



# Solar-Geophysical Data prompt reports

Data for March and April 2008

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

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NATIONAL OCEANIC AND  
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NATIONAL ENVIRONMENTAL SATELLITE,  
DATA, AND INFORMATION SERVICE

NATIONAL GEOPHYSICAL  
DATA CENTER

BOULDER,  
COLORADO



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May 2008 NUMBER 765 - Part I

# **Solar-Geophysical Data prompt reports**

Data for March and April 2008

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## **NATIONAL GEOPHYSICAL DATA CENTER**

Christopher G. Fox, Director

Boulder, Colorado

## DETAILED INDEX OF OBSERVATIONS PUBLISHED IN SOLAR-GEOPHYSICAL DATA

CODE	KIND OF OBSERVATION	SEP	OCT	NOV	DEC	Jan 08	FEB	MAR	MAR
A.	<b>SOLAR AND INTERPLANETARY</b>								
A.1	Sunspot Drawings	759A 40	760A 40	761A 44	762A 40	763A 40	764A 46	765A 40	
A.2aa	International Sunspot Numbers	758A 23	759A 24	760A 23	761A 24	762A 24	763A 23	764A 22	765A 23
A.2c	American Sunspot Numbers	758A 23	759A 24	760A 23	761A 24	762A 24	763A 23	764A 22	765A 23
A.3a	Mt. Wilson Magnetograms	759A 40	760A 40	761A 44	762A 40	763A 40	764A 46	765A 40	
A.3b	Sunspot Mag Class and Regions	759A 75	760A 77	761A 79	762A 77	763A 77	764A 80	765A 77	
A.3c	Kitt Peak Magnetograms	759A 40	760A 40	761A 44	762A 40	763A 40	764A 46	765A 40	
A.3d	Mean Solar Mag Field (Stanford)	758A 29	759A 31	760A 30	761A 34	762A 31	763A 30	764A 31	765A 30
A.3e	Stanford Magnetograms	759A 40	760A 40	761A 44	762A 40	763A 40	764A 46	765A 40	
A.4	H-alpha Filtergrams	759A 40	760A 40	761A 44	762A 40	763A 40	764A 46	765A 40	
A.5d	PhotometricCa FaculaeSanFernando	Jan 92-Dec 96-631B 22; 1997-1998 663B 66							
A.6c	Stanford Solar Mag Field Map	759A 34	760A 34	761A 38	762A 34	763A 34	764A 34	765A 34	
A.6d	Kitt Peak Mag Field Synoptic Map	759A 39	760A 39	761A 43	762A 39	763A 39	764A 45	765A 39	
A.6f	Active Prominences and Filaments	763B 15	764B 16	765B 15					
A.6g	Sac Peak Coronal Line Maps	759A 36	760A 36	761A 40	762A 37	763A 37	764A 38	765A 36	
A.6h	Photometric WL SanFernando	Jul-Dec 96 630B 32; 1997-1998 663B 51							
A.7h	Coronal Line Emission (Sac Peak)	759A 40	760A 40	761A 44	762A 40	763A 40	764A 46	765A 40	
A.7j	Coronal Hole Daily Maps (NSO/KP)								
A.7k	Coronal Index (Slovak Academy)	1939-1996 - 644B 28							
A.7m	Coronal Mass Ejections (CSPSW)	763B 20	764B 21	765B 20					
A.8aa	2800 MHz- Solar Flux (Penticton)	758A 23	759A 24	760A 23	761A 24	762A 24	763A 23	764A 22	765A 23
A.8ac	2800 MHz Adj Solar Flux (Pent.)	758A 23	759A 24	760A 23	761A 24	762A 24	763A 23	764A 22	765A 23
A.8g	Adjusted Daily Solar Flux SGMR	758A 23	759A 24	760A 23	761A 24	762A 24	763A 23	764A 22	765A 23
A.10g	Nancay Radioheliolo 164&327MHz	759A 81	760A 83	761A 85	762A 84	763A 83	764A 86	765A 85	
A.10h	Nobeyama Radioheliogr 17 GHz	759A 70	760A 71	761A 74	762A 71	763A 71	764A 75	765A 71	
A.11g	Solar X-ray GOES (graphs)	763B 9	764B 8	765B 9					
A.11g	Solar X-ray GOES (event table)	758A 27	759A 28	760A 27	761A 29	762A 28	763A 27	764A 28	765A 27
A.11k	Solar UV NOAA-9	May 86-Dec 88 in 566B 84							
A.11l	Solar UV NIMBUS7	Nov 78-Oct84 in 542B 82							
A.11m	Solar UV SOLSTICE (UARS)	Oct 91-Sep 94 in 607B 46							
A.11o	Solar UV SUSIM (UARS)	Oct 91-Jan 97 in 629B 30							
A.11p	Solar UV Mg II Daily Index	763B 16	764B 17	765B 16					
A.12g	Solar Particles (GOES)	758A 4	759A 4	760A 4	761A 4	762A 4	763A 4	764A 4	765A 4
A.12i	Solar Energetic Particles (ACE)	763B 19	764B 20	765B 19					
A.13g	Solar Plasma (ACE)	763B 18	764B 19	765B 18					
A.16c	ERBS	NOAA-9 & Oct 84-Jun 00 in 671B 36							
A.16d	UARS Solar Irradiance	Oct 91-May 2001 684B 26 - Complete Mission							
A.16e	VIRGO/SOHO Solar Irradiance	Jan 96-Sep 00 in 678B 46							
A.17c	Inferred Interplanetary Mag Field	1984-1988 data in 542A168; 1989-Jan94 in 611A118							
A.17d	ACE Interplanetary Mag Field	763B 17	764B 18	765B 17					
C.	<b>SOLAR FLARE-ASSOCIATED EVENT</b>								
C.1a	H-alpha Flares	758A 26	759A 27	760A 26	761A 27	762A 27	763A 26	764A 27	765A 26
C.1ba	H-alpha Flare Groups	763B 4	764B 4	765B 4					
C.1d	Flare Patrol Observations	763B 6	764B 6	765B 6					
C.1h	H-alpha Flare Index (ImpxDur)	Jan 76-Dec 85 in 639B 26; Jan 86-Oct 96 in 635B 24; Jan 96-Dec 98 in 665B 63							
C.3	Radio Bursts Fixed Frequency	763B 8	764B 8	765B 8					
C.3	Radio Bursts Fixed Freq Selected	758A 28	759A 29	760A 28	761A 32	762A 29	763A 28	764A 29	765A 28
C.4	Radio Bursts Spectral	759A 77	760A 79	761A 81	762A 80	763A 79	764A 82	765A 81	
C.6	Sudden Ionospheric Disturbances	759A 76	760A 78	761A 80	762A79	763A 78	764A 81	765A 80	
D.	<b>GEOMAGNETIC EVENTS</b>								
D.1a	Geomagnetic Indices	759A 86	760A 88	761A 92	762A 91	763A 90	764A 93	765A 93	
D.1ba	27-day Chart of Kp Indices	759A 88	760A 90	761A 94	762A 93	763A 92	764A 95	765A 95	
D.1cb	Monthly Mean aa Indices	759A 89	760A 91	761A 95	762A 94	763A 93	764A 97	765A 96	
D.1d	Principal Magnetic Storms	759A 93	760A 95	761A 99	762A 98	763A 97	764A103	765A100	
D.1f	Sudden Commencements	759A 94	760A 96	761A100	762A 99	763A 98	764A104	765A101	
D.1g	Equatorial Indices Dst	759A 91	760A 93	761A 97	762A 96	763A 95	764A101	765A 98	
D.1l	Polar Cap (PC) Index	759A 92	760A 94	761A 98	762A 97	763A 96	764A102	765A 99	
F.	<b>COSMIC RAYS</b>								
F.1b	Cosmic Ray Neutron Cts (Climax)	759A 82	760A 84	761A 87	762A 86	763A 85	764A 87	765A 88	
F.1h	Cosmic Ray Neutron Cts (Thule)	759A 82	760A 84	761A 87	762A 86	763A 85	764A 87	765A 88	
F.1l	Cosmic Ray Neutron Cts (Kiel)	759A 82	760A 84	761A 87	762A 86	763A 85	764A 87	765A 88	
F.1n	Cosmic Ray Neutron Cts (Beijing)	759A 82	760A 84	761A 87	762A 86	763A 85	764A 87	765A 88	
F.1m	Cosmic Ray Neutron (Haleakala)	759A 82	760A 84	761A 87	762A 86	763A 85	764A 87	765A 88	
F.1o	Cosmic Ray Neutron (Moscow)	759A 82	760A 84	761A 87	762A 86	763A 85	764A 87	765A 88	
F.1p	Cosmic Ray Neutron Cts (Calgary)	759A 82	760A 84	761A 87	762A 86	763A 85	764A 87	765A 88	
H.	<b>MISCELLANEOUS</b>								
H.60	ISES Alert Periods	758A 19	759A 20	760A 19	761A 20	762A 20	763A 19	764A 20	765A 19

The entry "748A 48" under Oct, for example, means the sunspot drawings for Oct appear in SOLAR-GEOPHYSICAL DATA No 748, Part I, and that they begin on page 48, "A" denotes Part I and "B", Part II. Blanks indicate data not yet received and dashes mark unavailable data.

**CONTENTS**

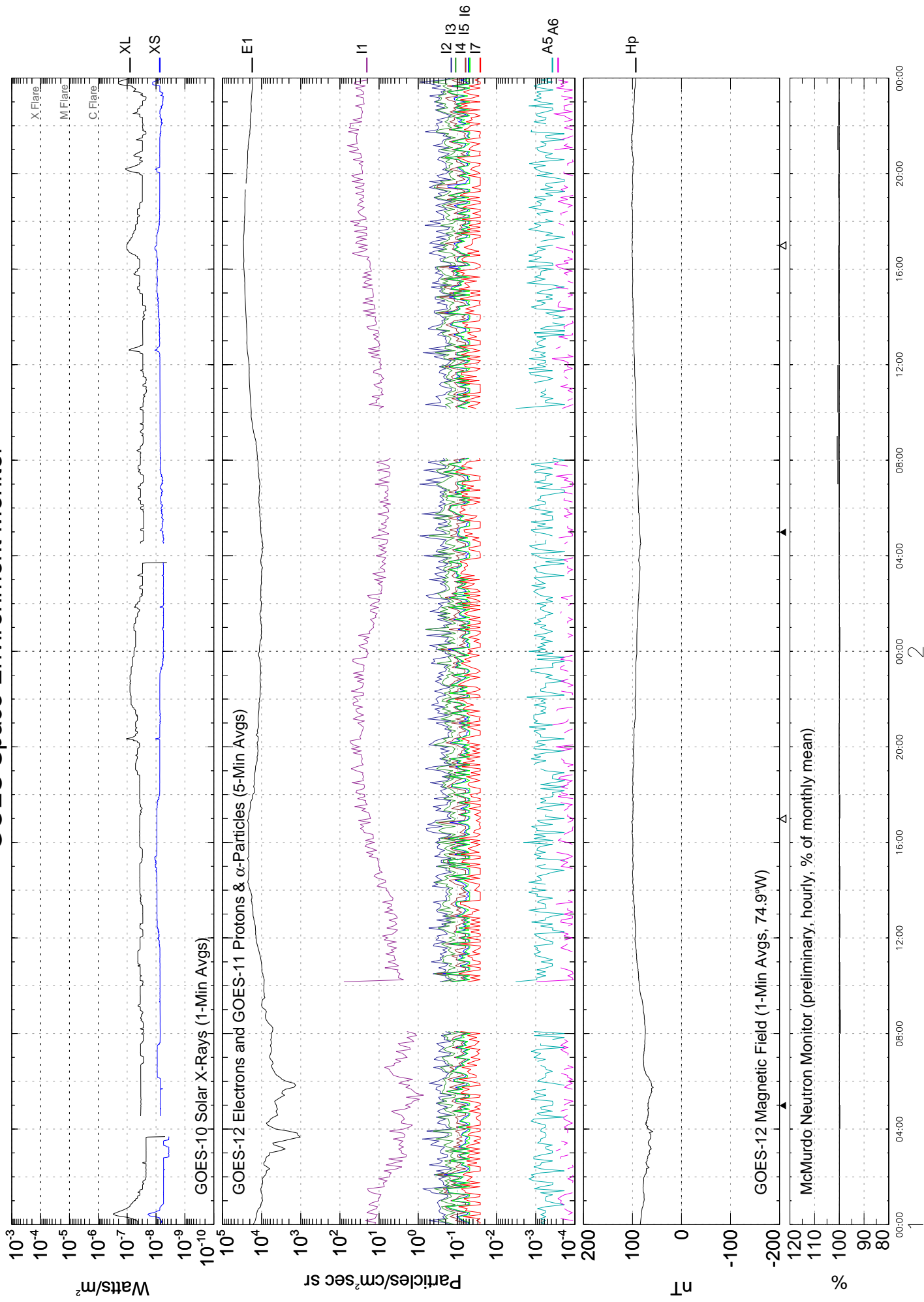
Prompt Reports

Number 765 Part I

**DATA FOR APRIL 2008**

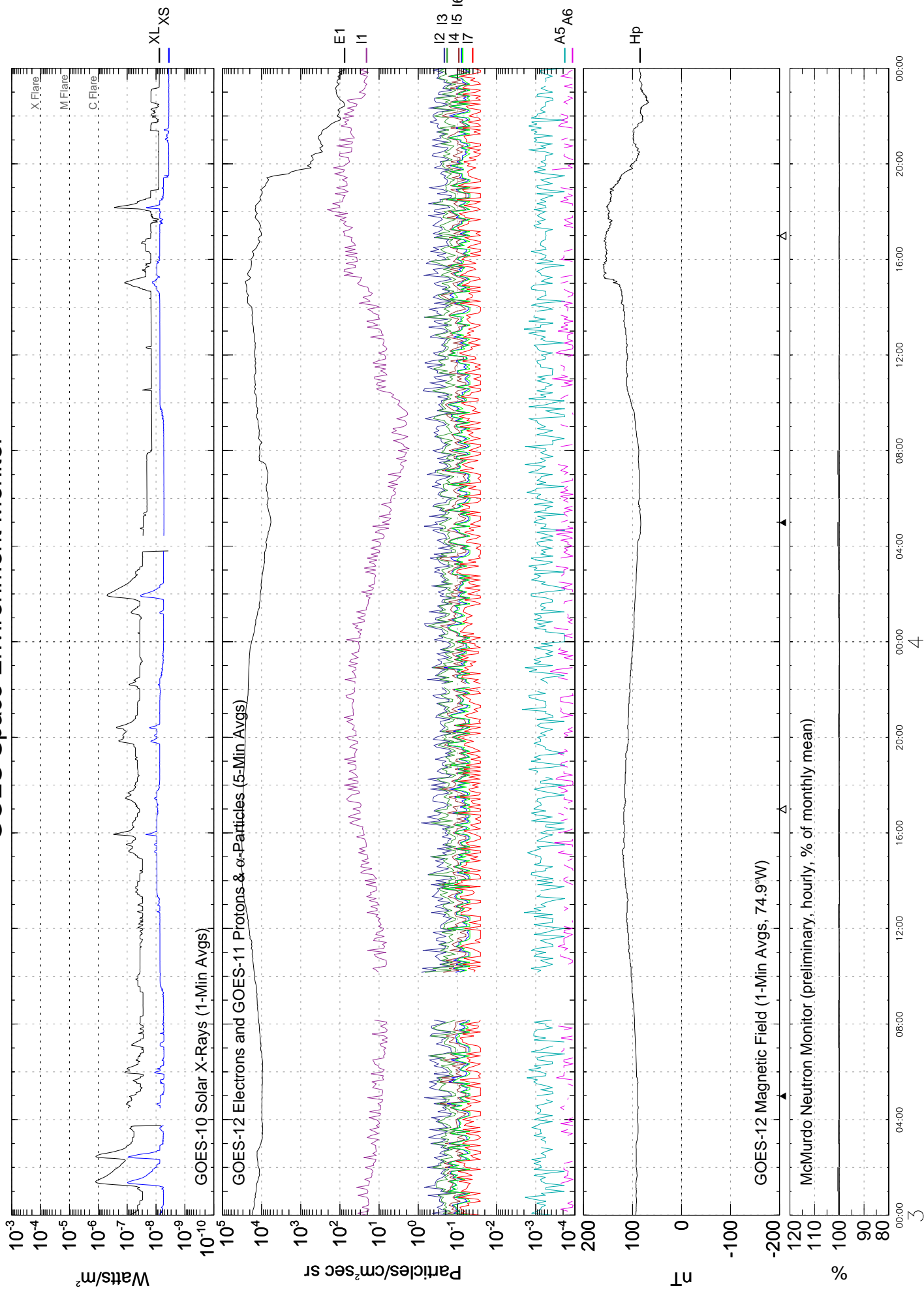
	Page
SOLAR-TERRESTRIAL ENVIRONMENT .....	4-18
Plots of GOES Satellite X-rays, Particles and Magnetometer Data with ground-based McMurdo Neutron Monitor Cosmic Rays	
ISES ALERT PERIODS (Advance and Worldwide) .....	19-20
SOLAR ACTIVITY INDICES	
Daily Sunspot Numbers (12 Months) .....	21
Daily 2800 MHz Solar Flux (12 Months) .....	22
Daily Solar Indices (Sunspot Numbers and Solar Flux) .....	23
Smoothed Observed and Predicted Sunspot Numbers .....	24
Graph and Table of Monthly Mean Sunspot Numbers 1951-present .....	25
SOLAR FLARES	
H-alpha Solar Flares .....	26
X-ray Solar Flares (GOES Full Disk Monitor) .....	27
Intervals of No Flare Patrol (See 6-month late chart in Comprehensive Reports.)	
SOLAR RADIO EMISSION	
Selected Fixed Frequency Events .....	28
STANFORD MEAN SOLAR MAGNETIC FIELD	
Graph .....	29
Table .....	30
GOES Daily Electron Fluence .....	31

# GOES Space Environment Monitor

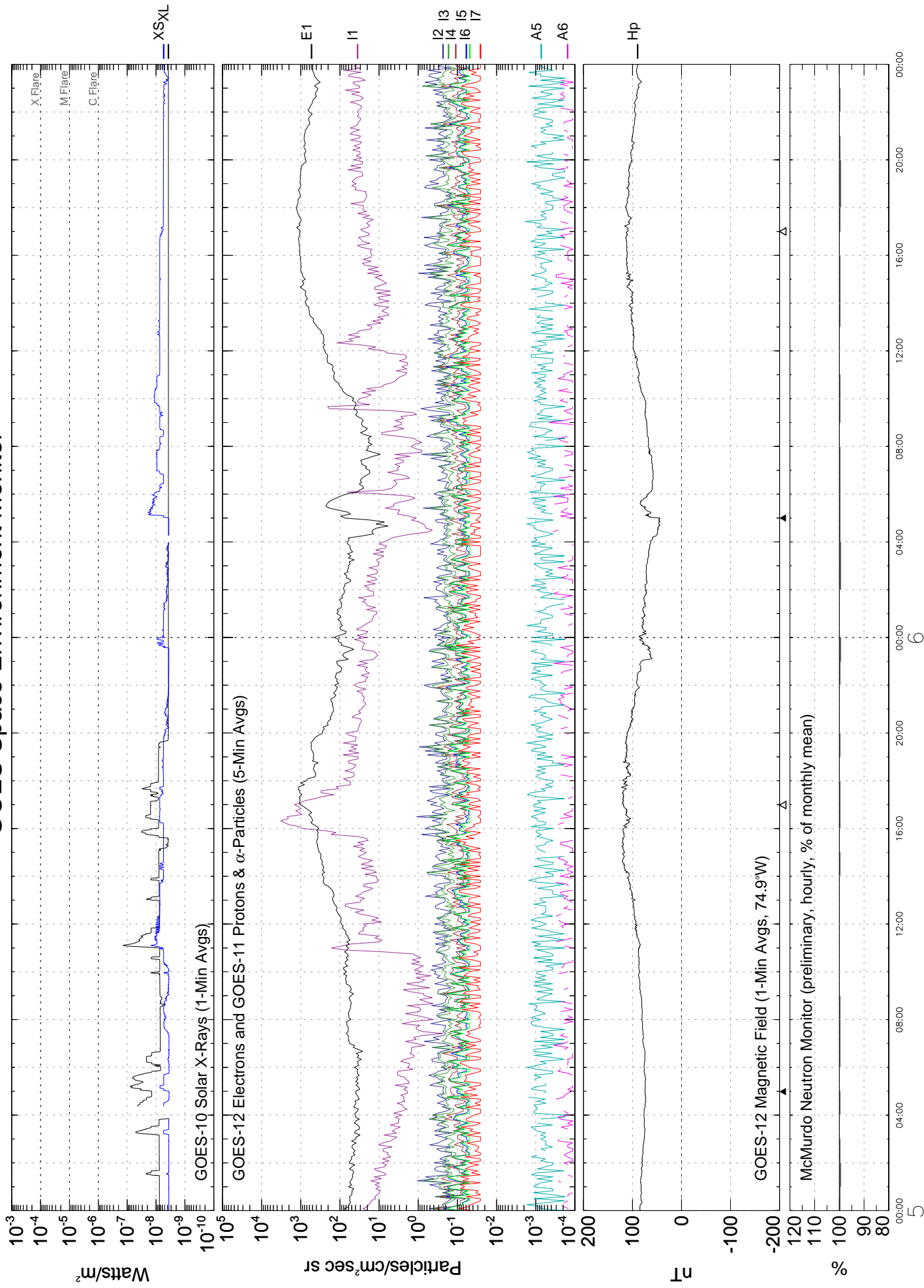


April 2008 (Universal Time)

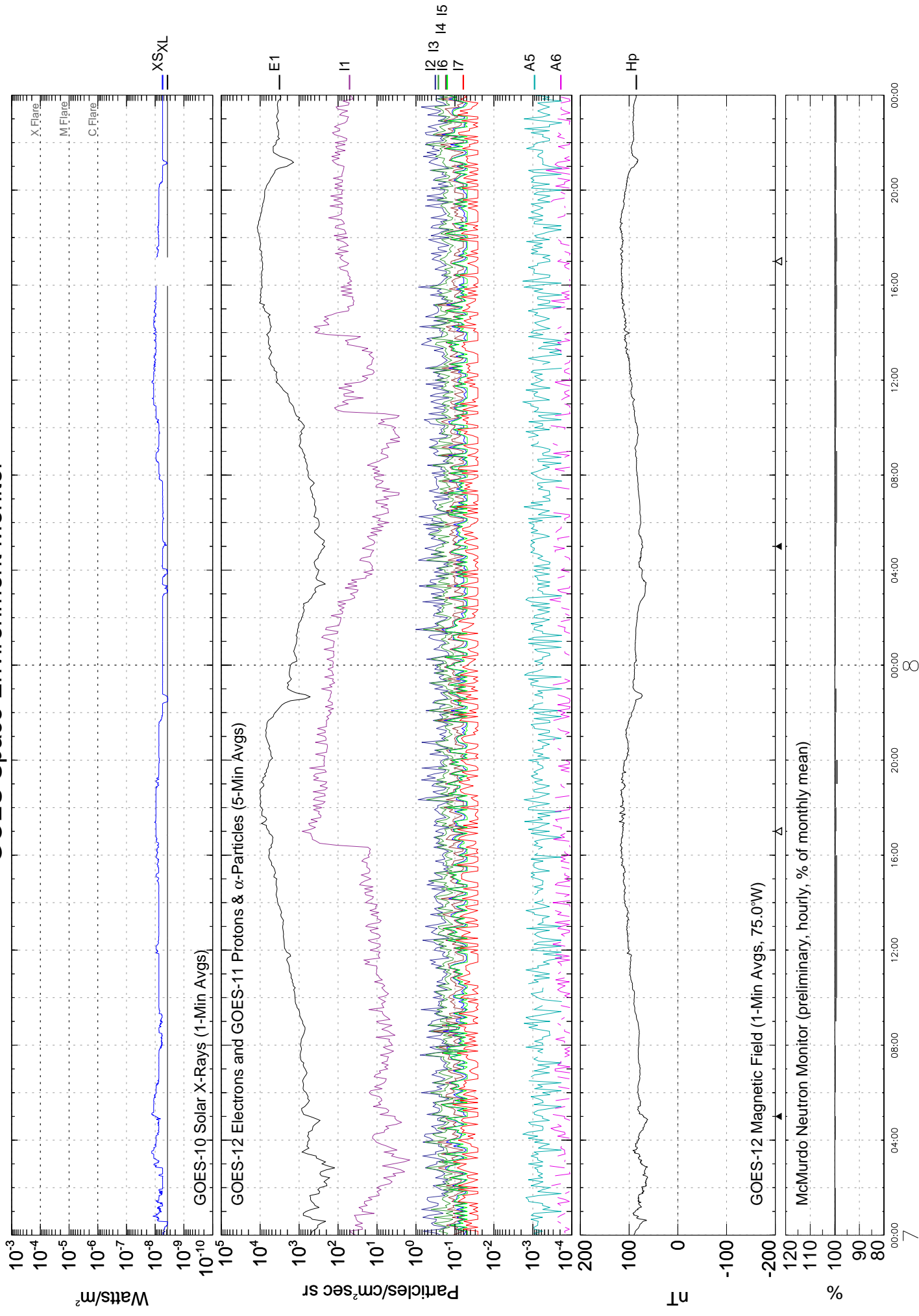
# GOES Space Environment Monitor



# GOES Space Environment Monitor



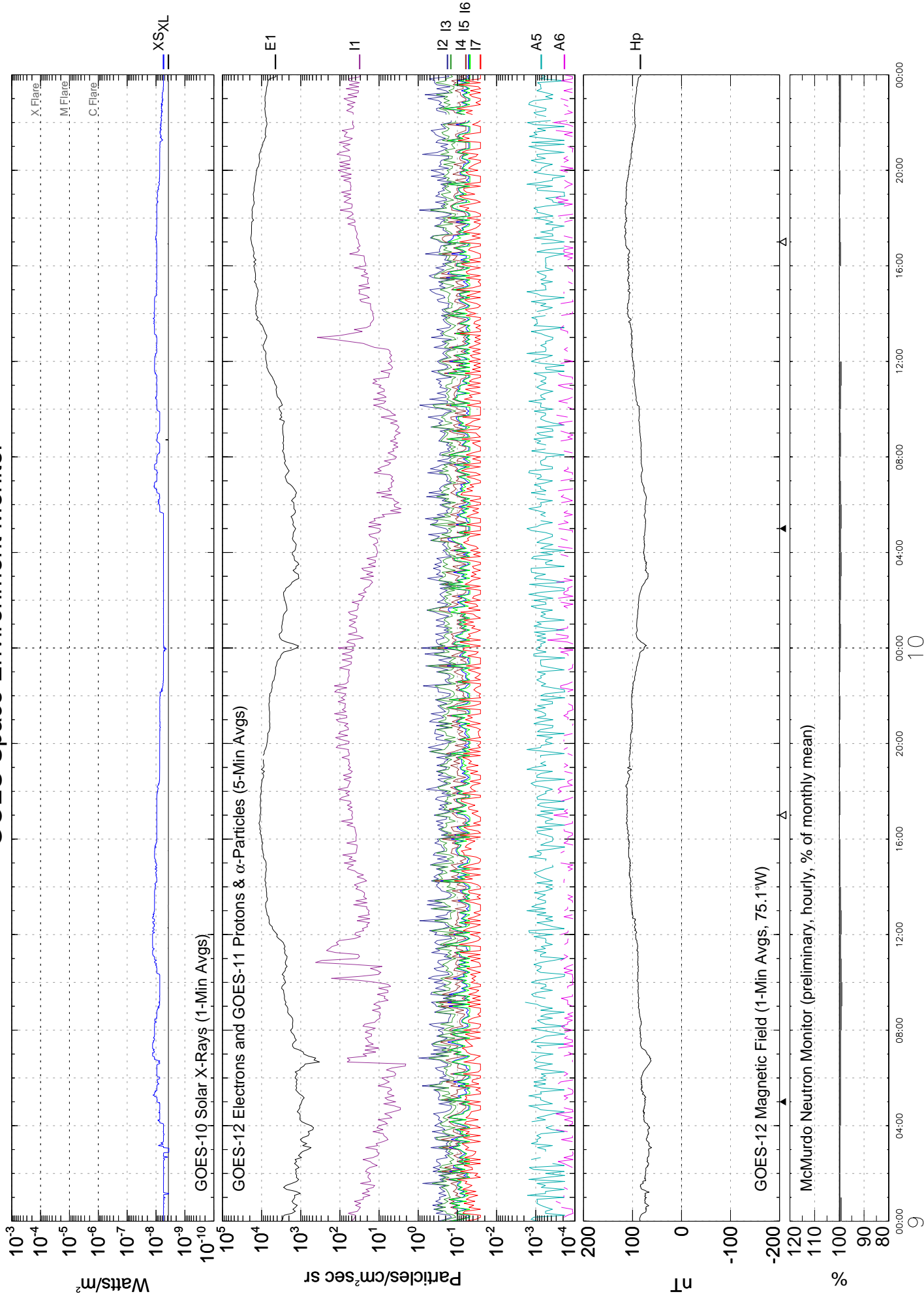
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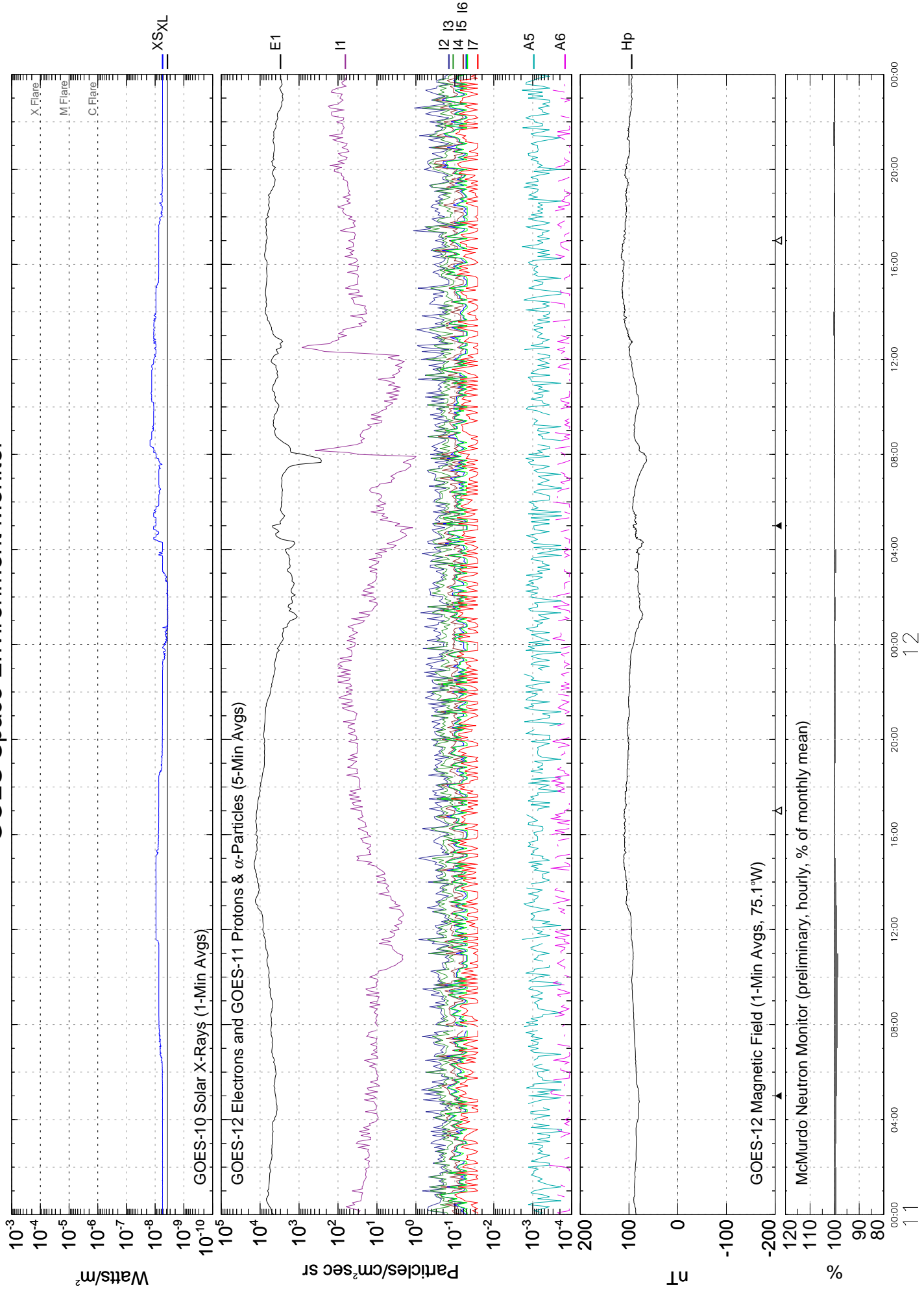
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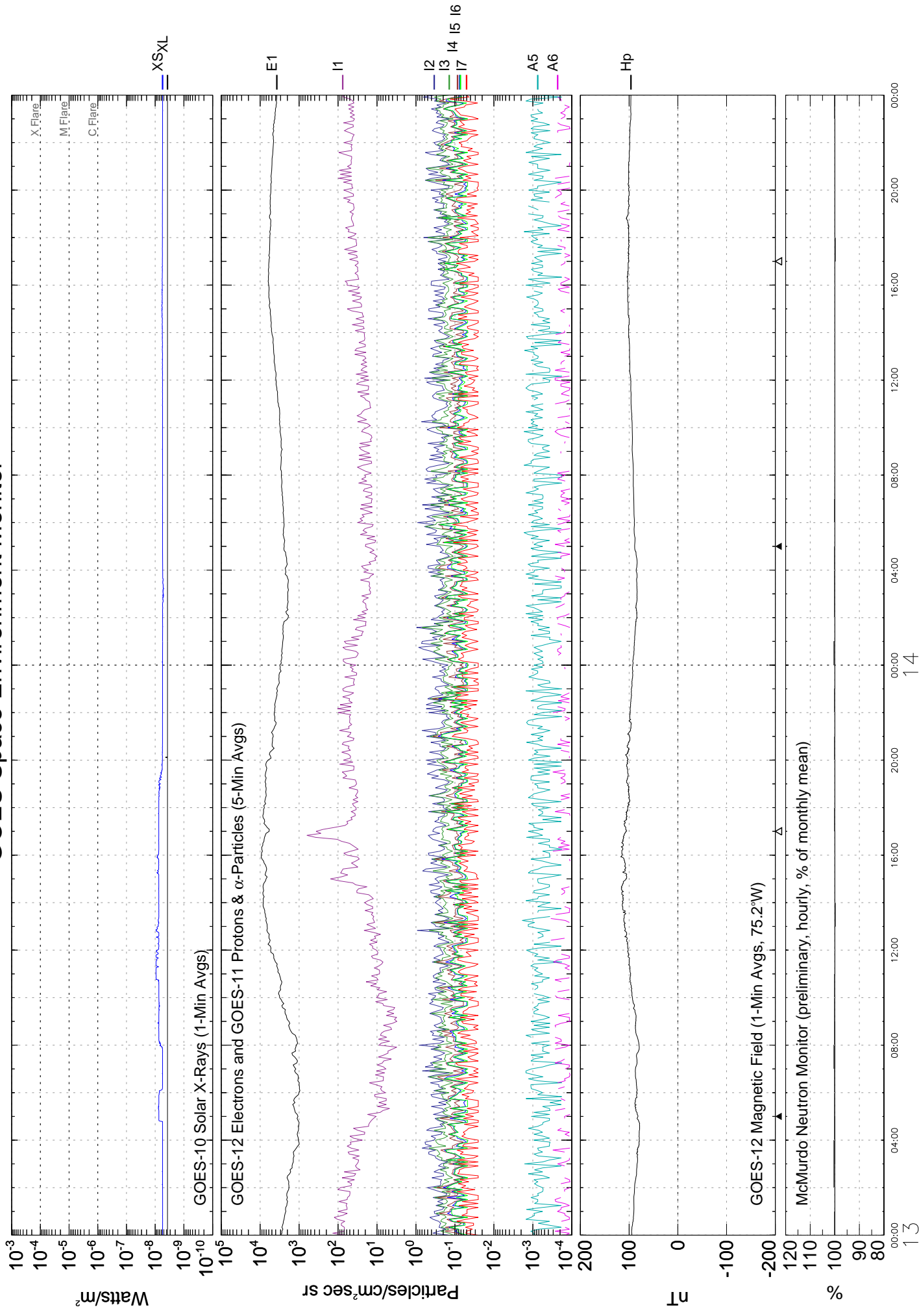
# GOES Space Environment Monitor



12

April 2008 (Universal Time)

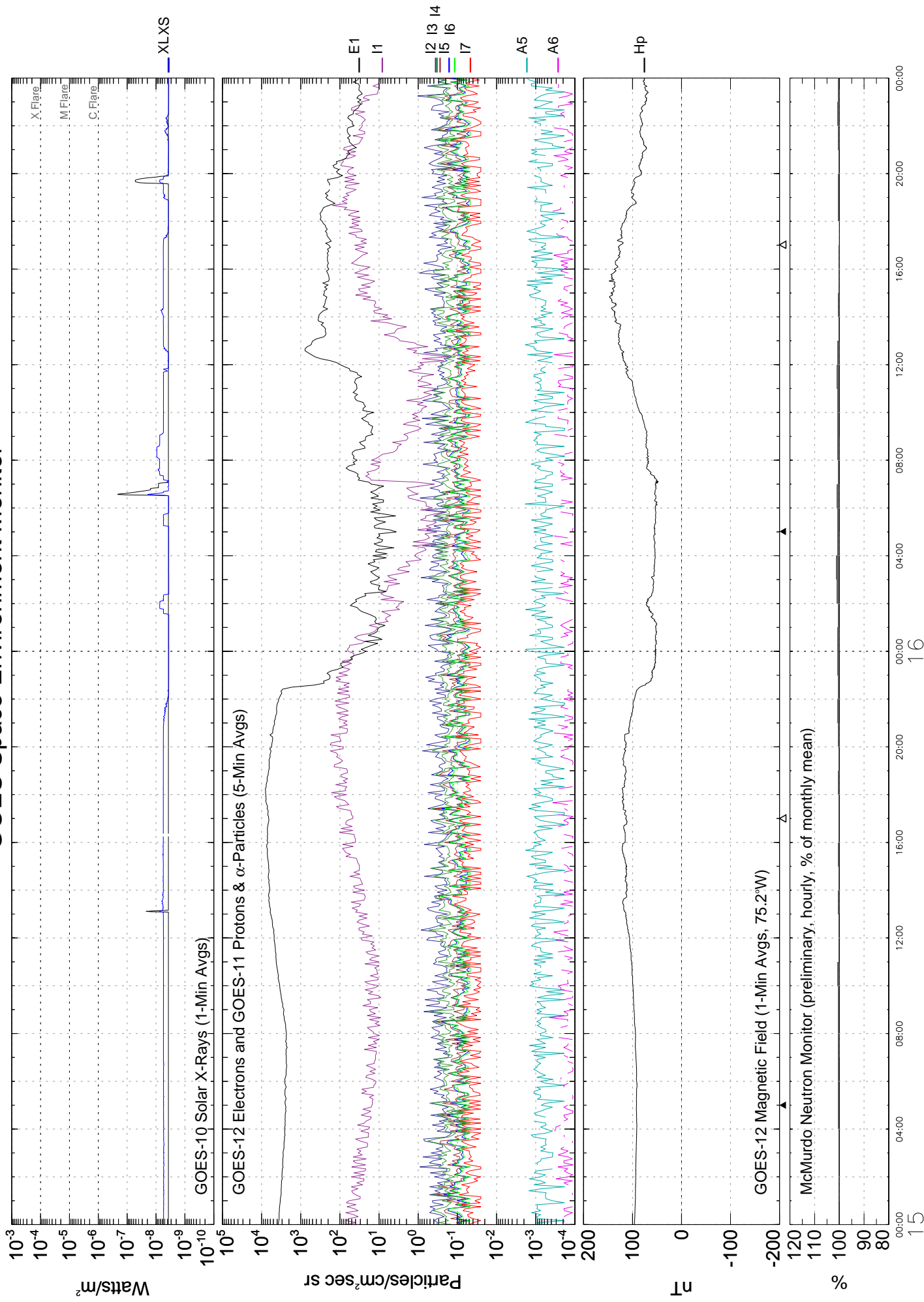
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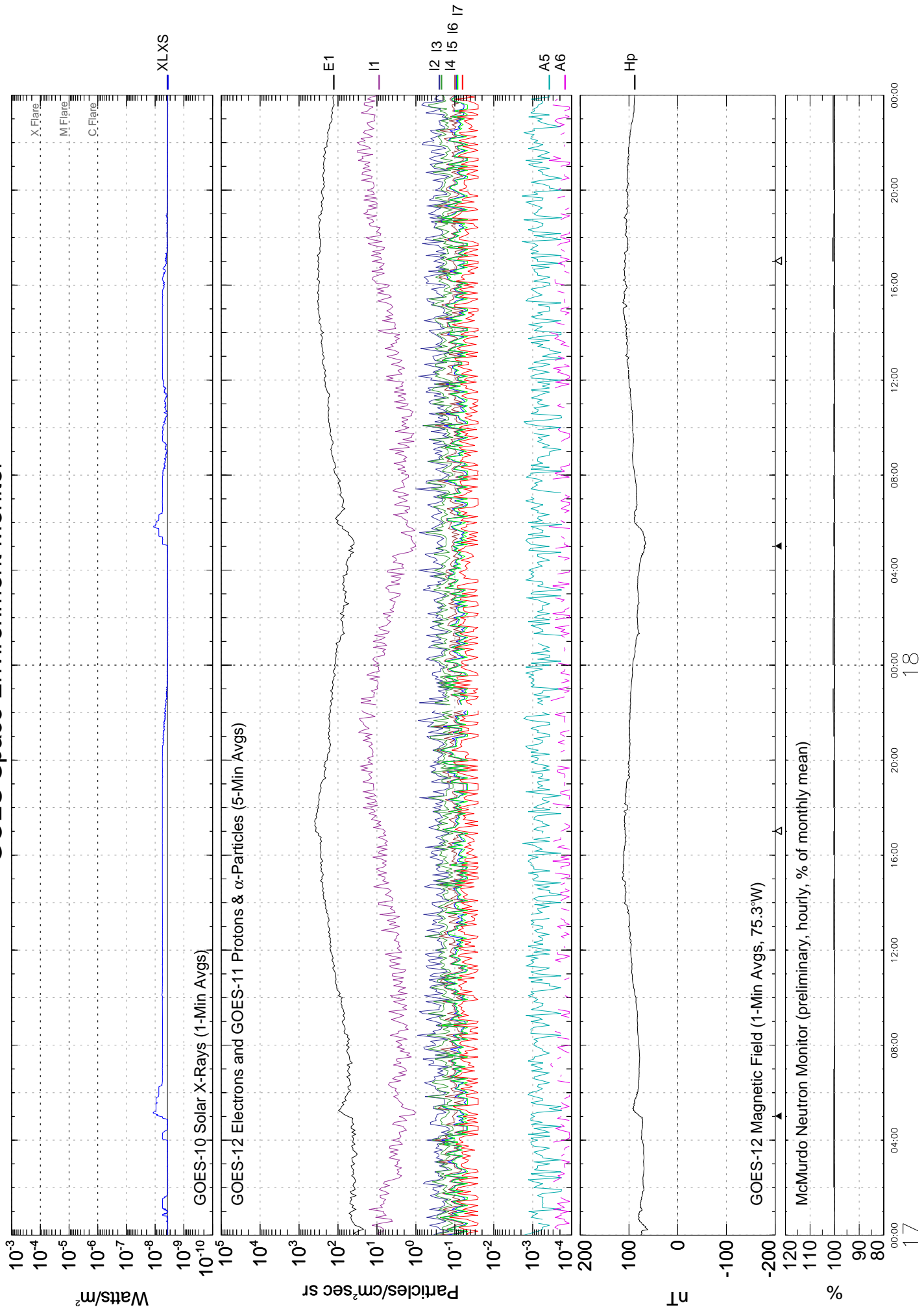
13  
14

April 2008 (Universal Time)

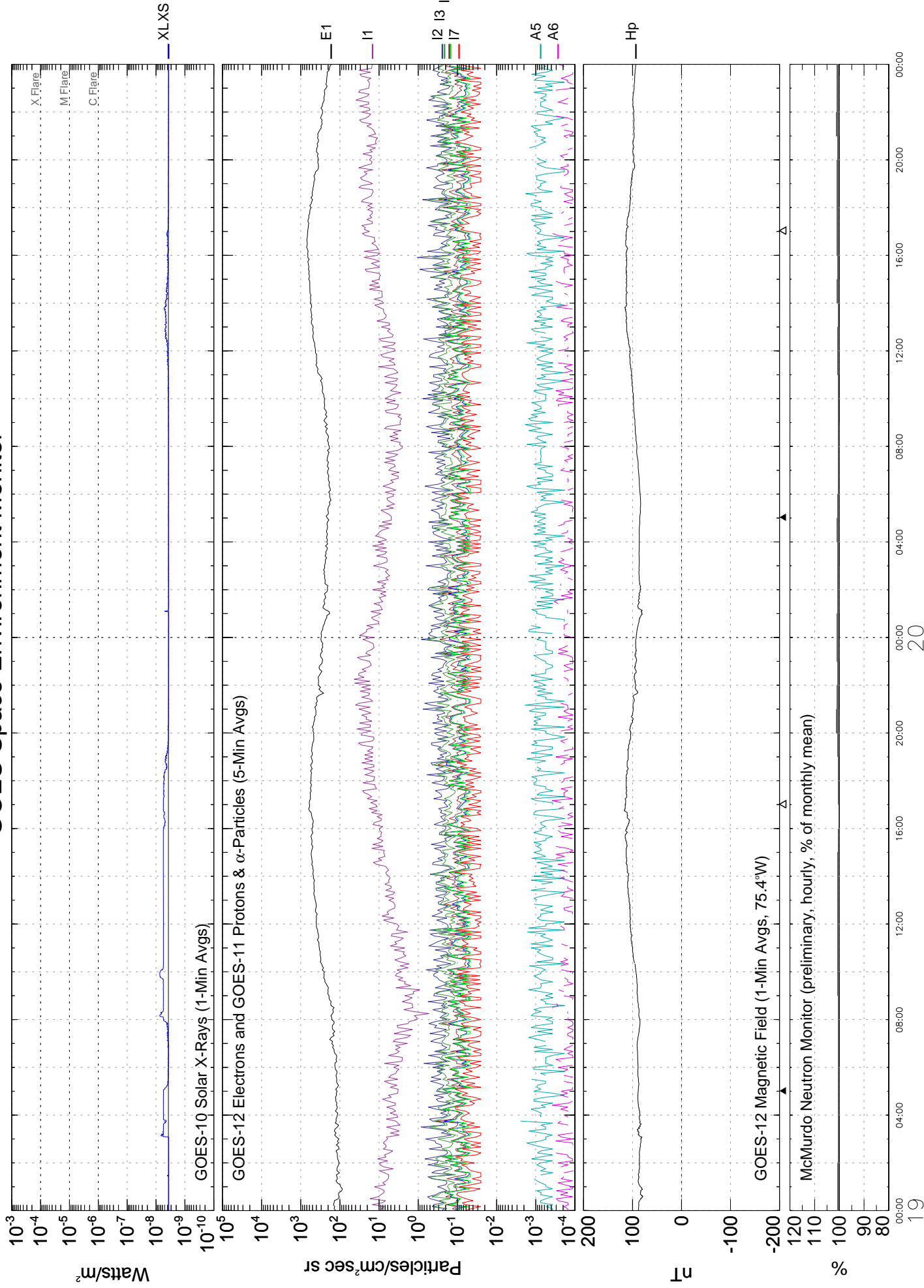
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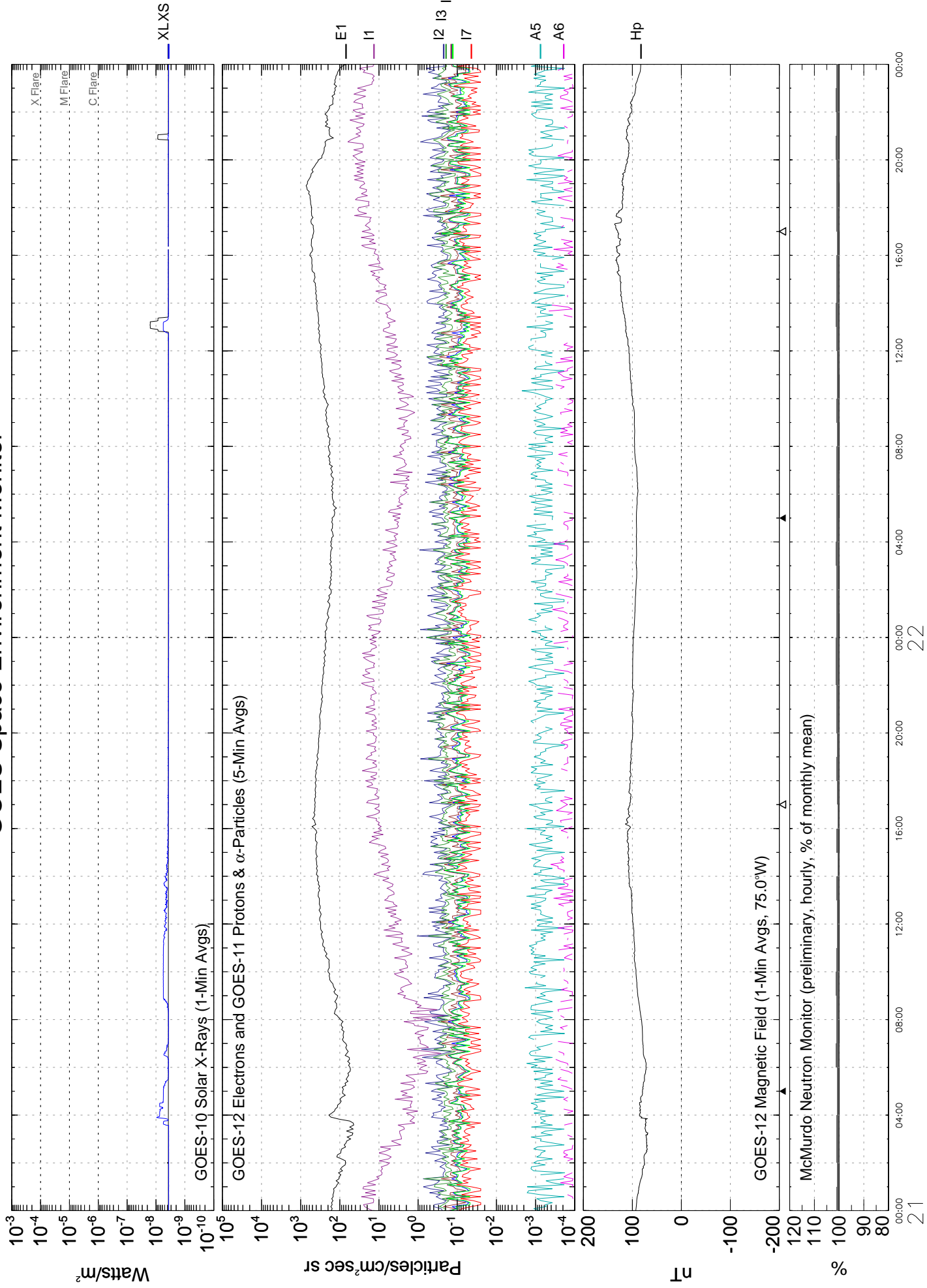
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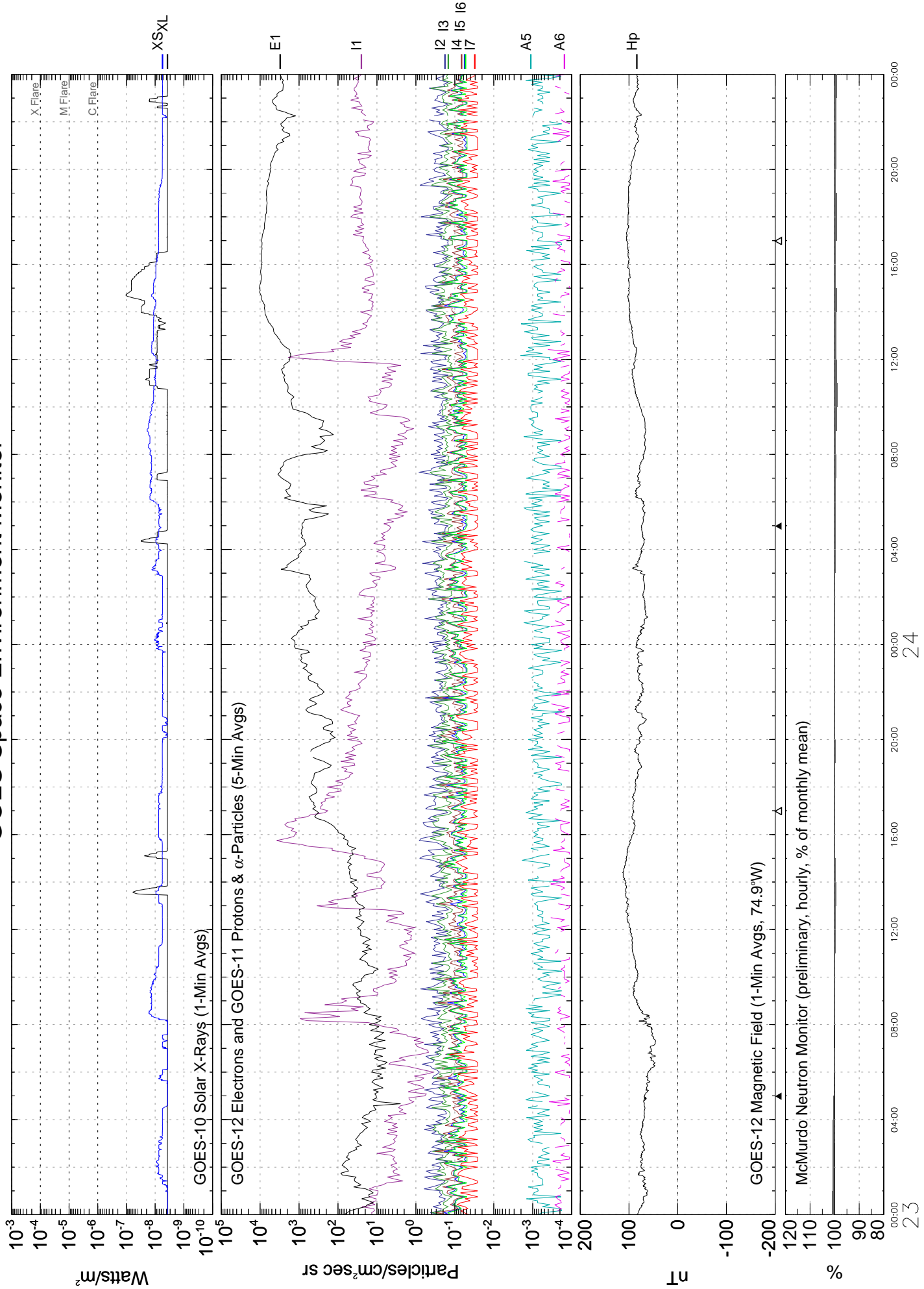
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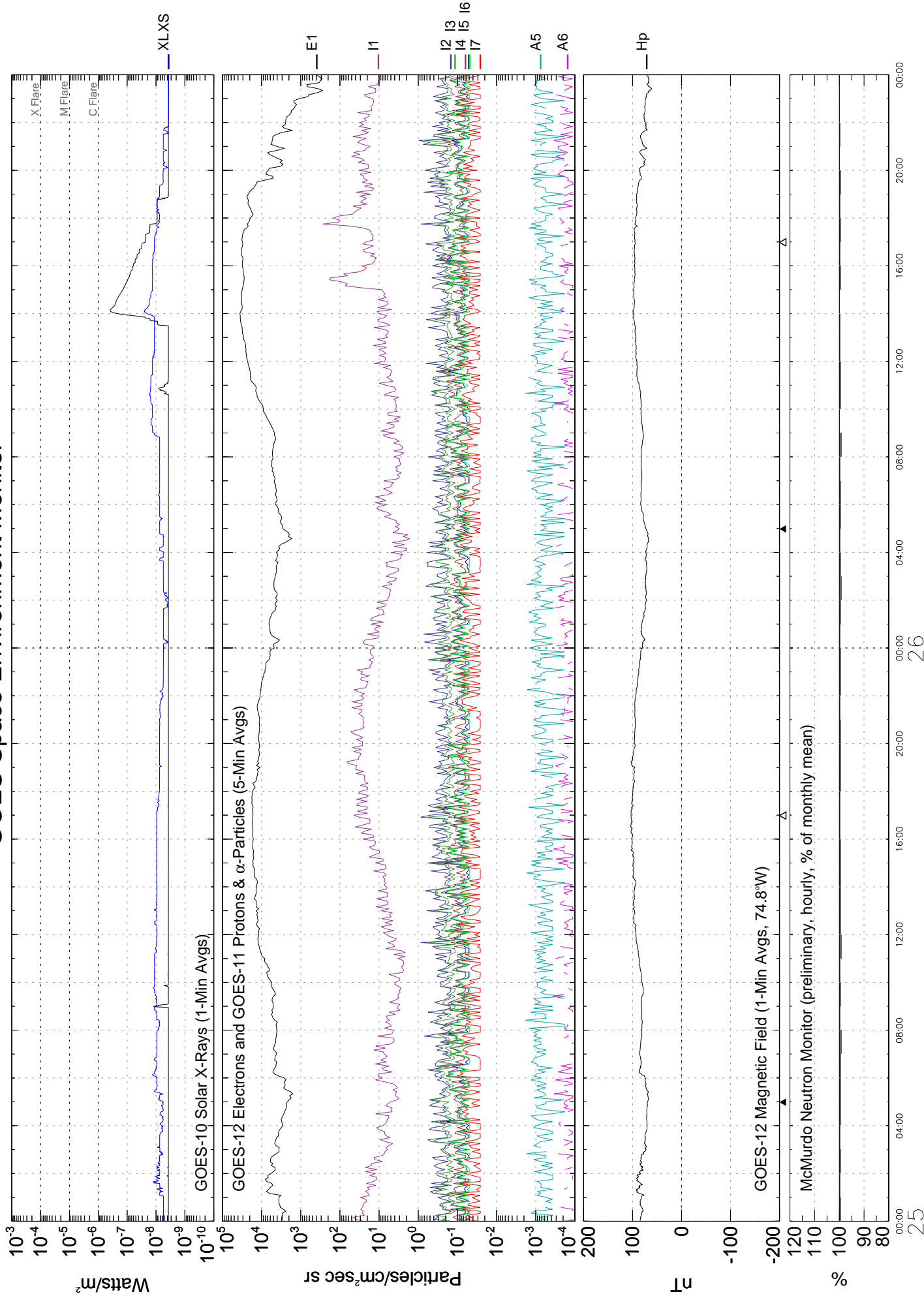
23

