

OCTOBER 2008 NUMBER 770 - Part I

# Solar-Geophysical Data prompt reports



Data for September and August 2008

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

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

NATIONAL GEOPHYSICAL  
DATA CENTER

BOULDER,  
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OCTOBER 2008 NUMBER 770 - Part I

# **Solar-Geophysical Data prompt reports**

Data for September and August 2008

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## **NATIONAL GEOPHYSICAL DATA CENTER**

Christopher G. Fox, Director

Boulder, Colorado

# SOLAR-GEOPHYSICAL DATA

Number 770

(Issued in Two Parts)

Editor: Edward H. Erwin

Division Chief: William F. Denig  
Solar-Terrestrial Physics Division

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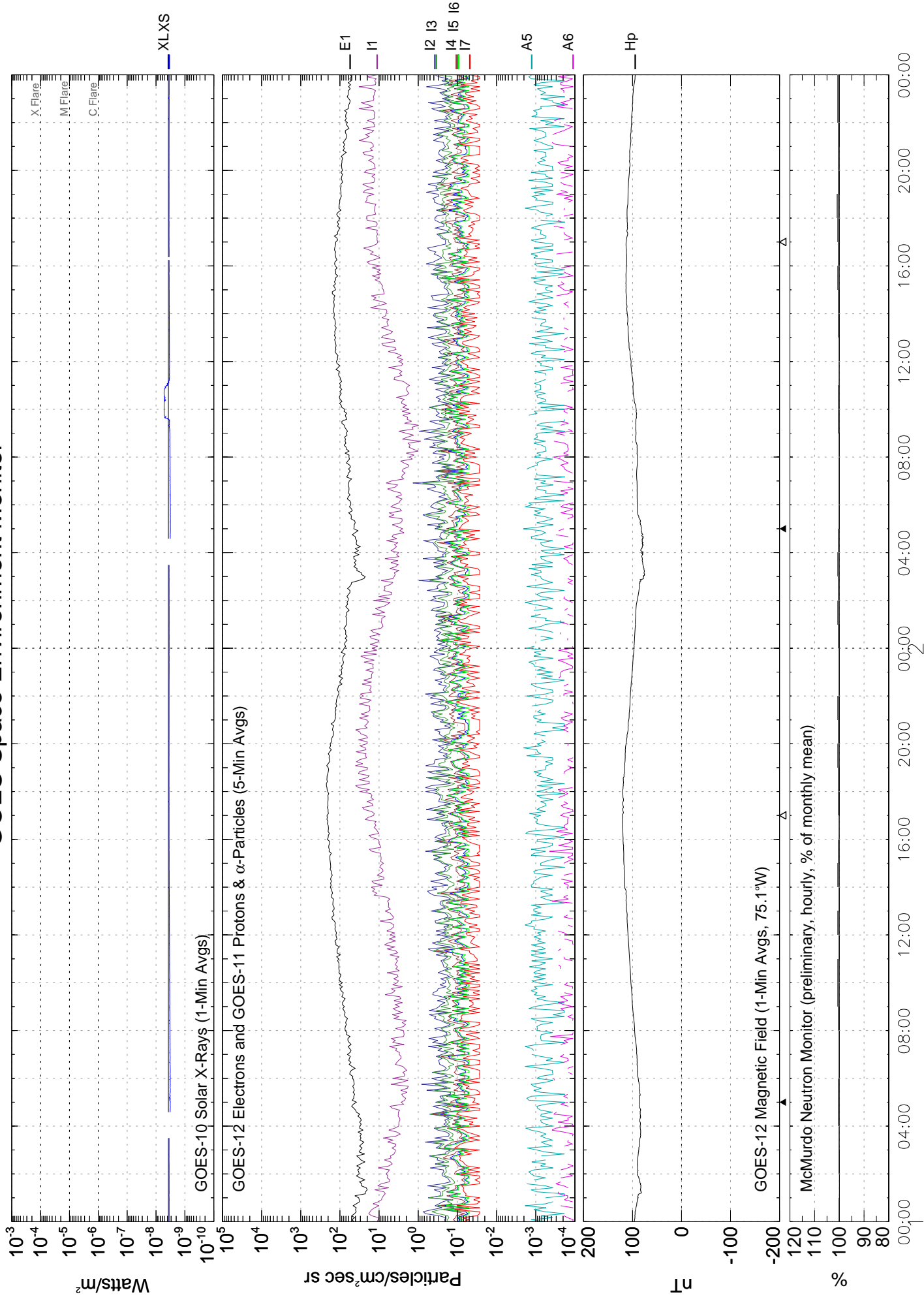
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Number 770 Part I

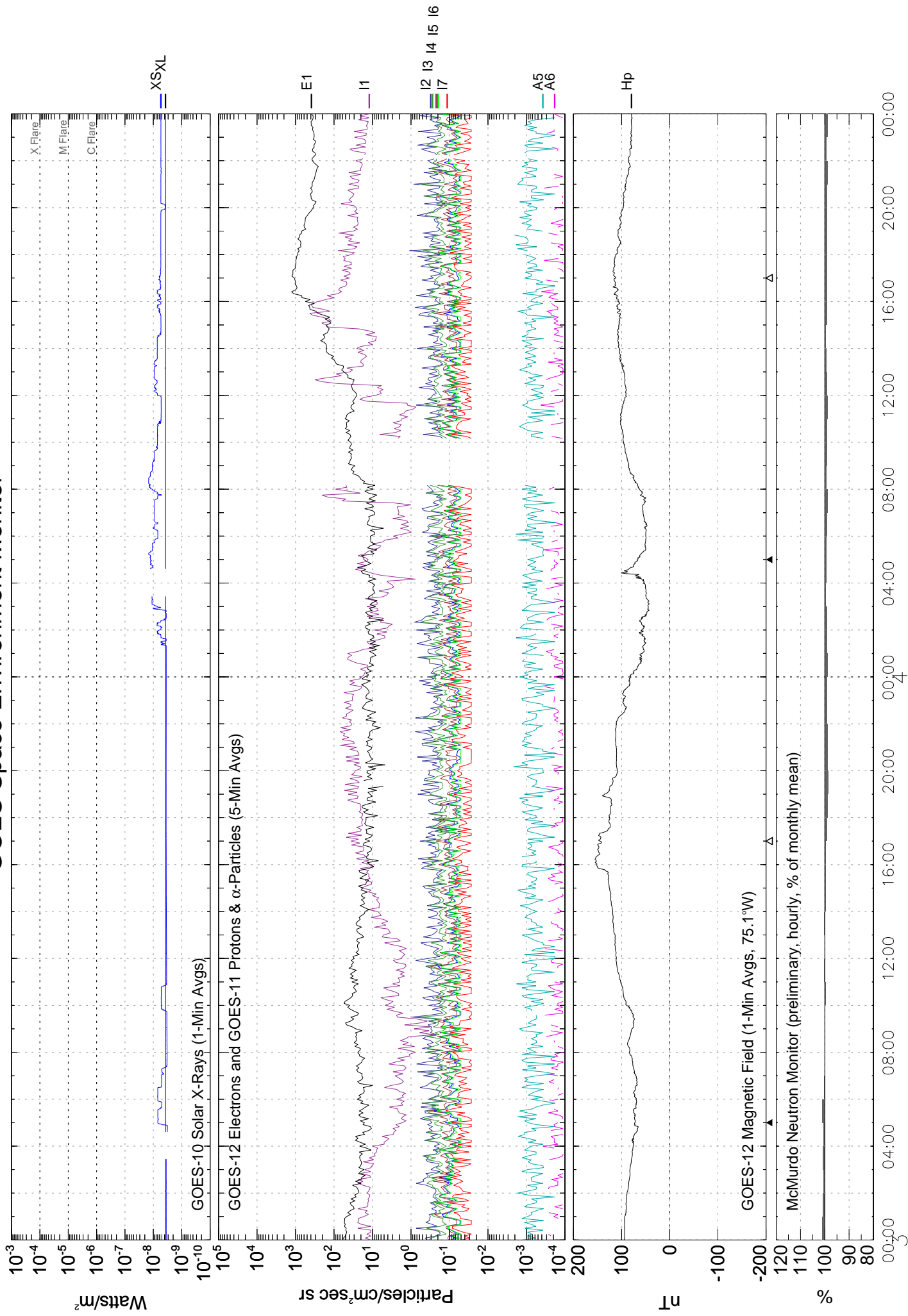
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# GOES Space Environment Monitor

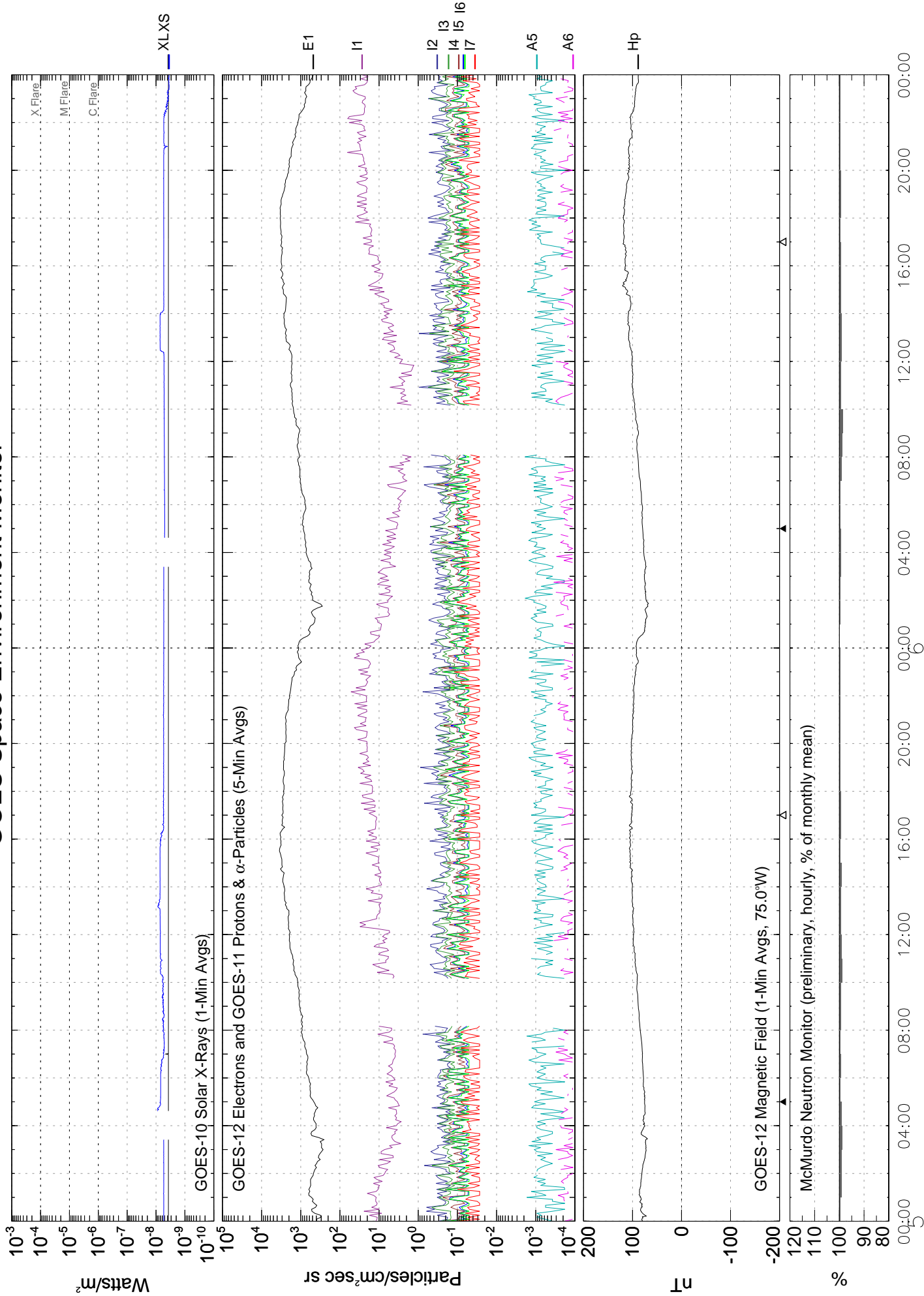


# GOES Space Environment Monitor



September 2008 (Universal Time)

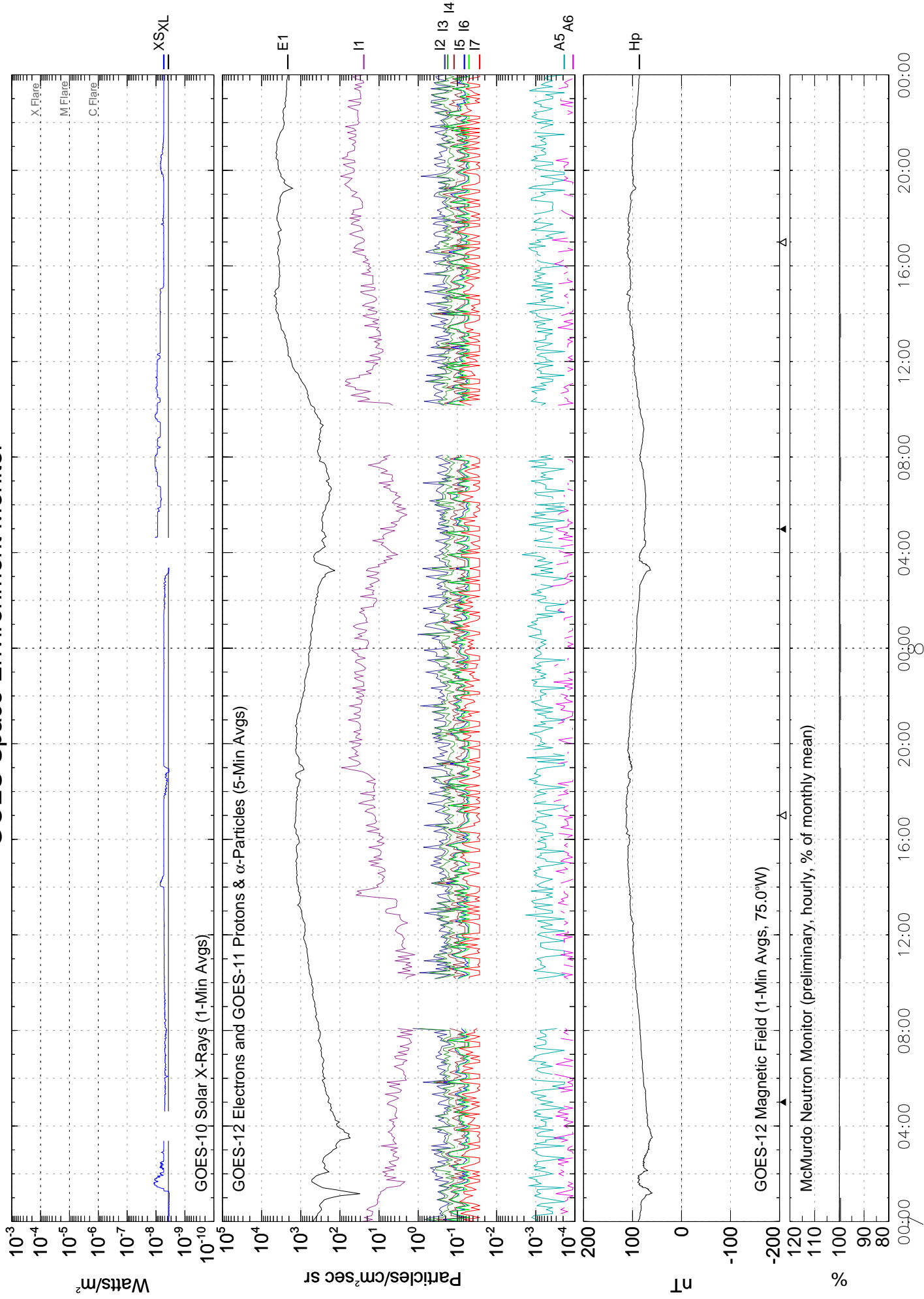
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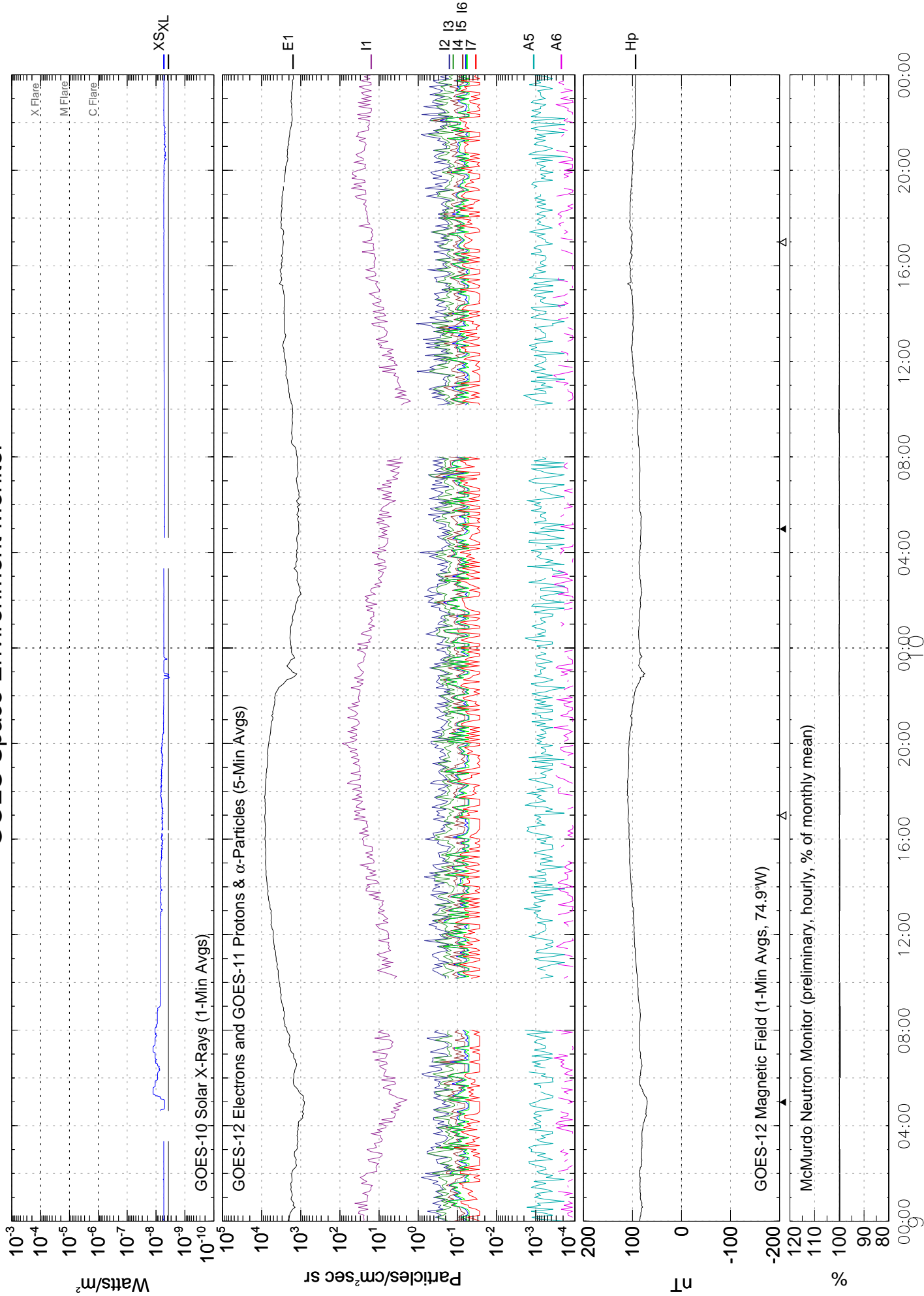


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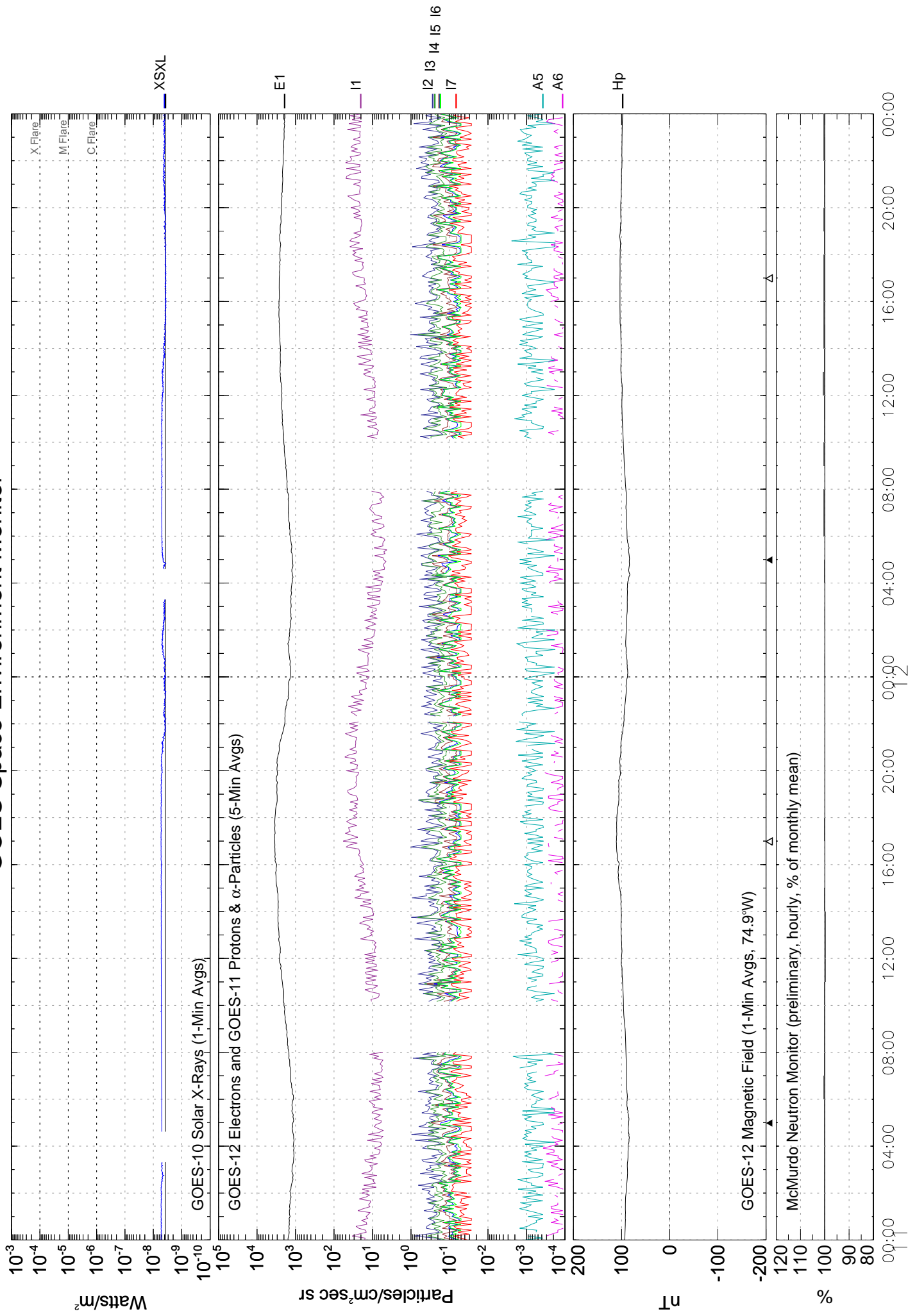
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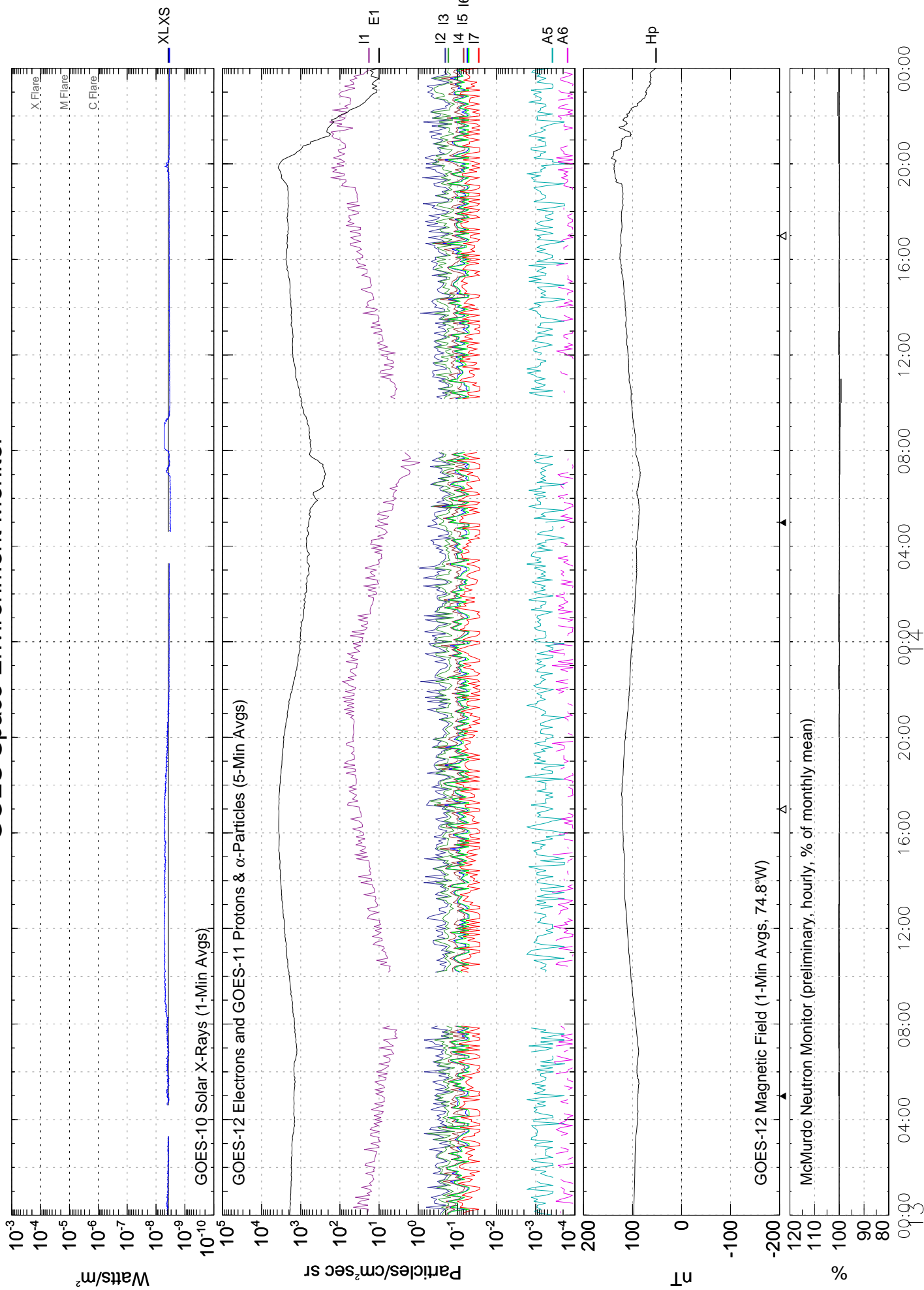
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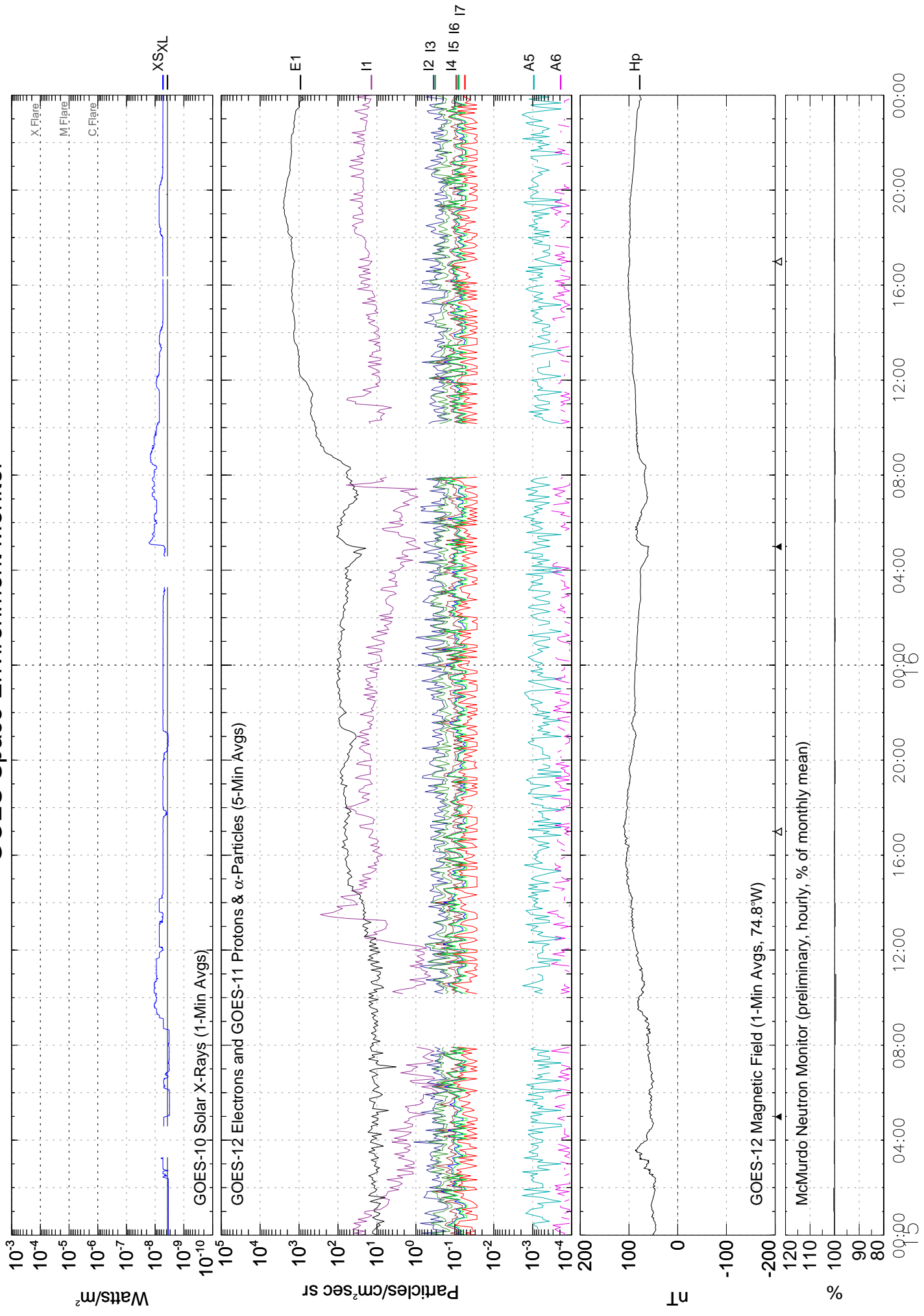
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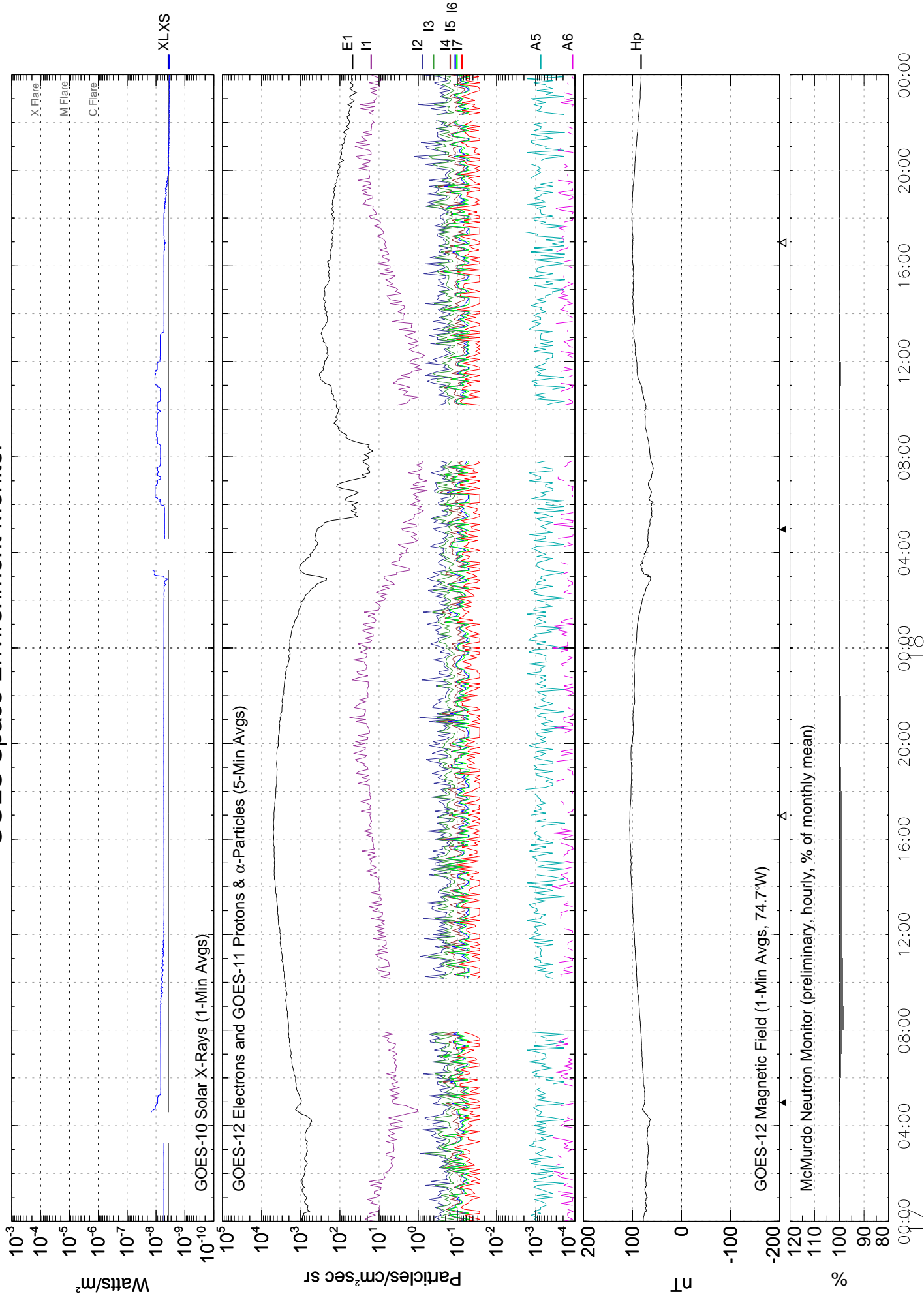
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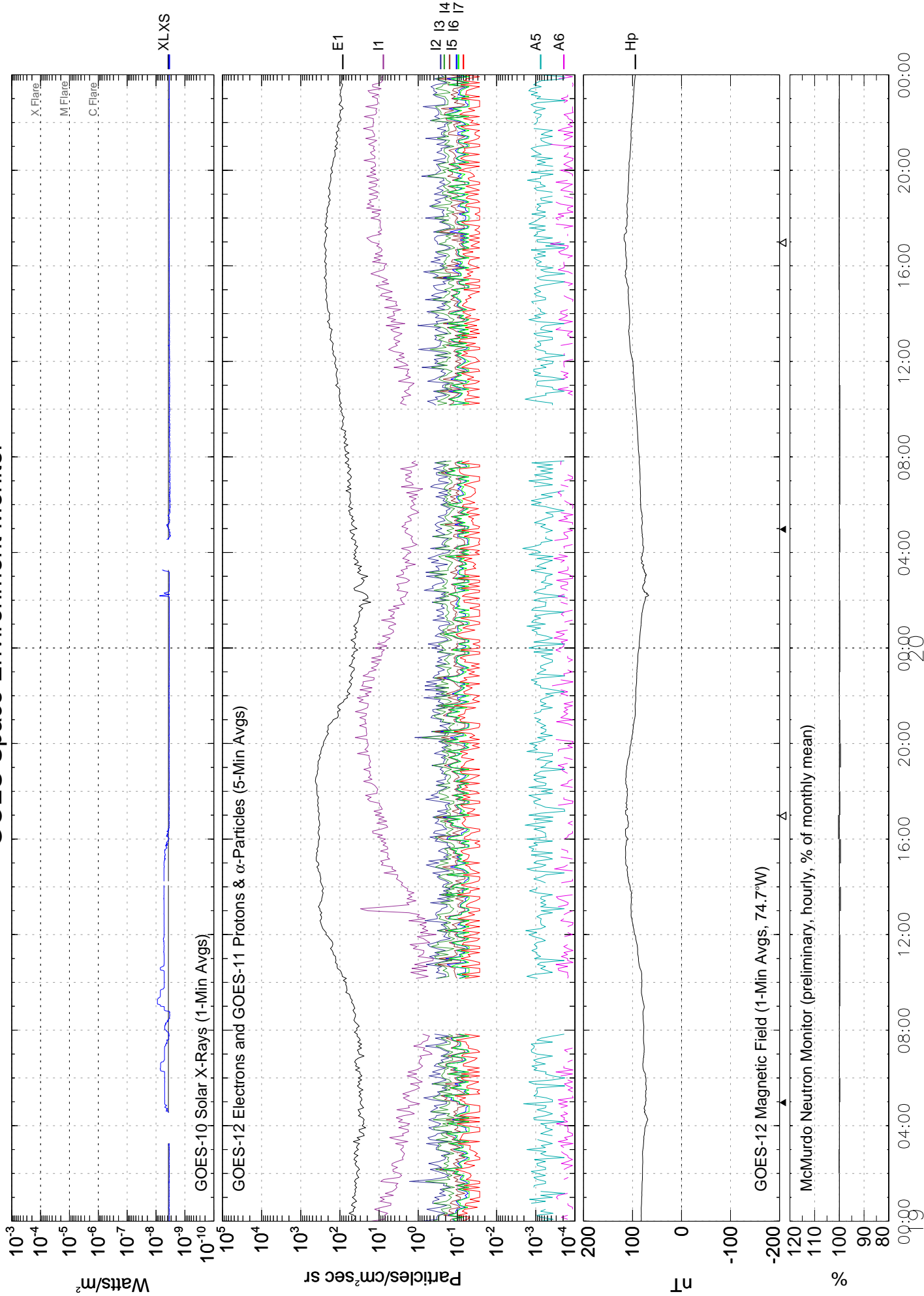


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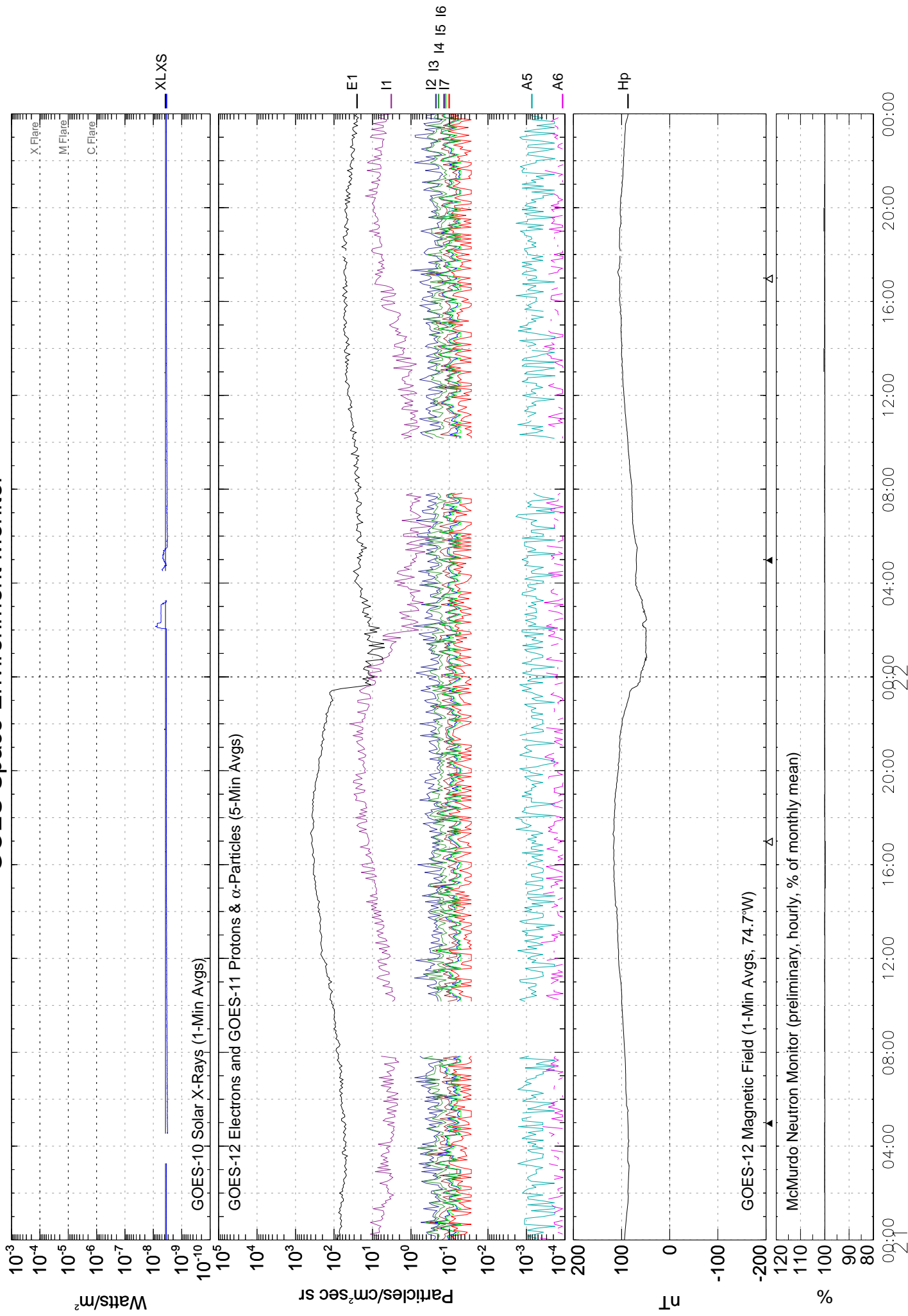


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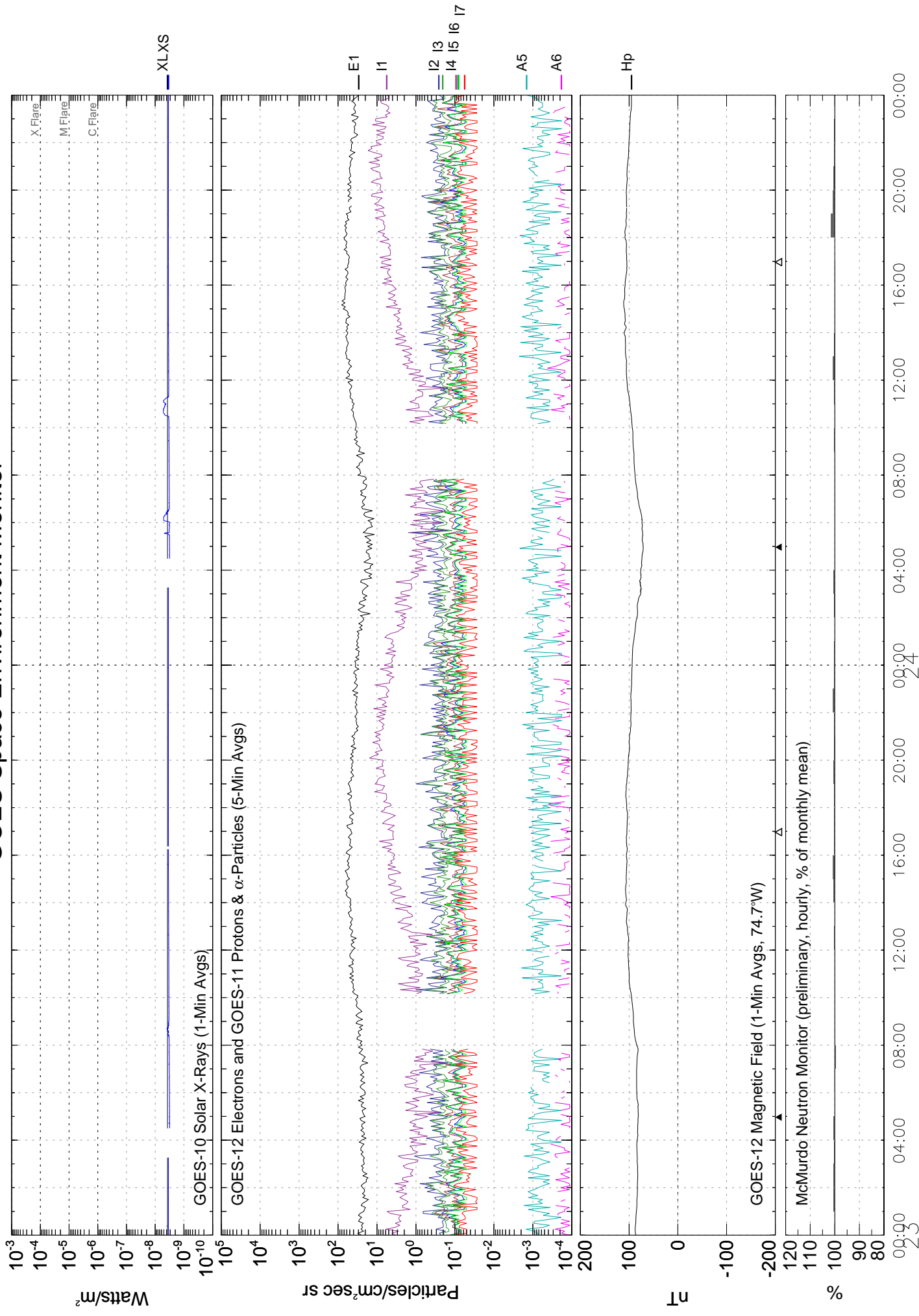
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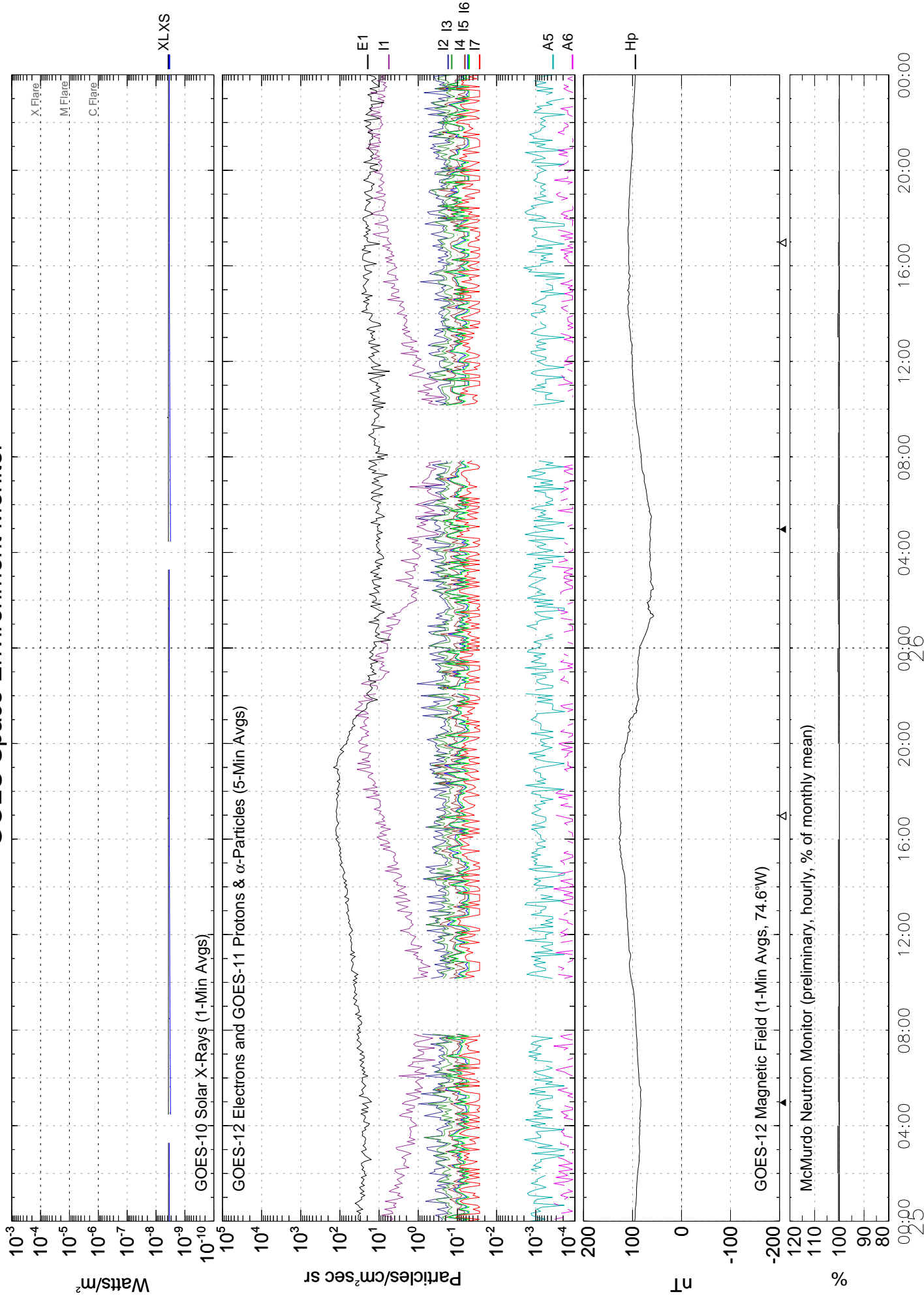


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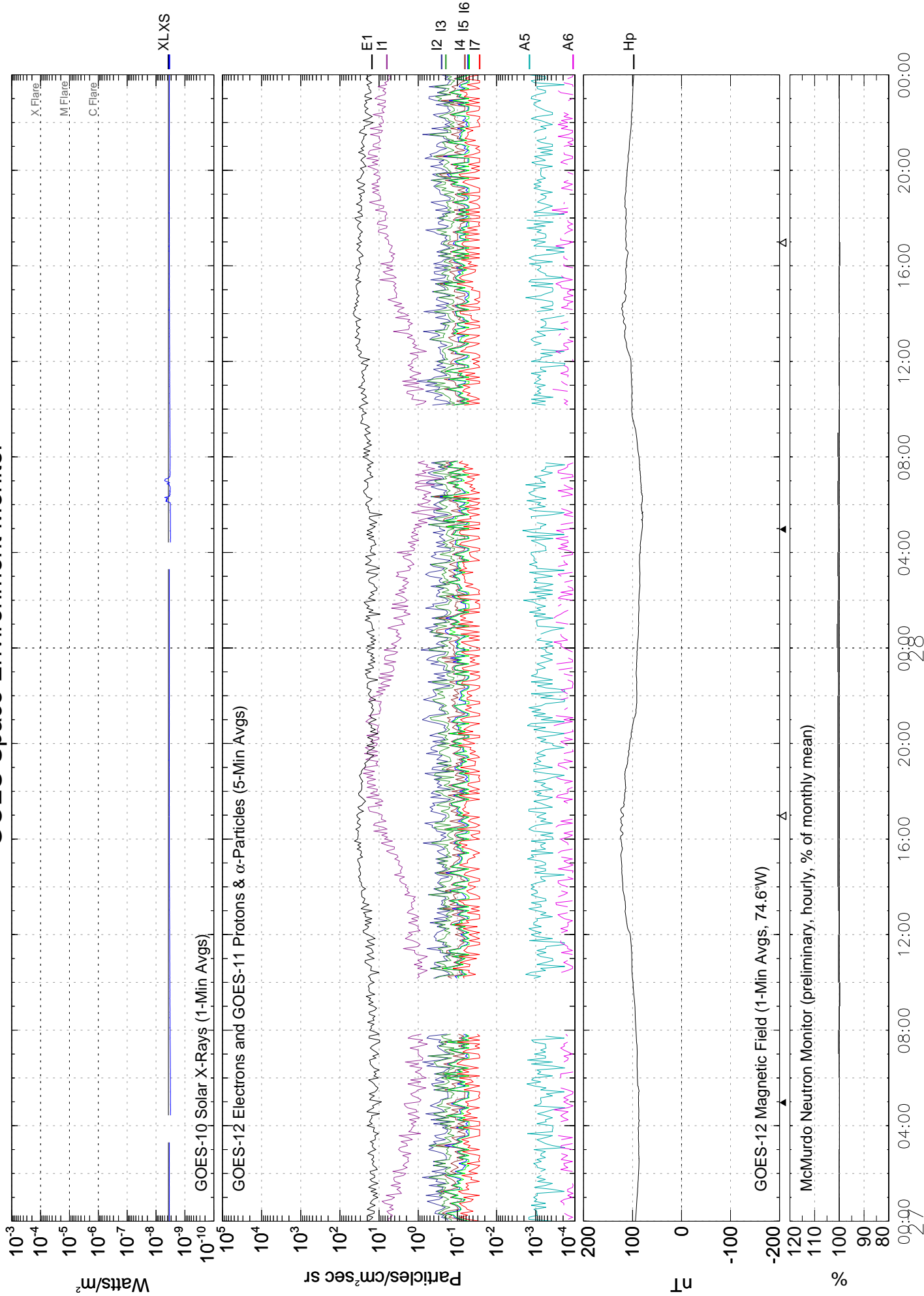
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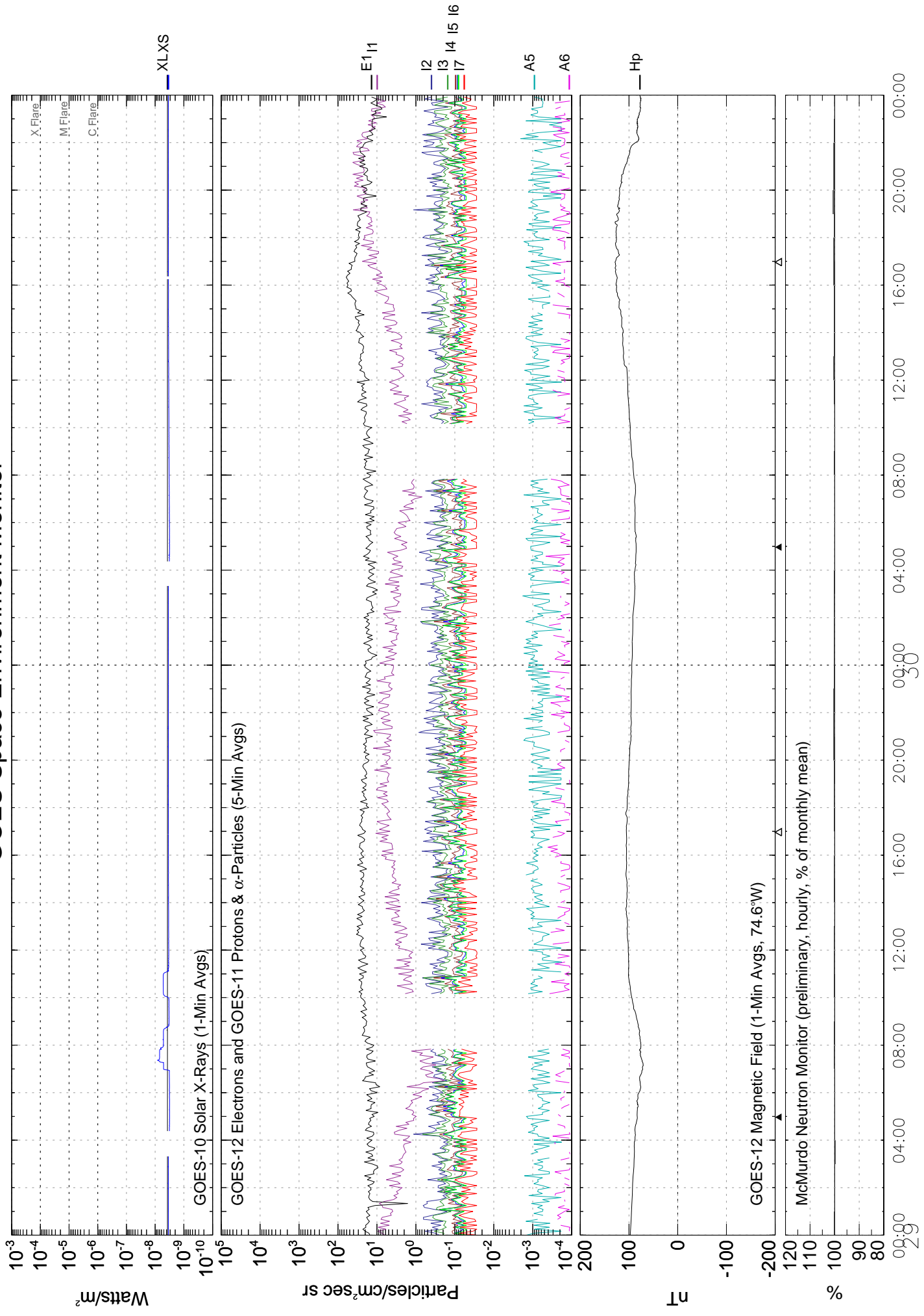
September 2008 (Universal Time)

