



Solar-Geophysical Data prompt reports

Data for September and October 2003

Explanation of Data Reports Issued as Number 515 (Supplement) July 1987

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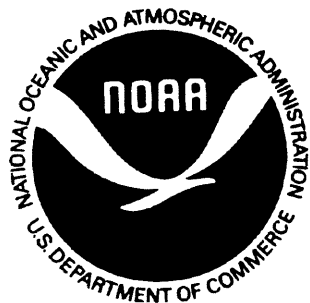
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NATIONAL OCEANIC AND
ATMOSPHERIC ADMINISTRATION

NATIONAL ENVIRONMENTAL SATELLITE,
DATA, AND INFORMATION SERVICE

NATIONAL GEOPHYSICAL
DATA CENTER

BOULDER,
COLORADO



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NATIONAL ENVIRONMENTAL SATELLITE, DATA, AND INFORMATION SERVICE

Gregory W. Withee, Assistant Administrator

NOVEMBER 2003 NUMBER 711 - Part I

Solar-Geophysical Data prompt reports

Data for September and October 2003

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NATIONAL GEOPHYSICAL DATA CENTER

Christopher G. Fox, Acting Director

Boulder, Colorado

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SOLAR-GEOPHYSICAL DATA

Number 711

(Issued in Two Parts)

Editor: Helen E. Coffey

Chief: Herbert W. Kroehl
Solar-Terrestrial Physics Division

Staff: Edward H. Erwin

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-- MONTHLY PLOTS	

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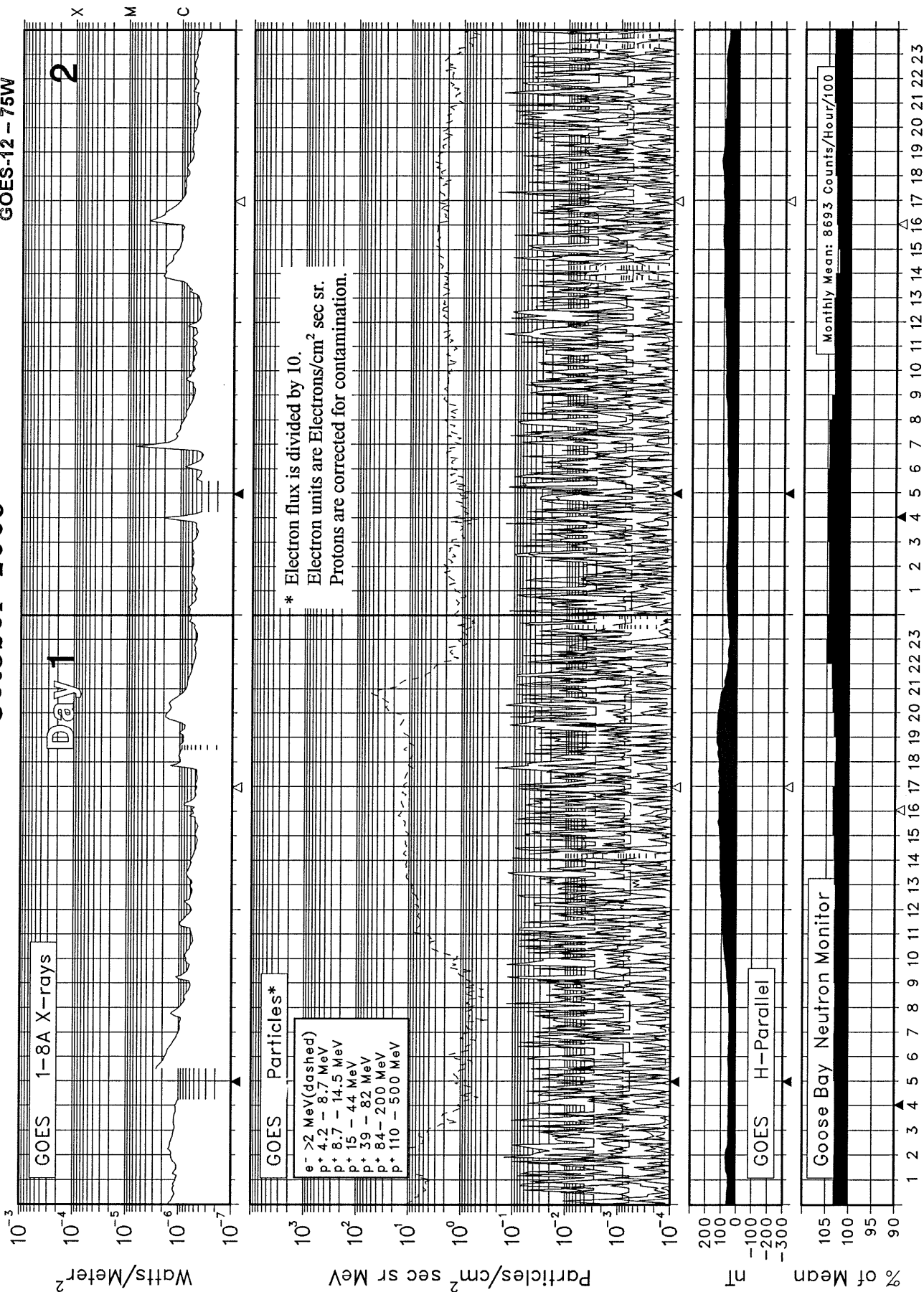
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SOLAR-TERRESTRIAL ENVIRONMENT

October 2003

Satellite positions:
GOES-8 - 75W
GOES-11 - 113W
GOES-12 - 75W



▲ Local Midnight ▲ Local Noon

UT Hours GOES-12 data replace GOES-8 X-rays, electrons
and magnetometer data after May 2003.

GOES 11 protons replace GOES-8 protons after June 19, 2003.

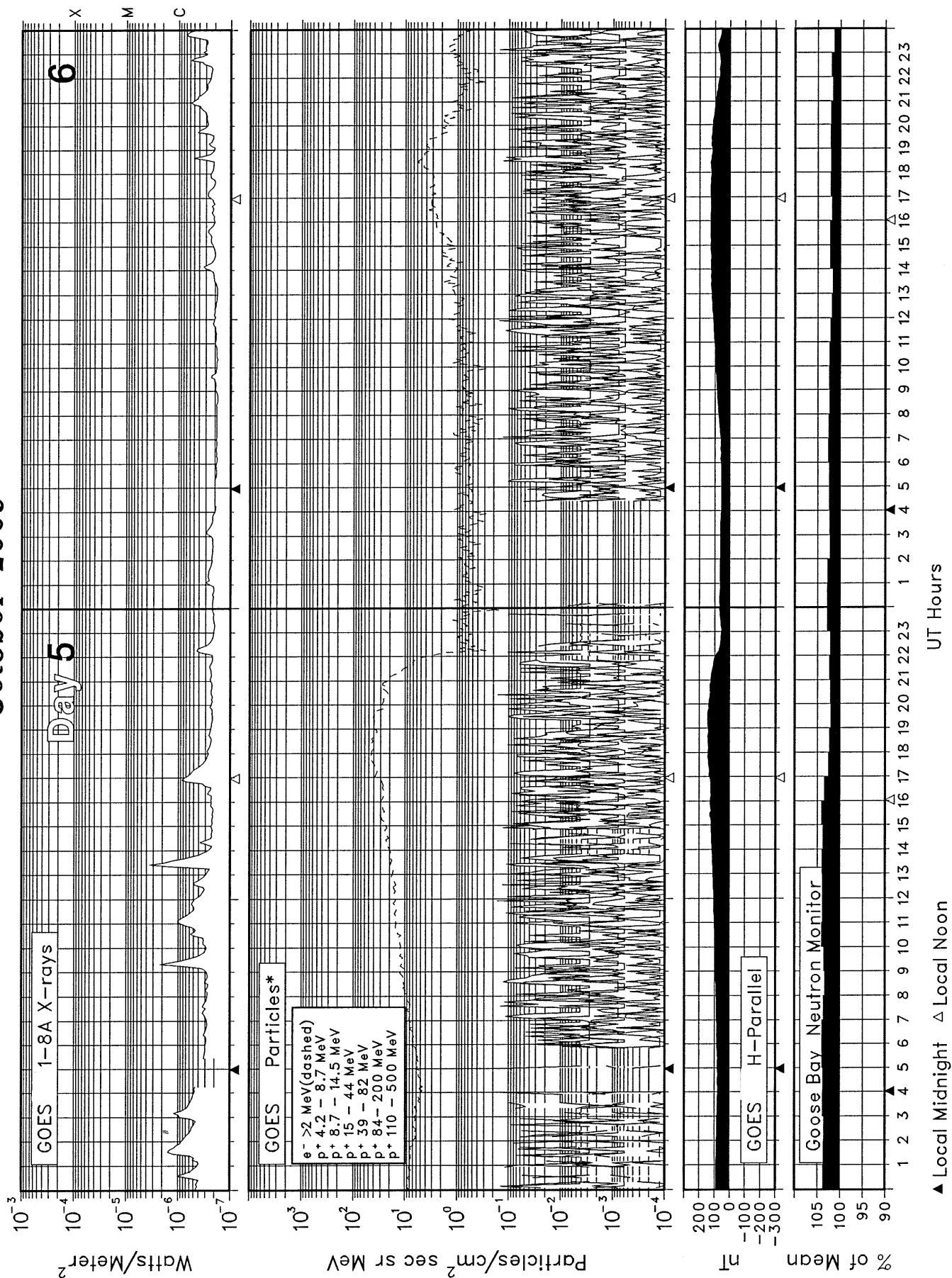
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Day 3

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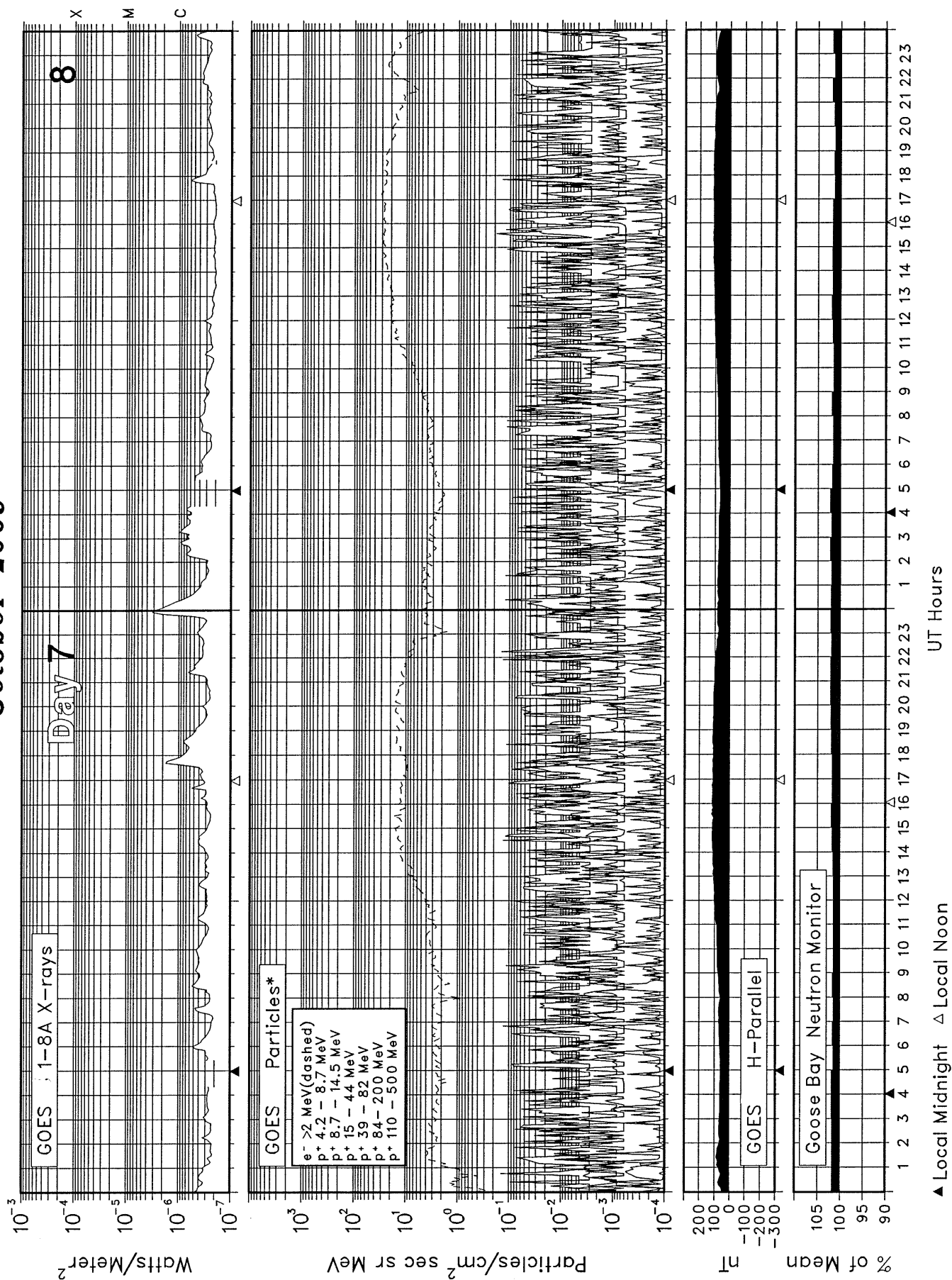
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October 2003



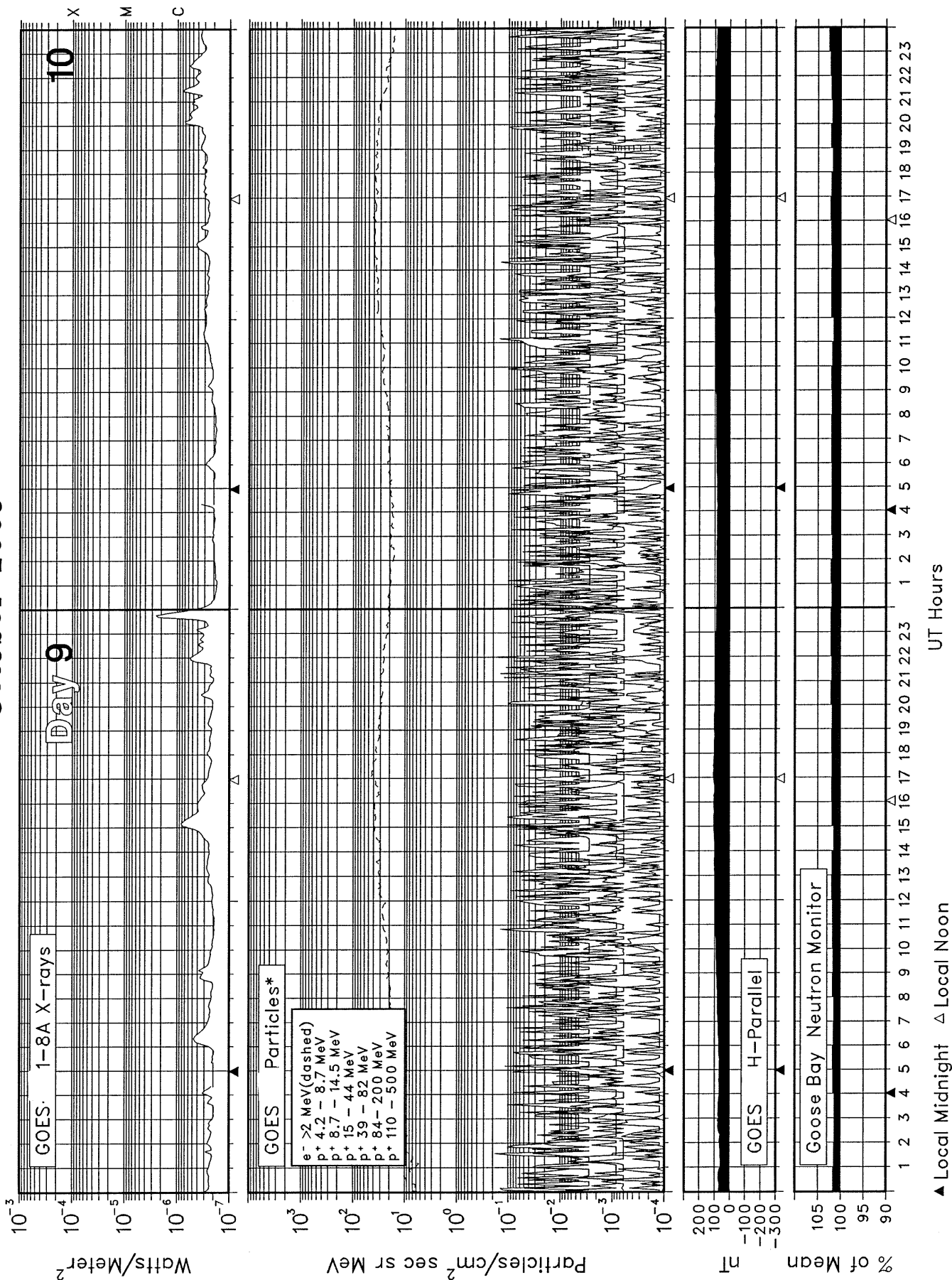
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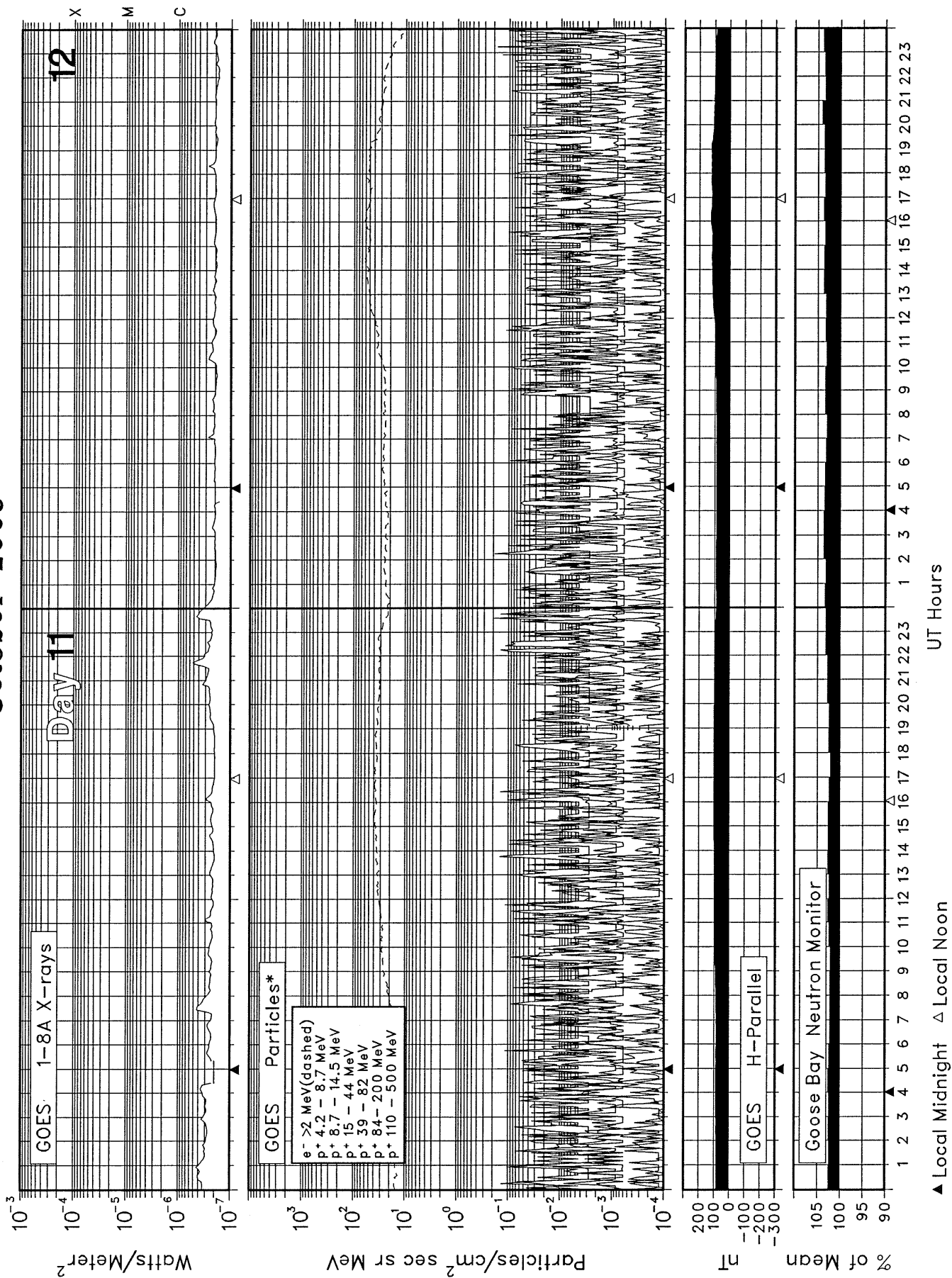
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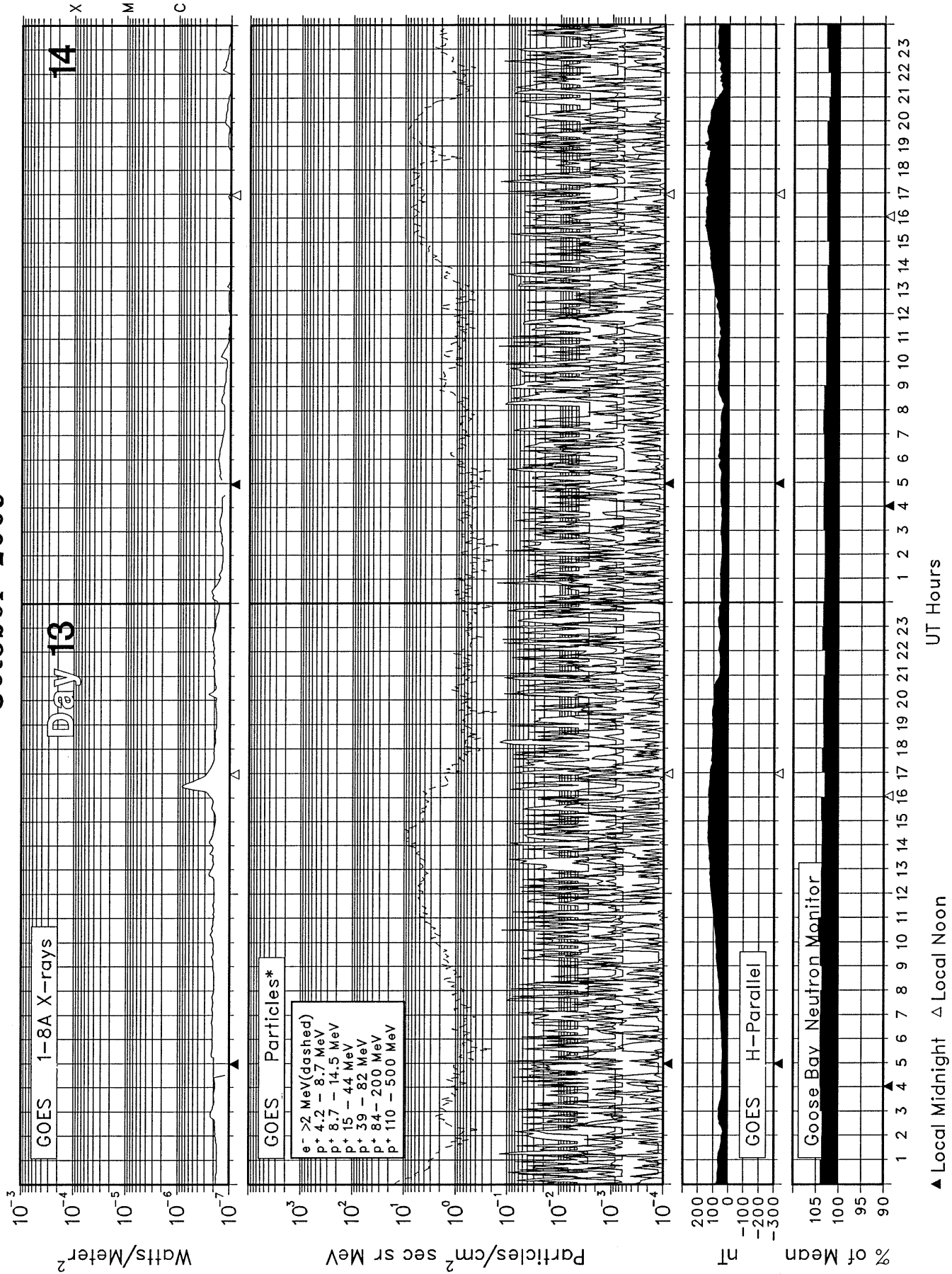


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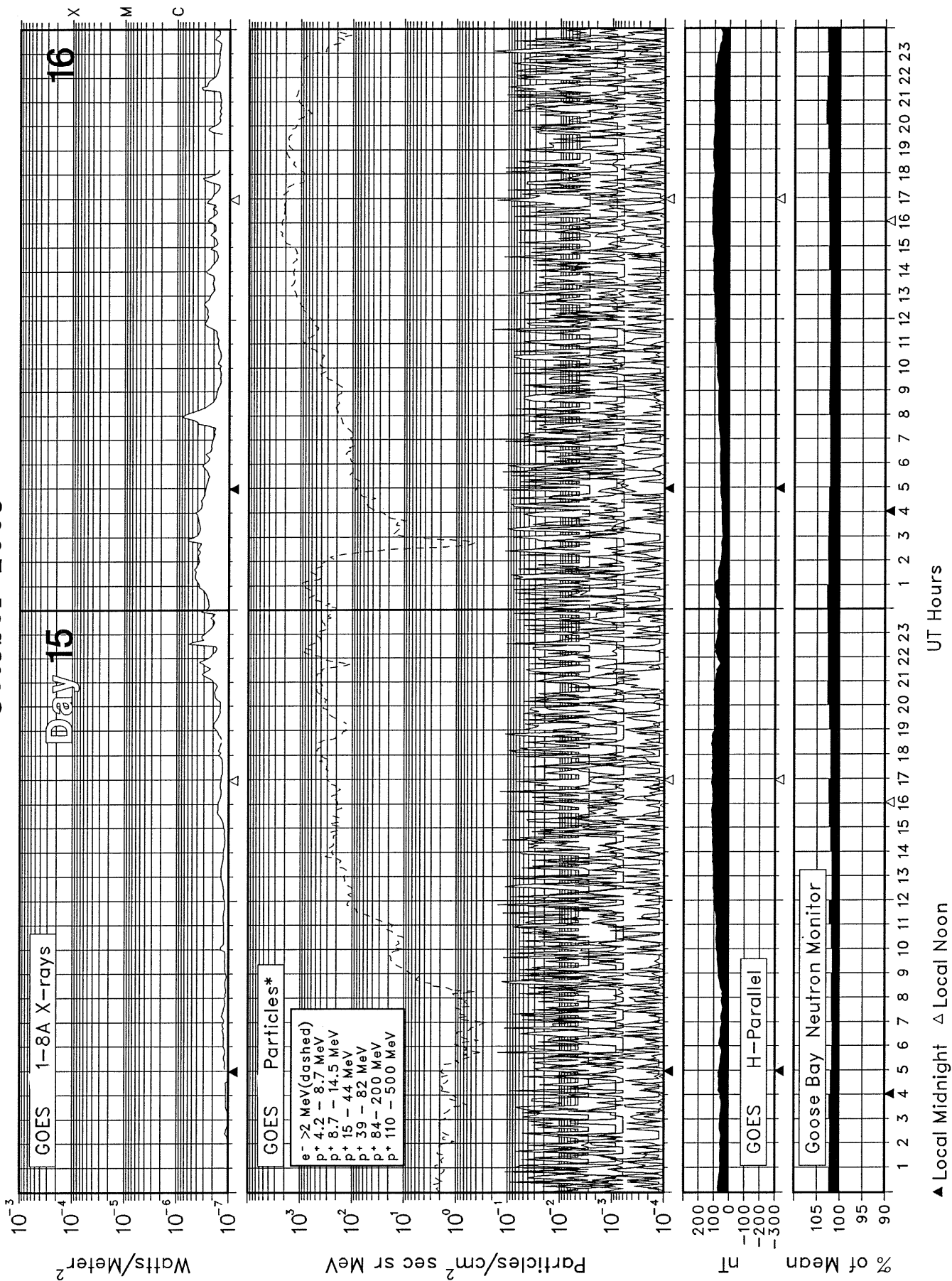
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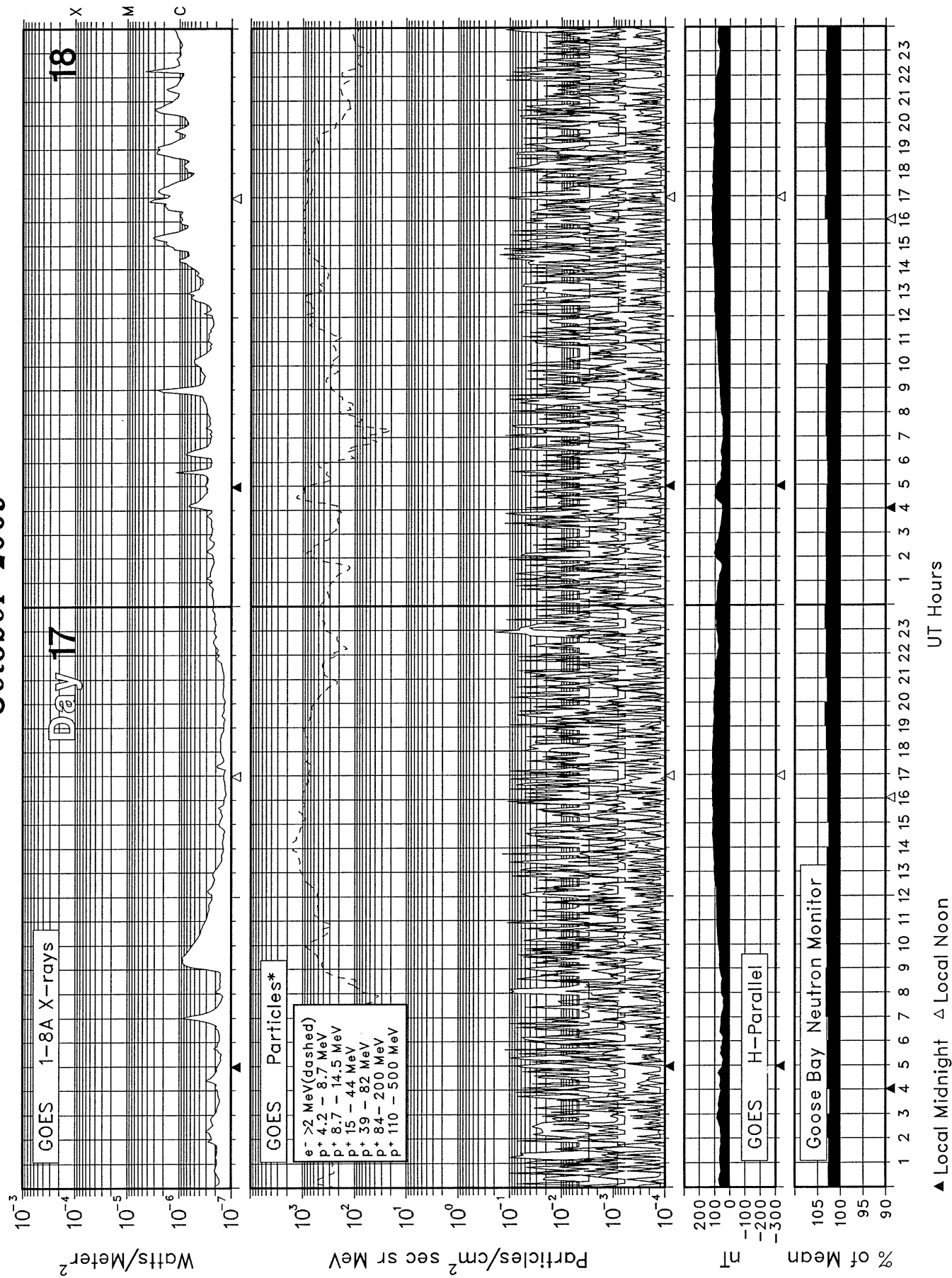
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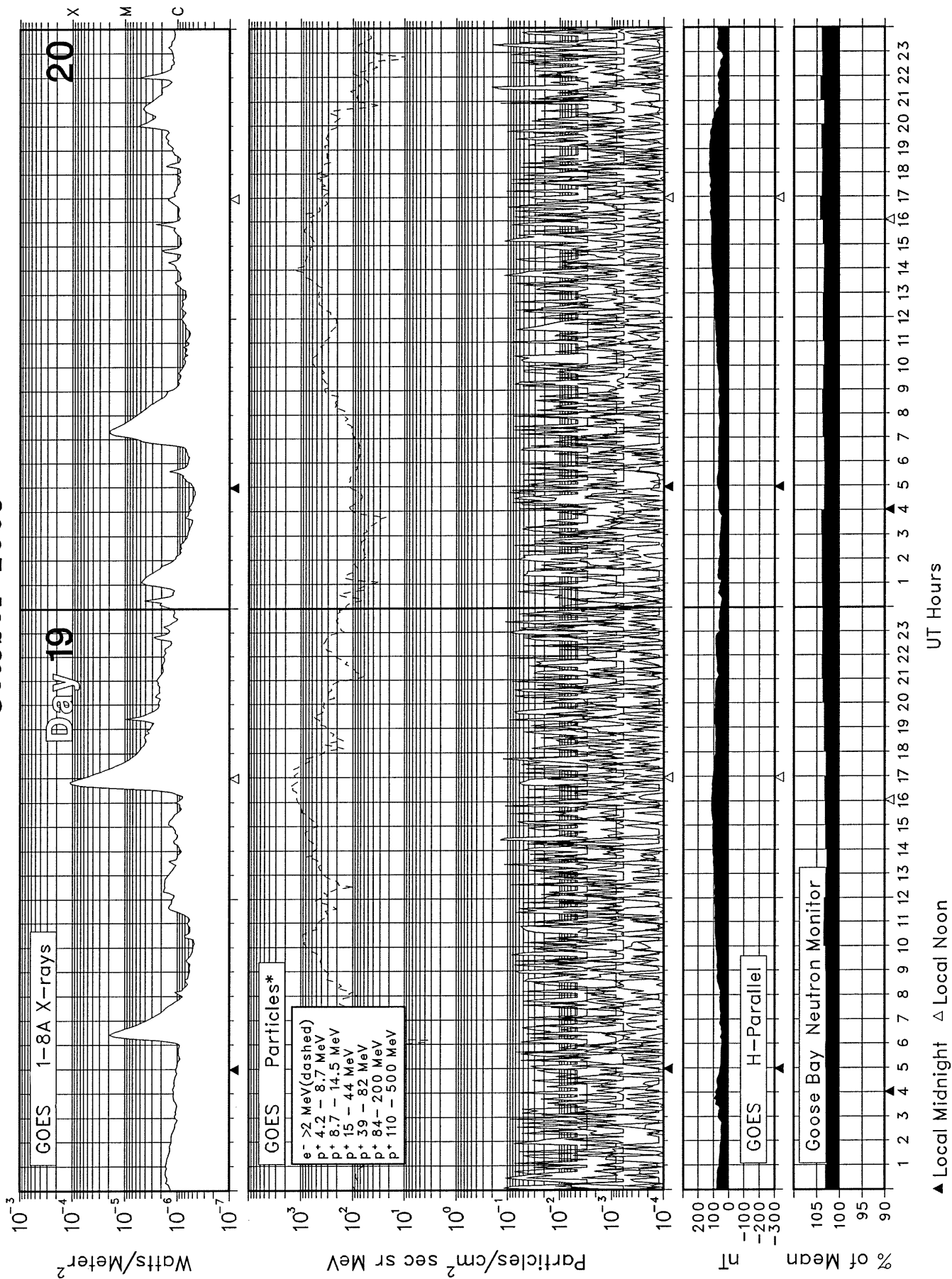
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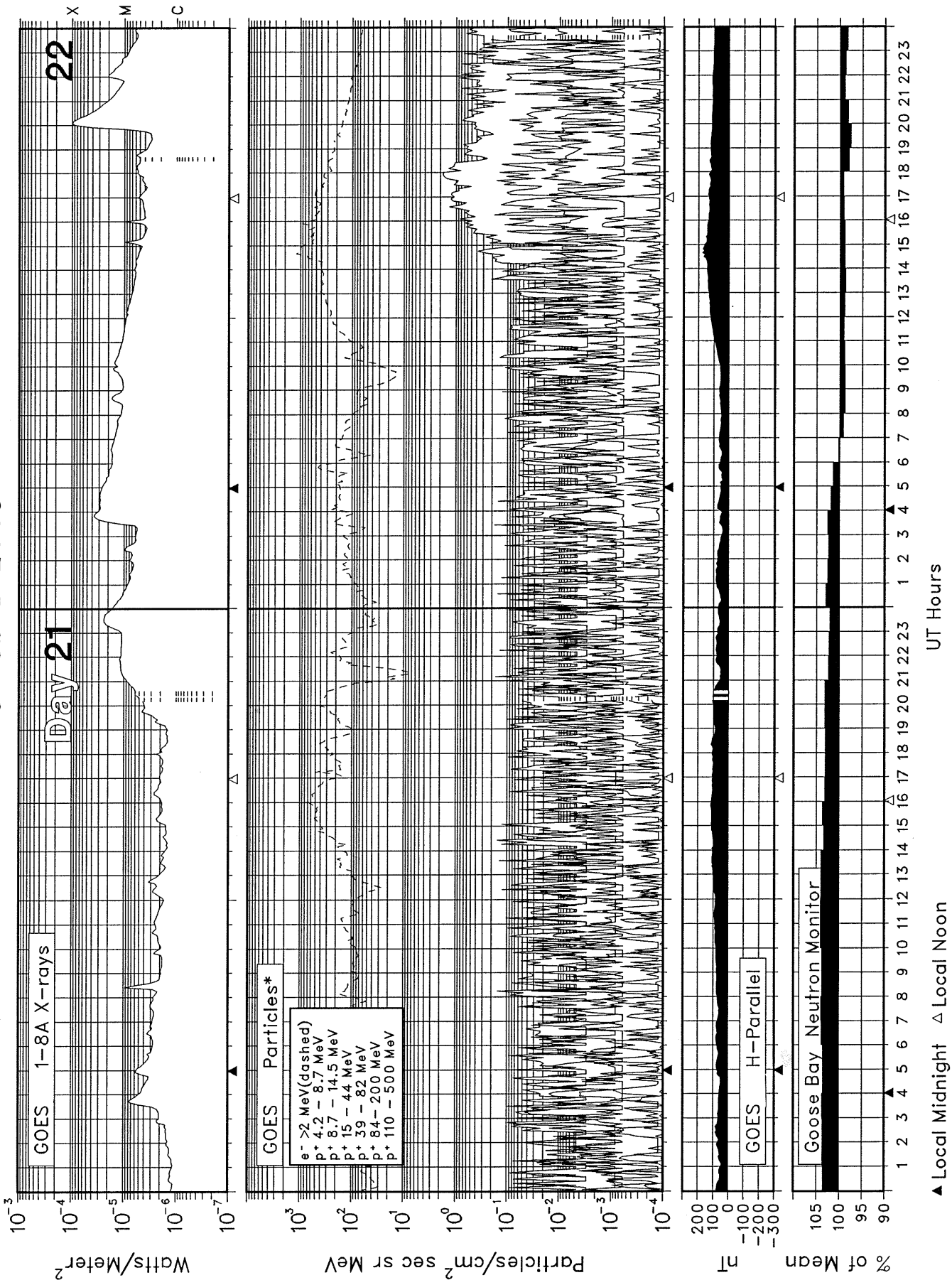


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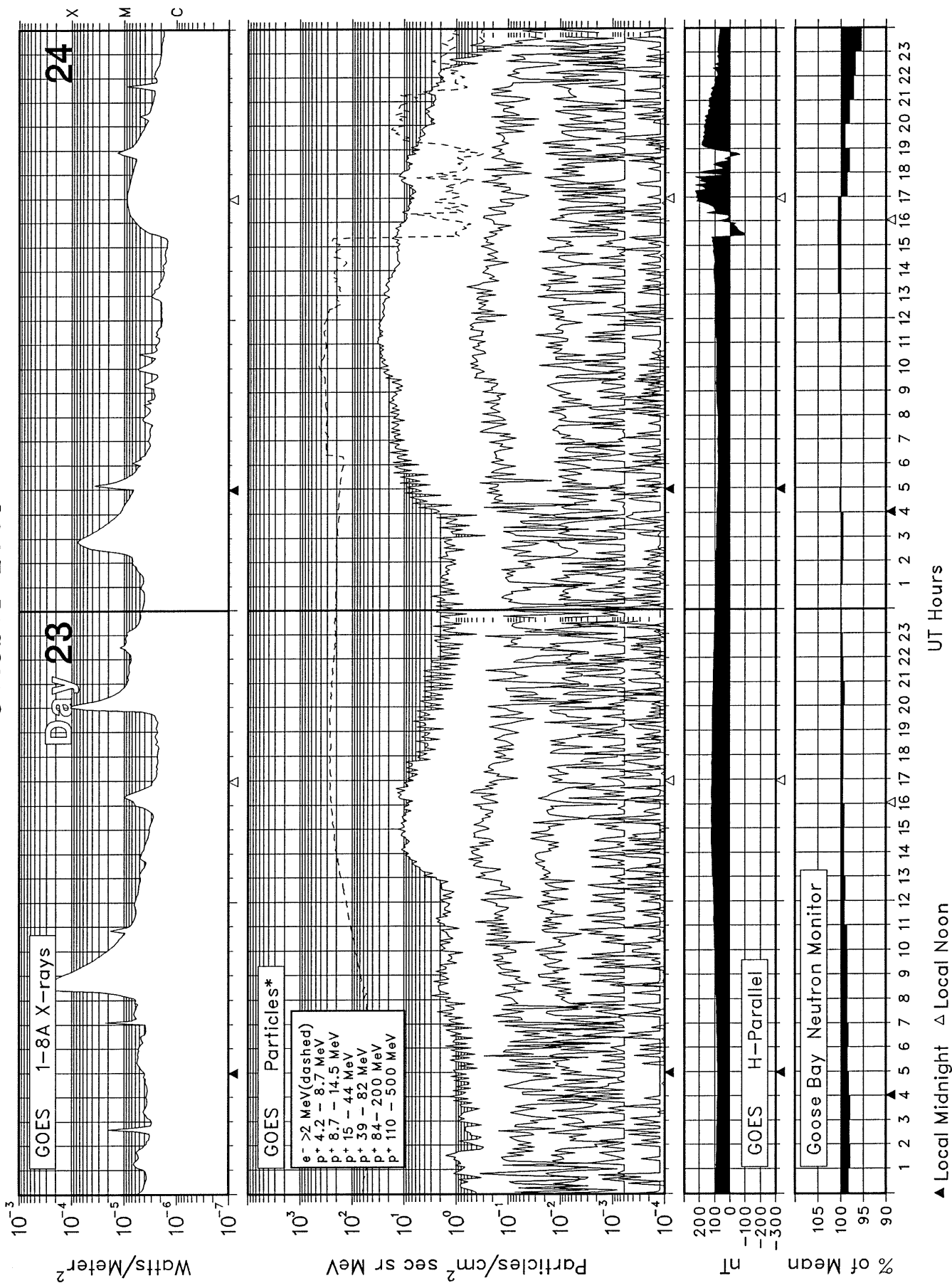
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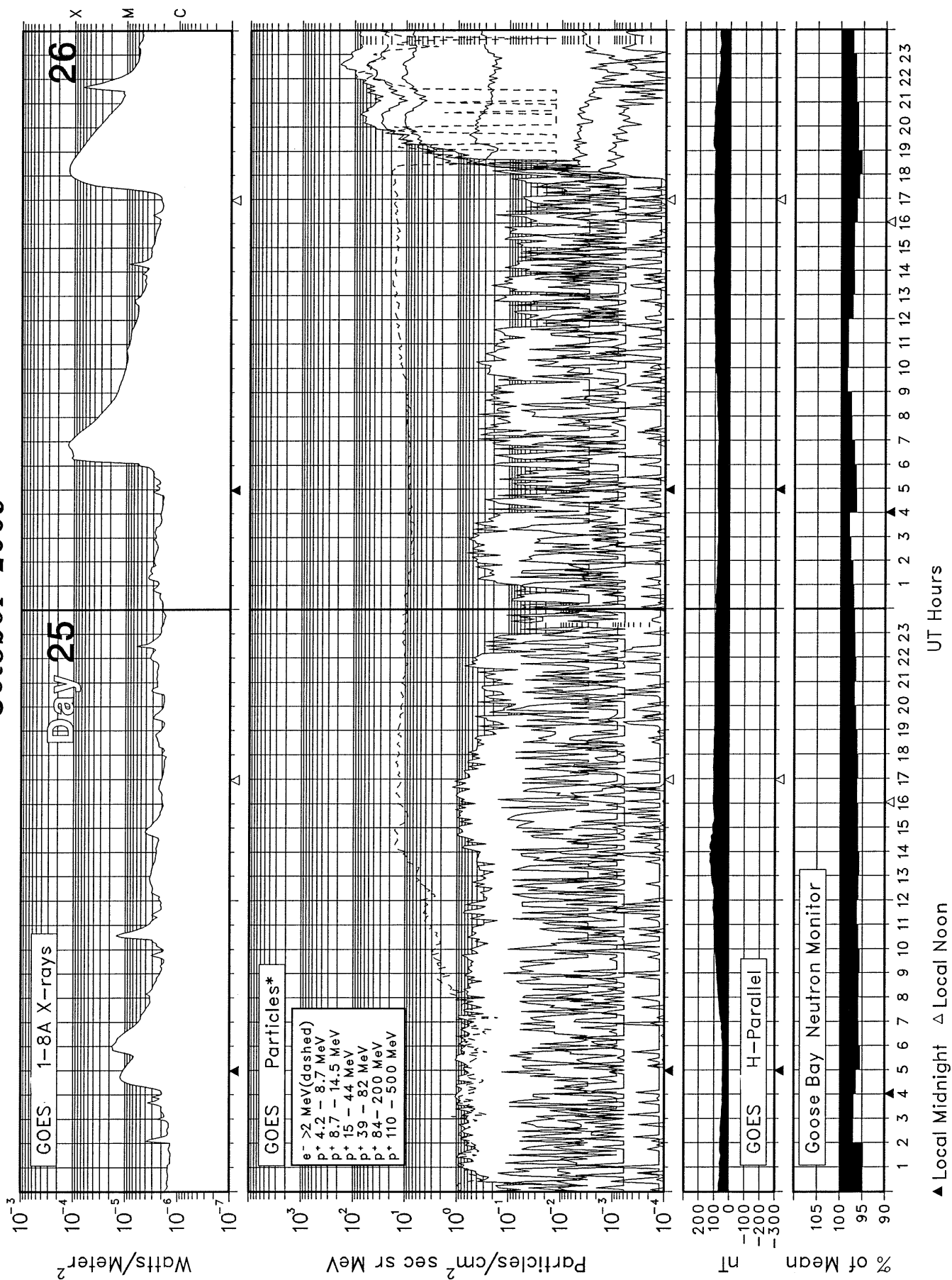
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Oct 03

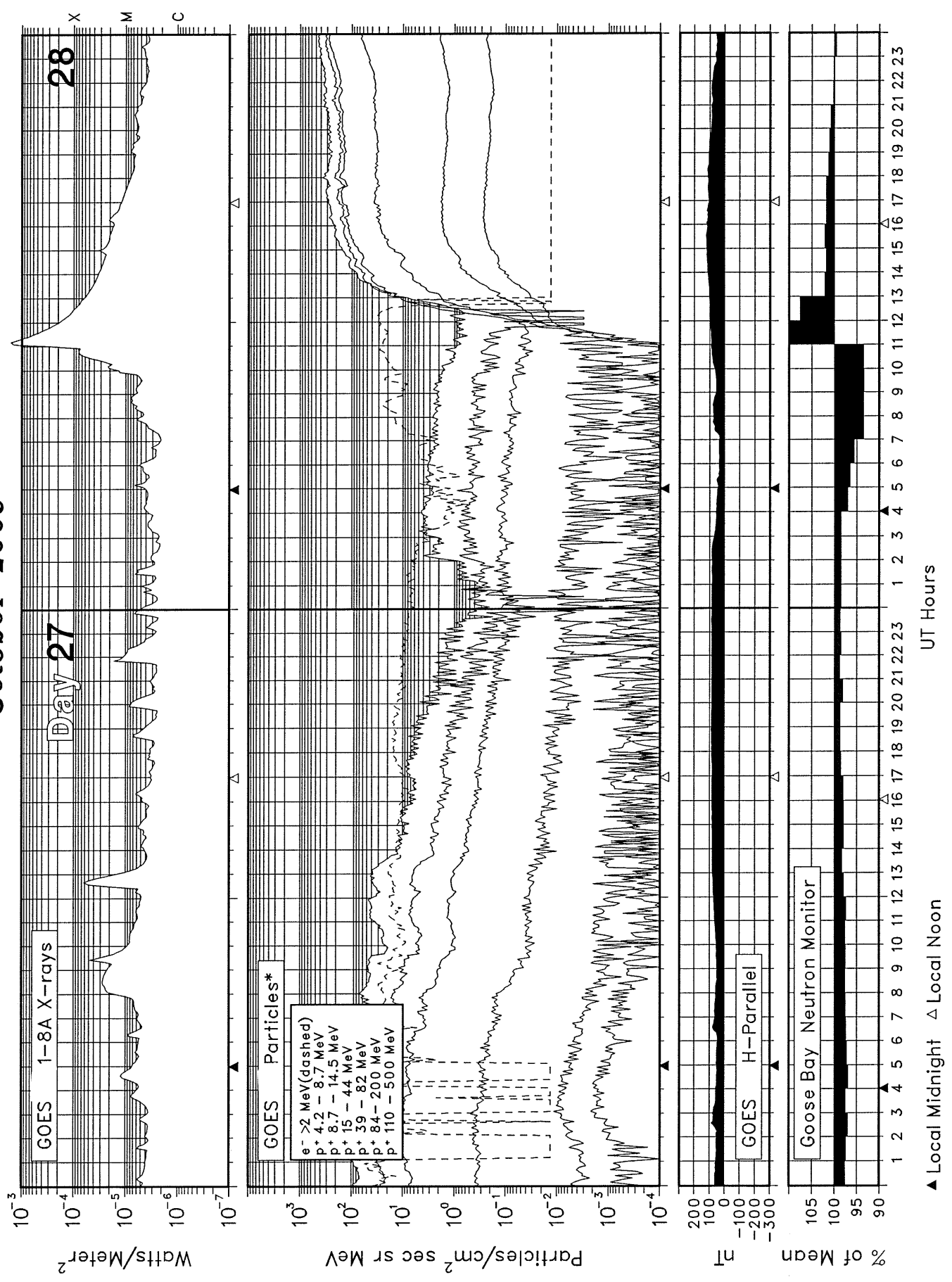


SOLAR-TERRESTRIAL ENVIRONMENT October 2003



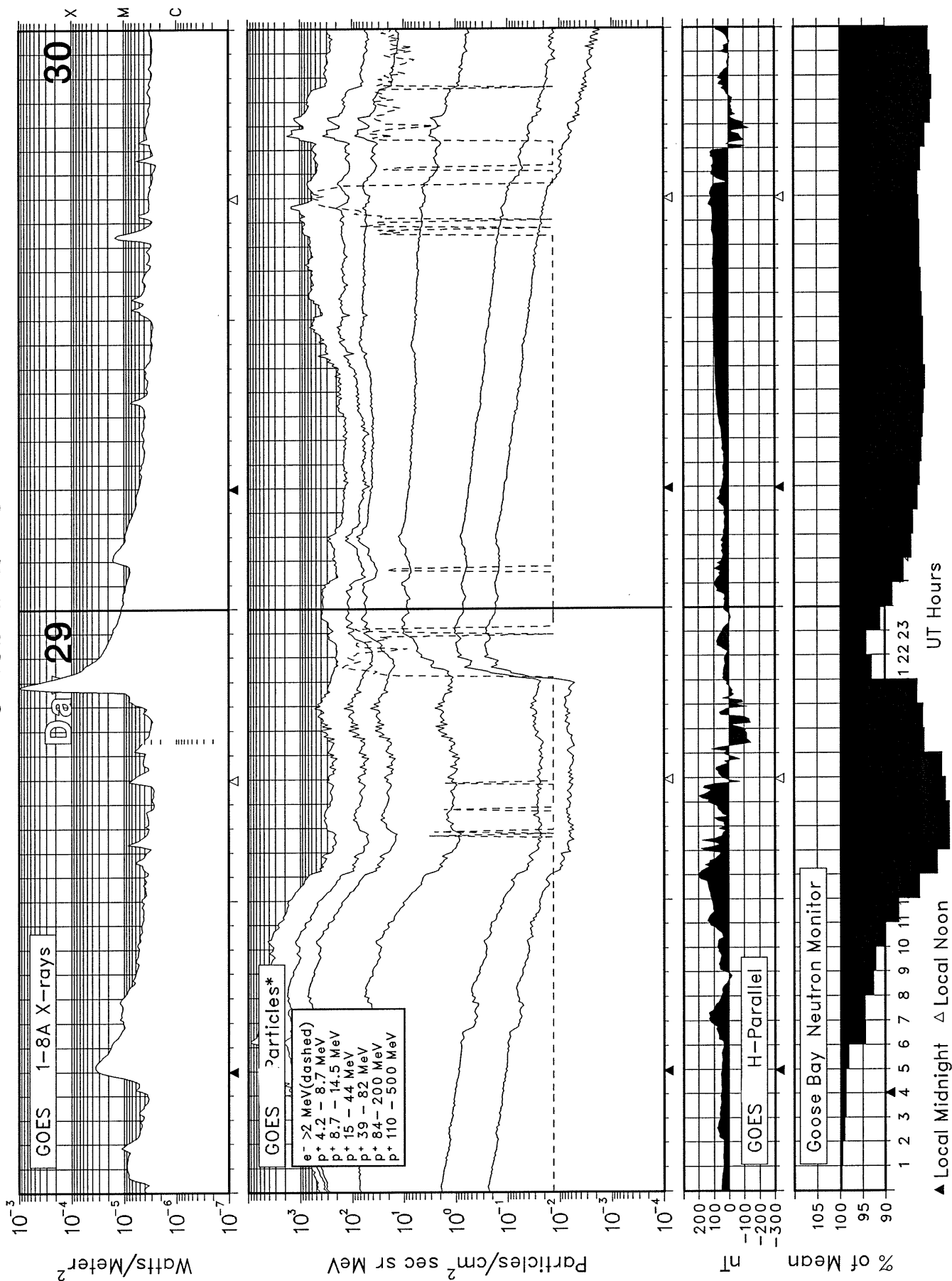
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October 2003



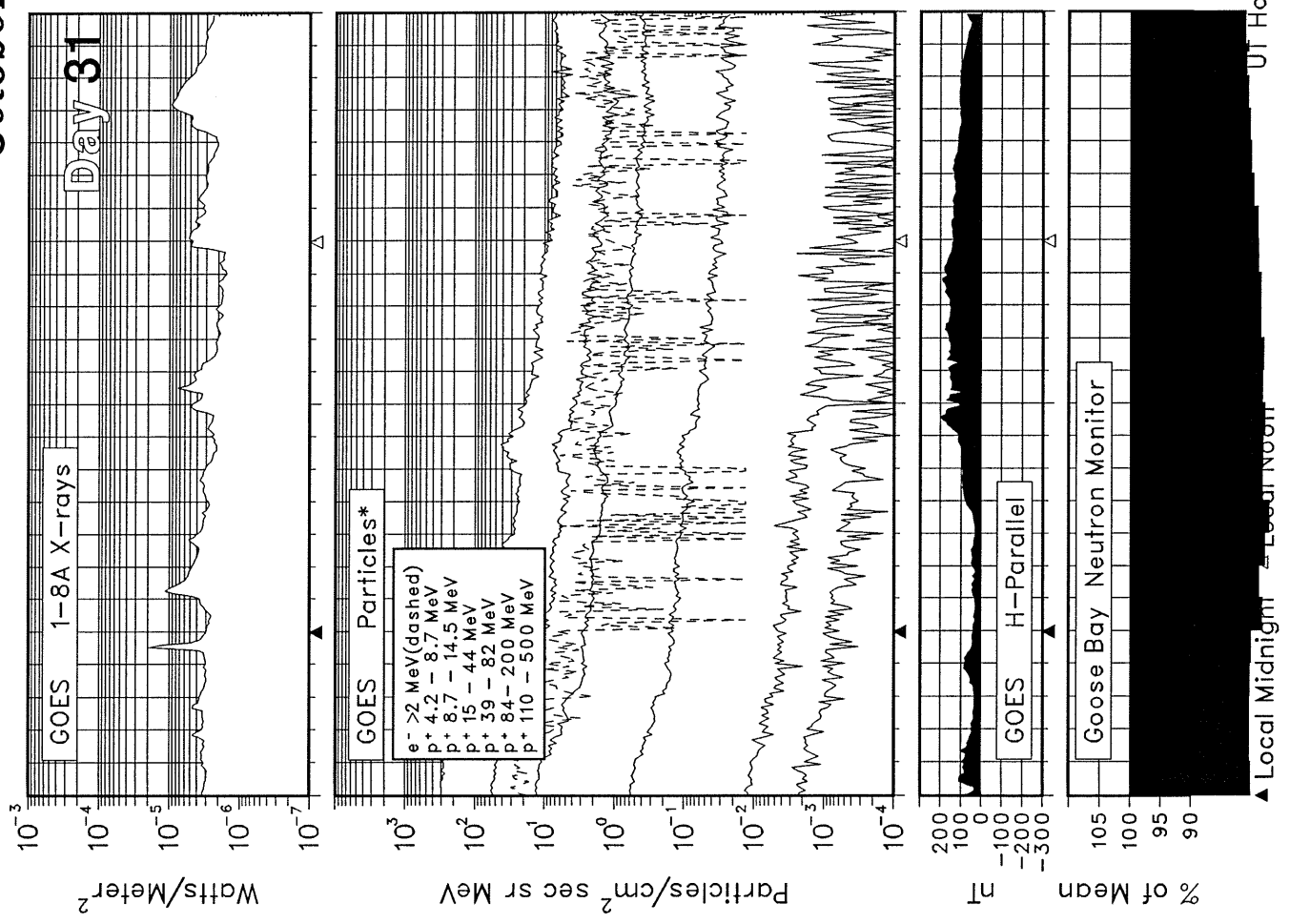
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October 2003



SOLAR-TERRESTRIAL ENVIRONMENT

October 2003



GOES-12 data replace GOES-8 X-rays, electrons and magnetometer data after May 2003.
GOES 11 protons replace GOES-8 protons after June 19, 2003.

Satellite positions:
GOES-8 - 75W
GOES-11 - 113W
GOES-12 - 75W

* Electron flux is divided by 10.
Electron units are Electrons/cm² sec sr.
Protons are corrected for contamination.

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Oct 03

A L E R T P E R I O D S The International Space Environment Service

OCTOBER 2003

Julian Day	Date of Issue	Date of Obs	Wolf No.	10-cm Solar Flux	A- index	Rgn No.	Location		Flares			Date of Fcst	Region Fcst(1)	Geoadvice(1)
							Lat	Lon	Opt	M	X			
274	01	30	116	133	4	464	N04	W62	5	0	0	01	E	SOL: Eruptive
						466	S05	W36	0	0	0	01	Q	MAG: Quiet
						469	S08	W66	0	0	0	01	Q	PRO: Quiet
						470	S12	E18	0	0	0	01	Q	
						471	S07	E63	1	0	0	01	Q	
275	02	01	126	137	11	464	N05	W73	3	1	0	02	E	SOL: Eruptive
						466	S04	W50	0	0	0	02	Q	MAG: Quiet
						467	S05	W51	0	0	0	02	Q	PRO: Quiet
						469	S09	W82	0	0	0	02	Q	
						470	S13	E04	1	0	0	02	Q	
						471	S08	E53	0	0	0	02	Q	
						472	S23	W02	0	0	0	02	Q	
276	03	02	75	125	8	464	N05	W81	4	0	0	03	E	SOL: Eruptive
						466	S05	W64	0	0	0	03	Q	MAG: Quiet
						470	S14	W08	0	0	0	03	Q	PRO: Quiet
						471	S08	E42	0	0	0	03	E	
						472	S22	W16	0	0	0	03	Q	
277	04	03	104	120	16	464	N06	W91	0	0	0	04	Q	SOL: Eruptive
						466	S06	W78	0	0	0	04	Q	MAG: Quiet
						470	S17	W26	0	0	0	04	Q	PRO: Quiet
						471	S08	E35	2	0	0	04	E	
						472	S22	W31	0	0	0	04	Q	
						473	S07	E20	0	0	0	04	Q	
278	05	04	89	119	8	471	S08	E22	1	1	0	05	E	SOL: Eruptive
						472	S22	W47	0	0	0	05	Q	MAG: Quiet
						473	S09	E07	0	0	0	05	Q	PRO: Quiet
						474	S14	W49	0	0	0	05	Q	
279	06	05	101	110	7	470	S17	W52	0	0	0	06	Q	SOL: Eruptive
						471	S08	E09	2	0	0	06	E	MAG: Active
						473	S09	W06	1	0	0	06	Q	PRO: Quiet
						474	S14	W62	0	0	0	06	Q	
						475	S22	E47	0	0	0	06	Q	
280	07	06	93	112	11	471	S08	W04	0	0	0	07	E	SOL: Eruptive
						473	S09	W19	0	0	0	07	Q	MAG: Active
						475	S22	E34	0	0	0	07	Q	PRO: Quiet
						476	S16	E12	0	0	0	07	Q	
						477	S15	E63	0	0	0	07	Q	
281	08	07	76	112	17	471	S08	W18	0	0	0	08	E	SOL: Eruptive
						473	S09	W33	0	0	0	08	Q	MAG: Active
						476	S16	W02	0	0	0	08	Q	PRO: Quiet
						477	S15	E60	0	0	0	08	Q	
282	09	08	69	113	8	471	S08	W31	0	0	0	09	E	SOL: Eruptive
						473	S09	W46	0	0	0	09	Q	MAG: Quiet
						477	S15	E47	0	0	0	09	Q	PRO: Quiet
283	10	09	68	111	10	471	S08	W44	0	0	0	10	E	SOL: Eruptive
						473	S08	W62	0	0	0	10	Q	MAG: Quiet
						477	S15	E32	0	0	0	10	Q	PRO: Quiet
						478	N10	W05	0	0	0	10	Q	
284	11	10	79	112	4	471	S08	W57	0	0	0	11	Q	SOL: Eruptive
						473	S08	W74	0	0	0	11	Q	MAG: Quiet
						477	S15	E19	0	0	0	11	Q	PRO: Quiet
						478	N09	W20	0	0	0	11	Q	
						479	N24	E63	0	0	0	11	Q	
285	12	11	77	106	4	471	S07	W70	0	0	0	12	Q	SOL: Quiet
						473	S08	W89	0	0	0	12	Q	MAG: Quiet
						477	S14	E04	0	0	0	12	Q	PRO: Quiet

A L E R T P E R I O D S The International Space Environment Service

OCTOBER 2003

Julian Day	Date of Issue	Date of Obs	Wolf No.	10-cm Solar Flux	A- index	Rgn No.	Location		Flares			Date of Fcst	Region Fcst(1)	Geoadvice(1)
							Lat	Lon	Opt	M	X			
						478	N12	W31	0	0	0	12	Q	
						479	N23	E52	0	0	0	12	Q	
286	13	12	35	98	5	471	S08	W85	0	0	0	13	Q	SOL: Eruptive
						477	S15	W08	0	0	0	13	Q	MAG: Quiet
						479	N23	E40	0	0	0	13	Q	PRO: Quiet
287	14	13	25	94	17	479	S15	W22	0	0	0	14	Q	SOL: Eruptive
						479	N23	E26	0	0	0	14	Q	MAG: Quiet
									0	0	0	14		PRO: Quiet
288	15	14	24	92	40	479	S15	W35	0	0	0	15	Q	SOL: Eruptive
						479	N24	E07	0	0	0	15	Q	MAG: Active
									0	0	0	15		PRO: Quiet
289	16	15	29	96	33	480	S14	W49	1	0	0	16	Q	SOL: Eruptive
						480	N20	W26	0	0	0	16	Q	MAG: Active
									0	0	0	16		PRO: Quiet
290	17	16	28	95	26	480	S14	W63	1	0	0	17	Q	SOL: Quiet
						480	N20	W40	0	0	0	17	Q	MAG: Minor
									0	0	0	17		PRO: Quiet
291	18	17	66	99	29	477	S15	W78	0	0	0	18	Q	SOL: Eruptive
						479	N24	W31	0	0	0	18	Q	MAG: Active
						480	N21	W51	0	0	0	18	Q	PRO: Quiet
						481	S08	W17	0	0	0	18	Q	
						482	N16	E62	0	0	0	18	Q	
292	19	18	91	109	26	479	N25	W44	0	0	0	19	Q	SOL: Eruptive
						481	S08	W32	0	0	0	19	Q	MAG: Active
						482	N17	E50	0	0	0	19	Q	PRO: Quiet
						483	S08	E55	0	0	0	19	Q	
						484	N05	E68	10	0	0	19	E	
293	20	19	89	120	30	479	N25	W58	0	0	0	20	Q	SOL: Eruptive
						481	S09	W48	0	0	0	20	Q	MAG: Active
						482	N16	E34	0	0	0	20	Q	PRO: Quiet
						483	S09	E40	0	0	0	20	Q	
						484	N06	E53	11	2	1	20	E	
294	21	20	113	135	26	479	N25	W72	0	0	0	21	Q	SOL: Eruptive
						481	S09	W63	0	0	0	21	Q	MAG: Minor
						482	N15	E20	0	0	0	21	Q	PRO: Quiet
						483	S11	E27	0	0	0	21	Q	
						484	N05	E40	8	1	0	21	E	
295	22	21	144	152	36	479	S25	W85	0	0	0	22	Q	SOL: Active
						482	N14	E05	0	0	0	22	Q	MAG: Active
						483	S10	E13	1	0	0	22	Q	PRO: Quiet
						484	N04	E26	7	1	0	22	E	
						485	S06	E47	0	0	0	22	Q	
296	23	22	117	154	28	482	N14	W08	0	0	0	23	Q	SOL: Active
						483	S10	E00	0	0	0	23	Q	MAG: Minor
						484	N04	E13	16	2	0	23	E	PRO: Quiet
						485	S06	E34	0	0	0	23	Q	
						486	S16	E81	1	4	0	23	E	
297	24	23	122	183	10	483	S10	W13	0	0	0	24	Q	SOL: Major
						484	N04	W00	7	3	0	24	E	MAG: Major
						485	S06	E21	0	0	0	24	Q	PRO: Quiet
						486	S16	E70	2	0	2	24	E	
298	25	24	160	191	36	482	N17	W31	0	0	0	25	Q	SOL: Major
						484	N05	W15	7	1	0	25	E	MAG: Major
						485	S07	E08	0	0	0	25	Q	PRO: Warning

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Oct 03

A L E R T P E R I O D S The International Space Environment Service

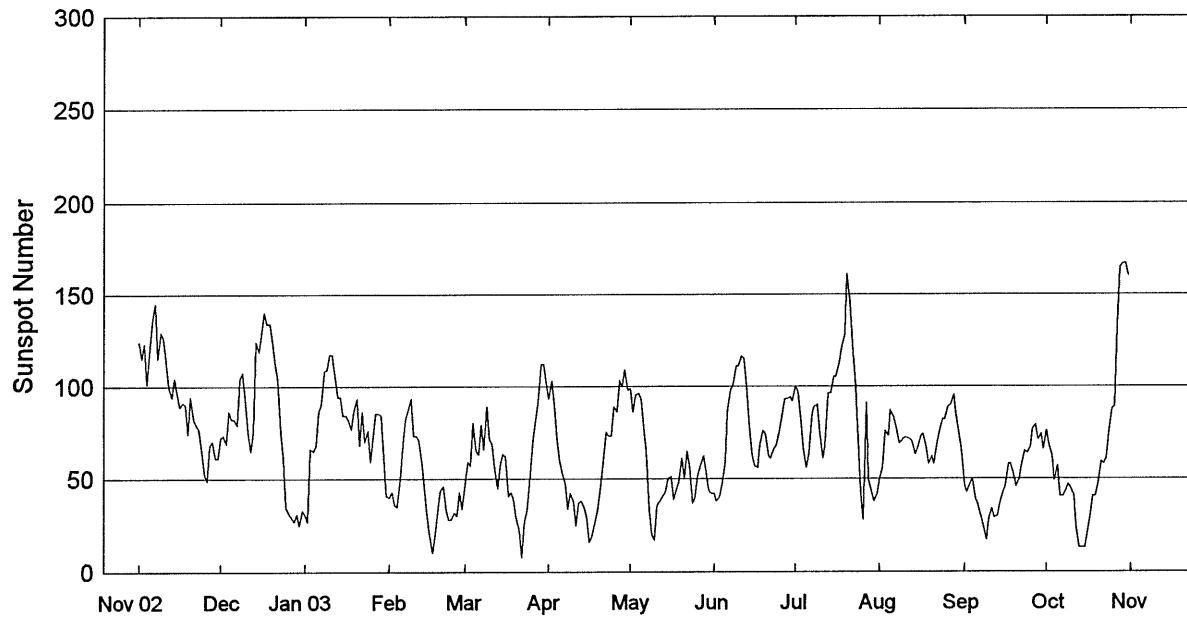
OCTOBER 2003

Julian Day	Date of Issue	Date of Obs	Wolf No.	10-cm Solar Flux	A- index	Rgn No.	Location		Flares			Date of Fcst	Region Fcst(1)	Geoadvice(1)
							Lat	Lon	Opt	M	X			
						486	S16	E57	5	2	0	25	E	
299	26	25	139	222	14	484	N04	W28	5	2	0	26	E	SOL: Major
						486	S15	E45	4	1	0	26	E	MAG: Minor
						487	N13	E72	0	0	0	26	Q	PRO: Warning
300	27	26	191	298	12	484	N03	W41	3	2	1	27	E	SOL: Major
						486	S15	E31	3	0	1	27	E	MAG: Active
						487	N14	E60	0	0	0	27	Q	PRO: IP
301	28	27	238	257	18	484	N03	W54	9	2	0	28	E	SOL: Major
						486	S16	E18	5	2	0	28	E	MAG: Active
						487	N14	E46	0	0	0	28	Q	PRO: Warning
						488	N09	E09	8	1	0	28	Q	
						489	S11	E05	0	0	0	28	Q	
						490	S10	E25	0	0	0	28	Q	
						491	S06	E09	0	0	0	28	Q	
						492	S22	W20	0	0	0	28	Q	
302	29	28	230	274	20	484	N03	W68	5	0	0	29	E	SOL: Major
						486	S17	E04	9	0	1	29	P	MAG: Severe
						487	N13	E32	0	0	0	29	Q	PRO: IP
						488	N08	W04	17	0	0	29	E	
						489	S11	W08	2	0	0	29	Q	
						490	S11	E11	0	0	0	29	Q	
						491	S07	W05	1	0	0	29	Q	
						492	S23	W34	0	0	0	29	Q	
						493	N09	E04	0	0	0	29	Q	
303	30	29	330	279	180	484	N03	W82	0	0	0	30	E	SOL: Major
						486	S16	W11	7	2	1	30	P	MAG: Severe
						487	N12	E20	0	0	0	30	Q	PRO: IP
						488	N07	W17	6	0	0	30	E	
						489	S12	W22	0	0	0	30	Q	
						490	S11	W03	0	0	0	30	Q	
						491	S06	W19	0	0	0	30	Q	
						492	S22	W48	1	0	0	30	Q	
304	31	30	293	271	147	484	N01	W95	0	0	0	31	E	SOL: Major
						486	S18	W23	1	1	0	31	P	MAG: Severe
						487	N12	E06	0	0	0	31	Q	PRO: IP
						488	N08	W28	1	1	0	31	E	
						489	S12	W36	0	0	0	31	Q	
						490	S12	W14	0	0	0	31	Q	
						491	S06	W32	0	0	0	31	Q	
						492	S23	W62	1	0	0	31	Q	
						494	S23	E08	0	0	0	31	Q	
						495	S22	E20	0	0	0	31	Q	

STRATWARM ALERTS - NONE

International Relative Sunspot Numbers Nov 2002 - Oct 2003

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Oct 03



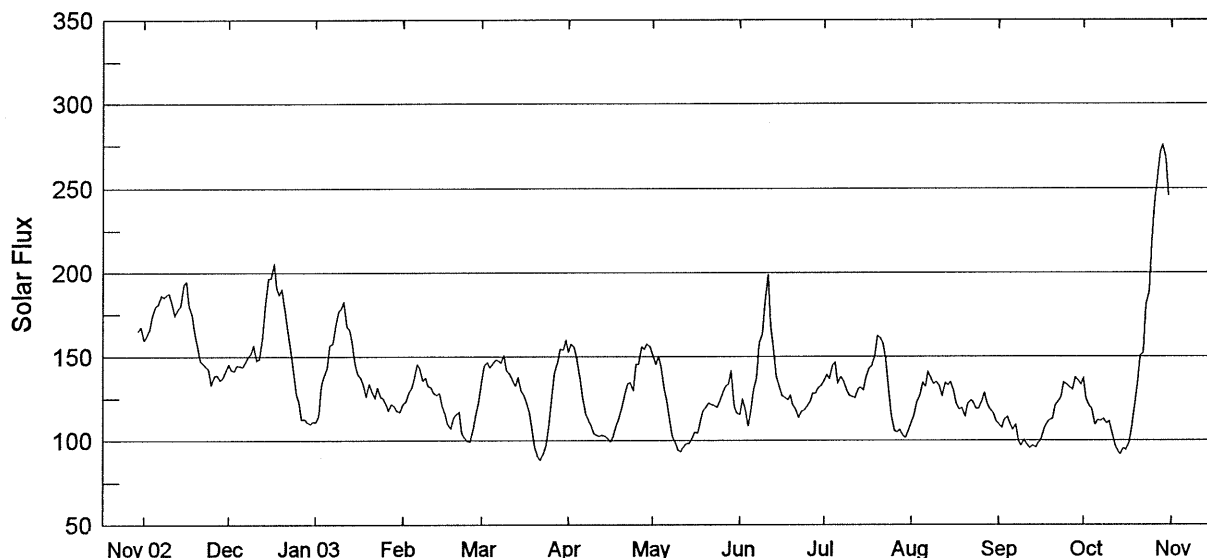
Day	Nov 02	Dec	Jan 03	Feb	Mar	Apr	May	Jun	Jul*	Aug*	Sep*	Oct*
1	124	72	31	40	48	93	99	42	100	49	46	76
2	115	66	27	43	59	103	86	38	97	56	43	68
3	123	64	66	36	57	90	95	40	80	76	47	62
4	107	80	65	35	80	72	96	47	67	73	50	49
5	122	82	68	50	65	60	93	59	56	87	39	57
6	137	82	86	68	63	52	78	86	63	83	37	41
7	145	79	90	82	79	48	65	98	85	78	30	41
8	115	98	108	87	66	34	33	101	89	69	25	43
9	129	107	109	93	89	42	20	111	90	70	17	47
10	126	94	117	73	71	38	17	111	74	72	28	45
11	114	74	117	73	69	25	36	116	61	72	34	41
12	100	65	104	71	56	37	38	115	68	71	29	25
13	94	75	94	59	45	38	41	96	96	70	30	13
14	104	124	94	45	58	35	43	81	96	63	36	13
15	102	119	84	31	63	29	50	63	105	67	42	13
16	89	129	84	20	62	16	51	57	105	73	46	19
17	91	140	81	10	41	19	39	56	112	74	58	30
18	83	134	77	20	43	27	44	68	121	67	58	41
19	74	134	87	33	39	34	48	76	128	58	52	41
20	94	124	93	44	29	45	61	74	161	62	46	47
21	82	112	68	46	23	58	50	62	146	58	50	59
22	79	104	86	34	8	75	65	61	123	69	57	58
23	77	75	70	28	27	73	57	66	100	76	65	61
24	67	57	76	28	33	73	37	68	78	82	64	75
25	56	35	59	32	52	89	39	76	43	82	67	88
26	49	32	72	30	70	86	52	82	28	89	77	89
27	68	29	85	43	81	103	57	93	91	90	79	133
28	70	27	85	34	91	100	62	93	50	95	71	165
29	61	31	84		112	109	56	94	43	85	74	167
30	61	29	62		112	98	44	92	38	74	66	167
31		33	41		102		42		42	65		160
Mean	95.5	80.8	79.7	46.0	61.1	60.0	54.6	77.4	85.0	72.7	48.8	65.6

* = Provisional.

Penticton 2800 MHz (10.7cm) Solar Flux

Nov 2002 - Oct 2003

Adjusted to 1 AU



Day	Nov 02	Dec	Jan 03	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct
1	159.7	145.5	111.2	122.1	135.6	152.8	151.0	115.5	135.6	110.6	110.1	137.1
2	162.1	142.0	114.4	123.0	144.7	157.3	145.3#	124.8	139.3	114.7	107.6	125.0
3	166.5	141.8	133.1	128.7	146.5	155.7	150.1	117.8	136.7	123.6	112.4	120.3
4	174.4	144.5	138.2	131.0	143.6	148.8#	144.4	108.7	144.8	126.0	114.1	119.0
5	180.0	144.4	143.2	136.2	146.2	137.5	131.1	117.0	146.7	134.4	109.8	109.6
6	181.2	143.9	156.8	145.4	147.9	126.1	124.1	129.4	134.0	132.4	106.6	112.0
7	186.4	146.6	157.8	143.3	147.6	115.9	112.2	137.2	137.8	140.9	109.4	111.8
8	185.5	149.8	168.0	135.4	146.2	112.6	102.8	158.0	135.7	136.6	100.3	113.1
9	187.0	151.6	176.9	137.6	150.6	109.7	98.9	163.1	130.2	133.6	97.3	110.5
10	187.7	156.5	178.7	132.6	141.7	104.1	94.5	182.0	126.9	134.7	100.6	111.4
11	181.0	147.7	182.6	131.4	139.7	103.0	93.4	198.9	126.1	132.7	98.0	105.4
12	174.6	148.4	167.7	128.2	136.2	102.6	95.8	168.6	125.5	126.6	95.6	97.4
13	178.6	161.8	166.2	127.3	132.5	103.0	98.1	155.8	130.7	134.3	97.3	94.0
14	180.2	180.1	158.6	128.1	137.3	102.6	98.3	137.7	131.4	133.1	95.8	91.9
15	193.2	196.6	145.0	120.6	129.3	101.1	101.4	132.8	129.9	134.7	98.4	95.3
16	194.8	196.5	139.9	115.7	127.2	99.2	104.9	126.5	137.5	130.1	100.4	94.6
17	180.5	205.8	137.1	109.4	123.1#	101.8	104.7	125.8	143.2	122.3	107.0	98.1
18	174.8	190.6	133.0	107.4	117.3	108.7	111.5	124.3	144.3	118.7	110.2	107.8
19	164.3	186.7	126.1	113.6	107.2	113.1	117.4	126.8	150.8	119.5	112.1	119.4
20	155.3	190.3	133.7	115.7	96.6	119.7	120.0	120.8	162.4	114.5	112.9	133.9
21	147.2	177.9	129.4	117.0	90.3	127.0	122.2	118.8	160.7	122.0	120.9	150.2
22	145.5	166.4	125.4	104.3	88.3	133.8	121.3	113.9	157.4	123.7	123.5	152.0#
23	143.8	153.7	131.6	101.8	92.4	134.3	120.9	117.2	148.7	122.9	125.7	181.3#
24	142.5	142.5	125.8	99.9	97.3	129.8	119.8	118.3	129.2	119.0	134.3	188.5
25	133.2	127.6	124.9	99.5	108.2	145.3	124.3	120.2	115.1	119.0	133.4	219.0
26	138.5	123.2	121.2	107.2	126.6	145.5	128.4	122.9	105.9	123.4	131.8	240.6*
27	138.8	112.7	117.7	115.4	140.5	156.1	132.3	128.1	104.9	128.3	130.3	254.0
28	136.0	113.1	121.8	122.6	146.4	154.3	133.7	128.1	106.6	121.1	137.6	270.9
29	137.5	111.0	120.7		154.6	157.4	141.6	131.6	103.0	118.7	135.6	275.4#
30	142.1	110.1	117.6		154.2	155.8	120.4	132.5	101.7	116.2	133.3	267.6
31		111.3	116.9		159.8		116.3		105.2	111.8		245.2
Mean	165.1	152.3	139.4	121.4	130.8	127.2	118.7	133.4	131.9	125.2	113.4	150.1

NOTE: # - 1700 or 1800UT reading, burst in progress at 2000UT. *-2300UT reading, burst in progress.

DAILY SOLAR INDICES
October 2003

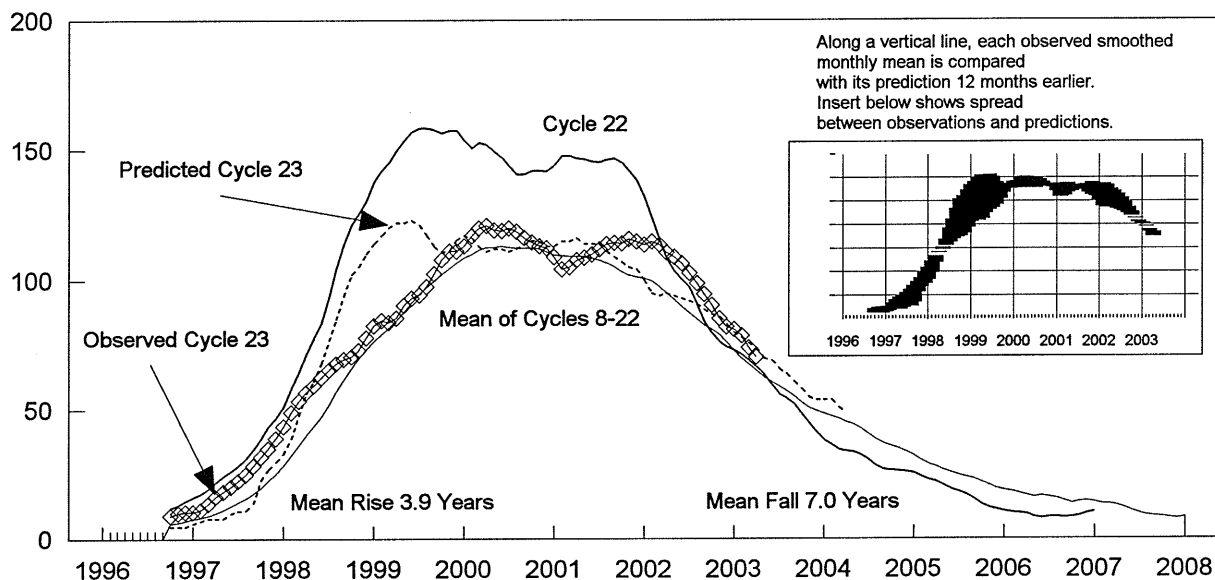
Day	Day of Year	Bartels Cycle Day	Sunspot Numbers		Obs Flux		-----Solar Flux Adjusted to 1 Astronomical Unit-----							
			Int	Amer	Penticton (2800)	SGMR (15400)	SGMR (8800)	SGMR (4995)	Penticton (2800)	SGMR (2695)	SGMR (1415)	SGMR (610)	SGMR (410)	SGMR (245)
1	274	26	76	75	136.8	534	260	165	137.1	126	82	46	33	12
2	275	27	68	72	124.8	520	272	169	125.0	124	84	46	33	13
3	276	1	62	59	120.1	529	266	164	120.3	115	80	42	30	13
4	277	2	49	60	119.0	428	215	139	119.0	110	76	34	28	14
5	278	3	57	53	109.6	532	246	155	109.6	106	74	44	30	12
6	279	4	41	51	112.1	521	241	149	112.0	109	73	44	31	15
7	280	5	41	50	111.9	528	244	150	111.8	110	74	42	31	14
8	281	6	43	56	113.3	530	250	156	113.1	105	73	44	31	11
9	282	7	47	58	110.8	543	244	151	110.5	105	71	43	30	12
10	283	8	45	50	111.8	509	237	146	111.4	106	69	43	31	11
11	284	9	41	44	105.8	524	253	149	105.4	100	67	41	32	12
12	285	10	25	22	97.8	469	221	135	97.4	89	63	37	30	11
13	286	11	13	12	94.4	490	232	135	94.0	88	62	40	29	12
14	287	12	13	4	92.4	483	239	134	91.9	88	61	38	28	11
15	288	13	13	17	95.9	519	246	143	95.3	88	64	39	29	15
16	289	14	19	24	95.2	516	243	141	94.6	93	62	39	30	12
17	290	15	30	37	98.8	519	239	136	98.1	92	62	40	31	17
18	291	16	41	43	108.6	531	250	150	107.8	101	67	44	45	69
19	292	17	41	43	120.4	465	296	185	119.4	120	78	43	36	33
20	293	18	47	64	135.1	536	303	200	133.9	123	74	48	58	---
21	294	19	59	66	151.5	540	306	207	150.2	132	83	42	61	---
22	295	20	58	72	153.5#	527	370	243	152.0#	151	86	52	52	48
23	296	21	61	68	183.2#	585	443	323	181.3#	176	95	51	43	49
24	297	22	75	81	190.6	612	477	332	188.5	189	105	---	---	---
25	298	23	88	89	221.5	564	444	328	219.0	203	114	66	83	---
26	299	24	89	102	243.4*	605	469	354	240.6*	240	130	52	54	55
27	300	25	133	141	257.2	608	472	366	254.0	242	130	67	129	---
28	301	26	165	161	274.4	---	---	---	270.9	---	---	---	---	---
29	302	27	167	167	279.1#	---	---	---	275.4#	---	---	---	---	---
30	303	1	167	171	271.4	625	483	382	267.6	251	138	69	80	---
31	304	2	160	156	248.9	611	460	368	245.2	223	122	54	48	62
MEAN			65.6	70	151.3	534	307	205	150.1	134	83	46	43	23

NOTE: Radio flux values are from Sagamore Hill, Massachusetts, USA.

- 1700UT Reading, burst in progress at 2000UT.

* - 2300UT Reading with burst in progress.

Cycle 23 Smoothed Sunspot Numbers: Observed and Predicted



Smoothed Sunspot Numbers (Observed and Predicted) for Parts of Solar Cycles 22 and 23

Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Avg
1994	37	35	34	34	33	31	29	27	27	27	26	26	31
1995	24	23	22	21	19	18	17	15	13	12	11	11	17
1996	10	10	10	9	8*	9	8	8	8	9**	10	10	8
1997	11	11	14	17	18	20	23	25	28	32	35	39	23
1998	44	49	53	57	59	63	65	68	69	71	73	78	62
1999	83	85	84	85	90	93	94	98	102	108	111	111	95
2000	113	117	120	120.8+	119	119	120	119	116	115	113	112	107
2001	109	104	105	108	109	110	112	114	114	114	115	115	111
2002	114	115	113	111	109	106	103	99	95	91	85	82	102
2003	81	79	74	70	67 (3)	65 (5)	63 (7)	61 (9)	59 (11)	57 (13)	55 (15)	54 (17)	65 (7)
2004	53 (19)	51 (19)	50 (20)	49 (20)	48 (21)	46 (21)	44 (21)	42 (22)	40 (22)	39 (23)	38 (23)	36 (24)	45 (21)
Solar Cycle 22				Solar Cycle 23				Min, Max, and Predictions					

* May 1996 marks Cycle 22's mathematical minimum. ** October 1996 marks the consensus minimum NGDC is now using.

+ April 2000 marks Cycle 23 maximum.

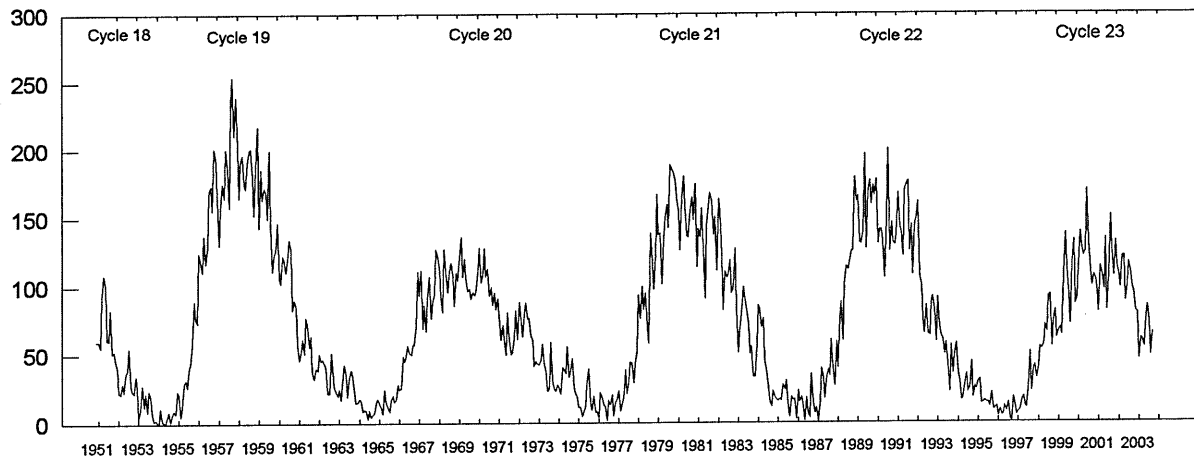
Observed and Predicted Numbers. For the end of Cycle 22, and the rise and decline of Cycle 23, the table above lists observed smoothed sunspot numbers up to the one that includes the most recent monthly mean. We based these smoothed values on final monthly means through June 2003 and on provisional numbers thereafter. Table entries with numbers in parentheses below them denote predictions by the McNish-Lincoln method. (See page 9 in the Jul 1987 supplement to *Solar-Geophysical Data*.) Adding the number in parentheses to the predicted value generates the upper limit of the 90% confidence interval. Subtracting the number from the predicted value generates the lower limit. Consider, for example, the April 2004 prediction. There exists a 90% chance that in April 2004, the actual smoothed number will fall somewhere between 29 and 69.

Points to Ponder. The McNish-Lincoln prediction method generates useful estimates of smoothed, monthly mean sunspot numbers for no more than 12 months ahead. Beyond 12 months, the predictions regress toward the mean of all 15 cycles of observations used in the computation. Moreover, the method remains very sensitive to the date defining the onset of the current cycle, that is, to the date of the most recent sunspot minimum. The new cycle predictions tabulated above are based on the consensus minimum value of 8.8 that occurred in October 1996.

Note: Please visit <http://www.sec.noaa.gov> for solar minimum and Cycle 23 discussions.

Mean Monthly Sunspot Numbers Jan 1951 - Oct 2003

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Oct 03



Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Mean
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	69.4
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	31.5
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	13.9
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	4.4 m
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	38.0
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	141.7
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	190.2 M
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	184.8
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	159.0
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	122.3
1961	57.9	46.1	53.0	61.4	51.0	77.4	70.2	55.8	63.6	37.7	32.6	39.9	53.9
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	37.6
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	27.9
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	10.2 m
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	15.1
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	47.0
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	93.8
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	105.9 M
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	105.5
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	104.5
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	66.6
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	68.9
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	38.0
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	34.5
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	15.5
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	12.6 m
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	27.5
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	92.5
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	155.4 M
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	154.6
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	140.4
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	115.9
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	66.6
1984	57.0	85.4	83.5	69.7	76.4	46.1	37.4	25.5	15.7	12.0	22.8	18.7	45.9
1985	16.5	15.9	17.2	16.2	27.5	24.2	30.7	11.1	3.9	18.6	16.2	17.3	17.9
1986	2.5	23.2	15.1	18.5	13.7	1.1	18.1	7.4	3.8	35.4	15.2	6.8	13.4 m
1987	10.4	2.4	14.7	39.6	33.0	17.4	33.0	38.7	33.9	60.6	39.9	27.1	29.4
1988	59.0	40.0	76.2	88.0	60.1	101.8	113.8	111.6	120.1	125.1	125.1	179.2	100.2
1989	161.3	165.1	131.4	130.6	138.5	196.2	126.9	168.9	176.7	159.4	173.0	165.5	157.6 M
1990	177.3	130.5	140.3	140.3	132.2	105.4	149.4	200.3	125.2	145.5	131.4	129.7	142.6
1991	136.9	167.5	141.9	140.0	121.3	169.7	173.7	176.3	125.3	144.1	108.2	144.4	145.7
1992	150.0	161.1	106.7	99.8	73.8	65.2	85.7	64.5	63.9	88.7	91.8	82.6	94.3
1993	59.3	91.0	69.8	62.2	61.3	49.8	57.9	42.2	22.4	56.4	35.6	48.9	54.6
1994	57.8	35.5	31.7	16.1	17.8	28.0	35.1	22.5	25.7	44.0	18.0	26.2	29.9
1995	24.2	29.9	31.1	14.0	14.5	15.6	14.5	14.3	11.8	21.1	9.0	10.0	17.5
1996	11.5	4.4	9.2	4.8	5.5	11.8	8.2	14.4	1.6	0.9	17.9	13.3	8.6 m
1997	5.7	7.6	8.7	15.5	18.5	12.7	10.4	24.4	51.3	22.8	39.0	41.2	21.5
1998	31.9	40.3	54.8	53.4	56.3	70.7	66.6	92.2	92.9	55.5	74.0	81.9	64.3
1999	62.0	66.3	68.8	63.7	106.4	137.7	113.5	93.7	71.5	116.7	133.2	84.6	93.2
2000	90.1	112.9	138.5	125.5	121.6	124.9	170.1	130.5	109.7	99.4	106.8	104.4	119.6 M
2001	95.6	80.6	113.5	107.7	96.6	134.0	81.8	106.4	150.7	125.5	106.5	132.2	111.0
2002	114.1	107.4	98.4	120.7	120.8	88.3	99.9	116.4	109.3	97.5	95.5	80.8	104.0
2003	79.7	46.0	61.1	60.0	54.6	77.4	85.0	72.7	48.8	65.6			65.1

Values are preliminary after June 03. For the yearly means, each 'M' marks a sunspot cycle maximum and each 'm' a minimum.

