



Solar-Geophysical Data prompt reports

Data for August and September 2003

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

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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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OCTOBER 2003 NUMBER 710 - Part I

Solar-Geophysical Data prompt reports

Data for August and September 2003

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NATIONAL GEOPHYSICAL DATA CENTER

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Boulder, Colorado

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SOLAR-GEOPHYSICAL DATA

Number 710

(Issued in Two Parts)

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C.3	Radio Bursts Fixed Frequency Select	703A 33	704A 36	705A 34	706A 33	707A 35	708A 37	709A 33	710A 31
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The entry "704A 52" under Feb 03, for example, means that the sunspot drawings for Feb 03 appear in SOLAR-GEOPHYSICAL DATA No. 704, Part I, and that they begin on page 52. "A" denotes Part I and "B", Part II. Blanks indicate data not yet received and dashes mark unavailable data.

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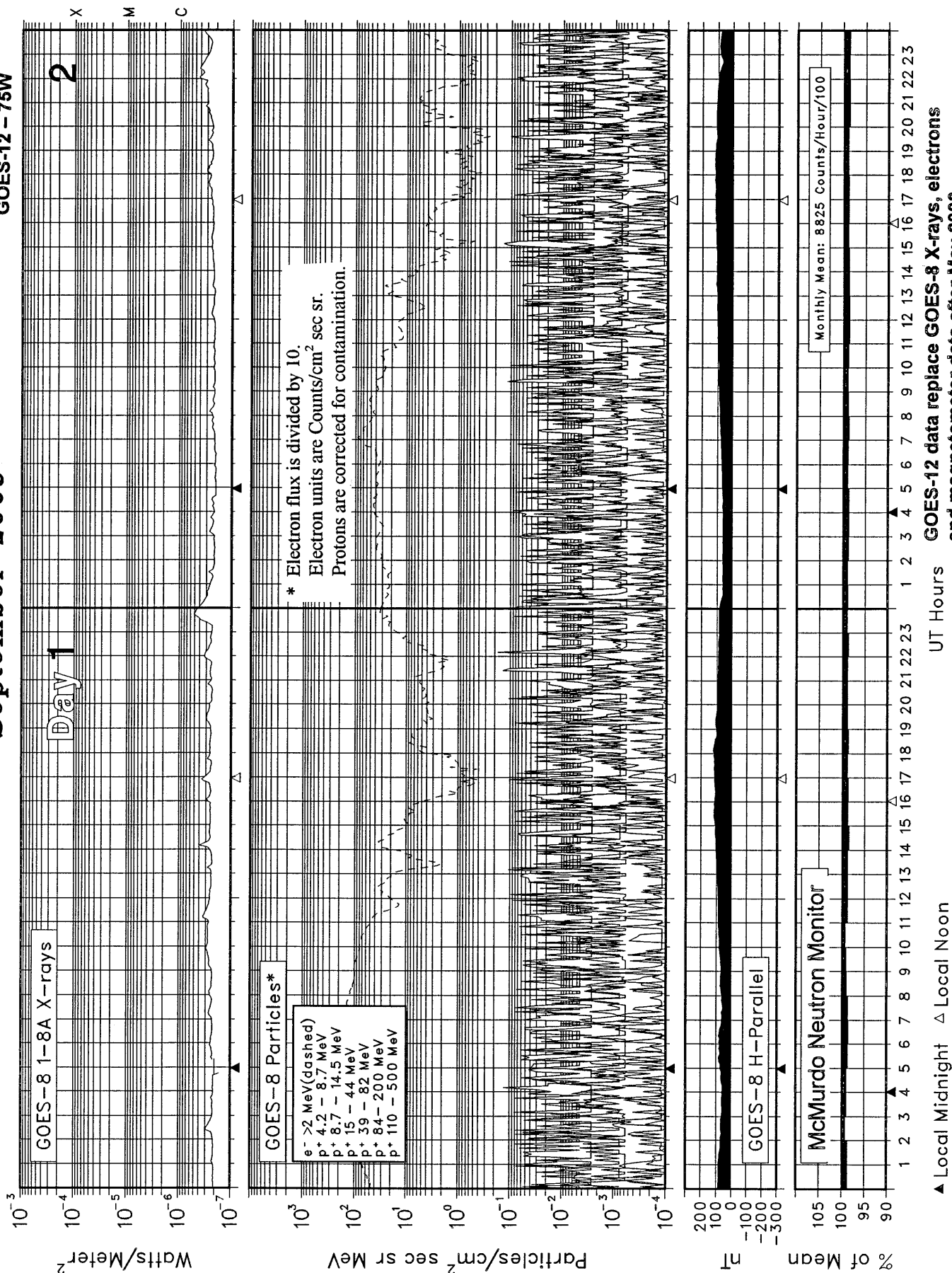
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SOLAR-TERRESTRIAL ENVIRONMENT

September 2003

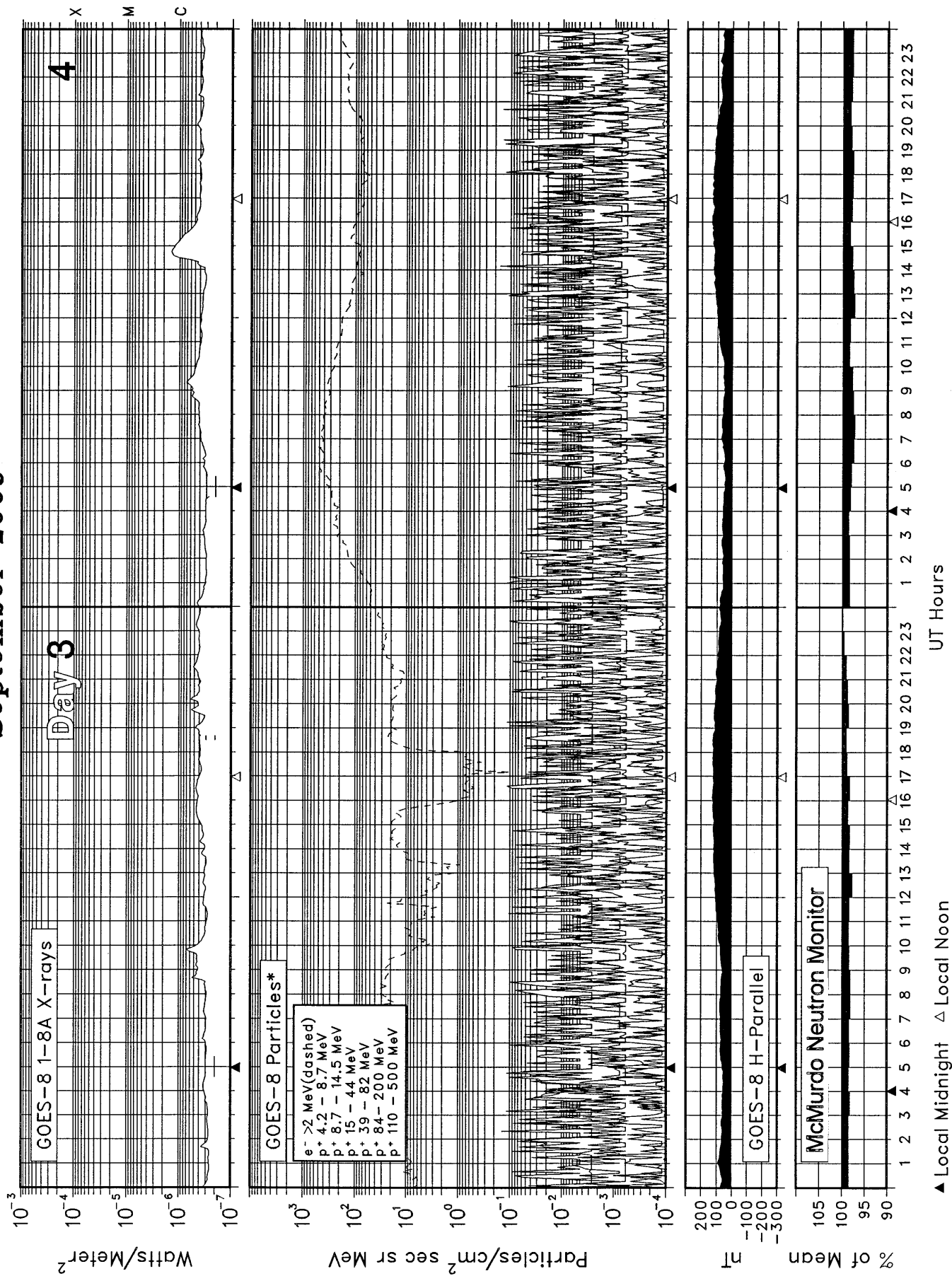
Satellite positions:
GOES-8 - 75W
GOES-11 - 113W
GOES-12 - 75W



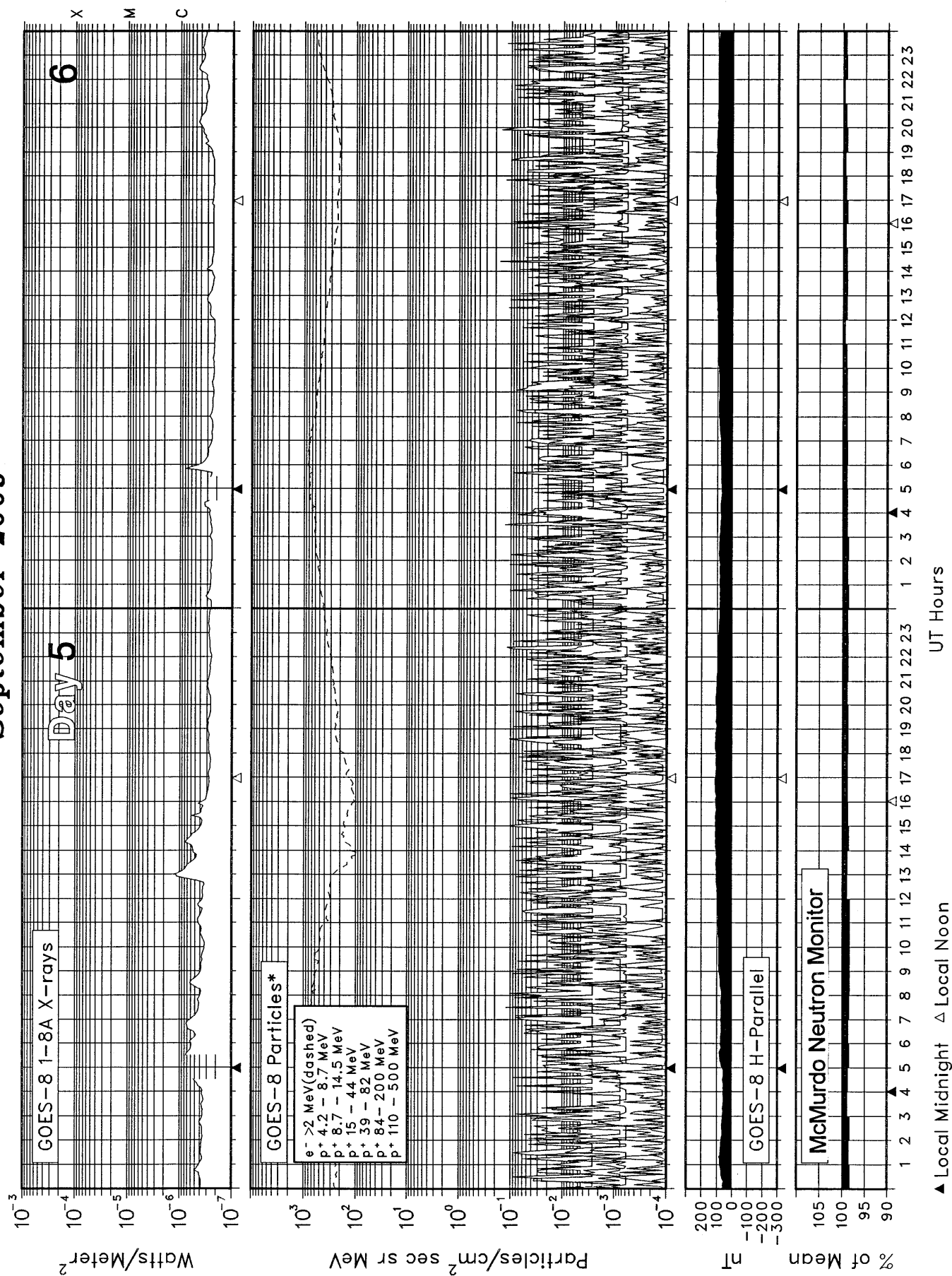
GOES-12 data replace GOES-8 X-rays, electrons
and magnetometer data after May 2003.
GOES 11 protons replace GOES-8 protons after June 19, 2003.

SOLAR-TERRESTRIAL ENVIRONMENT

September 2003

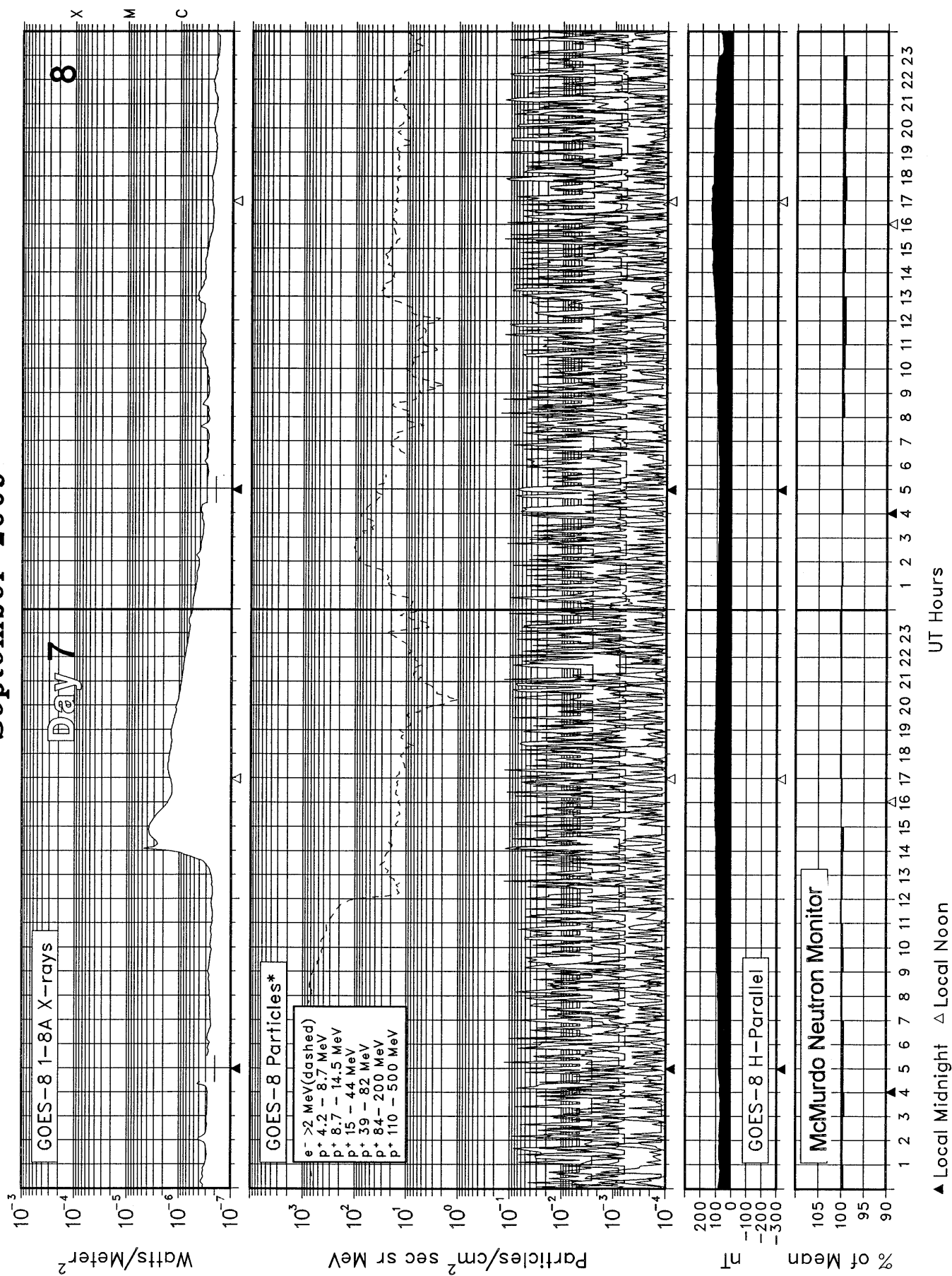


SOLAR-TERRESTRIAL ENVIRONMENT September 2003



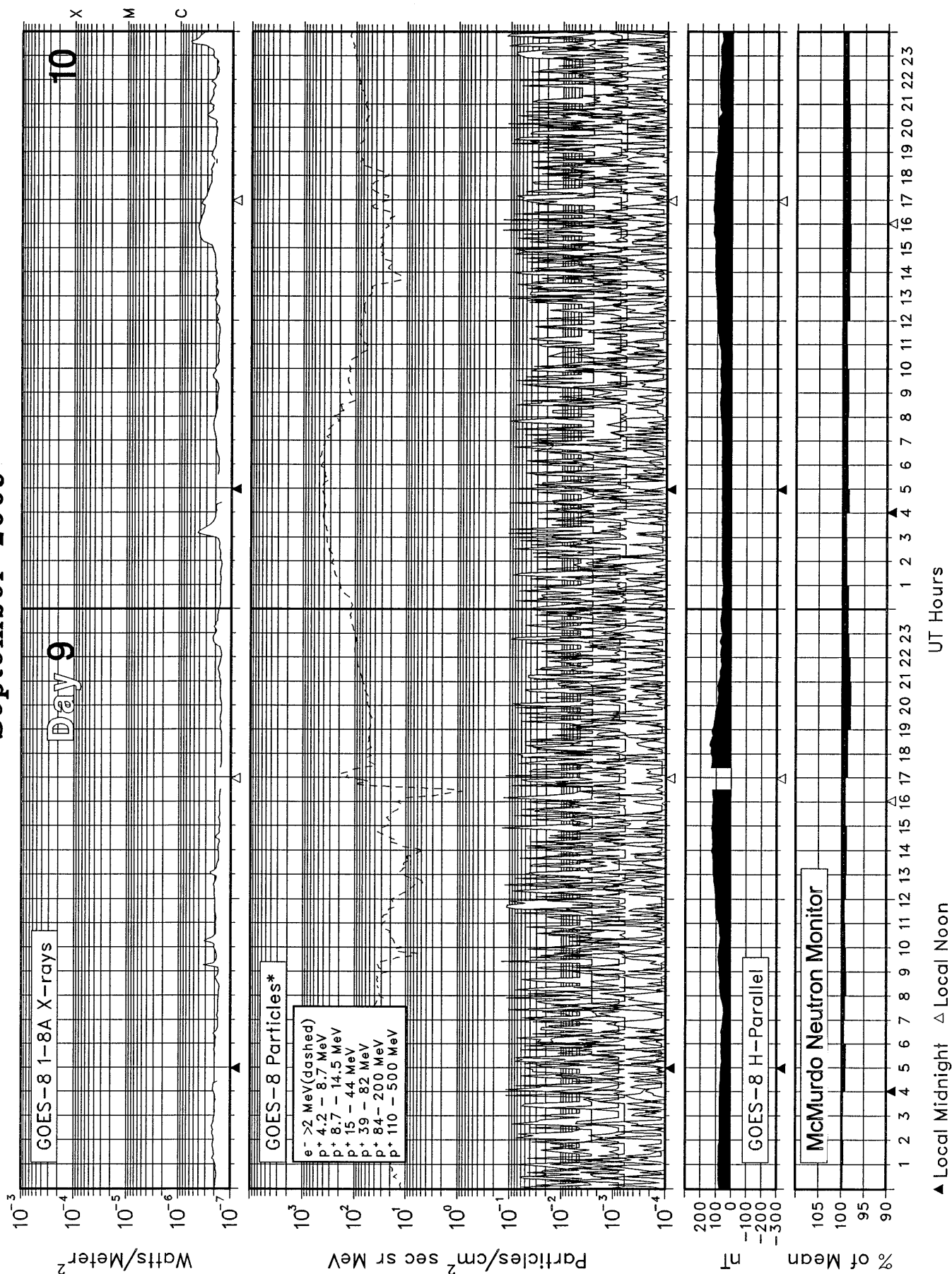
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September 2003



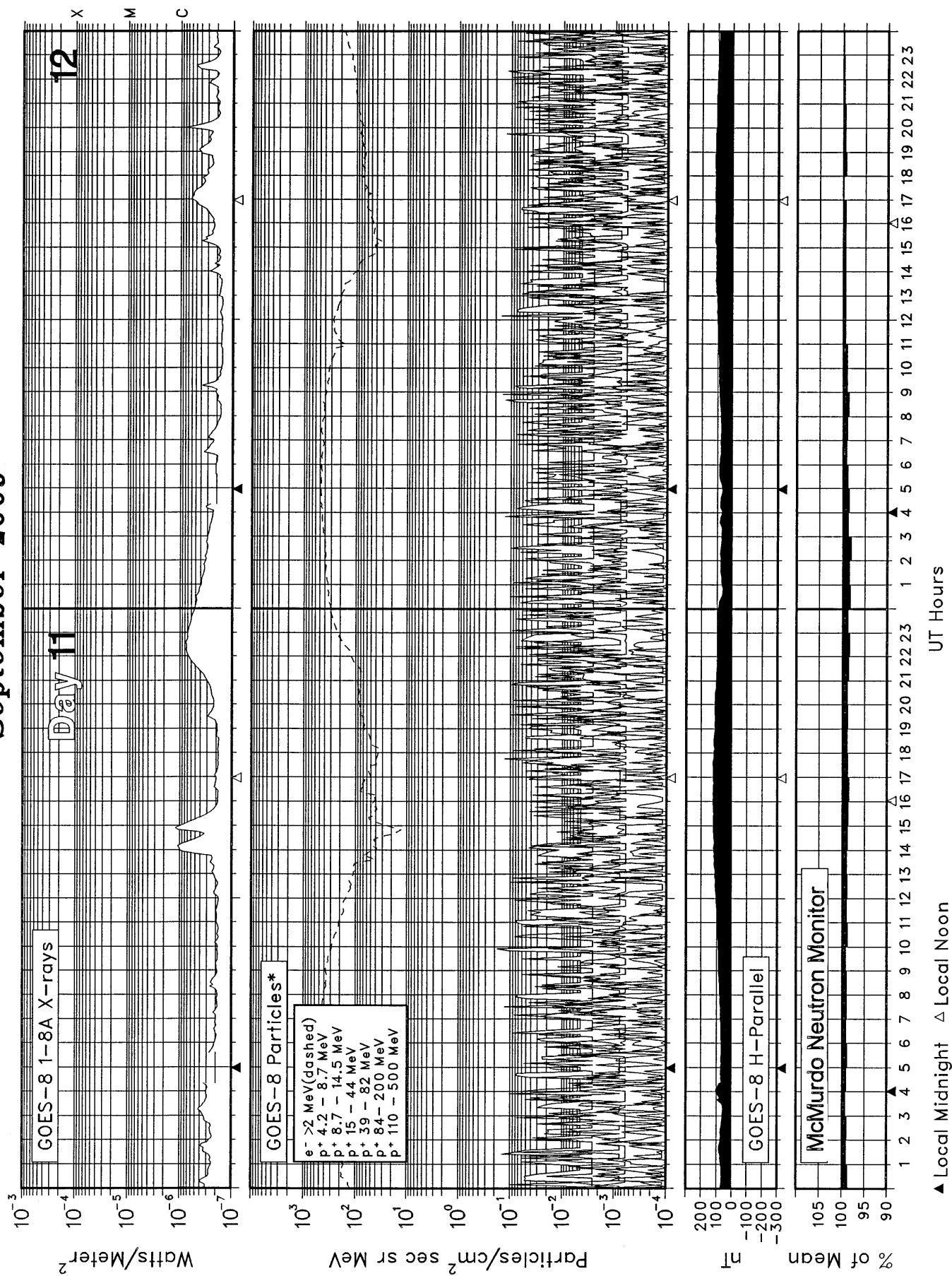
SOLAR-TERRESTRIAL ENVIRONMENT

September 2003



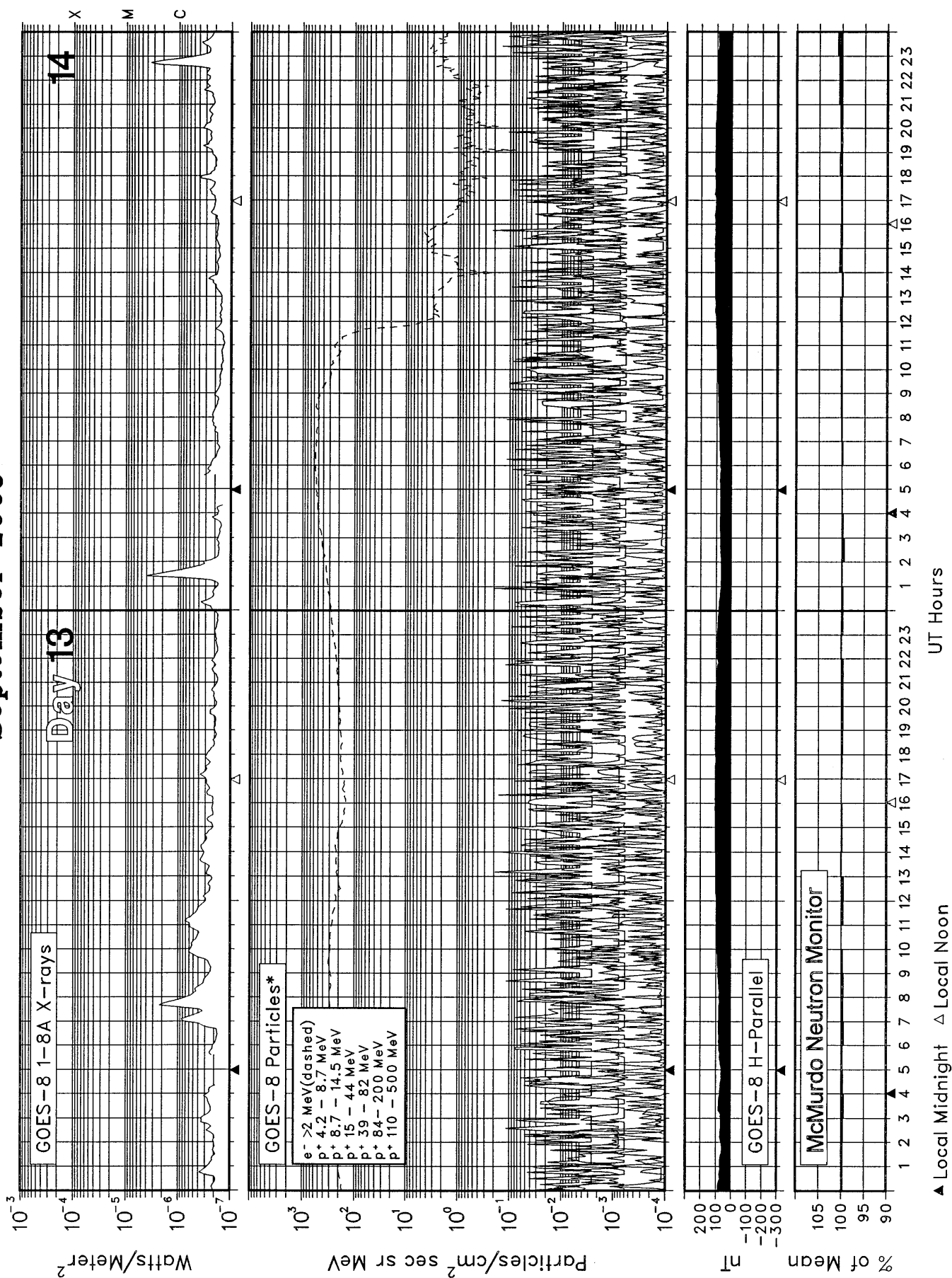
SOLAR-TERRESTRIAL ENVIRONMENT

September 2003



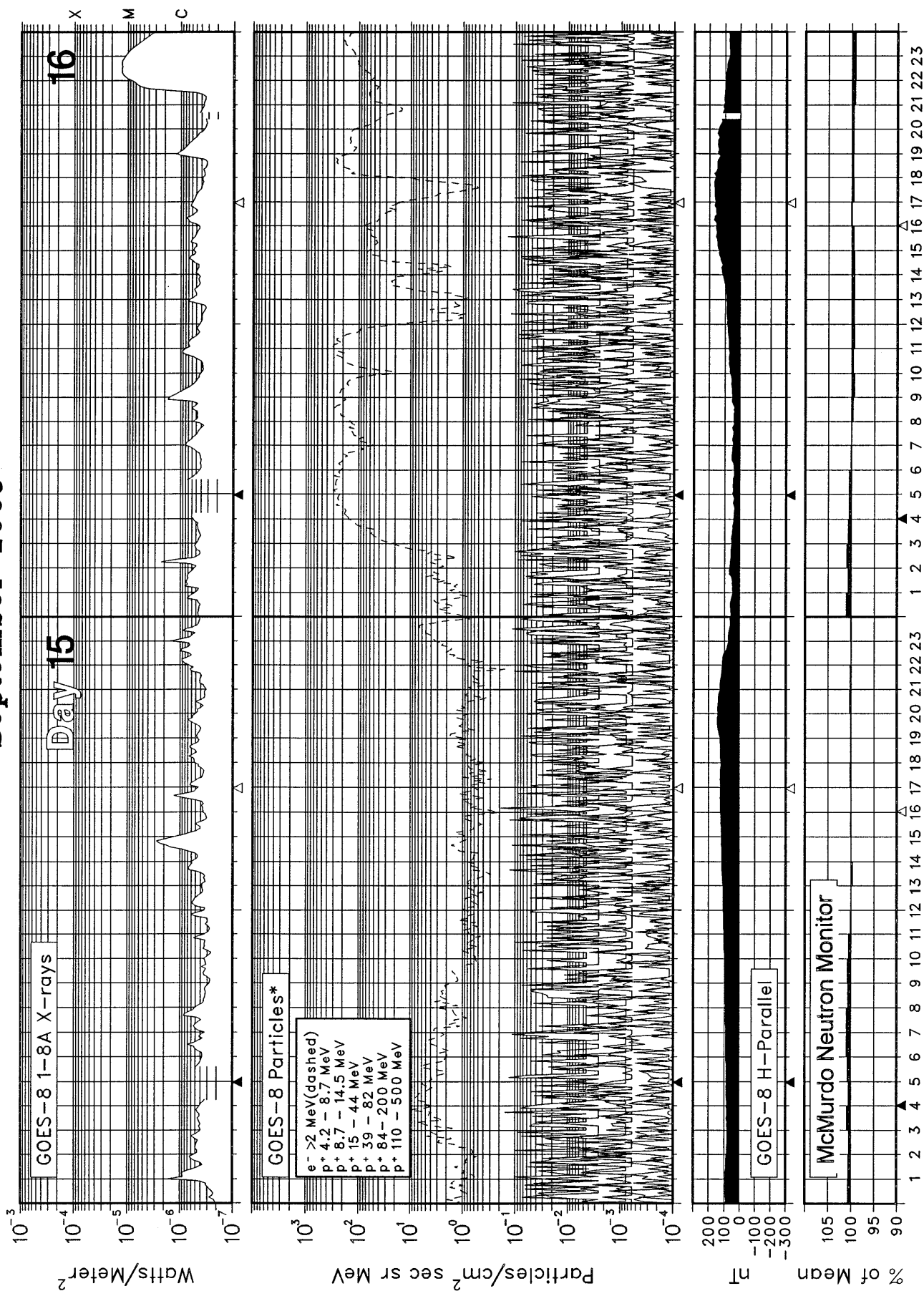
SOLAR-TERRESTRIAL ENVIRONMENT

September 2003



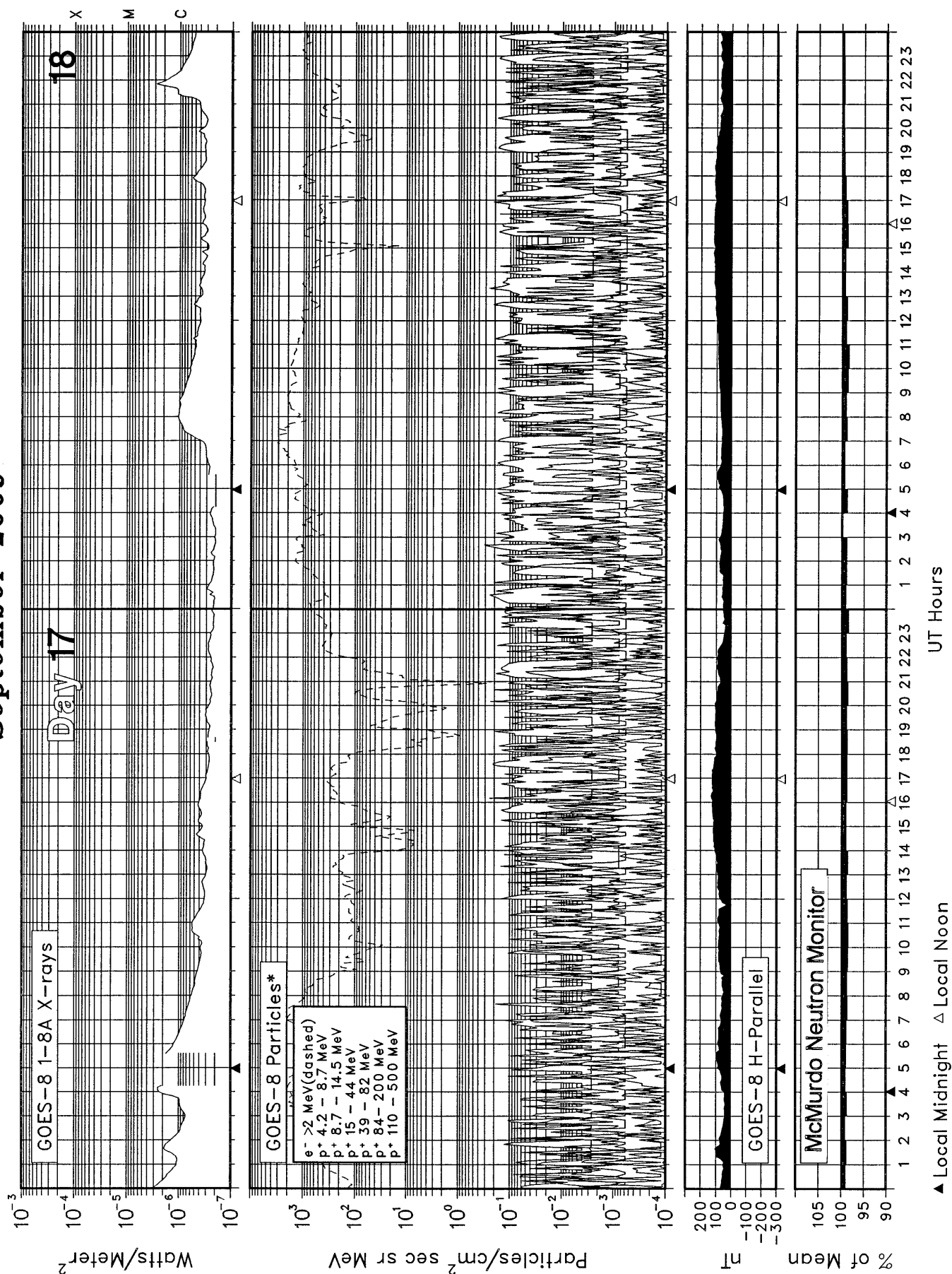
SOLAR-TERRESTRIAL ENVIRONMENT

September 2003



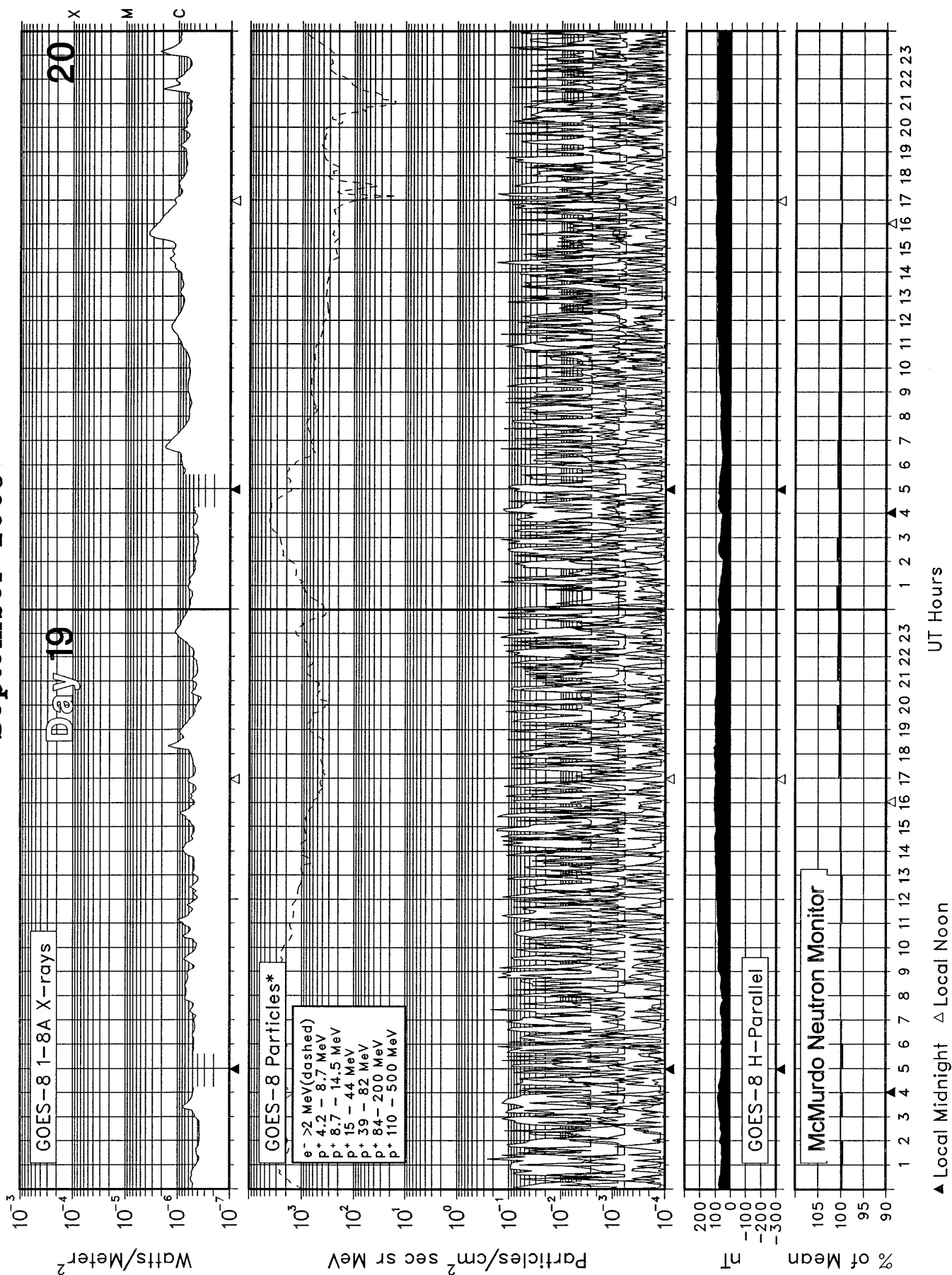
▲ Local Midnight △ Local Noon

SOLAR-TERRESTRIAL ENVIRONMENT September 2003

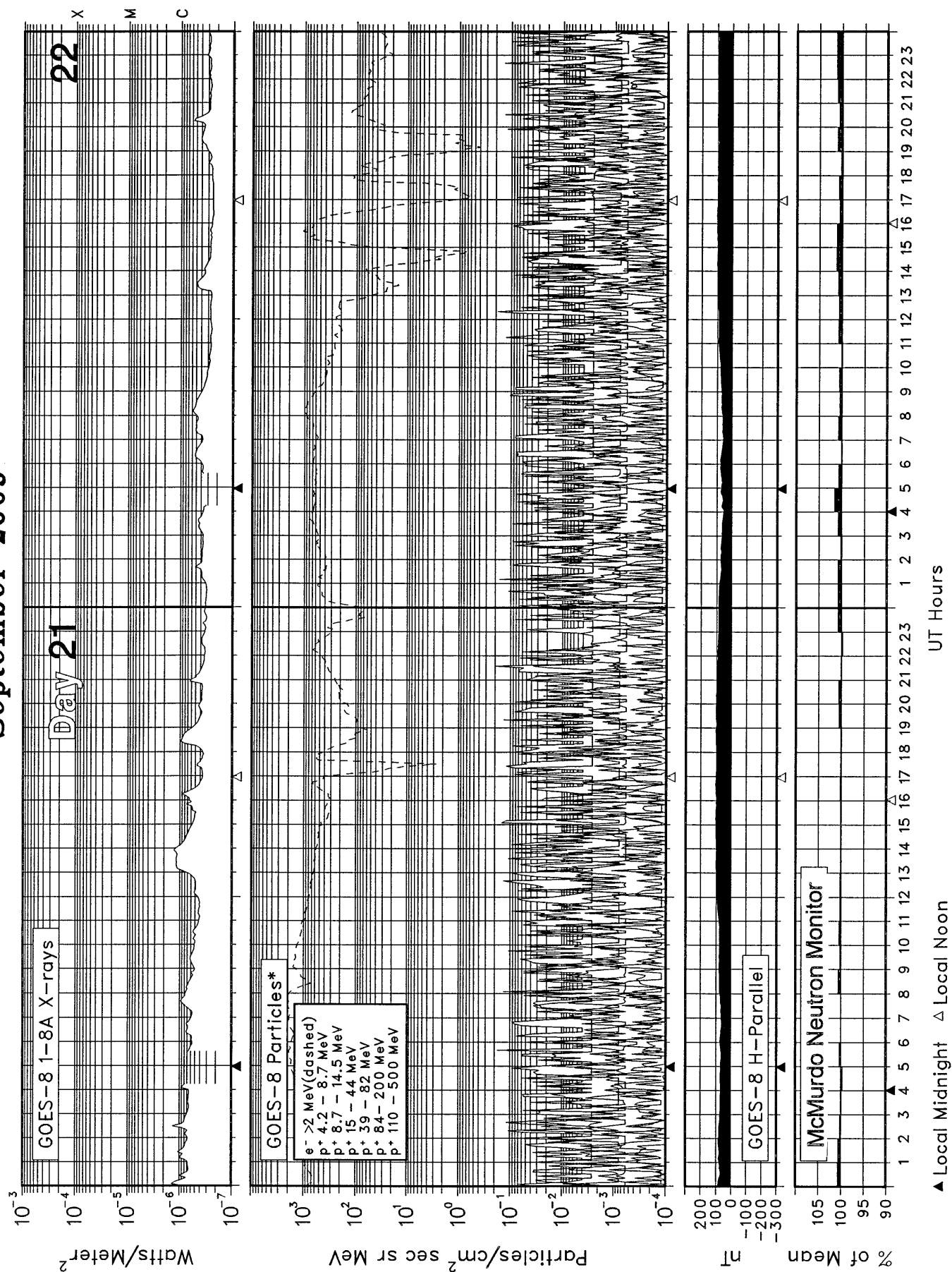


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September 2003

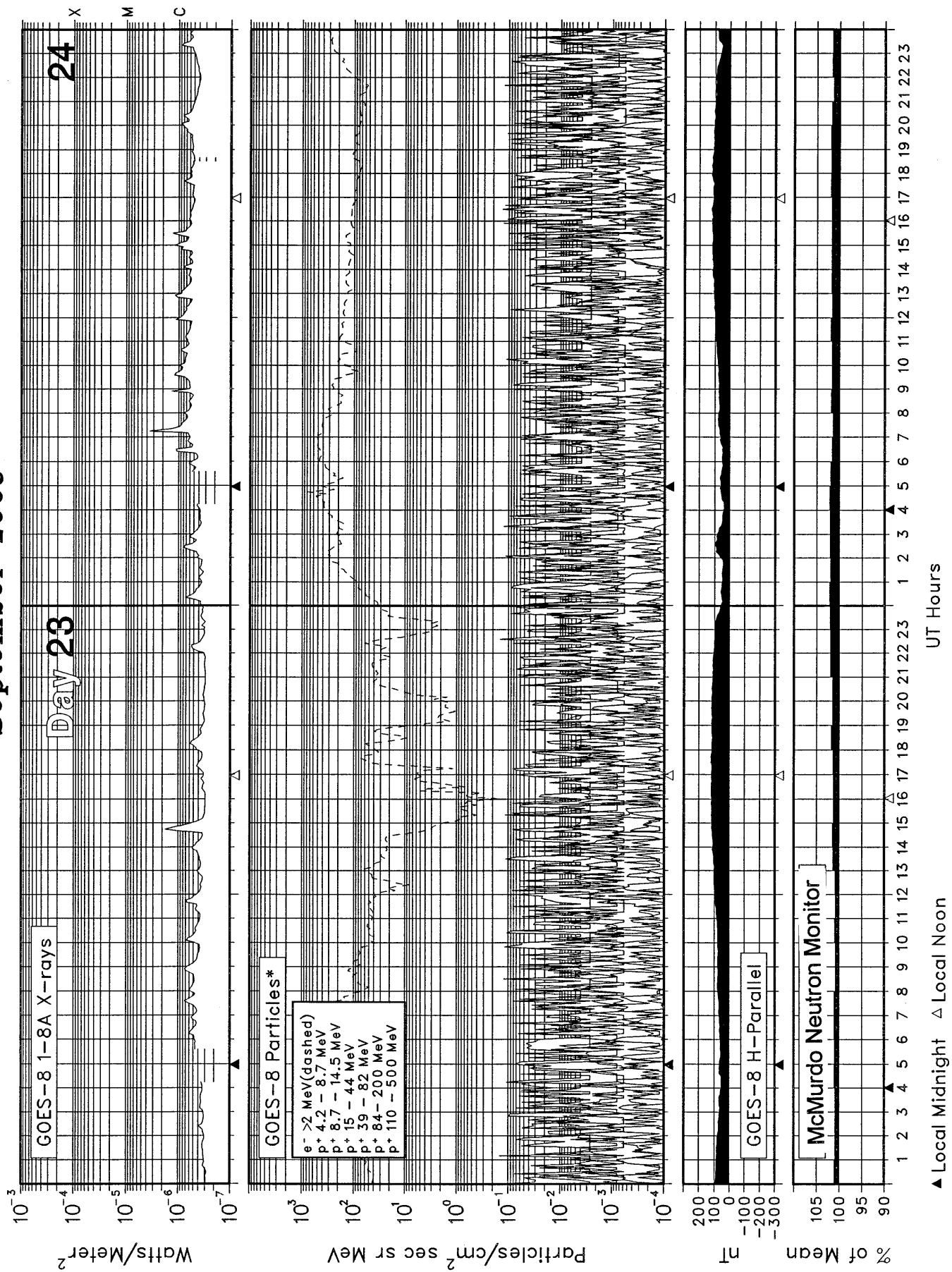


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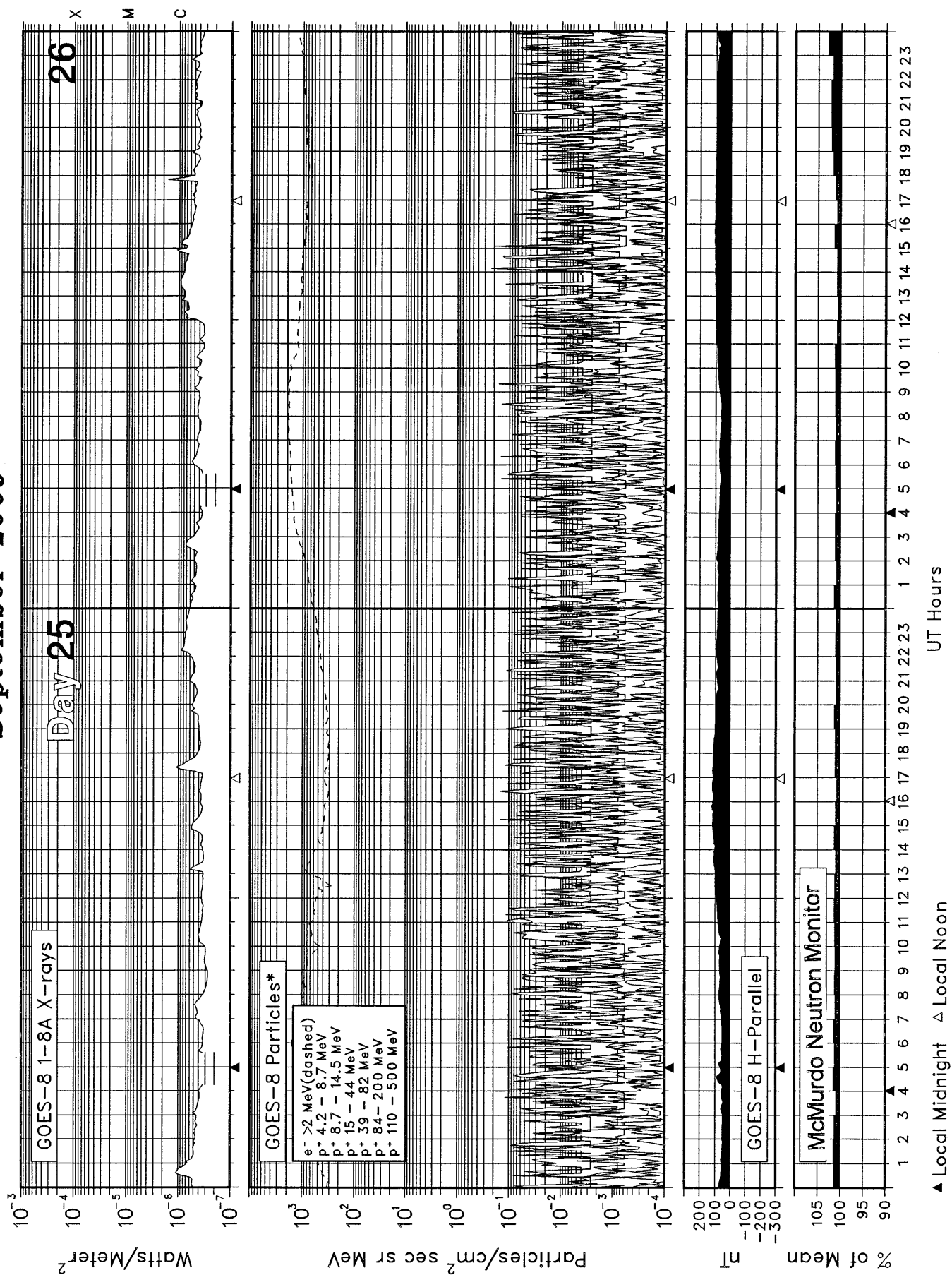
SOLAR-TERRESTRIAL ENVIRONMENT

September 2003



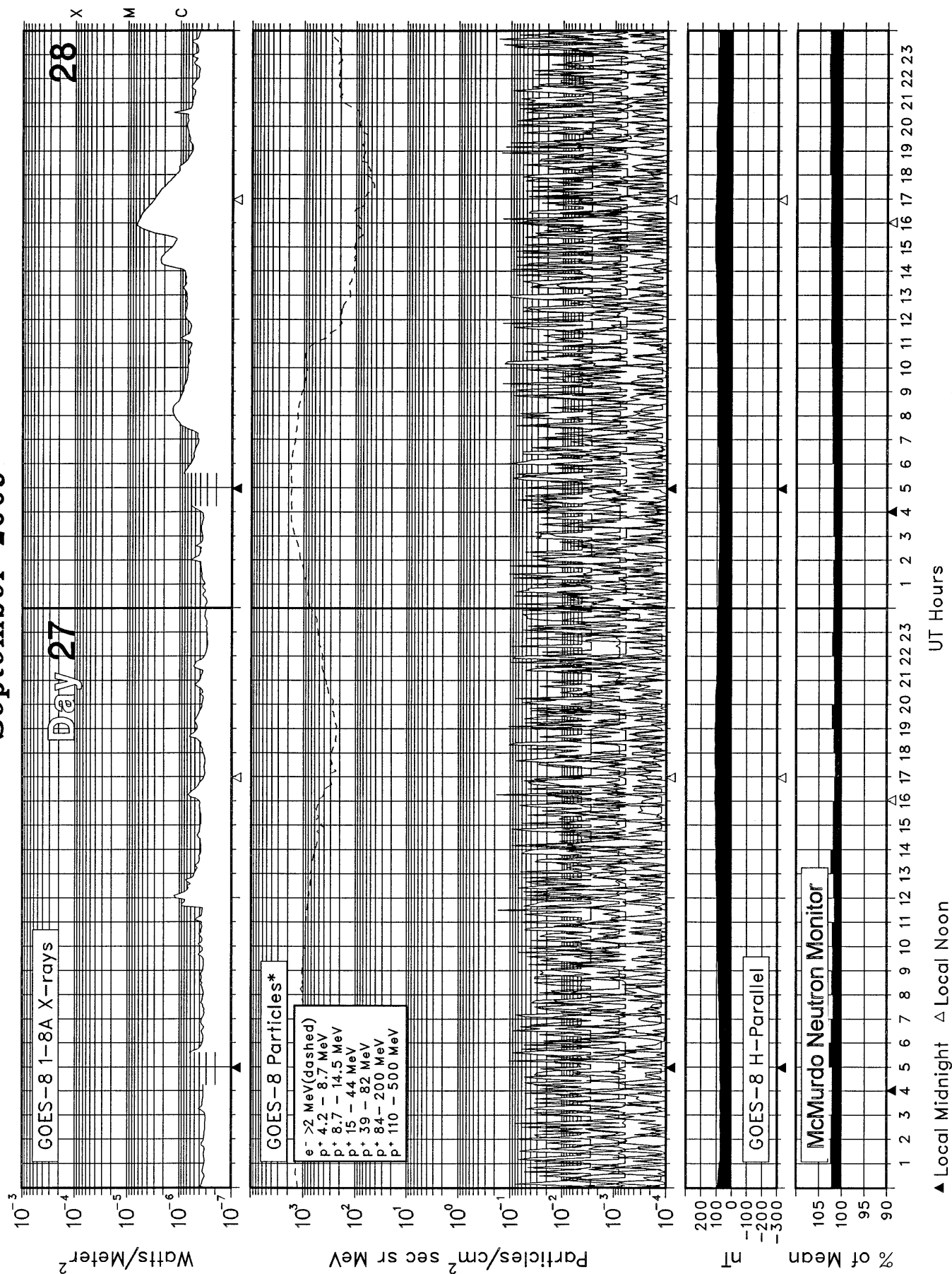
SOLAR-TERRESTRIAL ENVIRONMENT

September 2003



SOLAR-TERRESTRIAL ENVIRONMENT

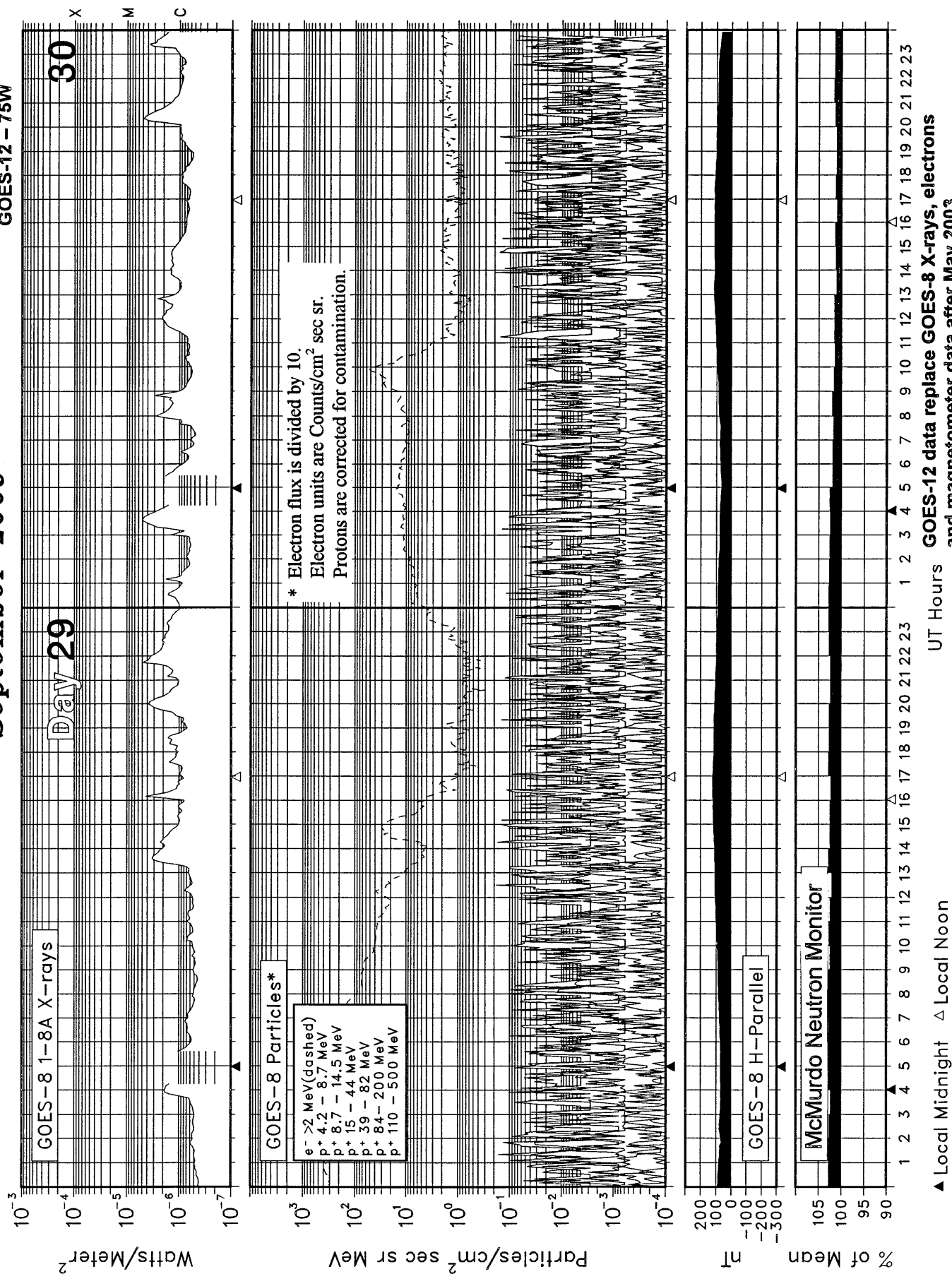
September 2003



SOLAR-TERRESTRIAL ENVIRONMENT

September 2003

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



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.

A L E R T P E R I O D S

The International Space Environment Service

SEPTEMBER 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			
244	01	31	101	110	9	442	S13	W47	0	0	0	01	Q	SOL: Eruptive MAG: Quiet PRO: Quiet
						444	N08	W47	0	0	0	01	Q	
						445	N04	W47	0	0	0	01	Q	
						447	N14	W50	0	0	0	01	Q	
						448	N20	W07	0	0	0	01	Q	
						449	S16	E27	0	0	0	01	Q	
245	02	01	59	108	14	450	S18	E39	0	0	0	01	Q	SOL: Eruptive MAG: Active PRO: Quiet
						442	S13	W61	0	0	0	02	Q	
						448	N20	W20	0	0	0	02	Q	
						449	S16	E13	0	0	0	02	Q	
						450	S17	E27	0	0	0	02	Q	
						442	S13	W74	0	0	0	03	Q	SOL: Quiet MAG: Active PRO: Quiet
246	03	02	90	106	12	444	N11	W74	0	0	0	03	Q	
						448	N19	W34	0	0	0	03	Q	
						449	S16	E00	0	0	0	03	Q	
						450	S18	E14	0	0	0	03	Q	
						452	S07	W54	0	0	0	03	Q	
						442	S12	W86	1	0	0	04	Q	SOL: Quiet MAG: Active PRO: Quiet
247	04	03	74	111	19	448	N19	W48	0	0	0	04	Q	
						450	S16	W07	0	0	0	04	Q	
						452	S07	W71	0	0	0	04	Q	
						448	N19	W61	0	0	0	05	Q	SOL: Eruptive MAG: Active PRO: Quiet
248	05	04	79	112	21	450	S17	W20	0	0	0	05	Q	
						452	S08	W84	0	0	0	05	Q	
						453	S23	W44	0	0	0	05	Q	
						454	S10	E22	0	0	0	05	Q	
						450	S17	W35	0	0	0	06	Q	SOL: Eruptive MAG: Active PRO: Quiet
249	06	05	57	108	14	453	S23	W56	0	0	0	06	Q	
						454	S10	E09	0	0	0	06	Q	
						450	S17	W52	0	0	0	07	Q	SOL: Quiet MAG: Quiet PRO: Quiet
250	07	06	60	105	13	453	S23	W69	0	0	0	07	Q	
						454	S10	W04	0	0	0	07	Q	
						455	S16	E32	0	0	0	07	Q	
						450	S17	W63	1	0	0	08	Q	SOL: Quiet MAG: Quiet PRO: Quiet
251	08	07	54	108	7	453	S24	W78	0	0	0	08	Q	
						454	S10	W18	0	0	0	08	Q	
						455	S20	E24	0	0	0	08	Q	
						450	S17	W78	0	0	0	09	Q	SOL: Eruptive MAG: Active PRO: Quiet
252	09	08	58	99	11	453	S24	W91	0	0	0	09	Q	
						455	S20	E11	0	0	0	09	Q	
						456	S09	E08	0	0	0	09	Q	
						457	S09	W05	0	0	0	10	Q	SOL: Quiet MAG: Active PRO: Quiet
253	10	09	43	96	22	457	S11	E08	0	0	0	10	Q	
						457	S11	E08	0	0	0	10	Q	
						457	S09	W19	0	0	0	11	E	SOL: Eruptive MAG: Active PRO: Quiet
254	11	10	42	99	19	457	S11	W06	0	0	0	11	Q	
						457	S11	W06	0	0	0	11	Q	
						457	S08	W32	0	0	0	12	E	SOL: Eruptive MAG: Quiet PRO: Quiet
255	12	11	55	97	18	457	S11	W17	0	0	0	12	Q	
						457	S11	W17	0	0	0	12	Q	
						457	S07	W45	1	0	0	13	E	SOL: Eruptive MAG: Quiet PRO: Quiet
256	13	12	58	94	8	457	S11	W27	0	0	0	13	Q	
						457	S11	W27	0	0	0	13	Q	
						457	S11	W27	0	0	0	13	Q	
257	14	13	57	96	11	456	S07	W59	2	0	0	14	E	SOL: Eruptive

20
Sep 03

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

SEPTEMBER 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			
258	15	14	58	95	7	457	S12	W38	0	0	0	14	Q	MAG: Quiet
						458	S08	W32	0	0	0	14	Q	PRO: Quiet
						456	S08	W73	2	0	0	15	E	SOL: Eruptive
						458	S09	W46	0	0	0	15	Q	MAG: Active
259	16	15	68	97	4	459	S11	E38	0	0	0	15	Q	PRO: Quiet
						456	S08	W88	1	0	0	16	Q	SOL: Eruptive
						457	S12	W69	0	0	0	16	Q	MAG: Quiet
						458	S08	W60	0	0	0	16	Q	PRO: Quiet
260	17	16	89	99	36	459	S11	E24	0	0	0	16	Q	
						460	N16	E75	0	0	0	16	Q	
						457	S12	W83	0	0	0	17	Q	SOL: Eruptive
						458	S10	W73	0	0	0	17	Q	MAG: Active
261	18	17	83	106	45	459	S11	E12	0	0	0	17	Q	PRO: Quiet
						460	N17	E62	0	0	0	17	Q	
						461	N12	W38	0	0	0	17	Q	
						462	S09	W30	0	0	0	17	Q	
262	19	18	92	109	32	459	S11	W01	0	0	0	18	Q	SOL: Eruptive
						460	N17	E51	0	0	0	18	Q	MAG: Minor
						461	N12	W52	0	0	0	18	Q	PRO: Quiet
						462	S10	W43	0	0	0	18	Q	
263	20	19	71	111	26	463	N09	E74	0	0	0	18	Q	
						459	S11	W14	0	0	0	19	Q	SOL: Eruptive
						460	N17	E38	0	0	0	19	Q	MAG: Minor
						461	N13	W64	0	0	0	19	Q	PRO: Quiet
264	21	20	72	112	34	462	S10	W59	0	0	0	19	Q	
						463	N09	E59	0	0	0	19	Q	
						459	S11	W27	0	0	0	20	Q	SOL: Eruptive
						460	N17	E21	0	0	0	20	Q	MAG: Active
265	22	21	64	120	19	461	N13	W76	0	0	0	20	Q	PRO: Quiet
						462	S09	W74	0	0	0	20	Q	
						463	N09	E46	0	0	0	20	Q	
						464	N03	E62	0	0	0	22	E	
266	23	22	91	123	17	459	S11	W56	0	0	0	22	Q	SOL: Eruptive
						460	N17	W05	0	0	0	22	Q	MAG: Active
						463	N09	E18	0	0	0	22	Q	PRO: Quiet
						464	N03	E62	0	0	0	22	E	
267	24	23	133	125	13	459	S12	W69	0	0	0	23	Q	SOL: Eruptive
						460	N16	W19	0	0	0	23	Q	MAG: Active
						463	N09	E06	0	0	0	23	Q	PRO: Quiet
						464	N06	E49	0	0	0	23	E	
268	25	24	121	134	28	465	S02	E50	0	0	0	23	Q	
						466	S04	E72	0	0	0	23	Q	
						459	S11	W84	0	0	0	24	Q	SOL: Eruptive
						460	N17	W34	0	0	0	24	Q	MAG: Active
269	26	25	122	135	14	463	N09	W09	0	0	0	24	Q	PRO: Quiet
						464	N04	E35	0	0	0	24	E	
						465	N00	E36	0	0	0	24	Q	
						466	S05	E60	0	0	0	24	Q	
270	27	26	123	136	15	467	S10	E46	0	0	0	24	Q	
						468	N16	W16	0	0	0	24	Q	
						463	N09	W22	0	0	0	25	Q	SOL: Eruptive
						464	N04	E22	9	0	0	25	E	MAG: Active

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

SEPTEMBER 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			
						465	N00	E23	0	0	0	25	Q	PRO: Quiet
						466	S05	E47	0	0	0	25	Q	
						467	S10	E33	0	0	0	25	Q	
						468	N16	W29	0	0	0	25	Q	
269	26	25	122	133	29	463	N09	W35	0	0	0	26	Q	SOL: Eruptive
						464	N04	E09	0	0	0	26	E	MAG: Active
						465	N00	E10	0	0	0	26	Q	PRO: Quiet
						466	S05	E34	0	0	0	26	Q	
						467	S10	E20	0	0	0	26	Q	
270	27	26	127	131	25	463	N08	W50	0	0	0	27	Q	SOL: Eruptive
						464	N04	W07	2	0	0	27	E	MAG: Active
						465	S01	W03	0	0	0	27	Q	PRO: Quiet
						466	S07	E19	0	0	0	27	Q	
						467	S10	E06	0	0	0	27	Q	
271	28	27	137	130	6	463	N09	W63	0	0	0	28	Q	SOL: Eruptive
						464	N05	W20	3	0	0	28	E	MAG: Quiet
						465	S01	W19	0	0	0	28	Q	PRO: Quiet
						466	S05	E05	0	0	0	28	Q	
						467	S10	W06	0	0	0	28	Q	
						469	S09	W24	0	0	0	28	Q	
272	29	28	139	137	3	463	N09	W77	0	0	0	29	Q	SOL: Eruptive
						464	N03	W34	2	0	0	29	E	MAG: Quiet
						465	S02	W32	0	0	0	29	Q	PRO: Quiet
						466	S05	W09	0	0	0	29	Q	
						467	S11	W20	0	0	0	29	Q	
						469	S09	W38	0	0	0	29	Q	
273	30	29	108	135	5	464	N03	W48	3	0	0	30	E	SOL: Eruptive
						466	S05	W23	0	0	0	30	Q	MAG: Quiet
						467	S11	W32	0	0	0	30	Q	PRO: Quiet
						469	S10	W52	0	0	0	30	Q	
						470	S13	E32	0	0	0	30	Q	

(1) Region Forecast and Flare (SOL) Advice

Q = Quiet (<50% probability of C-class flares)
 E = Eruptive (C-class flares expected, probability >=50%)
 A = Active (M-class flares expected, probability >=50%)
 M = Major (X-class flares expected, probability >=50%)
 P = Proton (Proton flares expected, probability >=50%)
 W = Warning (activity levels are expected to increase, but no numerical forecast given)
 / = No forecast available

Magnetic (MAG) Geoadvice

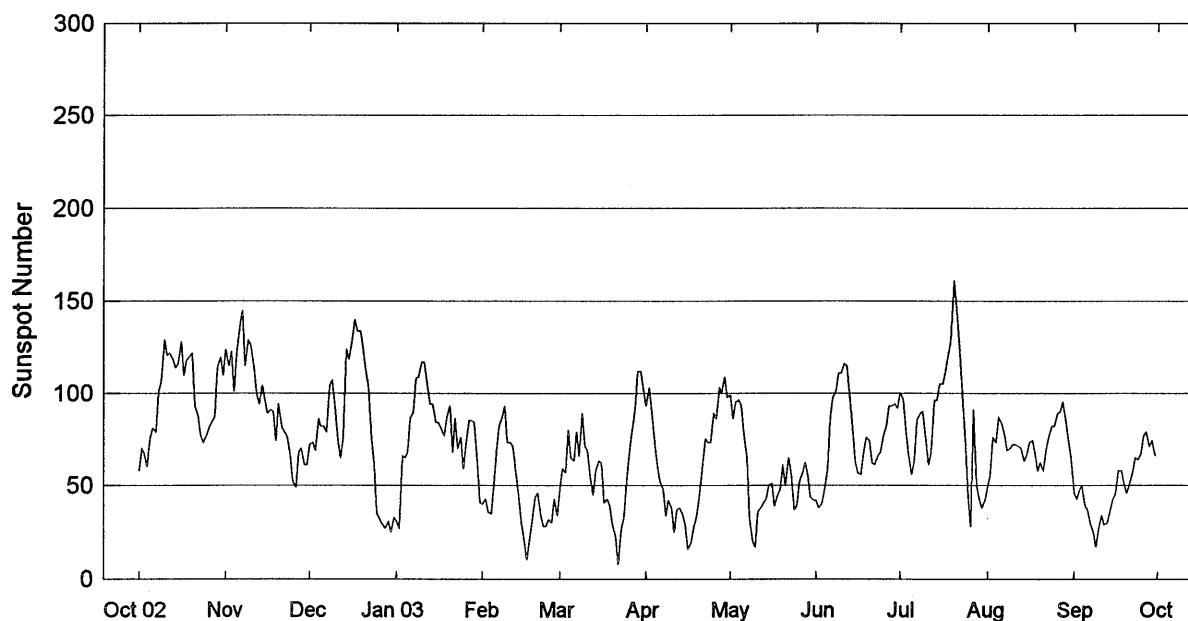
'Quiet'
 'Active' conditions expected (A>=20 or K=4)
 'Minor' storm expected (A>=30 or K=5)
 'Major' storm expected (A>=50 or K>=6)
 'Severe' storm expected (A>=100 or K>=7)
 'IP' magstorm in progress (A>=30 or K>=4)
 'Warning' (activity levels are expected to increase, but no numerical forecast given)
 '/' no forecast available

Proton (PRO) Geoadvice

'Quiet'
 'Proton' event expected (10pfu at >10MeV)
 'Major' proton event expected (100pfu at >100 MeV)
 'IP' proton event in progress (>10 MeV)
 'Warning' (activity levels are expected to increase, but no numerical forecast given)
 '/' no forecast available

STRATWARM ALERTS - NONE

International Relative Sunspot Numbers Oct 2002 - Sep 2003



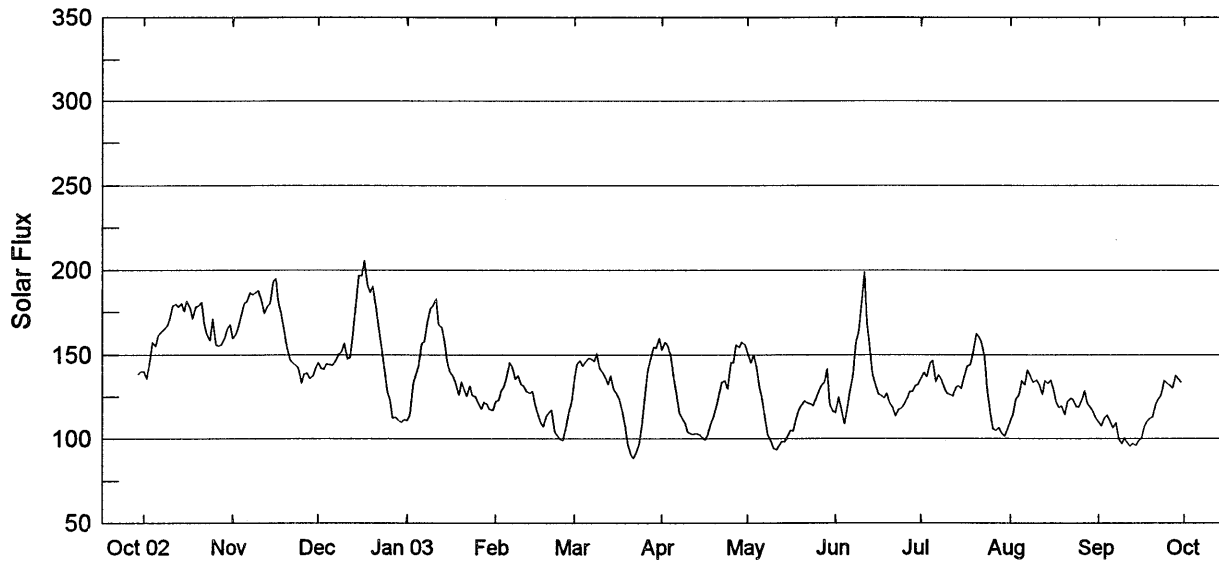
Day	Oct 02	Nov	Dec	Jan 03	Feb	Mar	Apr	May	Jun	Jul*	Aug*	Sep*
1	58	124	72	31	40	48	93	99	42	100	49	46
2	70	115	66	27	43	59	103	86	38	97	56	43
3	67	123	64	66	36	57	90	95	40	80	76	47
4	60	107	80	65	35	80	72	96	47	67	73	50
5	76	122	82	68	50	65	60	93	59	56	87	39
6	81	137	82	86	68	63	52	78	86	63	83	37
7	79	145	79	90	82	79	48	65	98	85	78	30
8	101	115	98	108	87	66	34	33	101	89	69	25
9	106	129	107	109	93	89	42	20	111	90	70	17
10	129	126	94	117	73	71	38	17	111	74	72	28
11	121	114	74	117	73	69	25	36	116	61	72	34
12	122	100	65	104	71	56	37	38	115	68	71	29
13	119	94	75	94	59	45	38	41	96	96	70	30
14	114	104	124	94	45	58	35	43	81	96	63	36
15	116	102	119	84	31	63	29	50	63	105	67	42
16	128	89	129	84	20	62	16	51	57	105	73	46
17	110	91	140	81	10	41	19	39	56	112	74	58
18	118	83	134	77	20	43	27	44	68	121	67	58
19	120	74	134	87	33	39	34	48	76	128	58	52
20	122	94	124	93	44	29	45	61	74	161	62	46
21	93	82	112	68	46	23	58	50	62	146	58	50
22	88	79	104	86	34	8	75	65	61	123	69	57
23	77	77	75	70	28	27	73	57	66	100	76	65
24	73	67	57	76	28	33	73	37	68	78	82	64
25	77	56	35	59	32	52	89	39	76	43	82	67
26	81	49	32	72	30	70	86	52	82	28	89	77
27	84	68	29	85	43	81	103	57	93	91	90	79
28	87	70	27	85	34	91	100	62	93	50	95	71
29	114	61	31	84		112	109	56	94	43	85	74
30	120	61	29	62		112	98	44	92	38	74	66
31	110		33	41		102		42		42	65	
Mean	97.5	95.5	80.8	79.7	46.0	61.1	60.0	54.6	77.4	85.0	72.7	48.8

* = Provisional.

Penticton 2800 MHz (10.7cm) Solar Flux Oct 2002 - Sep 2003

23
Sep 03

Adjusted to 1 AU



Day	Oct 02	Nov	Dec	Jan 03	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1	140.1	159.7	145.5	111.2	122.1	135.6	152.8	151.0	115.5	135.6	110.6	110.1
2	136.0	162.1	142.0	114.4	123.0	144.7	157.3	145.3#	124.8	139.3	114.7	107.6
3	146.1	166.5	141.8	133.1	128.7	146.5	155.7	150.1	117.8	136.7	123.6	112.4
4	157.6	174.4	144.5	138.2	131.0	143.6	148.8#	144.4	108.7	144.8	126.0	114.1
5	155.1	180.0	144.4	143.2	136.2	146.2	137.5	131.1	117.0	146.7	134.4	109.8
6	161.6	181.2	143.9	156.8	145.4	147.9	126.1	124.1	129.4	134.0	132.4	106.6
7	163.5	186.4	146.6	157.8	143.3	147.6	115.9	112.2	137.2	137.8	140.9	109.4
8	165.1	185.5	149.8	168.0	135.4	146.2	112.6	102.8	158.0	135.7	136.6	100.3
9	166.8	187.0	151.6	176.9	137.6	150.6	109.7	98.9	163.1	130.2	133.6	97.3
10	171.4	187.7	156.5	178.7	132.6	141.7	104.1	94.5	182.0	126.9	134.7	100.6
11	178.7	181.0	147.7	182.6	131.4	139.7	103.0	93.4	198.9	126.1	132.7	98.0
12	179.7	174.6	148.4	167.7	128.2	136.2	102.6	95.8	168.6	125.5	126.6	95.6
13	178.3	178.6	161.8	166.2	127.3	132.5	103.0	98.1	155.8	130.7	134.3	97.3
14	180.2	180.2	180.1	158.6	128.1	137.3	102.6	98.3	137.7	131.4	133.1	95.8
15	175.7	193.2	196.6	145.0	120.6	129.3	101.1	101.4	132.8	129.9	134.7	98.4
16	181.4	194.8	196.5	139.9	115.7	127.2	99.2	104.9	126.5	137.5	130.1	100.4
17	177.7	180.5	205.8	137.1	109.4	123.1#	101.8	104.7	125.8	143.2	122.3	107.0
18	171.3	174.8	190.6	133.0	107.4	117.3	108.7	111.5	124.3	144.3	118.7	110.2
19	178.1	164.3	186.7	126.1	113.6	107.2	113.1	117.4	126.8	150.8	119.5	112.1
20	178.7	155.3	190.3	133.7	115.7	96.6	119.7	120.0	120.8	162.4	114.5	112.9
21	180.8	147.2	177.9	129.4	117.0	90.3	127.0	122.2	118.8	160.7	122.0	120.9
22	167.7	145.5	166.4	125.4	104.3	88.3	133.8	121.3	113.9	157.4	123.7	123.5
23	161.9	143.8	153.7	131.6	101.8	92.4	134.3	120.9	117.2	148.7	122.9	125.7
24	158.5	142.5	142.5	125.8	99.9	97.3	129.8	119.8	118.3	129.2	119.0	134.3
25	170.9	133.2	127.6	124.9	99.5	108.2	145.3	124.3	120.2	115.1	119.0	133.4
26	156.1	138.5	123.2	121.2	107.2	126.6	145.5	128.4	122.9	105.9	123.4	131.8
27	155.2	138.8	112.7	117.7	115.4	140.5	156.1	132.3	128.1	104.9	128.3	130.3
28	156.3	136.0	113.1	121.8	122.6	146.4	154.3	133.7	128.1	106.6	121.1	137.6
29	159.4	137.5	111.0	120.7		154.6	157.4	141.6	131.6	103.0	118.7	135.6
30	165.3	142.1	110.1	117.6		154.2	155.8	120.4	132.5	101.7	116.2	133.3
31	167.7		111.3	116.9		159.8		116.3		105.2	111.8	
Mean	165.9	165.1	152.3	139.4	121.4	130.8	127.2	118.7	133.4	131.9	125.2	113.4

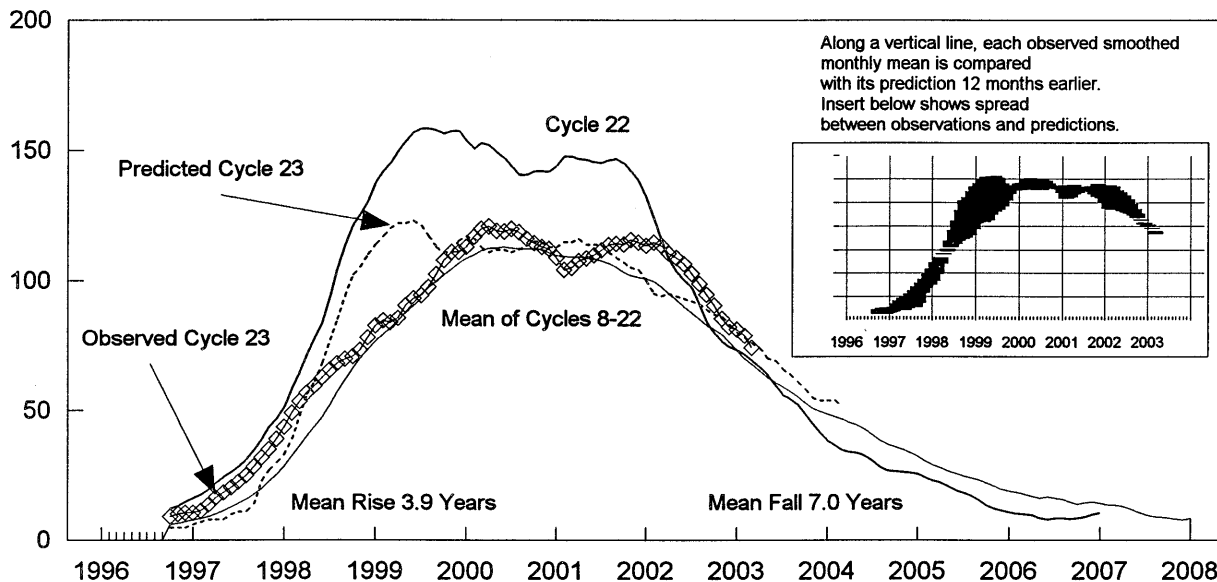
NOTE: # - 1700 or 1800UT reading, burst in progress at 2000UT.

