NOVEMBER 2004 NUMBER 723 - Part I

Solar-Geophysical Data prompt reports

Data for September and October 2004
Explanation of Data Reports Issued as Number 515 (Supplement) July 1987

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NOVEMBER 2004 NUMBER 723 - Part I

Solar-Geophysical Data prompt reports

Data for September and October 2004

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NATIONAL GEOPHYSICAL DATA CENTER
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Boulder, Colorado

Subscription information is on the inside back cover.

SOLAR-GEOPHYSICAL DATA

Number 723
(Issued in Two Parts)

Editor: Helen E. Coffey

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Solar-Terrestrial Physics Division

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CONTENTS

PART I (PROMPT REPORTS) Page

PART II (COMPREHENSIVE REPORTS) Page

NEW DATA:

ACE SOLAR WIND, INTERPLANETARY MAGNETIC FIELD AND PARTICLES

-- MONTHLY PLOTS

DETAILED INDEX OF OBSERVATIONS PUBLISHED IN SOLAR-GEOPHYSICAL DATA

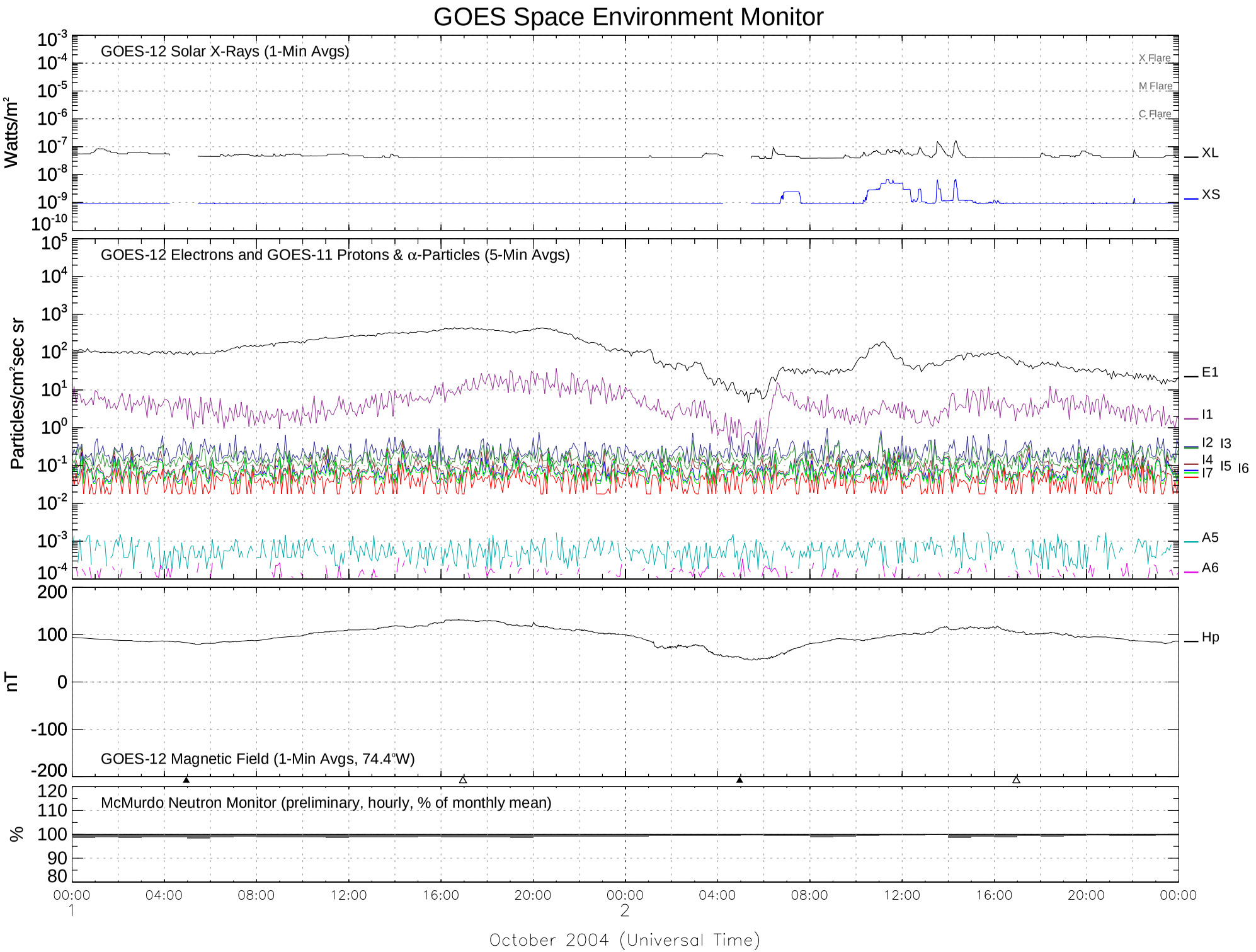
CODE	KIND OF OBSERVATION	MAR 04	APR	MAY	JUN	JUL	AUG	SEP	OCT
A.	SOLAR AND INTERPLANETARY								
A.1	Sunspot Drawings	717A 44	718A 44	719A 42	720A 48	721A 46	722A 46	723A 81	
A.2aa	International Sunspot Numbers	716A 25	717A 22	718A 23	719A 24	720A 25	721A 25	722A 23	723A 25
A.2c	American Sunspot Numbers	716A 25	717A 22	718A 23	719A 24	720A 25	721A 25	722A 23	723A 25
A.3a	Mt. Wilson Magnetograms	717A 44	718A 44	719A 42	720A 48	721A 46	722A 46	723A 46	
A.3b	Sunspot Mag Class and Regions	717A 81	718A 79	719A 79	720A 83	721A 83	722A 83	723A 81	
A.3c	Kitt Peak Magnetograms	717A 44	718A 44	719A 42	720A 48	721A 46	722A 46	723A 46	
A.3d	Mean Solar Magnetic Field (Stanford)	716A 36	717A 34	718A 34	719A 32	720A 38	721A 37	722A 31	723A 35
A.3e	Stanford Magnetograms	717A 44	718A 44	719A 42	720A 48	721A 46	722A 46	723A 46	
A.4	H-alpha Filtergrams	717A 44	718A 44	719A 42	720A 48	721A 46	722A 46	723A 46	
A.5d	PhotometricCa IIFaculaeSanFernando	Jan 92-Dec 96-631B 22; 1997-1998 in 663B 66							
A.6c	Stanford Solar Mag Field SynopticMap	717A 38	718A 38	719A 36	720A 42	721A 40	722A 34	723A 40	
A.6d	Kitt Peak Solar Mag Field SynopticMap	717A 43	718A 43	719A 41	--------	721A 45	722A 44	723A 45	
A.6f	Active Prominences and Filaments	721B 27	722B 30	723B 26					
A.6g	Sac Peak Coronal Line Synoptic Maps	717A 40	718A 40	719A 38	720A 44	721A 42	722A 38	723A 42	
A.6h	Photometric White Light SanFernando	Jul-Dec 96 630B 32; 1997-1998 in 663B 51							
A.7h	Coronal Line Emission (Sac Peak)	717A 44	718A 44	719A 42	720A 48	721A 46	722A 46	723A 46	
A.7j	Coronal Hole Daily Maps (NSO/KP)	----------	----------	----------	----------	----------	----------	-------	
A.7k	Coronal Index (Slovak Academy)	1939-1996 -644B 28							
A.7m	Coronal Mass Ejections (CSPSW)	721B	722B	723B					
A.8aa	2800 MHz- Solar Flux (Penticton)	716A 25	717A 22	718A 25	719A 24	720A 25	721A 25	722A 23	723A 25
A.8ac	2800 MHz- Adj. Solar Flux (Penticton)	716A 25	717A 22	718A 25	719A 24	720A 25	721A 25	722A 23	723A 25
A.8g	Adjusted Daily Solar Fluxes Sagamore	716A 25	717A 22	718A 25	719A 24	720A 25	721A 25	722A 23	723A 25
A.10g	Nancay Radioheliograph164&327MHz	717A112	718A103	719A100	720A108	721A116	722A112	723A 98	
A.10h	Nobeyama Radioheliograph - 17 GHz	717A 75	718A 74	719A 73	720A 78	721A 77	722A 77	723A 76	
A.11g	Solar X-ray GOES (graphs/event table)	721B 18	722B 22	723B 17					
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	721B 28	722B 31	723B 27					
A.12g	Solar Particles (GOES)	716A 4	717A 4	718A 4	719A 4	720A 4	721A 4	722A 4	723A 4
A.12i	Interplanetary Particles (ACE)	721B 31	722B 34	723B 30					
A.13g	Solar Plasma (ACE)	721B 30	722B 33	723B 29					
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	721B 29	722B 32	723B 28					
.	SOLAR FLARE-ASSOCIATED EVENT								
C.1a	H-alpha Flares	716A 30	717A 27	718A 28	719A 27	720A 28	721A 28	722A 26	723A 28
C.1ba	H-alpha Flare Groups	721B 4	722B 4	723B 4					
C.1d	Flare Patrol Observations	721B 10	722B 9	723B 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	721B 12	722B 11	723B 9					
C.3	Radio Bursts Fixed Frequency Select	716A 35	717A 32	718A 33	719A 31	720A 34	721A 34	722A 29	723A 33
C.4	Radio Bursts Spectral	717A 94	718A 90	719A 90	720A 94	721A 97	722A 95	723A 89	
C.6	Sudden Ionospheric Disturbances	717A 92	718A 88	719A 88	720A 92	721A 93	722A 92	723A 87	
D.	GEOMAGNETIC EVENTS								
D.1a	Geomagnetic Indices	717A120	718A111	719A108	720A114	721A122	722A120	723A106	
D.1ba	27-day Chart of Kp Indices	717A122	718A113	719A110	720A116	721A124	722A122	723A108	
D.1cb	Monthly Mean aa Indices	717A123	718A114	719A111	720A117	721A125	722A123	723A109	
D.1d	Principal Magnetic Storms	717A127	718A118	719A115	720A121	721A129	722A127	723A113	
D.1f	Sudden Commencements/FlareEffects	717A128	718A119	719A116	720A122	721A130	722A128	723A114	
D.1g	Equatorial Indices Dst	717A125	718A116	719A113	720A119	721A127	722A125	723A111	
D.1l	Polar Cap (PC) Index	717A126	718A117	719A114	720A120	721A128	722A126	723A112	
F.	COSMIC RAYS								
F.1b	Cosmic Ray Neutron Cts (Climax)	717A114	718A105	719A102	720A110	721A118	722A114	723A100	
F.1h	Cosmic Ray Neutron Cts (Thule)	717A114	718A105	719A102	720A110	721A118	722A114	723A100	
F.1l	Cosmic Ray Neutron Cts (Kiel)	717A114	718A105	719A102	720A110	721A118	722A114	723A100	
F.1n	Cosmic Ray Neutron Cts (Beijing)	717A114	718A105	719A102	720A110	721A118	722A114	723A100	
F.1m	Cosmic Ray Neutron Cts (Haleakala)	717A114	718A105	719A102	720A110	721A118	722A114	723A100	
F.1o	Cosmic Ray Neutron Cts (Moscow)	717A114	718A105	719A102	720A110	721A118	722A114	723A100	
F.1p	Cosmic Ray Neutron Cts (Calgary)	717A114	718A105	719A102	720A110	721A118	722A114	723A100	
H.	MISCELLANEOUS								
H.60	ISES Alert Periods	716A 20	717A 19	718A 20	719A 19	720A 20	721A 20	722A 19	723A 20

The entry "717A 44" under Mar 04, for example, means that the sunspot drawings for Mar 04 appear in SOLAR-GEOPHYSICAL DATA No. 717, Part I, and that they begin on page 44. "A" denotes Part I and "B", Part II. Blanks indicate data not yet received and dashes mark unavailable data.

CONTENTS

Prompt Reports Number 723 Part I

DATA FOR **OCTOBER 2004**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GOES-12 Solar X-Rays (1-Min Avgs)
X Flare
M Flare
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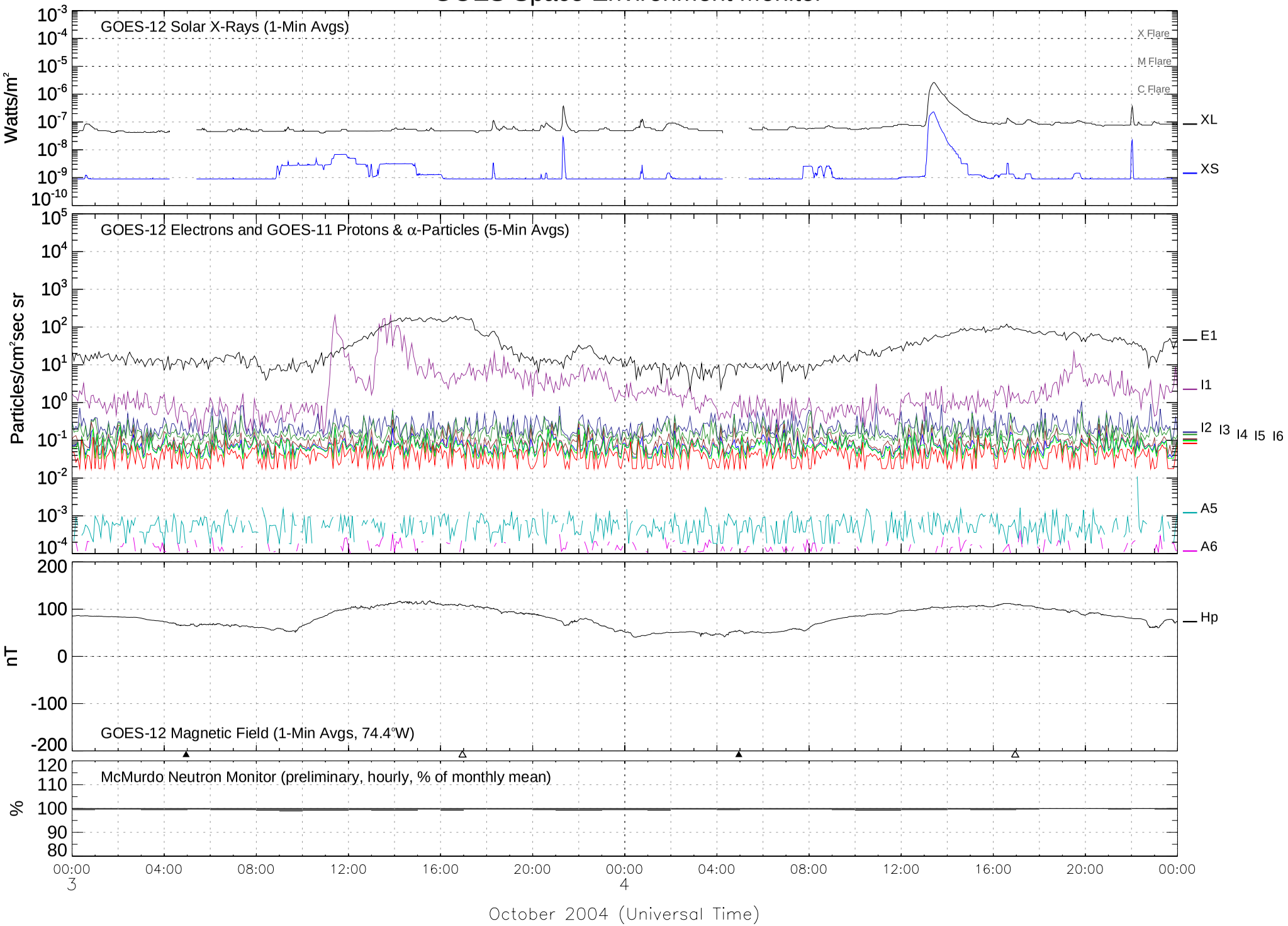

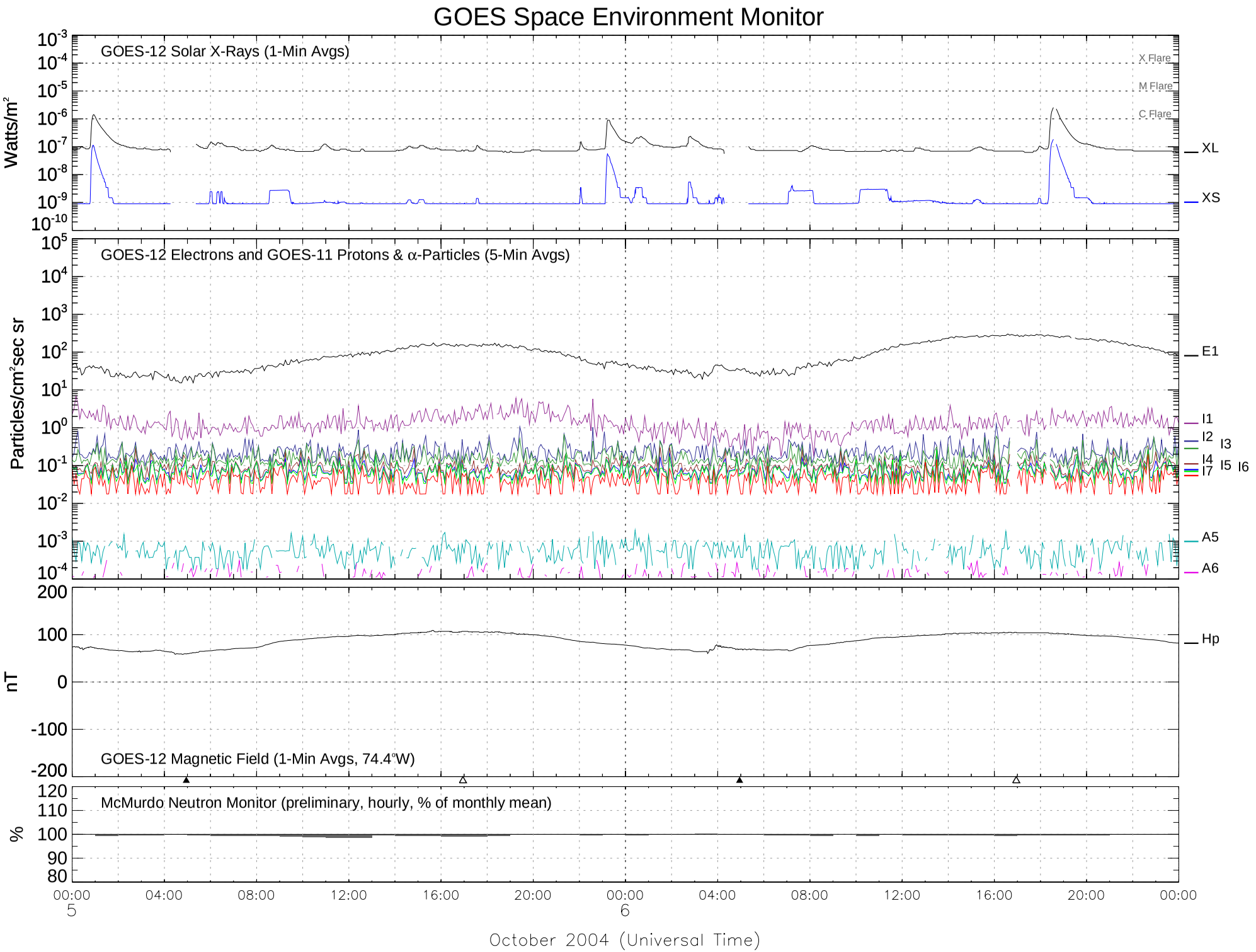
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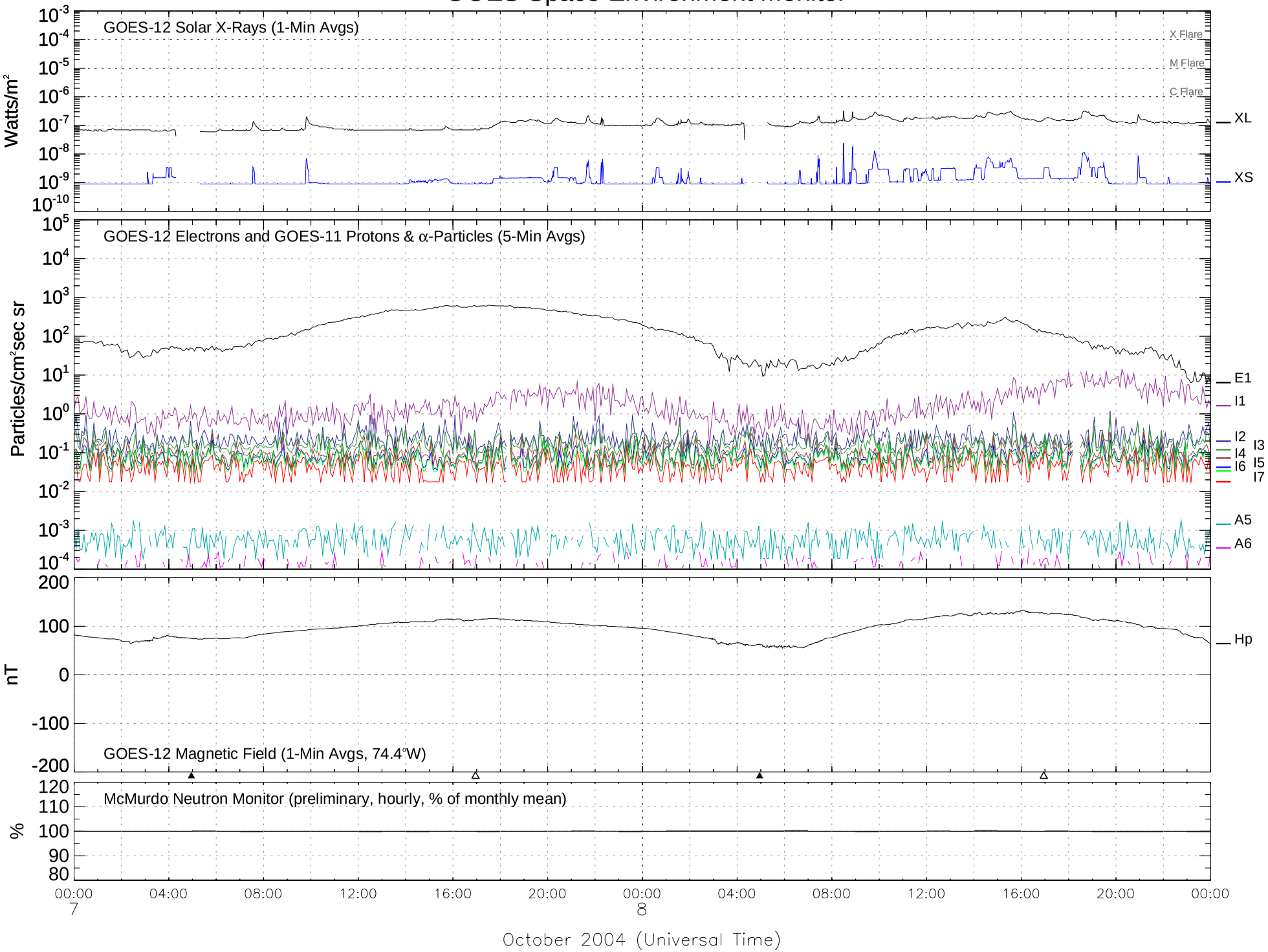

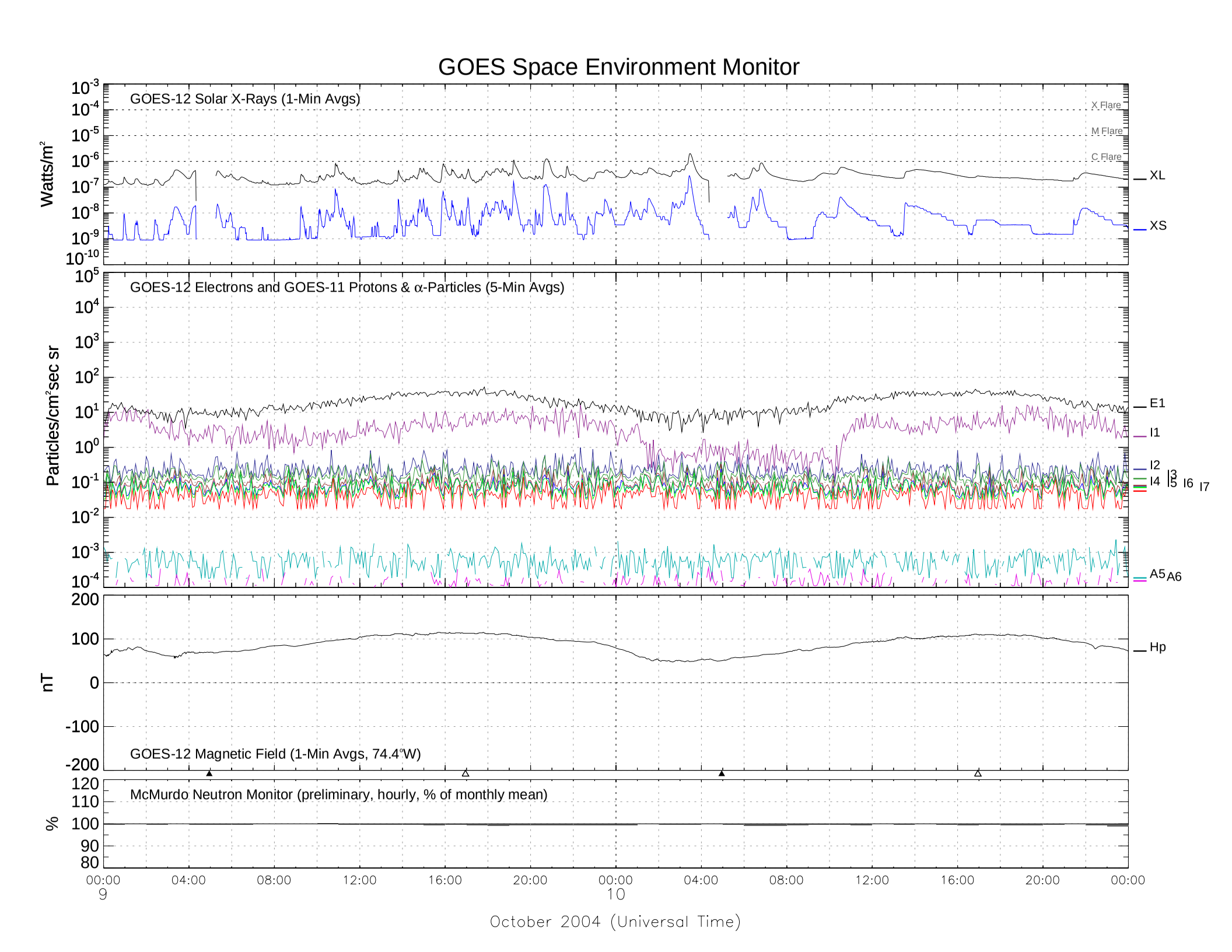
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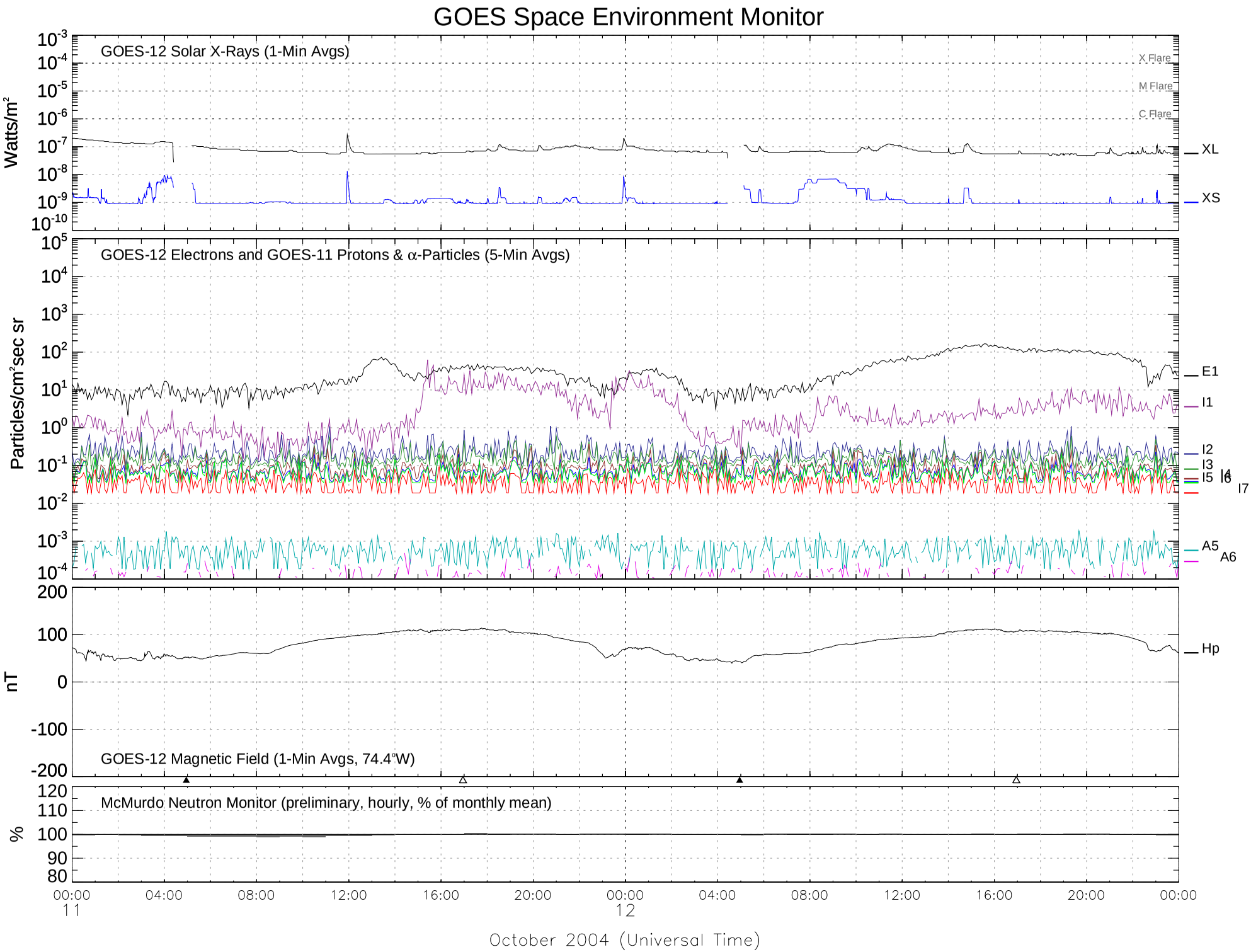
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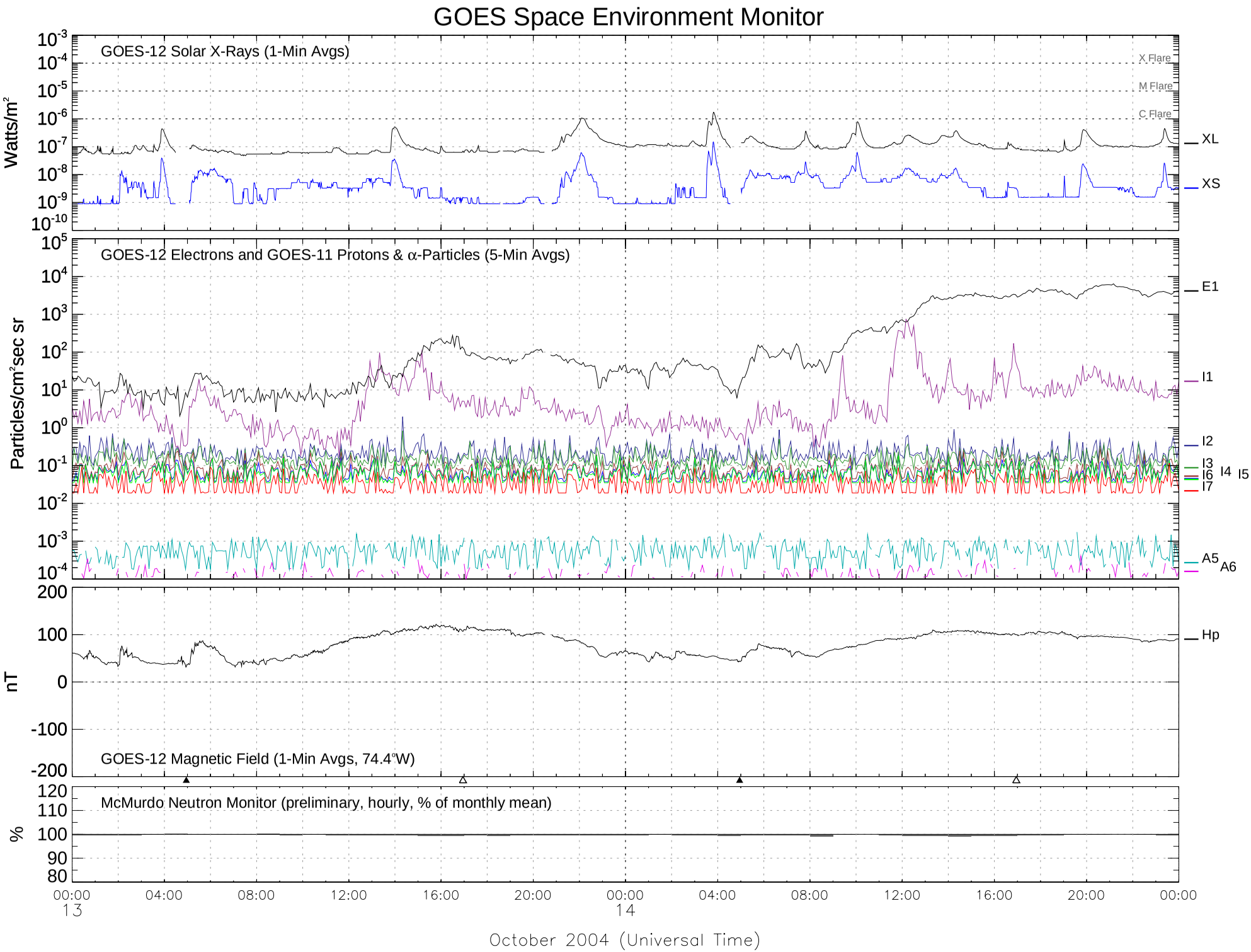
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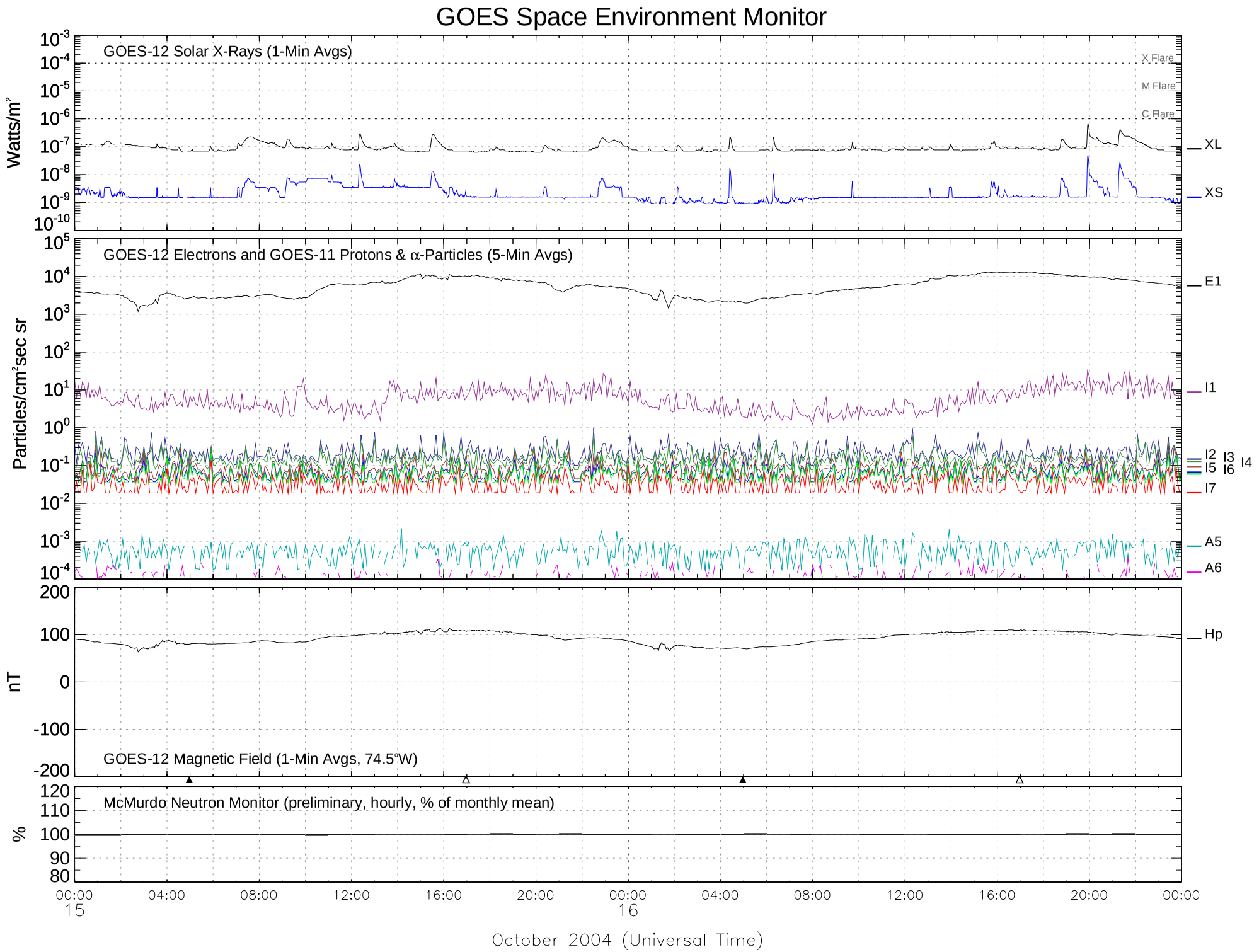
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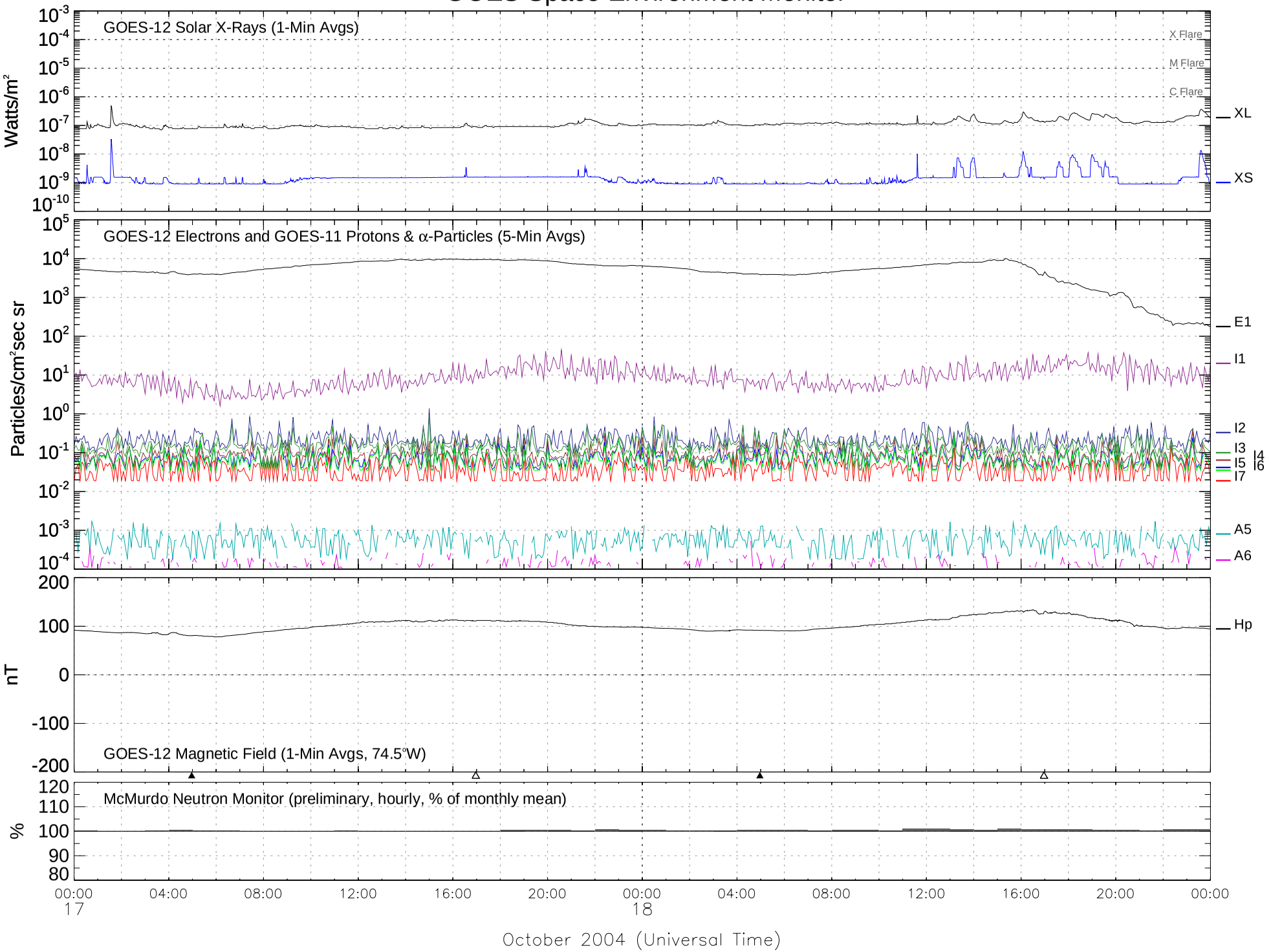

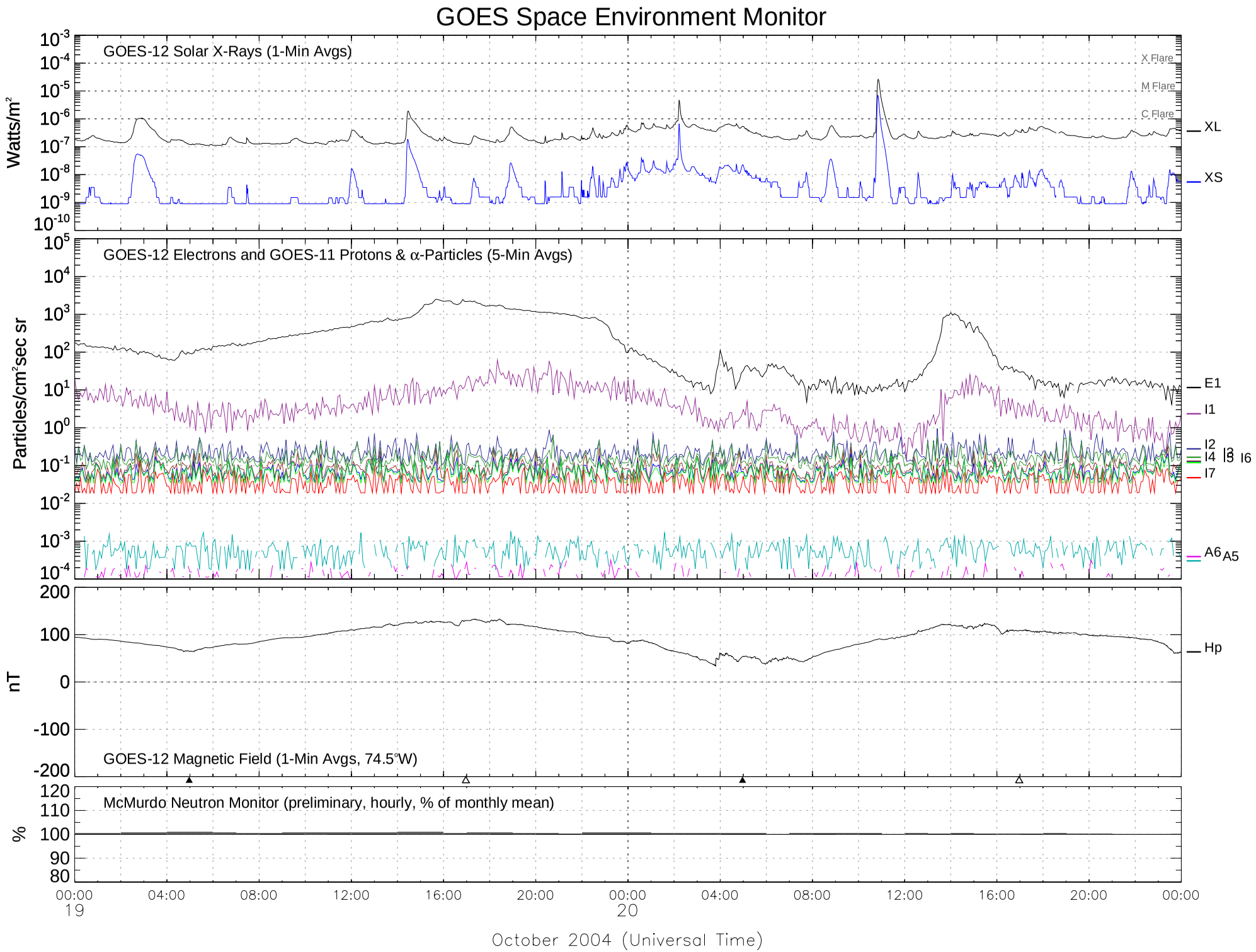
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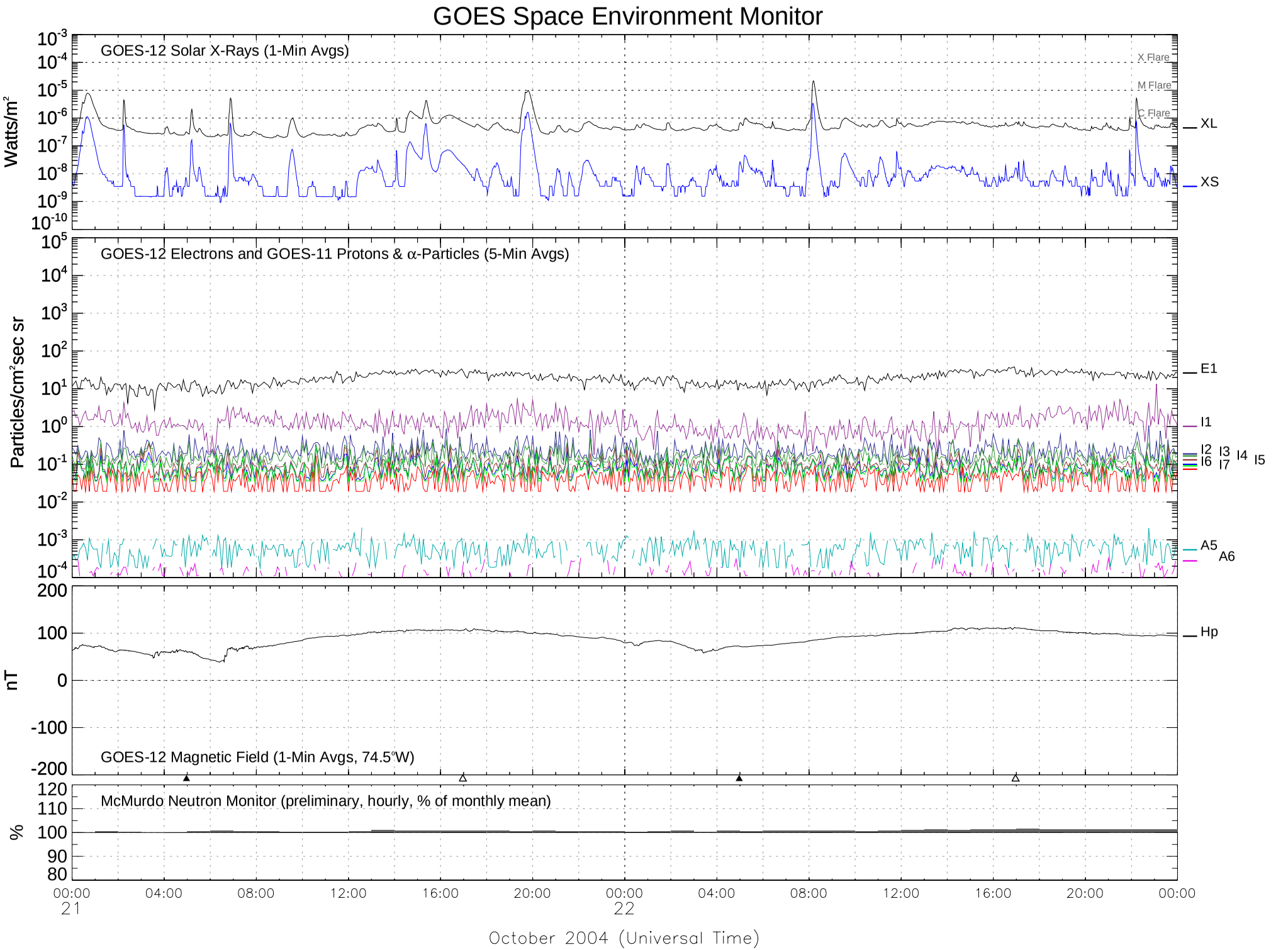
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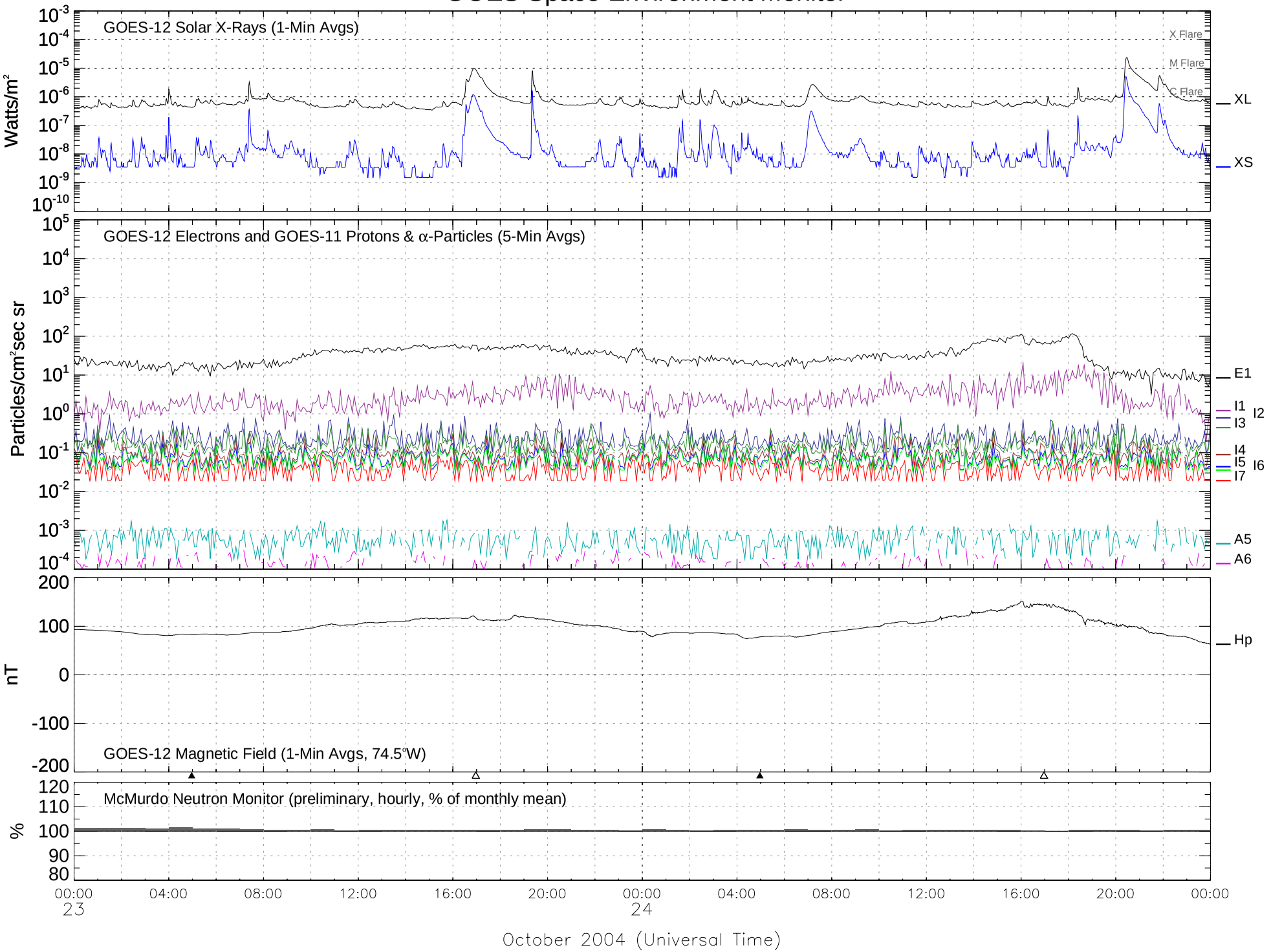

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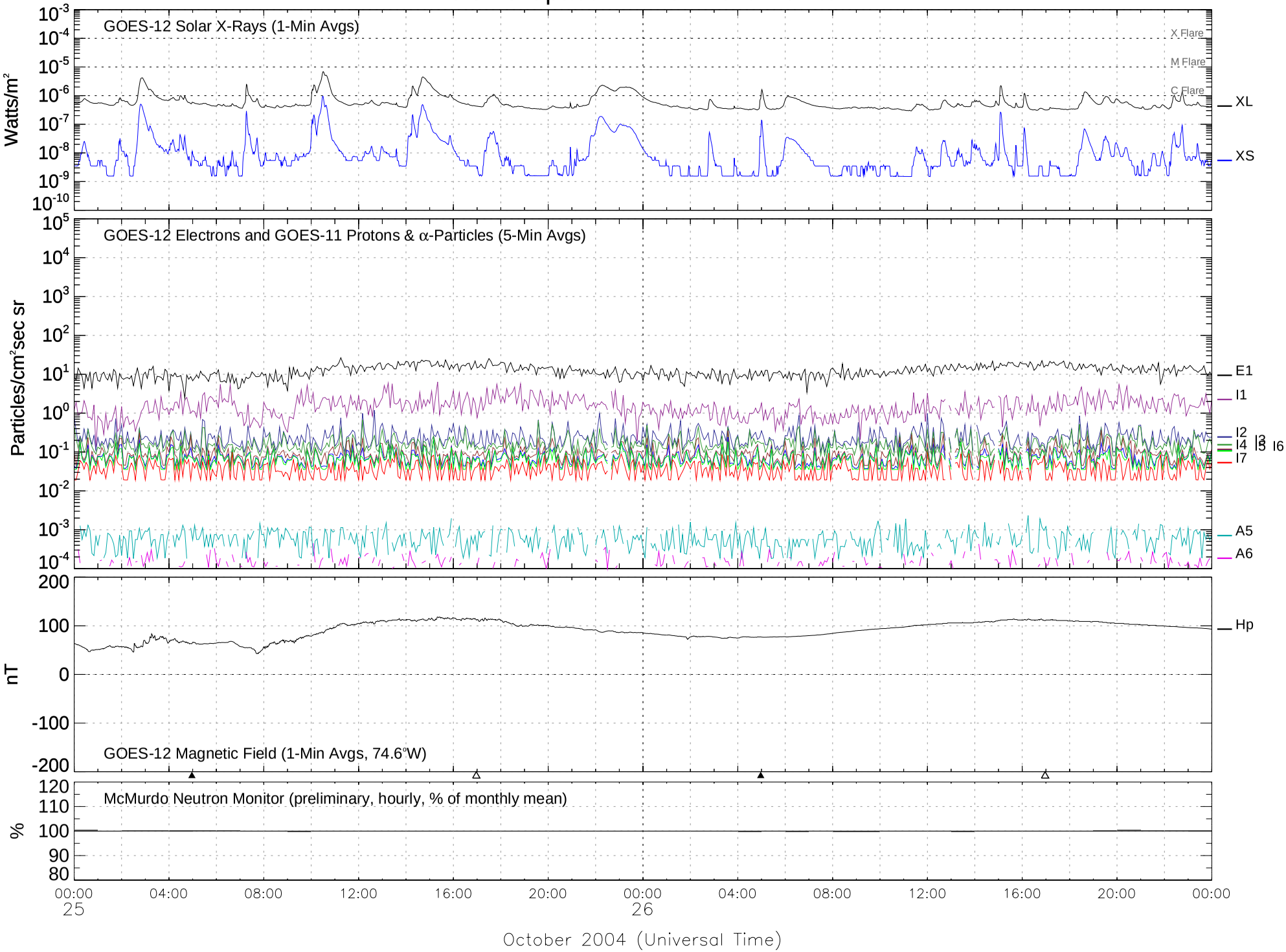

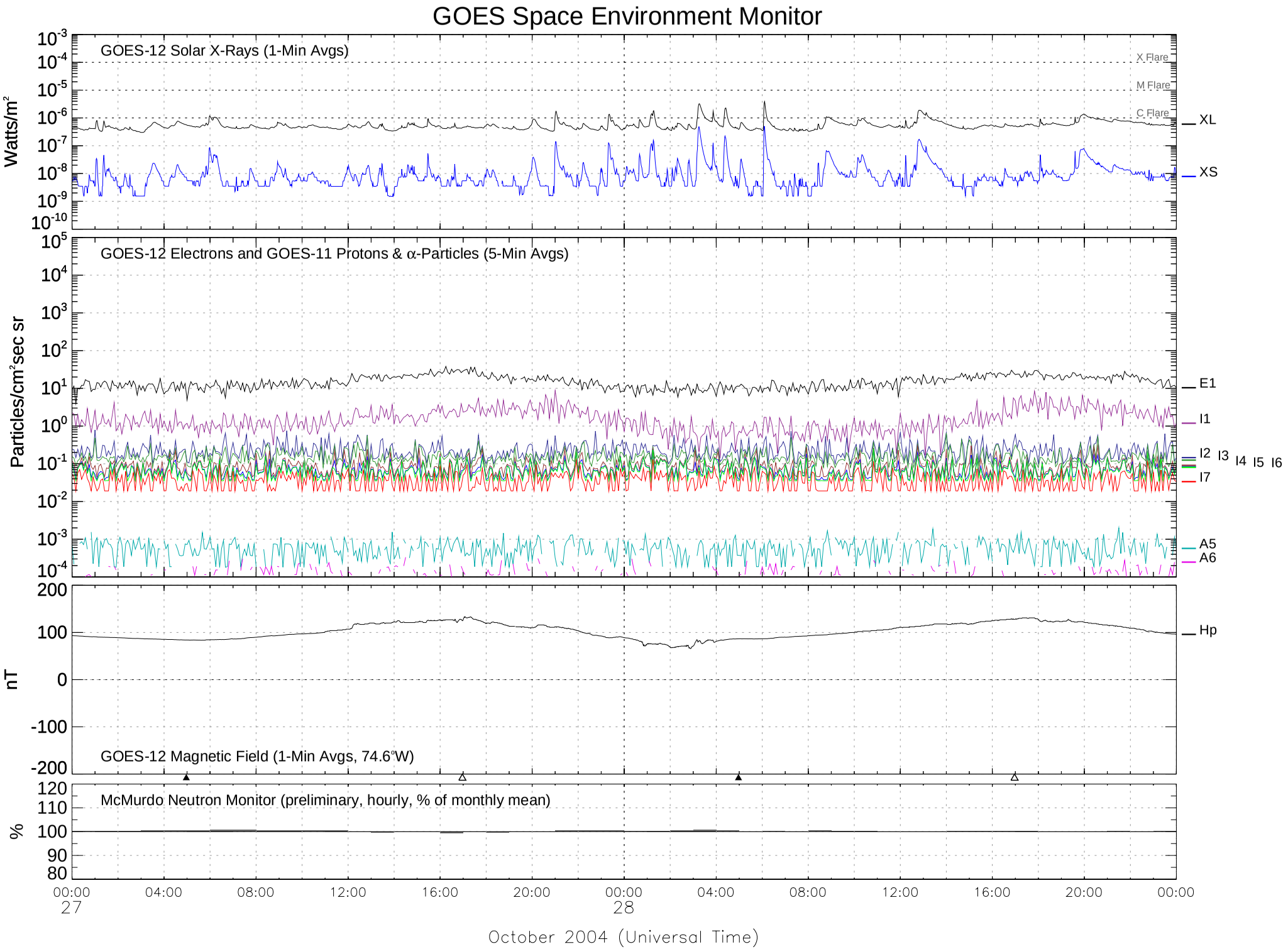
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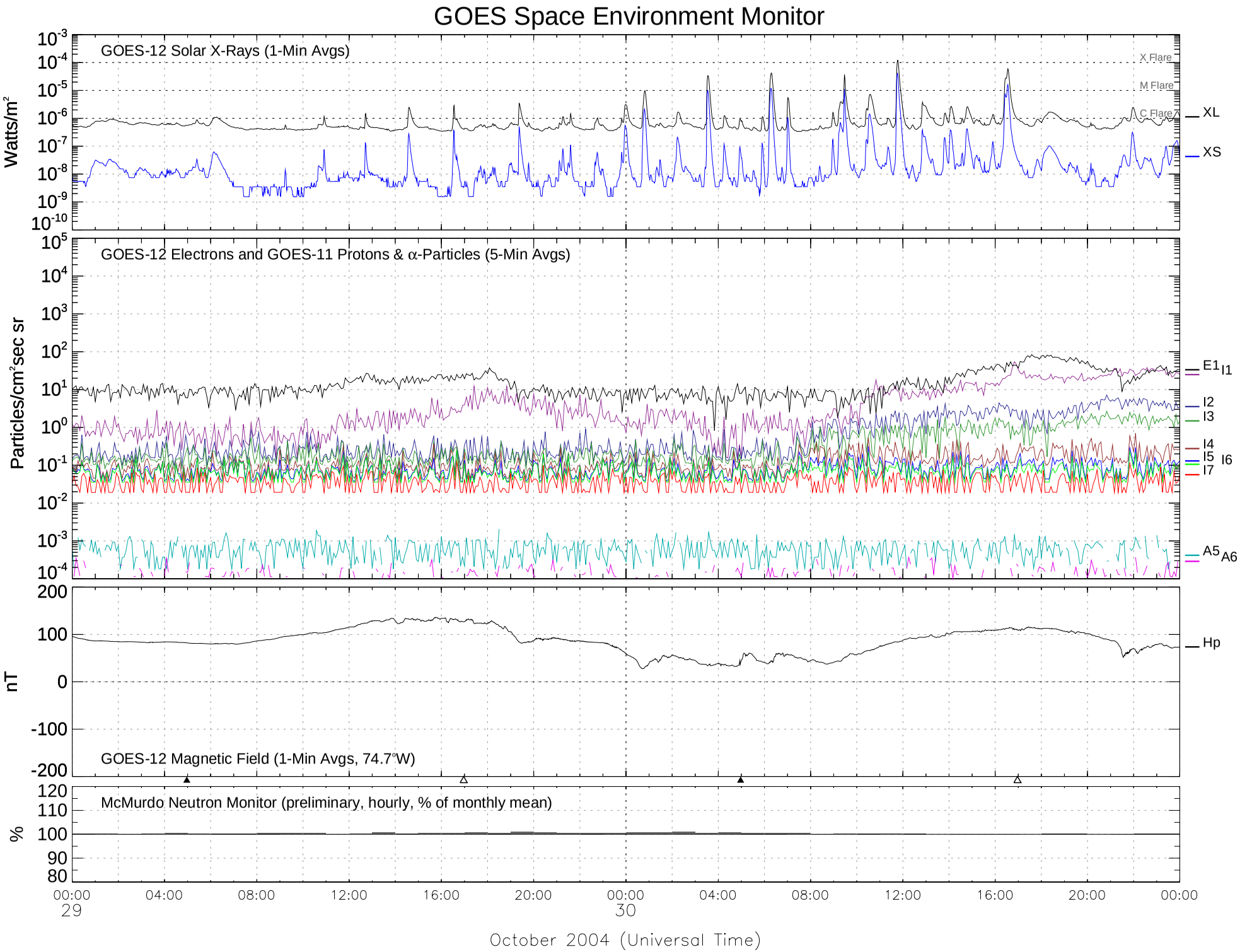
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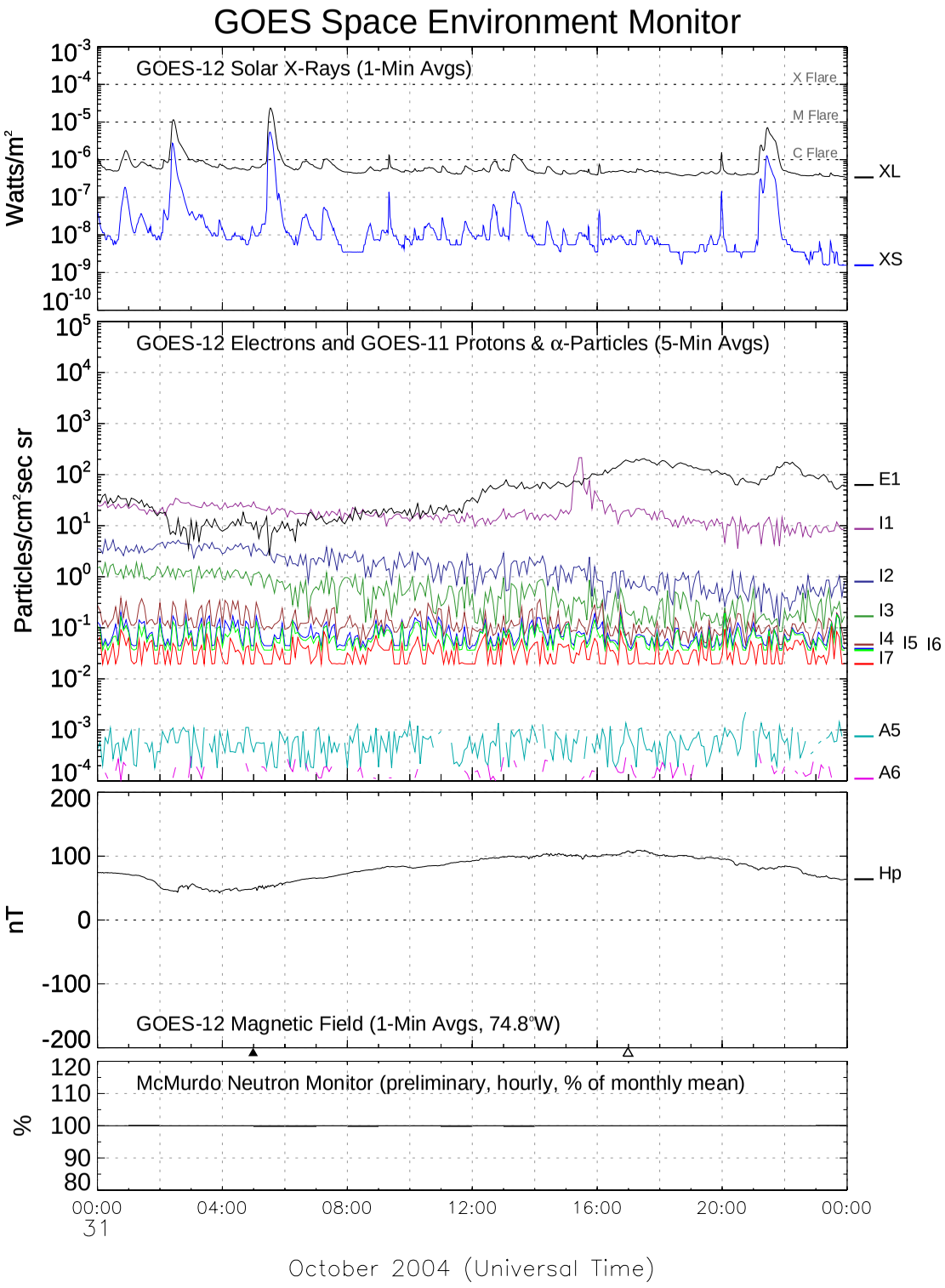
October 2004 (Universal Time)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Particles/cm²sec sr
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McMurdo Neutron Monitor (preliminary, hourly, % of monthly mean)
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October 2004 (Universal Time)