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Sta	Day	Start (UT)	Max (UT)	End (UT)	Lat	CMD	NOAA/ USAF Region	CMP Mo	Dur Day	(Min)	Imp Opt	Xray	Obs See	Type	Area Measurement			Remarks
															Time (UT)	Apparent (10-6 Disk)	Corr (Sq Deg)	
LEAR	01	0416	0424	0437	N06	W63	10464	09	26.6	21	SF		3	E		49		F
LEAR		0416	0425	0436	N03	W56	10465	09	27.1	20	SF		3	E		20		F
GOES		0419	0427	0435	N06	W63	10464			16	SF C 3.3							2.5E-03
LEAR		0440	0451	0509	N05	W57	10464	09	27.0	29	1F		3	E		174		FE
GOES		0444	0451	0459	N05	W57	10464			15	1F M 1.4							8.7E-03
GOES		0909	0915	0920						11	C 1.2							6.8E-04
GOES		1119	1124	1140						21	B 9.8							1.1E-03
GOES		1615	1618	1623						8	B 9.7							4.1E-04
GOES		1746	1752	1757	N04	W63	10464			11	SF C 1.6							7.8E-04
HOLL		1749	1751	1756	N04	W63	10464	09	27.1	7	SF		3	E		19		F
GOES		1933	1952	2039	S16	E03	10470			66	SF C 1.6							5.9E-03
HOLL		1945	1945	1958	S16	E03	10470	10	2.0	13	SF		3	E		15		FS
GOES	02	0351	0401	0405	N08	W69	10464			14	SF C 2.4							1.2E-03
LEAR		0357	0357	0402	N08	W69	10464	09	27.1	5	SF		3	E		16		
LEAR		0403	0405	0410	N09	W69	10464	09	27.1	7	SF		3	E		21		H
GOES		0423	0428	0437	N05	W72	10464			14	SF B 9.0							6.3E-04
LEAR		0426	0426	0431	N05	W72	10464	09	26.9	5	SF		3	E		51		FH
GOES		0600	0606	0613						13	B 8.6							5.6E-04
GOES		0649	0656	0701	N05	W79	10464			12	1F C 7.8							3.3E-03
LEAR		0653	0654	0709	N04	W70	10464	09	27.1	16	SF		2	E		23		FH
SVTO		0655	0658	0712	N05	W79	10464	09	26.5	17	1F		3	E		147		FH
GOES		1149	1153	1157						8	B 8.6							3.5E-04
GOES		1346	1356	1428						42	C 2.2							5.0E-03
GOES		1602	1611	1621			10471			19	C 4.2							3.3E-03
GOES		2129	2132	2135						6	B 6.9							2.2E-04
GOES	03	0058	0106	0147						49	B 9.4							2.4E-03
GOES		0333	0338	0346	S06	E32	10471			13	SF C 2.0							1.1E-03
LEAR		0338	0338	0352	S06	E32	10471	10	5.5	14	SF		3	E		46		
GOES		0610	0619	0637						27	C 1.0							1.4E-03
GOES		0640	0644	0647						7	C 1.4							4.7E-04
GOES		0753	0757	0801	S10	E42	10471			8	SF C 1.7							5.5E-04
LEAR		0756	0759	0803	S10	E42	10471	10	6.5	7	SF		3	E		36		
GOES		1119	1218	1244						85	C 2.1							5.8E-03
GOES		1919	1922	1932						13	B 6.8							4.9E-04
GOES		2301	2314	2328						27	C 2.7							3.4E-03
GOES	04	0409	0415	0419						10	B 7.4							3.7E-04
GOES		0454	0501	0507						13	C 1.7							9.7E-04
GOES		1309	1317	1341						32	C 2.5							3.2E-03
GOES		1515	1523	1530			10471			15	C 1.7							1.3E-03
GOES		1542	1547	1549	S10	E29	10471			7	SF M 1.0							2.1E-03
HOLL		1546	1548	1555	S10	E29	10471	10	6.8	9	SF		3	E		40		F
GOES		1753	1757	1803			10471			10	C 1.6							6.6E-04
GOES		1822	1826	1829			10471			7	C 1.3							5.2E-04
GOES		1908	1917	1922						14	C 1.7							1.2E-03
GOES		1946	1949	1952						6	B 5.9							1.9E-04
GOES	05	0030	0037	0043	S08	E20	10471			13	SF C 1.0							6.6E-04
LEAR		0034	0034	0039	S08	E20	10471	10	6.5	5	SF		3	E		18		F
GOES		0126	0139	0153	S07	E21	10471			27	SF C 1.5							2.0E-03
LEAR		0129	0130	0148	S07	E21	10471	10	6.6	19	SF		3	E		20		F
GOES		0256	0312	0317	S06	E05	10473			21	SF C 1.2							1.2E-03
LEAR		0259	0300	0311	S06	E05	10473	10	5.5	12	SF		3	E		26		F
GOES		0916	0920	0925						9	C 2.6							9.5E-04
GOES		1030	1034	1038			10471			8	B 7.2							2.7E-04
GOES		1051	1106	1116						25	C 1.0							1.3E-03
GOES		1234	1240	1247			10471			13	B 5.2							3.6E-04
GOES		1319	1328	1330						11	C 4.2							1.6E-03
GOES		1415	1422	1426			10471			11	B 3.9							2.2E-04
GOES		1648	1654	1711			10471			23	B 8.7							9.7E-04
GOES		2209	2215	2227			10471			18	B 4.4							4.3E-04
GOES	06	1835	1840	1845			10471			10	B 5.8							2.5E-04
GOES		1941	1948	1955			10471			14	B 4.6							3.2E-04
GOES		2243	2248	2252			10471			9	B 6.6							2.9E-04
GOES		2340	2350	2402			10471			22	B 7.0							7.9E-04

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Sta	Day	Start (UT)	Max (UT)	End (UT)	Lat	CMD	NOAA/ USAF Region	CMP Mo	Dur Day	(Min)	Imp Opt	Xray	Obs See	Type	Area Measurement			Remarks
															Time (UT)	Apparent (10 ⁻⁶ Disk)	Corr (Sq Deg)	
GOES	07	0254	0257	0301			10471			7	B	3.2						1.2E-04
GOES		0556	0559	0604			10471			8	B	5.6						2.5E-04
GOES		0724	0738	0740			10471			16	B	6.0						4.1E-04
GOES		0825	0829	0841			10471			16	B	6.1						4.7E-04
GOES		1637	1642	1646			10471			9	B	6.4						2.6E-04
GOES		1734	1743	1753			10471			19	C	1.8						1.5E-03
GOES		2118	2125	2134			10471			16	B	6.8						5.4E-04
GOES		2346	2357	2411	S07	W17	10471			25	SF	C 3.2						3.4E-03
LEAR		2349	2352	2429	S07	W17	10471	10	6.7	40	SF		4	E		56		F
GOES	08	0209	0250	0302			10471			53	B	9.7						2.2E-03
GOES		0313	0318	0328			10471			15	C	1.0						7.9E-04
GOES		1743	1750	1802			10471			19	B	6.1						5.7E-04
GOES	09	0845	0913	0917						32	B	4.1						6.5E-04
GOES		1423	1510	1529						66	B	8.4						2.0E-03
GOES		2146	2200	2215						29	B	5.7						8.1E-04
GOES		2245	2248	2252						7	B	4.2						1.6E-04
GOES		2335	2346	2352	S06	W46	10471			17	SF	C 2.6						1.8E-03
LEAR		2339	2341	2354	S06	W46	10471	10	6.5	15	SF		3	E		66		F
GOES	10	0420	0424	0426						6	B	4.6						1.2E-04
GOES		2002	2009	2018						16	B	7.6						6.2E-04
GOES		2052	2055	2101						9	B	5.8						2.8E-04
GOES		2120	2130	2139						19	B	7.8						7.6E-04
GOES	11	0721	0727	0746						25	B	4.4						5.8E-04
GOES		1105	1109	1112						7	B	3.6						1.3E-04
GOES		2333	2341	2359						26	B	4.5						6.2E-04
GOES	12	0703	0706	0711						8	B	2.8						1.2E-04
GOES	13	1619	1630	1640						21	B	8.6						8.7E-04
GOES	15	2232	2236	2238	S14	W48	10477			6	SF	B 7.8						1.6E-04
HOLL		2236	2237	2244	S14	W48	10477	10	12.3	8	SF		3	E		17		
GOES		2353	2357	0000						7	B	4.4						1.3E-04
GOES	16	0248	0252	0301	S13	W52	10477			13	SF	B 6.6						4.4E-04
LEAR		0254	0258	0301	S13	W52	10477	10	12.2	7	SF		3	E		18		F
GOES		0735	0759	0812						37	B	7.8						1.2E-03
GOES		1648	1653	1700			10477			12	B	2.7						1.8E-04
GOES		1739	1751	1756						17	B	3.4						2.8E-04
GOES		1943	1954	2001						18	B	2.8						2.5E-04
GOES		2128	2134	2140						12	B	4.1						2.3E-04
GOES	17	0152	0156	0200			10477			8	B	2.9						1.3E-04
GOES		0423	0426	0429			10482			6	B	3.1						1.0E-04
GOES		0655	0701	0708			10482			13	B	9.0						5.3E-04
GOES		0859	0932	1006						67	B	8.9						2.8E-03
GOES		1719	1723	1729			10482			10	B	2.2						1.1E-04
GOES	18	0404	0413	0422			10484			18	B	7.1						6.0E-04
GOES		0531	0538	0540	N05	E80	10484			9	SF	C 2.0						4.9E-04
LEAR		0534	0538	0542	N05	E80		10	24.2	8	SF		3	E		66		H
GOES		0612	0623	0633						21	B	7.6						7.6E-04
GOES		0849	0900	0904	N05	E75	10484			15	1F	C 3.3						1.6E-03
LEAR		0853	0856	0904	N05	E75		10	24.0	11	1F		3	E		109		H
GOES		1208	1211	1214			10484			6	B	3.9						1.2E-04
GOES		1448	1522	1531			10484			43	C	3.3						5.2E-03
GOES		1628	1653	1658	N08	E74	10484			30	SF	C 4.9						4.2E-03
HOLL		1633	1634	1639	N08	E74	10484	10	24.2	6	SF		3	E		12		
HOLL		1651	1652	1701	N08	E72	10484	10	24.1	10	SF		3	E		48		
GOES		1706	1715	1730			10484			24	C	2.6						3.2E-03
HOLL		1740	1742	1744	N07	E72	10484	10	24.1	4	SF		3	E		21		F
HOLL		1802	1802	1811	N05	E69	10484	10	23.9	9	SF		3	E		11		
GOES		1804	1808	1813	N05	E69	10484			9	SF	B 9.0						4.0E-04
GOES		1836	1908	1914	N07	E69	10484			38	SF	C 3.0						4.8E-03

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Sta	Day	Start (UT)	Max (UT)	End (UT)	Lat	CMD	NOAA/ USAF Region	CMP Mo	Dur Day	(Min)	Imp Opt	Xray	Obs See	Type	Area Measurement			Remarks
															Time (UT)	Apparent (10-6 Disk)	Corr (Sq Deg)	
HOLL	18	1842	1843	1918	N07	E69	10484	10	23.9	36	SF		3	E		18		
HOLL		1926	1930	1936	N03	E68	10484	10	23.9	10	SF		3	E		31		
GOES		2026	2041	2050	N07	E68	10484			24	SF C 3.3							3.4E-03
HOLL		2029	2034	2049	N07	E68	10484	10	23.9	20	SF		3	E		21		
GOES		2125	2129	2133	N03	E67	10484			8	SF C 2.3							8.6E-04
HOLL		2127	2128	2132	N03	E67	10484	10	23.9	5	SF		3	E		22		
GOES		2214	2218	2220			10484			6	C 6.5							1.5E-03
HOLL		2216	2217	2225	N03	E67	10484	10	23.9	9	1F		3	E		108		F
LEAR		2217E	2217U	2225	N03	E66	10484	10	23.9	8D	SF		1	E		64		
LEAR	19	0022	0022	0026	N03	E65	10484	10	23.9	4	SF		3	E		26		
LEAR		0348	0349	0354	N03	E63	10484	10	23.9	6	SF		3	E		18		F
GOES		0608	0626	0641	N06	E62	10484			33	1F M 1.9							2.3E-02
LEAR		0611	0621	0707	N06	E62	10484	10	23.9	56	1F		3	E		102		F
GOES		0806	0809	0813	N06	E60	10484			7	SF C 1.3							4.6E-04
LEAR		0808	0809	0812	N06	E60	10484	10	23.8	4	SF		3	E		23		
GOES		1331	1335	1338						7	C 1.6							6.0E-04
HOLL		1417	1417	1424	N05	E56	10484	10	23.8	7	SF		3	E		14		
GOES		1629	1650	1704	N08	E58	10484			35	1N X 1.1							1.4E-01
HOLL		1632	1652	1748	N08	E58	10484	10	24.0	76	1N		3	E		212		UF
HOLL		1857	1857	1900	N03	E55	10484	10	23.9	3	SF		3	E		13		
GOES		1921	1926	1930	N05	E54	10484			9	SF M 1.0							4.2E-03
HOLL		1924	1927	1931	N05	E54	10484	10	23.8	7	SF		3	E		68		F
HOLL		2021	2021	2026	N07	E53	10484	10	23.8	5	SF		3	E		31		F
HOLL		2102	2103	2111	N08	E55	10484	10	24.0	9	SF		3	E		15		
GOES		2245	2249	2253	N06	E51	10484			8	SF C 3.8							1.4E-03
HOLL		2247	2248	2326	N06	E51	10484	10	23.8	39	SF		3	E		38		F
LEAR		2346E	2424	2434	N03	E52	10484	10	23.9	48D	SF		3	E		42		F
GOES	20	0006	0024	0026	N03	E52	10484			20	SF C 5.1							3.2E-03
GOES		0054	0108	0129	N03	E51	10484			35	SF C 4.9							8.2E-03
LEAR		0057	0107	0144	N03	E51	10484	10	23.8	47	SF		3	E		63		F
GOES		0344	0347	0349						5	B 8.6							2.2E-04
GOES		0534	0541	0544						10	C 1.8							7.1E-04
GOES		0645	0722	0743	N03	E48	10484			58	1N M 1.9							3.9E-02
LEAR		0711E	0723	0851	N03	E48	10484	10	23.9	100D	1N		3	E		144		FE
GOES		1445	1449	1452	N07	E43	10484			7	SF C 3.3							9.0E-04
HOLL		1448	1449	1455	N07	E43	10484	10	23.8	7	SF		3	E		51		FH
GOES		1551	1555	1558	N03	E45	10484			7	SF C 3.2							9.9E-04
HOLL		1553	1555	1620	N03	E45	10484	10	24.0	27	SF		3	E		57		F
HOLL		1649	1703	1727	N05	E40	10484	10	23.7	38	SF		3	E		31		F
GOES		1821	1824	1826	N07	E41	10484			5	SF C 2.4							5.7E-04
HOLL		1822	1824	1829	N07	E41	10484	10	23.8	7	SF		3	E		70		
GOES		1955	2002	2012	N02	E41	10484			17	SF C 5.9							4.5E-03
HOLL		1958	1959	2022	N02	E41	10484	10	23.9	24	SF		3	E		42		FH
HOLL		2030	2046	2053	N07	E41	10484	10	23.9	23	SF		3	E		17		
GOES		2030	2046	2102	N07	E41	10484			32	SF C 4.5							7.5E-03
HOLL		2200	2200	2212	N03	E42	10484	10	24.0	12	SF		3	E		32		F
GOES		2200	2213U	2318D	N03	E42	10484			78D	SF C 6.2							3.2E-03
GOES	21	0249	0253	0300	N05	E35	10484			11	SF C 2.5							1.4E-03
LEAR		0252	0252	0304	N05	E35	10484	10	23.7	12	SF		3	E		25		F
GOES		0319	0345	0413	N06	E37	10484			54	SF C 7.9							1.6E-02
LEAR		0334	0343	0411	N06	E37	10484	10	23.9	37	SF		3	E		30		F
GOES		0451	0459	0509	N06	E35	10484			18	SF C 6.0							5.8E-03
LEAR		0453	0459	0503	N06	E35	10484	10	23.8	10	SF		3	E		21		F
LEAR		0631	0631	0643	N03	E35	10484	10	23.9	12	SF		3	E		31		F
GOES		0821	0827	0831	N03	E34	10484			10	SF M 1.0							4.2E-03
LEAR		0824	0825	0841	N03	E34	10484	10	23.9	17	SF		3	E		62		F
GOES		1242	1245	1252						10	C 3.4							1.9E-03
HOLL		1511	1512	1525	N02	E31	10484	10	23.9	14	SF		3	E		15		UF
GOES		1757	1800	1803	N07	E28	10484			6	SF C 2.5							8.3E-04
HOLL		1759	1800	1804	N07	E28	10484	10	23.8	5	SF		3	E		11		FH
GOES		1917	1920	1924						7	C 3.3							1.0E-03
GOES		1922	2330	2705						463	M 2.4							2.7E-01T
HOLL		2023	2024	2029	S09	E16	10483	10	23.0	6	SF		3	E		12		F
HOLL		2031	2037	2045	N07	E27	10484	10	23.9	14	SF		3	E		12		FH
LEAR	22	0133	0133	0135	N06	E24	10484	10	23.9	2	SF		3	E		15		

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Sta	Day	Start (UT)	Max (UT)	End (UT)	Lat	CMD	NOAA/ USAF Region	CMP Mo	Dur Day	(Min)	Imp Opt	Xray	Obs See	Type	Area Measurement			Remarks
															Time (UT)	Apparent (10-6 Disk)	Corr (Sq Deg)	
LEAR	22	0158	0201	0212	N04	E26	10484	10	24.0	14	SF		3	E		59		FH
LEAR		0213	0221	0231	N05	E26	10484	10	24.0	18	SF		3	E		25		FH
LEAR		0236	0238	0243	N04	E28	10484	10	24.2	7	SF		3	E		14		FH
GOES		0328	0351	0521	N07	E25	10486			113	SF	M 3.7						1.9E-01
LEAR		0333	0333	0338	N07	E25	10484	10	24.0	5	SF		3	E		23		F
LEAR		0414	0422	0437	N04	E24	10484	10	24.0	23	SF		3	E		74		FH
LEAR		0439	0526	0859	N05	E20	10484	10	23.7	260	SF		3	E		46		ZFT
GOES		0830	0844	0853			10486			23		M 1.7						
GOES		0937	0956	0959			10486			22		M 1.7						1.9E-02
HOLL		1424	1427	1439	N03	E18	10484	10	23.9	15	SF		3	E		13		F
GOES		1506	1511	1513	N05	E22	10484			7	SN	M 1.4						3.9E-03
HOLL		1507	1511	1518	N05	E22	10484	10	24.3	11	SN		3	E		50		
GOES		1557	1601	1604	N03	E17	10484			7	SN	M 1.2						3.6E-03
HOLL		1559	1601	1610	N03	E17	10484	10	23.9	11	SN		3	E		96		
HOLL		1701	1703	1716	N03	E16	10484	10	23.9	15	SF		3	E		28		
HOLL		1821	1822	1829	N07	E16	10484	10	24.0	8	SF		3	E		32		
GOES		1947	2007	2028			10486			41		M 9.9						1.6E-01
HOLL		2013	2013	2017	N03	E14	10484	10	23.9	4	SF		3	E		17		
HOLL		2020	2028	2043	S18	E78	10486	10	28.8	23	SF		3	E		81		YF
HOLL		2037	2038	2044	N03	E14	10484	10	23.9	7	SF		3	E		11		
GOES		2156	2204	2217			10486			21		M 2.1						2.3E-02
HOLL		2244	2245	2247	N03	E13	10484	10	23.9	3	SF		3	E		14		
LEAR		2358		2402	N03	E12	10484	10	23.9	4	SF		3	E		13		ZF
LEAR	23	0116	0117	0132	N03	E11	10484	10	23.9	16	SF		3	E		45		ZF
GOES		0235	0241	0244	N03	E15	10484			9	SN	M 2.4						7.3E-03
LEAR		0236	0240	0250	N03	E15	10484	10	24.2	14	SN		3	E		91		ZF
LEAR		0630	0630	0633	N03	E14	10484	10	24.3	3	SF		3	E		16		FH
GOES		0702	0708	0710	N04	E13	10484			8	1N	M 3.2						7.9E-03
LEAR		0705	0707	0718	N04	E13	10484	10	24.3	13	1N		3	E		115		FE
GOES		0819	0835	0849	S21	E88	10486			30	1B	X 5.4						6.0E-01
LEAR		0824	0846	0921	S21	E88	10486	10	30.1	57	1B		3	E		190		E
GOES		1049	1053	1055			10484			6		M 2.7						6.5E-03
HOLL		1422	1423	1437	N05	E00	10484	10	23.6	15	SF		3	E		12		
HOLL		1813	1813	1821	N01	E05	10484	10	24.1	8	SF		3	E		12		
GOES		1950	2004	2014	S17	E84	10486			24	1N	X 1.1						9.8E-02
HOLL		1955	1957	2028	S17	E84	10486	10	30.2	33	1N		3	E		119		F
LEAR		2307	2307	2314	N08	E00	10484	10	24.0	7	SF		3	E		36		F
LEAR	24	0154	0159	0215	N01	E00	10484	10	24.1	21	SF		3	E		25		F
LEAR		0222	0247	0328	S19	E72	10486	10	29.6	66	1N		3	E		107		FE
GOES		0227	0254	0314	S19	E72	10486			47	1N	M 7.6						1.6E-01
GOES		0504	0510	0516	S24	E74	10486			12	1F	M 4.2						1.9E-02
LEAR		0508	0510	0519	S24	E74	10486	10	29.9	11	1F		3	E		161		
LEAR		0556	0557	0558	N04	E00	10484	10	24.2	2	SF		3	E		18		
GOES		0603	0607	0612			10484			9		C 7.5						3.5E-03
LEAR		0621	0621	0629	S15	E66	10486	10	29.3	8	SF		3	E		30		F
LEAR		0635	0638	0642	S15	E66	10486	10	29.3	7	SF		3	E		11		
LEAR		0747	0747	0804	N01	W08	10484	10	23.7	17	SF		3	E		16		F
LEAR		0826	0829	0836	N04	W02	10484	10	24.2	10	SF		3	E		55		
GOES		0837	0840	0842	N03	W07	10484			5	SF	C 4.8						1.1E-03
LEAR		0839	0840	0843	N03	W07	10484	10	23.8	4	SF		3	E		29		F
GOES		0915	0918	0924			10484			9		C 4.6						2.3E-03
GOES		0952	0959	1008			10484			16		C 5.7						4.8E-03
GOES		1031	1035	1037			10484			6		C 9.1						1.9E-03
GOES		1523	1712	1842	S17	E55	10486			199	SF	C 8.9						8.2E-02
HOLL		1536	1539	1727	S17	E55	10486	10	28.8	111	SF		3	E		19		F
HOLL		1731	1752	1759	S16	E53	10486	10	28.7	28	SF		3	E		14		F
HOLL		1759	1810	1818	S16	E54	10486	10	28.8	19	SF		3	E		13		
GOES		1842	1856	1905			10486			23		M 1.3						1.4E-02
GOES		2021	2027	2030	N04	W08	10484			9	SF	C 5.3						2.6E-03
HOLL		2024	2024	2031	N04	W08	10484	10	24.2	7	SF		3	E		30		FH
GOES		2135	2140	2145	N05	W09	10484			10	1N	M 1.0						4.3E-03
HOLL		2138	2139	2148	N05	W09	10484	10	24.2	10	1N		3	E		119		FH
LEAR	25	0155	0157	0159	N04	W11	10484	10	24.2	4	SF		3	E		18		ZF
GOES		0202	0206	0214			10484			12		C 4.3						2.3E-03
GOES		0256	0300	0304	N03	W17	10484			8	SF	C 2.6						9.9E-04

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Sta	Day	Start (UT)	Max (UT)	End (UT)	Lat	CMD	NOAA/ USAF Region	CMP Mo	Day	Dur (Min)	Imp Opt	Xray	Obs See	Type	Area Measurement			Remarks	
															Time (UT)	Apparent (10-6 Disk)	Corr (Sq Deg)		
LEAR	25	0259	0300	0307	N03	W17	10484	10	23.8	8	SF		3	E		29		ZF	
LEAR		0332	0352	0415	N05	W13	10484	10	24.2	43	1F		3	E		68		FH	
GOES		0336	0341	0347	N05	W13	10484			11	SF	C 3.9						2.1E-03	
GOES		0353	0356	0359						6		C 3.4						9.9E-04	
LEAR		0415	0550	0709	S15	E43	10486	10	28.4	174	2N		3	E		442		FE	
GOES		0417	0446	0528	S15	E43	10486			71	2N	M 1.2						4.1E-02	
GOES		0544	0553	0626	N00	W15	10484			42	SF	M 1.7						3.8E-02	
LEAR		0552	0601	0622	N00	W15	10484	10	24.1	30	SF		3	E		62		F	
SVTO		0559E	0559U	0606	S11	E48	10486	10	28.9	7D	SF		3	E		40		F	
SVTO		0607	0616	0623	S10	E48	10486	10	28.9	16	SF		3	E		16			
LEAR		0711	0714	0719	S18	E49	10486	10	29.0	8	SF		3	E		18		F	
GOES		0938	0949	0952						14		C 3.4						2.2E-03	
GOES		1026	1035	1045	N03	W20	10484			19	SF	M 1.5						1.2E-02	
SVTO		1039E	1040U	1044D	N03	W20	10484	10	23.9	5D	SF		2	E		19		F	
GOES		1124	1128	1132						8		C 3.4						1.5E-03	
GOES		1438	1452	1504						26		C 4.2						5.7E-03	
GOES		1800	1804	1806						6		C 2.4						7.6E-04	
HOLL		1834	1840	1851	S11	E37	10486	10	28.5	17	SF		3	E		14			
GOES		1925	1933	1944						19		C 3.2						3.0E-03	
GOES		2033	2043	2051						18		C 3.3						3.1E-03	
GOES		2226	2231	2233	S19	E48				7	1N	C 7.9						2.2E-03	
GOES	26	0045	0050	0057						12		C 3.2						2.1E-03	
LEAR		0144E	0144U	0150	S17	E49	10486	10	29.8	6D	SF		2	E		47			
GOES		0557	0654	0733	S15	E44	10486			96	3B	X 1.2						5.1E-01	
LEAR		0600E	0627	0850	S17	E38	10486	10	29.1	170D	3N		2	E		661		UF	
GOES		1415	1420	1424	N05	W33	10484			9	SF	M 1.0						4.1E-03	
SVTO		1422E	1422U	1437	N03	W36	10484	10	23.9	15D	1F		3	E		113		F	
HOLL		1423	1424	1443	N05	W33	10484	10	24.1	20	SF		3	E		81		F	
HOLL		1618	1619	1628	S18	E29	10486	10	28.9	10	SF		3	E		21		F	
HOLL		1721	1733	2016	N02	W38	10484	10	23.9	175	1N		3	E		162		F	
GOES		1721	1819	1921	N02	W38	10484			120	1N	X 1.2						6.3E-01	
HOLL		1725	1726	1732	S09	W44	10483	10	23.4	7	SF		3	E		12			
HOLL		2126	2139	2226	N01	W38	10484	10	24.0	60	2N		3	E		333		F	
GOES		2134	2140	2148	N01	W38	10484			14	2N	M 7.6						4.3E-02	
GOES	27	0133	0138	0144	S21	E30	10486			11	SF	C 6.2						3.6E-03	
LEAR		0135	0137	0144	S21	E30	10486	10	29.4	9	SF		3	E		24		F	
LEAR		0207	0207	0212	N08	E22			10	28.7	5	SF		3	E		13		
LEAR		0240	0240	0248	N07	E21			10	28.7	8	SF		3	E		15		F
LEAR		0248	0249	0252	N07	E21			10	28.7	4	SF		3	E		13		F
LEAR		0339	0349	0357	N01	W43	10484	10	23.9	18	SF		2	E		38		F	
LEAR		0358	0400	0407	N00	W43	10484	10	23.9	9	SF		2	E		17		F	
LEAR		0409	0413	0416	N00	W44	10484	10	23.9	7	SF		2	E		24		F	
GOES		0412	0439	0508	N00	W44	10484			56	SF	M 1.2						3.0E-02	
LEAR		0428	0434	0438	N01	W43	10484	10	24.0	10	SF		3	E		17		F	
GOES		0613	0618	0628	S20	E29	10486			15	SF	C 9.0						7.3E-03	
LEAR		0614	0616	0629	S20	E29	10486	10	29.5	15	SF		3	E		55		F	
LEAR		0746	0826	0932	N00	W45	10484	10	24.0	106	2F		3	E		322		F	
GOES		0751	0833	0924	N00	W45	10484			93	2F	M 2.7						1.2E-01	
SVTO		0834E	0838	0932D	S01	W51	10484	10	23.5	58D	2F		2	E		334		F	
SVTO		0847	0847	0850	N08	E17			10	28.6	3	SF		3	E		10		F
GOES		0921	0927	0932	S16	E26	10486			11	SF	M 5.0						2.6E-02	
LEAR		0923	0923	0944	S16	E26	10486	10	29.4	21	SF		3	E		72		F	
SVTO		1029	1029	1035	N08	E15			10	28.6	6	SF		3	E		24		
GOES		1227	1243	1252	S17	E25	10486			25	SF	M 6.7						6.4E-02	
SVTO		1251E	1251U	1304	S17	E25	10486	10	29.4	13D	SF		2	E		66			
SVTO		1253E	1258U	1310	N07	W46	10484	10	24.1	17D	SF		2	E		44			
GOES		1402	1411	1421			10488			19		C 5.1						5.3E-03	
HOLL		1408	1412U	1447D	N09	E11			10	28.4	39D	SF		3	E		85		F
HOLL		1451E	1457U	1528D	N09	E12			10	28.5	37D	SF		3	E		46		F
GOES		1453	1457	1507	N09	E12	10488			14	SF	C 5.7						4.5E-03	
HOLL		1611	1621	1636	N10	E13			10	28.6	25	SF		3	E		63		
HOLL		1702	1704	1710	N07	E12	10488	10	28.6	8	SF		3	E		14		FH	
GOES		1834	1845	1855			10486			21		C 7.5						7.4E-03	
HOLL		1836	1838	1859	N04	W56	10484	10	23.6	23	SF		3	E		47		F	
HOLL		1842	1846	1854	S17	E11	10486	10	28.6	12	SF		3	E		21		F	
GOES		1948	1957	2016	N07	W50	10484			28	1N	C 9.0						1.1E-02	

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Sta	Day	Start (UT)	Max (UT)	End (UT)	Lat	CMD	NOAA/ USAF Region	CMP Mo	Dur Day	(Min)	Imp Opt	Xray	Obs See	Type	Area Measurement			Remarks
															Time (UT)	Apparent (10 ⁻⁶ Disk)	Corr (Sq Deg)	
HOLL	27	1949	1957	2029	N07	W50	10484	10	24.1	40	1N		3	E		270		F
HOLL		1952	1957	2005	N09	E13	10488	10	28.8	13	SF		3	E		33		F
HOLL		2120	2120	2122	N08	E09	10488	10	28.6	2	SF		3	E		42		
GOES		2146	2151	2205	N08	E09	10488			19	SN	M 1.9						1.3E-02
HOLL		2149	2151	2237	N08	E09	10488	10	28.6	48	SN		3	E		87		UF
HOLL		2239	2240	2245	N09	E11	10488	10	28.8	6	SF		3	E		34		
GOES		2312	2317	2322	N10	E10	10488			10	SF	C 4.1						2.2E-03
LEAR		2314	2314	2322	N10	E10	10488	10	28.7	8	SF		3	E		30		F
GOES		2345	2352	2409			10486			24		C 6.8						7.8E-03
LEAR		2348	2348	2353	S17	E17	10486	10	29.3	5	SF		3	E		45		F
LEAR		2359	2401	2410	N08	E08	10488	10	28.6	11	SF		3	E		12		UF
LEAR		2359	2405	2411	S19	E16	10486	10	29.2	12	SF		3	E		30		F
LEAR	28	0012	0014	0016	N08	E08	10488	10	28.6	4	SF		3	E		12		UF
LEAR		0032	0044	0121	N08	E08	10488	10	28.6	49	SF		3	E		52		UF
GOES		0041	0045	0048	N08	E08	10488			7	SF	C 5.3						1.8E-03
LEAR		0054	0100	0129	N03	W55	10484	10	23.9	35	1F		3	E		103		F
GOES		0056	0059	0102	N03	W55	10484			6	1F	C 6.7						1.8E-03
LEAR		0122	0125	0134	N08	E07	10488	10	28.6	12	SF		3	E		19		UF
GOES		0127	0133	0145	S19	E15	10486			18	SF	C 7.5						6.1E-03
LEAR		0130	0133	0140	S19	E15	10486	10	29.2	10	SF		3	E		34		F
LEAR		0135	0137	0200	N08	E07	10488	10	28.6	25	SF		3	E		39		UF
LEAR		0219	0219	0223	N08	E07	10488	10	28.6	4	SF		3	E		38		UF
LEAR		0227	0234	0245	N09	E08	10488	10	28.7	18	SF		3	E		30		UF
LEAR		0248	0257	0309	N08	E07	10488	10	28.6	21	SF		3	E		50		UF
LEAR		0309	0313	0316	N10	E07	10488	10	28.6	7	SF		3	E		33		UF
LEAR		0317	0333	0352	N08	E07	10488	10	28.7	35	SF		3	E		73		UF
LEAR		0353	0411	0513	N08	E06	10488	10	28.6	80	1F		3	E		108		UF
GOES		0507	0511	0514	N06	W53	10484			7	1F	C 7.7						2.6E-03
LEAR		0509	0513	0552	N06	W53	10484	10	24.2	43	1F		3	E		180		UF
LEAR		0514	0548	0620	N08	E05	10488	10	28.6	66	SF		3	E		43		UF
LEAR		0547	0549	0553	S11	E00	10489	10	28.2	6	SF		3	E		18		F
LEAR		0553	0602	0638	N03	W58	10484	10	23.9	45	1F		3	E		134		F
LEAR		0623	0647	0703	N10	E04	10488	10	28.6	40	SF		3	E		25		UF
LEAR		0734	0737	0743	S11	W01	10489	10	28.2	9	SF		3	E		26		F
LEAR		0738	0740	0749	N06	W56	10484	10	24.1	11	SF		3	E		39		F
SVTO		0752	0753	0816D	N07	E04	10488	10	28.6	24D	SF		3	E		43		F
LEAR		0753	0755	0759	N08	E04	10488	10	28.6	6	SF		3	E		56		F
LEAR		0756	0757	0802	S20	E08	10486	10	28.9	6	SF		3	E		18		F
LEAR		0819	0827	0838	S17	E12	10486	10	29.2	19	SF		3	E		29		F
GOES		0835	0839	0844			10488			9		C 8.7						4.1E-03
LEAR		0837	0840	0844	N08	E03	10488	10	28.6	7	SF		3	E		51		UF
LEAR		0842	0849	0906	S17	E09	10486	10	29.0	24	SF		3	E		53		F
SVTO		0842	0859U	0902D	N08	E04	10488	10	28.7	20D	SF		3	E		82		UF
SVTO		0904	0910	0924	N08	E03	10488	10	28.6	20	SF		3	E		18		UF
LEAR		0908	0913	0916	N08	E03	10488	10	28.6	8	SF		3	E		15		UF
GOES		0951	1110	1124	S16	E08	10486			93	4B	X17.2						1.8E00
SVTO		1001E	1205U	1420D	S16	E08	10486	10	29.0	259D	4B		2	E				UF
SVTO		1132E	1132	1211D	S06	E02	10491	10	28.6	39D	SF		2	E		21		
SVTO		1213E	1222U	1314D	N09	E02	10488	10	28.6	61D	SF		2	E		57		F
HOLL		1452	1453	1534	S16	E01	10486	10	28.7	42	SF		2	E		32		F
HOLL		1601E	1613U	1617D	S16	W01	10486	10	28.6	16D	SF		3	E		15		
HOLL		1613	1615	1645	N06	W61	10484	10	24.1	32	2F		3	E		330		FH
HOLL		1628	1631	1638	N07	W02	10488	10	28.5	10	SF		3	E		12		F
HOLL		1945	1946	1950	S15	E03	10486	10	29.0	5	SF		3	E		17		F
HOLL		2033	2041	2105	S15	E03	10486	10	29.1	32	SF		3	E		25		F
HOLL		2047	2103	2200	N10	W03	10488	10	28.6	73	SF		3	E		29		
HOLL		2137	2138	2151	S15	E03	10486	10	29.1	14	SF		3	E		13		F
GOES	29	0026	0151	0208			10486			102		M 1.1						5.2E-02
LEAR		0029	0047	0239	S18	E08	10486	10	29.6	130	1F		3	E		151		F
LEAR		0146	0147	0208D	N07	W07	10488	10	28.5	22D	SF		3	E		47		F
LEAR		0319E	0319	0331	S26	E06		10	29.6	12D	SF		3	E		36		
LEAR		0338	0339	0346	N08	W07	10488	10	28.6	8	SF		3	E		57		
GOES		0408	0511	0554			10486			106		M 3.5						1.2E-01
GOES		0410	0417	0425						15		C 6.2						4.9E-03
LEAR		0412	0412	0425	N06	W09	10488	10	28.5	13	SF		3	E		30		F
LEAR		0427	0428	0431	N10	W08	10488	10	28.6	4	SF		3	E		29		

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Oct 03

H α SOLAR FLARES

OCTOBER 2003

Sta	Day	Start (UT)	Max (UT)	End (UT)	Lat	CMD	NOAA/ USAF Region	CMP Mo	Dur Day	(Min)	Imp Opt	Xray	Obs See	Type	Area Measurement			Remarks
															Time (UT)	Apparent (10 ⁻⁶ Disk)	Corr (Sq Deg)	
LEAR	29	0437	0459	0636	S17	E06	10486	10	29.6	119	SN		3	E		96		F
GOES		1415	1422	1428	S16	W03	10486			13	SF	C 9.2						5.3E-03
HOLL		1421	1422	1446	S16	W03	10486	10	29.4	25	SF		3	E		15		F
GOES		1649	1657	1712	S19	W07	10486			23	SF	C 8.1						8.9E-03
HOLL		1652	1653	1811	S19	W07	10486	10	29.2	79	SF		3	E		83		FH
GOES		1810	1813	1817	N08	W16	10488			7	SF	C 7.8						2.7E-03
HOLL		1811	1812	1829	N08	W16	10488	10	28.5	18	SF		3	E		44		
HOLL		2001	2004	2015	S15	W02	10486	10	29.7	14	SF		3	E		15		F
HOLL		2008	2036	2055	S22	W41	10492	10	26.7	47	SF		3	E		44		F
HOLL		2037	2041	2046	N12	W13	10488	10	28.9	9	SF		3	E		17		
HOLL		2037	2042	2253	S15	W02	10486	10	29.7	136	2B		3	E		542		ZU
GOES		2037	2049	2101	S15	W02	10486			24	2B	X10.0						8.7E-01
LEAR	30	0153	0159	0254	N08	W22	10488	10	28.4	61	1F		3	E		145		F
GOES		0156	0207	0229	N08	W22	10488			33	1F	M 1.6						3.0E-02
LEAR		0215	0216	0221	S20	W20	10486	10	28.6	6	SF		3	E		25		F
LEAR		0820	0839	0849	S21	W53	10492	10	26.3	29	1F		3	E		101		
SVTO		0826	0839	0850	S21	W55	10492	10	26.1	24	1F		3	E		103		F
GOES		0832	0837	0844	S21	W55	10492			12	1F	C 7.7						4.9E-03
GOES		1222	1226	1230						8		C 7.6						3.2E-03
GOES		1245	1251	1257			10488			12		C 7.3						4.6E-03
GOES		1515	1528	1537			10486			22		M 1.5						1.5E-02
GOES		1614	1618	1624			10488			10		C 5.7						3.0E-03
GOES		1830	1836	1843			10488			13		C 5.8						3.6E-03
GOES		1918	1921	1927						9		C 5.6						2.6E-03
LEAR	31	0148	0149	0156	N13	E06	10487	10	31.5	8	SF		3	E		19		F
GOES		0150	0153	0156	N08	W25	10488			6	SF	C 5.5						1.7E-03
LEAR		0152	0153	0159	N08	W25	10488	10	29.2	7	SF		3	E		39		
GOES		0239	0243	0250	N08	W33	10488			11	SF	C 5.0						3.0E-03
LEAR		0240	0242	0248	N08	W33	10488	10	28.6	8	SF		3	E		27		
LEAR		0354	0356	0401	N08	W26	10488	10	29.2	7	SF		3	E		17		F
GOES		0426	0433	0437						11		M 2.0						9.2E-03
LEAR		0603	0615	0701	N08	W28	10488	10	29.1	58	SF		3	E		66		F
GOES		0608	0616	0628	N08	W28	10488			20	SF	M 1.1						1.1E-02
SVTO		0611E	0612U	0629	N10	W30	10488	10	29.0	18D	SF		3	E		79		F
SVTO		0908	0909	0913	N08	W30	10488	10	29.1	5	SF		3	E		30		
GOES		1224	1231	1235						11		C 8.5						4.1E-03
HOLL		1611	1612	1618	N12	W40	10488	10	28.7	7	SF		3	E		20		F
GOES		1644	1706	1748			10486			64		C 5.3						1.7E-02
HOLL		1647	1649	1724	S19	W44	10486	10	28.3	37	SF		3	E		37		FH
HOLL		1736	1737	1746	S20	W28	10486	10	29.6	10	SF		3	E		25		F
HOLL		1927	1927	1933	S16	W27	10486	10	29.8	6	SF		3	E		28		F
GOES		2014	2039	2049	N08	W44	10488			35	SF	C 5.1						8.7E-03
HOLL		2035	2042	2047	N08	W44	10488	10	28.5	12	SF		3	E		16		F
HOLL		2050	2110	2144	N08	W44	10488	10	28.6	54	SF		3	E		22		
GOES		2050	2111	2141	N08	W44	10488			51	SF	C 9.5						2.4E-02
GOES		2350	2420	2437						47		C 4.4						9.6E-03

"Remarks"

A = Eruptive prominence whose base is less than 90 degrees 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.

S O L A R R A D I O E M I S S I O N

Selected Fixed Frequency Events

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Oct 03

OCTOBER 2003

Day	Freq	Sta	Type	Start (UT)	Time of Maximum (UT)	Duration (Min)	Flux Density		Int	Remarks
							Peak (10 -22 W/m 2 Hz)	Mean (10 -22 W/m 2 Hz)		
02	2695	LEAR	8 S	0652.0	0652.0	1.0	38.0			QL=4 ST=2 TYP=3
	8800	LEAR	8 S	0652.0	0653.0	2.0	220.0			QL=4 ST=2 TYP=3
	8800	SVTO	4 S/F	0652.0	0653.0	3.0	320.0			QL=4 ST=2 TYP=3
	2695	SVTO	8 S	0652.0	0652.0	2.0	49.0			QL=4 ST=2 TYP=3
03	2695	LEAR	8 S	0756.0	0756.0	U	46.0			QL=4 ST=2 TYP=3
	8800	SVTO	8 S	0756.0	0756.0	U	40.0			QL=4 ST=2 TYP=3
	2695	SVTO	8 S	0756.0	0756.0	U	58.0			QL=4 ST=2 TYP=3
04	8800	SGMR	8 S	1545.0	1546.0	2.0	80.0			QL=4 ST=2 TYP=3
	2695	SGMR	8 S	1546.0	1546.0	1.0	22.0			QL=4 ST=2 TYP=3
	2695	SVTO	8 S	1546.0	1546.0	1.0	23.0			QL=4 ST=2 TYP=3
	8800	SVTO	8 S	1546.0	1546.0	2.0	64.0			QL=4 ST=2 TYP=3
05	2695	SGMR	8 S	1322.0	1322.0	1.0	41.0			QL=4 ST=2 TYP=3
	2695	SVTO	8 S	1322.0	1322.0	1.0	52.0			QL=4 ST=2 TYP=3
18	8800	SGMR	4 S/F	1705.0	1706.0	5.0	53.0			QL=4 ST=2 TYP=3
	2695	SGMR	4 S/F	1706.0	1706.0	4.0	26.0			QL=4 ST=2 TYP=3
19	8800	SVTO	4 S/F	0612.0	0620.0	15.0	200.0			QL=4 ST=2 TYP=3
	8800	LEAR	4 S/F	0619.0	0620.0	3.0	130.0			QL=4 ST=2 TYP=3
	2695	SVTO	8 S	0620.0	0621.0	1.0	46.0			QL=4 ST=2 TYP=3
	2695	LEAR	8 S	0621.0	0621.0	U	37.0			QL=4 ST=2 TYP=3
	8800	SGMR	48 C	1633.0	1652.0	67.0	1100.0			QL=4 ST=2 TYP=8
	2695	SGMR	48 C	1634.0	1652.0	46.0	510.0			QL=4 ST=2 TYP=8
	2695	PALE	48 C	1645.0	1652.0	21.0	660.0			QL=4 ST=2 TYP=8
	8800	PALE	48 C	1649.0	1652.0	16.0	1000.0			QL=4 ST=2 TYP=8
20	8800	SVTO	48 C	0709.0	0711.0	16.0	180.0			QL=4 ST=2 TYP=8
	8800	LEAR	8 S	0710.0	0711.0	2.0	120.0			QL=4 ST=2 TYP=3
	8800	SGMR	8 S	1856.0	1857.0	1.0	91.0			QL=4 ST=2 TYP=3
	8800	PALE	8 S	2200.0	2200.0	1.0	180.0			QL=4 ST=2 TYP=3
21	8800	LEAR	48 C	0326.0E	0338.0U	13.0D	91.0			QL=4 ST=2 TYP=8
	2695	LEAR	4 S/F	0344.0	0345.0	7.0	150.0			QL=4 ST=2 TYP=3
	2695	PALE	4 S/F	0344.0	0346.0	4.0	190.0			QL=4 ST=1 TYP=3
	8800	LEAR	8 S	0345.0	0345.0	1.0	42.0			QL=4 ST=2 TYP=3
	8800	LEAR	49 GB	0823.0	0824.0	2.0	620.0			QL=4 ST=2 TYP=6
	8800	SVTO	49 GB	0823.0	0824.0	9.0	650.0			QL=4 ST=2 TYP=6
	2695	LEAR	8 S	0824.0	0824.0	U	48.0			QL=4 ST=2 TYP=3
	2695	SVTO	8 S	0824.0	0824.0	U	35.0			QL=4 ST=2 TYP=3
	2695	PALE	4 S/F	2034.0	2039.0	21.0	270.0			QL=4 ST=2 TYP=3
	2695	SGMR	4 S/F	2037.0	2042.0	18.0	240.0			QL=4 ST=2 TYP=3
	8800	SGMR	4 S/F	2038.0	2042.0	15.0	370.0			QL=4 ST=2 TYP=3
22	8800	PALE	8 S	0324.0	0326.0	2.0	350.0			QL=4 ST=2 TYP=3
	2695	PALE	4 S/F	0324.0	0326.0	4.0	330.0			QL=4 ST=2 TYP=3
	2695	LEAR	4 S/F	0327.0	0330.0	7.0	320.0			QL=4 ST=2 TYP=3
	8800	LEAR	4 S/F	0327.0	0330.0	7.0	480.0			QL=4 ST=2 TYP=3
	8800	LEAR	4 S/F	0427.0	0429.0	5.0	210.0			QL=4 ST=2 TYP=3
	2695	LEAR	4 S/F	0427.0	0429.0	12.0	170.0			QL=4 ST=2 TYP=3
	8800	SVTO	8 S	0942.0	0942.0	U	42.0			QL=4 ST=2 TYP=3
	8800	SGMR	8 S	1215.0	1215.0	1.0	66.0			QL=4 ST=2 TYP=3
	8800	SGMR	8 S	1509.0	1509.0	1.0	51.0			QL=4 ST=2 TYP=3
	8800	SVTO	8 S	1509.0	1509.0	2.0	67.0			QL=4 ST=2 TYP=3
	8800	SGMR	8 S	1600.0	1601.0	1.0	130.0			QL=4 ST=2 TYP=3
	8800	PALE	8 S	1730.0	1730.0	U	54.0			QL=4 ST=2 TYP=3
	8800	SGMR	8 S	1731.0	1731.0	1.0	50.0			QL=4 ST=2 TYP=3
	8800	PALE	48 C	1945.0	2009.0	41.0	1500.0			QL=4 ST=2 TYP=8
	8800	SGMR	48 C	1946.0	2011.0	43.0	2400.0			QL=4 ST=2 TYP=8
	2695	PALE	48 C	1950.0	2009.0	23.0	240.0			QL=4 ST=2 TYP=8
	2695	SGMR	48 C	1951.0	2011.0	38.0	250.0			QL=4 ST=2 TYP=8
	8800	PALE	8 S	2156.0	2157.0	1.0	68.0			QL=4 ST=2 TYP=3
	8800	LEAR	8 S	2244.0	2244.0	1.0	60.0			QL=4 ST=2 TYP=3
23	8800	LEAR	4 S/F	0115.0	0115.0	3.0	73.0			QL=4 ST=2 TYP=3
	2695	PALE	8 S	0237.0	0237.0	U	54.0			QL=4 ST=2 TYP=3
	8800	PALE	8 S	0238.0	0238.0	U	91.0			QL=4 ST=2 TYP=3

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Oct 03

S O L A R R A D I O E M I S S I O N

Selected Fixed Frequency Events

OCTOBER 2003

Day	Freq Sta	Type	Start (UT)	Time of Maximum (UT)	Duration (Min)	Flux Density		Int	Remarks
						Peak (10 -22 W/m 2 Hz)	Mean (2 Hz)		
23	8800 LEAR	8 S	0239.0	0239.0	1.0	86.0			QL=4 ST=2 TYP=3
	8800 LEAR	8 S	0523.0	0523.0	U	110.0			QL=4 ST=2 TYP=3
	2695 LEAR	8 S	0705.0	0706.0	1.0	150.0			QL=4 ST=2 TYP=3
	8800 LEAR	8 S	0705.0	0706.0	2.0	390.0			QL=4 ST=2 TYP=3
	2695 SVTO	8 S	0705.0	0706.0	1.0	160.0			QL=4 ST=2 TYP=3
	8800 SVTO	8 S	0705.0	0705.0	1.0	280.0			QL=4 ST=2 TYP=3
	8800 LEAR	48 C	0817.0	0840.0	93.0	6600.0			QL=4 ST=2 TYP=8
	8800 SVTO	48 C	0817.0	0840.0	106.0	6200.0			QL=4 ST=2 TYP=8
	2695 SVTO	48 C	0823.0	0904.0	105.0	1500.0			QL=4 ST=2 TYP=8
	2695 LEAR	48 C	0824.0	0903.0	86.0	1500.0			QL=4 ST=2 TYP=8
	2695 SVTO	4 S/F	1032.0	1044.0	26.0	130.0			QL=4 ST=2 TYP=3
	8800 SVTO	4 S/F	1036.0	1042.0	17.0	74.0			QL=4 ST=2 TYP=3
	8800 SGMR	48 C	1953.0	1957.0	21.0	610.0			QL=4 ST=2 TYP=8
	8800 PALE	48 C	1953.0	2159.0	127.0	290.0			QL=4 ST=2 TYP=8
	2695 PALE	48 C	1953.0	1955.0	127.0	77.0			QL=4 ST=2 TYP=8
	2695 SGMR	4 S/F	1954.0	1957.0	18.0	65.0			QL=4 ST=2 TYP=3
	2695 SGMR	4 S/F	2021.0	2023.0	12.0	55.0			QL=4 ST=2 TYP=3
	8800 SGMR	8 S	2022.0	2023.0	1.0	100.0			QL=4 ST=2 TYP=3
	8800 LEAR	8 S	2306.0	2307.0	1.0	100.0			QL=4 ST=2 TYP=3
24	8800 LEAR	8 S	0053.0	0053.0	U	100.0			QL=4 ST=2 TYP=3
	8800 PALE	8 S	0136.0	0136.0	1.0	110.0			QL=4 ST=2 TYP=3
	8800 PALE	48 C	0136.0	0250.0	102.0	3800.0			QL=4 ST=2 TYP=8
	8800 LEAR	8 S	0138.0	0138.0	1.0	82.0			QL=4 ST=2 TYP=3
	8800 LEAR	8 S	0157.0	0157.0	U	69.0			QL=4 ST=2 TYP=3
	8800 LEAR	48 C	0224.0	0252.0	58.0	3800.0			QL=4 ST=2 TYP=8
	2695 PALE	48 C	0228.0	0251.0	47.0	630.0			QL=4 ST=2 TYP=8
	2695 LEAR	48 C	0230.0	0254.0	47.0	490.0			QL=4 ST=2 TYP=8
	2695 LEAR	4 S/F	0507.0	0509.0	3.0	91.0			QL=4 ST=2 TYP=3
	8800 LEAR	4 S/F	0507.0	0508.0	3.0	310.0			QL=4 ST=2 TYP=3
	8800 SVTO	8 S	0604.0	0605.0	2.0	130.0			QL=4 ST=2 TYP=3
	8800 LEAR	8 S	0605.0	0605.0	U	180.0			QL=4 ST=2 TYP=3
	8800 SVTO	8 S	0837.0	0837.0	1.0	39.0			QL=4 ST=2 TYP=3
	8800 SVTO	4 S/F	0953.0	0954.0	3.0	31.0			QL=2 ST=2 TYP=3
	8800 SVTO	8 S	1034.0	1034.0	1.0	93.0			QL=4 ST=2 TYP=3
	2695 SVTO	8 S	1034.0	1034.0	U	28.0			QL=4 ST=2 TYP=3
	2695 SGMR	4 S/F	1530.0	1536.0	29.0	260.0			QL=4 ST=2 TYP=3
	2695 SVTO	8 S	1534.0E	1536.0	2.0D	270.0			QL=4 ST=2 TYP=3
	8800 SVTO	8 S	1534.0E	1536.0	2.0D	380.0			QL=4 ST=2 TYP=3
	8800 SGMR	48 C	1535.0	1536.0	24.0	510.0			QL=4 ST=2 TYP=8
	8800 PALE	8 S	1658.0	1658.0	U	140.0			QL=4 ST=2 TYP=3
	2695 PALE	8 S	1658.0	1658.0	U	62.0			QL=4 ST=2 TYP=3
	8800 PALE	48 C	1738.0	1842.0	64.0	71.0			QL=4 ST=2 TYP=8
	8800 SGMR	8 S	1842.0	1842.0	U	85.0			QL=4 ST=2 TYP=3
	8800 PALE	48 C	2020.0	2023.0	4.0	220.0			QL=4 ST=2 TYP=8
	8800 SGMR	8 S	2023.0	2023.0	U	110.0			QL=4 ST=2 TYP=3
	8800 PALE	48 C	2131.0	2139.0	9.0	520.0			QL=4 ST=2 TYP=8
25	8800 LEAR	8 S	0019.0	0019.0	U	63.0			QL=4 ST=2 TYP=3
	8800 LEAR	8 S	0204.0	0205.0	2.0	53.0			QL=4 ST=2 TYP=3
	8800 PALE	8 S	0205.0	0205.0	U	56.0			QL=4 ST=2 TYP=3
	8800 LEAR	8 S	0333.0	0333.0	U	43.0			QL=4 ST=2 TYP=3
	2695 LEAR	4 S/F	0422.0	0424.0	11.0	64.0			QL=4 ST=2 TYP=3
	8800 LEAR	48 C	0537.0	0548.0	34.0	220.0			QL=4 ST=2 TYP=8
	8800 SVTO	48 C	0538.0	0548.0	23.0	150.0			QL=2 ST=2 TYP=8
	2695 SVTO	48 C	0541.0	0547.0	7.0	100.0			QL=2 ST=2 TYP=8
	2695 LEAR	4 S/F	0545.0	0547.0	12.0	130.0			QL=4 ST=2 TYP=3
	2695 SVTO	4 S/F	1028.0	1029.0	10.0	220.0			QL=4 ST=2 TYP=3
	8800 SVTO	49 GB	1028.0	1030.0	17.0	1200.0			QL=4 ST=2 TYP=6
	8800 SGMR	8 S	1216.0	1216.0	1.0	52.0			QL=4 ST=2 TYP=3
	8800 SGMR	8 S	1439.0	1440.0	1.0	66.0			QL=4 ST=2 TYP=3
	8800 SGMR	4 S/F	1445.0	1446.0	3.0	56.0			QL=4 ST=2 TYP=3
26	8800 PALE	8 S	2037.0	2037.0	U	56.0			QL=4 ST=2 TYP=3
	8800 LEAR	8 S	2231.0	2231.0	U	110.0			QL=4 ST=2 TYP=3
	8800 PALE	8 S	0031.0	0032.0	1.0	55.0			QL=4 ST=2 TYP=3
	8800 LEAR	4 S/F	0045.0	0046.0	5.0	120.0			QL=4 ST=2 TYP=3
	8800 LEAR	4 S/F	0114.0	0116.0	3.0	68.0			QL=4 ST=2 TYP=3
	8800 PALE	8 S	0116.0	0117.0	1.0	60.0			QL=4 ST=2 TYP=3

S O L A R R A D I O E M I S S I O N

Selected Fixed Frequency Events

37
Oct 03

OCTOBER 2003

Day	Freq	Sta	Type	Start (UT)	Time of Maximum (UT)	Duration (Min)	Flux Density		Int	Remarks
							Peak (10 -22 W/m 2 Hz)	Mean (2 Hz)		
26	2695	LEAR	8 S	0508.0	0508.0	1.0	34.0			QL=4 ST=2 TYP=3
	8800	LEAR	8 S	0508.0	0508.0	1.0	56.0			QL=4 ST=2 TYP=3
	8800	LEAR	48 C	0608.0	0729.0	149.0	6600.0			QL=4 ST=2 TYP=8
	8800	SVTO	48 C	0609.0	0729.0	137.0	8200.0			QL=4 ST=2 TYP=8
	2695	LEAR	48 C	0610.0	0730.0	184.0	4000.0			QL=4 ST=2 TYP=8
	2695	SVTO	48 C	0610.0	0729.0	180.0	4400.0			QL=4 ST=2 TYP=8
	2695	SVTO	20 GRF	0959.0	1004.0	26.0	94.0			QL=4 ST=2 TYP=2
	8800	SVTO	4 S/F	1003.0	1004.0	6.0	24.0			QL=4 ST=2 TYP=3
	2695	SVTO	8 S	1336.0	1336.0	U	33.0			QL=4 ST=2 TYP=3
	8800	SVTO	8 S	1336.0	1336.0	U	23.0			QL=4 ST=2 TYP=3
	8800	SGMR	8 S	1417.0	1417.0	1.0	82.0			QL=4 ST=2 TYP=3
	8800	SVTO	4 S/F	1417.0	1417.0	3.0	96.0			QL=4 ST=2 TYP=3
	8800	SGMR	8 S	1618.0	1618.0	1.0	55.0			QL=4 ST=2 TYP=3
	8800	PALE	48 C	1715.0	1731.0	113.0	4500.0			QL=4 ST=2 TYP=8
	2695	PALE	48 C	1715.0	1731.0	125.0	2500.0			QL=4 ST=2 TYP=8
	2695	SGMR	48 C	1717.0	1731.0	104.0	2000.0			QL=4 ST=2 TYP=8
	8800	SGMR	48 C	1717.0	1730.0	104.0	4100.0			QL=4 ST=2 TYP=8
	8800	PALE	8 S	2125.0	2125.0	1.0	84.0			QL=4 ST=2 TYP=3
	8800	PALE	49 GB	2137.0	2138.0	3.0	1000.0			QL=4 ST=2 TYP=6
	2695	PALE	8 S	2138.0	2138.0	U	57.0			QL=4 ST=2 TYP=3
27	8800	LEAR	8 S	0016.0	0017.0	1.0	100.0			QL=4 ST=2 TYP=3
	8800	PALE	8 S	0017.0	0017.0	U	130.0			QL=4 ST=2 TYP=3
	8800	LEAR	4 S/F	0135.0	0135.0	6.0	170.0			QL=4 ST=2 TYP=3
	8800	PALE	8 S	0135.0	0136.0	2.0	340.0			QL=4 ST=2 TYP=3
	8800	LEAR	8 S	0608.0	0608.0	U	56.0			QL=4 ST=2 TYP=3
	8800	LEAR	49 GB	0613.0	0614.0	11.0	570.0			QL=4 ST=2 TYP=6
	8800	SVTO	4 S/F	0614.0	0614.0	3.0	490.0			QL=4 ST=2 TYP=3
	8800	LEAR	48 C	0756.0	0821.0	54.0	710.0			QL=4 ST=2 TYP=8
	8800	SVTO	48 C	0758.0	0821.0	54.0	720.0			QL=4 ST=2 TYP=8
	2695	SVTO	48 C	0800.0	0821.0	52.0	1100.0			QL=4 ST=2 TYP=8
	2695	LEAR	48 C	0800.0	0821.0	60.0	1000.0			QL=4 ST=2 TYP=8
	8800	LEAR	49 GB	0905.0	0923.0	33.0	2800.0			QL=4 ST=2 TYP=6
	8800	SVTO	49 GB	0922.0	0923.0	6.0	2600.0			QL=4 ST=2 TYP=6
	2695	LEAR	8 S	0923.0	0923.0	1.0	65.0			QL=4 ST=2 TYP=3
	2695	SVTO	8 S	1229.0	1229.0	1.0	59.0			QL=4 ST=2 TYP=3
	8800	SGMR	48 C	1229.0	1229.0	26.0	1200.0			QL=4 ST=2 TYP=8
	8800	SVTO	48 C	1229.0	1229.0	30.0	1300.0			QL=4 ST=2 TYP=8
	2695	SGMR	4 S/F	1231.0	1231.0	24.0	58.0			QL=4 ST=2 TYP=3
	8800	LEAR	49 GB	2347.0	2348.0	4.0	850.0			QL=4 ST=2 TYP=6
	8800	PALE	49 GB	2348.0	2348.0	3.0	920.0			QL=4 ST=2 TYP=6
28	8800	LEAR	8 S	2356.0	2356.0	U	53.0			QL=4 ST=2 TYP=3
	8800	PALE	8 S	2356.0	2356.0	1.0	68.0			QL=4 ST=2 TYP=3
	8800	PALE	4 S/F	0004.0	0006.0	4.0	69.0			QL=4 ST=2 TYP=3
	8800	LEAR	8 S	0058.0	0058.0	1.0	190.0			QL=4 ST=2 TYP=3
	8800	PALE	8 S	0058.0	0058.0	1.0	240.0			QL=4 ST=2 TYP=3
	2695	PALE	8 S	0058.0	0058.0	1.0	60.0			QL=4 ST=2 TYP=3
	8800	LEAR	4 S/F	0132.0	0132.0	4.0	140.0			QL=4 ST=2 TYP=3
	8800	PALE	48 C	0132.0	0132.0	5.0	150.0			QL=4 ST=2 TYP=8
	8800	LEAR	8 S	0203.0	0203.0	2.0	73.0			QL=4 ST=2 TYP=3
	8800	LEAR	4 S/F	0456.0	0510.0	17.0	100.0			QL=4 ST=2 TYP=3
	2695	LEAR	8 S	0510.0	0510.0	U	62.0			QL=4 ST=2 TYP=3
	8800	LEAR	4 S/F	0816.0	0817.0	15.0	130.0			QL=4 ST=2 TYP=3
	8800	SVTO	48 C	0816.0	0817.0	25.0	200.0			QL=4 ST=2 TYP=8
	8800	LEAR	48 C	0846.0	0849.0	20.0	120.0			QL=4 ST=2 TYP=8
	8800	SVTO	4 S/F	0846.0	0849.0	25.0	110.0			QL=4 ST=2 TYP=3
	8800	SVTO	49 GB	0953.0	0954.0	3.0	650.0			QL=4 ST=2 TYP=6
	2695	SVTO	8 S	0954.0	0954.0	U	84.0			QL=4 ST=2 TYP=3
	8800	SVTO	49 GB	1003.0	1107.0	293.0	70000.0			QL=2 ST=2 TYP=6
	2695	SVTO	48 C	1014.0	1114.0	285.0	13000.0			QL=4 ST=2 TYP=8
	2695	SGMR	48 C	1131.0	1159.0	221.0	1500.0			QL=2 ST=2 TYP=8
28	8800	SGMR	48 C	1138.0	1203.0	214.0	910.0			QL=2 ST=2 TYP=8
	2695	SVTO	8 S	1530.0E	1531.0	1.0D	140.0			QL=4 ST=2 TYP=3
	8800	SGMR	48 C	1530.0	1530.0	84.0	290.0			QL=4 ST=2 TYP=8
	2695	SGMR	48 C	1530.0	1609.0	84.0	440.0			QL=4 ST=2 TYP=8
	8800	PALE	8 S	1950.0	1950.0	1.0	79.0			QL=4 ST=3 TYP=3
	8800	PALE	8 S	2302.0	2302.0	2.0	63.0			QL=4 ST=2 TYP=3

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Oct 03

S O L A R R A D I O E M I S S I O N

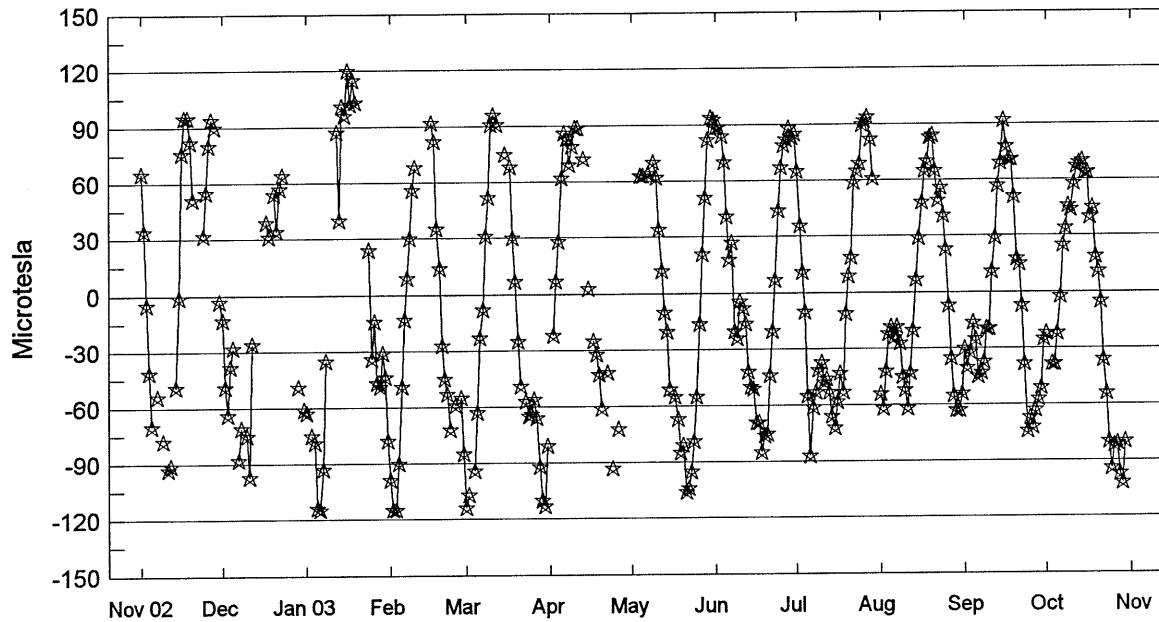
Selected Fixed Frequency Events

OCTOBER 2003

Day	Freq	Sta	Type	Start (UT)	Time of Maximum (UT)	Duration (Min)	Flux Density		Int	Remarks
							Peak (10 -22 W/m 2 Hz)	Mean (2 Hz)		
29	8800	PALE	48 C	0026.0	0029.0	51.0	250.0			QL=4 ST=2 TYP=8
	8800	LEAR	4 S/F	0027.0	0029.0	50.0	170.0			QL=4 ST=2 TYP=3
	2695	LEAR	4 S/F	0041.0	0042.0	6.0	63.0			QL=4 ST=2 TYP=3
	2695	PALE	48 C	0041.0	0042.0	9.0	82.0			QL=4 ST=2 TYP=8
	8800	LEAR	8 S	0146.0	0147.0	2.0	78.0			QL=4 ST=2 TYP=3
	2695	LEAR	48 C	0440.0	0456.0	39.0	610.0			QL=4 ST=2 TYP=8
	8800	LEAR	48 C	0453.0	0500.0	60.0	330.0			QL=4 ST=2 TYP=8
	8800	LEAR	8 S	0820.0	0820.0	U	72.0			QL=4 ST=2 TYP=3
	8800	SVTO	4 S/F	0820.0	0821.0	8.0	75.0			QL=4 ST=2 TYP=3
	8800	LEAR	4 S/F	0929.0	0931.0	3.0	93.0			QL=4 ST=2 TYP=3
	8800	SVTO	8 S	0931.0	0931.0	U	64.0			QL=4 ST=2 TYP=3
	8800	SGMR	8 S	1421.0	1421.0	U	50.0			QL=4 ST=2 TYP=3
	8800	SVTO	8 S	1421.0	1421.0	U	69.0			QL=4 ST=2 TYP=3
	8800	SGMR	8 S	1426.0	1427.0	2.0	51.0			QL=4 ST=2 TYP=3
	8800	SVTO	8 S	1456.0	1456.0	U	63.0			QL=4 ST=2 TYP=3
	8800	SVTO	8 S	1505.0	1505.0	U	64.0			QL=4 ST=2 TYP=3
	2695	SVTO	8 S	1525.0	1525.0	U	56.0			QL=4 ST=2 TYP=3
	8800	SGMR	4 S/F	1731.0	1733.0	9.0	100.0			QL=4 ST=2 TYP=3
	8800	PALE	8 S	1733.0	1733.0	U	51.0			QL=4 ST=2 TYP=3
	2695	PALE	8 S	1811.0	1811.0	U	62.0			QL=4 ST=2 TYP=3
	8800	SGMR	4 S/F	1811.0	1811.0	3.0	150.0			QL=4 ST=2 TYP=3
	8800	SGMR	8 S	1821.0	1821.0	U	53.0			QL=4 ST=2 TYP=3
	8800	PALE	8 S	2000.0	2000.0	U	51.0			QL=4 ST=2 TYP=3
	2695	SGMR	49 GB	2039.0	2041.0	16.0	2500.0			QL=4 ST=2 TYP=6
	8800	SGMR	49 GB	2039.0	2043.0	13.0	11000.0			QL=4 ST=2 TYP=6
30	8800	LEAR	8 S	0156.0	0157.0	2.0	140.0			QL=4 ST=2 TYP=3
	8800	PALE	8 S	0156.0	0157.0	2.0	160.0			QL=4 ST=2 TYP=3
	8800	LEAR	4 S/F	0214.0	0215.0	3.0	110.0			QL=4 ST=2 TYP=3
	8800	PALE	8 S	0214.0	0215.0	2.0	100.0			QL=4 ST=2 TYP=3
	2695	PALE	8 S	0214.0	0214.0	U	61.0			QL=4 ST=2 TYP=3
	8800	SVTO	4 S/F	1221.0	1222.0	7.0	70.0			QL=4 ST=2 TYP=3
	8800	SGMR	8 S	1222.0	1222.0	1.0	77.0			QL=4 ST=2 TYP=3
	2695	SVTO	8 S	1222.0	1222.0	U	22.0			QL=4 ST=2 TYP=3
	8800	SVTO	8 S	1504.0	1504.0	U	22.0			QL=4 ST=2 TYP=3
	8800	SGMR	4 S/F	1517.0	1517.0	6.0	110.0			QL=4 ST=2 TYP=3
	8800	SVTO	48 C	1517.0	1517.0	4.0	100.0			QL=2 ST=2 TYP=8
	2695	SVTO	8 S	1518.0	1518.0	U	29.0			QL=2 ST=2 TYP=3
	8800	SGMR	8 S	1906.0	1906.0	1.0	140.0			QL=4 ST=2 TYP=3
	2695	SGMR	8 S	1906.0	1906.0	2.0	100.0			QL=4 ST=2 TYP=3
	8800	PALE	8 S	1907.0	1907.0	U	150.0			QL=4 ST=2 TYP=3
	2695	PALE	8 S	1907.0	1907.0	1.0	110.0			QL=4 ST=2 TYP=3
	8800	PALE	49 GB	2035.0	2045.0	179.0	15000.0			QL=4 ST=2 TYP=6
	2695	PALE	48 C	2036.0	2051.0	194.0	5300.0			QL=4 ST=2 TYP=8
31	8800	LEAR	8 S	0429.0	0429.0	U	190.0			QL=4 ST=2 TYP=3
	2695	LEAR	8 S	0429.0	0429.0	U	67.0			QL=4 ST=2 TYP=3
	8800	SVTO	8 S	1121.0	1121.0	2.0	210.0			QL=4 ST=2 TYP=3
	2695	SVTO	4 S/F	1121.0	1122.0	4.0	140.0			QL=4 ST=2 TYP=3
	8800	SGMR	8 S	1701.0	1702.0	1.0	61.0			QL=4 ST=2 TYP=3
	8800	SGMR	8 S	1704.0	1704.0	U	67.0			QL=4 ST=2 TYP=3
	8800	PALE	8 S	1736.0	1736.0	U	98.0			QL=4 ST=2 TYP=3
	2695	SGMR	8 S	1736.0	1736.0	U	37.0			QL=4 ST=2 TYP=3
	8800	SGMR	8 S	1736.0	1736.0	U	85.0			QL=4 ST=2 TYP=3

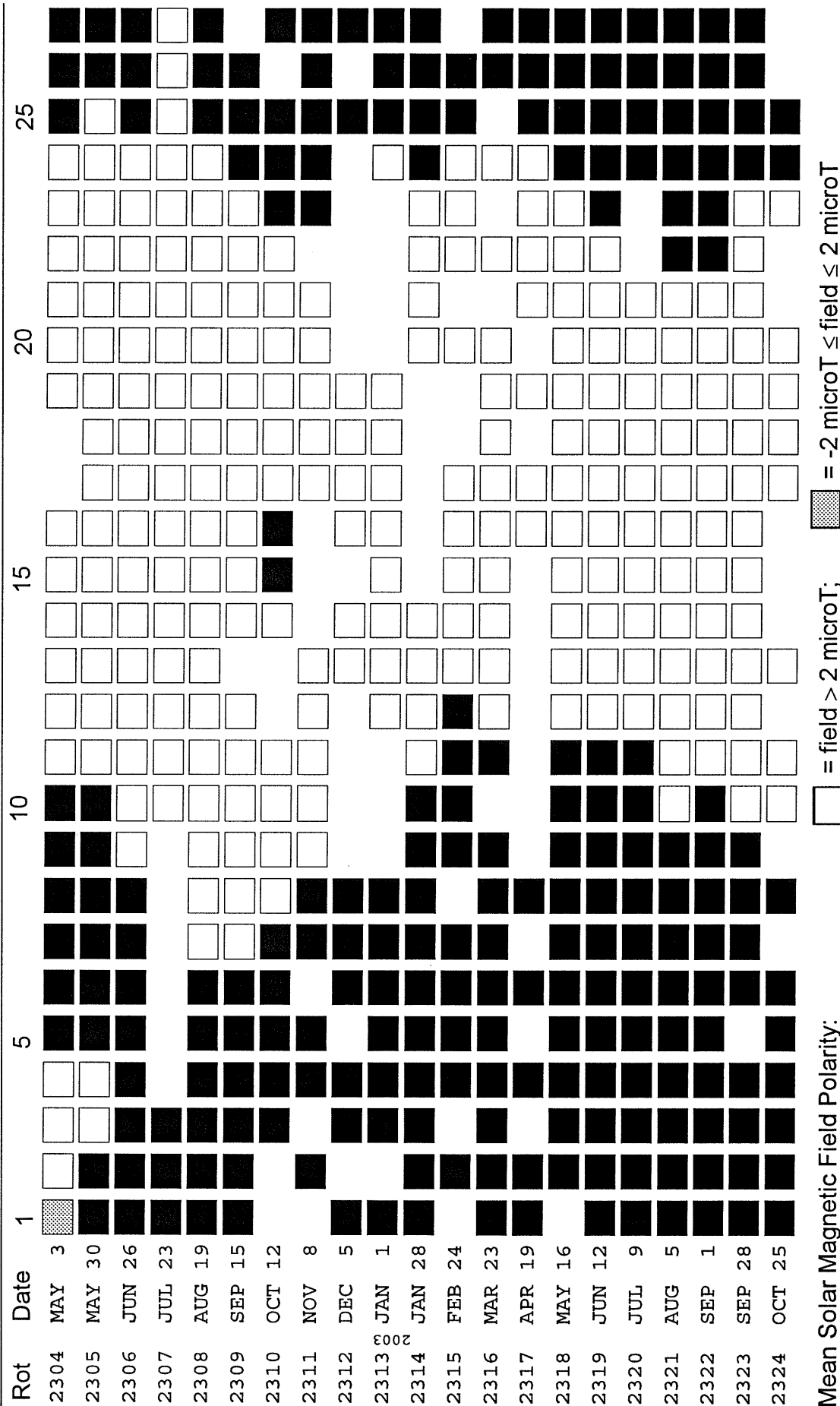
Stanford Mean Solar Magnetic Field (Microtesla) "Sun-As-A-Star"

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Oct 03



Day	Nov 02	Dec	Jan 03	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct
1	65	-13	-63	-99	-114	—	—	89	65	-54	-30	-22
2	34	-49	—	-115	-107	-22	—	89	36	-62	-40	—
3	-5	-64	-75	-115	—	7	—	84	11	-42	-32	-38
4	-41	-38	-79	-90	-94	28	63	70	-10	-22	-16	-38
5	-70	-28	-114	-49	-63	62	63	41	-55	-18	-25	-22
6	—	—	-115	-13	-23	86	—	18	-87	-24	-45	-2
7	-54	-88	-93	9	-8	83	64	27	-61	-18	-43	25
8	—	-71	-35	30	31	69	—	-20	-53	-27	-37	34
9	-78	—	—	56	52	79	70	-24	-41	-45	-19	46
10	—	-75	—	68	91	89	62	-4	-37	-52	-19	44
11	-93	-97	—	—	96	89	34	-8	-48	-62	11	58
12	-91	-26	87	—	91	—	12	-16	-46	-43	29	67
13	—	—	40	—	—	72	-10	-42	-53	-20	57	69
14	-49	—	101	—	—	—	-20	-50	-66	7	69	70
15	-1	—	96	—	75	3	-51	-51	-72	29	92	64
16	76	—	120	92	—	—	—	-69	-58	48	78	64
17	95	39	102	82	68	-25	-55	-69	-43	65	71	40
18	95	31	115	35	30	-32	-67	-85	-53	70	71	45
19	82	—	103	14	7	-43	-85	-76	-11	83	51	19
20	51	54	—	-27	-25	-61	-81	-75	9	84	18	11
21	—	34	—	-45	-49	—	-106	-44	19	65	15	-5
22	—	57	—	-53	—	-42	-104	-20	59	49	-7	-36
23	—	64	—	-72	-57	—	-95	7	65	56	-38	-54
24	32	—	24	—	-65	-93	-79	44	69	41	-74	-80
25	55	—	-34	-59	-64	—	-55	67	90	23	-67	-94
26	80	—	-14	—	-56	-72	-16	79	92	-7	-72	-82
27	94	—	-47	-55	-66	—	21	82	94	-35	-63	-81
28	90	—	-49	-85	-92	—	51	88	82	-55	-57	-97
29	—	-49	-31	—	-110	—	82	83	61	-63	-51	-102
30	-3	—	-44	—	-113	—	94	85	—	-63	-25	-80
31	—	-61	-78	—	-81	—	93	—	—	-54	—	—

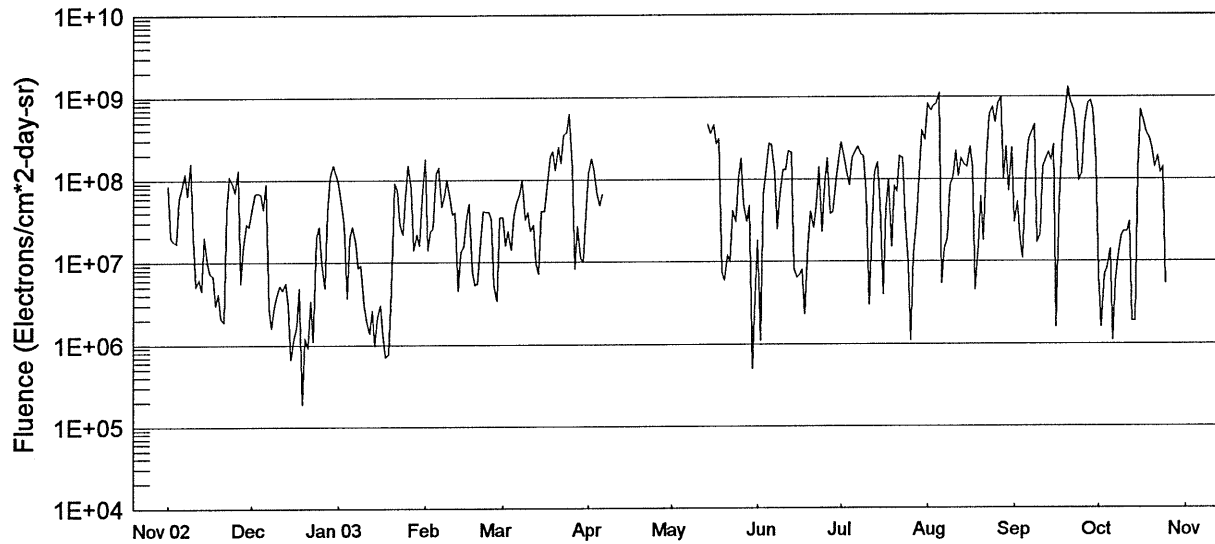
STANFORD MEAN SOLAR MAGNETIC FIELD



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

GOES Daily Electron Fluence Nov 2002 - Oct 2003

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Oct 03



Day	Nov 02	Dec	Jan 03	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct
1	8.5E+07	4.2E+07	9.5E+07	1.8E+08	3.5E+07	4.5E+08	--	1.8E+07	2.8E+08	8.1E+08	3.0E+07	6.7E+06
2	2.0E+07	6.7E+07	5.1E+07	1.4E+07	1.6E+07	6.3E+08	sensor	1.1E+06	1.8E+08	6.8E+08	5.4E+07	1.6E+06
3	1.8E+07	7.0E+07	2.9E+07	2.4E+07	2.4E+07	3.0E+08	problems	6.5E+07	1.2E+08	7.7E+08	1.9E+07	6.9E+06
4	1.7E+07	6.8E+07	3.7E+06	2.6E+07	1.4E+07	1.4E+08	--	1.2E+08	8.5E+07	8.2E+08	1.1E+07	8.2E+06
5	5.9E+07	4.4E+07	2.0E+07	1.2E+08	3.6E+07	1.7E+08	--	2.7E+08	1.8E+08	1.1E+09	1.2E+08	1.4E+07
6	7.8E+07	8.9E+07	2.7E+07	1.4E+08	5.2E+07	1.6E+08	--	2.6E+08	2.2E+08	5.4E+06	3.0E+08	1.1E+06
7	1.2E+08	2.7E+06	1.8E+07	4.7E+07	6.8E+07	1.7E+08	sensor	1.2E+08	2.5E+08	1.4E+07	3.6E+08	5.7E+06
8	6.5E+07	1.6E+06	8.6E+06	6.3E+07	9.9E+07	--	problems	2.5E+07	2.0E+08	1.9E+07	4.5E+08	1.1E+07
9	1.6E+08	2.8E+06	9.2E+06	1.0E+08	3.3E+07	--	--	6.4E+07	1.9E+08	8.3E+07	1.7E+07	2.0E+07
10	2.0E+07	3.9E+06	3.1E+06	6.1E+07	4.0E+07	--	--	1.3E+08	7.0E+07	1.1E+08	2.1E+07	2.3E+07
11	5.1E+06	5.2E+06	2.0E+06	3.8E+07	2.4E+07	--	--	1.3E+08	3.0E+06	2.2E+08	1.4E+08	2.3E+07
12	6.2E+06	4.6E+06	1.4E+06	4.0E+07	2.8E+07	sensor	--	2.2E+08	2.1E+07	1.1E+08	1.7E+08	3.0E+07
13	4.5E+06	5.6E+06	2.6E+06	4.5E+06	9.7E+06	problems	--	2.1E+08	1.2E+08	1.8E+08	2.1E+08	1.9E+06
14	2.0E+07	3.0E+06	9.8E+05	1.3E+07	7.2E+06	--	4.6E+08	8.3E+06	1.6E+08	1.5E+08	1.7E+08	1.9E+06
15	1.0E+07	6.7E+05	2.1E+06	1.6E+07	4.2E+07	--	3.6E+08	6.4E+06	5.0E+07	1.4E+08	2.6E+08	1.3E+08
16	7.3E+06	1.2E+06	3.0E+06	3.4E+07	4.2E+07	--	4.5E+08	6.9E+06	4.0E+06	2.5E+08	1.6E+06	6.8E+08
17	6.8E+06	1.6E+06	1.3E+06	5.2E+07	8.4E+07	sensor	2.7E+08	8.0E+06	4.5E+07	1.4E+08	5.5E+07	5.0E+08
18	3.0E+06	4.8E+06	7.1E+05	7.7E+06	1.9E+08	problems	3.1E+08	2.3E+06	9.9E+07	4.5E+06	3.5E+08	3.6E+08
19	4.2E+06	1.9E+05	7.7E+05	5.3E+06	2.2E+08	--	7.4E+06	1.6E+07	1.5E+07	1.5E+07	6.5E+08	3.1E+08
20	2.1E+06	1.2E+06	4.7E+06	5.5E+06	1.3E+08	--	6.0E+06	4.1E+07	8.4E+07	6.2E+07	1.3E+09	2.3E+08
21	1.9E+06	9.3E+05	9.1E+07	1.8E+07	2.5E+08	--	1.2E+07	2.6E+07	7.1E+07	1.8E+07	8.7E+08	1.4E+08
22	4.3E+07	3.4E+06	7.6E+07	4.2E+07	1.6E+08	sensor	1.0E+07	4.9E+07	1.9E+08	1.9E+08	6.8E+08	1.9E+08
23	1.1E+08	1.1E+06	2.9E+07	4.1E+07	3.5E+08	problems	4.2E+07	1.4E+08	1.8E+08	6.0E+08	3.7E+08	1.2E+08
24	9.1E+07	2.0E+07	2.2E+07	4.1E+07	3.7E+08	--	3.1E+07	2.3E+07	3.5E+07	7.5E+08	9.7E+07	1.4E+08
25	7.1E+07	2.7E+07	6.5E+07	3.3E+07	6.3E+08	--	9.9E+07	8.7E+07	9.4E+06	4.9E+08	1.2E+08	5.3E+06
26	1.3E+08	1.0E+07	1.5E+08	5.2E+06	1.4E+08	--	1.8E+08	1.8E+08	1.1E+06	8.2E+08	4.5E+08	-999
27	5.6E+06	4.9E+06	8.1E+07	3.4E+06	8.3E+06	sensor	5.1E+07	3.8E+07	1.2E+07	1.0E+09	8.3E+08	-999
28	1.5E+07	4.1E+07	1.4E+07	3.5E+07	2.7E+07	problems	3.1E+07	4.0E+07	3.2E+07	1.0E+08	8.9E+08	-999
29	2.9E+07	1.1E+08	2.2E+07		1.1E+07	--	4.8E+07	9.4E+07	1.1E+08	2.5E+08	7.0E+08	-999
30	2.7E+07	1.5E+08	1.6E+07		1.0E+07	--	5.0E+05	1.7E+08	3.9E+08	7.2E+07	1.6E+08	-999
31		1.2E+08	6.1E+07		3.7E+07		3.6E+06		3.0E+08	2.4E+08		-999

NOTE: The electron detector responds significantly to protons above 32 MeV; therefore, electron data are contaminated when a proton event is in progress. These days are indicated with '-999' in the table and are not plotted. '--' indicates data not available.

NOTE: GOES9 data began April, 1996 and ended on 26 July, 1998. GOES12 is primary satellite as of 15 May 2003.

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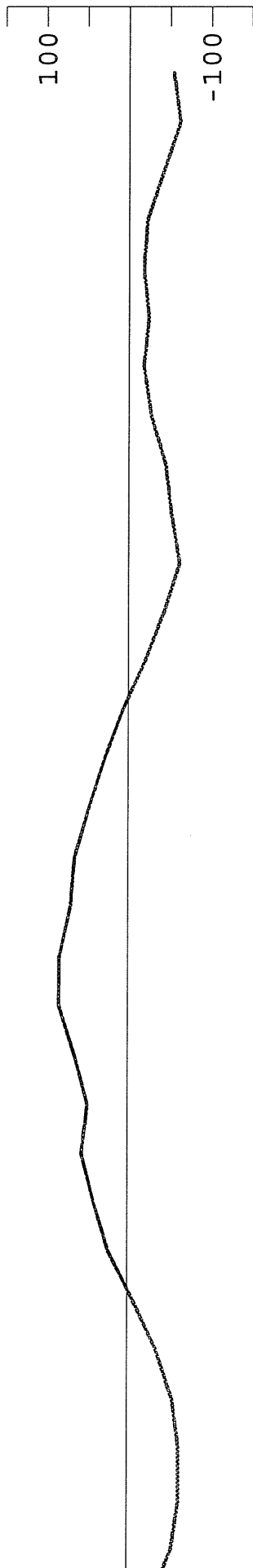
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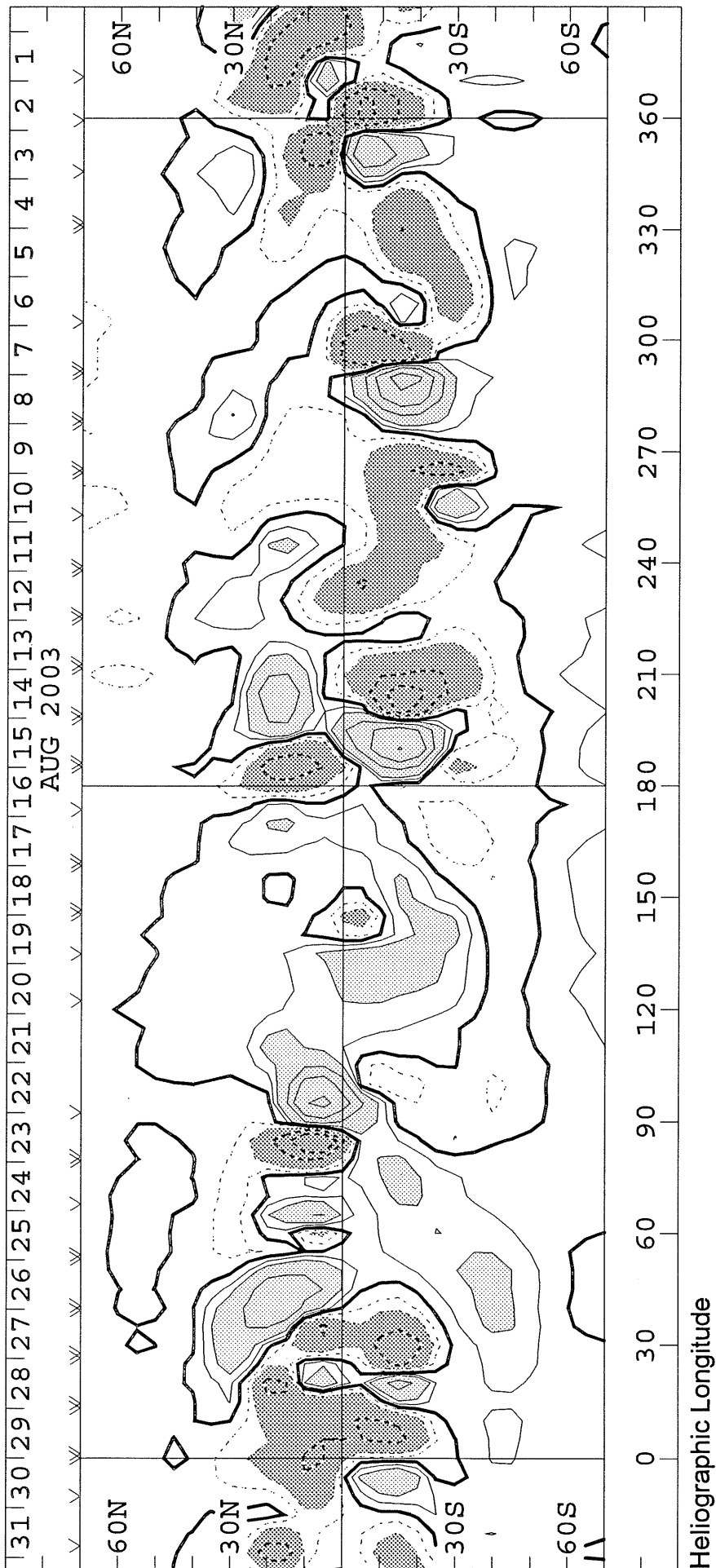
SOLAR MAGNETIC FIELD SYNOPTIC CHART
CARRINGTON ROTATION NUMBER 2006
(2-29 August 2003)

WILCOX SOLAR OBSERVATORY

Mean Field



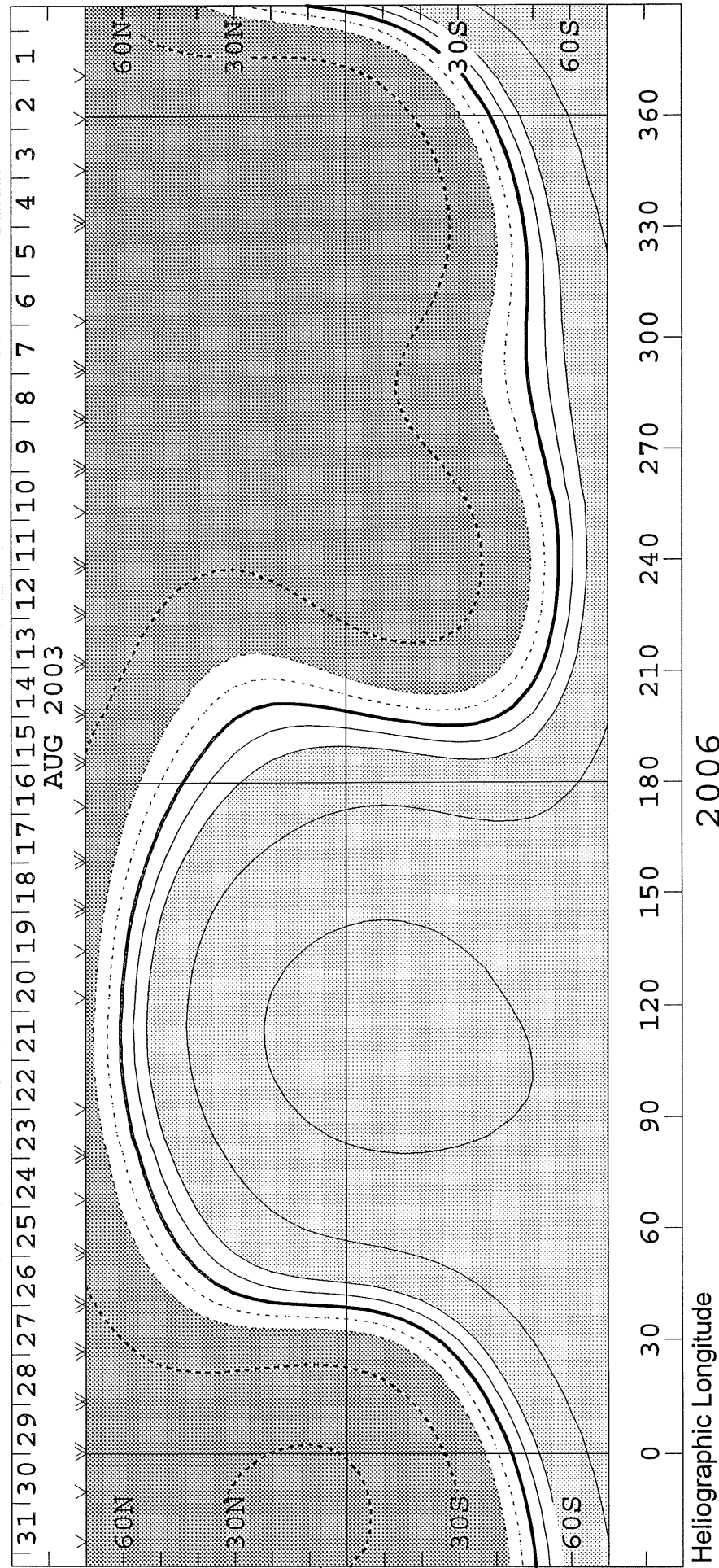
WSO - Photospheric Magnetic Field 0, +100, 200, 500, 1000, 2000 MicroTesla



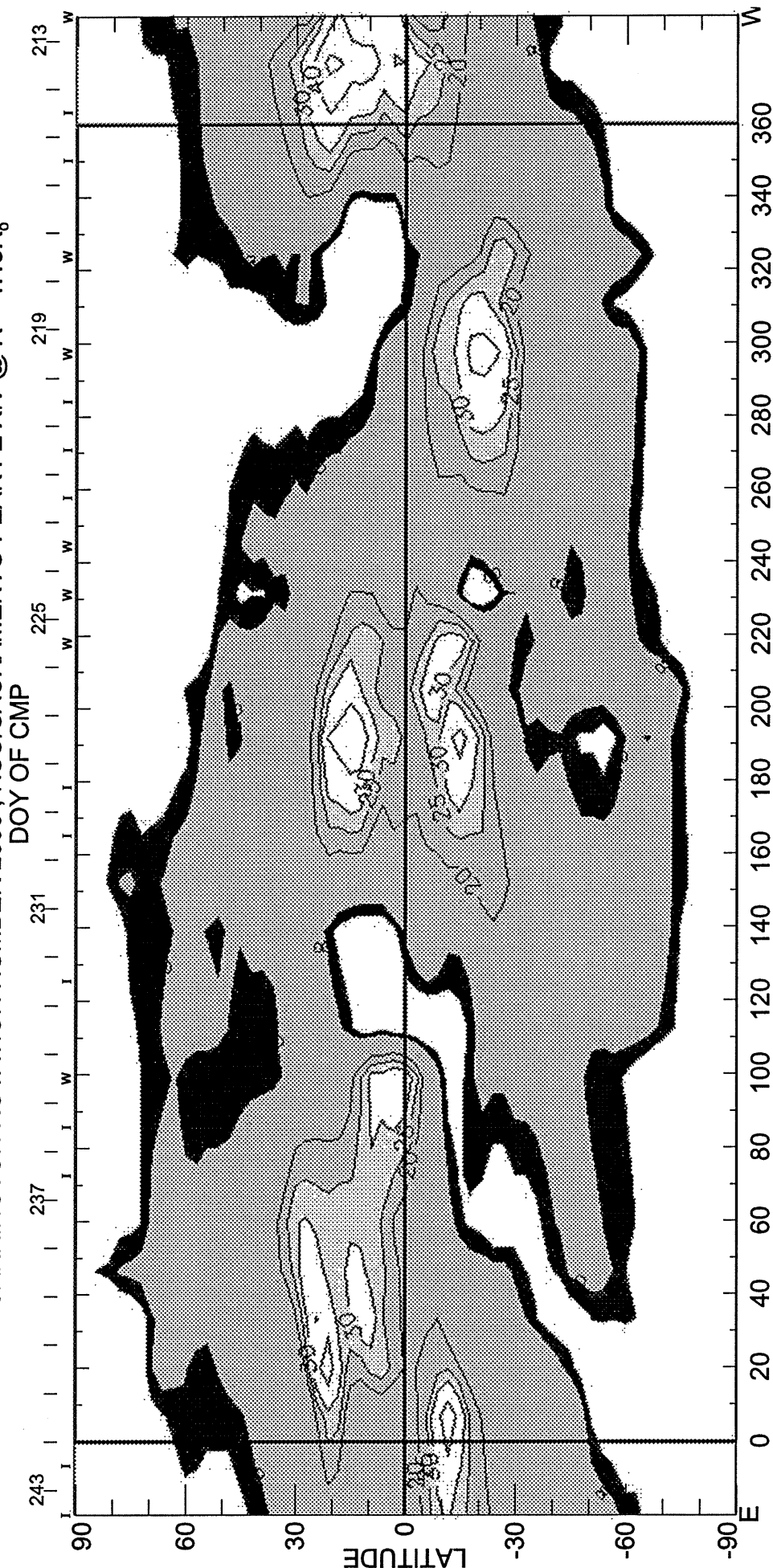
SOLAR MAGNETIC FIELD SYNOPTIC CHART
SOURCE SURFACE FIELD
 CARRINGTON ROTATION NUMBER 2006
 (2-29 August 2003)

Wilcox Solar Observatory

0, ± 1 , 2, 5, 10, 20 microTesla

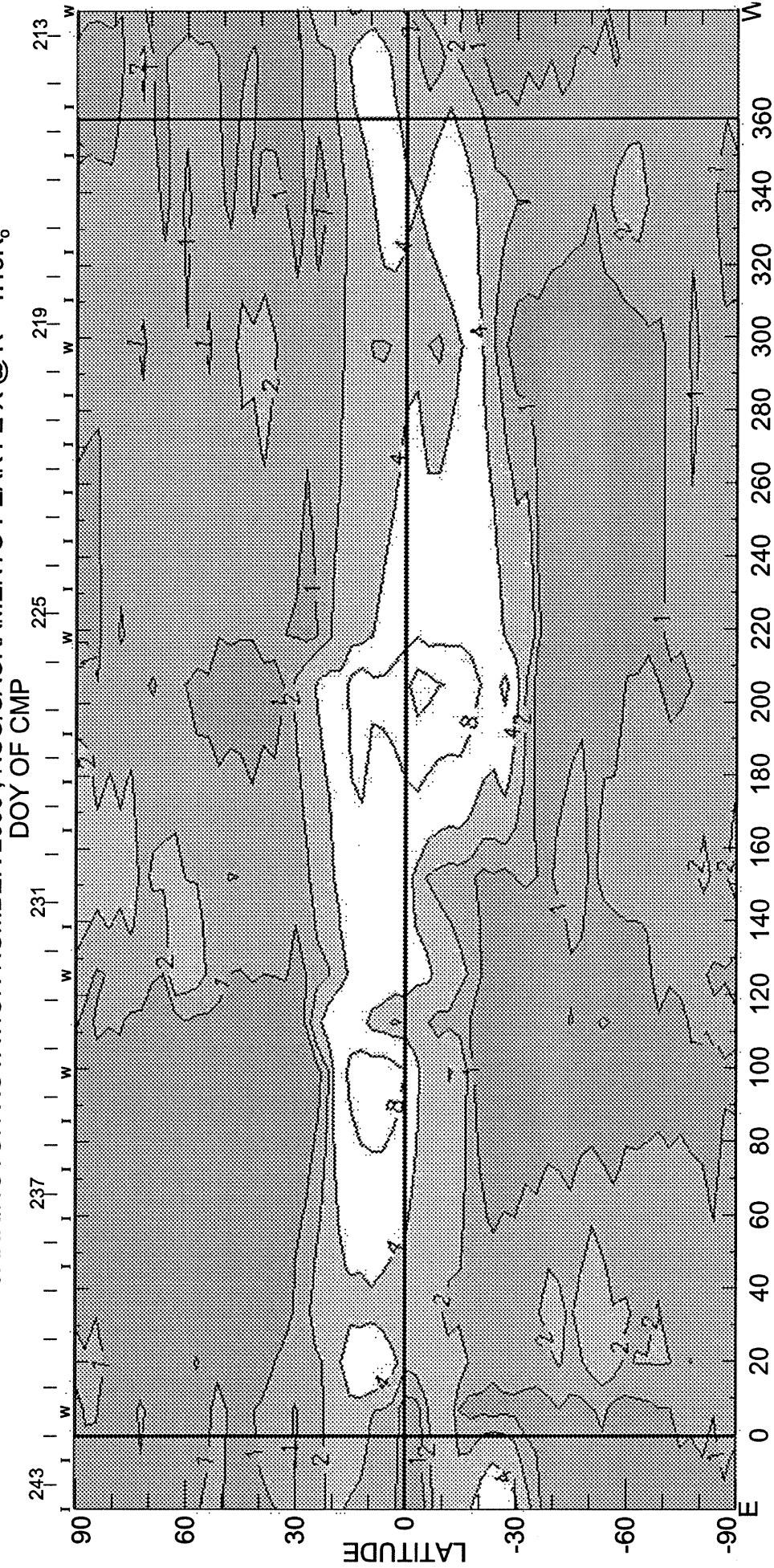


CARRINGTON ROTATION NUMBER 206 ; NSO/SACRAMENTO PEAK FE XIV @ $R = 1.15R_{\odot}$



(31-Oct-03) 2003 E+W LIMB CONTOURS: 6, 8, 20, 25, 30, 40, 50, 60, 80, 100, 120 MILLIONTHS OF I_0
HELIOGRAPHIC LONGITUDE
CORONAL HOLES ARE SHOWN AS WHITE BORDERED BY BLACK

CARRINGTON ROTATION NUMBER 2006 ; NSO/SACRAMENTO PEAK FEX @ R = 1.15R_o



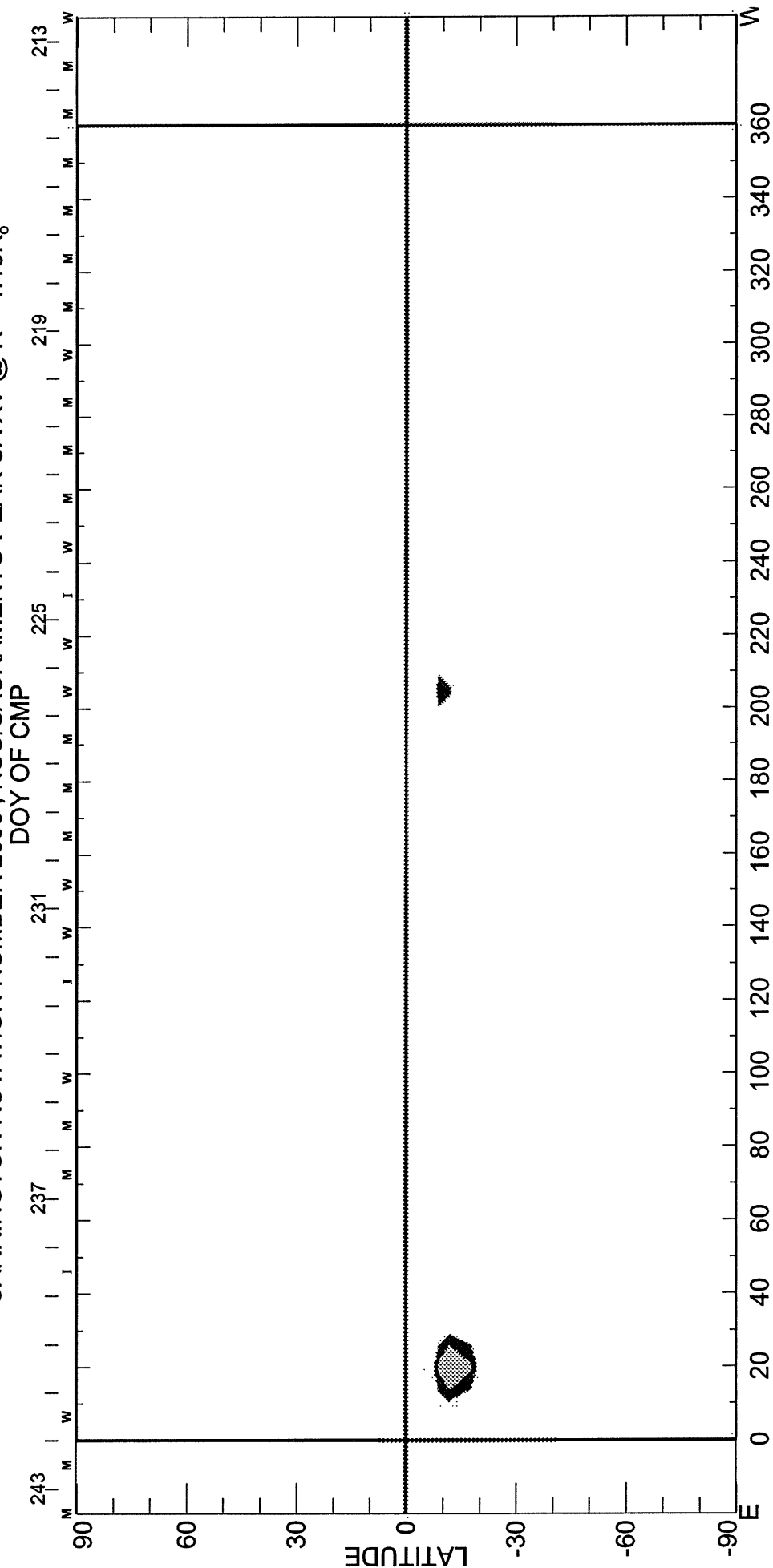
(04-Dec-03)