# GOES Space Environment Monitor



September 2008 (Universal Time)

# GOES Space Environment Monitor



September 2008 (Universal Time)

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

SEPTEMBER      2008

Julian Day	Date of Issue	Date of Obs	Wolf No.	10-cm Solar Flux	A-index	Rgn No.	Location		Flares			Date of Fcst	Region Fcst (1)	Geoadvice (1)
							Lat	Lon	Opt	M	X			
245	01	31	0	67	2				0	0	0	01		SOL: Quiet
									0	0	0	01		MAG: Quiet
									0	0	0	01		PRO: Quiet
246	02	01	0	66	3				0	0	0	02		SOL: Quiet
									0	0	0	02		MAG: Quiet
									0	0	0	02		PRO: Quiet
247	03	02	0	66	2				0	0	0	03		SOL: Quiet
									0	0	0	03		MAG: Quiet
									0	0	0	03		PRO: Quiet
248	04	03	0	66	7				0	0	0	04		SOL: Quiet
									0	0	0	04		MAG: Quiet
									0	0	0	04		PRO: Quiet
249	05	04	0	66	29				0	0	0	05		SOL: Quiet
									0	0	0	05		MAG: Active
									0	0	0	05		PRO: Quiet
250	06	05	0	65	6				0	0	0	06		SOL: Quiet
									0	0	0	06		MAG: Active
									0	0	0	06		PRO: Quiet
251	07	06	0	66	9				0	0	0	07		SOL: Quiet
									0	0	0	07		MAG: Quiet
									0	0	0	07		PRO: Quiet
252	08	07	0	67	6				0	0	0	08		SOL: Quiet
									0	0	0	08		MAG: Quiet
									0	0	0	08		PRO: Quiet
253	09	08	0	67	12				0	0	0	09		SOL: Quiet
									0	0	0	09		MAG: Quiet
									0	0	0	09		PRO: Quiet
254	10	09	0	67	6				0	0	0	10		SOL: Quiet
									0	0	0	10		MAG: Quiet
									0	0	0	10		PRO: Quiet
255	11	10	0	67	4				0	0	0	11		SOL: Quiet
									0	0	0	11		MAG: Quiet
									0	0	0	11		PRO: Quiet
256	12	11	12	67	3	11001	N06	E14	0	0	0	12	Q	SOL: Quiet
									0	0	0	12		MAG: Quiet
									0	0	0	12		PRO: Quiet
257	13	12	0	66	1				0	0	0	13		SOL: Quiet
									0	0	0	13		MAG: Quiet
									0	0	0	13		PRO: Quiet
258	14	13	0	66	0				0	0	0	14		SOL: Quiet
									0	0	0	14		MAG: Quiet
									0	0	0	14		PRO: Quiet
259	15	14	0	67	5				0	0	0	15		SOL: Quiet
									0	0	0	15		MAG: Active
									0	0	0	15		PRO: Quiet
260	16	15	0	68	16				0	0	0	16		SOL: Quiet
									0	0	0	16		MAG: Quiet
									0	0	0	16		PRO: Quiet
261	17	16	0	69	10				0	0	0	17		SOL: Quiet
									0	0	0	17		MAG: Quiet
									0	0	0	17		PRO: Quiet

20  
Sep 08

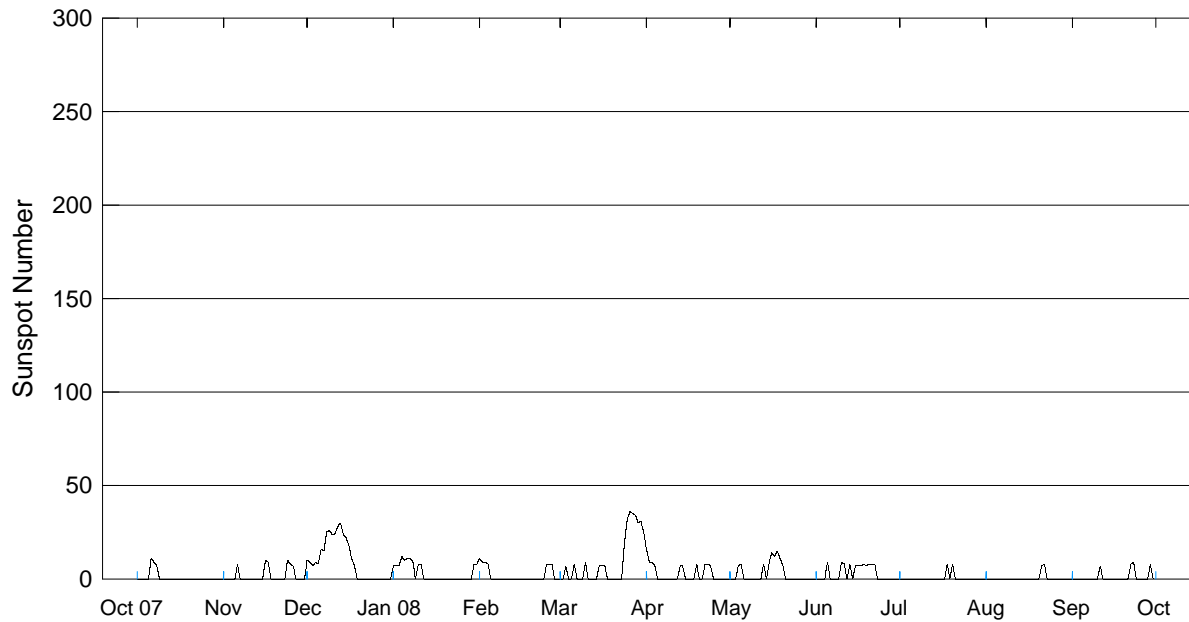
A L E R T P E R I O D S  
The International Space Environment Service

SEPTEMBER      2008

Julian Day	Date of Issue	Date of Obs	Wolf No.	10-cm Solar Flux	A-index	Rgn No.	Location		Flares			Date of Fcst	Region Fcst (1)	Geoadvice (1)
							Lat	Lon	Opt	M	X			
262	18	17	0	67	4				0	0	0	18		SOL: Quiet MAG: Quiet PRO: Quiet
									0	0	0	18		
									0	0	0	18		
263	19	18	0	67	9				0	0	0	19		SOL: Quiet MAG: Quiet PRO: Quiet
									0	0	0	19		
									0	0	0	19		
264	20	19	0	68	5				0	0	0	20		SOL: Quiet MAG: Quiet PRO: Quiet
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									0	0	0	20		
265	21	20	0	68	3				0	0	0	21		SOL: Quiet MAG: Quiet PRO: Quiet
									0	0	0	21		
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266	22	21	0	68	2				0	0	0	22		SOL: Quiet MAG: Quiet PRO: Quiet
									0	0	0	22		
									0	0	0	22		
267	23	22	18	69	5	11002	N25	W27	0	0	0	23	Q	SOL: Quiet MAG: Quiet PRO: Quiet
									0	0	0	23		
									0	0	0	23		
268	24	23	16	69	3	11002	N26	W40	0	0	0	24	Q	SOL: Quiet MAG: Quiet PRO: Quiet
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269	25	24	0	68	4				0	0	0	25		SOL: Quiet MAG: Quiet PRO: Quiet
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270	26	25	0	68	3				0	0	0	26		SOL: Quiet MAG: Quiet PRO: Quiet
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272	28	27	0	67	2				0	0	0	28		SOL: Quiet MAG: Quiet PRO: Quiet
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									0	0	0	28		
273	29	28	0	67	3				0	0	0	29		SOL: Quiet MAG: Quiet PRO: Quiet
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									0	0	0	29		
274	30	29	0	67	3				0	0	0	30		SOL: Quiet MAG: Quiet PRO: Quiet
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									0	0	0	30		

# International Relative Sunspot Numbers Oct 2007 - Sep 2008

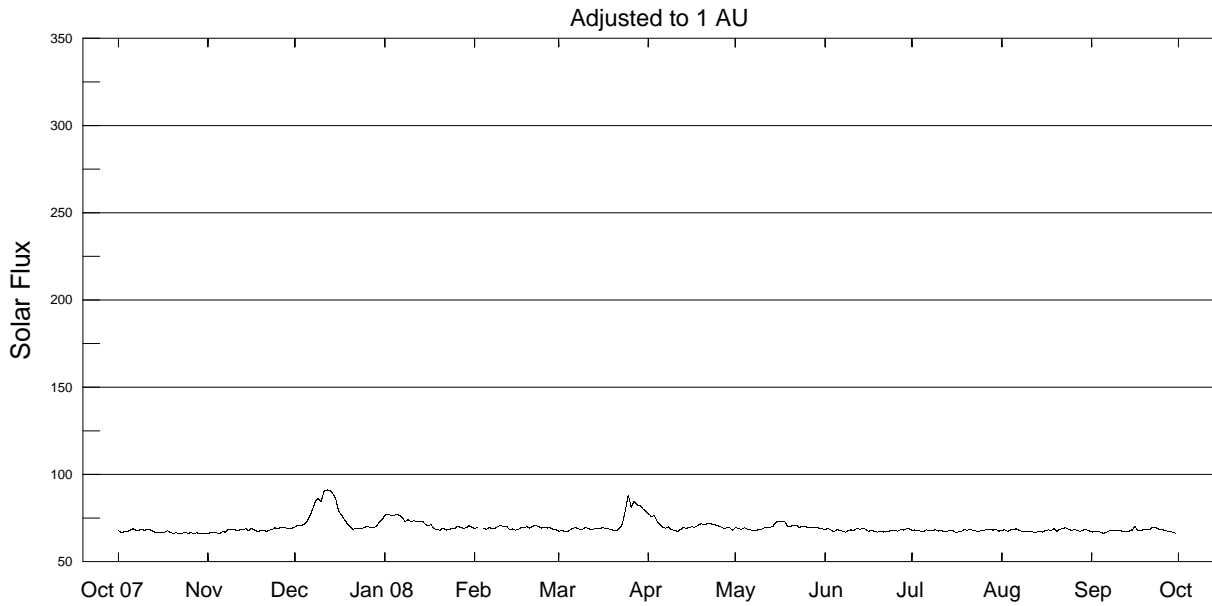
21  
Sep 08



Day	Oct 07	Nov	Dec	Jan 08	Feb	Mar	Apr*	May*	Jun*	Jul*	Aug*	Sep*
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2	0	0	9	7	9	0	9	0	0	0	0	0
3	0	0	7	7	9	7	9	0	0	0	0	0
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9	0	0	26	0	0	0	0	0	0	0	0	0
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11	0	0	24	8	0	0	0	0	8	0	0	7
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27	0	0	0	0	8	35	0	0	0	0	0	0
28	0	0	0	0	0	34	0	0	0	0	0	0
29	0	0	0	0	0	30	0	0	0	0	0	8
30	0	0	0	8		31	0	0	0	0	0	0
31	0		0	8		25		0		0		
Mean	0.9	1.7	10.1	3.3	2.1	9.3	2.9	2.9	3.1	0.5	0.5	1.1

\* = Provisional.

## Penticton 2800 MHz (10.7cm) Solar Flux Oct 2007 - Sep 2008



Day	Oct 07	Nov	Dec	Jan 08	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1	67.8	66.3	69.9	76.7	69.0	67.4	77.7	69.6	68.5	67.8	68.1	67.0
2	66.5	66.8	71.0	77.0	69.8	68.0	75.9	69.2	69.0	68.2	68.2	67.2
3	67.3	66.5	70.5	76.7	*	67.3	76.4	68.5	68.2	67.7	67.4	67.3
4	67.4	66.5	71.5	76.4	69.3	67.2	73.1	69.5	67.1	67.6	68.2	67.0
5	67.8	66.2	73.1	77.1	68.5	68.2	71.1	68.8	68.4	67.3	68.4	66.3
6	68.9	67.3	75.9	76.6	69.6	69.3	69.5	68.4	67.9	68.3	68.9	66.8
7	68.1	66.9	79.8	75.2	68.9	69.5	69.3	67.8	67.6	67.7	68.0	67.6
8	67.9	68.4	84.4	73.0	69.0	68.8	70.0	67.7	66.9	67.8	67.3	68.0
9	68.6	68.2	86.2	74.0	70.3	68.5	68.2	68.6	68.0	68.3	67.3	68.0
10	67.9	68.4	84.3	73.2	70.7	69.4	68.1	68.7	68.2	67.6	67.4	68.1
11	68.6	67.7	90.5	73.5	70.2	69.3	67.4	69.4	67.8	67.9	67.5	67.8
12	68.3	68.3	91.1	73.2	70.3	68.5	68.5	69.5	69.2	67.1	66.9	67.1
13	67.3	68.4	90.9	72.9	68.7	68.7	69.7	69.7	68.6	67.4	67.0	67.2
14	66.7	68.9	89.0	73.1	68.8	69.1	69.0	70.5	69.2	67.8	67.6	67.6
15	66.8	67.7	86.1	71.3	68.0	68.8	69.7	72.7	68.6	67.9	67.0	68.2
16	66.7	69.1	79.1	70.6	68.6	69.6	70.0	73.2	67.4	66.7	67.8	70.1
17	67.0	68.2	76.9	71.3	69.4	69.1	69.8	72.8	68.1	67.1	68.2	67.7
18	67.7	67.2	74.4	68.8	69.5	69.0	70.8	73.3	67.5	67.4	67.8	67.8
19	66.8	67.9	72.1	68.6	70.0	68.4	71.7	70.5	67.0	68.5	68.9	68.4
20	66.3	68.0	70.2	68.0	69.3	67.9	71.5	70.2	67.3	68.0	67.4	68.4
21	66.6	67.4	68.7	69.3	70.3	67.7	71.6	70.8	67.0	68.4	68.7	68.4
22	66.0	68.0	69.1	68.1	70.8	69.1	72.1	71.0	67.5	68.0	69.1	69.6
23	66.4	68.3	69.1	68.4	70.1	71.5	71.5	69.6	67.5	67.6	69.4	69.8
24	66.8	69.5	69.1	69.1	69.3	79.0	71.2	70.3	68.0	67.5	68.6	68.8
25	66.3	68.8	69.7	68.9	69.9	88.2	70.7	70.1	68.1	67.9	68.0	68.6
26	66.7	69.6	70.2	70.3	69.3	81.2	69.9	69.8	67.5	68.1	68.3	68.0
27	66.2	69.6	69.7	69.8	69.4	84.5	69.0	69.7	68.3	68.4	68.0	67.6
28	66.6	69.3	69.5	69.2	68.7	82.6	69.4	69.6	68.1	68.3	67.4	67.3
29	66.2	69.3	70.3	69.5	68.5	82.4	69.6	69.9	68.8	68.1	68.1	67.0
30	66.3	69.2	72.5	70.6		80.4	68.0	69.0	68.9	68.5	68.4	66.4
31	66.1		74.2	69.9		79.1		68.8		67.5	67.9	
Mean	67.1	68.1	76.1	71.9	69.4	72.2	70.7	69.9	68.0	67.8	68.0	67.8

\* = No data available.



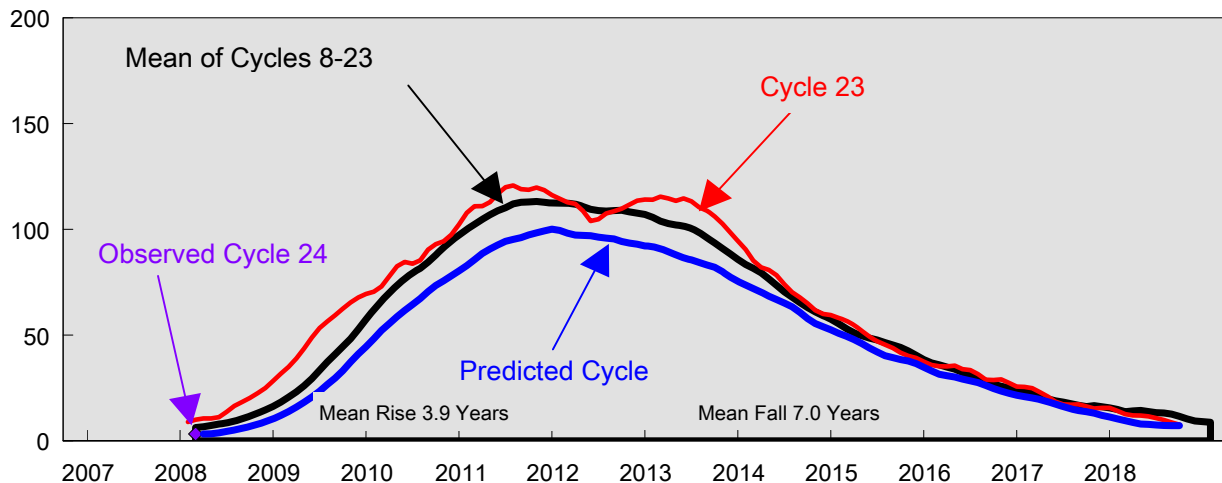
# DAILY SOLAR INDICES

## SEPTEMBER 2008

Day	Day of Year	Bartels Cycle Day	Sunspot		Obs Flux		-----Solar Flux Adjusted to 1 Astronomical Unit-----							
			Numbers Int	Amer	Penticton (2800)	SGMR (15400)	SGMR (8800)	SGMR (4995)	Penticton (2800)	SGMR (2695)	SGMR (1415)	SGMR (610)	SGMR (410)	SGMR (245)
1	245	14	0	0	65.8	451	225	123	67.0	60	54	37	20	11
2	246	15	0	0	66.0	448	217	119	67.2	62	53	37	21	10
3	247	16	0	0	66.2	---	---	---	67.3	---	---	---	---	---
4	248	17	0	0	65.9	451	222	120	67.0	57	53	37	20	9
5	249	18	0	0	65.2	450	225	121	66.3	59	53	36	20	10
6	250	19	0	0	65.8	439	228	121	66.8	58	52	36	20	11
7	251	20	0	0	66.6	452	226	120	67.6	58	53	37	21	10
8	252	21	0	0	67.1	449	224	121	68.0	61	54	37	21	10
9	253	22	0	0	67.1	---	210	118	68.0	59	53	36	20	12
10	254	23	0	0	67.2	453	225	121	68.1	55	55	38	21	11
11	255	24	7	1	66.9	452	231	123	67.8	61	54	37	20	11
12	256	25	0	0	66.3	445	229	120	67.1	58	54	37	21	11
13	257	26	0	0	66.4	447	224	121	67.2	60	54	37	21	11
14	258	27	0	0	66.8	---	219	118	67.6	59	53	36	21	11
15	259	1	0	0	67.5	449	225	121	68.2	61	55	37	21	12
16	260	2	0	0	69.4	437	230	123	70.1	60	55	38	21	11
17	261	3	0	0	67.1	450	224	122	67.7	56	55	38	22	10
18	262	4	0	0	67.2	449	215	117	67.8	61	54	38	22	11
19	263	5	0	0	67.9	450	227	126	68.4	65	54	38	21	10
20	264	6	0	0	67.8	452	227	122	68.4	59	55	37	22	11
21	265	7	0	0	67.9	447	226	122	68.4	61	56	39	21	11
22	266	8	8	8	69.1	447	225	129	69.6	62	56	38	21	11
23	267	9	9	5	69.4	451	222	134	69.8	61	56	39	21	11
24	268	10	0	0	68.4	450	226	125	68.8	62	55	38	21	10
25	269	11	0	0	68.2	451	233	123	68.6	63	55	---	---	---
26	270	12	0	0	67.7	---	199	125	68.0	59	52	36	20	9
27	271	13	0	0	67.3	413	203	120	67.6	63	54	36	20	10
28	272	14	0	0	67.0	---	221	113	67.3	61	54	34	19	10
29	273	15	8	1	66.8	447	225	121	67.0	59	53	36	21	10
30	274	16	0	1	66.2	446	227	120	66.4	60	53	35	20	10
MEAN			1.1	0.5	67.1	447	222	121	67.8	60	54	36	20	10

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

**Cycle 24 Smoothed Sunspot Numbers: Observed and Predicted  
PRELIMINARY Based on March 2008 Smoothed Data**



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

Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Avg
1996	10	10	10	9	8*	9	8	8	8	9**	10	10	8
1997	11	11	14	17	18	20	23	25	28	32	35	39	23
1998	44	49	53	57	59	63	65	68	69	71	73	78	62
1999	83	85	84	85	90	93	94	98	102	108	111	111	95
2000	113	117	120	120.8+	119	119	120	119	116	115	113	112	107
2001	109	104	105	108	109	110	112	114	114	114	115	115	111
2002	114	115	113	111	109	106	103	99	95	91	85	82	102
2003	81	79	74	70	68	65	62	60	60	58	57	57	66
2004	53	49	47	46	46	42	40	39	38	36	35	35	42
2005	35	34	34	32	29	29	29	27	26	26	25	23	29
2006	21	19	17	17	17	16	15	16	16	14	13	13	16
2007	12	12	11	10	9	8	7	6	6	6	6	5	8
2008	4	4	3.3###	3	3	4	5	5	6	7	8	9	5
				(1)	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(9)	(3)
2009	11	12	14	16	18	21	24	27	30	33	37	41	24
	(10)	(12)	(14)	(16)	(19)	(21)	(24)	(27)	(30)	(33)	(36)	(40)	(24)

Solar Cycle 22

Solar Cycle 23

Min, Max, and Predictions

\* May 1996 marks Cycle 23's mathematical minimum.

\*\* October 1996 marks the consensus minimum.

+ April 2000 marks Cycle 23 maximum.

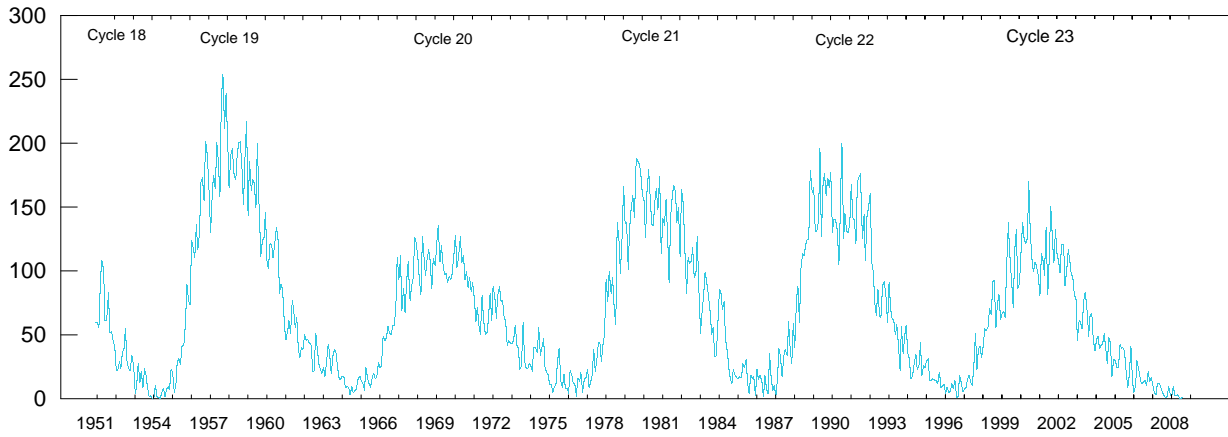
## - Preliminary Cycle 24 Minimum

**NOTE: This is a preliminary prediction using March 2008 as solar minimum.**

**OBSERVED AND PREDICTED NUMBERS:** For the end of Cycle 23, and the rise and decline of Cycle 24, the table above lists observed smoothed sunspot numbers up to the one that includes the most recent monthly mean. We based these smoothed values on final monthly means through Mar 2008 and on provisional numbers thereafter. Table entries with numbers in parentheses below them denote predictions by the McNish-Lincoln method. See page 9 in the Jul 1987 supplement to Solar-Geophysical Data. Adding the number in parentheses to the predicted value generates the upper limit of the 90% confidence interval. Subtracting the number from the predicted value generates the lower limit. Consider, for example, the March 2009 prediction. There exists a 90% chance that in March 2009, the actual smoothed sunspot will fall somewhere between 0 and 28.

**POINTS TO PONDER:** The McNish-Lincoln prediction method generates useful estimates of smoothed, monthly mean sunspot numbers for no more than 12 months ahead. Beyond 12 months, the predictions regress toward the mean of all 16 cycles of observations used in the computation. Moreover, the method remains very sensitive to the date defining the onset of the current cycle, that is, to the date of the most recent sunspot minimum. The new cycle predictions tabulated above are based on a PRELIMINARY minimum of March, 2009. This will be updated monthly until the actual minimum is reached.

# Mean Monthly Sunspot Numbers Jan 1951 - Sep 2008



Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Mean
1951	59.9	59.9	55.9	92.9	108.5	100.6	61.5	61.0	83.1	51.6	52.4	45.8	69.4
1952	40.7	22.7	22.0	29.1	23.4	36.4	39.3	54.9	28.2	23.8	22.1	34.3	31.5
1953	26.5	3.9	10.0	27.8	12.5	21.8	8.6	23.5	19.3	8.2	1.6	2.5	13.9
1954	0.2	0.5	10.9	1.8	0.8	0.2	4.8	8.4	1.5	7.0	9.2	7.6	4.4 m
1955	23.1	20.8	4.9	11.3	28.9	31.7	26.7	40.7	42.7	58.5	89.2	76.9	38.0
1956	73.6	124.0	118.4	110.7	136.6	116.6	129.1	169.6	173.2	155.3	201.3	192.1	141.7
1957	165.0	130.2	157.4	175.2	164.6	200.7	187.2	158.0	235.8	253.8	210.9	239.4	190.2 M
1958	202.5	164.9	190.7	196.0	175.3	171.5	191.4	200.2	201.2	181.5	152.3	187.6	184.8
1959	217.4	143.1	185.7	163.3	172.0	168.7	149.6	199.6	145.2	111.4	124.0	125.0	159.0
1960	146.3	106.0	102.2	122.0	119.6	110.2	121.7	134.1	127.2	82.8	89.6	85.6	122.3
1961	57.9	46.1	53.0	61.4	51.0	77.4	70.2	55.8	63.6	37.7	32.6	39.9	53.9
1962	38.7	50.3	45.6	46.4	43.7	42.0	21.8	21.8	51.3	39.5	26.9	23.2	37.6
1963	19.8	24.4	17.1	29.3	43.0	35.9	19.6	33.2	38.8	35.3	23.4	14.9	27.9
1964	15.3	17.7	16.5	8.6	9.5	9.1	3.1	9.3	4.7	6.1	7.4	15.1	10.2 m
1965	17.5	14.2	11.7	6.8	24.1	15.9	11.9	8.9	16.8	20.1	15.8	17.0	15.1
1966	28.2	24.4	25.3	48.7	45.3	47.7	56.7	51.2	50.2	57.2	57.2	70.4	47.0
1967	110.9	93.6	111.8	69.5	86.5	67.3	91.5	107.2	76.8	88.2	94.3	126.4	93.8
1968	121.8	111.9	92.2	81.2	127.2	110.3	96.1	109.3	117.2	107.7	86.0	109.8	105.9 M
1969	104.4	120.5	135.8	106.8	120.0	106.0	96.8	98.0	91.3	95.7	93.5	97.9	105.5
1970	111.5	127.8	102.9	109.5	127.5	106.8	112.5	93.0	99.5	86.6	95.2	83.5	104.5
1971	91.3	79.0	60.7	71.8	57.5	49.8	81.0	61.4	50.2	51.7	63.2	82.2	66.6
1972	61.5	88.4	80.1	63.2	80.5	88.0	76.5	76.8	64.0	61.3	41.6	45.3	68.9
1973	43.4	42.9	46.0	57.7	42.4	39.5	23.1	25.6	59.3	30.7	23.9	23.3	38.0
1974	27.6	26.0	21.3	40.3	39.5	36.0	55.8	33.6	40.2	47.1	25.0	20.5	34.5
1975	18.9	11.5	11.5	5.1	9.0	11.4	28.2	39.7	13.9	9.1	19.4	7.8	15.5
1976	8.1	4.3	21.9	18.8	12.4	12.2	1.9	16.4	13.5	20.6	5.2	15.3	12.6 m
1977	16.4	23.1	8.7	12.9	18.6	38.5	21.4	30.1	44.0	43.8	29.1	43.2	27.5
1978	51.9	93.6	76.5	99.7	82.7	95.1	70.4	58.1	138.2	125.1	97.9	122.7	92.5
1979	166.6	137.5	138.0	101.5	134.4	149.5	159.4	142.2	188.4	186.2	183.3	176.3	155.4 M
1980	159.6	155.0	126.2	164.1	179.9	157.3	136.3	135.4	155.0	164.7	147.9	174.4	154.6
1981	114.0	141.3	135.5	156.4	127.5	90.9	143.8	158.7	167.3	162.4	137.5	150.1	140.4
1982	111.2	163.6	153.8	122.0	82.2	110.4	106.1	107.6	118.8	94.7	98.1	127.0	115.9
1983	84.3	51.0	66.5	80.7	99.2	91.1	82.2	71.8	50.3	55.8	33.3	33.4	66.6
1984	57.0	85.4	83.5	69.7	76.4	46.1	37.4	25.5	15.7	12.0	22.8	18.7	45.9
1985	16.5	15.9	17.2	16.2	27.5	24.2	30.7	11.1	3.9	18.6	16.2	17.3	17.9
1986	2.5	23.2	15.1	18.5	13.7	1.1	18.1	7.4	3.8	35.4	15.2	6.8	13.4 m
1987	10.4	2.4	14.7	39.6	33.0	17.4	33.0	38.7	33.9	60.6	39.9	27.1	29.4
1988	59.0	40.0	76.2	88.0	60.1	101.8	113.8	111.6	120.1	125.1	125.1	179.2	100.2
1989	161.3	165.1	131.4	130.6	138.5	196.2	126.9	168.9	176.7	159.4	173.0	165.5	157.6 M
1990	177.3	130.5	140.3	140.3	132.2	105.4	149.4	200.3	125.2	145.5	131.4	129.7	142.6
1991	136.9	167.5	141.9	140.0	121.3	169.7	173.7	176.3	125.3	144.1	108.2	144.4	145.7
1992	150.0	161.1	106.7	99.8	73.8	65.2	85.7	64.5	63.9	88.7	91.8	82.6	94.3
1993	59.3	91.0	69.8	62.2	61.3	49.8	57.9	42.2	22.4	56.4	35.6	48.9	54.6
1994	57.8	35.5	31.7	16.1	17.8	28.0	35.1	22.5	25.7	44.0	18.0	26.2	29.9
1995	24.2	29.9	31.1	14.0	14.5	15.6	14.5	14.3	11.8	21.1	9.0	10.0	17.5
1996	11.5	4.4	9.2	4.8	5.5	11.8	8.2	14.4	1.6	0.9	17.9	13.3	8.6 m
1997	5.7	7.6	8.7	15.5	18.5	12.7	10.4	24.4	51.3	22.8	39.0	41.2	21.5
1998	31.9	40.3	54.8	53.4	56.3	70.7	66.6	92.2	92.9	55.5	74.0	81.9	64.3
1999	62.0	66.3	68.8	63.7	106.4	137.7	113.5	93.7	71.5	116.7	133.2	84.6	93.2
2000	90.1	112.9	138.5	125.5	121.6	124.9	170.1	130.5	109.7	99.4	106.8	104.4	119.6 M
2001	95.6	80.6	113.5	107.7	96.6	134.0	81.8	106.4	150.7	125.5	106.5	132.2	111.0
2002	114.1	107.4	98.4	120.7	120.8	88.3	99.9	116.4	109.3	97.5	95.5	80.8	104.0
2003	79.7	46.0	61.1	60.0	54.6	77.4	83.3	72.7	48.7	65.5	67.3	46.5	63.9
2004	37.7	45.8	49.1	39.3	41.5	43.2	51.0	40.9	27.7	48.0	43.5	17.9	40.4
2005	31.3	29.1	24.8	24.2	42.7	39.3	40.1	36.4	21.9	8.7	18.0	41.1	29.8
2006	15.4	4.7	10.8	30.2	22.2	13.9	12.2	12.9	14.4	10.5	21.4	13.6	15.2
2007	16.8	10.7	4.5	3.4	11.7	12.1	9.7	6.0	2.4	0.9	1.7	10.1	7.5
2008	3.3	2.1	9.3	2.9	2.9	3.1	0.5	0.5	1.1				2.9

Values are preliminary after Mar 08. For the yearly means, each 'M' marks a sunspot cycle maximum and each 'm' a minimum.

26  
Sep 08

HÀ S O L A R F L A R E S  
SEPTEMBER 2008

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Sta	Day	(UT)	Start	Max	End	(UT)	Lat	CMD	NOAA/		Dur	Imp	Obs	Area Measurement			Remarks
									USAF	CMP				Region	Mo	Day	

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**NO REPORTS**

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"Remarks"

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

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

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

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Sta	Day	Start (UT)	Max (UT)	End (UT)	Lat	CMD	NOAA/	CMP	Dur (Min)	Imp Xray	Total	Total Area(2)	Total(3) Intensity
							USAF Region				Mo		

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## No Reports

Note 1: Total integrated flux computed from the event start time to end if available (units=J/m\*2).

Note 2: Total area is derived from SXI imagery in units of squared arc seconds of the largest flaring area.

Note 3: Total intensity is derived from SXI imagery in units of data numbers/second of the largest flaring area.

=====

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

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

28  
Sep 08

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

SEPTEMBER 2008

Day	Freq Sta	Type	Start (UT)	Time of Maximum (UT)	Duration (Min)	Flux Density		Int	Remarks
						Peak (10 -22 W/m 2 Hz)	Mean		
02	410 SGMR	8 S	1016.0	1016.0	U	230.0			QL=4 ST=2 TYP=3

Reports are received routinely from the following observatories:

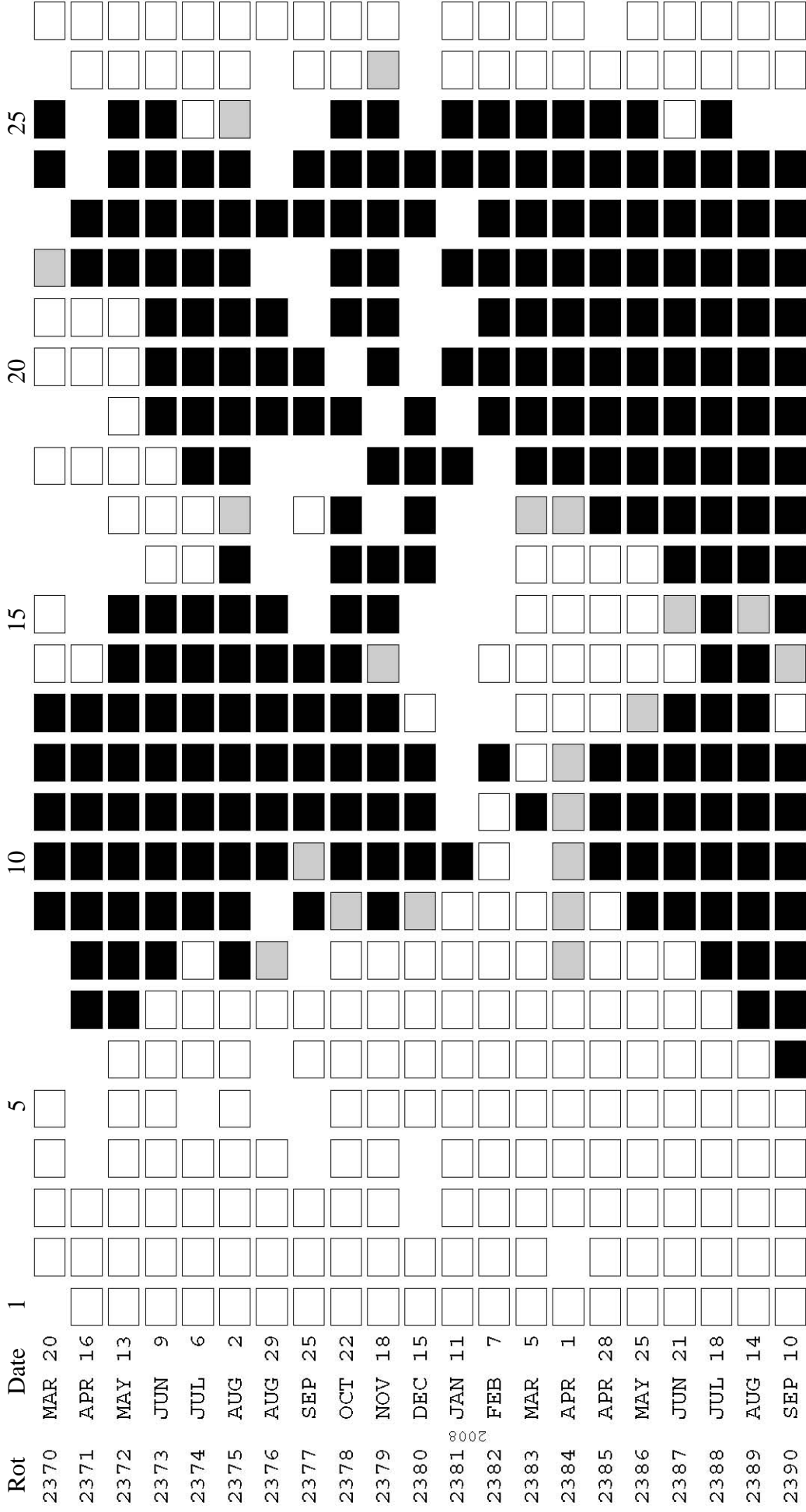
LEAR = Learmonth                      SGMR = Sagamore Hill                      SVTO = San Vito

Explanation of Type Code:

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

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

# STANFORD MEAN SOLAR MAGNETIC FIELD

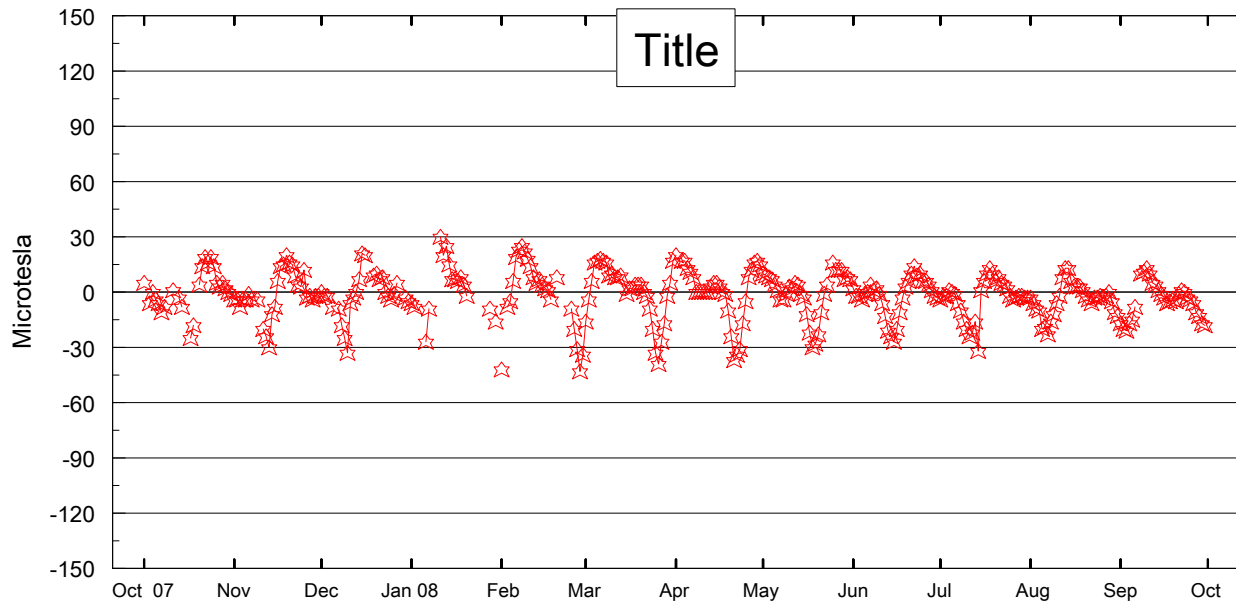


Mean Solar Magnetic Field Polarity:

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

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

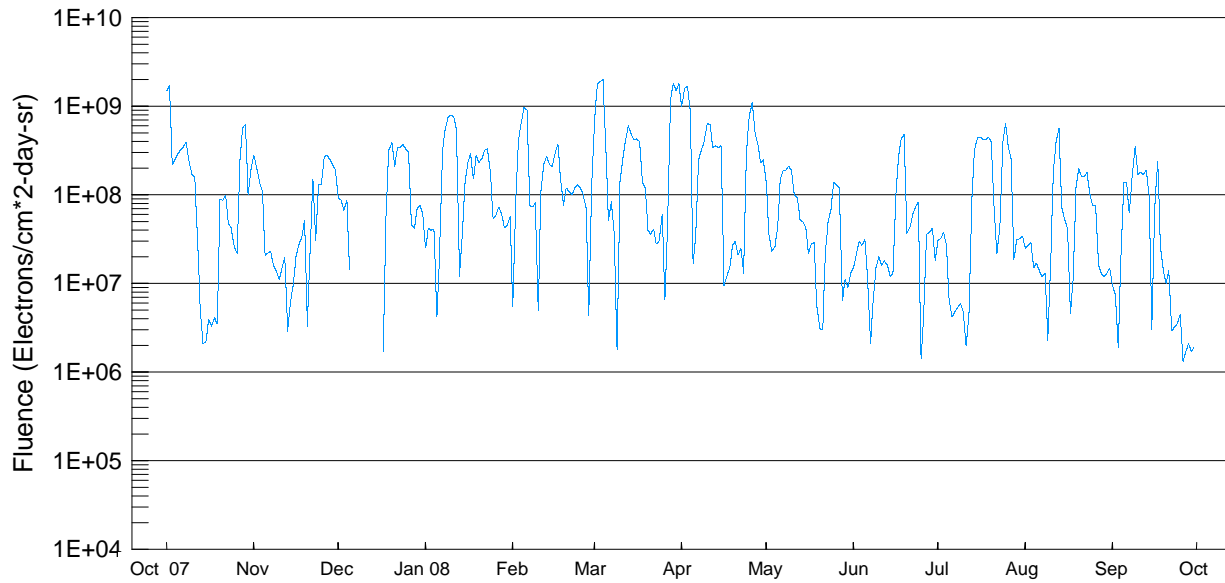
## Stanford Mean Solar Magnetic Field (Microtesla) "Sun-As-A-Star"



Day	Oct 07	Nov	Dec	Jan 08	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1	5	-4	0	-6	-42	-16	20	10	2	-4	-3	-17
2	---	-4	-2	-8	---	-4	---	9	-2	-2	-6	-20
3	-6	-8	-2	---	-8	6	17	8	-2	-2	-9	-21
4	0	-4	---	---	-5	16	17	7	-4	1	-10	-17
5	-4	-4	-8	---	6	17	13	4	-1	0	-20	-15
6	-6	-1	---	-27	19	18	11	1	0	-1	-19	-8
7	-11	-4	-9	-9	23	17	8	-4	4	-6	-23	---
8	-8	---	-18	---	25	16	0	-4	1	-10	-16	10
9	---	-4	-25	---	22	9	0	-1	2	-16	-12	11
10	---	---	-33	---	18	10	0	3	-1	-20	-6	13
11	1	-20	-6	30	14	8	0	2	-6	-24	-2	10
12	---	-24	-3	20	8	8	0	5	-13	-22	8	5
13	-3	-30	0	25	5	9	3	4	-21	-16	13	4
14	-8	-12	7	15	7	---	5	-1	-24	-32	13	1
15	---	-8	21	7	4	-1	5	-3	-27	1	6	-1
16	---	6	20	7	2	2	3	-12	-20	6	3	-3
17	-25	14	---	6	1	2	0	-22	-11	10	3	-6
18	-18	15	---	8	-4	4	-1	-30	-3	13	3	-5
19	---	20	9	4	---	4	-10	-28	3	10	1	-4
20	4	16	10	-2	8	4	-24	-23	6	6	-2	-5
21	14	15	7	---	---	0	-37	-11	10	8	-4	-1
22	19	9	8	---	---	-2	-34	-1	14	5	-6	1
23	16	4	0	---	---	-9	-31	4	9	4	-3	0
24	19	3	-2	---	---	-20	-17	---	10	2	-3	-3
25	14	12	-4	---	-9	-33	-5	16	6	-2	-2	-4
26	5	-3	-1	---	-20	-39	8	12	6	-4	-3	-6
27	3	-2	5	---	-31	-27	12	12	4	-3	-2	-11
28	5	-4	---	-9	-43	-17	16	12	1	-2	0	-13
29	2	-2	---	---	-34	-2	17	7	-2	-2	-5	-17
30	0	-2	-3	-16	---	5	15	8	-3	-3	-11	-18
31	-1	---	-5	---	---	17	---	7	---	-3	-13	---



# GOES Daily Electron Fluence Oct 2007 - Sep 2008



Day	Oct 07	Nov	Dec	Jan 08	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1	1.5E+09	2.8E+08	9.3E+07	2.5E+07	5.5E+06	7.5E+08	1.0E+09	1.4E+08	1.5E+07	3.1E+07	2.5E+07	9.4E+06
2	1.7E+09	2.0E+08	8.8E+07	4.2E+07	8.0E+07	1.8E+09	1.6E+09	3.6E+07	2.1E+07	3.2E+07	2.7E+07	7.3E+06
3	2.2E+08	1.4E+08	6.7E+07	4.0E+07	4.1E+08	1.9E+09	1.7E+09	2.3E+07	3.0E+07	3.8E+07	2.9E+07	1.9E+06
4	2.5E+08	1.1E+08	8.6E+07	4.1E+07	6.5E+08	2.0E+09	8.9E+08	2.6E+07	2.7E+07	2.7E+07	1.5E+07	2.0E+07
5	2.9E+08	2.1E+07	1.4E+07	4.2E+06	9.7E+08	3.6E+08	1.7E+07	4.2E+07	3.1E+07	6.6E+06	1.7E+07	1.4E+08
6	3.2E+08	2.2E+07	---	2.3E+07	9.1E+08	5.1E+07	3.6E+07	1.5E+08	1.1E+07	4.2E+06	1.4E+07	1.4E+08
7	3.5E+08	2.3E+07	---	3.2E+08	7.6E+07	8.4E+07	2.5E+08	1.9E+08	2.1E+06	4.8E+06	1.2E+07	6.2E+07
8	3.9E+08	1.6E+07	---	5.6E+08	7.3E+07	3.8E+07	3.2E+08	1.9E+08	6.7E+06	5.4E+06	1.3E+07	1.6E+08
9	2.3E+08	1.4E+07	---	7.5E+08	8.1E+07	1.8E+06	4.0E+08	2.1E+08	1.5E+07	5.9E+06	2.3E+06	3.6E+08
10	1.7E+08	1.1E+07	---	7.9E+08	5.0E+06	1.4E+08	6.4E+08	1.9E+08	2.0E+07	4.7E+06	1.8E+07	1.7E+08
11	1.6E+08	1.5E+07	---	7.7E+08	1.1E+08	2.5E+08	6.2E+08	1.0E+08	1.6E+07	2.0E+06	1.9E+08	1.8E+08
12	3.1E+07	2.0E+07	---	5.5E+08	2.2E+08	4.1E+08	3.4E+08	9.4E+07	1.8E+07	4.3E+06	4.0E+08	1.7E+08
13	5.0E+06	2.9E+06	---	1.2E+07	2.7E+08	6.0E+08	3.6E+08	5.2E+07	1.6E+07	7.8E+07	5.7E+08	1.9E+08
14	2.1E+06	6.1E+06	---	3.5E+07	2.2E+08	4.9E+08	3.4E+08	5.0E+07	1.2E+07	3.2E+08	7.2E+07	1.0E+08
15	2.2E+06	9.4E+06	---	1.4E+08	2.1E+08	4.2E+08	3.6E+08	4.3E+07	1.3E+07	4.4E+08	5.4E+07	3.0E+06
16	3.9E+06	2.0E+07	---	2.3E+08	3.0E+08	4.3E+08	9.4E+06	2.2E+07	9.6E+07	4.5E+08	4.1E+07	7.3E+07
17	3.3E+06	2.7E+07	1.7E+06	2.9E+08	3.7E+08	4.0E+08	1.2E+07	2.8E+07	2.7E+08	4.2E+08	4.5E+06	2.4E+08
18	4.1E+06	3.3E+07	6.4E+07	1.5E+08	1.5E+08	1.4E+08	1.5E+07	2.9E+07	4.3E+08	4.2E+08	1.1E+07	2.6E+07
19	3.5E+06	5.2E+07	3.2E+08	2.8E+08	7.6E+07	1.2E+08	2.7E+07	5.6E+06	4.8E+08	4.5E+08	1.2E+08	1.4E+07
20	8.9E+07	3.3E+06	3.9E+08	2.3E+08	1.2E+08	4.0E+07	3.0E+07	3.1E+06	3.7E+07	3.9E+08	2.0E+08	1.0E+07
21	8.7E+07	2.6E+07	2.1E+08	2.6E+08	1.1E+08	3.6E+07	2.1E+07	3.0E+06	4.3E+07	6.4E+07	1.6E+08	1.4E+07
22	9.9E+07	1.5E+08	3.4E+08	3.2E+08	1.0E+08	4.1E+07	2.5E+07	2.3E+07	6.0E+07	2.2E+07	1.6E+08	2.9E+06
23	4.7E+07	3.0E+07	3.4E+08	3.3E+08	1.2E+08	2.8E+07	1.3E+07	5.0E+07	7.3E+07	4.5E+07	1.8E+08	3.2E+06
24	4.3E+07	1.3E+08	3.7E+08	1.8E+08	1.3E+08	3.0E+07	3.0E+08	7.0E+07	8.3E+07	4.0E+08	9.6E+07	3.5E+06
25	2.6E+07	1.3E+08	3.3E+08	5.4E+07	1.2E+08	6.0E+07	7.8E+08	1.4E+08	1.4E+06	6.4E+08	7.5E+07	4.5E+06
26	2.2E+07	2.7E+08	3.0E+08	5.8E+07	1.0E+08	6.6E+06	1.1E+09	1.3E+08	4.8E+06	3.5E+08	7.7E+07	1.3E+06
27	2.3E+08	2.8E+08	4.6E+07	7.3E+07	7.1E+07	5.7E+07	5.0E+08	1.2E+08	3.6E+07	2.5E+08	1.6E+07	1.7E+06
28	5.7E+08	2.5E+08	4.2E+07	6.2E+07	4.4E+06	1.2E+09	3.7E+08	6.4E+06	3.8E+07	1.9E+07	1.3E+07	2.1E+06
29	6.2E+08	2.2E+08	7.1E+07	4.3E+07	1.1E+08	1.8E+09	2.3E+08	1.1E+07	4.2E+07	3.1E+07	1.2E+07	1.7E+06
30	1.0E+08	1.9E+08	7.6E+07	4.5E+07		1.5E+09	2.5E+08	9.1E+06	1.8E+07	3.2E+07	1.3E+07	1.9E+06
31	1.9E+08		6.1E+07	5.7E+07		1.8E+09		1.3E+07		3.4E+07	1.5E+07	

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

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Number 770 Part I

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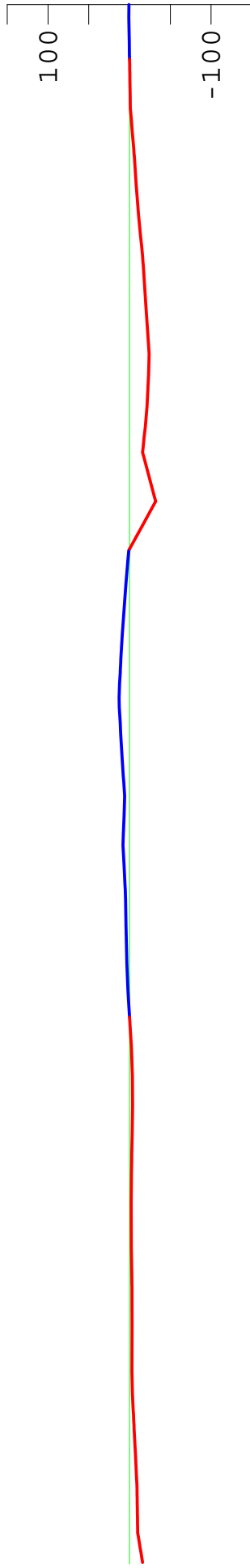
# SOLAR MAGNETIC FIELD SYNOPTIC CHART

CARRINGTON ROTATION NUMBER 2072

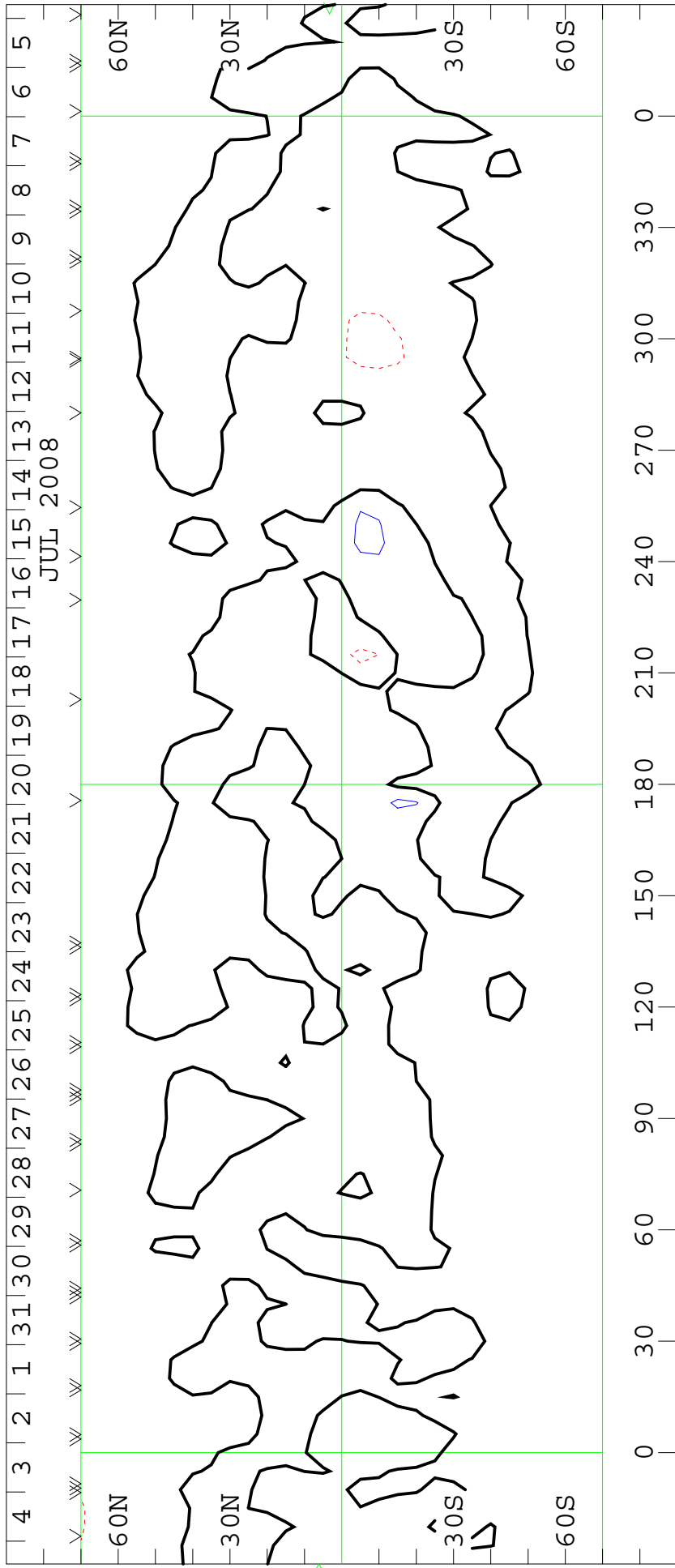
(6 Jul 2008 to 3 Aug 2008)