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

OCTOBER 2004

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)
275	01	30	36	88	2	10675	S08	E08	0	0	0	01	Q	SOL: Quiet
						10676	S12	E52	0	0	0	01	Q	MAG: Quiet
						10677	N02	E09	0	0	0	01	Q	PRO: Quiet
276	02	01	37	88	4	10675	S09	W06	0	0	0	02	Q	SOL: Quiet
						10676	S12	E38	0	0	0	02	Q	MAG: Quiet
						10677	N01	W06	0	0	0	02	Q	PRO: Quiet
277	03	02	35	88	10	10675	S09	W19	0	0	0	03	Q	SOL: Quiet
						10676	S12	E25	0	0	0	03	Q	MAG: Quiet
						10677	N02	W21	0	0	0	03	Q	PRO: Quiet
278	04	03	39	89	13	10675	S09	W33	0	0	0	04	Q	SOL: Quiet
						10676	S12	E11	0	0	0	04	Q	MAG: Quiet
						10678	N12	W29	0	0	0	04	Q	PRO: Quiet
279	05	04	41	91	10	10675	S10	W46	0	0	0	05	Q	SOL: Quiet
						10676	S11	W02	0	0	0	05	Q	MAG: Quiet
						10678	N12	W42	0	0	0	05	Q	PRO: Quiet
280	06	05	40	91	4	10675	S11	W59	0	0	0	06	Q	SOL: Eruptive
						10676	S12	W15	0	0	0	06	Q	MAG: Quiet
						10678	N13	W58	0	0	0	06	Q	PRO: Quiet
281	07	06	39	92	4	10675	S10	W76	0	0	0	07	Q	SOL: Eruptive
						10676	S13	W28	0	0	0	07	Q	MAG: Quiet
						10678	N12	W62	0	0	0	07	Q	PRO: Quiet
282	08	07	38	94	4	10675	S10	W89	0	0	0	08	Q	SOL: Quiet
						10676	S13	W41	0	0	0	08	Q	MAG: Quiet
						10678	N12	W75	0	0	0	08	Q	PRO: Quiet
283	09	08	28	91	7	10680	S13	W54	0	0	0	09	Q	SOL: Quiet
						10680	N15	W83	0	0	0	09	Q	MAG: Quiet
									0	0	0	09		PRO: Quiet
284	10	09	24	88	8	10680	S13	W67	0	0	0	10	Q	SOL: Quiet
						10680	N15	W93	0	0	0	10	Q	MAG: Quiet
									0	0	0	10		PRO: Quiet
285	11	10	0	89	7				0	0	0	11		SOL: Quiet
									0	0	0	11		MAG: Quiet
									0	0	0	11		PRO: Quiet
286	12	11	0	87	11				0	0	0	12		SOL: Quiet
									0	0	0	12		MAG: Quiet
									0	0	0	12		PRO: Quiet
287	13	12	14	88	11	10681	N12	W09	0	0	0	13	Q	SOL: Quiet
									0	0	0	13		MAG: Quiet
									0	0	0	13		PRO: Quiet
288	14	13	41	87	30	10682	N11	W21	0	0	0	14	Q	SOL: Quiet
						10682	S13	E64	0	0	0	14	Q	MAG: Active
									0	0	0	14		PRO: Quiet
289	15	14	38	91	25	10682	N10	W36	0	0	0	15	Q	SOL: Eruptive
						10682	S13	E50	0	0	0	15	Q	MAG: Active
									0	0	0	15		PRO: Quiet
290	16	15	26	89	8	10682	S14	E37	0	0	0	16	Q	SOL: Eruptive
									0	0	0	16		MAG: Quiet
									0	0	0	16		PRO: Quiet
291	17	16	43	92	4	10682	N10	W62	0	0	0	17	Q	SOL: Quiet
						10682	S14	E24	0	0	0	17	Q	MAG: Quiet
									0	0	0	17		PRO: Quiet

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

OCTOBER 2004

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)
292	18	17	51	92	3	10682	S14	E10	0	0	0	18	Q	SOL: Quiet
						10683	S09	E22	0	0	0	18	Q	MAG: Quiet
						10684	S04	E65	0	0	0	18	Q	PRO: Quiet
293	19	18	86	96	4	10682	S13	W03	0	0	0	19	Q	SOL: Quiet
						10683	S10	E08	0	0	0	19	Q	MAG: Quiet
						10684	S05	E53	0	0	0	19	Q	PRO: Quiet
						10685	S05	E26	0	0	0	19	Q	
						10686	S20	E43	0	0	0	19	Q	
294	20	19	86	99	6	10682	S13	W19	0	0	0	20	Q	SOL: Eruptive
						10683	S11	W05	0	0	0	20	Q	MAG: Quiet
						10684	S04	E41	0	0	0	20	Q	PRO: Quiet
						10685	S06	E12	0	0	0	20	Q	
						10686	S20	E31	0	0	0	20	Q	
						10687	N10	E79	0	0	0	20	Q	
295	21	20	129	111	10	10682	S13	W33	1	0	0	21	E	SOL: Active
						10683	S11	W18	0	0	0	21	Q	MAG: Quiet
						10684	S05	E27	0	0	0	21	Q	PRO: Quiet
						10685	S06	W02	0	0	0	21	Q	
						10686	S20	E17	0	0	0	21	Q	
						10687	N10	E65	0	1	0	21	E	
						10688	S08	W48	0	0	0	21	Q	
296	22	21	112	112	8	10682	S13	W46	2	0	0	22	E	SOL: Eruptive
						10683	S11	W31	0	0	0	22	Q	MAG: Quiet
						10684	S05	E14	0	0	0	22	Q	PRO: Quiet
						10685	S06	W15	0	0	0	22	Q	
						10687	N10	E52	7	0	0	22	E	
						10688	S08	W61	0	0	0	22	Q	
						10689	N12	E74	0	0	0	22	Q	
297	23	22	134	123	5	10682	S13	W59	1	0	0	23	E	SOL: Active
						10683	S11	W44	0	0	0	23	Q	MAG: Quiet
						10684	S05	E01	0	0	0	23	Q	PRO: Quiet
						10685	S06	W28	0	0	0	23	Q	
						10687	N10	E39	3	1	0	23	E	
						10688	S08	W74	0	0	0	23	Q	
						10689	N12	E61	0	0	0	23	Q	
						10690	N00	E78	0	0	0	23	Q	
298	24	23	141	132	2	10682	S13	W73	0	0	0	24	E	SOL: Active
						10684	S03	W12	1	0	0	24	Q	MAG: Quiet
						10685	S06	W45	0	0	0	24	Q	PRO: Quiet
						10687	N11	E28	3	0	0	24	E	
						10688	S08	W87	0	0	0	24	Q	
						10689	N12	E48	0	0	0	24	Q	
						10690	N00	E66	0	0	0	24	Q	
						10691	N16	E69	0	0	0	24	Q	
299	25	24	178	135	8	10682	S12	W86	0	0	0	25	E	SOL: Active
						10684	S04	W27	0	0	0	25	Q	MAG: Quiet
						10685	S07	W56	0	0	0	25	Q	PRO: Quiet
						10687	N12	E15	5	1	0	25	E	
						10689	N11	E34	0	0	0	25	Q	
						10690	N00	E53	0	0	0	25	Q	
						10691	N15	E59	0	0	0	25	E	
						10692	S17	E30	0	0	0	25	Q	
300	26	25	146	140	13	10684	S04	W39	0	0	0	26	Q	SOL: Active
						10687	N12	E03	3	0	0	26	E	MAG: Quiet
						10689	N12	E22	0	0	0	26	Q	PRO: Quiet
						10690	S01	E40	0	0	0	26	Q	
						10691	N15	E48	0	0	0	26	E	
						10692	S18	E16	0	0	0	26	Q	

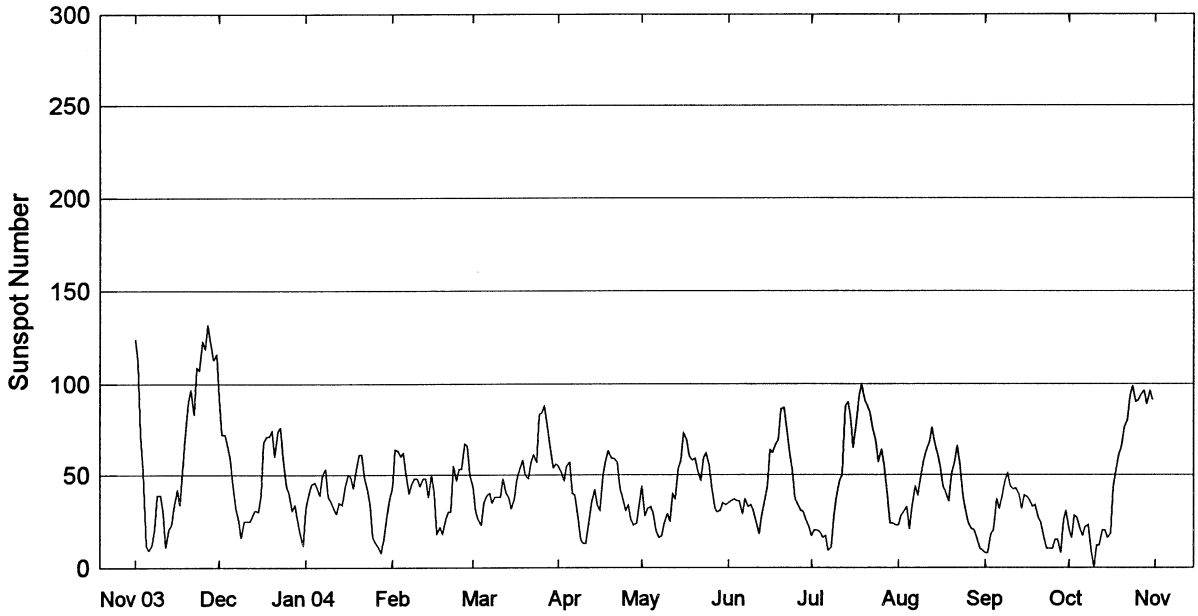
A L E R T P E R I O D S
The International Space Environment Service

OCTOBER 2004

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)
301	27	26	124	137	2	10684	S05	W54	0	0	0	27	Q	SOL: Eruptive
						10687	N12	W11	1	0	0	27	E	MAG: Quiet
						10689	N12	E10	0	0	0	27	Q	PRO: Quiet
						10690	N00	E26	0	0	0	27	Q	
						10691	N15	E32	0	0	0	27	Q	
						10692	S18	E03	0	0	0	27	Q	
302	28	27	150	130	3	10684	S04	W69	0	0	0	28	Q	SOL: Eruptive
						10687	N12	W24	1	0	0	28	E	MAG: Quiet
						10689	N12	W03	0	0	0	28	Q	PRO: Quiet
						10690	N00	E15	0	0	0	28	Q	
						10691	N16	E20	0	0	0	28	Q	
						10692	S18	W11	0	0	0	28	Q	
						10693	S13	E72	0	0	0	28	Q	
303	29	28	150	133	4	10684	S05	W83	0	0	0	29	Q	SOL: Eruptive
						10687	N12	W37	0	0	0	29	E	MAG: Quiet
						10689	N12	W17	0	0	0	29	Q	PRO: Quiet
						10690	S01	W01	0	0	0	29	Q	
						10691	N15	E04	1	0	0	29	Q	
						10692	S18	W27	0	0	0	29	Q	
						10693	S14	E61	4	0	0	29	E	
						10694	N16	E22	0	0	0	29	Q	
304	30	29	130	129	8	10684	S04	W94	0	0	0	30	Q	SOL: Eruptive
						10687	N12	W50	0	0	0	30	E	MAG: Quiet
						10689	N12	W30	0	0	0	30	Q	PRO: Quiet
						10690	N00	W14	0	0	0	30	Q	
						10691	N13	W13	1	0	0	30	Q	
						10692	S18	W42	0	0	0	30	Q	
						10693	S14	E46	3	0	0	30	E	
						10694	N17	E07	0	0	0	30	Q	
305	31	30	153	136	17	10687	N12	W66	0	0	0	31	Q	SOL: Active
						10689	N12	W43	0	0	0	31	Q	MAG: Quiet
						10690	N01	W27	0	0	0	31	Q	PRO: Warning
						10691	N14	W25	7	4	1	31	P	
						10692	S19	W54	0	0	0	31	Q	
						10693	S16	E34	0	0	0	31	E	
						10694	N15	W06	0	0	0	31	Q	
						10695	S15	E68	0	0	0	31	Q	

STRATWARM ALERTS - NONE

International Relative Sunspot Numbers
Nov 2003- Oct 2004

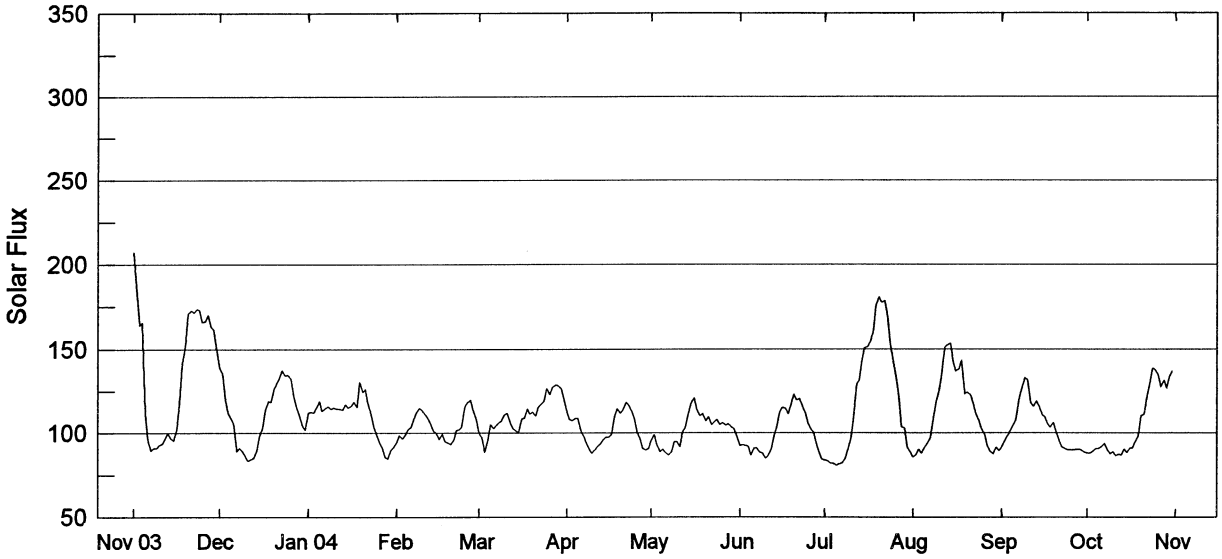


Day	Nov 03	Dec	Jan 04	Feb	Mar	Apr	May	Jun	Jul*	Aug*	Sep*	Oct*
1	124	92	32	43	44	55	44	35	17	23	8	20
2	112	72	40	64	31	51	28	36	20	28	8	16
3	72	72	45	63	26	47	32	37	20	30	18	28
4	52	66	46	60	23	55	33	36	19	33	20	27
5	12	59	44	62	35	57	29	36	16	21	37	21
6	9	45	39	51	39	40	20	29	17	33	32	17
7	12	32	50	40	40	39	16	37	9	44	38	22
8	21	26	53	45	35	27	17	33	11	39	47	23
9	39	16	38	48	38	15	24	34	27	50	51	10
10	39	25	36	48	38	13	29	31	38	58	44	0
11	30	25	32	44	38	13	25	24	47	63	42	12
12	11	25	29	48	48	25	40	18	50	68	43	12
13	21	28	35	48	40	35	37	28	88	76	39	20
14	23	31	34	38	38	42	54	35	90	68	32	20
15	33	30	43	50	32	34	58	44	82	61	39	16
16	42	39	50	41	37	31	73	64	65	54	38	18
17	34	68	49	18	48	50	69	62	79	44	36	44
18	52	71	43	22	54	58	60	67	93	41	33	54
19	70	71	54	18	58	63	58	69	100	36	34	60
20	90	74	61	26	50	59	59	86	91	50	27	66
21	97	60	61	30	48	59	52	87	88	57	24	76
22	83	74	49	30	57	57	47	76	84	66	17	80
23	109	76	42	55	61	43	59	61	74	56	10	93
24	107	59	34	47	57	38	62	52	69	38	10	99
25	123	44	16	53	83	31	55	37	57	31	10	90
26	119	40	13	53	84	34	43	34	64	24	15	91
27	132	31	11	67	88	26	32	31	55	21	15	94
28	121	34	8	66	76	23	30	30	39	20	8	96
29	113	26	16	50	66	24	31	26	24	16	25	89
30	116	17	27		54	34	35	22	24	10	31	96
31		12	38		56		34		23	9		91
Mean	67.3	46.5	37.7	45.8	49.1	39.3	41.5	43.2	51.0	40.9	27.7	48.4

* = Provisional.

Penticton 2800 MHz (10.7cm) Solar Flux
Nov 2003 - Oct 2004

Adjusted to 1 AU



Day	Nov 03	Dec	Jan 04	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct
1	207.2	139.3	112.2	94.5	100.0	112.6	95.7	92.5	84.0	85.8	91.5	88.1
2	187.4	135.4	112.6	98.5	97.1	108.1	99.1	93.0	83.4	87.0	95.6	88.1
3	164.2	120.3	112.3	96.6	88.9	107.4	92.8	92.6	82.2	90.1	98.3	89.1
4	165.6#	112.5	115.5	98.6	95.9	109.0	88.9	92.0	82.1	87.9	100.9	90.7
5	112.1	108.5	119.0	102.5	105.0	108.9	90.1	87.0	80.9	91.5	104.8	90.8
6	96.1	105.7	113.4	103.7	102.9	101.6	88.0	91.0	81.6	93.6	108.2	92.0
7	89.4	89.3	114.9	108.1	104.6	98.4	86.8	91.2	81.9	97.3	120.7	93.7
8	91.0	90.9	116.1	113.1	106.3	93.8	88.9	88.6	84.6	107.7	126.3	90.4
9	91.2	89.4	114.4	114.7	107.2	90.3	95.0	87.9	89.6	117.0	132.8	87.7
10	92.8	86.5	115.3	113.5	111.1	88.1	94.8	85.0	96.4	124.7	131.8	88.7
11	93.7	83.4	114.6	111.2	111.7	90.0	92.0	86.5	107.9	134.3	117.9	86.6
12	96.7	84.5	114.4	109.3	106.2	91.8	100.9	90.7	129.2	151.1	116.0	87.2
13	100.0	85.0	114.1	105.1	102.6	93.6	103.0	98.2	131.6#	152.5	119.1	86.7+
14	96.8	89.5	117.1	101.1	101.3	95.8	112.1	103.1	142.6	153.1	116.0	90.2
15	95.6	97.7	115.2	99.6	100.3	97.4	117.9	112.9	150.5	142.4	110.8	88.6
16	102.0	103.0	116.4	96.3	108.5	97.6	121.0	115.1	151.3	137.0	109.4	91.1
17	118.2	113.8	118.6	99.5	108.8	99.0	113.7	114.9	154.1	138.3	105.5	91.2
18	141.0	119.1	115.6	95.4	114.4	110.0	110.4	111.3	160.2	143.3	103.6	95.5
19	151.5	118.6	130.3	94.2	111.3	114.5	111.4	116.4	175.8	123.5	106.1	98.2
20	171.0	125.9	124.8	93.2	112.7	111.8	107.2	123.0	180.8	124.2	101.3	110.3
21	172.8	129.1	126.0	96.0	110.4	113.9	109.6	119.6	177.7	122.8	95.6	111.0
22	171.9	133.2	117.9	101.7	115.6	118.4	105.0	120.5	178.4	117.8	92.0	121.2
23	173.8	137.4	111.6	102.1	117.6	116.6	106.6	116.2	170.4	111.9	90.8	130.2
24	172.8	134.4	104.1	103.4	119.0	112.9	107.9	111.9	151.8	107.2	89.9	138.7
25	166.3	134.6	99.1	116.1	126.4	108.4	105.1	106.3	143.9*	102.5	89.9	137.9+
26	166.5	132.7	95.0	118.4	123.2	100.9	106.1	102.2	132.0	99.5	89.9	135.0
27	170.1	122.4#	90.8	119.8	127.2	96.4	104.6	100.4	121.8	92.3	90.2	127.8
28	163.2	115.1	85.9	113.6	128.6	90.7	105.2	92.4	103.8	88.9	90.2	131.6
29	161.4	110.7	84.8	108.0	128.3	89.8	104.0	87.9	102.8	87.7	90.0	127.0
30	148.6	104.2	89.9		126.4	90.8	102.4	84.5	91.4	91.6	88.4	134.4
31		102.1	91.6		121.0		98.1		89.0	89.7		137.1
Mean	137.7	111.4	110.4	104.4	111.0	101.9	102.1	100.5	122.4	112.7	104.1	105.1

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

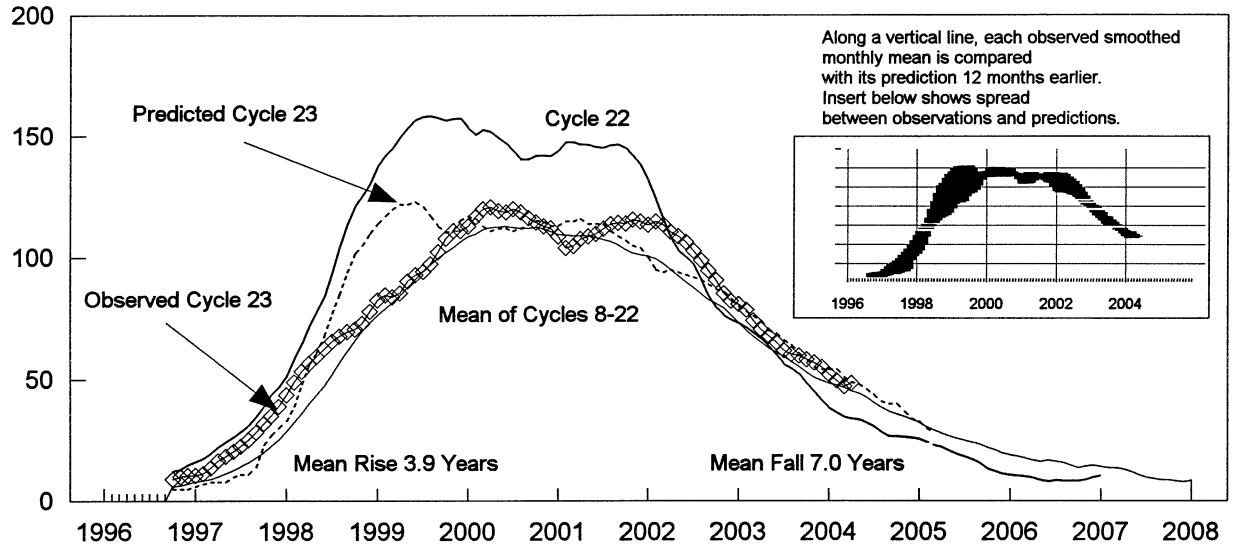
October 2004

	Day	Bartels	Sunspot		Obs Flux		-----Solar Flux Adjusted to 1 Astronomical Unit--------							
	of	Cycle	Numbers		Penticton	SGMR	SGMR	SGMR	Penticton	SGMR	SGMR	SGMR	SGMR	SGMR
Day	Year	Day	Int	Amer	(2800)	(15400)	(8800)	(4995)	(2800)	(2695)	(1415)	(610)	(410)	(245)
1	275	14	20	21	88.0	519	215	143	88.1	90	57	36	27	9
2	276	15	16	19	88.0	512	223	146	88.1	90	57	36	27	10
3	277	16	28	30	89.0	523	225	144	89.1	91	58	36	26	8
4	278	17	27	29	90.7	520	213	145	90.7	96	59	36	26	9
5	279	18	21	23	90.8	518	230	149	90.8	94	60	36	27	10
6	280	19	17	21	92.1	518	231	150	92.0	96	59	36	27	9
7	281	20	22	22	93.8	512	224	149	93.7	95	59	35	29	10
8	282	21	23	13	90.6	566	226	154	90.4	96	59	34	25	9
9	283	22	10	6	88.0	524	217	148	87.7	95	58	35	26	8
10	284	23	0	1	89.0	561	222	145	88.7	94	59	34	26	8
11	285	24	12	1	86.9	511	224	145	86.6	91	55	34	26	8
12	286	25	12	11	87.6	409	196	132	87.2	91	56	35	30	11
13	287	26	20	18	87.1*	504	209	142	86.7*	88	54	35	27	8
14	288	27	20	16	90.7	511	215	146	90.2	90	55	35	27	10
15	289	1	16	16	89.2	485	224	145	88.6	92	55	33	27	10
16	290	2	18	26	91.7	489	210	146	91.1	97	---	34	26	8
17	291	3	44	46	91.9	514	218	148	91.2	98	58	35	25	7
18	292	4	54	56	96.2	512	230	153	95.5	101	60	37	28	8
19	293	5	60	64	99.1	479	218	143	98.2	102	61	37	27	9
20	294	6	66	70	111.3	507	240	167	110.3	119	65	39	28	9
21	295	7	76	71	112.1	507	245	171	111.0	116	69	38	28	11
22	296	8	80	83	122.5	517	251	181	121.2	128	72	37	28	9
23	297	9	93	87	131.6	530	271	206	130.2	157	85	39	30	12
24	298	10	99	101	140.2	515	245	---	138.7	145	77	41	33	14
25	299	11	90	99	139.6*	516	252	---	137.9*	134	78	41	29	14
26	300	12	91	100	136.7	510	247	---	135.0	141	78	38	29	11
27	301	13	94	104	129.5	526	250	---	127.8	137	79	40	33	25
28	302	14	96	100	133.4	526	244	181	131.6	133	79	42	33	14
29	303	15	89	93	128.8	518	247	195	127.0	134	81	44	41	35
30	304	16	96	97	136.4	477	258	189	134.4	144	80	40	40	35
31	305	17	91	97	139.2	516	241	197	137.1	145	79	40	33	17
MEAN			48.4	49.7	105.9	511	231	157	105.1	110	65	37	28	12

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

* = 1700UT Reading, 2000UT not available.

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	44	43	41	39	37	36	35	34	42
					(3)	(5)	(7)	(10)	(11)	(12)	(14)	(15)	(6)
2005	32	31	30	28	27	26	25	24	23	22	21	21	26
	(17)	(17)	(18)	(18)	(18)	(18)	(17)	(17)	(18)	(17)	(17)	(16)	(17)
2006	20	19	18	17	17	16	15	15	14	14	13	12	16
	(15)	(15)	(16)	(16)	(17)	(17)	(16)	(15)	(14)	(14)	(14)	(14)	(15)
2007	11	11	11	11	11	12	12	13	14	15	15	16	13
	(13)	(12)	(11)	(10)	(10)	(11)	(12)	(13)	(15)	(16)	(18)	(20)	(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.**

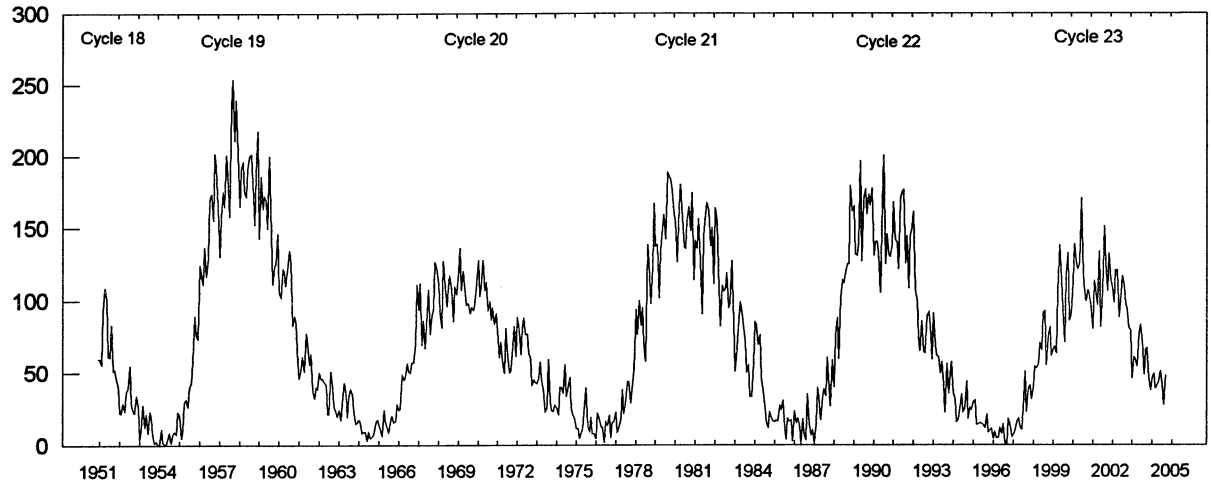
+ April 2000 marks Cycle 23 maximum.

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 Mar 2004 and on provisional numbers thereafter. Table entries with numbers in parentheses below them denote predictions by the McNish-Lincoln method. (See page 9 in the Jul 1987 supplement to *Solar-Geophysical Data.*) Adding the number in parentheses to the predicted value generates the upper limit of the 90% confidence interval. Subtracting the number from the predicted value generates the lower limit. Consider, for example, the April 2005 prediction. There exists a 90% chance that in April, the actual smoothed number will fall somewhere between 10 and 46.

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

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

Mean Monthly Sunspot Numbers
Jan 1951 - Oct 2004



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	48.4			42.5	

Values are preliminary after June, 2004. For the yearly means, each 'M' marks a sunspot cycle maximum and each 'm' a minimum.

Hα SOLAR FLARES

OCTOBER 2004

Sta	Day	Start (UT)	Max (UT)	End (UT)	Lat	CMD	NOAA/ USAF Region	CMP Mo	CMP Day	Dur (Min)	Imp Opt	Imp Xray	Obs See	Obs Type	Area Measurement Time (UT)	Area Measurement Apparent (10-6 Disk)	Area Measurement Corr (Sq Deg)	Remarks
GOES	02	1327	1332	1342			10675			15	B	1.5						1.0E-04
GOES		1413	1420	1424			10675			11	B	1.6						8.6E-05
GOES	03	1814	1818	1822			10676			8	B	1.1						4.6E-05
GOES		2115	2120	2124			10676			9	B	3.7						1.3E-04
GOES	04	0039	0045	0049			10676			10	B	1.2						6.3E-05
GOES		1303	1325	1341						38	C	2.6						3.6E-03
GOES		1633	1637	1644						11	B	1.3						8.1E-05
GOES		2156	2202	2204			10678			8	B	3.6						1.0E-04
GOES	05	0045	0056	0107						22	C	1.4						1.2E-03
GOES		1730	1734	1739						9	B	1.0						5.0E-05
GOES		2200	2204	2207						7	B	1.5						5.3E-05
GOES		2306	2317	2327						21	B	9.0						7.6E-04
GOES	06	0242	0249	0258						16	B	2.3						2.0E-04
GOES		1819	1834	1849						30	C	2.5						2.9E-03
GOES	07	0730	0734	0739			10678			9	B	1.3						6.1E-05
GOES		0944	0949	0954			10675			10	B	1.9						8.7E-05
GOES	08	0135	0138	0140						5	B	1.4						3.7E-05
GOES		0849	0852	0854			10678			5	B	2.9						6.6E-05
GOES		1832	1840	1854						22	B	3.1						3.8E-04
GOES		2053	2057	2100			10678			7	B	2.4						8.1E-05
GOES	09	0054	0058	0103			10678			9	B	2.4						1.1E-04
GOES		0126	0135	0139						13	B	2.0						1.5E-04
GOES		0421	0431	0439						18	C	1.2						1.1E-03
GOES		0911	0916	0924			10680			13	B	3.1						2.0E-04
GOES		1002	1009	1012			10680			10	B	2.7						1.4E-04
GOES		1047	1052	1059			10680			12	B	8.2						4.3E-04
GOES		1345	1349	1352			10680			7	B	4.4						1.4E-04
GOES		1441	1449	1504			10680			23	B	5.4						5.7E-04
GOES		1546	1555	1603			10680			17	B	8.0						5.3E-04
GOES		1616	1619	1625			10680			9	B	4.9						2.3E-04
GOES		1658	1705	1708			10680			10	B	5.0						2.3E-04
GOES		1741	1756	1805						24	B	4.3						4.6E-04
GOES		1907	1913	1917			10680			10	C	1.1						4.4E-04
GOES		2011	2014	2018						7	B	2.7						1.0E-04
GOES		2032	2044	2055			10680			23	C	1.2						1.2E-03
GOES		2137	2143	2147			10680			10	B	6.4						2.8E-04
GOES	10	0321	0328	0334			10680			13	C	2.0						1.2E-03
GOES		0452	0459	0515						23	B	3.7						4.2E-04
GOES		0621	0627	0633						12	B	5.7						3.7E-04
GOES		0641	0649	0656			10680			15	B	8.7						6.7E-04
GOES		1329	1406	1525						116	B	4.9						3.0E-03
GOES	11	1152	1156	1200						8	B	2.6						7.8E-05
GOES		2011	2016	2022						11	B	1.1						6.7E-05
GOES		2351	2356	0000						9	B	2.0						8.3E-05
GOES	12	0503	0507	0518						15	B	1.1						8.7E-05
GOES		1439	1449	1456						17	B	1.3						1.1E-04
GOES		2259	2304	2306			10681			7	B	1.1						3.4E-05
GOES	13	0104	0107	0109						5	B	1.0						2.7E-05
GOES		0346	0354	0403						17	B	4.4						3.1E-04
GOES		1347	1359	1411						24	B	5.1						5.4E-04
GOES		1557	1600	1604						7	B	1.0						3.8E-05
GOES		2108	2114	2117			10682			9	B	2.2						9.5E-05
GOES		2120	2206	2220			10682			60	C	1.0						1.9E-03
GOES	14	0328	0349	0356			10682			28	C	1.7						1.4E-03
GOES		0744	0749	0753			10682			9	B	3.6						1.5E-04
GOES		0959	1004	1010			10682			11	B	7.8						4.2E-04

Hα S O L A R F L A R E S

OCTOBER 2004

Sta	Day	Start (UT)	Max (UT)	End (UT)	Lat	CMD	NOAA/ USAF Region	CMP Mo	CMP Day	Dur (Min)	Imp Opt	Imp Xray	Imp See	Obs Type	Area Measurement Time (UT)	Area Measurement Apparent (10-6 Disk)	Area Measurement Corr (Sq Deg)	Remarks
GOES	14	1633	1636	1639						6		B 1.4						4.4E-05
GOES		1858	1902	1904			10682			6		B 1.6						4.1E-05
GOES		1943	1952	2005			10682			22		B 4.1						4.2E-04
GOES	15	0702	0705	0712						10		B 1.3						7.1E-05
GOES		0908	0914	0922						14		B 1.8						1.4E-04
GOES		1106	1109	1113						7		B 1.3						4.7E-05
GOES		1216	1222	1227						11		B 2.9						1.4E-04
GOES		1523	1532	1543						20		B 2.7						2.5E-04
GOES	16	0205	0211	0216						11		B 1.1						6.7E-05
GOES		0422	0425	0429						7		B 2.2						7.6E-05
GOES		0613	0618	0621						8		B 2.1						6.7E-05
GOES		0940	0943	0945						5		B 1.3						3.4E-05
GOES		1541	1552	1555						14		B 1.5						1.1E-04
GOES		1842	1849	1857						15		B 1.8						1.4E-04
GOES		1950	1956	2000						10		B 6.6						2.2E-04
GOES		2113	2120	2129						16		B 4.0						2.9E-04
GOES	17	0030	0033	0035						5		B 1.3						3.1E-05
GOES		0131	0134	0137						6		B 4.7						1.1E-04
GOES	18	1134	1137	1139						5		B 2.2						4.5E-05
GOES		1350	1400	1405						15		B 2.3						1.8E-04
GOES		1602	1606	1610						8		B 2.9						1.3E-04
GOES		1855	1902	1924						29		B 2.5						4.1E-04
GOES		2330	2336	2346			10682			16		B 3.6						3.1E-04
GOES	19	0230	0254	0310			10682			40		C 1.0						2.1E-03
GOES		1157	1204	1214						17		B 3.9						3.6E-04
GOES		1419	1428	1437			10682			18		C 1.9						1.2E-03
GOES		1849	1857	1904			10682			15		B 5.1						3.9E-04
GOES		2021	2025	2027			10682			6		B 2.3						6.3E-05
GOES		2105	2108	2110			10682			5		B 3.0						7.3E-05
GOES		2156	2159	2201						5		B 2.3						6.0E-05
GOES		2225	2229	2231			10682			6		B 4.7						1.5E-04
GOES		2336	2339	2342						6		B 3.9						1.2E-04
GOES		2347	2357	2403			10682			16		B 5.8						4.5E-04
GOES	20	0032	0036	0043			10682			11		B 7.2						4.1E-04
GOES		0138	0141	0145						7		B 6.2						2.3E-04
GOES		0209	0213	0216	S13	W23	10682			7	SF	C 4.5						1.1E-03
LEAR		0212	0213	0227	S13	W23	10682	10	18.3	15	SF		3	E		31		F
GOES		1043	1051	1056			10687			13		M 2.6						1.0E-02
GOES		1231	1236	1240			10682			9		B 3.6						1.7E-04
GOES	21	0018	0040	0052			10687			34		C 7.8						9.6E-03
LEAR		0027	0030	0037	N11	E63	10687	10	25.7	10	SF		3	E		24		F
LEAR		0038	0041	0100	N11	E63	10687	10	25.8	22	SF		3	E		31		F
GOES		0210	0215	0218	N11	E62	10687			8	SF	C 4.3						1.1E-03
LEAR		0213	0215	0221	N11	E62	10687	10	25.7	8	SF		3	E		33		F
GOES		0400	0408	0411			10687			11		B 4.9						2.8E-04
GOES		0505	0512	0515	N05	E60	10687			10	SF	C 2.0						6.8E-04
LEAR		0509	0513	0515	N05	E60	10687	10	25.7	6	SF		3	E		12		F
GOES		0644	0653	0657	N11	E60	10687			13	SF	C 5.2						1.9E-03
LEAR		0648	0653	0657	N11	E60	10687	10	25.8	9	SF		3	E		72		F
GOES		0921	0934	0941			10687			20		B 9.8						8.3E-04
GOES		1401	1406	1408	N08	E54	10687			7	SF	B 9.9						2.8E-04
HOLL		1405	1405	1408	N08	E54	10687	10	25.6	3	SF		3	E		17		H
GOES		1427	1442	1504	S14	W43	10682			37	SF	C 1.7						2.8E-03
HOLL		1436	1446	1449	S14	W43	10682	10	18.3	13	SF		3	E		11		FH
GOES		1512	1522	1527	S12	W40	10682			15	SF	C 4.3						2.5E-03
HOLL		1521	1521	1533	S12	W40	10682	10	18.6	12	SF		3	E		34		FH
HOLL		1829	1829	1835	N11	E50	10687	10	25.5	6	SF		3	E		21		F
GOES		1924	1948	1956			10687			32		C 9.9						1.0E-02
GOES	22	0146	0153	0158	N09	E47	10687			12	SF	B 6.8						4.3E-04
GOES		0455	0517	0533			10682			38		B 9.4						1.6E-03

Hα S O L A R F L A R E S

OCTOBER 2004

Sta	Day	Start (UT)	Max (UT)	End (UT)	Lat	CMD	NOAA/ USAF Region	CMP Mo	CMP Day	Dur (Min)	Imp Opt	Imp Xray	Imp See	Obs Type	Area Measurement Time (UT)	Area Measurement Apparent (10-6 Disk)	Area Measurement Corr (Sq Deg)	Remarks
GOES	22	0622	0625	0627			10687			5		B 7.3						1.9E-04
GOES		0752	0811	0816	N09	E44	10687			24	1N	M 2.1						9.7E-03
LEAR		0804	0811	0836	N09	E44	10687	10	25.6	32	1N		3	E		225		FE
SVTO		0808E	0810U	0831D	N11	E45	10687	10	25.7	23D	1F		2	E		200		FH
GOES		1145	1149	1152						7		B 9.5						3.2E-04
GOES		2152	2156	2158	S13	W62	10682			6	SF	C 1.0						2.4E-04
HOLL		2156	2156	2201	S13	W62	10682	10	18.2	5	SF		3	E		15		
GOES		2209	2213	2216	N15	E45	10687			7	SF	C 5.1						1.3E-03
HOLL		2212	2213	2220	N15	E45	10687	10	26.3	8	SF		3	E		62		F
GOES		2340	2343	2352						12		B 6.3						4.3E-04
GOES	23	0059	0103	0108			10687			9		B 8.0						3.5E-04
GOES		0131	0134	0138	S07	W03	10684			7	SF	B 6.1						2.2E-04
LEAR		0133	0135	0142	S07	W03	10684	10	22.8	9	SF		3	E		34		F
GOES		0226	0230	0233						7		B 7.5						2.7E-04
GOES		0351	0354	0356						5		B 8.5						2.1E-04
GOES		0357	0400	0403						6		C 1.8						4.5E-04
GOES		0506	0515	0520						14		B 8.6						6.2E-04
GOES		0720	0724	0727			10682			7		C 3.2						8.6E-04
GOES		0808	0812	0817			10682			9		C 1.3						6.3E-04
GOES		1136	1139	1145						9		B 7.4						3.7E-04
GOES		1532	1536	1541			10682			9		B 6.8						3.2E-04
GOES		1622	1654	1708	N11	E33	10687			46	SF	C 9.9						1.5E-02
HOLL		1629	1633	1727	N11	E33	10687	10	26.2	58	SF		3	E		52		FH
GOES		1916	1922	1924	N14	E35	10687			8	SF	C 8.0						1.8E-03
HOLL		1919	1921	1941	N14	E35	10687	10	26.4	22	SF		3	E		60		FH
HOLL		2304	2304	2308	N14	E33	10687	10	26.4	4	SF		3	E		13		
GOES		2351	2354	2356			10687			5		B 8.5						2.2E-04
GOES	24	0128	0142	0144	N12	E28	10687			16	SF	C 1.6						8.9E-04
LEAR		0142	0142	0147	N12	E28	10687	10	26.2	5	SF		3	E		20		
GOES		0223	0227	0230			10687			7		C 1.9						5.2E-04
GOES		0245	0248	0252			10691			7		B 7.1						2.7E-04
GOES		0254	0303	0313	N11	E19	10687			19	SF	C 1.7						1.5E-03
LEAR		0304E	0304U	0331	N10	E20	10687	10	25.6	27D	SF		1	E		36		F
GOES		0346	0352	0356			10687			10		B 7.1						3.8E-04
GOES		0409	0412	0414			10687			5		B 8.6						2.0E-04
GOES		0425	0428	0430			10687			5		B 9.5						2.4E-04
GOES		0550	0553	0559						9		B 7.1						3.3E-04
GOES		0656	0713	0726			10691			30		C 2.6						3.7E-03
GOES		1138	1143	1155			10682			17		B 7.0						6.3E-04
GOES		1353	1357	1406			10682			13		B 7.0						4.8E-04
GOES		1704	1709	1711	N12	E19	10687			7	SF	C 1.0						3.2E-04
HOLL		1708	1709	1712	N12	E19	10687	10	26.1	4	SF		3	E		18		
GOES		1821	1824	1827			10682			6		C 2.1						5.7E-04
HOLL		1956	2000	2009	N11	E19	10687	10	26.3	13	SF		3	E		15		F
GOES		2017	2028	2035	N10	E15	10687			18	1N	M 2.3						1.5E-02
HOLL		2020	2025	2144	N10	E15	10687	10	26.0	84	1N		3	E		130		UF
GOES		2144	2151	2157			10682			13		C 5.5						3.1E-03
GOES	25	0238	0252	0303	N15	E63	10691			25	SF	C 4.2						4.2E-03
GOES		0425	0430	0434						9		B 9.8						4.8E-04
GOES		0711	0716	0720	N09	E10	10687			9	SF	C 2.4						8.0E-04
LEAR		0715	0716	0723	N09	E10	10687	10	26.0	8	SF		3	E		27		F
GOES		0957	1007	1013			10687			16		C 2.3						1.5E-03
GOES		1015	1031	1042	N09	E07	10687			27	SF	C 6.8						6.8E-03
SVTO		1035	1035	1041	N09	E07	10687	10	26.0	6	SF		3	E		17		
GOES		1402	1417	1425			10687			23		C 2.1						1.7E-03
GOES		1429	1442	1459			10687			30		C 4.4						5.7E-03
GOES		1713	1742	1754			10687			41		C 1.1						1.9E-03
GOES		2053	2056	2058			10691			5		B 5.5						1.3E-04
GOES		2142	2217	2345			10687			123		C 2.3						1.2E-02
LEAR		2259	2304	2317	N08	E03	10687	10	26.2	18	SF		3	E		11		
GOES	26	0243	0250	0258			10687			15		B 7.4						5.4E-04
GOES		0453	0501	0505	N11	W06	10687			12	SF	C 1.6						7.1E-04
LEAR		0500	0501	0505	N11	W06	10687	10	25.7	5	SF		3	E		14		F
GOES		1233	1244	1252						19		B 7.0						6.7E-04

Hα SOLAR FLARES

OCTOBER 2004

Sta	Day	Start (UT)	Max (UT)	End (UT)	Lat	CMD	NOAA/ USAF Region	Mo	Day	CMP	Dur (Min)	Imp Opt	Xray	See	Obs Type	Area Measurement Time (UT)	Area Measurement Apparent (10-6 Disk)	Area Measurement Corr (Sq Deg)	Remarks
GOES	26	1450	1453	1457			10691				7		B 6.4						2.4E-04
GOES		1500	1506	1510			10687				10		C 2.2						8.9E-04
GOES		1541	1544	1547							6		B 5.4						1.7E-04
GOES		1600	1606	1610							10		C 1.2						4.9E-04
GOES		1833	1839	1848			10691				15		C 1.3						1.1E-03
GOES		2218	2225	2229			10685				11		C 1.0						5.4E-04
GOES		2239	2245	2248			10687				9		C 1.3						5.6E-04
GOES	27	0100	0105	0107	N11	W17	10687				7	SF	B 8.0						2.7E-04
LEAR		0103	0103	0108	N11	W17	10687	10	25.8		5	SF		3	E		14		
GOES		0118	0123	0126							8		B 7.7						2.7E-04
GOES		0554	0559	0605			10687				11		C 1.1						6.2E-04
GOES		1433	1437	1440							7		B 6.7						2.6E-04
GOES		1525	1529	1531							6		B 9.3						2.7E-04
GOES		1958	2004	2011			10693				13		B 9.1						6.3E-04
GOES		2057	2102	2107			10691				10		C 1.7						7.1E-04
GOES		2315	2321	2325			10693				10		C 1.3						5.8E-04
GOES	28	0036	0040	0046			10693				10		B 8.7						4.2E-04
GOES		0104	0117	0120	S13	E74	10693				16	SF	C 1.8						1.2E-03
GOES		0244	0249	0254			10693				10		B 5.9						3.1E-04
GOES		0306	0316	0323			10693				17		C 3.2						2.0E-03
GOES		0349	0352	0354			10693				5		C 1.7						3.7E-04
GOES		0417	0425	0428	S19	E72	10693				11	SF	C 2.2						9.9E-04
LEAR		0420	0424	0434	S19	E72	10693	11	2.7		14	SF		3	E		41		
GOES		0501	0505	0512			10693				11		B 6.8						4.0E-04
GOES		0602	0606	0609	S14	E73	10693				7	2F	C 3.8						1.0E-03
SVTO		0606E	0606	0609	S11	E64	10693	11	2.1		3D	SF		3	E		25		
LEAR		0611E	0611U	0631	S16	E68	10693	11	2.4		20D	SF		3	E		56		F
GOES		0823	0826	0829			10693				6		B 6.0						1.8E-04
GOES		0843	0848	0904	N14	E11	10691				21	SF	C 1.0						1.2E-03
LEAR		0845	0847	0855	N14	E11	10691	10	29.2		10	SF		3	E		39		F
LEAR		0928	0928	0933	S12	E64	10693	11	2.2		5	SF		3	E		12		F
GOES		1006	1021	1030			10693				24		B 9.6						1.2E-03
GOES		1211	1214	1216			10693				5		B 8.0						1.9E-04
GOES		1242	1249	1306			10693				24		C 1.9						2.2E-03
GOES		1802	1805	1808			10687				6		B 9.0						2.6E-04
GOES		1933	1936	1938			10693				5		C 1.0						2.3E-04
LEAR		2357E	2359U	2418D	N14	E03	10691	10	29.2		21D	SF		3	E		13		
LEAR	29	0018	0018	0028	S17	E61	10693	11	2.6		10	SF		3	E		27		F
GOES		0911	0914	0917			10687				6		B 5.7						1.8E-04
GOES		1051	1055	1057			10693				6		C 1.1						3.1E-04
GOES		1240	1243	1245			10693				5		C 1.4						3.3E-04
GOES		1430	1436	1441	S12	E48	10693				11	SF	C 2.4						1.1E-03
HOLL		1434	1435	1445	S12	E48	10693	11	2.2		11	SF		3	E		26		
GOES		1626	1633	1635			10693				9		C 2.8						6.8E-04
GOES		1919	1922	1926	S13	E50	10693				7	SF	C 3.4						9.7E-04
HOLL		1921	1923	1928	S13	E50	10693	11	2.6		7	SF		3	E		32		F
GOES		2104	2116	2120	N12	W14	10691				16	SF	C 1.1						7.3E-04
HOLL		2116	2116	2122	N12	W14	10691	10	28.8		6	SF		3	E		11		FH
GOES		2133	2136	2138			10693				5		C 1.4						3.3E-04
GOES		2236	2246	2249			10693				13		C 1.0						5.9E-04
GOES		2345	2349	2352			10691				7		B 9.7						3.2E-04
GOES		2353	2359	2405			10691				12		C 3.1						1.7E-03
GOES	30	0039	0049	0053	N14	W13	10691				14	SF	C 9.7						3.9E-03
LEAR		0043	0050	0057	N14	W13	10691	10	29.0		14	SF		3	E		26		F
GOES		0209	0216	0222							13		C 1.6						1.0E-03
GOES		0323	0333	0337	N14	W15	10691				14	SF	M 3.3						1.1E-02
LEAR		0330	0333	0344	N14	W15	10691	10	29.0		14	SF		3	E		30		F
GOES		0411	0416	0421							10		C 1.2						5.7E-04
GOES		0451	0456	0503							12		B 9.2						5.3E-04
GOES		0550	0555	0559							9		C 1.1						4.4E-04
GOES		0608	0618	0622	N14	W21	10691				14	SF	M 4.2						1.6E-02
LEAR		0612	0617	0629	N14	W21	10691	10	28.7		17	SF		3	E		39		
GOES		0655	0701	0705	N16	W22	10691				10	SF	C 5.5						1.7E-03
LEAR		0659	0703	0709	N16	W22	10691	10	28.6		10	SF		3	E		22		F

Hα SOLAR FLARES

OCTOBER 2004

Sta	Day	Start (UT)	Max (UT)	End (UT)	Lat	CMD	NOAA/ USAF Region	CMP Mo	CMP Day	Dur (Min)	Imp Opt	Imp Xray	Imp See	Obs Type	Area Measurement Time (UT)	Area Measurement Apparent (10-6 Disk)	Area Measurement Corr (Sq Deg)	Remarks
GOES	30	0853	0858	0901						8		C 1.6						5.3E-04
GOES		0909	0928	0930	N15	W23	10691			21	1N	M 3.7						9.0E-03
LEAR		0925	0929	0943D	N15	W23	10691	10	28.6	18D	1N		3	E		125		
GOES		1020	1035	1041			10691			21		C 7.2						4.8E-03
GOES		1117	1122	1127			10691			10		C 1.0						5.3E-04
GOES		1138	1146	1150	N12	W18	10691			12	SF	X 1.2						3.7E-02
SVTO		1148E	1149U	1155D	N12	W18	10691	10	29.1	7D	SF		2	E		44		F
GOES		1245	1251	1303			10687			18		C 3.7						2.5E-03
GOES		1344	1350	1354						10		C 1.5						7.0E-04
GOES		1359	1406	1410			10691			11		C 2.6						1.3E-03
GOES		1431	1435	1437						6		B 9.8						3.1E-04
GOES		1441	1448	1453						12		C 2.6						1.4E-03
GOES		1551	1554	1557						6		C 1.4						4.6E-04
GOES		1618	1633	1637	N15	W20	10691			19	SN	M 5.9						2.8E-02
HOLL		1623	1633	1645	N15	W20	10691	10	29.2	22	SN		3	E		98		
GOES		2151	2159	2204			10691			13		C 2.4						1.4E-03
GOES	31	0042	0055	0101			10691			19		C 1.7						1.4E-03
GOES		0204	0226	0232			10691			28		M 1.1						6.9E-03
GOES		0523	0532	0539	N13	W34	10691			16	SF	M 2.3						1.3E-02
LEAR		0536	0539	0546	N13	W34	10691	10	28.7	10	SF		3	E		44		
GOES		0711	0721	0730			10693			19		C 1.0						1.1E-03
GOES		1100	1103	1109			10691			9		B 6.8						3.3E-04
GOES		1233	1244	1249						16		B 9.1						7.6E-04
GOES		1311	1321	1335						24		C 1.3						1.6E-03
GOES		1420	1425	1433						13		B 6.5						4.7E-04
GOES		1600	1604	1606						6		B 7.5						2.1E-04
GOES		1955	1959	2001	N12	W44	10691			6	SF	C 1.5						3.3E-04
HOLL		1958	1959	2003	N12	W44	10691	10	28.5	5	SF		3	E		29		
GOES		2108	2127	2138	N15	W35	10691			30	SF	C 7.0						6.4E-03
HOLL		2113	2113	2120	N15	W35	10691	10	29.2	7	SF		3	E		19		
HOLL		2123	2125	2143	N10	W43	10691	10	28.7	20	SF		3	E		27		F

"Remarks"

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

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

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

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

OCTOBER 2004

Day	Freq	Sta	Type		Start (UT)	Time of Maximum (UT)	Duration (Min)	Flux Density Peak (10 -22 W/m 2 Hz)	Mean	Int	Remarks
10	2695	SVTO	8	S	1023.0	1023.0	U	34.0			QL=4 ST=2 TYP=3
20	2695	SVTO	4	S/F	1046.0	1046.0U	5.0	71.0			QL=4 ST=2 TYP=3
	8800	SVTO	4	S/F	1047.0	1048.0U	4.0	220.0			QL=4 ST=2 TYP=3
21	8800	SGMR	8	S	1947.0	1947.0	U	21.0			QL=4 ST=2 TYP=3
	2695	SGMR	8	S	1947.0	1947.0	1.0	65.0			QL=4 ST=2 TYP=3
22	2695	SVTO	4	S/F	0807.0	0810.0	4.0	110.0			QL=4 ST=2 TYP=3
	2695	LEAR	8	S	0808.0	0810.0	2.0	96.0			QL=4 ST=2 TYP=3
	8800	SVTO	4	S/F	0808.0	0810.0	3.0	51.0			QL=4 ST=2 TYP=3
23	2695	SGMR	8	S	1632.0	1632.0	1.0	36.0			QL=4 ST=2 TYP=3
	8800	SGMR	8	S	1632.0	1632.0	1.0	42.0			QL=4 ST=2 TYP=3
	2695	PALE	4	S/F	1654.0	1654.0	3.0	56.0			QL=4 ST=2 TYP=3
25	2695	SVTO	8	S	1227.0	1227.0	U	42.0			QL=4 ST=2 TYP=3
29	8800	LEAR	8	S	2355.0	2355.0	U	75.0			QL=4 ST=2 TYP=3
	8800	PALE	8	S	2355.0	2355.0	1.0	93.0			QL=4 ST=2 TYP=3
30	2695	LEAR	8	S	0043.0	0043.0	U	87.0			QL=4 ST=2 TYP=3
	8800	LEAR	8	S	0043.0	0043.0	2.0	440.0			QL=4 ST=2 TYP=3
	8800	PALE	8	S	0043.0	0043.0	2.0	480.0			QL=4 ST=2 TYP=3
	2695	PALE	8	S	0043.0	0043.0	U	110.0			QL=4 ST=2 TYP=3
	8800	LEAR	8	S	0047.0	0048.0	1.0	84.0			QL=4 ST=2 TYP=3
	8800	PALE	8	S	0047.0	0048.0	2.0	87.0			QL=4 ST=2 TYP=3
	2695	PALE	8	S	0210.0	0211.0	2.0	110.0			QL=4 ST=2 TYP=3
	8800	LEAR	8	S	0211.0	0211.0	2.0	270.0			QL=4 ST=2 TYP=3
	2695	LEAR	8	S	0211.0	0211.0	U	83.0			QL=4 ST=2 TYP=3
	8800	PALE	8	S	0211.0	0211.0	2.0	300.0			QL=4 ST=2 TYP=3
	8800	LEAR	48	C	0329.0	0330.0	7.0	590.0			QL=4 ST=2 TYP=8
	2695	LEAR	8	S	0329.0	0330.0	1.0	120.0			QL=4 ST=2 TYP=3
	8800	PALE	48	C	0329.0	0330.0	5.0	480.0			QL=4 ST=2 TYP=8
	2695	PALE	8	S	0330.0	0330.0	U	55.0			QL=4 ST=2 TYP=3
	8800	LEAR	8	S	0413.0	0413.0	U	56.0			QL=4 ST=2 TYP=3
	8800	LEAR	8	S	0455.0	0455.0	U	66.0			QL=4 ST=2 TYP=3
	8800	LEAR	8	S	0552.0	0552.0	U	55.0			QL=4 ST=2 TYP=3
	8800	SVTO	48	C	0611.0	0614.0	8.0	630.0			QL=4 ST=2 TYP=8
	8800	LEAR	48	C	0612.0	0614.0	7.0	630.0			QL=4 ST=2 TYP=8
	2695	SVTO	4	S/F	0612.0	0614.0	4.0	170.0			QL=4 ST=2 TYP=3
	2695	LEAR	8	S	0613.0	0614.0	2.0	130.0			QL=4 ST=2 TYP=3
	8800	LEAR	4	S/F	0658.0	0659.0	3.0	470.0			QL=4 ST=2 TYP=3
	2695	SVTO	8	S	0658.0	0659.0	2.0	61.0			QL=4 ST=2 TYP=3
	8800	SVTO	4	S/F	0658.0	0659.0	3.0	470.0			QL=4 ST=2 TYP=3
	8800	SVTO	4	S/F	0855.0	0856.0	4.0	160.0			QL=4 ST=2 TYP=3
	8800	LEAR	8	S	0856.0	0856.0	U	140.0			QL=4 ST=2 TYP=3
	2695	SVTO	8	S	0856.0	0856.0	U	33.0			QL=4 ST=2 TYP=3
	2695	SVTO	48	C	0912.0	0915.0	5.0	160.0			QL=4 ST=2 TYP=8
	8800	LEAR	48	C	0915.0	0917.0	3.0	210.0			QL=4 ST=2 TYP=8
	2695	LEAR	48	C	0915.0	0915.0	2.0	100.0			QL=4 ST=2 TYP=8
	8800	SVTO	48	C	0915.0	0917.0	5.0	250.0			QL=4 ST=2 TYP=8
	8800	LEAR	4	S/F	0925.0	0927.0	3.0	270.0			QL=4 ST=2 TYP=3
	2695	SVTO	8	S	0925.0	0927.0	2.0	63.0			QL=4 ST=2 TYP=3
	8800	SVTO	4	S/F	0925.0	0927.0	3.0	310.0			QL=4 ST=2 TYP=3
	2695	SVTO	4	S/F	1023.0	1028.0	7.0	56.0			QL=4 ST=2 TYP=3
	8800	SVTO	48	C	1026.0	1029.0	9.0	110.0			QL=4 ST=2 TYP=8
	8800	SVTO	8	S	1119.0	1120.0	1.0	62.0			QL=4 ST=2 TYP=3
	2695	SVTO	8	S	1120.0	1120.0	U	68.0			QL=4 ST=2 TYP=3
	2695	SVTO	49	GB	1141.0	1144.0	7.0	720.0			QL=4 ST=2 TYP=6
	8800	SVTO	48	C	1141.0	1144.0	10.0	1500.0			QL=4 ST=2 TYP=8
	2695	SGMR	49	GB	1142.0	1144.0	5.0	590.0			QL=4 ST=2 TYP=6
	8800	SGMR	48	C	1142.0	1144.0	7.0	1400.0			QL=4 ST=2 TYP=8
	8800	SGMR	8	S	1249.0	1249.0	1.0	86.0			QL=4 ST=2 TYP=3
	2695	SGMR	8	S	1249.0	1250.0	1.0	130.0			QL=4 ST=2 TYP=3
	8800	SVTO	8	S	1249.0	1249.0	1.0	100.0			QL=4 ST=2 TYP=3
	2695	SVTO	8	S	1249.0	1250.0	2.0	170.0			QL=4 ST=2 TYP=3
	8800	SGMR	8	S	1254.0	1255.0	2.0	110.0			QL=4 ST=2 TYP=3
	8800	SVTO	4	S/F	1254.0	1255.0	5.0	120.0			QL=4 ST=2 TYP=3

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

OCTOBER 2004

Day	Freq	Sta	Type	Start (UT)	Time of Maximum (UT)	Duration (Min)	Flux Density Peak (10 -22 W/m 2 Hz)	Flux Density Mean (10 -22 W/m 2 Hz)	Int	Remarks
30	2695	SVTO	8 S	1254.0	1255.0	2.0	30.0			QL=4 ST=2 TYP=3
	8800	SVTO	8 S	1314.0	1315.0	1.0	34.0			QL=4 ST=2 TYP=3
	2695	SVTO	8 S	1315.0	1315.0	U	21.0			QL=4 ST=2 TYP=3
	8800	SGMR	8 S	1344.0	1345.0	2.0	120.0			QL=4 ST=2 TYP=3
	8800	SVTO	4 S/F	1344.0	1345.0	5.0	100.0			QL=4 ST=2 TYP=3
	2695	SVTO	8 S	1344.0	1345.0	2.0	57.0			QL=4 ST=2 TYP=3
	2695	SGMR	8 S	1359.0	1359.0	U	52.0			QL=4 ST=2 TYP=3
	2695	SVTO	4 S/F	1359.0	1359.0	4.0	61.0			QL=4 ST=2 TYP=3
	8800	SGMR	4 S/F	1400.0	1401.0	3.0	80.0			QL=4 ST=2 TYP=3
	8800	SVTO	4 S/F	1400.0	1400.0	3.0	56.0			QL=4 ST=2 TYP=3
	2695	SGMR	8 S	1436.0	1436.0	U	110.0			QL=4 ST=2 TYP=3
	2695	SVTO	8 S	1436.0	1436.0	U	210.0			QL=4 ST=2 TYP=3
	2695	SVTO	8 S	1441.0	1441.0	U	24.0			QL=4 ST=2 TYP=3
	8800	SVTO	4 S/F	1441.0	1446.0	6.0	48.0			QL=4 ST=2 TYP=3
	8800	SGMR	8 S	1446.0	1446.0	U	46.0			QL=4 ST=2 TYP=3
	8800	SGMR	4 S/F	1551.0	1553.0	3.0	150.0			QL=4 ST=2 TYP=3
	2695	SGMR	48 C	1623.0	1624.0	11.0	300.0			QL=4 ST=2 TYP=8
	8800	SGMR	48 C	1623.0	1624.0	12.0	1300.0			QL=4 ST=2 TYP=8
	8800	PALE	4 S/F	2154.0	2155.0	5.0	140.0			QL=4 ST=2 TYP=3
	2695	PALE	8 S	2155.0	2156.0	2.0	59.0			QL=4 ST=2 TYP=3
31	8800	LEAR	4 S/F	0222.0	0222.0	6.0	77.0			QL=4 ST=2 TYP=3
	8800	PALE	4 S/F	0222.0	0222.0	5.0	66.0			QL=4 ST=2 TYP=3
	2695	LEAR	8 S	0526.0	0527.0	2.0	190.0			QL=4 ST=2 TYP=3
	8800	LEAR	48 C	0526.0	0526.0	11.0	780.0			QL=4 ST=2 TYP=8
	2695	SVTO	8 S	0919.0	0919.0	U	50.0			QL=4 ST=2 TYP=3
	8800	SVTO	8 S	0919.0	0919.0	U	48.0			QL=4 ST=2 TYP=3
	8800	SGMR	8 S	1139.0	1139.0	U	52.0			QL=4 ST=2 TYP=3

Reports are received routinely from the following observatories:
LEAR = Learmonth PALE = Palehua SGMR = Sagamore Hill SVTO = San Vito

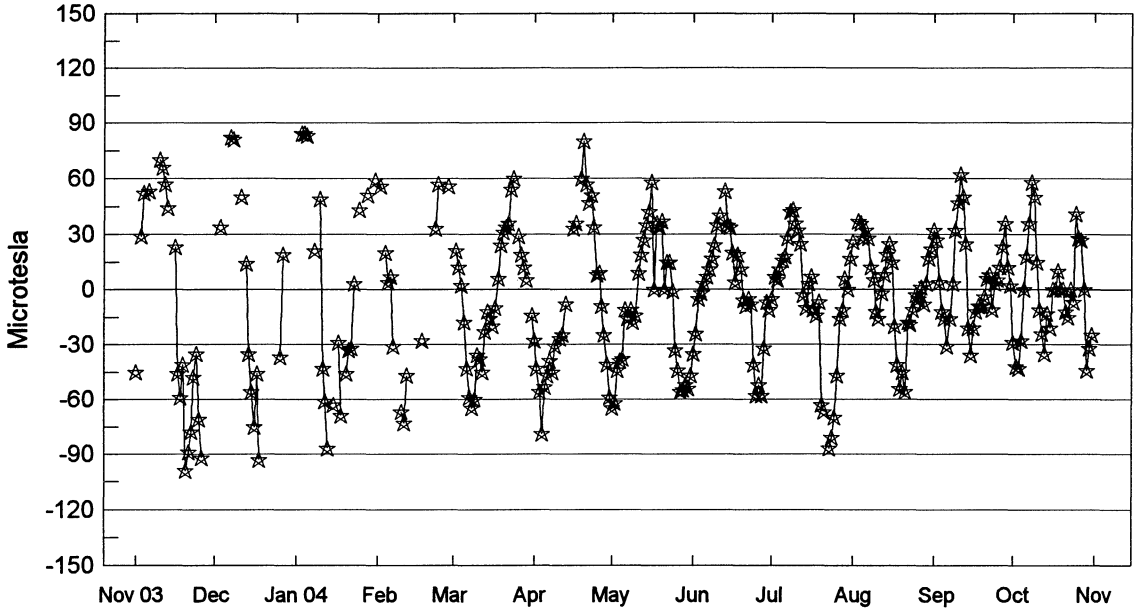
Explanation of Type Code:

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

1A Simple 1A	4A Simple 2AF	24PF Post Rise F	27F Rise and Fall F
3A Simple 2A	40 Rise Only	16A Fall A	27AF Rise and Fall AF
21A Simple 3A GRF	40F Rise Only F	260 Fall Only	31A Post Burst Decrease A
2A Simple 1AF	4P Post Rise	26F Fall F	32A Absorption A

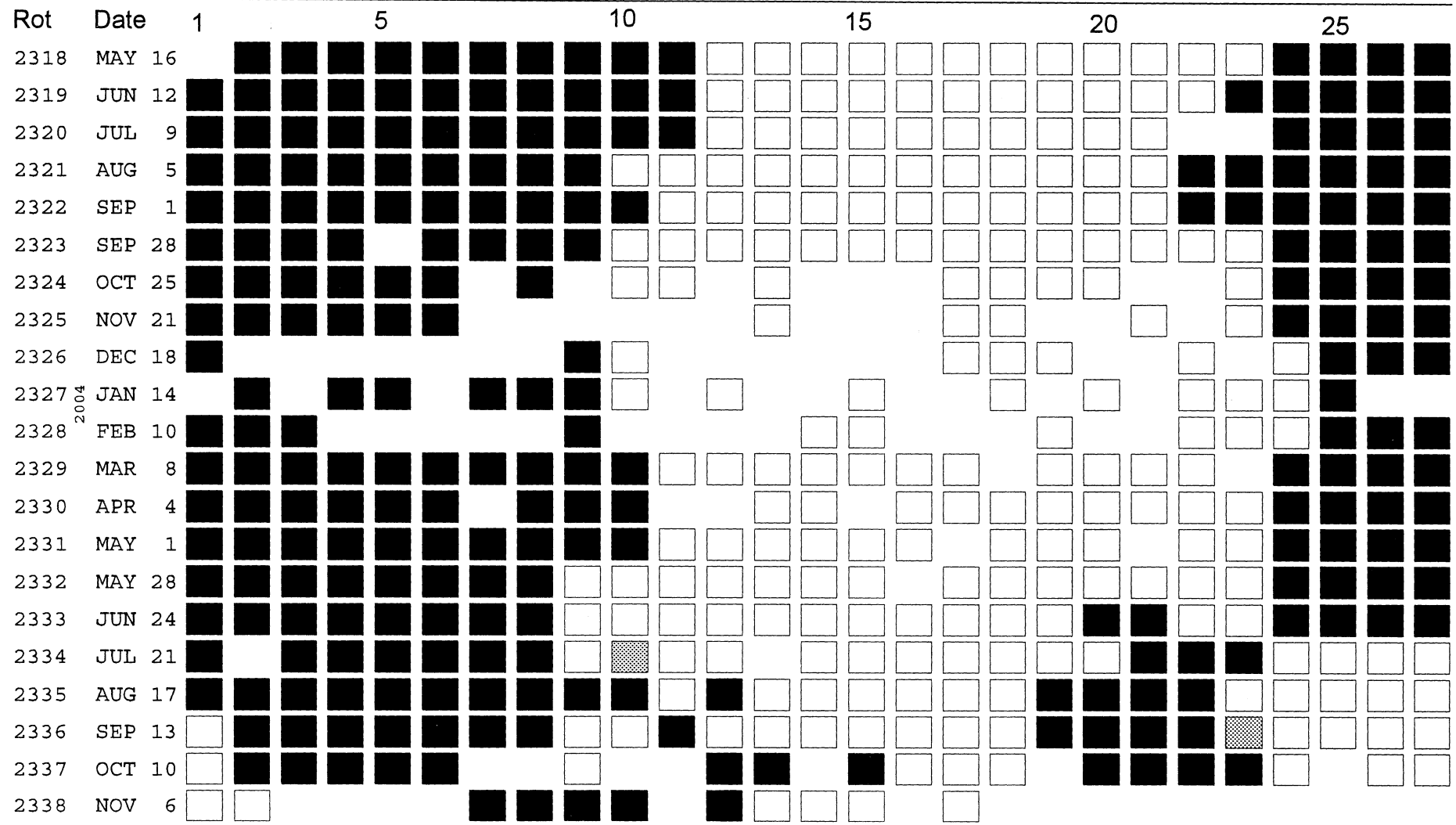
RSTN Site Information: Beginning in April 1986, the RSTN sites LEAR, PALE, SGMR, and SVTO fixed frequency solar radio data are periodically adjusted to several world standard stations. These world standard stations include: Kislovodsk, USSR 15,500 MHz; Penticton, Canada 2800 MHz; and Hiraiso, Japan 500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

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



Day	Nov 03	Dec	Jan 04	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct
1	-45	---	---	---	---	-28	-65	-35	-5	26	32	-29
2	---	---	---	56	21	-43	-62	-24	7	---	27	-42
3	29	34	84	---	12	-56	-44	-5	5	37	4	-43
4	52	---	84	20	2	-79	-39	-2	11	36	-12	-28
5	---	---	83	4	-18	-53	-38	3	16	28	-16	0
6	53	---	---	7	-43	-47	-11	7	18	32	-31	18
7	---	82	---	-31	-59	-39	-16	11	28	28	-16	36
8	---	81	21	---	-65	-45	-11	17	42	12	3	58
9	---	---	---	---	-60	-31	-18	24	43	5	32	50
10	70	---	49	-67	-36	---	-14	35	36	-12	47	15
11	66	50	-43	-73	-38	-27	9	40	32	-16	62	-11
12	57	---	-61	-47	-45	-25	19	---	25	-2	50	-24
13	44	14	-87	---	-23	-8	27	53	-3	8	25	-35
14	---	-35	---	---	-12	---	35	35	-10	19	-21	-13
15	---	-56	-63	---	-16	---	42	34	3	25	-36	-21
16	23	-75	---	---	-20	33	58	20	7	15	-21	---
17	-46	-46	-29	---	-10	36	---	4	-11	-20	-12	---
18	-59	-93	-69	-28	6	---	36	19	-14	-41	-9	10
19	-41	---	---	---	24	60	34	11	-7	-54	-9	---
20	-99	---	-46	---	31	80	37	-6	-63	-45	-4	---
21	-89	---	-33	---	34	57	---	-9	-67	-56	6	-12
22	-78	---	-32	---	36	47	15	-5	---	-18	8	-15
23	-48		3	33	54	51	15	-8	-87	-19	-11	---
24	-35	---	---	57	60	34	-1	-41	-81	-11	3	-7
25	-71	---	43	---	---	8	-33	-58	-70	-3	5	41
26	-92	-37	---	---	29	9	-44	-52	-47	-5	12	28
27	---	19	---	---	19	-9	-56	-58	-16	1	23	27
28	---	---	51	56	12	-25	-55	-32	-11	-8	36	---
29	---	---	---	---	5	-41	-52	-7	6	3	12	-44
30		---	---		---	-59	-54	-11	0	17	2	-32
31		---	59		-14		-47		17	22		-25

STANFORD MEAN SOLAR MAGNETIC FIELD

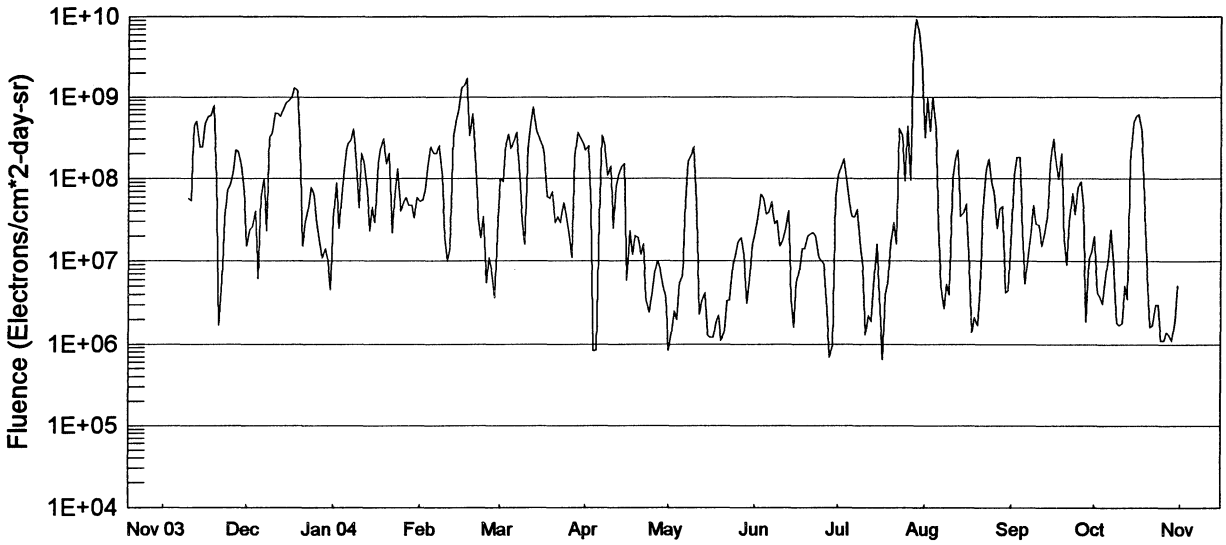


Mean Solar Magnetic Field Polarity: □ = field > 2 microT; ▒ = -2 microT ≤ field ≤ 2 microT

■ = 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.

