JUNE 2006 NUMBER 742 - Part I

Solar-Geophysical Data prompt reports

Data for April and May 2006
Explanation of Data Reports Issued as Number 515 (Supplement) July 1987

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JUNE 2006 NUMBER 742 - Part I

Solar-Geophysical Data prompt reports

Data for April and May 2006

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SOLAR-GEOPHYSICAL DATA

Number 742
(Issued in Two Parts)

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CONTENTS

PART I (PROMPT REPORTS) Page

DETAILED INDEX FOR 2005-2006 2
DATA FOR MAY 2006 ..... 3- 32
DATA FOR APRIL 2006 33-107

PART II (COMPREHENSIVE REPORTS) Page

DETAILED INDEX FOR 2005-2006 2
DATA FOR DECEMBER 2005 ..... 3- 27
INCLUDING:
ACE SOLAR WIND, INTERPLANETARY MAGNETIC FIELD AND PARTICLES
-- MONTHLY PLOTS

DETAILED INDEX OF OBSERVATIONS PUBLISHED IN SOLAR-GEOPHYSICAL DATA

CODE	KIND OF OBSERVATION	OCT 05	NOV	DEC	JAN 06	FEB	MAR	APR	MAY
A.	SOLAR AND INTERPLANETARY								
A.1	Sunspot Drawings	736A 42	737A 44	738A 48	739A 36	740A 40	741A 42	742A 40	
A.2aa	International Sunspot Numbers	735A 24	736A 23	737A 25	738A 24	739A 22	740A 24	741A 24	742A 25
A.2c	American Sunspot Numbers	735A 24	736A 23	737A 25	738A 24	739A 22	740A 24	741A 24	742A 25
A.3a	Mt. Wilson Magnetograms	736A 42	737A 44	738A 48	739A 36	740A 40	741A 42	742A 40	
A.3b	Sunspot Mag Class and Regions	736A 79	737A 79	738A 85	739A 73	740A 73	741A 79	742A 75	
A.3c	Kitt Peak Magnetograms	736A 42	737A 44	738A 48	739A 36	740A 40	741A 42	742A 40	
A.3d	Mean Solar Magnetic Field (Stanford)	735A 31	736A 31	737A 33	738A 31	739A 27	740A 31	741A 33	742A 31
A.3e	Stanford Magnetograms	736A 42	737A 44	738A 48	739A 36	740A 40	741A 42	742A 40	
A.4	H-alpha Filtergrams	736A 42	737A 44	738A 48	739A 36	740A 40	741A 42	742A 40	
A.5d	PhotometricCa IIFaculaeSanFernando	Jan 92-Dec 96-631B 22; 1997-1998 663B 66							
A.6c	Stanford Solar Mag Field SynopticMap	736A 36	737A 38	738A 36	739A 30	740A 34	741A 36	742A 34	
A.6d	Kitt Peak Mag Field Synoptic Map	736A 41	737A 43	738A 46	739A 35	740A 39	741A 41	742A 39	
A.6f	Active Prominences and Filaments	740B 16	741B 20	742B 20					
A.6g	Sac Peak Coronal Line Synoptic Maps	736A 38	737A 40	738A 40	739A 32	740A 36	741A 38	742A 36	
A.6h	Photometric White Light SanFernando	Jul-Dec 96 630B 32; 1997-1998 in 663B 51							
A.7h	Coronal Line Emission (Sac Peak)	736A 42	737A 44	738A 48	739A 36	740A 40	741A 42	742A 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)	740B 21	741B 25	742B 25					
A.8aa	2800 MHz- Solar Flux (Penticton)	735A 24	736A 23	737A 25	738A 24	739A 22	740A 24	741A 24	742A 25
A.8ac	2800 MHz- Adj. Solar Flux (Penticton)	735A 24	736A 23	737A 25	738A 24	739A 22	740A 24	741A 24	742A 25
A.8g	Adjusted Daily Solar Fluxes Sagamore	735A 24	736A 23	737A 25	738A 24	739A 22	740A 24	741A 24	742A 25
A.10g	Nancay Radioheliograph164&327MHz	736A 87	737A 89	738A 99	739A 82	740A 28	741A 86	742A 91	
A.10h	Nobeyama Radioheliograph -17 GHz	736A 73	737A 74	738A 79	739A 67	740A 68	741A 73	742A 70	
A.11g	Solar X-ray GOES (graphs)	740B 9	741B 14	742B 13					
A.11g	Solar X-ray GOES (event table)	735A 27	736A 26	737A 29	738A 28	739A 25	740A 28	741A 28	742A 29
A.11k	Solar UV NOAA-9	May 86-Dec 88 in 566B 84							
A.11l	Solar UV NIMBUS7	Nov 78-Oct 84 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	740B 16	741B 21	742B 21					
A.12g	Solar Particles (GOES)	735A 4	736A 4	737A 4	738A 4	739A 4	740A 4	741A 4	742A 4
A.12i	Solar Energetic Particles (ACE)	740B 20	741B 24	742B 24					
A.13g	Solar Plasma (ACE)	740B 19	741B 23	742B 23					
A.16c	ERBS, NOAA-9 & -10 Solar Irradiance	ERBS 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-Jan 94 in 611A118							
A.17d	ACE Interplanetary Mag Field	740B 18	741B 22	742B 22					
C.	SOLAR FLARE-ASSOCIATED EVENT								
C.1a	H-alpha Flares	735A 27	736A 26	737A 28	738A 27	-------	740A 27	741A 27	742A 28
C.1ba	H-alpha Flare Groups	740B 4	741B 4	742B 4					
C.1d	Flare Patrol Observations	740B 6	741B 7	742B 7					
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	740B 8	741B 9	742B 9					
C.3	Radio Bursts Fixed Frequency Select	735A 29	736A 30	737A 32	738A 30	-------	-------	741A 31	------
C.4	Radio Bursts Spectral	736A 82	737A 83	738A 94	739A 77	740A 75	741A 83	742A 83	
C.6	Sudden Ionospheric Disturbances	736A 81	737A 82	738A 93	739A 76	740A 74	741A 82	742A 82	
D.	GEOMAGNETIC EVENTS								
D.1a	Geomagnetic Indices	736A 92	737A 97	738A107	739A 89	740A 85	741A 93	742A 99	
D.1ba	27-day Chart of Kp Indices	736A 94	737A 99	738A109	739A 91	740A 87	741A 95	742A101	
D.1cb	Monthly Mean aa Indices	736A 95	737A100	738A110	739A 93	740A 88	741A 96	742A102	
D.1d	Principal Magnetic Storms	736A 99	737A104	738A114	739A 99	740A 92	741A100	742A106	
D.1f	Sudden Commencement/FlareEffect	736A100	737A105	738A115	739A100	740A 93	741A101	742A107	
D.1g	Equatorial Indices Dst	736A 97	737A 102	738A112	739A 97	740A 90	741A 98	742A104	
D.1l	Polar Cap (PC) Index	736A 98	737A103	738A113	739A 98	740A 91	741A 99	742A105	
F.	COSMIC RAYS								
F.1b	Cosmic Ray Neutron Cts (Climax)	736A 88	737A 91	738A101	739A 83	740A 79	741A 87	742A 93	
F.1h	Cosmic Ray Neutron Cts (Thule)	736A 88	737A 91	738A101	739A 83	740A 79	741A 87	742A 93	
F.1l	Cosmic Ray Neutron Cts (Kiel)	736A 88	737A 91	738A101	739A 83	740A 79	741A 87	742A 93	
F.1n	Cosmic Ray Neutron Cts (Beijing)	736A 88	737A 91	738A101	739A 83	740A 79	741A 87	742A 93	
F.1m	Cosmic Ray Neutron Cts (Haleakala)	736A 88	737A 91	738A101	739A 83	740A 79	741A 87	742A 93	
F.1o	Cosmic Ray Neutron Cts (Moscow)	736A 88	737A 91	738A101	739A 83	740A 79	741A 87	742A 93	
F.1p	Cosmic Ray Neutron Cts (Calgary)	736A 88	737A 91	738A101	739A 83	740A 79	741A 87	742A 93	
H.	MISCELLANEOUS								
H.60	ISES Alert Periods	735A 20	736A 19	737A 20	738A 20	739A 18	740A 20	741A 19	742A 20

The entry "736A 42" under Oct, for example, means that the sunspot drawings for Oct appear in SOLAR-GEOPHYSICAL DATA No. 736 Part I, and that they begin on page 42 "A" denotes Part I and "B", Part II. Blanks indicate data not yet received and dashes mark unavailable data.

CONTENTS

Prompt Reports Number 742 Part I

DATA FOR **MAY 2006**

Page

SOLAR-TERRESTRIAL ENVIRONMENT 4-19
Plots of GOES Satellite X-rays, Particles and Magnetometer Data
with ground-based McMurdo Neutron Monitor Cosmic Rays

ISES ALERT PERIODS (Advance and Worldwide) 20-22

SOLAR ACTIVITY INDICES
Daily Sunspot Numbers (12 Months) 23
Daily 2800 MHz Solar Flux (12 Months) 24
Daily Solar Indices (Sunspot Numbers and Solar Flux) 25

Smoothed Observed and Predicted Sunspot Numbers 26
Graph and Table of Monthly Mean Sunspot Numbers 1951-present 27

SOLAR FLARES
H-alpha Solar Flares 28
X-ray Solar Flares (GOES Full Disk Monitor) 29

Intervals of No Flare Patrol (See 6-month late chart in Comprehensive Reports.)

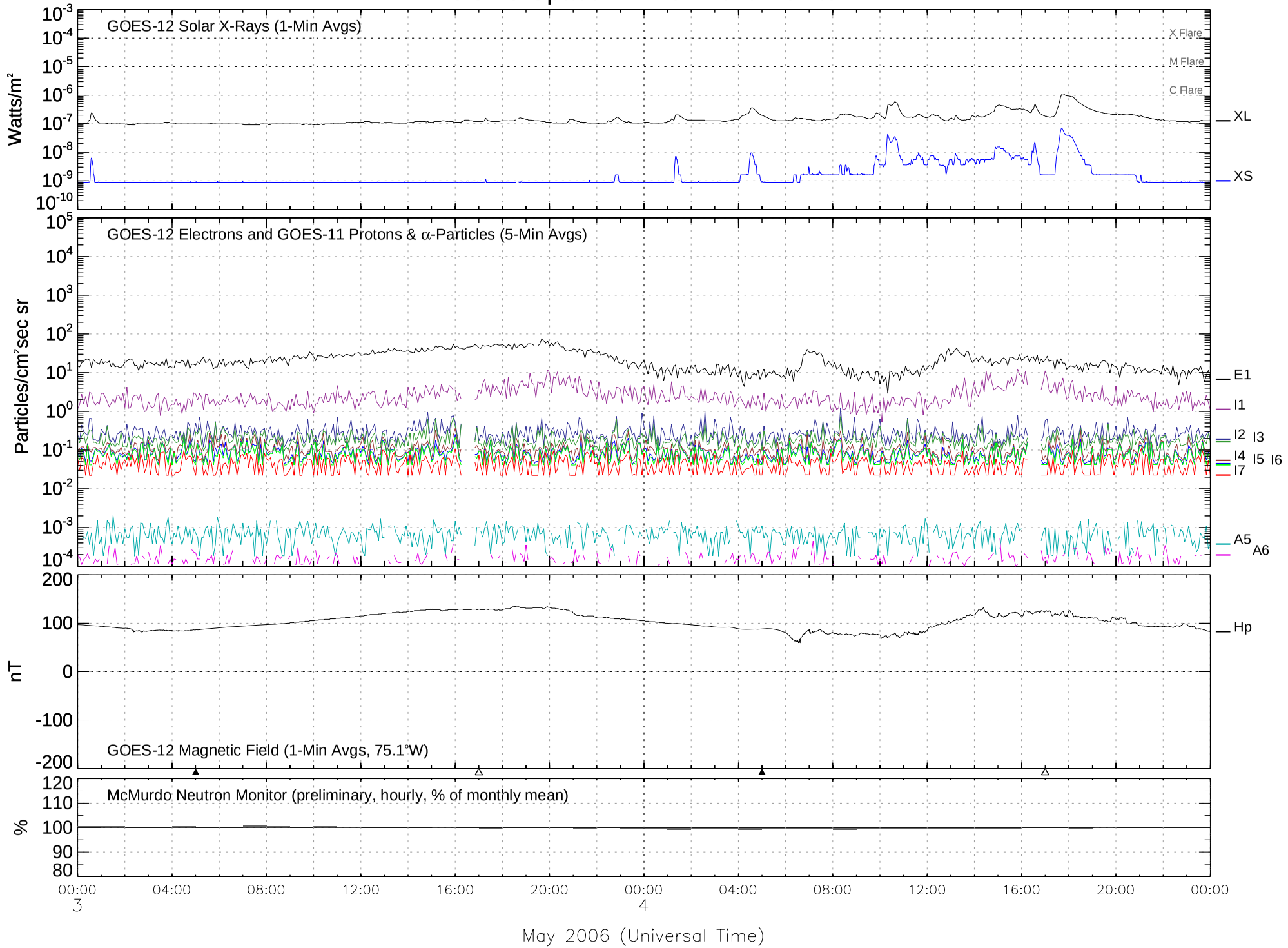
SOLAR RADIO EMISSION
Selected Fixed Frequency Events -- No events reported

STANFORD MEAN SOLAR MAGNETIC FIELD Graph 30
Table 31

GOES Daily Electron Fluence 32

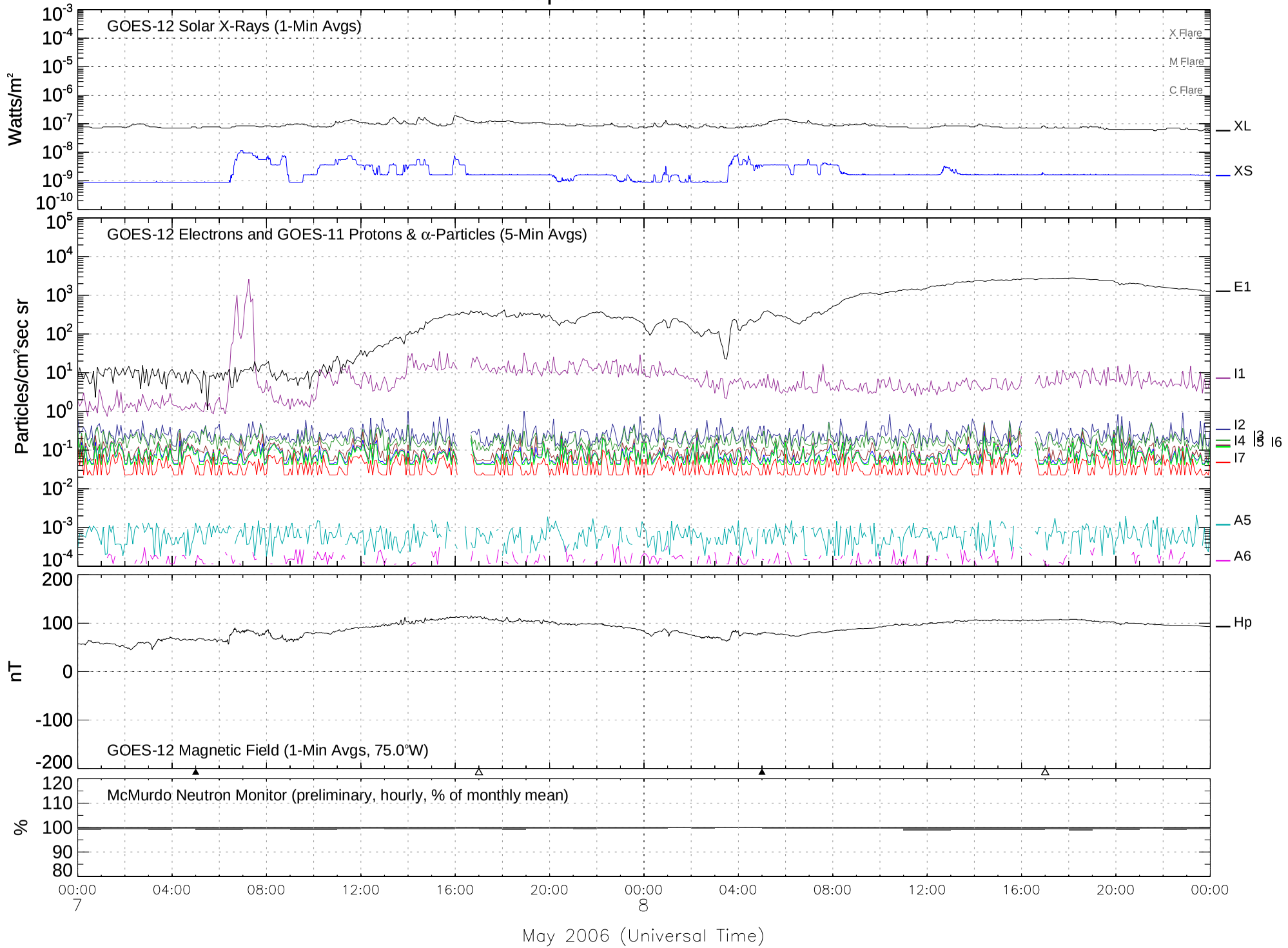
GOES Space Environment Monitor

GOES Space Environment Monitor

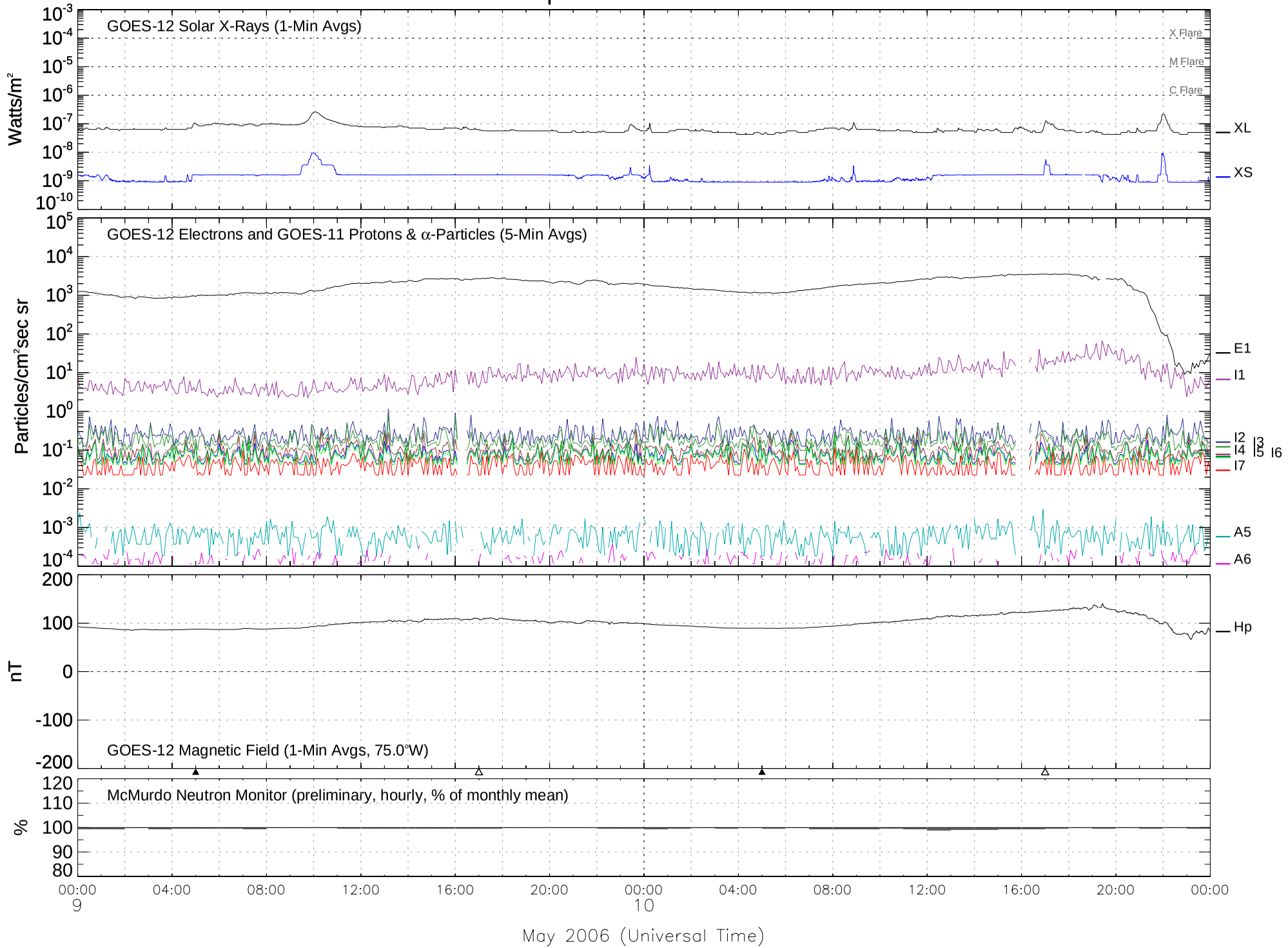


GOES Space Environment Monitor

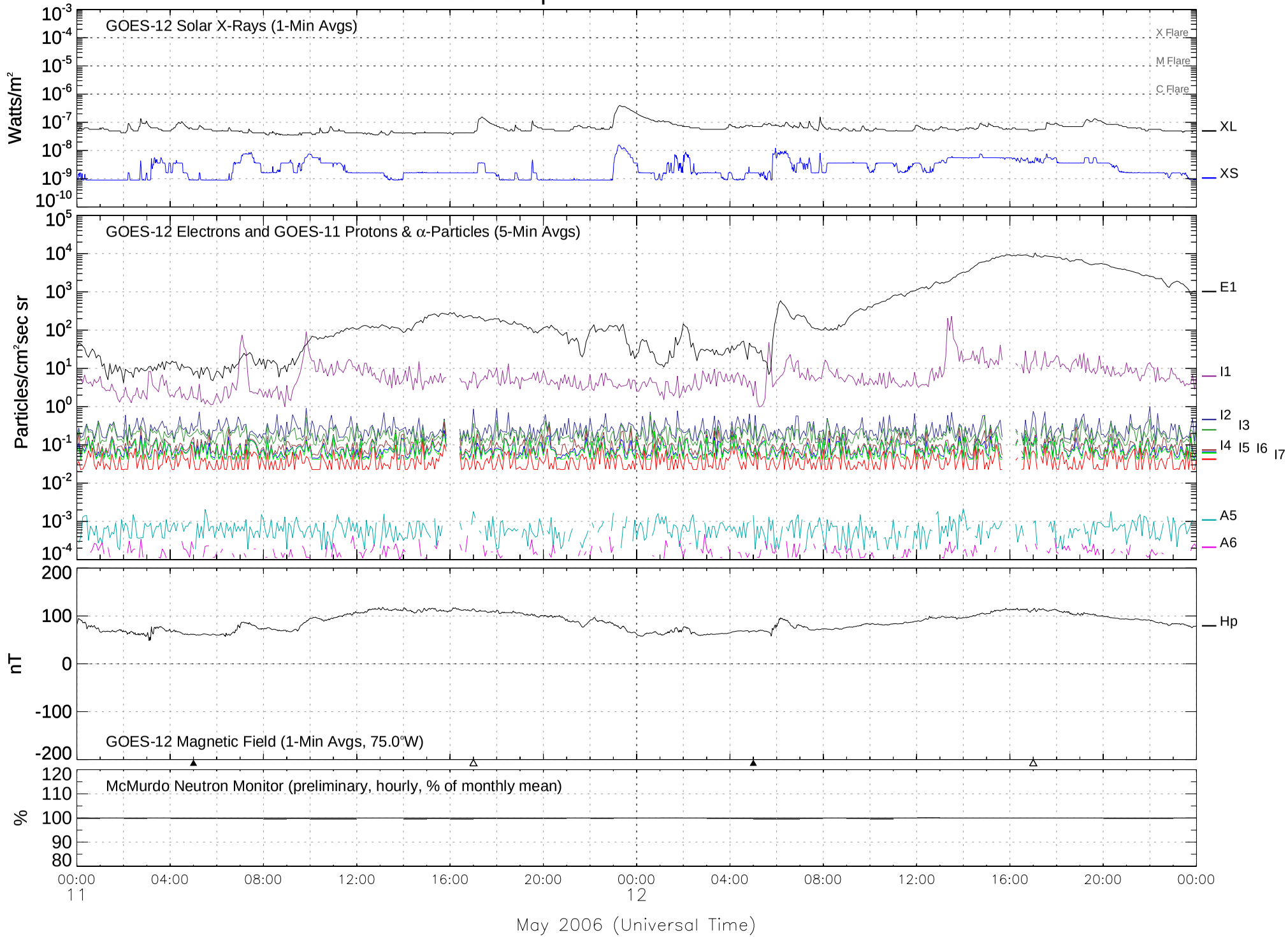
GOES Space Environment Monitor



GOES Space Environment Monitor

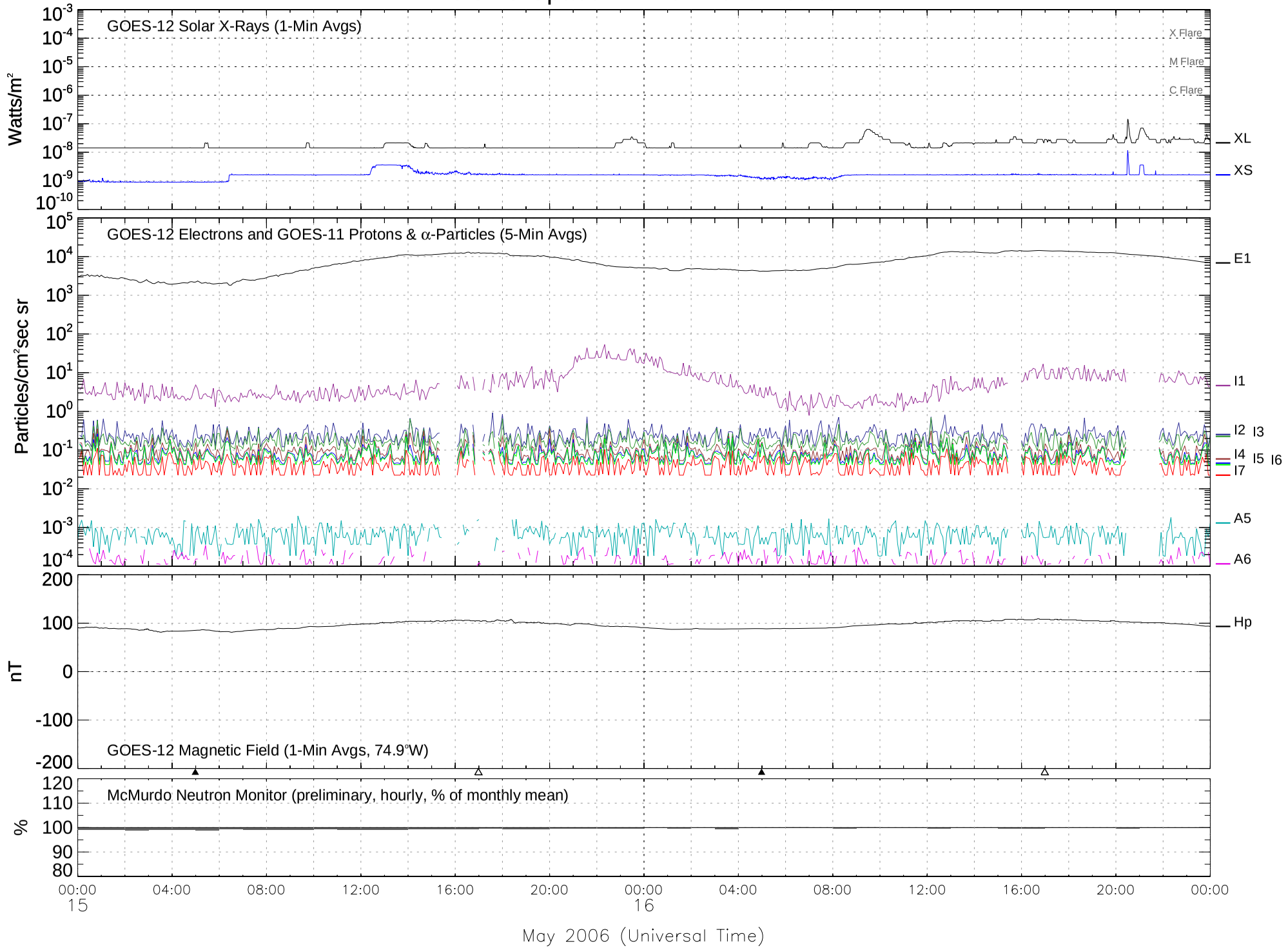


GOES Space Environment Monitor



GOES Space Environment Monitor

GOES Space Environment Monitor



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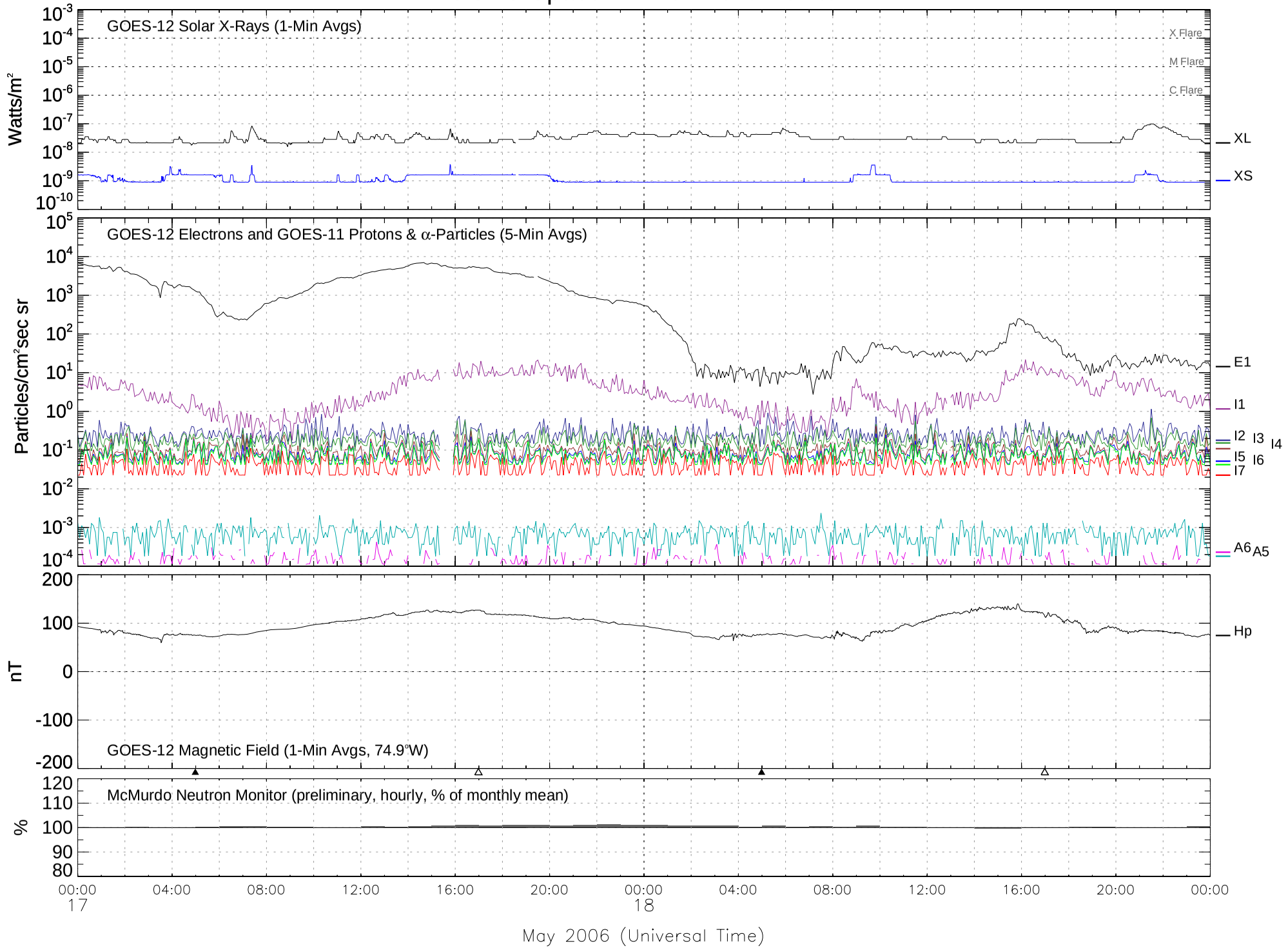

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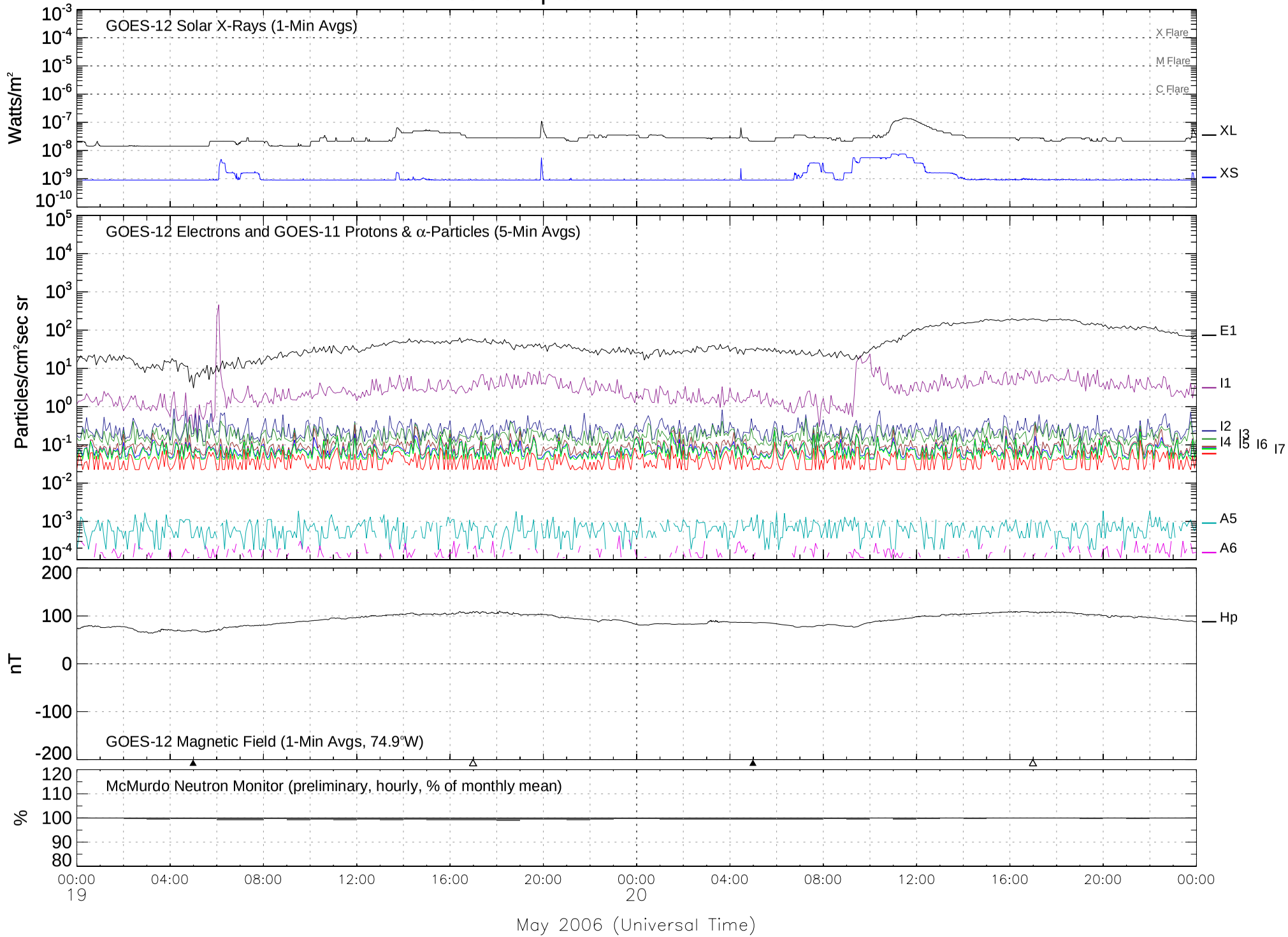
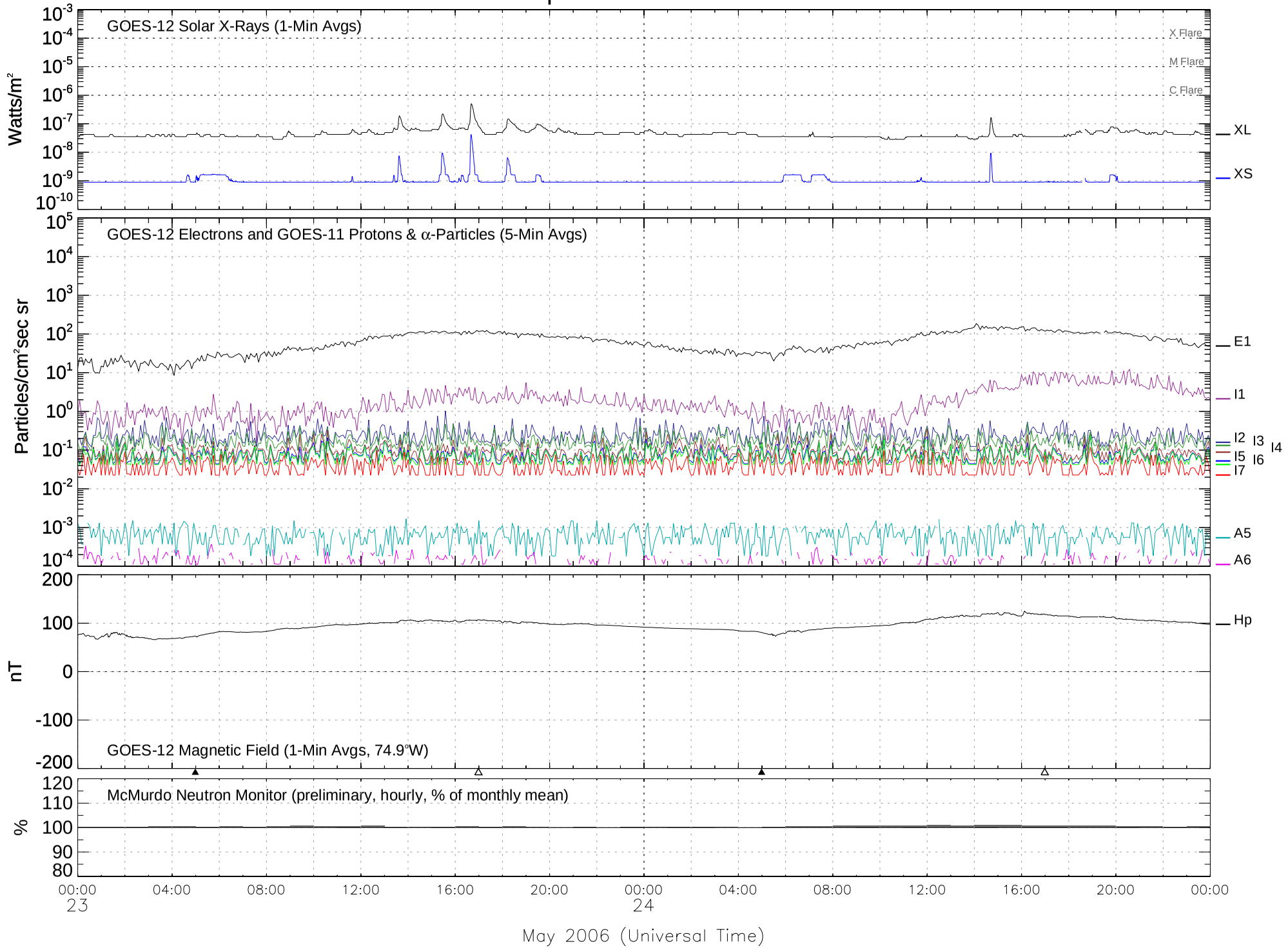


GOES Space Environment Monitor

GOES Space Environment Monitor



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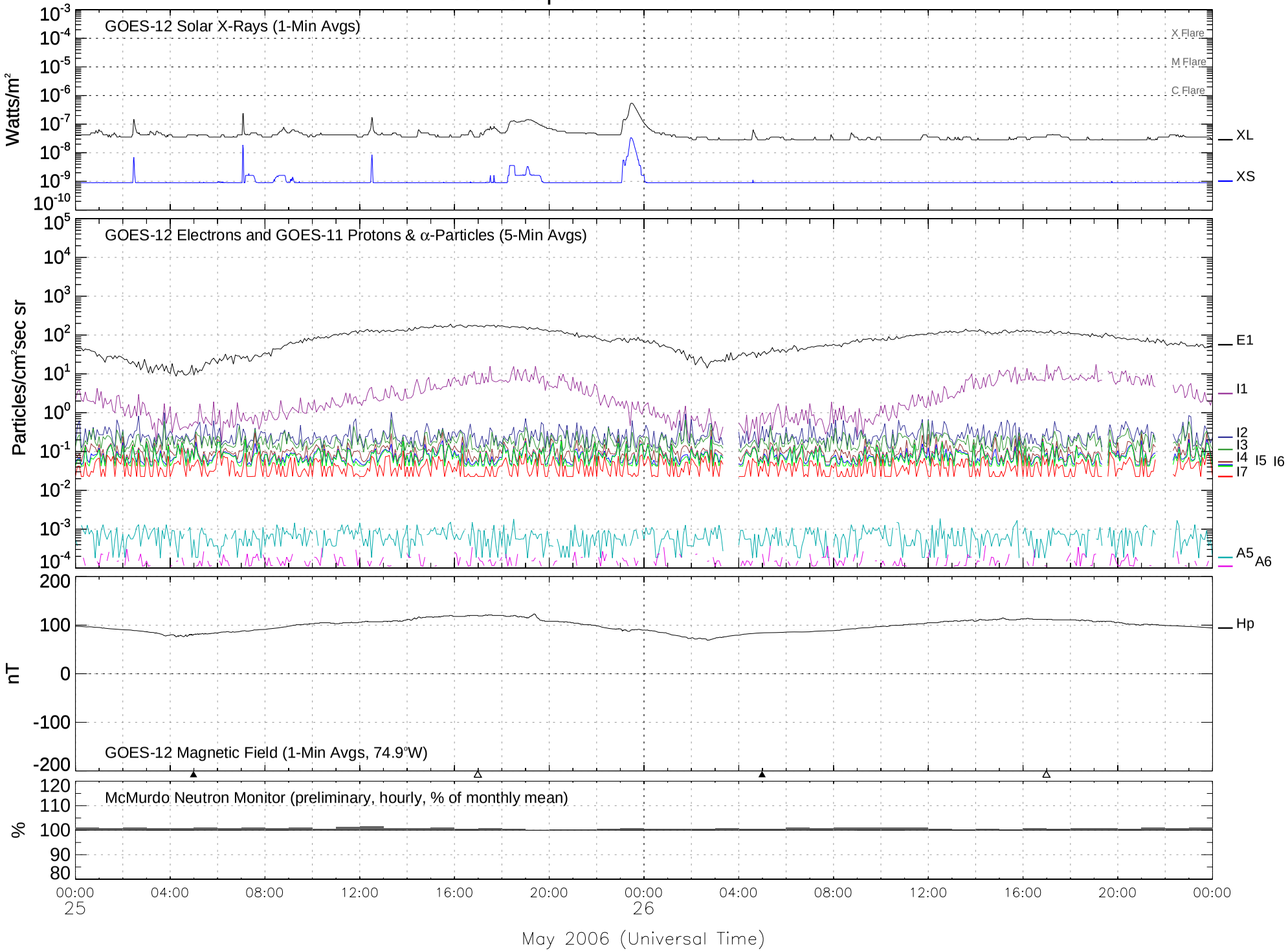

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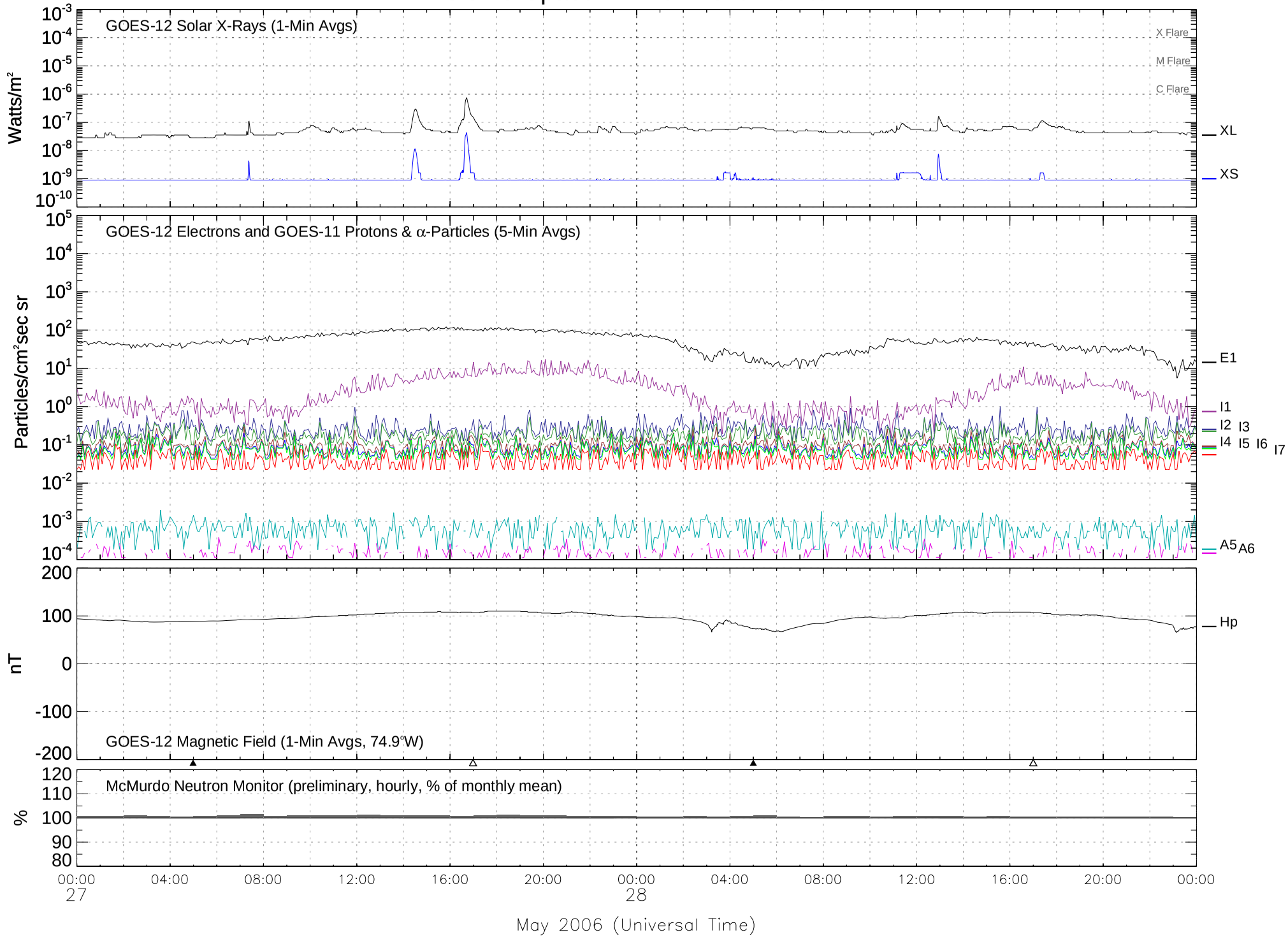

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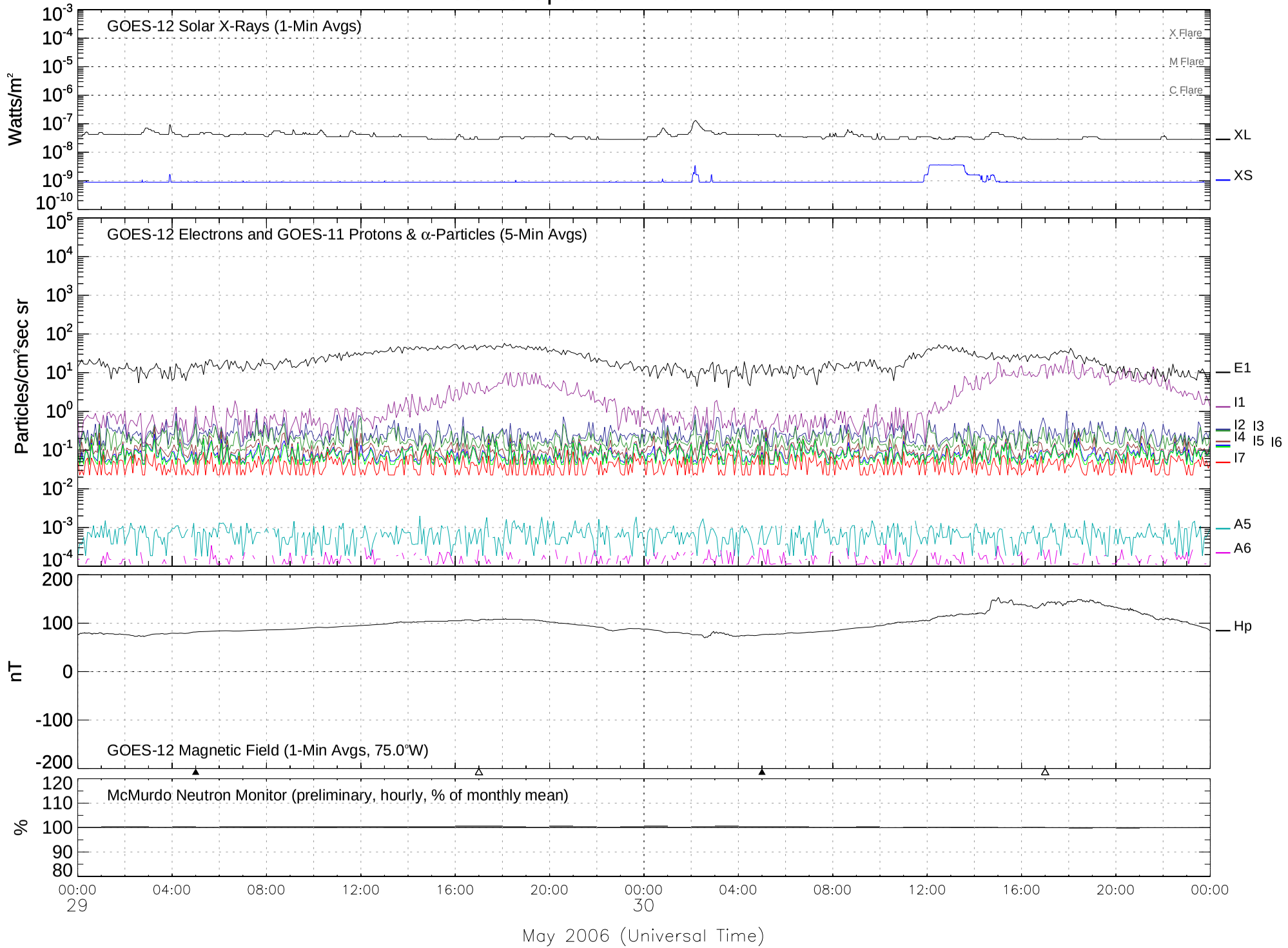
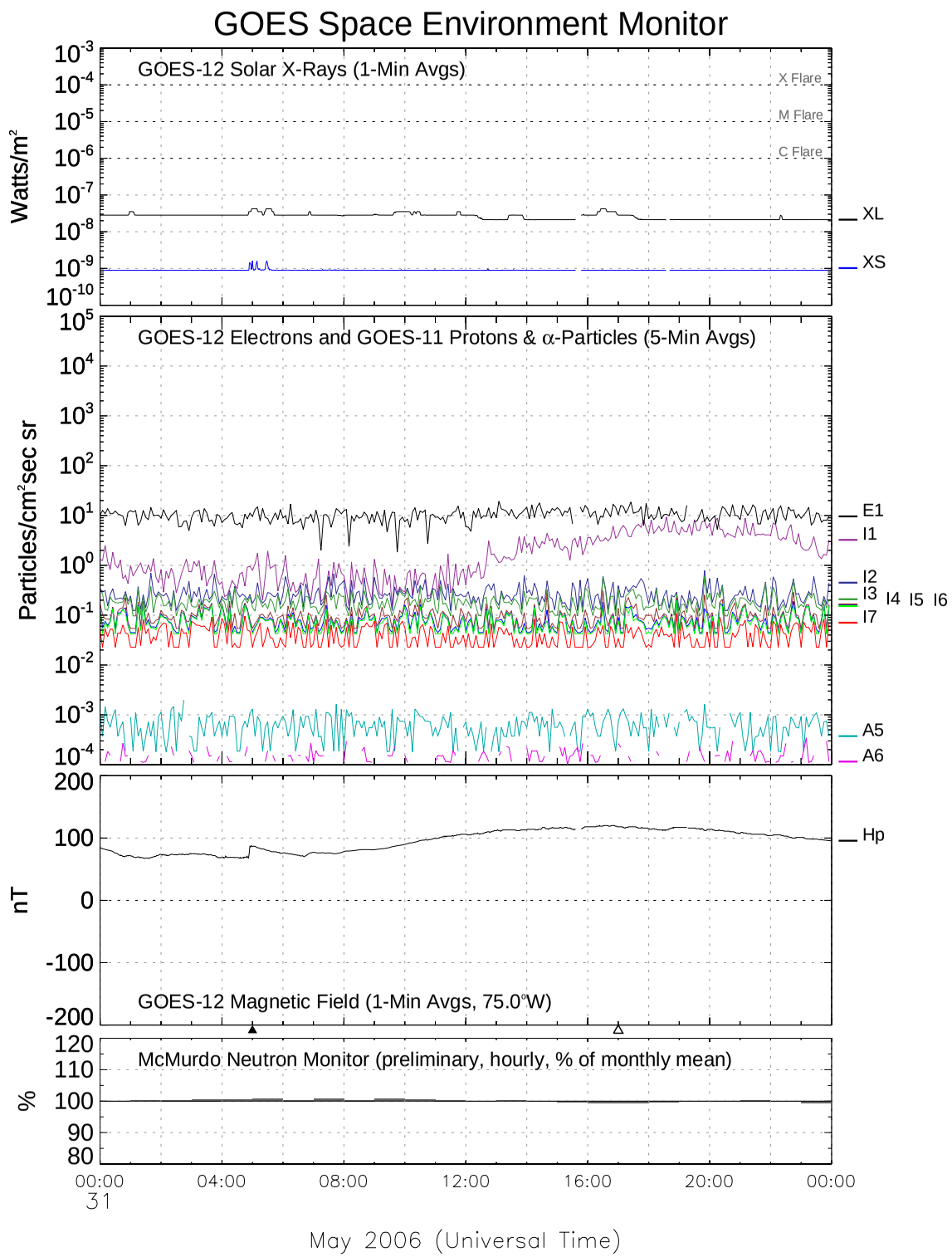



GOES Space Environment Monitor
GOES-12 Solar X-Rays (1-Min Avgs)
X Flare
M Flare
C Flare
Watts/m²
XL
XS
GOES-12 Electrons and GOES-11 Protons & α-Particles (5-Min Avgs)
Particles/cm²sec sr
E1
I1
I2
I3
I4 I5 I6
I7
A5
A6
Hp
nT
GOES-12 Magnetic Field (1-Min Avgs, 75.0°W)
McMurdo Neutron Monitor (preliminary, hourly, % of monthly mean)
%
00:00
04:00
08:00
12:00
16:00
20:00
00:00
31
May 2006 (Universal Time)

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

MAY 2006

Julian Day	Date of Issue	Date of Obs	Wolf No.	10-cm Solar Flux	A-index	Rgn No.	Location Lat	Location Lon	Flares Opt	Flares M	Flares X	Date of Fcst	Region Fcst(1)	Geoadvice(1)
121	01	30	62	100	0	10875	S08	W21	0	0	0	01	E	SOL: Eruptive
						10876	S11	E08	1	0	0	01	Q	MAG: Quiet
						10878	N14	E60	0	0	0	01	E	PRO: Quiet
122	02	01	51	93	3	10875	S11	W33	2	0	0	02	Q	SOL: Eruptive
						10876	S15	W07	1	0	0	02	Q	MAG: Quiet
						10878	N14	E46	0	0	0	02	Q	PRO: Quiet
123	03	02	58	89	5	10875	S12	W47	0	0	0	03	Q	SOL: Eruptive
						10876	S18	W16	0	0	0	03	Q	MAG: Quiet
						10878	N13	E31	0	0	0	03	Q	PRO: Quiet
						10879	N16	E07	0	0	0	03	Q	
124	04	03	52	89	2	10875	S12	W60	0	0	0	04	Q	SOL: Quiet
						10876	S17	W29	0	0	0	04	Q	MAG: Quiet
						10878	N14	E18	0	0	0	04	Q	PRO: Quiet
						10879	N17	W05	0	0	0	04	Q	
125	05	04	50	92	12	10875	S13	W72	0	0	0	05	Q	SOL: Quiet
						10878	N14	E05	0	0	0	05	Q	MAG: Active
						10879	N16	W18	0	0	0	05	Q	PRO: Quiet
						10880	S08	E63	0	0	0	05	Q	
126	06	05	61	87	16	10875	S13	W85	0	0	0	06	Q	SOL: Quiet
						10878	N14	W09	0	0	0	06	Q	MAG: Active
						10879	N16	W31	0	0	0	06	Q	PRO: Quiet
						10880	S08	E50	0	0	0	06	Q	
						10881	S12	E75	0	0	0	06	E	
127	07	06	69	87	19	10878	N14	W22	0	0	0	07	Q	SOL: Quiet
						10879	N16	W47	0	0	0	07	Q	MAG: Minor
						10880	S08	E37	0	0	0	07	Q	PRO: Quiet
						10881	S12	E68	0	0	0	07	Q	
						10882	S12	W19	0	0	0	07	Q	
128	08	07	64	86	19	10878	N12	W35	0	0	0	08	Q	SOL: Quiet
						10880	S09	E22	0	0	0	08	Q	MAG: Active
						10881	S10	E50	0	0	0	08	Q	PRO: Quiet
						10882	S12	W32	0	0	0	08	Q	
						10883	S04	E56	0	0	0	08	Q	
129	09	08	53	85	8	10880	S09	E08	0	0	0	09	Q	SOL: Quiet
						10881	S10	E33	0	0	0	09	Q	MAG: Quiet
						10882	S12	W45	0	0	0	09	Q	PRO: Quiet
						10883	S04	E43	0	0	0	09	Q	
130	10	09	56	83	3	10880	S09	W04	0	0	0	10	Q	SOL: Quiet
						10881	S08	E17	0	0	0	10	Q	MAG: Quiet
						10882	S12	W58	0	0	0	10	Q	PRO: Quiet
						10883	S04	E26	0	0	0	10	Q	
131	11	10	27	78	3	10882	S09	W17	0	0	0	11	Q	SOL: Quiet
						10882	S12	W70	0	0	0	11	Q	MAG: Minor
									0	0	0	11		PRO: Quiet
132	12	11	36	76	18	10880	S09	W29	0	0	0	12	Q	SOL: Quiet
						10882	S12	W82	0	0	0	12	Q	MAG: Active
						10883	S04	E02	1	0	0	12	Q	PRO: Quiet
133	13	12	38	76	15	10880	S09	W42	0	0	0	13	Q	SOL: Quiet
						10881	S08	W22	0	0	0	13	Q	MAG: Quiet
						10883	S04	W10	0	0	0	13	Q	PRO: Quiet
134	14	13	24	74	10	10883	S08	W57	0	0	0	14	Q	SOL: Quiet
						10883	S02	W27	0	0	0	14	Q	MAG: Quiet
									0	0	0	14		PRO: Quiet

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

MAY 2006

Julian Day	Date of Issue	Date of Obs	Wolf No.	10-cm Solar Flux	A-index	Rgn No.	Location Lat	Location Lon	Flares Opt	Flares M	Flares X	Date of Fcst	Region Fcst(1)	Geoadvice(1)
135	15	14	11	72	9	10880	S09	W71	0	0	0	15	Q	SOL: Quiet
									0	0	0	15		MAG: Quiet
									0	0	0	15		PRO: Quiet
136	16	15	0	72	4				0	0	0	16		SOL: Quiet
									0	0	0	16		MAG: Quiet
									0	0	0	16		PRO: Quiet
137	17	16	0	72	1				0	0	0	17		SOL: Quiet
									0	0	0	17		MAG: Quiet
									0	0	0	17		PRO: Quiet
138	18	17	0	72	6				0	0	0	18		SOL: Quiet
									0	0	0	18		MAG: Quiet
									0	0	0	18		PRO: Quiet
139	19	18	0	73	18				0	0	0	19		SOL: Quiet
									0	0	0	19		MAG: Active
									0	0	0	19		PRO: Quiet
140	20	19	15	75	7	10884	S13	E47	0	0	0	20	Q	SOL: Quiet
									0	0	0	20		MAG: Quiet
									0	0	0	20		PRO: Quiet
141	21	20	29	76	8	10885	S13	E33	0	0	0	21	Q	SOL: Quiet
						10885	S12	E44	0	0	0	21	Q	MAG: Quiet
									0	0	0	21		PRO: Quiet
142	22	21	30	78	5	10885	S14	E22	0	0	0	22	Q	SOL: Quiet
						10885	S12	E32	0	0	0	22	Q	MAG: Quiet
									0	0	0	22		PRO: Quiet
143	23	22	32	83	7	10885	S13	E08	0	0	0	23	Q	SOL: Quiet
						10885	S12	E17	0	0	0	23	Q	MAG: Quiet
									0	0	0	23		PRO: Quiet
144	24	23	48	84	6	10884	S13	W05	0	0	0	24	Q	SOL: Quiet
						10885	S12	E03	0	0	0	24	Q	MAG: Quiet
						10886	N08	E46	0	0	0	24	Q	PRO: Quiet
145	25	24	44	84	3	10884	S12	W14	0	0	0	25	Q	SOL: Quiet
						10885	S12	W09	0	0	0	25	Q	MAG: Quiet
						10886	N07	E31	0	0	0	25	Q	PRO: Quiet
146	26	25	33	84	5	10886	S11	W25	0	0	0	26	Q	SOL: Quiet
						10886	N08	E16	0	0	0	26	Q	MAG: Quiet
									0	0	0	26		PRO: Quiet
147	27	26	51	82	2	10885	S12	W38	0	0	0	27	Q	SOL: Quiet
						10886	N08	E04	0	0	0	27	Q	MAG: Quiet
						10887	S12	E64	0	0	0	27	Q	PRO: Quiet
						10888	N05	W64	0	0	0	27	Q	
148	28	27	69	83	2	10885	S12	W54	0	0	0	28	Q	SOL: Quiet
						10886	N08	W12	0	0	0	28	Q	MAG: Quiet
						10887	S13	E52	0	0	0	28	Q	PRO: Quiet
						10888	N06	W77	0	0	0	28	Q	
						10889	S03	E12	0	0	0	28	Q	
149	29	28	78	85	6	10886	N07	W24	0	0	0	29	Q	SOL: Quiet
						10887	S12	E38	0	0	0	29	Q	MAG: Quiet
						10888	N05	W91	0	0	0	29	Q	PRO: Quiet
						10889	S02	W06	0	0	0	29	Q	
						10890	S14	W29	0	0	0	29	Q	
150	30	29	54	81	1	10886	N08	W40	0	0	0	30	Q	SOL: Quiet
						10887	S12	E24	0	0	0	30	Q	MAG: Quiet

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

MAY 2006

Julian Day	Date of Issue	Date of Obs	Wolf No.	10-cm Solar Flux	A-index	Rgn No.	Location Lat	Location Lon	Flares Opt	Flares M	Flares X	Date of Fcst	Region Fcst(1)	Geoadvice(1)
						10889	S01	W20	0	0	0	30	Q	PRO: Quiet
						10890	S13	W42	0	0	0	30	Q	
151	31	30	51	80	14	10886	N08	W53	0	0	0	31	Q	SOL: Quiet
						10887	S12	E10	0	0	0	31	Q	MAG: Quiet
						10890	S15	W59	0	0	0	31	Q	PRO: Quiet
						10891	S13	E19	0	0	0	31	Q	

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

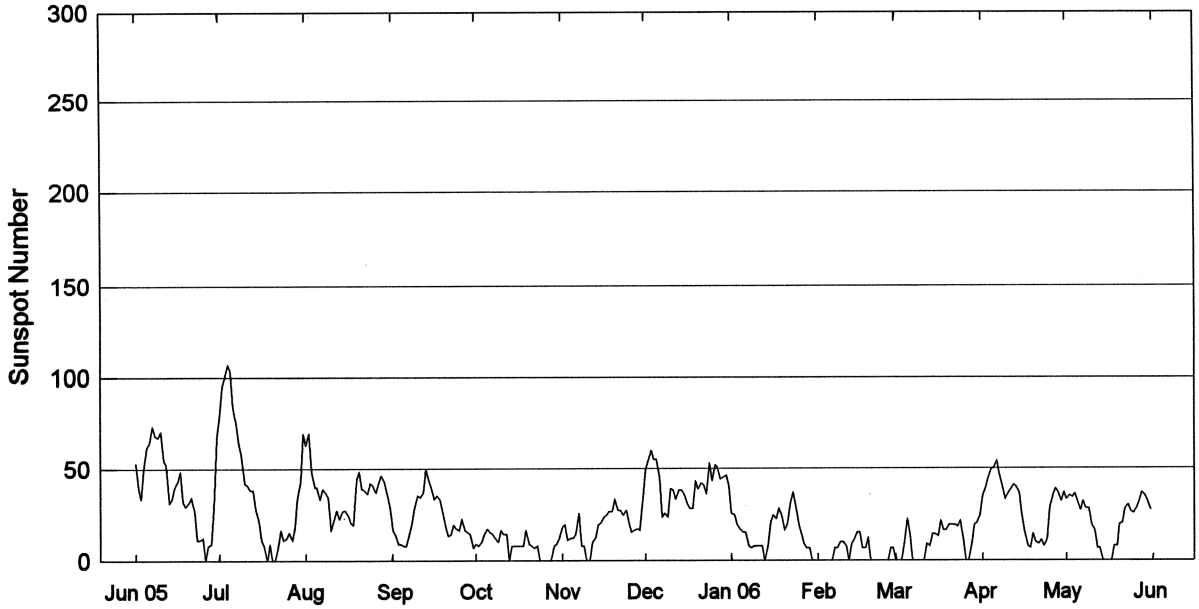
Magnetic (MAG) Geoadvice

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

Proton (PRO) Geoadvice

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

International Relative Sunspot Numbers
Jun 2005 - May 2006

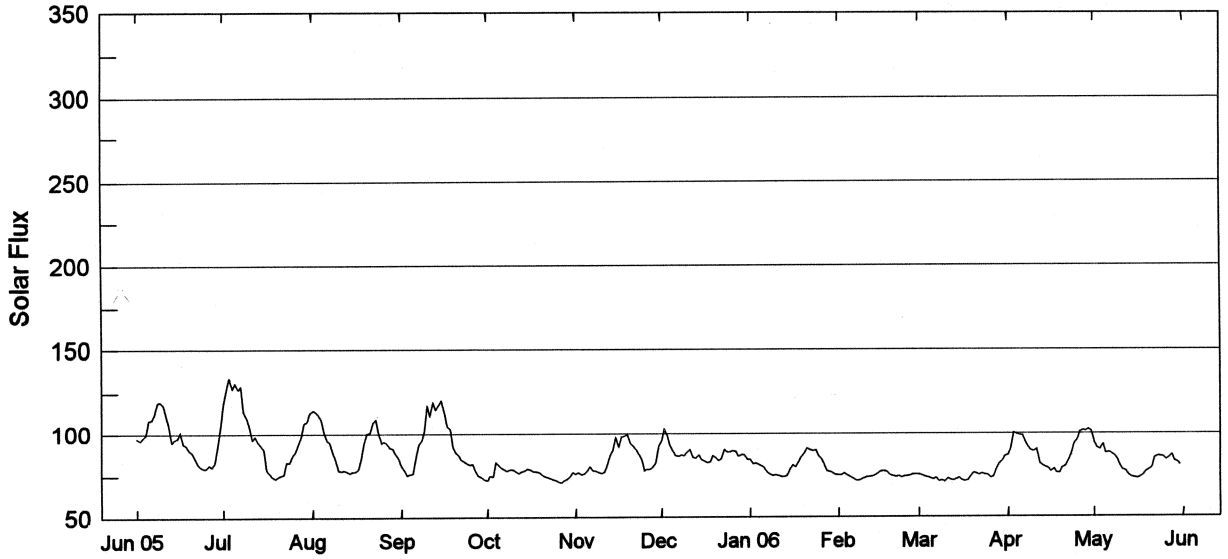


Day	Jun 05	Jul	Aug	Sep	Oct	Nov	Dec	Jan 06*	Feb*	Mar*	Apr*	May*
1	53	78	63	17	9	18	49	25	0	0	35	33
2	40	95	69	14	8	19	54	24	0	0	39	35
3	33	101	48	9	10	11	60	19	0	0	44	34
4	49	107	40	9	14	12	55	17	0	9	49	36
5	62	103	40	8	17	12	55	15	0	22	50	32
6	64	84	33	8	15	14	45	15	0	14	54	27
7	73	75	39	14	14	25	23	8	7	0	46	32
8	68	64	37	20	12	8	25	7	7	0	41	28
9	67	57	34	28	10	8	23	8	10	0	33	28
10	70	42	16	35	16	0	39	8	10	0	36	19
11	55	41	22	34	14	0	38	8	8	0	38	16
12	52	38	27	37	14	10	33	8	0	9	41	7
13	31	41	22	50	0	12	38	0	9	8	40	7
14	33	30	26	44	8	19	38	8	11	14	36	0
15	40	21	27	39	8	20	36	20	15	14	23	0
16	43	11	24	33	8	23	31	24	15	13	15	0
17	48	8	20	35	8	24	28	22	7	21	8	0
18	32	0	19	33	8	26	28	28	7	16	7	8
19	29	9	44	26	16	26	43	24	12	16	14	8
20	31	0	48	14	9	33	39	16	0	19	10	19
21	34	0	39	13	8	27	42	19	0	19	9	20
22	27	8	38	14	7	27	41	31	0	19	11	28
23	11	16	36	19	8	24	36	37	0	18	8	30
24	11	11	42	17	0	27	53	30	0	21	11	26
25	12	12	41	16	0	20	43	19	0	11	28	25
26	0	15	37	22	0	15	52	14	0	0	35	28
27	8	11	42	16	0	16	51	9	7	0	39	32
28	9	18	46	15	0	17	44	7	7	9	37	37
29	28	34	43	14	8	16	45	7		19	32	35
30	67	43	37	7	9	30	46	0		20	37	32
31		69	29		12		41	0		24		27
Mean	39.3	40.1	36.4	21.9	8.7	18.0	41.1	15.4	4.7	10.8	30.2	22.2

* = Provisional.

