JANUARY 2001 NUMBER 677 - Part I

Solar-Geophysical Data prompt reports

Data for November and December 2000
Explanation of Data Reports Issued as Number 515 (Supplement) July 1987

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Solar-Geophysical Data prompt reports

Data for November and December 2000

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SOLAR-GEOPHYSICAL DATA

Number 677

(Issued in Two Parts)

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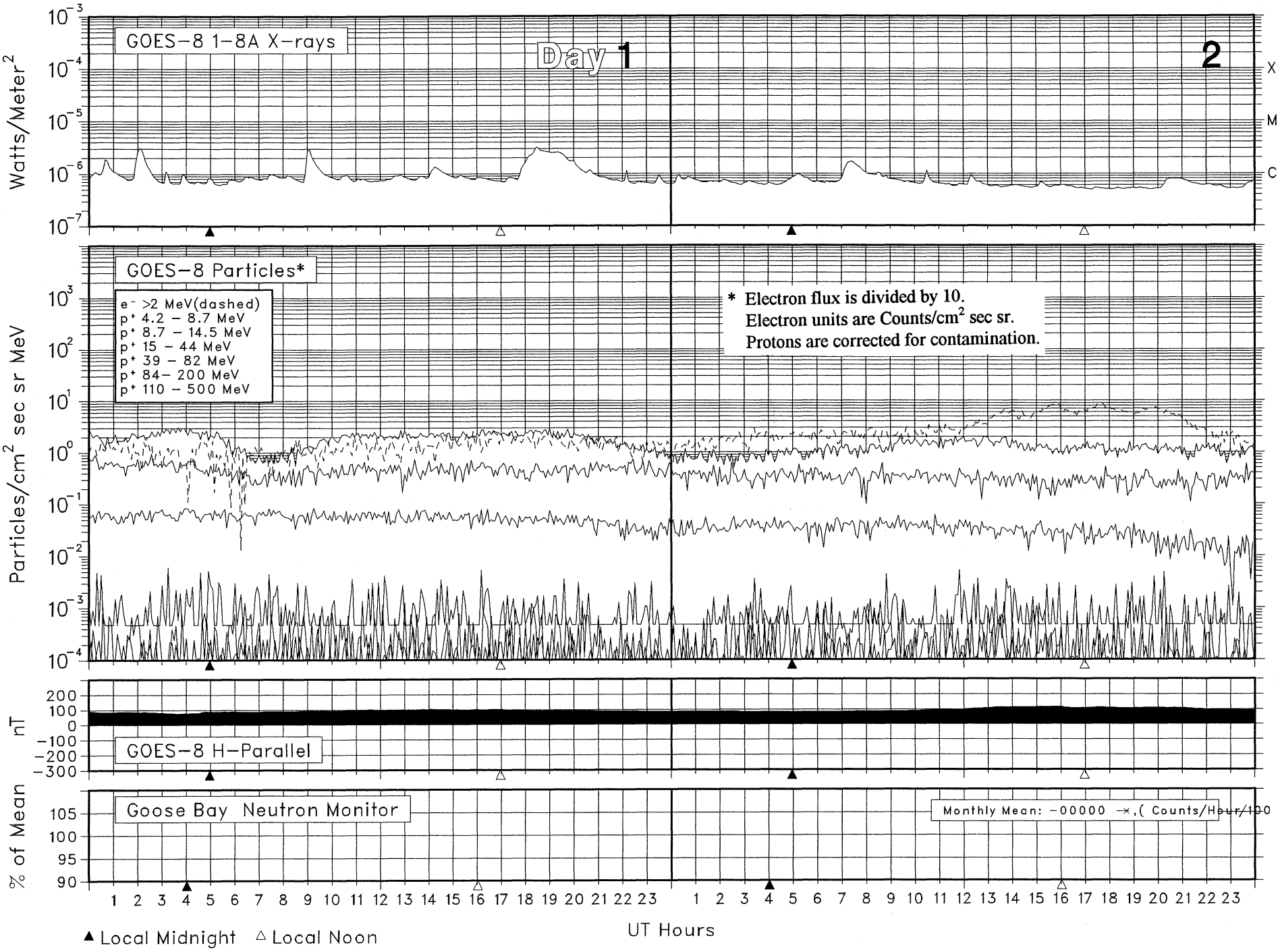

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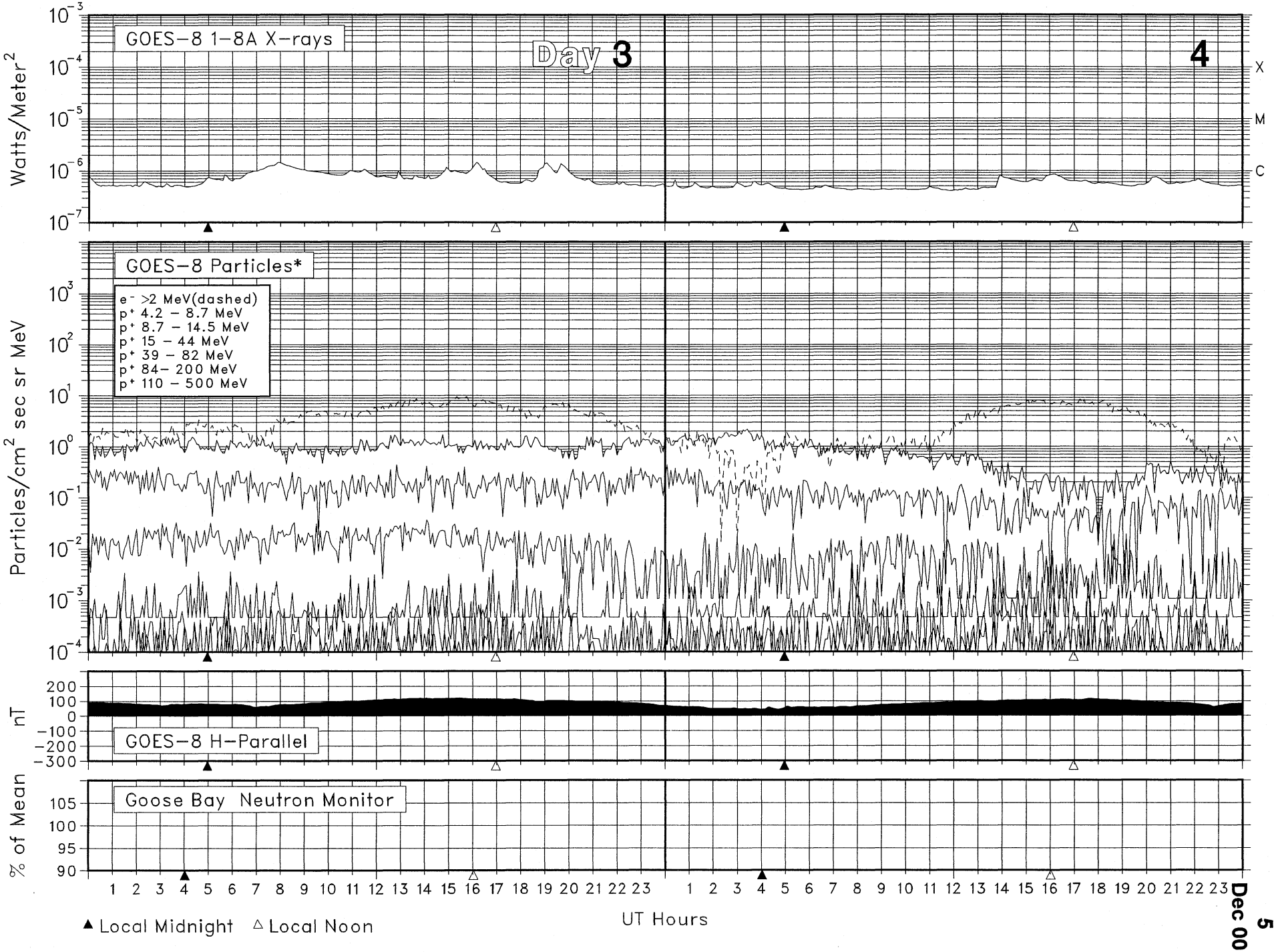

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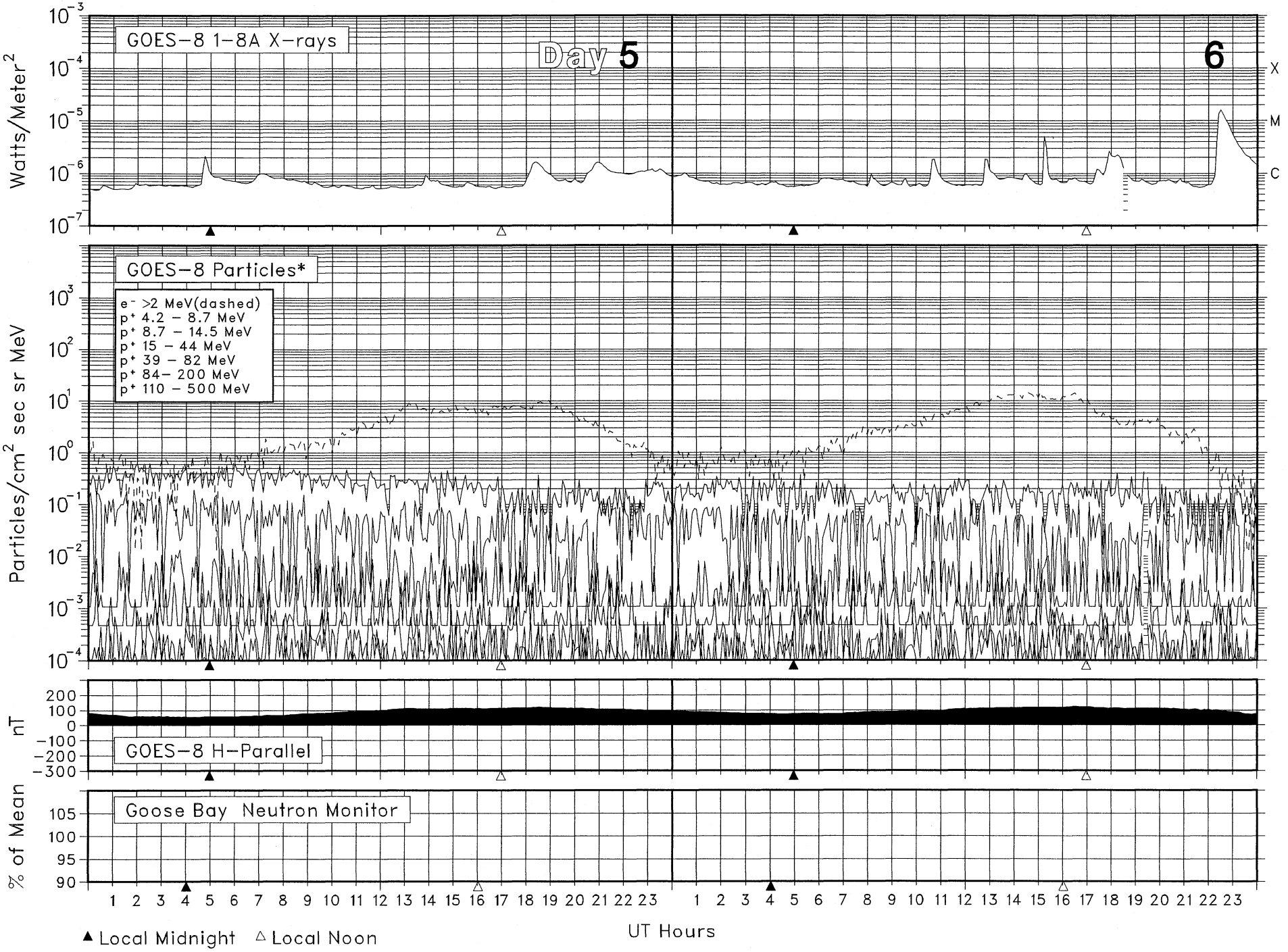

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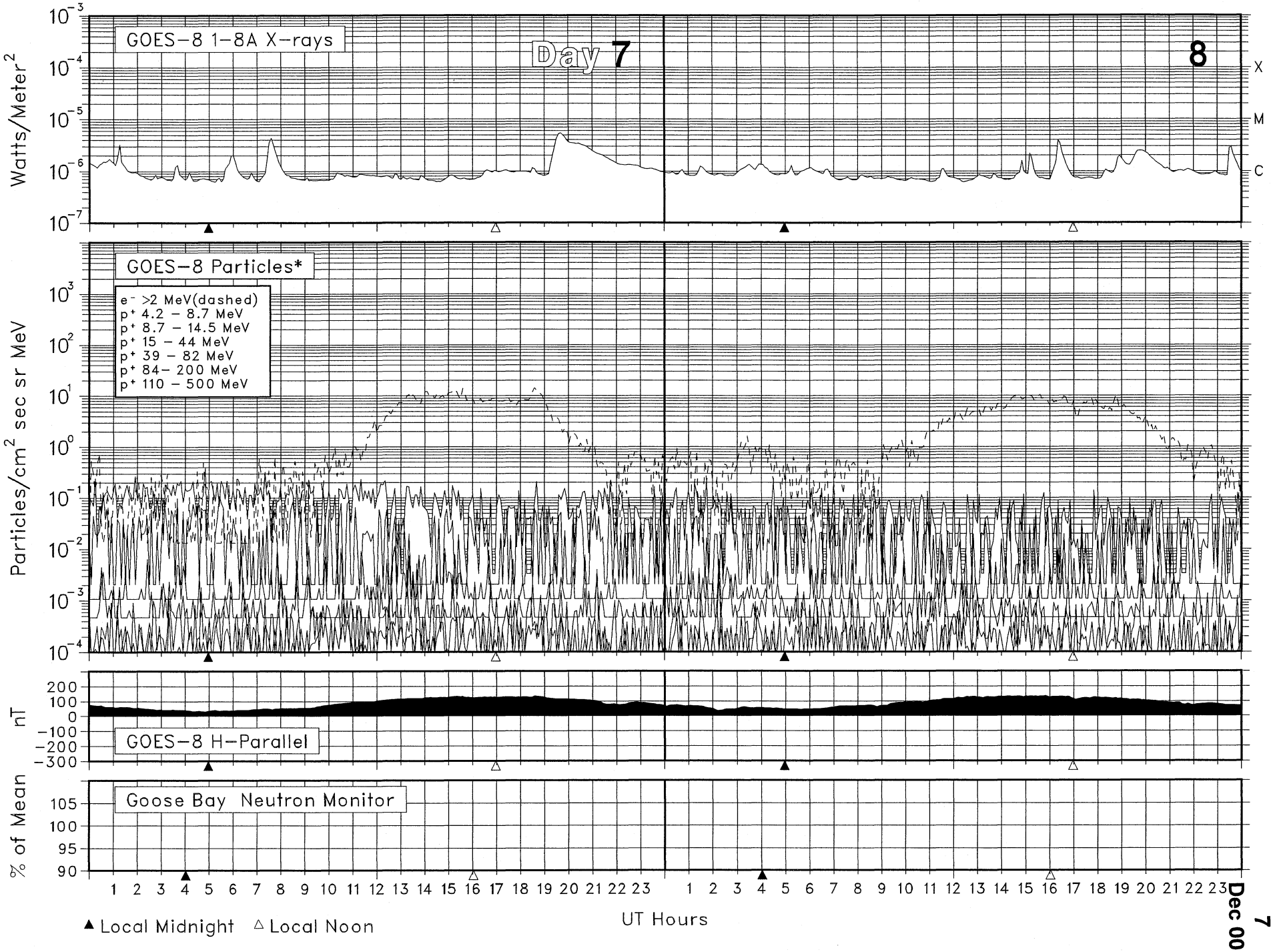
December 2000



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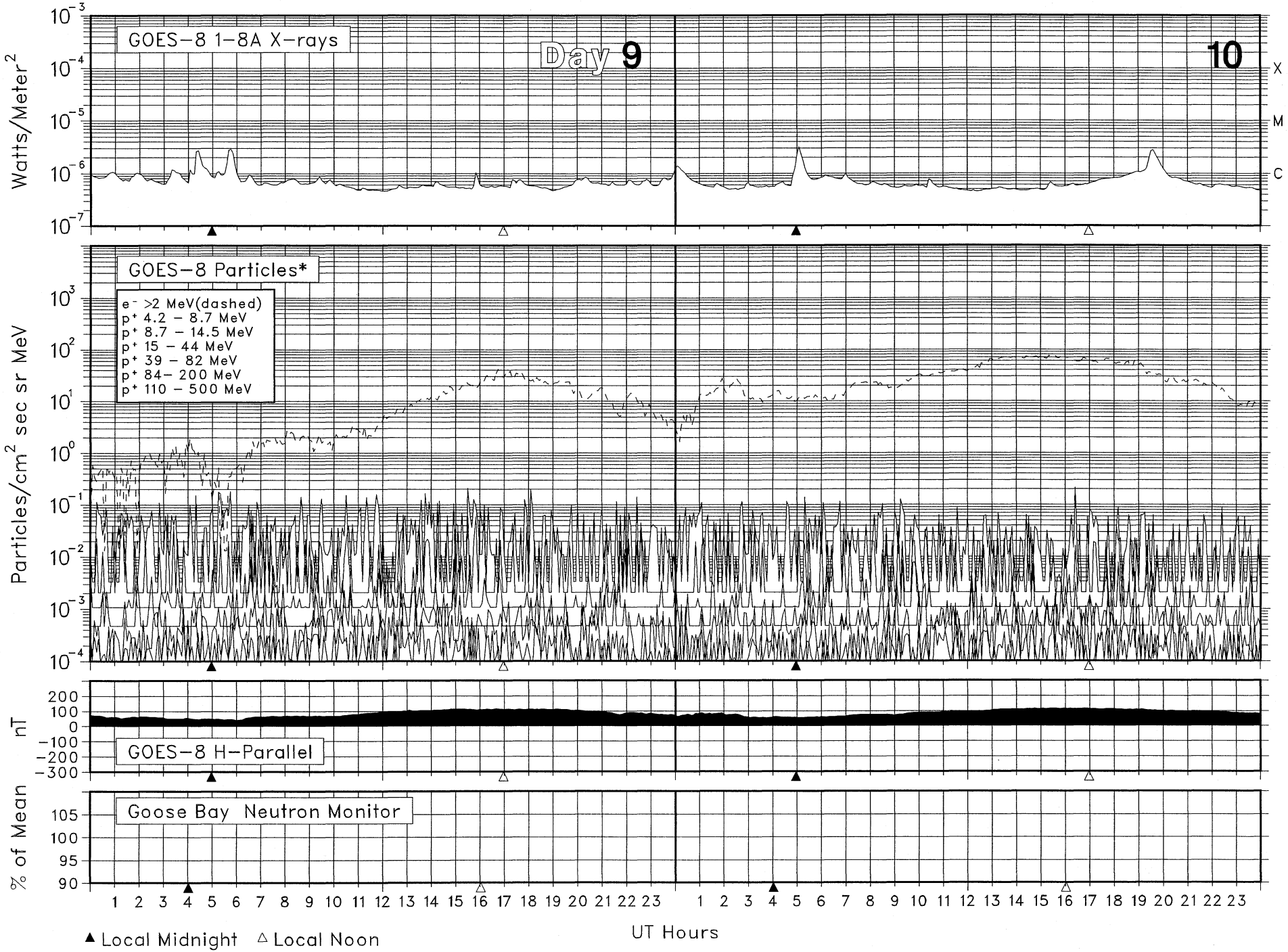