GOES Daily Electron Fluence
Nov 2003 - Oct 2004



Day	Nov 03	Dec	Jan 04	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct
1	-999	1.5E+07	3.3E+07	5.3E+07	9.9E+07	2.2E+08	8.3E+05	2.1E+07	1.1E+08	3.1E+08	2.4E+07	2.0E+07
2	-999	2.4E+07	8.8E+07	5.5E+07	9.2E+07	2.5E+08	1.4E+06	3.4E+07	1.4E+08	9.6E+08	1.1E+08	4.2E+06
3	-999	2.6E+07	2.5E+07	7.1E+07	2.6E+08	4.1E+07	2.5E+06	6.4E+07	1.7E+08	3.7E+08	1.8E+08	3.8E+06
4	-999	4.0E+07	7.2E+07	1.6E+08	3.4E+08	8.3E+05	2.0E+06	5.8E+07	1.0E+08	1.0E+09	1.8E+08	3.1E+06
5	-999	6.2E+06	1.5E+08	2.4E+08	2.3E+08	8.5E+05	5.4E+06	3.7E+07	4.7E+07	4.1E+08	2.2E+07	6.6E+06
6	-999	5.9E+07	2.6E+08	2.0E+08	2.9E+08	3.3E+07	6.6E+06	3.9E+07	3.4E+07	2.7E+07	5.4E+06	1.1E+07
7	-999	1.0E+08	2.9E+08	2.0E+08	3.6E+08	3.3E+08	5.2E+07	5.2E+07	3.4E+07	5.1E+06	1.2E+07	2.4E+07
8	-999	2.3E+07	4.0E+08	2.5E+08	1.1E+08	2.6E+08	1.6E+08	2.8E+07	4.2E+07	2.7E+06	2.1E+07	7.6E+06
9	-999	3.2E+08	2.0E+08	1.1E+08	3.1E+07	1.1E+08	1.9E+08	3.1E+07	1.5E+07	5.3E+06	4.7E+07	1.8E+06
10	5.6E+07	3.5E+08	4.4E+07	1.9E+07	1.6E+07	1.4E+08	2.4E+08	1.5E+07	8.4E+06	4.0E+06	2.8E+07	1.7E+06
11	5.4E+07	6.2E+08	2.0E+08	1.0E+07	2.5E+08	2.5E+07	3.4E+07	1.7E+07	1.3E+06	1.0E+08	2.7E+07	1.8E+06
12	4.4E+08	6.3E+08	1.6E+08	1.4E+07	4.7E+08	7.8E+07	2.3E+06	2.4E+07	2.2E+06	1.7E+08	1.5E+07	5.1E+06
13	5.0E+08	5.7E+08	7.3E+07	3.2E+08	7.4E+08	1.1E+08	3.3E+06	4.0E+07	1.9E+06	2.2E+08	2.1E+07	3.5E+06
14	2.4E+08	7.1E+08	2.3E+07	5.0E+08	3.8E+08	1.4E+08	4.1E+06	3.5E+06	6.6E+06	3.5E+07	3.5E+07	1.6E+08
15	2.4E+08	8.4E+08	4.5E+07	6.7E+08	3.2E+08	1.5E+08	1.3E+06	1.6E+06	1.6E+07	3.8E+07	1.5E+08	4.7E+08
16	4.6E+08	9.0E+08	2.9E+07	1.3E+09	2.6E+08	5.9E+06	1.2E+06	5.6E+06	3.8E+06	4.9E+07	3.0E+08	5.7E+08
17	5.7E+08	1.0E+09	1.5E+08	1.4E+09	2.2E+08	2.3E+07	1.2E+06	7.6E+06	6.5E+05	8.4E+06	1.6E+08	6.0E+08
18	5.8E+08	1.3E+09	2.4E+08	1.7E+09	6.0E+07	1.2E+07	1.8E+06	1.4E+07	4.0E+06	1.4E+06	9.8E+07	3.8E+08
19	7.7E+08	1.2E+09	3.0E+08	3.3E+08	5.7E+07	2.0E+07	2.2E+06	1.4E+07	5.5E+06	2.1E+06	2.0E+08	5.9E+07
20	9.6E+07	2.3E+08	1.5E+08	6.1E+08	6.9E+07	1.9E+07	1.1E+06	2.0E+07	1.6E+07	1.7E+06	1.8E+07	6.9E+06
21	1.7E+06	1.5E+07	2.0E+08	1.4E+08	2.9E+07	1.2E+07	1.4E+06	2.1E+07	2.9E+07	4.6E+06	9.0E+06	1.6E+06
22	5.8E+06	2.9E+07	2.2E+07	3.3E+07	3.4E+07	1.6E+07	3.3E+06	2.2E+07	1.6E+07	4.4E+07	3.0E+07	1.7E+06
23	3.3E+07	4.4E+07	6.6E+07	1.9E+07	2.9E+07	3.5E+06	3.4E+06	2.0E+07	4.0E+08	1.3E+08	6.6E+07	3.0E+06
24	7.1E+07	7.8E+07	1.3E+08	3.4E+07	5.1E+07	2.4E+06	8.9E+06	1.1E+07	3.3E+08	1.7E+08	3.7E+07	3.0E+06
25	8.7E+07	6.5E+07	4.0E+07	5.5E+06	3.7E+07	4.3E+06	1.2E+07	1.0E+07	9.3E+07	9.2E+07	7.6E+07	1.1E+06
26	1.2E+08	2.8E+07	5.1E+07	1.1E+07	2.0E+07	7.5E+06	1.7E+07	9.2E+06	4.3E+08	6.8E+07	9.1E+07	1.1E+06
27	2.2E+08	1.7E+07	5.9E+07	7.7E+06	1.1E+07	1.0E+07	1.9E+07	2.6E+06	9.4E+07	2.5E+07	4.5E+07	1.4E+06
28	2.1E+08	1.1E+07	4.7E+07	3.6E+06	1.8E+08	7.9E+06	1.2E+07	7.0E+05	4.5E+09	4.3E+07	1.9E+06	1.3E+06
29	1.4E+08	1.4E+07	4.7E+07	2.0E+07	3.6E+08	4.8E+06	3.1E+06	9.5E+05	9.3E+09	4.6E+07	1.1E+07	1.1E+06
30	7.1E+07	1.0E+07	3.3E+07		3.1E+08	3.8E+06	5.9E+06	6.0E+07	6.4E+09	4.2E+06	1.3E+07	1.9E+06
31		4.5E+06	5.9E+07		2.7E+08		1.5E+07		3.0E+09	4.4E+06		5.2E+06

NOTE: The electron detector responds significantly to protons above 32 MeV; therefore, electron data are contaminated when a proton event is in progress. These days are indicated with '-999' in the table and are not plotted. '--' indicates data not available.
NOTE: GOES9 data began April, 1996 and ended on 26 July, 1998. GOES12 is primary satellite as of 15 May 2003.

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CONTENTS

Prompt Reports Number 723 Part I

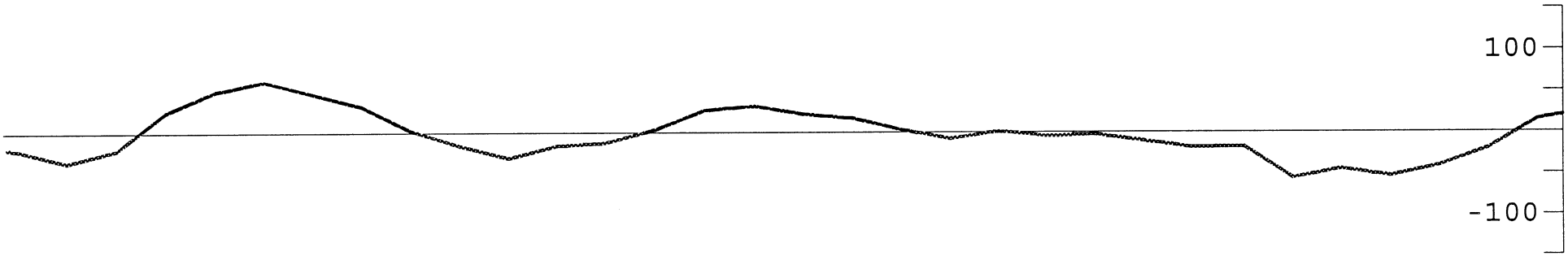
DATA FOR **SEPTEMBER 2004**

SOLAR MAGNETIC FIELD SYNOPTIC CHART

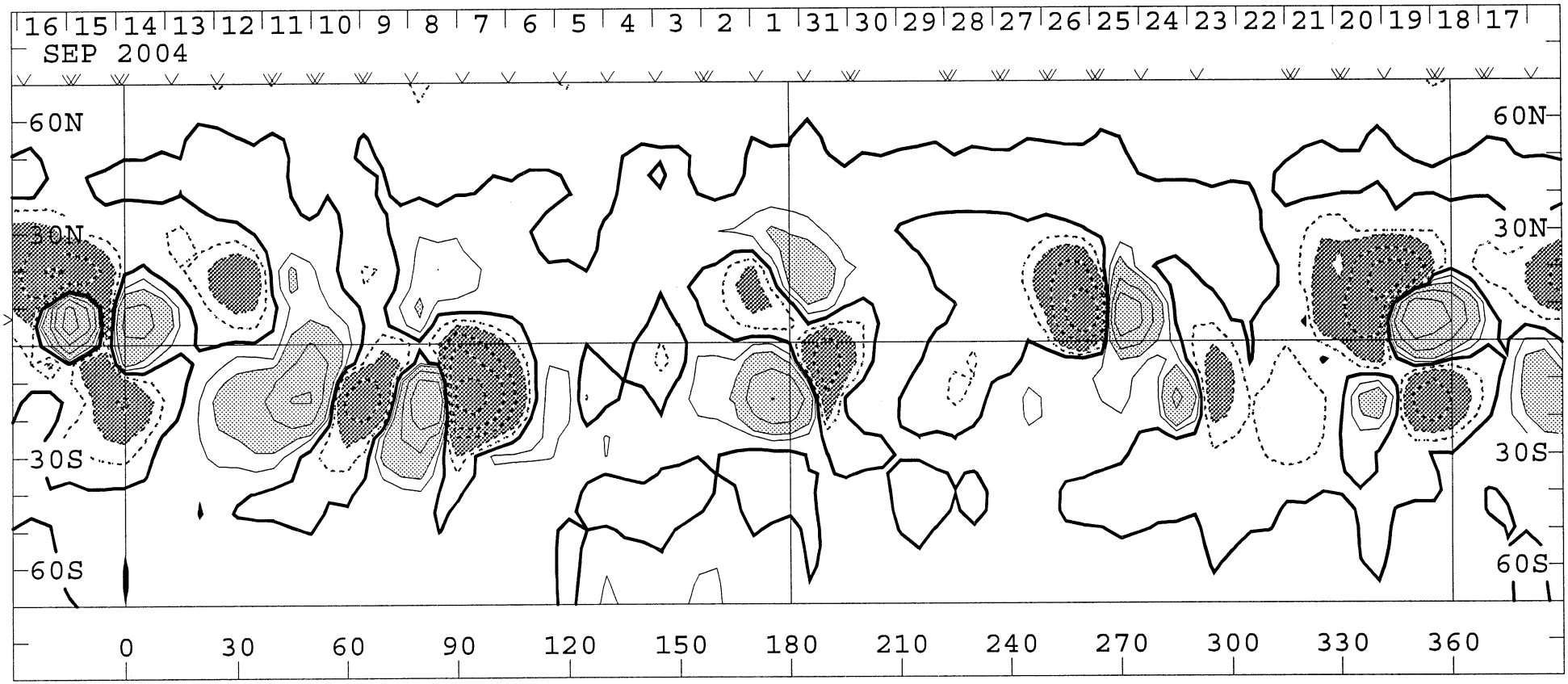
CARRINGTON ROTATION NUMBER 2020

(18 August to 14 September 2004)

WILCOX SOLAR OBSERVATORY



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



SOLAR MAGNETIC FIELD SYNOPTIC CHART

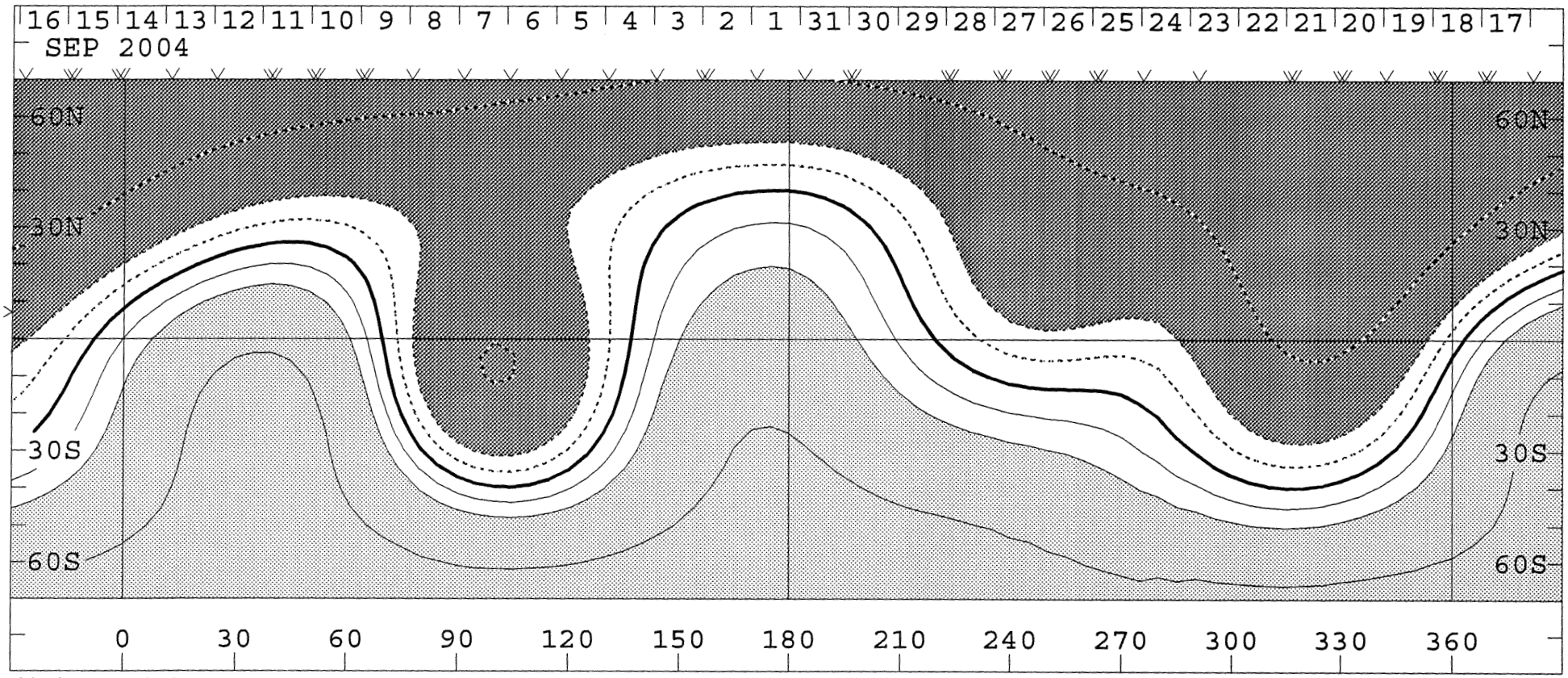
SOURCE SURFACE FIELD

CARRINGTON ROTATION NUMBER 2020

(18 August to 14 September 2004)

Wilcox Solar Observatory

0, ±1, 2, 5, 10, 20 microTesla

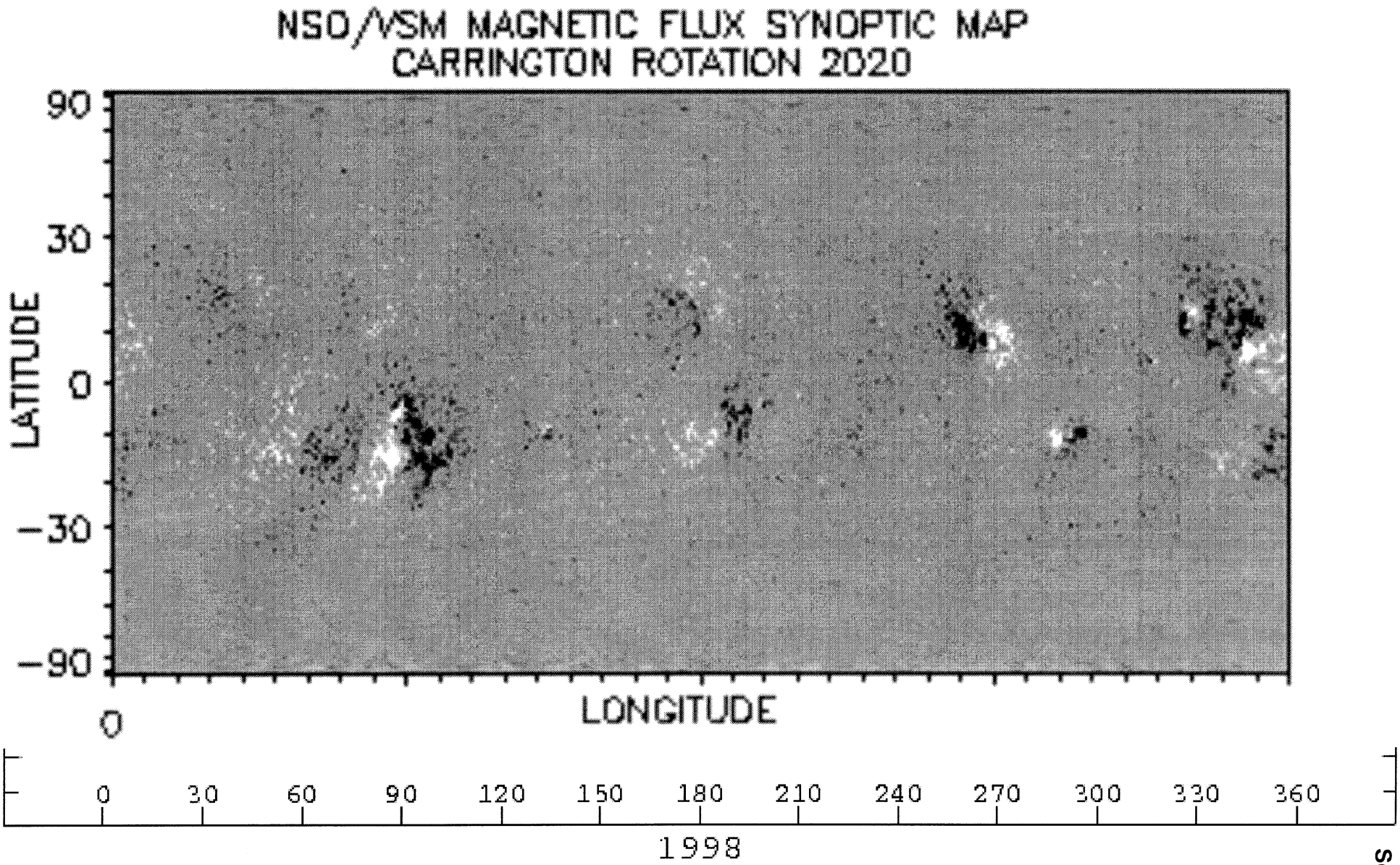


SOLAR MAGNETIC FIELD SYNOPTIC CHART

CARRINGTON ROTATION NUMBER 2020

(18 August to 14 September 2004)

National Solar Observatory/Kitt Peak



Heliographic Longitude

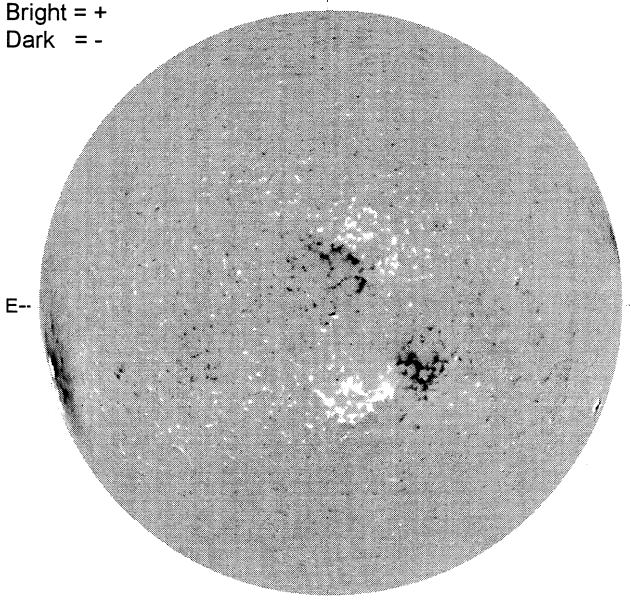
45
Sep 04

SEPTEMBER 1, 2004 (P= 21.15, Bo = 7.20, Lo = 182.70)

KITT PEAK MAGNETOGRAM--SOLIS

N **854.2 nm**

Bright = +
Dark = -

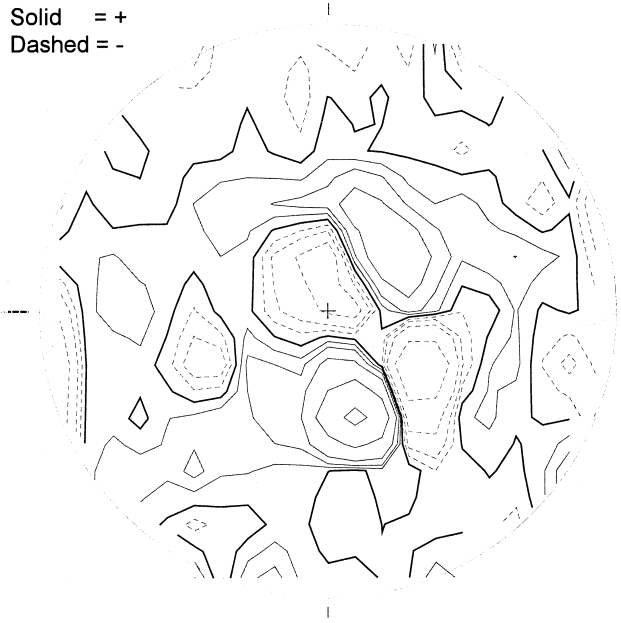


1920 UT

STANFORD MAGNETOGRAM

N

Solid = +
Dashed = -

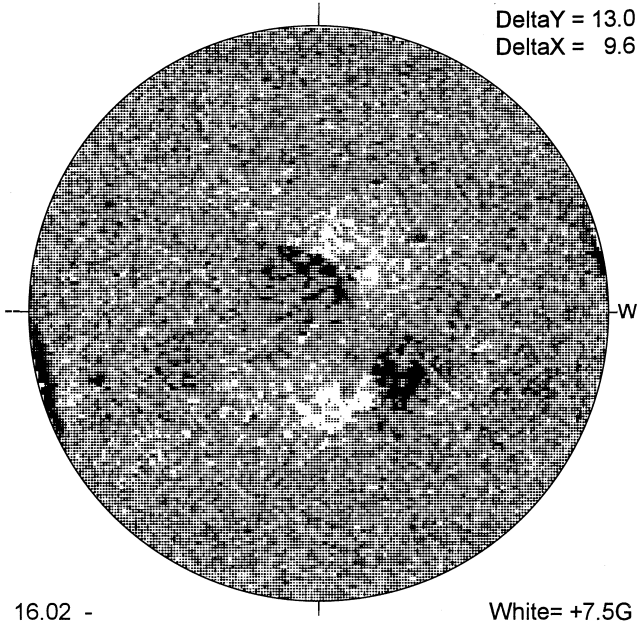


2113 UT

MT. WILSON MAGNETOGRAM

N

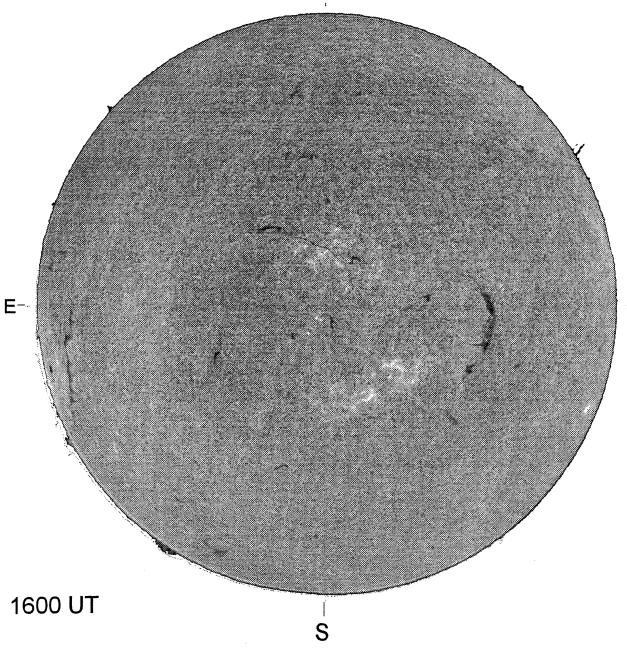
DeltaY = 13.0
DeltaX = 9.6



16.02 -
16.96 UT

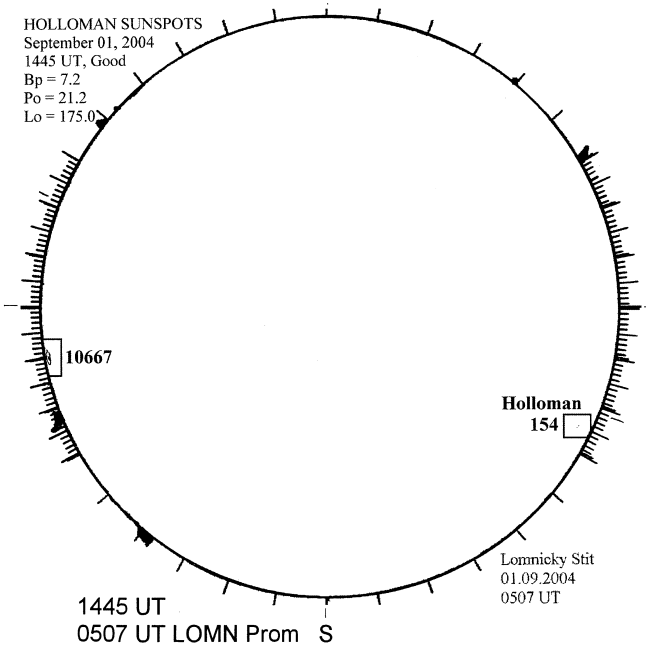
White= +7.5G
Black = -7.5G

BIG BEAR H-ALPHA



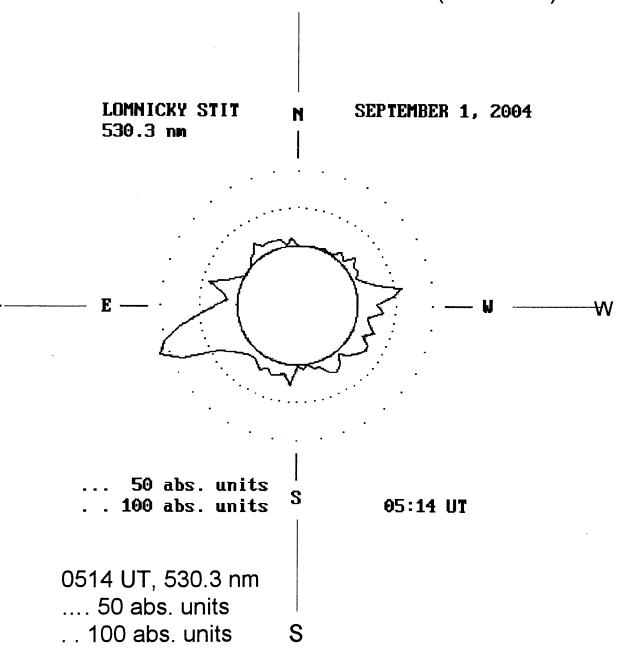
1600 UT

HOLLOMAN SUNSPOTS



1445 UT
0507 UT LOMN Prom S

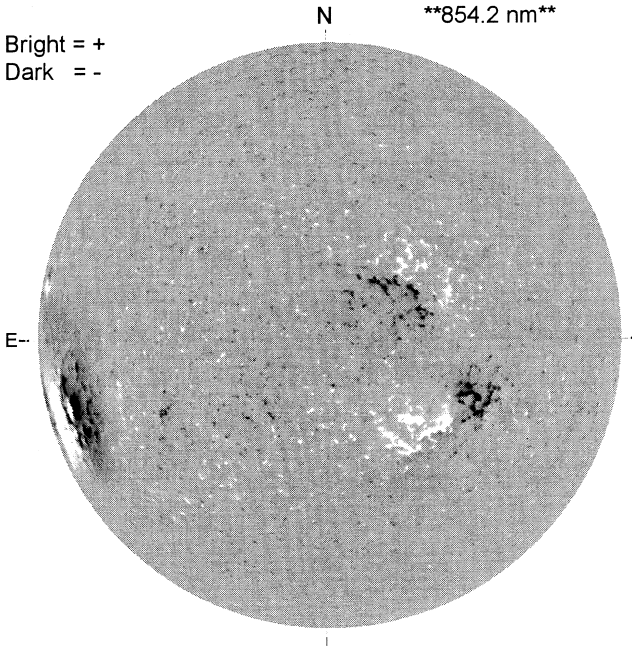
LOMNICKY PEAK CORONA (1.04 Radii)----



0514 UT, 530.3 nm
.... 50 abs. units
. . 100 abs. units S

SEPTEMBER 2, 2004 (P= 21.39, Bo = 7.21, Lo = 169.49)

KITT PEAK MAGNETOGRAM--SOLIS

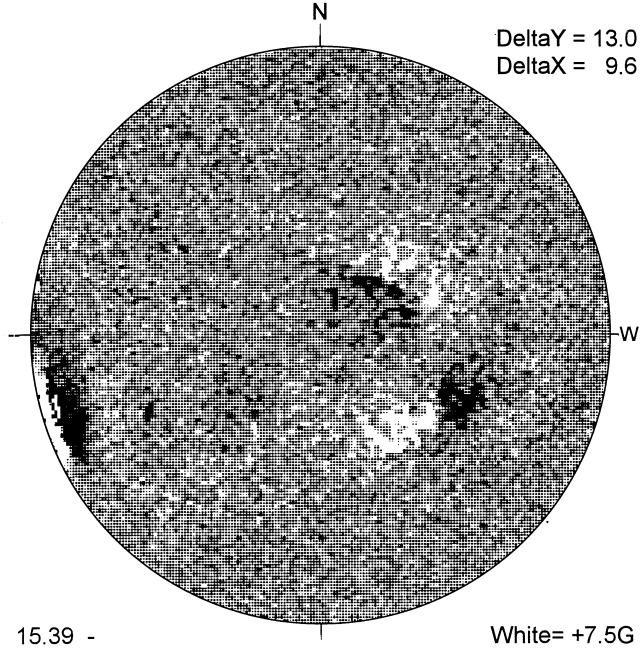


1729 UT

STANFORD MAGNETOGRAM

2137 UT

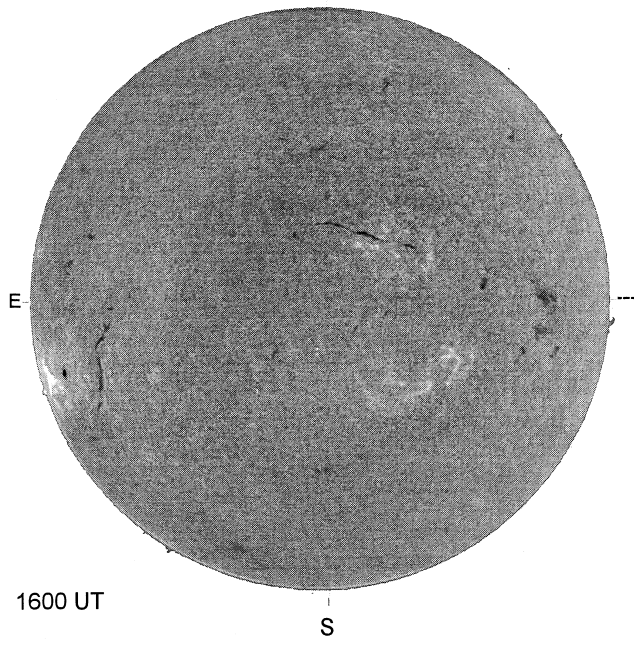
MT. WILSON MAGNETOGRAM



15.39 - 16.33 UT

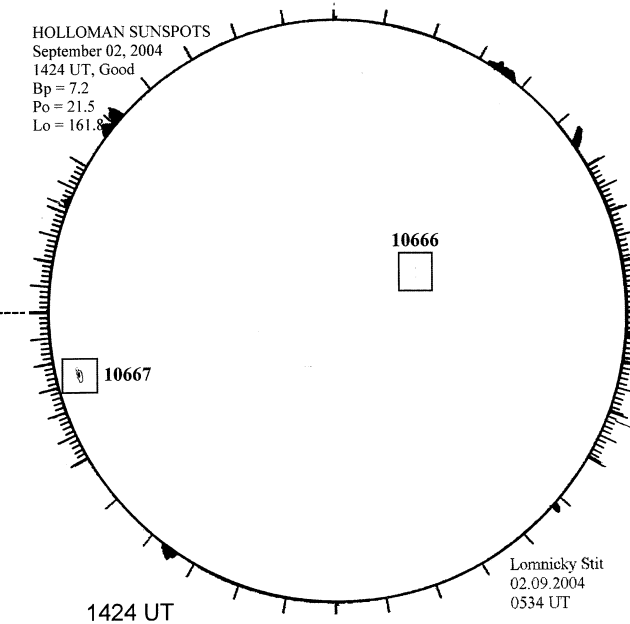
White= +7.5G
Black = -7.5G

BIG BEAR H-ALPHA



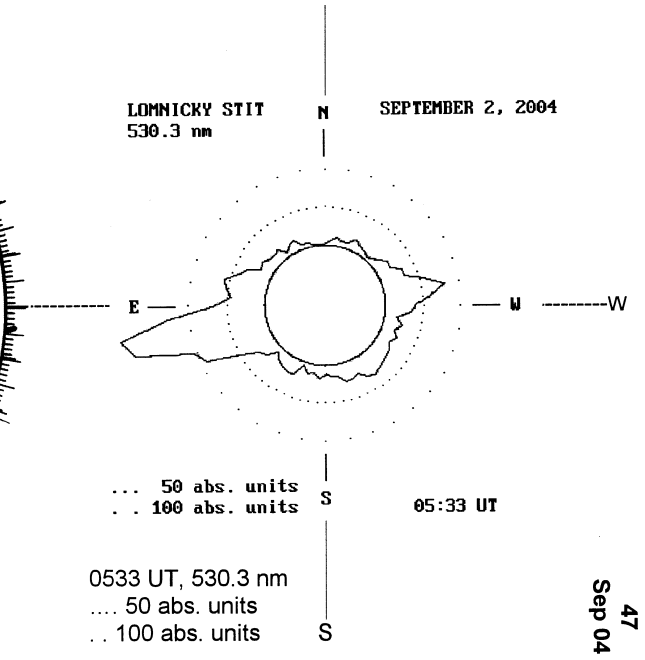
1600 UT

HOLLOMAN SUNSPOTS



1424 UT
0534 UT LOMN Prom S

LOMNICKY PEAK CORONA (1.04 Radii)----



0533 UT, 530.3 nm
.... 50 abs. units
. . 100 abs. units

S

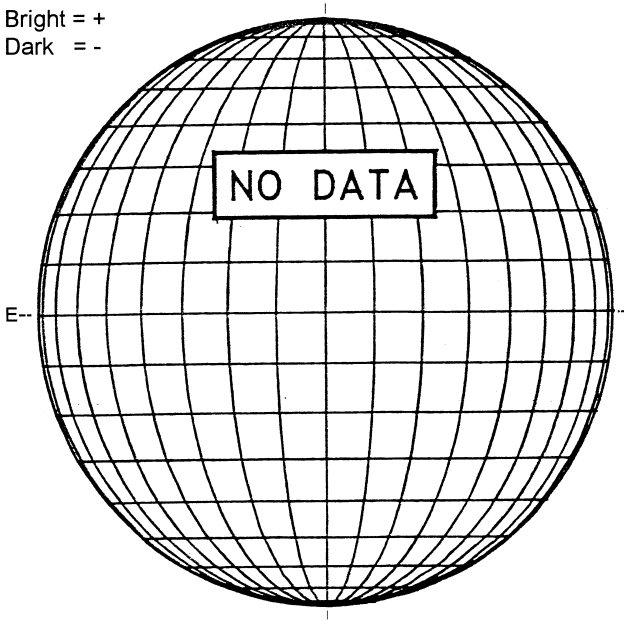
47
Sep 04

SEPTEMBER 3, 2004 (P= 21.64, Bo = 7.22, Lo = 156.28)

KITT PEAK MAGNETOGRAM--SOLIS

N
854.2 nm

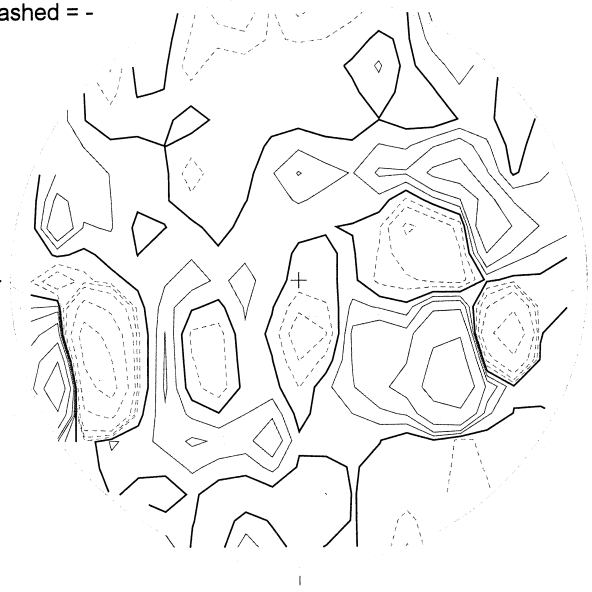
Bright = +
Dark = -



STANFORD MAGNETOGRAM

N

Solid = +
Dashed = -

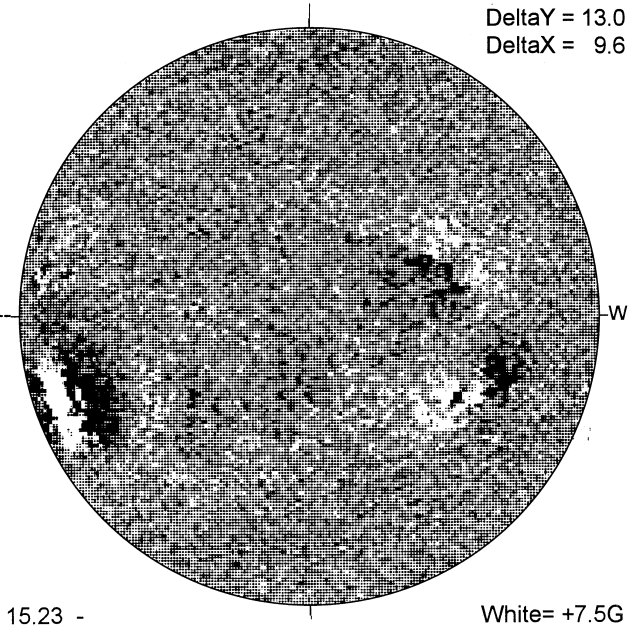


2242 UT

MT. WILSON MAGNETOGRAM

N

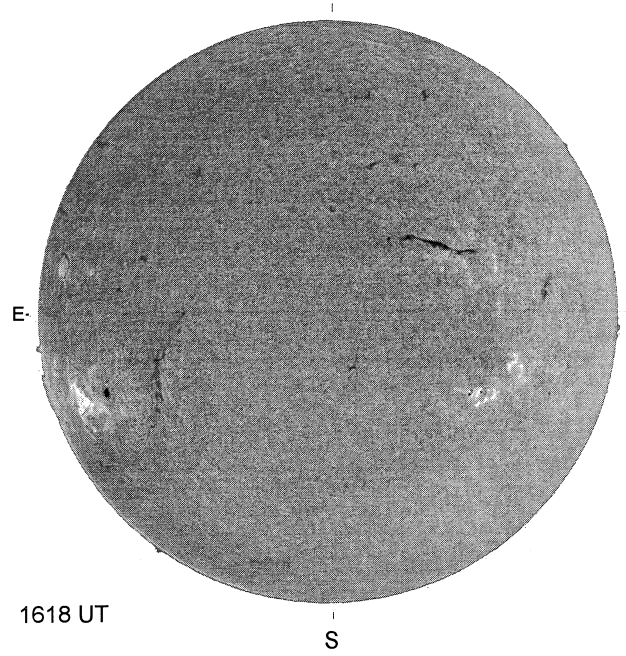
DeltaY = 13.0
DeltaX = 9.6



15.23 -
16.17 UT

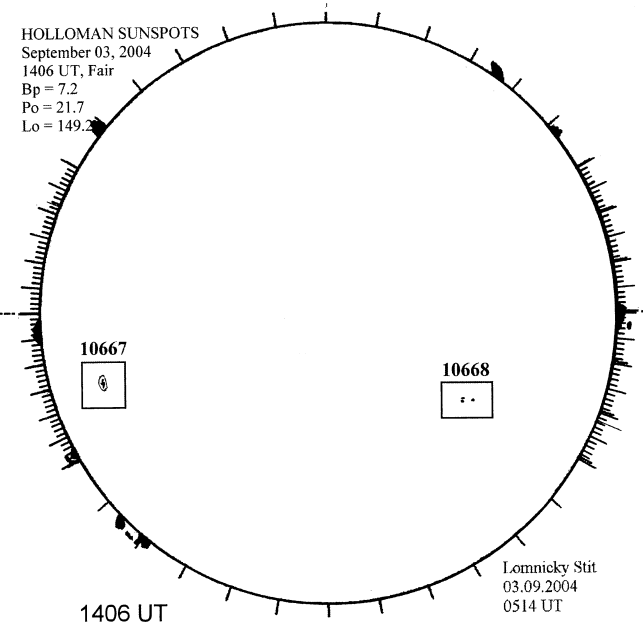
White= +7.5G
Black = -7.5G

BIG BEAR H-ALPHA



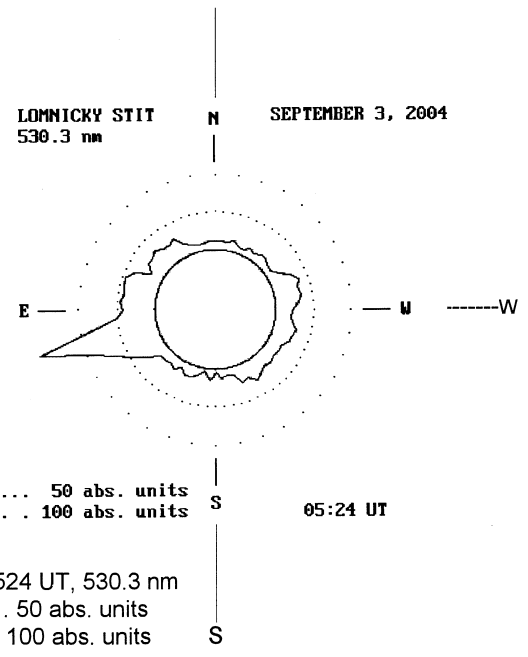
1618 UT

HOLLOMAN SUNSPOTS



1406 UT
0514 UT LOMN Prom S

LOMNICKY PEAK CORONA (1.04 Radii)----

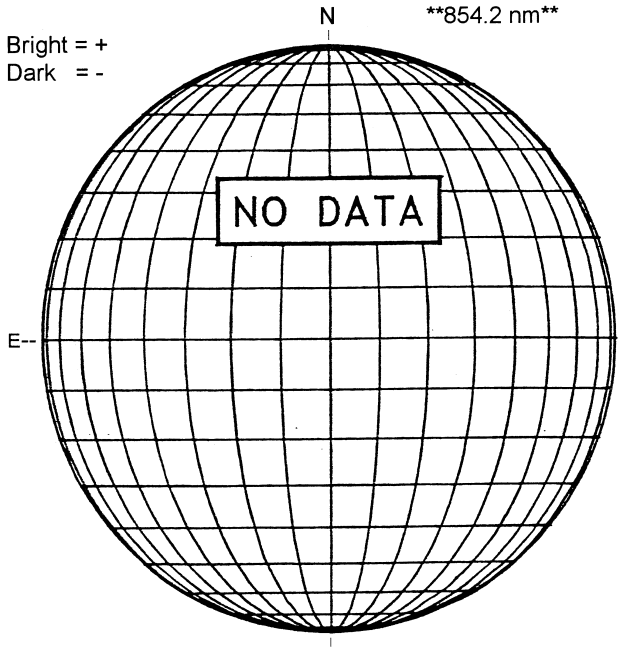


0524 UT, 530.3 nm
.... 50 abs. units
. . 100 abs. units

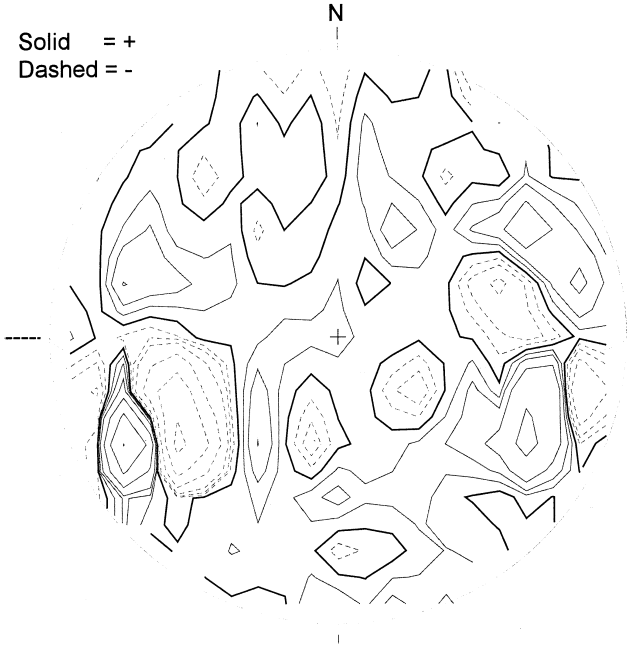
S

SEPTEMBER 4, 2004 (P= 21.88, Bo = 7.23, Lo = 143.07)

KITT PEAK MAGNETOGRAM--SOLIS

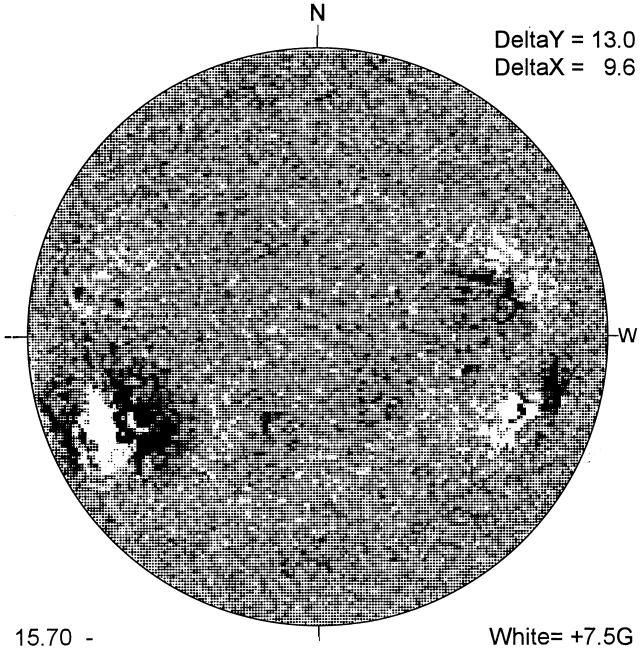


STANFORD MAGNETOGRAM



2215 UT

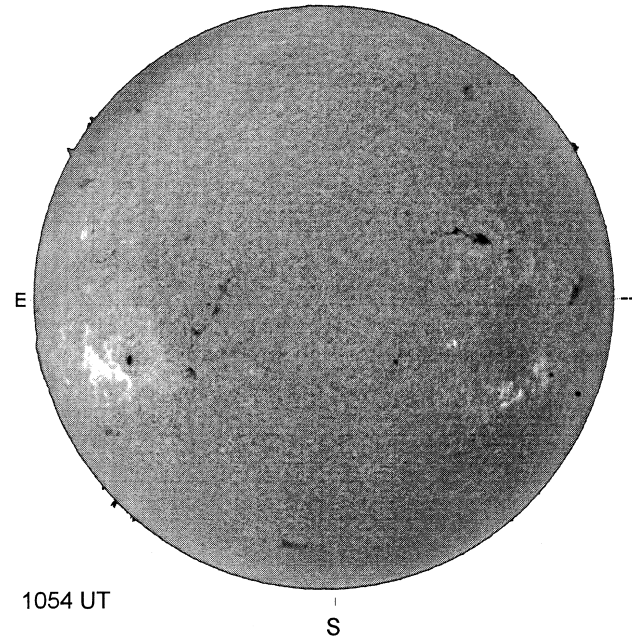
MT. WILSON MAGNETOGRAM



15.70 -
16.65 UT

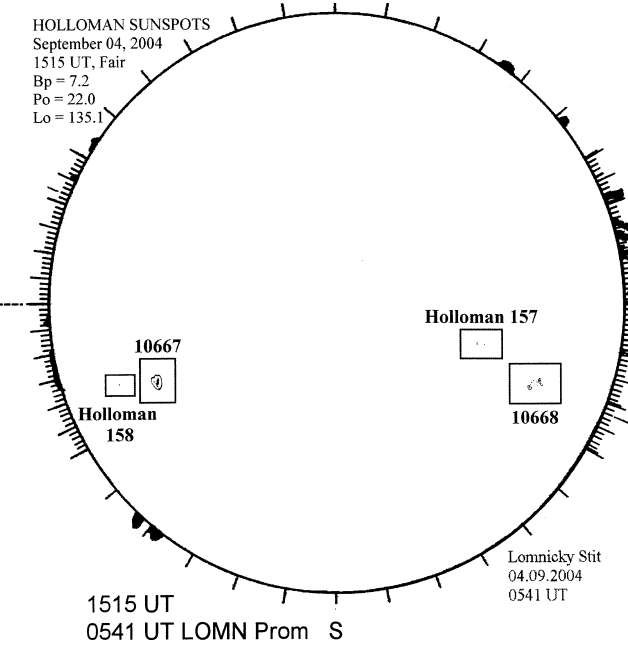
White= +7.5G
Black = -7.5G

KANZELHOHE H-ALPHA



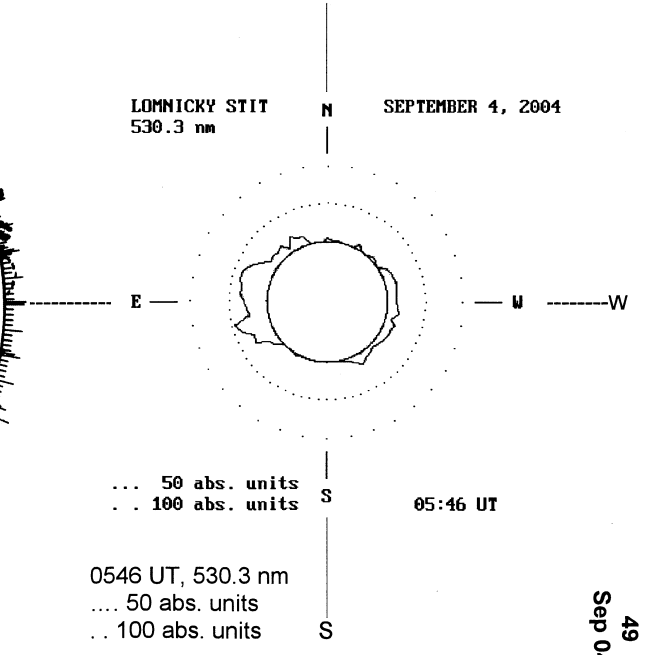
1054 UT

HOLLOMAN SUNSPOTS



1515 UT
0541 UT LOMN Prom S

LOMNICKY PEAK CORONA (1.04 Radii)----



0546 UT, 530.3 nm
.... 50 abs. units
. . 100 abs. units

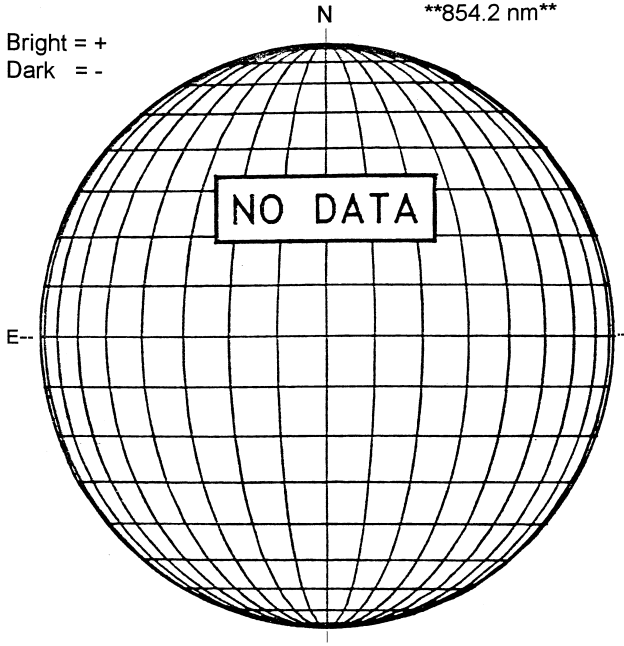
S

SEPTEMBER 5, 2004 (P= 22.11, Bo = 7.24, Lo = 129.86)