24
Sep 03

DAILY SOLAR INDICES **September 2003**

Day	Day of Year	Bartels Cycle	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	244	23	46	53	108.1	521	257	171	110.1	107	79	46	31	11
2	245	24	43	46	105.7	502	259	158	107.6	101	77	45	31	11
3	246	25	47	45	110.5	545	255	156	112.4	106	78	48	33	13
4	247	26	50	50	112.2	515	268	159	114.1	109	79	48	34	13
5	248	27	39	43	108.0	529	251	153	109.8	104	77	43	32	16
6	249	1	37	40	104.9	535	252	147	106.6	95	73	45	32	12
7	250	2	30	26	107.8	536	249	150	109.4	109	79	47	33	12
8	251	3	25	18	98.8	530	250	146	100.3	95	70	46	31	14
9	252	4	17	21	95.9	533	257	152	97.3	93	67	45	32	13
10	253	5	28	31	99.3	534	244	161	100.6	100	69	47	32	11
11	254	6	34	35	96.7	529	248	143	98.0	95	64	44	31	13
12	255	7	29	33	94.4	533	252	149	95.6	91	63	43	30	11
13	256	8	30	32	96.1	521	239	145	97.3	94	62	40	31	12
14	257	9	36	37	94.7	518	246	143	95.8	87	61	40	28	11
15	258	10	42	38	97.3	527	252	124	98.4	95	61	40	29	12
16	259	11	46	46	99.3	527	251	144	100.4	92	65	42	30	13
17	260	12	58	62	105.9	535	256	170	107.0	102	68	43	37	20
18	261	13	58	60	109.2	534	245	148	110.2	104	70	43	33	17
19	262	14	52	53	111.1	485	244	163	112.1	103	72	45	34	15
20	263	15	46	49	111.9	548	266	168	112.9	115	74	45	33	15
21	264	16	50	52	119.9	531	267	183	120.9	115	74	43	33	16
22	265	17	57	57	122.6	535	261	161	123.5	114	76	45	34	14
23	266	18	65	66	124.9	571	257	181	125.7	118	79	44	32	13
24	267	19	64	75	133.5	537	264	173	134.3	121	85	43	30	14
25	268	20	67	77	132.6	526	263	169	133.4	122	83	47	35	19
26	269	21	77	85	131.1	553	264	180	131.8	127	86	50	33	20
27	270	22	79	86	129.7	525	268	183	130.3	125	83	50	35	18
28	271	23	71	79	137.0	525	258	171	137.6	130	87	50	37	32
29	272	24	74	73	135.1	539	270	168	135.6	123	85	44	35	17
30	273	25	66	75	133.0	546	263	182	133.3	123	84	46	33	16
MEAN			48.8	51.5	112.2	530	255	160	113.4	107	74	44	32	14

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



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	72	69	66	64	62	60	58	57	54	66
				(3)	(5)	(7)	(8)	(10)	(12)	(14)	(16)	(18)	(8)
2004	53	52	51	50	49	47	45	42	41	40	38	37	45
	(19)	(20)	(20)	(21)	(21)	(21)	(21)	(22)	(23)	(24)	(24)	(24)	(22)
Solar Cycle 22				Solar Cycle 23				Min, Max, and Predictions					

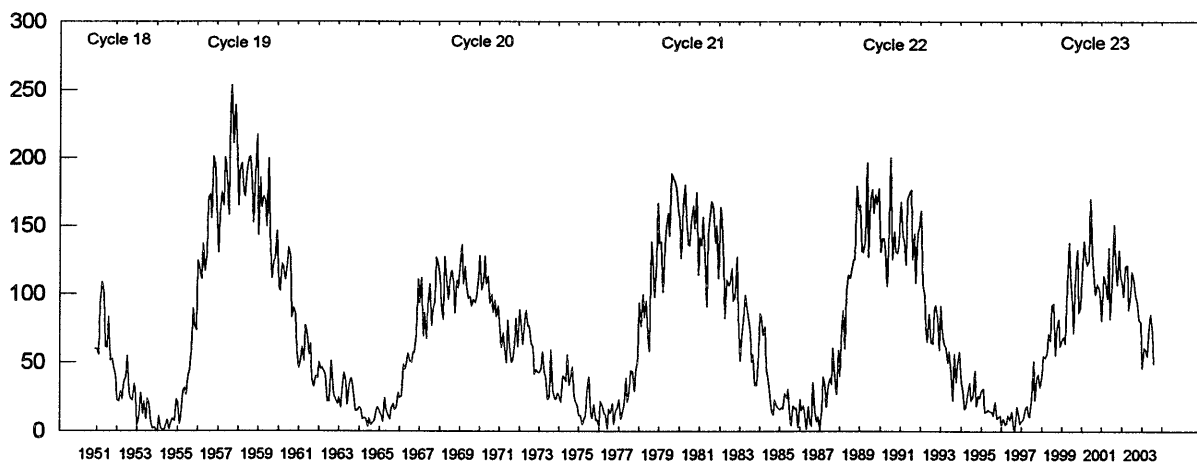
* May 1996 marks Cycle 22's mathematical minimum. ** October 1996 marks the consensus minimum NGDC is now using.

+ 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 March 2004 prediction. There exists a 90% chance that in March 2004, the actual smoothed number will fall somewhere between 31 and 71.

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 - Sep 2003

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				65.0

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

H α SOLAR FLARES

SEPTEMBER 2003

Sta	Day	Start (UT)	Max (UT)	End (UT)	Lat	CMD	NOAA/ USAF		CMP Mo	Day	Dur (Min)	Imp Opt	Xray	Obs See	Type	Area Measurement			Remarks
							Region	Region								Time (UT)	Apparent (10-6 Disk)	Corr (Sq Deg)	
GOES	01	1407	1411	1416			10444				9		B 4.1						2.0E-04
LEAR	03	0113	0115	0117	S06	W58	10442	08	29.8		4	SF		3	E		10		7.0E-04
GOES		0836	0843	0901							25		B 5.6						3.3E-04
GOES		0945	0950	0953							8		B 8.2						4.9E-04
GOES		1936	1945	1952							16		B 5.9						2.2E-04
GOES		2010	2014	2016							6		B 7.2						
GOES	04	1425	1449	1519			10452				54		C 1.4						3.8E-03
GOES	05	0045	0048	0050							5		B 6.1						1.6E-04
GOES		0632	0635	0702							30		B 7.4						1.2E-03
GOES		1248	1301	1312							24		C 1.2						1.4E-03
GOES		1522	1526	1529							7		B 6.6						2.3E-04
GOES		1555	1558	1601							6		B 5.3						1.6E-04
GOES	06	0507	0511	0515							8		B 5.2						2.0E-04
GOES		0544	0551	0559							15		B 7.9						5.3E-04
GOES	07	0417	0421	0428			10450				11		B 4.7						2.6E-04
GOES		1338	1407	1518	S16	W69	10450				100	SF	C 5.3						1.6E-02
HOLL		1403	1404	1433	S16	W69	10450	09	2.3		30	SF		3	E		82		F
SVTO		1405E	1405U	1408D	S19	W60	10450	09	3.0		3D	SF		2	E		47		
GOES	09	0912	0917	0919			10456				7		B 4.3						1.2E-04
GOES		1014	1017	1021			10456				7		B 3.4						1.3E-04
GOES	10	0302	0312	0325			10456				23		B 4.3						5.0E-04
GOES		1512	1552	1609			10456				57		B 4.3						1.4E-03
GOES		2326	2336	2344	S07	W18	10456				18	SF	B 6.5						5.8E-04
LEAR		2330	2331	2347	S07	W18	10456	09	9.6		17	SF		3	E		25		F
GOES	11	1348	1412	1424							36		C 1.0						1.8E-03
GOES		1446	1454	1507							21		C 1.2						1.2E-03
GOES		2016	2237	2408							232		B 7.9						7.4E-03T
GOES	12	0410	0413	0420							10		B 3.6						1.9E-04
GOES		0626	0631	0644							18		B 3.6						3.3E-04
GOES		0912	0917	0921							9		B 4.0						1.8E-04
GOES		1356	1400	1408							12		B 2.9						1.8E-04
GOES		1419	1422	1424							5		B 2.5						6.6E-05
GOES		1506	1516	1521							15		B 4.3						2.8E-04
HOLL		1524	1524	1528	S07	W41	10456	09	9.6		4	SF		3	E		21		F
SVTO		1524E	1524	1528D	S06	W41	10456	09	9.6		4D	SF		3	E		12		F
GOES		1853	1906	1917							24		B 4.6						5.8E-04
GOES		1956	2003	2007							11		B 8.4						4.2E-04
GOES		2222	2235	2241							19		B 5.7						4.9E-04
GOES	13	0039	0046	0057							18		B 3.8						3.6E-04
GOES		0250	0253	0255							5		B 4.5						1.1E-04
GOES		0644	0647	0649							5		B 3.5						8.3E-05
GOES		0654	0705	0715	S07	W50	10456				21	SF	B 8.8						8.4E-04
LEAR		0658	0702	0712	S07	W50	10456	09	9.5		14	SF		2	E		33		F
GOES		0732	0742	0752	S06	W52	10456				20	SF	C 2.2						1.8E-03
LEAR		0738	0741	0829	S06	W52	10456	09	9.4		51	SF		2	E		77		F
GOES	14	0115	0127	0133	S07	W61	10456				18	SF	C 4.4						2.1E-03
LEAR		0124	0125	0143	S07	W61	10456	09	9.5		19	SF		3	E		62		F
GOES		0346	0349	0353							7		B 2.7						9.6E-05
GOES		0439	0443	0445							6		B 3.5						9.1E-05
GOES		0533	0538	0542							9		B 3.3						1.6E-04
GOES		1754	1758	1803							9		B 4.7						2.1E-04
GOES		1911	1915	1917							6		B 4.6						1.2E-04
GOES		1957	2004	2013							16		B 3.5						3.1E-04
GOES		2134	2138	2141							7		B 3.7						1.4E-04
GOES		2235	2247	2252	S08	W73	10456				17	SF	C 3.6						2.3E-03
HOLL		2239	2241	2248	S08	W73	10456	09	9.5		9	SF		3	E		44		
GOES	15	0055	0101	0106	S07	W77	10456				11	1F	C 1.9						7.3E-04

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Sep 03

H α SOLAR FLARES

SEPTEMBER 2003

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)	
L	LEAR	15	0058	0103	0117	S07 W77	10456	09	9.3	19	1F		3	E		107		F
	GOES		0456	0501	0514					18		C 1.0						9.4E-04
	GOES		0628	0631	0634					6		B 7.4						2.4E-04
	GOES		0650	0653	0656					6		B 4.9						1.6E-04
	GOES		0704	0715	0728					24		B 5.5						7.1E-04
	GOES		0736	0743	0753					17		B 9.1						7.4E-04
	GOES		1047	1052	1058					11		B 5.8						3.2E-04
	GOES		1143	1151	1157					14		B 6.2						4.4E-04
	GOES		1209	1220	1236					27		B 6.0						8.7E-04
	GOES		1427	1450	1458					31		C 2.9						3.4E-03
	GOES		1636	1640	1644					8		C 1.5						5.8E-04
	GOES		1704	1709	1712					8		B 8.4						3.1E-04
	GOES		2200	2214	2220					20		C 1.0						1.0E-03
	GOES		2232	2241	2245					13		B 9.9						7.1E-04
	GOES		2257	2301	2306					9		C 1.5						6.5E-04
	GOES		2322	2326	2334					12		B 9.3						5.6E-04
	GOES	16	0043	0048	0053					10		B 8.3						4.2E-04
	GOES		0112	0116	0152					40		B 9.0						1.7E-03
	GOES		0211	0218	0221					10		C 2.5						1.0E-03
	GOES		0447	0453	0504					17		B 9.1						8.0E-04
	GOES		0518	0525	0531					13		C 1.4						8.9E-04
	GOES		0657	0701	0713					16		B 8.1						7.3E-04
	GOES		0756	0800	0812					16		B 5.9						4.9E-04
	GOES		0852	0858	0912					20		C 1.8						1.7E-03
	GOES		1251	1258	1308					17		B 7.3						6.5E-04
	GOES		1606	1620	1627					21		B 8.3						8.7E-04
	GOES		1850	1901	1918					28		C 1.1						1.6E-03
	GOES		2130	2224	2331					121		M 1.3						6.9E-02
	GOES	17	0120	0142	0200					40		C 1.9						3.8E-03
	GOES		0345	0406	0539					114		C 2.4						4.6E-03
	LEAR		0503	0515	0532	S12 E09	10459	09	17.9	29	SF		3	E		27		F
	GOES	18	0033	0036	0038					5		B 2.9						7.6E-05
	GOES		0651	0801	0938					167		C 1.0						8.2E-03
	GOES		1447	1450	1452					5		B 4.4						1.2E-04
	GOES		2145	2151	2157					12		C 2.9						1.8E-03
	GOES	19	1023	1031	1037					14		B 8.0						6.0E-04
	GOES		1812	1820	1828					16		C 1.6						1.2E-03
	GOES		2025	2030	2041					16		B 5.6						5.0E-04
	GOES	20	0438	0448	0452					14		C 1.1						8.1E-04
	GOES		0503	0512	0515					12		C 3.0						1.2E-03
	GOES		0630	0645	0705					35		C 1.7						3.0E-03
	GOES		1034	1145	1216					102		C 1.3						6.2E-03
	GOES		1524	1536	1557					33		C 3.6						6.5E-03
	GOES		1952	1955	1959					7		B 9.3						3.5E-04
	GOES		2129	2136	2143					14		C 2.0						1.3E-03
	GOES		2257	2310	2319		10464			22		C 2.3						2.2E-03
	GOES	21	0003	0008	0013		10464			10		C 1.4						7.8E-04
	GOES		0025	0028	0031		10464			6		C 1.1						3.6E-04
	GOES		0226	0230	0232		10464			6		C 1.8						4.5E-04
	GOES		0404	0407	0412					8		C 1.0						4.3E-04
	GOES		2054	2058	2102					8		B 8.5						3.1E-04
	GOES	22	1313	1331	1348					35		B 4.9						9.4E-04
	GOES		2012	2016	2025					13		B 5.7						4.1E-04
	LEAR	23	0615	0615	0619	N03 E38	10464	09	26.1	4	SF		3	E		32		
	GOES		1139	1144	1149					10		B 8.0						4.1E-04
	GOES		1440	1444	1452	N01 E42	10464			12	SF	C 2.1						1.0E-03
	SVTO		1443	1443	1448	N01 E42	10464	09	26.7	5	SF		3	E		18		
	GOES	24	0015	0023	0027		10464			12		B 8.1						4.5E-04
	GOES		0219	0232	0235		10464			16		B 8.3						6.8E-04

H α SOLAR FLARES

SEPTEMBER 2003

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)	
GOES	24	0431	0435	0438	N01	E23	10464			7	SF	C	2.1					5.8E-04
LEAR		0434	0434	0444	N01	E23	10464	09	25.9	10	SF		3	E		43		FH
GOES		0528	0532	0536	N02	E23	10464			8	SF	B	7.2					2.7E-04
SVTO		0532	0532	0534	N02	E23	10464	09	25.9	2	SF		3	E		10		
GOES		0622	0626	0628	N01	E23	10464			6	SF	C	1.2					3.2E-04
SVTO		0625	0629	0635	N01	E22	10464	09	25.9	10	SF		3	E		64		FH
LEAR		0625	0630	0636	N01	E23	10464	09	26.0	11	SF		3	E		41		FH
GOES		0712	0717	0719	N01	E20	10464			7	1F	C	5.4					1.1E-03
SVTO		0715	0717	0725	N01	E20	10464	09	25.8	10	1N		3	E		188		
LEAR		0716	0717	0723	N01	E20	10464	09	25.8	7	1F		3	E		179		FH
GOES		0851	0855	0857	N01	E21	10464			6	SF	C	2.0					4.2E-04
SVTO		0854	0855	0901	N01	E20	10464	09	25.9	7	SF		3	E		68		FH
LEAR		0855	0856	0858	N01	E21	10464	09	25.9	3	SF		3	E		15		FH
SVTO		0933	0935	0942	N00	E21	10464	09	26.0	9	SF		3	E		51		H
GOES		0936	0939	0942	N00	E21	10464			6	SF	C	1.4					4.7E-04
SVTO		0952	0954	1003	N01	E20	10464	09	25.9	11	SF		3	E		30		FH
GOES		1035	1039	1042	N02	E18	10464			7	SF	C	1.1					3.9E-04
SVTO		1037	1040	1045	N02	E18	10464	09	25.8	8	SF		3	E		58		H
GOES		1153	1158	1201	N01	E19	10464			8	SF	C	1.4					4.9E-04
SVTO		1156	1157	1201	N01	E19	10464	09	25.9	5	SF		3	E		95		FH
GOES		1250	1254	1257	N01	E18	10464			7	SF	C	1.9					5.2E-04
SVTO		1253	1254	1258	N01	E18	10464	09	25.9	5	SF		3	E		78		H
GOES		1405	1409	1412						7		B	9.6					3.5E-04
GOES		1447	1450	1455						8		B	9.7					3.9E-04
GOES		1456	1504	1508			10464			12		C	1.1					7.4E-04
GOES		1526	1530	1533	N02	E17	10464			7	SF	C	1.6					5.2E-04
HOLL		1527	1530	1534	N02	E17	10464	09	25.9	7	SF		3	E		62		FH
SVTO		1528	1529	1532	N01	E17	10464	09	25.9	4	SF		3	E		55		FH
GOES		1736	1740	1744	N01	E17	10464			8	SF	B	8.8					3.6E-04
HOLL		1738	1740	1743	N01	E17	10464	09	26.0	5	SF		3	E		37		FH
GOES		2002	2005	2007			10466			5		C	1.1					2.9E-04
GOES		2319	2323	2327	N02	E11	10464			8	SF	C	1.1					4.2E-04
LEAR		2323	2323	2328	N02	E11	10464	09	25.8	5	SF		3	E		16		
GOES	25	0029	0035	0052			10464			23		C	1.1					1.4E-03
GOES		1308	1313	1320						12		B	6.2					3.9E-04
GOES		1717	1725	1734			10464			17		C	1.1					9.4E-04
GOES		2212	2215	2229						17		B	9.2					8.4E-04
GOES	26	1202	1207	1215						13		B	7.7					5.2E-04
GOES		1215	1219	1222						7		B	9.5					3.3E-04
GOES		1449	1455	1458	N05	W04	10464			9	SF	C	1.3					5.6E-04
HOLL		1454	1455	1501	N05	W04	10464	09	26.3	7	SF		3	E		16		
SVTO		1455E	1455U	1458	N03	W03	10464	09	26.4	30	SF		2	E		14		
GOES		1748	1752	1755	N05	W06	10464			7	SF	C	2.3					6.0E-04
HOLL		1751	1751	1758	N05	W06	10464	09	26.3	7	SF		3	E		34		
GOES		1855	1858	1901						6		B	7.0					2.1E-04
GOES		2247	2251	2257						10		B	6.1					3.2E-04
GOES	27	1105	1109	1111						6		B	6.7					1.9E-04
GOES		1139	1143	1148	N14	W20	10464			9	SF	C	1.3					4.9E-04
SVTO		1142	1143	1150	N14	W20	10464	09	26.0	8	SF		3	E		40		F
GOES		1200	1204	1210	N16	W23	10464			10	SF	C	1.3					7.3E-04
SVTO		1201	1205	1223	N16	W23	10464	09	25.7	22	SF		3	E		19		FH
SVTO		1244	1247	1250	N17	W16	10464	09	26.3	6	SF		3	E		23		H
GOES		2130	2134	2148						18		B	5.7					5.5E-04
GOES	28	0159	0203	0207						8		B	7.2					2.8E-04
GOES		1410	1428	1455			10464			45		C	2.3					5.6E-03
GOES		1525	1558	1645	N03	W34	10464			80	SF	C	6.8					2.3E-02
HOLL		1553	1555	1620	N03	W34	10464	09	26.1	27	SF		3	E		30		F
GOES		2033	2037	2039	N05	W37	10464			6	SF	C	1.6					4.5E-04
HOLL		2036	2037	2042	N05	W37	10464	09	26.1	6	SF		3	E		24		
GOES		2255	2259	2301						6		B	7.5					2.3E-04
GOES		2331	2334	2337						6		B	7.3					2.3E-04
GOES	29	0343	0359	0442						59		C	1.8					3.2E-03
GOES		0500	0511	0523						23		C	3.9					4.1E-03

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Sep 03

H α SOLAR FLARES

SEPTEMBER 2003

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)	
GOES	29	1320	1339	1402						42				C 3.3				6.3E-03
GOES		1605	1610	1616			10464			11				C 5.1				2.2E-03
HOLL		1731	1737	1742	N03	W37	10464	09	27.0	11	SF		3	E		25		F
GOES		1941	2004	2018	N04	W45	10464			37	SF	C 3.8						6.5E-03
HOLL		2007	2015	2021	N04	W45	10464	09	26.5	14	SF		3	E		19		F
GOES		2107	2111	2118						11		C 1.7						9.8E-04
GOES		2141	2146	2156	N03	W39	10464			15	1F	C 5.4						3.6E-03
HOLL		2144	2145	2223	N03	W39	10464	09	27.0	39	1F		3	E		107		F
LEAR	30	0029	0032	0049	N09	W40	10464	09	27.0	20	SF		3	E		36		
GOES		0107	0110	0112			10464			5		C 2.4						5.5E-04
GOES		0258	0302	0306			10464			8		C 1.6						5.9E-04
GOES		0314	0340	0401			10464			47		C 5.1						1.0E-02
GOES		0507	0513	0530	N04	W43	10464			23	SF	C 3.3						3.0E-03
LEAR		0512	0512	0525	N04	W43	10464	09	27.0	13	SF		3	E		50		F
GOES		0737	0801	0815	N06	W52	10464			38	SF	C 2.8						3.6E-03
LEAR		0757	0801	0808	N06	W52	10464	09	26.4	11	SF		3	E		19		
GOES		0837	0840	0842						5		C 1.8						4.9E-04
GOES		0846	0852	0856	N09	W45	10464			10	1F	C 3.2						1.4E-03
LEAR		0849	0853	0905	N09	W45	10464	09	27.0	16	1F		3	E		111		F
GOES		1247	1250	1253			10464			6		C 3.0						9.1E-04
GOES		2009	2021	2041	S02	E75	10471			32	SF	C 4.9						7.1E-03
HOLL		2017	2019	2023	S02	E75	10471	10	6.4	6	SF		3	E		29		F
GOES		2317	2326	2340	N05	W61	10464			23	SF	C 3.9						4.0E-03
HOLL		2320	2321	2349	N05	W61	10464	09	26.4	29	SF		3	E		27		F
LEAR		2322	2322	2343	N04	W53	10464	09	27.0	21	SF		3	E		10		F

"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.

Observation Type: C=Cinematographic, E=Electronic, P=Photographic, V=Visual

NOTE: Beginning July 1997, the times of all GOES X-ray events are now included in this table.

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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Sep 03

SEPTEMBER 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		
07	8800	SVTO	8 S	1201.0	1201.0	U	96.0			QL=4 ST=2 TYP=3
	2695	SGMR	8 S	1404.0	1404.0	U	32.0			QL=4 ST=2 TYP=3
	2695	SVTO	8 S	1404.0	1404.0	1.0	31.0			QL=4 ST=2 TYP=3
23	8800	SGMR	8 S	1451.0	1451.0	2.0	60.0			QL=4 ST=2 TYP=3
24	8800	LEAR	8 S	0434.0	0434.0	U	180.0			QL=4 ST=2 TYP=3
	8800	SVTO	8 S	0715.0	0716.0	1.0	73.0			QL=4 ST=2 TYP=3
	2695	SVTO	8 S	0716.0	0716.0	U	35.0			QL=4 ST=2 TYP=3
	2695	SGMR	8 S	1155.0	1155.0	1.0	22.0			QL=4 ST=2 TYP=3
	8800	SGMR	49 GB	1454.0	1456.0	2.0	590.0			QL=4 ST=2 TYP=6
29	8800	SGMR	8 S	1609.0	1609.0	1.0	96.0			QL=4 ST=2 TYP=3

Reports are received routinely from the following observatories:

LEAR = Learmonth

PALE = Palehua

SGMR = Sagamore Hill

SVTO = San Vito

Explanation of Type Code:

1 Simple 1	7 Minor +	24 Rise	30 Post Burst Increase A	43 Onset of Noise Storm
2 Simple 1F	8 Spike	25 Rise A	31 Post Burst Decrease	44 Noise Storm in Progress
3 Simple 2	20 Simple 3	26 Fall	33 Absorption	45 Complex
4 Simple 2F	21 Simple 3A	27 Rise and Fall	40 Fluctuation	46 Complex F
5 Simple	22 Simple 3F	28 Precursor	41 Group of Bursts	47 Great Burst
6 Minor	23 Simple 3AF	29 Post Burst Increase	42 Series of Bursts	48 Major
1A Simple 1A	4A Simple 2AF	24PF Post Rise F	27F Rise and Fall F	
3A Simple 2A	40 Rise Only	16A Fall A	27AF Rise and Fall AF	
21A Simple 3A GRF	40F Rise Only F	260 Fall Only	31A Post Burst Decrease A	
2A Simple 1AF	4P Post Rise	26F Fall F	32A Absorption A	

RSTN Site Information: Beginning in April 1986, the RSTN sites LEAR, PALE, SGMR, and SVTO fixed frequency solar radio data are periodically adjusted to several world standard stations. These world standard stations include: Kislovodsk, USSR 15,500 MHz; Penticton, Canada 2800 MHz; and Hiraio, Japan 500 and 200 MHz.

STANFORD MEAN SOLAR MAGNETIC FIELD

Rot	Date	1	5	10	15	20	25
2303	APR 6						
2304	MAY 3						
2305	MAY 30						
2306	JUN 26						
2307	JUL 23						
2308	AUG 19						
2309	SEP 15						
2310	OCT 12						
2311	NOV 8						
2312	DEC 5						
2313	JAN 1						
2314	JAN 28						
2315	FEB 24						
2316	MAR 23						
2317	APR 19						
2318	MAY 16						
2319	JUN 12						
2320	JUL 9						
2321	AUG 5						
2322	SEP 1						
2323	SEP 28						

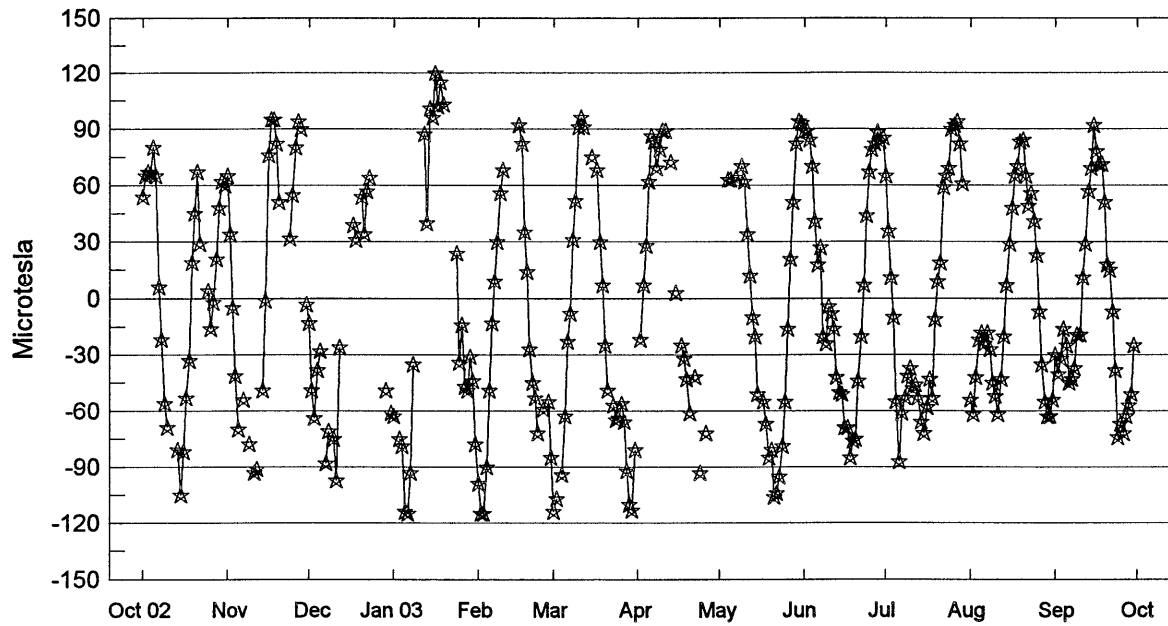
Mean Solar Magnetic Field Polarity:

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

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

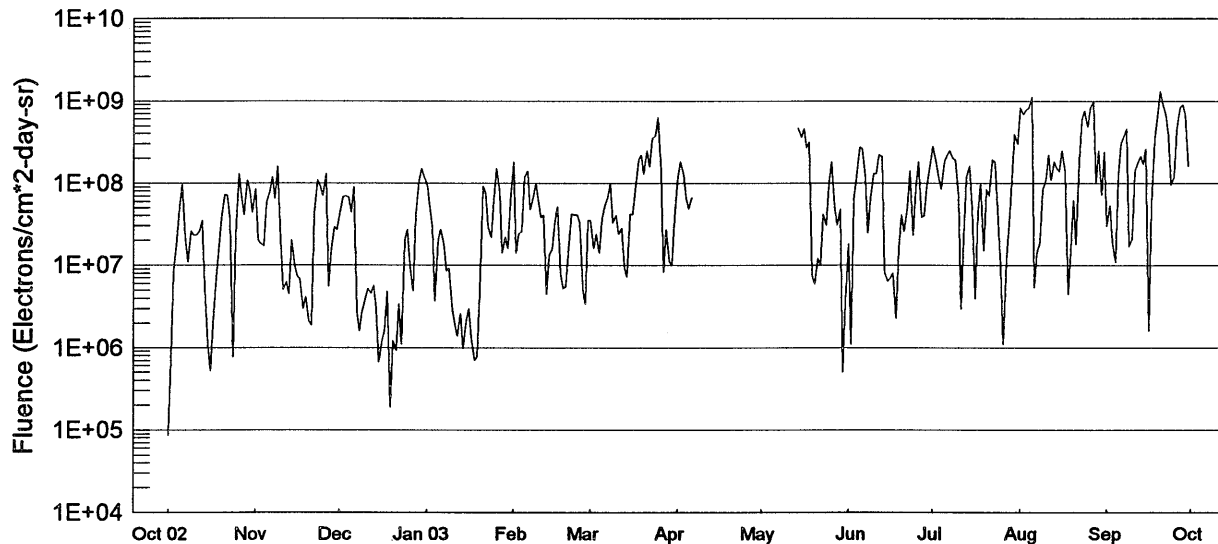
Stanford Mean Solar Magnetic Field (Microtesla) "Sun-As-A-Star"

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Sep 03



Day	Oct 02	Nov	Dec	Jan 03	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1	54	65	-13	-63	-99	-114	—	—	89	65	-54	-30
2	65	34	-49	—	-115	-107	-22	—	89	36	-62	-40
3	67	-5	-64	-75	-115	—	7	—	84	11	-42	-32
4	66	-41	-38	-79	-90	-94	28	63	70	-10	-22	-16
5	80	-70	-28	-114	-49	-63	62	63	41	-55	-18	-25
6	65	—	—	-115	-13	-23	86	—	18	-87	-24	-45
7	6	-54	-88	-93	9	-8	83	64	27	-61	-18	-43
8	-22	—	-71	-35	30	31	69	—	-20	-53	-27	-37
9	-56	-78	—	—	56	52	79	70	-24	-41	-45	-19
10	-69	—	-75	—	68	91	89	62	-4	-37	-52	-19
11	—	-93	-97	—	—	96	89	34	-8	-48	-62	11
12	—	-91	-26	87	—	91	—	12	-16	-46	-43	29
13	—	—	—	40	—	—	72	-10	-42	-53	-20	57
14	-81	-49	—	101	—	—	—	-20	-50	-66	7	69
15	-105	-1	—	96	—	75	3	-51	-51	-72	29	92
16	-82	76	—	120	92	—	—	—	-69	-58	48	78
17	-53	95	39	102	82	68	-25	-55	-69	-43	65	71
18	-33	95	31	115	35	30	-32	-67	-85	-53	70	71
19	19	82	—	103	14	7	-43	-85	-76	-11	83	51
20	45	51	54	—	-27	-25	-61	-81	-75	9	84	18
21	67	—	34	—	-45	-49	—	-106	-44	19	65	15
22	29	—	57	—	-53	—	-42	-104	-20	59	49	-7
23	—	—	64	—	-72	-57	—	-95	7	65	56	-38
24	—	32	—	24	—	-65	-93	-79	44	69	41	-74
25	4	55	—	-34	-59	-64	—	-55	67	90	23	-67
26	-16	80	—	-14	—	-56	-72	-16	79	92	-7	-72
27	-2	94	—	-47	-55	-66	—	21	82	94	-35	-63
28	21	90	—	-49	-85	-92	—	51	88	82	-55	-57
29	48	—	-49	-31	—	-110	—	82	83	61	-63	-51
30	62	-3	—	-44	—	-113	—	94	85	—	-63	-25
31	60	—	-61	-78	—	-81	—	93	—	—	-54	—

GOES Daily Electron Fluence Oct 2002 - Sep 2003



Day	Oct 02	Nov	Dec	Jan 03	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1	8.7E+04	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
2	7.4E+05	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
3	8.5E+06	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
4	2.0E+07	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
5	5.1E+07	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
6	9.6E+07	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
7	2.1E+07	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
8	1.1E+07	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
9	2.6E+07	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
10	2.3E+07	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
11	2.3E+07	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
12	2.6E+07	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
13	3.5E+07	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
14	5.4E+06	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
15	1.1E+06	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
16	5.2E+05	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
17	2.7E+06	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
18	6.9E+06	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
19	1.6E+07	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
20	3.8E+07	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
21	7.2E+07	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
22	7.1E+07	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
23	3.7E+07	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
24	7.7E+05	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
25	2.2E+07	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
26	1.3E+08	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
27	6.9E+07	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
28	4.1E+07	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
29	1.1E+08	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
30	8.0E+07	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
31	4.4E+07		1.2E+08	6.1E+07		3.7E+07		3.6E+06		3.0E+08	2.4E+08	

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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Number 710 Part I

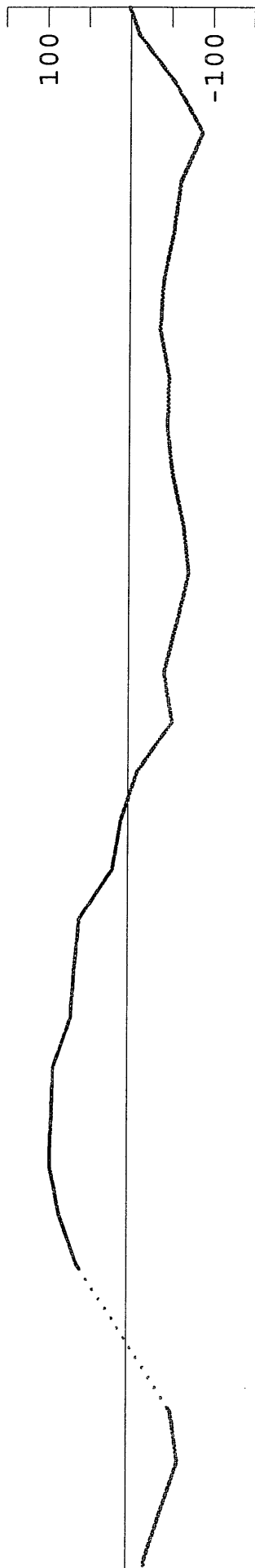
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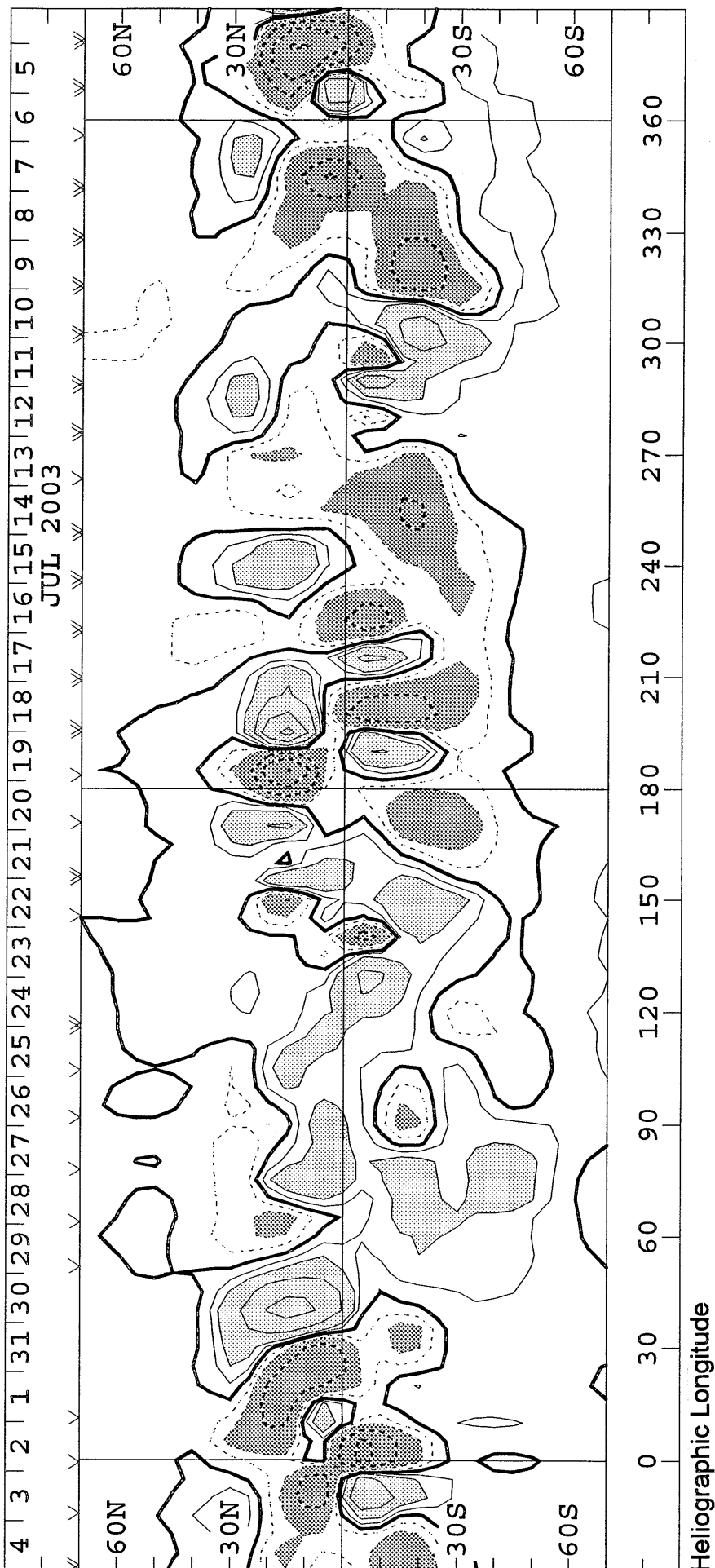
SOLAR MAGNETIC FIELD SYNOPTIC CHART
CARRINGTON ROTATION NUMBER 2005
(6 July to 2 August 2003)

WILCOX SOLAR OBSERVATORY

Mean Field



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

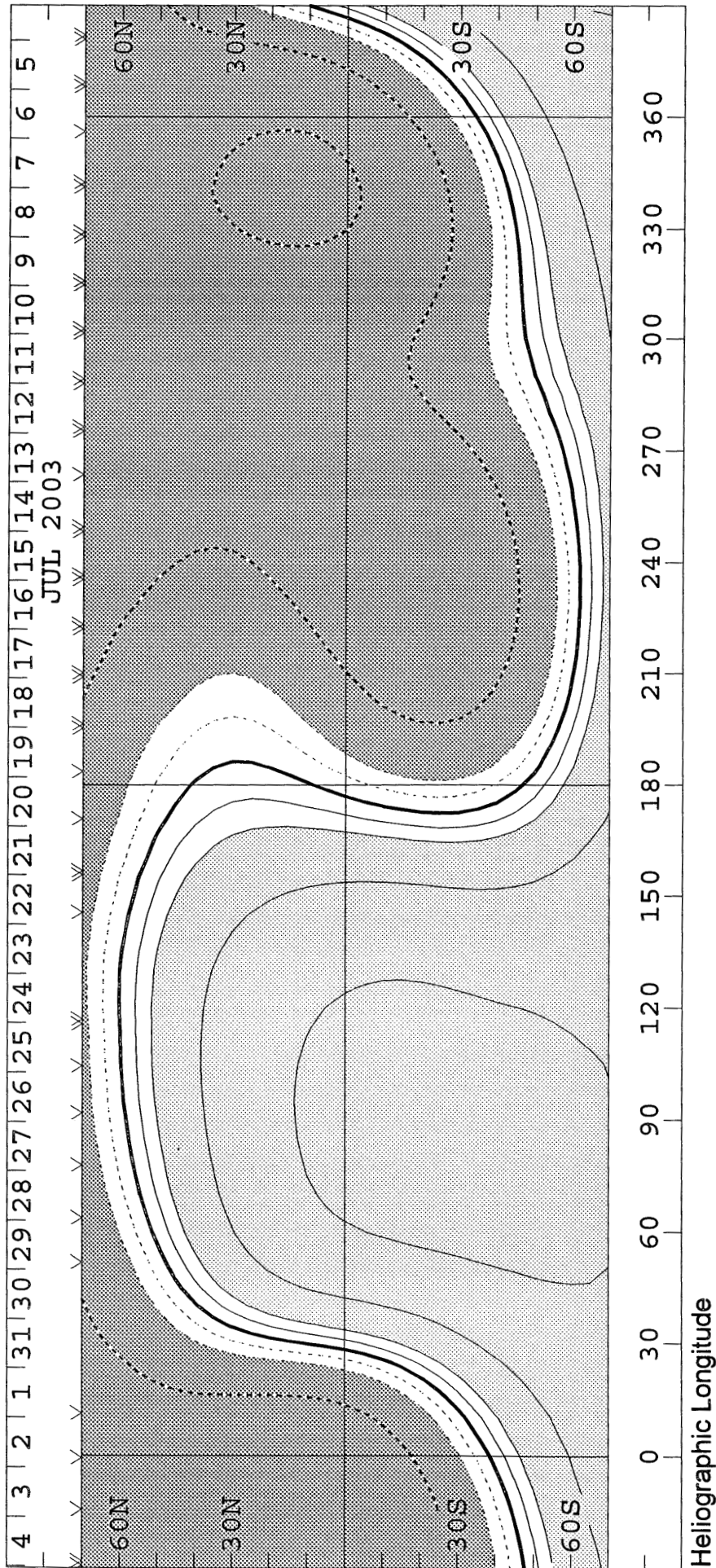


SOLAR MAGNETIC FIELD SYNOPSIS CHART

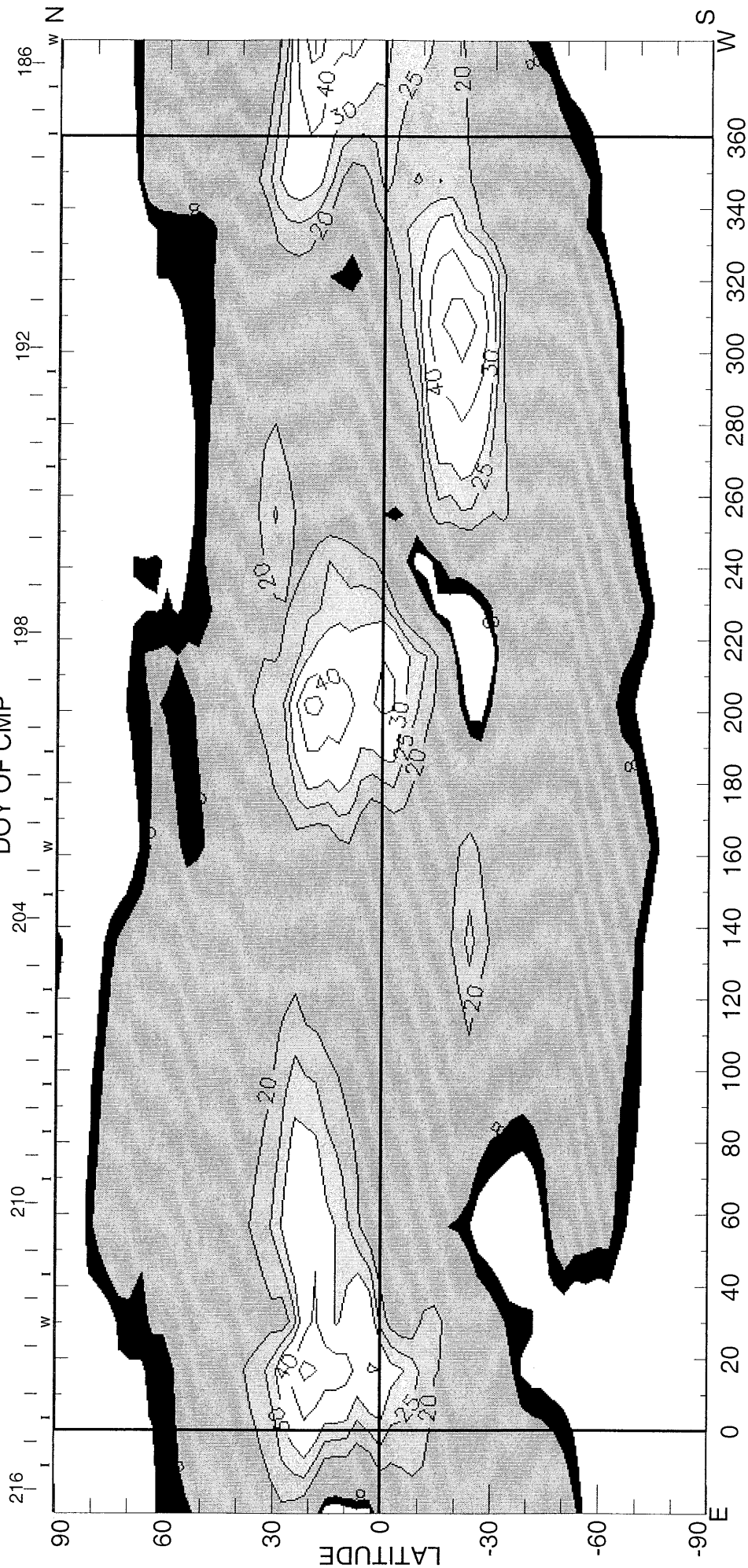
SOURCE SURFACE FIELD
CARRINGTON ROTATION NUMBER 2005
(6 July to 2 August 2003)

Wilcox Solar Observatory

0, ± 1 , 2, 5, 10, 20 microTesla

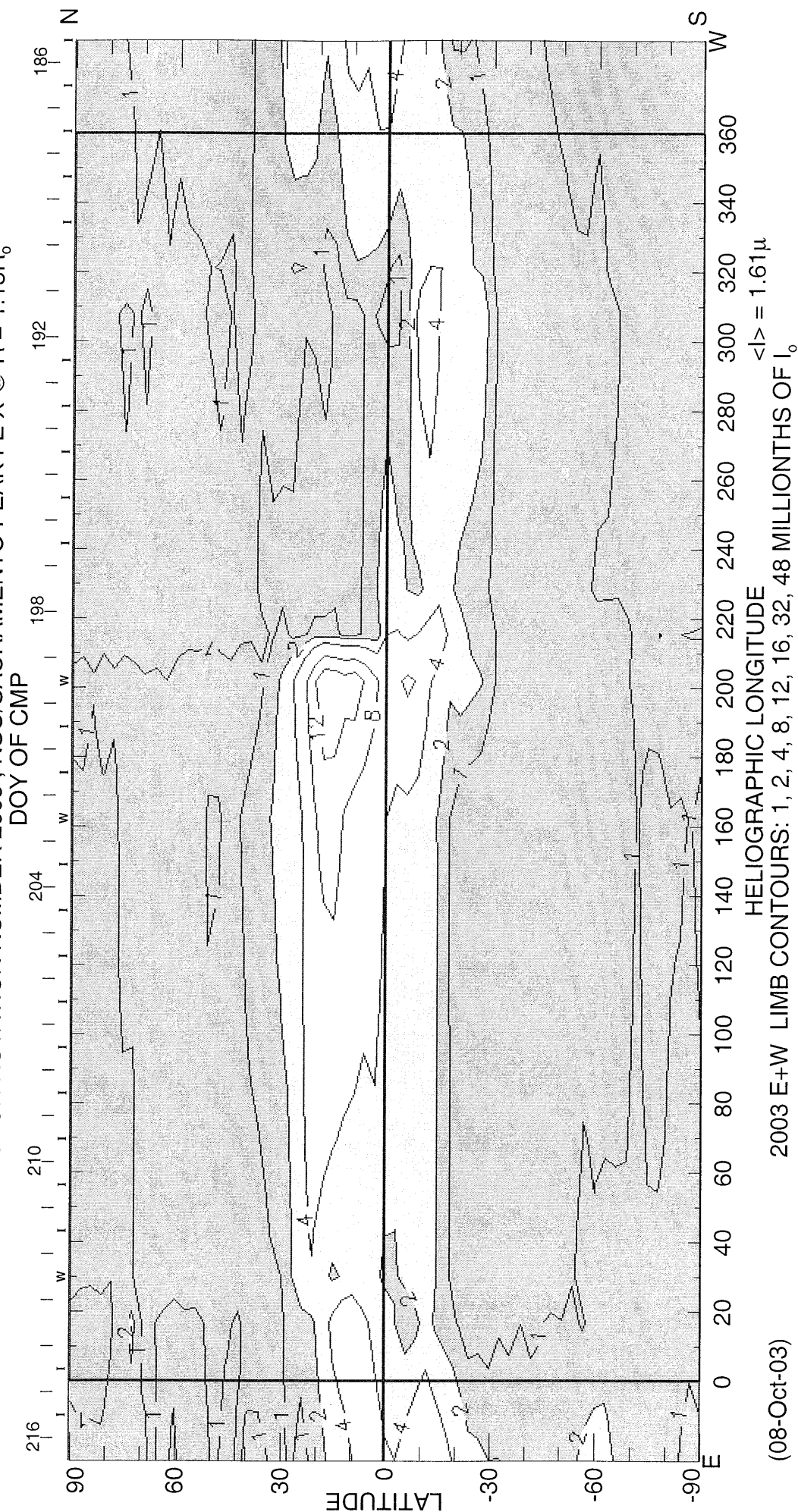


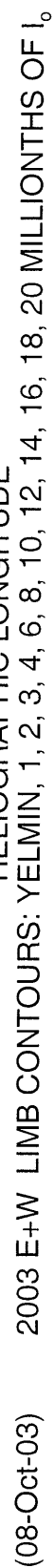
CARRINGTON ROTATION NUMBER 2005 ; NSO/SACRAMENTO PEAK FE XIV @ $R = 1.15R_{\odot}$
DOY OF CMP



2003 E+W LIMB CONTOURS: 6, 8, 20, 25, 30, 40, 50, 60, 80, 100, 120 MILLIONTHS OF I_0
CORONAL HOLES ARE SHOWN AS WHITE BORDERED BY BLACK

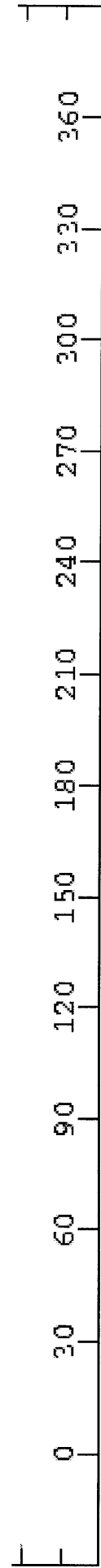
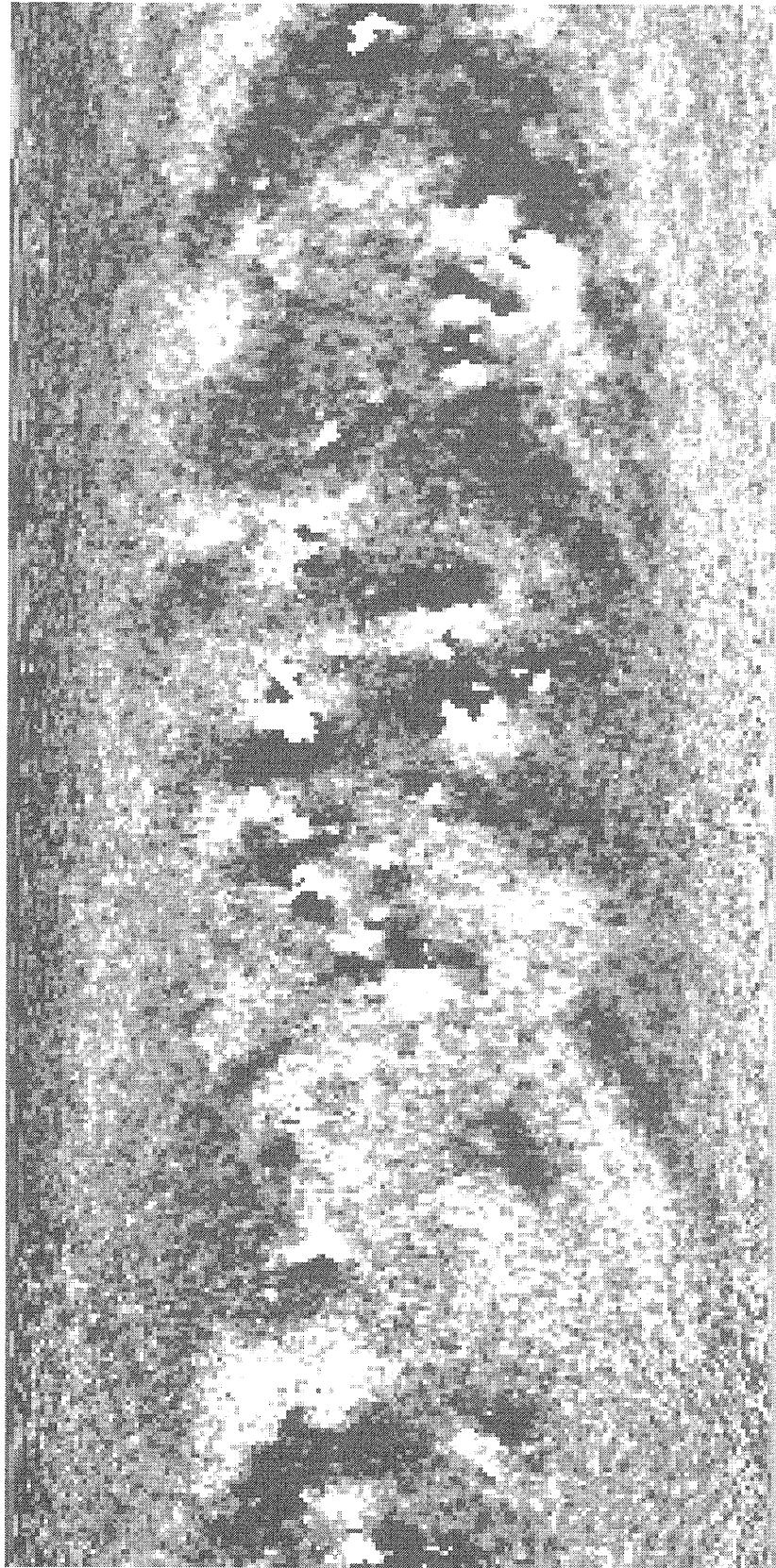
CARRINGTON ROTATION NUMBER 2005 ; NSO/SACRAMENTO PEAK FE X @ $R = 1.15R_{\odot}$





SOLAR MAGNETIC FIELD SYNOPTIC CHART
CARRINGTON ROTATION NUMBER 2005
(6 July to 2 August 2003)

National Solar Observatory/Kitt Peak



Heliographic Longitude

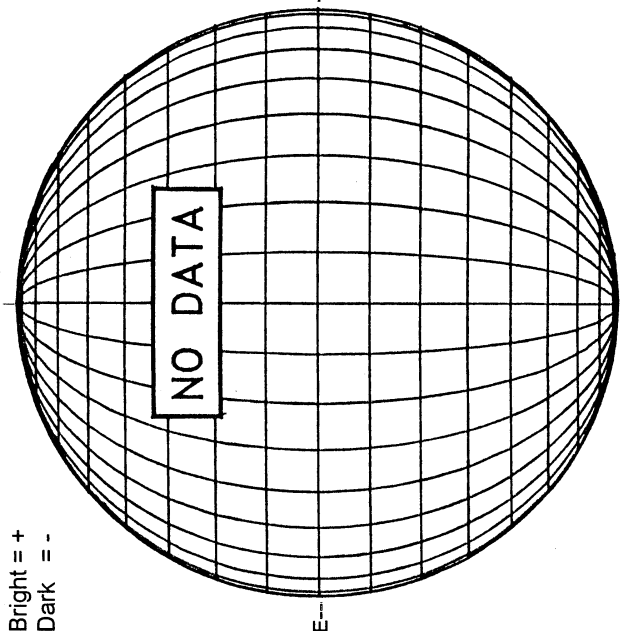
42
Aug 03

AUGUST 1, 2003 (P= 10.64, Bo = 5.75, Lo = 23.22)

KITT PEAK MAGNETOGRAM

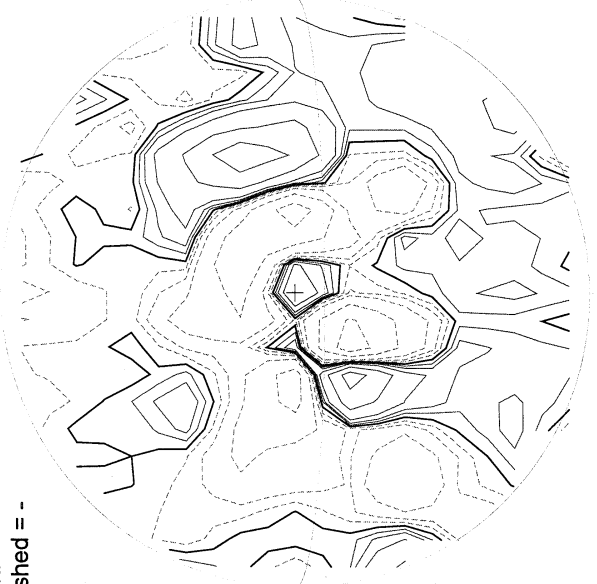
868.8 nm

Bright = +
Dark = -



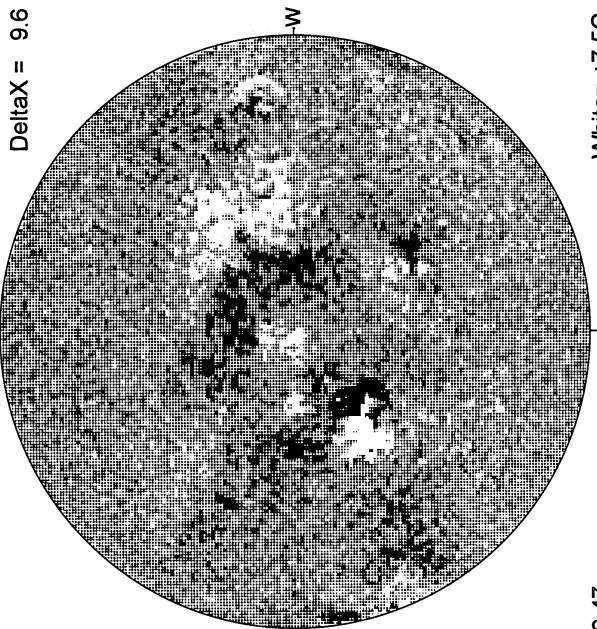
STANFORD MAGNETOGRAM

Solid = +
Dashed = -



MT. WILSON MAGNETOGRAM

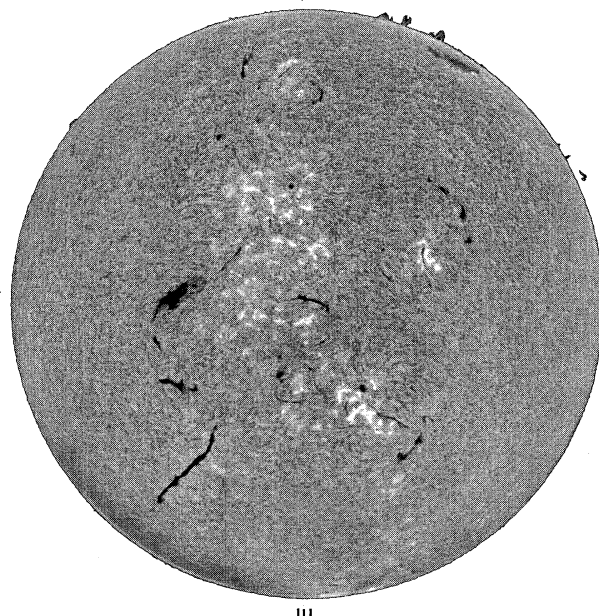
DeltaY = 13.1
DeltaX = 9.6



White = +7.5G
Black = -7.5G

16.47 -
17.39 UT

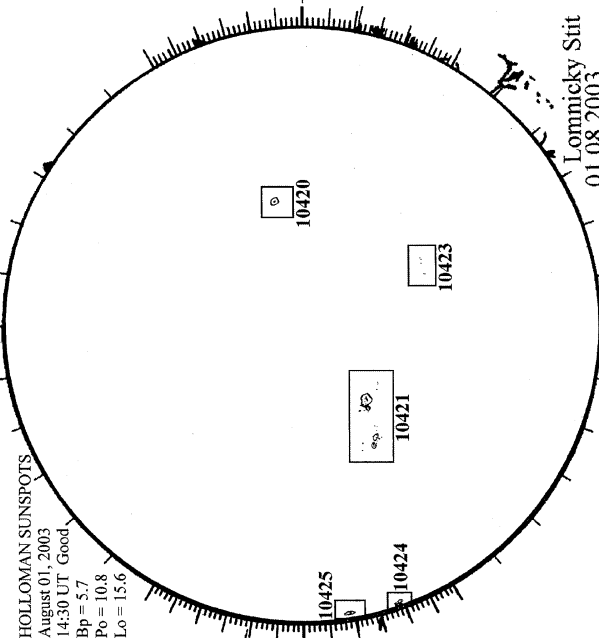
KANZELHOE H-ALPHA



1249 UT

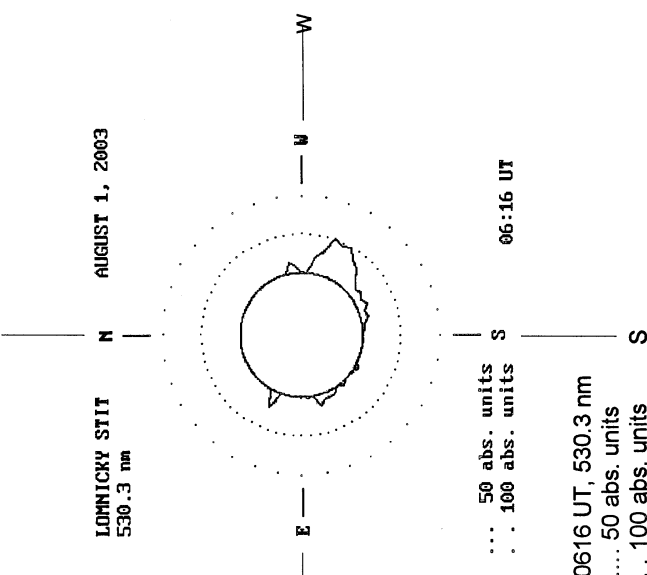
HOLLOMAN SUNSPOTS

August 01, 2003
14:30 UT Good
Bp = 5.7
Po = 10.8
Lo = 15.6



1430 UT
0530 UT LOMN Prom S

LOMNICKY PEAK CORONA (1.04 Radii)----



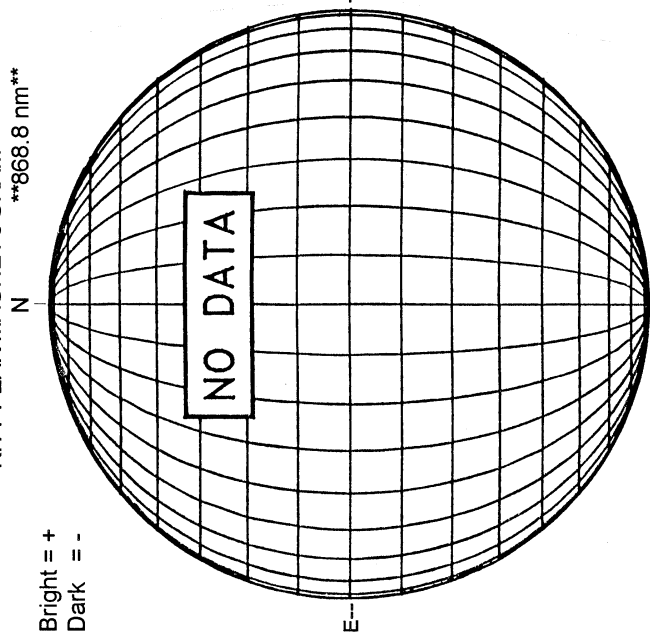
0616 UT, 530.3 nm
... 50 abs. units
... 100 abs. units

06:16 UT

AUGUST 2, 2003 (P= 11.04, Bo = 5.82, Lo = 9.99)

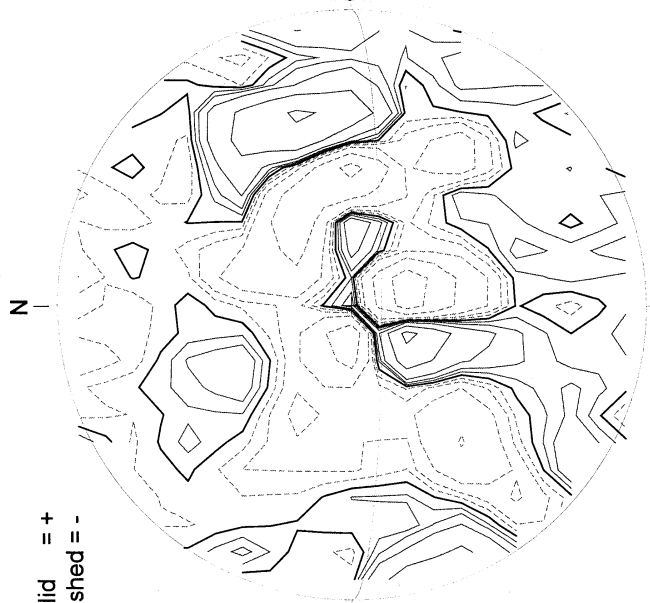
KITT PEAK MAGNETOGRAM

Bright = +
Dark = -



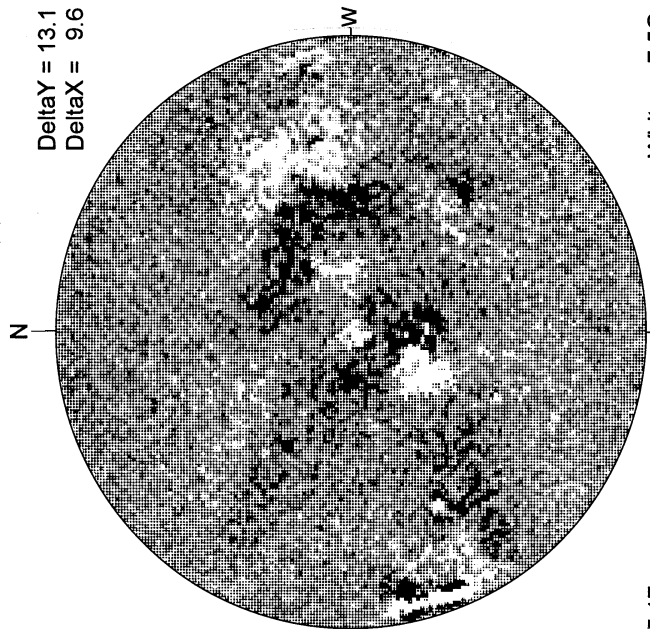
STANFORD MAGNETOGRAM

Solid = +
Dashed = -



MT. WILSON MAGNETOGRAM

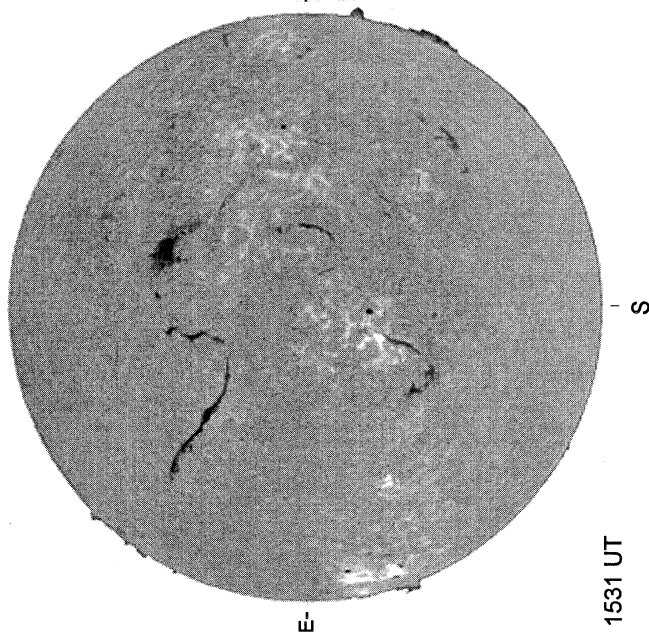
DeltaY = 13.1
DeltaX = 9.6



17.17 -
18.10 UT

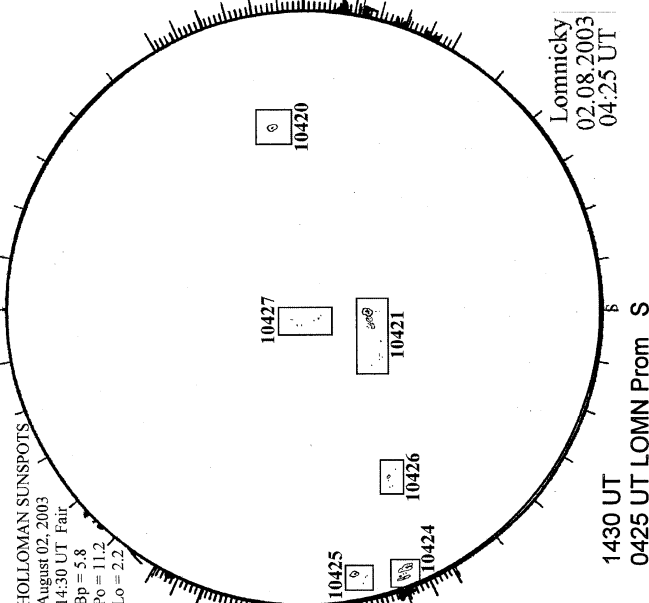
White = +7.5G
Black = -7.5G

BIG BEAR H-ALPHA

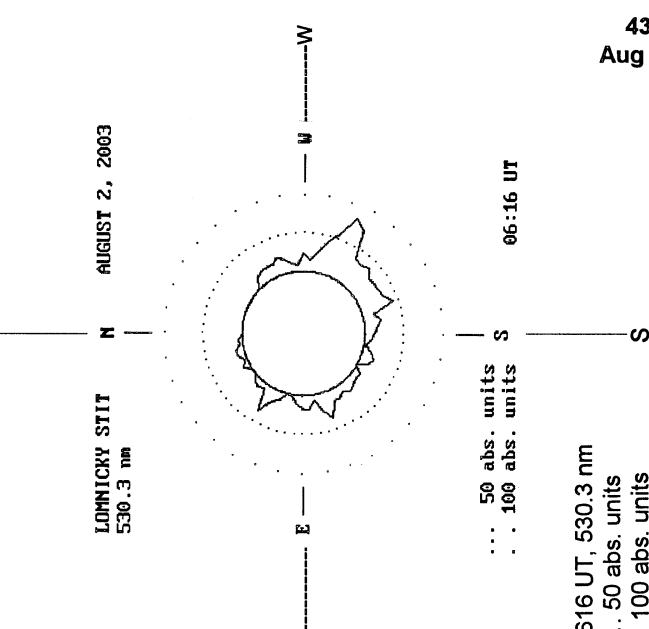


1531 UT

HOLLOMAN SUNSPOTS



LOMNICKY PEAK CORONA (1.04 Radii)----



43
Aug 03

AUGUST 3, 2003 (P= 11.43, Bo = 5.90, Lo = 356.77)

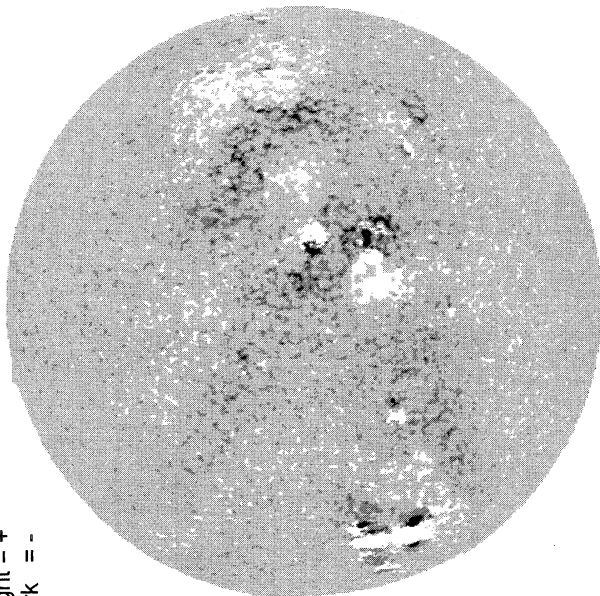
44
Aug 03

KITT PEAK MAGNETOGRAM

868.8 nm

Bright = +
Dark = -

N

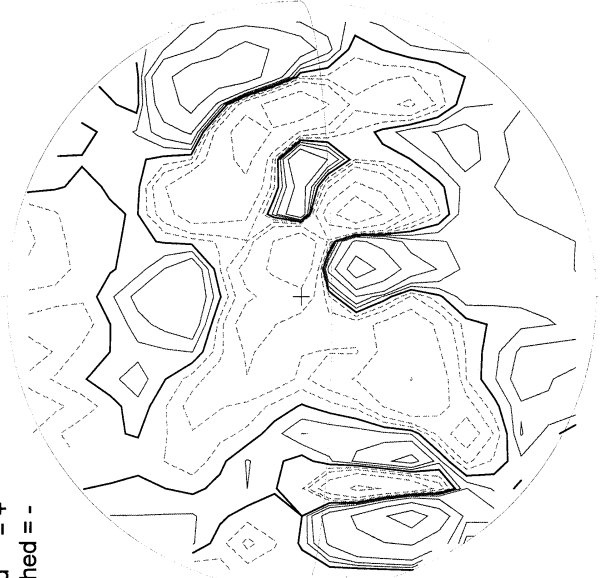


1557 UT

STANFORD MAGNETOGRAM

Solid = +
Dashed = -

N

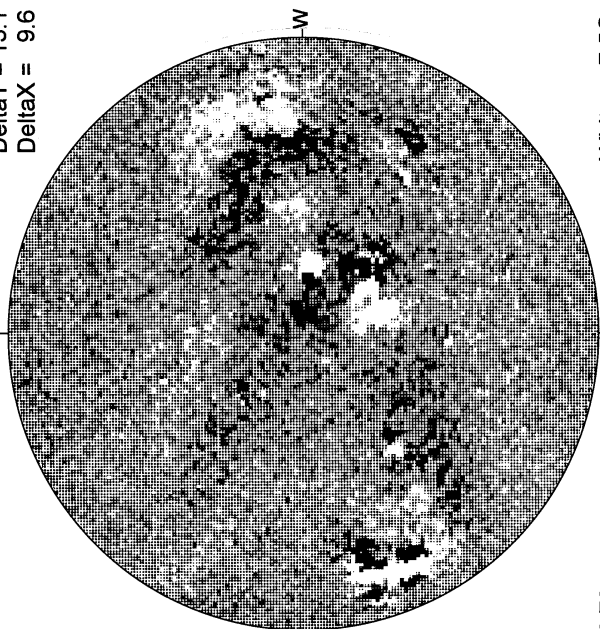


2027 UT

MT. WILSON MAGNETOGRAM

DeltaY = 13.1
DeltaX = 9.6

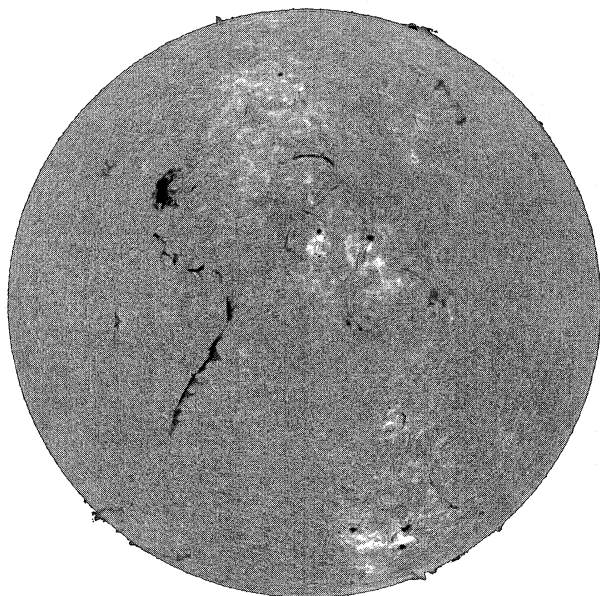
N



16.76 -
17.68 UT

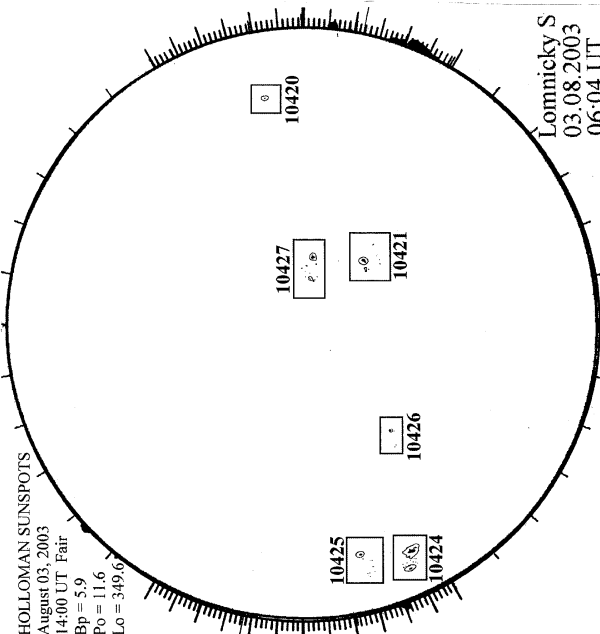
White= +7.5G
Black = -7.5G

BIG BEAR H-ALPHA



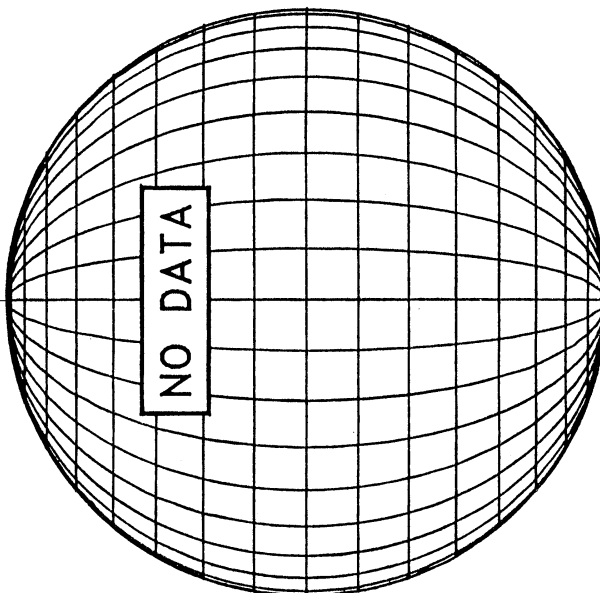
1609 UT

HOLLOMAN SUNSPOT



1400 UT
0604 UT LOMN Prom S

SACRAMENTO PEAK CORONA (1.15 Radii)----



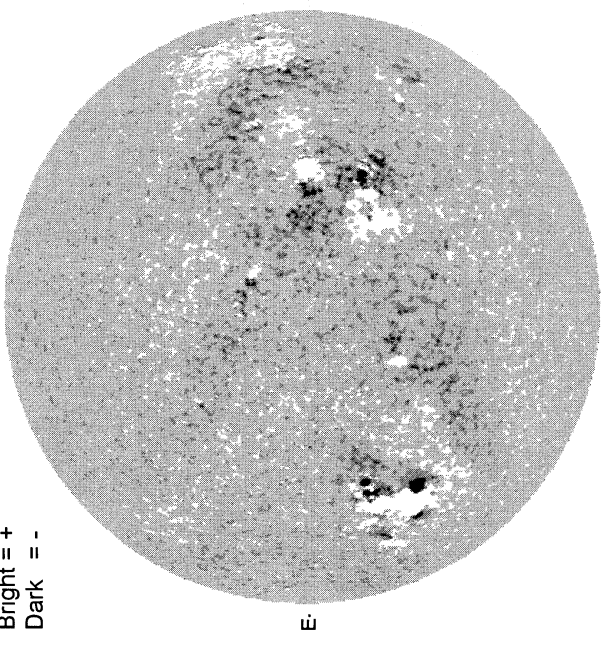
Loznicky S
03.08.2003
06:04 UT

AUGUST 4, 2003 (P= 11.82, Bo = 5.97, Lo = 343.54)