HELIOGRAPHIC LONGITUDE

2003 E+W LIMB CONTOURS: 1, 2, 4, 8, 12, 16, 32, 48 MILLIONTHS OF I_o

$\langle I \rangle = 1.87\mu$

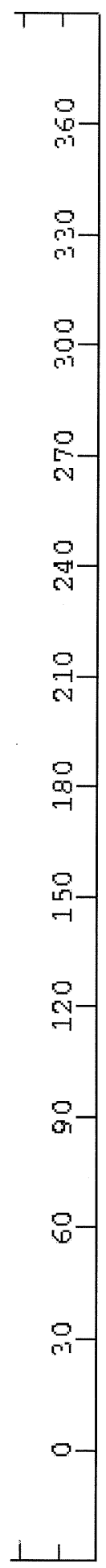
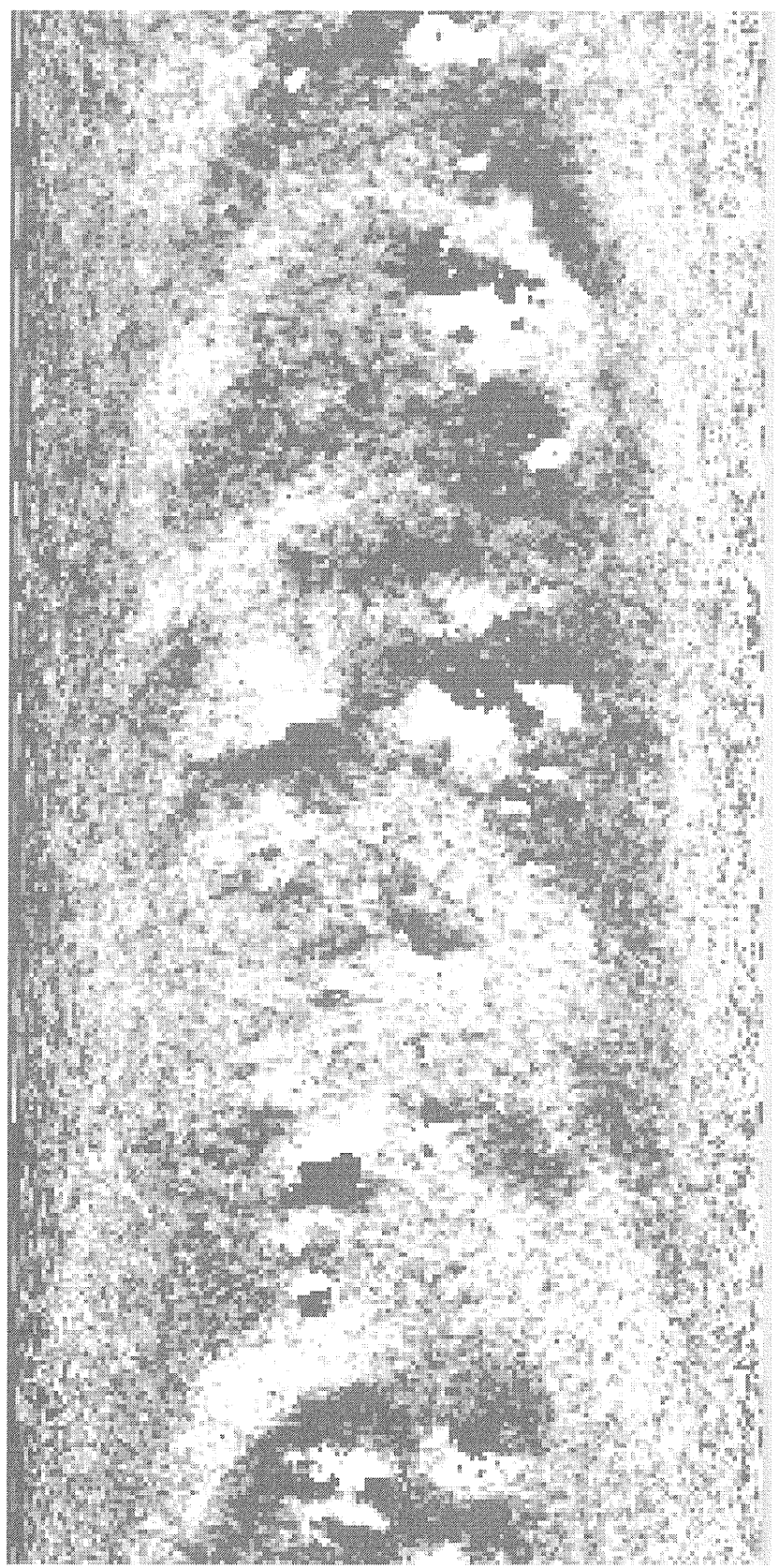
CARRINGTON ROTATION NUMBER 2006 ; NSO/SACRAMENTO PEAK CA XV @ $R = 1.15R_{\odot}$



HELIOGRAPHIC LONGITUDE
2003 E+W LIMB CONTOURS: YELMIN, 1, 2, 3, 4, 6, 8, 10, 12, 14, 16, 18, 20 MILLIONTHS OF $I_{\odot}$

SOLAR MAGNETIC FIELD SYNOPSIS CHART
CARRINGTON ROTATION NUMBER 2006
(2 to 29 August 2003)

National Solar Observatory/Kitt Peak



Heliographic Longitude

SEPTEMBER 1, 2003 (P= 20.95, Bo = 7.19, Lo = 333.46)

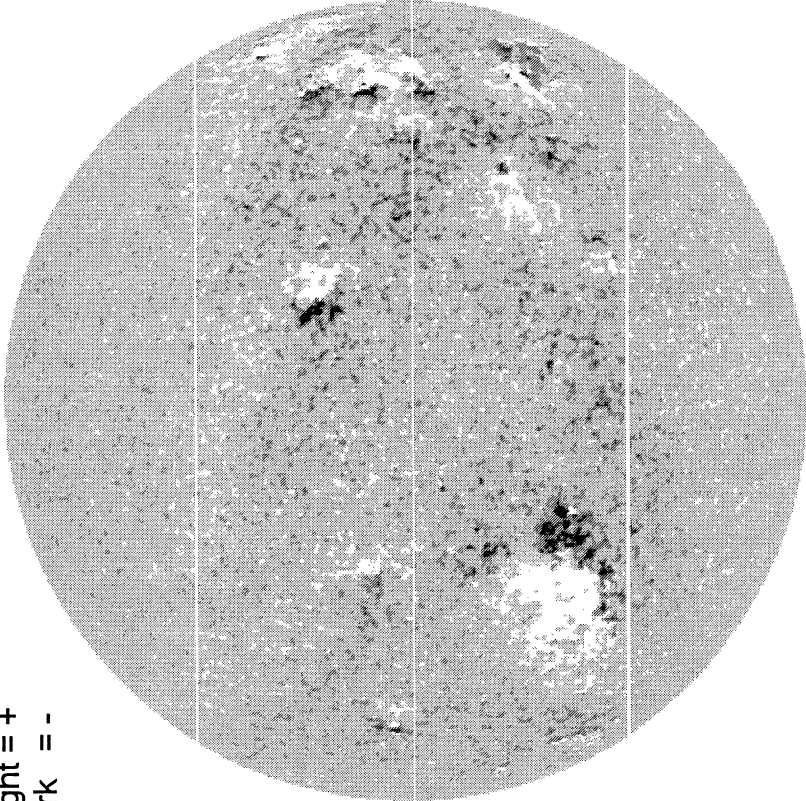
50
Sep 03

KITT PEAK MAGNETOGRAM

868.8 nm

N

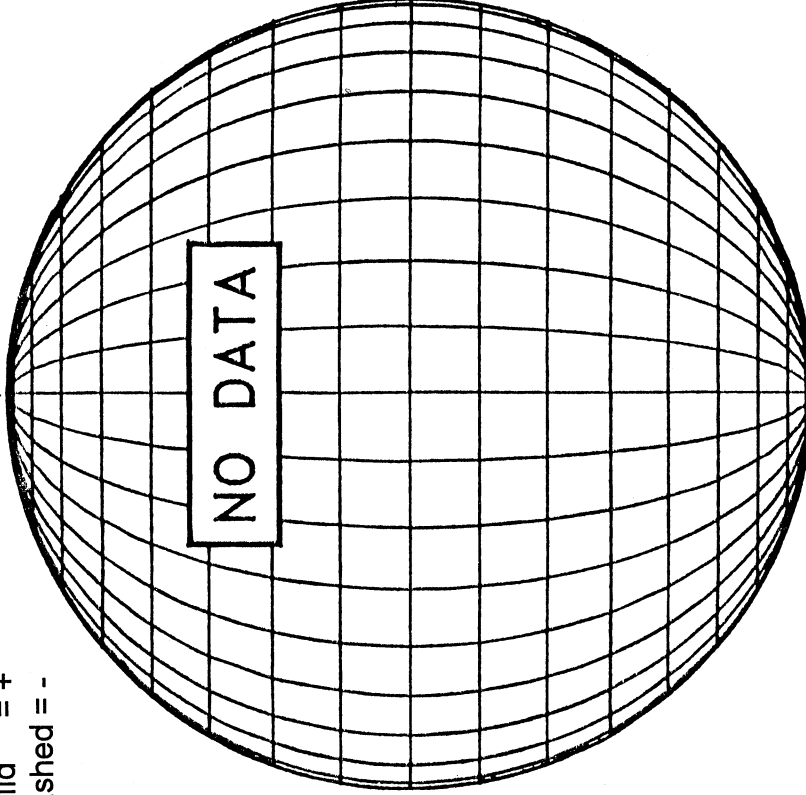
Bright = +
Dark = -



STANFORD MAGNETOGRAM

N

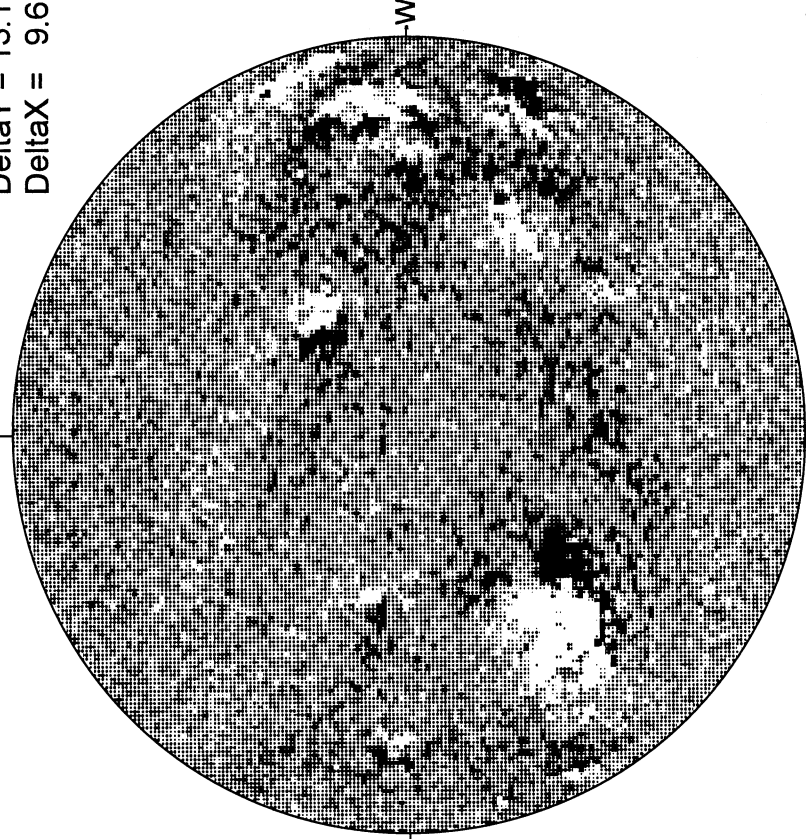
Solid = +
Dashed = -



MT. WILSON MAGNETOGRAM

N

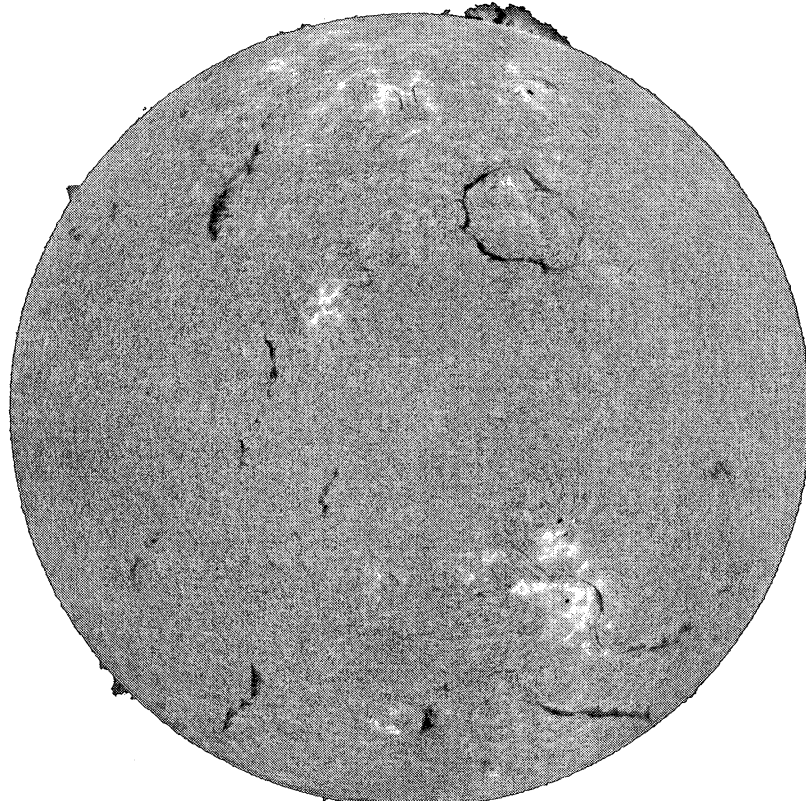
DeltaY = 13.1
DeltaX = 9.6



16.50 -
17.43 UT

White= +7.5G
Black = -7.5G

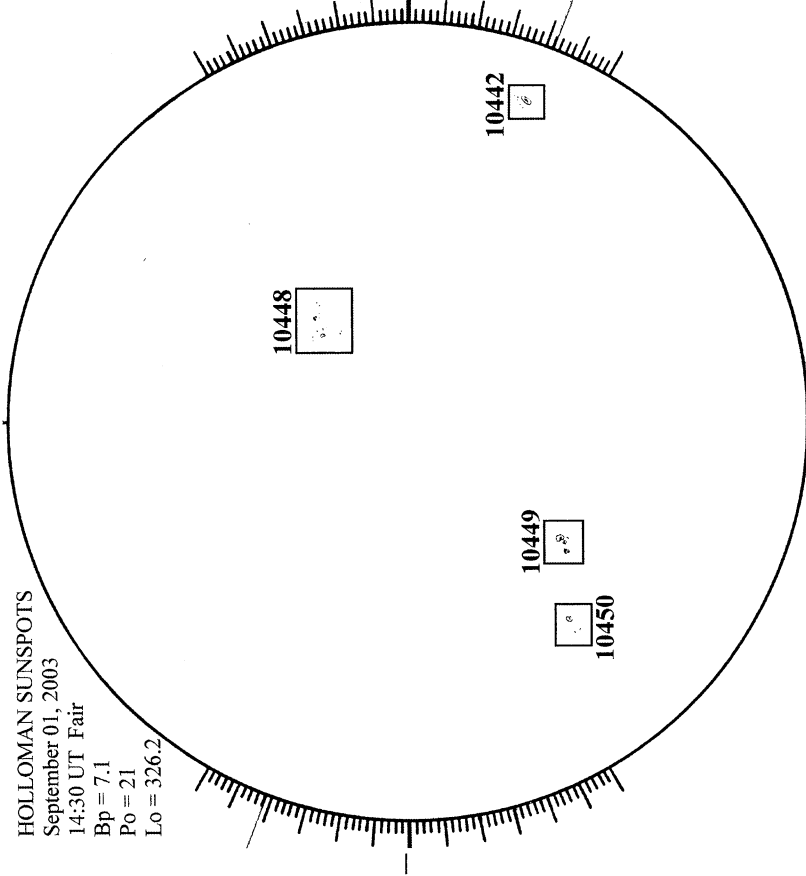
BIG BEAR H-ALPHA



1555 UT

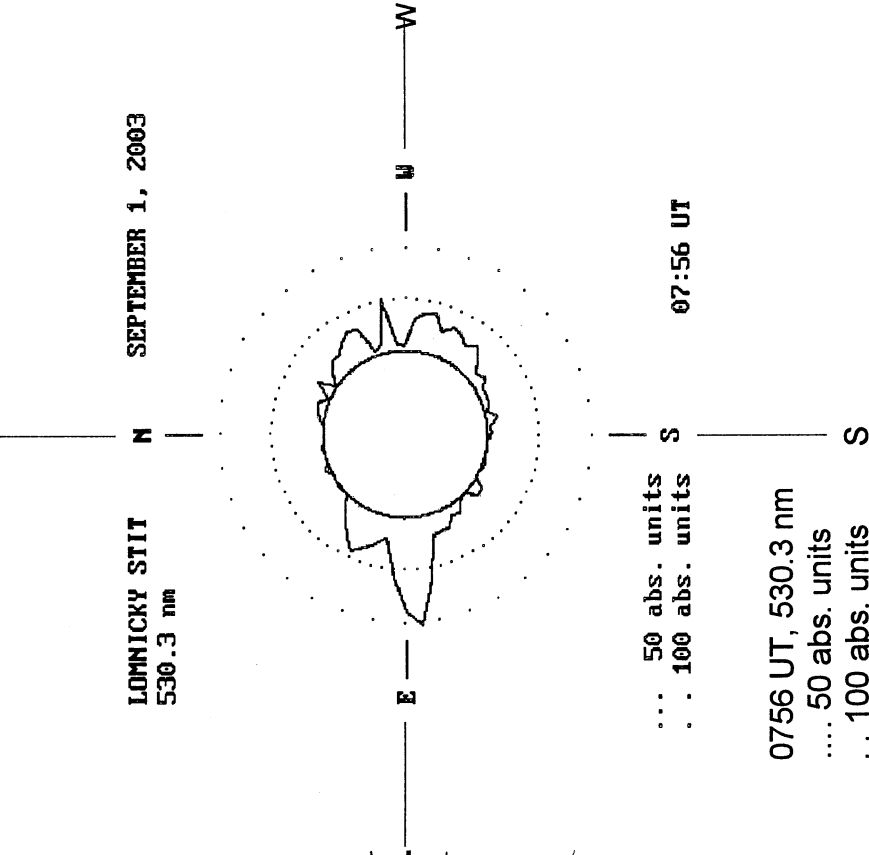
HOLLOMAN SUNSPOT

HOLLOMAN SUNSPOTS
September 01, 2003
14:30 UT Fair
Bp = 7.1
Po = 21
Lo = 326.2



1430 UT

LOMNICKY PEAK CORONA (1.04 Radii)----



... 50 abs. units
.. 100 abs. units

0756 UT, 530.3 nm
.... 50 abs. units
... 100 abs. units

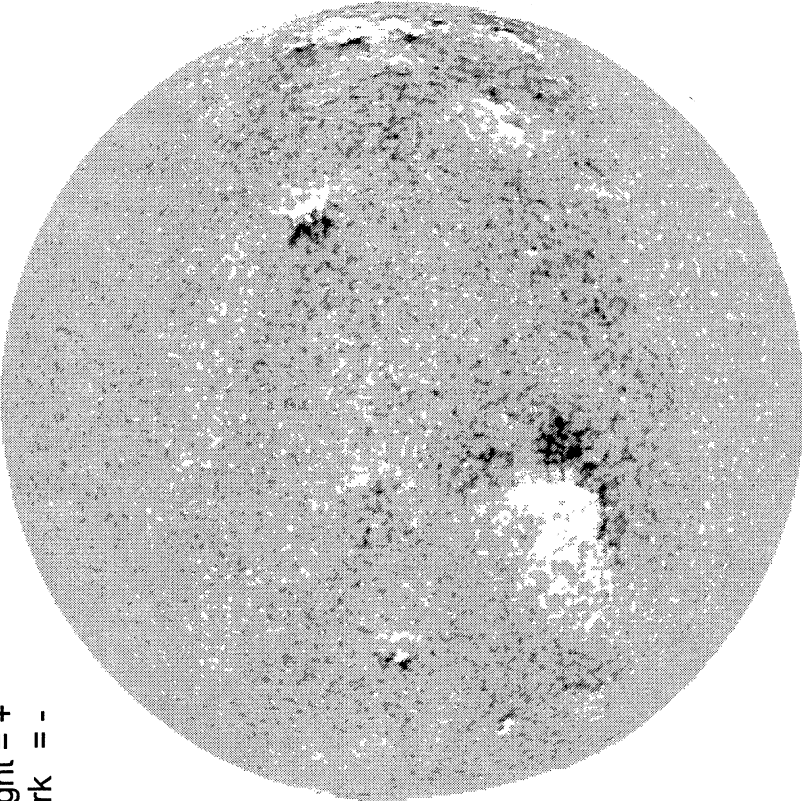
07:56 UT

SEPTEMBER 2, 2003 (P= 21.21, Bo = 7.20, Lo = 320.26)

KITT PEAK MAGNETOGRAM

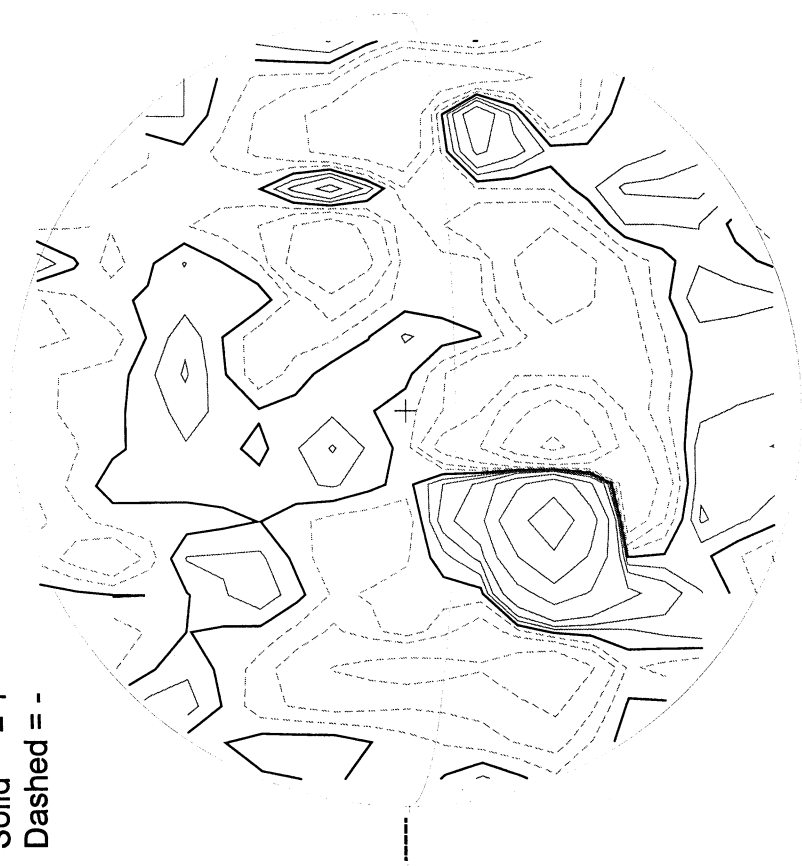
868.8 nm

Bright = +
Dark = -



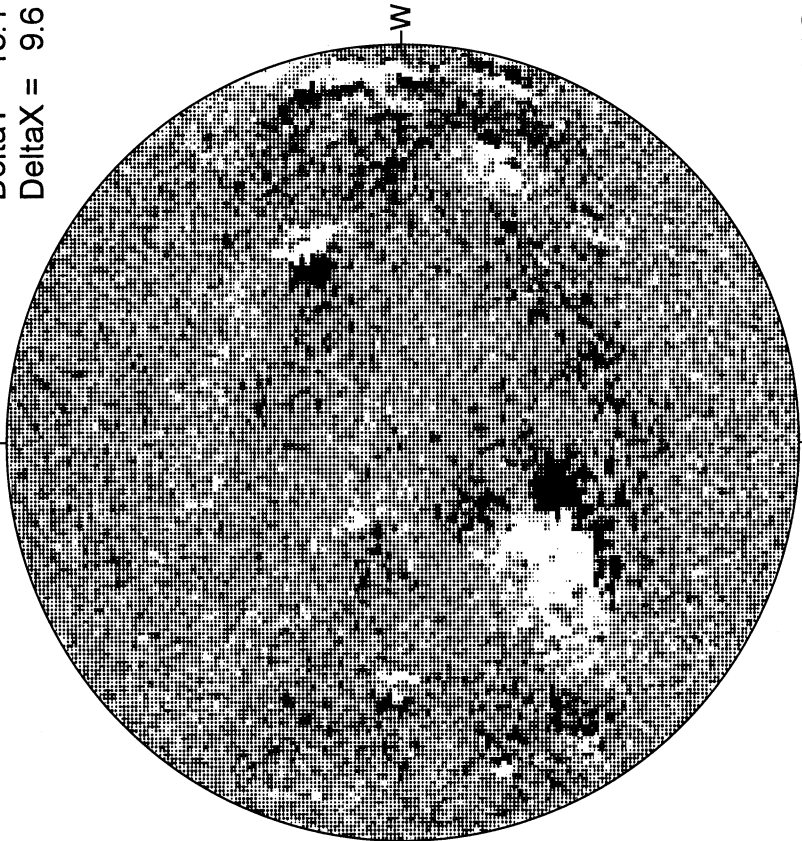
STANFORD MAGNETOGRAM

Solid = +
Dashed = -



MT. WILSON MAGNETOGRAM

DeltaY = 13.1
DeltaX = 9.6



16.06 -
17.00 UT

White= +7.5G
Black = -7.5G

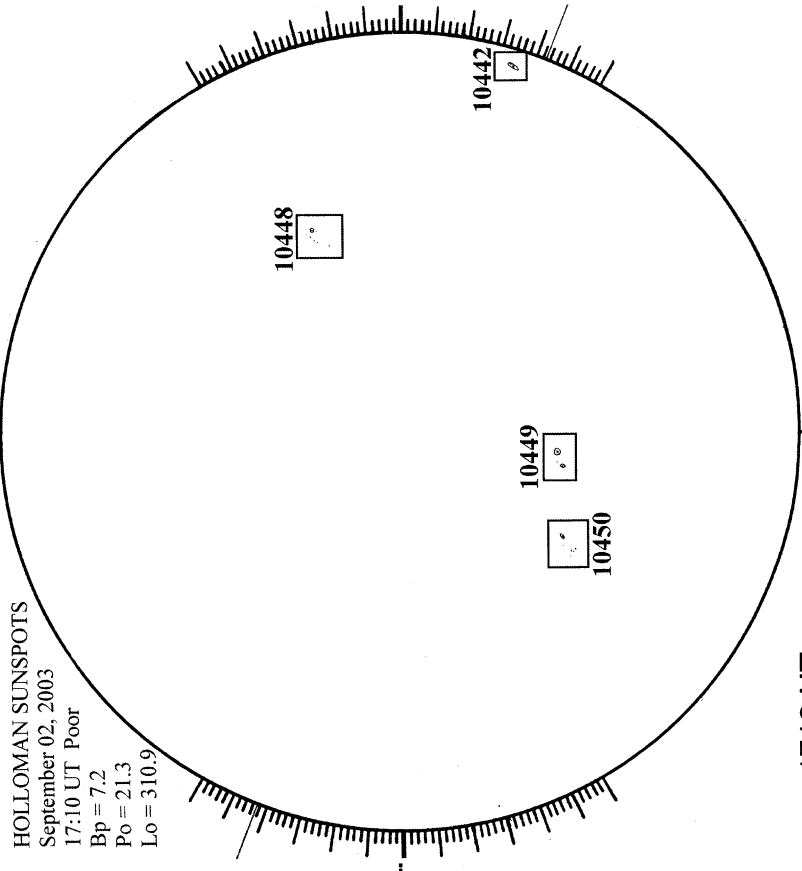
BIG BEAR H-ALPHA



1535 UT

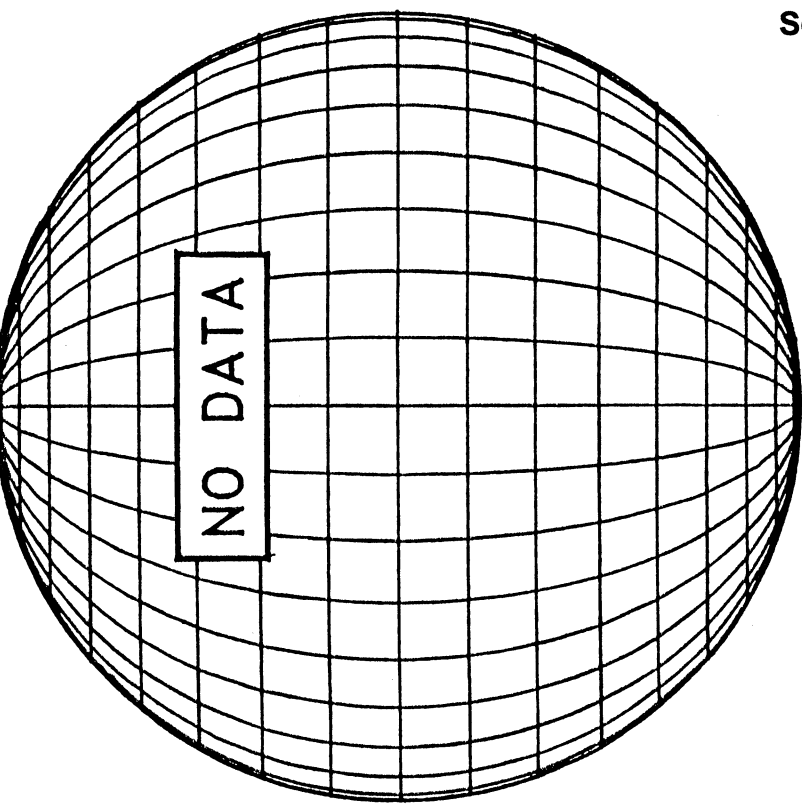
HOLLOMAN SUNSPOT

HOLLOMAN SUNSPOTS
September 02, 2003
17:10 UT Poor
Bp = 7.2
Po = 21.3
Lo = 310.9



1710 UT

LOMNICKY PEAK CORONA (1.04 Radii)---



S

51
Sep 03

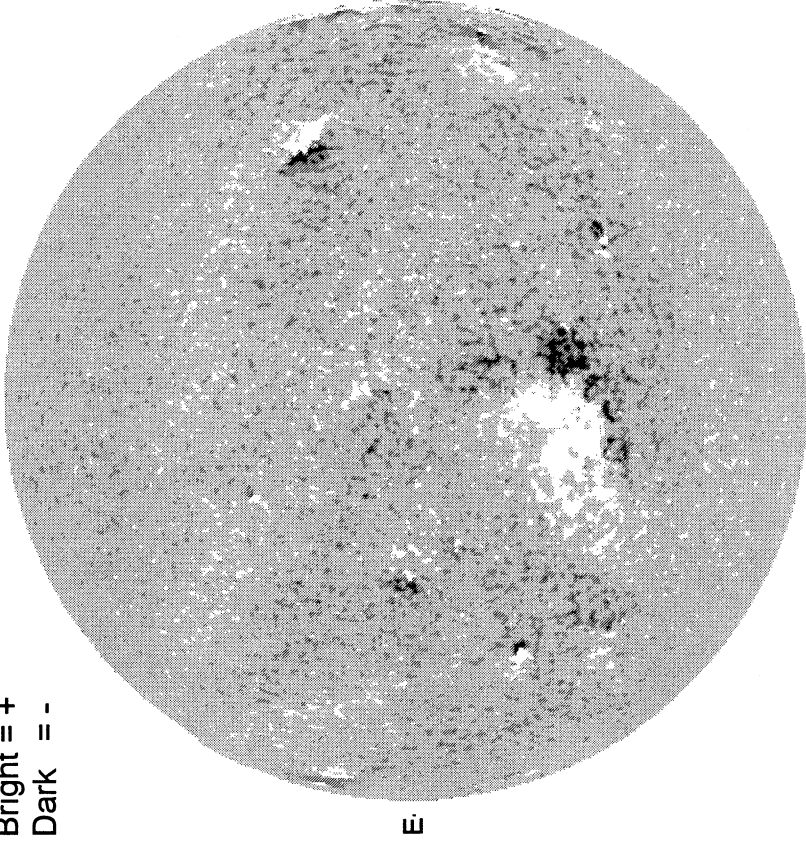
SEPTEMBER 3, 2003 (P= 21.46, Bo = 7.22, Lo = 307.05)

52
Sep 03

KITT PEAK MAGNETOGRAM

868.8 nm

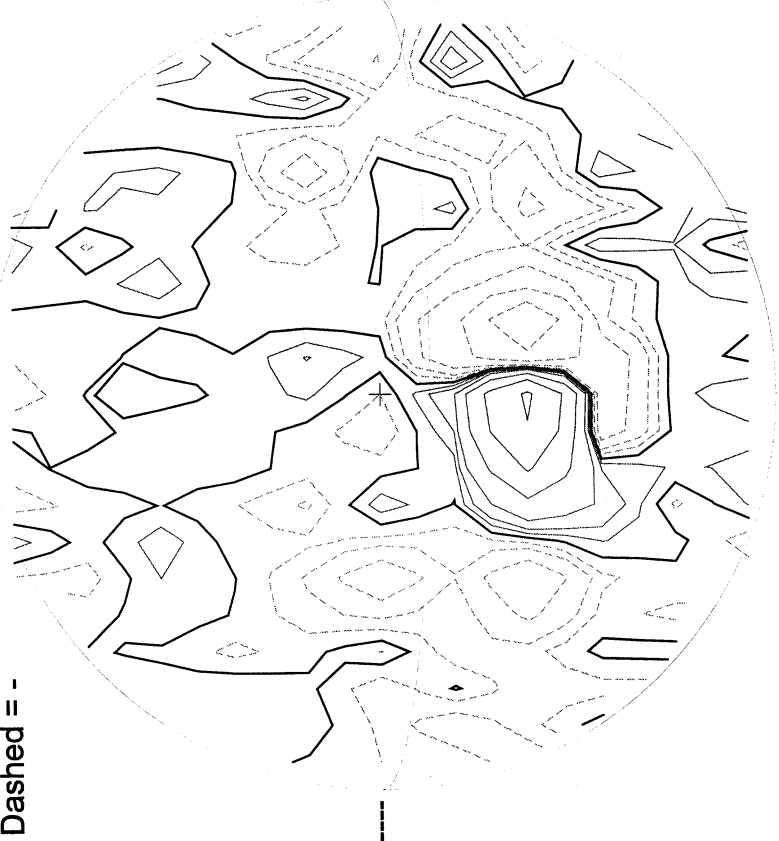
Bright = +
Dark = -



1545 UT

STANFORD MAGNETOGRAM

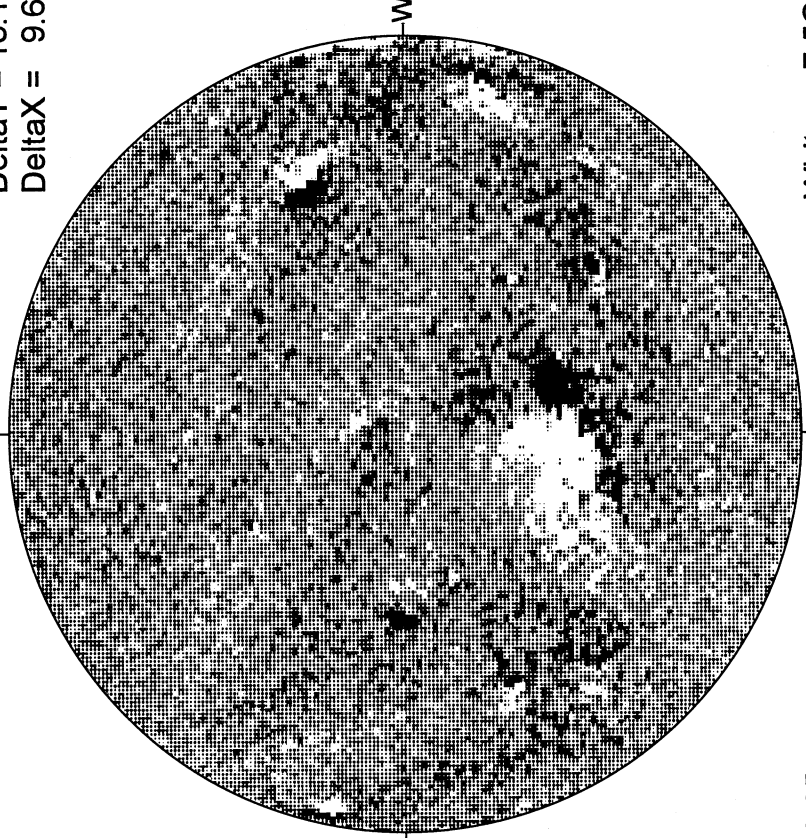
Solid = +
Dashed = -



1833 UT

MT. WILSON MAGNETOGRAM

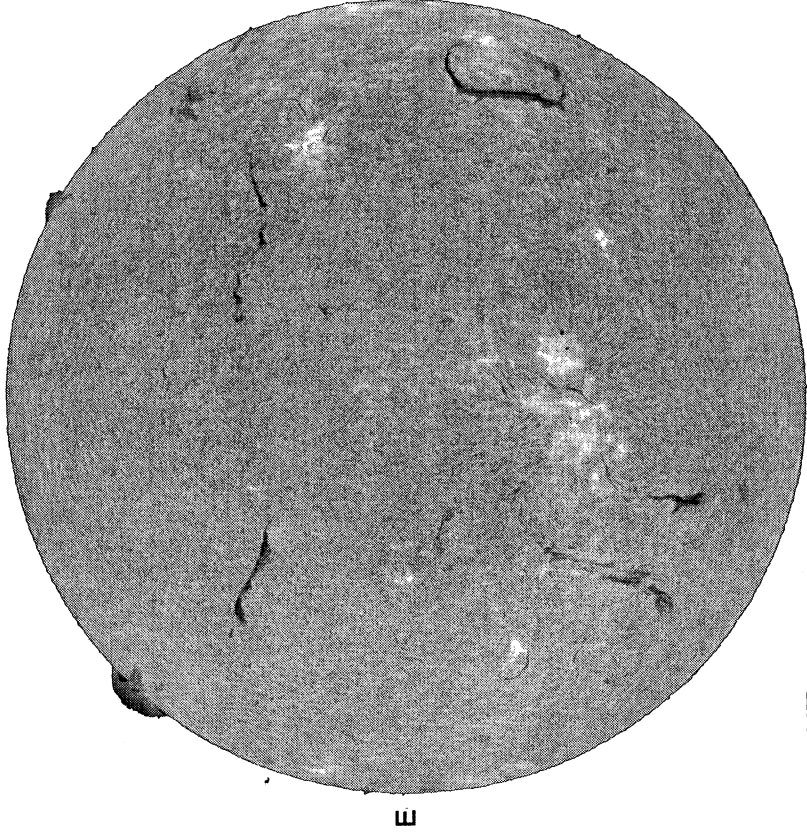
DeltaY = 13.1
DeltaX = 9.6



16.65 -
17.59 UT

White= +7.5G
Black = -7.5G

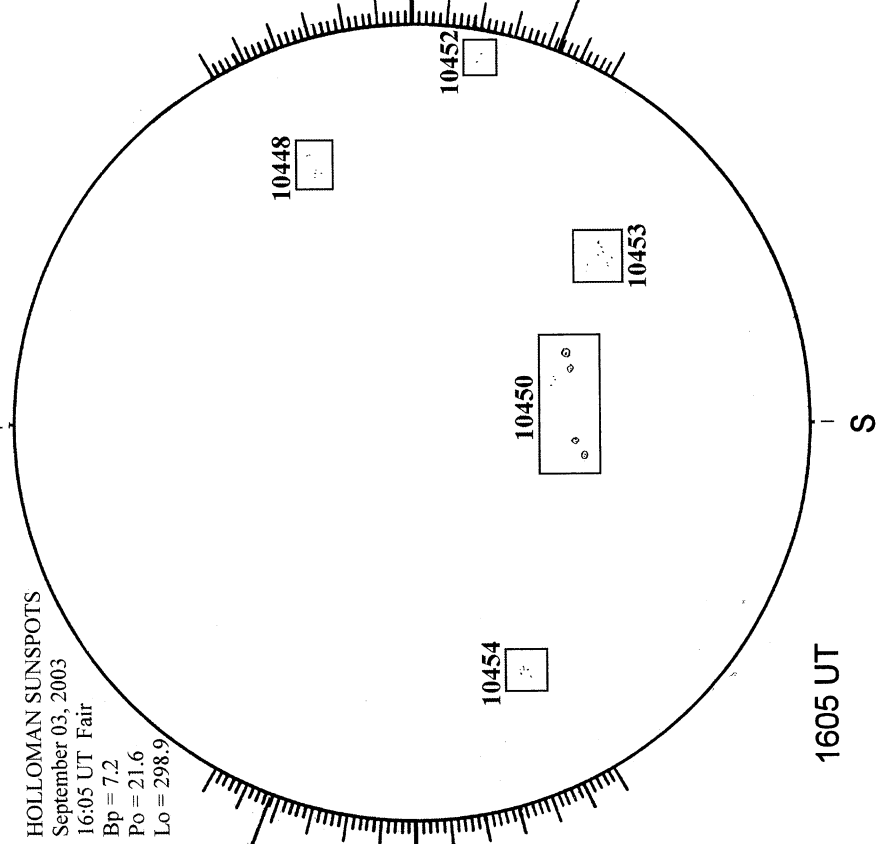
BIG BEAR H-ALPHA



1619 UT

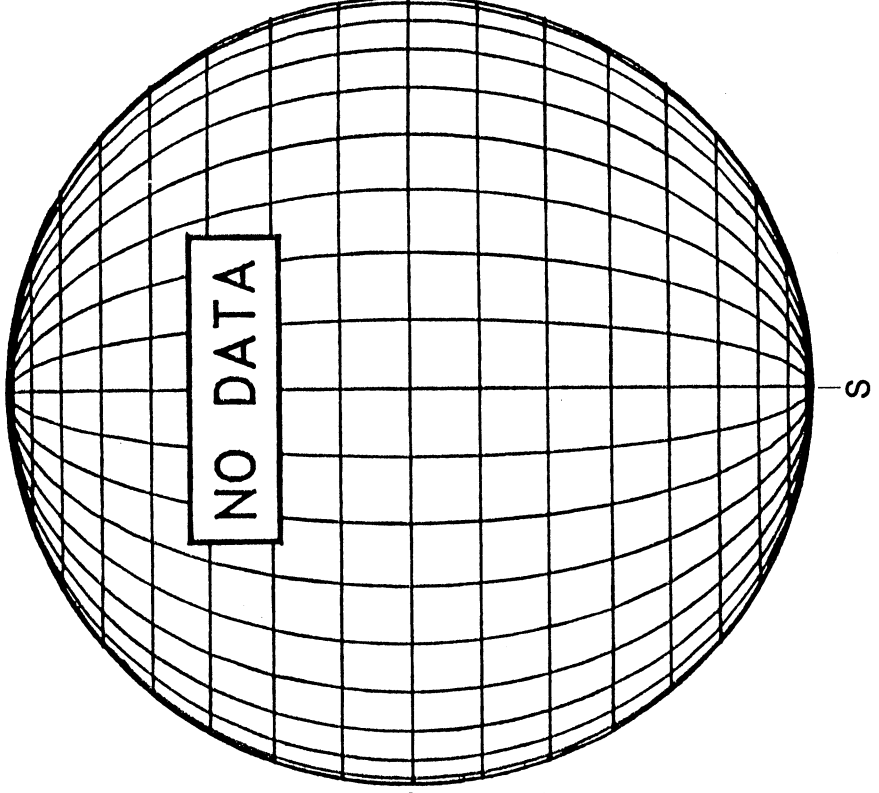
HOLLOMAN SUNSPOT

HOLLOMAN SUNSPOTS
September 03, 2003
16:05 UT Fair
Bp = 7.2
Po = 21.6
Lo = 298.9



1605 UT

SACRAMENTO PEAK CORONA (1.15 Radii)----

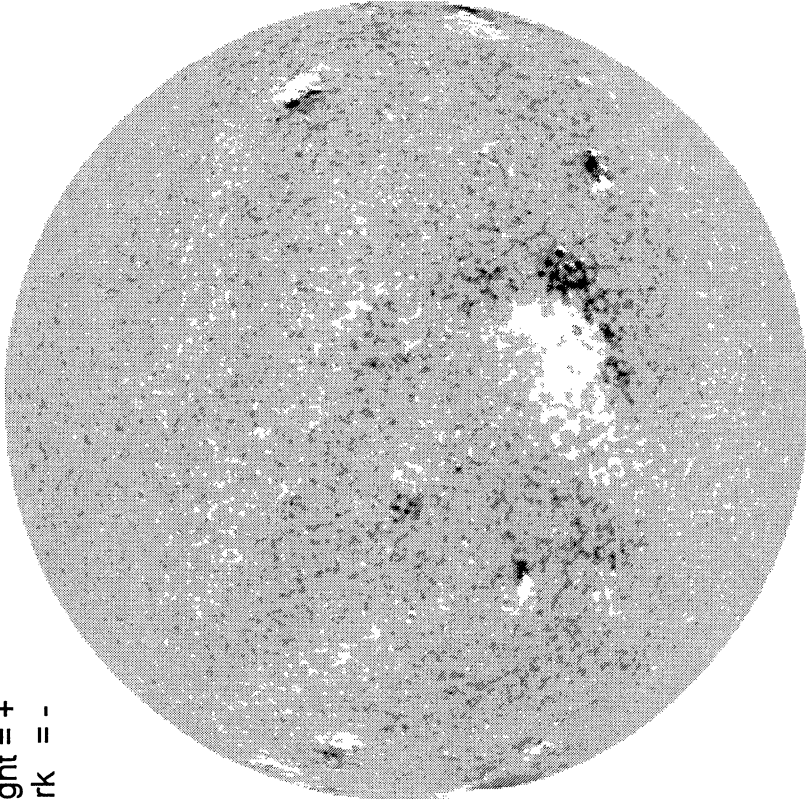


SEPTEMBER 4, 2003 (P= 21.70, Bo = 7.23, Lo = 293.84)

KITT PEAK MAGNETOGRAM

868.8 nm

Bright = +
Dark = -



E

1437 UT

STANFORD MAGNETOGRAM

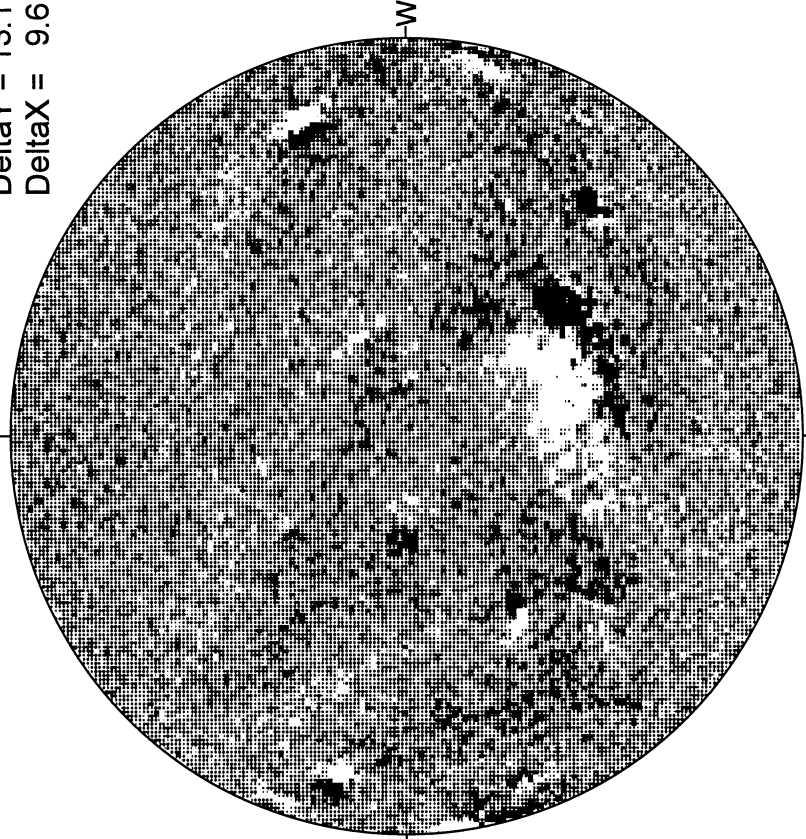
Solid = +
Dashed = -



2047 UT

MT. WILSON MAGNETOGRAM

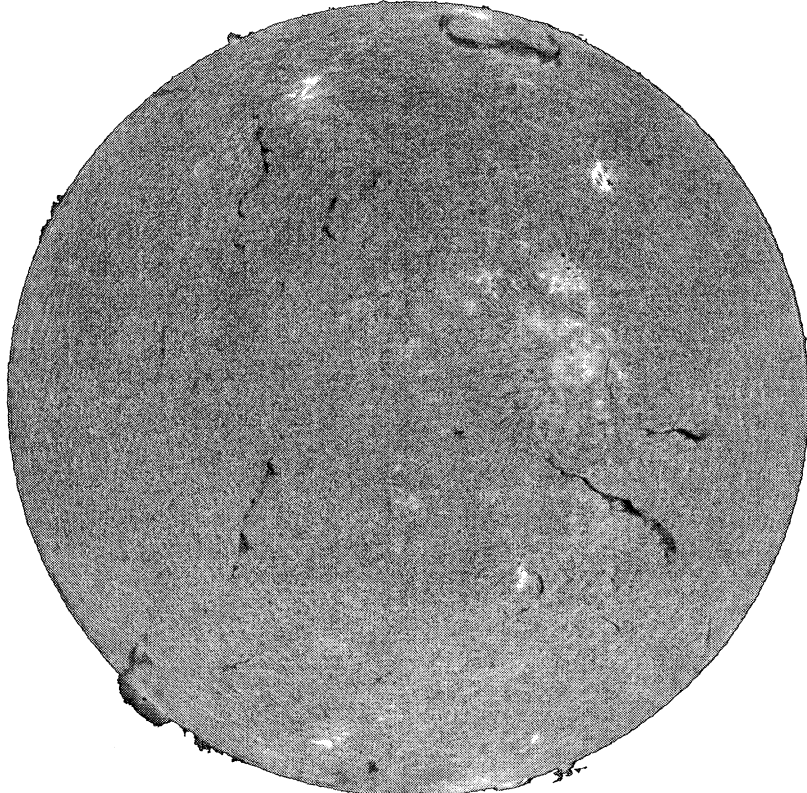
DeltaY = 13.1
DeltaX = 9.6



15.77 -
16.70 UT

White= +7.5G
Black = -7.5G

BIG BEAR H-ALPHA

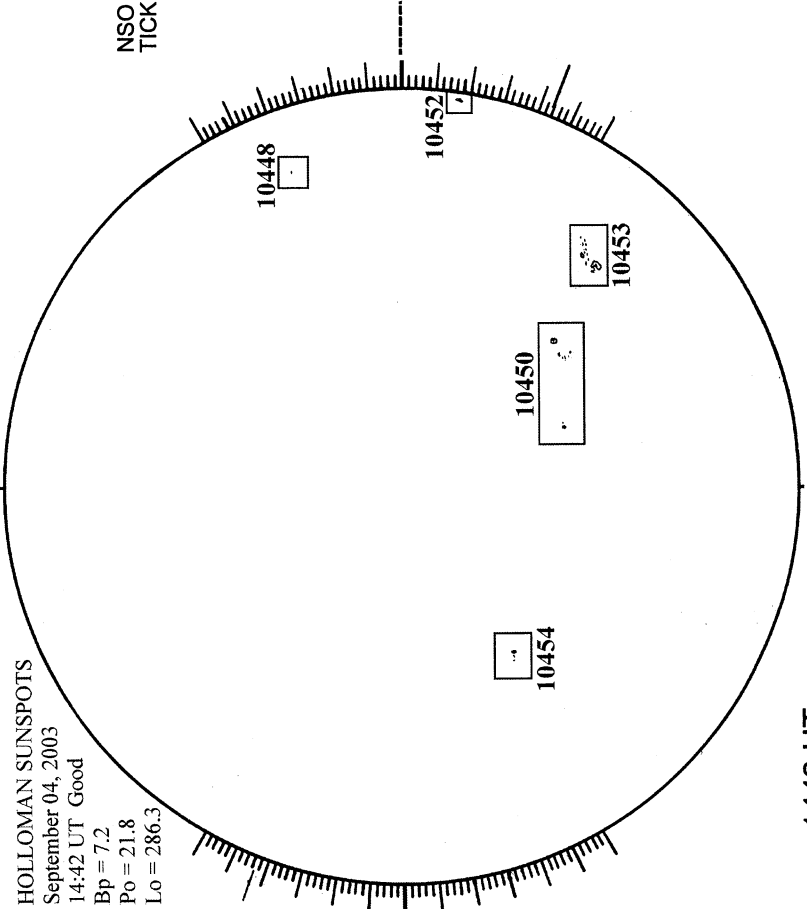


E

1541 UT

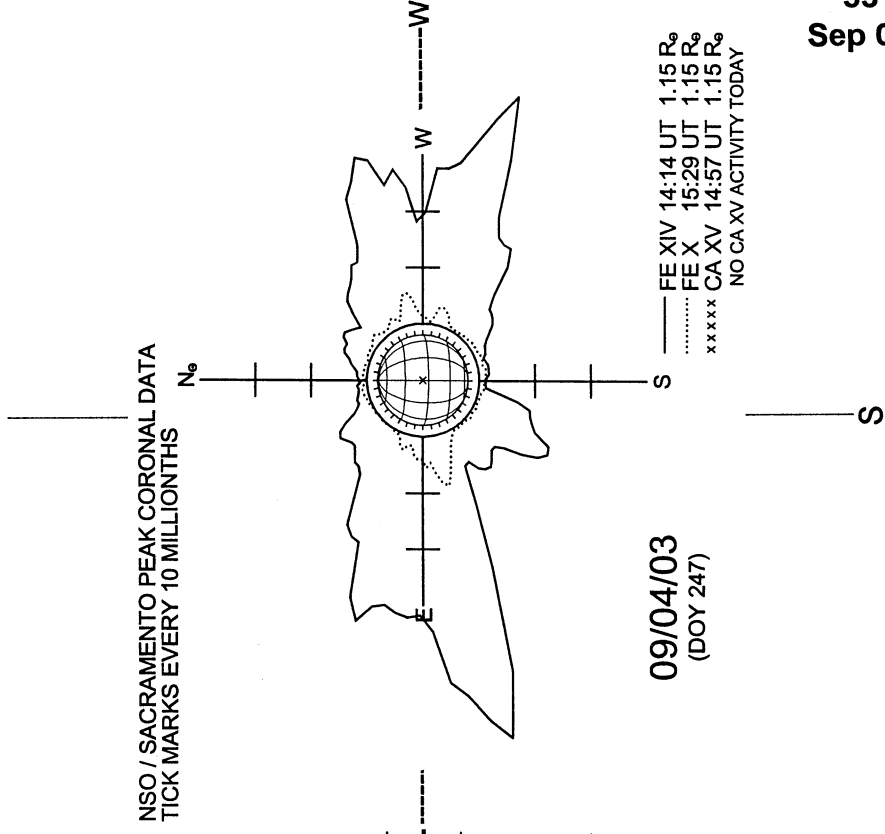
HOLLOMAN SUNSPOT

HOLLOMAN SUNSPOTS
September 04, 2003
14:42 UT Good
Bp = 7.2
Po = 21.8
Lo = 286.3



1442 UT

SACRAMENTO PEAK CORONA (1.15 Radii)----



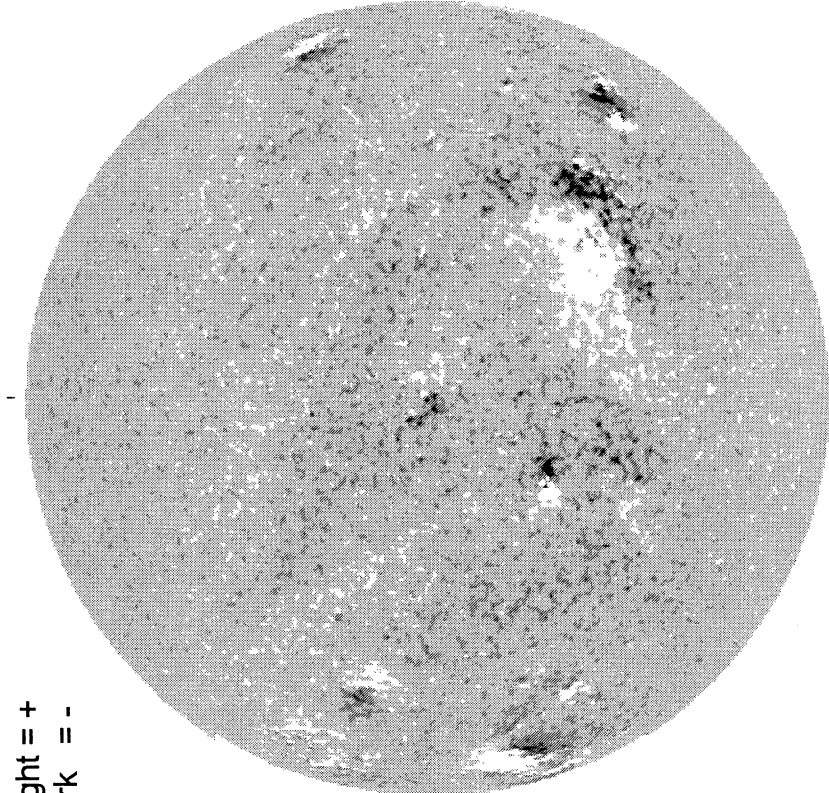
09/04/03
(DOY 247)

— FE XIV 14:14 UT 1.15 R_e
..... FE X 15:29 UT 1.15 R_e
xxxxx CA XV 14:57 UT 1.15 R_e
NO CA XV ACTIVITY TODAY

KITT PEAK MAGNETOGRAM

868.8 nm

N



Bright = +
Dark = -

E-

1626 UT

STANFORD MAGNETOGRAM

N



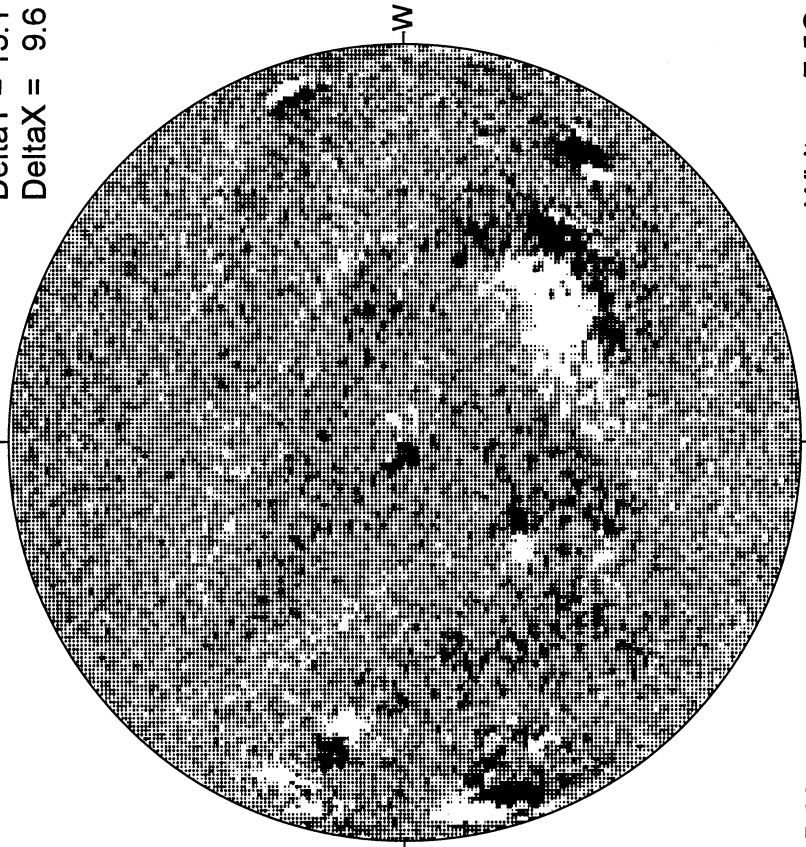
Solid = +
Dashed = -

1912 UT

MT. WILSON MAGNETOGRAM

N

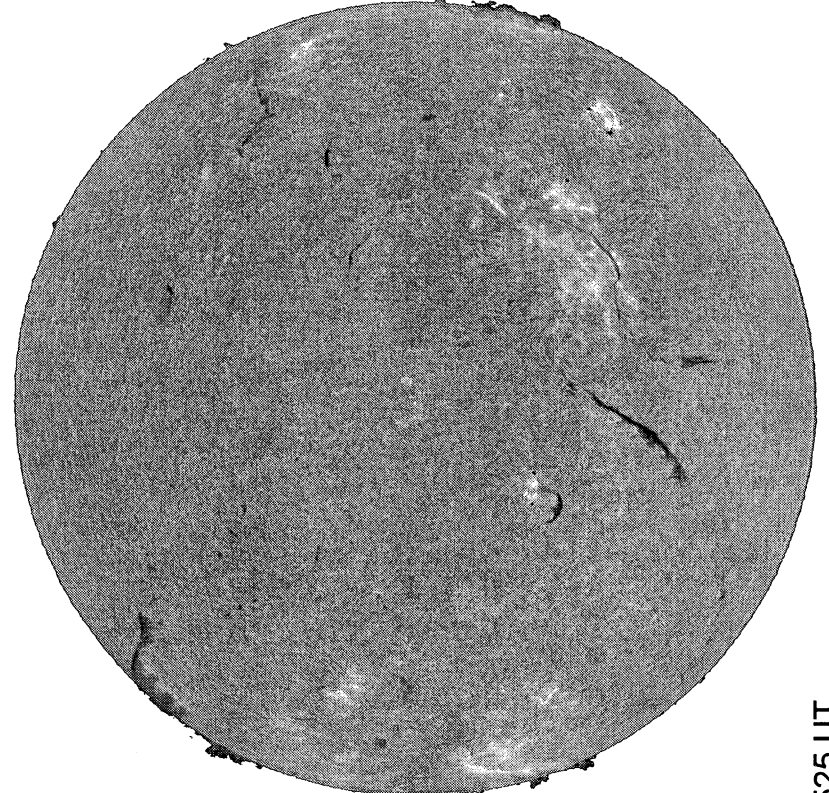
DeltaY = 13.1
DeltaX = 9.6



15.69 -
16.63 UT

White= +7.5G
Black = -7.5G

BIG BEAR H-ALPHA

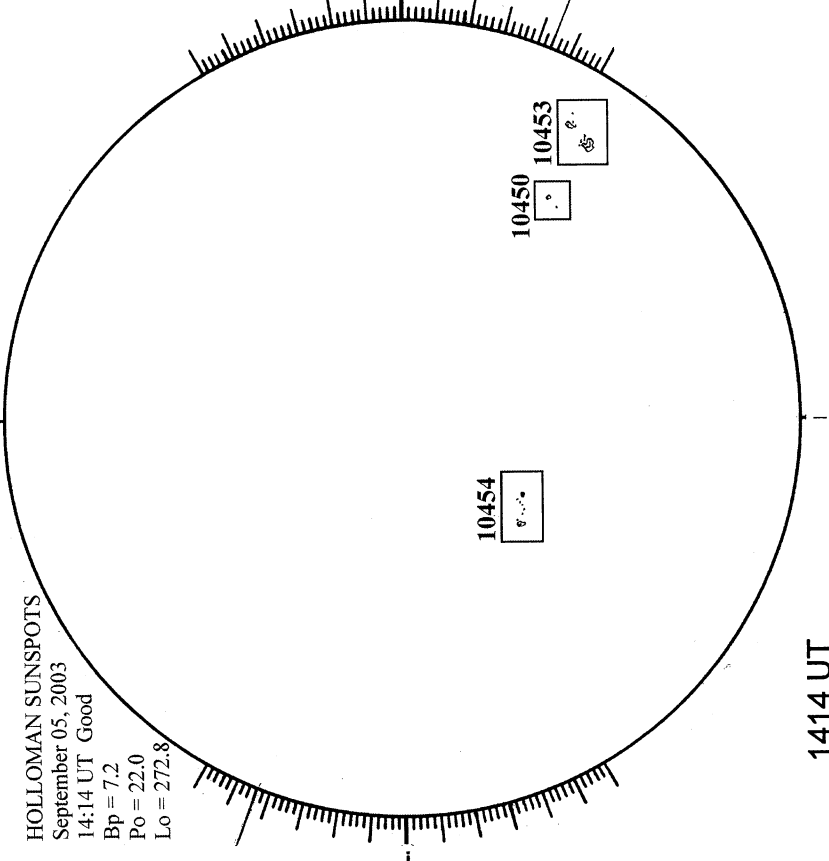


E-

1525 UT

HOLLOMAN SUNSPOT

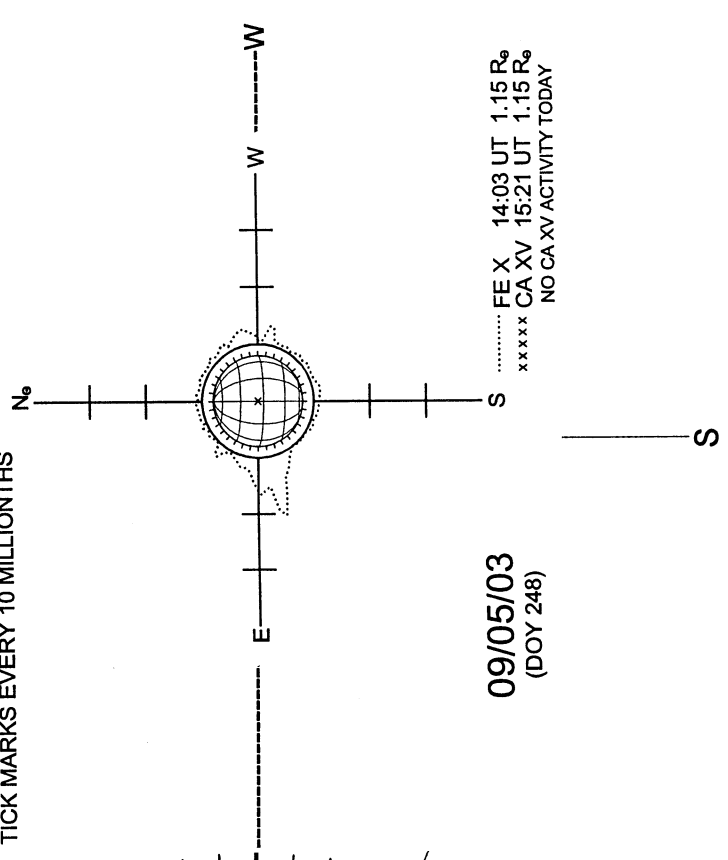
HOLLOMAN SUNSPOTS
September 05, 2003
14:14 UT Good
Bp = 7.2
Po = 22.0
Lo = 272.8



1414 UT

SACRAMENTO PEAK CORONA (1.15 Radii)----

NSO / SACRAMENTO PEAK CORONAL DATA
TICK MARKS EVERY 10 MILLIONTHS



09/05/03
(DOY 248)

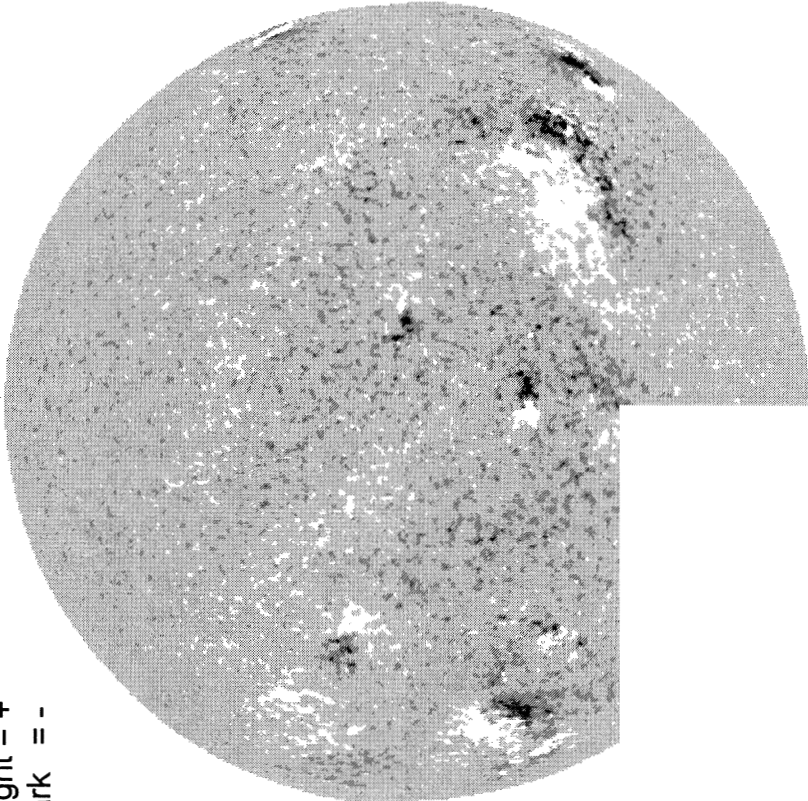
..... FE X 14:03 UT 1.15 R_o
xxxxx CA XV 15:21 UT 1.15 R_o
NO CA XV ACTIVITY TODAY

SEPTEMBER 6, 2003 (P= 22.17, Bo = 7.24, Lo = 267.42)

KITT PEAK MAGNETOGRAM

868.8 nm

Bright = +
Dark = -



1448 UT

STANFORD MAGNETOGRAM

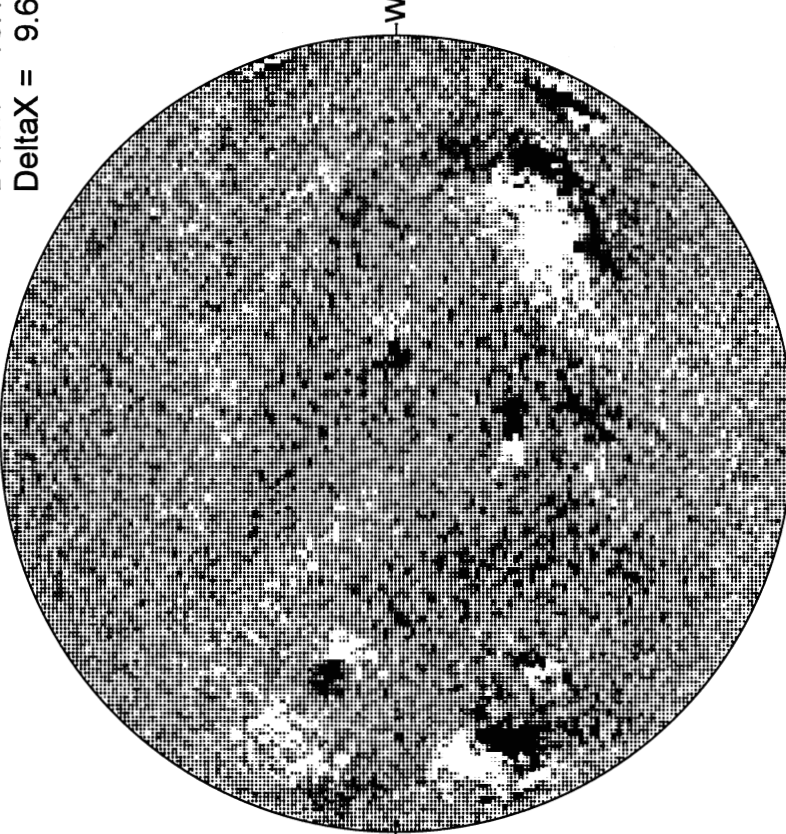
Solid = +
Dashed = -



2044 UT

MT. WILSON MAGNETOGRAM

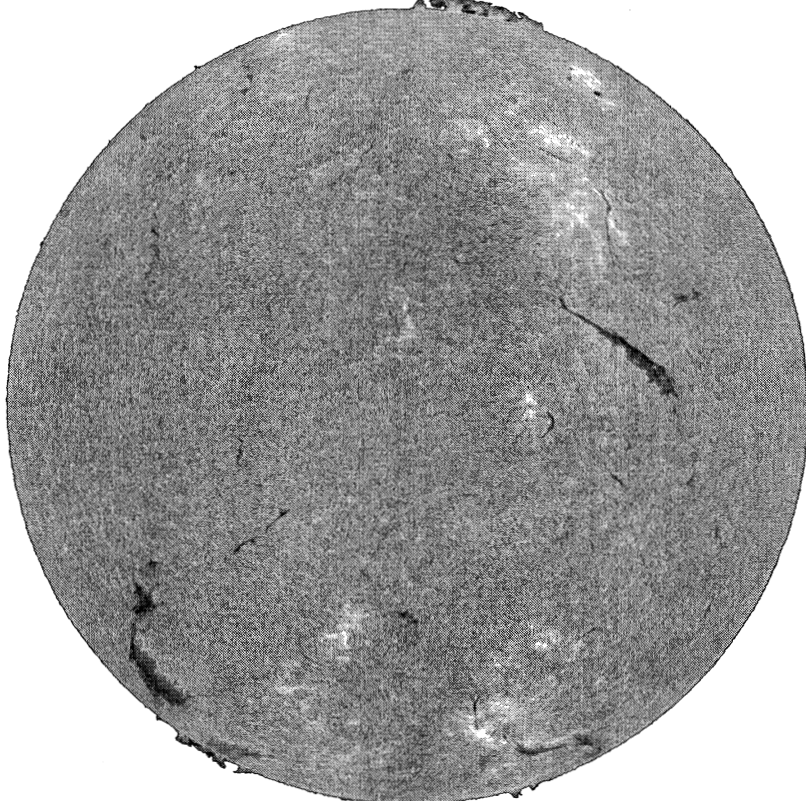
DeltaY = 13.1
DeltaX = 9.6



15:53 -
16:47 UT

White= +7.5G
Black = -7.5G

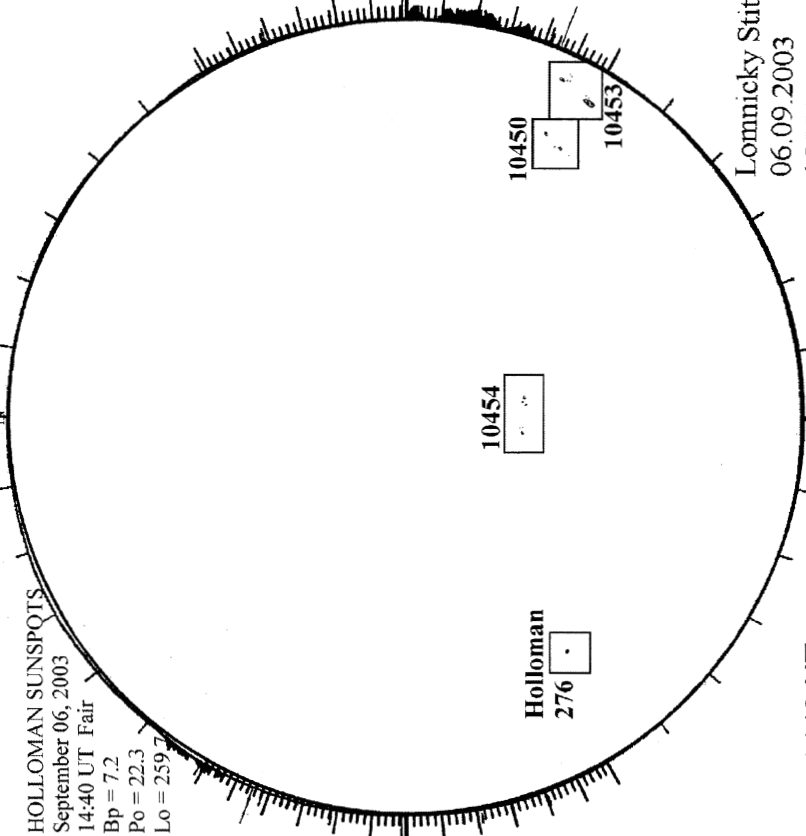
BIG BEAR H-ALPHA



1531 UT

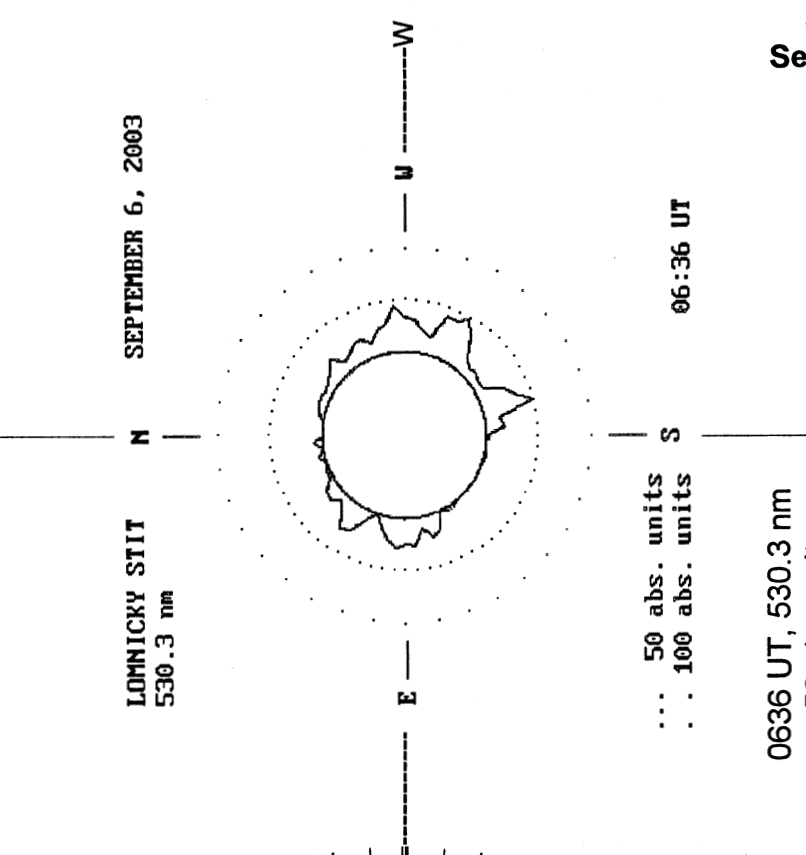
HOLLOMAN SUNSPOT

HOLLOMAN SUNSPOTS
September 06, 2003
14:40 UT Fair
Bp = 7.2
Po = 22.3
Lo = 259.7



1440 UT
0555 UT LOMN Prom S

LOMNICKY PEAK CORONA (1.04 Radii)----



... 50 abs. units
.. 100 abs. units

0636 UT, 530.3 nm
... 50 abs. units
.. 100 abs. units

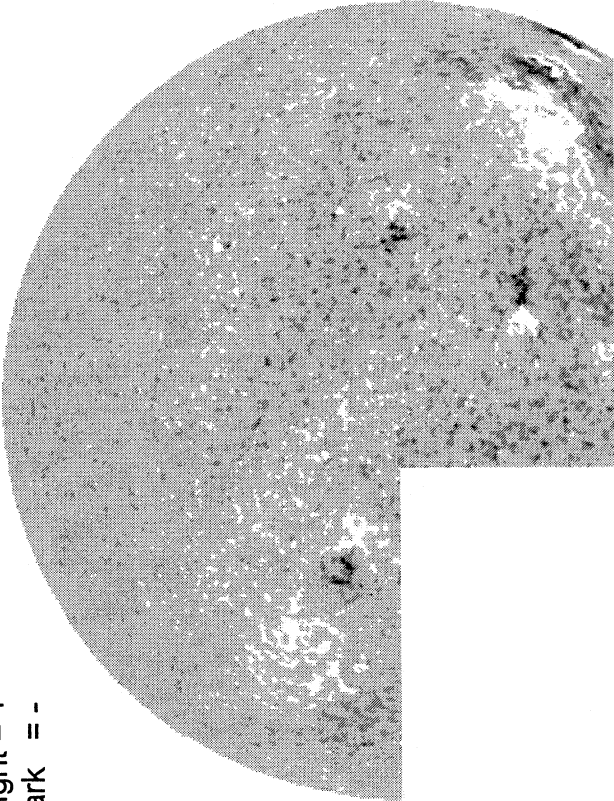
SEPTEMBER 7, 2003 (P= 22.39, Bo = 7.25, Lo = 254.22)

KITT PEAK MAGNETOGRAM

868.8 nm

N

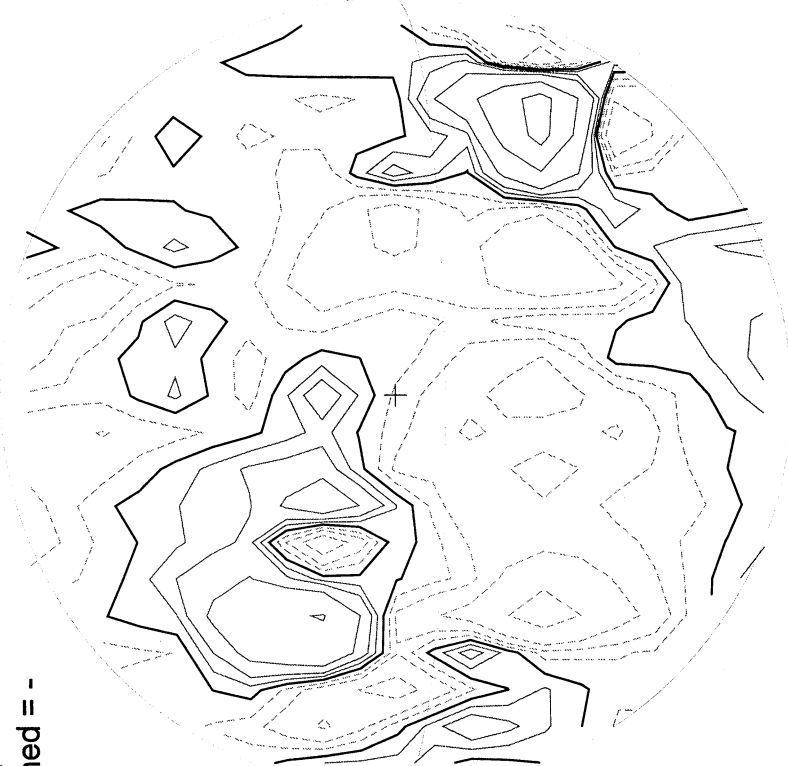
Bright = +
Dark = -



STANFORD MAGNETOGRAM

N

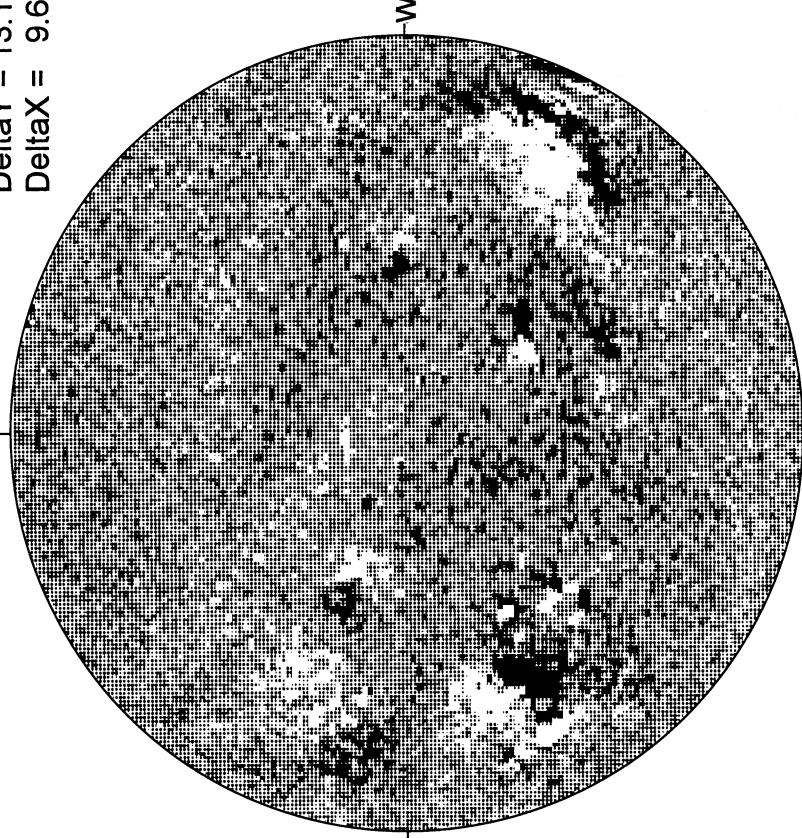
Solid = +
Dashed = -



MT. WILSON MAGNETOGRAM

N

DeltaY = 13.1
DeltaX = 9.6

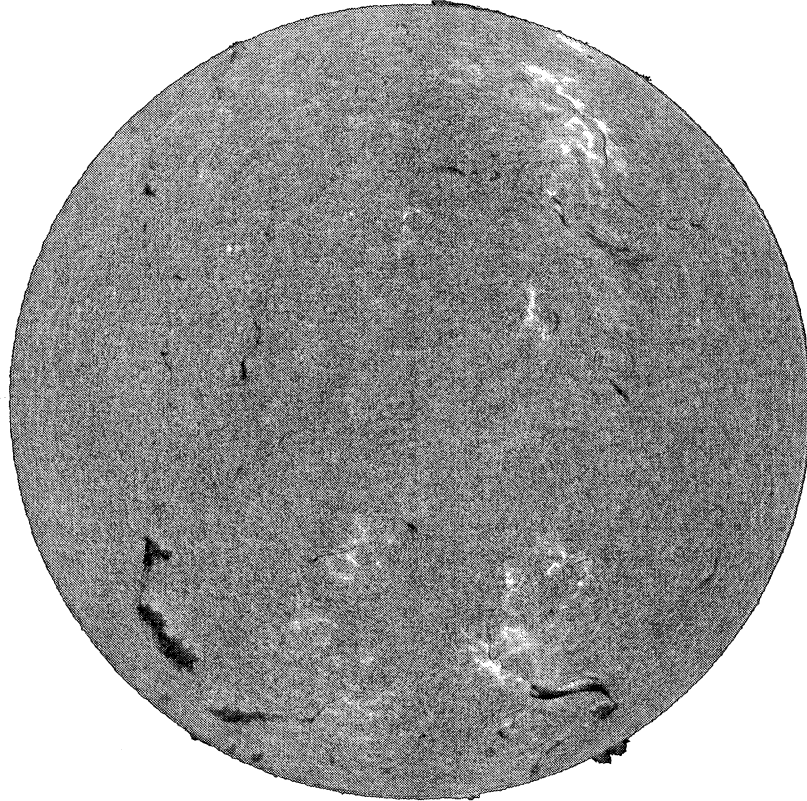


15.54 -
16.47 UT

White= +7.5G
Black = -7.5G

1442 UT

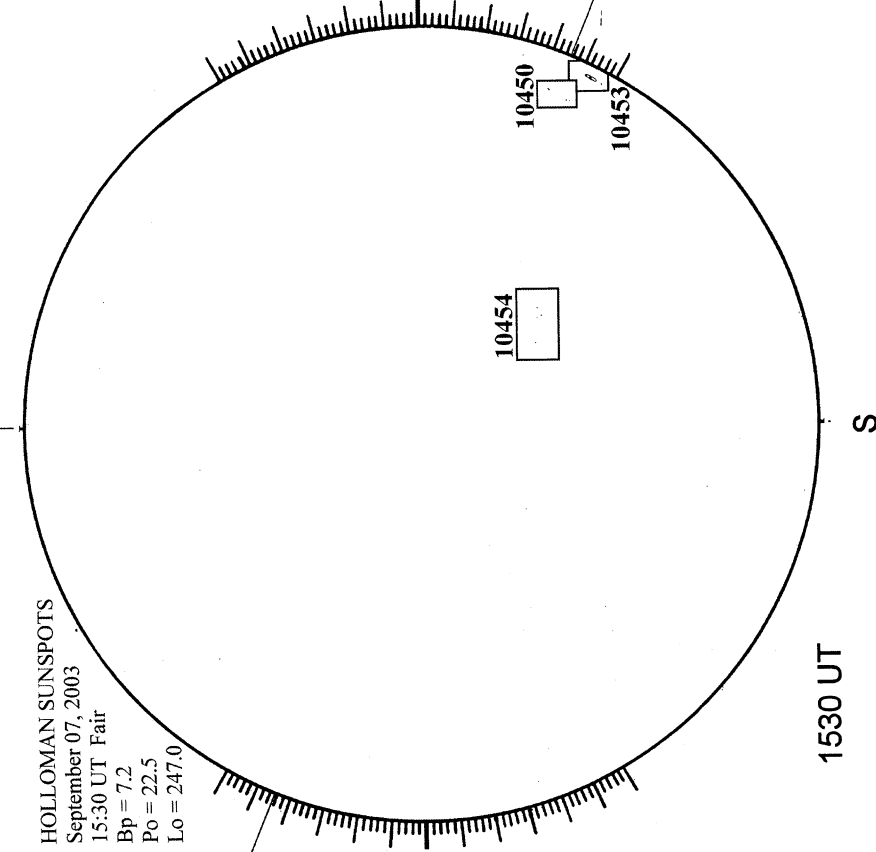
BIG BEAR H-ALPHA



1547 UT

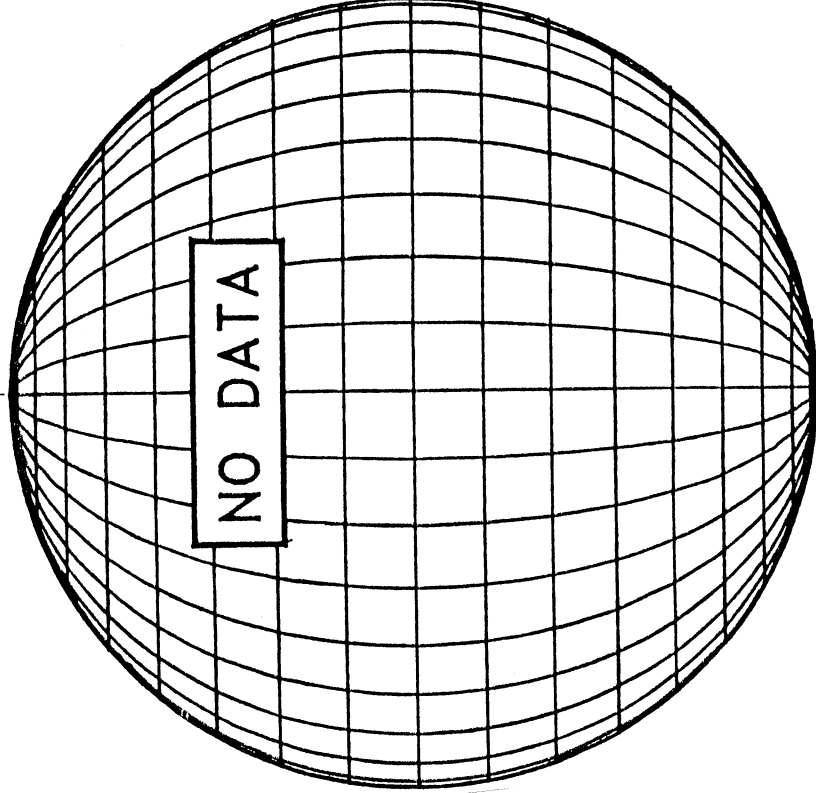
HOLLOMAN SUNSPOTS

HOLLOMAN SUNSPOTS
September 07, 2003
15:30 UT Fair
Bp = 7.2
Po = 22.5
Lo = 247.0



1530 UT

SACRAMENTO PEAK CORONA (1.15 Radii)----



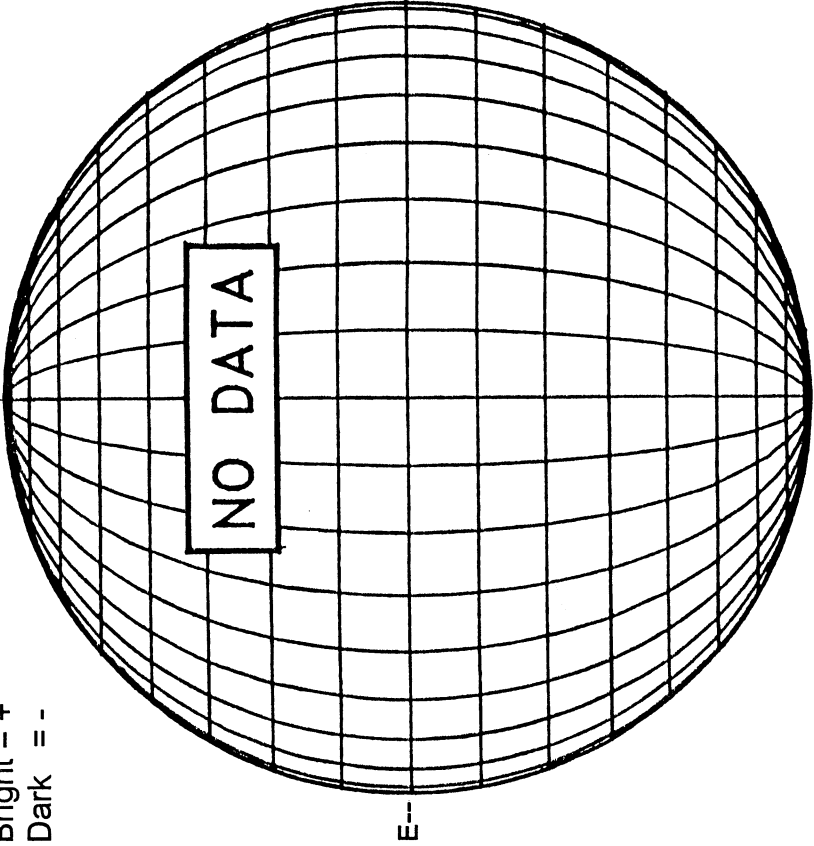
S

SEPTEMBER 8, 2003 (P= 22.61, Bo = 7.25, Lo = 241.01)

