1	2	1	0	-4	-7	-5	0	2	-3	-1	1	1	-1	-3
9	-6	-2	-2	-4	-6	-5	-2	-2	-5	-4	-3	-2	-5	-8	-11	-7	2	12	12	10	9	7	10	18
10	19	18	12	13	16	15	13	15	9	6	6	14	16	6	-1	-3	-1	-2	-2	-9	-8	-5	-2	0
11	0	2	-1	0	1	1	2	6	7	6	5	6	2	-3	-5	-8	-8	-6	-9	-11	-14	-14	-19	4
12	10	0	-10	-8	-1	2	-3	1	1	-2	-1	1	3	0	-3	-2	0	-2	0	3	0	-3	6	14
13	20	18	3	-9	-30	-23	-11	-30	-38	-36	-40	-55	-53	-81	-83	-73	-67	-58	-55	-54	-53	-45	-43	-49
14	-50	-47	-46	-55	-44	-49	-46	-42	-36	-37	-42	-36	-35	-25	-29	-34	-35	-30	-29	-26	-26	-26	-14	-19
15	-25	-27	-26	-29	-28	-24	-25	-27	-29	-28	-28	-24	-21	-22	-25	-27	-22	-17	-13	-22	-25	-22	-15	-20
16	-24	-19	-26	-29	-30	-24	-19	-14	-15	-23	-31	-25	-18	-17	-26	-28	-23	-14	-12	-21	-28	-19	-18	-25
17	-24	-25	-23	-22	-24	-26	-32	-26	-29	-29	-27	-22	-29	-24	-26	-32	-31	-29	-28	-27	-24	-24	-23	-21
18	-17	-15	-17	-25	-25	-18	-18	-15	-15	-16	-19	-17	-15	-14	-13	-15	-16	-21	-18	-20	-20	-20	-18	-13
19	-16	-22	-27	-24	-23	-24	-20	-17	-16	-18	-18	-13	-10	-10	-13	-17	-16	-11	-5	-7	-9	-11	-14	-9
20	-11	-9	-13	-9	-8	-12	-12	-13	-14	-11	-9	-9	-11	-11	-8	-9	-10	-7	-10	-9	-5	-2	-5	-7
21	-8	-7	-8	-8	-7	-9	-9	-10	-7	-5	-7	-7	-5	-6	-7	-6	-6	-2	2	2	2	1	-1	0
22	0	-5	-8	-9	-13	-15	-12	-6	-4	-5	-6	-3	-2	-1	-1	-3	-8	-5	0	1	1	2	2	0
23	0	1	-4	-4	-3	0	1	3	2	0	1	0	0	3	1	-1	-2	-3	-2	1	1	6	8	6
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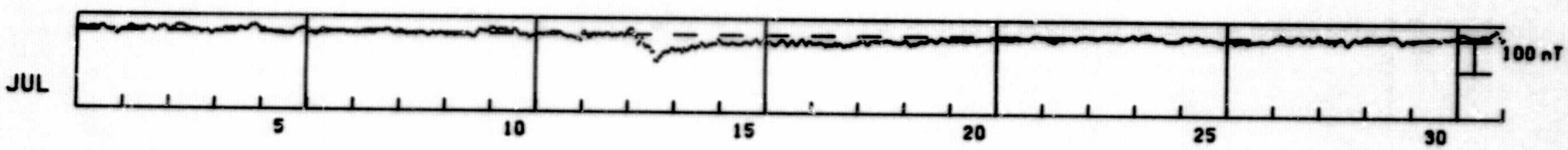
26	-6	-5	-9	-15	-13	-11	-11	-8	-9	-14	-14	-12	-10	-9	-9	-9	-7	-7	-7	-9	-10	-8	-5	-6
27	3	3	5	14	11	2	-2	-4	-5	-4	1	6	7	3	-2	-5	0	5	4	-4	-2	-1	8	12
28	8	3	-2	1	-7	-2	-4	-13	-5	-1	5	4	-3	-14	-17	-11	-5	2	4	-2	-2	-1	2	6
29	8	9	6	2	1	4	5	7	7	6	7	9	8	8	9	10	1	-4	-11	-9	-4	-1	-3	-3
30	-7	-4	-2	0	1	0	0	1	1	3	5	3	1	-1	-1	2	5	5	3	4	7	6	8	13
31	17	20	20	19	16	13	11	9	11	11	10	11	15	15	17	10	18	24	26	33	30	15	1	7



MAGNETIC STORM SUDDEN COMMENCEMENTS AND SOLAR FLARE EFFECTS
(PRELIMINARY REPORT ON RAPID MAGNETIC VARIATIONS)

JULY 1984

Storm Sudden Commencements (ssc)

Day	Time	Quality: Station Group*
09	1639 UT	A: WNG DOU
		B: QUE MPO
		C: NGK BDV EBR LNP
13	0602 UT	A: COI LNP
		B: QUE CZT KGL
		C: GCK SPT
31	1451 UT	A: SOD WNG DOU
		B: BDV GCK SPT FRD MPO
		C: WIT NGK HAD MMB EBR CZT KGL