KITT PEAK MAGNETOGRAM--SOLIS

854.2 nm

Bright = +
Dark = -



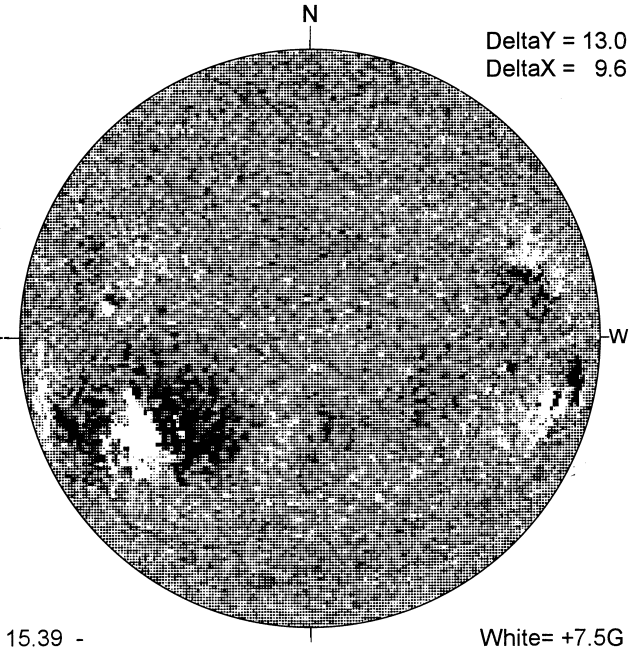
STANFORD MAGNETOGRAM

Solid = +
Dashed = -

2144 UT

MT. WILSON MAGNETOGRAM

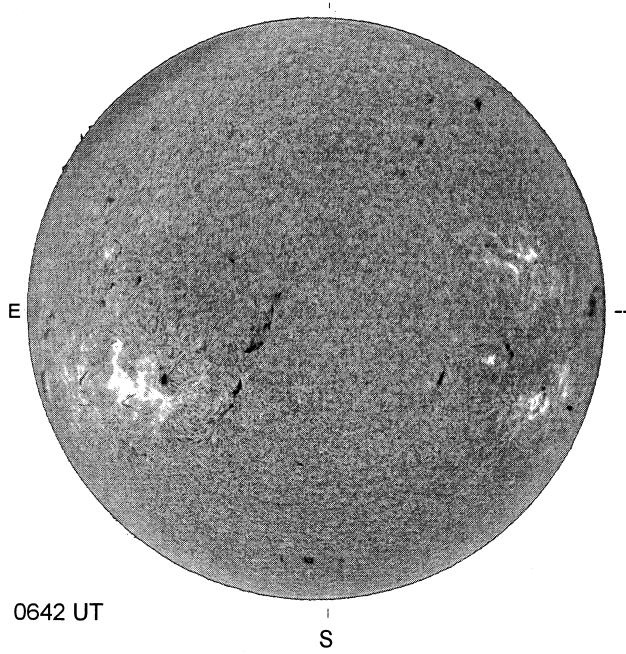
DeltaY = 13.0
DeltaX = 9.6



15.39 -
16.33 UT

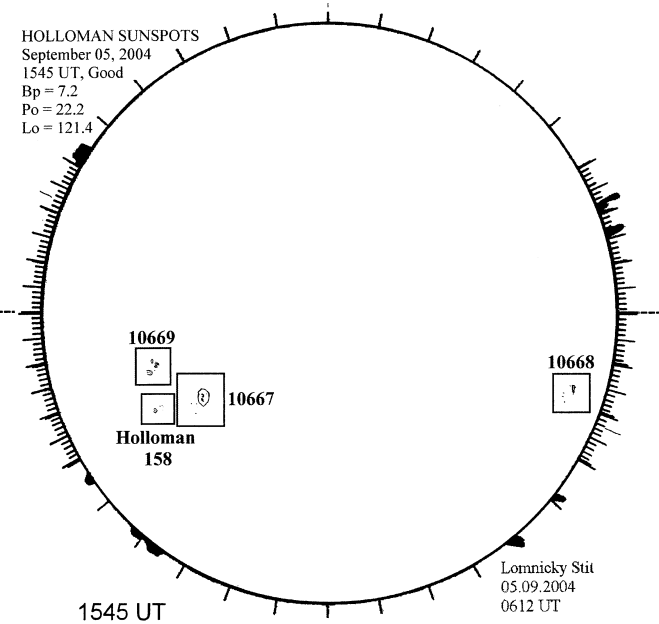
White= +7.5G
Black = -7.5G

KANZELHOHE H-ALPHA



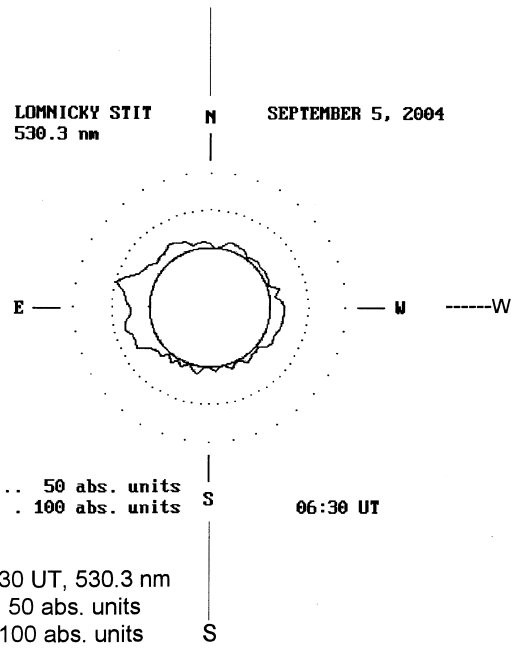
0642 UT

HOLLOMAN SUNSPOTS



1545 UT
0612 UT LOMN Prom

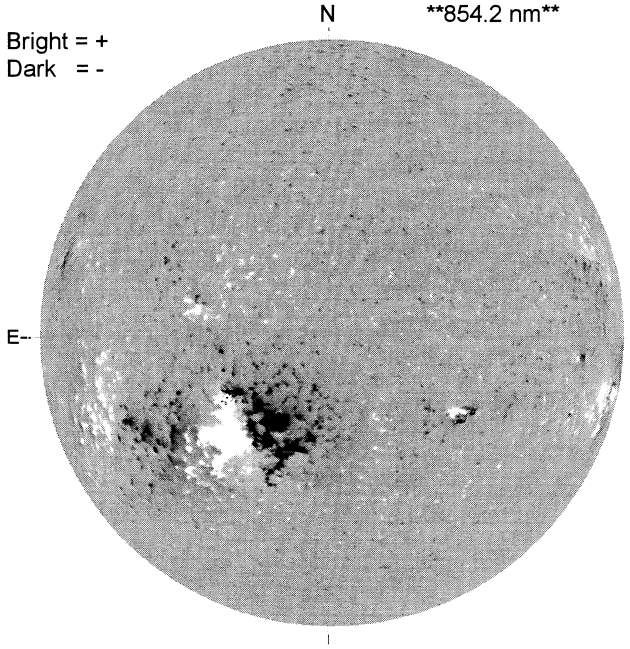
LOMNICKY PEAK CORONA (1.04 Radii)



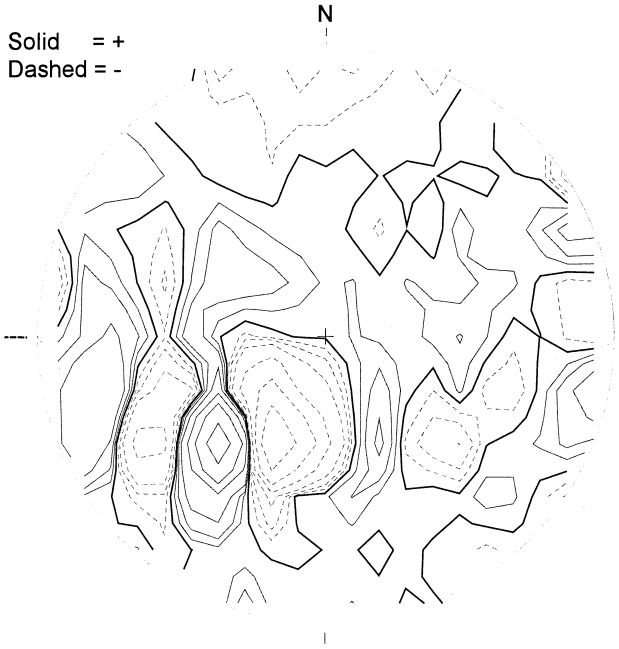
0630 UT, 530.3 nm
.... 50 abs. units
. . 100 abs. units

SEPTEMBER 6, 2004 (P= 22.33, Bo = 7.25, Lo = 116.66)

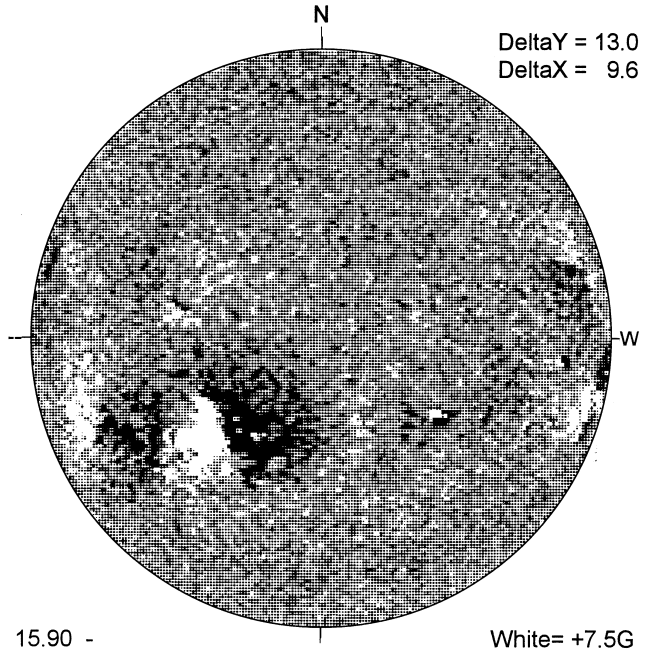
KITT PEAK MAGNETOGRAM--SOLIS



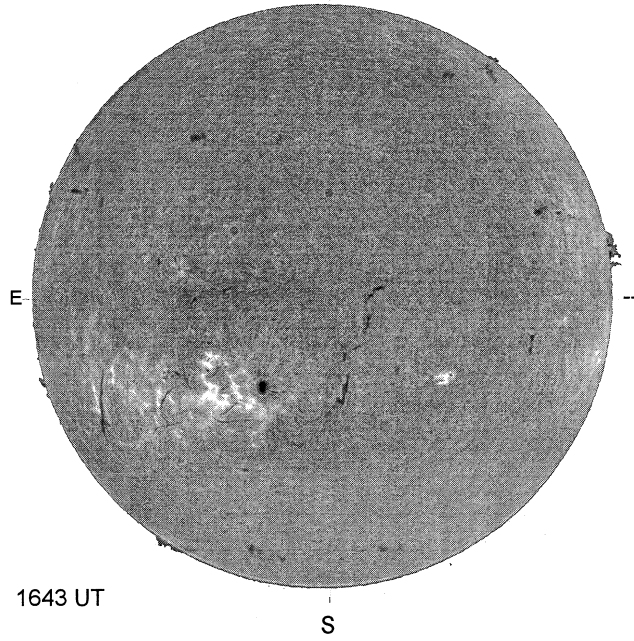
STANFORD MAGNETOGRAM



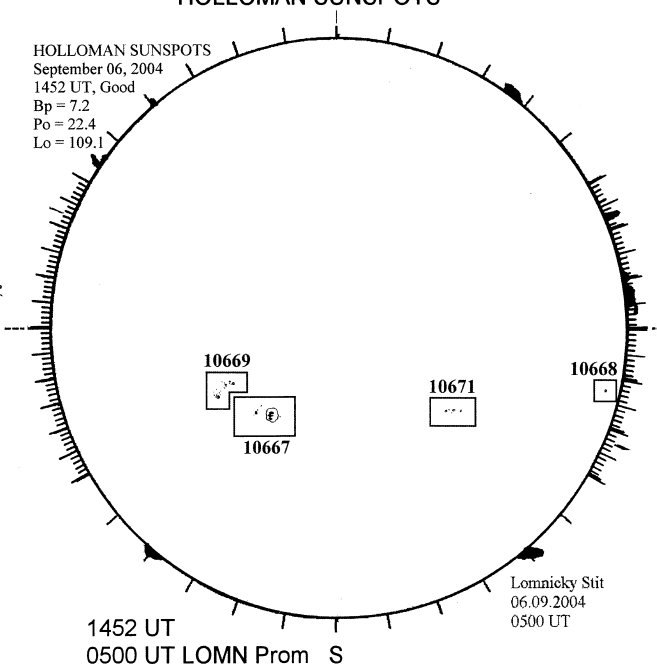
MT. WILSON MAGNETOGRAM



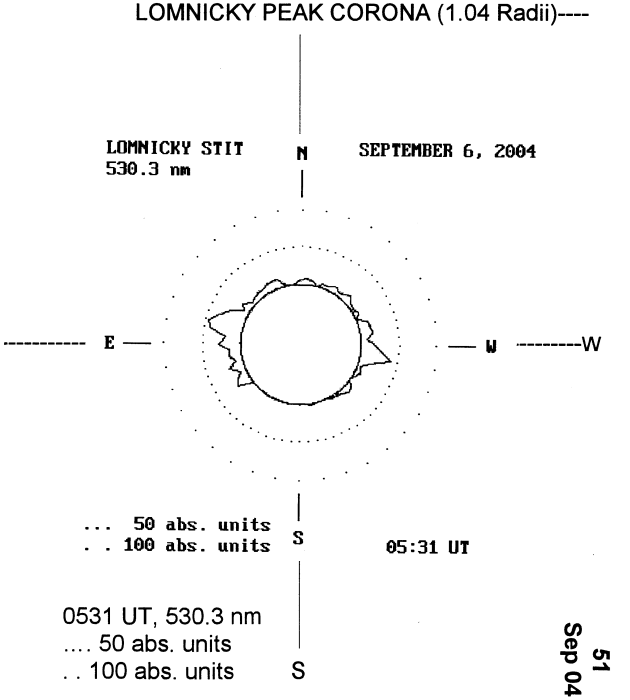
BIG BEAR H-ALPHA



HOLLOMAN SUNSPOTS



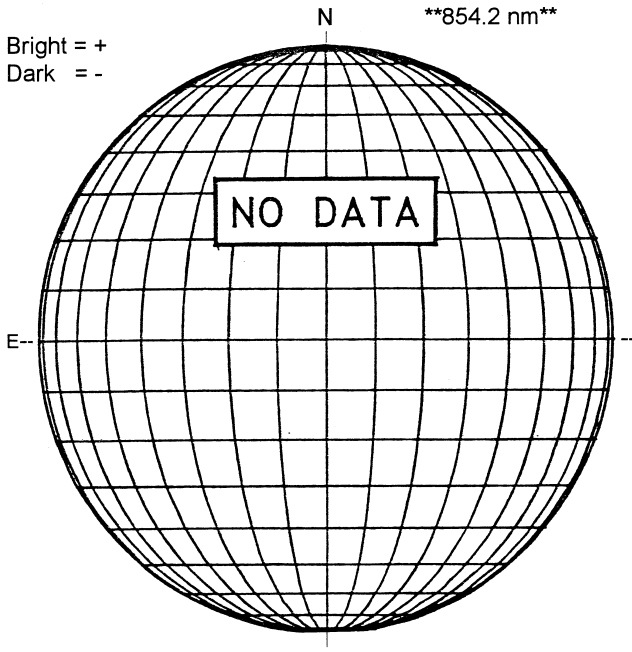
LOMNICKY PEAK CORONA (1.04 Radii)



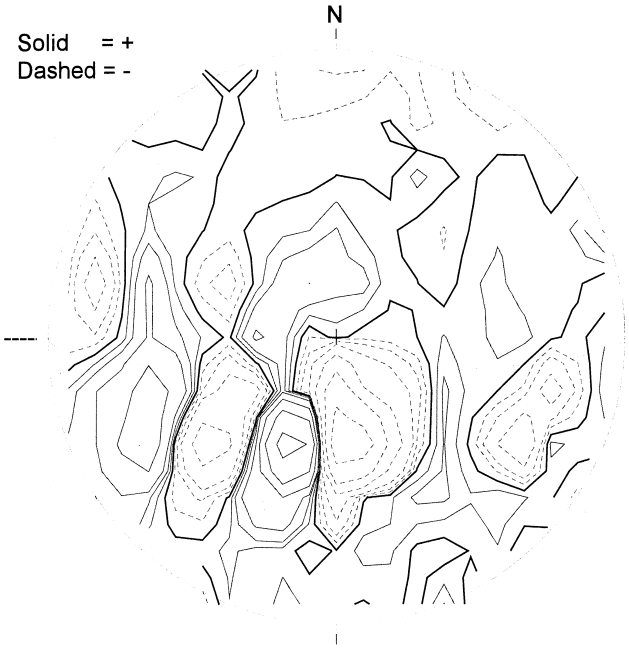
51
Sep 04

SEPTEMBER 7, 2004 (P= 22.56, Bo = 7.25, Lo = 103.45)

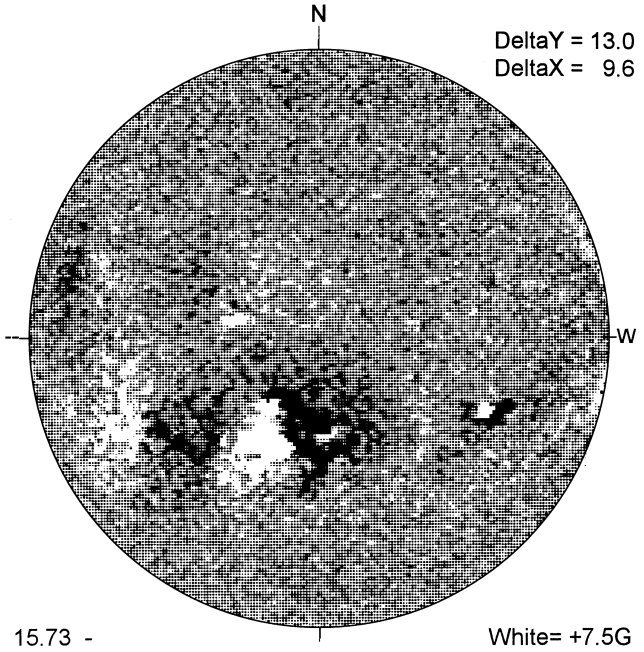
KITT PEAK MAGNETOGRAM--SOLIS



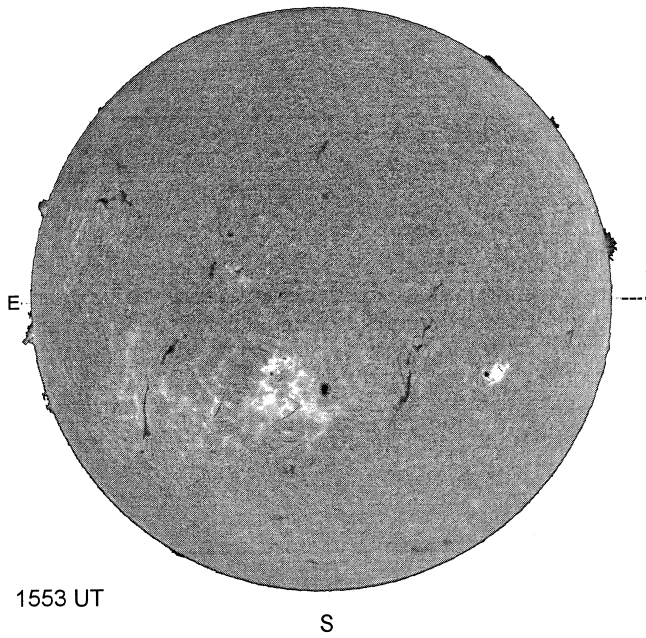
STANFORD MAGNETOGRAM



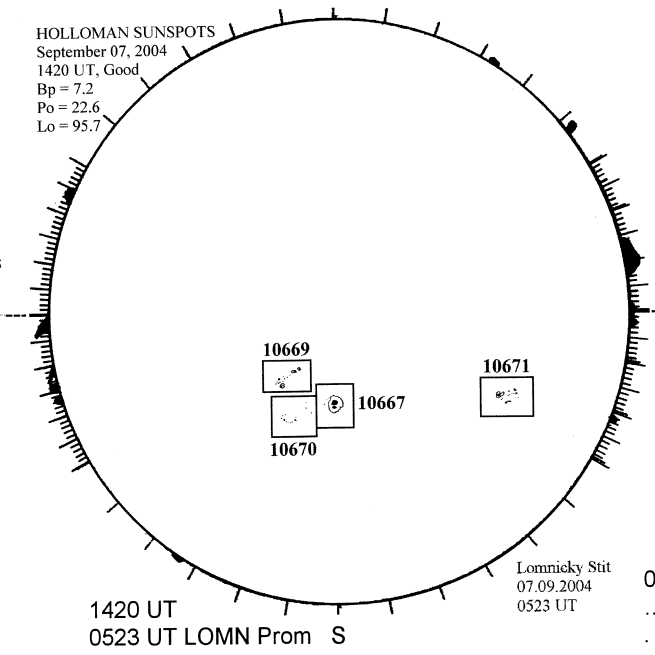
MT. WILSON MAGNETOGRAM



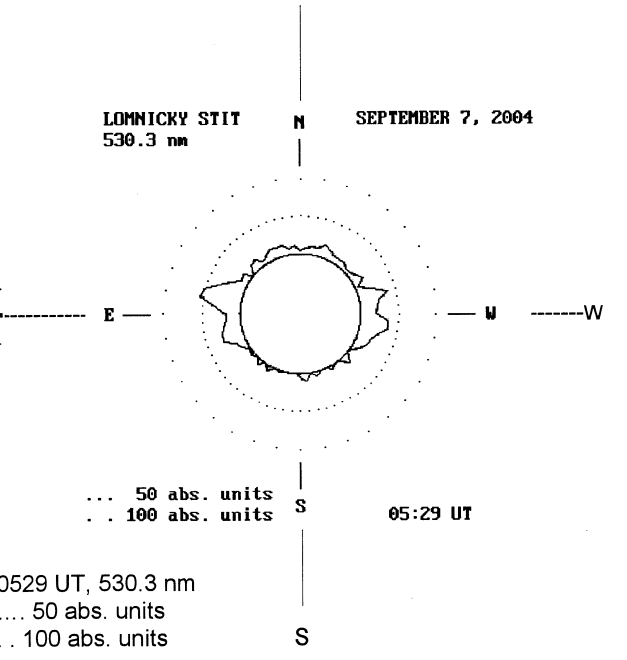
BIG BEAR H-ALPHA



HOLLOMAN SUNSPOTS



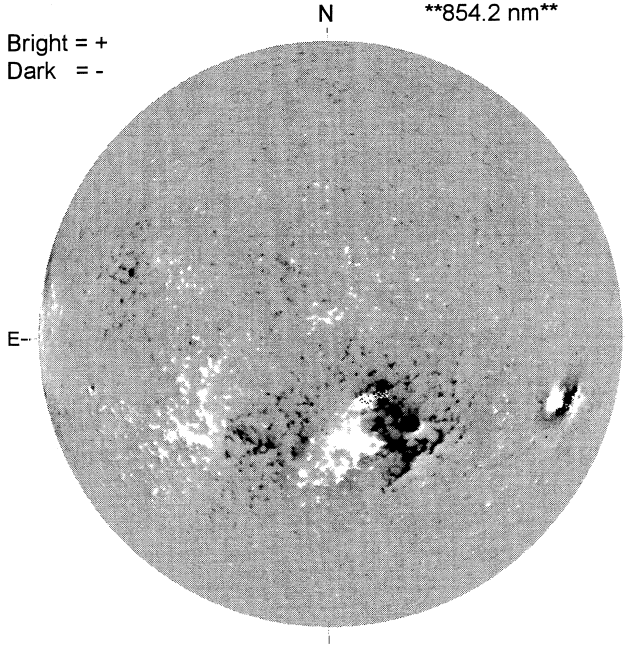
LOMNICKY PEAK CORONA (1.04 Radii)----



SEPTEMBER 8, 2004 (P= 22.77, Bo = 7.25, Lo = 90.24)

KITT PEAK MAGNETOGRAM--SOLIS

854.2 nm

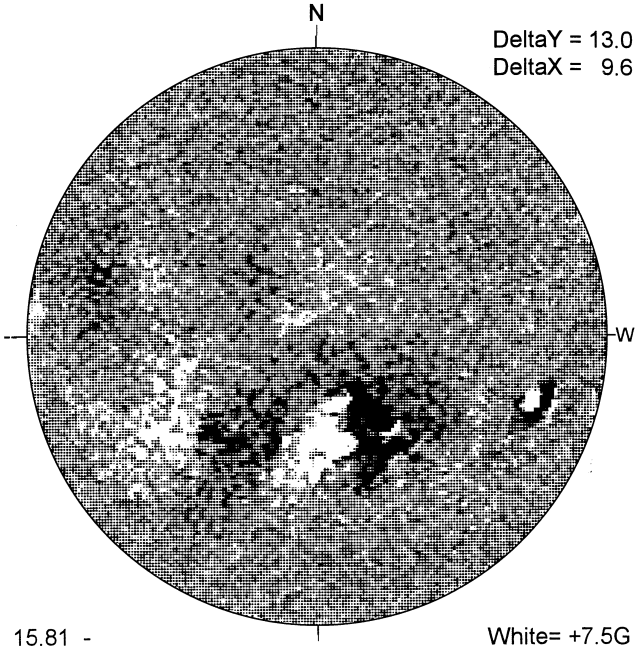


2030 UT

STANFORD MAGNETOGRAM

2227 UT

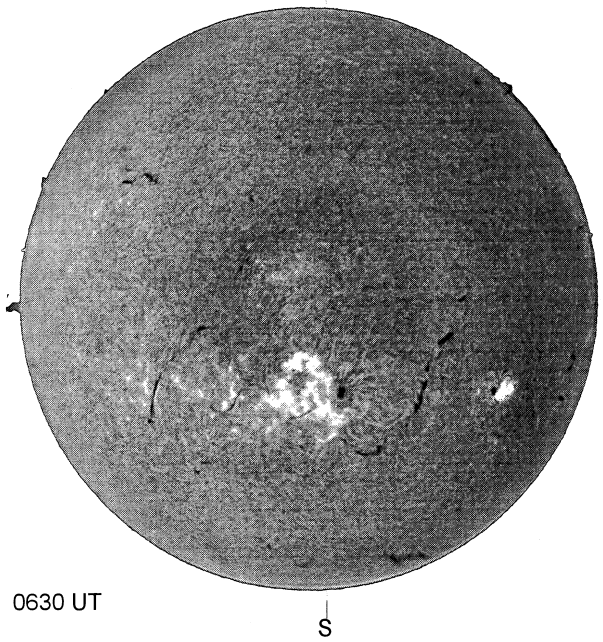
MT. WILSON MAGNETOGRAM



15.81 -
16.76 UT

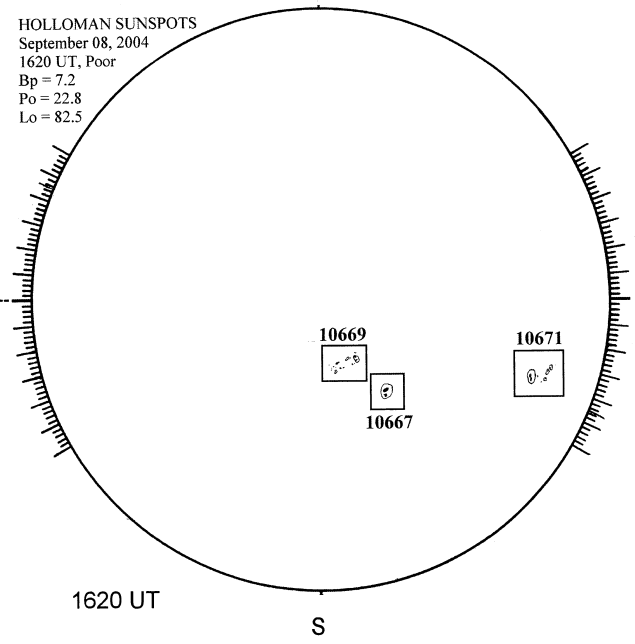
White= +7.5G
Black = -7.5G

KANZELHOHE H-ALPHA



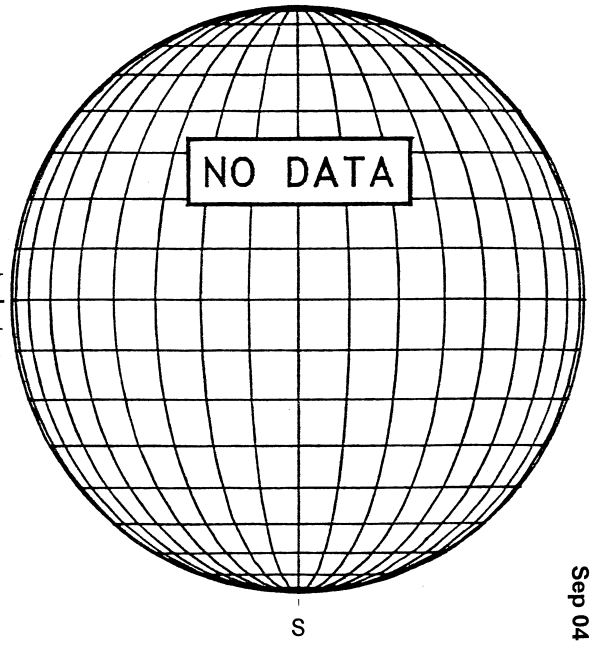
0630 UT

HOLLOMAN SUNSPOTS



1620 UT

SACRAMENTO PEAK CORONA (1.15 Radii)----



53
Sep 04

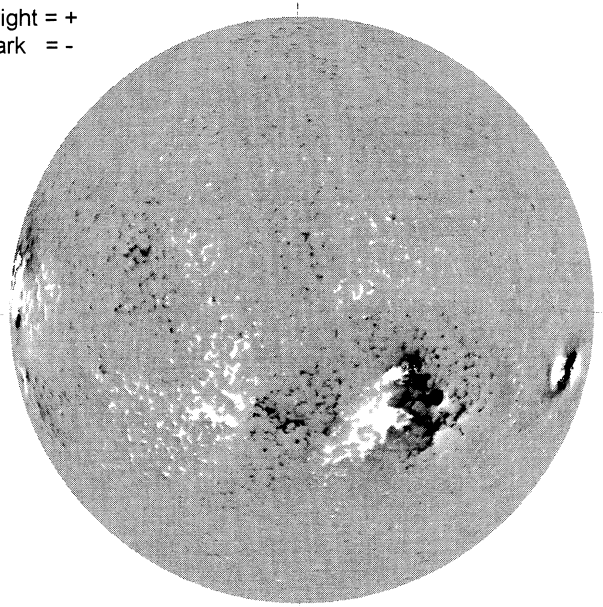
SEPTEMBER 9, 2004 (P= 22.98, Bo = 7.25, Lo = 77.04)

KITT PEAK MAGNETOGRAM--SOLIS

N

**854.2 nm

Bright = +
Dark = -



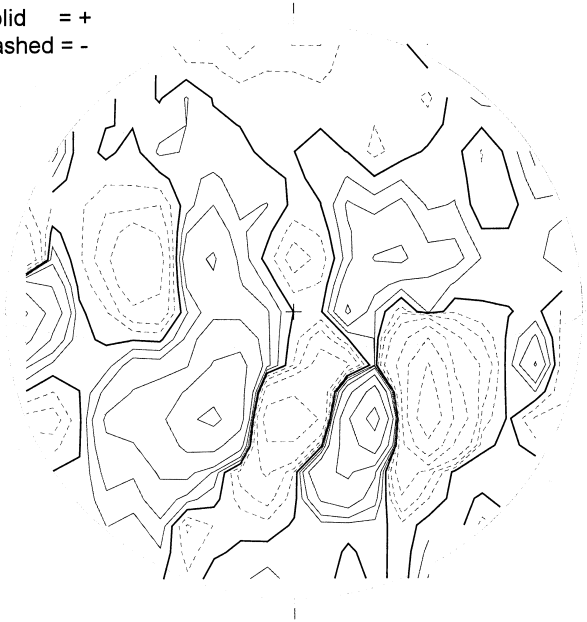
E-

1734 UT

STANFORD MAGNETOGRAM

N

Solid = +
Dashed = -

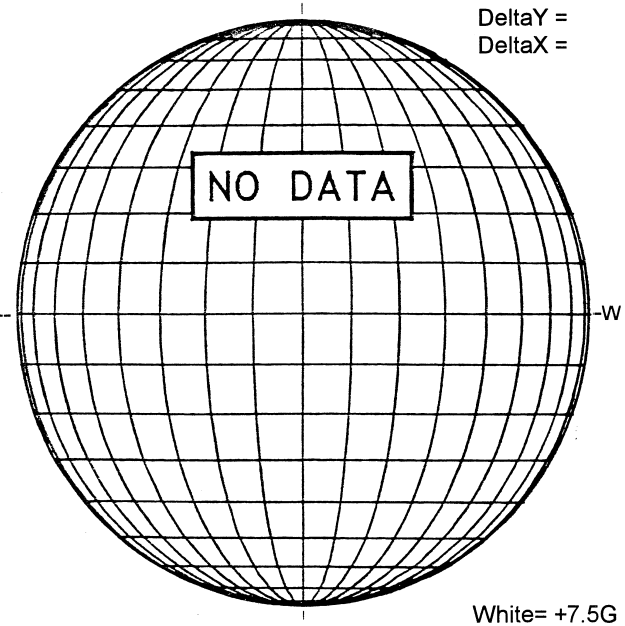


2118 UT

MT. WILSON MAGNETOGRAM

N

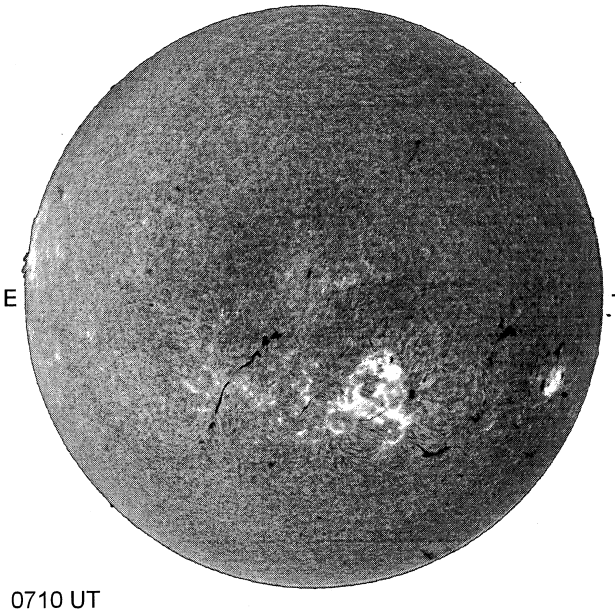
DeltaY =
DeltaX =



-W

White= +7.5G
Black = -7.5G

KANZELHOHE H-ALPHA

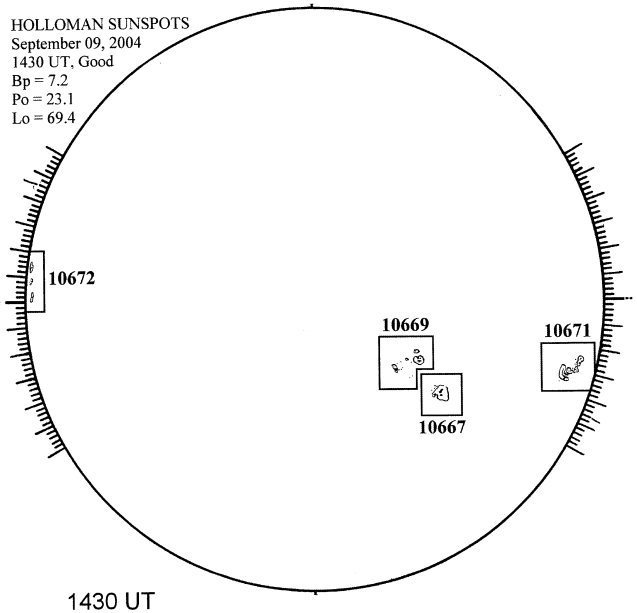


E

0710 UT

S

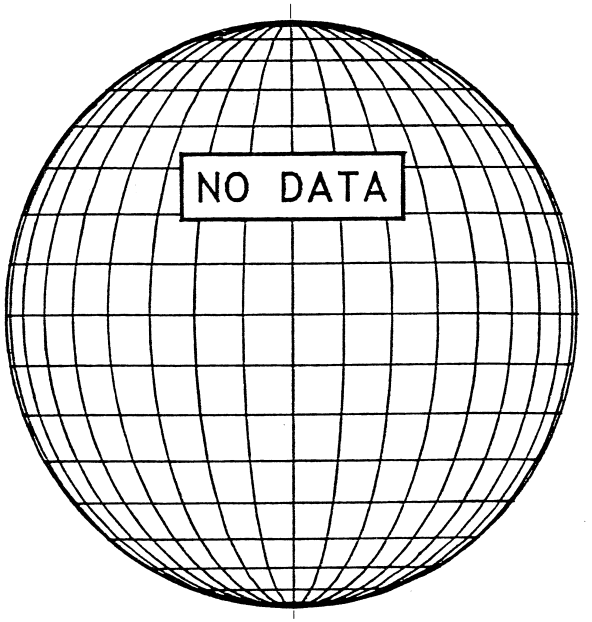
HOLLOMAN SUNSPOTS



1430 UT

S

SACRAMENTO PEAK CORONA (1.15 Radii)----



S

SEPTEMBER 10, 2004 (P= 23.18, Bo = 7.25 Lo = 63.83)

KITT PEAK MAGNETOGRAM--SOLIS

854.2 nm

Bright = +
Dark = -

N

E--

NO DATA

STANFORD MAGNETOGRAM

Solid = +
Dashed = -

N

2108 UT

MT. WILSON MAGNETOGRAM

N

DeltaY = 13.0
DeltaX = 9.6

-W

16.01 -
16.95 UT

White= +7.5G
Black = -7.5G

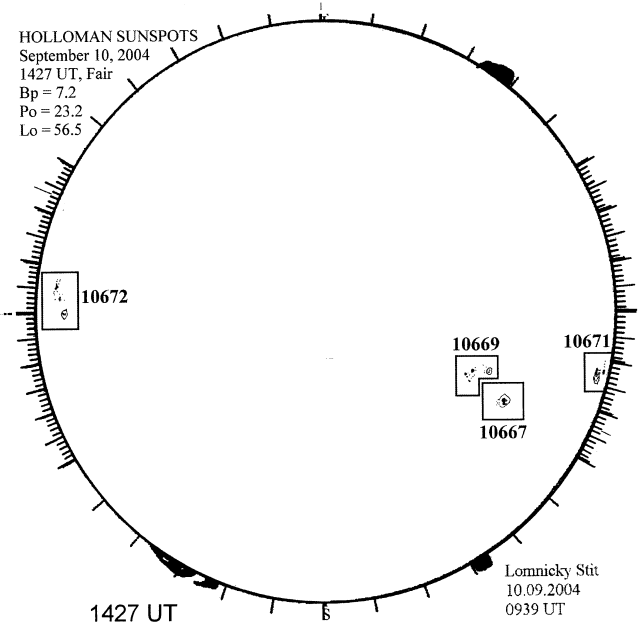
KANZELHOHE H-ALPHA

E

0902 UT

S

HOLLOMAN SUNSPOTS



1427 UT
0939 UT LOMN Prom S

SACRAMENTO PEAK CORONA (1.15 Radii)----

NO DATA

S

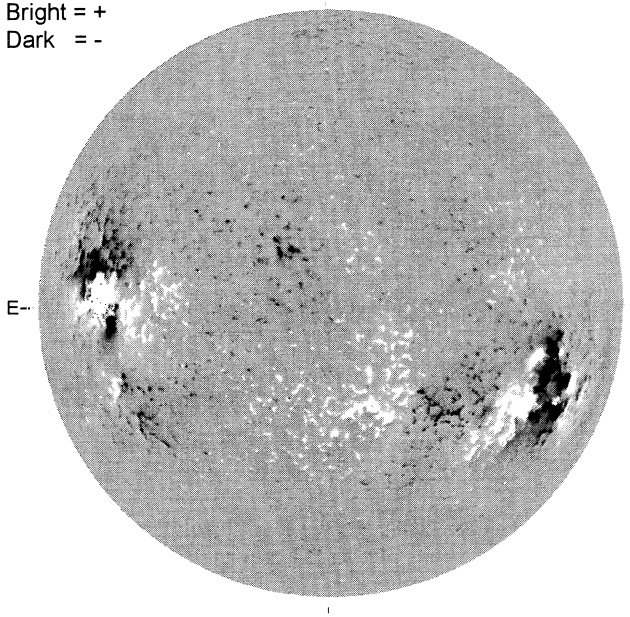
55
Sep 04

SEPTEMBER 11, 2004 (P= 23.38, Bo = 7.24, Lo = 50.63)

KITT PEAK MAGNETOGRAM--SOLIS

N **854.2 nm**

Bright = +
Dark = -

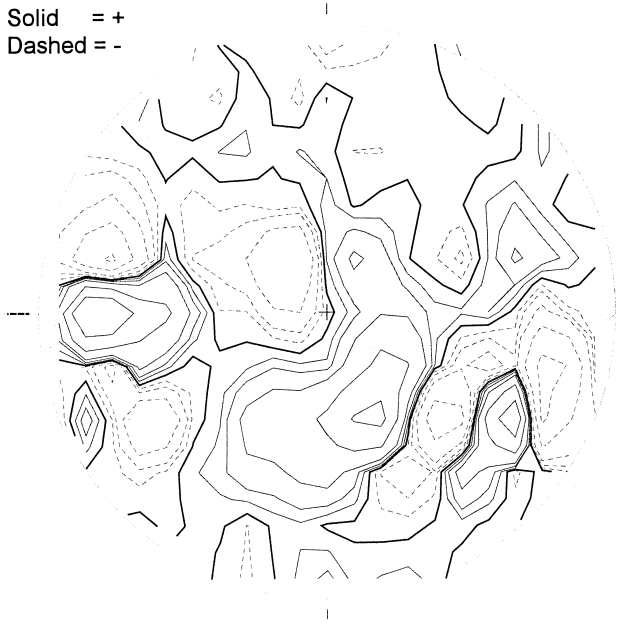


1753 UT

STANFORD MAGNETOGRAM

N

Solid = +
Dashed = -

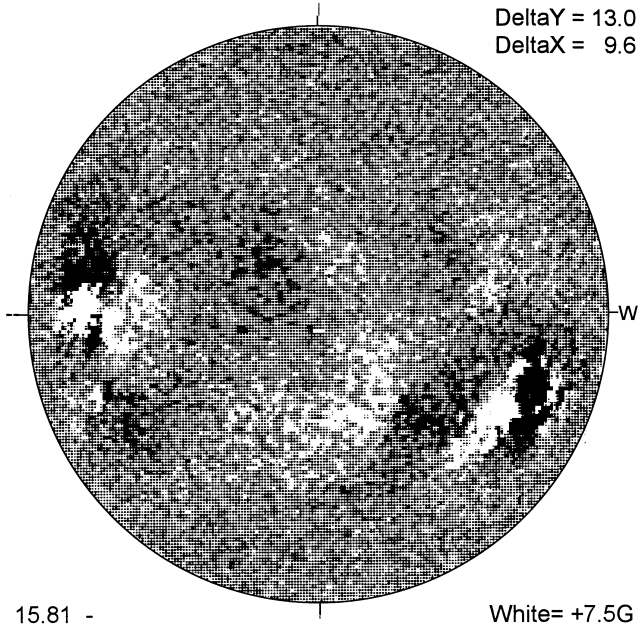


2027 UT

MT. WILSON MAGNETOGRAM

N

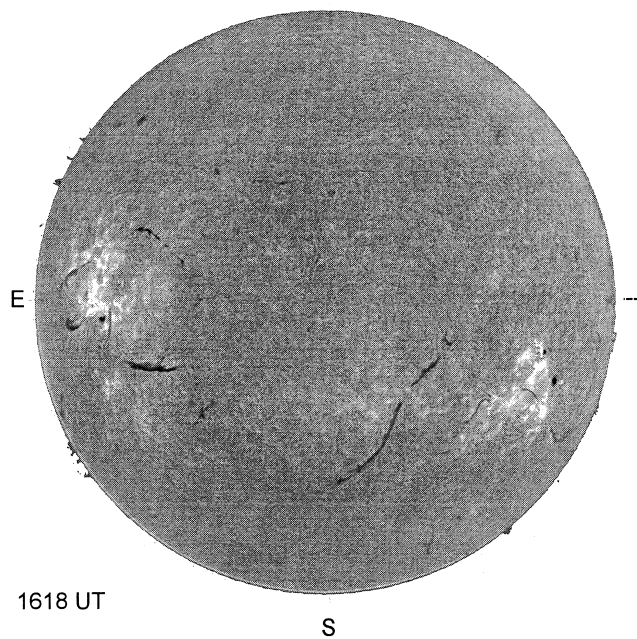
DeltaY = 13.0
DeltaX = 9.6



15.81 -
16.75 UT

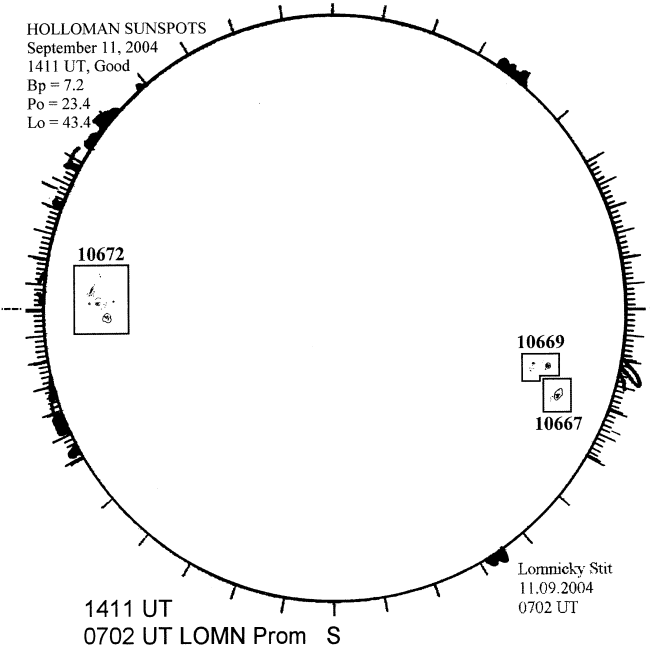
White= +7.5G
Black = -7.5G

BIG BEAR H-ALPHA



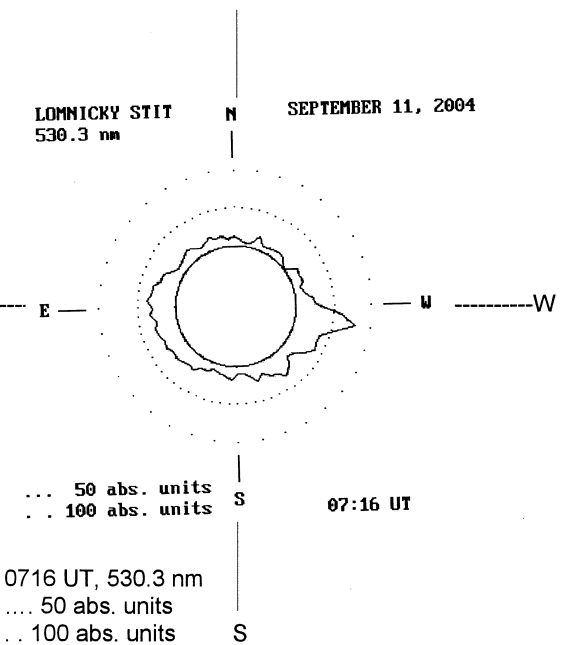
1618 UT

HOLLOMAN SUNSPOTS



1411 UT
0702 UT LOMN Prom S

LOMNICKY PEAK CORONA (1.04 Radii)----



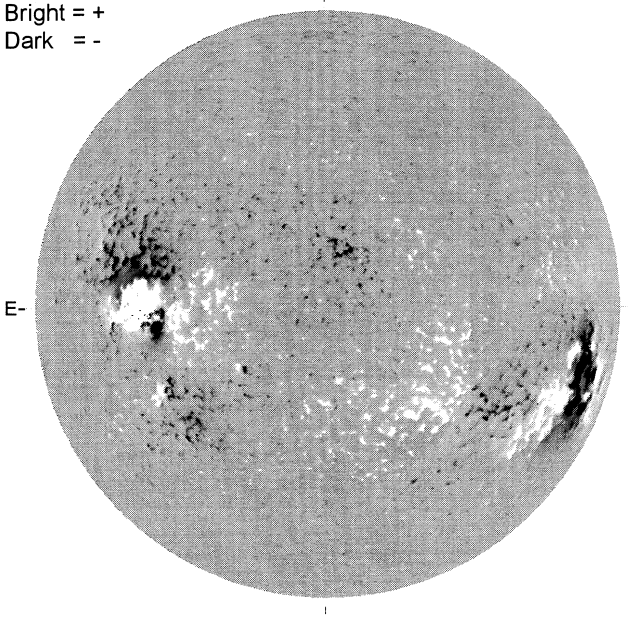
0716 UT, 530.3 nm
.... 50 abs. units
. . 100 abs. units S

SEPTEMBER 12, 2004 (P= 23.57, Bo = 7.24, Lo = 37.43)

KITT PEAK MAGNETOGRAM--SOLIS

N **854.2 nm**

Bright = +
Dark = -



E-

1657 UT

STANFORD MAGNETOGRAM

N

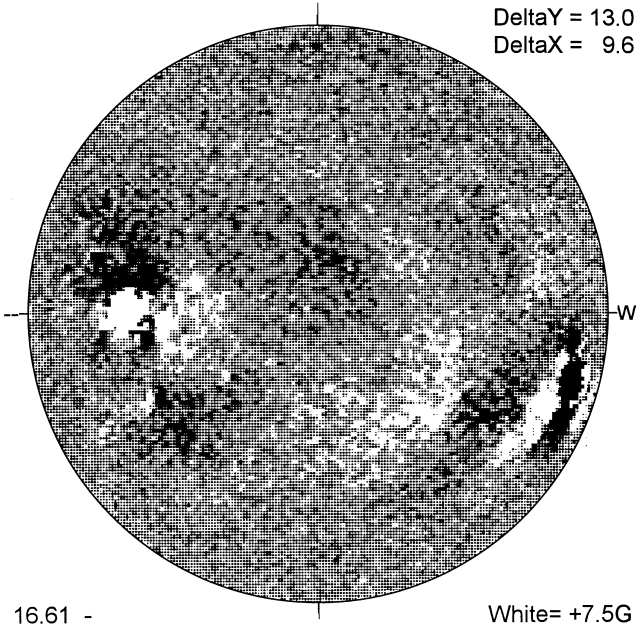
Solid = +
Dashed = -

2238 UT

MT. WILSON MAGNETOGRAM

N

DeltaY = 13.0
DeltaX = 9.6

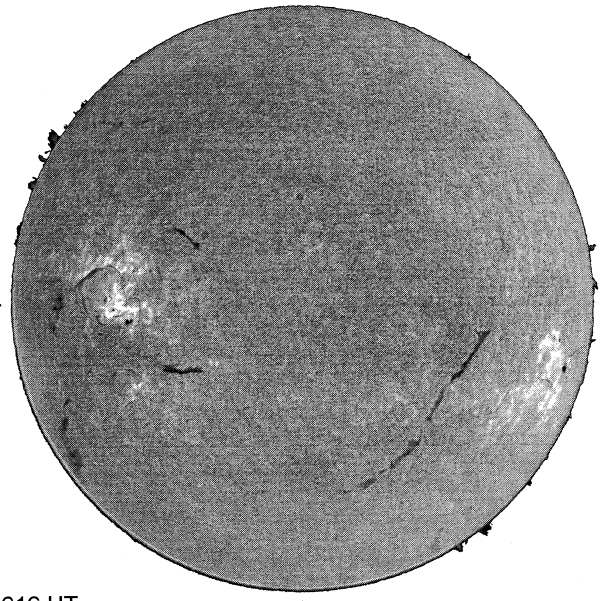


-W

16.61 -
17.55 UT

White= +7.5G
Black = -7.5G

---- BIG BEAR H-ALPHA

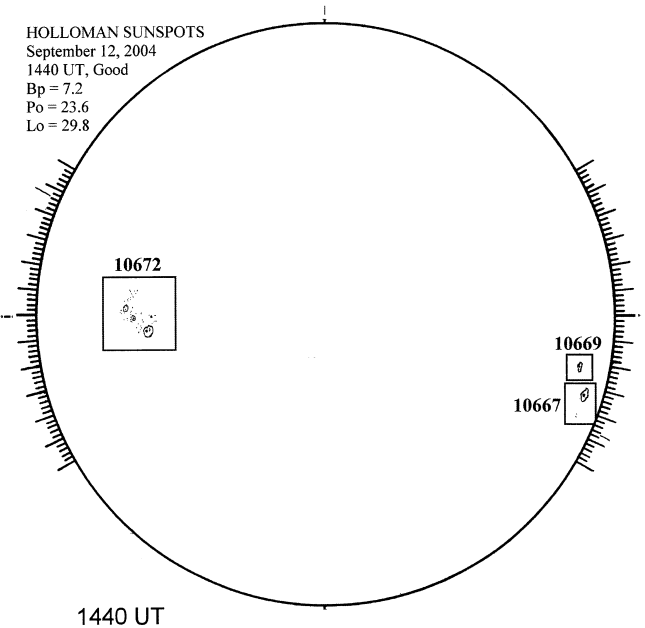


E-

1616 UT

S

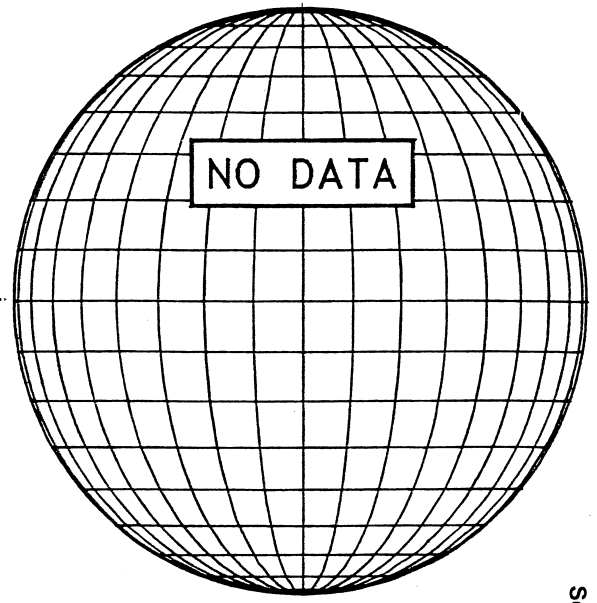
HOLLOMAN SUNSPOTS



1440 UT

S

SACRAMENTO PEAK CORONA (1.15 Radii)----



S

57
Sep 04

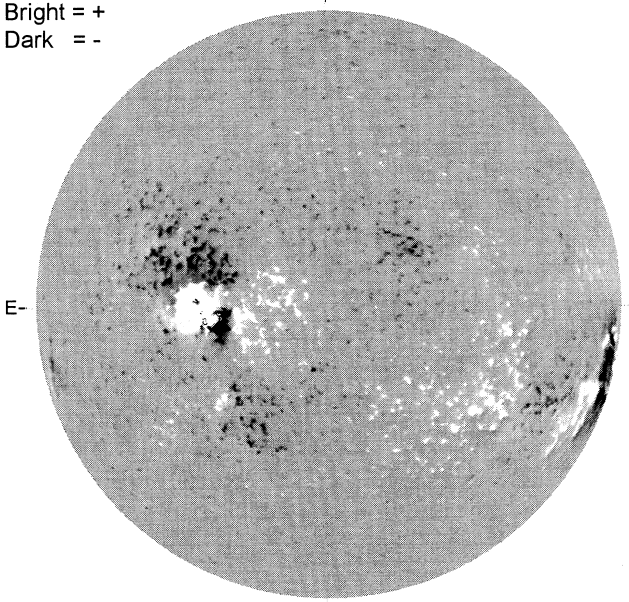
SEPTEMBER 13, 2004 (P= 23.76, Bo = 7.23, Lo = 24.22)

KITT PEAK MAGNETOGRAM--SOLIS

N

854.2 nm

Bright = +
Dark = -



1744 UT

STANFORD MAGNETOGRAM

N

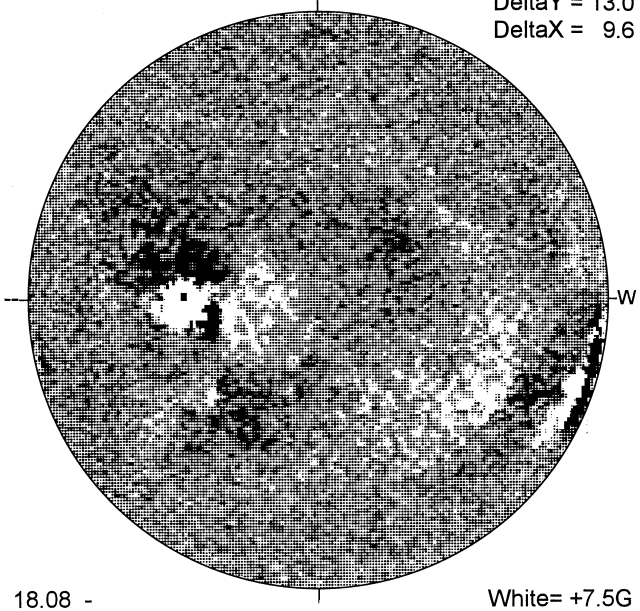
Solid = +
Dashed = -

2106 UT

MT. WILSON MAGNETOGRAM

N

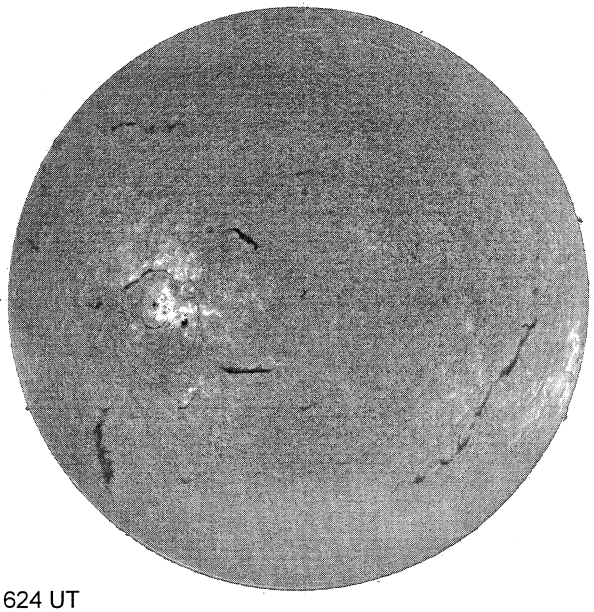
DeltaY = 13.0
DeltaX = 9.6



18.08 -
19.02 UT

White= +7.5G
Black = -7.5G

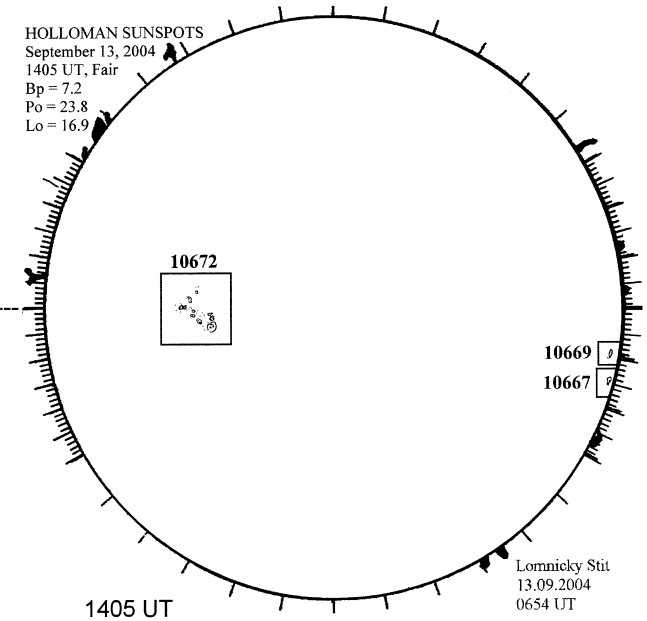
BIG BEAR H-ALPHA



1624 UT

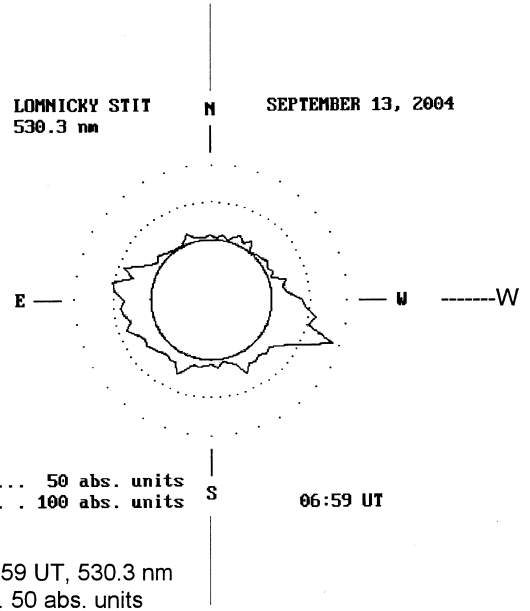
S

HOLLOMAN SUNSPOTS



1405 UT
0654 UT LOMN Prom S

LOMNICKY PEAK CORONA (1.04 Radii)----



0659 UT, 530.3 nm
.... 50 abs. units
. . 100 abs. units

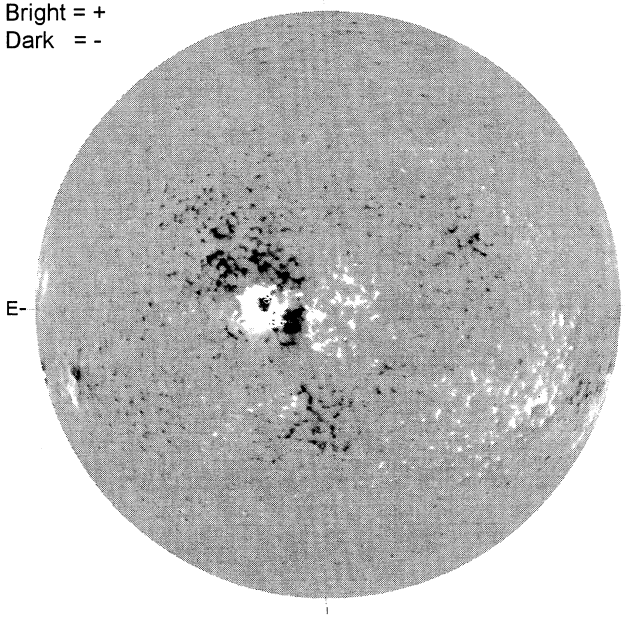
S

SEPTEMBER 14, 2004 (P= 23.94, Bo = 7.22, Lo = 11.02)

KITT PEAK MAGNETOGRAM--SOLIS

N **854.2 nm**

Bright = +
Dark = -



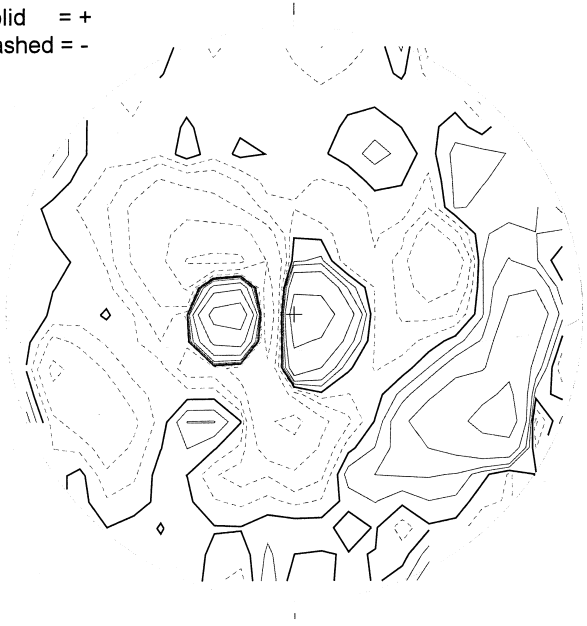
E-

1940 UT

STANFORD MAGNETOGRAM

N

Solid = +
Dashed = -

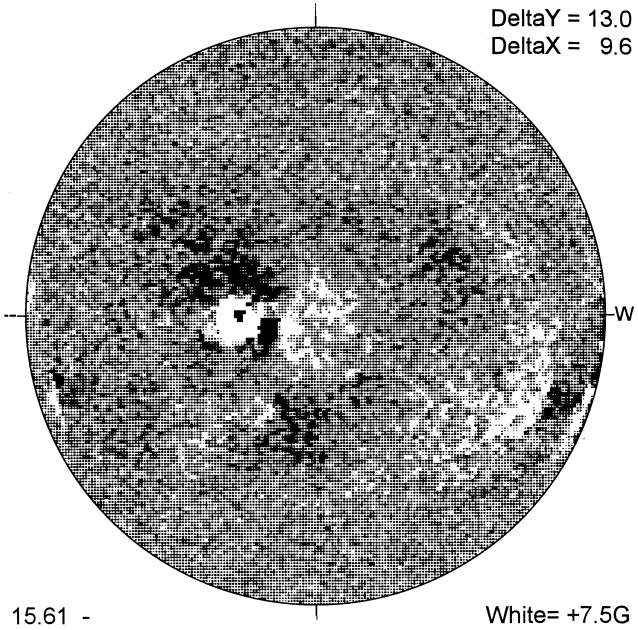


2112 UT

MT. WILSON MAGNETOGRAM

N

DeltaY = 13.0
DeltaX = 9.6

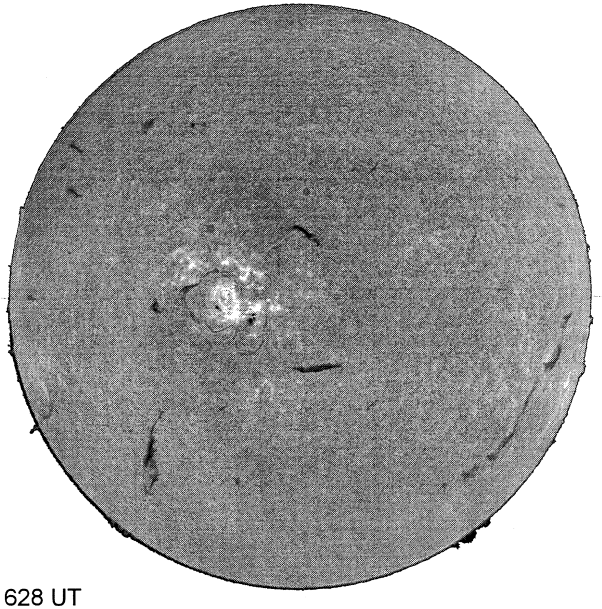


-W

15.61 -
16.56 UT

White= +7.5G
Black = -7.5G

BIG BEAR H-ALPHA

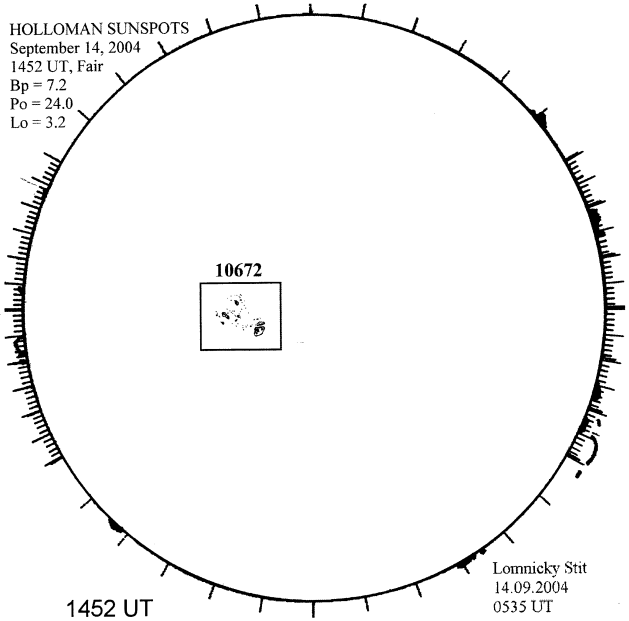


E

1628 UT

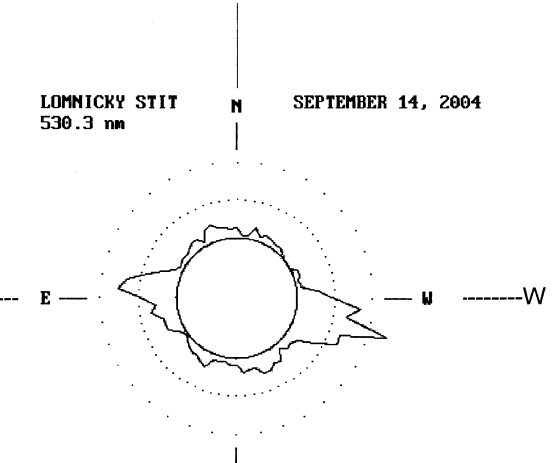
S

HOLLOMAN SUNSPOTS



1452 UT
0535 UT LOMN Prom S

LOMNICKY PEAK CORONA (1.04 Radii)----



-------W

0549 UT, 530.3 nm
.... 50 abs. units
. . 100 abs. units

S

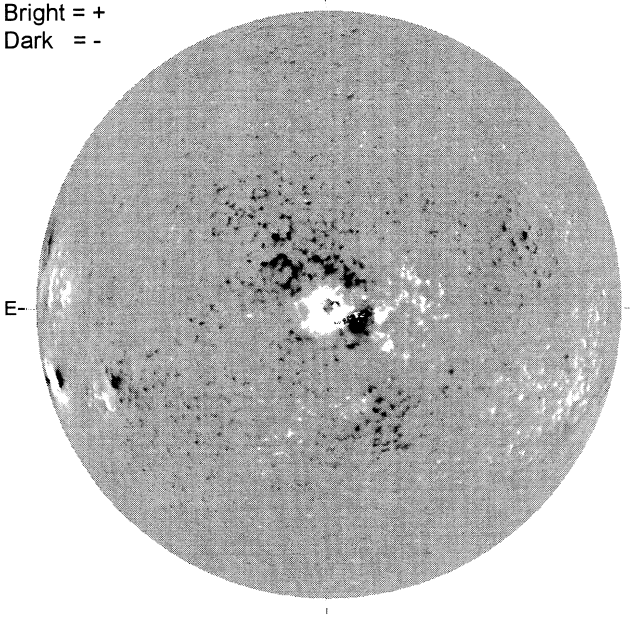
59
Sep 04

SEPTEMBER 15, 2004 (P= 24.11, Bo = 7.20, Lo = 357.82)