Penticton 2800 MHz (10.7cm) Solar Flux
Jun 2005 - May 2006

Adjusted to 1 AU



Day	Jun 05	Jul	Aug	Sep	Oct	Nov	Dec	Jan 06	Feb	Mar	Apr	May
1	96.9	118.5	114.6	80.6	72.3	76.1	95.5	84.5	75.3	75.6	86.9	94.8
2	96.0	128.0	113.5	78.5	75.0	76.8	103.3	81.7	75.1	74.7	91.1	90.9
3	98.0	134.1	112.2	75.4	74.4	75.5	98.4	82.1	76.4	74.2	100.4	90.4
4	99.8	127.8	109.2	75.8	82.7	76.1	92.5	81.2	74.9	73.8	99.6	93.4
5	108.6	131.0	101.7	76.2	81.3	77.9	89.0	80.6	74.2	73.0	99.1	88.2
6	109.2	127.2	96.1	84.7	79.4	80.3	86.5	79.3	72.9	72.5	99.1	88.6
7	112.4	129.1	94.9	93.6#	78.7	78.0	86.3	76.6	72.0	73.3	94.7	87.8
8	119.3	114.2	88.9	95.5	78.0	77.9	86.9	75.6	72.0	71.3	91.3	86.3
9	119.7	110.2	84.7	100.6#	78.7	76.6	86.4	75.0	72.8	71.8	89.5	84.2
10	117.9	105.2	78.3	117.6	78.8	76.4	88.7	75.2	73.2	71.2	89.1	79.8
11	111.4	96.4	77.9	111.1	77.3	77.0	90.2	74.7	74.1	73.1	90.1	77.9
12	106.3	98.5	78.3	119.5	76.5	81.4	85.6	74.0	74.1	72.3	81.6	77.3
13	94.7	94.8	77.4	115.0#	77.6	86.0	85.2	74.0	74.4	71.7	80.5	75.0
14	96.8	92.9	76.7	117.9	78.0	90.4	86.8	74.9	75.4	72.8	79.4	73.6
15	97.5	90.1	77.7	120.6	79.1	97.8	84.2	78.3	76.6	73.4	78.9	73.2
16	101.3	78.8	77.7	112.9#	78.7	91.8	83.1	81.1	77.3	71.7	77.0	73.1
17	93.7	76.5	78.9	104.9	77.5	98.2	82.5	79.8	77.3	71.3	78.5	73.6
18	92.9	74.4	84.7	103.2	77.7	98.8	82.8	82.9	76.7	71.7	76.5	75.0
19	89.8	73.5	95.3	91.9	77.2	99.6	86.6	85.8	74.8	74.6	76.5	77.1
20	88.9	74.4	100.4	88.5	76.0	94.1	84.9	87.9	74.5	76.2	79.3	78.0
21	85.5	75.2	100.8	86.7	74.6	92.4	83.7	90.9	74.2	76.1	80.0	79.4
22	82.1	75.9	107.2*	84.3	74.0	90.3	84.8	89.9	74.4	75.4	83.2	85.1
23	80.1	82.7	109.3*	83.3	73.4	87.5	90.1	89.6	73.6	76.1	87.7	86.3
24	79.2	82.8	100.7	81.9	72.5	84.4	88.9	89.8	74.4	75.4	93.9	85.9
25	79.3	86.5	94.4	81.4	72.1	77.9	88.8	86.3	74.5	75.2	96.3	85.9
26	81.3	89.2	95.2	81.7	71.2	78.7	89.5	84.2	75.0	73.3	101.3	83.8
27	80.0	93.4	94.0	77.2	70.7	78.6	89.2	81.0	75.5	74.0	102.0	85.2
28	82.6	98.7	91.6	74.9	72.1	79.7	86.1	77.6	75.7	79.0	101.5	87.0
29	91.9	106.9	90.9	74	73.1	82.4	87.4	77.2		81.5	102.7	83.3
30	105.9	108.2	87.6	72.4	74.5	92.0	86.9	76.5		83.7	101.4	82.3
31		113.1	85.6		76.7		84.5	75.3		86.1		80.6
Mean	96.6	99.6	92.8	92.1	76.1	84.4	87.9	80.8	74.7	74.7	89.6	82.7

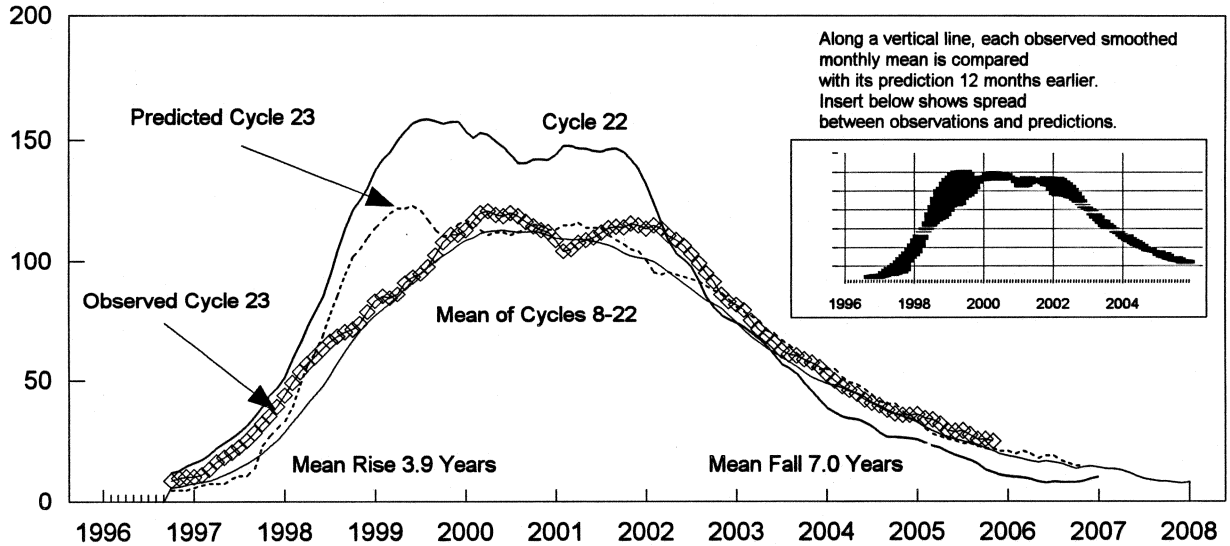
NOTE: # - 1700 or 1800UT reading, burst in progress at 2000UT. *-2300UT reading, burst in progress.
+ - 1700UT Reading, no data available at 2000UT.

DAILY SOLAR INDICES
May 2006

Day	Day of Year	Bartels Cycle Day	Sunspot Numbers Int	Sunspot Numbers Amer	Obs Flux Penticton (2800)	SGMR (15400)	SGMR (8800)	SGMR (4995)	Penticton (2800)	SGMR (2695)	SGMR (1415)	SGMR (610)	SGMR (410)	SGMR (245)
							-----Solar Flux Adjusted to 1 Astronomical Unit--------							
1	121	24	33	40	93.4	556	229	151	94.8	107	60	38	27	7
2	122	25	35	36	89.4	459	171	113	90.9	91	55	34	25	6
3	123	26	34	35	89.0	535	220	140	90.4	101	57	30	24	10
4	124	27	36	38	91.8	---	---	---	93.4	---	---	---	---	---
5	125	1	32	28	86.7	562	225	140	88.2	94	55	32	24	11
6	126	2	27	27	87.0	548	227	142	88.6	91	54	32	25	8
7	127	3	32	36	86.2	554	218	139	87.8	96	54	33	25	8
8	128	4	28	32	84.7	545	219	138	86.3	87	53	34	26	15
9	129	5	28	27	82.6	510	226	142	84.2	94	53	33	27	18
10	130	6	19	21	78.2	---	---	---	79.8	---	---	29	23	10
11	131	7	16	13	76.4	499	218	132	77.9	80	47	31	23	8
12	132	8	7	9	75.7	497	222	136	77.3	82	46	31	24	6
13	133	9	7	5	73.5	437	177	112	75.0	77	44	29	23	5
14	134	10	0	1	72.0	430	166	104	73.6	72	42	28	22	4
15	135	11	0	1	71.7	516	201	120	73.2	74	42	28	23	5
16	136	12	0	0	71.5	493	217	131	73.1	78	42	29	22	6
17	137	13	0	0	72.0	524	215	128	73.6	78	43	28	22	7
18	138	14	8	3	73.3	521	216	129	75.0	77	44	30	23	7
19	139	15	8	9	75.3	521	219	140	77.1	82	45	31	24	6
20	140	16	19	20	76.2	530	214	140	78.0	82	47	31	25	7
21	141	17	20	22	77.5	527	220	132	79.4	86	48	32	24	8
22	142	18	28	28	83.1	536	213	136	85.1	90	51	34	25	8
23	143	19	30	28	84.2	533	226	147	86.3	92	52	34	26	5
24	144	20	26	27	83.7	530	215	144	85.9	90	54	35	26	---
25	145	21	25	26	83.7	523	217	134	85.9	87	54	36	26	9
26	146	22	28	32	81.6	545	210	131	83.8	88	53	35	25	8
27	147	23	32	31	83.0	553	222	138	85.2	90	54	37	28	11
28	148	24	37	38	84.7	574	215	139	87.0	92	54	35	26	7
29	149	25	35	36	81.1	533	219	135	83.3	90	52	35	25	8
30	150	26	32	31	80.0	519	218	136	82.3	90	52	35	27	10
31	151	27	27	20	78.4	563	219	136	80.6	85	50	35	27	8
MEAN			22.2	22.6	80.9	523	213	133	82.7	87	50	32	24	8

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

Cycle 23 Smoothed Sunspot Numbers: Observed and Predicted



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

Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Avg
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	24	29
												(1)	(0)
2006	23	22	21	21	20	20	19	18	17	16	16	15	(14)
	(3)	(5)	(5)	(6)	(6)	(7)	(7)	(8)	(9)	(9)	(9)	(9)	(7)
2007	13	13	13	13	13	13	13	13	14	15	16	16	14
	(9)	(9)	(9)	(9)	(10)	(11)	(12)	(14)	(16)	(17)	(19)	(21)	(13)

Solar Cycle 22 | Solar Cycle 23 | Min, Max, and Predictions

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

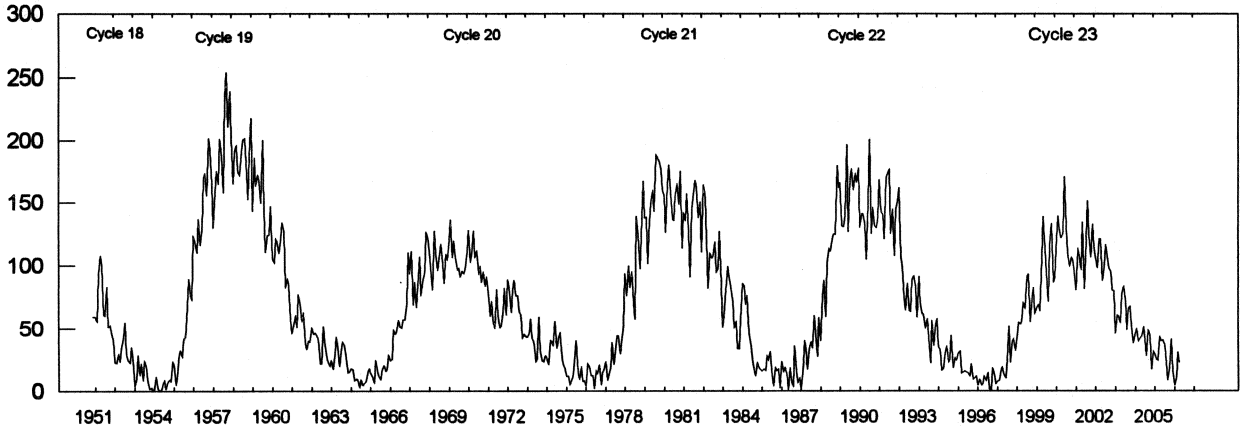
+ April 2000 marks Cycle 23 maximum.

Observed and Predicted Numbers. For the end of Cycle 22, and the rise and decline of Cycle 23, the table above lists observed smoothed sunspot numbers up to the one that includes the most recent monthly mean. We based these smoothed values on final monthly means through Dec 2005 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 November 2006 prediction. There exists a 90% chance that in November, the actual smoothed number will fall somewhere between 7 and 25.

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

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

Mean Monthly Sunspot Numbers
Jan 1951 - May 2006



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								16.7	

Values are preliminary after Dec, 2005. For the yearly means, each 'M' marks a sunspot cycle maximum and each 'm' a minimum.

Hα SOLAR FLARES

MAY 2006

Sta	Day	Start (UT)	Max (UT)	End (UT)	Lat	CMD	NOAA/ USAF Region	CMP Mo Day	Dur (Min)	Imp Opt	Xray	See	Obs Type	Area Measurement Time (UT)	Apparent (10-6 Disk)	Corr (Sq Deg)	Remarks
LEAR	01	0156	0159	0203	S11	W02	10876	04 30.9	7	SF		3	E		19		FH
HOLL		1532	1543	1547	S17	W29	10875	04 29.5	15	SF		3	E		11		FE
HOLL		1552	1555	1603	S11	W30	10875	04 29.5	11	SF		3	E		14		F
HOLL	11	2304	2304	2313	S06	E00	10883	05 12.0	9	SF		3	E		10		F

"Remarks"

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

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

NOTE: Beginning with the February 2005 data, only H-alpha flares are included in this table. Because the number of H-alpha patrols are dwindling and emphasis is now on the X-ray flare reports, a separate table of solar X-ray flares is now produced.

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NO SELECTED FIXED FREQUENCY SOLAR RADIO BURSTS AROUND 2695 MHZ WERE REPORTED FOR MAY 2006.

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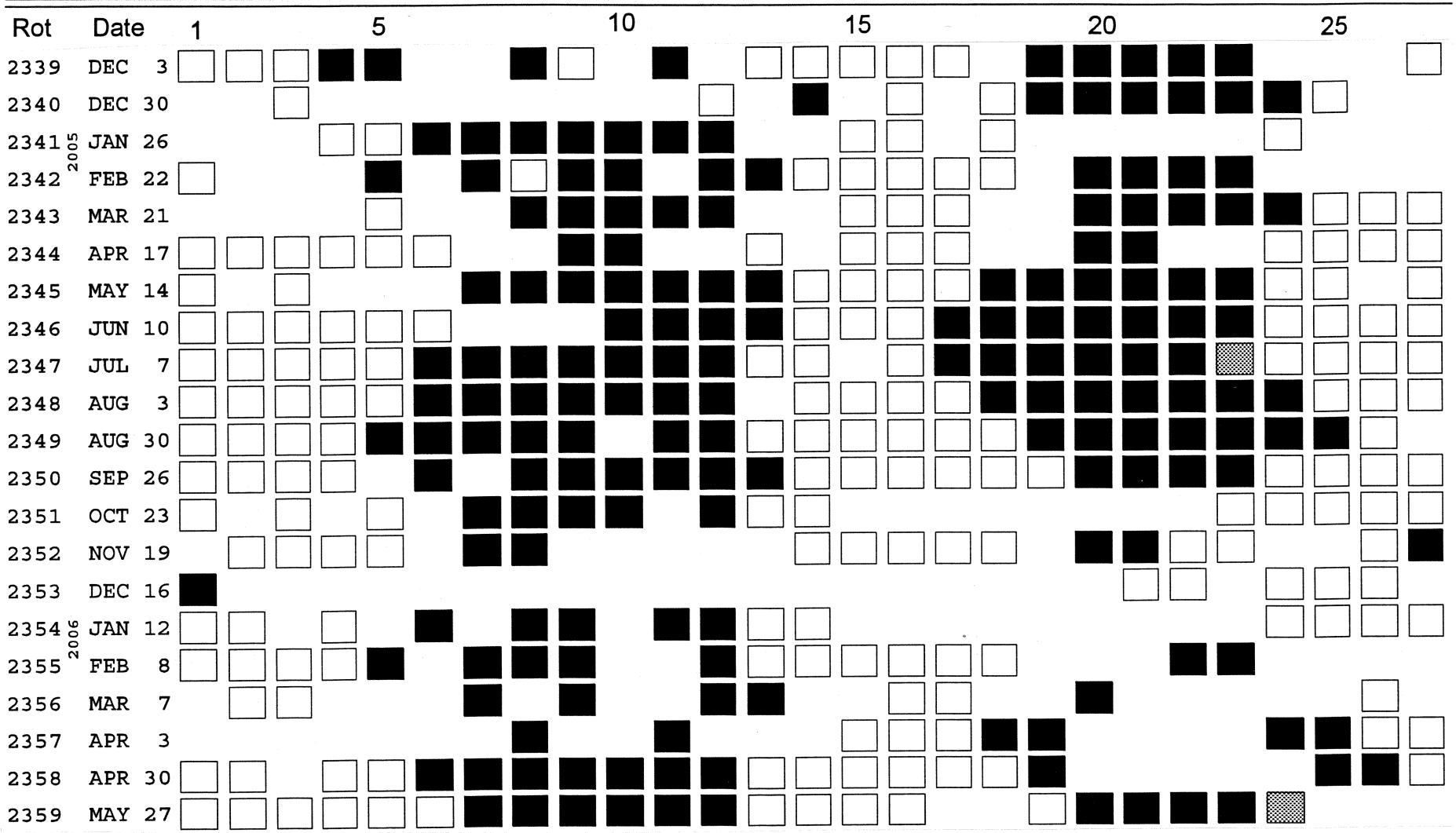
X - R A Y S O L A R F L A R E S

MAY 2006

Sta	Day	Start (UT)	Max (UT)	End (UT)	Lat	CMD	NOAA/ USAF Region	CMP Mo	CMP Day	Dur (Min)	Imp Xray	Total Integrated Flux(1)	Total Area(2)	Total(3) Intensity
GOES	01	0049	0052	0056	S07	W25	10875			7	B 2.3	8.3E-05	1.8E+02	3.1E+02
GOES		0152	0157	0200	S10	W01	10876			8	B 9.3	2.5E-04	1.6E+03	6.4E+03
GOES		1433	1535	1634			10875			121	C 1.0	6.4E-03		
GOES		2039	2043	2049			10875			10	B 2.1	1.2E-04		
GOES	02	1134	1237	1319			10875			105	B 2.9	1.5E-03		
GOES	03	0030	0035	0041	S12	W24	10877			11	B 2.4	1.3E-04	1.8E+02	3.3E+02
GOES	04	0117	0124	0133						16	B 2.2	1.9E-04		
GOES		1014	1038	1048	S10	E83				34	B 5.9	9.3E-04	1.3E+03	3.5E+03
GOES		1734	1745	1815	S10	E90	10881			41	C 1.1	2.3E-03	2.4E+03	6.3E+03
GOES	05	0909	0913	0917	S10	E78	10880			8	B 1.6	6.9E-05	5.0E+01	8.9E+01
GOES		1642	1645	1647	S07	W90	10875			5	B 1.8	4.2E-05	3.5E+02	6.2E+02
GOES		2012	2016	2023	S07	W90	10875			11	B 2.3	1.4E-04	6.3E+02	1.1E+03
GOES	06	0011	0019	0032	S07	W90	10877			21	B 5.6	6.3E-04	2.3E+03	4.7E+03
GOES		0441	0454	0506	S07	W90	10877			25	B 8.7	9.0E-04	2.3E+03	6.1E+03
GOES		0550	0553	0555	S08	W90	10875			5	B 2.7	7.0E-05	3.5E+02	6.0E+02
GOES		0738	0742	0745	S04	E79	10881			7	B 3.1	1.1E-04	2.8E+02	5.0E+02
GOES		0808	0821	0839	S08	W90	10877			31	B 6.3	9.6E-04	1.7E+03	3.8E+03
GOES	07	1421	1428	1438						17	B 1.6	1.4E-04		
GOES		1553	1600	1623						30	B 1.9	3.1E-04		
GOES	10	0850	0853	0856						6	B 1.0	3.5E-05		
GOES		1656	1702	1713	S10	W71	10882			17	B 1.2	1.1E-04	2.5E+02	4.7E+02
GOES		2153	2200	2207	S12	W74	10882			14	B 2.1	1.5E-04	8.0E+02	1.9E+03
GOES	11	1710	1722	1737						27	B 1.5	2.1E-04		
GOES		1929	1932	1935						6	B 1.1	3.3E-05		
GOES		2257	2316	2354	S06	W00	10883			57	B 3.9	1.0E-03	6.0E+02	1.6E+03
GOES	12	0720	0724	0727	S11	W90	10882			7	B 1.1	3.9E-05	1.0E+02	1.7E+02
GOES		0748	0752	0754	S11	W90	10882			6	B 1.5	4.0E-05	4.0E+02	7.1E+02
GOES	16	2027	2030	2033	S09	W76	10880			6	B 1.4	3.5E-05	2.8E+02	5.5E+02
GOES	19	1952	1955	1959	S13	E49	10884			7	B 1.0	3.4E-05	1.3E+02	2.2E+02
GOES	22	1937	1952	2006	S13	E14	10884			29	B 6.4	7.6E-04	1.5E+03	3.9E+03
GOES	23	1333	1338	1344	S12	E03	10884			11	B 1.8	9.3E-05	1.3E+02	2.2E+02
GOES		1523	1528	1533	S10	E08	10885			10	B 2.2	1.1E-04	3.3E+02	6.2E+02
GOES		1635	1641	1646	S12	E01	10884			11	B 5.0	2.2E-04	7.8E+02	1.9E+03
GOES		1809	1815	1824						15	B 1.4	1.1E-04		
GOES	24	1438	1443	1446	S12	W11	10884			8	B 1.6	5.5E-05	1.8E+02	3.3E+02
GOES	25	0225	0228	0231	N06	E26	10886			6	B 1.4	3.8E-05	1.3E+02	2.3E+02
GOES		0701	0705	0707	S12	W13	10885			6	B 2.4	4.7E-05	2.3E+02	6.4E+02
GOES		1227	1231	1233	S12	W16	10885			6	B 1.7	4.4E-05	1.3E+02	3.0E+02
GOES		1817	1905	1927						70	B 1.4	5.1E-04		
GOES		2303	2328	2343	S13	W29	10885			40	B 5.4	7.3E-04	1.1E+03	3.5E+03
GOES	27	0720	0723	0725			10888			5	B 1.0	2.6E-05		
GOES		1420	1431	1438	S12	W47	10885			18	B 2.9	2.2E-04	8.3E+02	2.1E+03
GOES		1634	1643	1647	S10	W48	10885			13	B 7.3	3.7E-04	1.9E+03	4.9E+03
GOES	28	1252	1257	1303	S13	W23	10890			11	B 1.6	7.9E-05	2.5E+02	4.8E+02
GOES	30	0202	0211	0218	S13	E31	10887			16	B 1.3	1.1E-04	7.5E+01	1.4E+02

STANFORD MEAN SOLAR MAGNETIC FIELD



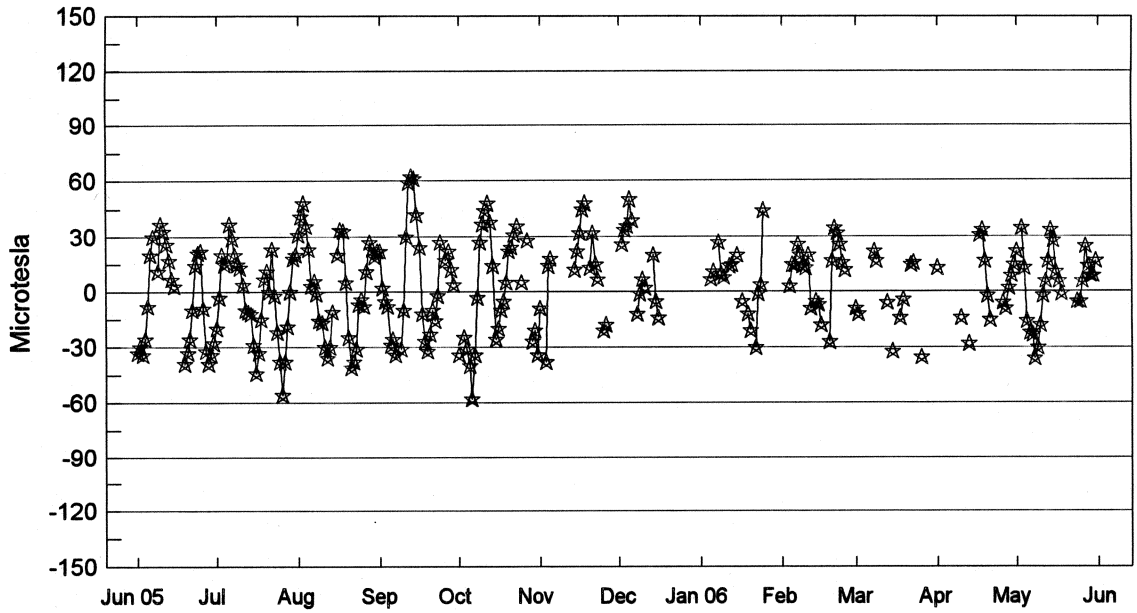
Mean Solar Magnetic Field Polarity: □ = field > 2 microT; ▒ = -2 microT ≤ field ≤ 2 microT

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

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

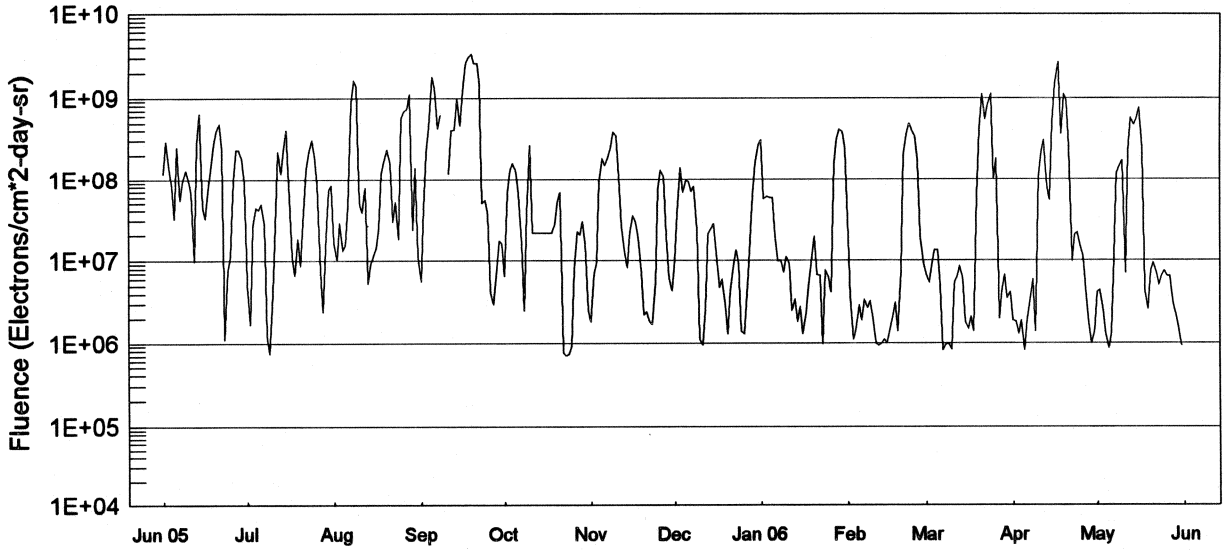
Stanford Mean Solar Magnetic Field (Microtesla)
"Sun-As-A-Star"

31
May 06



Day	Jun 05	Jul	Aug	Sep	Oct	Nov	Dec	Jan 06	Feb	Mar	Apr	May
1	-33	-20	31	22	-34	-9	—	—	—	-9	13	22
2	-30	-3	41	2	—	—	26	—	—	-12	—	—
3	-34	20	48	-5	-25	-38	34	—	—	—	—	35
4	-26	15	36	-8	-31	14	36	—	3	—	—	13
5	-8	16	23	-29	-40	18	50	7	15	—	—	-16
6	20	37	3	-26	-58	—	39	11	15	—	—	-22
7	30	29	6	-34	-34	—	—	—	26	—	—	-23
8	—	20	-1	—	-3	—	-12	27	20	22	—	-36
9	11	15	-16	-31	27	—	-1	10	14	17	—	-30
10	37	13	-17	-10	37	—	7	8	13	—	-14	-18
11	33	4	-30	30	44	—	2	—	20	—	—	-2
12	26	-10	-36	59	48	—	—	14	-9	—	—	6
13	17	-11	-30	62	38	—	—	15	—	-6	-28	17
14	7	-12	-11	61	14	12	20	—	-5	—	—	34
15	3	-29	—	42	-26	22	-5	20	-7	-32	—	28
16	—	-44	20	24	-20	32	-14	—	-18	—	.	11
17	—	-33	34	-12	-10	45	—	-5	—	—	31	6
18	—	-15	33	-27	-5	48	—	—	—	-14	34	-1
19	-39	7	5	-32	5	—	—	-12	-27	-4	17	—
20	-33	11	-25	-23	22	13	—	-21	17	—	-2	—
21	-26	—	-41	-10	24	32	—	—	35	—	-15	—
22	-10	23	-38	-16	31	15	—	-30	32	15	—	—
23	14	-2	-31	-2	36	7	—	-1	26	16	—	—
24	21	-22	-7	27	—	—	—	4	16	—	—	-5
25	22	-38	-4	—	5	-21	—	44	12	—	—	-5
26	-9	-56	-8	17	—	-18	—	—	—	-35	-6	6
27	-32	-38	11	22	28	—	—	—	—	—	-9	25
28	-39	-19	27	12	—	—	—	—	—	—	2	14
29	-34	0	23	4	-27	—	—	—		—	9	9
30	-28	18	19	—	-21	—	—	—		—	15	9
31		20	22		-34		—	—		—		17

GOES Daily Electron Fluence
Jun 2005 - May 2006



Day	Jun 05	Jul	Aug	Sep	Oct	Nov	Dec	Jan 06	Feb	Mar	Apr	May
1	1.2E+08	5.2E+06	1.6E+07	5.7E+06	6.5E+06	1.8E+06	1.0E+07	3.0E+08	3.1E+07	6.9E+06	1.9E+06	4.2E+06
2	2.9E+08	1.7E+06	1.0E+07	4.3E+07	6.7E+07	7.1E+06	4.9E+07	5.6E+07	3.6E+06	5.6E+06	1.8E+06	4.4E+06
3	1.6E+08	2.6E+07	2.8E+07	2.1E+08	1.3E+08	9.4E+06	1.4E+08	6.1E+07	1.1E+06	9.1E+06	1.3E+06	2.6E+06
4	8.4E+07	4.3E+07	1.3E+07	4.3E+08	1.6E+08	9.3E+07	6.9E+07	5.9E+07	1.5E+06	1.3E+07	1.9E+06	1.3E+06
5	3.2E+07	4.1E+07	1.5E+07	1.8E+09	1.3E+08	1.8E+08	9.6E+07	5.8E+07	2.9E+06	1.3E+07	8.2E+05	8.6E+05
6	2.5E+08	4.8E+07	4.6E+07	1.3E+09	6.8E+07	1.5E+08	9.3E+07	1.9E+07	1.9E+06	5.0E+06	1.9E+06	1.3E+06
7	5.5E+07	2.8E+07	8.8E+08	4.2E+08	1.6E+07	1.8E+08	7.0E+07	9.9E+06	3.3E+06	8.2E+05	3.1E+06	1.1E+07
8	9.5E+07	1.2E+06	1.6E+09	6.3E+08	2.5E+06	2.4E+08	8.1E+07	1.0E+07	2.7E+06	9.6E+05	6.0E+06	1.2E+08
9	1.3E+08	7.4E+05	1.4E+09	-999	3.8E+07	3.8E+08	2.3E+07	7.3E+06	3.2E+06	9.8E+05	1.4E+06	1.5E+08
10	1.0E+08	2.7E+06	4.9E+07	-999	2.6E+08	3.4E+08	1.1E+06	1.1E+07	2.1E+06	8.3E+05	1.1E+08	1.7E+08
11	6.9E+07	2.6E+07	3.8E+07	1.2E+08	2.1E+07	1.1E+08	9.4E+05	9.3E+06	1.0E+06	5.5E+06	2.1E+08	7.2E+06
12	9.9E+06	2.2E+08	7.8E+07	4.0E+08	2.1E+07	2.6E+07	2.6E+06	2.5E+06	9.2E+05	6.3E+06	3.0E+08	2.2E+08
13	2.8E+08	1.2E+08	5.4E+06	4.1E+08	2.1E+07	1.2E+07	2.0E+07	3.4E+06	1.0E+06	8.5E+06	8.1E+07	5.7E+08
14	6.4E+08	2.4E+08	9.0E+06	9.8E+08	2.1E+07	8.3E+06	2.4E+07	1.8E+06	1.1E+06	6.2E+06	5.5E+07	4.7E+08
15	4.5E+07	4.0E+08	1.1E+07	4.6E+08	2.1E+07	2.1E+07	2.7E+07	2.8E+06	1.0E+06	1.8E+06	5.0E+08	5.6E+08
16	3.2E+07	5.9E+07	1.4E+07	1.2E+09	2.1E+07	3.4E+07	1.2E+07	1.3E+06	1.5E+06	1.5E+06	1.5E+09	7.6E+08
17	8.0E+07	1.1E+07	2.4E+07	2.6E+09	2.1E+07	2.9E+07	4.8E+06	2.2E+06	2.1E+06	2.1E+06	2.7E+09	2.4E+08
18	1.4E+08	6.6E+06	1.2E+08	3.1E+09	2.1E+07	1.9E+07	6.0E+06	5.0E+06	3.1E+06	1.4E+06	3.6E+08	4.4E+06
19	2.6E+08	1.8E+07	1.8E+08	3.3E+09	2.7E+07	7.1E+06	2.9E+06	1.1E+07	1.4E+06	6.1E+07	1.1E+09	2.6E+06
20	3.9E+08	8.7E+06	2.3E+08	2.6E+09	5.4E+07	2.2E+06	1.3E+06	1.9E+07	7.6E+06	4.1E+08	9.3E+08	7.6E+06
21	4.8E+08	3.9E+07	1.6E+08	2.6E+09	6.8E+07	2.4E+06	4.4E+06	6.8E+06	2.0E+08	1.1E+09	2.5E+08	9.3E+06
22	2.4E+08	1.3E+08	2.9E+07	1.5E+09	7.6E+05	1.8E+06	8.9E+06	6.6E+06	3.7E+08	5.5E+08	9.9E+06	7.1E+06
23	1.1E+06	2.1E+08	5.2E+07	5.0E+07	7.1E+05	1.7E+06	1.3E+07	9.8E+05	4.9E+08	8.5E+08	2.0E+07	5.2E+06
24	7.7E+06	3.0E+08	1.8E+07	5.5E+07	7.3E+05	5.4E+06	9.3E+06	7.7E+06	4.0E+08	1.1E+09	2.1E+07	6.7E+06
25	1.1E+07	2.0E+08	5.7E+08	3.7E+07	9.0E+05	7.3E+07	1.4E+06	6.4E+06	3.3E+08	1.0E+08	1.4E+07	7.5E+06
26	9.7E+07	9.2E+07	6.8E+08	4.3E+06	8.0E+06	1.3E+08	1.3E+06	4.2E+06	1.7E+08	1.8E+08	1.1E+07	6.5E+06
27	2.3E+08	7.6E+06	7.3E+08	3.0E+06	2.2E+07	1.1E+08	3.9E+06	1.6E+08	1.9E+07	2.0E+06	3.7E+06	6.5E+06
28	2.3E+08	2.4E+06	1.1E+09	6.5E+06	2.0E+07	1.9E+07	1.7E+07	3.2E+08	9.4E+06	4.5E+06	1.7E+06	3.0E+06
29	1.8E+08	1.4E+07	2.3E+07	1.7E+07	2.9E+07	6.2E+06	6.3E+07	4.1E+08		6.8E+06	1.0E+06	2.3E+06
30	9.1E+07	7.2E+07	1.4E+08	1.6E+07	1.6E+07	4.4E+06	1.6E+08	3.8E+08		3.5E+06	1.4E+06	1.6E+06
31		8.4E+07	1.1E+07		2.5E+06		2.6E+08	2.4E+08		4.2E+06		9.0E+05

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 742 Part I

DATA FOR APRIL 2006

Page

SOLAR ACTIVE REGIONS
- Solar Synoptic Charts 34- 39
- Daily Activity Solar Maps 40- 69
- Preliminary NSO/KP Coronal Hole Daily Maps -- none available
- Nobeyama Daily Radioheliograph Images at 17 GHz 70- 74
- Sunspot Groups 75- 81

SUDDEN IONOSPHERIC DISTURBANCES 82

SOLAR RADIO SPECTRAL OBSERVATIONS 83- 90

SOLAR RADIOHELIOGRAPH - 164 AND 327 MHZ - NANCAY 91- 92

COSMIC RAY MEASUREMENTS BY NEUTRON MONITOR
- Daily Counting Rates 93
- Chart of Variations 94- 97
- Graph and Table of Monthly Mean Climax Data Jan 1953-Apr 2006 98

GEOMAGNETIC INDICES
- Geomagnetic Activity Indices 99
- Daily Average Ap 100
- Chart of Kp by 27-day Rotation 101
- Table of Monthly aa Index (1950 to present) 102
- Chart of 3-hourly Km and aa by 27-day Rotation 103

- Provisional Values of Hourly Equatorial Dst 104
- Polar Cap (PC) Geomagnetic Index Plot of 15-min values – Thule 105
  -- Plot of 1-min values – Vostok -- No data – Antarctic station inaccessible.

Principal Magnetic Storms 106

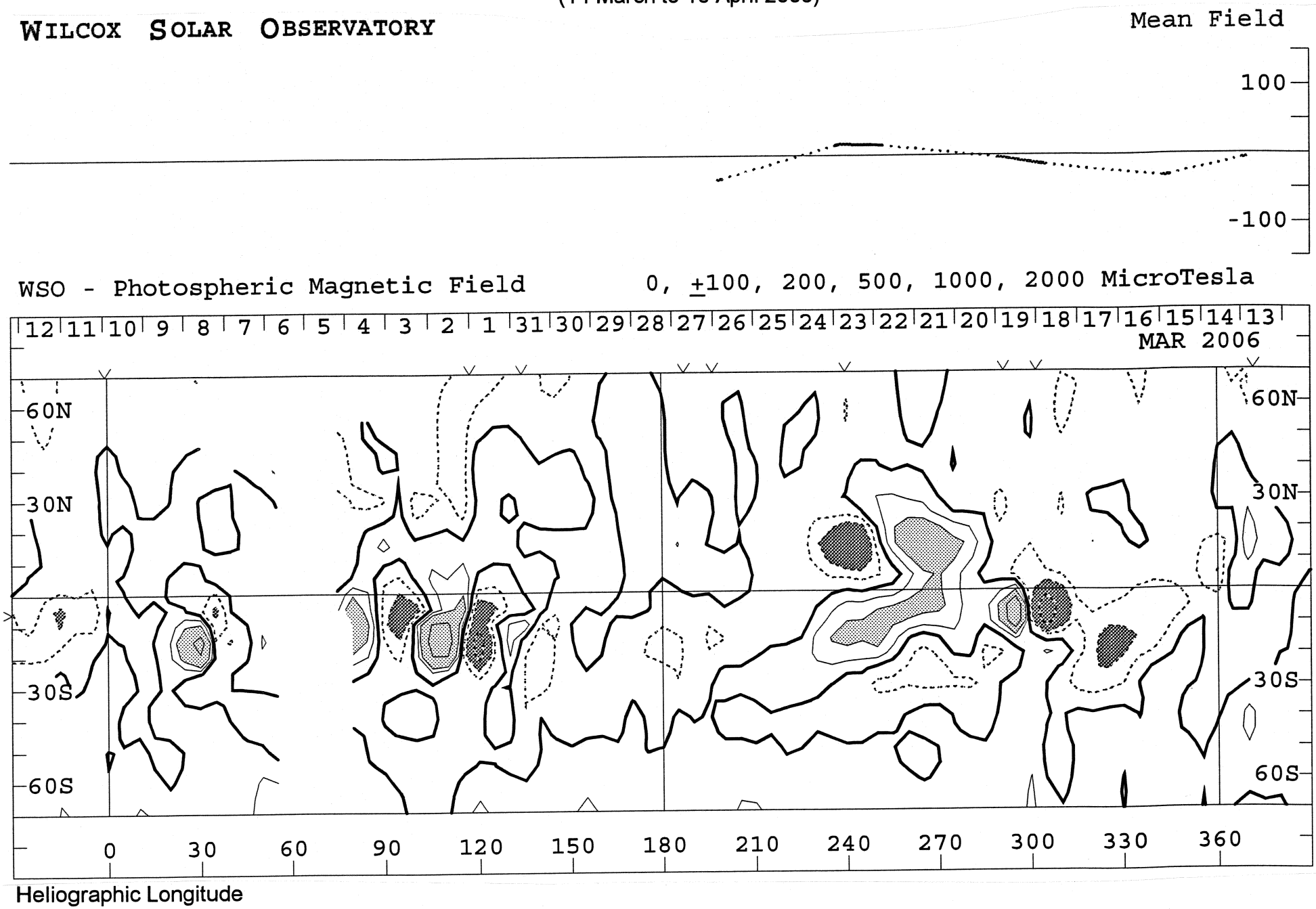
Sudden Commencements/Solar Flare Effects 107

SOLAR MAGNETIC FIELD SYNOPTIC CHART

CARRINGTON ROTATION NUMBER 2041

(14 March to 10 April 2006)

WILCOX SOLAR OBSERVATORY



SOLAR MAGNETIC FIELD SYNOPTIC CHART

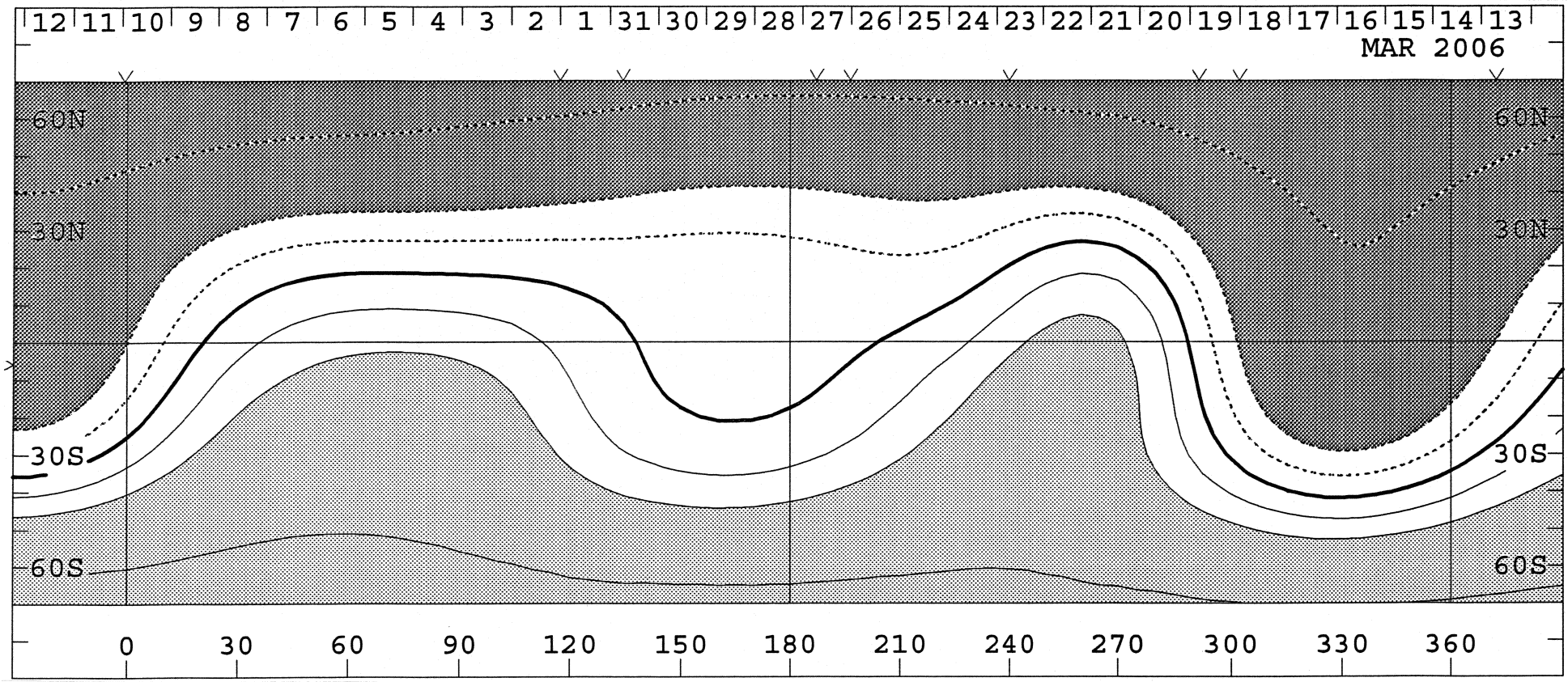
SOURCE SURFACE FIELD

CARRINGTON ROTATION NUMBER 2041

(14 March to 10 April 2006)

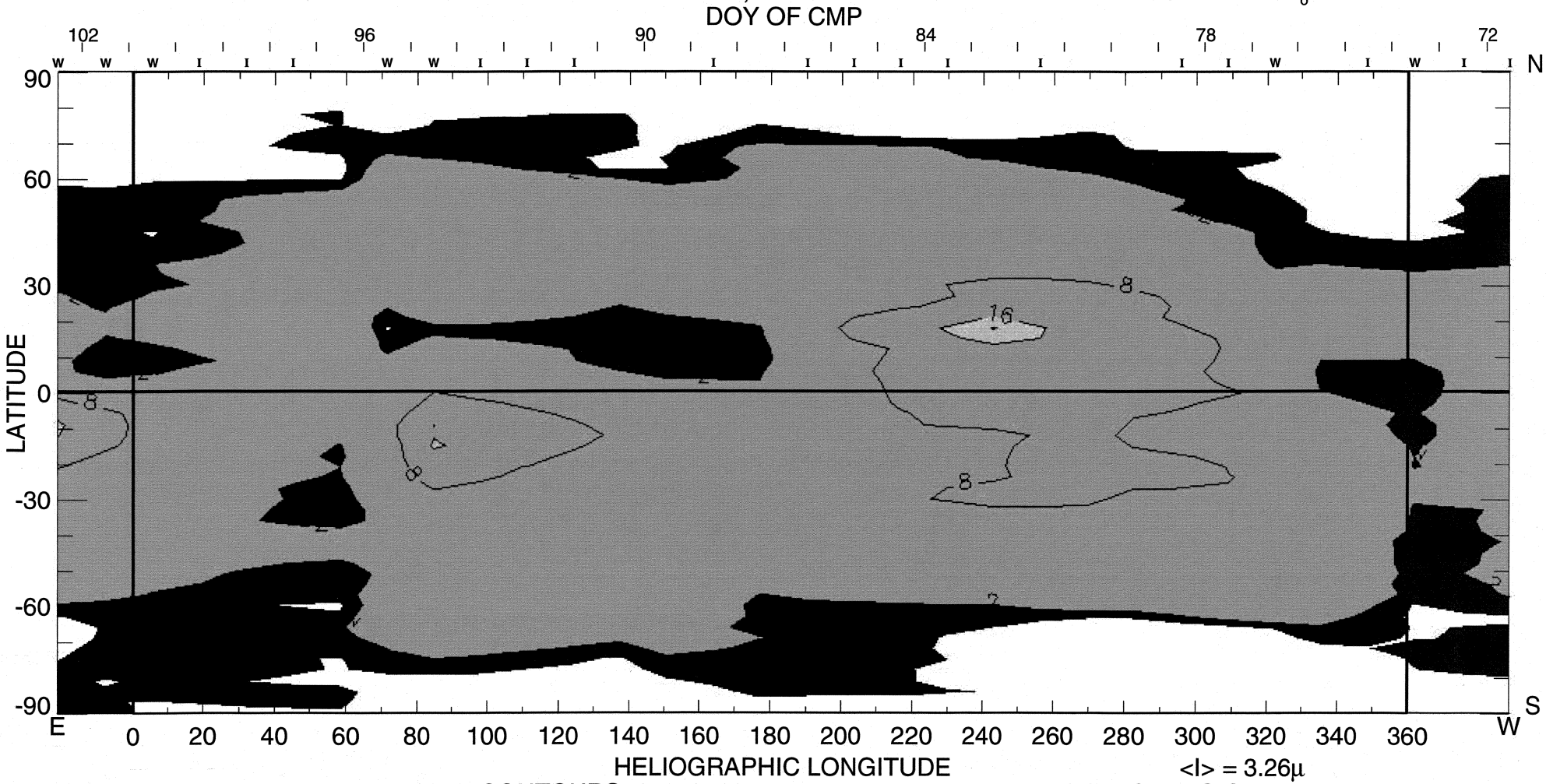
Wilcox Solar Observatory

0, ±1, 2, 5, 10, 20 microTesla



Heliographic Longitude

CARRINGTON ROTATION NUMBER 2041 ; NSO/SACRAMENTO PEAK FE XIV @ R = 1.15R_o



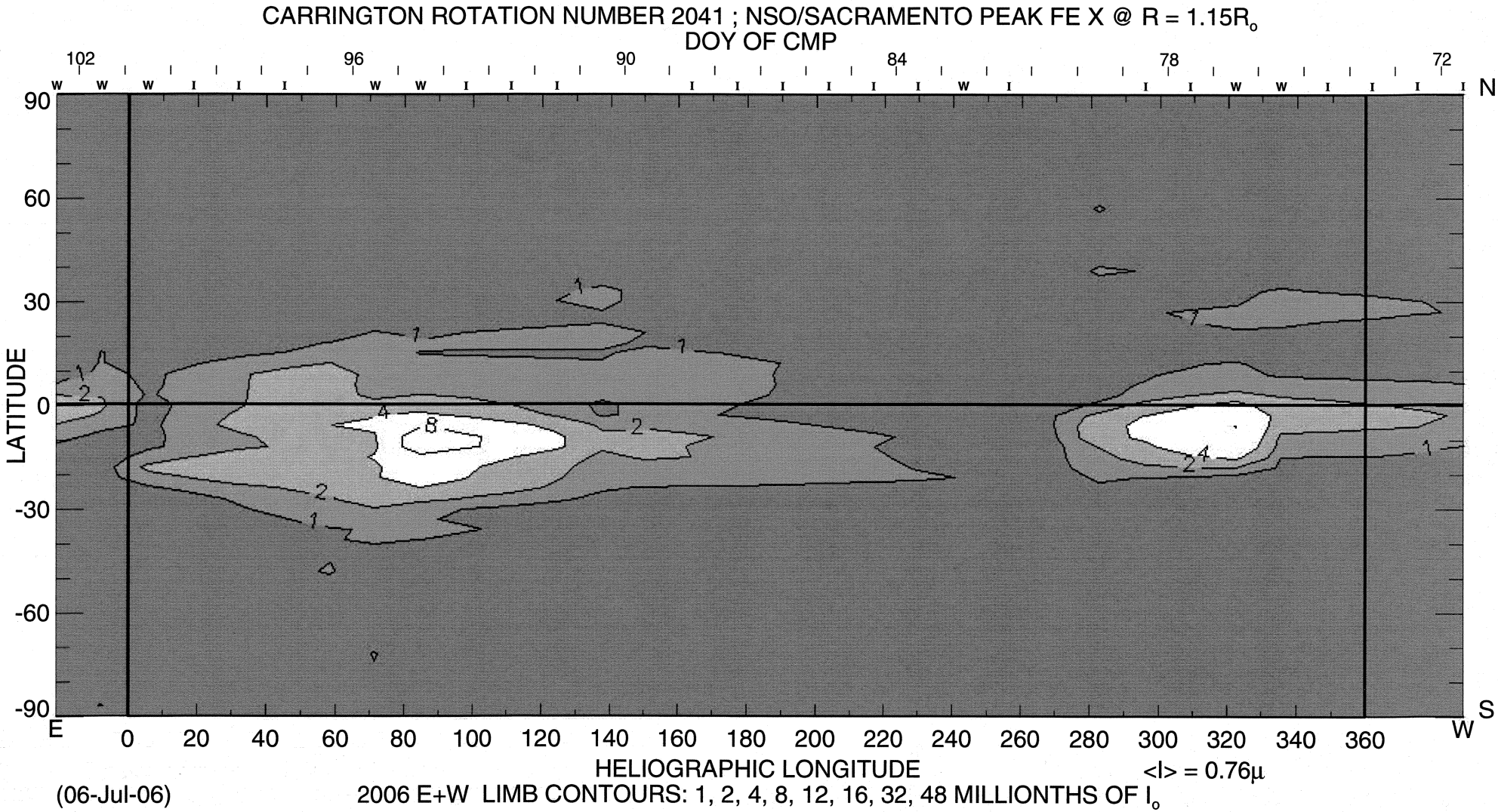
<I> = 3.26μ

(19-Jun-06)

2006 E+W LIMB CONTOURS: 1, 2, 8, 16, 20, 25, 30, 35, 40, 100, 120 MILLIONTHS OF I_o

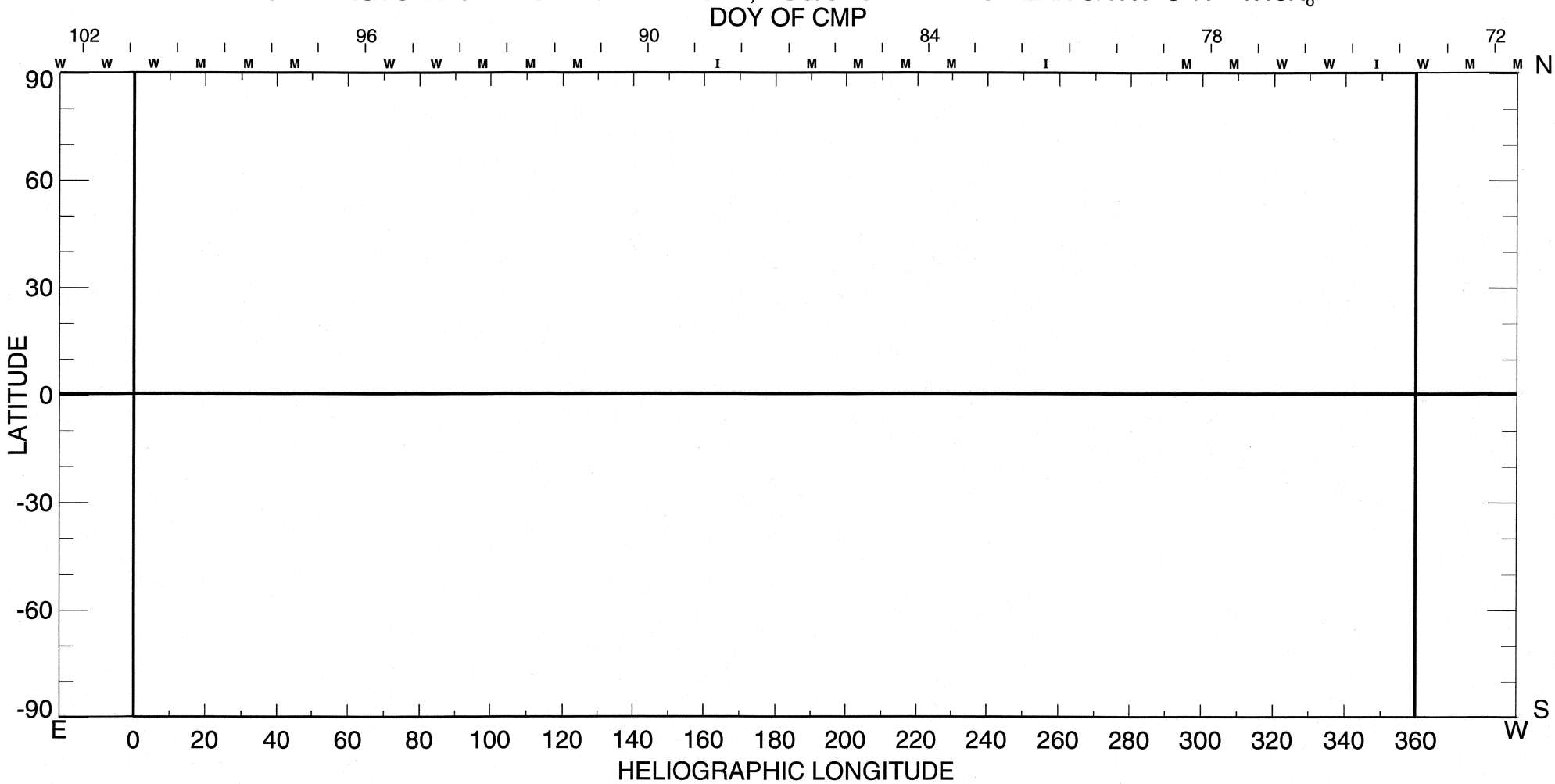
CORONAL HOLES ARE SHOWN AS WHITE BORDERED BY BLACK

tex Mon Jun 19 15:08:43 2006



altrock Thu Jul 6 13:18:25 2006

CARRINGTON ROTATION NUMBER 2041 ; NSO/SACRAMENTO PEAK CA XV @ R = 1.15R_o



(19-Jun-06) 2006 E+W LIMB CONTOURS: YELMIN, 1, 2, 3, 4, 6, 8, 10, 12, 14, 16, 18, 20 MILLIONTHS OF I_o

tex Mon Jun 19 15:08:11 2006

SOLAR MAGNETIC FIELD SYNOPTIC CHART

CARRINGTON ROTATION NUMBER 2041

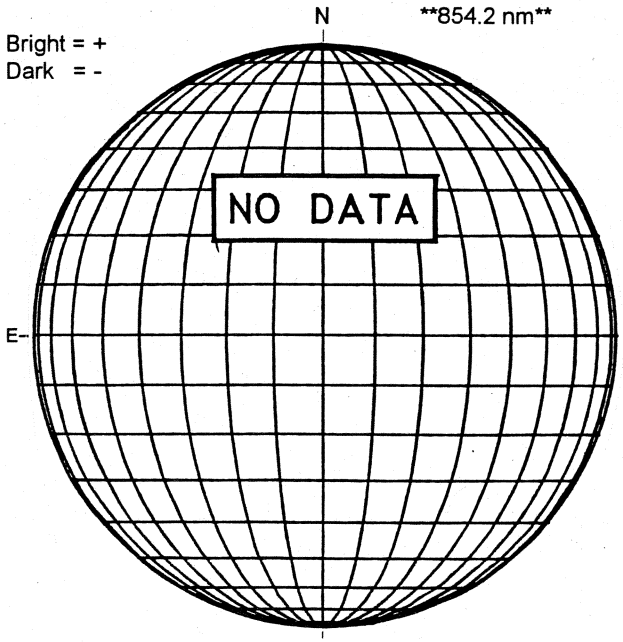
(14 March to 10 April 2006)

National Solar Observatory/Kitt Peak

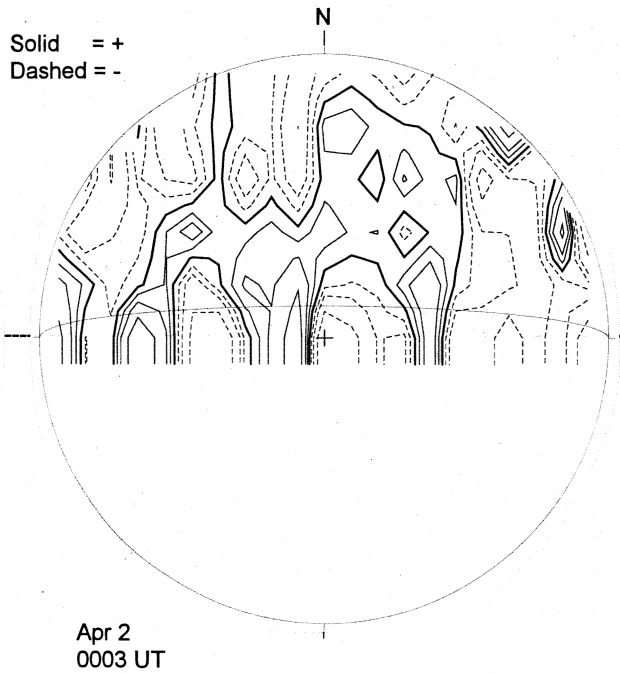
NO DATA AVAILABLE mid-February through mid-April 2006

APRIL 1, 2006 (P= -26.16, Bo = -6.55, Lo = 130.75)

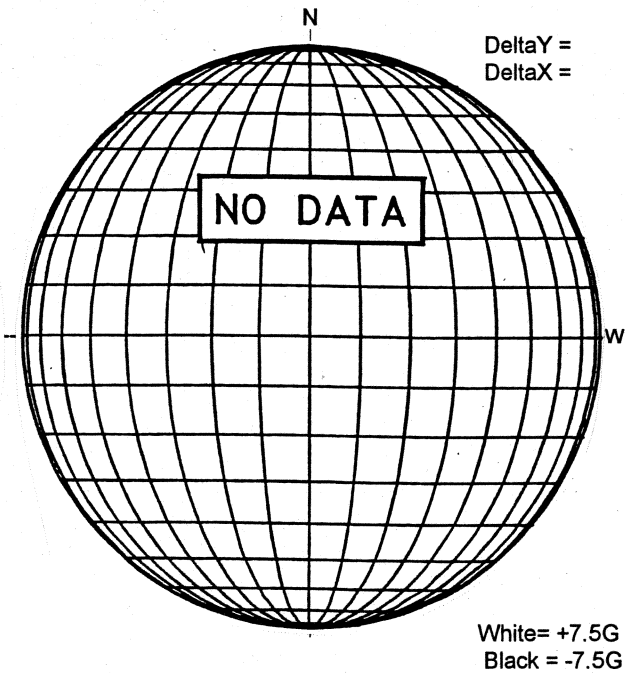
KITT PEAK MAGNETOGRAM--SOLIS



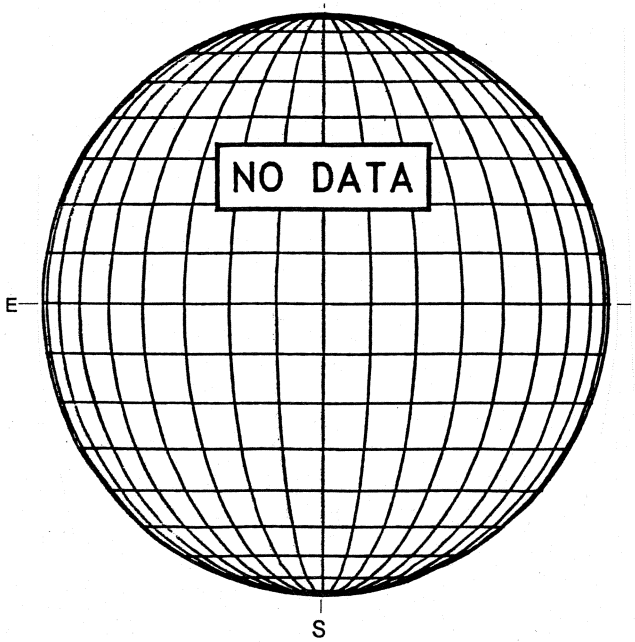
STANFORD MAGNETOGRAM



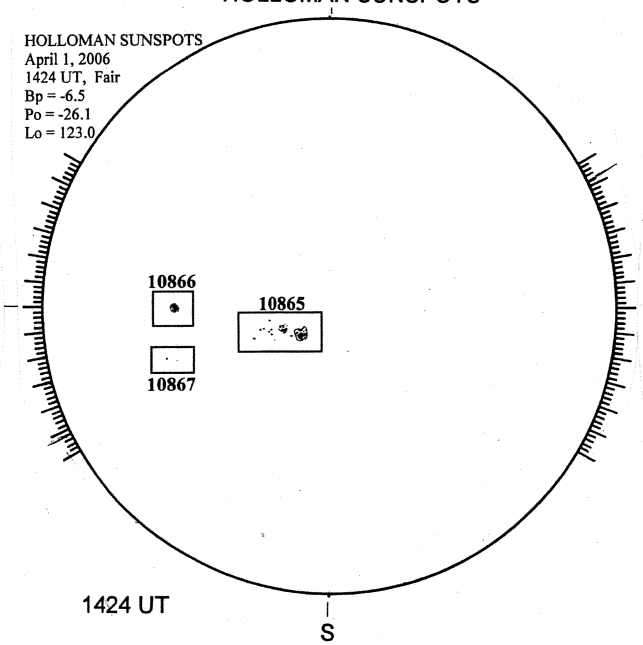
MT. WILSON MAGNETOGRAM



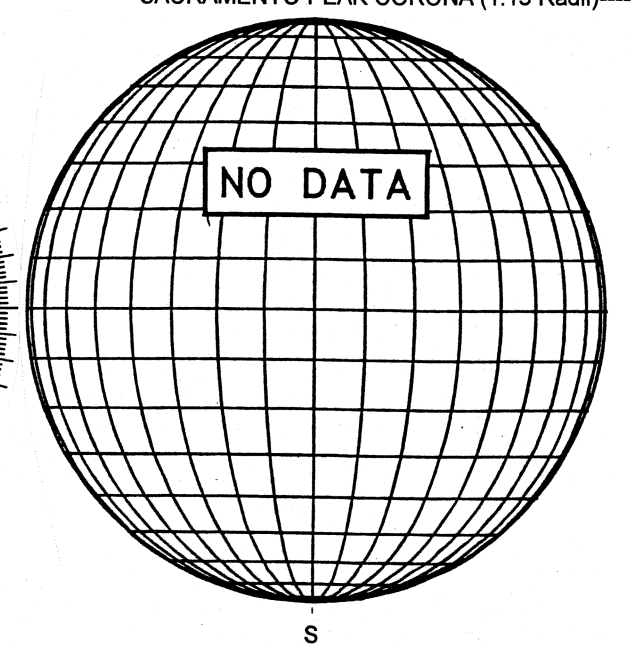
----- KANZELHOHE H-ALPHA



HOLLOMAN SUNSPOTS



SACRAMENTO PEAK CORONA (1.15 Radii)----

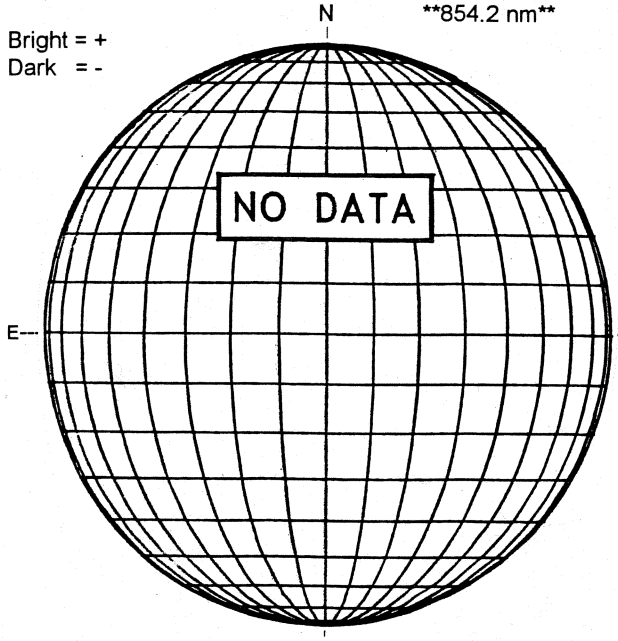


APRIL 2, 2006 (P= -26.20, Bo = -6.50, Lo = 117.56)