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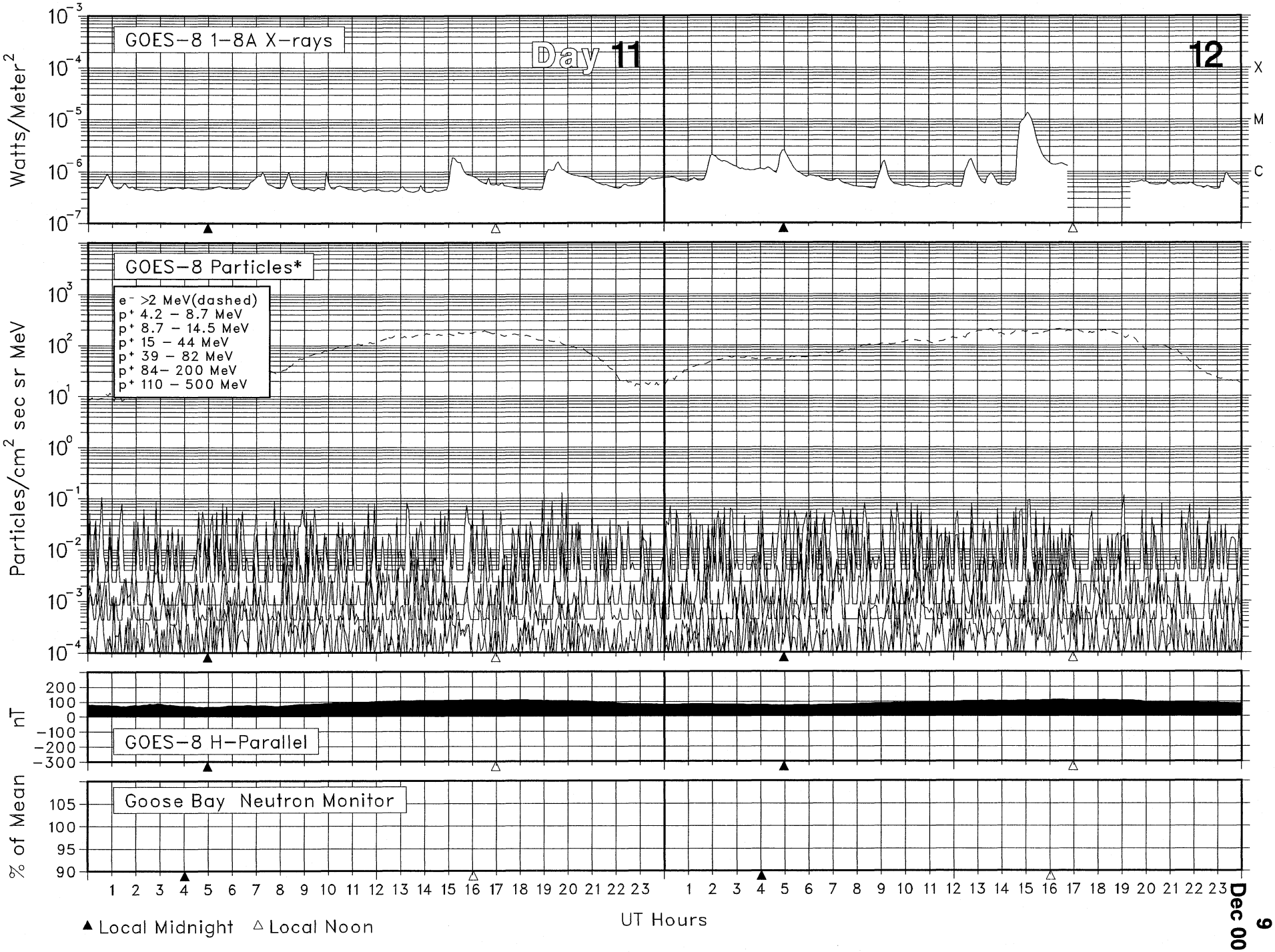

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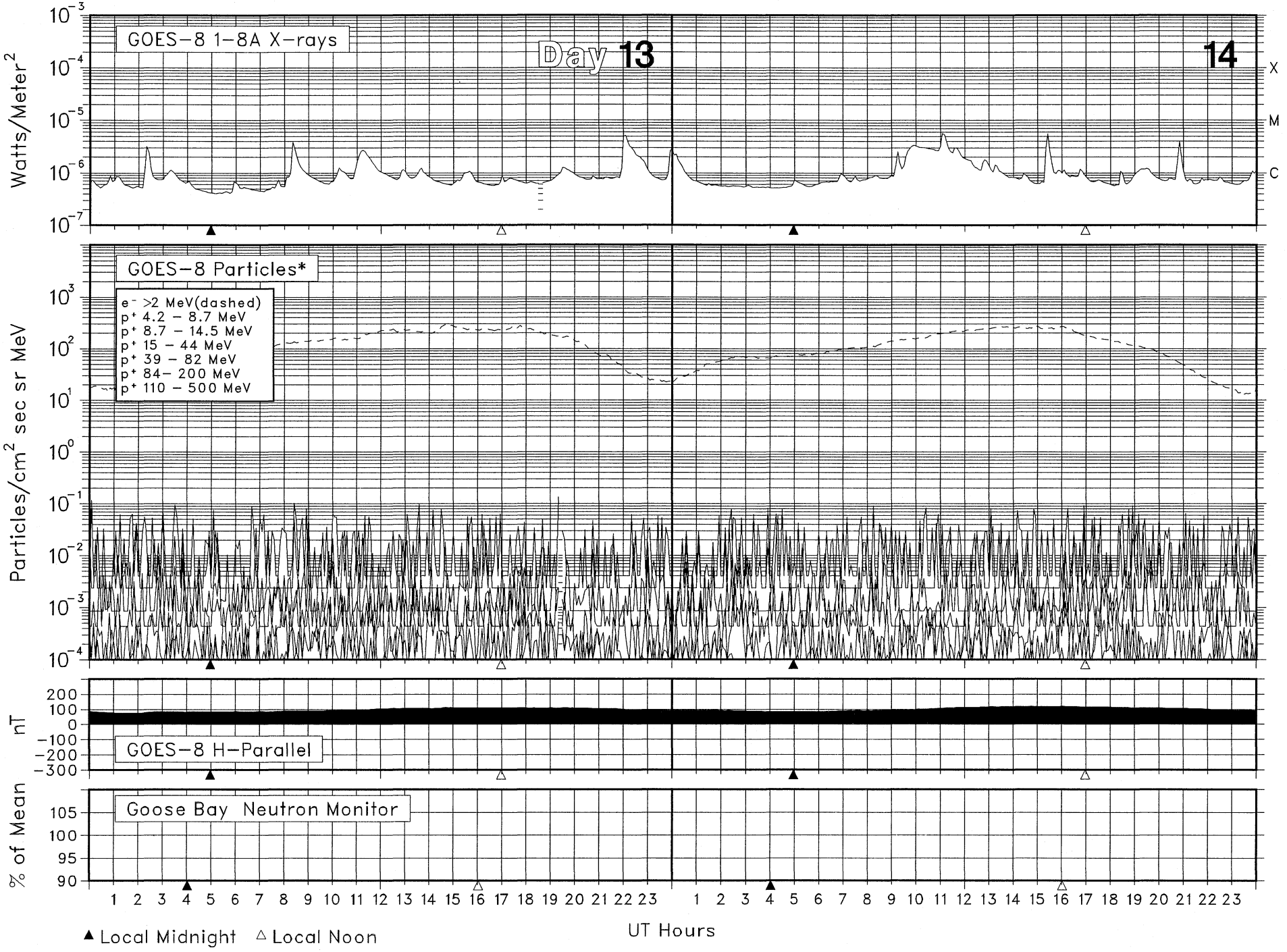

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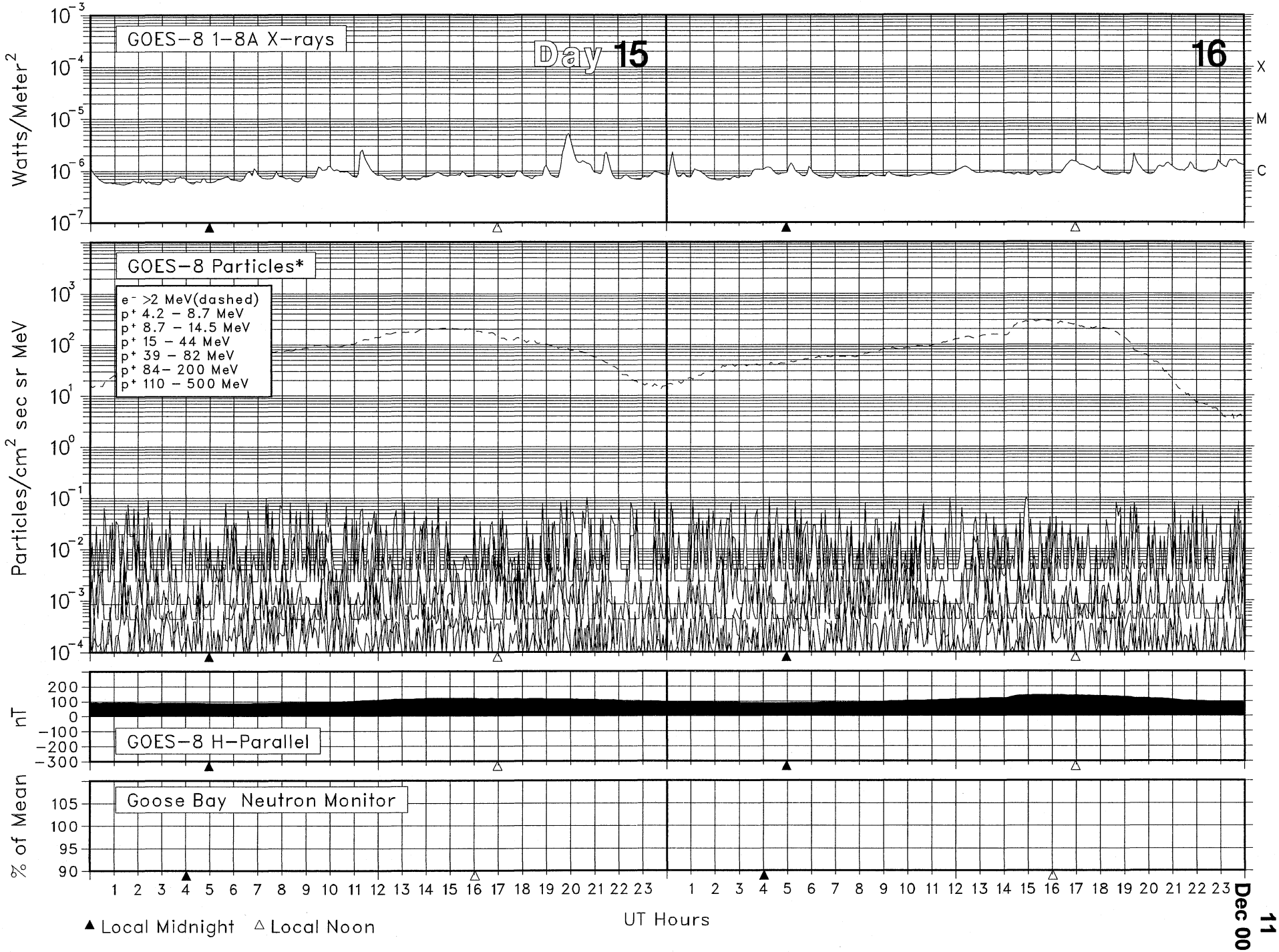

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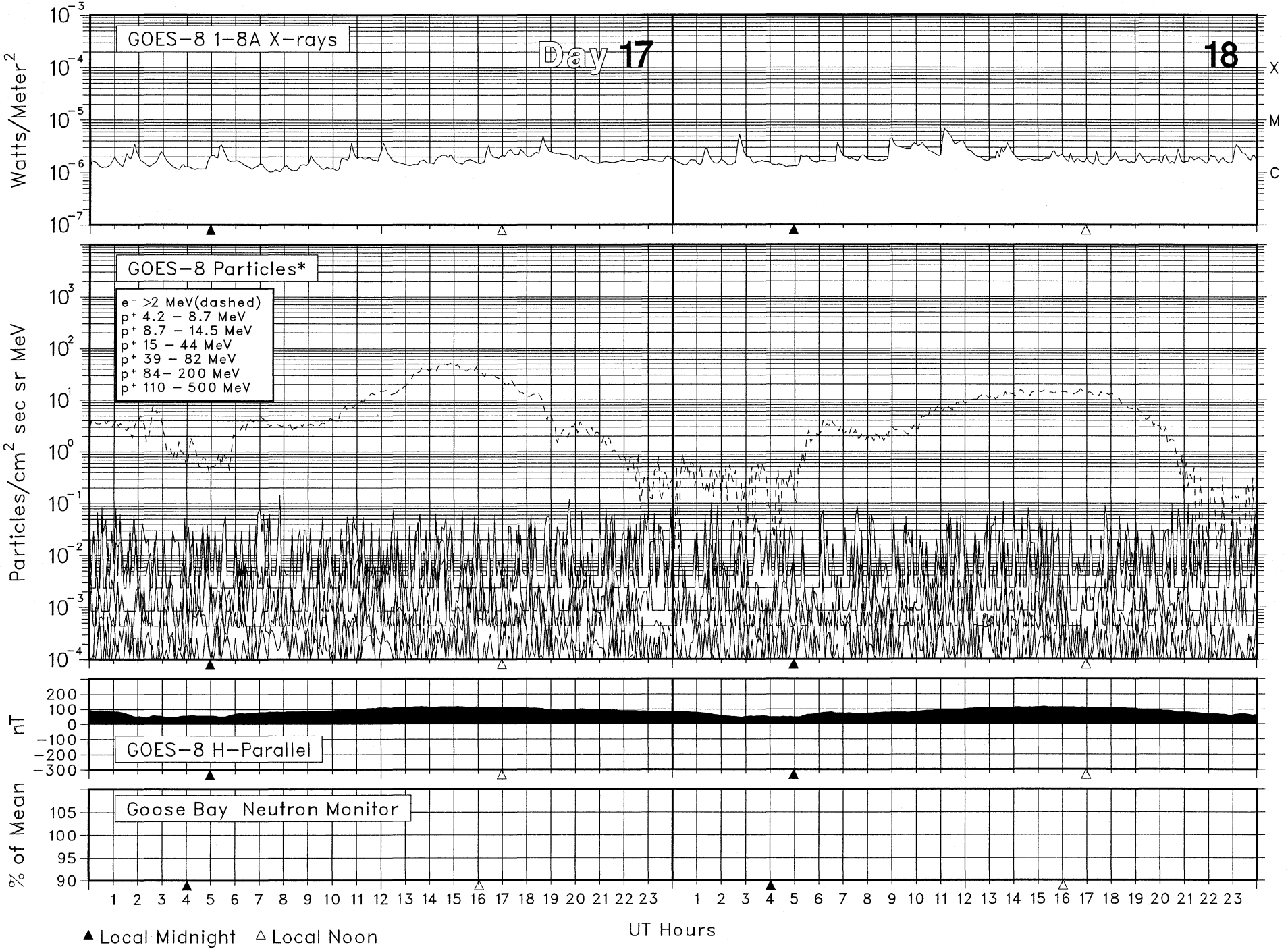

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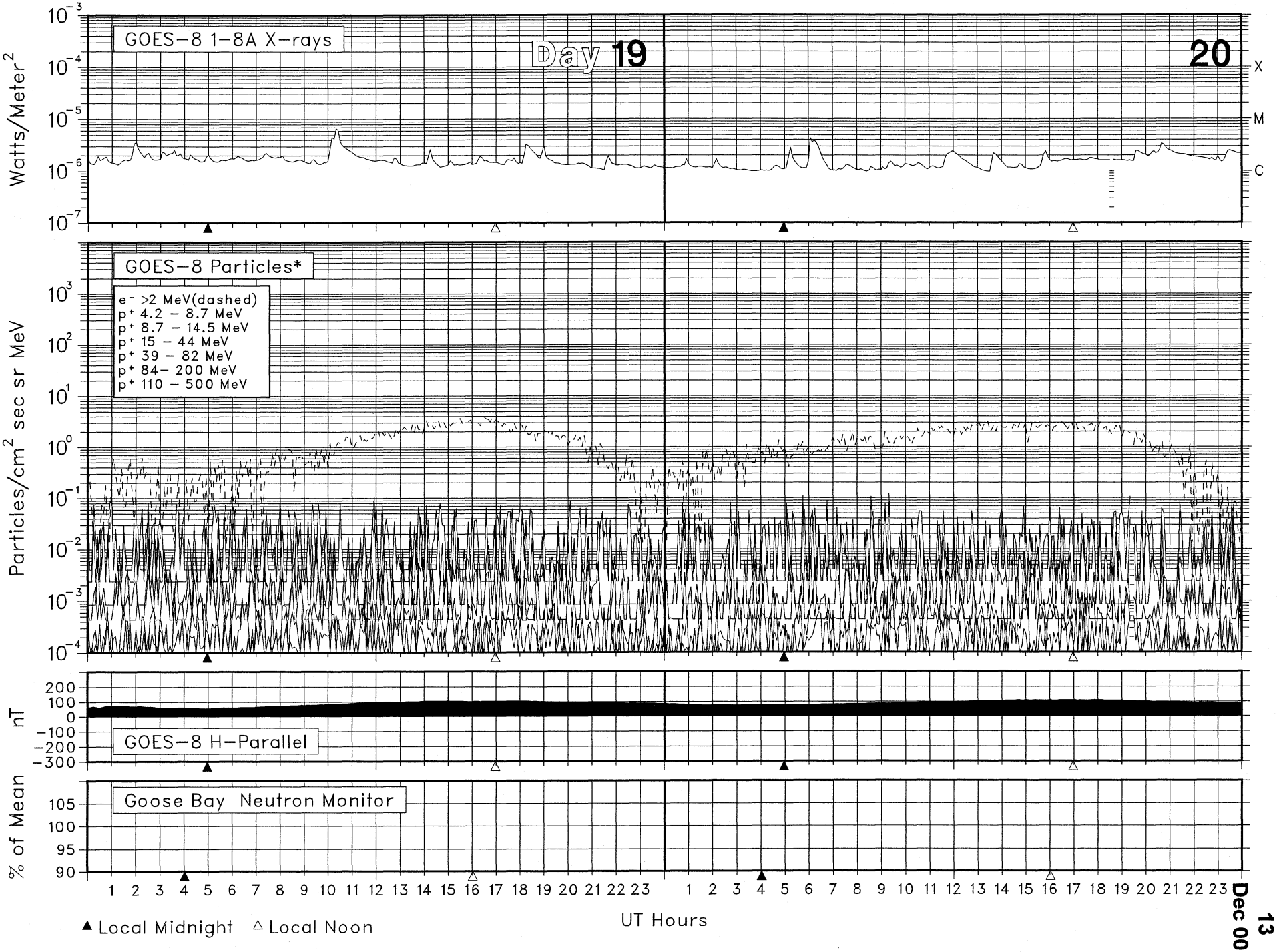