KITT PEAK MAGNETOGRAM

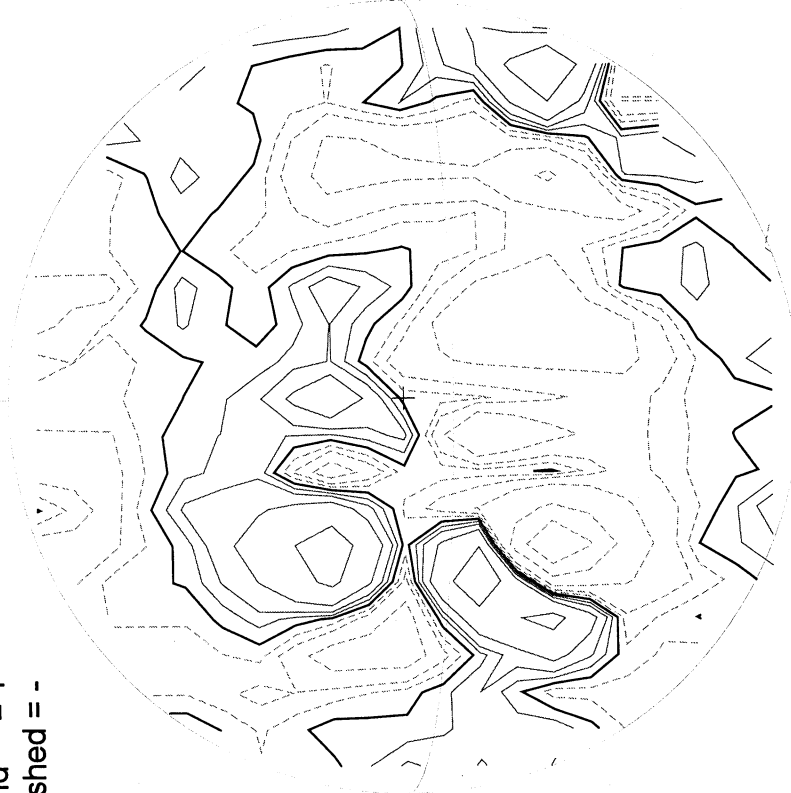
868.8 nm

Bright = +
Dark = -



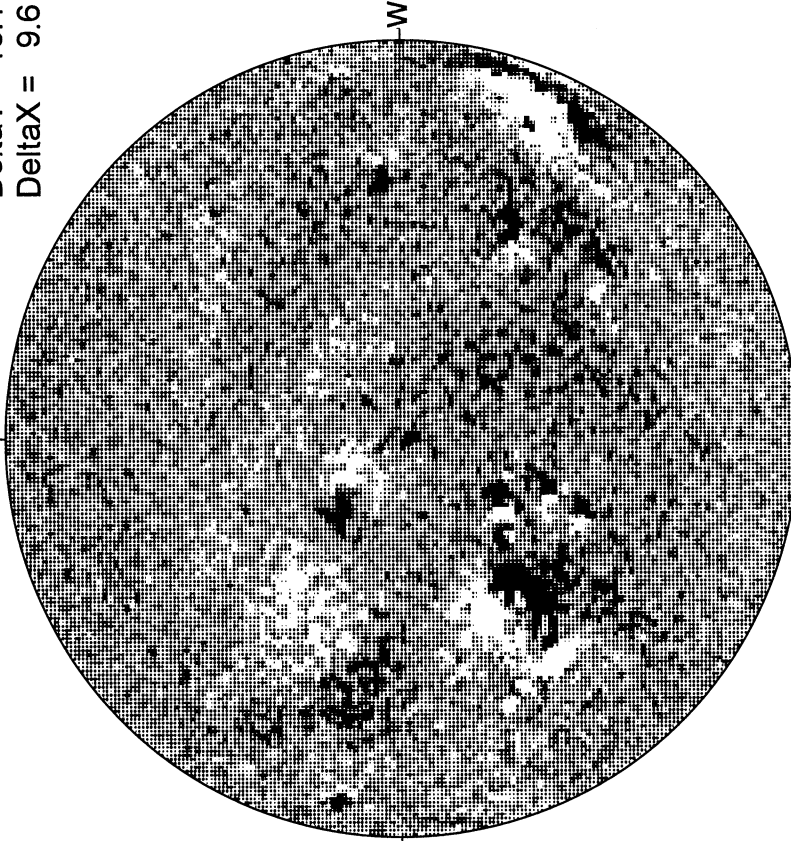
STANFORD MAGNETOGRAM

Solid = +
Dashed = -



MT. WILSON MAGNETOGRAM

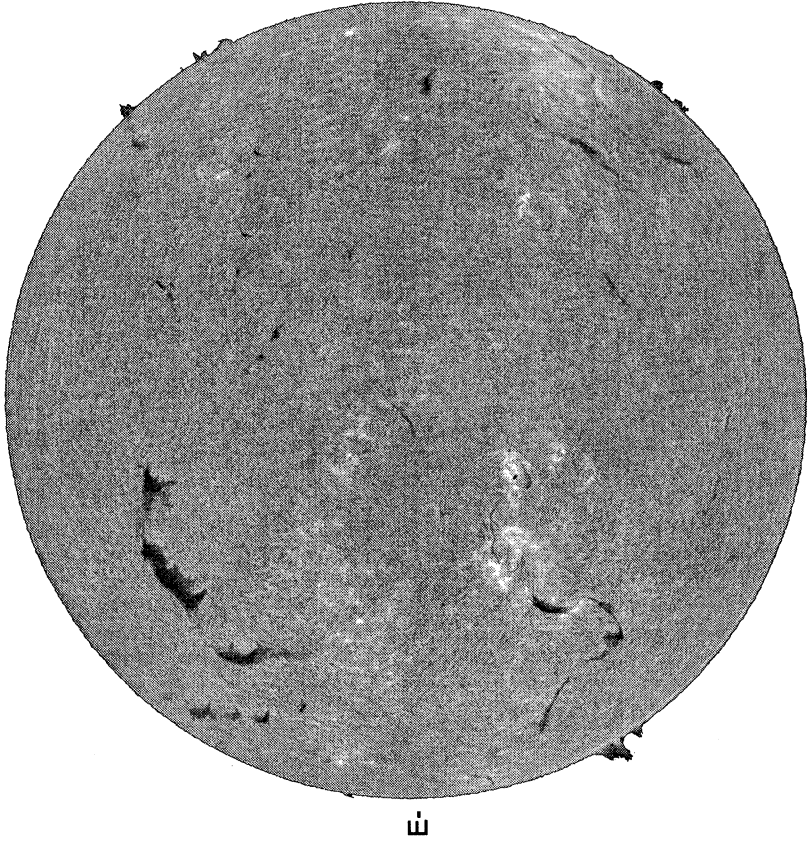
DeltaY = 13.1
DeltaX = 9.6



20.37 -
21.30 UT

White= +7.5G
Black = -7.5G

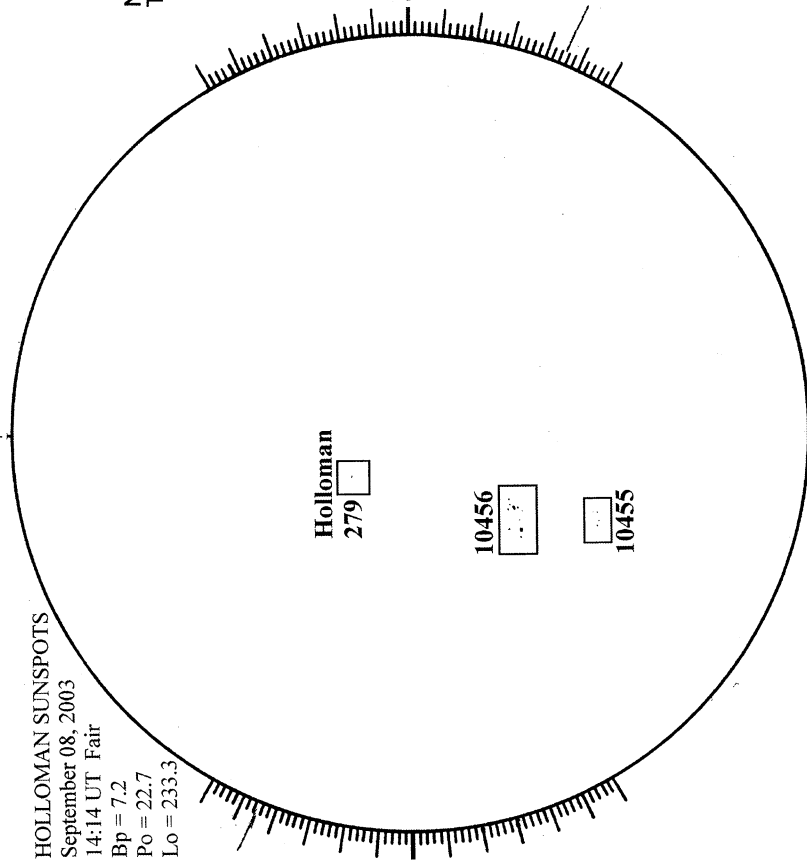
BIG BEAR H-ALPHA



2109 UT

HOLLOMAN SUNSPOT

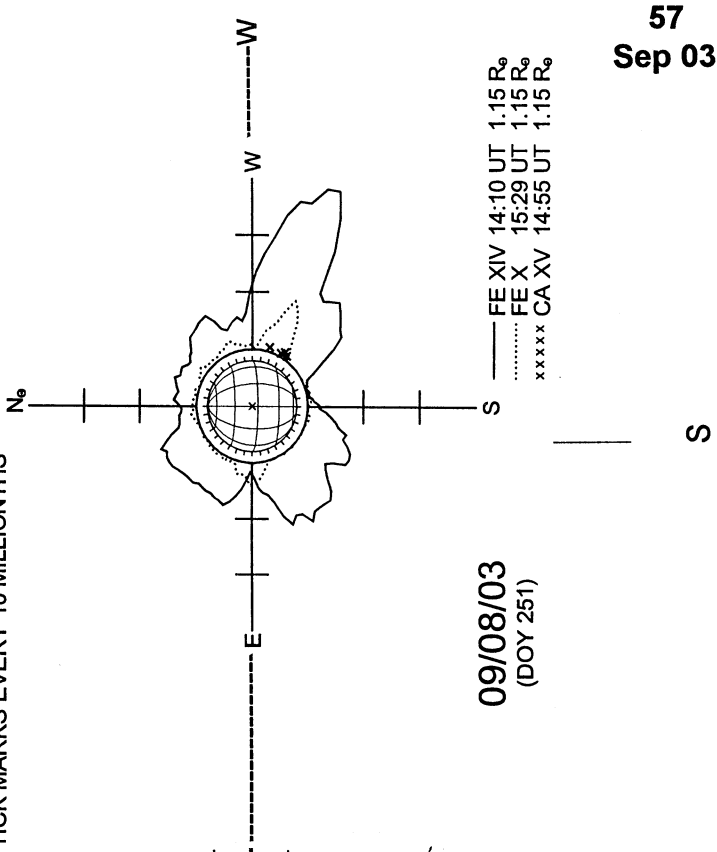
HOLLOMAN SUNSPOTS
September 08, 2003
14:14 UT Fair
Bp = 7.2
Po = 22.7
Lo = 233.3



1414 UT

SACRAMENTO PEAK CORONA (1.15 Radii)----

NSO / SACRAMENTO PEAK CORONAL DATA
TICK MARKS EVERY 10 MILLIONTHS



09/08/03
(DOY 251)

FE XIV 14:10 UT 1.15 R_o
FE X 15:29 UT 1.15 R_o
CA XV 14:55 UT 1.15 R_o

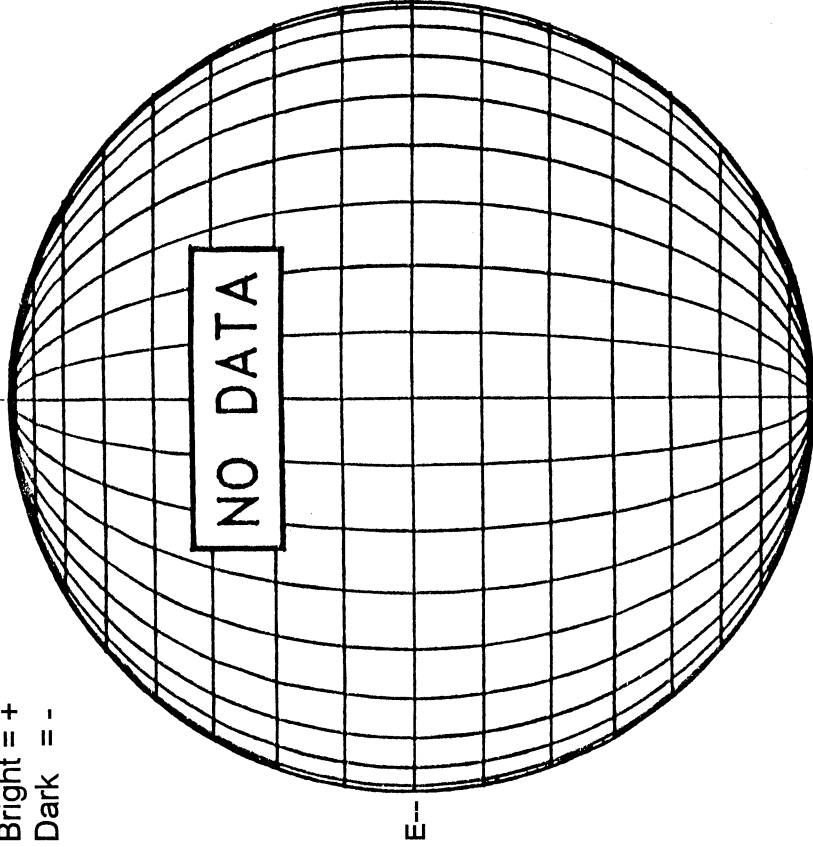
57
Sep 03

SEPTEMBER 9, 2003 (P= 22.82, Bo = 7.25, Lo = 227.80)

KITT PEAK MAGNETOGRAM

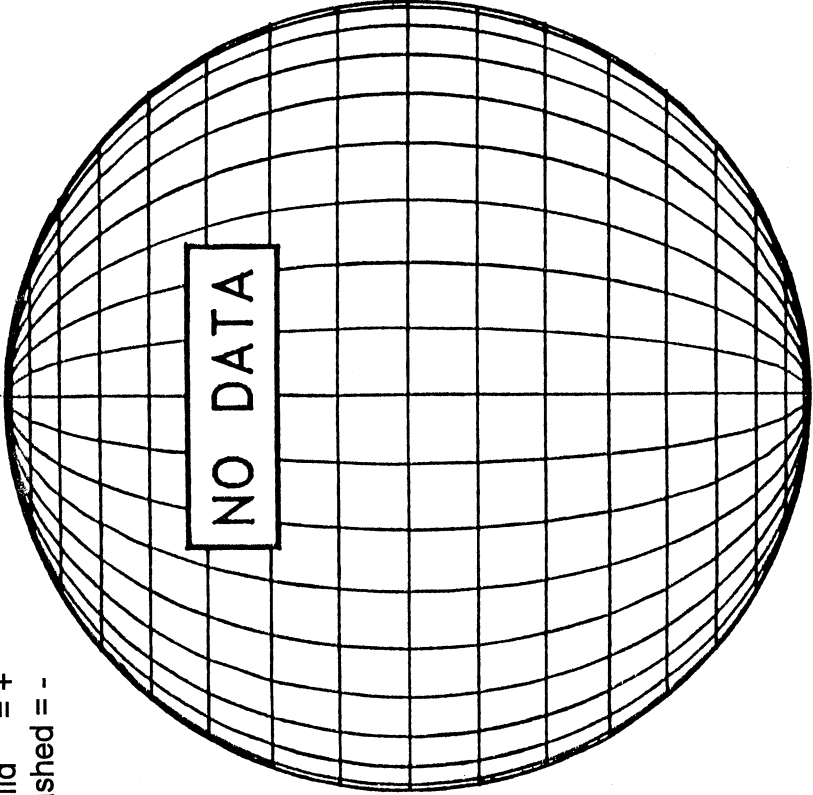
**868.8 nm

Bright = +
Dark = -



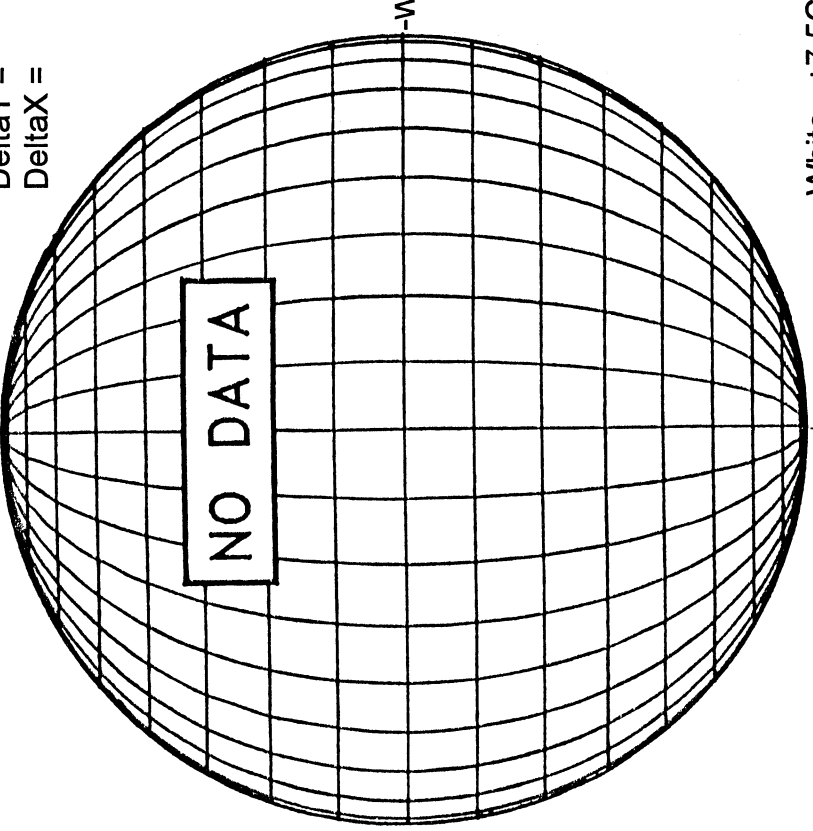
STANFORD MAGNETOGRAM

Solid = +
Dashed = -



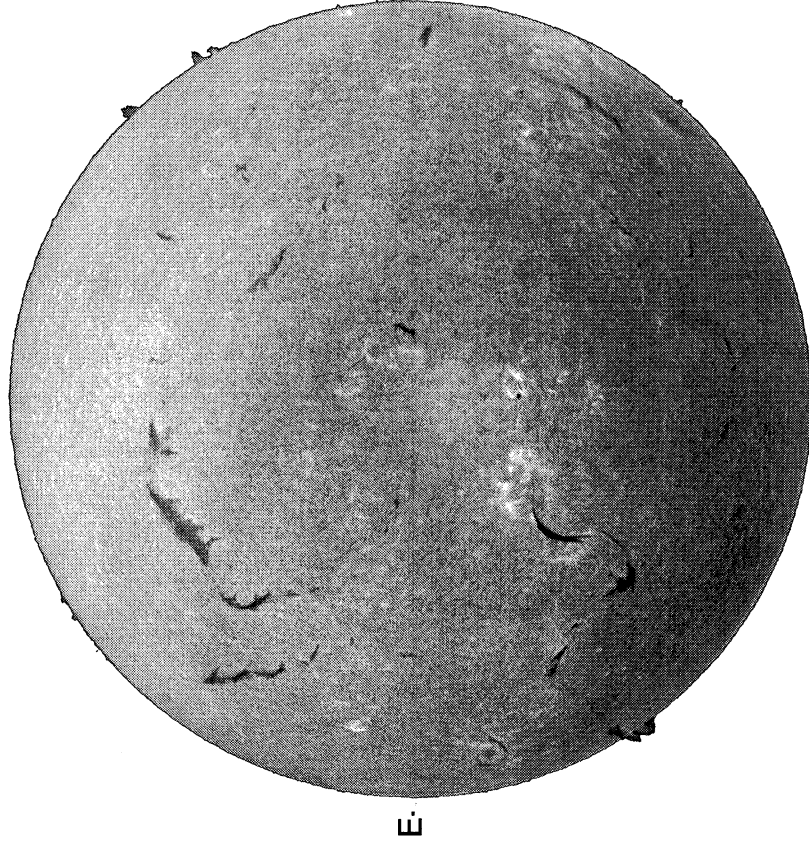
MT. WILSON MAGNETOGRAM

DeltaY =
DeltaX =



White= +7.5G
Black = -7.5G

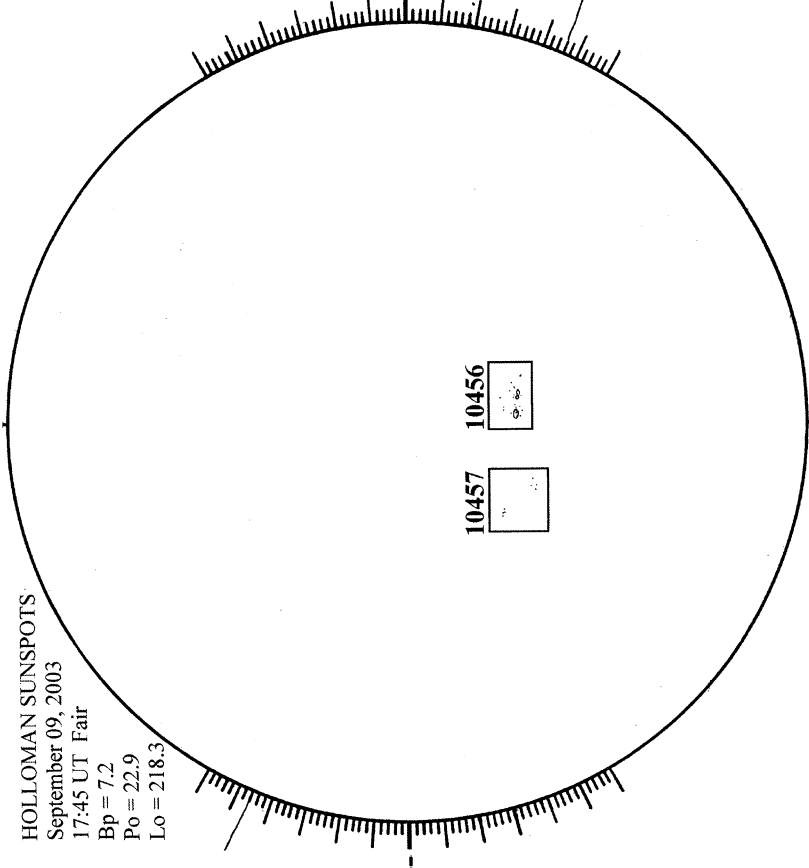
BIG BEAR H-ALPHA



1823 UT

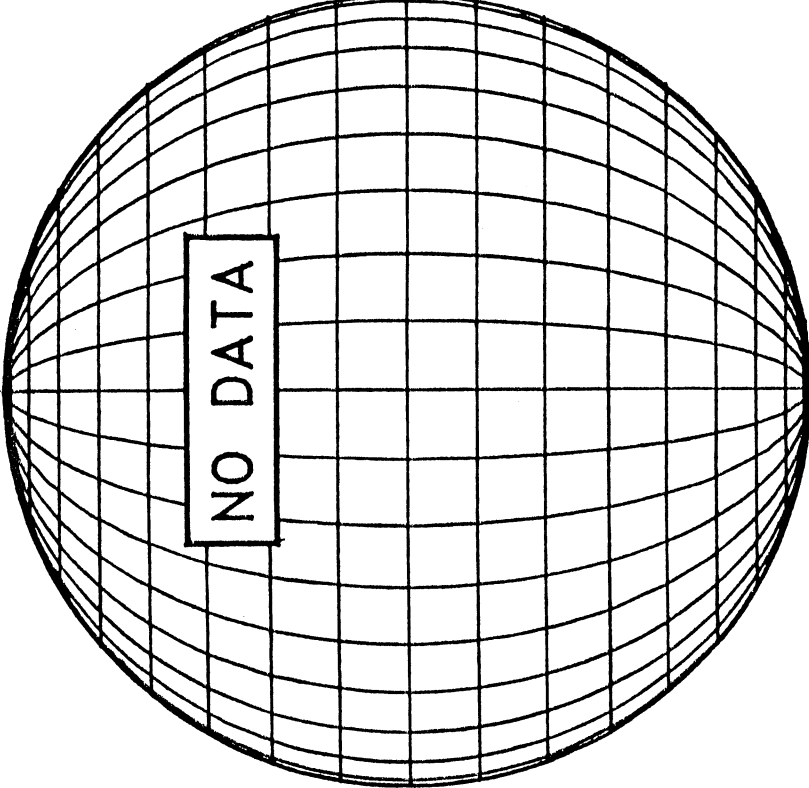
HOLLOMAN SUNSPOT

HOLLOMAN SUNSPOTS
September 09, 2003
17:45 UT Fair
Bp = 7.2
Po = 22.9
Lo = 218.3



1745 UT

SACRAMENTO PEAK CORONA (1.15 Radii)----



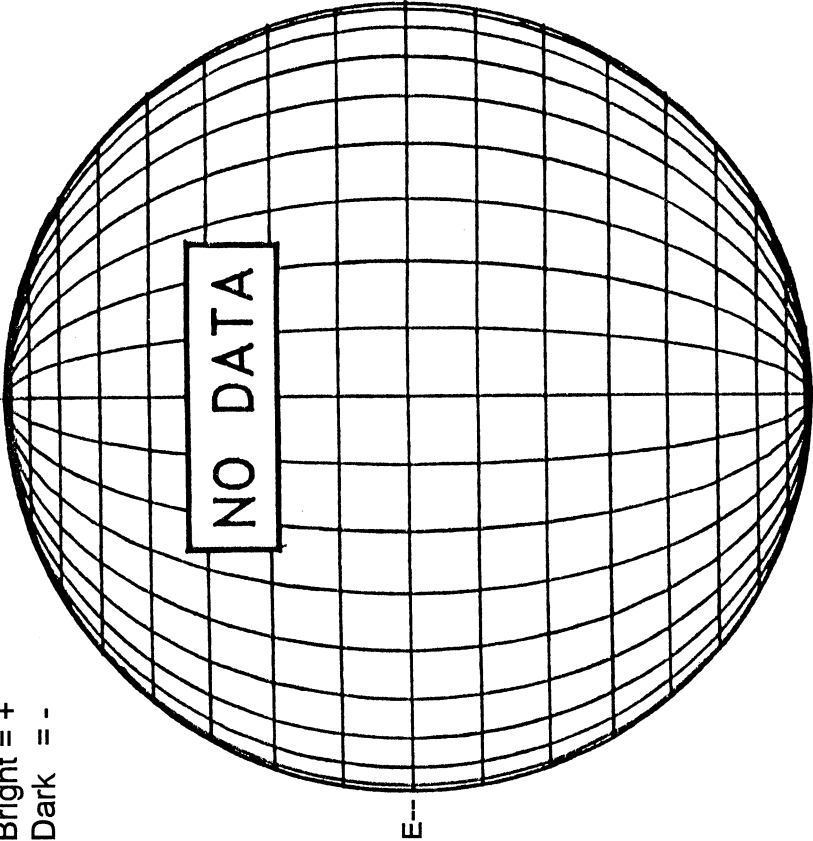
S

SEPTEMBER 10, 2003 (P= 23.03, Bo = 7.25 Lo = 214.60)

KITT PEAK MAGNETOGRAM

868.8 nm

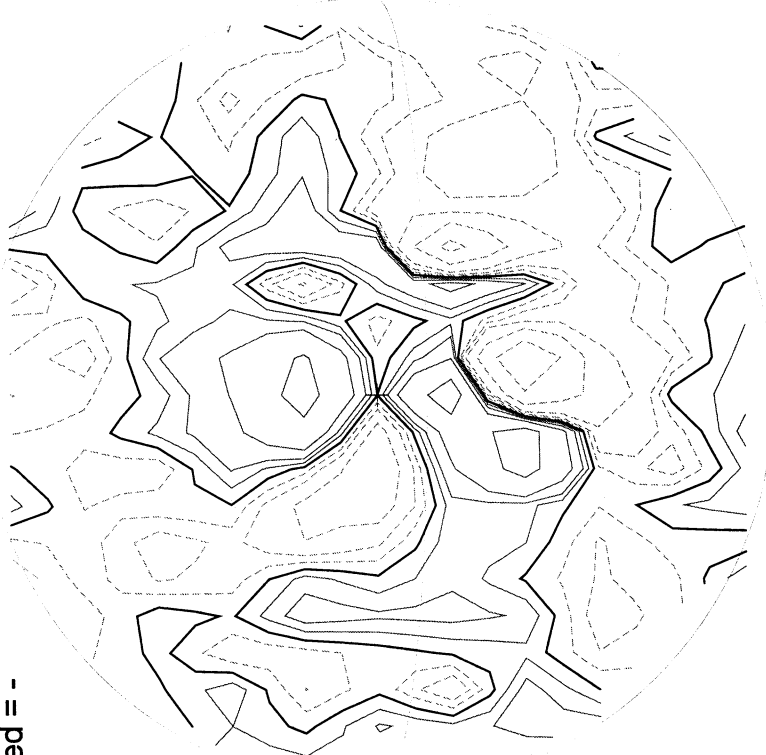
Bright = +
Dark = -



STANFORD MAGNETOGRAM

N

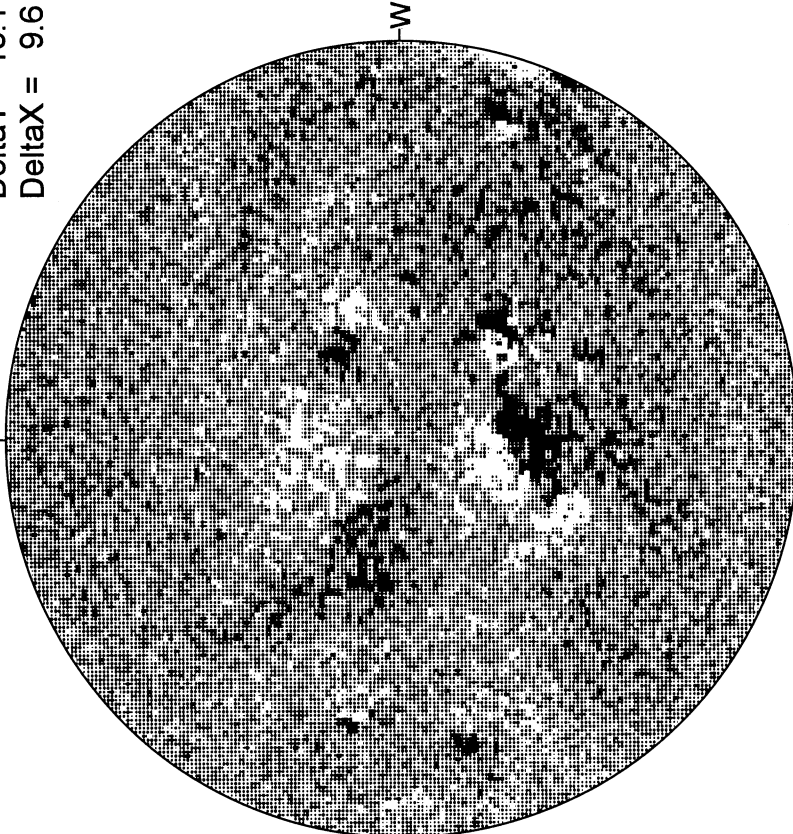
Solid = +
Dashed = -



MT. WILSON MAGNETOGRAM

N

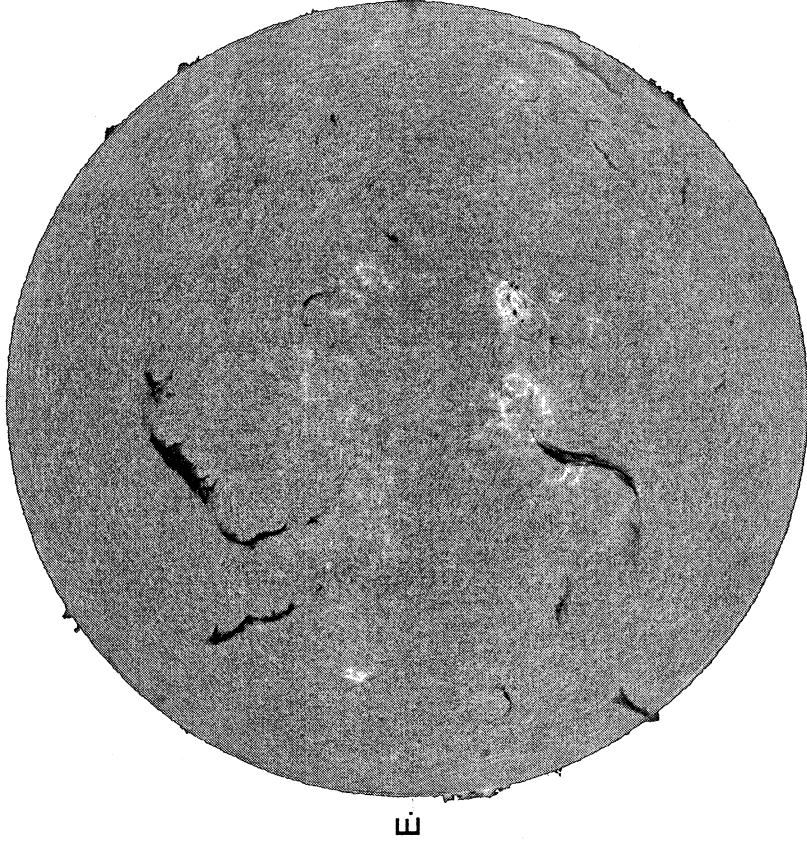
DeltaY = 13.1
DeltaX = 9.6



15.50 -
16.44 UT

White= +7.5G
Black = -7.5G

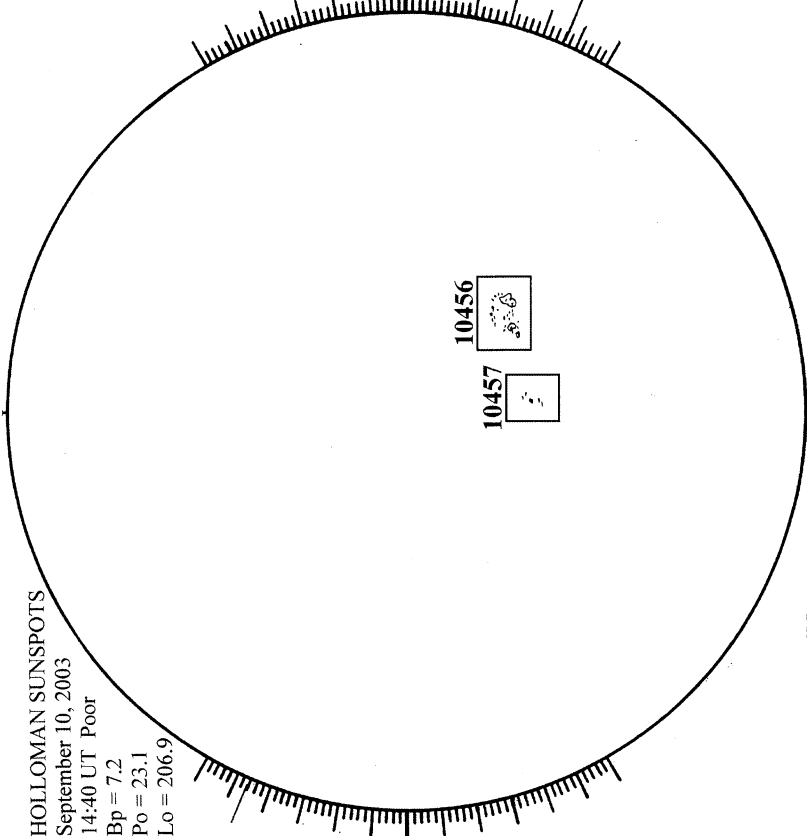
BIG BEAR H-ALPHA



1610 UT

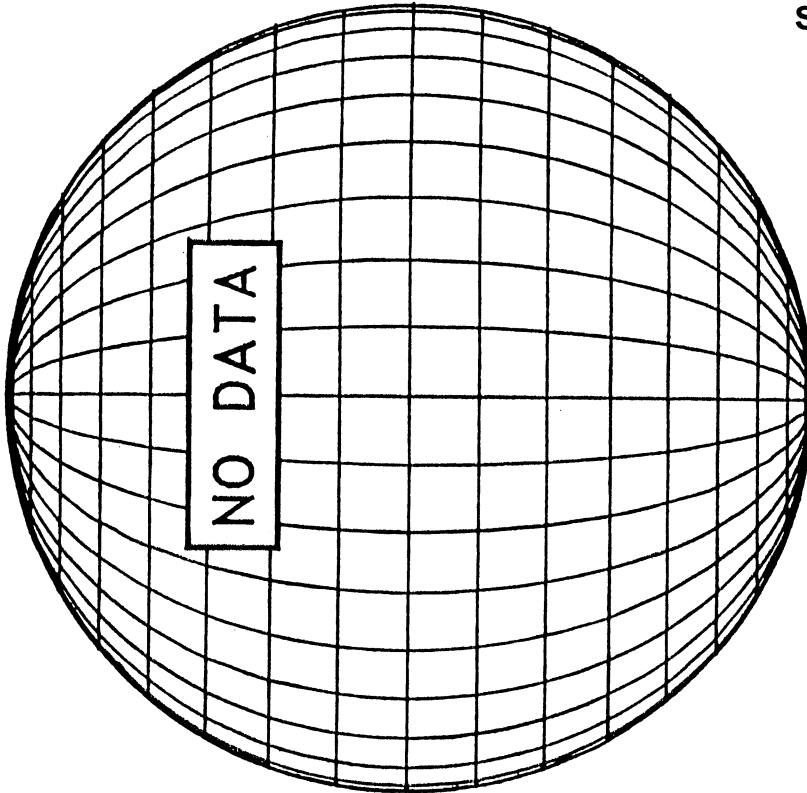
HOLLOMAN SUNSPOTS

HOLLOMAN SUNSPOTS
September 10, 2003
14:40 UT Poor
Bp = 7.2
Po = 23.1
Lo = 206.9



1440 UT

SACRAMENTO PEAK CORONA (1.15 Radii)----



59
Sep 03

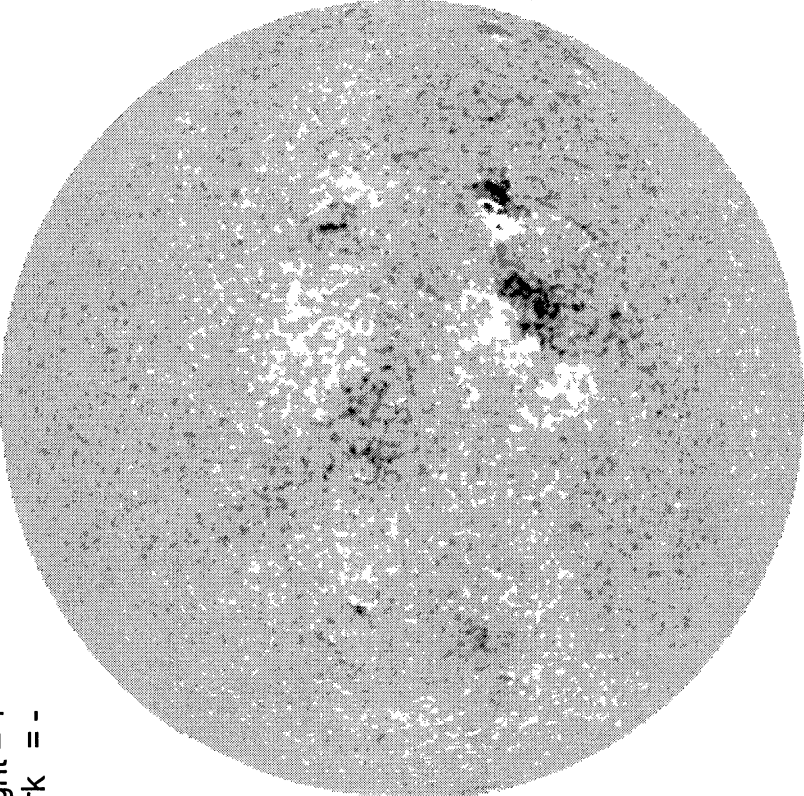
SEPTEMBER 11, 2003 (P= 23.23, Bo = 7.25, Lo = 201.39)

60
Sep 03

KITT PEAK MAGNETOGRAM

868.8 nm

Bright = +
Dark = -



1610 UT

STANFORD MAGNETOGRAM

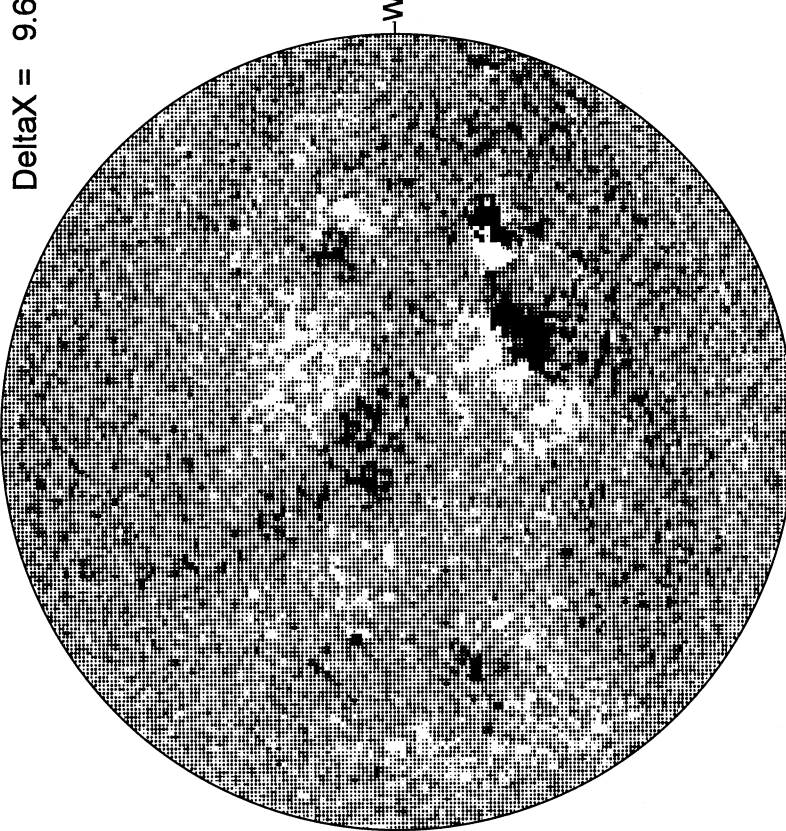
Solid = +
Dashed = -



2136 UT

MT. WILSON MAGNETOGRAM

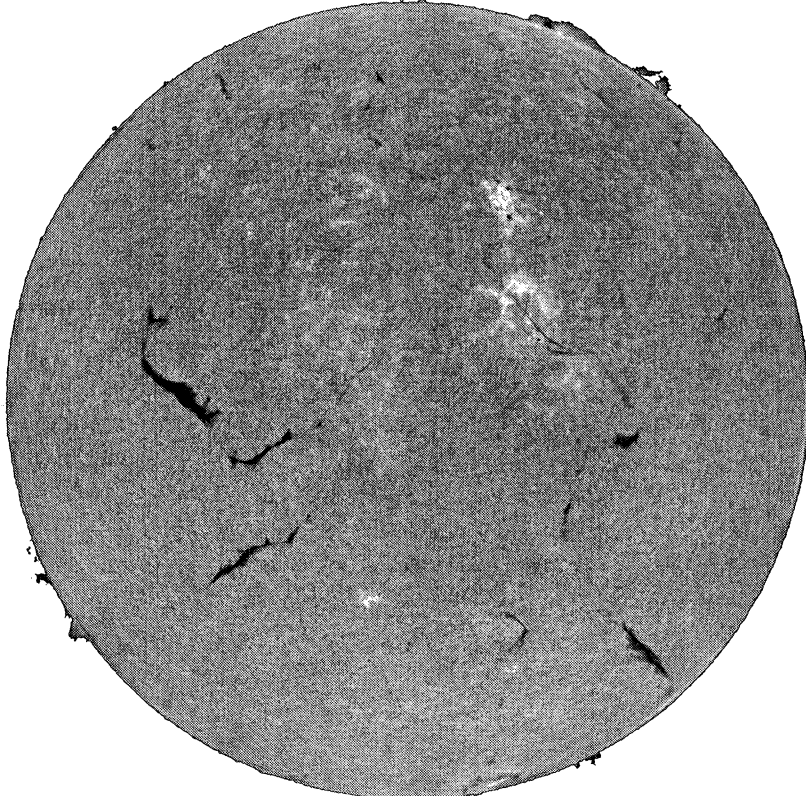
DeltaY = 13.1
DeltaX = 9.6



18.03 -
18.96 UT

White= +7.5G
Black = -7.5G

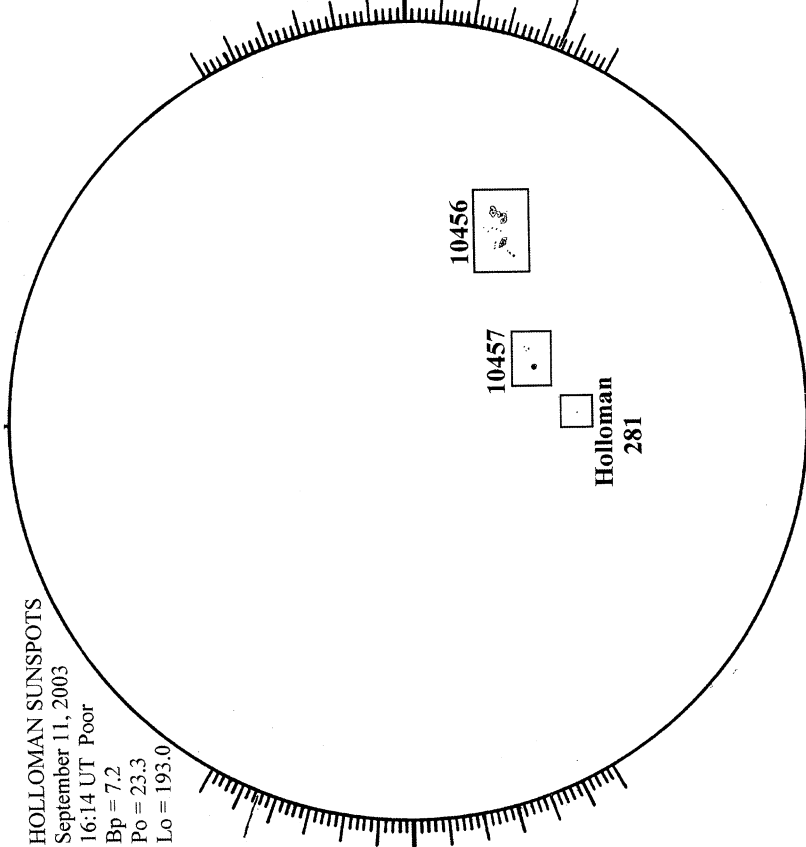
BIG BEAR H-ALPHA



1900 UT

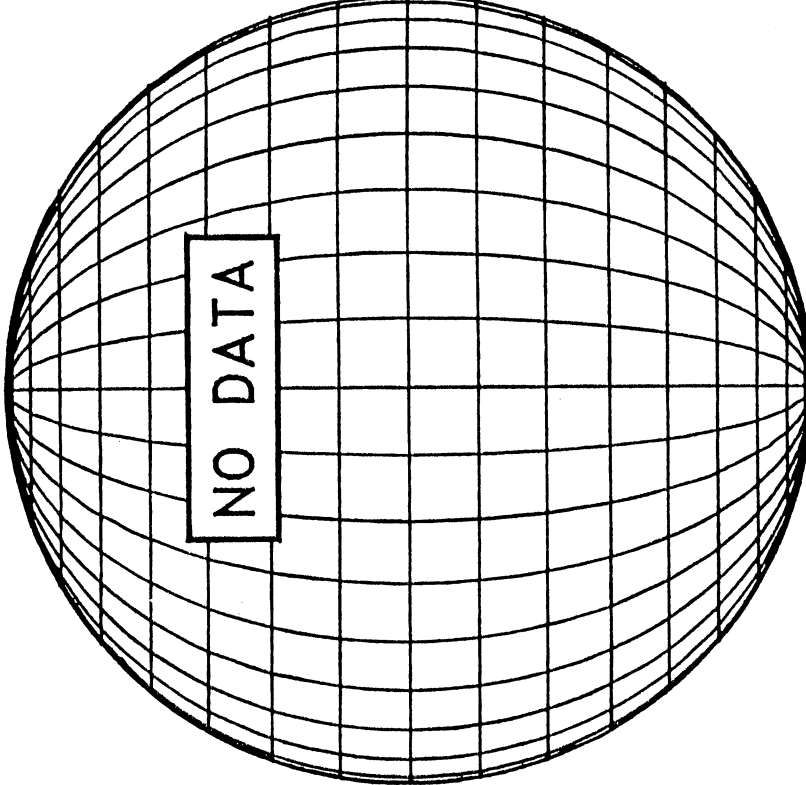
HOLLOMAN SUNSPOTS

HOLLOMAN SUNSPOTS
September 11, 2003
16:14 UT Poor
Bp = 7.2
Po = 23.3
Lo = 193.0



1614 UT

SACRAMENTO PEAK CORONA (1.15 Radii)----



NO DATA

SEPTEMBER 13, 2003 (P= 23.62, Bo = 7.23, Lo = 174.98)

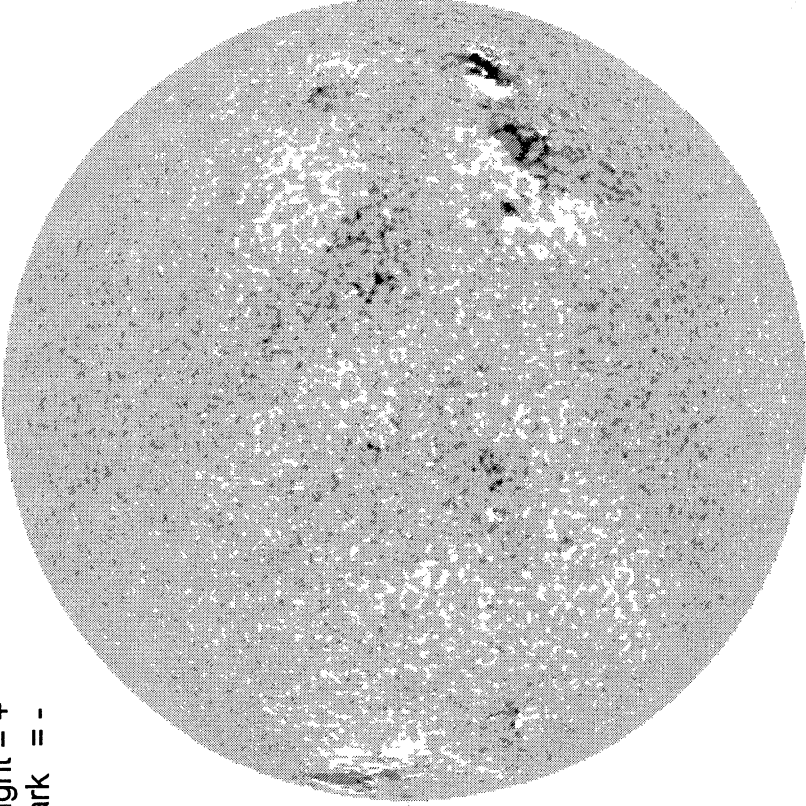
62
Sep 03

KITT PEAK MAGNETOGRAM

868.8 nm

N

Bright = +
Dark = -

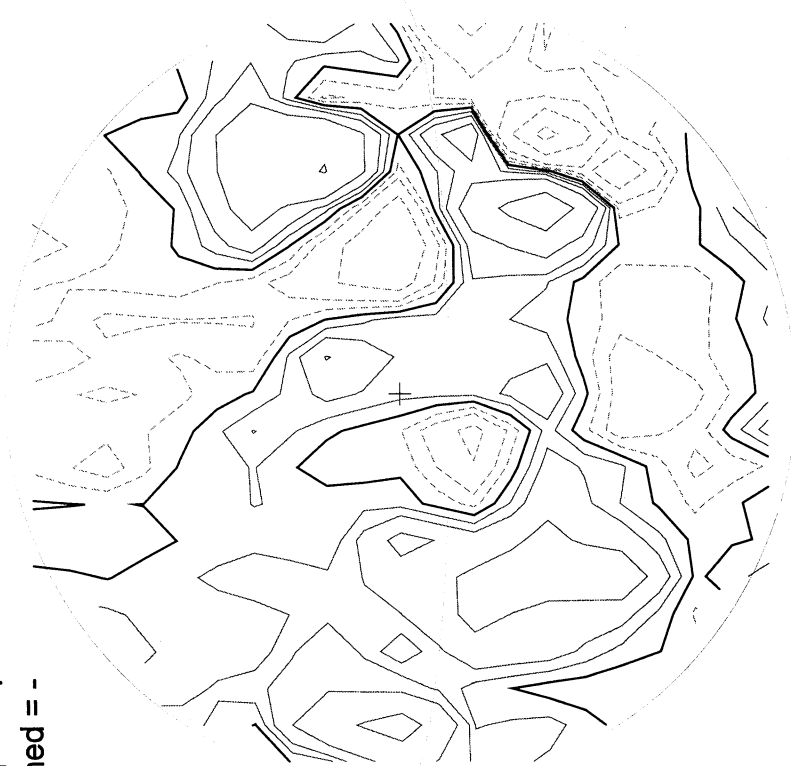


1444 UT

STANFORD MAGNETOGRAM

N

Solid = +
Dashed = -

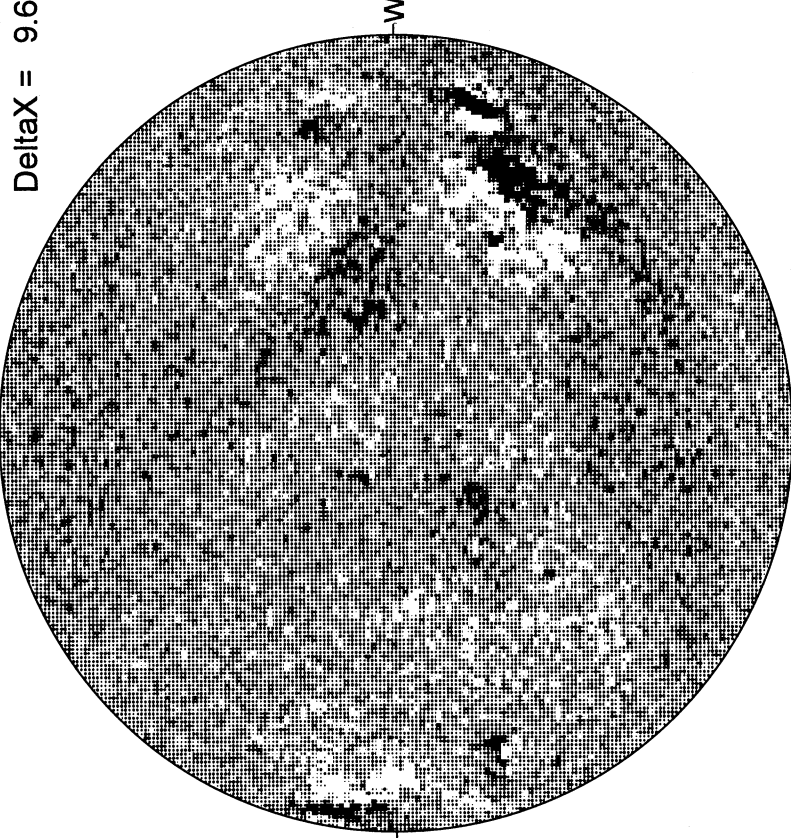


1928 UT

MT. WILSON MAGNETOGRAM

N

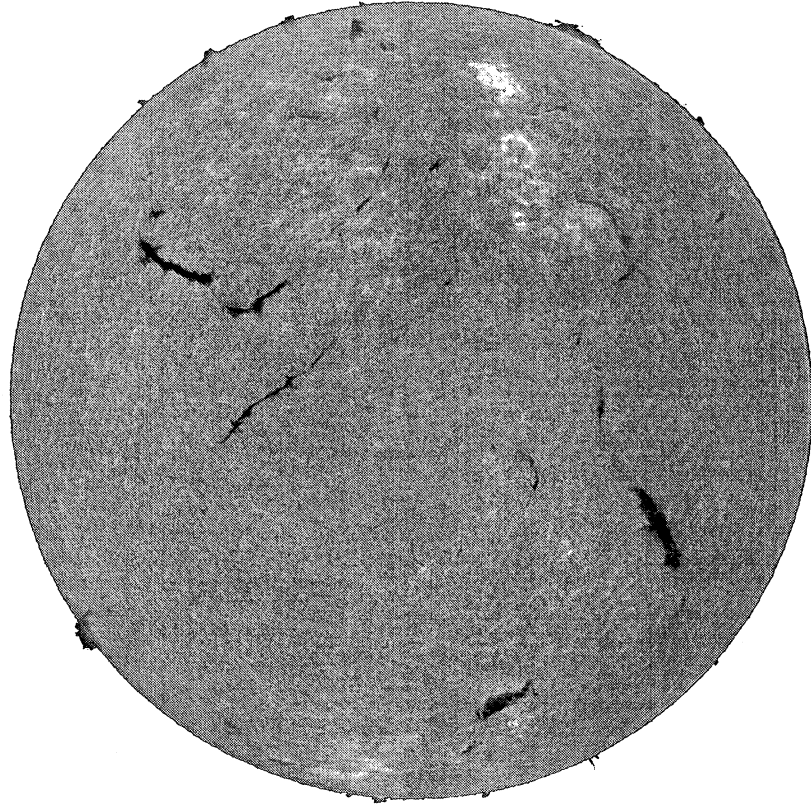
DeltaY = 13.1
DeltaX = 9.6



16.38 -
17.32 UT

White= +7.5G
Black = -7.5G

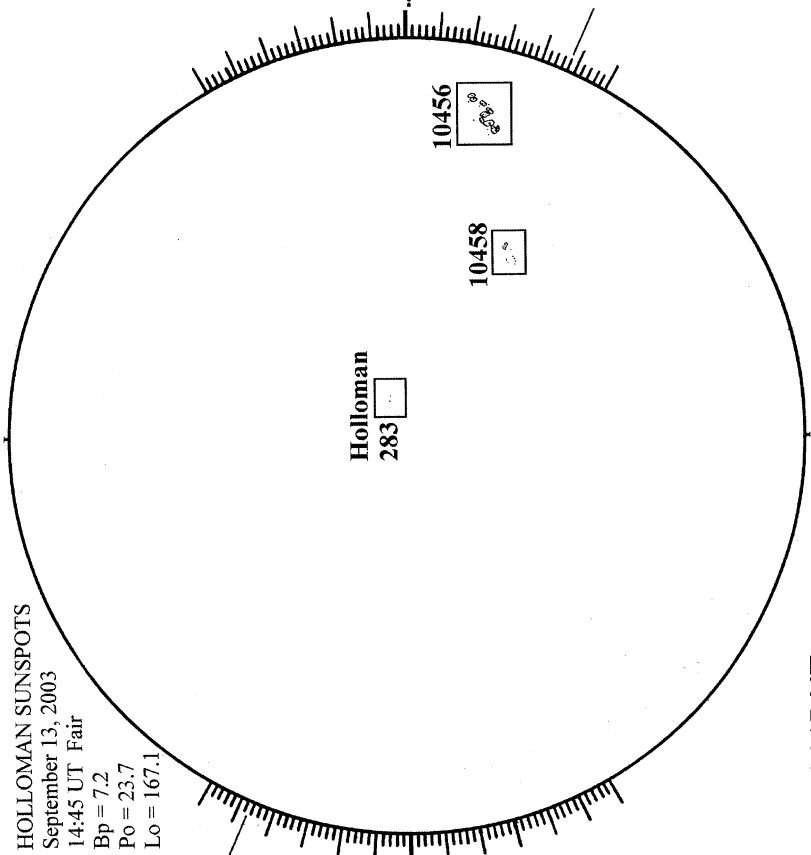
BIG BEAR H-ALPHA



1536 UT

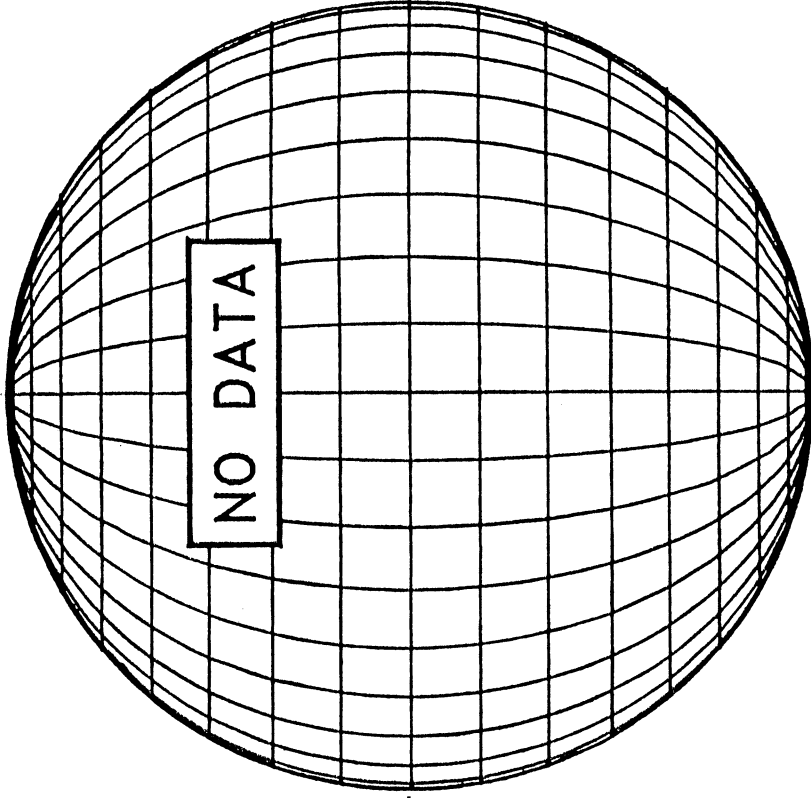
HOLLOMAN SUNSPOT

HOLLOMAN SUNSPOTS
September 13, 2003
14:45 UT Fair
Bp = 7.2
Po = 23.7
Lo = 167.1



1445 UT

SACRAMENTO PEAK CORONA (1.15 Radii)----



S

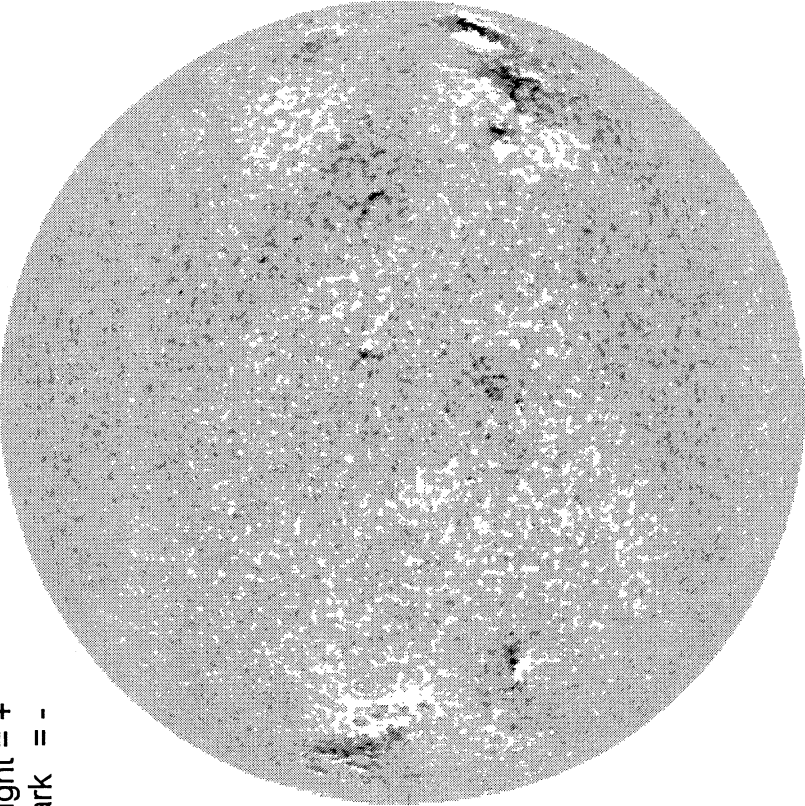
SEPTEMBER 14, 2003 (P= 23.80, Bo = 7.22, Lo = 161.78)

KITT PEAK MAGNETOGRAM

868.8 nm

N

Bright = +
Dark = -



1542 UT

STANFORD MAGNETOGRAM

N

Solid = +
Dashed = -

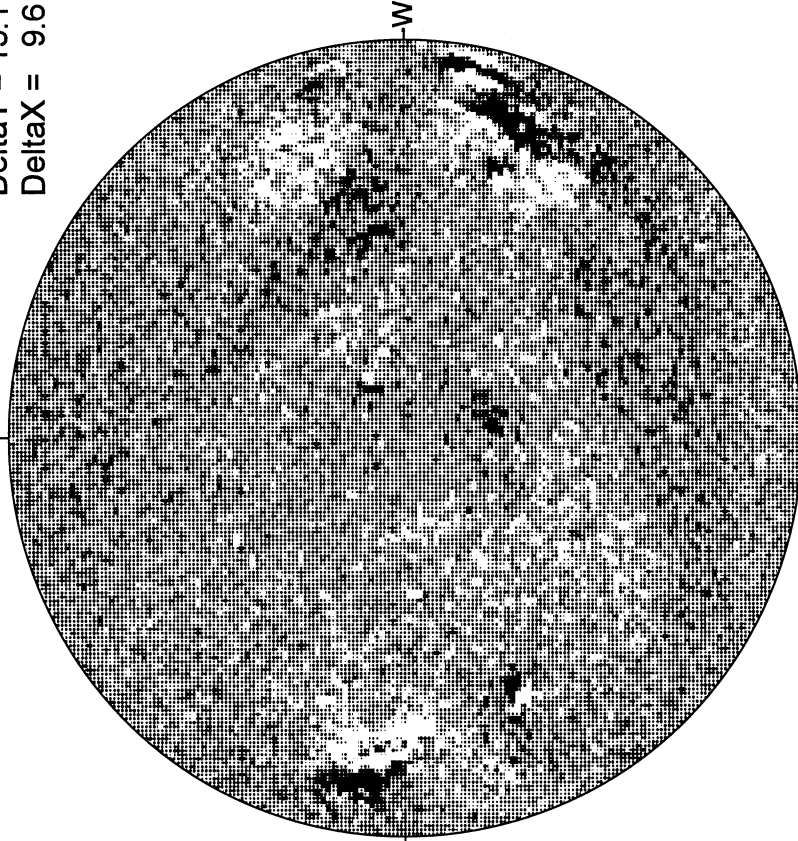


1953 UT

MT. WILSON MAGNETOGRAM

N

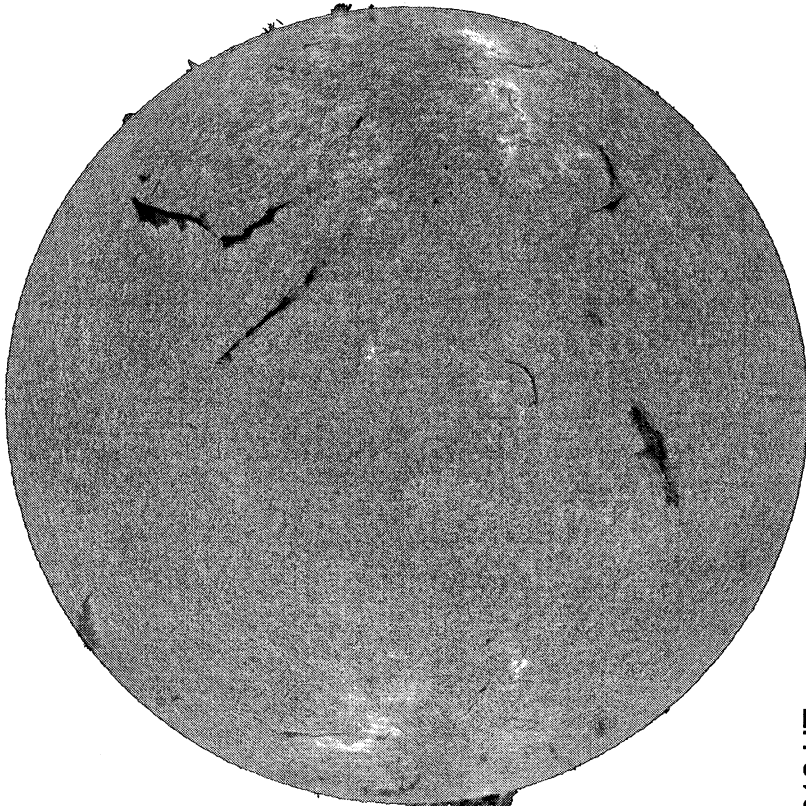
DeltaY = 13.1
DeltaX = 9.6



16.57 -
17.51 UT

White= +7.5G
Black = -7.5G

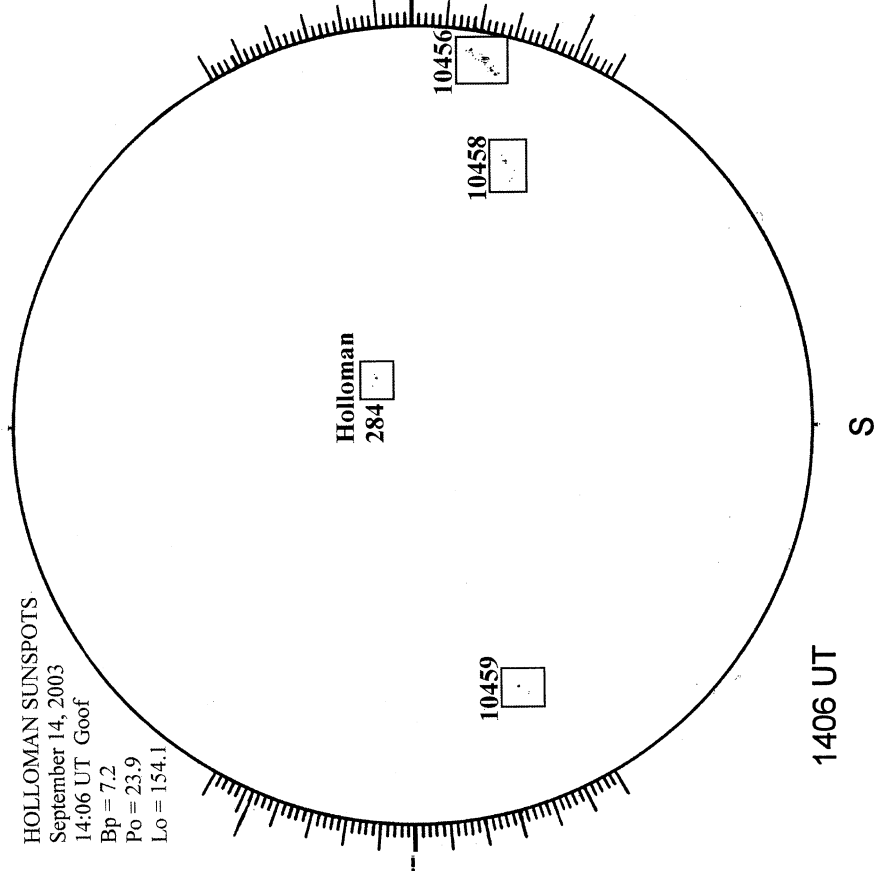
BIG BEAR H-ALPHA



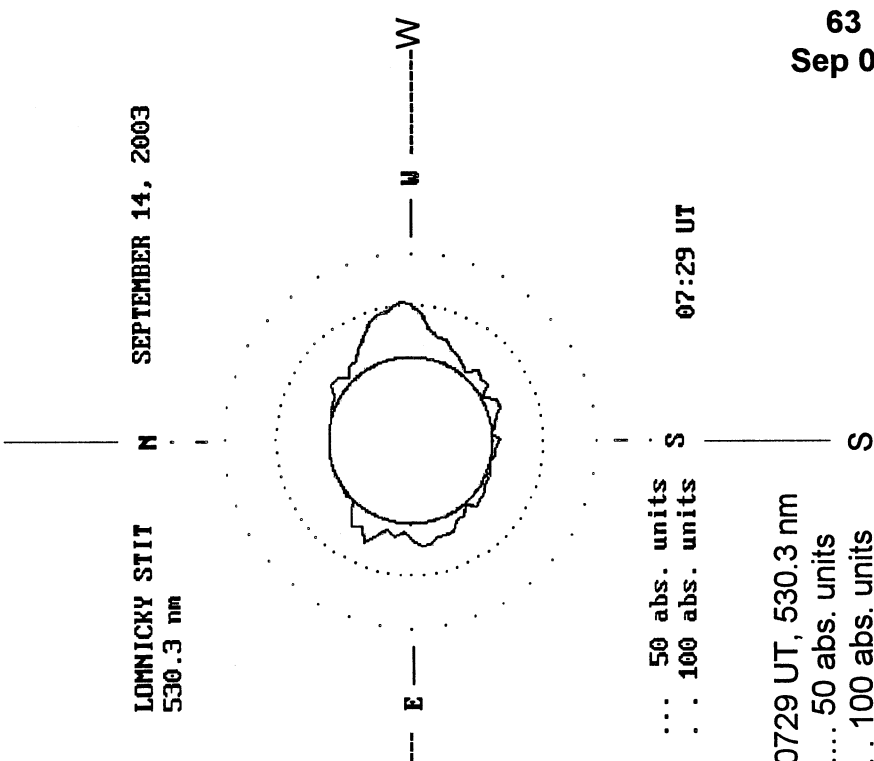
1610 UT

HOLLOMAN SUNSPOT

HOLLOMAN SUNSPOTS
September 14, 2003
14:06 UT Goof
Bp = 7.2
Po = 23.9
Lo = 154.1



LOMNICKY PEAK CORONA (1.04 Radii)----



SEPTEMBER 15, 2003 (P= 23.98, Bo = 7.21, Lo = 148.58)

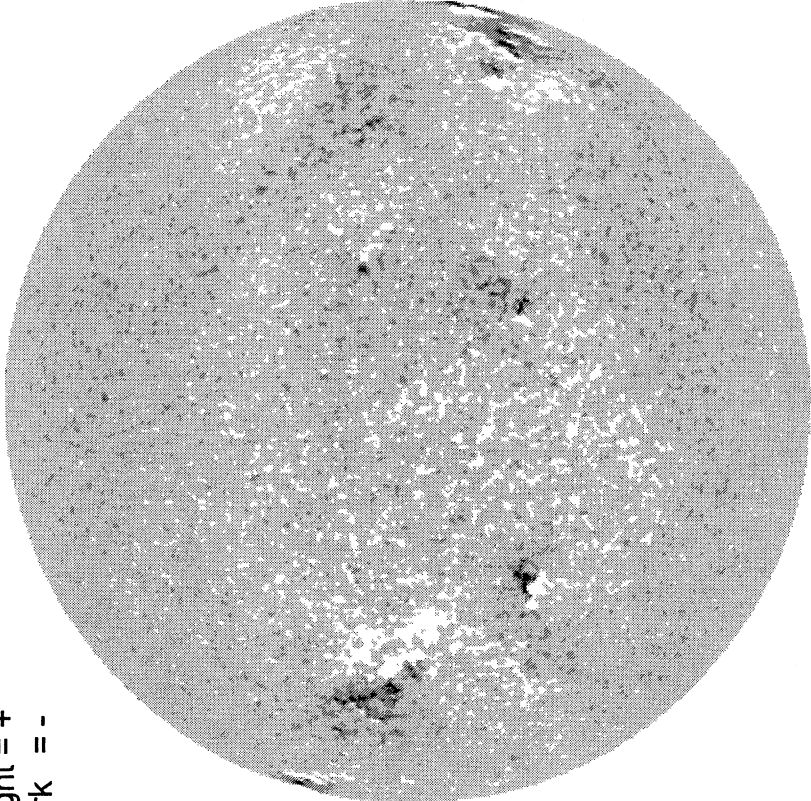
64
Sep 03

KITT PEAK MAGNETOGRAM

868.8 nm

N

Bright = +
Dark = -

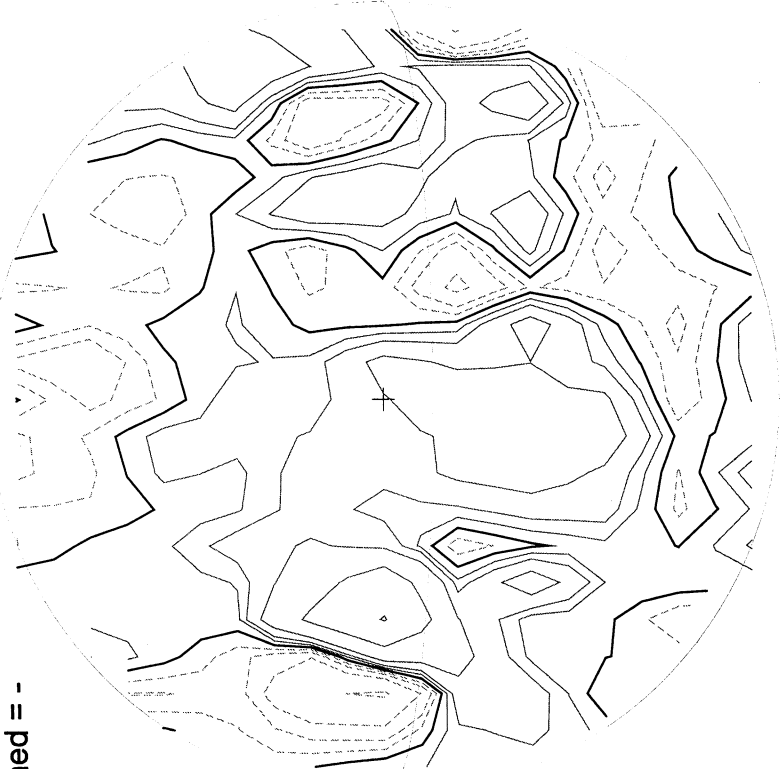


1547 UT

STANFORD MAGNETOGRAM

N

Solid = +
Dashed = -

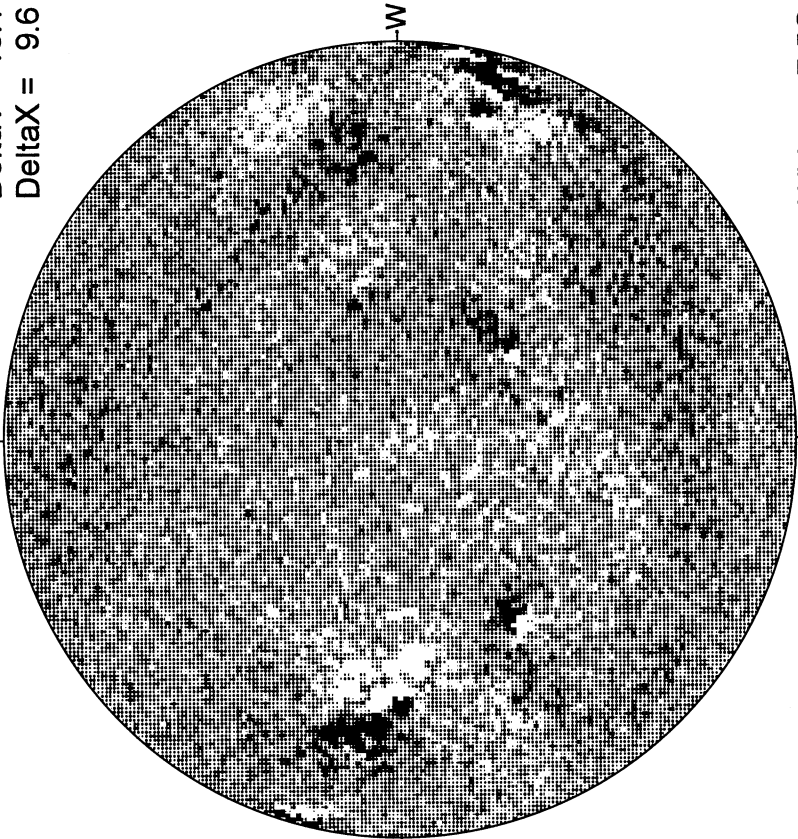


1919 UT

MT. WILSON MAGNETOGRAM

N

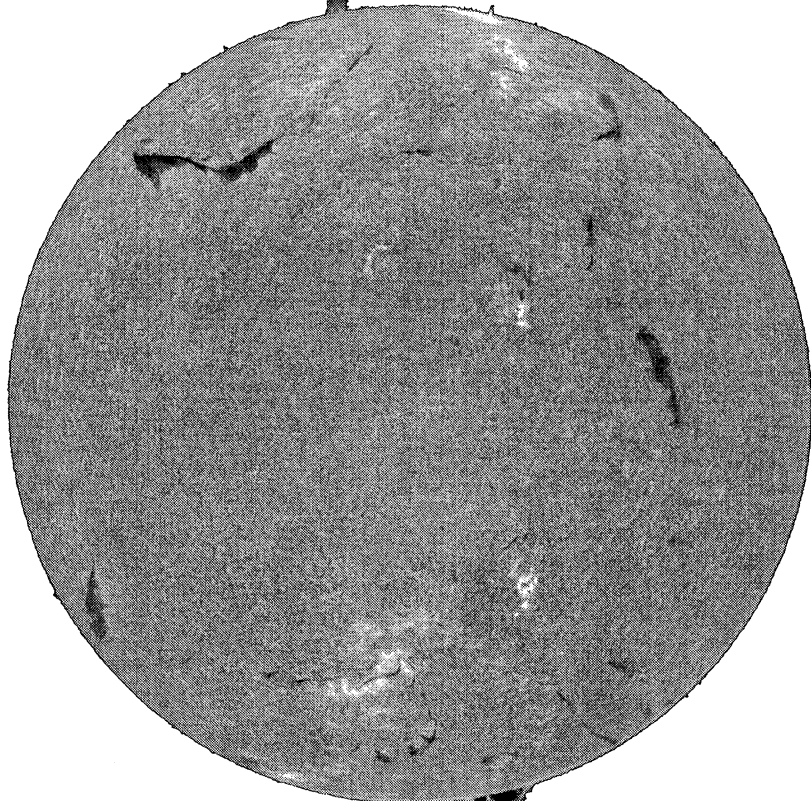
DeltaY = 13.1
DeltaX = 9.6



16.58 -
17.52 UT

White= +7.5G
Black = -7.5G

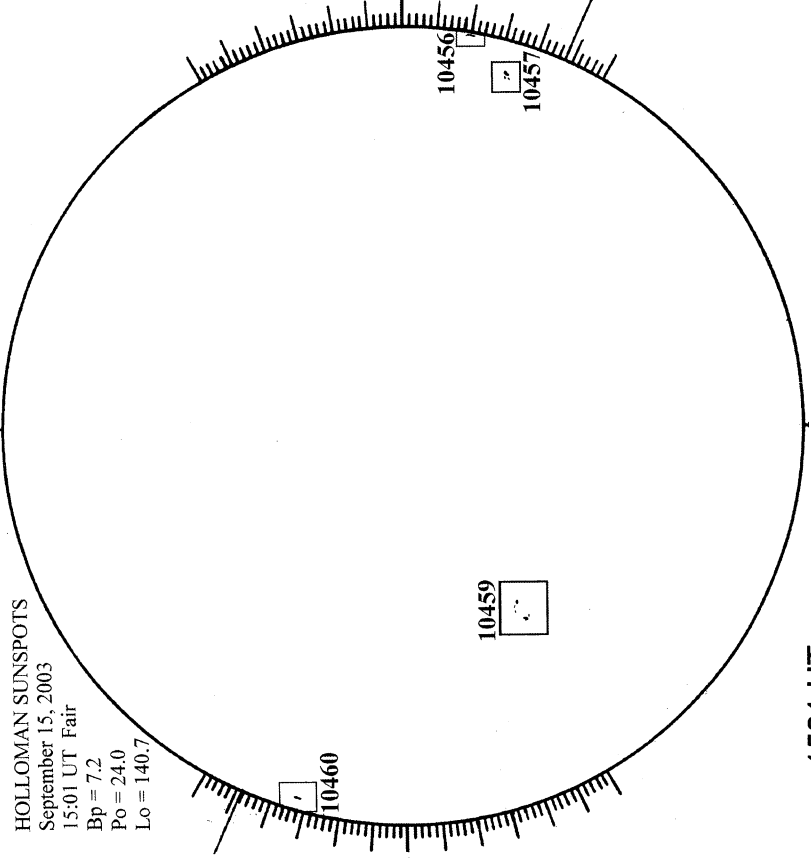
BIG BEAR H-ALPHA



1710 UT

HOLLOMAN SUNSPOT

HOLLOMAN SUNSPOTS
September 15, 2003
15:01 UT Fair
Bp = 7.2
Po = 24.0
Lo = 140.7



1501 UT

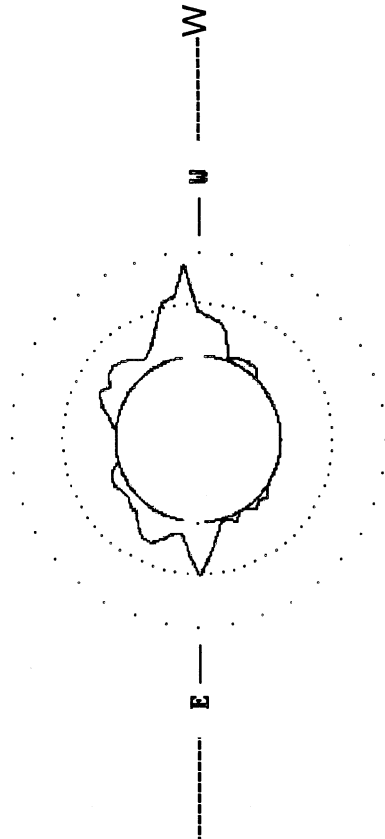
S

LOMNICKY PEAK CORONA (1.04 Radii)----

LOMNICKY STIT
530.3 nm

N

SEPTEMBER 15, 2003



... 50 abs. units
.. 100 abs. units

06:06 UT

0606 UT, 530.3 nm
.... 50 abs. units
... 100 abs. units

S

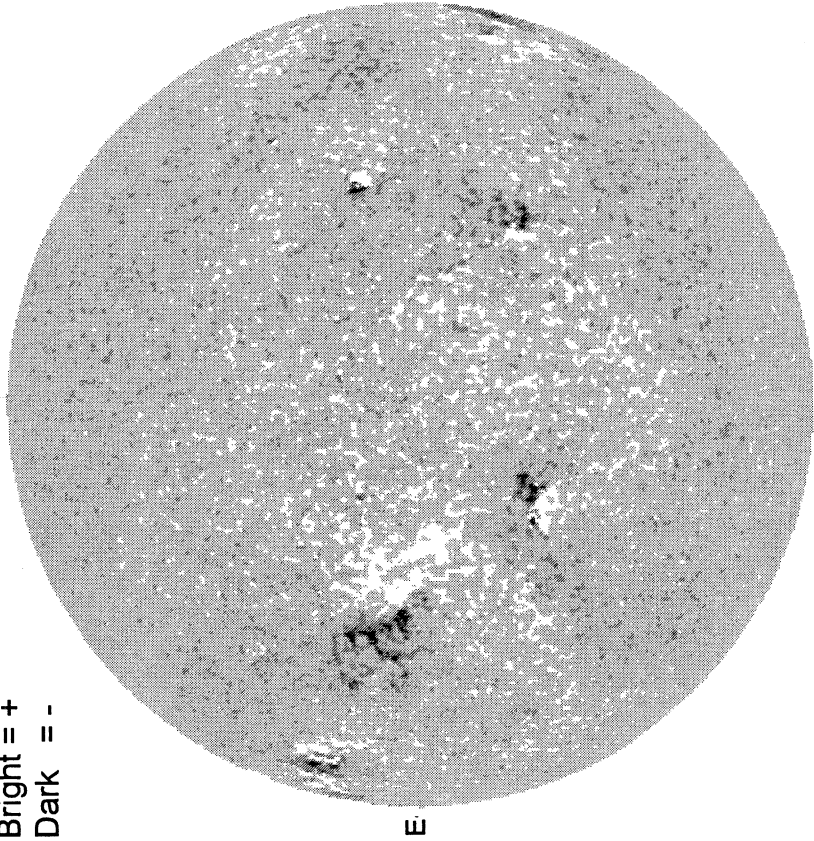
SEPTEMBER 16, 2003 (P= 24.15, Bo = 7.20, Lo = 135.38)

KITT PEAK MAGNETOGRAM

868.8 nm

N

Bright = +
Dark = -



1555 UT

STANFORD MAGNETOGRAM

N

Solid = +
Dashed = -

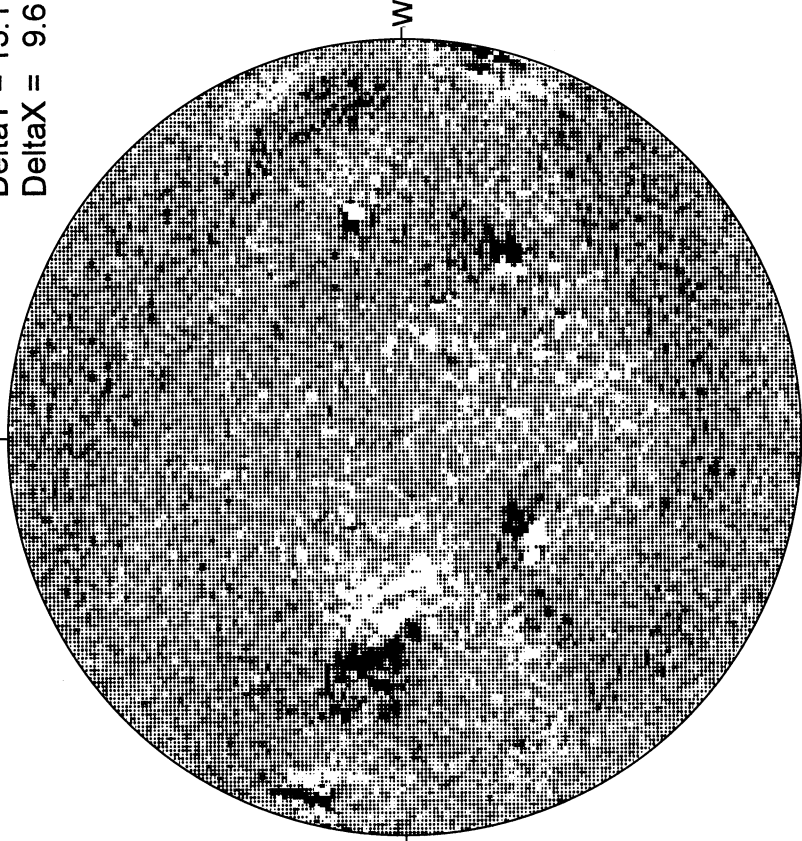


2301 UT

MT. WILSON MAGNETOGRAM

N

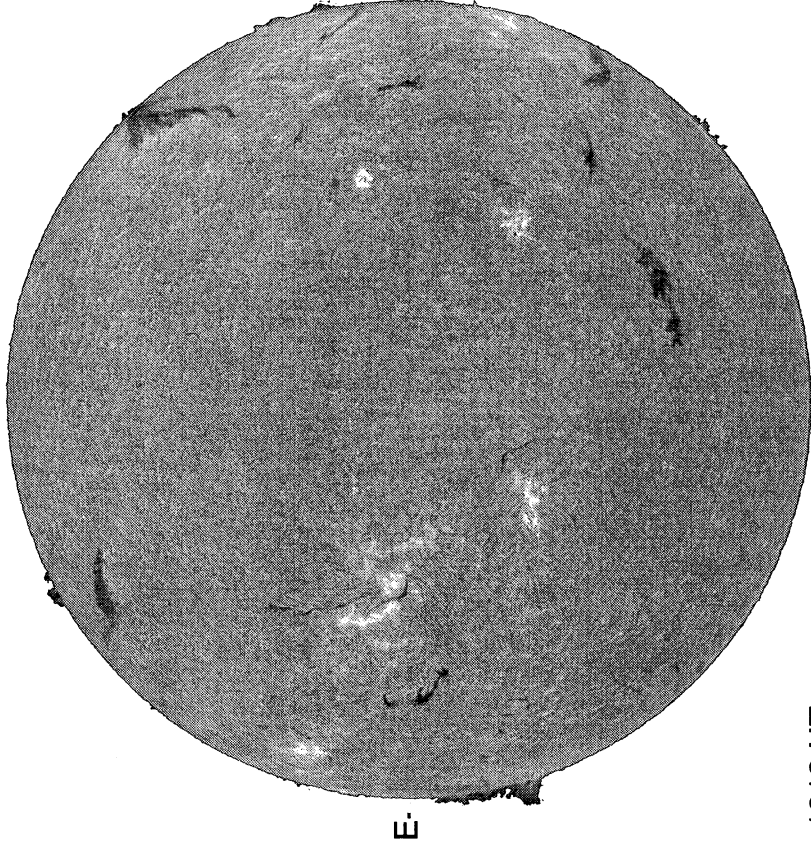
DeltaY = 13.1
DeltaX = 9.6



16.54 -
17.48 UT

White = +7.5G
Black = -7.5G

BIG BEAR H-ALPHA



1618 UT

HOLLOMAN SUNSPOT

HOLLOMAN SUNSPOTS

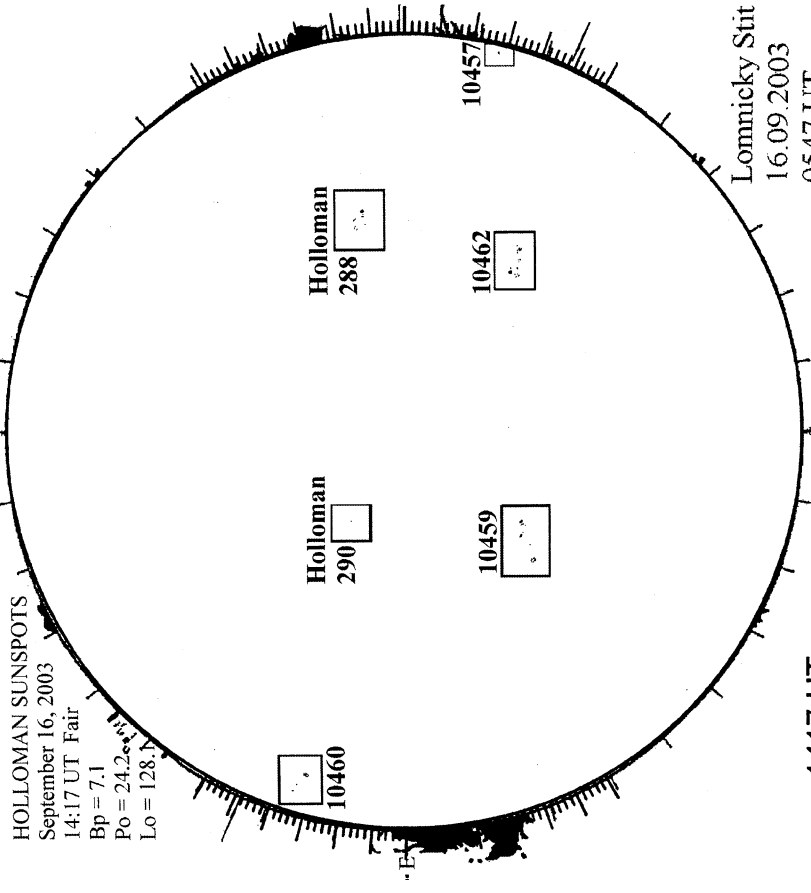
September 16, 2003

14:17 UT Fair

Bp = 7.1

Po = 24.2

Lo = 128.4



1417 UT

0547 UT LOMN Prom S

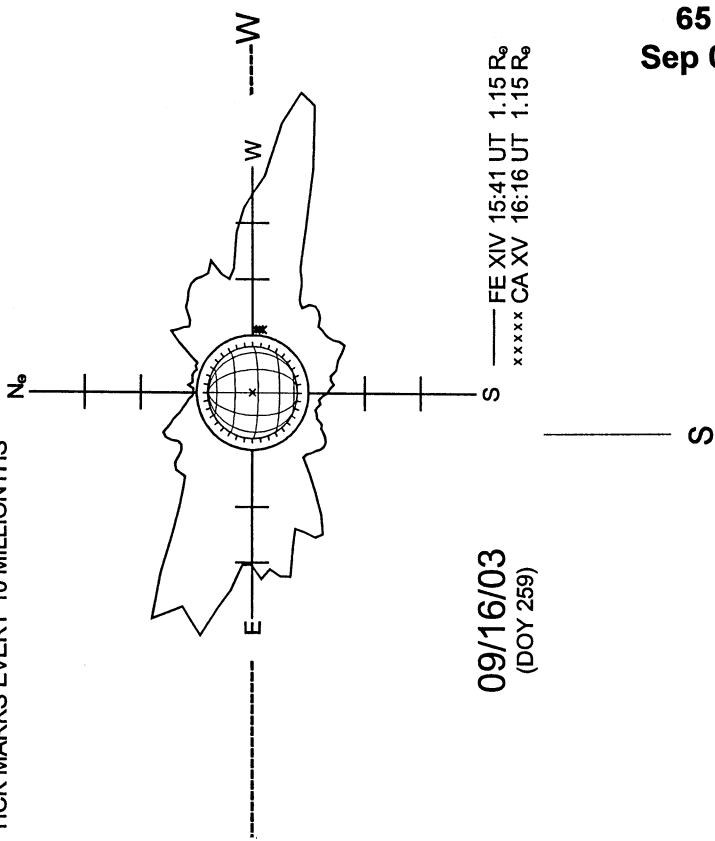
Lomnický štít

16.09.2003

0547 UT

SACRAMENTO PEAK CORONA (1.15 Radii)----

NSO / SACRAMENTO PEAK CORONAL DATA
TICK MARKS EVERY 10 MILLIONTHS



09/16/03
(DOY 259)

----- FE XIV 15:41 UT 1.15 R_o
xxxxx CA XV 16:16 UT 1.15 R_o

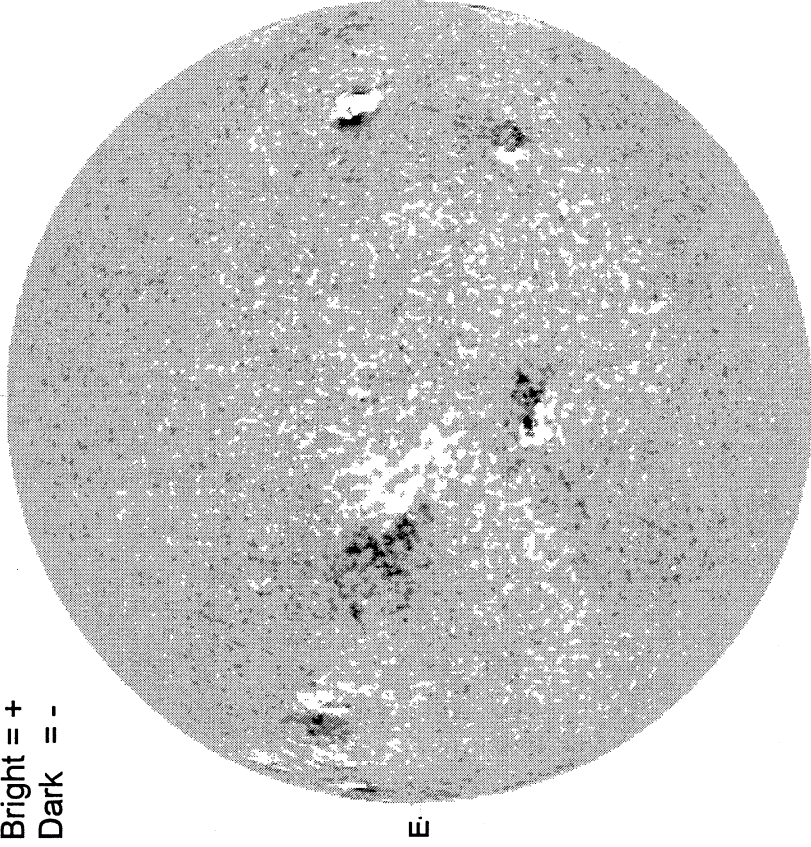
65
Sep 03

SEPTEMBER 17, 2003 (P= 24.32, Bo = 7.18, Lo = 122.17)