KITT PEAK MAGNETOGRAM--SOLIS

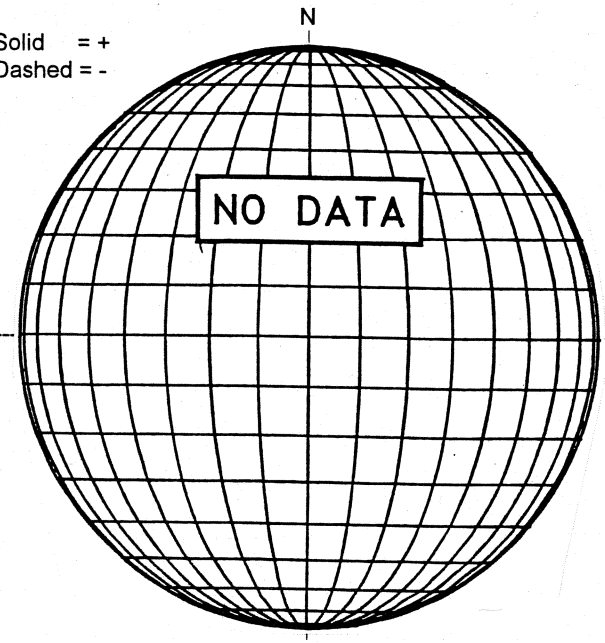
854.2 nm

Bright = +
Dark = -



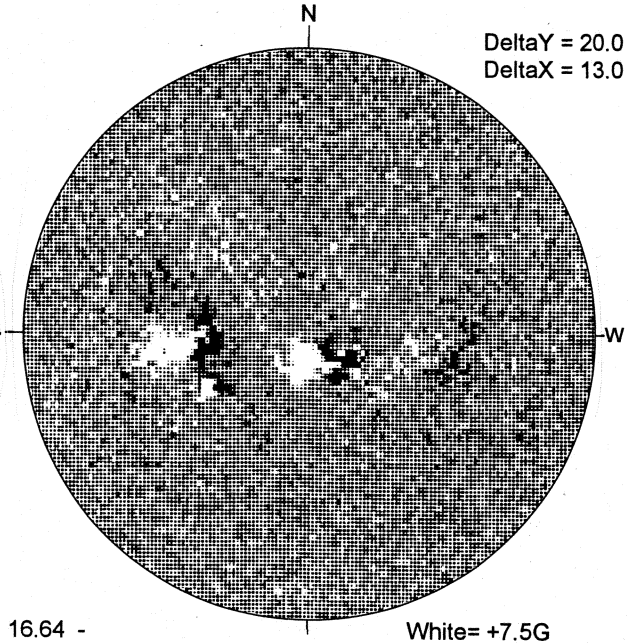
STANFORD MAGNETOGRAM

Solid = +
Dashed = -



MT. WILSON MAGNETOGRAM

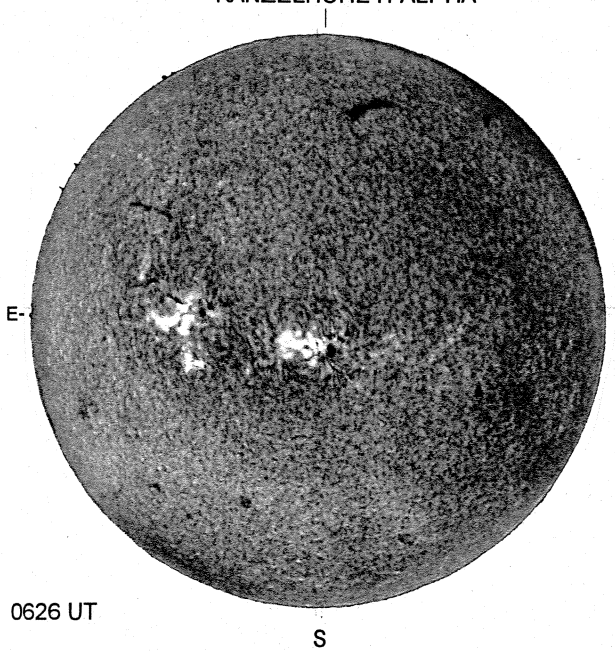
DeltaY = 20.0
DeltaX = 13.0



16.64 -
17.06 UT

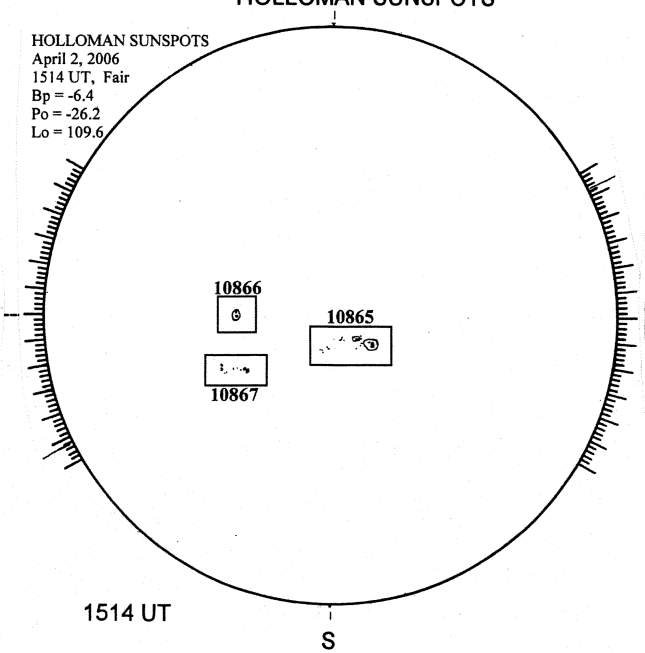
White= +7.5G
Black = -7.5G

KANZELHOHE H-ALPHA



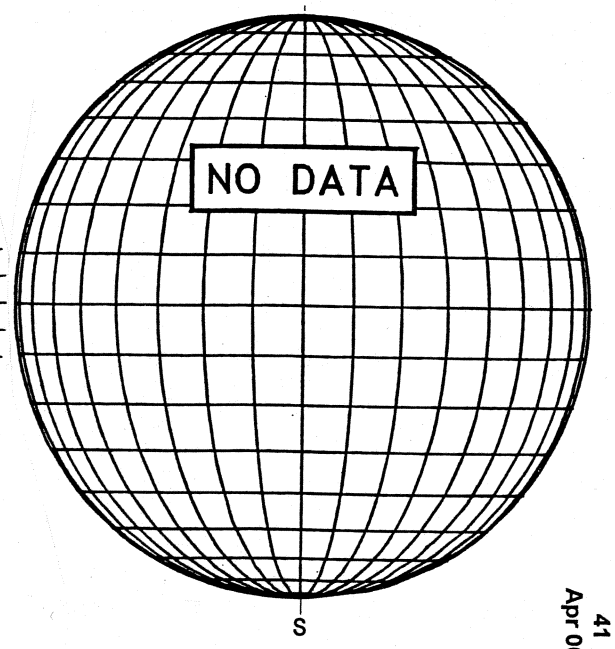
0626 UT

HOLLOMAN SUNSPOTS



1514 UT

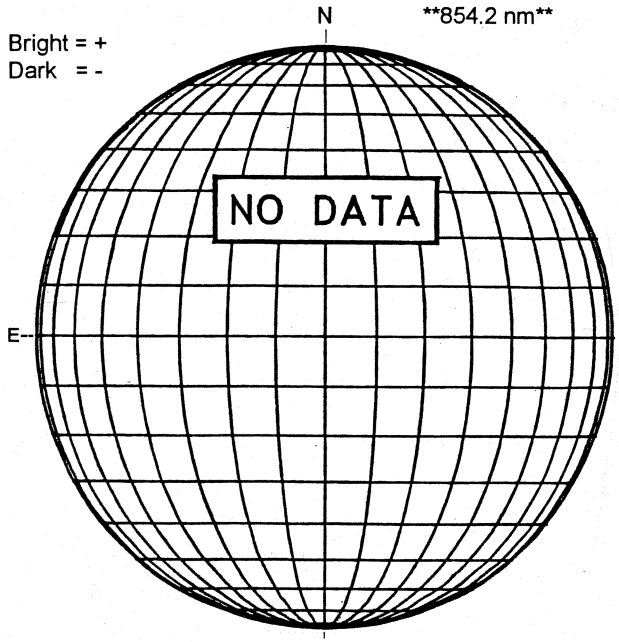
LOMNICKY PEAK CORONA (1.04 Radii)



APRIL 3, 2006 (P= -26.23, Bo = -6.44, Lo = 104.36)

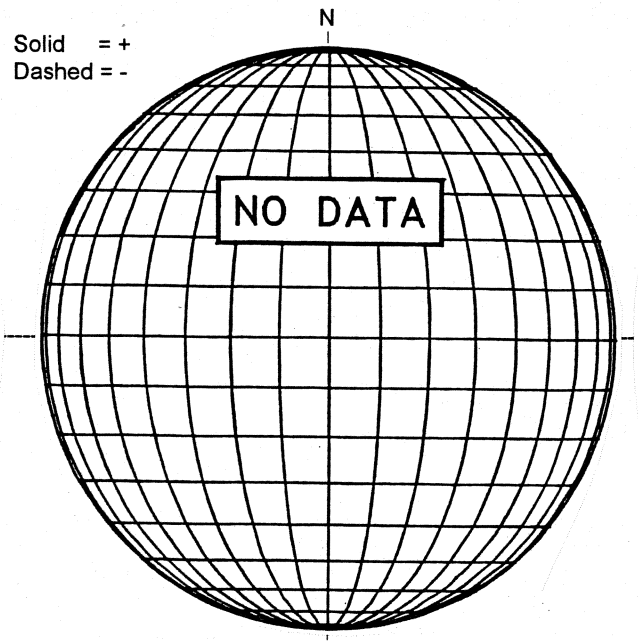
KITT PEAK MAGNETOGRAM--SOLIS

Bright = +
Dark = -



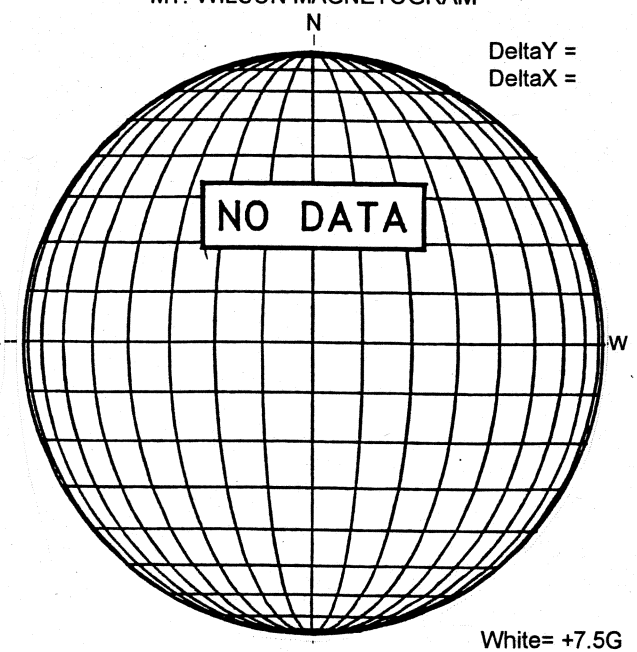
STANFORD MAGNETOGRAM

Solid = +
Dashed = -



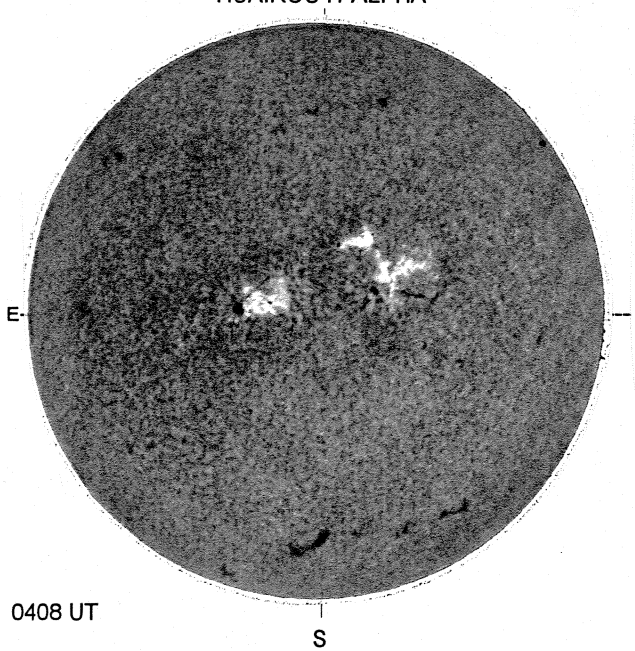
MT. WILSON MAGNETOGRAM

DeltaY =
DeltaX =



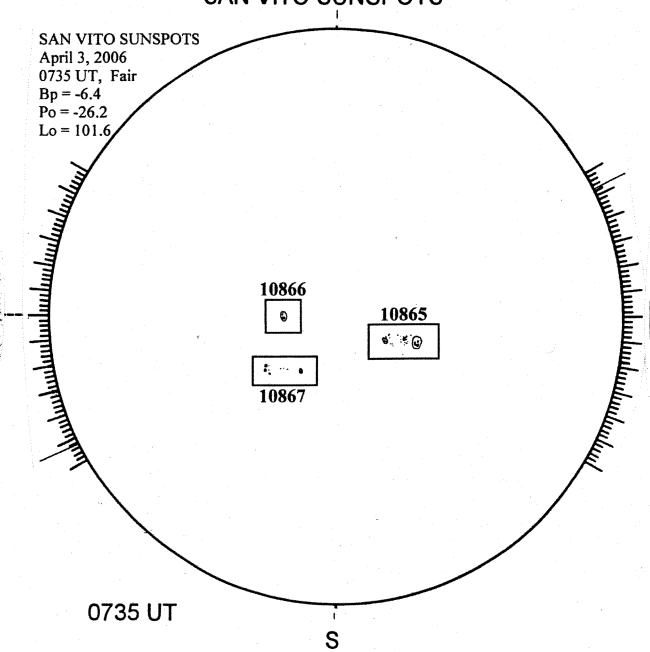
White= +7.5G
Black = -7.5G

HUAIROU H-ALPHA



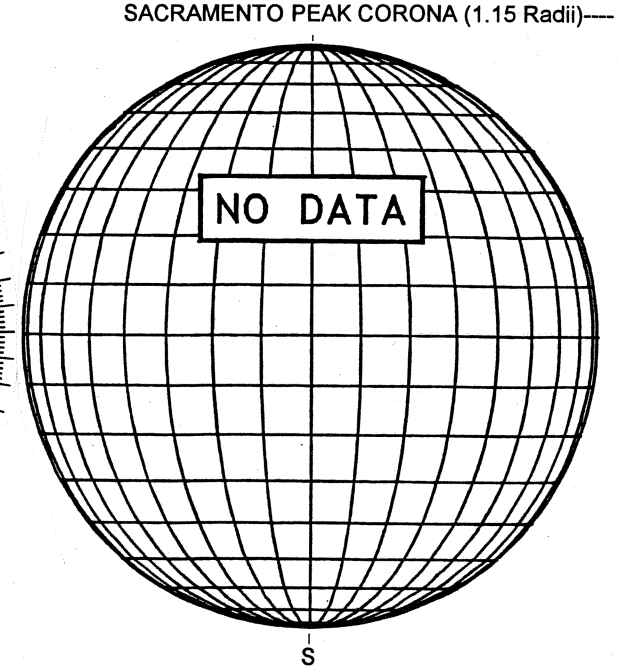
0408 UT

SAN VITO SUNSPOTS



0735 UT

SACRAMENTO PEAK CORONA (1.15 Radii)

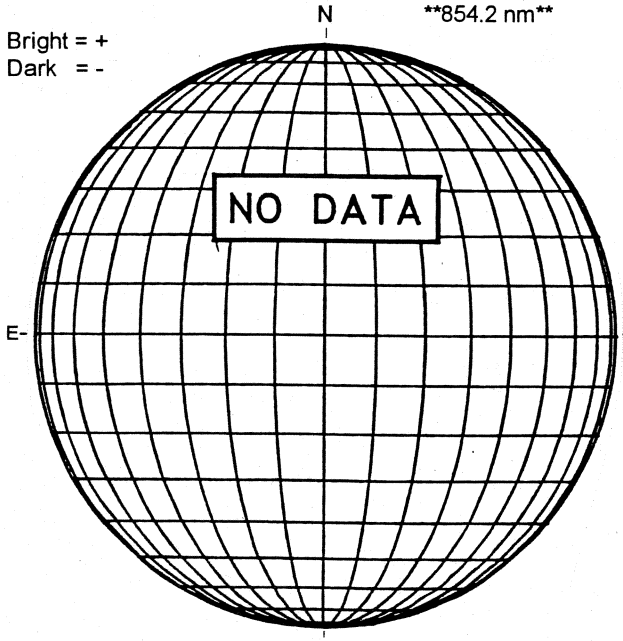


APRIL 4, 2006 (P= -26.26, Bo = -6.38, Lo = 91.17)

KITT PEAK MAGNETOGRAM--SOLIS

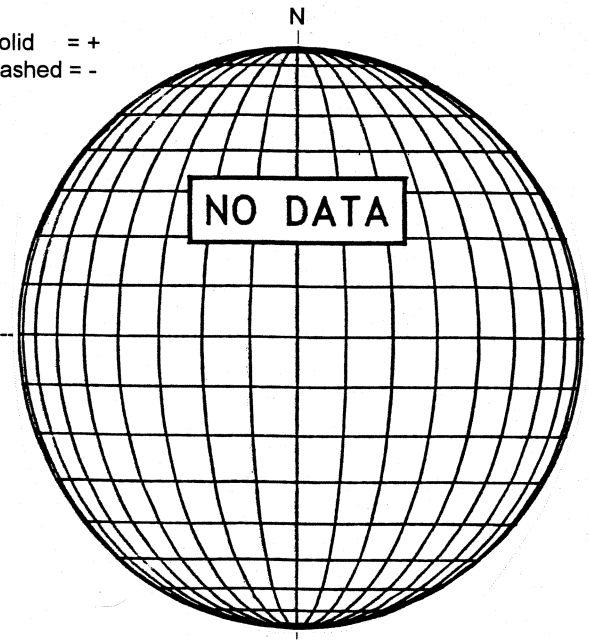
854.2 nm

Bright = +
Dark = -



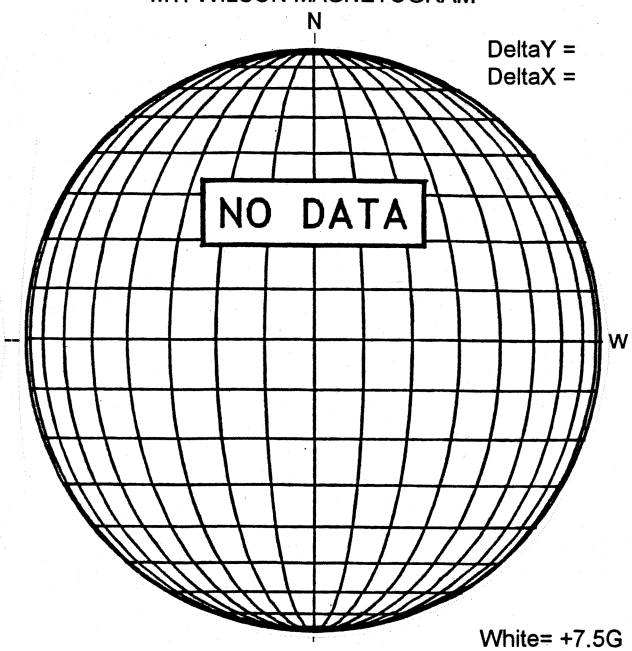
STANFORD MAGNETOGRAM

Solid = +
Dashed = -



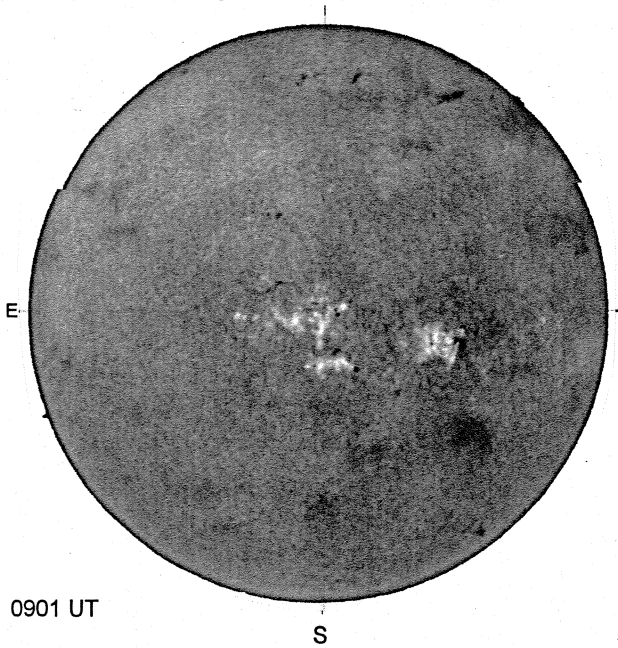
MT. WILSON MAGNETOGRAM

DeltaY =
DeltaX =



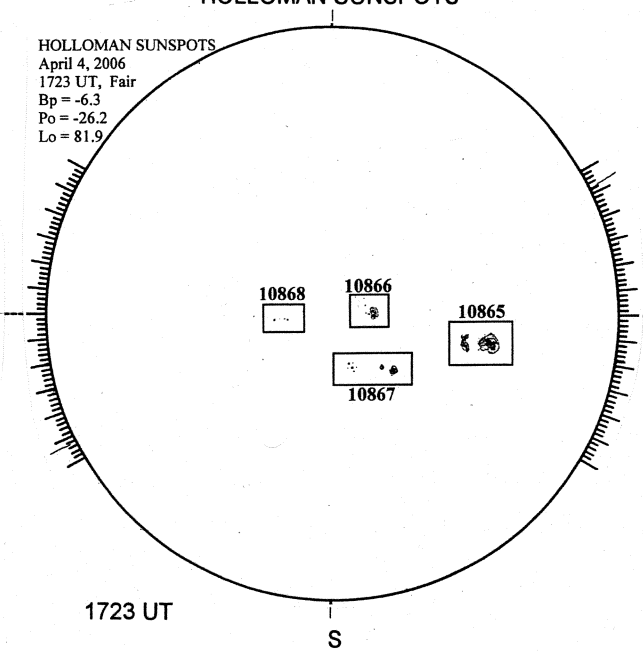
White= +7.5G
Black = -7.5G

CATANIA H-ALPHA



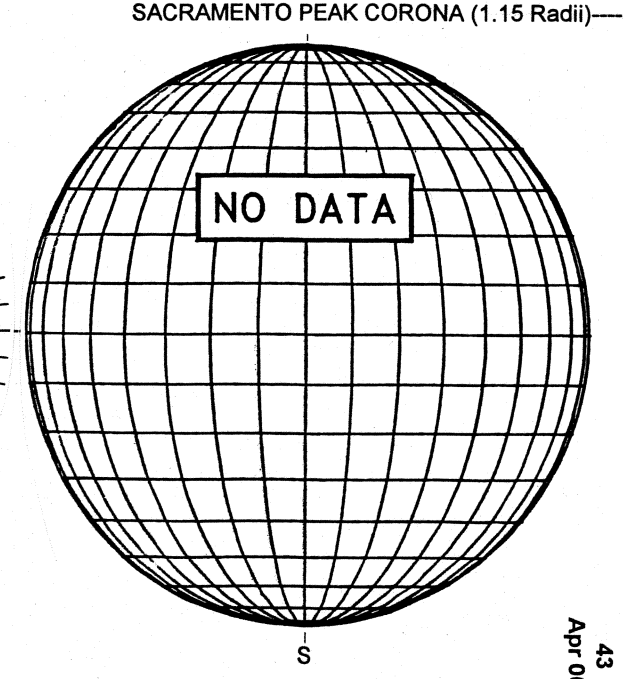
0901 UT

HOLLOMAN SUNSPOTS



1723 UT

SACRAMENTO PEAK CORONA (1.15 Radii)

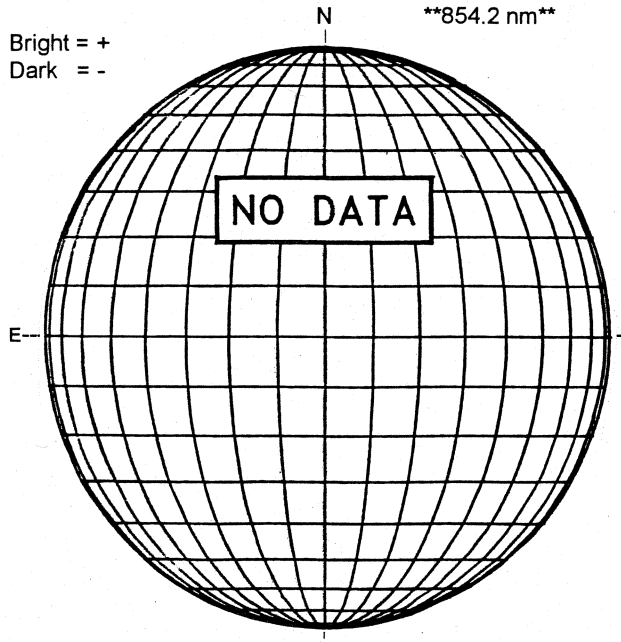


APRIL 5, 2006 (P= -26.27, Bo = -6.32, Lo = 77.97)

KITT PEAK MAGNETOGRAM--SOLIS

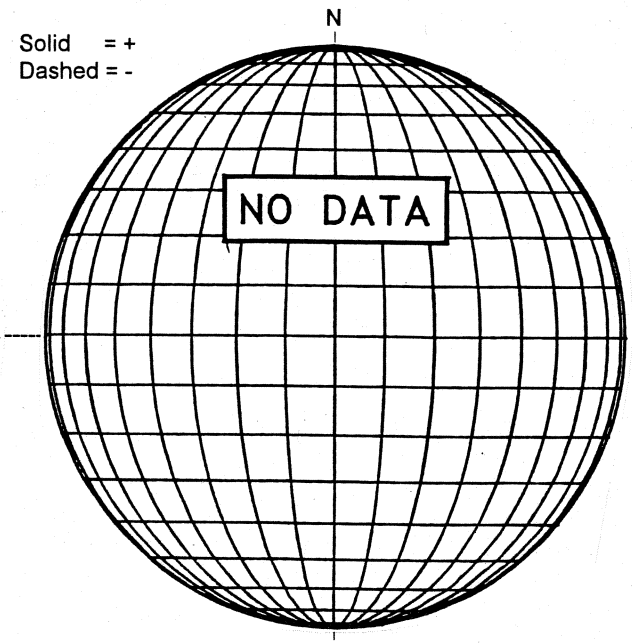
854.2 nm

Bright = +
Dark = -



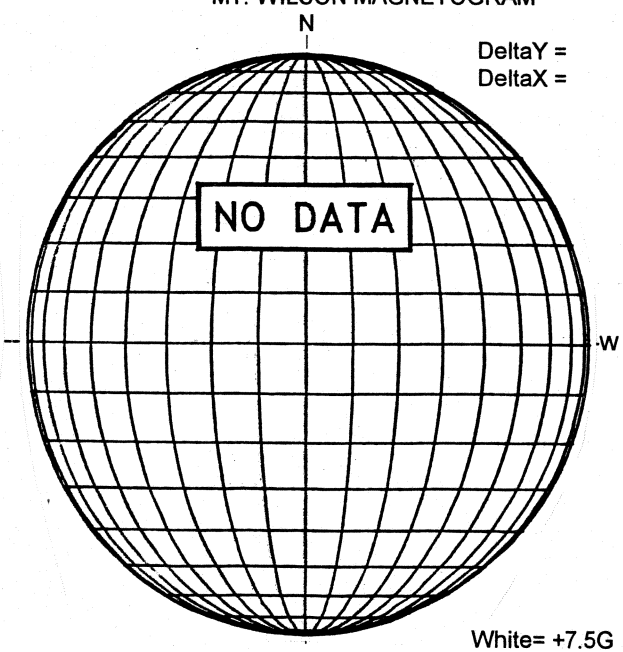
STANFORD MAGNETOGRAM

Solid = +
Dashed = -



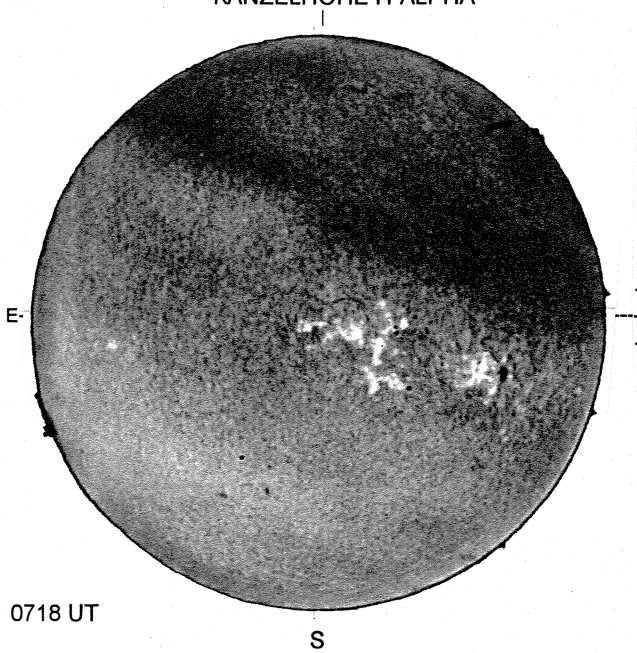
MT. WILSON MAGNETOGRAM

DeltaY =
DeltaX =



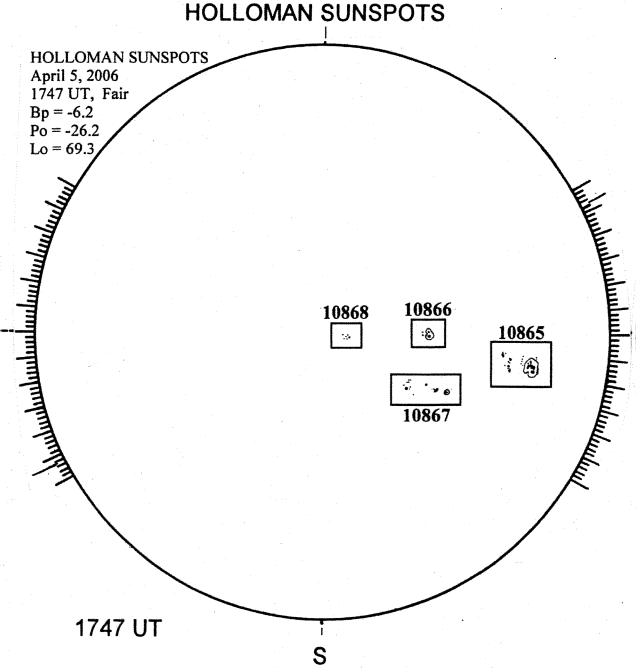
White= +7.5G
Black = -7.5G

KANZELHOHE H-ALPHA



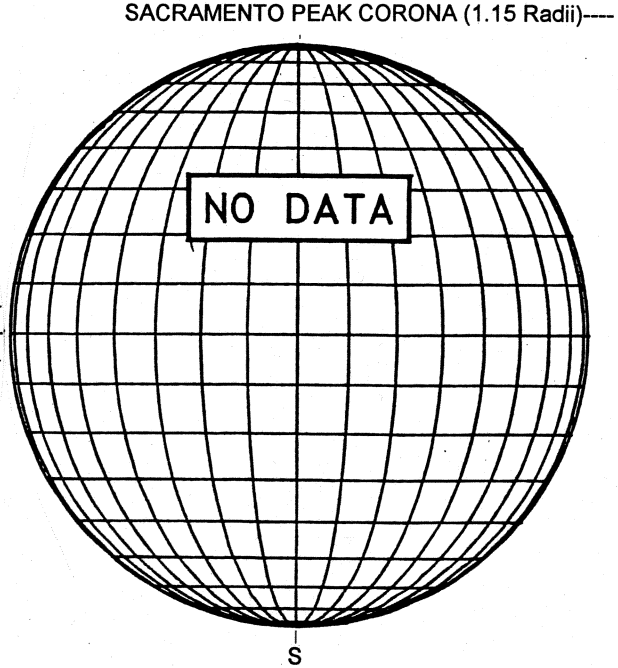
0718 UT

HOLLOMAN SUNSPOTS



1747 UT

SACRAMENTO PEAK CORONA (1.15 Radii)

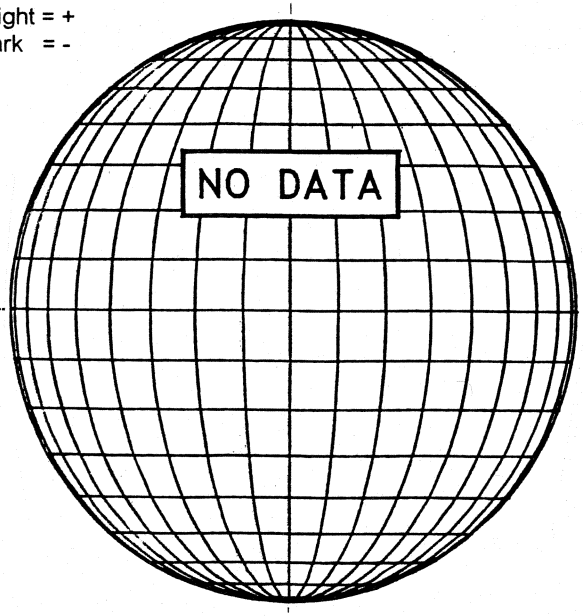


APRIL 6, 2006 (P= -26.28, Bo = -6.26, Lo = 64.78)

KITT PEAK MAGNETOGRAM--SOLIS

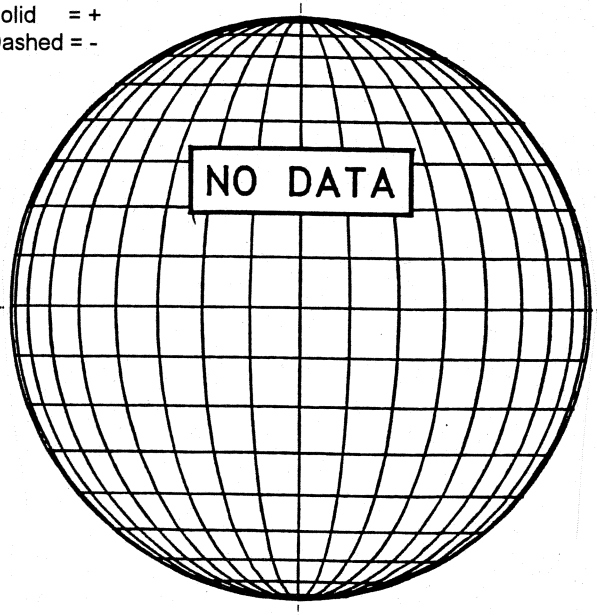
854.2 nm

Bright = +
Dark = -



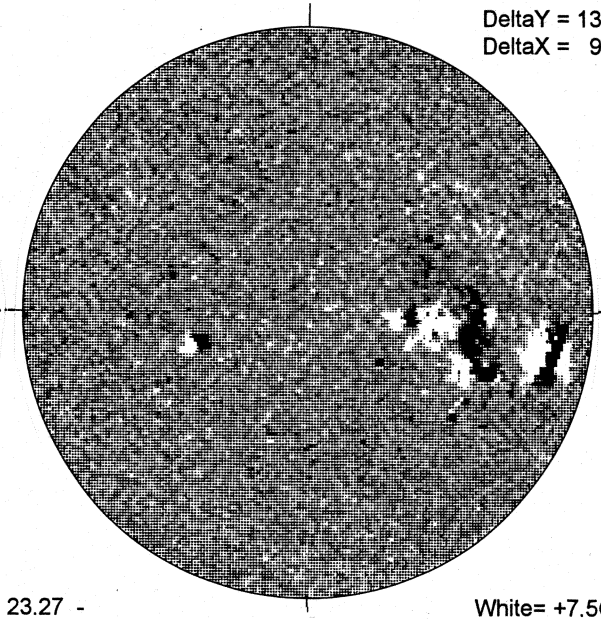
STANFORD MAGNETOGRAM

Solid = +
Dashed = -



MT. WILSON MAGNETOGRAM

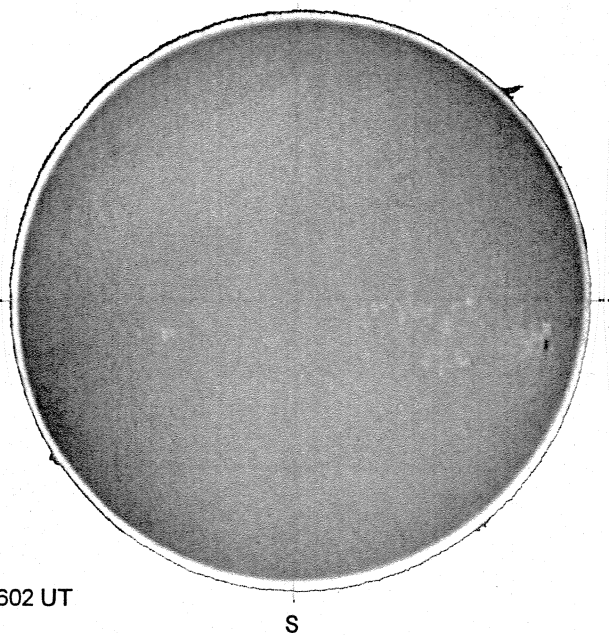
DeltaY = 13.0
DeltaX = 9.6



23.27 -
24.22 UT

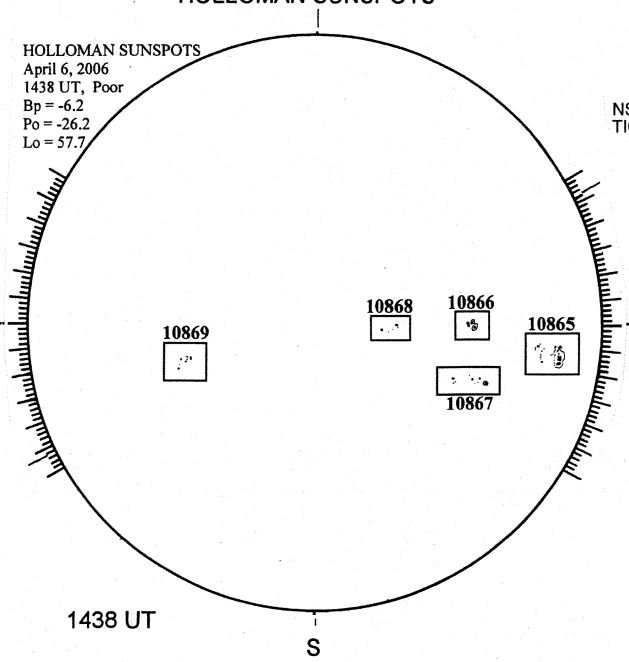
White= +7.5G
Black = -7.5G

MEUDON H-ALPHA



1602 UT

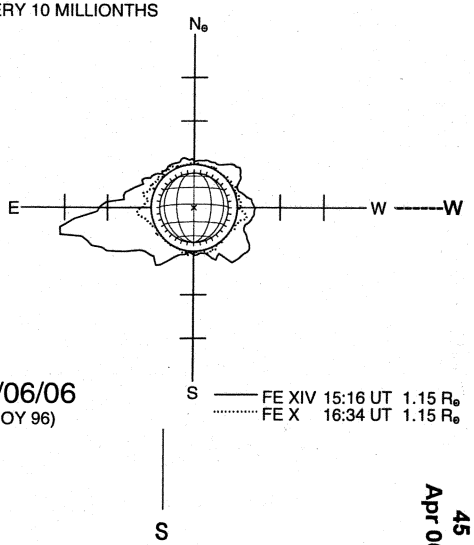
HOLLOMAN SUNSPOTS



1438 UT

SACRAMENTO PEAK CORONA (1.15 Radii)----

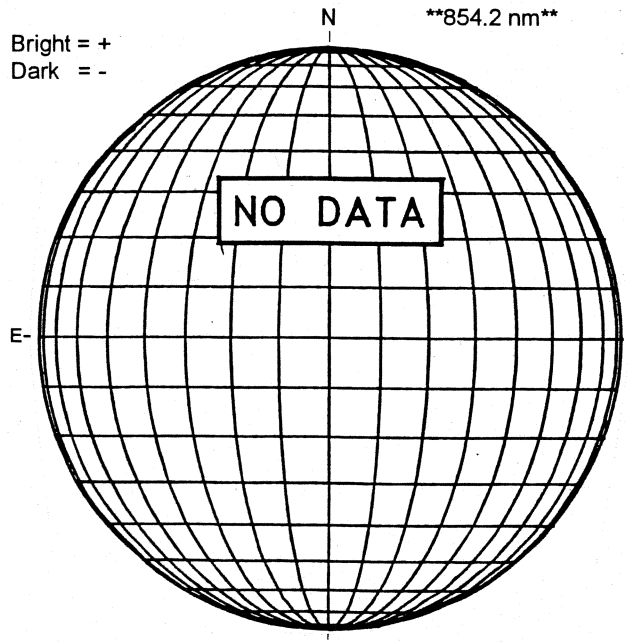
NSO / SACRAMENTO PEAK CORONAL DATA
TICK MARKS EVERY 10 MILLIONTHS



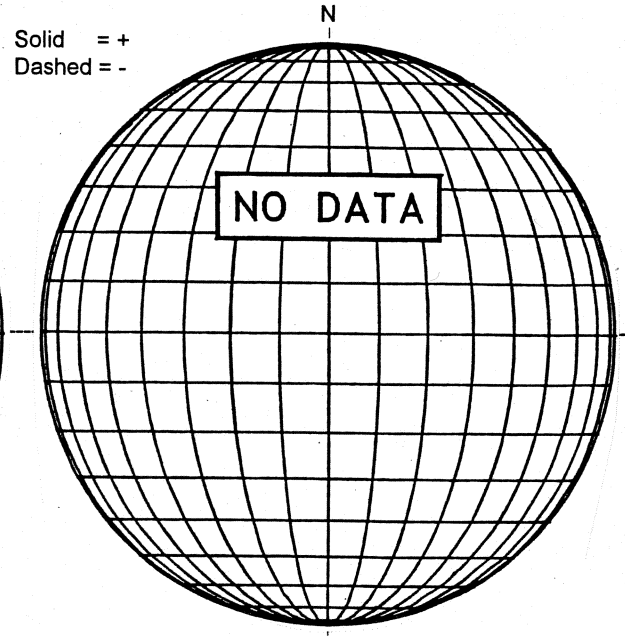
04/06/06
(DOY 96)

APRIL 7, 2006 (P= -26.29, Bo = -6.20, Lo = 51.58)

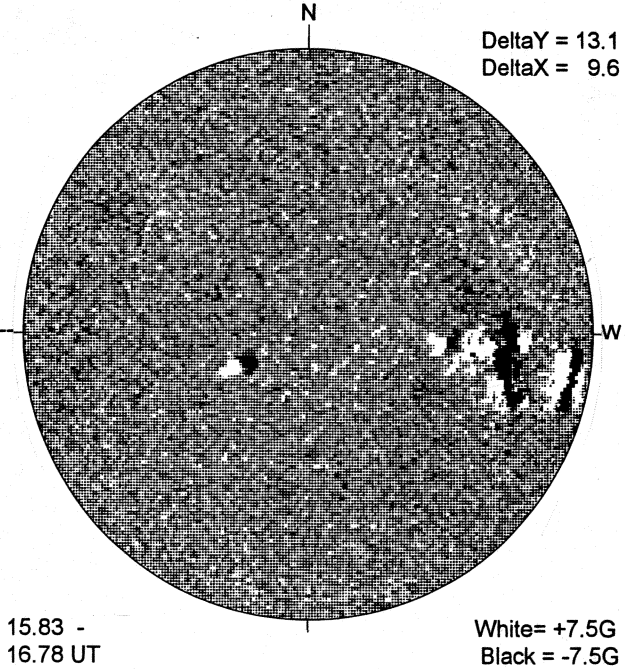
KITT PEAK MAGNETOGRAM--SOLIS



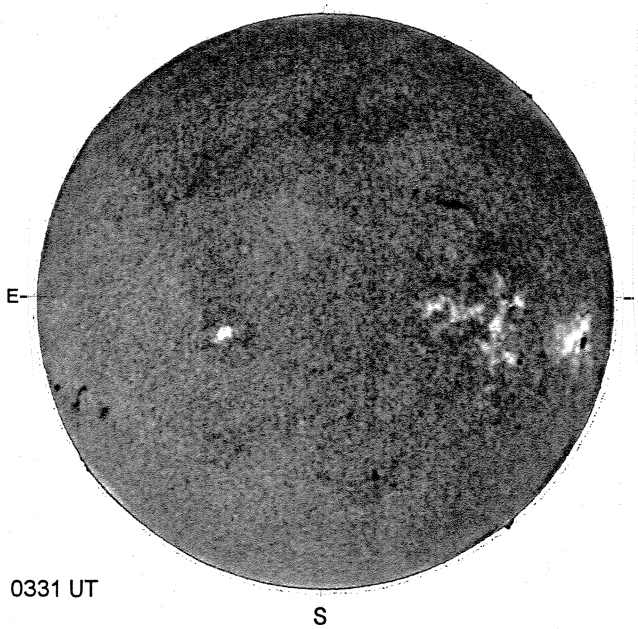
STANFORD MAGNETOGRAM



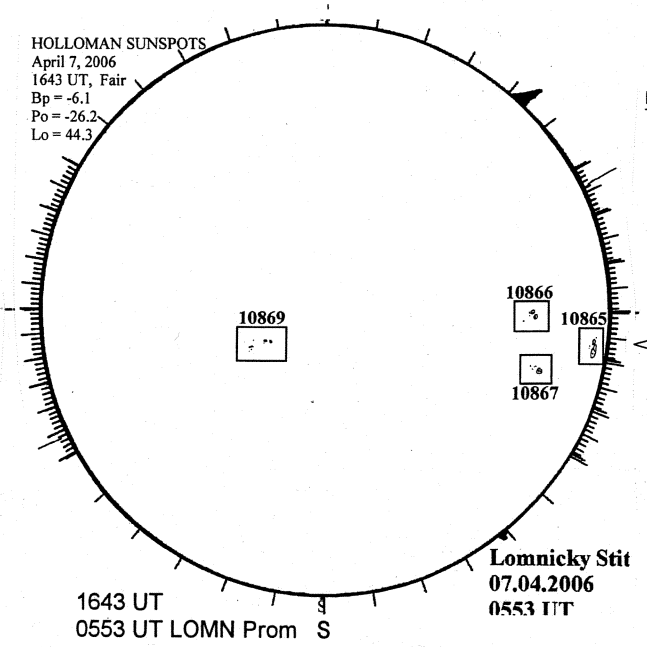
MT. WILSON MAGNETOGRAM



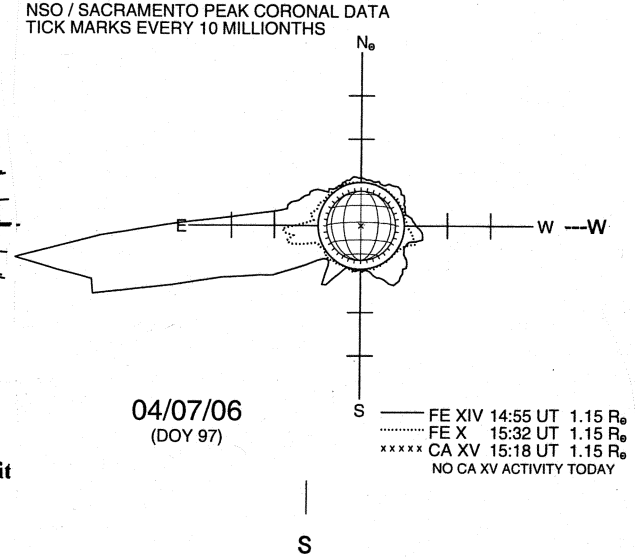
HUAIROU H-ALPHA



HOLLOMAN SUNSPOTS

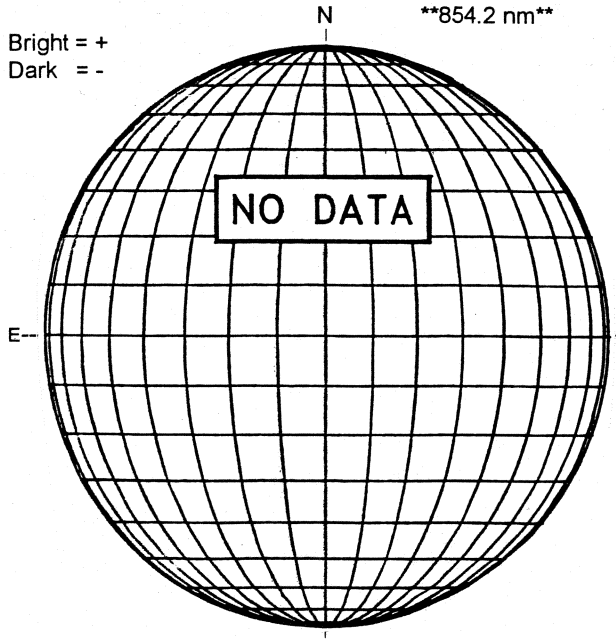


SACRAMENTO PEAK CORONA (1.15 Radii)----

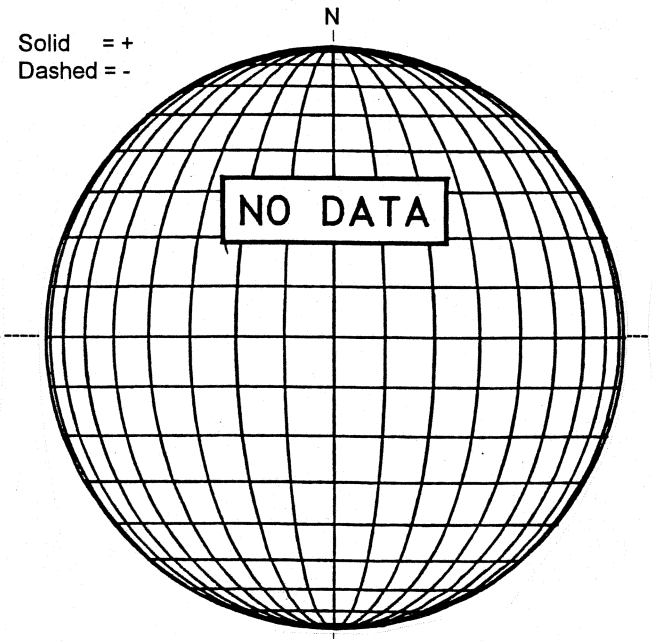


APRIL 8, 2006 (P= -26.28, Bo = -6.13, Lo = 38.38)

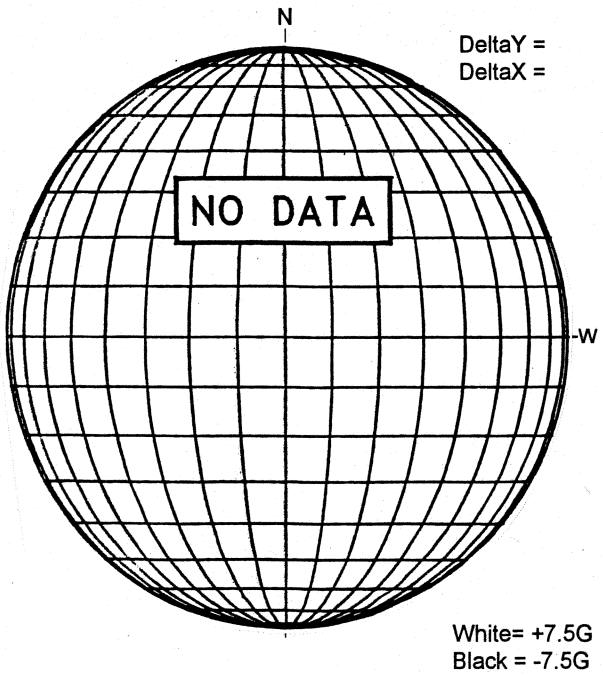
KITT PEAK MAGNETOGRAM--SOLIS



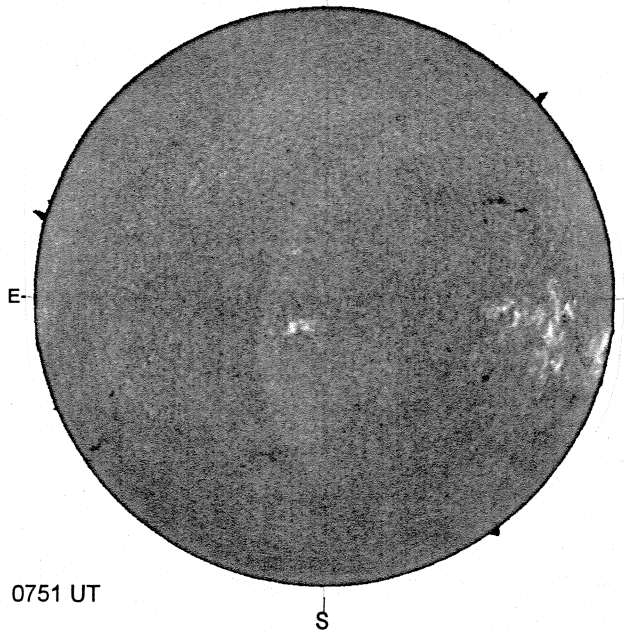
STANFORD MAGNETOGRAM



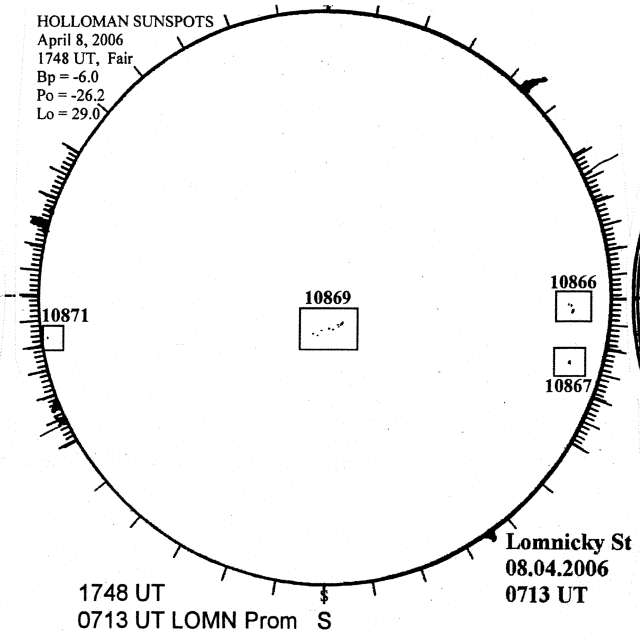
MT. WILSON MAGNETOGRAM



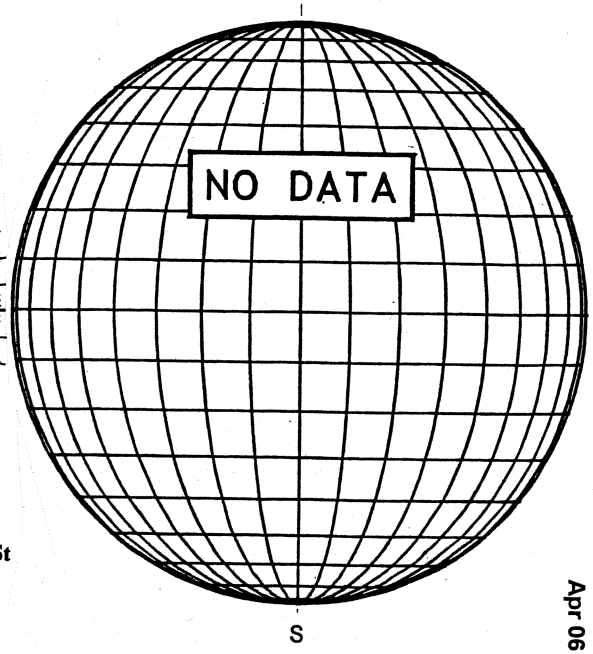
CATANIA H-ALPHA



HOLLOMAN SUNSPOTS



SACRAMENTO PEAK CORONA (1.15 Radii)----

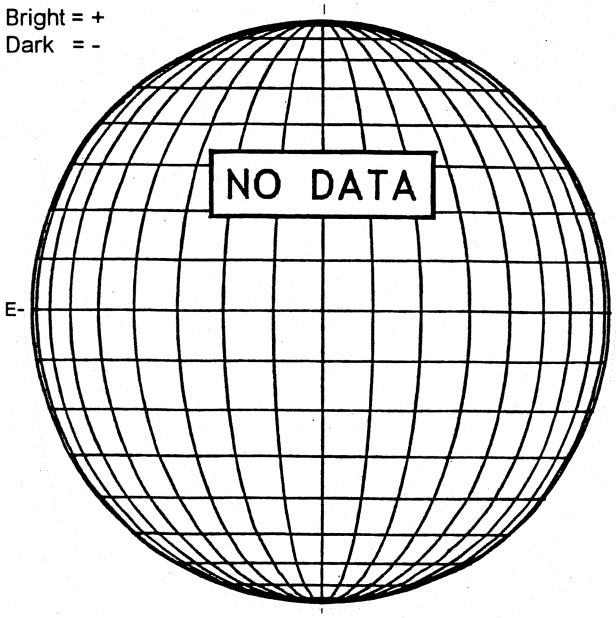


APRIL 9, 2006 (P= -26.27, Bo = -6.07, Lo = 25.19)

KITT PEAK MAGNETOGRAM--SOLIS

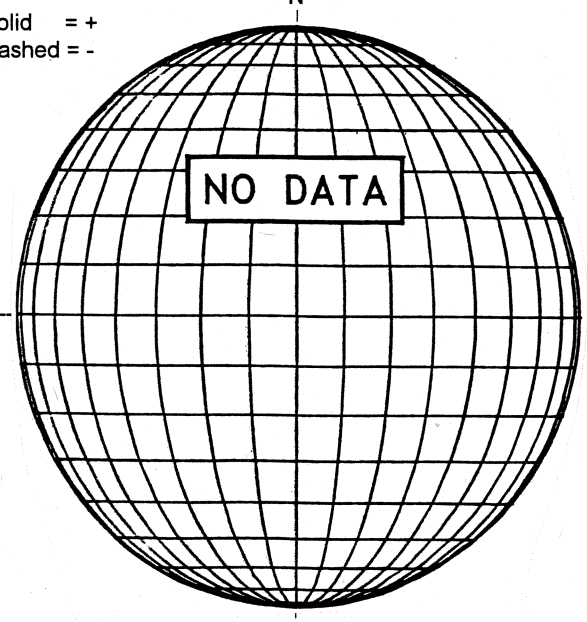
**854.2 nm

Bright = +
Dark = -



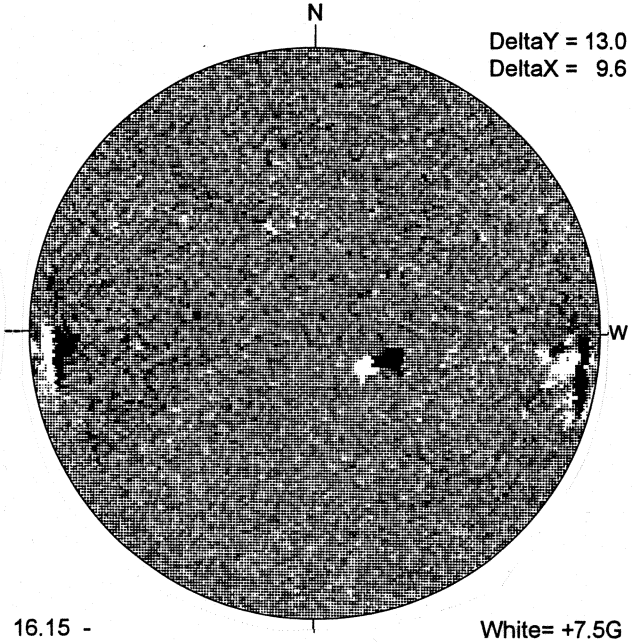
STANFORD MAGNETOGRAM

Solid = +
Dashed = -



MT. WILSON MAGNETOGRAM

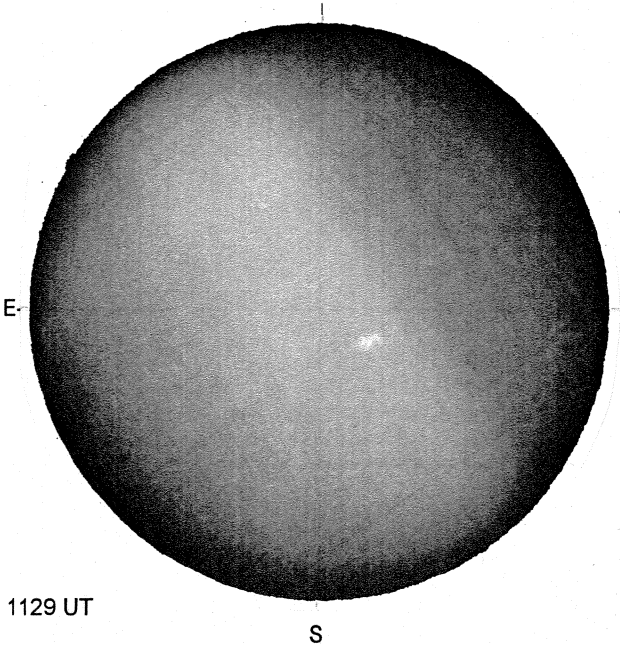
DeltaY = 13.0
DeltaX = 9.6



16.15 -
17.09 UT

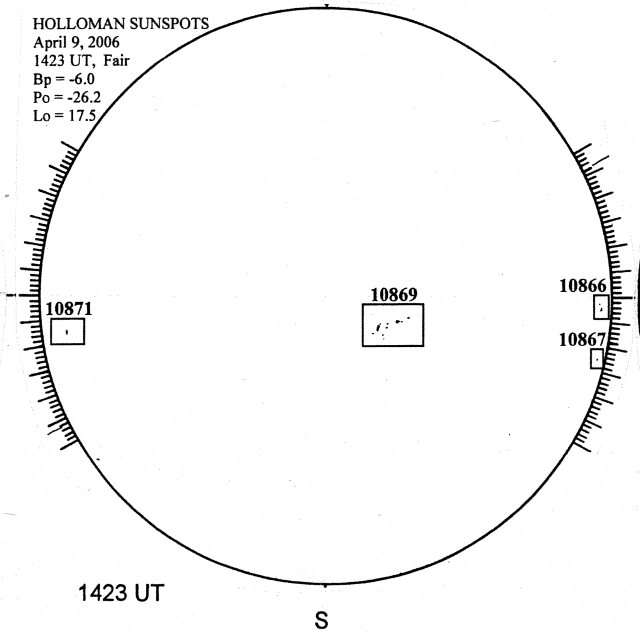
White= +7.5G
Black = -7.5G

MEUDON H-ALPHA



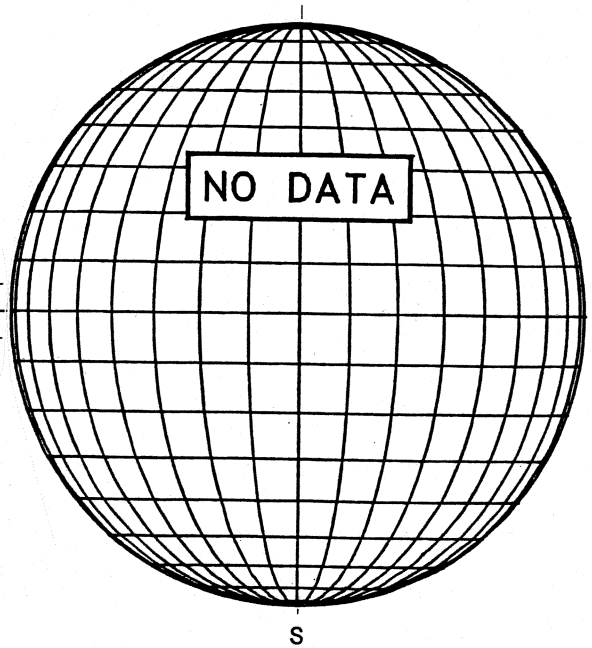
1129 UT

HOLLOMAN SUNSPOTS



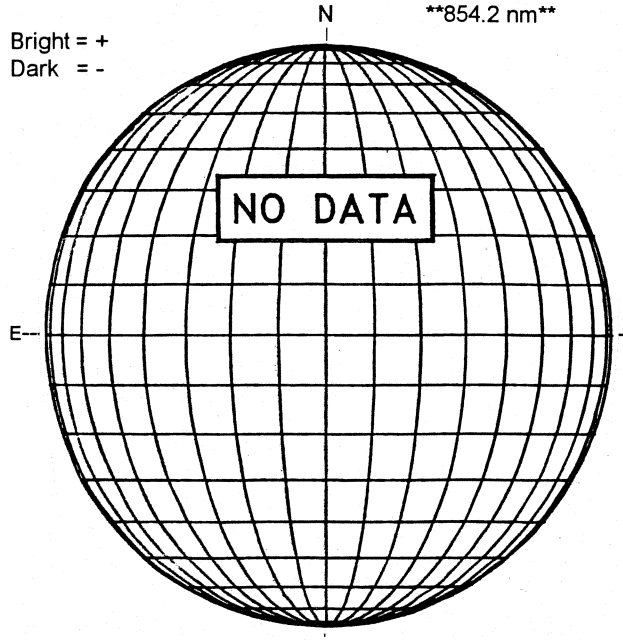
1423 UT

SACRAMENTO PEAK CORONA (1.15 Radii)