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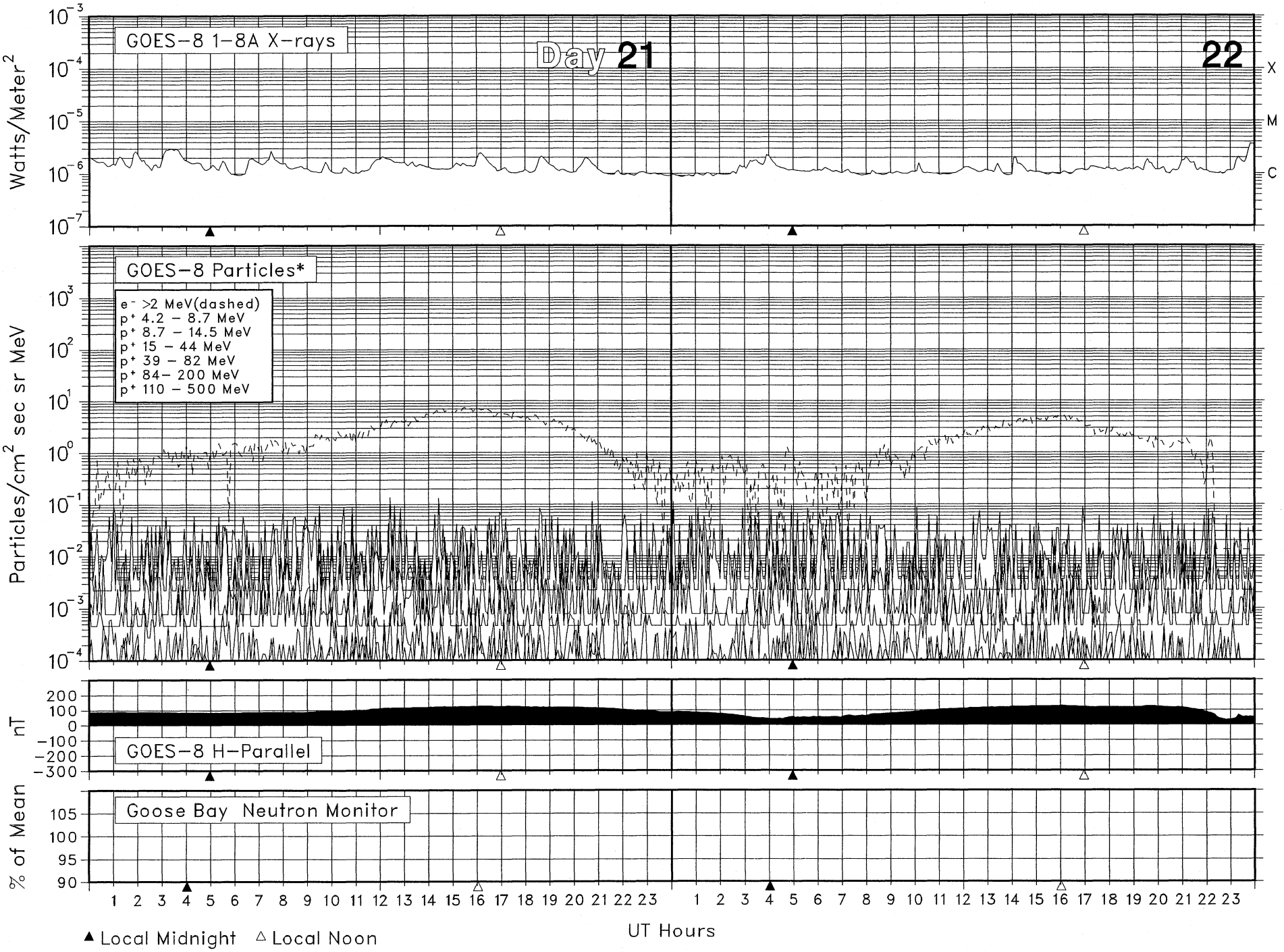

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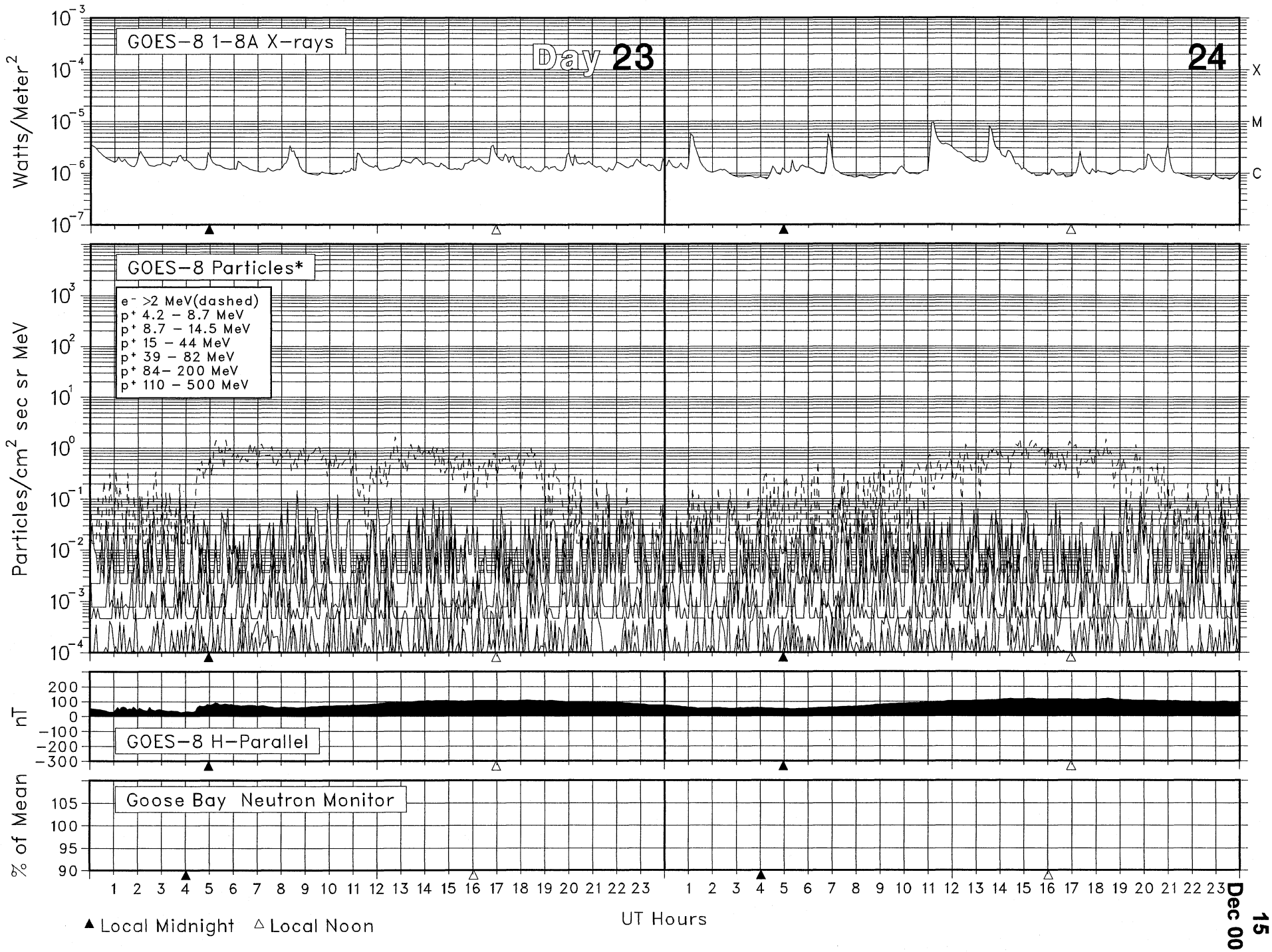

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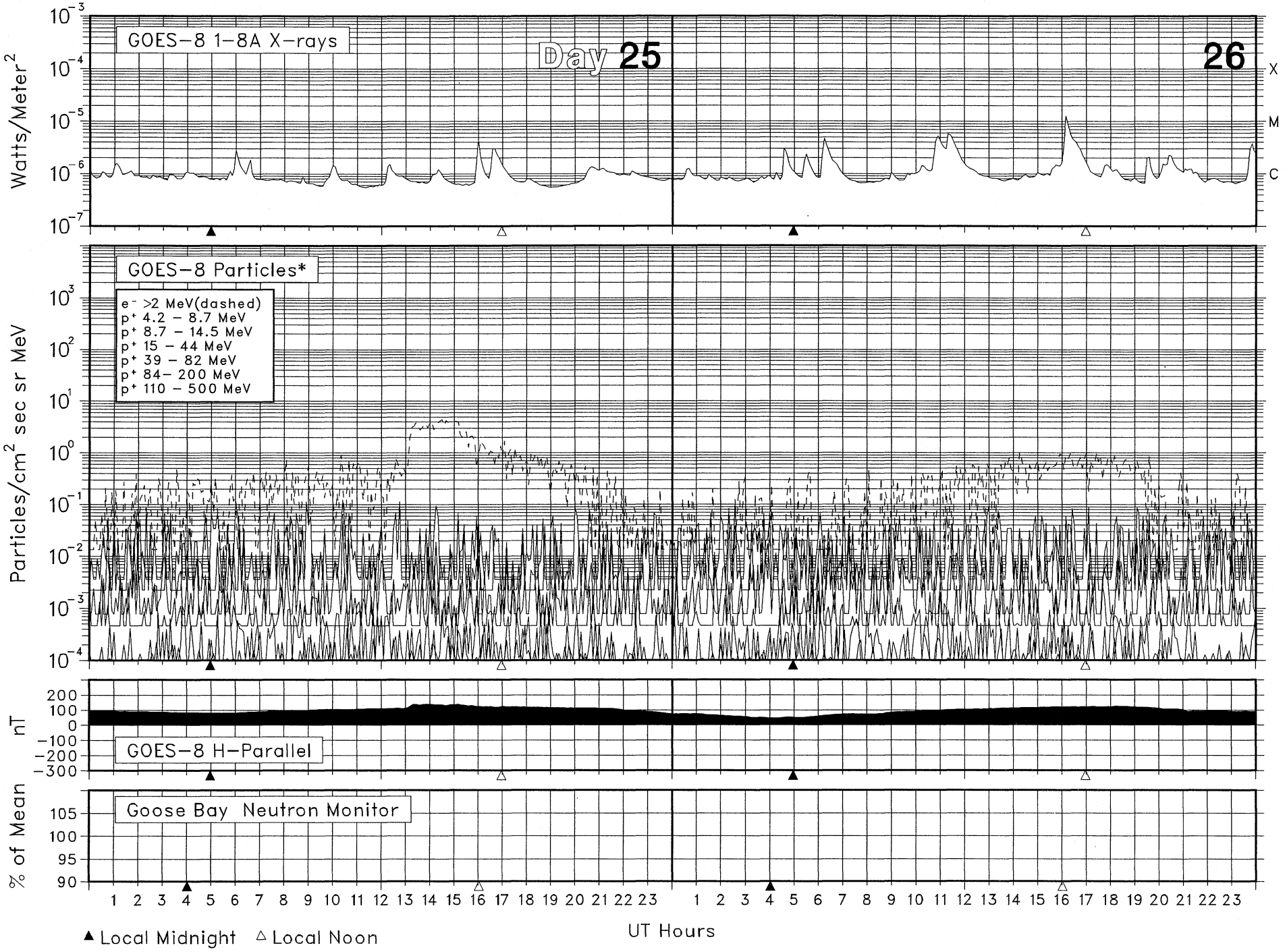

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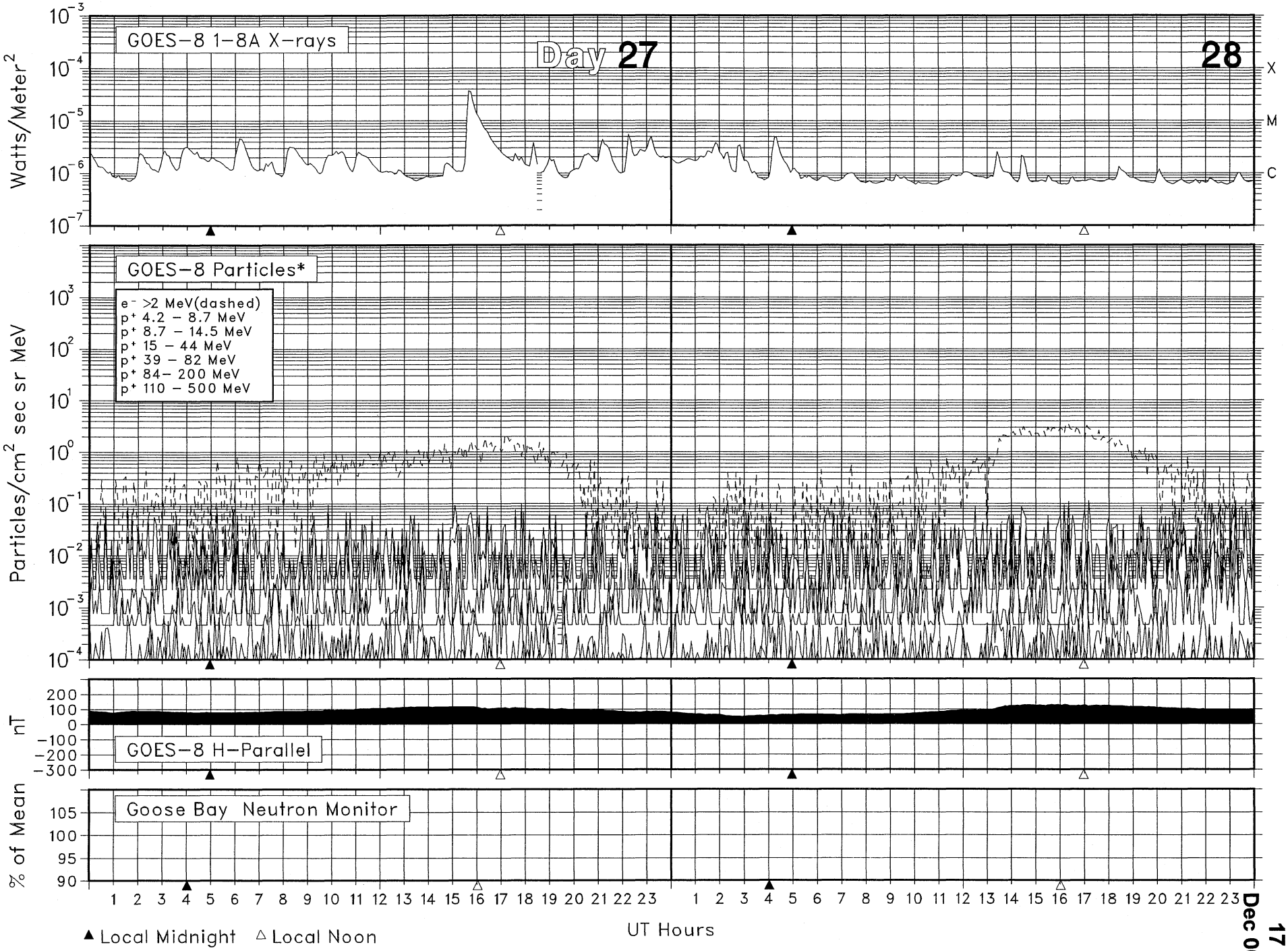

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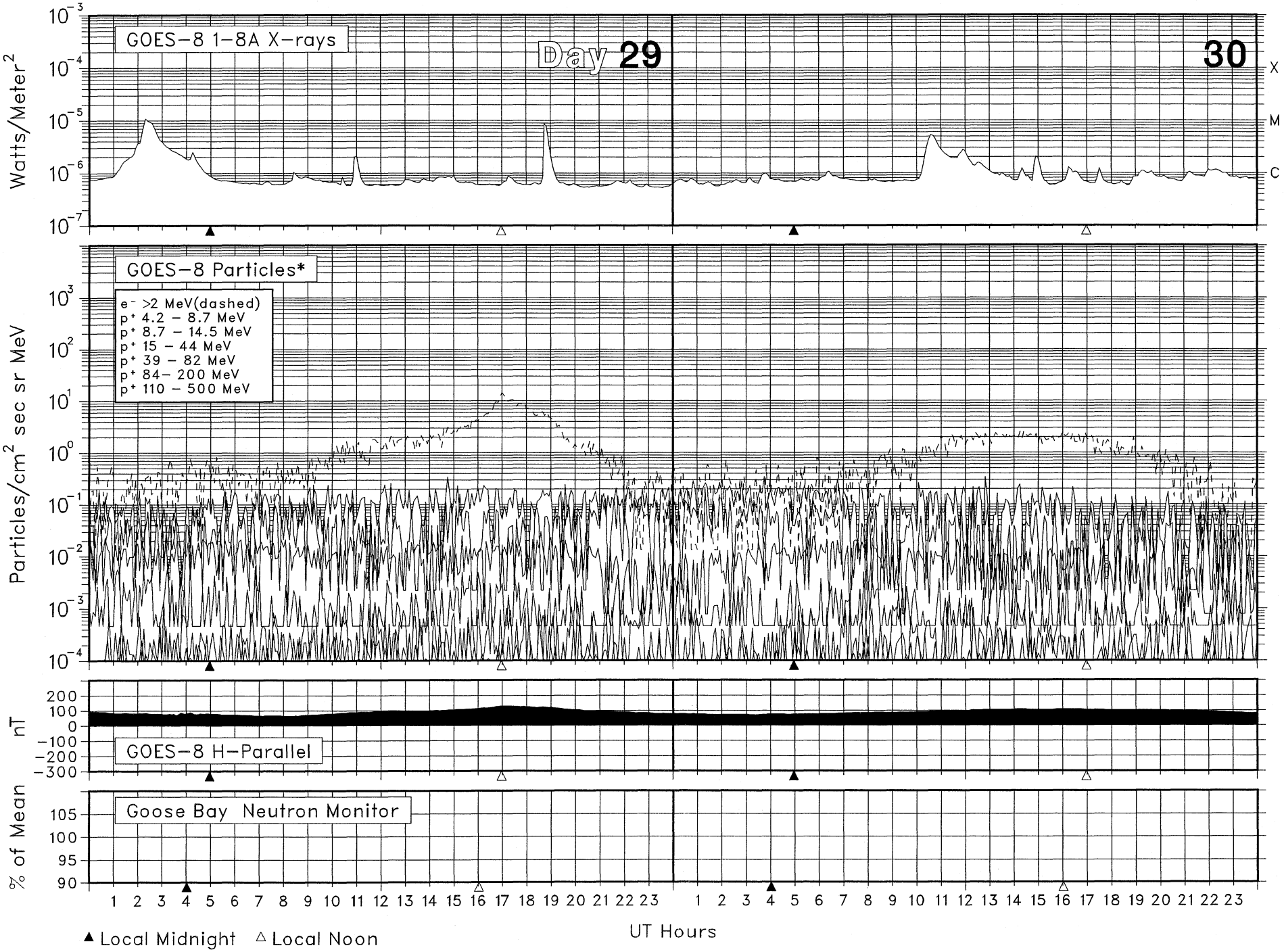

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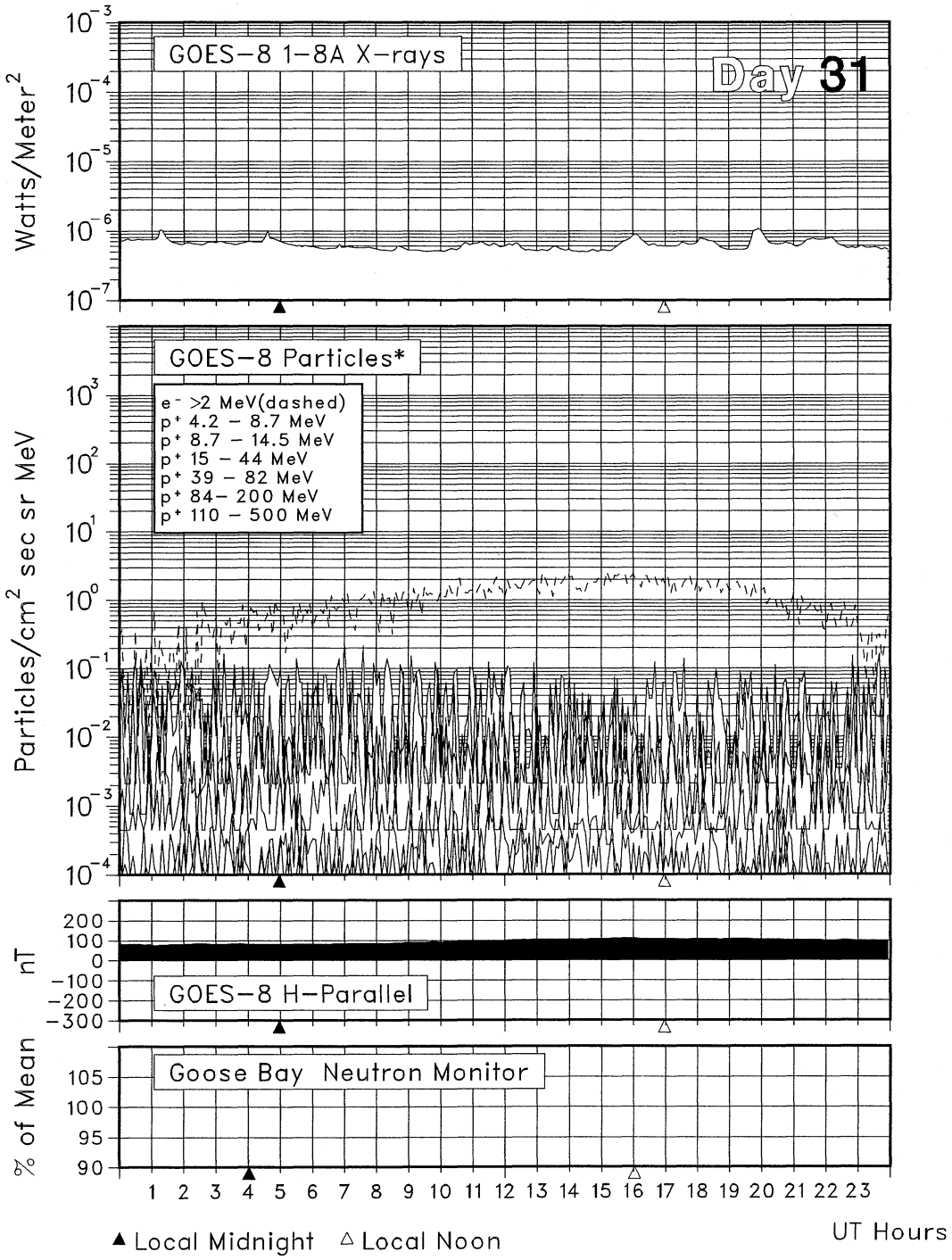

* Electron flux is divided by 10.
Electron units are Counts/cm^2 sec sr.
Protons are corrected for contamination.