24

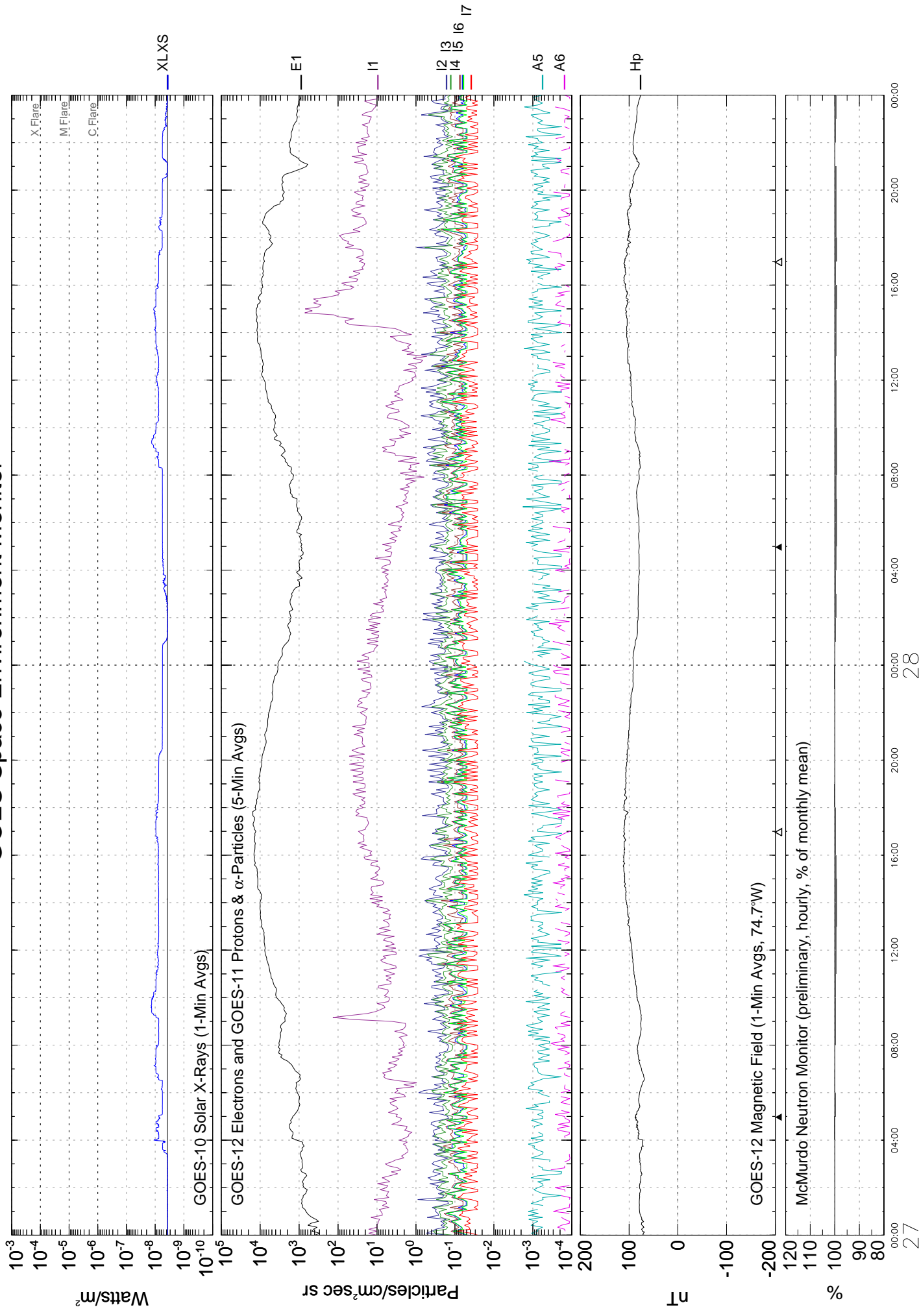
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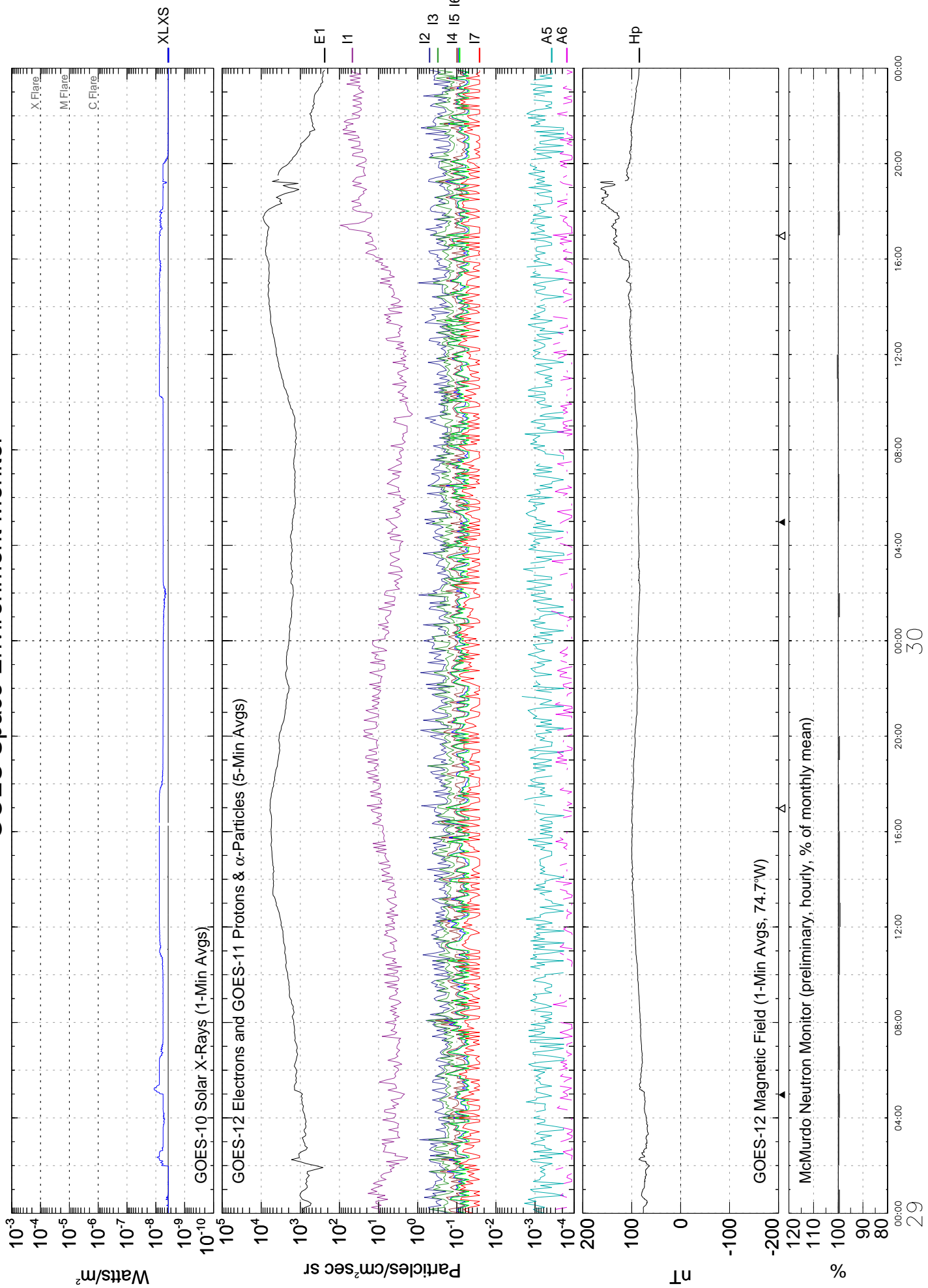
# GOES Space Environment Monitor



# GOES Space Environment Monitor



# GOES Space Environment Monitor



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

APRIL 2008

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				
092	01	31	45	79	3	10987	S07	W58	0	0	0	01	Q	SOL: Quiet	
							10988	S07	W35	1	0	0	01	Q	MAG: Quiet
							10989	S11	W01	0	0	0	01	Q	PRO: Quiet
093	02	01	25	78	4	10987	S08	W75	0	0	0	02	Q	SOL: Quiet	
							10988	S07	W50	0	0	0	02	Q	MAG: Quiet
									0	0	0	02		PRO: Quiet	
094	03	02	24	76	1	10987	S08	W89	0	0	0	03	Q	SOL: Quiet	
							10988	S07	W63	0	0	0	03	Q	MAG: Quiet
									0	0	0	03		PRO: Quiet	
095	04	03	14	76	0	10988	S06	W78	0	0	0	04	Q	SOL: Quiet	
									0	0	0	04		MAG: Quiet	
									0	0	0	04		PRO: Quiet	
096	05	04	0	73	8				0	0	0	05		SOL: Quiet	
									0	0	0	05		MAG: Active	
									0	0	0	05		PRO: Quiet	
097	06	05	0	71	16				0	0	0	06		SOL: Quiet	
									0	0	0	06		MAG: Active	
									0	0	0	06		PRO: Quiet	
098	07	06	0	69	17				0	0	0	07		SOL: Quiet	
									0	0	0	07		MAG: Active	
									0	0	0	07		PRO: Quiet	
099	08	07	0	69	13				0	0	0	08		SOL: Quiet	
									0	0	0	08		MAG: Quiet	
									0	0	0	08		PRO: Quiet	
100	09	08	0	70	10				0	0	0	09		SOL: Quiet	
									0	0	0	09		MAG: Quiet	
									0	0	0	09		PRO: Quiet	
101	10	09	0	68	12				0	0	0	10		SOL: Quiet	
									0	0	0	10		MAG: Quiet	
									0	0	0	10		PRO: Quiet	
102	11	10	0	68	8				0	0	0	11		SOL: Quiet	
									0	0	0	11		MAG: Quiet	
									0	0	0	11		PRO: Quiet	
103	12	11	0	67	5				0	0	0	12		SOL: Quiet	
									0	0	0	12		MAG: Quiet	
									0	0	0	12		PRO: Quiet	
104	13	12	0	68	12				0	0	0	13		SOL: Quiet	
									0	0	0	13		MAG: Quiet	
									0	0	0	13		PRO: Quiet	
105	14	13	0	69	8				0	0	0	14		SOL: Quiet	
									0	0	0	14		MAG: Quiet	
									0	0	0	14		PRO: Quiet	
106	15	14	11	69	1	10990	N26	E20	0	0	0	15	Q	SOL: Quiet	
									0	0	0	15		MAG: Quiet	
									0	0	0	15		PRO: Quiet	
107	16	15	12	69	5	10990	N27	E05	0	0	0	16	Q	SOL: Quiet	
									0	0	0	16		MAG: Quiet	
									0	0	0	16		PRO: Quiet	
108	17	16	0	70	13				0	0	0	17		SOL: Quiet	
									0	0	0	17		MAG: Quiet	
									0	0	0	17		PRO: Quiet	

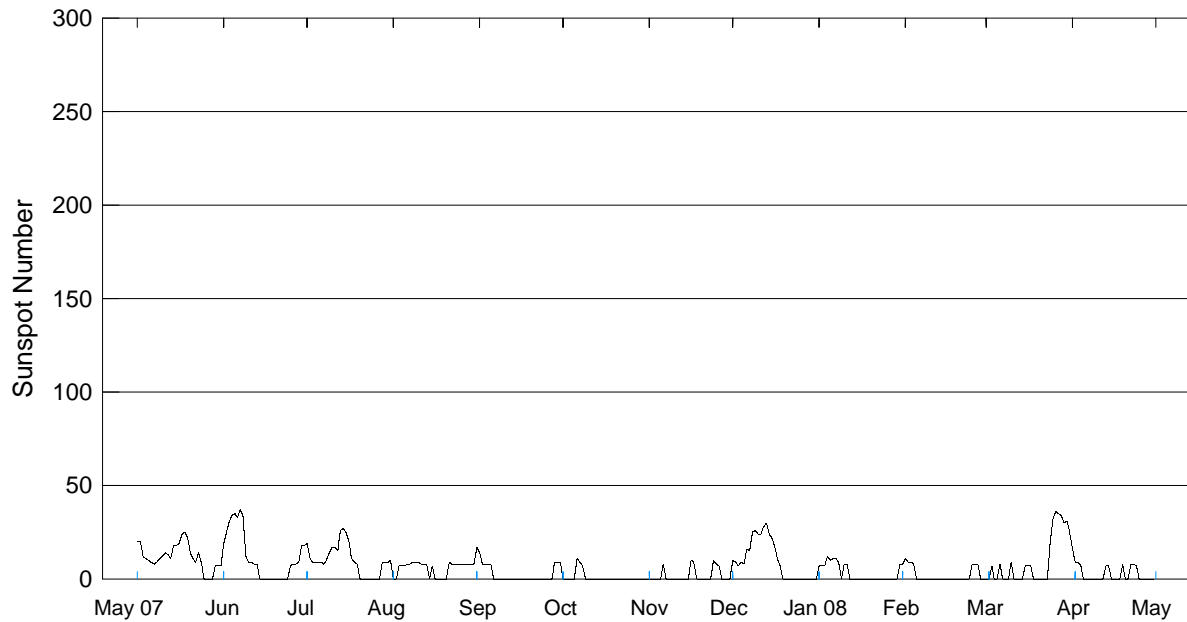
20  
Apr 08

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

APRIL 2008

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			
109	18	17	0	69	6				0	0	0	18		SOL: Quiet
									0	0	0	18		MAG: Quiet
									0	0	0	18		PRO: Quiet
110	19	18	0	70	6				0	0	0	19		SOL: Quiet
									0	0	0	19		MAG: Quiet
									0	0	0	19		PRO: Quiet
111	20	19	13	71	5	10991	S09	E29	0	0	0	20	Q	SOL: Quiet
									0	0	0	20		MAG: Quiet
									0	0	0	20		PRO: Quiet
112	21	20	12	71	5	10991	S10	E15	0	0	0	21	Q	SOL: Quiet
									0	0	0	21		MAG: Quiet
									0	0	0	21		PRO: Quiet
113	22	21	0	71	5				0	0	0	22		SOL: Quiet
									0	0	0	22		MAG: Quiet
									0	0	0	22		PRO: Quiet
114	23	22	13	71	5	10992	N13	W01	0	0	0	23	Q	SOL: Quiet
									0	0	0	23		MAG: Quiet
									0	0	0	23		PRO: Quiet
115	24	23	13	71	27	10992	N13	W17	0	0	0	24	Q	SOL: Quiet
									0	0	0	24		MAG: Quiet
									0	0	0	24		PRO: Quiet
116	25	24	11	70	16	10992	N13	W32	0	0	0	25	Q	SOL: Quiet
									0	0	0	25		MAG: Active
									0	0	0	25		PRO: Quiet
117	26	25	0	70	10				0	0	0	26		SOL: Quiet
									0	0	0	26		MAG: Quiet
									0	0	0	26		PRO: Quiet
118	27	26	0	69	11				0	0	0	27		SOL: Quiet
									0	0	0	27		MAG: Quiet
									0	0	0	27		PRO: Quiet
119	28	27	0	68	13				0	0	0	28		SOL: Quiet
									0	0	0	28		MAG: Quiet
									0	0	0	28		PRO: Quiet
120	29	28	0	69	12				0	0	0	29		SOL: Quiet
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121	30	29	0	69	6				0	0	0	30		SOL: Quiet
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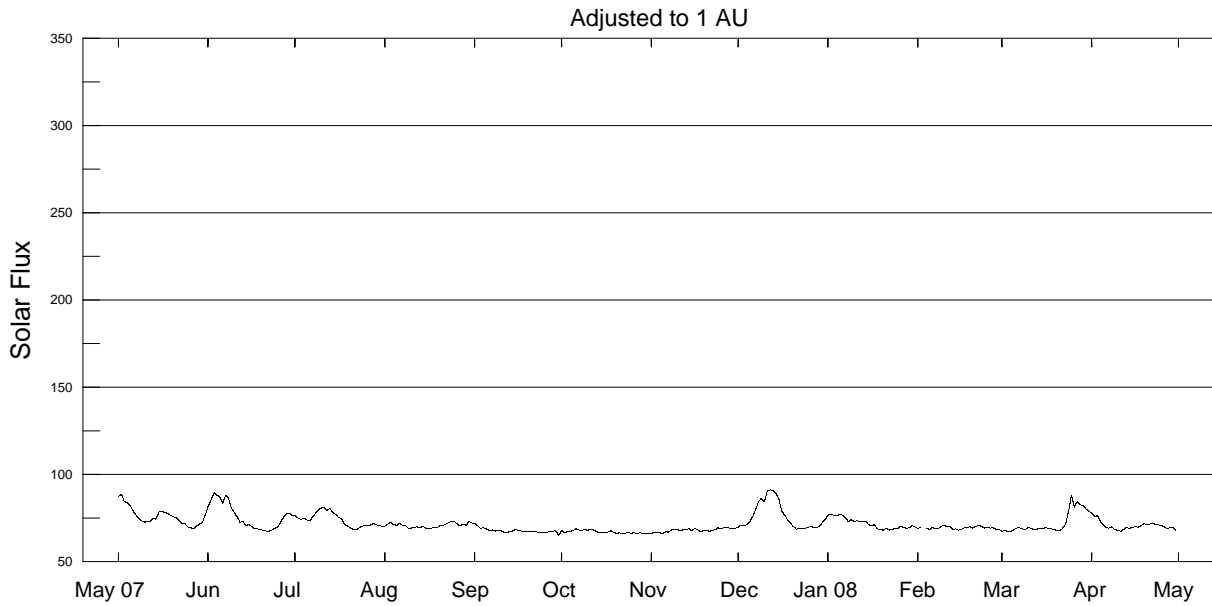
# International Relative Sunspot Numbers May 2007 - Apr 2008



Day	May 07	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan 08*	Feb*	Mar*	Apr*
1	20	19	19	0	14	0	0	10	7	11	0	16
2	20	25	11	0	8	0	0	9	7	9	0	9
3	12	31	9	7	8	0	0	7	7	9	7	9
4	11	34	9	7	8	0	0	9	12	8	0	7
5	10	35	9	7	8	0	0	8	10	0	0	0
6	9	33	9	8	0	11	8	16	11	0	8	0
7	8	37	8	8	0	9	0	15	11	0	0	0
8	9	34	10	9	0	7	0	25	9	0	0	0
9	11	12	14	9	0	0	0	26	0	0	0	0
10	12	9	17	9	0	0	0	24	8	0	9	0
11	14	9	17	8	0	0	0	24	8	0	0	0
12	13	8	15	8	0	0	0	28	0	0	0	0
13	11	8	26	8	0	0	0	30	0	0	0	7
14	18	0	27	0	0	0	0	24	0	0	0	7
15	18	0	25	0	0	0	0	22	0	0	7	0
16	19	0	20	0	0	0	10	18	0	0	7	0
17	24	0	11	0	0	0	9	11	0	0	7	0
18	25	0	9	0	0	0	0	7	0	0	0	0
19	22	0	8	0	0	0	0	0	0	0	0	8
20	14	0	0	0	0	0	0	0	0	0	0	0
21	11	0	0	9	0	0	0	0	0	0	0	0
22	9	0	0	8	0	0	0	0	0	0	0	8
23	14	0	0	8	0	0	0	0	0	0	0	8
24	9	0	0	8	0	0	10	0	0	0	19	7
25	0	7	0	8	0	0	8	0	0	8	32	0
26	0	8	0	8	0	0	7	0	0	8	36	0
27	0	8	0	8	0	0	0	0	0	8	35	0
28	0	9	9	8	9	0	0	0	0	0	34	0
29	7	18	9	8	9	0	0	0	0	0	30	0
30	7	18	9	8	9	0	0	0	8		31	0
31	7		0	17		0		0	8		25	
Mean	11.7	12.1	9.7	6.0	2.4	0.9	1.7	10.1	3.4	2.1	9.3	2.9

\* = Provisional.

## Penticton 2800 MHz (10.7cm) Solar Flux May 2007 - Apr 2008



Day	May 07	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan 08	Feb	Mar	Apr
1	87.6	81.6	76.8	70.4	72.1	67.8	66.3	69.9	76.7	69.0	67.4	77.7
2	88.8	85.6	75.1	71.5	70.6	66.5	66.8	71.0	77.0	69.8	68.0	75.9
3	84.4	89.5	74.2	72.4	69.1	67.3	66.5	70.5	76.7	*	67.3	76.4
4	83.9	88.2	74.9	71.4	69.4	67.4	66.5	71.5	76.4	69.3	67.2	73.1
5	82.4	87.1	73.9	70.9	68.8	67.8	66.2	73.1	77.1	68.5	68.2	71.1
6	79.4	83.6	73.5	72.0	67.8	68.9	67.3	75.9	76.6	69.6	69.3	69.5
7	77.1	88.1	75.5	71.0	68.2	68.1	66.9	79.8	75.2	68.9	69.5	69.3
8	74.7	86.8	77.6	71.0	67.6	67.9	68.4	84.4	73.0	69.0	68.8	70.0
9	73.5	81.0	79.7	69.3	67.7	68.6	68.2	86.2	74.0	70.3	68.5	68.2
10	72.6	78.2	80.8	69.3	67.9	67.9	68.4	84.3	73.2	70.7	69.4	68.1
11	72.9	75.6	81.1	69.5	67.0	68.6	67.7	90.5	73.5	70.2	69.3	67.4
12	72.9	72.6	79.5	70.0	66.7	68.3	68.3	91.1	73.2	70.3	68.5	68.5
13	75.0	73.1	80.6	69.5	67.2	67.3	68.4	90.9	72.9	68.7	68.7	69.7
14	74.4	70.6	78.2	70.3	67.6	66.7	68.9	89.0	73.1	68.8	69.1	69.0
15	78.5	71.3	77.1	69.3	68.5	66.8	67.7	86.1	71.3	68.0	68.8	69.7
16	78.9	70.2	75.3	69.0	67.8	66.7	69.1	79.1	70.6	68.6	69.6	70.0
17	78.3	68.9	74.7	69.3	67.6	67.0	68.2	76.9	71.3	69.4	69.1	69.8
18	77.6	68.8	71.8	69.6	67.1	67.7	67.2	74.4	68.8	69.5	69.0	70.8
19	76.6	68.5	70.5	69.4	67.4	66.8	67.9	72.1	68.6	70.0	68.4	71.7
20	75.9	67.8	69.5	70.7	67.4	66.3	68.0	70.2	68.0	69.3	67.9	71.5
21	75.0	67.6	68.6	70.9	67.4	66.6	67.4	68.7	69.3	70.3	67.7	71.6
22	73.7	67.5	68.3	71.6	67.2	66.0	68.0	69.1	68.1	70.8	69.1	72.1
23	71.9	68.1	69.3	72.4	66.8	66.4	68.3	69.1	68.4	70.1	71.5	71.5
24	71.7	69.1	70.2	73.2	66.5	66.8	69.5	69.1	69.1	69.3	79.0	71.2
25	69.9	69.8	70.8	73.1	66.6	66.3	68.8	69.7	68.9	69.9	88.2	70.7
26	69.5	72.8	70.6	71.6	66.8	66.7	69.6	70.2	70.3	69.3	81.2	69.9
27	68.8	75.7	70.9	70.7	67.4	66.2	69.6	69.7	69.8	69.4	84.5	69.0
28	70.5	77.4	72.1	71.6	67.4	66.6	69.3	69.5	69.2	68.7	82.6	69.4
29	71.5	77.8	71.1	71.0	67.8	66.2	69.3	70.3	69.5	68.5	82.4	69.6
30	72.6	76.4	71.0	73.0	65.1	66.3	69.2	72.5	70.6		80.4	68.0
31	76.7		70.1	72.2		66.1		74.2	69.9		79.1	
Mean	76.0	76.0	74.0	70.9	67.8	67.1	68.1	76.1	71.9	69.4	72.2	70.7

\* = No data available.

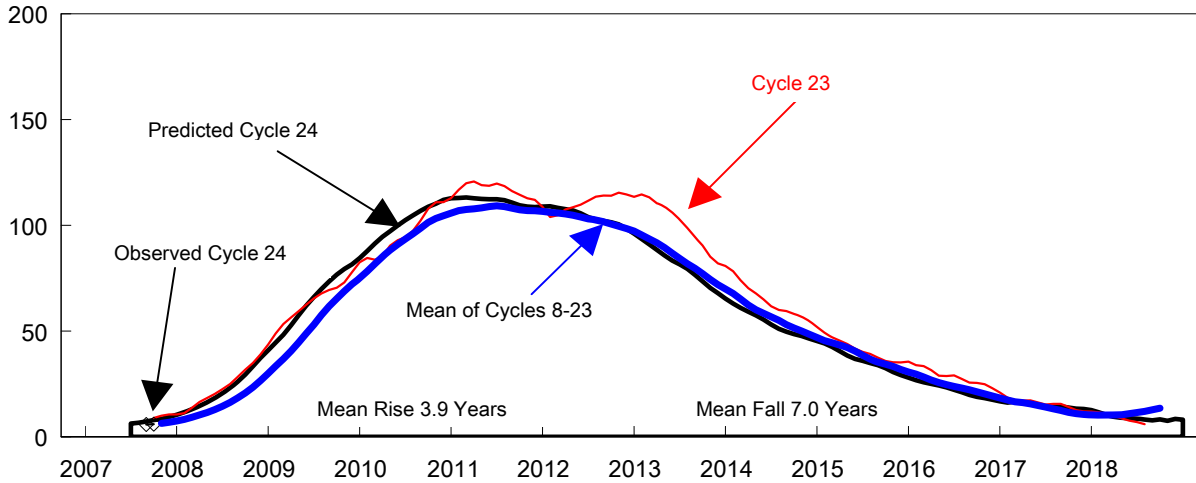
**DAILY SOLAR INDICES**  
**April**                      **2008**

Day	Day of Year	Bartels Cycle Day	Sunspot		Obs Flux		-----Solar Flux Adjusted to 1 Astronomical Unit-----							
			Numbers Int	Amer	Penticton (2800)	SGMR (15400)	SGMR (8800)	SGMR (4995)	Penticton (2800)	SGMR (2695)	SGMR (1415)	SGMR (610)	SGMR (410)	SGMR (245)
1	92	23	16	18	77.8	437	174	145	77.7	74	60	33	22	11
2	93	24	9	11	75.9	456	183	140	75.9	71	57	38	23	15
3	94	25	9	9	76.4	459	184	139	76.4	72	55	37	24	15
4	95	26	7	3	73.0	469	166	125	73.1	68	53	36	23	9
5	96	27	0	0	71.0	471	181	133	71.1	70	52	36	22	11
6	97	1	0	0	69.4	445	176	127	69.5	64	52	33	21	11
7	98	2	0	0	69.1	453	182	129	69.3	67	49	35	21	12
8	99	3	0	0	69.8	457	179	132	70.0	64	51	35	21	10
9	100	4	0	0	68.0	455	179	132	68.2	64	50	36	21	11
10	101	5	0	0	67.9	451	176	130	68.1	61	50	32	20	8
11	102	6	0	0	67.1	438	179	126	67.4	64	49	33	21	15
12	103	7	0	0	68.2	452	176	122	68.5	60	49	34	21	10
13	104	8	7	1	69.3	444	181	126	69.7	65	51	34	22	11
14	105	9	7	3	68.5	454	175	125	69.0	66	50	35	21	11
15	106	10	0	0	69.2	456	175	135	69.7	63	50	34	21	11
16	107	11	0	0	69.5	459	175	122	70.0	63	52	33	21	10
17	108	12	0	0	69.2	460	173	124	69.8	68	52	35	22	10
18	109	13	0	0	70.2	460	174	122	70.8	67	53	36	23	11
19	110	14	8	1	71.0	451	180	125	71.7	65	52	36	23	11
20	111	15	0	0	70.8	451	182	128	71.5	66	54	35	22	11
21	112	16	0	0	70.9	454	177	129	71.6	65	53	37	22	10
22	113	17	8	8	71.3	570	179	126	72.1	66	56	37	22	11
23	114	18	8	9	70.7	466	176	123	71.5	63	55	34	22	10
24	115	19	7	2	70.4	462	171	120	71.2	69	56	36	23	15
25	116	20	0	0	69.8	458	179	124	70.7	62	54	35	22	13
26	117	21	0	0	69.0	455	179	127	69.9	69	53	36	23	11
27	118	22	0	0	68.1	432	178	124	69.0	66	52	35	23	9
28	119	23	0	0	68.5	401	172	121	69.4	66	52	33	21	10
29	120	24	0	0	68.6	432	178	125	69.6	66	53	36	22	11
30	121	25	0	0	67.0	453	174	125	68.0	66	51	34	22	11
MEAN			2.9	2.2	70.2	455	177	127	70.7	66	52	34	21	11

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



Cycle 24 Smoothed Sunspot Numbers: Observed and Predicted  
PRELIMINARY Based on September 2007 Smoothed Data



Smoothed Sunspot Numbers (Observed and Predicted) for Parts of Solar Cycles 23 and 24

Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Avg
1996	10	10	10	9	8*	9	8	8	8	9**	10	10	8
1997	11	11	14	17	18	20	23	25	28	32	35	39	23
1998	44	49	53	57	59	63	65	68	69	71	73	78	62
1999	83	85	84	85	90	93	94	98	102	108	111	111	95
2000	113	117	120	120.8+	119	119	120	119	116	115	113	112	107
2001	109	104	105	108	109	110	112	114	114	114	115	115	111
2002	114	115	113	111	109	106	103	99	95	91	85	82	102
2003	81	79	74	70	68	65	62	60	60	58	57	57	66
2004	53	49	47	46	46	42	40	39	38	36	35	35	42
2005	35	34	34	32	29	29	29	27	26	26	25	23	29
2006	21	19	17	17	17	16	15	16	16	14	13	13	16
2007	12	12	11	10	9	8	7	6	6###	6	6	7	8
											(1)	(2)	(0)
2008	8	8	9	10	12	13	15	16	18	21	24	27	15
	(3)	(4)	(5)	(6)	(7)	(8)	(10)	(11)	(13)	(16)	(18)	(20)	(10)
2009	30	34	37	41	45	49	53	58	62	65	69	72	51
	(23)	(26)	(29)	(32)	(35)	(38)	(42)	(46)	(49)	(52)	(55)	(58)	(40)

Solar Cycle 22

Solar Cycle 23

Min, Max, and Predictions

edition.

\* May 1996 marks Cycle 22's mathematical minimum.

\*\* October 1996 marks the consensus minimum.

+ April 2000 marks Cycle 23 maximum.

## - Preliminary Cycle 24 Minimum

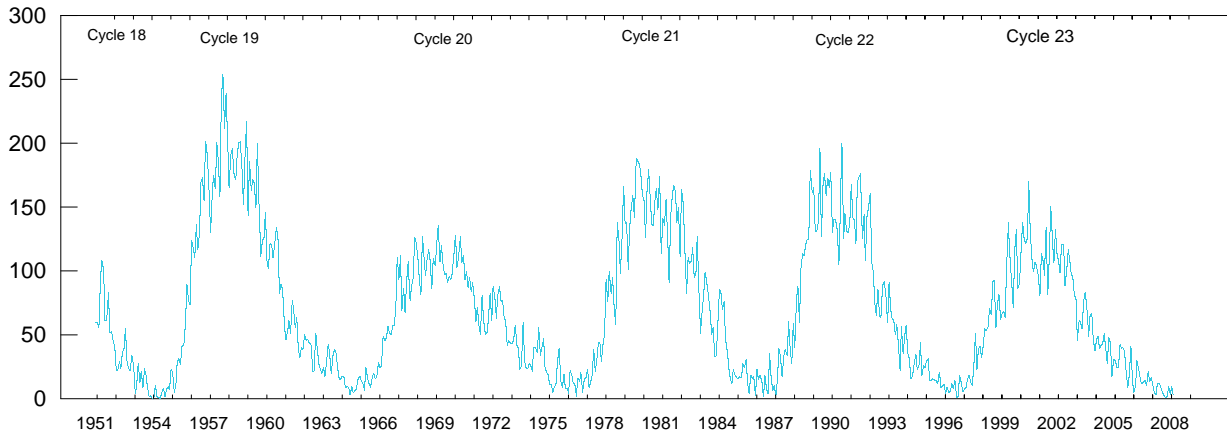
**NOTE: This is a preliminary prediction using September 2007 as solar minimum.**

**OBSERVED AND PREDICTED NUMBERS:** For the end of Cycle 23, and the rise and decline of Cycle 24, 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 Sep 2007 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 October 2008 prediction. There exists a 90% chance that in October 2008, the actual smoothed sunspot will fall somewhere between 5 and 37.

**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 16 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 a PRELIMINARY minimum of September, 2007. This will be updated monthly until the actual minimum is reached.

# Mean Monthly Sunspot Numbers Jan 1951 -Apr 2008



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	83.3	72.7	48.7	65.5	67.3	46.5	63.9
2004	37.7	45.8	49.1	39.3	41.5	43.2	51.0	40.9	27.7	48.0	43.5	17.9	40.4
2005	31.3	29.1	24.8	24.2	42.7	39.3	40.1	36.4	21.9	8.7	18.0	41.1	29.8
2006	15.4	4.7	10.8	30.2	22.2	13.9	12.2	12.9	14.4	10.5	21.4	13.6	15.2
2007	16.8	10.7	4.5	3.4	11.7	12.1	9.7	6.0	2.4	0.9	1.7	10.1	7.5
2008	3.4	2.1	9.3	2.9									4.4

Values are preliminary after Sep 07. For the yearly means, each 'M' marks a sunspot cycle maximum and each 'm' a minimum.

26  
Apr 08

HÀ S O L A R F L A R E S  
APRIL 2008

Sta	Day	Start (UT)	Max (UT)	End (UT)	Lat	CMD	NOAA/		Dur (Min)	Imp Opt	Xray	Obs See	Type	Area Measurement			Remarks
							USAF Region	CMP Mo Day						Time (UT)	Apparent (10-6 Disk)	Corr (Sq Deg)	
HOLL	03	1555	1556	1609	S12	W36	10989	03	31.9	14	SF	4	E		33		H
HOLL		2023	2023	2028	S08	W42	10989	03	31.7	5	SF	3	E		22		
HOLL	04	1810	1810	1815	S08	W54	10989	03	31.7	5	SF	3	E		36		E
KANZ	26	1356	1400U	1401D	N09	E09		04	27.2	5D	SF	2	E				
HOLL		1358	1400	1425	N08	E09		04	27.2	27	SF	3	E		26		F

"Remarks"

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

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

X - R A Y S O L A R F L A R E S  
APRIL 2008

Sta	Day	Start (UT)	Max (UT)	End (UT)	Lat	CMD	NOAA/ USAF Region	CMP Mo	Day	Dur (Min)	Imp Xray	Total Integrated Flux(1)	Total Area(2)	Total(3) Intensity
GOES	01	0016	0026	0033			10989			17	B 3.0	2.2E-04		
GOES		2017	2020	2022			10989			5	B 1.0	2.6E-05		
GOES	02	1643	1656	1707						24	B 1.0	1.4E-04		
GOES		2002	2012	2016						14	B 1.1	7.2E-05		
GOES		2339	2347	2355						16	B 2.0	1.6E-04		
GOES	03	0112	0124	0136						24	C 1.2	1.1E-03		
GOES		0218	0227	0235						17	C 1.2	7.5E-04		
GOES		0555	0559	0612						17	B 1.2	9.6E-05		
GOES		1527	1531	1533						6	B 1.0	3.4E-05		
GOES		1551	1557	1600	S12	W36	10989			9	B 2.9	1.0E-04		
GOES		1944	1951	1958						14	B 1.9	1.3E-04		
GOES		2020	2024	2028	S08	W42	10989			8	B 2.3	9.4E-05		
GOES	04	0147	0157	0208						21	B 5.0	4.3E-04		
GOES		1457	1501	1505						8	B 1.2	5.1E-05		
GOES		1806	1810	1814	S08	W54	10989			8	B 2.7	8.6E-05		
GOES	05	1102	1106	1110						8	B 1.3	4.5E-05		
GOES	16	0631	0634	0637						6	B 2.1	4.7E-05		
GOES	26	1354	1408	1438	N08	E09				44	B 3.8	7.1E-04		

Note 1: Total integrated flux computed from the event start time to end if available (units=J/m\*2).  
 Note 2: Total area is derived from SXI imagery in units of squared arc seconds of the largest flaring area.  
 Note 3: Total intensity is derived from SXI imagery in units of data numbers/second of the largest flaring area.

=====

TABLE FORMAT CHANGE: Data are from the GOES full disk xray monitor supplemented with Solar Xray Imager (SXI) from January, 2004, to April 12, 2007. Positions, areas, and intensities are taken from SXI imagery using the largest flare event on the disk. Only the largest event is selected during multiple flares on the disk.

IMPORTANT NOTE: The xray sensor on GOES 12 was turned off on April 12, 2007, at 2250UT. The GOES SXI instrument is also inoperative. GOES 11 is now primary with GOES 10 backup for xray data. Effective April 13, 2007, xray flare locations will be determined by optical flare reports. Xray event times will still be from the xray data.

28  
Apr 08

S O L A R R A D I O E M I S S I O N  
Selected Fixed Frequency Events

APRIL 2008

Day	Freq	Sta	Type	Start (UT)	Time of Maximum (UT)	Duration (Min)	Flux Density		Int	Remarks
							Peak (10 -22 W/m <sup>2</sup> Hz)	Mean		
03	15400	SGMR	8 S	1631.0	1631.0	U	69.0			QL=4 ST=2 TYP=3
04	410	SGMR	43 NS	1331.0	1337.0	629.0	350.0			QL=4 ST=1 TYP=1
	410	SGMR	48 C	1331.0	1337.0	13.0	350.0			QL=2 ST=2 TYP=8

Reports are received routinely from the following observatories:

LEAR = Learmonth                      SGMR = Sagamore Hill                      SVTO = San Vito

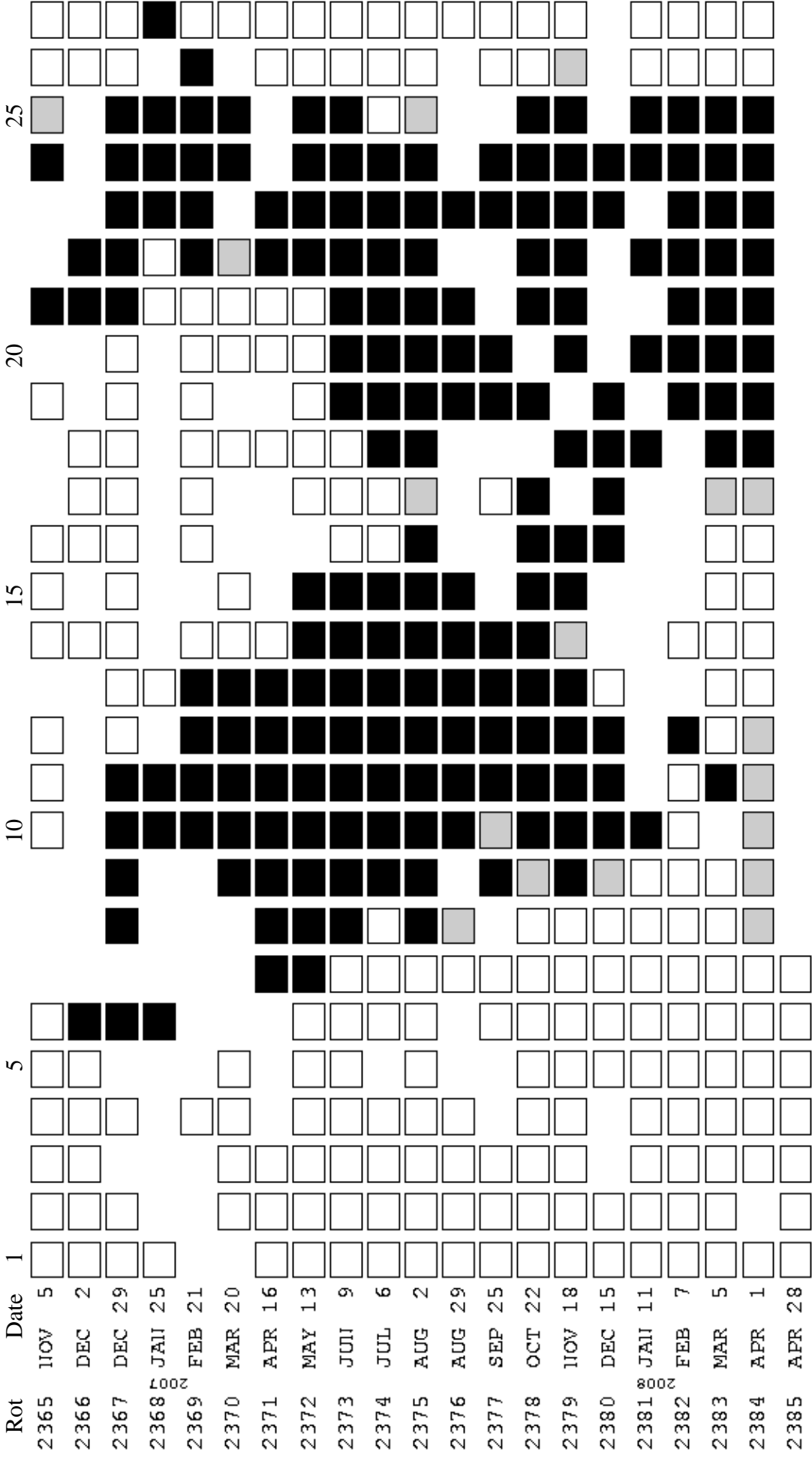
Explanation of Type Code:

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	4O Rise Only	16A Fall A	27AF Rise and Fall AF
21A Simple 3A GRF	4OF Rise Only F	26O 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 Hiraiso, Japan 500 and 200 MHz.

# STANFORD MEAN SOLAR MAGNETIC FIELD

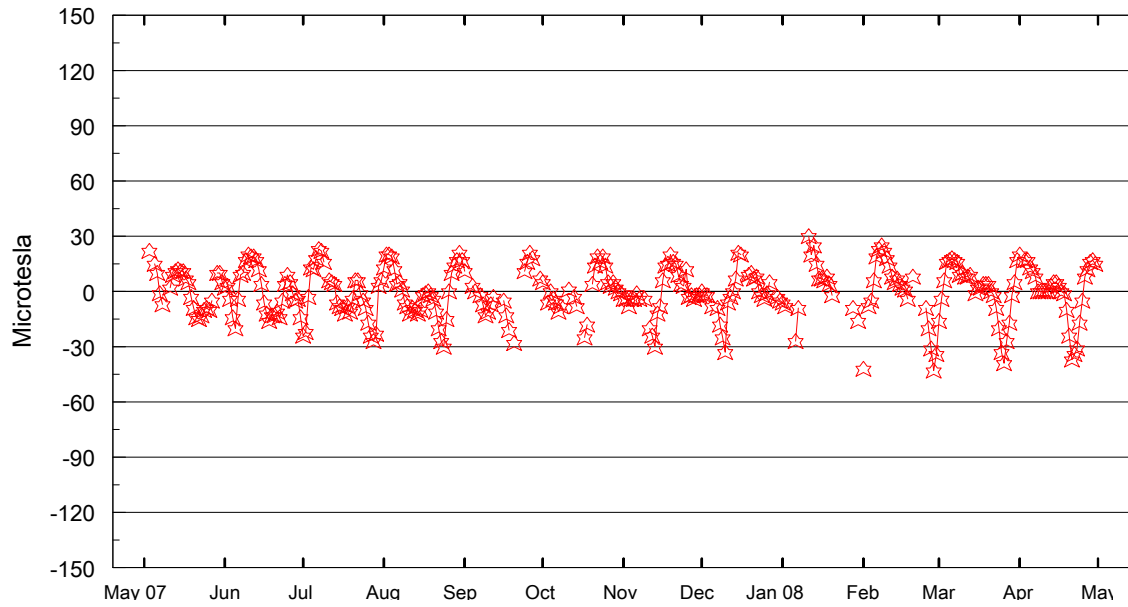


Mean Solar Magnetic Field Polarity:

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

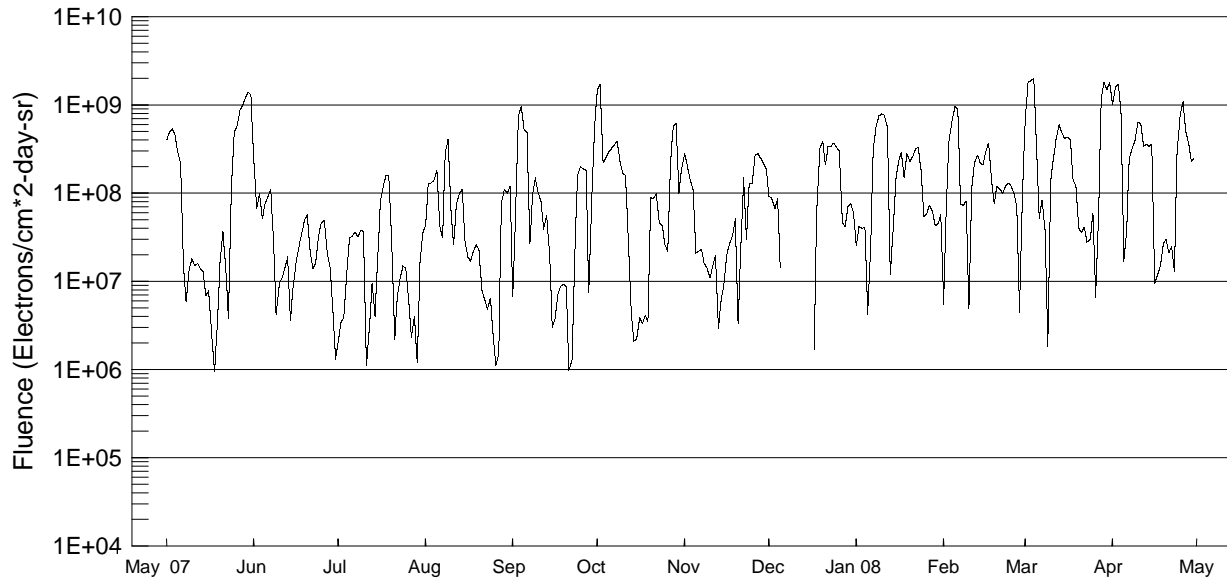
Observations are taken at 2000 UT. Rotation numbers given are the Bartels series, but the dates are not; these dates are five days earlier, to mark times of occurrence of phenomena on the Sun that affect the Earth during the given Bartels Rotation.