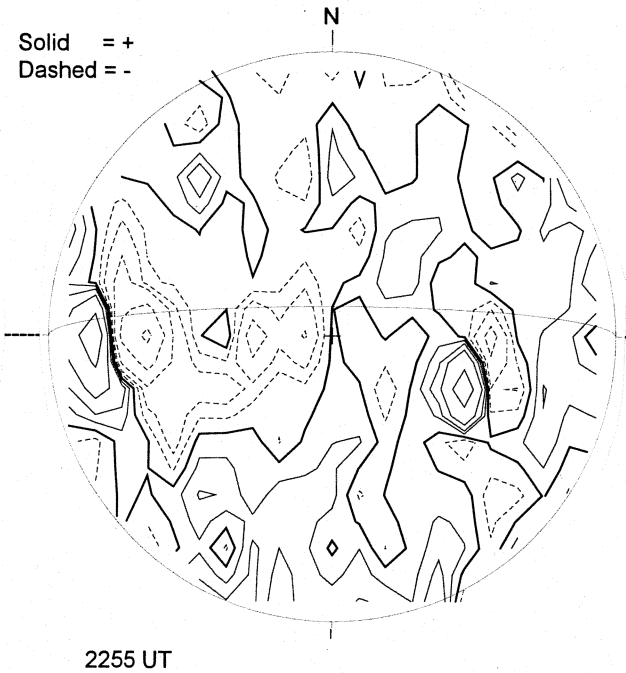


APRIL 10, 2006 (P= -26.25, Bo = -6.00 Lo = 11.99)

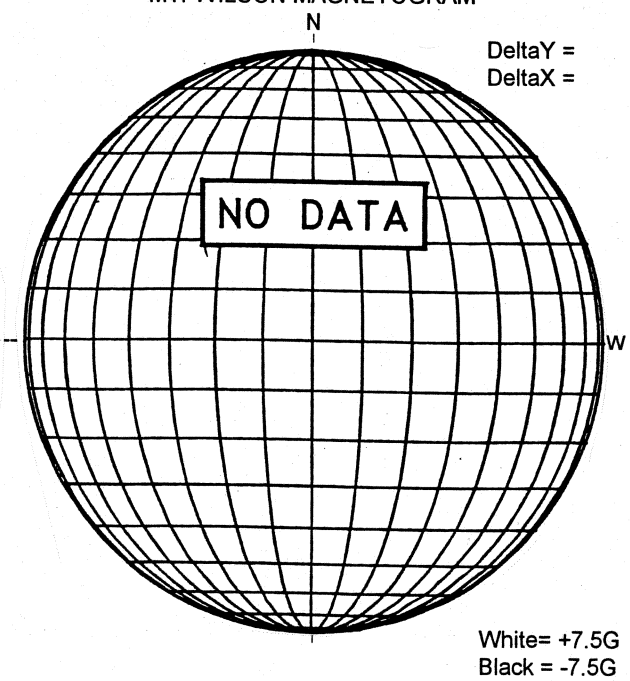
KITT PEAK MAGNETOGRAM--SOLIS



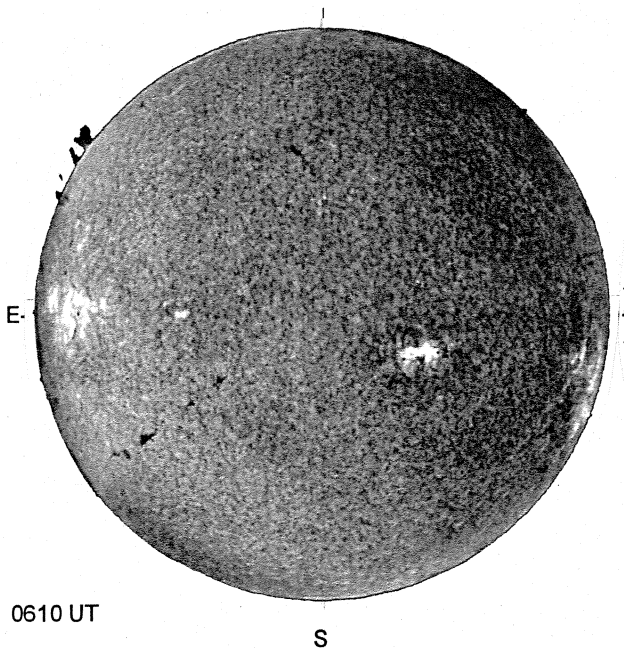
STANFORD MAGNETOGRAM



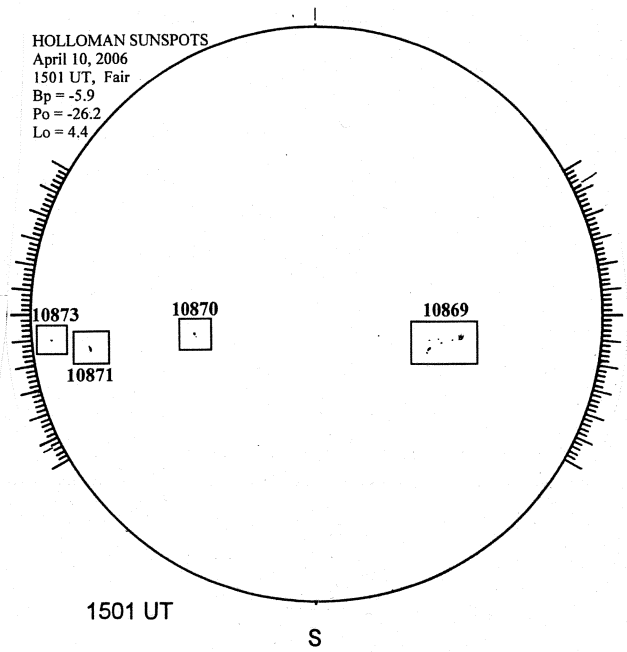
MT. WILSON MAGNETOGRAM



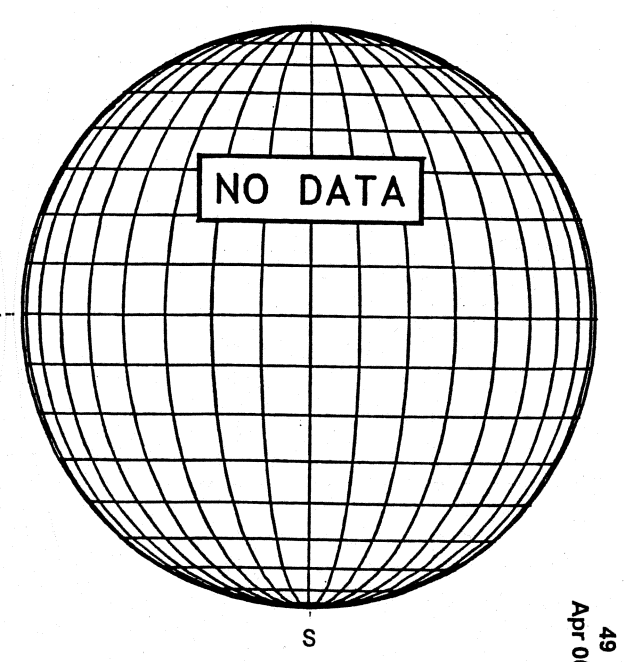
KANZELHOHE H-ALPHA



HOLLOMAN SUNSPOTS



SACRAMENTO PEAK CORONA (1.15 Radii)----

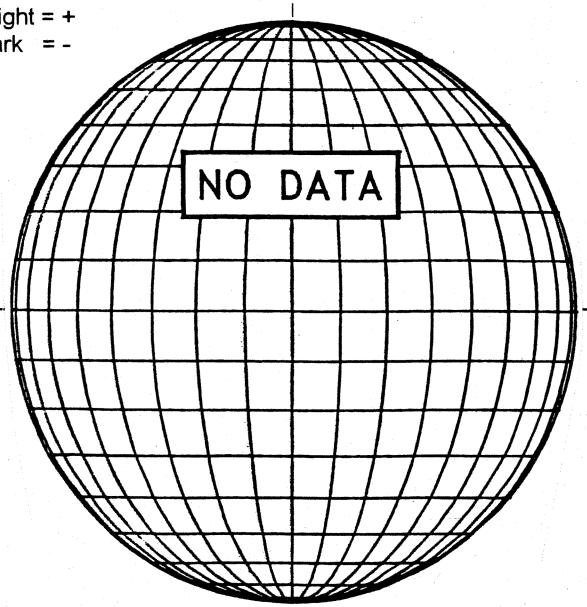


APRIL 11, 2006 (P= -26.23, Bo = -5.93, Lo = 358.79)

KITT PEAK MAGNETOGRAM--SOLIS

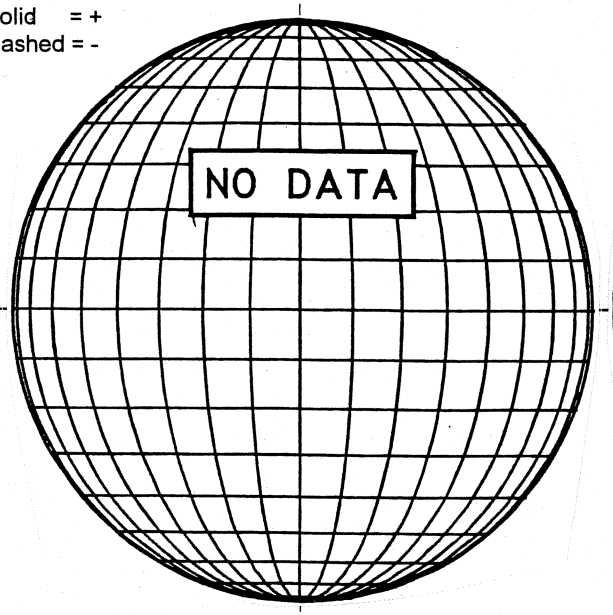
854.2 nm

Bright = +
Dark = -



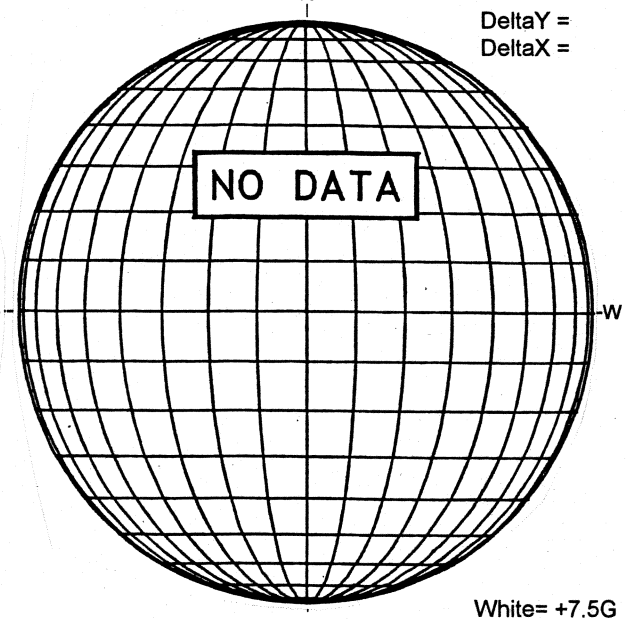
STANFORD MAGNETOGRAM

Solid = +
Dashed = -



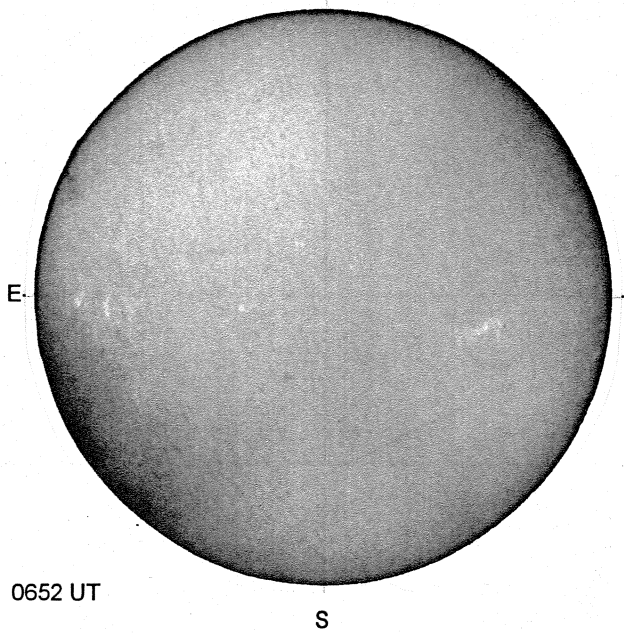
MT. WILSON MAGNETOGRAM

DeltaY =
DeltaX =



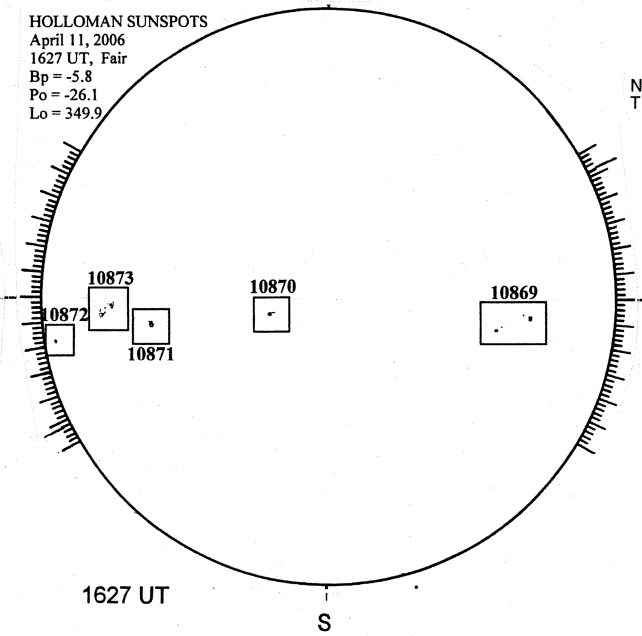
White= +7.5G
Black = -7.5G

MEUDON H-ALPHA



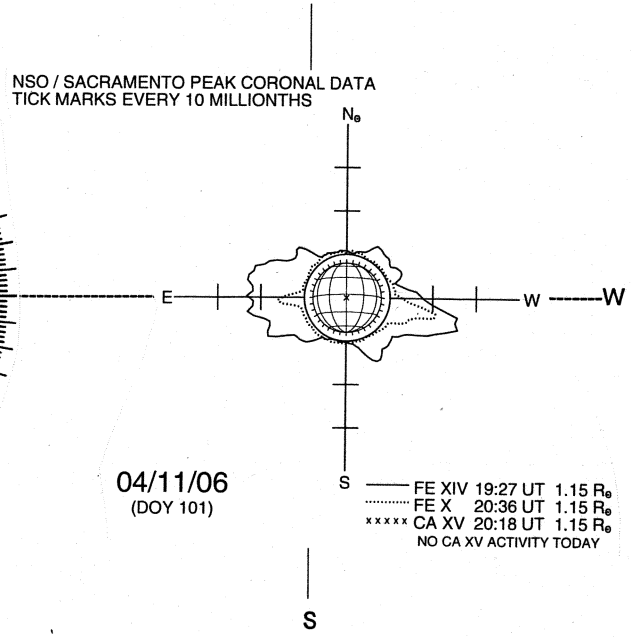
0652 UT

HOLLOMAN SUNSPOTS



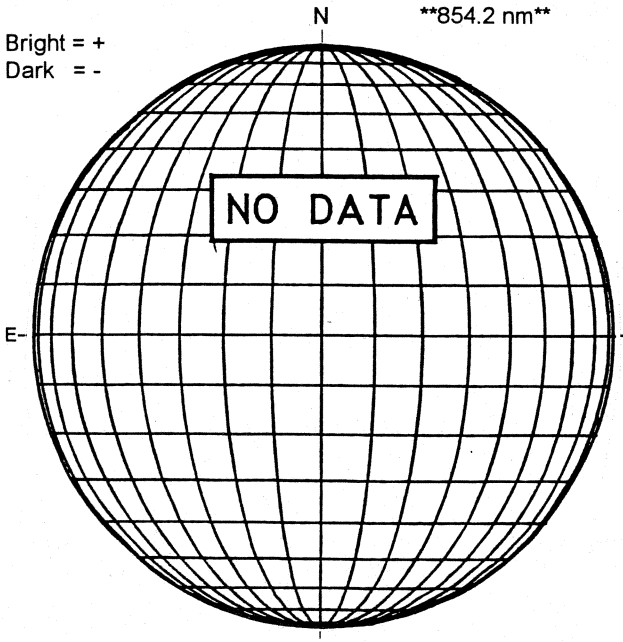
1627 UT

SACRAMENTO PEAK CORONA (1.15 Radii)

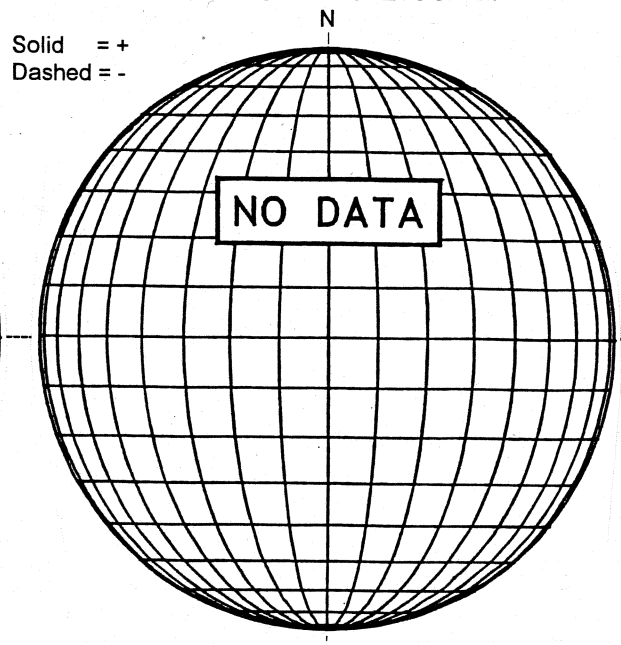


APRIL 12, 2006 (P= -26.20, Bo = -5.85, Lo = 345.59)

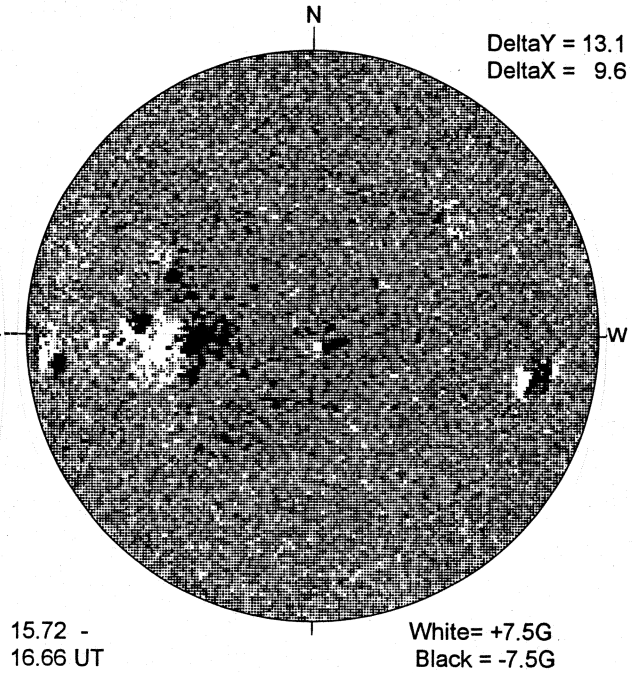
KITT PEAK MAGNETOGRAM--SOLIS



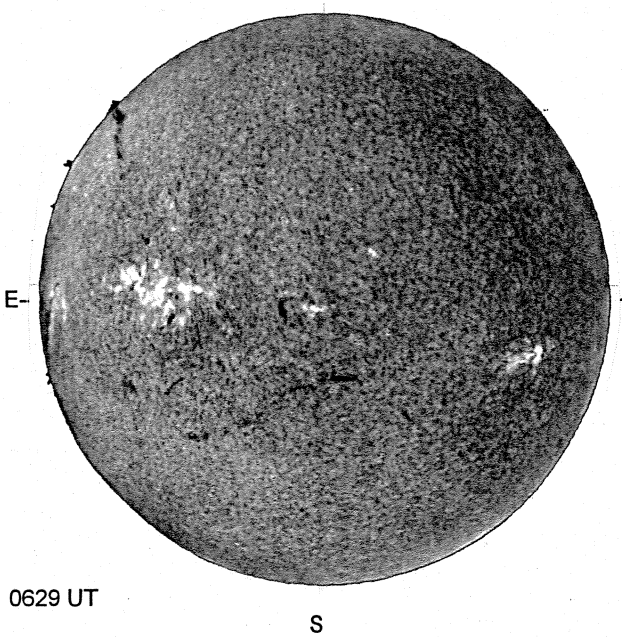
STANFORD MAGNETOGRAM



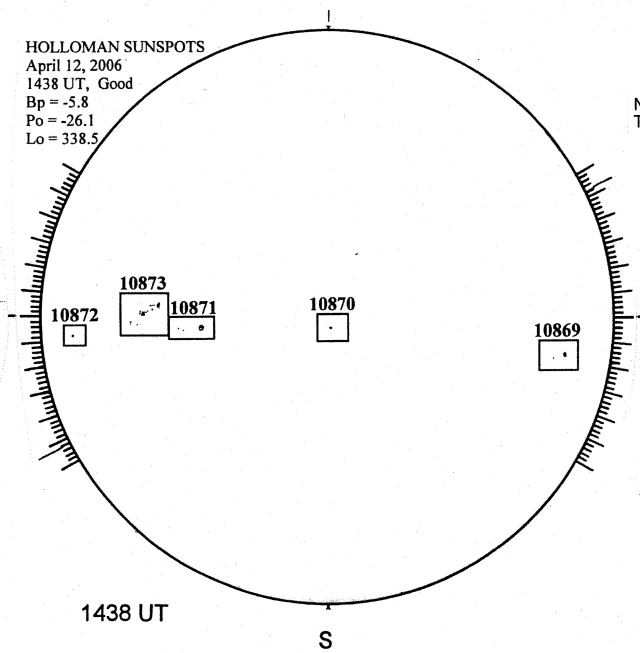
MT. WILSON MAGNETOGRAM



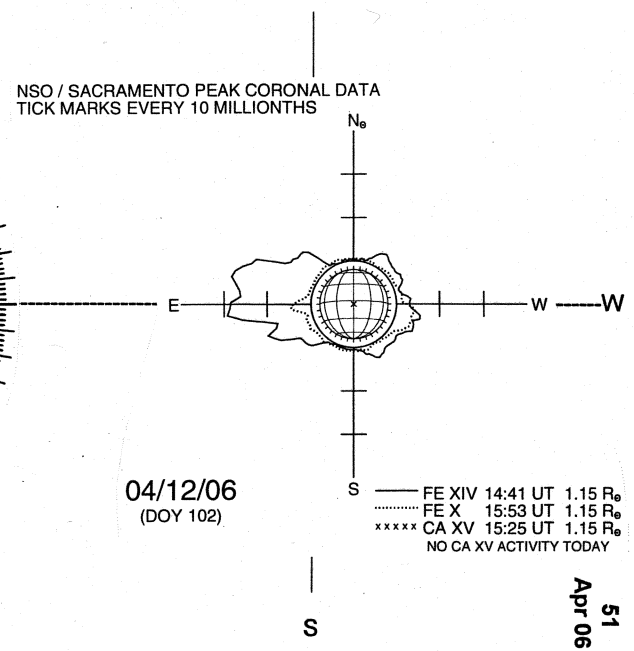
---- KANZELHOHE H-ALPHA



HOLLOMAN SUNSPOTS

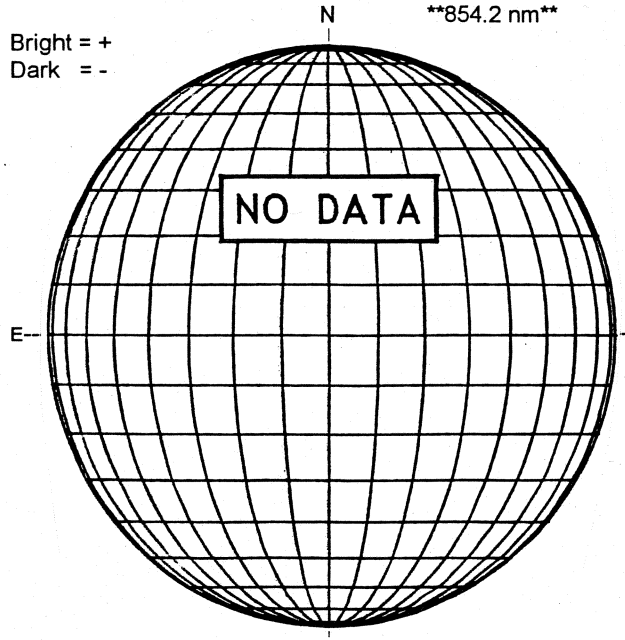


SACRAMENTO PEAK CORONA (1.15 Radii)----

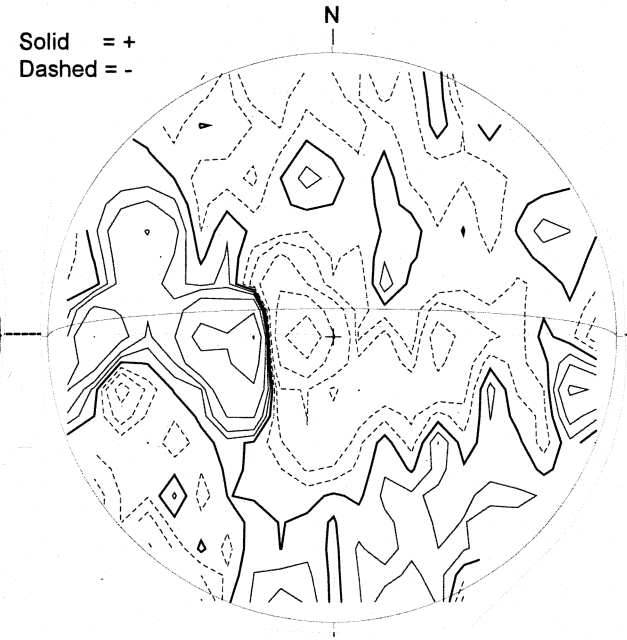


APRIL 13, 2006 (P= -26.16, Bo = -5.78, Lo = 332.38

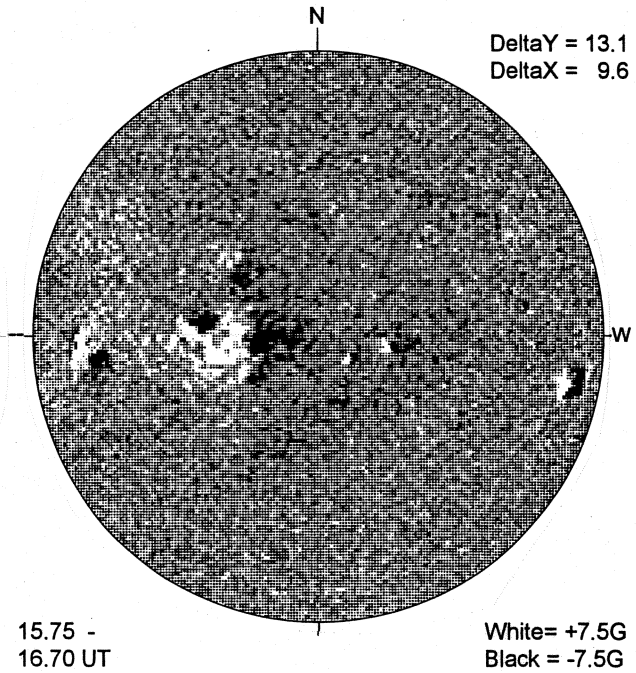
KITT PEAK MAGNETOGRAM--SOLIS



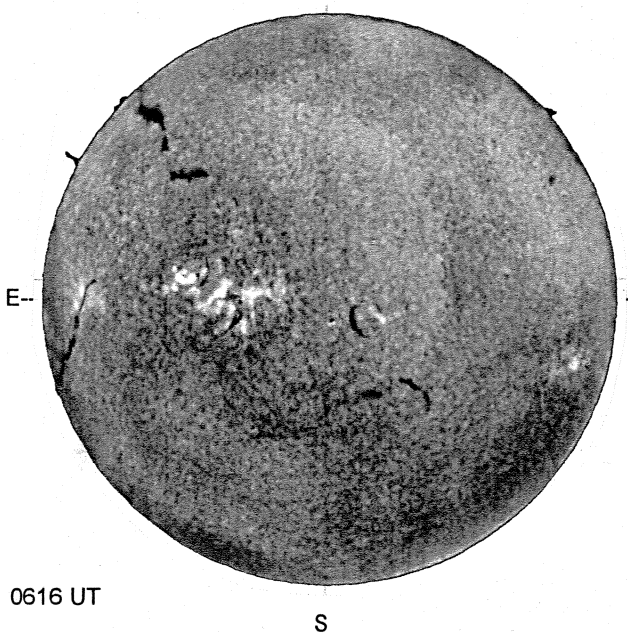
STANFORD MAGNETOGRAM



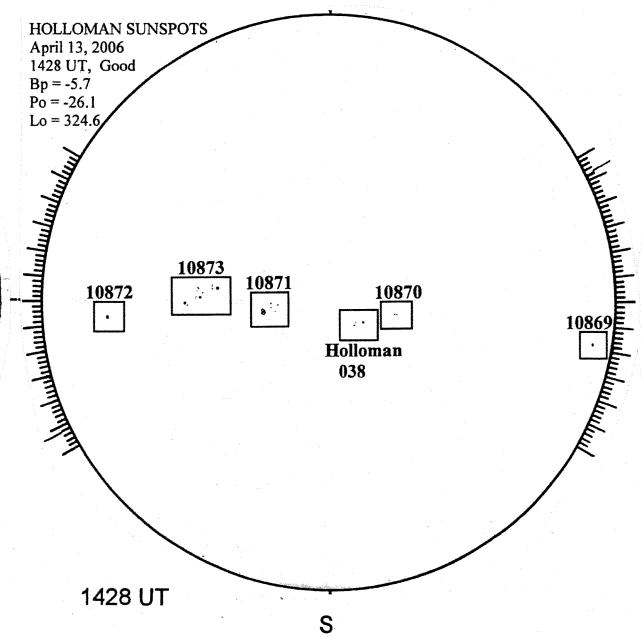
MT. WILSON MAGNETOGRAM



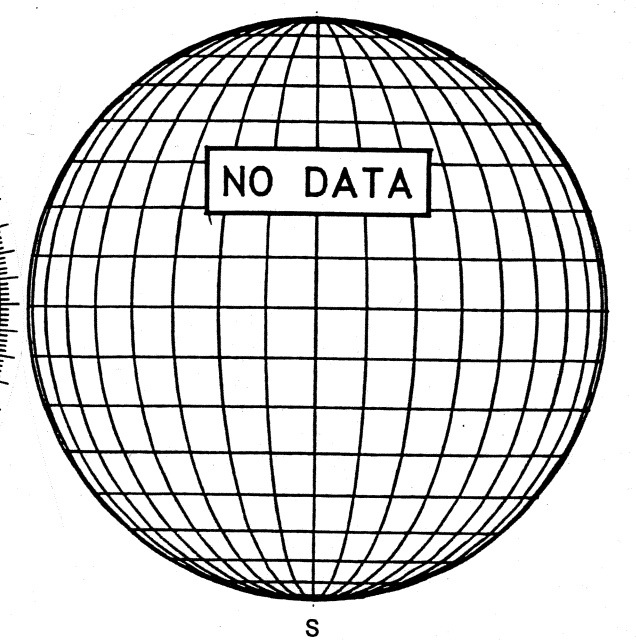
---- KANZELHOHE H-ALPHA



HOLLOMAN SUNSPOTS



SACRAMENTO PEAK CORONA (1.15 Radii)----

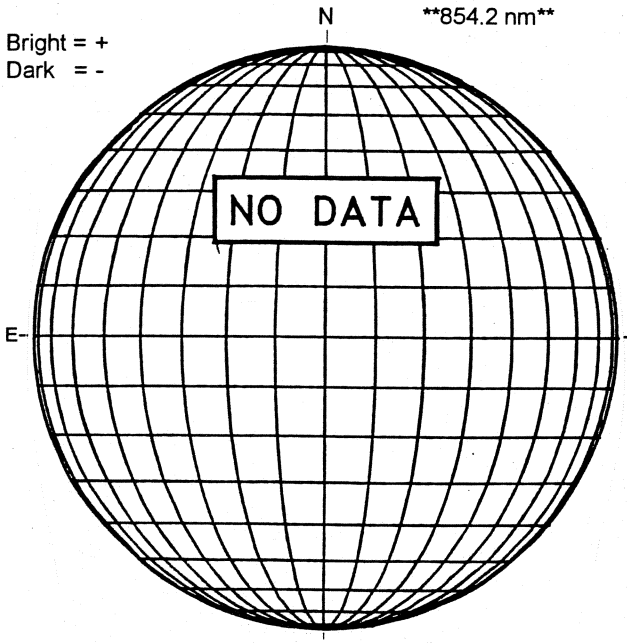


APRIL 14, 2006 (P= -26.11, Bo = -5.70, Lo = 319.18)

KITT PEAK MAGNETOGRAM--SOLIS

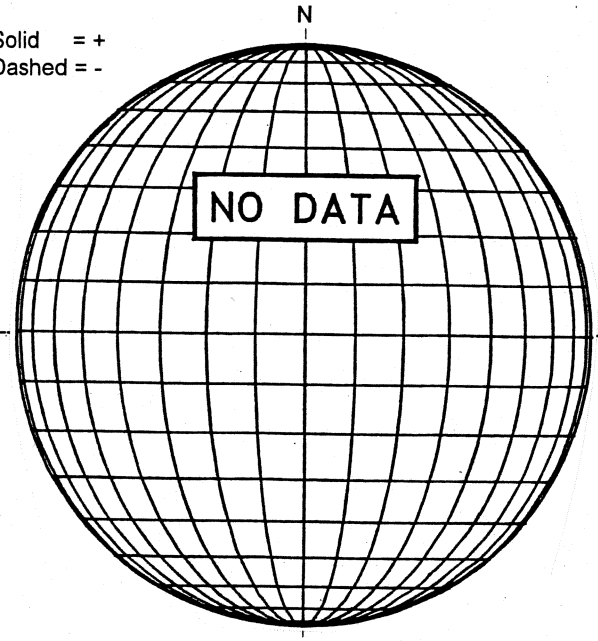
854.2 nm

Bright = +
Dark = -



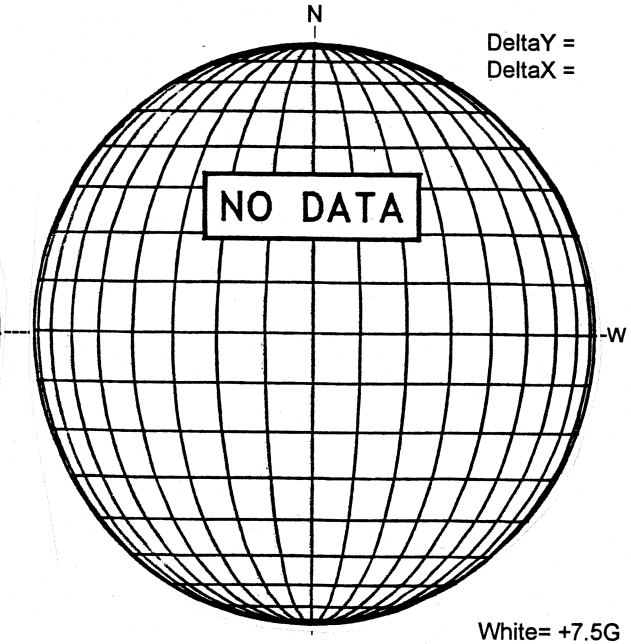
STANFORD MAGNETOGRAM

Solid = +
Dashed = -



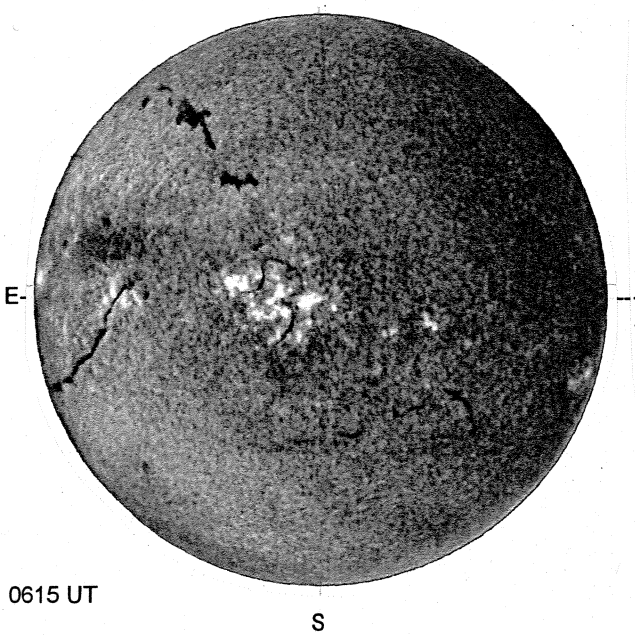
MT. WILSON MAGNETOGRAM

DeltaY =
DeltaX =



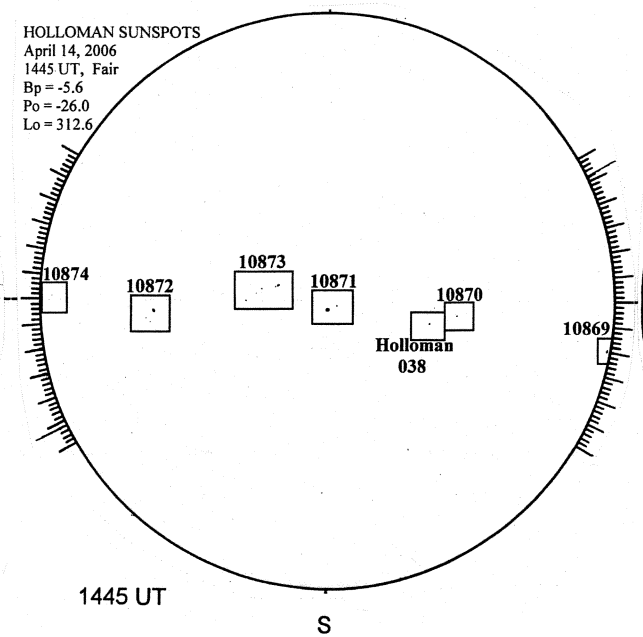
White= +7.5G
Black = -7.5G

KANZELHOHE H-ALPHA



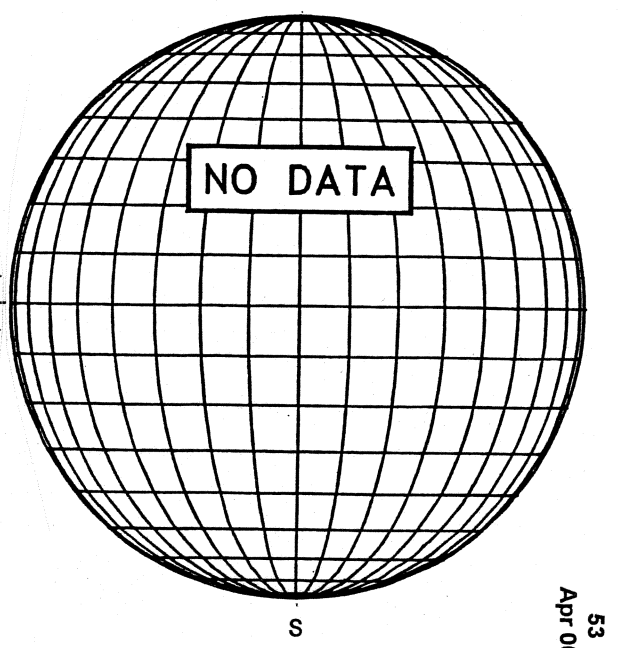
0615 UT

HOLLOMAN SUNSPOTS



1445 UT

SACRAMENTO PEAK CORONA (1.15 Radii)----

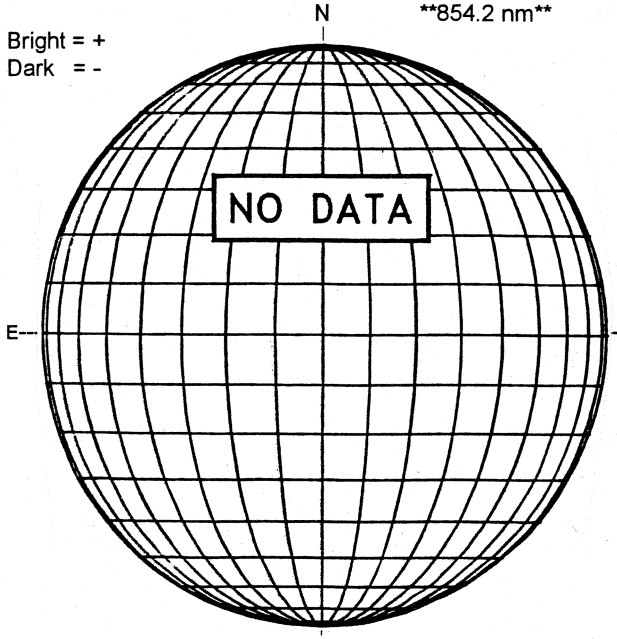


APRIL 15, 2006 (P= -26.05, Bo = -5.63, Lo = 305.98)

KITT PEAK MAGNETOGRAM--SOLIS

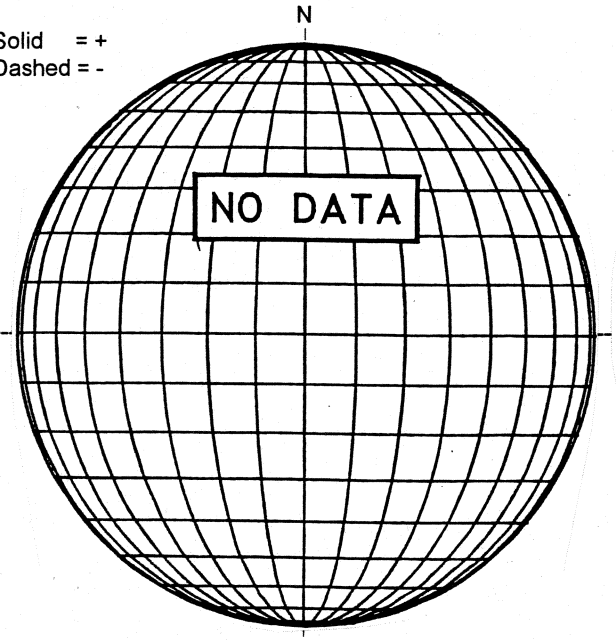
854.2 nm

Bright = +
Dark = -



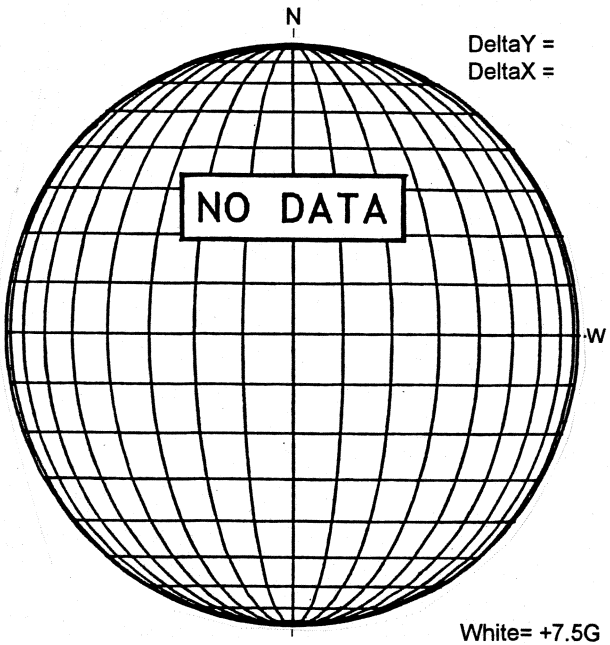
STANFORD MAGNETOGRAM

Solid = +
Dashed = -



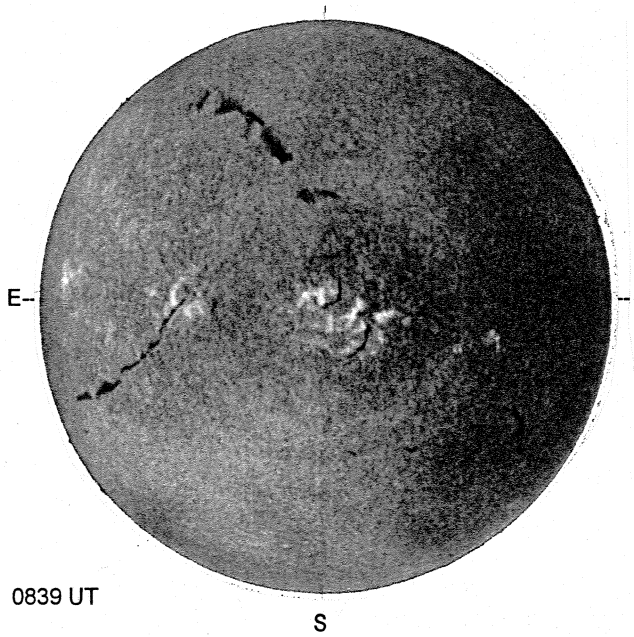
MT. WILSON MAGNETOGRAM

DeltaY =
DeltaX =

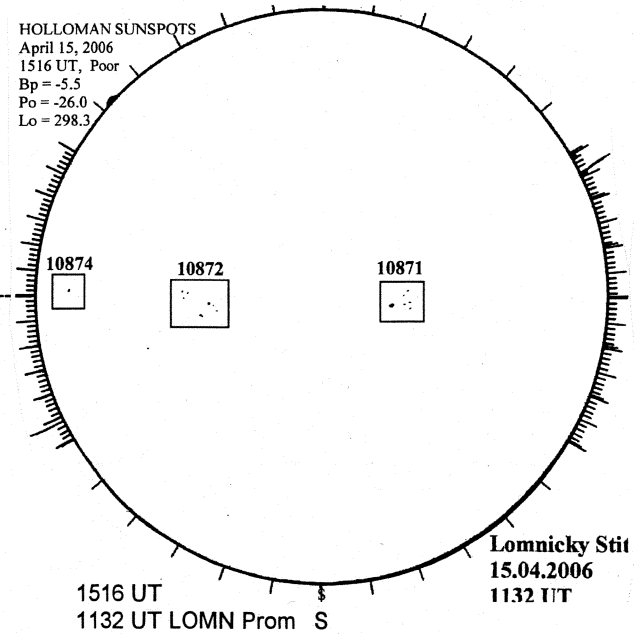


White= +7.5G
Black = -7.5G

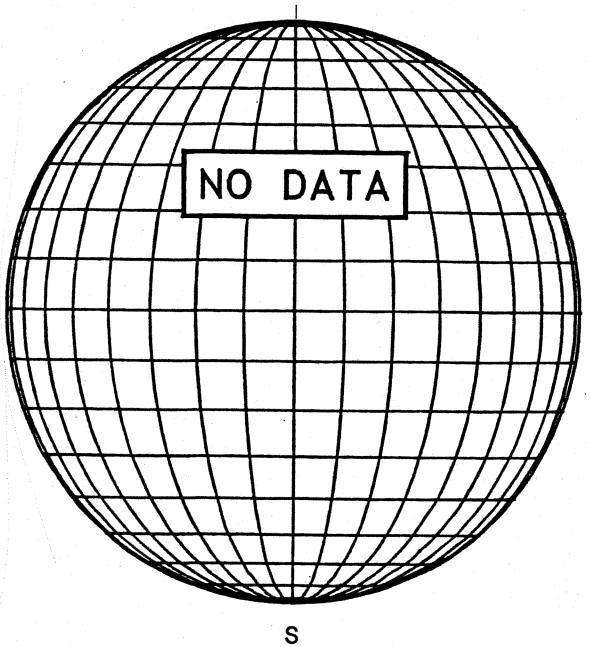
KANZELHOHE H-ALPHA



HOLLOMAN SUNSPOTS



SACRAMENTO PEAK CORONA (1.15 Radii)

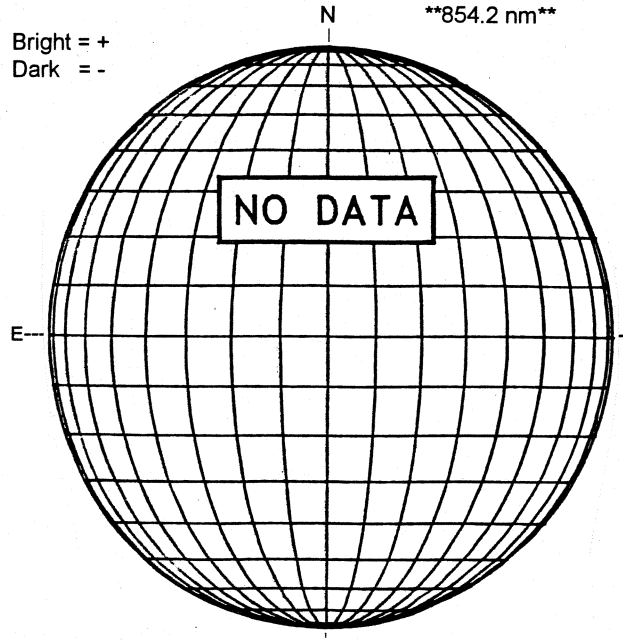


APRIL 16, 2006 (P= -25.99, Bo = -5.55, Lo = 292.77)

KITT PEAK MAGNETOGRAM--SOLIS

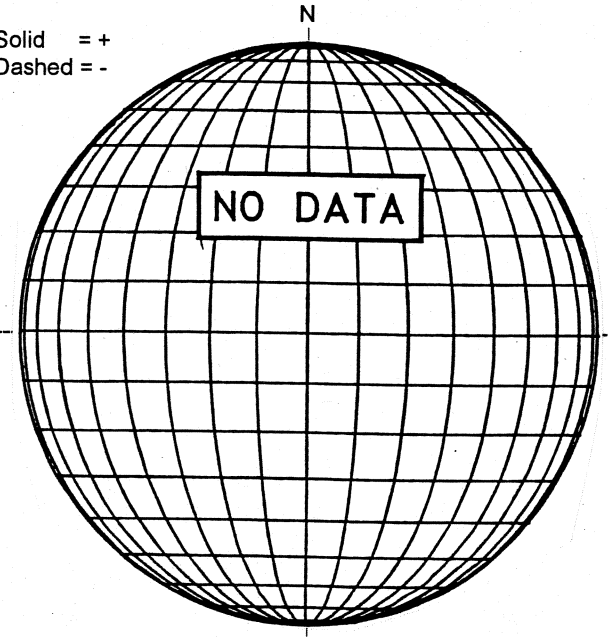
854.2 nm

Bright = +
Dark = -



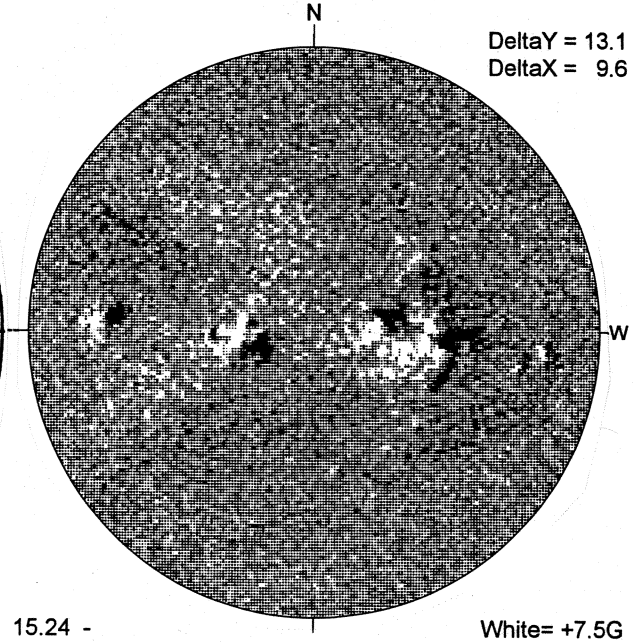
STANFORD MAGNETOGRAM

Solid = +
Dashed = -



MT. WILSON MAGNETOGRAM

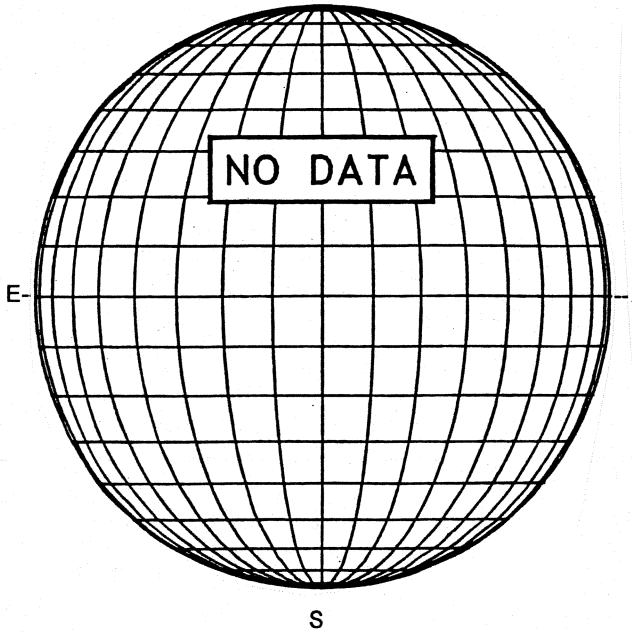
DeltaY = 13.1
DeltaX = 9.6



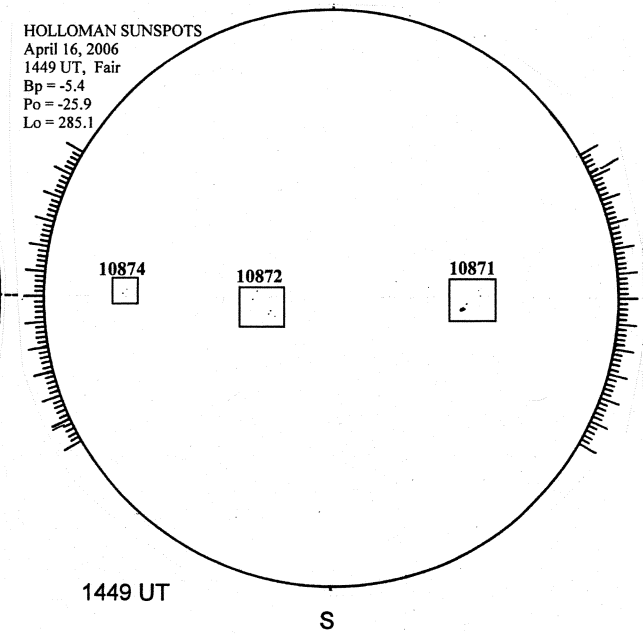
15.24 -
16.19 UT

White= +7.5G
Black = -7.5G

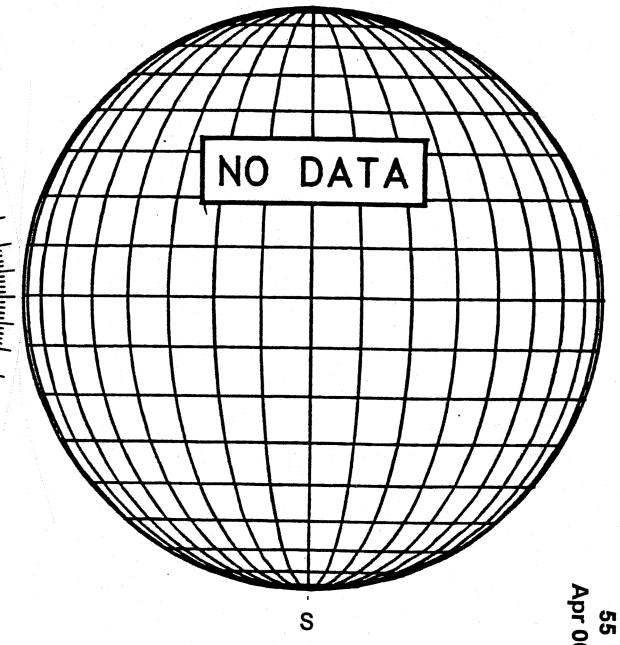
CATANIA H-ALPHA



HOLLOMAN SUNSPOTS



SACRAMENTO PEAK CORONA (1.15 Radii)----

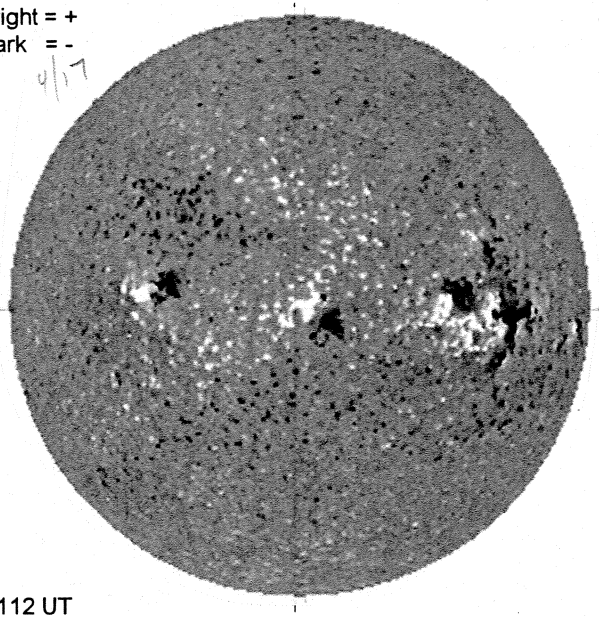


APRIL 17, 2006 (P= -25.92, Bo = -5.47, Lo = 279.57)

KITT PEAK MAGNETOGRAM--SOLIS

854.2 nm

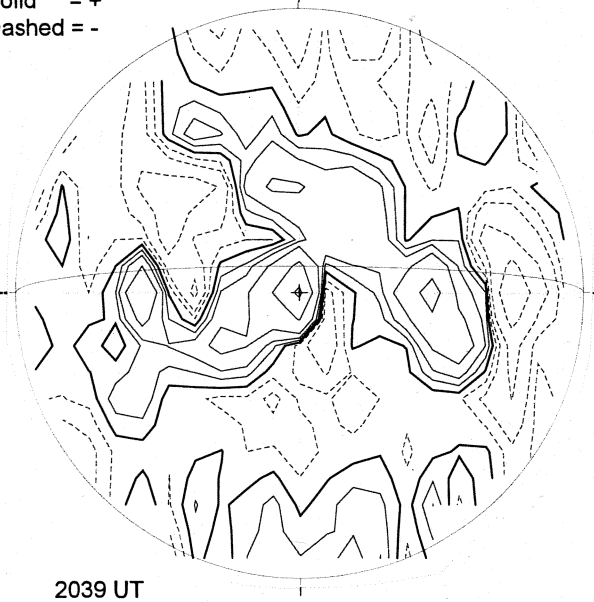
Bright = +
Dark = -



2112 UT

STANFORD MAGNETOGRAM

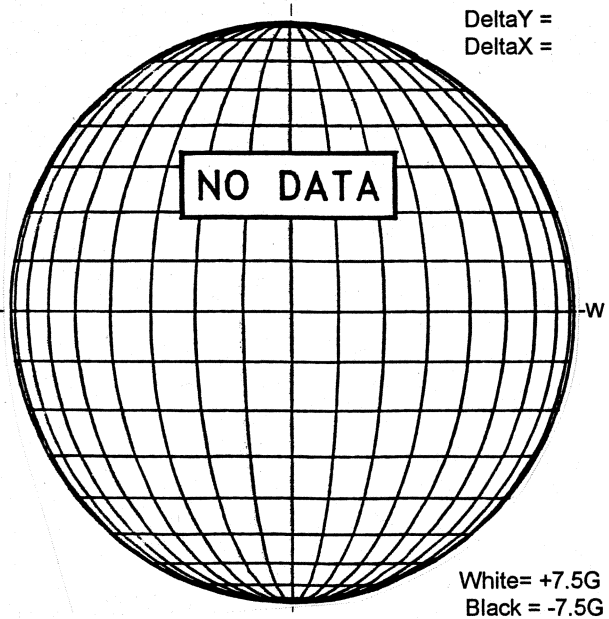
Solid = +
Dashed = -



2039 UT

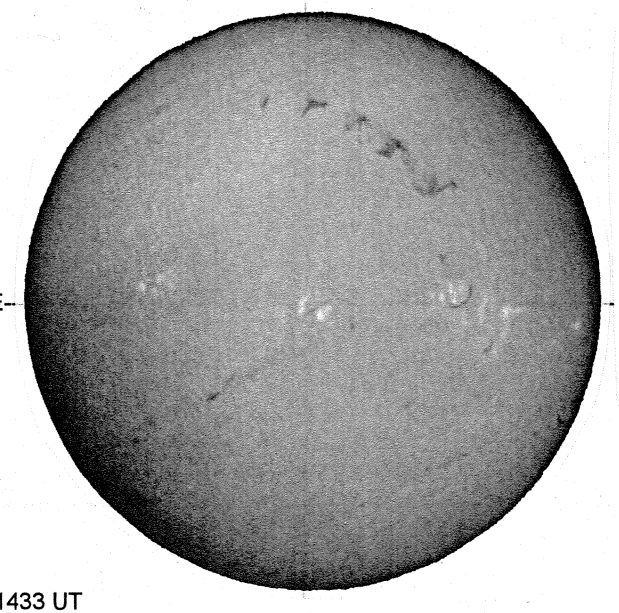
MT. WILSON MAGNETOGRAM

DeltaY =
DeltaX =



White= +7.5G
Black = -7.5G

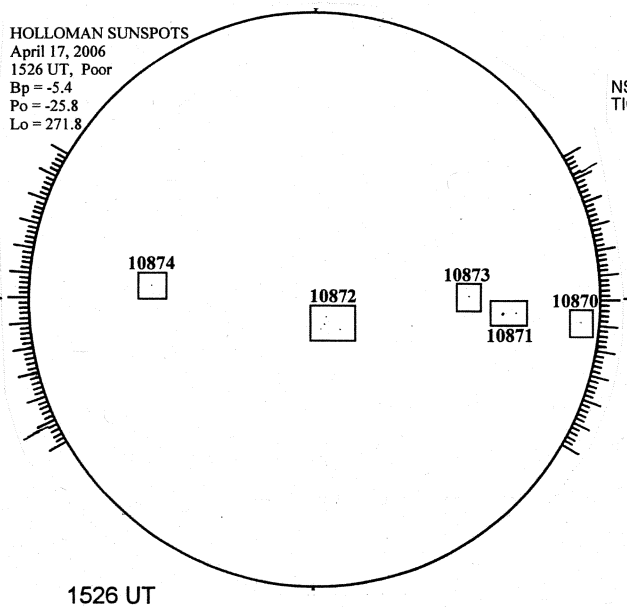
MEUDON H-ALPHA



1433 UT

S

HOLLOMAN SUNSPOTS

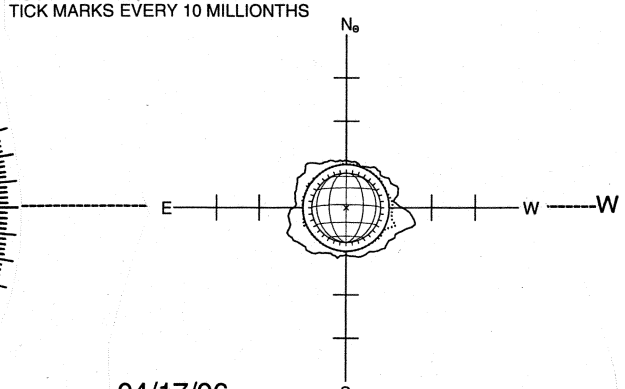


1526 UT

S

SACRAMENTO PEAK CORONA (1.15 Radii)

NSO / SACRAMENTO PEAK CORONAL DATA
TICK MARKS EVERY 10 MILLIONTHS



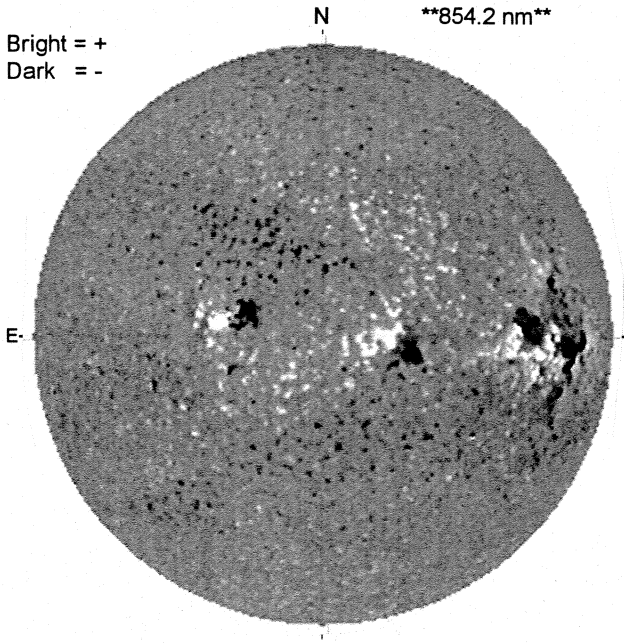
04/17/06
(DOY 107)

FE XIV 14:20 UT 1.15 Re
FE X 14:56 UT 1.15 Re
CA XV 15:36 UT 1.15 Re
NO CA XV ACTIVITY TODAY

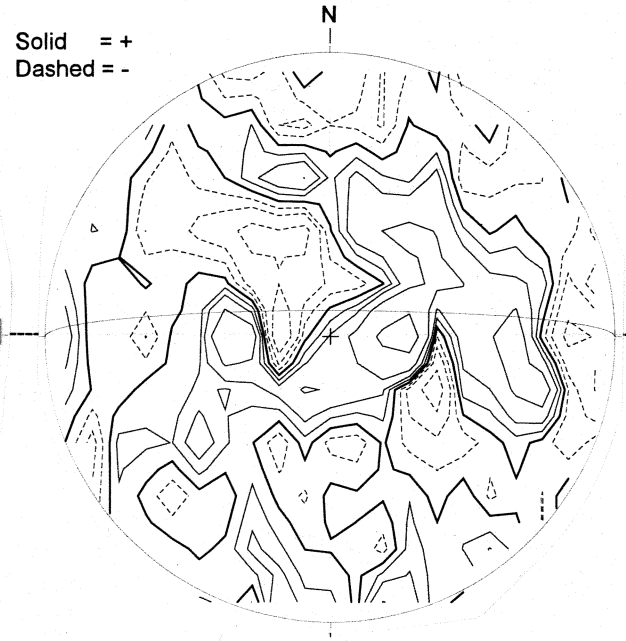
S

APRIL 18, 2006 (P= -25.84, Bo = -5.38, Lo = 266.36)