Wilcox Solar Observatory

Mean Field



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

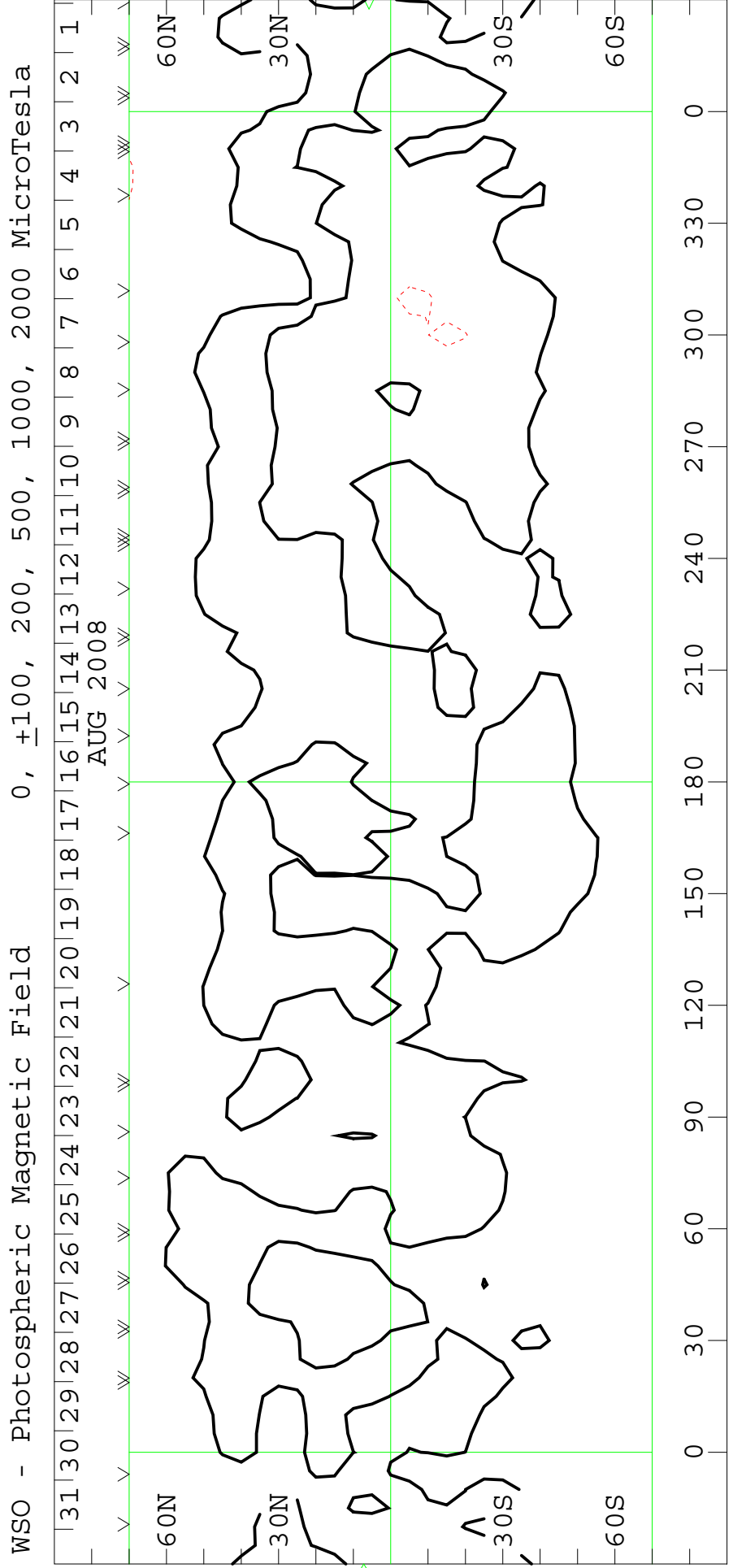
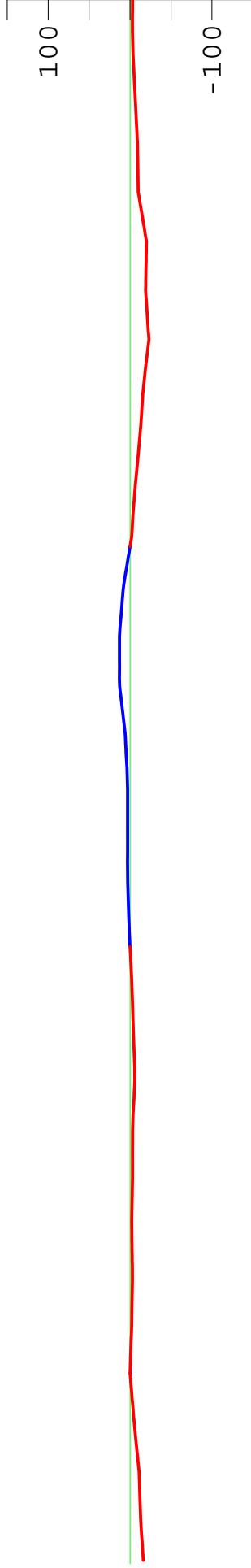


2072

**SOLAR MAGNETIC FIELD SYNOPTIC CHART**  
CARRINGTON ROTATION NUMBER 2073  
(3 Aug 2008 to 30 Aug 2008)

**Wilcox Solar Observatory**

**Mean Field**

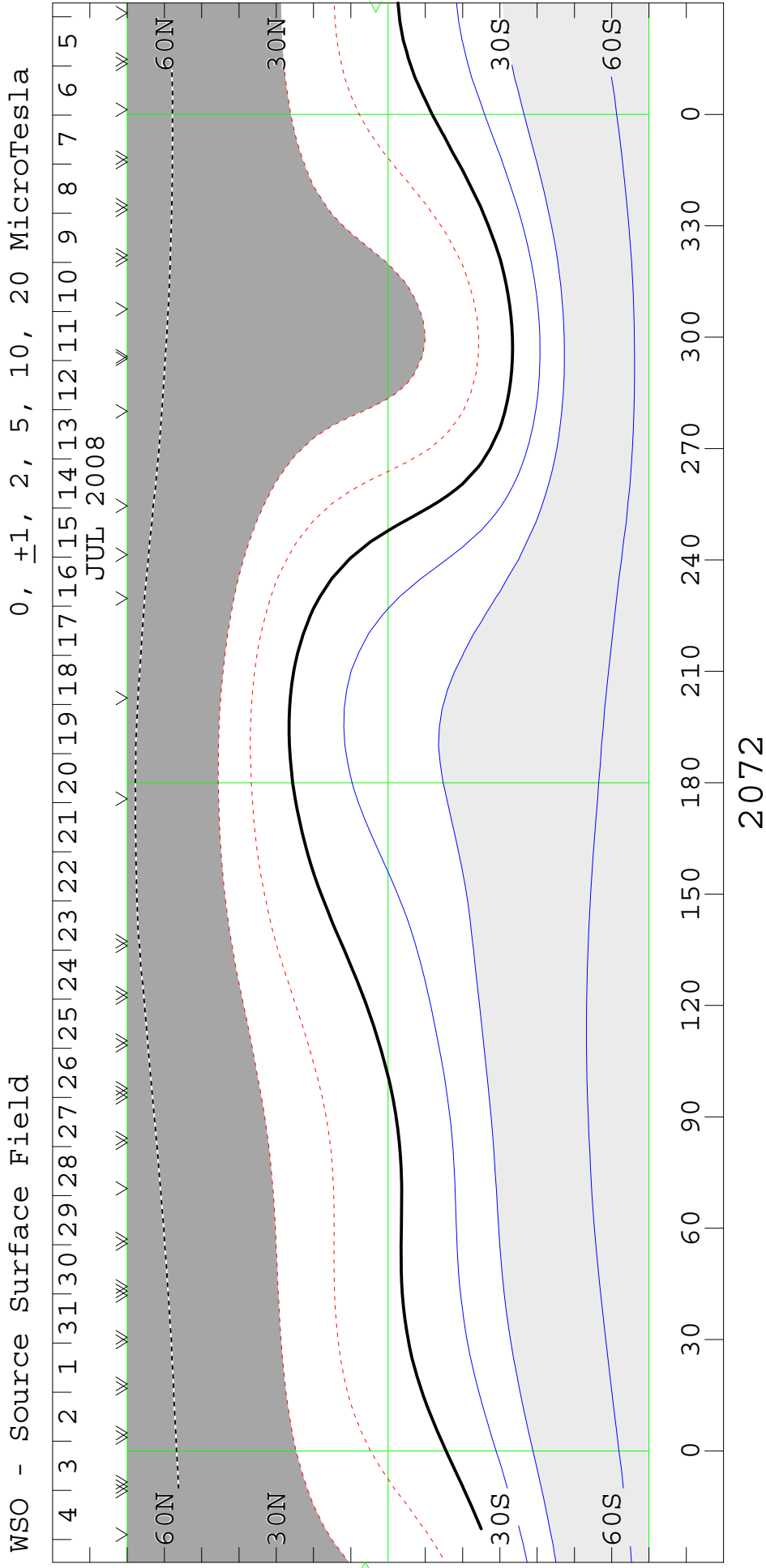


# SOLAR MAGNETIC FIELD SYNOPSIS CHART

## SOURCE SURFACE FIELD

CARRINGTON ROTATION NUMBER 2072

(6 Jul 2008 to 3 Aug 2008)

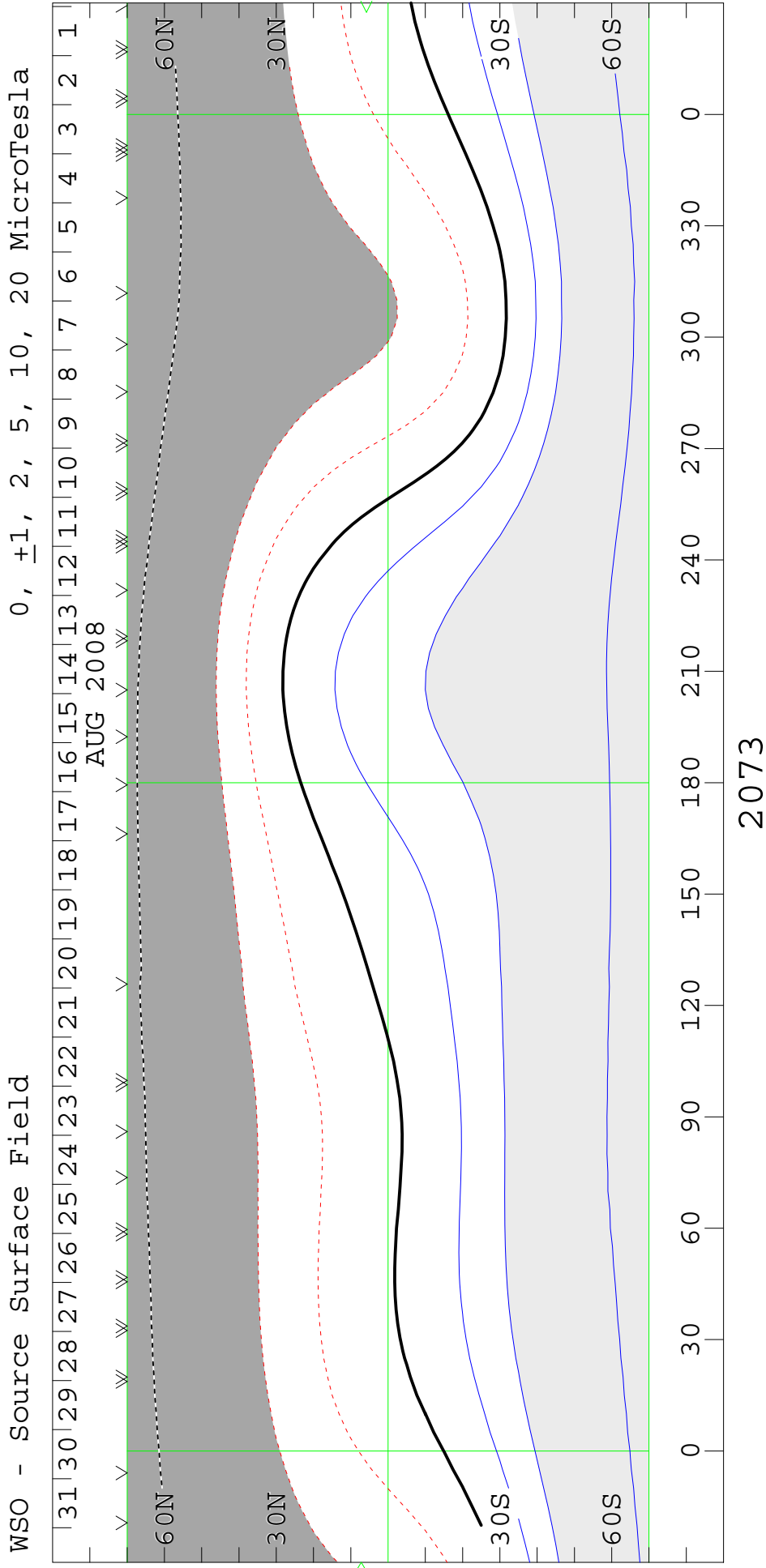


**SOLAR MAGNETIC FIELD SYNOPTIC CHART**

**SOURCE SURFACE FIELD**

CARRINGTON ROTATION NUMBER 2073

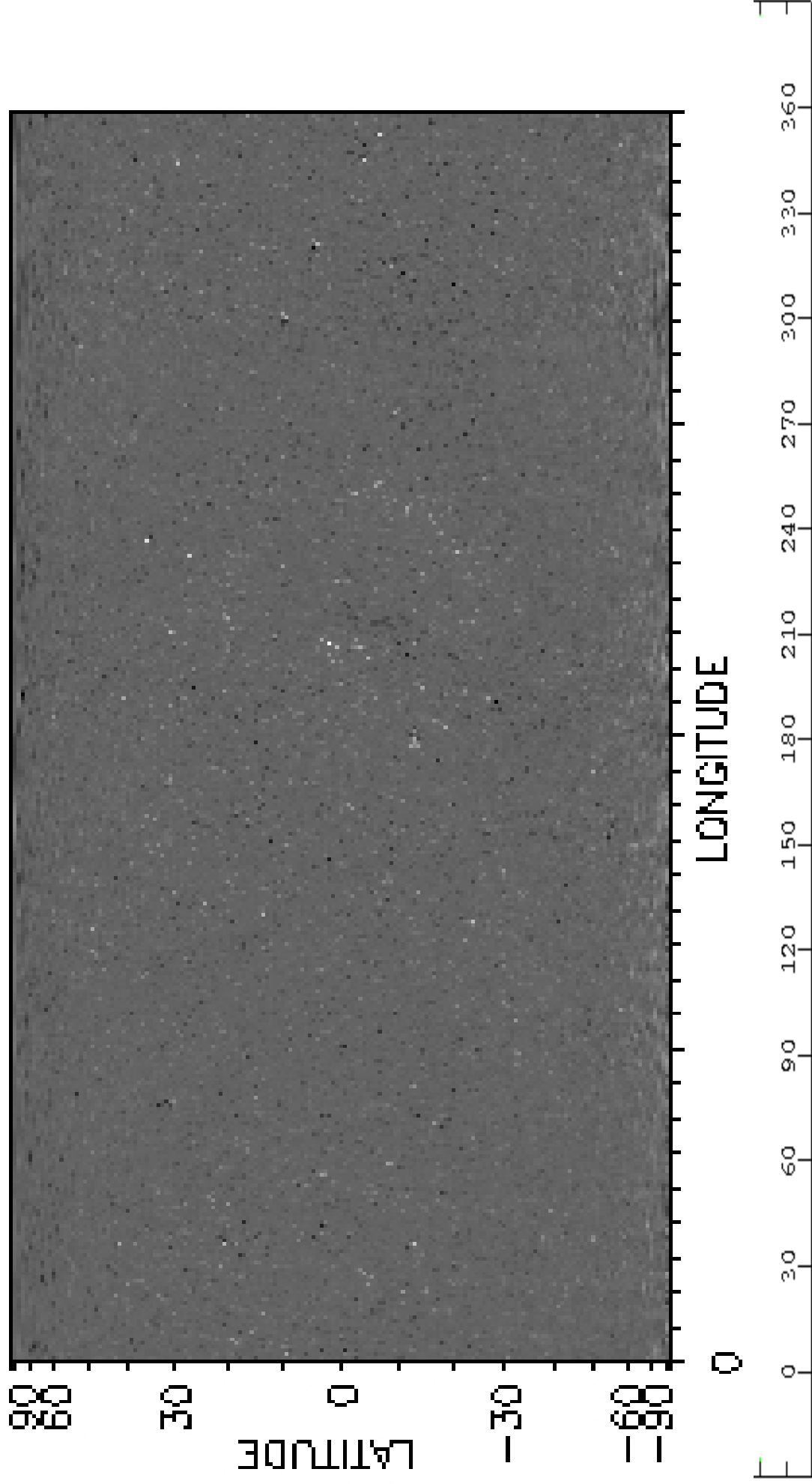
(3 Aug 2008 to 30 Aug 2008)



**SOLAR MAGNETIC FIELD SYNOPTIC CHART**  
CARRINGTON ROTATION NUMBER 2072  
(6 Jul 2008 to 3 Aug 2008)

National Solar Observatory/Kitt Peak

**NSO/VSM MAGNETIC FLUX SYNOPTIC MAP**  
CARRINGTON ROTATION 2072

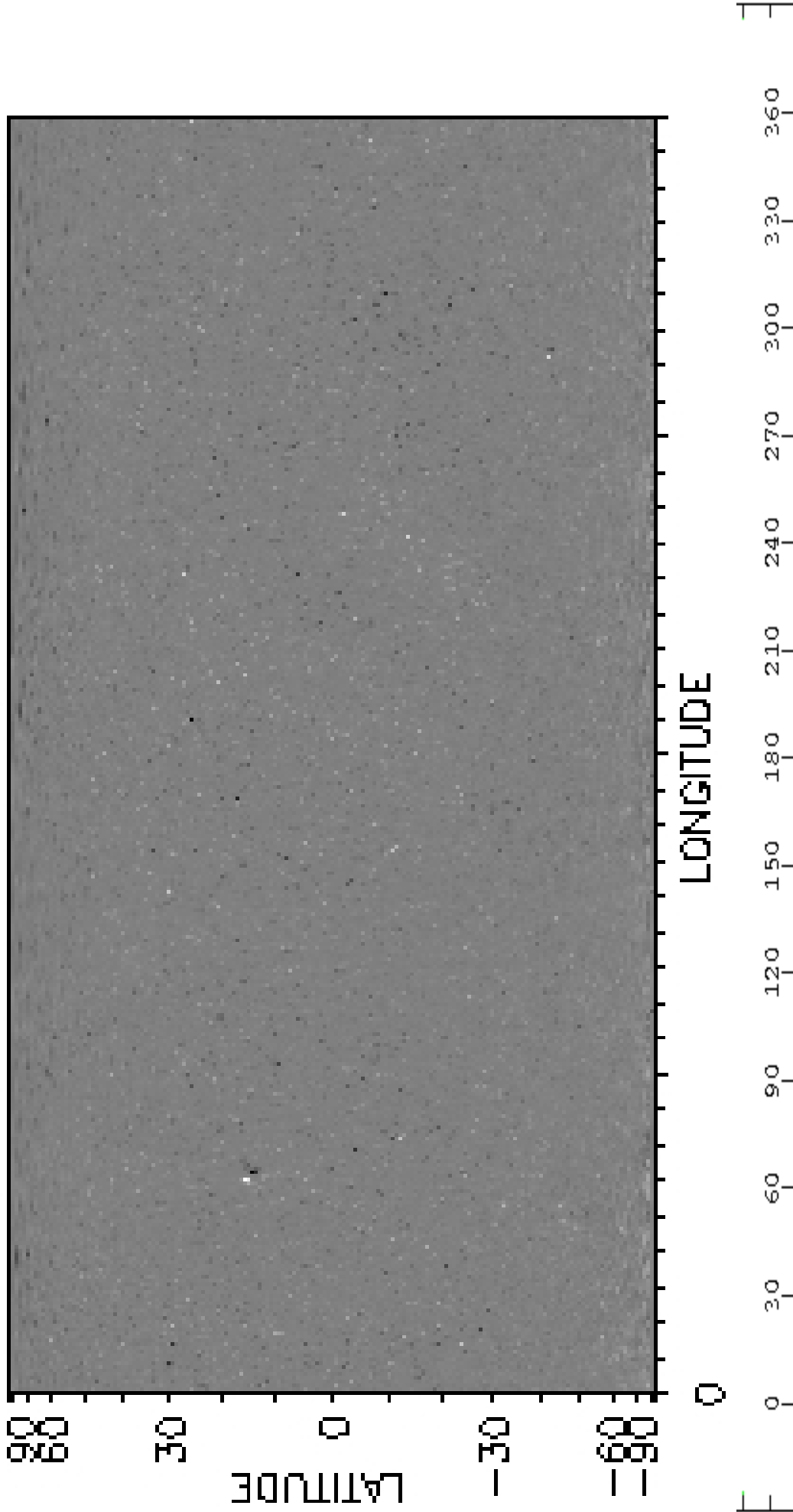


Heliographic Longitude

**SOLAR MAGNETIC FIELD SYNOPTIC CHART**  
CARRINGTON ROTATION NUMBER 2073  
(3 Aug 2008 – 30 Aug 2008)

National Solar Observatory/Kitt Peak

**NSO/VSM MAGNETIC FLUX SYNOPTIC MAP**  
CARRINGTON ROTATION 2073



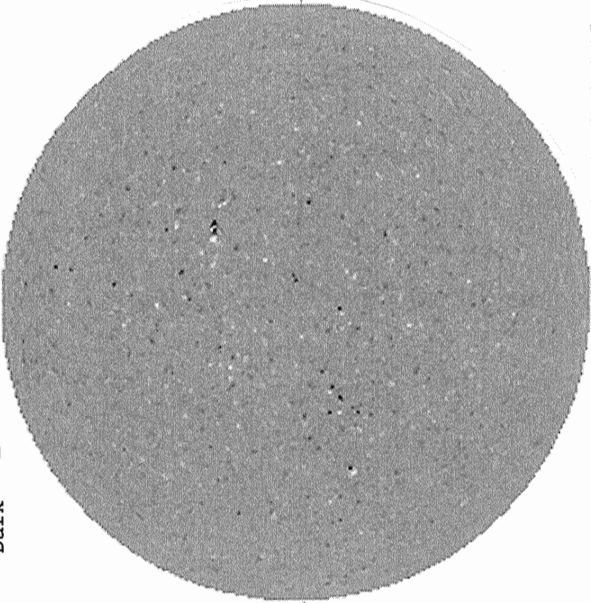
Heliographic Longitude



40  
Aug 08

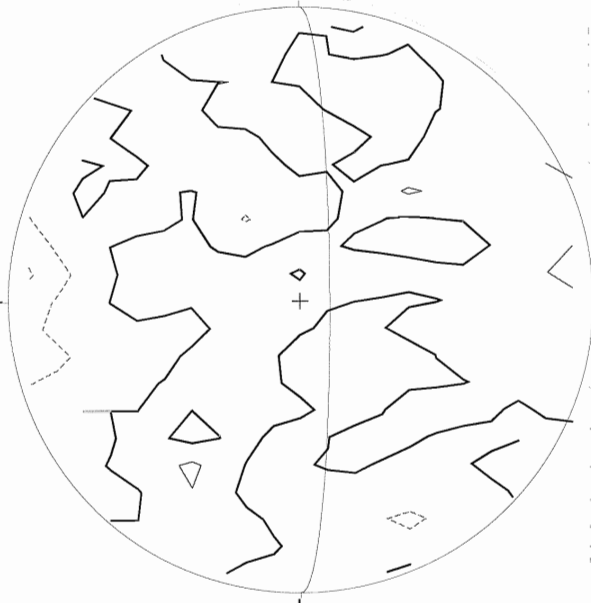
August 01, 2008 (P= 10.95, Bo= 5.80, Lo= 29.02)

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



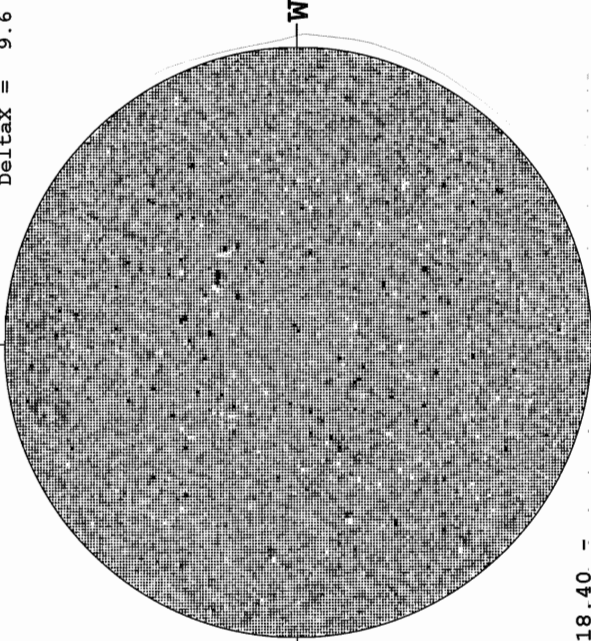
2125 UT

**STANFORD MAGNETOGRAM**  
Solid = +  
Dashed = -



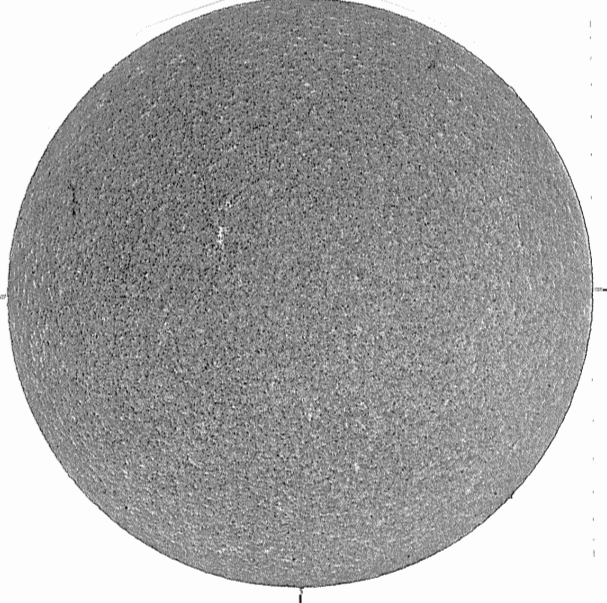
1957 UT

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



18.40 -  
19.33 UT

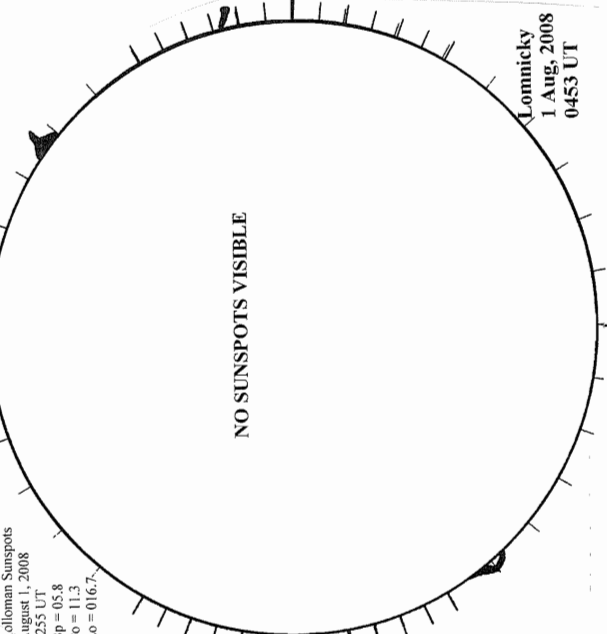
**BIG BEAR H-ALPHA**



1739 UT

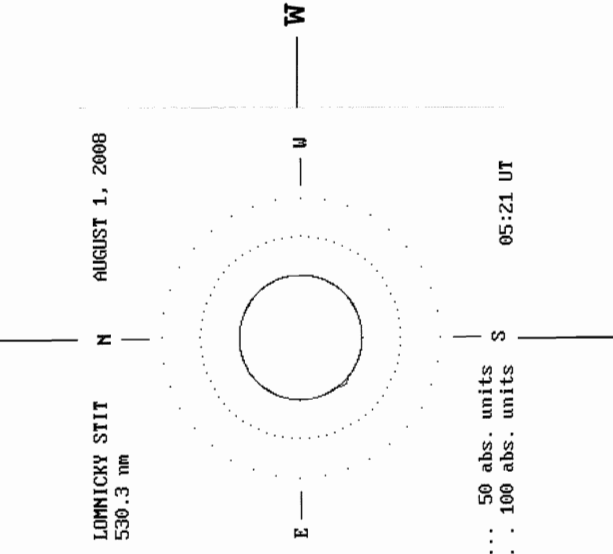
**HOLLOMAN SUNSPOTS**

Holoman Sunspots  
August 1, 2008  
2255 UT  
Bp = 05.8  
Pp = 11.3  
Lo = 016.7



2255 UT  
0453 UT LOMN PROM

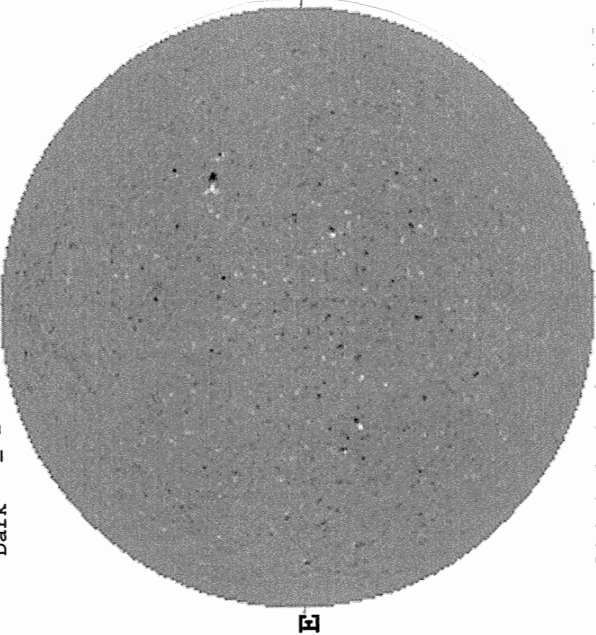
**LOMNICKY PEAK CORONA (1.04 Radii) -----**



... 50 abs. units S  
... 100 abs. units S  
05:21 UT

August 02, 2008 (P= 11.34, Bo= 5.88, Lo= 15.79)

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



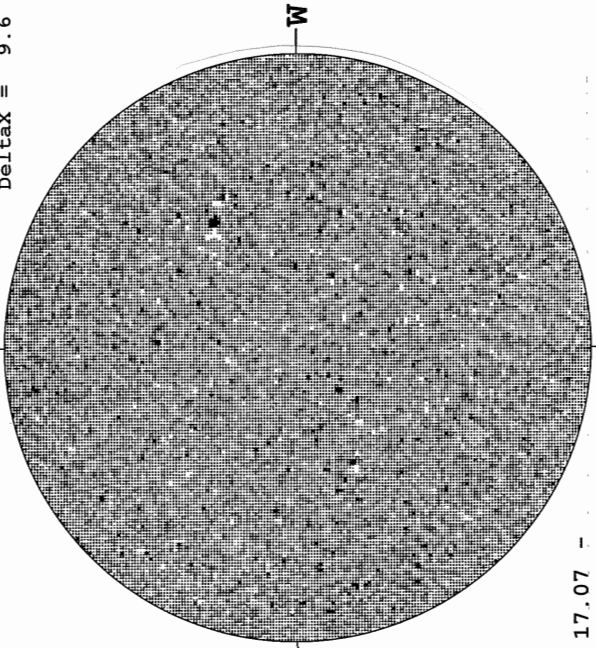
1819 UT

STANFORD MAGNETOGRAM  
 Solid = +  
 Dashed = -



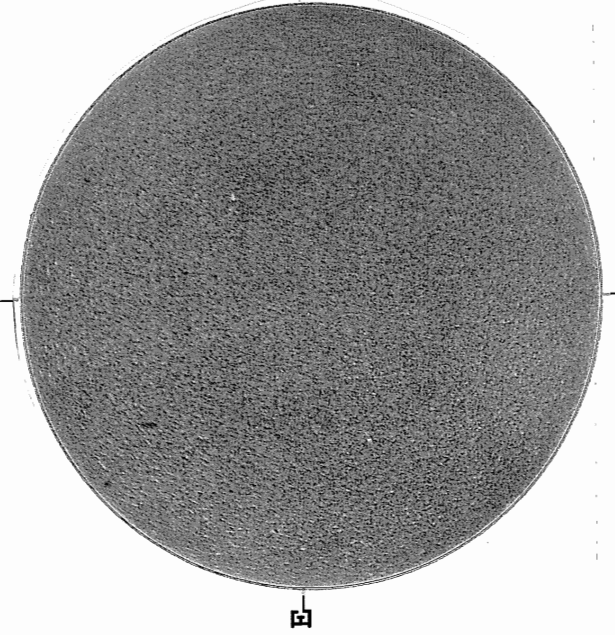
1956 UT

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



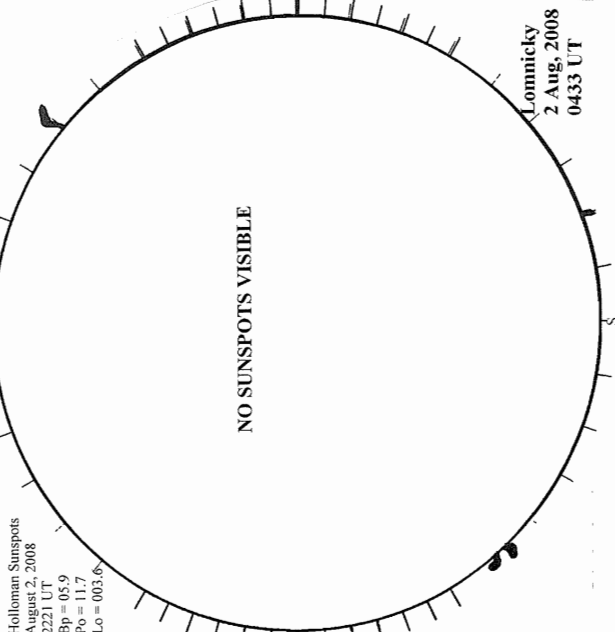
17.07 -  
17.99 UT

--- KANZELHOHE H-ALPHA



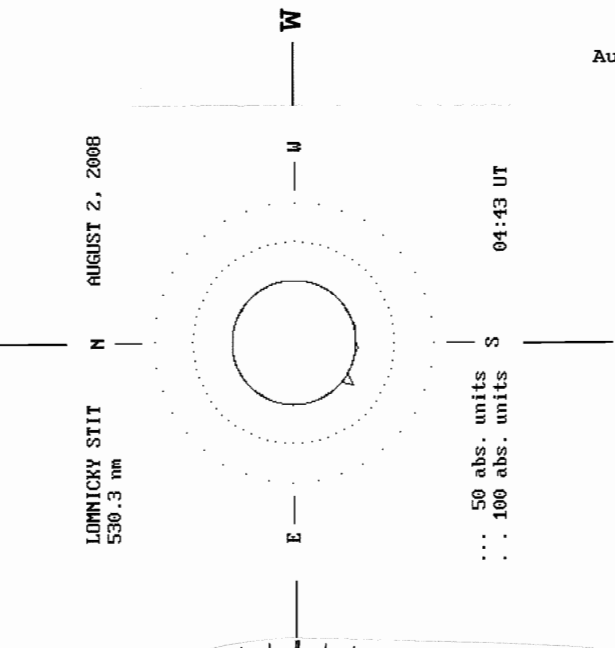
0724 UT

HOLLOMAN SUNSPOTS



2221 UT  
0433 UT LOMN PROM

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



41  
Aug 08

LOMNICKY STIT  
 530.3 nm  
 AUGUST 2, 2008

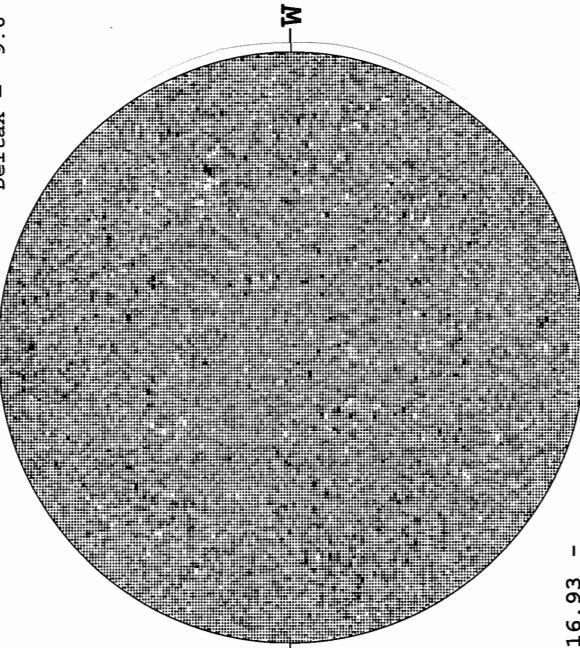
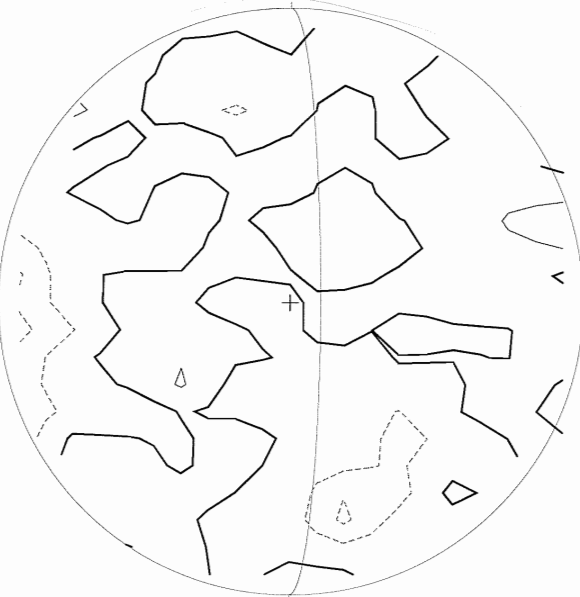
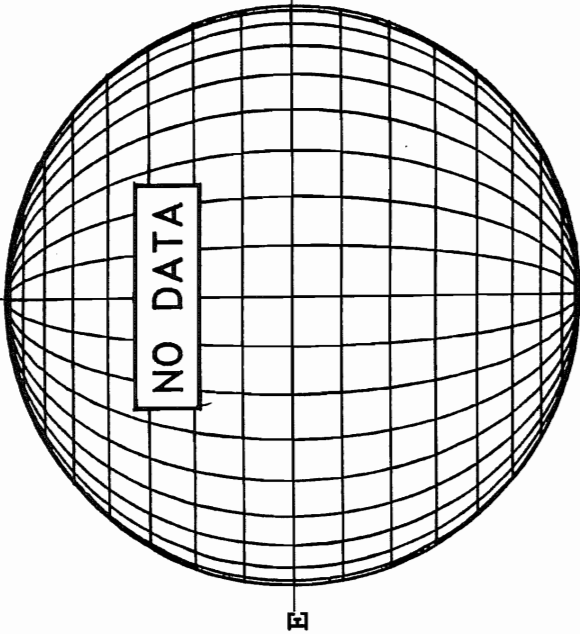
... 50 abs. units  
 ... 100 abs. units  
 04:43 UT

August 03, 2008 (P= 11.73, Bo= 5.95, Lo= 2.57)

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

STANFORD MAGNETOGRAM  
Solid = +  
Dashed = -

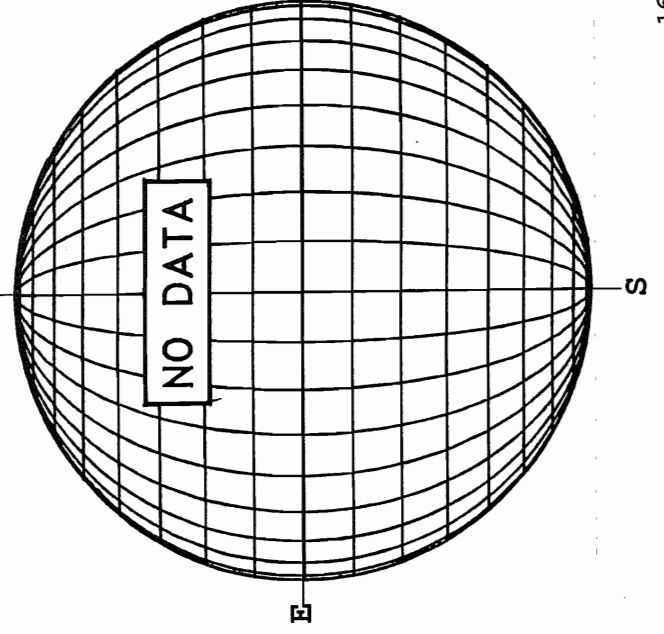
MT. WILSON MAGNETOGRAM  
White = +7.5G  
Black = -7.5G  
DeltaY = 13.1  
DeltaX = 9.6



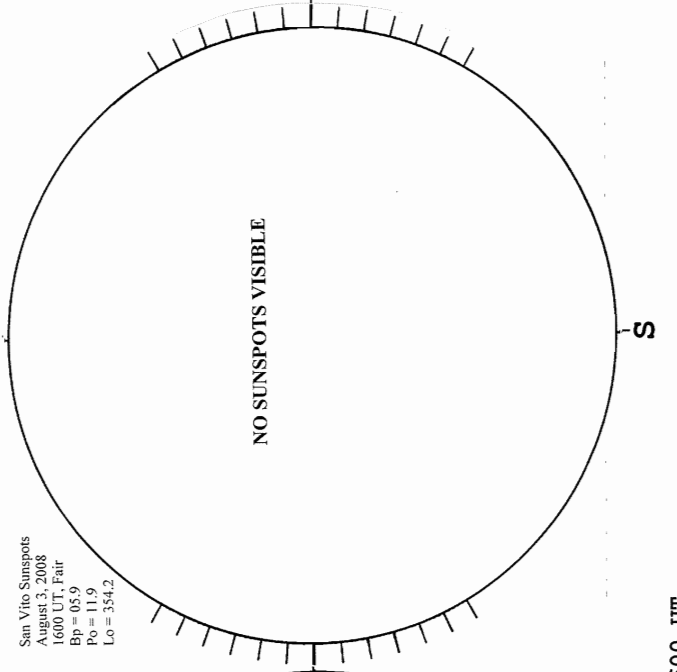
16.93 -  
17.85 UT

1957 UT

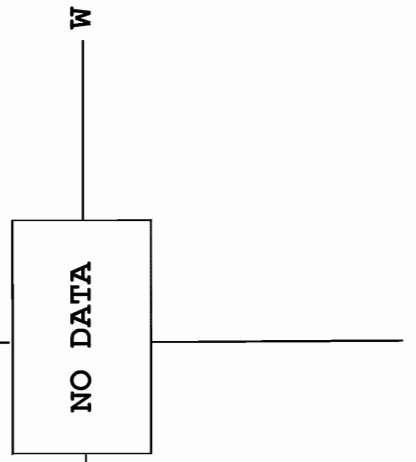
---  
BIG BEAR H-ALPHA



SAN VITO SUNSPOTS



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

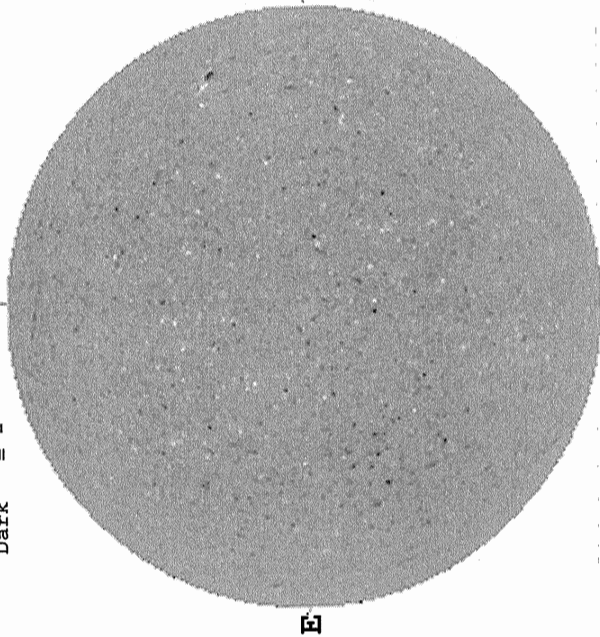


San Vito Sunspots  
August 3, 2008  
1600 UT, Fair  
Bp = 05.9  
Po = 11.9  
Lo = 354.2

1600 UT

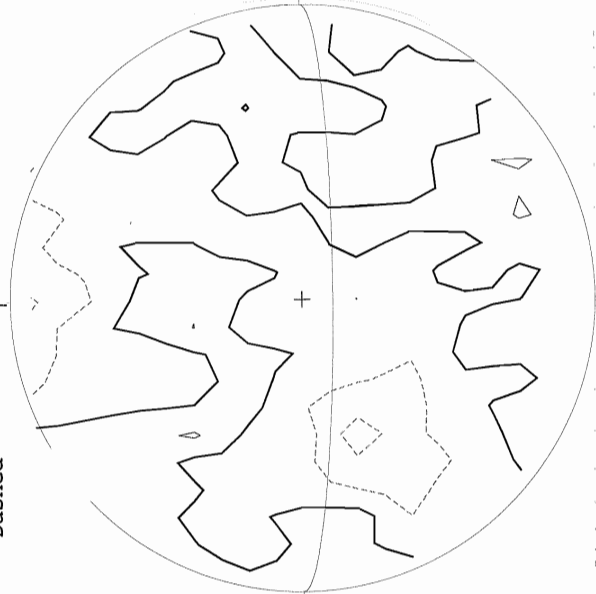
August 04, 2008 (P= 12.12, Bo= 6.02, Lo= 349.34)

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



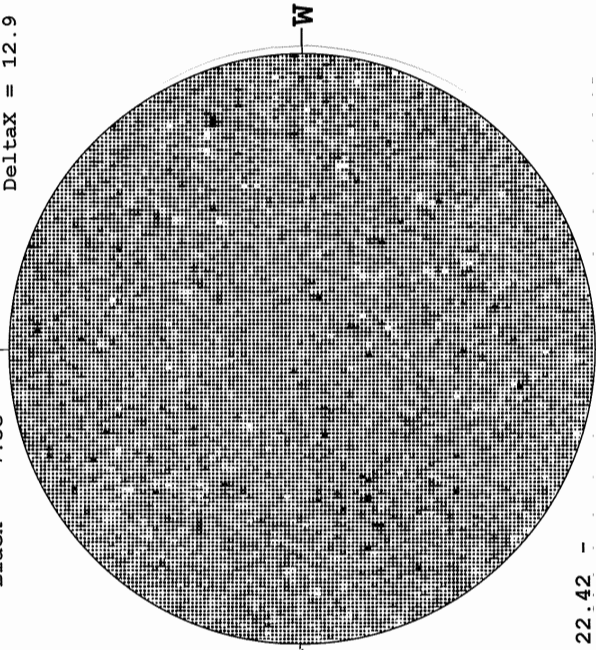
2153 UT

STANFORD MAGNETOGRAM  
 Solid = + N  
 Dashed = -



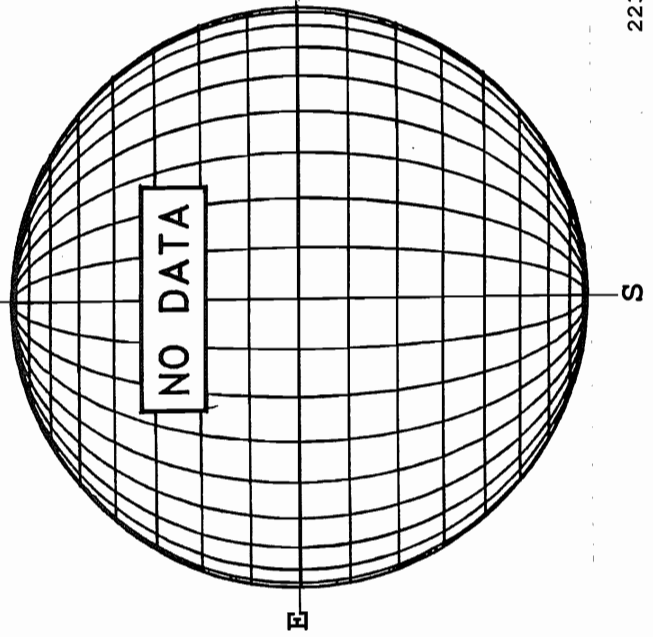
2137 UT

MT. WILSON MAGNETOGRAM  
 White = +7.5G N  
 Black = -7.5G  
 DeltaY = 20.3  
 DeltaX = 12.9



22:42 -  
 22:82 UT

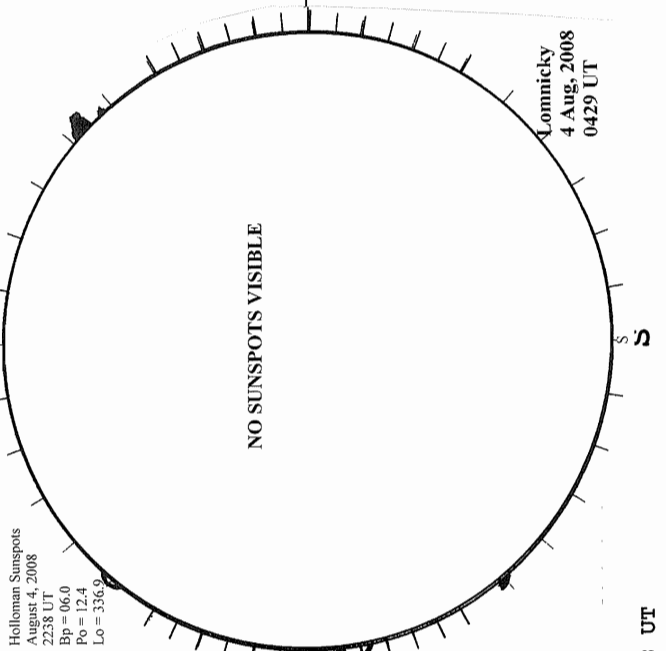
--- BIG BEAR H-ALPHA



2238 UT  
 0429 UT LOMN FROM

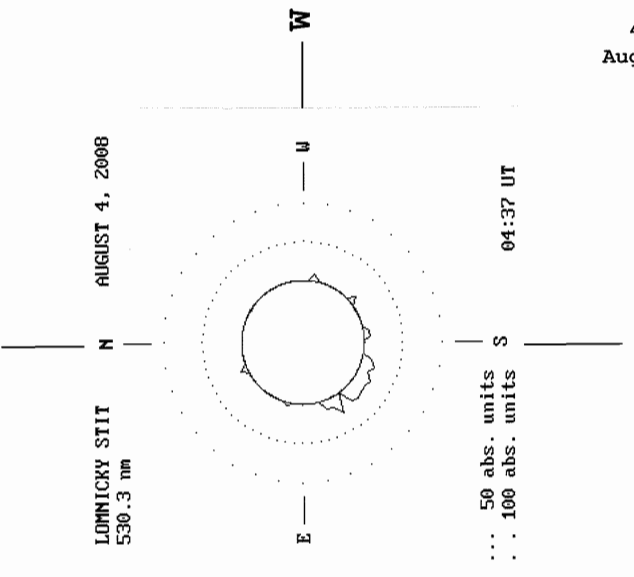
HOLLOMAN SUNSPOTS

Holloman Sunspots  
 August 4, 2008  
 2238 UT  
 Bp = 06.0  
 Po = 12.4  
 Lo = 336.9



Lomnický  
 4 Aug, 2008  
 0429 UT

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



... 50 abs. units  
 ... 100 abs. units  
 04:37 UT

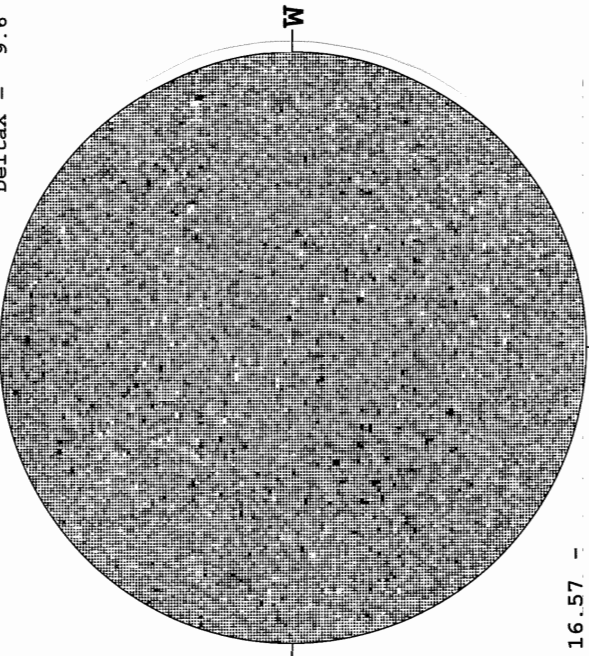
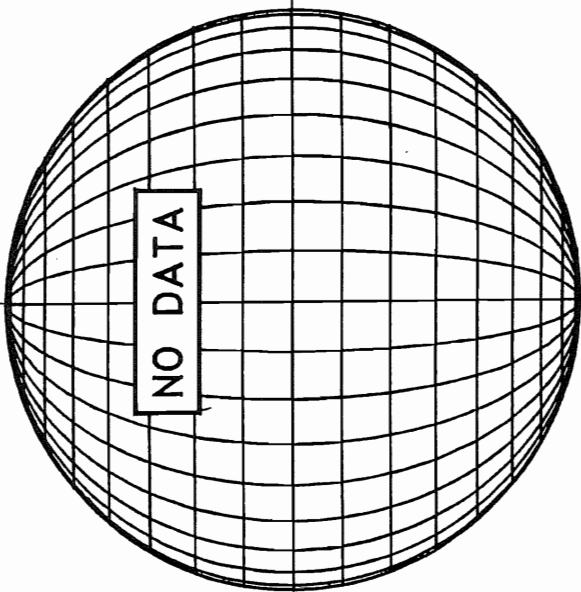
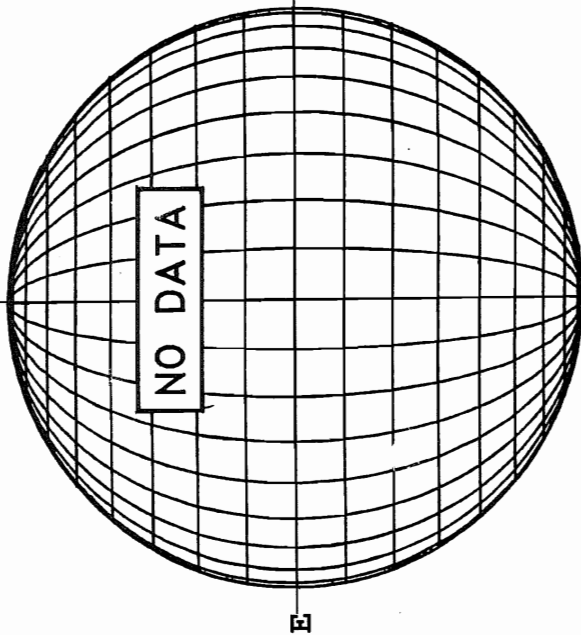
44  
Aug 08

August 05, 2008 (P= 12.50, Bo= 6.08, Lo= 336.12)

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

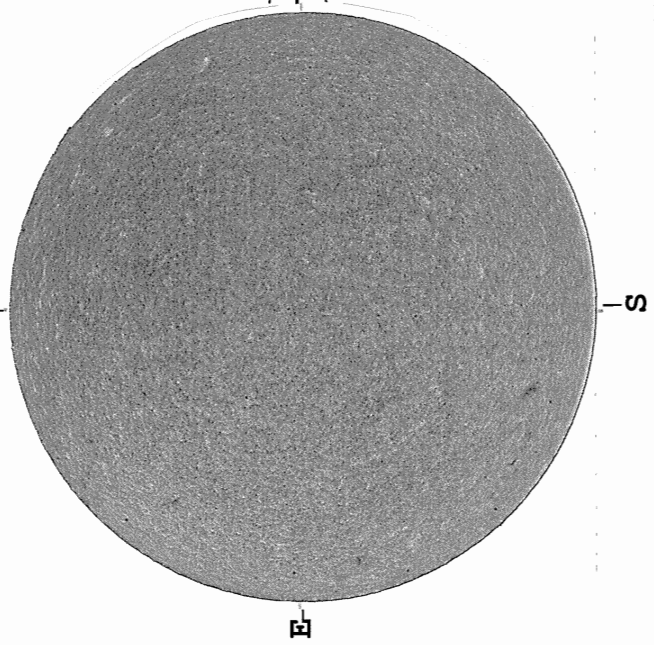
STANFORD MAGNETOGRAM  
Solid = +  
Dashed = -