KITT PEAK MAGNETOGRAM

868.8 nm

Bright = +
Dark = -



1543 UT

STANFORD MAGNETOGRAM

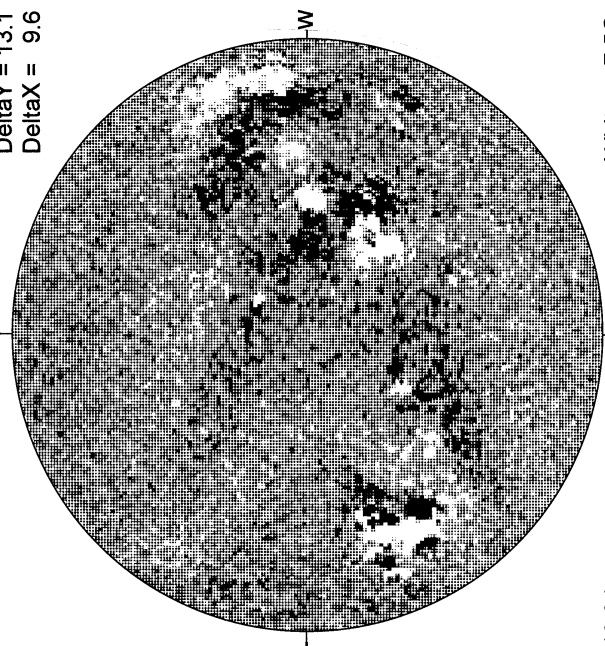
Solid = +
Dashed = -



2331 UT

MT. WILSON MAGNETOGRAM

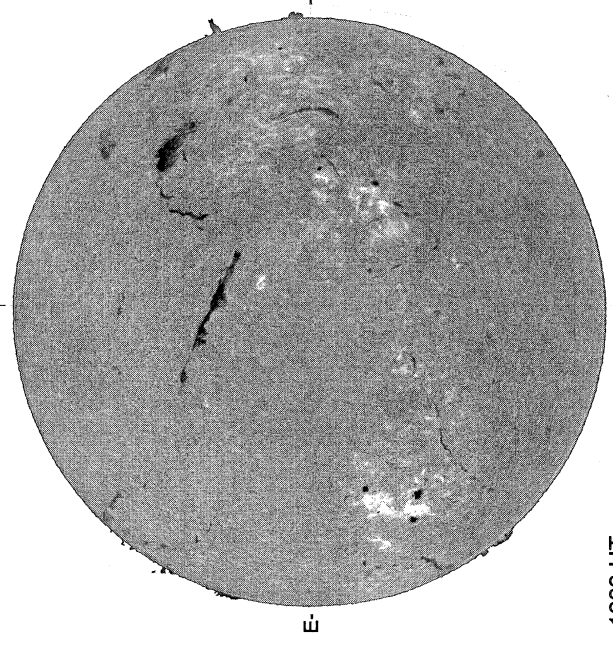
DeltaY = 13.1
DeltaX = 9.6



16.04 -
16.96 UT

White= +7.5G
Black = -7.5G

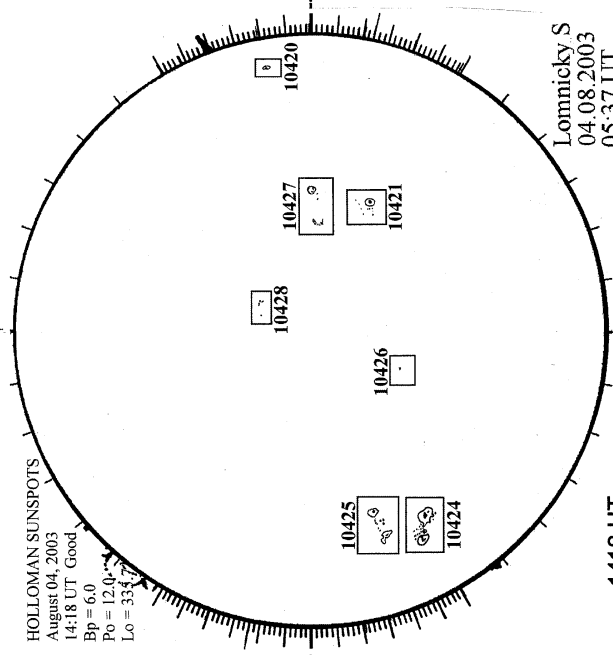
BIG BEAR H-ALPHA



1603 UT

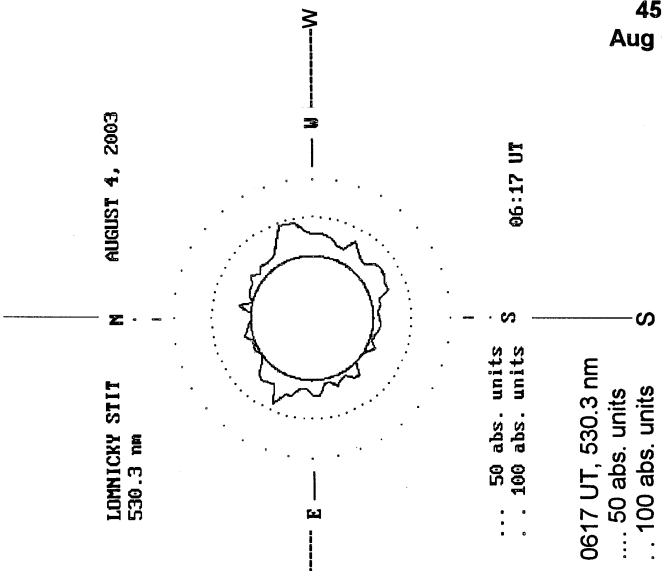
HOLLOMAN SUNSPOTS

August 04, 2003
14:18 UT Good
Bp = 6.0
Po = 12.0
Lo = 333.7



1418 UT
0537 UT LOMN Prom S

LOMNICKY PEAK CORONA (1.04 Radii)----



0617 UT, 530.3 nm
... 50 abs. units
... 100 abs. units

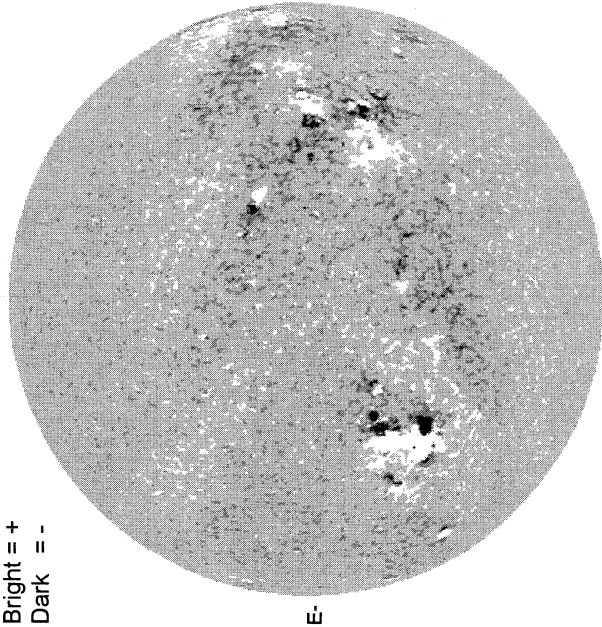
AUGUST 5, 2003 (P= 12.21, Bo = 6.03, Lo = 330.32)

46
Aug 03

KITT PEAK MAGNETOGRAM

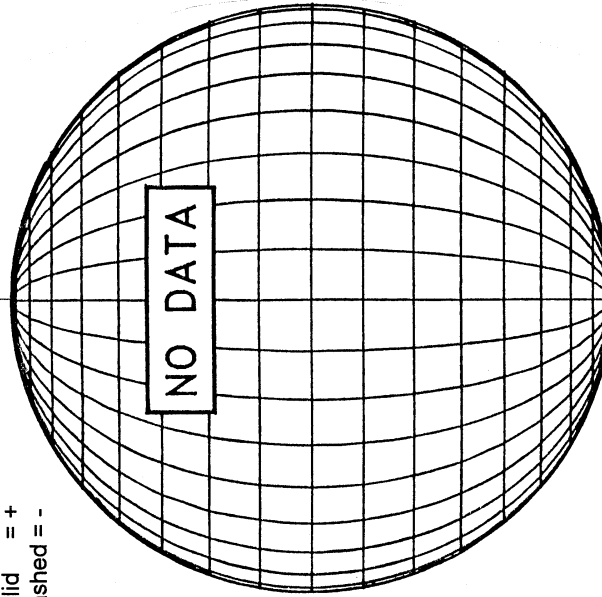
868.8 nm

Bright = +
Dark = -



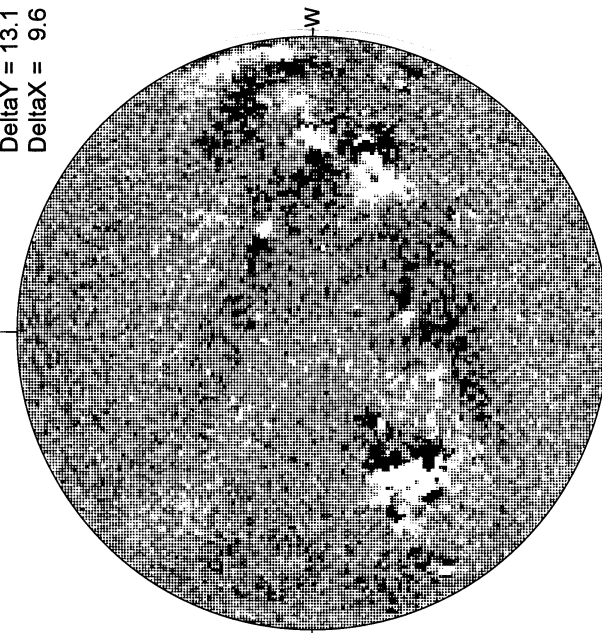
STANFORD MAGNETOGRAM

Solid = +
Dashed = -



MT. WILSON MAGNETOGRAM

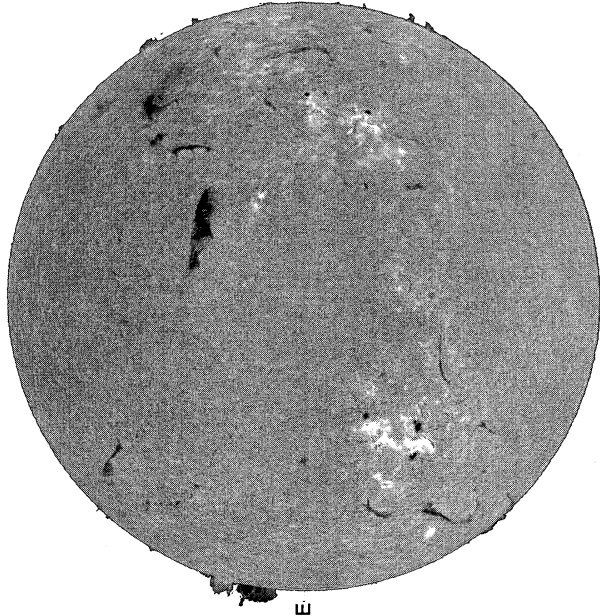
DeltaY = 13.1
DeltaX = 9.6



16.00 -
16.92 UT

White= +7.5G
Black = -7.5G

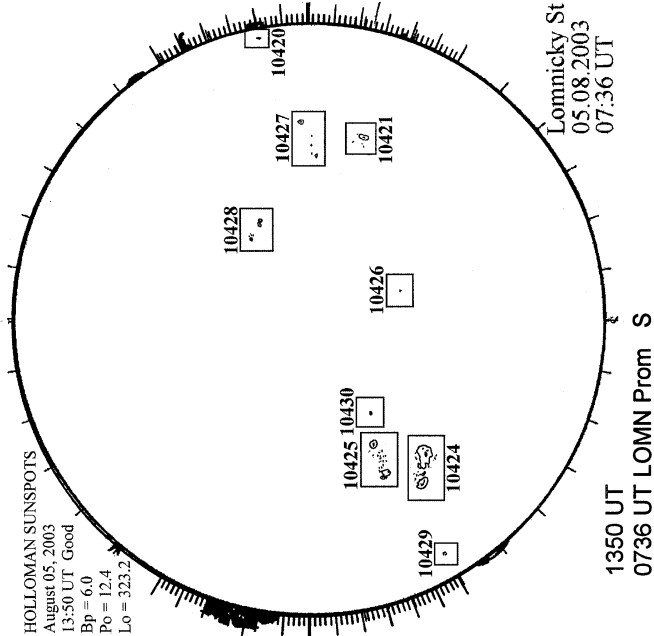
BIG BEAR H-ALPHA



1547 UT

HOLLOMAN SUNSPOT

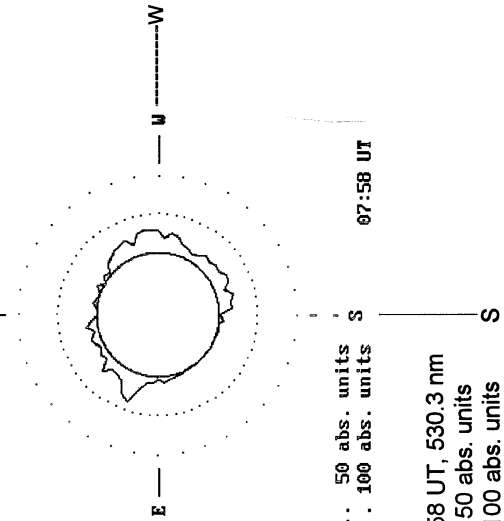
HOLLOMAN SUNSPOTS
August 05, 2003
13:50 UT Good
Bp = 6.0
Po = 12.4
Lo = 323.2



1350 UT
0736 UT LOMN Prom S

LOMNICKY PEAK CORONA (1.04 Radii)----

LOMNICKY STIT
530.3 nm



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

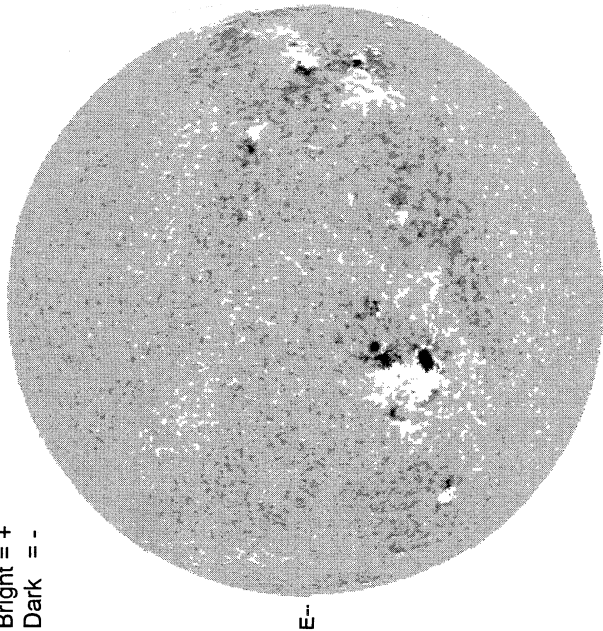
0758 UT, 530.3 nm
... 50 abs. units
... 100 abs. units

07:58 UT

AUGUST 6, 2003 (P= 12.59, Bo = 6.10, Lo = 317.10)

KITT PEAK MAGNETOGRAM
868.8 nm

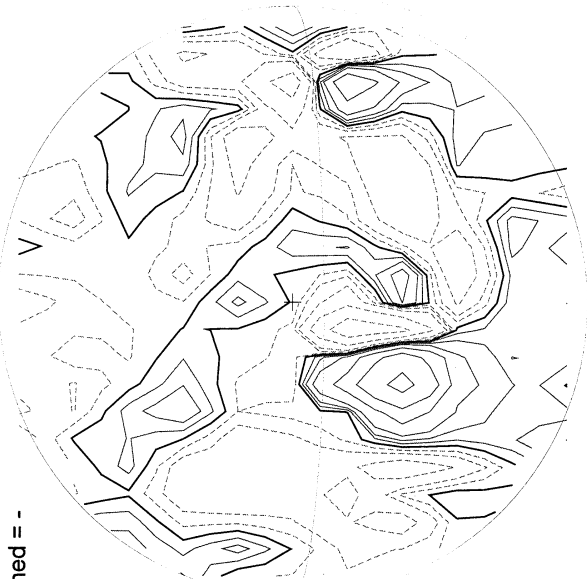
Bright = +
Dark = -



1715 UT

STANFORD MAGNETOGRAM

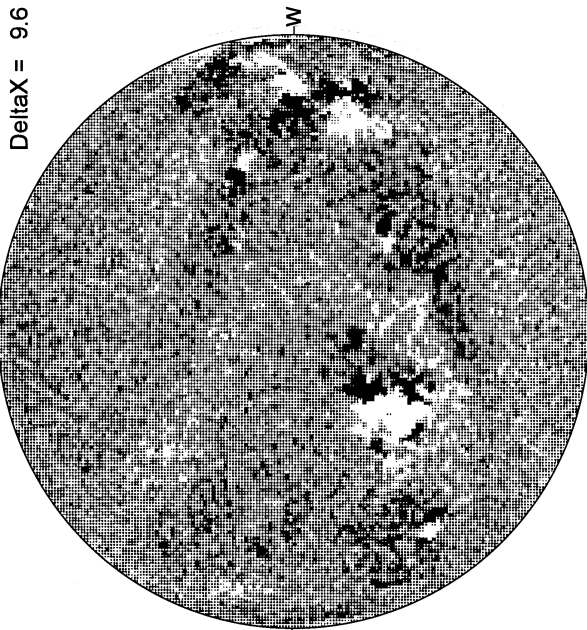
Solid = +
Dashed = -



2211 UT

MT. WILSON MAGNETOGRAM

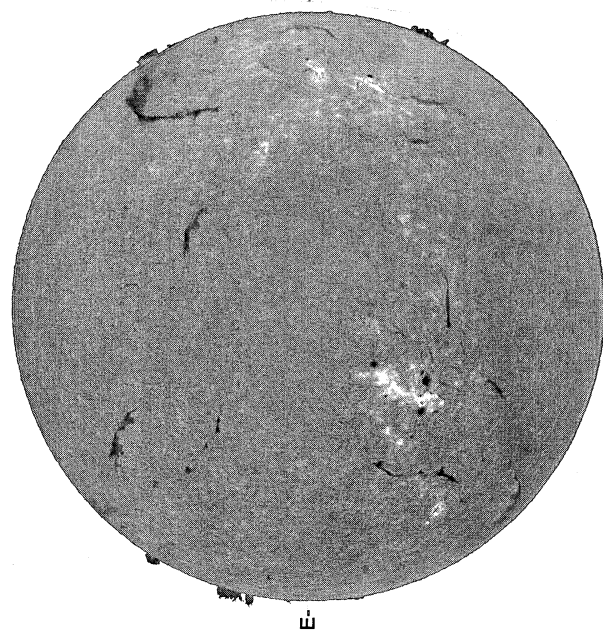
Delta Y = 13.1
Delta X = 9.6



18.58 -
19.50 UT

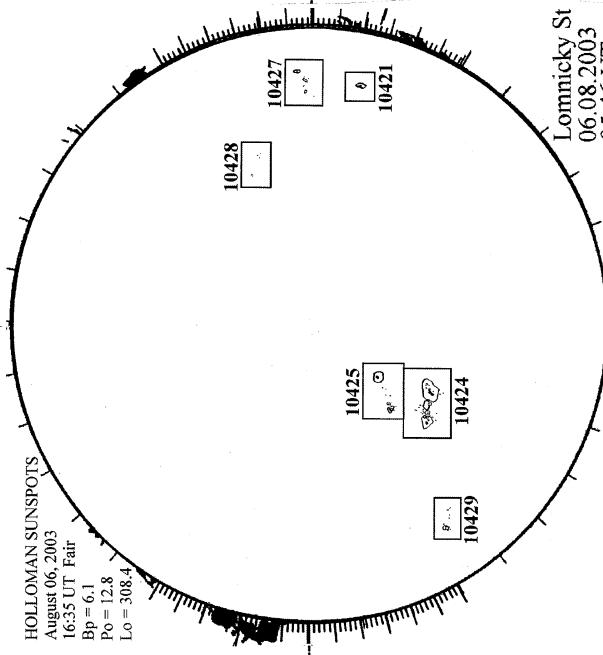
White = +7.5G
Black = -7.5G

BIG BEAR H-ALPHA



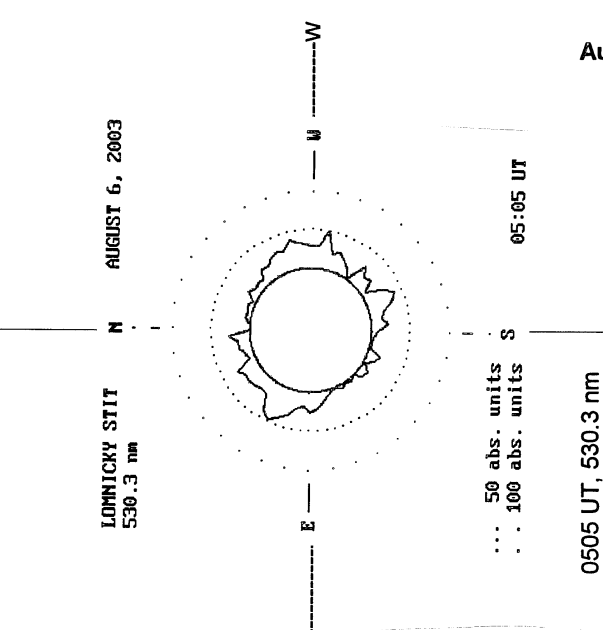
1545 UT

HOLLOMAN SUNSPOT



1635 UT
0546 UT LOMN Prom S

LOMNICKY PEAK CORONA (1.04 Radii)-----



0505 UT, 530.3 nm
... 50 abs. units
... 100 abs. units

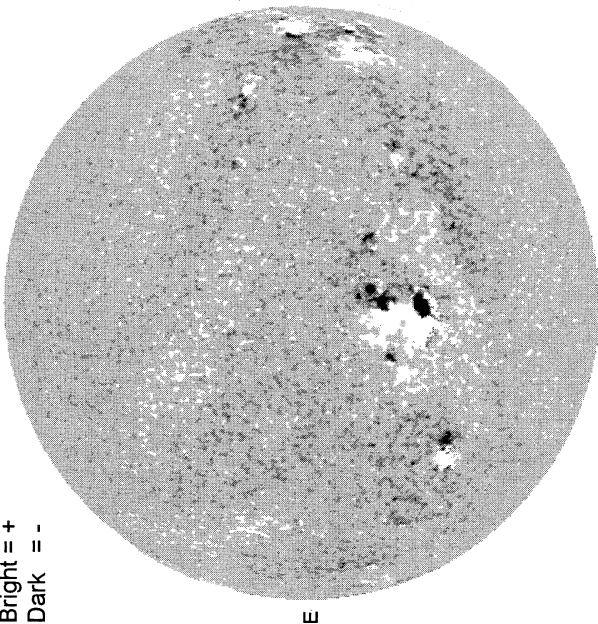
AUGUST 7, 2003 (P= 12.97, Bo = 6.17, Lo = 303.87)

48
Aug 03

KITT PEAK MAGNETOGRAM

868.8 nm

Bright = +
Dark = -



1623 UT

STANFORD MAGNETOGRAM

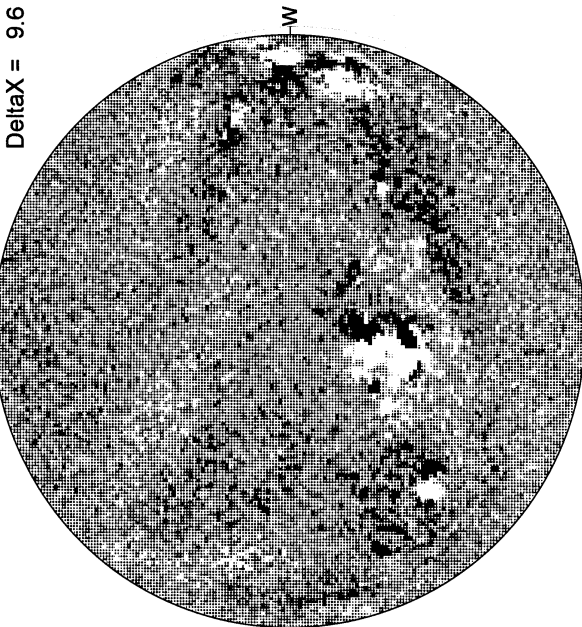
Solid = +
Dashed = -



2115 UT

MT. WILSON MAGNETOGRAM

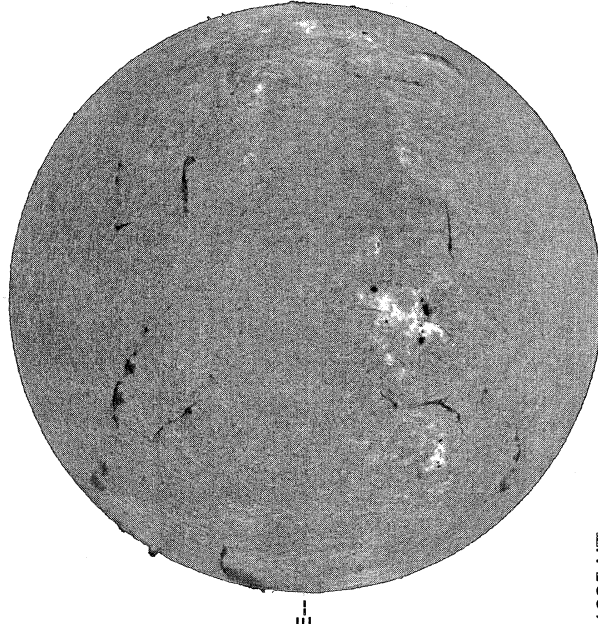
DeltaY = 13.1
DeltaX = 9.6



15.63 -
16.56 UT

White = +7.5G
Black = -7.5G

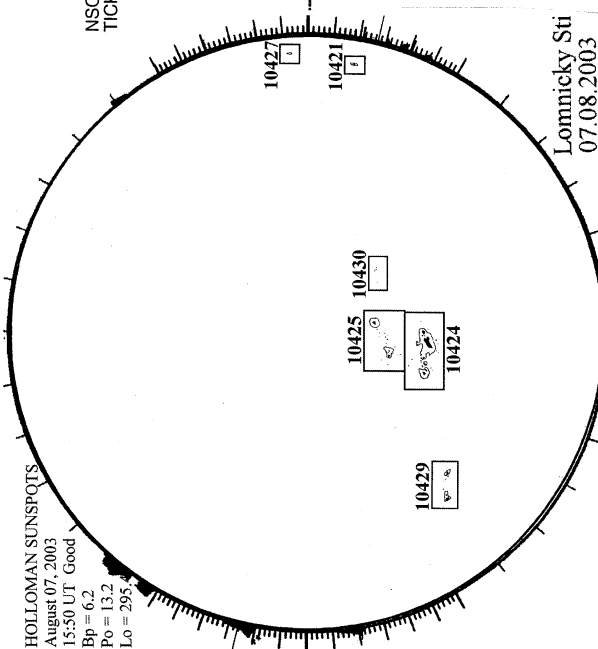
BIG BEAR H-ALPHA



1625 UT

HOLLOMAN SUNSPOTS

HOLLOMAN SUNSPOTS
August 07, 2003
15:50 UT Good
Bp = 6.2
Po = 13.2
Lo = 295.5

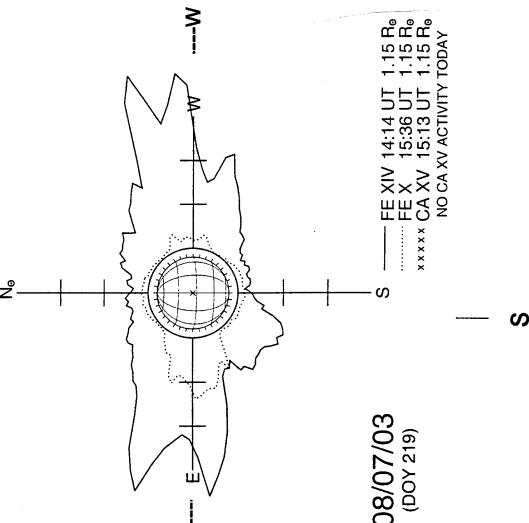


1550 UT

Lomnický Ští
07.08.2003
05:09 UT

SACRAMENTO PEAK CORONA (1.15 Radii)----

NSO / SACRAMENTO PEAK CORONAL DATA
TICK MARKS EVERY 10 MILLIONTHS



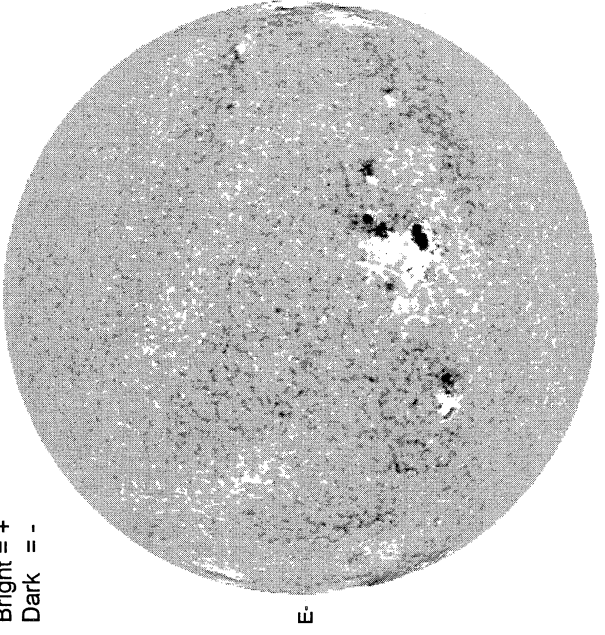
08/07/03
(DOY 219)

FE XIV 14:14 UT 1.15 R_o
FE X 15:36 UT 1.15 R_o
xxxxx CA XV 15:13 UT 1.15 R_o
NO CA XV ACTIVITY TODAY

AUGUST 8, 2003 (P= 13.34, Bo = 6.23, Lo = 290.65)

KITT PEAK MAGNETOGRAM
N
868.8 nm

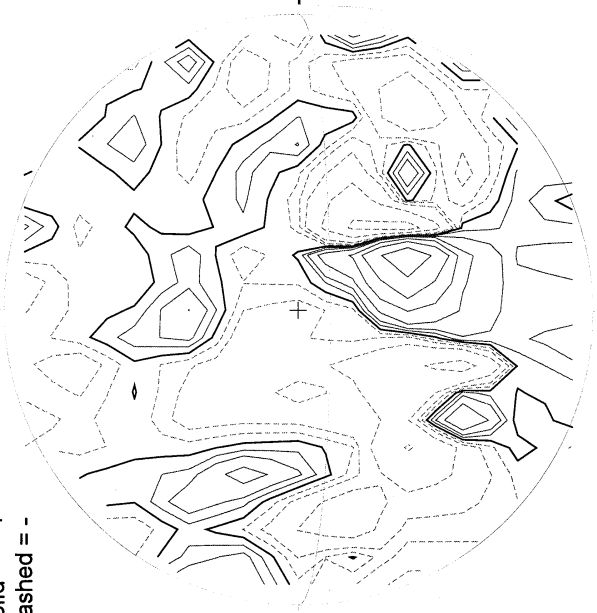
Bright = +
Dark = -



1536 UT

STANFORD MAGNETOGRAM
N

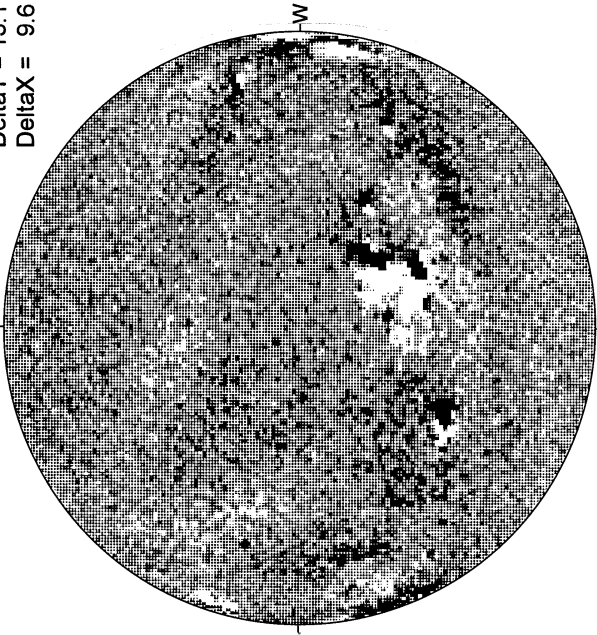
Solid = +
Dashed = -



2140 UT

MT. WILSON MAGNETOGRAM
N

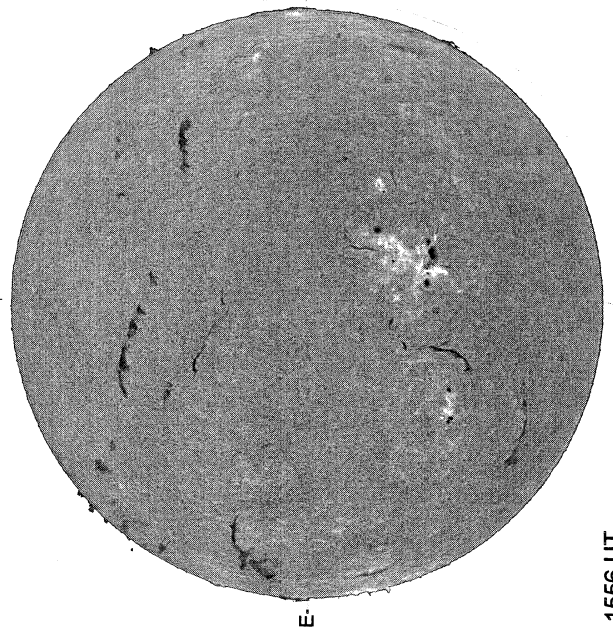
DeltaY = 13.1
DeltaX = 9.6



15.82 -
16.75 UT

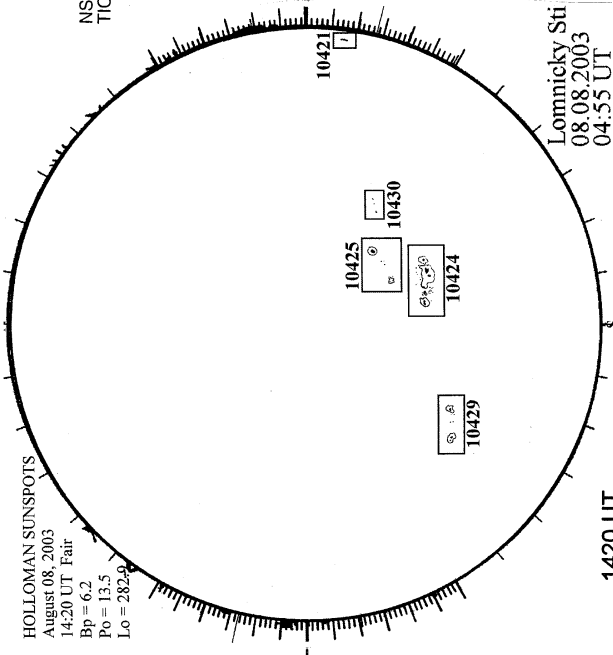
White = +7.5G
Black = -7.5G

BIG BEAR H-ALPHA



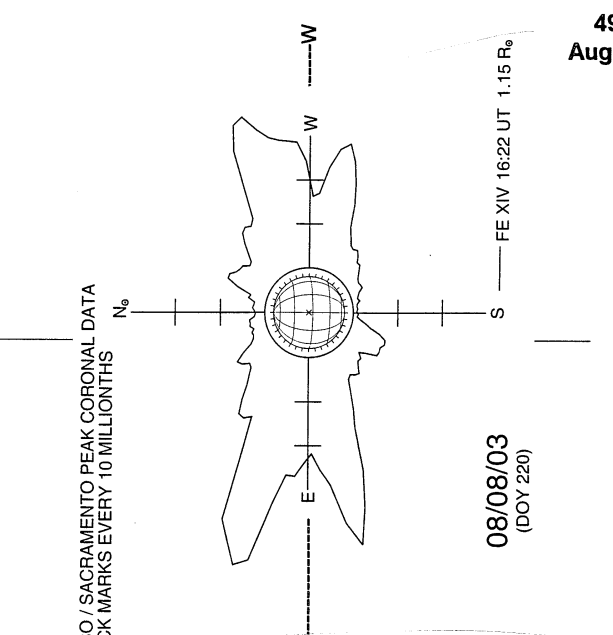
1556 UT

HOLLOMAN SUNSPOT



1420 UT
0455 UT LOMN Prom S

SACRAMENTO PEAK CORONA (1.15 Radii)----



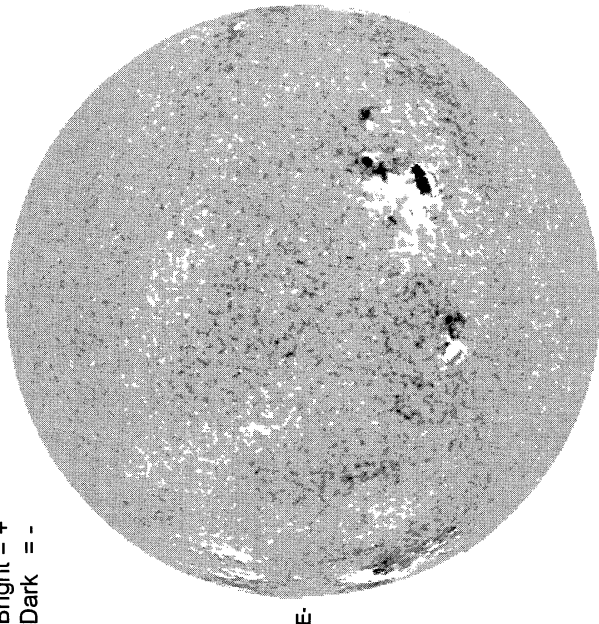
49
Aug 03

AUGUST 9, 2003 (P= 13.71, Bo = 6.29, Lo = 277.43)

50
Aug 03

KITT PEAK MAGNETOGRAM
**868.8 nm

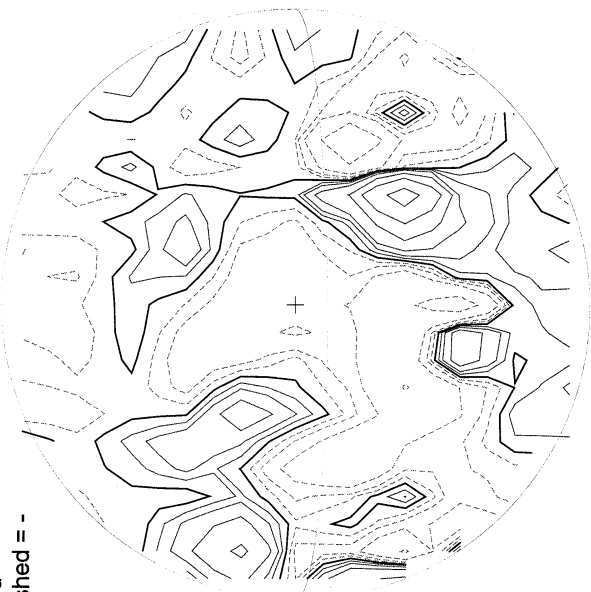
Bright = +
Dark = -



1533 UT

STANFORD MAGNETOGRAM

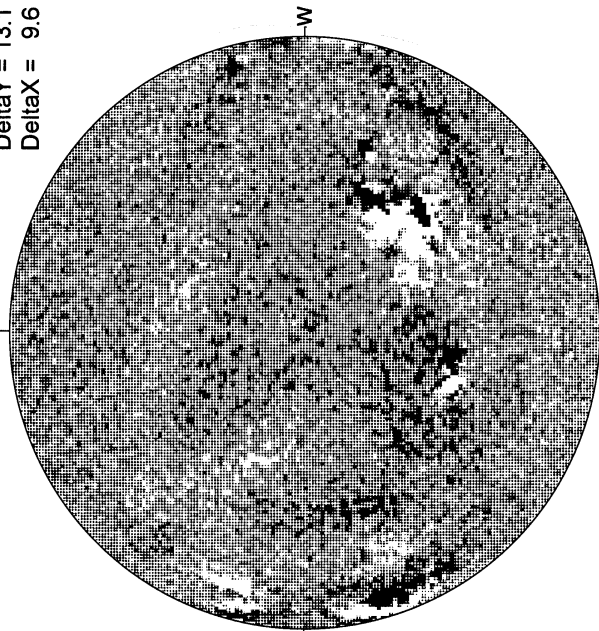
Solid = +
Dashed = -



2140 UT

MT. WILSON MAGNETOGRAM

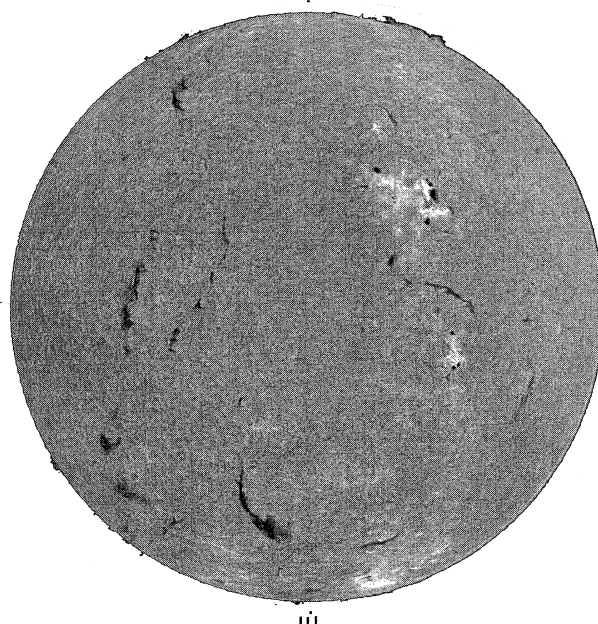
DeltaY = 13.1
DeltaX = 9.6



15.93 -
16.86 UT

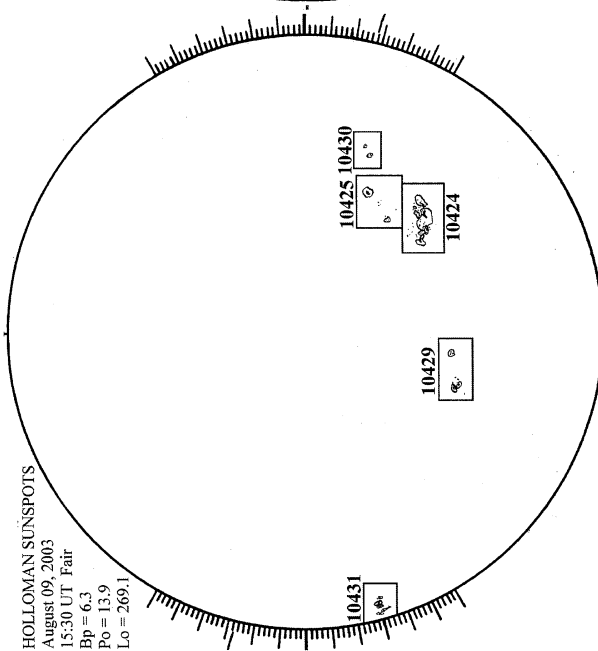
White= +7.5G
Black = -7.5G

BIG BEAR H-ALPHA



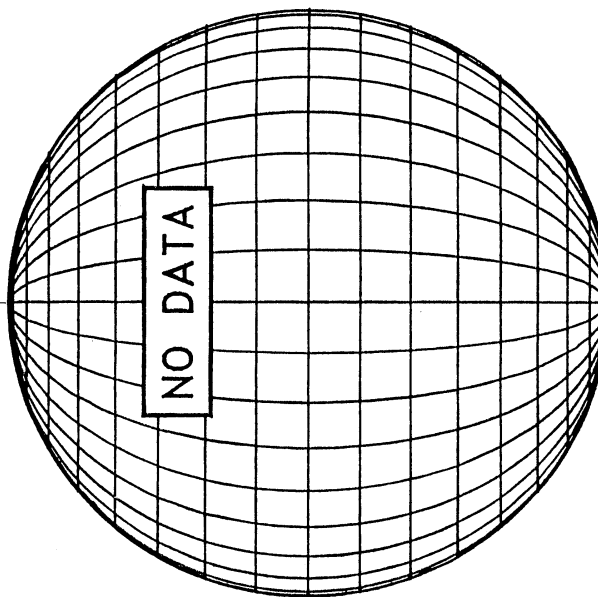
1608 UT

HOLLOMAN SUNSPOT



1530 UT

SACRAMENTO PEAK CORONA (1.15 Radii)----



S

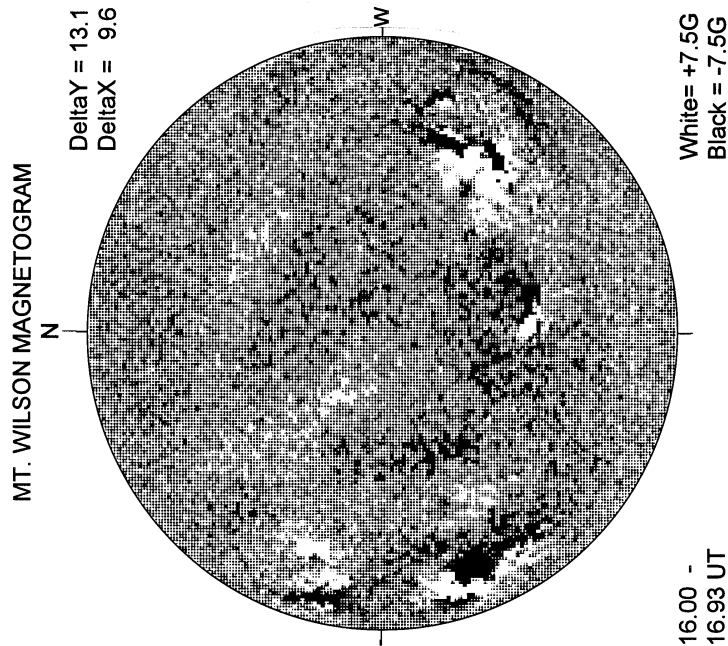
AUGUST 10, 2003 (P= 14.08, Bo = 6.35 Lo = 264.21)



1619 UT

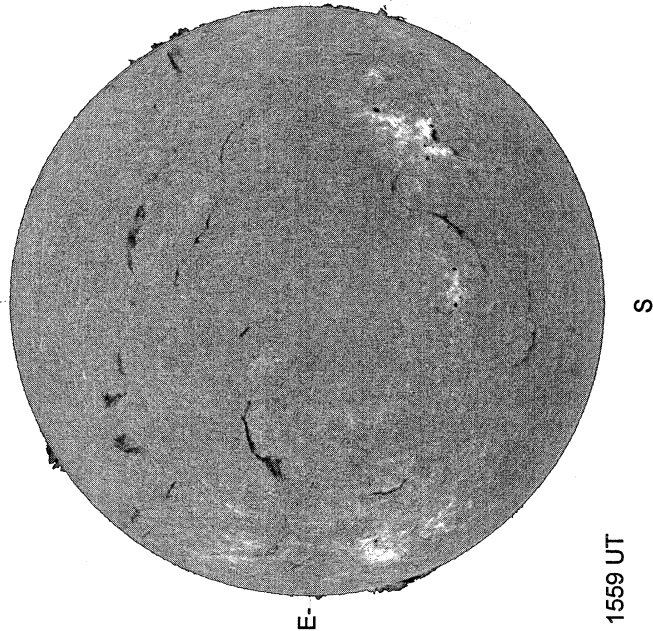


2014 UT



16.00 -
16.93 UT

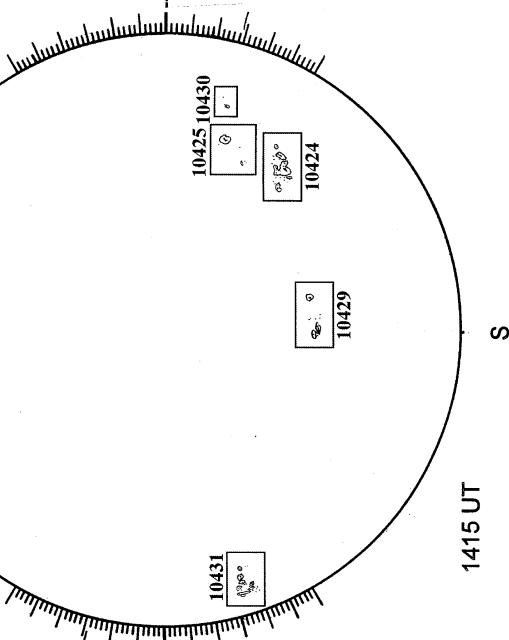
BIG BEAR H-ALPHA



1559 UT

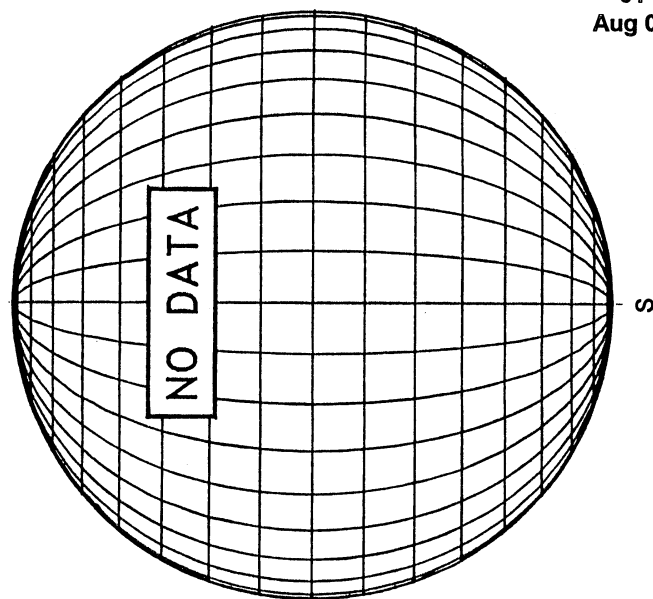
HOLLOMAN SUNSPOTS

HOLLOMAN SUNSPOTS
August 10, 2003
14:15 UT Fair
Bp = 6.3
Po = 14.2
Lo = 256.5



1415 UT

SACRAMENTO PEAK CORONA (1.15 Radii)-----



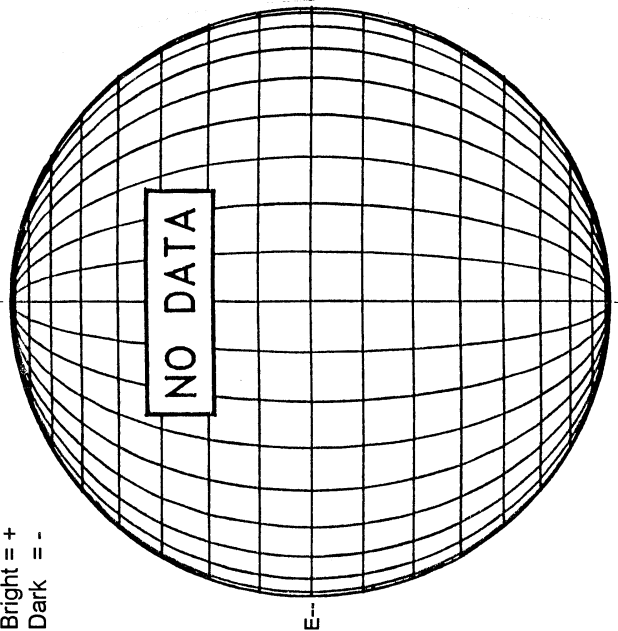
51
Aug 03

AUGUST 11, 2003 (P= 14.44, Bo = 6.41, Lo = 250.98)

KITT PEAK MAGNETOGRAM

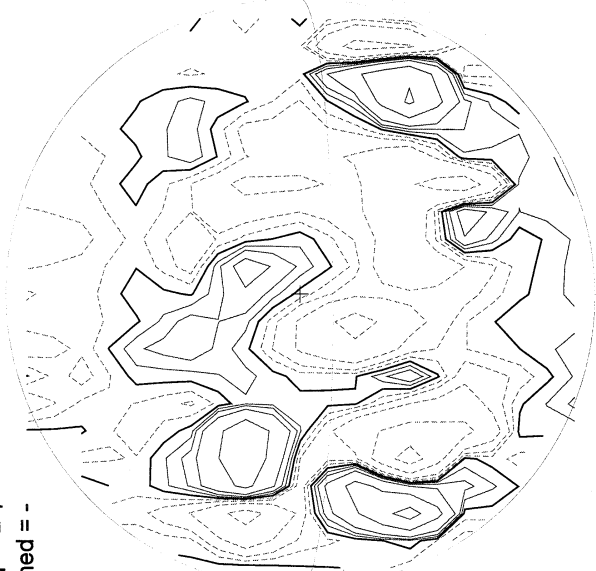
868.8 nm

Bright = +
Dark = -



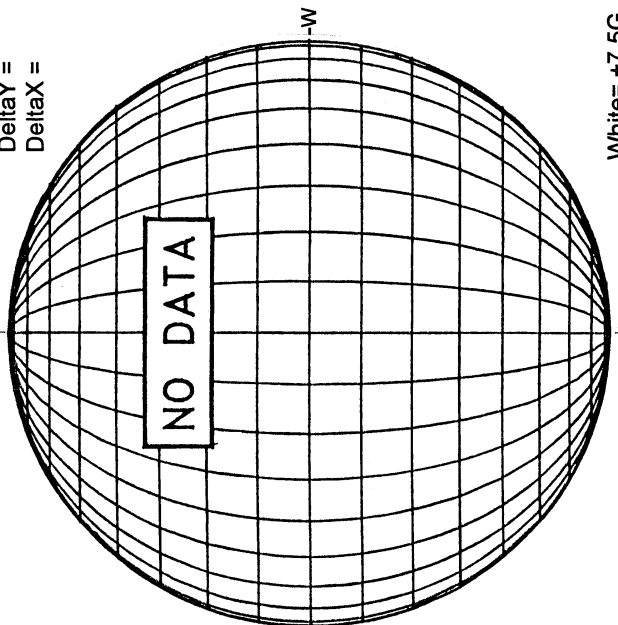
STANFORD MAGNETOGRAM

Solid = +
Dashed = -



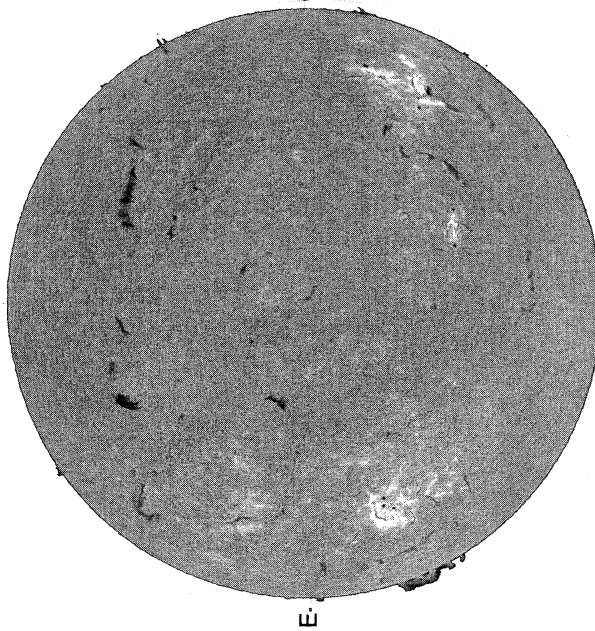
MT. WILSON MAGNETOGRAM

Delta Y =
Delta X =



White = +7.5G
Black = -7.5G

BIG BEAR H-ALPHA

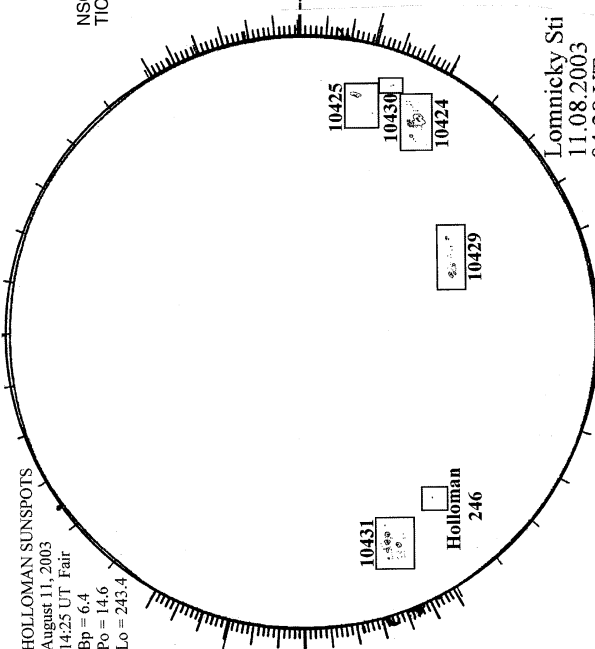


1635 UT

HOLLOMAN SUNSPOTS

HOLLOMAN SUNSPOTS

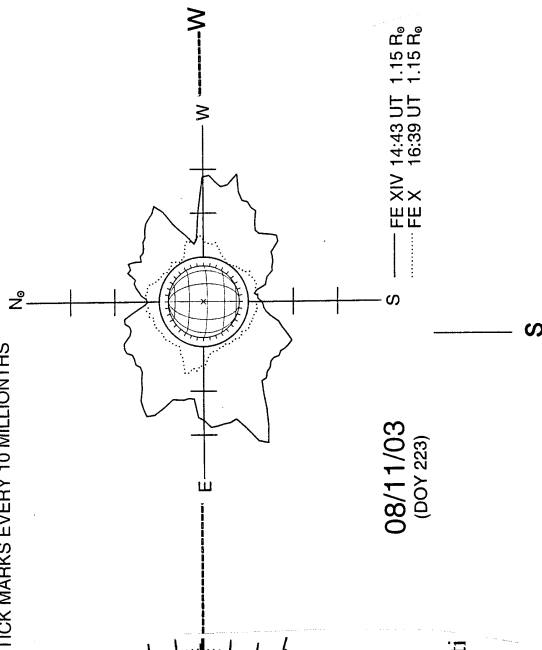
August 11, 2003
14:25 UT Fair
Bp = 6.4
Po = 14.6
Lo = 243.4



1425 UT
0438 UT LOMN Prom S

SACRAMENTO PEAK CORONA (1.15 Radii)----

NSO / SACRAMENTO PEAK CORONAL DATA
TICK MARKS EVERY 10 MILLIONTHS



08/11/03
(DOY 223)

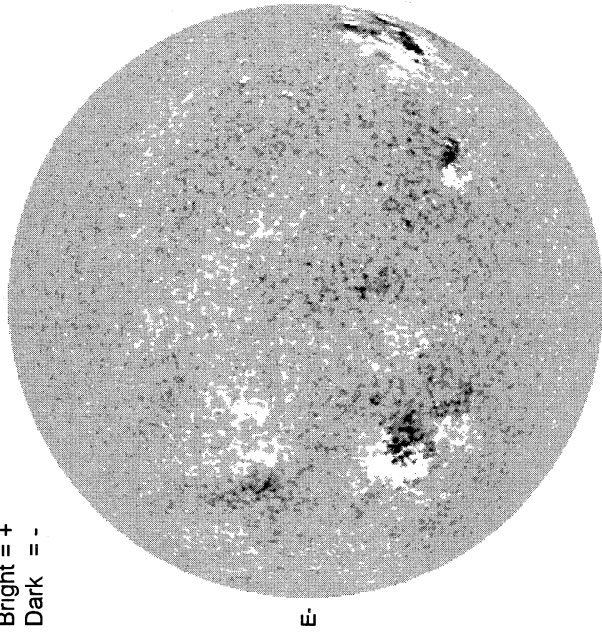
FE XIV 14:43 UT 1.15 R_o
FE X 16:39 UT 1.15 R_o

AUGUST 12, 2003 (P= 14.80, Bo = 6.46, Lo = 237.76)

KITT PEAK MAGNETOGRAM

868.8 nm

Bright = +
Dark = -



1551 UT

STANFORD MAGNETOGRAM

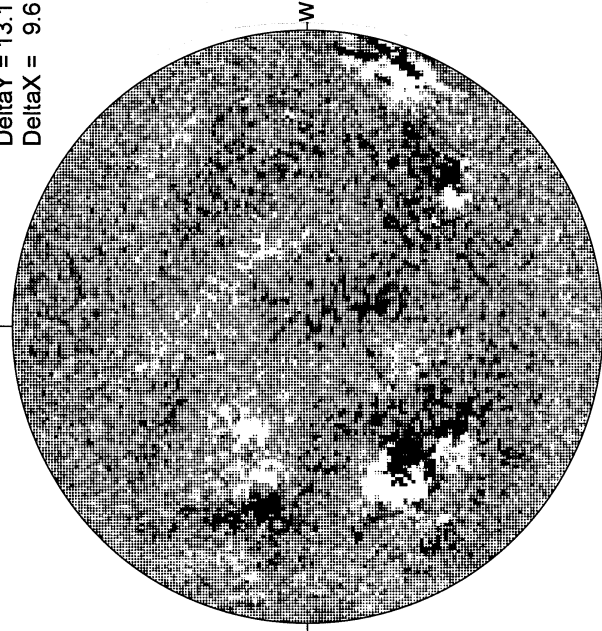
Solid = +
Dashed = -



2108 UT

MT. WILSON MAGNETOGRAM

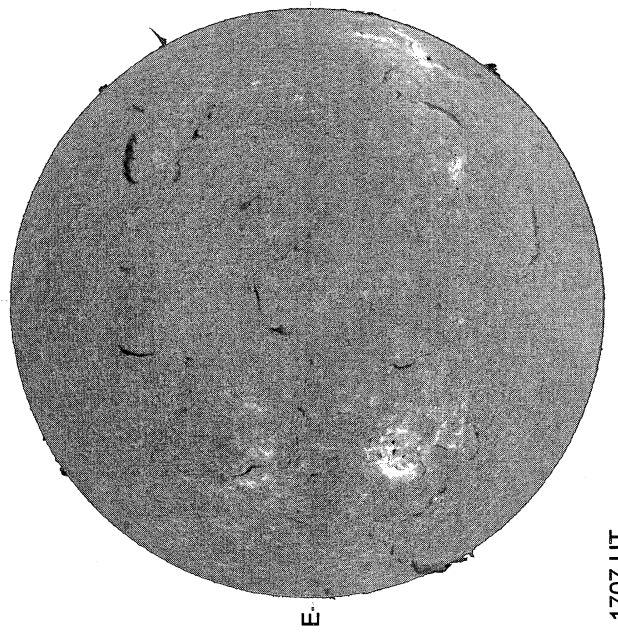
DeltaY = 13.1
DeltaX = 9.6



18.43 -
19.36 UT

White = +7.5G
Black = -7.5G

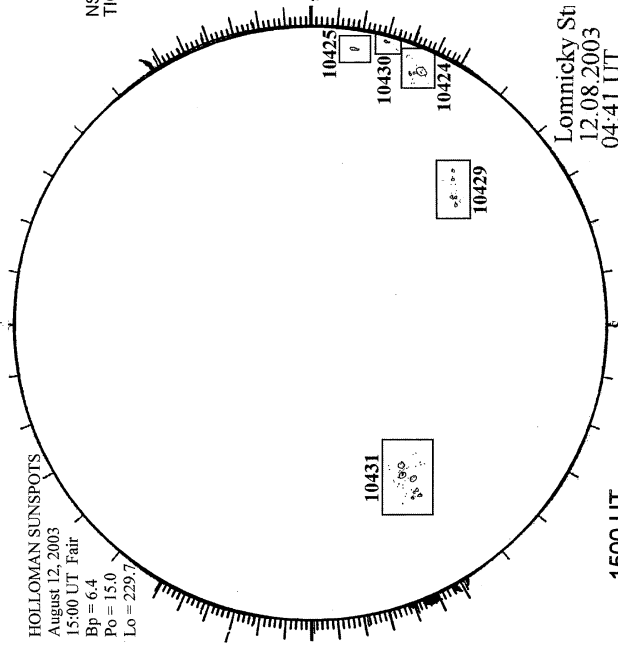
BIG BEAR H-ALPHA



1707 UT

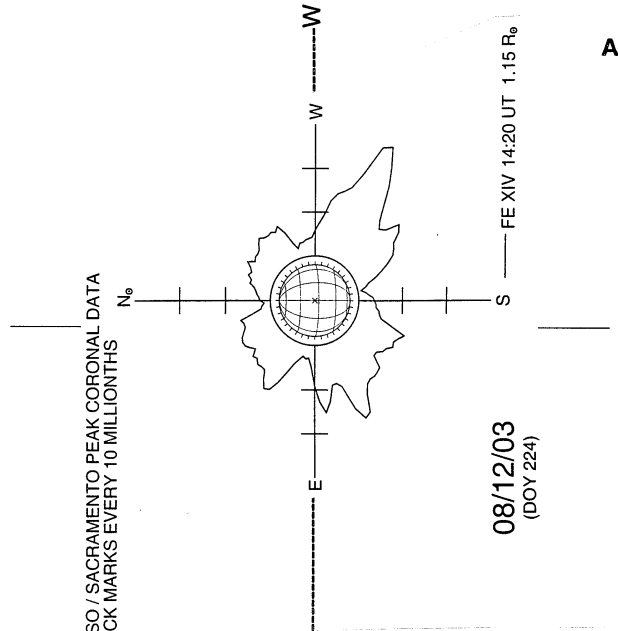
HOLLOMAN SUNSPOTS

HOLLOMAN SUNSPOTS
August 12, 2003
15:00 UT Fair
Bp = 6.4
Po = 15.0
Lo = 229.7



1500 UT
0441 UT LOMN Prom S

SACRAMENTO PEAK CORONA (1.15 Radii)----



NSO / SACRAMENTO PEAK CORONAL DATA
TICK MARKS EVERY 10 MILLIONTHS

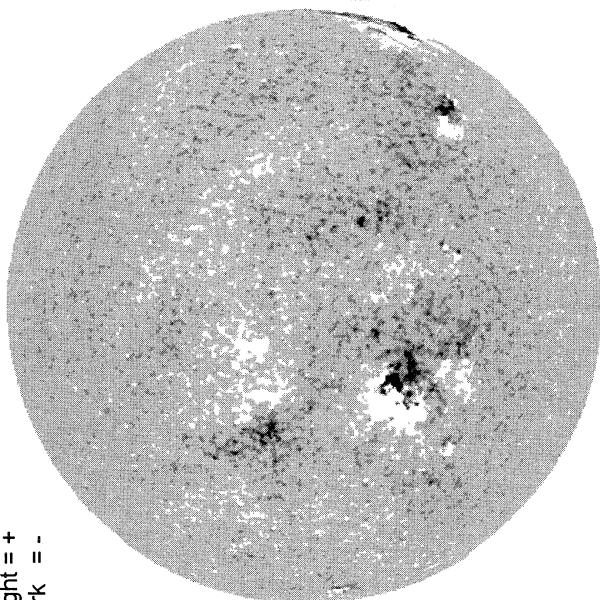
08/12/03
(DOY 224)

Lonnick St
12.08.2003
04:41 UT

AUGUST 13, 2003 (P= 15.15, Bo = 6.52, Lo = 224.54)

KITT PEAK MAGNETOGRAM
868.8 nm

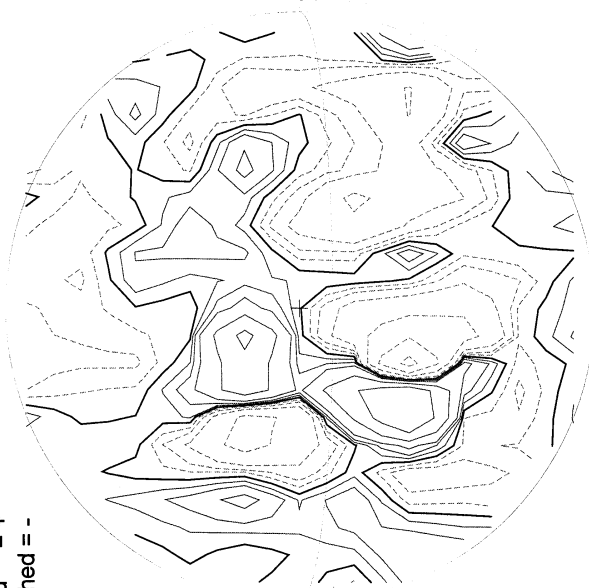
Bright = +
Dark = -



1813 UT

STANFORD MAGNETOGRAM

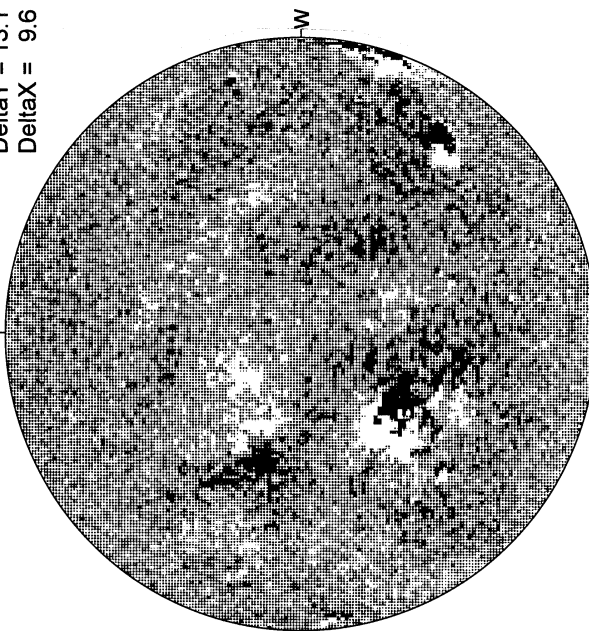
Solid = +
Dashed = -



2125 UT

MT. WILSON MAGNETOGRAM

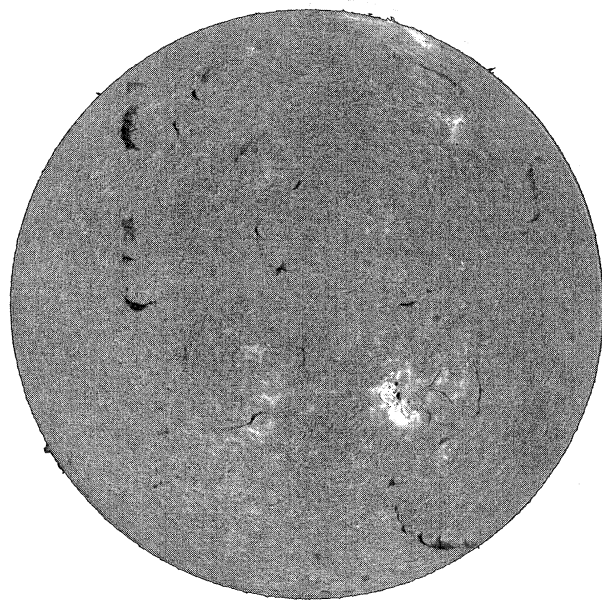
DeltaY = 13.1
DeltaX = 9.6



18.03 -
18.96 UT

White= +7.5G
Black = -7.5G

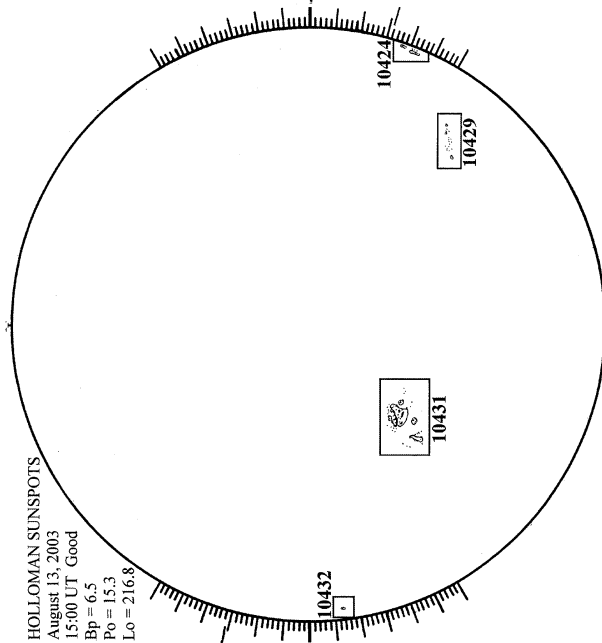
BIG BEAR H-ALPHA



1556 UT

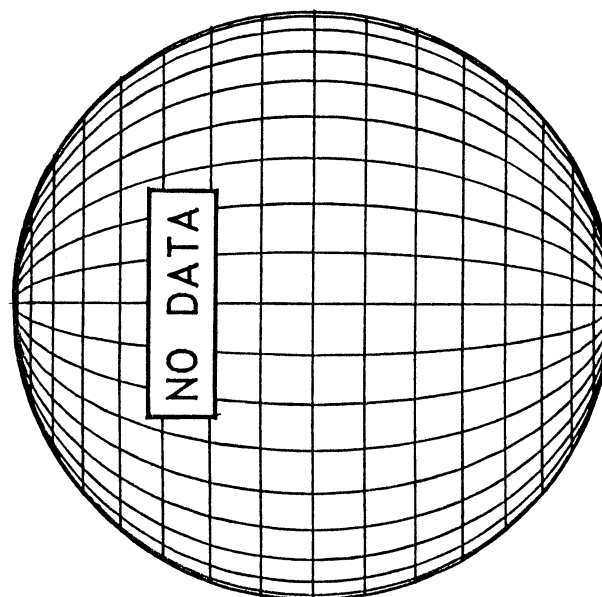
HOLLOMAN SUNSPOTS

HOLLOMAN SUNSPOTS
August 13, 2003
15:00 UT Good
Bp = 6.5
Po = 15.3
Lo = 216.8



1500 UT

SACRAMENTO PEAK CORONA (1.15 Radii)



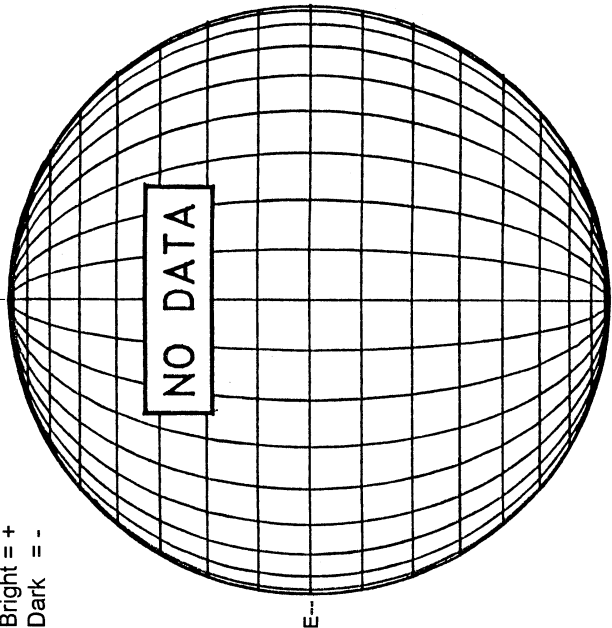
S

AUGUST 14, 2003 (P= 15.50, Bo = 6.57, Lo = 211.32)

KITT PEAK MAGNETOGRAM

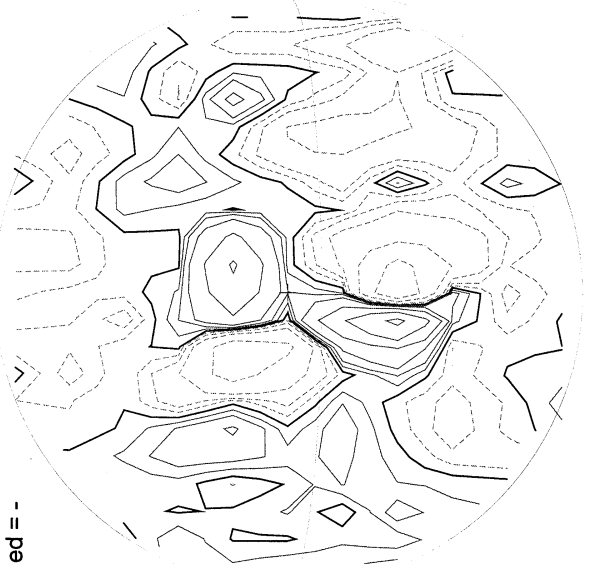
868.8 nm

Bright = +
Dark = -



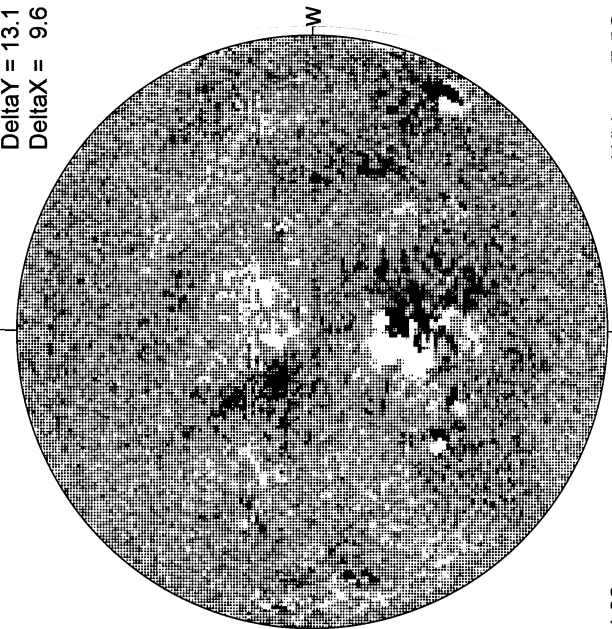
STANFORD MAGNETOGRAM

Solid = +
Dashed = -



MT. WILSON MAGNETOGRAM

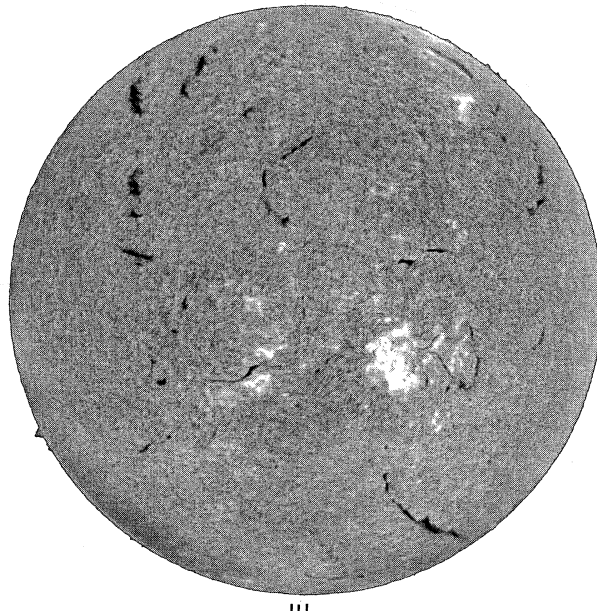
DeltaY = 13.1
DeltaX = 9.6



24.32 -
25.25 UT

White = +7.5G
Black = -7.5G

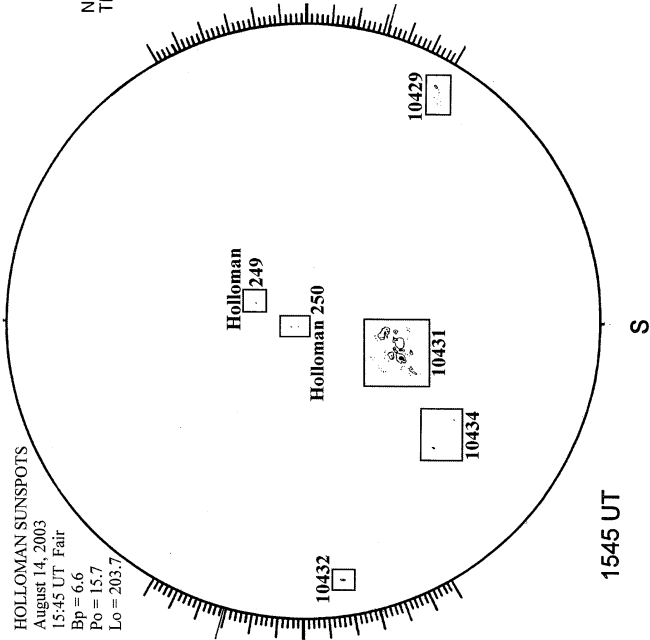
KANZELHOHE H-ALPHA



0727 UT

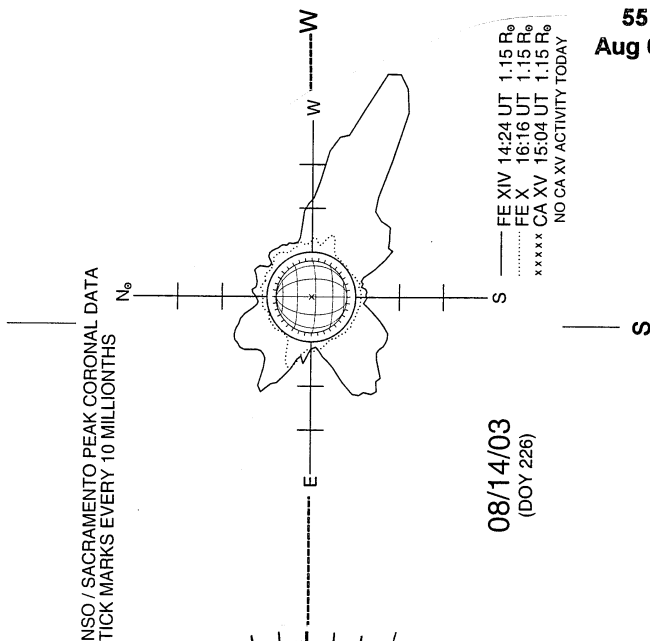
HOLLOMAN SUNSPOTS

HOLLOMAN SUNSPOTS
August 14, 2003
15:45 UT Fair
Bp = 6.6
Po = 15.7
Lo = 203.7



1545 UT

SACRAMENTO PEAK CORONA (1.15 Radii)----



08/14/03
(DOY 226)