KITT PEAK MAGNETOGRAM--SOLIS

N **854.2 nm**

Bright = +
Dark = -



1935 UT

STANFORD MAGNETOGRAM

N

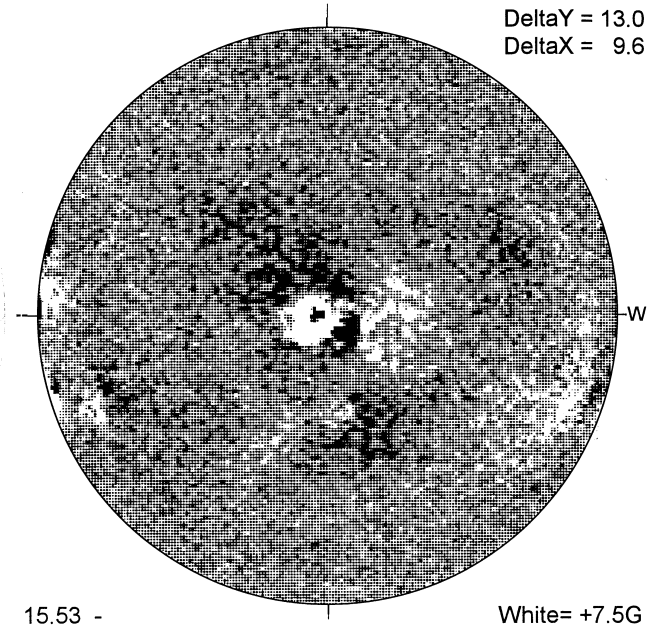
Solid = +
Dashed = -

2052 UT

MT. WILSON MAGNETOGRAM

N

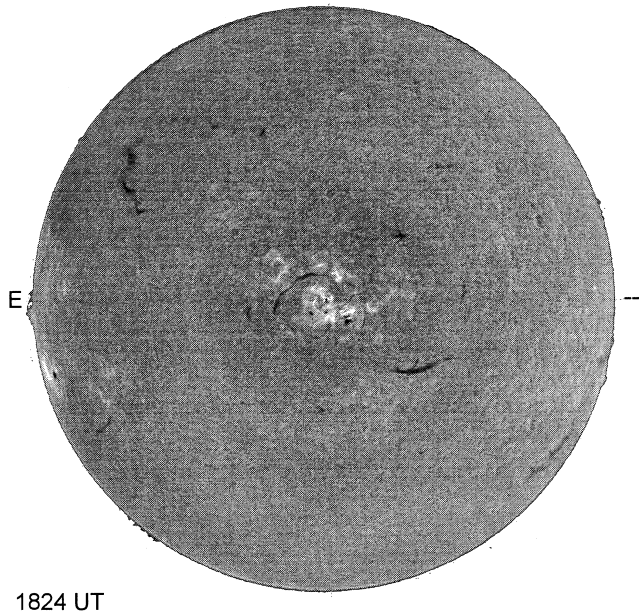
DeltaY = 13.0
DeltaX = 9.6



15.53 -
16.47 UT

White= +7.5G
Black = -7.5G

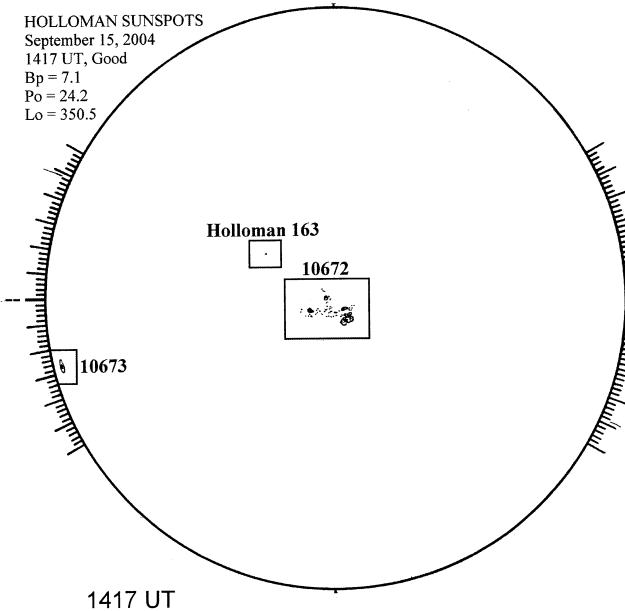
BIG BEAR H-ALPHA



1824 UT

S

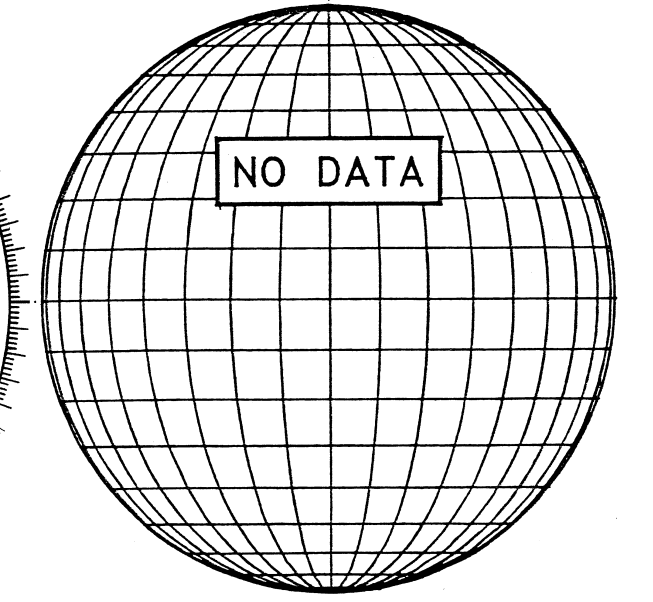
HOLLOMAN SUNSPOTS



1417 UT

S

SACRAMENTO PEAK CORONA (1.15 Radii)----



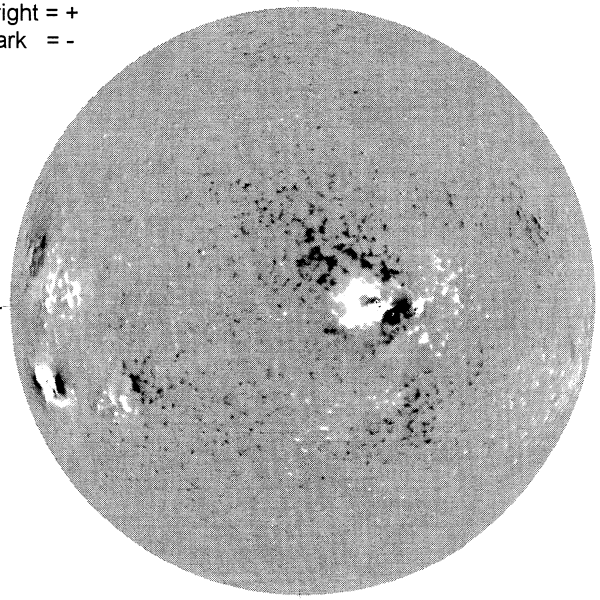
S

SEPTEMBER 16, 2004 (P= 24.28, Bo = 7.19, Lo = 344.62)

KITT PEAK MAGNETOGRAM--SOLIS

N **854.2 nm**

Bright = +
Dark = -



1758 UT

STANFORD MAGNETOGRAM

N

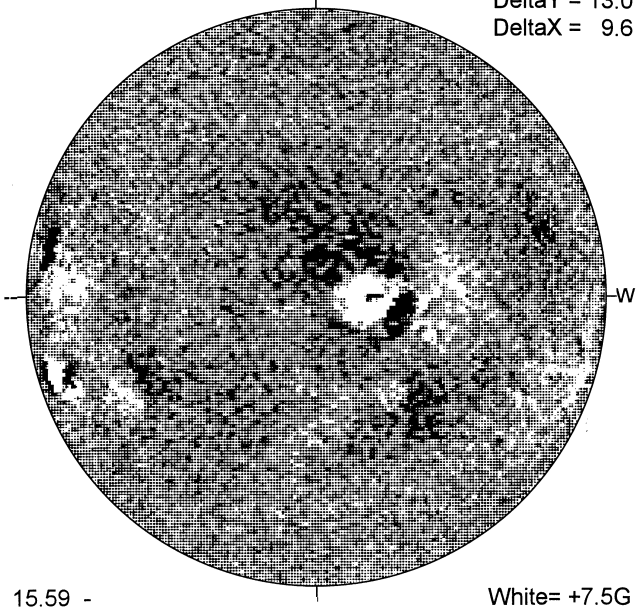
Solid = +
Dashed = -

2051 UT

MT. WILSON MAGNETOGRAM

N

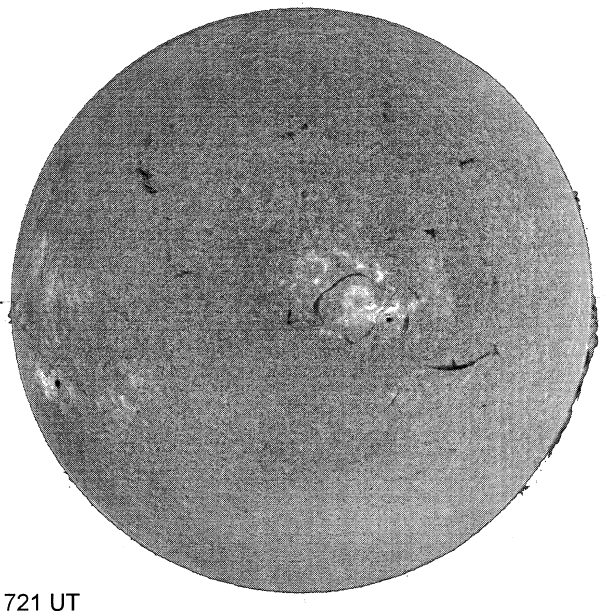
DeltaY = 13.0
DeltaX = 9.6



15.59 -
16.53 UT

White= +7.5G
Black = -7.5G

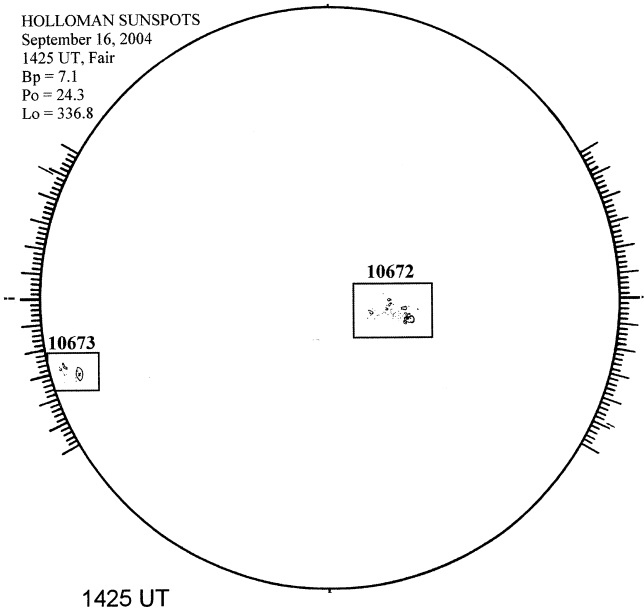
----- BIG BEAR H-ALPHA



1721 UT

S

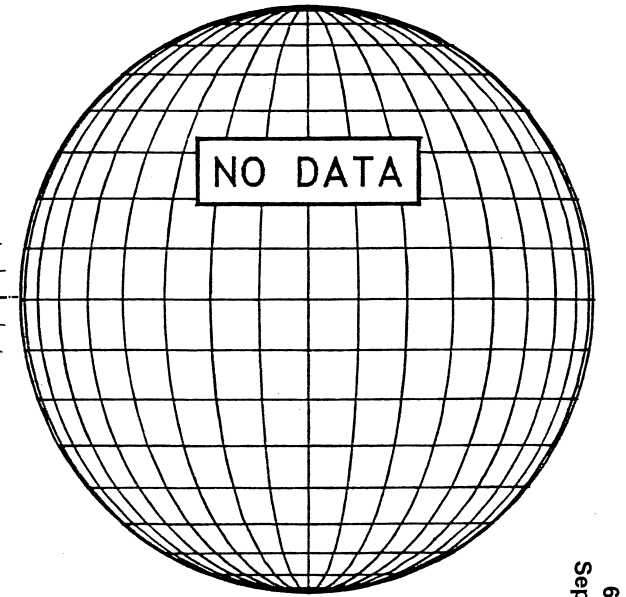
HOLLOMAN SUNSPOTS



1425 UT

S

SACRAMENTO PEAK CORONA (1.15 Radii)----



S

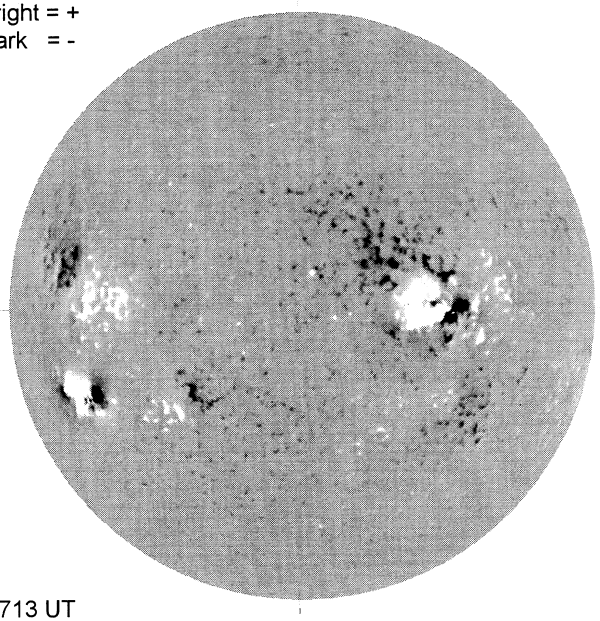
61
Sep 04

SEPTEMBER 17, 2004 (P= 24.44, Bo = 7.17, Lo = 331.42)

KITT PEAK MAGNETOGRAM--SOLIS

N **854.2 nm**

Bright = +
Dark = -



E-

1713 UT

STANFORD MAGNETOGRAM

N

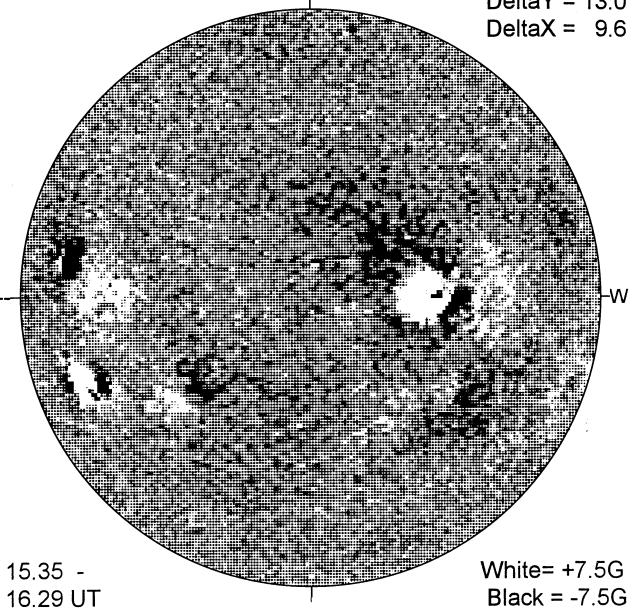
Solid = +
Dashed = -

2117 UT

MT. WILSON MAGNETOGRAM

N

DeltaY = 13.0
DeltaX = 9.6

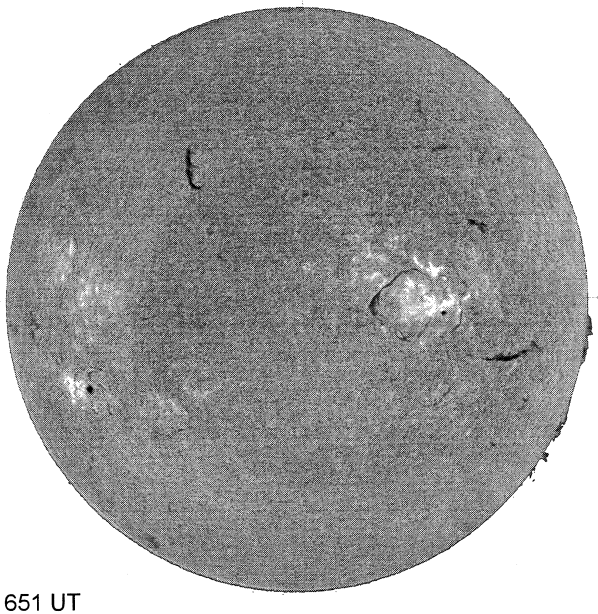


-W

15.35 -
16.29 UT

White= +7.5G
Black = -7.5G

BIG BEAR H-ALPHA

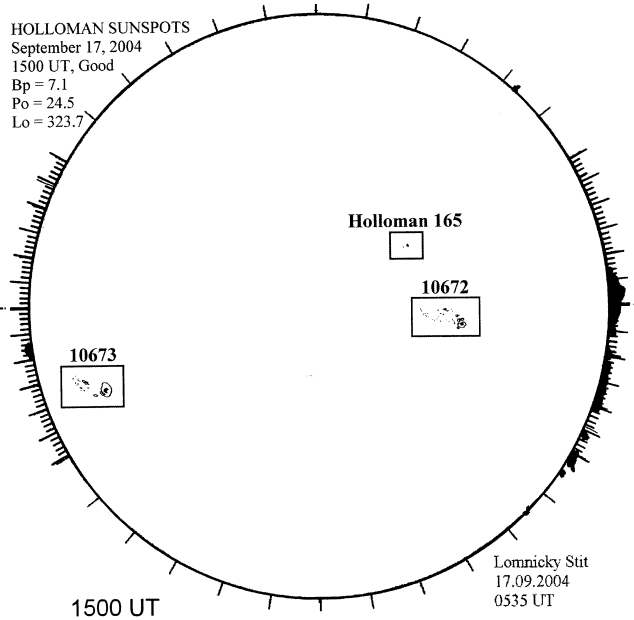


E

1651 UT

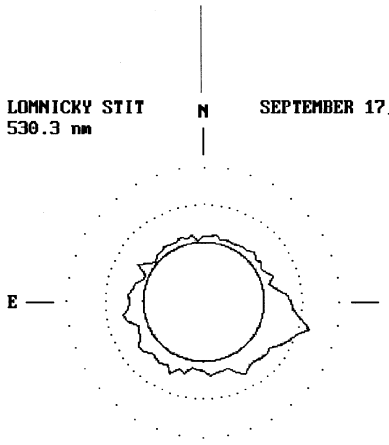
S

HOLLOMAN SUNSPOTS



1500 UT
0535 UT LOMN Prom S

LOMNICKY PEAK CORONA (1.04 Radii)----



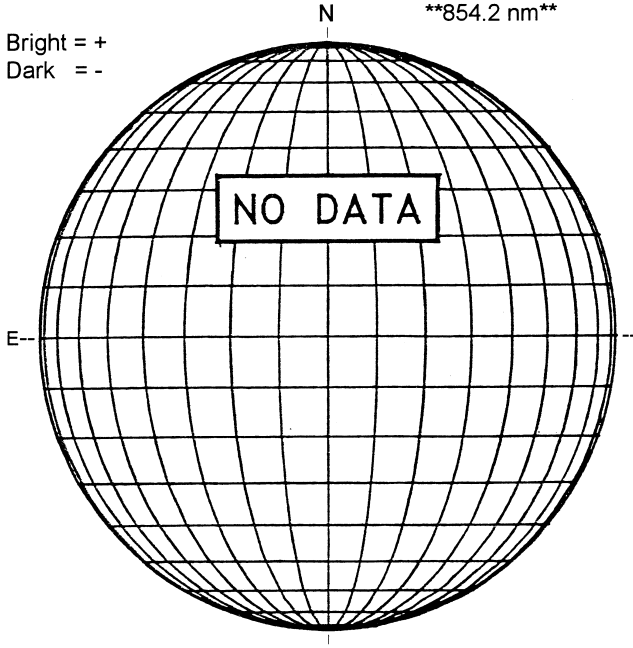
-W

0741 UT, 530.3 nm
.... 50 abs. units
. . 100 abs. units

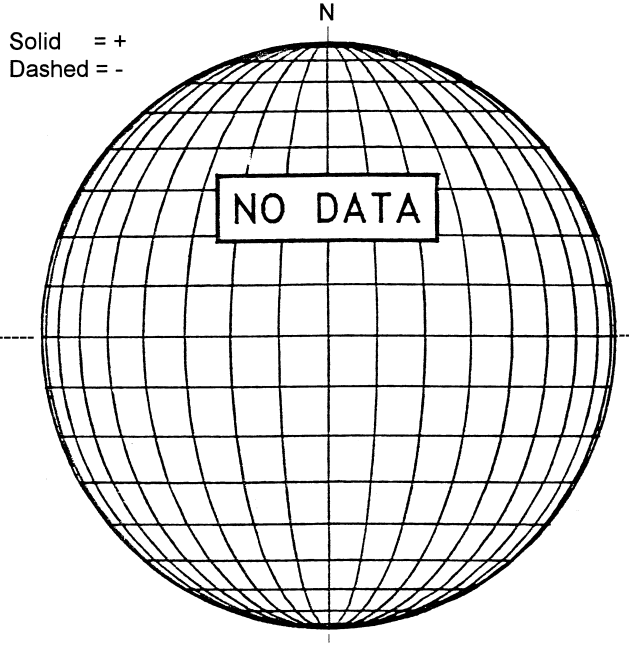
S

SEPTEMBER 18, 2004 (P= 24.59, Bo = 7.15, Lo = 318.21)

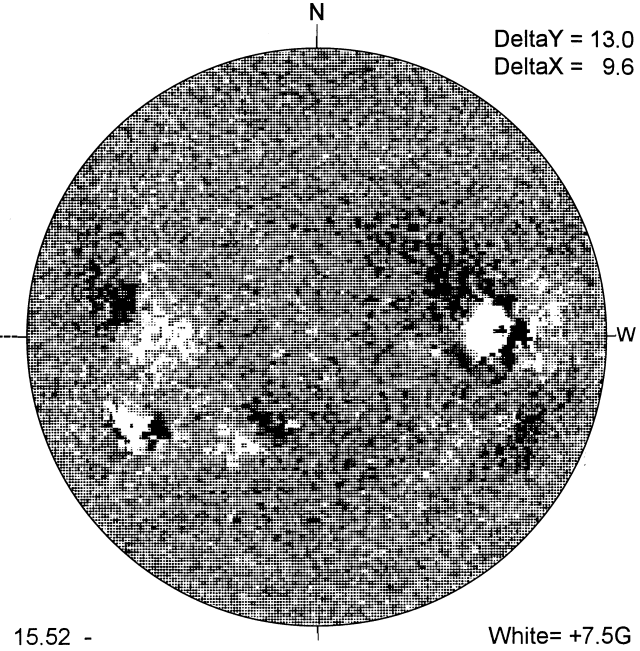
KITT PEAK MAGNETOGRAM--SOLIS



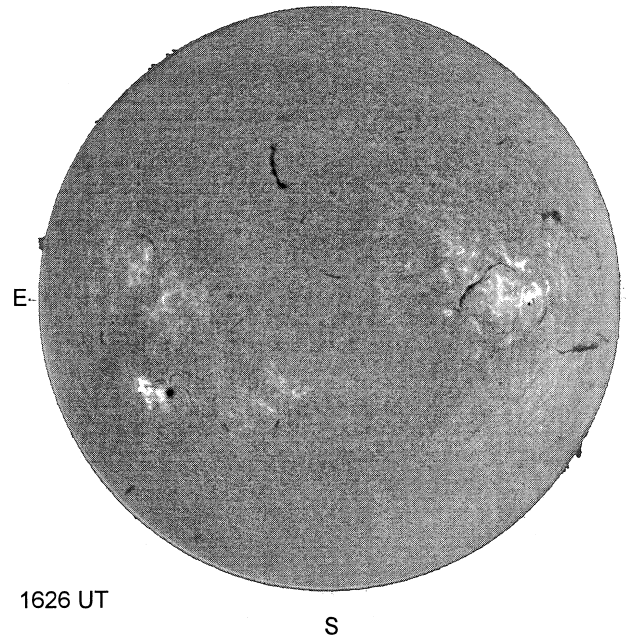
STANFORD MAGNETOGRAM



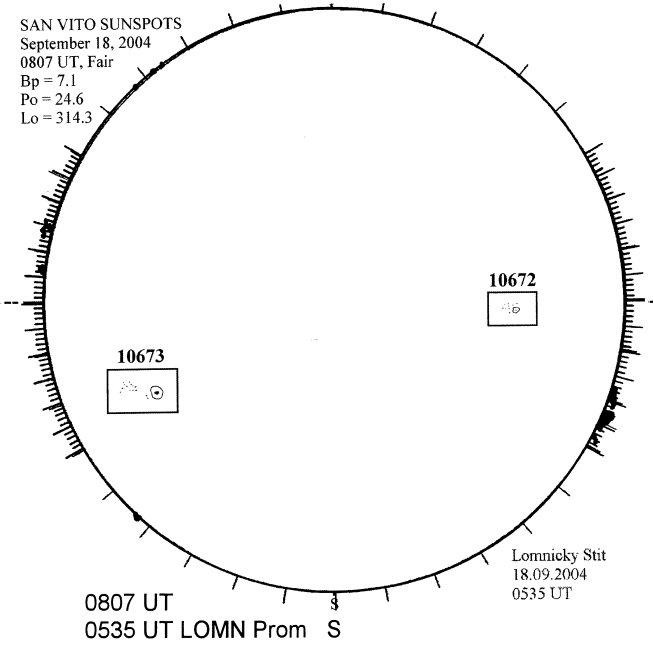
MT. WILSON MAGNETOGRAM



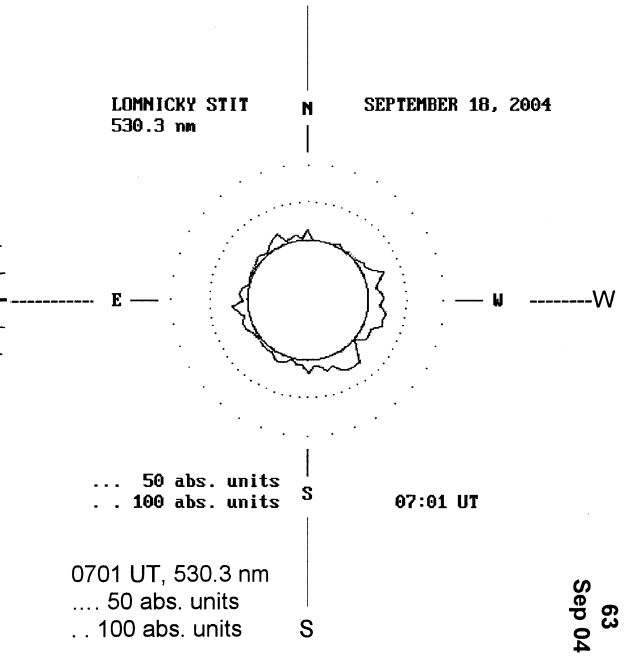
BIG BEAR H-ALPHA



SAN VITO SUNSPOTS

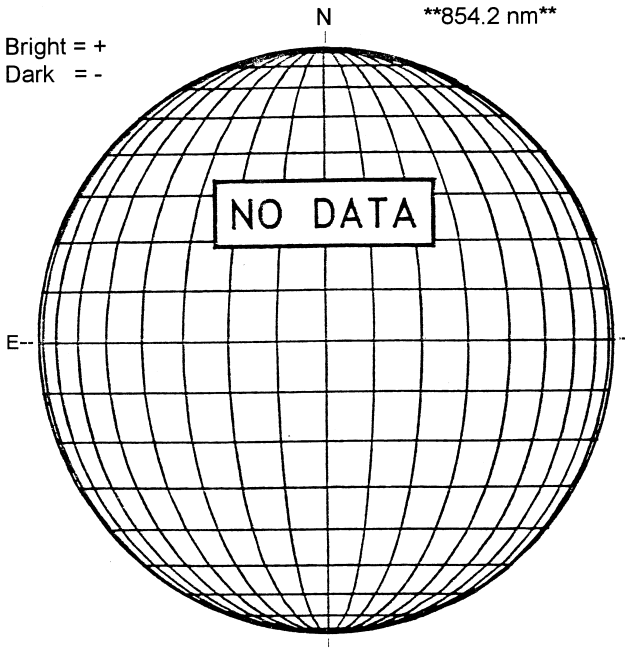


LOMNICKY PEAK CORONA (1.04 Radii)----

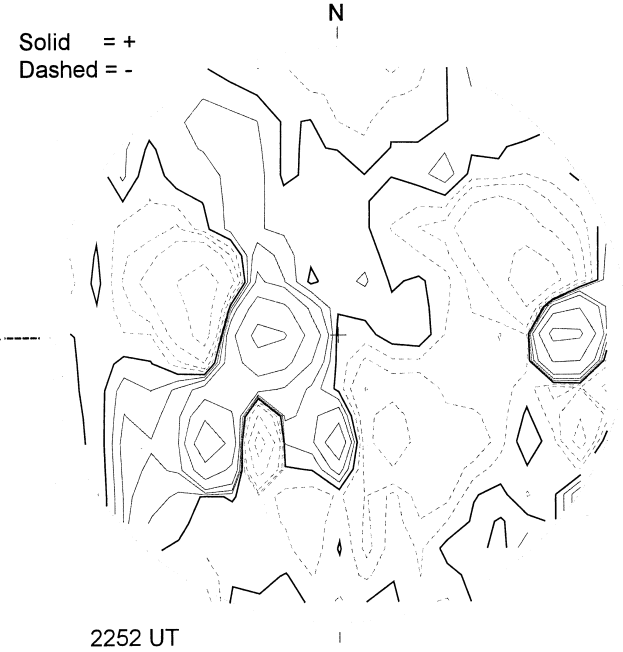


SEPTEMBER 19, 2004 (P= 24.74, Bo = 7.13, Lo = 305.01)

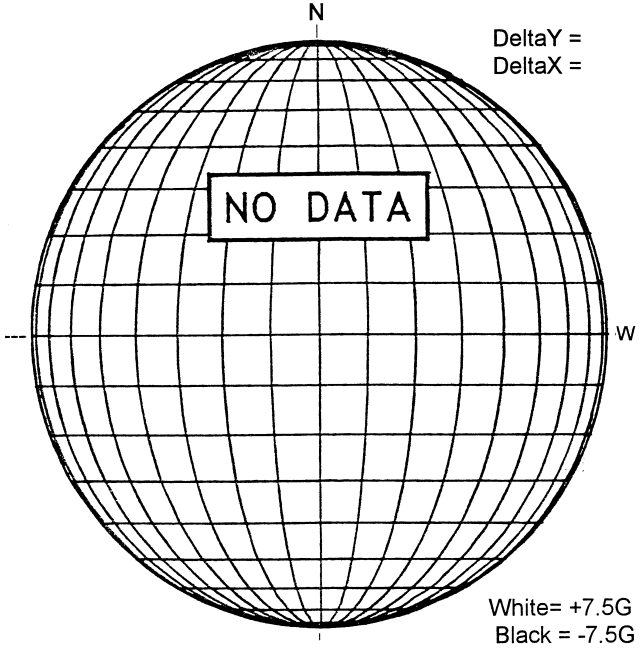
KITT PEAK MAGNETOGRAM--SOLIS



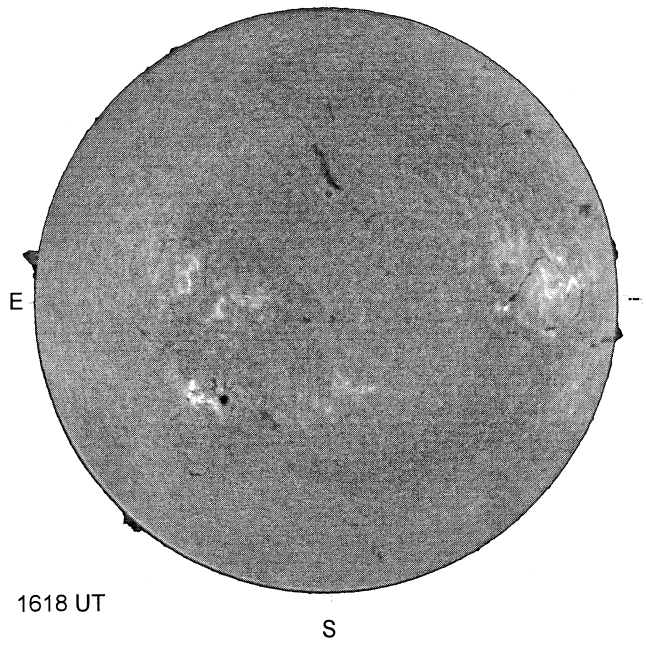
STANFORD MAGNETOGRAM



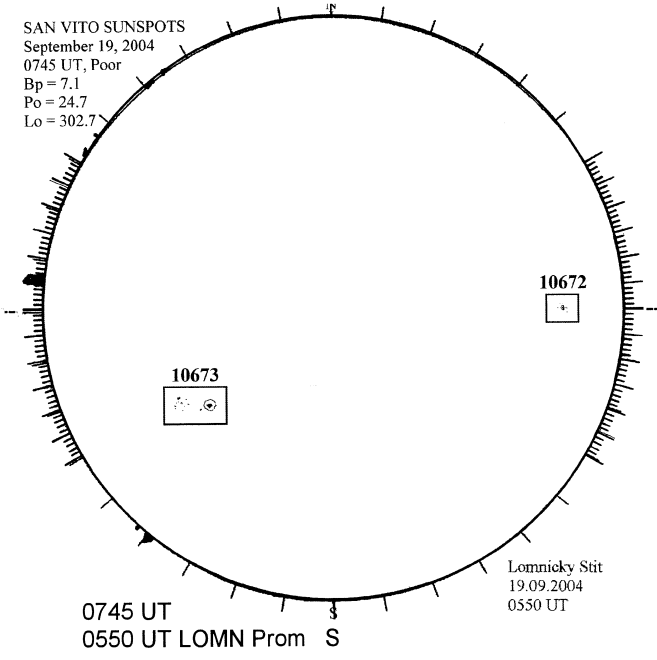
MT. WILSON MAGNETOGRAM



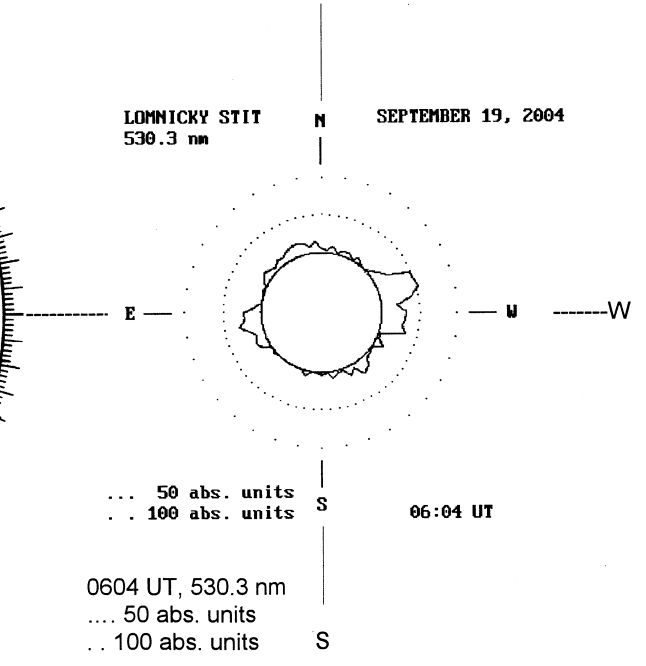
BIG BEAR H-ALPHA



SAN VITO SUNSPOTS

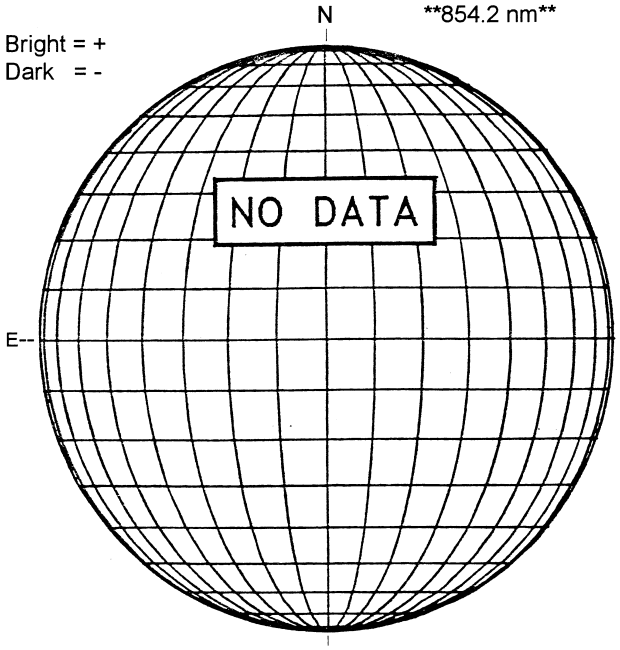


LOMNICKY PEAK CORONA (1.04 Radii)

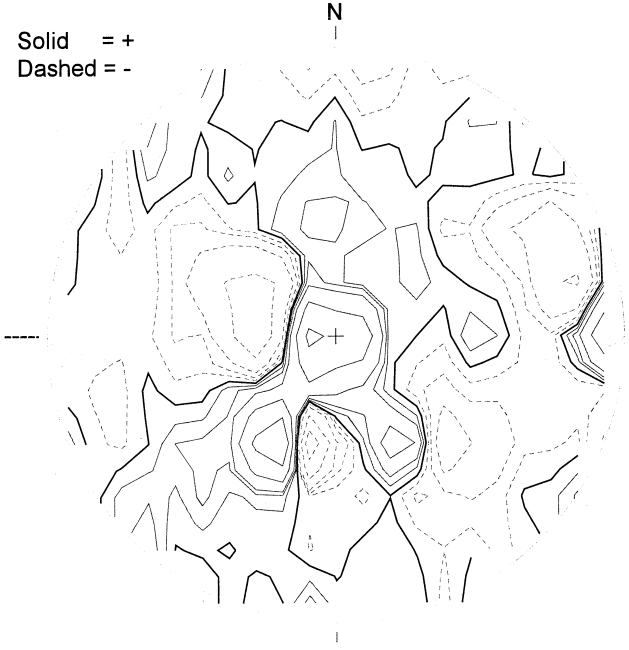


SEPTEMBER 20, 2004 (P= 24.88, Bo = 7.10, Lo = 291.81)

KITT PEAK MAGNETOGRAM--SOLIS

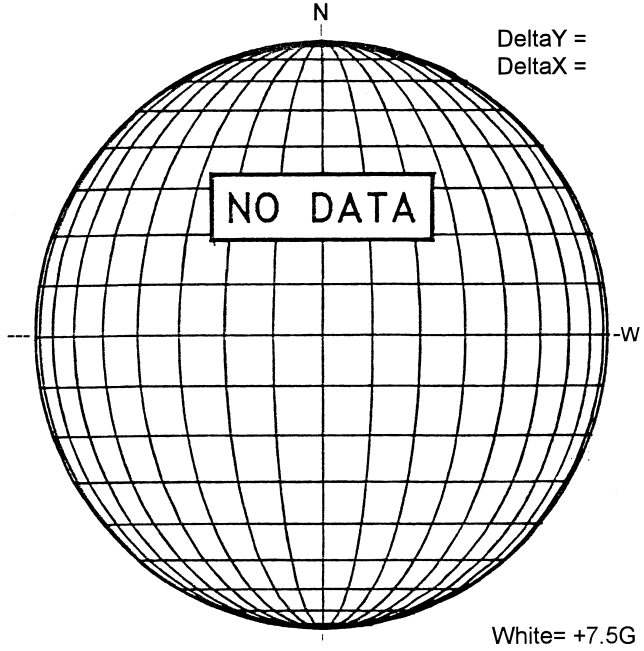


STANFORD MAGNETOGRAM



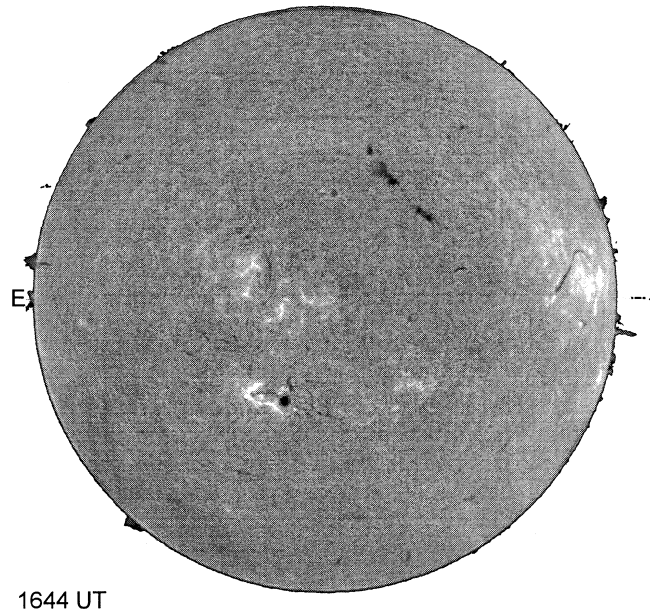
2139 UT

MT. WILSON MAGNETOGRAM



White= +7.5G
Black = -7.5G

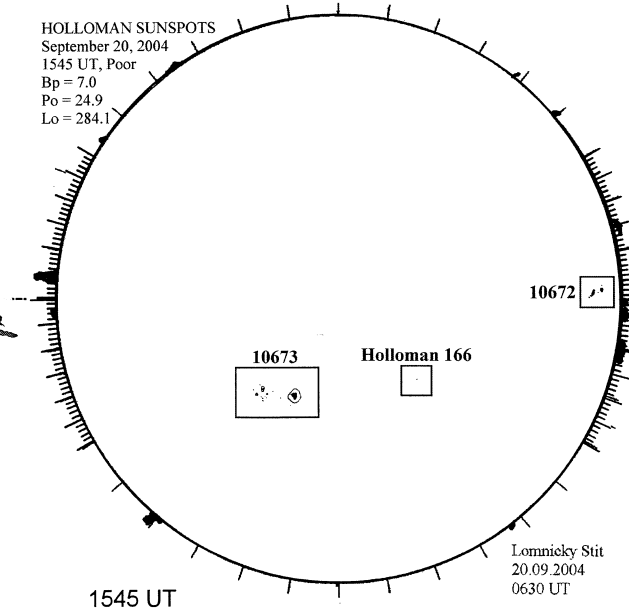
BIG BEAR H-ALPHA



1644 UT

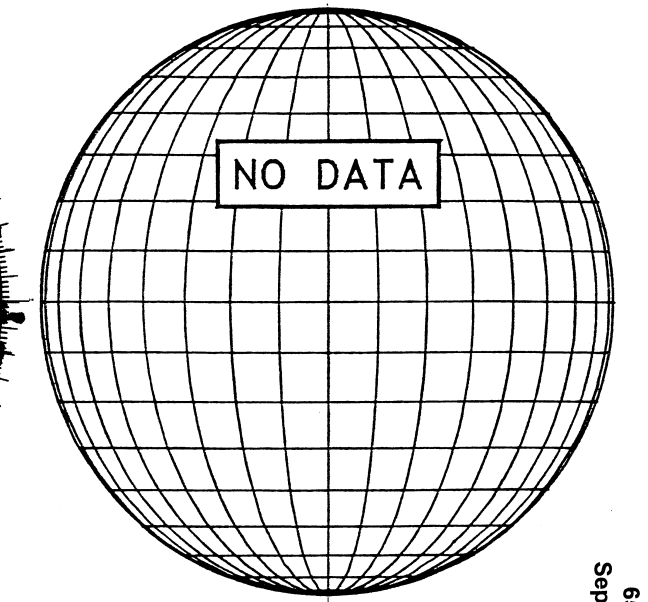
S

HOLLOMAN SUNSPOTS



1545 UT
0630 UT LOMN Prom S

SACRAMENTO PEAK CORONA (1.15 Radii)----



S

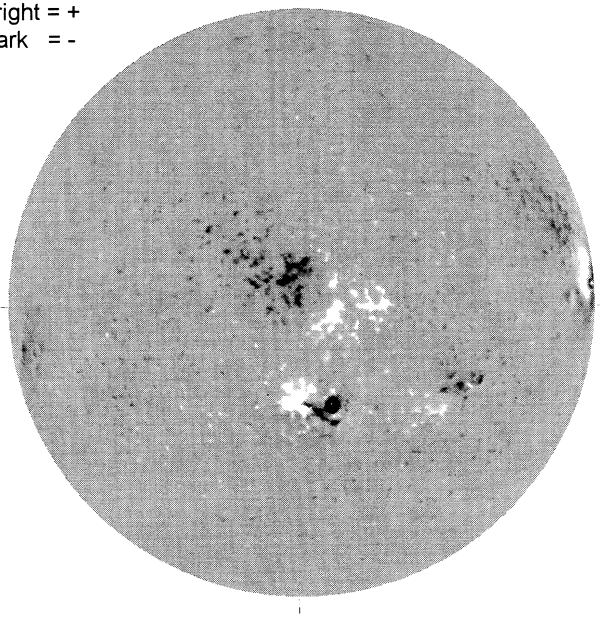
65
Sep 04

SEPTEMBER 21, 2004 (P= 25.01, Bo = 7.08, Lo = 278.61)

KITT PEAK MAGNETOGRAM--SOLIS

N **854.2 nm**

Bright = +
Dark = -



1927 UT

STANFORD MAGNETOGRAM

N

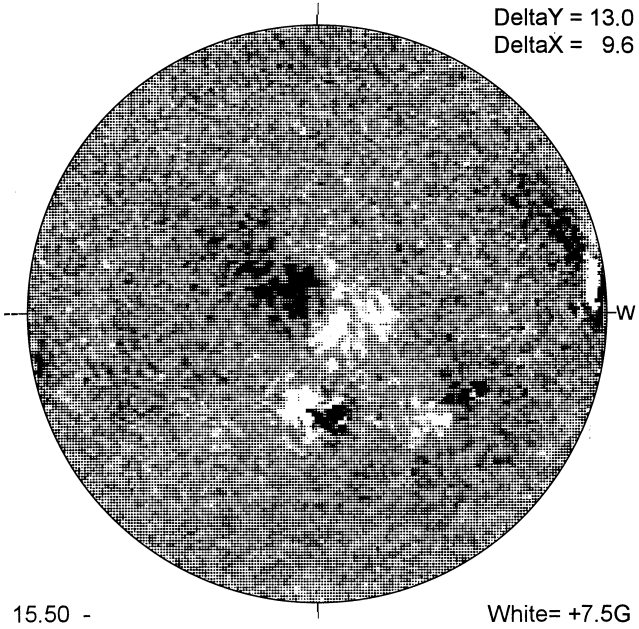
Solid = +
Dashed = -

2058 UT

MT. WILSON MAGNETOGRAM

N

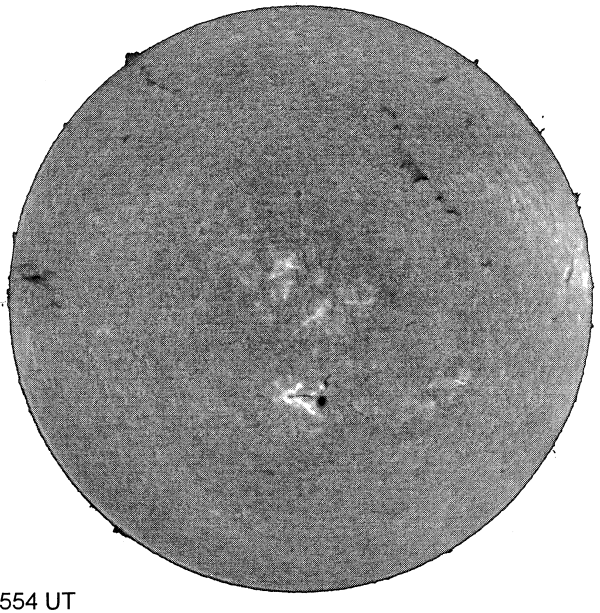
DeltaY = 13.0
DeltaX = 9.6



15.50 -
16.45 UT

White= +7.5G
Black = -7.5G

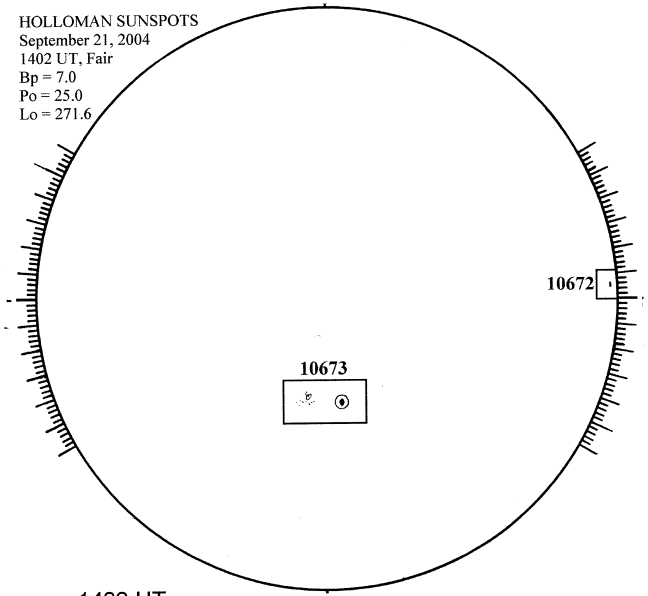
BIG BEAR H-ALPHA



1554 UT

S

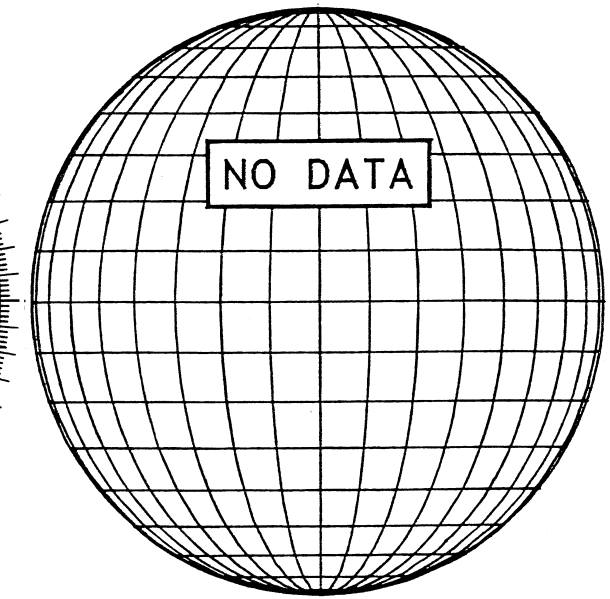
HOLLOMAN SUNSPOTS



1402 UT

S

SACRAMENTO PEAK CORONA (1.15 Radii)----



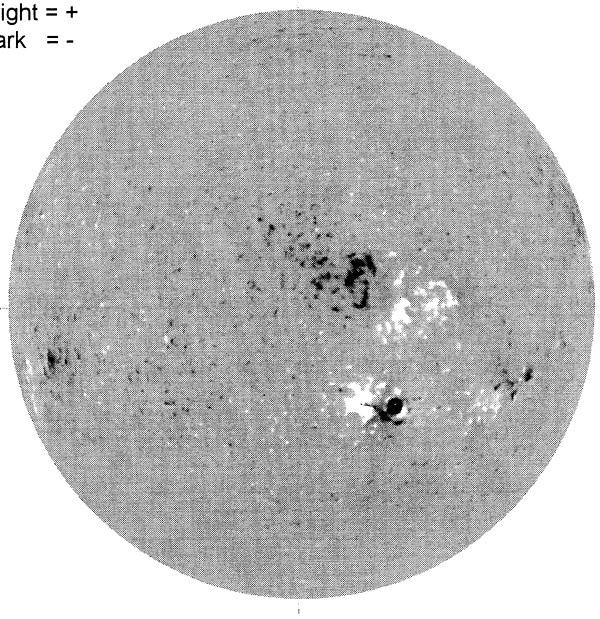
S

SEPTEMBER 22, 2004 (P= 25.14, Bo = 7.05, Lo = 265.42)

KITT PEAK MAGNETOGRAM--SOLIS

N **854.2 nm**

Bright = +
Dark = -



E--

1938 UT

STANFORD MAGNETOGRAM

N

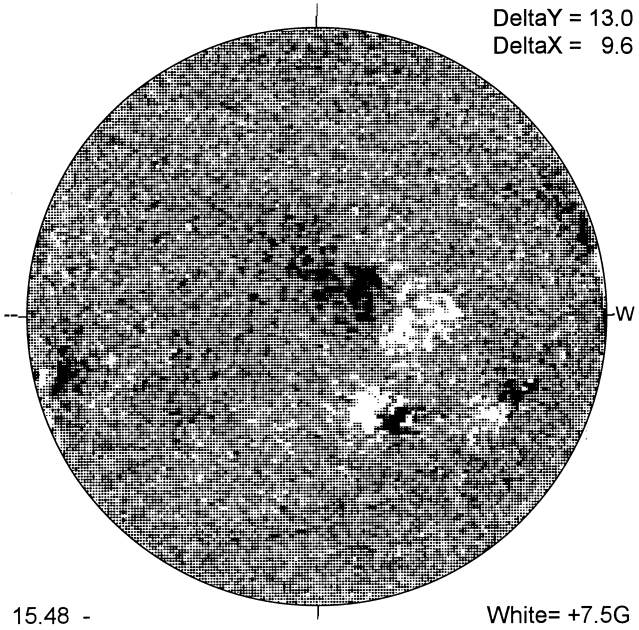
Solid = +
Dashed = -

1831 UT

MT. WILSON MAGNETOGRAM

N

DeltaY = 13.0
DeltaX = 9.6

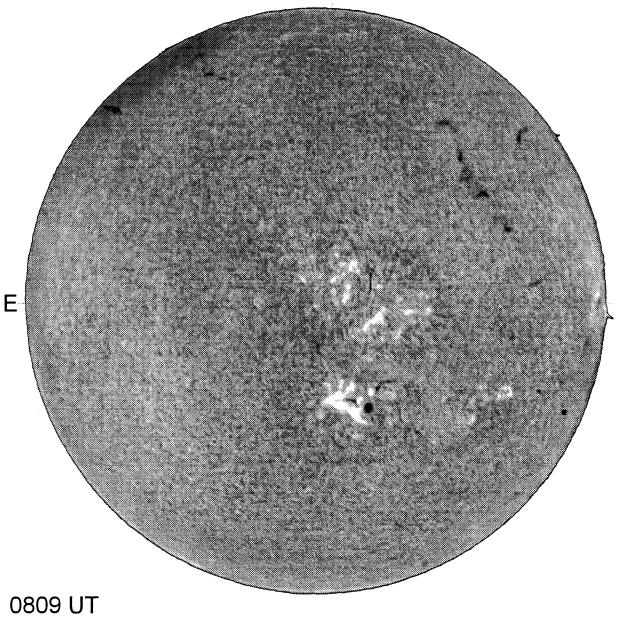


-W

15.48 -
16.43 UT

White= +7.5G
Black = -7.5G

KANZELHOHE H-ALPHA

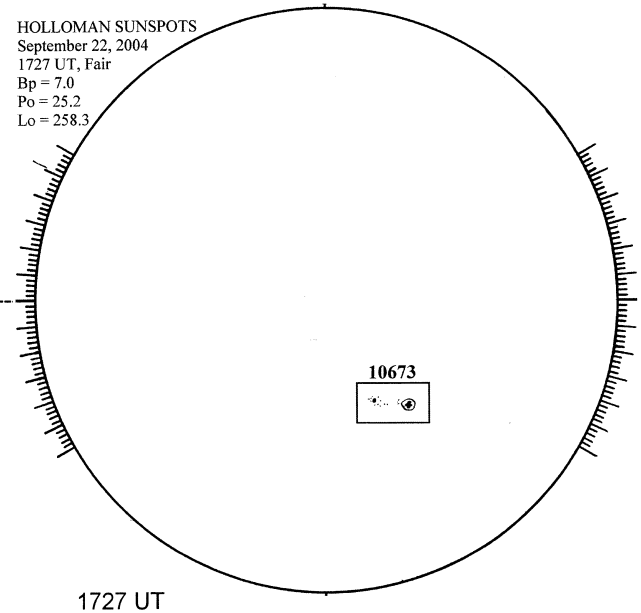


E

0809 UT

S

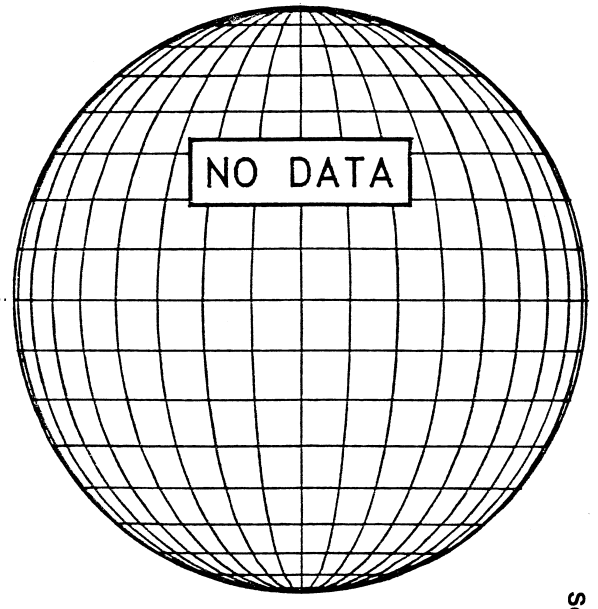
HOLLOMAN SUNSPOTS



1727 UT

S

LOMNICKY PEAK CORONA (1.04 Radii)----



S

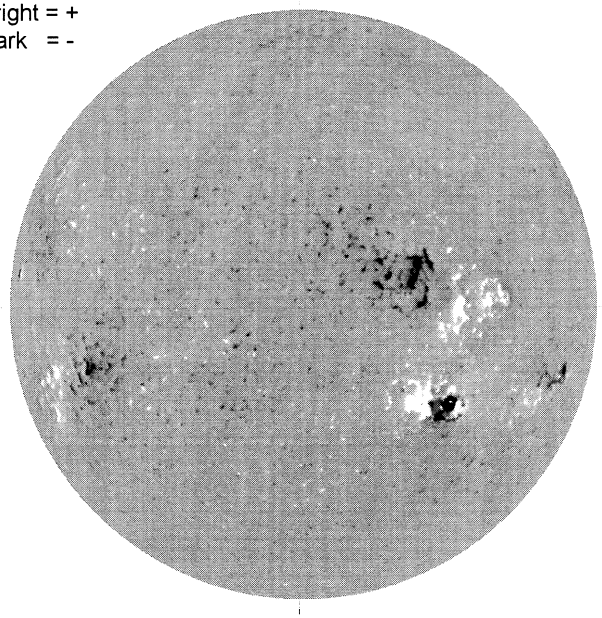
67
Sep 04

SEPTEMBER 23, 2004 (P= 25.26, Bo = 7.02, Lo = 252.22)

KITT PEAK MAGNETOGRAM--SOLIS

N **854.2 nm**

Bright = +
Dark = -



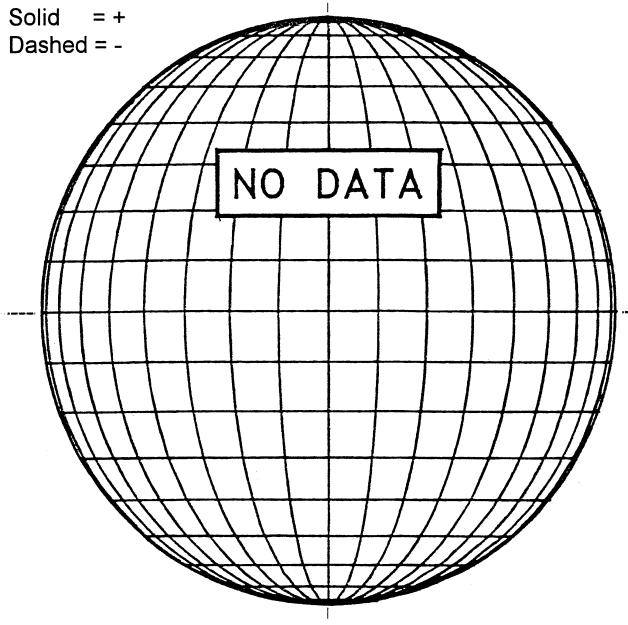
E-

1739 UT

STANFORD MAGNETOGRAM

N

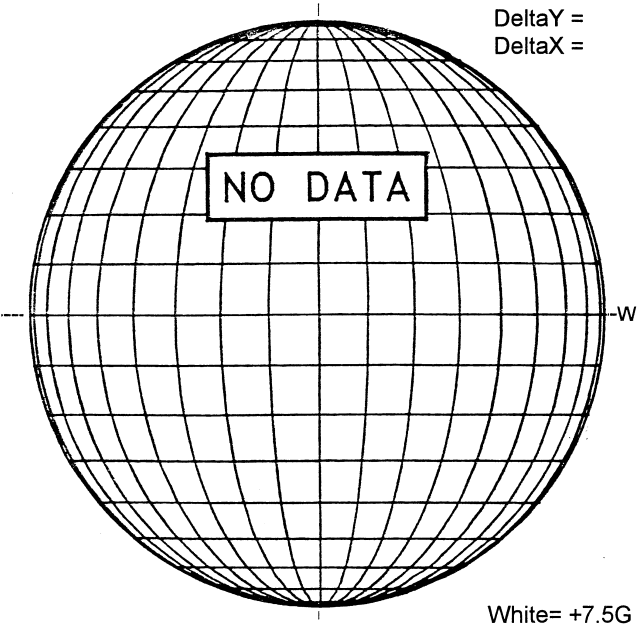
Solid = +
Dashed = -



MT. WILSON MAGNETOGRAM

N

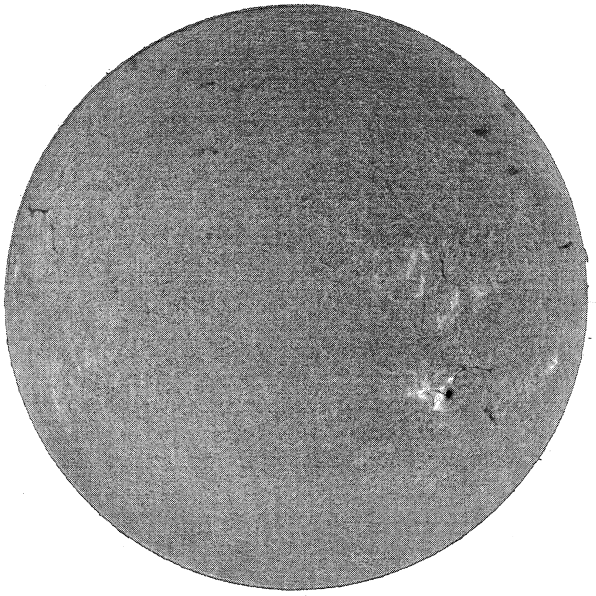
DeltaY =
DeltaX =



-W

White= +7.5G
Black = -7.5G

BIG BEAR H-ALPHA

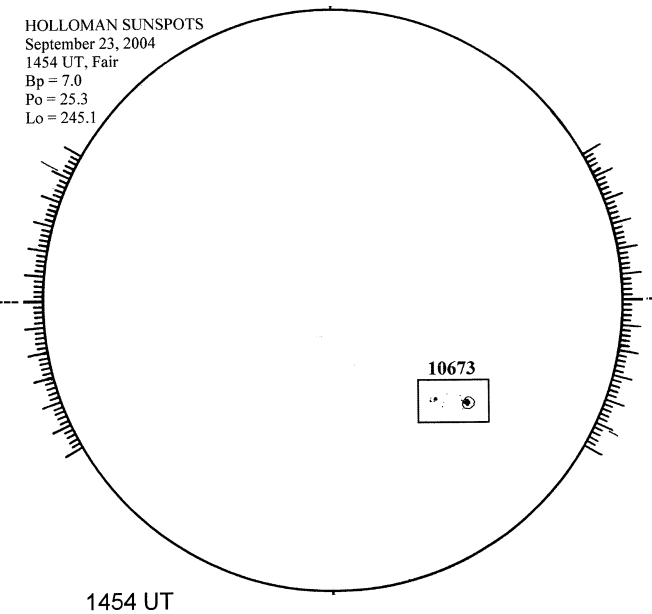


E

2022 UT

S

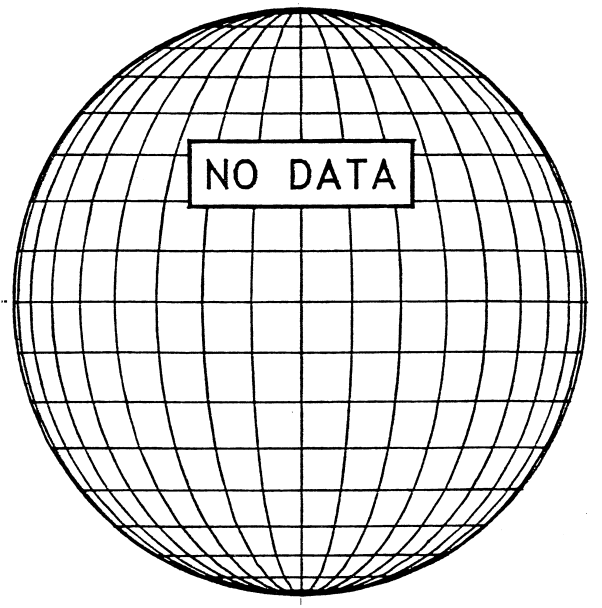
HOLLOMAN SUNSPOTS



1454 UT

S

SACRAMENTO PEAK CORONA (1.15 Radii)----



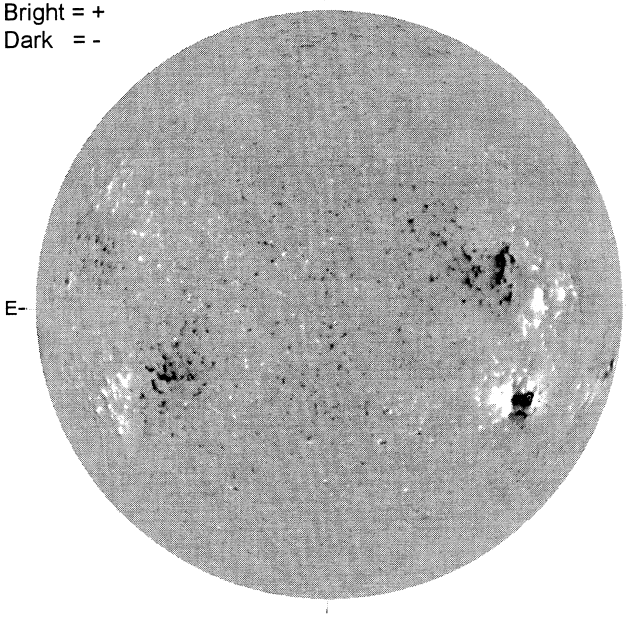
S

SEPTEMBER 24, 2004 (P= 25.38, Bo = 6.99, Lo = 239.02)