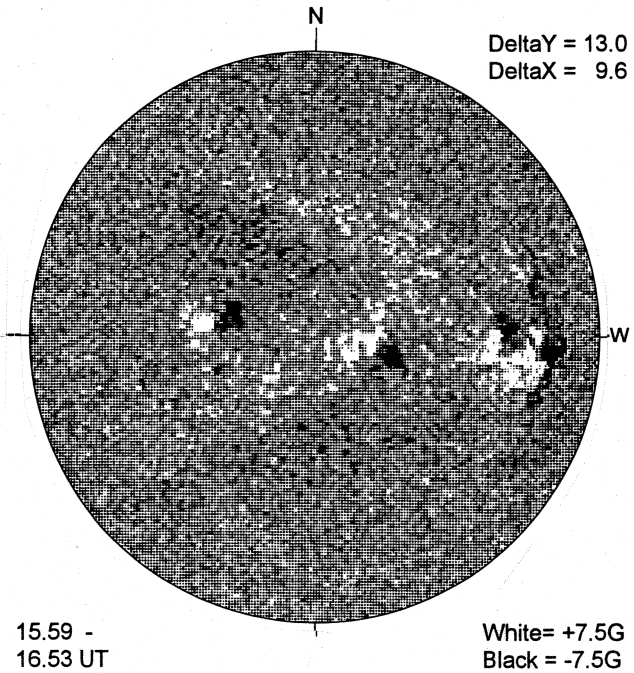
KITT PEAK MAGNETOGRAM--SOLIS



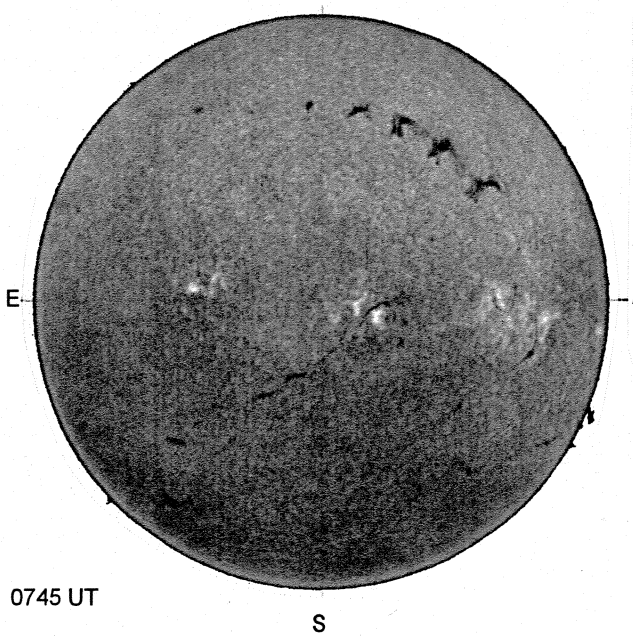
STANFORD MAGNETOGRAM



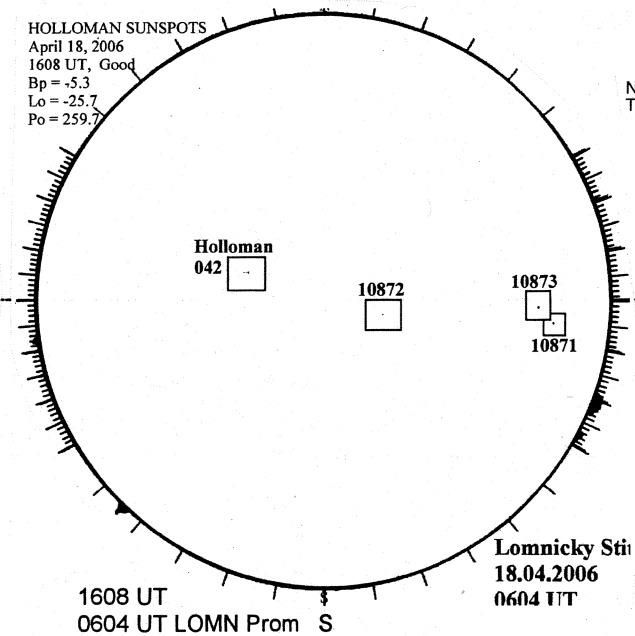
MT. WILSON MAGNETOGRAM



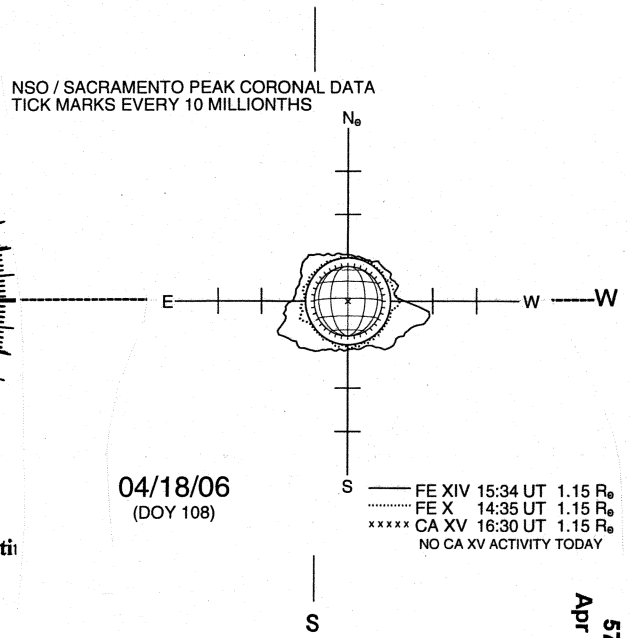
CATANIA H-ALPHA



HOLLOMAN SUNSPOTS



SACRAMENTO PEAK CORONA (1.15 Radii)----

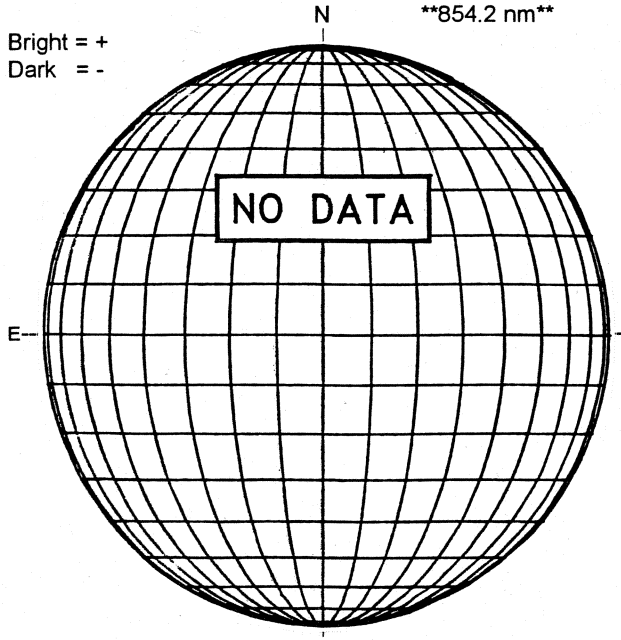


APRIL 19, 2006 (P= -25.76, Bo = -5.30, Lo = 253.16)

KITT PEAK MAGNETOGRAM--SOLIS

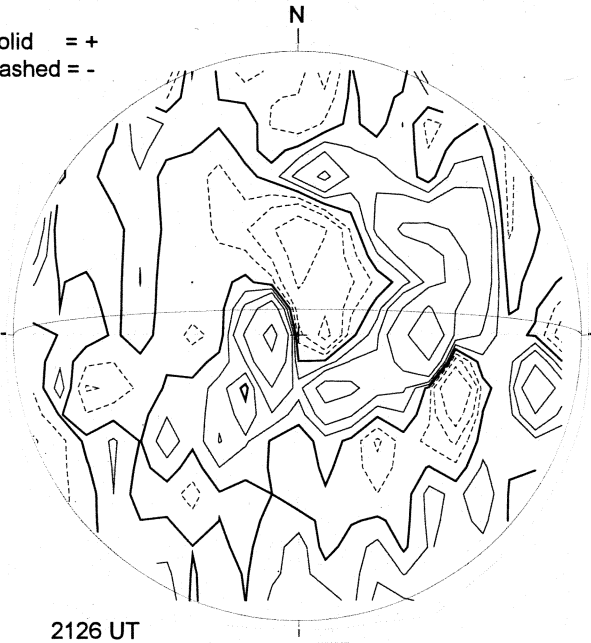
854.2 nm

Bright = +
Dark = -



STANFORD MAGNETOGRAM

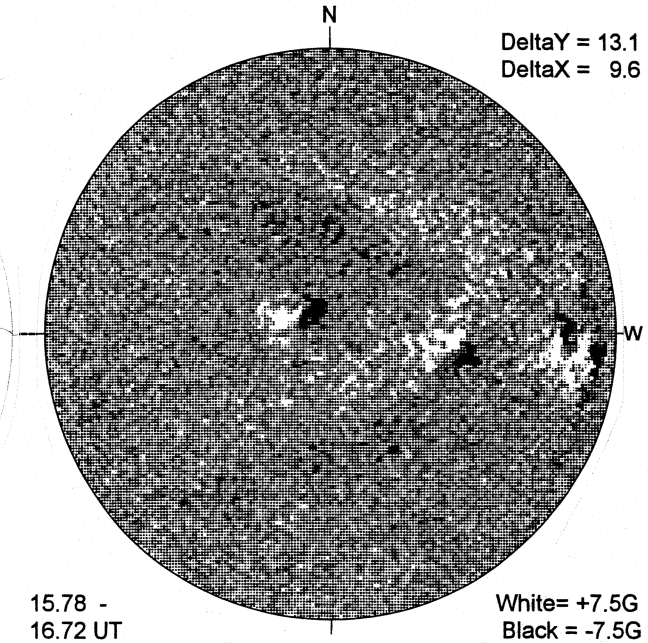
Solid = +
Dashed = -



2126 UT

MT. WILSON MAGNETOGRAM

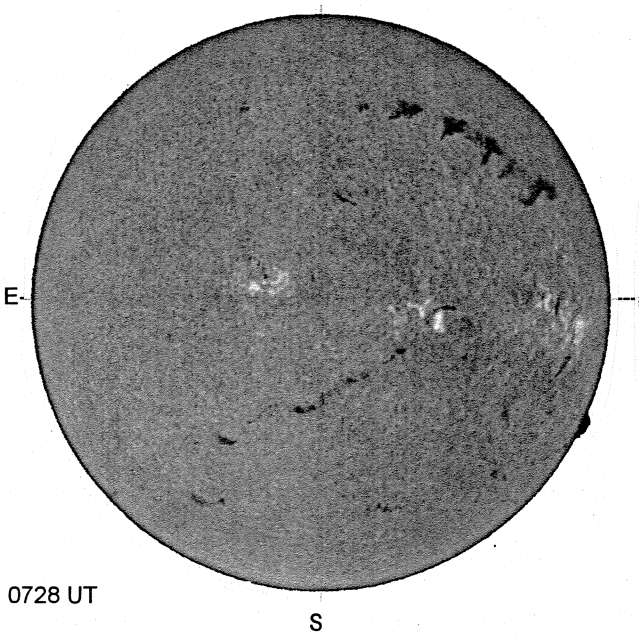
DeltaY = 13.1
DeltaX = 9.6



15.78 -
16.72 UT

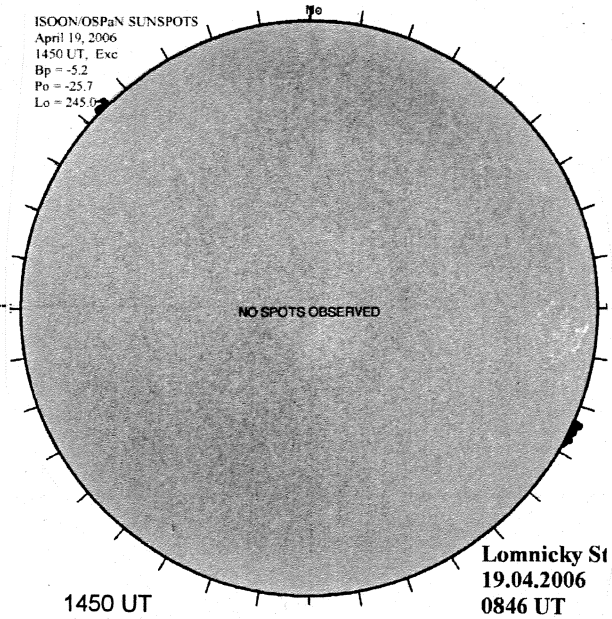
White= +7.5G
Black = -7.5G

CATANIA H-ALPHA



0728 UT

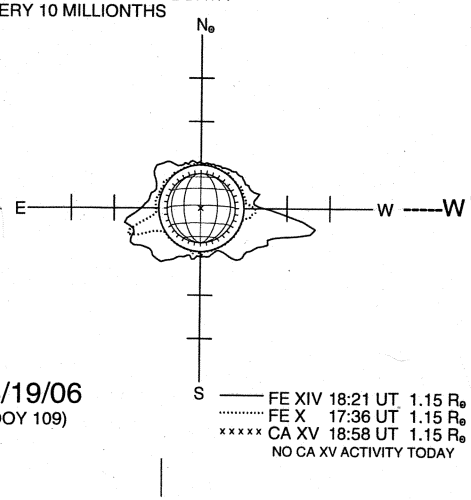
ISOON/OSPaN SUNSPOTS



1450 UT
0846 UT LOMN Prom S

SACRAMENTO PEAK CORONA (1.15 Radii)

NSO / SACRAMENTO PEAK CORONAL DATA
TICK MARKS EVERY 10 MILLIONTHS



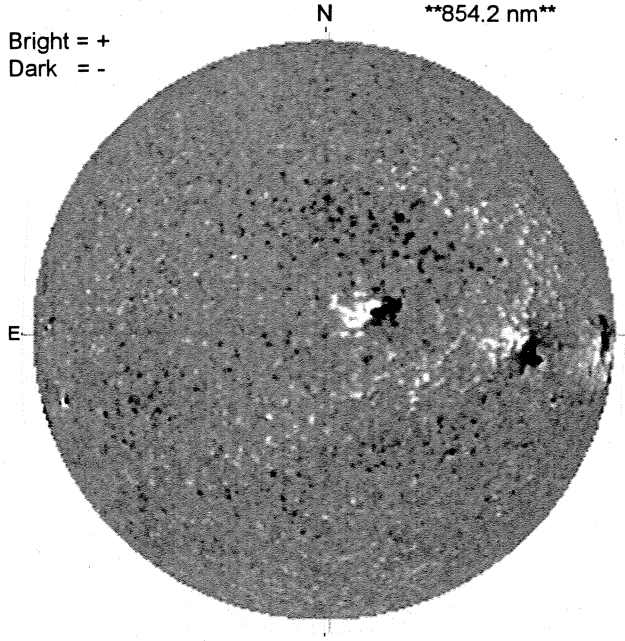
04/19/06
(DOY 109)

FE XIV 18:21 UT 1.15 $R_\odot$
FE X 17:36 UT 1.15 $R_\odot$
CA XV 18:58 UT 1.15 $R_\odot$
NO CA XV ACTIVITY TODAY

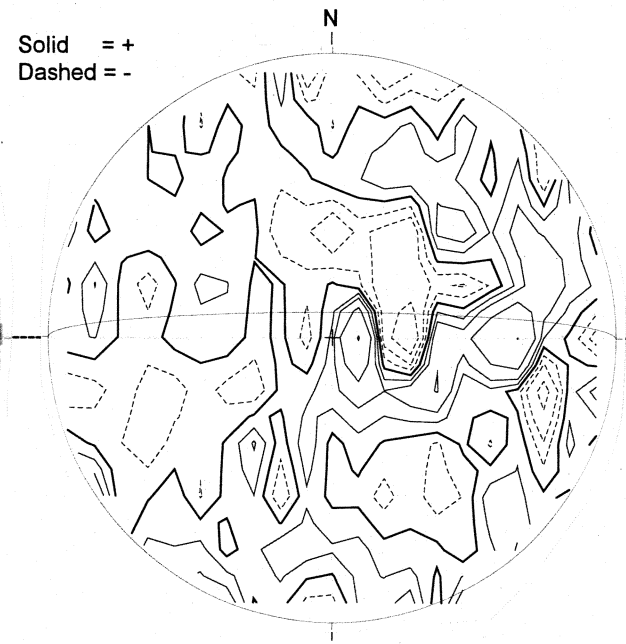
S

APRIL 20, 2006 (P= -25.67, Bo = -5.22, Lo = 239.95)

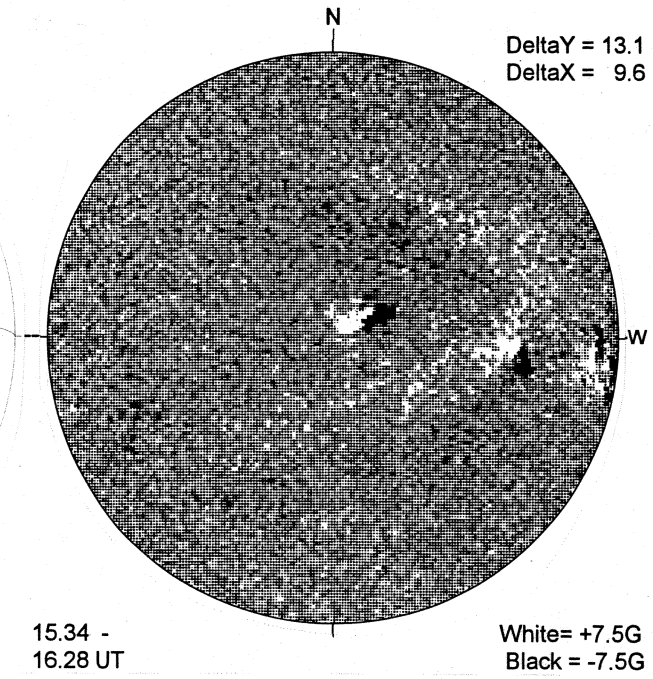
KITT PEAK MAGNETOGRAM--SOLIS



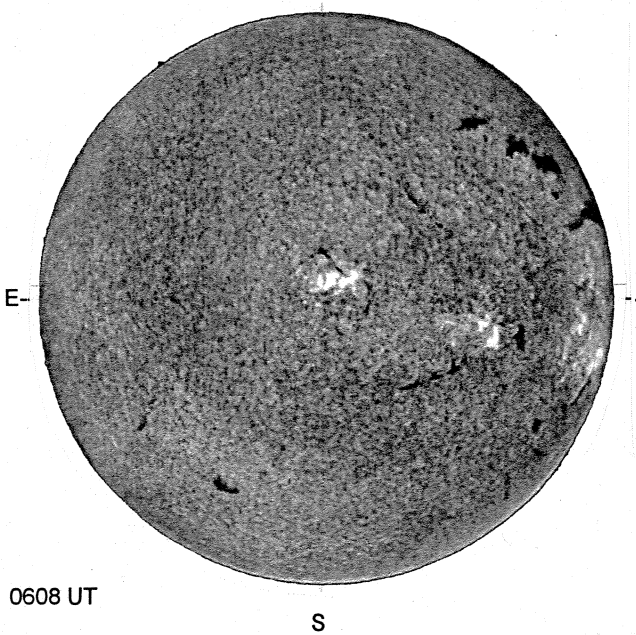
STANFORD MAGNETOGRAM



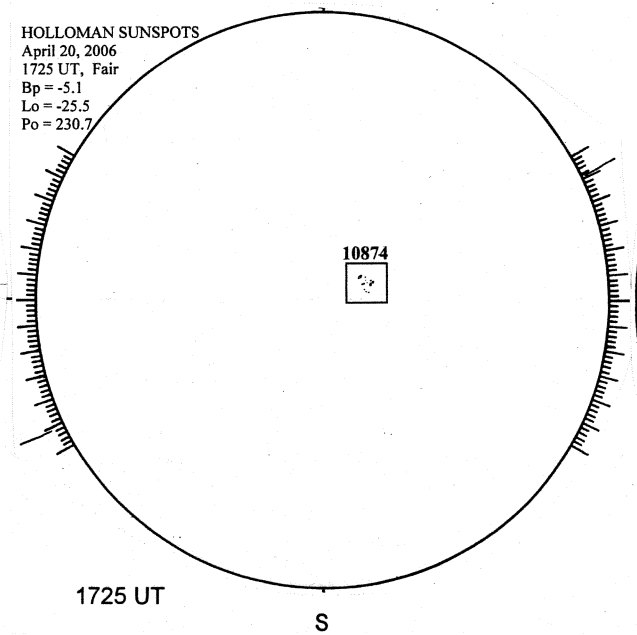
MT. WILSON MAGNETOGRAM



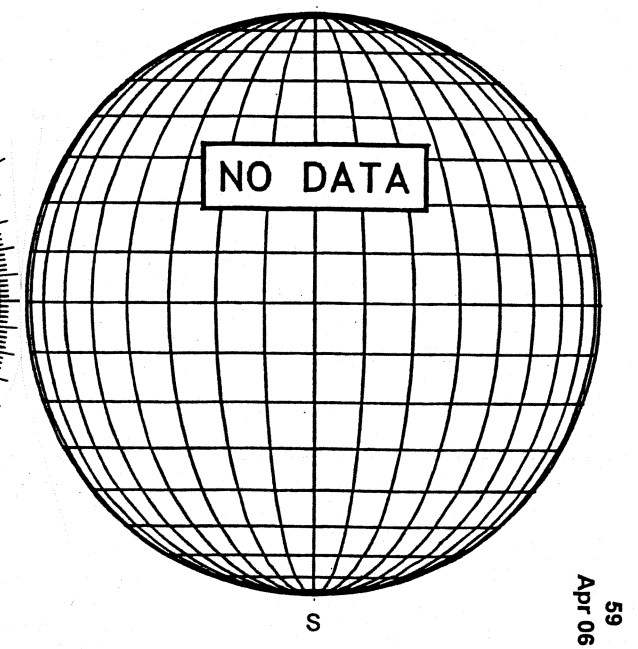
KANZELHOHE H-ALPHA



HOLLOMAN SUNSPOTS



LOMNICKY PEAK CORONA (1.04 Radii)



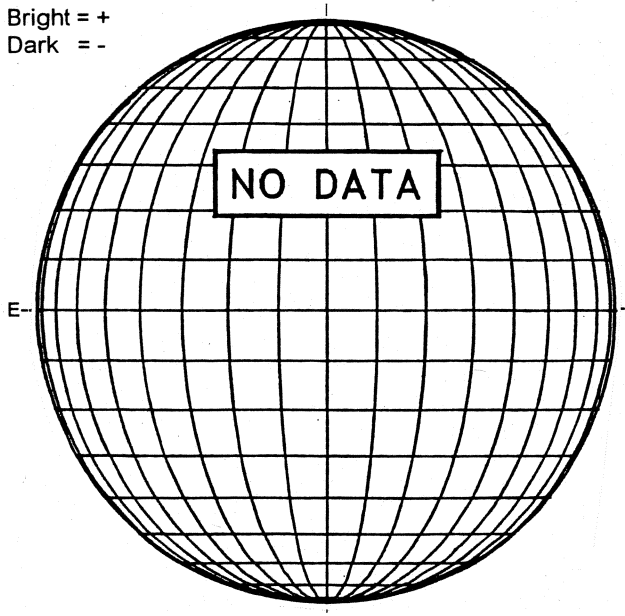
APRIL 21, 2006 (P= -25.57, Bo = -5.13, Lo = 226.74)

60
Apr 06

KITT PEAK MAGNETOGRAM--SOLIS

854.2 nm

Bright = +
Dark = -



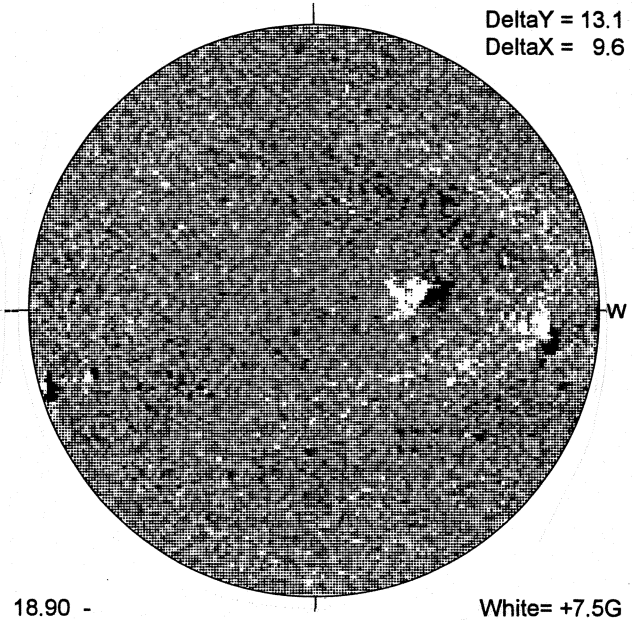
STANFORD MAGNETOGRAM

Solid = +
Dashed = -

2040 UT

MT. WILSON MAGNETOGRAM

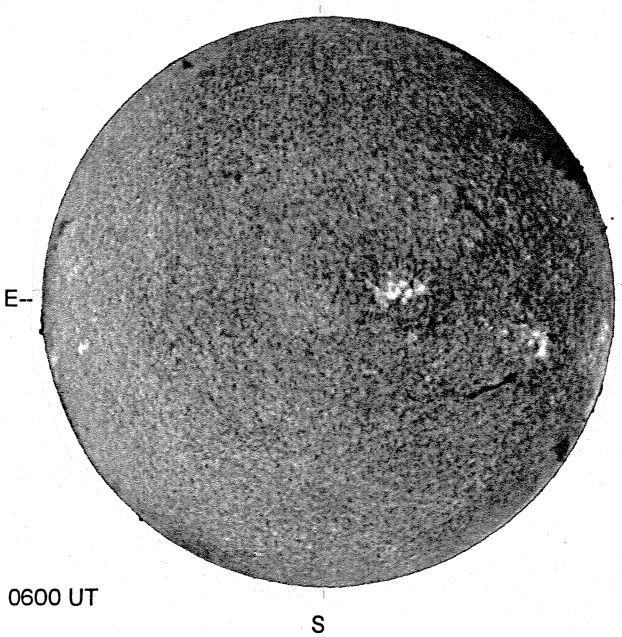
DeltaY = 13.1
DeltaX = 9.6



18.90 -
19.84 UT

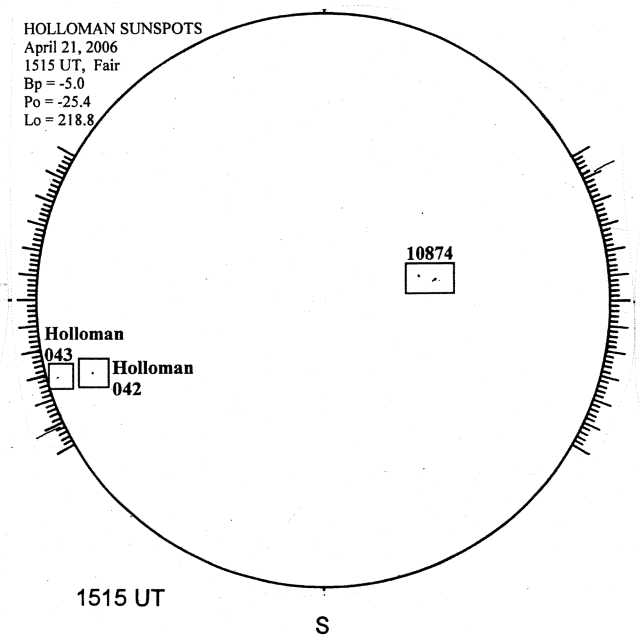
White= +7.5G
Black = -7.5G

----- KANZELHOHE H-ALPHA



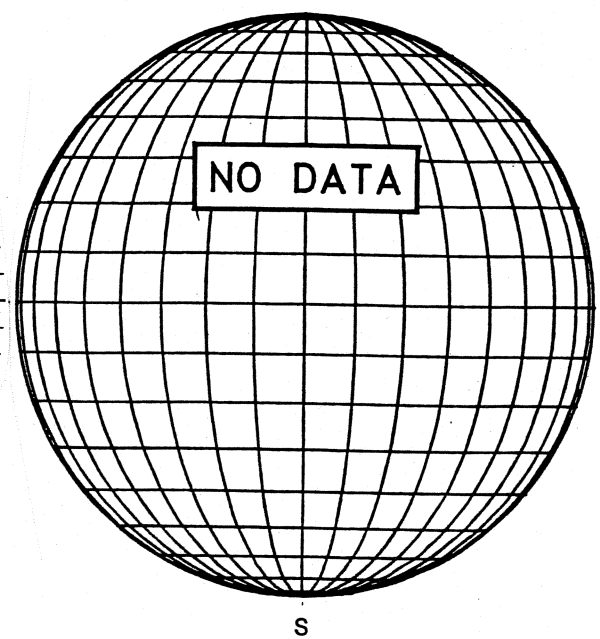
0600 UT

HOLLOMAN SUNSPOTS



1515 UT

LOMNICKY PEAK CORONA (1.04 Radii)----

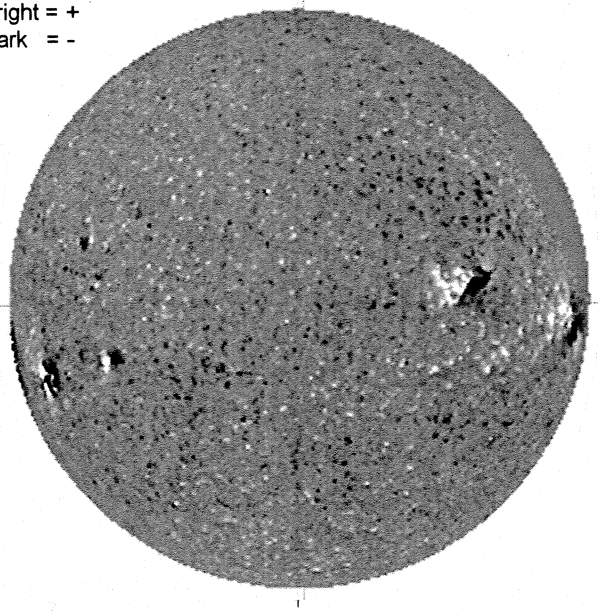


APRIL 22, 2006 (P= -25.46, Bo = -5.04, Lo = 213.53)

KITT PEAK MAGNETOGRAM--SOLIS

N **854.2 nm**

Bright = +
Dark = -



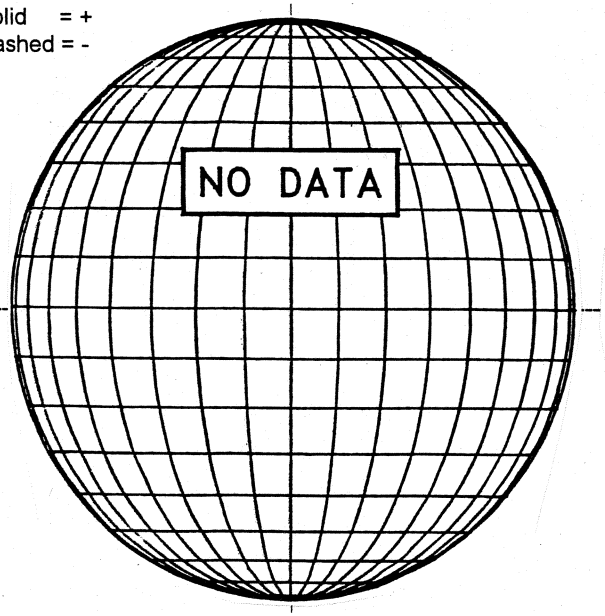
E

1637 UT

STANFORD MAGNETOGRAM

N

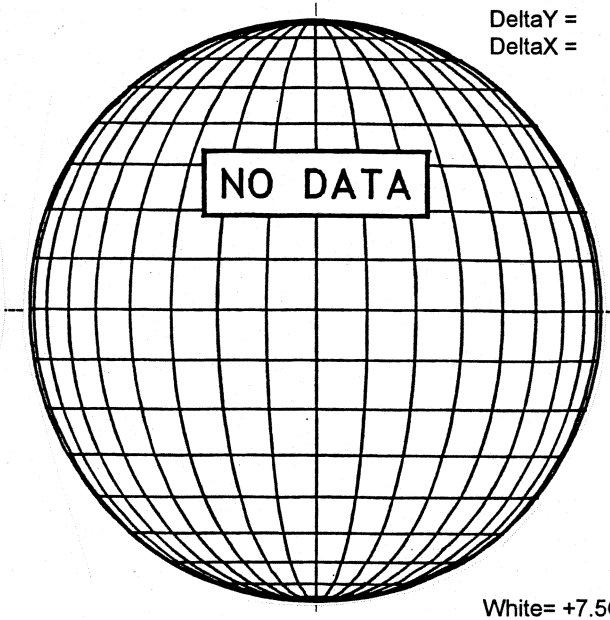
Solid = +
Dashed = -



MT. WILSON MAGNETOGRAM

N

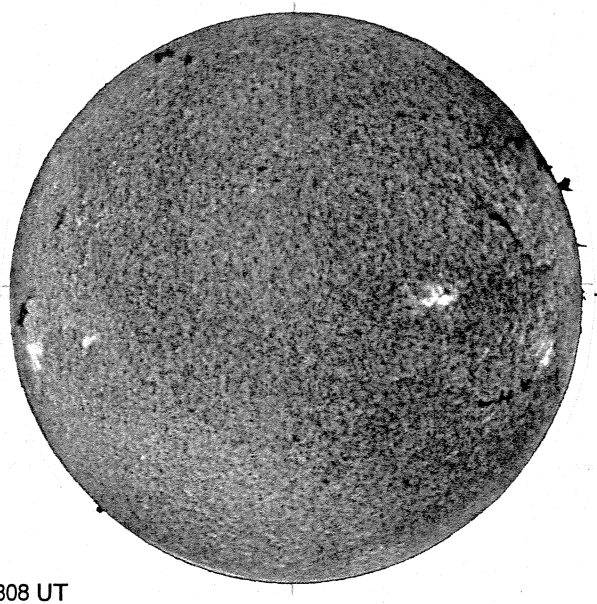
DeltaY =
DeltaX =



W

White= +7.5G
Black = -7.5G

---- KANZELHOHE H-ALPHA

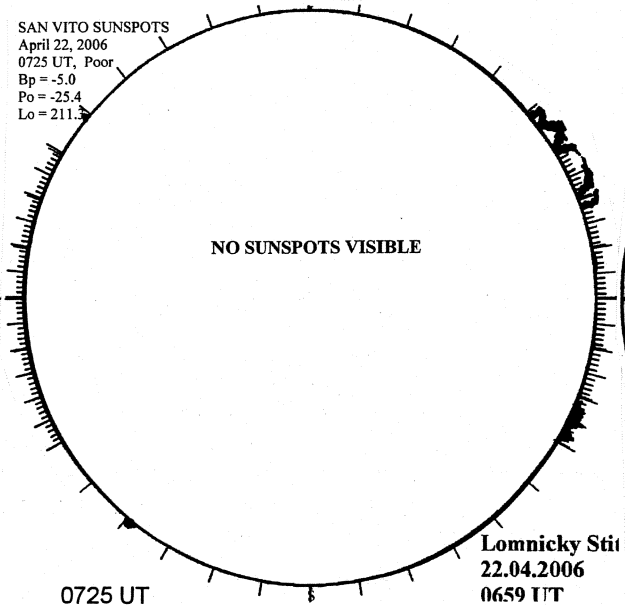


E-

0808 UT

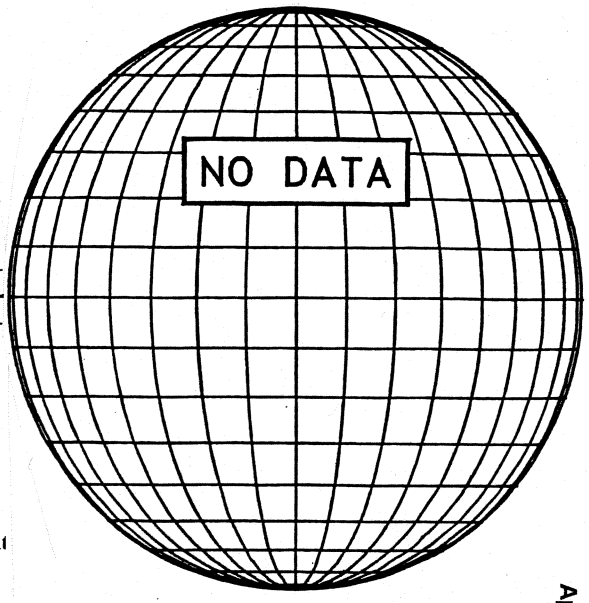
S

SAN VITO SUNSPOTS



0725 UT
0659 UT LOMN Prom S

SACRAMENTO PEAK CORONA (1.15 Radii)----



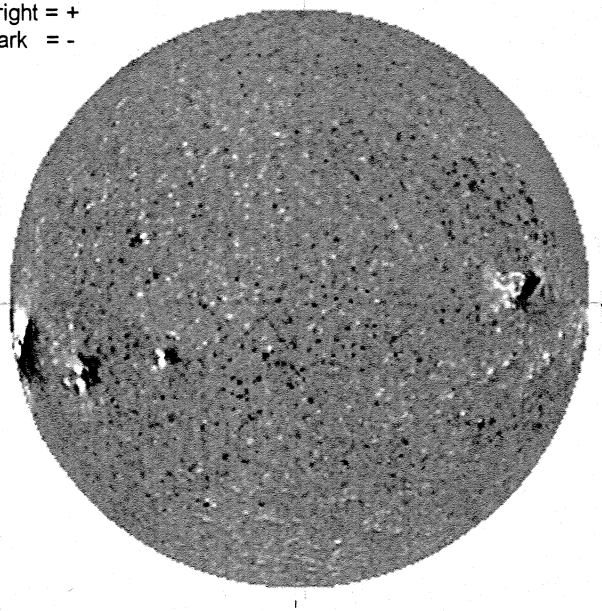
S

APRIL 23, 2006 (P= -25.35, Bo = -4.95, Lo = 200.32)

KITT PEAK MAGNETOGRAM--SOLIS

N **854.2 nm**

Bright = +
Dark = -



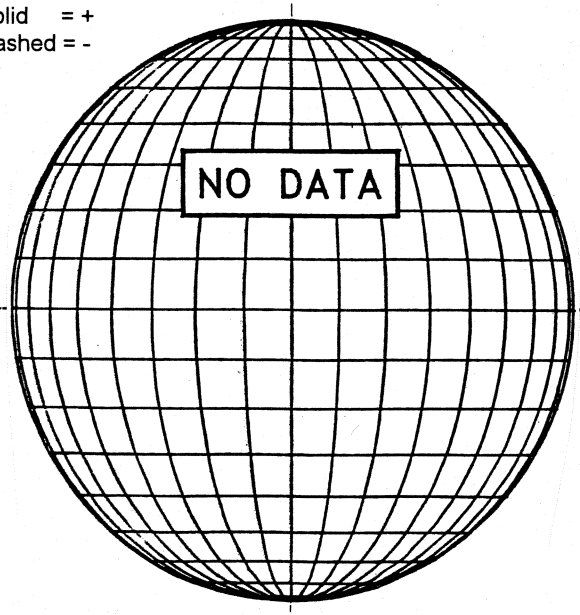
E-

1726 UT

STANFORD MAGNETOGRAM

N

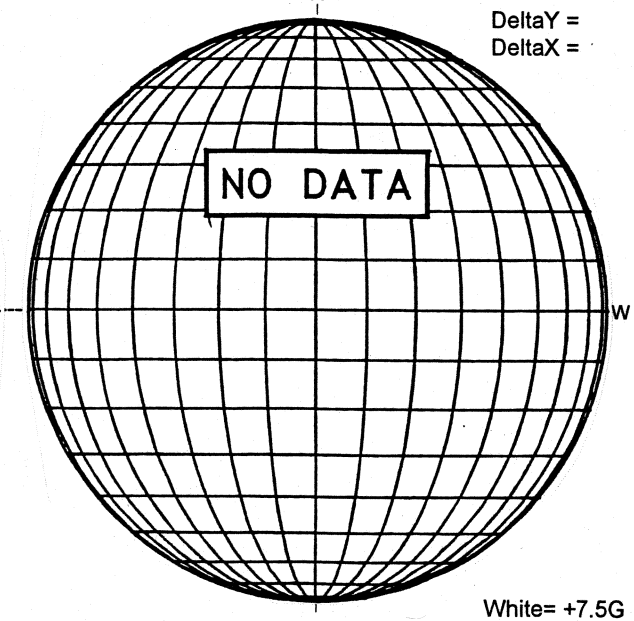
Solid = +
Dashed = -



MT. WILSON MAGNETOGRAM

N

DeltaY =
DeltaX =



W

White= +7.5G
Black = -7.5G

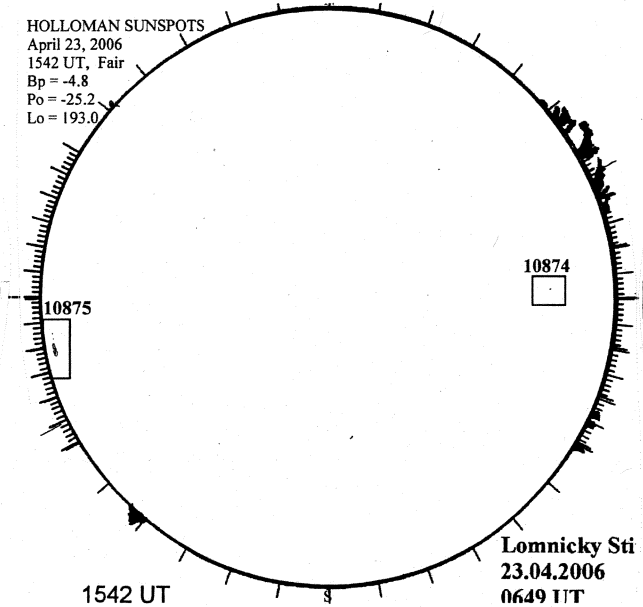
KANZELHOHE H-ALPHA

E--

0553 UT

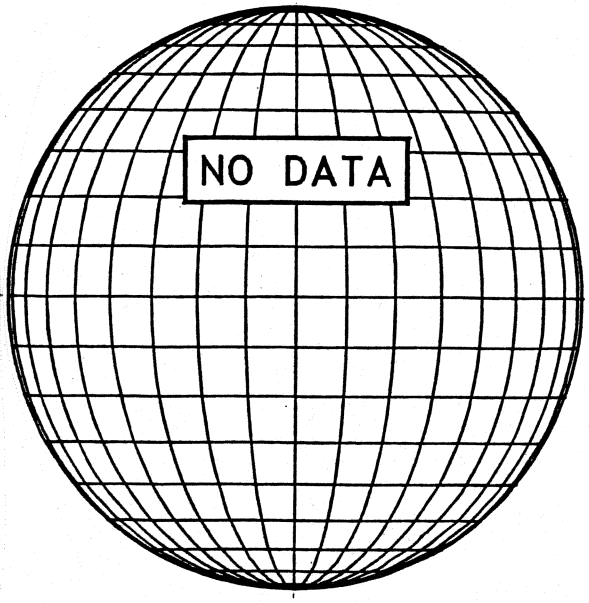
S

HOLLOMAN SUNSPOTS



1542 UT
0649 UT LOMN Prom S

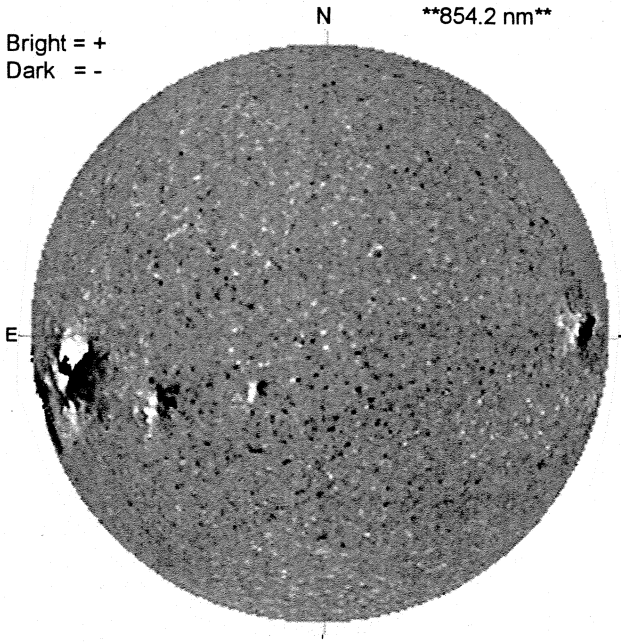
SACRAMENTO PEAK CORONA (1.15 Radii)----



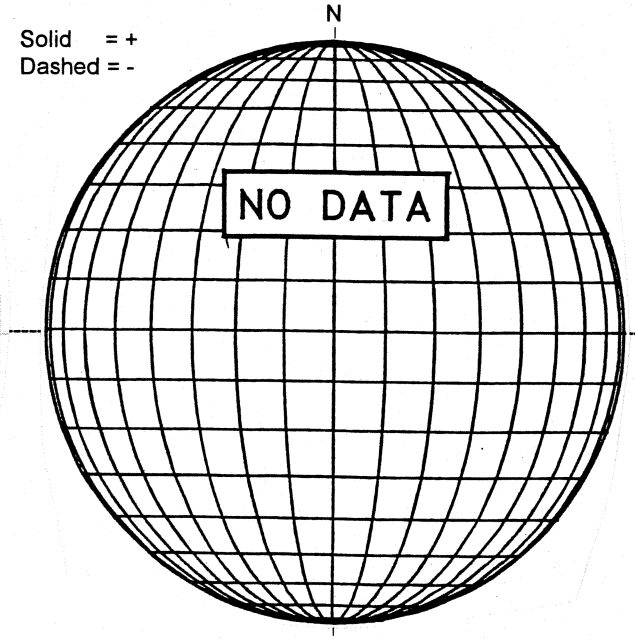
S

APRIL 24, 2006 (P= -25.23, Bo = -4.86, Lo = 187.11)

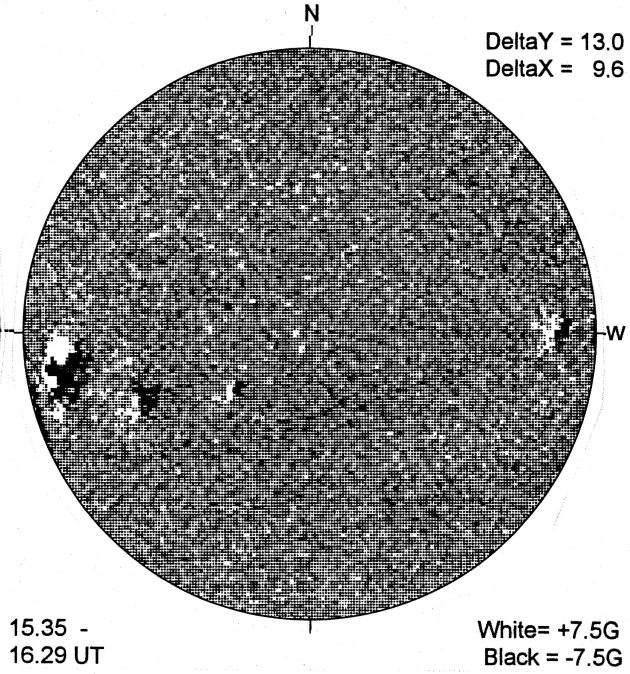
KITT PEAK MAGNETOGRAM--SOLIS



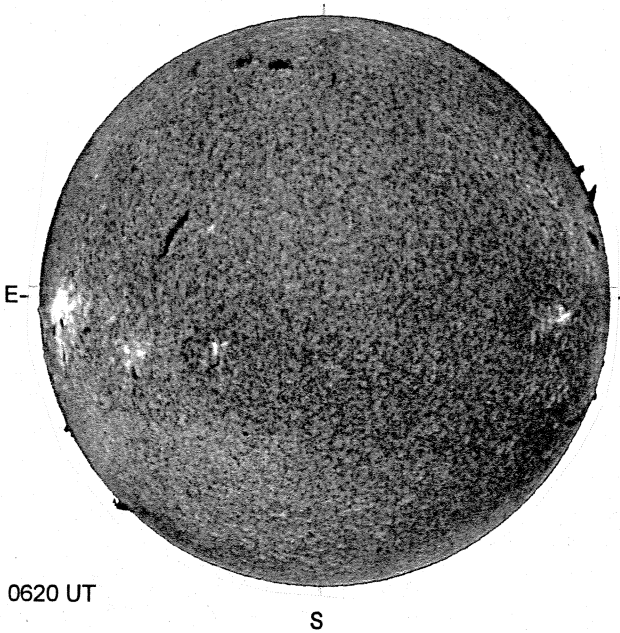
STANFORD MAGNETOGRAM



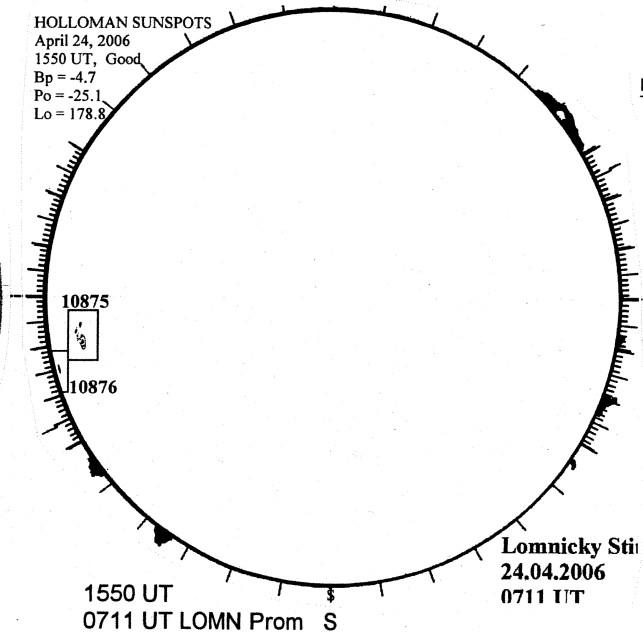
MT. WILSON MAGNETOGRAM



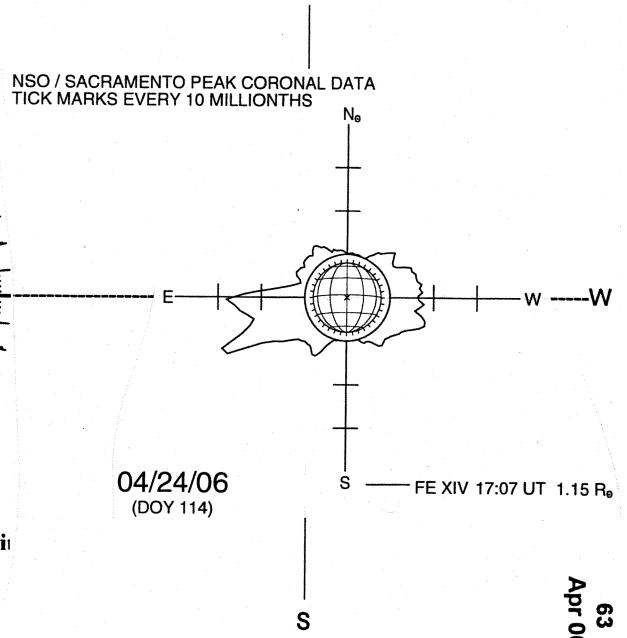
KANZELHOHE H-ALPHA



HOLLOMAN SUNSPOTS



SACRAMENTO PEAK CORONA (1.15 Radii)----

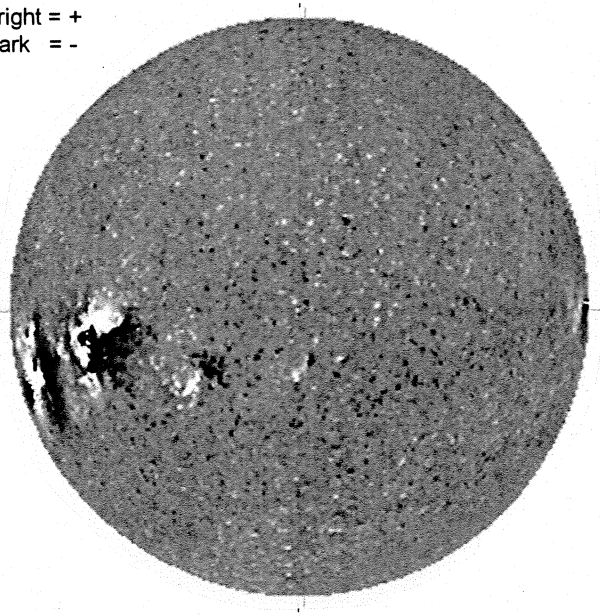


APRIL 25, 2006 (P= -25.10, Bo = -4.77, Lo = 173.90)

KITT PEAK MAGNETOGRAM--SOLIS

N **854.2 nm**

Bright = +
Dark = -



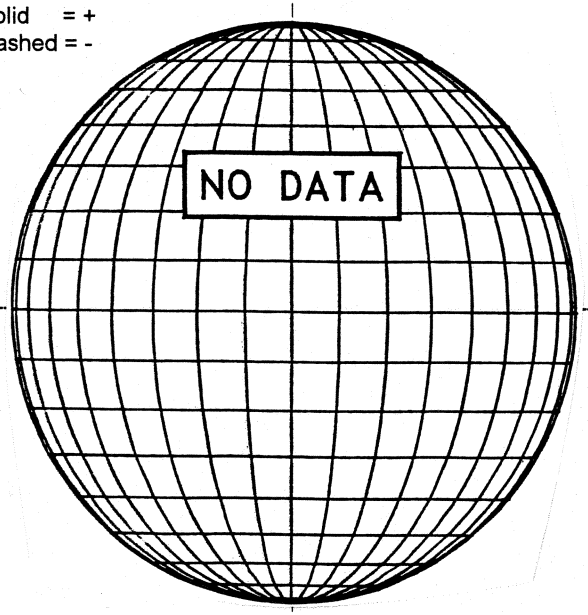
E

2230 UT

STANFORD MAGNETOGRAM

N

Solid = +
Dashed = -

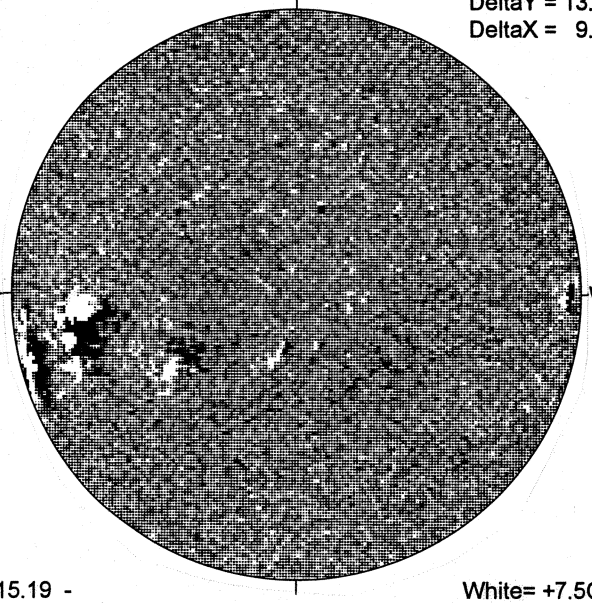


15.19 -
16.13 UT

MT. WILSON MAGNETOGRAM

N

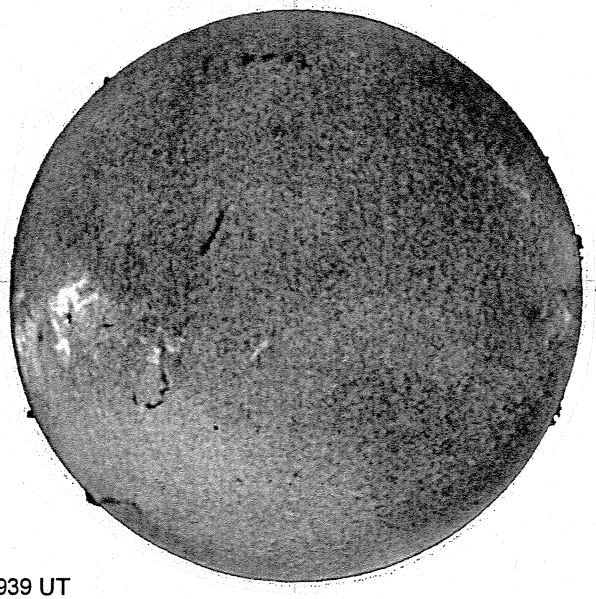
DeltaY = 13.1
DeltaX = 9.6



W

White= +7.5G
Black = -7.5G

KANZELHOHE H-ALPHA

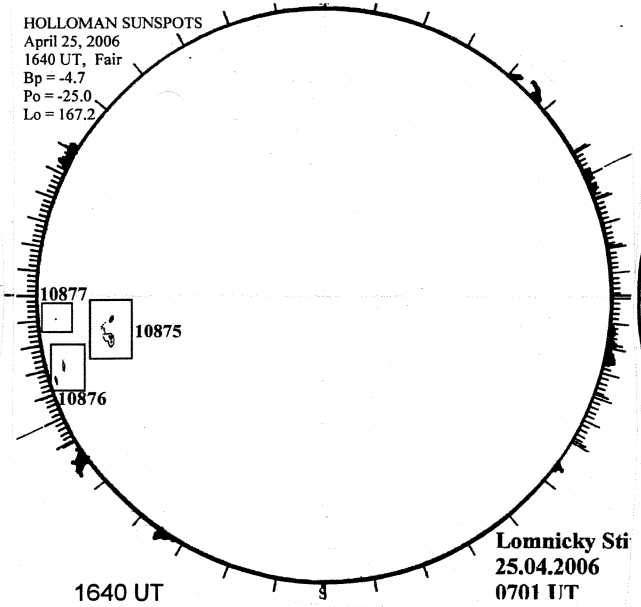


E-

0939 UT

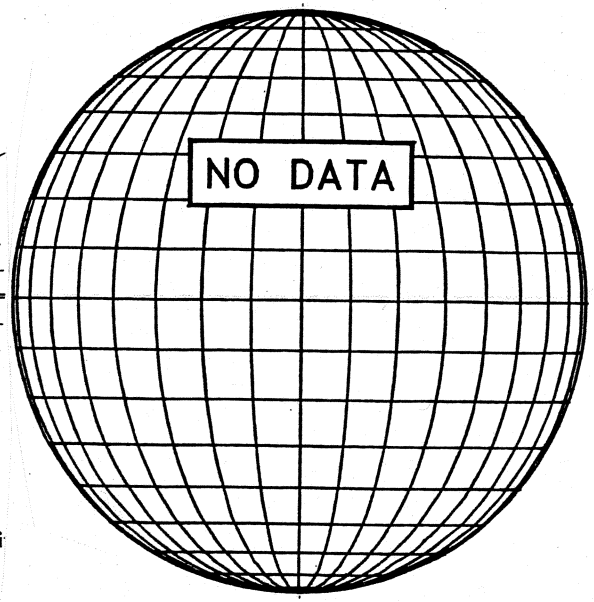
S

HOLLOMAN SUNSPOTS



1640 UT
0701 UT LOMN Prom S

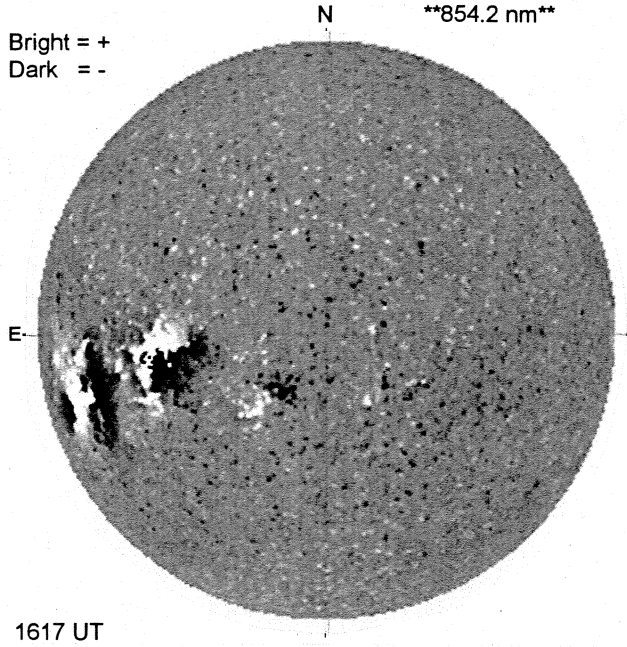
SACRAMENTO PEAK CORONA (1.15 Radii)



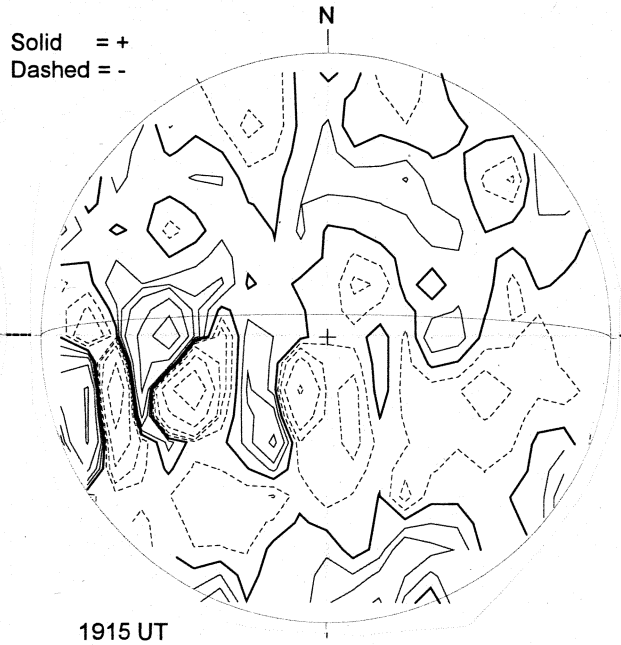
S

APRIL 26, 2006 (P= -24.96, Bo = -4.67, Lo = 160.69)

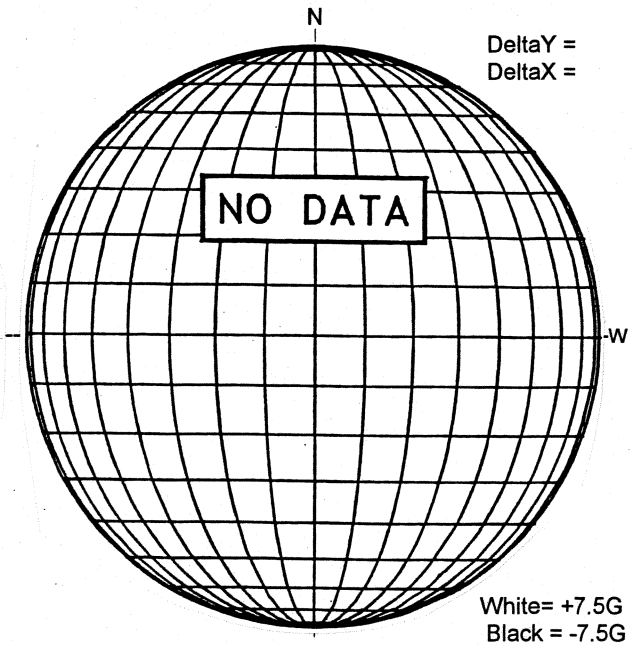
KITT PEAK MAGNETOGRAM--SOLIS



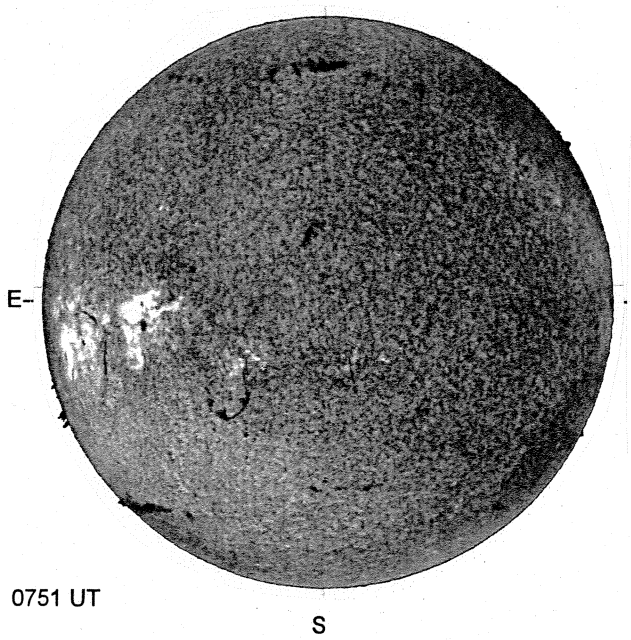
STANFORD MAGNETOGRAM



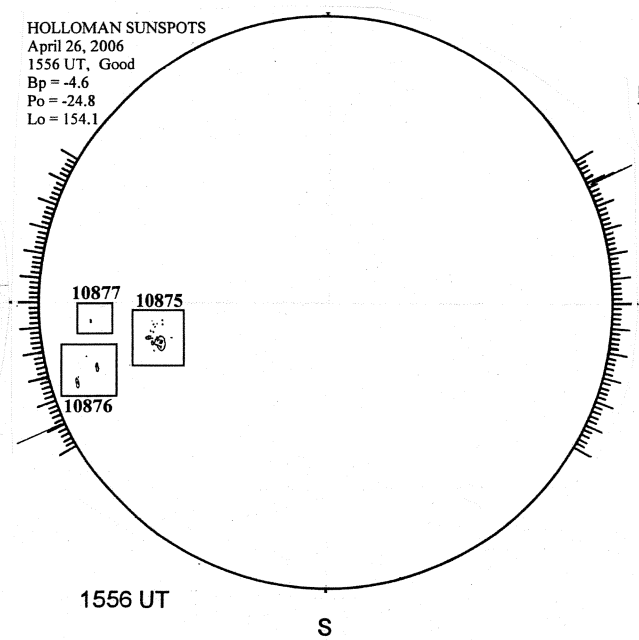
MT. WILSON MAGNETOGRAM



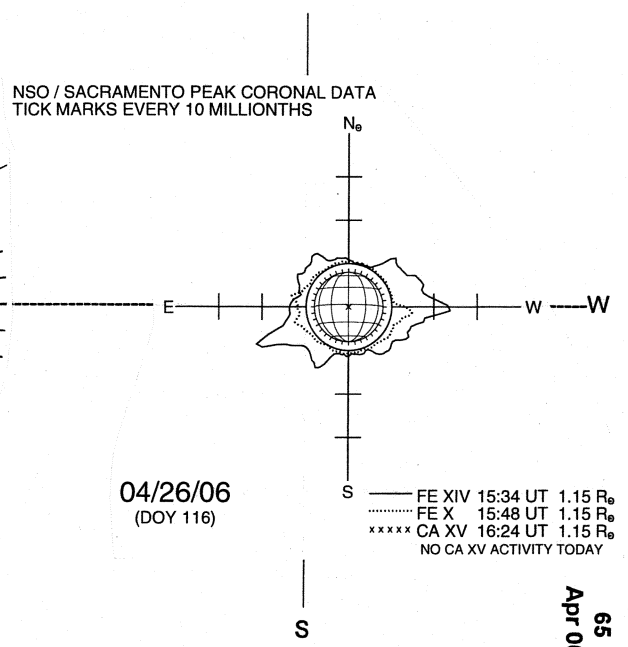
KANZELHOHE H-ALPHA



HOLLOMAN SUNSPOTS



SACRAMENTO PEAK CORONA (1.15 Radii)----

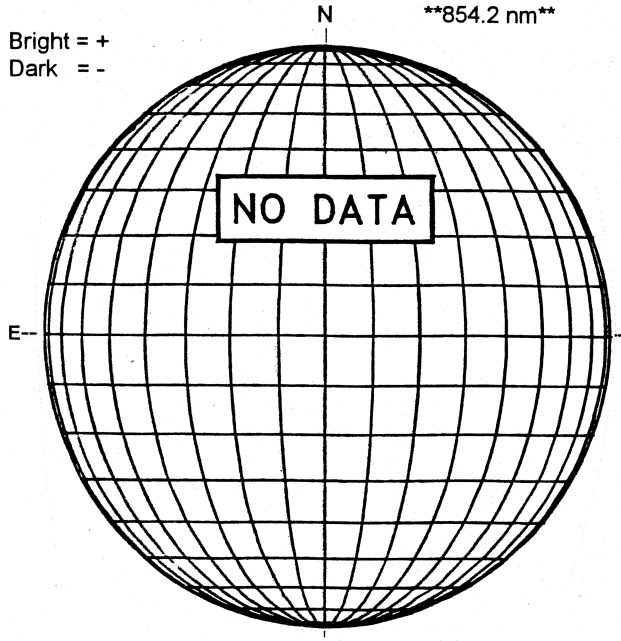


APRIL 27, 2006 (P= -24.82, Bo = -4.58, Lo = 147.48)