KITT PEAK MAGNETOGRAM

868.8 nm

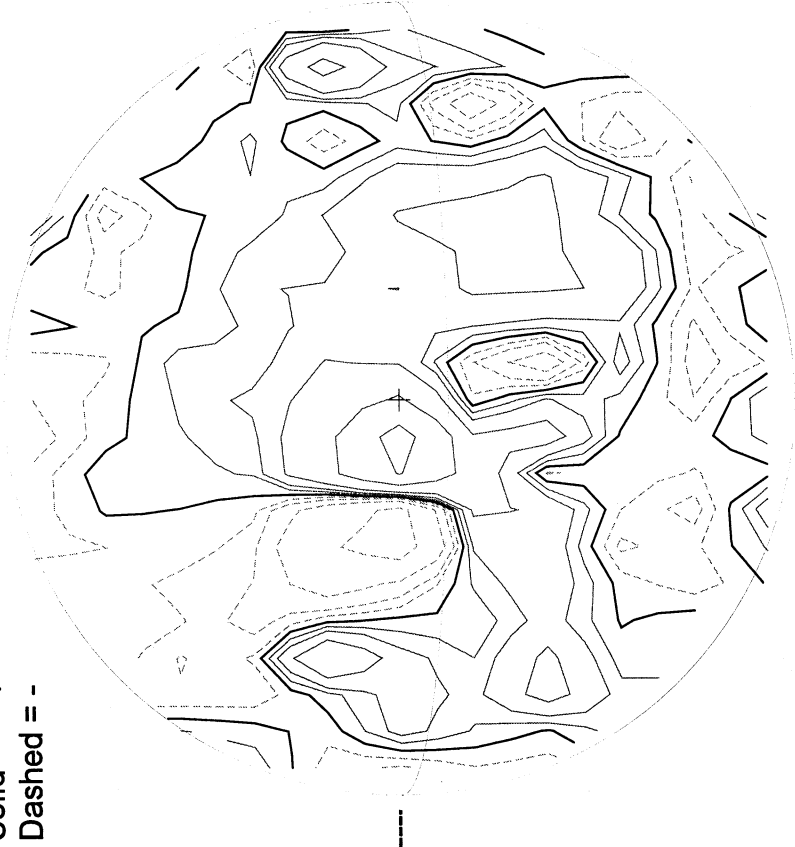
Bright = +
Dark = -



1604 UT

STANFORD MAGNETOGRAM

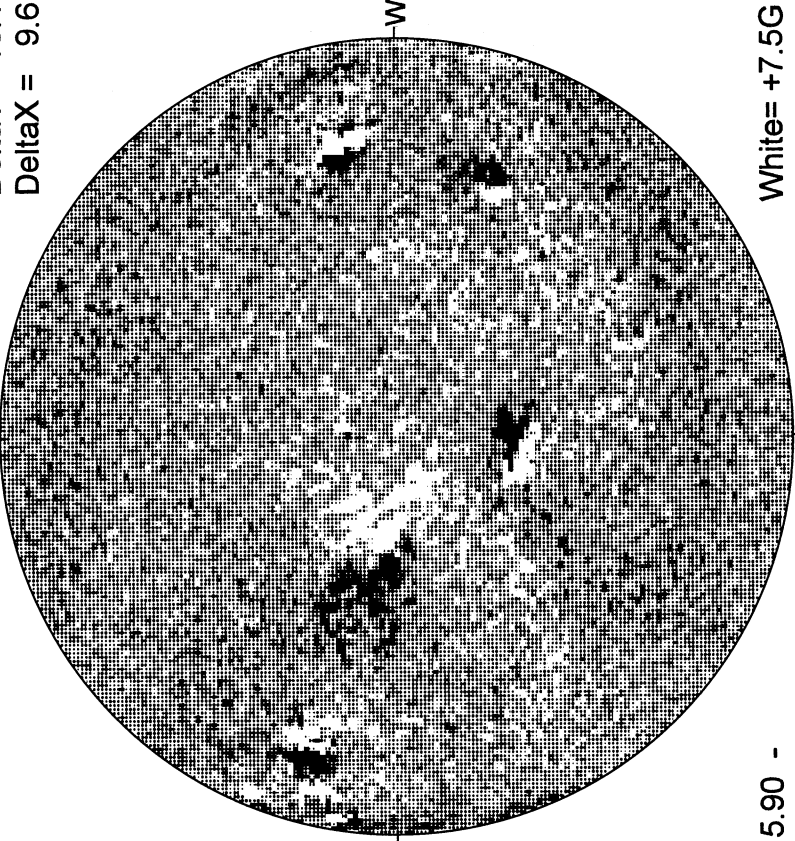
Solid = +
Dashed = -



2134 UT

MT. WILSON MAGNETOGRAM

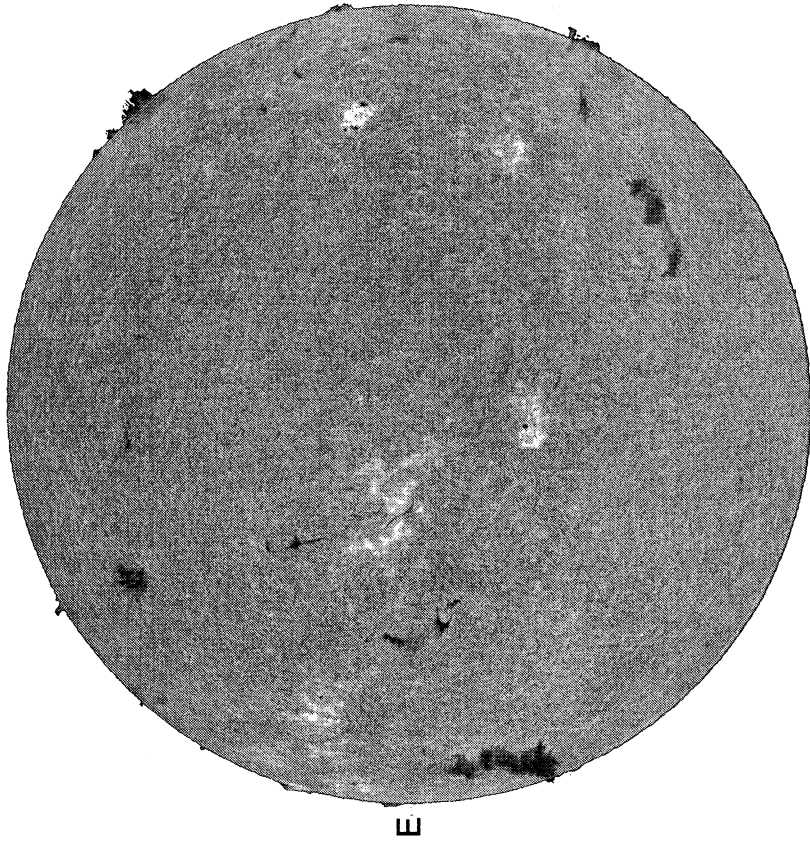
DeltaY = 13.1
DeltaX = 9.6



15.90 -
16.84 UT

White = +7.5G
Black = -7.5G

BIG BEAR H-ALPHA



1628 UT

HOLLOMAN SUNSPOT

HOLLOMAN SUNSPOTS

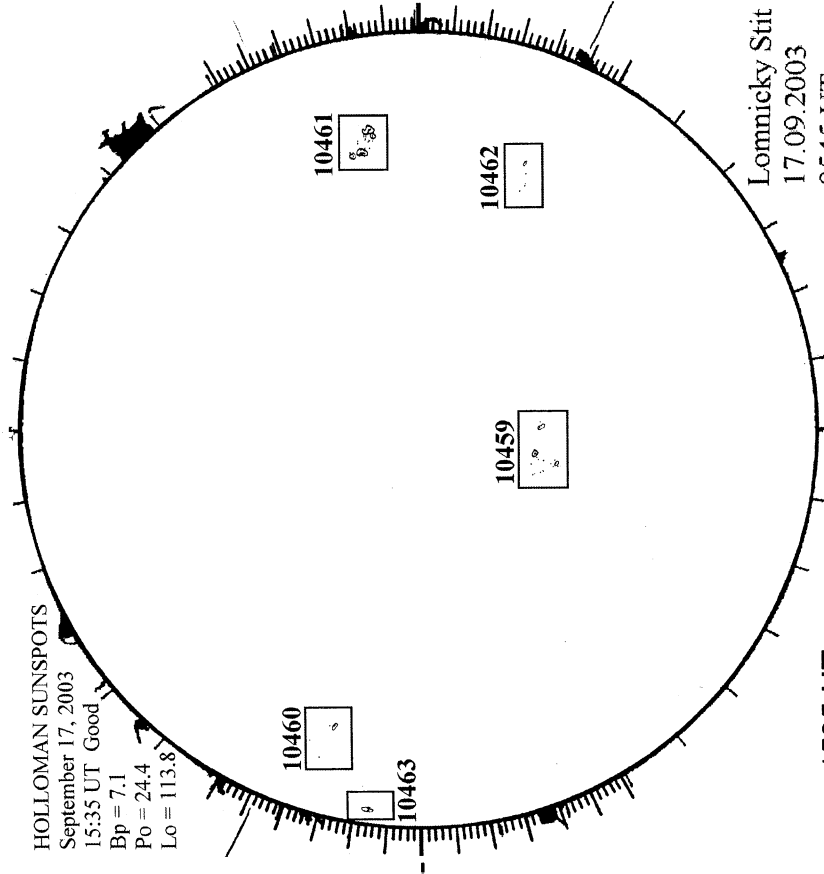
September 17, 2003

15:35 UT Good

Bp = 7.1

Po = 24.4

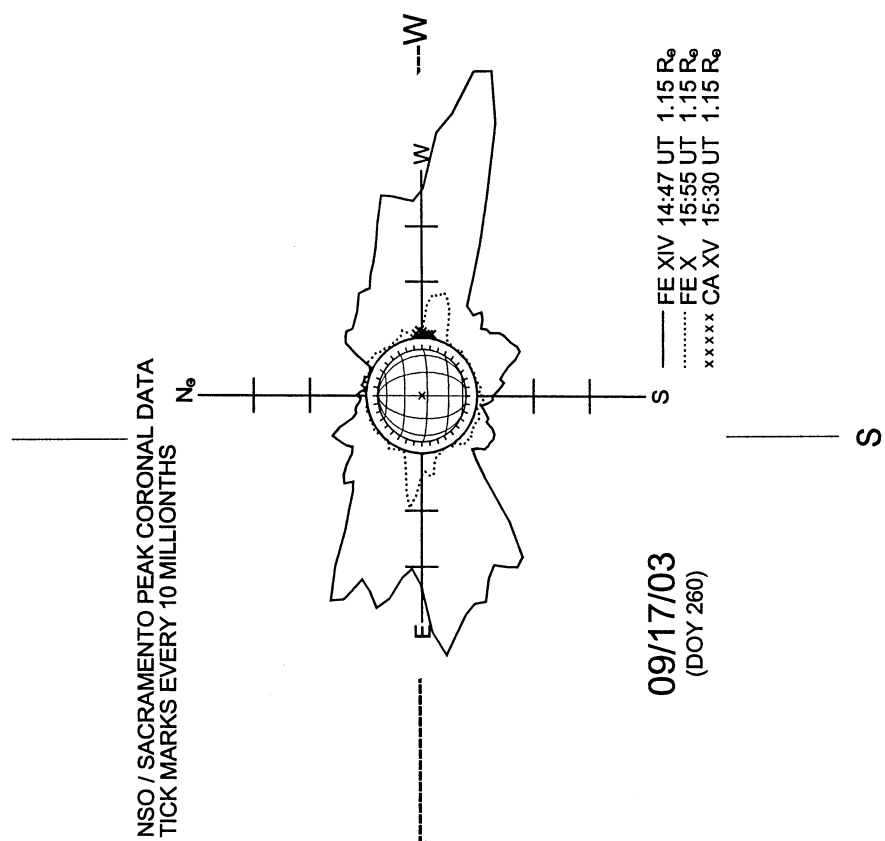
Lo = 113.8



1535 UT
0545 UT LOMN Prom S

Lomnický Stit
17.09.2003
0545 UT

SACRAMENTO PEAK CORONA (1.15 Radii)----



09/17/03
(DOY 260)

— FE XIV 14:47 UT 1.15 R_o
..... FE X 15:55 UT 1.15 R_o
xxxxx CA XV 15:30 UT 1.15 R_o

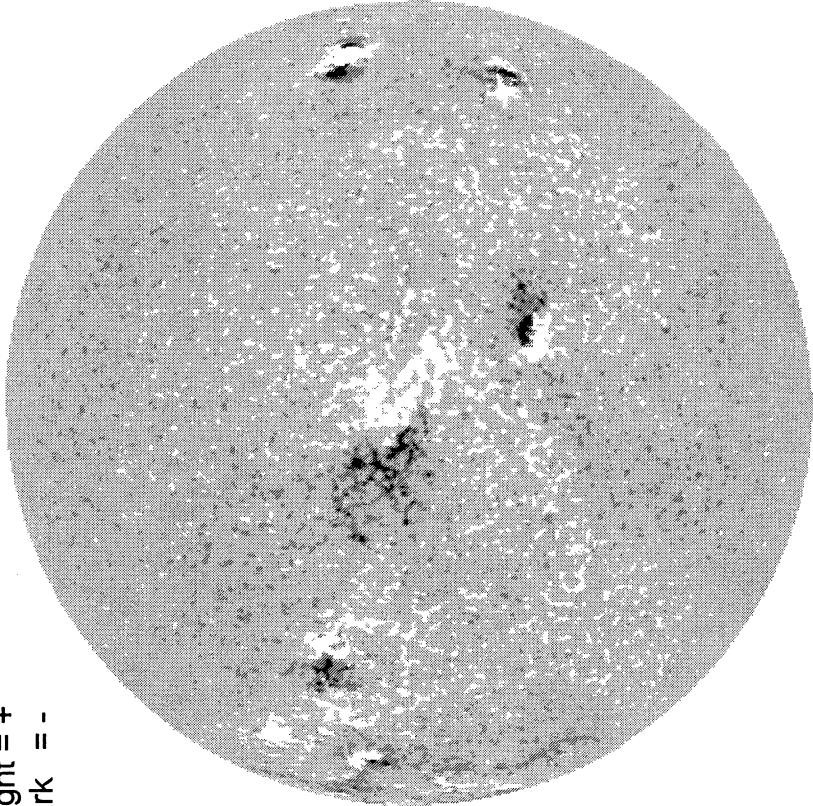
SEPTEMBER 18, 2003 (P= 24.47, Bo = 7.16, Lo = 108.97)

KITT PEAK MAGNETOGRAM

868.8 nm

N

Bright = +
Dark = -

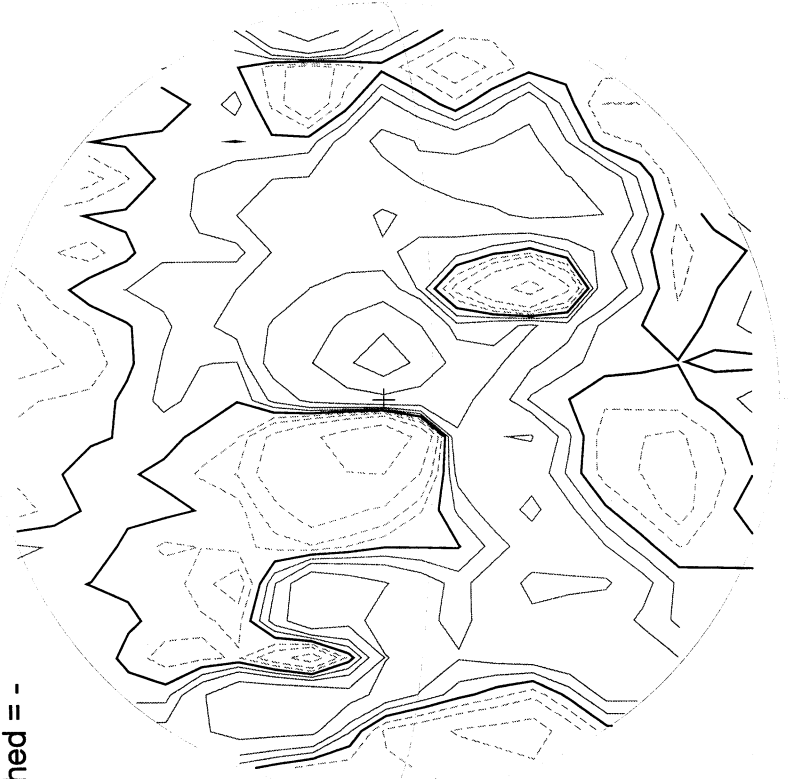


1538 UT

STANFORD MAGNETOGRAM

N

Solid = +
Dashed = -

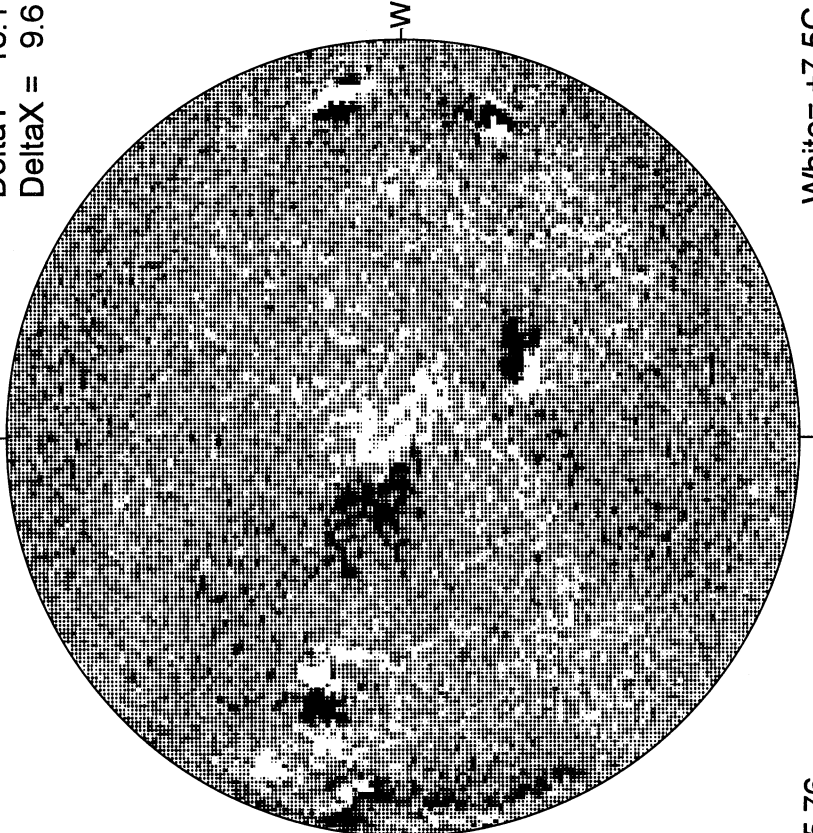


2148 UT

MT. WILSON MAGNETOGRAM

N

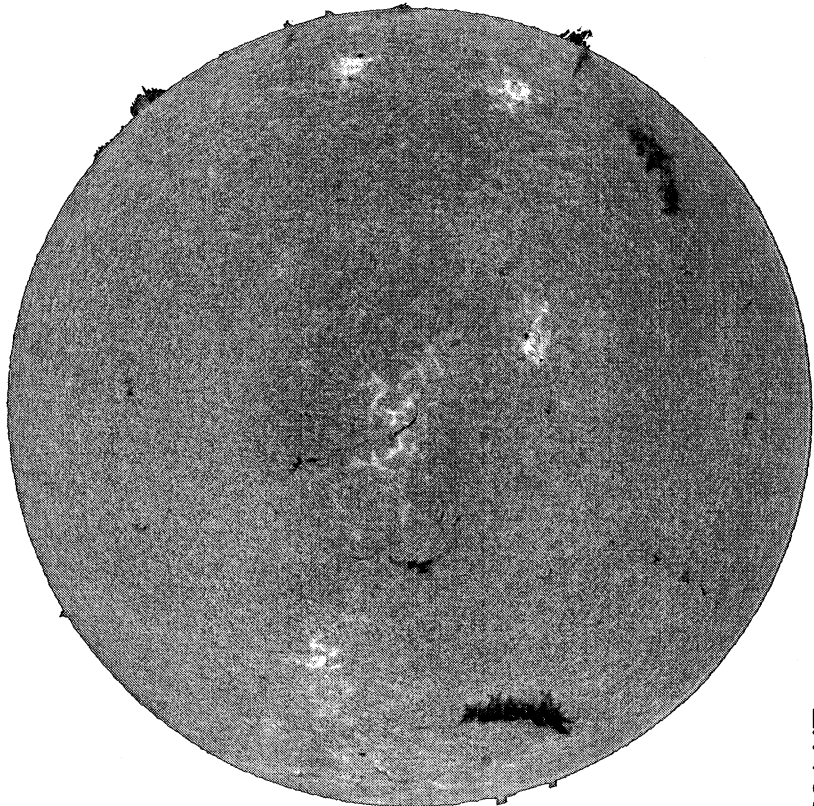
DeltaY = 13.1
DeltaX = 9.6



15.76 -
16.70 UT

White = +7.5G
Black = -7.5G

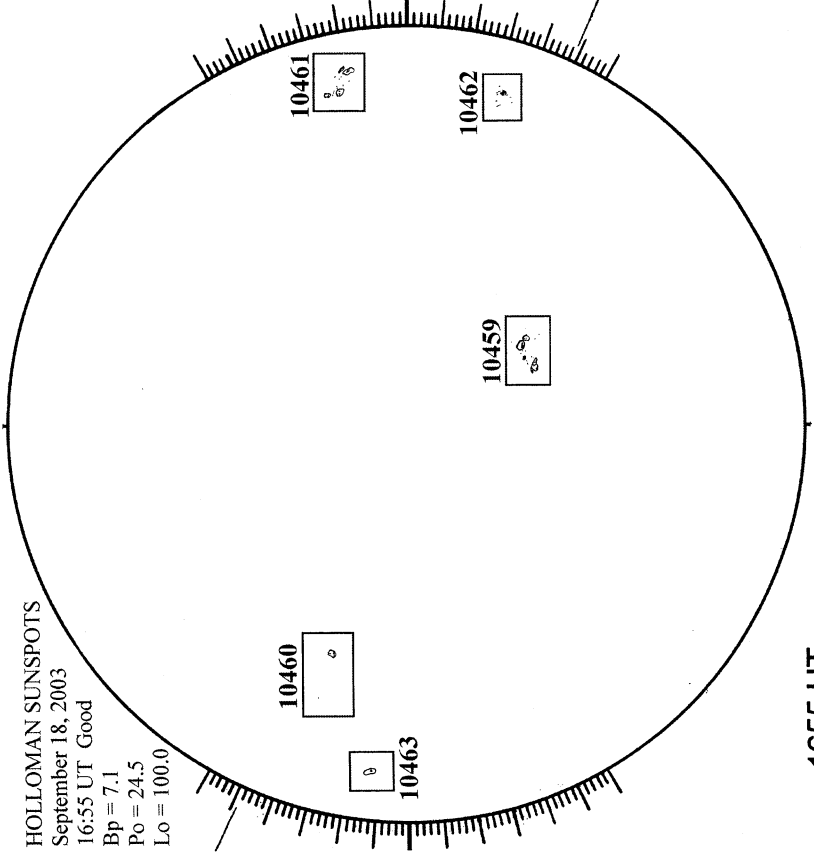
BIG BEAR H-ALPHA



1631 UT

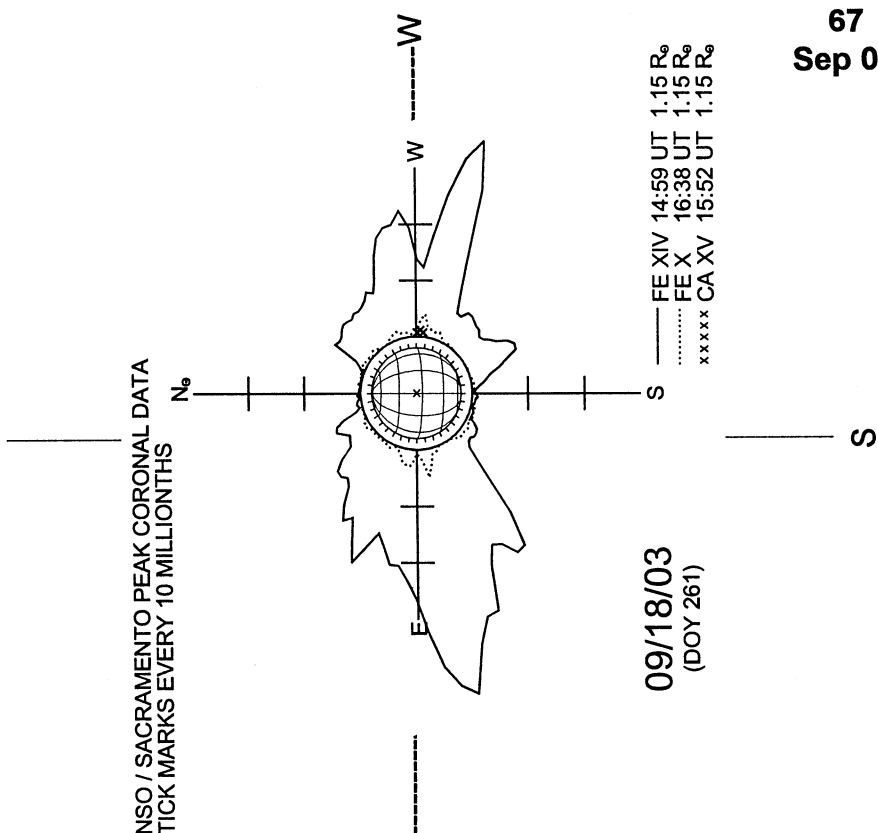
HOLLOMAN SUNSPOTS

HOLLOMAN SUNSPOTS
September 18, 2003
16:55 UT Good
Bp = 7.1
Po = 24.5
Lo = 100.0



1655 UT

SACRAMENTO PEAK CORONA (1.15 Radii)----



09/18/03
(DOY 261)

— FE XIV 14:59 UT 1.15 R_o
..... FE X 16:38 UT 1.15 R_o
xxxxx CA XV 15:52 UT 1.15 R_o

67
Sep 03

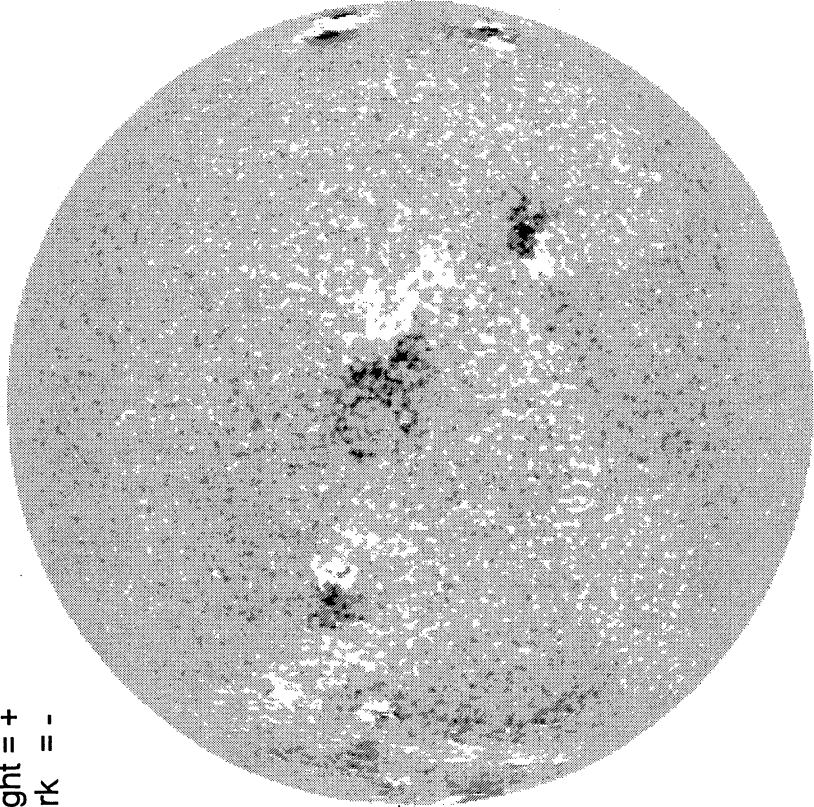
SEPTEMBER 19, 2003 (P= 24.63, Bo = 7.14, Lo = 95.77)

KITT PEAK MAGNETOGRAM

868.8 nm

N

Bright = +
Dark = -



1509 UT

STANFORD MAGNETOGRAM

N

Solid = +
Dashed = -

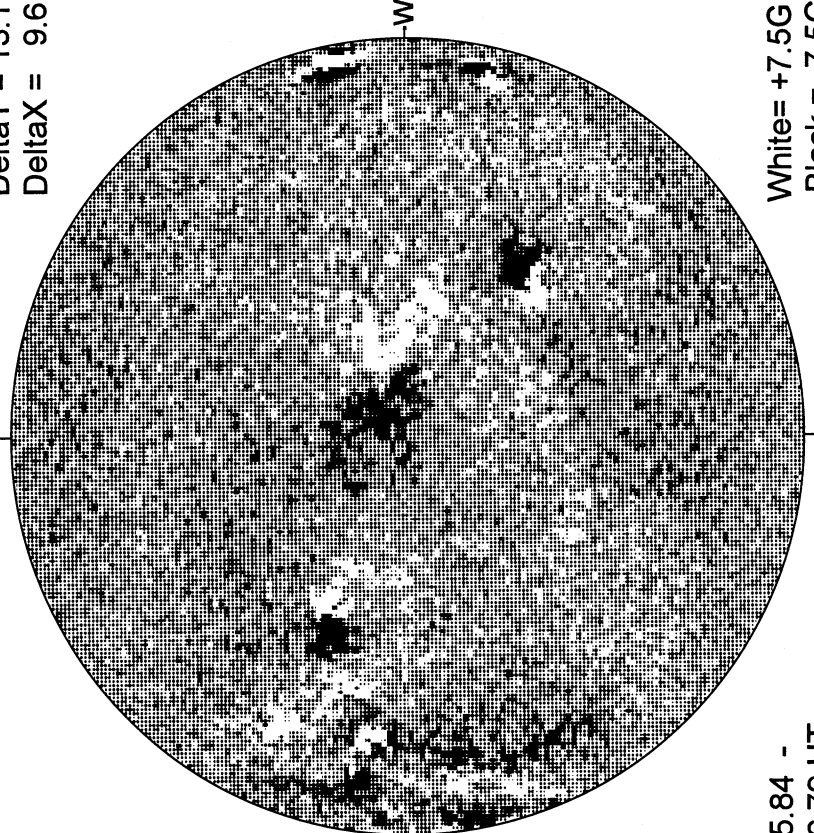


1929 UT

MT. WILSON MAGNETOGRAM

N

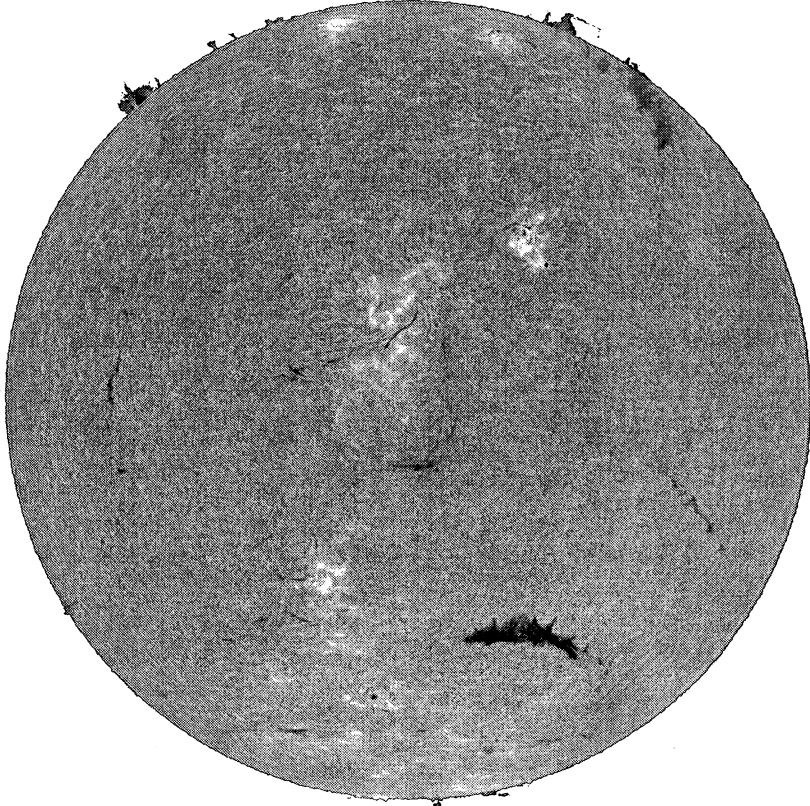
DeltaY = 13.1
DeltaX = 9.6



15.84 -
16.79 UT

White = +7.5G
Black = -7.5G

BIG BEAR H-ALPHA



1627 UT

HOLLOMAN SUNSPOT

HOLLOMAN SUNSPOTS

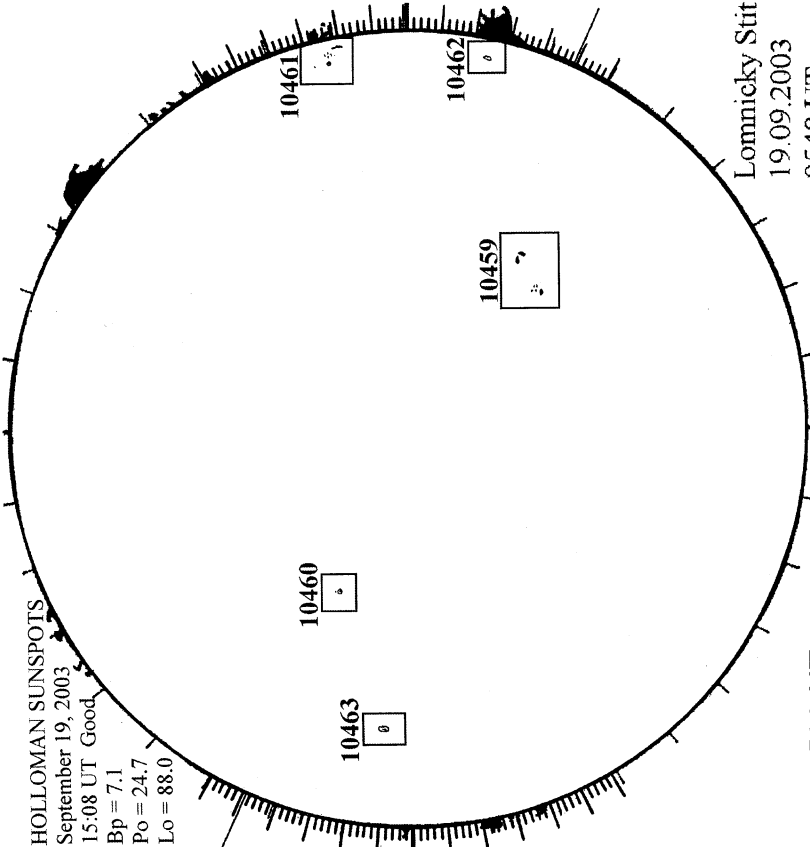
September 19, 2003

15:08 UT Good

Bp = 7.1

PO = 24.7

Lo = 88.0



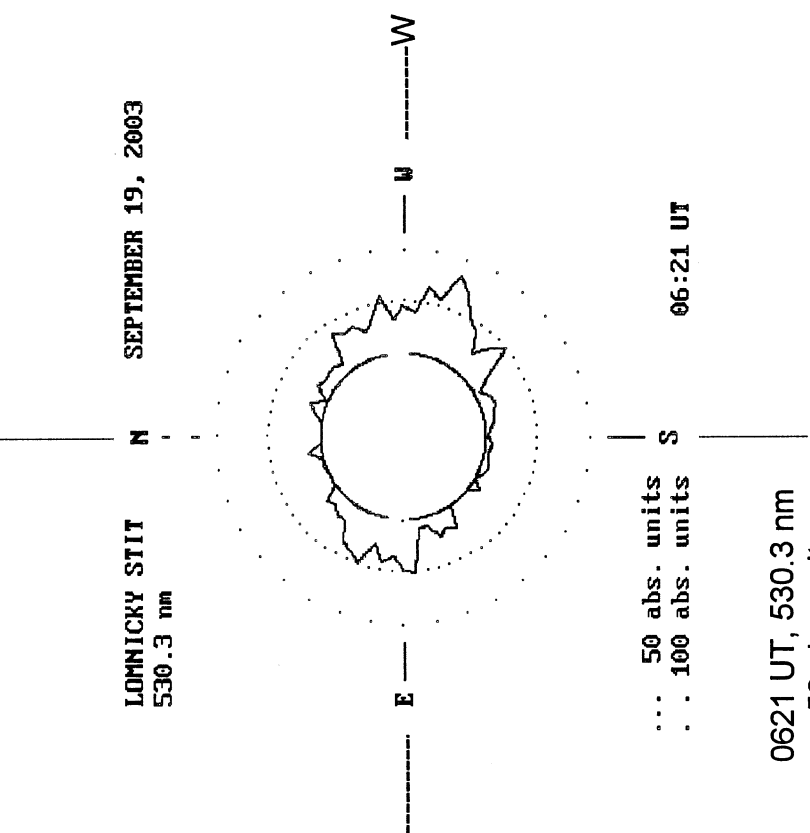
1508 UT
0548 UT LOMN Prom S

LOMNICKY PEAK CORONA (1.04 Radii)----

SEPTEMBER 19, 2003

LOMNICKY STIT

530.3 nm



... 50 abs. units
.. 100 abs. units

0621 UT, 530.3 nm
.... 50 abs. units
.. 100 abs. units

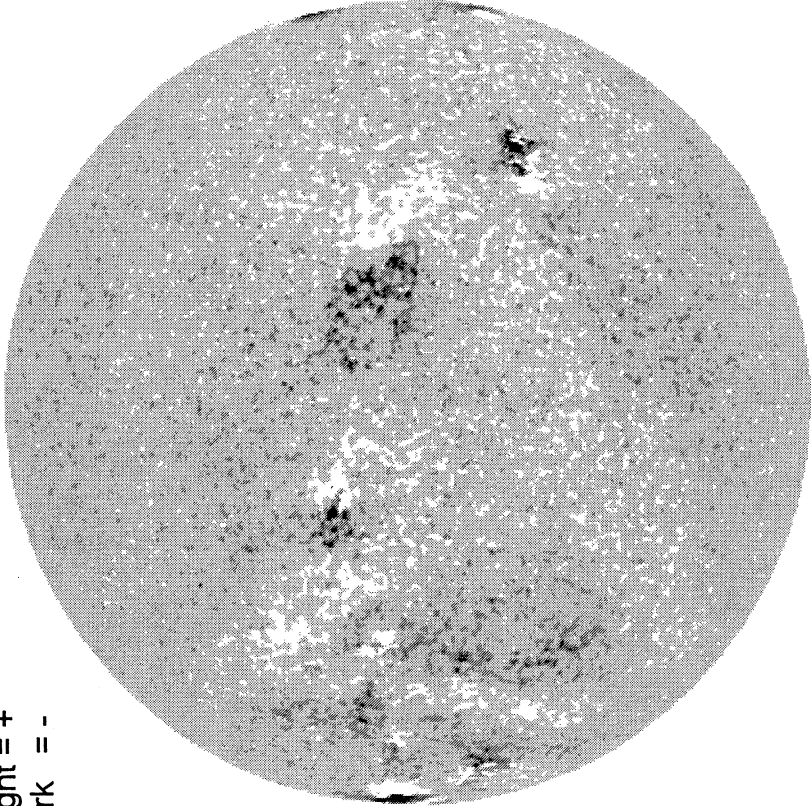
SEPTEMBER 20, 2003 (P= 24.77, Bo = 7.12, Lo = 82.57)

KITT PEAK MAGNETOGRAM

868.8 nm

N

Bright = +
Dark = -



1508 UT

STANFORD MAGNETOGRAM

N

Solid = +
Dashed = -

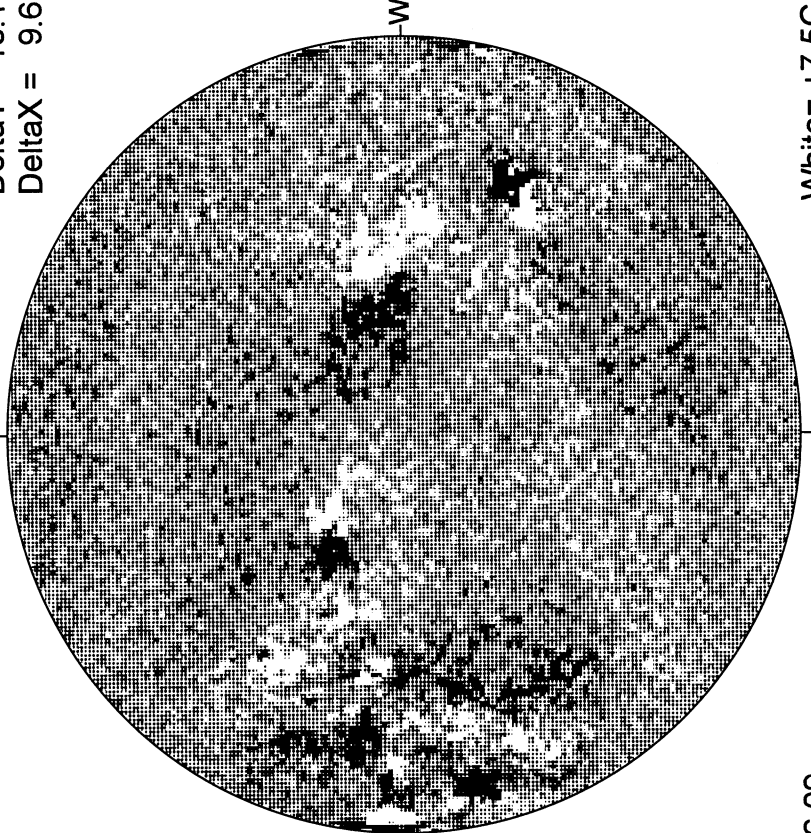


1903 UT

MT. WILSON MAGNETOGRAM

N

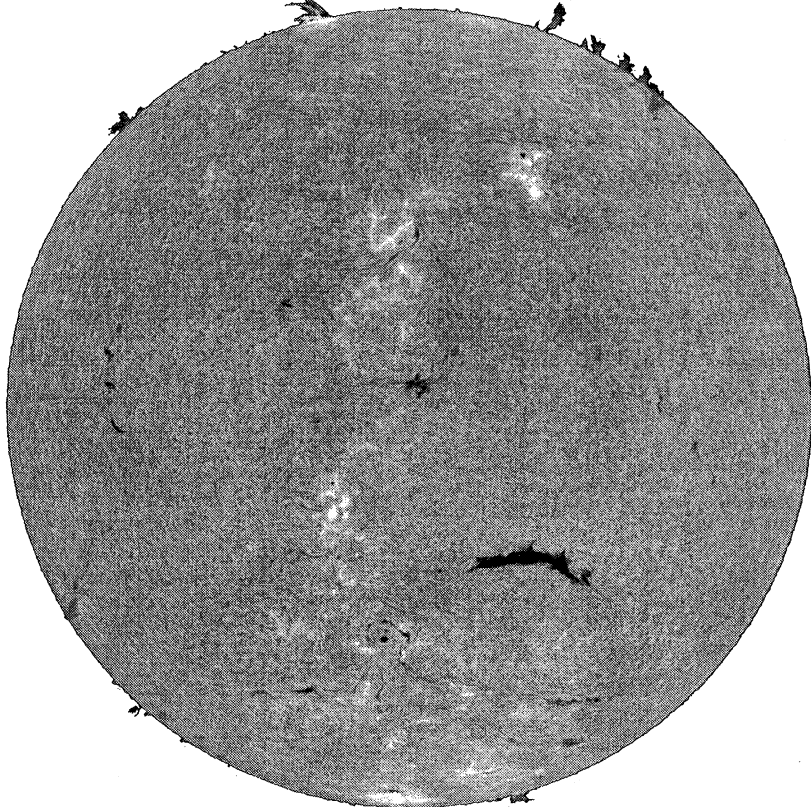
DeltaY = 13.1
DeltaX = 9.6



16.09 -
17.03 UT

White= +7.5G
Black = -7.5G

BIG BEAR H-ALPHA



1554 UT

HOLLOMAN SUNSPOT

HOLLOMAN SUNSPOTS

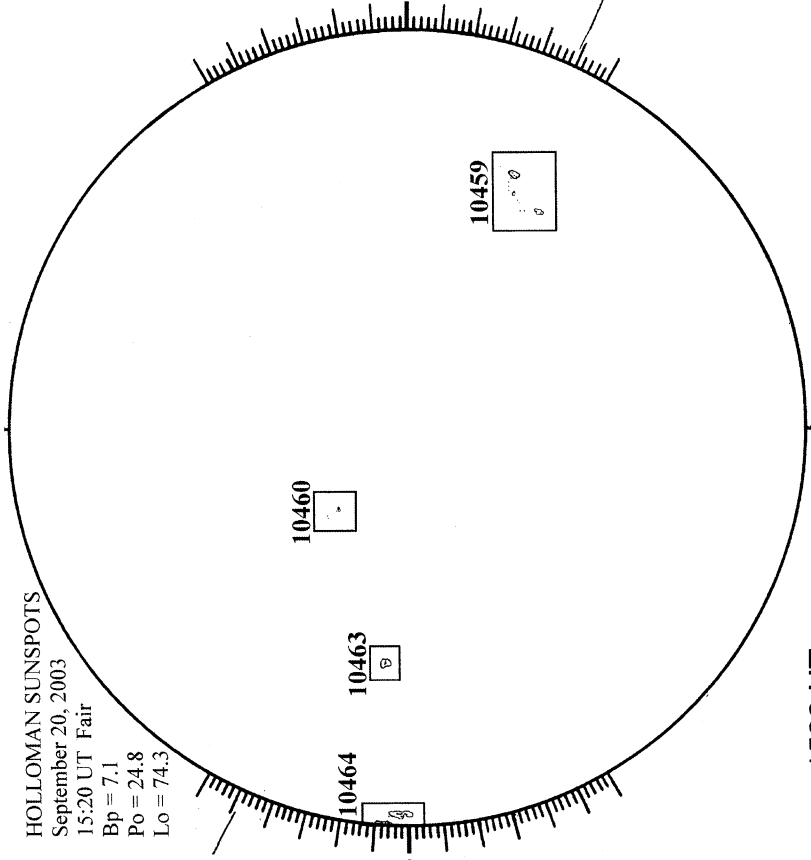
September 20, 2003

15:20 UT Fair

Bp = 7.1

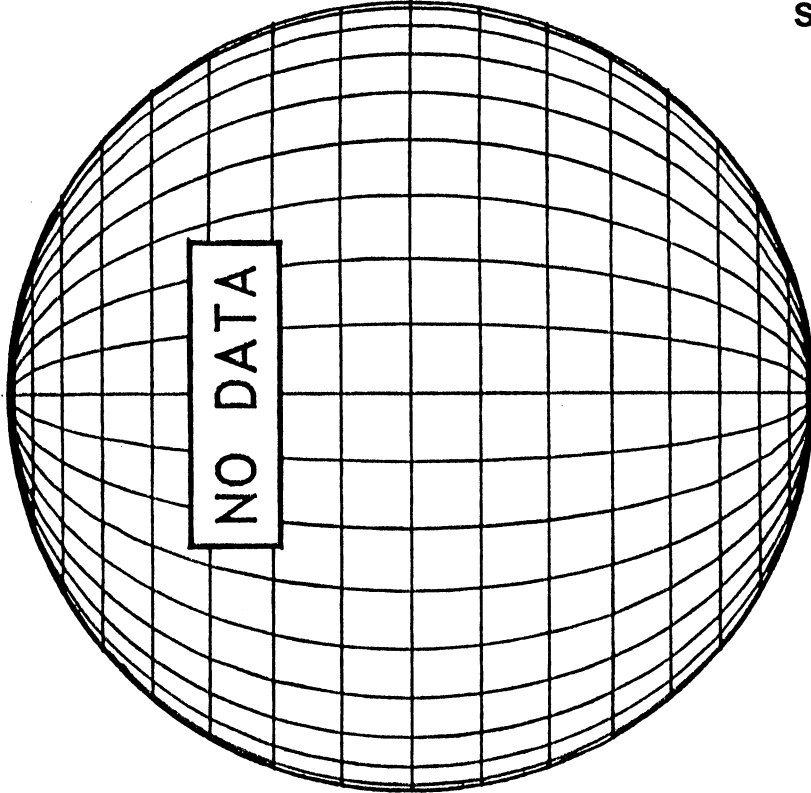
Po = 24.8

Lo = 74.3



1520 UT

SACRAMENTO PEAK CORONA (1.15 Radii)----



S

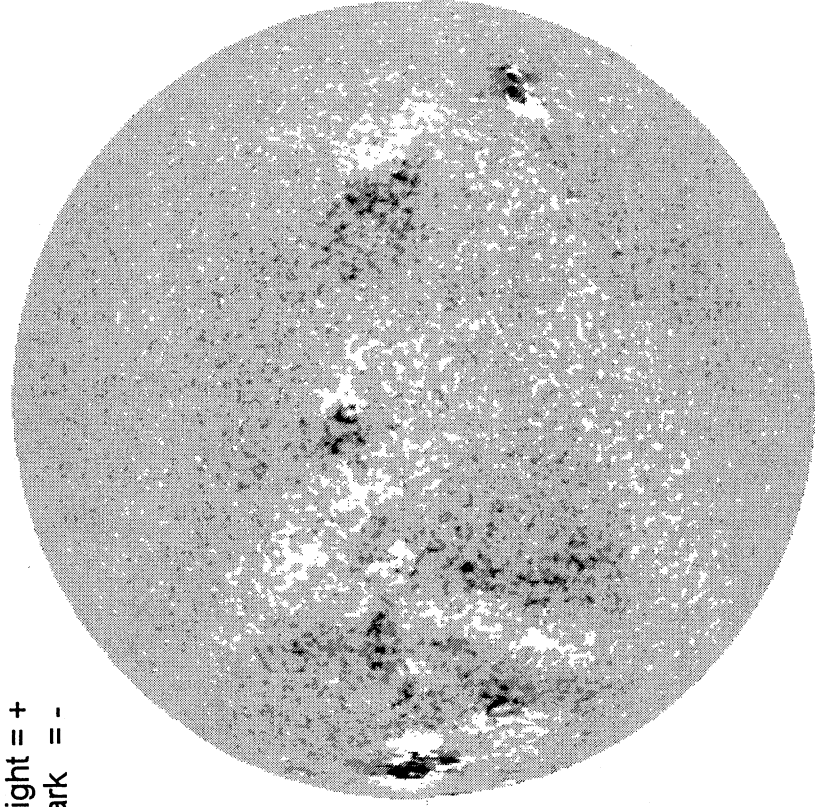
69
Sep 03

70
Sep 03

SEPTEMBER 21, 2003 (P= 24.91, Bo = 7.10, Lo = 69.37)

KITT PEAK MAGNETOGRAM
N
868.8 nm

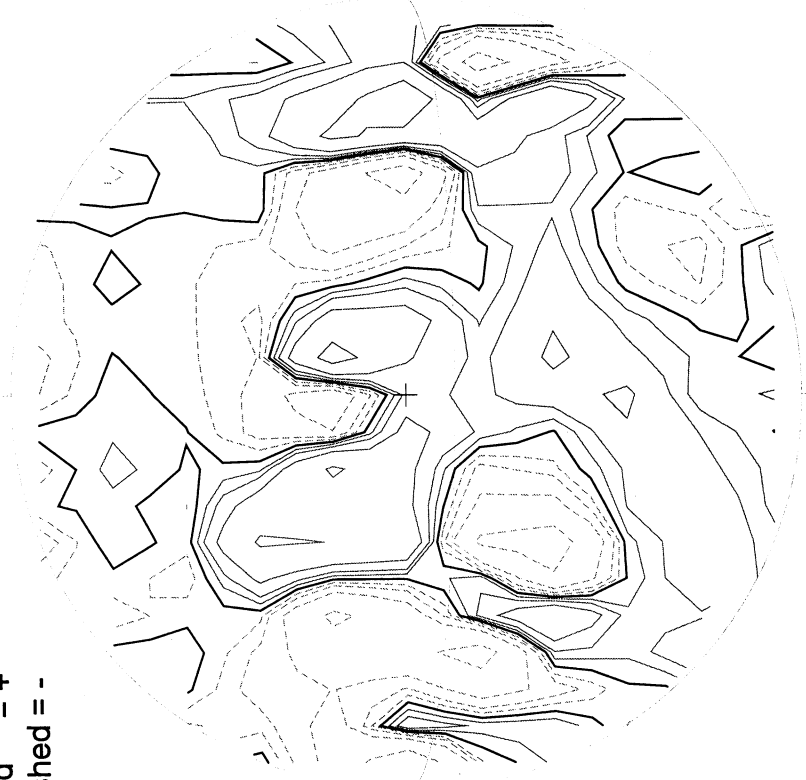
Bright = +
Dark = -



1540 UT

STANFORD MAGNETOGRAM

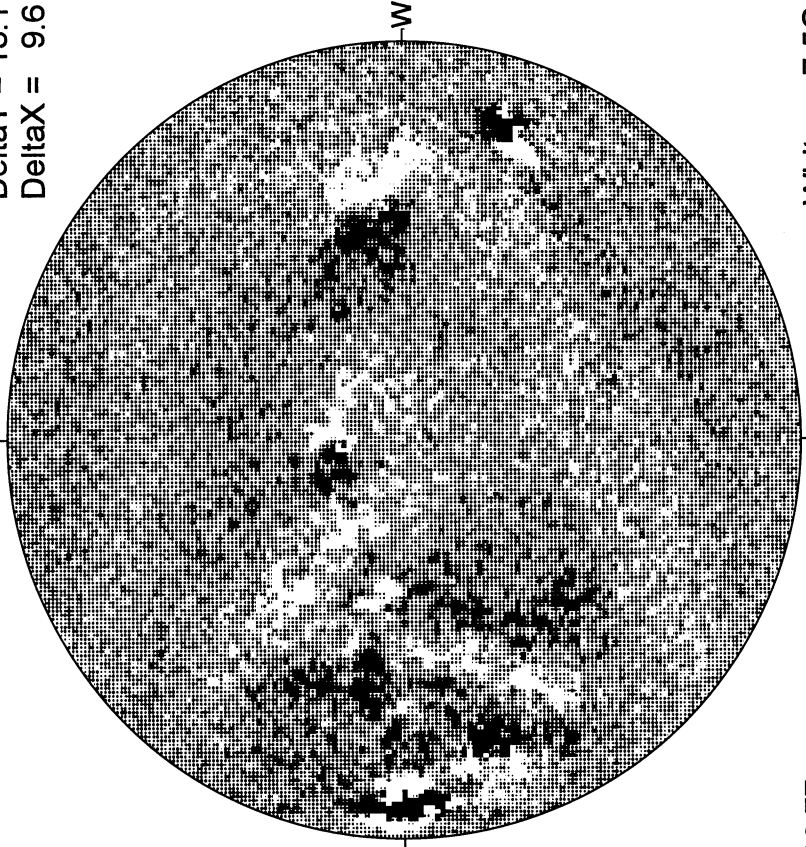
Solid = +
Dashed = -



2134 UT

MT. WILSON MAGNETOGRAM

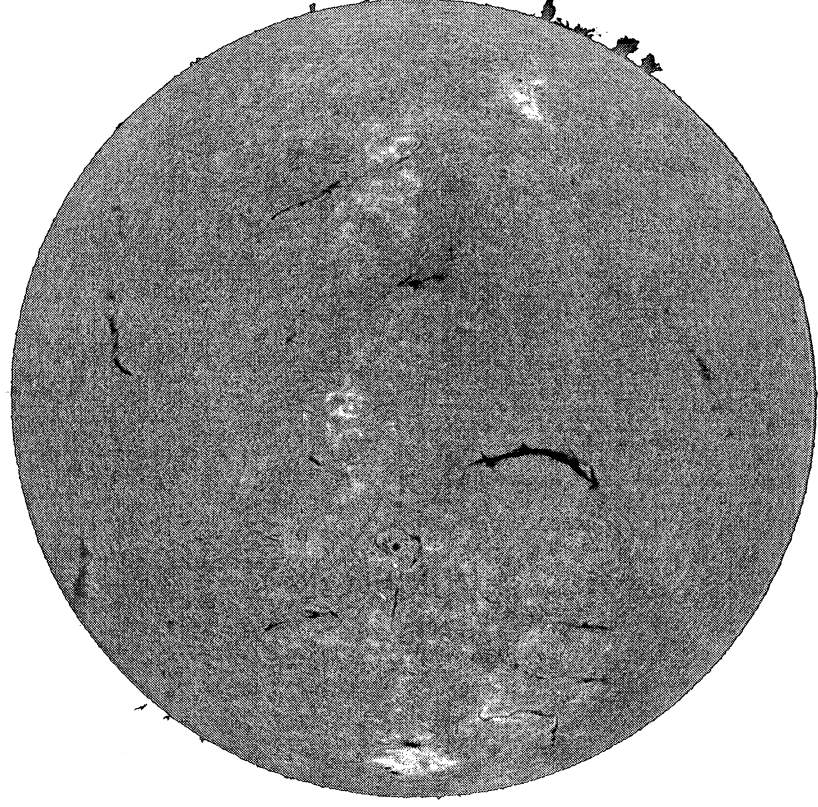
Delta Y = 13.1
Delta X = 9.6



16.77 -
17.71 UT

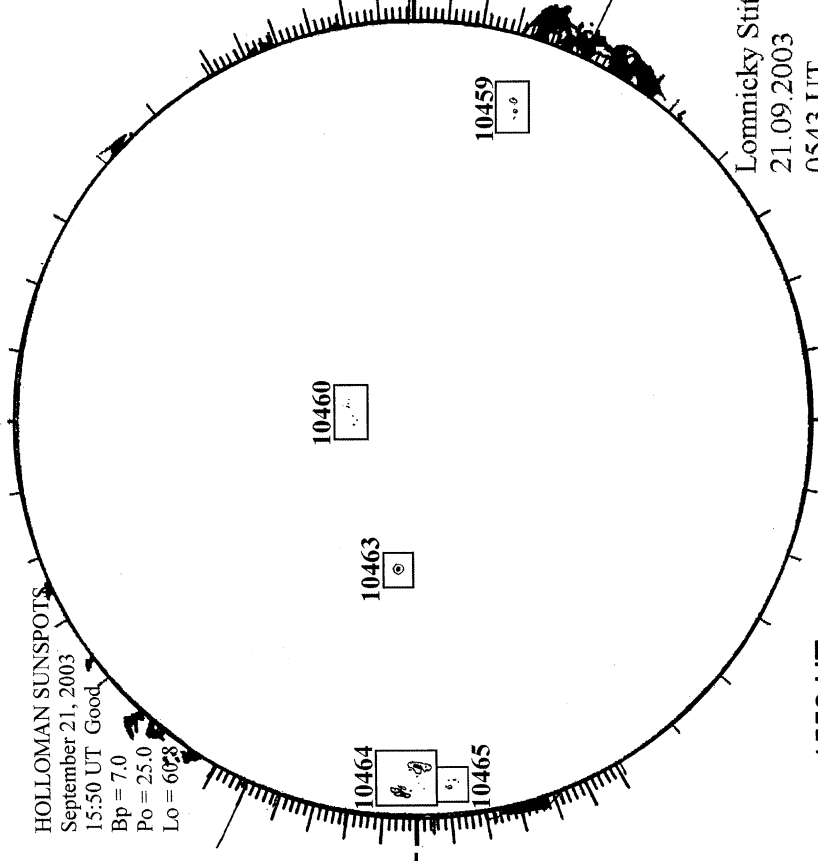
White = +7.5G
Black = -7.5G

BIG BEAR H-ALPHA



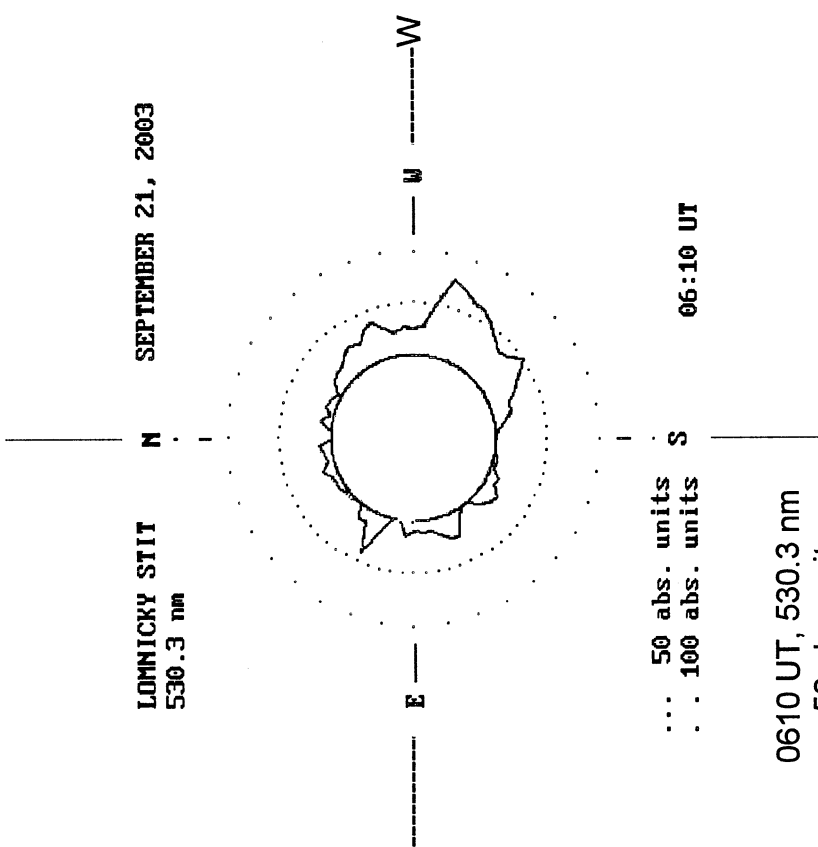
1620 UT

HOLLOMAN SUNSPOT



1550 UT
0543 UT LOMN Prom S

LOMNICKY PEAK CORONA (1.04 Radii)----



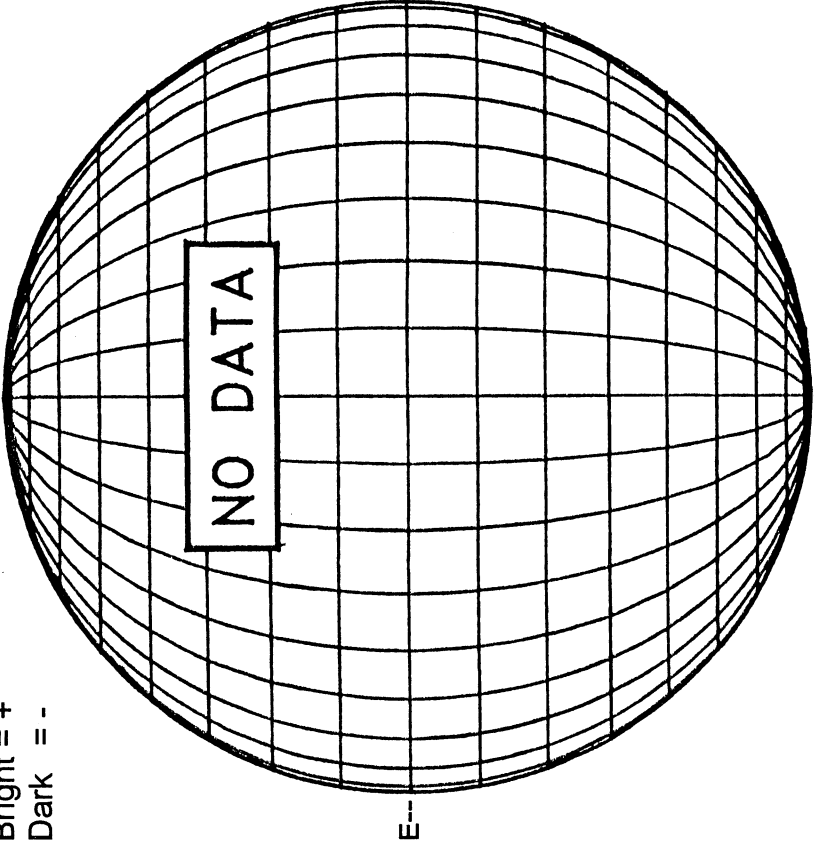
0610 UT, 530.3 nm
50 abs. units
100 abs. units

SEPTEMBER 22, 2003 (P= 25.05, Bo = 7.07, Lo = 56.17)

KITT PEAK MAGNETOGRAM

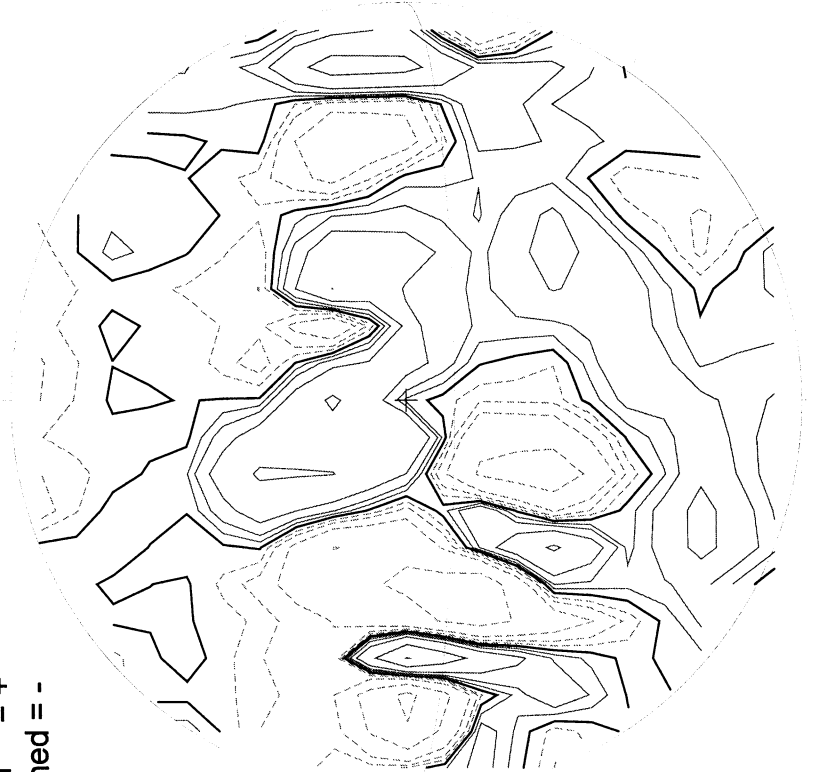
868.8 nm

Bright = +
Dark = -



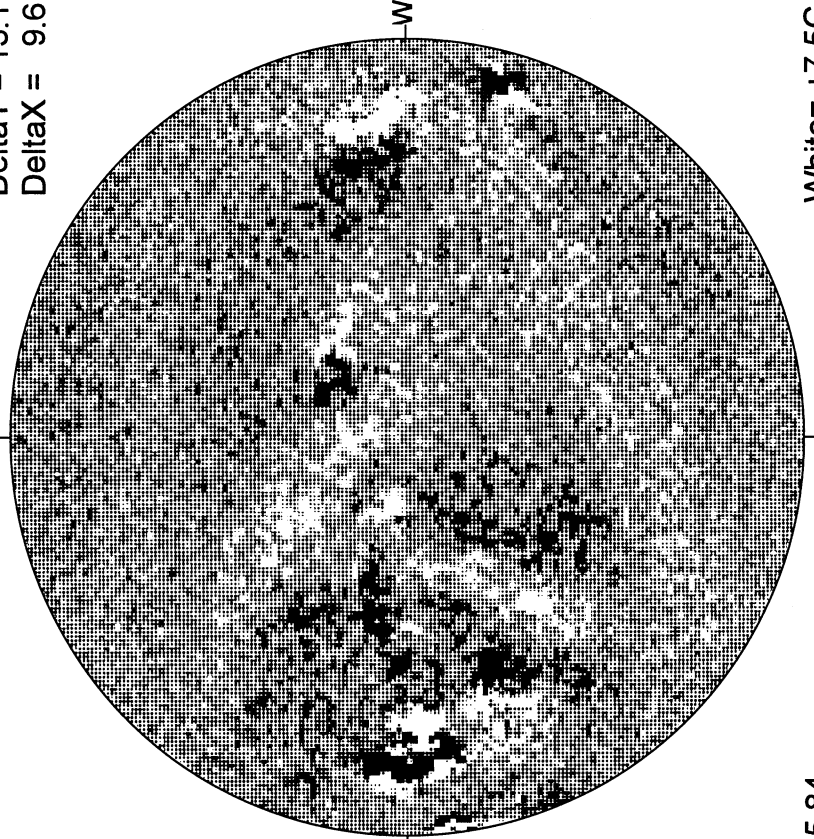
STANFORD MAGNETOGRAM

Solid = +
Dashed = -



MT. WILSON MAGNETOGRAM

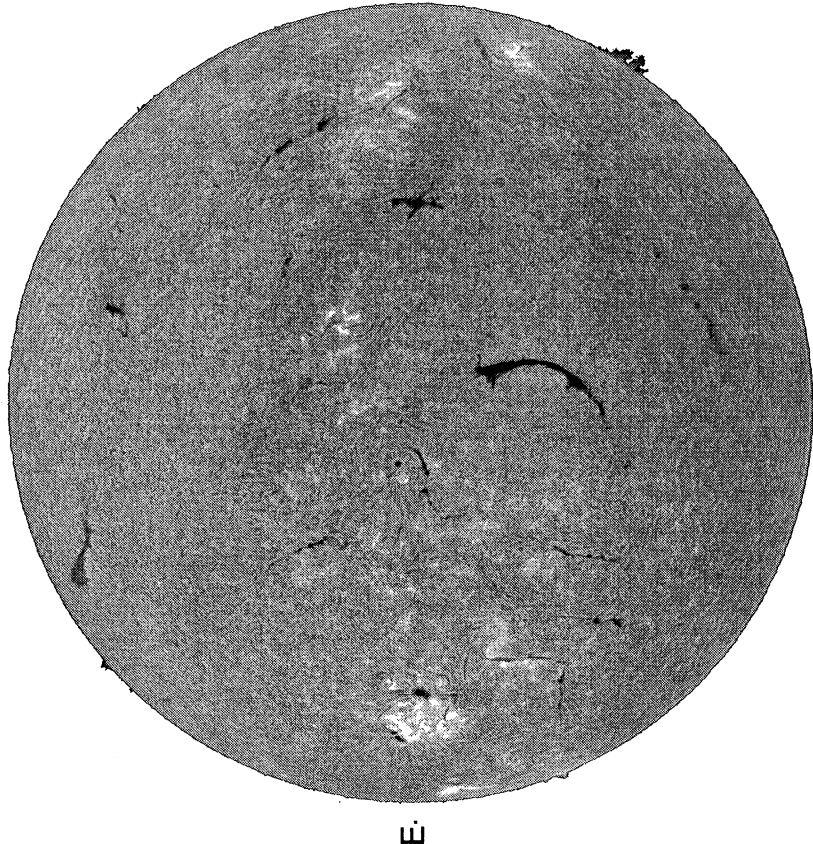
DeltaY = 13.1
DeltaX = 9.6



15.84 -
16.78 UT

White= +7.5G
Black = -7.5G

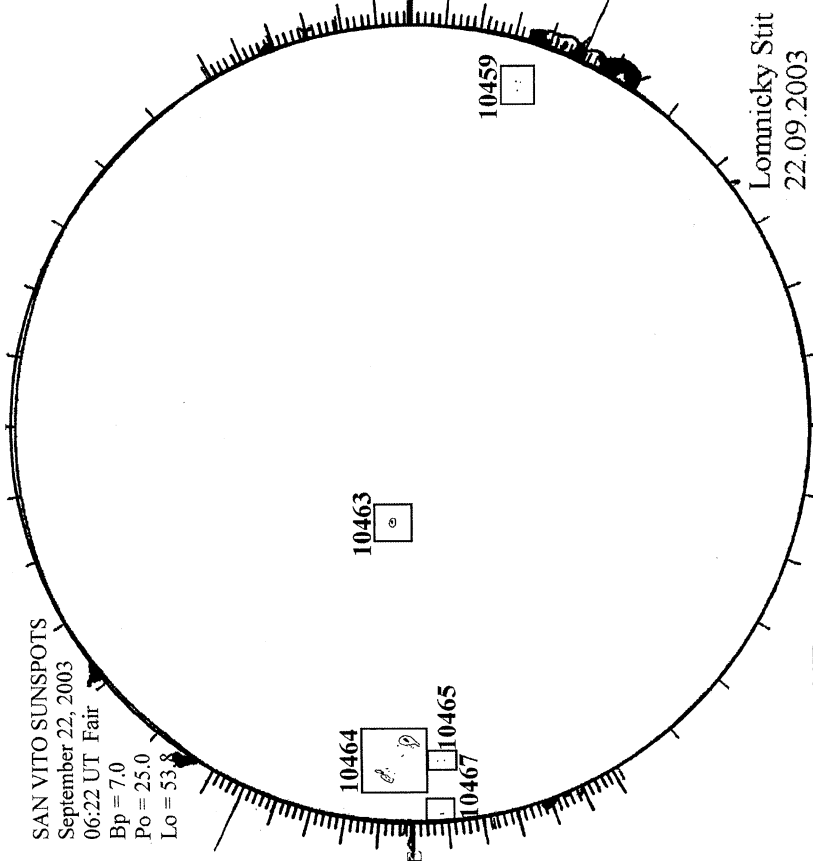
BIG BEAR H-ALPHA



1558 UT

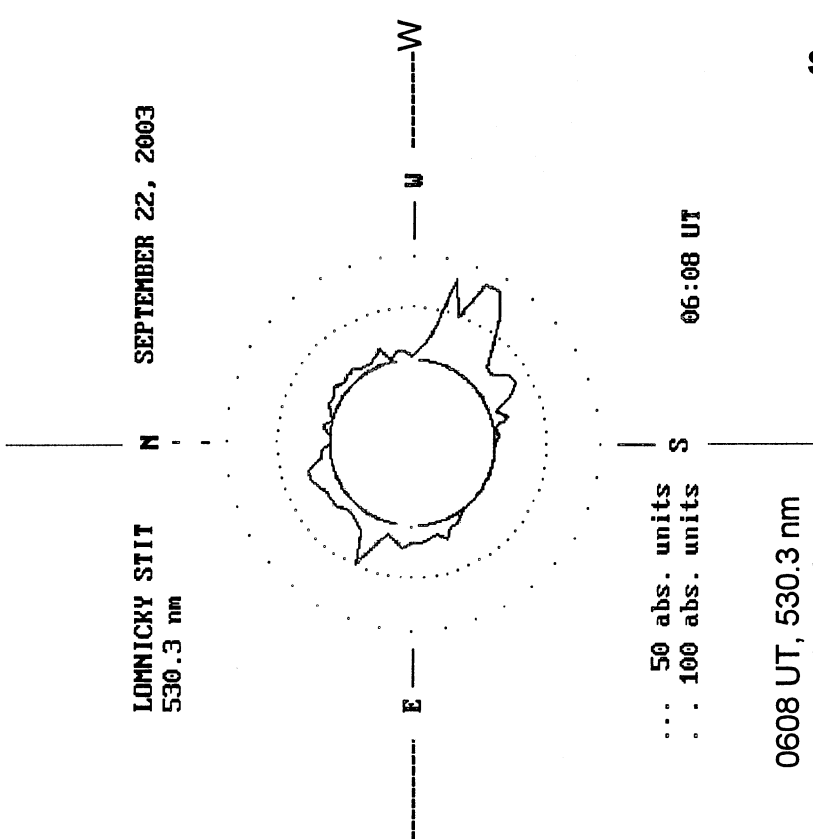
SAN VITO SUNSPOT

SAN VITO SUNSPOTS
September 22, 2003
06:22 UT Fair
Bp = 7.0
Po = 25.0
Lo = 53.8



0622 UT
0426 UT LOMN Prom

LOMNICKY PEAK CORONA (1.04 Radii)----



... 50 abs. units
.. 100 abs. units

0608 UT, 530.3 nm
.... 50 abs. units
.. 100 abs. units

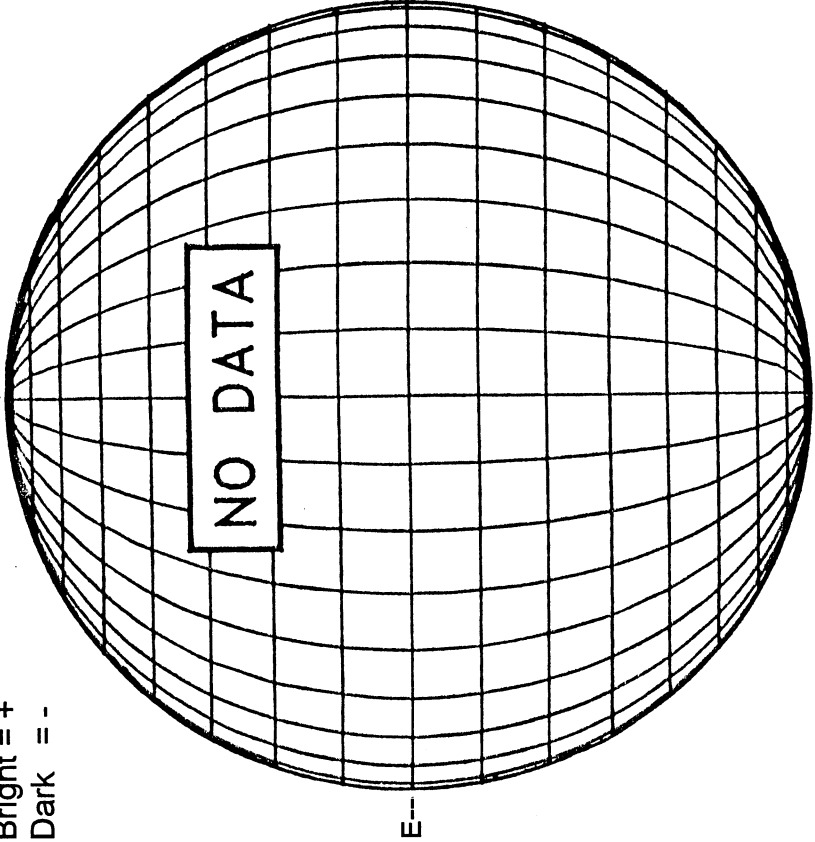
06:08 UT

SEPTEMBER 23, 2003 (P= 25.17, Bo = 7.04, Lo = 42.97)

KITT PEAK MAGNETOGRAM

868.8 nm

Bright = +
Dark = -



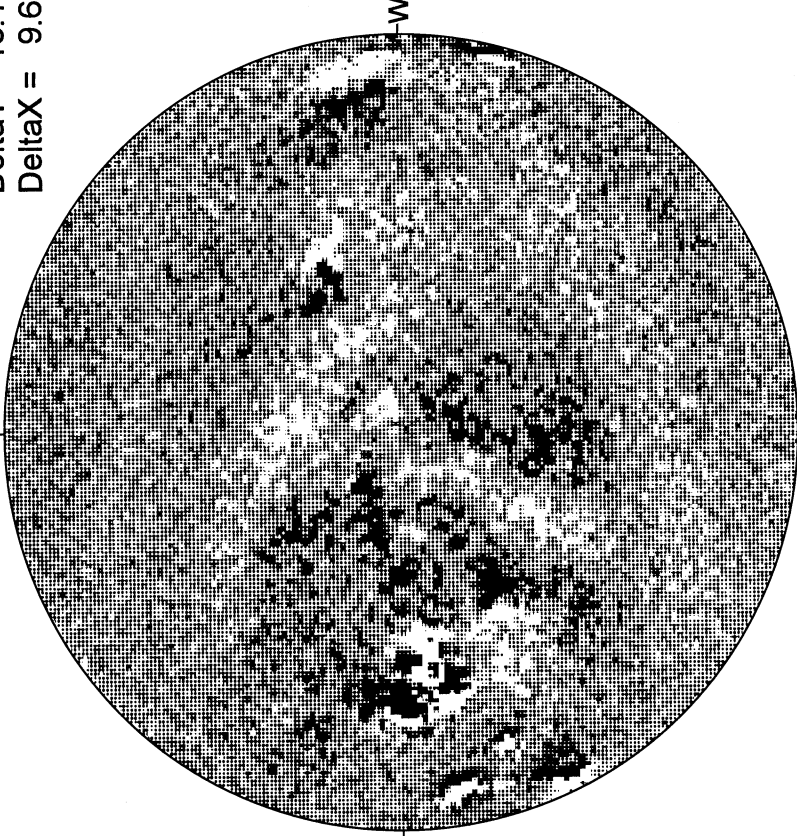
STANFORD MAGNETOGRAM

Solid = +
Dashed = -



MT. WILSON MAGNETOGRAM

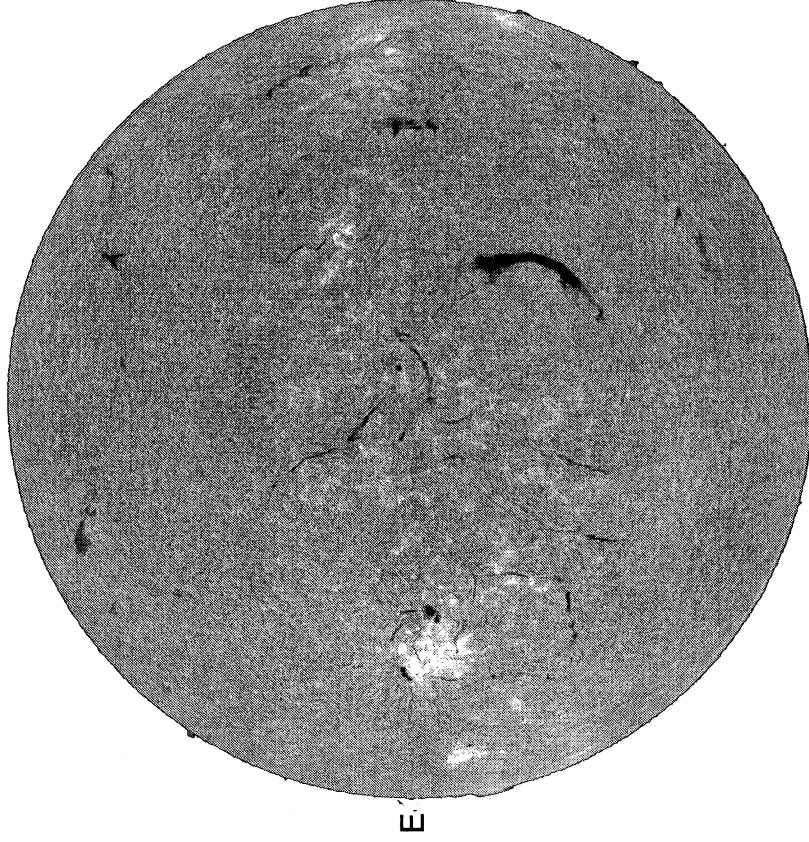
DeltaY = 13.1
DeltaX = 9.6



16.17 -
17.11 UT

White = +7.5G
Black = -7.5G

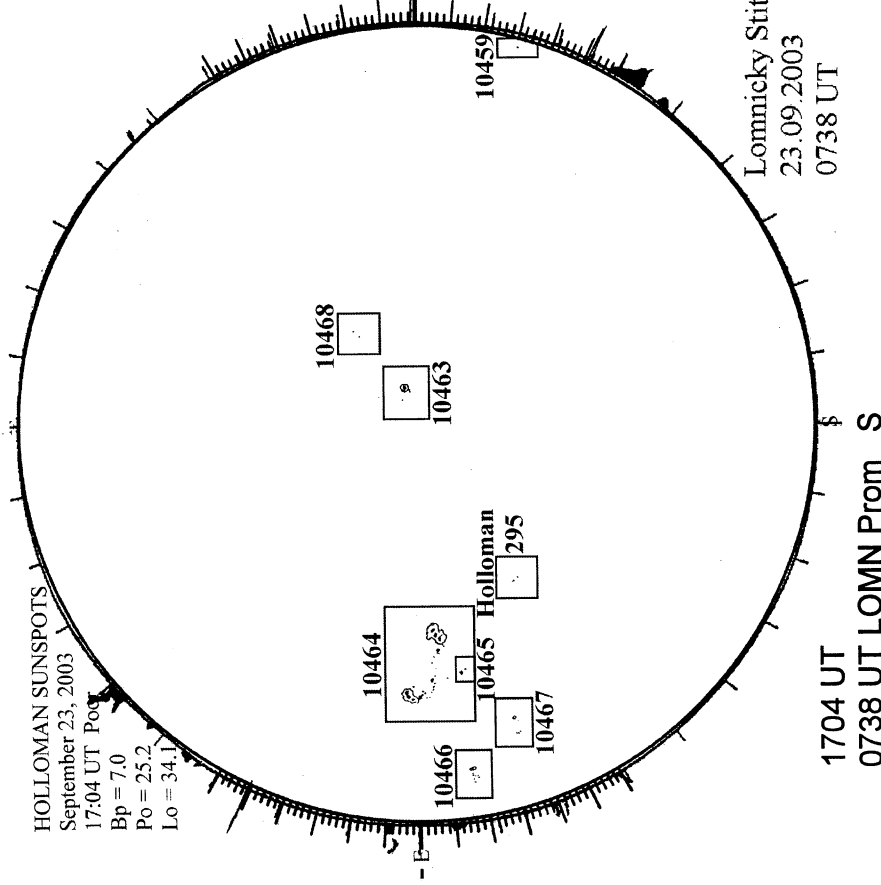
BIG BEAR H-ALPHA



1608 UT

HOLLOMAN SUNSPOT

HOLLOMAN SUNSPOTS
September 23, 2003
17:04 UT Pos
Bp = 7.0
Po = 25.2
Lo = 34.1

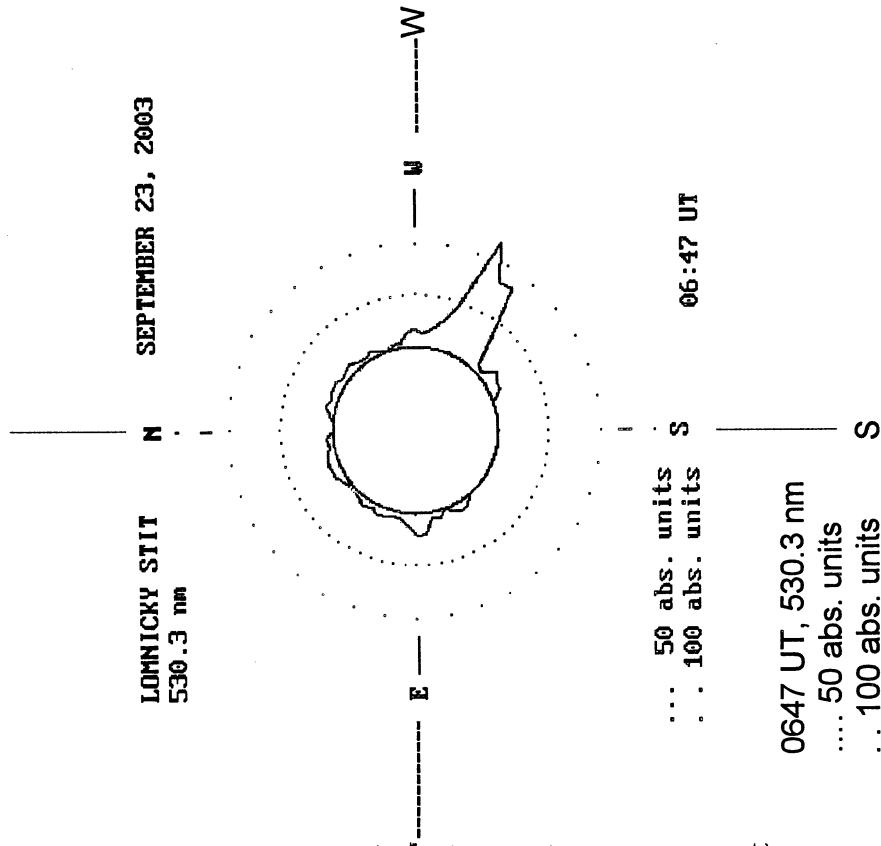


Lomnicky Stit
23.09.2003
0738 UT

LOMNICKY PEAK CORONA (1.04 Radii)----

SEPTEMBER 23, 2003

LOMNICKY STIT
530.3 nm



... 50 abs. units
... 100 abs. units

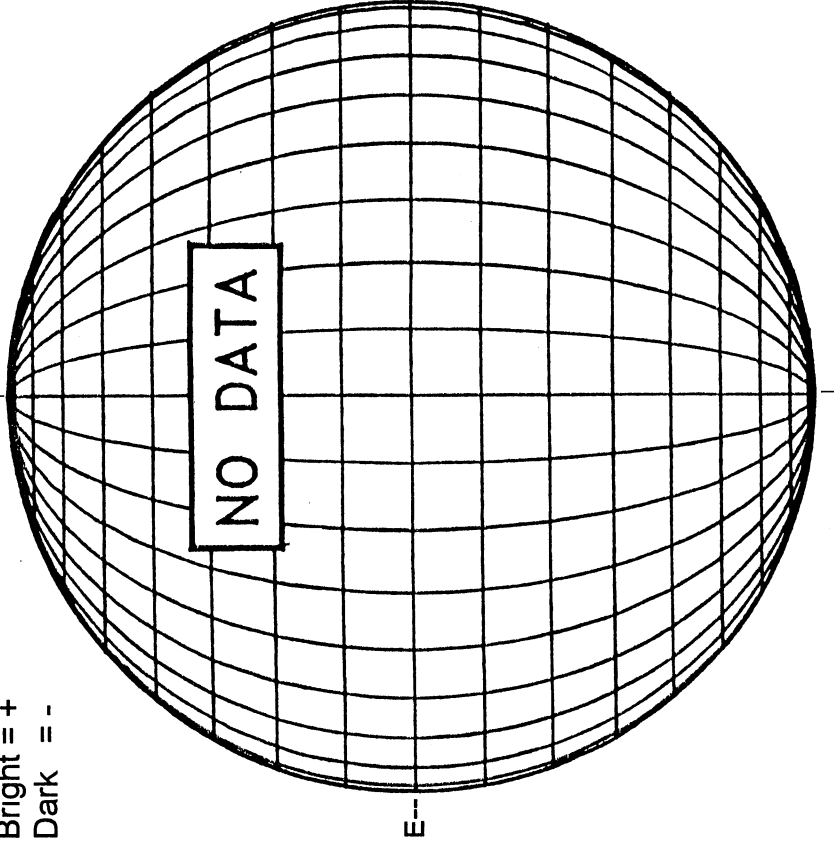
06:47 UT

0647 UT, 530.3 nm
... 50 abs. units
... 100 abs. units

KITT PEAK MAGNETOGRAM

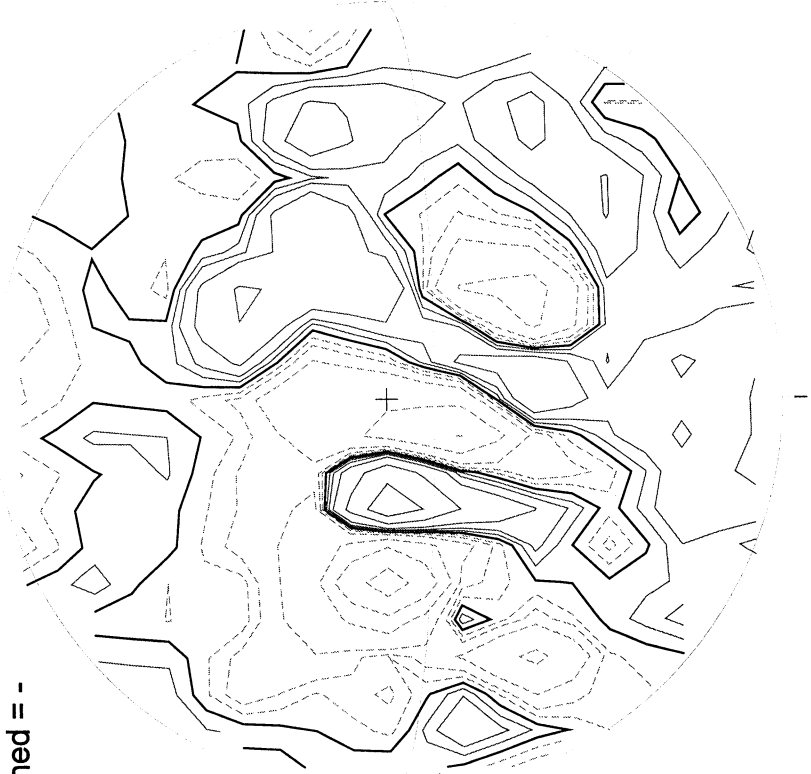
868.8 nm

Bright = +
Dark = -



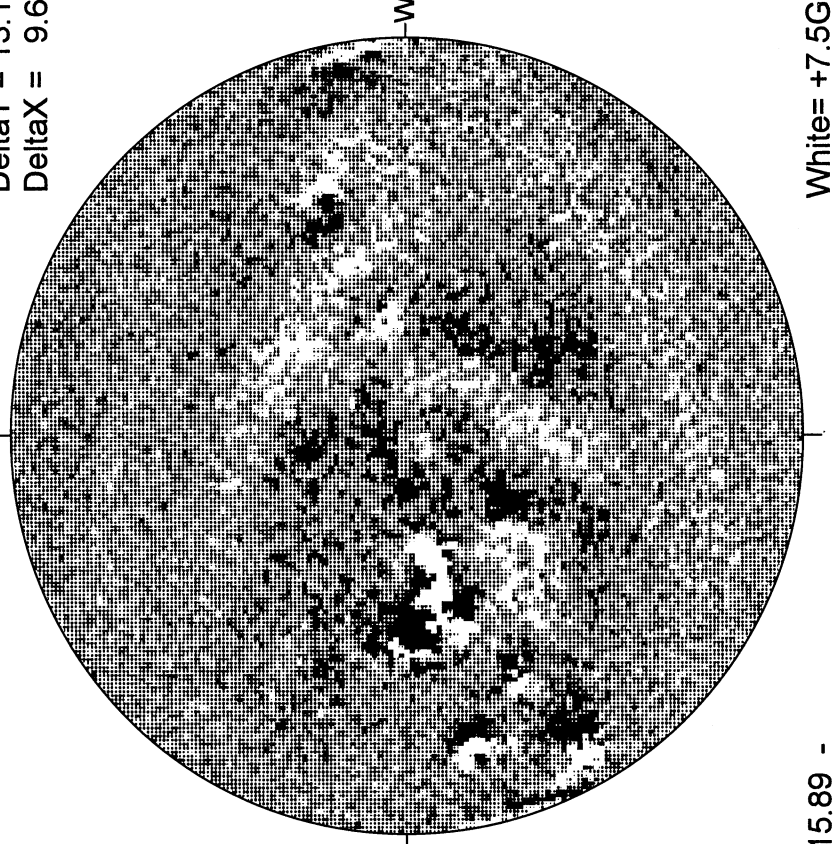
STANFORD MAGNETOGRAM

Solid = +
Dashed = -



MT. WILSON MAGNETOGRAM

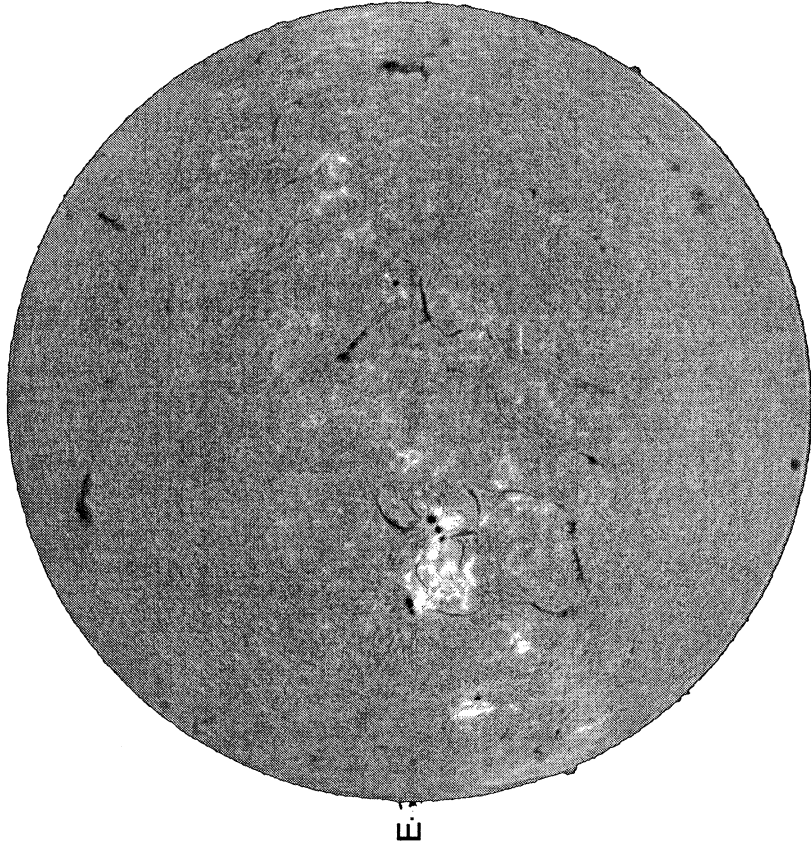
DeltaY = 13.1
DeltaX = 9.6



15.89 -
16.83 UT

White= +7.5G
Black = -7.5G

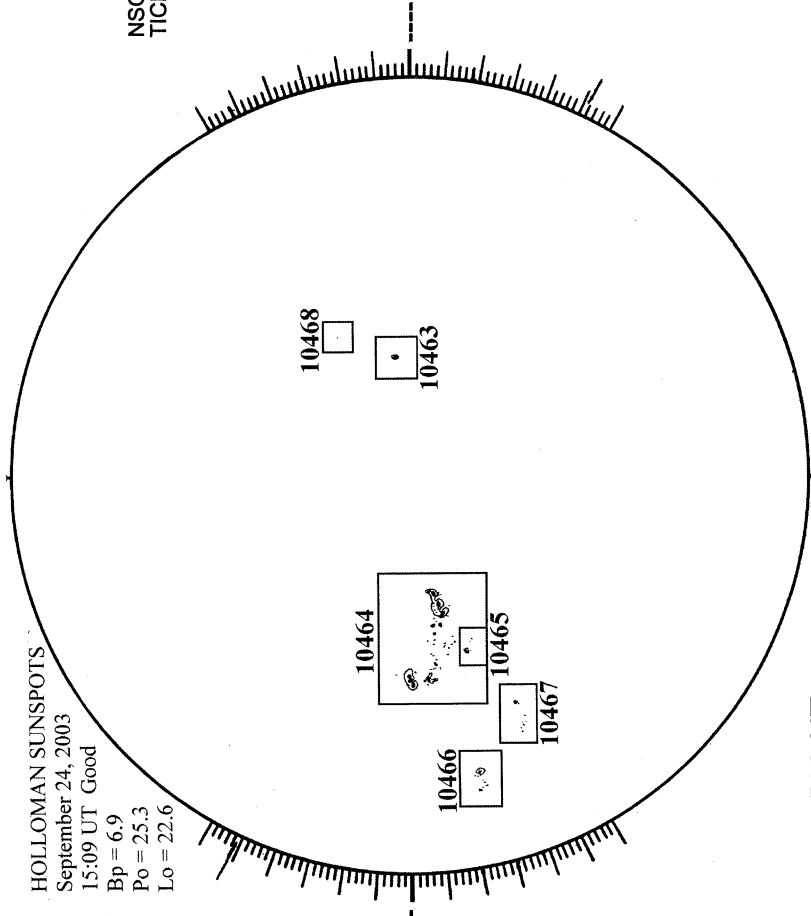
BIG BEAR H-ALPHA



1524 UT

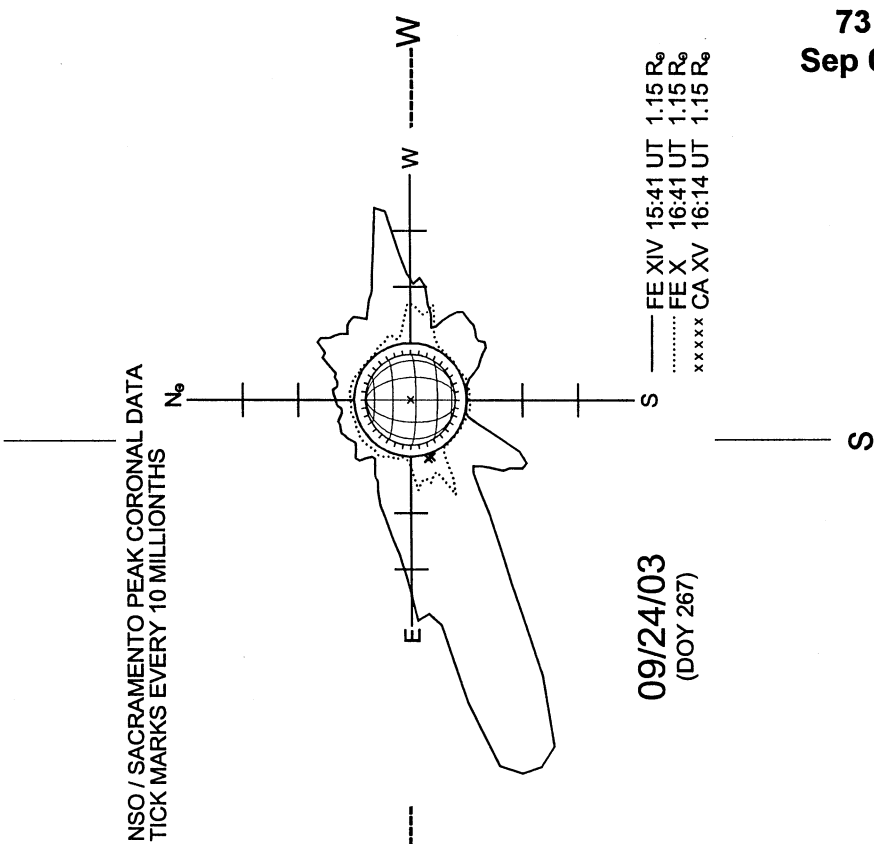
HOLLOMAN SUNSPOT

HOLLOMAN SUNSPOTS
September 24, 2003
15:09 UT Good
Bp = 6.9
Po = 25.3
Lo = 22.6



1509 UT

SACRAMENTO PEAK CORONA (1.15 Radii)----



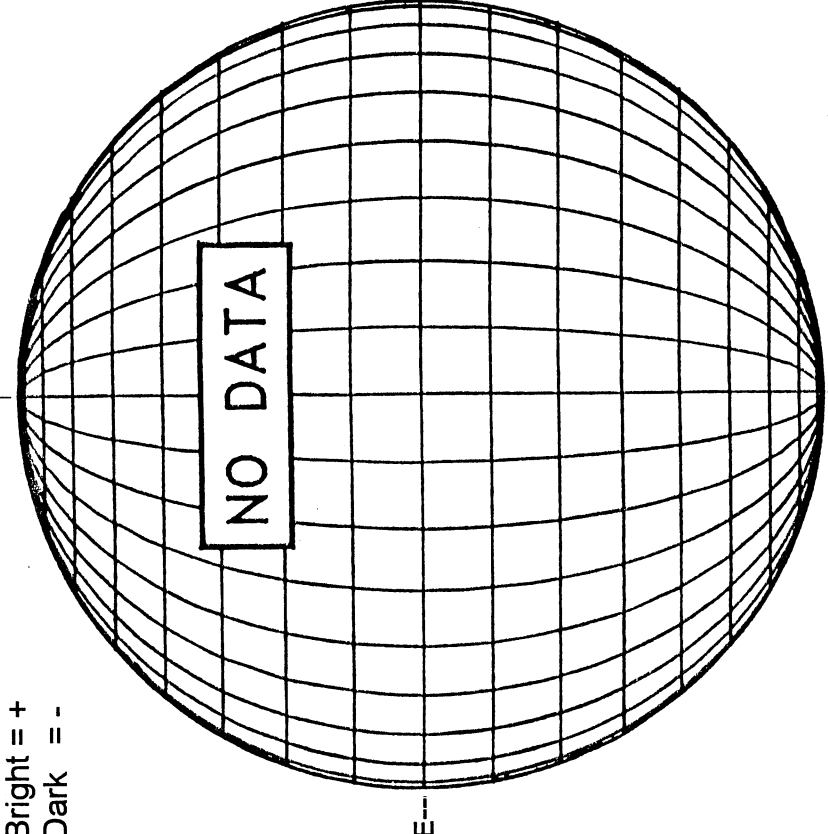
09/24/03
(DOY 267)

— FE XIV 15:41 UT 1.15 R_o
..... FE X 16:41 UT 1.15 R_o
xxxxx CA XV 16:14 UT 1.15 R_o

SEPTEMBER 25, 2003 (P= 25.41, Bo = 6.98, Lo = 16.58)