KITT PEAK MAGNETOGRAM--SOLIS

N **854.2 nm**

Bright = +
Dark = -



1759 UT

STANFORD MAGNETOGRAM

N

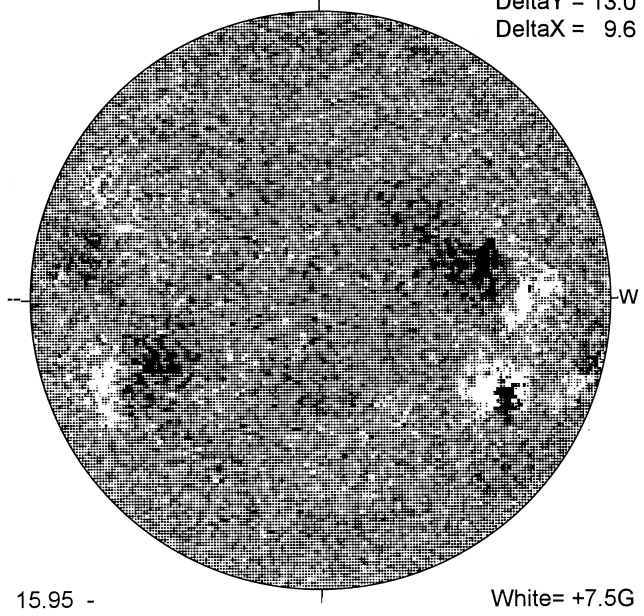
Solid = +
Dashed = -

2143 UT

MT. WILSON MAGNETOGRAM

N

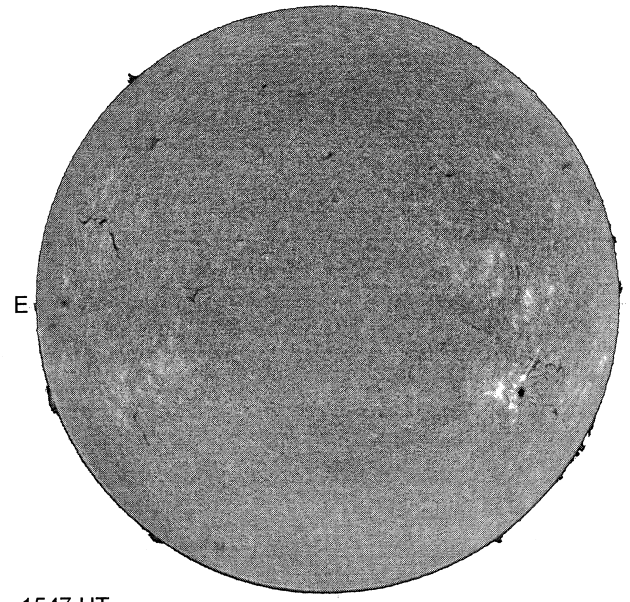
DeltaY = 13.0
DeltaX = 9.6



15.95 -
16.91 UT

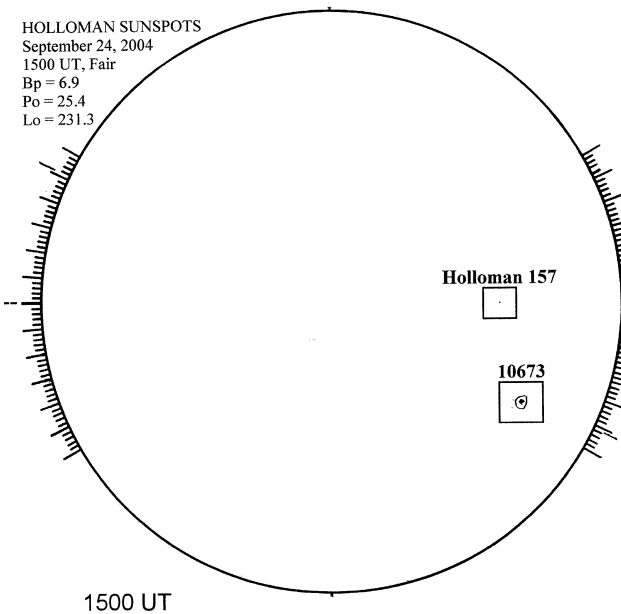
White= +7.5G
Black = -7.5G

----- BIG BEAR H-ALPHA



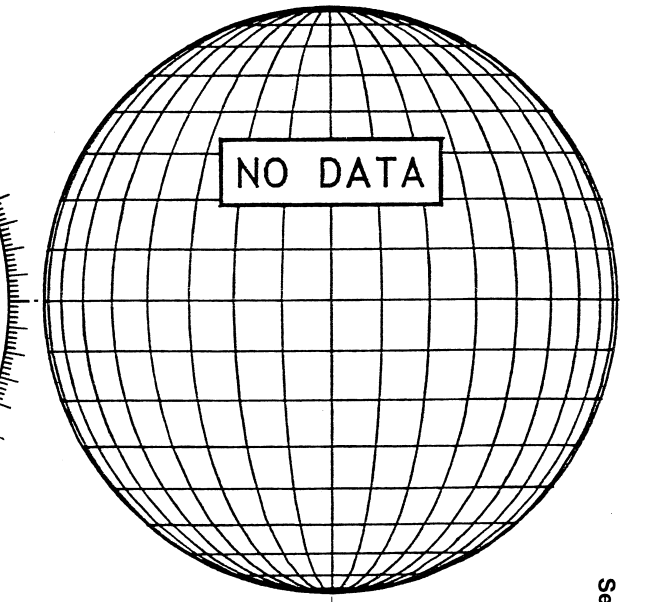
1547 UT

HOLLOMAN SUNSPOTS



1500 UT

LOMNICKY PEAK CORONA (1.04 Radii)----



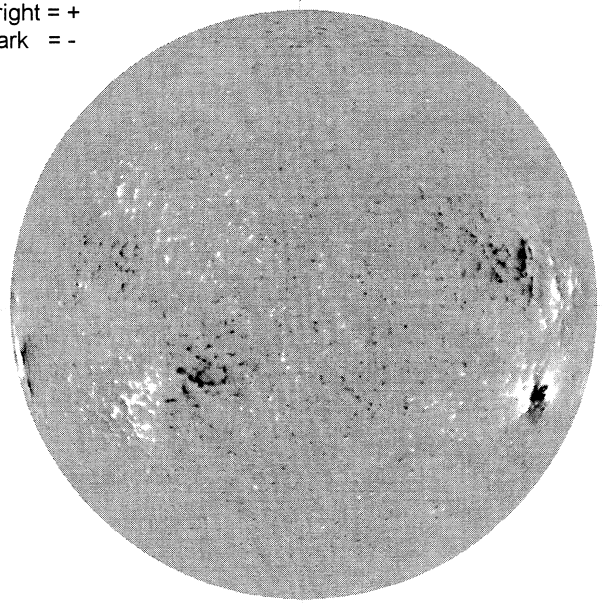
69
Sep 04

SEPTEMBER 25, 2004 (P= 25.49, Bo = 6.95, Lo = 225.82)

KITT PEAK MAGNETOGRAM--SOLIS

N **854.2 nm**

Bright = +
Dark = -



1730 UT

STANFORD MAGNETOGRAM

N

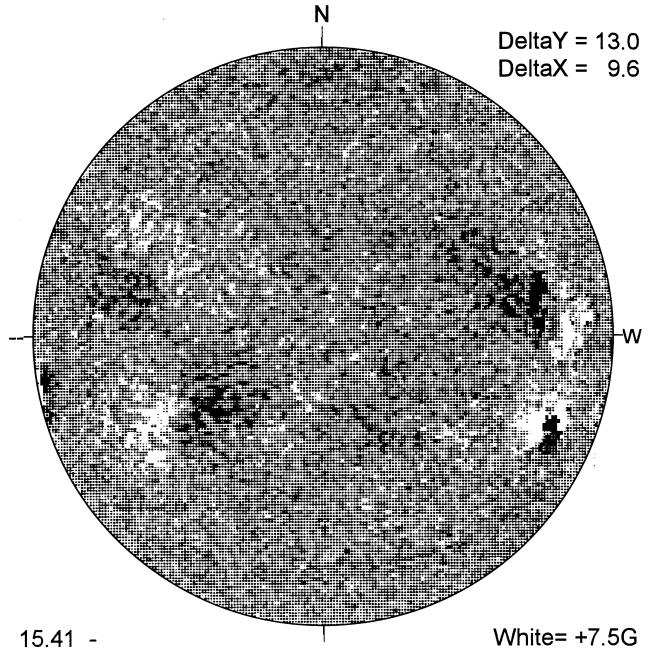
Solid = +
Dashed = -

2215 UT

MT. WILSON MAGNETOGRAM

N

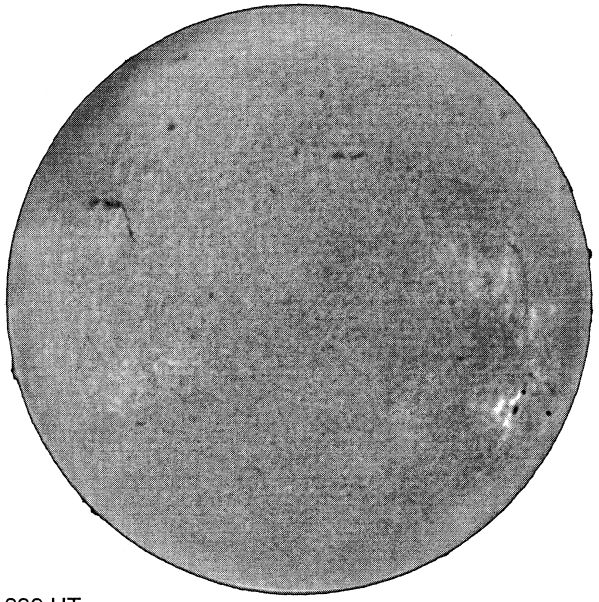
DeltaY = 13.0
DeltaX = 9.6



15.41 -
16.36 UT

White= +7.5G
Black = -7.5G

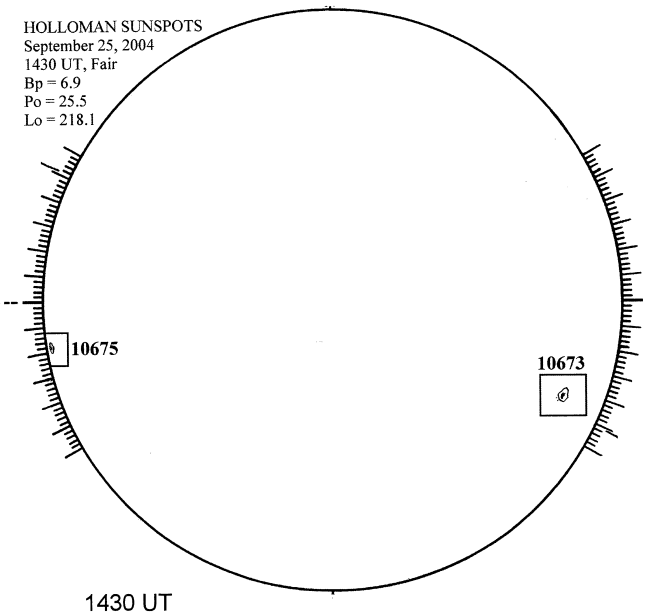
KANZELHOHE H-ALPHA



1039 UT

S

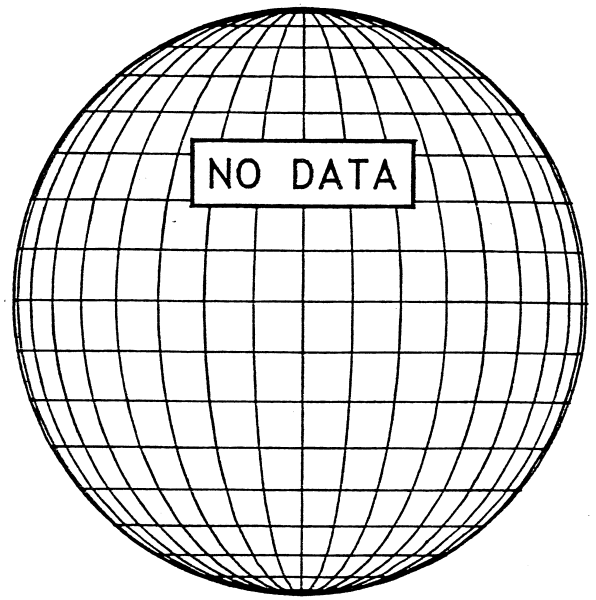
HOLLOMAN SUNSPOTS



1430 UT

S

SACRAMENTO PEAK CORONA (1.15 Radii)----



S

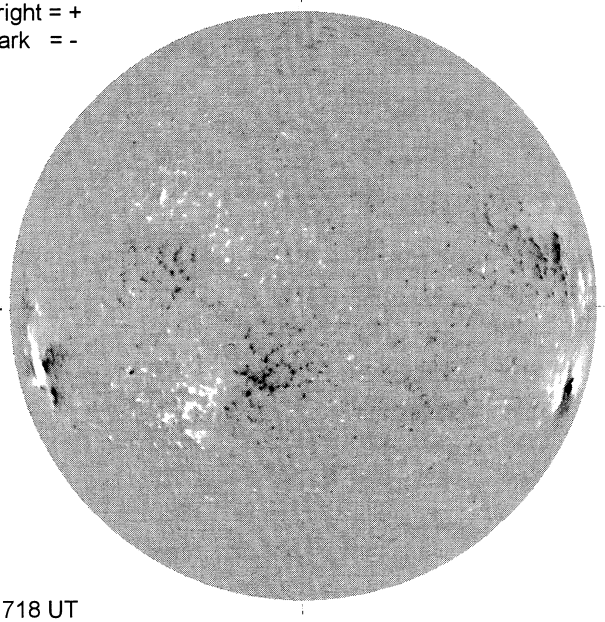
SEPTEMBER 26, 2004 (P= 25.59, Bo = 6.92, Lo = 212.62)

KITT PEAK MAGNETOGRAM--SOLIS

N

854.2 nm

Bright = +
Dark = -



E-

1718 UT

STANFORD MAGNETOGRAM

N

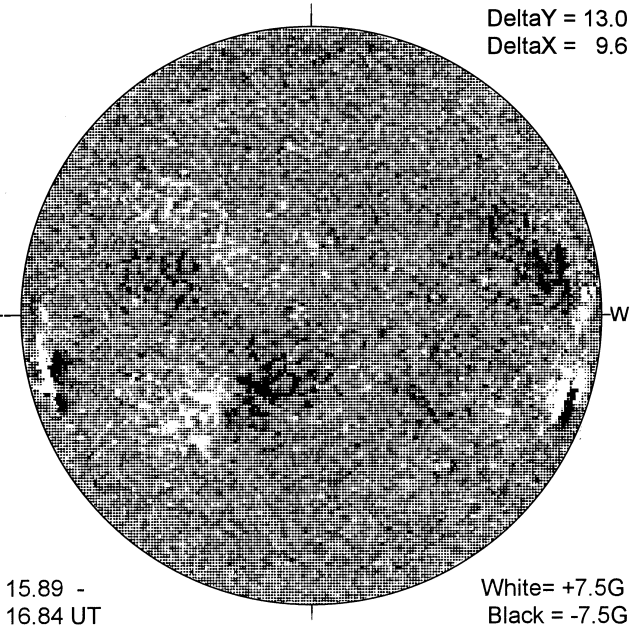
Solid = +
Dashed = -

2146 UT

MT. WILSON MAGNETOGRAM

N

DeltaY = 13.0
DeltaX = 9.6

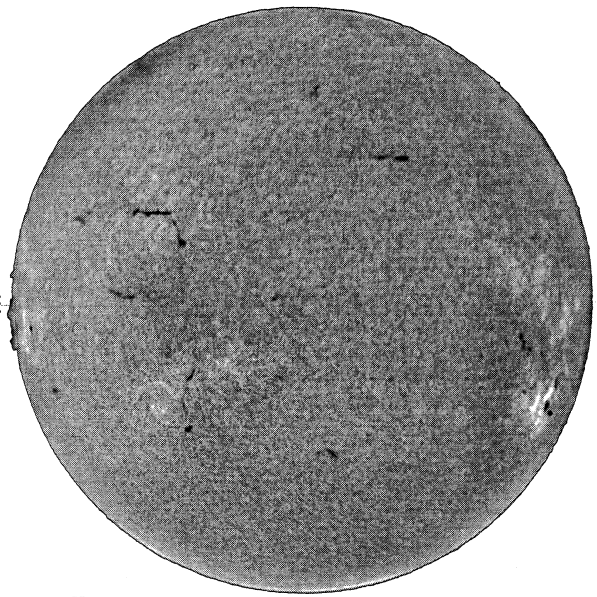


-W

15.89 -
16.84 UT

White= +7.5G
Black = -7.5G

KANZELHOHE H-ALPHA

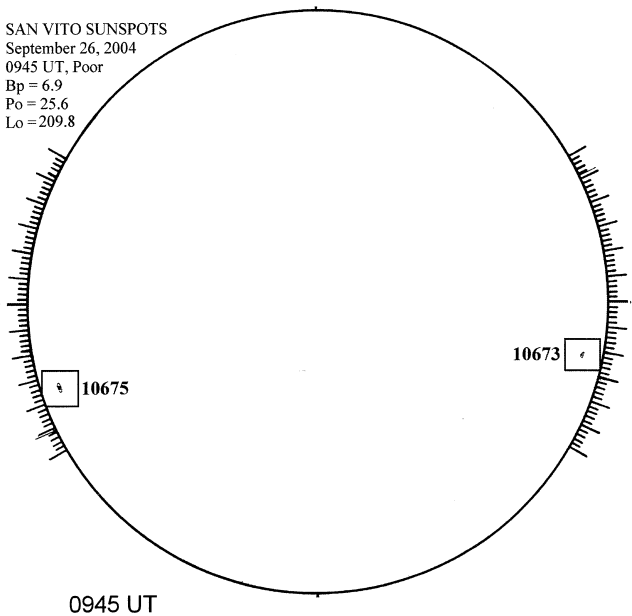


E-

0635 UT

S

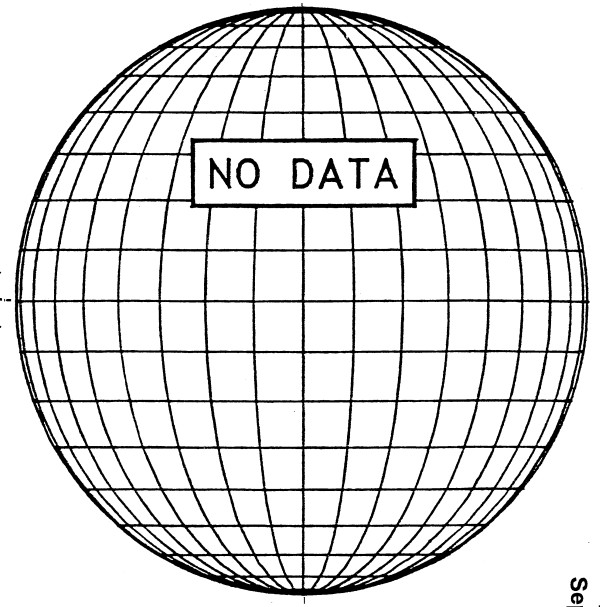
SAN VITO SUNSPOTS



0945 UT

S

SACRAMENTO PEAK CORONA (1.15 Radii)----



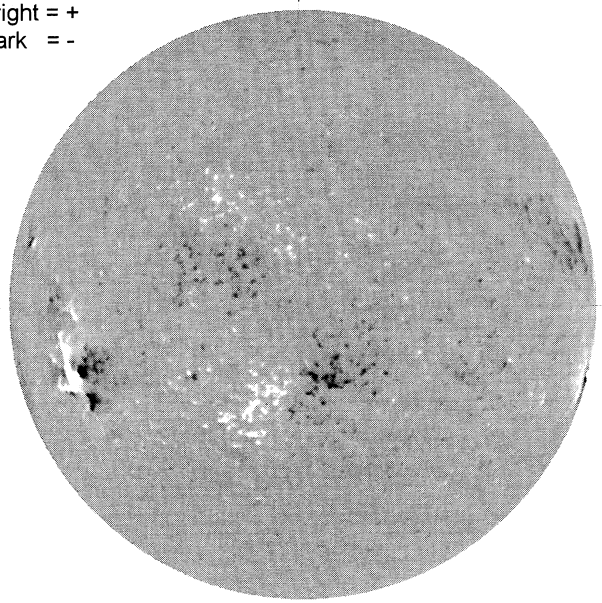
S

71
Sep 04

SEPTEMBER 27, 2004 (P= 25.68, Bo = 6.88, Lo = 199.42)

KITT PEAK MAGNETOGRAM--SOLIS

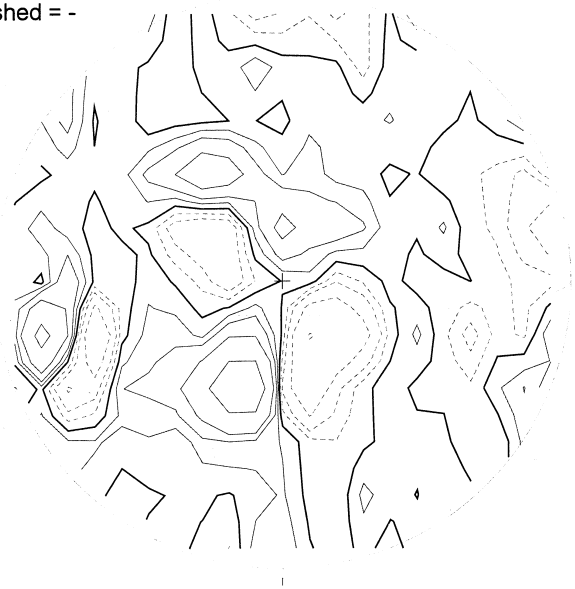
N
854.2 nm
Bright = +
Dark = -
E-



1724 UT

STANFORD MAGNETOGRAM

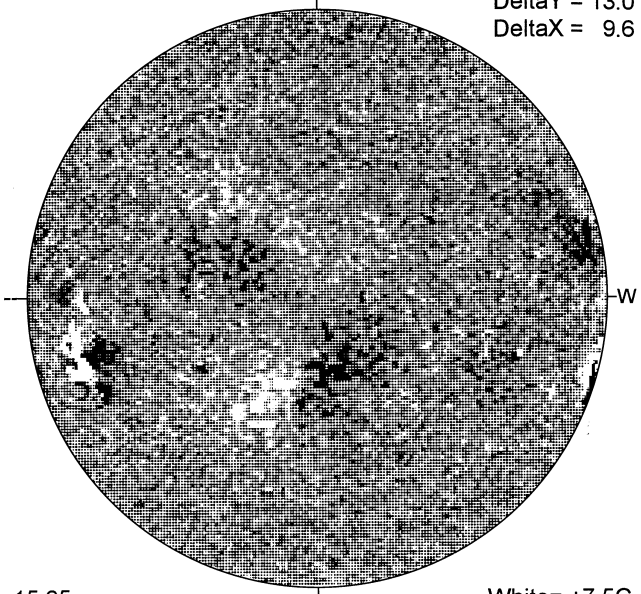
N
Solid = +
Dashed = -



2114 UT

MT. WILSON MAGNETOGRAM

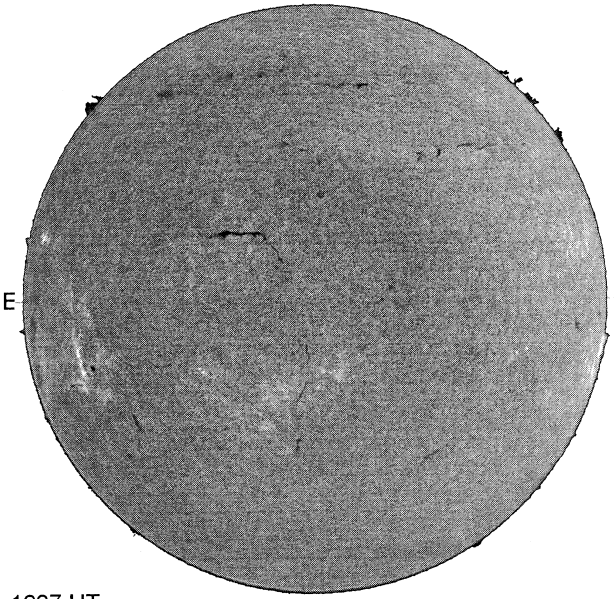
N
DeltaY = 13.0
DeltaX = 9.6
W



15.65 -
16.60 UT
White= +7.5G
Black = -7.5G

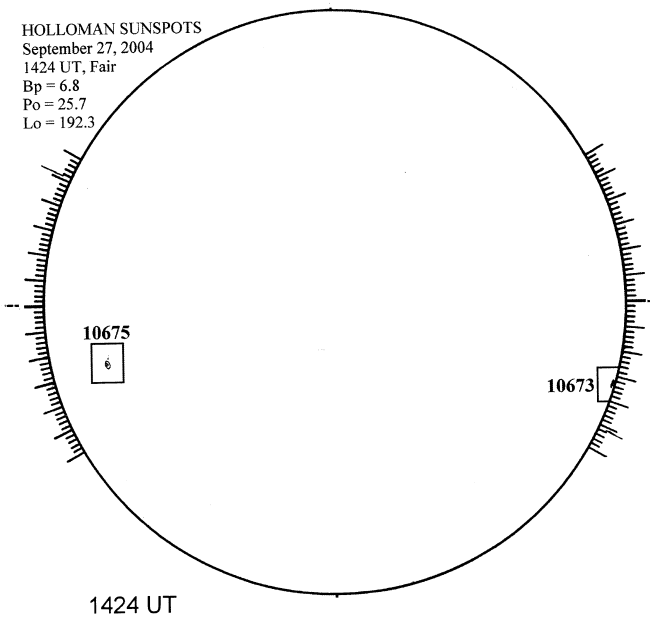
BIG BEAR H-ALPHA

E



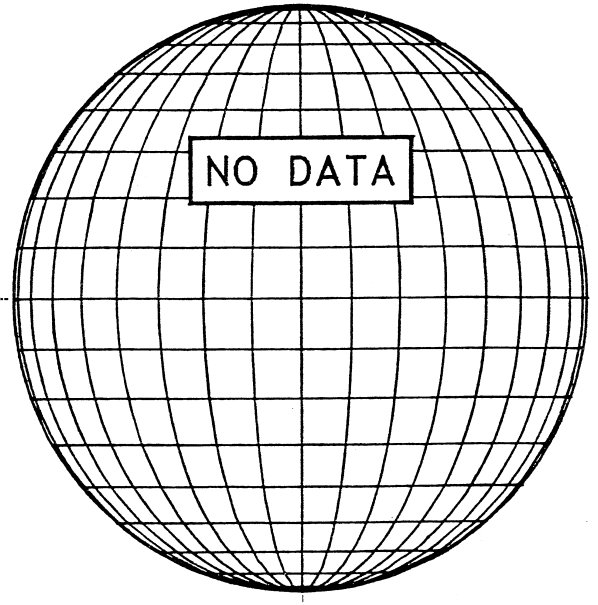
1637 UT
S

HOLLOMAN SUNSPOTS



1424 UT
S

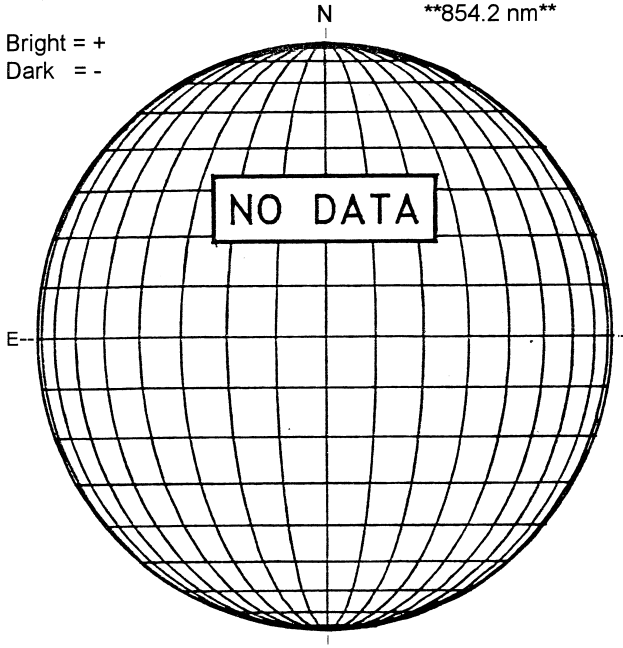
SACRAMENTO PEAK CORONA (1.15 Radii)----



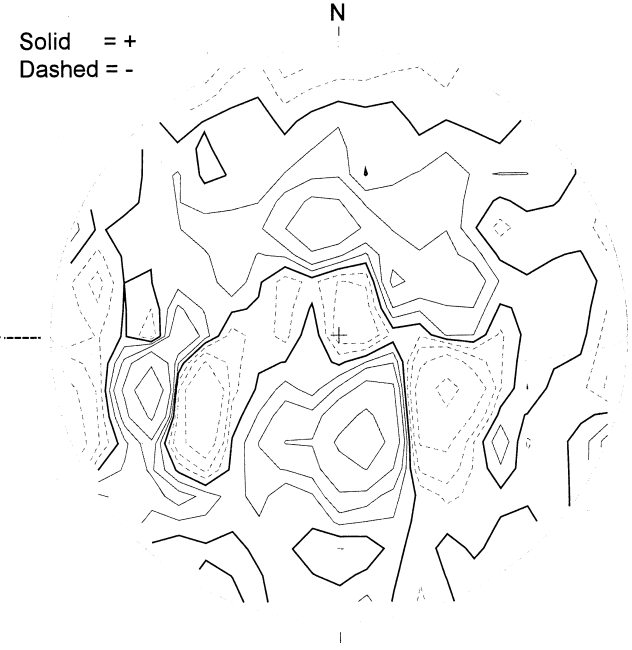
S

SEPTEMBER 28, 2004 (P= 25.77, Bo = 6.84, Lo = 186.23)

KITT PEAK MAGNETOGRAM--SOLIS

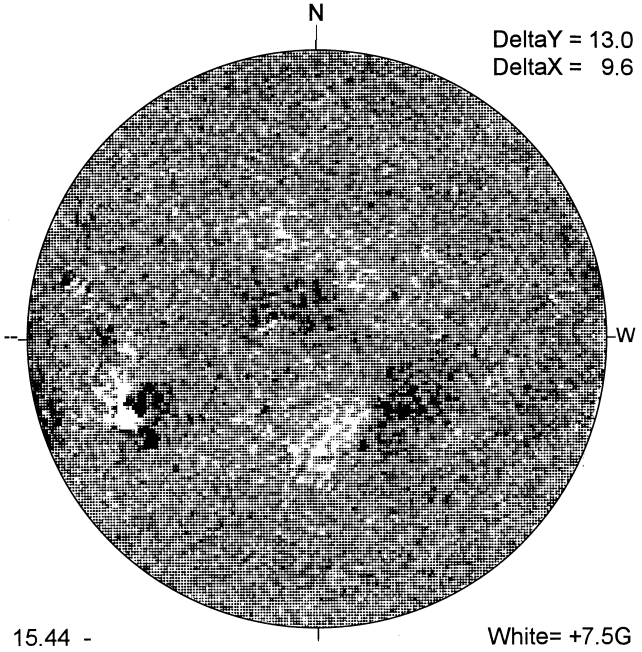


STANFORD MAGNETOGRAM



2219 UT

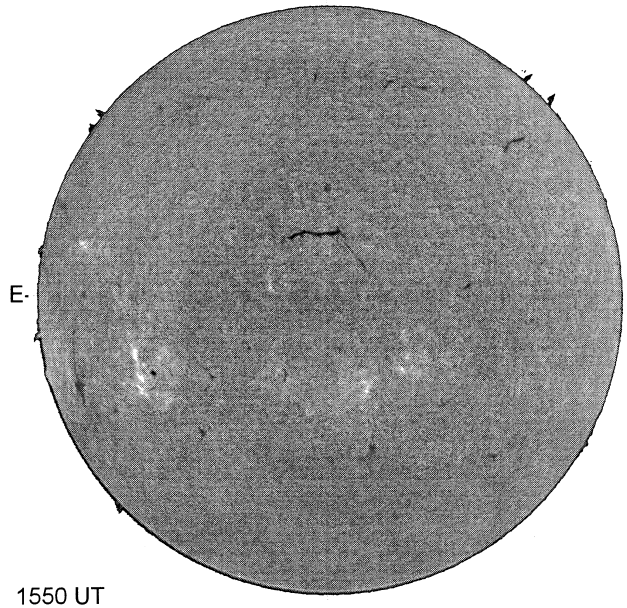
MT. WILSON MAGNETOGRAM



15.44 -
16.39 UT

White= +7.5G
Black = -7.5G

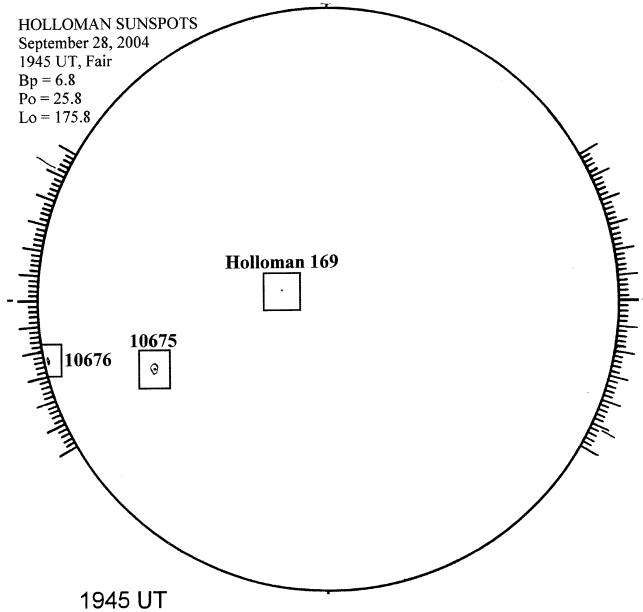
BIG BEAR H-ALPHA



1550 UT

S

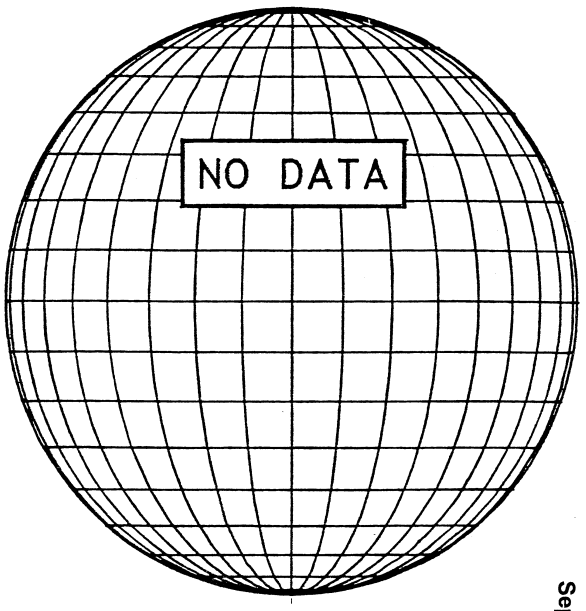
HOLLOMAN SUNSPOTS



1945 UT

S

SACRAMENTO PEAK CORONA (1.15 Radii)----

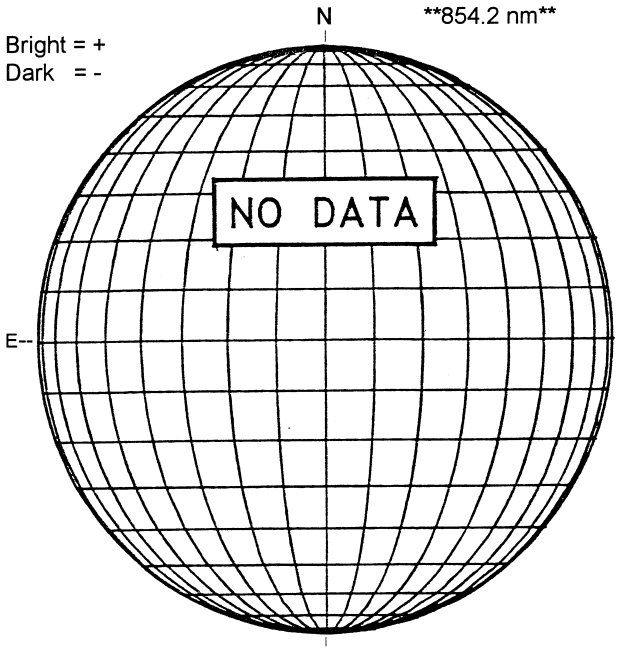


S

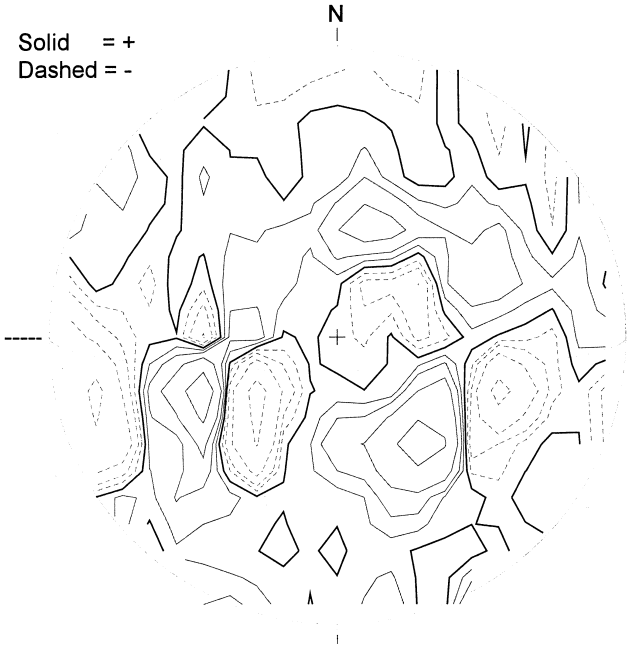
73
Sep 04

SEPTEMBER 29, 2004 (P= 25.85, Bo = 6.80, Lo = 173.03)

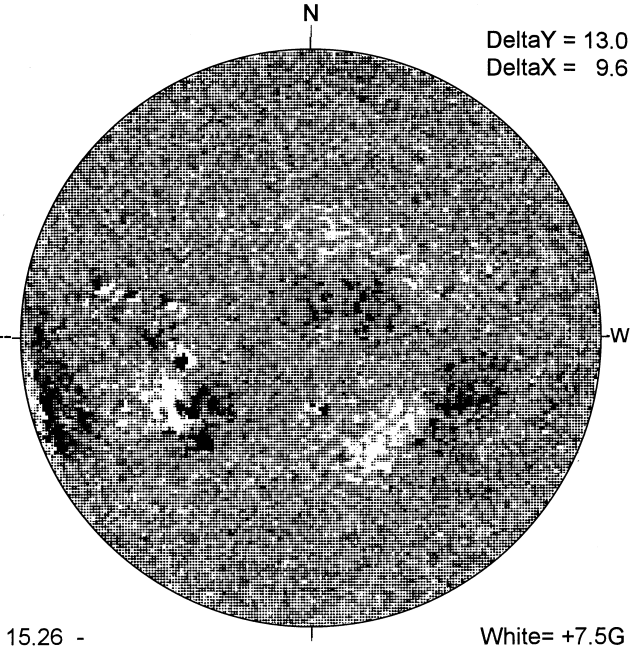
KITT PEAK MAGNETOGRAM--SOLIS



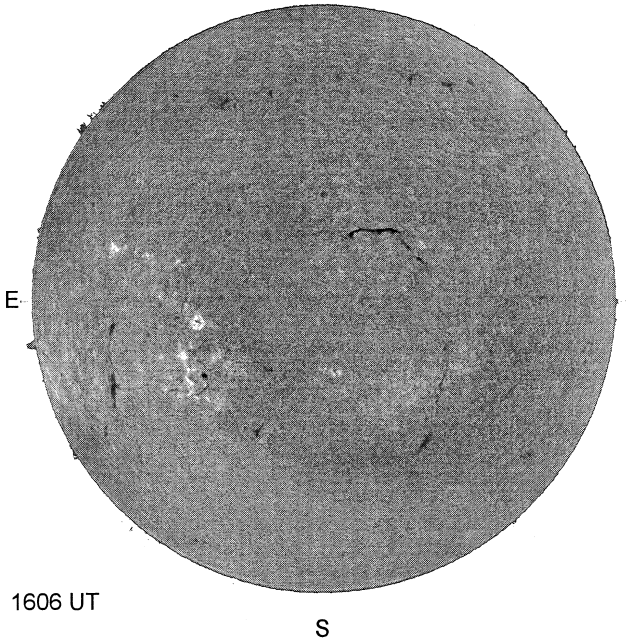
STANFORD MAGNETOGRAM



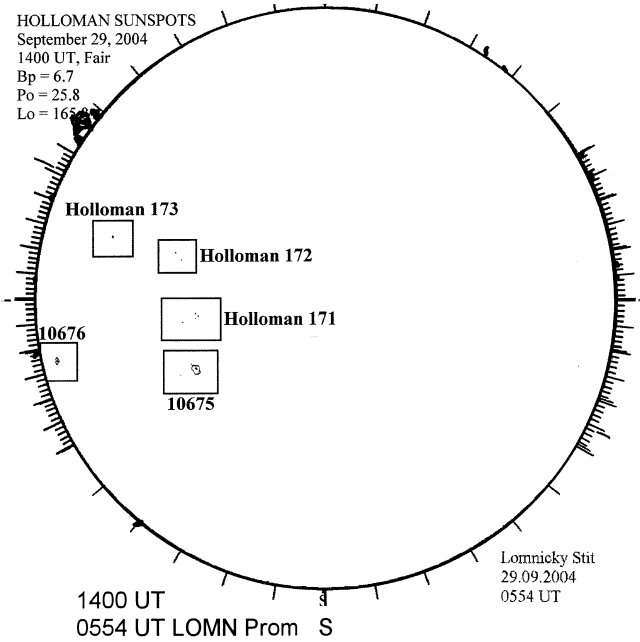
MT. WILSON MAGNETOGRAM



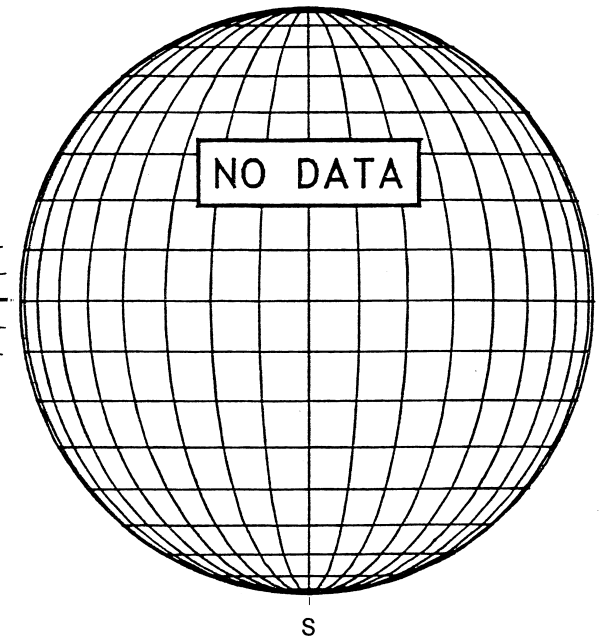
BIG BEAR H-ALPHA



HOLLOMAN SUNSPOTS



SACRAMENTO PEAK CORONA (1.15 Radii)

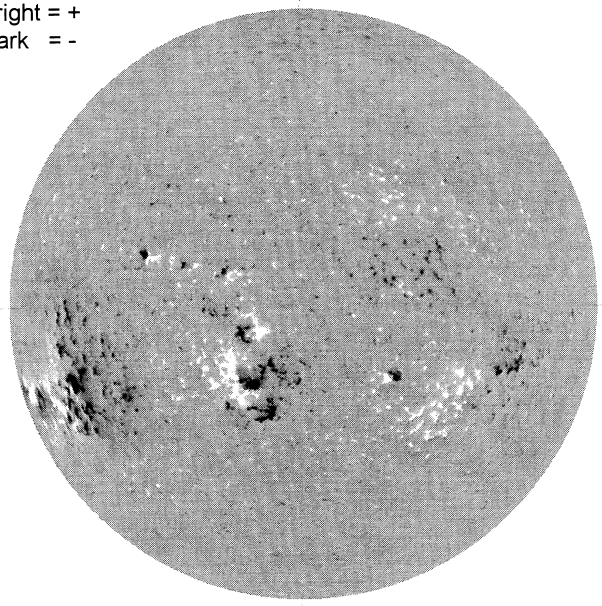


SEPTEMBER 30, 2004 (P= 25.93, Bo = 6.75, Lo = 159.83)

KITT PEAK MAGNETOGRAM—SOLIS

N **854.2 nm**

Bright = +
Dark = -



E-

1826 UT

STANFORD MAGNETOGRAM

N

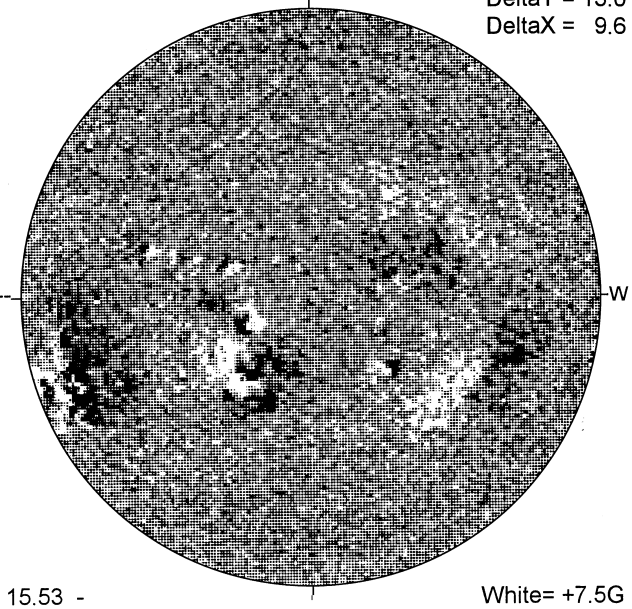
Solid = +
Dashed = -

2140 UT

MT. WILSON MAGNETOGRAM

N

DeltaY = 13.0
DeltaX = 9.6

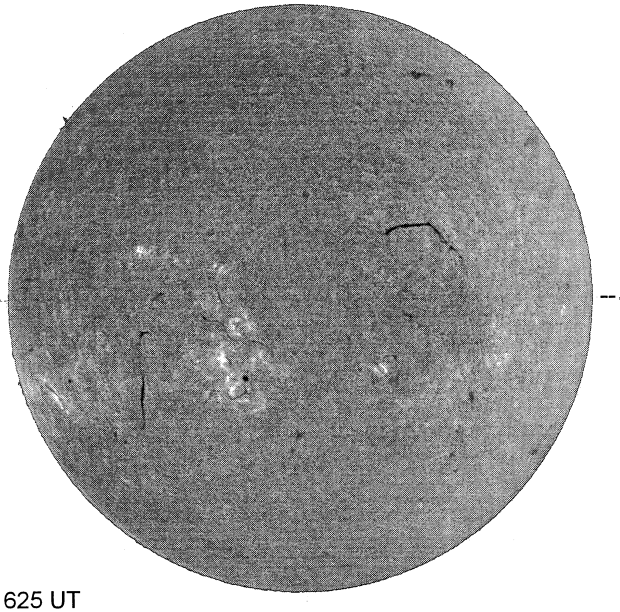


-W

15.53 -
16.48 UT

White= +7.5G
Black = -7.5G

BIG BEAR H-ALPHA

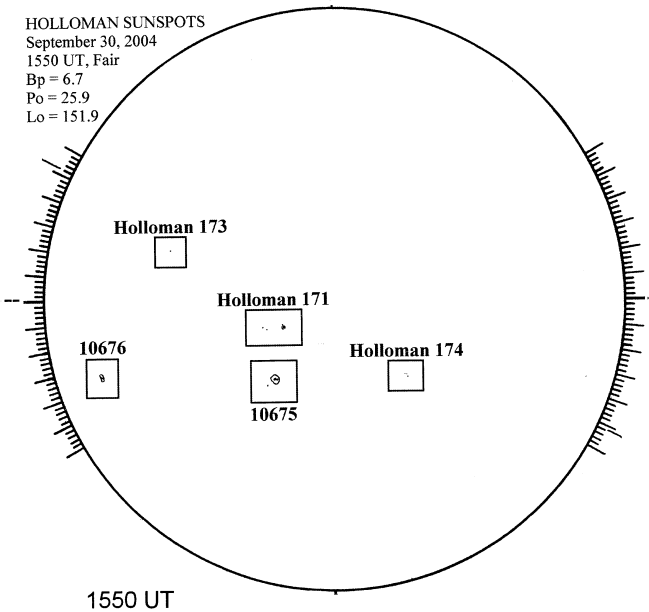


E-

1625 UT

S

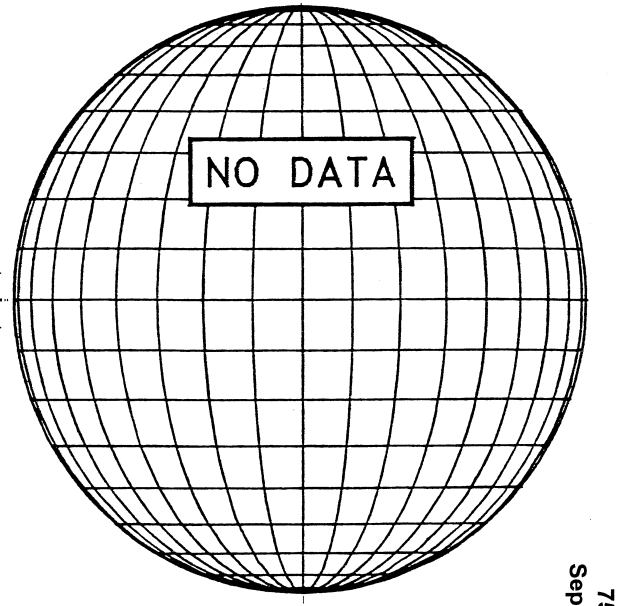
HOLLOMAN SUNSPOTS



1550 UT

S

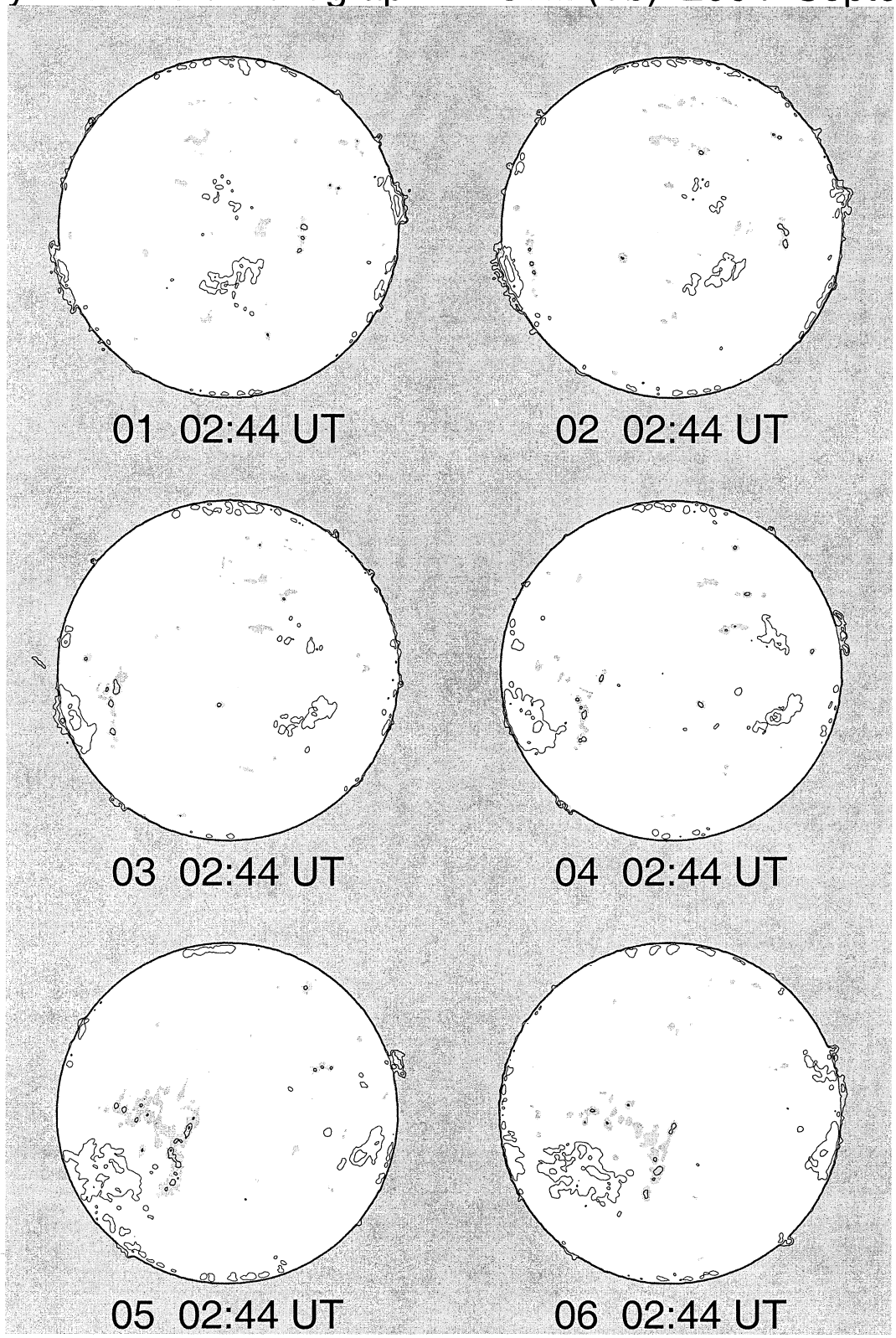
SACRAMENTO PEAK CORONA (1.15 Radii)----



S

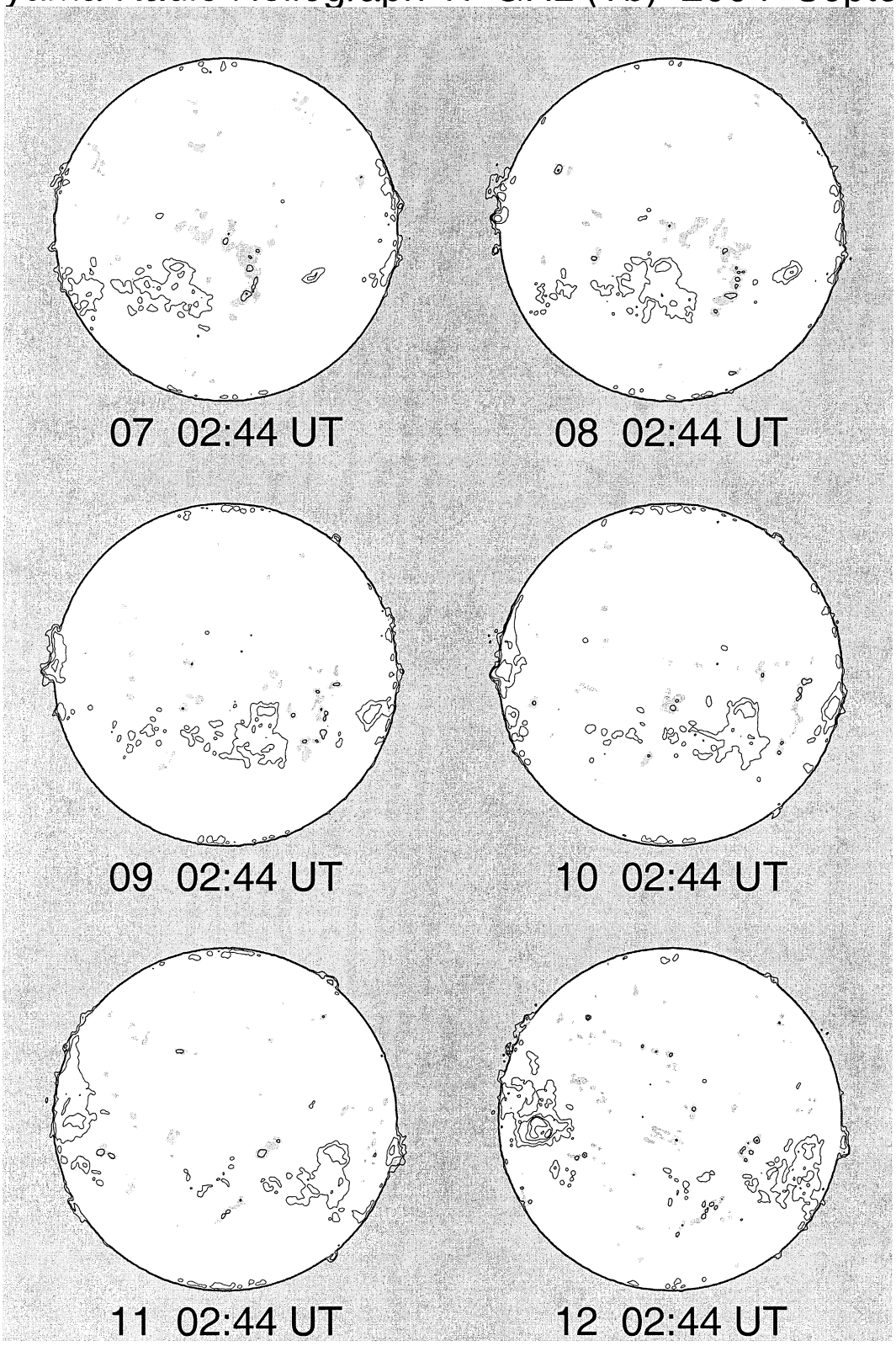
75
Sep 04

Nobeyama Radio Heliograph 17 GHz (Tb) 2004 September



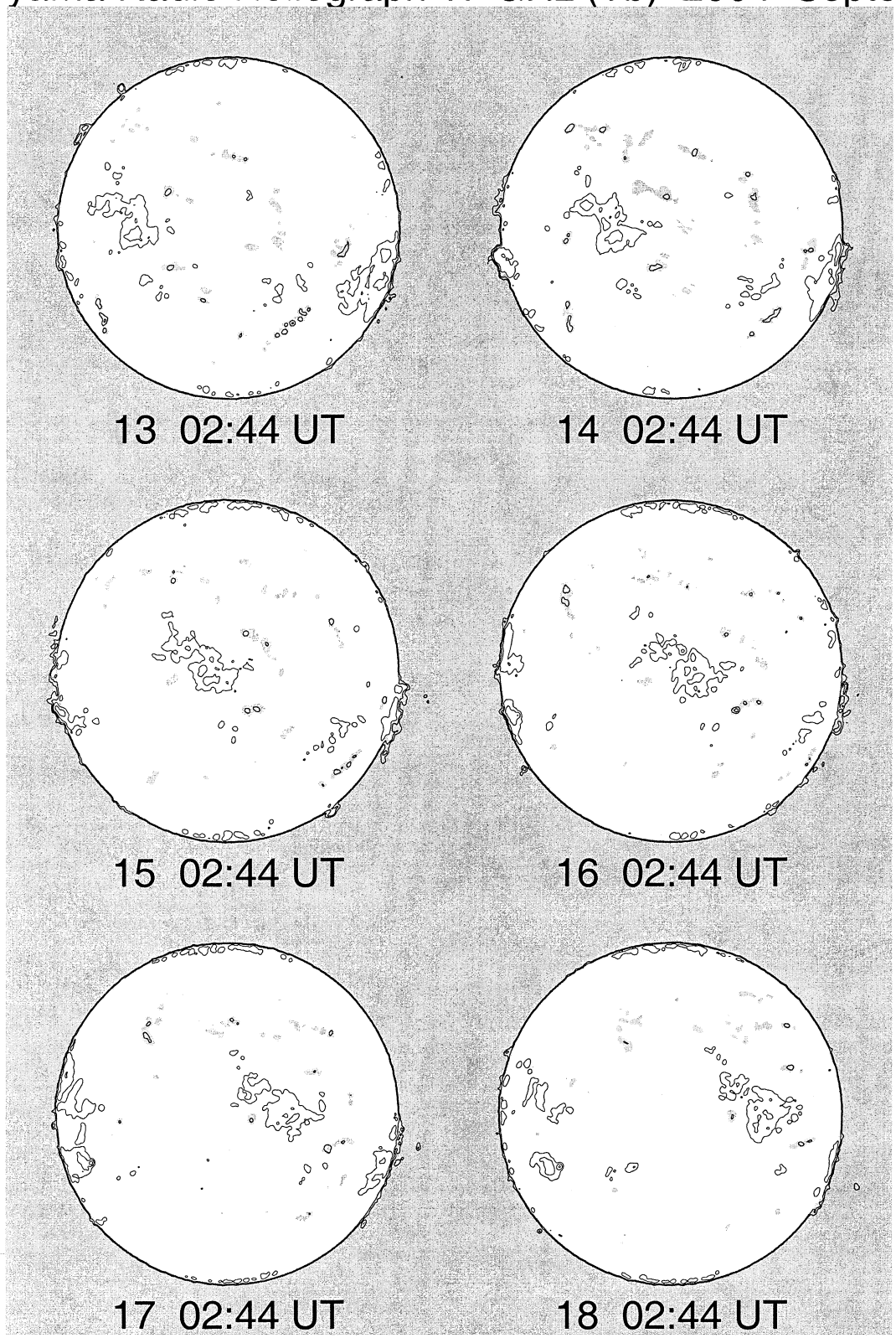
Contour Levels Tb=[5,8,12,20,50,100] x 10^3 K
Grey level Tb <= 9,500 K

Nobeyama Radio Heliograph 17 GHz (Tb) 2004 September



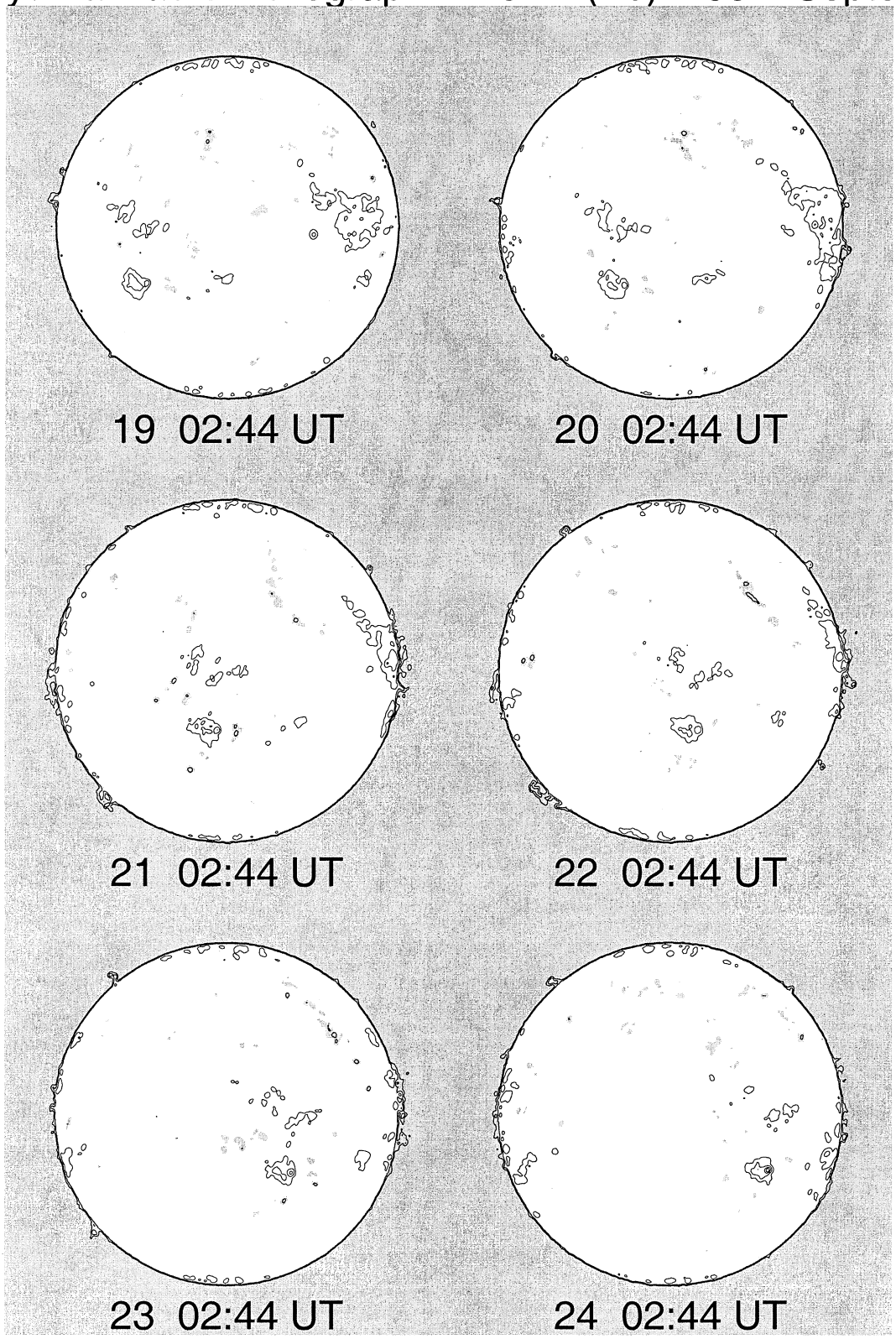
Contour Levels Tb=[5,8,12,20,50,100] x 10^3 K
Grey level Tb <= 9,500 K