----- FE XIV 14:24 UT 1.15 R₀
..... FE X 16:16 UT 1.15 R₀
xxxxx CA XV 15:04 UT 1.15 R₀
NO CA XV ACTIVITY TODAY

55
Aug 03

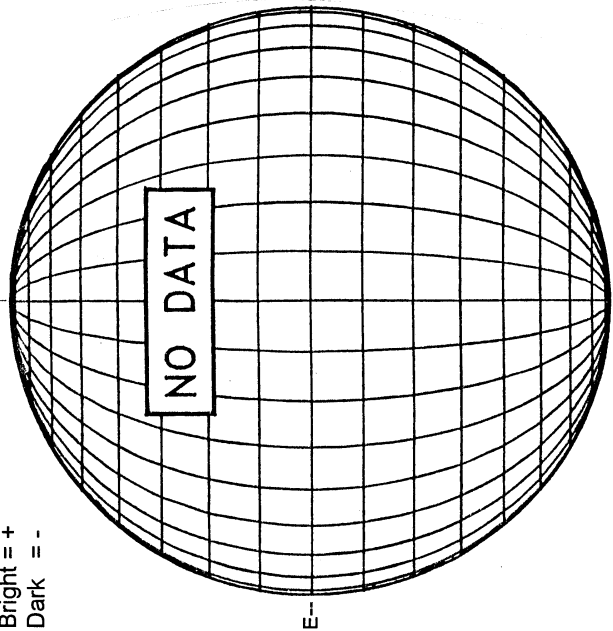
56
Aug 03

AUGUST 15, 2003 (P= 15.85, Bo = 6.62, Lo = 198.10)

KITT PEAK MAGNETOGRAM

868.8 nm

Bright = +
Dark = -



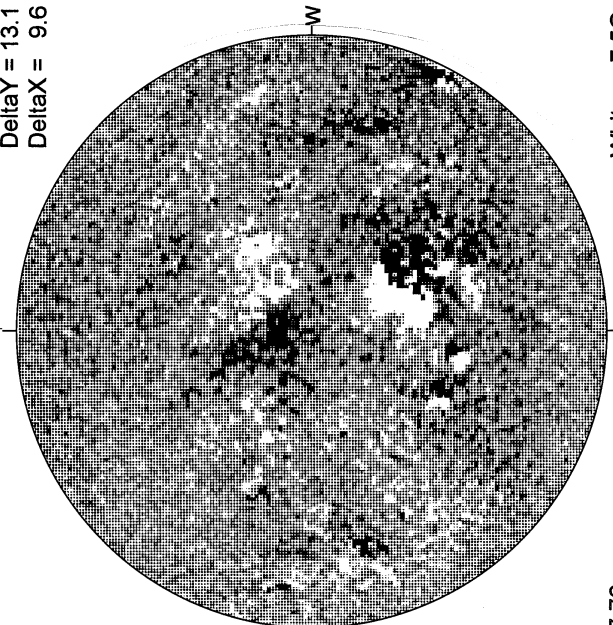
STANFORD MAGNETOGRAM

Solid = +
Dashed = -



MT. WILSON MAGNETOGRAM

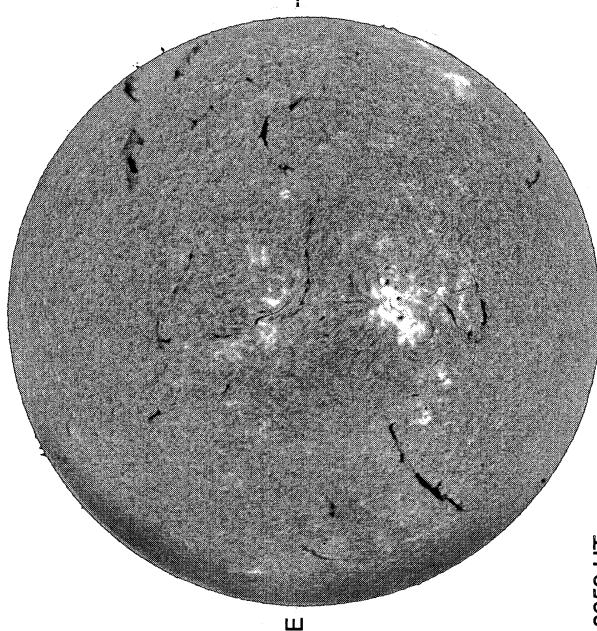
Delta Y = 13.1
Delta X = 9.6



17.76 -
18.69 UT

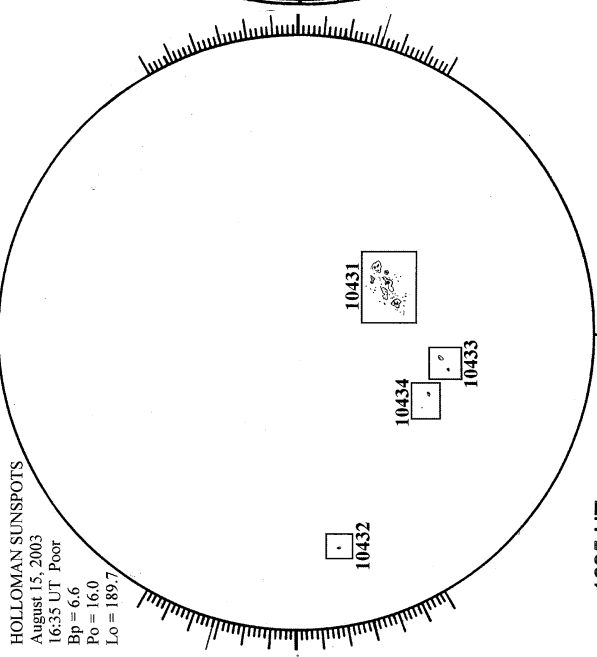
White = +7.5G
Black = -7.5G

KANZELHOHE H-ALPHA



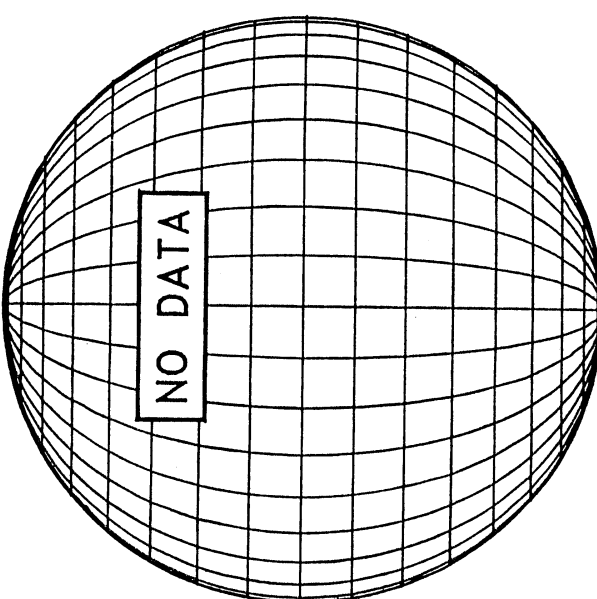
0659 UT

HOLLOMAN SUNSPOT



1635 UT

LOMNICKY PEAK CORONA (1.04 Radii)----



S

S

E

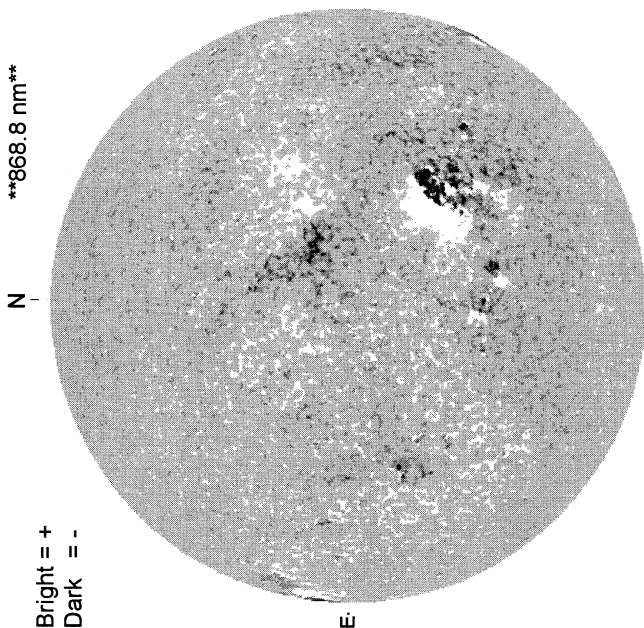
HOLLOMAN SUNSPOTS
August 15, 2003
16:35 UT Poor
Bp = 6.6
Po = 16.0
Lo = 189.7

AUGUST 16, 2003 (P= 16.19, Bo = 6.67, Lo = 184.88)

KITT PEAK MAGNETOGRAM

868.8 nm

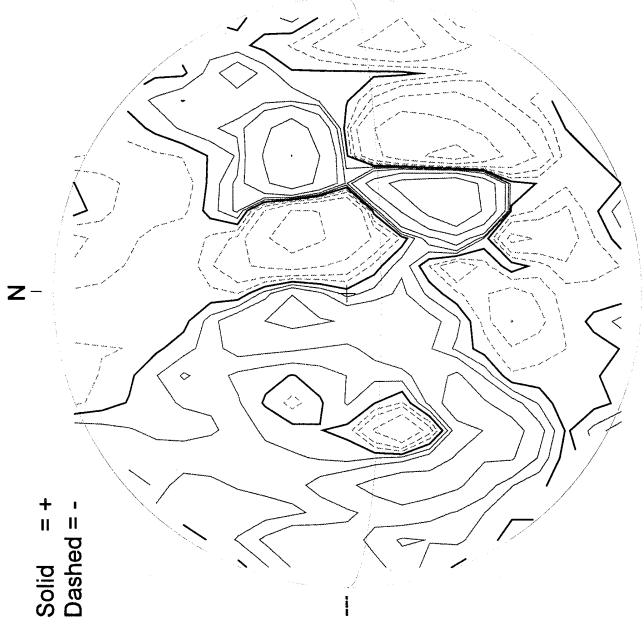
Bright = +
Dark = -



1538 UT

STANFORD MAGNETOGRAM

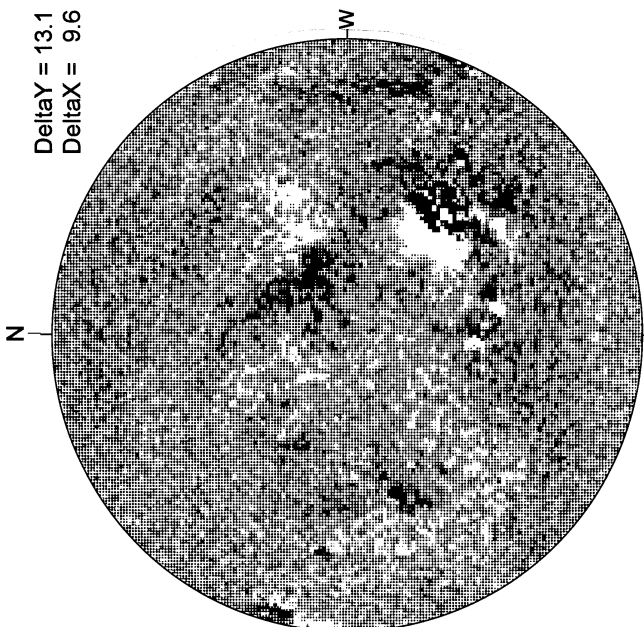
Solid = +
Dashed = -



2042 UT

MT. WILSON MAGNETOGRAM

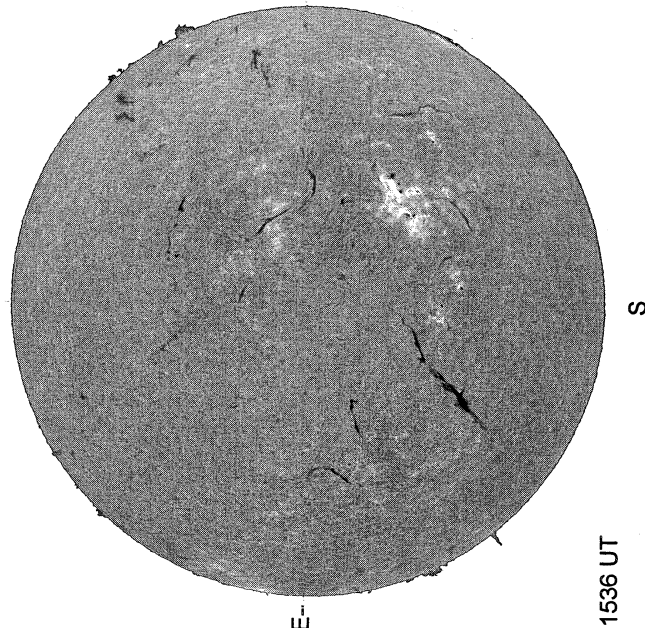
DeltaY = 13.1
DeltaX = 9.6



16.87 -
17.80 UT

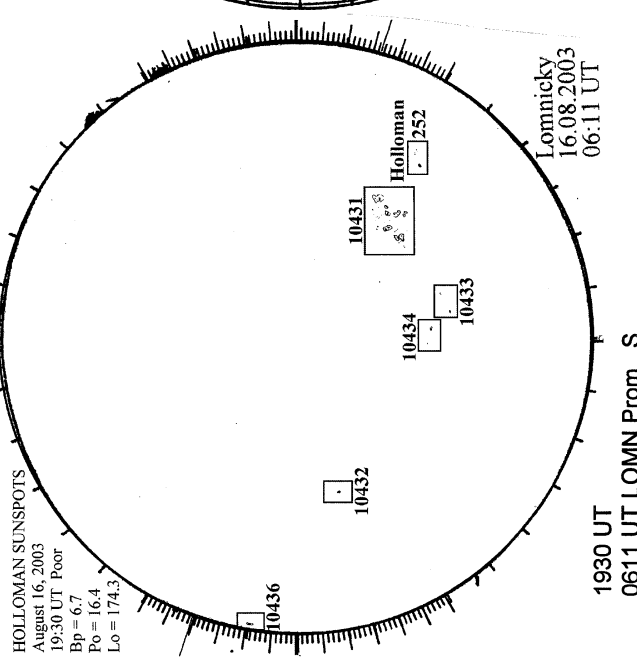
White = +7.5G
Black = -7.5G

BIG BEAR H-ALPHA



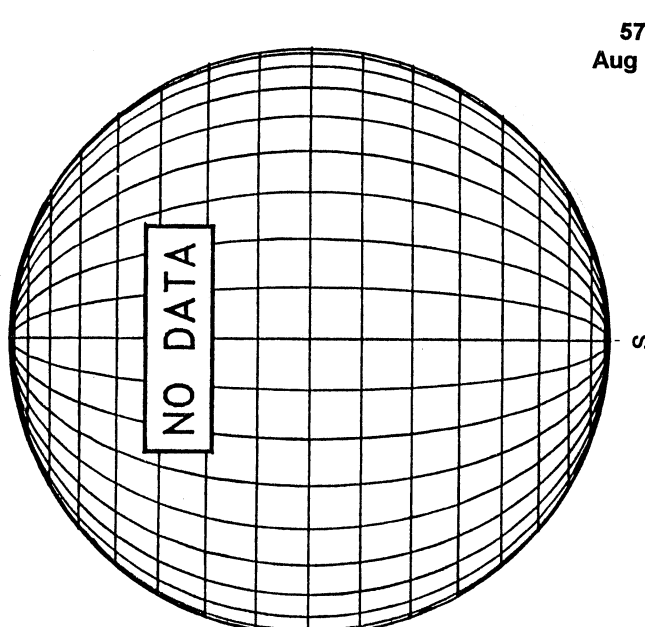
1536 UT

HOLLOMAN SUNSPOTS



1930 UT
0611 UT LOMN Prom

SACRAMENTO PEAK CORONA (1.15 Radii)----



57
Aug 03

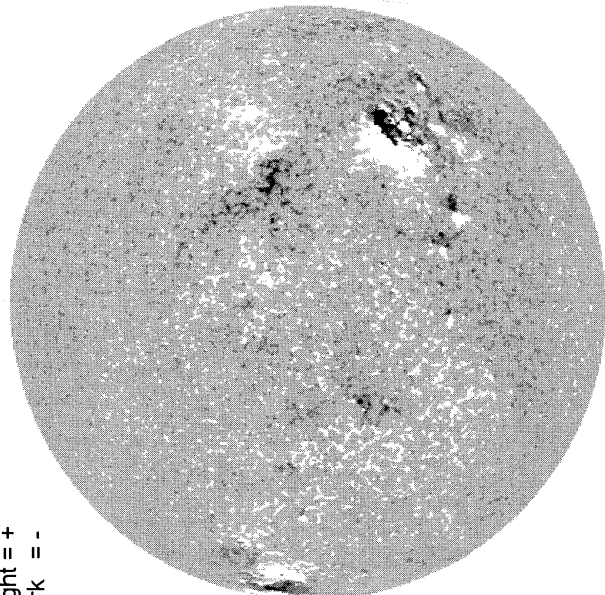
58
Aug 03

AUGUST 17, 2003 (P= 16.52, Bo = 6.72, Lo = 171.67)

KITT PEAK MAGNETOGRAM

868.8 nm

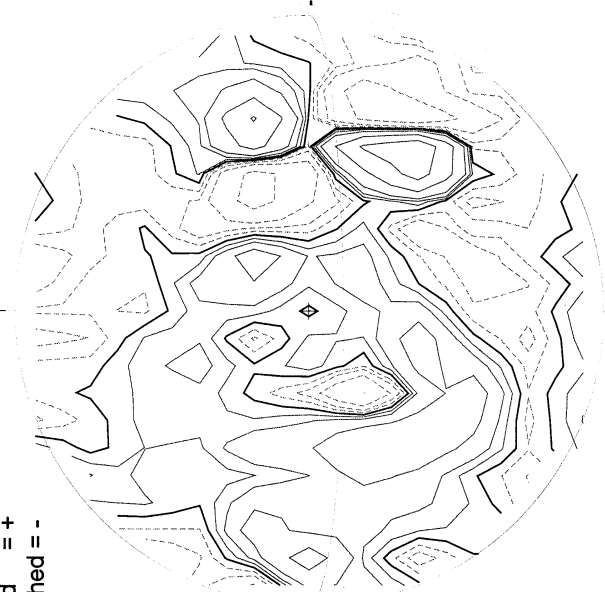
Bright = +
Dark = -



1532 UT

STANFORD MAGNETOGRAM

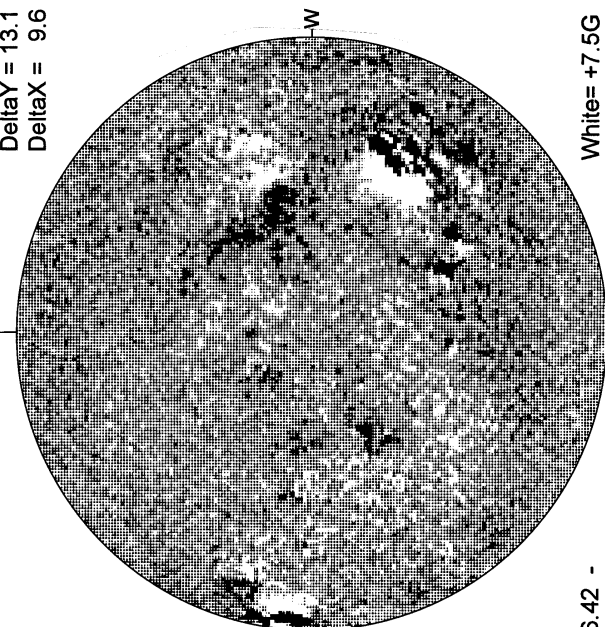
Solid = +
Dashed = -



2150 UT

MT. WILSON MAGNETOGRAM

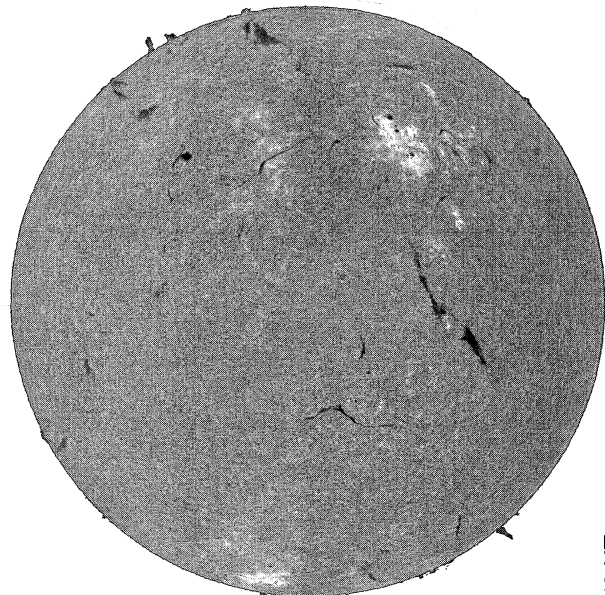
Delta Y = 13.1
Delta X = 9.6



16.42 -
17.34 UT

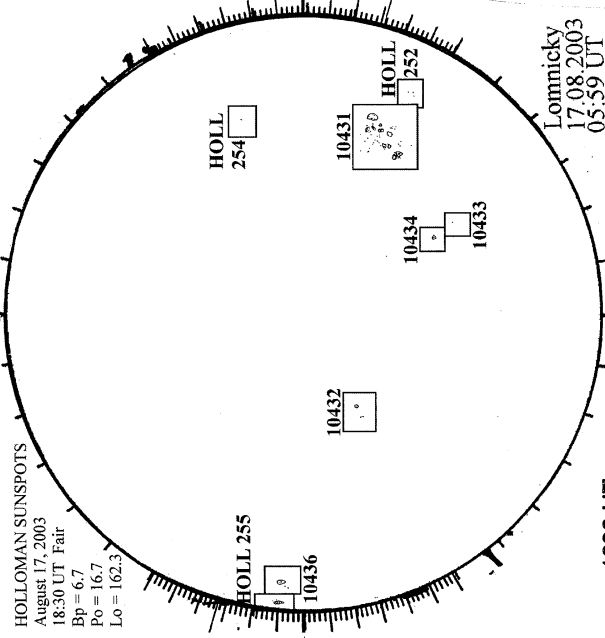
White = +7.5G
Black = -7.5G

BIG BEAR H-ALPHA



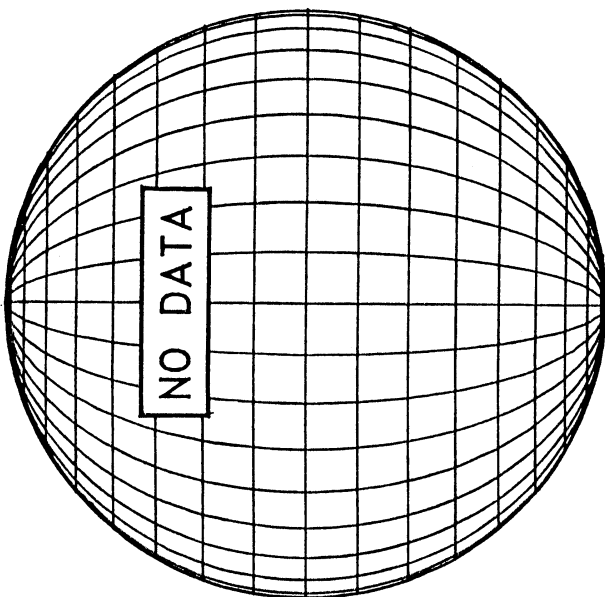
1549 UT

HOLLOMAN SUNSPOT



1830 UT
0559 UT LOMN Prom S

LOMNICKY PEAK CORONA (1.04 Radii)



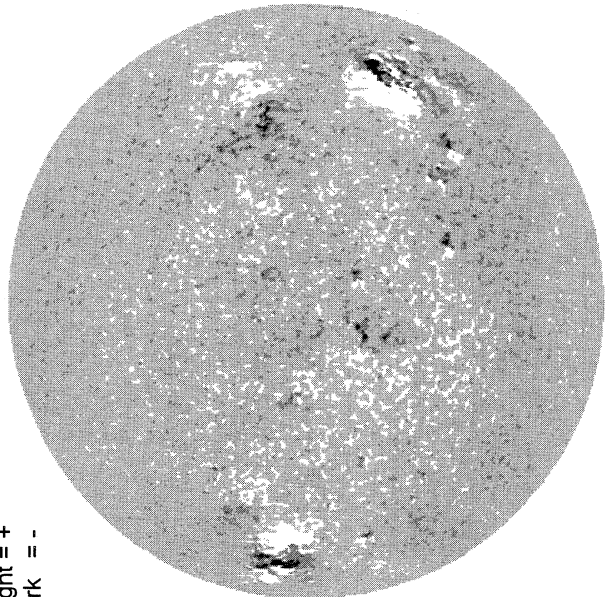
S

AUGUST 18, 2003 (P= 16.85, Bo = 6.76, Lo = 158.45)

KITT PEAK MAGNETOGRAM

868.8 nm

Bright = +
Dark = -



1711 UT

STANFORD MAGNETOGRAM

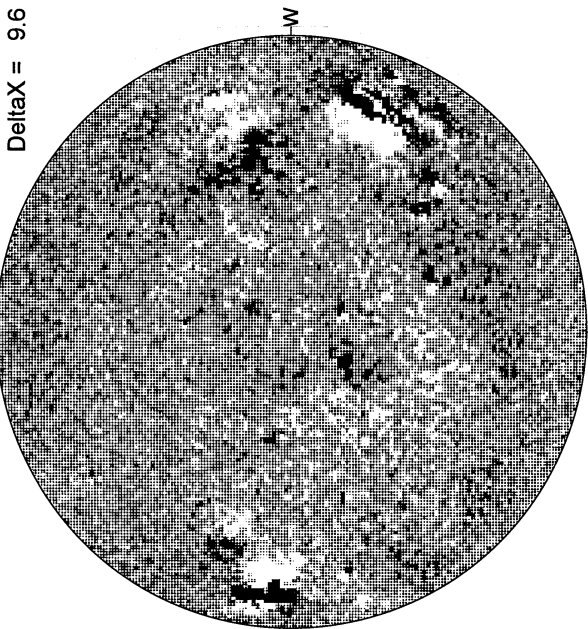
Solid = +
Dashed = -



2140 UT

MT. WILSON MAGNETOGRAM

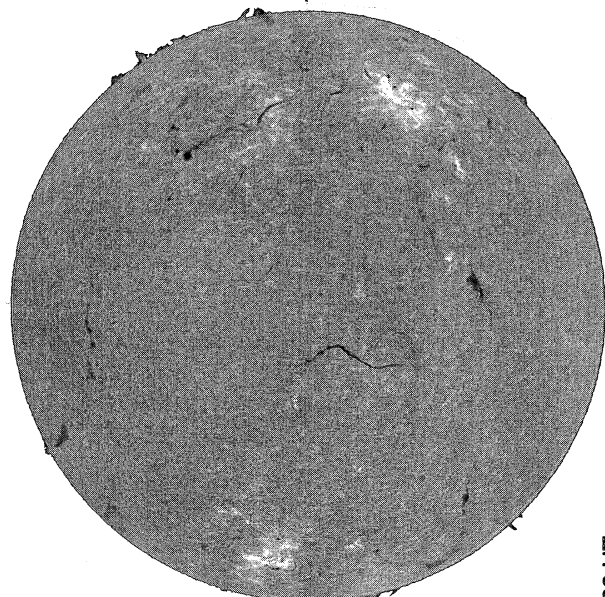
Delta Y = 13.1
Delta X = 9.6



15.81 -
16.74 UT

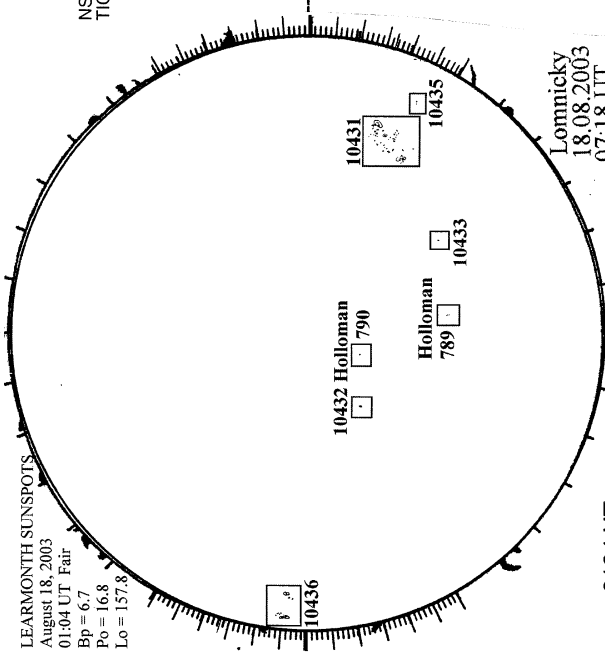
White = +7.5G
Black = -7.5G

BIG BEAR H-ALPHA



1606 UT

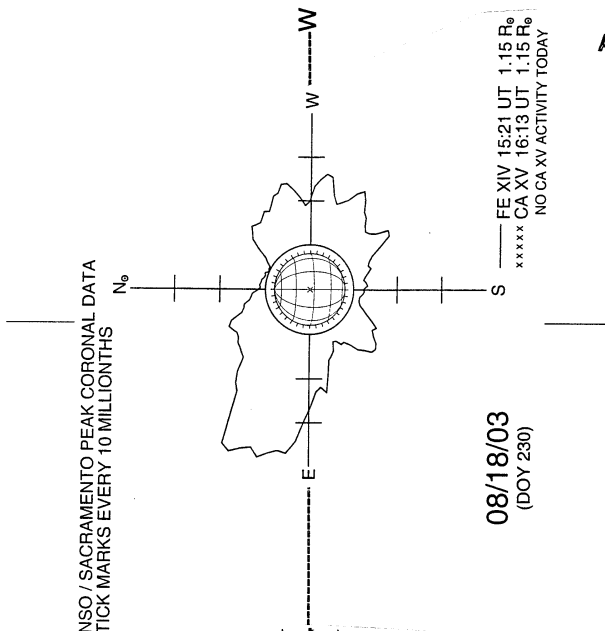
LEARMONTH SUNSPOTS



0104 UT

0718 UT LOMN Prom S

SACRAMENTO PEAK CORONA (1.15 Radii)----



0718 UT

18.08.2003

Lomnický

08/18/03
(DOY 230)

FE XIV 15:21 UT 1.15 R₀
CA XV 16:13 UT 1.15 R₀
NO CA XV ACTIVITY TODAY

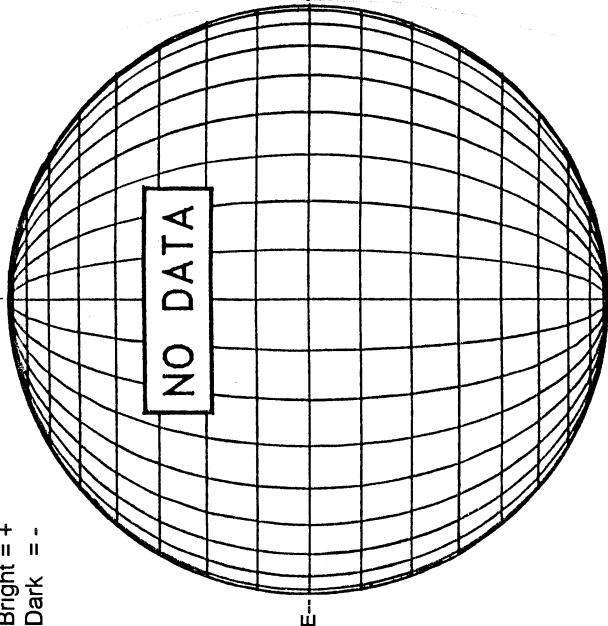
AUGUST 19, 2003 (P= 17.18, Bo = 6.80, Lo = 145.23)

60
Aug 03

KITT PEAK MAGNETOGRAM

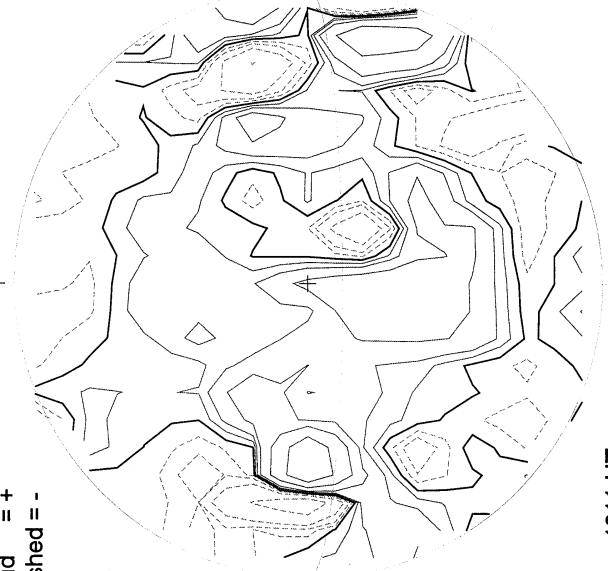
868.8 nm

Bright = +
Dark = -



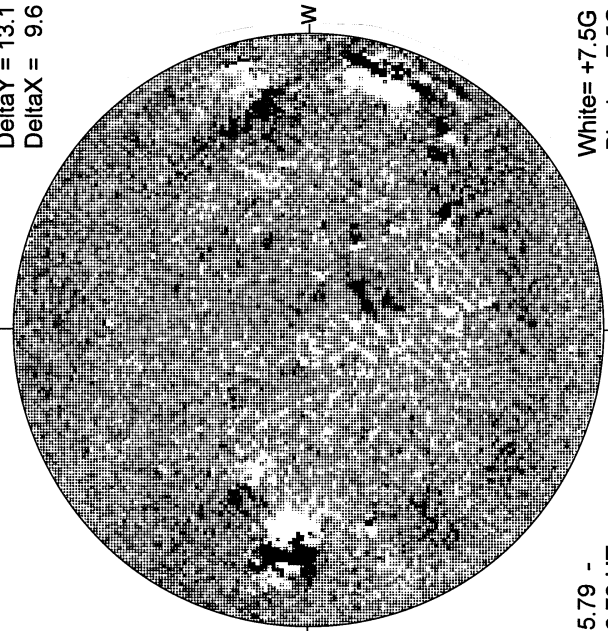
STANFORD MAGNETOGRAM

Solid = +
Dashed = -



MT. WILSON MAGNETOGRAM

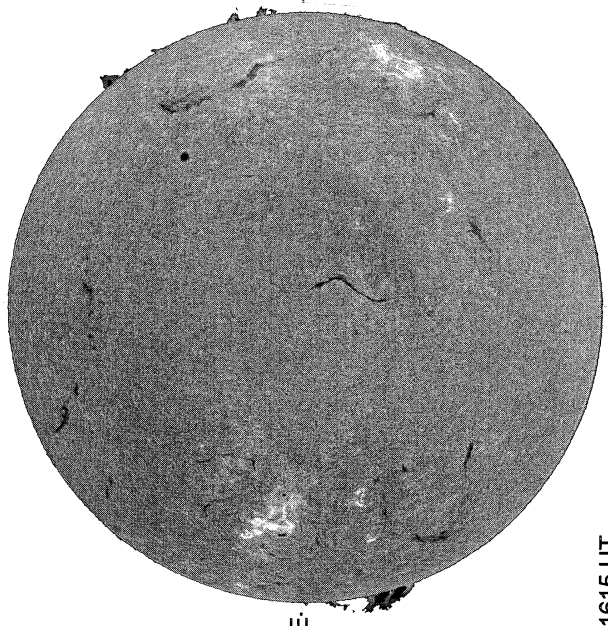
DeltaY = 13.1
DeltaX = 9.6



15.79 -
16.72 UT

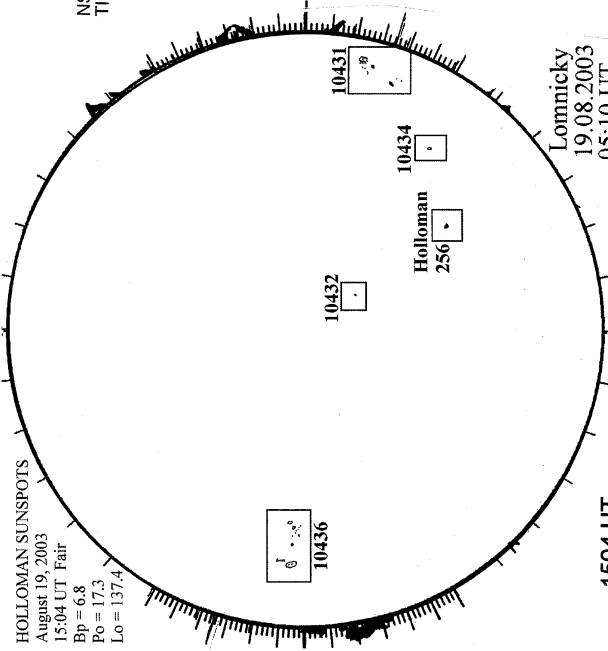
White = +7.5G
Black = -7.5G

BIG BEAR H-ALPHA



1615 UT

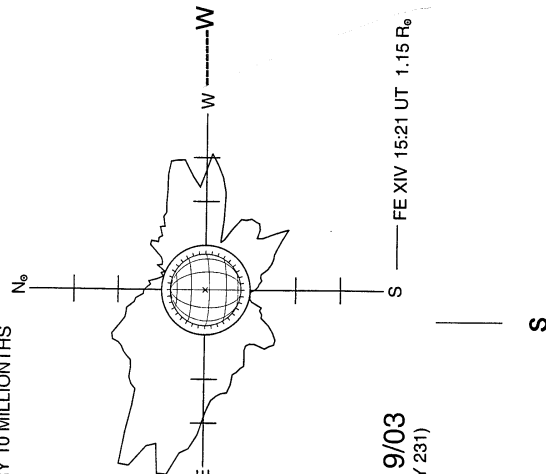
HOLLOMAN SUNSPOT



HOLLOMAN SUNSPOTS
August 19, 2003
15:04 UT Fair
Bp = 6.8
Po = 17.3
Lo = 137.4

SACRAMENTO PEAK CORONA (1.15 Radii)----

NSO / SACRAMENTO PEAK CORONAL DATA
TICK MARKS EVERY 10 MILLIONTHS



08/19/03
(DOY 231)

Lomnický
19.08.2003
05:10 UT

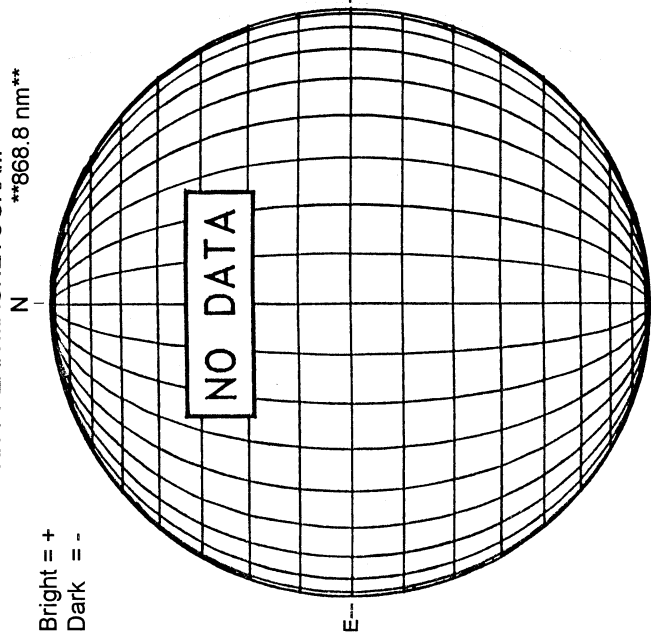
1504 UT
0510 UT LOMN Prom S

AUGUST 20, 2003 (P= 17.50, Bo = 6.85, Lo = 132.02)

KITT PEAK MAGNETOGRAM

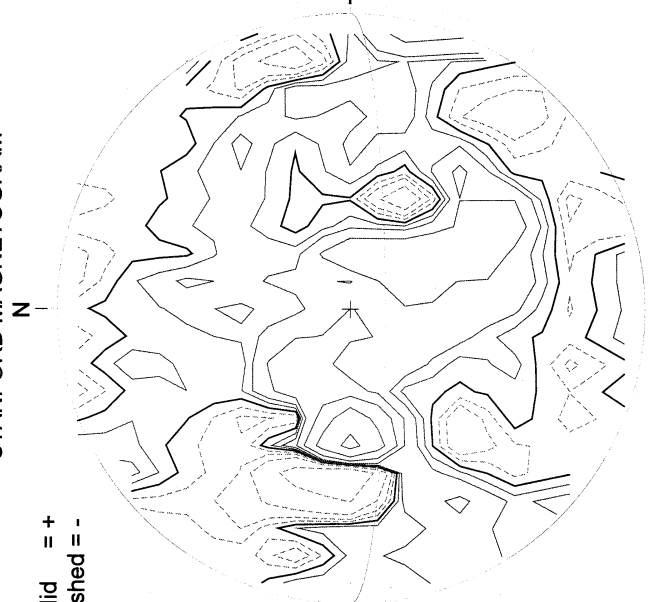
868.8 nm

Bright = +
Dark = -



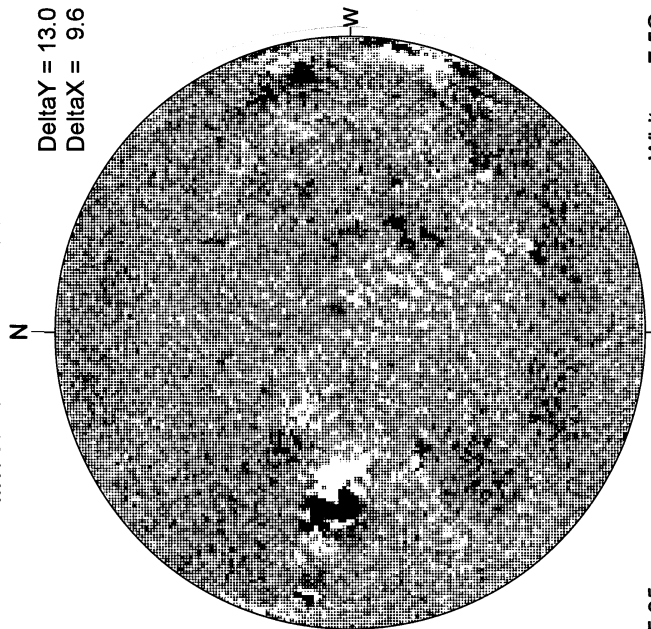
STANFORD MAGNETOGRAM

Solid = +
Dashed = -



MT. WILSON MAGNETOGRAM

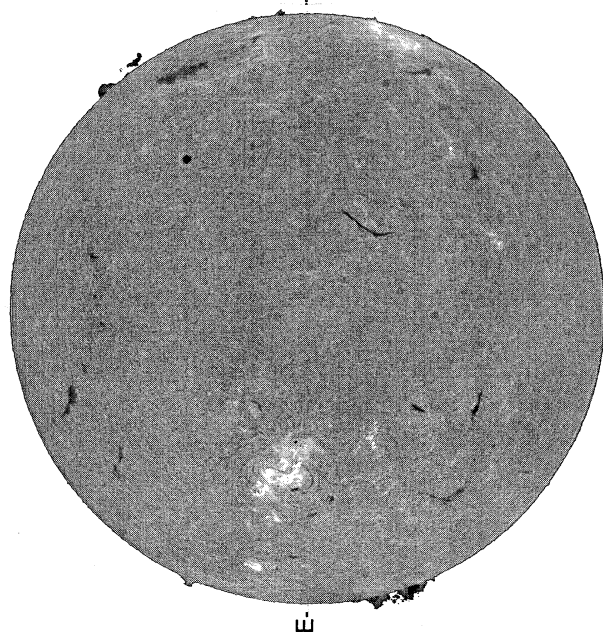
DeltaY = 13.0
DeltaX = 9.6



15.35 -
16.28 UT

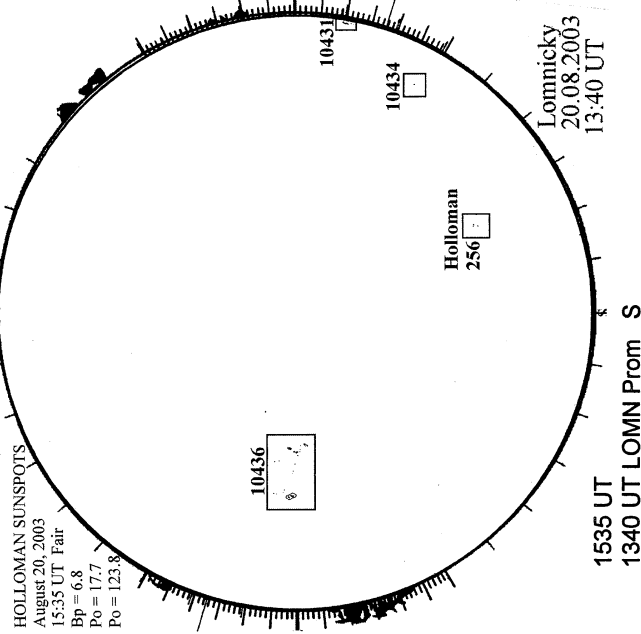
White= +7.5G
Black = -7.5G

BIG BEAR H-ALPHA



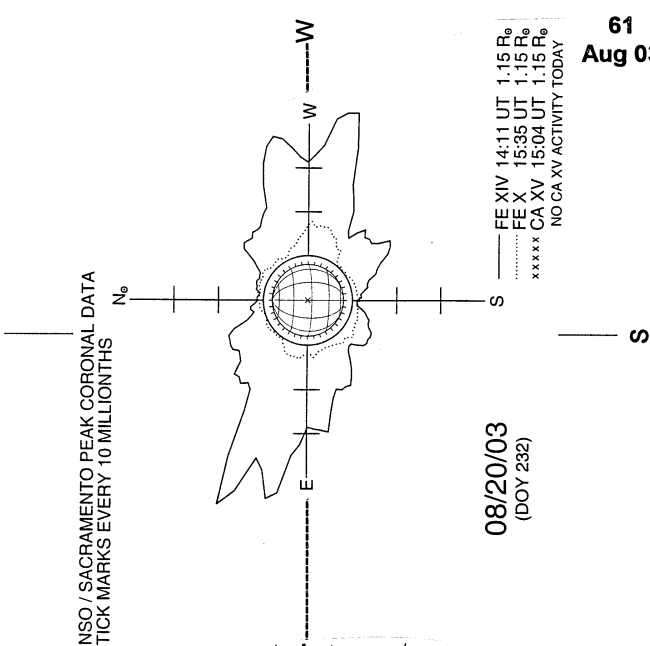
1547 UT

HOLLOMAN SUNSPOT



1535 UT
1340 UT LOMN Prom S

SACRAMENTO PEAK CORONA (1.15 Radii)----



08/20/03
(DOY 232)

FE XIV 14:11 UT 1.15 R_o
FE X 15:35 UT 1.15 R_o
xxxxx CA XV 15:04 UT 1.15 R_o
NO CA XV ACTIVITY TODAY

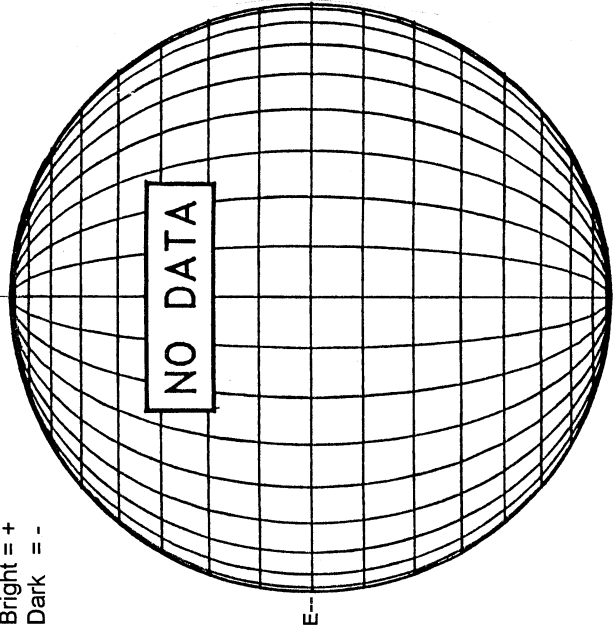
62
Aug 03

AUGUST 21, 2003 (P= 17.81, Bo = 6.88, Lo = 118.80)

KITT PEAK MAGNETOGRAM

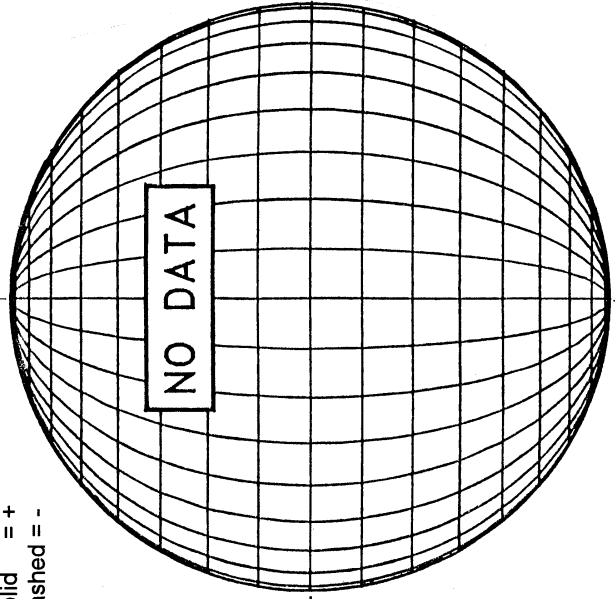
868.8 nm

Bright = +
Dark = -



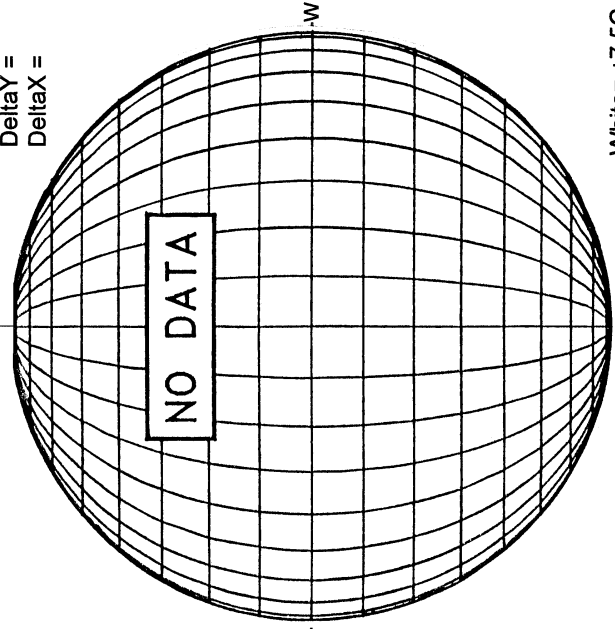
STANFORD MAGNETOGRAM

Solid = +
Dashed = -



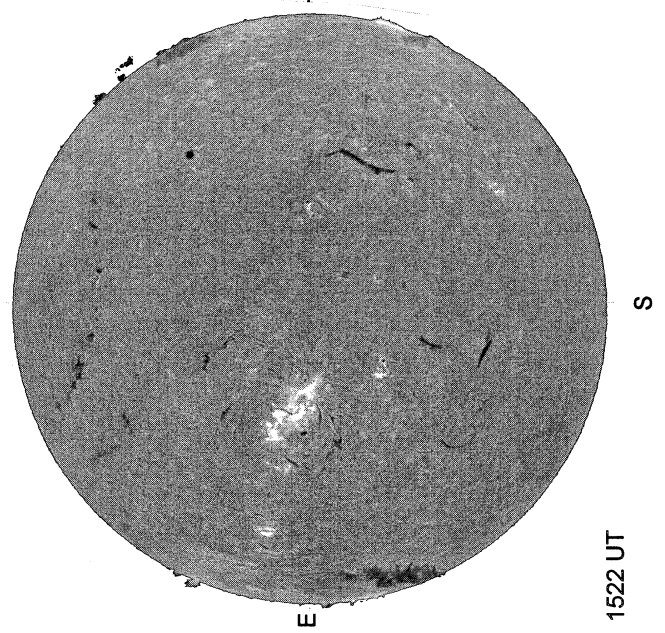
MT. WILSON MAGNETOGRAM

DeltaY =
DeltaX =

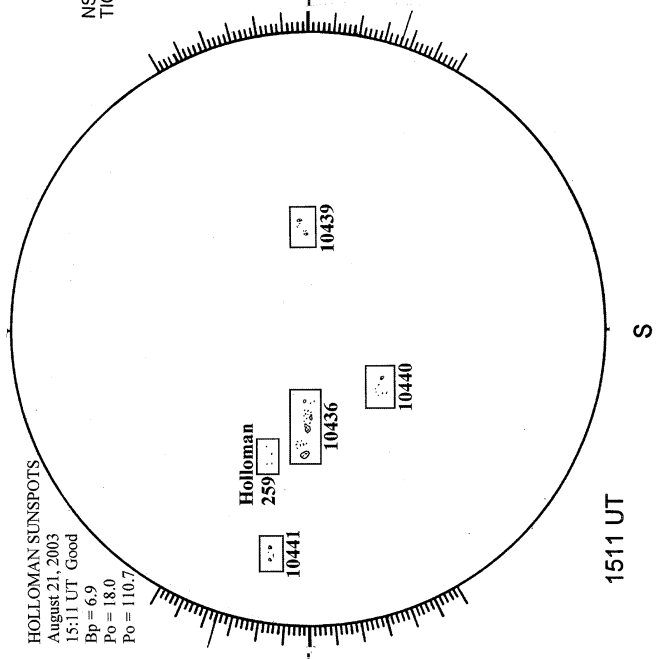


White = +7.5G
Black = -7.5G

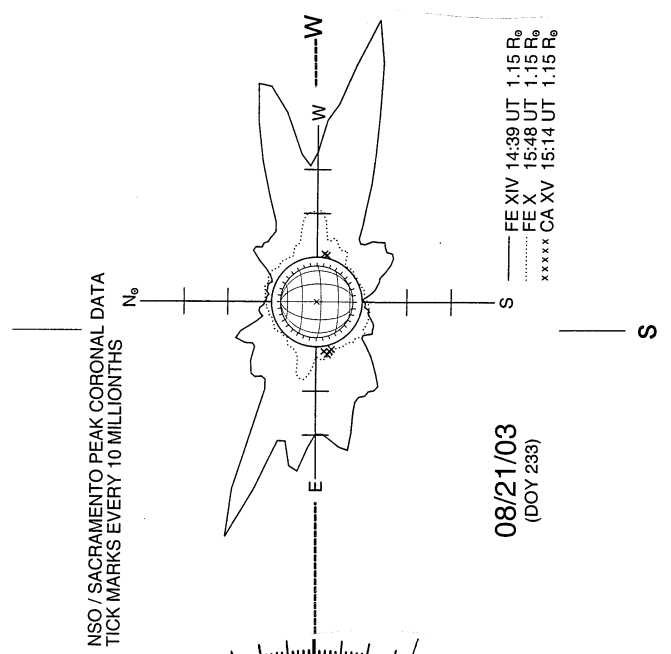
BIG BEAR H-ALPHA



HOLLOMAN SUNSPOT



SACRAMENTO PEAK CORONA (1.15 Radii)----



08/21/03
(DOY 233)

NSO / SACRAMENTO PEAK CORONAL DATA
TICK MARKS EVERY 10 MILLIONTHS

AUGUST 22, 2003 (P= 18.13, Bo = 6.92, Lo = 105.58)

KITT PEAK MAGNETOGRAM

868.8 nm

Bright = +
Dark = -

STANFORD MAGNETOGRAM

Solid = +
Dashed = -

MT. WILSON MAGNETOGRAM

DeltaY = 13.0
DeltaX = 9.6

1733 UT

2355 UT

16.13 -
17.06 UT

White = +7.5G
Black = -7.5G

BIG BEAR H-ALPHA

1613 UT

HOLLOMAN SUNSPOT

HOLLOMAN SUNSPOTS
August 22, 2003
16:05 UT Fair
Bp = 6.9
Po = 18.3
Lo = 97.0

SACRAMENTO PEAK CORONA (1.15 Radii)----

NSO / SACRAMENTO PEAK CORONAL DATA
TICK MARKS EVERY 10 MILLIONTHS

08/22/03
(DOY 234)

1605 UT

16.13 -
17.06 UT

63
Aug 03

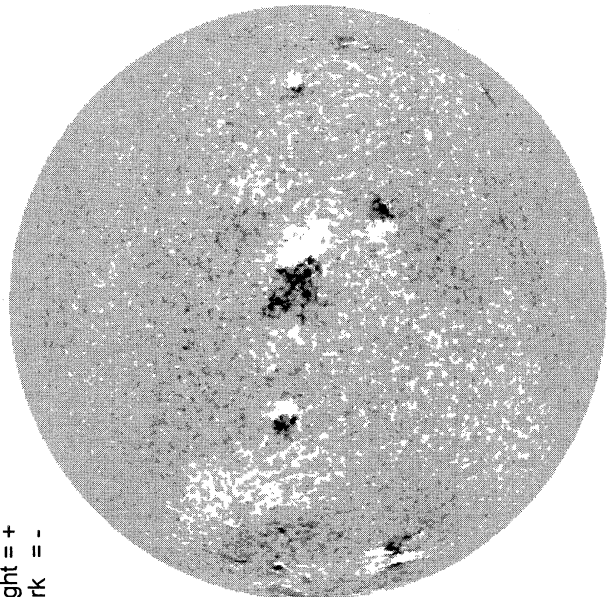
AUGUST 23, 2003 (P= 18.43, Bo = 6.96, Lo = 92.37)

64
Aug 03

KITT PEAK MAGNETOGRAM

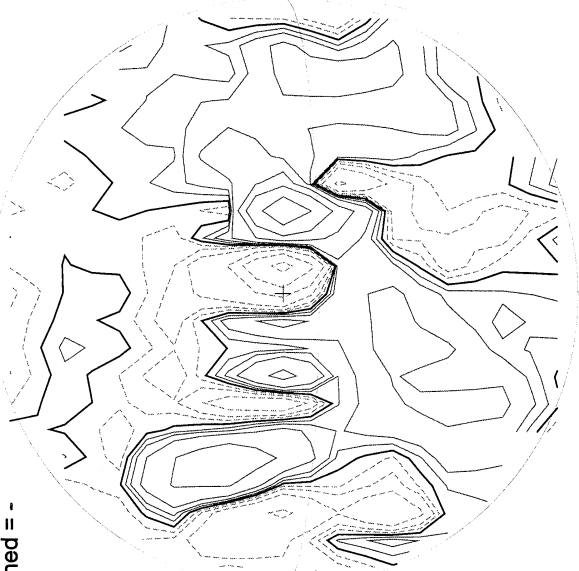
868.8 nm

Bright = +
Dark = -



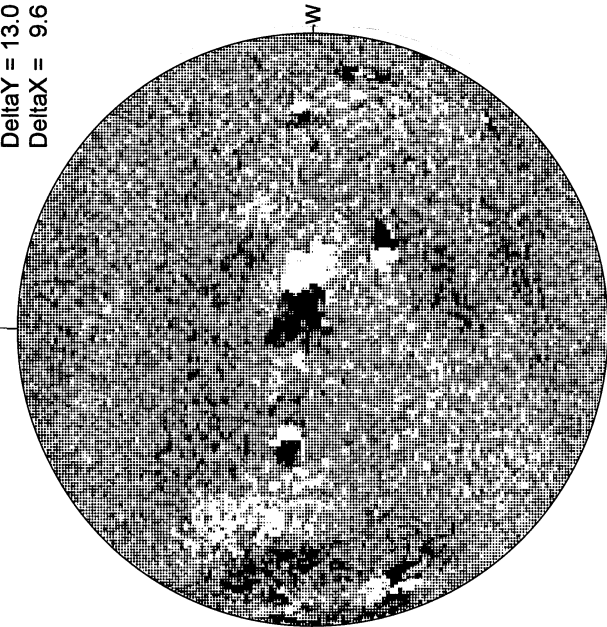
STANFORD MAGNETOGRAM

Solid = +
Dashed = -



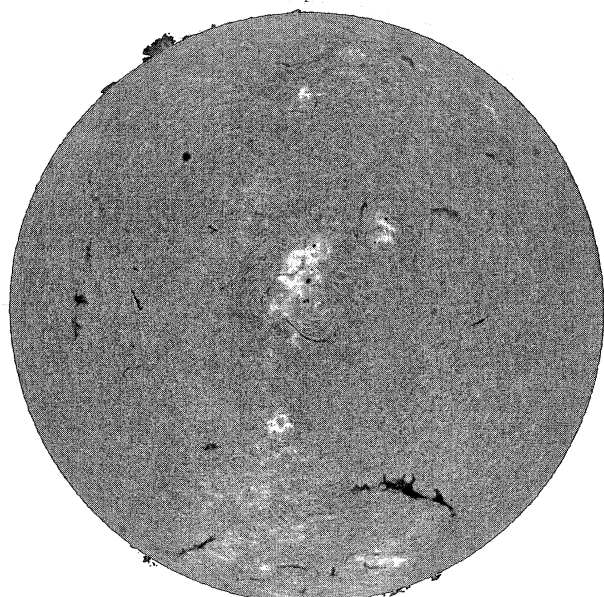
MT. WILSON MAGNETOGRAM

DeltaY = 13.0
DeltaX = 9.6



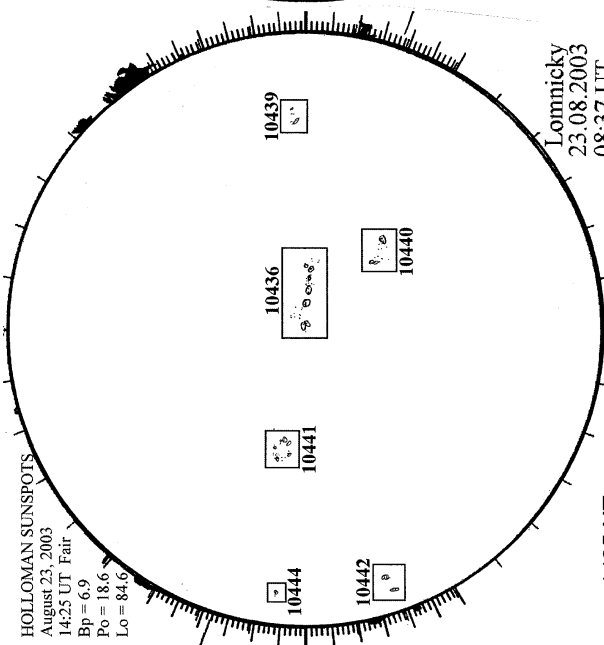
White = +7.5G
Black = -7.5G

BIG BEAR H-ALPHA

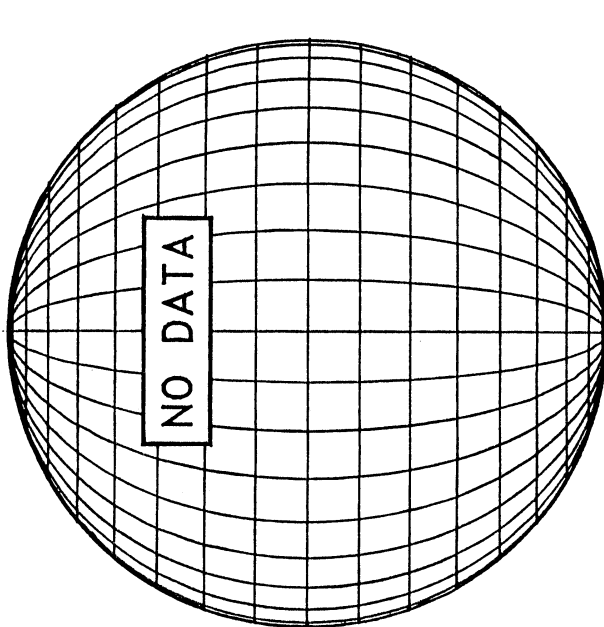


HOLLOMAN SUNSPOT

HOLLOMAN SUNSPOTS
August 23, 2003
14:25 UT Fair
Bp = 6.9
Po = 18.6
Lo = 84.6



SACRAMENTO PEAK CORONA (1.15 Radii)

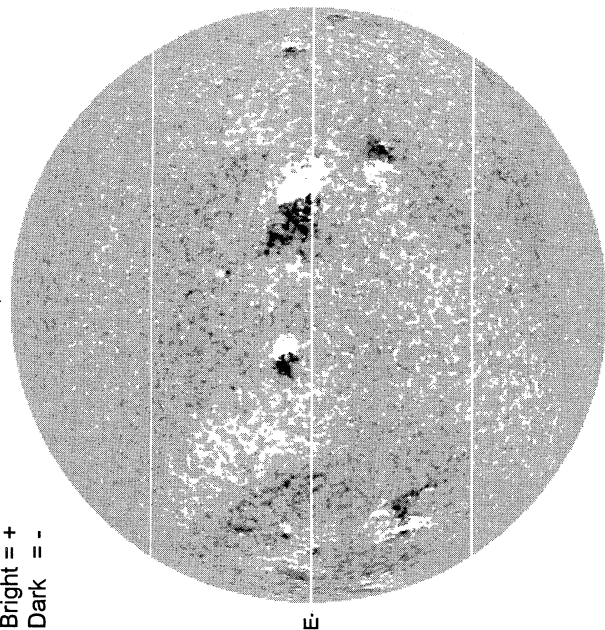


AUGUST 24, 2003 (P= 18.73, Bo = 6.99, Lo = 79.16)

KITT PEAK MAGNETOGRAM

868.8 nm

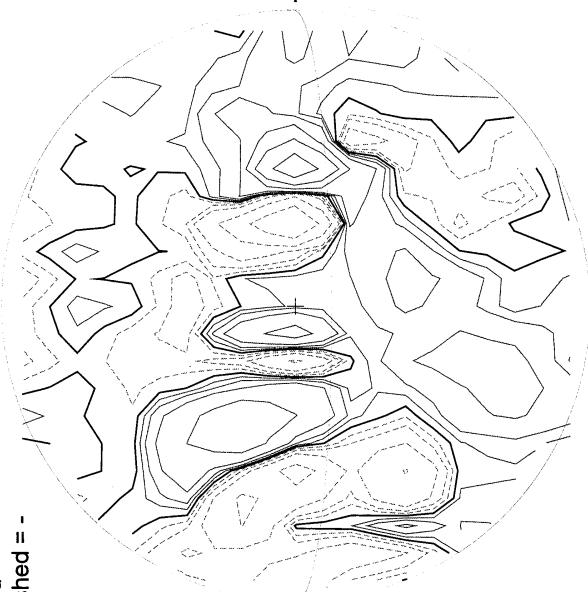
Bright = +
Dark = -



1537 UT

STANFORD MAGNETOGRAM

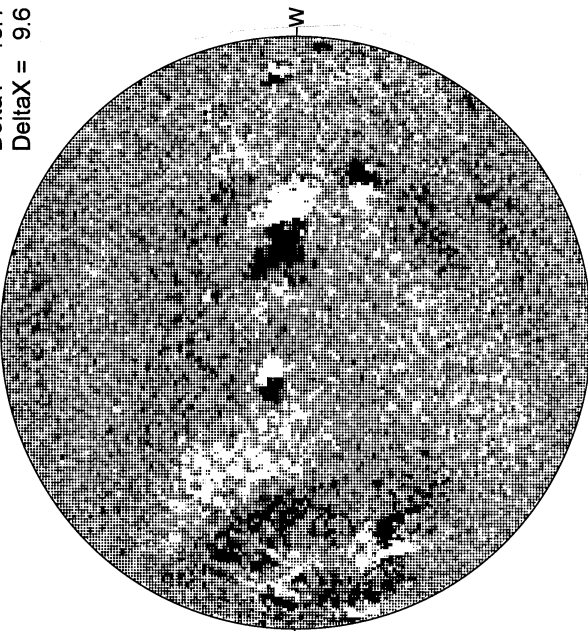
Solid = +
Dashed = -



2032 UT

MT. WILSON MAGNETOGRAM

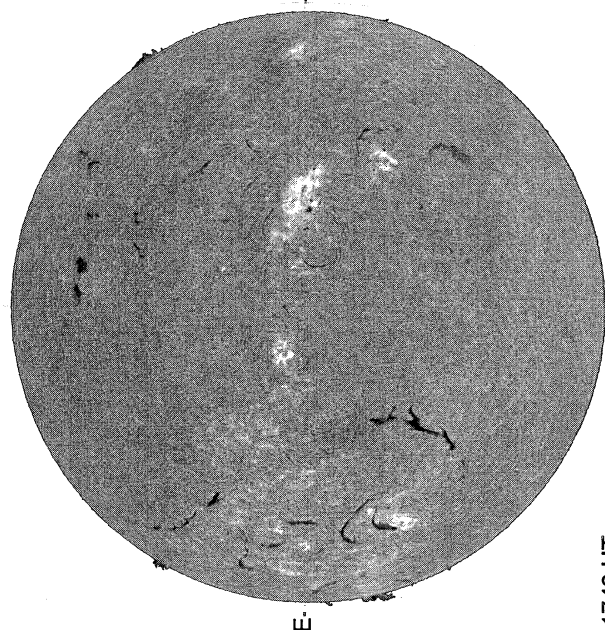
DeltaY = 13.1
DeltaX = 9.6



17.36 -
18.29 UT

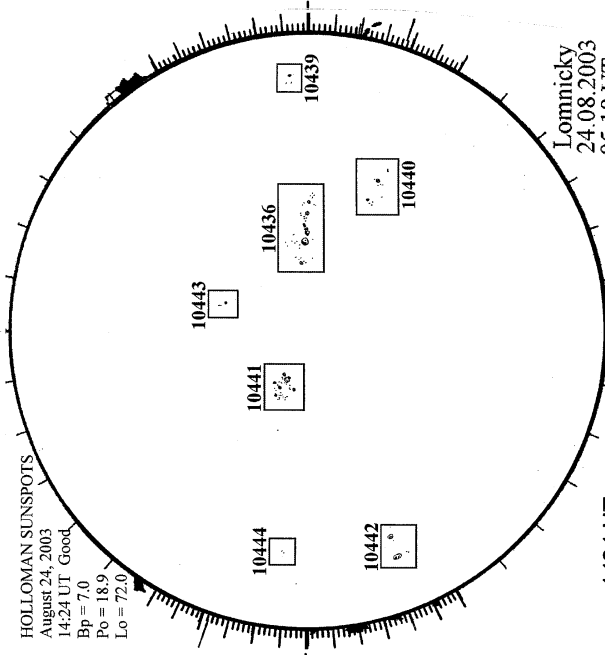
White = +7.5G
Black = -7.5G

BIG BEAR H-ALPHA



1746 UT

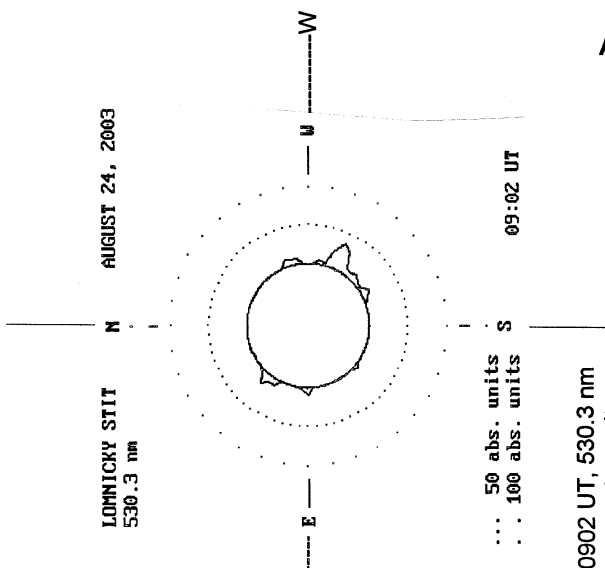
HOLLOMAN SUNSPOT



1424 UT

0518 UT LOMN Prom S

LOMNICKY PEAK CORONA (1.04 Radii)-----



0902 UT, 530.3 nm

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

09:02 UT

65
Aug 03

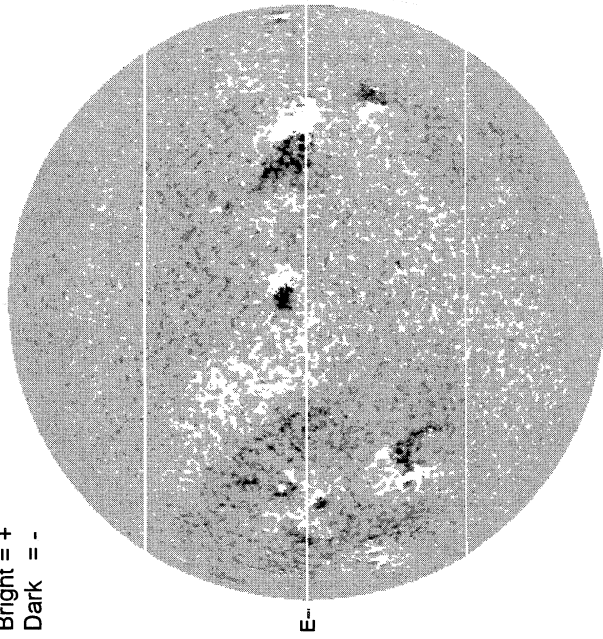
66
Aug 03

AUGUST 25, 2003 (P= 19.03, Bo = 7.02, Lo = 65.94)

KITT PEAK MAGNETOGRAM

868.8 nm

Bright = +
Dark = -



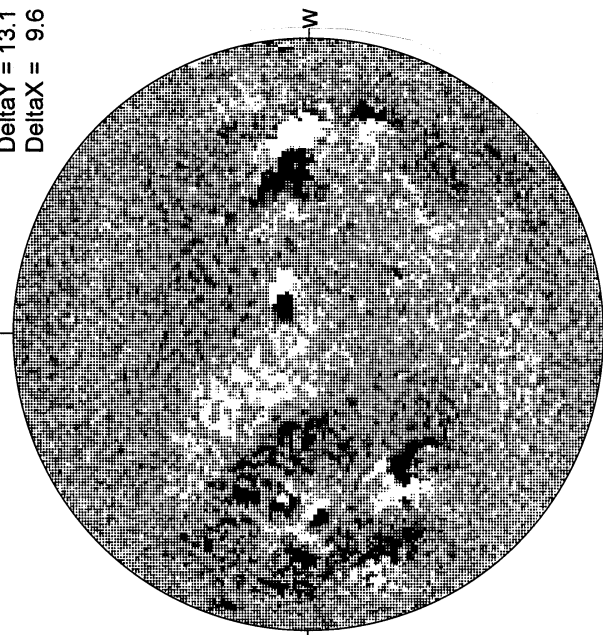
STANFORD MAGNETOGRAM

Solid = +
Dashed = -



MT. WILSON MAGNETOGRAM

DeltaY = 13.1
DeltaX = 9.6



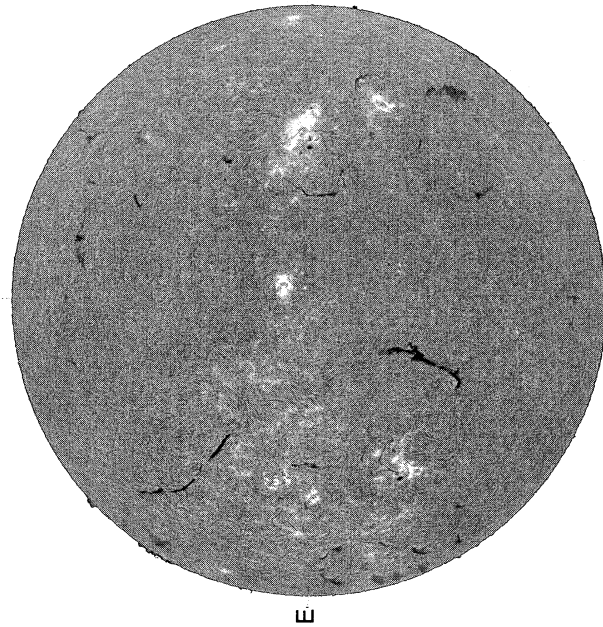
1514 UT

2127 UT

23.74 -
24.67 UT

White= +7.5G
Black = -7.5G

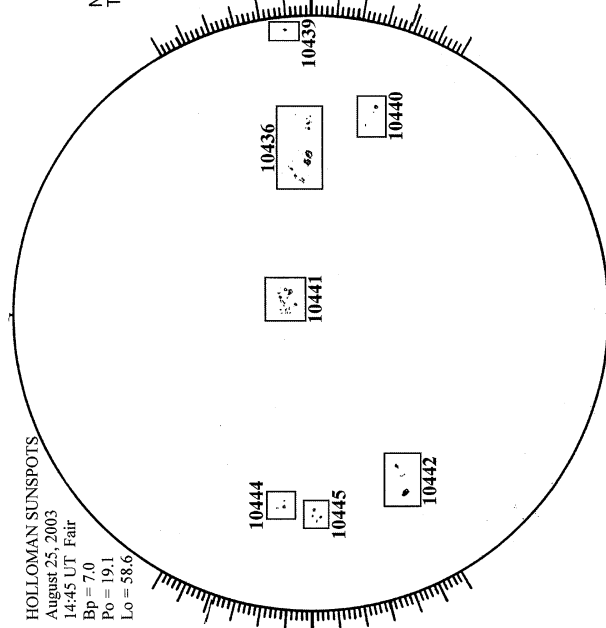
BIG BEAR H-ALPHA



1608 UT

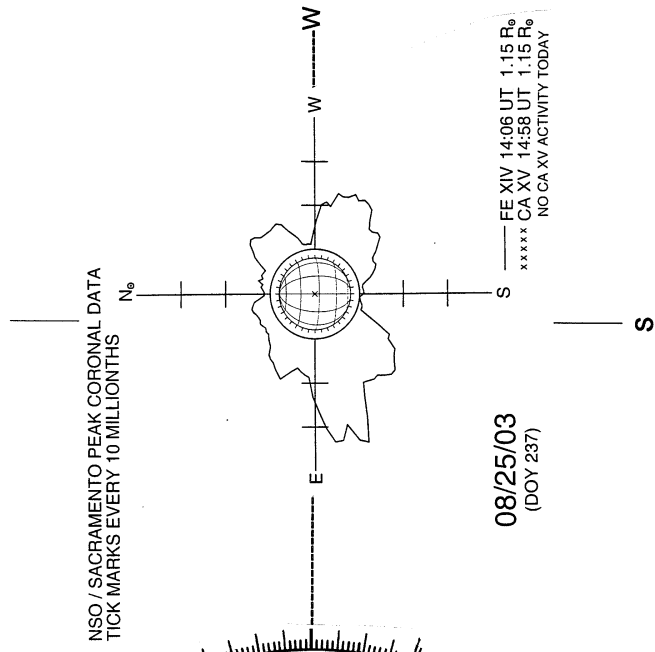
HOLLOMAN SUNSPOTS

HOLLOMAN SUNSPOTS
August 25, 2003
14:45 UT Fair
Bp = 7.0
Po = 19.1
Lo = 58.6



1445 UT

SACRAMENTO PEAK CORONA (1.15 Radii)-----



08/25/03
(DOY 237)

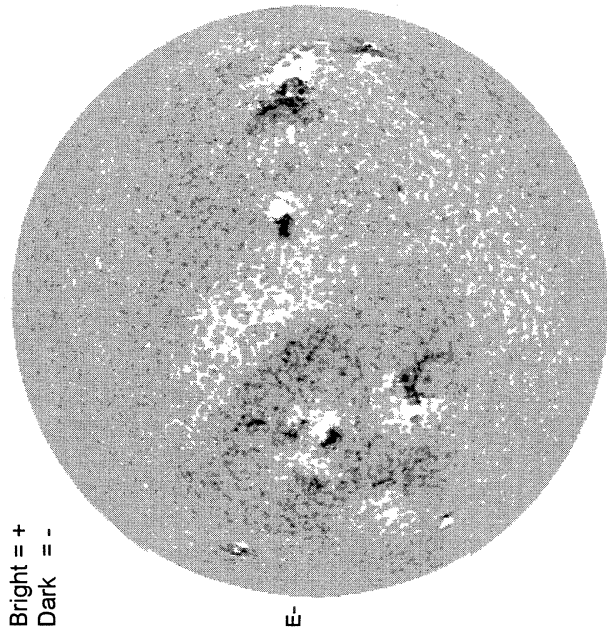
FE XIV 14:06 UT 1.15 R_o
CA XV 14:58 UT 1.15 R_o
NO CA XV ACTIVITY TODAY