KITT PEAK MAGNETOGRAM--SOLIS

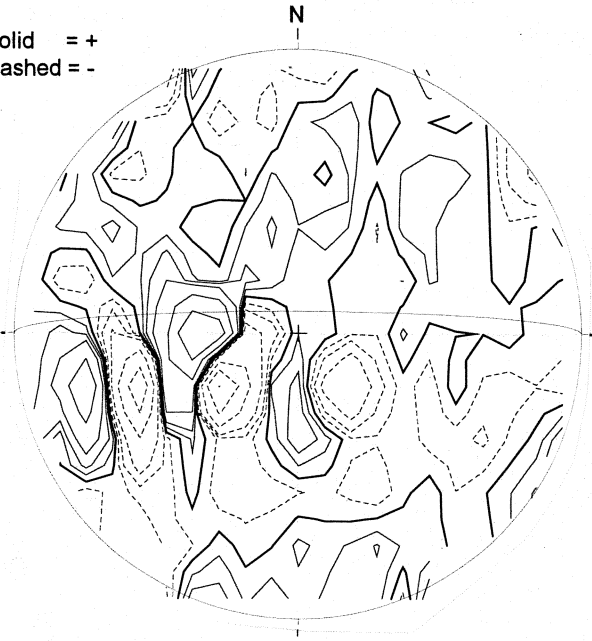
854.2 nm

Bright = +
Dark = -



STANFORD MAGNETOGRAM

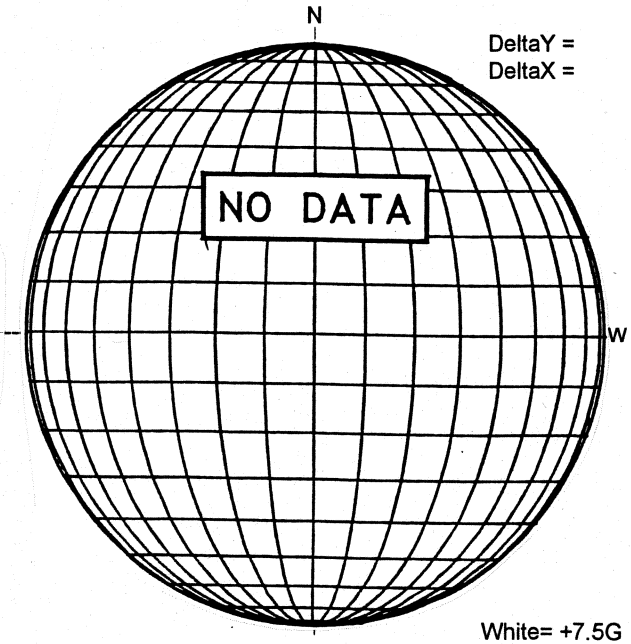
Solid = +
Dashed = -



2313 UT

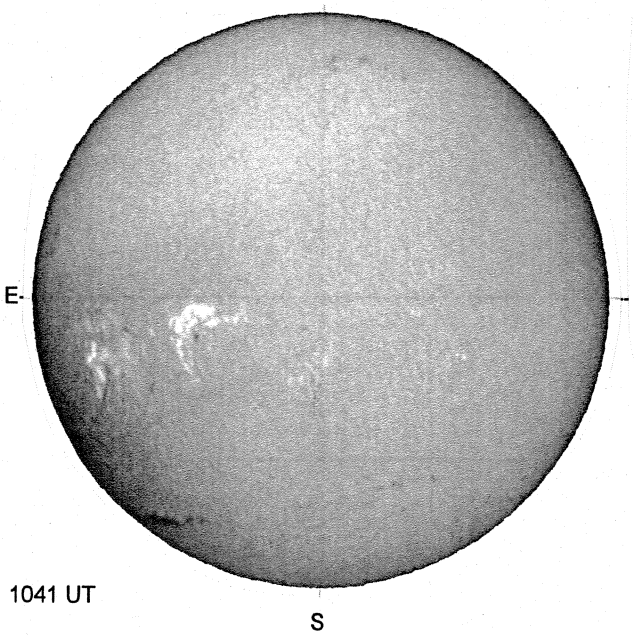
MT. WILSON MAGNETOGRAM

DeltaY =
DeltaX =



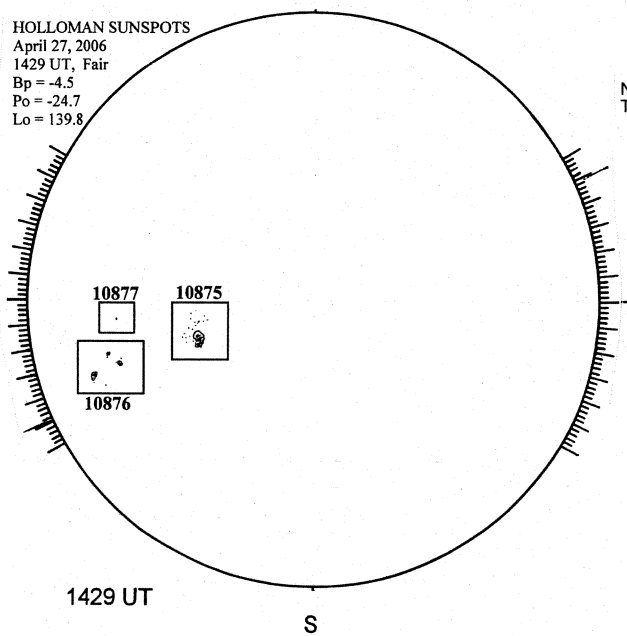
White= +7.5G
Black = -7.5G

MEUDON H-ALPHA



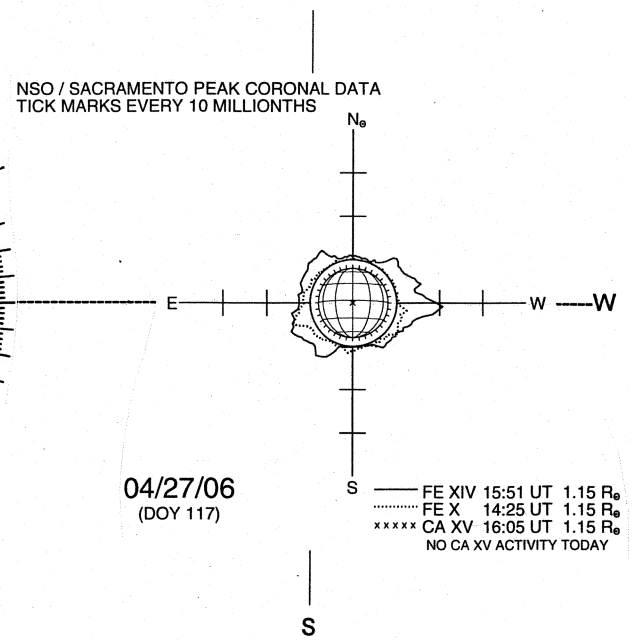
1041 UT

HOLLOMAN SUNSPOTS



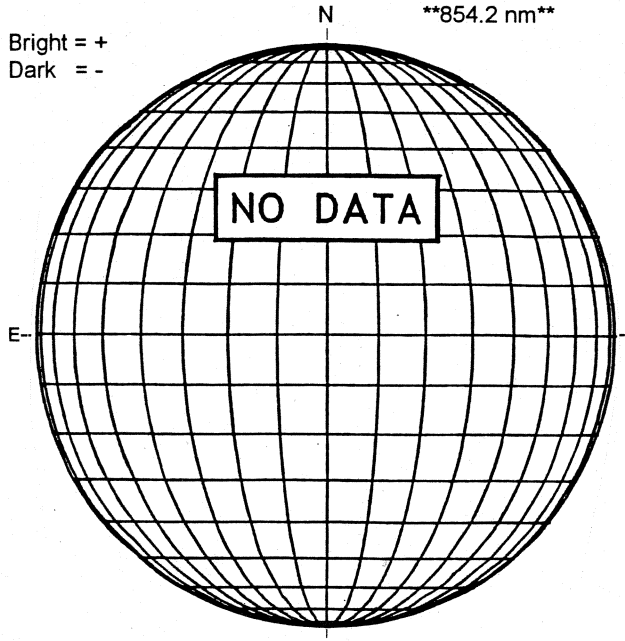
1429 UT

SACRAMENTO PEAK CORONA (1.15 Radii)----

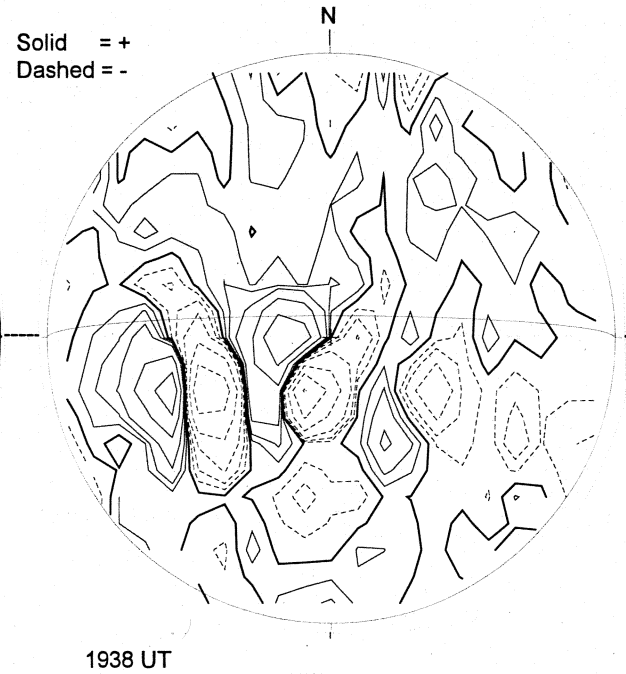


APRIL 28, 2006 (P= -24.67, Bo = -4.48, Lo = 134.26)

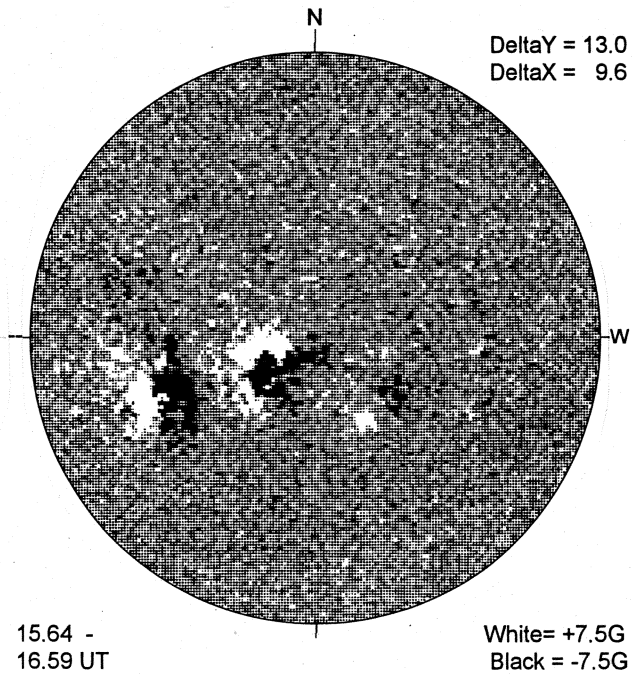
KITT PEAK MAGNETOGRAM--SOLIS



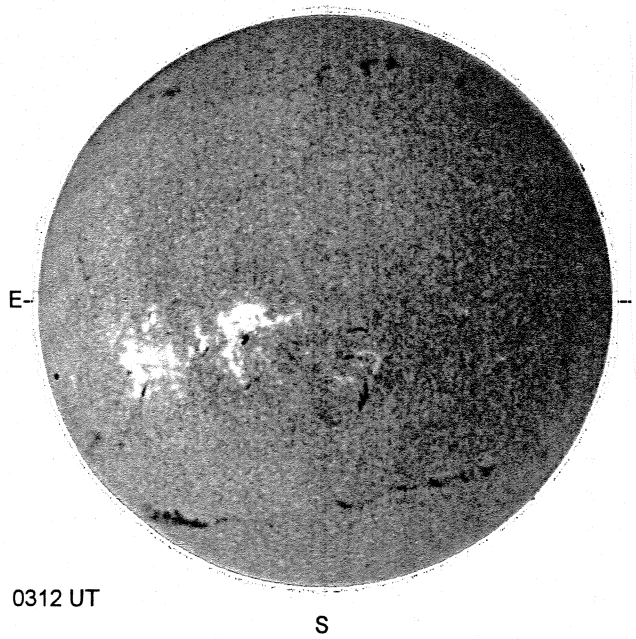
STANFORD MAGNETOGRAM



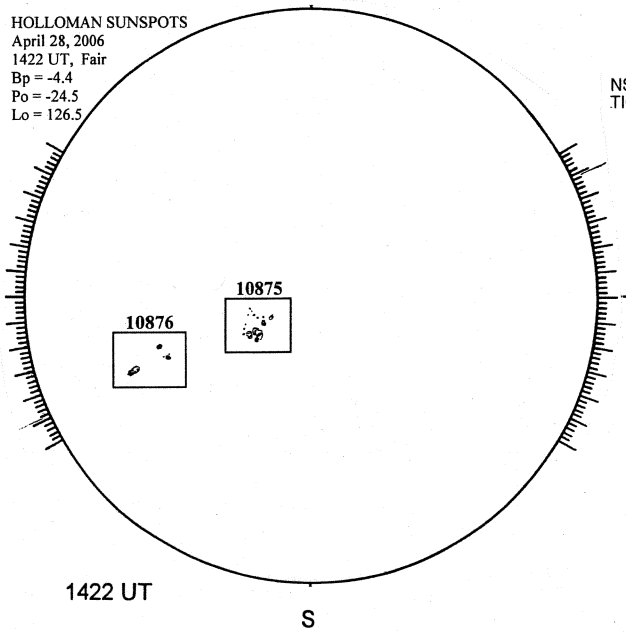
MT. WILSON MAGNETOGRAM



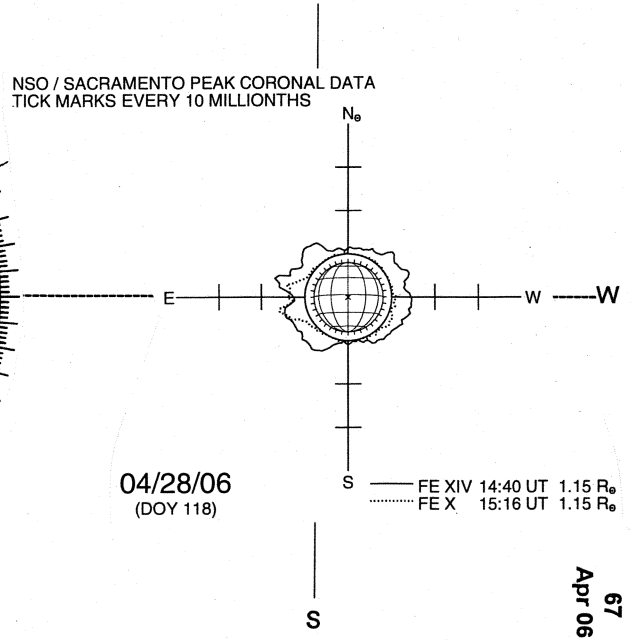
HUAIROU H-ALPHA



HOLLOMAN SUNSPOTS

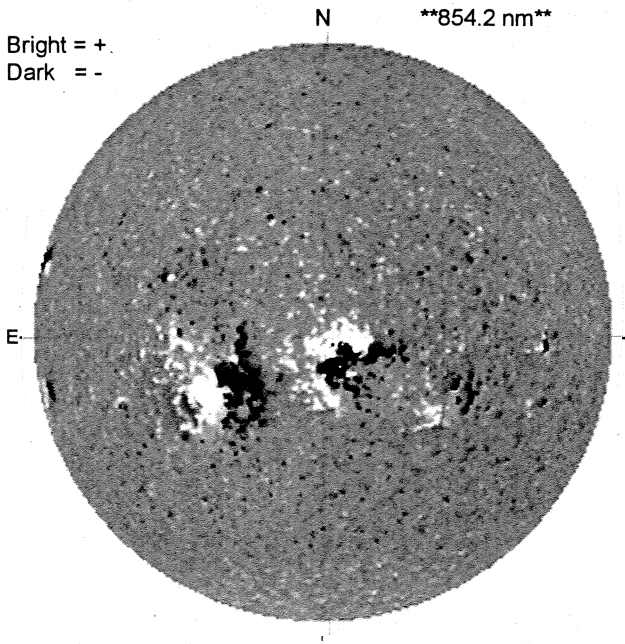


SACRAMENTO PEAK CORONA (1.15 Radii)----

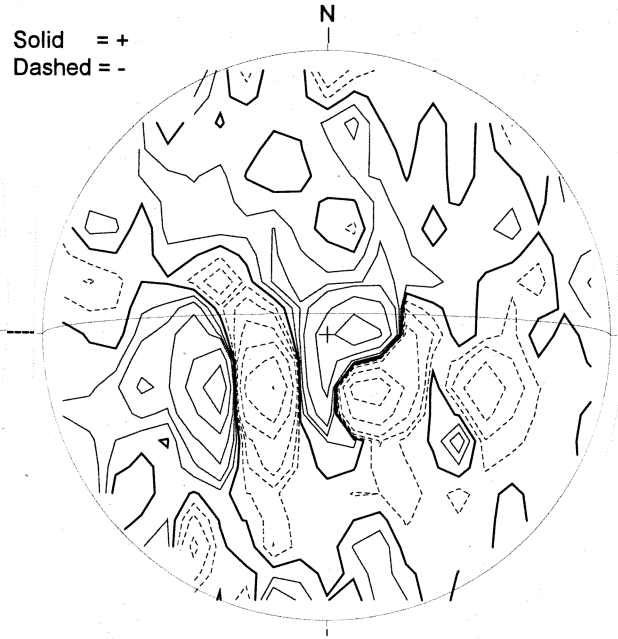


APRIL 29, 2006 (P= -24.51, Bo = -4.39, Lo = 121.05)

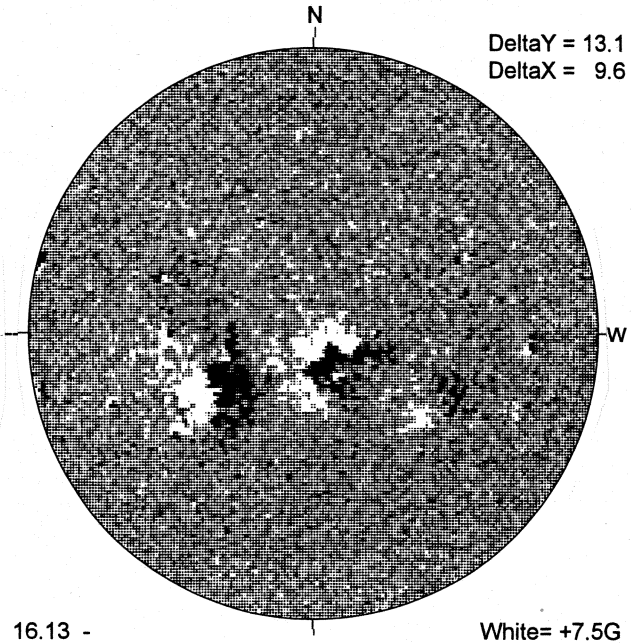
KITT PEAK MAGNETOGRAM--SOLIS



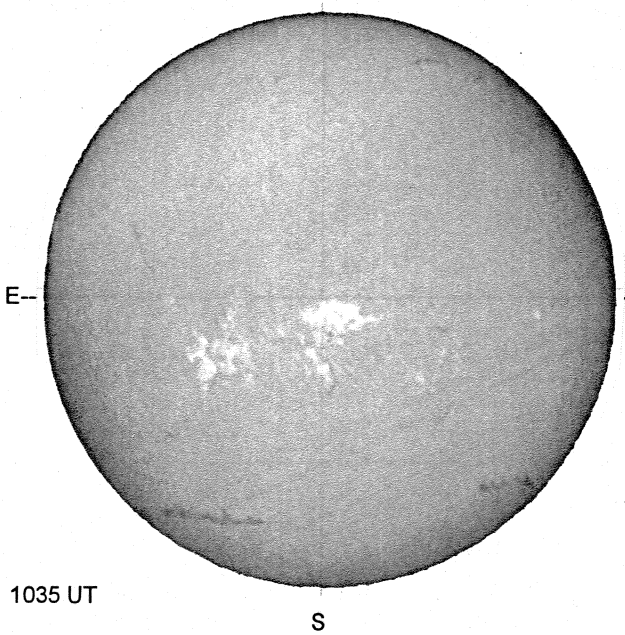
STANFORD MAGNETOGRAM



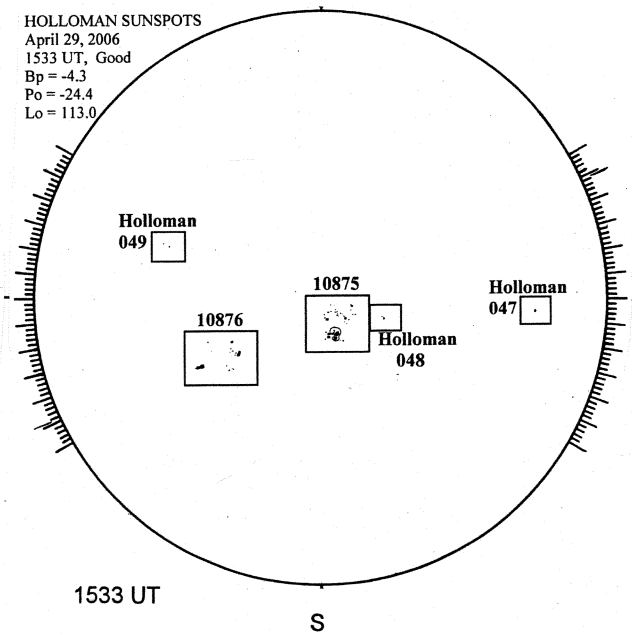
MT. WILSON MAGNETOGRAM



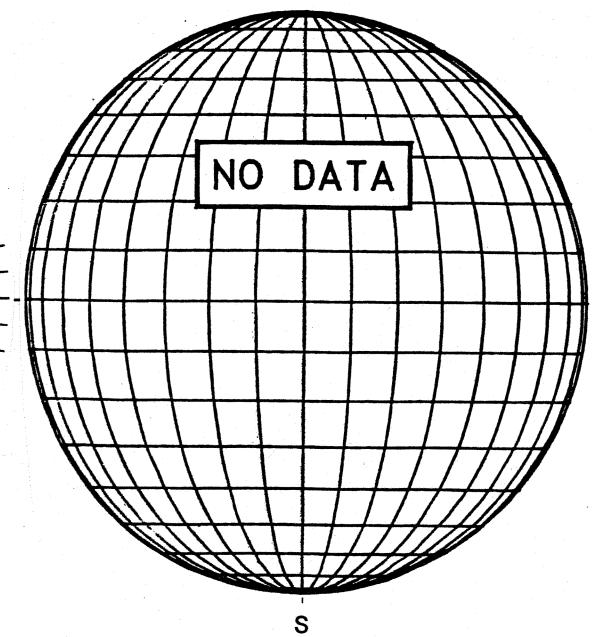
MEUDON H-ALPHA



HOLLOMAN SUNSPOTS

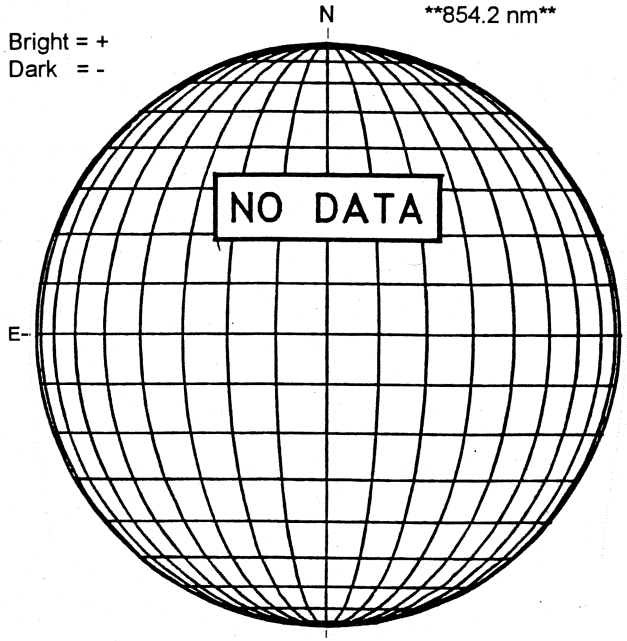


SACRAMENTO PEAK CORONA (1.15 Radii)

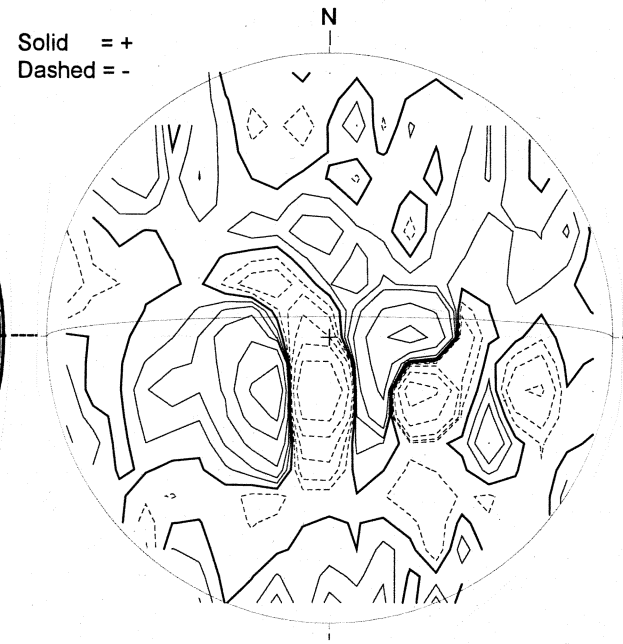


APRIL 30, 2006 (P= -24.35, Bo = -4.29, Lo = 107.84)

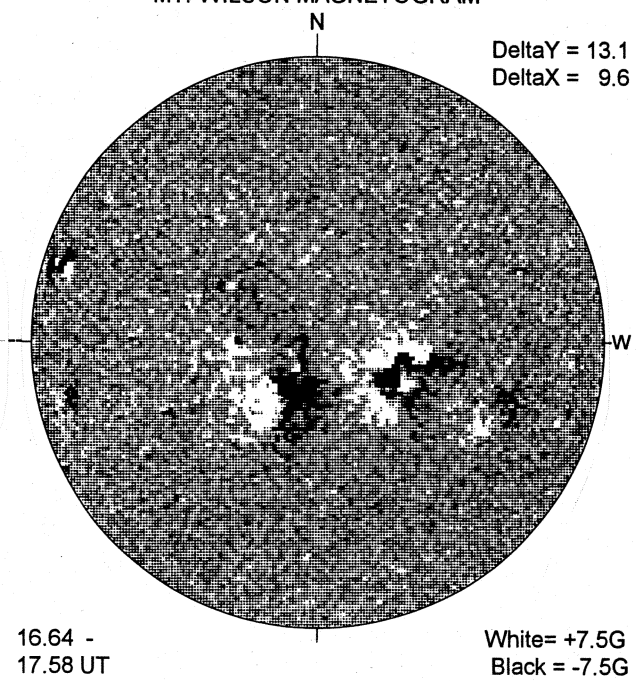
KITT PEAK MAGNETOGRAM—SOLIS



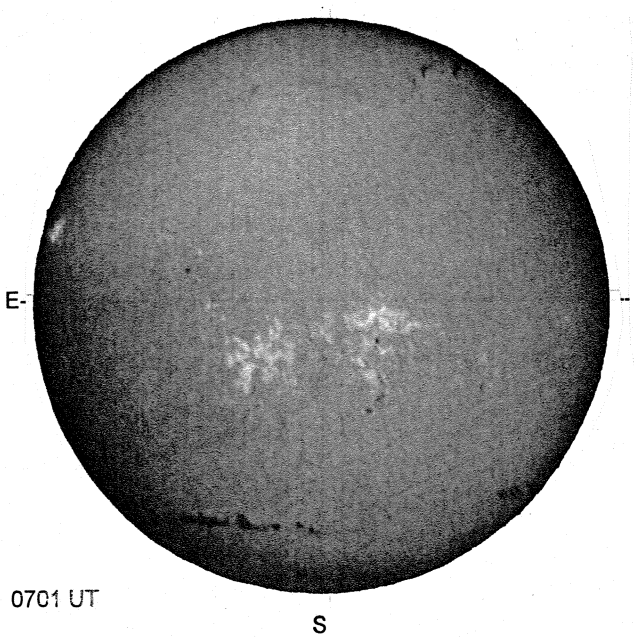
STANFORD MAGNETOGRAM



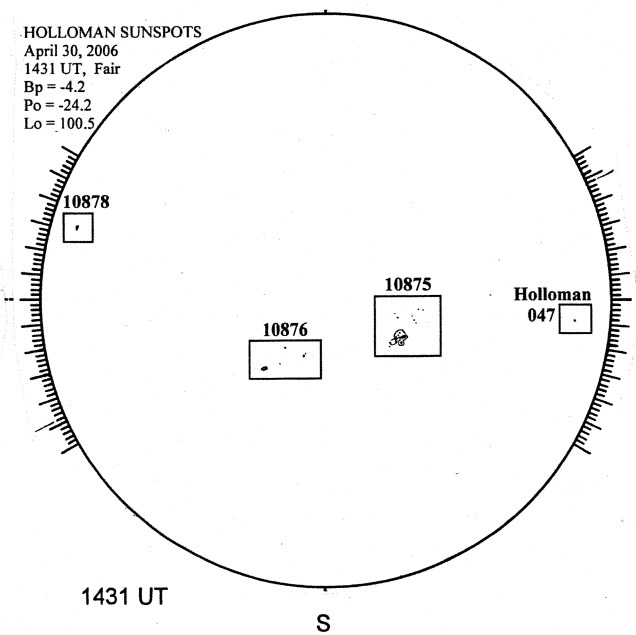
MT. WILSON MAGNETOGRAM



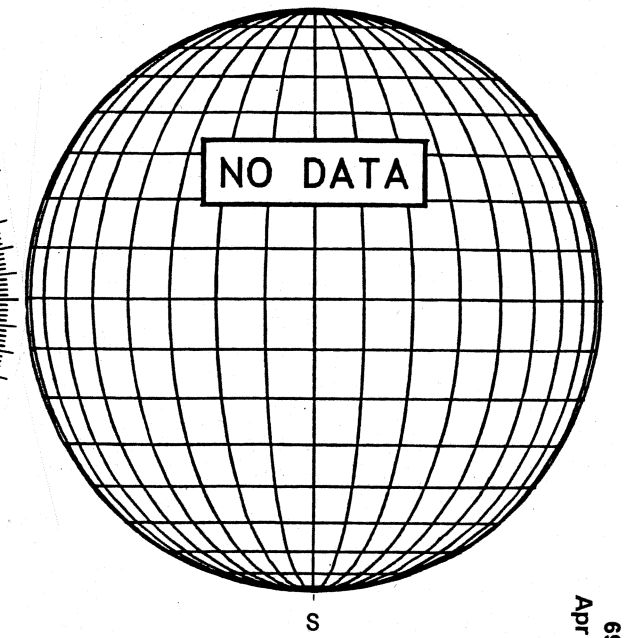
MEUDON H-ALPHA



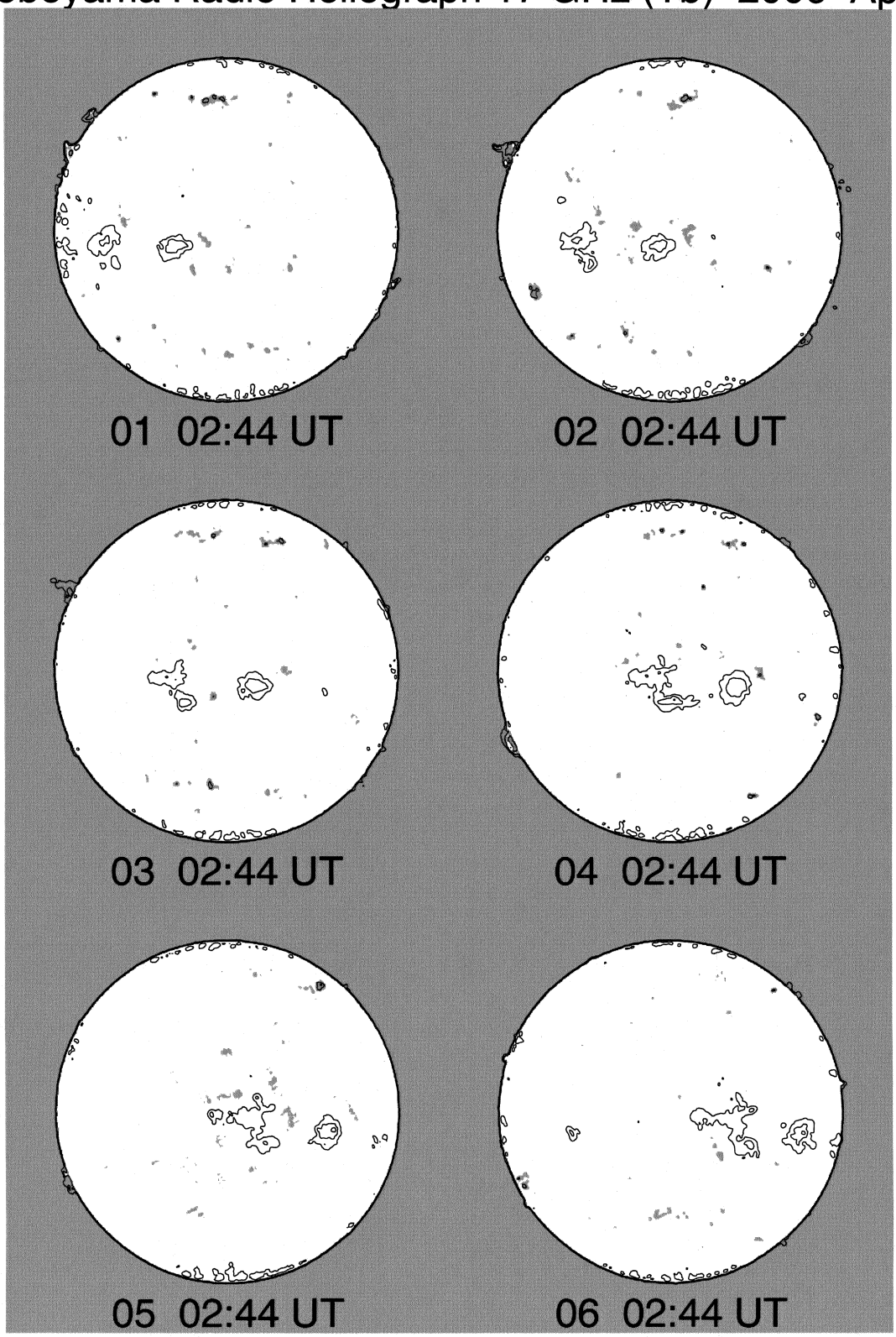
HOLLOMAN SUNSPOTS



SACRAMENTO PEAK CORONA (1.15 Radii)----

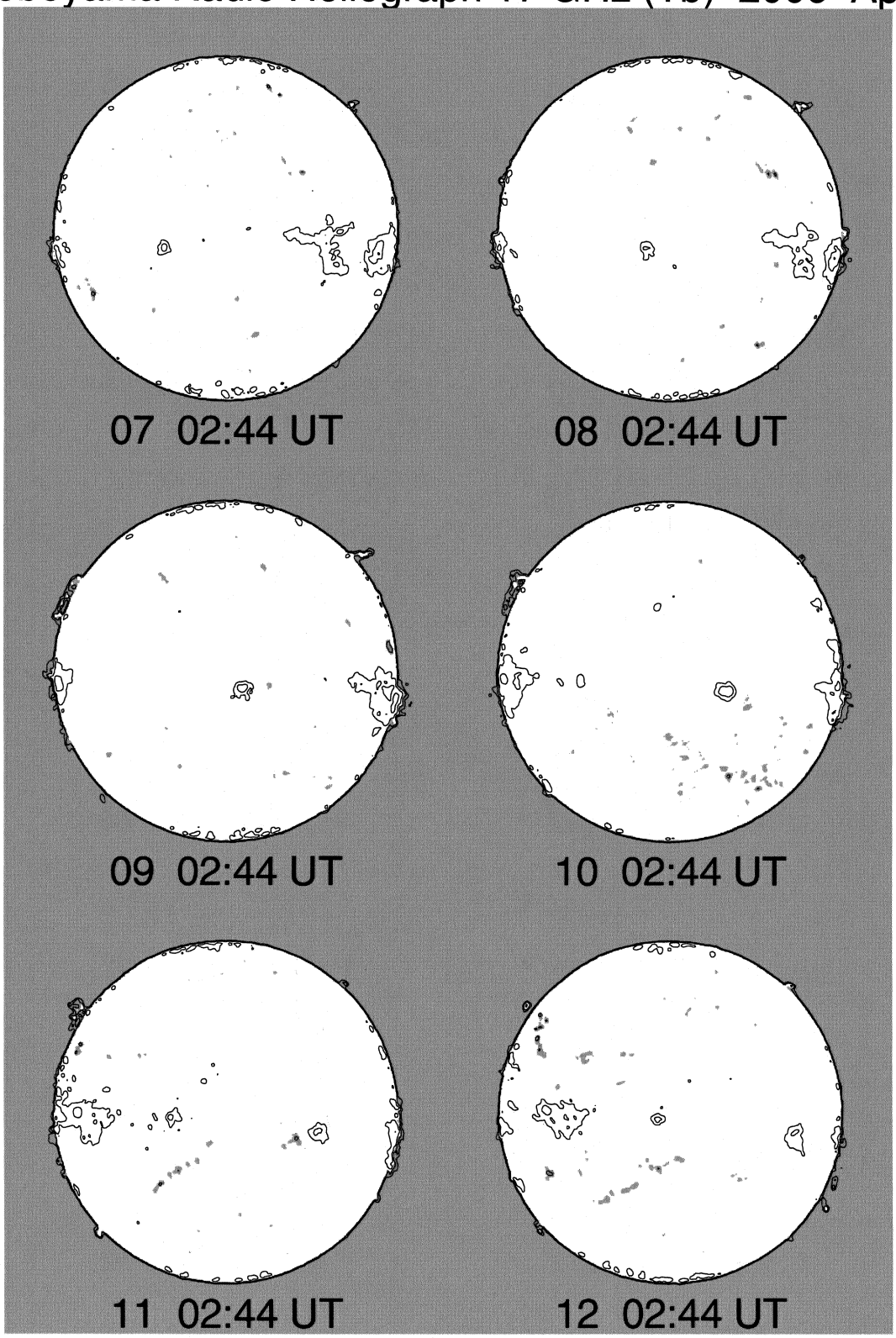


Nobeyama Radio Heliograph 17 GHz (Tb) 2006 April



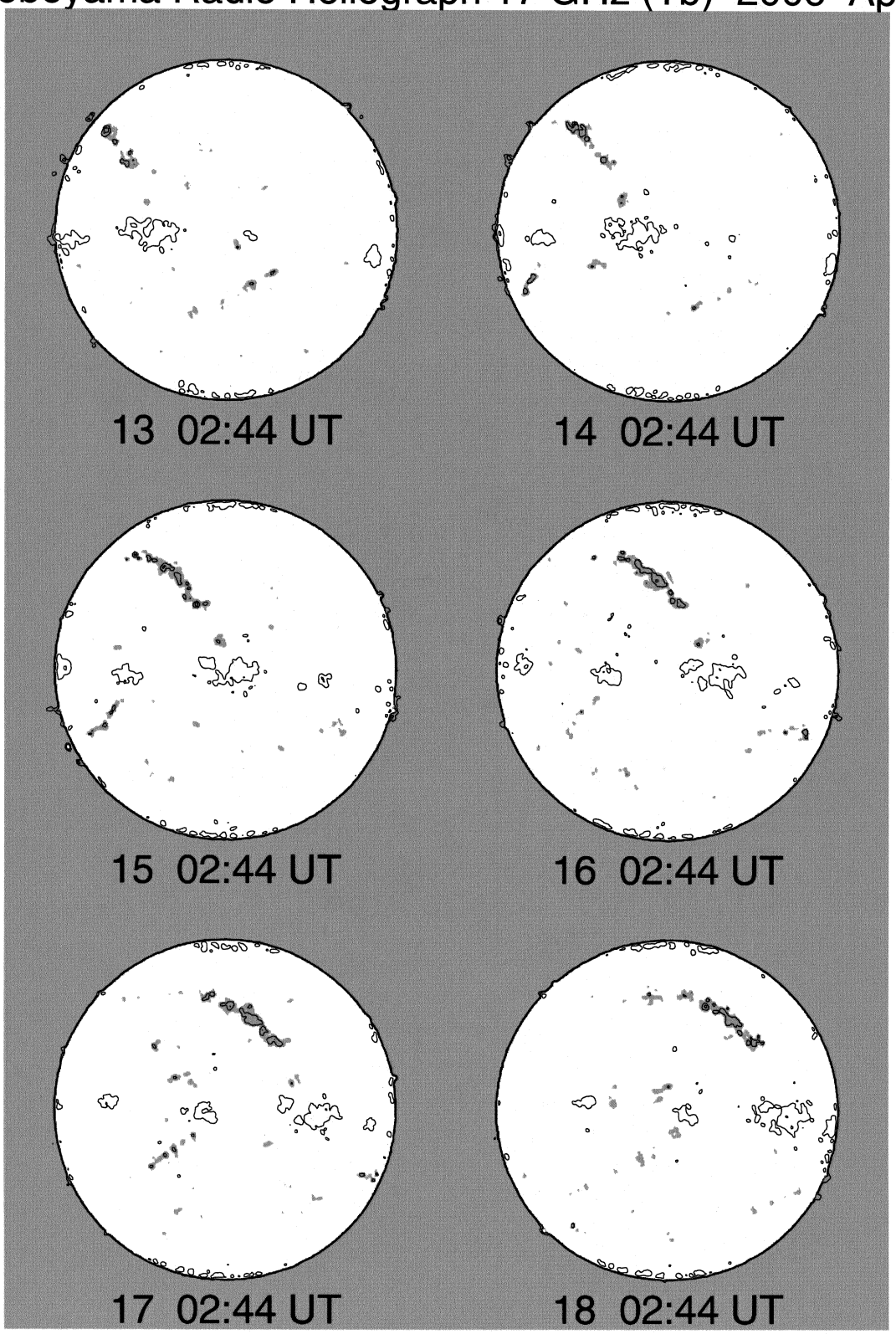
Contour Levels Tb=[5,8,12,20,50,100] x 10^3 K
Grey level Tb <= 9,500 K

Nobeyama Radio Heliograph 17 GHz (Tb) 2006 April



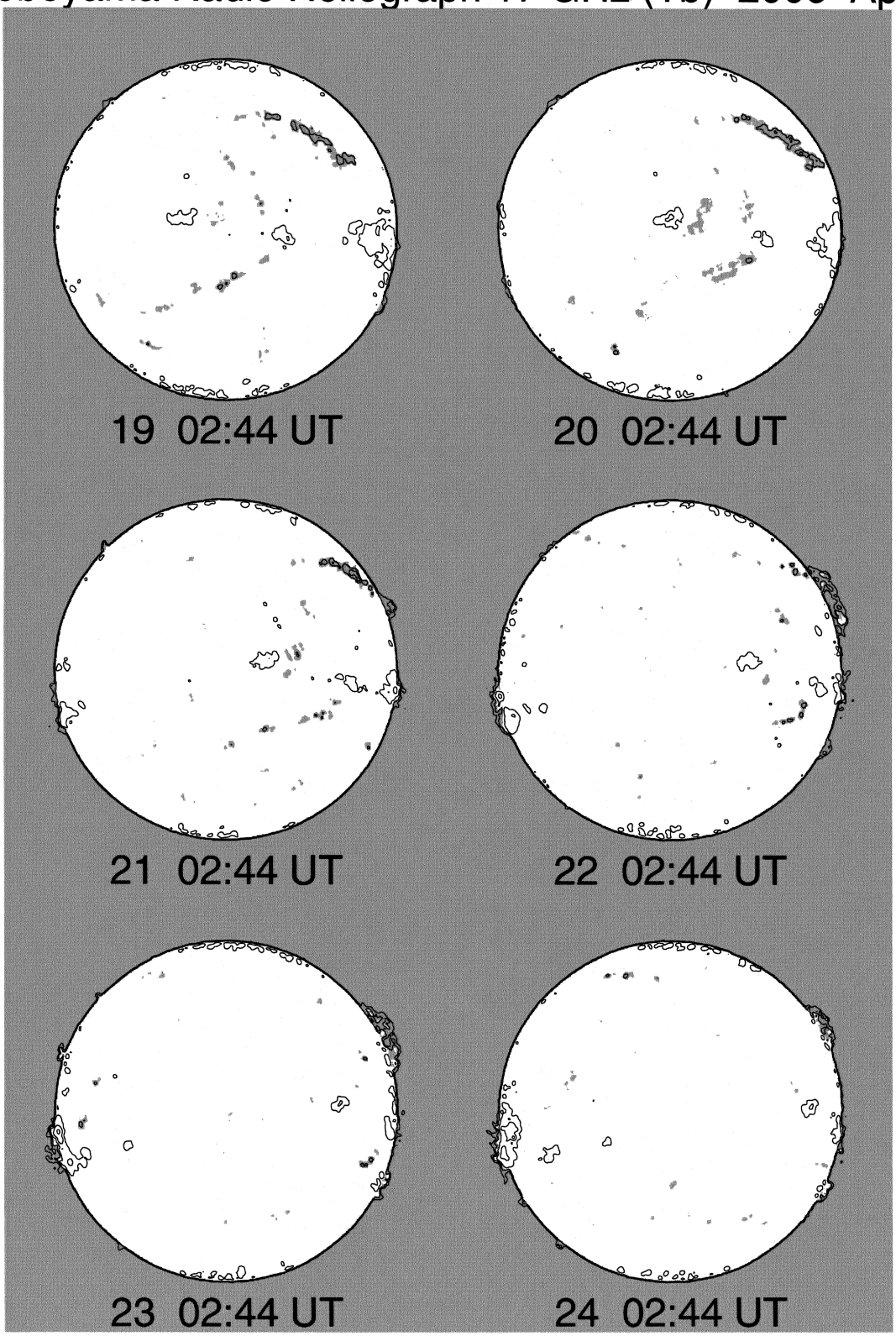
Contour Levels Tb=[5,8,12,20,50,100] x 10^3 K
Grey level Tb <= 9,500 K

Nobeyama Radio Heliograph 17 GHz (Tb) 2006 April



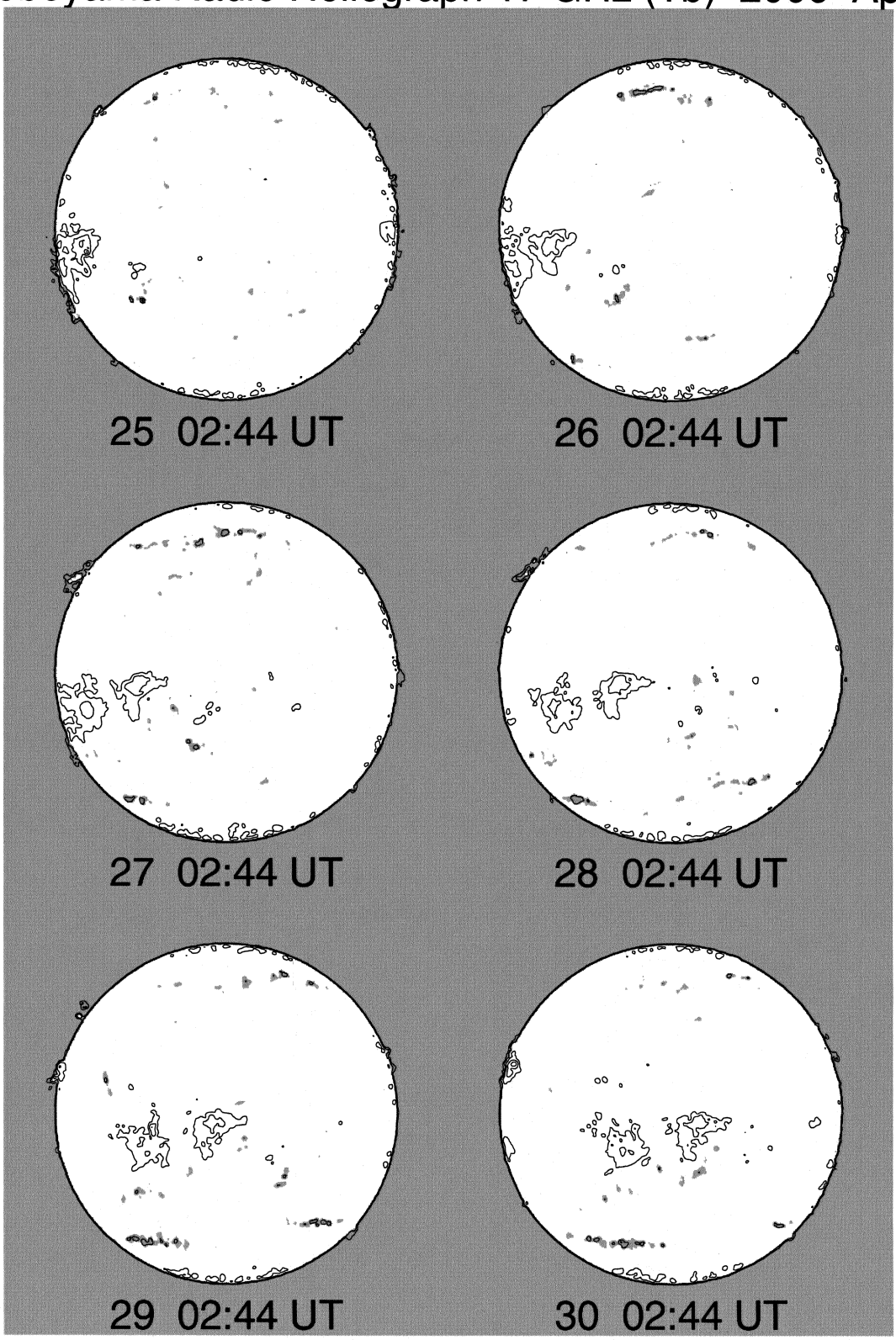
Contour Levels Tb=[5,8,12,20,50,100] x 10^3 K
Grey level Tb <= 9,500 K

Nobeyama Radio Heliograph 17 GHz (Tb) 2006 April



Contour Levels Tb=[5,8,12,20,50,100] x 10^3 K
Grey level Tb <= 9,500 K

Nobeyama Radio Heliograph 17 GHz (Tb) 2006 April



Contour Levels Tb=[5,8,12,20,50,100] x 10^3 K
Grey level Tb <= 9,500 K

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

APRIL 2006

NOAA/ USAF Group	Mt Wilson Group	Sta	Observation Mo	Day	Time (UT)	Lat	CMD	CMP Mo	Day	Max H	Mag Class	Spot Class	Corrected Area (10-6 Hemi)	Spot Count	Long. Extent (Deg)	Qual
10865		KAND	03	28	0755	S12	E70	04	2.6			CSO		4	6	3
10865		SVTO	03	28	0850	S13	E68	04	2.5		A	HSX	20	1	2	2
10865		LEAR	03	29	0014	S11	E59	04	2.4		B	CAO	110	12	7	1
10865		VORO	03	29	0017	S10	E61	04	2.6			CAI	130	8	9	3
10865		SVTO	03	29	0627	S13	E57	04	2.6		B	DSO	140	9	9	3
10865		KAND	03	29	0805	S13	E55	04	2.5			DSO		6	9	3
10865		SVTO	03	30	0635	S14	E42	04	2.4		B	DSO	160	8	10	3
10865		HOLL	03	30	1819	S13	E35	04	2.4		BG	DKI	120	17	9	4
10865		VORO	03	31	0023	S13	E32	04	2.4			DHI	282	13	9	3
10865		LEAR	03	31	0353	S11	E31	04	2.5		BG	CAI	230	18	10	1
10865		KAND	03	31	0640	S13	E28	04	2.4			DAI		13	10	3
10865		SVTO	03	31	0921	S13	E27	04	2.4		B	ESO	180	10	11	3
10865		HOLL	03	31	1855	S13	E23	04	2.5		B	EKI	240	25	12	3
10865		VORO	04	01	0353	S13	E16	04	2.4			DHI	435	15	10	3
10865		LEAR	04	01	0549	S11	E15	04	2.4		BG	EAC	330	32	12	1
10865		SVTO	04	01	0710	S12	E16	04	2.5		B	ESC	210	17	13	3
10865		HOLL	04	01	1424	S12	E12	04	2.5		B	EKO	240	15	11	3
10865		LEAR	04	02	0123	S11	E06	04	2.5		BGD	EAC	340	34	13	4
10865		KAND	04	02	0640	S13	W01	04	2.2			DKC		21	13	4
10865		SVTO	04	02	0715	S11	E02	04	2.4		B	EHC	400	24	12	3
10865		HOLL	04	02	1514	S12	W02	04	2.5		B	EHI	270	22	12	3
10865		VORO	04	03	0107	S12	W08	04	2.4			EHI	449	41	10	4
10865		LEAR	04	03	0155	S11	W09	04	2.4		BGD	EAI	330	38	12	4
10865		TACH	04	03	0612	S11	W12	04	2.3			DAI	250	10	6	3
10865		SVTO	04	03	0735	S11	W13	04	2.3		B	DHC	320	22	8	3
10865		KAND	04	03	1245	S12	W17	04	2.2			DKC		22	9	3
10865		VORO	04	03	2351	S11	W22	04	2.3			FKI	692	36	7	4
10865		LEAR	04	04	0147	S11	W23	04	2.3		BG	EKC	520	33	10	1
10865		SVTO	04	04	0832	S11	W27	04	2.3		B	DKC	650	16	9	3
10865		TACH	04	04	0839	S11	W25	04	2.5			DAI	609	8	6	4
10865		KAND	04	04	1150	S13	W28	04	2.4			DKI		13	9	2
10865		HOLL	04	04	1723	S10	W31	04	2.4		B	DHO	660	12	10	3
10865		VORO	04	04	2313	S11	W33	04	2.5			EHI	706	32	9	3
10865		LEAR	04	05	0131	S11	W34	04	2.5		BG	EKI	590	30	13	3
10865		SVTO	04	05	0534	S11	W37	04	2.4		BG	EKI	660	12	13	3
10865		KAND	04	05	1050	S12	W42	04	2.3			DKO		4	9	3
10865		HOLL	04	05	1747	S10	W45	04	2.3		BG	EKC	540	23	11	3
10865		VORO	04	05	2316	S10	W46	04	2.5			EKI	647	23	8	4
10865		LEAR	04	06	0223	S11	W50	04	2.3		BG	EKO	540	27	12	3
10865		KAND	04	06	0803	S11	W54	04	2.3			DKO		5	5	1
10865		TACH	04	06	0807	S12	W51	04	2.5			CAI	385	8	5	4
10865		HOLL	04	06	1438	S08	W56	04	2.4		BG	DKC	510	23	9	2
10865		TACH	04	07	0555	S10	W69	04	2.1			HR	548	4	2	4
10865		SVTO	04	07	0730	S12	W67	04	2.3		B	DKO	510	6	7	2
10865		KAND	04	07	1044	S13	W69	04	2.2			DKO		5	10	5
10865		HOLL	04	07	1643	S10	W75	04	2.1		B	DKO	40	8	8	3
10865		SVTO	04	08	0617	S09	W81	04	2.2		B	CAO	180	3	5	3
10866		LEAR	03	29	0014	S05	E79	04	3.9		A	HAX	100	1	2	1
10866		VORO	03	29	0017	S04	E80	04	4.0			HAX	169	1		3
10866		SVTO	03	29	0627	S07	E79	04	4.2		A	HSX	60	1	2	3
10866		KAND	03	29	0805	S03	E77	04	4.1			HA		1	2	3
10866		SVTO	03	30	0635	S07	E65	04	4.1		A	HSX	90	1	4	3
10866		HOLL	03	30	1819	S08	E58	04	4.1		A	HHX	60	3	2	4
10866		VORO	03	31	0023	S06	E53	04	4.0			HSX	150	1		3
10866		LEAR	03	31	0353	S07	E53	04	4.1		A	HSX	100	1	2	1
10866		KAND	03	31	0640	S03	E51	04	4.1			HS		1	2	3
10866		SVTO	03	31	0921	S06	E49	04	4.0		A	HSX	100	1	2	3
10866		HOLL	03	31	1855	S08	E44	04	4.1		A	HHX	140	1	3	3
10866		VORO	04	01	0353	S06	E38	04	4.0			HSX	174	1		3
10866		LEAR	04	01	0549	S06	E37	04	4.0		A	HAX	140	4	4	1
10866		SVTO	04	01	0710	S06	E38	04	4.1		A	HSX	70	1	3	3
10866		HOLL	04	01	1424	S05	E33	04	4.1		A	HSX	70	1	2	3
10866		LEAR	04	02	0123	S07	E29	04	4.2		B	CAO	110	7	6	4
10866		KAND	04	02	0640	S07	E24	04	4.1			HA		4	2	4
10866		SVTO	04	02	0715	S06	E24	04	4.1		A	HSX	140	1	3	3
10866		HOLL	04	02	1514	S05	E19	04	4.0		A	HHX	60	5	3	3
10866		VORO	04	03	0107	S06	E13	04	4.0			HHX	157	2		4
10866		LEAR	04	03	0155	S06	E19	04	4.5		B	CAO	140	6	9	4

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

APRIL 2006

NOAA/ USAF Group	Mt Wilson Group	Sta	Observation Mo	Day	Time (UT)	Lat	CMD	CMP Mo	Day	Max H	Mag Class	Spot Class	Corrected Area (10-6 Hemi)	Spot Count	Long. Extent (Deg)	Qual
10866		TACH	04	03	0612	N00	E14	04	4.3			HA	104	2	2	3
10866		SVTO	04	03	0735	S06	E11	04	4.1		A	HSX	100	2	3	3
10866		KAND	04	03	1245	S06	E06	04	4.0			HA		2	2	3
10866		VORO	04	03	2351	S06	E01	04	4.1			HAX	127	3		4
10866		LEAR	04	04	0147	S07	E02	04	4.2		B	DAO	150	8	6	1
10866		SVTO	04	04	0832	S05	W03	04	4.1		A	HSX	80	3	3	3
10866		TACH	04	04	0839	S05	W03	04	4.1			HA	75	2	1	4
10866		KAND	04	04	1150	S08	W06	04	4.0			CAO		3	2	2
10866		HOLL	04	04	1723	S04	W09	04	4.0		A	HHX	90	4	3	3
10866		VORO	04	04	2313	S02	W08	04	4.4			AXX	2	1		3
10866		VORO	04	04	2313	S06	W12	04	4.1			HAX	131	3		3
10866		LEAR	04	05	0131	S05	W09	04	4.4		BG	CAO	120	11	12	3
10866		SVTO	04	05	0534	S06	W15	04	4.1		B	CSO	80	3	3	3
10866		KAND	04	05	1050	S07	W17	04	4.2			DAO		3	4	3
10866		HOLL	04	05	1747	S06	W21	04	4.2		B	CKO	140	4	3	3
10866		VORO	04	05	2316	S06	W24	04	4.2			CKI	133	6	2	4
10866		LEAR	04	06	0223	S06	W27	04	4.1		B	CAO	110	8	4	3
10866		KAND	04	06	0803	S07	W29	04	4.2			CAO		5	3	1
10866		TACH	04	06	0807	S07	W29	04	4.2			HR	85	3	2	4
10866		HOLL	04	06	1438	S05	W32	04	4.2		B	DSO	130	4	3	2
10866		TACH	04	07	0555	S05	W41	04	4.2			AR	27	3	2	4
10866		SVTO	04	07	0730	S06	W44	04	4.0		B	DSO	100	3	3	2
10866		KAND	04	07	1044	S08	W44	04	4.1			HA		3	3	5
10866		HOLL	04	07	1643	S05	W49	04	4.0		B	DSO	90	6	3	3
10866		SVTO	04	08	0617	S05	W55	04	4.1		B	DSO	100	3	4	3
10866		HOLL	04	08	1748	S06	W60	04	4.2		B	CSO	60	4	3	3
10866		VORO	04	08	2239	S07	W64	04	4.1			DRI	68	6	2	4
10866		LEAR	04	09	0100	S07	W67	04	4.0		A	HAX	20	3	2	3
10866		SVTO	04	09	0612	S06	W70	04	4.0		B	CSO	50	2	4	3
10866		HOLL	04	09	1423	S04	W76	04	3.9		B	CSO	30	2	5	3
10866		LEAR	04	10	0212	S05	W81	04	4.0		A	AXX	30	1	1	3
10867		LEAR	04	01	0549	S16	E38	04	4.1		A	AXX	10	2	1	1
10867		SVTO	04	01	0710	S16	E40	04	4.3		A	AXX	10	1	1	3
10867		HOLL	04	01	1424	S16	E34	04	4.2		B	BXO	10	2	2	3
10867		LEAR	04	02	0123	S16	E28	04	4.2		B	DAO	30	7	5	4
10867		KAND	04	02	0640	S17	E26	04	4.2			CAO		10	6	4
10867		SVTO	04	02	0715	S16	E26	04	4.3		B	DSO	70	7	7	3
10867		HOLL	04	02	1514	S16	E20	04	4.1		B	DSO	50	10	8	3
10867		VORO	04	03	0107	S16	E14	04	4.1			DRI	106	14	7	4
10867		LEAR	04	03	0155	S16	E15	04	4.2		B	DAO	110	13	8	4
10867		TACH	04	03	0612	S16	E11	04	4.1			BRI	49	6	6	3
10867		SVTO	04	03	0735	S16	E12	04	4.2		B	DSO	90	10	9	3
10867		KAND	04	03	1245	S17	E05	04	3.9			DAI		14	9	3
10867		VORO	04	03	2351	S16	E01	04	4.1			ESI	174	20	8	4
10867		LEAR	04	04	0147	S16	E01	04	4.1		BG	EAI	170	19	11	1
10867		SVTO	04	04	0832	S16	W03	04	4.1		B	DSO	110	6	10	3
10867		TACH	04	04	0839	S16	W02	04	4.2			CAI	76	5	7	4
10867		KAND	04	04	1150	S18	W05	04	4.1			DAO		6	10	2
10867		HOLL	04	04	1723	S16	W08	04	4.1		B	CSI	110	11	11	3
10867		VORO	04	04	2313	S17	W12	04	4.0			DSI	113	17	9	3
10867		LEAR	04	05	0131	S16	W13	04	4.1		B	EAO	120	13	11	3
10867		SVTO	04	05	0534	S17	W16	04	4.0		B	ESI	110	11	11	3
10867		KAND	04	05	1050	S16	W19	04	4.0			DAC		8	10	3
10867		HOLL	04	05	1747	S16	W23	04	4.0		B	ESI	120	17	11	3
10867		VORO	04	05	2316	S16	W25	04	4.1			CAI	118	15	10	4
10867		LEAR	04	06	0223	S17	W26	04	4.1		B	CAO	80	13	10	3
10867		KAND	04	06	0803	S17	W33	04	3.8			DAI		4	6	1
10867		TACH	04	06	0807	S18	W33	04	3.8			CAO	38	3	5	4
10867		HOLL	04	06	1438	S16	W35	04	3.9		B	DSI	80	9	9	2
10867		TACH	04	07	0555	S16	W44	04	3.9			CAO	72	3	4	4
10867		SVTO	04	07	0730	S16	W46	04	3.8		B	DSO	90	3	5	2
10867		KAND	04	07	1044	S18	W47	04	3.9			HA		3	5	5
10867		HOLL	04	07	1643	S15	W52	04	3.7		B	CHO	80	7	4	3
10867		SVTO	04	08	0617	S17	W58	04	3.8		B	CAO	50	3	5	3
10867		HOLL	04	08	1748	S15	W64	04	3.9		B	CSO	40	2	2	3
10867		VORO	04	08	2239	S18	W68	04	3.8			CRO	21	3	1	4
10867		LEAR	04	09	0100	S17	W69	04	3.8		A	HAX	20	2	2	3
10867		SVTO	04	09	0612	S16	W74	04	3.6		A	HRX	30	1	1	3

S U N S P O T G R O U P S
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APRIL 2006

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10867		HOLL	04	09	1423	S15	W78	04	3.7		A	AXX	30	1	2	3
10867		LEAR	04	10	0212	S15	W85	04	3.6		A	AXX	30	1	1	3
10866B		VORO	04	04	2313	S05	W03	04	4.7			AXX	1	1		3
10868		HOLL	04	04	1723	S07	E10	04	5.5		B	BXO	10	3	3	3
10868		VORO	04	04	2313	S07	E06	04	5.4			BRI	16	4	3	3
10868		LEAR	04	05	0131	S07	E05	04	5.4		B	CAO	40	5	6	3
10868		SVTO	04	05	0534	S07	E04	04	5.5		B	CAO	30	4	4	3
10868		KAND	04	05	1050	S07	E01	04	5.5			BXO		2	4	3
10868		HOLL	04	05	1747	S07	W03	04	5.5		B	DAO	30	9	5	3
10868		VORO	04	05	2316	S07	W07	04	5.4			CRI	24	7	3	4
10868		LEAR	04	06	0223	S07	W09	04	5.4		B	CRO	20	6	4	3
10868		TACH	04	06	0807	S09	W10	04	5.6			BXO	8	2	4	4
10868		HOLL	04	06	1438	S06	W16	04	5.4		B	DSO	40	6	5	2
10869		LEAR	04	06	0223	S12	E35	04	8.7		B	BXO	10	6	5	3
10869		TACH	04	06	0807	S12	E31	04	8.7			AXX	2	1	1	4
10869		HOLL	04	06	1438	S12	E28	04	8.7		B	DSI	50	8	4	2
10869		TACH	04	07	0555	S12	E20	04	8.7			BRI	22	5	5	4
10869		SVTO	04	07	0730	S13	E18	04	8.7		B	DSO	50	6	5	2
10869		KAND	04	07	1044	S13	E16	04	8.6			CAI		9	4	5
10869		HOLL	04	07	1643	S12	E12	04	8.6		B	DSO	50	9	6	3
10869		SVTO	04	08	0617	S12	E06	04	8.7		B	DSO	60	5	6	3
10869		HOLL	04	08	1748	S12	W02	04	8.6		B	CAI	80	8	8	3
10869		VORO	04	08	2239	S12	W04	04	8.6			DRI	32	12	6	4
10869		LEAR	04	09	0100	S12	W04	04	8.7		B	CAI	40	13	8	3
10869		SVTO	04	09	0612	S12	W08	04	8.6		B	DSI	50	10	9	3
10869		HOLL	04	09	1423	S11	W13	04	8.6		B	DSO	60	9	10	3
10869		LEAR	04	10	0212	S12	W19	04	8.7		BG	DAI	100	23	8	3
10869		TACH	04	10	0551	S13	W20	04	8.7			DAI	82	4	7	3
10869		KAND	04	10	1054	S13	W24	04	8.6			DAO		7	9	4
10869		HOLL	04	10	1501	S11	W28	04	8.5		B	ESI	80	7	11	3
10869		LEAR	04	11	0114	S12	W32	04	8.6		B	DAO	80	12	9	3
10869		TACH	04	11	0626	S11	W34	04	8.7			BRO	22	3	9	3
10869		KAND	04	11	0750	S14	W35	04	8.7			DAO		2	10	3
10869		SVTO	04	11	1545	S08	W43	04	8.4		B	DSO	40	3	3	2
10869		HOLL	04	11	1627	S09	W41	04	8.6		B	EAO	50	5	11	3
10869		LEAR	04	12	0140	S12	W47	04	8.5		BG	CSO	60	7	6	2
10869		TACH	04	12	0626	S10	W52	04	8.4			HSX	57	1	2	4
10869		KAND	04	12	0720	S10	W53	04	8.3			HA		1	1	3
10869		SVTO	04	12	0755	S09	W54	04	8.3		A	HSX	30	1	2	2
10869		HOLL	04	12	1438	S11	W57	04	8.3		B	CSO	40	2	5	4
10869		VORO	04	12	2217	S12	W64	04	8.1			DRI	32	12	6	3
10869		LEAR	04	13	0221	S11	W63	04	8.3		B	CAO	20	2	3	1
10869		TACH	04	13	0637	S12	W66	04	8.3			HSX	30	1	1	3
10869		SVTO	04	13	0658	S08	W68	04	8.2		A	HSX	40	1	2	3
10869		KAND	04	13	0733	S12	W64	04	8.5			HA		1	2	5
10869		HOLL	04	13	1428	S10	W71	04	8.3		A	HAX	50	1	1	4
10869		VORO	04	13	2207	S11	W74	04	8.3			HAX	44	1		3
10869		LEAR	04	14	0138	S11	W78	04	8.2		A	HAX	30	1	1	2
10869		TACH	04	14	0506	S12	W78	04	8.3			HSX	46	1	2	4
10869		HOLL	04	14	1445	S11	W81	04	8.5		A	HSX	40	1	1	3
10870		LEAR	04	10	0212	S08	E32	04	12.5		B	CAO	10	2	2	3
10870		TACH	04	10	0551	S09	E30	04	12.5			BXO	7	2	7	3
10870		KAND	04	10	1054	S08	E27	04	12.5			CAO		2	3	4
10870		HOLL	04	10	1501	S09	E26	04	12.6		A	AXX	10	1	1	3
10870		LEAR	04	11	0114	S08	E19	04	12.5		BG	DAO	30	5	4	3
10870		TACH	04	11	0626	S07	E16	04	12.5			BRI	27	4	7	3
10870		KAND	04	11	0750	S08	E16	04	12.5			CAO		4	4	3
10870		SVTO	04	11	1545	S08	E13	04	12.6		A	HSX	20	2	2	2
10870		HOLL	04	11	1627	S09	E11	04	12.5		A	HSX	20	3	2	3
10870		LEAR	04	12	0140	S08	E06	04	12.5		B	CAO	20	8	3	2
10870		TACH	04	12	0626	S08	E05	04	12.6			AXX	15	1	1	4
10870		KAND	04	12	0720	S09	E04	04	12.6			AX		1	1	3
10870		SVTO	04	12	0755	S08	E04	04	12.6		A	CSX	20	2	1	2
10870		HOLL	04	12	1438	S08	W01	04	12.5		A	HSX	10	1	1	4
10870		VORO	04	12	2217	S08	W05	04	12.5			HRX	18	1		3