Nobeyama Radio Heliograph 17 GHz (Tb) 2004 September



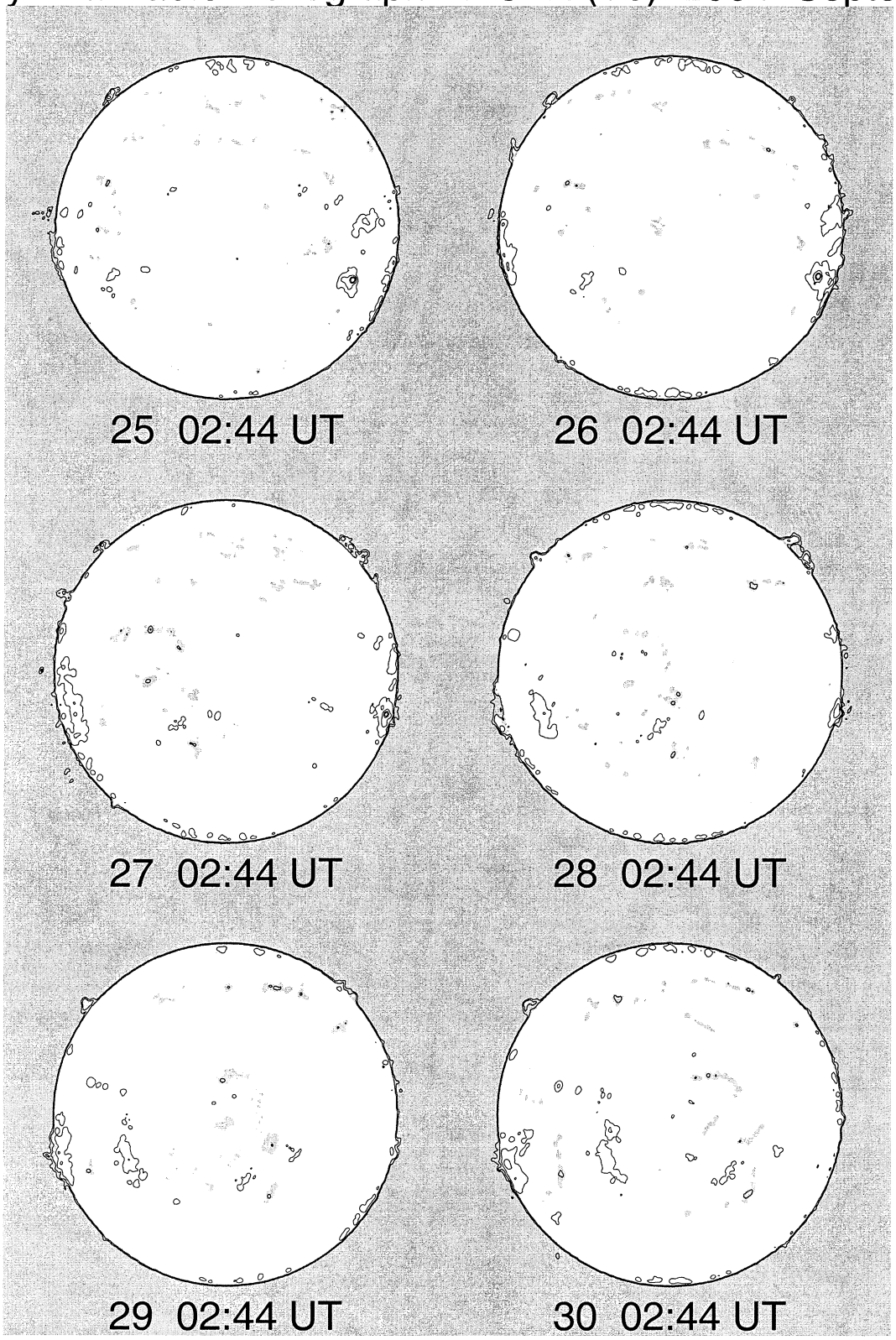
Contour Levels Tb=[5,8,12,20,50,100] x 10^3 K
Grey level Tb <= 9,500 K

Nobeyama Radio Heliograph 17 GHz (Tb) 2004 September



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) 2004 September



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

SUNSPOT GROUPS
(Ordered by Central Meridian Passage Date)

SEPTEMBER 2004

NOAA/ USAF Group	Mt Wilson Group	Sta	Observation Time Mo Day (UT)	Lat CMD	CMP Mo Day	Max H	Mag Class	Spot Class	Corrected Area (10-6 Hemi)	Spot Count	Long. Extent (Deg)	Qual
10666E	32189	MWIL	08 31 1430	S11 E05	09 1.0	3	(AF)					
10666		HOLL	08 29 1424	N16 E36	09 1.3		A	AXX		1	1	4
10666	32187	MWIL	08 29 1430	N16 E38	09 1.5	4	(B)					
10666		HOLL	08 30 1425	N17 E22	09 1.3		A	AXX		1	1	4
10666	32187	MWIL	08 30 1430	N16 E24	09 1.4	3	(AP)					
10666		KAND	09 02 0650	N15 W11	09 1.4			AX		1		4
10666		HOLL	09 02 1424	N16 W17	09 1.3		A	AXX	10	2	1	4
10668	32186	MWIL	08 28 1430	S09 E52	09 1.5	3	(AF)					
10668	32190	MWIL	08 31 1430	S10 E13	09 1.6	3	(B)					
10668		KAND	09 01 0805	S10 E02	09 1.5			AX		1		3
10668		LEAR	09 03 0140	S10 W22	09 1.4		A	AXX	10	1	1	4
10668		TACH	09 03 0530	S08 W23	09 1.5			AR	18	3	1	4
10668		SVTO	09 03 0622	S11 W25	09 1.4		B	CSO	30	4	3	3
10668		KAND	09 03 0905	S11 W28	09 1.3			DAO		2	4	4
10668		HOLL	09 03 1406	S11 W29	09 1.4		BG	DAO	30	3	3	3
10668		VORO	09 03 2216	S10 W34	09 1.4			DRI	78	7	3	3
10668		SVTO	09 04 0615	S10 W39	09 1.3		BG	CSO	40	3	4	3
10668		TACH	09 04 0640	S08 W40	09 1.3			BRO	23	4	4	4
10668		KAND	09 04 1320	S09 W43	09 1.3			DAC		4	4	3
10668		HOLL	09 04 1515	S11 W47	09 1.1		BG	DAO	60	9	4	3
10668		VORO	09 05 0247	S09 W50	09 1.4			CRI	60	8	3	3
10668		SVTO	09 05 0624	S11 W54	09 1.2		B	CRO	30	6	6	3
10668		KAND	09 05 0835	S10 W55	09 1.2			BXO		5	5	5
10668		LEAR	09 05 0841	S09 W59	08 31.9		B	CAO	70	6	4	4
10668		HOLL	09 05 1545	S12 W59	09 1.2		B	CAO	40	6	4	4
10668		VORO	09 06 0243	S09 W64	09 1.3			CRO	30	4	3	3
10668		LEAR	09 06 0510	S09 W67	09 1.2		B	CAO	30	4	5	2
10668		TACH	09 06 0549	S08 W64	09 1.4			BXO	100	2	4	3
10668		KAND	09 06 0828	S10 W69	09 1.2			BXO		2	5	4
10668		HOLL	09 06 1452	S10 W70	09 1.3		A	HSX	60	1	1	4
10668		LEAR	09 07 0210	S09 W78	09 1.2		A	AXX	30	1	2	3
10668		TACH	09 26 0738	S07 E69	10 1.5			HSX	120	1	3	4
10666A	32191	MWIL	08 31 1430	N06 E17	09 1.9	3	(AF)					
10666A		HOLL	08 31 1507	N06 E17	09 1.9		A	AXX		1	1	4
10668A		KAND	09 04 1320	S01 W30	09 2.3			AX		1	1	3
10668A		HOLL	09 04 1515	S02 W30	09 2.4		A	AXX	10	3	2	3
10668A		VORO	09 05 0247	S01 W35	09 2.5			ARX	10	1		3
10668A		KAND	09 05 0835	S02 W39	09 2.4			AX		1		5
10668A		LEAR	09 05 0841	S01 W38	09 2.5		A	AXX	10	1	1	4
10666D	32188	MWIL	08 30 1430	S14 E42	09 2.8	4	(B)					
10668B		VORO	09 06 0243	S12 W40	09 3.1			AXX	6	2		3
10666B		HOLL	08 31 1507	N13 E41	09 3.7		A	AXX	10	1	1	4
10671A		VORO	08 31 0145	S03 E59	09 4.5			AXX	5	1		3
10671		HOLL	09 06 1452	S10 W24	09 4.8		B	DSI	40	5	4	4
10671		LEAR	09 07 0210	S10 W31	09 4.8		B	CSO	60	9	8	3
10671		TACH	09 07 0541	S09 W30	09 5.0			CSO	42	2	3	3
10671		SVTO	09 07 0608	S12 W32	09 4.8		B	DSO	70	5	5	3
10671		KAND	09 07 1228	S11 W37	09 4.7			DAO		5	6	3
10671		HOLL	09 07 1420	S10 W36	09 4.9		B	DAI	90	16	6	4
10671		LEAR	09 08 0030	S10 W43	09 4.8		B	DAO	180	15	7	3
10671		VORO	09 08 0042	S08 W42	09 4.9			DAI	263	10	5	2
10671		TACH	09 08 0526	S09 W45	09 4.8			DAO	263	4	6	3
10671		SVTO	09 08 0718	S10 W47	09 4.8		B	DAI	120	26	7	3
10671		KAND	09 08 1042	S10 W48	09 4.8			DAC		8	9	4
10671		HOLL	09 08 1620	S10 W50	09 4.9		B	DKI	310	7	9	2
10671		VORO	09 08 2138	S08 W54	09 4.8			DAI	407	14	6	3
10671		LEAR	09 09 0016	S09 W55	09 4.9		B	DAO	200	11	9	3
10671		KAND	09 09 0625	S11 W59	09 4.8			DAO		9	10	3
10671		SVTO	09 09 0650	S09 W61	09 4.7		B	DAI	400	14	10	3
10671		TACH	09 09 0824	S07 W59	09 4.9			DAO	176	4	8	3

SUNSPOT GROUPS
(Ordered by Central Meridian Passage Date)

SEPTEMBER 2004

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
10671		HOLL	09	09	1430	S11	W65	09	4.7		BG	EAI	540	24	11	4
10671		VORO	09	09	2235	S08	W68	09	4.8			DKI	691	5	8	3
10671		LEAR	09	10	0005	S09	W70	09	4.7		B	DAI	320	9	9	2
10671		TACH	09	10	0455	S08	W70	09	4.9			DAO	614	8	6	4
10671		KAND	09	10	0650	S09	W75	09	4.6			DAO		2	7	3
10671		HOLL	09	10	1427	S11	W76	09	4.9		BG	DKI	400	11	8	3
10671		VORO	09	10	2144	S09	W77	09	5.1			HKX	460	1		2
10671		LEAR	09	11	0045	S08	W78	09	5.2		A	HAX	240	3	4	3
10671		SVTO	09	11	0630	S11	W89	09	4.6		A	HSX	90	1	5	3
10667A		VORO	09	08	0042	N55	W13	09	6.9			HRX	13	1		2
10667		SVTO	09	01	0655	S10	E86	09	7.7		A	HSX	180	1	5	3
10667		KAND	09	01	0805	S12	E87	09	7.9			HA		1	4	3
10667		TACH	09	01	0831	S12	E81	09	7.4			HSX	122	1	2	4
10667		HOLL	09	01	1445	S08	E80	09	7.6		A	HAX	180	2	3	4
10667		VORO	09	01	2234	S10	E74	09	7.5			HXX	333	1		3
10667		LEAR	09	02	0206	S10	E72	09	7.5		A	HAX	180	1	2	3
10667		SVTO	09	02	0605	S10	E73	09	7.7		A	HKX	300	1	4	3
10667		TACH	09	02	0649	S10	E68	09	7.4			HSX	224	1	3	4
10667		KAND	09	02	0650	S13	E73	09	7.8			HA		1	4	4
10667		HOLL	09	02	1424	S09	E67	09	7.6		A	HKX	200	5	4	4
10667		VORO	09	02	2230	S10	E61	09	7.5			HXX	334	1		3
10667		LEAR	09	03	0140	S12	E61	09	7.7		A	HHX	160	1	3	4
10667		TACH	09	03	0530	S10	E57	09	7.5			HSX	200	1	3	4
10667		SVTO	09	03	0622	S11	E57	09	7.5		A	HHX	360	1	5	3
10667		KAND	09	03	0905	S12	E56	09	7.6			HA		1	4	4
10667		HOLL	09	03	1406	S10	E52	09	7.5		A	HKX	260	1	3	3
10667		VORO	09	03	2216	S11	E48	09	7.5			HXX	419	1		3
10667		SVTO	09	04	0615	S10	E44	09	7.6		A	HHX	420	1	5	3
10667		TACH	09	04	0640	S09	E43	09	7.5			HSX	217	1	3	4
10667		KAND	09	04	1320	S12	E40	09	7.6			HS		1	3	3
10667		HOLL	09	04	1515	S10	E40	09	7.6		A	HKX	260	3	3	3
10667		VORO	09	05	0247	S10	E32	09	7.5			HXX	355	2		3
10667		SVTO	09	05	0624	S10	E32	09	7.7		A	HHX	310	1	4	3
10667		KAND	09	05	0835	S11	E31	09	7.7			HA		1	3	5
10667		LEAR	09	05	0841	S11	E30	09	7.6		A	HKX	252	1	3	4
10667		HOLL	09	05	1545	S11	E27	09	7.7		A	HKX	200	7	5	4
10667		VORO	09	06	0243	S10	E20	09	7.6			HXX	347	1		3
10667		LEAR	09	06	0510	S12	E21	09	7.8		A	HAX	270	11	6	2
10667		TACH	09	06	0549	S11	E18	09	7.6			CSO	285	2	2	3
10667		SVTO	09	06	0714	S11	E17	09	7.6		A	HHX	220	1	4	3
10667		KAND	09	06	0828	S11	E17	09	7.6			HA		1	4	4
10667		HOLL	09	06	1452	S11	E14	09	7.7		B	DHO	240	10	5	4
10667		LEAR	09	07	0210	S13	E14	09	8.1		B	CKO	360	9	13	3
10667		TACH	09	07	0541	S10	E04	09	7.5			HSX	184	1	2	3
10667		SVTO	09	07	0608	S11	E05	09	7.6		A	HHX	220	3	4	3
10667		KAND	09	07	1228	S12	E01	09	7.6			HK		2	3	3
10667		HOLL	09	07	1420	S11	E01	09	7.7		A	HKX	300	4	3	4
10667		LEAR	09	08	0030	S11	W06	09	7.6		A	HKX	250	2	3	3
10667		VORO	09	08	0042	S10	W06	09	7.6			HXX	341	1		3
10667		TACH	09	08	0526	S11	W08	09	7.6			HA	191	2	2	3
10667		SVTO	09	08	0718	S11	W08	09	7.7		A	HKX	300	4	5	3
10667		KAND	09	08	1042	S11	W12	09	7.5			HA		2	4	4
10667		HOLL	09	08	1620	S12	W13	09	7.7		A	HKX	210	2	3	2
10667		VORO	09	08	2138	S10	W17	09	7.6			HXX	326	1		3
10667		LEAR	09	09	0016	S11	W18	09	7.6		A	HKX	250	3	3	3
10667		KAND	09	09	0625	S12	W22	09	7.6			HK		5	3	3
10667		SVTO	09	09	0650	S11	W22	09	7.6		A	HAX	200	4	5	3
10667		TACH	09	09	0824	S09	W22	09	7.7			HA	113	2	2	3
10667		HOLL	09	09	1430	S12	W28	09	7.5		A	HKX	240	11	4	4
10667		VORO	09	09	2235	S10	W31	09	7.6			HXX	285	4		3
10667		LEAR	09	10	0005	S11	W32	09	7.6		A	HAX	200	3	3	2
10667		TACH	09	10	0455	S11	W34	09	7.6			HR	211	2	3	4
10667		KAND	09	10	0650	S12	W36	09	7.6			HH		3	4	3
10667		HOLL	09	10	1427	S12	W39	09	7.7		A	HHX	240	6	4	3
10667		VORO	09	10	2144	S11	W44	09	7.6			HXX	262	2		3
10667		LEAR	09	11	0045	S09	W44	09	7.7		A	HAX	180	8	5	3
10667		TACH	09	11	0622	S11	W48	09	7.6			HR	177	2	3	3

S U N S P O T G R O U P S
(Ordered by Central Meridian Passage Date)
SEPTEMBER 2004

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
10667		SVTO	09 11	0630	S13 W48	09 7.6		A	HSX	180	4	5	3
10667		HOLL	09 11	1411	S13 W52	09 7.7		A	HAX	180	7	3	4
10667		LEAR	09 12	0100	S11 W60	09 7.5		B	CAO	200	4	6	2
10667		TACH	09 12	0617	S11 W61	09 7.7			CAO	202	3	2	4
10667		SVTO	09 12	0725	S13 W63	09 7.5		B	CSO	260	3	5	3
10667		KAND	09 12	0802	S12 W66	09 7.4			HA		1	3	4
10667		HOLL	09 12	1440	S13 W68	09 7.5		B	CAO	220	4	6	4
10667		TACH	09 13	0531	S11 W75	09 7.6			HSX	323	1	4	4
10667		KAND	09 13	0740	S13 W78	09 7.4			HA		1	5	4
10669		SVTO	09 05	0624	S05 E44	09 8.5		A	AXX		1		3
10669		KAND	09 05	0835	S07 E43	09 8.6			BXO		4	3	5
10669		LEAR	09 05	0841	S06 E42	09 8.5		B	BXO	10	4	2	4
10669		HOLL	09 05	1545	S06 E39	09 8.6		B	DAI	60	10	4	4
10669		VORO	09 06	0243	S05 E30	09 8.3			DRI	77	5	3	3
10669		LEAR	09 06	0510	S08 E30	09 8.5		B	DAO	60	8	3	2
10669		TACH	09 06	0549	S05 E28	09 8.3			DAI	72	7	3	3
10669		SVTO	09 06	0714	S06 E28	09 8.4		B	DSO	40	6	6	3
10669		KAND	09 06	0828	S06 E28	09 8.4			DAI		7	5	4
10669		HOLL	09 06	1452	S07 E23	09 8.3		B	DSI	60	18	7	4
10669		LEAR	09 07	0210	S06 E17	09 8.4		B	CAI	90	22	5	3
10669		TACH	09 07	0541	S05 E14	09 8.3			BRO	38	3	3	3
10669		SVTO	09 07	0608	S06 E15	09 8.4		B	DSO	50	7	7	3
10669		KAND	09 07	1228	S07 E12	09 8.4			DAO		8	6	3
10669		HOLL	09 07	1420	S06 E11	09 8.4		B	DAI	90	16	4	4
10669		LEAR	09 08	0030	S06 E03	09 8.2		B	DAI	110	19	6	3
10669		VORO	09 08	0042	S05 E03	09 8.2			DRI	44	9	3	2
10669		TACH	09 08	0526	S05 E01	09 8.3			CAI	73	9	3	3
10669		SVTO	09 08	0718	S05 E00	09 8.3		B	DSI	70	26	7	3
10669		KAND	09 08	1042	S09 W02	09 8.3			CAO		22	6	4
10669		HOLL	09 08	1620	S04 W04	09 8.4		B	DAI	90	17	6	2
10669		VORO	09 08	2138	S05 W09	09 8.2			DRI	161	18	4	3
10669		LEAR	09 09	0016	S05 W11	09 8.2		B	DAO	80	15	6	3
10669		KAND	09 09	0625	S06 W14	09 8.2			DAO		15	7	3
10669		SVTO	09 09	0650	S04 W14	09 8.2		B	DAO	80	12	8	3
10669		TACH	09 09	0824	S03 W15	09 8.2			CSI	36	5	4	3
10669		HOLL	09 09	1430	S07 W19	09 8.2		B	DAI	130	21	8	4
10669		VORO	09 09	2235	S05 W22	09 8.3			DAI	147	21	5	3
10669		LEAR	09 10	0005	S04 W26	09 8.0		B	DAO	120	10	6	2
10669		TACH	09 10	0455	S05 W27	09 8.2			BRI	34	11	5	4
10669		KAND	09 10	0650	S06 W28	09 8.2			DSO		5	7	3
10669		HOLL	09 10	1427	S07 W32	09 8.2		B	DSI	130	18	7	3
10669		VORO	09 10	2144	S05 W36	09 8.2			DAI	124	6	5	2
10669		LEAR	09 11	0045	S05 W39	09 8.1		B	CAO	90	8	6	3
10669		TACH	09 11	0622	S03 W40	09 8.3			CSO	62	3	5	3
10669		SVTO	09 11	0630	S06 W42	09 8.1		B	CSO	70	5	8	3
10669		HOLL	09 11	1411	S07 W46	09 8.1		B	DSO	80	11	6	4
10669		LEAR	09 12	0100	S04 W56	09 7.8		A	HSX	70	2	2	2
10669		TACH	09 12	0617	S03 W57	09 8.0			HSX	66	1	2	4
10669		SVTO	09 12	0725	S07 W59	09 7.9		A	HSX	90	2	3	3
10669		KAND	09 12	0802	S06 W59	09 7.9			HA		1	3	4
10669		HOLL	09 12	1440	S07 W63	09 7.9		A	HAX	80	1	2	4
10669		TACH	09 13	0531	S05 W71	09 7.9			HR	105	2	2	4
10669		KAND	09 13	0740	S06 W73	09 7.8			HS		4	7	4
10669		VORO	09 13	2231	S05 W79	09 8.0			HAX	114	1		3
10669		LEAR	09 14	0054	S06 W83	09 7.8		A	HAX	60	1	2	4
10670		HOLL	09 04	1515	S12 E51	09 8.5		A	HKX	10	1	1	3
10670		VORO	09 05	0247	S14 E44	09 8.4			AXX	4	3		3
10670		SVTO	09 05	0624	S14 E43	09 8.5		A	AXX		1		3
10670		KAND	09 05	0835	S15 E42	09 8.5			AX		3	1	5
10670		LEAR	09 05	0841	S14 E43	09 8.6		A	AXX	10	2	4	4
10670		HOLL	09 05	1545	S13 E38	09 8.5		B	CAO	20	6	3	4
10670		LEAR	09 06	0510	S13 E29	09 8.4		A	AXX	10	4	1	2
10670		TACH	09 06	0549	S13 E29	09 8.4			AXX	1	1	1	3
10670		HOLL	09 07	1420	S14 E09	09 8.3		B	BXO	30	14	8	4
10670		LEAR	09 08	0030	S14 E05	09 8.4		A	AXX	10	5	2	3
10670		SVTO	09 08	0718	S14 E01	09 8.4		A	AXX		2	2	3
10670A		KAND	09 12	0802	S07 E23	09 14.0			BXO		2	3	4

SUNSPOT GROUPS
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SEPTEMBER 2004

NOAA/ USAF Group	Mt Wilson Group	Sta	Observation Time Mo Day (UT)	Lat CMD	CMP Mo Day	Max H	Mag Class	Spot Class	Corrected Area (10-6 Hemi)	Spot Count	Long. Extent (Deg)	Qual
10672		KAND	09 09 0625	N01 E87	09 15.8			HA		1	3	3
10672		SVTO	09 09 0650	N02 E85	09 15.6		A	HSX	60	1	5	3
10672		HOLL	09 09 1430	N05 E78	09 15.4		B	DAI	300	5	7	4
10672		VORO	09 09 2235	N04 E76	09 15.6			DAI	367	4	5	3
10672		LEAR	09 10 0005	N03 E73	09 15.4		B	DAI	240	5	8	2
10672		TACH	09 10 0455	N04 E71	09 15.5			DSO	208	4	5	4
10672		KAND	09 10 0650	N03 E77	09 16.0			DAO		4	10	3
10672		HOLL	09 10 1427	N05 E67	09 15.6		B	DAI	270	18	8	3
10672		VORO	09 10 2144	N04 E62	09 15.5			DAI	402	7	5	2
10672		LEAR	09 11 0045	N04 E61	09 15.6		B	FAI	300	18	16	3
10672		TACH	09 11 0622	N05 E59	09 15.7			DAI	209	10	7	3
10672		SVTO	09 11 0630	N06 E60	09 15.8		B	ESI	310	11	11	3
10672		HOLL	09 11 1411	N06 E54	09 15.6		B	EAI	220	34	11	4
10672		LEAR	09 12 0100	N04 E47	09 15.5		B	DAI	250	26	9	2
10672		TACH	09 12 0617	N07 E45	09 15.6			DAI	275	12	5	4
10672		SVTO	09 12 0725	N04 E45	09 15.7		BG	DSI	260	26	10	3
10672		KAND	09 12 0802	N02 E44	09 15.6			DAO		20	9	4
10672		HOLL	09 12 1440	N06 E42	09 15.7		BG	DAI	220	56	8	4
10672		TACH	09 13 0531	N07 E32	09 15.6			DAI	331	20	7	4
10672		KAND	09 13 0740	N02 E33	09 15.8			EAC		37	11	4
10672		VORO	09 13 2231	N05 E24	09 15.7			DKI	442	42	7	3
10672		LEAR	09 14 0054	N05 E22	09 15.7		BD	DAI	300	47	10	4
10672		TACH	09 14 0533	N05 E19	09 15.6			DAI	289	13	8	4
10672		SVTO	09 14 0730	N05 E18	09 15.6		B	EAI	350	30	12	3
10672		KAND	09 14 0736	N03 E18	09 15.7			DAI		34	10	4
10672		HOLL	09 14 1452	N06 E15	09 15.7		BD	EAC	290	65	11	4
10672		VORO	09 14 2150	N06 E11	09 15.7			DHI	442	39	7	3
10672		LEAR	09 15 0127	N06 E09	09 15.7		BD	DAI	350	46	10	4
10672		KAND	09 15 0730	N03 E05	09 15.7			EAI		38	11	5
10672		SVTO	09 15 0807	N05 E05	09 15.7		B	EKI	340	32	13	3
10672		HOLL	09 15 1417	N05 E01	09 15.7		BGD	EAC	270	57	12	4
10672		VORO	09 15 2255	N05 W02	09 15.8			DKI	533	35	9	3
10672		LEAR	09 16 0019	N05 W04	09 15.7		BD	EAC	340	52	13	3
10672		TACH	09 16 0629	N07 W07	09 15.7			EAI	100	21	12	4
10672		SVTO	09 16 0638	N05 W08	09 15.7		BG	EAI	180	32	13	3
10672		KAND	09 16 0712	N03 W10	09 15.5			EAO		19	11	3
10672		HOLL	09 16 1425	N04 W13	09 15.6		BGD	DAI	160	51	10	3
10672		TACH	09 17 0529	N06 W20	09 15.7			CAI	59	13	9	4
10672		KAND	09 17 0635	N04 W21	09 15.7			CAO		24	14	3
10672		LEAR	09 17 1038	N05 W19	09 16.0		BD	EAC	220	40	11	3
10672		SVTO	09 17 1200	N05 W26	09 15.5		B	CAO	110	8	8	2
10672		HOLL	09 17 1500	N05 W26	09 15.7		B	EAI	110	50	11	4
10672		LEAR	09 18 0127	N06 W32	09 15.7		BG	DAI	150	23	10	2
10672		TACH	09 18 0545	N06 W33	09 15.8			CAI	102	12	6	4
10672		SVTO	09 18 0807	N05 W38	09 15.5		B	CAO	70	11	3	3
10672		KAND	09 18 0857	N04 W36	09 15.7			CAO		11	11	3
10672		VORO	09 18 2204	N04 W42	09 15.8			CAO	126	7	8	2
10672		LEAR	09 19 0041	N06 W45	09 15.7		BG	CSO	70	7	8	3
10672		SVTO	09 19 0745	N04 W53	09 15.4		B	CAO	60	7	4	2
10672		TACH	09 19 0750	N05 W51	09 15.5			AR	28	2	1	4
10672		KAND	09 19 0754	N04 W52	09 15.4			HA		1	1	3
10672		VORO	09 19 2234	N05 W57	09 15.7			DAO	80	2	6	3
10672		LEAR	09 20 0115	N06 W57	09 15.8		BG	DRI	70	11	9	3
10672		TACH	09 20 0458	N05 W61	09 15.6			BRO	57	4	5	3
10672		SVTO	09 20 0630	N05 W63	09 15.5		B	DSO	70	4	8	3
10672		HOLL	09 20 1545	N05 W67	09 15.6		B	DAO	100	7	8	2
10672		VORO	09 20 2315	N05 W72	09 15.6			DRO	81	2	5	2
10672		LEAR	09 21 0050	N05 W74	09 15.5		BG	CSO	60	3	6	3
10672		SVTO	09 21 0903	N05 W79	09 15.5		A	HSX	50	1	3	3
10672		KAND	09 21 1100	N04 W83	09 15.2			HA		1	1	3
10672		HOLL	09 21 1402	N03 W79	09 15.7		A	HAX	30	1	1	3
10672A		TACH	09 14 0533	N14 E25	09 16.1			AXX	1	1	1	4
10672A		VORO	09 15 2255	N17 E01	09 16.0			AXX	8	5		3
10672A		LEAR	09 16 0019	N17 E00	09 16.0		A	AXX	10	3	1	3
10672A		HOLL	09 17 1500	N18 W19	09 16.2		B	CRO	10	2	2	4
10672B		HOLL	09 15 1417	N16 E14	09 16.6		A	AXX		1	1	4
10672B		VORO	09 15 2255	N21 E09	09 16.6			AXX	3	2		3

SUNSPOT GROUPS
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SEPTEMBER 2004

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10672B		LEAR	09	16	0019	N21	E08	09	16.6		A	AXX	10	3	1	3
10672C		VORO	09	18	2204	N04	W26	09	17.0			BRO	23	2	1	2
10672C		LEAR	09	19	0041	N04	W28	09	16.9		B	CAO	30	6	3	3
10672C		TACH	09	19	0750	N04	W32	09	16.9			BRO	4	4	3	4
10672E		VORO	09	14	2150	N10	E41	09	18.0			AXX	15	3		3
10672D		LEAR	09	20	0115	S11	W12	09	19.1		B	BXO	10	4	4	3
10672D		HOLL	09	20	1545	S09	W17	09	19.4		A	AXX		1	1	2
10673		LEAR	09	15	0127	S13	E80	09	21.1		A	HAX	90	1	3	4
10673		KAND	09	15	0730	S14	E77	09	21.1			HA		2	3	5
10673		SVTO	09	15	0807	S13	E85	09	21.7		A	HSX	90	1	6	3
10673		HOLL	09	15	1417	S12	E76	09	21.3		A	HKX	240	1	2	4
10673		VORO	09	15	2255	S12	E69	09	21.1			HHX	291	4		3
10673		LEAR	09	16	0019	S13	E68	09	21.1		A	HAX	230	1	3	3
10673		TACH	09	16	0629	S11	E65	09	21.2			HSX	198	1	3	4
10673		SVTO	09	16	0638	S12	E66	09	21.2		A	HSX	240	1	5	3
10673		KAND	09	16	0712	S14	E64	09	21.1			HK		2	3	3
10673		HOLL	09	16	1425	S11	E67	09	21.6		BG	EKI	260	16	11	3
10673		TACH	09	17	0529	S11	E56	09	21.4			DSI	329	6	7	4
10673		KAND	09	17	0635	S14	E58	09	21.6			EKO		11	14	3
10673		LEAR	09	17	1038	S14	E60	09	22.0		B	EAO	400	18	12	3
10673		SVTO	09	17	1200	S13	E54	09	21.6		B	EKO	360	9	11	2
10673		HOLL	09	17	1500	S12	E54	09	21.7		B	EKI	240	25	12	4
10673		LEAR	09	18	0127	S13	E46	09	21.5		B	DSO	390	13	12	2
10673		TACH	09	18	0545	S11	E45	09	21.6			CAI	344	10	8	4
10673		SVTO	09	18	0807	S13	E44	09	21.6		B	CHO	340	15	13	3
10673		KAND	09	18	0857	S13	E43	09	21.6			EAO		13	13	3
10673		VORO	09	18	2204	S13	E35	09	21.6			DHI	552	9	8	2
10673		LEAR	09	19	0041	S13	E34	09	21.6		BG	ESI	310	17	12	3
10673		SVTO	09	19	0745	S14	E29	09	21.5		B	DHO	290	12	9	2
10673		TACH	09	19	0750	S13	E28	09	21.4			DAI	352	9	6	4
10673		KAND	09	19	0754	S13	E30	09	21.6			ESO		10	12	3
10673		VORO	09	19	2234	S13	E23	09	21.7			DHI	431	12	8	3
10673		LEAR	09	20	0115	S13	E21	09	21.6		B	DKO	340	21	10	3
10673		TACH	09	20	0458	S13	E15	09	21.3			DAI	270	11	7	3
10673		SVTO	09	20	0630	S13	E17	09	21.5		B	DHO	310	16	10	3
10673		HOLL	09	20	1545	S12	E13	09	21.6		B	EHO	260	16	11	2
10673		VORO	09	20	2315	S12	E10	09	21.7			DHI	371	14	8	2
10673		LEAR	09	21	0050	S13	E08	09	21.6		B	DKI	250	16	10	3
10673		SVTO	09	21	0903	S13	E03	09	21.6		B	DHO	360	6	10	3
10673		KAND	09	21	1100	S14	E00	09	21.4			DHO		6	9	3
10673		HOLL	09	21	1402	S13	E02	09	21.7		B	EHO	260	14	11	3
10673		VORO	09	21	2257	S12	W03	09	21.7			DHI	355	8	8	3
10673		LEAR	09	22	0322	S13	W06	09	21.7		B	DSO	250	14	10	3
10673		TACH	09	22	0522	S12	W09	09	21.5			DSI	247	5	8	3
10673		SVTO	09	22	0630	S13	W09	09	21.6		B	EHO	340	9	11	3
10673		KAND	09	22	1151	S14	W13	09	21.5			DAO		15	9	5
10673		HOLL	09	22	1727	S12	W14	09	21.7		B	DAO	190	18	10	3
10673		VORO	09	22	2247	S12	W17	09	21.7			CHI	329	4	7	2
10673		LEAR	09	23	0201	S13	W18	09	21.7		BG	DSO	250	9	10	2
10673		TACH	09	23	0520	S13	W20	09	21.7			CSO	246	4	9	3
10673		SVTO	09	23	0640	S14	W22	09	21.6		B	DSO	240	7	8	3
10673		HOLL	09	23	1454	S13	W26	09	21.6		B	DSO	230	12	10	3
10673		VORO	09	23	2335	S13	W30	09	21.7			CHI	291	3	8	3
10673		LEAR	09	24	0100	S12	W32	09	21.6		B	DSO	220	5	10	3
10673		TACH	09	24	0449	S12	W32	09	21.8			CSO	275	2	8	4
10673		SVTO	09	24	0715	S14	W35	09	21.6		B	DKO	310	7	10	3
10673		KAND	09	24	0733	S14	W36	09	21.6			CSO		2	10	4
10673		HOLL	09	24	1500	S15	W42	09	21.4		B	CSO	190	3	5	3
10673		VORO	09	24	2308	S13	W47	09	21.4			HKX	328	1		3
10673		LEAR	09	25	0140	S13	W48	09	21.4		A	HSX	160	1	2	3
10673		TACH	09	25	0521	S13	W50	09	21.4			HSX	256	1	3	4
10673		KAND	09	25	1247	S15	W55	09	21.4			HH		1	4	3
10673		HOLL	09	25	1430	S15	W55	09	21.4		A	HHX	300	3	4	3
10673		LEAR	09	26	0023	S14	W60	09	21.5		A	HSX	220	1	2	3
10673		VORO	09	26	0237	S13	W62	09	21.4			HHX	342	1		3

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

SEPTEMBER 2004

NOAA/ USAF Group	Mt Wilson Group	Sta	Observation Time Mo Day (UT)	Lat CMD	CMP Mo Day	Max H	Mag Class	Spot Class	Corrected Area (10-6 Hemi)	Spot Count	Long. Extent (Deg)	Qual
10673		KAND	09 26 0540	S14 W65	09 21.3			HH		1	4	3
10673		TACH	09 26 0738	S13 W65	09 21.4			HSX	263	1	2	4
10673		SVTO	09 26 0945	S15 W68	09 21.2		A	HSX	130	1	4	2
10673		VORO	09 27 0003	S13 W73	09 21.5			HKX	297	1		3
10673		LEAR	09 27 0040	S13 W76	09 21.3		A	HSX	240	1	3	3
10673		TACH	09 27 0605	S14 W73	09 21.7			HSX	320	1	4	4
10673		KAND	09 27 0617	S13 W78	09 21.4			HS		1	3	5
10673		SVTO	09 27 0743	S15 W82	09 21.1		A	HSX	240	1	10	2
10673		HOLL	09 27 1424	S16 W81	09 21.4		A	HAX	120	1	2	3
10673A		HOLL	09 24 1500	N06 W36	09 21.9		A	AXX		1	1	3
10673B		HOLL	09 28 1945	N09 E09	09 29.5		A	AXX	10	1	1	3
10673B		LEAR	09 29 0023	N10 E05	09 29.4		B	BXO	10	3	3	3
10673C		KAND	09 27 0617	S09 E29	09 29.4			AX		1		5
10673C		LEAR	09 30 0011	S08 W08	09 29.4		A	AXX	10	1	1	3
10673C		HOLL	09 30 1550	S08 W14	09 29.6		A	AXX	10	3	1	3
10673C		LEAR	10 01 0030	S08 W20	09 29.6		A	AXX	10	2	1	3
10675A		KAND	10 03 0835	S08 W38	09 30.5			AX		1	1	2

Stations reporting:

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

SUDDEN IONOSPHERIC DISTURBANCES

SEPTEMBER 2004

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
05	0733	0740	0803	1	1		1				No flare		
07	0634	0641	0722	1	1		1				0706	C1.1	10669
07	1340	1530	1640	3+	1					1	1340	C2.8	
07	1651	1700	1735	1	1		1				No flare		
07	2146	2153	2214	1+	1					1	No flare		
08	1406	1443	1517	1	1		1				1453	B9.7	10669
08	1536	1559	1623	1	1		1				No flare		
10	0636	0709	0814	2	1		1				0630	C1.7	
10	1605	1614	1651	2-	5		1			7	1602	C6.9	10672
10	1700	1719	1727	1	1		1				No flare		
12	0023	0032	0105	2-	1					1	0004	M4.8	10672
12	0139E	0140	0158	1	1					1	0136	M3.2	10667
12	1212	1225	1319	1	1		1				No flare		
12	1533	1539	1624	1	1		1				1528	B7.9	
12	1830	1837	1908	1+	3					3	1828	C2.0	10669
12	2101	2104	2115	1	1					1	2057	B8.8	10672
13	2010	2012	2024	1	1					1	2007	C1.4	10672
13	2106	2118	2212	2+	1					1	*		
14	0728	0740	0808	2	1		1				0747	M1.5	10672
14	0908	0927	1109	3-	5			1		4	0747	M1.5	10672
14	0908	0952	1029	1	1	1					0747	M1.5	10672
14	1356	1405	1451	2	5					5	1354	C2.3	
14	1650	1657	1754	2+	3					4	1647	C1.8	
14	1918	1931	2021	2+	3					3	No flare		
15	0648	0714U	0746	1	1		1				No flare		
15	0745	0752	0914	1+	3		1			1	0742	C2.7	10672
15	1530	1533	1604	2	1					1	No flare		
15	1536	1559	1615	1	1		1				No flare		
15	1737	1756	1828	2+	1					1	1742	C1.1	10672
15	1834	1839	1904	1+	3					2	1830	B9.7	10672
17	0851	0900	0924	1	1		1				No flare		
18	1345	1353	1426	2	1					1	1352	B7.5	10673
18	1443	1450	1509	1	1		1				*		
18	1517	1527	1546	1	1		1				1514	B7.5	10672
18	1556	1605	1634	1	1		1				1603	C1.0	10673
18	1615	1622	1715	2+	1					1	*		
18	1735	1737	1846	2	1					1	*		
19	1134	1144	1304	2	3					2	1016	C3.8	10672
19	1235	1253	1400	1	1		1				*		
19	1651	1705	1821	3-	5					7	1646	M1.9	10672
20	0655	0724	0750	1	1		1				0709	C2.1	10672
20	1237	1250	1303	1	1		1				*		
20	1426	1440	1534	1	1		1				1445	B3.4	
21	0832	0835	0842	2	5	1	2	1		5	0830	C7.5	10672
22	0853	0918	1000	2	3		1			3	0854	C3.2	10673
26	1410	1429	1533	1	1		1				*		
28	1205	1334U	1411	2	1		1				1301	B1.9	10673

* = no flare patrol.

SUDDEN IONOSPHERIC DISTURBANCES

SEPTEMBER 2004

OBSERVATORIES REPORTING FOR SEPTEMBER 2004

Bedford, Massachusetts, USA	SES	Palo Alto, California, USA	SES
Bern, Switzerland	SES	Panska Ves, Czech Republic	SES, SEA, SWF
Brookline, Massachusetts, USA	SES	Sofia, Bulgaria	SES
Cambridge, England, UK	SES	Sussex, United Kingdom	SES
Houston, Texas, USA	SES	Torrington, Connecticut, USA	SES
Isola del Gran Sasso, Italy	SES	Tucson, Arizona, USA	SES
Marlborough, Massachusetts, USA	SES	Upice, Czech Republic	SEA
Milan, Italy	SES	Villiersdorp, South Africa	SES
Nerja, Spain	SES		

Observations are not necessarily continuous.

SOLAR RADIO EMISSION
Spectral Observations

SEPTEMBER 2004

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	0000	0730	CULG	0001.0	0243.0	III	N	1	18	90	
			LEAR	0020.0	0021.0	III		1	42	90	
			LEAR	0021.0	0022.0	III		1	25	103	
	0000	0906	HIRA	0022.0	0022.5	III	B	1	25X	120	
			LEAR	0125.0	0125.0	III		1	25	34	
	0527	1636	ONDR								
			CULG	0558.0	0629.0	III	N	2	20	90	
			HIRA	0611.0	0611.5	III	B	1	25X	100	
			LEAR	0611.0	0611.0	III		1	25	103	
			SVTO	0611.0	0611.0	III		1	25	81	
	0601	1200	IZMI	0611.2	0611.4	III	G	2	25X	95	
			IZMI	0616.5	0616.6	III	B	2	25X	85	
			CULG	0729.0	0729.0	III	B	1	25	140	
			SVTO	0729.0	0729.0	III		1	36	52	
			IZMI	0810.0	0810.1	III	G	1	25X	65U	
			LEAR	0810.0	0810.0	III		1	25	35	
			SVTO	0810.0	0817.0	III		1	25	48	
			IZMI	0817.4	0817.8	III	G	1	30	65U	
			IZMI	0930.7	0931.4	III	G	1	45	65	
			SVTO	0945.0	0945.0	III		1	25	44	
			IZMI	0945.5	0945.9	III	G	1	25X	65U	
			SVTO	1010.0	1014.0	III		1	25	42	
			IZMI	1019.2	1019.4	III	B	2	45	90	
			IZMI	1042.9	1043.0	III	G	1	35	65U	
			SVTO	1043.0	1043.0	III		1	25	44	
			IZMI	1047.9	1052.8	III	G	1	45	85	
			IZMI	1115.4	1115.5	III	B	1	45	95U	
			SVTO	1127.0	1127.0	III		1	25	39	
			SVTO	1217.0	1217.0	III		1	25	43	
	0620	1705	BLEN	1248.7	1248.8	III		1	290	500	
			SVTO	1436.0	1437.0	III		1	25	49	
			SGMR	1516.0	1516.0	III		1	25	39	
	2009	2400	HIRA								
	2040	2400	CULG	2114.0	2223.0	III	N	1	23	90	
			CULG	2139.0	2140.0	III	G	1	30	180	
			CULG	2340.0	2340.0	III	B	1	23	90	
02	0000	0730	CULG	0028.0	0320.0	III	N	1	20	90	
			LEAR	0057.0	0057.0	III		1	25	64	
	0000	0906	HIRA	0057.0	0057.5	III	B	1	25X	50	
			LEAR	0109.0	0112.0	III		1	25	147	
			PALE	0109.0	0110.0	III		1	25	65	
			HIRA	0109.5	0110.0	III	B	1	30	100	
			CULG	0110.0	0110.0	III	B	2	18	100	
			HIRA	0111.5	0112.0	III	B	1	80	130	
			CULG	0112.0	0112.0	III	B	1	40	180	
			LEAR	0323.0	0323.0	III		1	25	47	
			HIRA	0323.5	0324.0	III	B	1	25X	50	
			CULG	0324.0	0324.0	III	B	2	18	80	
			CULG	0530.0	0730.0D	III	N	1	18	90	
	0531	1634	ONDR								
	0620	1705	BLEN								
	0600	1200	IZMI	0625.0U	1200.0D	III	N	1	45U	95U	
			SVTO	0702.0	0702.0	III		1	25	52	
			SVTO	0756.0	0757.0	III		1	25	82	
			IZMI	0756.6	0757.1	III	G	1	45	95	
			IZMI	0843.4	0844.0	III	G	1	45	95	
			IZMI	0914.0	0914.7	III	G	1	45	95	
	2010	2400	HIRA								
	2040	2400	CULG	2040.0E	2322.0	III	N	1	20	120	
			LEAR	2306.0	2318.0	III	N	1	47	99	
03			LEAR	0012.0	0013.0	III		1	25	104	
			PALE	0012.0	0019.0	III		1	25	180	
	0000	0730	CULG	0012.0	0013.0	III	G	2	25	100	
	0000	0904	HIRA	0012.5	0013.0	III	B	1	25X	90	
			CULG	0038.0	0730.0D	III	N	1	25	90	
			LEAR	0038.0	0038.0	III		1	44	77	
			HIRA	0038.5	0039.0	III	B	1	50	80	

SOLAR RADIO EMISSION
Spectral Observations

SEPTEMBER 2004

Day	OBSERVATION Start (UT)	OBSERVATION End (UT)	Sta	EVENT Start (UT)	EVENT End (UT)	EVENT Spectral Class	EVENT Event Remarks	Int (1-3)	FREQUENCY Lower (MHz)	FREQUENCY Upper (MHz)	Remarks
03			LEAR	0108.0	0109.0	III		1	25	45	
			LEAR	0328.0	0402.0	III	N	1	25	103	
			CULG	0515.0	0517.0	III	G	3	18X	160	
			HIRA	0515.0	0516.0	III	B	1	25X	130	
			LEAR	0515.0	0516.0	III		1	25	147	
			SVTO	0515.0	0515.0	III		1	25	82	
	0530	1632	ONDR								
	0601	1200	IZMI	0600.0E	1200.0D	III	N	1	45U	95U	
	0620	1705	BLEN								
			IZMI	0810.2	0811.0	III	G	2	45	170	
			SGMR	1652.0	1653.0	III		1	25	55	
	2030	2400	CULG	2030.0E	2400.0D	III	S	1	23	90	
			CULG	2126.0	2126.0	III	B	2	23	90	
			CULG	2154.0	2155.0	III	G	2	20	57	
			LEAR	2339.0	2339.0	III		1	25	109	
	2011	2400	HIRA	2339.0	2339.5	III	B	1	30	70	
			LEAR	2353.0	0934.0	III	N	1	25	137	
04	0000	0730	CULG	0000.0E	0730.0D	III	S	1	23	90	
			CULG	0235.0	0236.0	III	G	2	18	140	
			CULG	0413.0	0413.0	III	B	2	18	70	
			SVTO	0517.0	1657.0	III	N	2	25	87	
	0531	1630	ONDR								
			CULG	0559.0	0650.0	I	S	1	120	180	
			IZMI	0601.0E	1200.0D	III	N	2	25X	95U	
	0601	1200	IZMI	0601.0E	1112.0U	I	N	2	110	270X	
			CULG	0615.0	0616.0	III	G	3	18	150	
			LEAR	0615.0	0616.0	III		2	25	103	
	0000	0902	HIRA	0615.0	0616.0	III	B	2	25X	100	
			IZMI	0615.2	0617.2	III	GG,C	2	25X	140	
			IZMI	0928.7	0934.4	III	GG	2	25X	92	
	0620	1705	BLEN	1008.5	1520.0	I	DC	2	180	500	
			SGMR	1119.0	2252.0	III	N	1	25	85	
			PALE	1633.0	0429.0	III	N	1	25	85	
	2012	2400	HIRA								
	2030	2400	CULG	2030.0E	2400.0D	III	S,C	1	20	90	
			LEAR	2312.0	0935.0	III	N	1	25	115	
05	0000	0740	CULG	0000.0E	0740.0D	III	S,C	1	20	90	
			SVTO	0503.0	1656.0	III	N	1	25	82	
	0533	1627	ONDR								
			CULG	0555.0	0555.0	III	B	1	27	160	
	0000	0900	HIRA	0555.5	0556.0	III	B	1	50	100	
	0600	1705	BLEN								
	0600	1200	IZMI	0600.0E	1200.0D	III	N	2	25X	95U	
			IZMI	0625.8	0629.1	III	G	1	25X	120	
			SGMR	1033.0	1933.0	III	N	1	25	80	
			SGMR	1034.0	1814.0	III	N	1	25	81	
			PALE	1831.0	0428.0	III	N	1	25	86	
	2013	2400	HIRA								
	2030	2400	CULG	2030.0E	2400.0D	III	N	1	18	90	
			CULG	2158.0	2203.0	III	G	1	120	180	
06			CULG	0000.0	0001.0	III	G	1	50	160	
	0000	0740	CULG	0000.0E	0740.0D	III	N	1	20	90	
			CULG	0349.0	0351.0	III	G	3	40	180	
	0000	0859	HIRA	0349.0	0349.5	III	B	3		150	
	0555	1205	IZMI	0555.0	1200.0D	III	N	1	25X	95U	
			SVTO	0642.0	1509.0	III	N	1	25	82	
			IZMI	1055.8	1056.0	III	G	1	80	140	
			IZMI	1120.6	1120.7	III	B	1	80	125	
	0600	1700	BLEN	1532.1	1536.5	DCIM	P,S,C	2	800	3500	
	0535	1625	ONDR	1532.4	1536.2	DCIM	G	1	2000X	4295	
	2013	2400	HIRA								
	2030	2400	CULG	2030.0E	2400.0D	III	S,C	1	23	160	
			CULG	2103.0	2103.0	III	B	2	23	57	
			LEAR	2300.0	0935.0	III	N	1	25	180	
			PALE	2358.0	0428.0	III	N	1	25	90	

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

SEPTEMBER 2004

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	0000	0740	CULG	0000.0E	0740.0D	III	S,C	1	20	160	
	0536	1623	ONDR								
			CULG	0546.0	0546.0	III	B	2	20	90	
			SVTO	0546.0	1652.0	III	N	1	25	160	
	0000	0858	HIRA	0546.0	0546.5	III	B	1	50	100	
	0600	1700	BLEN								
			IZMI	0612.0E	1200.0D	III	N	1	25X	95U	
	0600	1200	IZMI	0612.0E	1200.0D	I	N	1	40	270X	
			IZMI	0727.9	0728.1	III	B	2	25X	65	
			IZMI	1005.1	1011.0	III	GG	1	25X	65U	
			SGMR	1318.0	1943.0	III	N	1	25U	73U	
	2014	2400	HIRA								
	2030	2400	CULG	2030.0E	2400.0D	III	S,C	1	20	180	
			LEAR	2308.0	0936.0	CONT		1	66	180	
08	0000	0856	HIRA								
	0000	0740	CULG	0000.0E	0740.0D	III	S,C	1	20	180	
			LEAR	0205.0	0753.0	III	N	1	25	39	
			SVTO	0442.0	1651.0	CONT		2	25	180	
	0537	1621	ONDR								
	0605	1200	IZMI	0605.0E	1200.0D	I	N,DC	2	40	270X	
			SVTO	0606.0	1513.0	III	N	1	25	180	
			IZMI	0646.2	0708.0	III	N	2	110	260	
			SVTO	0728.0	0735.0	II		1	44	64	ESS 0354
	0600	1700	BLEN	0730.0	1545.0	I	DC	2	140	400	
			IZMI	0736.9	0737.0	III	G	2	200	270X	
			IZMI	0841.7	0845.5	III	GG	1	120	270X	
			SVTO	0933.0	0934.0	III		2	25	180	
			IZMI	0933.7	0934.3	III	GG,FS,HARM	2	25X	175	
			SGMR	1346.0	2102.0	CONT		1	25U	79U	
			SGMR	1405.0	1411.0	II		2	25	38	ESS 0413
			SVTO	1405.0	1412.0	II		1	25	39	ESS 0346
	2015	2400	HIRA								
	2030	2400	CULG	2030.0E	2136.0	III	S,C	2	18	180	
			CULG	2136.0	2218.0	III	S,C	3	18	180	
			CULG	2218.0	2400.0D	III	S,C	2	18	180	
			PALE	2228.0	0426.0	CONT		1	25	90	
			LEAR	2309.0	0936.0	CONT		1	25	180	
09	0000	0855	HIRA								
	0000	0740	CULG	0000.0E	0740.0D	III	S,C	2	18	180	
			LEAR	0006.0	0251.0	III	N	1	48	173	
			LEAR	0423.0	0423.0	III		1	54	150	
			LEAR	0439.0	0759.0	III		1	25	180	
			SVTO	0443.0	1649.0	CONT		1	25	180	
	0539	1619	ONDR								
	0600	1650	BLEN								
	0603	1200	IZMI	0603.0E	1200.0D	I	S,C	2	40U	190U	
			IZMI	0650.7	0650.8	III	B	1	25X	45	
			IZMI	0832.6	0832.8	III	G,U	2	110	240	
			IZMI	1003.5	1003.9	III	G	2	195	255	
			SGMR	1037.0	1826.0	CONT		1	25	141	
			PALE	1634.0	0150.0	CONT		1	70	180	
	2015	2400	HIRA								
	2030	2400	CULG	2030.0E	2244.0U	III	S,C	1	20	180	
10	0000	0740	CULG								
	0000	0854	HIRA								
	0540	1617	ONDR								
			IZMI	0555.0E	1200.0D	III	N	1	45U	95U	
	0555	1200	IZMI	0555.0E	1200.0D	I	S	1	60	270X	
			IZMI	0617.2	0617.3	III	B	2	45	70	
	0600	1650	BLEN	1606.4	1610.4	DCIM	C	3	1300	4000X	
	2016	2400	HIRA								
			CULG	2030.0E	2332.0	III	N	1	23	150	
	2030	2400	CULG	2030.0E	2400.0	I	S	1	57	170	
			CULG	2048.0	2048.0	III	B	2	20	100	
			CULG	2224.0	2224.0	III	B	2	20	180	

SOLAR RADIO EMISSION
Spectral Observations

SEPTEMBER 2004

Day	OBSERVATION Start (UT)	OBSERVATION End (UT)	Sta	EVENT Start (UT)	EVENT End (UT)	EVENT Spectral Class	EVENT Event Remarks	Int (1-3)	FREQUENCY Lower (MHz)	FREQUENCY Upper (MHz)	Remarks
11			LEAR	0140.0	0141.0	III		1	35	48	
			PALE	0140.0	0141.0	III		1	34	49	
	0000	0740	CULG	0141.0	0141.0	III	B	2	25	57	
			CULG	0205.0	0228.0	III	G	1	100	550	
			LEAR	0211.0	0342.0	CONT		1	76	180	
			CULG	0230.0	0301.0	I	S	1	100	160	
			CULG	0254.0	0300.0	III	G	1	27	160	
			CULG	0311.0	0311.0	III	B	1	120	180	
			CULG	0355.0	0356.0	III	G	3	18X	270	
			LEAR	0355.0	0356.0	III		1	25	180	
	0000	0852	HIRA	0355.0	0356.0	III	B	2	25X	220	
			CULG	0451.0	0451.0	III	B	1	35	57	
	0542	1615	ONDR								
	0555	1200	IZMI								
	0600	1650	BLEN								
	2017	2400	HIRA								
	2030	2400	CULG	2210.0	2235.0	I	S	1	100	180	
			CULG	2322.0	2322.0	III	B	1	40	80	
12	0000	0330	CULG	0013.0	0130.0	IV		2	30U	850	
			CULG	0023.0	0029.0	II	FN	3	30	57	
			CULG	0023.0	0029.0	II	SH	3	60	110	ESS 900
			CULG	0023.0	0038.0	III	GG	2	30	130	
			LEAR	0023.0	0046.0	II		2	28	157	ESS 0800
	0000	0850	HIRA	0023.5	0046.5	II		1	25X	120	
			PALE	0024.0	0027.0	II		2	25	133	ESS 0837
			HIRA	0026.0	0106.0	IV		1	50	1000	
			LEAR	0026.0	0200.0	IV		2	28	180	
			PALE	0027.0	0359.0	IV		1	25	180	
			CULG	0029.0	0049.0	II	SH	3	20	90	ESS 700
			CULG	0034.0	0041.0	II	FN	2	18	35	
			CULG	0041.0	0111.0	III	GG	2	20	180	
			CULG	0043.0	0047.0	UNCLF		2	50	85	
			CULG	0054.0	0057.0	III	G	3	60	100	
			CULG	0135.0	0140.0	III	G	1	75	440	
			HIRA	0136.0	0138.0	III	G	1	100	420	
			CULG	0141.0	0150.0	II	FN	3	30	90	
			CULG	0141.0	0150.0	II	SH	3	57	180	ESS 700
			HIRA	0141.0	0150.0	II		2	25X	220	
			LEAR	0141.0	0153.0	II		2	29	180	ESS 0750
			PALE	0142.0	0153.0	II		1	25	180	ESS 0870
			CULG	0149.0	0150.0	III	G	3	20	90	
			CULG	0150.0	0155.0	II	SH	2	45	80	ESS 700
			CULG	0151.0	0154.0	II	FN	2	35	45	
			HIRA	0151.5	0153.0	II		1	30	80	
			CULG	0303.0	0303.0	III	B	1	20	50	
	0543	1612	ONDR								
			HIRA	0701.0	0702.0	III	G	1	80	110	
			LEAR	0701.0	0702.0	III		1	25	138	
			SVTO	0701.0	0701.0	III		1	25	139	
	0600	1200	IZMI	0701.3	0701.9	III	G,HARM	2	25X	160	
			IZMI	0706.0	0706.1	III	G	1	110	175	
			SVTO	0802.0	0803.0	III		1	25	180	
			IZMI	1106.2	1106.3	III	B	1	220	270X	
			IZMI	1123.0	1145.0U	I	S	2	200	270X	
	0600	1650	BLEN	1534.6	1637.2	DCIM	P	3	200	1300	
			SGMR	1603.0	1611.0	III		1	25	80	
			SVTO	1603.0	1611.0	III		1	37U	131U	
	2018	2400	HIRA								
	2030	2400	CULG								
13	0000	0848	HIRA								
	0000	0740	CULG	0243.0	0248.0	III	G	1	20	130	
	0555	1200	IZMI	0605.0	0605.1	III	B	1	195	270X	
			IZMI	0809.3	0809.3	III	G	1	195	270X	
			IZMI	0919.9	0921.2	III	GG	2	210	270X	
			IZMI	0925.4	0927.0	III	G	1	205	270X	
			IZMI	0947.0	1042.0	I	S	1	110	270	
			IZMI	1004.7	1005.0	III	G	2	200	270X	

SOLAR RADIO EMISSION
Spectral Observations

SEPTEMBER 2004

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
13	0605	1650	BLEN	1335.1	1339.8	DCIM	C	2	200	4000X	
	0544	1610	ONDR	1338.0	1338.2	DCIM	G	1	2527	4500X	
	2019	2400	HIRA	2030.0	2030.5	III	B	1	60	240	
	2030	2400	CULG	2030.0	2030.0	III	B	2	57	180	
			CULG	2122.0	2204.0	III	N	1	20	180	
			HIRA	2215.5	2217.0	III	B	3	25X	330	
			CULG	2216.0	2217.0	III	G	3	18X	330	
			PALE	2216.0	2216.0	III		1	25	180	
			CULG	2219.0	2219.0	III	G	2	20	170	
14	0000	0847	HIRA								
	0000	0740	CULG	0020.0	0020.0	III	B	1	20	180	
			CULG	0032.0	0740.0D	III	S,C	1	20	180	
			LEAR	0214.0	0702.0	III	N	1	25	147	
			PALE	0301.0	0305.0	III		1	25	49	
			LEAR	0340.0	0621.0	CONT		1	74	135	
	0555	0634	IZMI	0555.0E	1205.0D	I	SG	1	50U	270X	
	0641	1200	IZMI	0718.1	0718.4	UNCLF		1	50	65	
			ONDR	0851.3	0945.5	DCIM	GG	2	800X	2000X	
	0546	1608	ONDR	0852.4	0948.5	DCIM	GG	2	2000X	4500X	
	0605	1640	BLEN	0856.3	0926.0	IV	P,S	3	100X	4000X	
			IZMI	0908.0	0926.0U	CONT	FS	2	45U	270X	
			LEAR	0908.0	0937.0	IV		1	25	180	
			SVTO	0909.0	1552.0	IV		1	25	180	
			IZMI	0916.1	0920.6	III	GG,FS	2	25X	90U	
			IZMI	0921.0	0933.7	III	N,FS	2	25X	160U	
			IZMI	0921.2	0925.8	UNCLF	DC	2	25X	45	
			IZMI	0925.8	0933.3	II	HARM	2	25X	45	
			IZMI	0926.0	1205.0D	IV		2	45U	270X	
			SVTO	0926.0	0934.0	II		1	25	44	ESS 1018
			IZMI	1033.5	1035.7	III	G	2	80	270X	
			SVTO	1047.0	1048.0	III		1	25	147	
	2019	2400	HIRA								
	2030	2400	CULG								
15	0000	0740	CULG								
	0000	0845	HIRA								
	0555	1200	IZMI	0555.0E	1200.0D	I	N	1	110	270	
			ONDR	0744.2	0746.4	DCIM	GG	1	809	2000X	
	0547	1606	ONDR	0745.0	0746.3	DCIM	G	1	2000X	4500X	
	0615	1640	BLEN	0745.1	0746.7	DCIM	P	2	800	4000X	
	2020	2400	HIRA								
	2030	2400	CULG	2043.0	2043.0	III	B	1	27	60	
			CULG	2056.0	2400.0D	I	S	1	100	180	
			CULG	2337.0	2337.0	III	B	1	30	90	
			CULG	2342.0	2342.0	III	B	1	30	90	
16	0000	0844	HIRA								
	0000	0740	CULG	0000.0E	0132.0	I	S	1	100	180	
	0549	1604	ONDR								
	0600	1204	IZMI	0600.0E	1204.0D	I	N	1	110U	270X	
			CULG	0609.0	0740.0D	I	S	1	110	180	
	0615	1635	BLEN								
			SGMR	1050.0	1050.0	III		1	25U	55U	
			SVTO	1050.0	1050.0	III		1	25	81	
			IZMI	1050.1	1051.0	III	G	2	25X	120	
			SGMR	1459.0	1459.0	III		1	25	55	
	2030	2400	CULG	2204.0	2204.0	III	B	1	20	70	
			CULG	2333.0	2339.0	III	G	1	18	80	
			LEAR	2336.0	2338.0	III		1	25	62	
	2021	2400	HIRA	2336.0	2338.5	III	G	1	25X	70	
17	0000	0740	CULG	0332.0	0332.0	III	B	1	40	80	
	0550	1601	ONDR								
			CULG	0602.0	0604.0	III	G	1	60	200	
	0600	1200	IZMI	0602.7	0604.3	III	G	1	120	270	
	0615	1635	BLEN								
			CULG	0641.0	0641.0	III	B	1	23	90	
			CULG	0702.0	0703.0	III	G	2	20	150	

SOLAR RADIO EMISSION
Spectral Observations

SEPTEMBER 2004

Day	OBSERVATION Start (UT)	OBSERVATION End (UT)	Sta	EVENT Start (UT)	EVENT End (UT)	EVENT Spectral Class	EVENT Event Remarks	Int (1-3)	FREQUENCY Lower (MHz)	FREQUENCY Upper (MHz)	Remarks
17			SVTO	0702.0	0703.0	III		1	25	59	
	0000	0843	HIRA	0702.0	0702.5	III	G	1	50	110	
			LEAR	0734.0	0736.0	III		1	25	130	
			SVTO	0734.0	0736.0	III		1	25	65	
			HIRA	0734.5	0736.5	III	G	1	25X	110	
			IZMI	0734.9	0736.5	III	G	2	25X	165	
			CULG	0735.0	0737.0	III	G	2	18	130	
			SVTO	1152.0	1152.0	III		1	25	44	
			SVTO	1459.0	1459.0	III		1	25	58	
			SGMR	1534.0	1534.0	III		1	25	78	
			SVTO	1534.0	1534.0	III		1	25	81	
	2022	2400	HIRA								
	2030	2400	CULG	2255.0	2255.0	III	B	1	30	90	
18			LEAR	0044.0	0045.0	III		1	25	180	
	0000	0740	CULG	0044.0	0046.0	III	G	2	18	200	
	0000	0842	HIRA	0044.0	0045.0	III	G	1	25X	190	
			CULG	0311.0	0316.0	III	G	1	100	180	
			CULG	0341.0	0341.0	III	B	1	20	180	
			CULG	0400.0	0400.0	III	B	1	20	180	
			CULG	0519.0	0740.0D	I	S,C	1	100	180	
			LEAR	0545.0	0751.0	CONT		1	90	180	
	0550	1200	IZMI	0550.0E	0810.0U	I	S	2	50	270X	
	0552	1559	ONDR								
			CULG	0610.0	0740.0D	III	N	1	30	130	
	0615	1635	BLEN								
			IZMI	0648.6	0648.8	III	B	1	45	65	
			IZMI	0702.0	0702.8	III	G	1	45	85	
			IZMI	0721.9	0724.0	III	G	2	25X	215	
			CULG	0722.0	0730.0	III	G	3	20	180	
			HIRA	0722.0	0724.0	III	G	1	25X	200	
			LEAR	0722.0	0730.0	III		1	25	153	
			SVTO	0722.0	0730.0	III		1	25	154	
			IZMI	0729.9	0730.2	III	G,C	2	25X	215	
			LEAR	0803.0	0806.0	III		1	25	180	
			SVTO	0803.0	0804.0	III		1	25	64	
			HIRA	0803.5	0804.0	III	B	1	25X	70	
			IZMI	0803.5	0804.0	III	G	1	25X	85	
			IZMI	0806.0	0806.7	III	G,U	2	55	215	
			IZMI	0810.0	1140.0U	I	N	1	110	270X	
			IZMI	1045.6	1045.9	III	B	1	25X	65	
	2022	2400	HIRA								
	2030	2400	CULG								
19	0000	0840	HIRA								
	0000	0740	CULG	0227.0	0227.0	III	B	1	25	57	
	0554	1557	ONDR								
			IZMI	0600.0E	0835.0U	I	N	1	200U	270X	
	0615	1635	BLEN								
			PALE	1650.0	1653.0	III		1	42	180	
			PALE	1655.0	1712.0	II		1	25	180	ESS 0680
			SGMR	1656.0	1713.0	II		3	25	180	ESS 0604
			PALE	1716.0	1734.0	IV		1	25	75	
			SGMR	1716.0	1734.0	IV		1	25	76	
	2030	2400	CULG	2030.0E	2128.0	I	S	1	130	180	
			CULG	2050.0	2102.0	III	G	2	20	90	
			PALE	2059.0	2059.0	III		1	25	65	
	2023	2400	HIRA	2059.5	2100.0	III	B	1	25X	100	
			CULG	2100.0	2100.0	III	B	3	20	100	
			CULG	2320.0	2320.0	III	B	1	27	80	
20			LEAR	0121.0	0121.0	III		1	25	51	
	0000	0740	CULG	0121.0	0126.0	III	G	1	30	90	
			CULG	0306.0	0306.0	III	G	2	18	120	
			LEAR	0306.0	0306.0	III		1	25	99	
	0000	0838	HIRA	0306.0	0306.5	III	B	1	25X	70	
			CULG	0314.0	0314.0	III	B	1	45	90	
			CULG	0324.0	0325.0	III	G	1	18	180	
			HIRA	0324.0	0324.5	III	B	1	90	300	