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



Day	May 07	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan 08	Feb	Mar	Apr
1	---	2	-24	13	11	5	-4	0	-6	-42	-16	20
2	---	3	-22	20	---	---	-4	-2	-8	---	-4	---
3	22	-4	-3	20	---	-6	-8	-2	---	-8	6	17
4	---	-14	13	19	3	0	-4	---	---	-5	16	17
5	15	-20	12	12	0	-4	-4	-8	---	6	17	13
6	10	-4	18	4	---	-6	-1	---	-27	19	18	11
7	-1	9	23	5	-2	-11	-4	-9	-9	23	17	8
8	-7	10	22	1	-7	-8	---	-18	---	25	16	0
9	---	17	16	-6	-13	---	-4	-25	---	22	9	0
10	---	20	---	-8	-11	---	---	-33	---	18	10	0
11	2	19	6	-12	-7	1	-20	-6	30	14	8	0
12	9	19	5	-9	-3	---	-24	-3	20	8	8	0
13	11	17	4	-10	---	-3	-30	0	25	5	9	3
14	12	12	-6	-12	---	-8	-12	7	15	7	---	5
15	11	4	-8	-10	---	---	-8	21	7	4	-1	5
16	11	-6	-9	-2	-5	---	6	20	7	2	2	3
17	7	-12	-12	-1	-13	-25	14	---	6	1	2	0
18	5	-16	-8	0	-21	-18	15	---	8	-4	4	-1
19	-3	-13	-11	-2	---	---	20	9	4	---	4	-10
20	-9	-13	-4	-4	-28	4	16	10	-2	8	4	-24
21	-14	-11	6	-11	---	14	15	7	---	---	0	-37
22	-15	-14	6	-20	---	19	9	8	---	---	-2	-34
23	-13	-5	-1	-27	---	16	4	0	---	---	-9	-31
24	-10	4	-5	-30	11	19	3	-2	---	---	-20	-17
25	-9	9	-9	-15	16	14	12	-4	---	-9	-33	-5
26	-10	5	-17	0	21	5	-3	-1	---	-20	-39	8
27	-5	-1	-24	10	18	3	-2	5	---	-31	-27	12
28	---	-5	-27	14	---	5	-4	---	-9	-43	-17	16
29	10	-4	-23	17	---	2	-2	---	---	-34	-2	17
30	10	-14	3	21	7	0	-2	-3	-16	---	5	15
31	5	---	6	17	---	-1	---	-5	---	---	17	---

# GOES Daily Electron Fluence May 2007 - Apr 2008



Day	May 07	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan 08	Feb	Mar	Apr
1	4.0E+08	2.4E+08	2.1E+06	4.3E+07	6.8E+06	1.5E+09	2.8E+08	9.3E+07	2.5E+07	5.5E+06	7.5E+08	1.0E+09
2	4.9E+08	6.7E+07	3.4E+06	1.3E+08	6.3E+07	1.7E+09	2.0E+08	8.8E+07	4.2E+07	8.0E+07	1.8E+09	1.6E+09
3	5.4E+08	1.0E+08	3.9E+06	1.3E+08	7.5E+08	2.2E+08	1.4E+08	6.7E+07	4.0E+07	4.1E+08	1.9E+09	1.7E+09
4	4.6E+08	5.1E+07	1.3E+07	1.4E+08	9.6E+08	2.5E+08	1.1E+08	8.6E+07	4.1E+07	6.5E+08	2.0E+09	8.9E+08
5	2.9E+08	7.7E+07	3.1E+07	1.8E+08	5.3E+08	2.9E+08	2.1E+07	1.4E+07	4.2E+06	9.7E+08	3.6E+08	1.7E+07
6	2.2E+08	9.0E+07	3.3E+07	4.3E+07	4.9E+08	3.2E+08	2.2E+07	---	2.3E+07	9.1E+08	5.1E+07	3.6E+07
7	1.6E+07	1.1E+08	3.6E+07	3.1E+07	2.7E+07	3.5E+08	2.3E+07	---	3.2E+08	7.6E+07	8.4E+07	2.5E+08
8	5.9E+06	3.1E+07	3.2E+07	2.9E+08	9.6E+07	3.9E+08	1.6E+07	---	5.6E+08	7.3E+07	3.8E+07	3.2E+08
9	1.4E+07	4.2E+06	3.8E+07	4.1E+08	1.5E+08	2.3E+08	1.4E+07	---	7.5E+08	8.1E+07	1.8E+06	4.0E+08
10	1.8E+07	9.4E+06	3.7E+07	6.6E+07	1.0E+08	1.7E+08	1.1E+07	---	7.9E+08	5.0E+06	1.4E+08	6.4E+08
11	1.5E+07	1.1E+07	1.1E+06	2.6E+07	8.2E+07	1.6E+08	1.5E+07	---	7.7E+08	1.1E+08	2.5E+08	6.2E+08
12	1.6E+07	1.4E+07	3.0E+06	7.5E+07	3.9E+07	3.1E+07	2.0E+07	---	5.5E+08	2.2E+08	4.1E+08	3.4E+08
13	1.4E+07	1.9E+07	9.6E+06	1.0E+08	5.6E+07	5.0E+06	2.9E+06	---	1.2E+07	2.7E+08	6.0E+08	3.6E+08
14	1.3E+07	3.6E+06	4.0E+06	1.1E+08	2.1E+07	2.1E+06	6.1E+06	---	3.5E+07	2.2E+08	4.9E+08	3.4E+08
15	6.9E+06	8.6E+06	1.9E+07	2.8E+07	3.0E+06	2.2E+06	9.4E+06	---	1.4E+08	2.1E+08	4.2E+08	3.6E+08
16	7.8E+06	1.6E+07	8.1E+07	1.9E+07	3.8E+06	3.9E+06	2.0E+07	---	2.3E+08	3.0E+08	4.3E+08	9.4E+06
17	2.5E+06	2.4E+07	1.2E+08	1.7E+07	7.2E+06	3.3E+06	2.7E+07	1.7E+06	2.9E+08	3.7E+08	4.0E+08	1.2E+07
18	9.6E+05	3.5E+07	1.6E+08	2.2E+07	8.8E+06	4.1E+06	3.3E+07	6.4E+07	1.5E+08	1.5E+08	1.4E+08	1.5E+07
19	3.1E+06	5.0E+07	1.6E+08	2.6E+07	9.3E+06	3.5E+06	5.2E+07	3.2E+08	2.8E+08	7.6E+07	1.2E+08	2.7E+07
20	1.6E+07	5.7E+07	2.3E+07	2.3E+07	8.8E+06	8.9E+07	3.3E+06	3.9E+08	2.3E+08	1.2E+08	4.0E+07	3.0E+07
21	3.7E+07	2.1E+07	2.2E+06	7.7E+06	9.8E+05	8.7E+07	2.6E+07	2.1E+08	2.6E+08	1.1E+08	3.6E+07	2.1E+07
22	1.5E+07	1.4E+07	7.0E+06	6.2E+06	1.3E+06	9.9E+07	1.5E+08	3.4E+08	3.2E+08	1.0E+08	4.1E+07	2.5E+07
23	3.8E+06	1.6E+07	1.1E+07	4.8E+06	2.2E+07	4.7E+07	3.0E+07	3.4E+08	3.3E+08	1.2E+08	2.8E+07	1.3E+07
24	1.0E+08	3.3E+07	1.5E+07	6.5E+06	1.6E+08	4.3E+07	1.3E+08	3.7E+08	1.8E+08	1.3E+08	3.0E+07	3.0E+08
25	4.9E+08	4.6E+07	1.4E+07	2.5E+06	2.0E+08	2.6E+07	1.3E+08	3.3E+08	5.4E+07	1.2E+08	6.0E+07	7.8E+08
26	5.8E+08	5.0E+07	6.3E+06	1.1E+06	1.9E+08	2.2E+07	2.7E+08	3.0E+08	5.8E+07	1.0E+08	6.6E+06	1.1E+09
27	8.6E+08	2.1E+07	2.3E+06	1.5E+06	1.8E+08	2.3E+08	2.8E+08	4.6E+07	7.3E+07	7.1E+07	5.7E+07	5.0E+08
28	9.9E+08	1.5E+07	4.0E+06	7.9E+07	7.5E+06	5.7E+08	2.5E+08	4.2E+07	6.2E+07	4.4E+06	1.2E+09	3.7E+08
29	1.2E+09	5.4E+06	1.2E+06	1.1E+08	7.1E+07	6.2E+08	2.2E+08	7.1E+07	4.3E+07	1.1E+08	1.8E+09	2.3E+08
30	1.4E+09	1.3E+06	1.6E+07	1.0E+08	6.1E+08	1.0E+08	1.9E+08	7.6E+07	4.5E+07	---	1.5E+09	2.5E+08
31	1.3E+09	---	3.5E+07	1.2E+08	---	1.9E+08	---	6.1E+07	5.7E+07	---	1.8E+09	---

**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.



## CONTENTS

Prompt Reports

Number 765 Part I

### DATA FOR MARCH 2008

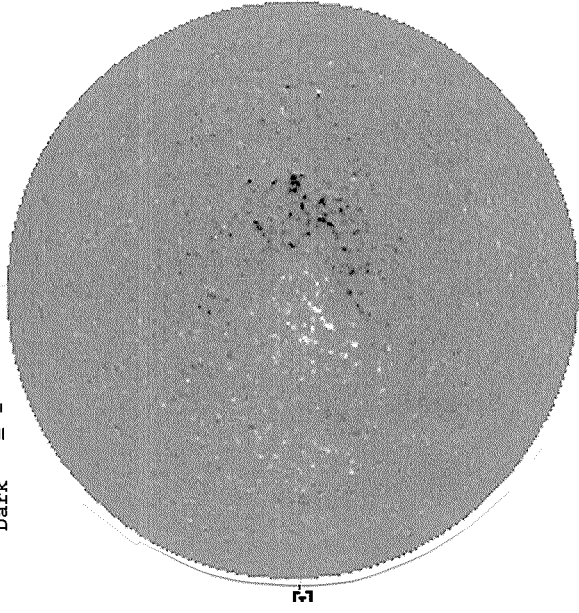
	Page
SOLAR ACTIVE REGIONS	
Solar Synoptic Charts .....	34- 39
Daily Activity Solar Maps .....	40- 70
Preliminary NSO/KP Coronal Hole Daily Maps -- none available	
Nobeyama Daily Radioheliograph Images at 17 GHz .....	71- 76
Sunspot Groups .....	77- 79
 SUDDEN IONOSPHERIC DISTURBANCES .....	 80
 SOLAR RADIO SPECTRAL OBSERVATIONS .....	 81- 84
 SOLAR RADIOHELIOGRAPH – 150.9 AND 327 MHz - NANCAY .....	 85- 86
COSMIC RAY MEASUREMENTS BY NEUTRON MONITOR	
Daily Counting Rates .....	87
Chart of Variations .....	88- 91
Graph and Table of Monthly Mean Moscow 1958 - Mar 2008 .....	92
GEOMAGNETIC INDICES	
Geomagnetic Activity Indices .....	93
Daily Average Ap .....	94
Chart of Kp by 27-day Rotation .....	95
Table of Monthly aa Index (1950 to present) .....	96
Chart of 3-hourly Km and aa by 27-day Rotation .....	97
 Provisional Values of Hourly Equatorial Dst .....	 98
Polar Cap (PC) Geomagnetic Index Plot of 15-min values – Thule .....	99
-- Plot of 1-min values – Vostok -- No data – Antarctic station inaccessible.	
 Principal Magnetic Storms .....	 100
Sudden Commencements/Solar Flare Effects .....	101

March 01, 2008 (P=-21.62, Bo=-7.22, Lo= 251.07)

KITT PEAK MAGNETOGRAM -- SOLIS  
Bright = + N  
Dark = -

STANFORD MAGNETOGRAM  
Solid = + N  
Dashed = -

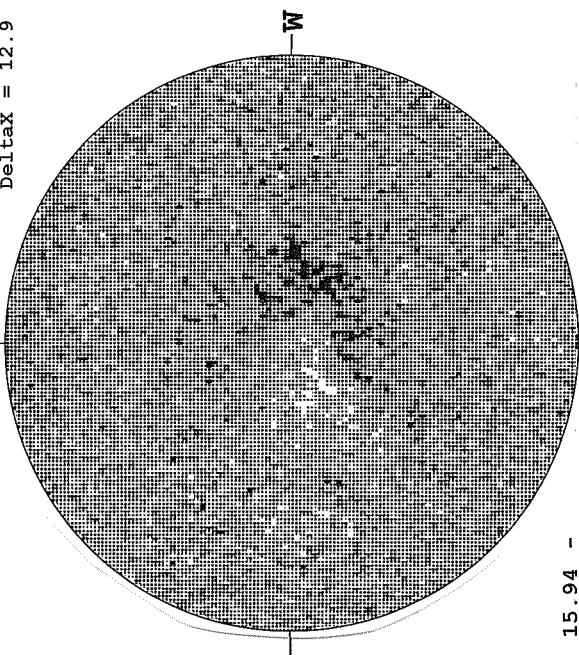
MT, WILSON MAGNETOGRAM  
White = +7.5G N  
Black = -7.5G  
DeltaY = 20.1  
DeltaX = 12.9



1934 UT

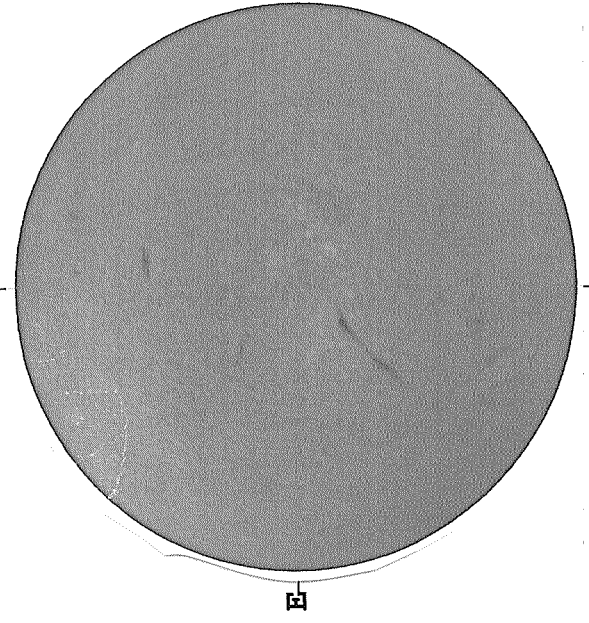


2314 UT



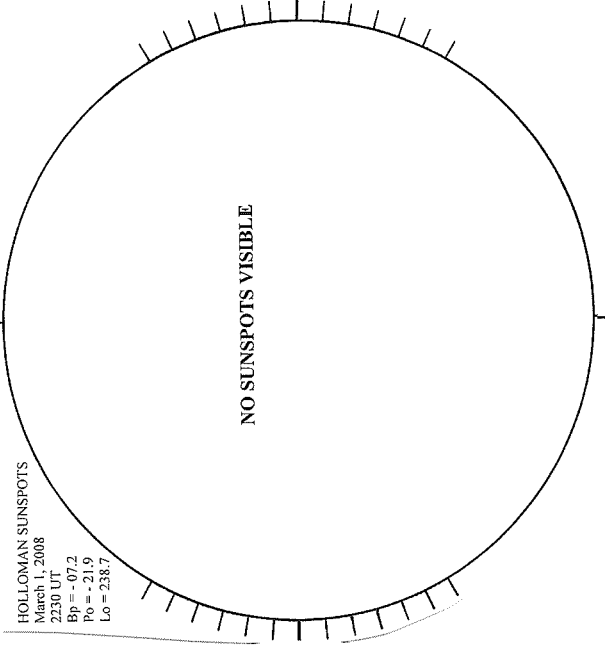
15.94 -  
16.36 UT

CATANIA H-ALPHA



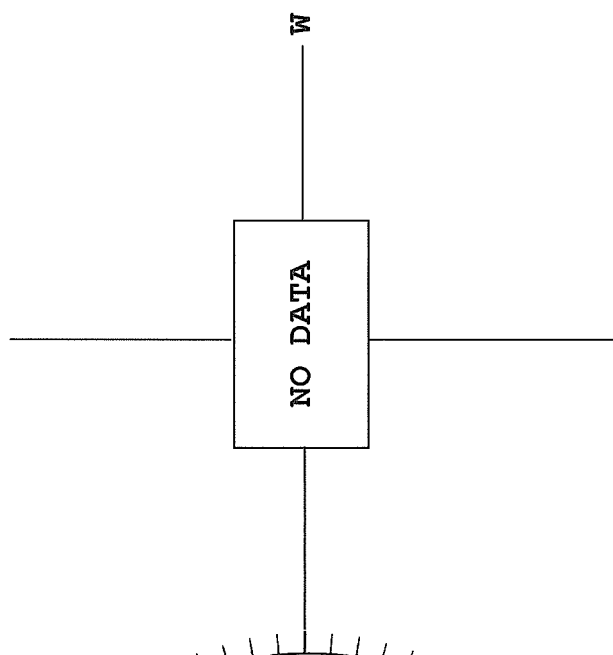
0953 UT

HOLLOMAN SUNSPOTS



2230 UT

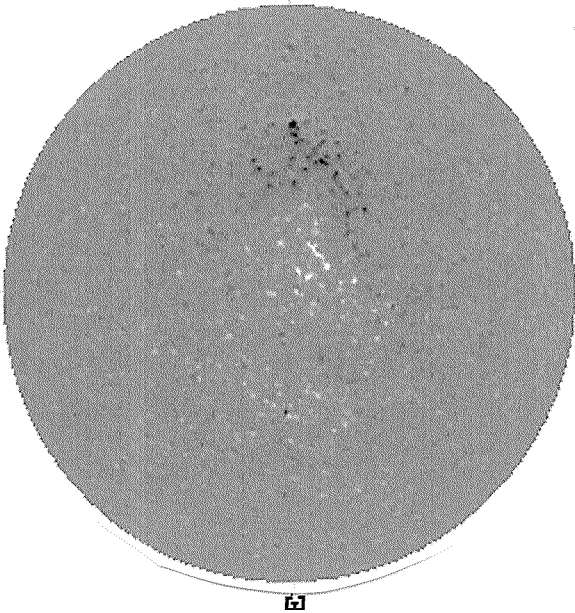
SACRAMENTO PEAK CORONA (1.15 Radii) -----



NO DATA

March 02, 2008 (P=-21.86, Bo=-7.23, Io= 237.90)

KITT PEAK MAGNETOGRAM -- SOLIS  
 Bright = + N  
 Dark = -



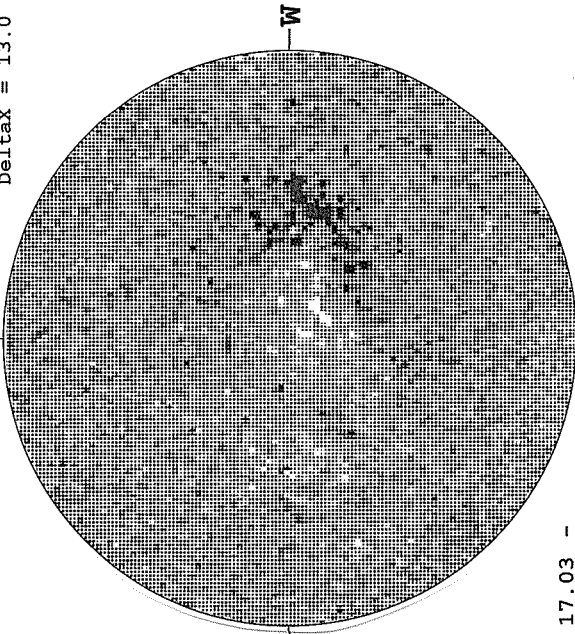
1939 UT

STANFORD MAGNETOGRAM  
 Solid = + N  
 Dashed = -



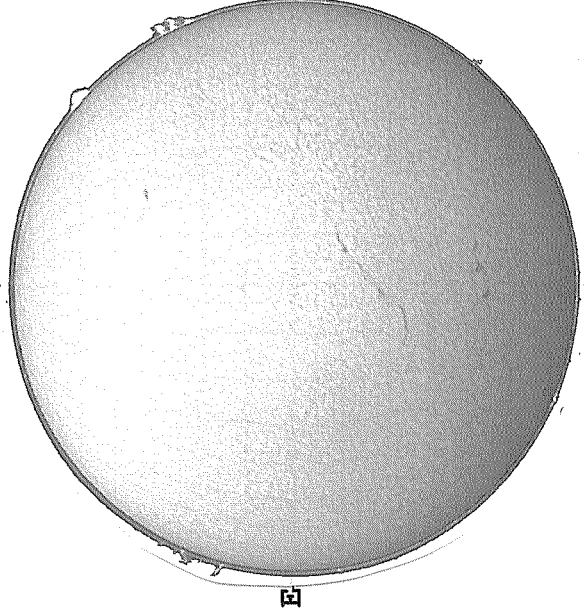
2345 UT

MT, WILSON MAGNETOGRAM  
 White = +7.5G N  
 Black = -7.5G  
 Delta<sub>ay</sub> = 20.0  
 Delta<sub>ax</sub> = 13.0



17.03 -  
 17.45 UT

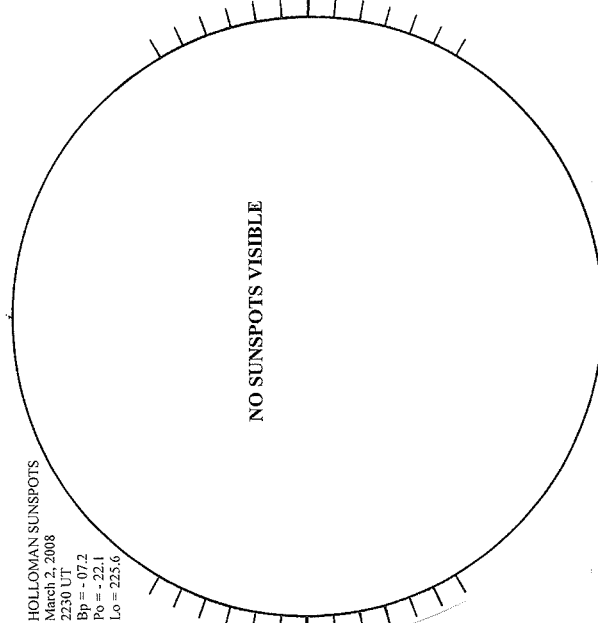
PIC DU MIDI H-ALPHA



1201 UT

HOLLOMAN SUNSPOTS

HOLLOMAN SUNSPOTS  
 March 2, 2008  
 2230 UT  
 Bp = -07.2  
 P<sub>0</sub> = -22.1  
 L<sub>0</sub> = 225.6



2230 UT

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

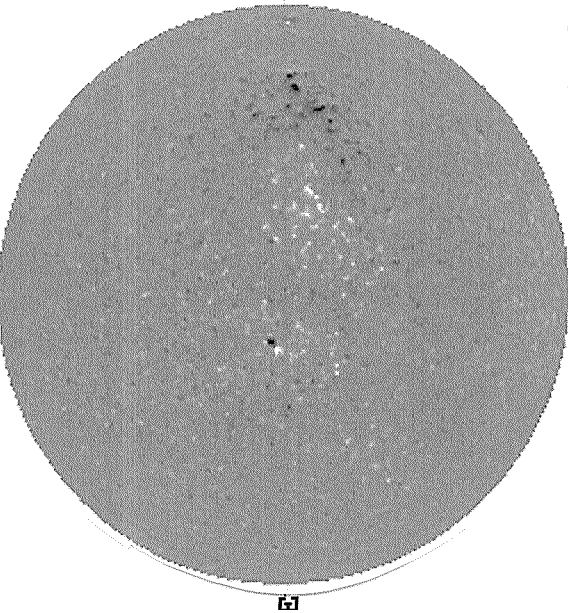
NO DATA

W

42  
Mar 08

March 03, 2008 (P=-22.10, Bo=-7.24, Io= 224.73)

KITT PEAK MAGNETOGRAM -- SOLIS  
Bright = +  
Dark = -  
N



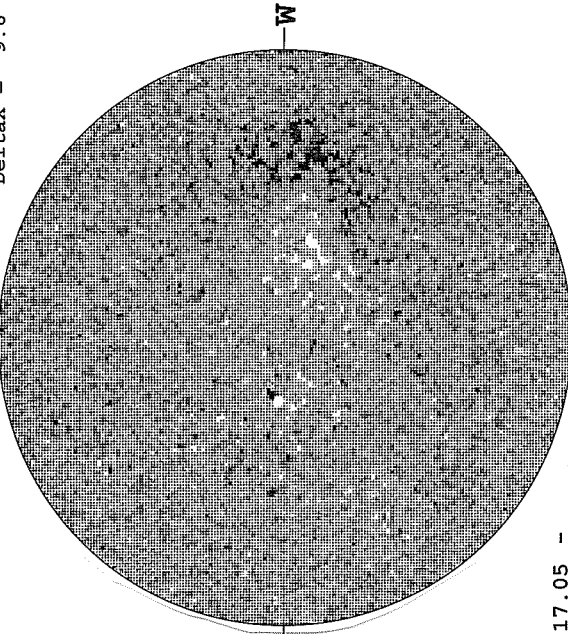
1910 UT

STANFORD MAGNETOGRAM  
Solid = +  
Dashed = -  
N



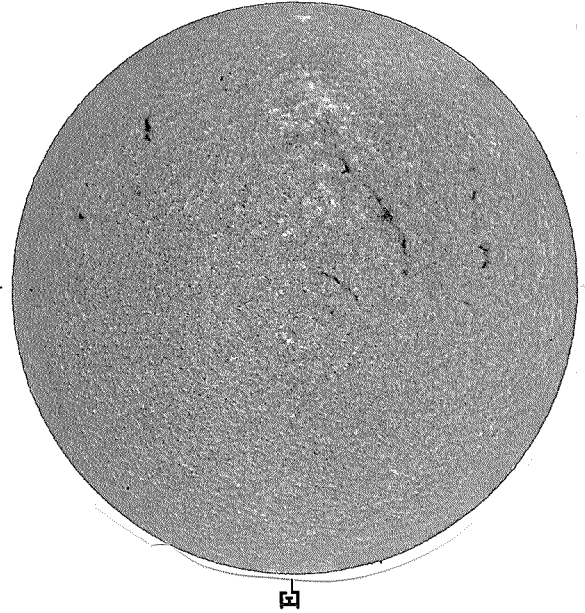
1806 UT

MTT, WILSON MAGNETOGRAM  
White = +7.5G  
Black = -7.5G  
DeltaY = 13.1  
DeltaX = 9.6  
N



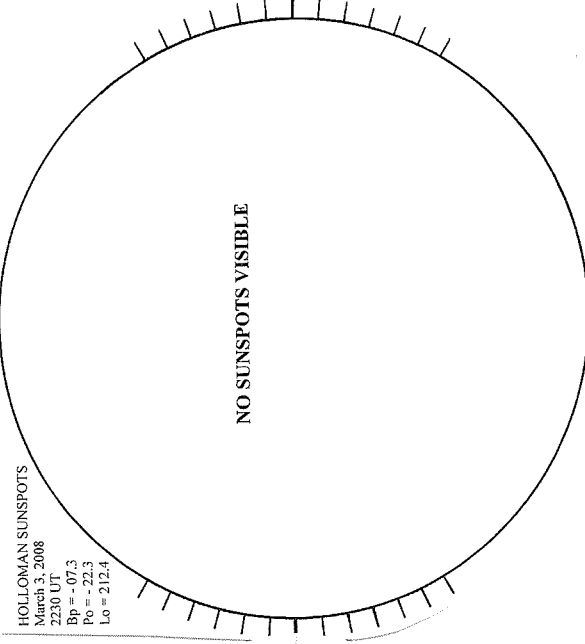
17.05 -  
18.01 UT

--- BIG BEAR H-ALPHA



1944 UT

HOLLOMAN SUNSPOTS



2230 UT

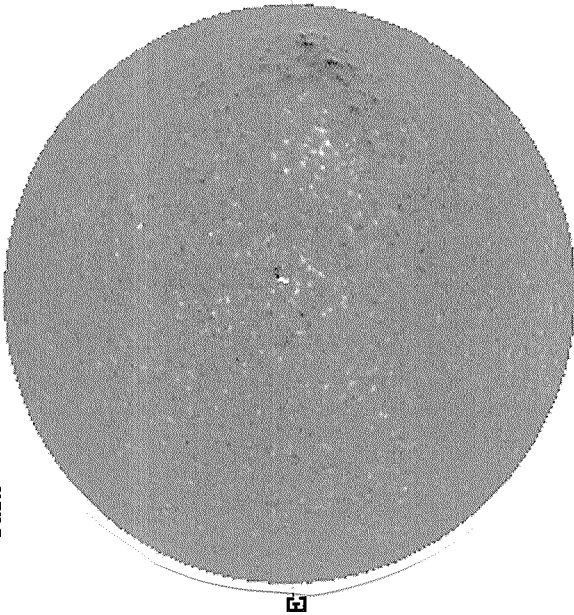
SACRAMENTO PEAK CORONA (1.15 Radii) ----

NO DATA

W

March 04, 2008 (P=-22.34, Bo=-7.25, Lo= 211.55)

KITT PEAK MAGNETOGRAM -- SOLIS  
 Bright = + N  
 Dark = -



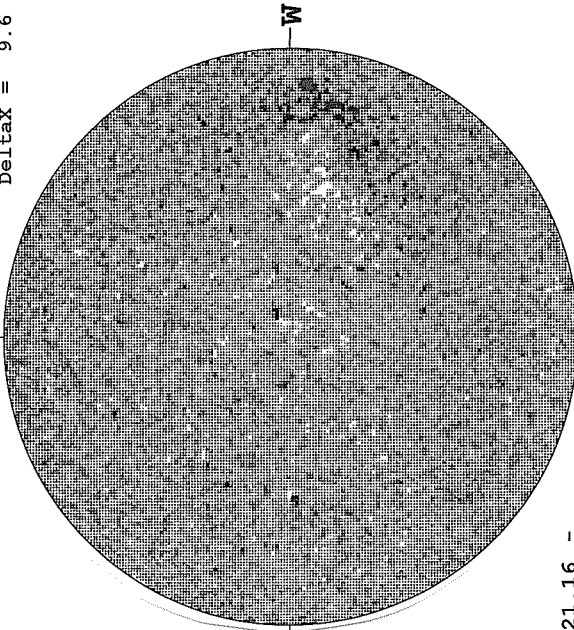
1944 UT

STANFORD MAGNETOGRAM  
 Solid = + N  
 Dashed = -



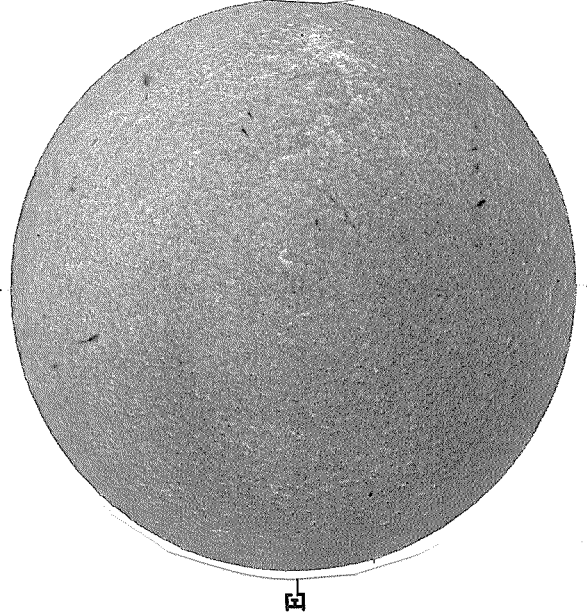
2134 UT

MT. WILSON MAGNETOGRAM  
 White = +7.5G N  
 Black = -7.5G  
 Deltax = 13.1  
 Deltay = 9.6



21.16 -  
 22.12 UT

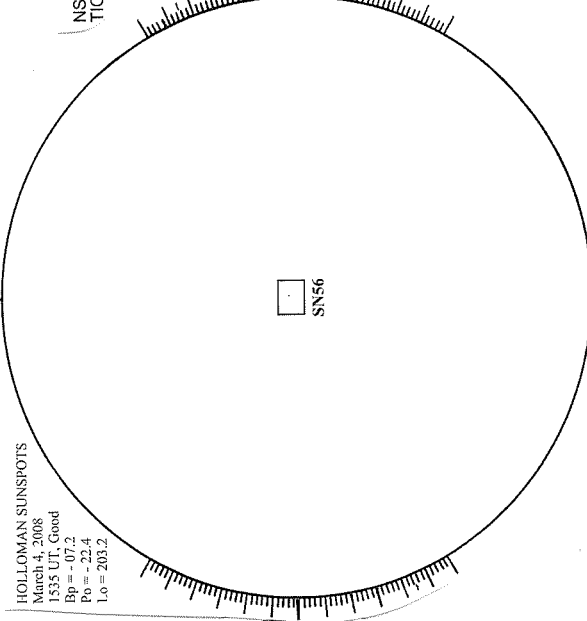
--- BIG BEAR H-ALPHA



2309 UT

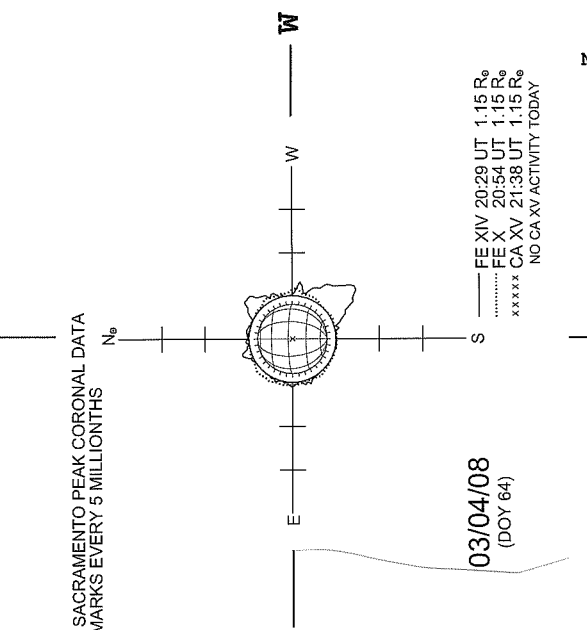
HOLLOMAN SUNSPOTS

HOLLOMAN SUNSPOTS  
 March 4, 2008  
 1535 UT, Good  
 Bp = -07.2  
 Po = -22.4  
 Lo = 203.2



1535 UT

SACRAMENTO PEAK CORONA (1.15 Radii) ----

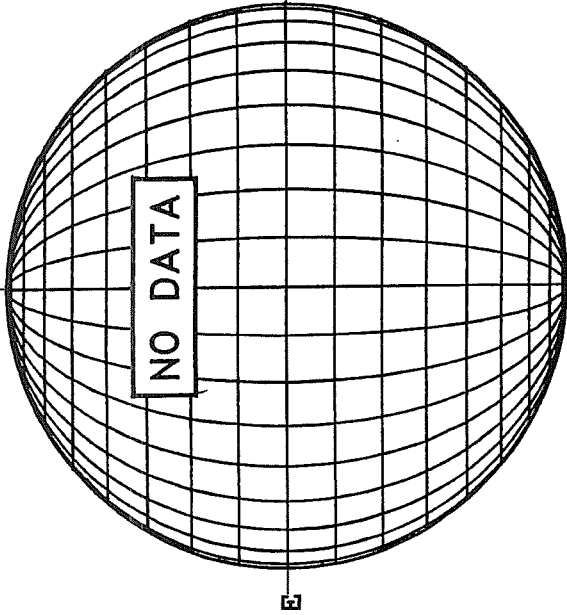


03/04/08  
 (DOY 64)

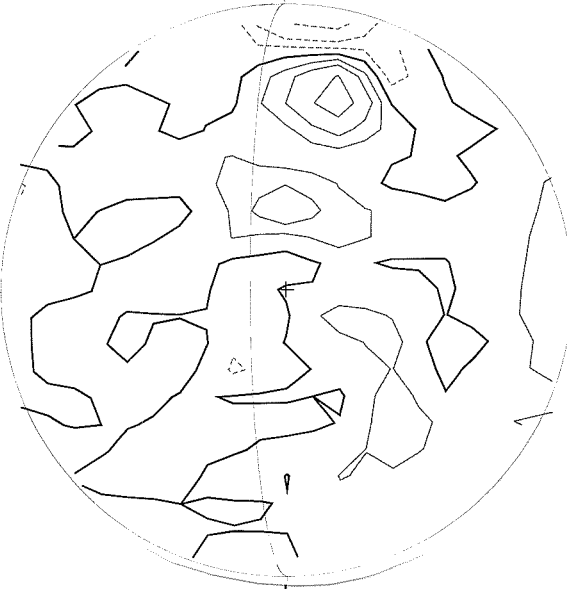
--- FE XIV 20:29 UT 1.15 R<sub>0</sub>  
 ..... FE X 20:54 UT 1.15 R<sub>0</sub>  
 xxxxxx CA XV 21:38 UT 1.15 R<sub>0</sub>  
 NO CA XV ACTIVITY TODAY

March 05, 2008 (P=-22.57, Bo=-7.25, Lo= 198.38)

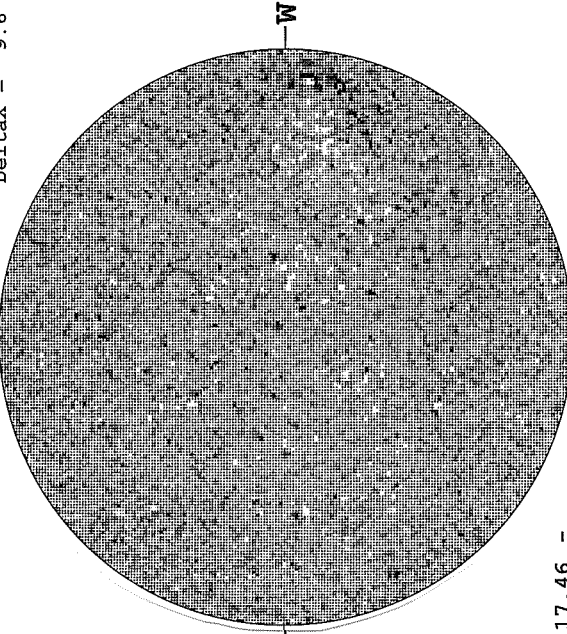
KITT PEAK MAGNETOGRAM -- SOLIS  
Bright = +  
Dark = -



STANFORD MAGNETOGRAM  
Solid = +  
Dashed = -



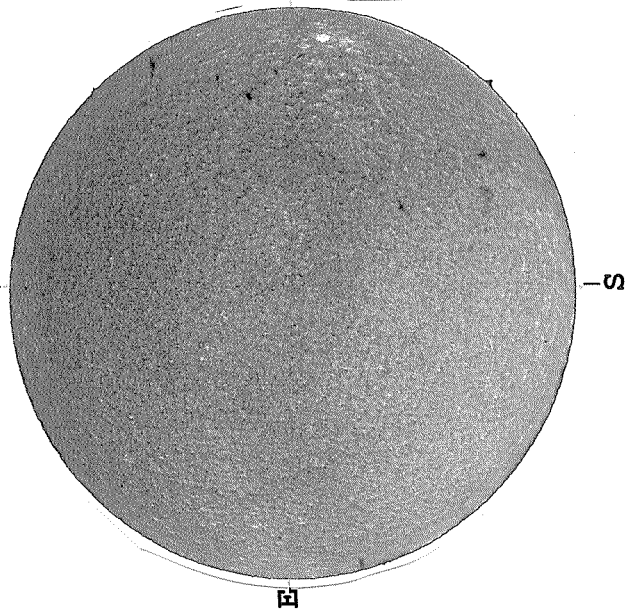
MT. WILSON MAGNETOGRAM  
White = +7.5G  
Black = -7.5G  
DeltaY = 13.1  
DeltaX = 9.6



17.46 -  
18.42 UT

2137 UT

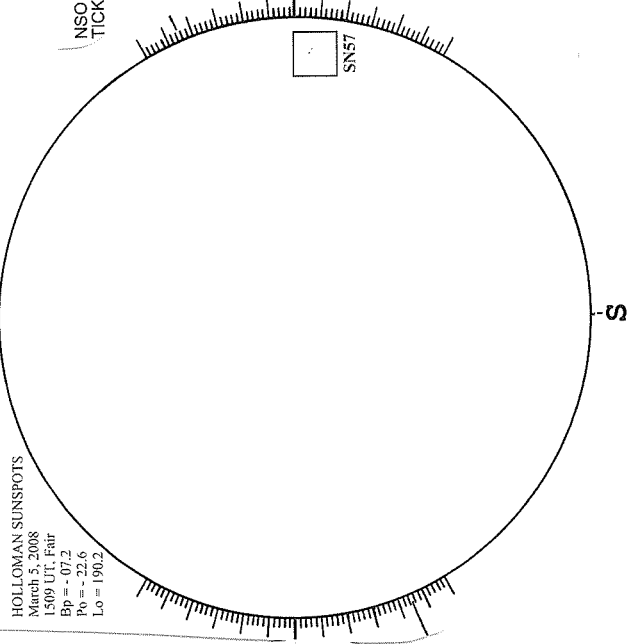
--- BIG BEAR H-ALPHA



1658 UT

HOLLOMAN SUNSPOTS

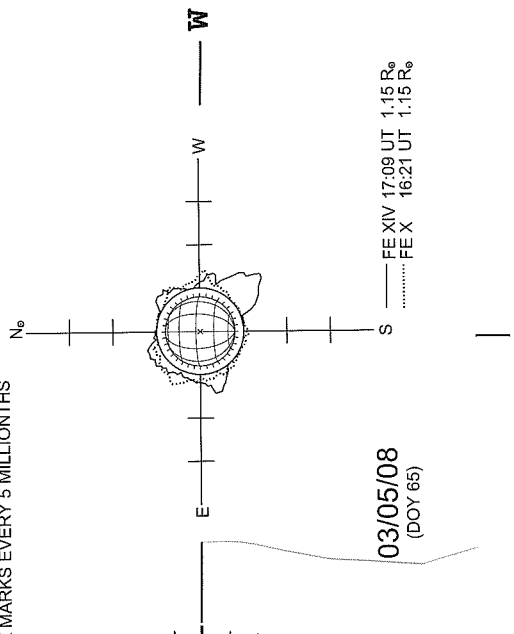
HOLLOMAN SUNSPOTS  
March 3, 2008  
1509 UT, Fair  
Bp = -07.2  
Po = -22.6  
Lo = 190.2



1509 UT

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

NSO / SACRAMENTO PEAK CORONAL DATA  
TICK MARKS EVERY 5 MILLIONTHS

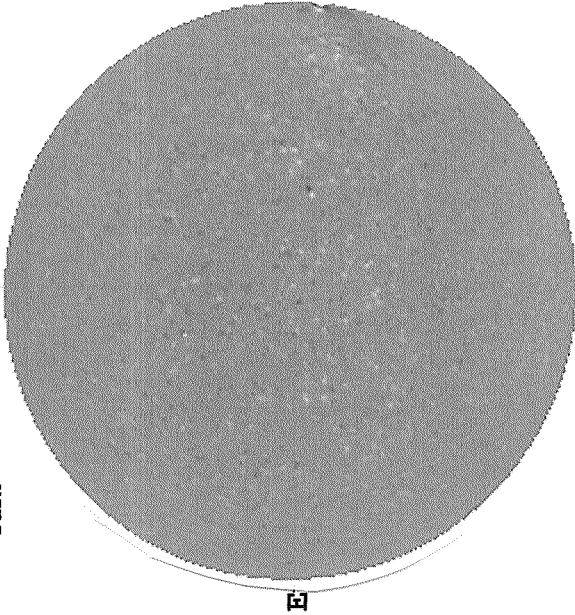


03/05/08  
(DOY 65)

----- FE XIV 17.09 UT 1.15 R<sub>o</sub>  
..... FE X 16.21 UT 1.15 R<sub>o</sub>

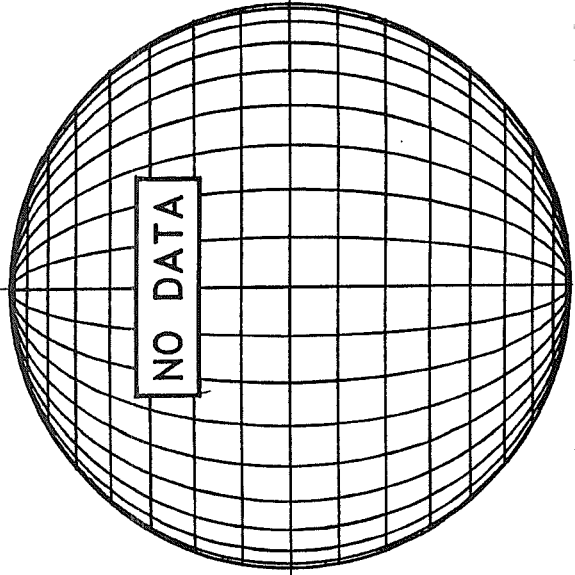
March 06, 2008 (P=-22.79, Bo=-7.25, Lo= 185.21)

KITT PEAK MAGNETOGRAM -- SOLIS  
Bright = +  
Dark = -  
N

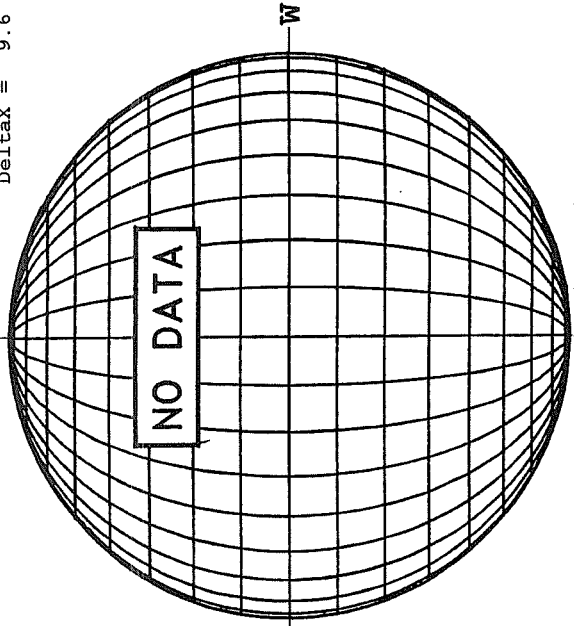


2025 UT

STANFORD MAGNETOGRAM  
Solid = +  
Dashed = -  
N



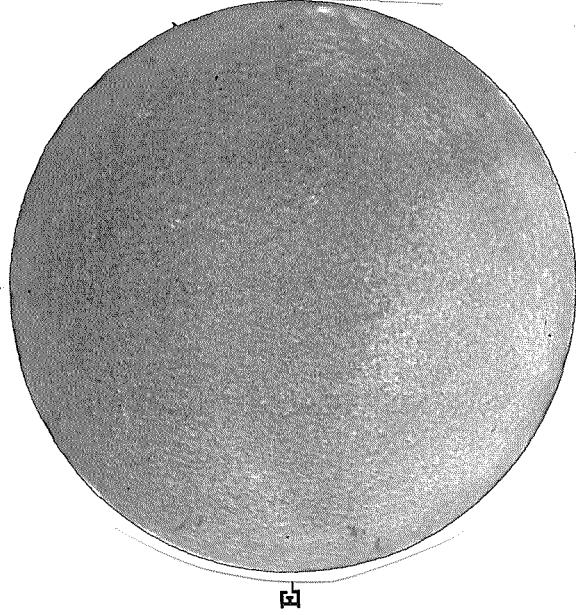
MT. WILSON MAGNETOGRAM  
White = +7.5G  
Black = -7.5G  
DeltaY = 13.1  
DeltaX = 9.6  
N



NO DATA

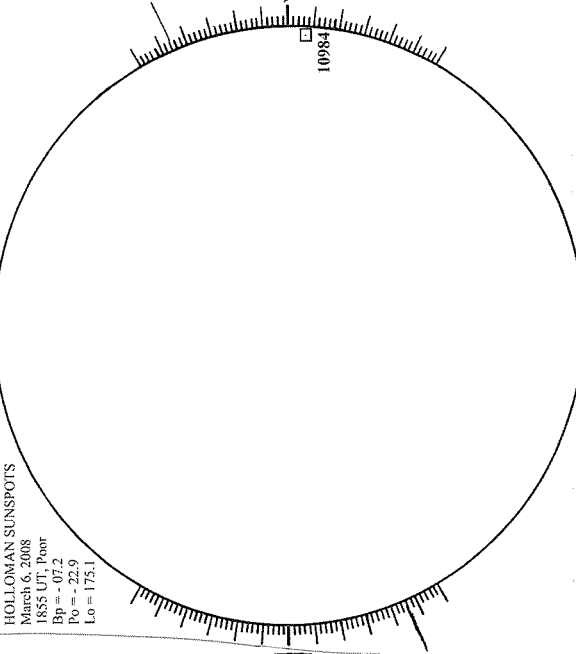
NO DATA

BIG BEAR H-ALPHA



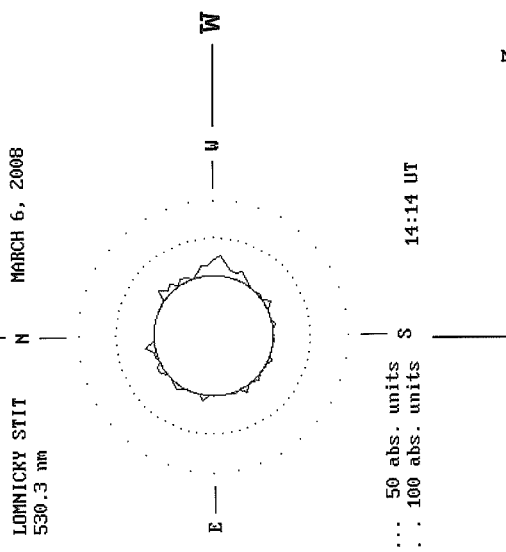
1647 UT

HOLLOMAN SUNSPOTS



1855 UT

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



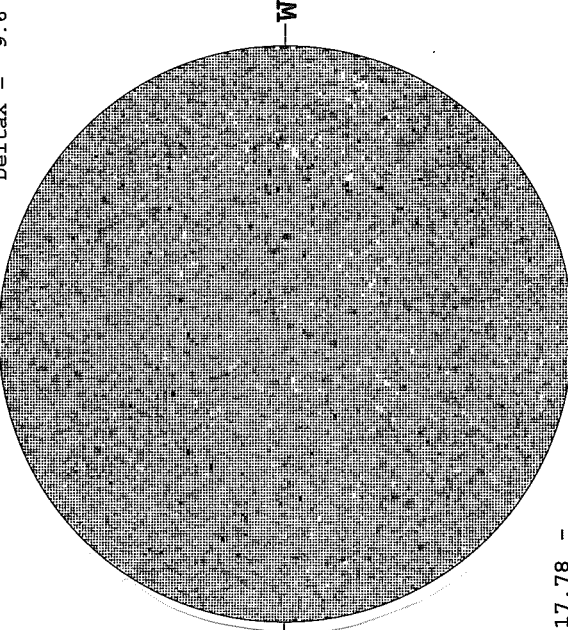
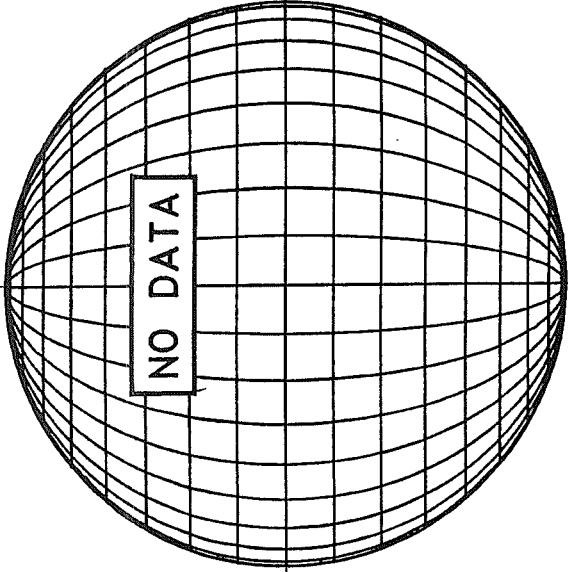
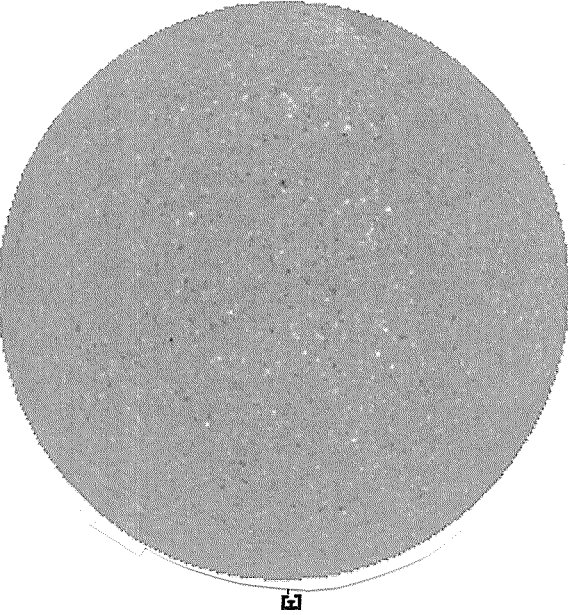
50 abs. units  
100 abs. units

March 07, 2008 (P=-23.00, Bo=-7.25, Io= 172.03)

KITP PEAK MAGNETOGRAM -- SOLIS  
Bright = + N  
Dark = -

STANFORD MAGNETOGRAM  
Solid = + N  
Dashed = -

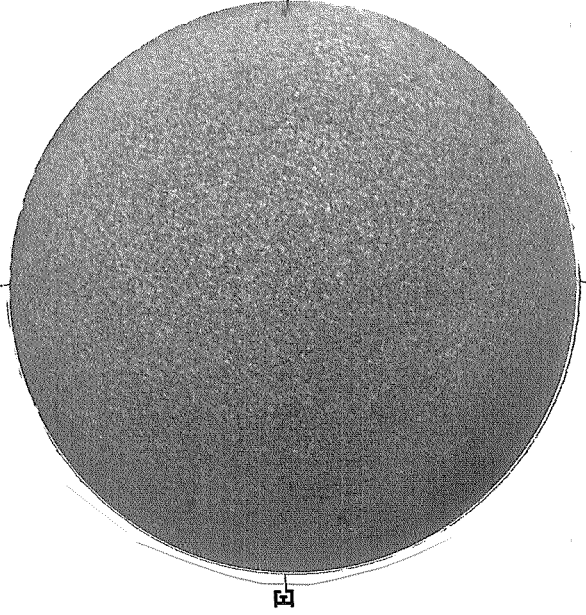
MT. WILSON MAGNETOGRAM  
White = +7.5G N  
Black = -7.5G  
DeltaY = 13.1  
DeltaX = 9.6



2034 UT

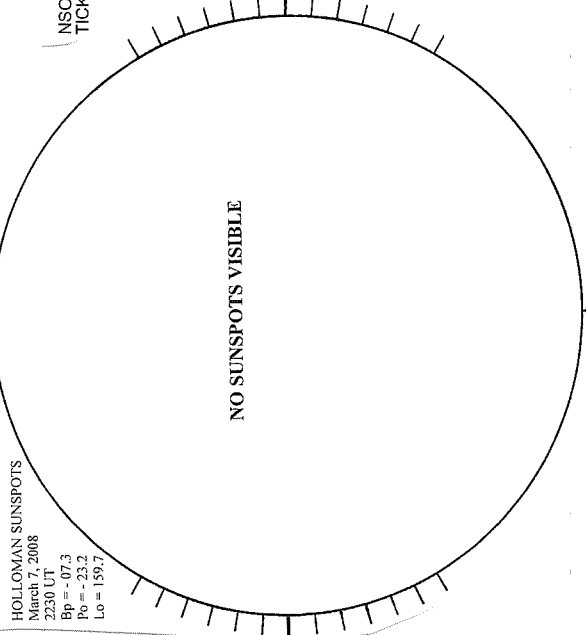
17.78 -  
18.75 UT

HUAIROU H-ALPHA



0340 UT

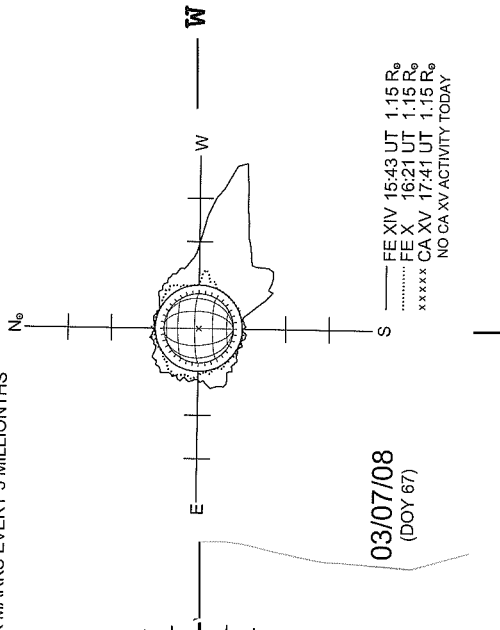
HOLLOMAN SUNSPOTS



2230UT

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

NSO / SACRAMENTO PEAK CORONAL DATA  
TICK MARKS EVERY 5 MILLIONTHS



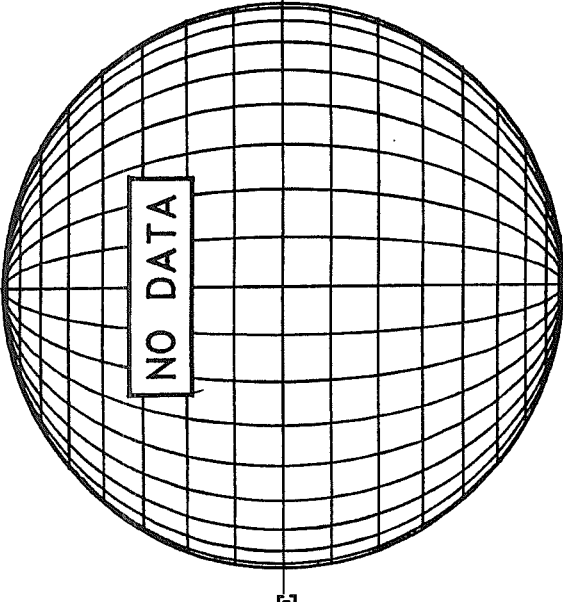
03/07/08  
(DOY 67)

--- FE XIV 1543 UT 1.15 R<sub>o</sub>  
..... FE X 1621 UT 1.15 R<sub>o</sub>  
xxxxx CA XV 1741 UT 1.15 R<sub>o</sub>  
NO CA XV ACTIVITY TODAY

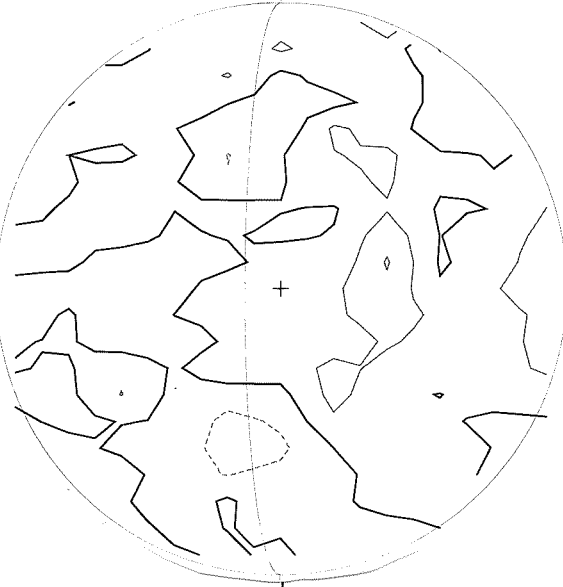


March 08, 2008 (P=-23.21, Bo=-7.25, Lo= 158.85)

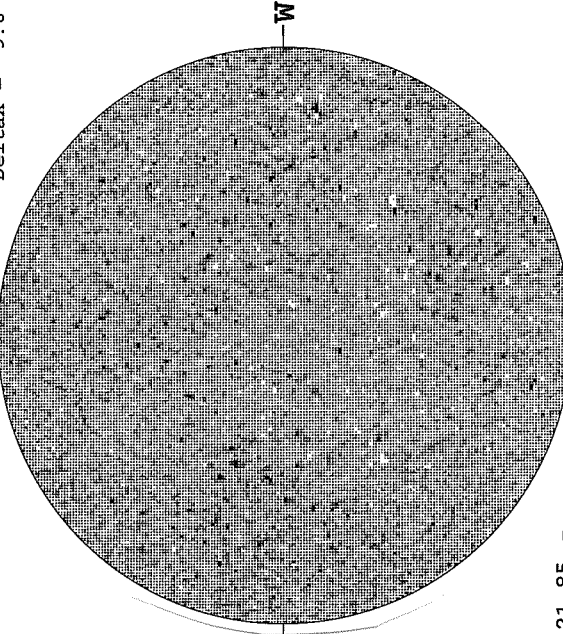
KITT PEAK MAGNETOGRAM -- SOLIS  
Bright = +  
Dark = -



STANFORD MAGNETOGRAM  
Solid = +  
Dashed = -

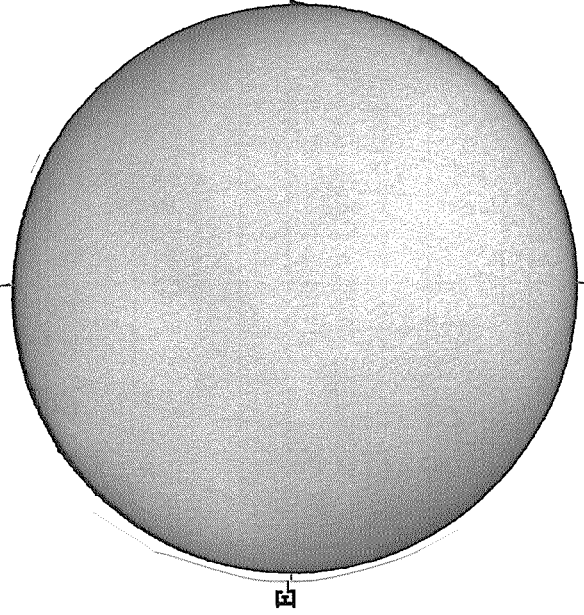


MT. WILSON MAGNETOGRAM  
White = +7.5G  
Black = -7.5G  
DeltaY = 13.1  
DeltaX = 9.6



21.85 -  
22.81 UT

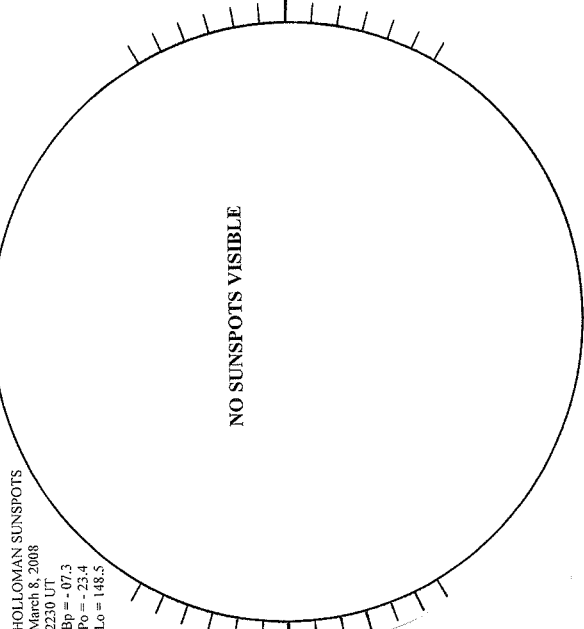
MEUDON H-ALPHA



0818 UT

HOLLoman SUNSPOTS

HOLLoman SUNSPOTS  
March 8, 2008  
2230 UT  
Bp = - 97.3  
Pb = - 23.4  
Lo = 148.5



1855 UT

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

NO DATA

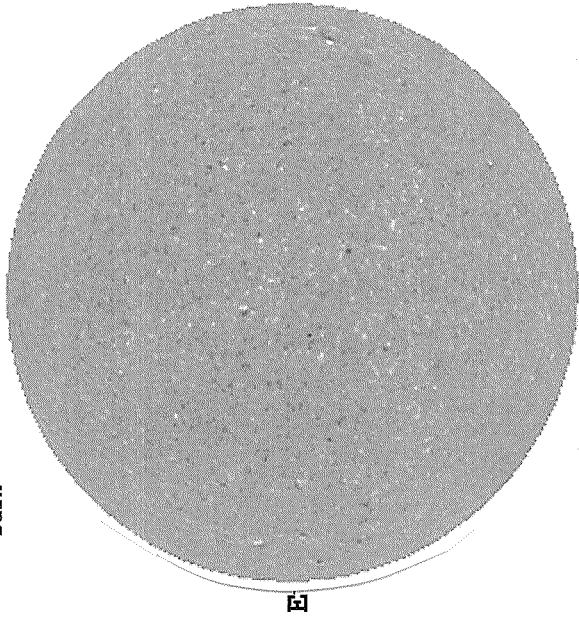
W

March 09, 2008 (P=-23.41, Bo=-7.24, Io= 145.68)