S U N S P O T G R O U P S
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APRIL 2006

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10870		LEAR	04	13	0221	S07	W09	04	12.4		B	CAO	20	6	7	1
10870		TACH	04	13	0637	S08	W08	04	12.7			AXX	3	1	1	3
10870		SVTO	04	13	0658	S09	W10	04	12.5		B	CRO	10	3	3	3
10870		KAND	04	13	0733	S09	W09	04	12.6			AX		1	1	5
10870		HOLL	04	13	1428	S08	W13	04	12.6		A	AXX		2	1	4
10870		LEAR	04	14	0138	S10	W23	04	12.3		A	AXX	10	1	1	2
10870		HOLL	04	14	1445	S08	W28	04	12.5		A	AXX		1	1	3
10870		HOLL	04	17	1526	S06	W70	04	12.4		A	AXX	10	1	1	2
10870A		HOLL	04	13	1428	S10	W06	04	13.1		B	CSO	10	4	3	4
10870A		VORO	04	13	2207	S08	W09	04	13.2			BRO	7	7		3
10870A		HOLL	04	14	1445	S10	W21	04	13.0		A	AXX		1	1	3
10871		HOLL	04	08	1748	S09	E79	04	14.7		A	AXX	30	1	1	3
10871		VORO	04	08	2239	S06	E76	04	14.6			HAX	31	1		4
10871		LEAR	04	09	0100	S07	E75	04	14.6		A	HAX	30	1	2	3
10871		SVTO	04	09	0612	S07	E72	04	14.6		A	HSX	50	1	1	3
10871		HOLL	04	09	1423	S10	E65	04	14.5		A	HSX	40	1	2	3
10871		LEAR	04	10	0212	S06	E66	04	15.0		B	CAO	70	2	12	3
10871		TACH	04	10	0551	S09	E58	04	14.6			AXX	9	1	1	3
10871		KAND	04	10	1054	S08	E56	04	14.6			HA		1	1	4
10871		HOLL	04	10	1501	S10	E53	04	14.6		A	HSX	30	1	2	3
10871		LEAR	04	11	0114	S08	E48	04	14.6		A	HAX	40	2	4	3
10871		TACH	04	11	0626	S06	E44	04	14.6			AXX	14	1	1	3
10871		KAND	04	11	0750	S07	E44	04	14.6			HA		1	1	3
10871		SVTO	04	11	1545	S08	E41	04	14.7		A	HSX	20	2	2	2
10871		HOLL	04	11	1627	S09	E39	04	14.6		A	HAX	50	2	1	3
10871		LEAR	04	12	0140	S07	E33	04	14.5		B	CAO	50	5	4	2
10871		TACH	04	12	0626	S08	E32	04	14.7			HSX	29	1	1	4
10871		KAND	04	12	0720	S08	E31	04	14.6			HS		1	2	3
10871		SVTO	04	12	0755	S09	E32	04	14.7		A	CSX	30	2	2	2
10871		HOLL	04	12	1438	S08	E28	04	14.7		B	CSO	50	3	6	4
10871		VORO	04	12	2217	S08	E22	04	14.6			HSX	96	1		3
10871		LEAR	04	13	0221	S07	E16	04	14.3		B	CSO	50	8	8	1
10871		TACH	04	13	0637	S08	E19	04	14.7			HSX	26	1	1	3
10871		SVTO	04	13	0658	S08	E18	04	14.6		A	HSX	20	1	1	3
10871		KAND	04	13	0733	S08	E19	04	14.7			HA		1	1	5
10871		HOLL	04	13	1428	S07	E12	04	14.5		B	CAO	40	5	4	4
10871		VORO	04	13	2207	S06	E14	04	15.0			AXX	4	1		3
10871		VORO	04	13	2207	S07	E09	04	14.6			HSX	34	1		3
10871		LEAR	04	14	0138	S07	E08	04	14.7		B	DAO	50	4	8	2
10871		TACH	04	14	0506	S08	E07	04	14.7			HSX	33	1	1	4
10871		SVTO	04	14	0611	S07	E07	04	14.8		B	CSO	30	2	5	3
10871		HOLL	04	14	1445	S08	W01	04	14.5		B	CSO	20	2	3	3
10871		VORO	04	14	2253	S04	W02	04	14.8			AXX	6	1		3
10871		VORO	04	14	2253	S07	W05	04	14.6			HAX	39	6		3
10871		LEAR	04	15	0051	S06	W05	04	14.7		B	CAO	50	9	7	3
10871		KAND	04	15	0727	S09	W09	04	14.6			HA		1	1	4
10871		TACH	04	15	0740	S08	W10	04	14.6			HSX	28	1	1	4
10871		SVTO	04	15	0745	S07	W10	04	14.6		A	HSX	40	1	1	3
10871		HOLL	04	15	1516	S06	W16	04	14.4		B	BXO	80	6	5	2
10871		LEAR	04	16	0142	S06	W21	04	14.5		B	CAO	20	6	2	1
10871		TACH	04	16	0445	S08	W21	04	14.6			AXX	13	1	1	3
10871		KAND	04	16	0855	S08	W24	04	14.6			HA		2	1	2
10871		SVTO	04	16	1045	S07	W25	04	14.6		B	CSO	50	2	3	2
10871		HOLL	04	16	1449	S06	W29	04	14.4		BG	CSO	70	5	7	3
10871		VORO	04	16	2222	S07	W31	04	14.6			HAX	12	1		3
10871		LEAR	04	17	0158	S07	W33	04	14.6		B	BXO	30	3	3	2
10871		KAND	04	17	0735	S09	W37	04	14.5			HA		1	1	3
10871		TACH	04	17	0740	S06	W35	04	14.7			AXX	12	1	1	3
10871		HOLL	04	17	1526	S06	W43	04	14.4		B	CSO	20	2	3	2
10871		VORO	04	18	0000	S08	W45	04	14.6			HAX	3	1		3
10871		LEAR	04	18	0500	S06	W48	04	14.6		A	AXX	10	2	2	3
10871		HOLL	04	18	1608	S07	W56	04	14.5		A	HSX	10	1	1	4
10871		LEAR	04	19	0129	S04	W54	04	15.0		A	AXX	20	1	1	3
10871		LEAR	04	20	0128	S07	W67	04	15.0		A	AXX	10	1	1	2
10873		KAND	04	10	1054	S03	E68	04	15.5			AX		1	1	4
10873		HOLL	04	10	1501	S08	E69	04	15.8		B	BXO	50	2	6	3

S U N S P O T G R O U P S
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APRIL 2006

NOAA/ USAF Group	Mt Wilson Group	Sta	Observation Mo	Day	Time (UT)	Lat	CMD	CMP Mo	Day	Max H	Mag Class	Spot Class	Corrected Area (10-6 Hemi)	Spot Count	Long. Extent (Deg)	Qual
10873		LEAR	04	11	0114	S03	E60	04	15.5		B	CAO	40	4	3	3
10873		TACH	04	11	0626	S02	E58	04	15.6			BRO	16	3	6	3
10873		KAND	04	11	0750	S03	E58	04	15.7			CAI		6	5	3
10873		SVTO	04	11	1545	S04	E53	04	15.6		B	DSO	60	7	6	2
10873		HOLL	04	11	1627	S06	E52	04	15.6		B	DSI	60	17	6	3
10873		LEAR	04	12	0140	S04	E47	04	15.6		BG	DAC	90	19	7	2
10873		TACH	04	12	0626	S04	E43	04	15.5			DAI	45	4	4	4
10873		KAND	04	12	0720	S04	E43	04	15.5			DAO		5	6	3
10873		SVTO	04	12	0755	S04	E43	04	15.5		B	DSO	70	7	6	2
10873		HOLL	04	12	1438	S04	E40	04	15.6		B	DAI	90	18	9	4
10873		VORO	04	12	2217	S04	E36	04	15.6			CAI	51	6	8	3
10873		LEAR	04	13	0221	S04	E33	04	15.6		BG	DAC	60	10	9	1
10873		TACH	04	13	0637	S04	E30	04	15.5			BXO	21	2	4	3
10873		SVTO	04	13	0658	S04	E30	04	15.5		B	DSO	40	3	5	3
10873		KAND	04	13	0733	S04	E33	04	15.8			DAI		3	9	5
10873		HOLL	04	13	1428	N00	E27	04	15.6		B	DSC	60	13	9	4
10873		VORO	04	13	2207	S03	E19	04	15.3			HAX	20	1		3
10873		LEAR	04	14	0138	S03	E18	04	15.4		A	HAX	20	2	1	2
10873		TACH	04	14	0506	S04	E16	04	15.4			AXX	13	1	2	4
10873		SVTO	04	14	0611	S03	E18	04	15.6		B	CSO	20	2	5	3
10873		HOLL	04	14	1445	S03	E14	04	15.7		B	CAO	20	5	8	3
10873		VORO	04	14	2253	S02	E05	04	15.3			AXX	12	3		3
10873		LEAR	04	15	0051	S03	E08	04	15.6		B	CAO	10	3	5	3
10873		KAND	04	15	0727	S05	E04	04	15.6			BXO		2	8	4
10873		TACH	04	15	0740	S03	E00	04	15.3			AXX	5	1	1	4
10873		SVTO	04	15	0745	S03	E01	04	15.4		A	HSX	20	1	1	3
10873		LEAR	04	16	0142	N01	W05	04	15.7		B	BXO	10	4	3	1
10873		HOLL	04	17	1526	S04	W33	04	15.2		A	AXX		1	1	2
10873		HOLL	04	18	1608	S04	W49	04	15.0		A	HSX	10	1	1	4
10872		SVTO	04	11	1545	S08	E78	04	17.5		A	HSX	30	1	2	2
10872		HOLL	04	11	1627	S09	E77	04	17.5		A	HSX	60	1	1	3
10872		LEAR	04	12	0140	S07	E71	04	17.4		A	AXX	30	1	1	2
10872		TACH	04	12	0626	S06	E68	04	17.3			AXX	20	1	1	4
10872		KAND	04	12	0720	S07	E68	04	17.4			AX		1	1	3
10872		SVTO	04	12	0755	S08	E69	04	17.5		A	HSX	40	1	2	2
10872		HOLL	04	12	1438	S07	E63	04	17.3		A	HSX	20	1	1	4
10872		VORO	04	12	2217	S07	E60	04	17.4			HAX	46	1		3
10872		LEAR	04	13	0221	S06	E57	04	17.4		A	HAX	20	1	1	1
10872		TACH	04	13	0637	S07	E56	04	17.5			AXX	9	1	1	3
10872		SVTO	04	13	0658	S08	E56	04	17.5		A	HSX	20	1	1	3
10872		KAND	04	13	0733	S06	E58	04	17.6			HA		1	1	5
10872		HOLL	04	13	1428	S07	E51	04	17.4		A	HSX	30	1	1	4
10872		VORO	04	13	2207	S07	E46	04	17.4			ARX	14	1		3
10872		LEAR	04	14	0138	S07	E45	04	17.4		A	HAX	20	1	1	2
10872		TACH	04	14	0506	S08	E43	04	17.4			AXX	10	1	2	4
10872		SVTO	04	14	0611	S07	E43	04	17.5		A	HRX	10	1	1	3
10872		HOLL	04	14	1445	S07	E38	04	17.5		B	CSO	20	3	3	3
10872		VORO	04	14	2253	S06	E32	04	17.3			HRX	22	2		3
10872		LEAR	04	15	0051	S08	E32	04	17.4		A	HAO	10	4	3	3
10872		KAND	04	15	0727	S08	E28	04	17.4			HA		1	1	4
10872		TACH	04	15	0740	S07	E27	04	17.3			AXX	8	1	1	4
10872		SVTO	04	15	0745	S08	E28	04	17.4		A	HSX	10	1	1	3
10872		HOLL	04	15	1516	S06	E26	04	17.6		B	BXO	60	8	9	2
10872		LEAR	04	16	0142	S06	E21	04	17.6		B	BXO	20	9	6	1
10872		HOLL	04	16	1449	S08	E13	04	17.6		B	BXI	20	5	8	3
10872		LEAR	04	17	0158	S06	E09	04	17.7		B	BXO	10	2	1	2
10872		HOLL	04	17	1526	S10	W03	04	17.4		B	BXO	10	4	4	2
10872		LEAR	04	18	0500	S08	W09	04	17.5		B	BXO	10	5	6	3
10872		HOLL	04	18	1608	S08	W12	04	17.8		A	AXX		1	1	4
10872		LEAR	04	19	0129	S06	W17	04	17.8		B	BXO	20	3	1	3
10874		HOLL	04	14	1445	S01	E76	04	20.3		A	AXX		1	1	3
10874		HOLL	04	15	1516	S02	E62	04	20.3		A	AXX	20	1	2	2
10874		HOLL	04	16	1449	S03	E49	04	20.3		B	BXO	10	2	2	3
10874		HOLL	04	17	1526	S02	E36	04	20.3		A	AXX		1	1	2
10874		LEAR	04	18	0500	S01	E29	04	20.4		A	AXX	10	1	1	3
10874		KAND	04	18	1035	S01	E19	04	19.9			AX		2	1	2
10874		HOLL	04	18	1608	N01	E16	04	19.9		A	HSX	10	3	2	4

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APRIL 2006

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10874		LEAR	04	19	0129	N00	E11	04	19.9		B	CAO	20	4	6	3
10874		LEAR	04	20	0128	S01	W01	04	20.0		B	BXO	20	13	8	2
10874		SVTO	04	20	1052	S01	W05	04	20.1		B	CSO	10	3	3	3
10874		HOLL	04	20	1725	S02	W08	04	20.1		B	DAI	90	13	6	3
10874		LEAR	04	21	0403	S02	W16	04	20.0		B	BXO	30	5	3	1
10874		SVTO	04	21	0643	S01	W16	04	20.1		B	DRO	30	4	4	3
10874		KAND	04	21	0735	S02	W17	04	20.0			DAO		3	4	3
10874		HOLL	04	21	1515	S01	W21	04	20.1		B	DSO	30	4	5	3
10874		VORO	04	21	2239	S01	W25	04	20.1			BXO	9	3	4	3
10874		LEAR	04	22	0234	S02	W28	04	20.0		B	BXO	10	5	4	3
10874		HOLL	04	23	1542	S01	W51	04	19.8		A	AXX		1	1	3
10874A		LEAR	04	27	0035	S15	W24	04	25.2		A	AXX	10	1	1	2
10874B		HOLL	04	21	1515	S16	E57	04	25.9		A	AXX	10	1	1	3
10874B		LEAR	04	22	0234	S15	E50	04	25.9		B	BXO	10	3	2	3
10874B		LEAR	04	23	0147	S15	E36	04	25.8		A	AXX	10	1	1	3
10874B		LEAR	04	24	0130	S14	E23	04	25.8		A	AXX	10	1	1	2
10874C		HOLL	04	29	1533	S05	W49	04	26.0		A	HSX	20	1	1	4
10874C		HOLL	04	30	1431	S06	W62	04	26.0		A	AXX	20	1	1	3
10874D		HOLL	04	21	1515	S17	E75	04	27.3		A	AXX	20	1	1	3
10874E		HOLL	04	29	1533	S07	W12	04	28.7		A	HSX	10	2	2	4
10875		LEAR	04	23	0147	S11	E82	04	29.2		A	HAX	60	1	2	3
10875		SVTO	04	23	0525	S11	E80	04	29.2		A	HSX	120	1	2	3
10875		TACH	04	23	0916	S12	E80	04	29.4			HSX	182	1	3	4
10875		KAND	04	23	1025	S12	E82	04	29.6			HA		2	4	3
10875		HOLL	04	23	1542	S10	E77	04	29.4		B	CKO	270	3	11	3
10875		LEAR	04	24	0130	S11	E71	04	29.4		BG	CAO	210	7	6	2
10875		SVTO	04	24	0530	S10	E70	04	29.5		B	DKO	240	4	6	3
10875		TACH	04	24	0805	S09	E69	04	29.5			DAO	201	3	2	4
10875		HOLL	04	24	1550	S10	E66	04	29.6		BG	EKC	430	16	13	4
10875		LEAR	04	25	0052	S11	E58	04	29.4		BGD	DKC	460	10	4	2
10875		VORO	04	25	0448	S10	E56	04	29.4			HKX	404	10	1	3
10875		KAND	04	25	0636	S10	E57	04	29.5			DKO		10	6	5
10875		SVTO	04	25	0645	S10	E56	04	29.5		B	DKO	310	8	6	3
10875		HOLL	04	25	1640	S10	E50	04	29.4		BG	DKI	580	12	8	3
10875		LEAR	04	26	0105	S10	E46	04	29.5		BG	DKI	390	23	7	3
10875		VORO	04	26	0531	S10	E45	04	29.6			HKX	408	14	1	3
10875		TACH	04	26	0656	S11	E41	04	29.4			CAI	325	6	2	3
10875		KAND	04	26	0850	S10	E41	04	29.4			DKO		27	6	3
10875		HOLL	04	26	1556	S11	E38	04	29.5		BG	DKI	530	19	9	4
10875		VORO	04	26	2300	S09	E33	04	29.4			EKC	474	14	1	3
10875		LEAR	04	27	0035	S11	E33	04	29.5		BG	DAC	350	19	6	2
10875		KAND	04	27	0634	S10	E29	04	29.4			DKO		10	8	4
10875		TACH	04	27	0854	S10	E28	04	29.5			CAI	228	10	2	4
10875		HOLL	04	27	1429	S11	E25	04	29.5		BG	CAI	280	23	8	3
10875		VORO	04	28	0028	S10	E18	04	29.4			EKC	298	12	2	3
10875		LEAR	04	28	0140	S10	E18	04	29.4		BG	DAC	320	29	7	2
10875		TACH	04	28	0607	S10	E16	04	29.4			CAI	177	13	4	3
10875		KAND	04	28	0905	S09	E14	04	29.4			DAC		8	7	2
10875		HOLL	04	28	1422	S12	E10	04	29.3		BG	DAC	420	19	8	3
10875		VORO	04	28	2232	S09	E06	04	29.4			EKI	252	14	4	3
10875		LEAR	04	29	0127	S10	E05	04	29.4		BG	DAC	380	21	7	2
10875		TACH	04	29	0750	S10	E01	04	29.4			CAI	136	7	2	4
10875		SVTO	04	29	1237	S09	W01	04	29.4		B	DKC	240	16	8	2
10875		HOLL	04	29	1533	S08	W03	04	29.4		BG	DKC	240	43	9	4
10875		LEAR	04	30	0253	S09	W09	04	29.4		BG	CAI	230	24	7	3
10875		HOLL	04	30	1431	S08	W17	04	29.3		BG	EKI	440	15	11	3
10875		LEAR	05	01	0109	S10	W21	04	29.6		BG	DAO	220	14	8	3
10875		VORO	05	01	0352	S10	W23	04	29.5			EKC	219	9	3	3
10875		TACH	05	01	0707	S11	W25	04	29.5			CAI	185	6	5	3
10875		SVTO	05	01	1115	S11	W26	04	29.6		B	DAO	120	5	4	3
10875		HOLL	05	01	1640	S11	W28	04	29.7		BG	CKI	120	8	5	3
10875		LEAR	05	02	0117	S12	W34	04	29.6		BG	DAO	190	7	5	2
10875		VORO	05	02	0250	S12	W33	04	29.7			HKX	168	5	2	3

S U N S P O T G R O U P S
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APRIL 2006

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10875		SVTO	05	02	0714	S12	W37	04	29.6		B	DAO	140	4	4	3
10875		TACH	05	02	0720	S12	W36	04	29.7			HA	106	4	3	4
10875		HOLL	05	02	1435	S11	W40	04	29.7		B	DHO	100	10	4	2
10875		VORO	05	02	2236	S12	W44	04	29.7			HKX	171	4	2	3
10875		LEAR	05	03	0113	S12	W48	04	29.5		BG	DAO	150	5	3	2
10875		KAND	05	03	0700	S11	W51	04	29.5			HA		1	2	3
10875		SVTO	05	03	0900	S12	W52	04	29.5		A	HAX	180	2	3	3
10875		HOLL	05	03	1426	S11	W55	04	29.6		B	DHO	190	2	3	3
10875		KAND	05	04	0823	S12	W64	04	29.6			DAO		4	6	4
10875		SVTO	05	04	1135	S13	W65	04	29.7		B	CSO	140	2	3	2
10875		HOLL	05	04	1502	S13	W69	04	29.5		B	DHO	180	2	3	3
10875		LEAR	05	05	0327	S12	W76	04	29.5		B	DAO	110	3	4	1
10875		SVTO	05	05	0535	S14	W77	04	29.5		B	CSO	60	2	3	3
10875		TACH	05	05	0548	S15	W74	04	29.7			HSX	53	1	2	3
10875		HOLL	05	05	1418	S11	W80	04	29.7		B	CAO	60	3	3	5
10877		VORO	04	25	0448	S06	E77	05	1.0			AXX	4	1		3
10877		HOLL	04	25	1640	S06	E70	04	30.9		A	AXX	30	1	1	3
10877		LEAR	04	26	0105	S06	E65	04	30.9		A	HAX	30	1	1	3
10877		VORO	04	26	0531	S06	E65	05	1.1			ARX	15	1		3
10877		TACH	04	26	0656	S08	E62	04	30.9			HSX	31	1	2	3
10877		KAND	04	26	0850	S06	E61	04	30.9			HA		1	2	3
10877		HOLL	04	26	1556	S07	E56	04	30.8		A	HRX	40	2	1	4
10877		VORO	04	26	2300	S06	E52	04	30.8			ARX	8	2		3
10877		LEAR	04	27	0035	S06	E52	04	30.9		A	HAX	20	1	1	2
10877		KAND	04	27	0634	S05	E48	04	30.9			HA		1	2	4
10877		TACH	04	27	0854	S07	E48	05	1.0			AXX	19	1	1	4
10877		HOLL	04	27	1429	S07	E44	04	30.9		A	AXX	10	1	1	3
10877		LEAR	04	28	0140	S05	E36	04	30.8		A	AXX	10	2	1	2

Stations reporting:

HOLL = Holloman
MWIL = Mt. Wilson
RAMY = Ramey
TACH = Tashkent
KAND = Kandilli
PALE = Palehua
SVTO = San Vito
VORO = Voroshilov
LEAR = Learmonth

SUDDEN IONOSPHERIC DISTURBANCES
APRIL 2006

Day	Start (UT)	Max (UT)	End (UT)	Imp	Wide Spread Index	Number of Station Reports by Type SWF	SEA	SPA	LF-SPA	SES	Flare (UT)	X-ray Class	NOAA Region
01	1616	1627	1643	1	1		1				*		
02	1016	1021	1109	1	1		1				No flare		
03	1201	1207	1258	1	3		1			1	1200	C1.8	10867
03	1556	1602	1615	1	1		1				1607	C1.4	10867
03	1631	1634	1650	1	1		1				No flare		
03	2121	2128	2156	2	1					1	2113	C4.0	10865
04	1200	1201	1316	1	1		1				No flare		
05	0932	1013U	1053	1	1		1				No flare		
05	1306	1313	1336	1	5	1	1			8	1301	C2.6	10867
05	1518	1522	1552	3-	5	1	2	1		11	1514	C8.1	10867
05	1944	1950	2023	2	1					1	1945	B7.3	10867
06	0530	0535	0600	1+	5		1			3	0522	M1.4	10865
06	2037	2042	2128	2	3					5	2033	M1.2	10865
07	0800	0805	0826	2+	5	1	1	1		4	0757	C9.7	10867
10	1456	1502	1541	1	1		1				No flare		
11	1819	1829	1901	2-	3					4	1808	C2.3	10871
15	1127	1139U	1151	1	1		1				1139	B1.1	
21	1502	1514	1539	1	1		1				No flare		
21	1540	1548U	1626	1	1		1				No flare		
22	0838	0843	0906	1+	1					1	0831	B6.0	
22	1634	1640	1702	1+	5					6	1630	C2.6	
26	0644	0650	0715	1+	1					1	0638	C1.0	10875
26	0829	0833	0907	2	1					1	0826	B8.3	10875
26	1223	1228	1240	1-	3	1				3	1212	C1.2	10875
26	1350	1355	1417	3-	5	1		1		10	1342	C7.7	10875
26	1439	1454	1521	2-	5	1	1			10	1432	C9.1	10875
26	1559	1609	1639	1	1		1				No flare		
26	1655	1659	1716	3-	5		1	1		8	1651	M1.3	10875
26	1820	1827	1848	1	3					2	1817	C2.6	10875
26	2056	2104	2135	2	3					2	2051	C3.6	10875
27	1546	1552	1616	3	5	1	1	1		11	1522	M7.9	10875
28	0820	0828	0846	2	5	1		1		2	0818	C1.9	10875
28	1334	1337U	1500	1	1		1				*		
28	1531	1537	1607	1	1		1				*		
29	0725	0740U	0820	1	1		1				No flare		
29	0945	0954	1003	1	1	1	1				*		
29	1349	1354U	1416	1	1		1				*		
29	1615	1630	1700	1+	5		1			5	1615	C2.3	
30	0915	0928	0943	1-	5	1				3	0913	C1.8	10876

* = no flare patrol.

OBSERVATORIES REPORTING FOR APRIL 2006

Athens, Greece	SES	Palo Alto, California, USA	SES
Bedford, Massachusetts, USA	SES	Panska Ves, Czech Republic	SES, SEA, SWF
Cambridge, England, UK	SES	Seville, Ohio, USA	SES
Houston, Texas, USA	SES	Sussex, United Kingdom	SES
Isola del Gran Sasso, Italy	SES	Torrington, Connecticut, USA	SES
Marlborough, Massachusetts, USA	SES	Tucson, Arizona, USA	SES
Milan, Italy	SES	Upice, Czech Republic	SEA
Mishawaka, Indiana, USA	SES	Villiersdorp, South Africa	SES

Observations are not necessarily continuous.

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

APRIL 2006

Day	OBSERVATION Start (UT)	End (UT)	Sta	EVENT Start (UT)	End (UT)	Spectral Class	Event Remarks	Int (1-3)	FREQUENCY Lower (MHz)	Upper (MHz)	Remarks
01			LEAR	0028.0	0029.0	III		2	38	180	
	0000	0800	CULG	0029.0	0029.0	III	B	2	35	160	
			CULG	0046.0	0048.0	III	G	1	35	160	
			LEAR	0046.0	0047.0	III		2	37	180	
			PALE	0046.0	0046.0	III		1	35	160	
			CULG	0059.0	0100.0	III	G	1	35	160	
			LEAR	0059.0	0100.0	III		2	37	178	
			PALE	0059.0	0059.0	III		1	38	160	
			CULG	0109.0	0110.0	III	G	1	30	130	
			LEAR	0109.0	0109.0	III		2	38	163	
			CULG	0126.0	0126.0	III	B	1	30	80	
			CULG	0143.0	0144.0	III	G	1	35	100	
			LEAR	0143.0	0144.0	III		1	36	155	
	0434	1807	POTS	0548 U	1629 U	I	S,N	1	200U	390	
	0549	1624	ONDR								
	0600	1645	BLEN	0822.4	1415.0	I	DC	1	190	400	
			SVTO	0917.0	0917.0	III		1	31	45	
			POTS	0958.9	0959.2	III	G,U	2	200U	270	
			POTS	1105.7	1106.0	III	G	2	200U	330	
			POTS	1548.1	1548.5	DCIM		2	280	400X	
	2010	2400	CULG								
			LEAR	2329.0	0855.0	CONT		1	141	180	
02	0000	0800	CULG	0111.0	0111.0	III	B	1	23	60	
			CULG	0116.0	0116.0	III	B	1	23	60	
			CULG	0124.0	0124.0	III	B	1	30	80	
	0431	1807	POTS	0523 E	1647 U	I	S,N,DC	2	200U	400X	
			SVTO	0552.0	0723.0	III	N	1	28	141	
			POTS	0619.8	0622.2	DCIM		2	220	360	
			LEAR	0854.0	0855.0	III		1	40	78	
			POTS	0854.9	0855.2	III	B,U	1	45	75U	
			SVTO	0855.0	0855.0	III		1	31	69	
	0546	1626	ONDR	1329.0	1332.3	DCIM	GG	1	800X	2000X	
	0600	1645	BLEN	1330.9	1333.1	III	GG,V,RS	3	150X	2300	
			SVTO	1331.0	1332.0	III		1	113	126	
			POTS	1331.7	1332.4	III	G,U	3	200U	400X	
			LEAR	2247.0	1003.0	CONT		1	109	180	
			LEAR	2359.0	2359.0	III		2	75U	180U	
	2010	2400	CULG	2359.0	2359.0	III	B	1	50	100	
03	0000	0800	CULG	0042.0	0042.0	III	B	1	30	50	
			CULG	0236.0	0236.0	III	B	1	23	60	
	0431	1810	POTS	0528 E	1652 U	I	S,N,DC	2	200U	400X	
			POTS	0545.0	0545.4	III	G	2	200U	360	
			POTS	0839.3	0840.7	III	G	2	200U	400X	
			SVTO	0920.0	0920.0	III		1	25U	41U	
			POTS	1014.5	1014.7	DCIM		2	220	400X	
	0600	1645	BLEN	1023.7	1028.4	III	GG,V	3	130	1900	
			POTS	1024.5	1028.3	DCIM	N	3	220	400X	
			SVTO	1026.0	1027.0	III		1	59	180	
			POTS	1026.9	1027.2	III	B	2	40X	400X	
			POTS	1045.4	1045.7	III	G	2	200U	400	
			SVTO	1201.0	1203.0	III		1	73	180	
	0544	1627	ONDR	1201.2	1203.1	DCIM	G,SP	2	800X	2000X	
			BLEN	1201.3	1203.3	III	GG,RS,C	3	112X	4000X	
			ONDR	1201.5	1203.2	DCIM	G	1	2000X	4500X	
			POTS	1201.8	1202.6	III	GG	3	200U	400X	
			BLEN	1216.6	1223.4	III	GG	3	112X	1400	
			POTS	1217.7	1222.3	DCIM		2	220	400X	
			SGMR	1222.0	1223.0	III		1	30	180	
			SVTO	1222.0	1223.0	III		2	25	180	
			POTS	1222.4	1223.7	III	GG	3	40X	400X	
			SVTO	1623.0	1625.0	III		2	25	180	
			BLEN	1623.5	1625.7	III	GG,RS	3	112X	3800	
			POTS	1624.0	1625.8	III	GG	3	45	400X	
			SGMR	1624.0	1625.0	III		1	30	180	
			PALE	2106.0	2106.0	III		1	25	149	
	2010	2400	CULG	2106.0	2106.0	III	G	1	20	130	

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

APRIL 2006

OBSERVATION Day	Start (UT)	End (UT)	Sta	EVENT Start (UT)	End (UT)	Spectral Class	Event Remarks	Int (1-3)	FREQUENCY Lower (MHz)	Upper (MHz)	Remarks
04	0000	0800	CULG	0023.0	0023.0	III	B	1	23	60	
			CULG	0042.0	0042.0	III	B	1	23	140	
			LEAR	0042.0	0042.0	III		1	25	114	
			PALE	0042.0	0042.0	III		1	25	155	
			LEAR	0155.0	0155.0	III		1	25	180	
			PALE	0155.0	0155.0	III		1	25	180	
			CULG	0156.0	0156.0	III	B	1	20	100	
			CULG	0358.0	0359.0	III	G	1	25	80	
			LEAR	0358.0	0359.0	III		1	55	180	
	0428	1810	POTS	0448 E	1653 U	I	S,N	2	200U	400X	
	0600	1645	BLEN								
			CULG	0613.0	0613.0	III	B	1	23	40	
			CULG	0659.0	0659.0	III	B	1	25	80	
			CULG	0712.0	0713.0	III	G	1	25	90	
			LEAR	0712.0	0712.0	III		2	25	137	
			SVTO	0712.0	0712.0	III		2	25	150	
	0555	1645	BLEN	0712.2	0713.0	III	GG	2	130	500	
			POTS	0712.3	0713.0	III	G,U	3	40X	400X	
			SGMR	1136.0	1224.0	III	N	1	30	180	
			SVTO	1157.0	1159.0	III		2	25	180	
			POTS	1157.3	1158.9	III	GG,U	3	40X	400	
			SVTO	1217.0	1217.0	III		1	32U	83U	
			SVTO	1553.0	1556.0	III		2	50	180	
			POTS	1553.9	1556.0	III	GG,U	3	50	400X	
			BLEN	1554.0	1556.4	III	GG,V	3	112X	2100	
			SGMR	1554.0	1556.0	III		1	30U	180U	
	0542	1629	ONDR	1555.0	1555.4	DCIM	G	2	800X	1800	
	2010	2400	CULG	2040.0U	2400.0D	III	S	1	30	130	
			CULG	2055.0	2055.0	III	B	1	40	160	
			CULG	2119.0	2119.0	III	B	1	25	60	
			LEAR	2309.0	0759.0	III	N	1	73	100	
05	0000	0800	CULG	0000.0E	0030.0U	III	S	1	30	130	
			CULG	0054.0	0054.0	III	B	1	30	180	
			CULG	0059.0	0059.0	III	B	1	30	220	
			CULG	0233.0	0234.0	III	G	1	40	80	
	0428	1813	POTS	0457 E	1706 U	I	S,N	2	200U	400X	
			POTS	0510.4	0518.4	III	G,N	1	40X	260	
			SVTO	0511.0	0518.0	III		1	25	144	
			LEAR	0518.0	0518.0	III		1	25	116	
	0555	1650	BLEN								
			POTS	0639.1	0639.5	DCIM		2	200U	400X	
	0655	1630	ONDR								
			SVTO	1023.0	1113.0	CONT		1	123	180	
			SVTO	1209.0	1211.0	III		1	25	170	
			SVTO	1443.0	1443.0	III		1	25	44	
			SVTO	1604.0	1656.0	CONT		1	112	180	
			PALE	2245.0	2246.0	III		1	123	180	
	2010	2400	CULG	2246.0	2246.0	III	G	1	70	220	
06	0000	0750	CULG	0314.0	0314.0	III	B	1	20	80	
	0425	1813	POTS	0450 E	1701 U	I	S,N	2	200U	400X	
	0651	1632	ONDR								
			SVTO	0818.0	0818.0	III		1	25	44	
			POTS	0829.7	0829.9	III	G	3	200U	360	
	0555	1655	BLEN	1418.1	1418.7	DCIM	P	2	1600	4000X	
	2010	2400	CULG	2205.0	2206.0	III	G	1	23	40	
			CULG	2210.0	2210.0	III	B	1	23	45	
			LEAR	2239.0	1001.0	CONT		1	95	180	
07			LEAR	0048.0	1000.0	CONT		1	119	180	
	0000	0750	CULG	0425.0	0425.0	III	B	1	25	60	
	0425	1816	POTS	0447 E	1702 U	I	S,N	2	200U	400X	
	0536	1633	ONDR								
			SVTO	0949.0	0950.0	III		1	25	85	
			POTS	0949.9	0950.3	III	G	2	40X	80U	
	0555	1655	BLEN	0954.0	1010.0	I	DC	2	150	400	
			POTS	1117.0	1117.4	III	G	2	40X	240	
			SGMR	1117.0	1117.0	III		1	30	157	

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

APRIL 2006

Day	OBSERVATION Start (UT)	End (UT)	Sta	EVENT Start (UT)	End (UT)	Spectral Class	Event Remarks	Int (1-3)	FREQUENCY Lower (MHz)	Upper (MHz)	Remarks
07			SVTO	1117.0	1117.0	III		2	25	162	
			POTS	1117.2	1117.5	V	G	2	40X	70	
			SGMR	1229.0	1230.0	III		1	30	54	
			SVTO	1229.0	1230.0	III		2	25	85	
			POTS	1229.6	1229.8	III	G	2	40X	300	
			POTS	1229.7	1230.0	V	B	2	40X	60	
			POTS	1427.3	1427.8	III	G	2	200U	340	
	2020	2400	CULG	2208.0	2208.0	III	B	1	20	90	
08			LEAR	0316.0	0318.0	III		2	25	180	
	0000	0750	CULG	0317.0	0319.0	III	G	1	20	80	
	0422	1816	POTS	0442 E	1641 U	I	S,N	2	200U	400X	
	0534	1635	ONDR								
	0555	1700	BLEN								
			CULG	0638.0	0720.0	III	N	1	23	70	
			POTS	0733.8	0734.8	III	G	2	40X	330	
			CULG	0734.0	0734.0	III	B	1	27	150	
			LEAR	0734.0	0734.0	III		1	25	180	
			SVTO	0734.0	0734.0	III		1	28U	173U	
			POTS	1139.2	1145.7	DCIM	N	2	250	400X	
			POTS	1237.3	1237.8	III	G	2	200U	400	
			POTS	1334.8	1335.1	III	B	2	45	80U	
	2020	2400	CULG	2101.0	2102.0	III	G	1	40	90	
			CULG	2133.0	2133.0	III	B	1	30	140	
09	0000	0750	CULG	0230.0	0233.0	III	G	1	20	120	
			LEAR	0231.0	0231.0	III		2	25	137	
			LEAR	0232.0	0233.0	III		2	25	125	
			LEAR	0331.0	0859.0	III	N	1	25	103	
	0422	1819	POTS	0449 E	0623	I	S,N	1	200U	240	
	0532	1636	ONDR								
			SVTO	0537.0	0618.0	CONT		1	38	146	
	0550	1705	BLEN								
			CULG	0608.0	0609.0	III	G	1	23	80	
			LEAR	0608.0	0608.0	III		2	25	102	
			SVTO	0608.0	0608.0	III		2	25U	75U	
			POTS	0608.1	0608.6	III	G,U	3	40X	70U	
			SVTO	0646.0	0647.0	III		1	25	78	
			POTS	0646.4	0646.9	III	G	1	40X	65	
			POTS	0813.1	0815.1	I	S	1	240	330	
			POTS	0959.2	1005.5	I	S,N	1	230	310	
			POTS	1258.4	1300.0	III	G,N	1	200U	380	
			POTS	1350.9	1353.3	DCIM		2	200	400X	
			POTS	1453	1506 U	I	S,N	1	210	310	
	2020	2400	CULG								
10	0000	0750	CULG								
	0530	1638	ONDR								
	0550	1705	BLEN								
	0419	1819	POTS	0633 U	1647 U	I	S,N	1	200U	380	
	2020	2400	CULG								
11	0000	0750	CULG	0149.0	0159.0	III	G	1	20	80	
			LEAR	0156.0	0157.0	III		1	25	102	
			CULG	0157.0	0157.0	III	B	2	18X	100	
	0419	1822	POTS	0527 U	0551	I	S,N	1	200U	300	
	0528	1639	ONDR								
	0545	1710	BLEN								
			POTS	0651	1232	I	S,N	1	200U	270	
			SVTO	0912.0	0915.0	III		2	25	81	
			POTS	0912.7	0915.5	III	GG	2	40X	400	
			LEAR	0914.0	0915.0	III		1	25	163	
			SVTO	1005.0	1005.0	III		2	25	53	
			POTS	1005.1	1005.6	III	G	1	40X	280	
			POTS	1348	1520	I	S,N	1	210	300	
	2020	2400	CULG								
12	0000	0750	CULG								
	0526	1641	ONDR								

SOLAR RADIO EMISSION
Spectral Observations

APRIL 2006

Day	OBSERVATION Start (UT)	End (UT)	Sta	EVENT Start (UT)	End (UT)	Spectral Class	Event Remarks	Int (1-3)	FREQUENCY Lower (MHz)	Upper (MHz)	Remarks
12	0545	1710	BLEN								
	0416	1822	POTS	0558	0728	I	S,N	1	200U	250	
			POTS	0837.2	0837.5	DCIM		1	290	400X	
			POTS	1153.1	1154.4	DCIM	N	2	200	380	
	2020	2400	CULG								
13	0524	1642	ONDR								
	0540	1715	BLEN								
			LEAR	0657.0	0659.0	V		2	25	180	
			SVTO	0657.0	0659.0	III		2	25	147	
	0416	1825	POTS	0657.8	0659.6	III	GG,U	2	40X	330	
	0000	0750	CULG	0658.0	0700.0	III	G	1	20	100	
			SVTO	0834.0	0834.0	III		1	35	63	
			LEAR	0848.0	0850.0	III		2	29	157	
			SVTO	0848.0	0851.0	III		2	25	151	
			POTS	0848.1	0851.0	III	GG	2	40X	280	
			POTS	1026.2	1032.0	III	GG	2	40X	320	
			SVTO	1028.0	1031.0	III		2	25	81	
	2020	2400	CULG								
14	0000	0740	CULG								
	0413	1825	POTS								
	0522	1644	ONDR								
	0540	1715	BLEN								
	2020	2400	CULG								
15	0000	0740	CULG								
	0413	1828	POTS								
	0520	1645	ONDR								
	0540	1715	BLEN								
	2020	2400	CULG								
16	0000	0740	CULG								
	0410	1828	POTS								
	0518	1646	ONDR								
	2020	2400	CULG								
17	0000	0740	CULG								
	0410	1831	POTS								
	0516	1648	ONDR								
	0535	1715	BLEN								
	2020	2400	CULG								
18	0000	0740	CULG								
	0407	1831	POTS								
	0514	1649	ONDR								
	0535	1715	BLEN								
	2020	2400	CULG								
19	0000	0740	CULG								
	0404	1831	POTS								
	0512	1651	ONDR								
	0535	1720	BLEN								
	2020	2400	CULG								
20	0000	0740	CULG								
	0404	1834	POTS								
	0511	1652	ONDR								
	0535	1720	BLEN								
	2020	2400	CULG								
21	0000	0740	CULG								
	0401	1834	POTS								
	0509	1654	ONDR								
	0530	1720	BLEN								
	2020	2400	CULG								
22	0000	0740	CULG								
	0358	1837	POTS								

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

APRIL 2006

Day	OBSERVATION Start (UT)	End (UT)	Sta	EVENT Start (UT)	End (UT)	Spectral Class	Event Remarks	Int (1-3)	FREQUENCY Lower (MHz)	Upper (MHz)	Remarks
22	0507	1655	ONDR								
	0530	1720	BLEN								
	2020	2400	CULG								
23	0000	0740	CULG								
	0505	1656	ONDR								
	0530	1720	BLEN								
			SGMR	1407.0	1408.0	III		1	30	62	
			SVTO	1407.0	1408.0	III		2	25	81	
			SGMR	1652.0	1652.0	III		1	30	54	
			SVTO	1652.0	1652.0	III		1	37	58	
	0358	1837	POTS	1652.6	1652.9	III	B,U	2	40X	80U	
	2020	2400	CULG								
24	0000	0730	CULG								
	0503	1658	ONDR	0731.5	0732.0	DCIM	G	1	800X	2000X	
	0530	1720	BLEN	0731.9	0732.3	III		1	900	3300	
	0355	1837	POTS	1336	1400	I	S,N	1	260	360	
			SGMR	1745.0	1745.0	III		1	30	49	
	2030	2400	CULG								
25	0352	1840	POTS	0636	0704	DCIM		1	220	400X	
			SVTO	0638.0	0752.0	CONT		1	25	150	
	0502	1659	ONDR	0639.0	0700.2	DCIM	G	2	800X	2000X	
	0530	1720	BLEN	0639.0	0657.3	DCIM	C	2	140	4000X	
			ONDR	0640.0	0647.5	DCIM	G	1	2000X	4500X	
	0000	0730	CULG	0640.0	0715.0	III	S	1	35	100	
			LEAR	0646.0	0801.0	CONT		1	73	116	
			SVTO	0646.0	0752.0	CONT		1	25	150	
			POTS	0655	0728	UNCLF		1	40X	70U	
			POTS	1136	1151	I	S,N	1	270	360	
			POTS	1248	1303	I	S,N	1	220	350	
			POTS	1408.0	1408.9	DCIM		1	240	380	
	2030	2400	CULG	2136.0	2136.0	III	B	1	20	70	
26			LEAR	0025.0	0358.0	III	N	1	25	145	
	0000	0730	CULG	0026.0	0026.0	III	B	1	20	90	
			CULG	0107.0	0107.0	III	B	1	25	140	
			CULG	0131.0	0134.0	III	G	1	20	100	
			CULG	0230.0	0231.0	III	G	1	40	90	
			CULG	0409.0	0409.0	III	B	1	20	90	
			LEAR	0409.0	0409.0	III		1	25	156	
			LEAR	0448.0	0449.0	III		1	25	49	
			SVTO	0448.0	0449.0	III		1	25	54	
			CULG	0449.0	0449.0	III	B	1	20	40	
	0500	1700	ONDR								
			CULG	0507.0	0509.0	III	G	1	18	90	
			LEAR	0507.0	0508.0	III		1	25	100	
			SVTO	0507.0	0509.0	III		1	25U	83U	
	0352	1840	POTS	0507.1	0508.8	III	G	1	40X	70U	
			SVTO	0531.0	0540.0	III		1	25	76	
			CULG	0555.0	0603.0	III	G	1	20	140	
			SVTO	0555.0	0603.0	III		1	25	151	
			POTS	0555.1	0601.4	III	GG,N	2	40X	380	
	0525	1725	BLEN	0557.9	0558.5	III	G,RS	1	130X	500	
			SVTO	0730.0	0730.0	III		1	75	180	
			SVTO	0745.0	0807.0	III	N	2	25	180	
			POTS	0758.4	0800.4	III	GG	2	200U	400X	
			LEAR	0806.0	0807.0	III		1	25	160	
			POTS	0806.6	0807.6	III	G	2	40X	70U	
			POTS	0846.0	0846.5	III	G	2	40X	70U	
			POTS	1141.7	1146.2	I	S,N	1	210	350	
			SVTO	1211.0	1211.0	III		1	25	46	
			POTS	1345	1504 U	I	S,N	2	200U	380	
			SGMR	1656.0	1657.0	III		1	30	46	
			SVTO	1656.0	1657.0	III		1	25	53	
			POTS	1656.6	1657.2	III	G	2	40X	70U	
	2030	2400	CULG								

SOLAR RADIO EMISSION
Spectral Observations

APRIL 2006

Day	OBSERVATION Start (UT)	End (UT)	Sta	EVENT Start (UT)	End (UT)	Spectral Class	Event Remarks	Int (1-3)	FREQUENCY Lower (MHz)	Upper (MHz)	Remarks
27			LEAR	0406.0	0409.0	III		1	25	180	
			PALE	0406.0	0409.0	III		1	25	180	
	0000	0730	CULG	0406.0	0411.0	III	G	2	18	130	
	0349	1840	POTS	0407.0	0408.6	III	G	2	40X	270	
			SVTO	0539.0	1536.0	III	N	2	25U	162U	
			POTS	0744	0832	I	S,N	1	240	330	
			LEAR	0909.0	0909.0	III		1	52	180	
			POTS	1013	1456	I	S,N	2	200U	370	
			POTS	1527	1721 U	I	S,N	2	230	400X	
	0525	1725	BLEN	1545.1	1551.9	DCIM	P	2	1000	4000X	
	0458	1702	ONDR	1545.2	1550.0	DCIM	G	2	2498	4500X	
			PALE	1951.0	1953.0	III		1	25	159	
			SGMR	1951.0	1953.0	III		1	30	137	
	2030	2400	CULG								
28	0000	0730	CULG								
	0349	1843	POTS	0432 E	0554 U	I	S,N	1	200U	330	
	0457	1703	ONDR								
			POTS	0832 U	0917 U	I	S,N	1	210	320	
			POTS	0850.1	0851.4	III	G,RS	2	200U	370	
	0515	1730	BLEN	0850.1	0851.5	III	G,RS	1	130X	350	
			POTS	0924.4	0924.7	III	G	2	40X	270	
			SVTO	0953.0	0956.0	III		2	25	180	
			POTS	0953.5	0956.3	III	GG	2	40X	350	
			POTS	1017	1221 U	I	S,N	1	200U	330	
			POTS	1050.9	1051.0	III	B	1	40X	75U	
			SGMR	1219.0	1220.0	III		1	30U	72U	
			SVTO	1219.0	1220.0	III		2	25	166	
			POTS	1219.8	1220.2	III	G	2	40X	320	
			SGMR	1253.0	1254.0	III		1	30	180	
			POTS	1253.5	1254.6	III	G	2	40X	260	
			SGMR	1322.0	1407.0	III	N	1	30U	180U	
			POTS	1410 U	1535 U	I	S,N	1	200U	360	
			SGMR	1456.0	1534.0	III	N	1	30U	62U	
			POTS	1603	1723 U	I	S,N	1	200U	330	
			PALE	1720.0	1721.0	III		1	25	93	
			POTS	1720.9	1721.0	III	B	2	40X	80U	
			SGMR	1721.0	1721.0	III		1	30	74	
	2030	2400	CULG	2147.0	2147.0	III	B	1	30	160	
			CULG	2221.0	2221.0	III	G	1	20	90	
			CULG	2253.0	2302.0	III	G	1	23	120	
			LEAR	2257.0	0942.0	CONT		1	75	144	
			CULG	2328.0	2329.0	III	G	2	27	180	
			LEAR	2328.0	2329.0	III		2	28	180	
			PALE	2328.0	2329.0	III		1	25	180	
			CULG	2330.0	2344.0	III	GG	1	23	90	
			CULG	2338.0	2338.0	III	B	2	20	150	
			LEAR	2338.0	2338.0	III		2	25	141	
			PALE	2338.0	2338.0	III		1	25	90	
			CULG	2345.0	2400.0D	III	N	1	30	90	
29	0000	0730	CULG	0000.0E	0711.0	III	N	1	20	90	
			CULG	0038.0	0042.0	III	G	2	20	180	
			LEAR	0038.0	0038.0	III		2	25	180	
			PALE	0038.0	0038.0	III		1	25	180	
			LEAR	0040.0	0042.0	V		2	25	180	
			PALE	0040.0	0042.0	III		1	25	180	
			LEAR	0100.0	0100.0	III		1	25	73	
			PALE	0100.0	0100.0	III		1	25	72	
			LEAR	0124.0	0124.0	III		1	25	86	
			PALE	0124.0	0124.0	III		1	25	71	
			LEAR	0158.0	0158.0	III		2	25	161	
			PALE	0158.0	0158.0	III		1	25	167	
			LEAR	0306.0	0306.0	III		1	25	109	
			PALE	0306.0	0306.0	III		1	25	128	
			LEAR	0343.0	0346.0	V		1	25	180	
	0346	1843	POTS	0411 E	1621 U	I	S,N	2	200U	380	
			SVTO	0413.0	0909.0	CONT		1	40	180	
			LEAR	0427.0	0427.0	III		1	25	109	

SOLAR RADIO EMISSION
Spectral Observations

APRIL 2006

OBSERVATION Day	Start (UT)	End (UT)	Sta	EVENT Start (UT)	End (UT)	Spectral Class	Event Remarks	Int (1-3)	FREQUENCY Lower (MHz)	Upper (MHz)	Remarks
29			POTS	0427.0	0429.4	III	G,N	1	40X	230	
			SVTO	0427.0	0427.0	III		1	25	85	
			POTS	0435 U	0532	I	S,N	1	40X	70U	
			SVTO	0603.0	0611.0	III		2	25	147	
			POTS	0603.3	0611.2	III	G,N	2	40X	280	
			CULG	0611.0	0611.0	III	B	2	20	100	
			SVTO	0637.0	0641.0	III		1	25	73	
			SVTO	0705.0	0705.0	III		1	25	83	
			POTS	0705.6	0705.9	III	G	1	40X	70U	
			SVTO	0739.0	0748.0	III		2	25	74	
			POTS	0740	0929	I	S,N	2	40X	65	
			POTS	0746.8	0747.0	III	G,N	1	40X	65	
			LEAR	0808.0	0808.0	III		1	25	116	
			SVTO	0808.0	1600.0	III	N	3	25	180	
			POTS	0815.1	0818.0	III	G	1	40X	320	
			LEAR	0817.0	0817.0	III		2	25	115	
			LEAR	0919.0	0921.0	V		2	25	180	
			POTS	0919.1	0923.9	III	GG	3	40X	350	
			POTS	1005	1034	III	GG,N	1	40X	65	
			POTS	1010	1614	I	S,N	1	40X	75U	
			POTS	1149.8	1150.5	III	G	2	40X	260	
			SVTO	1157.0	1720.0	CONT		1	37	180	
			POTS	1209.6	1210.0	III	G	2	40X	250	
			SGMR	1250.0	2118.0	III	N	1	30	180	
			POTS	1250.6	1257.4	III	GG,N	2	40X	300	
			SVTO	1618.0	1626.0	III		2	25	180	
			POTS	1618.2	1625.1	III	G,N	2	40X	250U	
	0515	1730	BLEN	1618.6	1718.5	DCIM	F,P	3	130X	4000X	
			POTS	1621	1656 U	IV	FS	2	200U	400X	
			SVTO	1643.0	1643.0	III		1	25	152	
			POTS	1643.2	1702.9	III	G,N	2	40X	70U	
			POTS	1656 U	1739 U	I	S,N	2	200U	400X	
			PALE	1702.0	1702.0	III		1	25	180	
			SVTO	1702.0	1703.0	III		1	25	164	
			POTS	1707	1724	I	DC,N	2	50	70U	
			PALE	1728.0	1730.0	III		1	25	180	
			POTS	1728.2	1732.7	III	GG	2	40X	240	
			POTS	1815.6	1816.1	III	G,RS	1	40X	70U	
	2030	2400	CULG	2030.0E	2400.0D	III	S,C	1	20	150	
			PALE	2038.0	2040.0	III		2	25	180	
			CULG	2039.0	2040.0	III	G	2	20	150	
			LEAR	2311.0	2311.0	III		1	25	176	
			PALE	2311.0	2312.0	III		1	25	147	
			SGMR	2311.0	2312.0	III		1	30	142	
			CULG	2312.0	2313.0	III	B	2	20	160	
30	0000	0730	CULG	0000.0E	0730.0D	III	S,C	1	20	150	
			LEAR	0019.0	0019.0	III		1	25	107	
			LEAR	0051.0	0051.0	III		1	25	126	
			CULG	0138.0	0149.0	II	SH	1	45	260	ESS 750
			CULG	0139.0	0146.0	II	FN	2	30	110	
			LEAR	0139.0	0144.0	II		2	40	180	ESS 0733
			PALE	0139.0	0205.0	II		1	29	180	ESS 0657
			CULG	0149.0	0151.0	II	FN	1	27	35	
			CULG	0149.0	0151.0	II	SH	1	57	75	
			CULG	0153.0	0153.0	III	B	3	20	130	
			LEAR	0156.0	0200.0	II		2	52	180	ESS 0504
			CULG	0157.0	0157.0	III	B	3	18	180	
			LEAR	0200.0	0200.0	II		2	52	180	ESS 0504
			CULG	0204.0	0207.0	II	UE	1	57	90	
			LEAR	0252.0	0252.0	III		1	25	111	
			LEAR	0300.0	0303.0	III		2	25	180	
			LEAR	0325.0	0328.0	III		2	25	180	
			PALE	0325.0	0328.0	III		1	25	167	
	0343	1843	POTS	0413 E	0525	I	S,N	2	200U	330	
			LEAR	0501.0	0501.0	III		1	25	164	
			SVTO	0501.0	0502.0	III		1	25	151	
			POTS	0501.7	0502.0	III	G	2	40X	240	
			SVTO	0552.0	0552.0	III		1	25	56	

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

APRIL 2006

OBSERVATION Day	Start (UT)	End (UT)	Sta	EVENT Start (UT)	End (UT)	Spectral Class	Event Remarks	Int (1-3)	FREQUENCY Lower (MHz)	Upper (MHz)	Remarks
30			SVTO	0555.0	0825.0	CONT		1	25	149	
			POTS	0614	0741 U	I	S,N	1	230	390	
			SVTO	0619.0	0626.0	III		2	25	73	
			POTS	0626.0	0626.2	III	B	2	40X	65U	
			LEAR	0813.0	0813.0	III		1	25	180	
			SVTO	0813.0	0814.0	III		2	25	160	
			POTS	0813.4	0814.5	III	G	2	40X	240	
			SVTO	0828.0	0832.0	III		3	25	180	
			POTS	0828.5	0832.2	III	GG	3	40X	330	
			LEAR	0829.0	0831.0	III	N	2	25	180	
	0515	1730	BLEN	0830.0	0831.5	III	GG,S	2	100X	1500	
			SVTO	0854.0	0854.0	III		1	25	145	
			POTS	0854.2	0854.8	III	G	2	40X	270	
			SVTO	0903.0	0903.0	III		1	25	37	
			POTS	0916	0933	IV		2	40X	400	
			SVTO	0916.0	0923.0	III		2	25	148	
			POTS	0919	0939	II	F,SH	2	40X	270	
			SVTO	0921.0	0927.0	II		2	25	180	ESS 0822
			LEAR	0923.0	0923.0	II		1	25	180	ESS 0724
			POTS	1027.2	1032.0	I	S,N	2	210	360	
			SVTO	1057.0	1409.0	III	N	2	25	180	
			POTS	1107	1125	I	S,N	1	260	400	
			POTS	1116.3	1123.9	III	GG	2	40X	370	
			SGMR	1117.0	1124.0	III	N	1	30	167	
			POTS	1204.4	1204.6	III	B	1	40X	70U	
			POTS	1236.4	1239.0	III	G	2	40X	230	
			POTS	1345.6	1345.8	III	B	1	40X	70U	
			POTS	1422	1454	I	S,N	1	230	370	
			POTS	1453.0	1457.4	III	G,N	2	40X	290	
			SGMR	1453.0	1457.0	III		1	30	54	
			SVTO	1453.0	1457.0	III		1	25	130	
			SGMR	1507.0	1507.0	III		1	30	142	
			SVTO	1507.0	1508.0	III		1	25	143	
			POTS	1507.4	1507.9	III	G	1	40X	240	
			SGMR	1528.0	1532.0	III		1	30	57	
			SVTO	1528.0	1532.0	III		1	25	118	
			POTS	1529.1	1532.4	III	G	2	40X	240	
			POTS	1605.4	1607.1	III	G,N	1	200U	340	
			SGMR	1615.0	1617.0	III		1	30	67	
			SVTO	1615.0	1616.0	III		1	25	130	
			POTS	1615.5	1616.1	III	G	1	40X	70U	
			POTS	1633	1720 U	I	S,N	1	200U	300	
			POTS	1640.1	1641.0	III	G	1	40X	70U	
			PALE	1927.0	1927.0	III		1	25	75	
			SGMR	1927.0	1927.0	III		1	30	61	
			PALE	2105.0	2106.0	III		1	25	180	
			SGMR	2106.0	2106.0	III		1	46	180	
	2030	2400	CULG	2106.0	2107.0	III	G	1	20	160	
			CULG	2112.0	2112.0	III	B	1	25	90	
			PALE	2112.0	2112.0	III		1	25	60	
			SGMR	2112.0	2112.0	III		1	30	60	
			PALE	2221.0	2222.0	III		1	25	125	
			SGMR	2221.0	2222.0	III		1	30	180	
			CULG	2222.0	2222.0	III	G	1	20	100	
			PALE	2252.0	2254.0	III		1	25	165	
			CULG	2253.0	2254.0	III	G	2	18	150	
			CULG	2300.0	2301.0	III	G	2	18	150	
			LEAR	2300.0	2300.0	III		1	28	168	
			CULG	2325.0	2327.0	III	G	1	30	160	
			CULG	2354.0	2355.0	III	G	1	20	150	

SOLAR RADIO NOISE STORM AT 164 MHZ

FROM NANÇAY RADIOHELIOGRAPH

APRIL 2006

	HELIOGRAPHICS POSITIONS MEAN VALUES[1]		IMP[2]	OBSERVING TIME[3]	
	E-W	S-N		START(UT)	END(UT)
01/04/06	+0.06	-0.27	I	8H24 E	15H25 D
02/04/06	-0.43	+0.05	I	8H23 E	15H24 D
02/04/06	+0.37	-0.12	I	8H23 E	13H25
02/04/06	+0.25	+0.08	I	13H25	15H24 D
03/04/06	-0.09	-0.21	II	8H23 E	14H22
03/04/06	-0.42	+0.06	II	13H42	15H24 D
03/04/06	+0.57	-0.21	II	8H23 E	15H24 D
04/04/06	+0.34	-0.25	II	8H23 E	15H24 D
04/04/06	+0.76	+0.00	I	8H23 E	15H24 D
04/04/06	+0.85	-0.38	I	8H23 E	15H24 D
05/04/06	-0.08	+0.04	I	8H22 E	13H48
05/04/06	+0.57	+0.00	II	8H22 E	15H23 D
05/04/06	+0.96	-0.11	II	8H22 E	15H23 D
06/04/06	+0.64	+0.08	I	8H09 E	15H24 D
06/04/06	+1.06	-0.26	II	8H09 E	15H24 D
06/04/06	+1.08	+0.04	II	8H09 E	15H24 D
07/04/06	+1.22	+0.15	I	8H36 E	15H23 D
07/04/06	+1.18	-0.22	II	8H36 E	15H23 D
08/04/06	+1.31	-0.08	I	8H32 E	15H23 D
10/04/06	+0.25	-0.14	I	8H31 E	15H22 D
10/04/06	+0.63	-0.00	I	8H31 E	15H22 D
11/04/06	+0.55	-0.24	1	8H40 E	15H22 D
12/04/06	+0.86	+0.10	I	8H21 E	10H20
27/04/06	-0.96	-0.33	I	8H17 E	15H18 D
28/04/06	-1.04	-0.33	I	8H34 E	15H19 D
28/04/06	-0.29	+0.10	I	8H34 E	15H19 D
29/04/06	+0.03	-0.10	III	8H17 E	15H18 D
30/04/06	+0.37	-0.12	II	8H17 E	15H18 D

[1] POSITIVE E-W AND S-N COORDINATES CORRESPOND TO THE N-W QUADRANT
[2] IMP1: FLUX< 5 SFU IMP2: 5< FLUX < 20 SFU IMP3: 20< FLUX <100 SFU
IMP4: 100< FLUX <300 SFU IMP5> 300 SFU
[3] E NOISE STORM IN PROGRESS AT THE BEGINNING OF THE NANÇAY OBSERVATIONS
D NOISE STORM IN PROGRESS AT THE END OF THE NANCAY OBSERVATIONS

SOLAR RADIO NOISE STORM AT 327 MHZ
FROM NANÇAY RADIOHELIOGRAPH
APRIL 2006

	HELIOGRAPHICS POSITIONS MEAN VALUES[1]		IMP[2]	OBSERVING TIME[3]	
DAY	E-W	S-N		START(UT)	END(UT)
01/04/06	-0.67	-0.05	I	8H24 E	15H25 D
01/04/06	-0.32	-0.13	I	8H24 E	15H25 D
01/04/06	-0.04	+0.02	I	8H24 E	15H25 D
02/04/06	-0.44	+0.05	II	8H23 E	15H24 D
02/04/06	+0.17	-0.10	II	8H23 E	15H24 D
03/04/06	-0.23	+0.08	II	8H23 E	15H24 D
03/04/06	-0.05	-0.21	II	8H23 E	15H24 D
03/04/06	+0.39	+0.00	II	8H23 E	15H24 D
03/04/06	+0.43	-0.19	II	12H25	15H24 E
04/04/06	+0.02	+0.07	I	8H23 E	15H24 D
04/04/06	+0.25	-0.31	I	11H50	15H24 E
04/04/06	+0.36	-0.02	I	8H23 E	15H24 D
04/04/06	+0.62	-0.27	I	11H02	13H25
04/04/06	+0.68	+0.00	I	8H23 E	15H24 D
05/04/06	-0.07	+0.02	I	8H22 E	15H23 D
05/04/06	+0.35	+0.10	I	8H22 E	13H00
05/04/06	+0.50	-0.21	I	8H22 E	15H23 D
05/04/06	+0.58	-0.05	I	8H22 E	15H23 D
05/04/06	+0.82	-0.15	II	8H22 E	15H23 D
06/04/06	-0.50	-0.05	I	8H09 E	15H24 D
06/04/06	+0.70	+0.20	I	8H09 E	15H24 D
06/04/06	+0.99	+0.05	I	8H09 E	15H24 D
06/04/06	+0.67	-0.29	I	8H09 E	15H24 D
06/04/06	+1.03	-0.17	II	8H09 E	15H24 D
07/04/06	+1.05	+0.06	I	8H36 E	15H23 D
07/04/06	+1.14	-0.19	II	8H36 E	15H23 D
08/04/06	+1.19	-0.13	I	8H32 E	15H23 D
10/04/06	+0.30	-0.16	I	8H31 E	15H22 D
10/04/06	+0.53	+0.03	I	8H31 E	15H22 D
27/04/06	-0.98	-0.31	I	8H17 E	15H18 D
28/04/06	-0.79	-0.28	I	8H34 E	15H19 D
28/04/06	-0.12	-0.28	I	8H34 E	15H19 D
29/04/06	+0.07	-0.13	II	8H17 E	15H18 D
30/04/06	+0.29	-0.14	I	8H17 E	15H18 D