Solar Flare Effects (sfe)

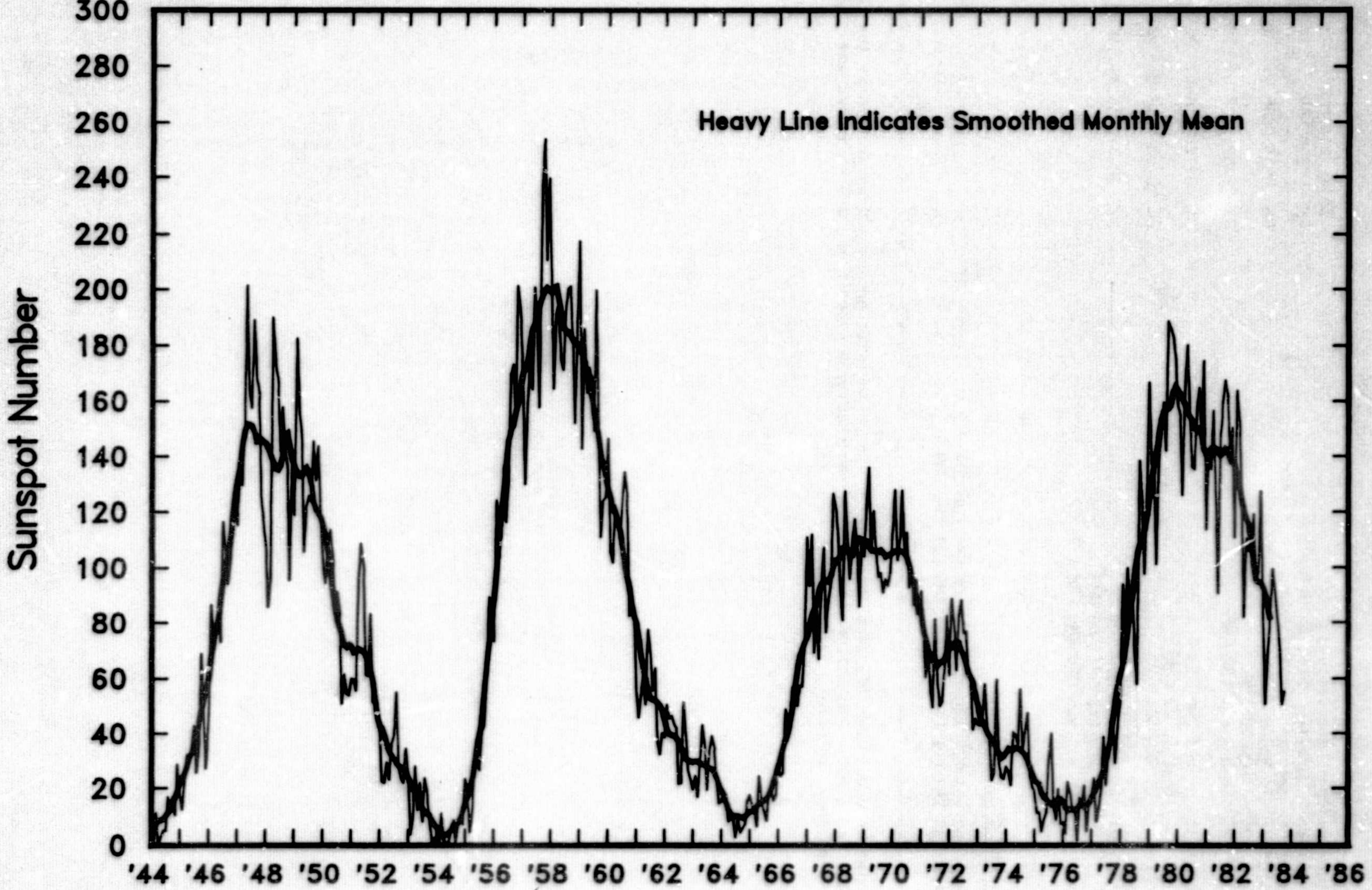
Day	Begin-End	Station(s)
01	0835-0845 UT	SOD
03	1157-1207 UT	MPO
21	0912-0918 UT	MPO
26	0730-0739 UT	MPO
27	1043-1053 UT	MPO

Reporting Observatories:

SOD COL WNG WIT NGK HAD DOU BDV GCK MMB EBR COI
SPT FRD KAK KNY QUE LNP MPO GNA AMS CZT KGL DUM

*Three-letter codes identify each observatory. Reporting stations have been grouped by the character of the observed event. The letter A means very remarkable; B means fair, ordinary, but unmistakable; and C means very poor, doubtful.

MONTHLY MEAN SUNSPOT NUMBERS
January 1944 – October 1983



*U.S. GOVERNMENT PRINTING OFFICE: 1984-0-576-025/10,004