AUGUST 26, 2003 (P= 19.32, Bo = 7.05, Lo = 52.73)

KITT PEAK MAGNETOGRAM

868.8 nm

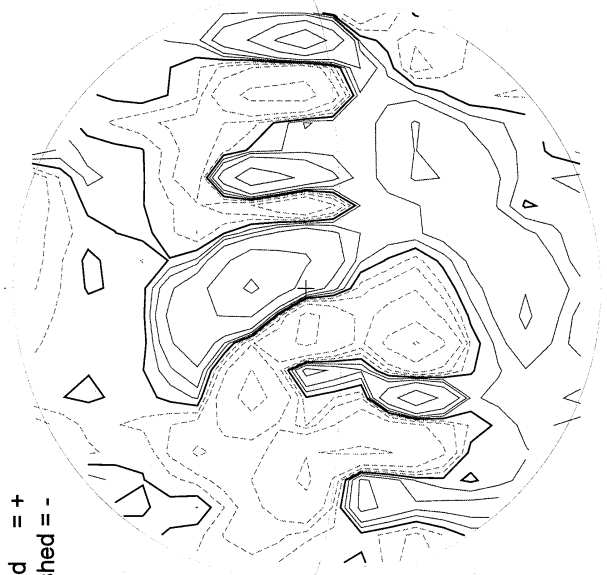
Bright = +
Dark = -



1745 UT

STANFORD MAGNETOGRAM

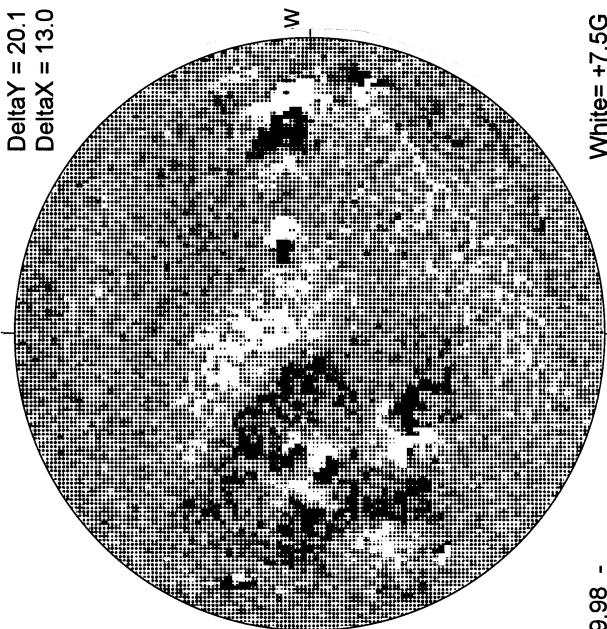
Solid = +
Dashed = -



2228 UT

MT. WILSON MAGNETOGRAM

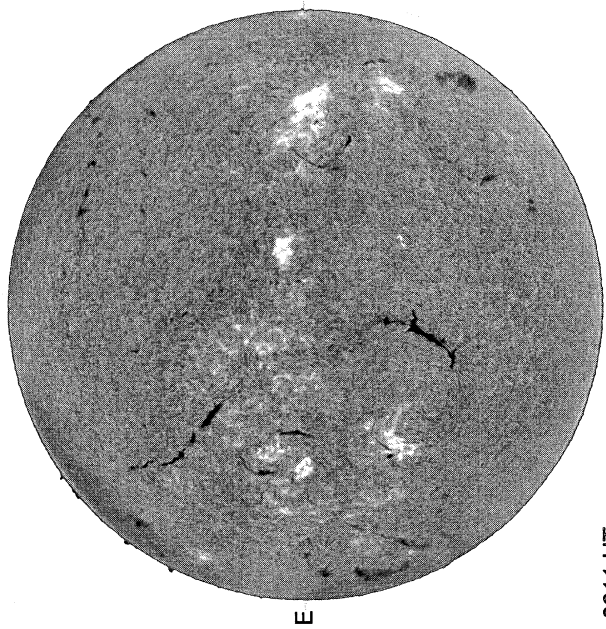
DeltaY = 20.1
DeltaX = 13.0



19.98 -
20.38 UT

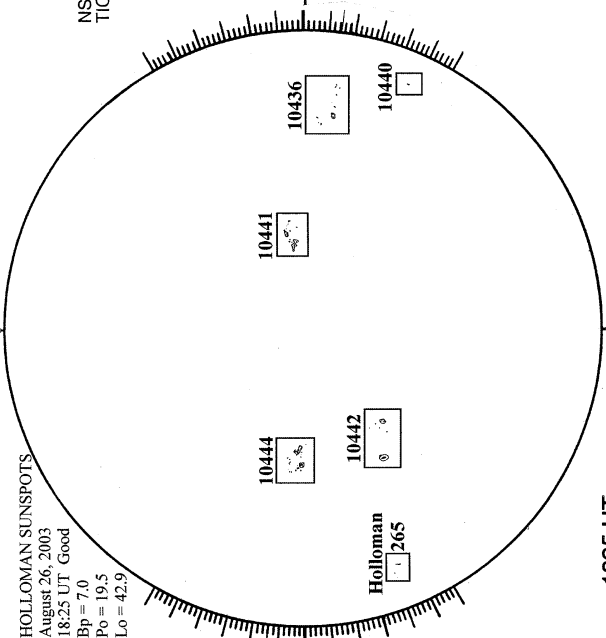
White = +7.5G
Black = -7.5G

KANZELHOHE H-ALPHA



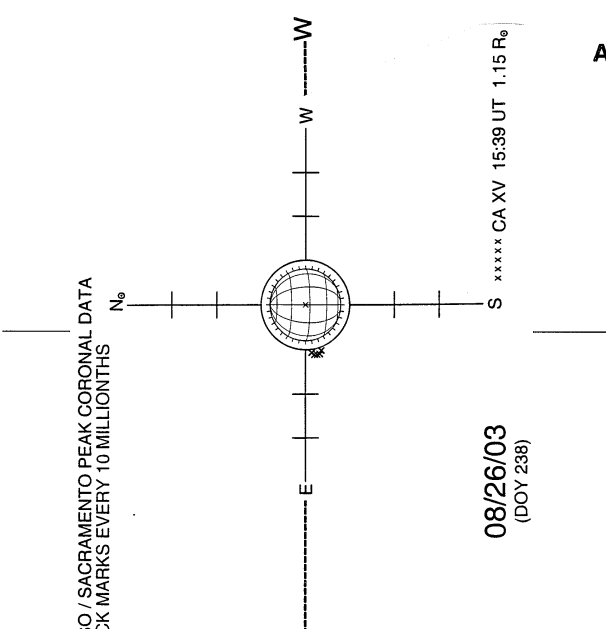
0611 UT

HOLLOMAN SUNSPOTS



1825 UT

SACRAMENTO PEAK CORONA (1.15 Radii)----



08/26/03
(DOY 238)

S ***** CA XV 15:39 UT 1.15 R_o

67
Aug 03

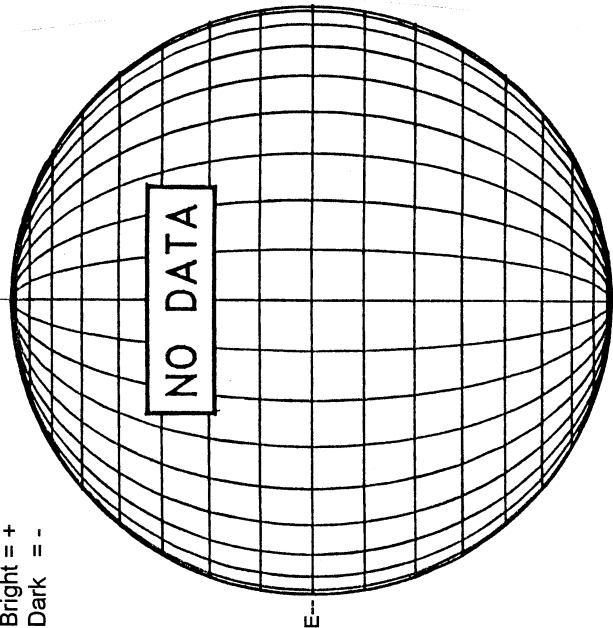
68
Aug 03

AUGUST 27, 2003 (P= 19.61, Bo = 7.08, Lo = 39.52)

KITT PEAK MAGNETOGRAM

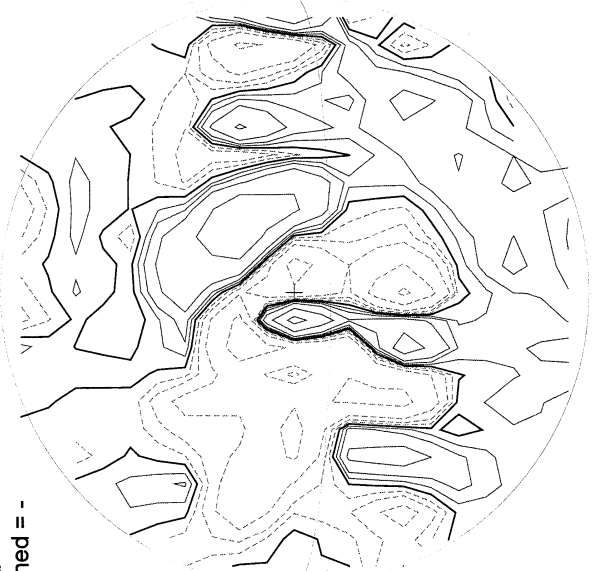
868.8 nm

Bright = +
Dark = -



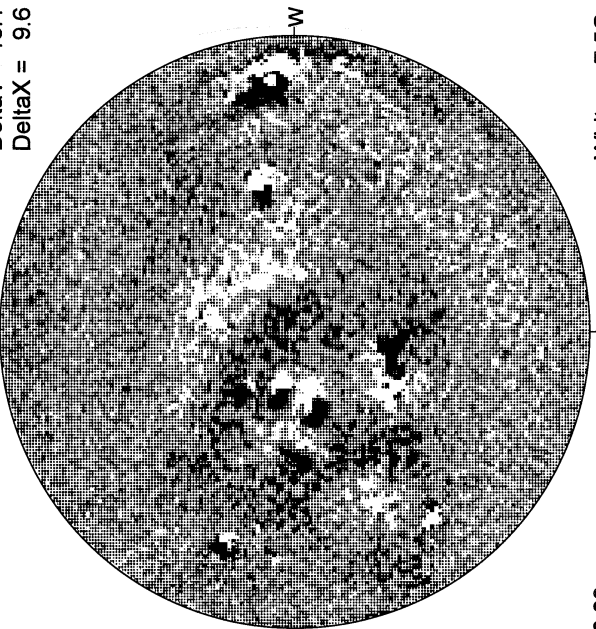
STANFORD MAGNETOGRAM

Solid = +
Dashed = -



MT. WILSON MAGNETOGRAM

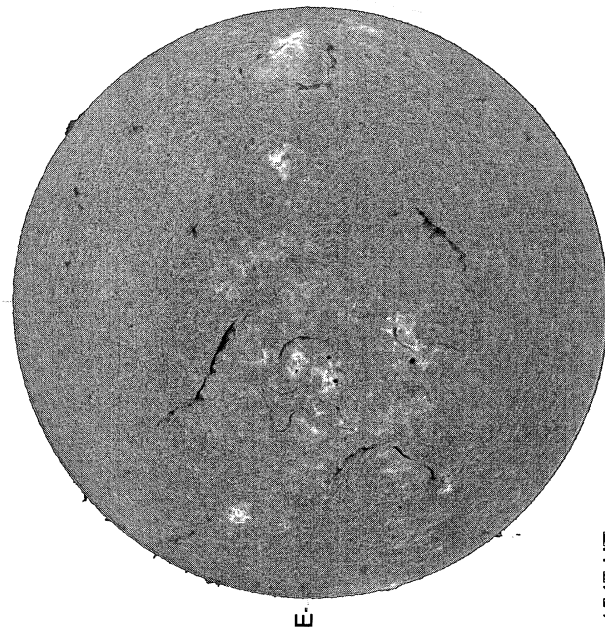
DeltaY = 13.1
DeltaX = 9.6



16.00 -
16.93 UT

White = +7.5G
Black = -7.5G

BIG BEAR H-ALPHA

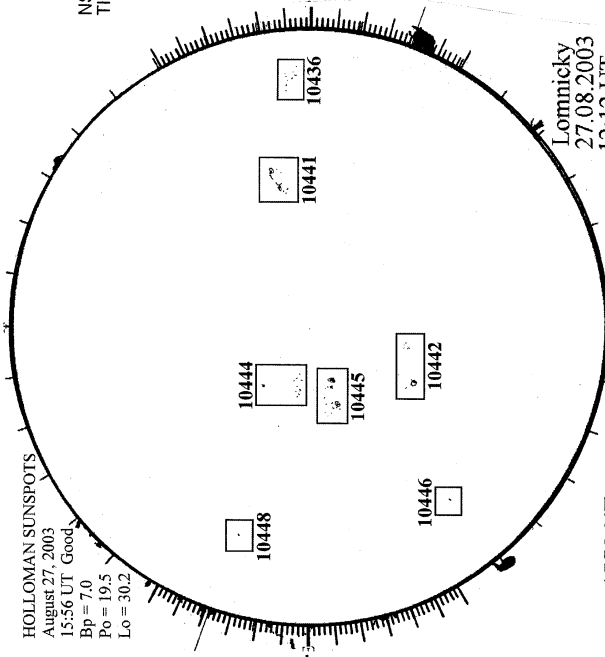


1547 UT

HOLLOMAN SUNSPOT

HOLLOMAN SUNSPOTS
August 27, 2003
15:56 UT Good.

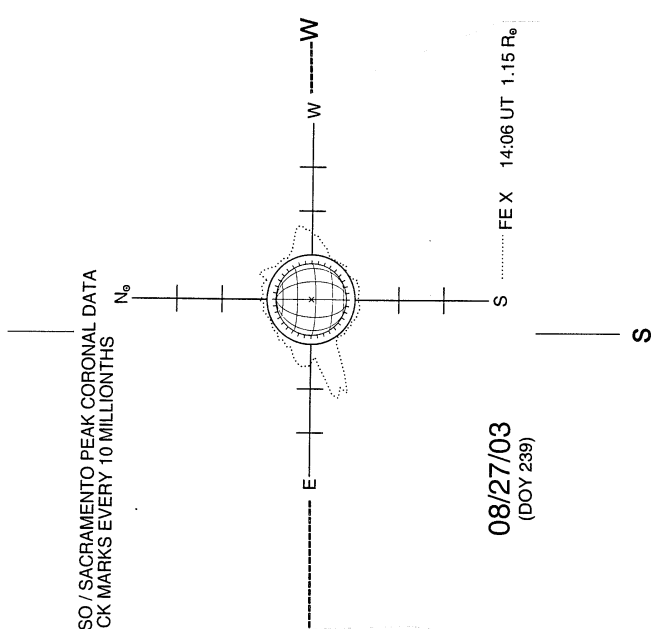
Bp = 7.0
Po = 19.5
Lo = 30.2



1556 UT
1212 UT LOMN Prom

Lonmicky
27.08.2003
12:12 UT

SACRAMENTO PEAK CORONA (1.15 Radii)----



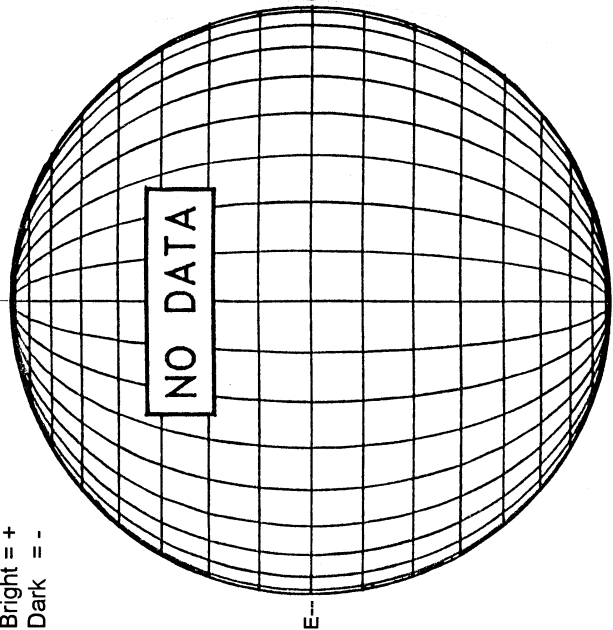
08/27/03
(DOY 239)

FEX 14:06 UT 1.15 R_e

KITT PEAK MAGNETOGRAM

****868.8 nm****

Bright = +
Dark = -



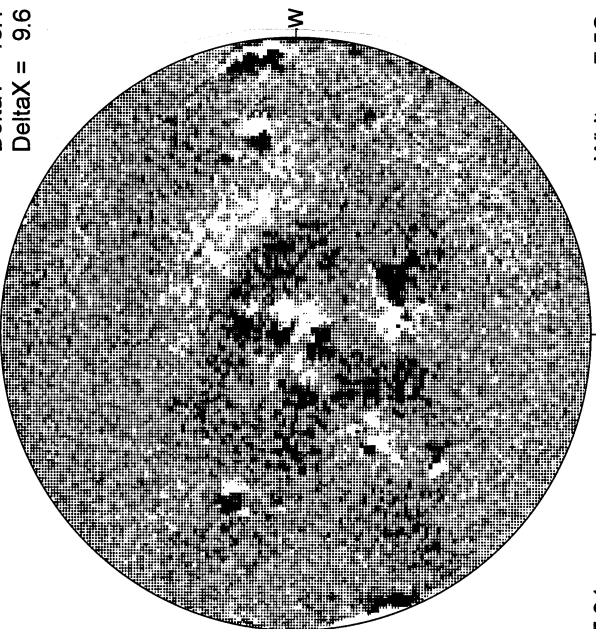
STANFORD MAGNETOGRAM

Solid = +
Dashed = -



MT. WILSON MAGNETOGRAM

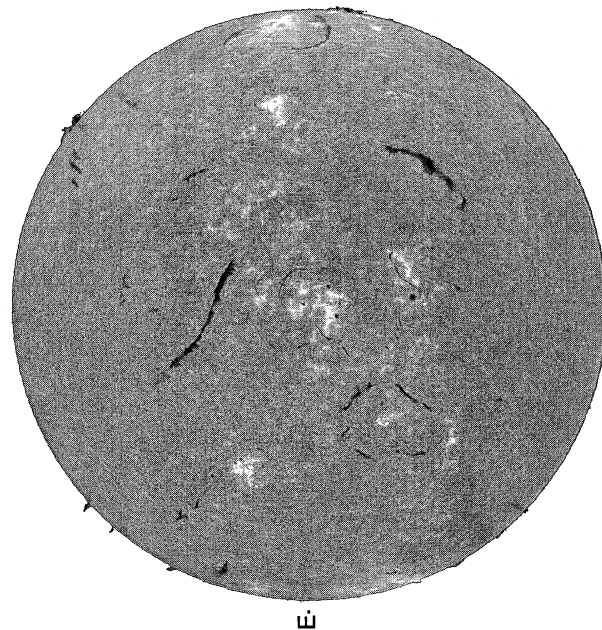
DeltaY = 13.1
DeltaX = 9.6



17.34 -
18.27 UT

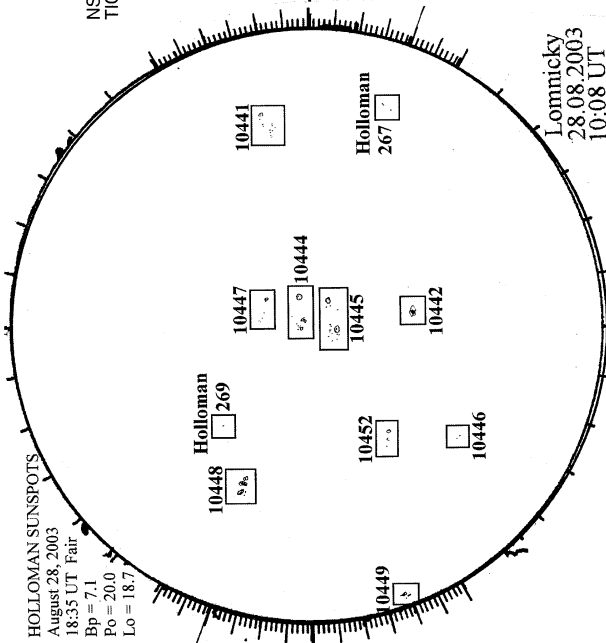
White= +7.5G
Black = -7.5G

BIG BEAR H-ALPHA



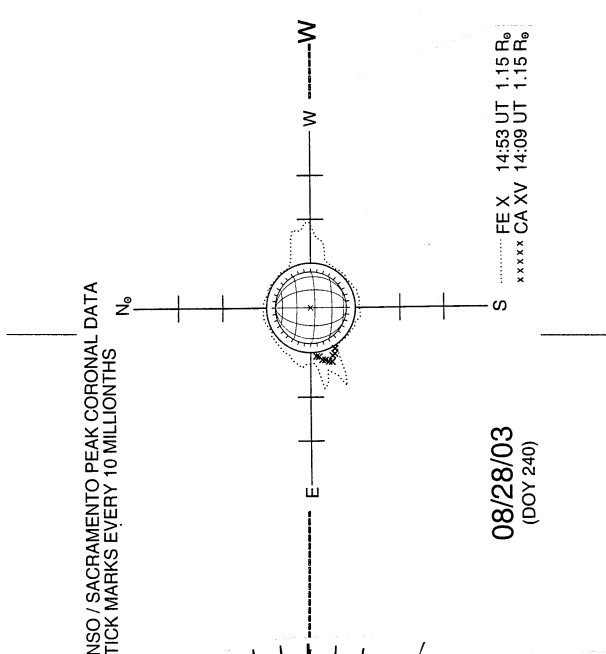
1558 UT

HOLLOMAN SUNSPOT



1835 UT
1008 UT LOMN Prom S

SACRAMENTO PEAK CORONA (1.15 Radii)----



08/28/03
(DOY 240)

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9

69
Aug 03

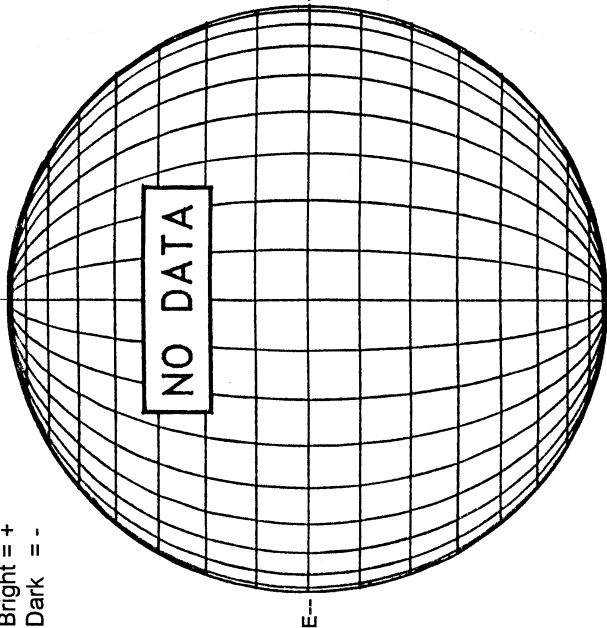
AUGUST 29, 2003 (P= 20.16, Bo = 7.13, Lo = 13.10)

70
Aug 03

KITT PEAK MAGNETOGRAM

868.8 nm

Bright = +
Dark = -



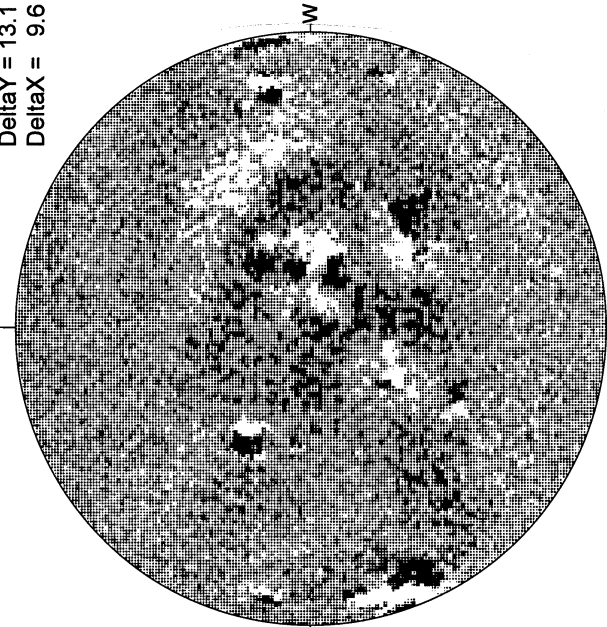
STANFORD MAGNETOGRAM

Solid = +
Dashed = -



MT. WILSON MAGNETOGRAM

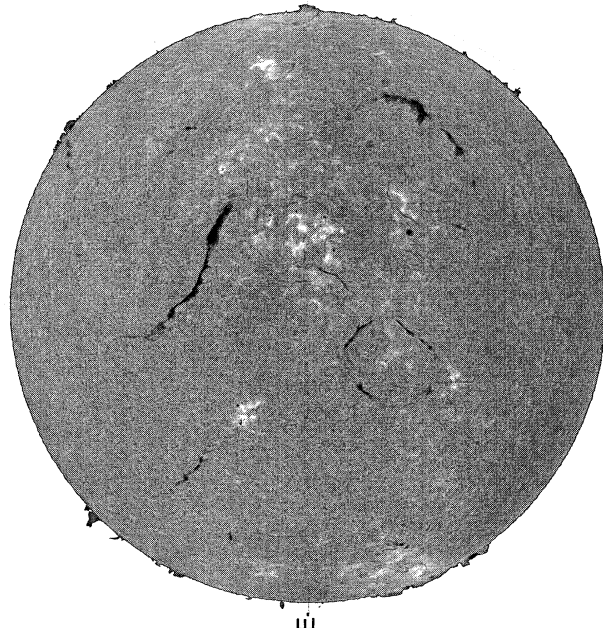
DeltaY = 13.1
DeltaX = 9.6



15.49 -
16.42 UT

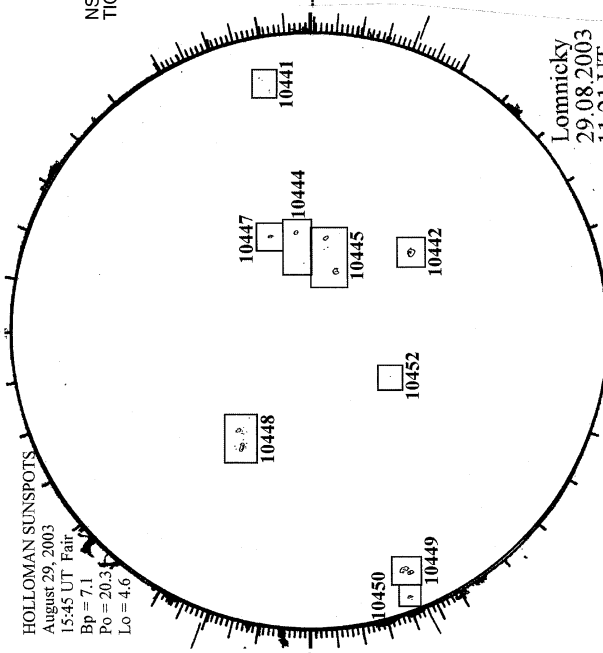
White = +7.5G
Black = -7.5G

BIG BEAR H-ALPHA



1553 UT

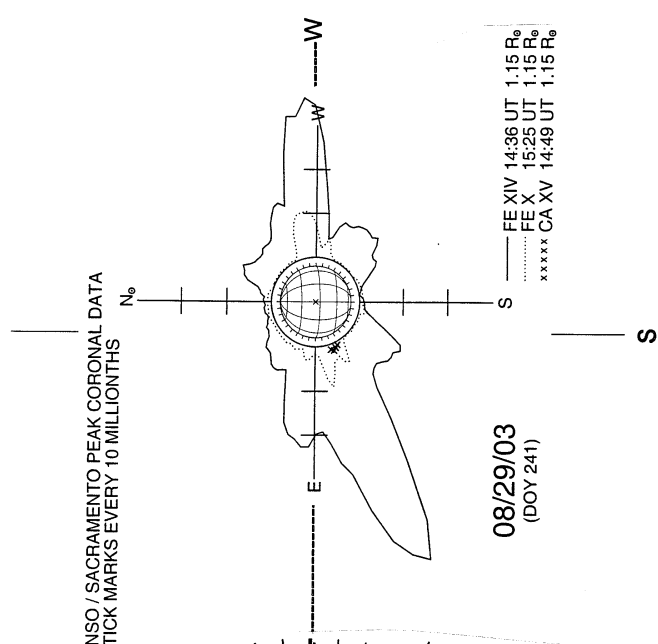
HOLLOMAN SUNSPOT



1545 UT

1121 UT LOMN Prom S

SACRAMENTO PEAK CORONA (1.15 Radii)----



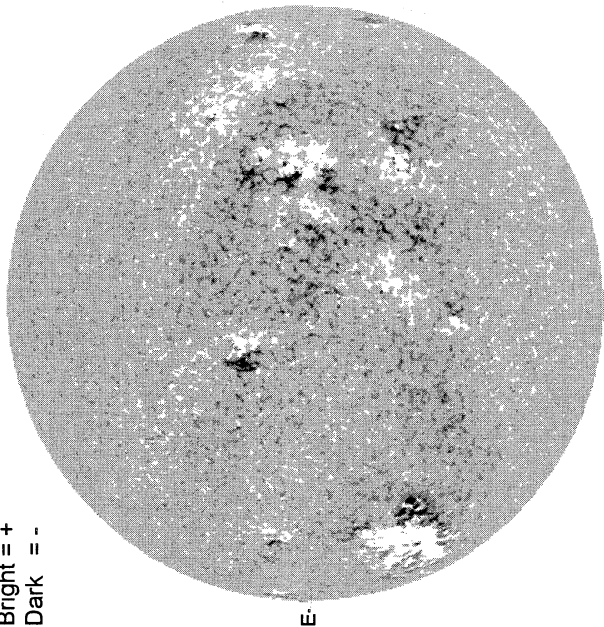
08/29/03
(DOY 241)

FE XIV 14:36 UT 1.15 R_o
FE X 15:25 UT 1.15 R_o
XXXX CA XV 14:49 UT 1.15 R_o

AUGUST 30, 2003 (P= 20.43, Bo = 7.15, Lo = 359.88)

KITT PEAK MAGNETOGRAM
868.8 nm

Bright = +
Dark = -



1437 UT

STANFORD MAGNETOGRAM

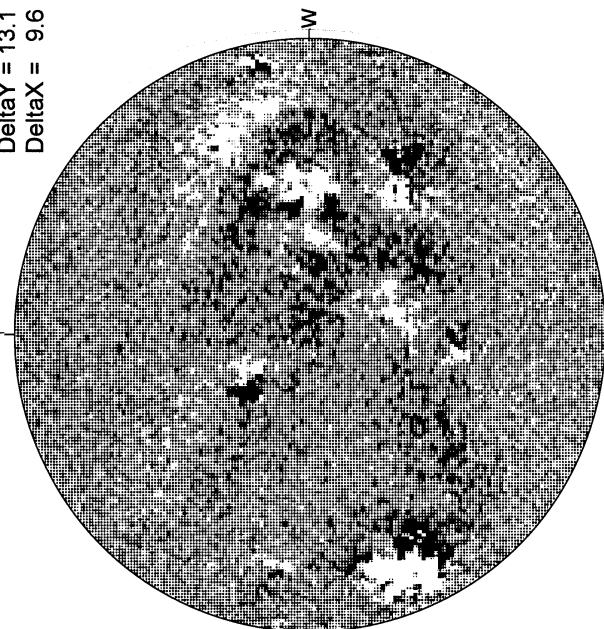
Solid = +
Dashed = -



1824 UT

MT. WILSON MAGNETOGRAM

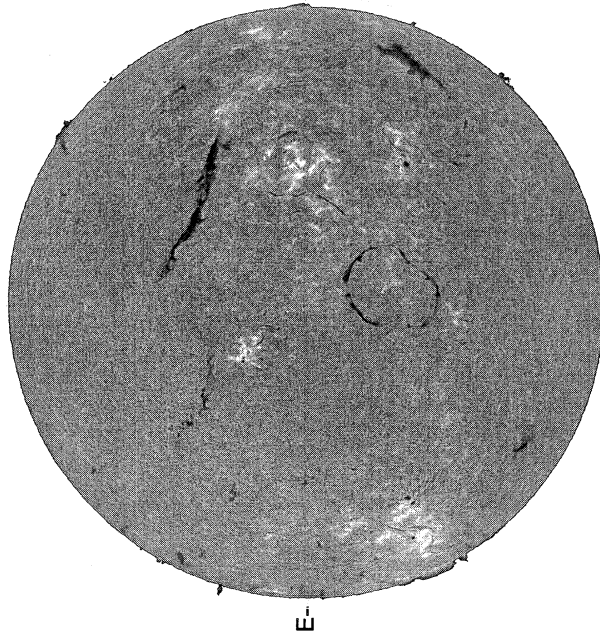
DeltaY = 13.1
DeltaX = 9.6



16:34 -
17:27 UT

White = +7.5G
Black = -7.5G

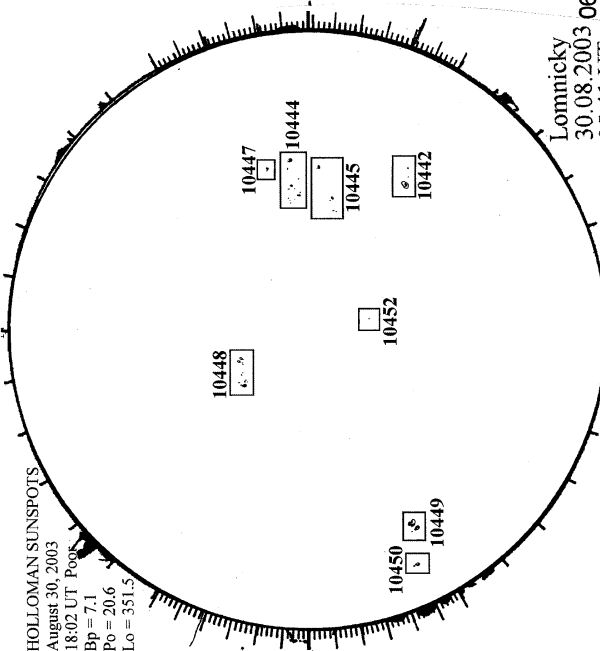
BIG BEAR H-ALPHA



1557 UT

HOLLOMAN SUNSPOT

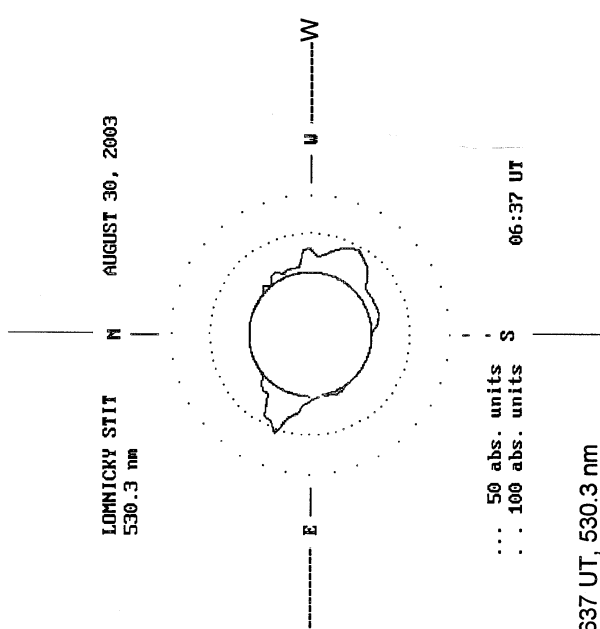
HOLLOMAN SUNSPOTS
August 30, 2003
18:02 UT Pog
Bp = 7.1
Po = 20.6
Lo = 351.5



1802 UT

0541 UT LOMN Prom S

LOMNICKY PEAK CORONA (1.04 Radii)-----



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

Lomnický
30.08.2003 0637 UT, 530.3 nm
... 50 abs. units
... 100 abs. units

06:37 UT

LOMNICKY STIT
530.3 nm

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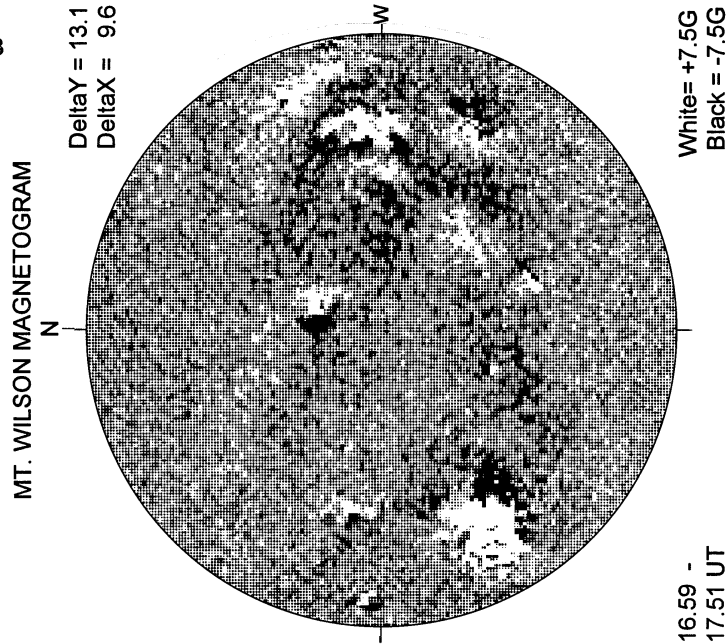
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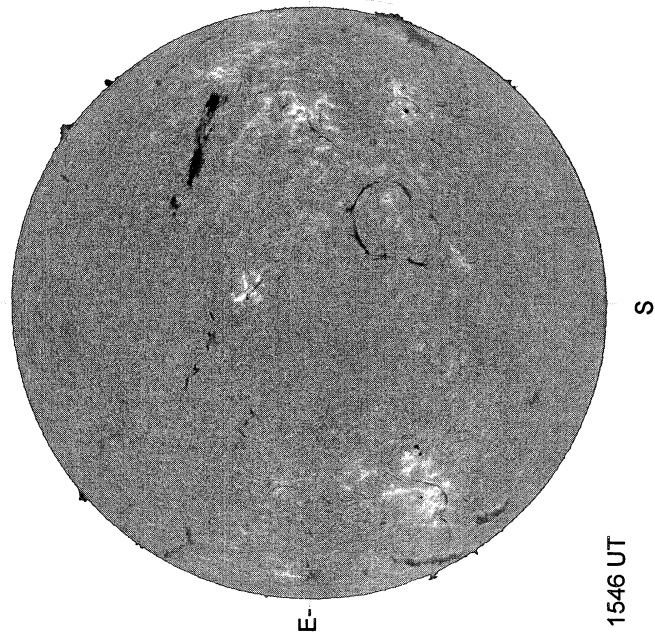
AUGUST 31, 2003 (P= 20.70, Bo = 7.17, Lo = 346.67)



1402 UT

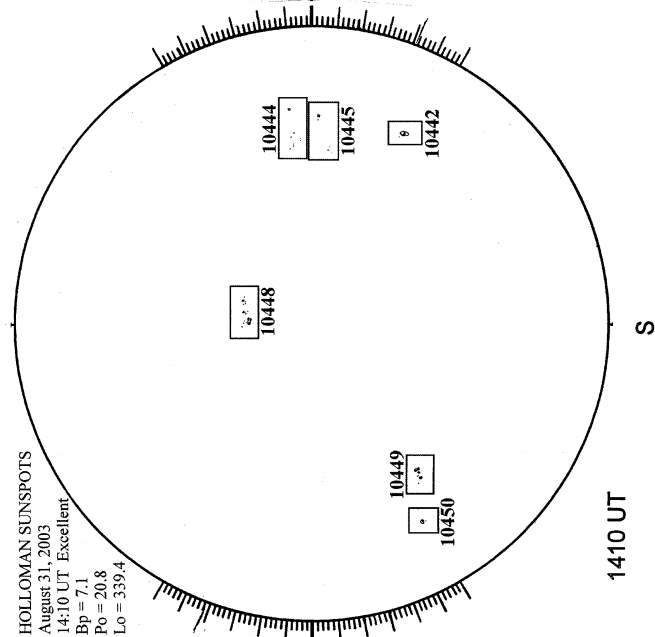
1826 UT

BIG BEAR H-ALPHA



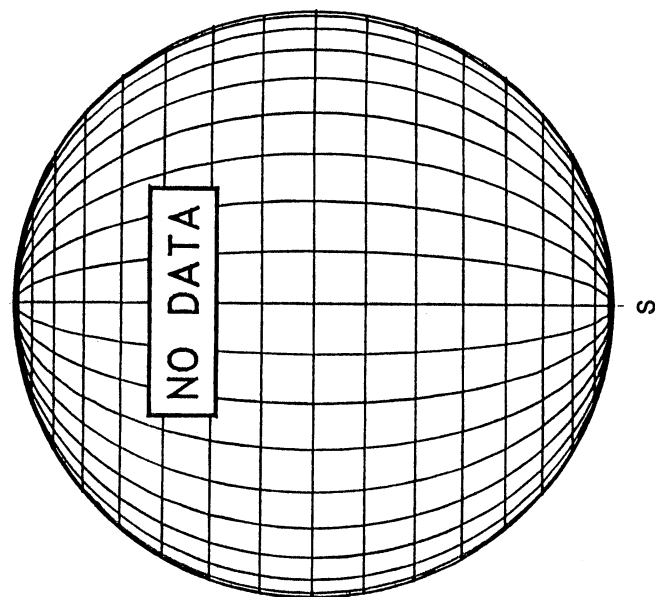
1546 UT

HOLLOMAN SUNSPOTS



1410 UT

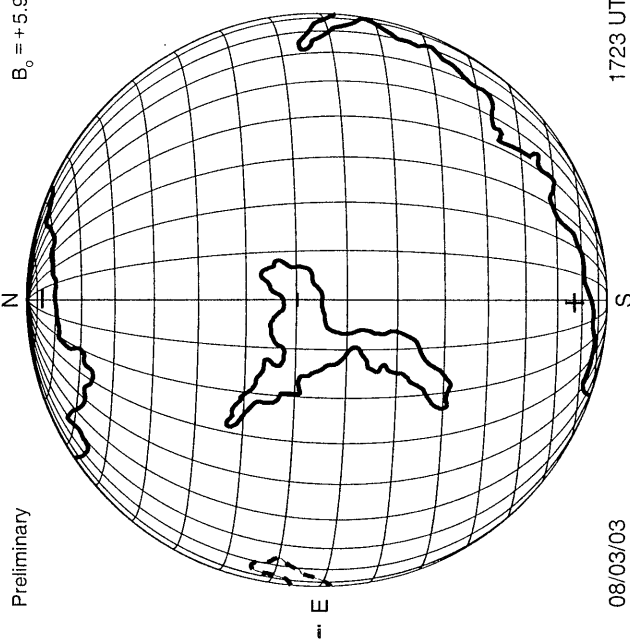
SACRAMENTO PEAK CORONA (1.15 Radii)----



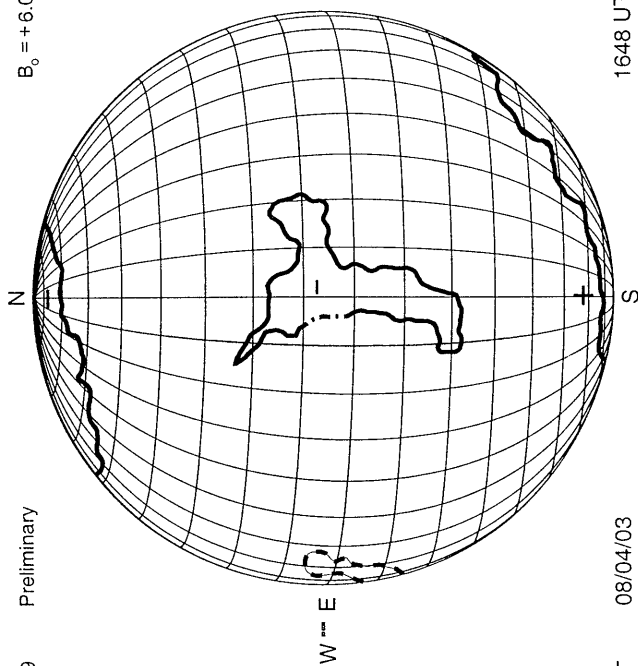
S

KITT PEAK CORONAL HOLE MAPS HE I 1083 nm August 2003

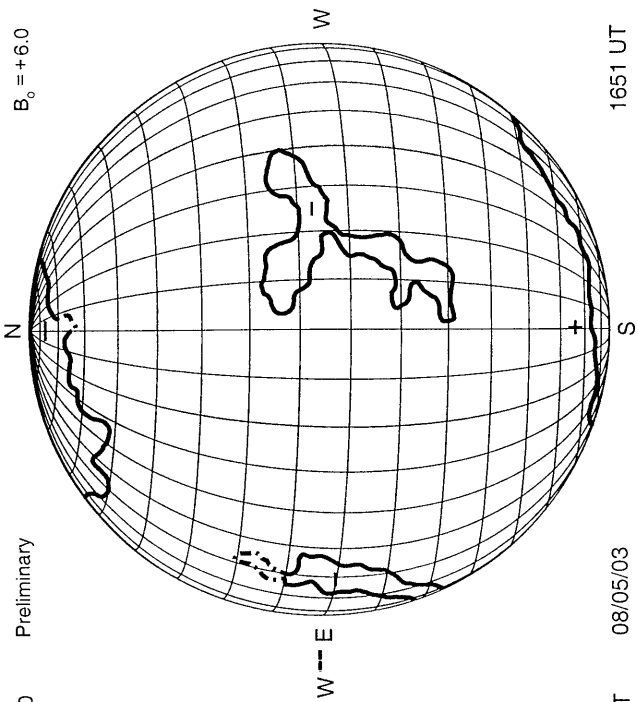
NSO/KP CORONAL HOLE MAP: HE I 1083 nm



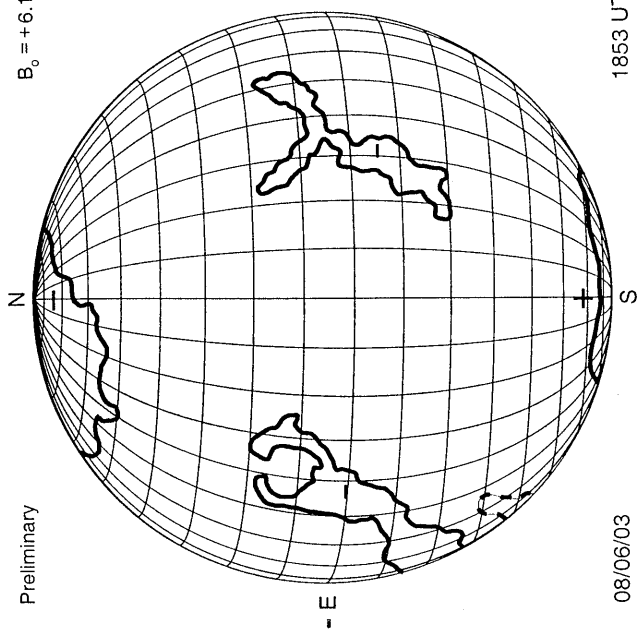
NSO/KP CORONAL HOLE MAP: HE I 1083 nm



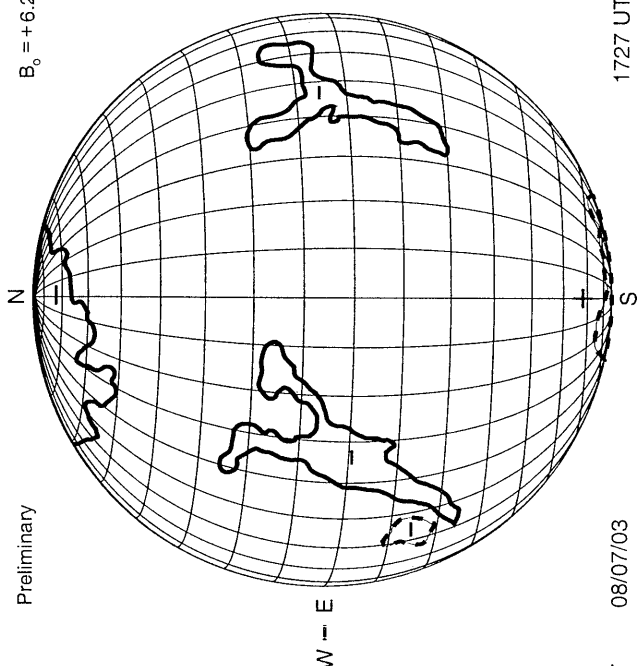
NSO/KP CORONAL HOLE MAP: HE I 1083 nm



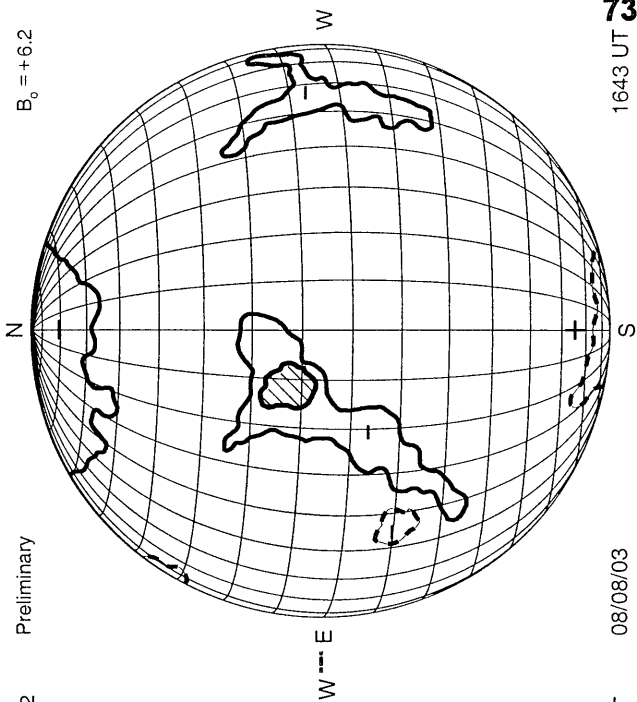
NSO/KP CORONAL HOLE MAP: HE I 1083 nm



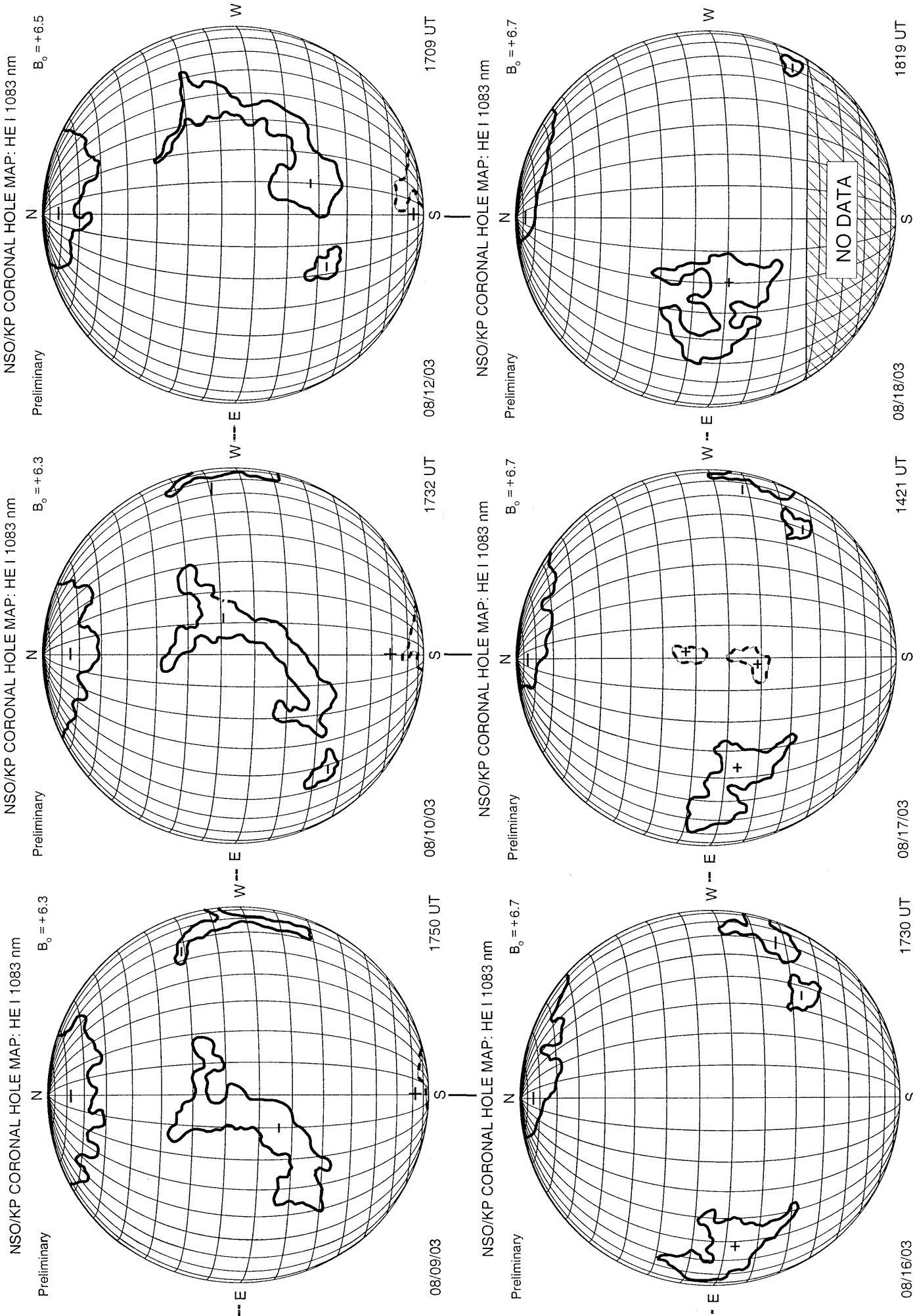
NSO/KP CORONAL HOLE MAP: HE I 1083 nm



NSO/KP CORONAL HOLE MAP: HE I 1083 nm



KITT PEAK CORONAL HOLE MAPS HE I 1083 nm August 2003



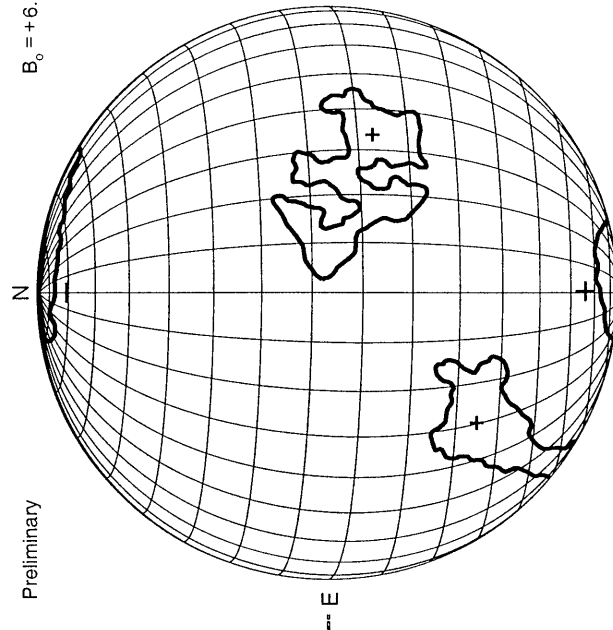
KITT PEAK CORONAL HOLE MAPS HE I 1083 nm

August 2003

NSO/KP CORONAL HOLE MAP: HE I 1083 nm

Preliminary

$B_0 = +6.9$



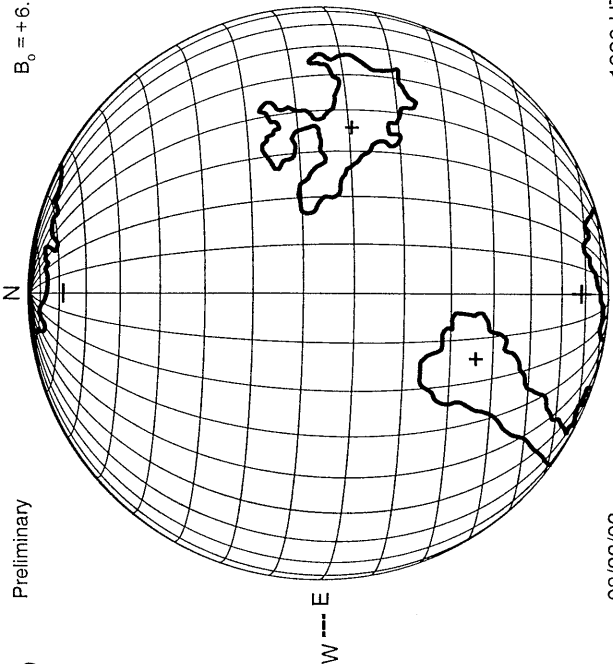
08/22/03

1904 UT

NSO/KP CORONAL HOLE MAP: HE I 1083 nm

Preliminary

$B_0 = +6.9$



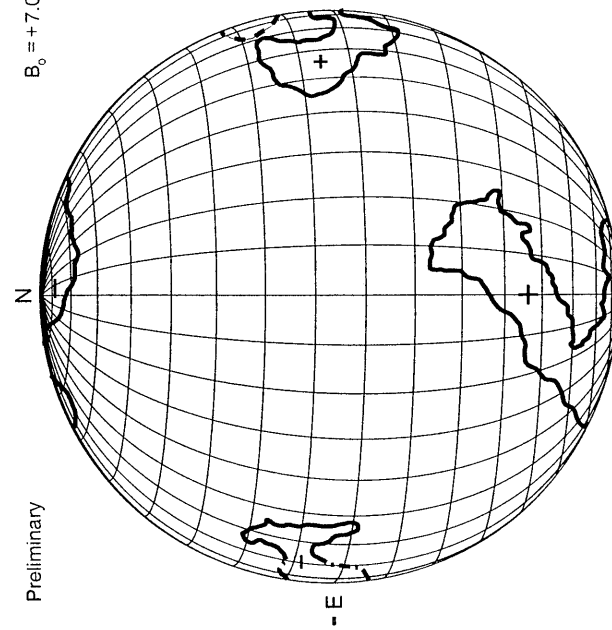
08/23/03

1930 UT

NSO/KP CORONAL HOLE MAP: HE I 1083 nm

Preliminary

$B_0 = +7.0$



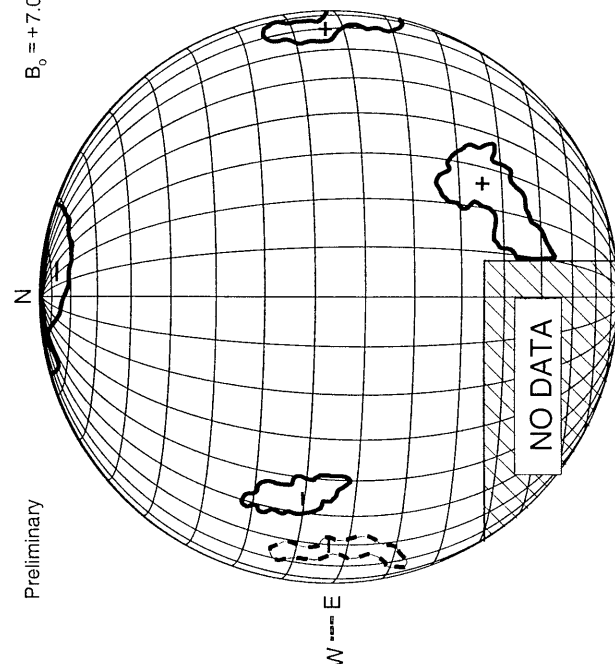
08/25/03

1807 UT

NSO/KP CORONAL HOLE MAP: HE I 1083 nm

Preliminary

$B_0 = +7.0$



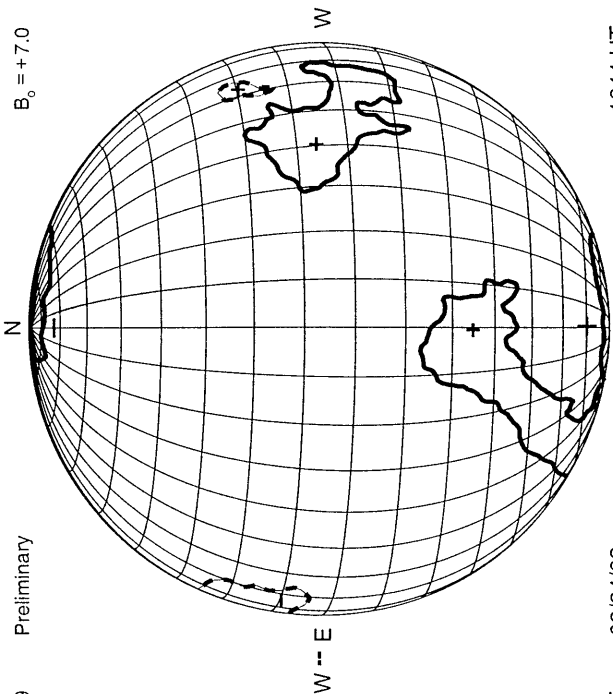
08/26/03

1913 UT

NSO/KP CORONAL HOLE MAP: HE I 1083 nm

Preliminary

$B_0 = +7.0$



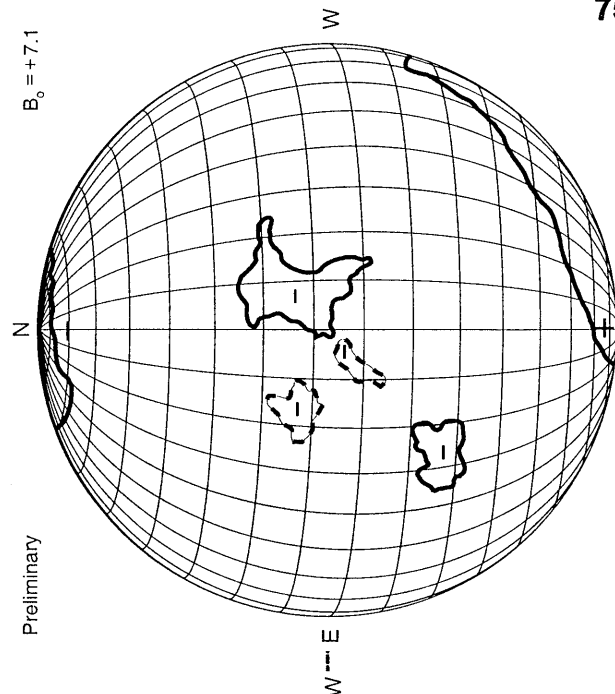
08/24/03

1644 UT

NSO/KP CORONAL HOLE MAP: HE I 1083 nm

Preliminary

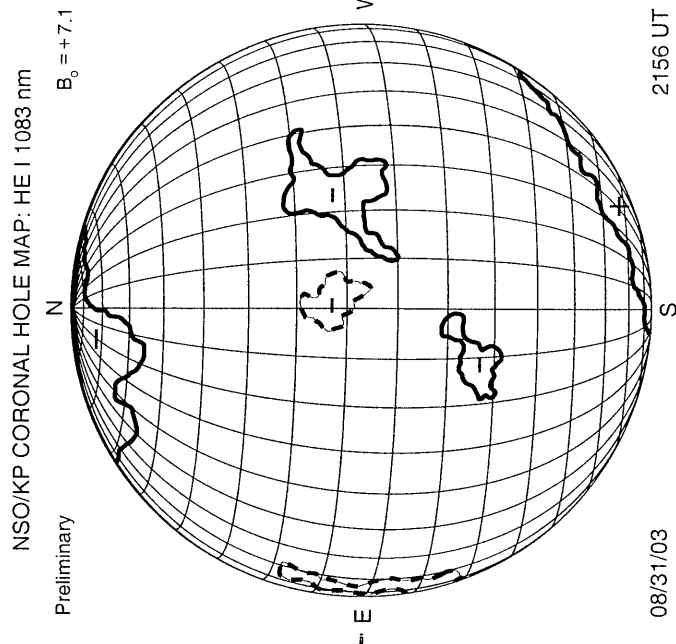
$B_0 = +7.1$



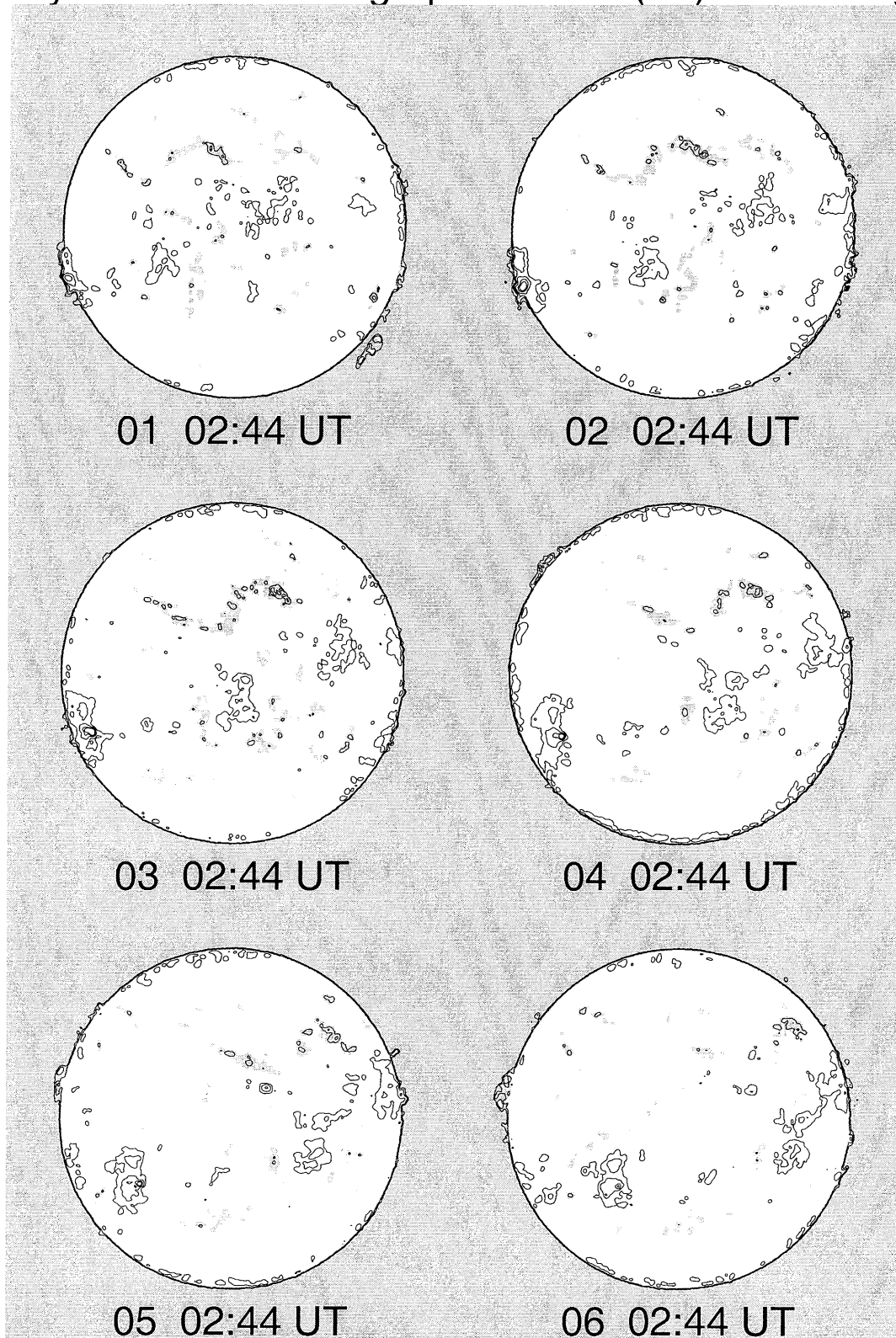
08/30/03

1649 UT

KITT PEAK CORONAL HOLE MAPS HE I 1083 nm
August 2003

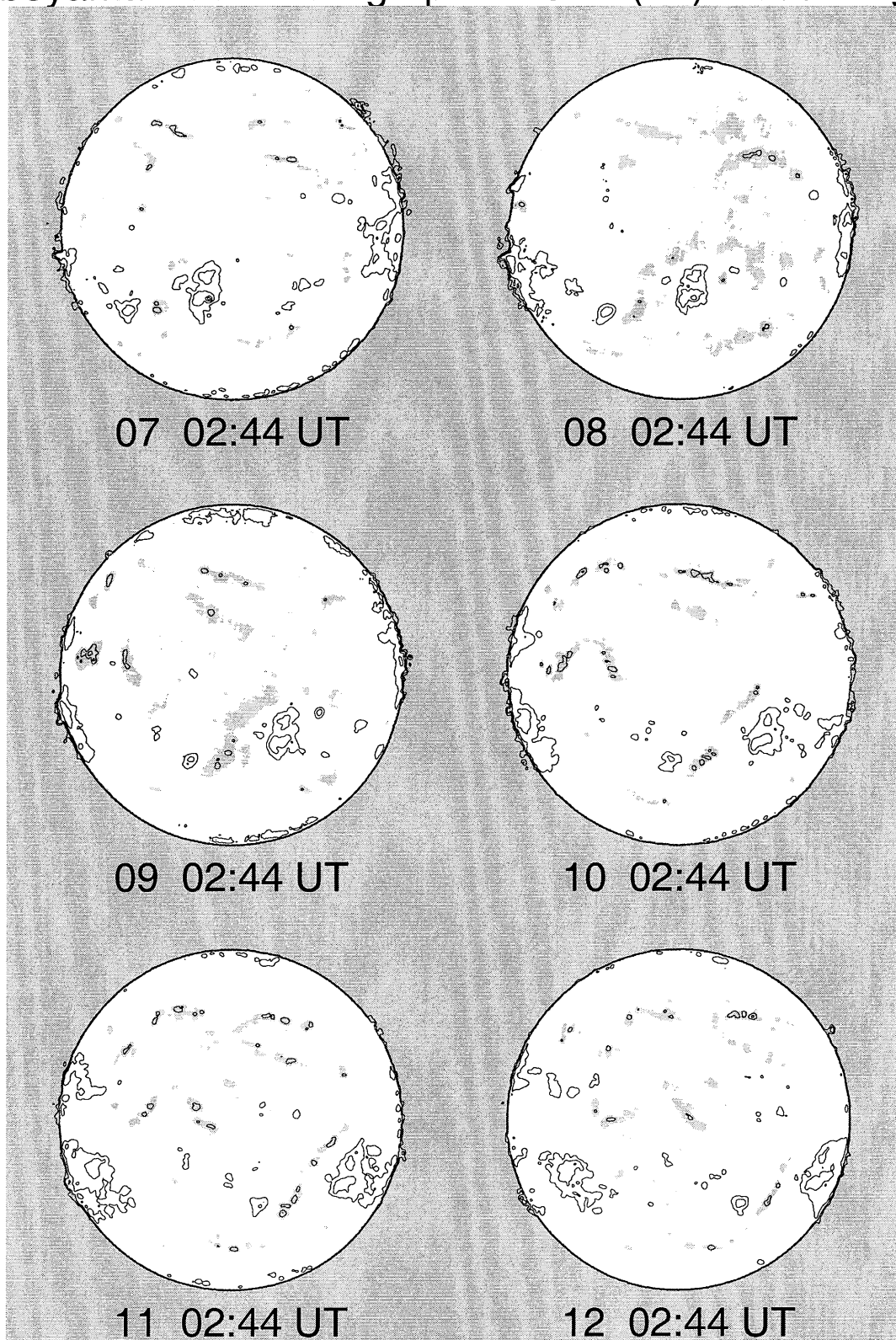


Nobeyama Radio Heliograph 17 GHz (Tb) 2003 August



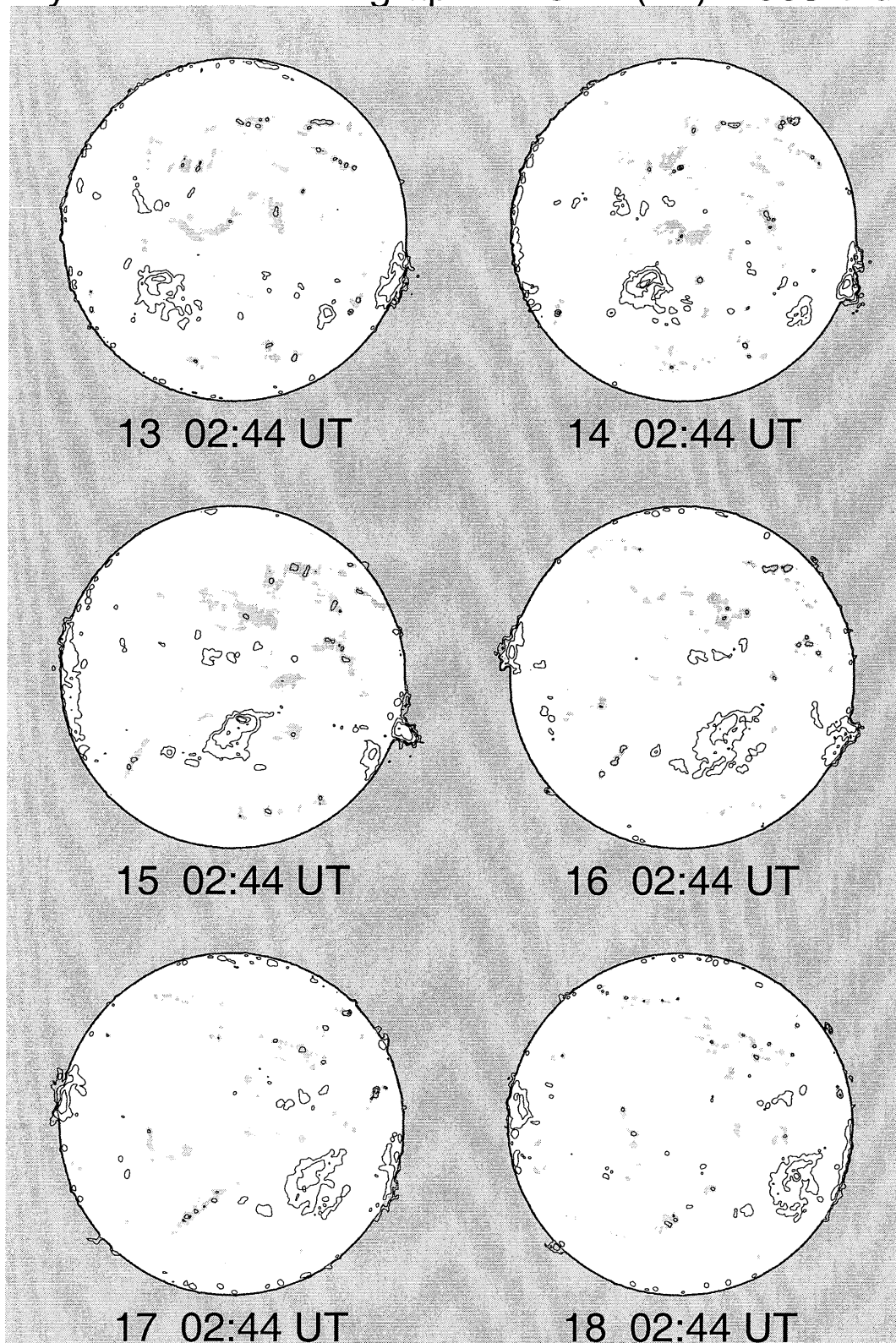
Contour Levels Tb=[5,8,12,20,50,100] x 10³ K
Grey level Tb <= 9,500 K

Nobeyama Radio Heliograph 17 GHz (Tb) 2003 August



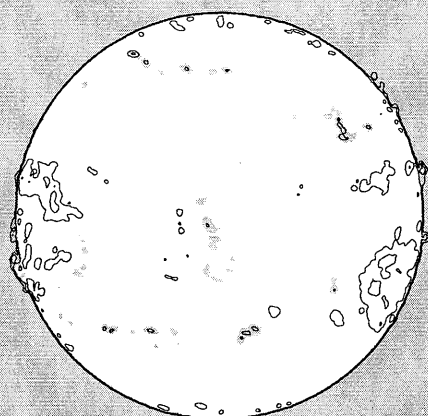
Contour Levels Tb=[5,8,12,20,50,100] x 10³ K
Grey level Tb <= 9,500 K

Nobeyama Radio Heliograph 17 GHz (Tb) 2003 August

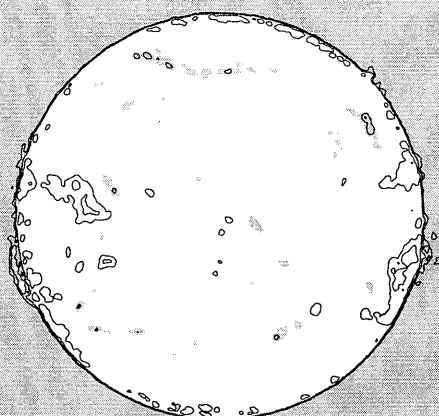


Contour Levels $T_b = [5, 8, 12, 20, 50, 100] \times 10^3 \text{ K}$
Grey level $T_b \leq 9,500 \text{ K}$

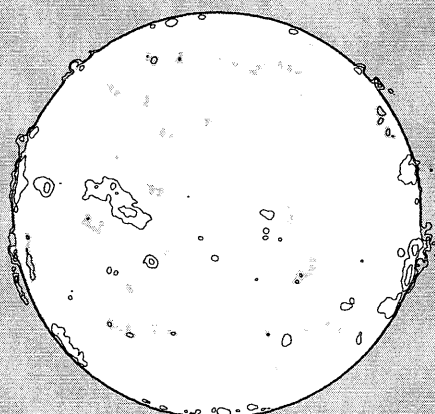
Nobeyama Radio Heliograph 17 GHz (Tb) 2003 August



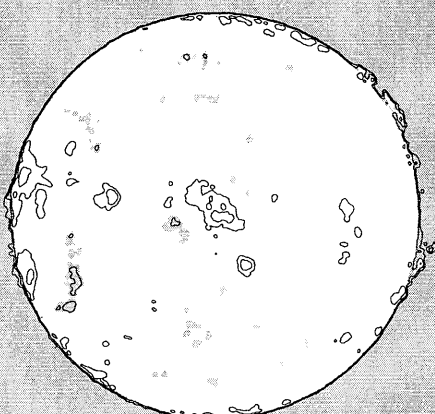
19 02:44 UT



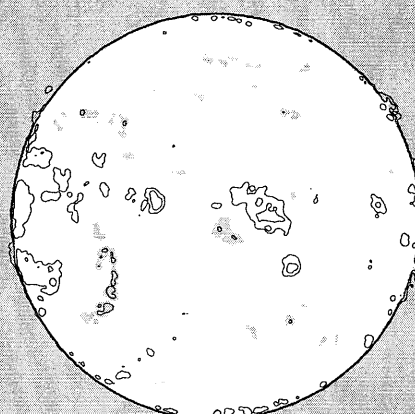
20 02:44 UT



21 02:44 UT



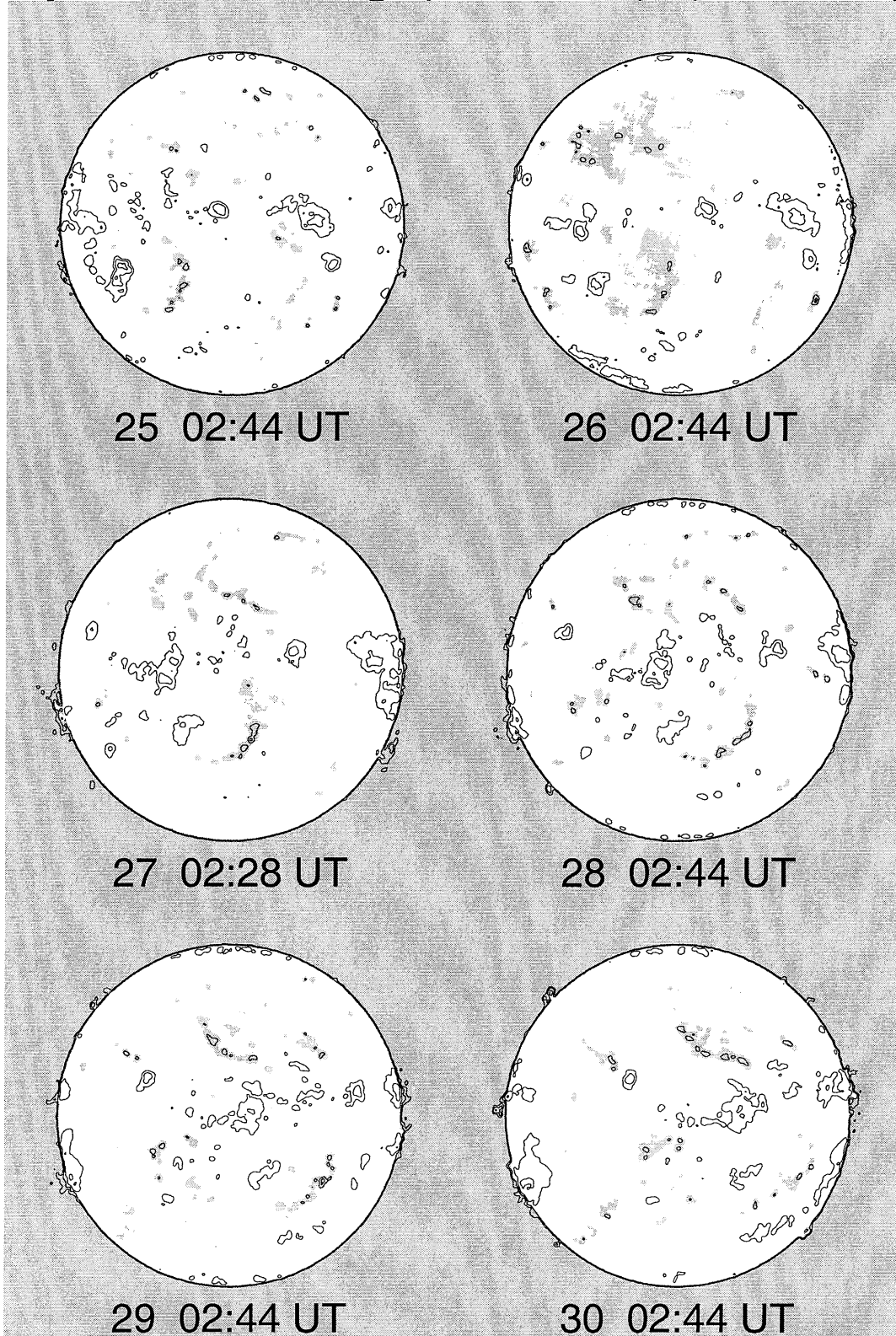
23 02:44 UT



24 02:44 UT

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

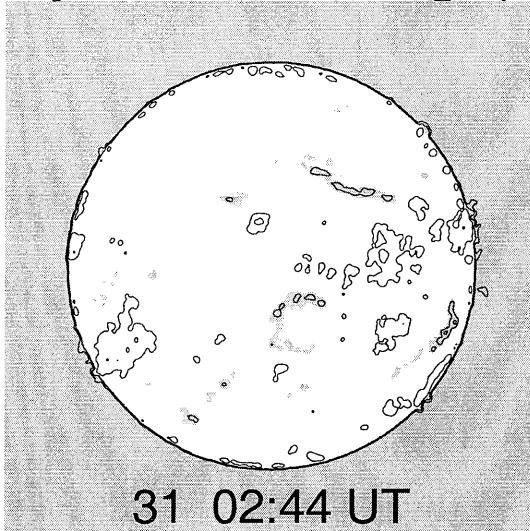
Nobeyama Radio Heliograph 17 GHz (Tb) 2003 August