KITT PEAK MAGNETOGRAM

868.8 nm



Bright = +
Dark = -

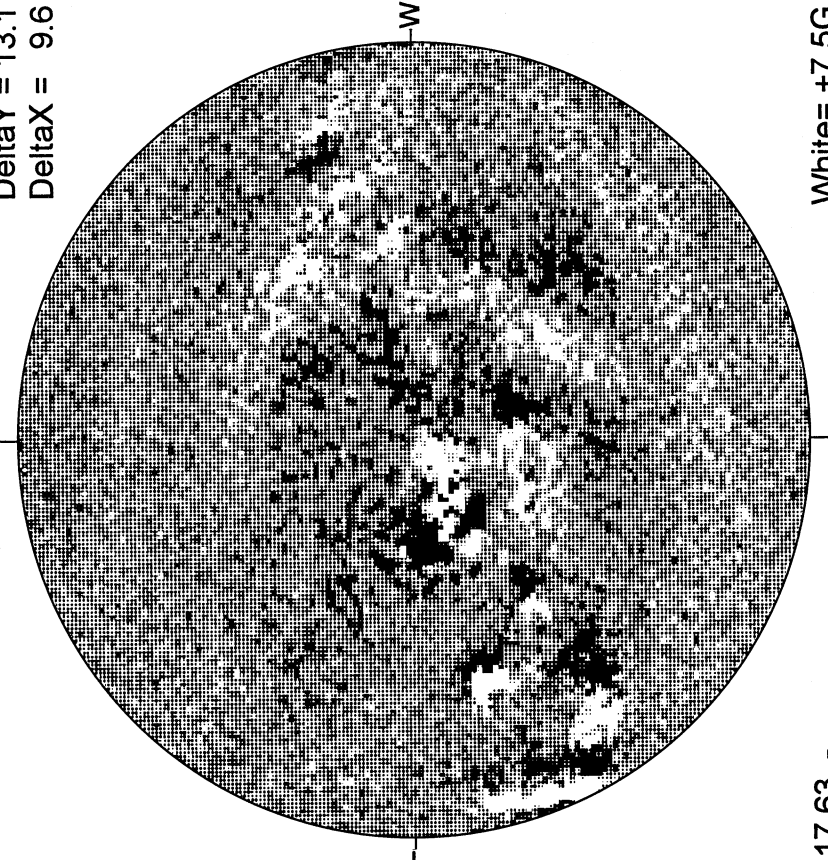
STANFORD MAGNETOGRAM

Solid = +
Dashed = -



MT. WILSON MAGNETOGRAM

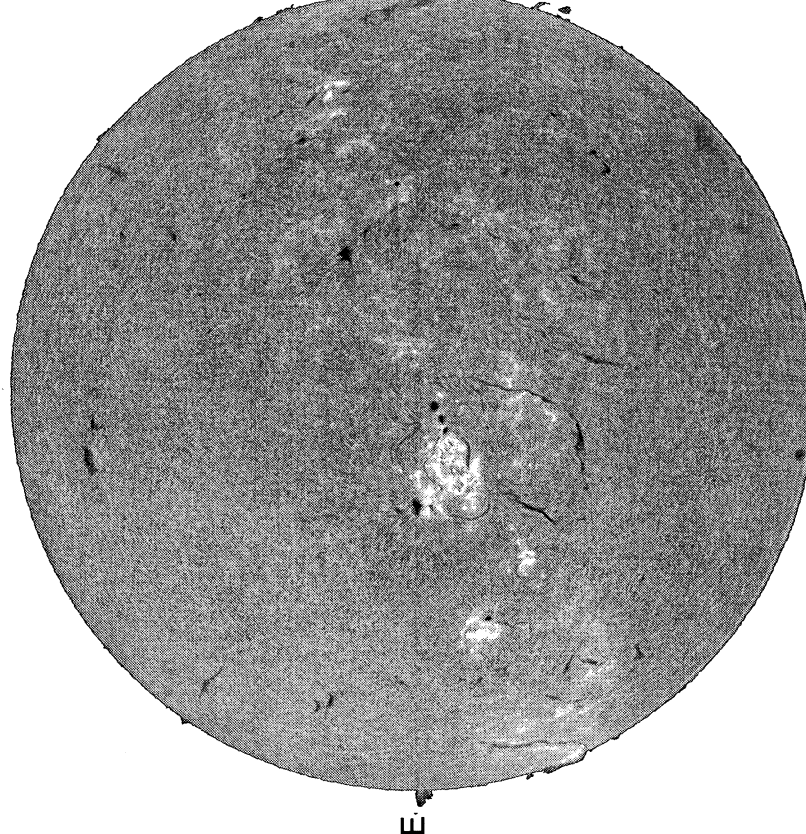
DeltaY = 13.1
DeltaX = 9.6



17.63 -
18.58 UT

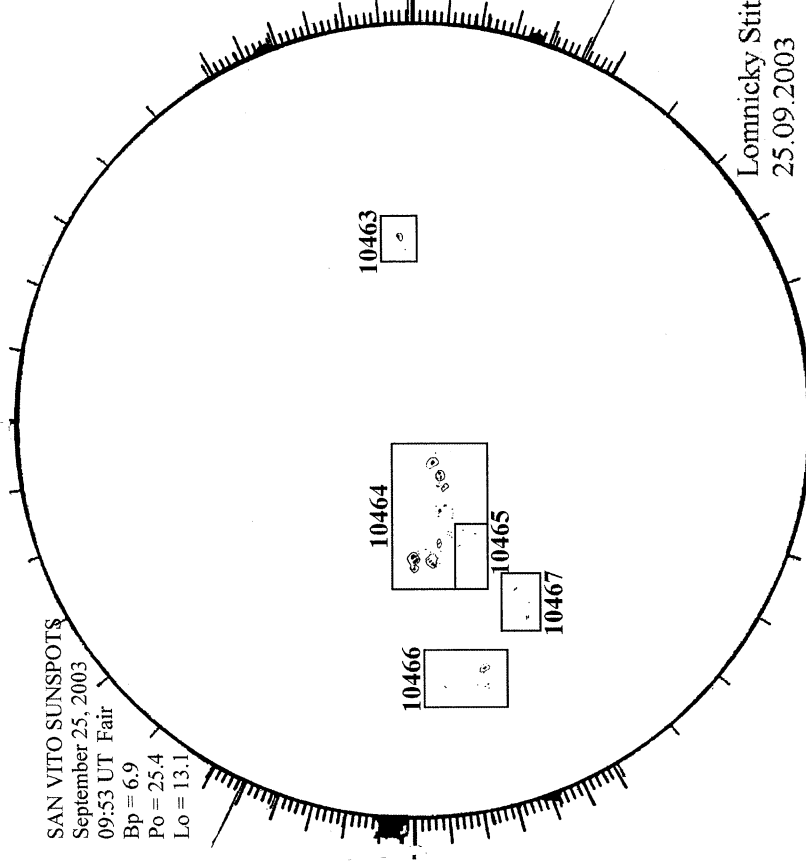
White = +7.5G
Black = -7.5G

BIG BEAR H-ALPHA



1554 UT

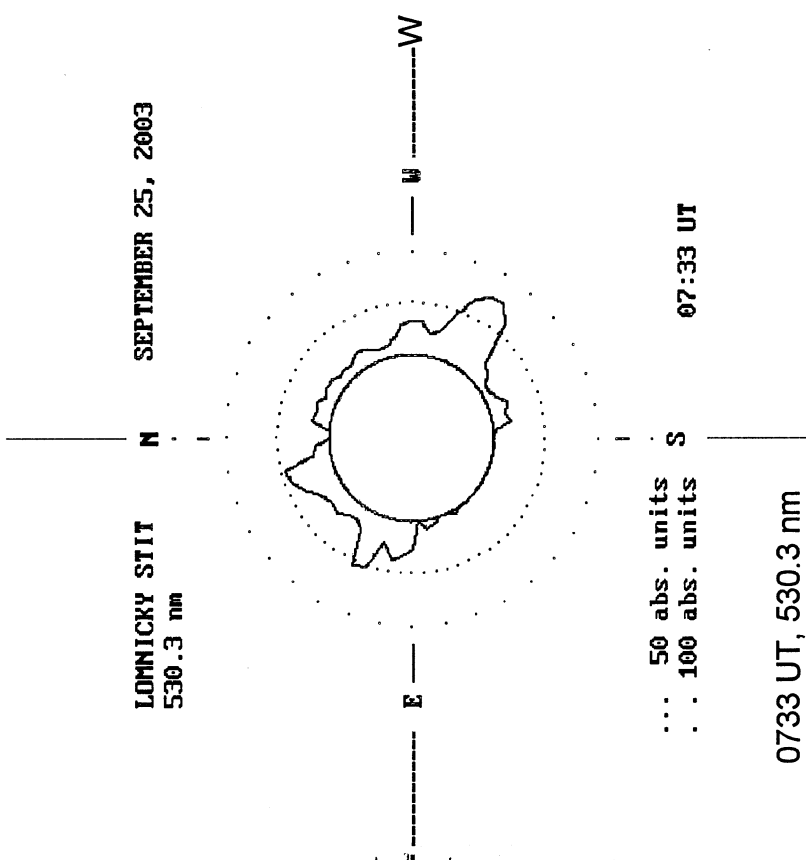
SAN VITO SUNSPOT



0953 UT

0708 UT LOMN Prom S

LOMNICKY PEAK CORONA (1.04 Radii)----



0733 UT, 530.3 nm

... 50 abs. units
... 100 abs. units

0708 UT

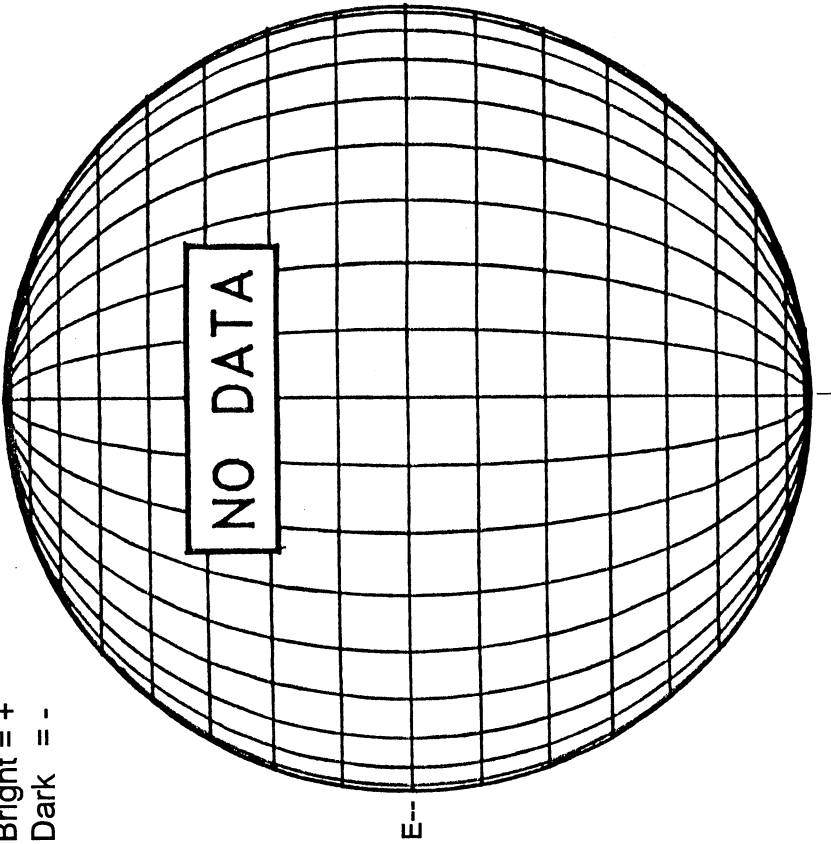
S

SEPTEMBER 26, 2003 (P= 25.51, Bo = 6.94, Lo = 3.38)

KITT PEAK MAGNETOGRAM

868.8 nm

Bright = +
Dark = -



STANFORD MAGNETOGRAM

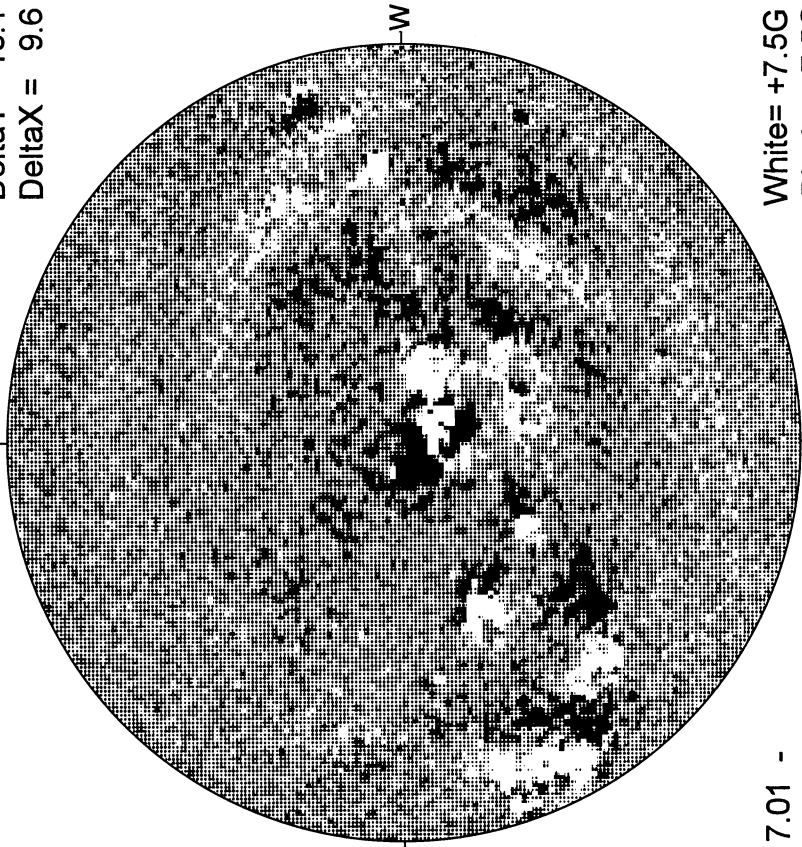
Solid = +
Dashed = -



2138 UT

MT. WILSON MAGNETOGRAM

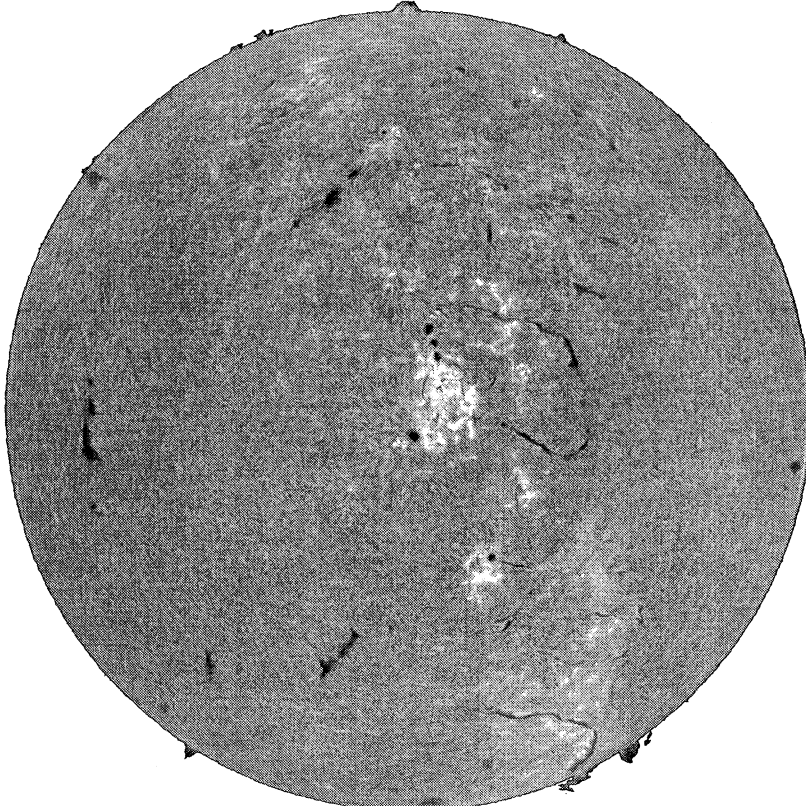
DeltaY = 13.1
DeltaX = 9.6



17.01 -
17.95 UT

White= +7.5G
Black = -7.5G

BIG BEAR H-ALPHA



1549 UT

HOLLOMAN SUNSPOT

HOLLOMAN SUNSPOTS

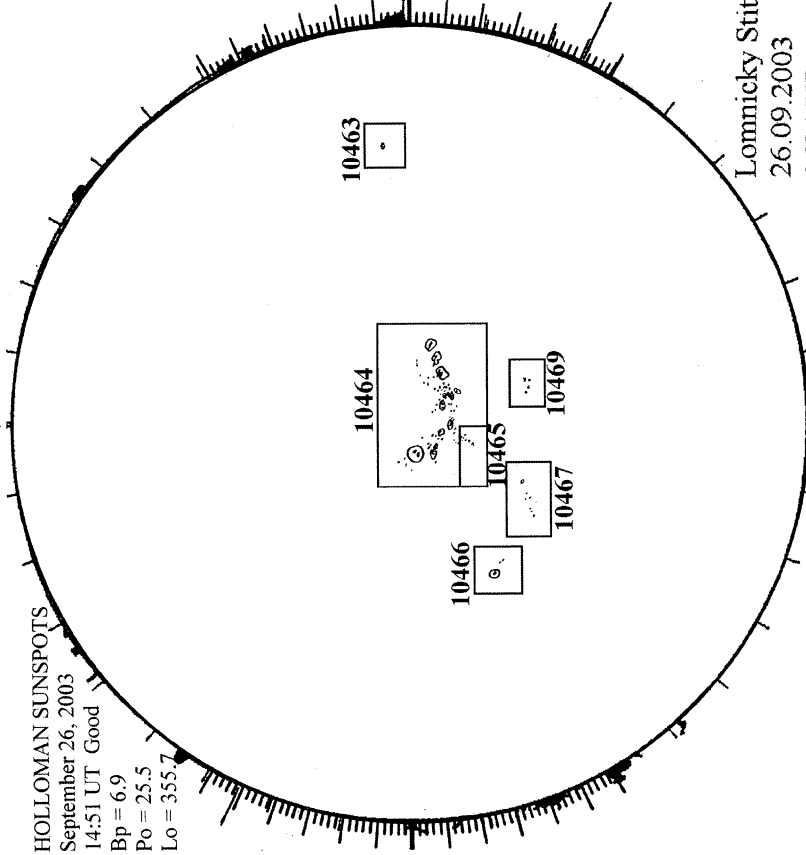
September 26, 2003

14:51 UT Good

Bp = 6.9

Po = 25.5

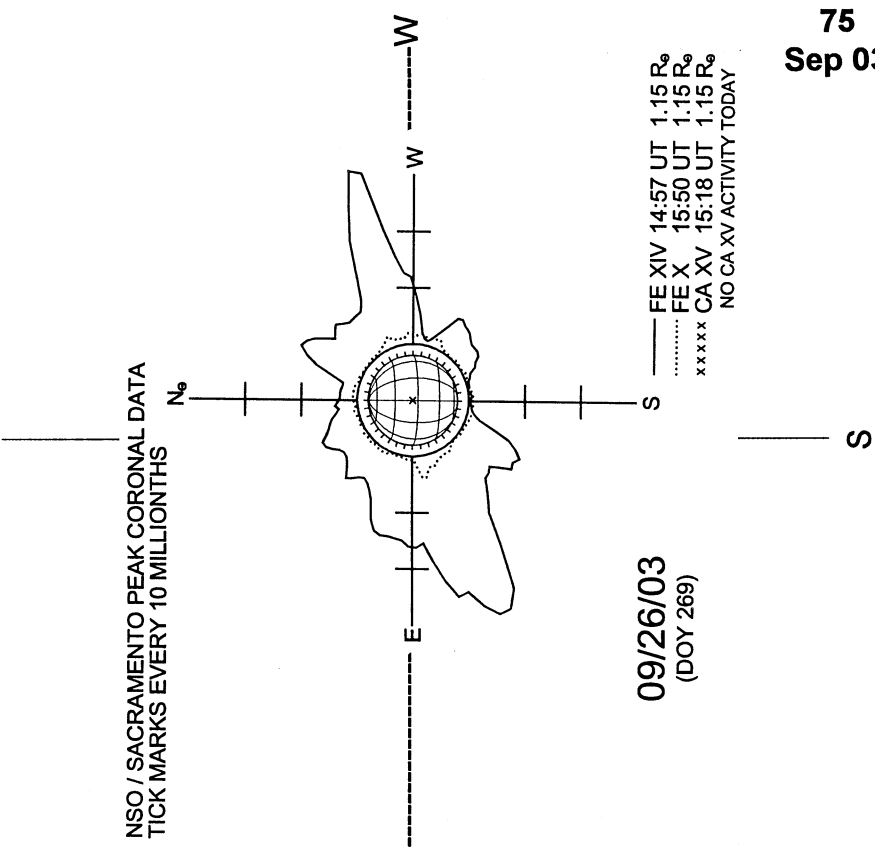
Lo = 355.7



1451 UT
0624 UT LOMN Prom S

Lomnický Stit
26.09.2003
0624 UT

SACRAMENTO PEAK CORONA (1.15 Radii)----



09/26/03
(DOY 269)

FE XIV 14:57 UT 1.15 R_o
FE X 15:50 UT 1.15 R_o
CA XV 15:18 UT 1.15 R_o
NO CA XV ACTIVITY TODAY

75
Sep 03

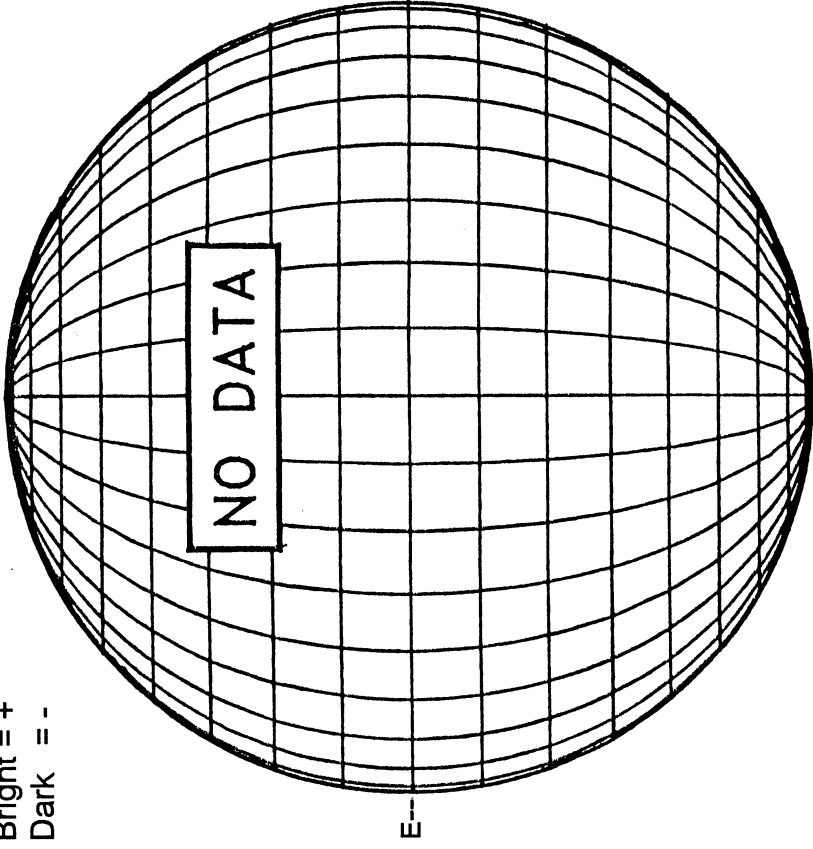
SEPTEMBER 27, 2003 (P= 25.61, Bo = 6.91, Lo = 350.18)

76
Sep 03

KITT PEAK MAGNETOGRAM

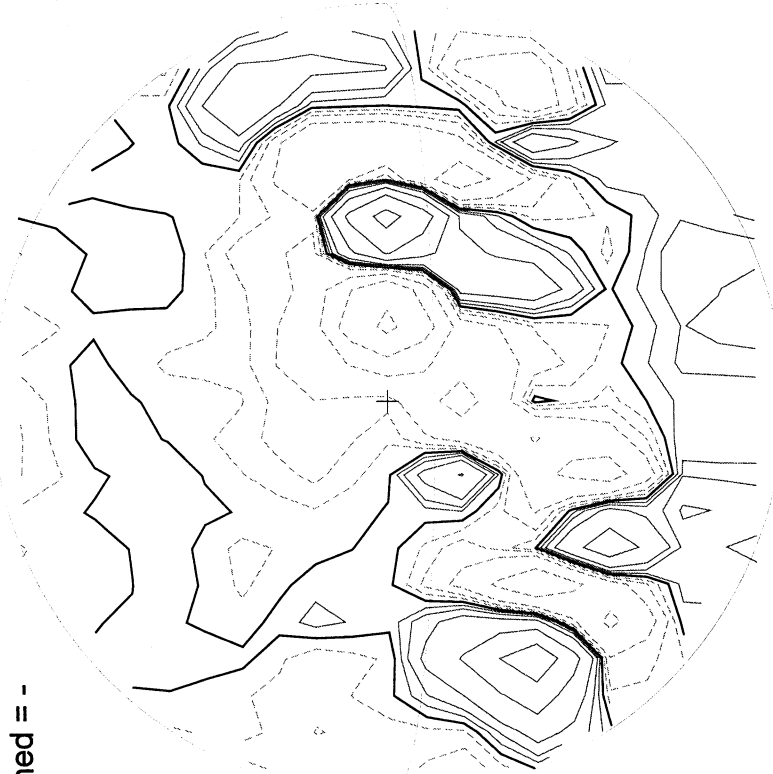
868.8 nm

Bright = +
Dark = -



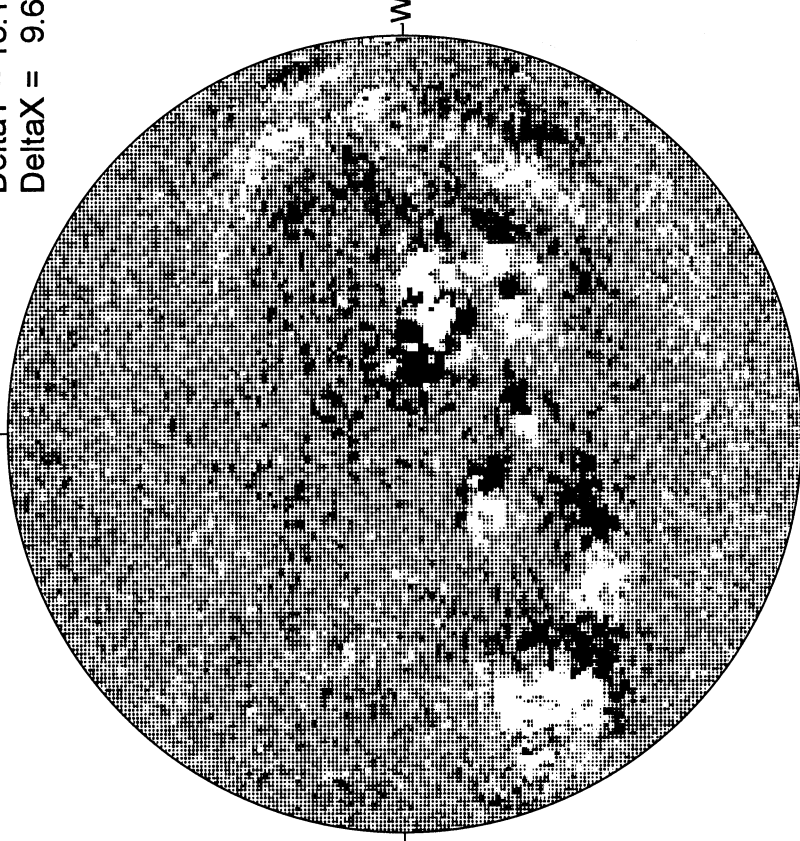
STANFORD MAGNETOGRAM

Solid = +
Dashed = -



MT. WILSON MAGNETOGRAM

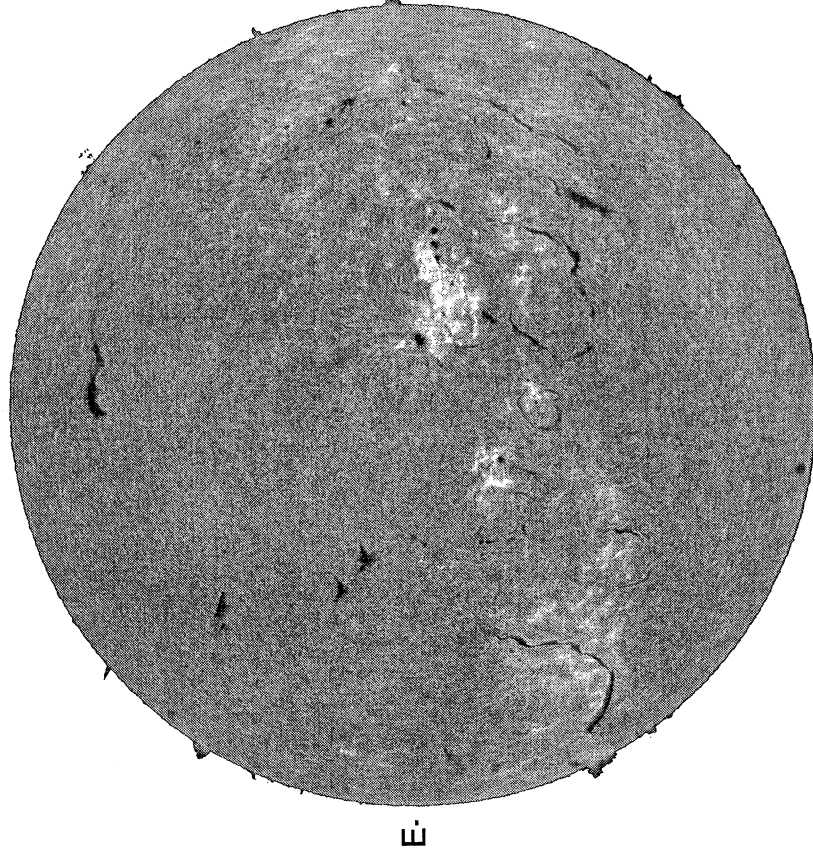
DeltaY = 13.1
DeltaX = 9.6



17.50 -
18.44 UT

White= +7.5G
Black = -7.5G

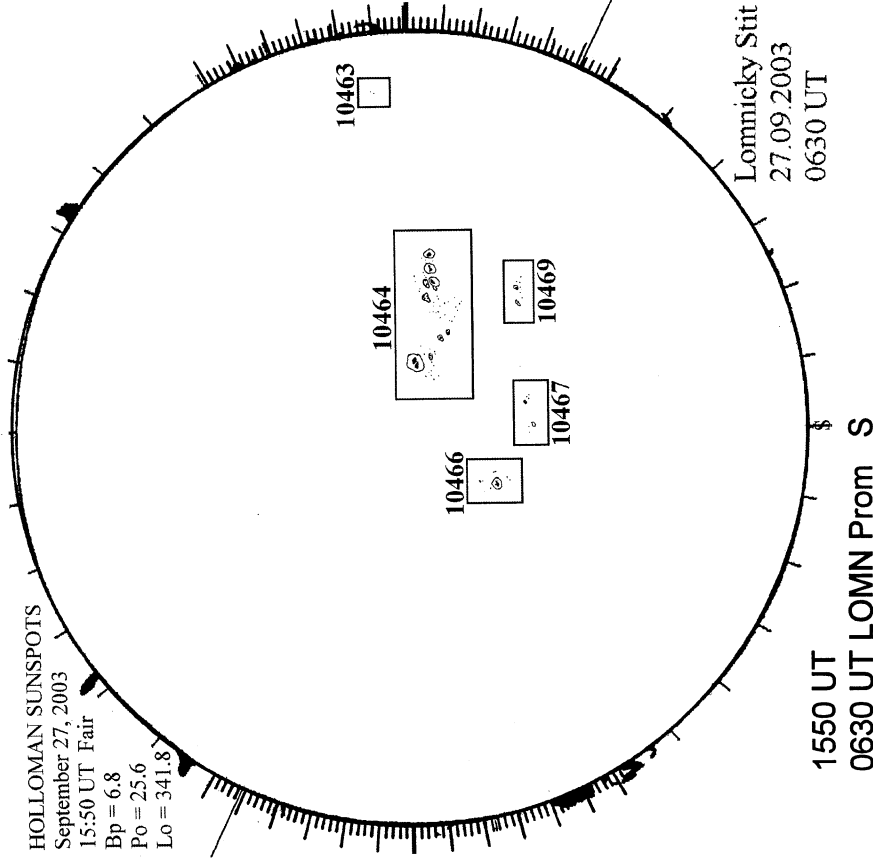
BIG BEAR H-ALPHA



1602 UT

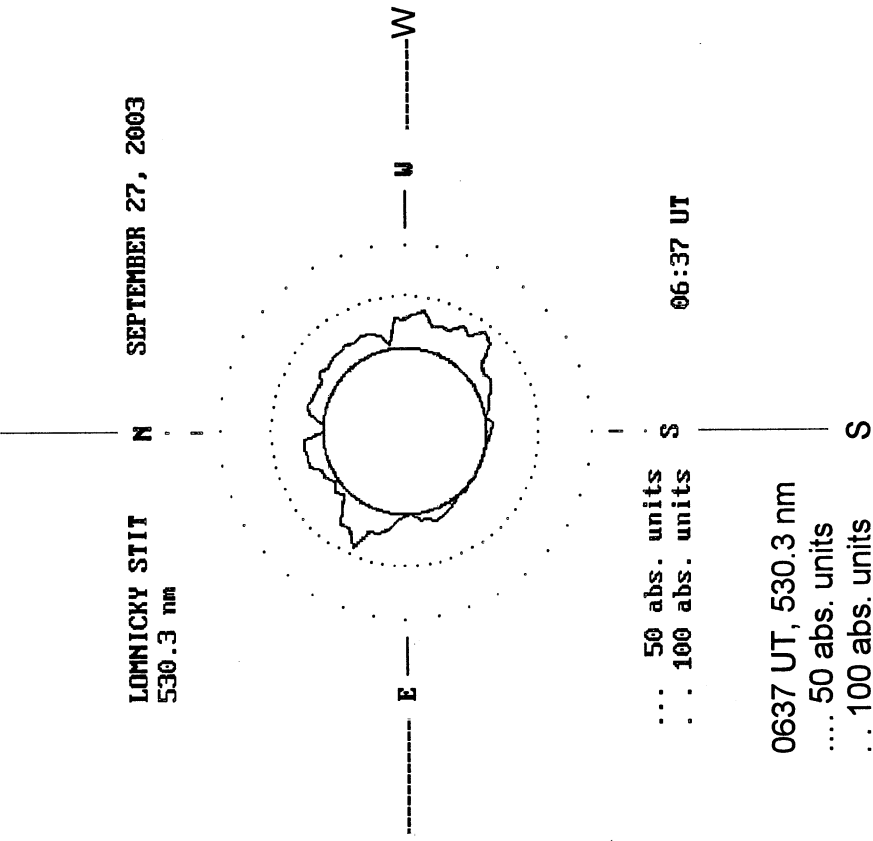
HOLLOMAN SUNSPOTS

HOLLOMAN SUNSPOTS
September 27, 2003
15:50 UT Fair
Bp = 6.8
Po = 25.6
Lo = 341.8



1550 UT
0630 UT LOMN Prom

LOMNICKY PEAK CORONA (1.04 Radii)----



... 50 abs. units
.. 100 abs. units

0637 UT, 530.3 nm
.... 50 abs. units
.. 100 abs. units

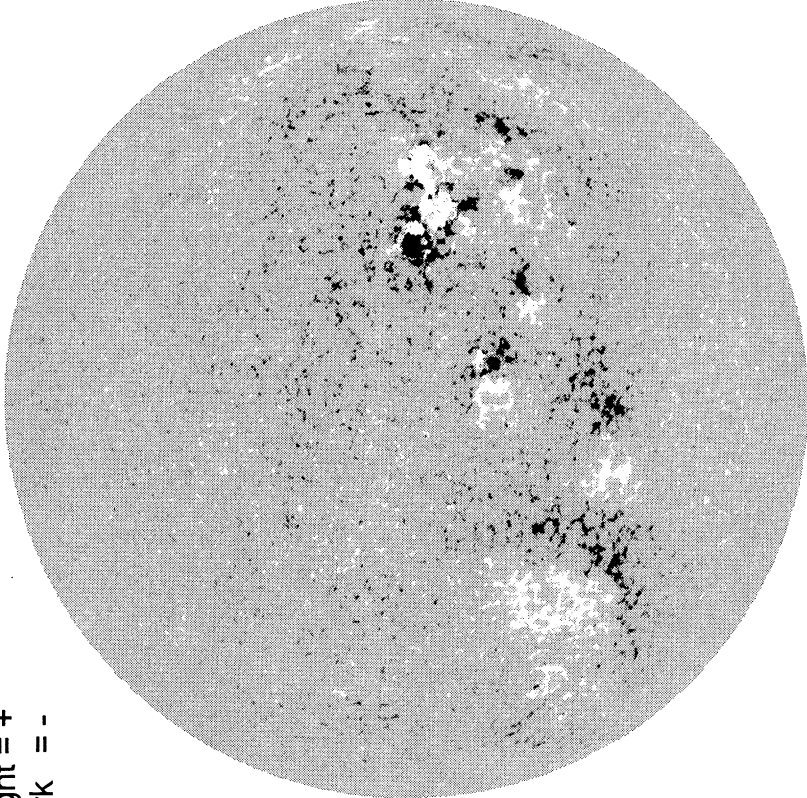
SEPTEMBER 28, 2003 (P= 25.71, Bo = 6.87, Lo = 336.98)

KITT PEAK MAGNETOGRAM--SOLIS

630.2 nm

N

Bright = +
Dark = -

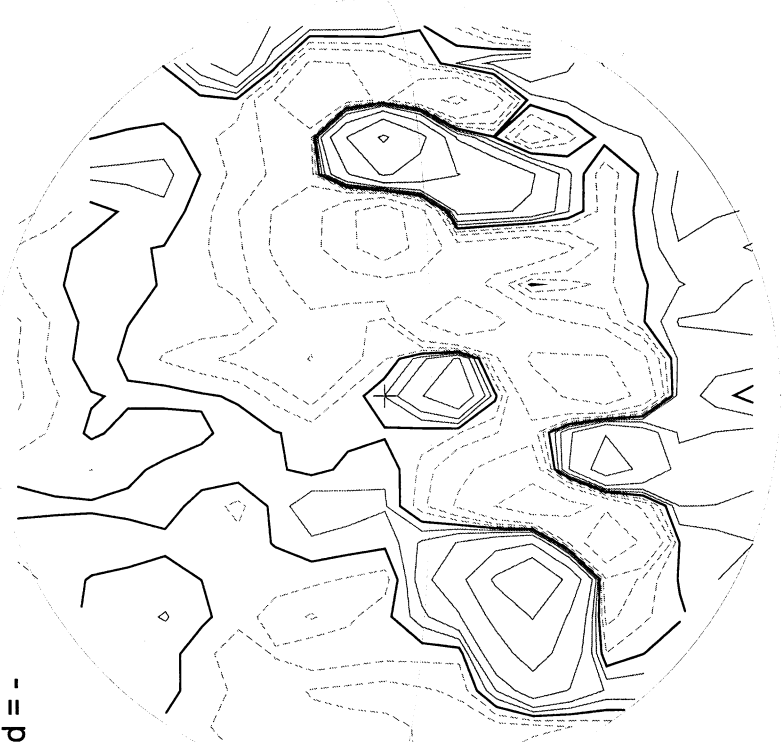


1514 UT

STANFORD MAGNETOGRAM

N

Solid = +
Dashed = -

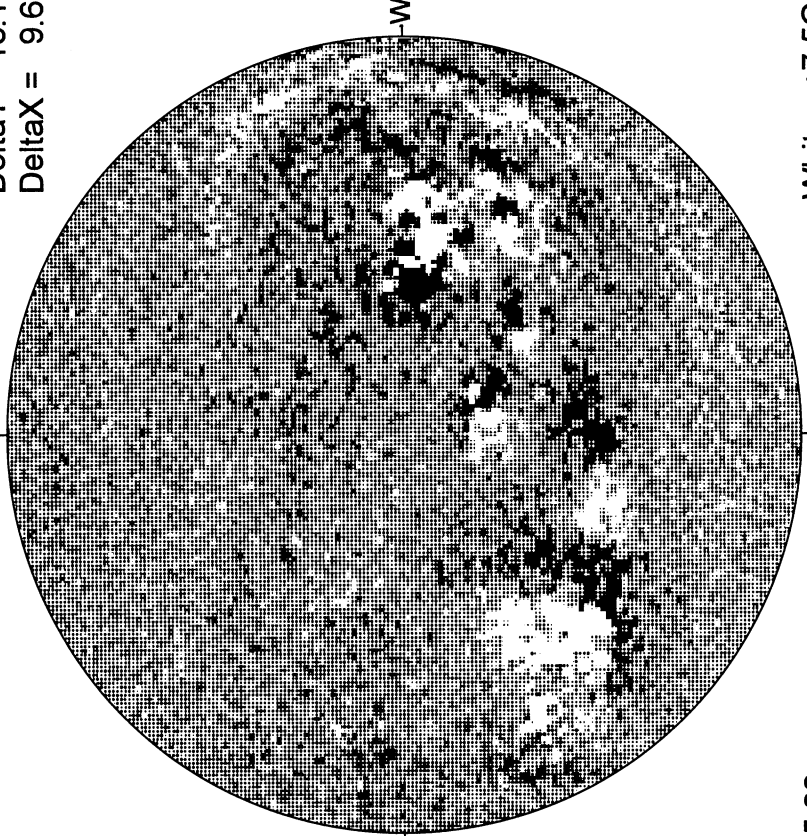


2107 UT

MT. WILSON MAGNETOGRAM

N

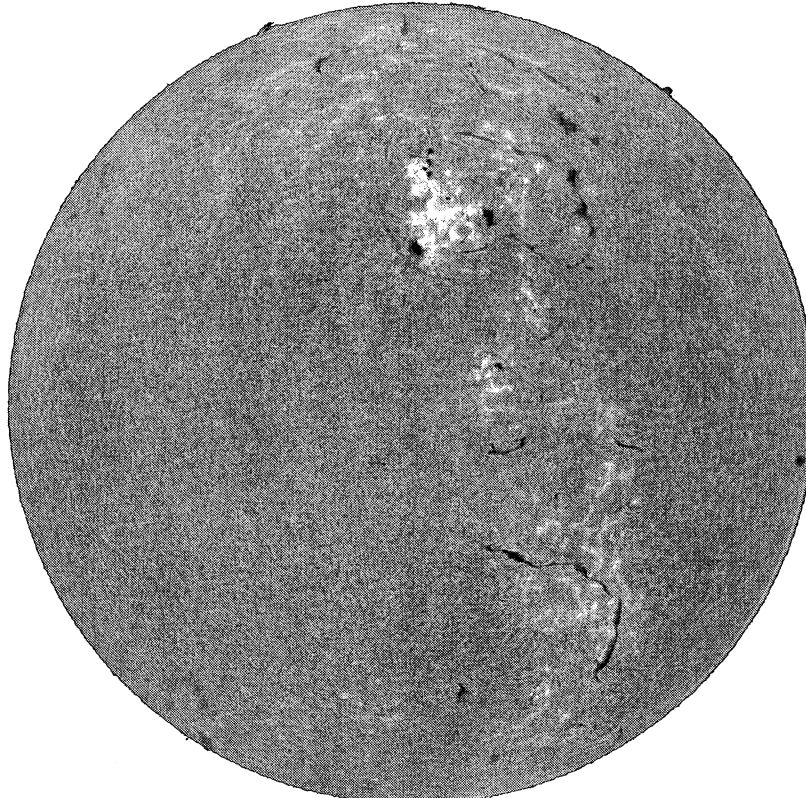
DeltaY = 13.1
DeltaX = 9.6



15.88 -
16.82 UT

White= +7.5G
Black = -7.5G

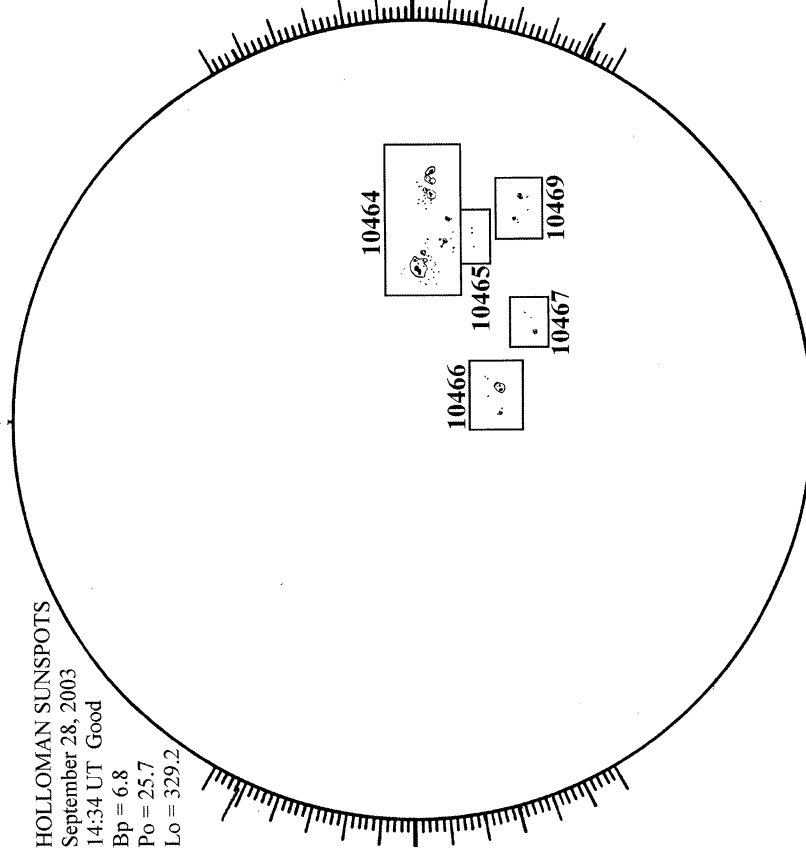
BIG BEAR H-ALPHA



1610 UT

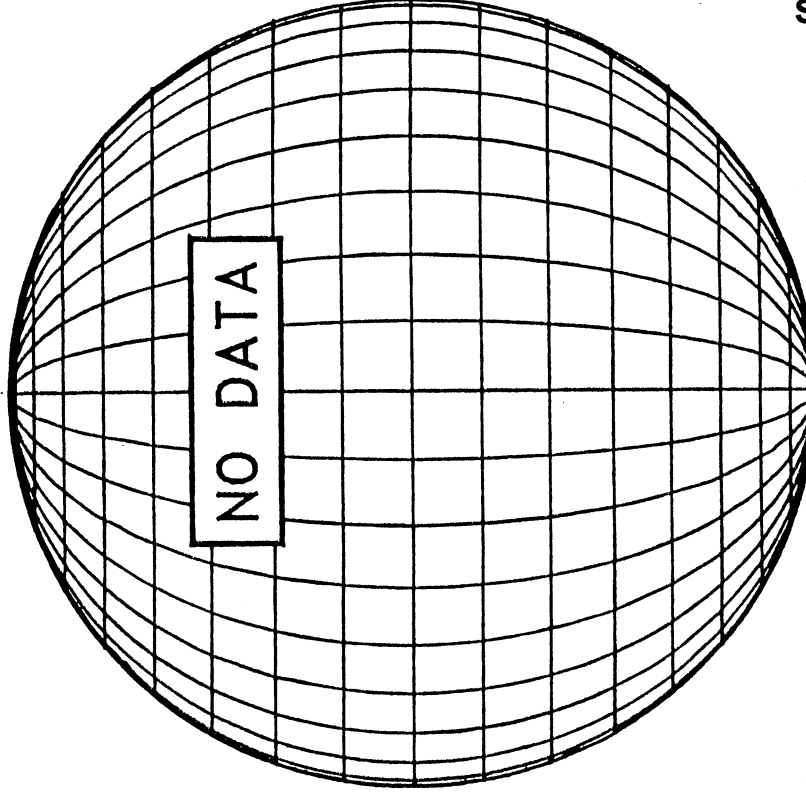
HOLLOMAN SUNSPOTS

HOLLOMAN SUNSPOTS
September 28, 2003
14:34 UT Good
Bp = 6.8
Po = 25.7
Lo = 329.2



1434 UT

SACRAMENTO PEAK CORONA (1.15 Radii)----



S

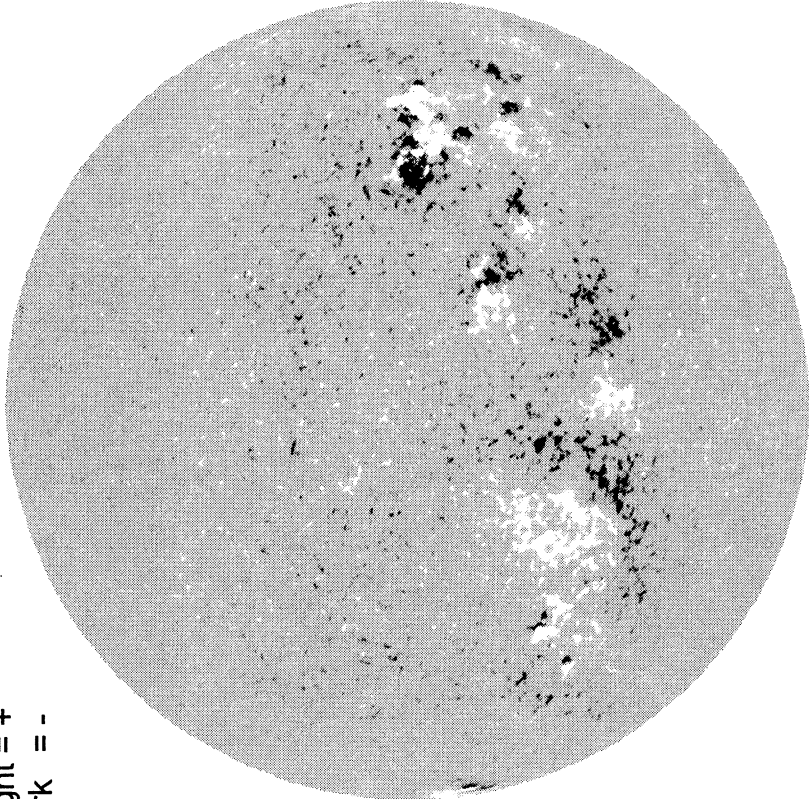
SEPTEMBER 29, 2003 (P= 25.79, Bo = 6.83, Lo = 323.79)

78
Sep 03

KITT PEAK MAGNETOGRAM--SOLIS

630.2 nm

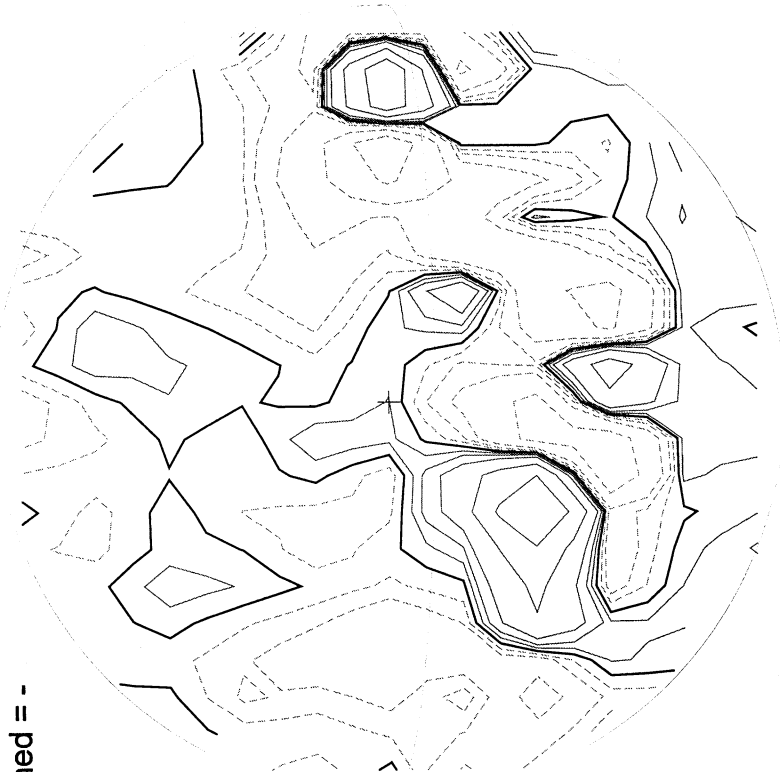
Bright = +
Dark = -



1426 UT

STANFORD MAGNETOGRAM

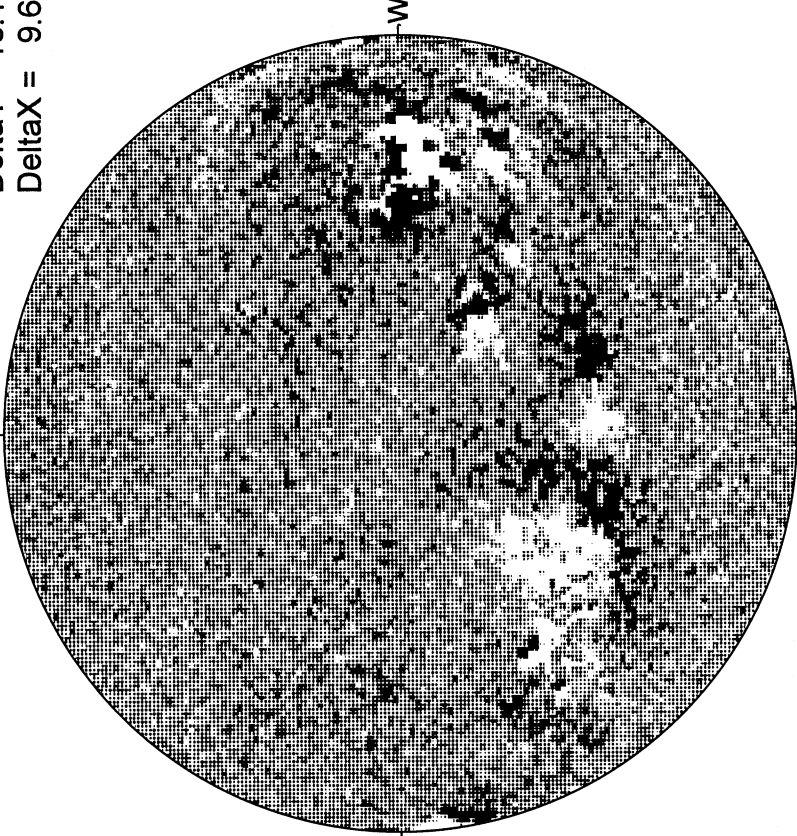
Solid = +
Dashed = -



2114 UT

MT. WILSON MAGNETOGRAM

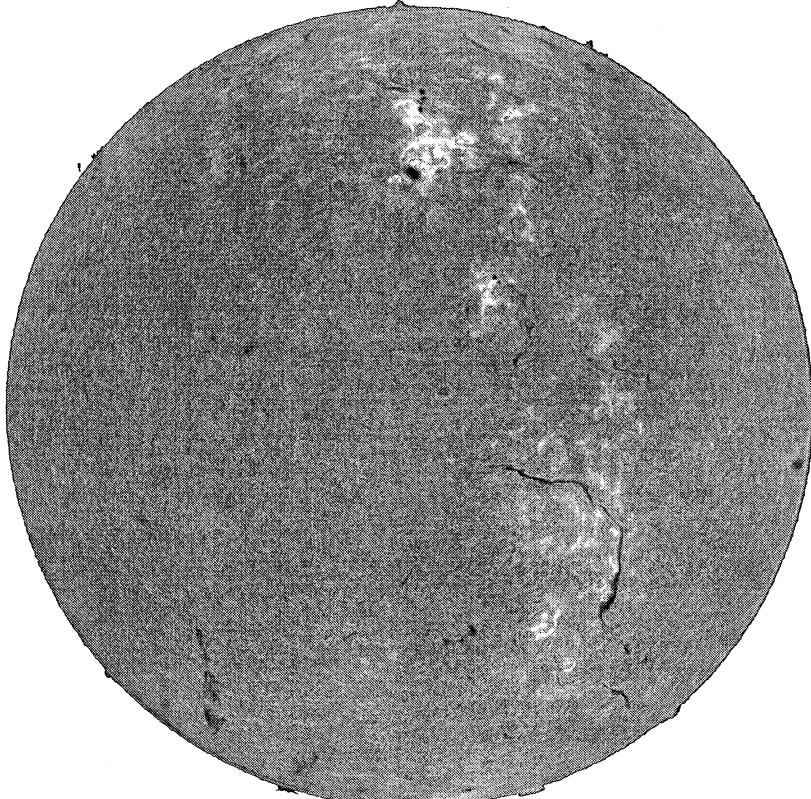
DeltaY = 13.1
DeltaX = 9.6



16.02 -
16.97 UT

White = +7.5G
Black = -7.5G

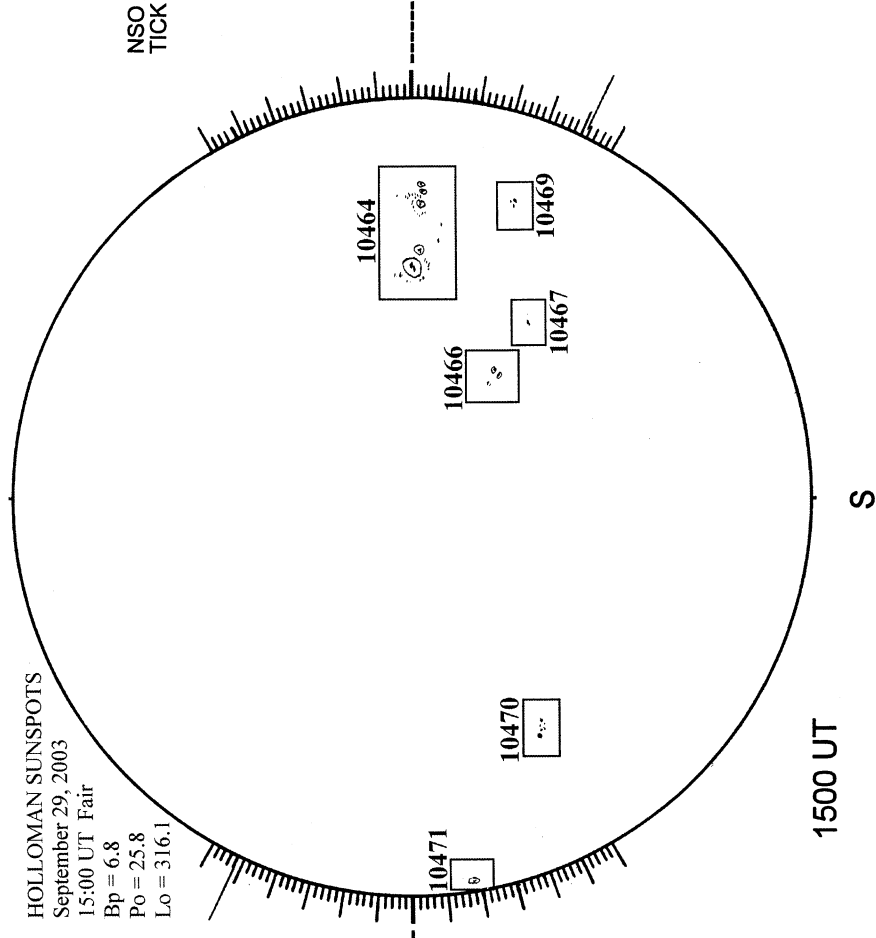
BIG BEAR H-ALPHA



1609 UT

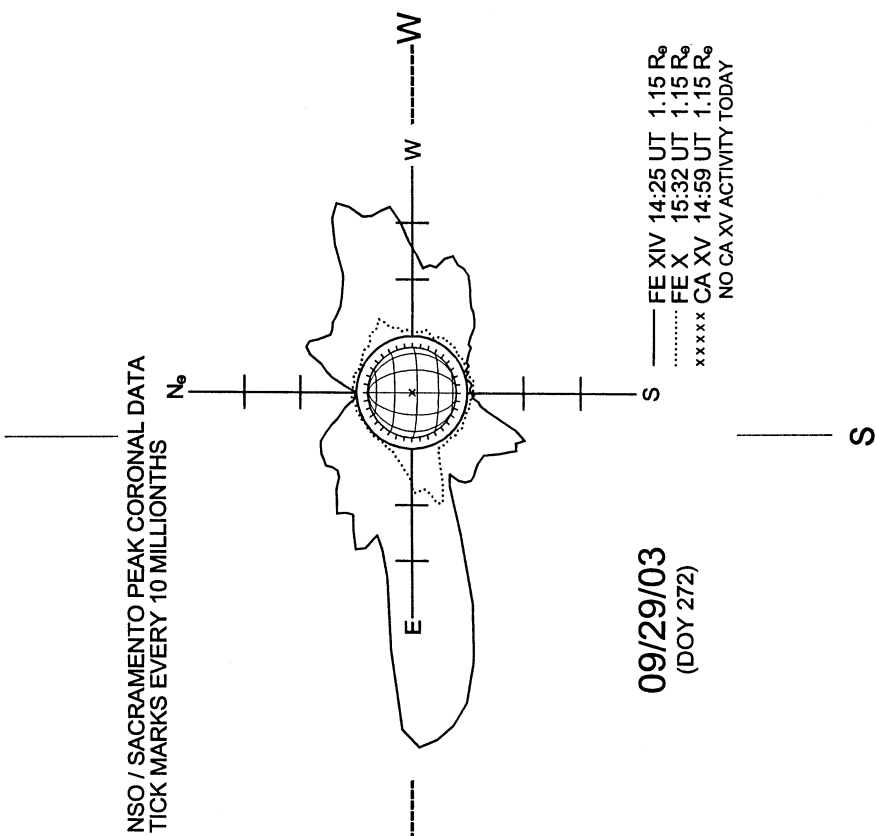
HOLLOMAN SUNSPOT

HOLLOMAN SUNSPOTS
September 29, 2003
15:00 UT Fair
Bp = 6.8
Po = 25.8
Lo = 316.1



1500 UT

SACRAMENTO PEAK CORONA (1.15 Radii)----



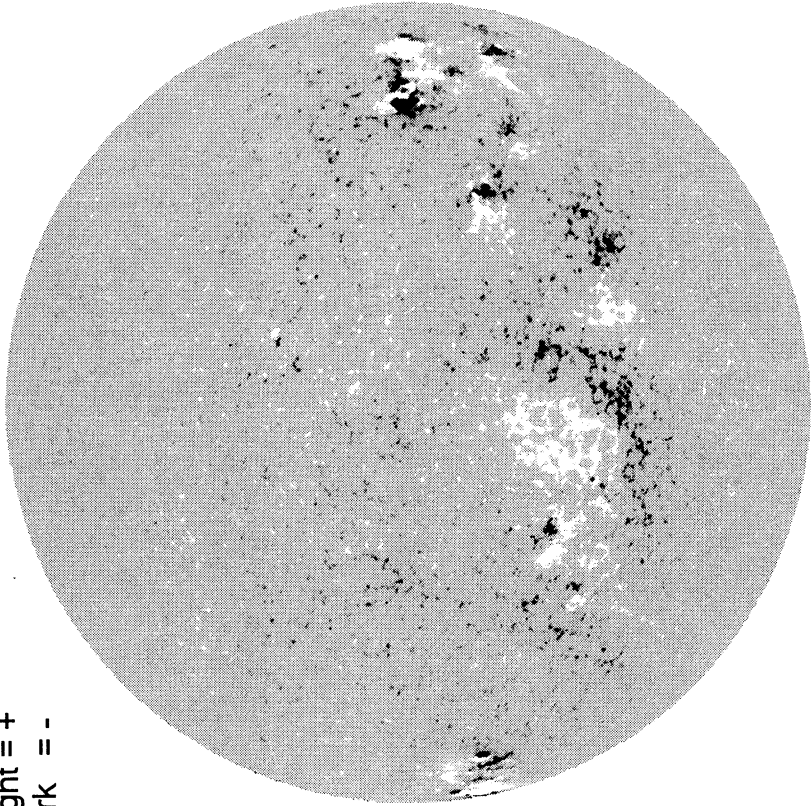
SEPTEMBER 30, 2003 (P= 25.87, Bo = 6.79, Lo = 310.59)

KITT PEAK MAGNETOGRAM—SOLIS

630.2 nm

N

Bright = +
Dark = -



1542 UT

STANFORD MAGNETOGRAM

N

Solid = +
Dashed = -

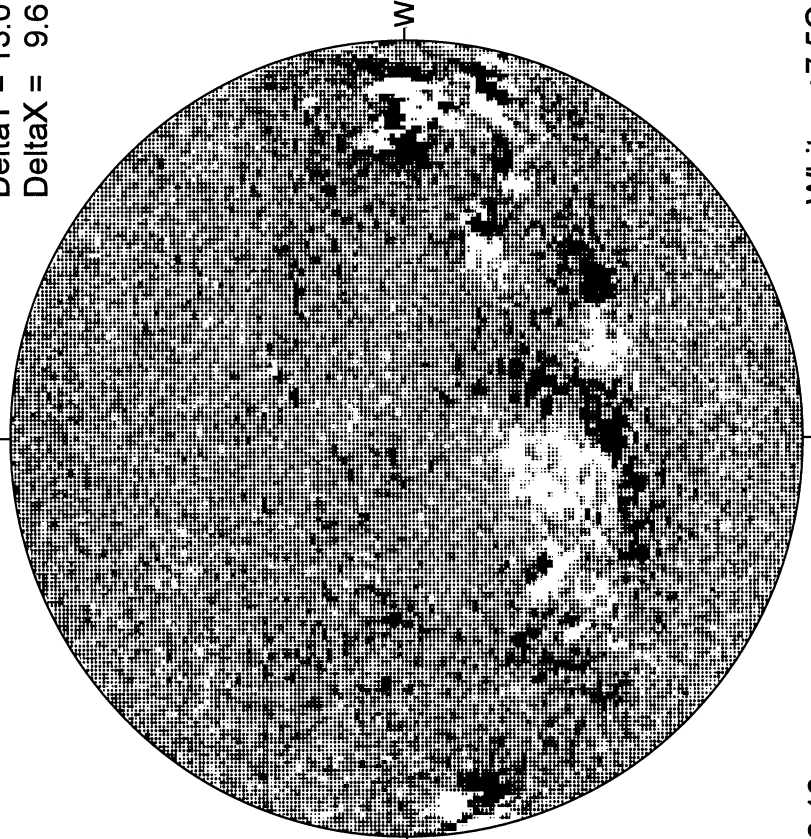


2052 UT

MT. WILSON MAGNETOGRAM

N

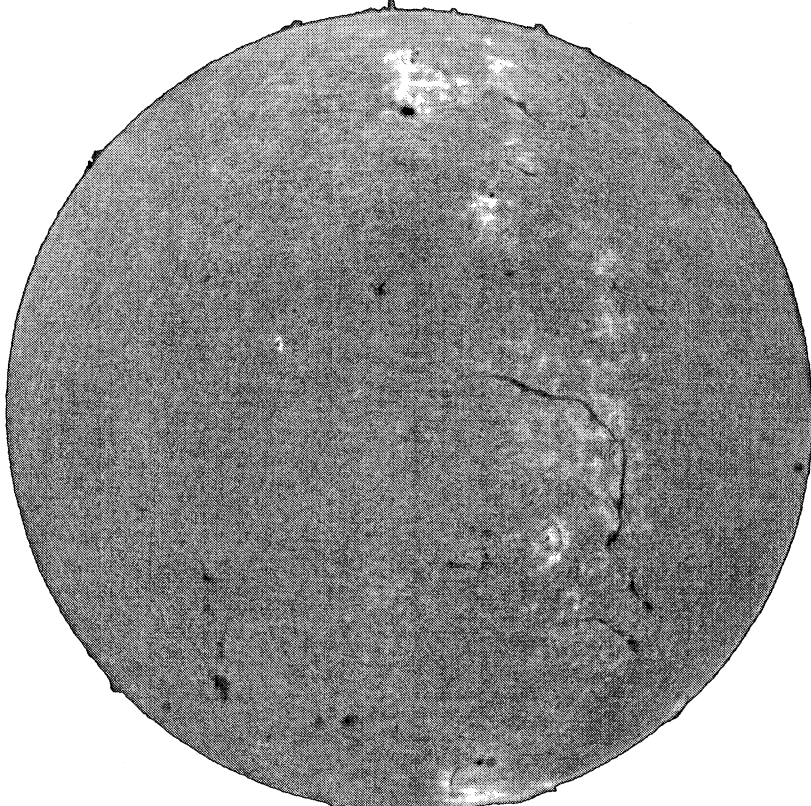
DeltaY = 13.0
DeltaX = 9.6



16.16 -
17.11 UT

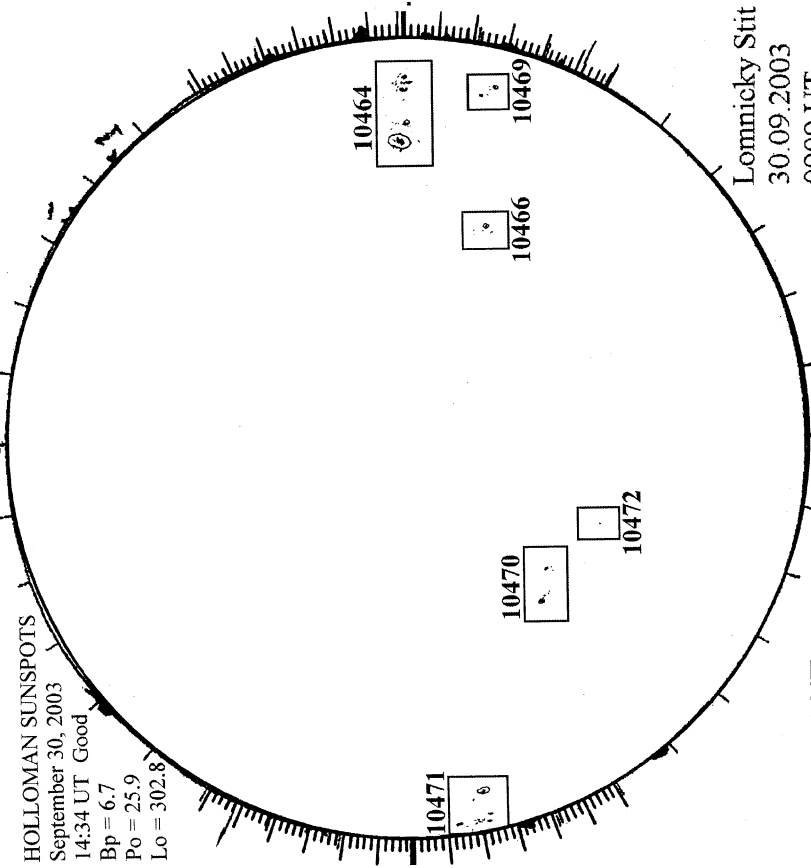
White = +7.5G
Black = -7.5G

BIG BEAR H-ALPHA



1615 UT

HOLLOMAN SUNSPOT



1434 UT

0909 UT LOMN Prom S

HOLLOMAN SUNSPOTS
September 30, 2003
14:34 UT Good
Bp = 6.7
Po = 25.9
Lo = 302.8

10464

10469

10466

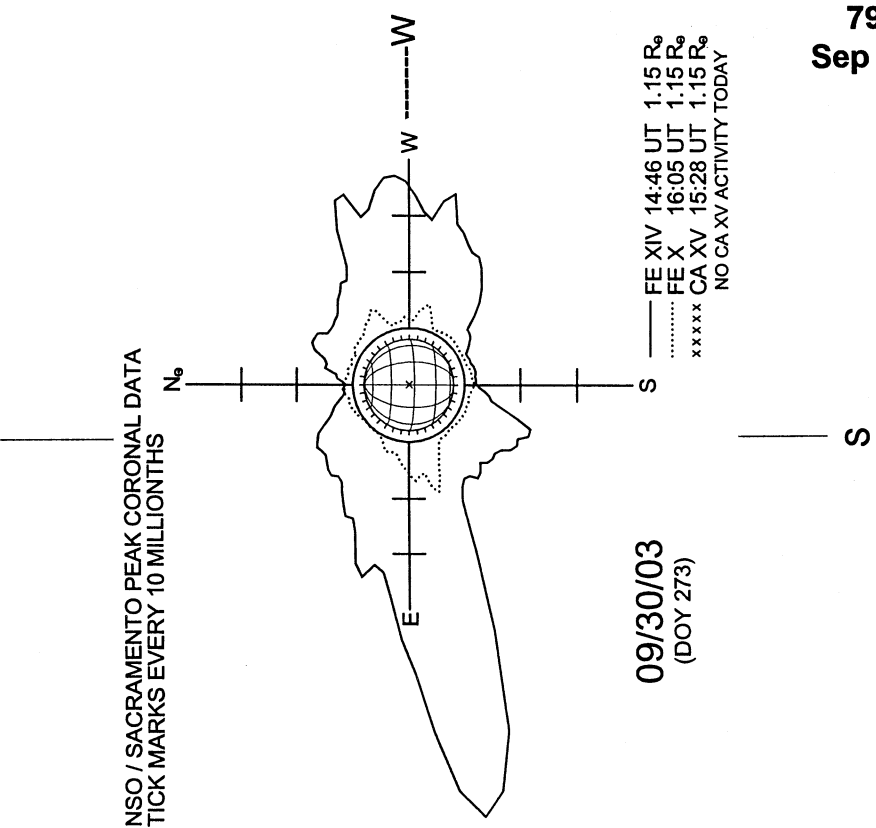
10470

10472

10471

Lomnický Stit
30.09.2003
0909 UT

SACRAMENTO PEAK CORONA (1.15 Radii)----



NSO / SACRAMENTO PEAK CORONAL DATA
TICK MARKS EVERY 10 MILLIONTHS

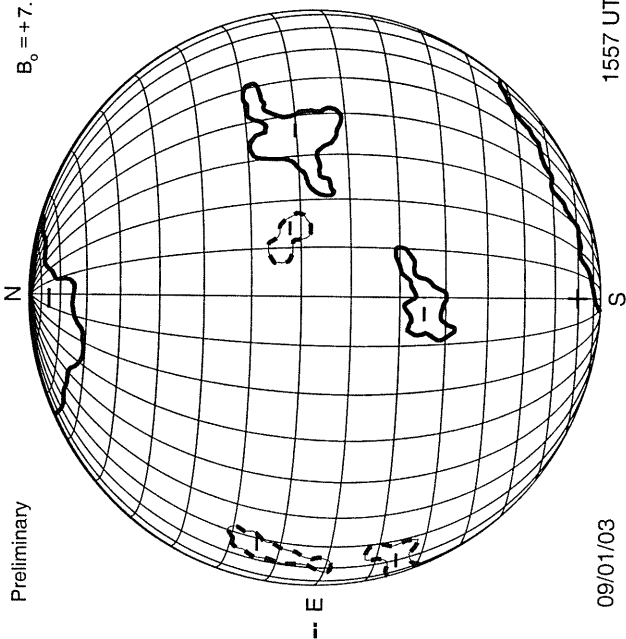
09/30/03
(DOY 273)

— FE XIV 14:46 UT 1.15 R_o
..... FE X 16:05 UT 1.15 R_o
xxxxx CA XV 15:28 UT 1.15 R_o
NO CA XV ACTIVITY TODAY

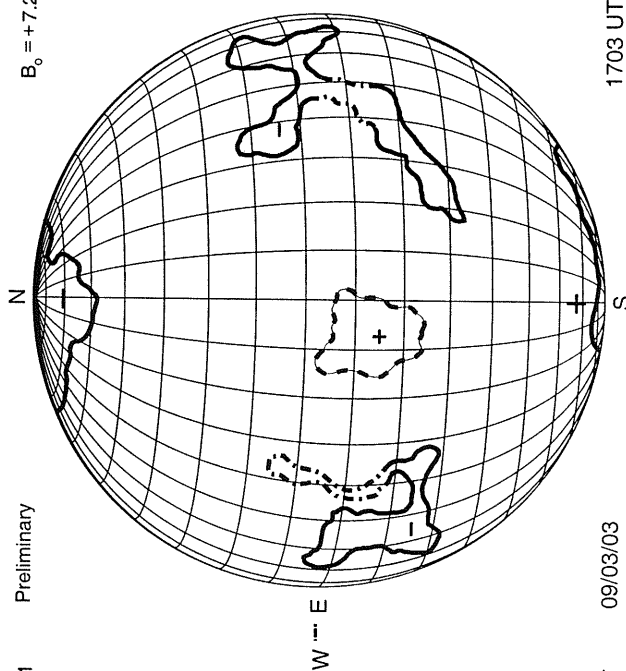
79
Sep 03

KITT PEAK CORONAL HOLE MAPS HE I 1083 nm September 2003

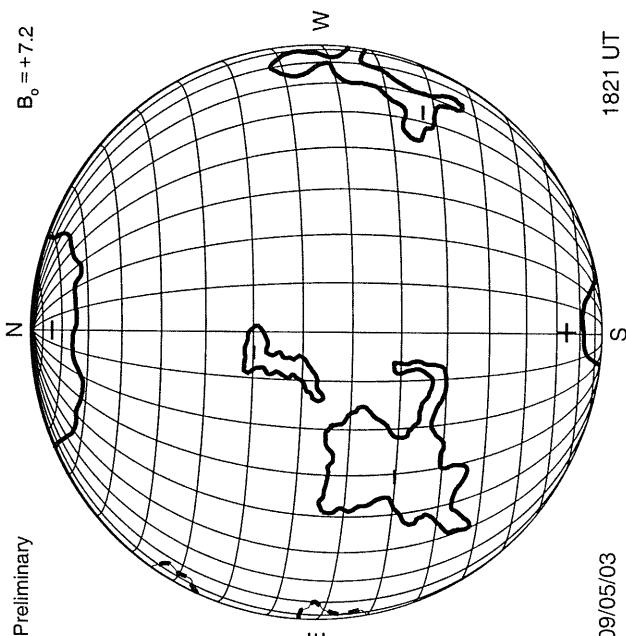
NSO/KP CORONAL HOLE MAP: HE I 1083 nm



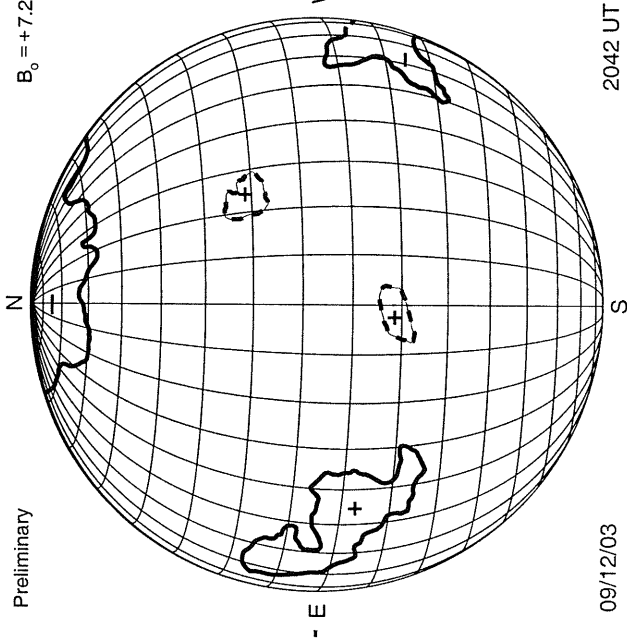
NSO/KP CORONAL HOLE MAP: HE I 1083 nm



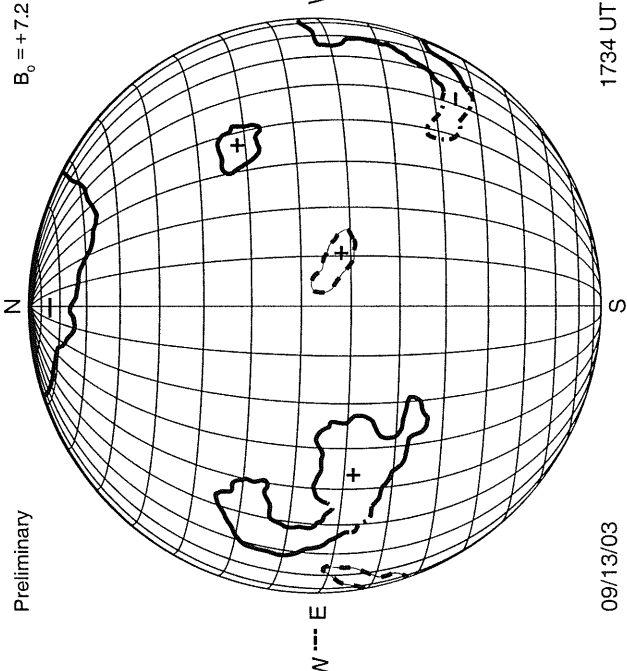
NSO/KP CORONAL HOLE MAP: HE I 1083 nm



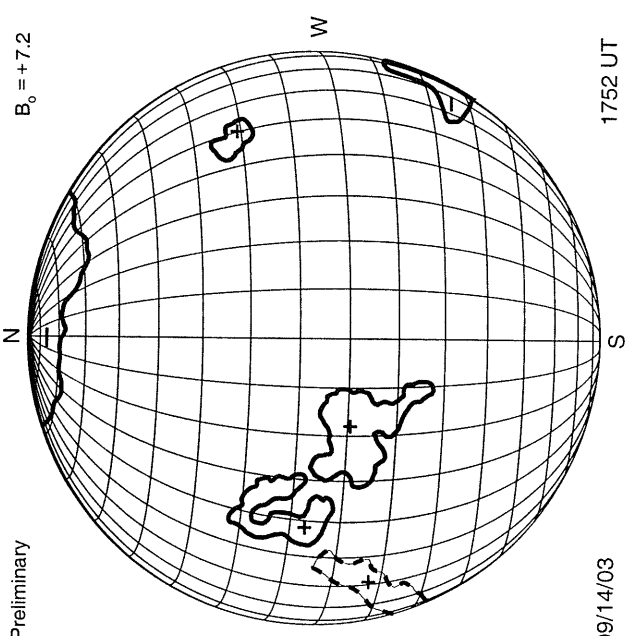
NSO/KP CORONAL HOLE MAP: HE I 1083 nm



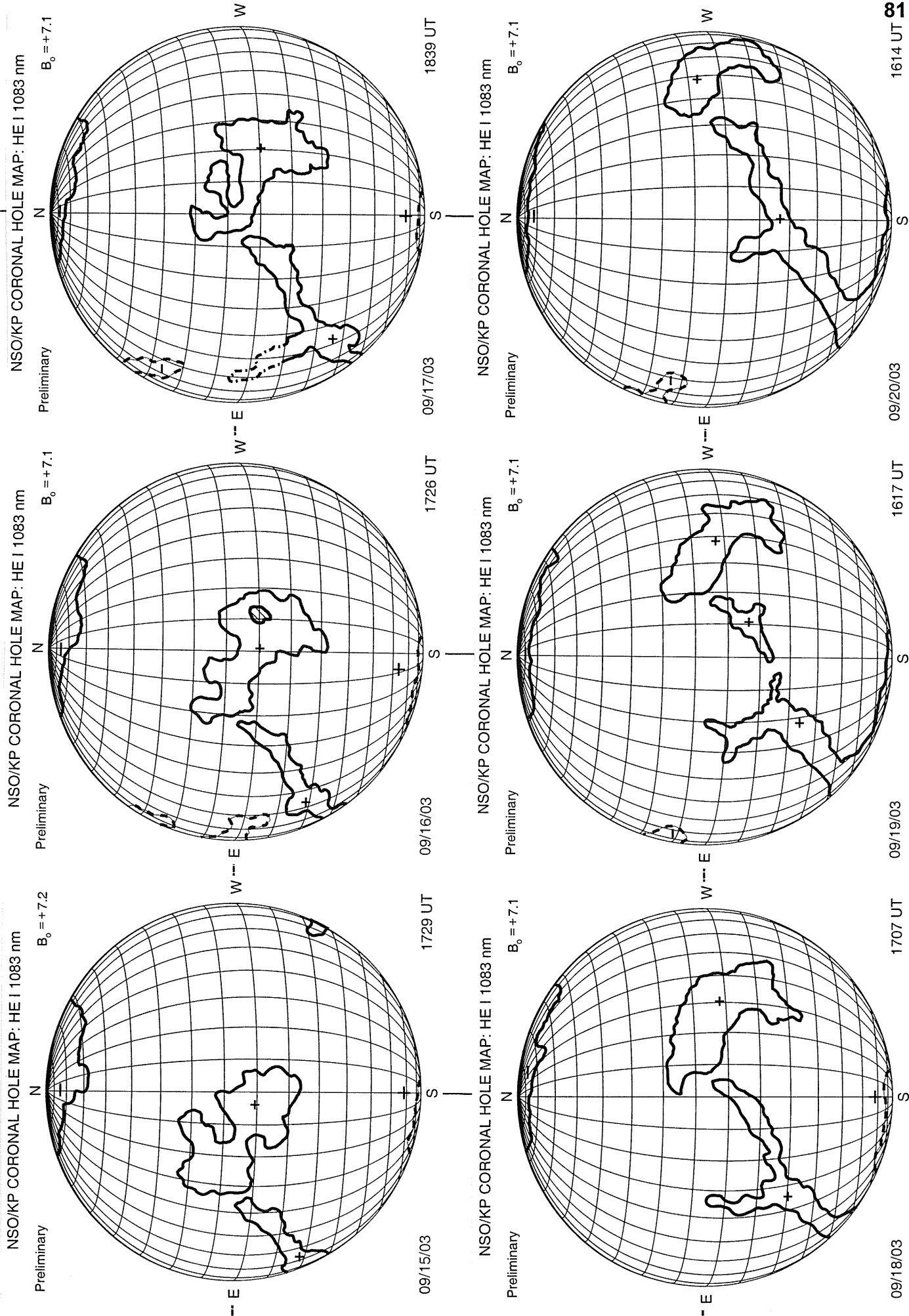
NSO/KP CORONAL HOLE MAP: HE I 1083 nm



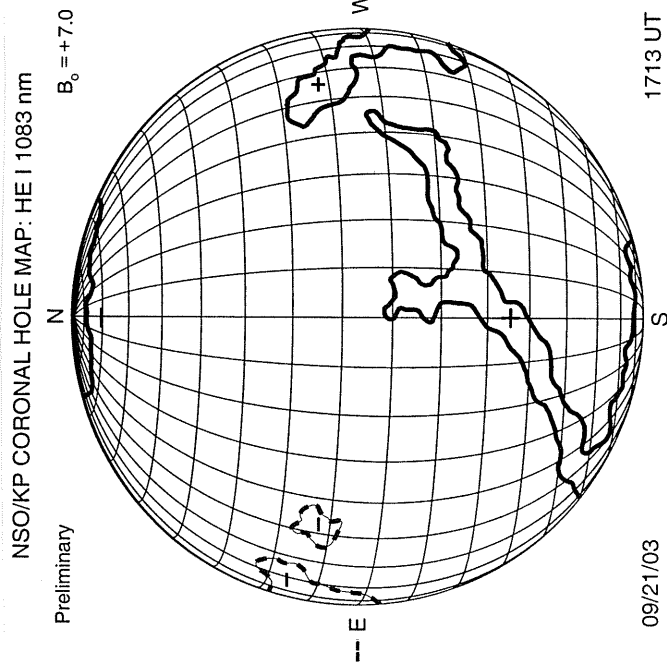
NSO/KP CORONAL HOLE MAP: HE I 1083 nm



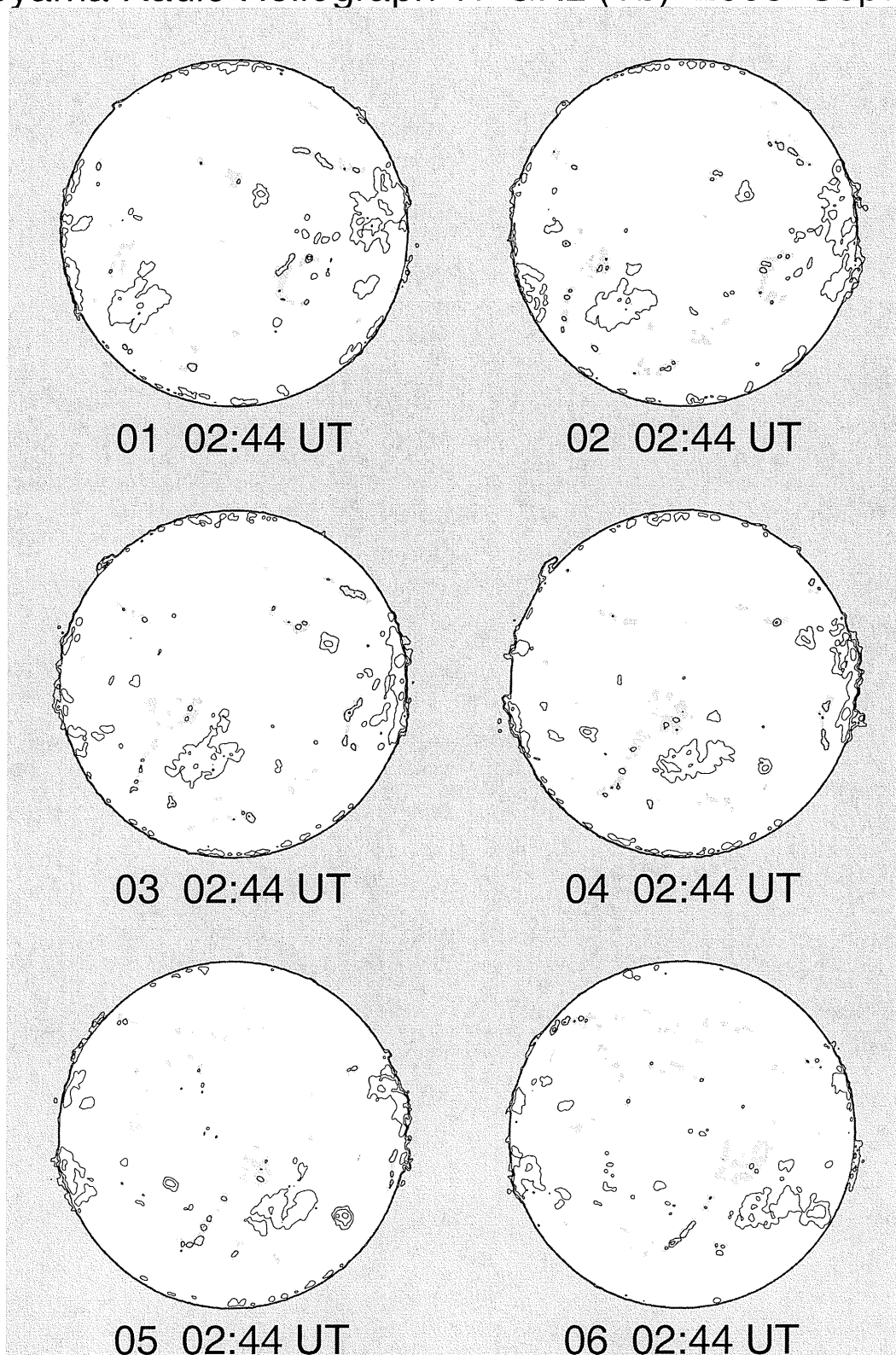
KITT PEAK CORONAL HOLE MAPS HE I 1083 nm September 2003



KITT PEAK CORONAL HOLE MAPS HE I 1083 nm
September 2003

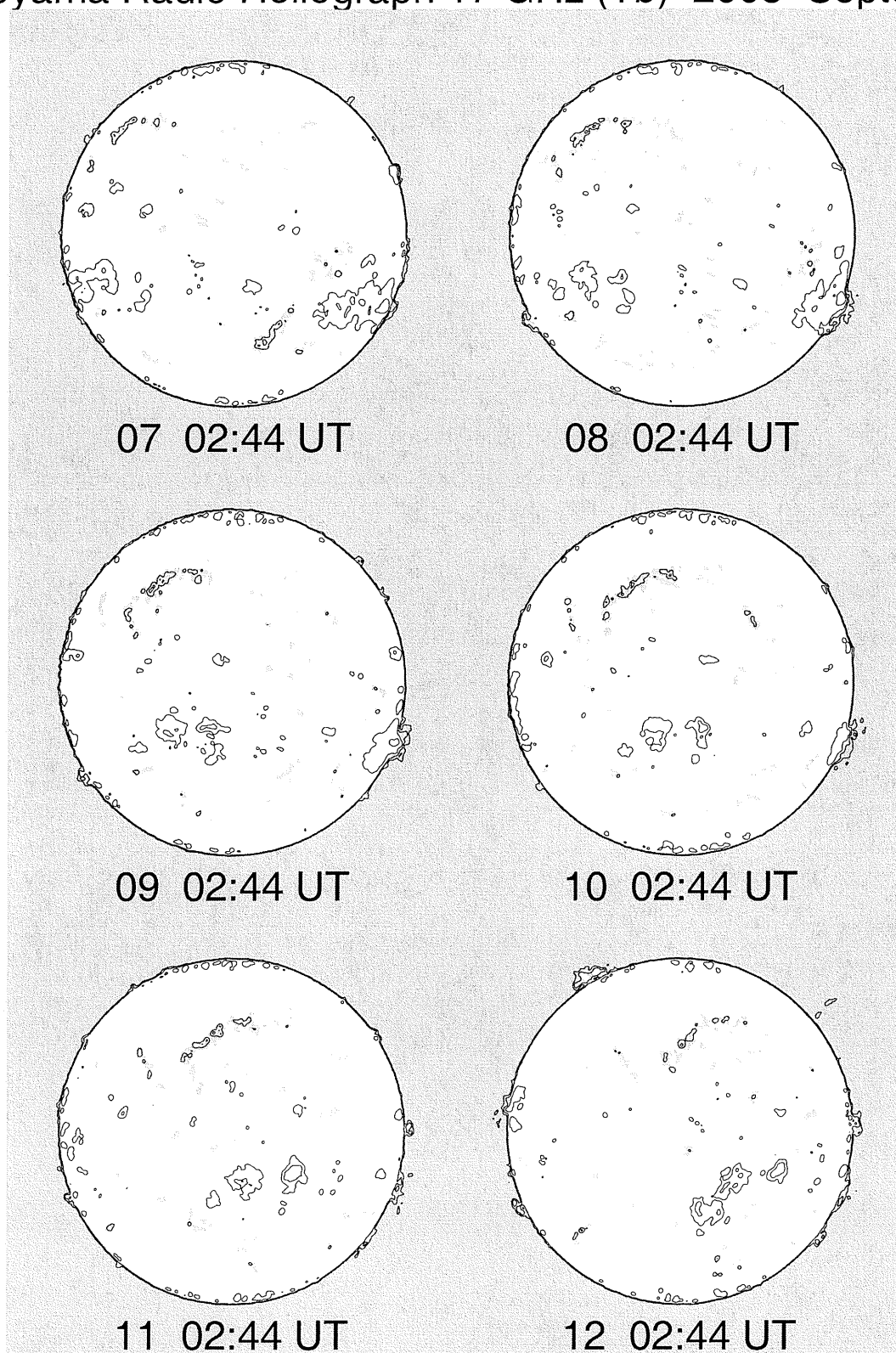


Nobeyama Radio Heliograph 17 GHz (Tb) 2003 September



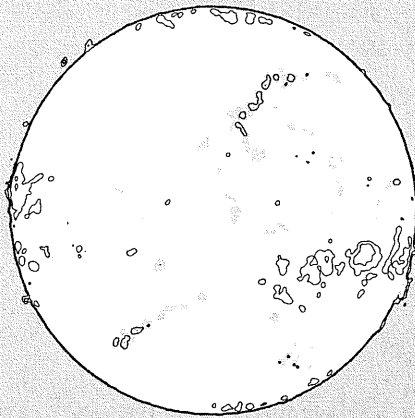
Contour Levels Tb=[5,8,12,20,50,100] x 10³ K
Grey level Tb <= 9,500 K

Nobeyama Radio Heliograph 17 GHz (Tb) 2003 September

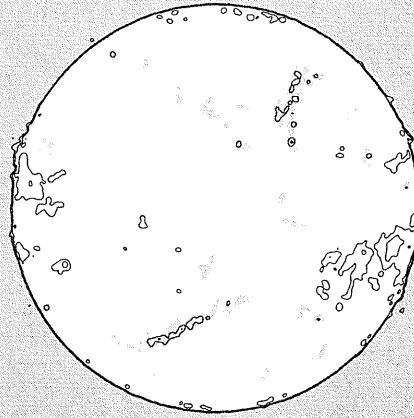


Contour Levels Tb=[5,8,12,20,50,100] x 10³ K
Grey level Tb <= 9,500 K

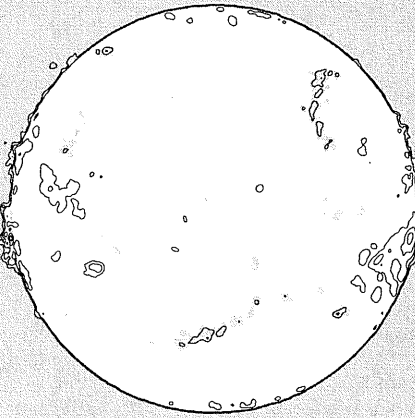
Nobeyama Radio Heliograph 17 GHz (Tb) 2003 September



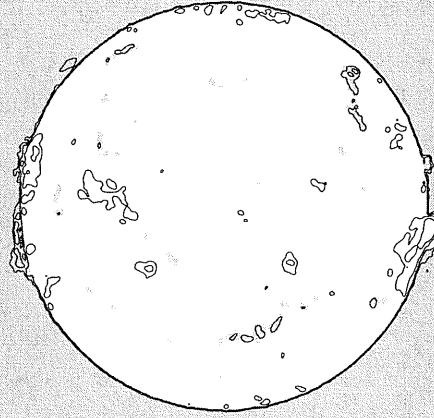
13 02:44 UT



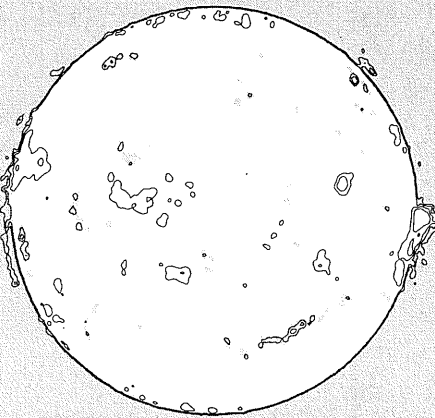
14 02:44 UT



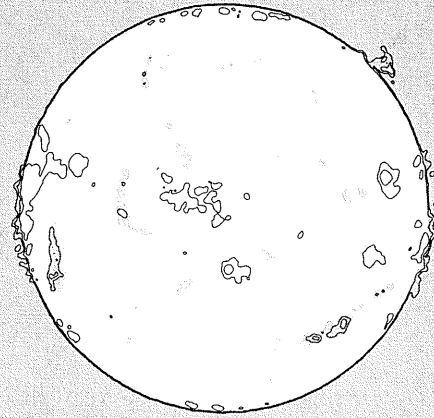
15 02:44 UT



16 02:44 UT



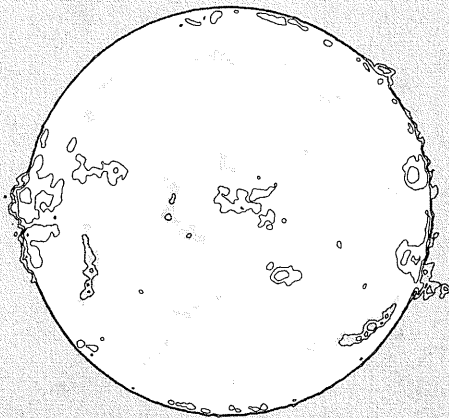
17 02:44 UT



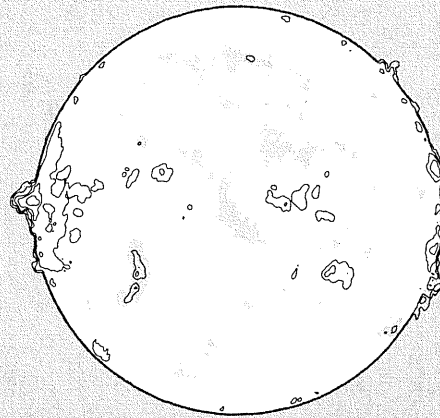
18 02:44 UT

Contour Levels Tb=[5,8,12,20,50,100] x 10³ K
Grey level Tb <= 9,500 K

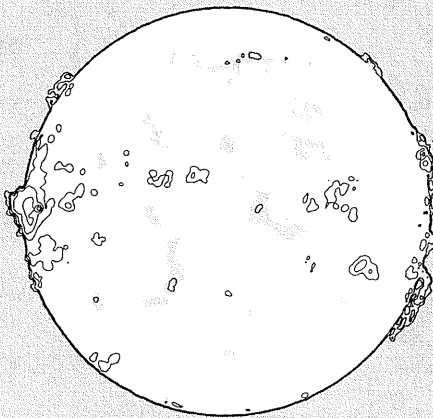
Nobeyama Radio Heliograph 17 GHz (Tb) 2003 September