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

DECEMBER 2000

Julian Day	Date of Issue	Date of Obs	Wolf No.	10-cm Solar Flux	A-index	Rgn No.	Location Lat	Location Lon	Flares Opt	Flares M	Flares X	Date of Fcst	Region Fcst(1)	Geoadvice(1)
336	01	30	191	192	5	9236	N20	W89	1	0	0	01	Q	SOL: Active
						9239	S21	W41	0	0	0	01	Q	MAG: Quiet
						9240	N09	W31	0	0	0	01	Q	PRO: Quiet
						9242	N21	W15	0	0	0	01	E	
						9243	S11	W12	0	0	0	01	Q	
						9244	N15	W70	1	0	0	01	Q	
						9245	N04	E40	0	0	0	01	Q	
						9246	S12	E19	7	1	0	01	E	
						9248	N04	W17	0	0	0	01	Q	
						9249	N11	E45	0	0	0	01	Q	
337	02	01	157	185	4	9239	S20	W53	0	0	0	02	Q	SOL: Active
						9240	N09	W43	1	0	0	02	Q	MAG: Quiet
						9242	N21	W28	1	0	0	02	E	PRO: Quiet
						9243	S10	W27	0	0	0	02	Q	
						9244	N16	W81	0	0	0	02	Q	
						9245	N04	E26	0	0	0	02	Q	
						9246	S12	E04	2	0	0	02	E	
						9248	N04	W28	0	0	0	02	Q	
						9249	N11	E31	0	0	0	02	Q	
338	03	02	141	167	3	9239	S21	W67	0	0	0	03	Q	SOL: Eruptive
						9240	N10	W60	0	0	0	03	Q	MAG: Quiet
						9242	N21	W41	0	0	0	03	Q	PRO: Quiet
						9243	S11	W40	0	0	0	03	Q	
						9245	N04	E14	0	0	0	03	Q	
						9246	S12	W08	1	0	0	03	E	
						9247	N14	W20	0	0	0	03	Q	
						9248	N05	W42	0	0	0	03	Q	
						9249	N12	E17	0	0	0	03	Q	
339	04	03	186	164	14	9239	S21	W82	0	0	0	04	Q	SOL: Eruptive
						9240	N09	W74	0	0	0	04	Q	MAG: Quiet
						9242	N20	W54	1	0	0	04	E	PRO: Quiet
						9243	S10	W53	0	0	0	04	Q	
						9245	N04	E00	0	0	0	04	Q	
						9246	S12	W21	0	0	0	04	E	
						9248	N05	W54	0	0	0	04	Q	
						9250	S11	W80	0	0	0	04	Q	
						9251	S22	W34	0	0	0	04	Q	
						9252	S02	W36	0	0	0	04	Q	
						9253	S14	E11	0	0	0	04	Q	
						9254	N10	E59	0	0	0	04	Q	
						9255	N21	E64	0	0	0	04	Q	
340	05	04	120	152	9	9240	N09	W85	0	0	0	05	Q	SOL: Eruptive
						9242	N19	W68	0	0	0	05	Q	MAG: Quiet
						9243	S08	W70	0	0	0	05	Q	PRO: Quiet
						9245	N05	W11	0	0	0	05	Q	
						9246	S12	W35	0	0	0	05	E	
						9248	N06	W67	0	0	0	05	Q	
						9254	N09	E48	0	0	0	05	Q	
						9255	N22	E54	0	0	0	05	Q	
						9256	S16	E65	0	0	0	05	Q	
341	06	05	90	147	3	9242	N19	W81	0	0	0	06	Q	SOL: Eruptive
						9245	N04	W25	0	0	0	06	Q	MAG: Quiet
						9246	S12	W52	0	0	0	06	Q	PRO: Quiet
						9254	N10	E36	0	0	0	06	Q	
						9255	N22	E40	0	0	0	06	Q	
						9256	S17	E51	0	0	0	06	Q	
342	07	06	99	141	7	9242	N20	W94	0	0	0	07	E	SOL: Eruptive
						9245	N04	W39	0	0	0	07	Q	MAG: Quiet
						9246	S11	W62	3	1	0	07	Q	PRO: Quiet
						9254	N10	E23	0	0	0	07	Q	
						9255	N23	E26	0	0	0	07	Q	

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

DECEMBER 2000

Julian Day	Date of Issue	Date of Obs	Wolf No.	10-cm Solar Flux	A-index	Rgn No.	Location Lat	Location Lon	Flares Opt	Flares M	Flares X	Date of Fcst	Region Fcst(1)	Geoadvice(1)
						9256	S17	E37	0	0	0	07	Q	
						9257	N19	E38	0	0	0	07	Q	
343	08	07	125	144	12	9246	S11	W75	3	0	0	08	E	SOL: Eruptive
						9249	N09	W48	0	0	0	08	Q	MAG: Quiet
						9254	N10	E10	0	0	0	08	Q	PRO: Quiet
						9255	N23	E14	0	0	0	08	Q	
						9257	N19	E24	0	0	0	08	Q	
						9258	N14	E48	0	0	0	08	Q	
						9259	S10	W24	0	0	0	08	Q	
						9260	S04	W47	0	0	0	08	Q	
						9261	N05	W69	0	0	0	08	Q	
344	09	08	81	138	18	9246	S11	W94	0	0	0	09	Q	SOL: Eruptive
						9254	N11	W04	0	0	0	09	E	MAG: Active
						9257	N20	E09	0	0	0	09	Q	PRO: Quiet
						9259	S09	W35	0	0	0	09	Q	
						9260	S05	W59	0	0	0	09	Q	
						9262	N13	E70	0	0	0	09	Q	
345	10	09	73	135	15	9254	N10	W19	1	0	0	10	E	SOL: Eruptive
						9257	N19	W03	0	0	0	10	Q	MAG: Quiet
						9260	S05	W71	0	0	0	10	Q	PRO: Quiet
						9262	N14	E58	1	0	0	10	E	
						9263	N18	E67	0	0	0	10	Q	
346	11	10	58	147	9	9260	S04	W91	0	0	0	11	Q	SOL: Eruptive
						9262	N13	E43	1	0	0	11	E	MAG: Quiet
						9263	N16	E51	0	0	0	11	Q	PRO: Quiet
						9264	S21	E65	0	0	0	11	Q	
						9265	N19	E70	0	0	0	11	Q	
347	12	11	101	144	7	9254	N10	W45	0	0	0	12	Q	SOL: Eruptive
						9258	N14	W04	0	0	0	12	Q	MAG: Quiet
						9262	N14	E31	0	0	0	12	E	PRO: Quiet
						9264	S23	E54	0	0	0	12	Q	
						9265	N18	E56	0	0	0	12	Q	
						9266	N24	W11	0	0	0	12	Q	
						9267	N08	E39	1	0	0	12	E	
348	13	12	95	150	6	9254	N09	W58	0	0	0	13	Q	SOL: Eruptive
						9262	N14	E18	0	0	0	13	E	MAG: Quiet
						9264	S24	E42	0	0	0	13	E	PRO: Quiet
						9265	N20	E43	0	0	0	13	Q	
						9266	N23	W24	0	0	0	13	Q	
						9267	N08	E25	2	1	0	13	E	
349	14	13	173	165	4	9254	N11	W71	0	0	0	14	Q	SOL: Eruptive
						9257	N18	W57	0	0	0	14	Q	MAG: Quiet
						9262	N14	E04	0	0	0	14	E	PRO: Quiet
						9264	S24	E30	1	0	0	14	E	
						9265	N17	E30	0	0	0	14	Q	
						9266	N23	W39	0	0	0	14	Q	
						9267	N08	E11	3	0	0	14	E	
						9268	S16	E75	0	0	0	14	Q	
						9269	N14	E61	0	0	0	14	Q	
						9270	S10	E10	0	0	0	14	Q	
350	15	14	157	182	2	9257	N13	W72	0	0	0	15	Q	SOL: Eruptive
						9262	N13	W10	1	0	0	15	E	MAG: Quiet
						9264	S24	E16	1	0	0	15	E	PRO: Quiet
						9265	N16	E16	0	0	0	15	Q	
						9266	N19	W53	0	0	0	15	Q	
						9267	N07	W02	4	0	0	15	E	
						9268	S15	E60	0	0	0	15	Q	
						9269	N18	E48	0	0	0	15	Q	
						9271	S20	W28	0	0	0	15	Q	

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Julian Day	Date of Issue	Date of Obs	Wolf No.	10-cm Solar Flux	A-index	Rgn No.	Location Lat	Location Lon	Flares Opt	Flares M	Flares X	Date of Fcst	Region Fcst(1)	Geoadvice(1)
						9272	N12	E19	0	0	0	15	Q	
351	16	15	181	188	2	9262	N16	W20	2	0	0	16	E	SOL: Eruptive
						9264	S24	E04	1	0	0	16	E	MAG: Quiet
						9265	N16	E04	0	0	0	16	Q	PRO: Quiet
						9266	N23	W62	2	0	0	16	Q	
						9267	N07	W17	1	0	0	16	E	
						9268	S18	E49	0	0	0	16	Q	
						9269	N15	E36	2	0	0	16	E	
						9271	S19	W41	0	0	0	16	Q	
						9272	N14	E05	0	0	0	16	Q	
						9273	N20	E68	0	0	0	16	Q	
352	17	16	203	191	3	9262	N14	W35	0	0	0	17	Q	SOL: Eruptive
						9264	S25	W09	0	0	0	17	E	MAG: Quiet
						9265	N18	W08	0	0	0	17	Q	PRO: Quiet
						9266	N23	W75	2	0	0	17	Q	
						9267	N07	W31	0	0	0	17	Q	
						9268	S18	E36	0	0	0	17	Q	
						9269	N16	E23	0	0	0	17	Q	
						9271	S20	W54	1	0	0	17	Q	
						9272	N12	W04	0	0	0	17	Q	
						9273	N19	E56	0	0	0	17	Q	
						9275	N20	W32	0	0	0	17	Q	
353	18	17	229	197	12	9262	N16	W44	0	0	0	18	Q	SOL: Eruptive
						9264	S24	W22	0	0	0	18	Q	MAG: Quiet
						9265	N15	W19	0	0	0	18	Q	PRO: Quiet
						9266	N25	W90	1	0	0	18	Q	
						9267	N08	W43	2	0	0	18	Q	
						9268	S18	E23	0	0	0	18	Q	
						9269	N14	E09	1	0	0	18	E	
						9271	S20	W67	1	0	0	18	Q	
						9272	N12	W21	0	0	0	18	Q	
						9273	N19	E43	0	0	0	18	Q	
						9275	N21	W45	1	0	0	18	Q	
						9276	S14	W72	15	0	0	18	E	
						9277	N16	W63	0	0	0	18	Q	
						9278	N09	E67	0	0	0	18	Q	
354	19	18	174	198	8	9262	N16	W58	0	0	0	19	Q	SOL: Eruptive
						9264	S25	W36	0	0	0	19	Q	MAG: Quiet
						9265	N19	W34	0	0	0	19	Q	PRO: Quiet
						9267	N08	W57	3	0	0	19	E	
						9268	S18	E09	0	0	0	19	Q	
						9269	N14	W06	1	0	0	19	E	
						9273	N20	E31	0	0	0	19	Q	
						9275	N22	W56	0	0	0	19	Q	
						9276	S12	W85	4	0	0	19	E	
						9277	N16	W76	2	0	0	19	E	
						9278	N09	E51	5	0	0	19	E	
						9279	S11	E62	1	0	0	19	Q	
355	20	19	163	199	5	9262	N16	W74	0	0	0	20	Q	SOL: Eruptive
						9264	S25	W49	0	0	0	20	Q	MAG: Quiet
						9267	N07	W72	2	0	0	20	E	PRO: Quiet
						9268	S18	W04	0	0	0	20	Q	
						9269	N13	W18	1	0	0	20	E	
						9273	N20	E20	0	0	0	20	Q	
						9277	N16	W89	2	0	0	20	Q	
						9278	N09	E37	5	0	0	20	E	
						9279	S11	E54	1	0	0	20	Q	
						9280	N10	E72	0	0	0	20	E	
356	21	20	183	201	3	9264	S25	W62	0	0	0	21	Q	SOL: Eruptive
						9267	N07	W88	0	0	0	21	Q	MAG: Active
						9268	S18	W16	0	0	0	21	Q	PRO: Quiet

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						9269	N14	W26	0	0	0	21	Q	
						9272	N14	W59	1	0	0	21	Q	
						9273	N20	E07	0	0	0	21	Q	
						9278	N09	E23	2	0	0	21	E	
						9279	S13	E41	2	0	0	21	Q	
						9280	N08	E61	1	0	0	21	E	
						9281	N07	E39	0	0	0	21	Q	
357	22	21	161	195	4	9264	S24	W73	0	0	0	22	Q	SOL: Eruptive
						9268	S18	W29	0	0	0	22	Q	MAG: Active
						9269	N15	W42	1	0	0	22	Q	PRO: Quiet
						9272	N14	W71	0	0	0	22	Q	
						9273	N20	W05	0	0	0	22	Q	
						9278	N09	E09	0	0	0	22	Q	
						9279	S13	E28	1	0	0	22	Q	
						9280	N08	E48	8	0	0	22	E	
						9281	N06	E20	0	0	0	22	Q	
						9282	N19	E68	0	0	0	22	Q	
358	23	22	164	190	6	9264	S26	W83	0	0	0	23	Q	SOL: Eruptive
						9268	S18	W43	0	0	0	23	Q	MAG: Active
						9269	N15	W53	1	0	0	23	Q	PRO: Quiet
						9273	N20	W20	0	0	0	23	Q	
						9278	N09	W05	0	0	0	23	Q	
						9279	S13	E11	1	0	0	23	Q	
						9280	N09	E35	4	0	0	23	E	
						9281	N06	E06	0	0	0	23	Q	
						9282	N19	E54	0	0	0	23	Q	
						9283	S15	E79	1	0	0	23	Q	
359	24	23	130	191	16	9268	S18	W56	0	0	0	24	Q	SOL: Eruptive
						9278	N09	W19	0	0	0	24	Q	MAG: Quiet
						9279	S12	W03	0	0	0	24	Q	PRO: Quiet
						9280	N08	E22	1	0	0	24	E	
						9281	N07	W01	0	0	0	24	Q	
						9282	N20	E43	0	0	0	24	Q	
						9283	S14	E65	20	0	0	24	Q	
						9284	N05	W07	0	0	0	24	Q	
360	25	24	155	193	5	9268	S18	W70	0	0	0	25	Q	SOL: Eruptive
						9269	N12	W80	0	0	0	25	Q	MAG: Quiet
						9278	N10	W31	0	0	0	25	Q	PRO: Quiet
						9279	S10	W21	0	0	0	25	Q	
						9280	N09	E10	0	0	0	25	E	
						9282	N20	E30	0	0	0	25	Q	
						9283	S12	E53	7	1	0	25	E	
						9284	N06	W20	0	0	0	25	Q	
						9285	N06	E59	4	0	0	25	Q	
						9286	N30	W47	0	0	0	25	Q	
361	26	25	164	187	7	9268	S16	W83	0	0	0	26	Q	SOL: Eruptive
						9279	S09	W35	0	0	0	26	Q	MAG: Quiet
						9280	N09	W04	1	0	0	26	E	PRO: Quiet
						9282	N20	E17	0	0	0	26	Q	
						9283	S12	E39	7	0	0	26	E	
						9285	N06	E47	0	0	0	26	Q	
						9286	N31	W62	0	0	0	26	Q	
						9287	S16	E60	0	0	0	26	Q	
362	27	26	189	189	4	9268	S16	W95	0	0	0	27	Q	SOL: Eruptive
						9279	S09	W49	0	0	0	27	Q	MAG: Quiet
						9280	N09	W18	0	0	0	27	E	PRO: Quiet
						9282	N21	E04	0	0	0	27	Q	
						9283	S11	E24	1	0	0	27	E	
						9285	N06	E33	0	0	0	27	Q	
						9286	N31	W75	0	0	0	27	Q	
						9287	S16	E45	0	0	0	27	Q	

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Julian Day	Date of Issue	Date of Obs	Wolf No.	10-cm Solar Flux	A-index	Rgn No.	Location Lat	Location Lon	Flares Opt	Flares M	Flares X	Date of Fcst	Region Fcst(1)	Geoadvice(1)
						9288	S21	E26	0	0	0	27	Q	
						9289	S07	E81	1	1	0	27	E	
363	28	27	171	188	7	9279	S10	W64	0	0	0	28	Q	SOL: Active
						9280	N10	W31	0	0	0	28	E	MAG: Quiet
						9282	N21	W09	0	0	0	28	Q	PRO: Quiet
						9283	S11	E11	8	0	0	28	E	
						9285	N08	E20	0	0	0	28	Q	
						9287	S16	E30	0	0	0	28	Q	
						9288	S21	E13	0	0	0	28	Q	
						9289	S08	E64	12	1	0	28	E	
						9290	N30	E31	0	0	0	28	Q	
364	29	28	159	185	5	9279	S12	W77	1	0	0	29	Q	SOL: Active
						9280	N08	W45	1	0	0	29	E	MAG: Quiet
						9282	N20	W22	0	0	0	29	Q	PRO: Quiet
						9283	S11	W03	2	0	0	29	E	
						9285	N07	E06	0	0	0	29	Q	
						9289	S06	E57	6	0	0	29	E	
						9290	N30	E19	0	0	0	29	Q	
365	30	29	150	182	8	9279	S10	W92	1	0	0	30	Q	SOL: Active
						9280	N08	W58	0	0	0	30	E	MAG: Quiet
						9282	N20	W34	0	0	0	30	Q	PRO: Quiet
						9283	S12	W16	4	0	0	30	E	
						9285	N06	W07	0	0	0	30	Q	
						9289	S06	E43	4	2	0	30	E	
						9290	N29	E06	1	0	0	30	Q	
						9291	S13	E34	0	0	0	30	Q	
366	31	30	140	182	4	9280	N09	W70	0	0	0	31	E	SOL: Active
						9282	N22	W47	0	0	0	31	Q	MAG: Quiet
						9283	S11	W28	2	0	0	31	E	PRO: Quiet
						9285	N07	W19	0	0	0	31	Q	
						9289	S07	E30	2	0	0	31	E	
						9290	N30	W06	0	0	0	31	Q	
						9291	S12	E21	0	0	0	31	Q	
						9292	N25	E63	0	0	0	31	Q	

(1) Region Forecast and Flare (SOL) Advice

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

Magnetic (MAG) Geoadvice

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

Proton (PRO) Geoadvice

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

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STRATWARM ALERTS

12/09/00 03:30:00 GEOALERT WWA344 STRATWARM ALERT/FRIDAY/STARTWARM EXISTS.
STRONG MINOR WARMING OVER ASIA AND EUROPE IN THE MIDDLE AND UPPER STRATOSPHERE. TEMPERATURE GRADIENT OVER HIGH LATITUDES REVERSED AT 1 HPA.