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

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Nobeyama Radio Heliograph 17 GHz (Tb) 2003 August



Contour Levels $T_b = [5, 8, 12, 20, 50, 100] \times 10^3 \text{ K}$
Grey level $T_b \leq 9,500 \text{ K}$

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

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NOAA/ USAF Group	Mt Wilson Group	Sta	Observation Time		Lat	CMD	CMP		Max H	Mag Class	Spot Class	Corrected Area (10-6 Hemi)	Spot Count	Long. Extent (Deg)	Qual
10423A		LEAR	08 04	0021	N07	W30	08	1.8		A	AXX	10	1		3
10423A		VORO	08 04	2145	N13	W43	08	1.7			AXX	15	1		3
10427	31818	LEAR	08 02	0014	N03	E11	08	2.8		A	AXX	10	1	1	4
10427		HOLL	08 02	1430	N05	E03	08	2.8		B	BXO	10	6	5	3
10427		MWIL	08 02	1500	N03	E02	08	2.8	3	(AP)					
10427		LEAR	08 03	0011	N04	W03	08	2.8		B	DAO	40	13	3	4
10427		VORO	08 03	0044	N04	W03	08	2.8			DRI	23	7	3	3
10427	31818	SVTO	08 03	0600	N04	W06	08	2.8		B	DAO	50	9	5	3
10427		TACH	08 03	0640	N04	W06	08	2.8			BRI	29	5	5	4
10427		KAND	08 03	0925	N04	W09	08	2.7			DAO		8	5	4
10427		HOLL	08 03	1400	N05	W12	08	2.7		B	DSO	100	10	6	2
10427		MWIL	08 03	1430	N03	W11	08	2.8	5	(B)					
10427	31818	VORO	08 03	2136	N04	W15	08	2.8			DAI	213	9	5	3
10427		LEAR	08 04	0021	N04	W17	08	2.7		B	DAO	110	24	6	3
10427		SVTO	08 04	0553	N04	W21	08	2.7		B	DSO	110	5	8	3
10427		KAND	08 04	0720	N05	W21	08	2.7			DAO		8	7	4
10427		TACH	08 04	0837	N04	W21	08	2.8			CAO	56	4	7	3
10427	31818	MWIL	08 04	1415	N04	W25	08	2.7	5	(B)					
10427		HOLL	08 04	1418	N06	W26	08	2.6		B	DAO	110	10	8	4
10427		VORO	08 04	2145	N04	W29	08	2.7			CAO	129	8	7	3
10427		LEAR	08 05	0100	N04	W33	08	2.6		B	DAO	80	9	9	2
10427		SVTO	08 05	0547	N05	W35	08	2.6		B	DSO	80	7	9	3
10427	31818	TACH	08 05	0609	N04	W34	08	2.7			CSO	47	4	8	4
10427		KAND	08 05	0710	N05	W35	08	2.7			DSO		7	9	3
10427		HOLL	08 05	1350	N05	W39	08	2.6		B	DAO	70	5	9	4
10427		MWIL	08 05	1430	N04	W39	08	2.7	5	(B)					
10427		LEAR	08 06	0140	N05	W47	08	2.5		B	DSO	70	5	9	3
10427	31818	KAND	08 06	0633	N05	W50	08	2.5			DAO		6	10	2
10427		SVTO	08 06	0700	N04	W50	08	2.5		B	ESO	110	7	12	3
10427		MWIL	08 06	1630	N05	W56	08	2.5	5	(BP)					
10427		HOLL	08 06	1635	N05	W58	08	2.3		B	DAO	80	9	8	3
10427		LEAR	08 07	0146	N06	W61	08	2.5		B	DSO	70	5	8	2
10427	31818	TACH	08 07	0710	N06	W66	08	2.3			HR	31	2	2	4
10427		KAND	08 07	0720	N06	W68	08	2.2			CSO		2	4	4
10427		SVTO	08 07	0835	N04	W73	08	1.9		A	AXX	10	1		3
10427		MWIL	08 07	1430	N05	W69	08	2.4	5	(BP)					
10427		HOLL	08 07	1550	N06	W71	08	2.3		A	HSX	30	1	1	3
10427	31813	LEAR	08 08	0203	N06	W79	08	2.2		A	HSX	70	1	1	3
10427		VORO	08 08	1544	N05	W79	08	2.7			HAX	26	1		2
10421		HOLL	07 27	1430	S08	E82	08	2.7		A	HAX	30	1	2	3
10421		MWIL	07 27	1445	S07	E85	08	3.0	5	AP					
10421		LEAR	07 28	0020	S08	E77	08	2.8		B	CSO	90	6	5	3
10421	31813	SVTO	07 28	0625	S08	E80	08	3.3		B	EAO	210	4	13	3
10421		TACH	07 28	0629	S07	E75	08	2.9			HSX	202	1	2	4
10421		KAND	07 28	0757	S07	E78	08	3.2			EAO		7	12	3
10421		HOLL	07 28	1447	S08	E75	08	3.2		B	EAO	420	5	13	3
10421		MWIL	07 28	1600	S08	E73	08	3.1	5	(B)					
10421	31813	LEAR	07 29	0320	S09	E67	08	3.2		BG	DAO	390	10	10	2
10421		TACH	07 29	0607	S08	E65	08	3.1			DAO	350	4	8	5
10421		SVTO	07 29	0615	S07	E65	08	3.1		B	ESO	310	11	11	3
10421		KAND	07 29	0700	S07	E65	08	3.2			EAO		12	13	4
10421		HOLL	07 29	1431	S08	E58	08	2.9		B	EAI	250	16	12	3
10421	31813	LEAR	07 30	0232	S09	E52	08	3.0		B	EAO	290	21	11	2
10421		SVTO	07 30	0533	S08	E53	08	3.2		B	ESC	190	10	13	3
10421		TACH	07 30	0548	S08	E51	08	3.1			DSO	173	3	8	4
10421		KAND	07 30	0750	S07	E51	08	3.1			EAO		9	12	3
10421		HOLL	07 30	1410	S07	E45	08	3.0		B	EAI	170	15	12	3
10421	31813	LEAR	07 31	0214	S08	E39	08	3.0		B	EAO	300	17	12	3
10421		TACH	07 31	0645	S08	E37	08	3.0			DAI	195	4	9	4
10421		SVTO	07 31	0732	S08	E36	08	3.0		B	EAO	180	16	11	3
10421		KAND	07 31	0815	S07	E37	08	3.1			EHO		12	12	4
10421		HOLL	07 31	1406	S08	E34	08	3.1		B	EAO	210	17	11	3
10421	31813	LEAR	08 01	0011	S07	E27	08	3.0		B	EAO	300	22	13	3
10421		KAND	08 01	0740	S07	E23	08	3.0			EKO		21	13	3
10421		HOLL	08 01	1430	S08	E21	08	3.2		B	FKI	230	28	18	4
10421		MWIL	08 01	1500	S07	E18	08	3.0	5	(B)					
10421		LEAR	08 02	0014	S08	E14	08	3.0		B	EAO	240	26	12	4

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(Ordered by Central Meridian Passage Date)
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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
10421		KAND	08	02	0600	S07	E10	08	3.0			EAO		17	12	3
10421		TACH	08	02	0609	S07	E11	08	3.1			CAI	119	11	10	5
10421		HOLL	08	02	1430	S08	E06	08	3.0			EAI	150	21	12	3
10421		SVTO	08	02	1459	S08	E04	08	2.9		B	EAO	140	8	11	3
10421	31813	MWIL	08	02	1500	S07	E03	08	2.8	5	(B)					
10421		LEAR	08	03	0011	S08	E00	08	3.0		BG	EAO	210	44	12	4
10421		VORO	08	03	0044	S06	W05	08	2.6			HHX	169	11		3
10421		VORO	08	03	0044	S09	E04	08	3.3			AXX	10	10		3
10421		SVTO	08	03	0600	S08	W03	08	3.0		B	ESO	170	12	14	3
10421		TACH	08	03	0640	S07	W08	08	2.7			CAO	93	4	1	4
10421		KAND	08	03	0925	S07	W06	08	2.9			EAO		15	15	4
10421		HOLL	08	03	1400	S08	W14	08	2.5		B	DAO	80	10	7	2
10421	31813	MWIL	08	03	1430	S07	W10	08	2.8	5	(BG)					
10421		VORO	08	03	2136	S06	W16	08	2.7			HSX	154	6		3
10421		LEAR	08	04	0021	S08	W16	08	2.8		BG	ESO	180	18	13	3
10421		SVTO	08	04	0553	S06	W22	08	2.6		B	DSO	130	2	4	3
10421		KAND	08	04	0720	S06	W22	08	2.6			CAO		4	4	4
10421		TACH	08	04	0837	S06	W22	08	2.7			HA	61	2	2	3
10421	31813	MWIL	08	04	1415	S07	W22	08	2.9	5	(BP)					
10421		HOLL	08	04	1418	S06	W26	08	2.6		B	CSO	100	10	5	4
10421		VORO	08	04	2145	S05	W26	08	3.0			CAO	168	6	7	3
10421		VORO	08	04	2145	S08	W21	08	3.3			BXO	9	3	3	3
10421		LEAR	08	05	0100	S07	W28	08	2.9		B	DSO	100	5	8	2
10421		SVTO	08	05	0547	S07	W34	08	2.7		B	CSO	130	3	4	3
10421		TACH	08	05	0609	S07	W34	08	2.7			HR	77	3	3	4
10421		KAND	08	05	0710	S06	W34	08	2.7			CSO		7	6	3
10421		HOLL	08	05	1350	S06	W38	08	2.7		B	CAO	80	5	4	4
10421	31813	MWIL	08	05	1430	S07	W36	08	2.9	5	(BP)					
10421		LEAR	08	06	0140	S06	W47	08	2.5		B	CAO	70	6	3	3
10421		KAND	08	06	0633	S07	W48	08	2.7			CSO		2	3	2
10421		SVTO	08	06	0700	S08	W48	08	2.7		B	CSO	80	3	4	3
10421	31813	MWIL	08	06	1630	S06	W53	08	2.7	5	(AP)					
10421		HOLL	08	06	1635	S06	W55	08	2.6		A	HAX	170	1	2	3
10421		LEAR	08	07	0146	S06	W60	08	2.6		A	HSX	90	1	2	2
10421		TACH	08	07	0710	S07	W62	08	2.6			HSX	55	1	2	4
10421		KAND	08	07	0720	S07	W63	08	2.6			HS		1	2	4
10421		SVTO	08	07	0835	S08	W68	08	2.2		A	HSX	50	1	2	3
10421	31813	MWIL	08	07	1430	S06	W66	08	2.7	5	(AP)					
10421		HOLL	08	07	1550	S07	W65	08	2.8		A	HSX	50	1	1	3
10421		LEAR	08	08	0203	S07	W73	08	2.6		A	HSX	90	1	2	3
10421		TACH	08	08	0606	S07	W73	08	2.8			HSX	83	1	2	4
10421		SVTO	08	08	0630	S09	W78	08	2.4		A	HSX	60	1	3	3
10421		KAND	08	08	0825	S07	W76	08	2.6			HS		1	2	3
10421		HOLL	08	08	1420	S05	W75	08	3.0		A	HSX	30	1	1	2
10421	31813	MWIL	08	08	1430	S06	W80	08	2.6	4	(AP)					
10421		VORO	08	08	1544	S07	W74	08	3.1			HAX	96	1		2
10421A	31819	MWIL	08	02	1500	S24	E15	08	3.8	3	(AF)					
10428		LEAR	08	04	0021	N17	E02	08	4.2		B	CRO	20	4	3	3
10428	31821	MWIL	08	04	1415	N15	W05	08	4.2	4	(B)					
10428		HOLL	08	04	1418	N16	W04	08	4.3		B	BXO	20	5	3	4
10428		VORO	08	04	2145	N16	W10	08	4.1			ARX	20	3	2	3
10428		LEAR	08	05	0100	N16	W12	08	4.1		B	BXO	30	3	3	2
10428		SVTO	08	05	0547	N16	W15	08	4.1		B	DSO	60	4	4	3
10428		TACH	08	05	0609	N15	W14	08	4.2			BRO	19	4	3	4
10428		KAND	08	05	0710	N16	W15	08	4.2			BXO		8	5	3
10428		HOLL	08	05	1350	N16	W18	08	4.2		B	DSO	60	6	6	4
10428	31821	MWIL	08	05	1430	N16	W19	08	4.2	5	(B)					
10428		LEAR	08	06	0140	N16	W26	08	4.1		B	DAO	30	9	5	3
10428		KAND	08	06	0633	N15	W29	08	4.1			DAO		4	5	2
10428		SVTO	08	06	0700	N15	W29	08	4.1		B	CSO	20	7	6	3
10428	31821	MWIL	08	06	1630	N16	W33	08	4.2	4	(B)					
10428		HOLL	08	06	1635	N16	W35	08	4.0		B	BXO	10	5	5	3
10428		LEAR	08	07	0146	N15	W41	08	4.0		A	HSX	20	2	1	2
10428		TACH	08	07	0710	N15	W43	08	4.0			AXX	7	1	1	4
10428		SVTO	08	07	0835	N14	W47	08	3.8		A	AXX		1		3
10428	31821	MWIL	08	07	1430	N15	W48	08	4.0	4	(AP)					
10426		KAND	08	02	0600	S11	E41	08	5.3			BXO		4	5	3

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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
10426	31820	HOLL	08 02	1430	S12	E36	08 5.3		B	CSO	10	5	4	3
10426		SVTO	08 02	1459	S13	E36	08 5.3		B	CSO	40	5	4	3
10426		MWIL	08 02	1500	S13	E37	08 5.4	4	(B)					
10426		LEAR	08 03	0011	S12	E31	08 5.3		B	CAO	40	10	3	4
10426		VORO	08 03	0044	S11	E31	08 5.4			DRI	16	4	3	3
10426		SVTO	08 03	0600	S12	E28	08 5.3		B	CSO	20	6	4	3
10426	31820	TACH	08 03	0640	S12	E28	08 5.4			BXO	14	2	4	4
10426		KAND	08 03	0925	S12	E28	08 5.5			BXO		5	6	4
10426		HOLL	08 03	1400	S12	E23	08 5.3		B	CSO	20	4	5	2
10426		MWIL	08 03	1430	S13	E24	08 5.4	4	(B)					
10426		VORO	08 03	2136	S10	E17	08 5.2			AXX	13	2	1	3
10426		LEAR	08 04	0021	S12	E16	08 5.2		A	HAX	10	1	1	3
10426	31820	SVTO	08 04	0553	S11	E13	08 5.2		A	HSX	20	1	1	3
10426		KAND	08 04	0720	S11	E12	08 5.2			AX		1	1	4
10426		TACH	08 04	0837	S10	E11	08 5.2			AXX	5	1	1	3
10426		MWIL	08 04	1415	S12	E08	08 5.2	4	(AP)					
10426		HOLL	08 04	1418	S12	E07	08 5.1		A	AXX	10	1	1	4
10426		VORO	08 04	2145	S11	E04	08 5.2			BXO	11	2	3	3
10426	31820	LEAR	08 05	0100	S12	E02	08 5.2		A	AXX	10	1	1	2
10426		SVTO	08 05	0547	S12	W02	08 5.1		A	HSX	10	1	1	3
10426		TACH	08 05	0609	S12	W02	08 5.1			AXX	2	1	1	4
10426		KAND	08 05	0710	S12	W02	08 5.1			AX		1		3
10426		HOLL	08 05	1350	S12	W06	08 5.1		A	AXX	10	1	1	4
10426		MWIL	08 05	1430	S12	W05	08 5.2	4	(AP)					
10426		LEAR	08 06	0140	S12	W13	08 5.1		B	BXO	10	2	2	3
10430	31822	HOLL	08 05	1350	S07	E18	08 6.9		A	HSX	10	1	1	4
10430		MWIL	08 05	1430	S06	E18	08 6.9	4	(BP)					
10430		LEAR	08 06	0140	S07	E10	08 6.8		B	CAO	10	2	1	3
10430		LEAR	08 07	0146	S08	W05	08 6.7		B	CRO	10	4	3	2
10430		MWIL	08 07	1430	S08	W11	08 6.8	4	(B)					
10430		HOLL	08 07	1550	S08	W07	08 7.1		B	BXO	10	4	1	3
10430	31822	LEAR	08 08	0203	S08	W17	08 6.8		B	CAO	20	4	3	3
10430		TACH	08 08	0606	S08	W17	08 7.0			AR	11	2	2	4
10430		SVTO	08 08	0630	S09	W19	08 6.8		B	CSO	20	2	3	3
10430		KAND	08 08	0825	S07	W20	08 6.8			CSO		3	3	3
10430		HOLL	08 08	1420	S08	W24	08 6.8		B	BXO	10	3	4	2
10430		MWIL	08 08	1430	S08	W24	08 6.8	4	(B)					
10430	31822	VORO	08 08	1544	S08	W18	08 7.3			CRO	26	3	2	2
10430		VORO	08 08	2351	S07	W30	08 6.7			CAI	47	6	2	3
10430		LEAR	08 09	0115	S08	W30	08 6.8		B	DAO	50	6	4	2
10430		TACH	08 09	0535	S08	W32	08 6.8			BXO	21	2	3	4
10430		SVTO	08 09	0610	S09	W34	08 6.7		B	DRO	40	3	3	3
10430		KAND	08 09	0645	S08	W33	08 6.8			BXO		6	4	3
10430	31822	MWIL	08 09	1445	S08	W38	08 6.8	5	(B)					
10430		HOLL	08 09	1530	S08	W39	08 6.7		B	DSO	30	5	4	3
10430		VORO	08 09	2325	S07	W42	08 6.8			CRO	29	3	2	3
10430		LEAR	08 10	0025	S07	W43	08 6.8		B	DAO	40	5	5	3
10430		TACH	08 10	0519	S09	W46	08 6.8			BXO	27	2	3	4
10430		SVTO	08 10	0538	S09	W47	08 6.7		B	CRO	10	2	4	3
10430	31822	HOLL	08 10	1415	S08	W50	08 6.8		A	HSX	30	4	3	3
10430		MWIL	08 10	1430	S08	W52	08 6.7	4	(B)					
10430		VORO	08 10	2213	S07	W55	08 6.8			HRX	9	1		3
10430A	31825	HOLL	08 11	1425	S15	W60	08 7.0		B	BXO	10	2	1	2
10430A		MWIL	08 11	1615	S15	W60	08 7.1	4	(BP)					
10430A		VORO	08 11	2316	S15	W66	08 7.0			HRX	29	1		3
10430A		TACH	08 12	0537	S16	W70	08 6.9			HSX	124	1	2	4
10430A		KAND	08 12	0725	S13	W73	08 6.8			HA		2	2	4
10430A		SVTO	08 12	0830	S16	W74	08 6.7		A	HSX	30	1	2	3
10430A	31825	HOLL	08 12	1500	S13	W78	08 6.7		B	CAO	60	3	4	3
10430A		MWIL	08 12	1515	S14	W74	08 7.0	5	(B)					
10425	31816	KAND	08 01	0740	S07	E85	08 7.7			HS		1	2	3
10425		HOLL	08 01	1430	S08	E80	08 7.6		A	HAX	120	1	2	4
10425		MWIL	08 01	1500	S07	E79	08 7.5	4	(AP)					
10425		LEAR	08 02	0014	S08	E73	08 7.5		A	HSX	120	1	2	4
10425		KAND	08 02	0600	S08	E75	08 7.9			CSO		4	10	3
10425		TACH	08 02	0609	S07	E70	08 7.5			HSX	147	1	2	5

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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
10425		HOLL	08 02	1430	S08	E65	08 7.5		B	CAO	90	4	5	3
10425		SVTO	08 02	1459	S08	E67	08 7.6		B	CSO	140	2	8	3
10425	31816	MWIL	08 02	1500	S07	E66	08 7.6	4	(BP)					
10425		LEAR	08 03	0011	S08	E63	08 7.7		B	DSO	170	16	8	4
10425		VORO	08 03	0044	S07	E59	08 7.4			HHX	165	5		3
10425		SVTO	08 03	0600	S07	E58	08 7.6		B	CSO	110	3	4	3
10425		TACH	08 03	0640	S08	E57	08 7.5			CSO	76	2	1	4
10425		KAND	08 03	0925	S08	E59	08 7.8			CSO		8	10	4
10425		HOLL	08 03	1400	S09	E55	08 7.7		B	CSO	120	11	10	2
10425	31816	MWIL	08 03	1430	S08	E54	08 7.6	5	(BP)					
10425		VORO	08 03	2136	S08	E51	08 7.7			DSI	257	8	8	3
10425		LEAR	08 04	0021	S09	E49	08 7.7		B	DAO	190	15	9	3
10425		SVTO	08 04	0553	S08	E46	08 7.7		B	DSO	260	5	9	3
10425		KAND	08 04	0720	S07	E45	08 7.7			DSO		10	9	4
10425		TACH	08 04	0837	S08	E43	08 7.6			DAO	156	5	7	3
10425	31816	MWIL	08 04	1415	S08	E41	08 7.7	5	(B)					
10425		HOLL	08 04	1418	S09	E41	08 7.7		B	DAI	270	11	9	4
10425		VORO	08 04	2145	S08	E36	08 7.6			DHI	376	12	6	3
10425		LEAR	08 05	0100	S09	E34	08 7.6		B	DAO	210	17	8	2
10425		SVTO	08 05	0547	S08	E33	08 7.7		B	DSI	250	22	9	3
10425		TACH	08 05	0609	S08	E32	08 7.6			DAI	206	8	7	4
10425		KAND	08 05	0710	S08	E32	08 7.7			DSI		19	9	3
10425		HOLL	08 05	1350	S09	E28	08 7.7		B	DAI	190	21	9	4
10425	31816	MWIL	08 05	1430	S08	E28	08 7.7	5	(B)					
10425		LEAR	08 06	0140	S09	E22	08 7.7		B	DSO	220	24	9	3
10425		KAND	08 06	0633	S08	E20	08 7.8			DAO		6	10	2
10425		SVTO	08 06	0700	S09	E19	08 7.7		B	DSO	140	14	9	3
10425	31816	MWIL	08 06	1630	S08	E14	08 7.7	6	(B)					
10425		HOLL	08 06	1635	S09	E13	08 7.7		B	DAI	200	12	9	3
10425		LEAR	08 07	0146	S09	E08	08 7.7		B	DSO	180	16	8	2
10425		TACH	08 07	0710	S09	E06	08 7.7			DAI	173	6	7	4
10425		KAND	08 07	0720	S08	E05	08 7.7			DAO		6	9	4
10425		SVTO	08 07	0835	S09	E04	08 7.6		B	DSO	170	8	8	3
10425	31816	MWIL	08 07	1430	S08	E02	08 7.7	5	(B)					
10425		HOLL	08 07	1550	S09	E01	08 7.7		B	DSI	170	24	10	3
10425		LEAR	08 08	0203	S09	W05	08 7.7		B	DAO	200	25	8	3
10425		TACH	08 08	0606	S10	W07	08 7.7			DSI	162	4	7	4
10425		SVTO	08 08	0630	S09	W07	08 7.7		B	DSO	210	4	8	3
10425		KAND	08 08	0825	S08	W09	08 7.7			DSO		8	7	3
10425		HOLL	08 08	1420	S09	W12	08 7.7		B	DSO	120	10	8	2
10425	31816	MWIL	08 08	1430	S09	W12	08 7.7	5	(B)					
10425		VORO	08 08	1544	S08	W06	08 8.2			DHI	245	8	6	2
10425		VORO	08 08	2351	S08	W17	08 7.7			DSI	189	5	6	3
10425		LEAR	08 09	0115	S09	W18	08 7.7		B	DSO	150	13	8	2
10425		TACH	08 09	0535	S09	W20	08 7.7			DSI	154	6	5	4
10425		SVTO	08 09	0610	S09	W21	08 7.7		B	DSO	140	4	9	3
10425		KAND	08 09	0645	S08	W21	08 7.7			DSO		6	7	3
10425	31816	MWIL	08 09	1445	S09	W25	08 7.7	5	(BP)					
10425		HOLL	08 09	1530	S09	W28	08 7.5		B	DAO	140	12	8	3
10425		VORO	08 09	2325	S08	W30	08 7.7			DHI	188	6	5	3
10425		LEAR	08 10	0025	S09	W31	08 7.7		B	DSO	150	11	7	3
10425		TACH	08 10	0519	S09	W33	08 7.7			CAO	174	4	6	4
10425		SVTO	08 10	0538	S09	W34	08 7.7		B	CSO	110	3	8	3
10425		HOLL	08 10	1415	S09	W38	08 7.7		B	DAO	120	9	7	3
10425	31816	MWIL	08 10	1430	S09	W38	08 7.7	5	(B)					
10425		VORO	08 10	2213	S08	W42	08 7.8			DSO	116	3	5	3
10425		LEAR	08 11	0540	S07	W50	08 7.5		B	CSO	30	2	2	1
10425		KAND	08 11	0610	S08	W48	08 7.6			CSO		2	6	4
10425		SVTO	08 11	0655	S10	W48	08 7.7		B	CSO	130	3	9	3
10425		TACH	08 11	0806	S08	W48	08 7.7			CSO	73	2	6	4
10425		HOLL	08 11	1425	S08	W51	08 7.8		B	CAO	80	3	9	2
10425	31816	MWIL	08 11	1615	S08	W52	08 7.8	5	(BP)					
10425		VORO	08 11	2316	S07	W59	08 7.5			HAX	112	1		3
10425		LEAR	08 12	0150	S06	W61	08 7.5		B	BXO	40	2	2	2
10425		TACH	08 12	0537	S10	W62	08 7.6			AR	20	2	2	4
10425		KAND	08 12	0725	S06	W65	08 7.4			HA		2	2	4
10425		SVTO	08 12	0830	S08	W67	08 7.3		A	HSX	90	3	2	3
10425		HOLL	08 12	1500	S07	W69	08 7.4		B	DAO	70	4	2	3
10425	31816	MWIL	08 12	1515	S06	W68	08 7.5	5	(AP)					

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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
10425		VORO	08 12 2156	S06 W71	08 7.6			HAX	107	2		3
10425		LEAR	08 13 0105	S05 W75	08 7.4		B	DAI	120	2	3	2
10425		TACH	08 13 0607	S06 W77	08 7.5			HSX	47	1	2	4
10425		KAND	08 13 0625	S05 W76	08 7.6			CAO		2	3	4
10424	31817	HOLL	08 01 1430	S18 E82	08 7.8		B	DAO	120	2	6	4
10424		MWIL	08 01 1500	S17 E79	08 7.6	5	AP					
10424		LEAR	08 02 0014	S18 E75	08 7.7		B	DAI	200	5	9	4
10424		KAND	08 02 0600	S18 E79	08 8.3			EAO		4	13	3
10424	31817	TACH	08 02 0609	S17 E76	08 8.0			DAO	247	4	8	5
10424		HOLL	08 02 1430	S18 E71	08 8.0		B	DKI	360	8	9	3
10424		SVTO	08 02 1459	S19 E69	08 7.9		B	EKO	390	4	13	3
10424		MWIL	08 02 1500	S17 E70	08 7.9	5	(B)					
10424	31817	LEAR	08 03 0011	S19 E65	08 8.0		BG	DKI	620	24	10	4
10424		VORO	08 03 0044	S17 E64	08 7.9			DKI	741	6	6	3
10424		SVTO	08 03 0600	S17 E62	08 8.0		B	EKO	540	6	12	3
10424		TACH	08 03 0640	S17 E60	08 7.8			DAO	534	4	8	4
10424	31817	KAND	08 03 0925	S18 E61	08 8.0			EKI		13	12	4
10424		HOLL	08 03 1400	S19 E56	08 7.8		BG	DKI	580	15	9	2
10424		MWIL	08 03 1430	S18 E58	08 8.0	5	(B)					
10424		VORO	08 03 2136	S17 E53	08 7.9			DKC	969	20	7	3
10424	31817	LEAR	08 04 0021	S19 E52	08 8.0		B	DKI	700	26	10	3
10424		SVTO	08 04 0553	S18 E48	08 7.9		BG	EHO	780	5	11	3
10424		KAND	08 04 0720	S17 E49	08 8.0			DKI		14	10	4
10424		TACH	08 04 0837	S18 E47	08 7.9			DAI	513	7	6	3
10424	31817	MWIL	08 04 1415	S18 E44	08 7.9	5	(D)					
10424		HOLL	08 04 1418	S18 E44	08 7.9		BG	EKI	710	18	11	4
10424		VORO	08 04 2145	S18 E40	08 7.9			DKC	1024	18	7	3
10424		LEAR	08 05 0100	S18 E38	08 7.9		BG	EKI	630	15	11	2
10424	31817	SVTO	08 05 0547	S17 E35	08 7.9		BG	EKO	820	15	11	3
10424		TACH	08 05 0609	S18 E36	08 8.0			DAO	737	8	6	4
10424		KAND	08 05 0710	S17 E35	08 7.9			DKO		23	10	3
10424		HOLL	08 05 1350	S18 E31	08 7.9		BG	EKI	700	19	11	4
10424	31817	MWIL	08 05 1430	S18 E31	08 8.0	6	(D)					
10424		LEAR	08 06 0140	S19 E24	08 7.9		BGD	EKC	760	34	11	3
10424		KAND	08 06 0633	S18 E23	08 8.0			EKO		13	11	2
10424		SVTO	08 06 0700	S18 E24	08 8.1		B	EKI	850	26	12	3
10424	31817	MWIL	08 06 1630	S17 E17	08 8.0	5	(BG)					
10424		HOLL	08 06 1635	S18 E16	08 7.9		BGD	EKC	680	31	11	3
10424		LEAR	08 07 0146	S18 E11	08 7.9		BD	DKC	640	28	10	2
10424		TACH	08 07 0710	S18 E10	08 8.1			DAI	652	8	6	4
10424	31817	KAND	08 07 0720	S18 E09	08 8.0			EKO		13	11	4
10424		SVTO	08 07 0835	S18 E07	08 7.9		BG	EKI	770	13	11	3
10424		MWIL	08 07 1430	S17 E05	08 8.0	5	(BG)					
10424		HOLL	08 07 1550	S19 E04	08 8.0		BGD	DKI	690	25	10	3
10424	31817	LEAR	08 08 0203	S18 W02	08 7.9		BD	DKC	590	41	9	3
10424		TACH	08 08 0606	S18 W03	08 8.0			DKI	645	7	6	4
10424		SVTO	08 08 0630	S19 W04	08 8.0		BG	EKC	790	8	12	3
10424		KAND	08 08 0825	S18 W05	08 8.0			DKC		11	10	3
10424	31817	HOLL	08 08 1420	S18 W09	08 7.9		BG	DKI	540	24	10	2
10424		MWIL	08 08 1430	S17 W08	08 8.0	5	(BG)					
10424		VORO	08 08 1544	S17 W02	08 8.5			DKC	962	15	6	2
10424		VORO	08 08 2351	S17 W14	08 7.9			DKC	870	16	8	3
10424	31817	LEAR	08 09 0115	S18 W15	08 7.9		BG	EKC	690	22	11	2
10424		TACH	08 09 0535	S18 W16	08 8.0			DKI	621	10	7	4
10424		SVTO	08 09 0610	S18 W18	08 7.9		BG	EKC	670	9	12	3
10424		KAND	08 09 0645	S18 W18	08 7.9			EKC		11	11	3
10424	31817	MWIL	08 09 1445	S18 W23	08 7.9	5	(D)					
10424		HOLL	08 09 1530	S17 W25	08 7.7		BG	EKC	650	45	11	3
10424		VORO	08 09 2325	S17 W27	08 7.9			DKC	867	25	9	3
10424		LEAR	08 10 0025	S18 W29	08 7.8		BG	DKC	470	24	10	3
10424	31817	TACH	08 10 0519	S18 W29	08 8.0			DKI	696	9	8	4
10424		SVTO	08 10 0538	S19 W32	08 7.8		BG	EAC	380	13	12	3
10424		HOLL	08 10 1415	S18 W36	08 7.8		BG	EKC	510	27	12	3
10424		MWIL	08 10 1430	S18 W36	08 7.9	5	(B)					
10424	31817	VORO	08 10 2213	S17 W40	08 7.9			DKI	665	25	11	3
10424		LEAR	08 11 0540	S18 W45	08 7.8		BG	EKC	340	13	12	1
10424		KAND	08 11 0610	S19 W45	08 7.8			EKO		17	13	4
10424		SVTO	08 11 0655	S20 W47	08 7.7		BG	EAI	450	19	12	3

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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
10424	31817	TACH	08	11	0806	S18	W46	08	7.8			EAI	546	10	11	4
10424		HOLL	08	11	1425	S18	W51	08	7.7		BG	EKI	330	29	12	2
10424		MWIL	08	11	1615	S18	W50	08	7.9	5	(BG)					
10424		VORO	08	11	2316	S17	W54	08	7.9			DKI	402	11	11	3
10424		LEAR	08	12	0150	S16	W61	08	7.4		BGD	FKC	280	16	20	2
10424		TACH	08	12	0537	S20	W54	08	8.1			CAI	380	7	6	4
10424		KAND	08	12	0725	S19	W61	08	7.6			EAO		9	13	4
10424		SVTO	08	12	0830	S20	W61	08	7.7		BG	CKI	430	10	14	3
10424		HOLL	08	12	1500	S16	W65	08	7.7		BG	EAI	260	15	12	3
10424		MWIL	08	12	1515	S18	W63	08	7.8	5	(B)					
10424	31817	VORO	08	12	2156	S19	W66	08	7.9			HKX	319	7		3
10424		LEAR	08	13	0105	S17	W67	08	7.9		BG	DAO	260	5	10	2
10424		TACH	08	13	0607	S19	W72	08	7.8			HR	196	2	3	4
10424		KAND	08	13	0625	S19	W71	08	7.8			CSO		4	4	4
10424		SVTO	08	13	0740	S20	W79	08	7.3		B	CAO	20	4	17	3
10424		MWIL	08	13	1500	S18	W76	08	7.8	5	(AP)					
10424		HOLL	08	13	1500	S18	W78	08	7.7		B	DAO	90	5	6	4
10424		VORO	08	13	2155	S19	W78	08	8.0			HAX	101	1		3
10424		LEAR	08	14	0130	S18	W78	08	8.1		B	DAO	90	2	4	2
10424A		LEAR	08	04	0021	S13	E63	08	8.8		A	HSX	20	1	1	3
10424B		VORO	08	10	2213	N08	W17	08	9.6			AXX	2	1		3
10429	31823	HOLL	08	05	1350	S24	E60	08	10.2		A	HSX	50	1	1	4
10429		MWIL	08	05	1430	S23	E60	08	10.2	4	(B)					
10429		LEAR	08	06	0140	S25	E53	08	10.2		B	DAO	50	3	5	3
10429		KAND	08	06	0633	S23	E52	08	10.3			BXO		4	7	2
10429		SVTO	08	06	0700	S23	E53	08	10.4		B	CRO	40	4	7	3
10429		MWIL	08	06	1630	S23	E47	08	10.3	4	(B)					
10429		HOLL	08	06	1635	S24	E48	08	10.4		B	CAO	30	10	8	3
10429		LEAR	08	07	0146	S25	E42	08	10.3		B	DAO	90	11	7	2
10429		TACH	08	07	0710	S25	E39	08	10.3			DSO	62	3	6	4
10429		KAND	08	07	0720	S23	E39	08	10.3			DAO		8	8	4
10429	31823	SVTO	08	07	0835	S23	E38	08	10.3		B	DSO	70	4	8	3
10429		MWIL	08	07	1430	S23	E35	08	10.3	5	(B)					
10429		HOLL	08	07	1550	S24	E35	08	10.4		B	DAO	110	8	8	3
10429		LEAR	08	08	0203	S24	E28	08	10.2		B	DAO	220	13	7	3
10429		TACH	08	08	0606	S24	E26	08	10.3			DAO	96	3	6	4
10429		SVTO	08	08	0630	S24	E27	08	10.3		B	DSO	130	5	8	3
10429		KAND	08	08	0825	S23	E26	08	10.3			DAO		7	9	3
10429		HOLL	08	08	1420	S23	E22	08	10.3		B	DAO	150	8	9	2
10429		MWIL	08	08	1430	S23	E22	08	10.3	5	(B)					
10429		VORO	08	08	1544	S23	E27	08	10.7			DAI	280	7	7	2
10429	31823	VORO	08	08	2351	S23	E16	08	10.2			DAO	219	8	7	3
10429		LEAR	08	09	0115	S24	E15	08	10.2		B	DAO	180	12	9	2
10429		TACH	08	09	0535	S24	E14	08	10.3			DAI	85	6	7	4
10429		SVTO	08	09	0610	S24	E14	08	10.3		B	DAO	170	5	9	3
10429		KAND	08	09	0645	S23	E14	08	10.3			DAO		7	9	3
10429		MWIL	08	09	1445	S24	E09	08	10.3	5	(B)					
10429		HOLL	08	09	1530	S23	E08	08	10.3		B	DAO	130	16	8	3
10429		VORO	08	09	2325	S22	E04	08	10.3			DAI	215	10	8	3
10429		LEAR	08	10	0025	S24	E03	08	10.2		B	DAO	130	17	8	3
10429		TACH	08	10	0519	S24	E01	08	10.3			DSI	114	7	6	4
10429	31823	SVTO	08	10	0538	S24	E02	08	10.4		B	DSO	100	8	9	3
10429		HOLL	08	10	1415	S23	E03	08	10.8		B	DAI	140	11	9	3
10429		MWIL	08	10	1430	S24	W04	08	10.3	5	(BF)					
10429		VORO	08	10	2213	S23	W08	08	10.3			DAI	133	10	8	3
10429		LEAR	08	11	0540	S25	W12	08	10.3		B	DAO	70	7	9	1
10429		KAND	08	11	0610	S24	W11	08	10.4			DSO		13	10	4
10429		SVTO	08	11	0655	S25	W13	08	10.3		B	DSO	80	8	9	3
10429		TACH	08	11	0806	S24	W13	08	10.3			BRO	65	4	8	4
10429		HOLL	08	11	1425	S25	W16	08	10.4		B	DAI	70	24	9	2
10429		MWIL	08	11	1615	S24	W16	08	10.4	5	(B)					
10429		VORO	08	11	2316	S23	W21	08	10.3			DAI	63	13	8	3
10429	31823	LEAR	08	12	0150	S23	W25	08	10.2		B	DAO	80	12	9	2
10429		TACH	08	12	0537	S24	W24	08	10.4			BRI	23	9	8	4
10429		KAND	08	12	0725	S24	W25	08	10.4			CRO		11	9	4
10429		SVTO	08	12	0830	S25	W26	08	10.3		B	DSI	50	15	10	3

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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
10429	31823	HOLL	08	12	1500	S23 W31	08 10.2		B	DSI	60	16	9	3
10429		MWIL	08	12	1515	S23 W29	08 10.4	5	(BF)					
10429		VORO	08	12	2156	S23 W33	08 10.4			CRI	78	16	8	3
10429		LEAR	08	13	0105	S22 W35	08 10.3		B	DAO	70	13	10	2
10429		TACH	08	13	0607	S23 W36	08 10.5			BRI	28	5	8	4
10429	31823	KAND	08	13	0625	S22 W36	08 10.5			CSO		13	9	4
10429		SVTO	08	13	0740	S25 W38	08 10.4		B	BXO	30	11	9	3
10429		MWIL	08	13	1500	S22 W41	08 10.5	4	(B)					
10429		HOLL	08	13	1500	S25 W42	08 10.4		B	DSO	50	19	9	4
10429		VORO	08	13	2155	S23 W45	08 10.4			CRI	35	10	7	3
10429		LEAR	08	14	0130	S23 W46	08 10.5		B	DAO	20	4	7	2
10429		TACH	08	14	0606	S25 W50	08 10.4			BRO	7	2	6	5
10429		KAND	08	14	0610	S22 W50	08 10.4			CRO		4	8	5
10429		SVTO	08	14	0617	S23 W49	08 10.5		B	BXO	40	9	6	3
10429		HOLL	08	14	1545	S23 W55	08 10.4		B	CAO	40	8	7	2
10435	31829	LEAR	08	16	0120	S17 W29	08 13.8		A	AXX	10	1	1	3
10435		TACH	08	16	0608	S18 W31	08 13.9			AR	14	2	2	4
10435		SVTO	08	16	0620	S18 W33	08 13.7		B	CRO	10	2	2	3
10435		KAND	08	16	0840	S18 W33	08 13.8			CRO		2	3	3
10435		MWIL	08	16	1600	S17 W36	08 13.9	4	(B)					
10435		HOLL	08	16	1930	S18 W41	08 13.7		B	CAO	20	5	5	1
10435		VORO	08	16	2253	S17 W41	08 13.8			DRO	21	2	3	3
10435		TACH	08	17	0425	S19 W44	08 13.8			BXO	6	2	4	3
10435		SVTO	08	17	0625	S18 W45	08 13.8		A	HRX	10	1		3
10435		KAND	08	17	0800	S17 W48	08 13.7			BXO		2	4	3
10435		LEAR	08	17	1255	S18 W44	08 14.2		B	CAO	30	5	5	3
10435	31829	MWIL	08	17	1430	S18 W49	08 13.9	4	(BP)					
10435		HOLL	08	17	1830	S17 W51	08 13.9		A	AXX	10	4	2	3
10435		VORO	08	17	2153	S17 W54	08 13.8			BXO	11	3	4	3
10435		LEAR	08	18	0104	S17 W55	08 13.9		B	DSO	20	2	2	3
10435		VORO	08	18	2319	S17 W65	08 14.0			AXX	16	2		3
10435A		KAND	08	12	0725	N15 E29	08 14.5			AX		1		4
10435A		KAND	08	14	0610	N19 E01	08 14.3			AX		1		5
10435A		HOLL	08	14	1545	N16 W04	08 14.3		A	AXX		1	1	2
10435A		HOLL	08	17	1830	N18 W43	08 14.5		A	AXX	10	1	1	3
10435B		HOLL	08	11	1425	S21 E38	08 14.5		A	AXX		1	1	2
10435C		HOLL	08	14	1545	N08 E01	08 14.7		B	BXO		2	2	2
10431	31824	MWIL	08	08	1430	S11 E83	08 14.8	5	AP					
10431		VORO	08	08	1544	S11 E78	08 14.5			DAI	105	3	5	2
10431		LEAR	08	09	0115	S12 E78	08 14.9		B	CSO	60	7	6	2
10431		TACH	08	09	0535	S12 E76	08 14.9			CAO	84	3	8	4
10431		SVTO	08	09	0610	S11 E78	08 15.1		B	CRO	60	3	6	3
10431	31824	KAND	08	09	0645	S12 E80	08 15.3			EAO		6	11	3
10431		MWIL	08	09	1445	S12 E75	08 15.3	5	(B)					
10431		HOLL	08	09	1530	S13 E73	08 15.1		B	EAI	190	8	12	3
10431		VORO	08	09	2325	S11 E67	08 15.0			DAI	268	9	10	3
10431		LEAR	08	10	0025	S13 E67	08 15.1		B	CAO	200	8	10	3
10431	31824	TACH	08	10	0519	S12 E64	08 15.0			DAI	114	8	7	4
10431		SVTO	08	10	0538	S12 E65	08 15.1		B	ESO	200	9	11	3
10431		HOLL	08	10	1415	S13 E63	08 15.3		BG	EAC	340	31	13	3
10431		MWIL	08	10	1430	S13 E60	08 15.1	5	(BD)					
10431		VORO	08	10	2213	S12 E54	08 15.0			DAI	273	24	6	3
10431	31824	LEAR	08	11	0540	S14 E51	08 15.1		BG	EAI	200	13	12	1
10431		KAND	08	11	0610	S13 E52	08 15.2			ESI		21	11	4
10431		SVTO	08	11	0655	S13 E51	08 15.1		B	ESI	150	26	13	3
10431		TACH	08	11	0806	S14 E50	08 15.1			DAI	113	9	10	4
10431		HOLL	08	11	1425	S14 E46	08 15.1		BG	EAI	150	40	11	2
10431	31824	MWIL	08	11	1615	S14 E47	08 15.2	5	(B)					
10431		VORO	08	11	2316	S13 E41	08 15.1			DAI	175	26	4	3
10431		LEAR	08	12	0150	S14 E40	08 15.1		BG	DAC	150	25	8	2
10431		TACH	08	12	0537	S13 E39	08 15.2			DAI	103	14	8	4
10431		KAND	08	12	0725	S13 E39	08 15.2			DSI		30	9	4
10431		SVTO	08	12	0830	S13 E38	08 15.2		BG	DSI	130	21	10	3
10431		HOLL	08	12	1500	S14 E33	08 15.1		BG	EAI	120	45	13	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
10431	31824	MWIL	08 12 1515	S13 E34	08 15.2	5	(BG)					
10431		VORO	08 12 2156	S13 E29	08 15.1			DAI	240	25	4	3
10431		LEAR	08 13 0105	S12 E25	08 14.9		BG	DAO	200	20	9	2
10431		TACH	08 13 0607	S13 E24	08 15.1			CAI	163	18	8	4
10431		KAND	08 13 0625	S12 E25	08 15.1			EKO		38	11	4
10431		SVTO	08 13 0740	S13 E24	08 15.1		BG	EAC	170	30	11	3
10431	31824	MWIL	08 13 1500	S13 E21	08 15.2	5	(D)					
10431		HOLL	08 13 1500	S14 E21	08 15.2		BG	EKC	590	55	14	4
10431		VORO	08 13 2155	S13 E16	08 15.1			DKC	589	27	8	3
10431		LEAR	08 14 0130	S12 E13	08 15.0		BGD	DKC	490	36	10	2
10431		TACH	08 14 0606	S13 E11	08 15.1			DAI	348	27	8	5
10431		KAND	08 14 0610	S11 E12	08 15.1			DKI		43	10	5
10431		SVTO	08 14 0617	S11 E13	08 15.2		B	EAI	430	20	12	3
10431		HOLL	08 14 1545	S07 E06	08 15.1		B	EKI	520	51	12	2
10431		VORO	08 14 2149	S11 E02	08 15.0			DKC	667	38	8	3
10431		LEAR	08 15 0110	S11 W01	08 15.0		BGD	DAC	500	42	10	2
10431		TACH	08 15 0547	S12 W02	08 15.1			DAI	493	21	8	5
10431		SVTO	08 15 0615	S11 W03	08 15.0		B	EAC	460	32	14	3
10431		KAND	08 15 0655	S10 W03	08 15.1			DAC		58	10	3
10431	31824	MWIL	08 15 1500	S11 W08	08 15.0	5	(D)					
10431		HOLL	08 15 1635	S11 W10	08 14.9		B	EKI	450	60	12	1
10431		VORO	08 15 2204	S10 W13	08 14.9			DKI	531	45	7	3
10431		LEAR	08 16 0120	S12 W14	08 15.0		BGD	EAC	400	41	11	3
10431		TACH	08 16 0608	S11 W17	08 15.0			DAI	238	19	8	4
10431		SVTO	08 16 0620	S11 W17	08 15.0		BG	ESC	390	29	14	3
10431		KAND	08 16 0840	S10 W19	08 14.9			EAC		42	11	3
10431	31824	MWIL	08 16 1600	S11 W22	08 15.0	5	(D)					
10431		HOLL	08 16 1930	S13 W25	08 14.9		B	EKI	350	55	12	1
10431		VORO	08 16 2253	S11 W27	08 14.9			DKI	560	34	8	3
10431		TACH	08 17 0425	S12 W30	08 14.9			DAI	151	8	9	3
10431		SVTO	08 17 0625	S10 W31	08 14.9		BG	ESC	360	22	13	3
10431		KAND	08 17 0800	S10 W31	08 15.0			EAO		29	11	3
10431		LEAR	08 17 1255	S10 W28	08 15.4		BGD	DKI	390	52	10	3
10431	31824	MWIL	08 17 1430	S11 W35	08 15.0	5	(BG)					
10431		HOLL	08 17 1830	S10 W35	08 15.1		BG	EAI	340	50	11	3
10431		VORO	08 17 2153	S11 W39	08 15.0			DAI	541	28	9	3
10431		LEAR	08 18 0104	S09 W42	08 14.9		BG	DAI	200	46	10	3
10431		TACH	08 18 0606	S12 W43	08 15.0			DAI	147	19	9	4
10431		SVTO	08 18 0620	S16 W42	08 15.1		B	EAI	150	33	17	3
10431		KAND	08 18 0700	S10 W44	08 15.0			EAI		27	12	3
10431	31824	MWIL	08 18 1430	S11 W49	08 14.9	5	(BG)					
10431		VORO	08 18 2319	S11 W53	08 15.0			DAI	283	18	9	3
10431		LEAR	08 19 0215	S11 W56	08 14.9		BG	EAI	160	12	13	2
10431		TACH	08 19 0521	S11 W57	08 14.9			DAI	205	7	9	4
10431		SVTO	08 19 0630	S11 W58	08 14.9		B	EAO	170	12	13	3
10431		KAND	08 19 0740	S10 W59	08 14.9			DAO		3	10	2
10431	31824	MWIL	08 19 1430	S11 W62	08 14.9	4	(BG)					
10431		HOLL	08 19 1504	S11 W63	08 14.9		BG	EAI	200	13	13	3
10431		LEAR	08 20 0105	S11 W67	08 15.0		BG	EAI	100	6	12	2
10431		VORO	08 20 0457	S11 W69	08 15.0			DAI	252	8	9	2
10431		SVTO	08 20 0626	S11 W68	08 15.1		A	HSX	180	1	4	3
10431	31824	MWIL	08 20 1430	S11 W75	08 15.0	4	(BG)					
10431		HOLL	08 20 1535	S08 W80	08 14.6		B	CSO	30	4	2	3
10431A		KAND	08 14 0610	N16 E13	08 15.2			AX		1		5
10434		KAND	08 13 0625	S22 E40	08 16.3			AX		1		4
10434		LEAR	08 14 0130	S23 E28	08 16.2		A	HRX	10	1	1	2
10434		KAND	08 14 0610	S22 E26	08 16.2			CRO		2	3	5
10434		SVTO	08 14 0617	S23 E27	08 16.3		A	AXX		1		3
10434		VORO	08 14 2149	S24 E18	08 16.3			AXX	5	1		3
10434		LEAR	08 15 0110	S19 E12	08 16.0		B	CSO	10	3	2	2
10434		SVTO	08 15 0615	S19 E10	08 16.0		B	CSO	20	3	4	3
10434		KAND	08 15 0655	S23 E13	08 16.3			AX		1		3
10434	31827	MWIL	08 15 1500	S23 E07	08 16.2	4	(B)					
10434		VORO	08 15 2204	S23 E03	08 16.1			CRO	29	2	3	3
10434		LEAR	08 16 0120	S22 E01	08 16.1		B	DSO	20	4	2	3
10434		SVTO	08 16 0620	S24 W01	08 16.2		B	DRO	20	3	5	3
10434		KAND	08 16 0840	S22 W02	08 16.2			CRO		2	4	3

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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
			Mo	Day (UT)										
10434	31827	MWIL	08	16	1600	S23 W06	08 16.2	4	(B)					
10434		VORO	08	16	2253	S22 W10	08 16.2			CRO	18	2	3	3
10434		SVTO	08	17	0625	S21 W11	08 16.4			B CRO	20	2	6	3
10434		KAND	08	17	0800	S22 W13	08 16.3			BXO		2	2	3
10434	31827	LEAR	08	17	1255	S23 W12	08 16.6	4	(AF)	B BXO	10	2	4	3
10434		MWIL	08	17	1430	S23 W17	08 16.3			A HSX	20	1	1	3
10434		HOLL	08	17	1830	S19 W16	08 16.5			AXX	5	1		3
10434		VORO	08	17	2153	S23 W21	08 16.3			HRX	10	1	1	3
10434	31828	SVTO	08	18	0620	S20 W22	08 16.6	4	(B)	A HSX	10	1	1	3
10434		HOLL	08	19	1504	S19 W42	08 16.4			AXX		1	1	3
10434		HOLL	08	20	1535	S20 W54	08 16.5					1	1	3
10433		TACH	08	13	0607	S21 E37	08 16.1			A				
10433	31828	TACH	08	14	0606	S24 E26	08 16.3	4	(B)	AXX	4	1	1	4
10433		VORO	08	14	2149	S19 E24	08 16.7			AXX	3	1	1	5
10433		TACH	08	15	0547	S19 E20	08 16.8			DRO	30	2	3	3
10433		TACH	08	15	0547	S19 E20	08 16.8			BXO	18	2	2	5
10433	31828	KAND	08	15	0655	S19 E20	08 16.8	4	(B)	CSO		2	4	3
10433		MWIL	08	15	1500	S20 E13	08 16.6							
10433		VORO	08	15	2204	S19 E09	08 16.6			HRX	12	1		3
10433		LEAR	08	16	0120	S20 E08	08 16.7			HXX	20	1	2	3
10433	31828	TACH	08	16	0608	S20 E04	08 16.6	4	(B)	AXX	14	1	1	4
10433		TACH	08	16	0608	S24 W01	08 16.2			BRO	24	3	4	4
10433		SVTO	08	16	0620	S20 E05	08 16.6			A HRX	10	1	1	3
10433		KAND	08	16	0840	S20 E04	08 16.7			HR		1	1	3
10433	31828	MWIL	08	16	1600	S20 W00	08 16.7	4	(AP)					
10433		VORO	08	16	2253	S19 W05	08 16.6			HRX	17	1		3
10433		TACH	08	17	0425	S20 W06	08 16.7			AXX	11	1	1	3
10433		TACH	08	17	0425	S24 W09	08 16.5			AXX	3	1	1	3
10433	31828	SVTO	08	17	0625	S21 W08	08 16.6	4	(B)	A AXX		1		3
10433		KAND	08	17	0800	S19 W09	08 16.6			AX		2	1	3
10433		LEAR	08	17	1255	S20 W07	08 17.0			A HAX	10	1	1	3
10433		MWIL	08	17	1430	S20 W14	08 16.5			(AP)				
10433	31828	VORO	08	17	2153	S19 W17	08 16.6	4	(B)	AXX	10	1		3
10433		LEAR	08	18	0104	S19 W20	08 16.5			HRX	10	1	1	3
10433		TACH	08	18	0606	S20 W22	08 16.6			AXX	6	1	1	4
10433		KAND	08	18	0700	S20 W22	08 16.6			AX		1		3
10433	31828	MWIL	08	18	1430	S20 W27	08 16.5	4	(AP)					
10433		VORO	08	18	2319	S19 W31	08 16.6			AXX	9	1		3
10433		LEAR	08	19	0215	S19 W34	08 16.5			A HRX	10	1	1	2
10433		KAND	08	19	0740	S20 W36	08 16.6			AX		1		2
10433	31828	MWIL	08	19	1430	S20 W40	08 16.5	4	(AP)					
10433		LEAR	08	20	0105	S22 W48	08 16.3			A AXX	10	1	1	2
10433		VORO	08	20	0457	S20 W48	08 16.5			AXX	9	2		2
10433		MWIL	08	20	1430	S20 W53	08 16.5			(AP)				
10433	31828	VORO	08	21	0240	S19 W60	08 16.5	4	(B)	AXX	10	1		3
10433		LEAR	08	21	1233	S20 W60	08 16.9			A AXX	20	1	1	3
10434A		HOLL	08	14	1545	S24 E25	08 16.6			B BXO	10	2	8	2
10434A		HOLL	08	15	1635	S29 E14	08 16.8			B BAO	20	2	3	1
10434A	31831	HOLL	08	15	1635	S33 E06	08 16.2	4	(B)	B BSO	30	2	3	1
10434A		HOLL	08	16	1930	S29 W01	08 16.7			B CAO	10	2	4	1
10434A		HOLL	08	16	1930	S34 W08	08 16.2			B CAO	10	2	5	1
10434A		HOLL	08	17	1830	S34 W20	08 16.2			A AXX	10	1	1	3
10434B	31831	KAND	08	17	0800	S20 E07	08 17.9	4	(AP)	AX		1		3
10434B		MWIL	08	17	1430	S21 E03	08 17.8							
10434B		LEAR	08	18	0104	S21 W04	08 17.7			A AXX	10	2	1	3
10434B		KAND	08	18	0700	S21 W05	08 17.9			BXO		3	3	3
10434B	31831	MWIL	08	18	1430	S21 W10	08 17.8	4	(B)					
10434B		VORO	08	18	2319	S21 W14	08 17.9			BRO	16	4	3	3
10434B		LEAR	08	19	0215	S21 W16	08 17.9			A AXX	10	1	1	2
10434B		TACH	08	19	0521	S22 W16	08 18.0			AXX	6	1	1	4
10434B	31831	SVTO	08	19	0630	S23 W17	08 18.0	4	(AF)	A HRX	10	1	1	3
10434B		KAND	08	19	0740	S22 W17	08 18.0			HA		1		2
10434B		MWIL	08	19	1430	S22 W22	08 17.9			A HAX	20	1	1	3
10434B		HOLL	08	19	1504	S22 W23	08 17.9			AXX	20	3	2	2
10434B	31831	VORO	08	20	0457	S21 W28	08 18.0	4	(B)	A AXX	10	1	1	3
10434B		SVTO	08	20	0626	S22 W30	08 18.0							
10434C		VORO	08	17	2153	S02 E07	08 18.4			BXO	6	4	2	3

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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
10434C	31832	LEAR	08	18	0104	S03	E04	08	18.3		A	AXX	10	1	1	3
10434C		MWIL	08	18	1430	S02	W02	08	18.4	3	(AF)					
10434C		VORO	08	18	2319	S03	W06	08	18.5			AXX	4	1		3
10432	31826	TACH	08	13	0607	S04	E77	08	19.0			AXX	23	1	1	4
10432		KAND	08	13	0625	S03	E81	08	19.3			HS		1	1	4
10432		MWIL	08	13	1500	S04	E74	08	19.1	4	(AP)					
10432	31826	HOLL	08	13	1500	S05	E75	08	19.2		A	HSX	30	1	1	4
10432		VORO	08	13	2155	S04	E69	08	19.1		A	HRX	31	1		3
10432		LEAR	08	14	0130	S03	E68	08	19.1		A	HSX	50	1	2	2
10432	31826	TACH	08	14	0606	S04	E64	08	19.0			AXX	7	1	1	5
10432		KAND	08	14	0610	S03	E68	08	19.3			HS		1	1	5
10432		SVTO	08	14	0617	S03	E67	08	19.3		A	HSX	20	1	1	3
10432	31826	HOLL	08	14	1545	S05	E61	08	19.2		A	HAX	20	1	1	2
10432		VORO	08	14	2149	S04	E56	08	19.1			HRX	27	1		3
10432		LEAR	08	15	0110	S04	E54	08	19.1		A	HSX	20	1	2	2
10432	31826	TACH	08	15	0547	S04	E52	08	19.1			HSX	25	1	1	5
10432		SVTO	08	15	0615	S04	E53	08	19.2		A	HSX	20	1	1	3
10432		KAND	08	15	0655	S03	E53	08	19.2			HA		2	1	3
10432	31826	MWIL	08	15	1500	S04	E47	08	19.1	4	(AP)					
10432		HOLL	08	15	1635	S04	E46	08	19.1		A	HSX	20	1	1	1
10432		VORO	08	15	2204	S03	E43	08	19.1			HRX	17	1		3
10432	31826	LEAR	08	16	0120	S04	E41	08	19.1		A	HXX	30	1	2	3
10432		TACH	08	16	0608	S04	E39	08	19.2			HSX	26	1	1	4
10432		SVTO	08	16	0620	S03	E38	08	19.1		A	HRX	10	1	1	3
10432	31826	KAND	08	16	0840	S03	E38	08	19.2			HR		1	1	3
10432		MWIL	08	16	1600	S04	E33	08	19.1	4	(AP)					
10432		HOLL	08	16	1930	S02	E31	08	19.1		A	HSX	10	1	1	1
10432	31826	VORO	08	16	2253	S03	E29	08	19.1			HRX	24	1		3
10432		TACH	08	17	0425	S03	E27	08	19.2			AXX	9	1	1	3
10432		SVTO	08	17	0625	S04	E25	08	19.1		A	HSX	20	1	1	3
10432	31826	KAND	08	17	0800	S03	E25	08	19.2			HS		1	1	3
10432		LEAR	08	17	1255	S04	E28	08	19.6		A	HRX	10	1	1	3
10432		MWIL	08	17	1430	S03	E20	08	19.1	4	(AP)					
10432	31826	HOLL	08	17	1830	S05	E19	08	19.2		B	CSO	20	3	3	3
10432		VORO	08	17	2153	S02	E16	08	19.1			HRX	12	1		3
10432		LEAR	08	18	0104	S03	E14	08	19.1		A	HSX	10	1	1	3
10432	31826	TACH	08	18	0606	S03	E08	08	18.8			BXO	21	2	9	4
10432		SVTO	08	18	0620	S02	E12	08	19.2		A	HRX	20	1	1	3
10432		KAND	08	18	0700	S02	E12	08	19.2			HS		1	1	3
10432	31826	MWIL	08	18	1430	S03	E07	08	19.1	4	(AP)					
10432		VORO	08	18	2319	S02	E02	08	19.1			ARX	10	2		3
10432		LEAR	08	19	0215	S02	W01	08	19.0		A	HSX	10	1	1	2
10432	31826	TACH	08	19	0521	S03	W02	08	19.1			AXX	5	1	1	4
10432		SVTO	08	19	0630	S03	W03	08	19.0		A	HRX	10	1	1	3
10432		KAND	08	19	0740	S02	W02	08	19.2			HR		1		2
10432	31826	MWIL	08	19	1430	S03	W06	08	19.1	4	(AP)					
10432		HOLL	08	19	1504	S03	W07	08	19.1		A	HSX	10	1	1	3
10432A	31834	MWIL	08	20	1430	S32	W19	08	19.1	4	(BP)					
10432A		HOLL	08	20	1535	S32	W20	08	19.1		B	BXX	10	5	2	3
10432A		VORO	08	21	0240	S31	W26	08	19.0			AXX	19	2		3
10432A		LEAR	08	21	1233	S31	W25	08	19.5		A	HRX	20	2	1	3
10439	31837	VORO	08	21	0240	N08	W13	08	20.1			BRO	16	4	2	3
10439		TACH	08	21	0552	N07	W14	08	20.2			BRI	8	5	2	3
10439		SVTO	08	21	0805	N08	W16	08	20.1		B	DSO	70	4	3	3
10439	31837	LEAR	08	21	1233	N07	W12	08	20.6		B	DSO	10	3	2	3
10439		MWIL	08	21	1430	N07	W20	08	20.1	5	(B)					
10439		HOLL	08	21	1511	N08	W21	08	20.0		B	CSO	30	7	4	4
10439	31837	LEAR	08	22	0105	N08	W26	08	20.1		B	DSO	60	3	4	2
10439		SVTO	08	22	0800	N07	W30	08	20.1		B	CSO	30	4	4	3
10439		MWIL	08	22	1445	N07	W33	08	20.1	5	(B)					
10439	31837	HOLL	08	22	1605	N08	W35	08	20.0		B	DSO	30	8	4	3
10439		VORO	08	22	2331	N07	W38	08	20.1			DAI	47	7	3	3
10439		LEAR	08	23	0115	N08	W40	08	20.0		B	DSO	50	6	5	2
10439	31837	SVTO	08	23	0635	N05	W43	08	20.0		B	CRO	30	3	5	3
10439		HOLL	08	23	1425	N08	W45	08	20.2		B	DAO	20	9	5	3
10439		MWIL	08	23	1445	N07	W46	08	20.2	4	(B)					

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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
10439		VORO	08	23	2137	N07	W50	08	20.1			BXO	14	4	3	3
10439		HOLL	08	24	1424	N07	W59	08	20.2		B	CSO	40	3	3	4
10439		VORO	08	24	2251	N07	W66	08	20.0			HRX	19	1		3
10439		LEAR	08	25	0105	N08	W68	08	19.9		A	HSX	30	1	1	2
10439		SVTO	08	25	0607	N06	W71	08	19.9		A	HSX	30	1	1	3
10439		TACH	08	25	0707	N06	W71	08	20.0			HSX	30	2	1	4
10439	31837	MWIL	08	25	1430	N07	W76	08	19.9	4	(AF)					
10439		HOLL	08	25	1445	N07	W75	08	20.0		A	HSX	30	1	1	3
10439A	31838	MWIL	08	22	1445	S13	W20	08	21.1	3	(AF)					
10440	31833	MWIL	08	18	1430	S06	E55	08	22.7	4	(B)					
10440		VORO	08	18	2319	S06	E49	08	22.6			AXX	11	1		3
10440	31833	MWIL	08	19	1430	S06	E41	08	22.7	4	(B)					
10440		VORO	08	20	0457	S07	E30	08	22.4			AXX	5	1		2
10440	31833	MWIL	08	20	1430	S08	E25	08	22.5	4	(B)					
10440		VORO	08	21	0240	S06	E18	08	22.4			BXI	12	5	4	3
10440		SVTO	08	21	0805	S07	E15	08	22.5		B	CSO	20	2	2	3
10440		LEAR	08	21	1233	S08	E20	08	23.0		B	BXO	10	3	4	3
10440	31833	MWIL	08	21	1430	S07	E12	08	22.5	4	(B)					
10440		HOLL	08	21	1511	S08	E11	08	22.4		B	CSO	20	8	4	4
10440		LEAR	08	22	0105	S07	E06	08	22.5		B	CSO	50	22	6	2
10440		SVTO	08	22	0800	S07	E02	08	22.5		B	DSO	80	8	6	3
10440	31833	MWIL	08	22	1445	S07	W02	08	22.5	5	(B)					
10440		HOLL	08	22	1605	S08	W02	08	22.5		B	DAI	120	17	5	3
10440		VORO	08	22	2331	S07	W07	08	22.4			DAI	134	14	4	3
10440		LEAR	08	23	0115	S08	W08	08	22.4		B	DSO	90	12	5	2
10440		SVTO	08	23	0635	S08	W11	08	22.4		B	DSO	100	7	7	3
10440		HOLL	08	23	1425	S08	W15	08	22.5		B	DAO	80	16	8	3
10440	31833	MWIL	08	23	1445	S07	W15	08	22.5	5	(B)					
10440		VORO	08	23	2137	S06	W19	08	22.5			DAI	96	10	5	3
10440		LEAR	08	24	0115	S08	W22	08	22.4		B	DSO	60	10	6	1
10440		SVTO	08	24	0724	S08	W25	08	22.4		B	DSO	60	6	7	3
10440		HOLL	08	24	1424	S07	W28	08	22.5		B	DSO	50	10	7	4
10440		VORO	08	24	2251	S07	W33	08	22.5			DRI	42	14	5	3
10440		LEAR	08	25	0105	S07	W35	08	22.4		B	DSO	30	5	6	2
10440		SVTO	08	25	0607	S08	W37	08	22.5		B	CSO	40	3	5	3
10440		TACH	08	25	0707	S08	W37	08	22.5			BRO	14	3	6	4
10440	31833	MWIL	08	25	1430	S06	W43	08	22.4	5	(B)					
10440		HOLL	08	25	1445	S07	W42	08	22.5		B	CSO	30	3	6	3
10440		VORO	08	25	2229	S07	W49	08	22.3			AXX	11	1		3
10440		LEAR	08	26	0140	S07	W52	08	22.2		A	HSX	20	1	1	4
10440		TACH	08	26	0910	S09	W56	08	22.2			AXX	5	1	1	4
10440		SVTO	08	26	1305	S08	W58	08	22.2		A	AXX	10	1		3
10440		HOLL	08	26	1825	S07	W59	08	22.3		A	AXX	10	1	1	4
10440		VORO	08	26	2138	S08	W62	08	22.2			AXX	16	1		3
10440		LEAR	08	27	0045	S07	W65	08	22.2		A	AXX	20	1	2	2
10440	31833	MWIL	08	27	1445	S07	W71	08	22.3	4	(AP)					
10436	31830	MWIL	08	16	1600	N08	E80	08	22.7	4	(AP)					
10436		HOLL	08	16	1930	N11	E80	08	22.8		A	HHX	60	1	2	1
10436		VORO	08	16	2253	N09	E75	08	22.6			HRX	75	1		3
10436		TACH	08	17	0425	N09	E75	08	22.8			HXX	27	1	2	3
10436		SVTO	08	17	0625	N06	E78	08	23.1		B	ESO	90	3	14	3
10436		KAND	08	17	0800	N09	E80	08	23.3			ESO	5	5	12	3
10436		LEAR	08	17	1255	N08	E75	08	23.2		B	DKO	120	2	7	3
10436	31830	MWIL	08	17	1430	N07	E74	08	23.1	4	(B)					
10436		HOLL	08	17	1830	N07	E65	08	22.6		B	CAO	80	4	4	3
10436		VORO	08	17	2153	N09	E69	08	23.1			DAI	231	7	11	3
10436		LEAR	08	18	0104	N08	E68	08	23.1		B	EAO	140	10	12	3
10436		TACH	08	18	0606	N07	E67	08	23.3			EAI	266	6	13	4
10436		SVTO	08	18	0620	N08	E66	08	23.2		B	ESO	180	10	15	3
10436		KAND	08	18	0700	N08	E66	08	23.2			FSO		8	16	3
10436	31830	MWIL	08	18	1430	N08	E60	08	23.1	5	(B)					
10436		VORO	08	18	2319	N09	E49	08	22.6			HAX	71	4		3
10436		VORO	08	18	2319	N09	E60	08	23.5			HAX	159	7	1	3
10436		LEAR	08	19	0215	N07	E53	08	23.1		B	EAO	150	8	13	2
10436		TACH	08	19	0521	N07	E50	08	23.0			EAI	178	7	12	4
10436		SVTO	08	19	0630	N09	E52	08	23.2		B	EAO	140	10	14	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
10436	31830	KAND	08 19 0840	N08 E51	08 23.2			CAO		10	13	2
10436		MWIL	08 19 1430	N07 E47	08 23.1	5	(B)					
10436		HOLL	08 19 1504	N08 E46	08 23.1		B	EAI	180	17	14	3
10436		LEAR	08 20 0105	N05 E40	08 23.0		BG	EAO	120	16	12	2
10436	31830	VORO	08 20 0457	N08 E39	08 23.1			DAI	177	15	11	2
10436		SVTO	08 20 0626	N09 E39	08 23.2		B	ESO	110	7	13	3
10436		MWIL	08 20 1430	N07 E34	08 23.1	5	(B)					
10436		HOLL	08 20 1535	N07 E33	08 23.1		B	EKO	140	22	13	3
10436	31830	VORO	08 21 0240	N08 E27	08 23.1			DAI	192	25	11	3
10436		TACH	08 21 0552	N07 E25	08 23.1			CAI	74	10	10	3
10436		SVTO	08 21 0805	N07 E24	08 23.1		B	ESC	210	10	13	3
10436		LEAR	08 21 1233	N08 E28	08 23.6		B	ESO	170	24	13	3
10436	31830	MWIL	08 21 1430	N07 E20	08 23.1	5	(B)					
10436		HOLL	08 21 1511	N07 E19	08 23.0		B	EAI	150	27	12	4
10436		LEAR	08 22 0105	N08 E15	08 23.2		B	EAI	220	36	13	2
10436		SVTO	08 22 0800	N07 E11	08 23.1		B	EAC	190	18	13	3
10436	31830	MWIL	08 22 1445	N07 E07	08 23.1	5	(BG)					
10436		HOLL	08 22 1605	N07 E07	08 23.2		BG	EAC	270	43	14	3
10436		VORO	08 22 2331	N07 E02	08 23.1			DSI	286	25	10	3
10436		LEAR	08 23 0115	N07 E01	08 23.1		BG	EAC	160	20	11	2
10436	31830	SVTO	08 23 0635	N07 W03	08 23.0		B	ESC	240	13	13	3
10436		HOLL	08 23 1425	N07 W07	08 23.1		B	EAI	220	35	14	3
10436		MWIL	08 23 1445	N07 W07	08 23.1	5	(B)					
10436		VORO	08 23 2137	N07 W11	08 23.1			DAI	306	20	14	3
10436	31830	VORO	08 23 2137	N12 W13	08 22.9			BXO	8	3	3	3
10436		LEAR	08 24 0115	N07 W13	08 23.1		BG	EAC	160	17	13	1
10436		SVTO	08 24 0724	N07 W17	08 23.0		B	EAC	220	17	15	3
10436		HOLL	08 24 1424	N08 W21	08 23.0		B	FSC	210	39	16	4
10436	31830	VORO	08 24 2251	N07 W25	08 23.1			EAI	258	28	13	3
10436		VORO	08 24 2251	N11 W24	08 23.1			AXX	9	4		3
10436		LEAR	08 25 0105	N07 W28	08 22.9		B	EAI	160	27	15	2
10436		SVTO	08 25 0607	N07 W28	08 23.1		B	ESC	200	22	15	3
10436	31830	TACH	08 25 0707	N10 W27	08 23.3			EAI	160	15	16	4
10436		MWIL	08 25 1430	N07 W33	08 23.1	5	(B)					
10436		HOLL	08 25 1445	N08 W35	08 23.0		B	FAC	180	21	16	3
10436		VORO	08 25 2229	N07 W41	08 22.9			DAI	267	20	20	3
10436	31830	LEAR	08 26 0140	N08 W39	08 23.1		B	EAI	90	13	14	4
10436		TACH	08 26 0910	N10 W43	08 23.1			EAI	107	11	14	4
10436		SVTO	08 26 1305	N08 W46	08 23.1		B	ESO	60	6	12	3
10436		HOLL	08 26 1825	N11 W49	08 23.1		B	CAO	50	10	12	4
10436	31830	VORO	08 26 2138	N08 W51	08 23.1			DAI	91	10	12	3
10436		LEAR	08 27 0045	N08 W54	08 23.0		BG	EAI	80	10	12	2
10436		TACH	08 27 0717	N09 W58	08 22.9			CAI	42	5	9	4
10436		SVTO	08 27 1002	N06 W60	08 22.9		B	BXO	40	5	11	3
10436	31830	MWIL	08 27 1445	N07 W60	08 23.1	4	(B)					
10436		HOLL	08 27 1556	N08 W64	08 22.9		B	BXO	10	8	4	4
10436		VORO	08 28 0002	N07 W64	08 23.2			CSO	52	7	4	3
10436		LEAR	08 28 0115	N08 W70	08 22.8		B	EAO	60	6	13	2
10436		SVTO	08 28 1002	N06 W80	08 22.4		B	CRO	60	2	2	3
10436B		HOLL	08 17 1830	N06 E78	08 23.6		A	HAX	60	6	3	3
10436A	31835	VORO	08 20 0457	N14 E44	08 23.5			AXX	8	1		2
10436A		MWIL	08 20 1430	N14 E41	08 23.7	4	(B)					
10436A		VORO	08 21 0240	N14 E31	08 23.4			AXX	3	2		3
10436A		MWIL	08 21 1430	N14 E27	08 23.6	4	(B)					
10436A	31835	HOLL	08 21 1511	N14 E26	08 23.6		B	BXO	10	4	5	4
10436A		LEAR	08 22 0105	N14 E22	08 23.7		B	BXO	20	13	3	2
10436A		MWIL	08 22 1445	N13 E13	08 23.6	4	(B)					
10436A		HOLL	08 22 1605	N15 E12	08 23.6		A	AXX	10	4	2	3
10436A	31835	MWIL	08 23 1445	N14 E01	08 23.7	4	(AF)					
10436A		VORO	08 24 2251	N14 W16	08 23.7			AXX	4	4		3
10436A		LEAR	08 25 0105	N14 W18	08 23.7		B	CXO	10	2	2	2
10436A		MWIL	08 25 1430	N14 W26	08 23.6	4	(AF)					
10436A	31835	VORO	08 25 2229	N15 W30	08 23.7			AXX	5	4		3
10436A		LEAR	08 26 0140	N14 W34	08 23.5		A	AXX	10	1	1	4
10443		HOLL	08 24 1424	N22 W06	08 24.1		B	CSO	20	3	3	4
10443		VORO	08 24 2251	N22 W11	08 24.1			AXX	4	1		3