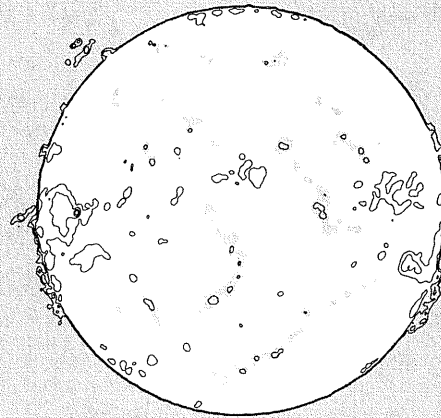
19 02:44 UT



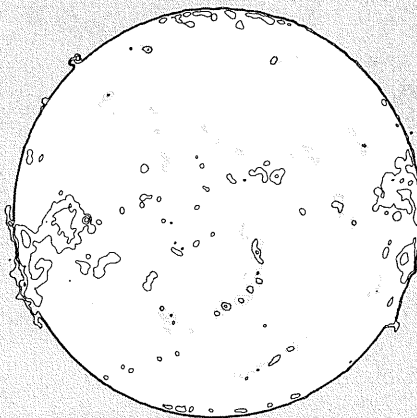
20 02:44 UT



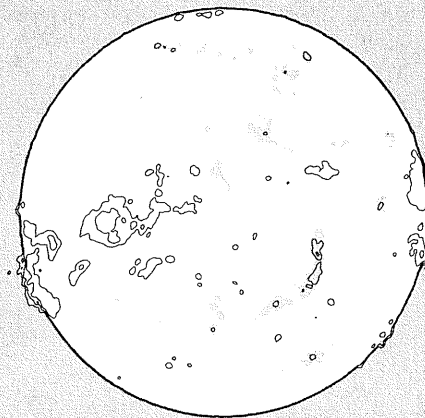
21 02:44 UT



22 02:44 UT



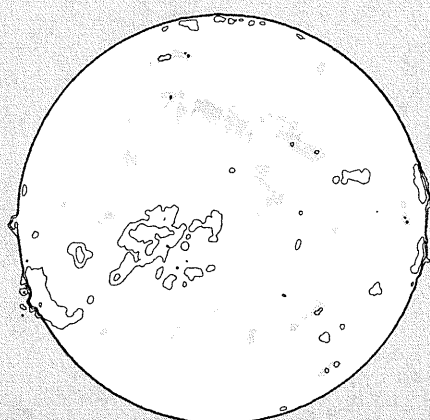
23 02:44 UT



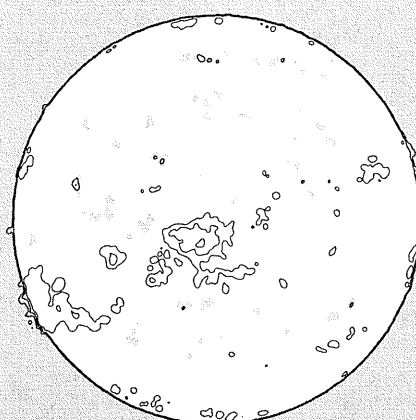
24 02:44 UT

Contour Levels Tb=[5,8,12,20,50,100] x 10³ K
Grey level Tb <= 9,500 K

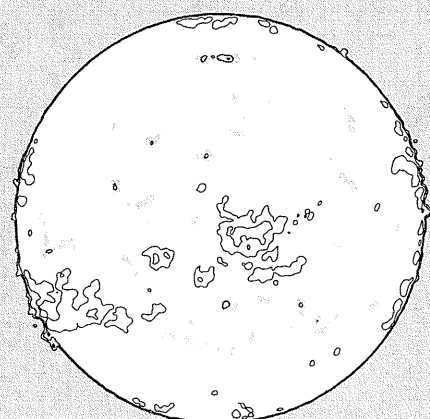
Nobeyama Radio Heliograph 17 GHz (Tb) 2003 September



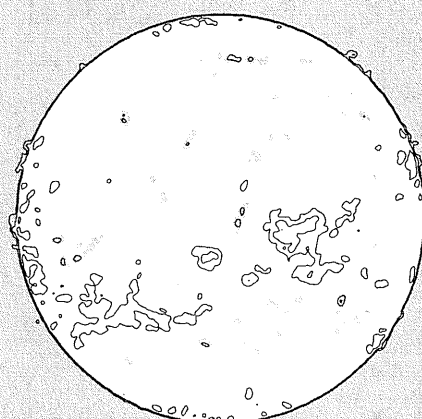
25 02:44 UT



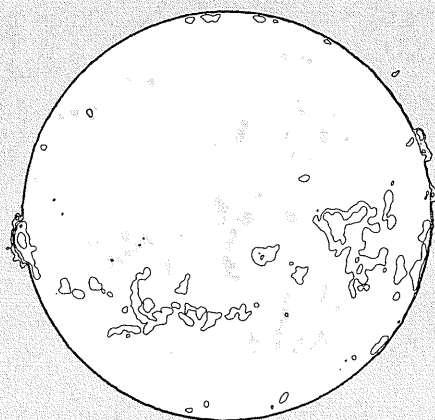
26 02:44 UT



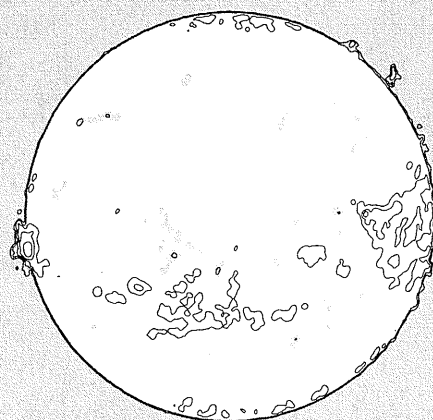
27 02:44 UT



28 02:44 UT



29 02:44 UT



30 02:44 UT

Contour Levels Tb=[5,8,12,20,50,100] x 10³ K
Grey level Tb <= 9,500 K

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Sep 03

S U N S P O T G R O U P S
(Ordered by Central Meridian Passage Date)

SEPTEMBER 2003

NOAA/ USAF Group	Mt Wilson Group	Sta	Observation Time (UT)	Lat	CMD	CMP Mo Day	Max H	Mag Class	Spot Class	Corrected Area (10-6 Hemi)	Spot Count	Long. Extent (Deg)	Qual
10453	31854	MWIL	09 03	1445	S23 W25	09 1.7	5	(B)					
10453		HOLL	09 03	1605	S23 W27	09 1.6		B	BXO	10	7	3	3
10453		VORO	09 03	2230	S22 W30	09 1.6			CAI	79	5	3	3
10453		LEAR	09 04	0136	S22 W32	09 1.6		B	DSO	60	8	5	3
10453		TACH	09 04	0709	S23 W34	09 1.7			BRI	40	4	5	4
10453		SVTO	09 04	0835	S24 W36	09 1.6		B	DSO	80	4	7	2
10453	31854	MWIL	09 04	1430	S23 W38	09 1.7	5	(B)					
10453		HOLL	09 04	1442	S23 W39	09 1.6		B	DAI	120	14	7	4
10453		LEAR	09 05	0239	S22 W45	09 1.6		B	DAO	220	24	8	3
10453		SVTO	09 05	0705	S23 W47	09 1.7		B	DAO	210	6	9	3
10453		TACH	09 05	0908	S23 W48	09 1.7			CAI	105	6	5	5
10453		HOLL	09 05	1414	S23 W52	09 1.6		B	DAO	160	12	7	4
10453	31854	MWIL	09 05	1430	S23 W51	09 1.7	5	(B)					
10453		VORO	09 05	2346	S22 W55	09 1.8			DAI	320	6	5	3
10453		LEAR	09 06	0151	S22 W58	09 1.6		B	DSO	260	10	10	3
10453		SVTO	09 06	0635	S24 W60	09 1.6		B	ESO	200	7	11	2
10453	31854	MWIL	09 06	1430	S23 W65	09 1.6	5	(B)					
10453		HOLL	09 06	1440	S23 W64	09 1.7		B	DAO	150	11	9	3
10453		VORO	09 06	2232	S22 W67	09 1.8			DAO	300	4	6	3
10453		LEAR	09 07	0101	S22 W68	09 1.8		B	DSO	180	4	7	2
10453		SVTO	09 07	0635	S23 W70	09 1.9		B	DSO	180	2	6	3
10453	31854	MWIL	09 07	1445	S23 W77	09 1.7	5	(B)					
10453		HOLL	09 07	1530	S25 W71	09 2.1		B	CHO	60	2	11	3
10453		LEAR	09 08	0207	S23 W78	09 2.1		A	HSX	90	1	2	3
10449		VORO	08 28	0002	S15 E78	09 2.9			HKX	344	3		3
10449		LEAR	08 28	0115	S17 E78	09 3.0		B	CAO	60	2	3	2
10449		TACH	08 28	0539	S16 E82	09 3.4			DAO	563	3	4	5
10449		SVTO	08 28	1002	S15 E78	09 3.3		B	DSO	90	3	5	3
10449	31849	MWIL	08 28	1500	S15 E70	09 2.9	4	(AP)					
10449		HOLL	08 28	1835	S17 E70	09 3.1		B	DAO	90	4	3	3
10449		VORO	08 28	2224	S15 E72	09 3.4			DKI	287	3	13	3
10449		LEAR	08 29	0240	S15 E63	09 2.9		B	DSO	200	3	6	4
10449		TACH	08 29	0540	S15 E64	09 3.1			HA	99	2	2	5
10449		SVTO	08 29	0722	S16 E63	09 3.1		B	DSO	90	2	6	3
10449	31849	MWIL	08 29	1415	S16 E64	09 3.4	5	(B)					
10449		HOLL	08 29	1545	S15 E58	09 3.0		B	DAO	100	4	4	3
10449		VORO	08 29	2152	S15 E58	09 3.3			DKI	232	3	13	3
10449		LEAR	08 30	0130	S15 E50	09 2.8		B	DSO	170	4	4	4
10449		TACH	08 30	0449	S15 E49	09 2.9			HA	42	2	2	4
10449		SVTO	08 30	0836	S15 E48	09 3.0		B	DAO	90	2	4	3
10449	31849	MWIL	08 30	1500	S17 E50	09 3.4	5	(B)					
10449		HOLL	08 30	1802	S16 E44	09 3.1		B	DAO	110	6	4	2
10449		VORO	08 30	2153	S16 E45	09 3.3			DKO	222	7	14	3
10449		LEAR	08 31	0125	S16 E38	09 2.9		B	DAO	100	2	3	3
10449		TACH	08 31	0539	S15 E36	09 3.0			HA	34	3	2	4
10449		SVTO	08 31	0630	S15 E36	09 3.0		B	DSO	140	3	4	3
10449	31849	MWIL	08 31	1430	S17 E38	09 3.5	5	(B)					
10449		VORO	08 31	2151	S15 E32	09 3.3			EAI	134	7	13	3
10449		LEAR	09 01	0125	S16 E24	09 2.9		B	DAO	90	3	3	2
10449		TACH	09 01	0607	S16 E22	09 2.9			HA	50	3	2	4
10449		SVTO	09 01	0617	S15 E23	09 3.0		B	DSO	70	3	4	3
10449	31849	MWIL	09 01	1415	S17 E24	09 3.4	5	(B)					
10449		HOLL	09 01	1430	S16 E18	09 3.0		B	DSO	80	5	3	3
10449		LEAR	09 02	0157	S16 E11	09 2.9		B	DAO	90	4	3	4
10449		SVTO	09 02	0628	S15 E10	09 3.0		B	DSO	60	4	4	3
10449		TACH	09 02	0944	S16 E08	09 3.0			DAO	73	3	3	4
10449	31849	MWIL	09 02	1430	S16 E12	09 3.5	5	(B)					
10449		HOLL	09 02	1710	S16 E04	09 3.0		B	DSO	30	3	4	2
10449		VORO	09 02	2146	S16 E08	09 3.5			EAI	122	6	16	3
10449		LEAR	09 03	0137	S16 W02	09 2.9		B	DSO	80	5	3	2
10449		TACH	09 03	0517	S17 W02	09 3.1			CAO	61	3	4	4
10449		SVTO	09 03	0635	S16 W03	09 3.0		B	DSO	30	4	5	3
10449	31849	MWIL	09 03	1445	S17 W01	09 3.5	5	(B)					
10449		HOLL	09 03	1605	S15 W07	09 3.1		B	DSO	60	7	7	3
10449		VORO	09 03	2230	S15 W06	09 3.5			EAI	115	10	15	3
10449		LEAR	09 04	0136	S16 W08	09 3.4		B	FSO	90	13	17	3
10449		TACH	09 04	0709	S18 W14	09 3.2			BRI	39	6	6	4
10449		SVTO	09 04	0835	S17 W13	09 3.4		B	ESO	70	6	14	2

S U N S P O T G R O U P S
(Ordered by Central Meridian Passage Date)

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Sep 03

SEPTEMBER 2003

NOAA/ USAF Group	Mt Wilson Group	Sta	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
10449	31849	MWIL	09	04	1430	S17	W16	09	3.4	5	(B)					
10449		HOLL	09	04	1442	S17	W15	09	3.5		B	ESO	50	8	14	4
10449		LEAR	09	05	0239	S16	W20	09	3.6		B	FAO	50	12	20	3
10449		SVTO	09	05	0705	S17	W25	09	3.4		B	CSO	40	5	14	3
10449		TACH	09	05	0908	S16	W29	09	3.2			BRO	12	4	6	5
10449		HOLL	09	05	1414	S17	W34	09	3.0		B	CSO	30	2	3	4
10449	31849	MWIL	09	05	1430	S17	W29	09	3.4	5	(BP)					
10449		VORO	09	05	2346	S15	W40	09	3.0			HRX	22	1		3
10449		LEAR	09	06	0151	S17	W40	09	3.0		A	HAX	20	4	5	3
10449		SVTO	09	06	0635	S17	W43	09	3.0		A	HSX	30	1	1	2
10449	31849	MWIL	09	06	1430	S17	W47	09	3.0	4	(BP)					
10449		HOLL	09	06	1440	S17	W47	09	3.0		B	DSO	40	4	8	3
10449		VORO	09	06	2232	S17	W50	09	3.1			CRO	26	5	4	3
10449		LEAR	09	07	0101	S16	W52	09	3.1		A	HAX	40	4	4	2
10449		SVTO	09	07	0635	S18	W54	09	3.2		B	CSO	40	4	4	3
10449	31849	MWIL	09	07	1445	S17	W60	09	3.0	4	(AP)					
10449		HOLL	09	07	1530	S16	W58	09	3.2		B	BXO	20	4	8	3
10449		LEAR	09	08	0207	S15	W68	09	2.9		A	AXX	10	1		3
10449A		VORO	08	31	2151	S23	E36	09	3.7			HAX	2	2		3
10449A		TACH	09	01	0607	S24	E32	09	3.7			AXX	1	1	1	4
10449A	31851	MWIL	09	01	1415	S24	E28	09	3.7	4	(AP)					
10450		LEAR	08	29	0240	S18	E75	09	3.8		A	HSX	60	1	2	4
10450		TACH	08	29	0540	S16	E74	09	3.8			HSX	46	1	2	5
10450		SVTO	08	29	0722	S18	E77	09	4.2		A	HSX	60	1	2	3
10450		HOLL	08	29	1545	S18	E70	09	4.0		A	HAX	60	2	3	3
10450		LEAR	08	30	0130	S19	E63	09	3.9		A	HSX	100	1	3	4
10450		TACH	08	30	0449	S18	E62	09	3.9			HHX	25	1	1	4
10450		SVTO	08	30	0836	S17	E61	09	4.0		A	HSX	40	1	1	3
10450		HOLL	08	30	1802	S18	E57	09	4.1		A	HSX	40	2	2	2
10450		LEAR	08	31	0125	S18	E51	09	3.9		A	HSX	50	1	2	3
10450		TACH	08	31	0539	S18	E48	09	3.9			HSX	30	1	1	4
10450		SVTO	08	31	0630	S18	E48	09	3.9		A	HSX	30	1	2	3
10450	31851	MWIL	08	31	1430	S23	E40	09	3.7	3	(AP)					
10450		LEAR	09	01	0125	S18	E37	09	3.9		A	HSX	20	1	1	2
10450		TACH	09	01	0607	S18	E35	09	3.9			AR	14	2	1	4
10450		SVTO	09	01	0617	S17	E36	09	4.0		A	HSX	30	1	1	3
10450		HOLL	09	01	1430	S17	E32	09	4.0		B	CAO	20	3	3	3
10450		LEAR	09	02	0157	S18	E24	09	3.9		B	DAO	60	10	4	4
10450		SVTO	09	02	0628	S18	E24	09	4.1		B	DSO	20	4	4	3
10450		TACH	09	02	0944	S19	E21	09	4.0			BRO	25	3	4	4
10450		VORO	09	02	1437	S17	E16	09	3.8			FAI	93	8	16	3
10450		HOLL	09	02	1710	S18	E17	09	4.0		B	CSO	20	5	4	2
10450		LEAR	09	03	0137	S18	E12	09	4.0		B	DSO	50	3	4	2
10450		TACH	09	03	0517	S18	E11	09	4.0			BXO	6	2	3	4
10450		SVTO	09	03	0635	S17	E12	09	4.2		B	CSO	30	4	4	3
10450		HOLL	09	03	1605	S18	E05	09	4.0		B	DSO	60	6	4	3
10450		TACH	09	04	0709	S18	W03	09	4.1			BRO	6	3	7	4
10450		TACH	09	05	0908	S17	W19	09	3.9			AXX	2	1	1	5
10450A	31855	MWIL	09	04	1430	S17	E04	09	4.9	4	(AF)					
10450C	31859	MWIL	09	07	1445	N16	W29	09	5.4	4	(B)					
10450B	31857	MWIL	09	05	1430	N06	E01	09	5.7	3	(AF)					
10454		HOLL	09	03	1605	S11	E40	09	6.7		A	AXX	10	5	3	3
10454		VORO	09	03	2230	S09	E35	09	6.6			HRX	35	6		3
10454		LEAR	09	04	0136	S11	E35	09	6.7		B	DSO	40	8	4	3
10454		TACH	09	04	0709	S11	E31	09	6.6			BRI	11	5	4	4
10454		SVTO	09	04	0835	S09	E32	09	6.7		B	CSO	40	3	4	2
10454	31856	MWIL	09	04	1430	S10	E27	09	6.6	5	(B)					
10454		HOLL	09	04	1442	S10	E26	09	6.6		A	HSX	10	3	2	4
10454		LEAR	09	05	0239	S10	E20	09	6.6		B	DAO	60	8	6	3
10454		SVTO	09	05	0705	S10	E18	09	6.6		B	DSO	50	5	5	3
10454		TACH	09	05	0908	S11	E16	09	6.6			BRI	14	6	4	5
10454		HOLL	09	05	1414	S10	E13	09	6.6		B	DAO	60	8	5	4
10454	31856	MWIL	09	05	1430	S10	E14	09	6.6	5	(B)					

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NOAA/ USAF Group	Mt Wilson Group	Sta	Observation Time		Lat CMD		CMP Mo Day	Max H	Mag Class	Spot Class	Corrected Area (10-6 Hemi)	Spot Count	Long. Extent (Deg)	Qual
10454	31856	VORO	09 05	2346	S09 E08	09	6.6			CRO	31	3	5	3
10454		LEAR	09 06	0151	S10 E07	09	6.6		B	DAO	40	6	6	3
10454		SVTO	09 06	0635	S10 E05	09	6.6		B	DSO	60	3	6	2
10454		MWIL	09 06	1430	S10 W01	09	6.5	5	(B)					
10454		HOLL	09 06	1440	S10 E01	09	6.7		B	DSO	50	6	6	3
10454		VORO	09 06	2232	S09 W05	09	6.6			BRO	18	3	5	3
10454		LEAR	09 07	0101	S10 W07	09	6.5		B	DAO	30	6	6	2
10454		SVTO	09 07	0635	S10 W08	09	6.7		B	DSO	30	4	6	3
10454		MWIL	09 07	1445	S10 W14	09	6.6	4	(B)					
10454		HOLL	09 07	1530	S11 W15	09	6.5		B	BXO	10	4	7	3
10454A		LEAR	09 06	0151	N14 E42	09	9.2		A	AXX		2	1	3
10454A		LEAR	09 08	0207	N15 E19	09	9.5		A	AXX		2	1	3
10454A		HOLL	09 08	1414	N16 E08	09	9.2		A	AXX		1	1	3
10455	31858	LEAR	09 06	0151	S15 E43	09	9.3		A	AXX		1		3
10455		MWIL	09 06	1430	S17 E37	09	9.4	4	(AP)					
10455		HOLL	09 06	1440	S18 E38	09	9.5		A	HSX	20	1	1	3
10455	31858	LEAR	09 07	0101	S20 E34	09	9.6		A	HRX	10	3	1	2
10455		SVTO	09 07	0635	S20 E34	09	9.9		B	CSO	30	2	2	3
10455		MWIL	09 07	1445	S20 E27	09	9.7	4	(AP)					
10455	31858	LEAR	09 08	0207	S19 E20	09	9.6		B	DAO	30	7	4	3
10455		HOLL	09 08	1414	S21 E12	09	9.5		B	BXO	10	4	3	3
10455		MWIL	09 08	1445	S20 E15	09	9.8	4	(B)					
10455		LEAR	09 09	0049	S18 E07	09	9.6		B	DAI	60	12	5	3
10456	31860	MWIL	09 07	1445	S08 E27	09	9.6	4	(B)					
10456		TACH	09 08	0835	S08 E16	09	9.5			BRI	11	6	3	4
10456		HOLL	09 08	1414	S09 E13	09	9.6		B	DSO	30	10	7	3
10456	31860	MWIL	09 08	1445	S07 E13	09	9.6	4	(B)					
10456		SVTO	09 09	0615	S08 E04	09	9.6		B	CAO	40	5	7	3
10456		TACH	09 09	0935	S08 E02	09	9.5			BRI	20	8	4	5
10456	31860	MWIL	09 09	1430	S08 W00	09	9.6	5	(BG)					
10456		HOLL	09 09	1745	S08 W02	09	9.6		B	DAO	50	24	7	3
10456		VORO	09 09	2347	S07 W06	09	9.5			DAI	141	16	4	3
10456	31860	LEAR	09 10	0110	S08 W07	09	9.5		B	DAO	50	13	6	2
10456		TACH	09 10	0537	S08 W09	09	9.5			BRI	37	12	3	4
10456		SVTO	09 10	1113	S08 W13	09	9.5		B	DAO	130	11	7	2
10456	31860	MWIL	09 10	1430	S08 W13	09	9.6	5	(BG)					
10456		HOLL	09 10	1440	S08 W15	09	9.5		B	DAI	170	26	7	2
10456		VORO	09 10	2200	S08 W17	09	9.6			DAI	281	20	5	3
10456	31860	LEAR	09 11	0012	S08 W20	09	9.5		B	DAI	170	41	7	3
10456		SVTO	09 11	0755	S08 W24	09	9.5		B	DAC	200	19	8	3
10456		TACH	09 11	0905	S09 W24	09	9.6			CAI	78	14	5	4
10456	31860	MWIL	09 11	1430	S07 W27	09	9.6	5	(B)					
10456		HOLL	09 11	1614	S08 W28	09	9.6		B	DKI	180	25	8	2
10456		VORO	09 11	2301	S07 W32	09	9.6			DAI	204	20	8	2
10456	31860	LEAR	09 12	0040	S07 W33	09	9.5		BG	DAI	260	45	9	3
10456		SVTO	09 12	0812	S07 W38	09	9.5		B	DAI	120	18	10	3
10456		LEAR	09 13	0033	S07 W47	09	9.5		BG	DAI	240	21	10	3
10456	31860	SVTO	09 13	0630	S07 W50	09	9.5		B	DAI	200	16	9	3
10456		TACH	09 13	1033	S09 W52	09	9.5			BRI	128	11	7	5
10456		HOLL	09 13	1445	S07 W54	09	9.6		B	EAI	280	22	11	3
10456	31860	MWIL	09 13	1500	S08 W55	09	9.5	5	(BD)					
10456		VORO	09 13	2340	S08 W60	09	9.5			DAI	233	14	9	3
10456		LEAR	09 14	0120	S08 W61	09	9.5		B	DAI	180	20	10	3
10456	31860	SVTO	09 14	0618	S09 W64	09	9.4		B	ESI	180	13	12	3
10456		TACH	09 14	0907	S10 W64	09	9.6			DAI	183	9	11	4
10456		HOLL	09 14	1406	S08 W68	09	9.5		B	EAC	150	22	14	4
10456	31860	MWIL	09 14	1430	S08 W69	09	9.4	5	(B)					
10456		VORO	09 14	2157	S07 W71	09	9.6			DAI	326	7	9	3
10456		LEAR	09 15	0015	S08 W74	09	9.5		B	EAI	200	15	11	3
10456	31860	SVTO	09 15	0642	S09 W81	09	9.2		B	CSI	90	5	7	3
10456		TACH	09 15	0845	S08 W78	09	9.5			HR	88	3	3	4
10456		MWIL	09 15	1430	S08 W80	09	9.6	4	(BF)					
10456		HOLL	09 15	1501	S08 W83	09	9.4		A	HSX	30	1	1	3
10456A	31861	MWIL	09 07	1445	N26 E31	09	10.0	3	(B)					
10457	31862	MWIL	09 08	1445	S09 E28	09	10.7	4	(B)					

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NOAA/ USAF Group	Mt Wilson Group	Sta	Observation Time (UT)	Lat	CMD	CMP Mo Day	Max H	Mag Class	Spot Class	Corrected Area (10-6 Hemi)	Spot Count	Long. Extent (Deg)	Qual
10457		LEAR	09 09 0049	S11	E20	09 10.5		B	BXO	20	7	2	3
10457		SVTO	09 09 0615	S13	E17	09 10.5		A	AXX	10	2	1	3
10457		TACH	09 09 0935	S12	E16	09 10.6			AR	2	2	1	5
10457	31862	MWIL	09 09 1430	S08	E14	09 10.6	4	(B)					
10457		HOLL	09 09 1745	S09	E11	09 10.6		B	BXO	10	8	5	3
10457		LEAR	09 10 0110	S11	E05	09 10.4		B	BXO	20	5	2	2
10457		TACH	09 10 0537	S13	E03	09 10.5			BRO	5	4	3	4
10457		SVTO	09 10 1113	S11	E01	09 10.5		A	AXX	10	4	2	2
10457	31862	MWIL	09 10 1430	S11	E03	09 10.8	4	(BP)					
10457		HOLL	09 10 1440	S11	W02	09 10.5		B	CSO	10	5	3	2
10457		VORO	09 10 2200	S10	W06	09 10.5			AXX	8	1		3
10457		LEAR	09 11 0012	S11	W04	09 10.7		B	DSO	30	8	9	3
10457		SVTO	09 11 0755	S12	W04	09 11.0		B	CSO	30	4	4	3
10457		TACH	09 11 0905	S12	W07	09 10.8			BRI	9	5	9	4
10457	31862	MWIL	09 11 1430	S10	W11	09 10.8	4	(BP)					
10457		HOLL	09 11 1614	S11	W09	09 11.0		B	CSO	30	4	4	2
10457		VORO	09 11 2301	S09	W20	09 10.4			BXO	6	2	2	2
10457		LEAR	09 12 0040	S10	W18	09 10.7		B	DSO	60	7	10	3
10457		SVTO	09 12 0812	S12	W17	09 11.1		B	CRO	10	4	2	3
10457		LEAR	09 13 0033	S12	W26	09 11.1		A	HSX	10	1	1	3
10457		SVTO	09 13 0630	S13	W29	09 11.1		A	HSX	10	1	1	3
10457	31863	MWIL	09 13 1500	S13	W33	09 11.1	3	(AF)					
10457		LEAR	09 15 0015	S11	W56	09 10.8		A	AXX	10	1	1	3
10457		SVTO	09 15 0642	S12	W60	09 10.7		A	HRX	10	1	1	3
10457		TACH	09 15 0845	S11	W60	09 10.8			HSX	32	1	1	4
10457	31867	MWIL	09 15 1430	S12	W64	09 10.8	5	(AP)					
10457		HOLL	09 15 1501	S12	W64	09 10.8		B	CAO	30	3	3	3
10457		VORO	09 16 0300	S12	W72	09 10.7			HAX	27	2		3
10457		TACH	09 16 0550	S12	W75	09 10.6			HR	78	3	2	4
10457		SVTO	09 16 0640	S12	W74	09 10.7		A	HRX	30	1	1	3
10457		HOLL	09 16 1417	S12	W78	09 10.7		A	AXX		1	1	3
10457	31867	MWIL	09 16 1445	S12	W78	09 10.7	4	(AP)					
10458		VORO	09 10 2200	S10	E02	09 11.1			HRX	13	1		3
10458		VORO	09 11 2301	S11	W12	09 11.0			HRX	11	1		2
10458		LEAR	09 13 0033	S08	W19	09 11.6		B	CSO	20	3	4	3
10458		SVTO	09 13 0630	S08	W23	09 11.5		B	DSO	20	4	4	3
10458		TACH	09 13 1033	S09	W24	09 11.6			BRO	5	3	4	5
10458		HOLL	09 13 1445	S09	W28	09 11.5		B	CAO	20	11	4	3
10458	31864	MWIL	09 13 1500	S09	W27	09 11.6	4	(B)					
10458		VORO	09 13 2340	S08	W33	09 11.5			ARX	13	2		3
10458		LEAR	09 14 0120	S08	W33	09 11.6		B	BXO	20	7	3	3
10458		SVTO	09 14 0618	S09	W38	09 11.4		B	CRO	40	5	3	3
10458		TACH	09 14 0907	S10	W37	09 11.6			BRO	21	3	4	4
10458		HOLL	09 14 1406	S09	W41	09 11.5		B	CSO	20	7	6	4
10458	31864	MWIL	09 14 1430	S09	W41	09 11.5	5	(B)					
10458		VORO	09 14 2157	S08	W45	09 11.5			HRX	29	2		3
10458		LEAR	09 15 0015	S08	W47	09 11.5		A	AXX	10	2	1	3
10458	31864	MWIL	09 15 1430	S10	W56	09 11.4	4	(AP)					
10458		LEAR	09 16 0021	S10	W60	09 11.5		A	HSX	20	1	2	3
10457A		HOLL	09 11 1614	S18	W01	09 11.6		A	AXX		1	1	2
10458A		HOLL	09 13 1445	N09	W05	09 13.2		A	AXX	10	2	1	3
10458A	31871	MWIL	09 17 1445	N10	W62	09 12.9	4	(AP)					
10461		TACH	09 10 0537	N11	E52	09 14.1			AXX	2	1	1	4
10461		HOLL	09 14 1406	N12	W06	09 14.1		B	CSO	10	3	3	4
10461	31865	MWIL	09 14 1430	N13	W07	09 14.1	4	(B)					
10461		VORO	09 14 2157	N13	W10	09 14.2			HRX	22	2	2	3
10461		LEAR	09 15 0015	N12	W12	09 14.1		B	BXO	10	3	3	3
10461		LEAR	09 16 0021	N13	W26	09 14.0		A	AXX	10	2	2	3
10461		VORO	09 16 0300	N13	W27	09 14.1			CRO	5	2	1	3
10461		HOLL	09 16 1417	N12	W33	09 14.1		B	CSO	30	9	4	3
10461	31865	MWIL	09 16 1445	N13	W34	09 14.0	5	(B)					
10461		LEAR	09 17 0031	N13	W39	09 14.1		B	DAO	80	12	5	3
10461		VORO	09 17 0036	N14	W39	09 14.1			DAI	161	6	3	3
10461		TACH	09 17 0607	N13	W41	09 14.2			DAI	104	5	4	4
10461		SVTO	09 17 0618	N12	W44	09 13.9		B	DSO	130	8	7	3

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NOAA/ USAF Group	Mt Wilson Group	Sta	Observation Time (UT)	Lat	CMD	CMP Mo Day	Max H	Mag Class	Spot Class	Corrected Area (10-6 Hemi)	Spot Count	Long. Extent (Deg)	Qual
10461	31865	KAND	09 17 0815	N12	W44	09 14.0			DSO		9	5	3
10461		MWIL	09 17 1445	N13	W47	09 14.1	5	(B)					
10461		HOLL	09 17 1636	N12	W48	09 14.1		B	DAO	200	16	7	4
10461		LEAR	09 18 0010	N13	W52	09 14.1		B	DAO	270	28	8	4
10461		SVTO	09 18 0625	N13	W57	09 14.0		B	DAO	270	11	9	3
10461		TACH	09 18 0628	N12	W52	09 14.3			CAI	272	10	5	4
10461	31865	KAND	09 18 0827	N13	W56	09 14.1			DSO		15	8	5
10461		MWIL	09 18 1445	N14	W60	09 14.1	5	(B)					
10461		HOLL	09 18 1655	N14	W60	09 14.2		B	DAO	220	16	9	4
10461		VORO	09 18 2242	N13	W64	09 14.1			DAI	242	12	7	3
10461		LEAR	09 19 0102	N13	W64	09 14.2		B	DAO	260	13	9	4
10461		TACH	09 19 0530	N14	W67	09 14.2			DSI	240	7	6	3
10461	31865	KAND	09 19 0835	N11	W72	09 13.9			DAO		4	9	4
10461		SVTO	09 19 0905	N13	W68	09 14.2		B	ESO	110	4	12	3
10461		MWIL	09 19 1430	N13	W73	09 14.1	5	(B)					
10461		HOLL	09 19 1508	N13	W72	09 14.2		B	DAO	100	7	9	4
10461		VORO	09 19 2227	N13	W77	09 14.1			DAO	91	4	7	3
10462	31868	VORO	09 14 2157	S06	W08	09 14.3			AXX	3	1		3
10462		LEAR	09 15 0015	S09	W04	09 14.7		A	AXX	10	1	1	3
10462		MWIL	09 15 1430	S09	W12	09 14.7	4	(B)					
10462		LEAR	09 16 0021	S09	W18	09 14.7		B	BXO	20	6	4	3
10462		VORO	09 16 0300	S09	W20	09 14.6			CRI	11	4	3	3
10462		TACH	09 16 0550	S08	W20	09 14.7			AR	15	4	3	4
10462	31868	SVTO	09 16 0640	S08	W19	09 14.8		B	CSO	20	3	3	3
10462		HOLL	09 16 1417	S10	W26	09 14.6		B	DSO	40	14	7	3
10462		MWIL	09 16 1445	S09	W26	09 14.7	5	(B)					
10462		LEAR	09 17 0031	S09	W31	09 14.7		B	CSO	30	6	4	3
10462		VORO	09 17 0036	S09	W31	09 14.7			CAO	65	3	4	3
10462		TACH	09 17 0607	S09	W34	09 14.7			BRO	15	4	5	4
10462	31868	SVTO	09 17 0618	S10	W35	09 14.6		B	DRO	40	6	5	3
10462		KAND	09 17 0815	S10	W35	09 14.7			BXO		6	6	3
10462		MWIL	09 17 1445	S10	W39	09 14.7	5	(B)					
10462		HOLL	09 17 1636	S10	W39	09 14.8		B	CAO	20	6	5	4
10462		LEAR	09 18 0010	S09	W45	09 14.6		B	DAO	50	5	6	4
10462		SVTO	09 18 0625	S10	W52	09 14.4		B	CRO	20	2	3	3
10462	31868	TACH	09 18 0628	S09	W48	09 14.7			AR	22	2	1	4
10462		KAND	09 18 0827	S10	W51	09 14.5			BXO		4	5	5
10462		MWIL	09 18 1445	S10	W55	09 14.5	5	(B)					
10462		HOLL	09 18 1655	S10	W55	09 14.6		B	CSO	30	11	6	4
10462		VORO	09 18 2242	S09	W58	09 14.6			CAI	52	6	4	3
10462		LEAR	09 19 0102	S10	W62	09 14.4		A	HSX	90	1	2	4
10462	31868	TACH	09 19 0530	S04	W66	09 14.3			HR	92	2	2	3
10462		KAND	09 19 0835	S10	W65	09 14.5			CAO		3	5	4
10462		SVTO	09 19 0905	S09	W65	09 14.5		B	CSO	60	2	4	3
10462		MWIL	09 19 1430	S10	W70	09 14.3	5	(B)					
10462		HOLL	09 19 1508	S09	W70	09 14.4		A	HAX	60	1	2	4
10462		VORO	09 19 2227	S10	W74	09 14.4			HAX	64	1		3
10462	31870	LEAR	09 20 0056	S10	W78	09 14.2		A	HSX	60	1	2	4
10462		SVTO	09 20 0925	S10	W81	09 14.3		A	HSX	30	1	3	3
10462A		HOLL	09 16 1417	N15	E13	09 17.6		A	AXX		1	1	3
10462A		MWIL	09 16 1445	N15	E13	09 17.6	4	(AP)					
10459	31866	VORO	09 13 2340	S11	E51	09 17.8			AXX	4	2		3
10459		LEAR	09 14 0120	S10	E50	09 17.8		A	AXX		1		3
10459		SVTO	09 14 0618	S11	E48	09 17.9		B	BXO	20	2	3	3
10459		TACH	09 14 0907	S10	E46	09 17.8			AR	27	2	2	4
10459		HOLL	09 14 1406	S12	E43	09 17.8		B	CSO	20	3	2	4
10459		MWIL	09 14 1430	S11	E42	09 17.8	4	(B)					
10459	31866	VORO	09 14 2157	S09	E33	09 17.4			BXO	9	3	7	3
10459		LEAR	09 15 0015	S11	E37	09 17.8		B	CRO	20	5	3	3
10459		SVTO	09 15 0642	S11	E33	09 17.8		B	DSO	30	3	4	3
10459		TACH	09 15 0845	S10	E32	09 17.8			BRO	33	3	3	4
10459		MWIL	09 15 1430	S11	E30	09 17.9	4	(B)					
10459		HOLL	09 15 1501	S11	E28	09 17.7		B	DSO	20	5	4	3
10459	31866	LEAR	09 16 0021	S11	E23	09 17.7		B	CSO	20	5	4	3
10459		VORO	09 16 0300	S11	E22	09 17.8			DRI	19	5	6	3
10459		TACH	09 16 0550	S10	E19	09 17.7			BRI	14	7	4	4

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NOAA/ USAF Group	Mt Wilson Group	Sta	Observation Time (UT)	Lat	CMD	CMP Mo Day	Max H	Mag Class	Spot Class	Corrected Area (10-6 Hemi)	Spot Count	Long. Extent (Deg)	Qual
10459	31866	SVTO	09 16 0640	S10	E22	09 17.9		B	DRO	20	7	5	3
10459		HOLL	09 16 1417	S11	E17	09 17.9		B	DAI	60	12	8	3
10459		MWIL	09 16 1445	S11	E16	09 17.8	5	(B)					
10459		LEAR	09 17 0031	S11	E11	09 17.8		B	CSO	40	9	7	3
10459		VORO	09 17 0036	S10	E10	09 17.8			CAI	123	6	6	3
10459		TACH	09 17 0607	S10	E09	09 17.9			BRI	21	6	6	4
10459		SVTO	09 17 0618	S11	E08	09 17.9		B	DSO	50	6	8	3
10459		KAND	09 17 0815	S10	E08	09 17.9			DSO		5	8	3
10459		MWIL	09 17 1445	S11	E04	09 17.9	4	(B)					
10459		HOLL	09 17 1636	S11	E03	09 17.9		B	DAO	50	19	8	4
10459	31866	LEAR	09 18 0010	S11	W02	09 17.8		B	DAO	50	12	7	4
10459		SVTO	09 18 0625	S11	W04	09 18.0		B	CSO	50	9	5	3
10459		TACH	09 18 0628	S10	W03	09 18.0			BRI	30	6	3	4
10459		KAND	09 18 0827	S10	W05	09 18.0			BXO		11	6	5
10459		MWIL	09 18 1445	S11	W09	09 17.9	5	(B)					
10459		HOLL	09 18 1655	S11	W10	09 17.9		B	DAO	110	18	5	4
10459		VORO	09 18 2242	S10	W13	09 18.0			DAI	95	10	5	3
10459		LEAR	09 19 0102	S11	W15	09 17.9		B	DAO	120	13	6	4
10459		TACH	09 19 0530	S10	W16	09 18.0			DAI	76	8	4	3
10459		KAND	09 19 0835	S11	W18	09 18.0			DAO		10	6	4
10459	31866	SVTO	09 19 0905	S11	W18	09 18.0		B	DAO	100	7	7	3
10459		MWIL	09 19 1430	S11	W22	09 17.9	5	(B)					
10459		HOLL	09 19 1508	S11	W23	09 17.9		B	DAO	70	7	7	4
10459		VORO	09 19 2227	S11	W27	09 17.9			DAO	118	9	6	3
10459		LEAR	09 20 0056	S11	W28	09 17.9		B	DAO	140	10	8	4
10459		SVTO	09 20 0925	S13	W34	09 17.8		B	DAO	70	7	9	3
10459		TACH	09 20 1007	S12	W32	09 18.0			CAI	54	4	7	3
10459		KAND	09 20 1135	S11	W34	09 17.9			DAO		7	8	4
10459		MWIL	09 20 1430	S11	W36	09 17.9	5	(BP)					
10459		HOLL	09 20 1520	S11	W36	09 17.9		B	DAO	80	15	8	3
10459	31866	VORO	09 20 2214	S12	W40	09 17.9			CAI	88	10	7	3
10459		LEAR	09 21 0000	S12	W42	09 17.8		B	CAI	110	12	9	2
10459		SVTO	09 21 0617	S12	W46	09 17.8		B	CSO	80	7	9	3
10459		KAND	09 21 0835	S10	W45	09 18.0			CSO		4	9	4
10459		MWIL	09 21 1445	S10	W52	09 17.7	4	(BP)					
10459		HOLL	09 21 1550	S09	W53	09 17.7		B	DSO	60	4	5	4
10459		VORO	09 21 2137	S11	W53	09 17.9			CAI	70	4	7	3
10459		LEAR	09 22 0113	S11	W56	09 17.8		B	CAO	40	3	9	3
10459		TACH	09 22 0520	S10	W59	09 17.8			CAO	41	3	9	4
10459		SVTO	09 22 0622	S12	W61	09 17.7		B	BXO	20	3	4	3
10459	31866	KAND	09 22 0755	S11	W60	09 17.8			CAO		6	10	4
10459		MWIL	09 22 1430	S11	W60	09 18.1	4	(B)					
10459		VORO	09 22 2205	S10	W69	09 17.7			HRX	18	2	3	3
10459		LEAR	09 23 0010	S10	W72	09 17.6		B	DAO	60	2	4	4
10459		SVTO	09 23 0910	S12	W78	09 17.5		B	BXO	10	2	3	3
10459		MWIL	09 23 1430	S11	W80	09 17.6	4	(AF)					
10459		HOLL	09 23 1704	S13	W78	09 17.8		A	AXX		1	1	2
10459A	31873	MWIL	09 19 1430	N04	W20	09 18.1	4	(AP)					
10459B	31874	MWIL	09 19 1430	N12	W13	09 18.6	4	(AP)					
10459C	31875	MWIL	09 19 1430	N07	W07	09 19.1	4	(BF)					
10460	31869	SVTO	09 15 0642	N16	E85	09 21.7		A	AXX	10	1	1	3
10460		MWIL	09 15 1430	N17	E80	09 21.7	4	(AP)					
10460		HOLL	09 15 1501	N17	E77	09 21.5		A	HSX	60	1	1	3
10460		LEAR	09 16 0021	N17	E76	09 21.8		B	CSO	60	4	8	3
10460		VORO	09 16 0300	N17	E71	09 21.5			HAX	57	1		3
10460		TACH	09 16 0550	N18	E68	09 21.4			HSX	51	1	1	4
10460		SVTO	09 16 0640	N17	E70	09 21.6		A	HSX	30	1	1	3
10460		HOLL	09 16 1417	N17	E66	09 21.6		B	CSO	50	3	5	3
10460		MWIL	09 16 1445	N18	E68	09 21.8	5	(B)					
10460		LEAR	09 17 0031	N17	E63	09 21.8		B	CSO	60	2	10	3
10460	31869	VORO	09 17 0036	N18	E63	09 21.8			DAO	85	2	8	3
10460		TACH	09 17 0607	N17	E61	09 21.9			BXO	25	2	9	4
10460		SVTO	09 17 0618	N18	E61	09 21.9		B	CSO	40	2	9	3
10460		KAND	09 17 0815	N18	E57	09 21.7			HS		1	1	3
10460		MWIL	09 17 1445	N18	E56	09 21.9	4	(B)					

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NOAA/ USAF Group	Mt Wilson Group	Sta	Observation Time (UT)	Lat	CMD	CMP Mo Day	Max H	Mag Class	Spot Class	Corrected Area (10-6 Hemi)	Spot Count	Long. Extent (Deg)	Qual
10460		HOLL	09 17	1636	N16 E55	09 21.9		B	CAO	30	3	9	4
10460		LEAR	09 18	0010	N17 E51	09 21.9		B	DAI	60	2	9	4
10460		SVTO	09 18	0625	N18 E44	09 21.6		B	CSO	20	2	2	3
10460		TACH	09 18	0628	N18 E47	09 21.8			CSO	52	2	10	4
10460		KAND	09 18	0827	N18 E46	09 21.8			BXO		5	11	5
10460	31869	MWIL	09 18	1445	N18 E43	09 21.9	4	(BP)					
10460		HOLL	09 18	1655	N17 E42	09 21.9		B	CAO	40	4	9	4
10460		VORO	09 18	2242	N18 E38	09 21.8			CRO	24	3	9	3
10460		LEAR	09 19	0102	N17 E32	09 21.5		B	CAO	20	2	1	4
10460		TACH	09 19	0530	N17 E33	09 21.7			AR	25	2	1	3
10460		KAND	09 19	0835	N17 E29	09 21.6			AX		4	2	4
10460		SVTO	09 19	0905	N17 E29	09 21.6		A	HAX	20	1	1	3
10460	31869	MWIL	09 19	1430	N17 E25	09 21.5	4	(AP)					
10460		HOLL	09 19	1508	N17 E27	09 21.7		A	HSX	20	2	1	4
10460		VORO	09 19	2227	N17 E21	09 21.5			HRX	27	3		3
10460		LEAR	09 20	0056	N17 E19	09 21.5		B	DSI	20	4	2	4
10460		SVTO	09 20	0925	N17 E15	09 21.5		A	AXX		1		3
10460		TACH	09 20	1007	N16 E15	09 21.5			AXX	5	1	1	3
10460		KAND	09 20	1135	N17 E14	09 21.5			AX		1		4
10460	31869	MWIL	09 20	1430	N17 E12	09 21.5	4	(AP)					
10460		HOLL	09 20	1520	N17 E12	09 21.5		A	HAX	10	4	2	3
10460		VORO	09 20	2214	N17 E08	09 21.5			AXX	15	2		3
10460		LEAR	09 21	0000	N18 E06	09 21.4		B	BXO	10	7	3	2
10460		SVTO	09 21	0617	N17 E04	09 21.6		B	BXO	10	4	3	3
10460		KAND	09 21	0835	N12 E03	09 21.6			CAO		3	3	4
10460	31869	MWIL	09 21	1445	N17 E00	09 21.6	4	(BP)					
10460		HOLL	09 21	1550	N16 W01	09 21.6		B	BXO	20	7	4	4
10460		VORO	09 21	2137	N15 W03	09 21.7			AXX	5	1		3
10460		LEAR	09 22	0113	N16 W07	09 21.5		B	BXO	10	2	3	3
10460	31869	MWIL	09 22	1430	N17 W13	09 21.6	4	(B)					
10460		LEAR	09 23	0010	N17 W21	09 21.4		A	HRX	10	3	1	4
10468		LEAR	09 23	0010	N16 W03	09 22.8		A	AXX		1		4
10468	31879	MWIL	09 23	1430	N15 W11	09 22.8	4	(AP)					
10468		HOLL	09 23	1704	N17 W13	09 22.7		B	BXO	10	2	3	2
10468		HOLL	09 24	1509	N17 W22	09 22.9		A	AXX		1	1	4
10463		TACH	09 17	0607	N08 E85	09 23.6			AXX	23	1	1	4
10463		SVTO	09 17	0618	N10 E83	09 23.5		A	HSX	60	1	3	3
10463		KAND	09 17	0815	N10 E81	09 23.4			HA		1	2	3
10463	31872	MWIL	09 17	1445	N10 E78	09 23.5	4	(AP)					
10463		HOLL	09 17	1636	N09 E78	09 23.5		A	HAX	120	1	2	4
10463		LEAR	09 18	0010	N09 E72	09 23.4		A	HSX	100	1	2	4
10463		SVTO	09 18	0625	N09 E68	09 23.4		A	HSX	40	1	1	3
10463		TACH	09 18	0628	N10 E68	09 23.4			HSX	90	1	2	4
10463		KAND	09 18	0827	N10 E69	09 23.5			HS		1	2	5
10463	31872	MWIL	09 18	1445	N09 E64	09 23.4	5	(AP)					
10463		HOLL	09 18	1655	N09 E62	09 23.3		A	HAX	80	1	2	4
10463		VORO	09 18	2242	N10 E59	09 23.4			HAX	92	1		3
10463		LEAR	09 19	0102	N10 E57	09 23.3		A	HSX	110	1	2	4
10463		TACH	09 19	0530	N10 E55	09 23.4			HSX	87	1	2	3
10463		KAND	09 19	0835	N10 E55	09 23.5			HS		1	2	4
10463		SVTO	09 19	0905	N08 E55	09 23.5		A	HSX	30	1	1	3
10463	31872	MWIL	09 19	1430	N09 E51	09 23.4	5	(BP)					
10463		HOLL	09 19	1508	N09 E50	09 23.4		A	HSX	60	1	2	4
10463		VORO	09 19	2227	N09 E45	09 23.3			HAX	112	2		3
10463		LEAR	09 20	0056	N08 E44	09 23.3		A	HSX	80	2	2	4
10463		SVTO	09 20	0925	N09 E40	09 23.4		A	HSX	70	1	2	3
10463		TACH	09 20	1007	N08 E40	09 23.4			HSX	29	1	1	3
10463		KAND	09 20	1135	N09 E39	09 23.4			HS		1	2	4
10463	31872	MWIL	09 20	1430	N09 E37	09 23.4	5	(AP)					
10463		HOLL	09 20	1520	N08 E38	09 23.5		A	HAX	60	1	2	3
10463		VORO	09 20	2214	N10 E32	09 23.3			HSX	138	0		3
10463		LEAR	09 21	0000	N09 E31	09 23.3		A	HSX	90	1	2	2
10463		SVTO	09 21	0617	N09 E28	09 23.4		A	HSX	70	1	2	3
10463		KAND	09 21	0835	N10 E26	09 23.3			HS		1	2	4
10463	31872	MWIL	09 21	1445	N09 E24	09 23.4	5	(AP)					
10463		HOLL	09 21	1550	N09 E22	09 23.3		A	HSX	50	1	2	4
10463		VORO	09 21	2137	N09 E18	09 23.2			HAX	123	1		3

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NOAA/ USAF Group	Mt Wilson Group	Sta	Observation Time Mo Day (UT)	Lat	CMD	CMP Mo Day	Max H	Mag Class	Spot Class	Corrected Area (10-6 Hemi)	Spot Count	Long. Extent (Deg)	Qual
10463		LEAR	09 22 0113	N09	E18	09 23.4		A	HAX	50	1	2	3
10463		TACH	09 22 0520	N09	E15	09 23.3			HSX	36	1	1	4
10463		SVTO	09 22 0622	N09	E15	09 23.4		A	HSX	40	1	2	3
10463		KAND	09 22 0755	N10	E14	09 23.4			HS		1	2	4
10463	31872	MWIL	09 22 1430	N09	E11	09 23.4	5	(BP)					
10463		VORO	09 22 2205	N10	E06	09 23.4			HAX	91	2		3
10463		LEAR	09 23 0010	N09	E04	09 23.3		A	HSX	60	1	2	4
10463		SVTO	09 23 0910	N09	W01	09 23.3		A	HSX	60	1	1	3
10463		TACH	09 23 0939	N09	W01	09 23.3			HSX	75	1	1	3
10463		KAND	09 23 1045	N09	W02	09 23.3			HS		1	2	3
10463	31872	MWIL	09 23 1430	N09	W04	09 23.3	5	(AP)					
10463		HOLL	09 23 1704	N08	W06	09 23.3		B	CSO	40	5	3	2
10463		VORO	09 23 2156	N10	W07	09 23.4			HSX	106	3		3
10463		LEAR	09 24 0037	N09	W09	09 23.3		A	HSX	60	1	2	2
10463		TACH	09 24 0543	N09	W12	09 23.3			HSX	92	1	1	3
10463		SVTO	09 24 0620	N09	W13	09 23.3		A	HSX	60	1	2	3
10463		KAND	09 24 0705	N09	W13	09 23.3			HS		1	2	4
10463	31872	MWIL	09 24 1445	N09	W17	09 23.3	5	(AP)					
10463		HOLL	09 24 1509	N09	W18	09 23.3		A	HSX	20	1	2	4
10463		VORO	09 24 2255	N08	W22	09 23.3			HAX	37	2		3
10463		LEAR	09 25 0107	N09	W24	09 23.2		A	HSX	50	2	2	2
10463		TACH	09 25 0523	N09	W26	09 23.3			HSX	28	1	1	4
10463		KAND	09 25 0835	N09	W28	09 23.2			HS		1	1	4
10463		SVTO	09 25 0953	N09	W28	09 23.3		B	CSO	50	2	3	3
10463	31872	MWIL	09 25 1445	N09	W31	09 23.3	4	(AP)					
10463		LEAR	09 26 0038	N08	W37	09 23.2		A	HSX	50	1	2	2
10463		KAND	09 26 0630	N09	W40	09 23.3			HS		1	1	4
10463		TACH	09 26 0852	N09	W41	09 23.3			HSX	40	1	1	4
10463		SVTO	09 26 1103	N09	W42	09 23.3		A	HSX	20	1	1	3
10463	31882	MWIL	09 26 1430	N05	W37	09 23.8	3	(AP)					
10463	31872	MWIL	09 26 1430	N09	W45	09 23.2	5	(AP)					
10463		HOLL	09 26 1451	N08	W46	09 23.2		A	HSX	30	1	1	4
10463		VORO	09 26 2346	N09	W49	09 23.3			HAX	27	1		3
10463		LEAR	09 27 0047	N09	W51	09 23.2		A	HSX	20	1	1	4
10463		TACH	09 27 0559	N09	W53	09 23.3			HSX	25	1	1	3
10463		SVTO	09 27 0630	N09	W54	09 23.2		A	HSX	20	1	1	3
10463	31872	MWIL	09 27 1500	N09	W58	09 23.3	4	(AP)					
10463		HOLL	09 27 1550	N08	W59	09 23.2		B	BXO	10	2	1	3
10463		LEAR	09 28 0155	N09	W65	09 23.2		A	AXX	10	1	1	2
10463B		KAND	09 24 0705	S08	W03	09 24.1			AX		1		4
10463A		KAND	09 23 1045	S08	E27	09 25.5			AX		1		3
10463A	31880	MWIL	09 23 1430	S08	E24	09 25.4	4	(AP)					
10463A		HOLL	09 23 1704	S07	E23	09 25.4		A	AXX	10	2	2	2
10463A		LEAR	09 26 0038	S08	W10	09 25.3		BG	FKI	10	5	3	2
10463A		VORO	09 26 2346	S08	W21	09 25.4			AXX	6	3		3
10463A		LEAR	09 27 0047	S08	W22	09 25.4		A	AXX	10	2	1	4
10463A	31884	MWIL	09 28 1430	S10	W45	09 25.2	3	(AP)					
10469	31883	MWIL	09 26 1430	S10	W06	09 26.1	5	(BP)					
10469		HOLL	09 26 1451	S09	W07	09 26.1		B	BXO	10	4	3	4
10469		VORO	09 26 2346	S09	W12	09 26.1			AXX	5	4		3
10469		LEAR	09 27 0047	S09	W12	09 26.1		B	BXO	10	4	3	4
10469	31883	MWIL	09 27 1500	S09	W19	09 26.2	5	(B)					
10469		HOLL	09 27 1550	S09	W20	09 26.1		B	DAO	40	8	4	3
10469		LEAR	09 28 0155	S09	W26	09 26.1		B	DAO	70	7	5	2
10469		TACH	09 28 0609	S09	W28	09 26.1			BRI	16	5	4	4
10469	31883	MWIL	09 28 1430	S09	W33	09 26.1	4	(B)					
10469		HOLL	09 28 1434	S09	W33	09 26.1		B	DSO	40	8	4	4
10469		VORO	09 28 2214	S08	W34	09 26.4			DRO	13	2	1	4
10469		VORO	09 28 2214	S09	W39	09 26.0			HRX	24	4		4
10469		LEAR	09 29 0205	S09	W40	09 26.1		B	DSO	40	4	5	2
10469		TACH	09 29 0600	S09	W40	09 26.2			BXO	17	2	5	4
10469		KAND	09 29 0615	S10	W44	09 25.9			AX		1		4
10469	31883	MWIL	09 29 1430	S09	W48	09 26.0	5	(BP)					
10469		HOLL	09 29 1500	S10	W49	09 25.9		A	HSX	20	3	2	3
10469		VORO	09 29 2211	S10	W53	09 25.9			ARX	44	5		4
10469		LEAR	09 30 0122	S09	W54	09 26.0		B	DSO	70	5	4	2

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10469	31883	TACH	09	30	0533	S08	W56	09	26.0			CAO	48	3	3	4
10469		HOLL	09	30	1434	S08	W61	09	26.0		B	DSO	70	4	7	4
10469		MWIL	09	30	1445	S08	W65	09	25.7	5	(B)					
10469		LEAR	10	01	0010	S08	W66	09	26.1		B	DSO	50	3	5	3
10469		VORO	10	01	0320	S10	W71	09	25.9			HRX	33	4		4
10469		TACH	10	01	0608	S09	W73	09	25.9			AXX	19	1	1	3
10469		SVTO	10	01	0817	S11	W77	09	25.6		A	HSX	30	1	2	3
10469		KAND	10	01	1130	S09	W76	09	25.9			AX		1		4
10469		HOLL	10	01	1426	S07	W76	09	26.0		A	HSX	50	1	2	3
10469		MWIL	10	01	1500	S09	W78	09	25.9	4	(AP)					
10464	31876	LEAR	09	20	0056	N02	E83	09	26.2		A	HSX	180	1	5	4
10464		SVTO	09	20	0925	N03	E80	09	26.4		A	HHX	240	1	2	3
10464		TACH	09	20	1007	N02	E82	09	26.5			HHX	214	1	4	3
10464		KAND	09	20	1135	N04	E78	09	26.3			CAO		5	3	4
10464		MWIL	09	20	1430	N04	E81	09	26.6	4	(B)					
10464		HOLL	09	20	1520	N05	E81	09	26.7		B	EKO	360	6	12	3
10464		VORO	09	20	2214	N05	E75	09	26.5			DKI	887	14	9	3
10464		LEAR	09	21	0000	N01	E74	09	26.5		BG	EKI	480	14	12	2
10464		SVTO	09	21	0617	N04	E72	09	26.6		B	EKO	390	8	11	3
10464		KAND	09	21	0835	N05	E70	09	26.6			EKO		10	11	4
10464	31876	MWIL	09	21	1445	N03	E68	09	26.7	5	(BG)					
10464		HOLL	09	21	1550	N04	E65	09	26.5		B	EKO	510	10	12	4
10464		VORO	09	21	2137	N02	E61	09	26.4			DKI	780	15	10	3
10464		LEAR	09	22	0113	N04	E61	09	26.6		BG	EKO	580	22	13	3
10464		TACH	09	22	0520	N03	E58	09	26.5			DAI	544	14	10	4
10464		SVTO	09	22	0622	N07	E58	09	26.6		BG	EKO	540	11	14	3
10464		KAND	09	22	0755	N05	E59	09	26.7			EKO		17	15	4
10464		MWIL	09	22	1430	N04	E54	09	26.6	5	(BG)					
10464		VORO	09	22	2205	N03	E48	09	26.5			DKI	880	28	5	3
10464		LEAR	09	23	0010	N04	E48	09	26.6		BG	EKO	630	41	14	4
10464	31876	SVTO	09	23	0910	N05	E44	09	26.7		B	FKI	650	16	16	3
10464		TACH	09	23	0939	N01	E40	09	26.4			DAI	763	15	7	3
10464		KAND	09	23	1045	N04	E42	09	26.6			FKO		23	16	3
10464		MWIL	09	23	1430	N04	E40	09	26.6	6	(BG)					
10464		HOLL	09	23	1704	N04	E38	09	26.5		BG	EKC	460	29	12	2
10464		VORO	09	23	2156	N05	E35	09	26.5			DKI	830	17	11	3
10464		LEAR	09	24	0037	N05	E34	09	26.6		BG	FKI	560	43	16	2
10464		TACH	09	24	0543	N03	E32	09	26.6			EAI	538	23	16	3
10464		SVTO	09	24	0620	N05	E30	09	26.5		BG	FKI	590	16	17	3
10464		KAND	09	24	0705	N04	E30	09	26.5			FKO		31	18	4
10464	31876	MWIL	09	24	1445	N04	E25	09	26.5	5	(BG)					
10464		HOLL	09	24	1509	N03	E26	09	26.6		BG	FKC	550	50	16	4
10464		VORO	09	24	2255	N05	E19	09	26.4			EKI	904	54	14	3
10464		LEAR	09	25	0107	N03	E18	09	26.4		BG	FKI	540	57	16	2
10464		TACH	09	25	0523	N01	E15	09	26.3			EAI	335	30	15	4
10464		KAND	09	25	0835	N04	E15	09	26.5			FAC		45	18	4
10464		SVTO	09	25	0953	N04	E13	09	26.4		B	FAI	520	45	19	3
10464		MWIL	09	25	1445	N02	E12	09	26.5	5	(BG)					
10464		LEAR	09	26	0038	N03	E07	09	26.5		BG	FKI	630	70	18	2
10464		KAND	09	26	0630	N03	E02	09	26.4			FKC		28	20	4
10464	31876	TACH	09	26	0852	N03	W01	09	26.3			FAI	356	48	15	4
10464		SVTO	09	26	1103	N04	W01	09	26.4		BG	FAI	510	44	19	3
10464		MWIL	09	26	1430	N03	W02	09	26.4	5	(BG)					
10464		HOLL	09	26	1451	N04	W02	09	26.5		BG	FKC	680	61	18	4
10464		VORO	09	26	2346	N05	W09	09	26.3			FAI	789	33	16	3
10464		LEAR	09	27	0047	N04	W07	09	26.5		BG	FSI	640	57	20	4
10464		TACH	09	27	0559	N01	W11	09	26.4			FAI	478	42	18	3
10464		SVTO	09	27	0630	N05	W13	09	26.3		BG	FSI	530	41	20	3
10464		MWIL	09	27	1500	N03	W17	09	26.3	5	(BG)					
10464		HOLL	09	27	1550	N05	W17	09	26.4		BG	FKI	550	64	20	3
10464	31876	LEAR	09	28	0155	N04	W21	09	26.5		BG	FKI	700	48	18	2
10464		TACH	09	28	0609	N02	W25	09	26.4			EAI	537	36	15	4
10464		MWIL	09	28	1430	N03	W29	09	26.4	5	(BG)					
10464		HOLL	09	28	1434	N03	W30	09	26.4		BG	FKC	460	58	20	4
10464		VORO	09	28	2214	N05	W34	09	26.4			FKI	940	33	16	4
10464		LEAR	09	29	0205	N04	W36	09	26.4		BG	FKI	620	56	20	2
10464		TACH	09	29	0600	N02	W37	09	26.5			EAI	510	22	13	4
10464		KAND	09	29	0615	N05	W38	09	26.4			FKO		30	20	4

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NOAA/ USAF Group	Mt Wilson Group	Sta	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
10464	31876	MWIL	09	29	1430	N04	W42	09	26.5	5	(BG)					
10464		HOLL	09	29	1500	N03	W44	09	26.3		BG	FKC	470	34	18	3
10464		VORO	09	29	2211	N04	W48	09	26.3			FAI	796	27	17	4
10464		LEAR	09	30	0122	N05	W49	09	26.4		BG	FKI	660	40	20	2
10464		TACH	09	30	0533	N05	W52	09	26.3			FAI	913	17	17	4
10464		HOLL	09	30	1434	N03	W58	09	26.3		BG	FKC	430	31	18	4
10464	31876	MWIL	09	30	1445	N04	W55	09	26.5	6	(BG)					
10464		LEAR	10	01	0010	N05	W60	09	26.6		BG	FKI	610	17	20	3
10464		VORO	10	01	0320	N04	W64	09	26.4			FAI	681	20	17	4
10464		TACH	10	01	0608	N05	W63	09	26.6			EAI	234	6	15	3
10464		SVTO	10	01	0817	N05	W66	09	26.5		B	FHI	440	12	24	3
10464		KAND	10	01	1130	N05	W70	09	26.3			FSO		9	22	4
10464		HOLL	10	01	1426	N05	W68	09	26.6		BG	FKI	380	18	18	3
10464	31876	MWIL	10	01	1500	N05	W67	09	26.7	5	(BG)					
10464		VORO	10	01	2314	N04	W74	09	26.5			FAI	521	5	15	4
10464		LEAR	10	02	0032	N06	W72	09	26.7		BG	FSO	310	6	19	2
10464		TACH	10	02	0527	N06	W69	09	27.2			HHX	340	1	3	3
10464		KAND	10	02	0800	N06	W73	09	27.0			HH		1	4	3
10464		SVTO	10	02	0803	N05	W71	09	27.1		A	HHX	180	1	5	3
10464	31876	MWIL	10	02	1515	N05	W76	09	27.0	5	(AF)					
10464		HOLL	10	02	2035	N08	W80	09	26.9		A	HKX	90	1	3	2
10464		VORO	10	02	2232	N05	W77	09	27.3			HKX	367	1		3
10464		LEAR	10	03	0211	N06	W80	09	27.2		A	HSX	170	1	2	2
10464		KAND	10	03	1055	N07	W87	09	27.0			HA		1	2	4
10465		KAND	09	21	0835	S01	E71	09	26.7			BXO		3	5	4
10465	31877	MWIL	09	21	1445	S03	E68	09	26.7	4	(B)					
10465		HOLL	09	21	1550	S02	E65	09	26.5		B	CAO	40	5	5	4
10465		LEAR	09	22	0113	S02	E61	09	26.6		B	CAO	60	7	4	3
10465		SVTO	09	22	0622	S01	E59	09	26.7		A	AXX	20	2	2	3
10465		KAND	09	22	0755	S01	E60	09	26.8			BXO		7	6	4
10465	31877	MWIL	09	22	1430	S01	E55	09	26.7	4	(B)					
10465		LEAR	09	23	0010	S02	E49	09	26.7		B	CRO	50	12	5	4
10465		SVTO	09	23	0910	N02	E45	09	26.7		B	DSO	30	3	5	3
10465		KAND	09	23	1045	S01	E42	09	26.6			BXO		5	4	3
10465	31877	MWIL	09	23	1430	S02	E40	09	26.6	4	(BG)					
10465		HOLL	09	23	1704	S01	E38	09	26.5		A	HSX	20	2	2	2
10465		LEAR	09	24	0037	S02	E34	09	26.6		B	CSO	40	11	4	2
10465		SVTO	09	24	0620	S01	E33	09	26.7		B	CRO	10	2	1	3
10465		KAND	09	24	0705	S02	E32	09	26.7			BXO		3	1	4
10465	31877	MWIL	09	24	1445	S01	E26	09	26.5	5	(BG)					
10465		HOLL	09	24	1509	S02	E25	09	26.5		B	CSO	30	4	3	4
10465		LEAR	09	25	0107	S01	E20	09	26.5		B	DSO	30	16	4	2
10465		KAND	09	25	0835	S01	E18	09	26.7			BXO		6	3	4
10465		SVTO	09	25	0953	S01	E17	09	26.7		B	CRO	20	4	4	3
10465	31877	MWIL	09	25	1445	S03	E13	09	26.6	3	(AF)					
10465		LEAR	09	26	0038	S01	E09	09	26.7		A	HSX	10	1	1	2
10465		KAND	09	26	0630	S01	E07	09	26.8			AX		2	1	4
10465		SVTO	09	26	1103	S01	E04	09	26.7		A	AXX	10	3	2	3
10465		HOLL	09	26	1451	S01	E02	09	26.8		B	BXO	10	7	2	4
10465		LEAR	09	27	0047	S02	W05	09	26.6		B	BXO	10	3	4	4
10465		SVTO	09	27	0630	N00	W13	09	26.3		B	CRO	10	2	2	3
10465		LEAR	09	28	0155	S02	W19	09	26.7		B	BXO	10	2	3	2
10465		HOLL	09	28	1434	S02	W27	09	26.6		B	BXO	10	3	6	4
10465		KAND	09	29	0615	N02	W35	09	26.6			BXO		4	7	4
10467		LEAR	09	23	0010	S11	E59	09	27.4		A	HRX	10	1		4
10467		TACH	09	23	0939	S12	E54	09	27.5			BXO	24	2	2	3
10467		KAND	09	23	1045	S11	E55	09	27.6			BXO		2	3	3
10467	31881	MWIL	09	23	1430	S11	E52	09	27.5	5	(B)					
10467		HOLL	09	23	1704	S09	E50	09	27.5		B	CSO	20	5	4	2
10467		VORO	09	23	2156	S10	E47	09	27.4			CRO	44	2	4	3
10467		LEAR	09	24	0037	S11	E47	09	27.6		B	DSO	20	5	5	2
10467		TACH	09	24	0543	S11	E42	09	27.4			BRO	22	3	5	3
10467		KAND	09	24	0705	S09	E44	09	27.6			BXO		3	5	4
10467	31881	MWIL	09	24	1445	S11	E38	09	27.5	4	(B)					
10467		HOLL	09	24	1509	S10	E38	09	27.5		B	CSO	20	8	6	4
10467		VORO	09	24	2255	S10	E32	09	27.3			CAI	33	5	5	3
10467		LEAR	09	25	0107	S12	E32	09	27.4		B	DSO	30	4	5	2

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NOAA/ USAF Group	Mt Wilson Group	Sta	Observation Time Mo Day (UT)	Lat CMD	CMP Mo Day	Max H	Mag Class	Spot Class	Corrected Area (10-6 Hemi)	Spot Count	Long. Extent (Deg)	Qual
10467		TACH	09 25 0523	S12 E26	09 27.2			BRO	36	3	8	4
10467		KAND	09 25 0835	S10 E29	09 27.5			BXO		4	6	4
10467		SVTO	09 25 0953	S10 E28	09 27.5		B	CRO	30	4	7	3
10467	31881	MWIL	09 25 1445	S10 E24	09 27.4	4	(B)					
10467		LEAR	09 26 0038	S11 E18	09 27.4		B	DSO	10	5	5	2
10467		KAND	09 26 0630	S10 E18	09 27.6			BXO		5	6	4
10467		TACH	09 26 0852	S10 E14	09 27.4			BRI	8	7	5	4
10467		SVTO	09 26 1103	S10 E13	09 27.4		B	CRO	40	6	6	3
10467	31881	MWIL	09 26 1430	S10 E11	09 27.4	4	(B)					
10467		HOLL	09 26 1451	S10 E11	09 27.4		B	CSO	20	8	5	4
10467		LEAR	09 27 0047	S10 E05	09 27.4		B	DSO	40	6	6	4
10467		TACH	09 27 0559	S10 E04	09 27.5			BRO	22	5	3	3
10467		SVTO	09 27 0630	S10 E04	09 27.6		B	CRO	20	4	5	3
10467	31881	MWIL	09 27 1500	S10 W02	09 27.5	5	(B)					
10467		HOLL	09 27 1550	S11 W03	09 27.4		B	DAO	20	7	6	3
10467		LEAR	09 28 0155	S10 W08	09 27.5		B	CSO	20	3	4	2
10467		TACH	09 28 0609	S10 W10	09 27.5			BRO	5	3	3	4
10467	31881	MWIL	09 28 1430	S10 W15	09 27.5	4	(B)					
10467		HOLL	09 28 1434	S11 W15	09 27.5		B	CSO	20	3	5	4
10467		VORO	09 28 2214	S11 W18	09 27.6			HRX	7	1		4
10467		LEAR	09 29 0205	S10 W22	09 27.4		B	DSO	20	4	3	2
10467		TACH	09 29 0600	S13 W21	09 27.7			BXO	6	2	1	4
10467		KAND	09 29 0615	S11 W23	09 27.5			BXO		2		4
10467	31881	MWIL	09 29 1430	S10 W28	09 27.5	4	(BF)					
10467		HOLL	09 29 1500	S11 W27	09 27.6		A	HSX	10	1	1	3
10467		LEAR	09 30 0122	S15 W35	09 27.4		B	DAO	70	5	3	2
10466		LEAR	09 22 0113	S05 E85	09 28.4		A	HSX	30	1	1	3
10466		TACH	09 22 0520	S06 E82	09 28.3			HSX	113	1	2	4
10466		SVTO	09 22 0622	S03 E80	09 28.2		A	HSX	30	1	1	3
10466		KAND	09 22 0755	S05 E83	09 28.5			DAO		2	6	4
10466	31878	MWIL	09 22 1430	S06 E78	09 28.4	5	(B)					
10466		VORO	09 22 2205	S05 E72	09 28.3			HAX	167	3	4	3
10466		LEAR	09 23 0010	S07 E72	09 28.4		B	DAO	150	9	7	4
10466		SVTO	09 23 0910	S03 E69	09 28.5		B	DSO	100	4	5	3
10466		TACH	09 23 0939	S09 E69	09 28.6			CSO	123	4	2	3
10466		KAND	09 23 1045	S06 E67	09 28.5			DAO		7	6	3
10466	31878	MWIL	09 23 1430	S06 E65	09 28.5	4	(B)					
10466		HOLL	09 23 1704	S05 E62	09 28.3		B	CAO	50	9	4	2
10466		VORO	09 23 2156	S05 E57	09 28.2			HKX	354	4		3
10466		LEAR	09 24 0037	S07 E57	09 28.3		B	DAO	100	18	5	2
10466		TACH	09 24 0543	S06 E55	09 28.3			CSO	94	5	5	3
10466		SVTO	09 24 0620	S05 E56	09 28.4		B	CSO	90	4	5	3
10466		KAND	09 24 0705	S05 E55	09 28.4			CAO		7	6	4
10466	31878	MWIL	09 24 1445	S06 E51	09 28.4	5	(B)					
10466		HOLL	09 24 1509	S06 E51	09 28.4		B	DSO	80	10	7	4
10466		VORO	09 24 2255	S06 E45	09 28.3			CAO	121	12	4	3
10466		LEAR	09 25 0107	S07 E43	09 28.3		B	DAO	100	7	5	2
10466		TACH	09 25 0523	S07 E41	09 28.3			CSO	49	3	4	4
10466		KAND	09 25 0835	S05 E42	09 28.5			CSO		7	6	4
10466		SVTO	09 25 0953	S05 E41	09 28.5		B	CSO	100	7	7	3
10466	31878	MWIL	09 25 1445	S06 E36	09 28.3	5	(BP)					
10466		LEAR	09 26 0038	S06 E31	09 28.3		B	DAO	70	8	4	2
10466		KAND	09 26 0630	S05 E30	09 28.5			CSO		6	6	4
10466		TACH	09 26 0852	S06 E27	09 28.4			CSI	58	3	4	4
10466		SVTO	09 26 1103	S07 E26	09 28.4		B	CSO	40	7	7	3
10466	31878	MWIL	09 26 1430	S06 E23	09 28.3	5	(BP)					
10466		HOLL	09 26 1451	S07 E23	09 28.3		B	CSO	70	3	3	4
10466		VORO	09 26 2346	S05 E17	09 28.3			HAX	85	4		3
10466		LEAR	09 27 0047	S06 E18	09 28.4		B	CSO	80	8	5	4
10466		TACH	09 27 0559	S04 E14	09 28.3			CAI	65	5	1	3
10466		SVTO	09 27 0630	S04 E14	09 28.3		B	CSO	50	3	4	3
10466	31878	MWIL	09 27 1500	S05 E08	09 28.2	4	(BP)					
10466		HOLL	09 27 1550	S06 E07	09 28.2		B	CAO	70	9	5	3
10466		LEAR	09 28 0155	S04 E02	09 28.2		B	DSO	90	6	3	2
10466		TACH	09 28 0609	S04 E01	09 28.3			CAI	49	4	2	4
10466	31878	MWIL	09 28 1430	S04 W05	09 28.2	5	(BG)					
10466		HOLL	09 28 1434	S05 W04	09 28.3		B	DSO	80	10	7	4
10466		VORO	09 28 2214	S05 W09	09 28.2			HAX	61	4		4

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NOAA/ USAF Group	Mt Wilson Group	Sta	Observation Time		Lat	CMD	CMP Mo Day	Max H	Mag Class	Spot Class	Corrected Area (10-6 Hemi)	Spot Count	Long. Extent (Deg)	Qual
10466		LEAR	09 29	0205	S05	W12	09 28.2		B	DAO	60	4	3	2
10466		TACH	09 29	0600	S04	W13	09 28.3			BRI	26	7	3	4
10466		KAND	09 29	0615	S06	W15	09 28.1			CSO		3	4	4
10466	31878	MWIL	09 29	1430	S05	W18	09 28.2	5	(BG)					
10466		HOLL	09 29	1500	S05	W18	09 28.3		B	DSO	40	5	4	3
10466		VORO	09 29	2211	S05	W23	09 28.2			HAX	40	3		4
10466		TACH	09 30	0533	S05	W27	09 28.2			HA	52	2	2	4
10466		HOLL	09 30	1434	S05	W31	09 28.3		B	CSO	30	6	6	4
10466	31878	MWIL	09 30	1445	S05	W32	09 28.2	5	(BP)					
10466		LEAR	10 01	0010	S05	W38	09 28.3		B	DSO	30	3	3	3
10466		VORO	10 01	0320	S06	W39	09 28.3			HAX	51	2		4
10466		TACH	10 01	0608	S05	W39	09 28.4			CSO	33	2	3	3
10466		SVTO	10 01	0817	S05	W42	09 28.3		B	CSO	30	2	4	3
10466		KAND	10 01	1130	S04	W45	09 28.2			CSO		2	2	4
10466		HOLL	10 01	1426	S03	W45	09 28.3		B	CSO	30	5	4	3
10466	31878	MWIL	10 01	1500	S06	W46	09 28.3	5	(BP)					
10466		VORO	10 01	2314	S06	W50	09 28.3			HAX	36	1		4
10466		LEAR	10 02	0032	S05	W51	09 28.3		A	HSX	30	1	1	2
10466		TACH	10 02	0527	S05	W53	09 28.4			AR	22	2	1	3
10466		KAND	10 02	0800	S06	W56	09 28.2			HS		1	1	3
10466		SVTO	10 02	0803	S05	W56	09 28.2		A	HSX	20	1	1	3
10466	31878	MWIL	10 02	1515	S06	W59	09 28.3	5	(AP)					
10466		HOLL	10 02	2035	S05	W65	09 28.1		A	AXX	10	1	1	2
10466		VORO	10 02	2232	S06	W63	09 28.3			HRX	37	2		3
10466		LEAR	10 03	0211	S04	W67	09 28.2		B	DAO	20	2	3	2
10466		SVTO	10 03	1045	S07	W71	09 28.2		A	AXX		1		2
10466		KAND	10 03	1055	S06	W72	09 28.2			AX		2	2	4
10466	31878	MWIL	10 03	1445	S06	W73	09 28.2	4	(AP)					
10466		HOLL	10 03	1810	S07	W76	09 28.2		A	AXX	10	1	1	3
10467A		LEAR	10 01	0010	N27	W15	09 29.9		B	DSO	10	2	4	3
10467A		HOLL	10 01	1426	N23	W25	09 29.8		A	AXX		1	1	3

Stations reporting:

HOLL = Holloman
KAND = Kandilli
LEAR = Learmonth

MWIL = Mt. Wilson
PALE = Palehua

RAMY = Ramey
SVTO = San Vito

TACH = Tashkent
VORO = Voroshilov

SUDDEN IONOSPHERIC DISTURBANCES

SEPTEMBER 2003

Day	Start (UT)	Max (UT)	End (UT)	Imp	Wide Spread Index	Number of Station Reports by Type					Flare (UT)	X-ray Class	NOAA Region
						SWF	SEA	SPA	LF- SPA	SES			
01	0758	0808	0822	1	1		1				No flare		
01	1350	1425	1436D	2+	1					1	1407	B4.1	10444
02	1314	1319	1340	1+	1					1	*		
03	0643	0703U	0730	1	1		1				No flare		
03	0917	0925	0949	1	1		1				No flare		
04	1430	1438	1530	2+	1					1	1425	C1.4	10452
04	1749	1804	1836	1	1		1				No flare		
05	1251	1304	1322	1+	1					1	1248	C1.2	
06	0917	0927	1023	1	1		1				*		
07	0852	0919	0931	1	1		1				No flare		
07	0938	0945	1009	1	1		1				No flare		
07	1355	1400	1430	2	1					1	1338	C5.3	10450
07	1403	1414	1548	2+	5		1			1	1338	C5.3	10450
08	0642	0647	0843	1	1		1				No flare		
09	0653	0705	0720	1	1		1				No flare		
09	1334	1346	1427	1	1		1				No flare		
10	0804	0820	0849	1	1		1				No flare		
11	1158	1211	1311	1	1		1				*		
11	1352	1409	1514	1	1		1				1348	C1.0	
12	0831	0845U	0910	1	1		1				No flare		
12	0906	0921	0947D	2	1					1	1912	B4.0	
12	0947	0950U	1016	1+	1					1	No flare		
13	0705	0707	0727	1	1					1	0654	B8.8	10456
13	0736	0742	0808	2-	5					4	0732	C2.2	10456
14	0124	0127	0138	1-	3					2	0115	C4.4	10456
15	0434U	0452	0534	2+	1					1	0456	C1.0	
15	0638	0645	0706D	1+	1					1	0650	B4.9	
15	0706E	0712	0741	2	1					1	0704	B5.5	
15	0737	0814U	1027	2	1		1				0736	B9.1	
15	1341	1407	1524	2	1		1				No flare		
15	1436	1452	1521	2	1					1	1427	C2.9	
16	0520	0525	0549	1+	3					2	0518	C1.4	
16	0758	0807	0840	1	1		1				0756	B5.9	
16	0854	0902	0942	1+	5		1			5	0852	C1.8	
16	1142	1204	1336	2	1		1				No flare		
16	1251	1253	1312	1	1					1	1251	B7.3	
16	2159	2230	2320	2+	1					1	2130	M1.3	
17	1020	1043	1103	1	1		1				No flare		
18	1549	1601	1625	1	1		1				No flare		
18	1630	1640	1732	1	1		1				No flare		
19	0924	0932	0952	1	1		1				No flare		
19	1445	1455	1518	1	1		1				No flare		
20	0508	0514	0542	2-	3					2	0503	C3.0	
20	0630	0644	0710	2-	3					2	0630	C1.7	
20	1134	1141	1213	2	1					1	1034	C1.3	
20	1526	1538	1619	2-	5		1			1	1524	C3.6	
22	1257	1307	1345	1	1		1				1313	B4.9	

* = no flare patrol.

SUDDEN IONOSPHERIC DISTURBANCES

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SEPTEMBER 2003

Day	Start (UT)	Max (UT)	End (UT)	Imp	Wide Spread Index	Number of Station Reports by Type					Flare (UT)	X-ray Class	NOAA Region
						SWF	SEA	SPA	LF- SPA	SES			
23	0851	0903	0948	2	1		1				No flare		
23	1444	1447	1514	1+	1					1	1440	C2.1	10464
24	0434	0438	0509	2-	3					2	0431	C2.1	10464
24	0621E	0625U	0634U	1-	1					1	0622	C1.2	10464
24	0714	0725	0759	2	3		1			2	0712	C5.4	10464
24	0853	0856	0908	1-	1					1	0851	C2.0	10464
24	0916	0925	0957	2	1		1				0936	C1.4	10464
24	1138	1153	1219	2-	3		1			1	1153	C1.4	10464
24	1330	1343	1512	1	1		1				No flare		
25	0525	0529	0623	1	1		1				No flare		
28	1412	1426U	1446	1	1		1				1410	C2.3	
28	1507	1516	1636	1	1		1				1525	C6.8	10464
29	0352	0401	0441	2+	1					1	0343	C1.8	
29	0501	0510	0559	2+	1					1	0500	C3.9	
29	1224	1240	1321	1	1		1				*		
29	1326	1341	1441	2-	5		1			1	1320	C3.3	
29	1507	1510	1548	2	1					1	No flare		
29	1609	1620	1635	1	1		1				1605	C5.1	10464
29	1945	1956	2052	2+	1					1	1941	C3.8	10464
29	2145	2148	2248	2+	1					1	2141	C5.4	10464
30	0319	0339	0420	2+	1					1	0314	C5.1	10464
30	0511	0516	0557	2	3					2	0507	C3.3	10464
30	0757	0801	0838	2	3					2	0737	C2.8	10464
30	0848	0854	0931	2-	3					2	0846	C3.2	10464
30	0927	0941	1007	1	1		1				No flare		
30	1028	1042	1114	1	1		1				*		
30	1119	1210	1308	2	1		1				*		
30	2013	2019	2122	2+	1					1	2009	C4.9	10471

* = no flare patrol.

OBSERVATORIES REPORTING FOR SEPTEMBER 2003

Calcutta, India	SES	Perth, Australia	SES
Edenvale, Rep of S. Africa	SES	Sofia, Bulgaria	SES
Hudson, Ohio, USA	SES	Sussex, United Kingdom	SES
Isola del Gran Sasso, Italy	SES	Upice, Czech Republic	SEA
Kirksville, Mississippi, USA	SES	Villiersdorp, South Africa	SES
Panska Ves, Czech Republic	SES, SEA, SWF		

Observations are not necessarily continuous.