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



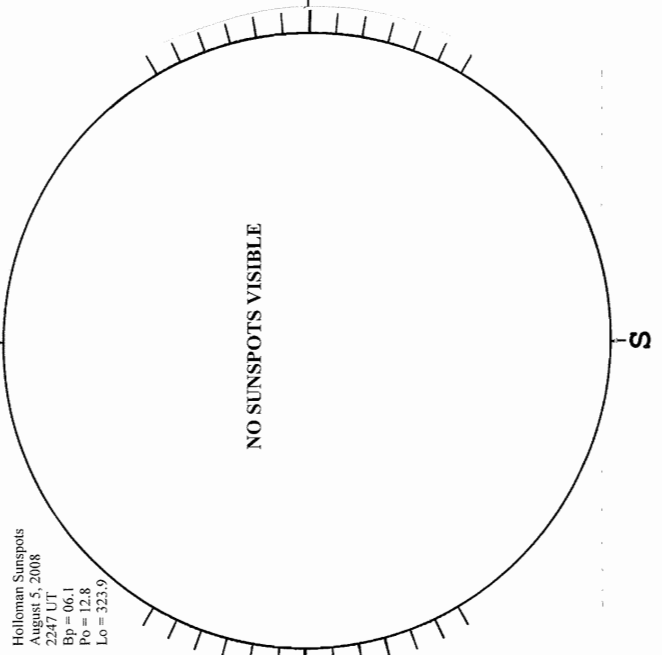
16.57 -  
17.49 UT

BIG BEAR H-ALPHA



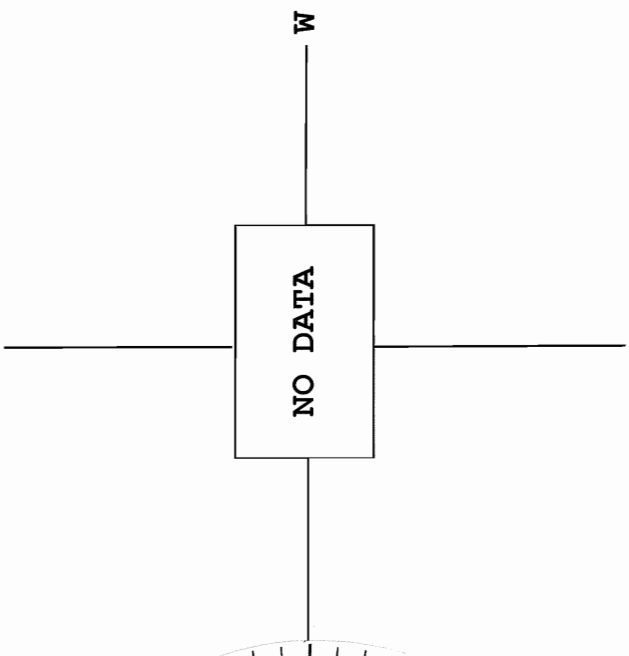
1638 UT

HOLLOMAN SUNSPOTS



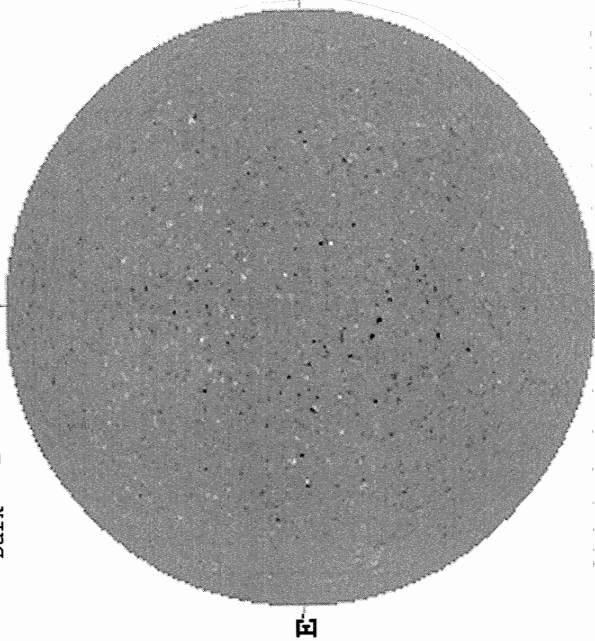
2247 UT

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



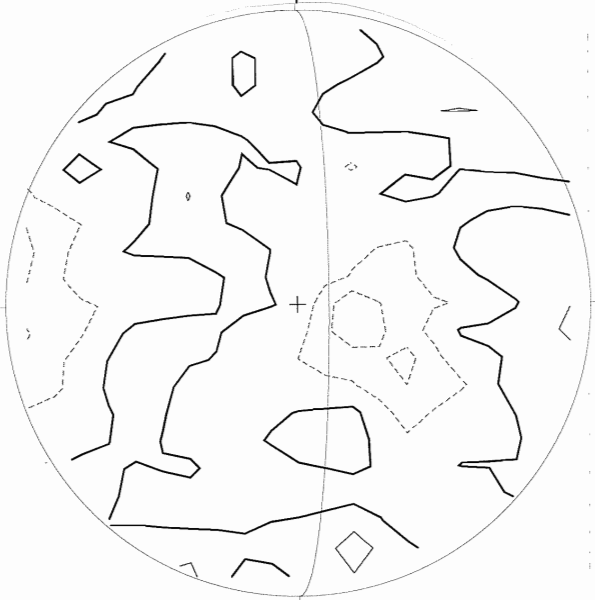
August 06, 2008 (P= 12.88, Bo= 6.15, Lo= 322.90)

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



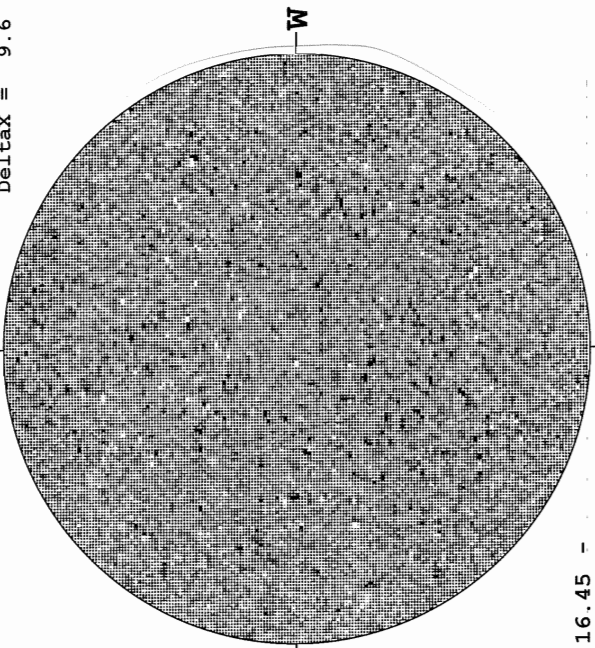
1541 UT

STANFORD MAGNETOGRAM  
 Solid = +  
 Dashed = -



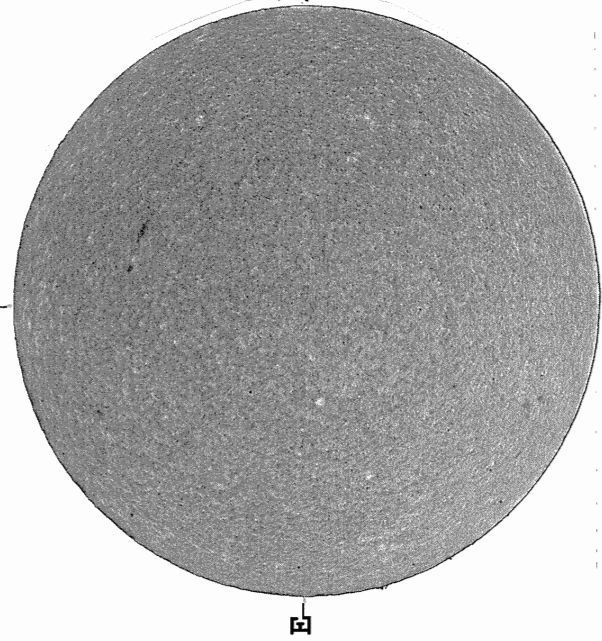
2009 UT

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



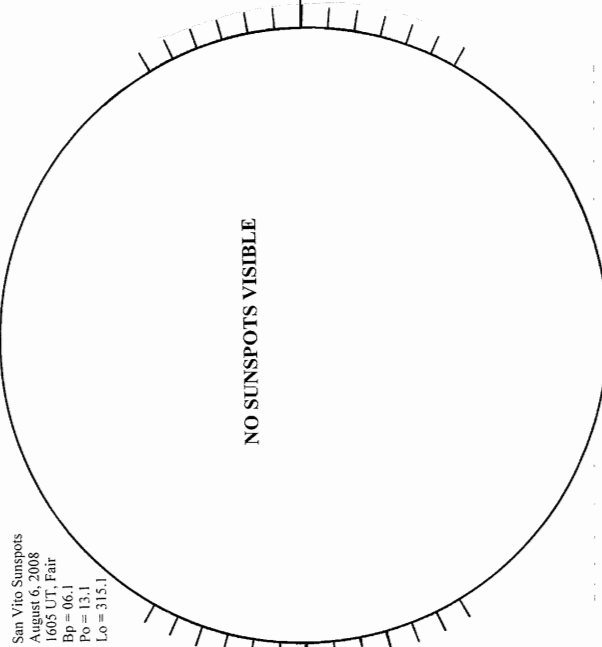
16.45 -  
 17.37 UT

BIG BEAR H-ALPHA



1538 UT

SAN VITO SUNSPOTS



1605 UT

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

NO DATA

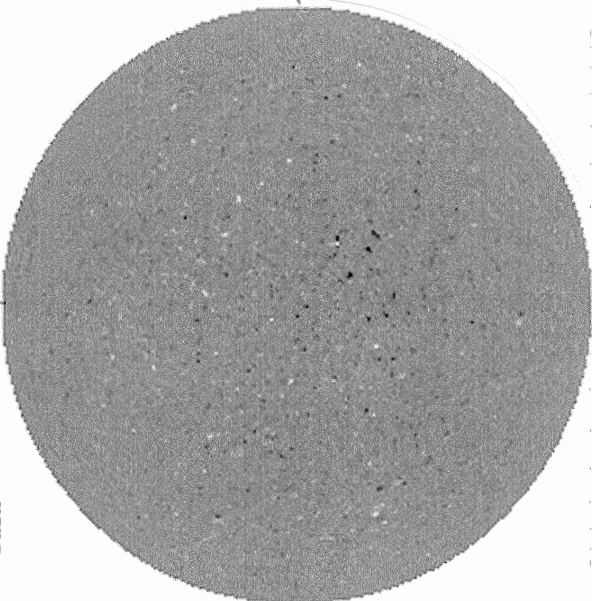
Aug 08 46

August 07, 2008 (P= 13.26, Bo= 6.21, Lo= 309.67)

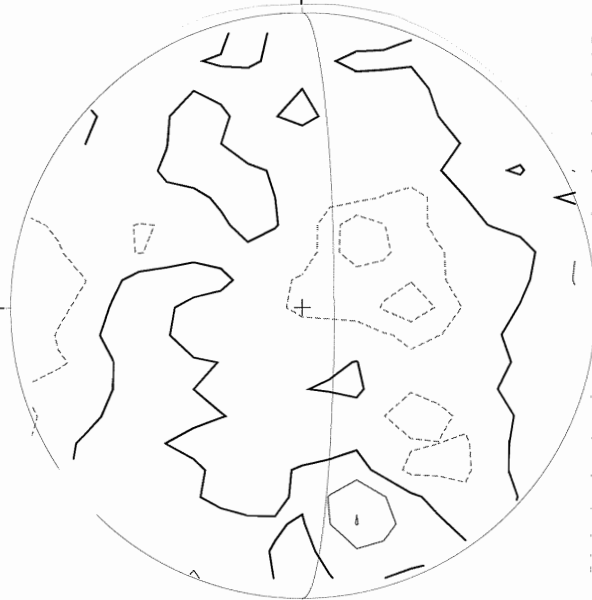
KITT PEAK MAGNETOGRAM -- SOLIS  
Bright = +  
Dark = -

STANFORD MAGNETOGRAM  
Solid = +  
Dashed = -

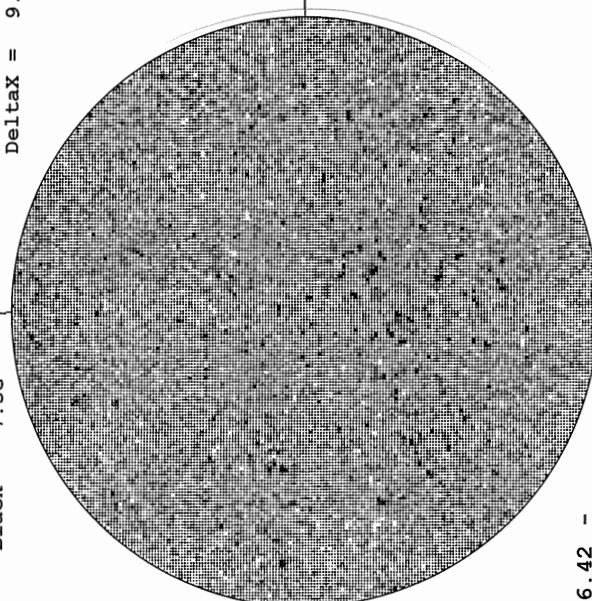
MT. WILSON MAGNETOGRAM  
White = +7.5G  
Black = -7.5G  
DeltaY = 13.1  
DeltaX = 9.6



2011 UT

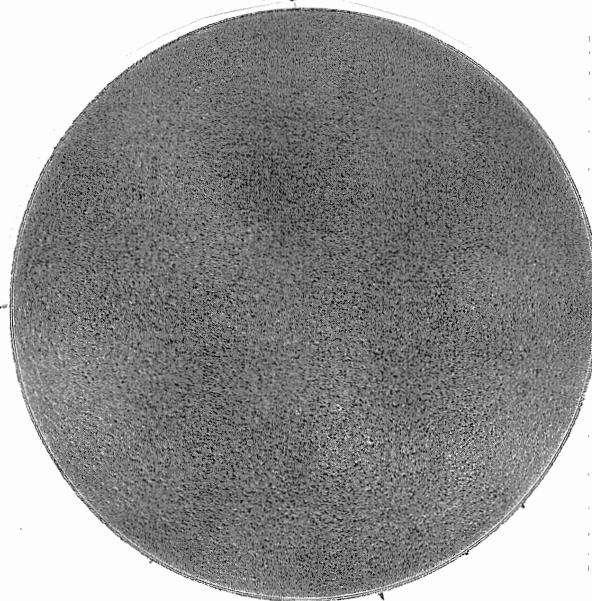


2110 UT



16.42 -  
17.34 UT

--- KANZELHOHE H-ALPHA

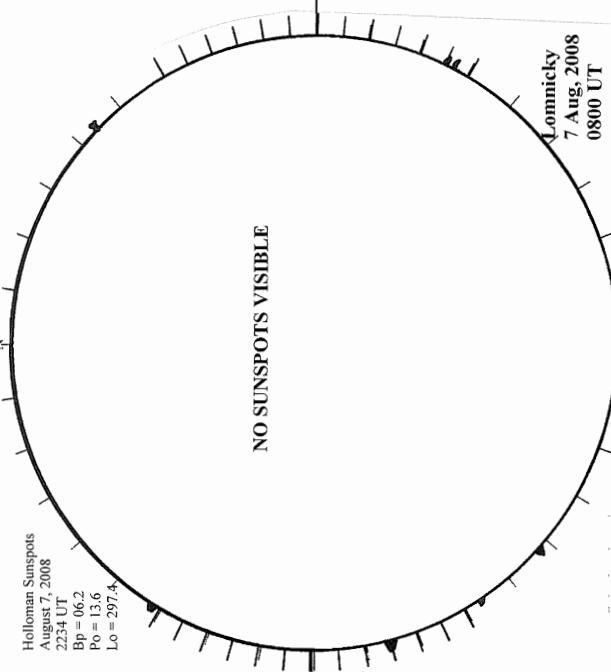


0849 UT

HOLLOMAN SUNSPOTS

Holloman Sunspots  
August 7, 2008  
2234 UT  
Bp = 06.2  
Po = 13.6  
Lo = 297.4

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



2234 UT  
0800 UT LOMN PROM

NO DATA

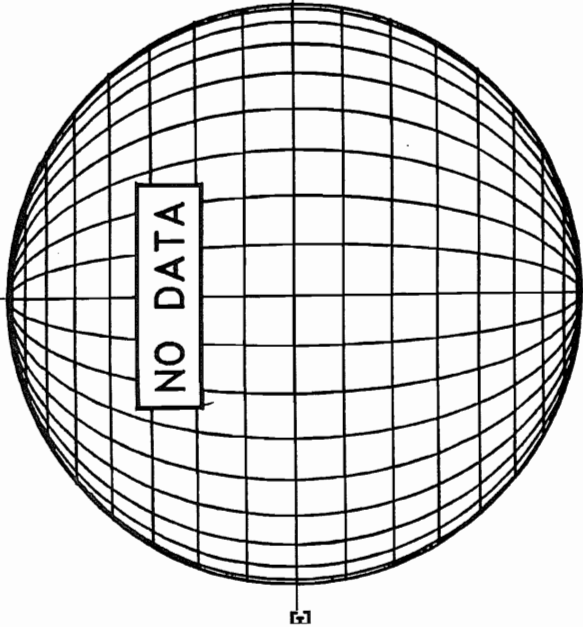
W

LOMNICKY  
7 Aug, 2008  
0800 UT

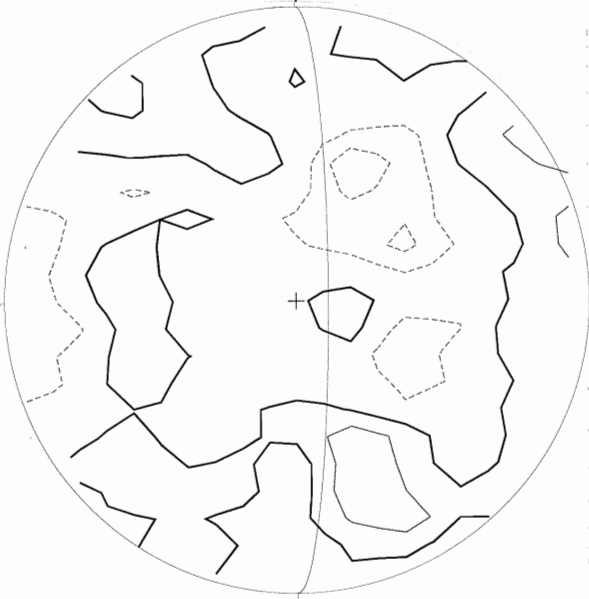
0800 UT LOMN PROM

August 08, 2008 (P= 13.63, Bo= 6.27, Lo= 296.45)

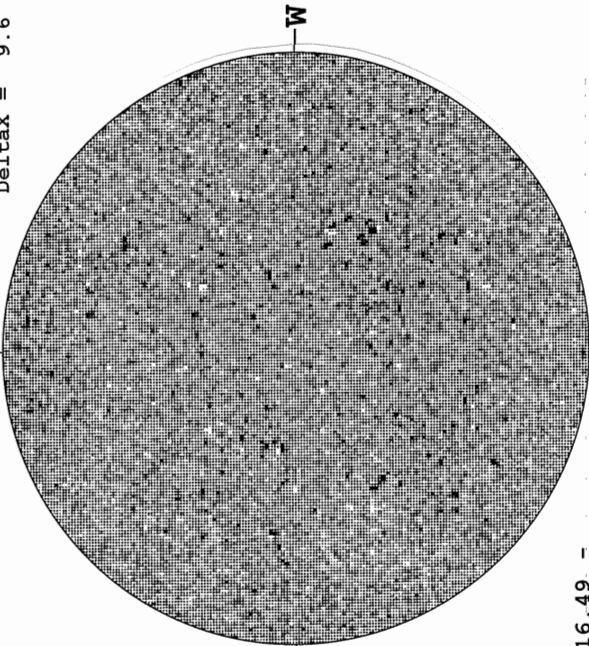
KITT PEAK MAGNETOGRAM -- SOLIS  
Bright = +  
Dark = -



STANFORD MAGNETOGRAM  
Solid = +  
Dashed = -



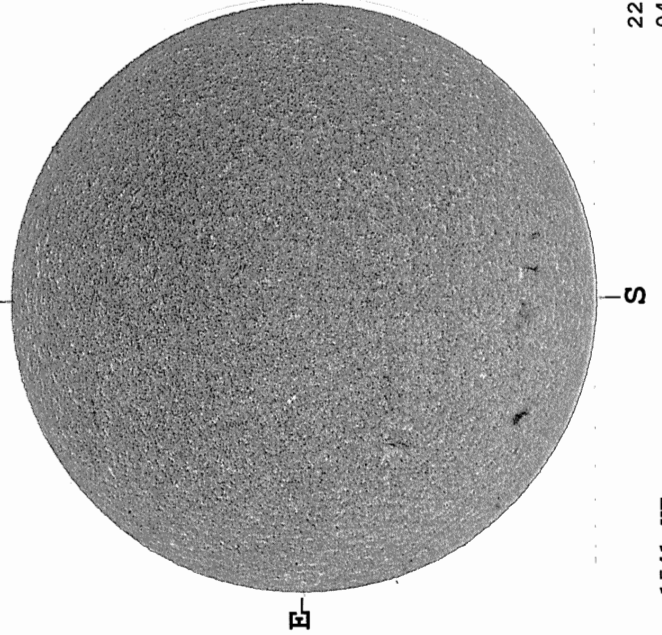
MT. WILSON MAGNETOGRAM  
White = +7.5G  
Black = -7.5G  
DeltaY = 13.1  
DeltaX = 9.6



16.49 -  
17.41 UT

2025 UT

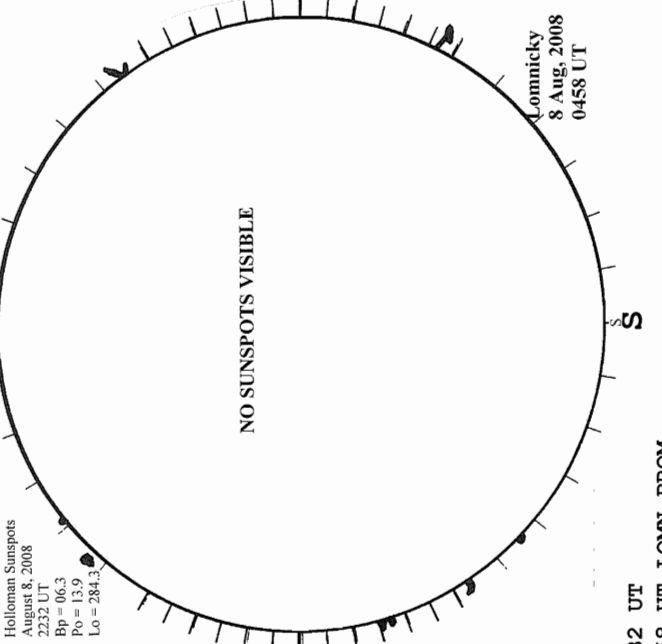
--- BIG BEAR H-ALPHA



1541 UT

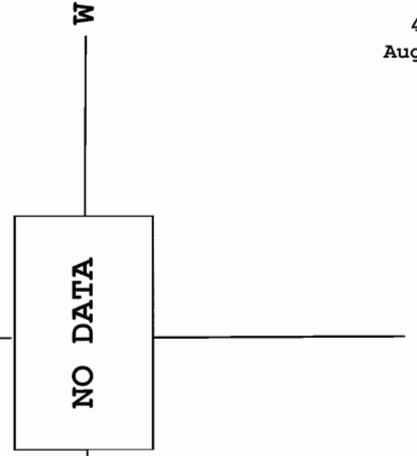
HOLLOMAN SUNSPOTS

Holloman Sunspots  
August 8, 2008  
2232 UT  
Bp = 06.3  
Po = 15.9  
Lo = 284.3



2232 UT  
0458 UT LOWN PROM

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

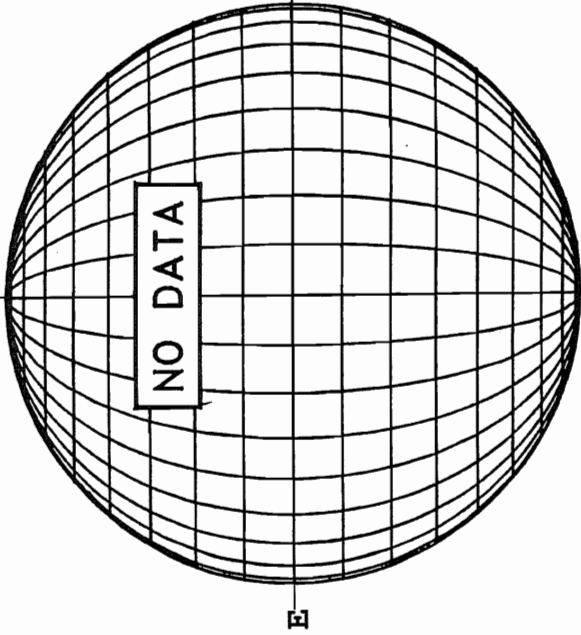


47  
Aug 08

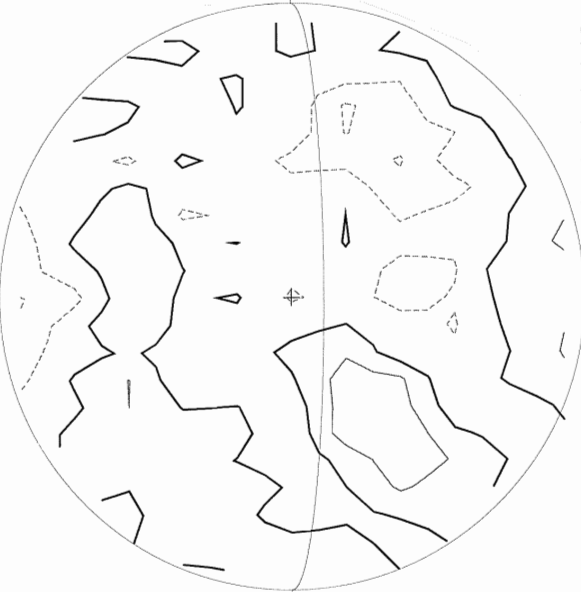


August 09, 2008 (P= 13.99, Bo= 6.33, Lo= 283.23)

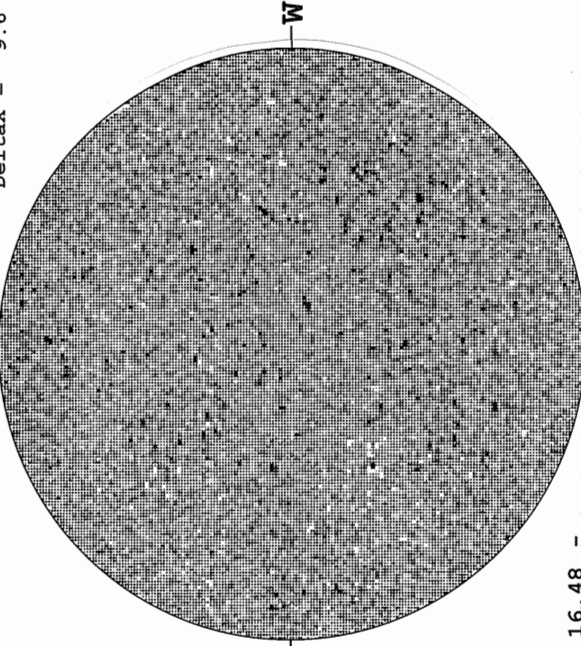
KITT PEAK MAGNETOGRAM -- SOLIS  
Bright = + \*\* 854.2NM \*\*  
Dark = -



STANFORD MAGNETOGRAM  
Solid = +  
Dashed = -



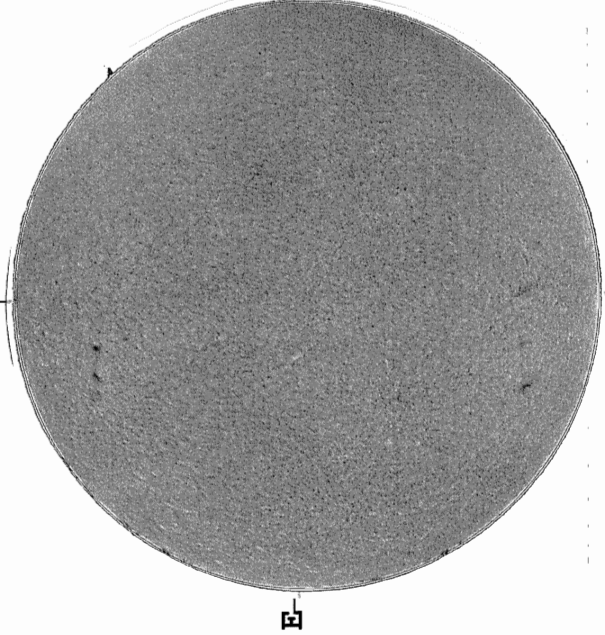
MT. WILSON MAGNETOGRAM  
White = +7.5G  
Black = -7.5G  
DeltaY = 13.1  
DeltaX = 9.6



16.48 -  
17.41 UT

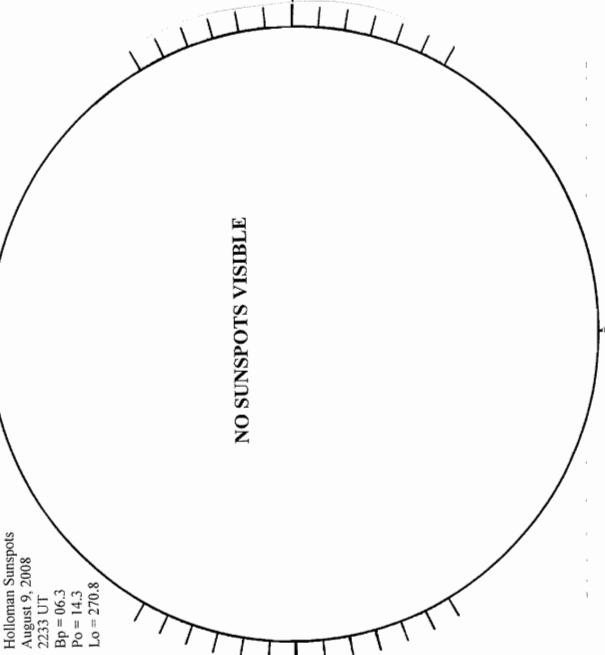
2234 UT

KANZELHOHE H-ALPHA



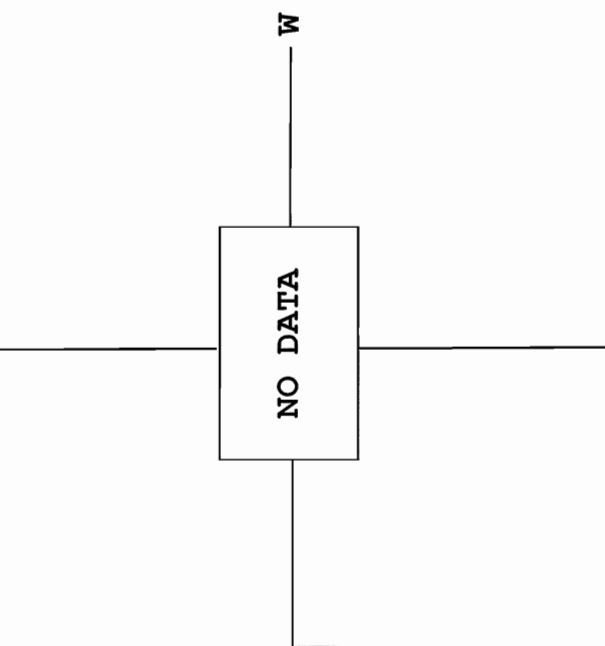
0613 UT

HOLLOMAN SUNSPOTS



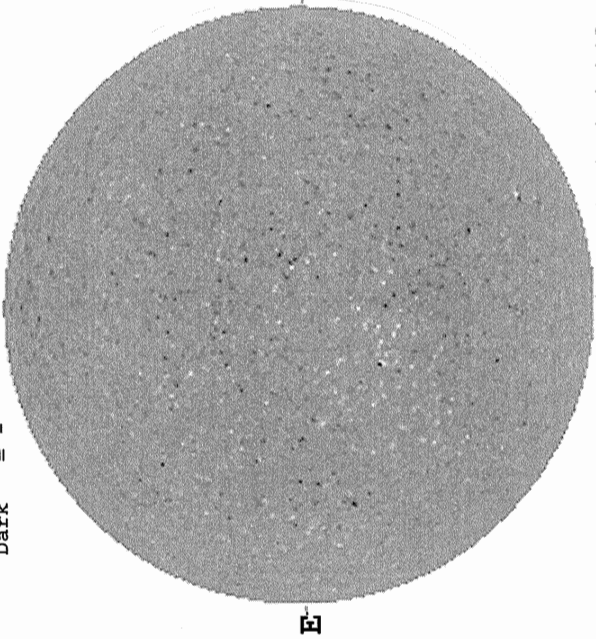
2233 UT

SACRAMENTO PEAK CORONA (1.15 Radii) ----



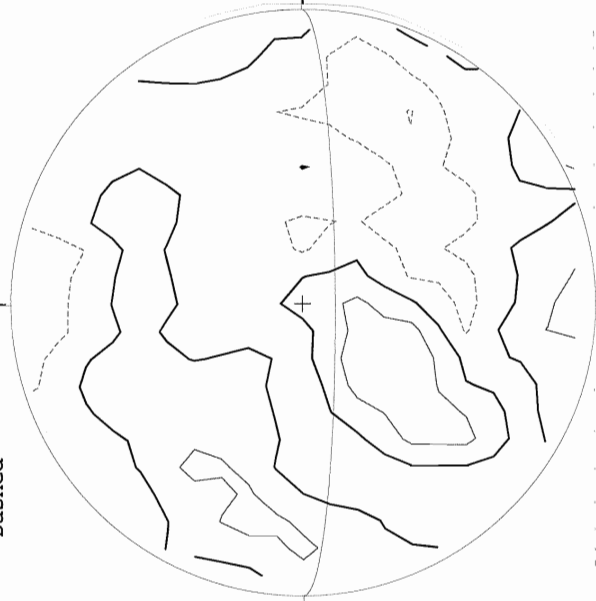
August 10, 2008 (P= 14.36, Bo= 6.39, Lo= 270.01)

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



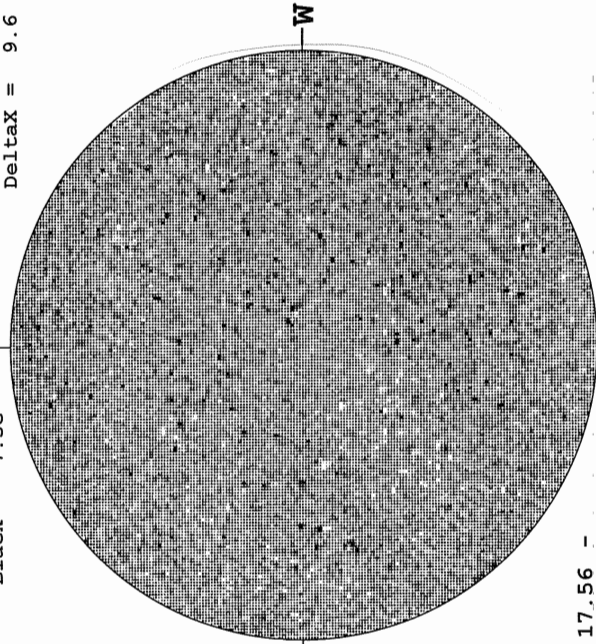
1900 UT

STANFORD MAGNETOGRAM  
 Solid = +  
 Dashed = -



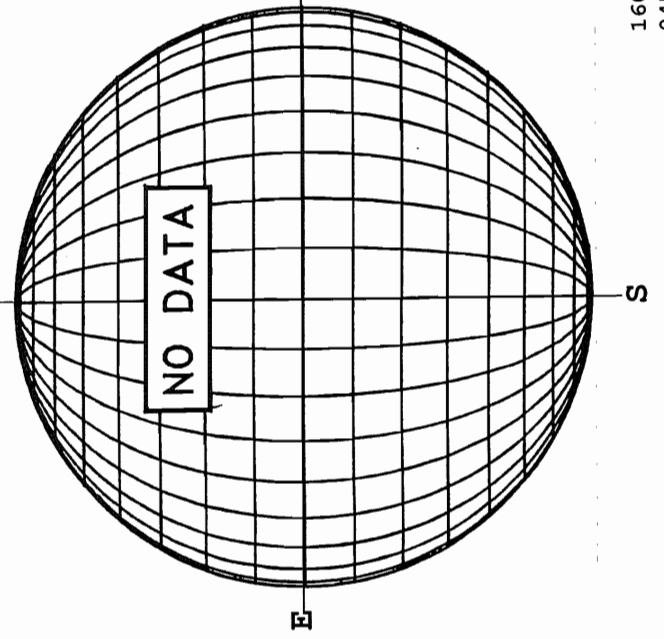
2207 UT

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



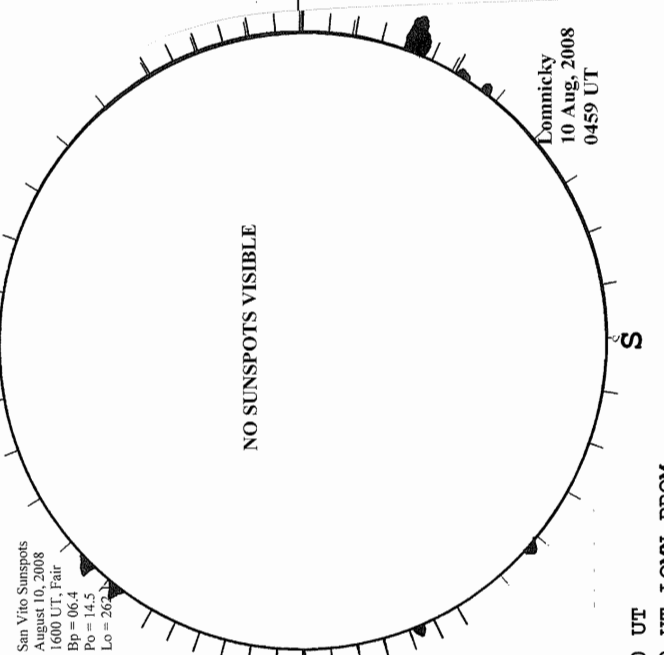
17.56 -  
 18.48 UT

--- BIG BEAR H-ALPHA



1600 UT  
 0459 UT LOMN FROM

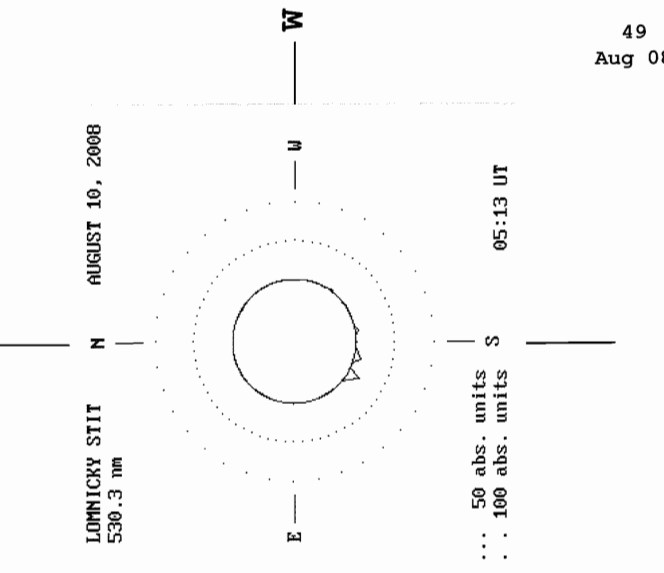
SAN VITO SUNSPOTS



San Vito Sunspots  
 August 10, 2008  
 1600 UT, Fair  
 Bp = 06.4  
 Po = 14.5  
 Lo = 262 N

Lomnický  
 10 Aug, 2008  
 0459 UT

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



LOMNICKY STIT  
 530.3 nm  
 AUGUST 10, 2008

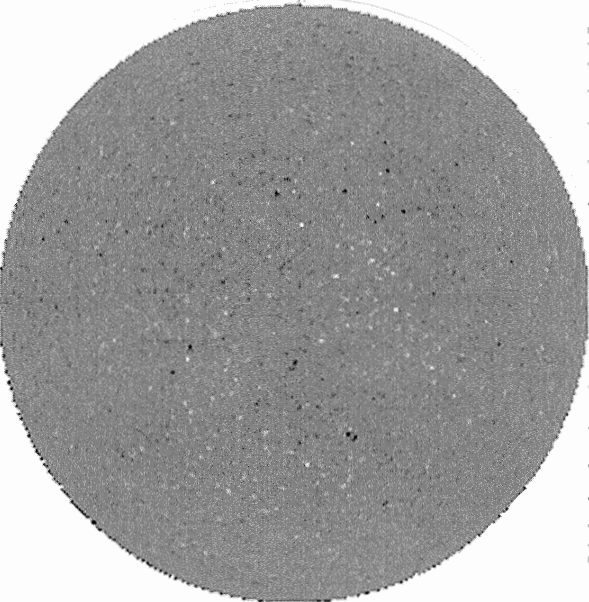
... 50 abs. units S  
 . . . 100 abs. units  
 05:13 UT

50  
Aug 08

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

STANFORD MAGNETOGRAM  
Solid = +  
Dashed = -  
N

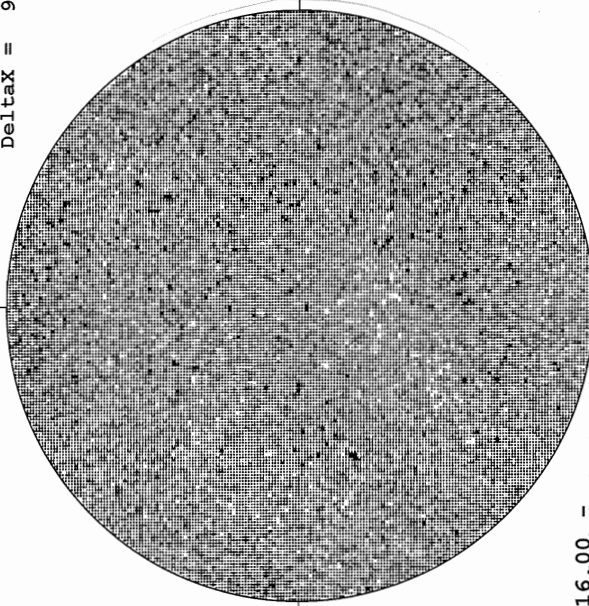
MT. WILSON MAGNETOGRAM  
White = +7.5G  
Black = -7.5G  
DeltaY = 13.1  
DeltaX = 9.6  
N



2318 UT

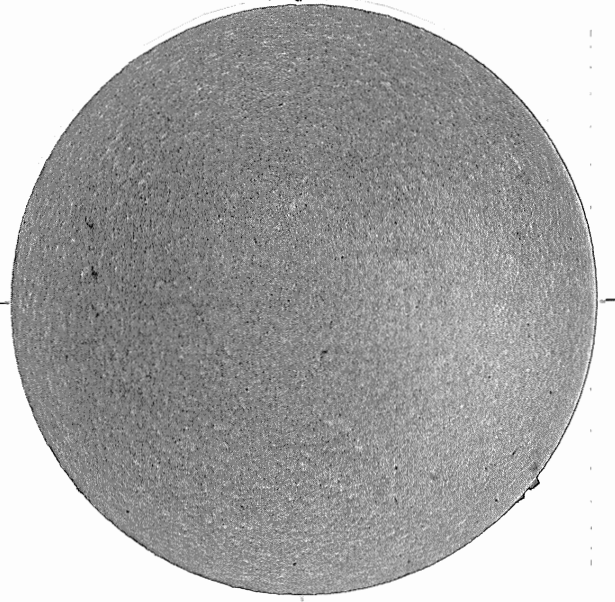


1927 UT



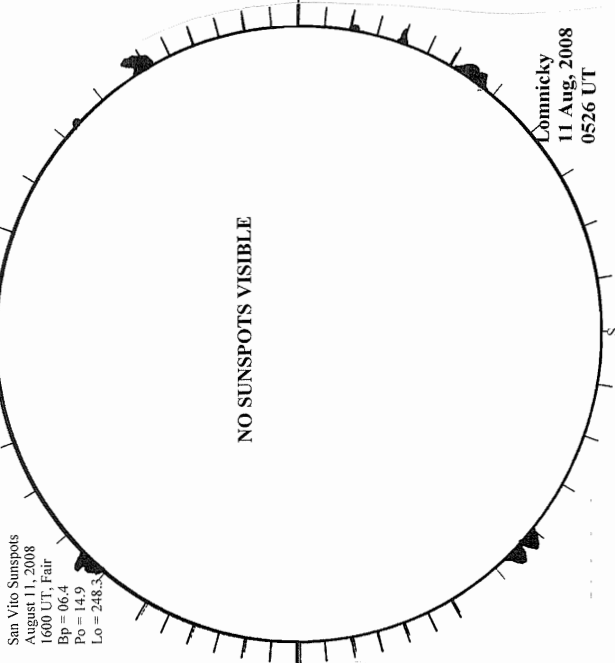
16.00 -  
16.93 UT

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BIG BEAR H-ALPHA



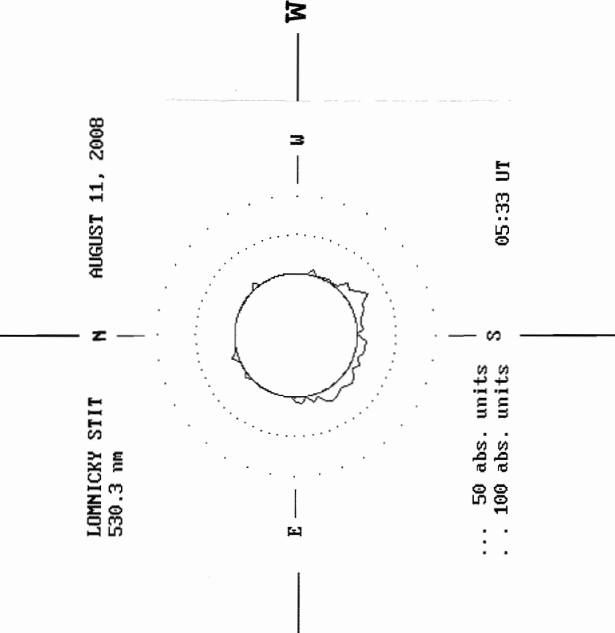
1531 UT

SAN VITO SUNSPOTS



1600 UT  
0526 UT LOMN PROM

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



... 50 abs. units  
: : 100 abs. units  
S  
05:33 UT

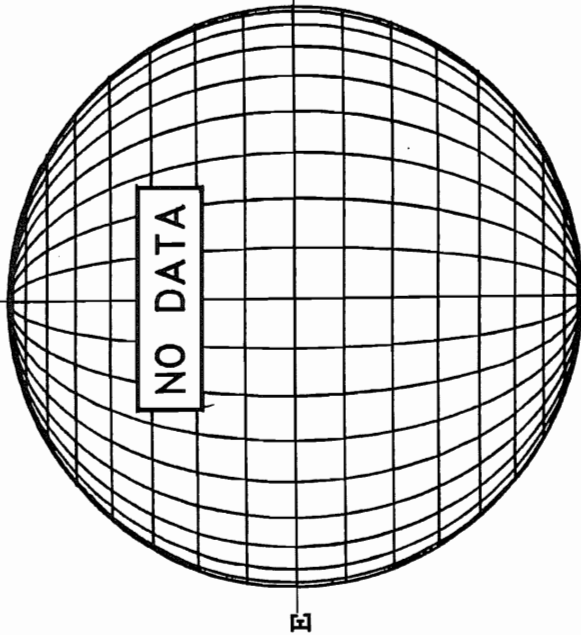
San Vito Sunspots  
August 11, 2008  
1600 UT, Fair  
Bp = 06.4  
Po = 14.9  
Lo = 248.3

Lomnicky  
11 Aug. 2008  
0526 UT

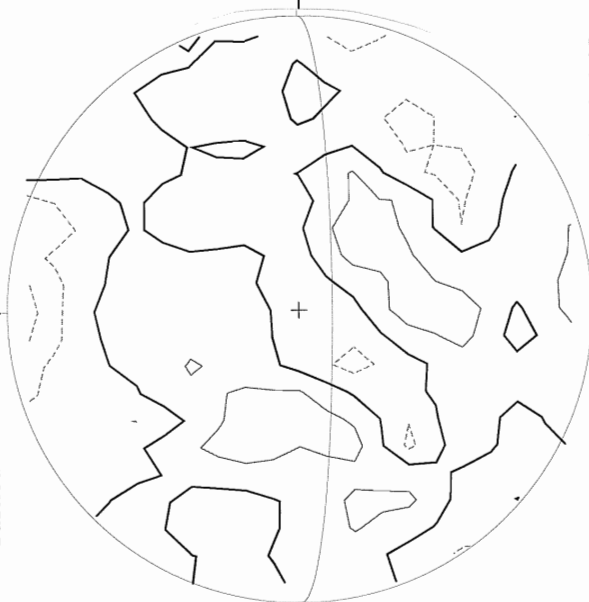
LOMNICKY STIT  
530.3 nm  
N  
AUGUST 11, 2008

August 12, 2008 (P= 15.07, Bo= 6.50, Lo= 243.57)

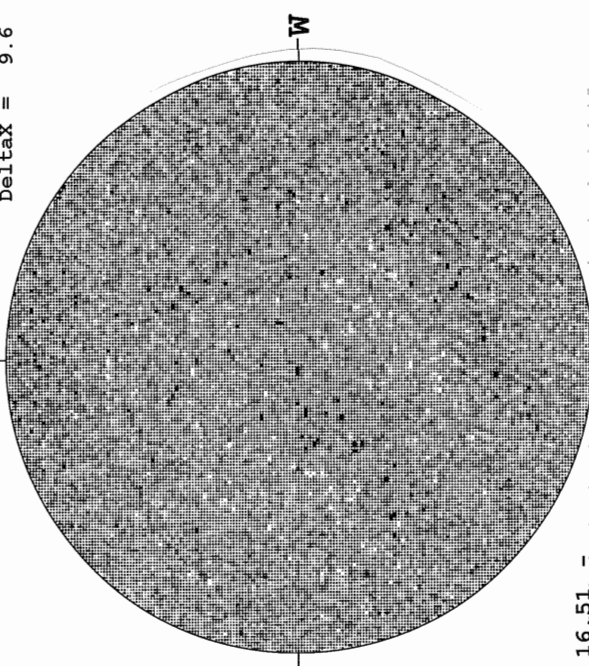
KITT PEAK MAGNETOGRAM -- SOLIS  
 Bright = + \*\* 854.2NM \*\*  
 Dark = -



STANFORD MAGNETOGRAM  
 Solid = +  
 Dashed = -



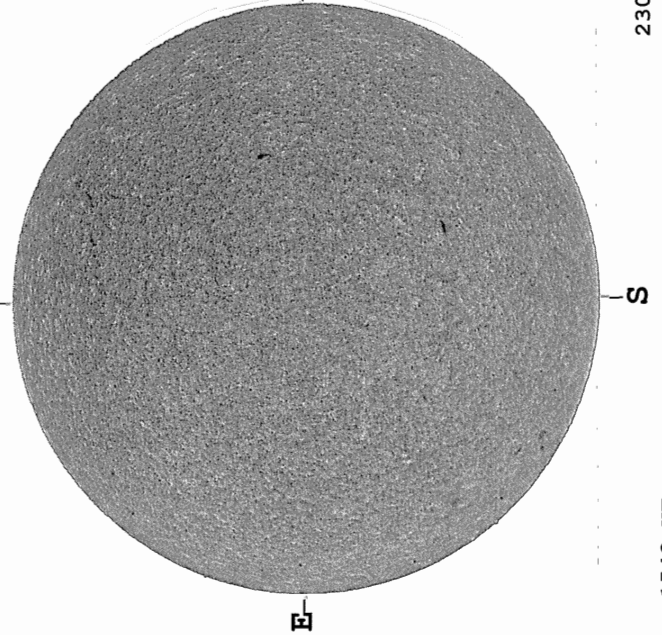
MT. WILSON MAGNETOGRAM  
 White = +7.5G  
 Black = -7.5G  
 DeltaY = 13.1  
 DeltaX = 9.6



16.51 -  
 17.43 UT

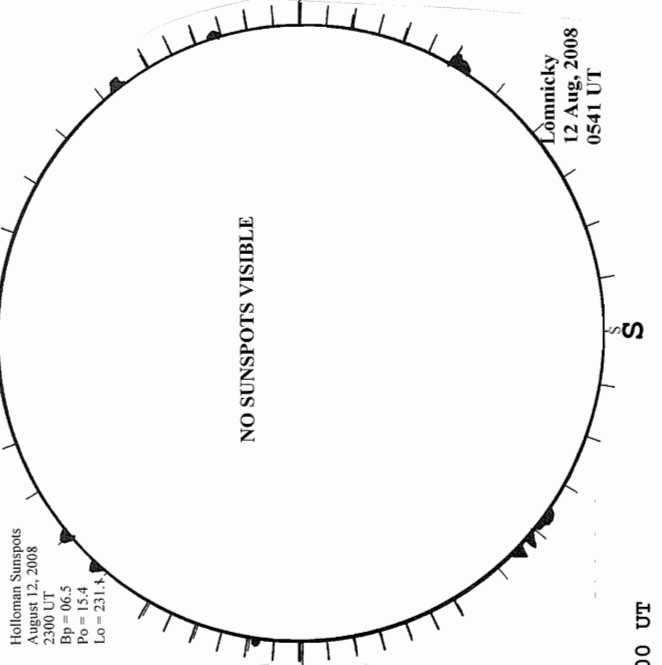
2128 UT

BIG BEAR H-ALPHA



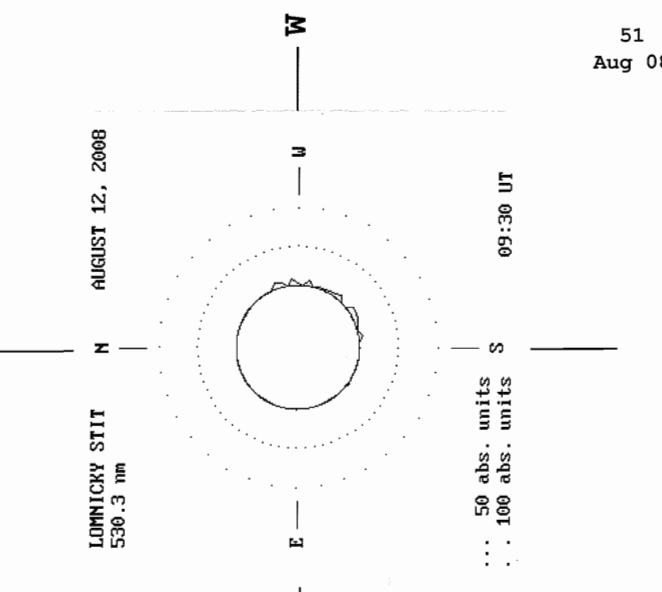
1548 UT

HOLLoman SUNSPOTS



2300 UT  
 0541 UT LOMN FROM

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



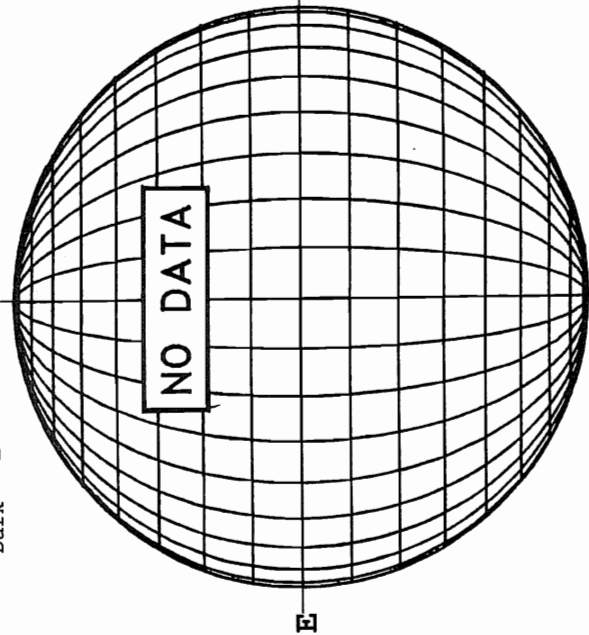
... 50 abs. units  
 ... 100 abs. units

09:30 UT

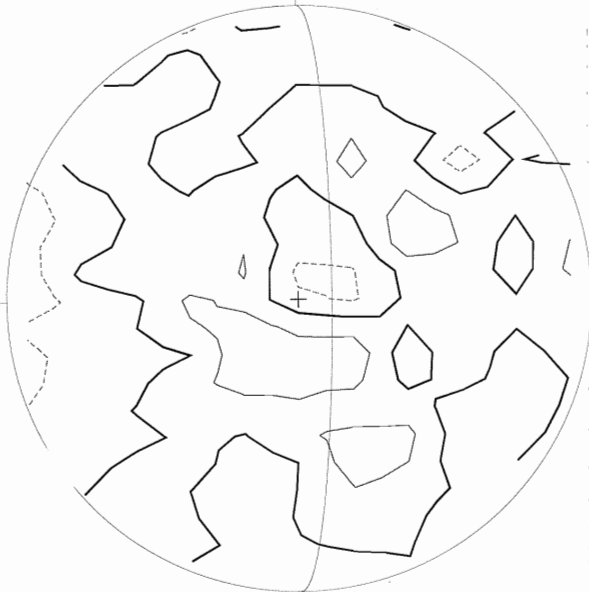
Lomnicky  
 12 Aug, 2008  
 0541 UT

August 13, 2008 (P= 15.42, Bo= 6.56, Lo= 230.35)