12/10/00 03:30:00 GEOALERT WWA345 STRATWARM ALERT/SATURDAY/STRATWARM EXISTS.
STRONG MINOR WARMING OVER ASIA AND NORTHERN EUROPE IN THE MIDDLE AND UPPER STRATOSPHERE.

12/11/00 03:30:00 GEOALERT WWA346 STRATWARM ALERT/SUNDAY/STRATWARM EXISTS.
MAJOR WARMING IN PROGRESS. STRONG WARMING OVER ASIA AND NORTHERN EUROPE CONTINUES IN THE MIDDLE AND UPPER STRATOSPHERE WITH A REVERSED TEMPERATURE GRADIENT BETWEEN 60N AND THE POLE AT 11 HPA.

12/12/00 03:30:00 GEOALERT WWA347 STRATWARM ALERT/MONDAY/STRATWARM EXISTS.
MAJOR WARMING IN PROGRESS. THE VORTEX CENTER, CURRENTLY NORTH OF GREENLAND, SPLITS INTO TWO NEW CENTERS OVER CENTRAL RUSSIA AND HUDSON BAY WITH AN ANTICYCLONE MOVING OVER THE POLE AND COLD AIR DEVELOPING OVER THE CANADIAN ARCTIC AND WESTERN SIBERIA.

12/13/00 03:30:00 GEOALERT WWA348 STRATWARM ALERT/TUESDAY/STRATWARM EXISTS.
MAJOR WARMING CONTINUES. 5 AND 8-DAY FORECASTS INDICATE A VORTEX SPLITTING EVENT TO FORM TWO NEW CENTRES OVER THE CANADIAN ARCTIC AND A WEAKER CENTRE OVER SIBERIA. THE WARM AIR OVER SIBERIA AND RUSSIA COOLS SLIGHTLY AND SPREADS TO THE WEST.

12/14/00 03:30:00 GEOALERT WWA349 STRATWARM ALERT/WEDNESDAY/STRATWARM EXISTS.
MAJOR WARMING IN PROGRESS. THE VORTEX CENTRE DISPLACED TO CANADA AND MOVING DUE WEST COINCIDENT WITH THE COLDEST AIR. THE WARM AIR TRAVELS TOWARDS THE BARENTS SEA AND AN ANTICYCLONE DEVELOPS OVER NORTHERN EUROPE.

12/15/00 03:30:00 GEOALERT WWA350 STRATWARM ALERT EXISTS STRATWARM THURSDAY
STRONG STRATOSPHERIC WARMING IN PROGRESS. THE VORTEX CENTER AND COLD AIR ARE LOCATED OVER CANADA WITH THE VORTEX BEING ELONGATED TOWARDS THE BARENTS SEA. THE PACIFIC ANTICYCLONE WEAKENS AND AN ANTICYCLONE DEVELOPS OVER THE EASTERN ATLANTIC. THE WARM AIR IS CENTERED OVER CENTRAL ASIA.

12/16/00 03:30:00 GEOALERT WWA351 STRATWARM ALERT EXISTS STRATWARM FRIDAY
STRONG STRATOSPHERIC WARMING IN PROGRESS. THE VORTEX CENTER SHIFTED TOWARDS CANADA; THE VORTEX BEING ELONGATED TOWARDS THE BARENTS SEA AND KASACHSTAN. AN ANTICYCLONE OVER THE PACIFIC; A NEW ANTICYCLONE DEVELOPING OVER THE NORTH ATLANTIC. COLD AIR BEING DISPLACED TO NORTHERN CANADA; WARM AIR CENTERED OVER CENTRAL ASIA.

12/17/00 03:30:00 GEOALERT WWA352 STRATWARM ALERT EXISTS STRATWARM SATURDAY
STRONG STRATOSPHERIC WARMING IN PROGRESS. A SPLIT VORTEX WITH A MAJOR CENTER OVER CANADA AND A SECONDARY CENTER OVER RUSSIA; AN ANTICYCLONE OVER THE PACIFIC AND AN EVOLVING ANTICYCLONE OVER THE NORTH ATLANTIC. COLD AIR CENTERED OVER NORTHERN CANADA; A WARM REGION OVER CENTRAL ASIA, WEAKENING; A NEW WEAK COLD CENTER OVER NORTH EASTERN EUROPE; A WARM REGION DEVELOPING OVER EASTERN CANADA TOWARDS THE NORTH ATLANTIC.

12/18/00 03:30:00 GEOALERT WWA353 STRATWARM ALERT EXISTS STRATWARM SUNDAY
STRONG STRATOSPHERIC WARMING IS IN PROGRESS. STRONG ELONGATED POLAR VORTEX WITH A MAJOR CENTER OVER NORTHERN CANADA AND A MINOR CENTER OVER RUSSIA IS WEAKENING. AN ANTICYCLONE EXISTS OVER BOTH THE NORTHERN PACIFIC AND THE NORTH ATLANTIC WITH THE WARMEST AIR OVER THE LABRADOR SEA. THE WARM REGION OVER CENTRAL ASIA IS WEAKENING.

12/19/00 03:30:00 GEOALERT WWA354 STRATWARM ALERT EXISTS STRATWARM MONDAY
STRONG STRATOSPHERIC MINOR WARMING CONTINUES. A SPLIT VORTEX WITH A MAJOR CENTER OVER NORTHERN CANADA AND A MINOR CENTER OVER WESTERN SIBERIA WEAKENS. THE ANTICYCLONE OVER THE NORTH PACIFIC WEAKENS. THE WARM REGION OVER THE LABRADOR SEA INTENSIFIES. THE WARM REGION OVER CENTRAL ASIA WEAKENS.

12/20/00 03:30:00 GEOALERT WWA355 STRATWARM ALERT/TUESDAY/STRATWARM EXISTS.
STRONG STRATOSPHERIC MINOR WARMING CONTINUES. SPLITTED VORTEX IN THE MIDDLE STRATOSPHERE WITH A MAJOR CENTER OVER CANADA AND A MINOR CENTER OVER WESTERN SIBERIA, WEAKENING. AT 10HPA THE ANTICYCLONE OVER THE NORTH ATLANTIC, MOVING EASTWARD, INTENSIFYING. THE MINOR WARMING OVER GREENLAND, MOVING NORTHEASTWARD. THE WARM REGION OVER ASIA, WEAKENING. IN THE UPPER STRATOSPHERE REVERSED TEMPERATURE GRADIENT BETWEEN 60N AND THE POLE. A WARM REGION OVER THE MEDITERRANEAN SEA.

12/21/00 03:30:00 GEOALERT WWA356 STRATWARM ALERT/WEDNESDAY/STRATWARM EXISTS.
STRONG MINOR WARMING CONTINUES. SPLITTED VORTEX IN THE LOWER STRATOSPHERE WITH THE MAIN CENTRE OVER CANADA AND A SECOND CENTRE OVER SIBERIA, WHILE A WARM ANTICYCLONE IS LOCATED OVER THE NORTHERN ATLANTIC REGION WITH THE WARM AIR OVER GREENLAND. AT 5 AND 10 HPA, REVERSED TEMPERATURE GRADIENT BETWEEN 60N AND THE POLE. MEAN ZONAL WIND AT 60N VERY WEAK FROM THE WEST IN THE UPPER STRATOSPHERE.

12/22/00 03:30:00 GEOALERT WWA357 STRATWARM ALERT EXISTS STRATWARM THURSDAY

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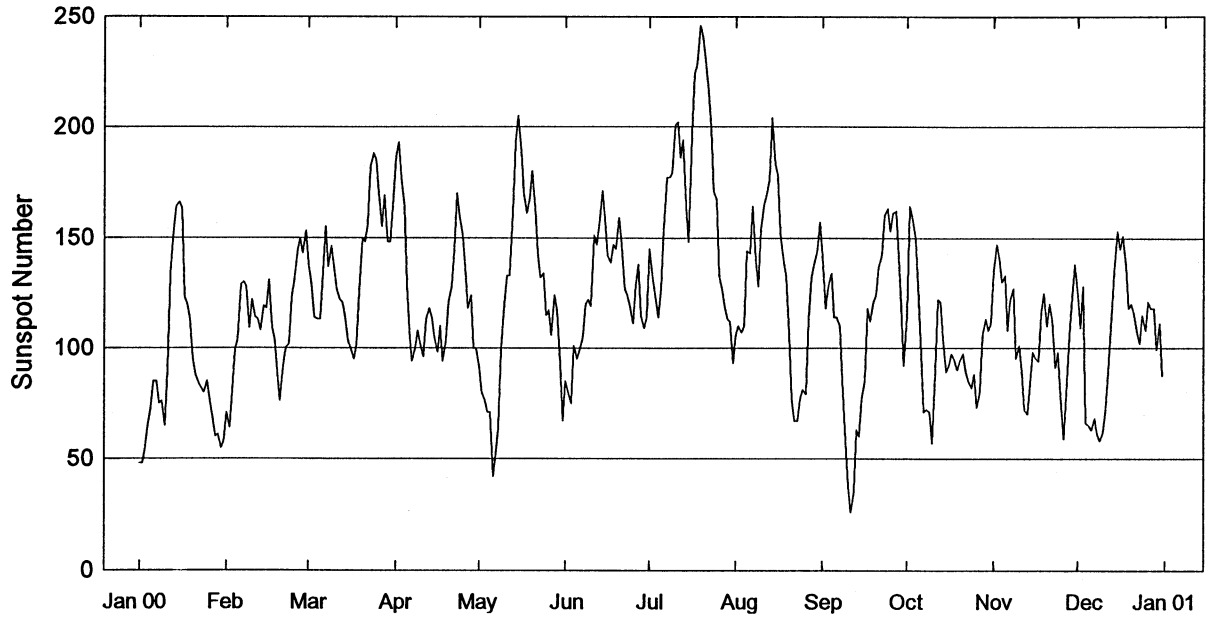
STRONG STRATOSPHERIC MINOR WARMING CONTINUES. A SPLIT VORTEX IN THE LOWER STRATOSPHERE EXISTS WITH THE MAIN CENTER OVER CANADA AND A MINOR CENTER WEST OF THE BAIKAL SEA WEAKENING. A WARM ANTICYCLONE IS LOCATED OVER THE NORWEGEAN SEA WITH THE WARM AIR OVER THE BARENTS SEA. AT 5 AND 10 HPA A REVERSED TEMPERATURE GRADIENT EXISTS BETWEEN 60N AND THE POLE. MEAN ZONAL WIND IS VERY WEAK FROM THE WEST IN THE UPPER STRATOSPHERE.

12/23/00 03:30:00 GEOALERT WWA358 STRATWARM ALERT EXISTS STRATWARM FRIDAY
A STRONG ANTICYCLONE, TILTING FROM WESTERN EUROPE IN THE LOWER STRATOSPHERE TO NORTHERN RUSSIA IN THE UPPER STRATOSPHERE, DOMINATES THE CIRCULATION OVER EUROPE AND ASIA WHILE THE CENTER OF THE COLD POLAR VORTEX IS SITUATED BETWEEN THE CANADIAN ARCTIC IN THE LOWER STRATOSPHERE AND ALASKA IN THE UPPER STRATOSPHERE. A RETURN TO NORMAL WINTER CONDITIONS IS EXPECTED WITHIN THE NEXT 5 DAYS.

12/24/00 03:30:00 GEOALERT WWA359 STRATWARM ALERT EXISTS STRATWARM SATURDAY
STRONG ANTICYCLONE, TILTING FROM ICELAND IN THE LOWER STRATOSPHERE TOWARDS THE URAL MOUNTIAINS IN THE UPPER STRATOSPHERE, CONTINUES TO DOMINATE THE CIRCULATION OVER EUROPE AND ASIA BUT WILL DISAPPEAR WITHIN THE NEXT 5 DAYS. PROGNOSIS SHOW THE RETURN TO NORMAL WINTER CONDITIONS WITH THE CENTER OF THE COLD POLAR VORTEX MOVING TOWARDS THE EUROPEAN SECTOR OF THE ACTIC. END OF THIS GEOALERT PERIOD.

12/25/00 03:30:00 GEOALERT WWA360 STRATWARM ALERT ENDS SUNDAY
RETURN TO NORMAL WINTER CONDITIONS THROUGHOUT THE STRATOSPHERE WITHIN THE NEXT 2 DAYS.

International Relative Sunspot Numbers
Jan 2000 - Dec 2000

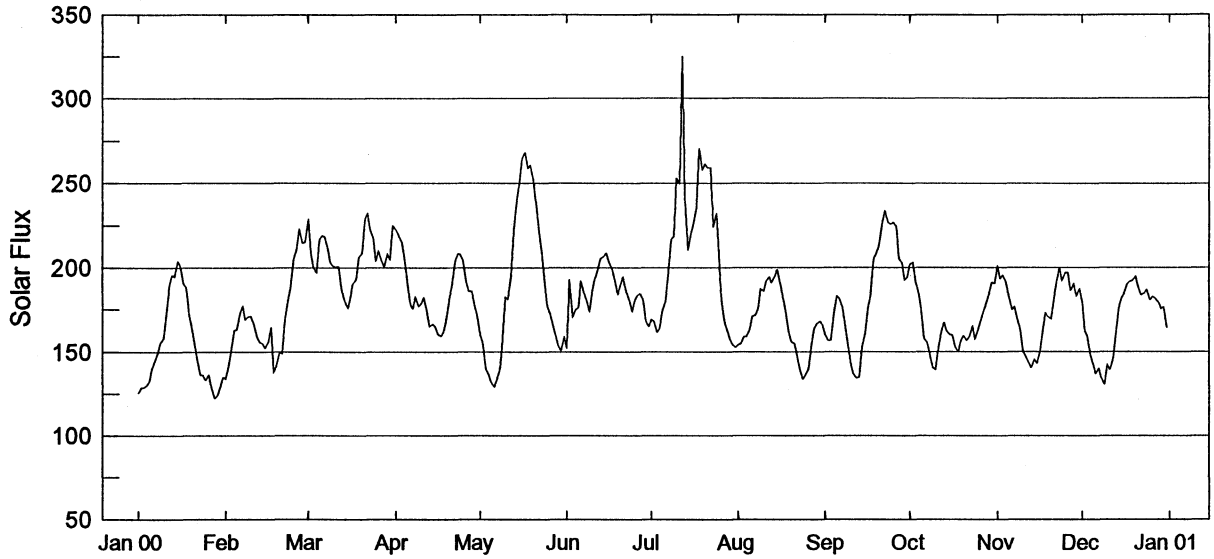


Day	Jan 00	Feb	Mar	Apr	May	Jun	Jul*	Aug*	Sep*	Oct*	Nov*	Dec*
1	48	71	138	187	91	85	145	106	142	115	135	124
2	51	64	130	193	80	79	132	110	118	164	147	109
3	54	81	114	177	76	75	124	107	128	159	141	128
4	64	99	113	164	71	101	114	110	134	150	130	66
5	73	104	113	129	71	95	127	144	114	128	133	65
6	85	136	129	108	42	99	154	143	114	97	108	63
7	85	130	155	94	52	105	177	164	110	71	122	68
8	75	128	145	100	64	120	177	140	85	72	127	61
9	76	109	146	108	99	122	179	128	63	71	95	58
10	65	122	137	102	120	119	201	154	38	57	101	62
11	90	114	127	96	133	151	202	165	26	82	90	72
12	134	113	122	113	133	147	186	170	35	122	72	89
13	153	108	121	118	161	156	194	176	63	121	70	114
14	164	119	115	114	193	171	164	204	60	104	84	135
15	157	118	103	105	205	158	148	183	77	89	98	153
16	163	131	100	98	189	142	197	178	85	92	95	145
17	131	109	95	110	170	139	224	152	118	97	94	151
18	120	104	101	94	161	147	228	140	112	95	116	138
19	114	89	126	103	167	145	246	133	121	90	125	118
20	95	76	150	121	180	159	241	106	124	94	110	120
21	88	92	148	128	163	147	231	77	137	97	120	116
22	84	100	156	145	143	127	216	67	142	89	113	107
23	82	95	182	170	132	124	199	67	160	85	91	102
24	80	123	188	160	134	119	171	77	163	82	98	115
25	85	131	185	151	115	111	167	81	153	88	74	108
26	77	144	170	136	117	129	133	79	161	73	59	121
27	70	150	155	118	106	138	126	113	162	80	79	118
28	60	151	169	124	124	115	120	132	142	106	106	118
29	61	162	148	100	117	109	113	138	119	113	123	99
30	51		148	100	93	114	112	144	92	108	138	111
31	58		164		67		93	157		111		87
Mean	90.1	122.9	138.5	125.5	121.6	124.9	169.1	130.5	109.9	100.1	106.5	104.5

* = Provisional.

Penticton 2800 MHz (10.7cm) Solar Flux
Jan 2000 - Dec 2000

Adjusted to 1 AU



Day	Jan 00	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1	125.6	134.1	228.7	222.7	160.1	152.3	169.2	153.9	160.5	201.9	201.2	179.3
2	128.5	140.2	209.6	219.3	155.3	192.7+	167.9	155.1	156.7	202.9	193.2	162.3
3	128.7	149.7	200.4	215.5	139.6	170.7	161.5	158.8	156.7	192.1	195.5	158.9
4	130.3	162.7	197.0	206.9	136.8	174.7	163.7	158.7	173.6	184.1	191.4	147.6
5	132.0	163.1	216.8	194.7	132.1	176.1	174.4	163.2	183.1	173.7	183.1	142.7
6	140.0	172.8	219.1	178.1	129.1	192.0	180.1	170.8	181.5	157.9	174.9	136.9
7	144.8	177.0	218.5	175.4	133.4	185.8	193.5	171.6	175.8	155.3	176.6	139.9
8	149.6	169.0	211.8	182.5	139.6	179.9	217.1	175.6	165.7	148.6	169.5	134.1
9	155.3	170.8#	203.0	176.9	152.5	174.1	218.4	187.2	153.0	140.4	163.0	130.7
10	157.8	171.1	200.7	178.6	182.8+	185.1	252.7	185.9	142.5	139.1	150.4	142.1
11	171.8	165.8	200.6	182.4	181.3	192.6	249.7	192.3	136.7	150.8	146.6	139.2
12	189.3	159.1	200.8	173.9	194.4	198.7	325.1+	194.3	134.2	161.9	143.6	145.2
13	195.4	155.9	186.0	165.0	222.0	205.5	239.6	190.9	134.8	167.2	140.6	159.5
14	194.7	154.7	180.6	166.3	237.6	206.9	210.6	194.3	152.5	162.3	145.4	176.5
15	203.9	152.2	175.9	164.9	249.9	208.9	220.1	198.9	161.1	160.1	143.2	181.9
16	201.0	156.3	182.5	160.2	264.5	203.8	226.1	190.3	176.4	159.8	150.7	184.4
17	190.1	164.4	190.6	159.2	268.1	199.4	235.8	181.5	183.2	153.0	159.6	190.4
18	188.4	137.8	193.0	161.8	258.8	193.7	270.5	173.6	205.7	149.9	172.9	191.6
19	172.9	141.5	206.5	169.2	260.4	184.2	258.0	160.8	208.8	156.5	170.7	192.2
20	165.3	149.9	208.7	182.4	251.6	189.7	261.1	156.0	213.1	159.3	169.6	194.8
21	154.3	148.7	228.9	189.2	238.0	194.2	259.0	154.9	226.7	156.5	180.9	188.2
22	145.8	168.6	232.2	204.1	220.3	185.6	259.0	147.5	233.8	158.6	190.1	183.8
23	136.1	181.2	222.7	208.4	209.5	181.0	224.3	139.9	226.7	164.8	200.1	184.7
24	136.3	188.3	217.7	208.1	194.3	173.9	232.0	133.5	225.8	157.5	192.1	186.7
25	133.1	206.2	204.1	205.1	177.4	180.9	208.2	136.0	226.8	162.0	197.0#	180.9
26	136.4	210.6	210.4	192.4	172.4	183.4	180.1	139.9	224.7	168.9	197.0	182.6
27	128.4	222.9	204.1	186.0	166.2	184.6	167.4	153.2	205.5	173.7	186.6	181.4
28	122.2#	214.7	200.3	186.0	160.2	181.2	162.7	163.2	203.0	179.7	190.3	179.3
29	123.9	215.1	208.3	177.5	153.1	168.8	157.9	166.5	192.6	184.5	183.2	175.5
30	128.7		205.1	172.0	150.5	165.0	154.5	167.9	194.0	191.0	187.0	176.1
31	134.5		225.1		158.7		152.4	165.9		190.5		163.9
Mean	153.9	153.9	206.1	185.5	188.7	185.5	211.4	167.2	183.8	166.6	174.9	168.2