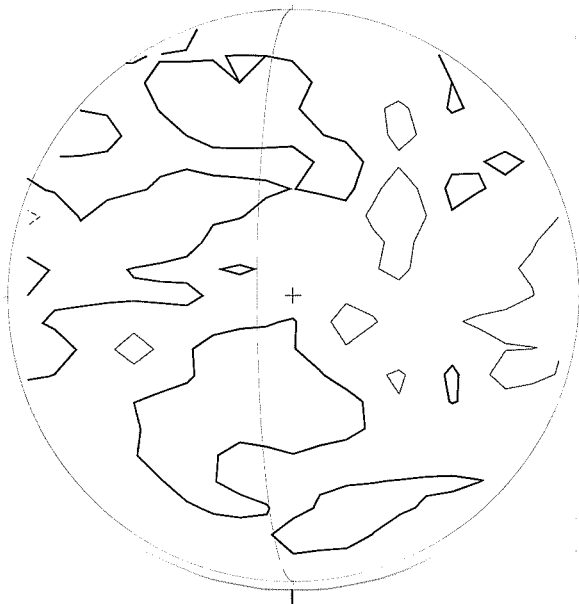
KITT PEAK MAGNETOGRAM -- SOLIS  
Bright = +  
Dark = -  
N

STANFORD MAGNETOGRAM  
Solid = +  
Dashed = -  
N

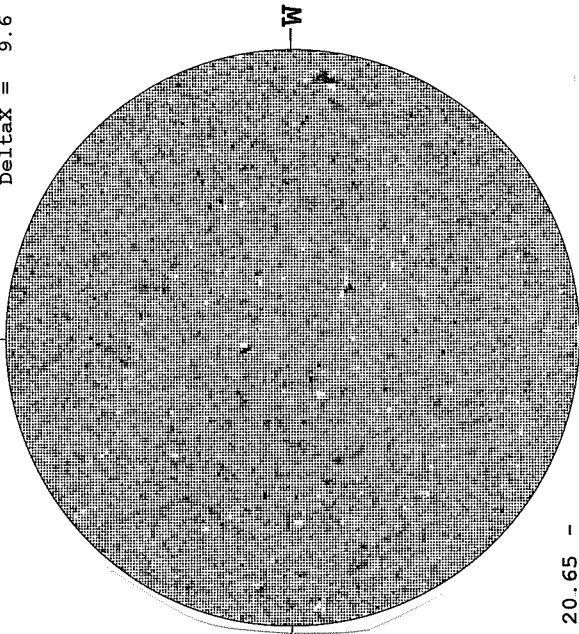
MT. WILSON MAGNETOGRAM  
White = +7.5G  
Black = -7.5G  
N  
DeltaY = 13.1  
DeltaX = 9.6



1722 UT

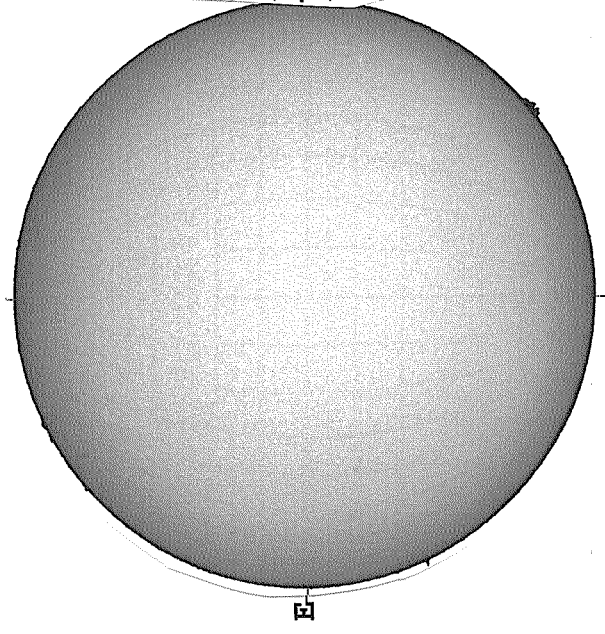


1843 UT



20.65 -  
21.61 UT

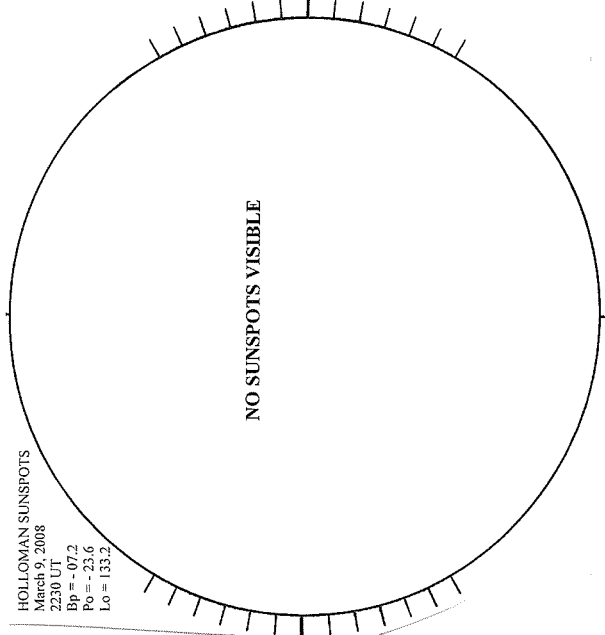
YUNNAN H-ALPHA



0443 UT

HOLLOMAN SUNSPOTS

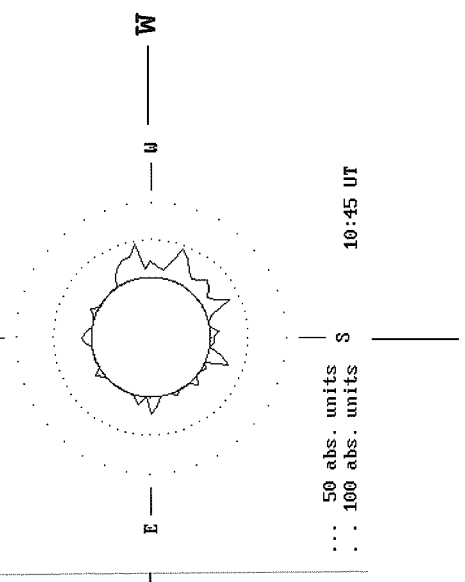
HOLLOMAN SUNSPOTS  
March 9, 2008  
2230 UT  
Bp = -07.2  
Po = -23.6  
Lo = 133.2



2245 UT

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

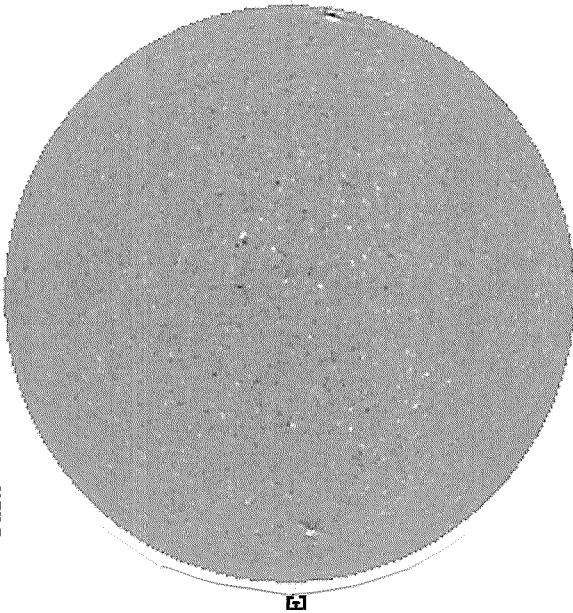
LOMNICKY STIT  
530.3 nm  
MARCH 9, 2008



... 50 abs. units  
... 100 abs. units  
10:45 UT

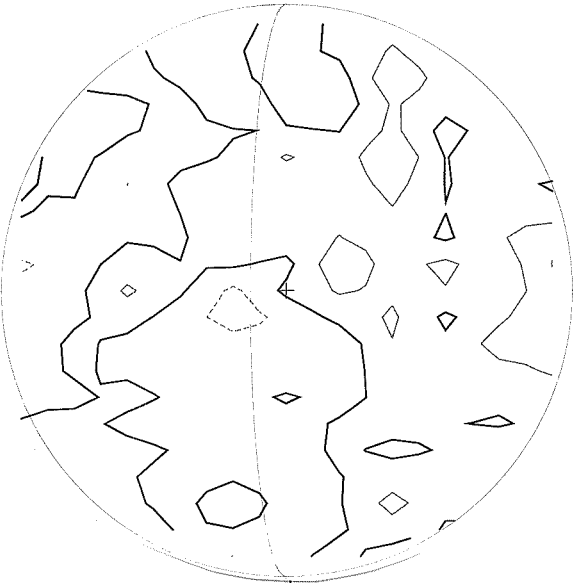
March 10, 2008 (P=-23.61, Bo=-7.23, Io= 132.50)

KITT PEAK MAGNETOGRAM -- SOLIS  
 Bright = + N  
 Dark = -



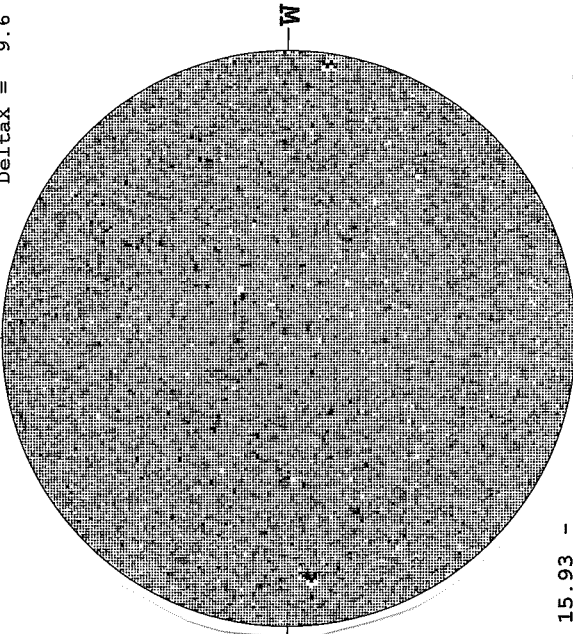
1859 UT

STANFORD MAGNETOGRAM  
 Solid = + N  
 Dashed = -



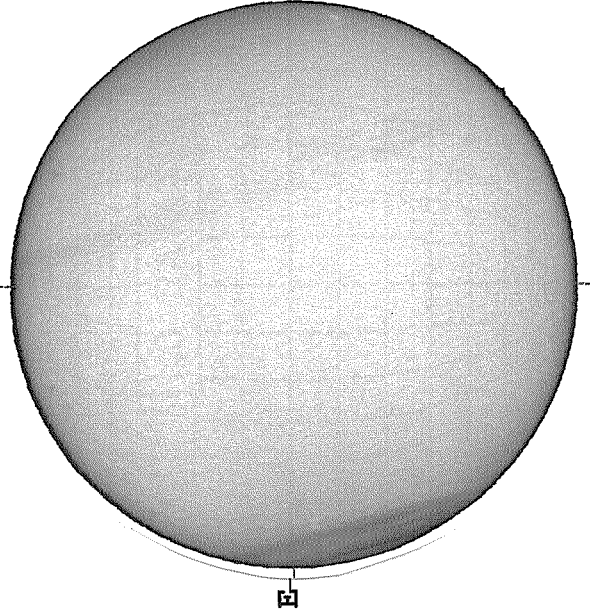
1754 UT

MT. WILSON MAGNETOGRAM  
 White = +7.5G N  
 Black = -7.5G  
 DeltaY = 13.1  
 DeltaX = 9.6



15.93 -  
 16.88 UT

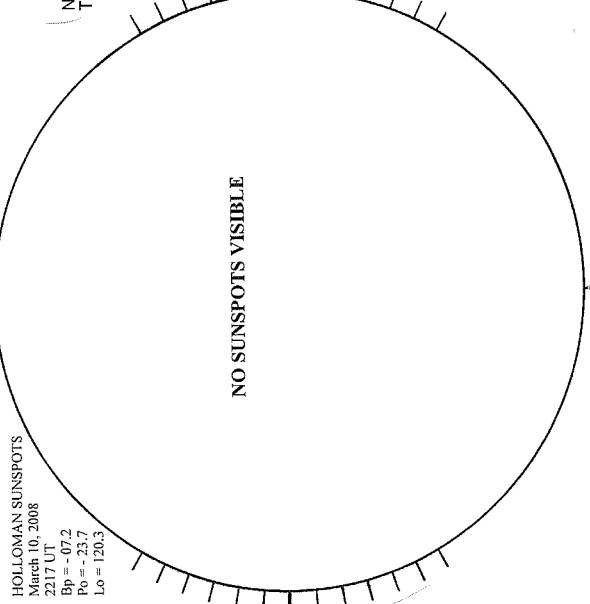
MEUDON H-ALPHA



1309 UT

HOLLOMAN SUNSPOTS

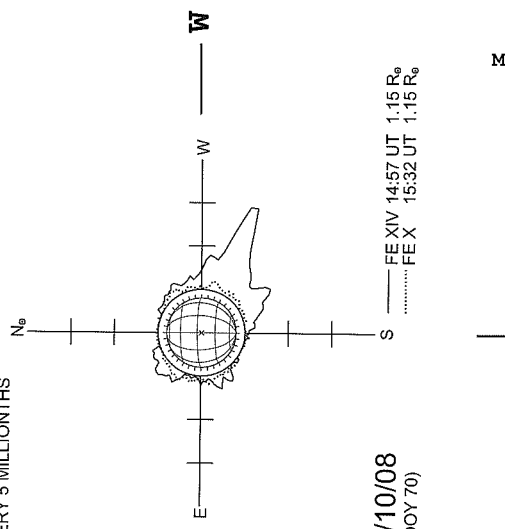
HOLLOMAN SUNSPOTS  
 March 10, 2008  
 2217 UT  
 Bp = -07.2  
 Po = -23.7  
 Lo = 120.3



2217 UT

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

NSO / SACRAMENTO PEAK CORONAL DATA  
 TICK MARKS EVERY 5 MILLIONTHS



03/10/08  
 (DOY 70)

FE XIV 14:57 UT 1.15 R<sub>o</sub>  
 FE X 15:32 UT 1.15 R<sub>o</sub>

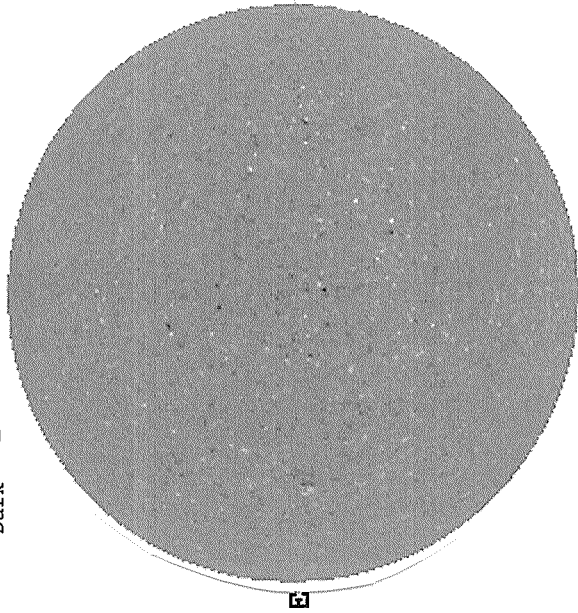
50  
Mar 08

March 11, 2008 (P=-23.79, Bo=-7.23, Lo= 119.32)

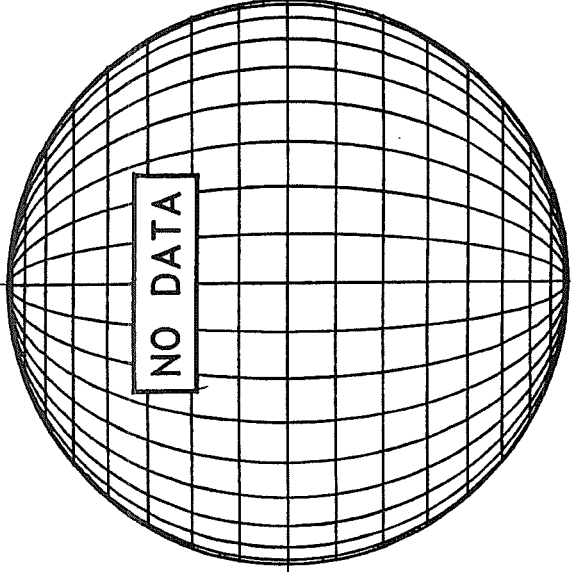
KITP PEAK MAGNETOGRAM -- SOLIS  
Bright = +  
Dark = -  
N

STANFORD MAGNETOGRAM  
Solid = +  
Dashed = -  
N

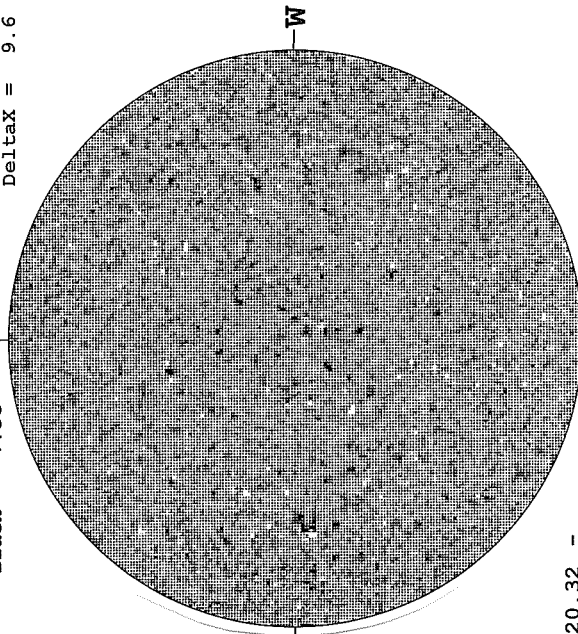
MT. WILSON MAGNETOGRAM  
White = +7.5G  
Black = -7.5G  
N  
DeltaY = 13.1  
DeltaX = 9.6



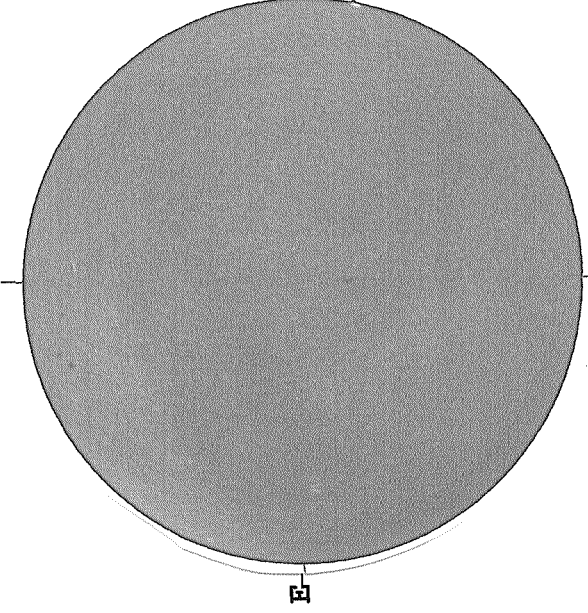
1851 UT



20.32 -  
21.27 UT



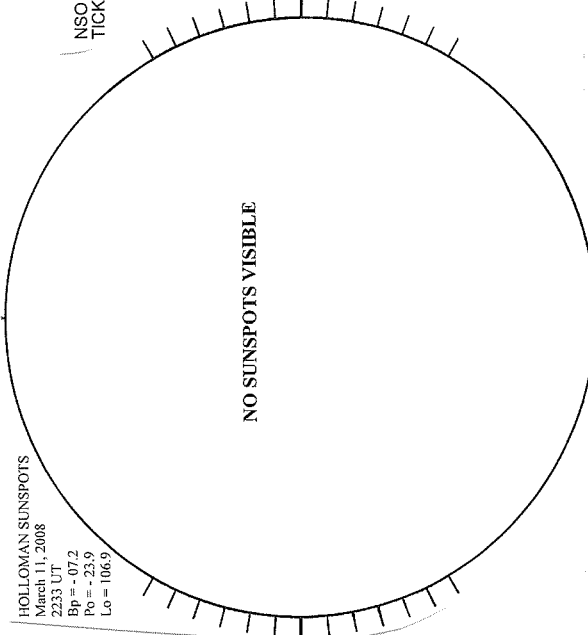
--- CATANIA H-ALPHA



0915 UT

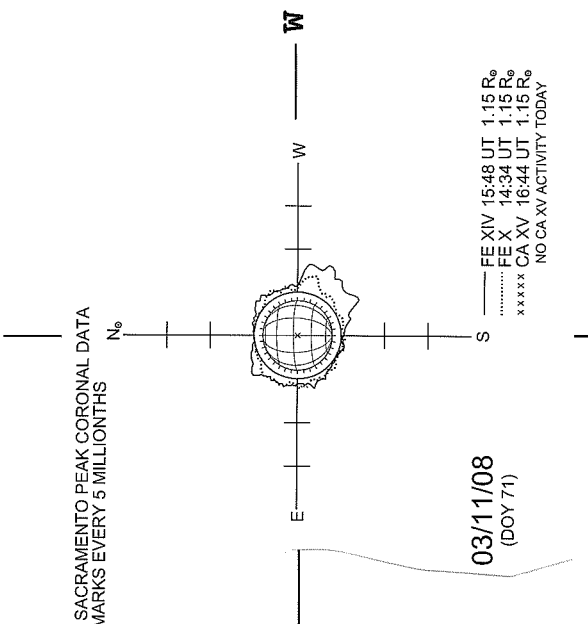
HOLLOMAN SUNSPOTS

HOLLOMAN SUNSPOTS  
March 11, 2008  
2233 UT  
Bp = -07.2  
Ps = -23.9  
Lo = 106.9



2233 UT

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



03/11/08  
(DOY 71)

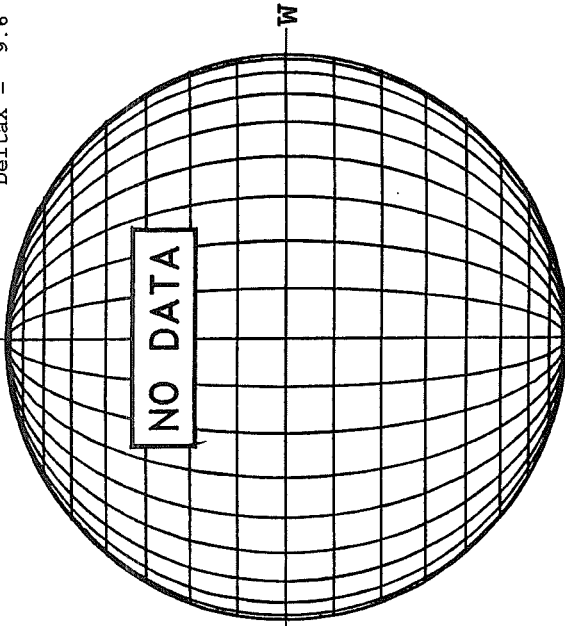
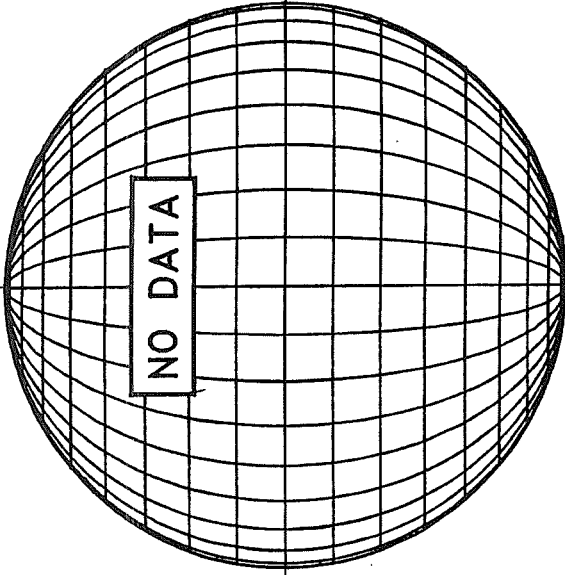
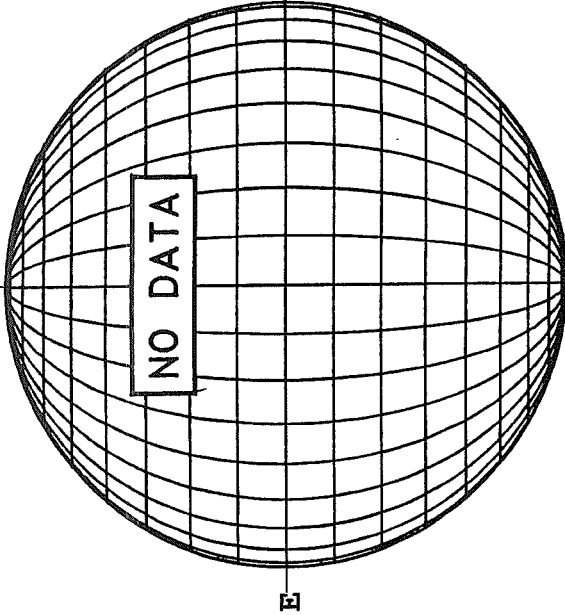
----- FE XIV 15:48 UT 1.15 R<sub>o</sub>  
..... FE X 14:34 UT 1.15 R<sub>o</sub>  
\*\*\*\*\* CA XV 16:44 UT 1.15 R<sub>o</sub>  
NO CA XV ACTIVITY TODAY

March 12, 2008 (P=-23.98, Bo=-7.21, Lo= 106.15)

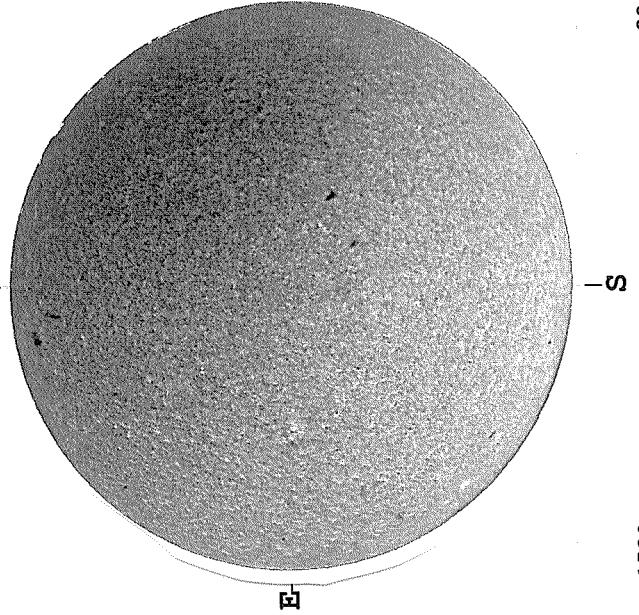
KITT PEAK MAGNETOGRAM -- SOLIS  
 Bright = +  
 Dark = -

STANFORD MAGNETOGRAM  
 Solid = +  
 Dashed = -

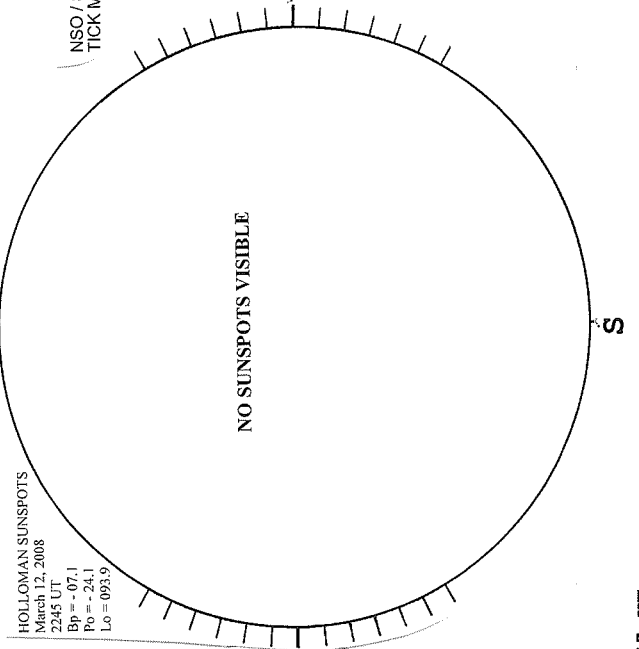
MT. WILSON MAGNETOGRAM  
 White = +7.5G  
 Black = -7.5G  
 DeltaY = 13.1  
 DeltaX = 9.6



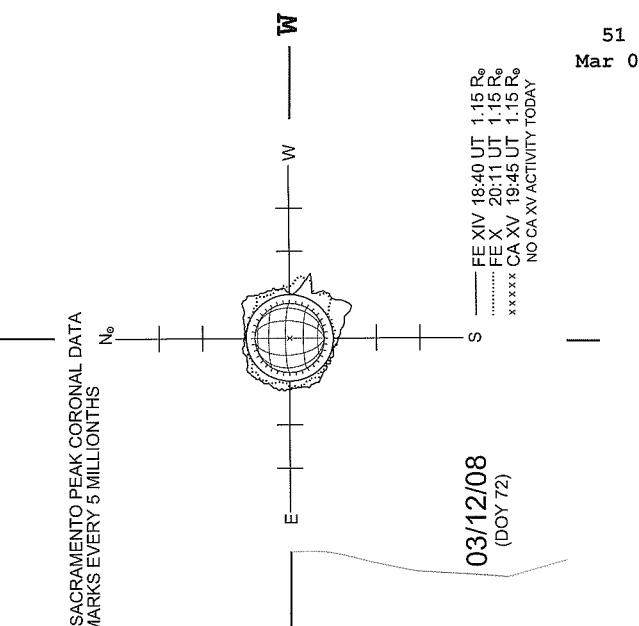
BIG BEAR H-ALPHA



HOLLOWMAN SUNSPOTS



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



1532 UT

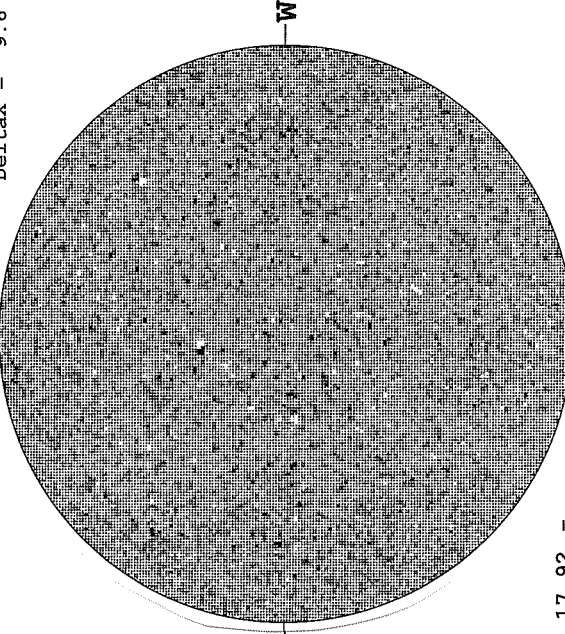
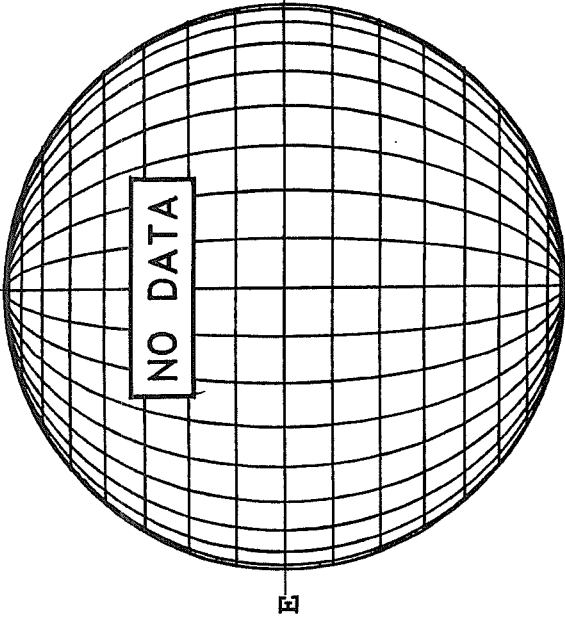
2245 UT

March 13, 2008 (P=-24.15, Bo=-7.20, Lo= 92.97)

KITT PEAK MAGNETOGRAM -- SOLIS  
Bright = +  
Dark = -  
N

STANFORD MAGNETOGRAM  
Solid = +  
Dashed = -  
N

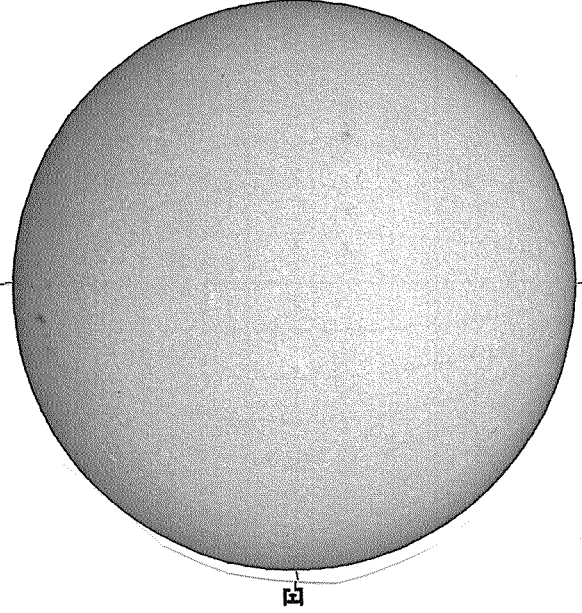
MT. WILSON MAGNETOGRAM  
White = +7.5G  
Black = -7.5G  
DeltaX = 13.1  
DeltaY = 9.6



17.92 -  
18.88 UT

2119 UT

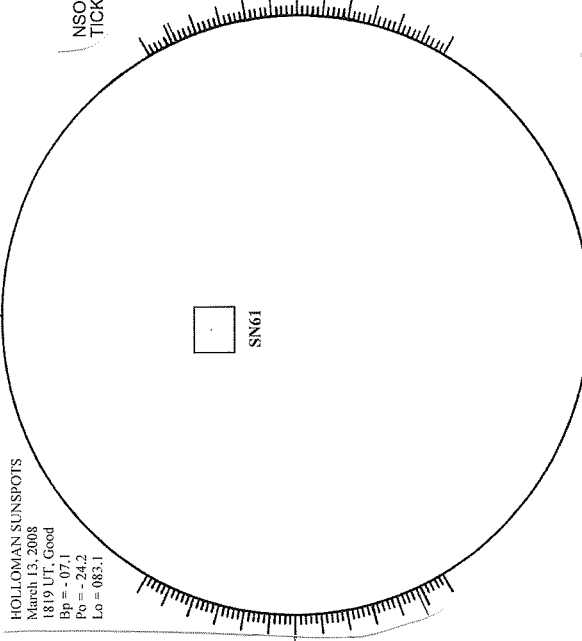
--- BIG BEAR H-ALPHA



1722 UT

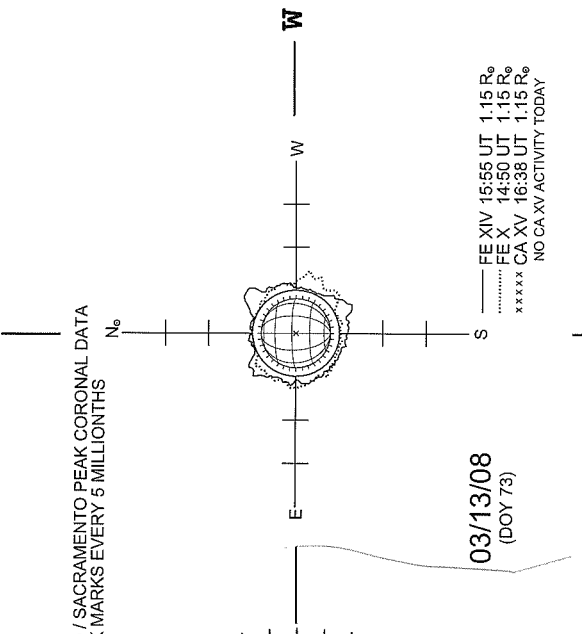
HOLLOMAN SUNSPOTS

HOLLOMAN SUNSPOTS  
March 13, 2008  
1819 UT, Good  
Bp = -07.1  
Po = -24.2  
Lo = 083.1



1819 UT

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



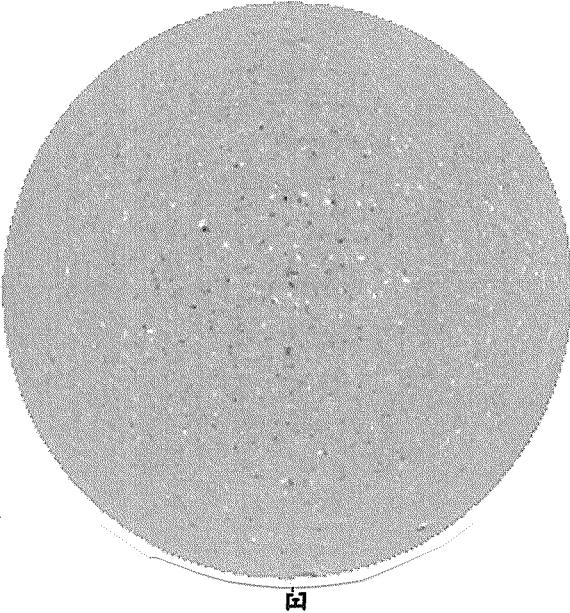
NSO/SACRAMENTO PEAK CORONAL DATA  
TICK MARKS EVERY 5 MILLIONTHS

03/13/08  
(DOY 73)

--- FE XIV 15.55 UT 1.15 R<sub>o</sub>  
..... FE X 14.50 UT 1.15 R<sub>o</sub>  
\*\*\*\*\* CA XV 16.38 UT 1.15 R<sub>o</sub>  
NO CA XV ACTIVITY TODAY

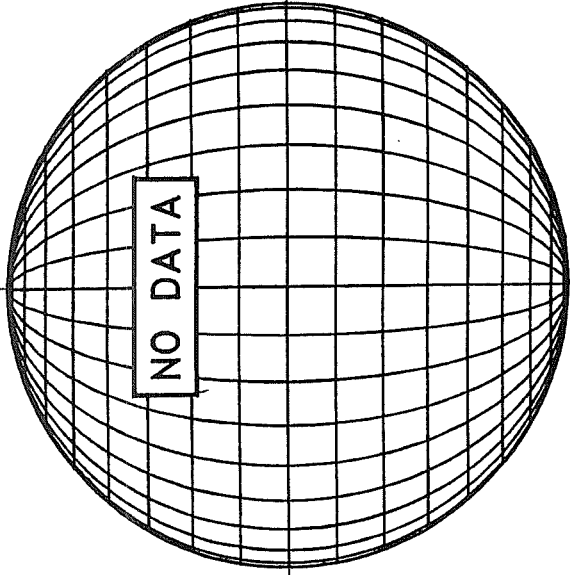
March 14, 2008 (P=-24.32, Bo=-7.18, Lo= 79.79)

KITT PEAK MAGNETOGRAM -- SOLIS  
 Bright = +  
 Dark = -  
 N



2133 UT

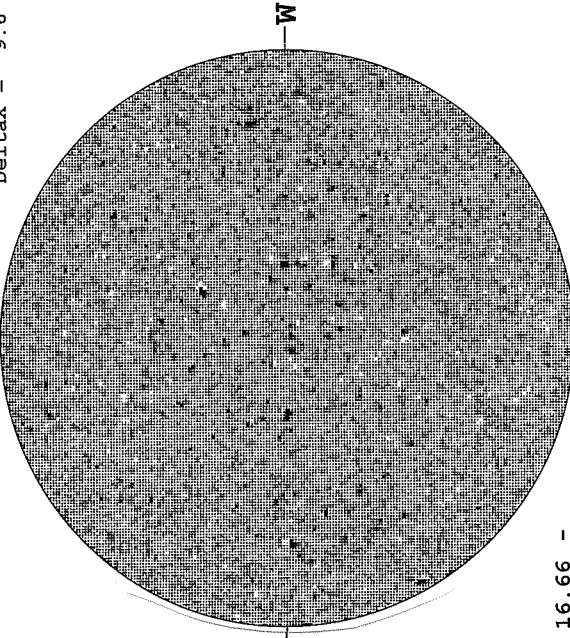
STANFORD MAGNETOGRAM  
 Solid = +  
 Dashed = -  
 N



NO DATA

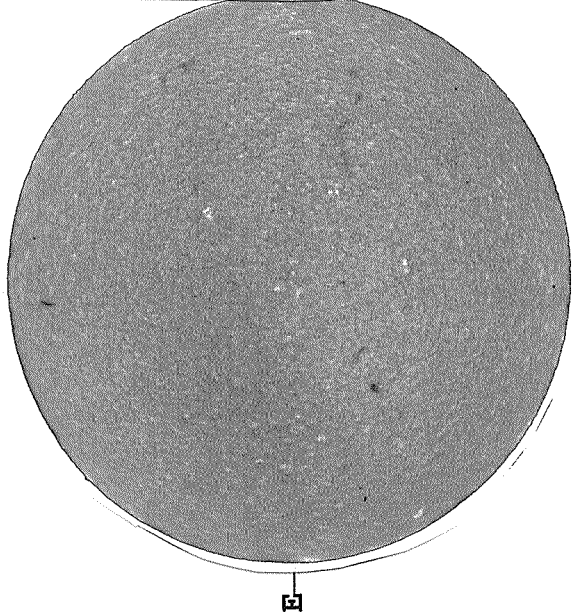
16.66 -  
 17.62 UT

MT. WILSON MAGNETOGRAM  
 White = +7.5G  
 Black = -7.5G  
 DeltaY = 13.1  
 DeltaX = 9.6  
 N



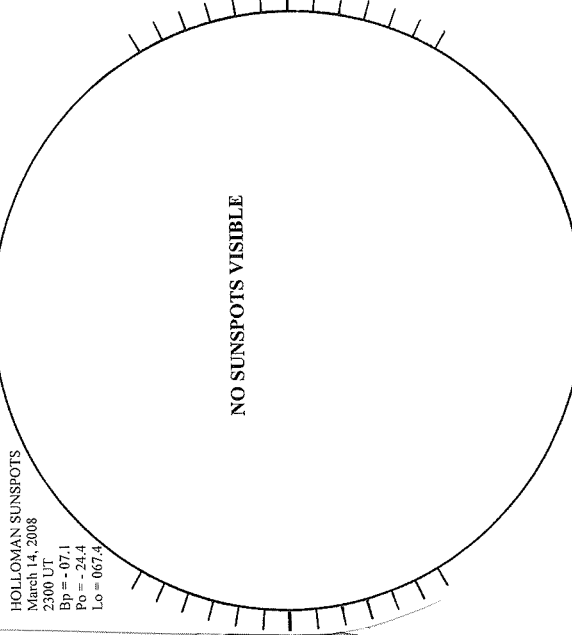
W

BIG BEAR H-ALPHA



2149 UT

HOLLOMAN SUNSPOTS

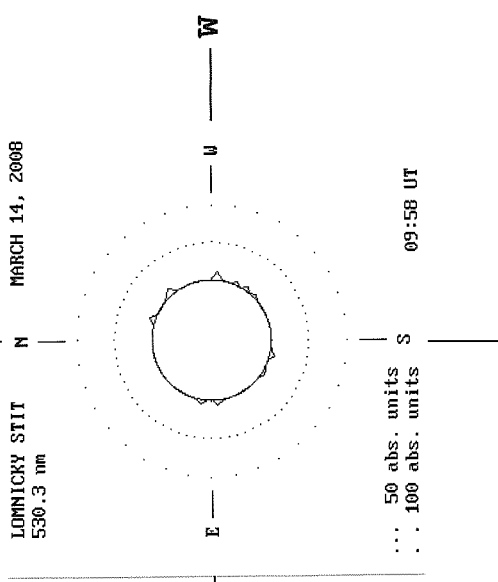


HOLLOMAN SUNSPOTS  
 March 14, 2008  
 2300 UT  
 Bp = -07.1  
 Po = -24.4  
 Lo = 067.4

NO SUNSPOTS VISIBLE

2300 UT

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



LOMNICKY STIT  
 530.3 nm  
 N  
 MARCH 14, 2008

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

09:58 UT

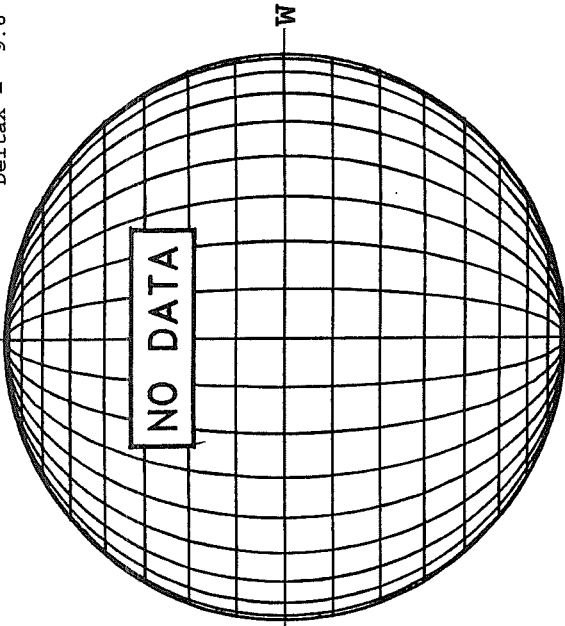
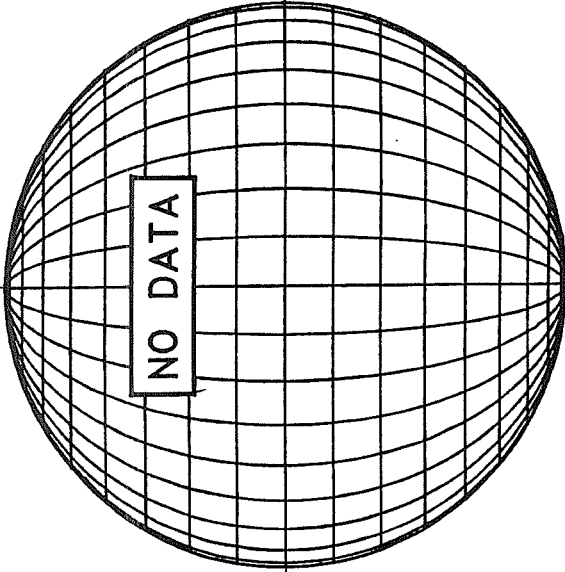
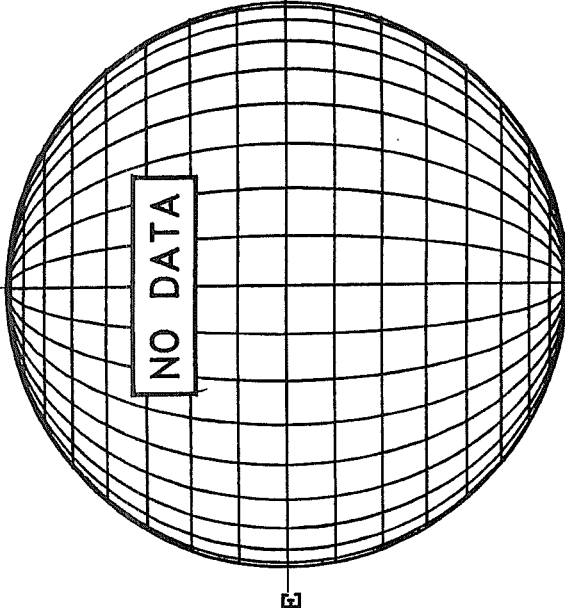
March 15, 2008 (P=-24.48, Bo=-7.16, Io= 66.61)

KITT PEAK MAGNETOGRAM -- SOLIS  
Bright = +  
Dark = -

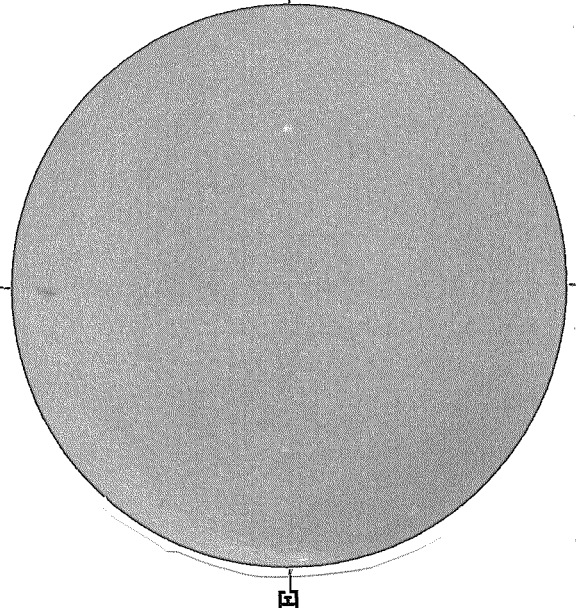
STANFORD MAGNETOGRAM  
Solid = +  
Dashed = -

MT. WILSON MAGNETOGRAM  
White = +7.5G  
Black = -7.5G

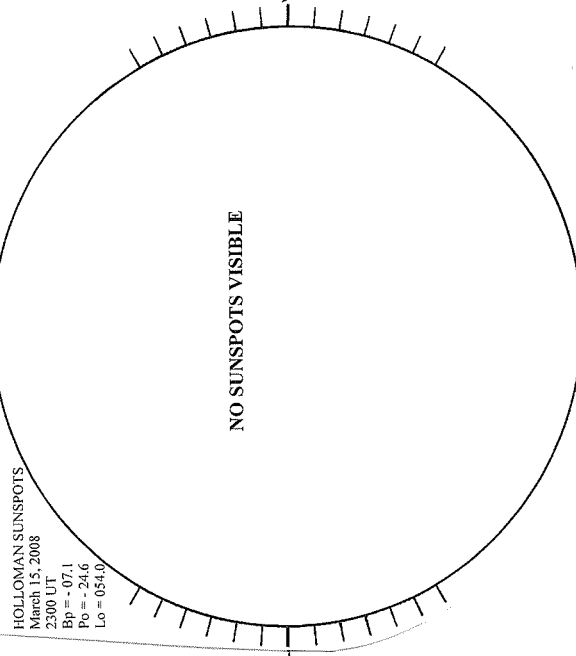
DeltaY = 13.1  
DeltaX = 9.6



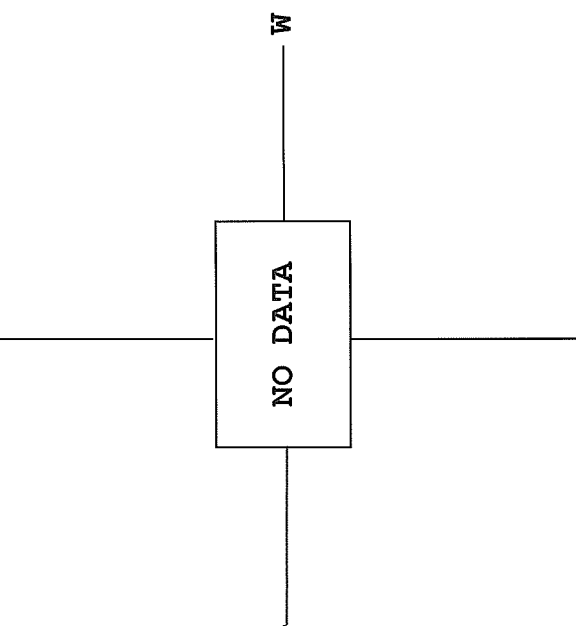
CATANIA H-ALPHA



HOLLOMAN SUNSPOTS



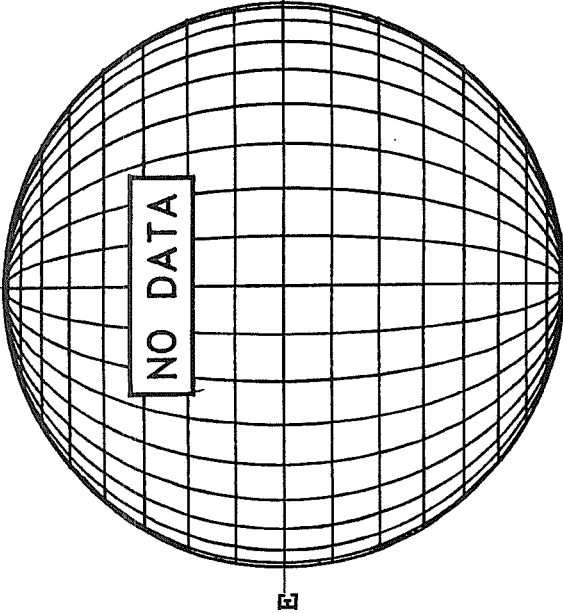
SACRAMENTO PEAK CORONA (1.15 Radii) -----



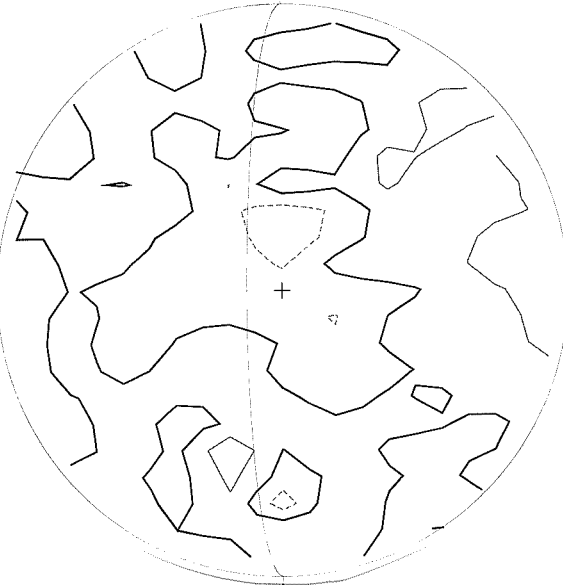


March 16, 2008 (P=-24.64, Bo=-7.14, Io= 53.43)

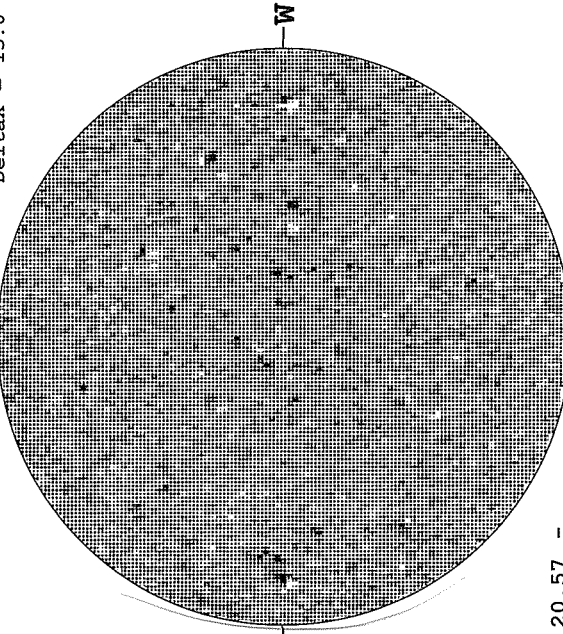
KITTT PEAK MAGNETOGRAM -- SOLIS  
 Bright = +  
 Dark = -



STANFORD MAGNETOGRAM  
 Solid = +  
 Dashed = -



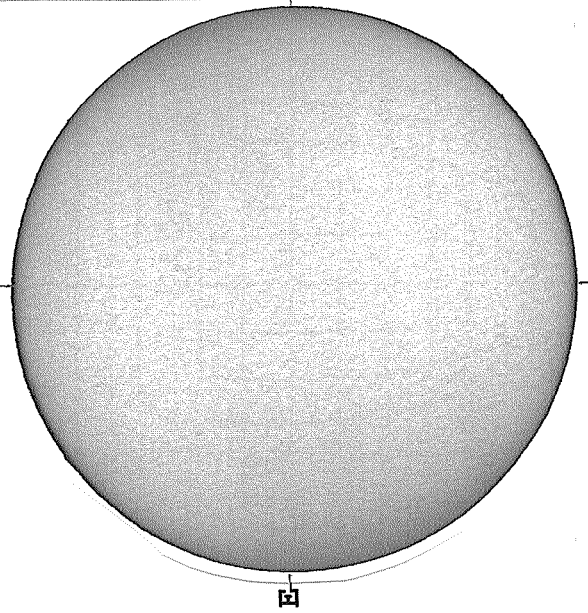
MT. WILSON MAGNETOGRAM  
 White = +7.5G  
 Black = -7.5G  
 DeltaY = 19.9  
 DeltaX = 13.0