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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
10443		LEAR	08 25	0105	N23	W13	08 24.0		A	AXX	10	1	1	2
10443A		VORO	08 25	2229	S09	W11	08 25.1			AXX	4	1		3
10443A	31845	MWIL	08 28	1500	S10	W46	08 25.2	4	(B)					
10443A		HOLL	08 28	1835	S11	W48	08 25.2		A	AXX	10	3	2	3
10443A		VORO	08 28	2224	S10	W50	08 25.2			CAO	16	3	3	3
10443A		LEAR	08 29	0240	S10	W54	08 25.0		B	BXO	20	2	3	4
10443A		TACH	08 29	0540	S10	W56	08 25.0			AXX	9	1	1	5
10443A	31845	MWIL	08 29	1415	S10	W59	08 25.2	3	(B)					
10441	31836	MWIL	08 20	1430	N12	E64	08 25.4	4	(AP)					
10441		VORO	08 21	0240	N12	E57	08 25.4			CAI	44	4	3	3
10441		TACH	08 21	0552	N11	E57	08 25.5			BRO	4	3	3	3
10441		SVTO	08 21	0805	N12	E56	08 25.5		B	DSO	60	3	4	3
10441		LEAR	08 21	1233	N12	E57	08 25.8		B	DSO	30	5	4	3
10441	31836	MWIL	08 21	1430	N12	E52	08 25.5	4	(B)					
10441		HOLL	08 21	1511	N12	E50	08 25.4		B	DSO	30	4	6	4
10441		LEAR	08 22	0105	N12	E45	08 25.4		B	DSO	40	7	6	2
10441		SVTO	08 22	0800	N12	E42	08 25.5		B	DRO	30	4	5	3
10441	31836	MWIL	08 22	1445	N11	E38	08 25.5	4	(B)					
10441		HOLL	08 22	1605	N11	E36	08 25.4		B	CAO	20	10	6	3
10441		VORO	08 22	2331	N12	E32	08 25.4			CAI	80	10	4	3
10441		LEAR	08 23	0115	N11	E31	08 25.4		B	DSO	60	12	4	2
10441		SVTO	08 23	0635	N12	E29	08 25.4		B	DRO	80	12	6	3
10441		HOLL	08 23	1425	N11	E24	08 25.4		B	DSO	80	25	5	3
10441	31836	MWIL	08 23	1445	N12	E25	08 25.5	4	(B)					
10441		VORO	08 23	2137	N12	E20	08 25.4			DAI	142	19	5	3
10441		LEAR	08 24	0115	N10	E18	08 25.4		B	DSO	80	16	5	1
10441		SVTO	08 24	0724	N12	E14	08 25.4		B	DSO	90	15	8	3
10441		HOLL	08 24	1424	N12	E11	08 25.4		B	DAI	110	32	6	4
10441		VORO	08 24	2251	N11	E06	08 25.4			DRI	146	20	5	3
10441		LEAR	08 25	0105	N12	E05	08 25.4		B	DSI	90	28	7	2
10441		SVTO	08 25	0607	N12	E03	08 25.5		B	DSI	90	19	6	3
10441		TACH	08 25	0707	N11	E02	08 25.4			BRI	30	12	4	4
10441	31836	MWIL	08 25	1430	N12	W02	08 25.4	5	(B)					
10441		HOLL	08 25	1445	N12	W03	08 25.4		B	DSC	60	24	6	3
10441		VORO	08 25	2229	N13	W06	08 25.5			DAI	125	18	5	3
10441		LEAR	08 26	0140	N12	W08	08 25.5		B	DAI	100	36	7	4
10441		TACH	08 26	0910	N11	W10	08 25.6			BRI	42	13	6	4
10441		SVTO	08 26	1305	N13	W14	08 25.5		B	DAO	190	9	8	3
10441		HOLL	08 26	1825	N09	W18	08 25.4		B	DAO	70	16	6	4
10441		VORO	08 26	2138	N13	W19	08 25.5			DAI	104	17	2	3
10441		LEAR	08 27	0045	N13	W21	08 25.4		B	DAO	100	16	6	2
10441		TACH	08 27	0717	N13	W24	08 25.5			CAI	42	11	5	4
10441		SVTO	08 27	1002	N14	W27	08 25.4		B	DAO	60	13	7	3
10441	31836	MWIL	08 27	1445	N13	W28	08 25.5	4	(B)					
10441		HOLL	08 27	1556	N12	W29	08 25.5		B	DAO	120	11	7	4
10441		VORO	08 28	0002	N13	W34	08 25.4			CAI	81	11	5	3
10441		LEAR	08 28	0115	N14	W35	08 25.4		B	DAO	70	11	7	2
10441		TACH	08 28	0539	N13	W38	08 25.4			BRI	29	8	5	5
10441		SVTO	08 28	1002	N13	W38	08 25.5		B	DRO	50	9	7	3
10441	31836	MWIL	08 28	1500	N13	W43	08 25.4	4	(B)					
10441		HOLL	08 28	1835	N14	W46	08 25.3		B	CAO	20	12	8	3
10441		VORO	08 28	2224	N13	W47	08 25.4			DRI	32	8	5	3
10441		LEAR	08 29	0240	N10	W50	08 25.3		B	DSO	30	9	8	4
10441		TACH	08 29	0540	N13	W52	08 25.3			BRO	11	3	7	5
10441		SVTO	08 29	0722	N14	W57	08 25.0		A	HSX	20	1	1	3
10441	31836	MWIL	08 29	1415	N13	W57	08 25.3	4	(BP)					
10441		HOLL	08 29	1545	N12	W58	08 25.3		B	BXO	20	4	4	3
10441		LEAR	08 30	0130	N15	W68	08 24.9		A	AXX	20	1	1	4
10441B		TACH	08 28	0539	N19	W32	08 25.8			AXX	3	1	1	5
10441A		LEAR	08 26	0140	N20	E08	08 26.7		B	BXO	10	2	2	4
10441A		VORO	08 26	2138	N18	W07	08 26.4			AXX	8	1		3
10441E	31850	MWIL	08 31	1430	N23	W57	08 27.2	4	(BP)					
10441C		VORO	08 24	2251	N40	E36	08 27.9			AXX	4	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
10442	31839	LEAR	08 22 0105	S12 E87	08 28.6		A	HAX	60	2	3	2
10442		SVTO	08 22 0800	S12 E80	08 28.4		B	ESO	120	2	11	3
10442		MWIL	08 22 1445	S13 E75	08 28.3	4	(B)					
10442		HOLL	08 22 1605	S12 E72	08 28.1		B	DAO	120	3	9	3
10442		VORO	08 22 2331	S13 E70	08 28.3			DAO	240	3	6	3
10442	31839	LEAR	08 23 0115	S13 E66	08 28.0		BG	DAO	100	3	6	2
10442		SVTO	08 23 0635	S11 E67	08 28.3		B	DSO	190	4	9	3
10442		HOLL	08 23 1425	S12 E62	08 28.3		B	DAO	160	5	8	3
10442		MWIL	08 23 1445	S12 E62	08 28.3	5	(B)					
10442		VORO	08 23 2137	S12 E57	08 28.2			DAO	221	2	6	3
10442	31839	LEAR	08 24 0115	S14 E55	08 28.2		B	DSO	100	3	8	1
10442		SVTO	08 24 0724	S11 E53	08 28.3		B	DSO	100	6	9	3
10442		HOLL	08 24 1424	S12 E48	08 28.2		B	DAO	150	7	9	4
10442		VORO	08 24 2251	S12 E43	08 28.2			DAO	132	3	7	3
10442		LEAR	08 25 0105	S13 E42	08 28.2		B	DSO	90	3	7	2
10442	31839	SVTO	08 25 0607	S13 E39	08 28.2		B	DAO	160	4	8	3
10442		TACH	08 25 0707	S11 E40	08 28.3			DSO	68	2	7	4
10442		MWIL	08 25 1430	S12 E35	08 28.2	5	(B)					
10442		HOLL	08 25 1445	S12 E36	08 28.3		B	DAO	110	5	8	3
10442		VORO	08 25 2229	S11 E30	08 28.2			DSO	139	7	7	3
10442	31839	LEAR	08 26 0140	S13 E27	08 28.1		B	DSO	120	5	7	4
10442		TACH	08 26 0910	S13 E24	08 28.2			CAO	81	3	8	4
10442		SVTO	08 26 1305	S12 E22	08 28.2		B	DSO	100	2	9	3
10442		HOLL	08 26 1825	S09 E21	08 28.3		B	DKO	70	9	10	4
10442		VORO	08 26 2138	S11 E17	08 28.2			DSO	148	5	8	3
10442	31839	LEAR	08 27 0045	S13 E15	08 28.2		B	DSO	70	3	9	2
10442		TACH	08 27 0717	S12 E12	08 28.2			CAO	77	3	8	4
10442		SVTO	08 27 1002	S12 E12	08 28.3		B	CSO	110	3	10	3
10442		MWIL	08 27 1445	S12 E10	08 28.4	5	(BF)					
10442		HOLL	08 27 1556	S13 E07	08 28.2		B	CAO	80	7	9	4
10442	31839	VORO	08 28 0002	S11 E03	08 28.2			CSO	126	4	8	3
10442		LEAR	08 28 0115	S12 E02	08 28.2		B	CSO	80	4	9	2
10442		TACH	08 28 0539	S12 E05	08 28.6			CAO	79	3	2	5
10442		SVTO	08 28 1002	S13 E04	08 28.7		B	CSO	110	3	6	3
10442		MWIL	08 28 1500	S13 W02	08 28.5	5	(BF)					
10442	31839	HOLL	08 28 1835	S13 W04	08 28.5		A	HAX	60	1	2	3
10442		VORO	08 28 2224	S13 W06	08 28.5			HSX	91	2		3
10442		LEAR	08 29 0240	S13 W08	08 28.5		A	HSX	100	1	2	4
10442		TACH	08 29 0540	S12 W05	08 28.8			HSX	94	1	1	5
10442		SVTO	08 29 0722	S13 W11	08 28.5		A	HSX	100	1	4	3
10442	31839	MWIL	08 29 1415	S13 W15	08 28.5	5	(BF)					
10442		HOLL	08 29 1545	S13 W15	08 28.5		A	HAX	60	1	2	3
10442		VORO	08 29 2157	S12 W19	08 28.5			HSX	117	1		3
10442		LEAR	08 30 0130	S12 W24	08 28.2		B	DSO	90	2	6	4
10442		TACH	08 30 0449	S14 W25	08 28.3			CAO	136	3	5	4
10442	31839	SVTO	08 30 0836	S12 W25	08 28.5		B	CSO	70	2	3	3
10442		MWIL	08 30 1500	S13 W30	08 28.4	5	(BG)					
10442		HOLL	08 30 1802	S12 W32	08 28.3		B	CAO	60	3	5	2
10442		VORO	08 30 2152	S13 W32	08 28.5			HSX	84	1		3
10442		LEAR	08 31 0125	S13 W36	08 28.3		B	CSO	50	2	2	3
10442	31839	TACH	08 31 0539	S12 W37	08 28.4			HSX	67	1	2	4
10442		SVTO	08 31 0630	S13 W38	08 28.4		A	HSX	80	1	3	3
10442		MWIL	08 31 1430	S13 W42	08 28.4	5	(AF)					
10442		VORO	08 31 2150	S13 W46	08 28.4			HAX	102	1		3
10442		LEAR	09 01 0125	S12 W48	08 28.5		B	CAO	70	2	2	2
10442	31839	SVTO	09 01 0617	S13 W53	08 28.4		B	CSO	90	4	4	3
10442		MWIL	09 01 1415	S13 W55	08 28.5	5	(BP)					
10442		HOLL	09 01 1430	S13 W55	08 28.5		B	CSO	80	6	3	3
10442		LEAR	09 02 0157	S12 W63	08 28.4		A	HSX	140	1	2	4
10442		VORO	09 02 0336	S13 W63	08 28.5			HAX	92	1		2
10442	31839	SVTO	09 02 0628	S14 W65	08 28.4		A	HSX	70	1	2	3
10442		MWIL	09 02 1430	S12 W69	08 28.5	5	(AF)					
10442		HOLL	09 02 1710	S14 W71	08 28.4		A	HSX	110	1	2	2
10442		VORO	09 02 2146	S13 W72	08 28.6			HAX	208	1		2
10442		LEAR	09 03 0137	S11 W75	08 28.5		A	HSX	180	1	4	2
10442	31839	SVTO	09 03 0635	S13 W77	08 28.6		A	HSX	60	1	2	3
10442		MWIL	09 03 1445	S13 W81	08 28.6	4	(AF)					
10444		HOLL	08 23 1425	N09 E65	08 28.5		A	HSX	40	3	2	3

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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
10444	31840	MWIL	08	23	1445	N10	E65	08	28.5	4	(B)					
10444		VORO	08	23	2137	N11	E59	08	28.3			HRX	13	1		3
10444		LEAR	08	24	0115	N08	E58	08	28.4		B	BRO	30	2	2	1
10444		HOLL	08	24	1424	N09	E49	08	28.3		A	AXX	10	2	1	4
10444	31840	MWIL	08	25	1430	N11	E41	08	28.7	4	(B)					
10444		HOLL	08	25	1445	N12	E41	08	28.7		B	CSO	20	5	3	3
10444		VORO	08	25	2229	N11	E36	08	28.6			BXO	14	4	3	3
10444		LEAR	08	26	0140	N10	E34	08	28.6		B	BXO	10	2	3	4
10444		SVTO	08	26	1305	N10	E27	08	28.6		A	HRX	10	1		3
10444		HOLL	08	26	1825	N07	E26	08	28.7		B	DAI	90	24	7	4
10444		VORO	08	26	2138	N10	E21	08	28.5			AXX	6	5	1	3
10444		LEAR	08	27	0045	N09	E20	08	28.5		B	CAO	30	2	2	2
10444		TACH	08	27	0717	N10	E18	08	28.6			AXX	16	1	1	4
10444		SVTO	08	27	1002	N09	E14	08	28.5		B	CSO	20	4	4	3
10444	31840	MWIL	08	27	1445	N10	E12	08	28.5	4	(B)					
10444		HOLL	08	27	1556	N12	E12	08	28.6		B	CSO	40	10	8	4
10444		VORO	08	28	0002	N10	E07	08	28.5			CAI	56	11	5	3
10444		LEAR	08	28	0115	N08	E06	08	28.5		B	DSO	40	7	6	2
10444		TACH	08	28	0539	N09	E04	08	28.5			BRI	20	9	4	5
10444		SVTO	08	28	1002	N09	E04	08	28.7		B	DSO	50	9	6	3
10444	31840	MWIL	08	28	1500	N09	W01	08	28.5	4	(B)					
10444		HOLL	08	28	1835	N09	W06	08	28.3		B	DAO	70	13	7	3
10444		VORO	08	28	2224	N09	W06	08	28.5			DRI	35	6	6	3
10444		LEAR	08	29	0240	N09	W08	08	28.5		B	DSO	20	5	8	4
10444		TACH	08	29	0540	N09	W10	08	28.5			BRI	12	6	5	5
10444		SVTO	08	29	0722	N09	W12	08	28.4		B	DSO	30	7	8	3
10444	31840	MWIL	08	29	1415	N08	W15	08	28.5	4	(B)					
10444		HOLL	08	29	1545	N09	W18	08	28.3		B	CSO	20	3	8	3
10444		VORO	08	29	2157	N10	W19	08	28.5			DRI	31	6	8	3
10444		LEAR	08	30	0130	N10	W21	08	28.5		B	DSO	30	5	9	4
10444		TACH	08	30	0449	N08	W23	08	28.5			BRI	17	8	8	4
10444		SVTO	08	30	0836	N09	W25	08	28.5		B	DSO	40	3	9	3
10444	31840	MWIL	08	30	1500	N09	W29	08	28.4	4	(B)					
10444		HOLL	08	30	1802	N08	W31	08	28.4		B	DSO	50	13	9	2
10444		VORO	08	30	2152	N10	W33	08	28.4			DRI	42	9	9	3
10444		LEAR	08	31	0125	N09	W36	08	28.3		B	DSO	50	11	10	3
10444		TACH	08	31	0539	N10	W37	08	28.4			BRI	7	6	9	4
10444		SVTO	08	31	0630	N08	W37	08	28.5		B	CSO	40	8	11	3
10444	31840	MWIL	08	31	1430	N10	W42	08	28.4	4	(B)					
10444		VORO	08	31	2150	N09	W51	08	28.1			AXX	4	1		3
10444		LEAR	09	02	0157	N11	W62	08	28.5		B	CSO	20	2	2	4
10444C		TACH	09	01	0607	S14	W51	08	28.5			HA	96	2	2	4
10444C		TACH	09	02	0944	S14	W66	08	28.5			HSX	83	1	2	4
10444C		TACH	09	03	0517	S13	W76	08	28.6			HSX	59	1	2	4
10447		TACH	08	27	0717	N16	E18	08	28.7			AXX	3	1	1	4
10447	31842	MWIL	08	27	1445	N16	E12	08	28.5	4	(B)					
10447		VORO	08	28	0002	N16	E07	08	28.5			CRO	31	5	3	3
10447		LEAR	08	28	0115	N16	E05	08	28.4		B	DAO	30	5	4	2
10447		TACH	08	28	0539	N15	E04	08	28.5			BRO	7	5	3	5
10447		SVTO	08	28	1002	N16	E03	08	28.6		B	CSO	20	4	4	3
10447	31842	MWIL	08	28	1500	N16	W02	08	28.5	4	(B)					
10447		HOLL	08	28	1835	N15	W04	08	28.5		B	CSO	20	6	5	3
10447		VORO	08	28	2224	N16	W07	08	28.4			CRO	11	3	4	3
10447		LEAR	08	29	0240	N15	W08	08	28.5		B	DSO	20	5	5	4
10447		TACH	08	29	0540	N15	W11	08	28.4			BRI	11	5	5	5
10447		SVTO	08	29	0722	N15	W14	08	28.2		B	CRO	10	2	2	3
10447	31842	MWIL	08	29	1415	N15	W17	08	28.3	4	(B)					
10447		HOLL	08	29	1545	N15	W19	08	28.2		A	HSX	10	1	2	3
10447		VORO	08	29	2157	N15	W22	08	28.2			HRX	9	1		3
10447		LEAR	08	30	0130	N16	W25	08	28.2		B	BXO	10	2	2	4
10447		TACH	08	30	0449	N13	W26	08	28.2			AR	2	3	1	4
10447		SVTO	08	30	0836	N15	W28	08	28.2		A	HRX	10	2	1	3
10447	31842	MWIL	08	30	1500	N14	W29	08	28.4	4	(B)					
10447		HOLL	08	30	1802	N14	W34	08	28.2		A	HSX	10	2	2	2
10447		VORO	08	30	2152	N14	W36	08	28.2			AXX	4	4		3
10447		LEAR	08	31	0125	N15	W37	08	28.2		B	CRO	10	2	2	3
10447		TACH	08	31	0539	N15	W40	08	28.2			AXX	3	1	1	4

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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
10447		SVTO	08 31 0630	N14 W42	08 28.1		A	AXX		1		3
10447	31842	MWIL	08 31 1430	N15 W46	08 28.1	3	(AP)					
10445		LEAR	08 25 0105	N03 E50	08 28.8		A	AXX	10	1	1	2
10445	31841	MWIL	08 25 1430	N04 E43	08 28.8	4	(B)					
10445		HOLL	08 25 1445	N04 E42	08 28.7		B	DSO	40	4	4	3
10445		VORO	08 25 2229	N04 E38	08 28.8			CAI	80	13	3	3
10445		LEAR	08 26 0140	N03 E36	08 28.7		B	DAO	30	12	5	4
10445		TACH	08 26 0910	N03 E31	08 28.7			BRI	44	9	5	4
10445		SVTO	08 26 1305	N03 E30	08 28.8		B	DAO	140	12	6	3
10445		VORO	08 26 2138	N05 E24	08 28.7			DAI	157	21	5	3
10445		LEAR	08 27 0045	N03 E22	08 28.7		B	DAO	90	11	6	2
10445		TACH	08 27 0717	N04 E19	08 28.7			BRI	49	12	6	4
10445		SVTO	08 27 1002	N04 E17	08 28.7		B	DAO	110	12	8	3
10445	31841	MWIL	08 27 1445	N03 E14	08 28.7	5	(B)					
10445		HOLL	08 27 1556	N03 E14	08 28.7		B	DSI	130	13	7	4
10445		VORO	08 28 0002	N03 E09	08 28.7			DAI	141	8	6	3
10445		LEAR	08 28 0115	N03 E07	08 28.6		B	DAO	90	6	6	2
10445		TACH	08 28 0539	N02 E05	08 28.6			BRI	32	8	6	5
10445		SVTO	08 28 1002	N02 E05	08 28.8		B	DSO	70	7	8	3
10445	31841	MWIL	08 28 1500	N03 E00	08 28.6	4	(B)					
10445		HOLL	08 28 1835	N03 W03	08 28.5		B	DAO	40	17	8	3
10445		VORO	08 28 2224	N03 W05	08 28.5			DAO	44	3	6	3
10445		LEAR	08 29 0240	N03 W08	08 28.5		B	DSO	100	9	8	4
10445		TACH	08 29 0540	N03 W09	08 28.6			BRO	20	3	6	5
10445		SVTO	08 29 0722	N03 W10	08 28.5		B	DAO	30	2	7	3
10445	31841	MWIL	08 29 1415	N03 W14	08 28.5	4	(B)					
10445		HOLL	08 29 1545	N04 W15	08 28.5		B	DAO	60	7	8	3
10445		VORO	08 29 2157	N04 W18	08 28.6			DRO	34	2	7	3
10445		LEAR	08 30 0130	N04 W20	08 28.6		B	DSO	50	4	8	4
10445		TACH	08 30 0449	N03 W22	08 28.5			BRO	16	4	7	4
10445		SVTO	08 30 0836	N03 W25	08 28.5		B	DSO	20	2	8	3
10445	31841	MWIL	08 30 1500	N03 W28	08 28.5	4	(B)					
10445		HOLL	08 30 1802	N03 W28	08 28.6		B	DSO	30	6	10	2
10445		VORO	08 30 2152	N04 W36	08 28.2			AXX	5	2		3
10445		LEAR	08 31 0125	N04 W35	08 28.4		B	DSO	20	4	8	3
10445		TACH	08 31 0539	N05 W39	08 28.3			AXX	2	1	1	4
10445		SVTO	08 31 0630	N04 W42	08 28.1		B	CSO	30	4	3	3
10445	31841	MWIL	08 31 1430	N04 W45	08 28.2	4	(AP)					
10445	31841	MWIL	09 02 1430	N03 W69	08 28.5	4	(B)					
10444D		VORO	08 26 2138	S14 E36	08 29.6			AXX	11	2	2	3
10444D		VORO	09 03 2230	S07 W69	08 29.9			HAX	45	2	3	3
10444A		LEAR	08 30 0130	N10 W05	08 29.7		A	AXX	10	1	1	4
10444B	31847	MWIL	08 28 1500	N24 E24	08 30.5	3	(B)					
10444B		HOLL	08 28 1835	N25 E21	08 30.4		A	AXX	10	1	1	3
10446		SVTO	08 26 1305	S22 E57	08 30.9		B	BXO	20	2	3	3
10446		VORO	08 26 2138	S21 E51	08 30.8			CAO	36	3	4	3
10446		LEAR	08 27 0045	S23 E50	08 30.9		B	DSO	40	2	5	2
10446		TACH	08 27 0717	S23 E46	08 30.8			BXO	29	2	6	4
10446		SVTO	08 27 1002	S21 E43	08 30.7		B	CRO	20	2	1	3
10446	31843	MWIL	08 27 1445	S22 E40	08 30.7	4	(B)					
10446		HOLL	08 27 1556	S23 E39	08 30.7		A	AXX	10	1	1	4
10446		VORO	08 28 0002	S23 E35	08 30.7			AXX	22	5	3	3
10446		LEAR	08 28 0115	S23 E33	08 30.6		B	CRO	30	2	2	2
10446		TACH	08 28 0539	S22 E32	08 30.7			AR	6	2	1	5
10446		SVTO	08 28 1002	S23 E32	08 30.9		B	CSO	30	2	2	3
10446	31843	MWIL	08 28 1500	S23 E26	08 30.6	4	(AP)					
10446		HOLL	08 28 1835	S24 E25	08 30.7		A	AXX	10	2	2	3
10446		VORO	08 28 2224	S22 E22	08 30.6			AXX	4	3		3
10452	31846	MWIL	08 28 1500	S08 E23	08 30.3	4	(B)					
10452		HOLL	08 28 1835	S09 E22	08 30.4		B	CSO	10	5	4	3
10452		VORO	08 28 2224	S08 E18	08 30.3			AXX	5	1		3
10452		LEAR	08 29 0240	S09 E16	08 30.3		A	AXX	10	1	1	4
10452		TACH	08 29 0540	S08 E15	08 30.4			AXX	3	1	1	5

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

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AUGUST 2003

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
10452	31846	MWIL	08 29 1415	S08	E10	08 30.3	3	(AF)					
10452		HOLL	08 29 1545	S09	E09	08 30.3		A	AXX	10	1	1	3
10452		HOLL	08 30 1802	S06	W02	08 30.6		A	AXX		1	1	2
10452		TACH	09 01 0607	S08	W29	08 30.2			AR	3	3	2	4
10452	31852	MWIL	09 01 1415	S08	W34	08 30.1	4	(B)					
10452		LEAR	09 02 0157	S07	W42	08 30.0		B	BXO	10	2	2	4
10452	31853	MWIL	09 03 1445	S09	W65	08 29.8	4	(B)					
10452		HOLL	09 03 1605	S07	W67	08 29.7		A	AXX	20	2	2	3
10452		LEAR	09 04 0136	S08	W73	08 29.7		B	DAO	90	3	6	3
10452		TACH	09 04 0709	S07	W73	08 29.9			AR	22	2	3	4
10452		SVTO	09 04 0835	S09	W76	08 29.7		B	DSO	60	2	6	2
10452	31853	MWIL	09 04 1430	S08	W79	08 29.8	4	(B)					
10452		HOLL	09 04 1442	S08	W78	08 29.9		A	HAX	30	1	1	4
10452B		HOLL	08 26 1825	S15	E55	08 30.9		B	CAO	20	2	4	4
10448		VORO	08 26 2138	N20	E62	08 31.6			AXX	14	1		3
10448	31844	MWIL	08 27 1445	N18	E48	08 31.3	4	(BP)					
10448		HOLL	08 27 1556	N18	E48	08 31.3		A	AXX	10	1	1	4
10448		VORO	08 28 0002	N20	E44	08 31.4			BRO	26	4	3	3
10448		LEAR	08 28 0115	N18	E44	08 31.4		B	CSO	40	4	4	2
10448		TACH	08 28 0539	N19	E41	08 31.4			BRO	11	4	4	5
10448		SVTO	08 28 1002	N19	E42	08 31.6		B	CRO	30	6	5	3
10448	31848	MWIL	08 28 1500	N16	E40	08 31.6	4	(BG)					
10448	31844	MWIL	08 28 1500	N19	E37	08 31.4	5	(B)					
10448		HOLL	08 28 1835	N19	E35	08 31.4		B	DAO	70	9	5	3
10448		VORO	08 28 2224	N20	E31	08 31.3			DAI	83	12	4	3
10448		LEAR	08 29 0240	N19	E29	08 31.3		B	DSO	90	6	5	4
10448		TACH	08 29 0540	N19	E30	08 31.5			CAI	45	7	1	5
10448		SVTO	08 29 0722	N19	E28	08 31.4		B	DAO	90	6	5	3
10448	31844	MWIL	08 29 1415	N20	E24	08 31.4	4	(B)					
10448		HOLL	08 29 1545	N20	E22	08 31.3		B	DAO	60	12	5	3
10448		VORO	08 29 2157	N20	E19	08 31.4			DAI	97	8	4	3
10448		LEAR	08 30 0130	N20	E18	08 31.4		B	DSO	100	10	6	4
10448		TACH	08 30 0449	N19	E15	08 31.3			BRI	29	7	5	4
10448		SVTO	08 30 0836	N20	E15	08 31.5		B	DSO	100	7	7	3
10448	31844	MWIL	08 30 1500	N20	E10	08 31.4	4	(B)					
10448		HOLL	08 30 1802	N20	E09	08 31.4		B	DSO	50	12	7	2
10448		VORO	08 30 2152	N20	E06	08 31.4			CRI	78	13	5	3
10448		LEAR	08 31 0125	N19	E04	08 31.4		B	DSO	60	12	6	3
10448		TACH	08 31 0539	N20	E02	08 31.4			BRI	30	7	5	4
10448		SVTO	08 31 0630	N20	E02	08 31.4		B	DAO	80	8	6	3
10448	31844	MWIL	08 31 1430	N20	W02	08 31.4	5	(B)					
10448		VORO	08 31 2150	N19	W07	08 31.4			CAI	83	7	5	3
10448		LEAR	09 01 0125	N20	W07	08 31.5		B	DAO	50	9	5	2
10448		TACH	09 01 0607	N19	W10	08 31.5			BRI	29	5	4	4
10448		SVTO	09 01 0617	N20	W12	08 31.3		B	DSO	50	6	4	3
10448	31844	MWIL	09 01 1415	N20	W15	08 31.4	4	(B)					
10448		HOLL	09 01 1430	N19	W15	08 31.4		B	DAO	20	15	7	3
10448		LEAR	09 02 0157	N20	W20	08 31.5		B	DSO	40	17	4	4
10448		VORO	09 02 0336	N20	W22	08 31.5			DRI	22	14	5	2
10448		SVTO	09 02 0628	N19	W26	08 31.3		A	AXX	20	4	2	3
10448		TACH	09 02 0944	N19	W24	08 31.6			BRI	37	5	5	4
10448	31844	MWIL	09 02 1430	N20	W28	08 31.5	4	(B)					
10448		HOLL	09 02 1710	N17	W32	08 31.3		B	CSO	20	7	6	2
10448		VORO	09 02 2146	N20	W34	08 31.3			HRX	26	1		2
10448		LEAR	09 03 0137	N20	W36	08 31.3		B	CSO	20	5	3	2
10448		TACH	09 03 0517	N19	W36	08 31.5			BXO	9	2	4	4
10448		SVTO	09 03 0635	N19	W39	08 31.3		B	CRO	20	2	4	3
10448	31844	MWIL	09 03 1445	N19	W42	08 31.4	4	(B)					
10448		HOLL	09 03 1605	N19	W43	08 31.4		A	AXX	10	6	2	3
10448		VORO	09 03 2230	N22	W46	08 31.4			BXO	13	2	4	3
10448		LEAR	09 04 0136	N19	W48	08 31.4		B	BXO	10	3	5	3
10448		TACH	09 04 0709	N20	W53	08 31.2			AXX	4	1	1	4
10448		SVTO	09 04 0835	N19	W53	08 31.3		B	BXO	20	3	4	2
10448	31844	MWIL	09 04 1430	N19	W56	08 31.3	4	(B)					
10448		HOLL	09 04 1442	N20	W57	08 31.2		A	AXX		1		4

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SUDDEN IONOSPHERIC DISTURBANCES

AUGUST 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	0331	0337	0432	2+	1					1	0327	C4.5	
01	0706	0719	0739	3-	5	1	2	1			0706	C3.9	10424
01	0719	0735	0839	2	5		1			2	0706	C3.9	10424
01	0912	0938	0959	2+	1					1	0934	B6.7	10424
01	1044	1051	1112	1+	1					1	1042	B8.8	10424
01	1119	1136	1208	2	5					2	1110	C2.3	10424
01	1325	1342	1419	2	5					2	1321	C2.0	
02	0403	0414U	0528	1	1		1				No flare		
02	1726	1742	1753	1+	1					1	1727	C4.5	10424
02	1933	1937	2037	2+	1					1	1930	C5.9	10424
02	2352	2356	2400	1-	1					1	2341	M1.3	10424
03	0932	0939	1001	1+	3					2	0931	C1.3	10424
03	1146	1211	1312	1	1		1				*		
03	1311	1319	1332	1	1					1	1308	B8.8	
03	1707	1715	1728	1	1		1				No flare		
04	1450	1507	1628	1	1		1				No flare		
05	0905	0920	0942	2	5	1	1	1		6	0907	C3.5	10421
05	1248	1252	1309	3	5	1	2	1		5	1243	M1.7	10424
06	0727	0737	0821	2	3		1			1	0721	B6.6	
06	1602	1619	1647	1	1		1				No flare		
07	1055	1103	1127	1	1		1				No flare		
07	1130	1147	1249	1	1		1				1149	C1.3	
08	1418	1436	1523	2-	5		1			3	1344	C2.3	
08	1707	1717U	1749	1	1		1				No flare		
10	1007	1009	1049	3-	5	1	1	1		5	1011	C3.5	10425
10	1112	1129	1149	2	1					1	1057	C2.1	10425
11	0945	0956	1015	1	1		1				No flare		
12	1004	1009	1042	2-	1					2	1005	C1.6	10431
12	1210	1229	1317	1	1		1				No flare		
12	1401	1459U	1525	1	1		1				No flare		
13	0828	0834	0851	1	3					2	0829	C2.0	10431
13	0937	0951	1008	2-	5	1	2	1		4	0937	C3.0	10431
13	1009	1014	1106	2+	1					1	No flare		
14	0617	0632	0704	2	3		1			2	0611	C6.8	10431
14	0940	0949	1030	2+	1					1	No flare		
15	0235	0247	0302	1+	1					1	0233	C3.1	
15	0625	0628	0637	1-	1					1	No flare		
15	0841	0852	0906	1	1					2	0839	C1.4	10431
15	1046	1049	1112	1+	1					1	1058	C1.5	10431
15	1122	1130	1141	1-	3		1			1	1123	C2.3	10431
15	1258	1310	1323	1-	3		1			1	1305	C2.3	10431
15	1339	1401	1426	1	1		1				No flare		
15	1531	1555	1655	1	1		1				No flare		
16	0432	0442	0501	1+	1					1	0438	C1.6	10431
16	0935	0948	1001	1+	1					1	0946	C1.4	10431
17	0420	0429	0457	2	1					1	0419	C2.1	10431
17	0841	0844	0904	1	3					2	0839	C1.9	10431
18	0902	0909	0931	1+	5					5	0859	C2.4	10431
18	1503	1514	1523	1	1					1	1500	C1.3	10431

* = no flare patrol.

SUDDEN IONOSPHERIC DISTURBANCES

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AUGUST 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			
19	0758	0801	0822	2+	5	1	2	1		4	0738	M2.0	10431
19	0851	0858	0919	1+	3					2	0846	C2.8	
19	0907	0914	0945	2	1					2	0906	C2.0	
19	0948	0958	1057	3	5	1	2	1		6	0945	M2.7	10431
20	0949	0954	1030D	2	1					1	No flare		
20	1538	1549	1620	1	1		1				No flare		
20	1831	1845	1941	2+	1					1	No flare		
21	1518	1520	1540	2	5	1	2	1		2	1515	C4.9	10431
21	1632	1645	1710	1	1		1				1624	B7.6	10431
21	1726	1736	1743	1-	3		1			1	1727	C1.4	10431
22	0758	0807	0836	1	1		1				No flare		
22	1439	1502	1620	1	1		1				No flare		
24	0413	0420	0438	1	1					1	0410	C1.2	10436
24	0627	0639	0729	1	1		1				No flare		
25	0243	0303	0335	2+	1					1	0230	C3.6	10442
25	0820	0853U	0928	1	1		1				No flare		
26	1207	1221	1232	1	1					1	1208	B9.0	10442
26	1551	1603	1638	2-	5		1			2	1549	C4.6	10436
27	0500	0513	0536	2	1					1	0456	C1.9	10436
28	0747	0755	0852	2	1		1				*		
28	1043	1057	1218	1	1		1				No flare		
28	1327	1337	1344	1-	1					1	1324	C1.3	

* = no flare patrol.

OBSERVATORIES REPORTING FOR AUGUST 2003

Athens, Greece	SES	Perth, Australia	SES
Bern, Switzerland	SES	Sofia, Bulgaria	SES
Brookline, Massachusetts, USA	SES	Sussex, United Kingdom	SES
Calcutta, India	SES	Udine City, Italy	SES
Houston, Texas, USA	SES	Upice, Czech Republic	SEA
Isola del Gran Sasso, Italy	SES	Villiersdorp, South Africa	SES
Panska Ves, Czech Republic	SES, SEA, SWF		

Observations are not necessarily continuous.

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

AUGUST 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)	
01	0000 0710	0710	CULG	0215.0	0215.0	III	B	1	50U	160	
			CULG	0328.0	0328.0	III	B	1	23	180	
			ONDR								
	0446 1730	1730	CULG	0458.0	0557.0	III	N	1	20	170	
			LEAR	0504.0	0504.0	III		1	69U	150U	
			HIRA	0504.0	0504.5	III	B	1	80	130	
	0000 0945 0600 1200	0945 1200	IZMI	0623.0U	1025.0U	I	N	1	110	270X	
			CULG	0646.0	0646.0	III	B	1	50U	110	
			IZMI	0835.7	0838.0	III	G	1	45	95	
			IZMI	0846.9	0848.8	III	GG	1	45	160	
			IZMI	0851.3	0853.1	III	G	1	45	90	
			IZMI	0901.8	0908.3	III	GG	1	40	95	
			IZMI	0913.9	0914.6	III	G	2	25X	160	
			HIRA	0914.0	0914.5	III	B	1	25X	140	
			SVTO	0914.0	0914.0	III		1	25	53	
			IZMI	0919.0	0930.0	III	N	1	45	95	
			IZMI	0926.9	0927.0	III	B	2	40	95	
			IZMI	0930.6	0930.9	III	G	2	40	130	
			IZMI	0936.3	0937.7	III	G	1	55	95	
			IZMI	1100.7	1101.2	III	G,C	1	25X	90	
			SVTO	1351.0	1406.0	III	N	1	25	130	
			HOLL	1402.0	1406.0	III		1	25	134	
			SGMR	1402.0	1402.0	III		2	30	55	
			HOLL	1604.0	1605.0	III		1	25	81	
	1943 2400	2400	HIRA								
	2100 2400	2400	CULG	2116.0	2134.0	III	N	1	23	180	
			CULG	2335.0	2337.0	III	G	1	50U	150	
02	0000 0710	0710	CULG	0048.0	0055.0	III	G	1	57U	180	
			CULG	0119.0	0120.0	III	G	1	50U	180	
			CULG	0310.0	0312.0	III	G	1	100	180	
			CULG	0342.0	0342.0	III	B	1	57	180	
	0447 1729 0558 1200	1729 1200	ONDR								
			IZMI	0558.0E	1200.0D	I	N	2	55	270X	
			IZMI	0611.4	0614.9	III	GG	1	50	150	
			CULG	0612.0	0635.0	III	N	1	30	180	
	0000 0944	0944	LEAR	0612.0	0614.0	III		1	25	180	
			SVTO	0612.0	0615.0	III		2	25	180	
			HIRA	0612.5	0613.0	III	B	2	40	140	
			IZMI	0612.6	0613.2	III	G,C	2	25X	215	
			CULG	0613.0	0613.0	III	B	3	23	180	
			IZMI	0613.8	0635.3	III	GG	1	45	140	
			IZMI	0712.5	0714.0	III	G	1	110	155	
			LEAR	0721.0	0922.0	III	N	1	25	180	
			IZMI	0721.3	0722.1	III	G,C	1	45	175	
			HIRA	0721.5	0723.5	III	G	1	25X	150	
			SVTO	0722.0	0723.0	III		1	25	142	
			IZMI	0722.7	0723.5	III	GG	2	25X	210	
			IZMI	0740.0	1200.0D	III	N	2	25X	95U	
			IZMI	0741.3	0743.4	III	G	1	25X	150	
			IZMI	0746.6	0749.4	III	GG	1	25X	125	
			IZMI	0804.6	0806.0	III	G	2	25X	95	
			SVTO	0937.0	0939.0	III		1	25	59	
			IZMI	0939.1	0939.3	III	B	2	25X	85	
			IZMI	1001.3	1001.5	III	B	2	25X	82	
			IZMI	1045.4	1047.2	III	G	2	25X	180	
			SGMR	1115.0	1116.0	III		1	30	55	
			IZMI	1115.7	1116.1	III	G,C	2	25X	170	
			IZMI	1146.0	1146.9	III	G	2	45	175	
			HOLL	1253.0	2300.0	CONT		1	71	180	
	1944 2400	2400	HIRA								
	2100 2400	2400	CULG	2100.0E	2207.0	I	S,C	1	70	160	
			CULG	2116.0	2117.0	III	G	1	50U	300	
			CULG	2147.0	2205.0	III	N	1	20	100	
			CULG	2313.0	2343.0	I	S	1	100	160	
03	0000 0710	0710	CULG	0145.0	0629.0	I	S	1	100	180	
	0448 1727	1727	ONDR								
	0600 1200	1200	IZMI	0600.0E	1200.0D	I	N	2	110	270X	

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OBSERVATION		Sta	EVENT		Event Remarks	Int (1-3)	FREQUENCY		Remarks
Start	End		Start	End			Lower	Upper	
Day (UT)	(UT)		(UT)	(UT)	Spectral Class		(MHz)	(MHz)	
03	0000 0943	IZMI	0601.8	0604.2	III	G	2	45	270X
		CULG	0602.0	0604.0	III	G	1	27	180
		HIRA	0603.0	0604.0	III	G	1	30	200
		SVTO	0809.0	0809.0	III		1	25	56
		IZMI	0837.5	0837.7	III	G	1	45	90
		SVTO	0923.0	0930.0	III		1	25	162
		IZMI	0923.3	0925.3	III	GG	2	25X	190
		HIRA	0923.5	0925.0	III	G	1	25X	310
		SVTO	0927.0	1119.0	CONT		1	25	180
		IZMI	0930.2	0931.9	III	G	2	25X	175
		IZMI	1029.2	1029.3	III	B	1	45	65
		IZMI	1032.6	1034.1	III	G	1	50	85
		IZMI	1052.4	1052.6	III	B	1	50	155
		SGMR	1157.0	1205.0	III		2	30	62
		SVTO	1157.0	1205.0	III		2	25	162
		IZMI	1157.3	1159.0	III	GG	2	25X	270X
		SGMR	1340.0	1340.0	III		1	30	60
		SVTO	1340.0	1340.0	III		1	25U	83U
		SVTO	1500.0	1507.0	III		1	25	67
		SVTO	1729.0	1731.0	III		1	129	180
		HOLL	1730.0	1731.0	III		1	25	180
		SGMR	1730.0	1731.0	III		1	30	55
		PALE	1755.0	1755.0	III		1	25	54
		SGMR	1755.0	1755.0	III		1	30	55
		HOLL	1853.0	1859.0	III		1	25	87
		SGMR	1853.0	1856.0	III		1	30	55
		HOLL	2029.0	2030.0	III		1	25	180
	1945 2400 2100 2400	HIRA	2029.5	2030.0	III	B	2	25X	150
		CULG	2100.0E	2149.0	III	N	1	25	150
		CULG	2136.0	2136.0	III	B	3	20	160
		HIRA	2136.0	2136.5	III	B	2	25X	120
		HOLL	2136.0	2136.0	III		1	25	93
		SGMR	2136.0	2136.0	III		2	30	60
		CULG	2257.0	2257.0	III	B	1	27	140
		CULG	2342.0	2351.0	III	G	2	20	200
		HIRA	2346.0	2351.0	III	G	1	25X	230
		LEAR	2346.0	2350.0	III		1	25	180
04	0000 0720 0000 0942	CULG	0144.0	0145.0	III	G	1	23	180
		HIRA	0144.5	0145.0	III	B	1	25X	110
		CULG	0235.0	0236.0	III	G	1	20	180
		HIRA	0236.0	0236.5	III	B	1	25X	50
		CULG	0253.0	0253.0	III	B	1	20	140
		HIRA	0253.5	0254.0	III	B	1	25X	50
		CULG	0336.0	0336.0	III	B	1	23	90
		CULG	0413.0	0432.0	III	N	1	27	180
	0450 1726 0600 1200	ONDR							
		IZMI	0620.9	0621.3	III	G	1	25X	90
		CULG	0621.0	0621.0	III	B	1	18	150
		HIRA	0621.0	0621.5	III	B	1	25X	80
		SVTO	0621.0	0621.0	III		1	25	77
		IZMI	0626.0	1200.0D	I	N	1	180	270X
		IZMI	0728.1	0730.2	III	G	1	45	90
		HIRA	0752.0	0756.5	III	G	1	30	210
		IZMI	0752.0	0756.6	III	GG	2	25X	250
		LEAR	0752.0	0756.0	III		1	25	180
		SVTO	0752.0	0806.0	III	N	1	25	155
		IZMI	0805.0	0806.6	III	G	1	25X	160
		SVTO	0916.0	0921.0	III		2	25	180
		IZMI	0917.4	0919.2	III	G,C	2	25X	245
		HIRA	0918.0	0919.0	III	G	2	25X	200
		LEAR	0918.0	0919.0	III		1	25	180
		IZMI	0921.4	0921.7	III	G	1	25X	65
		HOLL	1524.0	1525.0	III		1	25	81
		SGMR	1524.0	1525.0	III		1	30	50
		SVTO	1524.0	1524.0	III		1	25	135
		HOLL	1711.0	1715.0	III		1	25	58
		HOLL	1823.0	1824.0	III		1	25	159
		PALE	1823.0	1824.0	III		1	25	131

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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)	
04			SGMR	1823.0	1825.0	III		1	30	80	
			PALE	1853.0	0428.0	III	N	1	25	180	
			HOLL	1942.0	1943.0	III		1	25	160	
			PALE	1942.0	1944.0	III		1	25	134	
			SGMR	1942.0	1943.0	III		1	30	80	
	1945	2400	HIRA	2105.0	2106.0	III	G	3	80	220	
	2100	2400	CULG	2105.0	2106.0	III	G	3	70	300	
05			LEAR	0412.0	0412.0	III		1	25	180	
	0000	0941	HIRA	0412.5	0413.0	III	B	1	25X	130	
	0000	0720	CULG	0413.0	0413.0	III	B	1	20	170	
			CULG	0450.0	0457.0	III	G	1	20	150	
			CULG	0515.0	0518.0	III	G	2	20	90	
			LEAR	0515.0	0516.0	III		1	25	99	
			SVTO	0515.0	0516.0	III		1	25U	81U	
			CULG	0526.0	0526.0	III	B	1	20	90	
			LEAR	0526.0	0526.0	III		1	25	99	
			SVTO	0526.0	0526.0	III		1	26	74	
			CULG	0552.0	0552.0	III	B	1	27	130	
			CULG	0628.0	0631.0	III	G	1	25	100	
	0603	1200	IZMI	0629.7	0630.8	III	G	1	25X	85	
			SVTO	0636.0	0638.0	III		1	25	82	
			IZMI	0636.8	0638.2	III	G	2	25X	240	
			CULG	0637.0	0638.0	III	G	1	25	180	
			LEAR	0637.0	0638.0	III		1	25	180	
			CULG	0650.0	0655.0	III	G	1	23	90	
			SVTO	0748.0	0748.0	III		1	28	57	
			IZMI	0748.2	0748.3	III	B	1	45	145	
			IZMI	0803.4	0803.5	III	B	1	110	160	
			LEAR	0804.0	0805.0	III		1	25	180	
			SVTO	0804.0	0805.0	III		1	25	151	
			HIRA	0804.5	0805.5	III	G	1	25X	130	
			IZMI	0804.7	0805.4	III	GG	2	25X	250	
			IZMI	0855.5	0856.4	III	GG	1	30	150	
			IZMI	0909.0	0921.0	I	S	1	110	270X	
	0451	1724	ONDR	0910.3	0913.4	DCIM	G	1	800X	1906	
			SVTO	0930.0	0936.0	III		1	25	180	
			IZMI	0930.6	0933.7	III	GG	2	25X	245	
			IZMI	0934.5	0937.1	III	GG	2	25X	150	
			IZMI	1046.2	1046.5	III	G	2	220	270X	
			SGMR	1121.0	1122.0	III		1	30	80	
			SVTO	1121.0	1124.0	III		2	25	180	
			IZMI	1121.1	1122.6	III	GG	2	25X	240	
			IZMI	1123.6	1125.2	III	G	1	25X	145	
			ONDR	1245.1	1248.1	DCIM	G	2	2000X	4500X	
			ONDR	1245.1	1248.1	DCIM	GG,SP	2	800X	2000X	
			SVTO	1251.0	1256.0	II		1	43	130	ESS 0339
			SVTO	1415.0	1415.0	III		1	25	80	
			SVTO	1454.0	1454.0	III		1	56	82	
	2100	2400	CULG	2203.0	2203.0	III	B	1	23	80	
	1946	2400	HIRA	2203.5	2204.0	III	B	1	25X	50	
06	0000	0720	CULG	0128.0	0239.0	III	N	1	20	180	
			LEAR	0137.0	0138.0	III		1	25	50	
	0000	0940	HIRA	0137.5	0138.0	III	B	1	25X	50	
			LEAR	0236.0	0237.0	III		1	25	117	
			HIRA	0237.0	0237.5	III	B	1	25X	100	
	0452	1723	ONDR								
			LEAR	0728.0	0729.0	III		1	54	172	
	0555	1200	IZMI	0728.3	0729.0	III	G,C	1	40	240	
			HIRA	0728.5	0729.0	III	B	1	80	200	
			IZMI	0744.5	0745.2	III	G	1	180	270X	
			IZMI	0746.8	0747.5	III	G	1	190	270X	
			HIRA	0826.0	0826.5	III	B	1	30	170	
			LEAR	0826.0	0826.0	III		1	25	170	
			SVTO	0826.0	0829.0	III		1	25	130	
			IZMI	0826.2	0826.4	III	G	2	25X	155	
			IZMI	0829.7	0829.8	III	B	1	45	85	
			IZMI	0851.0	0851.6	III	G	1	45	95	

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OBSERVATION			EVENT			FREQUENCY			Remarks	
Start Day	End (UT)	Sta	Start (UT)	End (UT)	Spectral Class	Event Remarks	Int (1-3)	Lower (MHz)		Upper (MHz)
06		IZMI	1053.2	1053.5	III	G,FS	1	55	240	
		IZMI	1146.5	1146.6	III	G	2	55	270X	
		SGMR	1358.0	1358.0	III		1	30	40	
		SVTO	1358.0	1359.0	III		1	25	126	
		HOLL	1438.0	1438.0	III		1	75	180	
		HOLL	1546.0	1547.0	III		1	25	82	
		HOLL	1723.0	1723.0	III		1	25	59	
		HOLL	1736.0	1739.0	III		1	25	59	
		HOLL	1840.0	1841.0	V		1	25	85	
		PALE	1840.0	1841.0	V		1	25	66	
		SGMR	1840.0	1841.0	V		1	30	80	
		HOLL	1918.0	1920.0	III		1	25	180	
		PALE	1918.0	1920.0	III		1	25	180	
	2100	2400	CULG	2240.0	2240.0	III	B	1	25	180
		CULG	2251.0	2252.0	III	G	1	18	180	
		HOLL	2251.0	2251.0	III		1	25	84	
	1947	2400	HIRA	2251.0	2251.5	III	B	1	25X	50
		CULG	2314.0	2315.0	III	G	1	18	180	
		HIRA	2314.0	2315.0	III	G	1	25X	300	
		HOLL	2314.0	2315.0	III		1	25	85	
07	0000	0720	CULG	0243.0	0243.0	III	B	1	20	90
		CULG	0343.0	0409.0	III	N	1	30	180	
		CULG	0403.0	0404.0	III	G	2	18	180	
	0000	0939	HIRA	0403.0	0404.0	III	B	1	25X	200
		CULG	0441.0	0444.0	III	G	1	20	180	
		HIRA	0443.0	0443.5	III	B	1	25X	50	
		LEAR	0443.0	0444.0	III		1	25	180	
		CULG	0457.0	0457.0	III	B	1	57	130	
		LEAR	0525.0	0526.0	III		1	25	180	
	0550	1200	IZMI	0550.0E	1200.0D	I	S	1	80	270X
		LEAR	0551.0	0552.0	III		1	25	86	
		SVTO	0551.0	0551.0	III		1	25	66	
		IZMI	0551.4	0551.9	III	G	2	25X	155	
		CULG	0552.0	0552.0	III	G	1	20	160	
		CULG	0625.0	0710.0	I	S	1	100	180	
		IZMI	0643.8	0645.0	III	G	1	45	150	
		CULG	0647.0	0649.0	III	N	1	40U	160	
		SVTO	0719.0	0758.0	III	N	2	25	180	
		IZMI	0734.4	0734.5	III	G,C	2	40	145	
		LEAR	0735.0	0736.0	III		1	25	180	
		HIRA	0735.5	0736.0	III	B	2	25X	420	
		IZMI	0735.6	0736.1	III	G,C	3	25X	270X	
		IZMI	0746.3	0746.7	III	G	1	25X	65	
		IZMI	0758.2	0758.6	III	G	1	25X	65	
		IZMI	0844.5	0844.6	III	B	1	40	65	
		SVTO	0938.0	0938.0	III		1	25	123	
		IZMI	0938.1	0938.9	III	G,C	2	25X	255	
		IZMI	0939.8	0940.1	III	G	1	55	160	
		IZMI	0945.3	0946.5	III	GG	1	55	170	
		IZMI	1003.6	1017.1	III	N	1	110	170	
		SVTO	1102.0	1150.0	III	N	2	25	180	
		IZMI	1102.3	1102.8	III	G	2	25X	155	
		IZMI	1110.4	1110.7	III	B	1	25X	55	
		IZMI	1114.7	1116.5	III	G	1	25X	160	
		IZMI	1124.3	1125.1	III	G	2	25X	165	
		SGMR	1128.0	1131.0	III		2	30	80	
		IZMI	1128.2	1134.0	III	GG,C	2	25X	270X	
		IZMI	1139.5	1139.9	III	G,C	1	80	175	
		IZMI	1149.5	1150.1	III	G	1	30	85	
		HOLL	1311.0	1315.0	III		1	25	180	
		SGMR	1312.0	1315.0	III		2	30	65	
		SVTO	1312.0	1315.0	III		2	25	180	
	0453	1722	ONDR	1312.0	1312.4	DCIM	G,W	1	800X	2000X
		SVTO	1334.0	1502.0	III	N	1	25	180	
		HOLL	1410.0	1410.0	III		1	25	77	
		SGMR	1410.0	1411.0	III		2	30	50	
		SGMR	1501.0	1502.0	III		2	30	60	
		HOLL	1553.0	1558.0	III		1	25	85	

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OBSERVATION			EVENT			FREQUENCY			Remarks	
Day	Start (UT)	End (UT)	Sta	Start (UT)	End (UT)	Spectral Class	Event Remarks	Int (1-3)		Lower (MHz)
07			SVTO	1553.0	1617.0	III	N	1	25	82
			SGMR	1558.0	1558.0	III		1	30	65
			HOLL	1801.0	1802.0	III		1	25	149
			SGMR	1801.0	1802.0	III		2	30	80
			HOLL	2029.0	2029.0	III		1	25	75
			PALE	2029.0	2029.0	III		1	25	63
			SGMR	2029.0	2029.0	III		1	30	65
	1948 2400		HIRA	2029.0	2029.5	III	B	1	30	120
	2050 2400		CULG	2113.0	2206.0	I	S	1	110	170
			CULG	2323.0	2323.0	III	B	3	18	200
			HOLL	2323.0	2323.0	III		1	25	85
			HIRA	2323.5	2324.0	III	B	2	25X	180
			CULG	2355.0	2356.0	III	G	1	25	180
			HIRA	2355.0	2355.5	III	B	1	25X	160
			LEAR	2355.0	2355.0	III		1	25	180
08	0000 0720		CULG	0006.0	0025.0	III	N	1	40U	180
			CULG	0122.0	0208.0	III	N	1	20	180
			CULG	0335.0	0342.0	III	G	1	20	180
			LEAR	0338.0	0338.0	III		1	25	127
	0000 0938		HIRA	0338.0	0338.5	III	B	1	80	130
			CULG	0538.0	0538.0	III	G	1	27	180
	0600 1200		IZMI	0617.6	0618.1	III	G,FS	2	45	240
			CULG	0618.0	0618.0	III	G	1	30	180
			IZMI	0740.3	0740.3	III	B,FS	1	55	210
			IZMI	0945.7	0947.1	III	G	2	25X	190
			IZMI	1010.0	1010.6	III	G	1	110	170
			IZMI	1102.5	1102.6	III	B	2	95	190
	0455 1720		ONDR	1110.4	1111.0	DCIM	G	2	1442	2000X
			ONDR	1212.0	1212.1	DCIM	G	1	2869	4061
			ONDR	1212.0	1212.2	DCIM	G	2	800X	2000X
			HOLL	1922.0	1922.0	III		1	25	75
			PALE	1922.0	1922.0	III		1	25	180
	2050 2400		CULG	2106.0	2117.0	III	G	1	25	180
			CULG	2254.0	2256.0	III	G	1	18	180
			HOLL	2254.0	2255.0	III		1	25	78
			PALE	2254.0	2254.0	III		1	25	64
	1949 2400		HIRA	2254.0	2254.5	III	B	1	25X	150
			PALE	2323.0	2323.0	III		1	25	180
09	0000 0720		CULG	0107.0	0107.0	III	B	1	23	150
			CULG	0425.0	0432.0	III	G	1	25	180
	0456 1719		ONDR							
			LEAR	0742.0	0742.0	III		1	25	147
			SVTO	0742.0	0743.0	III		1	25	138
	0608 1200		IZMI	0742.0	0743.3	III	G	2	25X	170
	0000 0937		HIRA	0742.5	0743.0	III	B	1	30	150
			IZMI	1140.0U	1145.8	I	N	1	220	270X
	2050 2400		CULG	2302.0	2302.0	III	B	1	27	90
			CULG	2311.0	2311.0	III	G	1	80	180
			LEAR	2319.0	2323.0	III		1	53	180
			CULG	2320.0	2323.0	III	G	2	25U	200
			HOLL	2321.0	2322.0	III		1	25	180
	1950 2400		HIRA	2322.0	2322.5	III	B	2	80	200
			CULG	2348.0	2350.0	III	G	1	57U	180
10			LEAR	0024.0	0032.0	III		1	74	180
	0000 0936		HIRA	0024.5	0025.0	III	B	1	90	130
	0000 0720		CULG	0025.0	0202.0	III	N	1	27	180
			HIRA	0031.5	0032.0	III	B	1	80	190
			LEAR	0100.0	0306.0	III	N	1	25	180
			CULG	0111.0	0111.0	III	B	3	50U	460
			HIRA	0111.0	0111.5	III	B	3	90	430
			CULG	0455.0	0455.0	III	B	1	100	180
			CULG	0549.0	0549.0	III	B	1	27	90
	0550 1200		IZMI	0715.0U	1150.0U	I	N	1	130	270X
			ONDR	1014.4	1016.3	DCIM	G	1	800X	2000X
	0457 1717		ONDR	1014.5	1016.2	DCIM	GG	2	2000X	4246
			HOLL	1558.0	1559.0	III		1	53	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)	
10			SVTO	1558.0	1559.0	III		2	55	180	
			HOLL	1930.0	1935.0	III		1	25	145	
			PALE	1931.0	1935.0	III		1	25	65	
	2050	2400	CULG	2102.0	2102.0	III	B	1	50U	90	
			CULG	2150.0	2152.0	III	G	1	30	180	
	1950	2400	HIRA	2150.0	2151.5	III	G	1	25X	210	
11	0000	0130	HIRA								
	0000	0720	CULG								
	0214	0935	HIRA								
	0458	1715	ONDR								
	0550	1200	IZMI								
	1951	2400	HIRA								
	2040	2400	CULG	2046.0	2046.0	III	B	1	50U	80	
			CULG	2338.0	2338.0	III	B	1	100	180	
12			LEAR	0306.0	0309.0	III		1	25	180	
			LEAR	0356.0	0400.0	III		1	25	180	
	0000	0720	CULG	0357.0	0359.0	III	G	2	18	200	
	0000	0933	HIRA	0357.0	0359.0	III	G	1	25X	180	
			CULG	0411.0	0413.0	III	G	1	50U	85	
			LEAR	0649.0	0654.0	III		1	25	180	
			SVTO	0649.0	0651.0	III		1	25	180	
			HIRA	0649.5	0651.0	III	G	1	30	200	
	0600	1200	IZMI	0649.7	0654.3	III	GG	2	25X	255	
			CULG	0650.0	0651.0	III	G	3	23	180	
			CULG	0651.0	0654.0	III	G	1	35U	170	
			CULG	0700.0	0703.0	III	G	1	35U	180	
			IZMI	0933.7	0934.1	III	G	1	40	65	
	0500	1714	ONDR	1005.0	1010.0	DCIM	G	1	2430	4500X	
			IZMI	1036.0U	1129.0U	I	N	1	180	270X	
			IZMI	1121.5	1122.8	III	G	2	25X	160	
			SVTO	1122.0	1122.0	III		1	25	148	
			IZMI	1127.5	1128.0	III	G	1	110U	240	
			HOLL	1528.0	1529.0	III		1	25	121	
			SVTO	1528.0	1529.0	III		1	26	121	
			HOLL	1829.0	1831.0	III		1	25	180	
			SGMR	1829.0	1831.0	III		3	30	70	
			PALE	1958.0	2000.0	III		1	25	85	
	1952	2400	HIRA	1958.5	2000.0	III	G	1	30	130	
	2040	2400	CULG	2153.0	2155.0	III	G	2	25	170	
			HIRA	2153.5	2155.0	III	G	1	25X	130	
13	0000	0730	CULG								
	0000	0932	HIRA								
	0501	1712	ONDR								
	0601	1200	IZMI								
	1953	2400	HIRA								
	2040	2400	CULG								
			HOLL	2212.0	2214.0	III		1	25	71	
14	0000	0730	CULG								
	0000	0931	HIRA								
	0555	1200	IZMI	1121.1	1121.1	III	B	1	220	270X	
			IZMI	1137.6	1137.8	III	G	2	130	215	
			IZMI	1138.9	1139.0	III	G	1	155	175	
			IZMI	1140.9	1141.5	III	G	1	180	270X	
	0502	1711	ONDR	1355.4	1355.5	DCIM	G	2	800X	1067	
	2040	2400	CULG	2040.0E	2400.0D	CONT		2	27	110	
			CULG	2109.0	2109.0	III	G	1	100	180	
			CULG	2240.0	2400.0D	I	S	1	40	130	
			LEAR	2330.0	0928.0	CONT		1	40	180	
15			CULG	0000.0E	0730.0D	I	S,C	1	45	160	
	0000	0730	CULG	0000.0E	0138.0	CONT		1	30	110	
			CULG	0005.0	0130.0	III	N	1	25	180	
			CULG	0146.0	0155.0	III	G	2	75	320	
			CULG	0326.0	0329.0	III	G	1	65	320	
	0503	1709	ONDR								

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OBSERVATION			Sta	EVENT		Spectral Class	Event Remarks	Int (1-3)	FREQUENCY		Remarks
Start Day	End Day	Time (UT)		Start (UT)	End (UT)				Lower (MHz)	Upper (MHz)	
15	0555	1200	IZMI	0555.0E	1136.0U	I	S	1	50	160	
			IZMI	0626.8	0627.2	III	GG	2	80	270X	
			CULG	0627.0	0640.0	III	G	1	75	470	
			IZMI	0630.3	0630.5	III	G,U	2	90	270X	
			IZMI	0639.1	0639.8	III	GG	2	140	270X	
			IZMI	0704.8	0706.4	III	GG,C	2	90	270X	
			CULG	0705.0	0707.0	III	G	2	80	700	
			IZMI	0928.1	0928.2	III	GG,C,U	2	170	270X	
			SVTO	1008.0	1012.0	III		1	25	180	
			IZMI	1008.6	1009.3	III	GG	2	25X	150	
			IZMI	1011.5	1012.5	III	GG	2	25X	150	
			IZMI	1102.6	1105.6	III	GG,C,FS	2	25X	270X	
			SVTO	1103.0	1104.0	III		1	25	150	
			PALE	2108.0	2109.0	III		1	25	91	
	2040	2400	CULG	2109.0	2111.0	III	G	1	23	80	
			CULG	2125.0	2301.0	I	S	1	100	150	
			CULG	2258.0	2259.0	III	G	1	18	90	
			CULG	2336.0	2336.0	III	B	2	57U	180	
16	0000	0730	CULG	0155.0	0155.0	III	B	1	27	90	
	0200	0929	HIRA								
	0600	1205	IZMI								
	0625	1707	ONDR								
	1955	2400	HIRA								
	2040	2400	CULG								
17	0000	0730	CULG								
	0000	0928	HIRA								
	0600	1200	IZMI								
	0622	1703	ONDR	0904.0	0904.4	DCIM	G,W	1	2000X	4500X	
	1956	2400	HIRA								
	2040	2400	CULG								
18	0000	0730	CULG	0239.0	0239.0	III	B	1	18	50	
			CULG	0341.0	0343.0	III	G	1	20	90	
			CULG	0633.0	0633.0	III	B	1	27	80	
	0555	1200	IZMI	0900.3	0902.3	III	GG,C	2	25X	250	
			LEAR	0901.0	0903.0	V		2	25	180	
			SVTO	0901.0	0903.0	V		2	25	180	
	0000	0927	HIRA	0901.0	0903.0	III	B	1	30	200	
	0624	1704	ONDR	0901.1	0903.3	DCIM	G	2	2000X	4500X	
			IZMI	0901.4	0903.7	V	G	2	25X	160	
			HOLL	1357.0	1358.0	III		1	25	180	
			SVTO	1357.0	1357.0	III		1	41	180	
			HOLL	1707.0	1708.0	III		1	51	150	
			SVTO	1707.0	1708.0	III		1	54	164	
	1957	2400	HIRA								
	2040	2400	CULG	2251.0	2257.0	III	G	1	60	180	
19	0000	0114	HIRA								
	0000	0730	CULG	0016.0	0017.0	III	G	1	100	180	
			CULG	0027.0	0027.0	III	B	1	25	70	
			CULG	0149.0	0149.0	III	B	1	60	180	
			CULG	0325.0	0328.0	III	G	1	110	180	
			CULG	0407.0	0409.0	III	G	1	30	280	
			CULG	0414.0	0415.0	III	G	1	30	180	
			CULG	0425.0	0425.0	III	B	1	90	180	
			CULG	0445.0	0451.0	III	G	1	40	200	
			CULG	0545.0	0547.0	III	G	1	57	180	
			CULG	0630.0	0708.0	III	N	1	57	180	
	0555	1205	IZMI	0630.2	0631.2	III	GG	2	110	170	
			IZMI	0636.5	0636.6	III	G	1	115	160	
			IZMI	0751.9	0804.0U	III	N	1	110U	270X	
			IZMI	0754.5	0757.9	III	GG	2	25X	270X	
	0449	0925	HIRA	0754.5	0801.0	III	G	3	25X	500	
			LEAR	0755.0	0801.0	V		3	25	180	
			SVTO	0755.0	0803.0	V		3	25	180	
			IZMI	0755.3	0758.6	V	G	3	25X	160	
	0509	1702	ONDR	0755.3	0801.1	DCIM	G	2	2000X	4500X	

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Start Day (UT)	End Day (UT)		Start (UT)	End (UT)			Lower (MHz)	Upper (MHz)	
19		IZMI	0756.7	0804.0U	I	NG	2	110U	270X
		IZMI	0757.8	0801.6	III	GG,FS,C	2	25X	220
		IZMI	0758.1	0758.8	II	HARM	2	70	160
		HIRA	0804.0	0813.0	II		1	40	80
		LEAR	0804.0	0819.0	II		1	25	85
		SVTO	0804.0	0828.0	II		1	25	79
		IZMI	0804.6	0814.6	II	HARM	2	25X	70
		IZMI	0814.2	0823.4	I	N	2	25X	80
		IZMI	0823.0	0826.7	II	G	1	45	65
		IZMI	0928.0	0928.4	III	G	1	120	270X
		IZMI	0938.1	0938.3	III	G	2	220	270X
		ONDR	0947.2	1024.5	DCIM	G	2	2000X	4500X
		IZMI	0952.0	1200.0	I	S,C	2	45U	270X
		IZMI	0956.9	1016.7	II	HARM	2	25X	95
		SVTO	0957.0	1014.0	II		2	25	151
		SVTO	1001.0	1340.0	IV		1	25	180
		IZMI	1008.8	1030.0U	III	N	2	25X	270X
		ONDR	1105.5	1135.0	DCIM	G	2	2000X	4500X
		SVTO	1548.0	1549.0	III		1	28	171
	1958 2400	HIRA							
	2040 2400	CULG							
20	0510 1700	ONDR							
	0000 0730	CULG	0542.0	0550.0	III	G	1	27	180
	0000 0924	HIRA	0543.0	0543.5	III	B	1	80	200
		CULG	0609.0	0611.0	III	G	3	20	270
		SVTO	0609.0	0610.0	III		2	25	180
		HIRA	0610.0	0611.0	III	G	2	40	290
		LEAR	0610.0	0610.0	III		1	25	180
	0600 1200	IZMI	0610.9	0612.2	III	GG,FS,C	2	25X	270X
		HIRA	0836.0	0837.0	III	B	1	40	150
		IZMI	0836.0	0837.0	III	G,C	2	25X	215
		LEAR	0836.0	0836.0	III		1	25U	163U
		SVTO	0836.0	0836.0	III		1	25	125
		IZMI	0928.4	0928.6	III	G	2	55	190
		IZMI	1014.5	1014.8	III	G	1	45	140
		SVTO	1103.0	1104.0	III		1	25	137
		IZMI	1103.4	1104.0	III	G	2	40	160
	2040 2400	CULG	2330.0	2331.0	III	G	1	30	120
		CULG	2350.0	2350.0	III	B	2	20	180
	1959 2400	HIRA	2350.5	2351.0	III	B	1	25X	70
21	0000 0730	CULG	0409.0	0411.0	III	G	1	27	180
	0000 0922	HIRA	0410.5	0411.0	III	B	1	25X	100
		CULG	0438.0	0451.0	III	N	1	27	150
	0605 1200	IZMI	0746.2	0749.0	III	G	1	185	270X
		IZMI	0800.2	0806.4	III	GG	1	35	95
		IZMI	0809.5	0910.6	III	GG	1	40	90
		IZMI	0924.8	0924.8	III	B	2	240	270X
		IZMI	0942.2	0951.1	III	GG	1	40	85
		IZMI	1004.3	1004.9	III	GG,C	2	130	270X
		IZMI	1009.0	1009.3	III	G,C	2	110	270X
		ONDR	1516.5	1529.5	DCIM	G	2	800X	2000X
	0511 1658	ONDR	1517.2	1522.2	DCIM	G	2	2000X	4500X
		HOLL	1730.0	1731.0	III		2	25	180
		PALE	1730.0	1730.0	III		2	25	180
		SGMR	1730.0	1731.0	III		2	30	80
		HOLL	1944.0	2032.0	III	N	1	25	97
	1959 2400	HIRA							
	2040 2400	CULG							
		HOLL	2350.0	2350.0	III		1	25	70
22	0000 0921	HIRA							
	0000 0730	CULG	0315.0	0730.0D	III	S,C	2	30	180
		LEAR	0319.0	0930.0	CONT		1	25	180
		CULG	0345.0	0507.0	I	S	1	100	180
		SVTO	0450.0	1513.0	CONT		1	25	180
	0550 1200	IZMI	0550.0E	0855.0U	I	S,C	2	45U	160U
		IZMI	0855.0	0950.0U	I	N	1	45	160

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OBSERVATION			EVENT				FREQUENCY			Remarks
Day	Start (UT)	End (UT)	Sta	Start (UT)	End (UT)	Spectral Class	Event Remarks	Int (1-3)	Lower (MHz)	
22			IZMI	1059.0	1059.1	III	B	1	45	90
			SGMR	1246.0	1246.0	III		1	30	55
			HOLL	1550.0	1554.0	III		1	108	180
			HOLL	1606.0	1608.0	III		1	25	180
			SVTO	1606.0	1608.0	III		1	25	180
			ONDR	1615.0	1620.4	DCIM	G	2	800X	2000X
	0513	1657	ONDR	1615.0	1618.1	DCIM	G	1	2000X	4500X
			ONDR	1628.3	1633.3	DCIM	G	1	2205	4500X
			PALE	1952.0	1956.0	III		2	25	180
	2000	2400	HIRA							
	2040	2400	CULG	2040.0E	2040.0D	I	S	1	130	180
			CULG	2145.0	2222.0	III	N	1	23	100
			LEAR	2317.0	0930.0	CONT		1	80	180
23	0000	0920	HIRA							
	0000	0730	CULG	0000.0E	0730.0D	I	S	1	100	180
			CULG	0054.0	0106.0	III	G	1	27	160
			CULG	0229.0	0730.0D	III	N	1	20	160
	0514	1655	ONDR							
			IZMI	0601.0E	1200.0D	III	N	1	25X	95
	0601	1200	IZMI	0601.0E	1200.0D	I	S	1	110	250
			IZMI	0906.1	0906.2	III	B,FS	2	35	65
			IZMI	0912.4	0914.4	III	G	1	45	90
			SVTO	0935.0	0937.0	III		1	25	148
			IZMI	0935.6	0937.1	III	G	2	25X	95
			IZMI	0940.2	0940.3	UNCLF		2	40	65
			SVTO	1009.0	1235.0	CONT		1	80	180
			IZMI	1027.0	1027.1	III	B	1	40	65
			HOLL	1552.0	2000.0	III	N	1	25	75
			SGMR	1915.0	1916.0	III		1	30	60
			PALE	1931.0	1934.0	III		1	25	75
	2001	2400	HIRA							
			CULG	2040.0E	2400.0D	III	N	1	23	130
	2040	2400	CULG	2040.0E	2400.0D	I	S	1	100	180
			LEAR	2247.0	0931.0	CONT		1	82	180
24	0000	0919	HIRA							
			CULG	0503.0E	0730.0D	III	S	1	23	150
	0503	0730	CULG	0503.0E	0730.0D	I	S	1	110	180
	0515	1653	ONDR							
			IZMI	0604.0E	1202.0D	I	S	2	110	270X
			IZMI	0604.0E	1202.0D	III	N	1	25X	270X
			SVTO	0825.0	1715.0	CONT		1	116	180
			IZMI	0929.7	0930.7	III	G	2	25X	90
			PALE	1816.0	1822.0	III		1	25	162
	2002	2400	HIRA							
	2040	2400	CULG	2040.0E	2327.0	I	S	1	110	180
			CULG	2122.0	2345.0	III	N	1	25	130
25			LEAR	0022.0	0024.0	III		1	25	127
			PALE	0022.0	0024.0	III		1	25	68
	0000	0730	CULG	0022.0	0133.0	III	N	1	27	140
	0000	0917	HIRA	0024.5	0025.0	III	B	1	25X	80
			CULG	0113.0	0158.0	I	S	1	110	180
			CULG	0242.0	0730.0D	III	S,C	2	25	200
			LEAR	0246.0	0931.0	CONT		1	25	180
			CULG	0306.0	0313.0	III	G	3	23	1300
			HIRA	0306.0	0313.0	III	G	1	25X	1200
			PALE	0306.0	0312.0	III		1	25	180
			PALE	0312.0	0340.0	CONT		1	25	86
			IZMI	0555.0E	1200.0D	III	N	1	45U	95U
	0550	1200	IZMI	0555.0E	1200.0D	I	S	2	50	160
			IZMI	0630.4	0632.9	III	GG,FS	2	45	95
			IZMI	0658.2	0658.4	III	G	2	110	270X
			IZMI	0708.0	0709.3	III	GG	1	110	270X
			IZMI	0712.3	0714.3	III	GG,FS	2	45	190
			IZMI	0718.3	0718.5	III	G,FS	2	35	75
			IZMI	0821.8	0821.9	III	B	1	45	65
			SVTO	0901.0	1230.0	CONT		1	25	180

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OBSERVATION			Sta	EVENT		Event Remarks	Int (1-3)	FREQUENCY		Remarks
Start Day (UT)	End (UT)			Start (UT)	End (UT)	Spectral Class		Lower (MHz)	Upper (MHz)	
25			HOLL	1509.0	1757.0	III	N	1	25	113
	0517 1651	ONDR		1512.3	1513.3	DCIM	G,W	1	2303	4500X
	2003 2400	HIRA								
	2040 2400	CULG								
26			HIRA							
	0000 0730	CULG		0031.0	0033.0	III	G	1	30	70
		CULG		0138.0	0216.0	III	N	1	30	140
		LEAR		0253.0	0300.0	III		1	25	180
	0000 0916	HIRA		0254.5	0255.0	III	G	1	25X	220
		CULG		0255.0	0255.0	III	G	2	18	180
		HIRA		0300.5	0302.0	III	G	1	80	200
		CULG		0301.0	0302.0	III	G	1	40	180
	0555 1200	IZMI		0758.2	0759.0	III	G	2	45	95
		IZMI		0802.9	0803.3	III	G	1	40	95
		IZMI		1013.8	1014.1	III	G,HARM,U	2	40	95
		IZMI		1147.0	1151.0	III	G	1	35	60
		IZMI		1157.4	1159.0	III	G	1	50	65
		HOLL		1404.0	1409.0	III		1	25	94
		SGMR		1404.0	1405.0	III		1	30	65
		SVTO		1404.0	1405.0	III		1	25	66
		HOLL		1523.0	1531.0	III		1	25	180
		SGMR		1523.0	1523.0	III		1	30	60
		SVTO		1523.0	1523.0	III		1	25U	84U
		HOLL		1550.0	1550.0	III		1	25	180
		SGMR		1550.0	1550.0	III		1	30	60
		SVTO		1550.0	1550.0	III		1	25	180
	0518 1649	ONDR		1551.5	1553.3	DCIM	GG	2	2605	4500X
		PALE		1744.0	1746.0	III		1	25	145
		SGMR		1744.0	1746.0	III		1	30	60
		PALE		1851.0	1852.0	III		1	34	61
	2004 2400	HIRA								
	2040 2400	CULG		2040.0E	2129.0	III	N	1	27	180
27			HIRA							
	0000 0915	CULG		0142.0	0220.0	III	N	1	27	180
	0000 0730	LEAR		0211.0	0220.0	III	N	1	25	180
		CULG		0340.0	0340.0	III	G	1	30	100
		CULG		0506.0	0534.0	III	N	1	23	180
	0519 1647	ONDR								
	0600 1200	IZMI		0600.0E	1200.0D	I	N	1	150	270
		CULG		0622.0	0622.0	III	B	1	25	90
		CULG		0652.0	0652.0	III	G	1	23	140
		IZMI		0921.8	0921.9	III	G	1	125	270X
		IZMI		1021.5	1021.7	III	B	1	45	150
		IZMI		1027.3	1027.4	III	B	1	50	90
		IZMI		1050.2	1050.5	III	G	2	45	215
		SVTO		1121.0	1203.0	III	N	1	25	180
		IZMI		1121.7	1122.9	III	GG	2	25X	250
		IZMI		1123.9	1125.4	III	GG	2	25X	250
		IZMI		1129.4	1130.2	III	G	1	40	85
		IZMI		1140.5	1141.1	III	G,C	1	45	170
		IZMI		1143.8	1144.2	III	G	1	55	145
		SVTO		1346.0	1437.0	III	N	2	25	180
		SGMR		1348.0	1348.0	III		1	30	80
	2040 2400	CULG		2040.0E	2229.0	I	S	1	110	180
		CULG		2058.0	2058.0	III	G	1	30	90
		CULG		2235.0	2329.0	III	N	1	27	180
	2005 2400	HIRA		2240.5	2246.0	III	G	1	30	1100
		CULG		2243.0	2246.0	III	G	2	27	900
		CULG		2305.0	2306.0	III	G	2	27	200
		HIRA		2305.0	2306.0	III	G	1	25X	170
		HOLL		2305.0	2305.0	III		1	25	123
28			CULG							
	0000 0730	CULG		0220.0	0730.0D	III	N	1	23	180
		CULG		0222.0	0222.0	III	B	2	20	160
		LEAR		0222.0	0222.0	III		1	25	88
	0000 0914	HIRA		0222.0	0222.5	III	B	1	25X	90
		LEAR		0304.0	0304.0	III		1	25	103

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Aug 03

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

AUGUST 2003

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)
28			PALE	0304.0	0304.0	III		1	25	87	
			HIRA	0304.5	0305.0	III	B	1	25X	100	
			CULG	0305.0	0305.0	III	B	3	18	130	
			LEAR	0319.0	0336.0	III	N	1	25	46	
			LEAR	0356.0	0842.0	III	N	1	25	180	
			HIRA	0513.0	0514.0	III	B	1	25X	210	
			SVTO	0513.0	0513.0	III		1	25	180	
			SVTO	0531.0	0638.0	III	N	2	25	180	
			CULG	0547.0	0551.0	III	G	3	20	180	
			HIRA	0547.0	0551.0	III	G	1	30	210	
0605	1200		IZMI	0549.0E	0551.4	III	GG,C	2	35	95U	
			IZMI	0606.9	0613.6	III	GG	1	45	85	
			IZMI	0608.2	0610.4	III	G	2	25X	100	
			HIRA	0608.5	0609.0	III	B	1	30	100	
			CULG	0609.0	0609.0	III	B	3	27	90	
			IZMI	0630.6	0638.7	III	GG	2	45	155	
			SVTO	0651.0	0658.0	III		2	25	180	
			IZMI	0651.4	0658.4	III	GG	2	25X	270X	
			HIRA	0653.5	0658.5	III	G	2	25X	600	
			CULG	0654.0	0658.0	III	G	3	23	750	
			HIRA	0800.0	0803.5	III	G	1	30	800	
			SVTO	0802.0	0804.0	III		1	25	155	
			IZMI	0802.1	0803.6	III	G	2	25X	270X	
			IZMI	0827.8	0827.8	III	G	1	110	250	
			HIRA	0830.0	0830.5	III	B	1	25X	50	
			SVTO	0830.0	0831.0	III		1	25	50	
			IZMI	0830.3	0830.5	III	B	1	25X	55	
			SVTO	0837.0	0842.0	III		2	25	180	
			IZMI	0837.8	0838.6	III	GG	2	25X	270X	
			HIRA	0838.0	0842.0	III	G	2	30	1000	
			IZMI	0840.0	0842.6	III	GG,C	2	25X	270X	
0521	1645		ONDR	0840.3	0841.3	DCIM	G	1	800X	1827	
			SVTO	0855.0	0910.0	III	N	2	25	156	
			IZMI	0855.3	0855.5	III	G	1	30	160	
			IZMI	0904.5	0904.8	III	B	1	25X	55	
			LEAR	0909.0	0910.0	III		1	25	180	
			IZMI	0909.6	0910.1	III	G,C	2	25X	270X	
			IZMI	0954.0U	1005.4	I	N	1	180	270	
			IZMI	1006.4	1006.5	III	G	1	180	250	
			IZMI	1124.6	1125.1	III	G,U	2	110	260	
			SVTO	1127.0	1131.0	III		1	25	180	
			IZMI	1127.3	1128.9	III	GG	2	25X	270X	
			IZMI	1130.8	1131.9	III	GG	2	120	270X	
			IZMI	1150.0	1151.6	III	G	1	25X	95	
			SVTO	1150.0	1151.0	III		1	25	83	
			SGMR	1300.0	1333.0	III	N	1	30	55	
			SVTO	1300.0	1301.0	III		1	25	62	
			SVTO	1332.0	1333.0	III		1	25	146	
			SVTO	1339.0	1346.0	II		1	26	147	ESS 0723
			SGMR	1340.0	1346.0	II		1	30	80	ESS 0800
			PALE	1822.0	1822.0	III		1	25	59	
			SGMR	1822.0	1822.0	III		1	30	60	
			HOLL	2010.0	2039.0	III	N	1	25	180	
			PALE	2022.0	2026.0	III		1	25	100	
2005	2400		HIRA	2022.0	2023.0	III	B	1	25X	80	
			HIRA	2032.0	2040.0	III	G	2	30	400	
2030	2400		CULG	2032.0	2040.0	III	G	2	23	200	
			PALE	2034.0	2035.0	III		1	25	95	
			SGMR	2034.0	2039.0	III		1	30	80	
			CULG	2106.0	2126.0	III	N	1	50	180	
			PALE	2137.0	2144.0	III		1	25	87	
			CULG	2138.0	2144.0	III	G	2	40	180	
			HIRA	2138.0	2139.0	III	B	1	25X	180	
			CULG	2152.0	2152.0	III	B	2	18	160	
			LEAR	2320.0	2339.0	III	N	1	25	132	
			CULG	2334.0	2340.0	III	G	3	18	180	
			HIRA	2334.0	2334.5	III	B	1	25X	100	
			PALE	2334.0	2334.0	III		1	25	54	
			HIRA	2339.5	2340.0	III	B	1	25X	130	