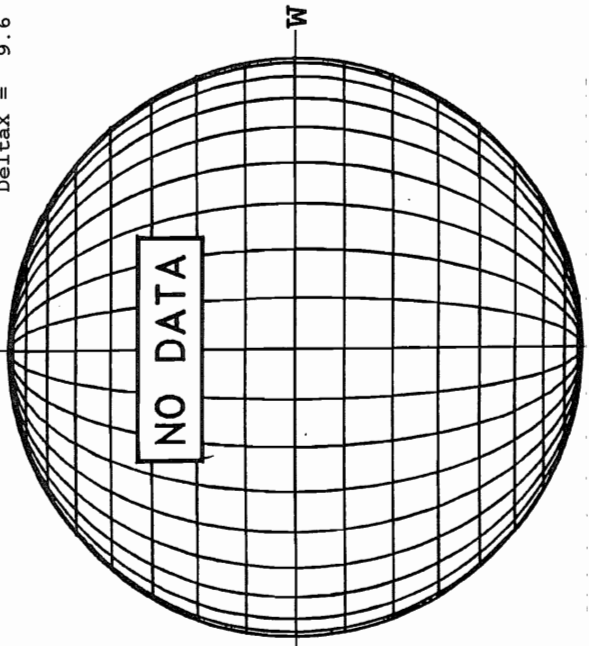
KITT PEAK MAGNETOGRAM -- SOLIS  
Bright = + \*\* 854.2NM \*\*  
Dark = -



STANFORD MAGNETOGRAM  
Solid = +  
Dashed = -

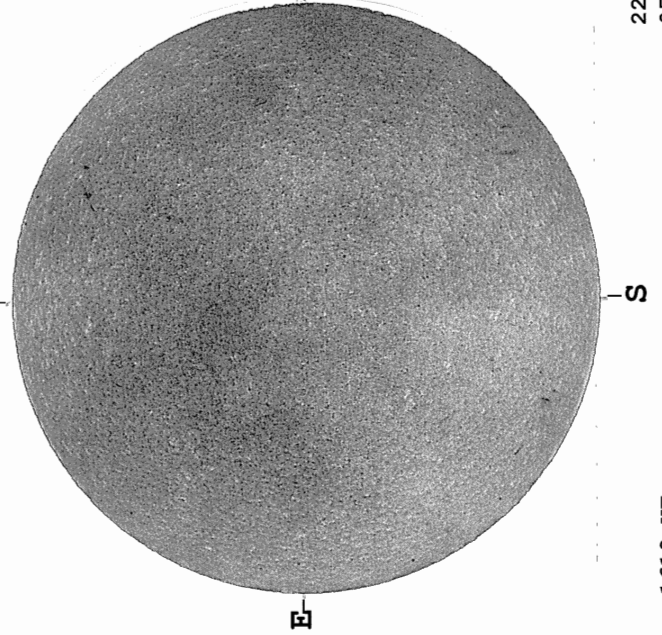


MT. WILSON MAGNETOGRAM  
White = +7.5G  
Black = -7.5G  
DeltaY = 13.1  
DeltaX = 9.6



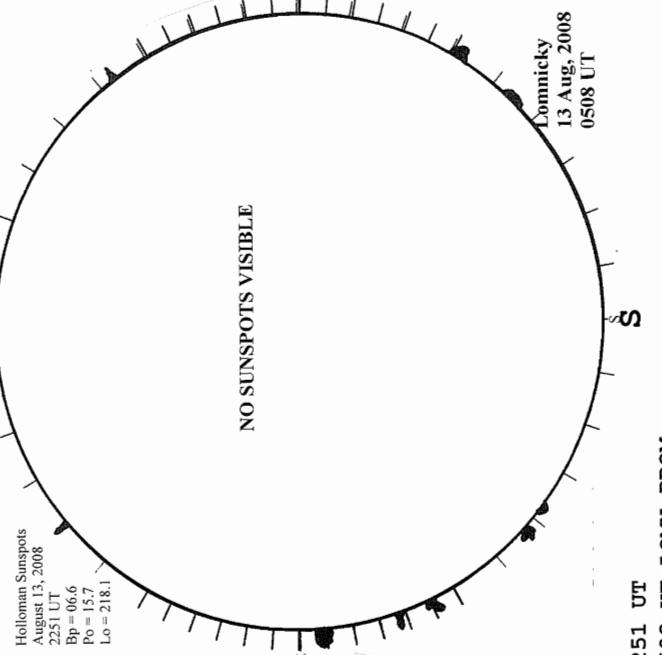
2000 UT

BIG BEAR H-ALPHA



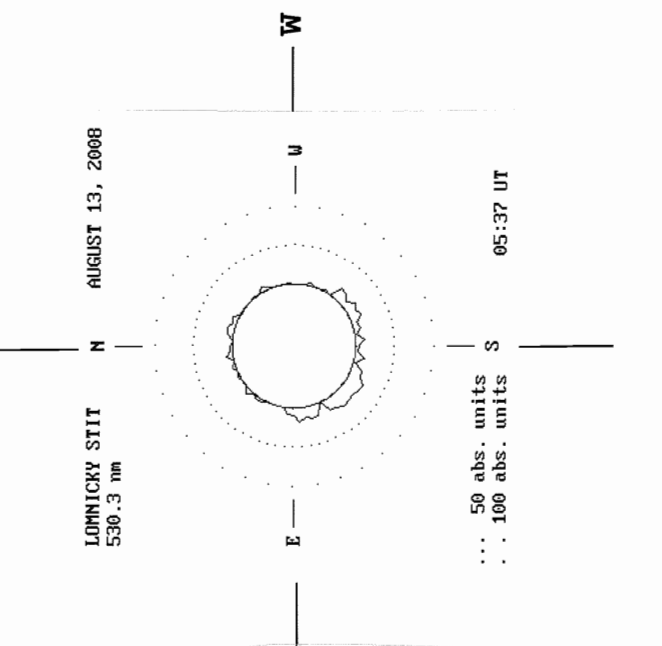
1619 UT

HOLLOMAN SUNSPOTS



2251 UT  
0508 UT LOMN PROM

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

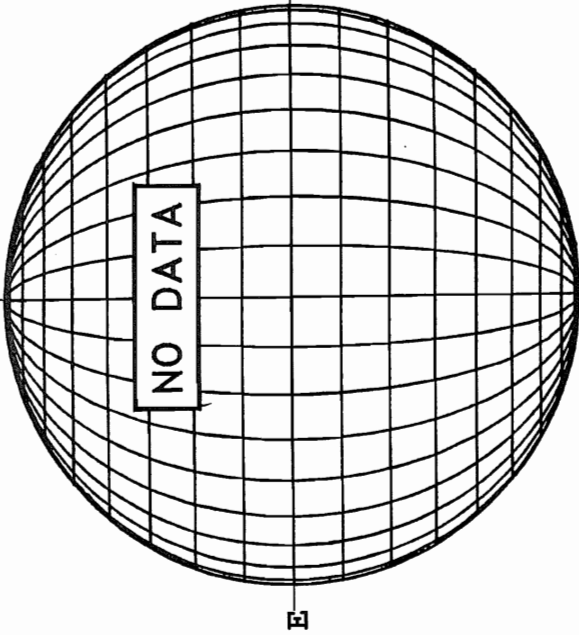


... 50 abs. units  
... 100 abs. units

05:37 UT

August 14, 2008 (P= 15.77, Bo= 6.61, Lo= 217.13)

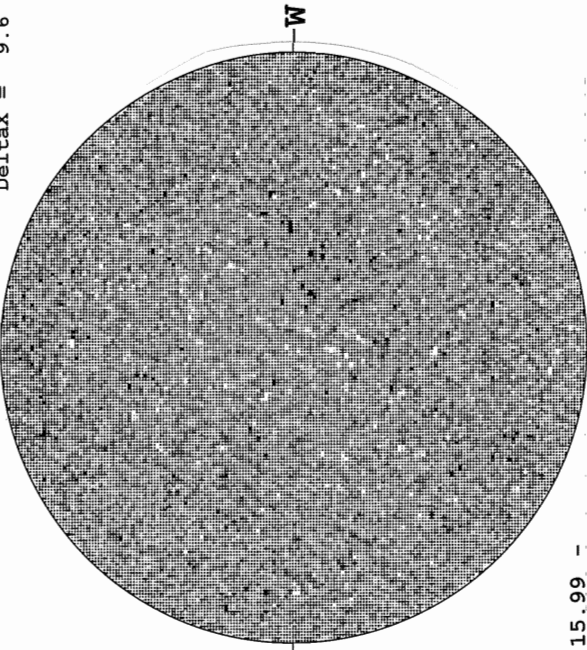
KITT PEAK MAGNETOGRAM -- SOLIS  
 Bright = +  
 Dark = -



STANFORD MAGNETOGRAM  
 Solid = +  
 Dashed = -



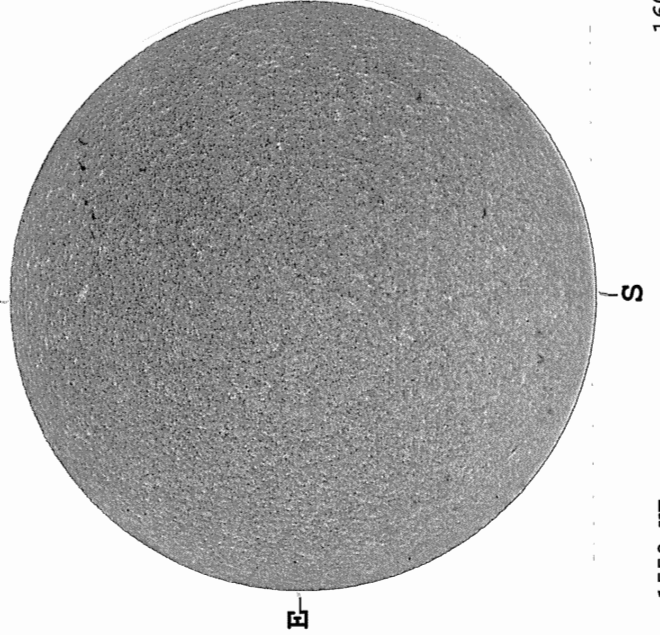
MT. WILSON MAGNETOGRAM  
 White = +7.5G  
 Black = -7.5G  
 DeltaY = 13.1  
 DeltaX = 9.6



15.99 -  
 16.94 UT

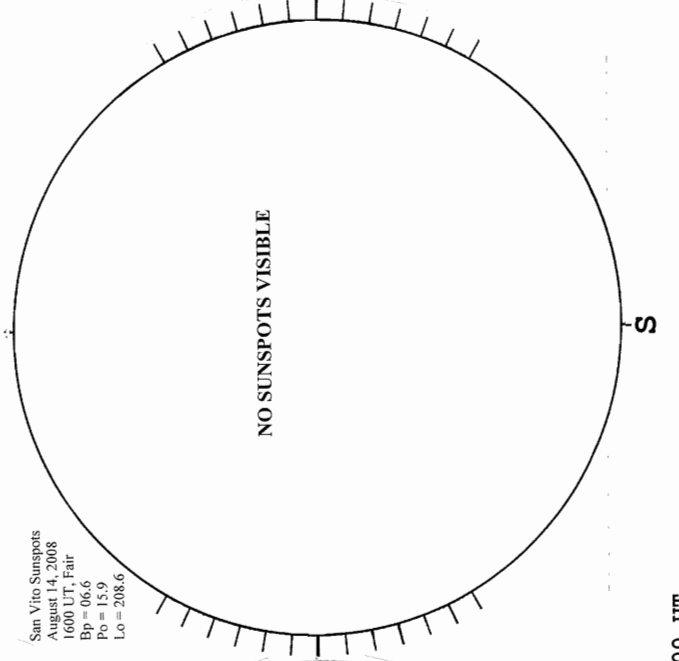
2214 UT

BIG BEAR H-ALPHA



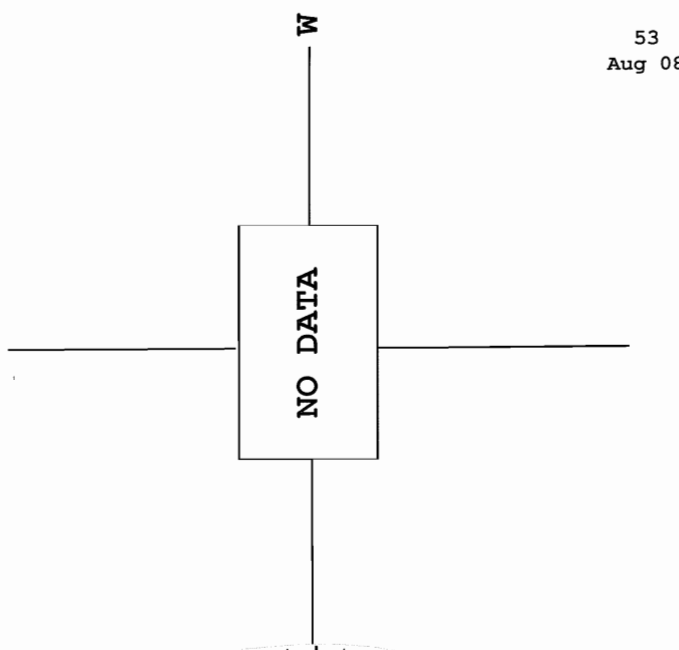
1550 UT

SAN VITO SUNSPOTS



1600 UT

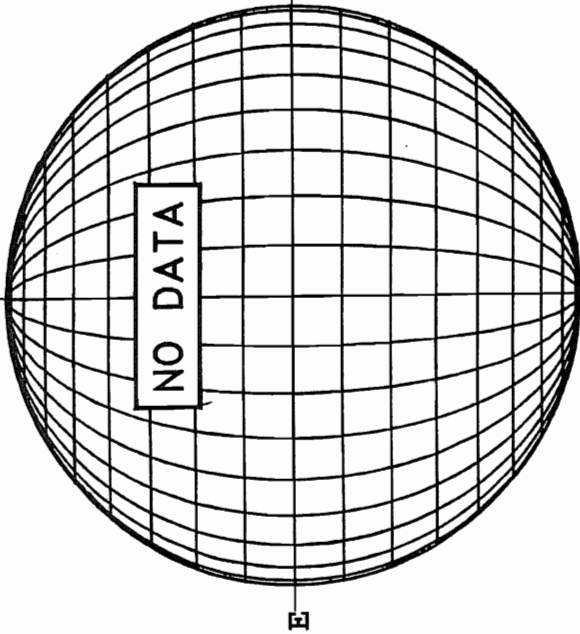
SACRAMENTO PEAK CORONA (1.15 Radii) -----



54  
Aug 08

August 15, 2008 (P= 16.11, Bo= 6.66, Lo= 203.91)

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



E

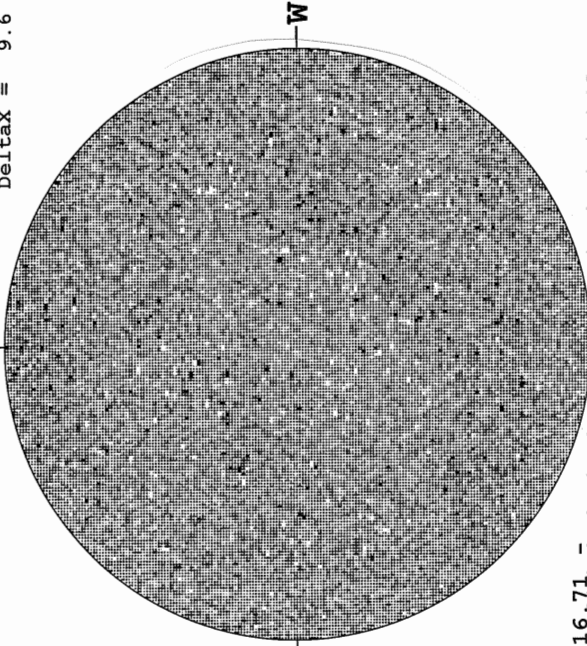
STANFORD MAGNETOGRAM  
Solid = +  
Dashed = -



2107 UT

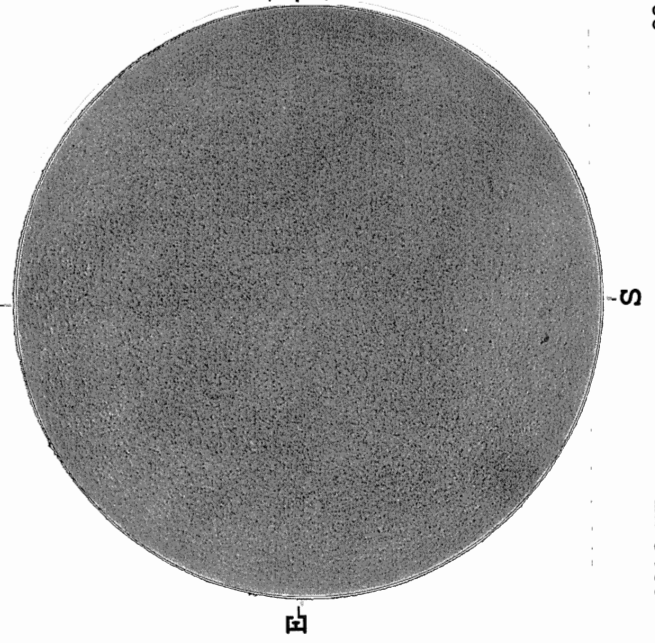
MT, WILSON MAGNETOGRAM  
White = +7.5G  
Black = -7.5G

DeltaY = 13.0  
DeltaX = 9.6



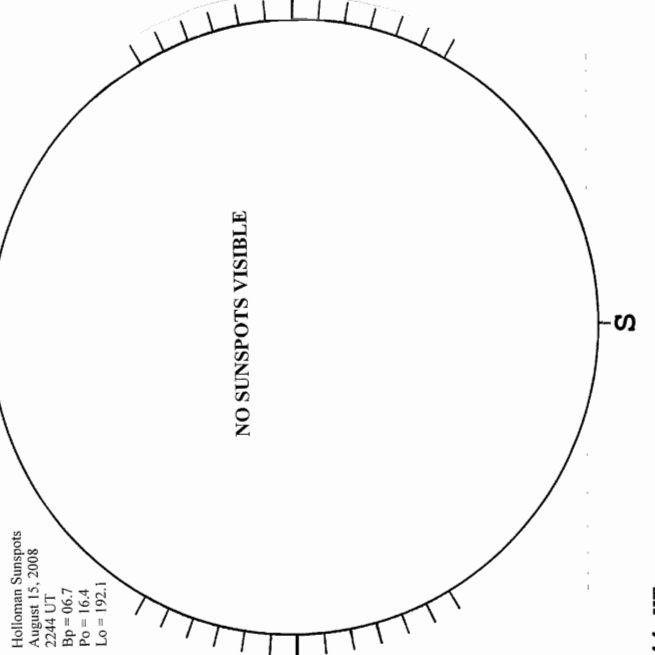
16.71 -  
17.63 UT

KANZELHOHE H-ALPHA



0916 UT

HOLLOMAN SUNSPOTS



2244 UT

Holloman Sunspots  
August 15, 2008  
2244 UT  
Bp = 06.7  
Po = 16.4  
Lo = 192.1

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

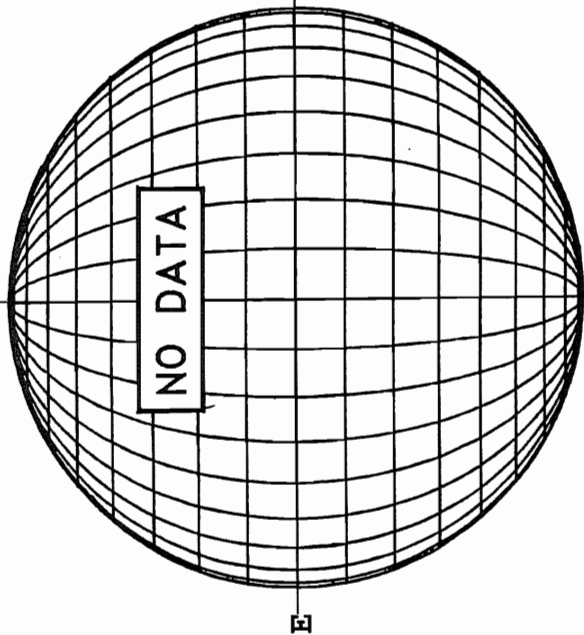
NO DATA

W

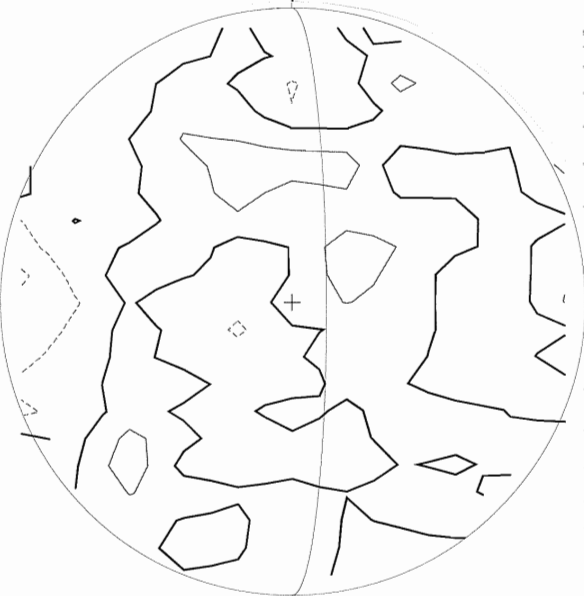
S

August 16, 2008 (P= 16.44, Bo= 6.70, Lo= 190.69)

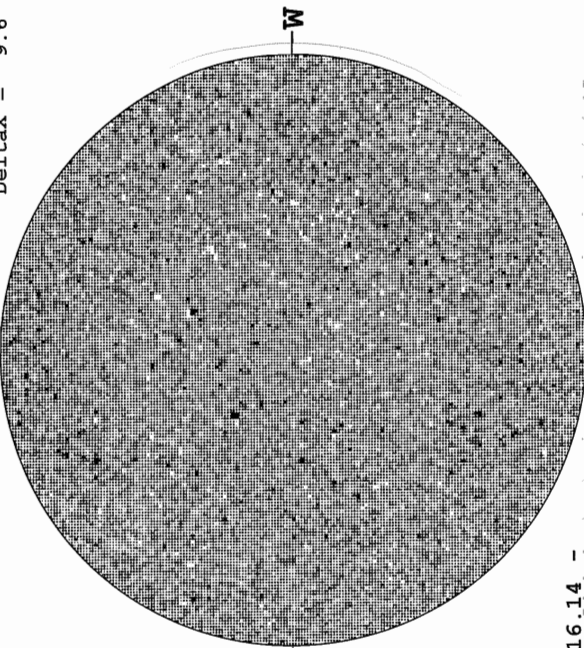
KITT PEAK MAGNETOGRAM -- SOLIS  
 Bright = +  
 Dark = -



STANFORD MAGNETOGRAM  
 Solid = +  
 Dashed = -



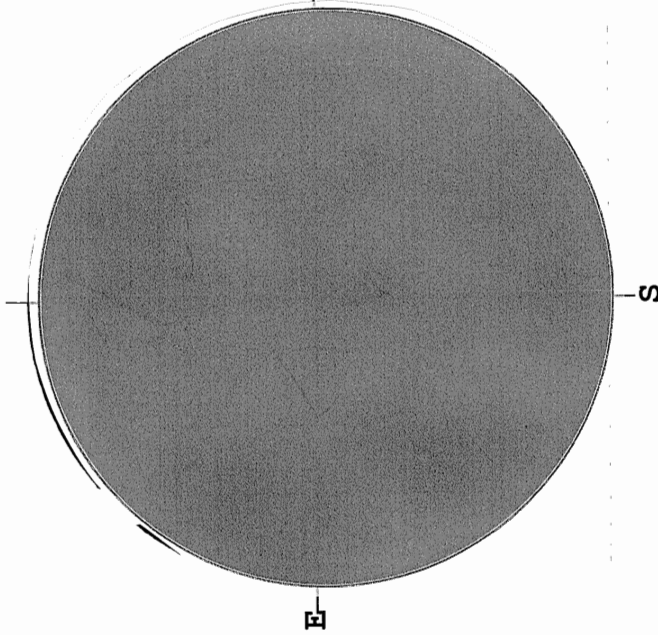
MT. WILSON MAGNETOGRAM  
 White = +7.5G  
 Black = -7.5G  
 DeltaY = 13.1  
 DeltaX = 9.6



16.14 -  
 17.07 UT

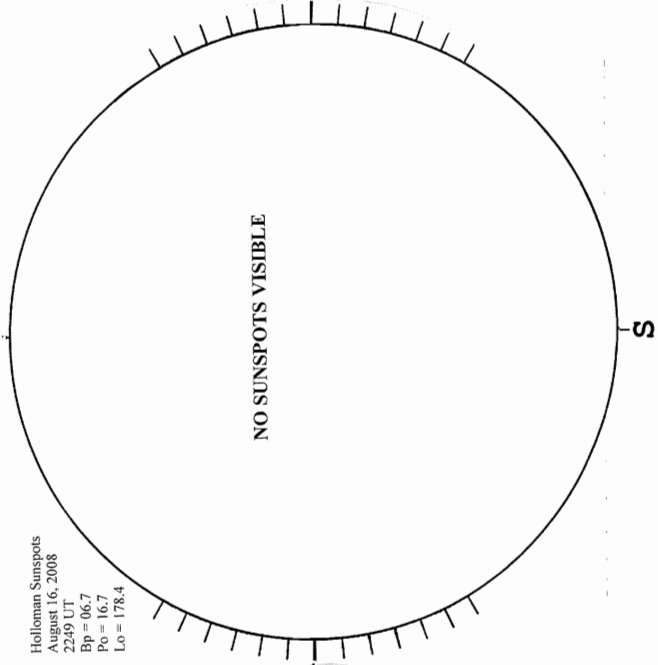
2039 UT

KANZELHOHE H-ALPHA



1005 UT

HOLLOMAN SUNSPOTS



2249 UT

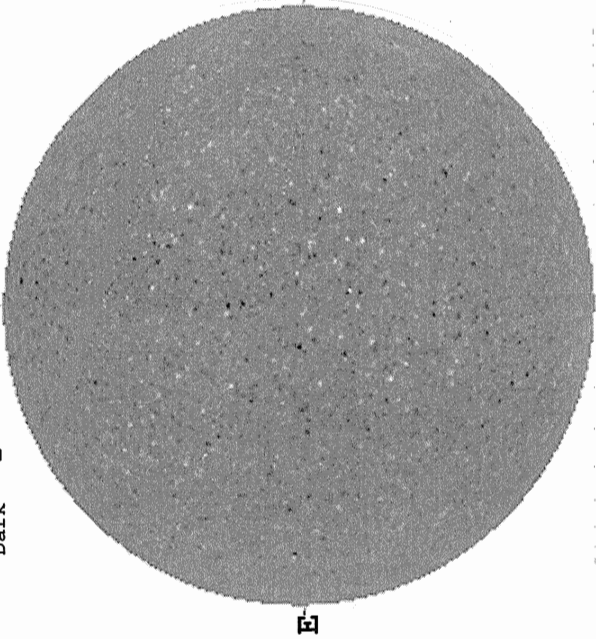
SACRAMENTO PEAK CORONA (1.15 Radii) -----

NO DATA



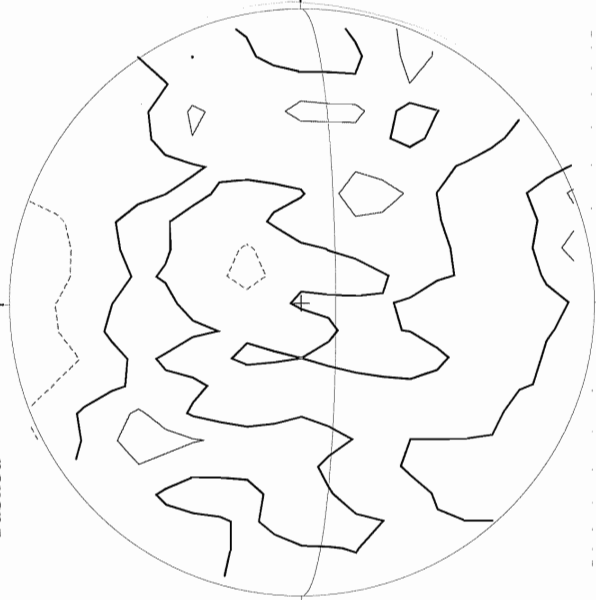
56  
Aug 08

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



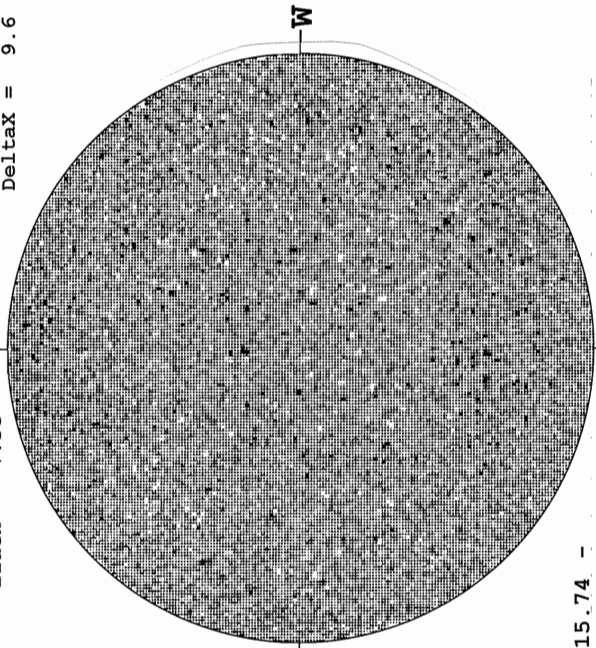
1623 UT

STANFORD MAGNETOGRAM  
Solid = +  
Dashed = -  
N



2038 UT

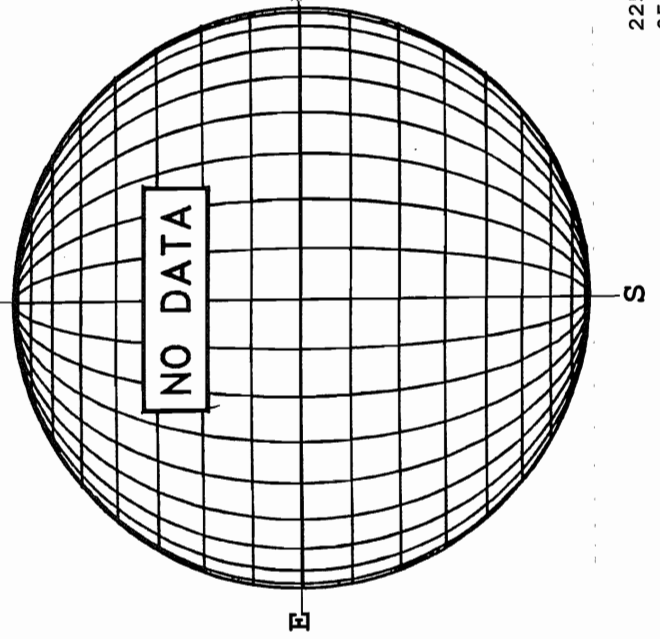
MT. WILSON MAGNETOGRAM  
White = +7.5G  
Black = -7.5G  
DeltaY = 13.1  
DeltaX = 9.6  
N



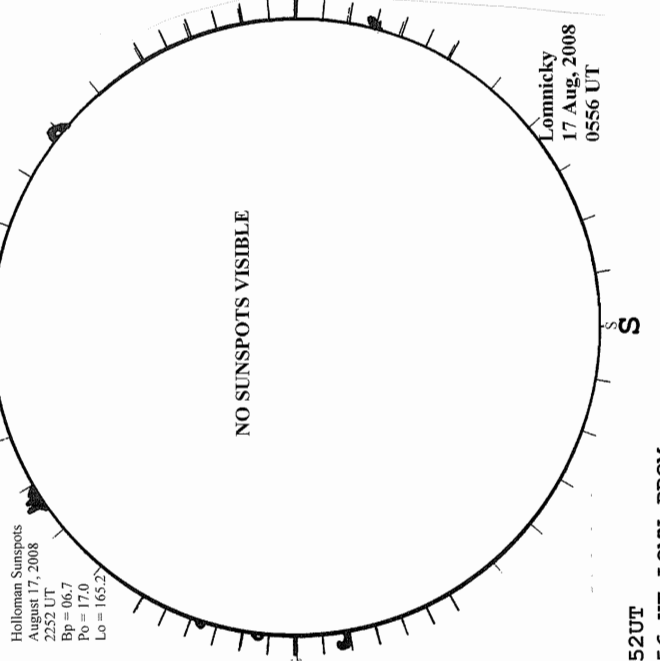
15.74 -  
16.66 UT

August 17, 2008 (P= 16.77, Bo= 6.75, Lo= 177.47)

--- BIG BEAR H-ALPHA



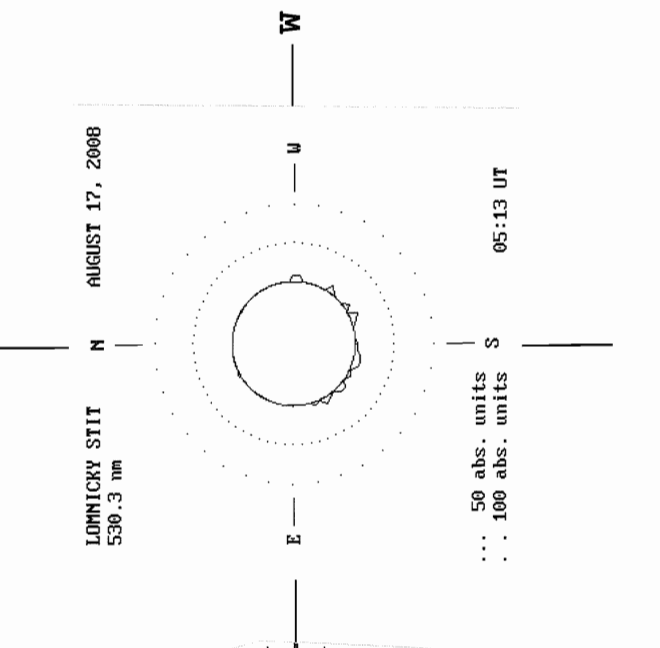
HOLLAMAN SUNSPOTS



Holloman Sunspots  
August 17, 2008  
2252 UT  
Bp = 06.7  
Po = 17.0  
Lo = 165.2

Lomnický  
17 Aug, 2008  
0556 UT

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



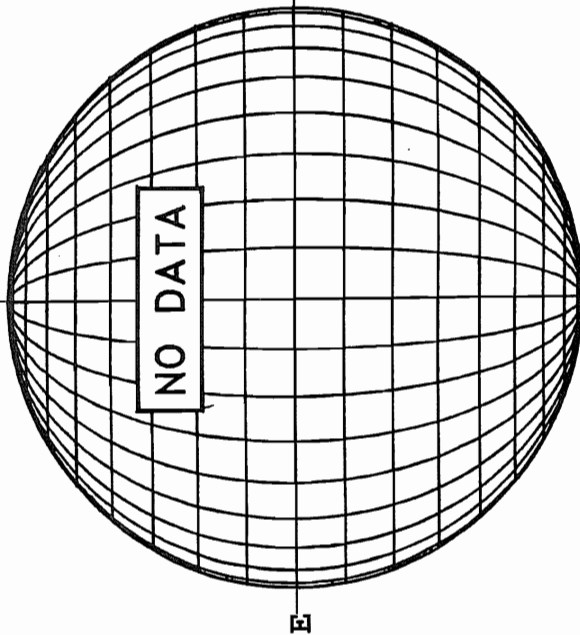
LOMNICKY STIT  
530.3 nm  
AUGUST 17, 2008

... 50 abs. units  
... 100 abs. units  
05:13 UT

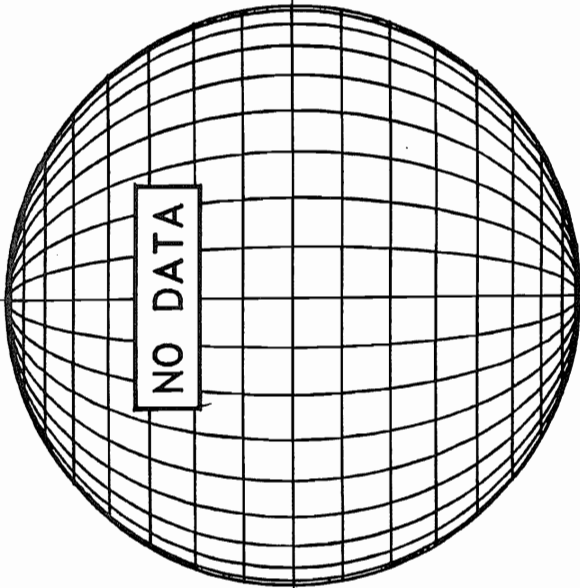
2252UT  
0556 UT LOMN PROM

August 18, 2008 (P= 17.10, Bo= 6.79, Lo= 164.25)

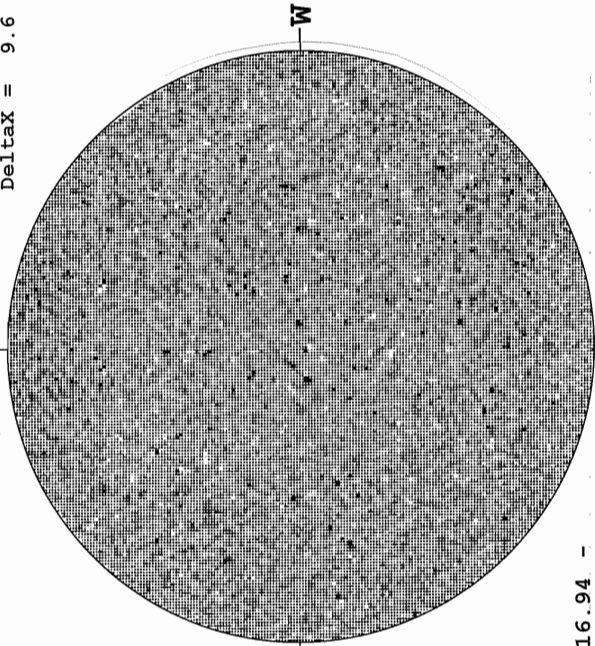
KITT PEAK MAGNETOGRAM -- SOLIS  
 Bright = +  
 Dark = -



STANFORD MAGNETOGRAM  
 Solid = +  
 Dashed = -

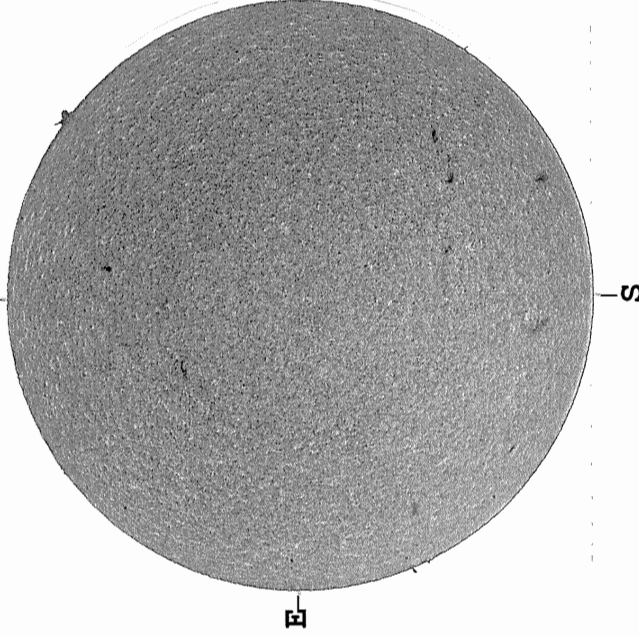


MT. WILSON MAGNETOGRAM  
 White = +7.5G  
 Black = -7.5G  
 DeltaY = 13.1  
 DeltaX = 9.6



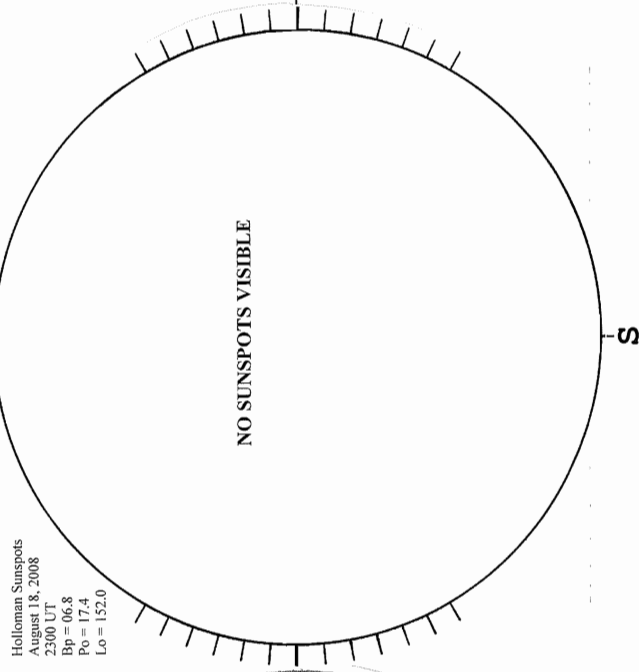
16.94 -  
 17.86 UT

BIG BEAR H-ALPHA



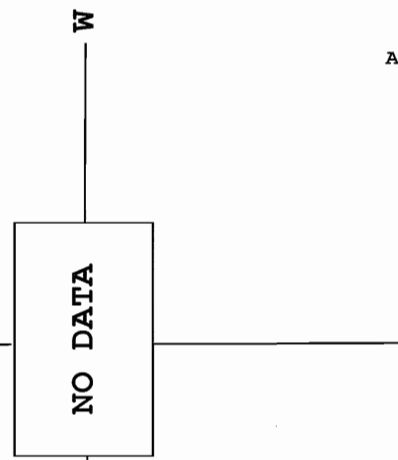
1527 UT

HOLLOMAN SUNSPOTS



2300 UT

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



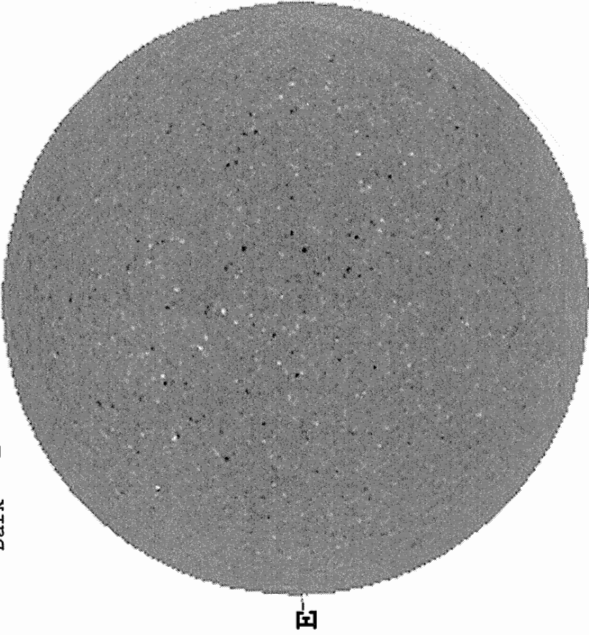
57  
 Aug 08

August 19, 2008 (P= 17.42, Bo= 6.83, Lo= 151.04)

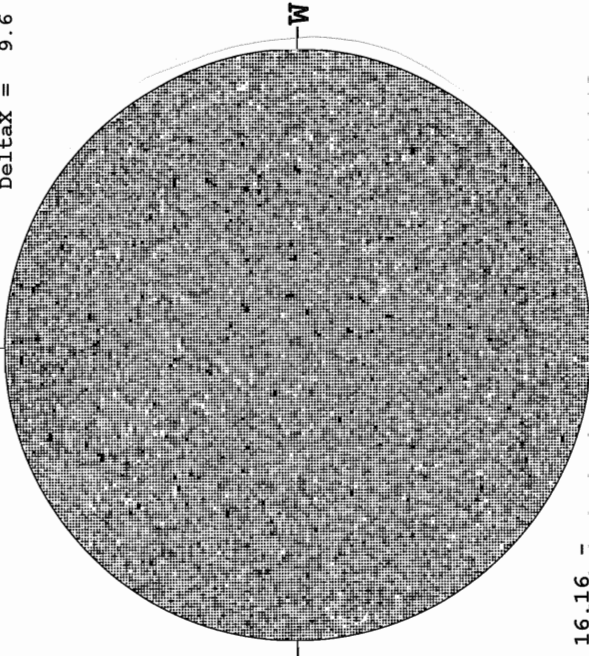
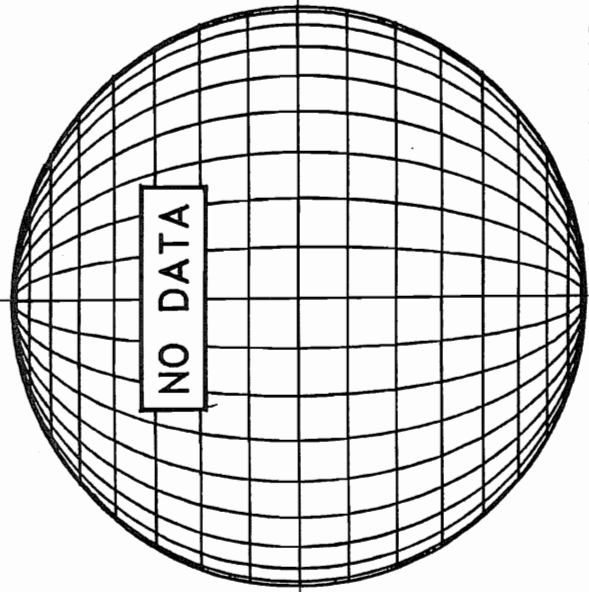
KITT PEAK MAGNETOGRAM -- SOLIS  
Bright = + N  
Dark = -

STANFORD MAGNETOGRAM  
Solid = + N  
Dashed = -

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

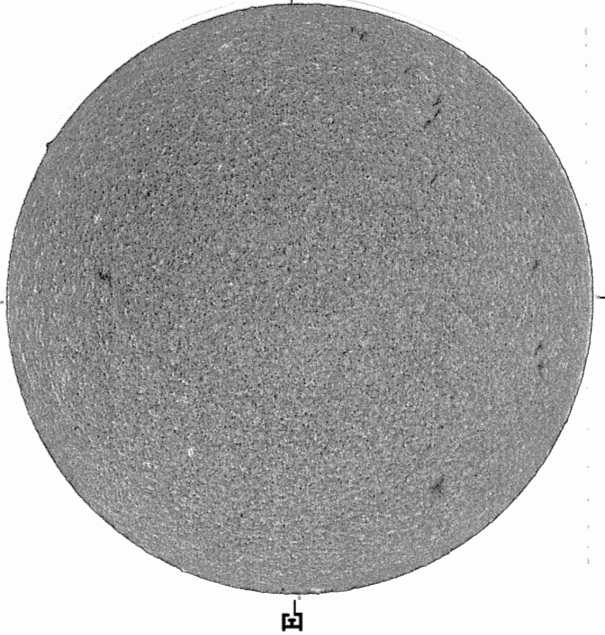


2007 UT



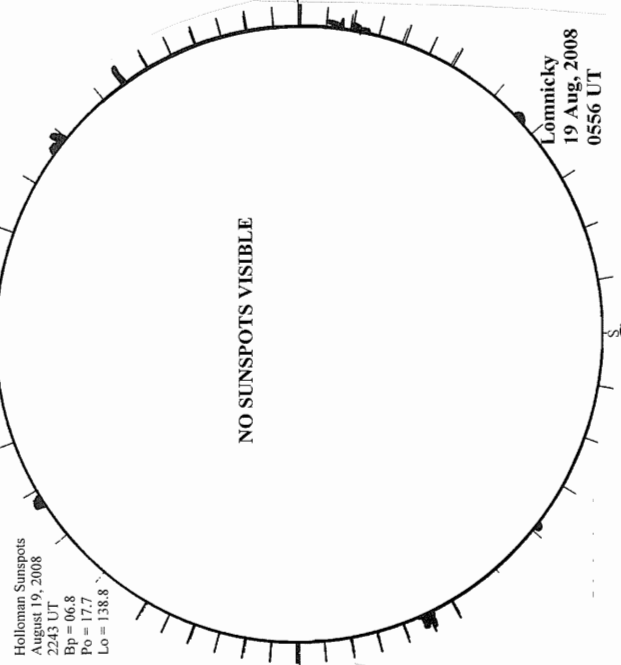
16.16 -  
17.09 UT

BIG BEAR H-ALPHA



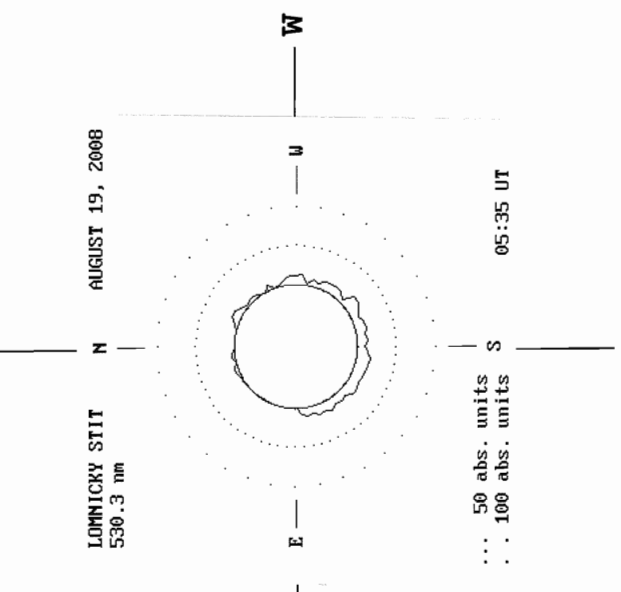
1640 UT

HOLLOMAN SUNSPOTS



2243 UT  
0556 UT LOMN PROM

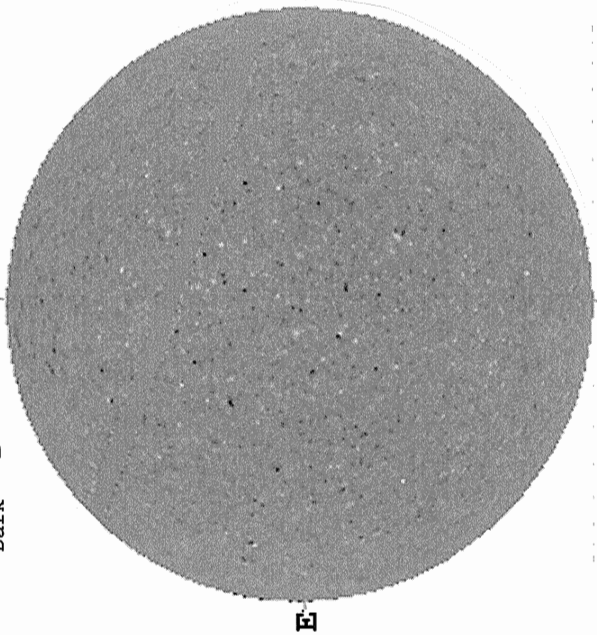
LOMNICKY PEAK CORONA (1.04 Radii) -----



05:35 UT

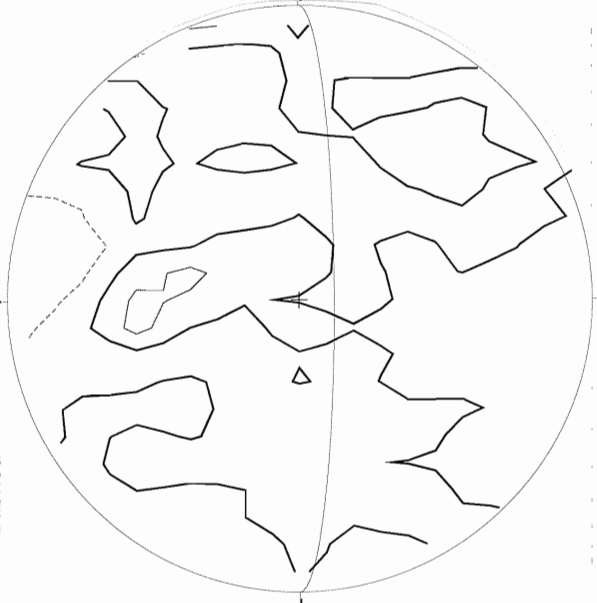
August 20, 2008 (P= 17.74, Bo= 6.87, Lo= 137.82)

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



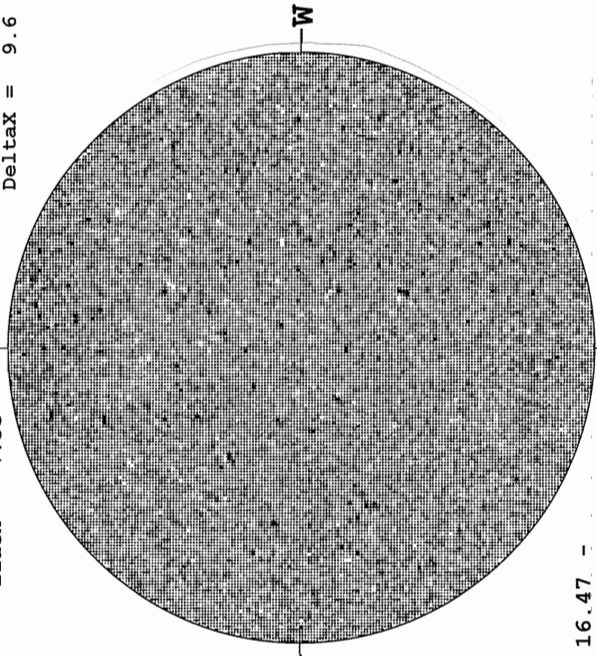
2137 UT

STANFORD MAGNETOGRAM  
 Solid = +  
 Dashed = -



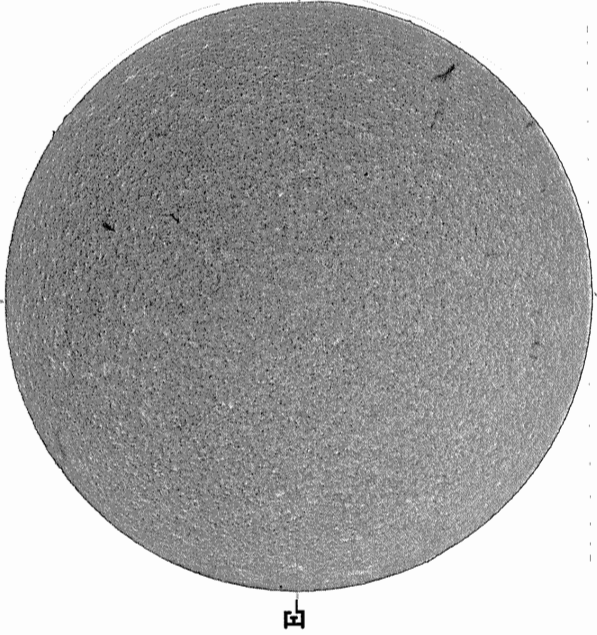
2207 UT

MT. WILSON MAGNETOGRAM  
 White = +7.5G  
 Black = -7.5G  
 Delta $\gamma$  = 13.1  
 Delta $\alpha$  = 9.6