20.57 -  
 21.00 UT

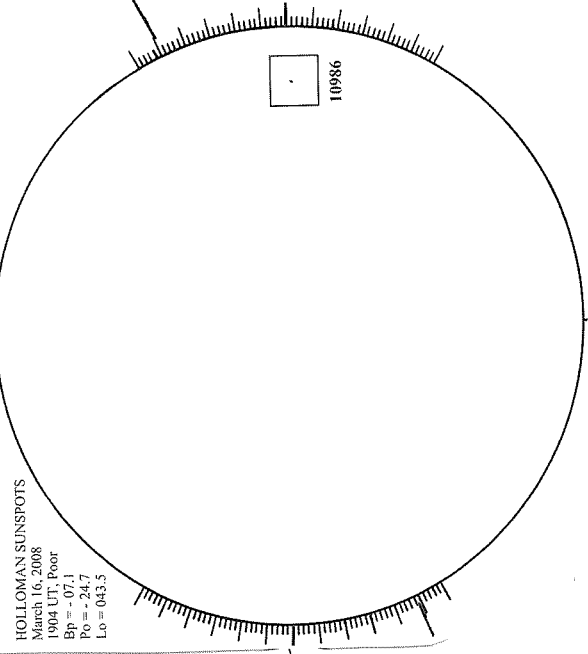
2129 UT

MEUDON H-ALPHA



1304 UT

HOLLOMAN SUNSPOTS



1904 UT

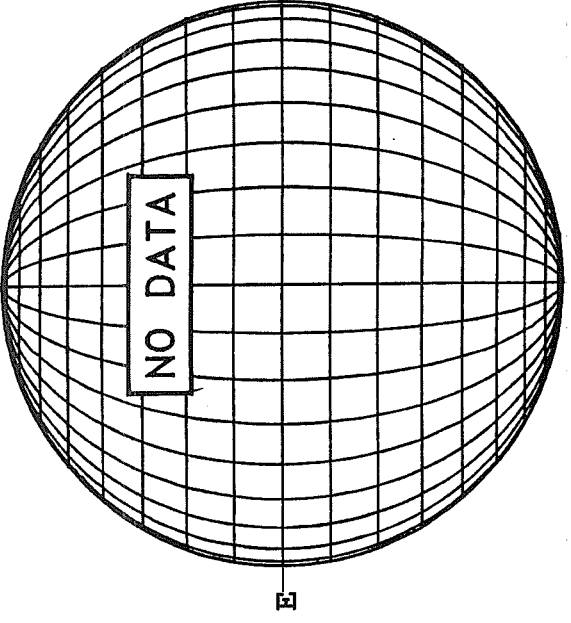
SACRAMENTO PEAK CORONA (1.15 Radii) -----

NO DATA

56  
Mar 08

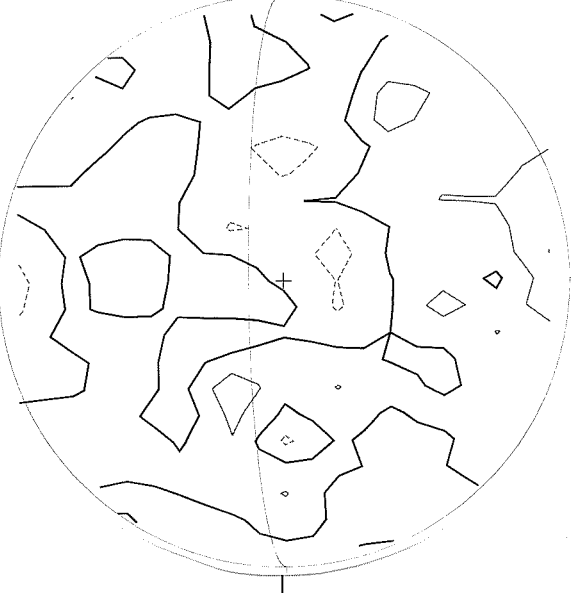
March 17, 2008 (P=-24.78, Bo=-7.12, Lo= 40.25)

KITT PEAK MAGNETOGRAM -- SOLIS  
Bright = +  
Dark = -  
N  
\*\* 854.2NM \*\*



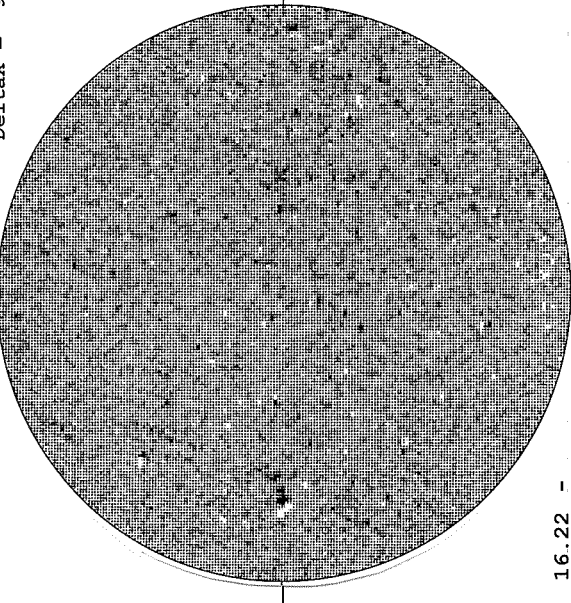
E

STANFORD MAGNETOGRAM  
Solid = +  
Dashed = -  
N



2138 UT

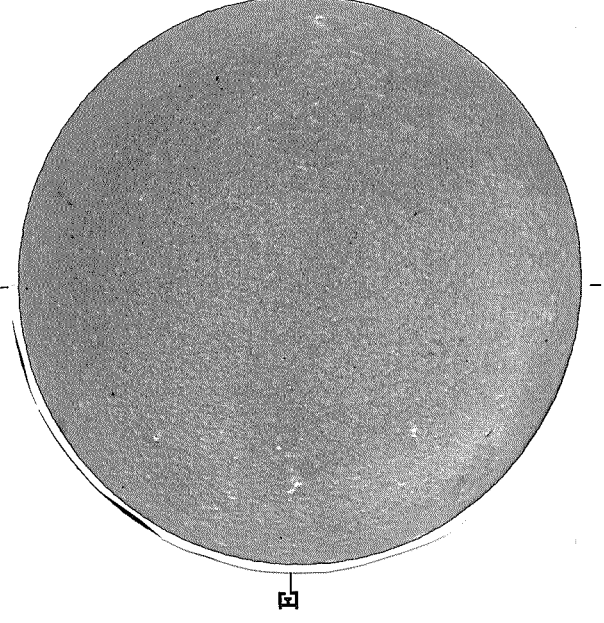
MT. WILSON MAGNETOGRAM  
White = +7.5G  
Black = -7.5G  
N  
DeltaY = 13.0  
DeltaX = 9.6



W

16.22 -  
17.18 UT

---  
BIG BEAR H-ALPHA



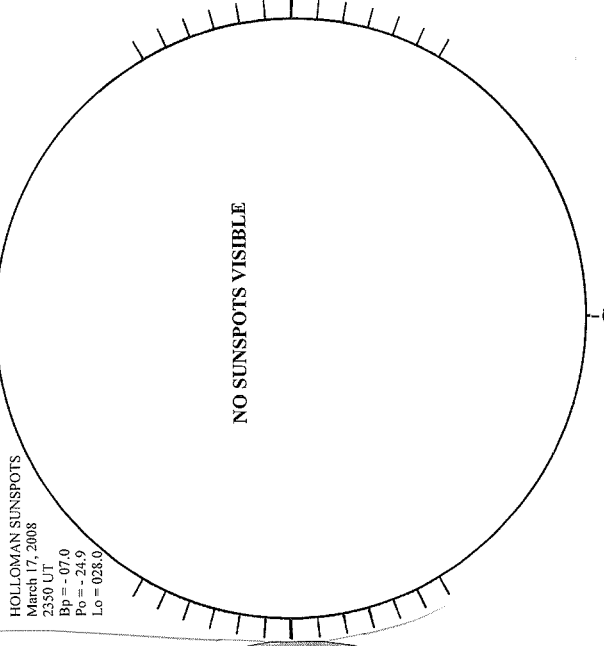
E

S

1625 UT

HOLLOMAN SUNSPOTS

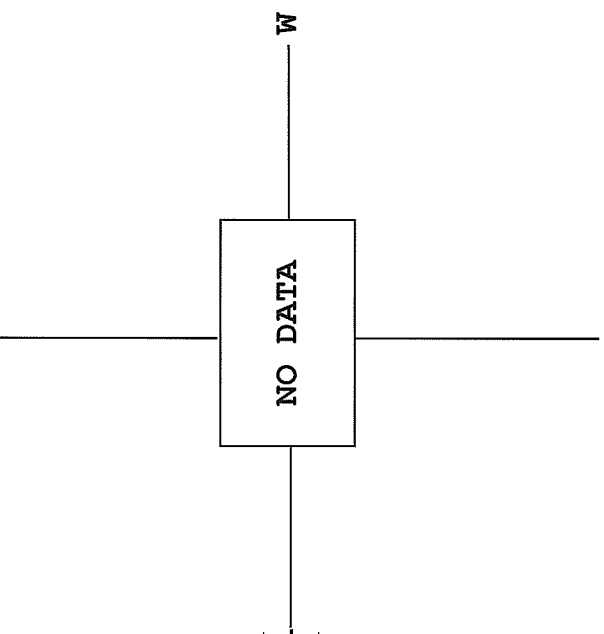
HOLLOMAN SUNSPOTS  
March 17, 2008  
2350 UT  
Bp = -07.0  
Po = -24.9  
Lo = 028.0



S

2250 UT

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



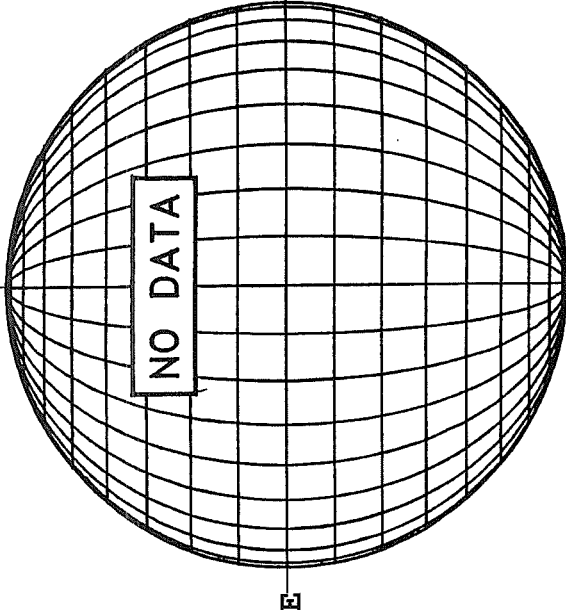
W

NO DATA

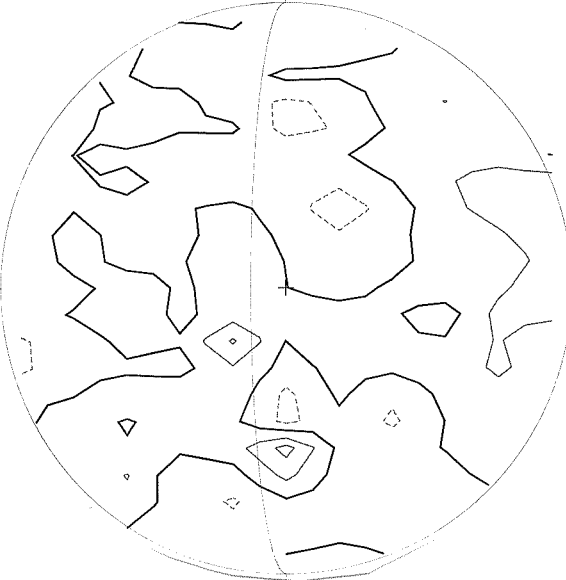
1625 UT

March 18, 2008 (P=-24.93, Bo=-7.10, Io= 27.06)

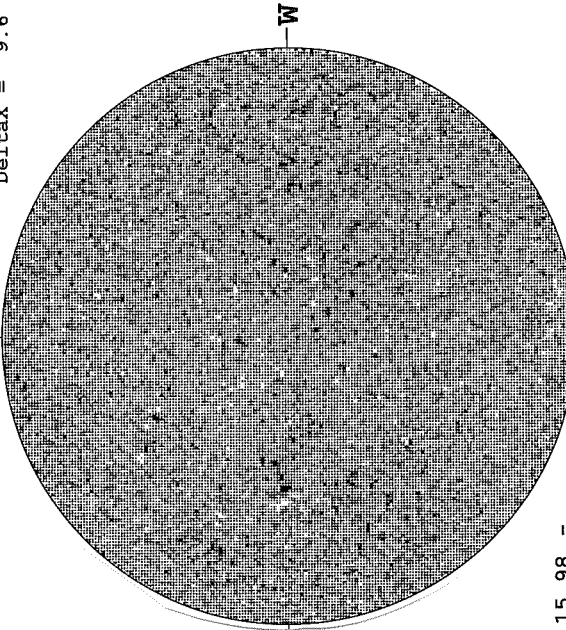
KITT PEAK MAGNETOGRAM -- SOLIS  
Bright = +  
Dark = -



STANFORD MAGNETOGRAM  
Solid = +  
Dashed = -



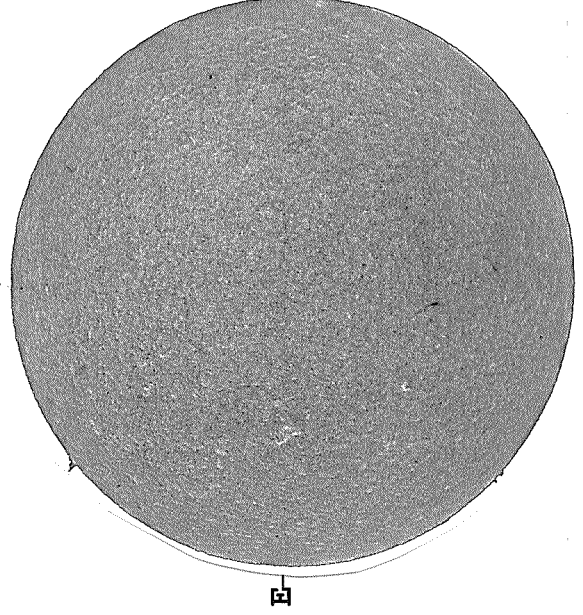
MT. WILSON MAGNETOGRAM  
White = +7.5G  
Black = -7.5G  
DeltaY = 13.1  
DeltaX = 9.6



15.98 -  
16.93 UT

1834 UT

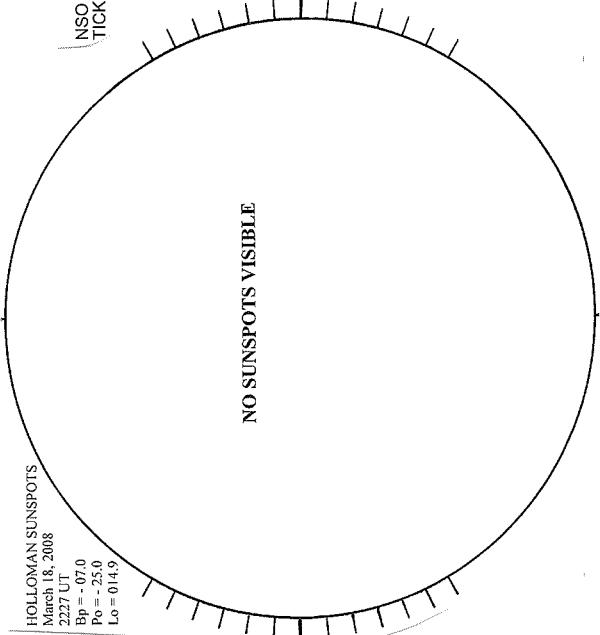
BIG BEAR H-ALPHA



1625 UT

HOLLOMAN SUNSPOTS

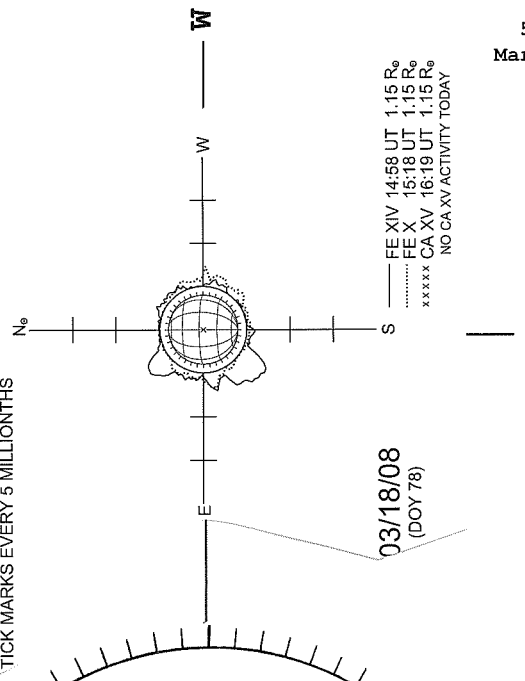
HOLLOMAN SUNSPOTS  
March 18, 2008  
2227 UT  
Bp = -07.0  
Pb = -25.0  
Lo = 014.9



2227 UT

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

NSO / SACRAMENTO PEAK CORONAL DATA  
TICK MARKS EVERY 5 MILLIONTHS



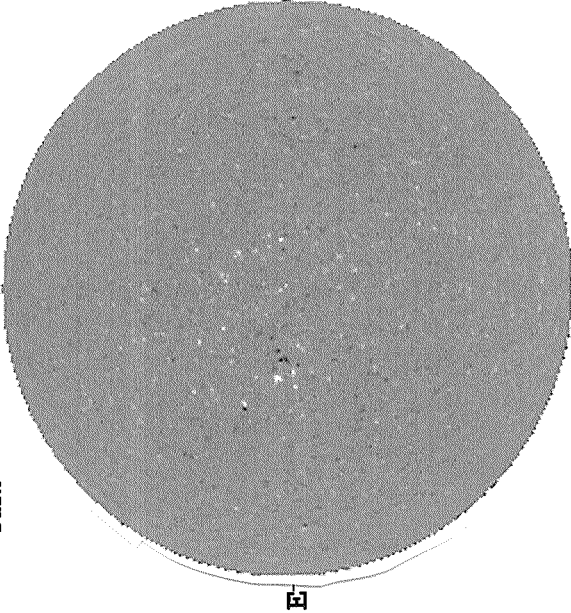
03/18/08  
(DOY 78)

--- FE XIV 14:58 UT 1.15 R<sub>o</sub>  
..... FE X 15:18 UT 1.15 R<sub>o</sub>  
xxxxx CA XV 16:19 UT 1.15 R<sub>o</sub>  
NO CA XV ACTIVITY TODAY

58  
Mar 08

March 19, 2008 (P=-25.06, Bo=-7.07, Lo= 13.88)

KITT PEAK MAGNETOGRAM --- SOLIS  
Bright = +  
Dark = -  
N



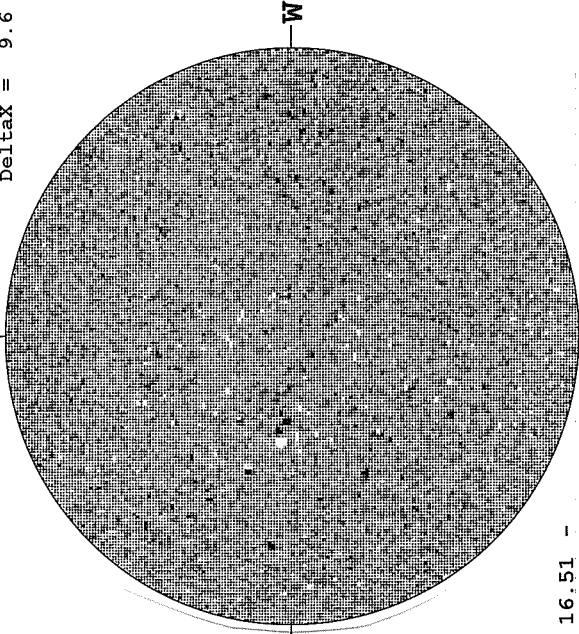
2126 UT

STANFORD MAGNETOGRAM  
Solid = +  
Dashed = -  
N



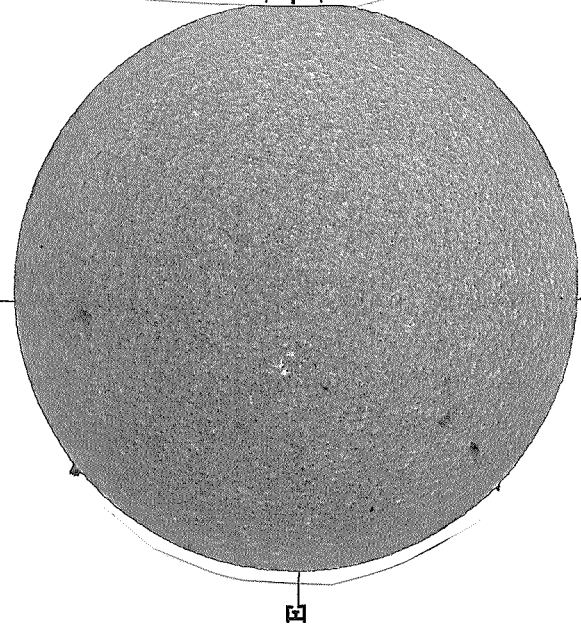
2111 UT

MT. WILSON MAGNETOGRAM  
White = +7.5G  
Black = -7.5G  
DeltaY = 13.1  
DeltaX = 9.6  
N



16.51 -  
17.46 UT

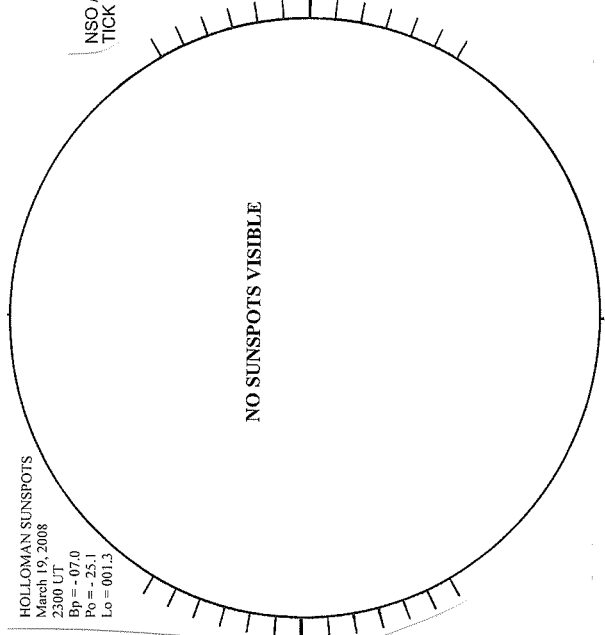
--- BIG BEAR H-ALPHA



2228 UT

HOLLOMAN SUNSPOTS

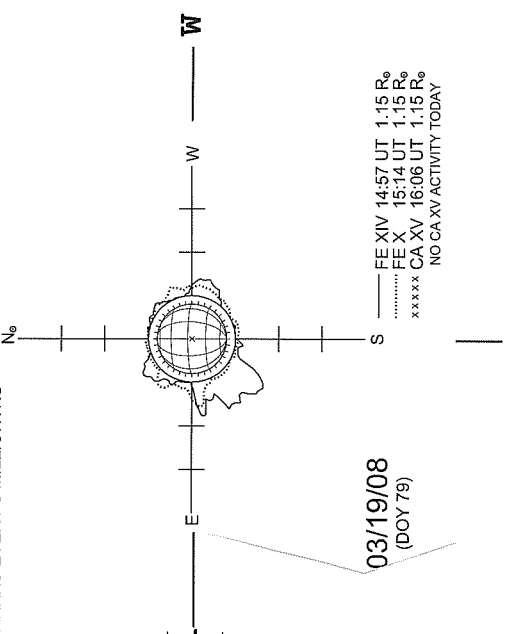
HOLLOMAN SUNSPOTS  
March 19, 2008  
2300 UT  
Bp = -07.0  
Po = -25.1  
Lo = 001.3



2300 UT

SACRAMENTO PEAK CORONA (1.15 Radii) ----

NSO / SACRAMENTO PEAK CORONAL DATA  
TICK MARKS EVERY 5 MILLIONTHS

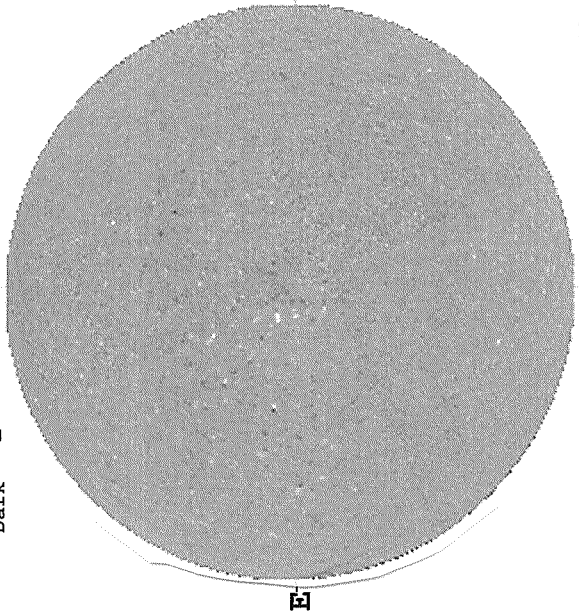


03/19/08  
(DOY 79)

--- FE XIV 14:57 UT 1.15 R<sub>o</sub>  
..... FE X 15:14 UT 1.15 R<sub>o</sub>  
xxxxx CA XV 16:06 UT 1.15 R<sub>o</sub>  
NO CA XV ACTIVITY TODAY

March 20, 2008 (P=-25.19, Bo=-7.04, Lo= 0.70)

KITT PEAK MAGNETOGRAM -- SOLIS  
Bright = +  
Dark = -  
N



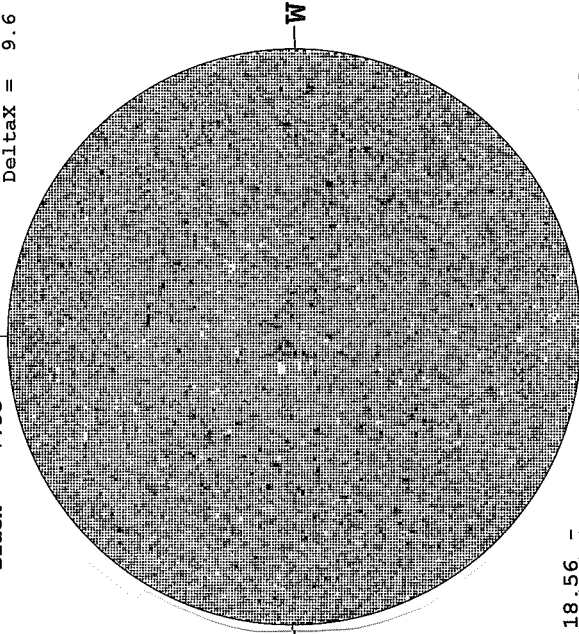
2129 UT

STANFORD MAGNETOGRAM  
Solid = +  
Dashed = -  
N



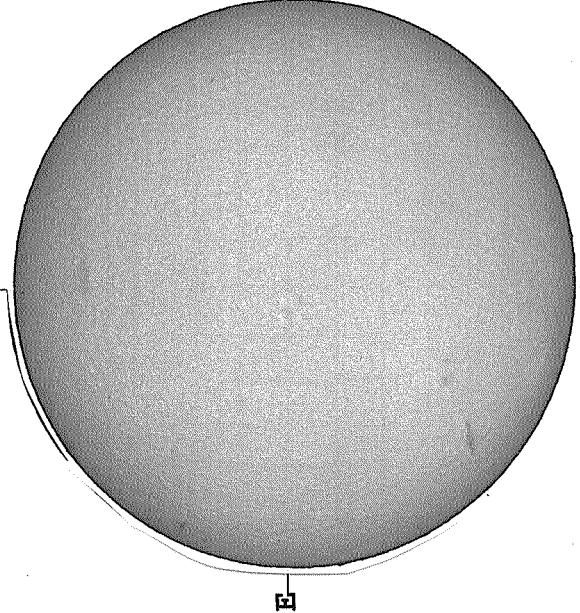
2140 UT

MT. WILSON MAGNETOGRAM  
White = +7.5G  
Black = -7.5G  
N  
DeltaY = 13.1  
DeltaX = 9.6



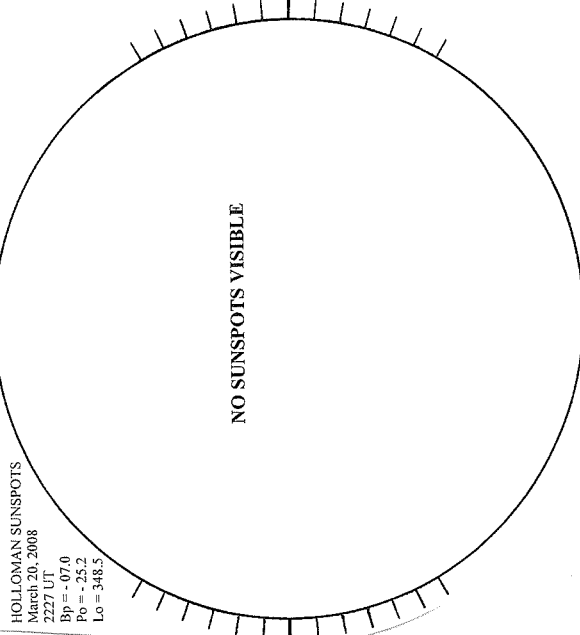
18.56 -  
19.51 UT

BIG BEAR H-ALPHA



1611 UT

HOLLOMAN SUNSPOTS



2227 UT

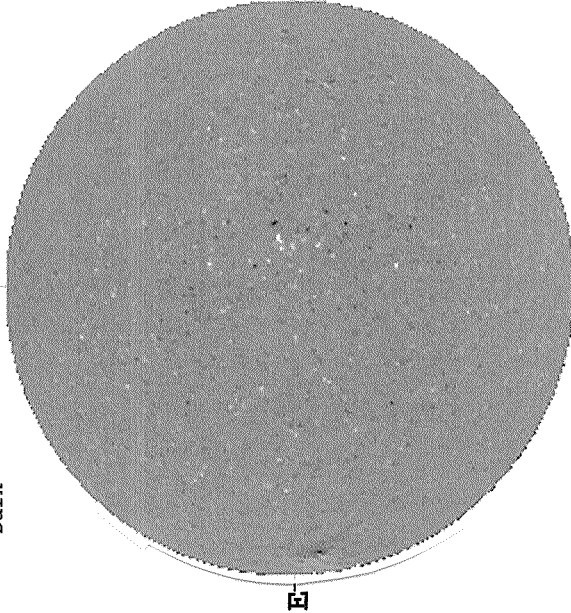
SACRAMENTO PEAK CORONA (1.15 Radii) -----

NO DATA

Mar 08 60

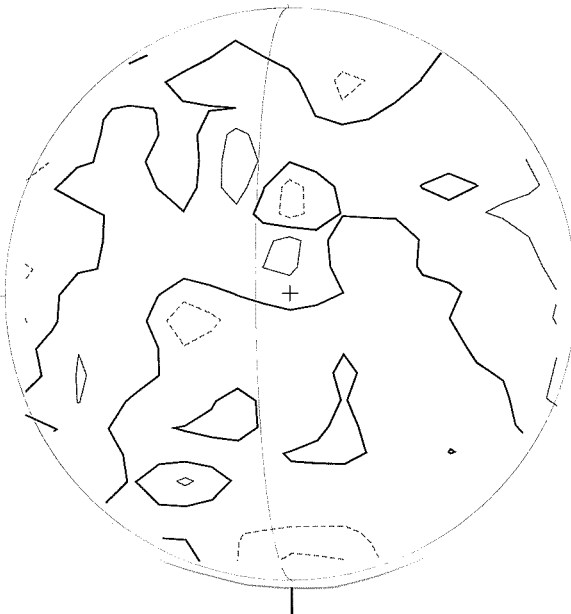
March 21, 2008 (P=-25.31, Bo=-7.01, Lo= 347.51)

KITT PEAK MAGNETOGRAM -- SOLIS  
Bright = +  
Dark = -  
N



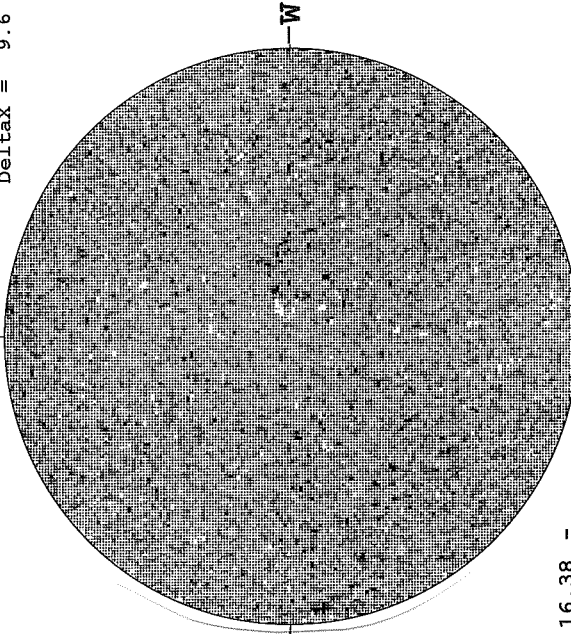
2202 UT

STANFORD MAGNETOGRAM  
Solid = +  
Dashed = -  
N



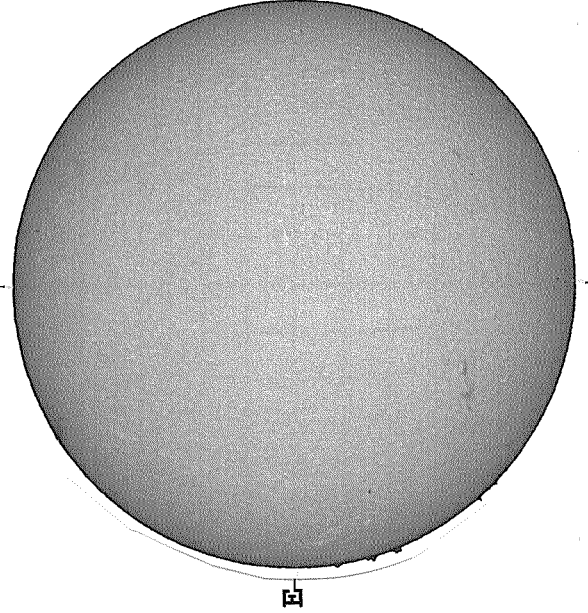
2134 UT

MT. WILLSON MAGNETOGRAM  
White = +7.5G  
Black = -7.5G  
DeltaY = 13.1  
DeltaX = 9.6  
N



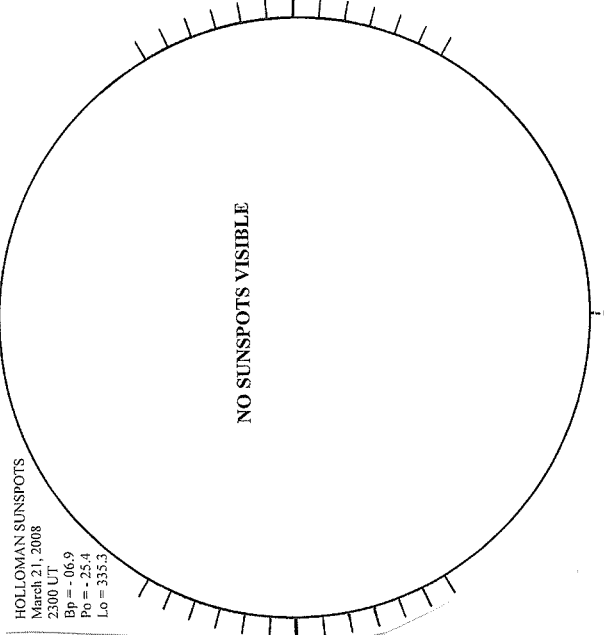
16.38 -  
17.34 UT

--- BIG BEAR H-ALPHA



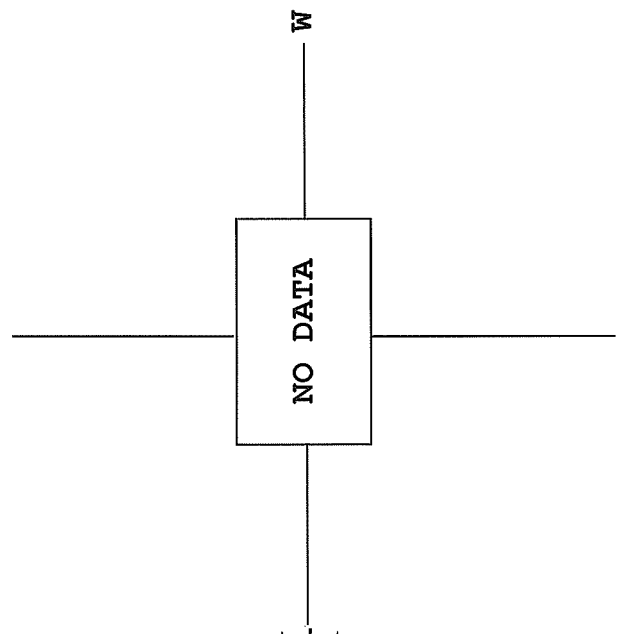
2228 UT

HOLLOMAN SUNSPOTS



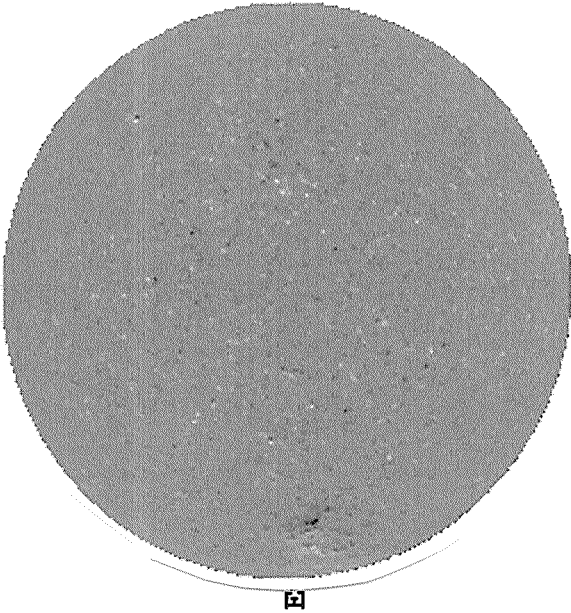
2300 UT

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



March 22, 2008 (P=-25.42, Bo=-6.97, Lo= 334.33)

KITT PEAK MAGNETOGRAM -- SOLIS  
Bright = + N  
Dark = -



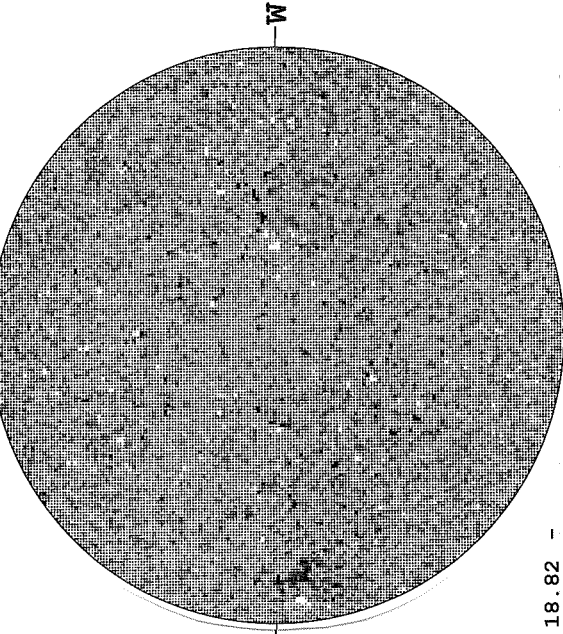
2126 UT

STANFORD MAGNETOGRAM  
Solid = + N  
Dashed = -



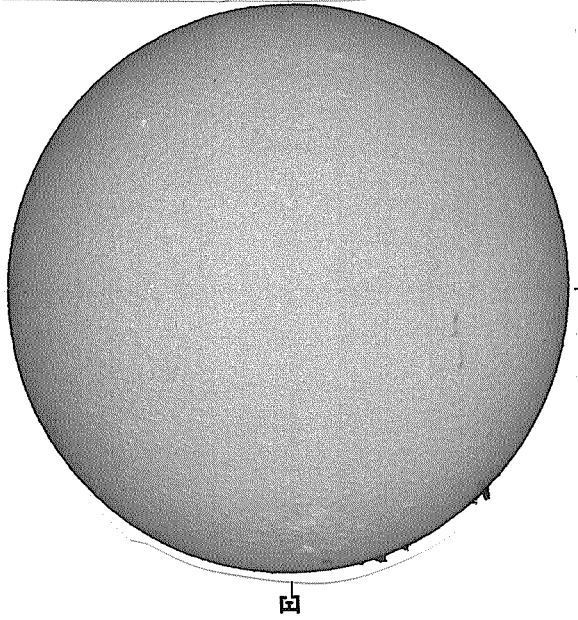
1928 UT

MT. WILSON MAGNETOGRAM  
White = +7.5G N  
Black = -7.5G  
DeltaY = 13.1  
DeltaX = 9.6



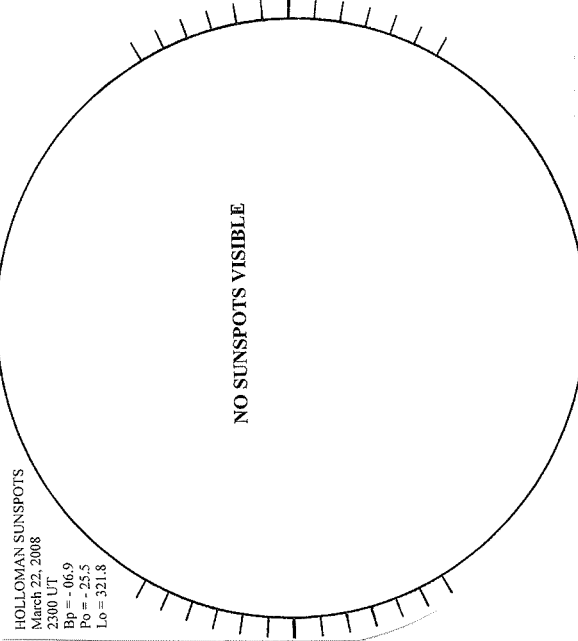
18.82 -  
19.77 UT

BIG BEAR H-ALPHA



1729 UT

HOLLOMAN SUNSPOTS



2300 UT

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

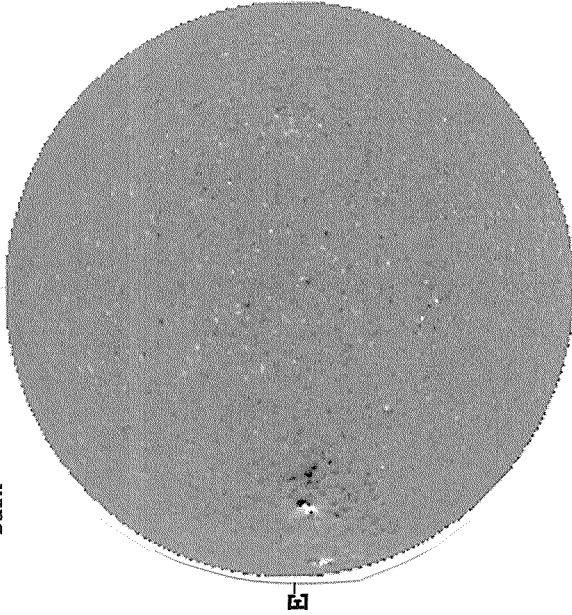
NO DATA

W

62  
Mar 08

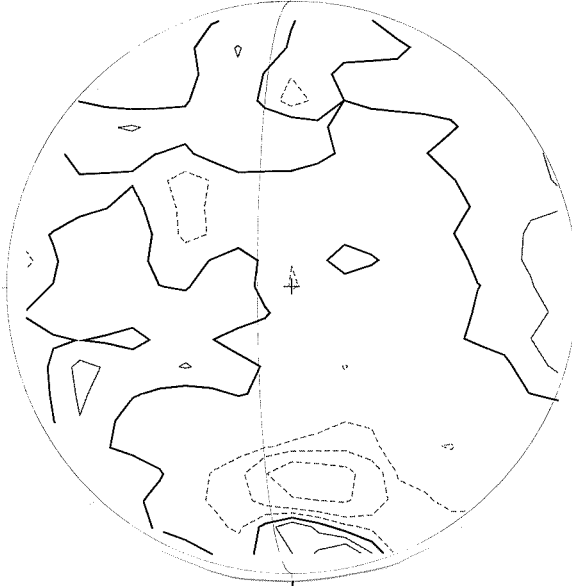
March 23, 2008 (P=-25.53, Bo=-6.94, Lo= 321.14)

KITT PEAK MAGNETOGRAM -- SOLIS  
Bright = +  
Dark = -  
N



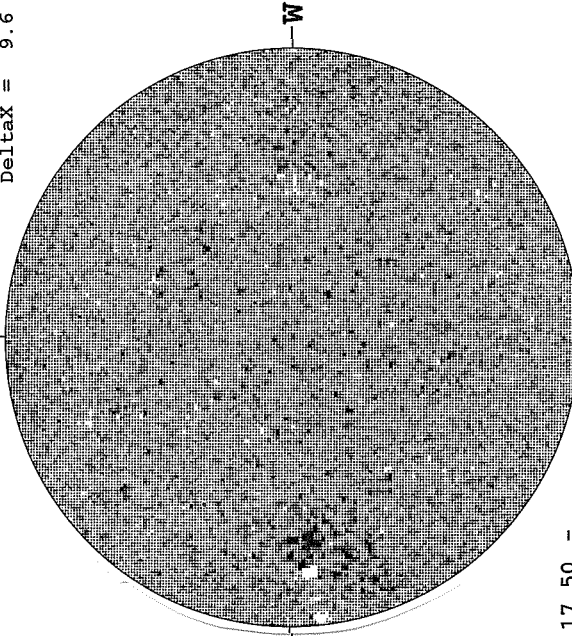
2153 UT

STANFORD MAGNETOGRAM  
Solid = +  
Dashed = -  
N



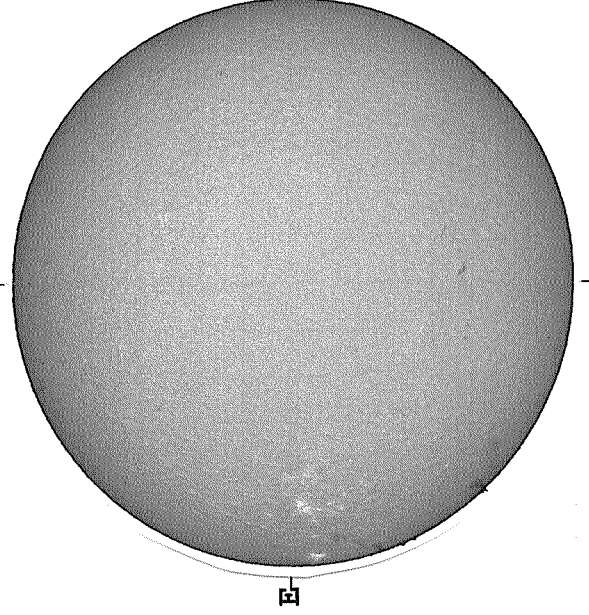
1934 UT

MT. WILSON MAGNETOGRAM  
White = +7.5G  
Black = -7.5G  
N  
DeltaY = 13.1  
DeltaX = 9.6



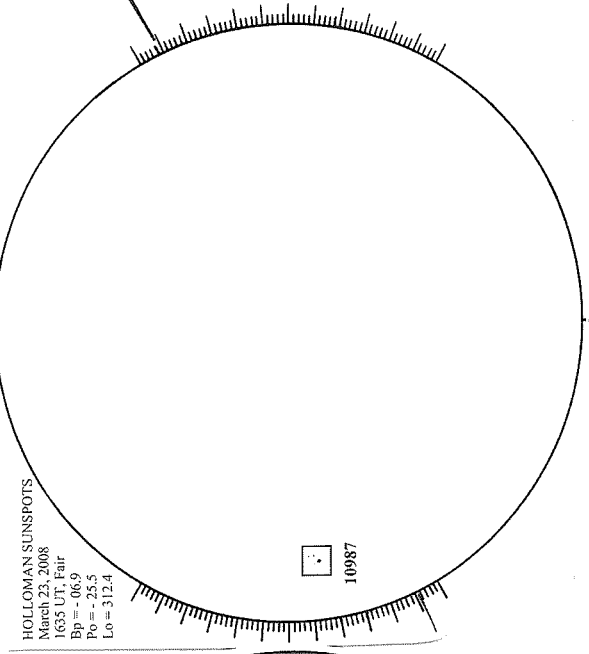
17.50 -  
18.45 UT

BIG BEAR H-ALPHA



1720 UT

HOLLOMAN SUNSPOTS



1635 UT

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

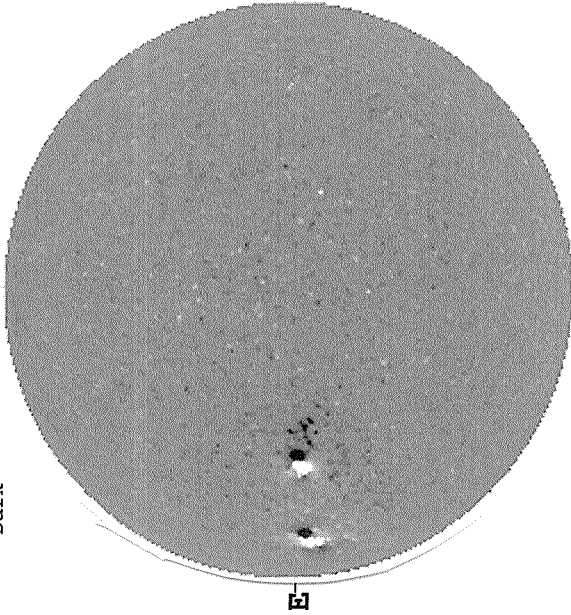
NO DATA

W



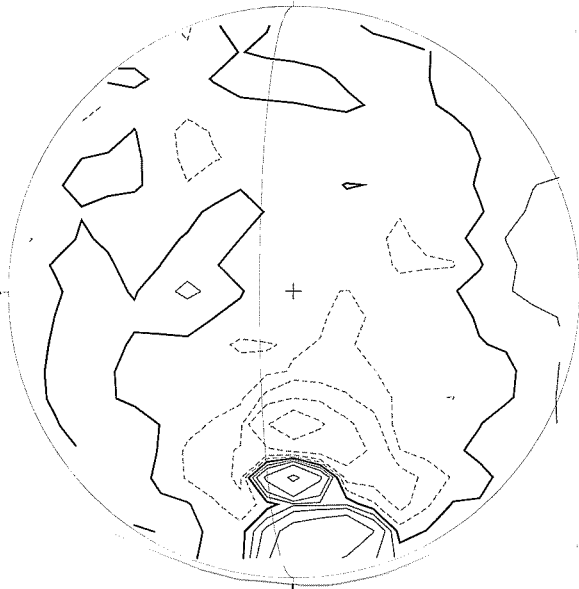
March 24, 2008 (P=-25.63, Bo=-6.90, Lo= 307.96)

KITT PEAK MAGNETOGRAM -- SOLIS  
 Bright = +  
 Dark = -



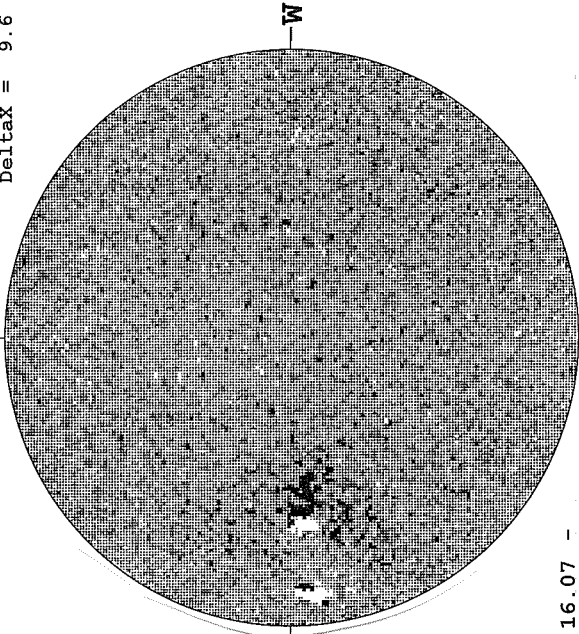
1909 UT

STANFORD MAGNETOGRAM  
 Solid = +  
 Dashed = -



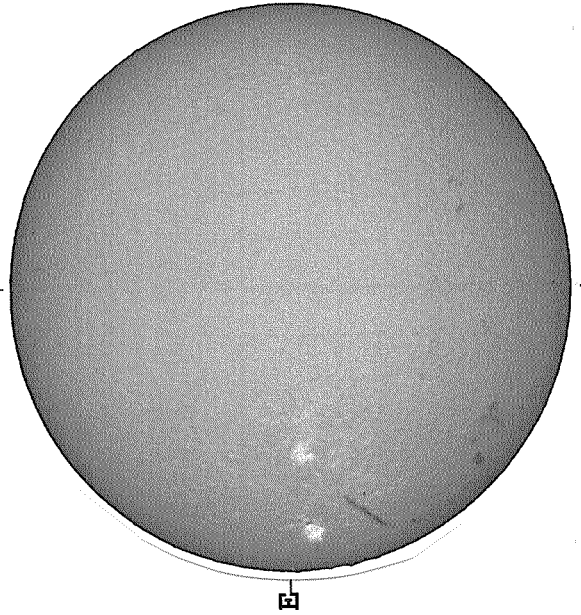
25/0026 UT

MT. WILSON MAGNETOGRAM  
 White = +7.5G  
 Black = -7.5G  
 DeltaY = 13.1  
 DeltaX = 9.6



16.07 -  
 17.02 UT

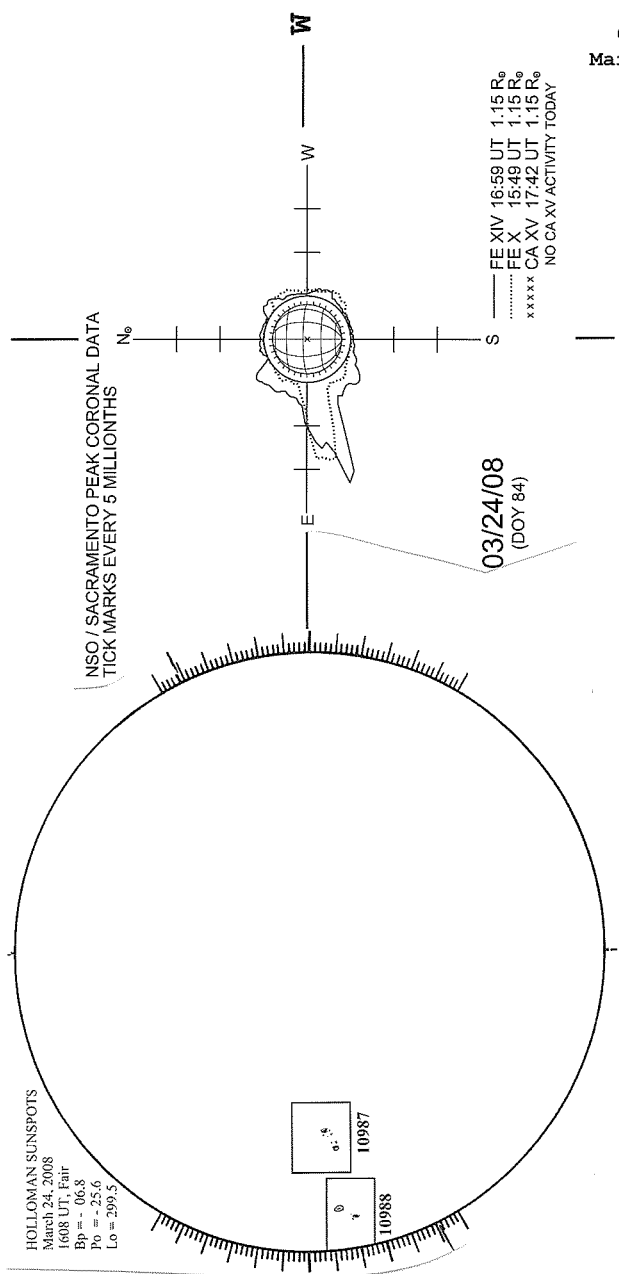
BIG BEAR H-ALPHA



2138 UT

HOLLOMAN SUNSPOTS

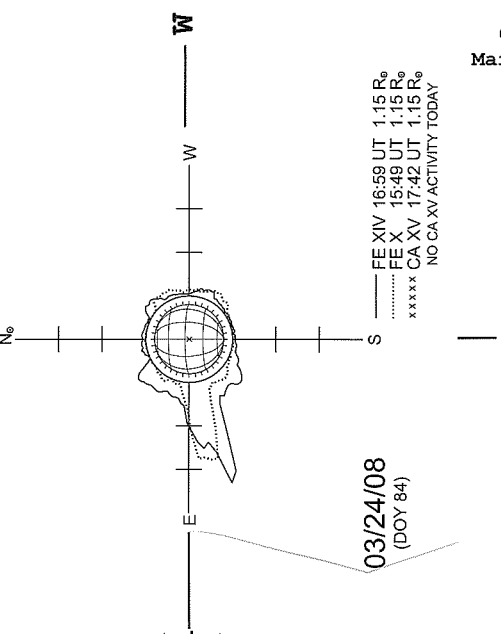
HOLLOMAN SUNSPOTS  
 March 24, 2008  
 1608 UT, Fair  
 Bp = 06.8  
 Pp = 25.6  
 Lo = 299.5