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

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Aug 03

AUGUST 2003

OBSERVATION			EVENT				FREQUENCY			Remarks
Day	Start (UT)	End (UT)	Sta	Start (UT)	End (UT)	Spectral Class	Event Remarks	Int (1-3)	Lower (MHz)	
29			LEAR	0041.0	0041.0	III		1	25	54
	0000	0730	CULG	0041.0	0041.0	III	B	2	20	180
	0000	0912	HIRA	0041.0	0041.5	III	B	1	25X	50
			HIRA	0135.5	0136.0	III	B	1	25X	50
			CULG	0136.0	0136.0	III	B	2	23	100
			CULG	0152.0	0152.0	III	B	1	23	70
			CULG	0205.0	0205.0	III	B	1	23	50
			CULG	0220.0	0220.0	III	B	1	40	160
			CULG	0342.0	0343.0	III	G	1	30	90
			CULG	0459.0	0459.0	III	B	1	23	130
	0522	1643	ONDR							
	0550	1200	IZMI	0623.6	0623.7	III	B	1	45	75
			CULG	0624.0	0624.0	III	B	1	23	75
			IZMI	0821.4	0821.6	III	G	2	220	270X
			SVTO	0900.0	0901.0	III		2	44	170
			HIRA	0900.5	0901.0	III	B	2	90	190
			IZMI	0900.9	0901.4	III	GG	2	45	270X
			LEAR	0901.0	0902.0	III		1	25	180
			IZMI	0901.7	0902.2	III	G	2	55	260
			SVTO	0944.0	0946.0	III		1	25	64
			IZMI	0944.5	0945.8	III	G	2	25X	90
	2006	2400	HIRA							
	2030	2400	CULG							
			PALE	2352.0	2354.0	III		1	25	65
30	0000	0910	HIRA							
			LEAR	0435.0	0915.0	CONT		1	25	180
	0000	0730	CULG	0445.0	0730.00	III	S,C	1	23	180
	0523	1641	ONDR							
			IZMI	0630.0E	0825.0U	III	N	1	45	95
	0600	1200	IZMI	0630.0E	0825.0U	I	S	2	45U	170U
			SVTO	0705.0	1706.0	CONT		1	25	180
			IZMI	0954.7	0955.1	III	G	2	220	270X
			IZMI	1153.9	1154.1	III	G	2	220	270X
	2007	2400	HIRA							
	2030	2400	CULG							
31	0000	0909	HIRA	0031.5	0032.0	III	B	1	25X	220
	0000	0730	CULG	0032.0	0032.0	III	B	2	27	180
	0525	1639	ONDR							
			SVTO	1132.0	1132.0	III		1	25	48
	0600	1200	IZMI	1132.7	1133.0	III	B	1	25X	45
	2008	2400	HIRA	2032.5	2033.0	III	B	1	80	200
	2030	2400	CULG	2033.0	2033.0	III	G	1	50	180
			CULG	2125.0	2125.0	III	B	1	50U	90

Event Remarks:

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

SOLAR RADIO NOISE STORM AT 164 MHZ

FROM NANÇAY RADIOHELIOGRAPH

AUGUST 2003

DAY	HELIOGRAPHICS POSITIONS MEAN VALUES ¹		IMP ²	OBSERVING TIME ³	
	E-W	S-N		START(UT)	END(UT)
01/08/03	-0.50	-0.31	I	8H27 E	15H22 D
02/08/03	-1.10	-0.40	II	8H27 E	15H22 D
02/03/03	-0.05	-0.19	II	8H27 E	15H22 D
03/08/03	-1.10	-0.40	II	8H27 E	14H35 D
03/08/03	+0.17	-0.33	II	8H27 E	11H05
04/08/03	-1.04	-0.50	I	10H06	15H22 D
05/08/03	-0.88	-0.62	I	8H27 E	15H22 D
07/08/03	+0.09	-0.59	I	8H47 E	15H23 D
10/08/03	+0.70	-0.47	I	8H26 E	11H04
10/08/03	+0.84	-0.02	I	8H26 E	15H21 D
15/08/03	-0.02	-0.03	II	8H25 E	15H20 D
19/08/03	+0.99	+0.20	III	9H51	15H20 D
21/08/03	-0.25	+0.06	I	8H24 E	15H19 D
22/08/03	+0.03	-0.02	I	8H24 E	15H19 D
23/08/03	+0.34	-0.09	III	8H23 E	15H19 D
24/08/03	+0.57	-0.11	II	8H23 E	15H19 D
25/08/03	-0.74	-0.42	III	8H23 E	15H19 D
25/08/03	+0.76	-0.08	I	8H23 E	15H19 D
27/08/03	-0.20	-0.12	I	8H22 E	13H42
28/08/03	+0.20	-0.11	I	8H22 E	11H20
30/08/03	+0.47	-0.57	I	8H20 E	10H01
31/08/03	+0.85	-0.37	I	12H56	15H21 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

SOLAR RADIO NOISE STORM AT 327 MHZ
FROM NANÇAY RADIOHELIOGRAPH
AUGUST 2003

DAY	HELIOGRAPHICS POSITIONS MEAN VALUES ¹		IMP ²	OBSERVING TIME ³	
	E-W	S-N		START(UT)	END(UT)
01/08/03	-1.13	-0.50	I	8H27 E	15H22 D
01/08/03	-0.36	-0.03	I	8H27 E	15H22 D
02/08/03	-1.10	-0.59	I	8H27 E	15H22 D
02/08/03	-0.34	-0.40	III	8H27 E	15H22 D
03/08/03	-1.05	-0.40	II	8H27 E	14H35 D
03/08/03	+0.28	-0.22	I	8H27 E	13H43
04/08/03	-0.85	-0.42	I	8H27 E	15H22 D
04/08/03	-0.73	-0.71	I	8H27 E	15H22 D
05/08/03	-0.70	-0.43	I	8H27 E	15H22 D
05/08/03	+0.81	+0.12	I	8H27 E	15H22 D
06/08/03	-0.50	-0.50	I	8H27 E	15H22 D
06/08/03	-0.33	-0.68	I	8H27 E	15H22 D
06/08/03	-0.09	-0.34	I	8H27 E	15H22 D
06/08/03	-0.08	-0.53	I	8H27 E	15H22 D
07/08/03	-0.22	+0.56	I	8H47 E	15H23 D
07/08/03	+0.17	-0.56	II	8H47 E	15H23 D
08/08/03	-0.45	-0.53	I	8H26 E	15H21 D
08/08/03	+0.03	-0.53	I	8H26 E	15H21 D
08/08/03	+0.28	-0.17	I	8H26 E	15H21 D
08/08/03	+0.36	-0.53	I	8H26 E	15H21 D
09/08/03	-0.29	-0.56	I	8H26 E	13H58
09/08/03	+0.29	-0.51	I	8H26 E	15H21 D
09/08/03	+0.60	-0.50	I	8H26 E	15H21 D
10/08/03	+0.76	-0.28	I	8H26 E	15H21 D
10/08/03	+0.84	-0.08	I	8H26 E	15H21 D
12/08/03	+0.88	-0.50	I	8H26 E	15H21 D
12/08/03	+1.16	-0.11	I	8H26 E	15H21 D
17/08/03	-1.18	+0.11	I	8H25 E	15H20 D
18/08/03	+0.90	-0.48	I	13H37	15H20 D
19/08/03	+0.99	-0.31	III	9H51	15H20 D
21/08/03	-0.28	+0.03	I	8H24 E	15H19 D
22/08/03	+0.03	-0.03	I	8H24 E	15H19 D
23/08/03	+0.34	-0.06	I	8H23 E	15H19 D
24/08/03	+0.60	-0.08	I	8H23 E	15H19 D
25/08/03	-0.71	-0.40	I	8H23 E	15H19 D
25/08/03	+0.45	+0.08	I	8H23 E	15H19 D
25/08/03	+0.76	-0.17	I	8H23 E	15H19 D

Continued -- Solar Radio Noise Storm at 327 MHz from NANÇAY RADIOHELIOGRAPH

27/08/03	-0.28	-0.09	I	8H22 E	15H 17 D
28/08/03	+0.00	-0.42	I	10H22	15H17 D
28/08/03	+0.08	-0.11	I	8H22 E	11H30
30/08/03	+0.56	-0.42	I	8H20 E	11H34
31/08/03	+0.82	-0.31	I	8H20 E	13H31

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)
August 2003

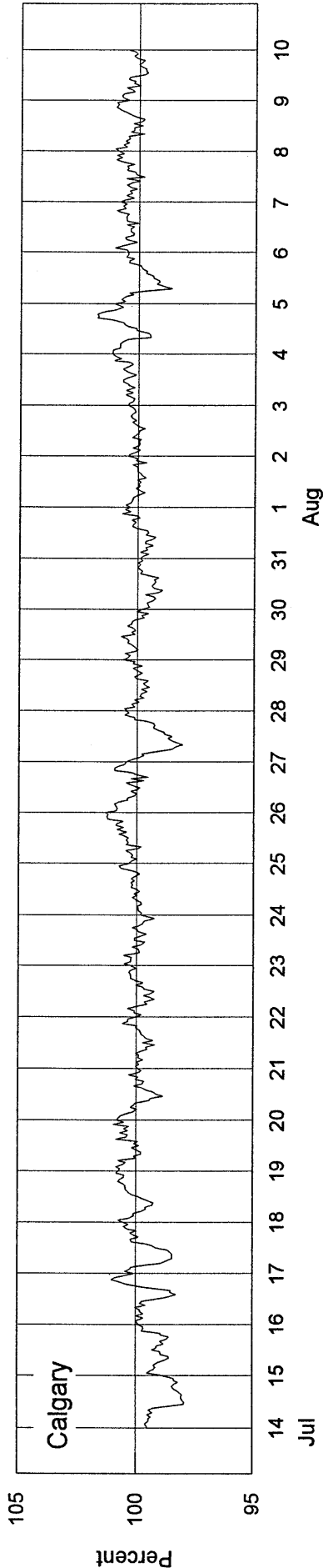
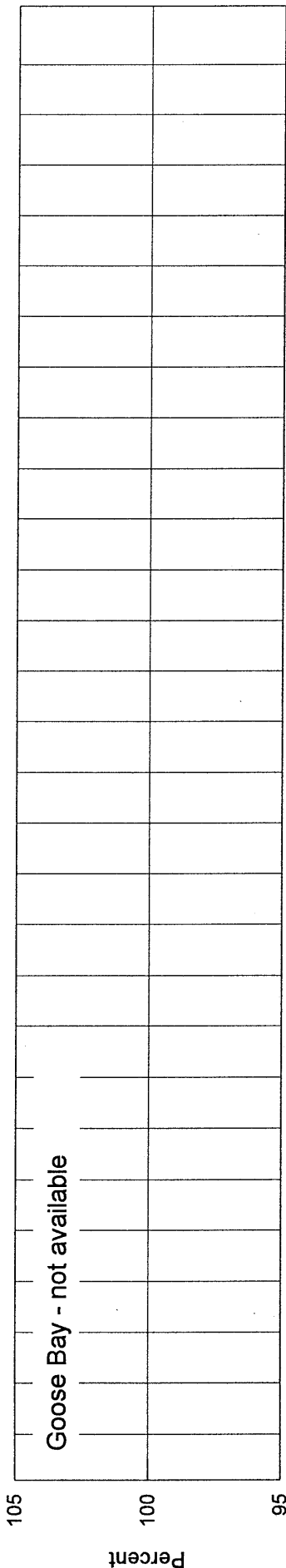
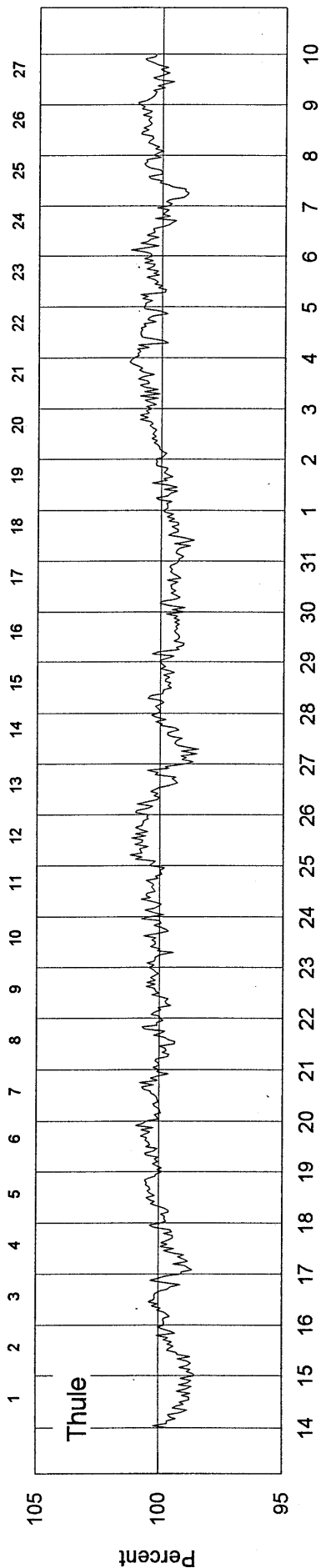
Day	THULE Average (cts/h)/100	CALGARY Average (cts/h)/300	KIEL Average (cts/h)/100	MOSCOW Average (cts/h)/64	CLIMAX Average (cts/h)/100	BEIJING Average (cts/h)/256	HALEAKALA Average (cts/h)/1000
1	3940.0	3468.7	5554.8	8114.5	3690.6	1874.6	3462.1
2	3958.5	3471.3	5564.2	8104.3	3700.6	1872.6	3464.7
3	3973.2	3483.5	5583.9	8139.6	3710.8	1874.3	3471.5
4	3970.2	3492.8	5586.4	8146.0	3718.2	1876.0	3474.8
5	3962.6	3464.7	5565.0	8128.7	3695.0	1869.3	3465.2
6	3956.3	3485.0	5601.0	8180.0	3723.2	1890.0	3475.5
7	3943.6	3483.0	5594.8	8208.3	3713.5	1876.6	3469.5
8	3966.8	3483.3	5598.7	8203.6	3719.4	1888.1	3483.5
9	3957.2	3473.3	5572.3	8176.7	3695.4	1884.3	3477.3
10	3950.6	3466.0	5575.3	8178.3	3696.2	1889.5	3477.1
11	3955.3	3470.3	5576.3	8177.3	3687.8	1887.4	3471.9
12	3960.8	3475.3	5577.5	8187.9(23)	3702.6	1890.1	3462.4
13	3956.6	3485.8	5586.2	8213.1	3711.2	1884.8	3459.8
14	3979.3	3503.0	5619.2	8227.5(23)	3730.8	1895.3	3472.3
15	3978.6	3500.0	5609.4	8184.0	3718.4	1898.5	3476.2
16	3958.8	3470.8	5579.4	8159.4	3691.2	1890.6	3470.6
17	3913.1	3455.7	5560.2	8127.5	3685.2	1880.0	3463.1
18	3915.9	3433.5	5507.1(23)	8056.3	3682.9	1899.8	3475.0
19	3934.8	3465.5	5548.5	8107.2	3695.5	1892.8	3475.9
20	3949.1	3457.8	5588.8	8172.9	3714.8	1890.9	3481.1
21	3964.2	3480.2	5594.5	8196.1	3715.9	1893.2	3476.2
22	3978.4	3479.2	5586.5	8191.6	3718.2	1892.3	3481.4
23	4000.3	3486.7	5588.1	8201.5	3712.0	1887.5	3470.7
24	4003.2	3506.7	5607.7	8255.2	3733.2	1891.3	3479.5
25	3989.5	3507.0	5602.5	8265.2	3723.6	1895.4	3486.5
26	3981.3	3496.5	5574.2	8206.2	3707.9	1886.5	3477.3
27	3975.5	3480.3	5595.4	8231.0	3706.8	1889.3	3474.6
28	3989.2	3483.5	5603.1	8241.6	3715.1	1890.0	3479.6
29	3979.4	3490.8	5588.7	8187.9	3694.7	1899.8	3472.9
30	3958.7	3475.5	5575.7	8163.5	3685.5	1900.5	3469.8
31	3969.5	3491.3	5587.2	8200.6	3698.2	1901.5	3475.8
Mean	3963.0	3479.6	5582.3	8178.5	3706.3	1888.2	3473.3

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)

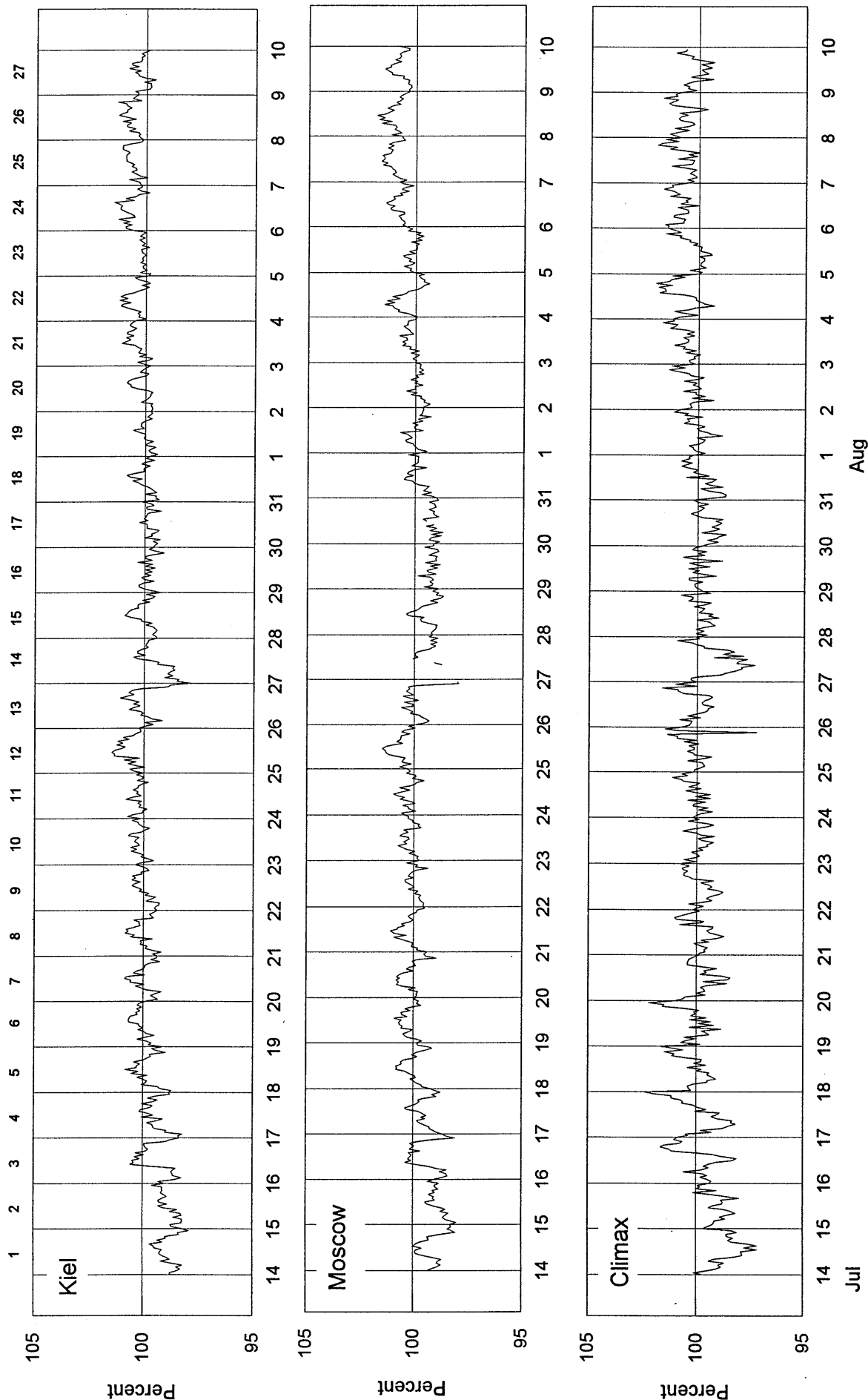
Bartels Rotation 2320 - Beginning 14 July 2003



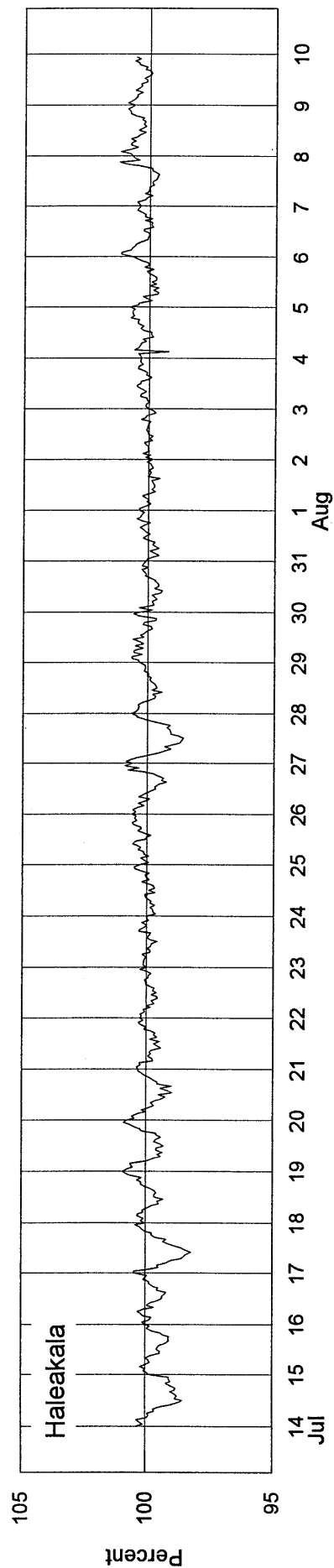
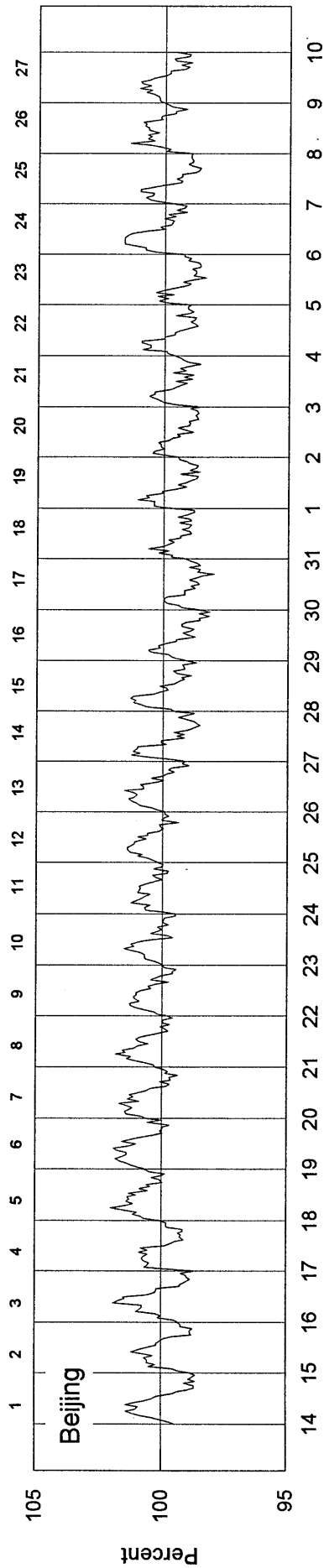
COSMIC RAY INDICES

(Neutron Monitor)

Bartels Rotation 2320 - Beginning 14 July 2003

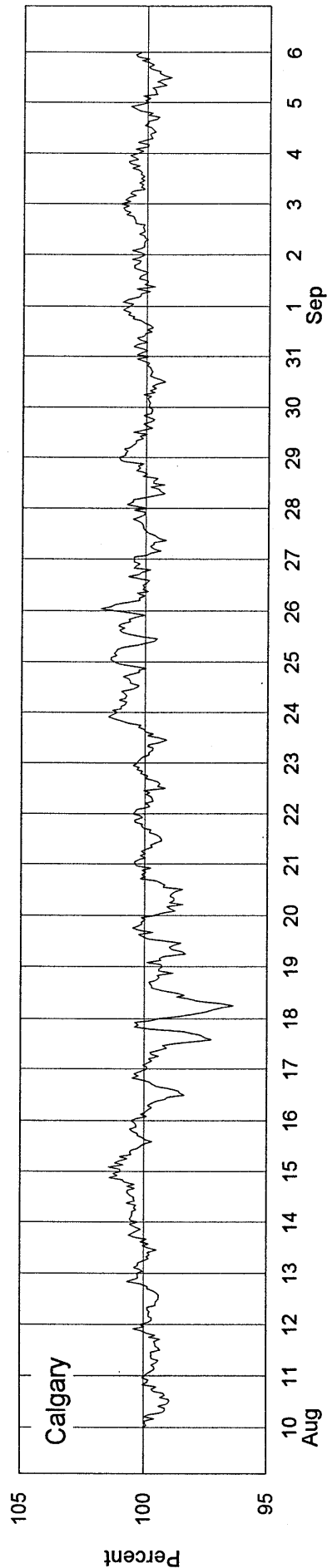
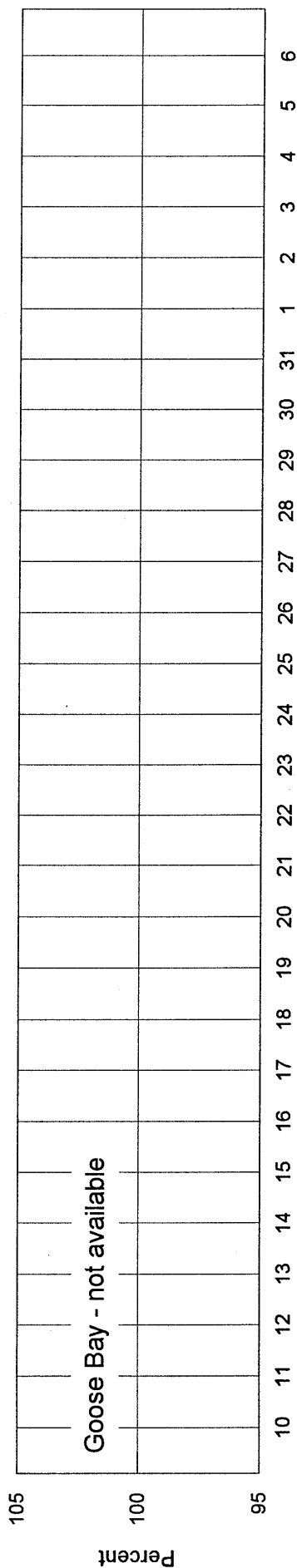
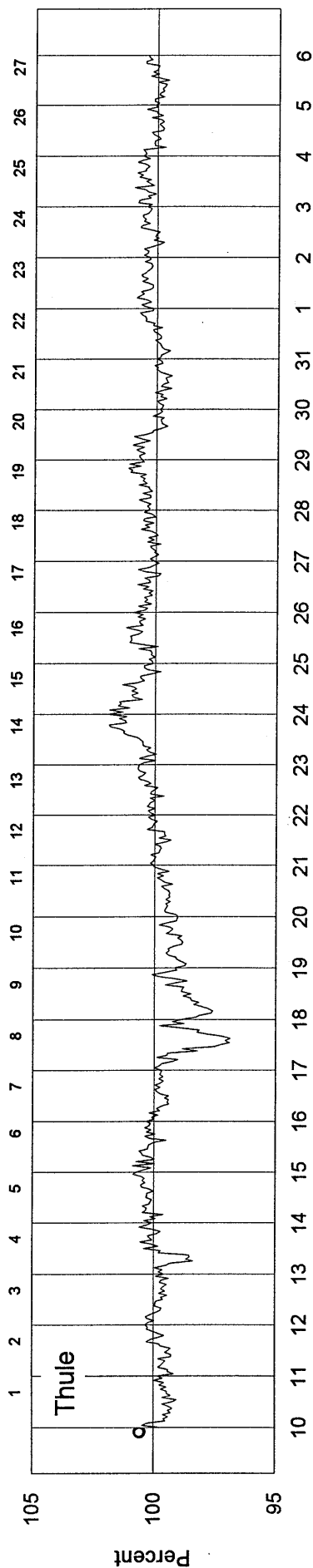


COSMIC RAY INDICES (Neutron Monitor) Bartels Rotation 2320 - Beginning 14 July 2003

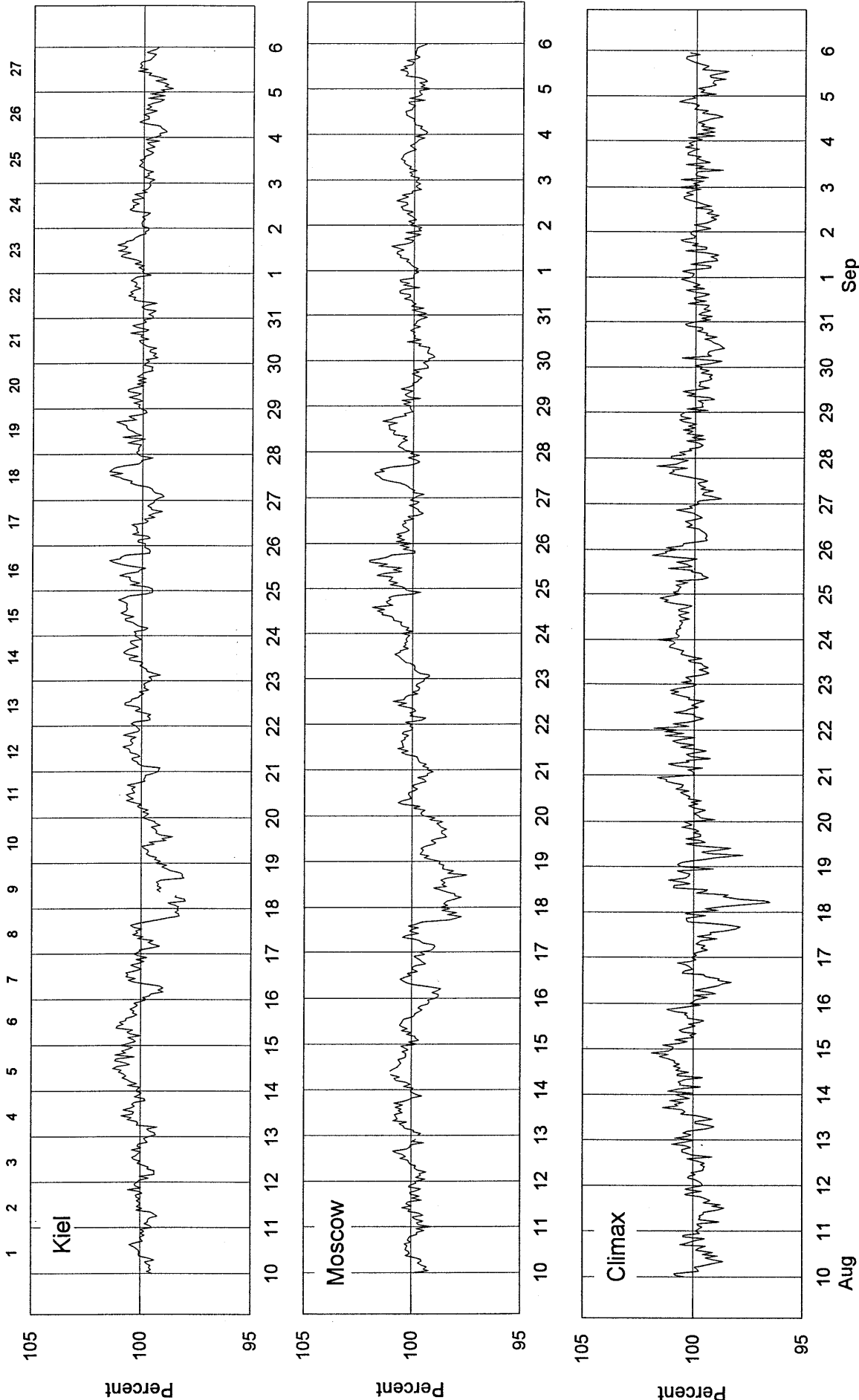


COSMIC RAY INDICES (Neutron Monitor)

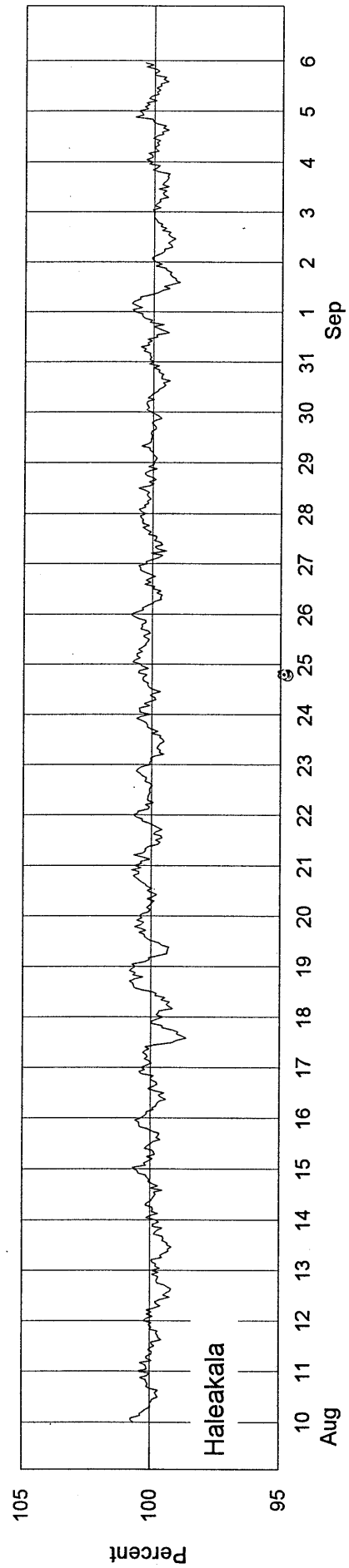
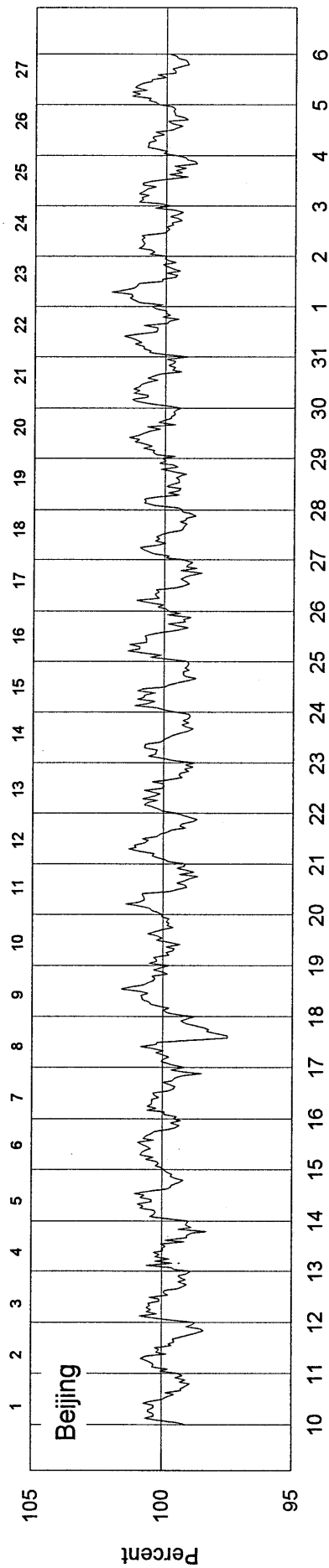
Bartels Rotation 2321 - Beginning 10 August 2003



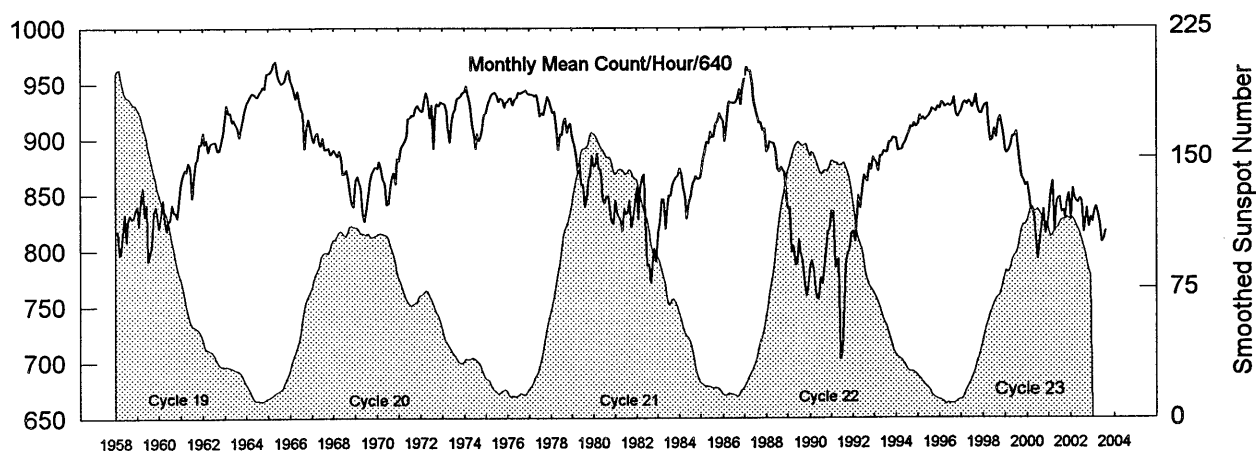
COSMIC RAY INDICES
(Neutron Monitor)
Bartels Rotation 2321 - Beginning 10 August 2003



COSMIC RAY INDICES (Neutron Monitor) Bartels Rotation 2321 - Beginning 10 August 2003



Moscow Neutron Monitor Pressure-Corrected Values Jan 1958 - Aug 2003



Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Mean
1958	8171*	8175*	7973*	7971*	8145*	8330*	8087*	8266*	8324*	8291*	8294*	8378*	8200*
1959	8405	8223	8443	8565	8309	8416	7911	7972	8054	8351	8397	8325	8281
1960	8199	8313	8459	8264*	8178*	8272*	8272*	8417	8348	8348	8295	8464	8319*
1961	8619	8682	8731*	8708*	8791*	8759*	8472	8676	8808	8816	8957	8956	8748*
1962	9061	8959	8996	8891	8964*	8974	8977	8977	8908	8902	8973	9056	8940*
1963	9201	9308	9243	9239	9154	9180	9147	9109	9020	9110	9194	9259	9180
1964	9321	9353	9395	9416	9410	9396	9384	9425	9442	9473	9458	9594	9422
1965	9602	9608	9642	9685	9701	9586	9530	9505	9520	9525	9608	9630	9595
1966	9531	9502	9439	9367	9438	9336	9261	9242*	8916	9105*	9178	9094	9284*
1967	9006	8973	9038	9059	8956	8940	9015	8913	8911	8924	8860	8873	8956
1968	8904	8875*	8844*	8892*	8825*	8690*	8689	8725	8635*	8533*	8428	8394	8703*
1969	8628	8666	8606	8584	8334	8261	8378	8510	8612	8689	8731	8751	8562
1970	8735	8799	8749	8639	8608	8418	8420	8540	8656	8702	8596	8827	8641
1971	8805	8921	8952	8982	9028	9185	9190	9219	9215	9285	9302	9276	9113
1972	9260	9254	9367	9419	9364	9192	9311	8916	9275	9319	9298	9336	9275
1973	9333	9321	9258	9107	8975	9160	9233	9263	9368	9376	9392	9423	9267
1974	9431	9481	9390	9327	9153	9062	8916	9054	8983	9027	9092	9222	9178
1975	9238	9317	9361	9405	9415	9425	9395	9339	9370	9361	9285*	9330	9353*
1976	9339	9375	9370	9310	9363	9371	9423	9418	9423	9428	9440	9415	9380
1977	9405	9404	9401	9392	9399	9318	9209	9236	9216	9302	9384*	9341	9334*
1978	9279	9243	9254	9113	8907	9050	9035	9149	9189	9062	9118	9145	9216
1979	9012	8955	8860	8693	8778	8599	8592	8396	8470	8662	8661	8857	8740
1980	8752	8776	8871	8737	8732	8463	8430	8490	8491	8379	8259	8242	8552
1981	8451	8330	8311	8277	8176	8379	8332	8338	8452	8206	8289	8439	8332
1982	8565	8277	8565	8649	8686	8279	7870	7882	7712	7931	8023	7902	8195
1983	8150	8253	8460	8460	8194	8343	8498	8492	8575	8625	8658	8670	8448
1984	8736	8686	8574	8505	8286	8421	8476	8590	8632	8669	8641	8644	8575
1985	8671	8813	8878	8973	8958	9066	9018	9017	9140	9155	9233	9183	9009
1986	9162	8982	9125	9316	9339	9328	9326	9327	9368	9444	9312	9472	9292
1987	9553	9646	9619	9618	9505	9349	9268	9202	9149	9153	9085	9094	9353
1988	8885	8922	8979	8968	8961	8904	8724	8704	8745	8716	8699	8474	8807
1989	8381	8385	7985	8043	7868	7888	8102	7977	7897	7709	7592	7701	7961
1990	7871	7910	7846	7652	7574	7569	7755	7701	7864	8037	8168	8185	7844
1991	8356	8347	7850	7915	7926	7025	7082	7510	7863	7964	8008	8153	7833
1992	8169	8078	8247	8490	8378	8535	8670	8649	8614	8767	8717	8833	8512
1993	8804	8784	8705	8846	8842	8888	8884	8880	8968	8968	9010	9011	8882
1994	9001	8895	8899	8898	8942	8963	9013	9055	9110	9098	9141	9112	9011
1995	9122	9206	9169	9193	9159	9186	9203	9228	9272	9257	9241	9286	9210
1996	9266	9328	9324	9287	9291	9302	9295	9302	9364	9226	9192	9227	9284
1997	9240	9311	9334	9302	9340	9318	9277	9322	9390	9281	9233	9217	9297
1998	9273	9306	9312	9057	8981	8983	9088	9007	9157	9196	9133	9036	9127
1999	8883	8867	8887	8937	9021	9018	9058	8904	8794	8660	8627	8574	8853
2000	8600	8481	8377	8358	8283	8107	7921	8081	8224	8365	8146	8215	8263
2001	8314	8521	8617	8168	8428	8468	8473	8334	8359	8289	8447	8505	8410
2002	8277	8555	8462	8434	8420	8462	8438	8157	8289	8374	8207	8297	8364
2003	8251	8344	8398	8329	8238	8075	8099	8178					8239

Multiply table entries by 64 to obtain hourly counting rate. Moscow, Russia: N55, E37, Alt= 200 m, Cutoff Rigidity= 2.42GV.

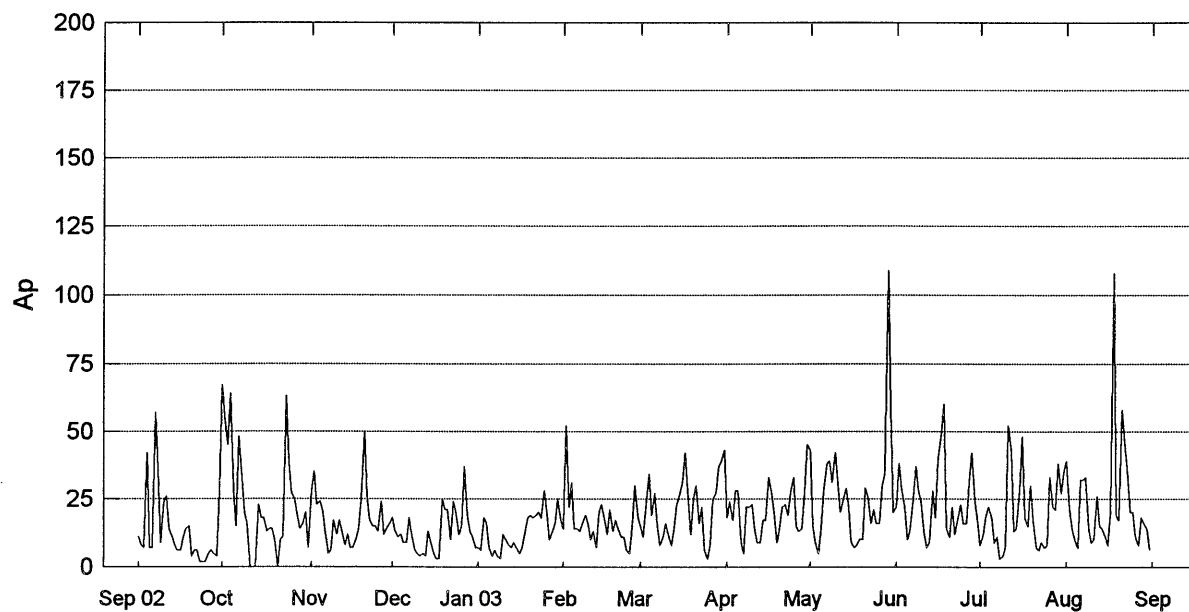
NOTE: * Indicates data have been restored using the corresponding data of other cosmic ray stations.

Geomagnetic Activity Indices

August 2003

		Kp Three-Hourly Indices								Km Three-Hourly Indices																aa Provisional			
Day		1	2	3	4	5	6	7	8	Sum	Ap	Cp	1	2	3	4	5	6	7	8	Am	N	S	M					
1	D4	5+	5	4+	4+	5+	3	3+	5+	36	39	1.4	5o	4o	4o	4o	4+	3-	3-	4+	56	64	57	63	58				
2		4	3+	3+	3-	3-	4-	4+	4	28	21	1.1	4-	3+	3+	3-	2+	3+	4o	3+	37	46	30	33	43				
3	Q10A	3	3+	3-	3	2-	2+	3	3+	22+	14	0.8	3o	4-	3o	3-	2+	2+	3o	3o	28	34	20	26	29				
4	Q5A	1+	2-	3-	2	1-	2+	3+	3+	17+	10	0.5	2-	2-	3o	3-	1o	2o	3-	3o	19	23	18	18	23				
5	Q2A	3	1	1	1	1	1	2-	3	13-	7	0.4	3-	1o	2-	1o	1-	1o	1o	3-	12	16	9	13	12 C				
6		6-	5+	6-	4-	4-	2	2	2+	30+	32	1.3	5o	5-	5+	3+	3o	2o	2o	2o	51	56	37	65	27				
7		1	2-	2-	2	4	5	7-	5	27	32	1.3	2-	2-	1+	2-	4-	4o	5o	4+	39	57	47	13	91				
8		5	5+	5-	4+	3	4	4+	3+	34	33	1.3	5+	5+	4+	4-	3-	3+	4-	3+	60	52	53	65	40				
9		2+	2+	3+	3-	3-	2+	3	4	23-	14	0.8	3-	2o	3+	3o	3-	2o	3-	4-	27	29	28	26	31				
10	Q6A	4	2-	2	2	2	2-	2+	2-	17+	9	0.5	4-	2o	2+	3-	2o	2-	2+	2-	20	23	19	22	20				
11	Q7A	2-	2	2-	2-	2+	2+	3	3+	18	10	0.5	1+	2+	2-	2o	2o	2+	3-	4-	19	24	11	12	23				
12		4-	4	5-	4	4+	4	3+	3	31	26	1.2	4o	4o	4o	4-	4-	4-	3+	3o	44	48	42	46	45				
13		3	4+	3-	2-	3-	2	3-	4-	23-	15	0.8	3o	4+	3o	2o	3-	2-	2+	4-	29	32	24	27	29				
14		3	3+	3+	2	2+	3	3+	3	23	14	0.8	3o	3+	3+	2+	2o	3-	3o	3o	28	31	27	35	23				
15	Q9A	2+	2	2+	2	2+	3+	3-	3+	20+	11	0.6	3-	2o	3o	2o	2o	3-	2+	3+	22	32	14	17	30				
16	Q3A	3-	2+	2-	2-	3-	3-	2-	1	16+	8	0.5	3-	3-	2o	2+	2o	3-	2-	1+	17	17	14	16	15				
17		1-	0+	0+	0+	5-	4	4+	5+	20	20	1.0	1o	0o	0+	0+	4o	4-	4o	5-	30	48	32	4	75				
18	D1	6-	6+	7	7-	7	7+	6+	6	52+	108	1.9	5+	5+	6+	6o	6-	6-	5o	6-	130	95	124	114	105				
19		6-	4-	3-	2+	2	3+	3-	2	24+	19	1.0	5o	3o	3o	3-	2o	3-	2o	2-	30	30	18	27	21				
20		1	3	3	2-	3-	3+	3	5	23-	17	0.9	1o	3o	3-	2o	3-	3o	3-	4o	25	34	19	14	38				
21	D2	4+	5-	6	4+	5+	6-	6	6	42+	58	1.7	3+	5-	5+	4o	4+	5-	5o	5o	78	79	76	64	91				
22	D3	5+	5	5-	5-	6-	5	5-	4+	39+	46	1.5	5-	4+	4+	4+	5-	4o	4o	4+	65	76	64	67	74				
23	D5	4	5+	6-	5-	5-	4	3+	3+	35	36	1.4	3+	4+	5-	4o	4o	4o	3-	4-	52	62	55	68	49				
24		3	3	5-	3+	3+	2+	4+	3-	27-	20	1.0	3-	3-	4-	4-	3o	2+	4-	2+	31	34	31	35	31				
25		4	5-	4+	3	3	3+	2	2+	27-	20	1.0	4-	4-	4o	3o	3-	3-	2o	2+	33	43	31	49	25				
26	Q8A	4-	1+	1-	2+	2	3-	3-	3	18+	11	0.6	3+	1+	1+	3o	3-	3-	3-	3o	22	23	25	22	27				
27	Q4A	2	2	2	2	2	2+	3-	3-	18-	8	0.5	2-	2-	2+	3-	2o	2o	3-	3-	19	19	18	14	23				
28		3+	3+	3+	4+	3-	3+	3	3	26+	18	1.0	3o	3+	3o	4-	2+	3-	3-	3-	30	33	24	29	28				
29		1	1+	1+	3	3	4-	5	3-	21	16	0.9	1o	1+	1+	3o	3+	3o	4+	2+	26	33	23	14	41				
30		4	4+	2+	3-	2+	2+	2	1+	21+	14	0.8	4-	4-	2+	3-	2o	2+	2o	1+	24	28	17	29	17				
31	Q1	1+	2	2-	2-	2	2-	2	1	13+	6	0.3	1+	2o	2-	2-	3-	2-	2-	1+	13	12	15	12	15 C				
Mean											23	0.95									36.0	39.9	33.0	36.4					
		Kn Three-Hourly Indices								Ks Three-Hourly Indices																Prov			
Day		1	2	3	4	5	6	7	8	An	1	2	3	4	5	6	7	8	As	Sa	Ri	Ra	Rs	IMF					
1		5o	4+	4+	4o	5-	3o	3o	4+	58	5+	4-	4o	4o	4o	3-	3-	4+	54	110.6	49	49	57						
2		4o	3+	4-	3o	3-	3+	4-	4-	40	4-	3+	3o	3-	2+	3o	4+	3+	35	114.7	56	61	62						
3		3o	4-	3o	3o	3-	3-	3-	3-	29	3o	3+	3+	2+	2o	2-	3o	3+	28	123.6	76	80	71						
4		1+	2-	3o	3-	1o	2+	3-	3+	21	2-	2o	3o	2+	1-	2-	3-	2+	17	126.0	73	81	74						
5		3o	1-	2-	1o	1+	2-	1+	3o	14	3-	1o	1+	1-	0+	0+	0+	3-	9	134.4	87	90	83						
6		5o	5-	6-	4-	3+	2+	3-	2+	56	5+	5-	5-	3o	3o	1+	1o	2-	47	132.4	83	81	81						
7		2-	2o	1+	2o	4-	4+	5o	4+	41	2-	1+	2-	1+	4-	4-	5o	5-	38	140.9	78	79	90						
8		5-	5o	4+	4o	3o	4-	4-	3+	55	6-	6-	4+	4-	2+	3+	3+	3+	64	136.6	69	73	86						
9		2+	2+	4-	3+	3o	2+	3-	3+	28	3-	2o	3+	3o	2+	2o	3-	4-	26	133.6	70	76	82						
10		4-	2-	2o	3-	2o	2o	3-	2-	20	4-	2o	2+	3-	2o	2-	1+	1+	19	134.7	72	79	83						
11		2-	2+	2-	2+	2+	3-	3o	4-	22	1+	2+	1+	1+	1+	2o	3-	3+	17	132.7	72	77	81						
12		4-	4o	4o	4-	4-	3+	3o	3-	42	4+	4-	4+	3+	3+	4-	3+	3o	46	126.6	71	70	75						
13		3-	4+	3o	2o	3-	2o	3o	3+	29	3+	4+	3-	2-	2+	1+	2+	4+	30	134.3	70	68	83						
14		3o	3+	3o	3-	2+	3o	3o	3o	28	3+	3+	4-	2+	1+	2o	3o	3o	27	133.1	63	69	82						
15		2+	2o	3o	2+	3-	3+	3o	3o	24	3-	2o	3o	2-	2-	2o	2o	3+	20	134.7	67	70	83						
16		3-	3-	2o	2+	3-	3o	2o	1+	19	3-	2+	2o	2+	2-	2o	1+	1+	15	130.1	73	79	79						
17		1-	0o	0+	0+	4+	4o	4o	5-	33	1+	0+	0+	0+	4-	3o	4-	5o	28	122.3	74	77	70						
18		5o	6-	6+	6o	6-	5+	5o	5+	129	5+	5o	6+	6o	5+	6-	5+	6-	130	118.7	67	70	66						
19		5o	3+	3o	3o	3-	3o	2+	2+	35	5-	3o	3o	2o	1+	2o	1+	1+	25	119.5	58	60	67						
20		1o	3-	3o	2+	3o	3+	3-	4o	28	1o	3o	3-	2o	2o	3-	2+	4-	22	114.5	62	56	62						
21		4-	4+	6-	4+	5-	5-	5o	5o	83	3o	5-	5o	4-	4o	5-	5o	5o	72	122.0	58	63	70						
22		4+	4+	5-	5-	4+	4+	4+	4+	68	5-	4o	4o	4+	5-	4-	4o	4+	63	123.7	69	75	72						
23		4-	5-	5-	4+	4+	4o	3-	3o	57	3+	4-	4+	4-	4-	4-	3o	4-	46	122.9	76	88	71						
24		3o	3o	4-	4-	3+	2+	4-	3-	33	3-	3-	4-	3+	3o	2+	4-	2o	30	119.0	82	89	67						
25		4-	4-	4+	3+	3o	3-	2o	2+	35	4-	4-	4o	3o	2+	3-	2-	2+	31	119.0	82	86	67						
26		3+	1o	1+	3+	3-	3-	3-	3o	24	4-	1+	1o	2+	2+	3-	2+	3o	20	123.4	89	91	71						
27		1+	2-	2+	3o	2-	2+	3o	3-	20	2-	1+	2+	2+	2+	1+	2+	3-	16	128.3	90	93	77						
28		3o	4-	3o	4o	3-	3o	3+	3-	34	3+	3+	3o	3o	2o	3-	2+	2+	25	121.1	95	93	69						
29		1o	2-	1+	3+	3+	3+	4+	3-	29	1-	1+	1+	3o	3o	2+	4+	2o	23	118.7	85	86	66						
30		3+	4-	2+	3o	2o	3-	2o	2-	25	4-	4-	2o	2+	2-	2o	2o	1+	23	116.2	74	72	63						
31		1o	2+	2-	2+	3-	2o	2-	1+	14	1+	2-	2-	1+	2+	1+	2-	1o	11	111.8	65	60	59						
Mean											37.8									34.1	125.2	72.7	75.5	73.2					

Daily Average Indices Ap Sep 2002 - Aug 2003

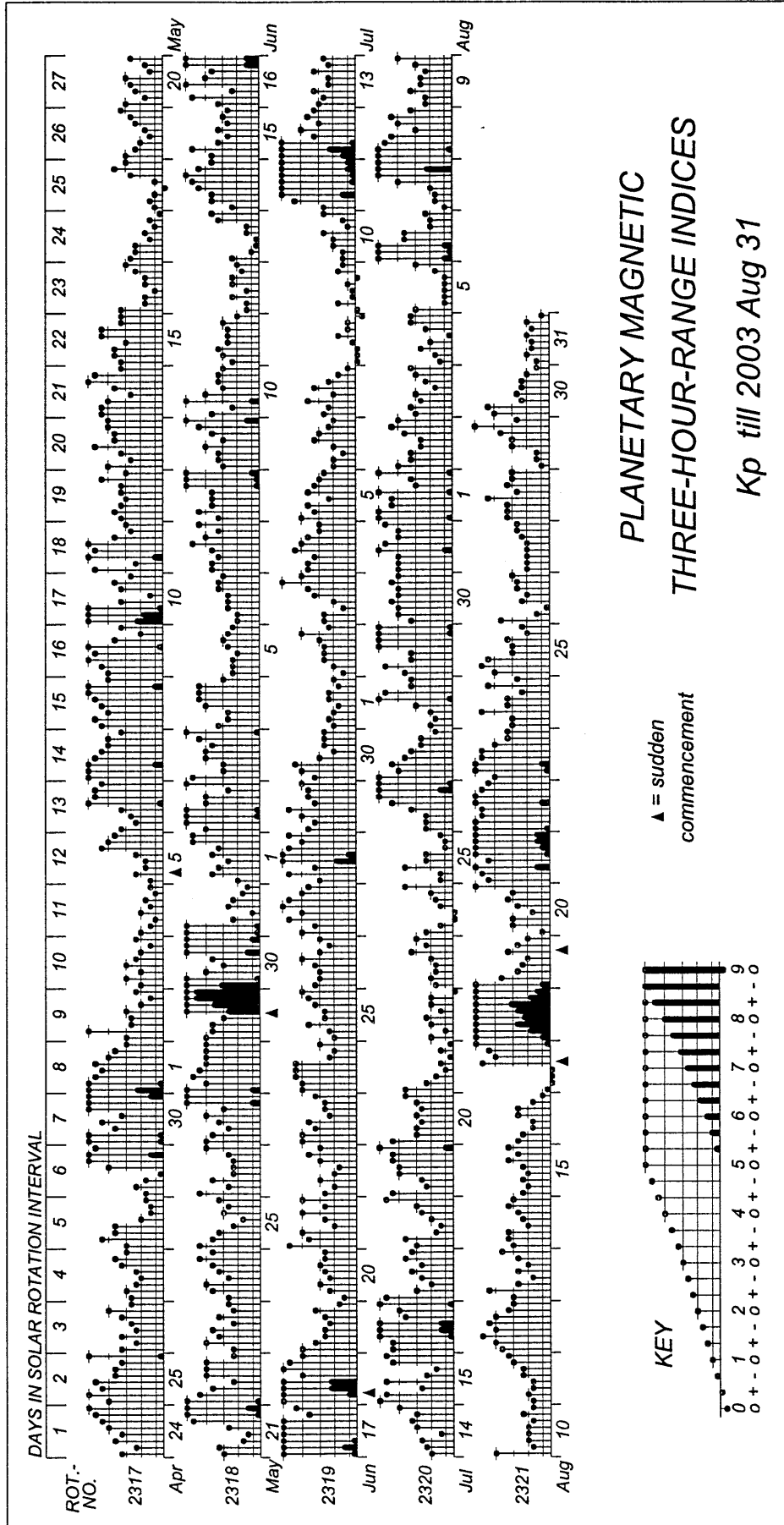


Day	Sep 02	Oct	Nov	Dec	Jan 03	Feb	Mar	Apr	May	Jun	Jul	Aug
1	11	67	7	18	7	14	15	18	43	22	8	39
2	8	53	28	13	6	52	11	24	15	38	12	21
3	7	45	35	11	18	22	24	17	9	29	19	14
4	42	64	23	12	16	31	34	28	5	22	22	10
5	7	28	24	9	7	14	19	28	14	10	18	7
6	7	15	21	9	4	14	27	9	28	13	9	32
7	57	48	13	18	6	13	15	5	38	25	11	32
8	36	33	5	12	4	16	8	22	39	37	3	33
9	9	20	6	6	3	19	11	22	31	28	4	14
10	24	16	17	5	12	16	16	23	42	24	7	9
11	26	6	12	4	10	10	12	14	31	12	52	10
12	14	6	17	5	8	13	8	9	20	7	43	26
13	11	5	13	4	7	7	14	9	24	9	13	15
14	8	23	8	13	9	20	23	17	29	28	14	14
15	6	18	12	8	7	23	26	17	22	18	28	11
16	6	18	7	5	5	17	31	33	9	40	48	8
17	11	13	7	3	7	12	42	28	7	49	18	20
18	14	14	10	3	12	21	28	21	8	60	15	108
19	15	14	14	25	18	13	12	9	10	14	30	19
20	4	10	25	21	19	17	25	14	10	11	17	17
21	6	8	50	21	18	14	30	22	29	22	7	58
22	6	10	26	10	19	11	16	23	26	12	6	46
23	2	11	17	24	20	11	22	19	16	18	9	36
24	2	63	15	20	18	6	6	27	21	23	7	20
25	2	39	15	12	28	5	3	33	16	16	8	20
26	5	27	13	15	20	15	8	15	16	16	33	11
27	6	25	24	37	10	30	25	13	30	31	22	8
28	5	19	12	19	13	18	27	14	34	42	21	18
29	4	14	14	13	16		37	27	109	24	38	16
30	28	16	16	11	25		39	45	59	17	27	14
31		20		7	17		43		20		35	6
Mean	13	25	17	13	13	17	21	20	26	24	19	23

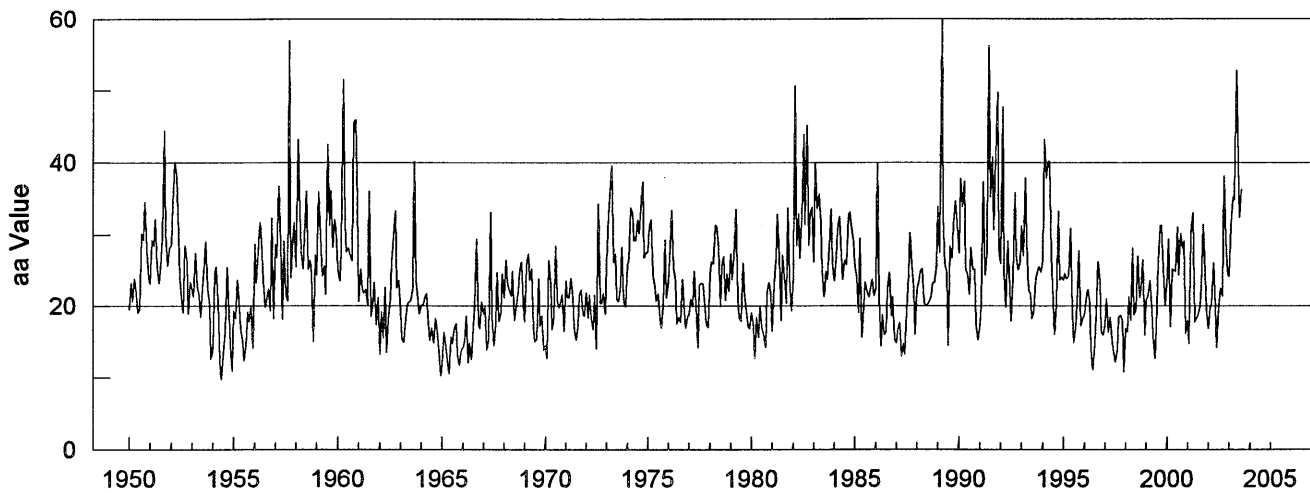
PLANETARY 3-HOUR-RANGE INDICES (Kp) BY 27-DAY SOLAR ROTATION INTERVAL

GeoForschungsZentrum Potsdam

Kp through August 31, 2003



Monthly Mean aa Index Jan 1950 - Aug 2003



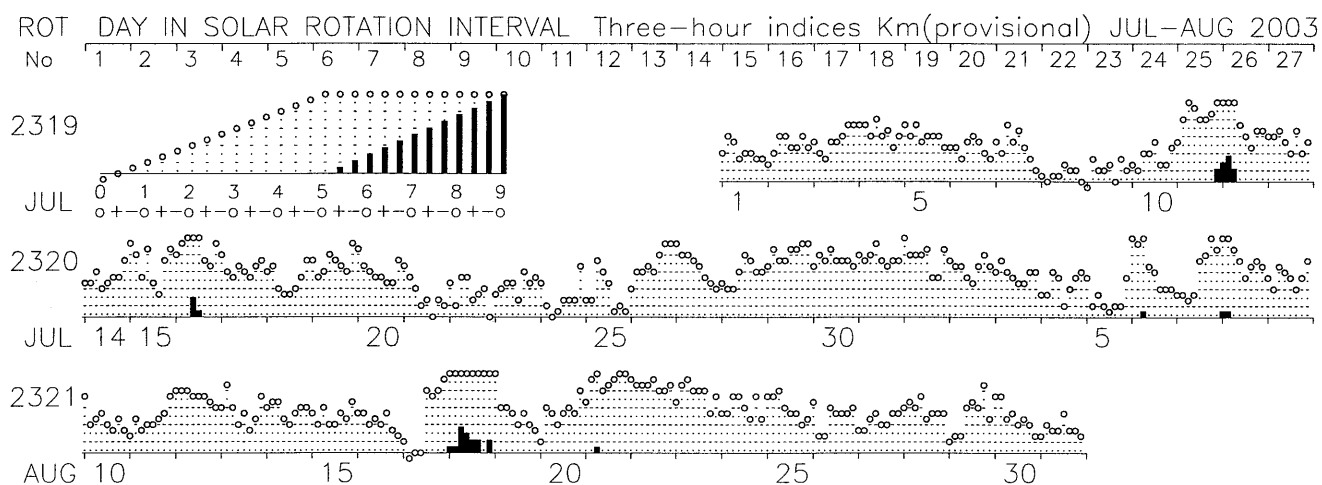
Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Mean
1950	19.5	23.2	20.6	23.8	21.7	19.0	19.5	30.2	29.3	34.5	28.0	24.0	24.4
1951	23.1	29.2	28.5	32.1	25.5	23.2	25.2	29.7	44.4	30.3	25.7	28.2	28.8
1952	28.5	34.3	40.1	38.0	33.1	23.8	20.7	19.0	28.5	26.4	18.9	23.4	27.9
1953	22.3	21.2	27.4	22.7	21.4	18.4	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					35.9

PLANETARY GEOMAGNETIC ACTIVITY

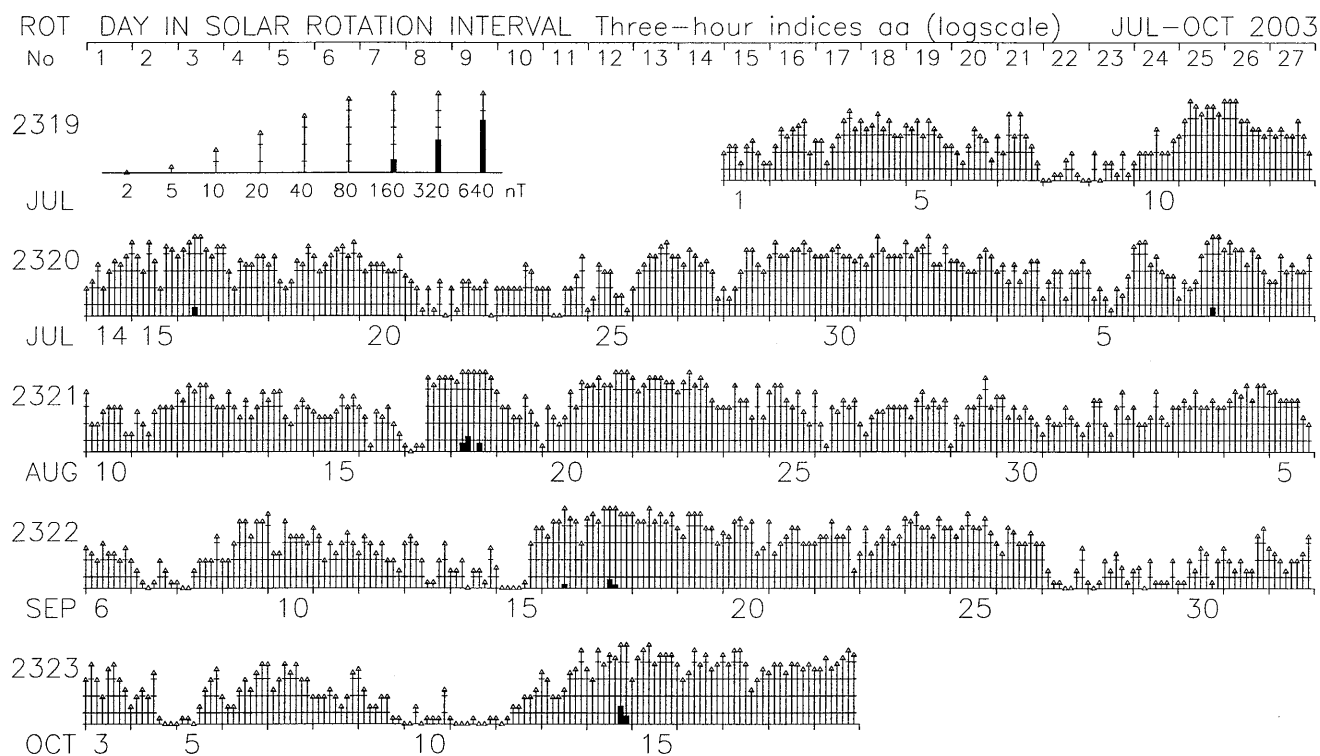
3-HOUR-RANGE INDICES K_m AND a_a BY 27-DAY SOLAR ROTATION INTERVAL

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

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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.

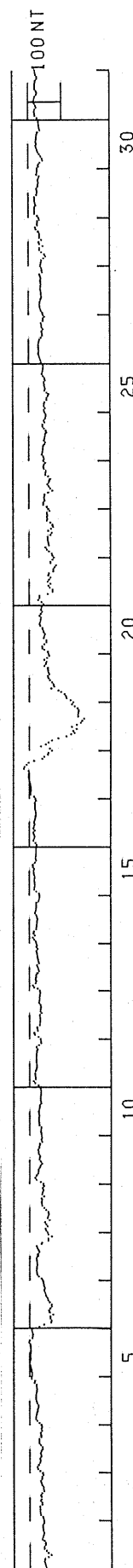
HOURLY EQUATORIAL DST VALUES (PROVISIONAL)

AUGUST 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	-49	-48	-45	-44	-46	-55	-64	-55	-50	-44	-44	-47	-47	-44	-37	-39	-42	-43	-41	-39	-39	-40	-43	-44	-44
2	-42	-40	-33	-30	-31	-30	-30	-38	-37	-33	-35	-35	-33	-38	-43	-42	-42	-38	-35	-33	-37	-38	-42	-40	-44
3	-30	-25	-22	-26	-31	-33	-31	-36	-34	-33	-35	-40	-39	-32	-29	-29	-29	-29	-36	-33	-37	-35	-37	-36	-40
4	-29	-22	-17	-18	-20	-22	-23	-24	-26	-27	-22	-19	-17	-17	-18	-19	-22	-23	-20	-19	-13	-15	-6	-5	-16
5	-7	-8	-5	-5	-4	-2	1	-2	-4	-1	-2	-3	-3	-3	-2	-1	3	1	-7	-8	-9	-8	-6	-16	-16
6	-28	-43	-65	-66	-62	-63	-72	-60	-58	-63	-67	-67	-61	-57	-53	-49	-48	-46	-44	-46	-44	-42	-41	-40	-40
7	-36	-27	-22	-21	-20	-21	-22	-23	-23	-19	-19	-24	-24	-29	-27	-22	-21	-36	-37	-57	-56	-67	-56	-53	-53
8	-49	-47	-54	-50	-45	-60	-53	-56	-59	-56	-50	-43	-38	-37	-34	-37	-21	-44	-38	-39	-41	-40	-44	-41	-41
9	-32	-20	-15	-21	-24	-26	-27	-30	-33	-37	-33	-28	-31	-30	-26	-26	-25	-28	-28	-30	-37	-34	-38	-36	-36
10	-35	-32	-36	-35	-29	-29	-27	-27	-29	-28	-28	-27	-28	-30	-31	-35	-33	-32	-32	-32	-35	-34	-33	-31	-31
11	-26	-16	-12	-17	-18	-15	-15	-18	-20	-22	-22	-21	-20	-19	-20	-20	-20	-23	-25	-21	-28	-35	-36	-33	-33
12	-27	-16	-14	-24	-25	-23	-31	-31	-32	-32	-31	-31	-38	-33	-33	-35	-32	-28	-29	-30	-31	-30	-33	-30	-30
13	-25	-14	-10	-17	-19	-18	-19	-20	-25	-29	-27	-25	-23	-29	-26	-25	-24	-23	-22	-21	-24	-20	-22	-20	-20
14	-18	-13	-10	-15	-11	-14	-20	-21	-22	-23	-22	-24	-22	-21	-16	-17	-20	-20	-21	-21	-26	-29	-31	-30	-30
15	-29	-19	-14	-15	-15	-15	-14	-14	-16	-14	-11	-12	-14	-10	-9	-16	-19	-18	-18	-19	-20	-20	-19	-21	-21
16	-22	-18	-11	-14	-15	-13	-11	-16	-12	-13	-15	-14	-16	-17	-17	-21	-21	-18	-15	-15	-15	-16	-20	-17	-17
17	-13	-3	-3	-6	-5	-4	-4	-2	0	2	3	4	2	3	17	16	9	3	14	-39	-45	-55	-58	-69	-69
18	-62	-36	-50	-59	-68	-87	-113	-127	-139	-134	-145	-130	-144	-158	-162	-168	-149	-150	-150	-151	-148	-138	-131	-134	-134
19	-126	-113	-111	-108	-97	-87	-67	-76	-73	-68	-62	-59	-55	-60	-59	-57	-55	-45	-49	-51	-46	-53	-60	-58	-58
20	-57	-46	-39	-39	-45	-51	-51	-43	-46	-47	-44	-41	-39	-33	-31	-33	-35	-36	-31	-35	-40	-35	-38	-33	-33
21	-44	-37	-26	-31	-31	-56	-70	-70	-63	-59	-65	-57	-60	-65	-58	-61	-73	-73	-78	-82	-65	-65	-70	-75	-75
22	-70	-68	-61	-54	-50	-61	-59	-58	-56	-55	-65	-68	-59	-66	-74	-72	-64	-54	-55	-54	-57	-54	-62	-58	-58
23	-53	-43	-43	-47	-45	-45	-47	-58	-71	-64	-60	-57	-60	-63	-64	-59	-49	-49	-51	-46	-44	-46	-49	-43	-43
24	-46	-44	-40	-41	-42	-44	-43	-48	-49	-46	-47	-50	-50	-53	-51	-46	-42	-41	-47	-46	-50	-52	-51	-47	-47
25	-46	-49	-46	-45	-48	-53	-53	-58	-60	-54	-48	-49	-48	-45	-45	-49	-47	-44	-40	-41	-43	-44	-44	-44	-44
26	-38	-36	-32	-30	-29	-31	-31	-29	-29	-28	-30	-32	-38	-41	-41	-40	-43	-40	-39	-38	-43	-43	-47	-43	-43
27	-42	-38	-34	-33	-32	-33	-36	-38	-40	-38	-37	-38	-36	-38	-37	-37	-36	-38	-35	-33	-41	-39	-39	-34	-34
28	-38	-38	-40	-45	-52	-47	-40	-33	-33	-43	-33	-31	-39	-32	-32	-33	-29	-22	-19	-26	-27	-26	-32	-31	-31
29	-26	-17	-18	-17	-18	-22	-21	-18	-17	-18	-24	-26	-26	-24	-28	-29	-30	-29	-31	-33	-24	-26	-27	-27	-27
30	-31	-31	-34	-43	-41	-38	-32	-28	-27	-25	-23	-24	-23	-24	-25	-25	-26	-29	-34	-33	-32	-30	-31	-32	-32
31	-26	-19	-19	-18	-20	-24	-23	-17	-16	-17	-21	-24	-26	-24	-21	-21	-21	-20	-22	-27	-26	-22	-22	-19	-19

2003

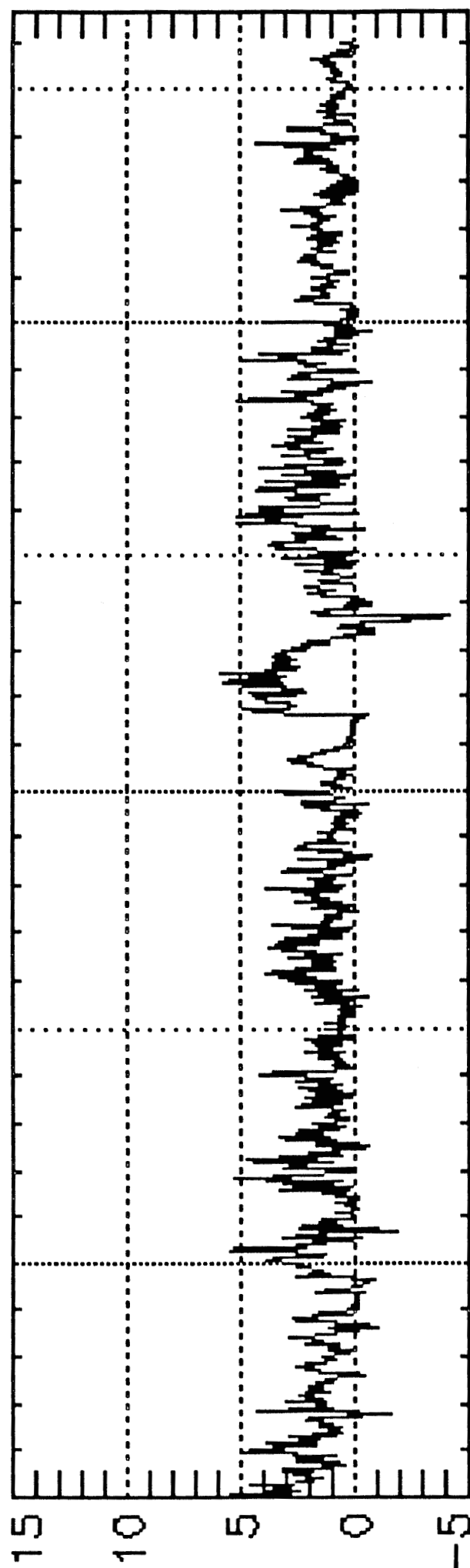
AUG



WDC C1 for Geomagnetism, Copenhagen

Polar Cap index
Qaanaaq (Thule), THL

2003-08-01



8-01 8-06 8-11 8-16 8-21 8-26 8-31

Date, mm-dd

Data source: Solar-Terrestrial Physics Division
Danish Meteorological Institute

132
Aug 03

P R I N C I P A L M A G N E T I C S T O R M S

AUGUST 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 (Min)	H (Gamma)	Z (Gamma)	Day	(UT)
GNA	43.0S	01	0000	..	..	..	..	01(1,4,5)	5	18	108	93	03 00
HYB	07.6N	04	1200	..	..	..	..	06(1)	5	7	144	31	06 23
JAI	17.4N	05	2200	..	..	..	..		-	9	83	31	06 20
NGP	11.3N	05	2200	..	..	..	..		-	7	76	19	06 20
ABG	09.4N	05	2200	..	..	..	..	06(1) 08(2)	-	8	86	47	06 20
PND	02.0N	05	2200	..	..	..	..		-	6	92	35	06 20
TIR	00.6S	05	2200	..	..	..	..		-	6	127	47	06 20
HYB	07.6N	07	1200	..	..	..	..	08(2)	5	8	80	26	10 04
CAN	43.6S	07	1200	..	..	..	..	07(7,8) 08(2)	5	16	134	45	08 21
JAI	17.4N	17	1420	SC	- 0.3	35	- 7		-	10	241	47	19 20
KRC	16.4N	17	1348	SC	- 24	45	22	18(2,6)	6	7	221	36	19 07
NGP	11.3N	17	1420	SC	- 0.6	37	- 5		-	9	258	30	19 20
ABG	09.4N	17	1420	SC	- 0.6	32	- 6	18(2,3)	6	9	256	54	19 20
HYB	07.6N	17	1420	SC	- 0.6	34	- 4	18(3,4,5,6)	6	8	261	30	19 24
PND	02.0N	17	1420	SC	- 0.3	33	30		-	7	265	83	19 20
TIR	00.6S	17	1420	SC	- 0.4	25	34		-	8	248	121	19 20
GNA	43.0S	17	1422	SC*	2.7	28.4*	- 16.3	18(4)	7	42	217	268	19 18
CAN	43.6S	17	1422	SC*	0.8*	36.2	- 4.4	18(4)	7	36	245	111	19 03
JAI	17.4N	20	0700	..	..	..	..		-	9	92	55	23 20
NGP	11.3N	20	0700	..	..	..	..		-	8	116	32	23 20
ABG	09.4N	20	0700	..	..	..	..	21(7)	6	8	107	62	23 20
HYB	07.6N	20	0400	..	..	..	..	22(7)	6	8	88	30	23 24
PND	02.0N	20	0700	..	..	..	..		-	7	124	84	23 20
TIR	00.6S	20	0700	..	..	..	..		-	7	164	126	23 20
GNA	43.0S	20	1500	..	..	..	..	21(7)	6	24	114	160	23 21
KRC	16.4N	21	1222	..	..	..	..	21(7)	6	7	105	40	21 07
CAN	43.6S	21	0000	..	..	..	..	21(3,6,7,8) 22(4,5) 23(3,5)	5	24	127	71	23 21

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)

August 2003

Storm Sudden Commencements (SSC)			Solar Flare Effects (sfe)		
Day	Time	Quality: Station Group*	Day	Begin-End	Station(s)
17	1421	A: SOD* NUR* NGK* VAL* DOU* NAG* EBR* SPT* GUI* CNB* B: BDV* HRB* C: GCK* -: GNA*	15	1413-1428	GUI
			16	0946-0957	BDV

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

SOD NUR NGK VAL DOU BDV CLF HRB NAG GCK EBR SPT GUI 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.