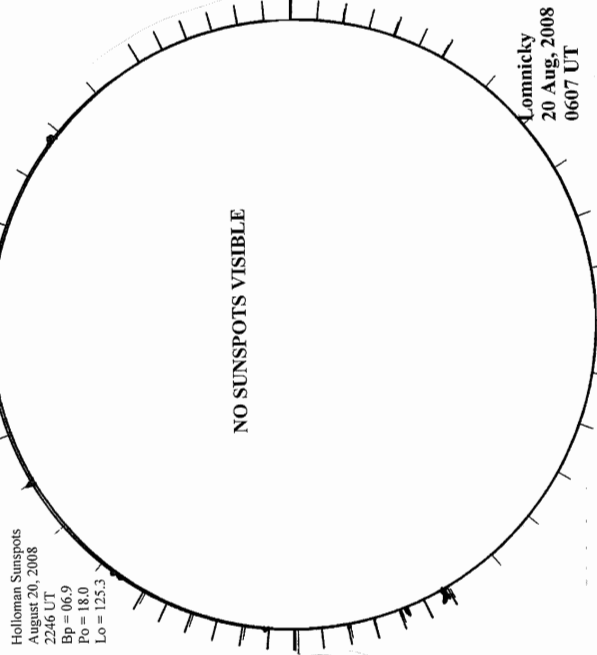
16.47 -  
 17.39 UT

--- BIG BEAR H-ALPHA



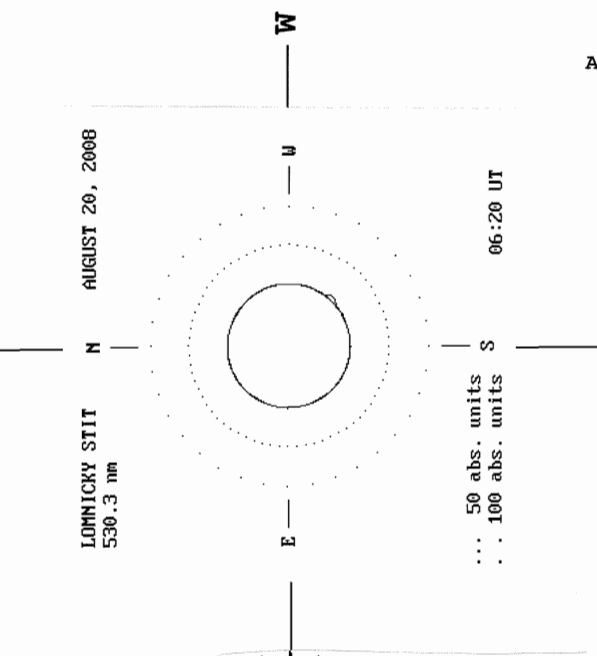
1654 UT

HOLLOMAN SUNSPOTS



2246 UT  
 0607 UT LOMN PROM

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



... 50 abs. units  
 ... 100 abs. units  
 06:20 UT

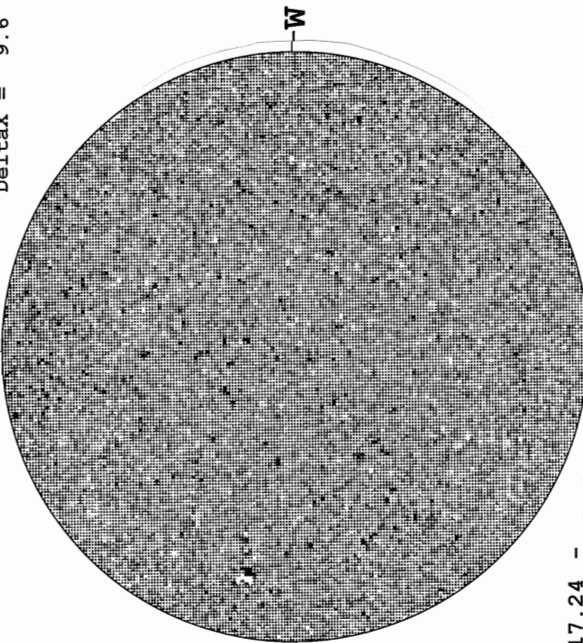
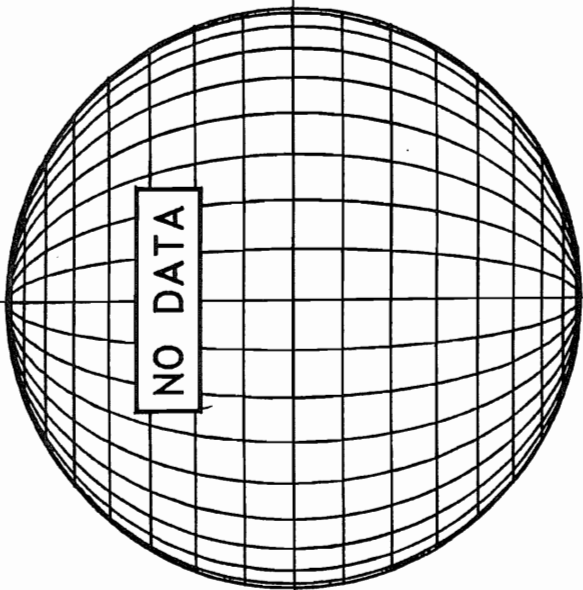
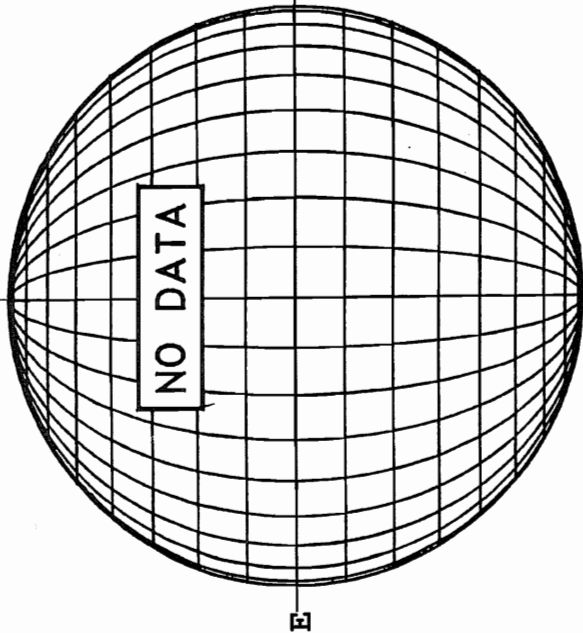
60  
Aug 08

August 21, 2008 (P= 18.05, Bo= 6.91, Lo= 124.61)

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

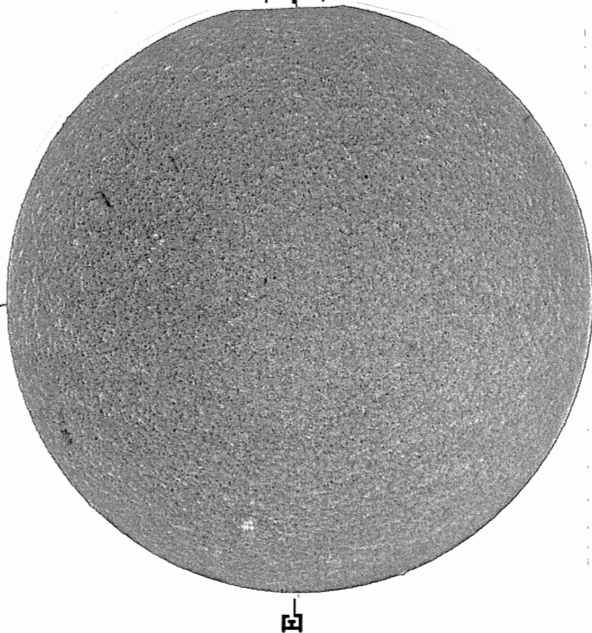
STANFORD MAGNETOGRAM  
Solid = +  
Dashed = -

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



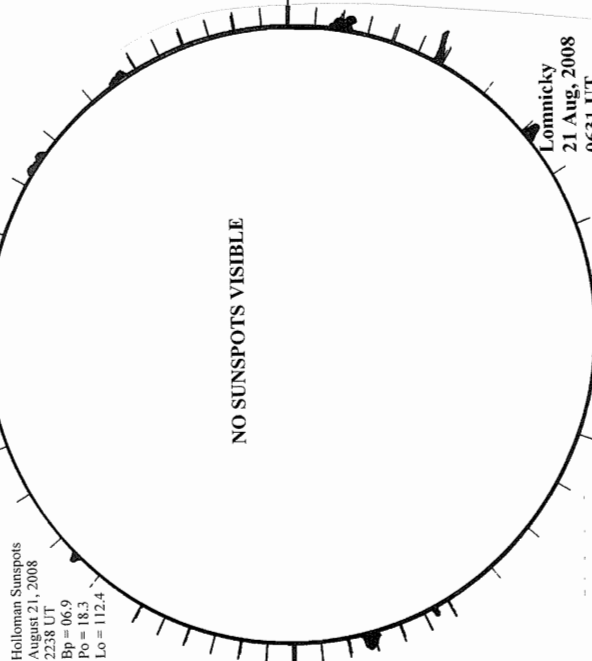
17.24 -  
18.17 UT

--- BIG BEAR H-ALPHA



1538 UT

HOLLOMAN SUNSPOTS



Holloman Sunspots  
August 21, 2008  
2238 UT  
Bp = 06.9  
Po = 18.3  
Lo = 112.4

Lonnicky  
21 Aug, 2008  
0631 UT

2238 UT  
0631 UT IOMN FROM

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

NO DATA

W

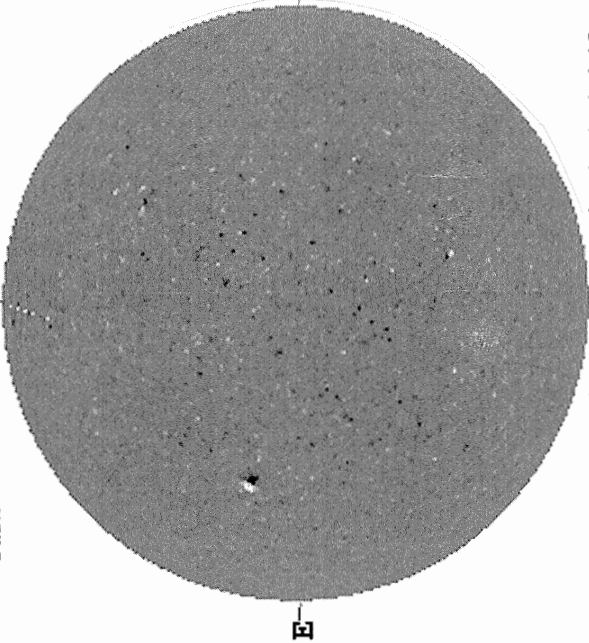
E

August 22, 2008 (P= 18.36, Bo= 6.95, Lo= 111.39)

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

STANFORD MAGNETOGRAM  
Solid = +  
Dashed = -  
N

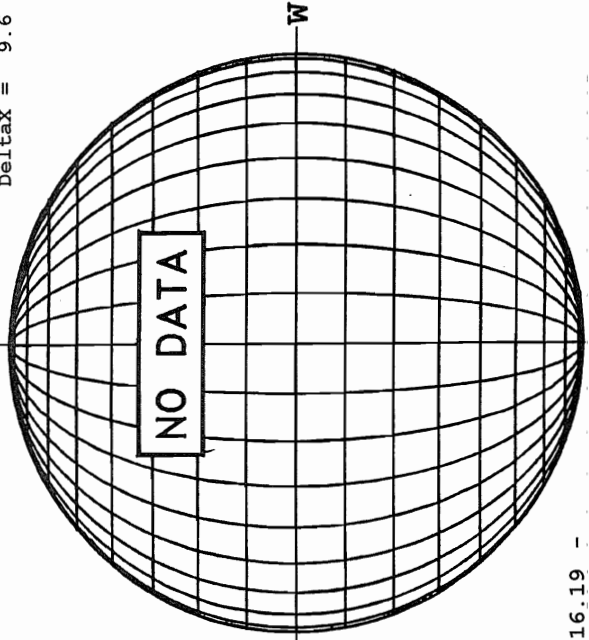
MT. WILSON MAGNETOGRAM  
White = +7.5G  
Black = -7.5G  
DeltaY = 13.1  
DeltaX = 9.6  
N



1646 UT

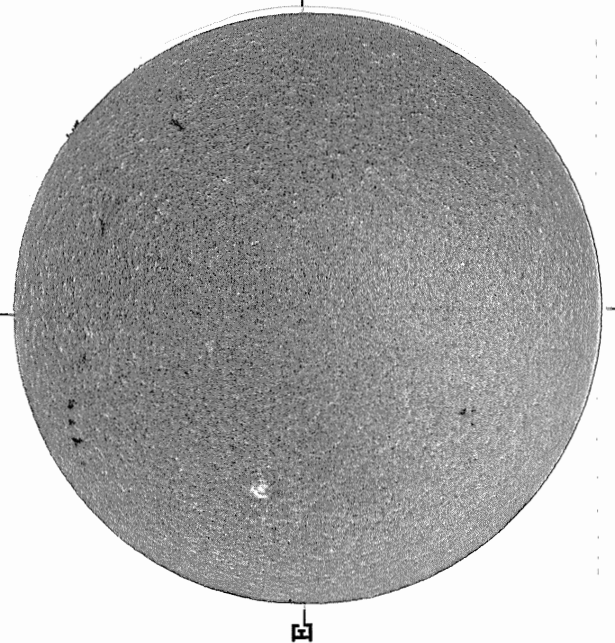


2112 UT



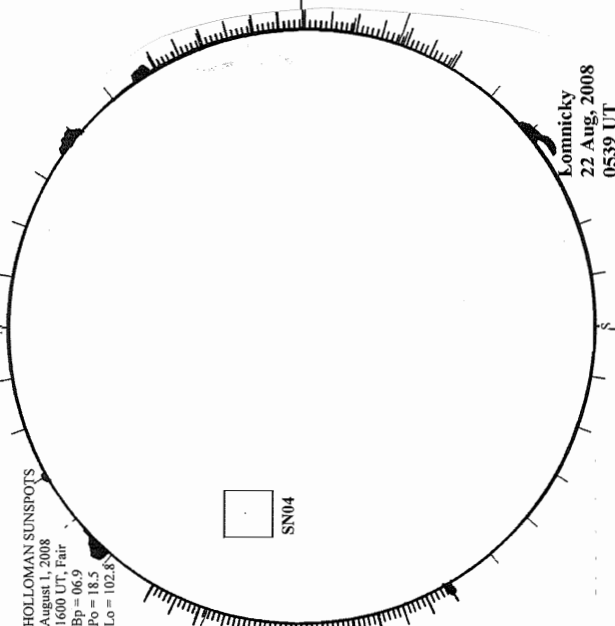
16.19 -  
17.12 UT

--- BIG BEAR H-ALPHA



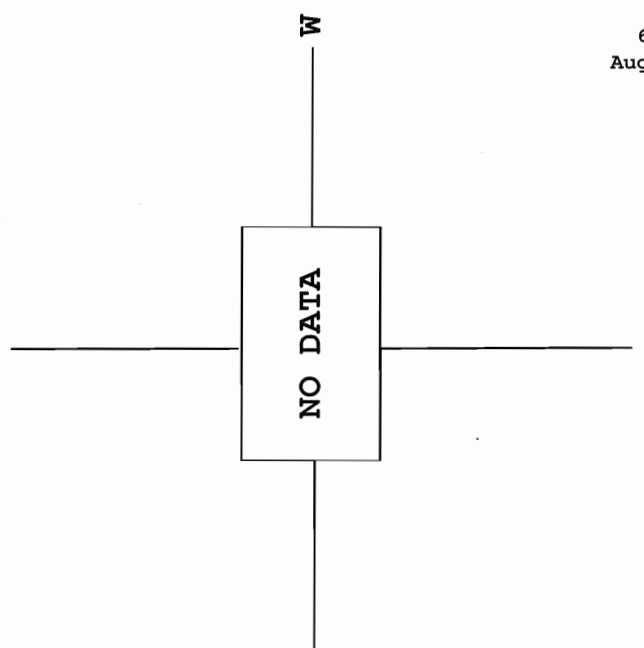
1540 UT

HOLLOMAN SUNSPOTS



1600 UT  
0539 UT LOMN FROM

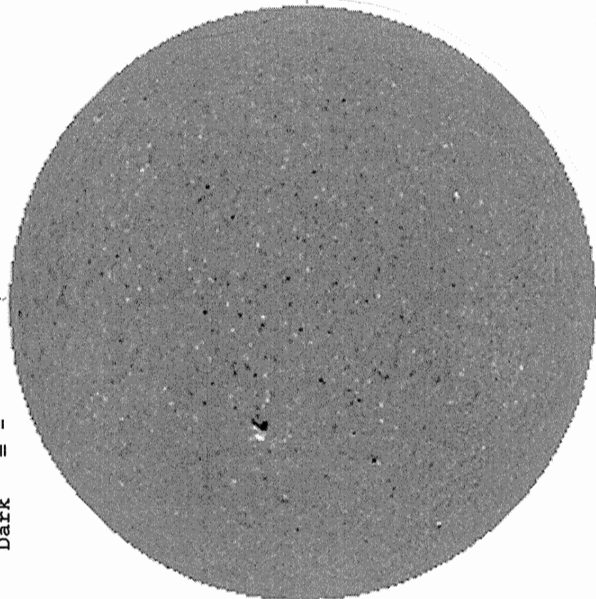
SACRAMENTO PEAK CORONA (1.15 Radii) ---



Aug 23 08 62

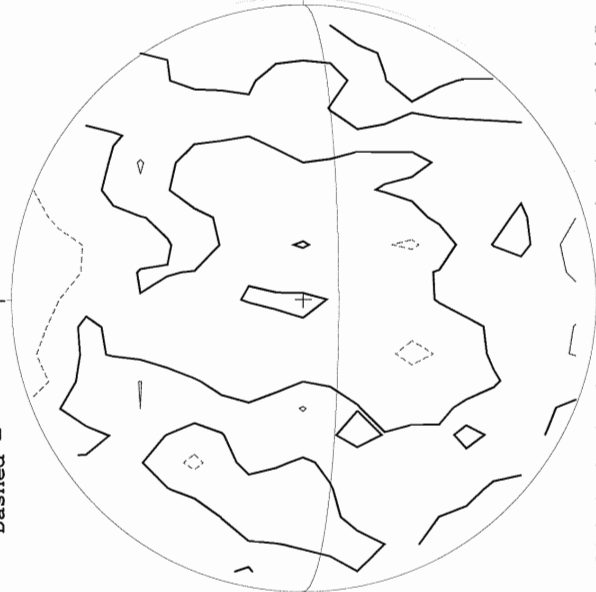
August 23, 2008 (P= 18.66, Bo= 6.98, Lo= 98.18)

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



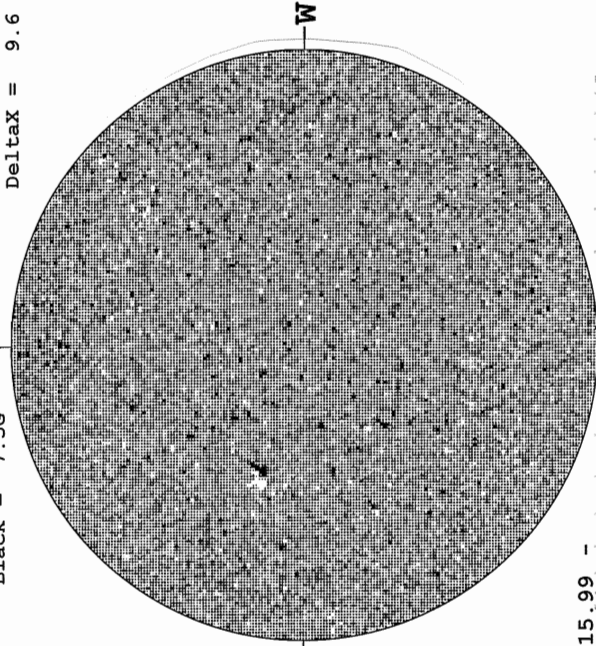
1711 UT

STANFORD MAGNETOGRAM  
Solid = +  
Dashed = -  
N



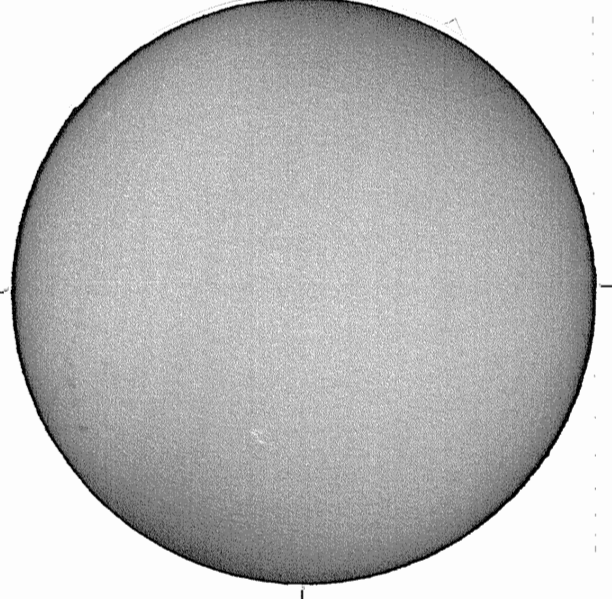
2214 UT

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



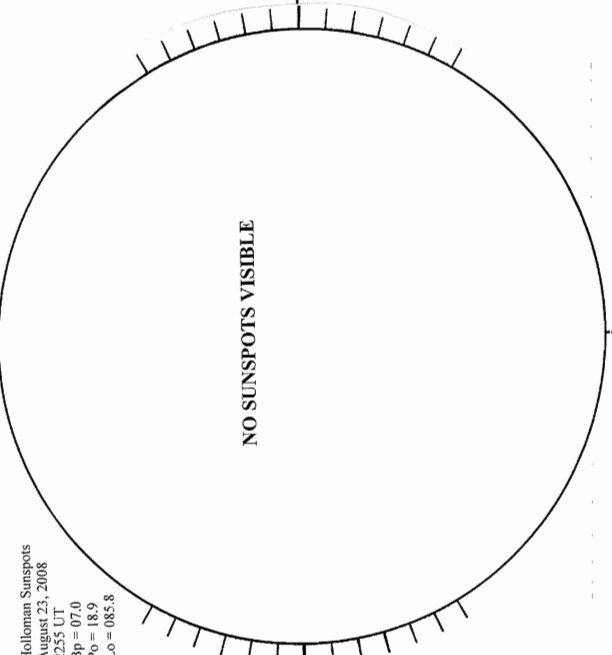
15.99 -  
16.92 UT

MEUDON H-ALPHA



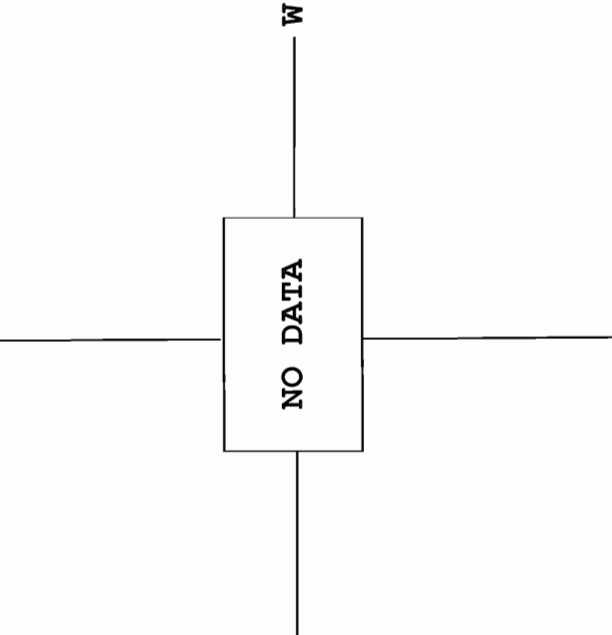
0842 UT

HOLLOMAN SUNSPOTS



2255 UT

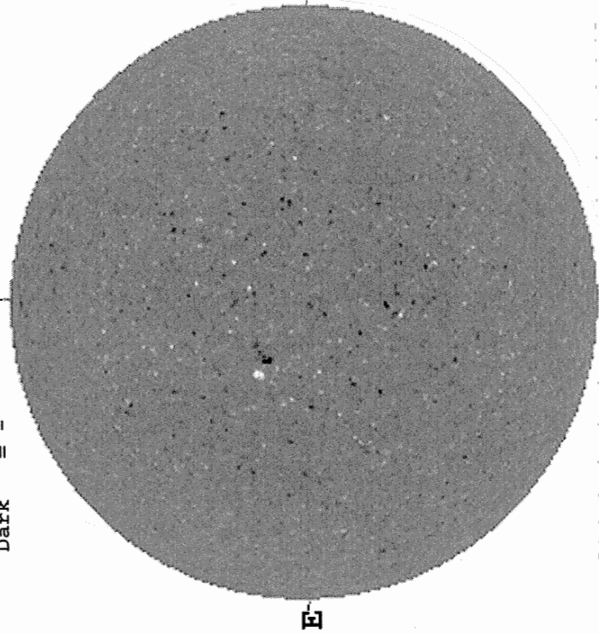
SACRAMENTO PEAK CORONA (1.15 Radii) -----



0842 UT

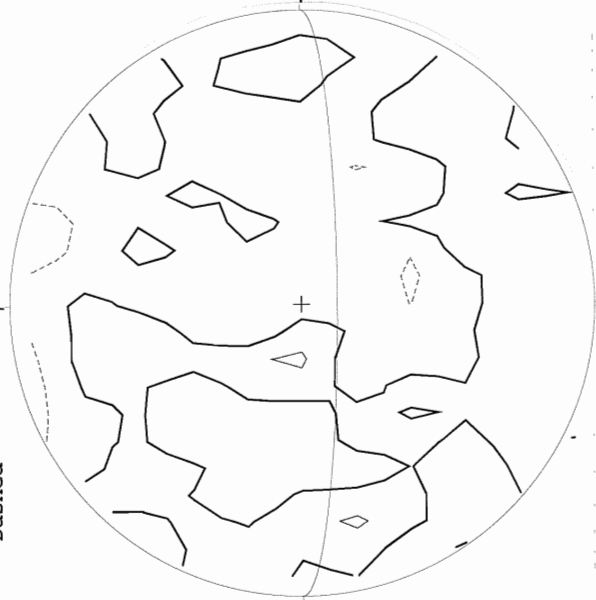
August 24, 2008 (P= 18.96, Bo= 7.01, Lo= 84.96)

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



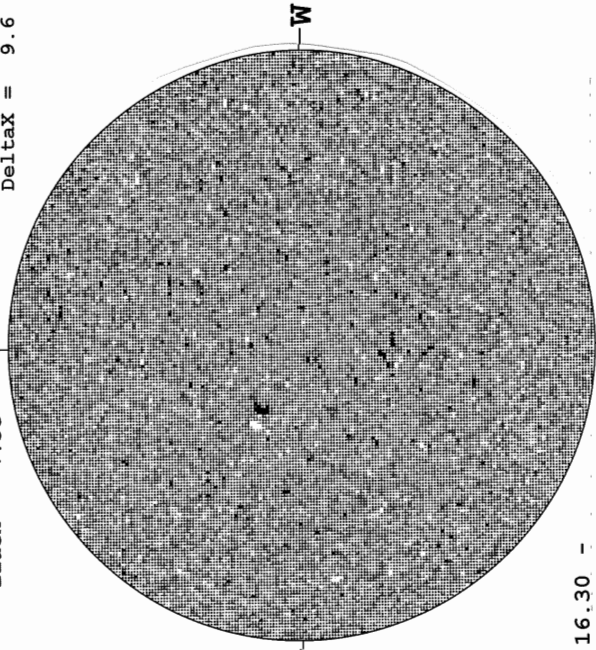
1841 UT

STANFORD MAGNETOGRAM  
 Solid = +  
 Dashed = -



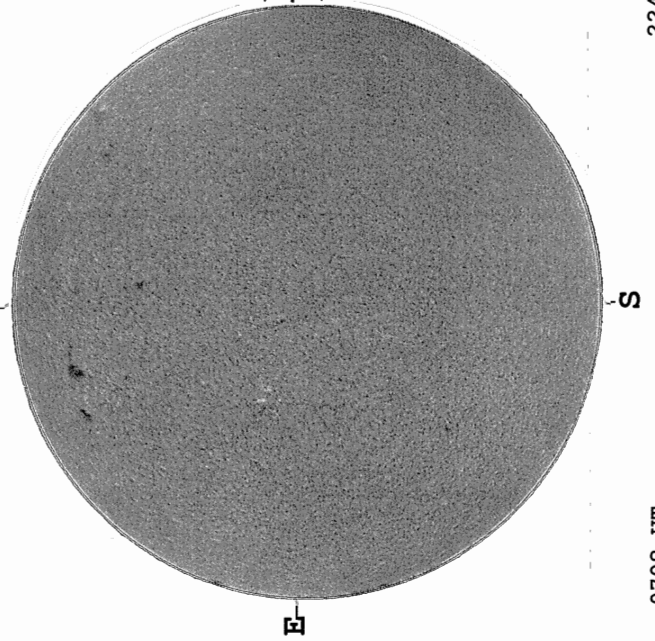
2042 UT

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



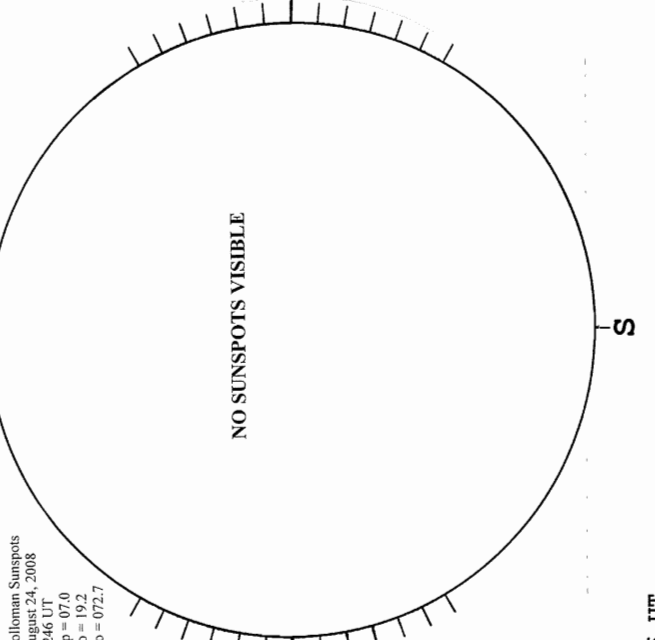
16.30 -  
 17.23 UT

KANZELHOHE H-ALPHA



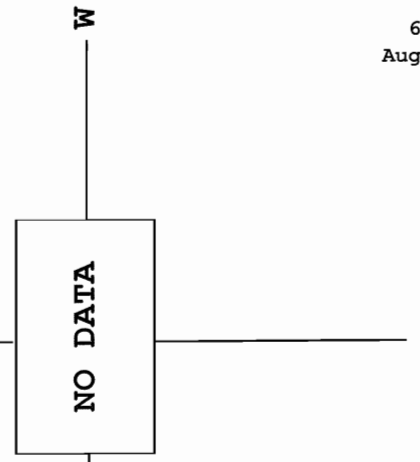
0708 UT

HOLLOMAN SUNSPOTS



2246 UT

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

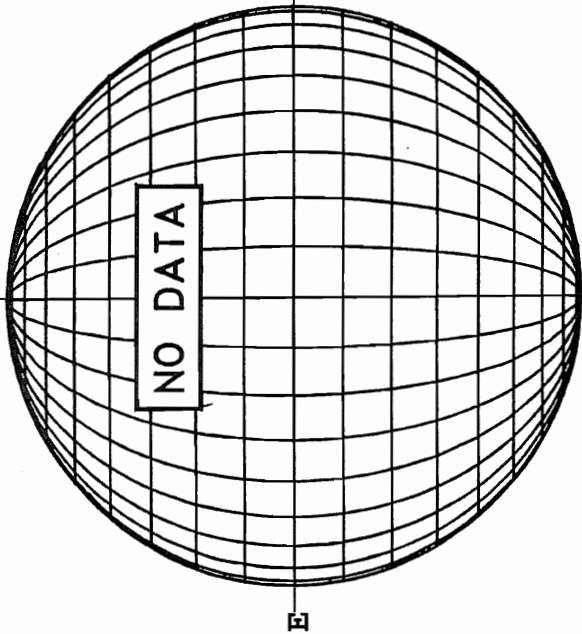




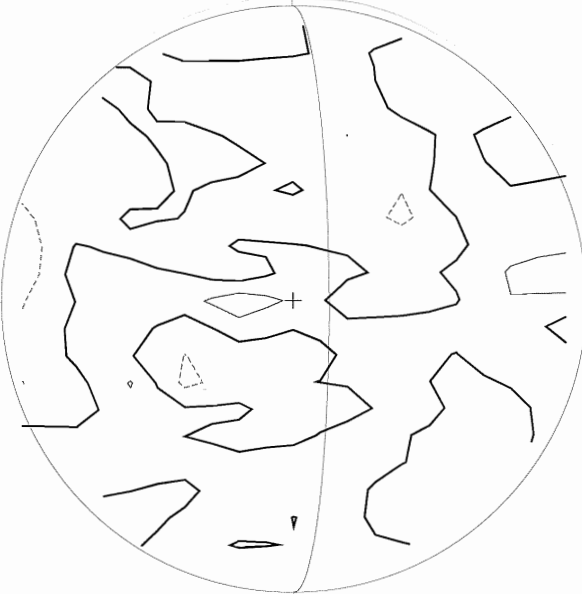
Aug 08 64

August 25, 2008 (P= 19.25, Bo= 7.04, Io= 71.75)

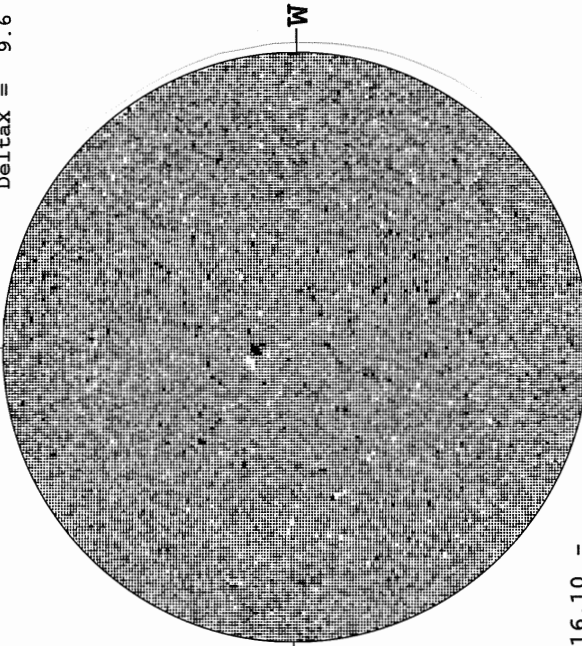
KITT PEAK MAGNETOGRAM -- SOLIS  
 Bright = +  
 Dark = -



STANFORD MAGNETOGRAM  
 Solid = +  
 Dashed = -



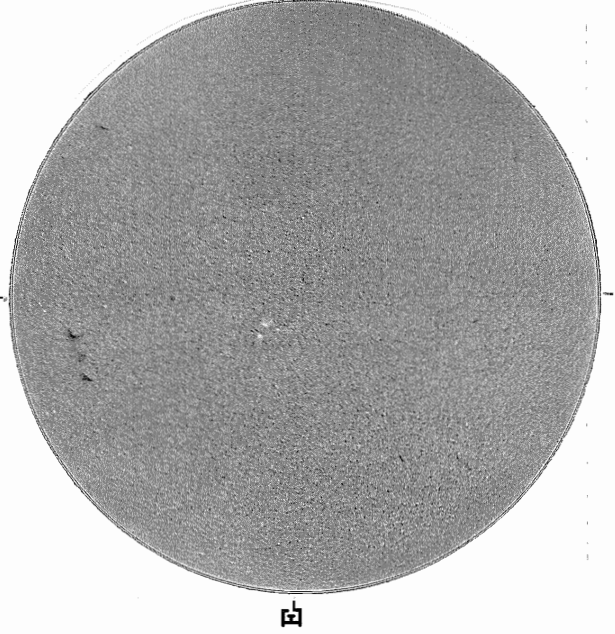
MT. WILSON MAGNETOGRAM  
 White = +7.5G  
 Black = -7.5G  
 DeltaY = 13.1  
 DeltaX = 9.6



16.10 -  
 17.03 UT

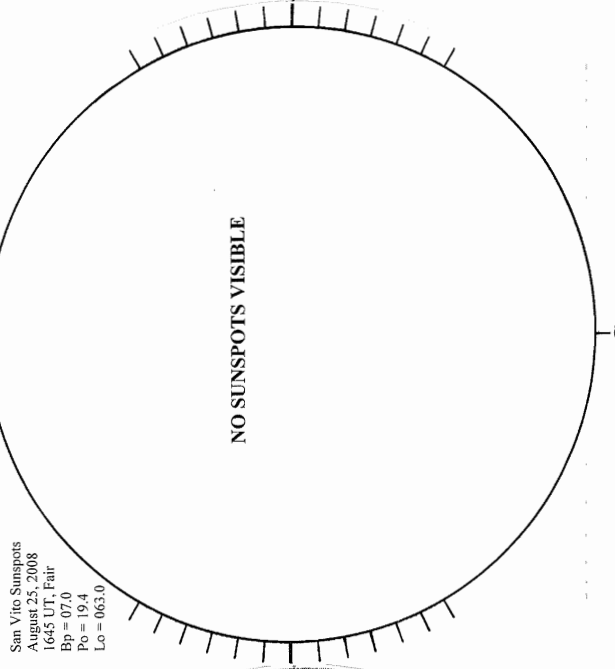
2211 UT

--- KANZELHOHE H-ALPHA



0633 UT

SAN VITO SUNSPOTS



1645 UT

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

NO DATA

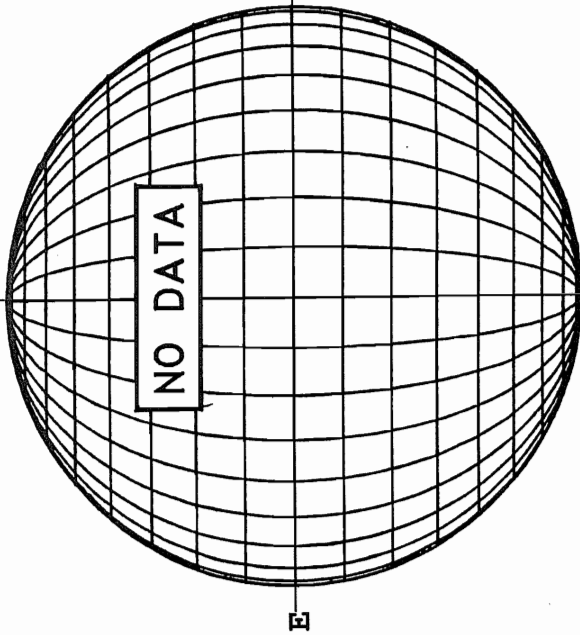
W

S

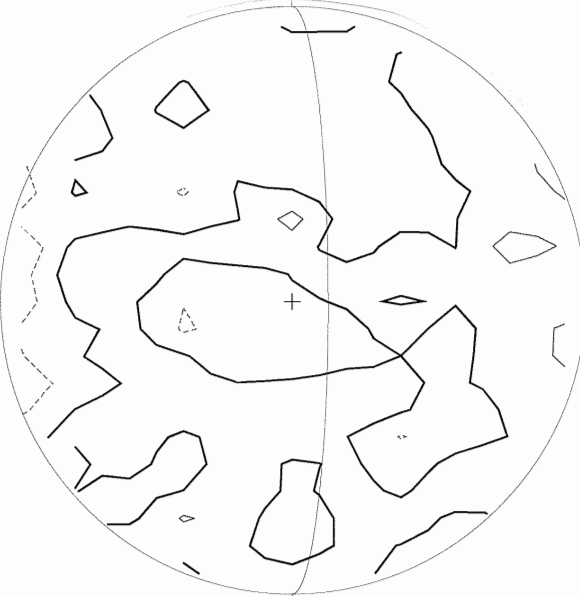
E

August 26, 2008 (P= 19.54, Bo= 7.07, Lo= 58.54)

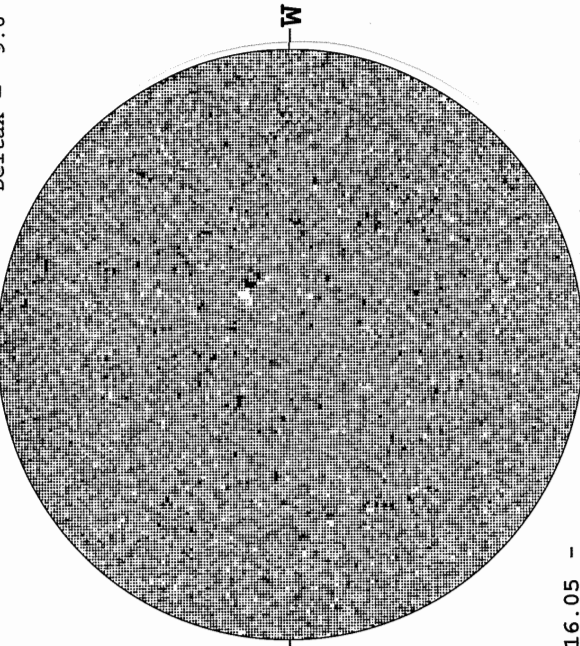
KITT PEAK MAGNETOGRAM -- SOLIS  
 Bright = +  
 Dark = -  
 N  
 \*\* 854.2NM \*\*



STANFORD MAGNETOGRAM  
 Solid = +  
 Dashed = -  
 N



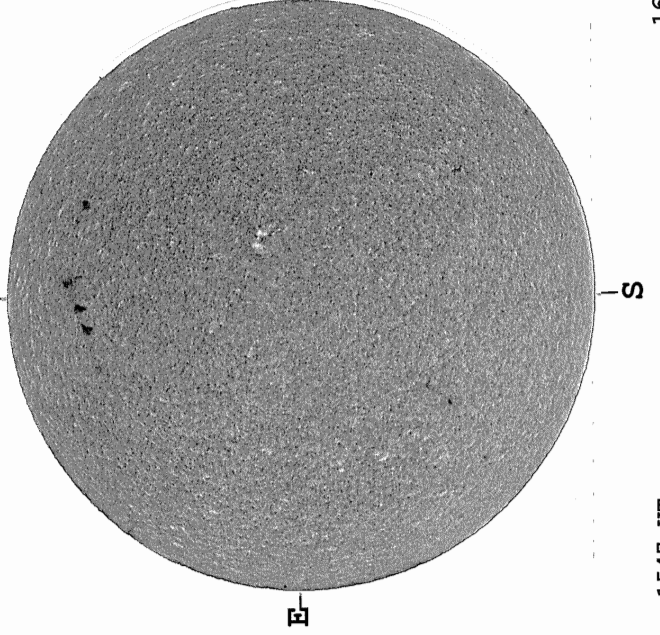
MT. WILSON MAGNETOGRAM  
 White = +7.5G  
 Black = -7.5G  
 DeltaY = 13.1  
 DeltaX = 9.6  
 N



16.05 -  
 16.98 UT

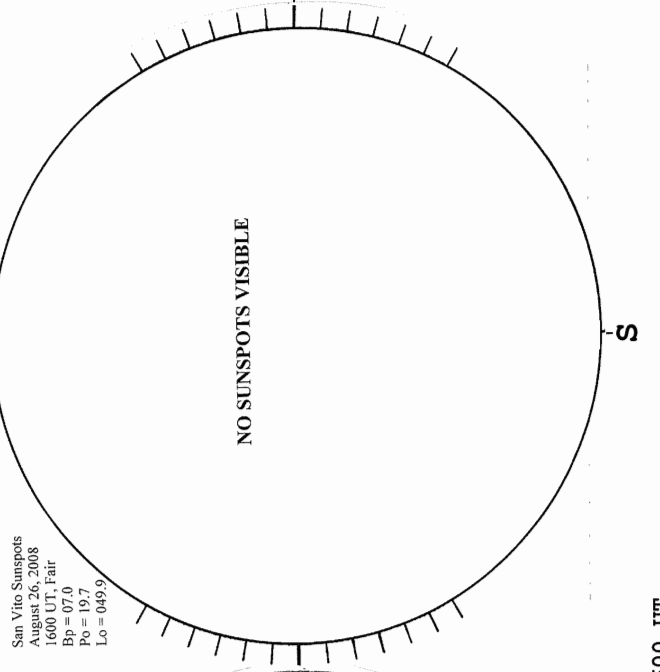
2131 UT

--- BIG BEAR H-ALPHA



1547 UT

SAN VITO SUNSPOTS



1600 UT

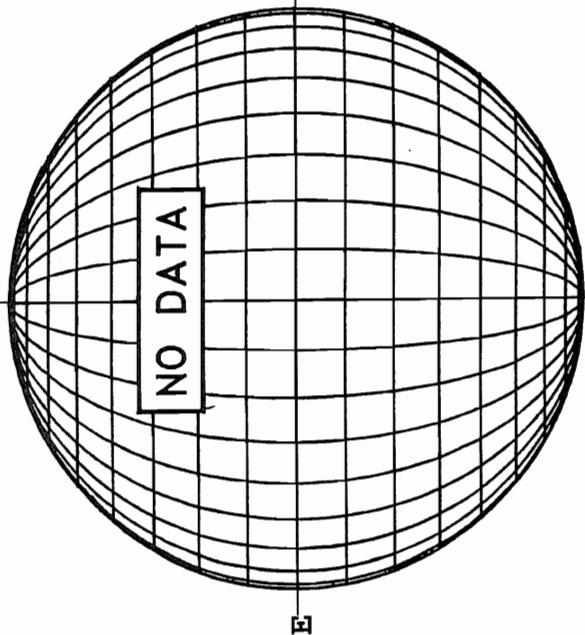
SACRAMENTO PEAK CORONA (1.15 Radii) -----

NO DATA

66  
Aug 08

August 27, 2008 (P= 19.82, Bo= 7.10, Lo= 45.32)

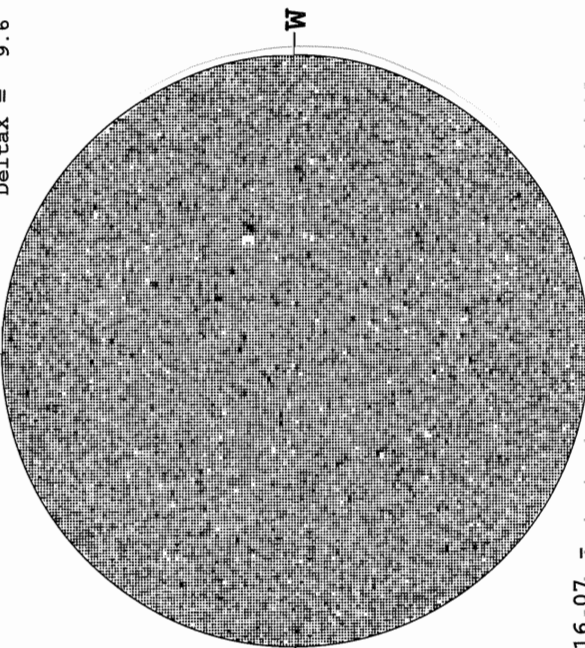
KITT PEAK MAGNETOGRAM -- SOLIS  
Bright = +  
Dark = -



STANFORD MAGNETOGRAM  
Solid = +  
Dashed = -

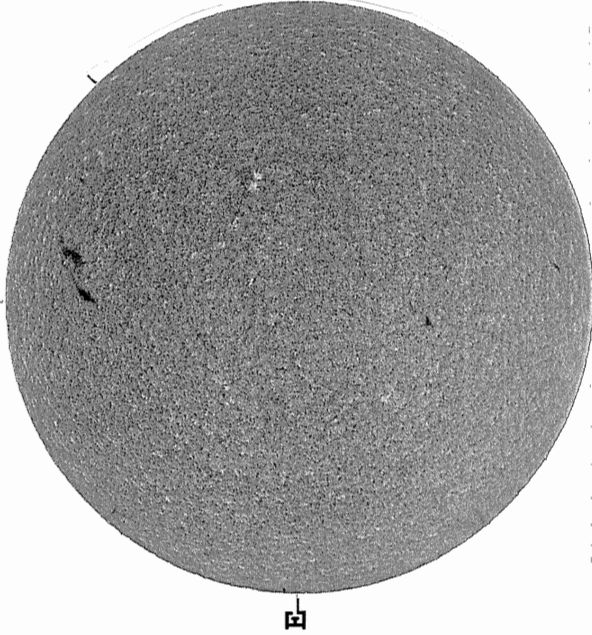


MT. WILSON MAGNETOGRAM  
White = +7.5G  
Black = -7.5G  
DeltaY = 13.1  
DeltaX = 9.6



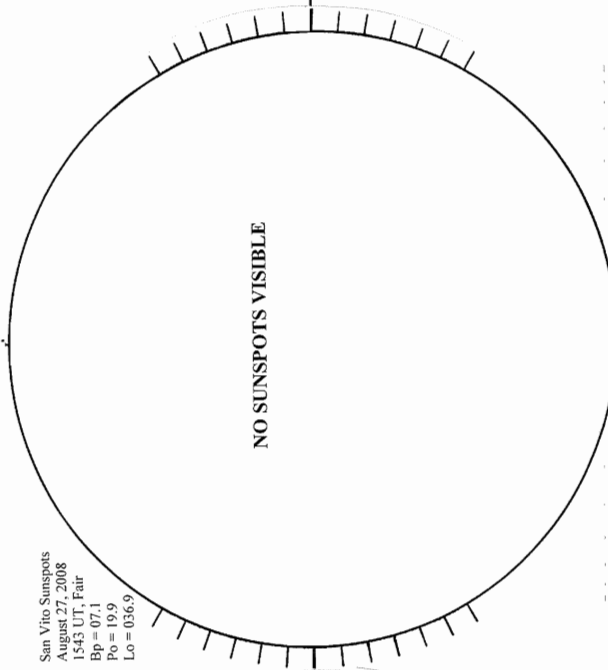
16.07 -  
17.00 UT

---  
BIG BEAR H-ALPHA



1556 UT

SAN VITO SUNSPOTS



1543 UT

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

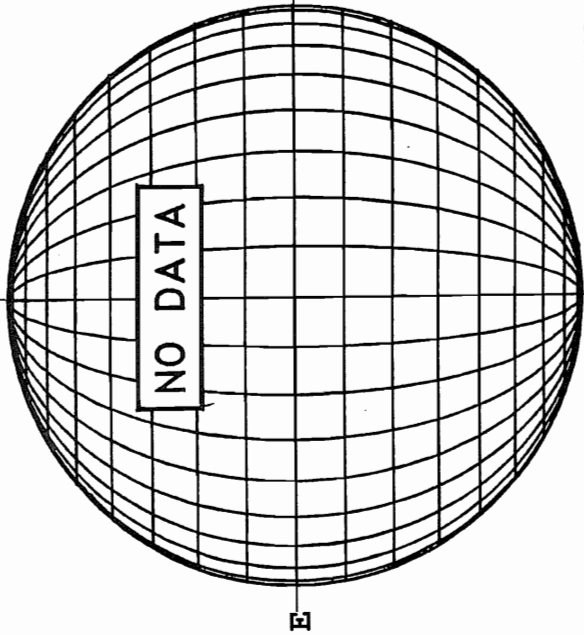
NO DATA

W

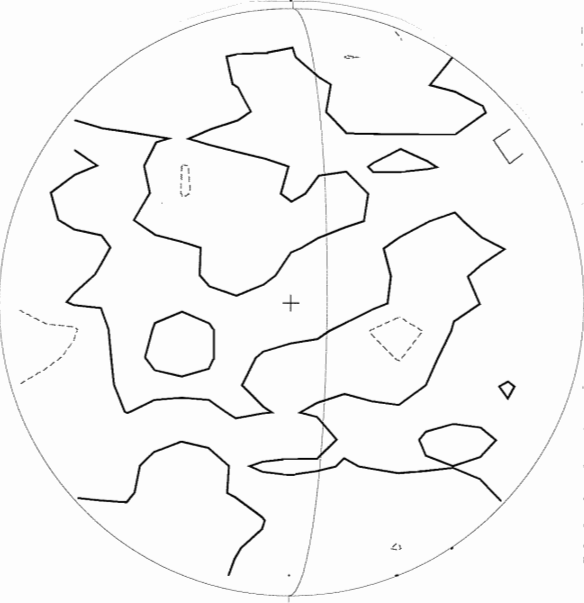
S

August 28, 2008 (P= 20.09, Bo= 7.12, Lo= 32.11)

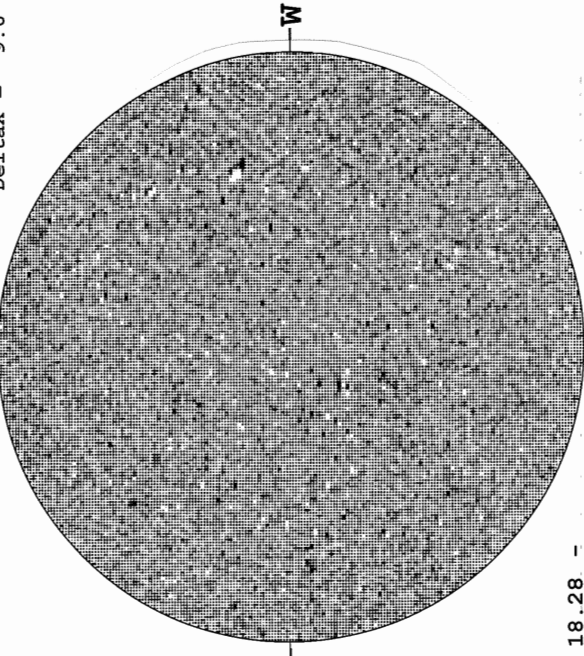
KITT PEAK MAGNETOGRAM -- SOLIS  
 Bright = + \*\* 854.2NM \*\*  
 Dark = -



STANFORD MAGNETOGRAM  
 Solid = +  
 Dashed = -



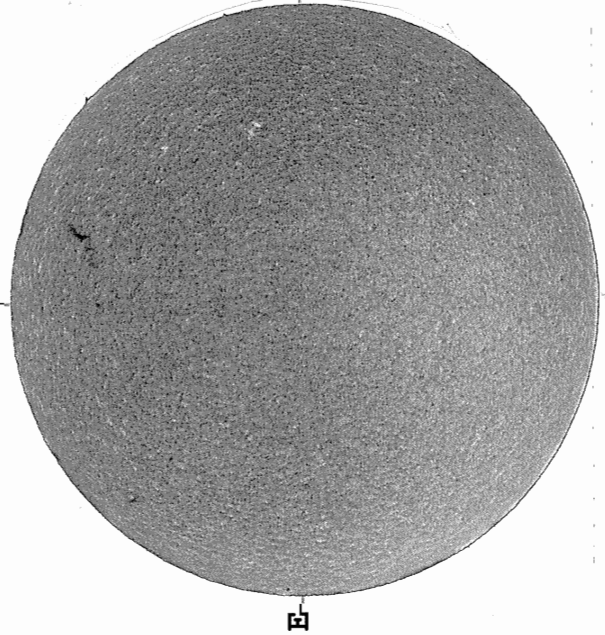
MT. WILSON MAGNETOGRAM  
 White = +7.5G  
 Black = -7.5G  
 DeltaY = 13.1  
 DeltaX = 9.6