SOLAR RADIO EMISSION
Spectral Observations

SEPTEMBER 2004

Day	OBSERVATION Start (UT)	OBSERVATION End (UT)	Sta	EVENT Start (UT)	EVENT End (UT)	EVENT Spectral Class	EVENT Event Remarks	Int (1-3)	FREQUENCY Lower (MHz)	FREQUENCY Upper (MHz)	Remarks
20			CULG	0422.0	0422.0	III	B	2	18	80	
			HIRA	0422.0	0422.5	III	B	1	25X	60	
			LEAR	0422.0	0422.0	III		1	25	63	
	0555	1555	ONDR								
	0555	1200	IZMI	0555.0E	1200.0D	I	N	2	130	270X	
			CULG	0623.0	0740.0D	III	N	1	20	180	
			IZMI	0645.7	0645.9	III	G	1	50	170	
	0615	1630	BLEN	0713.8	0714.2	DCIM	P	1	230	4000X	
			IZMI	0735.3	0736.6	III	G	1	30	90	
			SVTO	0739.0	0740.0	III		1	25	180	
			IZMI	0739.7	0740.5	III	G	1	40	95	
			LEAR	0925.0	0926.0	III		1	25	133	
			IZMI	0925.9	0926.4	III	GG	2	25X	155	
			SVTO	0926.0	0926.0	III		1	25	81	
			IZMI	1036.3	1036.4	III	B	1	45	85	
			SVTO	1427.0	1429.0	III		1	25	147	
			SGMR	1428.0	1429.0	III		1	25	66	
			SGMR	1428.0	1429.0	III		1	25	166	
			SGMR	1447.0	1449.0	III		1	25	176	
			SVTO	1447.0	1449.0	III		1	25	180	
	2024	2400	HIRA								
	2030	2400	CULG	2103.0	2103.0	III	B	1	25	90	
			CULG	2110.0	2110.0	III	B	1	25	90	
			CULG	2210.0	2210.0	III	B	1	25	180	
			CULG	2249.0	2250.0	III	G	1	30	180	
			CULG	2353.0	2353.0	III	B	1	27	70	
21			LEAR	0051.0	0052.0	III		1	25	62	
	0000	0837	HIRA	0051.5	0052.0	III	B	1	25X	50	
	0000	0750	CULG	0052.0	0052.0	III	B	1	18	90	
			CULG	0307.0	0308.0	III	G	1	20	90	
	0600	1200	IZMI	0620.0	0653.0	I	S	2	180	270X	
			LEAR	0809.0	0809.0	III		1	25	104	
			SVTO	0809.0	0810.0	III		2	25	84	
			IZMI	0809.4	0810.1	III	G	2	25X	95	
			HIRA	0809.5	0810.0	III	G	1	30	60	
	0557	1552	ONDR	0833.4	0834.4	DCIM	G	2	2439	4500X	
			LEAR	0834.0	0837.0	III		2	25	180	
			ONDR	0834.0	0834.4	DCIM	G	1	1128	2000X	
			SVTO	0834.0	0837.0	III		2	25	180	
			IZMI	0834.8	0837.0	III	GG,C,FS	2	25X	215	
			HIRA	0835.0	0836.0	III	G	1	25X	50	
			IZMI	0933.1	0933.2	III	B	1	95	170	
			SGMR	1417.0	1417.0	III		1	25	75	
			SGMR	1656.0	1657.0	III		1	25	75	
	2030	2400	CULG	2140.0	2315.0	I	S	1	100	180	
			CULG	2201.0	2203.0	III	G	1	20	180	
			CULG	2213.0	2213.0	III	B	1	20	75	
			CULG	2253.0	2254.0	III	G	1	35	140	
			LEAR	2253.0	2255.0	III		1	42	138	
	2025	2400	HIRA	2253.0	2254.0	III	G	1	50	110	
			LEAR	2307.0	0237.0	CONT		1	41	180	
			CULG	2333.0	2400.0D	I	S,C	1	50	160	
			CULG	2335.0	2345.0	III	G	1	30	180	
22	0000	0750	CULG	0000.0E	0148.0	I	S,C	1	57	180	
			CULG	0003.0	0115.0	III	N	1	30	180	
			LEAR	0048.0	0048.0	III		1	25	180	
			PALE	0048.0	0048.0	III		1	25	157	
	0000	0835	HIRA	0048.0	0048.5	III	B	1	25X	140	
			SVTO	0700.0	0700.0	III		1	25	75	
	0600	1200	IZMI	0700.6	0701.5	III	G	2	25X	85	
			CULG	0701.0	0701.0	III	G	2	20	140	
	0558	1550	ONDR	0856.5	0907.3	DCIM	GG	1	1095	1836	
			IZMI	1029.0	1029.1	III	B	1	115	215	
	2026	2400	HIRA								
	2030	2400	CULG								
23	0000	0750	CULG	0022.0	0050.0	III	N	1	20	140	

SOLAR RADIO EMISSION
Spectral Observations

SEPTEMBER 2004

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
23			CULG	0421.0	0422.0	III	G	1	30	60	
	0559	1548	ONDR								
			CULG	0642.0	0750.0D	III	N	1	23	90	
	0555	1200	IZMI	0648.2	0703.1	I	N	1	45	95	
			LEAR	0749.0	0750.0	III		1	43	103	
			SVTO	0749.0	0751.0	III		1	25	81	
			IZMI	0749.3	0750.4	III	G	1	25X	90	
	0000	0834	HIRA	0749.5	0750.0	III	B	1	40	80	
			IZMI	0804.0	0804.1	III	B	1	45	85	
			LEAR	0826.0	0826.0	III		1	25	125	
			SVTO	0826.0	0826.0	III		1	26	66	
			IZMI	0826.2	0826.6	III	G	2	30	170	
			SVTO	0945.0	0946.0	III		1	25	81	
	1010	1600	BLEN								
			IZMI	1023.0	1023.2	III	G	1	80	250	
			IZMI	1032.0	1036.9	III	G	1	45	85	
			SVTO	1055.0	1057.0	III		1	25	52	
			IZMI	1055.1	1056.1	III	G	1	25X	65	
			IZMI	1100.0	1100.8	III	G	1	25X	65	
			IZMI	1130.1	1130.2	III	B	1	110	165	
			SVTO	1213.0	1219.0	III		1	25	49	
	2027	2400	HIRA								
	2030	2400	CULG	2110.0	2110.0	III	B	1	23	90	
			CULG	2117.0	2117.0	III	B	1	30	90	
24	0000	0750	CULG								
	0000	0832	HIRA								
	0602	1546	ONDR								
	0605	1200	IZMI								
	0610	1615	BLEN								
	2027	2400	HIRA								
	2030	2400	CULG								
25	0000	0830	HIRA								
	0000	0750	CULG	0319.0	0319.0	III	B	1	20	80	
			CULG	0555.0	0559.0	III	G	1	20	180	
	0603	1543	ONDR								
	0615	1615	BLEN								
			CULG	0657.0	0657.0	III	B	2	20	180	
	0603	1200	IZMI	0657.0	0657.3	III	G,C	1	40	95	
			IZMI	0907.4	0907.7	III	G	1	40	90	
			SGMR	1445.0	1452.0	III		1	25	155	
			SVTO	1451.0	1452.0	III		1	25	142	
	2028	2400	HIRA								
	2030	2400	CULG	2231.0	2231.0	III	B	1	20	180	
26	0000	0750	CULG								
	0000	2029	HIRA								
	0555	1200	IZMI								
	0615	1610	BLEN								
	0605	1541	ONDR	1355.2	1356.0	DCIM	G,W	1	1109	1691	
			PALE	1843.0	1844.0	III		1	25	92	
			SGMR	1843.0	1844.0	III		1	25	62	
	2029	2400	HIRA								
	2030	2400	CULG								
27	0000	0828	HIRA								
	0606	1539	ONDR								
	0615	1610	BLEN								
	0000	0750	CULG	0725.0	0725.0	III	B	1	30	75	
	0555	1200	IZMI	1007.5	1008.8	III	G	1	25X	60	
	2030	2400	HIRA								
	2020	2400	CULG	2052.0	2052.0	III	B	2	20	60	
28	0000	0750	CULG								
	0000	0826	HIRA								
	0600	1200	IZMI								
	0608	1537	ONDR								
	0615	1610	BLEN								

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

Spectral Observations

SEPTEMBER 2004

OBSERVATION Day	Start (UT)	End (UT)	Sta	EVENT Start (UT)	End (UT)	Spectral Class	Event Remarks	FREQUENCY Int (1-3)	Lower (MHz)	Upper (MHz)	Remarks
28	2020	2400	CULG								
	2031	2400	HIRA								
29	0000	0825	HIRA								
	0000	0750	CULG	0432.0	0433.0	III	G	1	60	180	
	0604	1153	IZMI								
	0609	1534	ONDR								
	0620	1605	BLEN								
			LEAR	2249.0	2250.0	III		1	64	180	
	2031	2400	HIRA	2249.5	2250.0	III	B	2	90	200	
	2020	2400	CULG	2250.0	2250.0	III	B	2	40	180	
30	0000	0750	CULG								
	0000	0823	HIRA								
	0611	1532	ONDR								
	0620	1605	BLEN								
	0555	1200	IZMI	0852.4	0852.6	III	B	1	12	85	
	2020	2400	CULG	2027.0	2027.0	III	B	1	25	50	
	2032	2400	HIRA								

Event Remarks:

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

Frequency qualifiers:

X = Extends beyond instrument range U = Uncertain frequency

Remarks:

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

Stations Reporting:

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

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

SOLAR RADIO NOISE STORM AT 164 MHZ

FROM NANÇAY RADIOHELIOGRAPH

SEPTEMBER 2004

	HELIOGRAPHICS POSITIONS MEAN VALUES[1]		IMP[2]	OBSERVING TIME[3]	
	E-W	S-N		START(UT)	END(UT)
02/09/04	-1.13	-0.17	I	8H51 E	15H03 D
03/09/04	-0.96	-0.11	I	8H19 E	15H20 D
04/09/04	-0.63	-0.34	I	8H19 E	15H20 D
05/09/04	-0.37	-0.21	I	8H18 E	15H20 D
06/09/04	-0.25	-0.31	II	8H21 E	15H19 D
07/09/04	+0.00	-0.35	III	12H22 E	15H19 D
08/09/04	+0.22	-0.35	IV	8H19 E	15H18 D
09/09/04	+0.48	-0.31	III	8H44 E	15H18 D
10/09/04	+0.78	-0.36	III	8H22 E	15H18 D
13/09/04	+1.31	-0.33	I	9H46	11H00
14/09/04	-0.20	-0.16	III	8H16 E	14H14 D
15/09/04	-1.26	-0.39	I	8H16 E	15H16 D
15/09/04	-0.04	-0.21	II	8H16 E	15H16 D
20/09/04	-0.02	-0.65	I	8H58 E	15H12 D
21/09/04	+0.36	-0.64	III	13H02	15H14 D
21/09/04	+1.12	-0.34	I	8H20 E	15H14 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

SEPTEMBER 2004

	HELIOGRAPHICS POSITIONS MEAN VALUES[1]		IMP[2]	OBSERVING TIME[3]	
DAY	E-W	S-N		START(UT)	END(UT)
02/09/04	-1.03	-0.16	I	8H51 E	15H03 D
03/09/04	-0.86	-0.22	I	8H19 E	15H20 D
04/09/04	-0.64	-0.28	I	8H19 E	15H20 D
07/09/04	+0.00	-0.34	I	12H22 E	15H19 D
07/09/04	+0.63	-0.29	II	12H22 E	15H19 D
08/09/04	+0.23	-0.32	III	8H18 E	15H18 D
08/09/04	+0.80	-0.34	I	8H19 E	13H10
09/09/04	+0.49	-0.29	II	8H44 E	15H18 D
10/09/04	+0.79	-0.3é	I	8H22 E	15H18 D
10/09/04	+1.14	+0.01	I	8H22 E	15H18 D
13/09/04	+1.23	-0.22	I	11H40	15H16 D
14/09/04	-0.29	-0.09	II	8H16 E	14H14 D
15/09/04	-1.08	-0.34	I	8H16 E	15H16 D
15/09/04	-0.08	-0.19	II	8H16 E	15H16 D
20/09/04	-0.15	-0.43	I	8H58 E	15H12 D
20/09/04	-0.02	-0.60	I	8H58 E	11H50
21/09/04	+0.08	-0.46	II	8H20 E	15H14 D

11, 12, 16, 17, 18, 19, 26 SEPTEMBER : 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

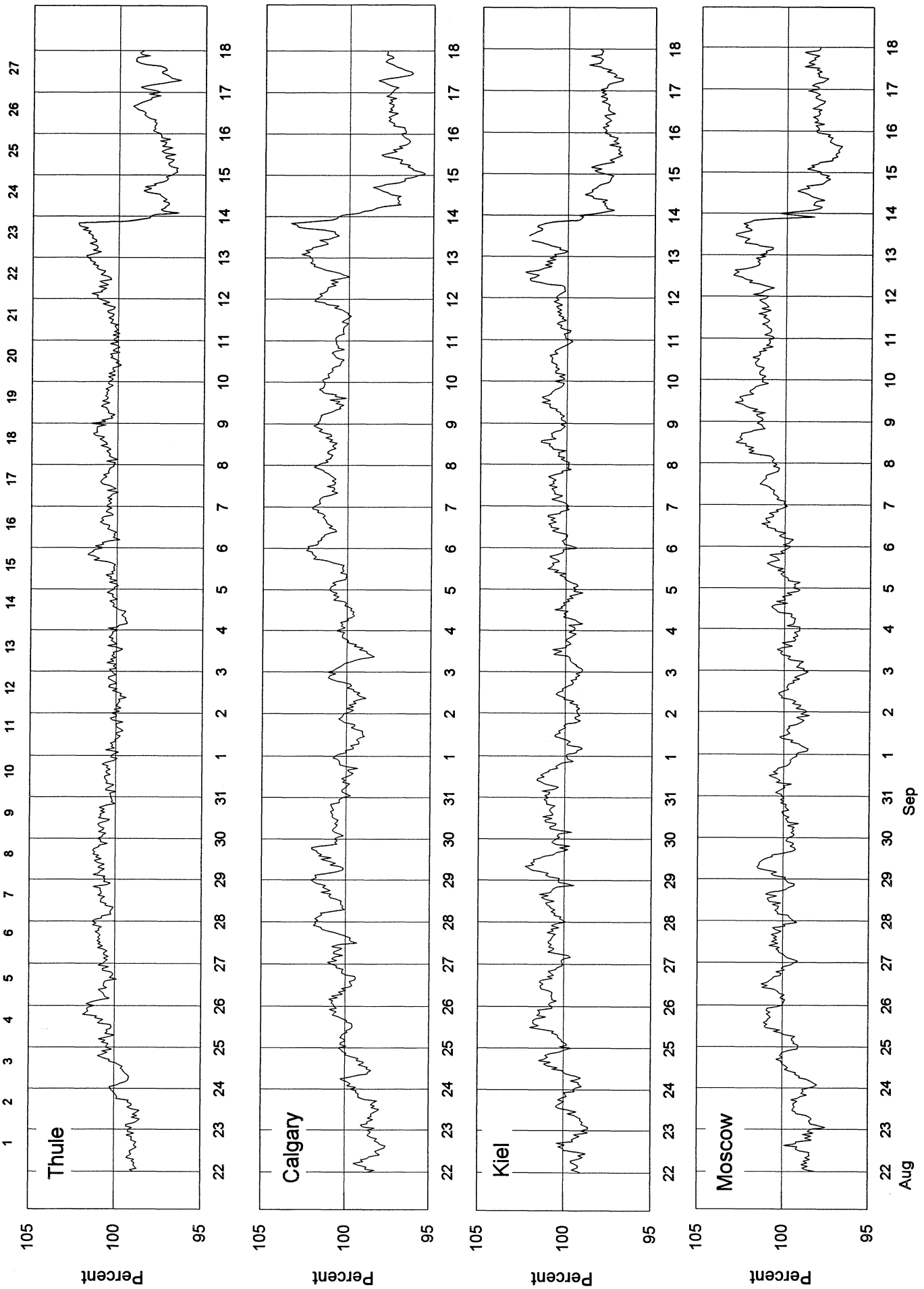
COSMIC RAY INDICES
(Neutron Monitor)
September 2004

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	4248.5	3680.2	5909.9	8646.3	3986.4	1959.0	3567.4
2	4248.2	3686.7	5904.5	8659.3	3996.6	1951.2	3561.8
3	4255.2	3682.0	5909.5	8666.3	4012.6	1953.4	3562.9
4	4245.3	3698.0	5909.5	8690.4	4018.0	1960.1	3573.3
5	4272.0	3725.0	5937.8	8717.2	4036.8	1958.5	3580.5
6	4270.4	3745.5	5944.7	8742.8	4049.2	1967.9	3582.3
7	4269.0	3737.8	5951.0	8766.3	4050.5	1973.8	3585.6
8	4278.5	3736.8	5956.2	8863.3	4046.7	1970.0	3575.8
9	4274.7	3733.7	5962.6	8872.5	4043.8	1965.8	3572.0
10	4257.0	3723.0	5953.4	8827.5	4025.2	1960.0	3575.2
11	4261.7	3710.0	5942.8	8805.6	4013.4	1950.3	3571.8
12	4292.7	3740.8	5991.2	8869.1	4044.1	1958.8	3577.8
13	4302.8	3760.5	5980.1(22)	8854.1	4062.2	1956.4	3575.4
14	4145.8	3614.2	5811.1	8571.2	3901.2	1934.9	3525.8
15	4126.0	3571.8	5777.7	8499.2	3878.4	1927.3	3515.6
16	4175.2	3594.0	5792.8	8553.2	3885.1	1936.0	3531.1
17	4161.4	3594.7	5795.1	8561.2	3884.2	1948.4	3531.4
18	4177.2	3608.3	5784.2	8532.2	3904.8	1950.5	3551.4
19	4179.4	3620.5	5805.1	8559.6	3899.8	1947.3	3534.4
20	4213.9	3660.7	5858.9	8633.5(12)	3933.8(18)	1964.9	3557.1
21	4217.7	3646.7	5889.0	8723.8(15)	3942.8	1962.6	3541.6
22	4175.5	3632.5	5830.4	8660.5	3917.4	1957.4	3531.0
23	4184.1	3643.5	5871.0	8720.3	3939.2	1957.2	3542.4
24	4232.8	3678.5	5924.5	8790.8	3968.0	1960.5	3555.2
25	4227.8	3693.2	5908.5	8756.2	3980.3	1962.2	3557.1
26	4248.7	3704.2	5912.2	8749.8	3990.7	1962.8(12)	3560.5
27	4256.5	3709.8	5918.8	8757.9	3995.4	1968.7(15)	3563.4
28	4266.8	3712.2	5932.0	8791.7	4004.4	1968.5	3569.8
29	4279.8	3724.5	5949.4	8810.7	4013.0	1961.8	3567.4
30	4275.4	3725.3	5935.7	8794.6	4019.8	1968.7	3570.4
Mean	4233.0	3683.2	5898.3	8714.9	3982.4	1957.5	3558.9

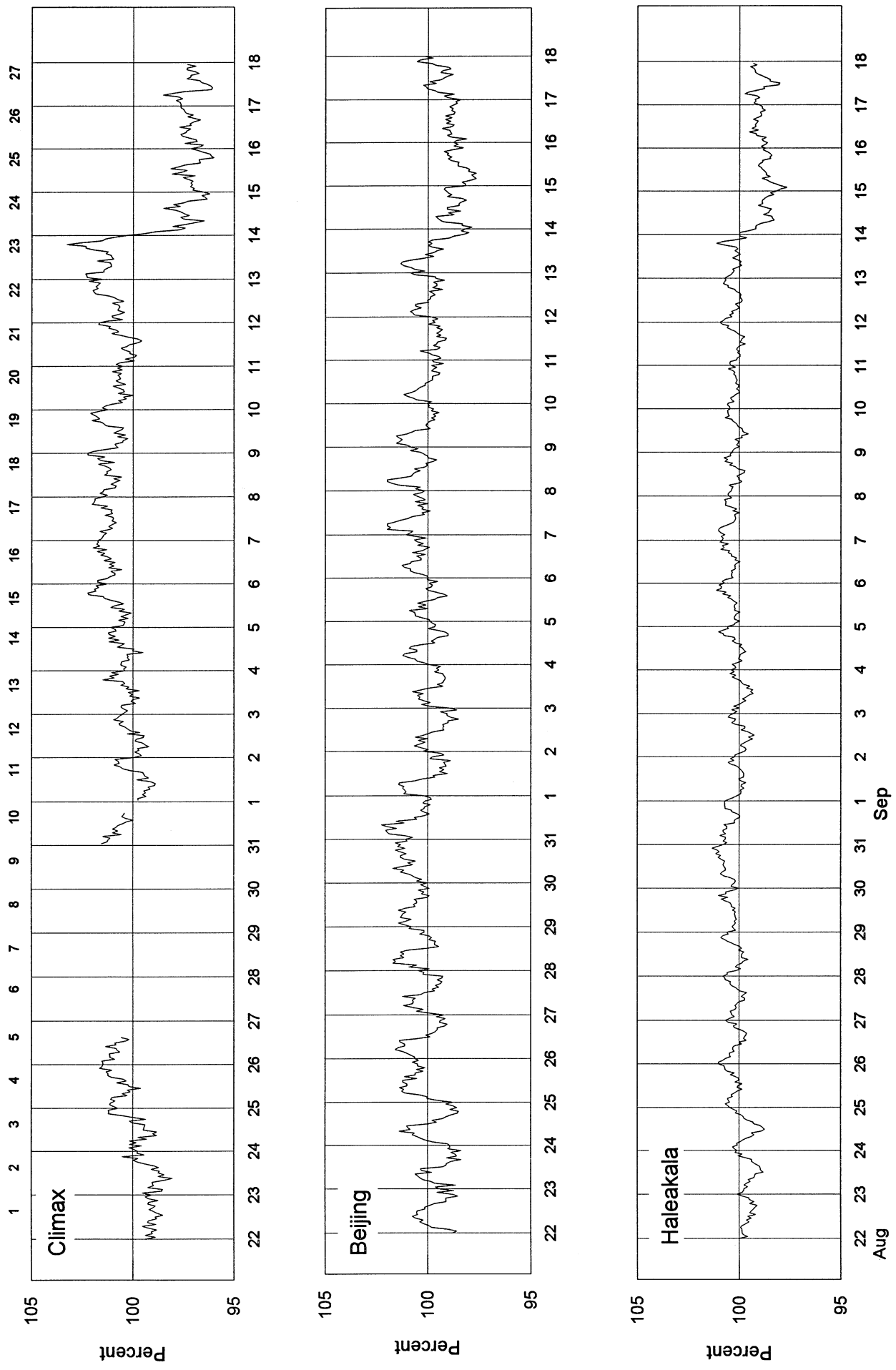
For less than 24-hour coverage, parentheses enclose the number of hours for which data are available. For Climax, parentheses enclose the number of section hours whenever the sum of both sections falls below 40 hours, and for Haleakala, whenever the sum of all three sections falls below 60 hours.

COSMIC RAY INDICES
(Neutron Monitor)

Bartels Rotation 2335 - Beginning 22 Aug 2004

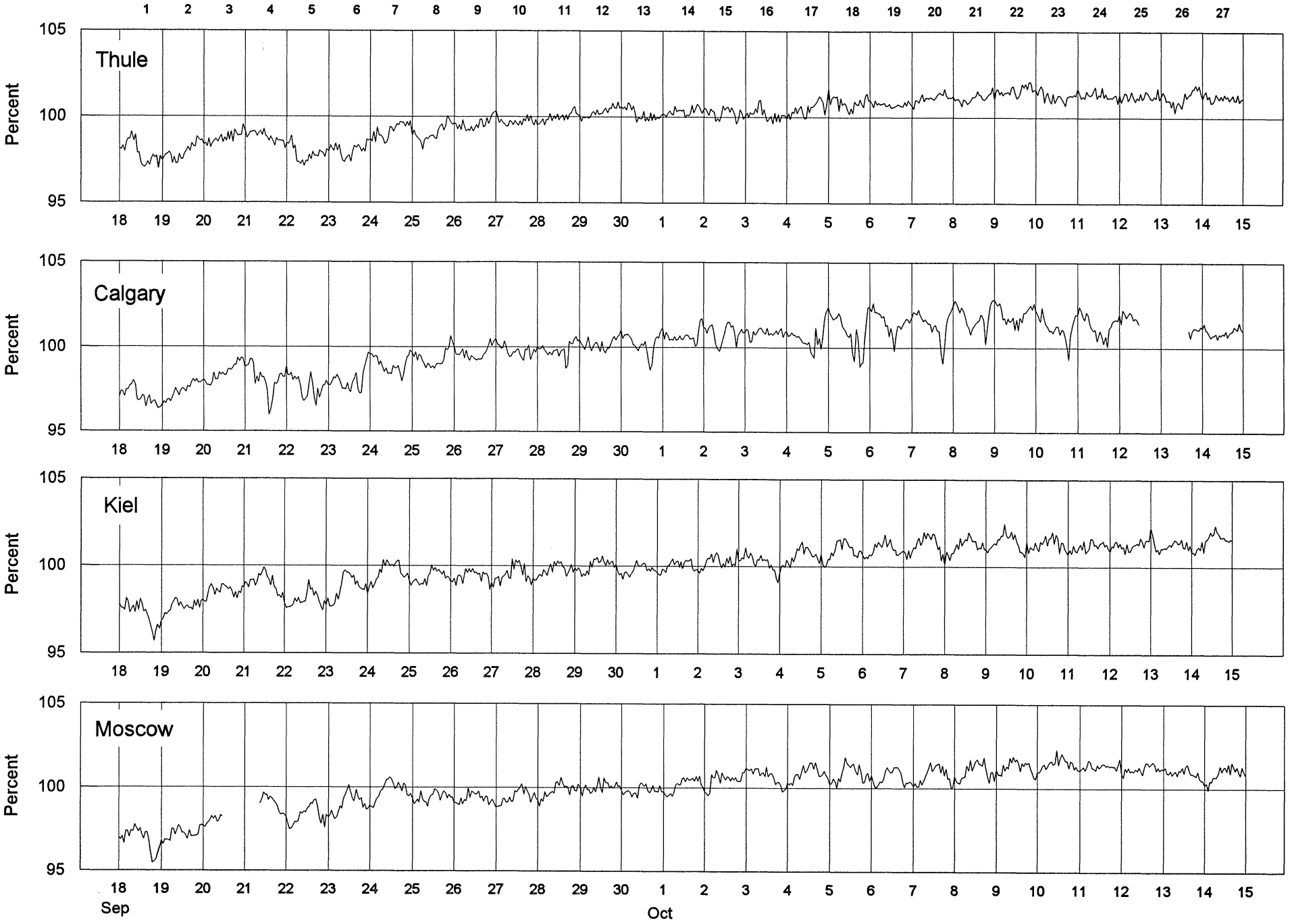


COSMIC RAY INDICES
(Neutron Monitor)
Bartels Rotation 2335 - Beginning 22 Aug 2004



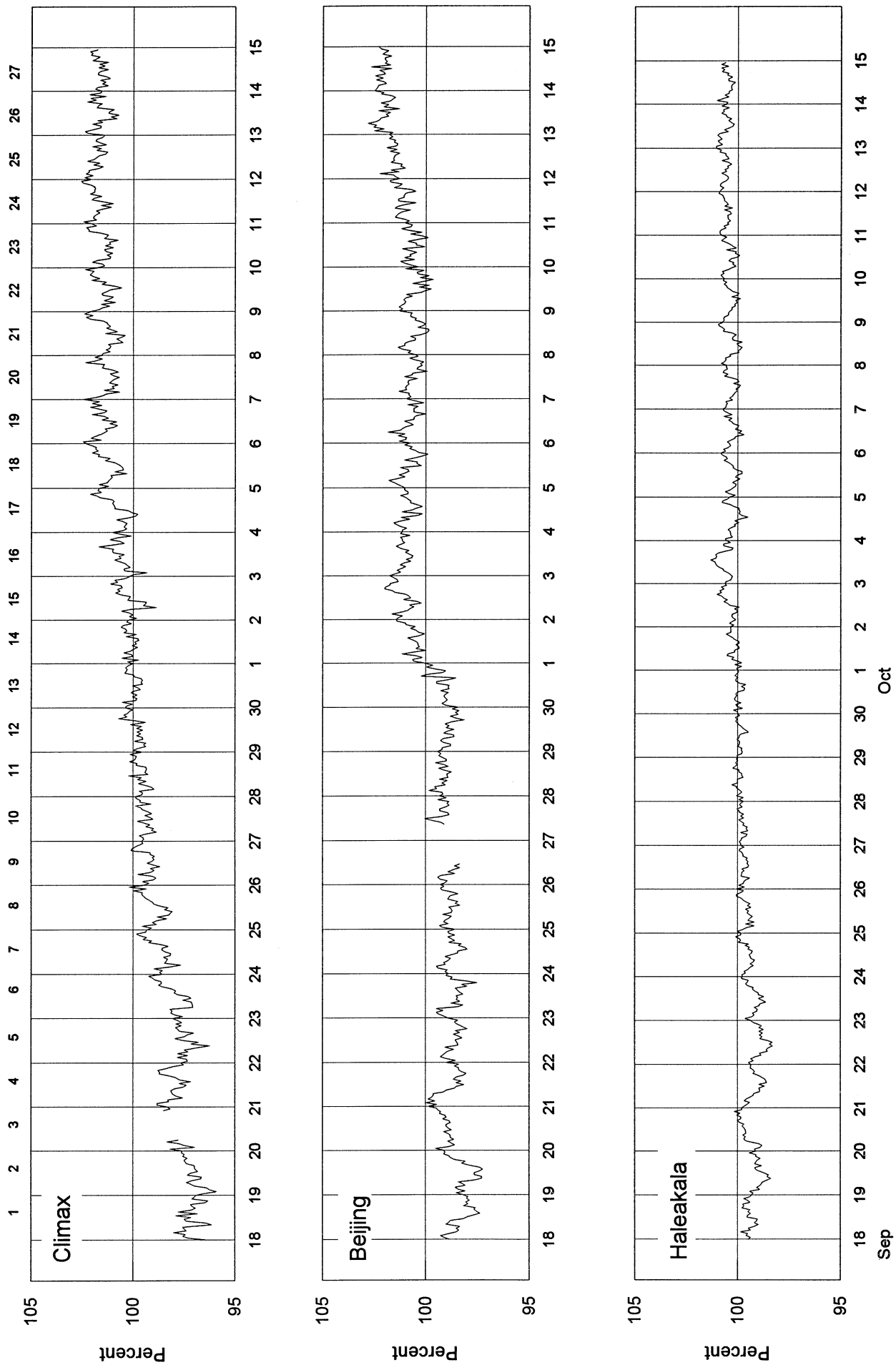
COSMIC RAY INDICES
(Neutron Monitor)

Bartels Rotation 2336 - Beginning 18 Sep 2004

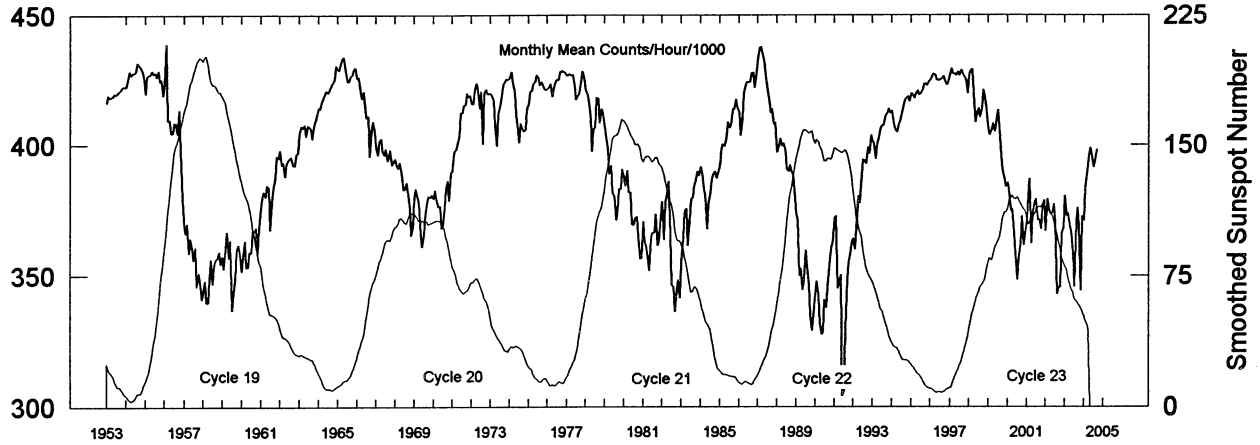


103
Sep 04

COSMIC RAY INDICES
(Neutron Monitor)
Bartels Rotation 2336 - Beginning 18 Sep 2004



Climax Neutron Monitor Pressure-Corrected Values
Jan 1953 - Sep 2004



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				3907

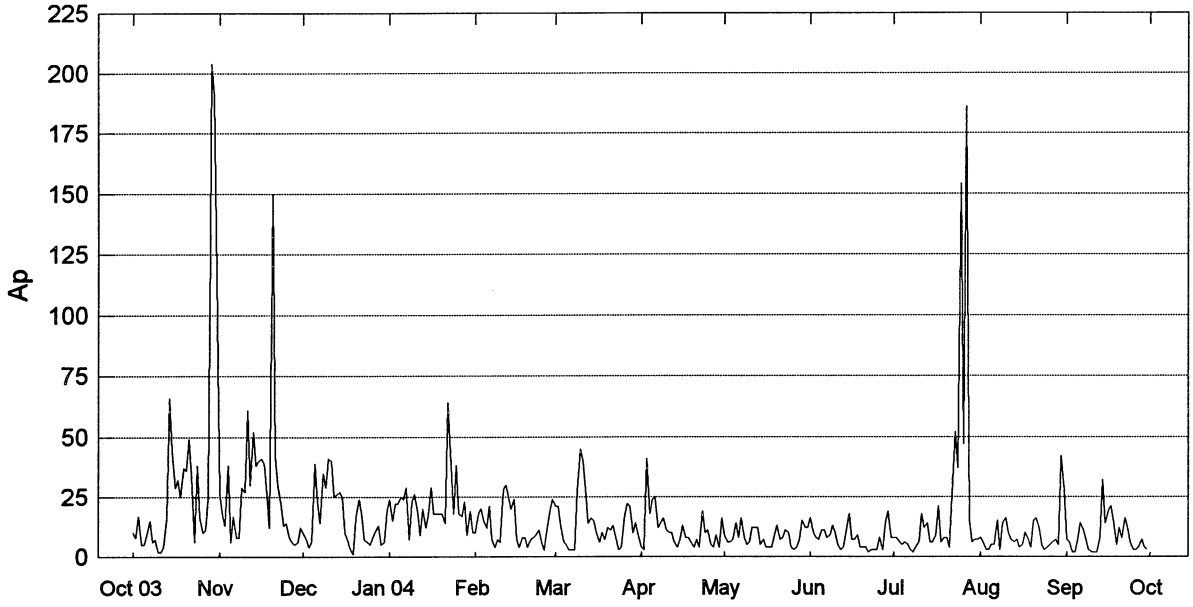
Multiply table entries by 100 to obtain hourly counting rate. Climax, Colorado: N39, W106, Alt=3400 m, Cutoff Rigidity=2.99GV (1980).
NOTE: Data may differ from previously reported values due to subsequent cleanup of data and slight changes in the averaging algorithm. See http://astro.uchicago.edu/home/web/pyle/neutron.html for latest changes. Sunspot numbers are preliminary after March, 2004.

Geomagnetic Activity Indices
September 2004

		Kp Three-Hourly Indices											Km Three-Hourly Indices								aa Provisional				
Day		1	2	3	4	5	6	7	8	Sum	Ap	Cp	1	2	3	4	5	6	7	8	Am	N	S	M	
1		2+	2-	2-	1+	2-	2-	2	2+	15-	7	0.3	2+	2-	1+	2-	2-	2-	2-	2o	13	14	11	10	15 C
2		2+	2-	2	2-	1-	1	1	1+	12-	6	0.2	3-	2o	2-	2-	1-	1+	1o	1o	11	11	7	10	8 CC
3	Q5	1+	1-	0+	0+	0+	1-	1-	0	4+	2	0.0	2-	1o	0+	0o	0+	1-	0+	0o	4	5	5	5	4 CC
4	Q3	0+	0	1-	1	1-	0	0+	1	4	2	0.0	1-	0+	1-	1o	0+	0o	0+	1o	4	6	5	5	5 CC
5		1	0+	1+	1+	2-	3-	3+	1	13-	7	0.4	1o	0+	2-	2o	2+	3o	3o	1o	14	15	17	10	22
6	D5*	3-	2-	3	3+	3-	4-	2	4-	23-	14	0.8	2o	1+	3-	3o	3-	4-	2o	3o	25	31	26	27	31
7		3+	3	3	3-	2+	2-	2	1+	19+	11	0.6	3-	3-	3o	3o	2+	2-	2o	1+	21	21	15	21	15
8		3-	3	3-	1+	2-	1-	0+	0+	13-	7	0.4	2+	2o	3-	2-	2+	1-	0o	0+	12	16	11	18	9 KK
9	Q9	0	1+	0+	1-	1	0+	1	2	7-	3	0.1	0o	1+	0+	1-	1o	0o	1o	2+	6	9	5	4	9 CC
10	Q2	1-	1-	1-	1	1-	0	0	0	4-	2	0.0	0+	1-	0+	1+	0o	0o	0o	0o	3	4	5	6	3 CC
11	Q1	0	0	0	0+	1-	1	1-	1-	3+	2	0.0	0o	0o	0o	0o	1-	1o	1-	1o	3	5	6	2	8 CC
12	Q4	1	1-	0	0	0+	1+	0	0+	4-	2	0.0	1o	1o	0o	0o	1-	1o	0o	0o	3	6	7	6	7 CC
13		0	0	0	0+	0	0+	4+	4+	9+	8	0.5	0o	0o	0o	0o	0o	0o	4-	4-	12	22	13	2	33
14	D1	3+	5-	4+	4	4	4	5+	4	34-	32	1.3	3o	4-	4o	4-	4-	4-	5-	4o	50	54	49	46	58
15		5-	3	2-	2-	3+	3	2	2+	22-	14	0.8	4o	3-	2-	2+	3+	3o	2o	2+	26	31	21	27	26
16	D3*	3+	3	4-	3-	4-	3+	4-	4-	27	19	1.0	3o	2+	3+	3+	4-	3o	3+	4-	35	38	31	28	41
17	D2	5-	4	4-	3	3	3-	3-	4	28-	21	1.1	4o	3+	3-	3-	3o	2+	2+	4o	32	36	27	33	30
18		5-	5	2-	3	2+	1-	0+	0	18-	15	0.9	4o	4-	2-	3o	2+	0+	0+	0+	20	25	16	34	8
19		1-	0	1-	1-	1-	1+	1+	3	8+	5	0.2	1-	0o	1o	1-	1o	1+	1+	3o	9	9	8	5	12 CK
20		3-	1+	5-	3	3-	2	0+	2-	18+	12	0.7	3-	1o	4-	3o	3-	2o	0o	2-	20	18	20	27	12
21		3-	3	2+	1+	2-	1+	1	1+	15-	8	0.4	2+	3-	2+	2-	1+	1+	1+	2-	14	16	15	20	11
22	D4*	1-	1	3-	3-	4+	4	4-	3+	22+	16	0.9	1o	1o	3o	3-	5-	4-	4-	3o	33	37	29	16	50
23		4+	4+	2	1+	1+	1	1+	2	18-	12	0.7	4o	4o	2+	1+	2-	2-	1o	2-	22	22	15	26	12
24		2+	2	1	2-	1-	2-	1	1+	12-	6	0.2	2+	2-	1o	2o	1-	2-	1+	2-	11	11	10	10	11 CC
25	Q8	0	1-	0+	2-	1+	1	1	0+	6+	3	0.1	0o	0+	0o	2o	2-	1+	1o	0+	6	6	8	7	6 CC
26	Q7	1	0+	1	0	0	0+	2-	1+	6-	3	0.1	1-	0+	1o	0o	0o	0+	1+	1+	4	6	4	3	7 CC
27	Q10	1-	0+	0	1	2	2	2-	0+	8	4	0.1	1-	0o	0o	1+	2o	2+	2o	1-	8	9	12	7	13 CC
28		1+	3-	3-	1	0+	1-	1+	3-	13-	7	0.3	2-	2o	3o	1+	0+	0+	1+	3-	13	14	11	15	10 KC
29		1+	0	1-	1-	1+	1	1+	2+	9-	4	0.1	1+	0+	1o	1o	2o	1+	2-	2+	10	10	12	7	16 CC
30	Q6	2-	0+	0+	0	1-	0+	1	0+	5-	3	0.0	1+	0+	0o	0o	0+	0o	1o	0o	3	5	4	4	5 CC
Mean											9	0.41									14.9	17.2	14.2	15.6	

	Kn Three-Hourly Indices									Ks Three-Hourly Indices											Prov			
Day	1	2	3	4	5	6	7	8	An	1	2	3	4	5	6	7	8	As	Sa	Ri	Ra	Rs	IMF
1	2+	1+	2-	2-	2-	2o	2-	2+	13	2+	2-	1+	1+	2-	2-	2-	2o	12	91.5	8	12	37	
2	2o	2+	2o	2o	1o	1o	1+	1+	12	3o	1+	2-	2-	0+	1+	0+	1-	10	95.6	8	12	41	
3	1+	1-	0+	0+	1-	1o	1-	0+	5	2o	1+	0+	0o	0o	0+	0+	0o	4	98.3	18	21	44	
4	0+	0o	1-	1o	1-	0+	0+	1+	4	1-	0+	1-	1o	0+	0o	0o	1o	3	100.9	20	26	47	
5	1-	1-	2-	2-	2+	3o	3o	1o	15	1+	0+	2-	2o	2o	3-	3-	1+	13	104.8	37	39	51	
6	2+	1+	3-	3o	3-	4o	2o	3o	26	2o	2-	3-	3+	3-	3o	2+	3o	24	108.2	32	40	55	
7	3-	3o	3+	3+	3-	2o	2o	1+	23	2+	3-	3o	3-	2o	2-	2+	1o	19	120.7	38	51	68	
8	2+	2+	3-	2-	3-	1-	0+	0+	14	2+	2-	2+	2-	2-	1-	0o	0o	10	126.3	47	52	74	
9	0o	1+	1-	1o	1o	0+	1o	2o	7	0o	1+	0o	0+	1o	0o	1-	2+	6	132.8	51	60	81	
10	0o	1-	0+	2-	0+	0o	0o	0+	3	0+	1o	0+	1+	0o	0o	0o	0o	3	131.8	44	55	80	
11	0o	0o	0o	0o	1o	1o	1-	1o	3	0o	0o	0o	0o	0+	1o	1-	1o	3	117.9	42	47	65	
12	1-	1-	0o	0o	1-	1+	0o	0+	4	1+	1o	0o	0o	1-	1-	0o	0o	3	116.0	43	49	63	
13	0o	0o	0o	0o	0o	0o	4o	4-	13	0o	0o	0o	0o	0o	0o	3o	4-	10	119.1	39	49	67	
14	3o	4-	4o	4o	4o	4+	5-	4o	55	3o	3+	4o	4-	3+	3+	5-	4o	46	116.0	32	43	63	
15	4o	3-	2o	2+	3+	3o	2o	2o	26	4o	3-	1+	2+	3o	3o	2o	2+	26	110.8	39	46	58	
16	3o	2+	3+	3+	4-	3+	3+	4-	37	3o	2+	3o	3o	3+	3-	3+	4o	33	109.4	38	43	56	
17	4o	4-	3o	3o	3+	3-	2+	4-	36	4-	3o	3-	2+	3-	2+	2+	4o	29	105.5	36	44	52	
18	4o	4-	2-	3o	2+	0+	0+	0+	22	4o	3+	2-	3-	2o	0o	0+	0o	18	103.6	33	39	50	
19	1-	0o	1o	1-	1o	1+	1+	3+	10	1o	0o	1o	1o	1-	1o	1+	3-	8	106.1	34	34	53	
20	3-	1-	4o	3-	3o	2+	0+	2-	21	3-	1+	4-	3+	3-	1+	0o	1+	19	101.3	27	31	47	
21	2+	3o	2+	2-	1+	2-	1+	2o	15	3-	3-	2+	2o	1+	1o	1+	1+	14	95.6	24	26	41	
22	1o	1o	3o	3-	5o	4-	3+	3o	34	1o	1o	3o	3-	4o	4-	4+	3+	32	92.0	17	19	37	
23	4o	4o	2o	1+	2-	2-	1o	2-	22	4o	4o	2+	1o	2-	1+	1+	2o	23	90.8	10	15	36	
24	2o	2-	1o	2o	1-	2o	1o	2-	11	2+	1+	1-	2o	1-	2-	1+	2-	10	89.9	10	11	35	
25	0o	0+	0o	2-	2o	1+	1o	1-	7	0+	0+	0o	2o	2-	1o	1-	0o	5	89.9	10	15	35	
26	1o	0+	1o	0o	0o	1-	1+	1+	5	1-	1-	1-	0o	0o	0o	1+	1+	4	89.9	15	17	35	
27	0+	0+	0o	1+	2+	2+	2+	1-	9	1o	0o	0o	2-	2-	2o	2o	0+	8	90.2	15	16	35	
28	2-	2o	3o	1+	1-	1o	1+	3-	14	2-	2o	3o	1+	0o	0o	1o	2+	12	90.2	8	12	35	
29	1o	0+	1o	1o	2o	1+	2-	2o	10	1+	1-	1o	1o	2-	1+	2-	3-	10	90.0	25	28	35	
30	1+	0+	0+	0+	0+	0o	1+	0+	4	1+	0o	0o	0o	0o	0o	1-	0o	2	88.4	31	32	33	
Mean									16.0									14.0	104.1	27.7	32.8	50.4	

Daily Average Indices Ap
Oct 2003 - Sep 2004

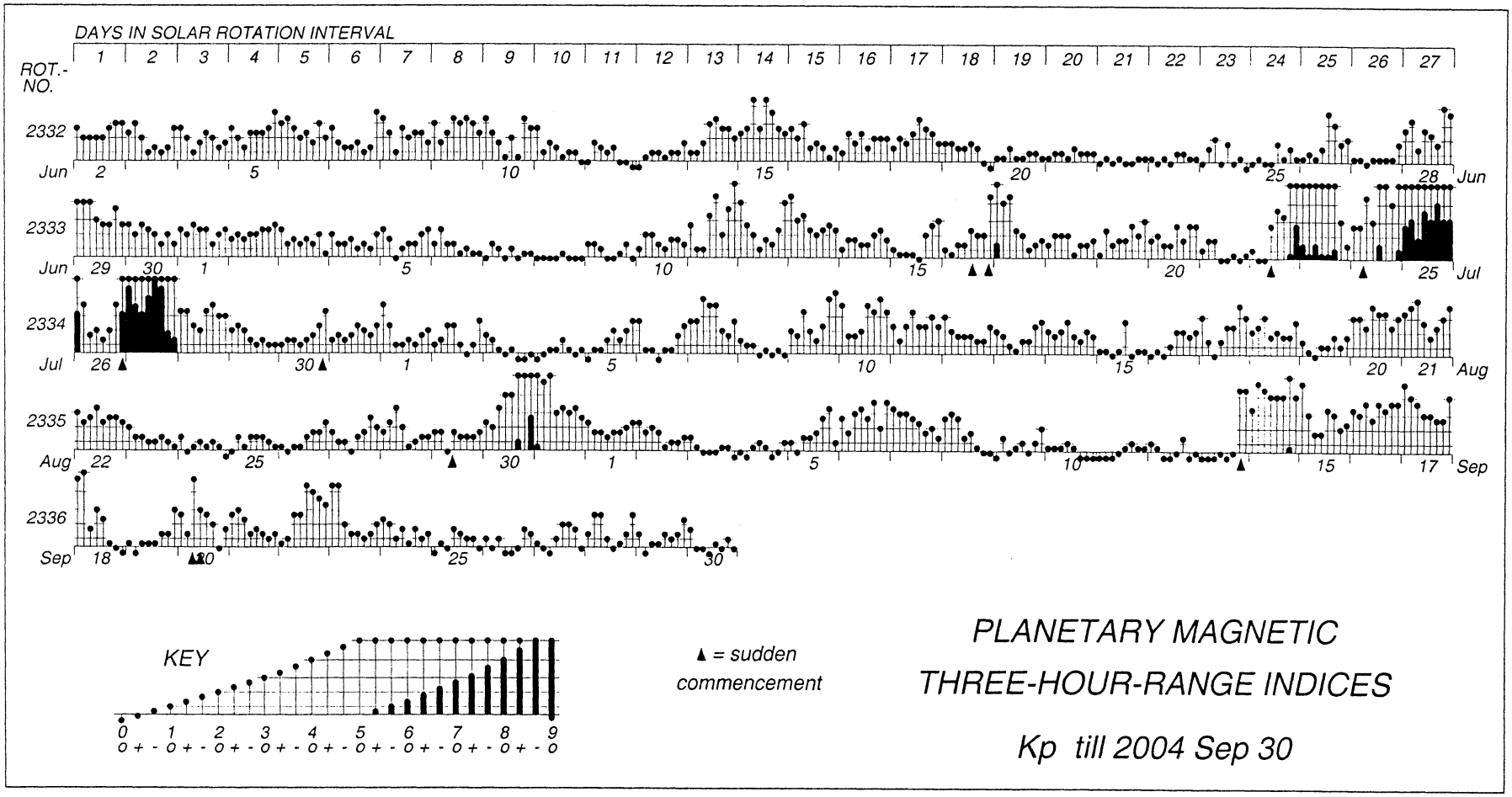


Day	Oct 03	Nov	Dec	Jan 04	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1	10	26	10	24	10	21	4	9	16	8	8	7
2	8	18	7	15	18	21	3	6	10	8	6	6
3	17	13	4	22	20	13	41	6	8	6	3	2
4	5	38	6	22	15	6	18	7	7	5	3	2
5	5	6	39	25	12	5	24	14	11	6	5	7
6	9	17	23	24	21	3	25	8	11	5	5	14
7	15	8	14	29	7	3	12	16	8	3	15	11
8	6	8	35	7	4	3	14	8	9	2	3	7
9	7	29	29	23	7	28	16	5	13	4	14	3
10	2	27	41	26	6	45	11	6	10	6	16	2
11	2	61	40	19	28	40	10	12	5	18	10	2
12	4	30	25	9	30	28	10	12	3	12	7	2
13	16	52	26	20	25	14	6	12	4	14	6	8
14	66	38	27	12	20	16	4	5	10	6	7	32
15	44	40	25	18	24	15	7	7	18	6	4	14
16	29	41	10	29	7	10	13	4	7	9	5	19
17	32	39	7	18	4	6	8	4	7	21	10	21
18	25	26	3	18	8	10	8	4	9	6	8	15
19	37	12	1	18	8	7	6	9	4	8	4	5
20	36	150	16	18	4	12	4	13	4	8	15	12
21	49	42	24	14	7	11	7	7	4	4	16	8
22	34	30	18	64	8	13	4	8	2	31	12	16
23	6	22	7	43	9	7	19	11	3	52	5	12
24	38	13	6	18	11	3	10	10	3	37	3	6
25	16	14	5	38	6	4	11	4	3	154	4	3
26	10	8	8	18	3	17	5	3	8	47	5	3
27	11	6	11	17	12	22	4	4	3	186	6	4
28	25	5	13	23	19	21	9	7	14	15	7	7
29	204	6	5	9	24	10	4	15	19	6	5	4
30	191	12	6	19		14	16	12	8	7	42	3
31	116		19	10		9		12		7	28	
Mean	35	28	16	22	13	14	11	8	8	23	9	9

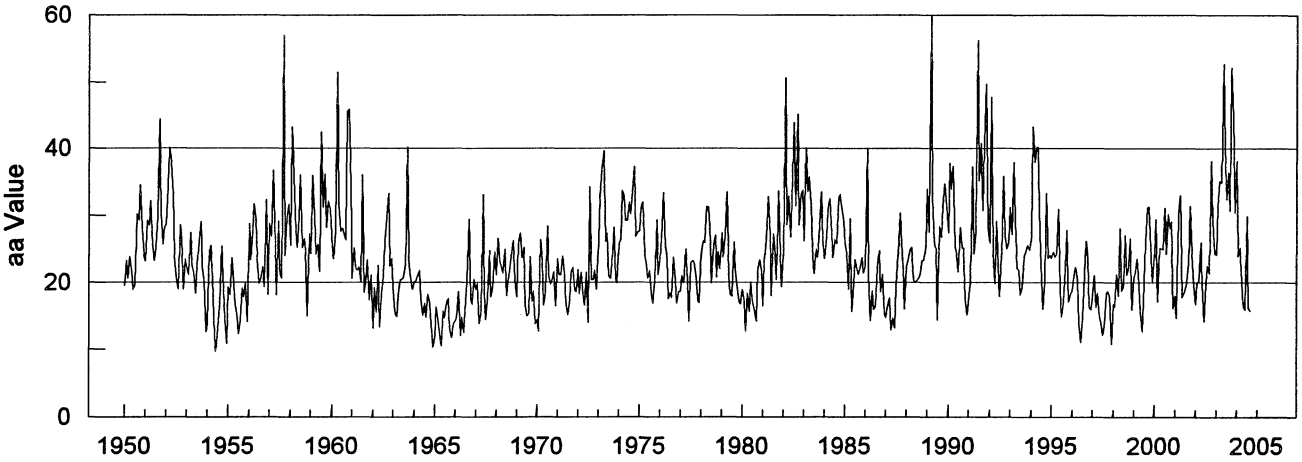
PLANETARY 3-HOUR-RANGE INDICES (Kp) BY 27-DAY SOLAR ROTATION INTERVAL

GeoForschungsZentraum Potsdam

Kp through September 30, 2004



Monthly Mean aa Index Jan 1950 - Sep 2004



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				22.4

PLANETARY GEOMAGNETIC ACTIVITY

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

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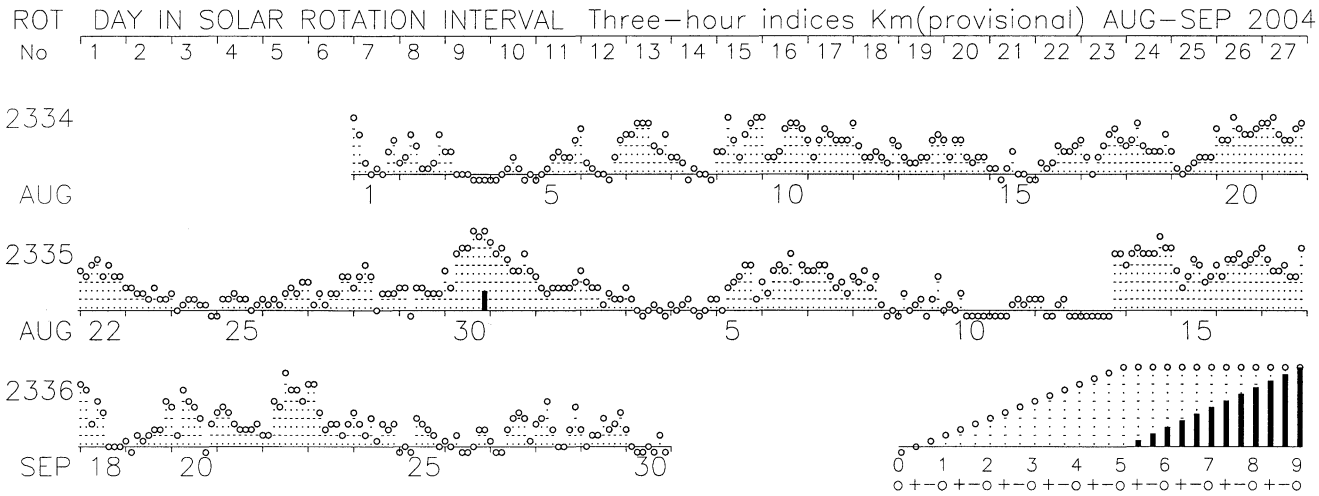
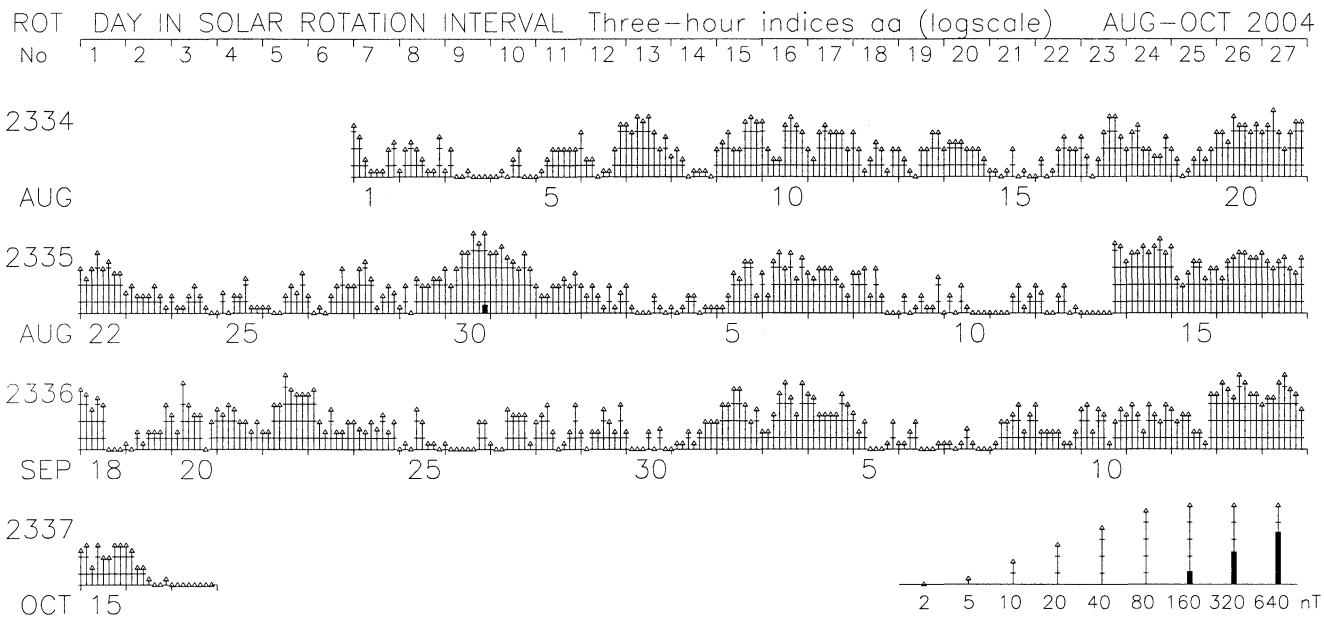
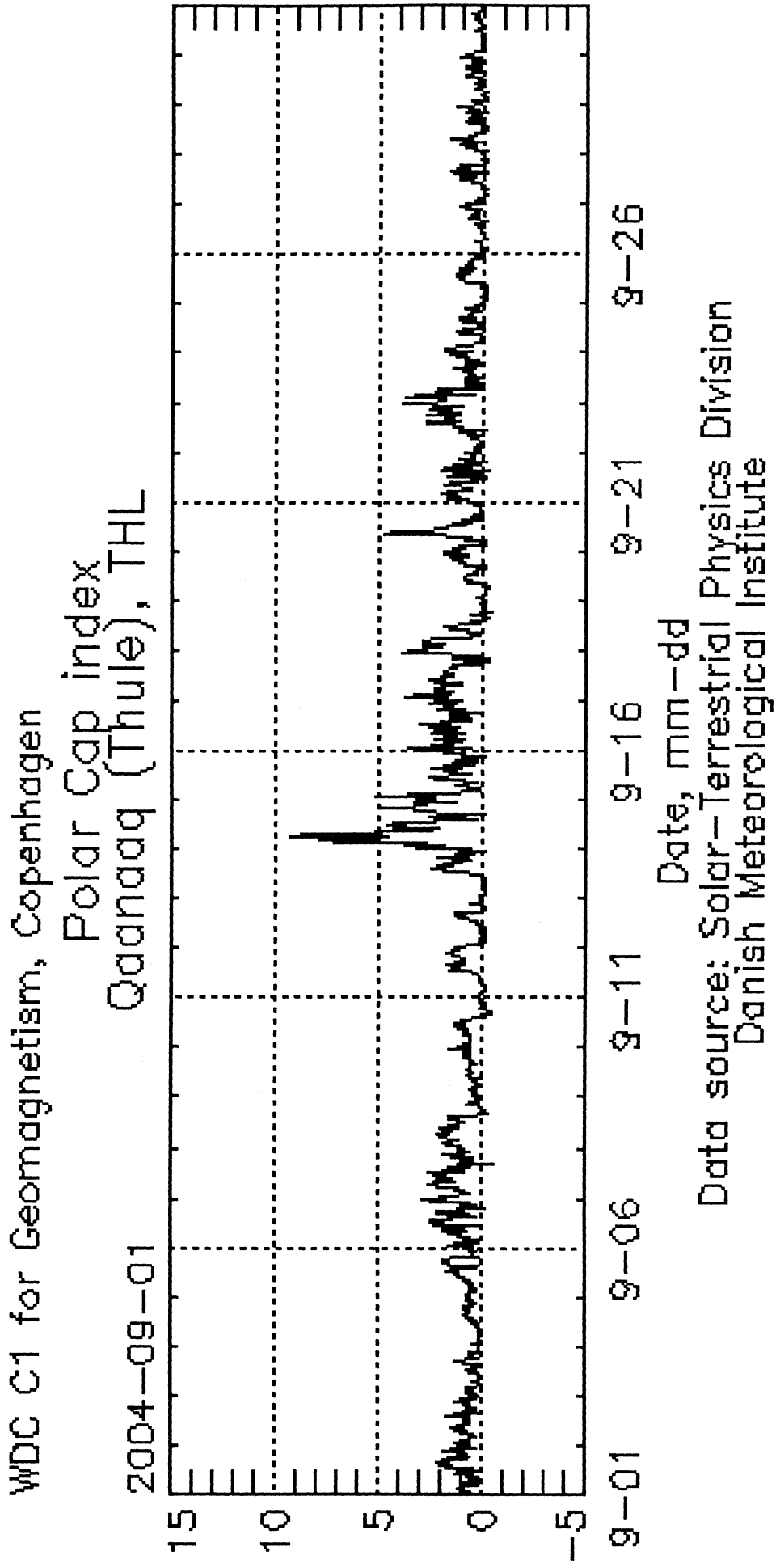


Indices Derivation at C.E.T.P.; Graph Prepared at ISGI Publication Office.



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


WDC C1 for Geomagnetism, Copenhagen
Polar Cap index
Qaanaaq (Thule), THL
2004-09-01
15
10
5
0
-5
9-01
9-06
9-11
9-16
9-21
9-26
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

SEPTEMBER 2004

Sta	Geomag Lat	Commencement Time Day	(UT)	Type	SC Amplitudes D (Min)	H (Gamma)	Z (Gamma)	Maximum 3-Hour K Index Day(3-Hour Periods)	Ranges K	D (Min)	H (Gamma)	Z (Gamma)	End Day	Hour (UT)
HYB	07.6N	05	0600	..	..	..	..	05(6) 06(6)	4	6	117	36	07	22
JAI	17.4N	13	2000	SC	- 1.3	47	- 10		-	7	110	36	15	18
KRC	16.4N	13	2000	SC	- 30	60	30	13(7) 14(1,2,3,4,5,7)	5	5	115	55	15	02
NGP	11.3N	13	2000	SC	- 0.2	48	- 6		-	6	109	26	15	18
ABG	09.4N	13	2000	SC	- 0.6	40	- 6	13(7) 14(2,4,7) 17(1) 18(1) 20(3)	5	6	98	44	15	18
HYB	07.6N	13	2002	SC	- 0.5	43	- 4	13(7) 14(4,7)	5	5	102	22	15	02
PND	02.0N	13	2000	SC	- 0.2	40	36		-	5	106	82	15	18
TIR	00.6S	13	2000	SC	- 0.3	32	45		-	5	138	86	15	18
HYB	07.6N	15	0500	..	..	..	..	16(7) 18(1)	4	5	70	37	18	23
JAI	17.4N	22	0630	SC	- 0.9	25	- 5		-	6	68	36	23	19
NGP	11.3N	22	0630	SC	- 0.5	29	- 4		-	7	87	40	23	19
ABG	09.4N	22	0630	SC	- 0.4	19	- 8	22(3,5,6) 23(1)	4	6	90	55	23	19
HYB	07.6N	22	0635	SC	- 0.6	23	- 4	22(3,5,6) 23(1)	4	5	101	30	23	23
PND	02.0N	22	0630	SC	- 0.2	29	30		-	4	117	46	23	19
TIR	00.6S	22	0630	SC	- 0.9	47	49		-	4	186	47	23	19

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

Stations reporting no storms observed: CAN GNA

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

September 2004

Storm Sudden Commencements (SSC)			Solar Flare Effects (sfe)		
Day	Time	Quality: Station Group*	Day	Begin-End	Station(s)
13	2003	A: NUR LER* ESK* VAL HAD* CLF* HRB NAG* SPT* GUI GNA CNB	06	1108-1130	GUI
			12	0136-0145	MMB+ KAK+ KNY+ GNA CNB
		B: NGK* BDV* EBR			
		C: GCK*			
		-: COI			
22	0633	B: SOD* NUR LER* ESK* HAD* GUI CNB			
		C: NGK* BDV* CLF* GCK* EBR* SPT			
		-: COI			

REPORTING OBSERVATORIES (up to the 3rd of November 2004):
SOD NUR LER ESK NGK VAL HAD BDV CLF HRB NAG GCK MMB EBR COI SPT KAK HTY KNY GUI GNA CNB

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

Note that we have included data of the Antartic Station LIVINGSTONE (62º 39' 44" S, 60º23' 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.