1608 UT

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

NSO / SACRAMENTO PEAK CORONAL DATA  
 TICK MARKS EVERY 5 MILLIONTHS

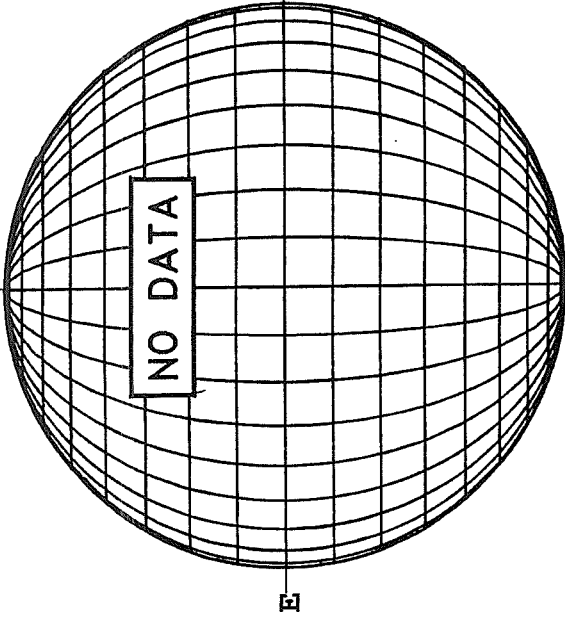


03/24/08  
 (DOY 84)

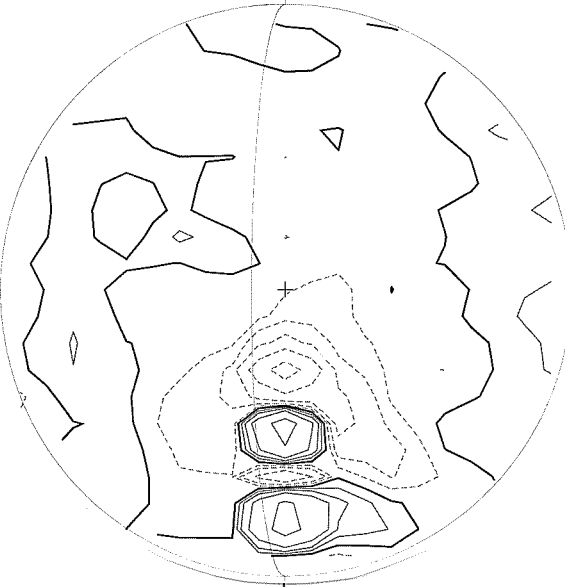
FE XIV 16:59 UT 1.15 R<sub>0</sub>  
 FE X 15:49 UT 1.15 R<sub>0</sub>  
 CA XV 17:42 UT 1.15 R<sub>0</sub>  
 NO CA XV ACTIVITY TODAY

March 25, 2008 (P=-25.72, Bo=-6.86, Lo= 294.77)

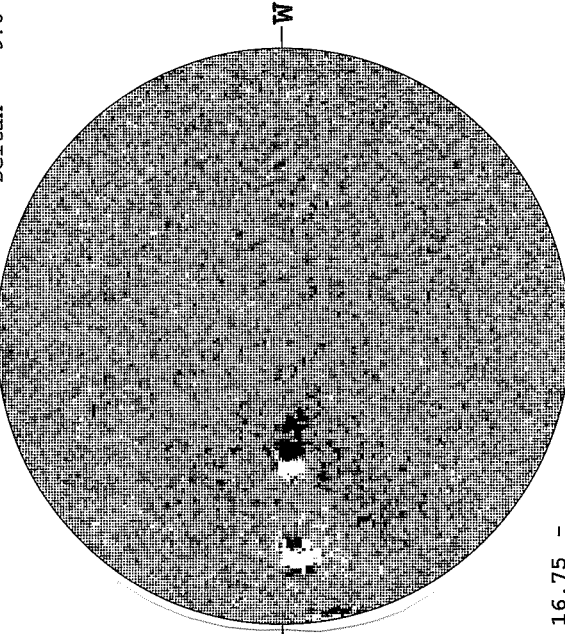
KITT PEAK MAGNETOGRAM -- SOLIS  
Bright = +  
Dark = -  
N  
\*\* 854.2NM \*\*



STANFORD MAGNETOGRAM  
Solid = +  
Dashed = -  
N



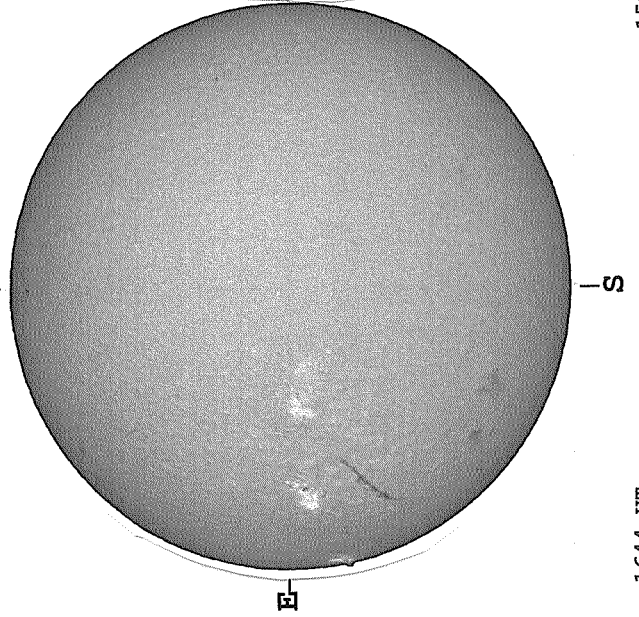
MT. WILSON MAGNETOGRAM  
White = +7.5G  
Black = -7.5G  
N  
DeltaY = 13.1  
DeltaX = 9.6



16.75 -  
17.70 UT

2231 UT

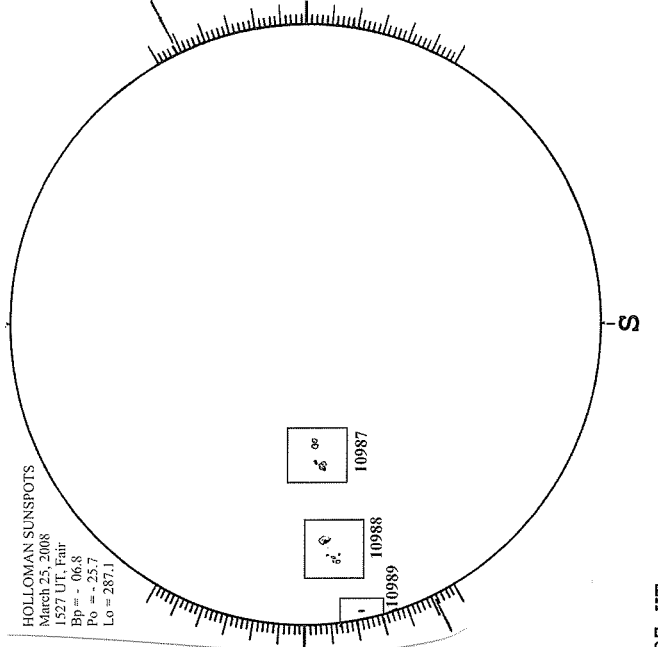
---  
BIG BEAR H-ALPHA



1644 UT

HOLLOMAN SUNSPOTS

HOLLOMAN SUNSPOTS  
March 25, 2008  
1527 UT, Fair  
Bp = -06.8  
Po = -25.7  
Lo = 287.1



1527 UT

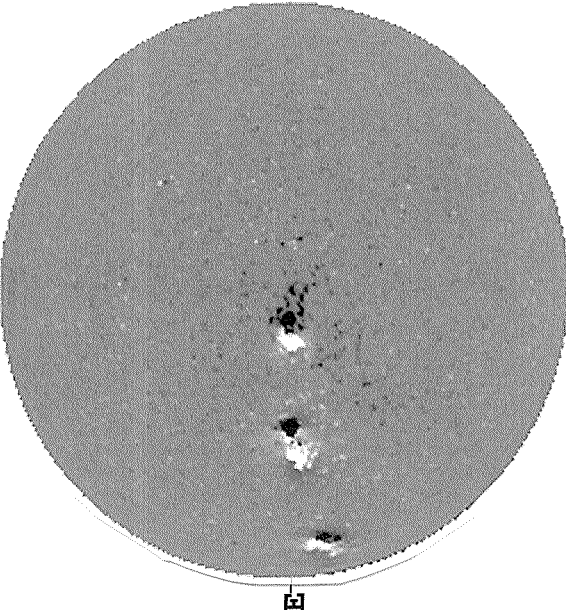
SACRAMENTO PEAK CORONA (1.15 Radii) ----

NO DATA

W

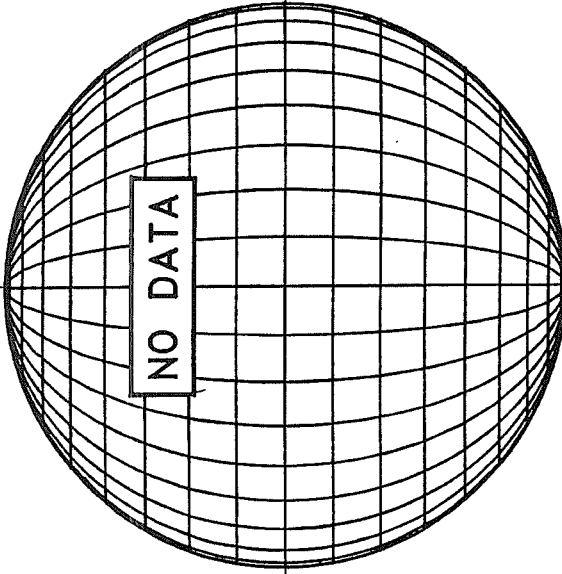
March 26, 2008 (P=-25.81, Bo=-6.82, Lo= 281.58)

KITT PEAK MAGNETOGRAM -- SOLIS  
 Bright = + N \*\* 854.2NM \*\*  
 Dark = -



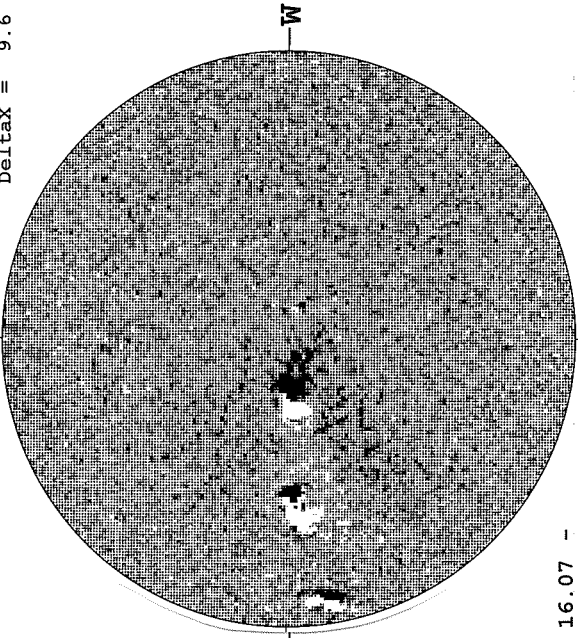
2142 UT

STANFORD MAGNETOGRAM  
 Solid = + N  
 Dashed = -

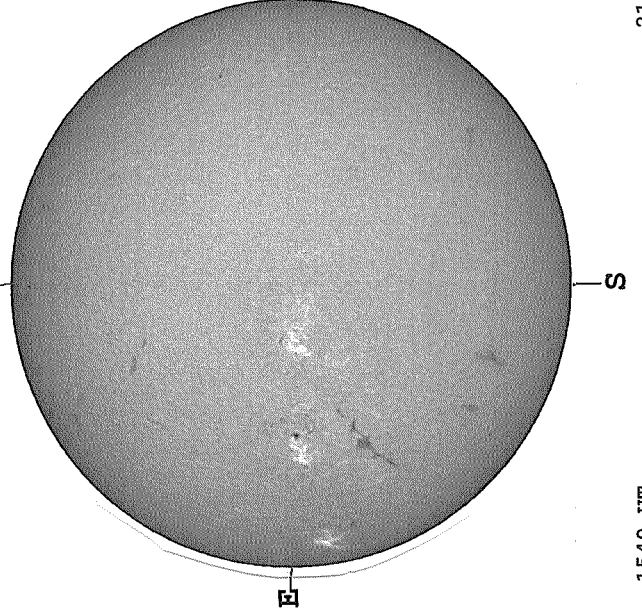


16.07 -  
 17.03 UT

MT. WILSON MAGNETOGRAM  
 White = +7.5G N  
 Black = -7.5G  
 DeltaY = 13.1  
 DeltaX = 9.6

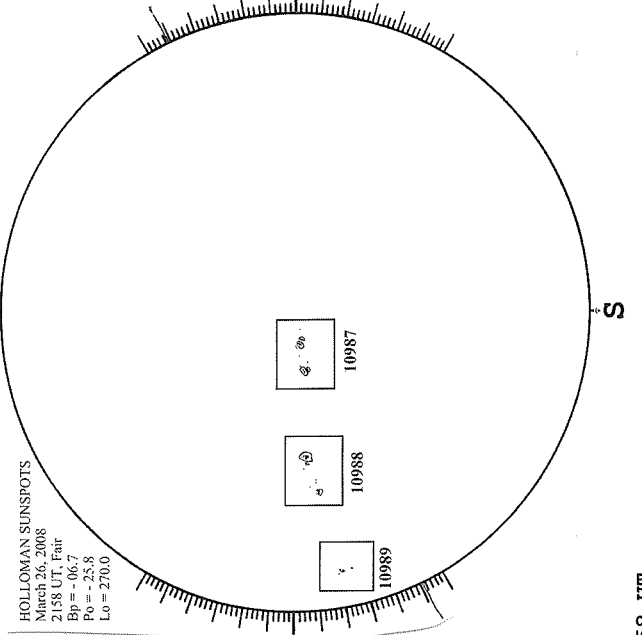


--- BIG BEAR H-ALPHA



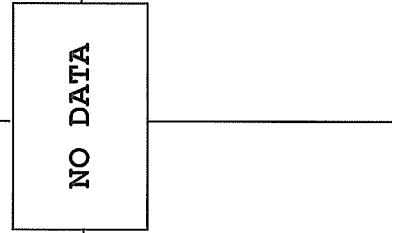
1549 UT

HOLLOMAN SUNSPOTS



2158 UT

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

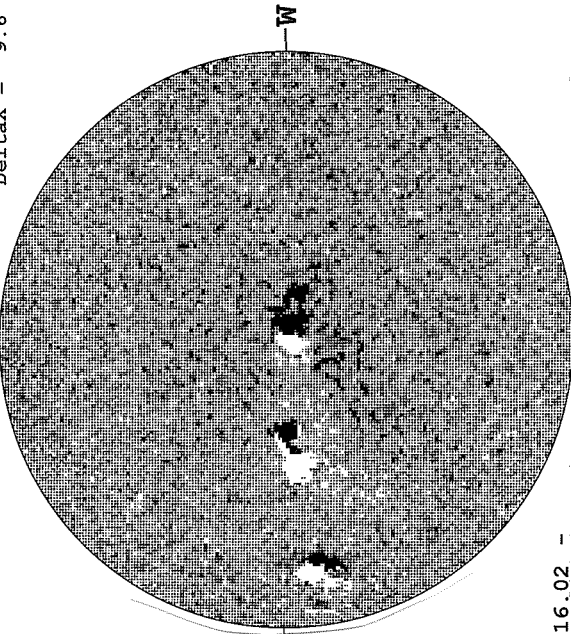
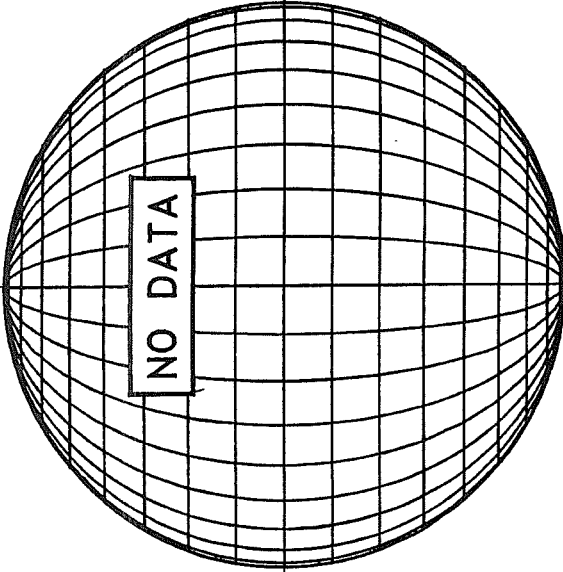
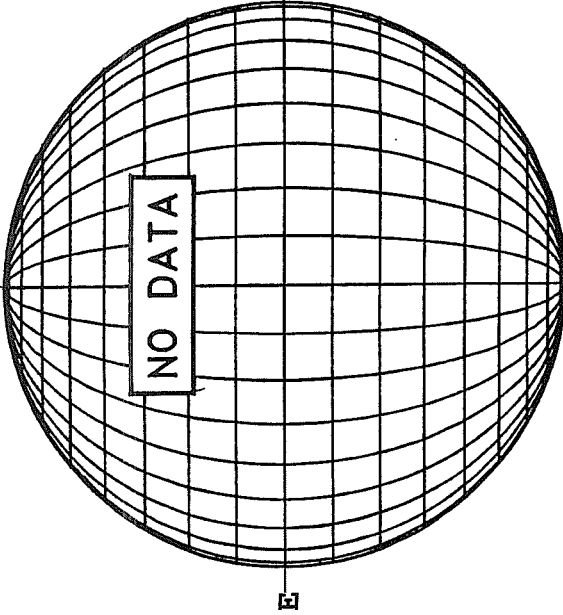


March 27, 2008 (P=-25.89, Bo=-6.78, Lo= 268.39)

KITT PEAK MAGNETOGRAM -- SOLIS  
Bright = +  
Dark = -

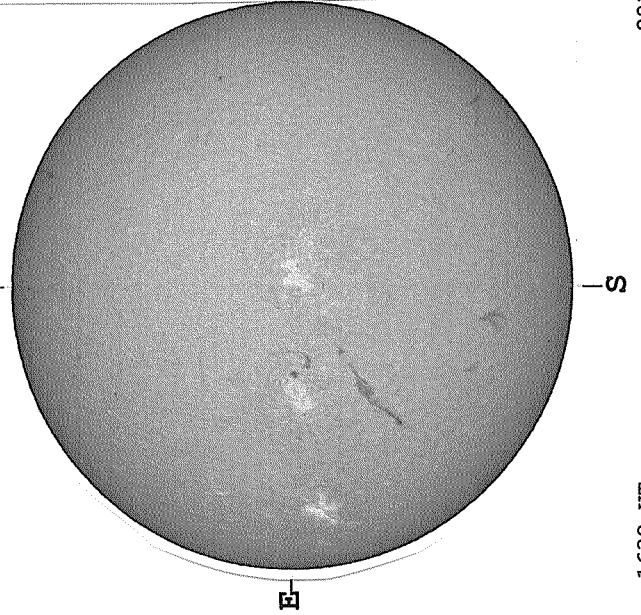
STANFORD MAGNETOGRAM  
Solid = +  
Dashed = -

MT. WILSON MAGNETOGRAM  
White = +7.5G  
Black = -7.5G  
DeltaY = 13.1  
DeltaX = 9.6



16.02 -  
16.97 UT

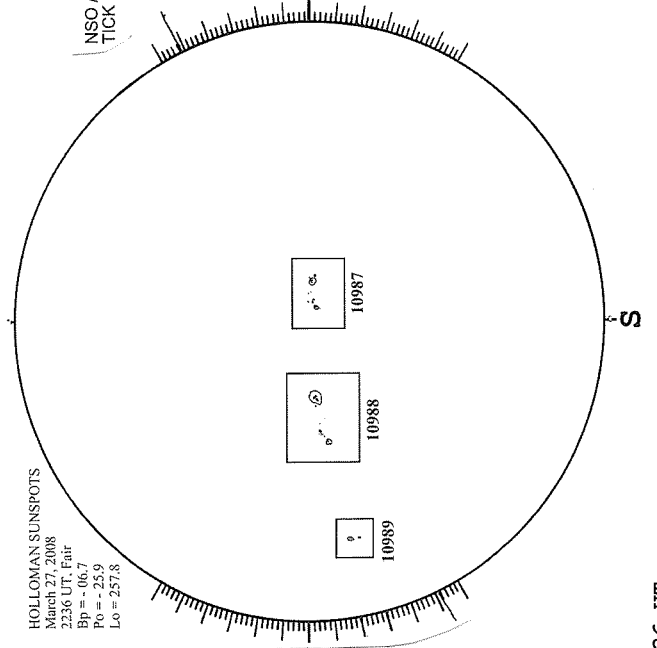
--- BIG BEAR H-ALPHA



1638 UT

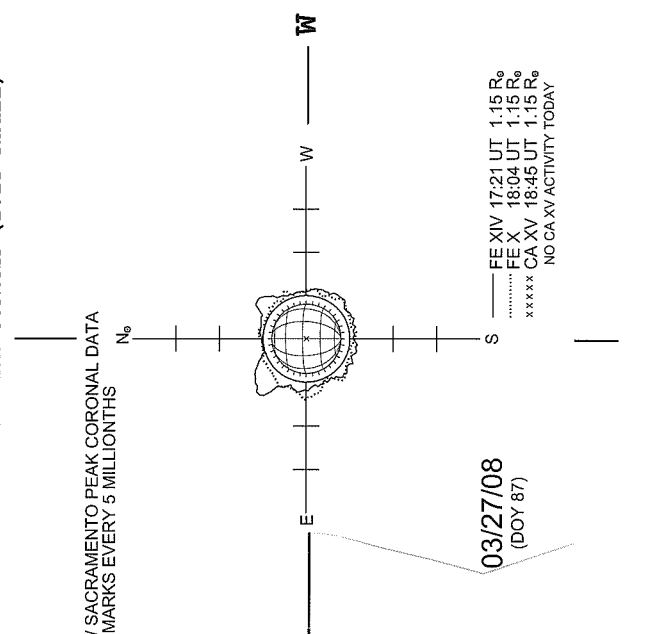
HOLLOMAN SUNSPOTS

HOLLOMAN SUNSPOTS  
March 27, 2008  
2236 UT, Fair  
Bp = -06.7  
Po = -25.9  
Lo = 257.8



2236 UT

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

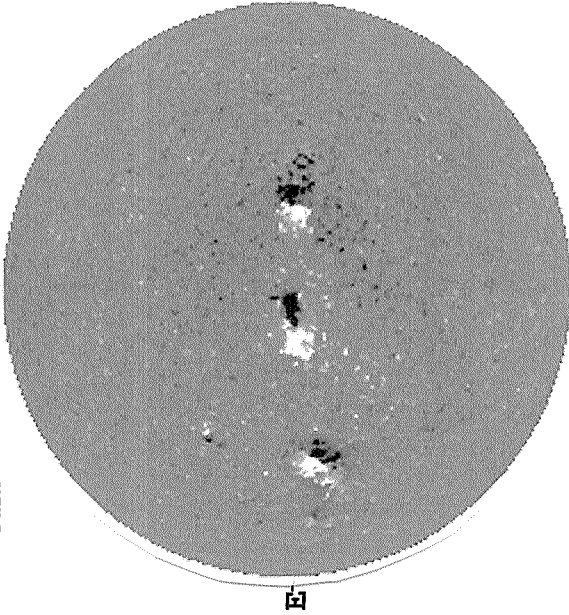


03/27/08  
(DOY 87)

--- FE XIV 17:21 UT 1.15 R<sub>o</sub>  
..... FE X 18:04 UT 1.15 R<sub>o</sub>  
xxxxx CA XV 18:45 UT 1.15 R<sub>o</sub>  
NO CA XV ACTIVITY TODAY

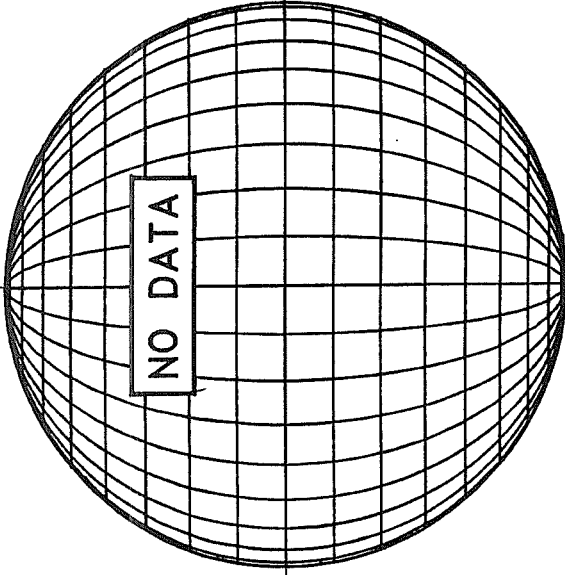
March 28, 2008 (P=-25.96, Bo=-6.73, Lo= 255.20)

KITT PEAK MAGNETOGRAM -- SOLIS  
Bright = + N \*\* 854.2NM \*\*  
Dark = -



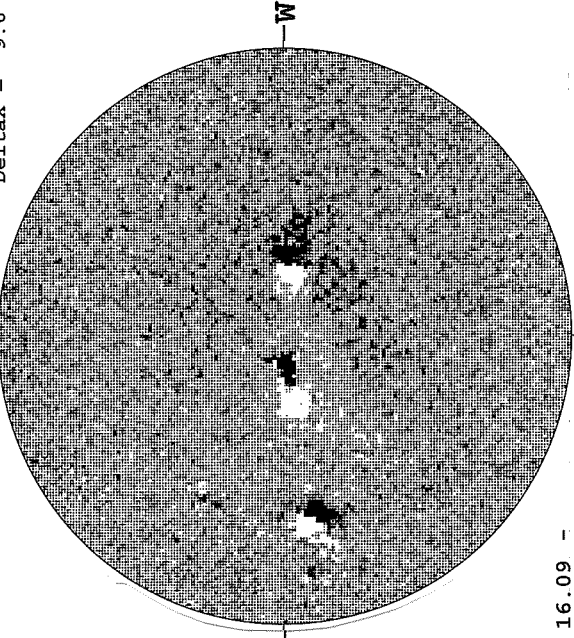
2010 UT

STANFORD MAGNETOGRAM  
Solid = + N  
Dashed = -

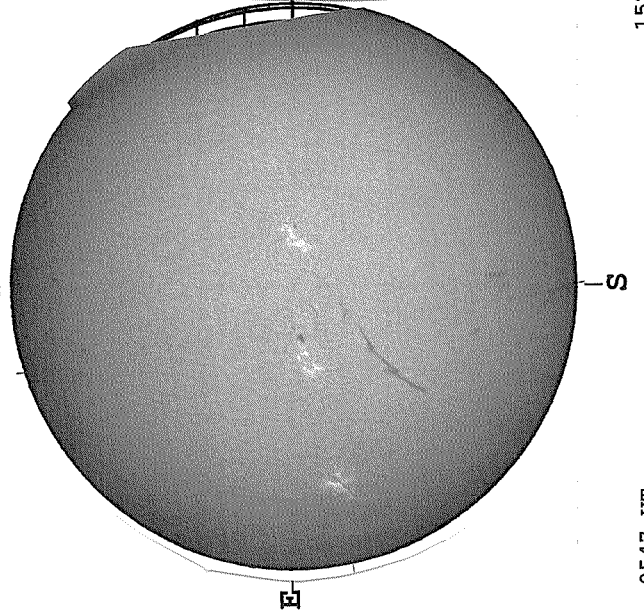


16.09 -  
17.04 UT

MT. WILSON MAGNETOGRAM  
White = +7.5G N  
Black = -7.5G  
DeltaY = 13.1  
DeltaX = 9.6



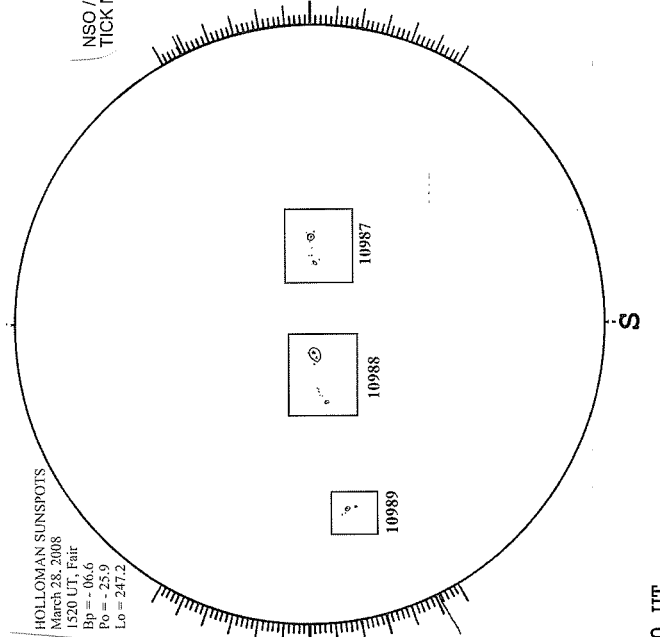
YUNNAN H-ALPHA



0547 UT

HOLLOWMAN SUNSPOTS

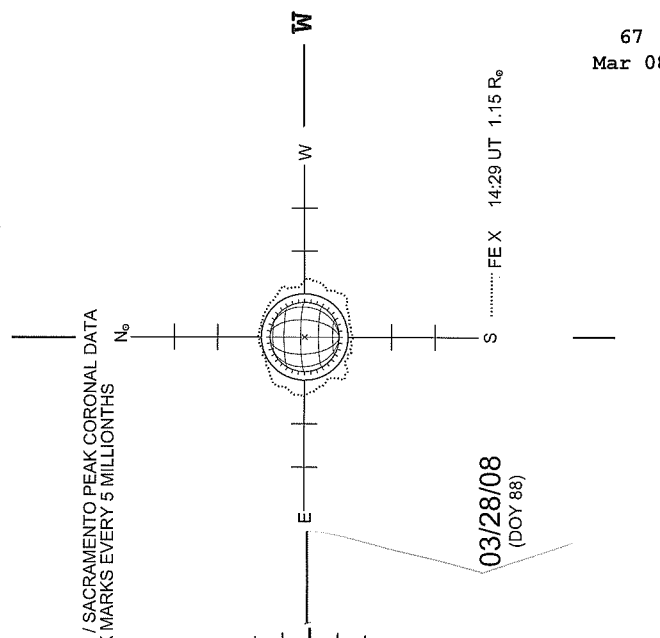
HOLLOWMAN SUNSPOTS  
March 28, 2008  
1520 UT, Fair  
Bp = -06.6  
Po = -25.9  
Lo = 247.2



1520 UT

SACRAMENTO PEAK CORONA (1.15 Radii) ----

NSO / SACRAMENTO PEAK CORONAL DATA  
TICK MARKS EVERY 5 MILLIONTHS

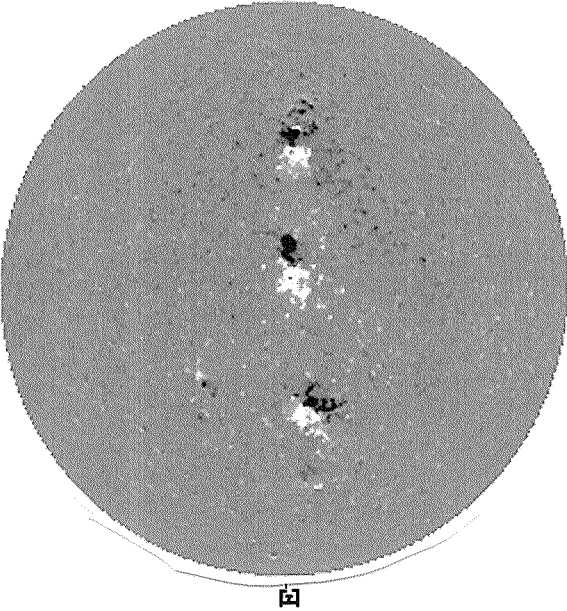


03/28/08  
(DOY 88)

S .....FEX 14:29 UT 1.15 R<sub>o</sub>

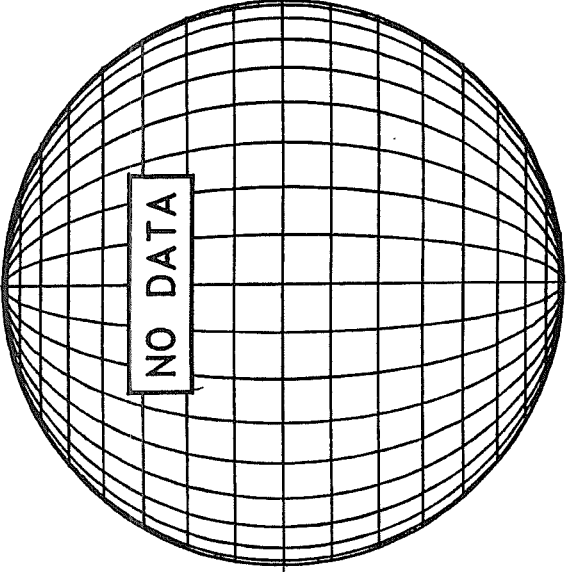
March 29, 2008 (P=-26.02, Bo=-6.68, Lo= 242.01)

KITT PEAK MAGNETOGRAM -- SOLIS  
Bright = + N \*\* 854.2NM \*\*  
Dark = -



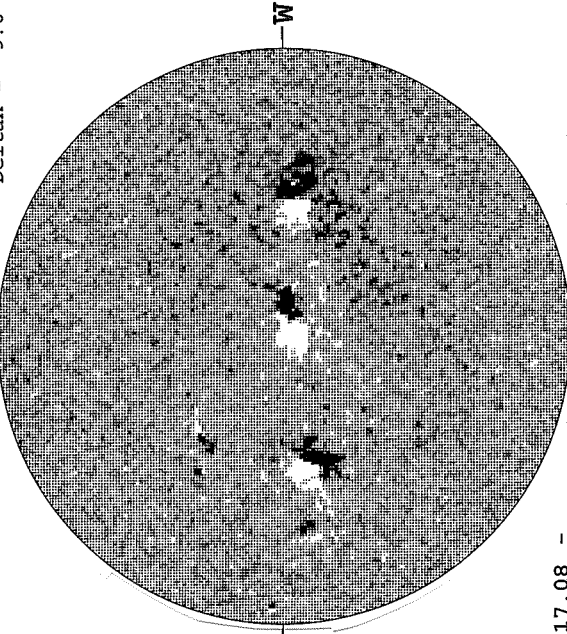
1842 UT

STANFORD MAGNETOGRAM  
Solid = + N  
Dashed = -

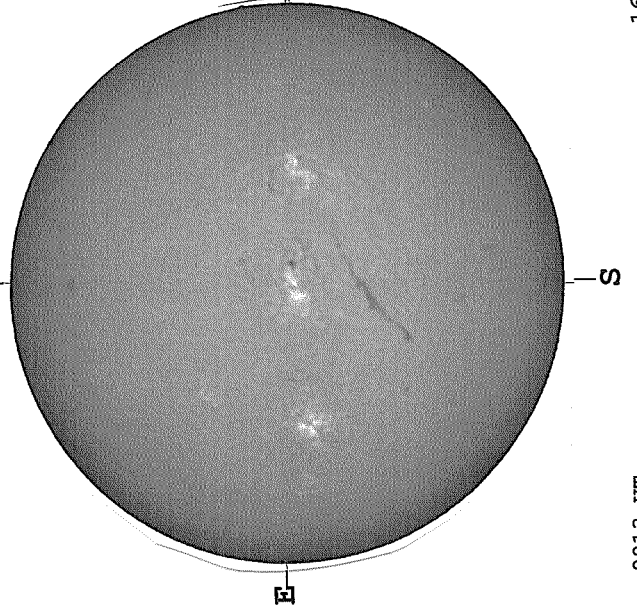


17.08 -  
18.02 UT

MT. WILSON MAGNETOGRAM  
White = +7.5G N  
Black = -7.5G  
DeltaY = 13.1  
DeltaX = 9.6



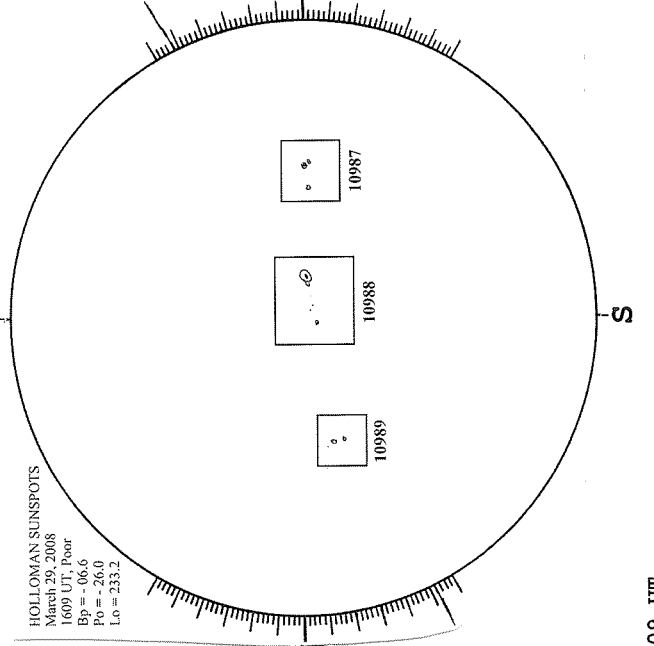
CAATANIA H-ALPHA



0913 UT

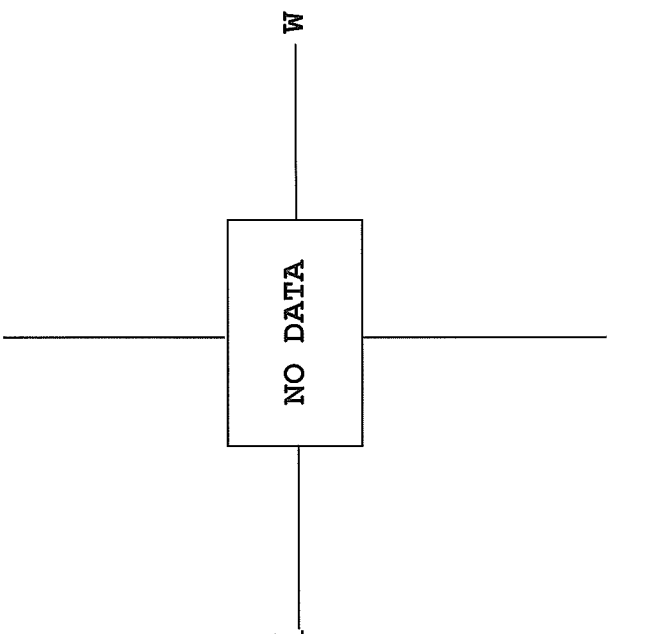
HOLLOMAN SUNSPOTS

HOLLOMAN SUNSPOTS  
March 29, 2008  
1609 UT, Poor  
Bp = -06.6  
Pp = -26.0  
Lo = 233.2



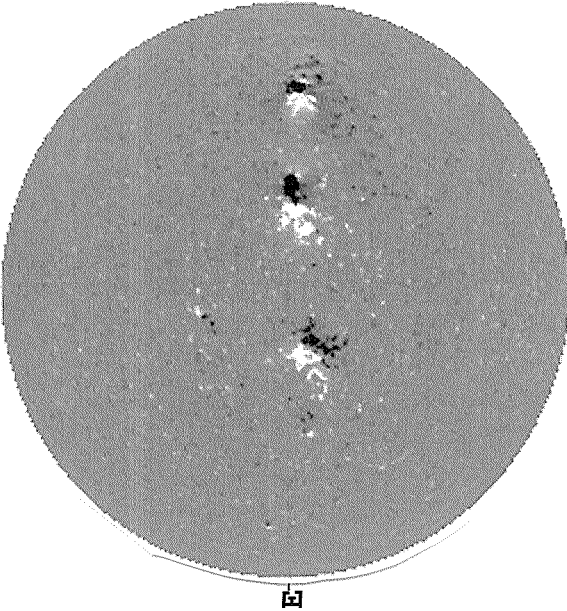
1609 UT

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



March 30, 2008 (P=-26.08, Bo=-6.63, Lo= 228.82)

KITT PEAK MAGNETOGRAM -- SOLIS  
 Bright = + N  
 Dark = -



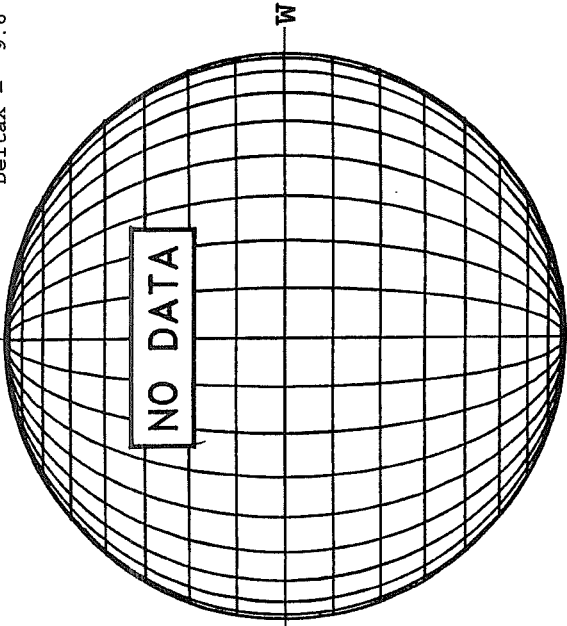
1837 UT

STANFORD MAGNETOGRAM  
 Solid = + N  
 Dashed = -

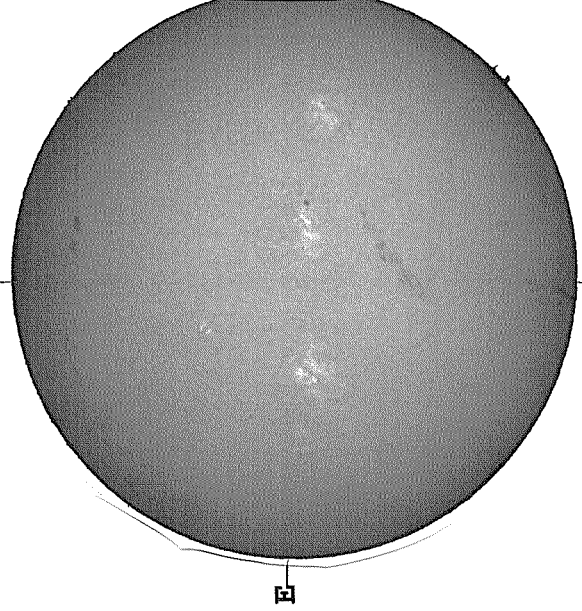


2158 UT

MT. WILSON MAGNETOGRAM  
 White = +7.5G N  
 Black = -7.5G  
 DeltaY = 13.1  
 DeltaX = 9.6



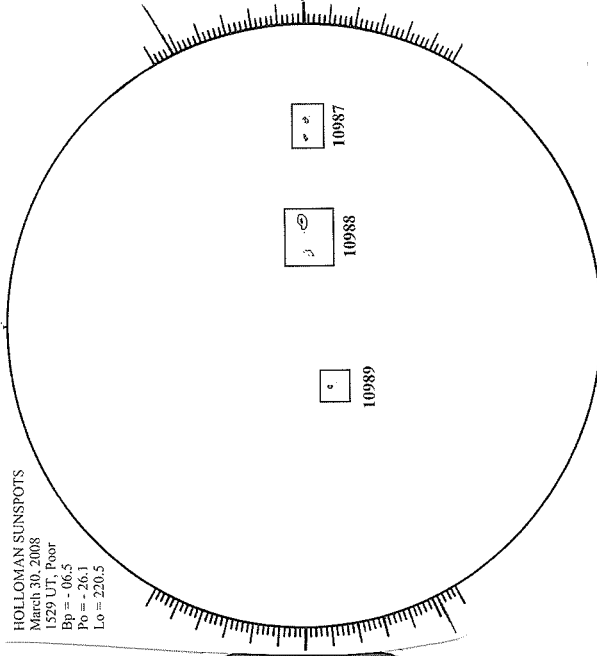
YUNNAN H-ALPHA



0420 UT

HOLLOMAN SUNSPOTS

HOLLOMAN SUNSPOTS  
 March 30, 2008  
 1529 UT, Poor  
 Bp = -06.5  
 Pp = -26.1  
 Lo = 220.5



1529 UT

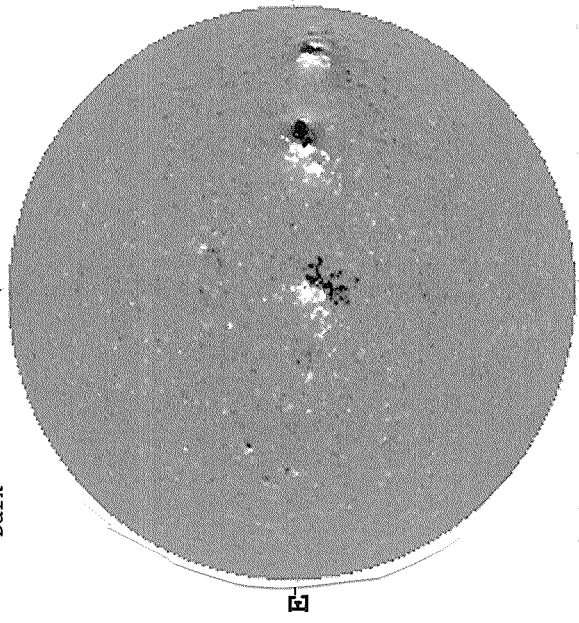
SACRAMENTO PEAK CORONA (1.15 Radii) -----

NO DATA

W

March 31, 2008 (P=-26.13, Bo=-6.58, Lo= 215.63)

KITT PEAK MAGNETOGRAM -- SOLIS  
Bright = +  
Dark = -



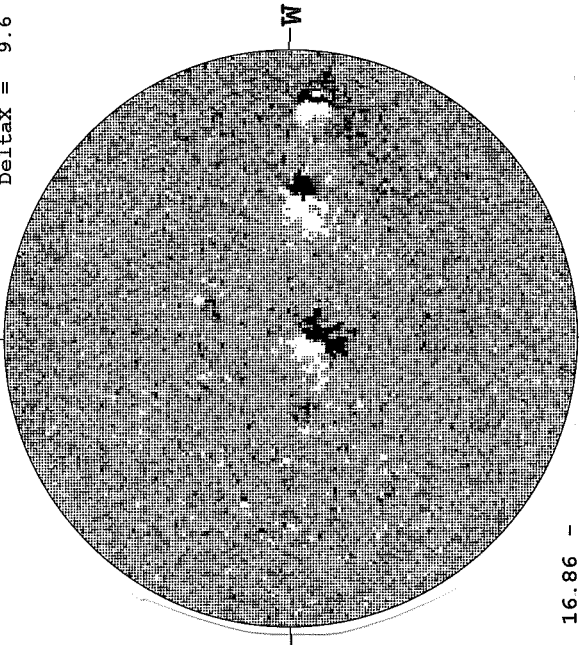
1852 UT

STANFORD MAGNETOGRAM  
Solid = +  
Dashed = -



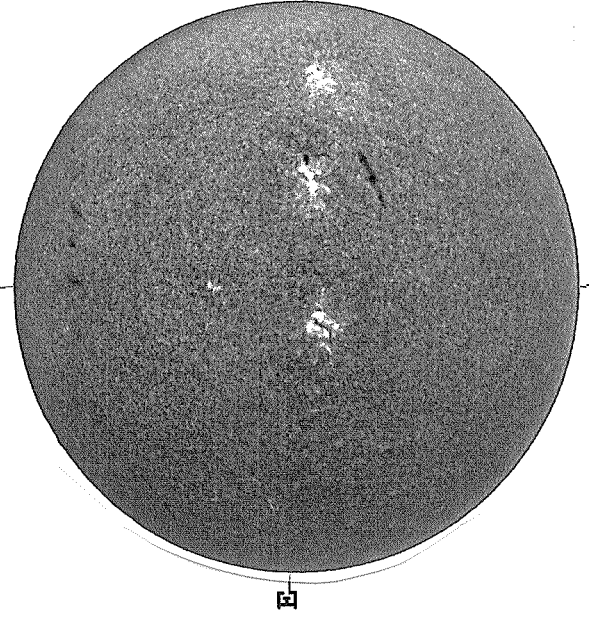
2220 UT

MT. WILSON MAGNETOGRAM  
White = +7.5G  
Black = -7.5G  
DeltaY = 13.1  
DeltaX = 9.6



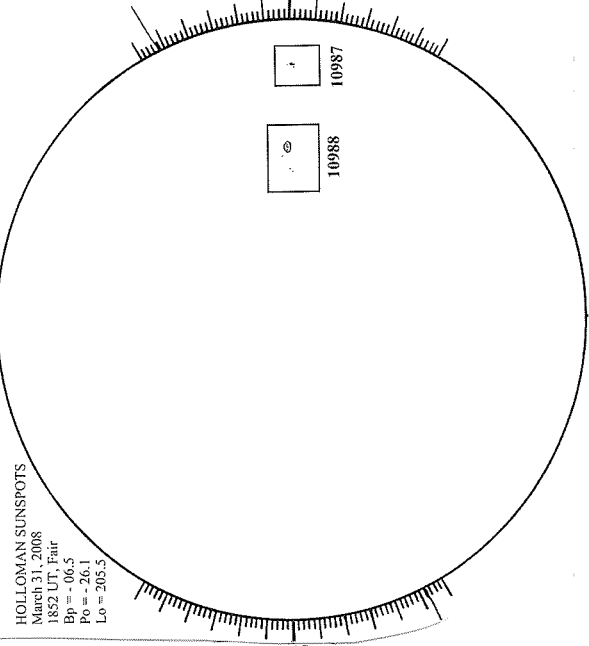
16.86 -  
17.81 UT

HUAIROU H-ALPHA



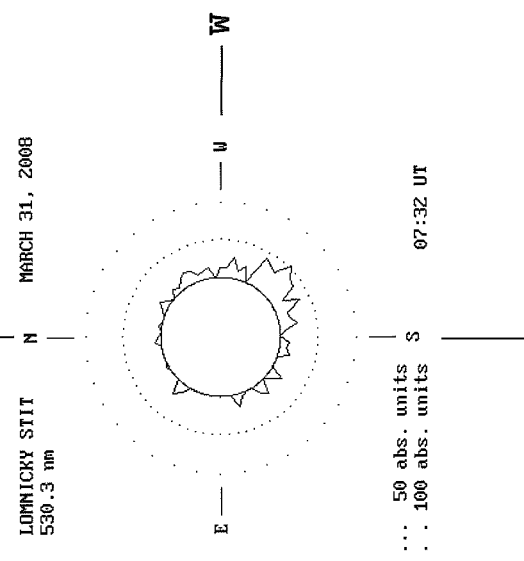
0333 UT

HOLLOMAN SUNSPOTS



1852 UT

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



07:32 UT

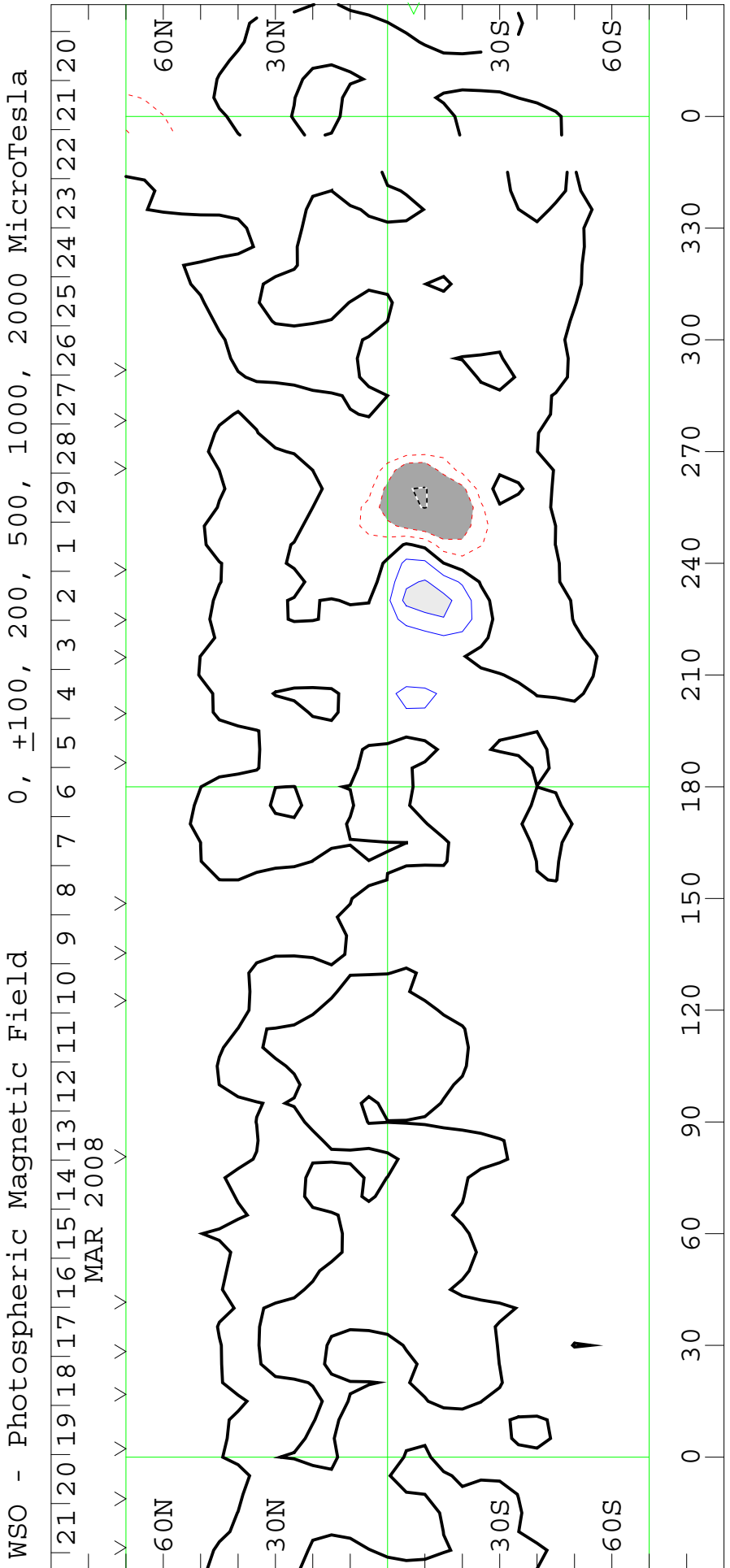
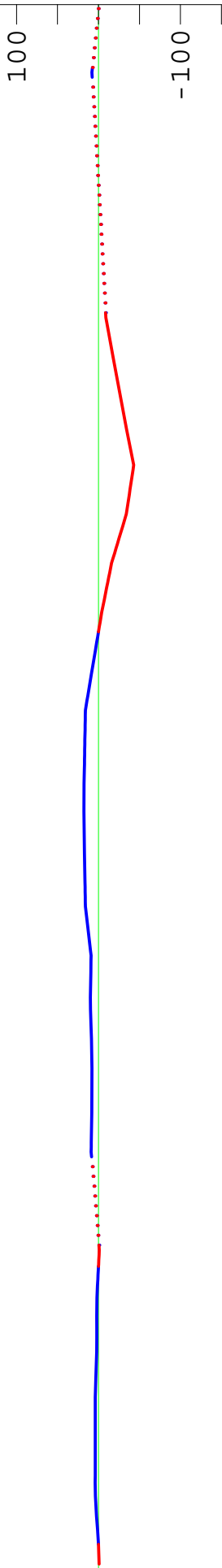
LOMNICKY STII  
530.3 nm  
MARCH 31, 2008