OBSERVATION			EVENT					FREQUENCY		Remarks	
Day	Start (UT)	End (UT)	Sta	Start (UT)	End (UT)	Spectral Class	Event Remarks	Int (1-3)	Lower (MHz)		Upper (MHz)
01	0000	0730	CULG								
	0000	0908	HIRA								
	0526	1637	ONDR								
	0600	1102	BLEN								
	0600	1200	IZMI	1019.6	1020.4	III	GG,U	2	25X	270X	
			IZMI	1020.7	1021.2	III	G,U	2	25X	270X	
			IZMI	1034.3	1035.2	III	G,U	2	40	270	
			IZMI	1040.9	1041.6	III	G,C,FS	2	30	190	
	2008	2400	HIRA								
	2030	2400	CULG								
02	0000	0730	CULG								
	0000	0906	HIRA								
	0528	1635	ONDR								
	0545	1700	BLEN								
	0555	1200	IZMI								
	2009	2400	HIRA								
	2030	2400	CULG	2159.0	2202.0	III	G	3	20	80	
	03	0000	0904	HIRA	0232.5	0233.0	III	B	1	110	190
		0000	0730	CULG	0233.0	0238.0	III	G	1	40	180
				HIRA	0303.5	0304.0	III	B	1	110	220
			CULG	0304.0	0307.0	III	G	1	60	180	
			CULG	0338.0	0339.0	III	G	1	100	300	
			LEAR	0338.0	0338.0	III		1	103	180	
			HIRA	0338.5	0339.0	III	G	1	130	330	
			CULG	0458.0	0458.0	III	B	1	40	180	
0529		1633	ONDR								
			LEAR	0809.0	0810.0	III		1	25	180	
04	0000	0903	HIRA								
	0000	0730	CULG	0125.0	0125.0	III	B	1	23	90	
			CULG	0157.0	0157.0	III	B	1	20	130	
			CULG	0233.0	0309.0	III	S	1	25	170	
			CULG	0448.0	0537.0	III	N	1	23	180	
			CULG	0448.0	0730.00	I	S	1	100	180	
	0530	1631	ONDR								
	0550	1700	BLEN								
	0555	1200	IZMI	0555.0E	0705.0U	I	N	1	185	270X	
			IZMI	0824.6	0834.6	III	GG	1	185	270X	
05	2010	2400	HIRA								
	2030	2400	CULG	2132.0	2133.0	III	G	1	30	180	
			CULG	2344.0	2344.0	III	B	1	30	90	
	0000	0740	CULG	0237.0	0239.0	III	G	1	20	90	
			CULG	0315.0	0559.0	I	S	1	100	180	
			CULG	0447.0	0450.0	III	G	3	20	360U	
			LEAR	0447.0	0449.0	III		1	25	180	
			SVTO	0447.0	0448.0	III		1	25	180	
	0000	0902	HIRA	0447.5	0450.0	III	G	3	25X	220	
			CULG	0520.0	0520.0	III	G	1	23	90	

S O L A R R A D I O E M I S S I O N Spectral Observations

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SEPTEMBER 2003

OBSERVATION		Sta	Start (UT)	End (UT)	EVENT		Int (1-3)	FREQUENCY		Remarks
Day	Start End (UT) (UT)				Spectral Class	Event Remarks		Lower (MHz)	Upper (MHz)	
05		CULG	0655.0	0655.0	III	B	3	27	180	
		IZMI	1050.0U	1200.0D	I	N	1	180	270X	
		HOLL	1928.0	1934.0	III		1	25	180	
	2011 2400	HIRA								
	2020 2400	CULG	2144.0	2144.0	III	B	1	30	90	
		CULG	2328.0	2329.0	III	G	1	30	120	
06		LEAR	0133.0	0141.0	III		1	25	180	
	0000 0900	HIRA	0133.5	0134.0	III	B	1	80	270	
	0000 0740	CULG	0134.0	0135.0	III	G	1	30	180	
		CULG	0141.0	0142.0	III	G	1	20	140	
		CULG	0355.0	0355.0	III	B	1	27	130	
	0533 1627	ONDR								
		CULG	0549.0	0602.0	III	GG	2	20	180	
		LEAR	0549.0	0559.0	III	N	1	25	180	
		SVTO	0549.0	0601.0	III	N	1	25	180	
	0600 1200	IZMI	0559.8	0602.6	III	G	1	25X	85	
		IZMI	0917.3	0917.8	III	G	1	25X	215	
		IZMI	1130.3	1130.4	III	B	1	50	65	
	0550 1700	BLEN	1510.1	1513.1	DCIM	C	2	1200	4000X	
		PALE	1930.0	1933.0	III		1	25	75	
		HOLL	1931.0	1933.0	III		1	25	94	
		SGMR	1931.0	1933.0	III		1	30	80	
	2012 2400	HIRA								
	2020 2400	CULG	2027.0	2049.0	III	N	1	27	180	
		CULG	2216.0	2228.0	III	G	1	18	150	
07	0000 0859	HIRA								
	0000 0740	CULG	0209.0	0256.0	III	N	1	27	90	
		CULG	0419.0	0420.0	III	G	1	27	160	
		CULG	0514.0	0514.0	III	B	1	27	180	
	0600 1200	IZMI	1016.3	1017.7	III	GG,C	1	25X	215	
		IZMI	1049.7	1049.8	III	G	1	110	270	
		IZMI	1134.2	1134.4	III	G	1	50	160	
		SVTO	1146.0	1146.0	III		1	25	180	
		IZMI	1146.1	1146.4	III	G	2	25X	250	
	0550 1700	BLEN	1402.0	1421.3	III	GG,RS,S	3	100X	4000X	
		HOLL	1403.0	1405.0	III		1	25	180	
		SGMR	1403.0	1406.0	V		1	30	70	
		SVTO	1403.0	1406.0	III		1	25	180	
		ONDR	1403.3	1405.3	DCIM	G	1	800X	2000X	
	0535 1625	ONDR	1403.3	1405.3	DCIM	G	1	2000X	4500X	
	2020 2400	CULG	2320.0	2320.0	III	B	1	130	180	
		CULG	2325.0	2327.0	III	G	3	18	220	
		HOLL	2325.0	2326.0	III		1	25	86	
		PALE	2325.0	2327.0	III		1	25	67	
	2013 2400	HIRA	2325.5	2326.5	III	G	1	25X	300	
		LEAR	2327.0	2333.0	III		1	25	180	
08	0536 1623	ONDR								
	0550 1700	BLEN								
	0000 0740	CULG	0556.0	0556.0	III	G	1	23	140	
	0555 1200	IZMI	0556.2	0556.5	III	G	1	25X	90	
		CULG	0726.0	0726.0	III	B	1	23	250	
		LEAR	0726.0	0730.0	III		1	50	180	
	0000 0857	HIRA	0726.0	0726.5	III	B	1	60	200	
		IZMI	0726.1	0726.4	III	G	2	55	210	
		CULG	0728.0	0729.0	III	G	1	57U	140	
		IZMI	0737.2	0740.3	III	GG	1	50	65	
		IZMI	0945.2	0947.1	III	G	1	25X	45	
		IZMI	0955.8	0958.1	III	GG	1	50	85	
		IZMI	1004.5	1005.4	III	G	1	35	85	
		IZMI	1018.0	1023.2	III	GG	1	45	95	
		HOLL	1327.0	1327.0	III		1	25	132	
		SGMR	1327.0	1327.0	III		1	30	75	
		SVTO	1327.0	1327.0	III		1	25	83	
	2014 2400	HIRA								
	2020 2400	CULG								

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S O L A R R A D I O E M I S S I O N Spectral Observations

SEPTEMBER 2003

OBSERVATION Day	Start End		Sta	Start (UT)	End (UT)	EVENT		Int (1-3)	FREQUENCY		Remarks
	(UT)	(UT)				Spectral Class	Event Remarks		Lower (MHz)	Upper (MHz)	
09	0000	0856	HIRA								
	0538	1621	ONDR								
	0550	1700	BLEN								
	0000	0740	CULG	0550.0	0550.0	III	B	1	30	90	
			CULG	0559.0	0603.0	III	G	1	30	90	
	0602	1200	IZMI	0602.8	0602.9	III	B	2	45	90	
			CULG	0709.0	0710.0	III	G	2	23	180	
			LEAR	0709.0	0712.0	III		1	25	180	
			SVTO	0709.0	0710.0	III		1	25	141	
			IZMI	0709.3	0712.5	III	GG	2	25X	175	
			CULG	0712.0	0713.0	III	G	1	30	120	
			IZMI	1103.4	1110.7	III	GG	1	50	65	
			SVTO	1228.0	1228.0	III		1	25	79	
			SGMR	1319.0	1321.0	III		2	30	80	
			HOLL	1324.0	1327.0	III		1	25	145	
			SVTO	1324.0	1327.0	III		1	25	141	
			SGMR	1612.0	1613.0	III		1	30	45	
			SVTO	1612.0	1613.0	III		1	25	83	
	2015	2400	HIRA								
	2020	2400	CULG	2243.0	2246.0	III	G	1	50U	100	
			CULG	2347.0	2349.0	III	G	1	20	90	
			CULG	2356.0	2357.0	III	G	1	30	80	
10	0000	0855	HIRA								
	0000	0740	CULG	0107.0	0107.0	III	B	1	20	90	
	0539	1618	ONDR								
	0550	1700	BLEN								
	0555	1200	IZMI								
	2015	2400	HIRA								
	2020	2400	CULG	2035.0	2037.0	III	G	1	30	100	
11	0000	0740	CULG								
	0000	0853	HIRA								
	0540	1616	ONDR								
	0606	1200	IZMI								
	0550	1700	BLEN	0716.2	0716.5	III	GG	2	450	750	
	2016	2400	HIRA								
	2020	2400	CULG								
12	0000	0851	HIRA								
	0000	0740	CULG	0058.0	0552.0	I	S	1	60	180	
	0542	1614	ONDR								
	0550	1700	BLEN								
	0600	1200	IZMI								
			CULG	0623.0	0629.0	III	G	1	100	180	
	2017	2400	HIRA								
13	0000	0740	CULG								
	0000	0849	HIRA								
	0600	1700	BLEN								
	0706	1200	IZMI								
	0543	1612	ONDR	0737.1	0739.2	DCIM	G,W	1	2732	4500X	
	2020	2400	CULG								
14	0000	0740	CULG	0041.0	0041.0	III	B	2	20	60	
			CULG	0437.0	0437.0	III	B	1	50	120	
	0545	1610	ONDR								
	0604	1200	IZMI								
	0606	1700	BLEN								
			CULG	0703.0	0703.0	III	G	1	80	180	
	2020	2400	CULG								
15	0000	0740	CULG	0049.0	0052.0	III	G	1	27	150	
	0546	1607	ONDR								
	0600	1200	IZMI								
	0600	1645	BLEN								
			SVTO	1212.0	1212.0	III		1	25	46	
			HOLL	1415.0	1417.0	III		1	25	131	

S O L A R R A D I O E M I S S I O N Spectral Observations

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SEPTEMBER 2003

OBSERVATION			Sta	Start (UT)	End (UT)	EVENT		Int (1-3)	FREQUENCY		Remarks
Day	Start (UT)	End (UT)				Spectral Class	Event Remarks		Lower (MHz)	Upper (MHz)	
15			SGMR	1415.0	1417.0	III		1	30	55	
			SVTO	1415.0	1417.0	III		1	25	148	
	2020	2400	CULG								
16	0103	0845	HIRA								
	0548	1605	ONDR								
	0600	1645	BLEN								
	0000	0740	CULG	0734.0	0735.0	III	G	1	20	180	
	0600	1200	IZMI	0734.1	0734.6	III	GG	1	35	260	
	2020	2400	CULG								
	2020	2400	HIRA								
17	0000	0844	HIRA								
	0000	0740	CULG	0506.0	0512.0	III	G	1	20	180	
	0549	1603	ONDR								
	0600	1640	BLEN								
	0604	1205	IZMI	0635.0U	1205.0D	I	N	1	180	270	
	2010	2400	CULG	2021.0	2021.0	III	B	1	23	150	
			CULG	2208.0	2400.0D	I	S	1	130	180	
			CULG	2259.0	2259.0	III	B	1	30	150	
	2021	2400	HIRA	2259.0	2259.5	III	B	1	50	100	
18	0000	0740	CULG	0000.0E	0005.0	I	S	1	140	180	
			CULG	0001.0	0002.0	III	G	2	20	230	
			LEAR	0010.0	0011.0	III		1	25	180	
			PALE	0010.0	0011.0	III		1	25	151	
	0000	0842	HIRA	0010.5	0011.0	III	B	1	25X	200	
			CULG	0425.0	0426.0	III	G	1	20	160	
			LEAR	0425.0	0425.0	III		1	25	130	
			HIRA	0425.5	0426.0	III	B	1	25X	120	
			CULG	0438.0	0438.0	III	G	1	18	180	
			CULG	0507.0	0507.0	III	B	1	20	70	
	0551	1601	ONDR								
	0600	1640	BLEN								
	0550	1200	IZMI	1013.0U	1053.0U	I	N	1	180	250	
			IZMI	1149.7	1150.5	III	G	1	40	85	
			IZMI	1152.6	1152.9	III	G	1	35	85	
	2010	2400	CULG								
	2022	2400	HIRA								
19	0000	0231	HIRA								
	0000	0740	CULG								
	0532	0841	HIRA								
	0552	1559	ONDR								
	0600	1640	BLEN								
	0600	1200	IZMI	0658.1	0658.3	III	G	1	45	85	
			LEAR	0910.0	0915.0	III		1	58	180	
			HOLL	1515.0	1515.0	III		1	25	78	
			SVTO	1515.0	1515.0	III		1	25U	51U	
	2010	2400	CULG	2126.0	2126.0	III	G	1	30	180	
			HOLL	2159.0	2201.0	III		1	25	167	
			CULG	2200.0	2202.0	III	G	2	18	110	
			PALE	2200.0	2200.0	III		1	25	62	
			HOLL	2311.0	2311.0	III		1	25	132	
			LEAR	2311.0	2311.0	III		1	25	133	
			PALE	2311.0	2311.0	III		1	25	54	
	2022	2400	HIRA	2311.5	2312.0	III	B	1	25X	200	
			CULG	2312.0	2312.0	III	B	1	20	180	
			CULG	2357.0	2358.0	III	G	1	27	80	
20	0000	0840	HIRA								
	0000	0750	CULG	0105.0	0106.0	III	G	1	30	90	
			CULG	0212.0	0212.0	III	B	1	130	160	
	0554	1556	ONDR								
	0600	1630	BLEN								
	0603	1200	IZMI	0630.0U	1200.0D	I	N	1	180	270X	
			IZMI	0957.8	0958.1	III	G	1	180	190	
	2023	2400	HIRA								
	2010	2400	CULG	2115.0	2115.0	III	G	1	60	180	

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OBSERVATION			Sta	Start (UT)	End (UT)	EVENT		Int (1-3)	FREQUENCY		Remarks
Day	Start (UT)	End (UT)				Spectral Class	Event Remarks		Lower (MHz)	Upper (MHz)	
20			CULG	2120.0	2120.0	III	G	1	35	200	
			CULG	2206.0	2213.0	UNCLF		1	100	180	
			CULG	2231.0	2232.0	III	G	1	35	90	
21	0000	0750	CULG	0044.0	0044.0	III	B	1	18	180	
			CULG	0203.0	0207.0	III	G	2	20	180	
			HIRA	0203.0	0203.5	III	B	1	30	60	
	0000	0838	HIRA	0212.5	0213.0	III	B	1	40	70	
			CULG	0213.0	0213.0	III	B	2	25	170	
			CULG	0220.0	0220.0	III	B	1	20	50	
			CULG	0301.0	0302.0	III	G	1	20	50	
			CULG	0437.0	0444.0	III	G	1	18	180	
			CULG	0551.0	0551.0	III	B	1	20	35	
	0555	1554	ONDR								
	0555	1200	IZMI	0555.0E	1200.0D	I	S	1	170	270X	
	0600	1630	BLEN								
			CULG	0700.0	0700.0	III	B	1	23	90	
			IZMI	0807.6	0813.0	III	GG	2	110	270X	
	2024	2400	HIRA								
	2010	2400	CULG	2034.0	2034.0	III	B	1	30	60	
			CULG	2038.0	2038.0	III	B	1	23	150	
22	0000	0120	CULG								
	0000	0836	HIRA								
	0210	0750	CULG								
	0555	1200	IZMI	0555.0E	1155.0U	I	N	1	210	270X	
	0557	1552	ONDR								
	0605	1620	BLEN								
	2010	2400	CULG	2010.0E	2210.0	I	S	1	120	180	
			HIRA								
			PALE	2036.0	2038.0	III		1	25	180	
			CULG	2124.0	2124.0	III	B	1	120	180	
			CULG	2217.0	2217.0	III	B	1	27	180	
			CULG	2231.0	2231.0	III	B	1	20	110	
23	0000	0835	HIRA								
	0000	0750	CULG	0219.0	0219.0	III	B	1	35	90	
			CULG	0530.0	0731.0	I	S	1	110	180	
	0559	1550	ONDR								
	0600	1200	IZMI	0600.0E	1028.0U	I	N	1	120	270X	
			BLEN								
			IZMI	0652.1	0704.1	I	GG	1	45	65	
			IZMI	0752.4	0752.5	III	B	1	45	90	
	2000	2400	CULG								
	2026	2400	HIRA								
24	0000	0750	CULG	0220.0	0222.0	III	G	1	20	400	
			CULG	0227.0	0228.0	III	G	2	18X	450	
	0000	0833	HIRA	0227.5	0228.5	III	G	1	25X	340	
			CULG	0327.0	0327.0	III	B	1	25	75	
			CULG	0423.0	0424.0	III	G	1	25	170	
			HIRA	0423.0	0424.0	III	G	1	60	150	
			CULG	0432.0	0436.0	III	G	3	18X	700	
			LEAR	0432.0	0435.0	III		1	25	180	
			HIRA	0432.5	0434.5	III	G	3	25X	700	
			CULG	0452.0	0453.0	III	G	3	18	180	
			HIRA	0452.0	0452.5	III	B	1	25X	200	
			LEAR	0452.0	0452.0	III		1	25	180	
			LEAR	0530.0	0531.0	III		1	25	180	
			SVTO	0530.0	0531.0	III		1	25	180	
			HIRA	0530.5	0531.0	III	B	1	40	340	
			CULG	0531.0	0531.0	III	G	1	20	400	
			CULG	0550.0	0730.0	I	S,C	1	100	180	
			LEAR	0550.0	0835.0	CONT		1	100	180	
			SVTO	0605.0	0642.0	CONT		1	118	180	
	0606	1200	IZMI	0606.0E	1015.0U	I	N,DC	2	110	270X	
	0610	1620	BLEN	0624.3	0625.2	III	GG,RS,C	3	280	4000X	
			HIRA	0624.5	0625.0	III	B	2	300	800	
			CULG	0625.0	0625.0	III	B	1	280	800	

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OBSERVATION			EVENT				FREQUENCY			Remarks	
Start	End	Sta	Start (UT)	End (UT)	Spectral Class	Event Remarks	Int (1-3)	Lower (MHz)	Upper (MHz)		
Day	(UT)										(UT)
24			BLEN	0630.3	0633.7	III	GG,RS	2	200	800	
			IZMI	0632.1	0632.1	III	B	2	240	270X	
			BLEN	0713.8	0714.6	III	GG,S	2	260	800	
			CULG	0714.0	0716.0	III	G	1	300	820	
	0600	1547	ONDR	0715.2	0716.1	DCIM	G	2	800X	1695	
			BLEN	0715.5	0718.4	II		2	100X	560	
			HIRA	0715.5	0716.5	III	G	1	300	850	
			CULG	0717.0	0718.0	III	G	2	25	550	
			HIRA	0717.0	0718.5	II		3	140	510	
			IZMI	0717.2	0717.8	III	HARM	1	195	250	
			IZMI	0717.4	0717.5	III	G	3	225	270X	
			IZMI	0717.9	0718.4	III	GG	2	25X	260	
			SVTO	0718.0	0718.0	III		1	25	180	
			BLEN	0755.8	0759.6	III	G,S	3	360	1200	
			IZMI	0819.2	0819.7	III	G	2	195	270X	
			BLEN	0853.8	0855.1	III	GG,RS,C	3	100X	4000X	
			IZMI	0853.8	0855.3	III	GG,C	2	25X	270X	
			LEAR	0854.0	0855.0	III		1	25	180	
			SVTO	0854.0	0856.0	III		2	25	180	
			ONDR	0854.2	0854.5	DCIM	G	2	800X	1836	
			IZMI	0854.7	0854.8	III	B,RS	2	205	260	
			BLEN	0931.4	0935.2	III	GG	2	200	700	
			IZMI	0932.6	0934.7	III	GG	1	180	270X	
			SVTO	1037.0	1038.0	III		2	25	152	
			BLEN	1037.7	1038.1	III	GG,RS	2	100X	900	
			IZMI	1037.8	1038.3	III	G,C	2	25X	270X	
			IZMI	1100.1	1100.7	III	G	1	220	270X	
			BLEN	1155.1	1159.3	III	GG,S,C	2	450	1000	
			BLEN	1405.7	1407.5	III	GG,S,C	2	100X	4000X	
			HOLL	1406.0	1407.0	III		1	25	180	
			SGMR	1407.0	1407.0	III		2	30	80	
			SVTO	1407.0	1407.0	III		2	25	180	
			HOLL	1738.0	1739.0	III		1	25	180	
			PALE	1738.0	1739.0	III		1	25	180	
			SGMR	1738.0	1740.0	III		2	30	80	
	2026	2400	HIRA								
	2000	2400	CULG	2035.0	2400.0D	III	N	1	25	90	
25	0000	0750	CULG	0000.0E	0750.0D	III	N	1	25	90	
	0000	0832	HIRA	0233.5	0234.0	III	B	1	300	420	
			CULG	0234.0	0234.0	III	B	1	150	460	
			CULG	0538.0	0645.0	I	S,C	1	50	90	
			IZMI	0600.0E	1200.0D	I	N	1	50U	270X	
	0600	1200	IZMI	0600.0E	1200.0D	III	N	1	25X	95 U	
	0602	1545	ONDR								
	0610	1615	BLEN								
			IZMI	0724.8	0725.1	III	B	1	25X	85	
			IZMI	0820.4	0828.5	III	GG	1	25X	85	
			IZMI	0927.7	0929.3	III	G	2	25X	90	
			IZMI	0932.5	0936.3	III	GG	2	25X	85	
			IZMI	1108.4	1110.3	I	GG,DC	2	150	215	
			SVTO	1251.0	1252.0	III		1	25	42	
			SVTO	1305.0	1306.0	III		1	25	42	
	2000	2400	CULG	2000.0E	2400.0D	III	N	1	27	90	
			HOLL	2023.0	2338.0	III	N	1	25	180	
			PALE	2023.0	2024.0	III		1	25	150	
			CULG	2024.0	2153.0	III	N	2	18	180	
			CULG	2032.0	2035.0	III	G	3	20	180	
			PALE	2032.0	2040.0	III		1	25	180	
			SGMR	2032.0	2034.0	III		2	30	80	
	2027	2400	HIRA	2032.5	2034.0	III	G	3	30	180	
			PALE	2045.0	2047.0	III		1	25	180	
			SGMR	2045.0	2047.0	III		2	30	80	
			HIRA	2045.5	2047.5	III	G	3	25X	300	
			CULG	2046.0	2047.0	III	G	3	18	180	
			CULG	2113.0	2117.0	III	G	3	18	180	
			PALE	2113.0	2117.0	III		1	25	106	
			HIRA	2113.5	2117.5	III	G	2	25X	150	
			PALE	2121.0	2128.0	III	N	1	25	180	

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OBSERVATION			Sta	Start (UT)	End (UT)	EVENT		Int (1-3)	FREQUENCY		Remarks
Day	Start (UT)	End (UT)				Spectral Class	Event Remarks		Lower (MHz)	Upper (MHz)	
25			CULG	2127.0	2130.0	III	G	3	18X	200	
			HIRA	2127.0	2129.5	III	G	1	25X	230	
			CULG	2257.0	2300.0	III	G	2	18	180	
			HIRA	2257.5	2300.5	III	G	1	25X	170	
			LEAR	2308.0	0941.0	III	N	1	25	180	
			HIRA	2335.5	2339.0	III	G	1	25X	210	
			CULG	2336.0	2339.0	III	G	2	18	180	
26	0000	0750	CULG	0000.0E	0750.0D	III	N	1	18	180	
	0000	0830	HIRA	0019.5	0020.0	III	B	1	25X	50	
			CULG	0020.0	0020.0	III	B	2	20	180	
			HIRA	0200.0	0200.5	III	B	1	25X	50	
			CULG	0201.0	0201.0	III	G	2	18	180	
			LEAR	0548.0	0941.0	CONT		1	44	170	
			SVTO	0548.0	1622.0	CONT		1	25	180	
			CULG	0549.0	0750.0D	I	S,C	1	40	180	
			IZMI	0600.0E	1200.0D	III	N	1	25X	95U	
	0600	1200	IZMI	0600.0E	1200.0D	I	S,C,DC	1	45U	210	
	0603	1543	ONDR								
			IZMI	0632.0	0651.2	I	S	2	45	95	
			IZMI	0640.7U	0649.0	III	S	2	45	95	
			SVTO	0808.0	0810.0	III		2	25	170	
			IZMI	0808.4	0811.8	III	GG	2	25X	260	
			HIRA	0808.5	0810.5	III	G	1	25X	210	
			IZMI	0811.9	0812.7	III	GG	1	45	270X	
			IZMI	0820.4	0828.7	I	GG,DC	2	75	100	
			IZMI	0833.9	0844.3	I	GG,DC	2	65	120	
			IZMI	0851.4	0851.5	III	B	2	30	140	
			IZMI	0906.2	0908.2	I	GG,DC	2	130	165	
			IZMI	1008.1	1008.3	III	B	2	25X	100	
			SVTO	1019.0	1021.0	III		2	25	163	
			IZMI	1019.7	1020.6	III	GG,C	2	25X	270X	
			IZMI	1020.9	1021.2	III	G	2	25X	165	
			IZMI	1142.3	1143.1	III	G	2	25X	240	
			IZMI	1142.8	1149.3	I	GG,DC	2	120	150	
			SGMR	1205.0	1206.0	III		1	30	80	
			SVTO	1205.0	1206.0	III		2	25	161	
	0615	1615	BLEN	1205.6	1219.1	III	GG,RS	2	100X	800	
			BLEN	1448.1	1454.9	III	GG,RS	2	100X	800	
			HOLL	1505.0	1505.0	III		1	25	87	
			SGMR	1505.0	1505.0	III		1	30	55	
			SVTO	1505.0	1505.0	III		1	25U	83U	
			HOLL	1510.0	1531.0	III	N	1	25	138	
			HOLL	1613.0	1641.0	III	N	1	25	124	
	2000	2400	CULG	2000.0E	2400.0D	I	S,C	1	60	160	
			CULG	2055.0	2400.0D	III	N	1	20	180	
			HOLL	2139.0	0036.0	CONT		1	76	166	
			HOLL	2250.0	2259.0	III		1	25	120	
	2028	2400	HIRA	2250.5	2251.0	III	B	1	25X	140	
			LEAR	2252.0	0940.0	CONT		1	25	180	
			LEAR	2258.0	2259.0	III		1	25	180	
			PALE	2258.0	2259.0	III		1	25	87	
			CULG	2259.0	2259.0	III	B	3	18X	140	
			HIRA	2259.0	2259.5	III	B	3	25X	130	
			CULG	2331.0	2331.0	III	B	2	18	300	
			HIRA	2331.0	2331.5	III	B	1	25X	310	
			HOLL	2331.0	2331.0	III		1	25	180	
			LEAR	2331.0	2331.0	III		1	25	180	
			PALE	2331.0	2331.0	III		1	25	180	
27			CULG	0000.0E	0750.0D	III	N	1	20	180	
	0000	0750	CULG	0000.0E	0750.0D	I	S,C	2	60	150	
			CULG	0010.0	0010.0	III	B	2	18	130	
			CULG	0016.0	0016.0	III	B	2	20	80	
			CULG	0359.0	0401.0	III	G	2	20	100	
			CULG	0420.0	0421.0	III	G	3	18X	100	
			SVTO	0508.0	1620.0	CONT		1	25	180	
			LEAR	0518.0	0519.0	III		1	25	180	
			SVTO	0518.0	0519.0	III		1	25U	83U	

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OBSERVATION			Sta	Start (UT)	End (UT)	EVENT		Int (1-3)	FREQUENCY		Remarks
Day	Start (UT)	End (UT)				Spectral Class	Event Remarks		Lower (MHz)	Upper (MHz)	
27	0000	0829	HIRA	0518.5	0519.5	III	G	1	30	70	
			CULG	0519.0	0520.0	III	G	3	18X	100	
			IZMI	0555.0E	1200.0D	III	N	2	25X	140U	
	0555	1200	IZMI	0555.0E	1200.0D	I	S,C,DC	2	45U	270X	
			ONDR								
			SVTO	0621.0	0635.0	III	N	2	25	155	
	0605	1540	IZMI	0621.8	0623.5	III	GG	2	25X	270X	
			CULG	0622.0	0629.0	III	GG	3	20	180	
			HIRA	0622.5	0623.0	III	B	2	25X	190	
	0605	1540	LEAR	0625.0	0627.0	III		1	25	180	
			IZMI	0625.3	0629.6	III	GG	2	25X	205	
			HIRA	0625.5	0628.0	III	G	1	30	150	
	0605	1540	CULG	0634.0	0636.0	III	G	2	25U	180	
			IZMI	0634.2	0635.6	III	GG	2	35	190	
			IZMI	0719.3	0719.4	III	B	2	240	270X	
	0605	1540	LEAR	0758.0	0940.0	III	N	1	25	180	
			SVTO	0758.0	1104.0	III	N	1	25	180	
			IZMI	0758.8	0800.8	III	G	2	25X	160	
	0605	1540	IZMI	0807.2	0817.1	III	GG	2	25X	150	
			IZMI	0912.2	0918.3	III	GG	2	25X	250	
			IZMI	0955.9	0956.3	III	G	2	25X	150	
	0605	1540	IZMI	1030.3	1032.0	III	G	2	25X	270X	
			IZMI	1037.3	1047.3	III	GG	2	25X	270X	
			IZMI	1044.7	1047.8	CONT		2	50	160	
	0605	1540	IZMI	1100.5	1104.1	III	G	2	25X	95	
			IZMI	1143.1	1145.1	III	G	2	40	95	
			IZMI	1153.4	1157.6	III	GG	2	25X	270X	
	0605	1540	SGMR	1154.0	1155.0	III		2	30	80	
			SVTO	1154.0	1155.0	III		1	25	180	
			BLEN	1154.7	1242.4	III	GG,C	2	100X	4000X	
	0605	1540	SGMR	1607.0	1607.0	III		2	30	80	
			HOLL	1815.0	1815.0	III		1	25	56	
			PALE	1815.0	1815.0	III		1	25	58	
	2000	2400	CULG	2000.0E	2400.0D	III	N	1	20	180	
			HIRA	2000.0E	2400.0D	I	S,C	1	60	180	
			LEAR	2246.0	0941.0	CONT		1	75	180	
	2029	2400	LEAR	2246.0	0941.0	III	N	1	25	180	
28	0000	0827	HIRA								
			CULG	0000.0E	0129.0	III	N	1	20	160	
			CULG	0000.0E	0750.0D	I	S	1	100	180	
	0000	0750	CULG	0255.0	0255.0	III	G	1	27	120	
			CULG	0434.0	0436.0	III	G	2	25	160	
			CULG	0451.0	0527.0	I	S	1	50	90	
	0000	0750	CULG	0531.0	0531.0	III	B	2	18	160	
			CULG	0554.0	0554.0	III	B	1	20	130	
			IZMI	0600.0E	1200.0D	I	S,C,DC	2	55	270X	
	0600	1200	ONDR								
			IZMI	0609.7	0610.0	III	G	2	25X	85	
			CULG	0610.0	0610.0	III	B	2	20	100	
	0607	1538	BLEN								
			CULG	0645.0	0648.0	III	G	3	20	90	
			IZMI	0645.5	0647.6	III	G,HARM	2	25X	85	
	0620	1610	IZMI	0701.9	0716.0	I	GG,DC	2	120	165	
			CULG	0710.0	0710.0	III	G	2	20	80	
			IZMI	0740.0U	1053.0U	III	U	1	25X	95	
	0620	1610	IZMI	0753.7	0754.2	III	G	1	50	160	
			IZMI	0906.4	0907.4	III	G	2	25X	160	
			IZMI	0954.1	0955.3	III	G	1	25X	95	
	0620	1610	HOLL	1714.0	1714.0	III		1	25	148	
			PALE	1714.0	1714.0	III		1	25	97	
	2030	2400	HIRA								
			CULG	2119.0	2120.0	III	G	1	27	90	
			CULG	2147.0	2400.0D	I	S	1	130	180	
	2000	2400	LEAR	2312.0	0339.0	CONT		1	119	180	
29	0000	0347	CULG								
			LEAR	0352.0	0356.0	III		1	25	87	

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Sep 03

S O L A R R A D I O E M I S S I O N Spectral Observations

SEPTEMBER 2003

OBSERVATION			Sta	Start (UT)	End (UT)	EVENT		Int (1-3)	FREQUENCY		Remarks
Day	Start (UT)	End (UT)				Spectral Class	Event Remarks		Lower (MHz)	Upper (MHz)	
29	0000	0826	HIRA	0352.5	0353.0	III	B	1	25X	110	
			LEAR	0449.0	0450.0	III		1	25	149	
	0608	1536	ONDR								
			IZMI	0640.0U	1200.0D	III	N	1	25X	270X	
	0600	1200	IZMI	0640.0U	1200.0D	I	N	1	45U	270X	
	0535	0750	CULG	0726.0	0726.0	III	B	1	25	90	
			IZMI	0726.2	0726.3	III	B	2	40	90	
			IZMI	0804.2	0804.4	III	G,C	2	180	270X	
			LEAR	0827.0	0830.0	III		1	25	180	
			IZMI	0827.3	0828.6	III	GG,C	2	35	270X	
	0620	1610	BLEN	0827.3	0828.7	III	GG	2	100X	600	
			IZMI	0827.8	0829.1	I	GG	2	130	165	
			IZMI	0829.9	0830.3	III	GG,C	2	30	270X	
			IZMI	0914.0	0919.4	III	GG	2	45	270X	
			IZMI	1052.8	1054.6	III	GG	2	25X	85	
			IZMI	1058.8	1059.6	III	GG	2	25X	190	
			HOLL	1515.0	1527.0	III	N	1	25	149	
			SGMR	1518.0	1525.0	III		1	30	45	
			HOLL	1719.0	1748.0	III	N	1	25	120	
			SGMR	1732.0	1749.0	III	N	1	30	80	
			PALE	1838.0	0335.0	III	N	1	25	90	
	2000	2400	CULG	2105.0	2117.0	III	G	2	20	170	
			HOLL	2145.0	2151.0	III		1	25	180	
			CULG	2146.0	2151.0	III	G	2	20	180	
	2030	2400	HIRA	2146.0	2150.0	III	G	1	25X	500	
			CULG	2206.0	2212.0	III	G	2	20	180	
			HIRA	2209.0	2212.0	III	G	1	25X	150	
			HOLL	2209.0	2211.0	III		1	25	180	
			CULG	2226.0	2309.0	III	N	1	20	130	
			CULG	2339.0	2340.0	III	G	1	20	130	
			HIRA	2339.0	2339.5	III	B	1	25X	40	
			LEAR	2339.0	2339.0	III		1	25	85	
30	0000	0230	CULG	0002.0	0005.0	III	G	3	18	180	
			HOLL	0003.0	0003.0	III		1	25	89	
			LEAR	0003.0	0003.0	III		1	25	144	
	0000	0825	HIRA	0003.0	0003.5	III	B	3	25X	80	
			LEAR	0028.0	0941.0	III	N	1	25	180	
			CULG	0029.0	0038.0	III	GG	2	18X	300	
			CULG	0041.0	0050.0	III	GG	3	18X	200	
			HIRA	0041.0	0046.5	III	G	1	25X	230	
			CULG	0059.0	0100.0	III	G	1	20	90	
			CULG	0103.0	0103.0	III	B	1	30	80	
	0340	0510	CULG	0354.0	0405.0	III	G	2	20	90	
			HIRA	0404.5	0405.0	III	B	1	25X	40	
			CULG	0419.0	0419.0	III	B	1	27	180	
			CULG	0426.0	0427.0	III	G	1	27	150	
			CULG	0443.0	0443.0	III	B	1	27	75	
	0535	0750	CULG	0543.0	0549.0	III	G	1	30	130	
			CULG	0553.0	0557.0	III	G	1	20	180	
			HIRA	0553.0	0556.5	III	G	1	30	200	
	0555	1200	IZMI	0556.3	0602.0	III	GG	1	25X	195	
			IZMI	0604.9	1200.0D	III	N	1	45	95	
			IZMI	0616.0U	1200.0D	I		1	200	270X	
			CULG	0620.0	0626.0	III	G	1	27	160	
			IZMI	0621.4	0626.5	III	GG	1	45	95	
			CULG	0650.0	0750.0D	III	N	1	25	140	
			CULG	0654.0	0654.0	III	B	2	23	120	
			HIRA	0654.0	0654.5	III	B	1	40	110	
			IZMI	0654.3	0654.7	III	G	2	25X	95	
			IZMI	0702.7	0704.1	III	G RM	2	40	95	
			IZMI	0712.3	0721.2	III	GG	1	40	160	
			CULG	0717.0	0718.0	III	G	3	23	150	
			HIRA	0717.0	0718.0	III	G	2	30	100	
			IZMI	0717.3	0719.3	III	G	2	25X	140	
			IZMI	0734.7	0737.6	III	GG	1	35	95	
			IZMI	0822.0	0822.0	III	B	1	45	95	
			LEAR	0847.0	0902.0	III		2	25	180	
	0620	1610	BLEN	0847.0	0851.1	III	GG	3	100X	3500	

S O L A R R A D I O E M I S S I O N

Spectral Observations

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Sep 03

SEPTEMBER 2003

OBSERVATION			Sta	Start (UT)	End (UT)	EVENT		Int (1-3)	FREQUENCY		Remarks
Day	Start (UT)	End (UT)				Spectral Class	Event Remarks		Lower (MHz)	Upper (MHz)	
30			IZMI	0847.2	0853.8	III	GG	2	25X	270X	
			ONDR	0848.4	0853.0	DCIM	G	2	800X	2000X	
	0610	1534	ONDR	0848.4	0853.1	DCIM	G	1	2000X	4500X	
			IZMI	0856.8	0856.9	III	G	2	40	145	
			IZMI	0857.9	0859.1	III	GG	1	25X	65	
			IZMI	0902.1	0902.4	III	B	2	25X	85	
			IZMI	0905.1	0907.4	III	G	2	25X	95	
			IZMI	0911.7	0913.4	III	GG,C	2	25X	270	
			IZMI	1112.0	1123.5	III	GG	1	40	70	
	2000	2400	CULG	2054.0	2123.0	III	N	1	23	90	
			LEAR	2252.0	0240.0	III	N	1	25	180	
			CULG	2322.0	2322.0	III	B	1	20	180	
			HOLL	2322.0	2322.0	III		1	25	65	
	2031	2400	HIRA	2322.0	2322.5	III	B	1	25X	130	

Event Remarks:

B = Single burst C = Underlying continuum (particularly with Type I) DC = Drifting chains DP = Drifting pairs F = Fundamental emission (Type II) FS = Fine structures (Type IV) G = Small group of bursts (<10) GG = Large group of bursts (>10) H = Herringbone HARM = Harmonic	N = Intermittent activity in this period MOV = Moving (Type IV) MWB = Meter wave burst RS = Reverse slope burst S = Storm in the sense of intermittent but apparently connected actively SH = Secondary harmonic emission STA = Stationary (Type IV) U = U-shaped burst of Type III UE = Uncertain emission (Type II) W = Weak
--	--

Frequency qualifiers:

X = Extends beyond instrument range U = Uncertain frequency

Remarks:

SWF = Associated short wave fade observed

ESS = Estimated shock speed in km/s (Type II)

FLA = Associated flare observed (class optional)

Stations Reporting:

CULG = Culgoora	IZMI = Izmiran	LEAR = Learmonth	ONDR = Ondrejov	BLEN = Bleien
PALE = Palehua	POTS = Potsdam	SGMR = Sagamore Hill	SVTO = San Vito	

NOTE 1: Beginning June 26, 2001, the Bleien observatory changed to higher frequencies (1-4Ghz).

SOLAR RADIO NOISE STORM AT 164 MHZ

FROM NANÇAY RADIOHELIOGRAPH

SEPTEMBER 2003

DAY	HELIOGRAPHICS POSITIONS MEAN VALUES ¹		IMP ²	OBSERVING TIME ³	
	E-W	S-N		START(UT)	END(UT)
04/09/03	-0.67	-0.37	II	8H44 E	15H20 D
05/09/03	-0.42	-0.36	I	8H20 E	15H00 D
06/03/03	-0.03	-0.34	I	8H18 E	15H19 D
17/09/03	+0.82	+0.19	II	8H14 E	15H15 D
18/09/03	+1.01	+0.19	I	8H14 E	15H15 D
20/09/03	-1.36	-0.14	I	8H13 E	15H14 D
20/09/03	+0.71	-0.48	II	10H50	15H14 D
21/09/03	-1.24	-0.11	I	8H13 E	15H14 D
23/09/03	-0.96	-0.59	I	8H12 E	15H13 D
24/09/03	-0.78	-0.16	I	8H12 E	15H13 D
25/09/03	-0.28	-0.28	III	8H33 E	15H13 D
26/09/03	-0.25	+0.00	III	8H11 E	15H12 D
27/09/03	+0.08	-0.02	IV	8H11 E	15H12 D
28/09/03	+0.28	-0.05	III	8H10 E	15H11 D
29/09/03	+0.50	-0.12	I	8H10 E	15H06 D
29/09/03	+1.05	-0.26	II	8H10 E	15H06 D
30/09/03	+1.05	-0.29	II	8H10 E	15H06 D

¹ POSITIVE E-W AND S-N COORDINATES CORRESPOND TO THE N-W QUADRANT

² IMP1: FLUX< 5 SFU IMP2: 5<FLUX < 20 SFU IMP3: 20<FLUX <100 SFU
IMP4: 100<FLUX <300 SFU IMP5> 300 SFU

³ E NOISE STORM IN PROGRESS AT THE BEGINNING OF THE NANÇAY OBSERVATIONS
D NOISE STORM IN PROGRESS AT THE END OF THE NANCAY OBSERVATIONS

NOISE STORM AT 327 MHZ

FROM NANÇAY RADIOHELIOGRAPH

SEPTEMBER 2003

DAY	HELIOGRAPHICS POSITIONS MEAN VALUES ¹		IMP ²	OBSERVING TIME ³	
	E-W	S-N		START(UT)	END(UT)
04/09/03	-0.65	-0.33	I	8H44 E	15H20 D
05/09/03	-0.34	-0.25	I	8H20 E	15H00 D
06/09/03	+0.00	-0.33	I	8H18 E	15H19 D
17/09/03	+0.85	+0.11	II	8H14 E	15H15 D
18/09/03	+1.01	+0.09	I	8H14 E	15H15 D
19/09/03	+0.45	-0.39	I	8H14 E	15H15 D
19/09/03	+1.10	+0.03	I	8H14 E	15H15 D
20/09/03	-1.21	-0.06	I	8H13 E	15H14 D
20/09/03	+0.78	-0.33	I	8H13 E	15H14 D
21/09/03	-1.16	-0.11	II	8H13 E	15H14 D
22/09/03	-1.01	-0.19	I	8H13 E	15H14 D
23/09/03	-0.78	-0.25	I	8H12 E	15H13 D
24/09/03	-0.57	-0.03	I	8H12 E	15H13 D
25/09/03	-0.26	-0.02	I	8H33 E	15H13 D
25/09/03	-0.20	-0.36	I	11H00	15H13 D
26/09/03	-0.19	+0.00	I	8H11 E	15H12 D
26/09/03	+0.16	-0.23	I	8H11 E	10H44
27/09/03	+0.12	-0.03	III	8H11 E	15H12 D
27/09/03	+0.40	-0.28	I	8H11 E	11H14
28/09/03	+0.34	+0.00	III	8H10 E	15H11 D
29/09/03	+0.53	-0.03	II	8H10 E	15H06 D
29/09/03	+0.91	-0.08	II	8H10 E	15H06 D
30/09/03	+0.51	-0.23	I	8H10 E	15H06 D
30/09/03	+1.05	-0.09	II	8H10 E	15H06 D

08, 09 SEPTEMBER : NO DATA

OTHERS DAYS: NO DETECTABLE NOISE STORM

- For the days marked by an asterisk, intense ionospheric gravity waves are observed during the whole day. Without a more detailed analysis leading to increase uncertainties in the deviation, the positions which are indicated are estimated within +/- 0.2 R.

** Following a large burst

*** Importance not well determined due to the proximity off the very strong other source

**** No flux measurements available

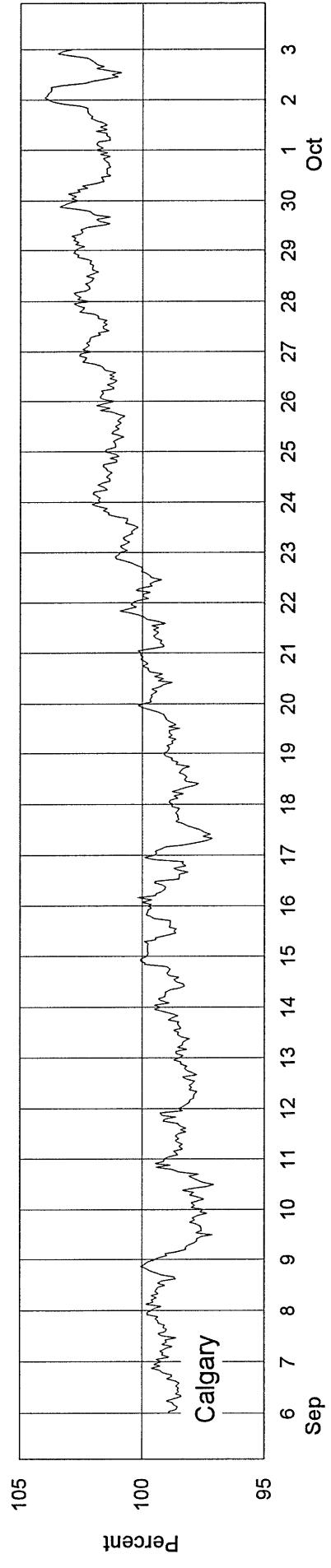
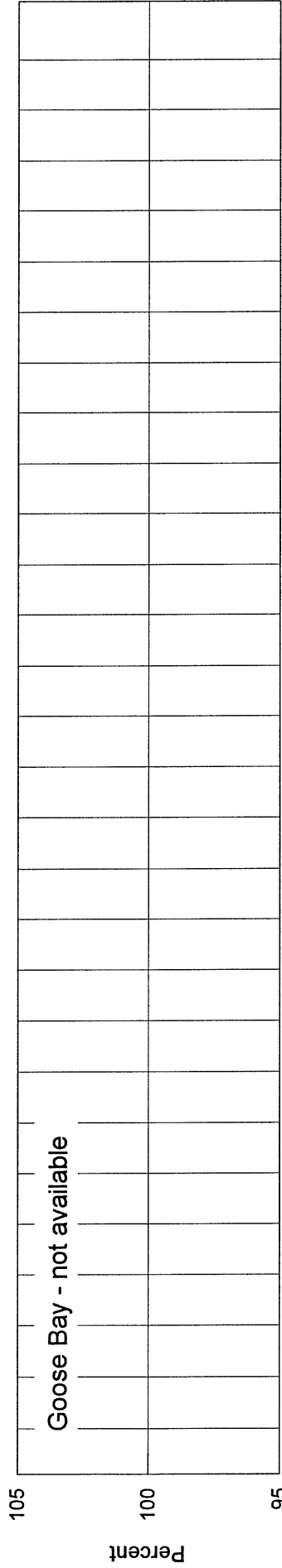
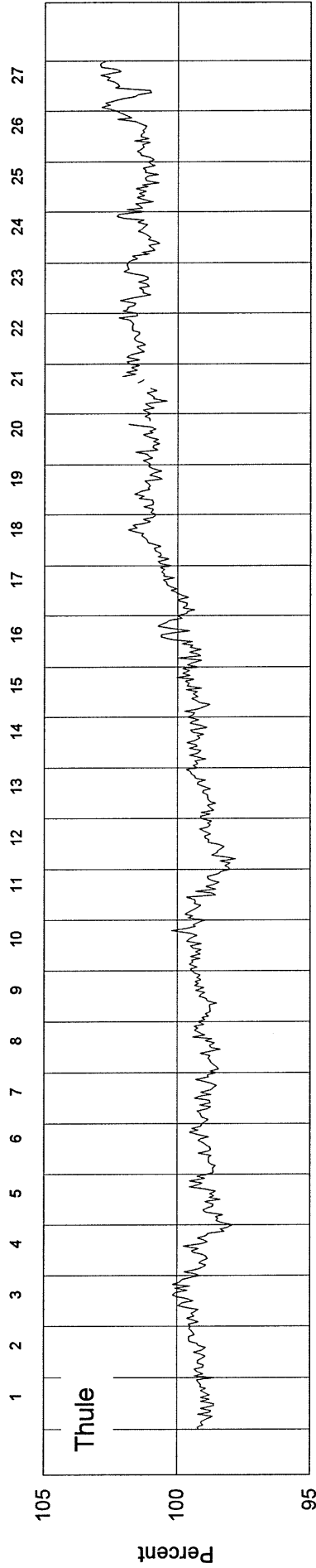
COSMIC RAY INDICES
(Neutron Monitor)
September 2003

Day	THULE Average (cts/h)/100	CALGARY Average (cts/h)/300	KIEL Average (cts/h)/100	MOSCOW Average (cts/h)/64	CLIMAX Average (cts/h)/100	BEIJING Average (cts/h)/256	HALEAKALA Average (cts/h)/1000
1	3985.0	3492.8	5606.1	8211.2	3698.9	1902.6	3467.7
2	3980.0	3494.8	5587.8	8206.9	3695.5	1897.3	3461.5
3	3987.1	3498.7	5572.2	8202.0	3704.8	1894.8	3464.0
4	3970.8	3483.2	5557.2	8185.9	3695.0	1892.9	3472.8
5	3967.9	3473.8	5557.6	8187.8	3689.8	1898.4	3473.3
6	3975.5	3487.5	5572.8	8190.5	3699.0	1898.2	3474.3
7	3985.2	3500.5	5592.4	8227.8	3717.2	1905.9	3484.0
8	4002.8	3509.8	5623.4	8278.2	3739.2	1911.8	3490.7
9	3977.6	3460.2	5599.7	8249.0	3718.5	1907.6	3472.6
10	3967.5	3461.5	5586.3	8198.7	3717.0	1902.3	3467.6
11	3973.8	3481.5	5586.7	8191.6	3717.6	1899.0	3460.5
12	3973.7	3463.0	5570.1	8173.6	3711.4	1895.6	3453.2
13	3970.6	3478.7	5578.6	8182.5	3721.5	1886.6	3461.5
14	3977.4	3496.3	5585.5	8197.3	3738.5	1897.5	3473.8
15	3992.9	3508.3	5591.5	8222.1	3742.7	1899.0	3472.2
16	3977.9	3497.8	5581.4	8224.3	3759.8	1907.7	3488.5
17	3957.9	3470.7	5573.0	8229.7	3741.7	1900.9	3459.5
18	3977.5	3475.0	5564.8	8221.6	3733.8	1904.3	3465.1
19	3987.9	3495.0	5590.1	8239.2	3742.0	1917.3	3473.5
20	3994.2	3515.0	5590.7	8254.1	3761.4	1922.9	3470.1
21	4009.6	3520.3	5612.2	8261.9	3761.0	1915.0	3466.3
22	4019.6	3532.3	5649.1	8308.5	3782.4	1923.9	3477.5
23	4057.1	3560.3	5703.7	8368.0(22)	3811.9	1926.0	3493.7
24	4058.3	3582.0	5711.6	8387.5	3836.0	1937.8	3512.5
25	4059.2(23)	3570.5	5703.2	8360.4(23)	3835.8	1938.7	3513.9
26	4066.0(21)	3587.0	5718.2	8409.0	3832.5	1937.7	3517.4
27	4081.6	3601.0	5741.0	8425.8	3844.7	1943.8	3526.4
28	4079.7	3610.0	5749.2	8452.2	3855.0	1951.1	3535.2
29	4071.5	3614.0	5747.0	8428.2	3857.8	1950.2	3541.3
30	4066.8	3596.2	5700.0	8374.5	3822.4	1947.2	3525.9
Mean	4004.0	3517.3	5623.5	8268.3	3756.2	1913.8	3483.9

For less than 24-hour coverage, parentheses enclose the number of hours for which data are available. For Climax, parentheses enclose the number of section hours whenever the sum of both sections falls below 40 hours, and for Haleakala, whenever the sum of all three sections falls below 60 hours.

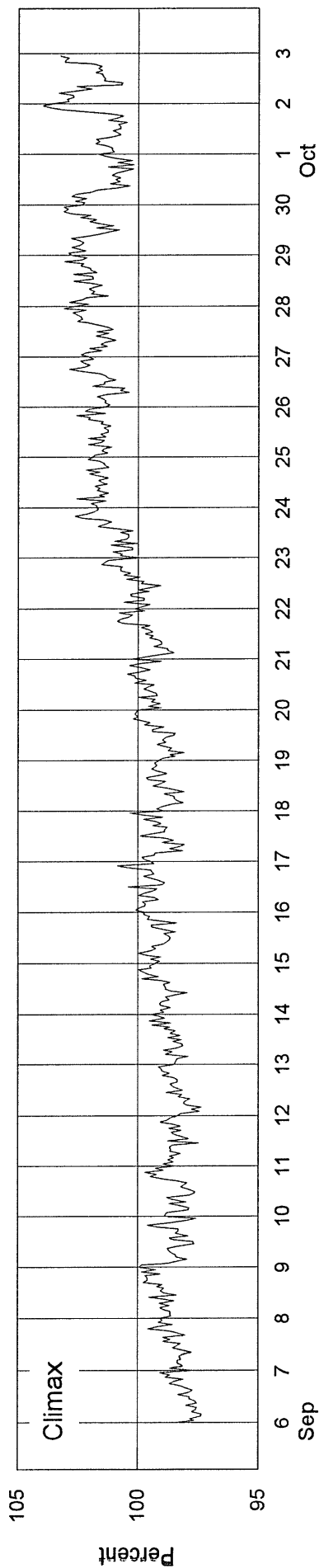
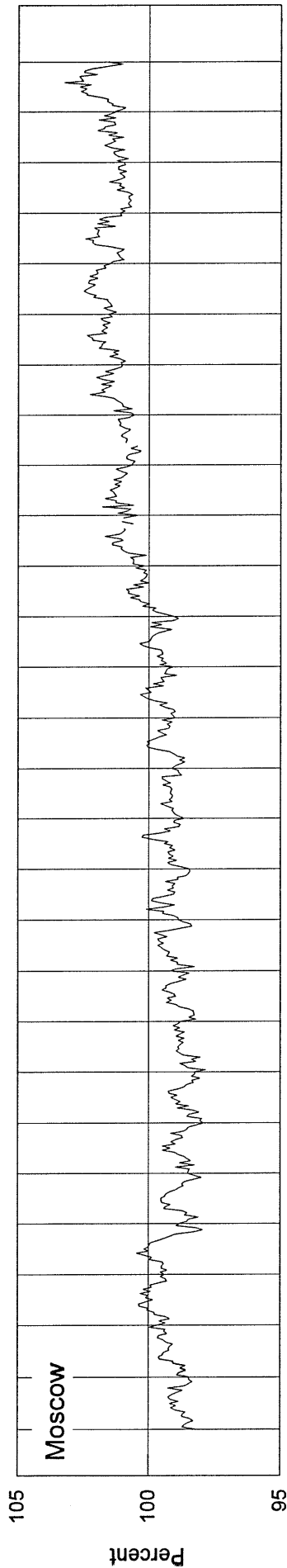
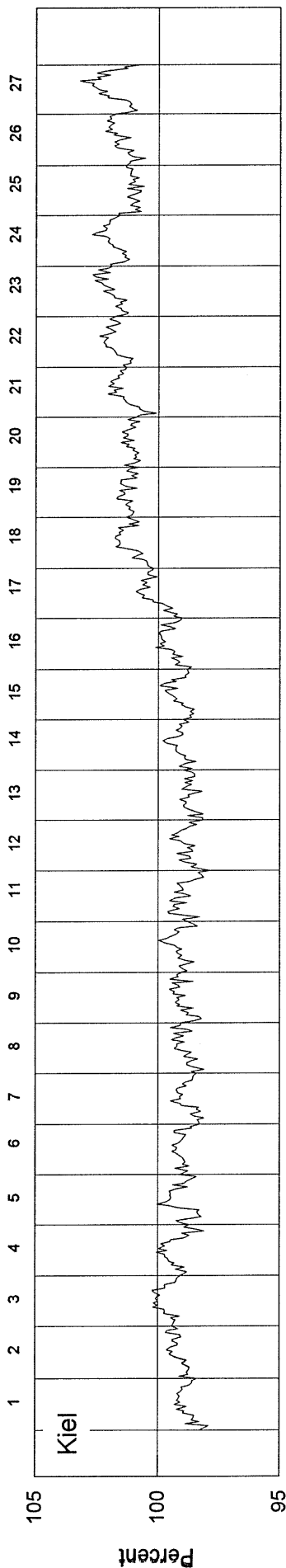
COSMIC RAY INDICES (Neutron Monitor)

Bartels Rotation 2322 - Beginning 6 Sept 2003



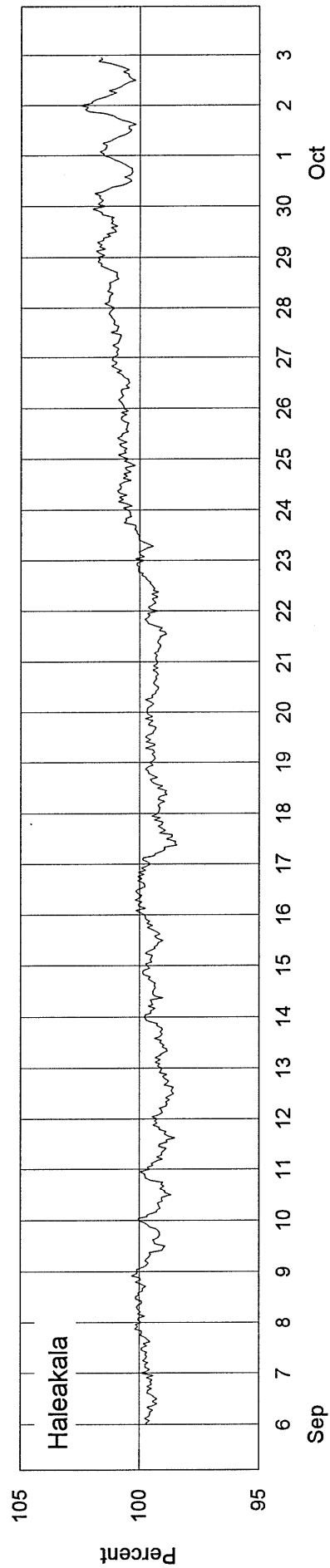
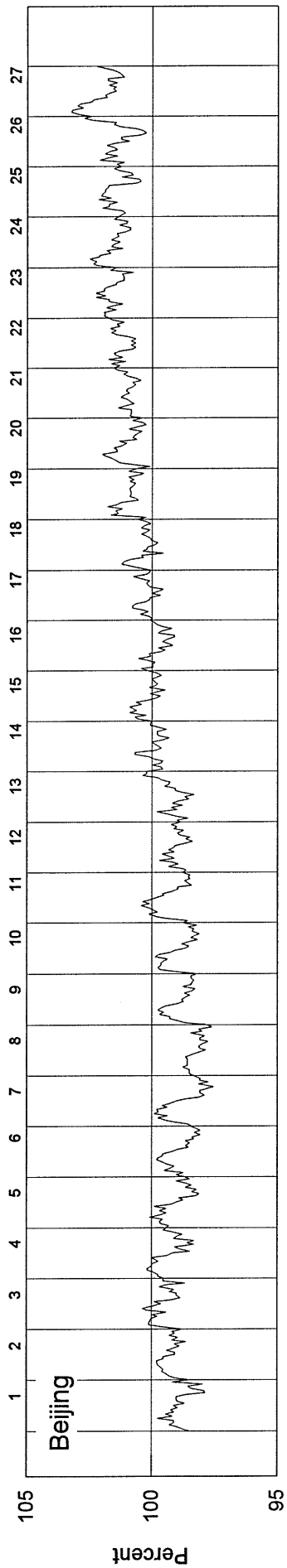
COSMIC RAY INDICES (Neutron Monitor)

Bartels Rotation 2322 - Beginning 6 Sept 2003

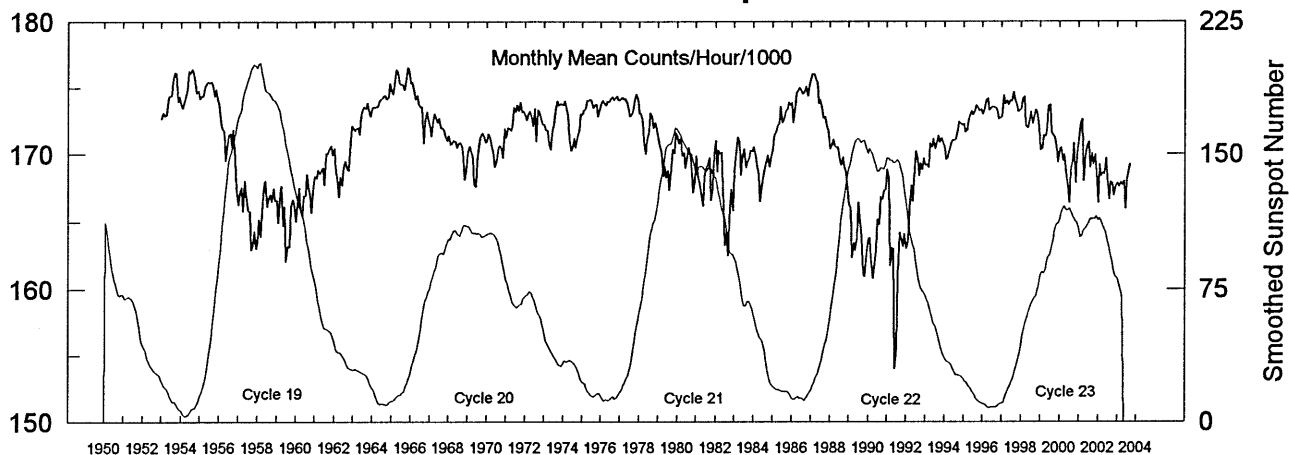


COSMIC RAY INDICES (Neutron Monitor)

Bartels Rotation 2322 - Beginning 6 Sept 2003



Huancayo* Neutron Monitor Pressure-Corrected/Adjusted Values Jan 1953 - Sep 2003



Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Mean
1953	1727	1732	1730	1729	1742	1744	1744	1756	1762	1761	1740	1744	1743
1954	1737	1735	1738	1744	1747	1763	1761	1764	1762	1754	1746	1748	1750
1955	1742	1744	1744	1751	1754	1755	1754	1755	1753	1744	1749	1741	1749
1956	1738	1724	1719	1718	1696	1707	1715	1716	1706	1719	1697	1675	1711
1957	1663	1671	1675	1658	1680	1670	1659	1658	1630	1633	1643	1630	1656
1958	1635	1652	1639	1657	1677	1680	1661	1667	1670	1665	1675	1666	1662
1959	1666	1649	1671	1676	1647	1661	1621	1632	1632	1661	1666	1663	1654
1960	1650	1663	1675	1660	1654	1669	1669	1685	1674	1670	1657	1677	1667
1961	1684	1682	1688	1685	1688	1690	1677	1701	1700	1704	1706	1699	1692
1962	1704	1687	1683	1668	1683	1677	1690	1695	1690	1688	1703	1721	1691
1963	1720	1718	1720	1720	1715	1729	1734	1736	1734	1739	1732	1729	1727
1964	1735	1736	1736	1736	1739	1741	1742	1744	1744	1741	1743	1753	1741
1965	1748	1745	1756	1764	1762	1754	1753	1753	1748	1754	1765	1764	1755
1966	1754	1754	1747	1741	1744	1737	1736	1736	1708	1725	1732	1727	1737
1967	1721	1714	1726	1731	1727	1724	1727	1720	1720	1718	1713	1710	1721
1968	1714	1708	1708	1710	1710	1705	1708	1709	1706	1698	1681	1689	1704
1969	1702	1706	1702	1698	1678	1676	1695	1708	1714	1716	1714	1709	1701
1970	1709	1715	1712	1707	1701	1691	1695	1705	1706	1705	1697	1719	1705
1971	1712	1720	1720	1718	1722	1735	1732	1737	1732	1739	1732	1732	1728
1972	1730	1726	1731	1732	1728	1721	1734	1710	1733	1733	1726	1723	1727
1973	1723	1719	1718	1709	1704	1716	1723	1733	1740	1737	1738	1738	1725
1974	1737	1740	1736	1729	1713	1703	1704	1712	1705	1713	1718	1731	1720
1975	1730	1733	1734	1740	1740	1742	1740	1735	1737	1738	1729	1733	1736
1976	1738	1741	1739	1737	1740	1740	1742	1743	1742	1742	1744	1741	1741
1977	1741	1743	1742	1742	1740	1735	1729	1730	1732	1742	1745	1741	1739
1978	1731	1731	1726	1710	1700	1710	1717	1731	1729	1719	1724	1720	1721
1979	1711	1707	1702	1684	1691	1682	1688	1674	1689	1703	1700	1717	1696
1980	1713	1708	1712	1699	1701	1690	1698	1705	1699	1688	1672	1680	1697
1981	1699	1682	1680	1671	1662	1685	1690	1693	1697	1666	1675	1700	1683
1982	1710	1687	1703	1700	1702	1662	1632	1643	1625	1662	1674	1658	1671
1983	1688	1703	1713	1709	1685	1697	1704	1690	1694	1697	1703	1702	1699
1984	1705	1699	1693	1685	1665	1677	1684	1691	1695	1699	1691	1698	1690
1985	1703	1714	1716	1721	1723	1736	1724	1727	1732	1734	1739	1737	1725
1986	1739	1724	1734	1746	1748	1750	1748	1745	1747	1751	1744	1752	1744
1987	1757	1760	1760	1757	1754	1738	1741	1735	1728	1728	1721	1718	1741
1988	1704	1706	1711	1706	1705	1705	1696	1692	1698	1690	1688	1674	1698
1989	1663	1660	1624	1635	1629	1638	1664	1650	1640	1611	1609	1627	1637
1990	1638	1638	1623	1608	1616	1630	1651	1648	1668	1666	1673	1673	1644
1991	1689	1682	1617	1631	1630	1540	1555	1611	1642	1638	1632	1641	1626
1992	1630	1635	1659	1677	1665	1689	1702	1696	1684	1693	1688	1697	1676
1993	1692	1692	1690	1708	1705	1711	1704	1707	1714	1709	1712	1709	1705
1994	1705	1696	1697	1703	1708	1711	1711	1711	1718	1724	1723	1722	1711
1995	1723	1717	1718	1726	1730	1732	1730	1733	1736	1735	1732	1734	1729
1996	1730	1734	1740	1742	1733	1735	1736	1736	1735	1733	1727	1727	1734
1997	1728	1744	1738	1740	1737	1741	1739	1747	1741	1737	1733	1733	1738
1998	1734	1741	1744	1721	1720	1723	1732	1723	1728	1733	1731	1719	1729
1999	1703	1704	1714	1713	1719	1736	1737	1717	1714	1713	1705	1694	1714
2000	1704	1704	1695	1700	1685	1678	1664	1688	1695	1708	1679	1699	1692
2001	1712	1723	1726	1680	1700	1705	1791	1690	1701	1693	1700	1687	1709
2002	1664	1693	1684	1686	1685	1696	1683	1666	1680	1679	1669	1672	1680
2003	1679	1676	1679	1677	1680	1659	1681	1688	1693				1679

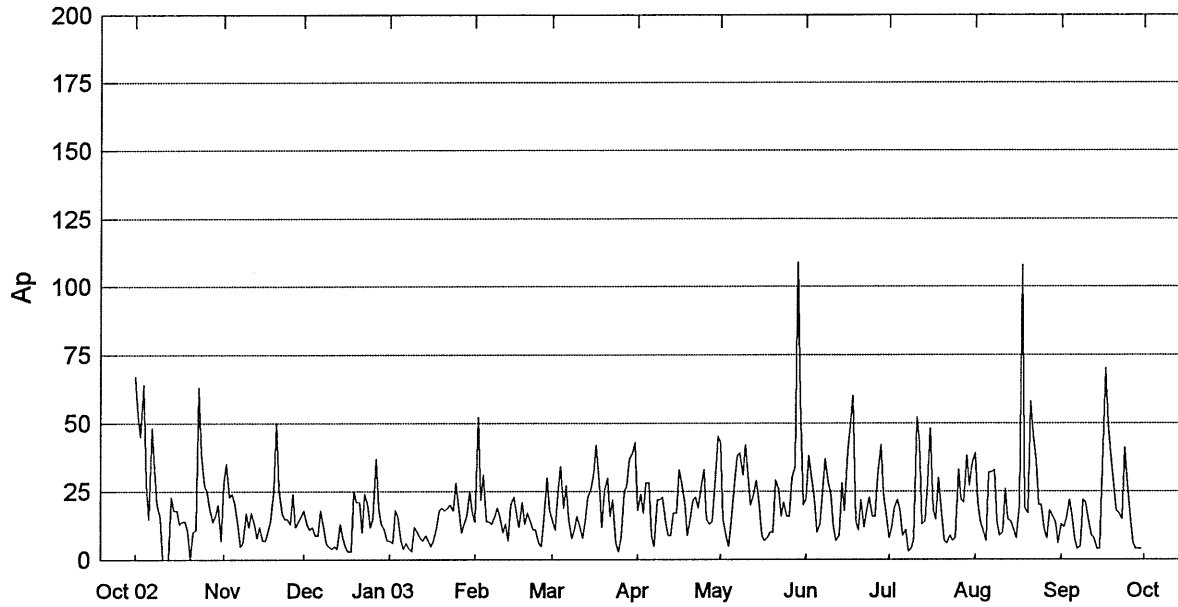
Multiply table entries by 100 to obtain hourly counting rate for Huancayo, Peru: S12 W75, Alt=3400m, Cutoff Rigidity=12.92GV (1980). NOTE: Secular changes in the Earth's magnetic field resulted in a slow lowering of the geomagnetic cutoff rigidity at Huancayo over the 40 year period. This dataset was adjusted by applying a linear time-correction based on the calculated change in response to the change in the vertical cutoff. * Data from Jan 92 on are from the 18-NM64 at Haleakala, Hawaii: N20 W156, Alt=3030m, Cutoff Rigidity=12.91GV (1980). Multiply table entries by 2057.6 to obtain equivalent Haleakala counting rate.

Geomagnetic Activity Indices

September 2003

Day	Kp Three-Hourly Indices								Sum	Ap	Cp	Km Three-Hourly Indices								Am	aa Provisional				
	1	2	3	4	5	6	7	8				1	2	3	4	5	6	7	8		N	S	M		
1	2	4-	3+	1+	1+	3-	4	2+	21-	13	0.8	2-	3+	3+	2-	1+	2+	4-	2o	23	25	20	22	23	
2		3+	2-	2-	2+	4	2+	2-	20	12	0.7	3-	2-	1+	2+	4-	2+	2o	3o	22	22	19	16	25	
3		3	3	3-	3+	3-	3-	3+	24	15	0.8	3o	3o	3-	3+	2+	2+	3+	4-	30	30	28	32	26	
4		3+	3+	4-	3	4	3	4	29-	22	1.1	3+	3o	4-	3+	4-	3-	3+	4o	39	40	47	35	52	
5		4	4-	3+	3	3	3+	2	24-	16	0.9	4-	3+	3o	3o	3-	3o	2-	2-	28	30	32	39	23	
6	Q9A	3-	2	2	2+	2	2	2+	18-	8	0.5	2+	2o	2o	3-	2o	2+	2o	2+	17	20	14	18	16	
7	Q4	2+	2	1-	0	0+	1+	1	8	4	0.1	2o	2-	0o	0+	0+	1+	1o	0+	7	8	6	7	8	
8	Q7K	1-	0+	0+	1-	2	1+	2-	10	5	0.2	0+	0o	0+	1-	1+	2-	2-	3+	10	12	9	4	17	
9		2	2	2+	4+	4+	3+	4+	27+	22	1.1	2-	2o	3-	4-	4-	3-	4o	5-	37	38	41	27	52	
10		5	2	2+	5-	3	3	4-	27-	21	1.1	4+	2o	2+	4-	3o	3-	3+	3o	34	40	33	43	30	
11		4	4	1+	2+	2	3-	3	22	14	0.8	4o	4-	1o	3-	2o	2+	3-	3-	25	31	22	28	25	
12		2+	3+	3	2	2	2-	2	18-	9	0.5	2+	3o	2+	2o	2+	2-	2-	1+	17	19	17	22	14	
13	Q10A	3+	3	2+	2-	0+	0+	1	14+	8	0.4	3o	3-	3-	2o	1-	0+	1+	3-	16	17	18	23	12	
14	Q2	1+	1-	1	0+	1+	1+	1+	9	4	0.2	1+	1o	1+	1-	1+	1o	1o	2o	9	10	8	8	10	
15	Q6K	1+	0+	0	0	0+	1-	2	8-	4	0.1	1+	0+	0o	0+	0+	1-	2o	3-	7	13	10	4	19	
16	D5	5-	4	4+	4	6-	4+	4+	34+	34	1.3	4o	3o	4o	4-	5+	4+	4+	3-	55	48	67	49	67	
17	D1	5+	5+	5	6+	7	5+	5	45	70	1.7	4+	4+	4+	5o	6o	5-	5-	5o	87	104	76	77	103	
18	D2	5	6-	4+	6	5-	5	5-	40+	50	1.6	4+	5o	4-	5-	4o	4o	4+	5-	67	79	65	75	70	
19	D4	5-	4-	5+	5+	5	4+	5-	36+	39	1.4	4+	3o	5-	5o	4+	4-	4o	3+	57	52	57	60	49	
20		4	5-	5-	4-	4	5-	3-	31	27	1.2	3+	4o	4-	4o	4-	4o	2+	2+	41	40	44	49	35	
21		4	3-	3	3+	4	3+	3+	26	18	1.0	4-	2+	3o	3o	4-	3o	3-	2+	29	34	33	33	35	
22		3	3+	3	4-	3+	3	4	24+	17	0.9	2+	3o	3o	4-	3o	3-	4-	1+	29	35	31	37	29	
23		2+	4	2+	2+	3	3+	3	23+	15	0.8	2+	3o	3-	3-	3o	3+	3o	3o	27	32	26	25	33	
24	D3	6-	5+	5	4-	4	4	5-	37	41	1.5	4+	4+	4+	4-	4-	4-	4o	4o	54	59	51	63	48	
25		4+	4	4	4+	4	4	4+	33-	28	1.2	4-	3o	4o	4o	4-	4-	4-	3o	45	54	46	51	49	
26		3	3-	4-	3+	2+	3	3	24	15	0.9	3-	2+	4-	3+	3-	3-	3o	3+	29	29	29	31	27	
27	Q8K	3+	1	1-	1-	0+	0+	1-	9+	6	0.2	3-	0+	1-	1o	0o	0+	1-	2-	7	12	6	11	8	
28	Q1	1-	0+	1+	1	1+	2-	1+	8	4	0.1	1-	0+	1-	1+	1+	2-	1+	1-	7	9	7	6	10	
29	Q3	2-	2	0+	1+	1-	0+	1-	9-	4	0.1	1+	1o	0+	2-	1-	0+	1-	1+	6	9	6	8	7	
30	Q5	0+	1-	2-	1	1+	2-	1-	9+	4	0.2	1-	1+	2o	1+	2o	2o	1o	2o	11	8	12	8	13	
Mean										18	0.78									29.1	32.1	29.4	30.7		
Day	Kn Three-Hourly Indices								An	Ks Three-Hourly Indices								Prov				Ra	Rs	IMF	
	1	2	3	4	5	6	7	8		1	2	3	4	5	6	7	8	As	Sa	Ri					
1	2-	4-	3+	2-	1+	3-	3+	3-	24	2-	3+	3+	1+	1o	2-	4o	2-	22	110.1	46	53	57			
2	3-	1+	2-	2+	4o	2+	2o	3o	22	3-	2-	1o	2o	4-	2+	2-	3o	21	107.6	43	46	54			
3	3-	3o	2+	3+	3-	2+	3o	3+	28	3+	3-	3-	3+	2o	2+	3+	4o	31	112.4	47	45	59			
4	3o	3-	4-	3+	4-	3o	4-	4-	38	3+	3+	4-	3+	3+	2+	3+	4o	39	114.1	50	50	61			
5	3+	3+	3o	3o	3o	3+	1+	2o	28	4-	3+	3o	3o	2+	3o	2-	2-	28	109.8	39	43	57			
6	2+	2o	2o	3-	2o	2o	2+	2+	18	2+	2o	2-	3-	2-	2+	2o	2+	16	106.6	37	40	53			
7	2-	2o	0+	0+	1-	2-	1+	0+	8	2+	1+	0o	0+	0o	1o	1o	0o	6	109.4	30	26	56			
8	0+	0o	0+	1o	2o	2o	2o	3+	12	0+	0o	1-	0+	1o	1o	1+	3o	7	100.3	25	18	46			
9	2o	2+	3-	4-	4-	3-	4o	4+	36	2-	2-	3-	4o	3+	3-	4o	5-	38	97.3	17	21	43			
10	4+	2-	2+	4o	3o	3o	4-	3o	35	4+	2o	2+	4-	3o	3-	3+	3o	33	100.6	28	31	47			
11	4-	4o	1o	3-	2o	3-	3-	2+	26	4o	3+	1+	2+	2o	2+	2+	3-	25	98.0	34	35	44			
12	2+	3o	3-	2+	3-	2o	2o	2-	19	3-	3-	2o	2-	2-	1o	2-	1o	14	95.6	29	33	41			
13	3o	3o	3-	2+	1-	1-	1o	2o	17	3o	3-	2+	1+	0+	0+	2-	3-	16	97.3	30	32	43			
14	1o	1-	1+	1-	2-	1o	1+	2-	8	2-	1o	2-	1-	1o	1o	1o	2+	9	95.8	36	37	41			
15	1o	0+	0o	0+	0+	1-	2o	3o	8	1+	1-	0o	0o	0+	1-	2o	2+	7	98.4	42	38	44			
16	4-	3o	4+	4o	5+	4+	4o	3-	56	4o	3-	4-	3+	5+	5-	5-	2+	55	100.4	46	46	46			
17	5-	5-	5-	5+	6o	5-	5-	5-	92	4o	4+	4+	5-	6-	4+	4+	5o	81	107.0	58	62	54			
18	4+	5o	4-	5o	4o	4o	4+	5-	72	4+	5-	3+	5-	4o	4o	5-	5-	63	110.2	58	60	57			
19	4o	3+	5-	5o	4o	4o	4-	3o	55	4+	3o	5-	5-	4+	4-	4o	4-	59	112.1	52	53	59			
20	3+	4+	4o	4o	4o	4-	2+	2+	43	3+	4o	3+	4o	4-	4o	2o	2o	39	112.9	46	49	60			
21	4-	2+	3+	3o	4-	3o	3-	2+	31	4-	2o	3-	3-	3+	3o	3o	2o	27	120.9	50	52	69			
22	2+	3+	3o	4-	3+	3o	4-	1+	31	2o	3-	3-	3+	3o	3-	4o	1+	26	123.5	57	57	71			
23	2o	3o	3-	3-	3+	3+	3o	3o	29	2+	3o	3-	3-	3-	3+	3-	3-	25	125.7	65	66	74			
24	4+	4+	4+	4-	4-	4-	4o	4o	57	4o	4+	4o	3+	3+	4-	4-	4o	51	134.3	64	75	83			
25	3+	3+	4o	4+	4o	4+	4-	3o	47	4-	3o	4o	4o	4-	3+	4-	3o	43	133.4	67	77	82			
26	3-	2+	4-	4-	3-	3o	3+	3o	31	3-	2+	3+	3+	2+	2+	3-	4-	27	131.8	77	85	80			
27	2+	0o	1-	1o	0+	0+	1o	2-	7	3o	1-	0+	1o	0o	0o	1-	2-	8	130.3	79	86	79			
28	0+	0o	1o	2-	1+	2-	1+	0+	7	1-	0o	1-	1+	1+	1+	1+	1-	6	137.6	71	79	87			
29	1-	1o	0+	2-	1o	1-	1-	1+	7	1+	1o	0+	1+	0o	0o	0+	2-	6	135.6	74	73	84			
30	0o	1o	2o	1+	2+	2-	1o	2o	11	1o	2-	2o	1o	2o	2o	1o	2-	11	133.3	66	75	82			
Mean										30.1									28.0	113.4	48.8	51.5	60.5		

Daily Average Indices Ap Oct 2002 - Sep 2003

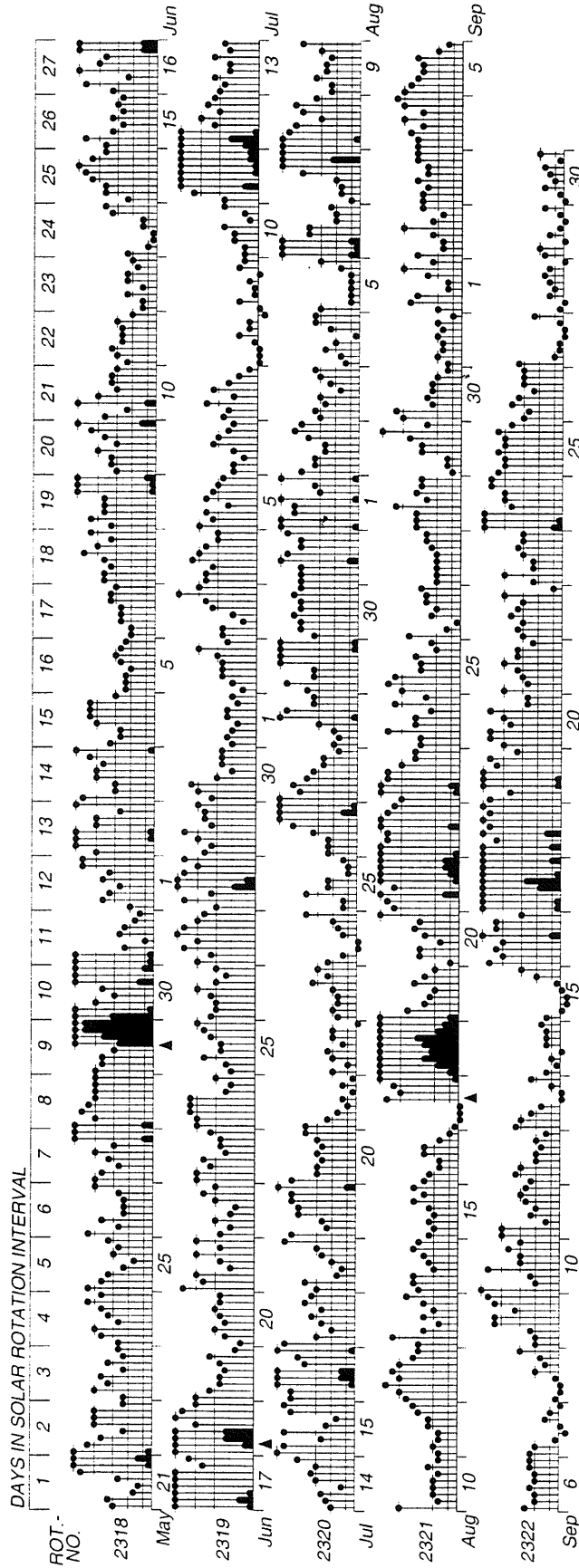


Day	Oct 02	Nov	Dec	Jan 03	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1	67	7	18	7	14	15	18	43	22	8	39	13
2	53	28	13	6	52	11	24	15	38	12	21	12
3	45	35	11	18	22	24	17	9	29	19	14	15
4	64	23	12	16	31	34	28	5	22	22	10	22
5	28	24	9	7	14	19	28	14	10	18	7	16
6	15	21	9	4	14	27	9	28	13	9	32	8
7	48	13	18	6	13	15	5	38	25	11	32	4
8	33	5	12	4	16	8	22	39	37	3	33	5
9	20	6	6	3	19	11	22	31	28	4	14	22
10	16	17	5	12	16	16	23	42	24	7	9	21
11	6	12	4	10	10	12	14	31	12	52	10	14
12	6	17	5	8	13	8	9	20	7	43	26	9
13	5	13	4	7	7	14	9	24	9	13	15	8
14	23	8	13	9	20	23	17	29	28	14	14	4
15	18	12	8	7	23	26	17	22	18	28	11	4
16	18	7	5	5	17	31	33	9	40	48	8	34
17	13	7	3	7	12	42	28	7	49	18	20	70
18	14	10	3	12	21	28	21	8	60	15	108	50
19	14	14	25	18	13	12	9	10	14	30	19	39
20	10	25	21	19	17	25	14	10	11	17	17	27
21	8	50	21	18	14	30	22	29	22	7	58	18
22	10	26	10	19	11	16	23	26	12	6	46	17
23	11	17	24	20	11	22	19	16	18	9	36	15
24	63	15	20	18	6	6	27	21	23	7	20	41
25	39	15	12	28	5	3	33	16	16	8	20	28
26	27	13	15	20	15	8	15	16	16	33	11	15
27	25	24	37	10	30	25	13	30	31	22	8	6
28	19	12	19	13	18	27	14	34	42	21	18	4
29	14	14	13	16		37	27	109	24	38	16	4
30	16	16	11	25		39	45	59	17	27	14	4
31	20		7	17		43		20		35	6	
Mean	25	17	13	13	17	21	20	26	24	19	23	18

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

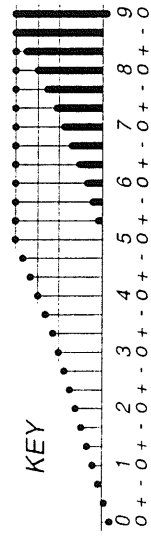
GeoForschungsZentrum Potsdam

Kp through September 30, 2003

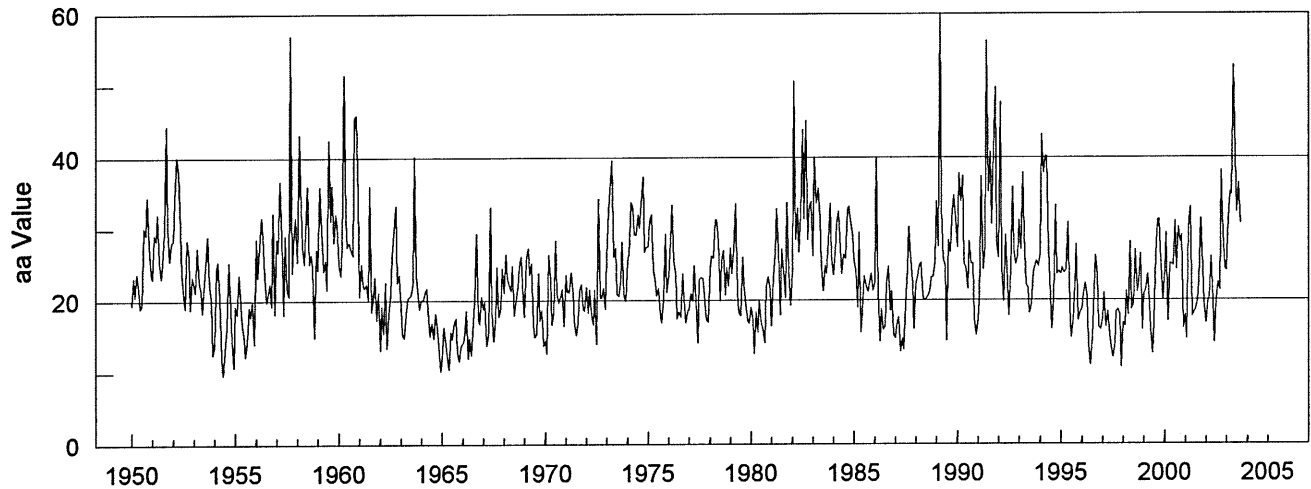


PLANETARY MAGNETIC
THREE-HOUR-RANGE INDICES

Kp till 2003 Sep 30



Monthly Mean aa Index Jan 1950 - Sep 2003



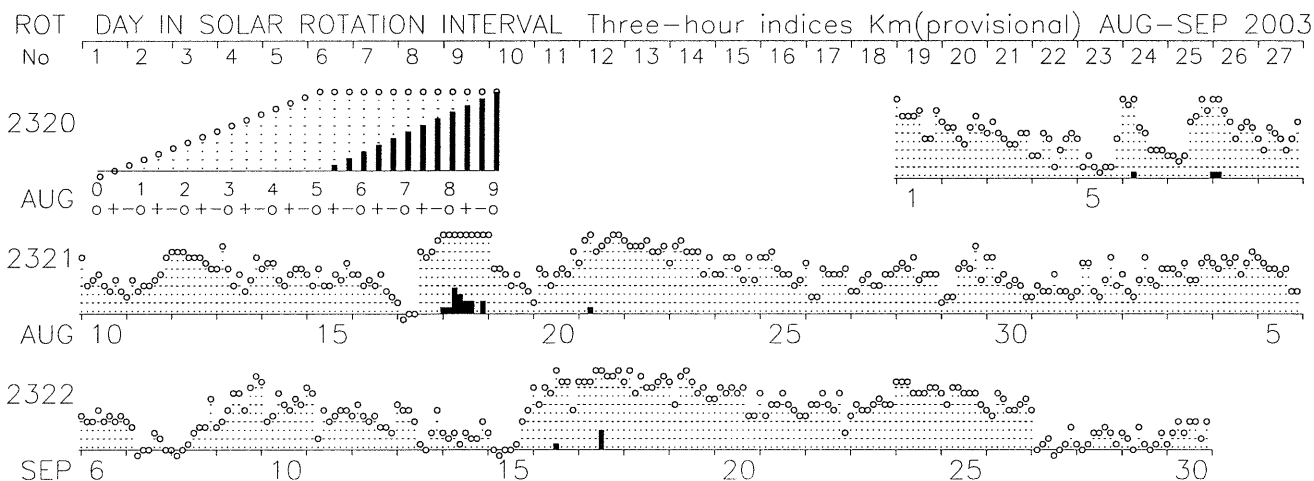
Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Mean
1950	19.5	23.2	20.6	23.8	21.7	19.0	19.5	30.2	29.3	34.5	28.0	24.0	24.4
1951	23.1	29.2	28.5	32.1	25.5	23.2	25.2	29.7	44.4	30.3	25.7	28.2	28.8
1952	28.5	34.3	40.1	38.0	33.1	23.8	20.7	19.0	28.5	26.4	18.9	23.4	27.9
1953	22.3	21.2	27.4	22.7	21.4	18.4	22.5	26.1	29.0	22.4	20.2	12.6	22.2
1954	13.9	24.5	25.5	20.6	12.0	9.7	13.1	16.5	25.4	21.1	14.5	10.9	17.3
1955	19.3	18.2	23.6	21.1	16.7	15.1	12.3	14.3	19.1	17.8	19.9	14.1	17.6
1956	28.7	23.3	27.6	31.7	29.3	23.5	19.8	20.7	22.4	19.3	32.3	18.2	24.7
1957	28.7	26.8	36.7	28.8	18.1	29.1	21.7	20.7	57.0	24.0	29.5	31.7	29.4
1958	25.5	43.2	36.1	27.6	25.2	29.7	36.0	25.1	26.5	24.7	15.0	27.2	28.5
1959	24.3	35.9	29.9	24.2	25.7	21.6	42.5	31.2	36.1	28.2	32.1	30.8	30.2
1960	25.2	23.5	27.6	51.5	31.6	27.6	28.1	27.2	26.4	45.6	45.9	34.5	32.9
1961	20.6	25.1	22.0	21.8	22.3	20.1	36.0	18.5	20.7	23.3	17.3	21.1	22.4
1962	13.2	19.2	15.5	22.6	13.4	18.1	21.0	26.2	29.8	33.3	22.5	23.5	21.5
1963	19.3	15.3	14.9	18.2	20.4	20.5	20.8	22.5	40.2	23.5	20.7	18.9	21.3
1964	20.1	20.1	21.0	21.7	17.5	15.1	16.9	14.8	18.2	16.9	13.8	10.3	17.2
1965	11.8	16.3	14.3	12.6	10.5	15.7	14.7	16.8	17.5	13.1	11.7	13.8	14.1
1966	14.2	14.8	18.6	12.0	14.8	12.5	17.1	20.0	29.4	17.5	16.8	20.5	17.3
1967	18.9	19.8	13.8	15.5	33.1	18.6	14.4	17.5	24.7	17.8	18.9	24.5	19.8
1968	21.1	26.5	23.3	22.2	21.4	24.9	18.0	20.1	22.0	24.8	26.2	20.3	22.6
1969	17.8	25.8	27.3	23.6	25.2	16.7	15.0	15.3	23.8	17.2	18.7	13.8	20.0
1970	14.4	12.7	26.4	23.1	16.6	18.3	28.4	21.0	19.7	20.6	21.6	16.5	19.9
1971	23.5	21.2	21.1	23.9	21.1	17.0	15.2	17.1	21.4	22.2	18.8	18.6	20.1
1972	21.9	18.3	21.5	18.1	16.6	21.5	14.0	34.2	20.4	20.4	21.8	18.9	20.6
1973	26.1	32.7	36.9	39.6	26.1	27.3	20.9	20.6	22.8	28.2	20.7	19.9	26.8
1974	25.8	26.4	33.7	32.9	29.2	29.2	32.0	30.2	33.7	37.3	26.8	27.5	30.4
1975	27.6	31.1	32.0	24.3	22.7	20.7	21.7	18.1	16.9	20.2	29.3	21.1	23.8
1976	23.3	28.5	33.4	25.4	23.7	17.5	18.4	17.7	23.7	20.4	16.9	18.6	22.3
1977	18.7	21.0	19.9	24.9	20.1	14.2	22.9	23.2	23.0	20.9	17.3	17.0	20.3
1978	24.6	26.2	25.9	31.3	31.2	28.3	19.9	25.6	27.0	20.8	24.6	22.0	25.6
1979	27.3	23.7	26.9	33.5	21.0	18.3	17.9	26.0	22.0	19.3	17.1	16.8	22.5
1980	19.0	17.3	12.7	18.4	15.6	20.0	17.0	15.9	14.2	21.9	23.3	21.7	18.1
1981	16.5	23.1	26.6	32.8	26.9	18.0	27.2	24.0	20.4	33.7	24.1	19.3	24.4
1982	24.2	50.6	28.5	32.9	26.7	32.1	43.9	31.4	45.1	28.5	33.0	33.8	34.2
1983	26.2	40.0	33.6	35.7	31.6	24.9	21.3	24.9	23.7	28.3	33.5	26.0	29.1
1984	23.5	26.7	30.7	32.5	27.2	23.7	26.4	25.8	32.6	33.1	31.0	29.0	28.5
1985	25.7	24.1	19.0	29.5	15.6	19.9	23.4	22.0	21.2	22.2	23.7	21.4	22.3
1986	22.4	40.0	21.1	14.3	18.8	15.9	16.3	22.3	24.7	18.6	21.2	15.3	20.9
1987	14.8	16.6	17.6	12.9	14.7	13.2	19.3	24.3	30.3	25.8	22.4	16.0	19.0
1988	22.4	23.4	24.8	25.2	20.5	20.0	20.2	20.6	21.4	23.2	23.3	25.5	22.5
1989	33.9	27.5	60.1	32.8	25.7	24.9	14.4	28.4	26.7	31.4	34.7	31.4	31.0
1990	27.4	37.8	33.9	37.4	25.1	24.6	21.6	28.2	25.1	25.1	17.4	15.2	26.6
1991	17.2	20.1	37.3	24.3	27.3	56.2	35.2	40.8	30.7	44.1	49.7	28.0	34.2
1992	25.9	47.7	24.5	19.8	29.1	24.8	17.9	24.1	35.8	27.0	25.0	26.1	27.3
1993	31.2	27.1	37.9	29.2	22.1	21.8	18.2	19.2	23.8	24.6	25.5	24.8	25.5
1994	26.5	43.2	37.9	40.2	40.2	27.2	20.6	16.0	20.2	33.3	23.6	24.1	29.4
1995	23.6	24.5	23.8	24.2	30.9	19.1	14.9	17.0	22.2	27.9	17.2	18.2	22.0
1996	18.8	20.8	22.3	20.5	14.0	11.1	14.7	18.8	26.2	23.5	16.3	15.9	18.6
1997	17.4	21.0	16.3	18.4	15.1	13.7	12.1	13.7	18.4	18.7	18.0	10.8	16.1
1998	16.8	16.4	21.2	18.0	28.1	18.8	19.3	27.0	21.1	22.4	26.5	15.9	21.0
1999	20.8	21.3	23.5	21.3	15.8	12.7	16.9	26.2	31.2	31.3	25.1	20.1	22.2
2000	24.2	29.4	17.1	25.1	25.0	24.9	31.1	24.3	30.2	28.1	29.1	16.1	25.4
2001	18.0	14.7	30.2	33.0	17.8	18.2	18.7	19.9	22.7	31.4	24.4	19.5	22.4
2002	16.8	20.0	20.2	26.0	19.9	14.2	19.9	22.5	21.4	38.1	29.3	24.4	22.7
2003	24.2	31.3	35.2	34.9	52.7	40.2	32.4	36.4	30.7				35.3

PLANETARY GEOMAGNETIC ACTIVITY

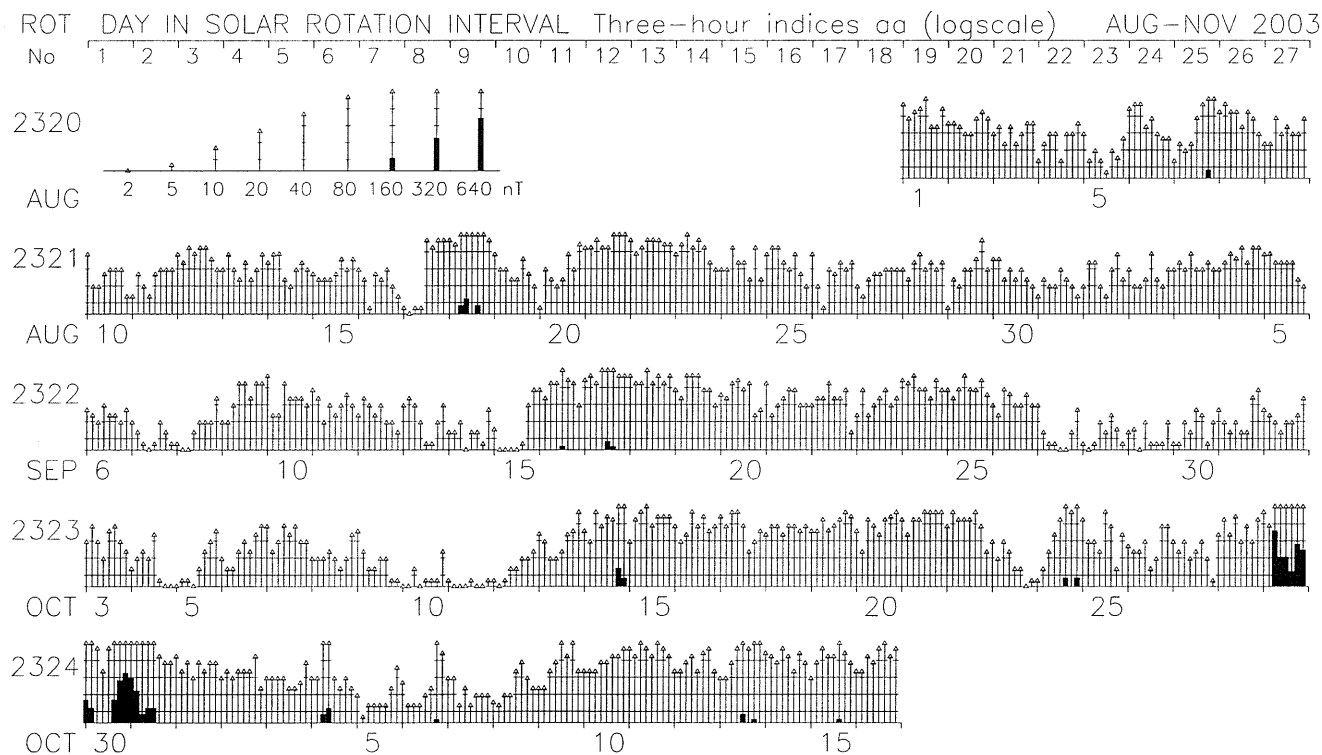
3-HOUR-RANGE INDICES Km AND aa BY 27-DAY SOLAR ROTATION INTERVAL

ISGI PUBLICATION OFFICE – EMail : ISGI.PUBOFF@cetp.ipsl.fr

CETP, 4 Avenue de Neptune, F-94107 Saint Maur des Fosses CEDEX – FRANCE



Indices Derivation at C.E.T.P.; Graph Prepared at ISGI Publication Office.

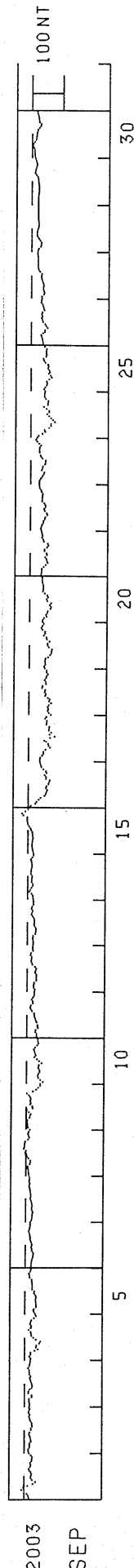


Indices Derivation at C.E.T.P.; Graph Prepared at ISGI Publication Office.

HOURLY EQUATORIAL DST VALUES (PROVISIONAL)

SEPTEMBER 2003

DAY	UNIT=NT																								U. T.
	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	-14	-12	-7	2	9	3	-9	-27	-35	-25	-20	-21	-22	-20	-16	-14	-17	-21	-18	-22	-25	-24	-19	-14	
2	-11	-11	-15	-16	-16	-19	-19	-17	-15	-13	-16	-19	-21	-25	-25	-22	-18	-15	-14	-15	-12	-13	-15	-14	
3	-15	-13	-17	-13	-22	-22	-12	-11	-15	-22	-24	-23	-19	-17	-16	-17	-14	-14	-14	-9	-13	-16	-16	-17	
4	-17	-13	-17	-17	-31	-41	-34	-37	-45	-50	-36	-27	-19	-20	-18	-12	-20	-20	-16	-17	-21	-28	-34	-33	
5	-28	-26	-28	-34	-35	-35	-32	-33	-36	-32	-28	-28	-23	-22	-23	-22	-21	-20	-14	-14	-12	-15	-18	-18	
6	-18	-17	-18	-21	-23	-25	-24	-25	-21	-21	-18	-20	-18	-15	-13	-13	-14	-12	-10	-12	-14	-13	-13	-13	
7	-17	-20	-19	-21	-22	-20	-18	-19	-19	-18	-16	-14	-15	-15	-14	-13	-12	-12	-10	-11	-9	-10	-12	-10	
8	-8	-8	-8	-6	-6	-11	-14	-13	-8	-4	-1	3	1	7	6	6	6	3	-6	-9	-7	-6	-7	-11	
9	-6	-3	-4	-4	-4	-9	-11	-13	-7	-2	-19	-17	-12	-13	-12	-13	-11	-7	-2	-19	-30	-38	-44	-44	
10	-51	-44	-38	-36	-38	-42	-42	-38	-37	-40	-47	-39	-33	-25	-28	-26	-24	-23	-26	-33	-38	-35	-36	-34	
11	-31	-30	-26	-29	-34	-35	-33	-31	-29	-27	-24	-23	-22	-16	-11	-10	-12	-18	-17	-14	-18	-22	-22	-23	
12	-24	-21	-20	-20	-22	-28	-28	-28	-26	-25	-27	-28	-24	-16	-14	-11	-14	-13	-10	-12	-17	-15	-16	-17	
13	-18	-17	-18	-16	-17	-25	-26	-27	-28	-23	-20	-22	-23	-19	-15	-12	-14	-15	-12	-13	-17	-18	-17	-17	
14	-16	-15	-11	-6	-8	-12	-16	-15	-12	-12	-13	-13	-10	-10	-9	-11	-13	-13	-12	-10	-9	-13	-17	-17	
15	-15	-14	-14	-11	-11	-13	-14	-15	-14	-13	-13	-10	-8	-3	1	3	3	3	3	15	21	10	0	1	
16	-7	-22	-26	-32	-39	-52	-57	-59	-61	-57	-59	-65	-66	-68	-56	-55	-51	-58	-57	-47	-41	-39	-37	-34	
17	-36	-38	-44	-48	-48	-54	-69	-64	-63	-56	-50	-69	-84	-67	-73	-64	-64	-66	-56	-59	-59	-51	-55	-71	
18	-65	-61	-63	-61	-64	-72	-65	-66	-60	-51	-53	-50	-52	-42	-44	-53	-54	-50	-54	-56	-60	-56	-56	-50	
19	-48	-52	-50	-50	-52	-60	-67	-70	-72	-73	-63	-59	-58	-65	-57	-53	-46	-50	-49	-41	-38	-41	-45	-42	
20	-42	-46	-53	-52	-55	-59	-67	-68	-64	-68	-57	-54	-58	-56	-48	-42	-43	-44	-43	-42	-40	-39	-40	-36	
21	-35	-37	-38	-38	-43	-49	-55	-54	-51	-47	-54	-52	-46	-46	-54	-59	-57	-44	-41	-37	-39	-38	-37	-35	
22	-33	-35	-38	-42	-42	-46	-47	-54	-51	-45	-44	-47	-47	-44	-38	-38	-38	-38	-40	-36	-33	-28	-27	-27	
23	-26	-28	-32	-38	-42	-43	-36	-37	-39	-45	-47	-47	-37	-32	-31	-29	-27	-26	-28	-32	-26	-20	-16	-20	
24	-24	-37	-45	-44	-58	-65	-65	-78	-72	-64	-59	-52	-58	-58	-49	-42	-53	-54	-55	-48	-43	-44	-46	-46	
25	-41	-45	-50	-51	-49	-58	-67	-63	-57	-60	-59	-54	-56	-54	-45	-42	-39	-48	-49	-47	-47	-49	-44	-41	
26	-38	-38	-34	-32	-31	-38	-43	-44	-51	-48	-43	-37	-36	-33	-36	-33	-35	-41	-40	-38	-34	-31	-33	-33	
27	-32	-40	-42	-40	-38	-37	-39	-37	-35	-33	-30	-30	-32	-27	-23	-21	-20	-21	-19	-21	-21	-20	-17	-18	
28	-21	-23	-28	-31	-30	-26	-22	-17	-15	-15	-17	-19	-22	-22	-22	-21	-19	-19	-20	-20	-20	-20	-21	-21	
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30	-8	-8	-8	-7	-5	-2	-3	-7	-11	-14	-13	-14	-15	-17	-23	-27	-28	-23	-23	-20	-19	-17	-16	-19	

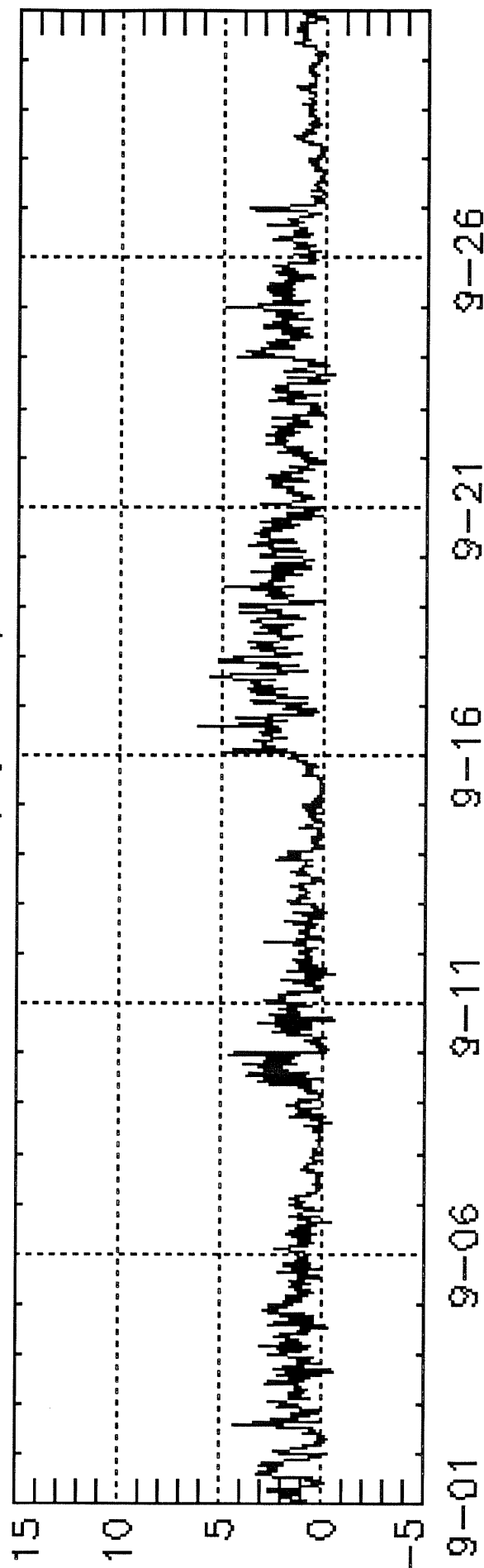


Note: The baselines for the observatories were adjusted for secular change for the Provisional Dst values for September 2003.

WDC C1 for Geomagnetism, Copenhagen

Polar Cap index
Qaanaaq (Thule), THL

2003-09-01



Date, mm-dd

Data source: Solar-Terrestrial Physics Division
Danish Meteorological Institute

126
Sep 03

PRINCIPAL MAGNETIC STORMS

SEPTEMBER 2003

Sta	Geomag Lat	Commencement Time			SC Amplitudes			Maximum 3-Hour K Index Day(3-Hour Periods)	Ranges			End Hour	
		Day	(UT)	Type	D (Min)	H (Gamma)	Z (Gamma)		D K (Min)	H (Gamma)	Z (Gamma)	Day	(UT)
HYB	07.6N	02	0500	..	..	..	..	03(7)	4	8	85	45	05 20
JAI	17.4N	09	0400	..	..	..	..		-	9	86	41	10 21
NGP	11.3N	09	0400	..	..	..	..		-	8	102	37	10 21
ABG	09.4N	09	0400	..	..	..	..	09(3,7) 10(1)	5	8	95	58	10 21
HYB	07.6N	09	0400	..	..	..	..	09(7)	5	9	104	53	12 21
PND	02.0N	09	0400	..	..	..	..		-	7	120	54	10 21
TIR	00.6S	09	0400	..	..	..	..		-	8	175	55	10 21
JAI	17.4N	15	1900	..	..	..	..		-	8	147	39	18 23
NGP	11.3N	15	1900	..	..	..	..		-	7	138	40	18 23
ABG	09.4N	15	1900	..	..	..	..	17(5)	6	7	145	62	18 23
HYB	07.6N	15	1900	..	..	..	..	17(5)	6	6	150	42	18 23
PND	02.0N	15	1900	..	..	..	..		-	6	150	100	18 23
TIR	00.6S	15	1900	..	..	..	..		-	6	212	97	18 23
GNA	43.0S	15	2300	..	..	..	..	17(5)	8	45	175	241	20 21
CAN	43.6S	15	1900	..	..	..	..	16(5) 17(5)	6	24	137	69	20 18
KRC	16.4N	17	0240	..	..	..	..	17(4,5)	6	8	112	40	17 21
JAI	17.4N	19	0400	..	..	..	..		-	6	69	38	20 19
NGP	11.3N	19	0400	..	..	..	..		-	5	68	39	20 19
ABG	09.4N	19	0400	..	..	..	..	20(5) 21(6)	5	5	69	54	20 19
HYB	07.6N	19	0400	..	..	..	..	19(5) 20(5)	5	5	77	37	21 22
PND	02.0N	19	0400	..	..	..	..		-	4	102	78	20 19
TIR	00.6S	19	0400	..	..	..	..		-	4	182	69	20 19
HYB	07.6N	22	0400	..	..	..	..	24(1)	5	6	97	39	26 22
JAI	17.4N	24	0000	..	..	..	..		-	7	63	43	25 22
NGP	11.3N	24	0000	..	..	..	..		-	6	66	36	25 22
ABG	09.4N	24	0000	..	..	..	..	24(1)	5	6	63	61	25 22
PND	02.0N	24	0000	..	..	..	..		-	5	105	72	25 22
TIR	00.6S	24	0000	..	..	..	..		-	6	190	71	25 22
GNA	43.0S	24	0300	..	..	..	..	25(4,5)	5	17	88	100	26 02

Stations:

ABG = ALIBAG
AMS = MARTIN DE VIVIES
ANN = ANNAMALAINAGAR
BJI = BEIJING
CAN = CANBERRA
CMO = COLLEGE

CZT = PORT ALFRED
DRV = DUMONT D'URVILLE
ETT = ETAIYAPURAM
GNA = GNANGARA
GUA = GUAM
HER = HERMANUS

HON = HONOLULU
HYB = HYDERABAD
JAI = JAIPUR
KRC = KARACHI
NGP = NAGPUR
PAF = PORT AUX FRANCAIS

PMG = PORT MORESBY
PND = PONDICHERRY
SHL = SHILLONG
SIT = SITKA
TIR = TIRUNELVELI
UJJ = UJJAIN

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

September 2003

Storm Sudden Commencements (SSC)			Solar Flare Effects (sfe)		
Day	Time	Quality: Station Group*	Day	Begin-End	Station(s)
None			03	0723-0735	NAG
			08	1450-1510	GUI

REPORTING OBSERVATORIES (up to the 3rd of November 2003):

SOD NUR NGK VAL BDV CLF HRB NAG GCK MMB EBR COI SPT KAK HTY KNY GUI HYB GNA CNB

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, but unmistakable; C means very poor, doubtful; and - means no quality figure given. The * means that the SSC, at least in one component, was preceded by a small reversed impulse. SSCs are given only when five or more stations report the event. SFEs include all reports. If an SFE is confirmed by solar or ionospheric events, the name of the station is identified with a plus sign (+).

Note that we have included data of the Antarctic Station LIVINGSTONE (62° 39' 44" S, 60°23' 41" W) – Luis F.

Criterion on Provisional SSC data

From December 2002, we are giving as provisional SSC only the SSC reported by more than 4 observatories. This is a change with respect to the previous criterion according to which we used to give the SSC reported by more than 5 observatories. The change, pending IAGA confirmation, has been provisionally taken because of the decreasing number of reporting observatories in order to keep the homogeneity of the data. The idea is to keep the same minimum percentage of the observatories reporting an SSC, relative to the total number of reporting observatories, to be considered as a probable SSC.