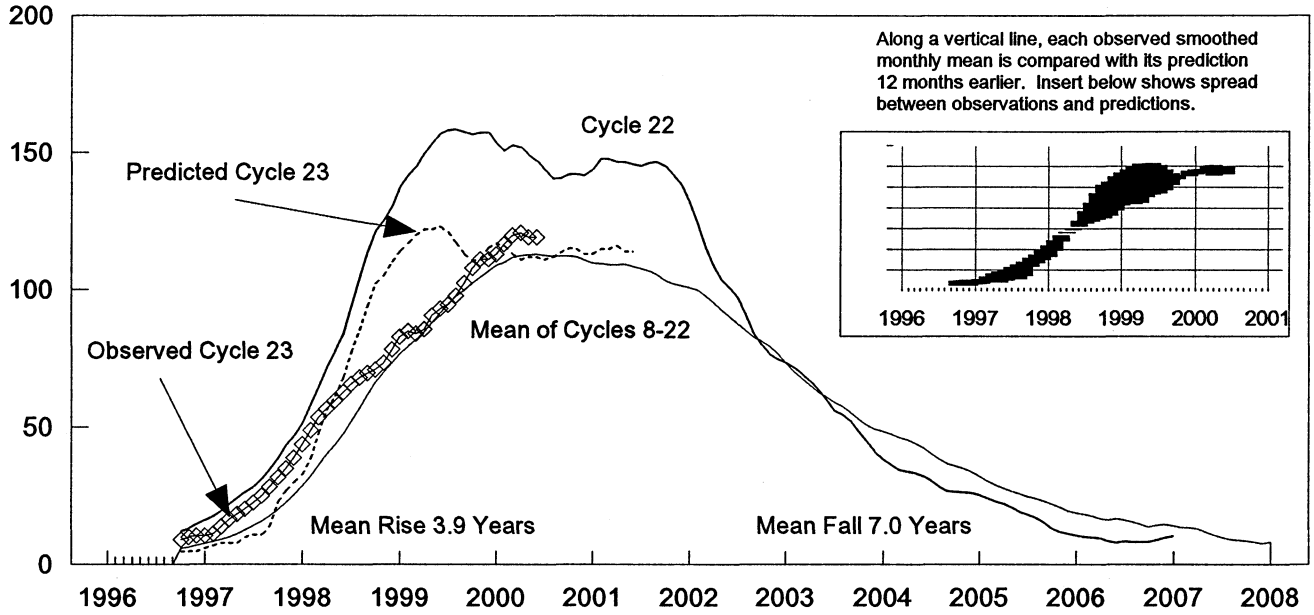
NOTE: * 2300UT reading - hail on antenna at 2000UT. ; #1800UT reading - burst in progress at 2000UT
+ Burst in progress.

DAILY SOLAR INDICES
December 2000

Day	Day of Year	Bartels Cycle Day	Sunspot Numbers Int	Sunspot Numbers Amer	Obs Flux Penticton (2800)	Solar Flux Adjusted to 1 Astronomical Unit SGMR (15400)	SGMR (8800)	SGMR (4995)	Pentic (2800)	SGMR (2695)	SGMR (1415)	SGMR (610)	SGMR (410)	SGMR (245)
1	336	18	124	106	184.5	545	297	186	179.3	154	143	81	54	40
2	337	19	109	101	167.0	530	297	181	162.3	144	131	72	46	27
3	338	20	128	95	163.6	546	301	183	158.9	141	127	69	44	17
4	339	21	66	72	152.0	543	291	176	147.6	--	115	66	44	17
5	340	22	65	60	147.0	531	286	175	142.7	125	109	64	48	18
6	341	23	63	52	141.0	542	295	175	136.9	120	104	62	45	18
7	342	24	68	68	144.2	543	290	176	139.9	121	105	62	41	20
8	343	25	61	57	138.3	517	289	175	134.1	120	102	62	41	17
9	344	26	58	58	134.7	531	286	166	130.7	113	98	63	42	16
10	345	27	62	54	146.6	534	279	168	142.1	117	106	65	43	17
11	346	1	72	73	143.6	499	278	162	139.2	122	107	65	43	17
12	347	2	89	79	149.8	481	274	175	145.2	126	115	65	42	17
13	348	3	114	111	164.6	535	296	180	159.5	134	118	67	42	17
14	349	4	135	136	182.2	474	262	174	176.5	150	124	56	45	19
15	350	5	153	162	187.8	541	300	190	181.9	154	132	68	43	21
16	351	6	145	142	190.5	534	310	198	184.4	166	143	74	45	19
17	352	7	151	136	196.7	510	307	205	190.4	166	145	75	--	20
18	353	8	138	117	198.0	547	330	212	191.6	163	144	75	--	21
19	354	9	118	113	198.6	552	325	213	192.2	168	145	78	51	20
20	355	10	120	118	201.3	543	329	215	194.8	171	148	78	50	21
21	356	11	116	117	194.5	542	334	220	188.2	167	148	78	48	20
22	357	12	107	111	190.0	527	334	220	183.8	162	147	76	48	20
23	358	13	102	102	190.9	554	330	228	184.7	163	144	75	47	20
24	359	14	115	106	193.0	540	329	223	186.7	163	145	78	49	19
25	360	15	108	106	187.0	525	311	198	180.9	148	136	73	44	17
26	361	16	121	115	188.8	552	326	213	182.6	158	140	79	50	20
27	362	17	118	124	187.6	555	337	220	181.4	162	138	78	48	22
28	363	18	118	117	185.4	529	319	214	179.3	159	136	77	51	22
29	364	19	99	119	181.5	529	316	206	175.5	149	130	72	50	23
30	365	20	111	118	182.1	527	318	211	176.1	149	128	71	49	23
31	366	21	87	93	169.5	529	306	204	163.9	144	126	75	49	20
MEAN			104.5	101.2	173.6	531	305	194	168.2	146	128	70	46	20

The International and American sunspot numbers shown above are preliminary values.
NOTE: Radio flux values are from Sagamore Hill, Massachusetts, USA.

Cycle 23 Smoothed Sunspot Numbers: Observed and Predicted



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

Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Avg
1993	71	69	67	64	60	56	55	52	48	45	41	38	56
1994	37	35	34	34	33	31	29	27	27	27	26	26	31
1995	24	23	22	21	19	18	17	15	13	12	11	11	17
1996	10	10	10	9	8*	9	8	8	8	9**	10	10	8
1997	11	11	14	17	18	20	23	25	28	32	35	39	23
1998	44	49	53	57	59	63	65	68	69	71	73	78	62
1999	83	85	84	85	90	93	94	98	102	108	111	111	95
2000	113	117	120	121	119	119	119	119	119	118	117	116	118
							(6)	(12)	(16)	(19)	(23)	(26)	(9)
2001	116	116	115	115	114	114	113	111	111	109	108	107	112
	(27)	(29)	(30)	(33)	(36)	(35)	(33)	(32)	(33)	(34)	(33)	(32)	(32)

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

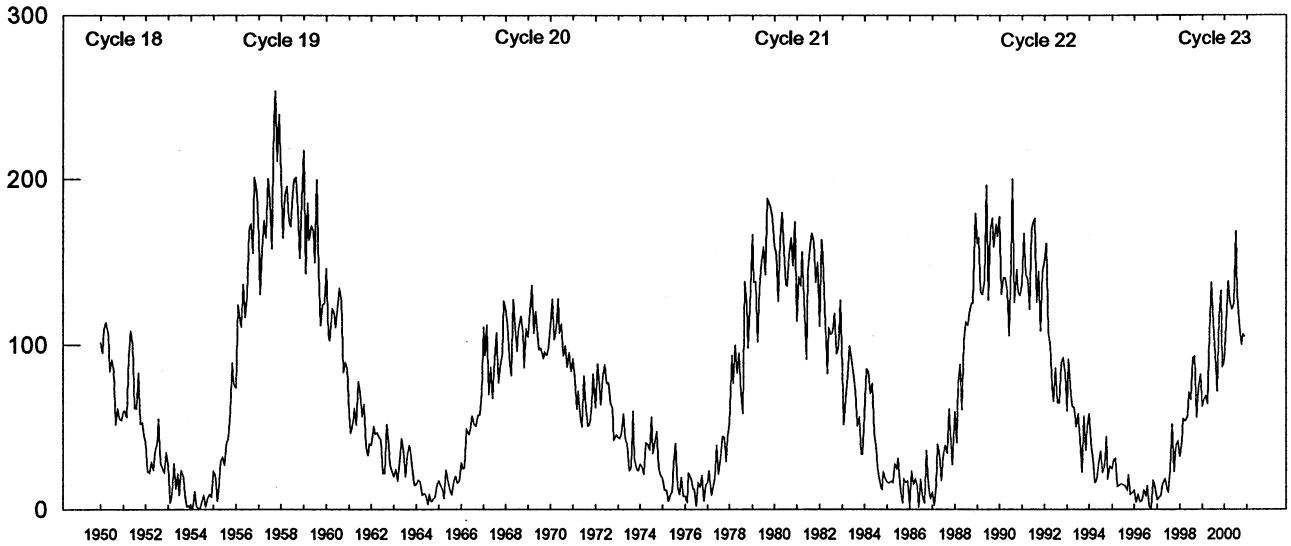
*** May 1996 marks Cycle 22's mathematical minimum. ** October 1996 marks the consensus minimum NGDC is now using.**

Observed and Predicted Numbers. For the end of Cycle 22, and the rise and decline of Cycle 23, the table above lists observed smoothed sunspot numbers up to the one that includes the most recent monthly mean. We based these smoothed values on final monthly means through Jun 2000 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 June 2001 prediction. There exists a 90% chance that in June 2001, the actual smoothed number will fall somewhere between 79 and 149.

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

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

Mean Monthly Sunspot Numbers
Jan 1950 - Dec 2000



Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Mean	
1950	101.6	94.8	109.7	113.4	106.2	83.6	91.0	85.2	51.3	61.4	54.8	54.1	83.9	
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	169.1	130.5	109.9	100.1	106.5	104.5	119.5	

Values are preliminary after Jun 00. For the yearly means, each 'M' marks a sunspot cycle maximum and each 'm' a minimum.

Hα SOLAR FLARES

DECEMBER 2000

Sta	Day	Start (UT)	Max (UT)	End (UT)	Lat	CMD	NOAA/ USAF Region	CMP Mo	CMP Day	Dur (Min)	Imp Opt	Imp Xray	See	Obs Type	Area Measurement Time (UT)	Area Measurement Apparent (10-6 Disk)	Area Measurement Corr (Sq Deg)	Remarks
LEAR	01	0042	0042	0050	N08	W36	9240	11	28.4	8	SF		3	E		76		FH
LEAR		0156	0158	0222	S13	E18	9246	12	2.4	26	SF		3	E		18		
LEAR		0311	0314	0322	S12	E15	9246	12	2.3	11	SF		3	E		32		F
LEAR		0900E	0901	0922	N19	W21	9242	11	29.9	22D	1F		2	E		103		F
SVTO		0902E	0909U	0914	N19	W20	9242	11	29.9	12D	SF		3	E		26		F
LEAR	02	0018	0019	0023	S13	E06	9246	12	2.5	5	SF		3	E		13		
LEAR	03	0212	0217	0238	N19	W41	9242	11	30.0	26	SF		2	E		14		
LEAR	04	0016	0018	0022	S08	W87		11	27.6	6	SF		3	E		18		
LEAR		0025	0025	0034	N20	W54	9242	11	30.0	9	SF		3	E		11		
LEAR	05	0442	0446	0500	N05	W74	9248	11	29.8	18	SF		3	E		64		F
LEAR	06	0932	0934	0940	S10	W64	9246	12	1.6	8	SF		3	E		49		
RAMY		1814	1815	1821	S09	W68	9246	12	1.6	7	SF		3	E		17		H
HOLL		2223	2233	2247	S10	W66	9246	12	2.0	24	SF		3	E		70		F
LEAR	07	0049E	0050U	0135D	S10	W63	9246	12	2.3	46D	SF		3	E		42		
LEAR		0336	0339	0445D	S09	W69	9246	12	2.0	69D	1F		2	E		145		
LEAR		0602	0703	0723	S10	W65	9246	12	2.4	81	SF		3	E		57		
LEAR	09	0420	0423	0427	N11	E61		12	13.8	7	SF		3	E		12		
RAMY		1722	1723	1727	N10	W15	9254	12	8.6	5	SF		3	E		17		
GOES	10	0449	0505	0515	N13	E56	9262			26	SF	C 3.3						3.1E-03
LEAR		0452	0453	0500	N13	E56	9262	12	14.4	8	SF		3	E		15		F
GOES		1024	1028	1034						10		B 8.3						4.5E-04
GOES		1917	1935	1948						31		C 2.8						3.8E-03
GOES	11	0028	0050	0058						30		B 9.0						1.3E-03
GOES		0634	0718	0730						56		C 1.0						2.4E-03
GOES		0820	0823	0825						5		C 1.1						3.0E-04
GOES		0954	0958	1000						6		C 1.3						3.4E-04
GOES		1501	1514	1536	N07	E42	9267			35	SF	C 1.9						3.1E-03
HOLL		1504	1513	1541	N07	E42	9267	12	14.8	37	SF		3	E		52		F
RAMY		1517	1518	1542	N08	E41	9267	12	14.7	25	SF		3	E		69		
GOES		1638	1641	1643						5		B 9.0						2.3E-04
GOES		1855	1936	2054						119		C 1.6						6.8E-03
GOES	12	0152	0202	0219						27		C 2.1						3.1E-03
GOES		0445	0500	0513	N07	E32	9267			28	SF	C 2.6						3.6E-03
LEAR		0453	0458	0511	N07	E32	9267	12	14.6	18	SF		3	E		74		
GOES		0849	0911	0918						29		C 1.6						1.9E-03
GOES		1228	1245	1255						27		C 1.8						2.3E-03
GOES		1437	1507	1523	N08	E25	9267			46	1F	M 1.3						2.6E-02
SVTO		1442E	1451U	1503D	N07	E25	9267	12	14.5	21D	SF		2	E		81		FH
RAMY		1444	1444	1543	N08	E25	9267	12	14.5	59	1F		3	E		241		FH
GOES		2318	2324	2332						14		B 9.8						7.4E-04
GOES	13	0213	0223	0228						15		C 3.8						2.0E-03
GOES		0552	0556	0609						17		B 6.9						6.4E-04
GOES		0741	0745	0749						8		B 8.2						3.4E-04
GOES		0803	0808	0816			9267			13		B 9.4						6.3E-04
GOES		0816	0823	0828	N08	E17	9267			12	SF	C 4.6						2.1E-03
LEAR		0819	0820	0837	N08	E17	9267	12	14.6	18	SF		3	E		33		
GOES		1012	1016	1022						10		C 1.2						7.0E-04
GOES		1100	1115	1131	S25	E32	9264			31	SF	C 2.7						4.3E-03
SVTO		1105	1109	1118	S23	E33	9264	12	16.0	13	SF		3	E		12		H
SVTO		1119	1125	1142	S25	E32	9264	12	15.9	23	SF		3	E		12		H
GOES		1658	1701	1703						5		C 1.1						2.7E-04
GOES		2155	2204	2216	N10	E07	9267			21	1F	C 5.8						4.9E-03
HOLL		2158	2201	2227	N10	E07	9267	12	14.4	29	1F		3	E		169		UF
HOLL		2240	2242	2250	N16	E61		12	18.6	10	SF		3	E		14		F
GOES		2351	2359	2414						23		C 3.2						3.1E-03
GOES	14	0457	0503	0510	N19	W67	9255			13	SF	B 7.7						5.4E-04

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Sta	Day	Start (UT)	Max (UT)	End (UT)	Lat	CMD	NOAA/ USAF Region	CMP Mo	Day	Dur (Min)	Opt	Imp Xray	See	Obs Type	Time (UT)	Area Measurement Apparent (10-6 Disk)	Corr (Sq Deg)	Remarks
LEAR	14	0502E	0503U	0516D	N19	W67	9255	12	9.1	14D	SF		3	E		28		
GOES		0652	0655	0707						15		B 9.9						8.1E-04
GOES		0910	0916	0921						11		C 2.7						1.3E-03
LEAR		0915	0917	0930	N04	E03	9267	12	14.6	15	SF		3	E		51		
LEAR		0930	0958	1012D	S24	E22	9264	12	16.1	42D	SF		2	E		38		
LEAR		0934	0935	0944	N04	E02	9267	12	14.5	10	SF		3	E		19		
GOES		0936	0958	1100			9264			84		C 3.4						1.5E-02
GOES		1101	1108	1117						16		C 5.7						4.7E-03
GOES		1244	1247	1300	N07	E00	9267			16	SF	C 1.8						1.6E-03
RAMY		1246	1247	1257	N07	E00	9267	12	14.5	11	SF		3	E		24		F
GOES		1316	1319	1321	N13	W06	9262			5	SF	C 2.4						5.0E-04
RAMY		1319	1319	1322	N13	W06	9262	12	14.1	3	SF		3	E		12		H
GOES		1518	1526	1530	N08	E02	9267			12	SF	C 6.4						2.8E-03
HOLL		1520	1523	1532	N08	E02	9267	12	14.8	12	SF		3	E		93		F
GOES		1824	1828	1832						8		C 1.4						5.2E-04
GOES		2045	2051	2056						11		C 4.5						2.0E-03
GOES		2347	2350	2356						9		C 1.1						5.7E-04
LEAR	15	0639	0640	0647	N20	W55	9266	12	11.1	8	SF		3	E		27		
GOES		0648	0651	0658	N20	W55	9266			10	SF	C 1.1						6.4E-04
LEAR		0926	0927	0929	N24	W54	9266	12	11.2	3	SF		3	E		25		
SVTO		0930	0932	0938	N21	W10	9262	12	14.6	8	SF		3	E		11		H
LEAR		0930	0933	0941	N11	W22	9262	12	13.7	11	SF		3	E		16		F
GOES		1112	1119	1129	N10	W12	9267			17	SF	C 2.7						2.2E-03
SVTO		1115	1116	1127	N10	W12	9267	12	14.6	12	SF		3	E		18		FH
GOES		1854	1859	1906	N14	E40	9269			12	SF	C 1.3						8.7E-04
RAMY		1855E	1856U	1909	N14	E40	9269	12	18.8	14D	SF		3	E		15		
GOES		1935	1956	2007	N19	W16	9262			32	SF	C 5.3						6.7E-03
HOLL		1942	1959	2015	N19	W16	9262	12	14.6	33	SF		3	E		48		F
RAMY		1946	1952	2024	N18	W16	9263	12	14.6	38	SF		3	E		73		F
GOES		2122	2129	2136	S26	E13	9264			14	SF	C 2.5						1.7E-03
HOLL		2126	2128	2137	S26	E13	9264	12	16.9	11	SF		3	E		48		F
LEAR		2328	2337	2351	N15	E34	9269	12	18.5	23	SF		3	E		13		F
GOES	16	0009	0016	0020	N20	W19				11	SF	C 2.5						1.3E-03
LEAR		0011	0013	0028	N20	W19		12	14.5	17	SF		3	E		97		F
GOES		0505	0512	0518	N23	W66	9266			13	SF	C 1.4						1.0E-03
LEAR		0507	0510	0512	N23	W66	9266	12	11.1	5	SF		3	E		28		
GOES		0552	0557	0604						12		C 1.2						8.0E-04
LEAR		0912	0914	0921	N21	W67	9266	12	11.2	9	SF		3	E		18		
RAMY		1919	1927	1951	S20	W54	9271	12	12.7	32	SF		3	E		41		
GOES		1921	1926	1931	S20	W54	9271			10	SF	C 2.3						1.1E-03
HOLL		2252	2255	2304	S14	W62		12	12.3	12	SF		3	E		17		F
GOES		2253	2256	2301	S14	W62	9276			8	SF	C 1.7						7.3E-04
HOLL		2318	2322	2326	S13	W59		12	12.5	8	SF		3	E		18		F
GOES	17	0002	0005	0019	S13	W61				17	SF	C 1.8						1.6E-03
LEAR		0003	0005	0016	S13	W61		12	12.4	13	SF		3	E		37		
GOES		0056	0100	0106	S19	W57	9271			10	SF	C 2.1						1.2E-03
LEAR		0059	0104	0115	S19	W57	9271	12	12.7	16	SF		3	E		22		F
GOES		0125	0132	0140	S13	W59				15	SF	C 2.4						1.8E-03
LEAR		0126	0127	0137	S13	W59		12	12.6	11	SF		3	E		34		H
GOES		0146	0149	0153	S13	W62				7	SF	C 4.4						1.4E-03
LEAR		0149	0150	0155	S13	W62		12	12.4	6	SF		3	E		33		
GOES		0242	0256	0306	S13	W60	9276			24	SF	C 2.6						3.0E-03
LEAR		0246	0248	0303	S13	W60		12	12.6	17	SF		3	E		16		H
LEAR		0345	0346	0357	S13	W63		12	12.4	12	SF		3	E		31		
GOES		0449	0524	0535			9266			46		C 3.7						6.4E-03
LEAR		0451	0452	0459	N08	E81		12	23.3	8	SF		3	E		61		
LEAR		0522	0526	0533	N25	W78	9266	12	11.2	11	SF		3	E		15		
LEAR		0700	0701	0707	N07	W39	9267	12	14.4	7	SF		3	E		17		
LEAR		0735	0735	0741	N17	E15	9269	12	18.4	6	SF		3	E		10		F
SVTO		0757	0759	0802	S13	W64		12	12.5	5	SF		3	E		15		
LEAR		0837	0844	0851	S14	W64		12	12.5	14	SF		3	E		27		H
LEAR		0857	0902	0918	S13	W64		12	12.5	21	SF		3	E		54		
GOES		0902	0906	0914	S13	W64	9276			12	SF	C 2.1						1.4E-03
LEAR		0916	0921	0941	N08	W37	9267	12	14.6	25	SF		3	E		17		
GOES		1201	1205	1212	S14	W66	9276			11	SF	C 4.0						2.2E-03