18.28 -  
 19.21 UT

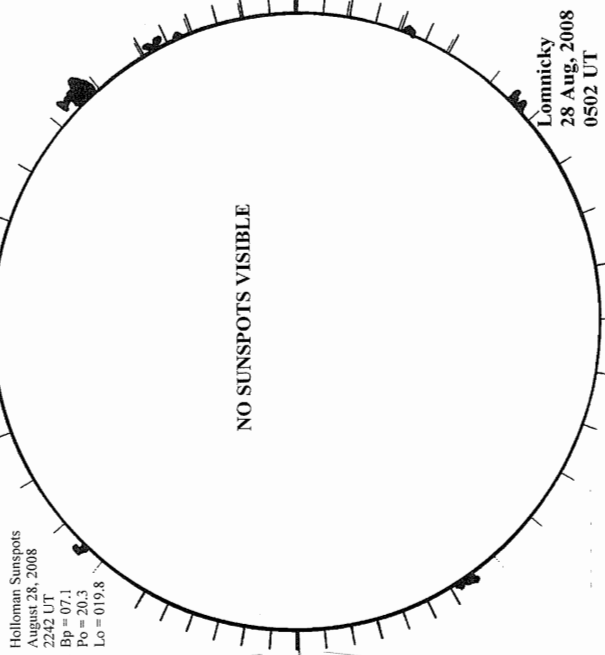
2215 UT

---  
 BIG BEAR H-ALPHA



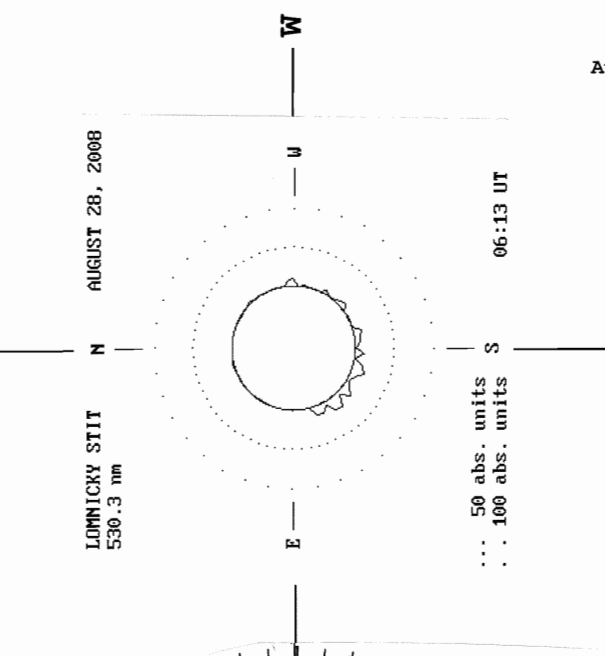
1532 UT

HOLLAMAN SUNSPOTS



2242 UT  
 0502 UT IOMN FROM

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



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

06:13 UT

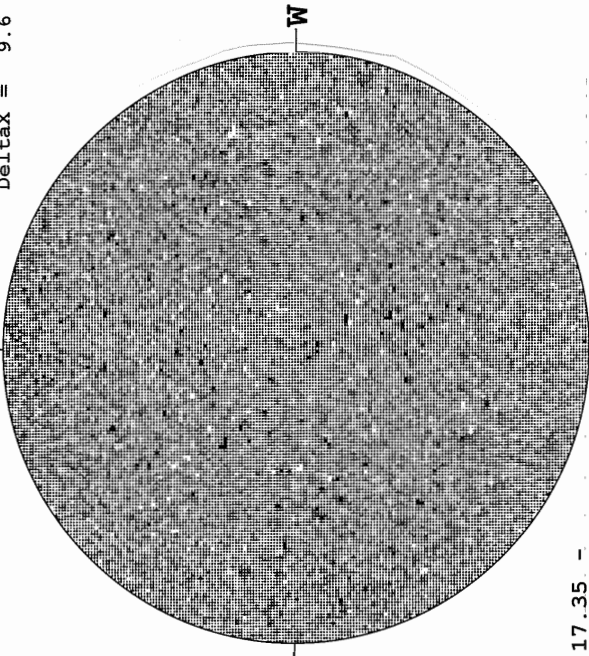
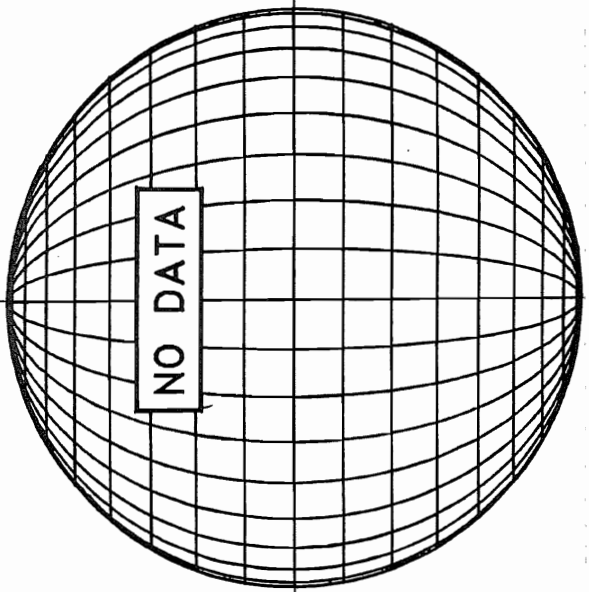
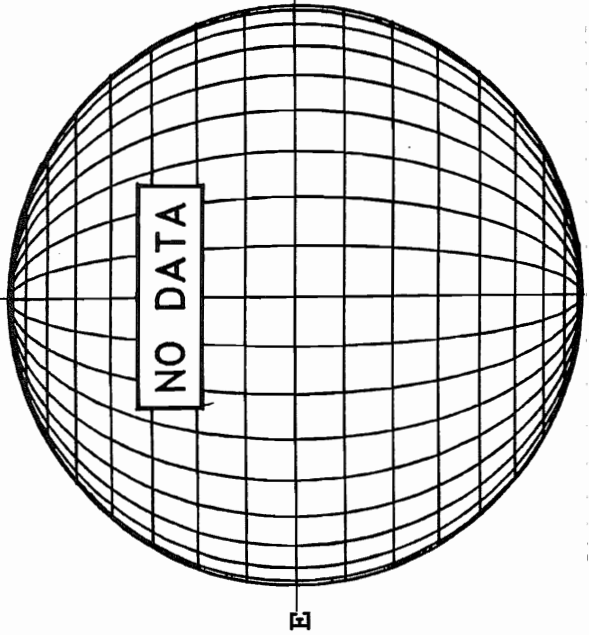
68  
Aug 08

August 29, 2008 (P= 20.36, Bo= 7.14, Lo= 18.90)

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

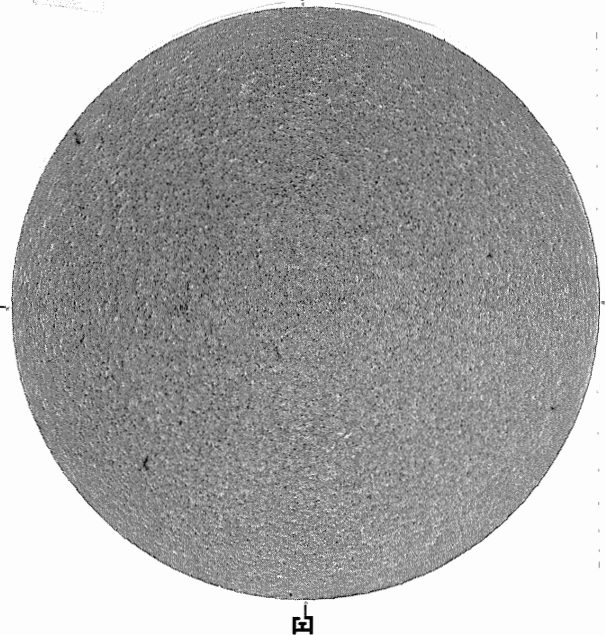
STANFORD MAGNETOGRAM  
Solid = +  
Dashed = -

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



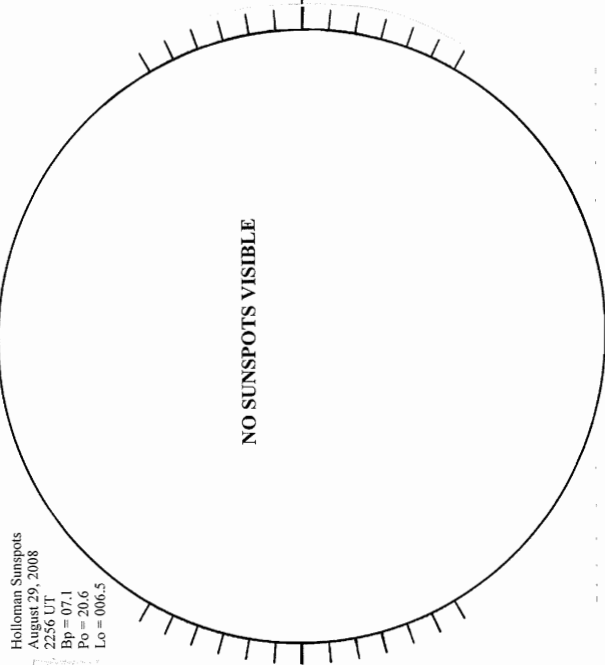
17.35 -  
18.34 UT

BIG BEAR H-ALPHA



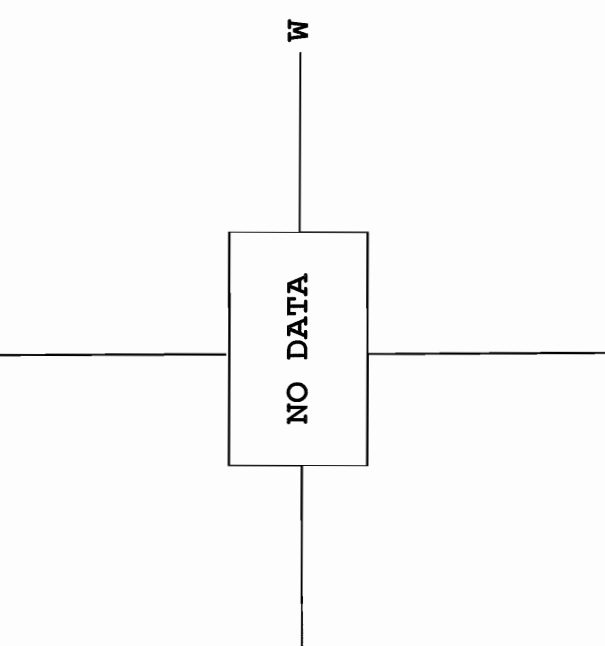
1634 UT

HOLLOMAN SUNSPOTS



2256 UT

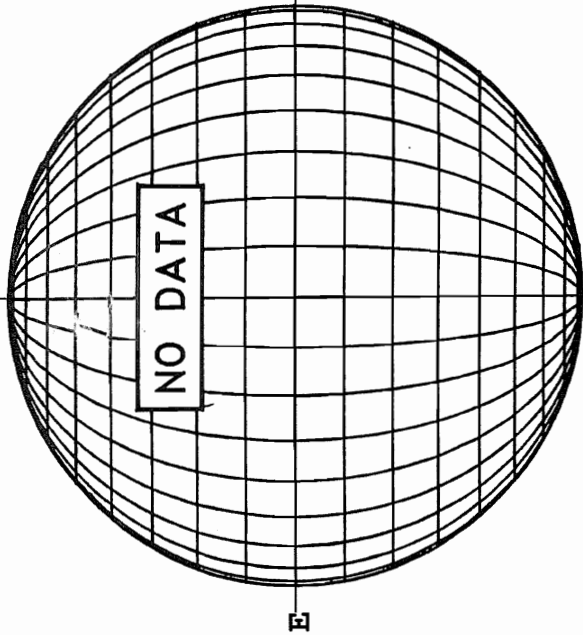
SACRAMENTO PEAK CORONA (1.15 Radii) -----



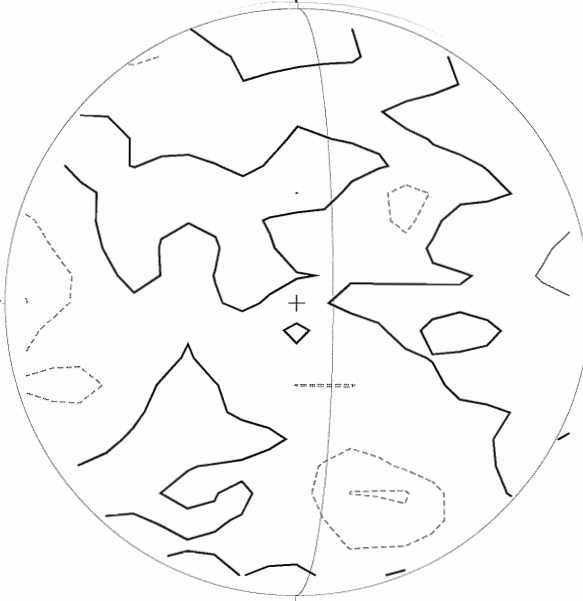
W

August 30, 2008 (P= 20.63, Bo= 7.16, Io= 5.69)

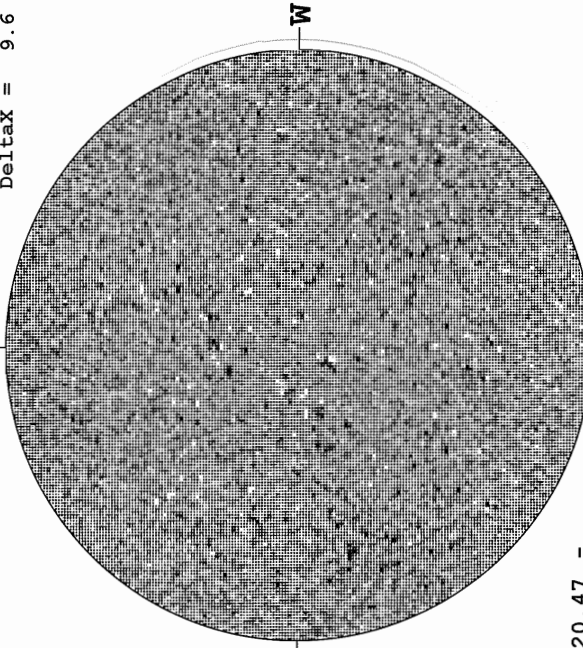
KITT PEAK MAGNETOGRAM -- SOLIS  
Bright = +  
Dark = -



STANFORD MAGNETOGRAM  
Solid = +  
Dashed = -



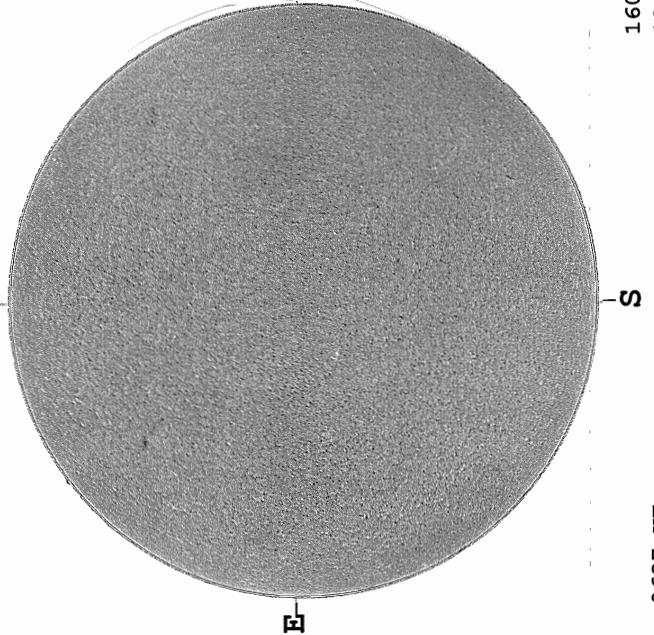
MT. WILSON MAGNETOGRAM  
White = +7.5G  
Black = -7.5G  
DeltaY = 13.1  
DeltaX = 9.6



20.47 -  
21.40 UT

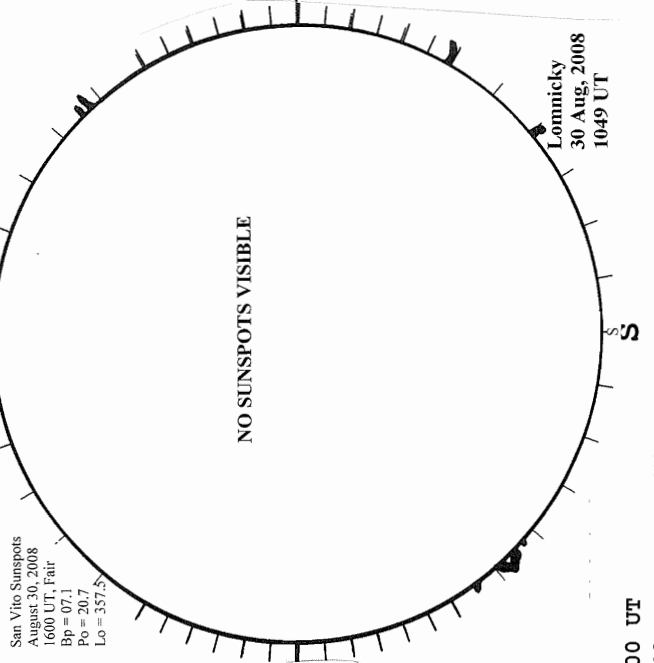
2111 UT

KANZELHOHE H-ALPHA



0637 UT

SAN VITO SUNSPOTS



1600 UT  
1049 UT LOMN FROM

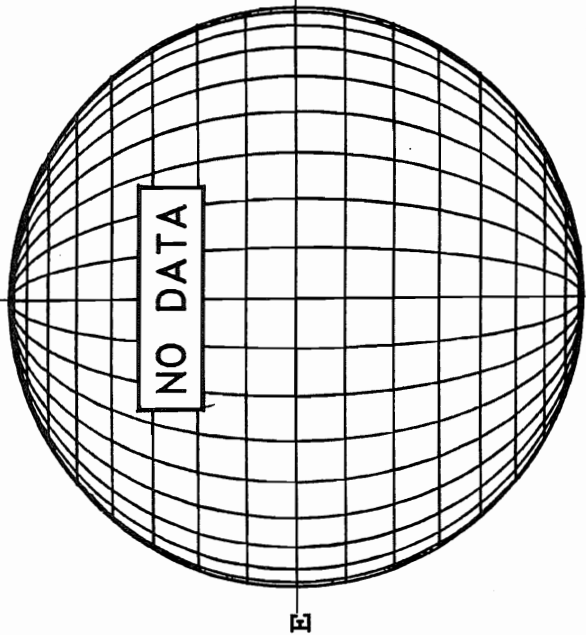
SACRAMENTO PEAK CORONA (1.15 Radii) -----

NO DATA

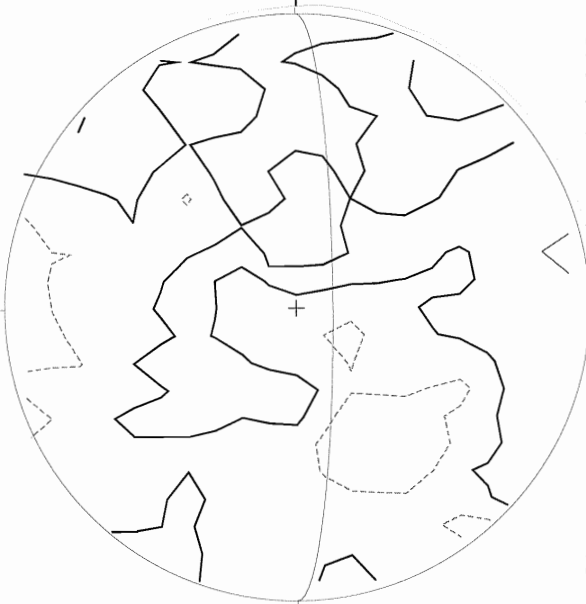
70  
Aug 08

August 31, 2008 (P= 20.89, Bo= 7.18, Lo= 352.48)

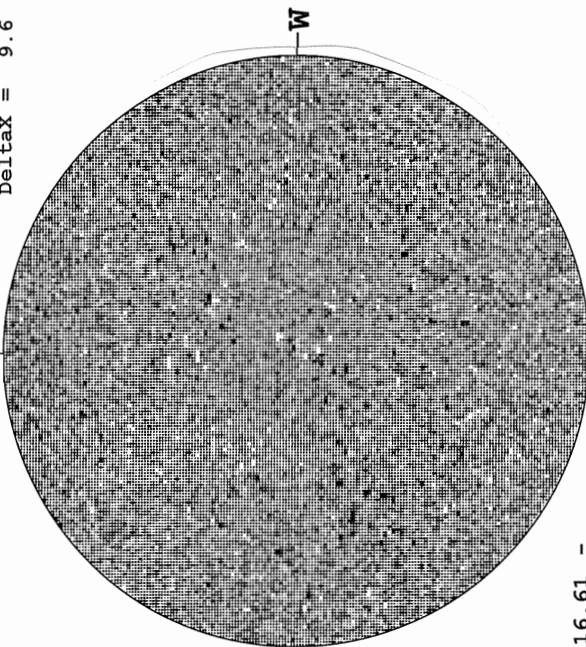
KITT PEAK MAGNETOGRAM -- SOLIS  
Bright = +  
Dark = -



STANFORD MAGNETOGRAM  
Solid = +  
Dashed = -



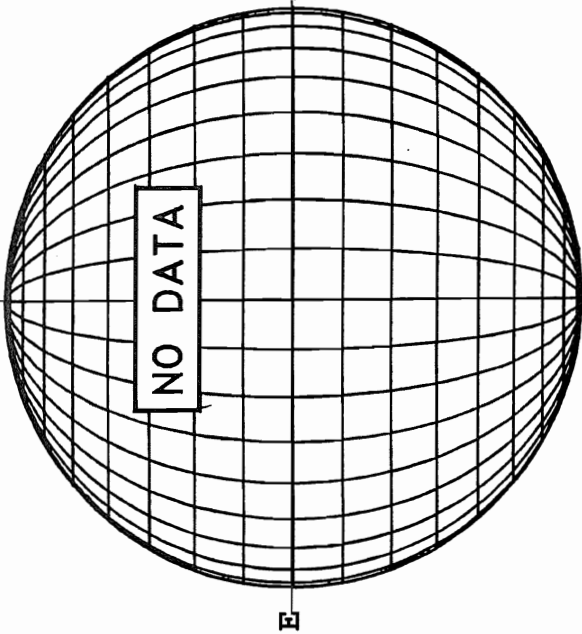
MT. WILSON MAGNETOGRAM  
White = +7.5G  
Black = -7.5G  
DeltaY = 13.1  
DeltaX = 9.6



16.61 -  
17.54 UT

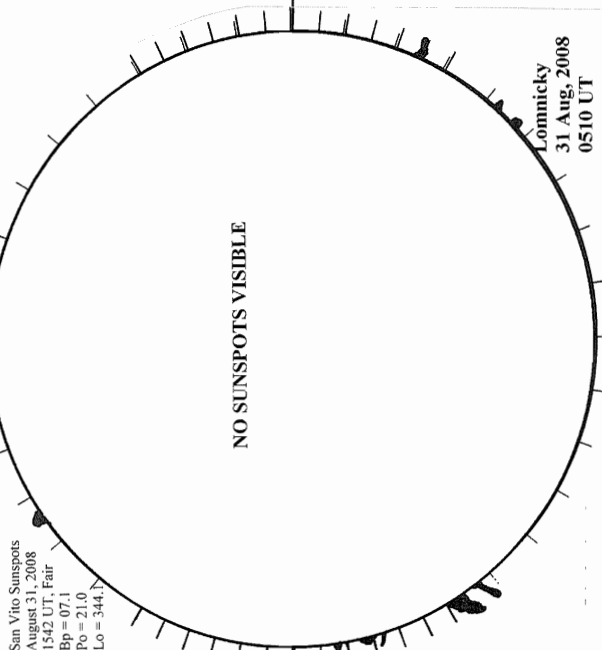
2137 UT

---  
BIG BEAR H-ALPHA



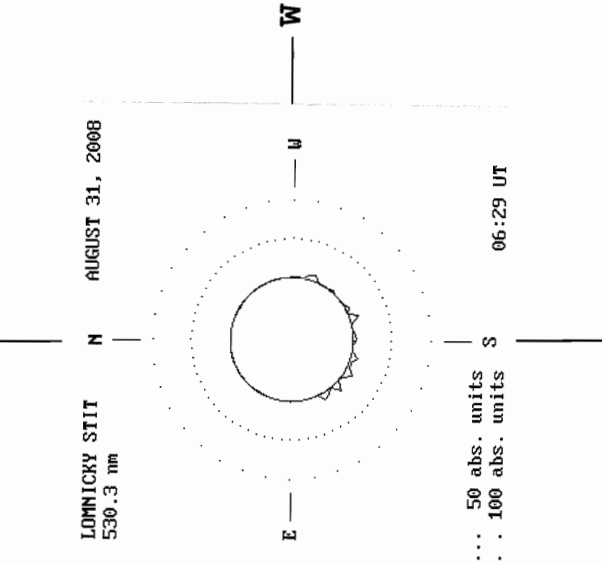
S

SAN VITO SUNSPOTS



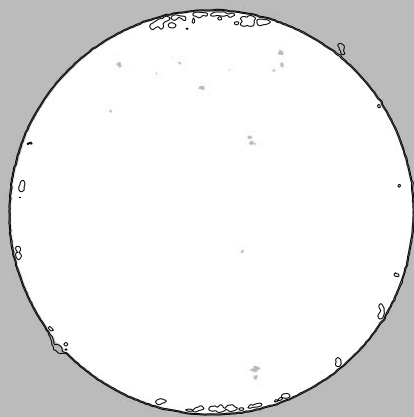
1542 UT  
0510 UT LOMN FROM

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

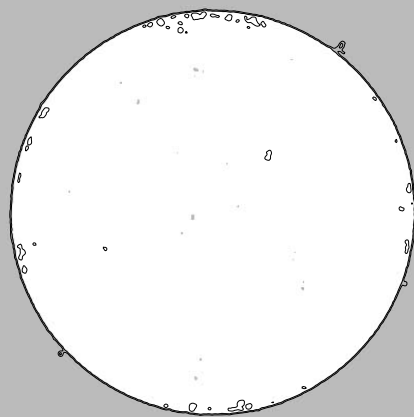


50 abs. units  
100 abs. units  
06:29 UT

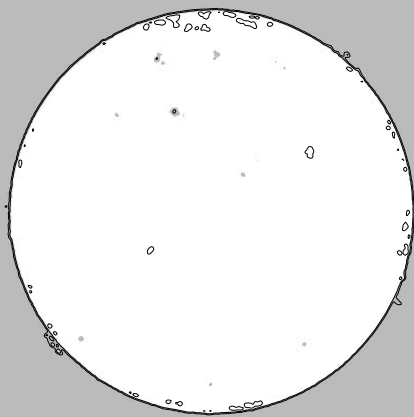
# Nobeyama Radio Heliograph 17 GHz (Tb) 2008 August



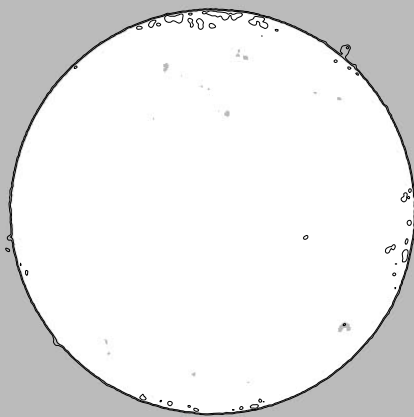
01 02:44 UT



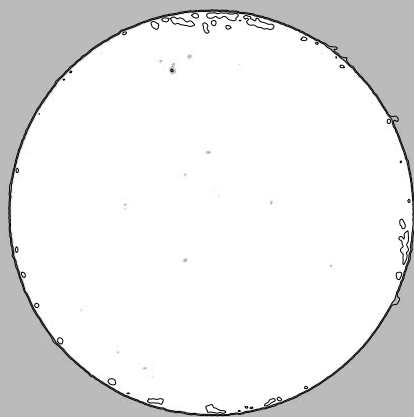
02 02:44 UT



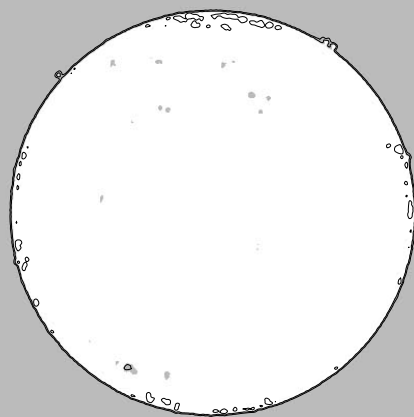
03 02:44 UT



04 02:44 UT



05 02:44 UT

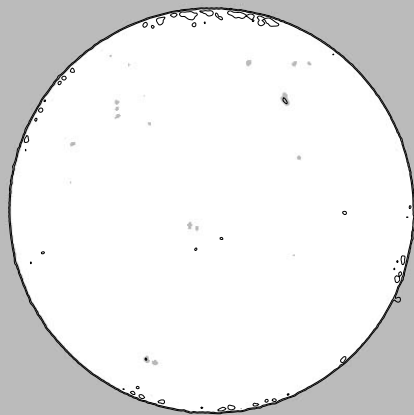


06 02:44 UT

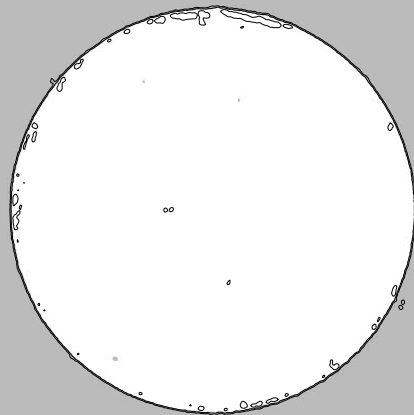
Contour Levels  $T_b = [5, 8, 12, 20, 50, 100] \times 10^3$  K  
Grey level  $T_b \leq 9,500$  K



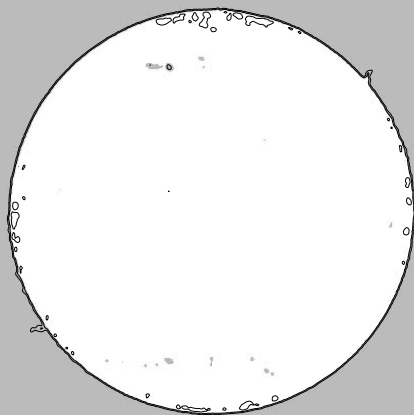
# Nobeyama Radio Heliograph 17 GHz (Tb) 2008 August



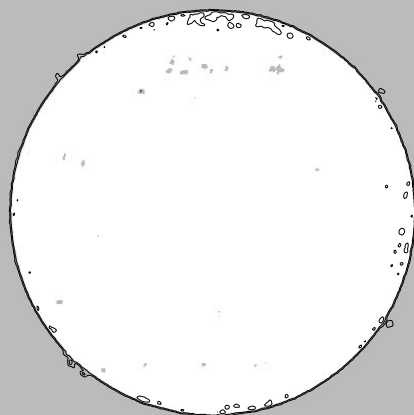
07 02:44 UT



08 02:45 UT



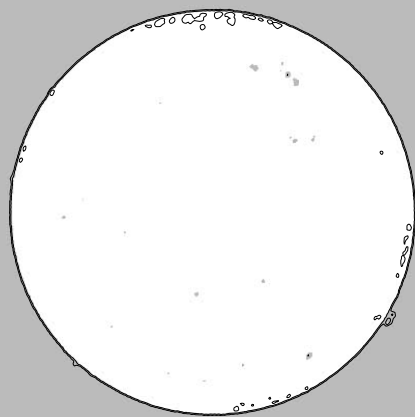
09 02:44 UT



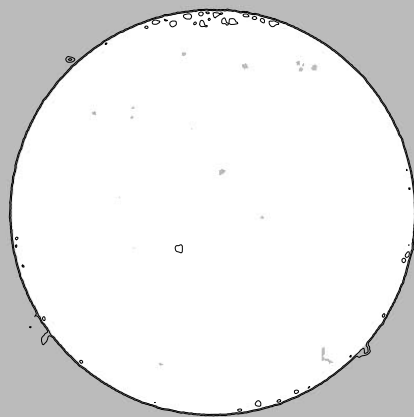
12 02:44 UT

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

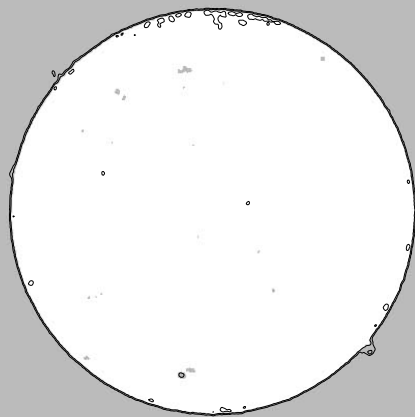
# Nobeyama Radio Heliograph 17 GHz (Tb) 2008 August



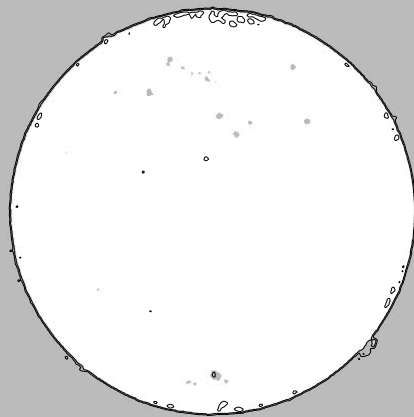
13 02:44 UT



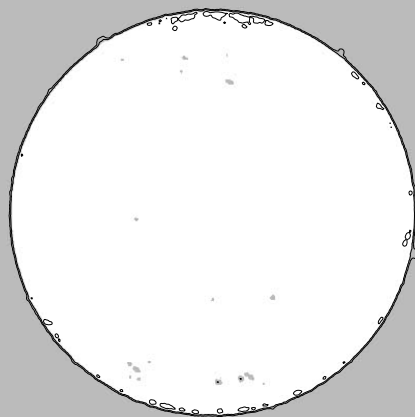
14 02:44 UT



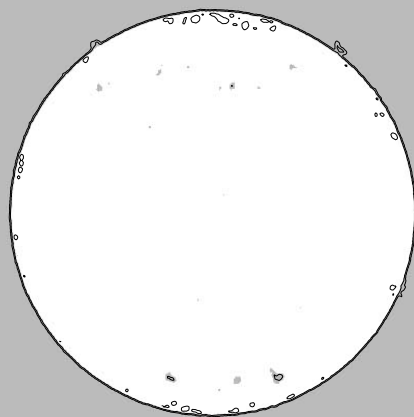
15 02:44 UT



16 02:44 UT



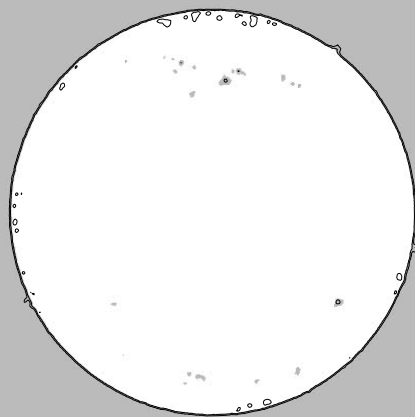
17 02:44 UT



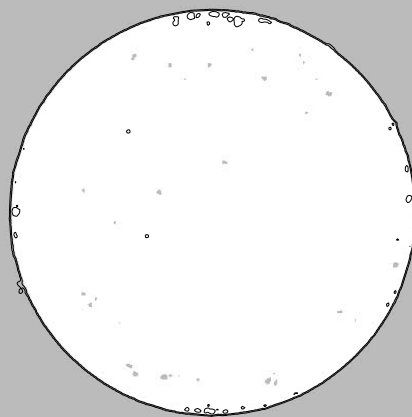
18 02:44 UT

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

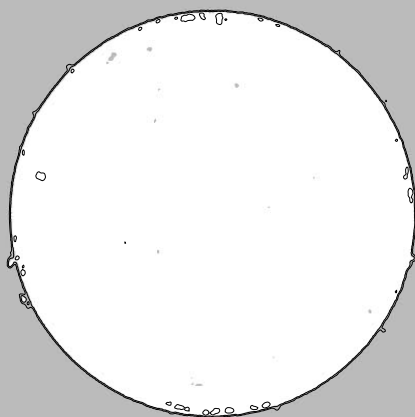
# Nobeyama Radio Heliograph 17 GHz (Tb) 2008 August



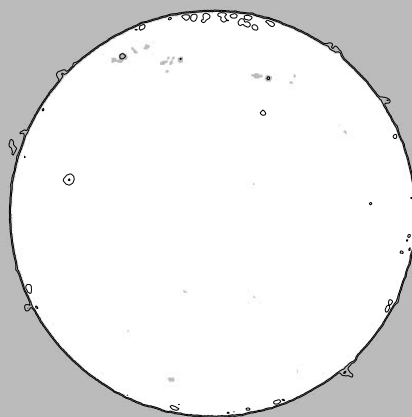
19 02:44 UT



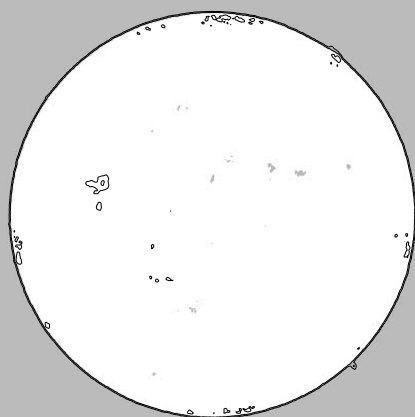
20 02:44 UT



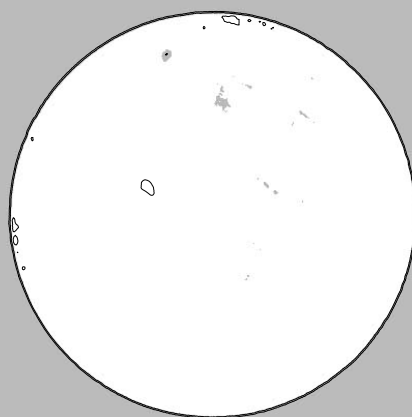
21 02:44 UT



22 02:44 UT



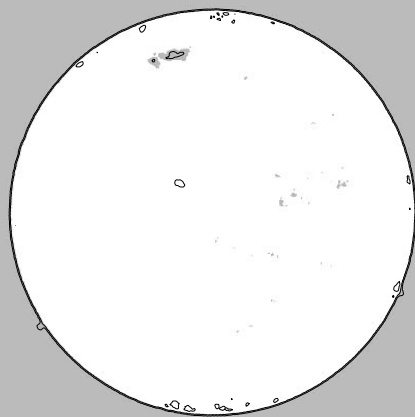
23 02:44 UT



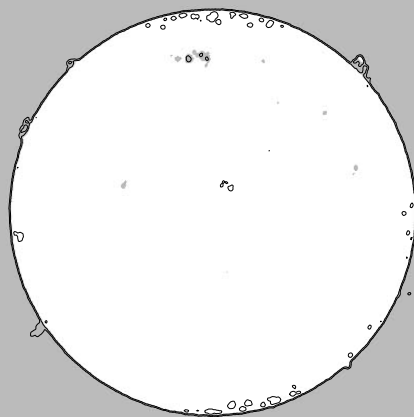
24 05:00 UT

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

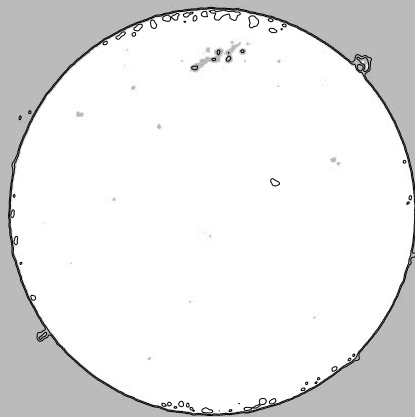
# Nobeyama Radio Heliograph 17 GHz (Tb) 2008 August



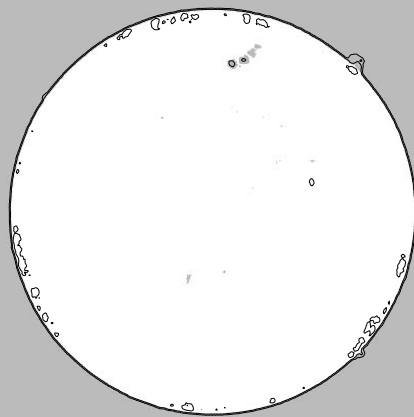
25 02:44 UT



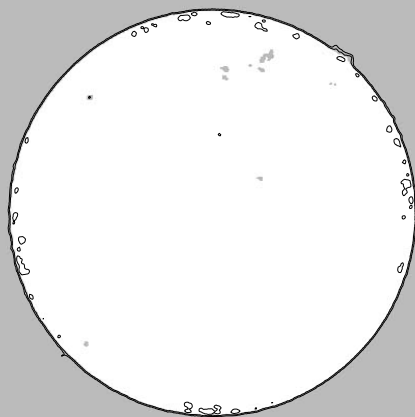
26 02:44 UT



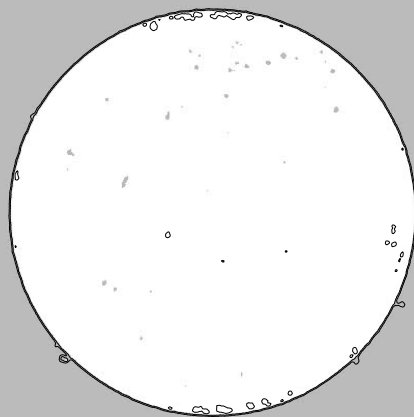
27 02:44 UT



28 02:44 UT



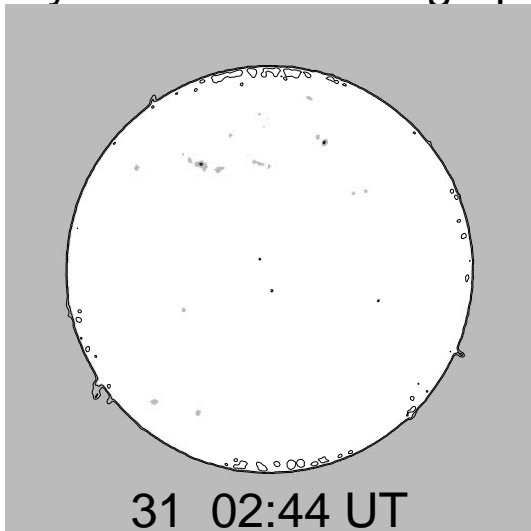
29 02:44 UT



30 02:44 UT

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

# Nobeyama Radio Heliograph 17 GHz (Tb) 2008 August



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

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

NOAA/ USAF Group	Mt Wilson Group	Sta	Observation Time			CMP	Max	Mag	Spot	Corrected Area	Spot	Long. Extent	Qual				
			Mo	Day	(UT)	Lat	CMD	Mo	Day	H	Class	Class	(10-6 Hemi)	Count	(Deg)		
11000A		PURP	08	19	0043	N10	W09	08	18.3			BXO		4	2	3	3
11000B		KAND	08	22	0750	N14	E45	08	25.7			BXO			3	2	3
11000B		SVTO	08	21	0844	N17	E58	08	25.8		A	AXX		10	1		3
11000B		HOLL	08	22	1600	N15	E41	08	25.8		A	AXX		10	1	1	3

Stations reporting:

HOLL = Holloman	LEAR = Learmonth	PURP = Purple Mountain	TACH = Tashkent
KAND = Kandilli	PALE = Palehua	SVTO = San Vito	VORO = Voroshilov

78  
Aug 08

SUDDEN IONOSPHERIC DISTURBANCES  
AUGUST 2008

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Day	Start (UT)	Max (UT)	End (UT)	Imp	Wide Spread Index	Number of Station Reports by Type					Flare (UT)	X-ray Class	NOAA Region
						SWF	SEA	SPA	LF- SPA	SES			
07	0822	0829	0844	1	1						No flare		
19	0949	1014	1056	2	1						No flare		
25	0950	1005	1051	2	1						No flare		

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OBSERVATORIES REPORTING FOR AUGUST 2008

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Upice, Czech Republic

SEA

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









Aug 08

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

OBSERVATION			EVENT				FREQUENCY		Remarks	
Day	Start (UT)	End (UT)	Sta	Start (UT)	End (UT)	Spectral Class	Event Remarks	Int (1-3)		Lower (MHz)
31	0000	0740	CULG							
	0000	0913	HIRA							
	0526	1638	ONDR							
	0545	1715	BLEN							
	2003	2400	HIRA							
	2020	2400	CULG							

## Event Remarks:

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

## Frequency qualifiers:

X = Extends beyond instrument range	U = Uncertain frequency
-------------------------------------	-------------------------

## Remarks:

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

## Stations Reporting:

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

NOTE 1: Beginning June 26, 2001, the Bleien observatory changed to higher frequencies (1-4Ghz).  
 NOTE 2: Potsdam has reduced sensitivity in the 400-800 MHz range.

## SOLAR RADIO NOISE STORM AT 150.9 MHZ

FROM NANÇAY RADIOHELIOGRAPH

AUGUST 2008

	HELIOGRAPHICS POSITIONS MEAN VALUES <sup>1</sup>		IMP <sup>2</sup>	OBSERVING TIME <sup>3</sup>	
DAY	E-W	S-N		START( UT)	END(UT)

## SOLAR RADIO NOISE STORM AT 327 MHZ

FROM NANÇAY RADIOHELIOGRAPH

AUGUST 2008

	HELIOGRAPHICS POSITIONS MEAN VALUES <sup>1</sup>		IMP <sup>2</sup>	OBSERVING TIME <sup>3</sup>	
DAY	E-W	S-N		START(UT)	END(UT)

### OTHERS DAYS: NO DETECTABLE NOISE STORM

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

\*\* Following a large burst

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

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

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

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

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

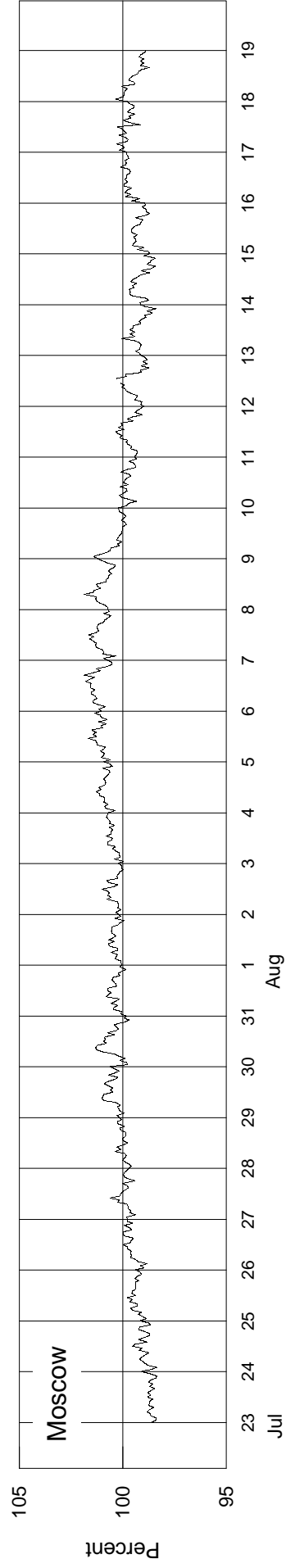
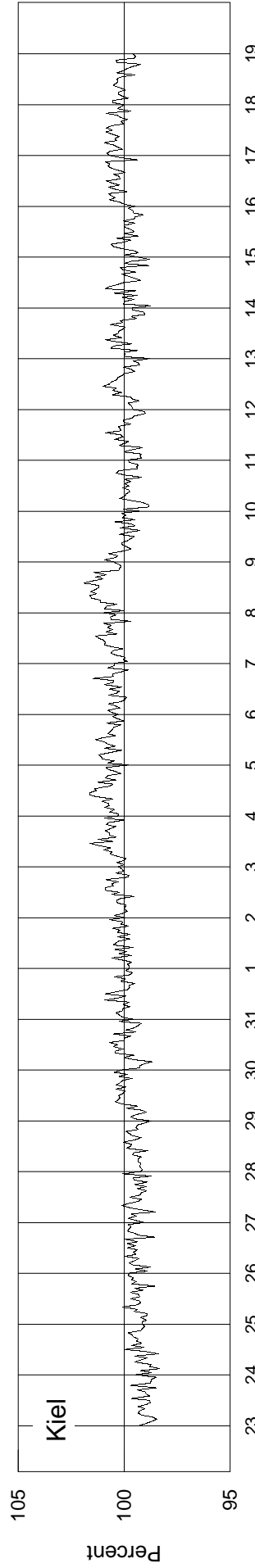
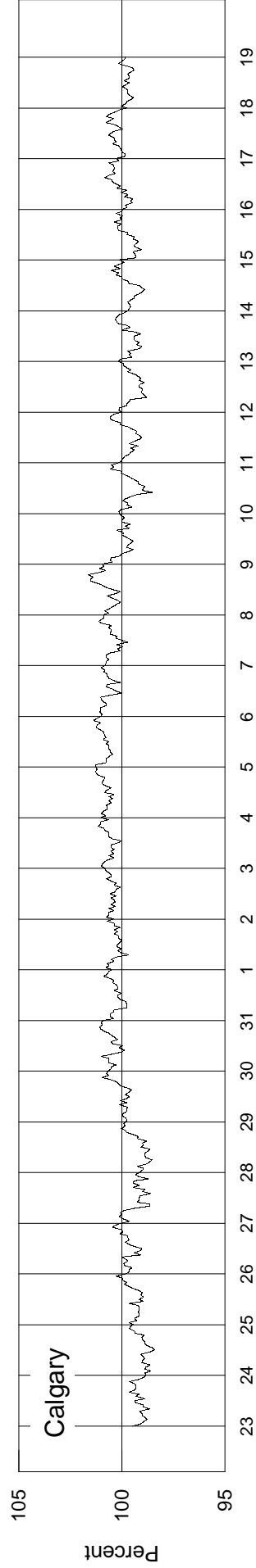
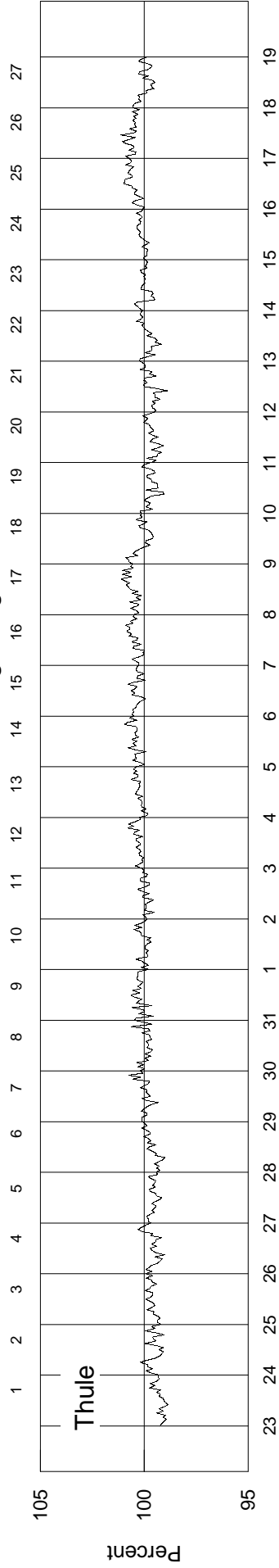
**COSMIC RAY INDICES**  
**(Neutron Monitor)**  
**AUGUST 2008**

Day	THULE Average (cts/h)/100	CALGARY Average (cts/h)/300	KIEL Average (cts/h)/100	MOSCOW Average (cts/h)/64	CLIMAX Average (cts/h)/100	BEIJING Average (cts/h)/256	HALEAKALA Average (cts/h)/1000
1	4578.0	4021.8	6331.5	9562.5		2005.9	
2	4574.5	4029.3	6340.6	9565.5		2007.1	
3	4591.5	4036.7	6364.0	9575.9		2016.9	
4	4588.0	4043.2	6377.5	9609.6		2009.3	
5	4597.4	4045.8	6366.1	9633.9		2011.1	
6	4594.5	4039.5	6354.7	9652.1		2004.6	
7	4598.3	4031.0	6361.0	9630.8	data	2015.8	data
8	4604.6	4041.5	6389.4	9620.0	not	2010.4	not
9	4583.7	4008.2	6327.5	9556.1	available	1989.3	available
10	4564.0	3996.3	6306.2	9507.6		1992.4	
11	4559.5	3999.7	6313.9	9499.9		2000.9	
12	4562.2	3988.2	6324.5	9472.4(23)		1999.8	
13	4570.8	3997.3	6323.4	9453.3		2006.5	
14	4576.4	3998.0	6312.6	9444.8		2011.9	
15	4581.7	3999.3	6311.7	9451.4		2020.1	
16	4602.1	4015.3	6348.2	9503.8		2016.0	
17	4603.8	4022.2	6352.2	9511.2		2004.9	
18	4577.5	4000.0	6330.8	9479.1		2010.7	
19	4573.1	3999.3	6313.5	9483.7		1984.3	
20	4587.6	4020.0	6336.5	9508.3		2005.7	
21	4595.5	4033.2	6337.7	9511.4		1995.7	
22	4610.9	4004.0	6340.2	9536.0		2015.9	
23	4620.0	4021.2	6364.0(22)	9544.0		2012.4	
24	4620.8	4035.0	6365.8	9578.9		2011.1	
25	4624.8	4050.0	6353.2	9617.6		2013.4	
26	4613.0	4043.3	6335.0	9625.2		2013.8	
27	4612.1	4058.8(3)	6328.3	9602.3(23)		2001.5	
28	4617.4	4044.5	6344.8	9604.7		2014.3	
29	4617.7	4047.3	6345.5	9646.8		1998.9	
30	4605.2	4040.3	6328.7	9672.6		2019.6	
31	4619.7	4016.3	6351.9	9697.3		2015.9	
Mean	4594.0	4023.4	6341.3	9560.0		2007.6	

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.