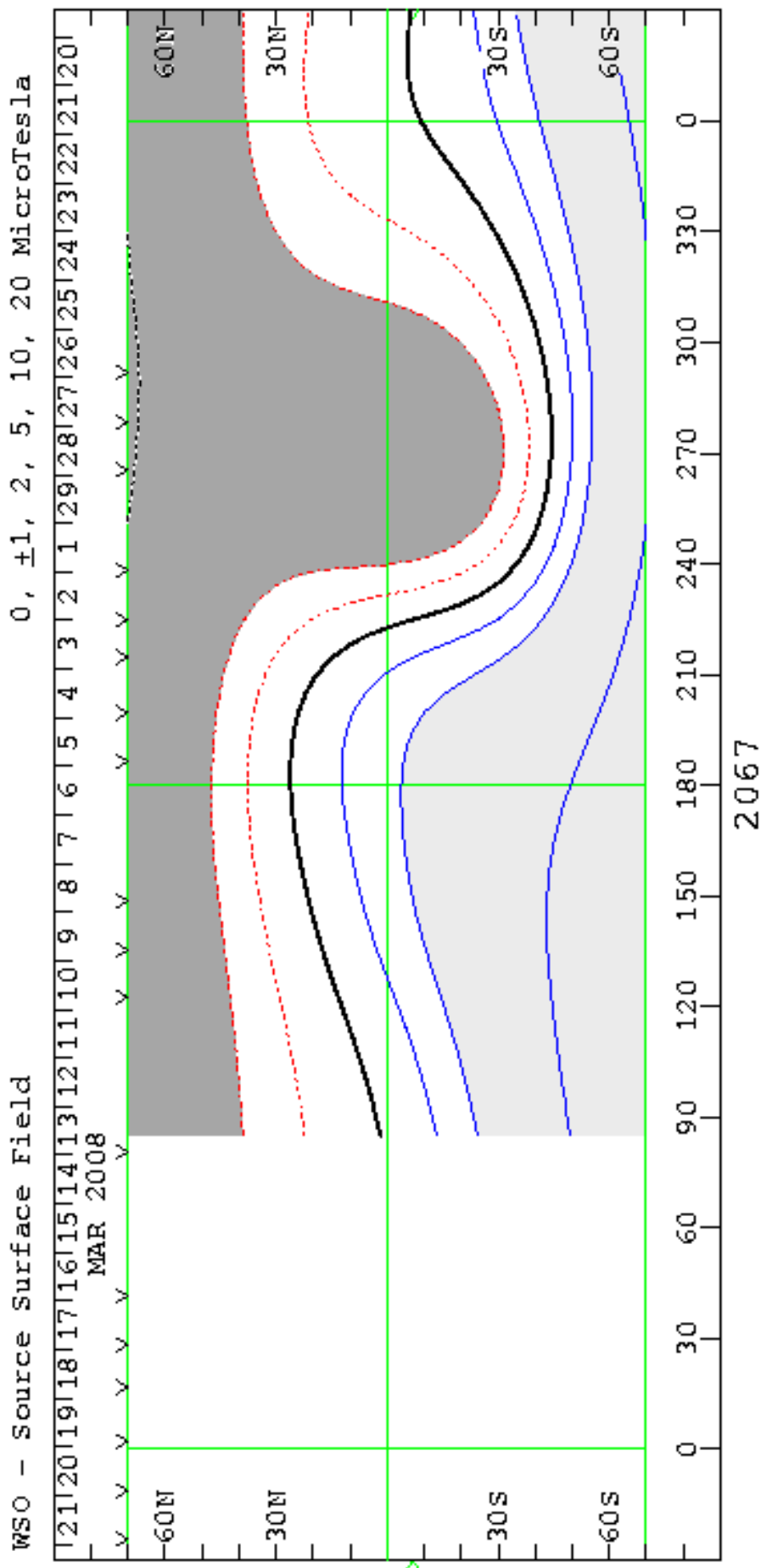
**SOLAR MAGNETIC FIELD SYNOPTIC CHART**  
CARRINGTON ROTATION NUMBER 2067  
(21 Feb 2008 to 20 Mar 2008)

Wilcox Solar Observatory

Mean Field

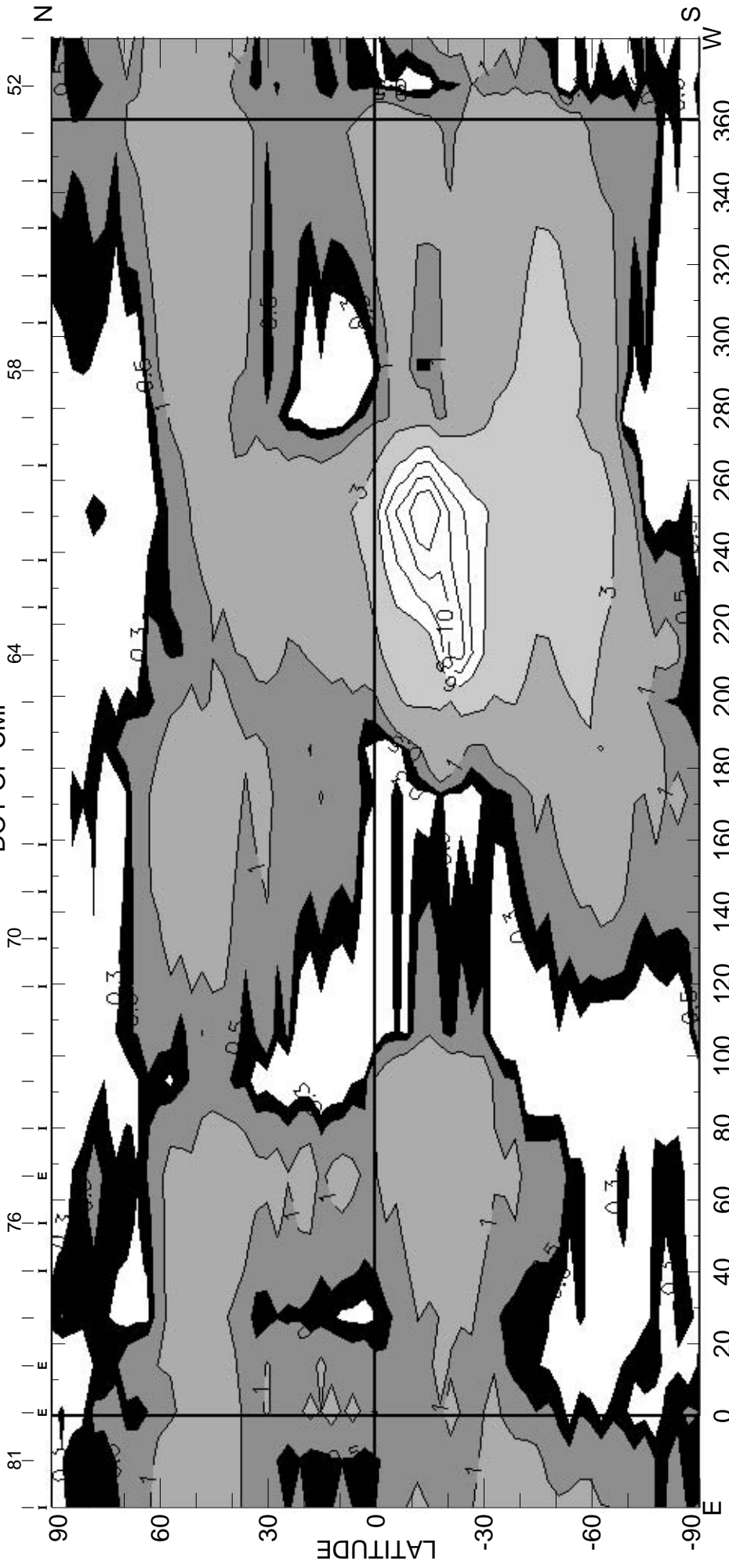


**SOLAR MAGNETIC FIELD SYNOPTIC CHART**  
**SOURCE SURFACE FIELD**  
 CARRINGTON ROTATION NUMBER 2067  
 (21 Feb 2008 to 20 Mar 2008)



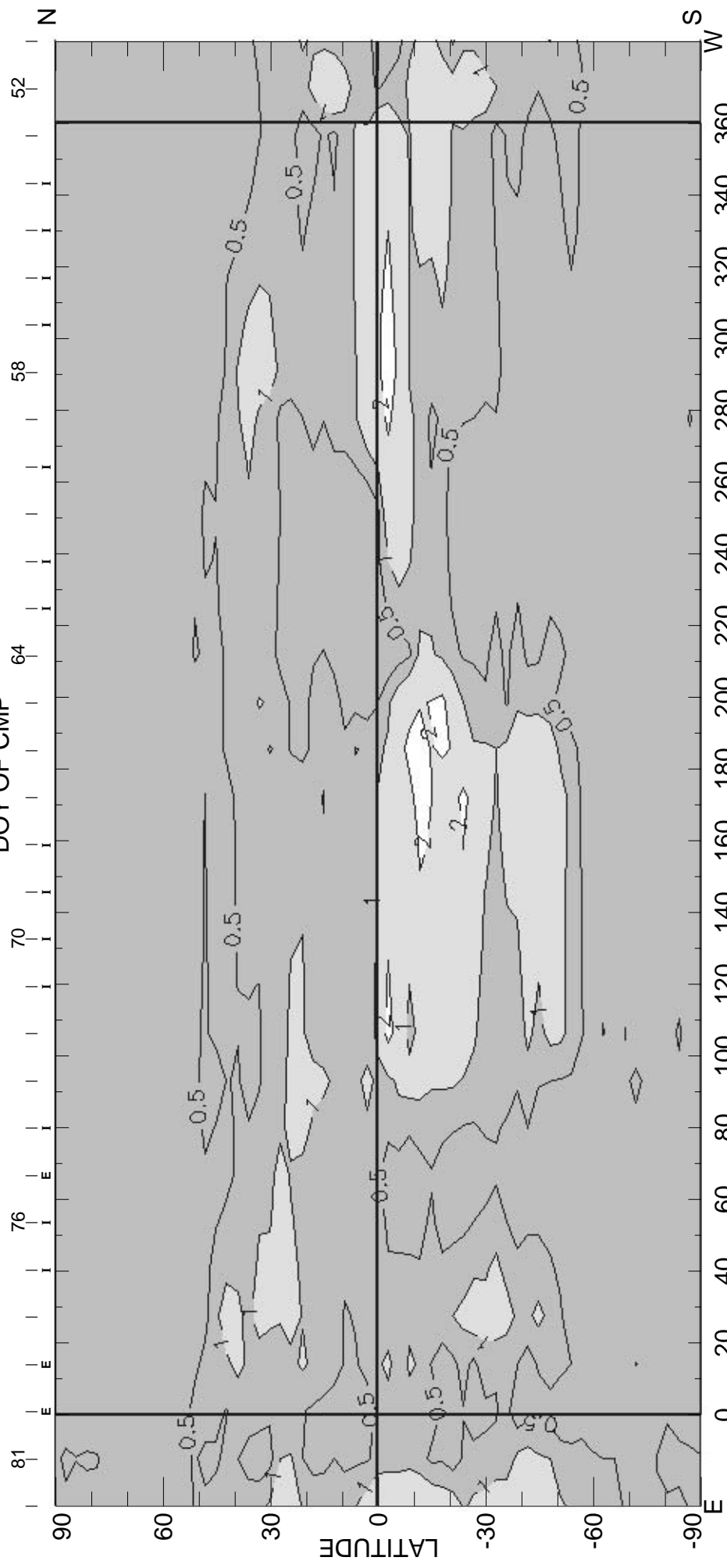
Heliographic Longitude

CARRINGTON ROTATION NUMBER 2067 ; NSO/SACRAMENTO PEAK FE XIV @ R = 1.15R<sub>o</sub>  
DOY OF CMP



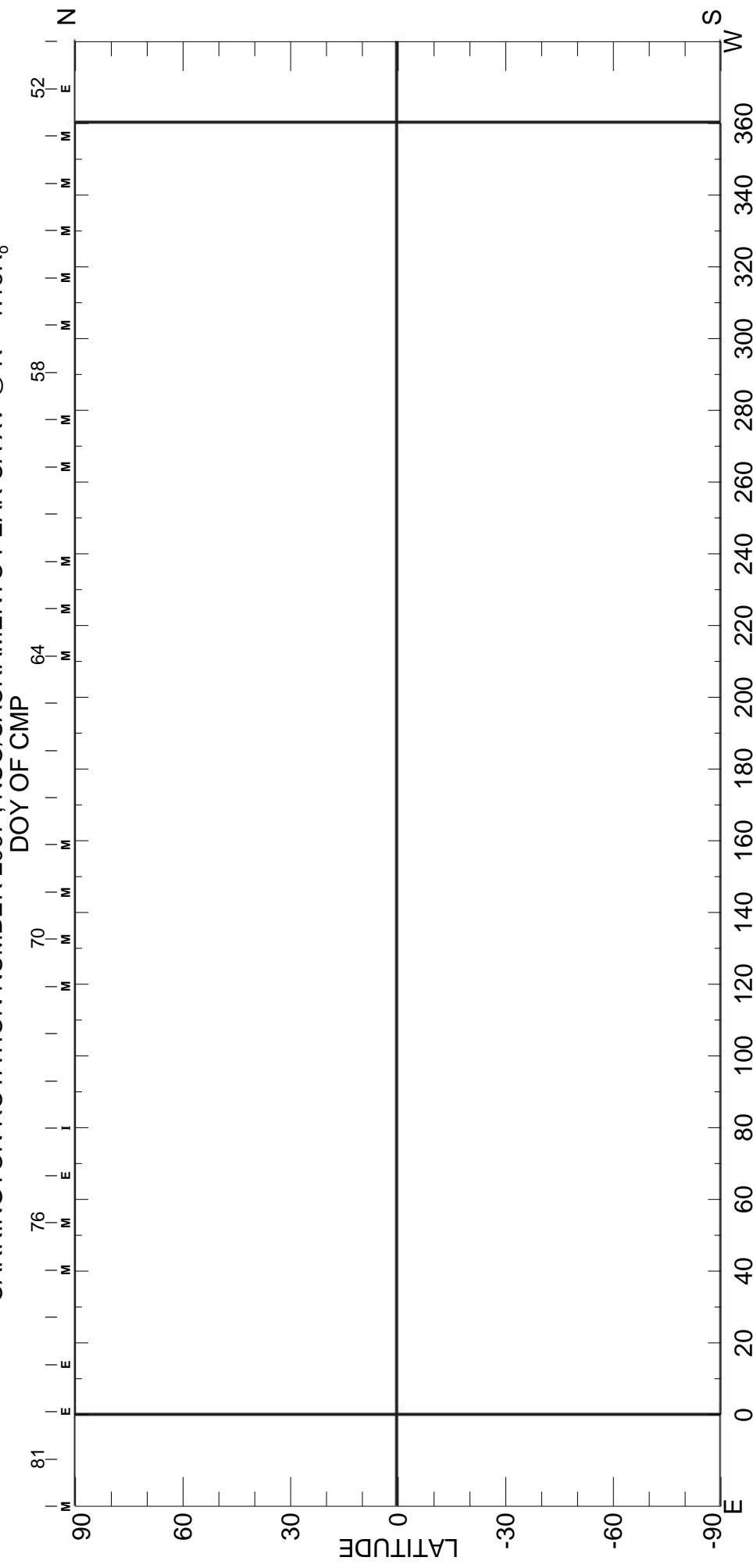
(03-Jun-08)      2008 W+E LIMB CONTOURS: 0.3, 0.5, 1, 3, 6, 8, 10, 12, 16, 20 MILLIONTHS OF I<sub>o</sub>  
CORONAL HOLES ARE SHOWN AS WHITE BORDERED BY BLACK

CARRINGTON ROTATION NUMBER 2067 ; NSO/SACRAMENTO PEAK FE X @ R = 1.15R<sub>o</sub>  
DOY OF CMP



(20-May-08)  
2008 W+E LIMB CONTOURS: 0.5, 1, 2, 3, 4, 8, 12, 16 MILLIONTHS OF I<sub>o</sub>  
HELIOGRAPHIC LONGITUDE  
<I> = 0.50μ

CARRINGTON ROTATION NUMBER 2067 ; NSO/SACRAMENTO PEAK CA XV @ R = 1.15R<sub>o</sub>



HELIOGRAPHIC LONGITUDE

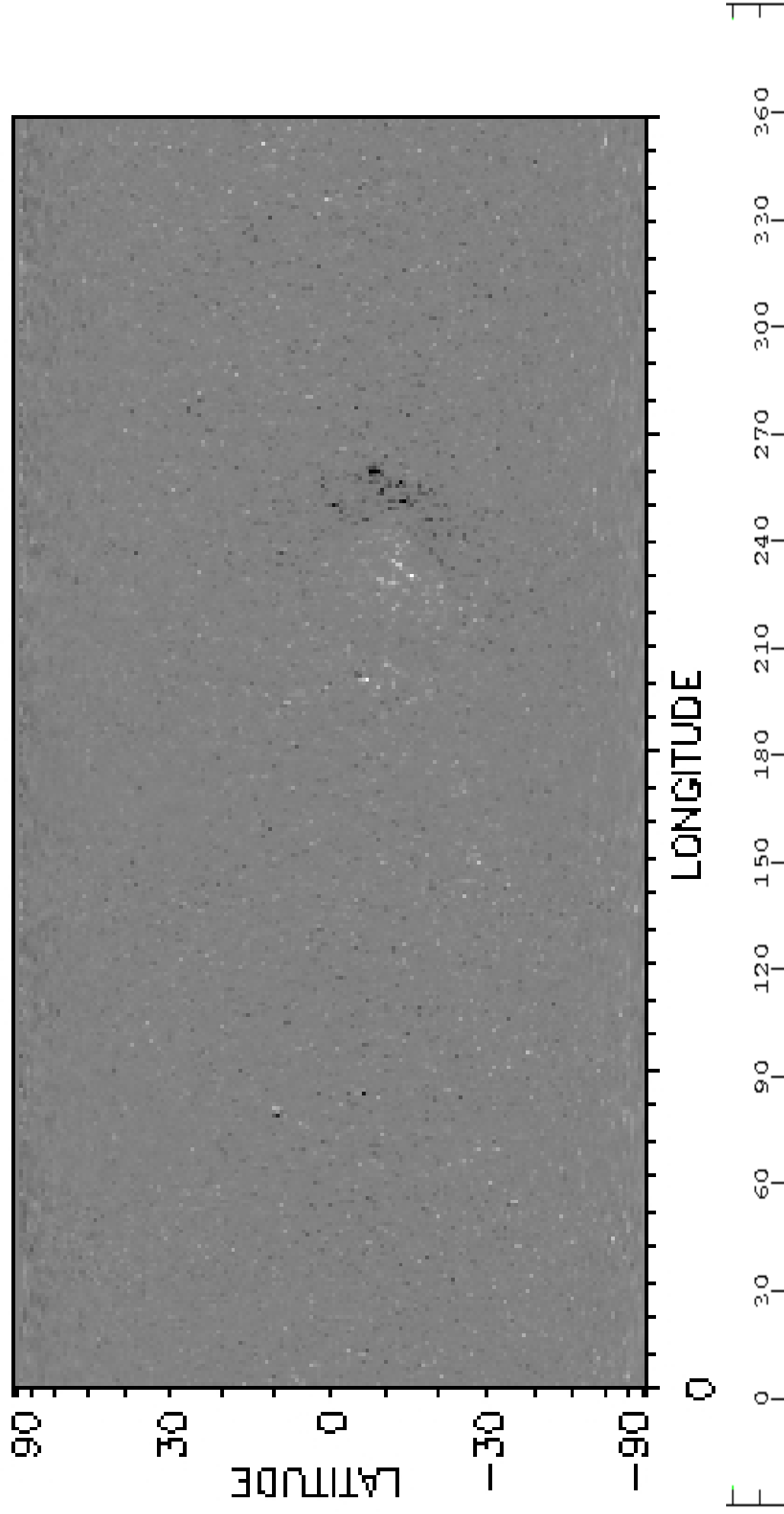
2008 W+E LIMB CONTOURS: 1, 2, 3, 4, 6, 8, 10, 12, 14, 16, 18, 20 MILLIONTHS OF I<sub>o</sub>

(16-May-08)

**SOLAR MAGNETIC FIELD SYNOPTIC CHART**  
CARRINGTON ROTATION NUMBER 2067  
(21 Feb 2008 to 20 Mar 2008)

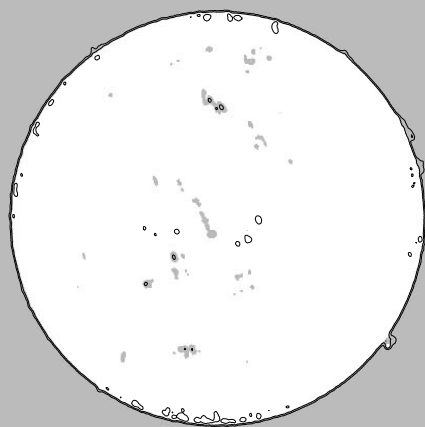
National Solar Observatory/Kitt Peak

**NSO/VSM MAGNETIC FLUX SYNOPTIC MAP**  
CARRINGTON ROTATION 2067

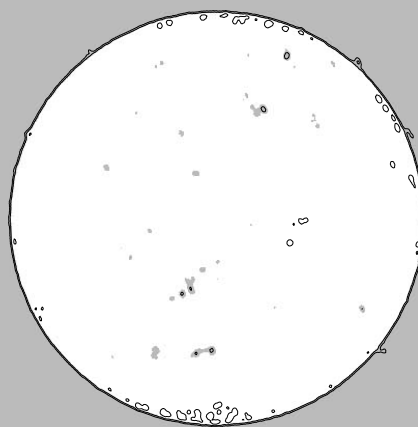


Heliographic Longitude

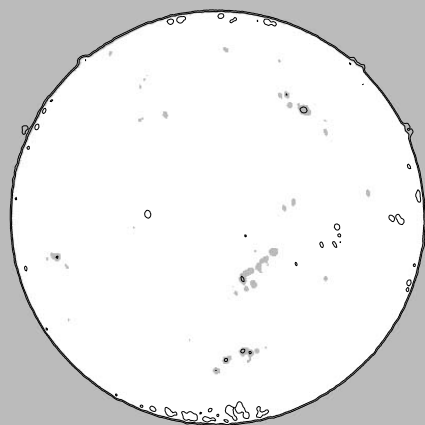
# Nobeyama Radio Heliograph 17 GHz (Tb) 2008 March



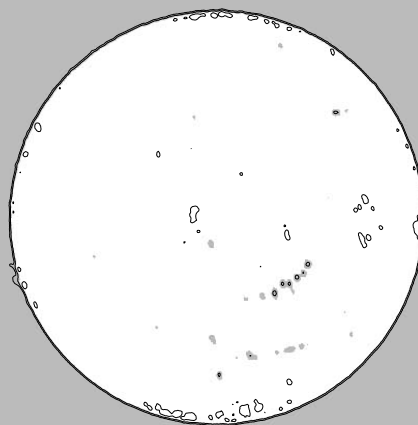
01 02:44 UT



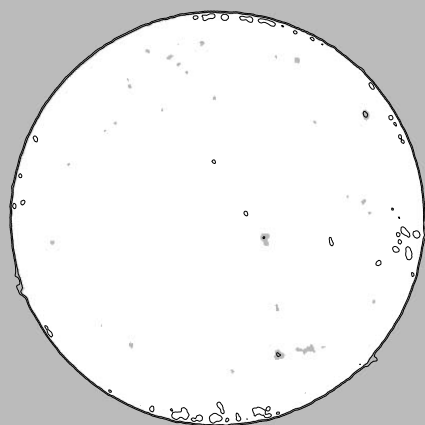
02 02:44 UT



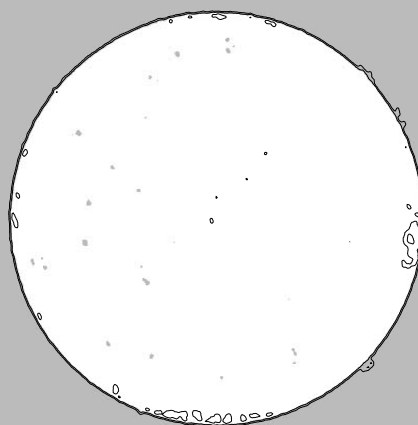
03 02:44 UT



04 02:44 UT



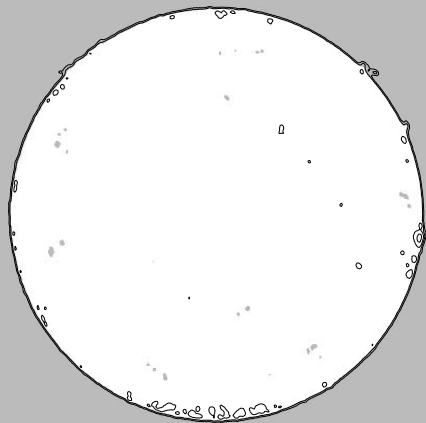
05 02:44 UT



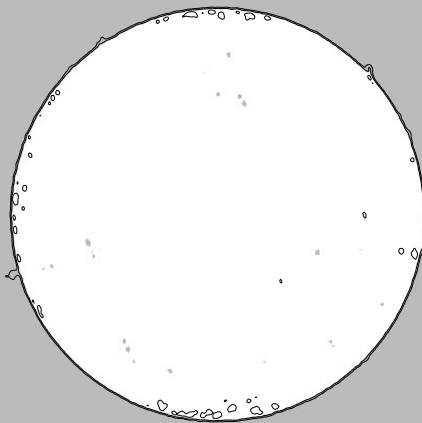
06 02:44 UT

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

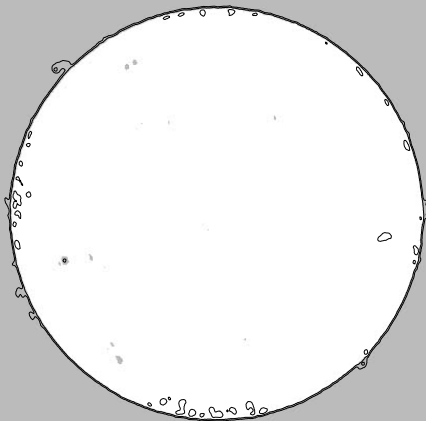
# Nobeyama Radio Heliograph 17 GHz (Tb) 2008 March



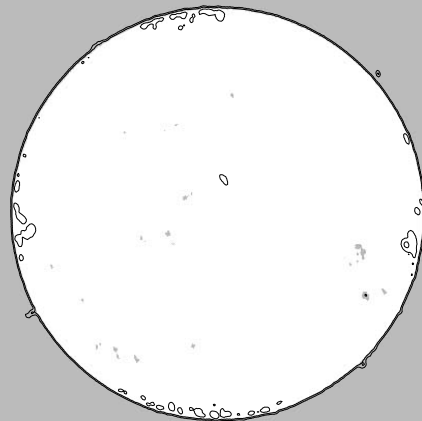
07 02:44 UT



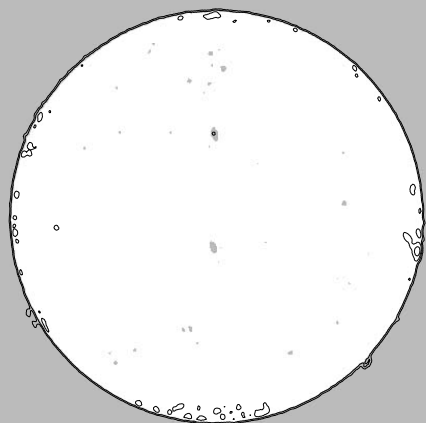
08 02:44 UT



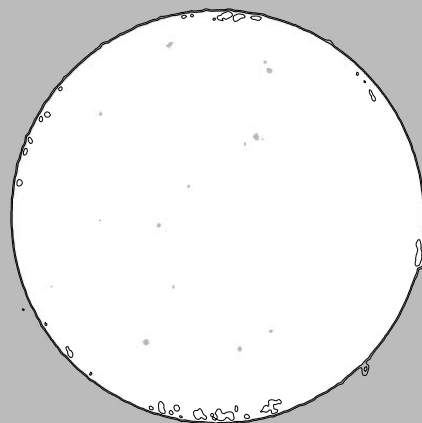
09 02:44 UT



10 02:44 UT



11 02:44 UT

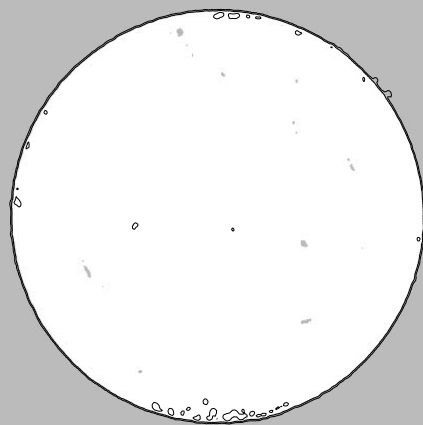


12 02:44 UT

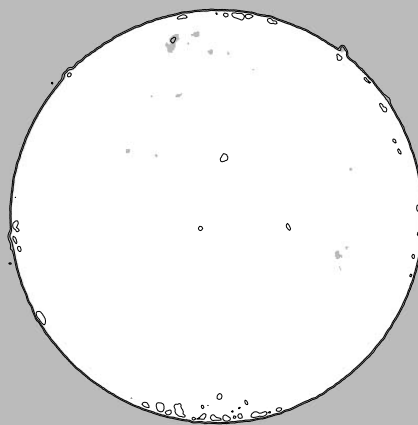
Contour Levels  $T_b = [5, 8, 12, 20, 50, 100] \times 10^3 \text{ K}$   
Grey level  $T_b \leq 9,500 \text{ K}$



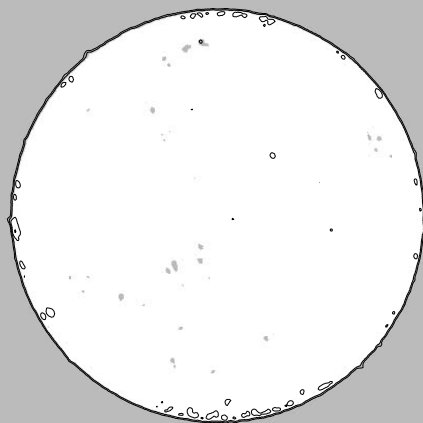
# Nobeyama Radio Heliograph 17 GHz (Tb) 2008 March



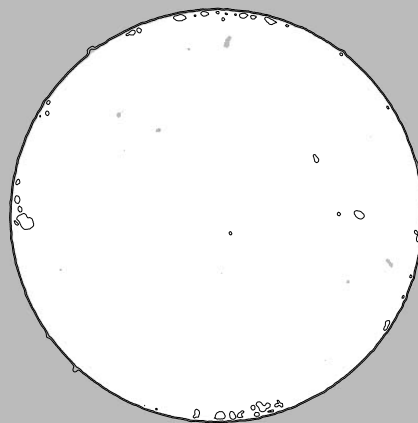
13 02:44 UT



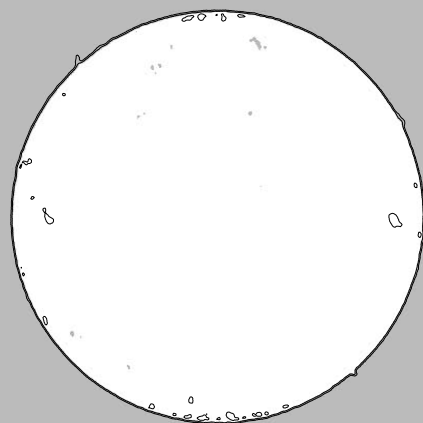
14 02:44 UT



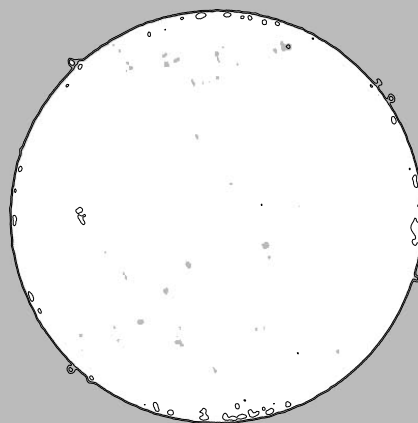
15 02:44 UT



16 02:44 UT



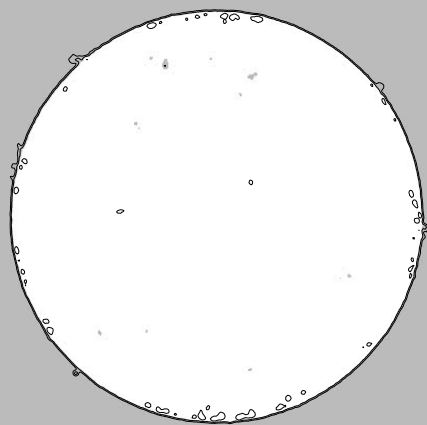
17 02:44 UT



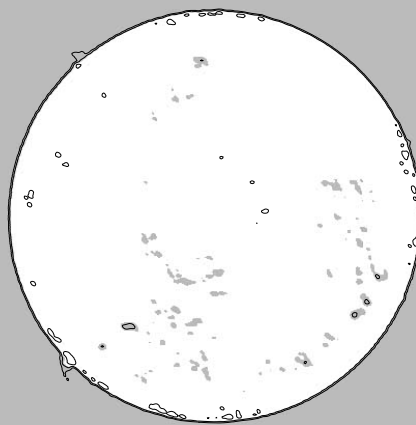
18 02:44 UT

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

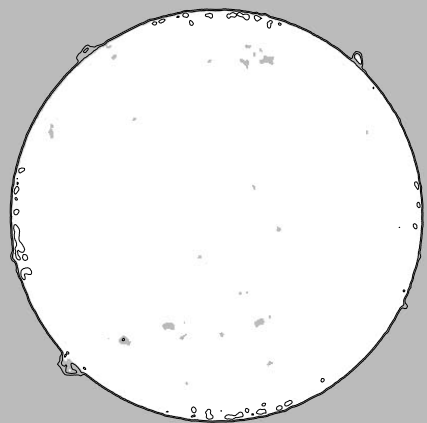
# Nobeyama Radio Heliograph 17 GHz (Tb) 2008 March



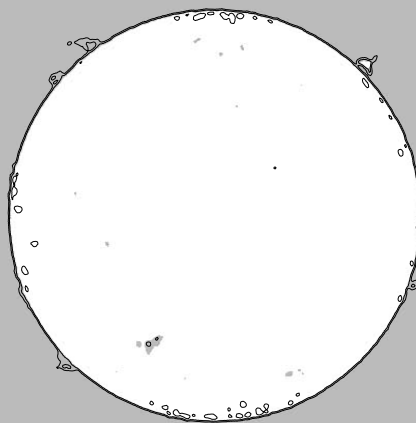
19 02:44 UT



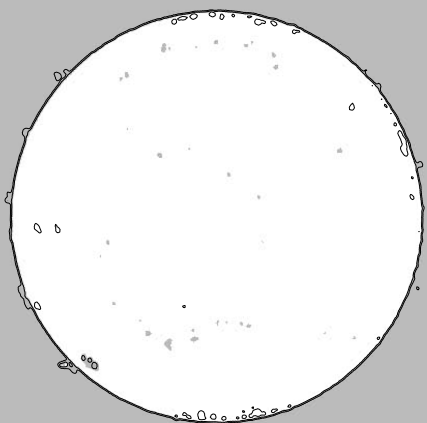
20 04:44 UT



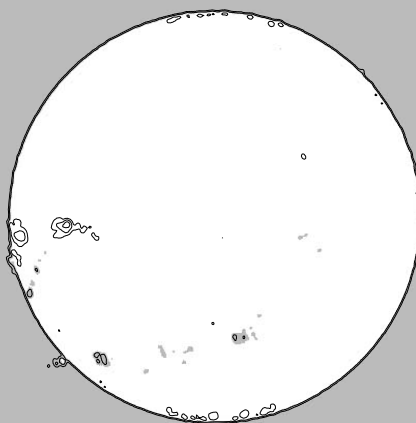
21 02:44 UT



22 02:44 UT



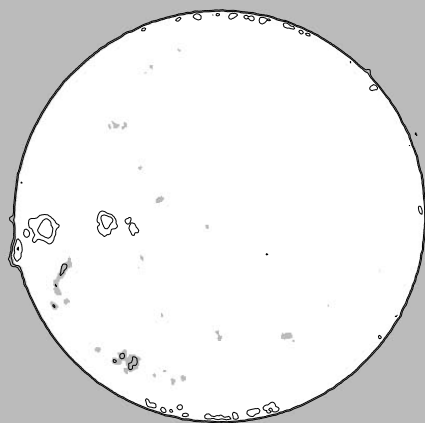
23 02:44 UT



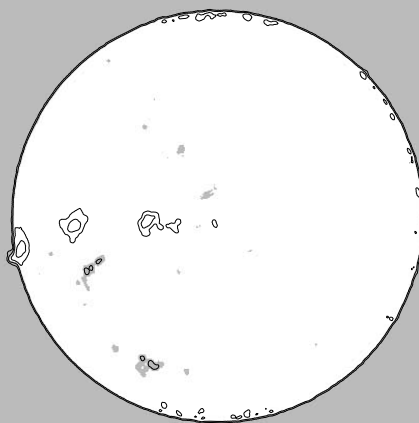
24 02:44 UT

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

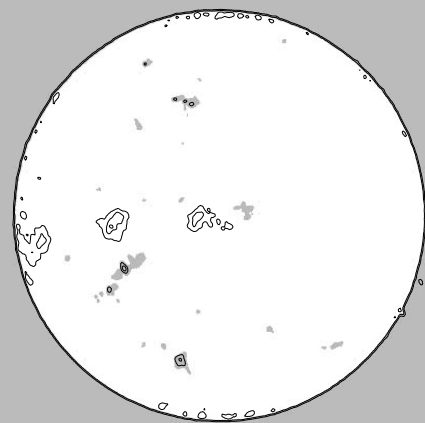
# Nobeyama Radio Heliograph 17 GHz (Tb) 2008 March



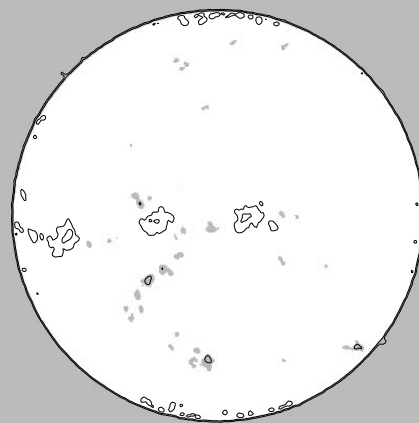
25 02:44 UT



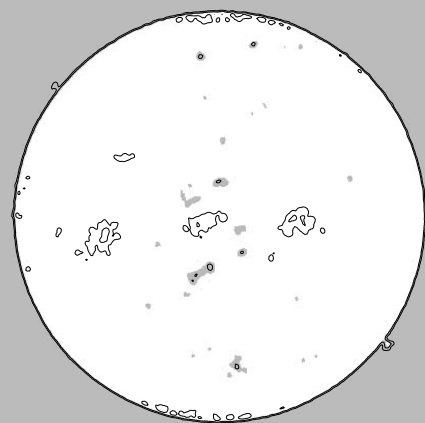
26 02:44 UT



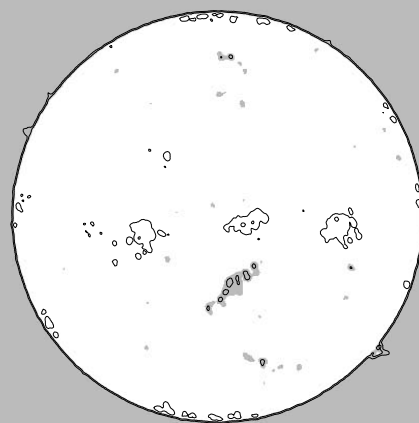
27 02:44 UT



28 02:44 UT



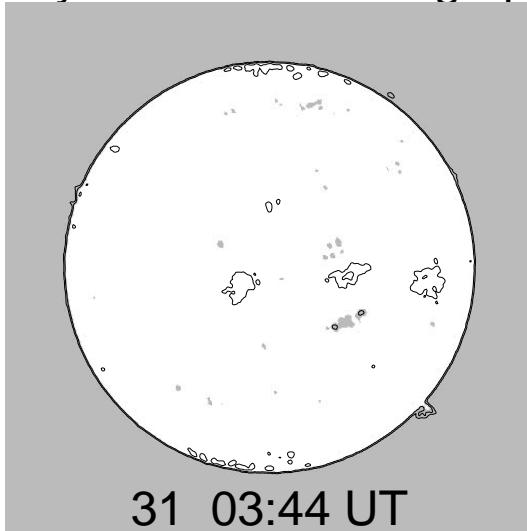
29 02:44 UT



30 02:44 UT

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

# Nobeyama Radio Heliograph 17 GHz (Tb) 2008 March



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

S U N S P O T   G R O U P S  
(Ordered by Central Meridian Passage Date)  
MARCH 2008

NOAA/ USAF Group	Mt Wilson Group	Sta	Observation			Lat	CMD	CMP Mo	Day	Max H	Mag Class	Spot Class	Corrected		Spot Count	Long. Extent (Deg)	Qual
			Mo	Day	Time (UT)								Area (10-6 Hemi)	Area			
10984A		SVTO	03	03	0650	S05 E18	03	4.6		A	AXX			1		3	
10984A		LEAR	03	03	0728	S04 E16	03	4.5		A	AXX	10		1	1	3	
10984A		KAND	03	03	0900	S06 E16	03	4.6			BXO			2	2	3	
10984A		HOLL	03	04	1535	S05 W01	03	4.6		A	AXX			1	1	4	
10984A		VORO	03	09	2334	S11 W67	03	4.9			AXX	7		3	1	3	
10984A		TACH	03	10	0710	S11 W69	03	5.1			BXO	7		2	3	4	
10984A		SVTO	03	10	0836	S09 W76	03	4.6		B	CRO	50		2	6	3	
10984A		LEAR	03	10	0857	S12 W73	03	4.9		B	BXO	150		2	4	2	
10984A		VORO	03	10	2348	S10 W79	03	5.0			AXX	6		1		3	
10984B		VORO	03	11	2307	S04 W10	03	11.2			AXX	4		1		3	
10986		KAND	03	15	0735	S05 W33	03	12.8			BXO			3	1	3	
10986		LEAR	03	15	0845	S05 W33	03	12.9		B	BXO	20		2	3	2	
10986		SVTO	03	15	0950	S03 W35	03	12.8		B	BXO	20		2	2	2	
10986		LEAR	03	16	0045	S05 W43	03	12.8		B	BXO	20		2	2	3	
10986		KAND	03	16	0730	S05 W48	03	12.7			AX			1		4	
10986		SVTO	03	16	1128	S02 W51	03	12.7		B	BXO	30		2	1	2	
10986		HOLL	03	16	1904	S05 W55	03	12.7		A	HSX	20		1	1	2	
10986		VORO	03	17	0018	S05 W58	03	12.7			AXX	6		2		3	
10986		LEAR	03	17	0045	S05 W57	03	12.8		A	AXX	10		1	1	2	
10986		PURP	03	17	0120	S04 W57	03	12.8			BXO	9		2	2	3	
10986		SVTO	03	17	0713	S03 W63	03	12.6		A	AXX			1		3	
10986		VORO	03	18	2351	S06 W73	03	13.5			AXX	4		1		3	
10986B		HOLL	03	13	1819	N10 E03	03	14.0		A	AXX			1		4	
10986A		VORO	03	09	2334	S07 E67	03	15.0			AXX	3		1		3	
10987		SVTO	03	23	1509	S08 E55	03	27.7		A	AXX	30		3	3	3	
10987		HOLL	03	23	1635	S08 E53	03	27.7		B	CSO	50		4	3	3	
10987		PURP	03	24	0110	S07 E49	03	27.7			DSO	23		8	4	4	
10987		LEAR	03	24	0144	S07 E48	03	27.7		B	DAC	130		5	5	3	
10987		KAND	03	24	0840	S09 E44	03	27.7			DAI			14	5	3	
10987		SVTO	03	24	1600	S08 E39	03	27.6		B	BXO	40		6	6	3	
10987		HOLL	03	24	1608	S10 E40	03	27.7		B	DSI	170		15	6	3	
10987		PURP	03	25	0046	S08 E35	03	27.6			DAC	107		10	7	3	
10987		SVTO	03	25	0840	S08 E31	03	27.7		B	CSO	70		10	8	3	
10987		HOLL	03	25	1527	S08 E27	03	27.7		B	DAC	180		10	7	3	
10987		PURP	03	26	0044	S08 E21	03	27.6			DAI	160		15	7	4	
10987		VORO	03	26	0310	S08 E19	03	27.5			DKI	244		12	5	3	
10987		TACH	03	26	0611	S08 E17	03	27.5			BRI	34		10	5	4	
10987		SVTO	03	26	0855	S08 E16	03	27.6		B	DAO	160		13	8	2	
10987		KAND	03	26	0930	S09 E16	03	27.6			DSO			5	7	3	
10987		HOLL	03	26	2158	S08 E10	03	27.7		B	DAI	170		16	8	3	
10987		PURP	03	27	0053	S08 E07	03	27.6			DAI	117		11	7	3	
10987		TACH	03	27	0429	S09 E05	03	27.6			DAI	143		8	6	4	
10987		VORO	03	27	0442	S08 E05	03	27.6			DKI	260		6	5	3	
10987		KAND	03	27	0845	S08 E03	03	27.6			DAO			10	8	4	
10987		SVTO	03	27	0913	S08 E03	03	27.6		B	DAO	180		9	7	2	
10987		HOLL	03	27	2236	S07 W05	03	27.6		B	DAI	160		12	8	3	
10987		VORO	03	28	0555	S08 W08	03	27.6			DAO	141		9	5	3	
10987		SVTO	03	28	0620	S08 W10	03	27.5		B	DSI	130		16	7	3	
10987		KAND	03	28	0840	S08 W11	03	27.5			DAO			10	7	4	
10987		TACH	03	28	0850	S09 W10	03	27.6			CAI	130		6	5	4	
10987		HOLL	03	28	1520	S07 W14	03	27.6		B	DSI	120		12	8	3	
10987		SVTO	03	29	0955	S07 W25	03	27.5		B	DSO	90		7	8	2	
10987		KAND	03	29	1215	S08 W26	03	27.6			DSO			4	7	3	
10987		HOLL	03	29	1609	S06 W27	03	27.6		B	DSO	90		4	7	2	
10987		VORO	03	30	0128	S08 W33	03	27.6			DAO	49		7	5	3	
10987		LEAR	03	30	0530	S08 W32	03	27.8		B	CAO	130		3	6	2	
10987		SVTO	03	30	0645	S06 W37	03	27.5		B	BXO	50		4	8	3	
10987		TACH	03	30	0806	S09 W36	03	27.6			BRO	27		4	5	3	
10987		HOLL	03	30	1529	S05 W42	03	27.5		B	DSO	70		8	6	2	
10987		VORO	03	30	2207	S08 W45	03	27.5			CRI	39		10	5	4	
10987		LEAR	03	31	0119	S08 W47	03	27.5		B	BXO	60		7	6	3	
10987		SVTO	03	31	0640	S06 W50	03	27.5		B	BXO	60		3	5	2	
10987		LEAR	03	31	0919	S08 W47	03	27.9		B	BXO	60		7	6	3	
10987		TACH	03	31	0926	S09 W52	03	27.5			BRI	23		4	4	4	

S U N S P O T   G R O U P S  
(Ordered by Central Meridian Passage Date)  
MARCH 2008

NOAA/ USAF Group	Mt Wilson Group	Sta	Observation			CMP Mo Day	Max H	Mag Class	Spot Class	Corrected		Long. Extent (Deg)	Qual			
			Mo	Day	Time (UT)					Lat	CMD			Area (10-6 Hemi)	Spot Count	
10987		KAND	03	31	1230	S08	W57	03	27.2		CSO	4	2	4		
10987		HOLL	03	31	1852	S06	W58	03	27.4		CAO	4	2	3		
10987		VORO	03	31	2227	S08	W61	03	27.4		HRX	4		4		
10987		LEAR	04	01	0130	S08	W64	03	27.4		A	AXX	20	1	3	
10987		TACH	04	01	0419	S08	W64	03	27.5			AXX	11	1	4	
10987		SVTO	04	01	0935	S07	W68	03	27.4		A	HSX	20	1	2	
10987		HOLL	04	01	1541	S03	W70	03	27.5		A	HAX	40	2	2	
10987		VORO	04	01	2149	S08	W74	03	27.5			ARX	11	1	3	
10987		LEAR	04	02	0342	S08	W78	03	27.4		A	AXX	60	2	1	2
10988		KAND	03	24	0840	S07	E68	03	29.4			CAO		4	3	3
10988		VORO	03	26	0310	S08	E43	03	29.3			DKI	282	10	7	3
10988		KAND	03	26	0930	S08	E36	03	29.1			DSO		7	8	3
10988		VORO	03	27	0442	S07	E29	03	29.4			DKI	315	7	9	3
10988		KAND	03	27	0845	S09	E27	03	29.4			DAO		16	10	4
10988		VORO	03	28	0555	S08	E16	03	29.4			DKI	351	6	9	3
10988		KAND	03	28	0840	S08	E14	03	29.4			EAO		16	13	4
10988		KAND	03	29	1215	S09	W03	03	29.3			CKO		4	12	3
10988		VORO	03	30	0128	S08	W08	03	29.5			DKO	197	5	9	3
10988		VORO	03	30	2207	S09	W19	03	29.5			CSI	198	10	9	4
10988		KAND	03	31	1230	S08	W33	03	29.0			HA		3	3	4
10988		VORO	03	31	2227	S08	W34	03	29.4			CSI	216	10	5	4
10988		LEAR	04	01	0130	S08	W39	03	29.2		A	HHX	170	4	3	3
10988		TACH	04	01	0419	S09	W38	03	29.4			CAI	135	4	5	4
10988		SVTO	04	01	0935	S07	W42	03	29.3		B	DSO	130	5	8	3
10988		HOLL	04	01	1541	S04	W44	03	29.5		B	DSO	140	3	2	2
10988		VORO	04	01	2149	S08	W49	03	29.3			HAX	232	4		3
10988		LEAR	04	02	0342	S08	W52	03	29.3		A	HAX	240	3	2	2
10988		TACH	04	02	0725	S08	W53	03	29.4			HR	100	2	2	3
10988		KAND	04	02	0850	S07	W58	03	29.1			HA		2	3	3
10988		SVTO	04	02	0930	S06	W56	03	29.3		A	HSX	170	2	3	3
10988		TACH	04	03	0453	S09	W64	03	29.5			CAO	95	3	5	3
10988		VORO	04	03	0617	S08	W67	03	29.3			HAX	152	3		2
10988		KAND	04	03	1130	S08	W72	03	29.2			HA		3	3	2
10988		SVTO	04	03	1158	S05	W73	03	29.1		B	BXO	80	3	5	2
10988		HOLL	04	03	1624	S06	W73	03	29.3		B	BXO	60	5	3	4
10988		VORO	04	04	0047	S09	W77	03	29.3			HAX	52	2		3
10988		KAND	04	04	0720	S08	W82	03	29.2			HR		1	2	3
10988		PURP	03	24	0110	S08	E73	03	29.5			BXO	14	3	4	4
10988		LEAR	03	24	0144	S07	E73	03	29.5		B	BXO	60	3	4	3
10988		KAND	03	24	0840	S07	E68	03	29.4			CAO		4	3	3
10988		SVTO	03	24	1600	S09	E62	03	29.3		B	BXO	60	4	5	3
10988		HOLL	03	24	1608	S12	E63	03	29.4		BG	EHI	170	10	11	3
10988		PURP	03	25	0046	S07	E58	03	29.4			DAO	135	7	9	3
10988		SVTO	03	25	0840	S08	E55	03	29.5		B	CSO	190	8	8	3
10988		HOLL	03	25	1527	S10	E50	03	29.4		B	DAC	210	14	8	3
10988		PURP	03	26	0044	S07	E44	03	29.3			DAI	235	14	9	4
10988		TACH	03	26	0611	S08	E40	03	29.2			CAI	207	9	7	4
10988		SVTO	03	26	0855	S08	E41	03	29.4		B	DSO	230	11	10	2
10988		KAND	03	26	0930	S08	E36	03	29.1			DSO		7	8	3
10988		HOLL	03	26	2158	S09	E36	03	29.6		B	DAI	340	17	11	3
10988		PURP	03	27	0053	S07	E30	03	29.3			EAI	280	13	10	3
10988		TACH	03	27	0429	S08	E28	03	29.3			DAI	335	9	7	4
10988		KAND	03	27	0845	S09	E27	03	29.4			DAO		16	10	4
10988		SVTO	03	27	0913	S08	E27	03	29.4		B	DAO	240	11	13	2
10988		HOLL	03	27	2236	S09	E20	03	29.4		B	DSI	310	16	11	3
10988		SVTO	03	28	0620	S08	E15	03	29.4		B	EKI	240	15	13	3
10988		KAND	03	28	0840	S08	E14	03	29.4			EAO		16	13	4
10988		TACH	03	28	0850	S08	E14	03	29.4			DAI	358	7	9	4
10988		HOLL	03	28	1520	S09	E12	03	29.5		B	DAI	220	12	11	3
10988		SVTO	03	29	0955	S09	E01	03	29.5		B	EKI	210	13	11	2
10988		KAND	03	29	1215	S09	W03	03	29.3			CKO		4	12	3
10988		HOLL	03	29	1609	S08	W03	03	29.4		B	DAI	230	7	11	2
10988		LEAR	03	30	0530	S12	W08	03	29.6		B	CAO	280	5	11	2
10988		SVTO	03	30	0645	S06	W16	03	29.1		B	CAO	150	3	4	3
10988		TACH	03	30	0806	S08	W11	03	29.5			CAI	174	7	9	3
10988		HOLL	03	30	1529	S06	W17	03	29.4		B	DAI	210	6	8	2
10988		LEAR	03	31	0119	S08	W24	03	29.2		B	CHO	180	3	7	3
10988		SVTO	03	31	0640	S07	W28	03	29.2		B	CAO	90	3	3	2

S U N S P O T   G R O U P S  
(Ordered by Central Meridian Passage Date)  
MARCH 2008

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)									
10988		LEAR	03	31	0919	S08 W24	03 29.6		B	CHO	40	3	7	3
10988		TACH	03	31	0926	S09 W28	03 29.3			CAO	175	3	5	4
10988		KAND	03	31	1230	S08 W33	03 29.0			HA		3	3	4
10988		HOLL	03	31	1852	S07 W35	03 29.2		B	CSO	190	9	6	3
10989		VORO	03	26	0310	S10 E72	03 31.5			HAX	151	4		3
10989		VORO	03	27	0442	S10 E58	03 31.5			HAX	60	3		3
10989		VORO	03	28	0555	S09 E44	03 31.5			HAX	31	2		3
10989		VORO	03	30	0128	S11 E20	03 31.6			CAO	11	4	0	3
10989		VORO	03	30	2207	S10 E09	03 31.6			AXX	11	5		4
10989		SVTO	03	25	0840	S09 E85	03 31.7		A	AXX	30	1	1	3
10989		HOLL	03	25	1527	S12 E80	03 31.7		A	HAX	60	1	2	3
10989		PURP	03	26	0044	S07 E76	03 31.7			HKX	121	2	3	4
10989		TACH	03	26	0611	S11 E68	03 31.4			BXO	23	2	1	4
10989		SVTO	03	26	0855	S10 E70	03 31.6		A	HSX	30	1	2	2
10989		KAND	03	26	0930	S11 E71	03 31.7			CAO	2	2	2	3
10989		HOLL	03	26	2158	S13 E65	03 31.8		B	DAO	70	3	4	3
10989		PURP	03	27	0053	S10 E63	03 31.8			CSO	30	3	2	3
10989		TACH	03	27	0429	S11 E58	03 31.5			BXO	41	2	1	4
10989		KAND	03	27	0845	S11 E57	03 31.6			CAO		4	2	4
10989		SVTO	03	27	0913	S12 E57	03 31.7		B	DSO	70	3	5	2
10989		HOLL	03	27	2236	S13 E48	03 31.6		B	DSO	50	2	3	3
10989		SVTO	03	28	0620	S11 E45	03 31.6		B	DSO	40	4	5	3
10989		KAND	03	28	0840	S11 E43	03 31.6			CAO		3	2	4
10989		TACH	03	28	0850	S10 E42	03 31.5			CSO	40	2	1	4
10989		HOLL	03	28	1520	S12 E39	03 31.6		B	DAO	50	5	4	3
10989		SVTO	03	29	0955	S12 E31	03 31.7		B	CSO	90	4	3	2
10989		KAND	03	29	1215	S11 E28	03 31.6			CAO		6	3	3
10989		HOLL	03	29	1609	S13 E25	03 31.5		B	DSO	70	4	5	2
10989		LEAR	03	30	0530	S13 E17	03 31.5		B	BXO	20	2	1	2
10989		SVTO	03	30	0645	S10 E18	03 31.6		B	BXO	20	2	1	3
10989		TACH	03	30	0806	S12 E17	03 31.6			BRO	4	3	2	3
10989		HOLL	03	30	1529	S12 E12	03 31.5		B	CSO	30	3	3	2
10989		LEAR	03	31	0919	S11 E07	03 31.9		A	AXX	10	1		3

## Stations reporting:

HOLL = Holloman  
KAND = Kandilli

LEAR = Learmonth  
PALE = Palehua

PURP = Purple Mountain  
SVTO = San Vito

TACH = Tashkent  
VORO = Voroshilov

SUDDEN IONOSPHERIC DISTURBANCES  
MARCH 2008

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			
03	0848	0900	0949	1	1						No flare		
08	1414	1423	1501	1	1						No flare		
10	0953	1001	1102	1	1						No flare		
16	0641	0648	0731	1	1						*		
24	0854	0905	0933	1	1						*		
24	1306	1315	1338	1	1						*		
25	0730	0832	0956	1	1						No flare		
25	1404	1429	1542	1	1						No flare		
25	1843	1858	1936	2	5					4	1836	M 1.7	10989
26	0616	0625	0730	1	1						No flare		
26	1415	1419	1532	1	1						*		
27	1507	1514	1537	1	1						*		
30	1000	1005	1106	1	1						No flare		
31	0627	0640	0709	1	1						No flare		