09 April : NO DATA

OTHERS DAYS: NO DETECTABLE NOISE STORM

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

** Following a large burst

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

**** no flux measurements available

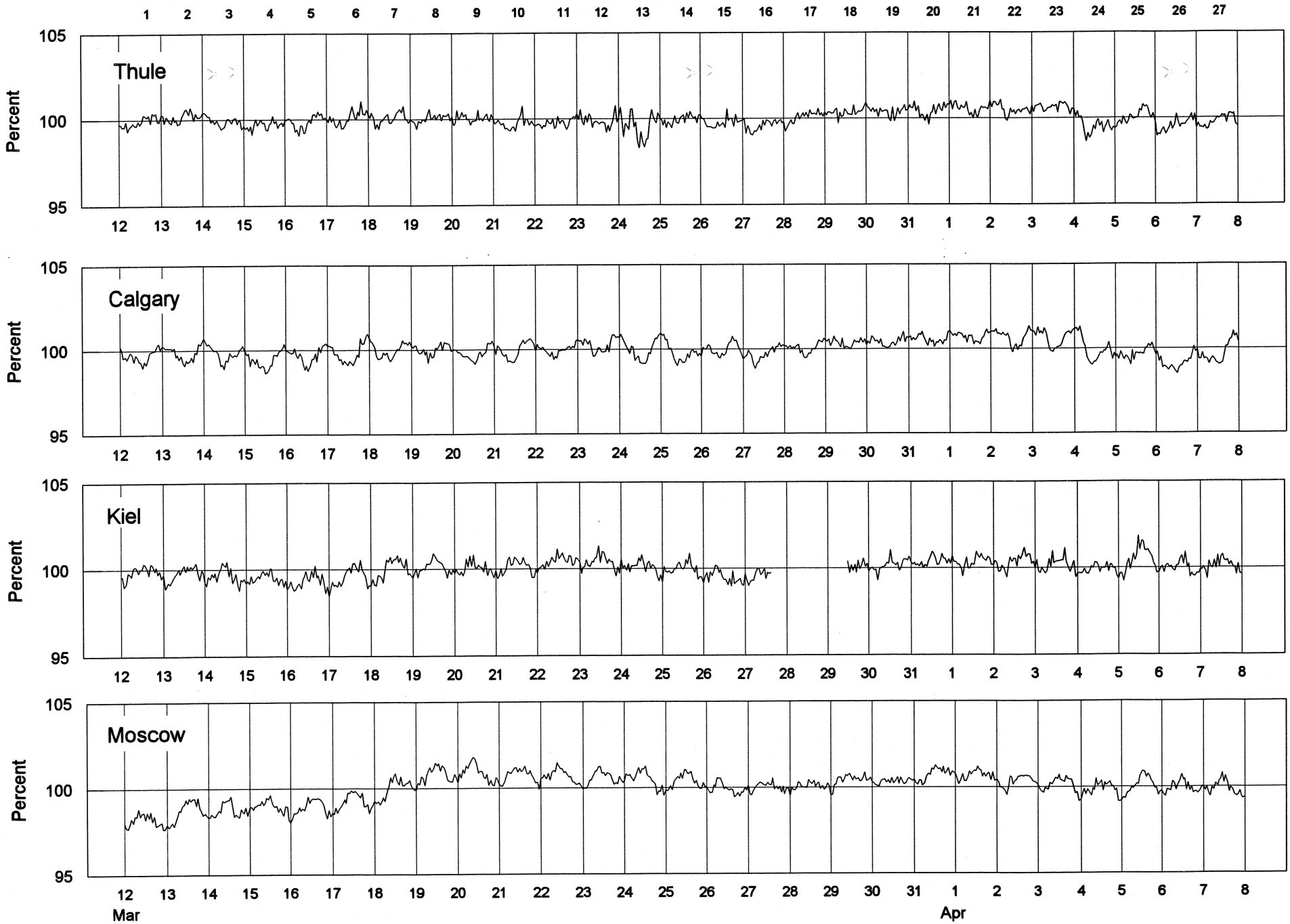
COSMIC RAY INDICES
(Neutron Monitor)
April 2006

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	4495.8	3929.2	6219.3	9368.9	4240.5	2070.1	3566.5
2	4493.7	3927.5	6217.9	9333.9	4226.4	2062.9	3581.9
3	4500.1	3925.3	6208.5	9315.8	4220.0	2053.4	3583.7
4	4452.0	3899.3	6192.4	9291.8	4217.4	2054.2	3586.2
5	4473.9	3888.8	6225.8	9311.2	4251.0	2068.4	3607.6
6	4453.0	3868.7	6197.0	9299.1	4259.8	2073.9	3600.3
7	4462.2	3889.2	6204.7	9296.3	4235.1	2072.6	3603.5
8	4461.2	3888.7	6208.9	9273.3	4208.0	2065.8	3605.1
9	4456.2	3866.0	6219.8	9287.0	4231.3	2069.0	3605.0
10	4455.1	3872.5	6205.0	9251.9	4223.7	2061.3	3603.0
11	4484.0	3892.5	6221.2	9300.5	4230.5	2065.3	3601.0
12	4500.0	3911.0	6234.1	9347.5	4221.1	2075.8	3614.9
13	4483.7	3895.3	6208.2	9319.6	4201.1	2069.9	3605.0
14	4446.2	3843.8	6181.7	9304.0	4180.2	2063.0	3594.8
15	4460.6	3860.3	6178.4	9320.7	4204.5	2063.1	3593.5
16	4467.6	3881.0	6192.0	9330.7	4207.4	2061.8	3587.5
17	4468.7	3891.7	6184.2	9303.5	4210.4	2057.5	3594.2
18	4472.2	3892.0	6198.2	9282.7	4228.1	2061.4	3604.5
19	4469.7	3898.8	6193.5	9278.4	4225.4	2066.5	3609.2
20	4475.8	3900.8	6205.0	9297.5	4225.2	2059.4	3609.8
21	4481.4	3903.3	6196.2	9301.9	4222.5	2058.1	3600.5
22	4466.9	3881.5	6175.0	9291.2	4205.3	2052.2	3595.0
23	4458.7	3883.7	6170.7	9281.1	4194.5	2050.3	3597.8
24	4474.6	3896.0	6187.5	9298.5	4218.0	2054.0	3603.5
25	4487.8	3912.7	6196.6	9290.9	4222.3	2053.5(2)	3603.0
26	4501.7	3922.0	6205.7	9312.0	4236.2	2055.6(22)	3612.8
27	4498.0	3923.8	6220.3	9323.3	4241.2	2054.8	3614.0
28	4464.4	3893.0	6201.6(8)	9260.7	4225.0	2048.0	3609.1
29	4466.4	3886.7	---	9305.4	4208.1	2038.2	3602.1
30	4470.2	3900.5	---	9317.0	4220.9	2027.9	3603.2
Mean	4473.0	3894.2	6201.8	9303.2	4221.3	2059.6	3600.0

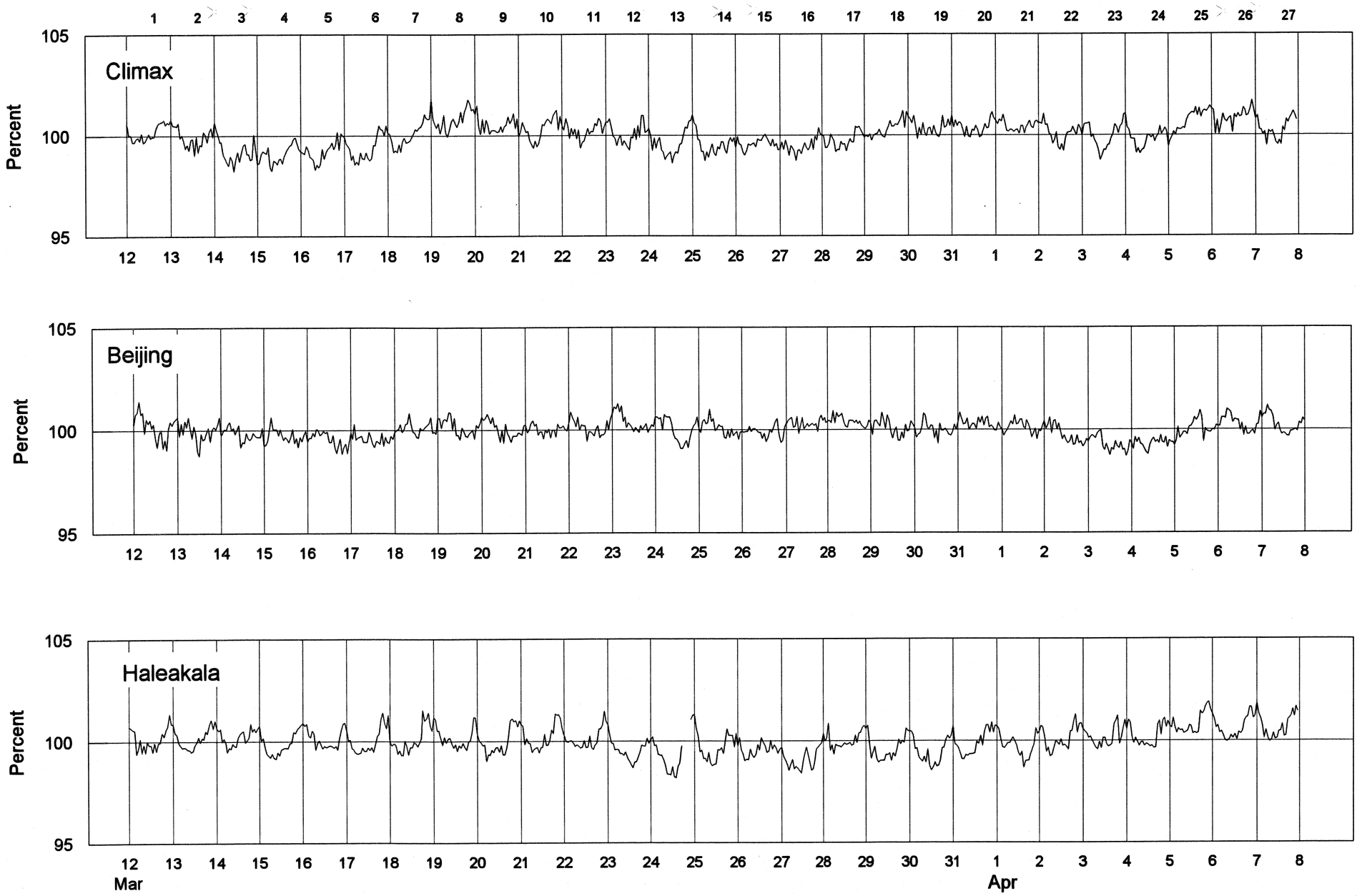
For less than 24-hour coverage, parentheses enclose the number of hours for which data are available. For Climax, parentheses enclose the number of section hours whenever the sum of both sections falls below 40 hours, and for Haleakala, whenever the sum of all three sections falls below 60 hours.

COSMIC RAY INDICES
(Neutron Monitor)

Bartels Rotation 2356 - Beginning 12 Mar 2006

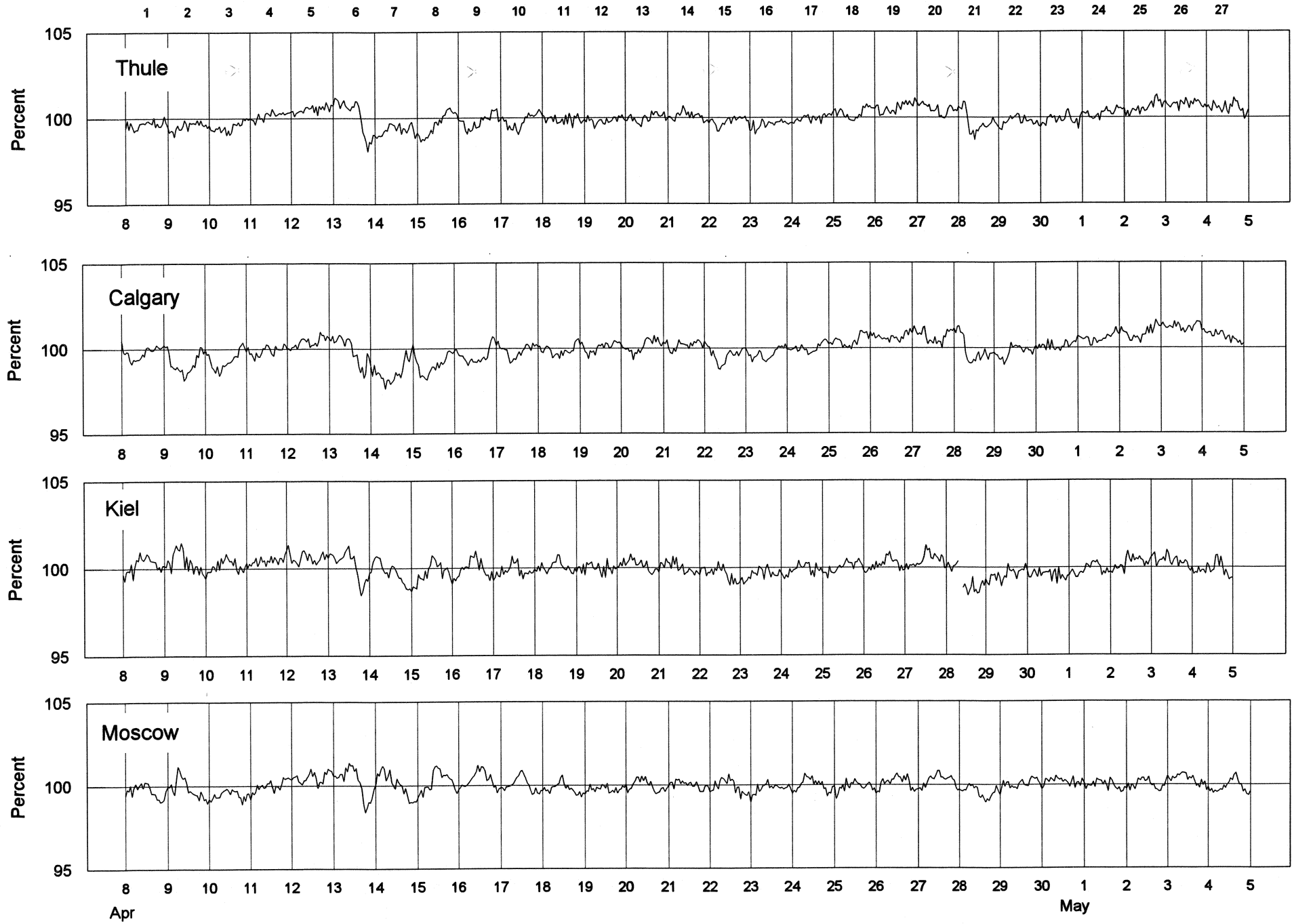


COSMIC RAY INDICES
(Neutron Monitor)
Bartels Rotation 2356 - Beginning 12 Mar 2006

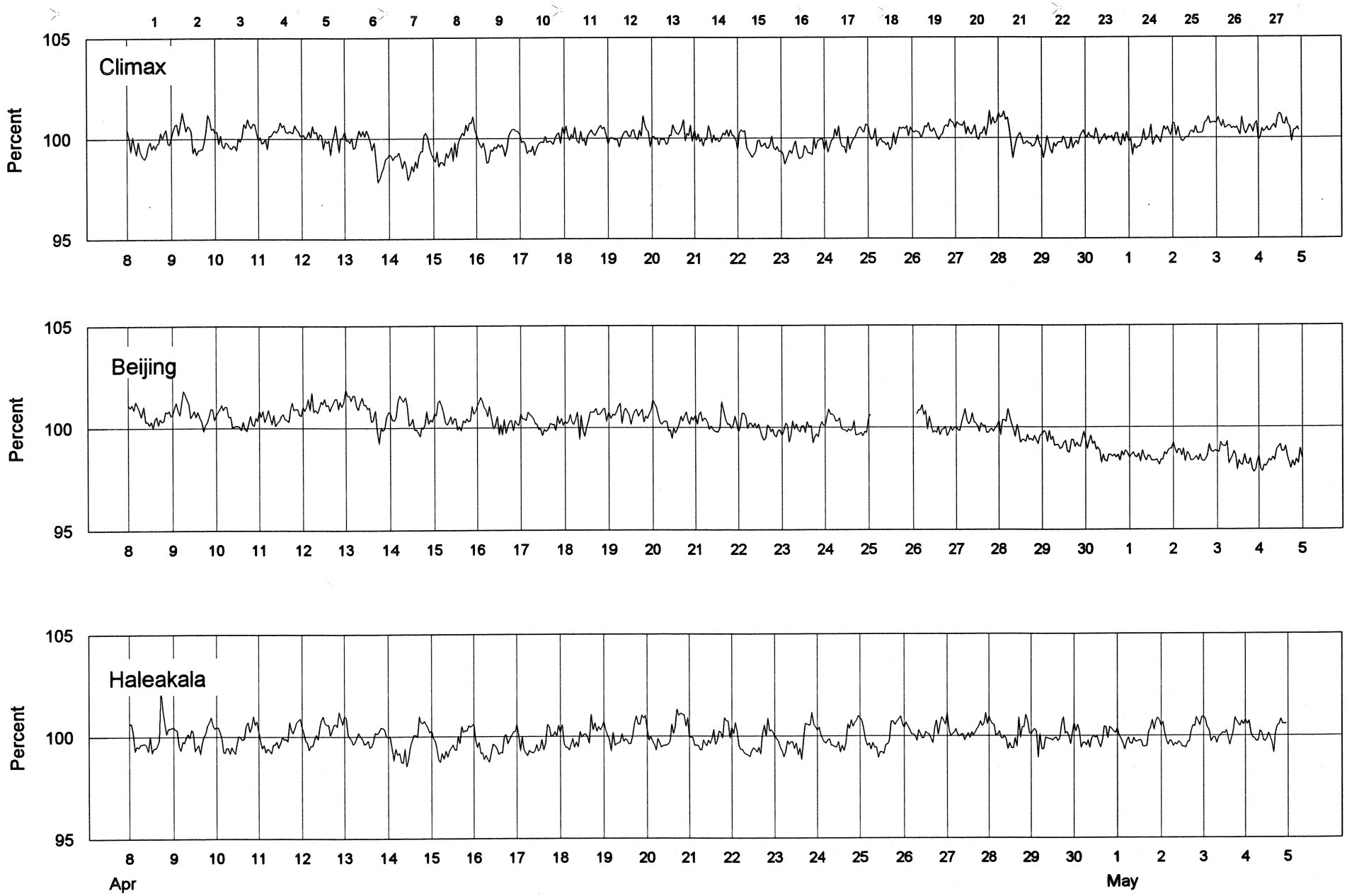


COSMIC RAY INDICES
(Neutron Monitor)

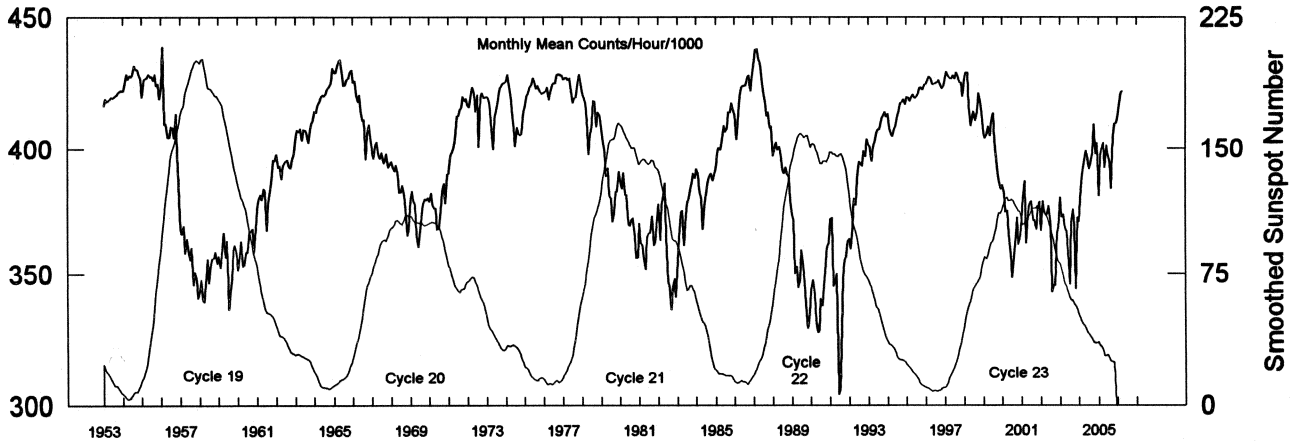
Bartels Rotation 2357 - Beginning 8 Apr 2006



COSMIC RAY INDICES
(Neutron Monitor)
Bartels Rotation 2357 - Beginning 8 Apr 2006



Climax Neutron Monitor Pressure-Corrected Values
Jan 1953 - Apr 2006



Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Mean
1953	4165	4193	4182	4188	4190	4200	4197	4205	4208	4216	4225	4226	4200
1954	4225	4247	4285	4269	4280	4277	4284	4318	4308	4303	4286	4269	4279
1955	4200	4267	4272	4273	4287	4278	4279	4263	4286	4245	4252	4193	4258
1956	4234	4388	4097	4097	4049	4045	4088	4083	4044	4134	3980	3799	4087
1957	3677	3660	3695	3585	3640	3603	3557	3606	3458	3509	3484	3410	3574
1958	3435	3479	3400	3396	3490	3560	3467	3537	3561	3564	3589	3542	3502
1959	3573	3526	3606	3664	3567	3633	3367	3420	3484	3597	3615	3587	3553
1960	3516	3573	3631	3532	3534	3589	3587	3670	3670	3682	3586	3681	3604
1961	3761	3801	3819	3800	3843	3838	3675	3784	3834	3870	3955	3950	3828
1962	3977	3922	3931	3878	3927	3940	3950	3954	3924	3919	3963	3971	3938
1963	4049	4073	4065	4077	4033	4075	4072	4060	4024	4066	4094	4111	4067
1964	4144	4139	4168	4181	4198	4208	4202	4213	4232	4240	4254	4307	4207
1965	4294	4290	4314	4335	4340	4288	4247	4246	4267	4271	4294	4300	4291
1966	4258	4262	4211	4180	4207	4146	4108	4112	3956	4055	4091	4053	4137
1967	3991	3960	4014	4025	3974	3960	3985	3939	3955	3980	3922	3933	3970
1968	3946	3925	3909	3932	3895	3830	3830	3853	3817	3761	3652	3685	3836
1969	3801	3831	3798	3782	3656	3609	3652	3730	3781	3803	3798	3807	3754
1970	3792	3824	3781	3765	3765	3679	3684	3755	3832	3862	3786	3895	3785
1971	3898	3975	3981	4003	4032	4124	4124	4152	4156	4200	4184	4192	4085
1972	4162	4157	4209	4237	4215	4141	4207	4005	4198	4214	4198	4198	4178
1973	4200	4193	4173	4075	3997	4119	4150	4180	4235	4240	4255	4253	4173
1974	4261	4283	4237	4207	4121	4077	4009	4083	4061	4054	4058	4140	4133
1975	4155	4206	4210	4239	4244	4271	4262	4231	4243	4231	4218	4213	4227
1976	4216	4223	4236	4188	4218	4244	4254	4253	4283	4287	4285	4280	4247
1977	4268	4272	4274	4267	4272	4231	4175	4193	4197	4245	4284	4260	4245
1978	4213	4198	4173	4107	3976	4058	4068	4183	4180	4085	4139	4128	4126
1979	4071	4034	3983	3888	3920	3814	3806	3710	3745	3829	3829	3905	3878
1980	3873	3842	3900	3819	3817	3697	3692	3719	3723	3647	3564	3564	3738
1981	3703	3623	3616	3561	3518	3643	3663	3662	3732	3613	3624	3726	3640
1982	3780	3634	3778	3819	3860	3650	3463	3456	3364	3444	3482	3413	3595
1983	3550	3643	3744	3753	3613	3700	3789	3798	3845	3860	3897	3881	3756
1984	3915	3896	3830	3806	3677	3773	3813	3865	3891	3897	3871	3890	3844
1985	3919	3985	4002	3995	4026	4088	4066	4075	4139	4139	4174	4141	4062
1986	4128	4036	4098	4199	4232	4242	4243	4244	4277	4280	4221	4277	4206
1987	4331	4376	4378	4346	4323	4254	4216	4170	4123	4139	4080	4084	4235
1988	3970	3997	4024	3995	4005	3981	3906	3899	3923	3893	3886	3798	3940
1989	3731	3717	3500	3527	3446	3478	3594	3535	3467	3347	3291	3349	3499
1990	3432	3476	3424	3317	3275	3283	3406	3377	3450	3540	3608	3620	3434
1991	3719	3725	3451	3470	3501	3041	3062	3293	3482	3550	3570	3628	3458
1992	3639	3600	3684	3803	3776	3876	3945	3939	3928	3989	3966	4036	3848
1993	4011	4007	3947	4003	4028	4061	4075	4076	4113	4122	4138	4122	4059
1994	4130	4079	4058	4048	4076	4085	4117	4140	4173	4179	4187	4168	4120
1995	4198	4194	4180	4199	4208	4193	4198	4209	4235	4236	4228	4246	4210
1996	4249	4266	4276	4269	4252	4250	4254	4256	4264	4243	4231	4242	4254
1997	4273	4293	4278	4274	4268	4281	4268	4290	4278	4260	4255	4199	4268
1998	4270	4290	4291	4160	4087	4116	4142	4107	4141	4212	4175	4133	4177
1999	4056	4040	4057	4083	4050	4106	4133	4031	3953	3899	3870	3840	4010
2000	3855	3822	3748	3752	3656	3583	3485	3562	3617	3725	3615	3651	3673
2001	3713	3812	3869	3622	3734	3779	3791	3713	3713	3675	3761	3787	3747
2002	3670	3790	3745	3733	3739	3771	3702	3429	3456	3454	3659	3680	3652
2003	3804	3727	3736	3685	3664	3580	3459	3706	3756	3685	3442	3725	3664
2004	3707	3835	3893	3944	3988	3964	3914	3935	3982	4091	3976	4020	3937
2005	3813	3963	3993	4020	3919	4011	3972	3949	3842	4044	4094	4096	3976
2006	4122	4177	4215	4221									4184

Multiply table entries by 100 to obtain hourly counting rate. Climax, Colorado: N39, W106, Alt=3400 m, Cutoff Rigidity=2.99GV (1980).

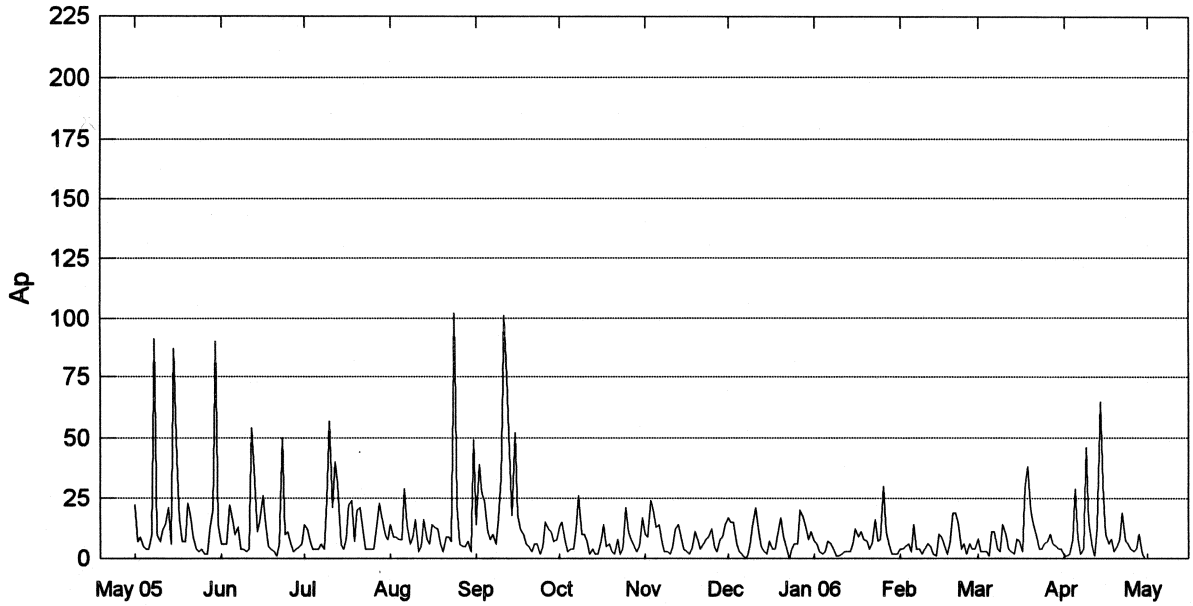
Geomagnetic Activity Indices

April 2006

Day		Kp Three-Hourly Indices 1	2	3	4	5	6	7	8	Sum	Ap	Cp	Km Three-Hourly Indices 1	2	3	4	5	6	7	8	aa Provisional Am	N	S	M	
1	Q3	0	0	0	0+	1-	0+	0	0	1+	1	0.0	0o	0+	0+	0+	0+	1-	0o	0o	2	3	4	2	4 CC
2	Q5	0	0	0	0+	1	0	0+	0+	2	1	0.0	0o	0o	0+	0o	1-	0o	0o	1-	2	4	2	2	4 CC
3	Q4	0	0	0	0+	0+	1-	0+	1-	2+	2	0.0	0o	0o	0+	0+	0+	1-	0+	1o	3	4	3	2	4 CC
4		0+	0+	2-	2	2-	2+	3-	3+	14+	8	0.4	1-	1-	2o	2+	2-	3-	3o	3+	18	23	17	11	30
5	D4	4-	5-	4	4	5+	5-	3+	2	32-	29	1.3	3o	3o	3o	4o	6-	4-	4o	2-	48	46	50	43	53
6		1+	3-	4-	1+	2-	1	1+	2-	15-	8	0.4	1o	2+	3+	2o	2+	1o	1+	1+	15	15	21	22	14
7	Q7	1-	0+	1	1-	1-	0+	0	1-	4+	2	0.0	1-	0+	1o	1-	1o	0+	0o	1o	4	3	6	4	5 CC
8		1+	0	0+	2-	1	1	1	2-	8	4	0.1	1o	0o	1-	2-	2-	1o	1o	2-	8	9	8	8	9 C
9	D2	4+	5	6	4+	4+	4-	5-	6	38+	46	1.5	4-	4o	5o	4-	4o	3o	4o	4+	55	74	55	58	72
10		3+	4	4-	2	3	3-	3-	2-	23	15	0.8	3o	4-	3+	3-	2+	3-	2+	2-	25	28	27	32	23
11		2	2+	1-	1	1	1-	0+	2-	10-	5	0.2	2-	2o	1+	1+	1+	1o	0o	1+	9	10	9	11	9 CK
12	Q2	0	0+	0	0	0+	0+	0+	0	1+	1	0.0	0+	0+	0o	0+	0o	0+	0+	0o	2	3	3	3	3 CK
13		1+	2	2	3	4	4-	2-	3	21-	13	0.7	1o	2o	2+	3o	4-	3o	2-	3o	24	28	26	19	35
14	D1	4+	6	7-	7	5	5+	4	4+	43-	65	1.7	4-	5o	6-	6-	4o	5o	4-	4o	85	69	124	109	84
15	D3	4-	4	5-	4+	4	5	4+	4-	34-	31	1.3	3o	3+	4o	4+	4-	5-	4o	3+	48	56	47	49	54
16		4-	3	2+	2	2	2+	2-	2-	19-	10	0.6	3o	3-	2o	3-	3-	2+	2-	1+	19	21	20	25	16
17		2	1	1	1-	0+	1-	1+	3+	10+	6	0.3	2-	1o	1o	1o	0+	1o	1+	3-	9	10	8	8	11 CK
18		4	3	1	1-	0+	1-	1	1+	12	8	0.4	3o	2+	1o	1o	0+	1+	1+	2-	11	18	7	19	7 KK
19	Q8	2-	0	1-	1-	0+	0+	0+	1-	5-	3	0.0	1+	0o	1-	1-	0+	1-	0+	0+	4	6	3	5	4 CC
20		0	1	1-	2+	3	1+	1-	0	9	5	0.2	0o	1o	1o	2+	3-	1+	1-	0o	9	15	10	9	16 KK
21		1	1+	1	1	2	4	1+	1+	13	8	0.4	0+	1o	1o	1+	2o	3+	1+	1+	12	16	11	7	20 K
22	D5*	4+	4+	3+	5-	3+	2	1	1-	24-	19	1.0	4-	4-	3+	4o	3-	2-	1o	1-	29	38	27	45	20
23		1	3	3	1+	1-	1+	0+	2	13-	7	0.4	1o	2+	3o	1+	1-	1+	0o	2-	11	16	10	17	9 K
24		3-	2	2-	2-	1-	0+	0+	2	11+	6	0.3	2+	2-	2-	2o	1-	0o	0o	2-	9	13	7	13	7 CC
25		3-	1-	0+	0+	1	1+	1-	0	7	4	0.1	2o	1o	0+	1-	2-	1o	0+	0o	6	10	6	8	8 CC
26	Q9	2-	2-	1-	0+	0+	1-	0+	0	6-	3	0.1	1+	1+	1o	1-	0+	0+	0+	0o	5	7	3	7	4 CC
27	Q10	1	1+	1	1-	1+	1+	1-	1	8+	4	0.1	1o	1o	1+	1-	1+	1+	1+	1o	8	8	7	7	9 CK
28		3	3-	4-	3	2-	1-	1-	1+	17-	10	0.6	2+	2+	4-	3o	2o	1-	1o	1+	18	19	19	30	9 K
29	Q6	1-	0+	0+	1-	0+	0+	0+	1-	4-	2	0.0	1-	0+	0o	1-	0o	0+	0o	1-	3	6	2	4	4 CC
30	Q1	0	0	0	0	0	0	0	0	0	0	0.0	0+	0o	0o	0o	0o	0o	0o	0o	1	2	3	3	2 CC
Mean											11	0.43									16.7	19.5	18.3	18.8	

Day	Kn Three-Hourly Indices 1	2	3	4	5	6	7	8	An	Ks Three-Hourly Indices 1	2	3	4	5	6	7	8	As	Sa	Prov Ri	Ra	Rs	IMF
1	0o	0o	0+	0+	1-	1o	0o	0o	2	0+	1-	0+	0+	0+	0+	0o	0+	2	86.9	35	38	32	
2	0o	0o	0o	0o	1+	0o	0+	1o	3	0+	0o	0+	0o	0o	0o	0o	0+	1	91.1	39	43	36	
3	0o	0o	0o	0+	1-	1o	1-	1o	3	0o	0+	0+	1-	0o	0o	0o	1-	2	100.4	44	49	46	
4	0+	0+	2-	3-	2o	3o	3o	3+	19	1o	1+	2o	2+	1+	2+	3-	3+	17	99.6	49	56	46	
5	3o	3+	3+	5-	6-	4-	4o	2o	53	3-	3-	3-	4-	5+	4-	4o	2-	42	99.1	50	56	45	
6	1+	2+	4-	2o	3-	1+	2-	2-	17	1o	2o	3o	2-	2o	1o	1+	1o	13	99.1	54	58	45	
7	1-	0o	1+	0+	1o	1-	0o	1o	4	1-	0+	1-	1-	1-	0+	0o	1o	4	94.7	46	50	40	
8	1o	0o	0+	2o	2-	1o	1+	2o	8	1-	0o	1o	2-	2-	1o	1o	1o	7	91.3	41	41	37	
9	4-	4o	5o	4o	4o	3o	4+	5-	62	4-	4-	5-	3+	4o	3o	4-	4o	48	89.5	33	35	35	
10	3+	4-	4-	3-	3-	3-	2+	2-	29	3-	3o	3o	2+	2o	3-	2+	2-	22	89.1	36	42	34	
11	2-	3-	1+	1+	1+	1+	0+	2-	10	2-	1+	1+	1o	1o	0+	0o	1+	7	90.1	38	43	35	
12	0o	0+	0o	0+	0+	1-	1-	0+	3	0+	1-	0o	0o	0o	0o	0o	0o	1	81.6	41	44	26	
13	1o	2o	3-	3+	4-	3+	2+	3o	27	1o	2o	2o	3-	4-	3-	1+	3-	21	80.5	40	43	25	
14	4-	5o	6-	6o	4+	5-	4-	4-	84	3+	5o	6-	6-	4o	5+	4o	4+	86	79.4	36	32	24	
15	3o	4-	4o	4+	4-	5-	4o	3+	50	3o	3o	4-	4+	3+	4+	4o	3+	46	78.9	23	21	23	
16	3+	3-	2+	3-	3-	2+	2o	1+	21	3-	2+	2-	3-	2+	2+	2-	1+	17	77.0	15	13	21	
17	2-	1o	1o	1o	1-	1+	1+	3o	11	2-	1o	1o	1o	0o	1-	1+	3-	9	78.5	8	10	23	
18	3o	3-	1+	1+	0+	1+	2-	2-	13	3-	2o	1o	1-	0o	1o	1o	1+	9	76.5	7	8	21	
19	1+	0+	1-	1o	1-	1-	1-	1o	5	1+	0o	1-	1-	0o	0+	0o	0o	3	76.5	14	2	21	
20	0o	1o	1o	2+	3o	2-	1-	0+	10	0o	1o	1-	2o	2+	1o	0+	0o	7	79.3	10	12	24	
21	0+	1+	1+	2-	2+	4-	2o	1+	15	0+	1-	0+	1+	2-	3-	1o	1o	9	80.0	9	9	24	
22	4o	4o	3+	4+	3o	2-	1+	1o	34	4-	3+	3o	4-	3-	1+	1-	0+	24	83.2	11	2	28	
23	1o	3-	3+	1+	1o	2-	0+	2o	14	1o	2-	3-	1o	0o	1-	0o	1+	8	87.7	8	8	33	
24	3-	2-	2o	2o	1-	0+	0o	2o	11	2o	1+	1+	2-	0+	0o	0o	1o	7	93.9	11	15	39	
25	3-	1-	0+	1-	2-	1o	1o	0+	8	2-	1o	0+	0+	1+	1o	0o	0o	5	96.3	28	30	42	
26	2o	2-	1o	1-	1-	1-	1-	0+	7	1-	1o	1-	1-	0o	0o	0o	0o	3	101.3	35	40	47	
27	1+	1+	1+	1o	2-	2-	1+	1o	9	1o	1-	1o	0+	1o	1-	1+	1o	6	102.0	39	46	48	
28	3-	2+	4-	3o	2o	1o	1+	1+	20	2o	2+	4-	3-	2-	0+	0+	1o	16	101.5	37	42	48	
29	1o	1-	0o	1o	0+	0+	0+	1-	4	0+	0+	0o	0+	0o	0o	0o	0+	1	102.7	32	37	49	
30	0o	0o	0+	0o	0+	0o	0o	0o	1	0+	0o	0o	0o	0o	0o	0o	0o	1	101.4	37	42	48	
Mean									18.6									14.8	89.6	30.2	32.2	34.8	

Daily Average Indices Ap
May 2005 - Apr 2006

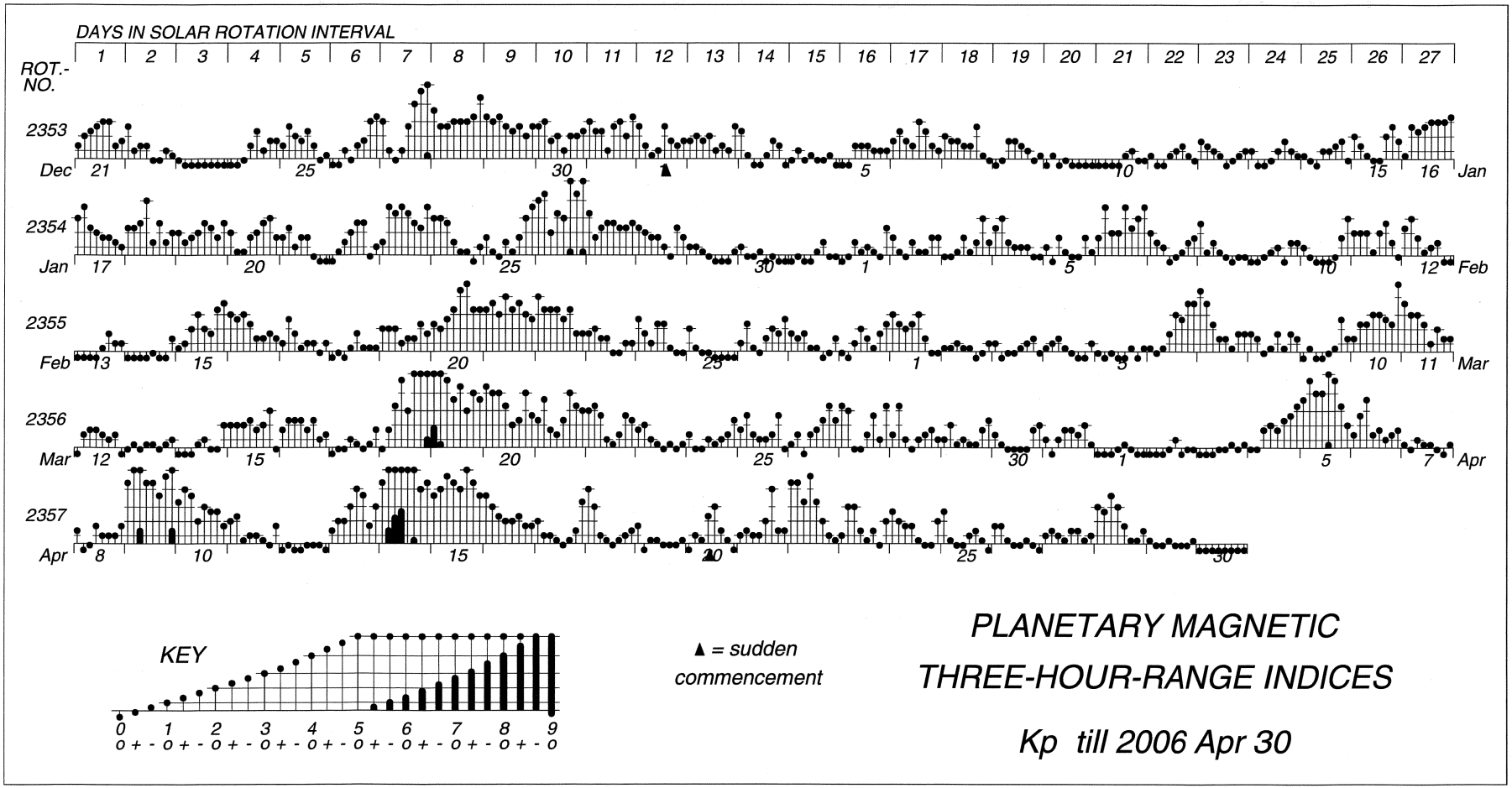


Day	May 05	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan 06	Feb	Mar	Apr
1	22	6	14	14	14	13	10	17	7	4	8	1
2	7	6	12	9	39	15	9	15	6	4	3	1
3	9	6	7	9	27	7	24	15	3	5	3	2
4	5	22	4	8	24	3	20	6	2	6	3	8
5	4	17	4	8	11	4	13	3	3	3	1	29
6	4	10	4	29	8	4	14	2	7	14	11	8
7	10	13	6	14	10	12	7	0	6	4	11	2
8	91	4	4	6	6	26	3	1	4	4	4	4
9	10	4	24	9	17	10	3	6	1	2	3	46
10	7	3	57	16	33	10	2	14	1	4	14	15
11	12	4	21	3	101	7	5	21	2	6	10	5
12	14	54	40	5	75	2	12	12	3	5	4	1
13	21	32	31	16	44	4	14	5	3	2	3	13
14	6	11	6	8	18	2	9	3	3	1	2	65
15	87	16	4	6	52	2	4	2	6	10	8	31
16	41	26	8	14	18	7	3	7	12	9	7	10
17	16	14	22	13	12	14	2	4	9	5	3	6
18	7	5	24	12	10	5	4	4	11	2	30	8
19	7	4	7	6	6	6	11	10	8	6	38	3
20	23	3	20	3	5	3	8	17	7	19	20	5
21	18	1	21	9	3	2	4	9	4	19	14	8
22	9	6	12	9	6	8	6	5	6	15	10	19
23	4	50	4	7	6	2	8	0	16	4	4	7
24	3	10	4	102	2	4	9	4	7	6	4	6
25	4	11	4	22	5	21	12	6	8	2	6	4
26	2	6	4	6	15	11	5	6	30	6	7	3
27	2	3	14	5	12	8	3	20	11	4	10	4
28	12	4	23	5	11	5	8	18	6	4	6	10
29	20	5	17	7	7	3	9	13	2		5	2
30	90	6	10	3	8	5	14	8	2		4	0
31	14		8	49		17		11	2		4	
Mean	19	12	14	14	20	8	8	9	6	6	8	11

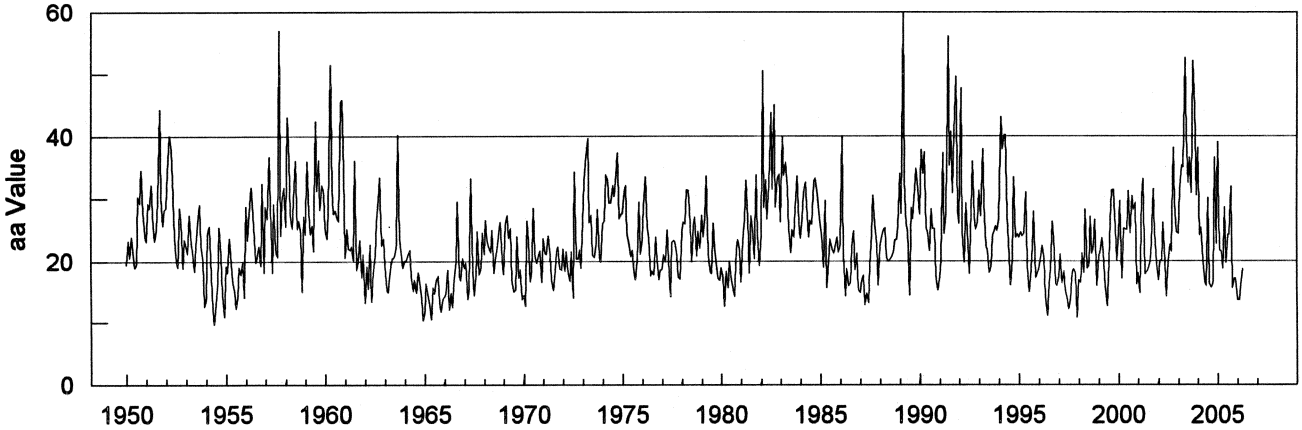
PLANETARY 3-HOUR-RANGE INDICES (Kp) BY 27-DAY SOLAR ROTATION INTERVAL

GeoForschungsZentraum Potsdam

Kp through Apr 30, 2006



Monthly Mean aa Index Jan 1950 - Apr 2006



Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Mean
1950	19.5	23.2	20.6	23.8	21.7	19.0	19.5	30.2	29.3	34.5	28.0	24.0	24.4
1951	23.1	29.2	28.5	32.1	25.5	23.2	25.2	29.7	44.4	30.3	25.7	28.2	28.8
1952	28.5	34.3	40.1	38.0	33.1	23.8	20.7	19.0	28.5	26.4	18.9	23.4	27.9
1953	22.3	21.2	27.4	22.7	21.4	18.4	22.5	26.1	29.0	22.4	20.2	12.6	22.2
1954	13.9	24.5	25.5	20.6	12.0	9.7	13.1	16.5	25.4	21.1	14.5	10.9	17.3
1955	19.3	18.2	23.6	21.1	16.7	15.1	12.3	14.3	19.1	17.8	19.9	14.1	17.6
1956	28.7	23.3	27.6	31.7	29.3	23.5	19.8	20.7	22.4	19.3	32.3	18.2	24.7
1957	28.7	26.8	36.7	28.8	18.1	29.1	21.7	20.7	57.0	24.0	29.5	31.7	29.4
1958	25.5	43.2	36.1	27.6	25.2	29.7	36.0	25.1	26.5	24.7	15.0	27.2	28.5
1959	24.3	35.9	29.9	24.2	25.7	21.6	42.5	31.2	36.1	28.2	32.1	30.8	30.2
1960	25.2	23.5	27.6	51.5	31.6	27.6	28.1	27.2	26.4	45.6	45.9	34.5	32.9
1961	20.6	25.1	22.0	21.8	22.3	20.1	36.0	18.5	20.7	23.3	17.3	21.1	22.4
1962	13.2	19.2	15.5	22.6	13.4	18.1	21.0	26.2	29.8	33.3	22.5	23.5	21.5
1963	19.3	15.3	14.9	18.2	20.4	20.5	20.8	22.5	40.2	23.5	20.7	18.9	21.3
1964	20.1	20.1	21.0	21.7	17.5	15.1	16.9	14.8	18.2	16.9	13.8	10.3	17.2
1965	11.8	16.3	14.3	12.6	10.5	15.7	14.7	16.8	17.5	13.1	11.7	13.8	14.1
1966	14.2	14.8	18.6	12.0	14.8	12.5	17.1	20.0	29.4	17.5	16.8	20.5	17.3
1967	18.9	19.8	13.8	15.5	33.1	18.6	14.4	17.5	24.7	17.8	18.9	24.5	19.8
1968	21.1	26.5	23.3	22.2	21.4	24.9	18.0	20.1	22.0	24.8	26.2	20.3	22.6
1969	17.8	25.8	27.3	23.6	25.2	16.7	15.0	15.3	23.8	17.2	18.7	13.8	20.0
1970	14.4	12.7	26.4	23.1	16.6	18.3	28.4	21.0	19.7	20.6	21.6	16.5	19.9
1971	23.5	21.2	21.1	23.9	21.1	17.0	15.2	17.1	21.4	22.2	18.8	18.6	20.1
1972	21.9	18.3	21.5	18.1	16.6	21.5	14.0	34.2	20.4	20.4	21.8	18.9	20.6
1973	26.1	32.7	36.9	39.6	26.1	27.3	20.9	20.6	22.8	28.2	20.7	19.9	26.8
1974	25.8	26.4	33.7	32.9	29.2	29.2	32.0	30.2	33.7	37.3	26.8	27.5	30.4
1975	27.6	31.1	32.0	24.3	22.7	20.7	21.7	18.1	16.9	20.2	29.3	21.1	23.8
1976	23.3	28.5	33.4	25.4	23.7	17.5	18.4	17.7	23.7	20.4	16.9	18.6	22.3
1977	18.7	21.0	19.9	24.9	20.1	14.2	22.9	23.2	23.0	20.9	17.3	17.0	20.3
1978	24.6	26.2	25.9	31.3	31.2	28.3	19.9	25.6	27.0	20.8	24.6	22.0	25.6
1979	27.3	23.7	26.9	33.5	21.0	18.3	17.9	26.0	22.0	19.3	17.1	16.8	22.5
1980	19.0	17.3	12.7	18.4	15.6	20.0	17.0	15.9	14.2	21.9	23.3	21.7	18.1
1981	16.5	23.1	26.6	32.8	26.9	18.0	27.2	24.0	20.4	33.7	24.1	19.3	24.4
1982	24.2	50.6	28.5	32.9	26.7	32.1	43.9	31.4	45.1	28.5	33.0	33.8	34.2
1983	26.2	40.0	33.6	35.7	31.6	24.9	21.3	24.9	23.7	28.3	33.5	26.0	29.1
1984	23.5	26.7	30.7	32.5	27.2	23.7	26.4	25.8	32.6	33.1	31.0	29.0	28.5
1985	25.7	24.1	19.0	29.5	15.6	19.9	23.4	22.0	21.2	22.2	23.7	21.4	22.3
1986	22.4	40.0	21.1	14.3	18.8	15.9	16.3	22.3	24.7	18.6	21.2	15.3	20.9
1987	14.8	16.6	17.6	12.9	14.7	13.2	19.3	24.3	30.3	25.8	22.4	16.0	19.0
1988	22.4	23.4	24.8	25.2	20.5	20.0	20.2	20.6	21.4	23.2	23.3	25.5	22.5
1989	33.9	27.5	60.1	32.8	25.7	24.9	14.4	28.4	26.7	31.4	34.7	31.4	31.0
1990	27.4	37.8	33.9	37.4	25.1	24.6	21.6	28.2	25.1	25.1	17.4	15.2	26.6
1991	17.2	20.1	37.3	24.3	27.3	56.2	35.2	40.8	30.7	44.1	49.7	28.0	34.2
1992	25.9	47.7	24.5	19.8	29.1	24.8	17.9	24.1	35.8	27.0	25.0	26.1	27.3
1993	31.2	27.1	37.9	29.2	22.1	21.8	18.2	19.2	23.8	24.6	25.5	24.8	25.5
1994	26.5	43.2	37.9	40.2	40.2	27.2	20.6	16.0	20.2	33.3	23.6	24.1	29.4
1995	23.6	24.5	23.8	24.2	30.9	19.1	14.9	17.0	22.2	27.9	17.2	18.2	22.0
1996	18.8	20.8	22.3	20.5	14.0	11.1	14.7	18.8	26.2	23.5	16.3	15.9	18.6
1997	17.4	21.0	16.3	18.4	15.1	13.7	12.1	13.7	18.4	18.7	18.0	10.8	16.1
1998	16.8	16.4	21.2	18.0	28.1	18.8	19.3	27.0	21.1	22.4	26.5	15.9	21.0
1999	20.8	21.3	23.5	21.3	15.8	12.7	16.9	26.2	31.2	31.3	25.1	20.1	22.2
2000	24.2	29.4	17.1	25.1	25.0	24.9	31.1	24.3	30.2	28.1	29.1	16.1	25.4
2001	18.0	14.7	30.2	33.0	17.8	18.2	18.7	19.9	22.7	31.4	24.4	19.5	22.4
2002	16.8	20.0	20.2	26.0	19.9	14.2	19.9	22.5	21.4	38.1	29.3	24.4	22.7
2003	24.2	31.3	35.2	34.9	52.7	40.2	32.4	36.4	30.7	52.2	44.7	30.4	37.1
2004	38.1	23.9	25.2	20.1	16.6	15.9	29.9	16.3	15.6	16.3	36.4	22.6	23.1
2005	39.0	21.6	21.4	18.8	28.4	19.7	24.0	24.0	31.8	15.5	17.1	17.1	23.2
2006	13.6	13.6	15.8	18.8									15.5

PLANETARY GEOMAGNETIC ACTIVITY

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

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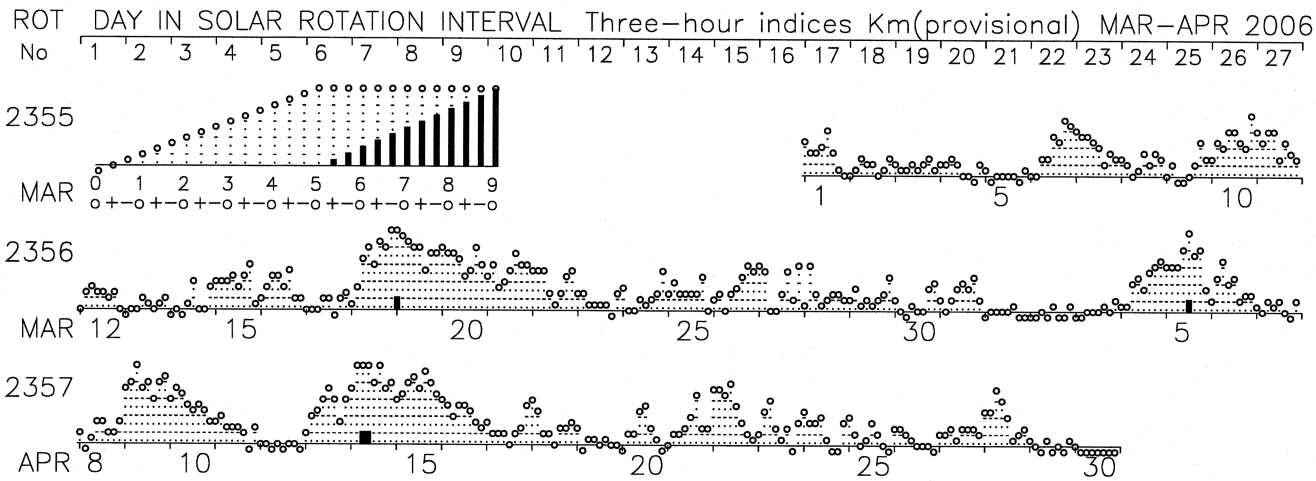
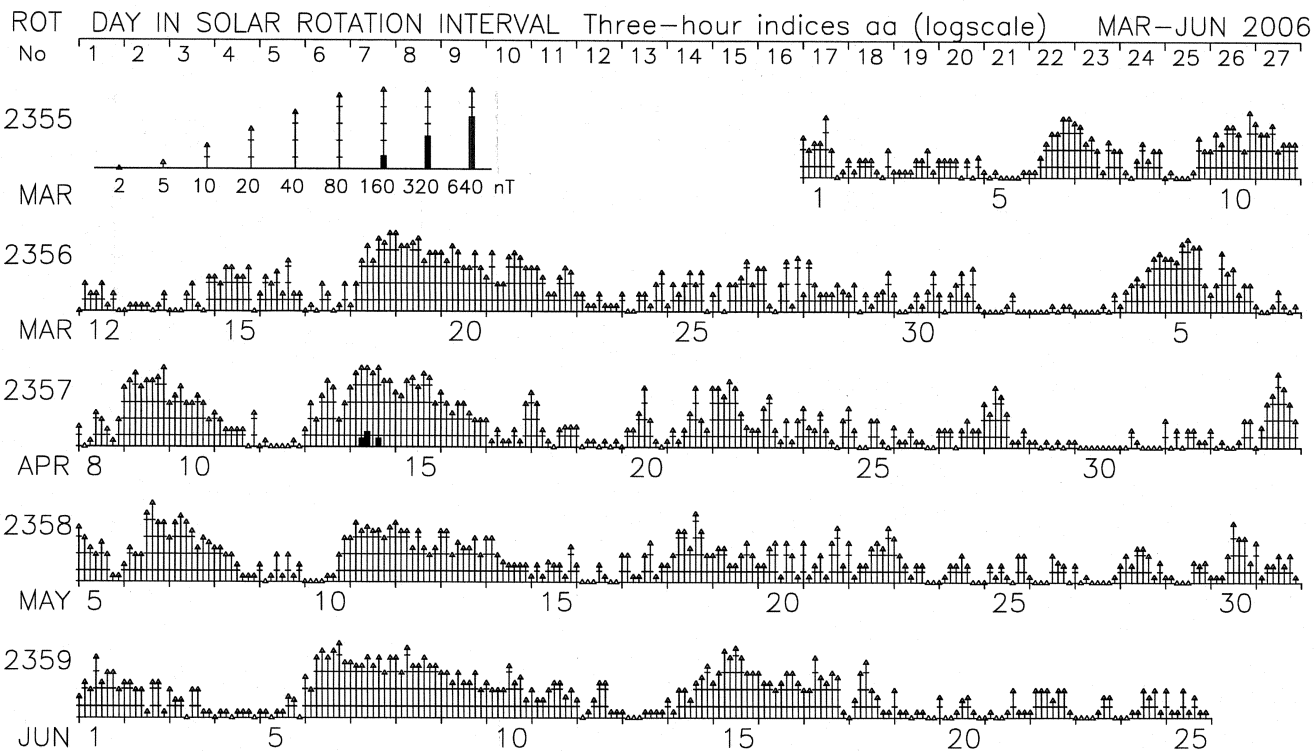
CETP, 4 Avenue de Neptune, F-94107 Saint Maur des Fosses CEDEX – FRANCE



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



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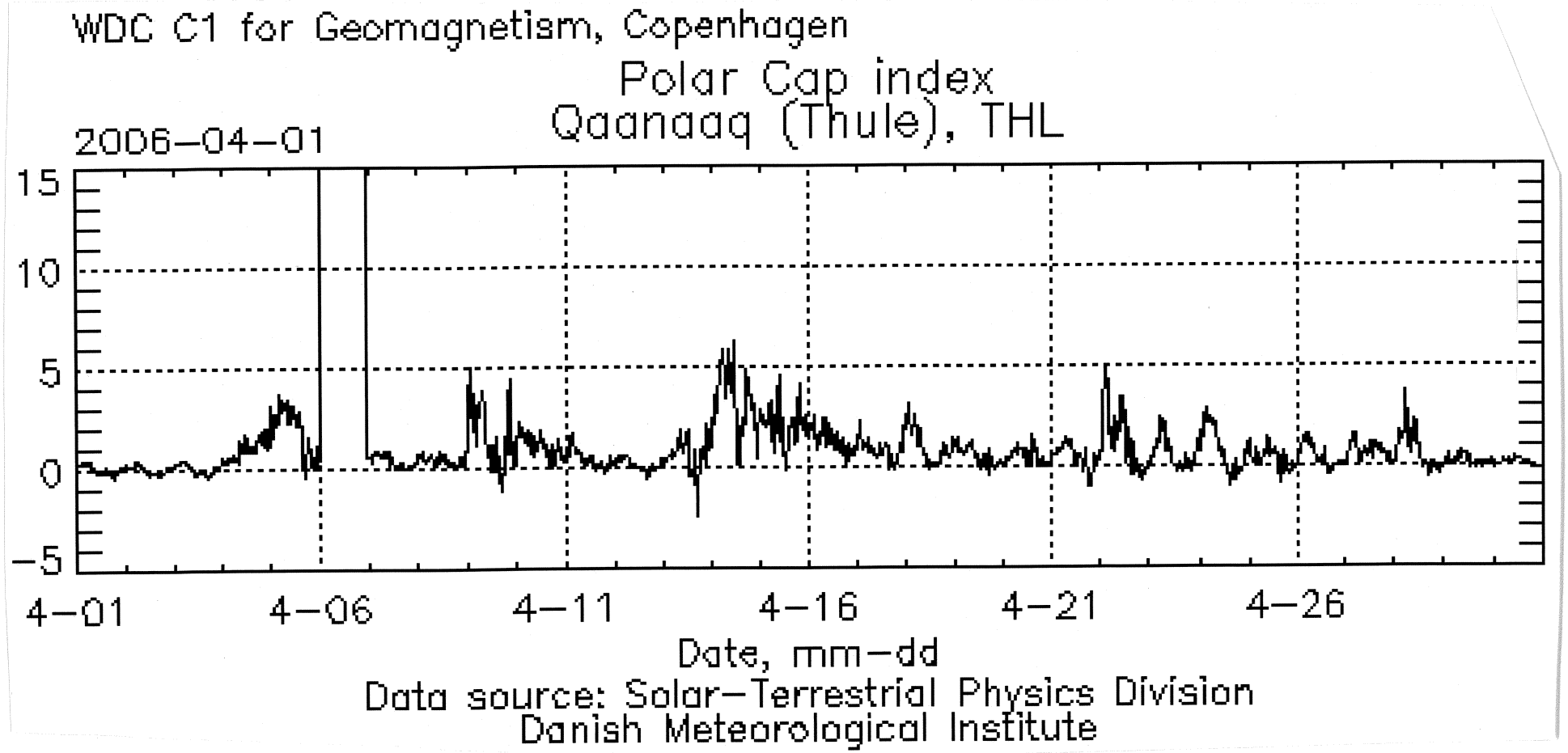
WDC C1 for Geomagnetism, Copenhagen
Polar Cap index
Qaanaaq (Thule), THL
2006-04-01
15
10
5
0
-5
4-01
4-06
4-11
4-16
4-21
4-26
Date, mm-dd
Data source: Solar-Terrestrial Physics Division
Danish Meteorological Institute

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

APRIL 2006

Sta	Geomag Lat	Commencement Day	Commencement Time (UT)	Type	SC Amplitudes D (Min)	SC Amplitudes H (Gamma)	SC Amplitudes Z (Gamma)	Maximum 3-Hour K Index Day(3-Hour Periods)	K	Ranges D (Min)	Ranges H (Gamma)	Ranges Z (Gamma)	End Day	End Hour (UT)
HYB	07.6N	03	1300	..	..	..	..	05(5,6)	6	4	203	20	06	22
JAI	17.4N	04	0500	..	..	..	..		-	5	170	33	06	20
NGP	11.3N	04	0500	..	..	..	..		-	3	193	26	06	20
ABG	09.4N	04	0500	..	..	..	..	05(6)	6	4	198	29	06	20
PND	02.0N	04	0500	..	..	..	..		-	3	203	62	06	20
TIR	00.6S	04	0500	..	..	..	..		-	3	236	77	06	20
GNA	43.0S	05	0900	..	..	..	..	05(5)	7	29	133	185	05	22
CAN	43.6S	05	0600	..	..	..	..	05(4,5)	5	17	86	32	05	21
HYB	07.6N	08	0800	..	..	..	..	09(2,3,7)	5	4	93	27	10	23
JAI	17.4N	09	0000	..	..	..	..		-	4	84	25	10	21
NGP	11.3N	09	0000	..	..	..	..		-	4	87	26	10	21
ABG	09.4N	09	0000	..	..	..	..	09(2,3,4,8)	5	3	86	34	10	21
PND	02.0N	09	0000	..	..	..	..		-	3	113	78	10	21
TIR	00.6S	09	0000	..	..	..	..		-	2	170	103	10	21
JAI	17.4N	13	0430	..	..	..	..		-	7	198	36	15	23
NGP	11.3N	13	0430	..	..	..	..		-	6	214	23	15	23
ABG	09.4N	13	0430	..	..	..	..	14(5,6)	6	6	213	35	15	23
HYB	07.6N	13	0200	..	..	..	..	14(4,5,6)	6	6	222	25	16	21
PND	02.0N	13	0430	..	..	..	..		-	5	228	99	15	23
TIR	00.6S	13	0430	..	..	..	..		-	5	270	124	15	23
GNA	43.0S	14	0300	..	..	..	..	14(4,6,8)	6	34	189	228	16	03
CAN	43.6S	14	0300	..	..	..	..	14(4)	7	35	211	83	16	18
HYB	07.6N	17	2054	SC	- 0.4	18	2		-	--	--	--	--	--
JAI	17.4N	21	0900	..	..	..	..		-	6	89	32	22	18
NGP	11.3N	21	0900	..	..	..	..		-	5	87	20	22	18
ABG	09.4N	21	0900	..	..	..	..	22(4)	5	5	87	36	22	18
HYB	07.6N	21	0900	..	..	..	..	22(4)	5	5	94	18	22	24
PND	02.0N	21	0900	..	..	..	..		-	4	107	33	22	18
TIR	00.6S	21	0900	..	..	..	..		-	4	160	45	22	18
HYB	07.6N	28	0116	SC	- 0.3	16	- 2	28(3)	4	4	79	33	28	24

Stations:

ABG = ALIBAG
AMS = MARTIN DE VIVIES
ANN = ANNAMALAINAGAR
BJI = BEIJING
CAN = CANBERRA
CMO = COLLEGE
CZT = PORT ALFRED
DRV = DUMONT D'URVILLE
ETT = ETAIYAPURAM
GNA = GNANGARA
GUA = GUAM
HER = HERMANUS
HON = HONOLULU
HYB = HYDERABAD
JAI = JAIPUR
KRC = KARACHI
NGP = NAGPUR
PAF = PORT AUX FRANCAIS
PMG = PORT MORESBY
PND = PONDICHERRY
SHL = SHILLONG
SIT = SITKA
TIR = TIRUNELVELI
UJJ = UJJAIN

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

April 2006

Storm Sudden Commencements (SSC)			Solar Flare Effects (sfe)		
Day	Time	Quality: Station Group*	Day	Begin-End	Station(s)
20	1112	C: LER* ESK* NGK* HAD* DOU BDV* CLF*	06	0528-0540	MMB+ KAK+ KNY+
			07	0800-0812	BDV+
28	0116	B: SPT GUI HYB	08	1143-1202	GUI
		C: LER* ESK* HAD* DOU BDV* EBR	13	0434-0458	GUI
			20	1057-1125	GUI
			27	1546-1614	LER ESK NGK+ HAD BDV+ EBR+ GUI

REPORTING OBSERVATORIES (up to the 2nd of June 2006):
SOD 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 Antartic 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.