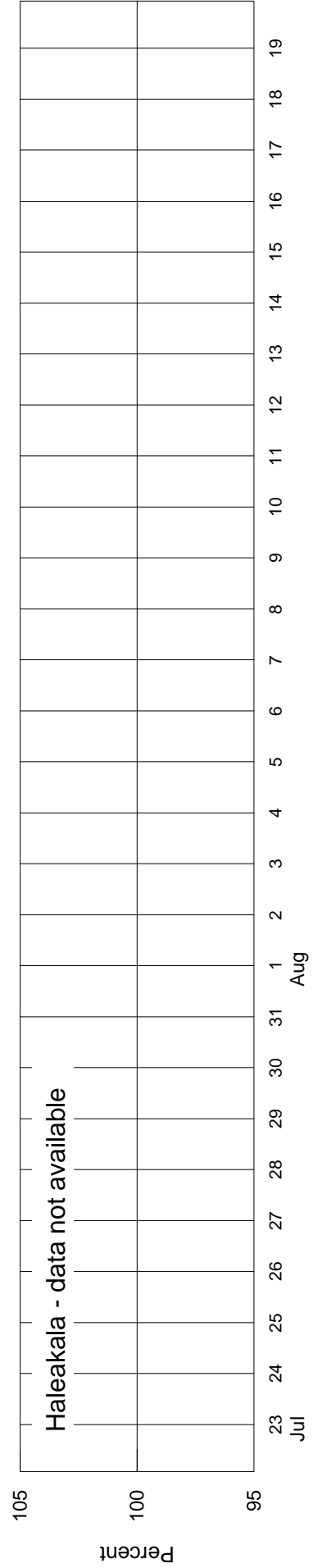
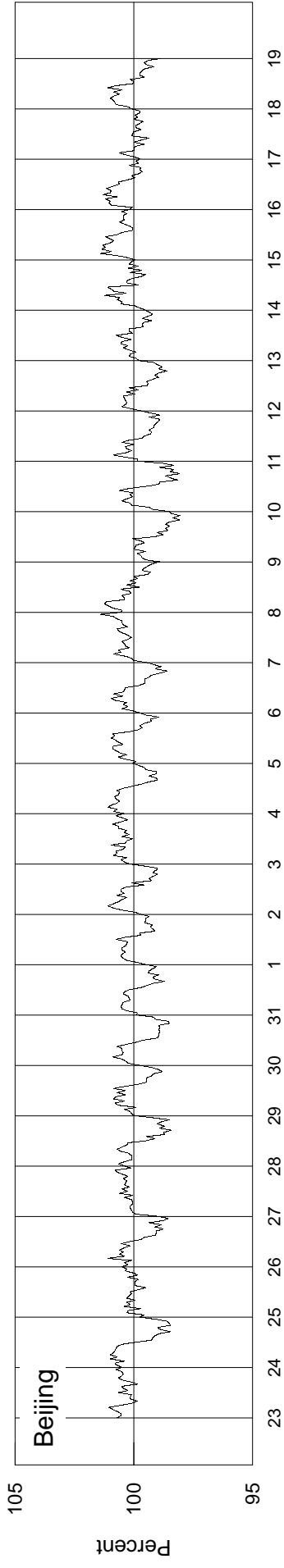
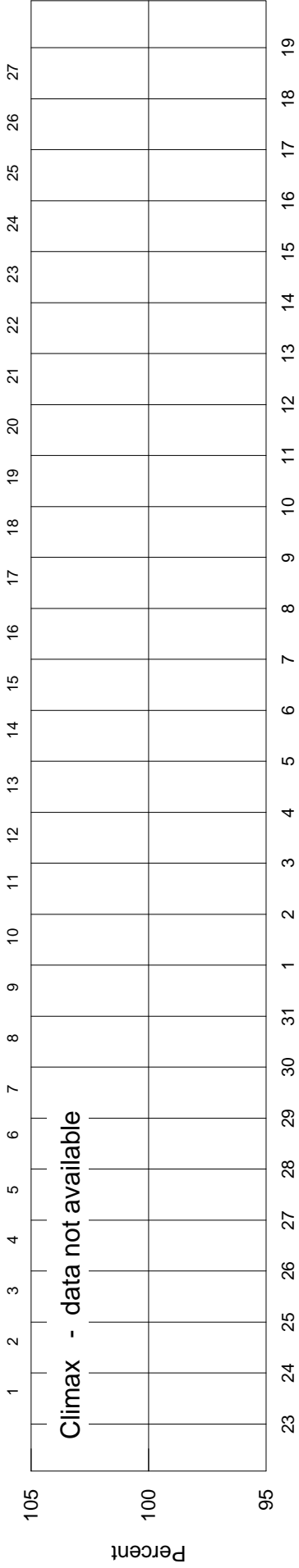
# COSMIC RAY INDICES (Neutron Monitor)

Bartels Rotation 2388 - Beginning 23 Jul 2008



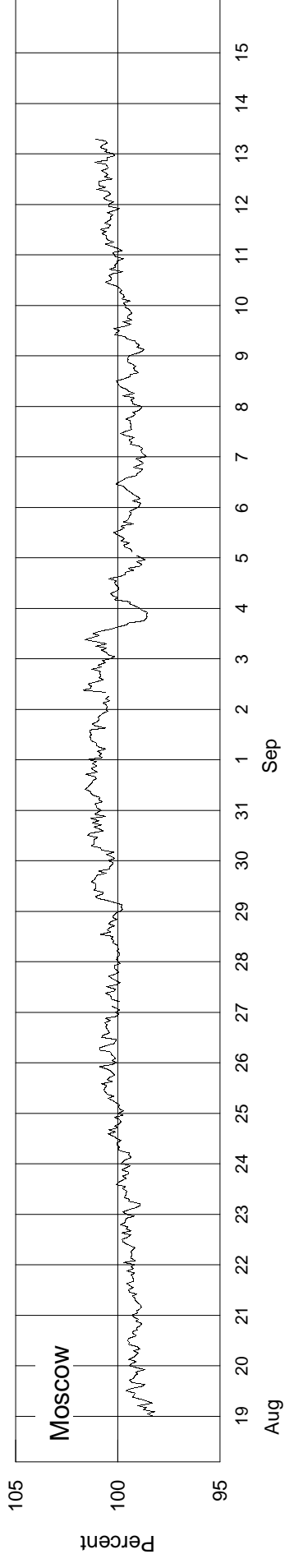
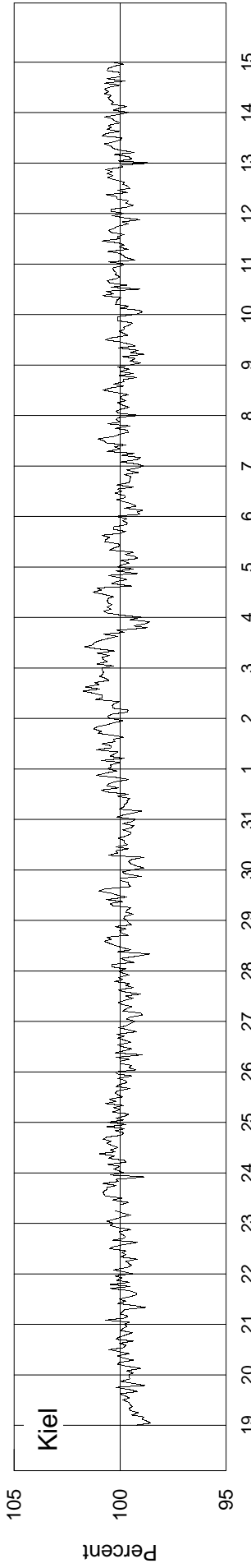
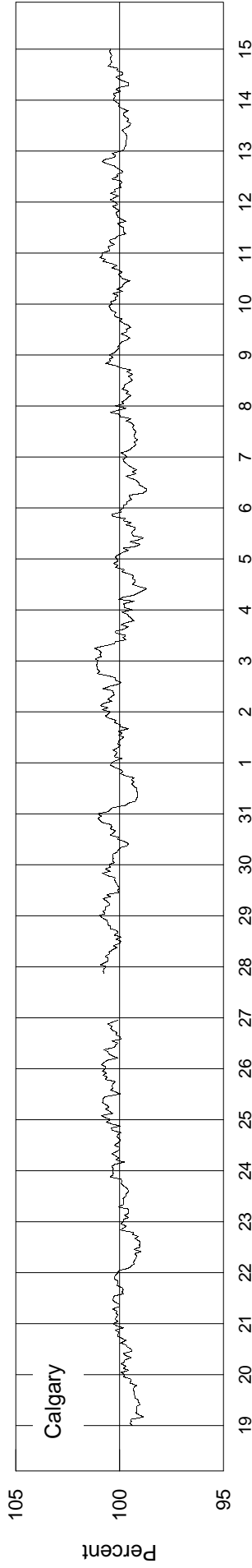
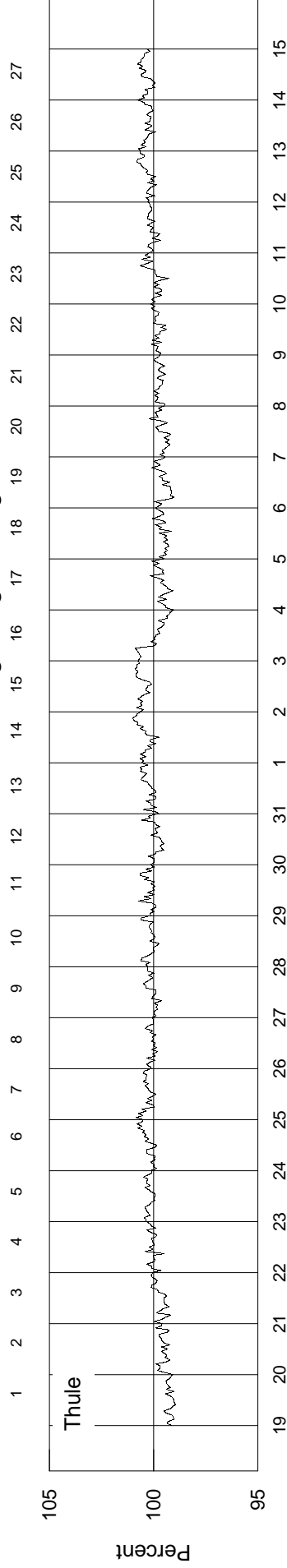
# COSMIC RAY INDICES (Neutron Monitor)

Bartels Rotation 2388 - Beginning 23 Jul 2008



# COSMIC RAY INDICES (Neutron Monitor)

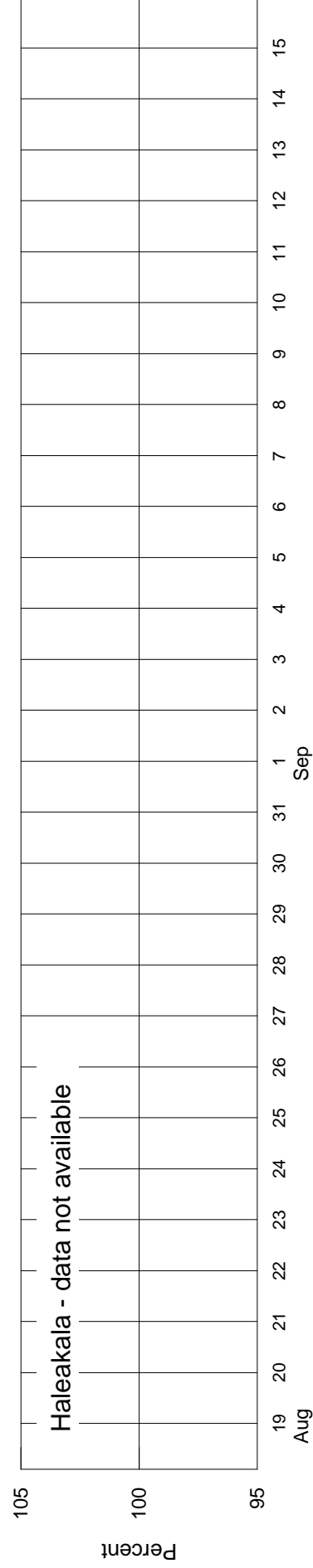
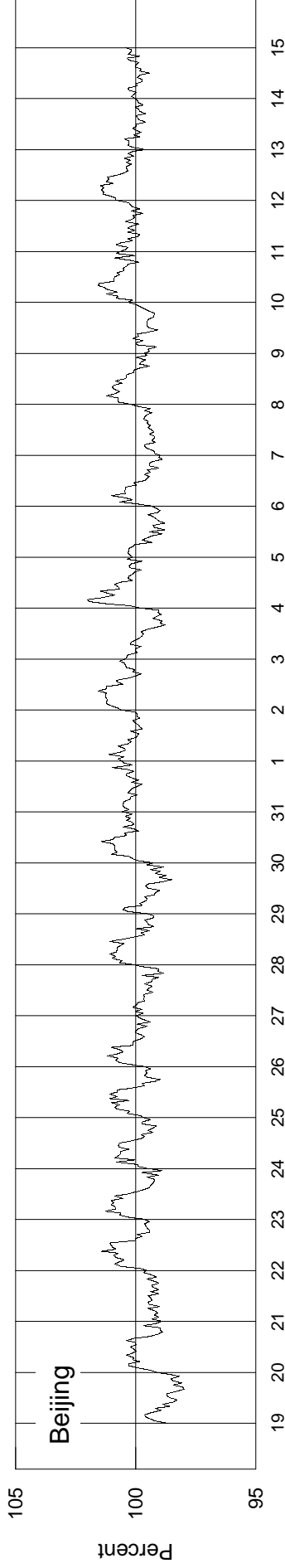
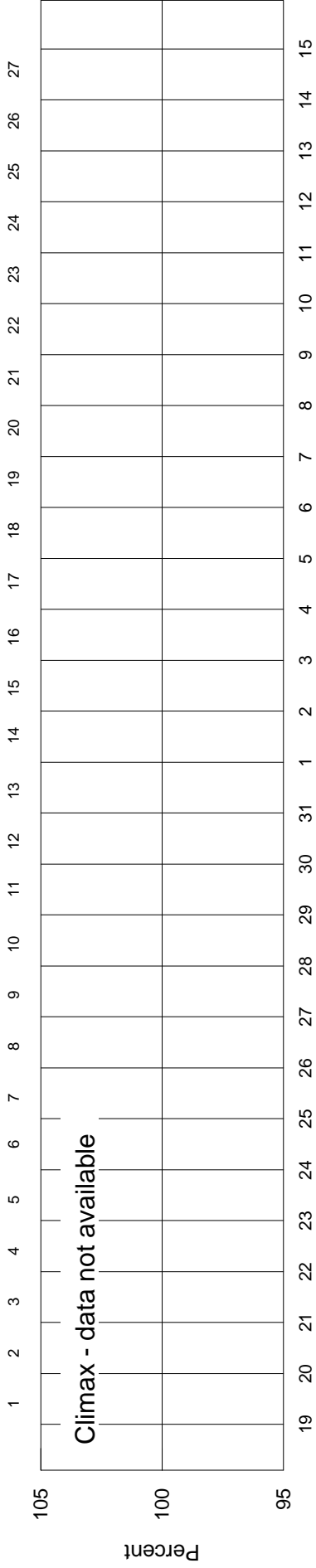
Bartels Rotation 2389 - Beginning 19 Aug 2008



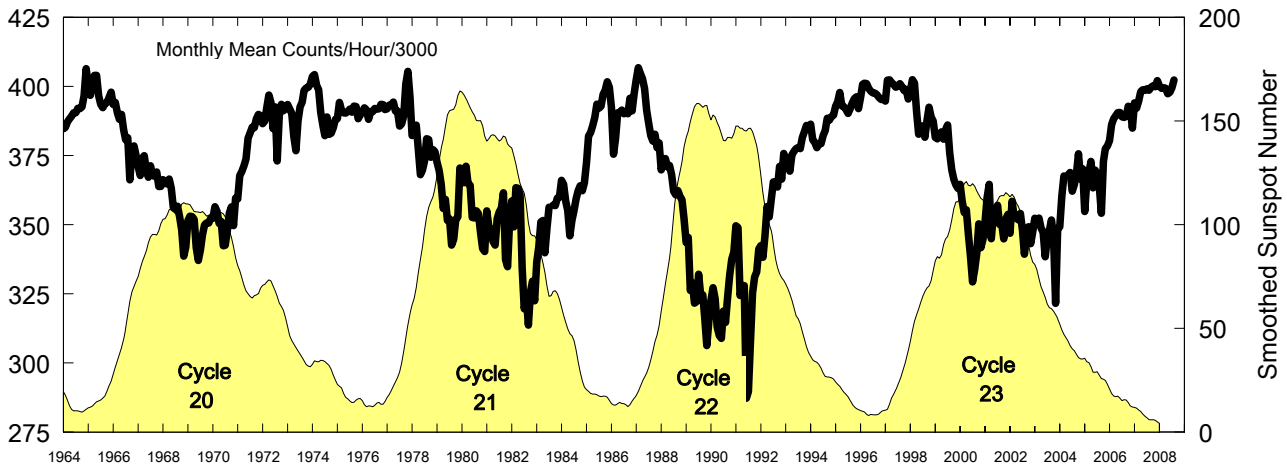


# COSMIC RAY INDICES (Neutron Monitor)

Bartels Rotation 2389 - Beginning 19 Aug 2008



# Calgary Neutron Monitor Pressure-Corrected Values Jan 1964 - Aug 2008



Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Mean
1964	3847	3852	3872	3883	3892	3905	3905	3921	3920	3926	3966	4064	3913
1965	4006	3968	4007	4040	4040	3967	3935	3923	3938	3942	3960	3980	3976
1966	3935	3943	3906	3881	3899	3844	3807	3814	3663	3758	3785	3750	3832
1967	3710	3678	3741	3750	3697	3671	3713	3679	3675	3691	3638	3639	3690
1968	3663	3653	3647	3665	3632	3561	3556	3567	3529	3482	3386	3420	3563
1969	3515	3531	3529	3520	3417	3370	3408	3464	3500	3507	3506	3524	3483
1970	3523	3565	3548	3505	3512	3424	3426	3477	3543	3564	3497	3596	3515
1971	3593	3678	3693	3712	3737	3813	3832	3853	3851	3883	3899	3893	3786
1972	3865	3875	3924	3969	3942	3847	3926	3731	3895	3935	3912	3920	3895
1973	3935	3919	3903	3819	3768	3875	3926	3944	3986	3995	3997	4008	3923
1974	4036	4043	4005	3988	3906	3861	3822	3890	3827	3831	3850	3881	3912
1975	3883	3943	3914	3905	3904	3910	3918	3907	3929	3927	3884	3897	3910
1976	3908	3923	3915	3881	387	3909	3921	3918	3920	3936	3935	3916	3916
1977	3919	3933	3933	3943	3911	3911	3857	3865	3895	4010	4055	3961	3933
1978	3823	3826	3860	3773	3681	3697	3730	3811	3808	3744	3772	3764	3774
1979	3726	3696	3647	3559	3592	3516	3521	3427	3447	3519	3528	3705	3573
1980	3681	3652	3711	3649	3643	3527	3525	3550	3540	3471	3414	3403	3564
1981	3550	3491	3483	3440	3426	3522	3546	3560	3615	3374	3348	3520	3490
1982	3586	3492	3634	3632	3608	3344	3196	3239	3137	3257	3296	3225	3387
1983	3364	3421	3510	3515	3399	3487	3563	No Data	3571	3569	3597	3599	3509
1984	3661	3646	3586	3551	3460	3515	3551	3593	3623	3641	3623	3652	3592
1985	3723	3821	3834	3858	3888	3936	3921	3929	3971	3987	4017	3997	3907
1986	3923	3755	3814	3905	3906	3915	3902	3907	3902	3958	3912	3974	3898
1987	4025	4068	4047	4028	3993	3914	3866	3822	3802	3827	3779	3796	3914
1988	3698	3729	3739	3709	3714	3682	3621	3608	3624	3603	3590	3520	3653
1989	3436	3454	3263	3290	3216	3222	3321	3224	3246	3164	3063	3152	3254
1990	3227	3272	3232	3129	3099	3089	3188	3147	3237	3317	3375	3401	3226
1991	3496	3489	3244	3279	3280	2873	2896	3078	3253	3311	3330	3412	3245
1992	3425	3382	3463	3566	3528	3593	3655	3655	3636	3711	3665	3758	3586
1993	3730	3741	3693	3753	3765	3775	3780	3775	3815	3836	3859	3852	3781
1994	3864	3807	3798	3779	3793	3793	3822	3841	3885	3878	3891	3896	3837
1995	3929	3945	3919	3929	3927	3917	3902	3919	3940	3956	3963	3920	3931
1996	3960	4008	4012	4010	3993	3983	3976	3976	3970	3960	3953	3955	3980
1997	3947	4023	4024	4014	4007	3998	4001	4010	3999	3985	3990	3955	3996
1998	3982	4025	4013	3910	3827	3839	3857	3817	3876	3925	3890	3875	3903
1999	3816	3811	3823	3836	3810	3843	3861	3760	3699	3664	3644	3631	3767
2000	3646	3586	3544	3554	3465	3386	3293	3337	3395	3503	3417	3447	3464
2001	3510	3599	3646	3449	3537	3511	3570	3501	3504	3449	3521	3537	3528
2002	3469	3585	3527	3526	3517	3541	3479	3393	3455	3493	3431	3474	3491
2003	3523	3517	3524	3488	3473	3384	3450	3480	3517	3460	3216	3485	3460
2004	3492	3604	3676	---	3680	3689	3612	3645	3683	3756	3665	3702	3655
2005	3546	3658	3688	3729	3633	3698	3684	3640	3541	3729	3775	3785	3676
2006	3804	3862	3883	3894	3905	3906	3890	3888	3893	3929	3918	3849	3885
2007	3940	3921	3947	3981	3988	3986	3992	3986	3997	4002	3999	4021	3980
2008	4002	3993	3996	3993	3974	3979	3995	4023					3994

Multiply table entries by 300 to obtain hourly counting rate. Calgary, Canada: N51 W114, Alt=1128m, Cutoff Rigidity=1.09GV.

90  
Aug 08

# Geomagnetic Activity Indices

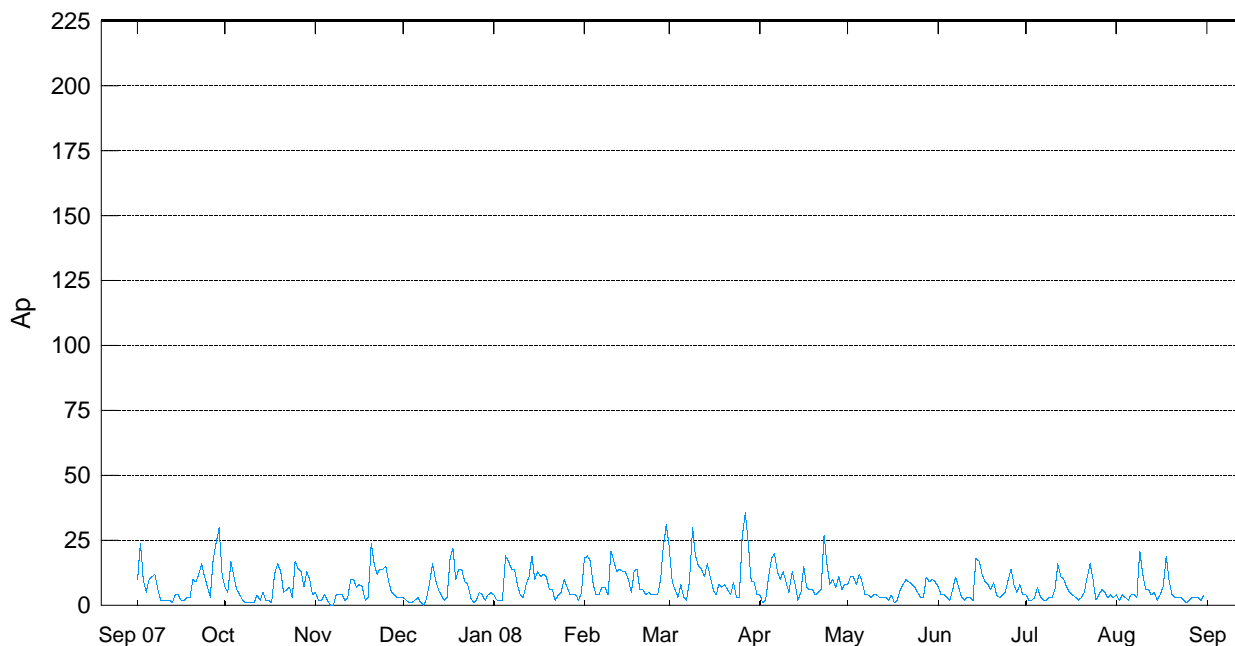
## AUGUST 2008

Day	Kp Three-Hourly Indices								Sum	Ap	Cp	Km Three-Hourly Indices								aa Provisional					
	1	2	3	4	5	6	7	8				1	2	3	4	5	6	7	8	Am	N	S	M		
1	1-	1-	0+	0+	1	1	2-	1+	7	4	0.1	1-	1-	0+	0o	1-	1+	1o	1+	5	10	6	5	11	CC
2	Q2	0	0+	0+	0+	1-	0	1-	3	2	0.0	0+	0o	0+	0+	0+	0o	0+	1o	3	5	3	3	5	CC
3		0+	1-	0+	1-	1-	1	1+	7	4	0.1	1-	0+	0+	1-	1-	1o	2-	2o	6	9	5	3	10	CC
4	Q9	1+	0+	0+	1-	1	0+	1-	5+	3	0.1	1+	0+	0+	1-	1-	0+	0+	0+	4	8	4	6	6	CC
5	Q6	0+	0+	1-	1	1-	0+	0+	4-	2	0.0	0+	0+	1-	1+	1o	0+	0o	0o	3	4	5	4	5	CC
6		1-	1-	1-	1+	1+	1+	1+	9-	4	0.1	0+	1+	1o	1+	1-	1o	2-	1+	7	11	9	8	12	CC
7		1	1	0+	0+	1-	1	1+	8-	4	0.1	1-	1+	0+	0+	0+	1-	1+	2-	6	10	4	5	9	CC
8		0	0+	0+	0	0+	1+	1-	5	3	0.0	0+	0+	0o	0o	0+	1-	1-	2o	4	9	3	2	10	CK
9	D1	2+	3+	2+	2	2+	4-	5-	26	21	1.1	2+	3+	3-	2o	2+	3+	4o	4+	33	48	30	23	54	
10	D3*	4-	4-	3+	1+	1+	3	2-	20-	12	0.7	4-	3+	3+	2o	2-	3-	2o	2o	25	25	24	30	19	
11		3-	1+	1	1+	2	1+	1-	12-	6	0.3	2+	2o	1+	2-	2+	2-	1o	1+	13	13	13	14	12	C
12		2	2	2	1+	2-	2	1	13+	6	0.3	2o	2o	2+	1+	1+	2+	1o	2-	13	17	10	12	15	CC
13		2+	1	0+	1	1	1-	1-	8-	4	0.1	2+	1+	0+	1o	1o	0+	0+	1o	7	10	6	10	7	CC
14		2+	3	1-	1-	1	1-	1-	9+	5	0.2	2o	3-	1o	1-	1o	0+	1-	0o	8	11	8	13	6	CC
15		2	1+	0+	0+	0	0+	0+	5-	2	0.0	2o	1+	0+	0o	0o	0o	0+	0o	4	8	5	9	4	CC
16		0	1-	1	1-	0+	1-	1	7	4	0.1	0+	0+	1+	1+	0+	1o	1+	3-	8	9	7	6	11	CC
17	D5*	3+	2-	1-	2-	2	1+	1-	13	7	0.3	3-	1+	1-	2-	2-	1o	0+	1+	10	13	9	12	11	C
18	D2*	2+	3+	3-	3+	5-	4-	3+	26+	19	1.0	2+	3-	2+	4-	4o	4-	3+	3-	34	36	31	23	45	
19	D4*	3-	2+	2+	2	2+	3-	2	18-	9	0.5	2+	2+	2+	2+	2+	2+	2-	1+	17	24	16	20	20	
20		2	2-	1	1	1	1-	0+	8	4	0.1	2o	2-	1-	1o	1o	1-	0+	0o	7	9	6	9	6	CK
21		0	0	1-	1+	1	0+	1	5+	3	0.0	0+	0o	1-	2-	1o	0+	1-	1o	5	6	6	5	7	CC
22	Q10	1-	1-	1+	1	1-	0	0+	5+	3	0.1	1o	1-	1o	1o	0+	0o	0o	0+	3	5	6	7	4	CC
23		1	1-	0	0	1+	1-	0+	5	3	0.0	1o	0+	0o	0o	1o	1-	0o	1o	3	6	5	3	8	CC
24	Q4	0	0	0+	0+	1-	0+	0+	3	2	0.0	0o	0o	0+	0+	1-	0+	0o	1o	3	4	4	2	6	CC
25	Q1	0	0	0+	0	0+	0	0+	1	1	0.0	0o	0o	0+	0o	0o	0o	0+	0+	1	3	2	2	3	CC
26	Q3	0+	0	0	0	1-	1	0+	3-	2	0.0	0+	0o	0o	0o	1-	1-	0+	0+	3	5	4	2	7	CC
27		2-	2-	1-	0+	1-	0+	0+	6	3	0.1	1+	2-	0+	0+	0+	0o	0+	0+	4	5	3	5	3	CC
28	Q8	0+	1	0	0+	1-	1	1	5+	3	0.1	0+	1-	0o	0+	0+	1-	1o	1o	4	8	2	3	7	CC
29	Q7	1-	1-	1-	0+	0+	1	1-	5	3	0.1	1-	1o	1o	0+	0+	1o	1-	1-	5	6	3	4	5	CC
30	Q5	0+	0+	0+	1	1-	0+	0+	3+	2	0.0	0+	0o	1-	1o	0+	0o	0o	0o	3	4	4	5	3	CC
31		0+	0+	1-	1	2-	1+	1+	8-	4	0.1	0+	0+	1o	1+	2-	1+	1+	1o	7	8	8	8	9	CC
Mean												5	0.18									8.3	11.4	8.1	9.6

Day	Kn Three-Hourly Indices								An	Ks Three-Hourly Indices								Prov							
	1	2	3	4	5	6	7	8		1	2	3	4	5	6	7	8	As	Sa	Ri	Ra	Rs	IMF		
1	1-	1-	1-	0+	1-	2-	1+	1+	6	1o	1-	0o	0o	0+	1-	1-	1o	4	68.1	0	0	12			
2	0+	0o	1-	1-	1-	0o	1-	2-	4	0o	0o	0+	0o	0+	0o	0o	0+	1	68.2	0	0	12			
3	1-	1-	0+	1-	1o	1+	2-	2o	7	0+	0+	0+	0+	0+	1-	1+	2-	5	67.4	0	0	11			
4	1+	1-	1-	1+	1-	1-	1-	1-	5	1+	0o	0+	1-	1-	0o	0o	0o	2	68.2	0	0	12			
5	0+	0+	1-	1+	1o	1-	0+	0+	4	0+	0+	0+	1o	1-	0o	0o	0o	2	68.4	0	0	12			
6	1-	1+	1+	2-	1o	1+	2-	2-	10	0o	1o	1o	1o	0+	1-	2-	1o	6	68.9	0	0	12			
7	1o	1o	1-	1-	1-	1+	2-	2+	8	0+	1+	0o	0o	0o	0o	1-	1o	3	68.0	0	0	11			
8	0+	1-	0o	0o	1-	2-	1+	2+	6	0o	0+	0o	0o	0o	0o	0o	2-	2	67.3	0	0	11			
9	2+	3o	3-	2+	2+	3+	4-	4o	33	2o	3+	3-	2o	2o	3o	4o	5-	33	67.3	0	0	11			
10	4-	4-	4-	2+	2o	3-	2+	2o	28	4-	3o	3o	2o	2-	3-	2o	2-	23	67.4	0	0	11			
11	2+	1+	1+	2-	2+	2-	1+	1+	12	3-	2+	2-	2o	2o	1+	1o	1o	13	67.5	0	0	11			
12	2o	2o	2+	2-	2-	3-	1+	2-	14	2+	2+	2+	1+	1+	2-	0+	2-	12	66.9	0	0	10			
13	2o	1+	0+	1+	1+	1-	1-	1o	8	2+	1+	0+	1-	1-	0o	0o	1-	6	67.0	0	0	10			
14	2o	3o	1-	1-	1+	1-	1o	0o	9	2+	3-	1+	0+	1-	0o	0+	0o	7	67.6	0	0	11			
15	2-	1+	0+	0+	0o	0o	1-	0+	4	2+	1+	0+	0o	0o	0o	0o	0o	4	67.0	0	0	10			
16	0+	1-	1+	1+	1-	1o	1+	3o	10	0o	0+	1+	1o	0o	1-	1+	2+	7	67.8	0	0	11			
17	3o	1+	1-	2o	2-	1+	1-	1+	12	3-	1+	1o	1+	1+	1-	0+	1o	8	68.2	0	0	12			
18	2+	3o	3-	4o	4+	4-	3+	3-	38	2o	2+	2o	3+	4o	3+	3+	2+	29	67.8	0	0	11			
19	2+	2+	2+	3-	3-	3-	2+	1+	19	3-	2o	2+	2o	2o	2o	1+	1-	14	68.9	0	0	12			
20	2-	2-	1o	1o	1+	1+	0+	0o	8	2+	2-	0+	1o	0+	0+	0o	0o	6	67.4	0	0	11			
21	0+	0o	0+	2-	1o	1-	1o	1+	5	0o	0o	1o	2-	1o	0o	0+	1-	4	68.7	7	2	12			
22	1o	1-	1o	1o	0+	0o	0o	0+	4	1-	1-	1o	1o	0+	0o	0o	0o	3	69.1	8	2	13			
23	1-	0+	0o	0o	1+	1o	0+	1o	4	1+	0+	0o	0o	1-	0o	0o	1o	3	69.4	0	0	13			
24	0o	0o	1-	0+	1-	1-	0o	1o	3	0o	0o	0+	0o	0+	0o	0o	1o	2	68.6	0	0	12			
25	0o	0o	0+	0o	0o	0+	0o	0+	1	0o	0o	0+	0o	0o	0o	0o	0o	1	68.0	0	0	11			
26	0+	0o	0o	0o	1+	1+	1-	1-	4	0+	0o	0o	0o	0o	0o	0o	0+	1	68.3	0	0	12			
27	1+	1+	0+	1-	1-	0+	0+	0+	5	1+	2o	0+	0+	0o	0o	0+	0+	4	68.0	0	0	11			
28	0+	1-	0o	1-	1-	1o	1+	1+	5	0+	1-	0o	0o	0o	0o	1-	1-	2	67.4	0	0	11			
29	1-	1o	1o	0+	0+	1+	1o	1o	6	1-	1o	1-	0o	0o	1-	0+	0+	3	68.1	0	0	12			
30	1-	0o	1-	1+	1-	0+	0o	0+	3	0+	0o	1-	1-	0o	0o	0o	0o	2	68.4	0	0	12			
31	0+	0+	1+	2-	2o	1+	2-	1+	8	0+	0+	1-	1o	1+	1o	1o	1-	5	67.9	0	0	11			
Mean												9.5									7.0	68.0	0.5	0.2	11.4

# Daily Average Indices Ap Sep 2007 - Aug 2008

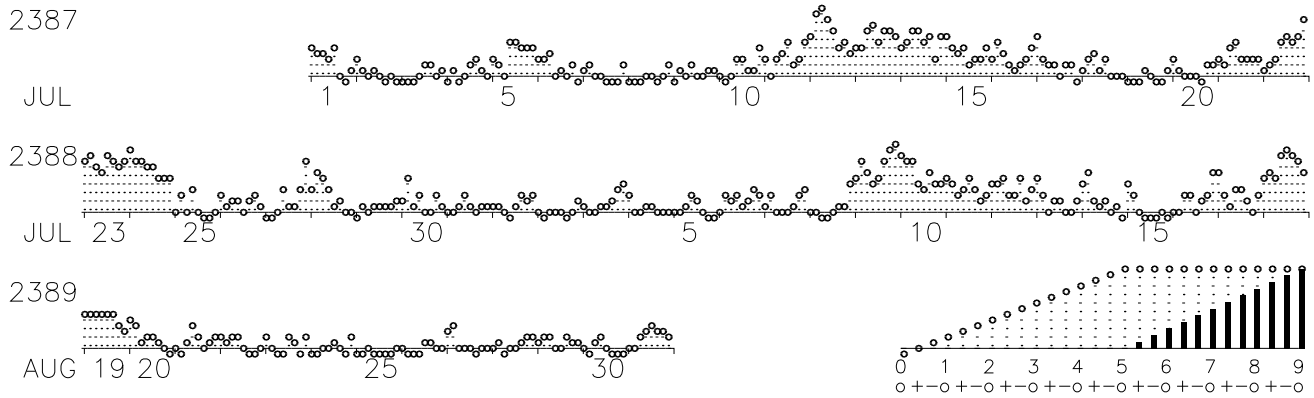


Day	Sep 07	Oct	Nov	Dec	Jan 08	Feb	Mar	Apr	May	Jun	Jul	Aug
1	10	7	5	3	4	18	22	4	8	7	4	4
2	24	8	2	2	2	19	9	1	11	4	2	2
3	10	9	2	1	2	17	6	2	11	4	2	4
4	5	10	4	1	2	8	3	11	8	3	3	3
5	10	11	2	2	19	4	8	18	12	2	7	2
6	11	4	0	3	17	4	3	20	9	6	3	4
7	12	2	0	1	14	7	2	13	4	11	2	4
8	6	1	4	0	14	7	10	10	4	7	2	3
9	2	1	4	3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

# PLANETARY GEOMAGNETIC ACTIVITY

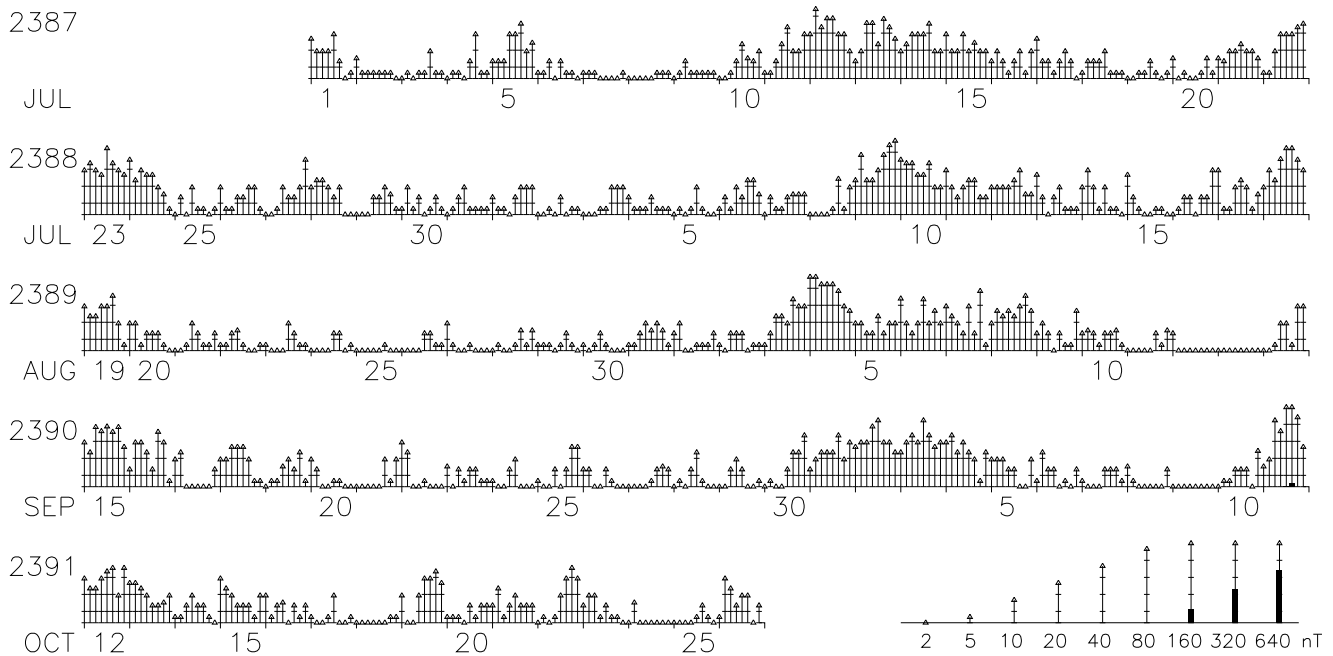
3-HOUR-RANGE INDICES  $K_m$  AND  $a_a$  BY 27-DAY SOLAR ROTATION INTERVAL  
 ISGI PUBLICATION OFFICE – EMAIL : ISGI.PUBOFF@cetp.ipsl.fr  
 CETP, 4 Avenue de Neptune, F-94107 Saint Maur des Fosses CEDEX – FRANCE

ROT DAY IN SOLAR ROTATION INTERVAL Three-hour indices  $K_m$ (provisional) JUL–AUG 2008  
 No 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27



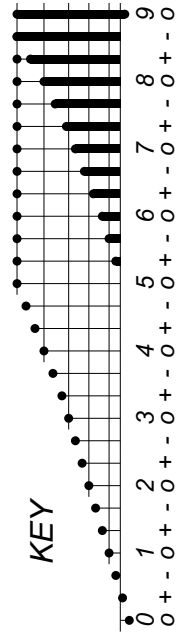
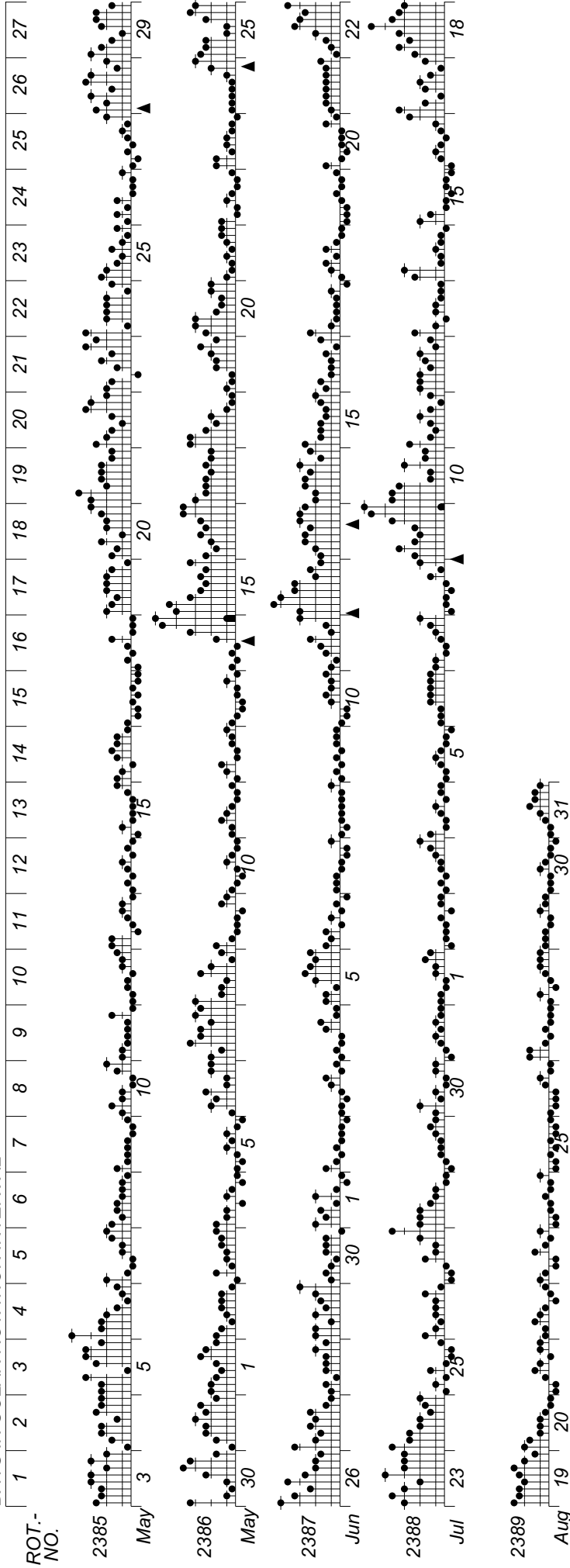
Indices Derivation at C.E.T.P.; Graph Prepared at ISGI Publication Office.

ROT DAY IN SOLAR ROTATION INTERVAL Three-hour indices  $a_a$  (logscale) JUL–OCT 2008  
 No 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27



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

DAYS IN SOLAR ROTATION INTERVAL

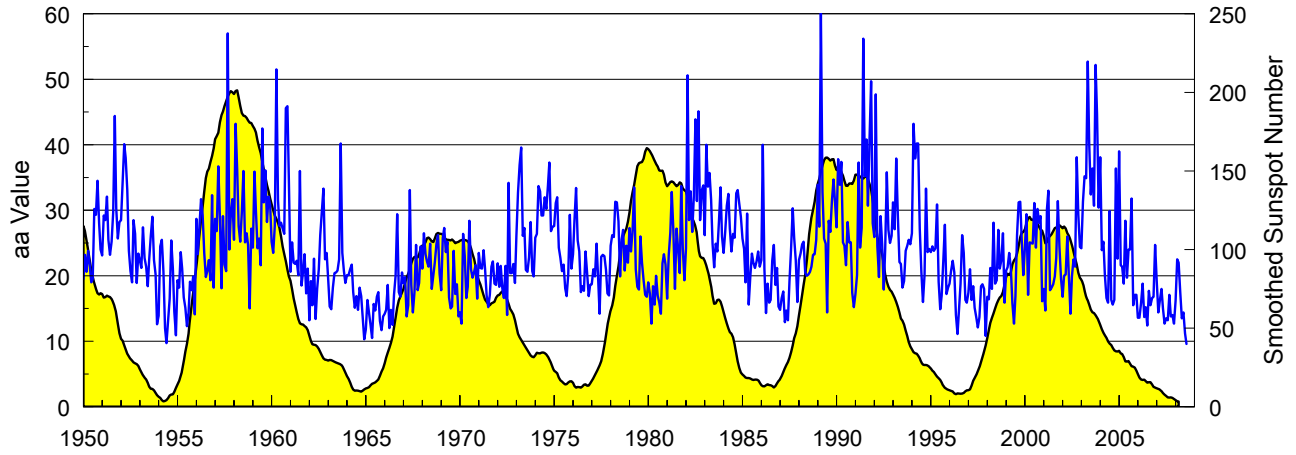


▲ = sudden commencement

PLANETARY MAGNETIC  
THREE-HOUR-RANGE INDICES

Kp till 2008 Aug 31

# Monthly Mean aa Index Jan 1950 - Aug 2008

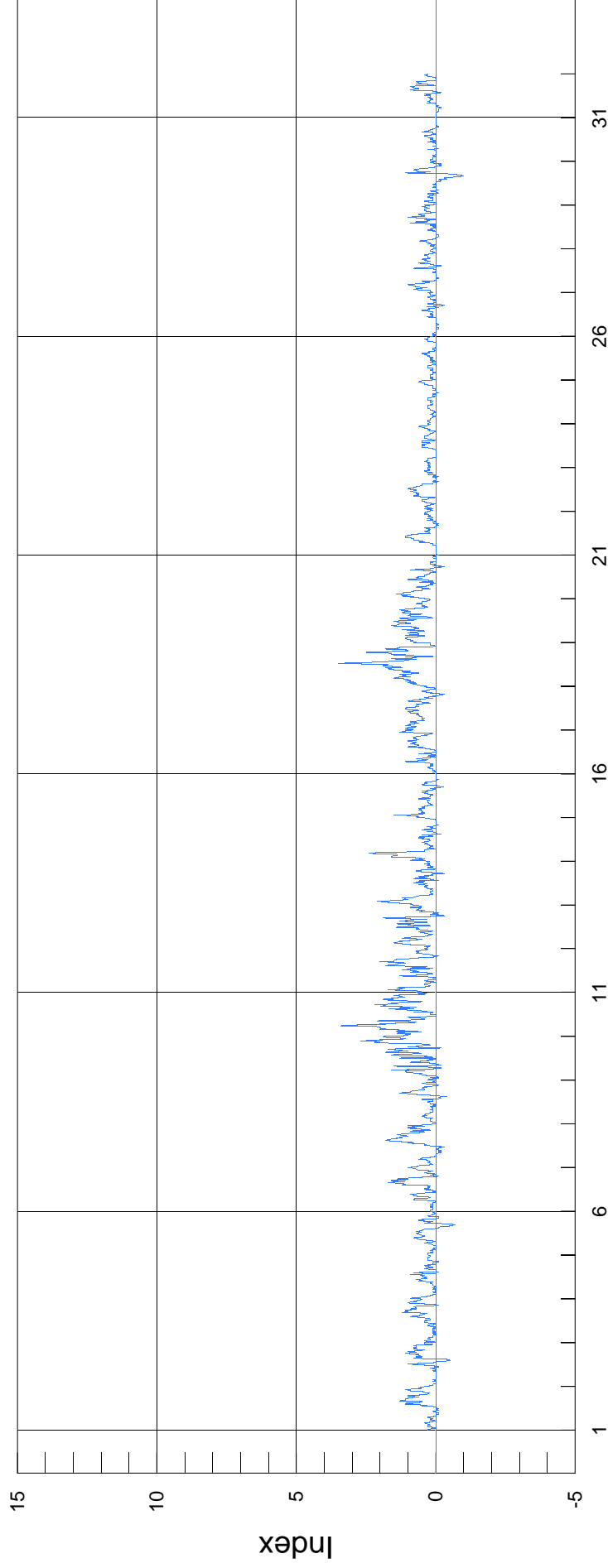


Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Mean
1950	19.5	23.2	20.6	23.8	21.7	19.0	19.5	30.2	29.3	34.5	28.0	24.0	24.4
1951	23.1	29.2	28.5	32.1	25.5	23.2	25.2	29.7	44.4	30.3	25.7	28.2	28.8
1952	28.5	34.3	40.1	38.0	33.1	23.8	20.7	19.0	28.5	26.4	18.9	23.4	27.9
1953	22.3	21.2	27.4	22.7	21.4	18.4	22.5	26.1	29.0	22.4	20.2	12.6	22.2
1954	13.9	24.5	25.5	20.6	12.0	9.7	13.1	16.5	25.4	21.1	14.5	10.9	17.3
1955	19.3	18.2	23.6	21.1	16.7	15.1	12.3	14.3	19.1	17.8	19.9	14.1	17.6
1956	28.7	23.3	27.6	31.7	29.3	23.5	19.8	20.7	22.4	19.3	32.3	18.2	24.7
1957	28.7	26.8	36.7	28.8	18.1	29.1	21.7	20.7	57.0	24.0	29.5	31.7	29.4
1958	25.5	43.2	36.1	27.6	25.2	29.7	36.0	25.1	26.5	24.7	15.0	27.2	28.5
1959	24.3	35.9	29.9	24.2	25.7	21.6	42.5	31.2	36.1	28.2	32.1	30.8	30.2
1960	25.2	23.5	27.6	51.5	31.6	27.6	28.1	27.2	26.4	45.6	45.9	34.5	32.9
1961	20.6	25.1	22.0	21.8	22.3	20.1	36.0	18.5	20.7	23.3	17.3	21.1	22.4
1962	13.2	19.2	15.5	22.6	13.4	18.1	21.0	26.2	29.8	33.3	22.5	23.5	21.5
1963	19.3	15.3	14.9	18.2	20.4	20.5	20.8	22.5	40.2	23.5	20.7	18.9	21.3
1964	20.1	20.1	21.0	21.7	17.5	15.1	16.9	14.8	18.2	16.9	13.8	10.3	17.2
1965	11.8	16.3	14.3	12.6	10.5	15.7	14.7	16.8	17.5	13.1	11.7	13.8	14.1
1966	14.2	14.8	18.6	12.0	14.8	12.5	17.1	20.0	29.4	17.5	16.8	20.5	17.3
1967	18.9	19.8	13.8	15.5	33.1	18.6	14.4	17.5	24.7	17.8	18.9	24.5	19.8
1968	21.1	26.5	23.3	22.2	21.4	24.9	18.0	20.1	22.0	24.8	26.2	20.3	22.6
1969	17.8	25.8	27.3	23.6	25.2	16.7	15.0	15.3	23.8	17.2	18.7	13.8	20.0
1970	14.4	12.7	26.4	23.1	16.6	18.3	28.4	21.0	19.7	20.6	21.6	16.5	19.9
1971	23.5	21.2	21.1	23.9	21.1	17.0	15.2	17.1	21.4	22.2	18.8	18.6	20.1
1972	21.9	18.3	21.5	18.1	16.6	21.5	14.0	34.2	20.4	20.4	21.8	18.9	20.6
1973	26.1	32.7	36.9	39.6	26.1	27.3	20.9	20.6	22.8	28.2	20.7	19.9	26.8
1974	25.8	26.4	33.7	32.9	29.2	29.2	32.0	30.2	33.7	37.3	26.8	27.5	30.4
1975	27.6	31.1	32.0	24.3	22.7	20.7	21.7	18.1	16.9	20.2	29.3	21.1	23.8
1976	23.3	28.5	33.4	25.4	23.7	17.5	18.4	17.7	23.7	20.4	16.9	18.6	22.3
1977	18.7	21.0	19.9	24.9	20.1	14.2	22.9	23.2	23.0	20.9	17.3	17.0	20.3
1978	24.6	26.2	25.9	31.3	31.2	28.3	19.9	25.6	27.0	20.8	24.6	22.0	25.6
1979	27.3	23.7	26.9	33.5	21.0	18.3	17.9	26.0	22.0	19.3	17.1	16.8	22.5
1980	19.0	17.3	12.7	18.4	15.6	20.0	17.0	15.9	14.2	21.9	23.3	21.7	18.1
1981	16.5	23.1	26.6	32.8	26.9	18.0	27.2	24.0	20.4	33.7	24.1	19.3	24.4
1982	24.2	50.6	28.5	32.9	26.7	32.1	43.9	31.4	45.1	28.5	33.0	33.8	34.2
1983	26.2	40.0	33.6	35.7	31.6	24.9	21.3	24.9	23.7	28.3	33.5	26.0	29.1
1984	23.5	26.7	30.7	32.5	27.2	23.7	26.4	25.8	32.6	33.1	31.0	29.0	28.5
1985	25.7	24.1	19.0	29.5	15.6	19.9	23.4	22.0	21.2	22.2	23.7	21.4	22.3
1986	22.4	40.0	21.1	14.3	18.8	15.9	16.3	22.3	24.7	18.6	21.2	15.3	20.9
1987	14.8	16.6	17.6	12.9	14.7	13.2	19.3	24.3	30.3	25.8	22.4	16.0	19.0
1988	22.4	23.4	24.8	25.2	20.5	20.0	20.2	20.6	21.4	23.2	23.3	25.5	22.5
1989	33.9	27.5	60.1	32.8	25.7	24.9	14.4	28.4	26.7	31.4	34.7	31.4	31.0
1990	27.4	37.8	33.9	37.4	25.1	24.6	21.6	28.2	25.1	25.1	17.4	15.2	26.6
1991	17.2	20.1	37.3	24.3	27.3	56.2	35.2	40.8	30.7	44.1	49.7	28.0	34.2
1992	25.9	47.7	24.5	19.8	29.1	24.8	17.9	24.1	35.8	27.0	25.0	26.1	27.3
1993	31.2	27.1	37.9	29.2	22.1	21.8	18.2	19.2	23.8	24.6	25.5	24.8	25.5
1994	26.5	43.2	37.9	40.2	40.2	27.2	20.6	16.0	20.2	33.3	23.6	24.1	29.4
1995	23.6	24.5	23.8	24.2	30.9	19.1	14.9	17.0	22.2	27.9	17.2	18.2	22.0
1996	18.8	20.8	22.3	20.5	14.0	11.1	14.7	18.8	26.2	23.5	16.3	15.9	18.6
1997	17.4	21.0	16.3	18.4	15.1	13.7	12.1	13.7	18.4	18.7	18.0	10.8	16.1
1998	16.8	16.4	21.2	18.0	28.1	18.8	19.3	27.0	21.1	22.4	26.5	15.9	21.0
1999	20.8	21.3	23.5	21.3	15.8	12.7	16.9	26.2	31.2	31.3	25.1	20.1	22.2
2000	24.2	29.4	17.1	25.1	25.0	24.9	31.1	24.3	30.2	28.1	29.1	16.1	25.4
2001	18.0	14.7	30.2	33.0	17.8	18.2	18.7	19.9	22.7	31.4	24.4	19.5	22.4
2002	16.8	20.0	20.2	26.0	19.9	14.2	19.9	22.5	21.4	38.1	29.3	24.4	22.7
2003	24.2	31.3	35.2	34.9	52.7	40.2	32.4	36.4	30.7	52.2	44.7	30.4	37.1
2004	38.1	23.9	25.2	20.1	16.6	15.9	29.9	16.3	15.6	16.3	36.4	22.6	23.1
2005	39.0	21.6	21.4	18.8	28.4	19.7	24.0	24.0	31.8	15.5	17.1	17.1	23.2
2006	13.6	13.6	15.8	18.8	13.7	15.2	12.4	17.7	15.5	16.6	16.8	24.7	16.2
2007	19.2	14.4	16.3	18.0	15.0	12.7	13.5	13.2	17.1	13.8	14.0	12.7	15.0
2008	16.2	22.5	22.0	17.5	13.5	14.4	11.2	9.6					15.9

# Polar Cap Index

Qaanaaq - Thule

WDC C1 for Geomagnetism, Copenhagen



AUGUST 2008

Data Source: Geomagnetism and Space Physics  
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  
AUGUST 2008

Sta	Geomag		Commencement		SC Amplitudes			Maximum 3-Hour K Index Day(3-Hour Periods)	K	Ranges			End	
	Lat	Day	Time (UT)	Type	D (Min)	H (Gamma)	Z (Gamma)			D (Min)	H (Gamma)	Z (Gamma)	Day	Hour (UT)
JAI	17.4N	08	2300	..	..	..	..		-	7	115	27	10	20
NGP	11.3N	08	2300	..	..	..	..		-	6	122	25	10	20
ABG	09.4N	08	2300	..	..	..	..	9 (2,7)	5	6	116	40	10	20
HYB	07.6N	08	1500	..	..	..	..	9 (2)	5	5	119	29	10	22
HYB	07.6N	08	2345	SC	- 0.2	11	0		-	-	---	--	--	--
PND	02.0N	08	2300	..	..	..	..		-	4	106	58	10	20
TIR	00.6S	08	2300	..	..	..	..		-	5	142	78	10	20
HYB	07.6N	16	0000	..	..	..	..	17 (1)	4	6	52	18	17	04
JAI	17.4N	18	0100	..	..	..	..		-	7	82	37	19	21
NGP	11.3N	18	0100	..	..	..	..		-	6	82	20	19	21
ABG	09.4N	18	0100	..	..	..	..	18 (5,6,7)	4	7	78	36	19	21
HYB	07.6N	18	0100	..	..	..	..	18 (7)	4	5	83	19	19	22
PND	02.0N	18	0100	..	..	..	..		-	5	73	40	19	21
TIR	00.6S	18	0100	..	..	..	..		-	5	107	48	19	21

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

**AUGUST 2008**

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Storm Sudden Commencements (SSC)					Solar Flare Effects (sfe)		
Day	Time	Quality:	Station	Group*	Day	Begin-End	Station(s)
08	2344	C:	NGK*	BDV* NAG* SPT HYB	04	0841-0853	NAG
					29	1749-1800	GUI

---

REPORTING OBSERVATORIES (up to 30/09/2008):

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

---

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

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

**Criterion on Provisional SSC data**

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