OBSERVATORIES REPORTING FOR MARCH 2008

Bedford, Massachusetts, USA	SES
Edenvale, Rep of S. Africa	SES
Southern France	SES
Torrington, Connecticut, USA	SES
Upice, Czech Republic	SEA

Observations are not necessarily continuous.  
\* = No Flare Patrol



S O L A R R A D I O E M I S S I O N  
Spectral Observations  
MARCH 2008

Day	OBSERVATION			Sta	EVENT				FREQUENCY		Remarks
	Start (UT)	End (UT)	Start (UT)		End (UT)	Spectral Class	Event Remarks	Int (1-3)	Lower (MHz)	Upper (MHz)	
01	0000	0735		CULG							
	0000	0837		HIRA							
	0705	0900		ONDR							
	2000	2400		CULG							
	2101	2400		HIRA							
02	0000	0800		CULG							
	0000	0838		HIRA							
	2000	2400		CULG							
	2100	2400		HIRA							
03	0000	0800		CULG							
	0000	0839		HIRA							
	0801	1536		ONDR							
	1400	1605		BLEN							
	2000	2400		CULG							
2059	2400		HIRA								
04	0000	0800		CULG							
	0000	0840		HIRA							
	0650	1538		ONDR							
	0700	1605		BLEN							
	2000	2400		CULG							
2057	2400		HIRA								
05	0000	0243		HIRA							
	0000	0800		CULG							
	0648	1540		ONDR							
	0700	1605		BLEN							
	0746	0841		HIRA							
	2000	2400		CULG							
2056	2400		HIRA								
06	0000	0800		CULG							
	0000	0842		HIRA							
	0645	1542		ONDR							
	0700	1605		BLEN							
	2000	2400		CULG							
2055	2400		HIRA								
07	0000	0800		CULG							
	0000	0843		HIRA							
	0643	1531		ONDR							
	0700	1615		BLEN							
	2000	2400		CULG							
2053	2400		HIRA								
08	0000	0800		CULG							
	0000	0844		HIRA							
	0641	1545		ONDR							
	0700	1615		BLEN							
	2052	2400		HIRA							
	2000	2400		CULG	2132.0	2132.0	III	B	1	20	90
			CULG	2205.0	2205.0	III	B	1	18	100	
			CULG	2213.0	2215.0	III	G	1	18X	100	
09	0000	0800		CULG							
	0000	0845		HIRA							
				LEAR	0029.0	0030.0	III		1	25	34
	0639	1547		ONDR							
	0700	1620		BLEN							
	2000	2400		CULG							
2050	2400		HIRA								
			LEAR	2350.0	0021.0	III		1	25	41	
10	0000	0800		CULG							
	0000	0846		HIRA							
	0636	1549		ONDR							
	0700	1620		BLEN							



S O L A R R A D I O E M I S S I O N  
Spectral Observations  
MARCH 2008

Day	OBSERVATION			Start (UT)	End (UT)	EVENT		Int (1-3)	FREQUENCY		Remarks
	Start (UT)	End (UT)	Sta			Spectral Class	Event Remarks		Lower (MHz)	Upper (MHz)	
20	0000	0855	HIRA								
	0614	1606	ONDR								
	0620	1640	BLEN								
	2010	2400	CULG								
	2034	2400	HIRA								
21	0000	0800	CULG								
	0000	0856	HIRA								
	0611	1608	ONDR								
	0620	1640	BLEN								
	2010	2400	CULG								
	2033	2400	HIRA								
22	0000	0800	CULG								
	0000	0857	HIRA								
	0609	1609	ONDR								
	0615	1640	BLEN								
	2010	2400	CULG								
	2032	2400	HIRA								
23	0000	0800	CULG								
	0000	0858	HIRA								
	0607	1611	ONDR								
	0615	1640	BLEN								
	2010	2400	CULG								
	2030	2400	HIRA								
24	0000	0800	CULG								
	0000	0859	HIRA								
	0605	1613	ONDR								
	0610	1645	BLEN								
	2010	2400	CULG	2251.0	2254.0	III	G	1	18	85	
			LEAR	2351.0	2354.0	III		1	25	149	
	2029	2400	HIRA	2351.0	2354.5	III	G	1	50	130	
25	0000	0800	CULG								
	0000	0900	HIRA								
	0610	1645	BLEN								
	0650	1614	ONDR								
			PALE	1848.0	1850.0	V		1	28	55	
			PALE	1852.0	1900.0	II		3	25U	60U	ESS 1278
	2010	2400	CULG	2136.0	2136.0	III	B	1	50	110	
	2028	2400	HIRA	2136.0	2136.5	III	B	1	60	220	
			CULG	2138.0	2138.0	III	B	1	18	40	
26			LEAR	0013.0	0013.0	III		1	70	166	
	0000	0800	CULG	0013.0	0013.0	III	B	1	60	100	
	0000	0900	HIRA	0013.0	0013.5	III	B	1	60	320	
			HIRA	0018.0	0018.5	III	B	1	25X	80	
			LEAR	0225.0	0227.0	III		1	25	180	
			PALE	0225.0	0227.0	III		1	25	169	
			CULG	0226.0	0228.0	III	G	1	18	100	
	0601	1616	ONDR								
			SVTO	1209.0	1219.0	III		1	25	157	
			SVTO	1209.0	1219.0	III	N	1	25	157	
	0610	1645	BLEN	1624.8	1625.3	III	GG,RS	1	100X	600	
			SGMR	1625.0	1625.0	III		1	110	180	
			SVTO	1625.0	1625.0	III		1	56	176	
	2010	2400	CULG								
	2026	2400	HIRA								
27	0000	0800	CULG								
			LEAR	0226.0	0227.0	III		1	64	180	
			PALE	0226.0	0227.0	III		1	82	175	
	0000	0901	HIRA	0226.0	0227.0	III	G	2	60	220	
	0558	1617	ONDR								
			HIRA	0843.0	0847.0	III	G	1	90	210	
			LEAR	0843.0	0846.0	III		1	81	180	
			SVTO	0843.0	0846.0	III		1	109	180	

Mar 08

S O L A R   R A D I O   E M I S S I O N  
Spectral Observations  
MARCH 2008

Day	OBSERVATION			Start (UT)	End (UT)	EVENT		Int (1-3)	FREQUENCY		Remarks
	Start (UT)	End (UT)	Sta			Spectral Class	Event Remarks		Lower (MHz)	Upper (MHz)	
27	0610	1645	BLEN	0843.0	0843.7	III	GG	1	100X	260	
	2010	2400	CULG								
	2024	2400	HIRA								
28	0000	0800	CULG								
	0000	0902	HIRA								
	0556	1619	ONDR								
	0610	1650	BLEN								
			SVTO	1109.0	1109.0	III		1	25	40	
	2010	2400	CULG								
	2022	2400	HIRA								
29	0000	0800	CULG								
	0000	0902	HIRA								
	0554	1621	ONDR								
	0605	1650	BLEN								
	2010	2400	CULG								
	2020	2400	HIRA								
30	0000	0800	CULG								
	0000	0903	HIRA								
	0552	1622	ONDR								
	0605	1650	BLEN								
			PALE	2033.0	2033.0	III		1	25	58	
			SGMR	2033.0	2033.0	III		1	30	54	
	2010	2400	CULG	2033.0	2033.0	III	B	1	20	90	
	2019	2400	HIRA	2033.0	2033.5	III	B	1	50	310	
			CULG	2324.0	2325.0	III	G	1	20	45	
31			LEAR	0110.0	0111.0	V		1	25U	157U	
			PALE	0111.0	0112.0	V		1	25U	153U	
	0000	0800	CULG	0111.0	0112.0	III	G	1	20	130	
	0000	0904	HIRA	0111.0	0111.5	III	G	1	50	130	
			LEAR	0210.0	0215.0	III		1	25	147	
			PALE	0210.0	0210.0	III		1	25U	108U	
			CULG	0211.0	0211.0	III	B	1	23	75	
			CULG	0215.0	0215.0	III	B	1	18	85	
			HIRA	0215.0	0215.5	III	B	1	25X	130	
			PALE	0215.0	0216.0	III		1	25U	160U	
	0550	1624	ONDR								
	0600	1700	BLEN								
	2010	2400	CULG								
	2018	2400	HIRA								

## Event Remarks:

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

## Frequency qualifiers:

X = Extends beyond instrument range      U = Uncertain frequency

## Remarks:

SWF = Associated short wave fade observed      ESS = Estimated shock speed in km/s (Type II)  
 FLA = Associated flare observed (class optional)

## Stations Reporting:

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

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

NOTE 2: Potsdam has reduced sensitivity in the 400-800 MHz range.

# SOLAR RADIO NOISE STORM AT 150.9 MHZ

FROM NANÇAY RADIOHELIOGRAPH

MARCH 2008

DAY	HELIOGRAPHICS POSITIONS MEAN VALUES <sup>1</sup>		IMP <sup>2</sup>	OBSERVING TIME <sup>3</sup>	
	E-W	S-N		START( UT)	END(UT)
22/03/08	-1.16	-0.99	I	13H51	15H27 D
22/03/08	-0.99	-1.02	I	13H51	15H27 D
24/03/08	-1.10	-0.07	I	08H32 E	15H27 D
25/03/08	-0.79	-0.18	I	13H15	15H27 D
26/03/08	-0.44	-0.03	I	8H31 E	15H26 D
27/03/08	-0.40	-0.16	I	8H31 E	15H01 D
29/03/08	+0.61	+0.04	I	14H03	15H25 D

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<sup>1</sup> POSITIVE E-W AND S-N COORDINATES CORRESPOND TO THE N-W QUADRANT

<sup>2</sup> IMP1: FLUX < 5 SFU IMP2: 5 < FLUX < 20 SFU IMP3: 20 < FLUX < 100 SFU

IMP4: 100 < FLUX < 300 SFU IMP5 > 300 SFU

<sup>3</sup> E NOISE STORM IN PROGRESS AT THE BEGINNING OF THE NANÇAY OBSERVATIONS

D NOISE STORM IN PROGRESS AT THE END OF THE NANÇAY OBSERVATIONS

**SOLAR RADIO NOISE STORM AT 327 MHZ**  
**FROM NANÇAY RADIOHELIOGRAPH**  
**MARCH 2008**

DAY	HELIOGRAPHICS POSITIONS MEAN VALUES <sup>1</sup>		IMP <sup>2</sup>	OBSERVING TIME <sup>3</sup>	
	E-W	S-N		START(UT)	END(UT)
24/03/08	-1.08	-0.09	I	8H32 E	15H27 D
25/03/08	-0.97	-0.05	I	8H36 E	15H27 D
25/03/08	-0.78	-0.15	I	8H36 E	15H27 D
25/03/05	-0.59	-0.03	I	8H36 E	15H27 D
26/03/08	-0.81	-0.05	I	8H31 E	15H26 D
26/03/08	-0.42	-0.08	I	8H31 E	15H26 D
27/03/08	-0.62	-0.07	I	8H31 E	15H01 D
27/03/08	-0.35	-0.10	I	8H31 E	15H01 D
27/03/08	-0.21	+0.03	I	8H31 E	15H01 D
28/03/08	-0.05	-0.10	I	8H31 E	15H01 D
29/03/08	+0.18	-0.10	I	8H30 E	15H25 D
29/03/08	+0.37	-0.07	I	8H30 E	15H25 D
30/03/08	+0.44	-0.07	I	8H28 E	15H25 D
31/03/08	+0.60	-0.15	I	8H30 E	15H25 D

04 March 2008 : 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 of the very strong other source

\*\*\*\* no flux measurements available

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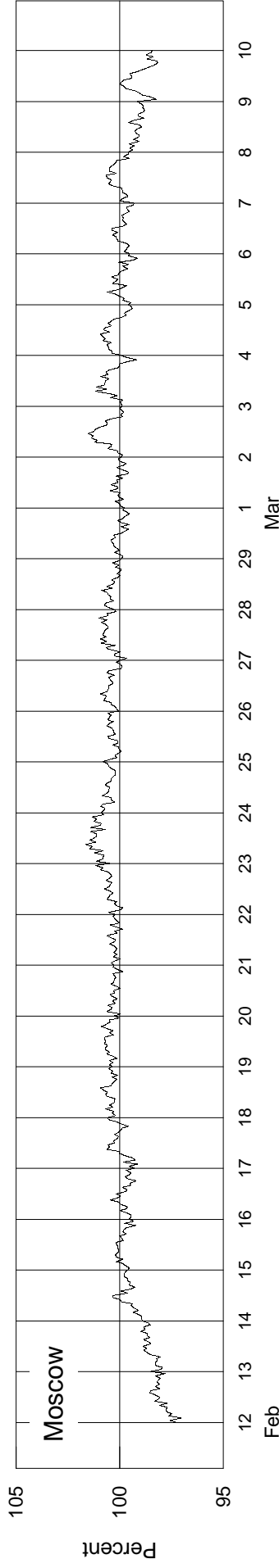
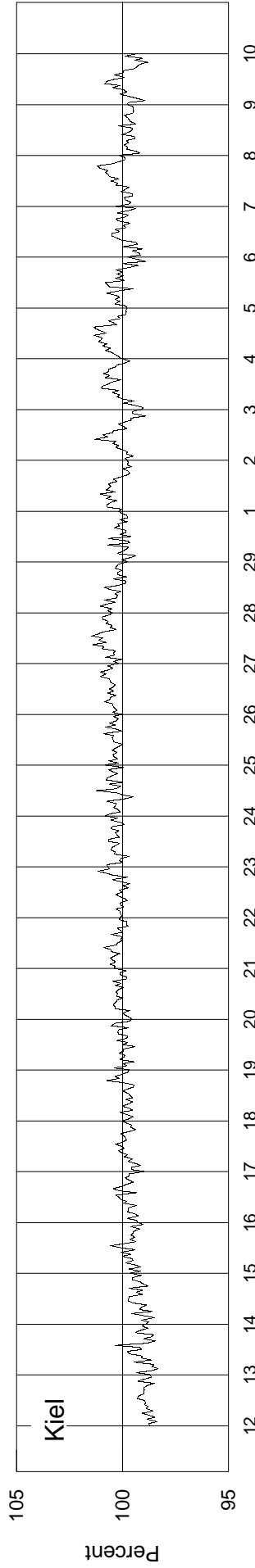
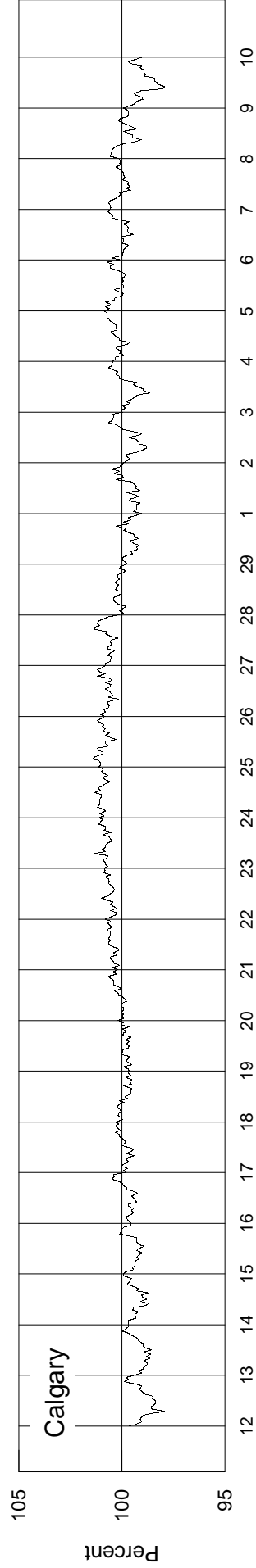
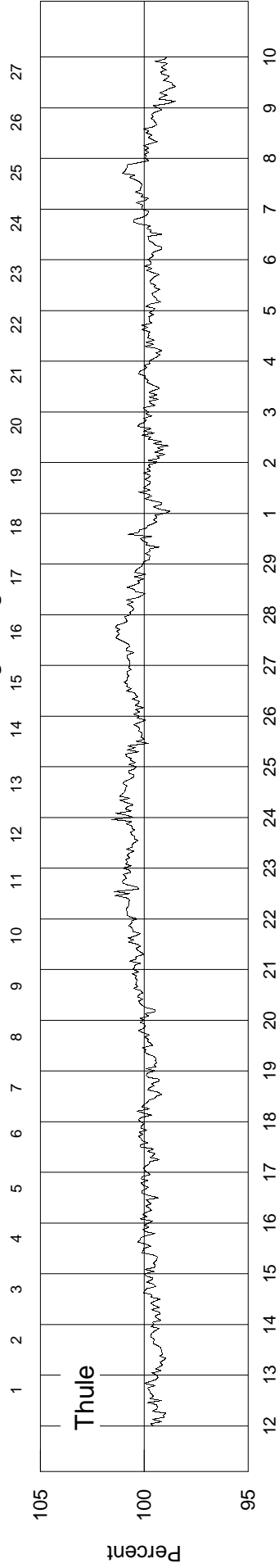
**COSMIC RAY INDICES**  
**(Neutron Monitor)**  
**March 2008**

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	4543.7	3979.3	6332.4	9521.2		2082.9	
2	4542.4	3981.7	6316.3	9572.8		2080.8	
3	4548.9	3984.8	6327.3	9551.3		2081.0	
4	4544.7	4005.7	6351.5	9550.7		2080.0	
5	4539.8	4005.2	6317.7	9510.2		2077.8	
6	4547.9	3993.8	6303.5	9506.2		2078.8	
7	4574.5	3997.5	6326.8	9530.0	data	2077.8	data
8	4545.1	3989.5	6293.2	9440.8	not	2071.8	not
9	4513.8	3953.7	6301.8	9427.3	available	2071.5	available
10	4517.6	3955.0	6302.8	9392.7		2062.9	
11	4526.9	3961.5	6323.4	9420.3		2063.8	
12	4526.9	3971.7	6318.5	9444.2		2075.7	
13	4537.8	3982.7	6313.0	9467.9		2075.8	
14	4542.7	3993.7	6313.3	9483.5		2074.8	
15	4558.9	4001.8	6329.8	9524.5		2073.1	
16	4553.1	3995.2	6344.7	9542.5		2074.5	
17	4552.1	4003.8	6362.8	9557.0		2074.3	
18	4542.3	4004.0	6344.1	9547.7		2074.6	
19	4563.5	4008.2	6350.2	9549.9		2073.8	
20	4571.5	4016.2	6373.8	9593.5		2069.3	
21	4582.4	4033.2	6432.7	9627.7		2070.1	
22	4579.8	4018.3	6408.3	9587.0		2080.7	
23	4565.7	4017.2	6413.2	9578.0		2076.5	
24	4561.6	4020.7	6405.9	9540.6		2081.0	
25	4576.2	4029.2	6402.3	9589.2		2085.2	
26	4574.0	4029.3	6389.9	9598.1		2089.1	
27	4548.0	3998.0	6353.4	9527.3		2074.3	
28	4521.1	3987.2	6302.3	9416.6		2064.8	
29	4496.8	3990.2	6302.1	9390.0		2067.0	
30	4488.9	3976.3	6283.2	9373.5		2066.3	
31	4500.2	3987.5	6272.5	9386.1		2067.3	
Mean	4544.0	3995.9	6339.1	9508.0		2074.8	

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 2382 - Beginning 12 Feb 2008



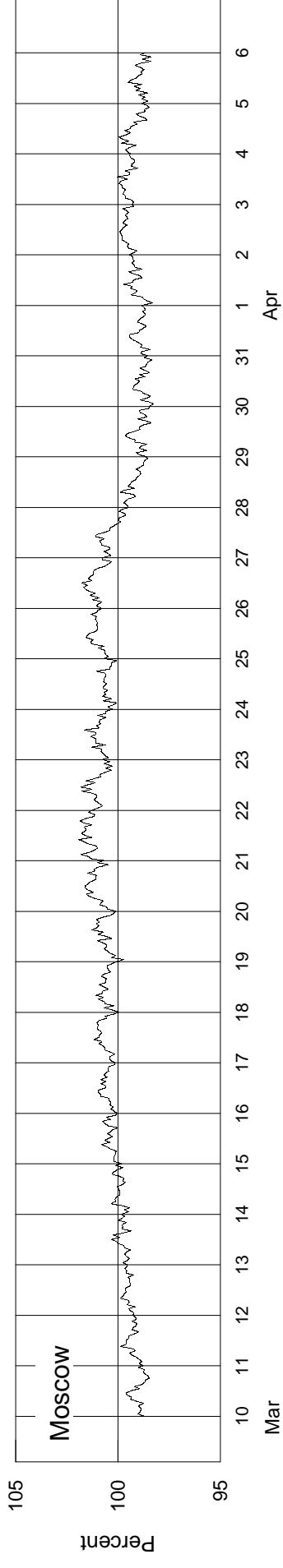
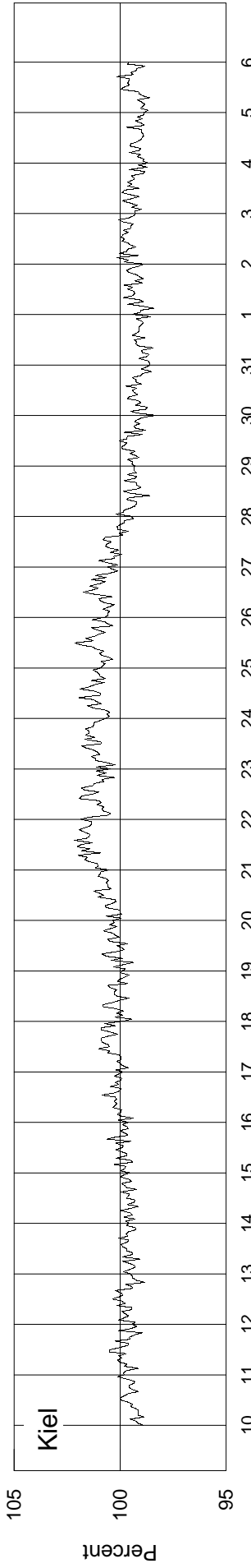
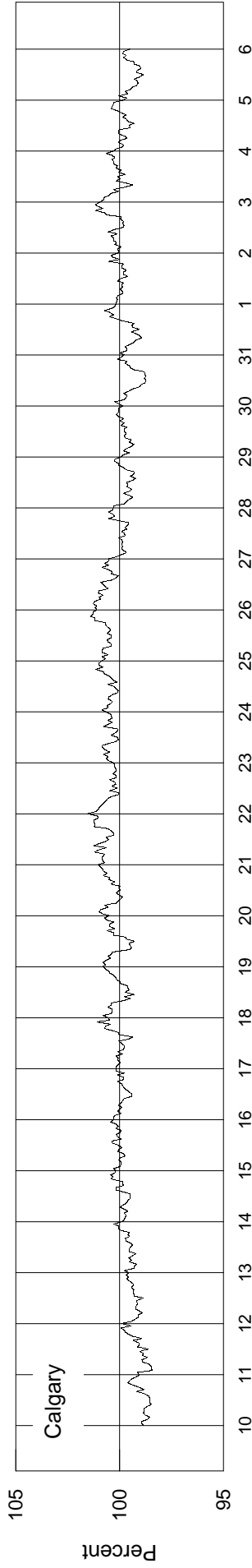
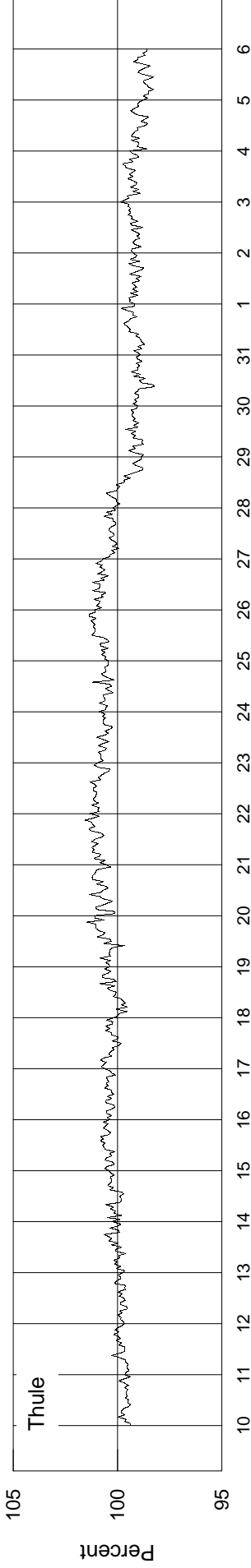
Mar

Feb



# COSMIC RAY INDICES (Neutron Monitor)

Bartels Rotation 2383 - Beginning 10 Mar 2008

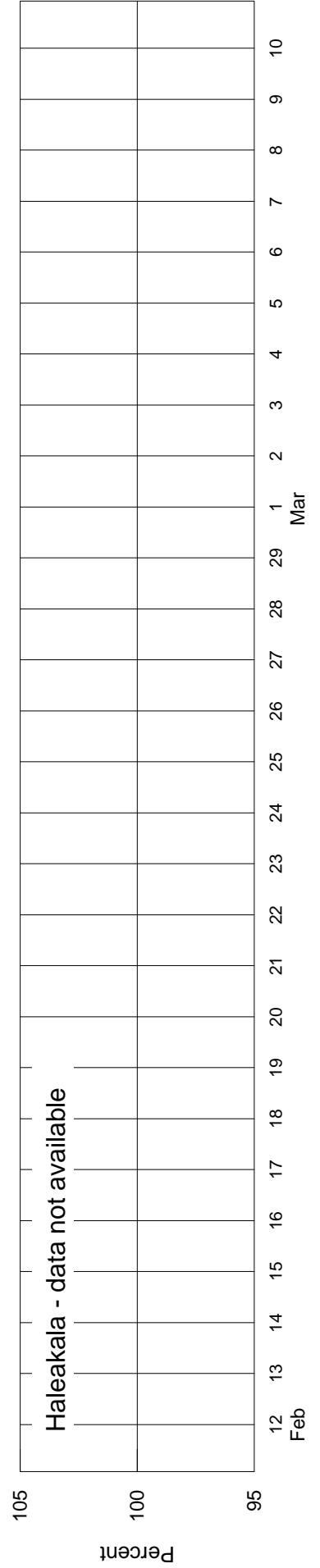
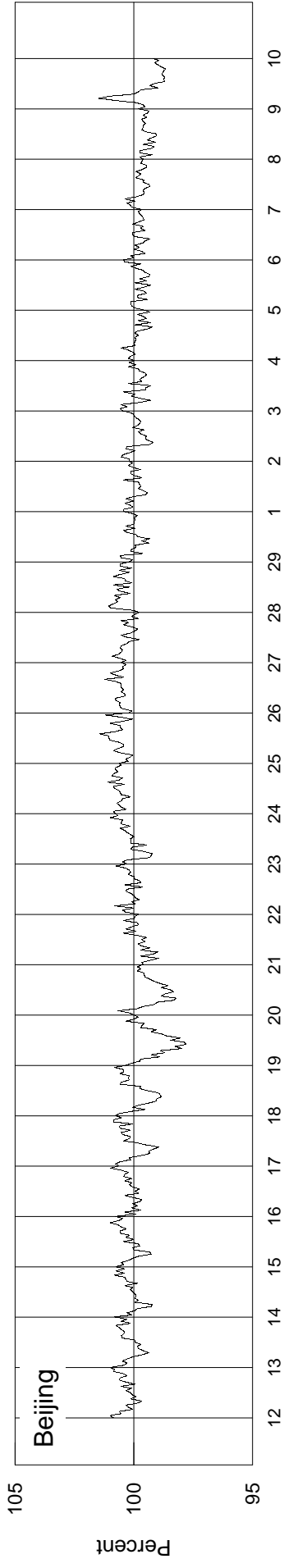
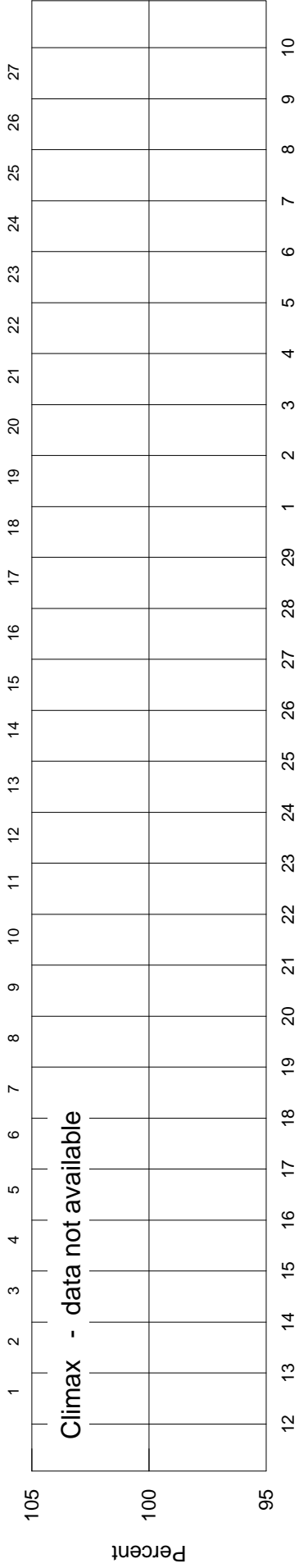


Mar

Apr

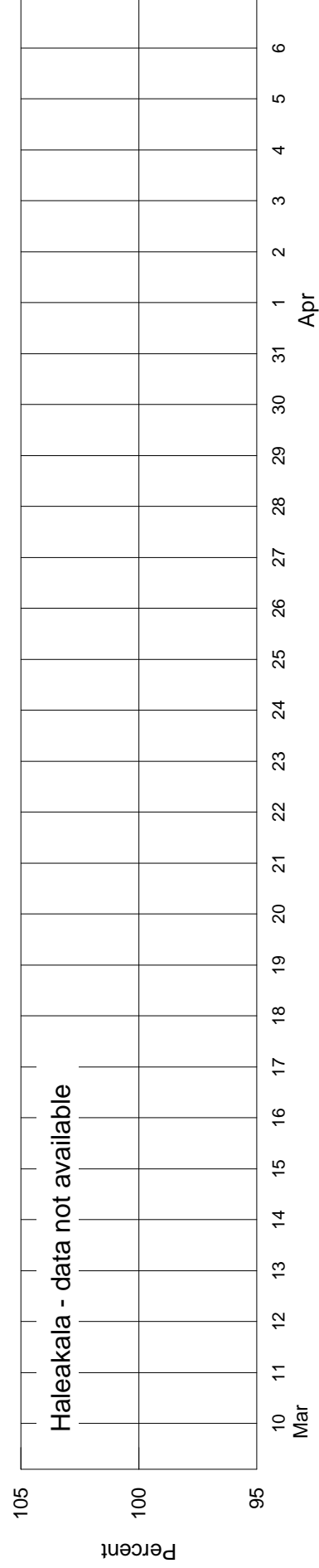
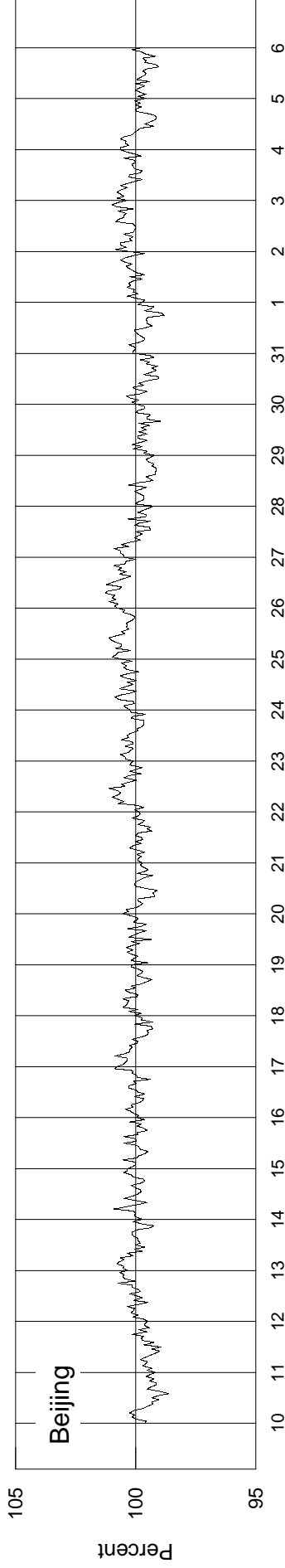
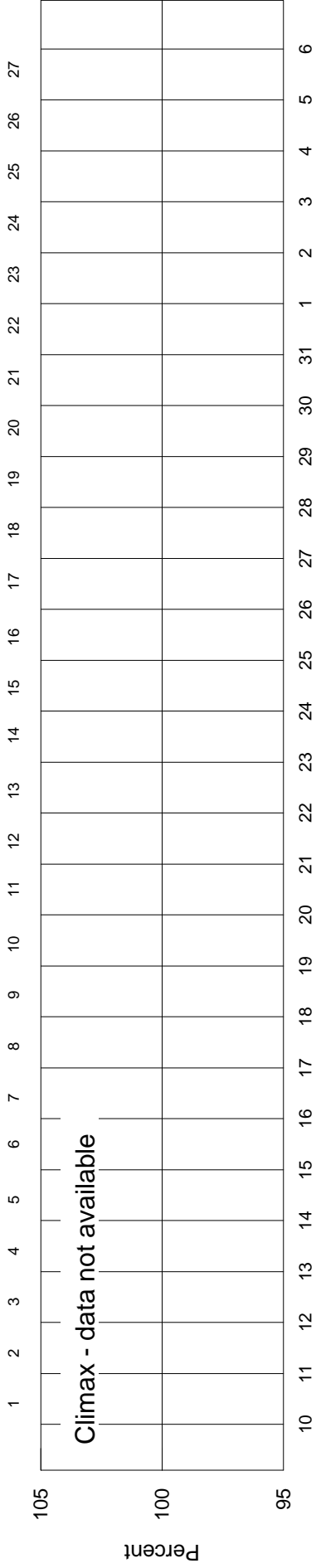
# COSMIC RAY INDICES (Neutron Monitor)

Bartels Rotation 2382 - Beginning 12 Feb 2008

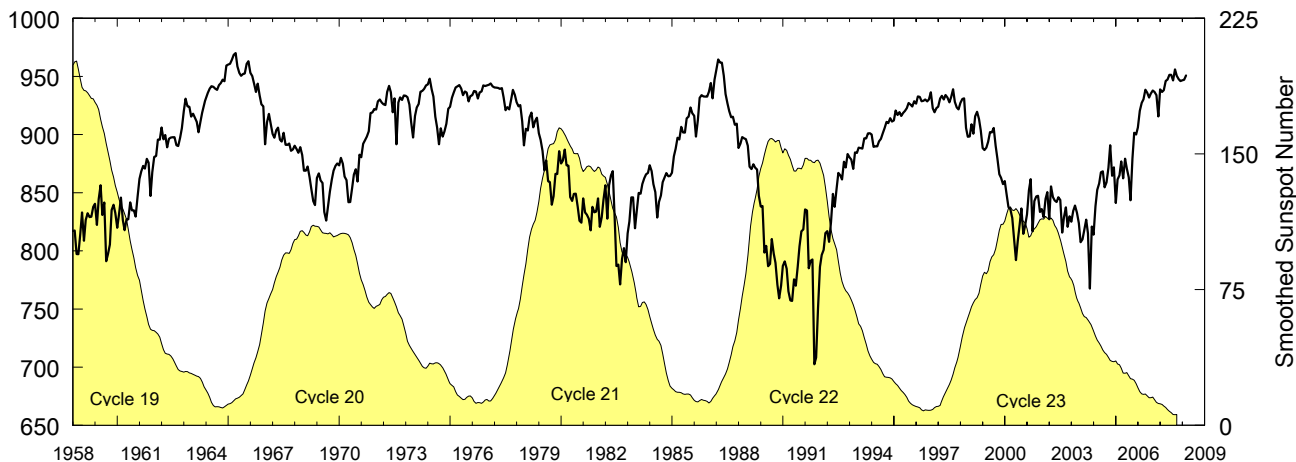


# COSMIC RAY INDICES (Neutron Monitor)

Bartels Rotation 2383 - Beginning 10 Mar 2008



## Moscow Neutron Monitor Pressure-Corrected Values Jan 1958 - Mar 2008



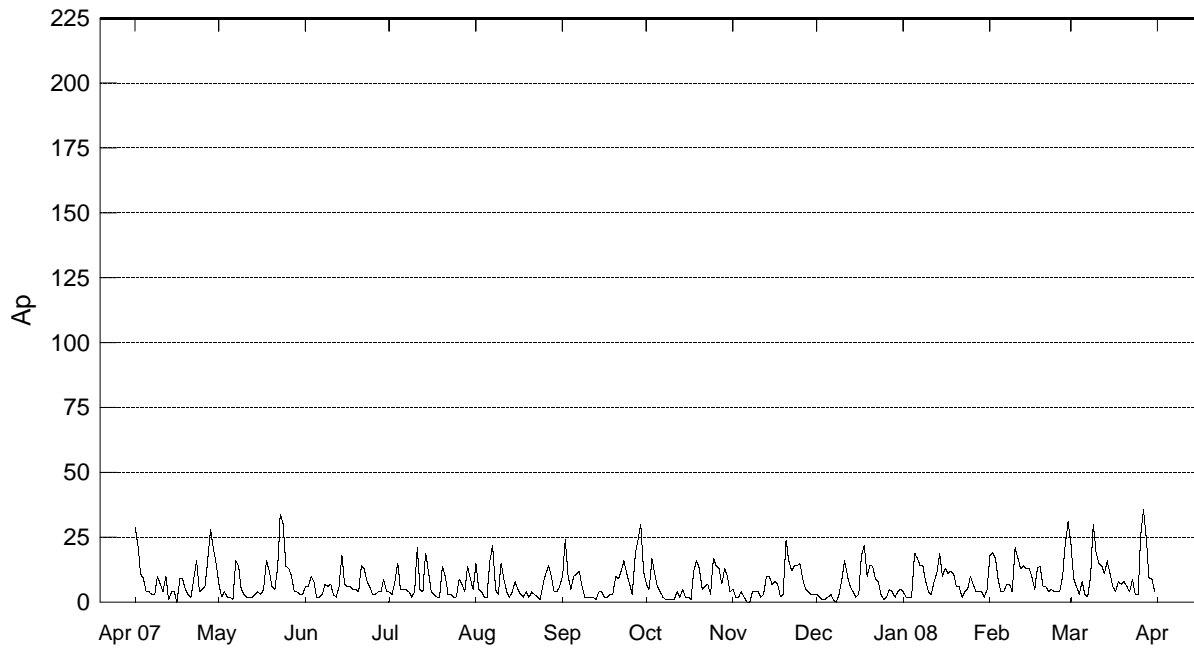
Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Mean
1958	8171*	8175*	7973*	7971*	8145*	8330*	8087*	8266*	8324*	8291*	8294*	8378*	8200*
1959	8405	8223	8443	8565	8309	8416	7911	7972	8054	8351	8397	8325	8281
1960	8199	8313	8459	8264*	8178*	8272*	8272*	8417	8348	8348	8295	8464	8319*
1961	8619	8682	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	8268	8150	7675	8209	8185
2004	8139	8385	8525	8580	8676	8684	8546	8589	8715	8909	8646	8718	8593
2005	8411	8614	8649	8770	8624	8792	8707	8632	8436	8793	9015	9001	8704
2006	9061	9204	9273	9303	9385	9361	9318	9353	9379	9367	9339	9156	9292
2007	9389	9367	9381	9461	9473	9513	9514	9465	9561	9506	9477	9460	9464
2008	9467	9472	9508										9482

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.



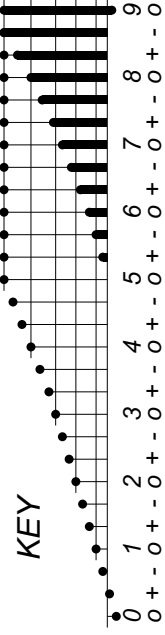
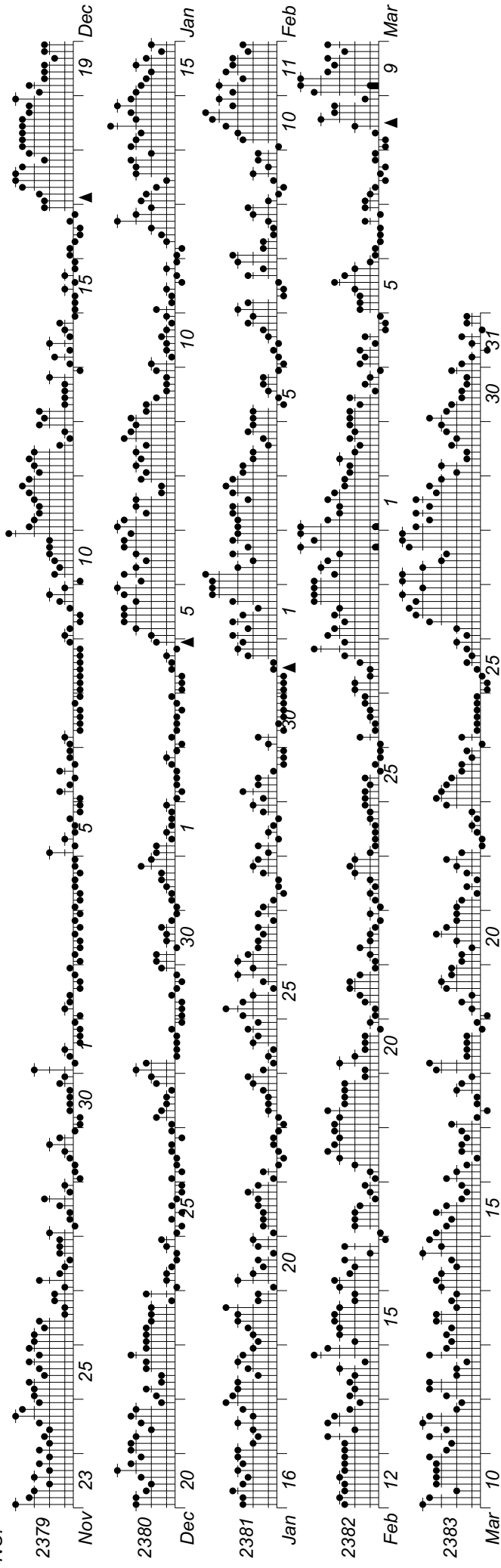
### Daily Average Indices Ap Apr 2007 - Mar 2008



Day	Apr 07	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan 08	Feb	Mar
1	29	7	6	4	15	10	7	5	3	4	18	22
2	22	2	6	3	5	24	8	2	2	2	19	9
3	11	4	10	8	4	10	9	2	1	2	17	6
4	9	2	8	15	2	5	10	4	1	2	8	3
5	4	2	2	5	2	10	11	2	2	19	4	8
6	4	1	2	5	16	11	4	0	3	17	4	3
7	3	16	3	5	22	12	2	0	1	14	7	2
8	3	14	7	4	5	6	1	4	0	14	7	10
9	10	5	6	2	3	2	1	4	3	8	4	30
10	7	3	7	4	15	2	1	4	9	4	21	19
11	4	2	3	21	9	2	1	2	16	3	17	15
12	10	2	2	5	4	2	4	3	10	8	13	14
13	1	2	6	4	2	1	2	10	6	11	14	11
14	4	3	18	19	4	4	5	10	4	19	13	16
15	4	4	7	12	8	4	2	7	2	10	13	11
16	0	3	6	4	5	2	2	8	3	13	10	6
17	9	5	6	3	3	2	1	7	18	11	5	4
18	9	16	5	2	2	3	12	2	22	12	13	8
19	5	12	5	2	4	3	16	3	10	11	14	7
20	3	6	4	14	2	10	13	24	14	6	6	8
21	2	5	14	10	4	9	5	16	14	6	6	6
22	9	13	13	3	3	12	6	12	9	2	4	4
23	16	34	8	3	2	16	7	14	8	4	5	9
24	4	30	6	2	1	11	3	14	3	5	4	3
25	5	14	3	2	7	7	17	15	1	10	4	3
26	6	13	3	9	11	3	14	9	2	7	4	26
27	16	10	4	7	14	18	13	5	5	4	10	36
28	28	4	4	4	10	24	7	4	4	4	23	24
29	21	4	9	14	4	30	13	3	2	4	31	9
30	15	3	4	9	4	12	10	3	4	2		9
31		3		5	6		4		5	5		4
Mean	9	8	6	7	6	9	7	7	6	8	11	11

DAYS IN SOLAR ROTATION INTERVAL

ROT.-  
NO.



PLANETARY MAGNETIC  
THREE-HOUR-RANGE INDICES

Kp till 2008 Mar 31

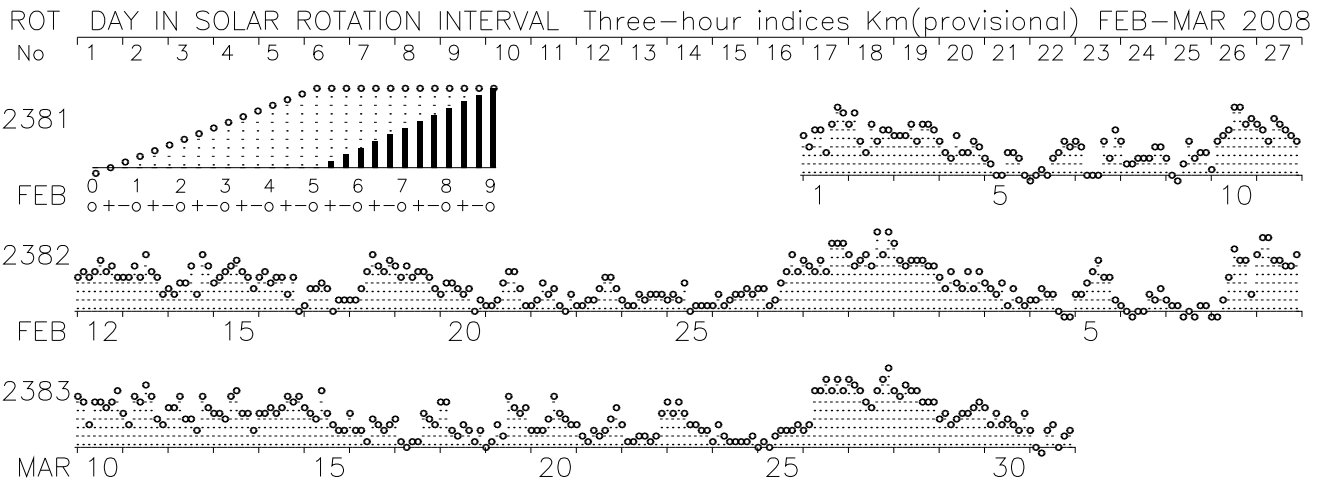
▲ = sudden  
commencement



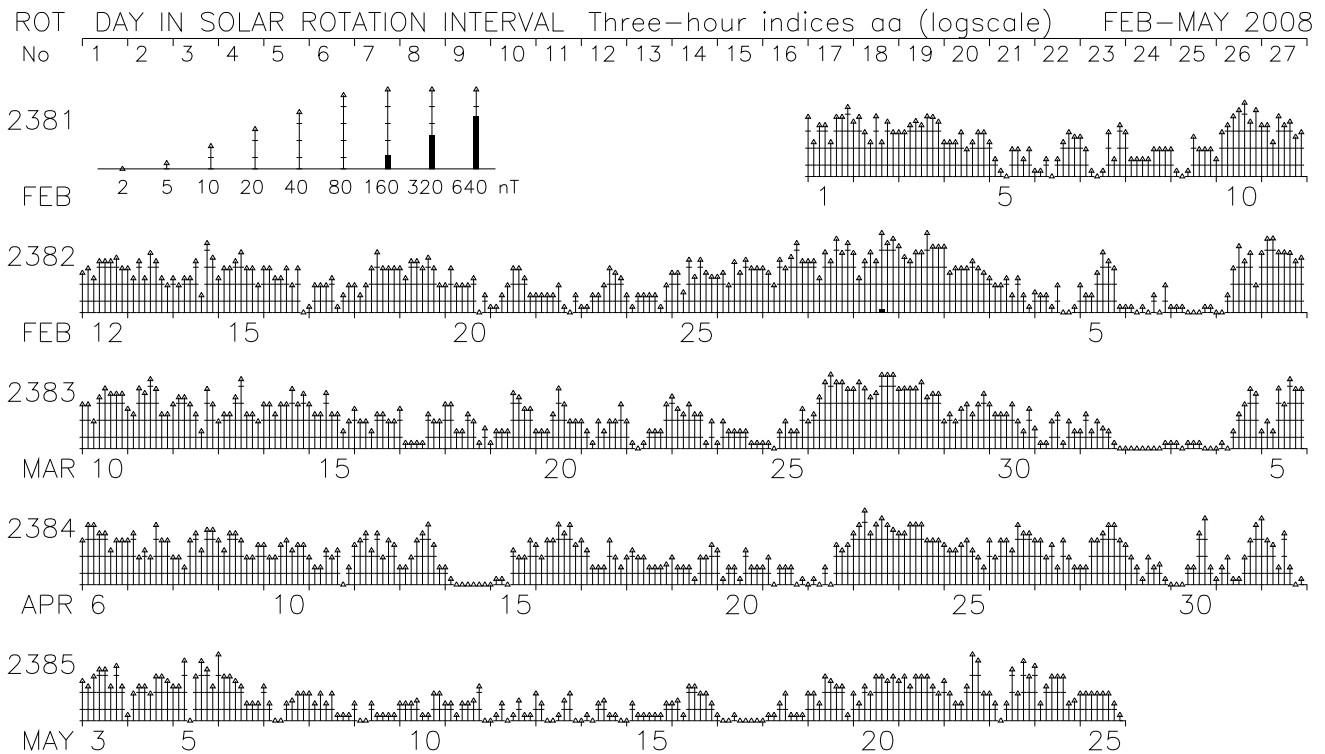


# PLANETARY GEOMAGNETIC ACTIVITY

3-HOUR-RANGE INDICES  $K_m$  AND  $a_a$  BY 27-DAY SOLAR ROTATION INTERVAL  
 ISGI PUBLICATION OFFICE – EMAIL : ISGI.PUBOFF@cetp.ipsl.fr  
 CETP, 4 Avenue de Neptune, F-94107 Saint Maur des Fosses CEDEX – FRANCE



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

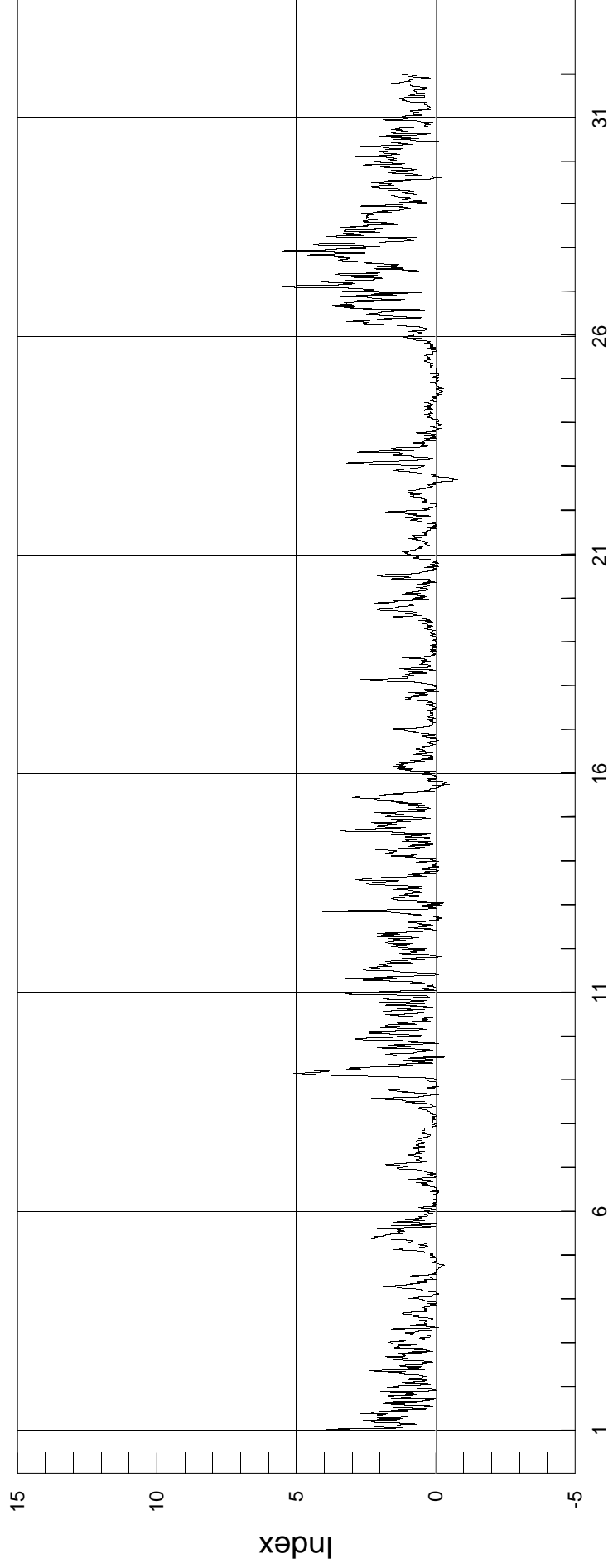


Indices Derivation at C.E.T.P.; Graph Prepared at ISGI Publication Office.

# Polar Cap Index

Qaanaaq - Thule

WDC C1 for Geomagnetism, Copenhagen



MARCH 2008

Data Source: Geomagnetism and Space Physics  
Danish Meteorological Institute

100  
Mar 08

P R I N C I P A L M A G N E T I C S T O R M S  
MARCH 2008

Sta	Geomag		Commencement		SC Amplitudes			Maximum 3-Hour K Index Day(3-Hour Periods)	K	Ranges			End	
	Lat	Day	Time (UT)	Type	D (Min)	H (Gamma)	Z (Gamma)			D (Min)	H (Gamma)	Z (Gamma)	Day	Hour (UT)
JAI	17.4N	08	0700	..	..	..	..	-	4	108	25	08	22	
ABG	09.4N	08	0700	..	..	..	..	8(5)	6	3	126	20	08	22
HYB	07.6N	08	0500	..	..	..	..	8(5) 9(2)	6	3	112	26	11	20
PND	02.0N	08	0700	..	..	..	..	..	-	1	120	43	08	22
TIR	00.6S	08	0700	..	..	..	..	..	-	2	127	64	08	22
JAI	17.4N	09	0130	..	..	..	..	..	-	5	79	26	11	21
ABG	09.4N	09	0130	..	..	..	..	9(2) 11(4,5,6)	4	4	---	25	11	21
PND	02.0N	09	0130	..	..	..	..	..	-	2	109	65	11	21
TIR	00.6S	09	0130	..	..	..	..	..	-	3	164	69	11	21
HYB	07.6N	12	0500	..	..	..	..	12(3,7) 14(6) 15(4)	4	4	81	22	15	22
JAI	17.4N	26	0330	..	..	..	..	..	-	6	113	40	28	23
ABG	09.4N	26	0330	..	..	..	..	26(4) 28(5)	5	5	135	41	28	23
HYB	07.6N	26	0500	..	..	..	..	26(4)	6	6	146	27	30	01
PND	02.0N	26	0330	..	..	..	..	..	-	4	158	66	28	23
TIR	00.6S	26	0330	..	..	..	..	..	-	4	230	76	28	23
NGP	11.3N	09	0130	..	..	..	..	..	-	4	83	27	11	21
NGP	11.3N	08	0700	..	..	..	..	..	-	3	120	09	08	22
NGP	11.3N	26	0330	..	..	..	..	..	-	6	131	29	28	23

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

**MARCH 2008**

Storm Sudden Commencements (SSC)				Solar Flare Effects (sfe)		
Day	Time	Quality:	Station Group*	Day	Begin-End	Station(s)
08	1142	B:	LER* ESK* HAD* DOU	03	0950-1000	NAG
		C:	NGK* BDV*	06	1712-1728	GUI
				08	1139-1145	NAG
26	0936	B:	LER* ESK* HAD*	18	1238-1650	GUI
		C:	DOU GCK*	22	1213-1228	GUI

**REPORTING OBSERVATORIES** up to 04/05/2008):

NUR LER ESK NGK HAD DOU BDV CLF HRB NAG GCK MMB EBR SPT KAK KNY GUI HYB GNA CNB

Three-letter codes identify each observatory. Reporting stations have been grouped by the character of the observed event. The letter A means very remarkable; B means fair, but unmistakable; C means very poor, doubtful; and - means no quality figure given. The \* means that the SSC, at least in one component, was preceded by a small reversed impulse. SSCs are given only when five or more stations report the event. SFEs include all reports. If an SFE is confirmed by solar or ionospheric events, the name of the station is identified with a plus sign (+).

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

**Criterion on Provisional SSC data**

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