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Sta	Day	Start (UT)	Max (UT)	End (UT)	Lat	CMD	NOAA/ USAF Region	CMP Mo	CMP Day	Dur (Min)	Imp Opt	Imp Xray	See	Obs Type	Area Measurement Time (UT)	Apparent (10-6 Disk)	Corr (Sq Deg)	Remarks
RAMY	17	1203E	1203U	1224	S14	W66	9271	12	12.5	21D	SF		3	E		97		
RAMY		1451	1452	1456	N18	W37	9275	12	14.8	5	SF		3	E		31		
GOES		1619	1626	1630	S15	W71	9276			11	SF	C 3.7						1.9E-03
RAMY		1622	1623	1636	S14	W70	9271	12	12.4	14	SF		3	E		72		
HOLL		1622	1625	1631	S15	W71		12	12.3	9	SF		3	E		51		
RAMY		1656	1659	1704	S15	W71	9271	12	12.3	8	SF		3	E		35		
HOLL		1658	1658	1702	S15	W71		12	12.3	4	SF		3	E		24		
RAMY		1706	1710	1722	S14	W70	9271	12	12.4	16	SF		3	E		28		
GOES		1744	1747	1750	S14	W72	9276			6	SF	C 3.1						1.0E-03
RAMY		1746	1747	1751	S14	W72	9271	12	12.3	5	SF		3	E		20		
HOLL		1747	1747	1750	S14	W72		12	12.3	3	SF		3	E		16		
RAMY		1801	1839	1923	S14	W72		12	12.3	82	SF		3	E		98		
GOES		1835	1840	1846	S14	W72	9276			11	SF	C 5.8						2.9E-03
HOLL		1839	1839	1848	S14	W72		12	12.3	9	SF		3	E		23		
RAMY		2009	2010	2017	S14	W73		12	12.3	8	SF		3	E		30		
LEAR	18	0045	0046	0052	N04	W48	9267	12	14.4	7	SF		3	E		17		
GOES		0115	0124	0130	N17	W61	9277			15	SF	C 3.2						2.3E-03
LEAR		0118	0121	0133	N17	W61	9277	12	13.4	15	SF		3	E		71		F
GOES		0237	0246	0252	N08	E65	9278			15	SF	C 5.7						3.6E-03
LEAR		0240	0249	0303	N08	E65	9278	12	23.0	23	SF		3	E		63		
GOES		0512	0516	0541						29		C 2.2						3.5E-03
GOES		0643	0648	0652						9		C 4.4						1.8E-03
GOES		0852	0859	0909	S14	W76	9276			17	SF	C 5.2						4.0E-03
LEAR		0856	0903	0907	S14	W76	9276	12	12.6	11	SF		3	E		30		
LEAR		0926	0927	0930	N04	W52	9267	12	14.5	4	SF		3	E		14		F
GOES		1103	1111	1129	N15	E01	9269			26	SF	C 7.0						8.5E-03
RAMY		1113E	1113U	1203	N15	E00	9269	12	18.5	50D	1F		2	E		182		F
SVTO		1119E	1119U	1213D	N15	E01	9269	12	18.5	54D	SF		3	E		60		U
RAMY		1238	1241	1246	N07	W50	9267	12	14.8	8	SF		3	E		16		F
GOES		1318	1321	1323						5		C 3.0						7.6E-04
GOES		1328	1331	1336	S15	W90	9276			8	SF	C 3.2						1.3E-03
RAMY		1331	1331	1333	S15	W90	9276	12	11.7	2	SF		3	E		33		
GOES		1340	1347	1353						13		C 3.8						2.5E-03
HOLL		1555	1559	1603	N08	E58	9278	12	23.0	8	SF		3	E		17		
RAMY		1556	1559	1605	N08	E56	9278	12	22.9	9	SF		3	E		18		F
GOES		1618	1622	1625						7		C 2.6						9.3E-04
GOES		1722	1725	1728						6		C 3.3						8.9E-04
GOES		1807	1810	1815	N17	W71	9277			8	SF	C 2.9						1.2E-03
RAMY		1809	1810	1816	N17	W71	9277	12	13.4	7	SF		3	E		51		
HOLL		1809	1812	1816	N16	W69	9277	12	13.5	7	SF		3	E		26		
RAMY		1905	1909	1914	N09	E55	9278	12	22.9	9	SF		3	E		13		F
RAMY		1957	1959	2005	N08	E50	9278	12	22.6	8	SF		3	E		40		
HOLL		1958	1959	2001	N08	E52	9278	12	22.7	3	SF		3	E		28		F
GOES		2010	2014	2018						8		C 2.7						1.1E-03
GOES		2041	2045	2050						9		C 3.1						1.4E-03
GOES		2201	2210	2212	N05	E51	9278			11	SF	C 2.4						1.4E-03
HOLL		2204	2205	2209	N05	E51	9278	12	22.7	5	SF		3	E		30		
GOES		2302	2312	2323	S13	E73	9279			21	1F	C 3.5						3.7E-03
HOLL		2304	2307	2316	S13	E73		12	24.5	12	1F		3	E		110		F
LEAR		2307	2307	2317	S10	E70		12	24.2	10	SF		2	E		55		
HOLL		2314	2315	2318	S12	W90	9276	12	12.2	4	SF		3	E		36		
LEAR		2314	2315	2319	S18	W82	9276	12	12.7	5	SF		2	E		28		
LEAR		2326	2330	2338	S13	E68		12	24.1	12	SF		2	E		18		
LEAR		2359	2401	2403	S18	W83	9276	12	12.7	4	SF		3	E		29		
GOES	19	0022	0025	0030	N04	W59	9267			8	SF	C 2.1						8.9E-04
LEAR		0025	0027	0029	N04	W59	9267	12	14.6	4	SF		3	E		19		
GOES		0150	0159	0207	S18	W84	9276			17	SF	C 4.0						3.2E-03
LEAR		0158	0158	0204	S18	W84	9276	12	12.7	6	SF		3	E		65		
GOES		0304	0307	0313						9		C 2.5						1.3E-03
LEAR		0325	0328	0332	N17	W73	9277	12	13.6	7	SF		3	E		19		
LEAR		0348	0351	0357	S12	E61		12	23.7	9	SF		3	E		15		
GOES		0455	0459	0505	N04	W63	9267			10	SF	C 2.2						1.2E-03
LEAR		0456	0458	0508	N04	W63	9267	12	14.5	12	SF		3	E		55		F
LEAR		0611	0614	0616	N17	W76	9277	12	13.5	5	SF		3	E		14		
LEAR		0739	0740	0742	N09	E46	9278	12	22.8	3	SF		3	E		24		
LEAR		0804	0805	0809	S10	E60	9279	12	23.8	5	SF		3	E		28		

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GOES	19	1003	1024	1028	N07	E41	9278			25	SF	C 9.5						7.3E-03
LEAR		1019E	1023U	1030D	N09	E49	9278	12	23.1	11D	SF		1	E		15		F
SVTO		1023	1024	1032	N07	E41	9278	12	22.5	9	SF		3	E		26		
GOES		1411	1415	1419	N15	W12	9269			8	SF	C 3.0						1.2E-03
RAMY		1414	1414	1424	N15	W12	9269	12	18.7	10	SF		3	E		25		F
RAMY		1622	1624	1630	N07	E38	9278	12	22.5	8	SF		3	E		19		F
GOES		1810	1819	1835						25		C 3.3						4.3E-03
GOES		1856	1900	1903	N06	E38	9278			7	SF	C 4.1						1.3E-03
HOLL		1858	1859	1907	N06	E38	9278	12	22.6	9	SF		3	E		55		
GOES		2135	2140	2149	N07	E38	9278			14	SF	C 2.1						1.5E-03
HOLL		2138	2148	2151	N07	E38	9278	12	22.7	13	SF		3	E		14		F
GOES	20	0053	0056	0100						7		C 1.7						6.8E-04
GOES		0206	0210	0215	N07	E34	9278			9	SF	C 1.8						8.8E-04
LEAR		0207	0207	0215	N07	E34	9278	12	22.6	8	SF		3	E		11		F
GOES		0510	0515	0520	N07	E33	9278			10	1F	C 3.3						1.5E-03
LEAR		0512	0515	0522	N07	E33	9278	12	22.7	10	1F		3	E		113		F
GOES		0601	0606	0627						26		C 4.7						5.5E-03
GOES		1138	1202	1223						45		C 2.4						5.7E-03
GOES		1335	1343	1358						23		C 2.3						2.7E-03
GOES		1545	1549	1554	S13	E48	9279			9	SF	C 2.7						1.3E-03
HOLL		1548	1548	1603	S13	E48	9279	12	24.3	15	SF		3	E		40		F
GOES		1933	1938	1958	N14	W60	9272			25	SF	C 2.6						3.4E-03
HOLL		1935	1936	1943	N14	W60		12	16.3	8	SF		3	E		13		F
GOES		2035	2043	2051	S10	E48	9279			16	SF	C 3.5						3.0E-03
HOLL		2038	2045	2057	S10	E48	9279	12	24.5	19	SF		3	E		52		F
GOES		2300	2303	2305	N09	E64	9280			5	SF	C 2.2						5.9E-04
LEAR		2302	2303	2309	N09	E64	9280	12	25.8	7	SF		3	E		44		
GOES		2317	2332	2405	N06	E61	9280			48	SF	C 2.5						6.5E-03
LEAR		2337	2340	2348	N06	E61	9280	12	25.5	11	SF		3	E		40		
LEAR	21	0058	0059	0104	N10	E63	9280	12	25.8	6	SF		3	E		14		
GOES		0058	0115	0125	N09	E62	9280			27	SF	C 2.1						2.9E-03
LEAR		0113	0113	0117	N09	E62	9280	12	25.7	4	SF		3	E		15		
GOES		0145	0158	0207	N12	E61	9280			22	SF	C 2.7						3.0E-03
LEAR		0148	0149	0207	N12	E61	9280	12	25.7	19	SF		3	E		35		F
GOES		0213	0214	0218	N06	E62	9280			5	SF	C 1.9						5.6E-04
LEAR		0213	0216	0228	N06	E62	9280	12	25.7	15	SF		3	E		20		F
GOES		0240	0243	0249	N06	E61	9280			9	SF	C 1.6						8.1E-04
LEAR		0242	0245	0251	N06	E61	9280	12	25.7	9	SF		3	E		26		
LEAR		0258	0311	0410	N16	W29	9269	12	18.9	72	SF		3	E		70		F
LEAR		0428	0435	0444	N06	E63	9280	12	25.9	16	SF		3	E		23		F
GOES		0525	0533	0538	N09	E60	9280			13	SF	C 1.8						1.3E-03
LEAR		0526	0533	0545	N09	E60	9280	12	25.7	19	SF		3	E		38		F
GOES		0628	0644	0710						42		C 1.9						4.2E-03
GOES		0727	0733	0736	N09	E59	9280			9	SF	C 2.8						1.3E-03
LEAR		0730	0730	0738	N09	E59	9280	12	25.7	8	SF		3	E		27		F
GOES		0938	0946	0953						15		C 1.6						1.3E-03
HOLL		1833	1837	1843	S13	E34	9279	12	24.3	10	SF		3	E		31		F
GOES	22	0246	0250	0305	N15	W47	9269			19	SF	C 1.4						1.5E-03
LEAR		0247	0249	0253	N15	W47	9269	12	18.5	6	SF		3	E		18		F
LEAR		0302	0302	0305	N07	E50	9280	12	25.9	3	SF		3	E		11		F
GOES		0311	0315	0339	N07	E50	9280			28	SF	C 1.8						2.9E-03
LEAR		0314	0315	0318	N07	E50	9280	12	25.9	4	SF		3	E		14		
GOES		0351	0358	0409						18		C 2.3						2.2E-03
LEAR		0606	0606	0609	S12	E19	9279	12	23.7	3	SF		3	E		27		
GOES		1007	1010	1014						7		C 1.7						6.2E-04
GOES		1321	1326	1331						10		C 1.5						8.4E-04
GOES		1403	1409	1414						11		C 2.4						1.2E-03
GOES		1931	1934	1937	N08	E36	9280			6	SF	C 2.6						7.0E-04
HOLL		1933	1934	1941	N08	E36	9280	12	25.5	8	SF		3	E		57		F
RAMY		1942	1944	1951	N07	E36	9280	12	25.5	9	SF		3	E		26		F
HOLL		1942	1944	1952	N07	E36	9280	12	25.5	10	SF		3	E		15		F
GOES		2011	2014	2016						5		C 1.8						4.4E-04
GOES		2056	2111	2123			9283			27		C 2.0						2.9E-03
LEAR		2319	2321	2323	S15	E80	9283	12	29.0	4	SF		3	E		12		
LEAR		2342	2423	2429	S14	E80	9283	12	29.0	47	SF		3	E		23		F

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Sta	Day	Start (UT)	Max (UT)	End (UT)	Lat	CMD	NOAA/ USAF Region	CMP Mo	CMP Day	Dur (Min)	Imp Opt	Imp Xray	Imp See	Obs Type	Area Measurement Time (UT)	Area Measurement Apparent (10-6 Disk)	Area Measurement Corr (Sq Deg)	Remarks
GOES	22	2345	2352	2416	S14	E80	9283			31	SF	C 3.7						6.3E-03
GOES	23	0155	0207	0215	N12	E35	9280			20	SF	C 2.7						2.6E-03
LEAR		0200	0201	0218	N12	E35	9280	12	25.7	18	SF		3	E		25		F
LEAR		0217	0222	0225	S12	E78	9283	12	29.0	8	SF		4	E		26		
LEAR		0226	0227	0242	S12	E78	9283	12	29.0	16	SF		3	E		31		H
LEAR		0253	0253	0302	S13	E78	9283	12	29.0	9	SF		3	E		33		
LEAR		0336	0344	0348	S12	E77	9283	12	28.9	12	SF		3	E		38		F
GOES		0340	0344	0350	S12	E77	9283			10	SF	C 2.5						1.3E-03
LEAR		0451	0455	0505	S12	E76	9283	12	28.9	14	SF		3	E		20		
GOES		0452	0458	0501	S12	E76	9283			9	SF	C 3.4						1.2E-03
LEAR		0523	0529	0532	S12	E76	9283	12	28.9	9	SF		3	E		21		
GOES		0608	0611	0620						12		C 1.9						1.2E-03
LEAR		0804	0823	0856	S13	E75	9283	12	29.0	52	1N		3	E		113		EF
GOES		0817	0820	0825	S13	E75	9283			8	1N	C 3.7						1.4E-03
SVTO		0820	0823	0829	S12	E76	9283	12	29.1	9	SF		3	E		73		
GOES		0831	0834	0836						5		C 3.4						8.0E-04
GOES		1108	1112	1120	S09	E74	9283			12	SF	C 3.0						1.6E-03
SVTO		1114	1117	1118	S09	E74	9283	12	29.0	4	SF		3	E		30		
HOLL		1442	1443	1446	S12	E69	9283	12	28.8	4	SF		3	E		42		
RAMY		1520	1520	1525	S14	E72	9283	12	29.1	5	SF		3	E		11		
GOES		1642	1649	1655	S12	E69	9283			13	SF	C 4.0						2.4E-03
HOLL		1647	1651	1657	S12	E69	9283	12	28.9	10	SF		3	E		28		
GOES		1720	1724	1726	S13	E69	9283			6	SF	C 2.8						8.7E-04
HOLL		1722	1723	1727	S13	E69	9283	12	28.9	5	SF		3	E		15		
GOES		1735	1739	1745						10		C 2.4						1.2E-03
GOES		1952	2000	2005						13		C 2.6						1.7E-03
GOES		2013	2016	2019						6		C 2.7						7.7E-04
HOLL		2130	2131	2135	S13	E67	9283	12	28.9	5	SF		3	E		41		
HOLL		2137	2144	2147	S13	E67	9283	12	28.9	10	SF		3	E		14		
HOLL		2206	2208	2209	S13	E67	9283	12	29.0	3	SF		3	E		31		
HOLL		2218	2220	2223	N05	E73		12	29.4	5	SF		3	E		25		
HOLL		2226	2231	2233	S13	E66	9283	12	28.9	7	SF		3	E		13		
HOLL		2234	2236	2252	S13	E66	9283	12	28.9	18	SF		3	E		94		
GOES		2246	2249	2259	N06	E75	9283			13	SF	C 1.9						1.3E-03
HOLL		2248	2252	2302	N06	E75		12	29.6	14	SF		3	E		49		
HOLL		2259	2259	2304	S15	E65	9283	12	28.9	5	SF		3	E		15		
GOES		2353	2357	2359	S12	E65	9283			6	SF	C 2.4						6.5E-04
LEAR		2354	2357	2402	S12	E65	9283	12	28.9	8	SF		3	E		24		
GOES	24	0008	0011	0013	S13	E66	9283			5	SF	C 2.0						5.3E-04
LEAR		0009	0011	0016	S13	E66	9283	12	29.0	7	SF		3	E		24		
LEAR		0032	0032	0036	N05	E72		12	29.4	4	SF		3	E		25		
LEAR		0042	0044	0046	S13	E66	9283	12	29.0	4	SF		3	E		34		
GOES		0101	0108	0115	S15	E66	9283			14	SF	C 7.0						3.8E-03
LEAR		0105	0107	0117	S15	E66	9283	12	29.0	12	SF		3	E		46		
LEAR		0230	0232	0239	S15	E65	9283	12	29.0	9	SF		4	E		27		
LEAR		0249	0249	0255	N06	E70		12	29.3	6	SF		4	E		11		
GOES		0454	0457	0501						7		C 1.4						5.2E-04
GOES		0517	0521	0524	N06	E69	9285			7	SF	C 2.0						6.7E-04
LEAR		0519	0520	0529	N06	E69		12	29.4	10	SF		3	E		41		
LEAR		0645	0649	0709	S13	E64	9283	12	29.1	24	SF		3	E		32		
GOES		0646	0653	0658	S13	E64	9283			12	SF	C 6.6						3.1E-03
LEAR		0713	0726	0742	N05	E69		12	29.5	29	SF		3	E		14		F
GOES		1103	1115	1122	S16	E63	9283			19	SF	M 1.1						7.7E-03
SVTO		1111	1115	1126	S16	E63	9283	12	29.2	15	SF		3	E		81		FH
GOES		1332	1338	1344	S14	E60	9283			12	SF	C 9.4						4.8E-03
SVTO		1335	1336	1350	S14	E60	9283	12	29.1	15	SF		3	E		31		F
GOES		1716	1720	1722						6		C 3.8						8.5E-04
GOES		2007	2013	2019						12		C 2.6						1.6E-03
GOES		2054	2101	2103						9		C 5.4						1.6E-03
GOES	25	0056	0108	0116						20		C 1.6						1.7E-03
LEAR		0358	0358	0402	S15	E48	9283	12	28.8	4	SF		3	E		13		
GOES		0541	0545	0551						10		C 1.2						6.3E-04
GOES		0556	0601	0608	S13	E50	9283			12	SF	C 2.9						1.6E-03
LEAR		0559	0602	0613	S13	E50	9283	12	29.0	14	SF		3	E		21		
GOES		0630	0635	0639	N12	E06	9280			9	SF	C 2.1						9.1E-04

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Sta	Day	Start (UT)	Max (UT)	End (UT)	Lat	CMD	NOAA/ USAF Region	CMP Mo	CMP Day	Dur (Min)	Imp Opt	Imp Xray	See	Obs Type	Time (UT)	Area Measurement Apparent (10-6 Disk)	Area Measurement Corr (Sq Deg)	Remarks
LEAR	25	0633	0634	0640	N12	E06	9280	12	25.7	7	SF		3	E		43		F
GOES		0843	0846	0849	S12	E46	9283			6	SF	B 9.5						3.0E-04
LEAR		0845	0845	0850	S12	E46	9283	12	28.8	5	SF		3	E		10		
GOES		0936	1002	1013						37		C 1.4						2.2E-03
GOES		1214	1219	1224	S11	E48	9283			10	SF	C 1.8						8.6E-04
RAMY		1216	1223	1243	S11	E48	9283	12	29.1	27	SF		3	E		37		F
GOES		1356	1422	1432	S13	E43	9283			36	SF	C 1.2						2.1E-03
RAMY		1405	1422	1425	S13	E43	9283	12	28.8	20	SF		3	E		47		
GOES		1555	1600	1605	S12	E42	9283			10	SF	C 5.4						2.0E-03
RAMY		1557	1605	1615	S12	E42	9283	12	28.8	18	SF		3	E		65		F
GOES		1630	1639	1653	S10	E43	9283			23	SF	C 3.2						3.3E-03
RAMY		1632	1635	1651	S10	E43	9283	12	28.9	19	SF		3	E		77		F
RAMY		1632	1635	1651	S21	E43	9283	12	29.0	19	SF		3	E		77		F
GOES	26	0025	0041	0049						24		C 1.2						1.5E-03
GOES		0413	0416	0421			9283			8		C 1.1						4.7E-04
GOES		0431	0438	0445						14		C 3.4						2.0E-03
GOES		0523	0531	0539			9283			16		C 2.4						1.8E-03
GOES		0609	0615	0626						17		C 5.0						3.6E-03
GOES		0859	0902	0908						9		C 1.1						5.5E-04
GOES		1043	1056	1111			9283			28		C 5.4						6.5E-03
GOES		1118	1122	1132						14		C 6.8						4.5E-03
GOES		1602	1613	1619	S09	E90	9289			17	SF	M 1.3						8.0E-03
RAMY		1606	1606	1618	S09	E90		01	2.4	12	SF		3	E		45		
RAMY		1614	1615	1624	S09	E27	9283	12	28.7	10	SF		3	E		27		F
GOES		1741	1753	1803			9283			22		C 1.5						1.8E-03
GOES		1928	1933	1939						11		C 2.9						1.3E-03
GOES		2024	2028	2033						9		C 2.5						1.2E-03
GOES		2340	2350	2404						24		C 4.0						3.8E-03
LEAR	27	0156	0201	0213	S08	E81	9289	01	2.1	17	SF		3	E		96		F
GOES		0156	0204	0222	S08	E81	9289			26	SF	C 2.4						3.1E-03
GOES		0227	0228	0229	S08	E19	9283			2	SF	C 1.7						1.9E-04
LEAR		0227	0228	0230	S08	E19	9283	12	28.5	3	SF		3	E		22		
GOES		0255	0305	0318	S08	E80	9289			23	1F	C 3.0						3.1E-03
LEAR		0303	0309	0320	S08	E80	9289	01	2.1	17	1F		3	E		102		F
GOES		0344	0400	0418	S07	E17	9283			34	SF	C 3.2						5.7E-03
LEAR		0355	0405	0419	S07	E17	9283	12	28.4	24	SF		3	E		32		F
GOES		0423	0425	0427	S08	E20	9283			4	SF	C 2.8						6.3E-04
LEAR		0423	0425	0437	S08	E20	9283	12	28.7	14	SF		3	E		36		F
LEAR		0443	0446	0449	S08	E79	9289	01	2.1	6	SF		2	E		22		
LEAR		0529	0529	0534	S15	E24	9283	12	29.0	5	SF		3	E		23		
GOES		0558	0613	0627						29		C 4.8						6.2E-03
GOES		0713	0717	0722						9		C 1.6						7.9E-04
GOES		0725	0729	0734						9		C 1.8						8.8E-04
GOES		0804	0817	0840	S08	E79	9289			36	SF	C 3.2						5.8E-03
LEAR		0812	0817	0824	S08	E79	9289	01	2.3	12	SF		3	E		21		
GOES		0934	1028	1036						62		C 2.6						8.0E-03
GOES		1056	1108	1134						38		C 2.5						4.9E-03
RAMY		1213	1215	1230	S14	E21	9283	12	29.1	17	SF		3	E		28		
GOES		1439	1444	1503						24		C 1.6						2.1E-03
GOES		1530	1544	1553	S07	E73	9289			23	1F	M 4.3						3.1E-02
RAMY		1535	1541	1609	S08	E74	9289	01	2.2	34	SF		3	E		98		
HOLL		1536	1549	1612	S07	E73	9289	01	2.1	36	1F		3	E		112		F
RAMY		1556	1557	1602	S10	E17	9283	12	28.9	6	SF		3	E		18		F
GOES		1735	1738	1740	S15	E17	9283			5	SF	C 3.3						7.2E-04
RAMY		1738	1738	1745	S10	E11	9283	12	28.6	7	SF		3	E		20		
HOLL		1738	1739	1745	S15	E17	9283	12	29.0	7	SF		3	E		10		
GOES		1816	1821	1826	S08	E72	9289			10	SF	C 4.1						1.9E-03
RAMY		1819	1820	1826	S08	E72	9289	01	2.2	7	SF		3	E		12		
GOES		1857	1900	1905	S07	E71	9289			8	SF	C 2.0						9.0E-04
HOLL		1900	1900	1909	S07	E71	9289	01	2.1	9	SF		3	E		14		
HOLL		1909	1911	1919	S07	E70	9289	01	2.0	10	SF		3	E		11		
HOLL		2014	2015	2020	S08	E71	9289	01	2.2	6	SF		3	E		24		F
GOES		2021	2036	2047	S08	E60	9289			26	SF	C 2.3						3.3E-03
HOLL		2036	2038	2040	S08	E60	9289	01	1.3	4	SF		3	E		18		
HOLL		2043	2043	2049	S07	E71	9289	01	2.2	6	SF		3	E		43		
GOES		2103	2111	2127						24		C 4.5						5.0E-03

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Sta	Day	Start (UT)	Max (UT)	End (UT)	Lat	CMD	NOAA/ USAF Region	CMP Mo	CMP Day	Dur (Min)	Imp Opt	Imp Xray	See	Obs Type	Time (UT)	Area Measurement Apparent (10-6 Disk)	Area Measurement Corr (Sq Deg)	Remarks
GOES	27	2209	2218	2224	S14	E16	9283			15	SF	C 5.8						3.6E-03
HOLL		2211	2218	2245	S14	E16	9283	12	29.1	34	SF		3	E		69		UF
LEAR		2218E	2222U	2245	S15	E25	9283	12	29.8	27D	SF		2	E		16		
HOLL		2303	2311	2324	S07	E68	9289	01	2.0	21	SF		3	E		68		F
LEAR		2305E	2310U	2322D	S08	E60	9289	01	1.5	17D	SF		3	E		28		F
GOES		2306	2311	2316	S07	E68	9289			10	SF	C 5.2						2.8E-03
GOES	28	0145	0151	0159						14		C 3.8						2.9E-03
LEAR		0207	0208	0213	N12	W38	9280	12	25.2	6	SF		2	E		36		
GOES		0215	0219	0222	S08	E66	9289			7	SF	C 3.5						1.1E-03
LEAR		0217	0220	0225	S08	E66	9289	01	2.0	8	SF		2	E		60		
GOES		0244	0249	0255	S08	E67	9289			11	SF	C 4.5						2.1E-03
LEAR		0246	0251	0258	S08	E67	9289	01	2.1	12	SF		3	E		74		F
GOES		0406	0417	0429	S08	E67	9289			23	1F	C 5.1						5.0E-03
LEAR		0410	0416	0443	S08	E67	9289	01	2.2	33	1F		3	E		109		F
LEAR		0422	0422	0425	N09	W32	9280	12	25.8	3	SF		3	E		20		
GOES		0500	0503	0510						10		C 1.3						7.3E-04
LEAR		0527	0529	0534	S07	E65	9289	01	2.1	7	SF		3	E		19		
LEAR		0729	0734	0740	S08	E66	9289	01	2.3	11	SF		3	E		23		
GOES		0912	0915	0926						14		B 9.7						7.4E-04
GOES		1320	1326	1333	S07	E60	9289			13	1F	C 2.7						1.6E-03
RAMY		1321	1326	1405	S07	E60	9289	01	2.0	44	1F		3	E		113		
SVTO		1330E	1332U	1335D	S08	E62	9289	01	2.2	5D	SF		2	E		13		
GOES		1421	1429	1436	S07	W74	9279			15	SF	C 2.3						1.6E-03
RAMY		1424	1425	1432	S07	W74	9279	12	23.0	8	SF		3	E		20		
GOES		1530	1533	1536						6		C 1.0						3.4E-04
GOES		1622	1630	1635	S12	E05	9283			13	SF	B 8.7						6.0E-04
RAMY		1627	1627	1636	S12	E05	9283	12	29.1	9	SF		3	E		11		
GOES		1821	1826	1837	S15	E05	9283			16	SF	C 1.3						1.1E-03
RAMY		1824	1832	1838	S15	E04	9283	12	29.1	14	SF		3	E		31		F
HOLL		1825	1826	1838	S15	E05	9283	12	29.1	13	SF		3	E		16		F
GOES		2001	2005	2010						9		C 1.2						6.1E-04
GOES	29	0102	0210	0318			9283			136		C 4.0						3.5E-02
LEAR		0120	0125	0127	S11	W03	9283	12	28.8	7	SF		3	E		16		U
LEAR		0136	0235	0323	S09	W02	9283	12	28.9	107	1F		3	E		202		F
GOES		0210	0223	0242	S08	E55	9289			32	1F	M 1.2						1.7E-02
LEAR		0211	0221	0244	S08	E55	9289	01	2.2	33	1F		3	E		102		F
GOES		0412	0417	0422	S15	W02	9283			10	SF	C 2.5						1.4E-03
LEAR		0414	0418	0423	S15	W02	9283	12	29.0	9	SF		3	E		15		F
GOES		0824	0828	0831						7		C 1.2						4.4E-04
GOES		1025	1029	1031						6		C 1.1						3.0E-04
GOES		1053	1059	1105	S08	E50	9289			12	SF	C 2.5						1.4E-03
SVTO		1101E	1101U	1121D	S08	E50	9289	01	2.2	20D	SF		2	E		34		
RAMY		1402	1402	1410	N30	E14	9290	12	30.7	8	SF		3	E		13		
RAMY		1402	1402	1421	S13	E40		01	1.6	19	SF		3	E		12		
RAMY		1402	1413	1440	S15	W08	9283	12	29.0	38	SF		3	E		62		
RAMY		1712	1725	1802	S09	W66	9279	12	24.8	50	SF		3	E		43		
GOES		1842	1848	1853	S09	E45	9289			11	1F	M 1.2						4.8E-03
HOLL		1843	1849	1859	S08	E46	9289	01	2.2	16	1F		3	E		195		H
RAMY		1844	1849	1858	S09	E45	9289	01	2.1	14	1F		3	E		221		FH
HOLL		2217	2218	2220	S08	E37	9289	01	1.7	3	SF		3	E		15		
GOES	30	0336	0354	0400						24		C 1.0						1.3E-03
LEAR		1020	1025	1036D	S08	W21	9283	12	28.8	16D	SF		2	E		39		FH
GOES		1021	1039	1053	S11	W23	9283			32	SF	C 5.4						8.2E-03
SVTO		1023	1039	1101	S11	W23	9283	12	28.7	38	SF		3	E		28		FH
RAMY		1215	1217	1220	S09	E38	9289	01	2.4	5	SF		3	E		16		
GOES		1415	1420	1426						11		C 1.3						7.5E-04
GOES		1448	1458	1506	S07	E35	9289			18	SF	C 2.1						1.9E-03
RAMY		1451	1453	1509	S08	E36	9289	01	2.3	18	SF		3	E		20		
HOLL		1451	1458	1511	S07	E35	9289	01	2.2	20	SF		3	E		31		
GOES		1608	1617	1625						17		C 1.3						1.1E-03
GOES		1726	1731	1736						10		C 1.3						6.5E-04
RAMY		1914	1921	1925	S15	W23	9283	12	29.1	11	SF		3	E		11		
GOES	31	0111	0119	0124						13		C 1.1						7.5E-04
GOES		0431	0435	0438						7		C 1.1						4.0E-04

Hα SOLAR FLARES

DECEMBER 2000

Sta	Day	Start (UT)	Max (UT)	End (UT)	Lat	CMD	NOAA/ USAF Region	CMP Mo	CMP Day	Dur (Min)	Imp Opt	Imp Xray	See	Obs Type	Time (UT)	Area Measurement Apparent (10-6 Disk)	Area Measurement Corr (Sq Deg)	Remarks
GOES	31	0647	0653	0655	N21	E67				8	SF	B 6.4						3.0E-04
LEAR		0649	0650	0656	N21	E67		01	5.4	7	SF		3	E		47		
GOES		1938	1957	2009						31		C 1.1						1.7E-03

"Remarks"

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

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

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

SOLAR RADIO EMISSION
Selected Fixed Frequency Events

DECEMBER 2000

Day	Freq	Sta	Type		Start (UT)	Time of Maximum (UT)	Duration (Min)	Flux Density Peak (10 -22 W/m 2 Hz)	Flux Density Mean (10 -22 W/m 2 Hz)	Int	Remarks
05	8800	LEAR	20	GRF	0845.0	0901.0	68.0	77.0			QL=4 ST=2 TYP=2
06	2695	PALE	4	S/F	2223.0	2230.0	8.0	36.0			QL=4 ST=2 TYP=3
	8800	PALE	4	S/F	2223.0	2227.0	8.0	75.0			QL=4 ST=2 TYP=3
	2695	LEAR	8	S	2226.0	2227.0	1.0	23.0			QL=4 ST=2 TYP=3
12	2695	SGMR	4	S/F	1441.0	1442.0	4.0	78.0			QL=4 ST=2 TYP=3
	2695	SVTO	8	S	1442.0	1442.0	2.0	59.0			QL=4 ST=2 TYP=3
13	2695	PALE	8	S	2159.0	2200.0	2.0	39.0			QL=4 ST=2 TYP=3
14	2695	SVTO	4	S/F	0930.0	0933.0	4.0	82.0			QL=4 ST=3 TYP=3
	2695	SVTO	4	S/F	0945.0	0950.0	6.0	34.0			QL=4 ST=2 TYP=3
	2695	SVTO	8	S	0950.0	0950.0	U	31.0			QL=4 ST=2 TYP=3
	2695	SVTO	4	S/F	1004.0	1009.0	6.0	42.0			QL=4 ST=2 TYP=3
	2695	LEAR	8	S	1008.0	1009.0	1.0	64.0			QL=4 ST=2 TYP=3
18	2695	SVTO	4	S/F	1106.0	1107.0	7.0	54.0			QL=4 ST=2 TYP=3
	2695	LEAR	8	S	2303.0	2304.0	2.0	55.0			QL=4 ST=2 TYP=3
	2695	PALE	8	S	2304.0	2304.0	1.0	57.0			QL=4 ST=2 TYP=3
19	8800	LEAR	8	S	1022.0	1023.0	2.0	130.0			QL=4 ST=3 TYP=3
	2695	LEAR	8	S	1023.0	1023.0	1.0	54.0			QL=4 ST=3 TYP=3
20	2695	LEAR	8	S	0603.0	0603.0	1.0	37.0			QL=4 ST=2 TYP=3
23	8800	LEAR	8	S	0341.0	0342.0	1.0	42.0			QL=4 ST=2 TYP=3
24	2695	LEAR	8	S	0101.0	0102.0	1.0	9.0			QL=4 ST=2 TYP=3
	8800	LEAR	8	S	0101.0	0102.0	1.0	20.0			QL=4 ST=2 TYP=3
	8800	LEAR	8	S	0107.0	0107.0	2.0	31.0			QL=4 ST=2 TYP=3
	8800	PALE	8	S	0107.0	0107.0	1.0	32.0			QL=4 ST=2 TYP=3
	8800	SVTO	8	S	0648.0	0649.0	1.0	57.0			QL=2 ST=2 TYP=3
	8800	LEAR	8	S	0649.0	0649.0	U	46.0			QL=4 ST=2 TYP=3
	8800	SVTO	20	GRF	1105.0	1106.0	26.0	24.0			QL=4 ST=2 TYP=2
	2695	SVTO	4	S/F	1109.0	1110.0	3.0	24.0			QL=4 ST=2 TYP=3
27	8800	SGMR	4	S/F	1538.0	1540.0	12.0	200.0			QL=4 ST=2 TYP=3
	2695	SGMR	4	S/F	1539.0	1540.0	11.0	48.0			QL=4 ST=2 TYP=3
	8800	SGMR	4	S/F	1737.0	1737.0	4.0	48.0			QL=4 ST=3 TYP=3
	8800	SGMR	8	S	1818.0	1818.0	U	46.0			QL=4 ST=2 TYP=3
28	8800	LEAR	8	S	0246.0	0246.0	U	26.0			QL=4 ST=2 TYP=3
	8800	LEAR	8	S	0412.0	0412.0	2.0	98.0			QL=4 ST=2 TYP=3
	8800	LEAR	8	S	0421.0	0422.0	1.0	51.0			QL=4 ST=2 TYP=3
	8800	LEAR	8	S	0502.0	0502.0	1.0	65.0			QL=4 ST=2 TYP=3
29	8800	LEAR	20	GRF	0204.0	0220.0	48.0	29.0			QL=4 ST=2 TYP=2
	8800	SGMR	8	S	1845.0	1845.0	1.0	110.0			QL=4 ST=2 TYP=3

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

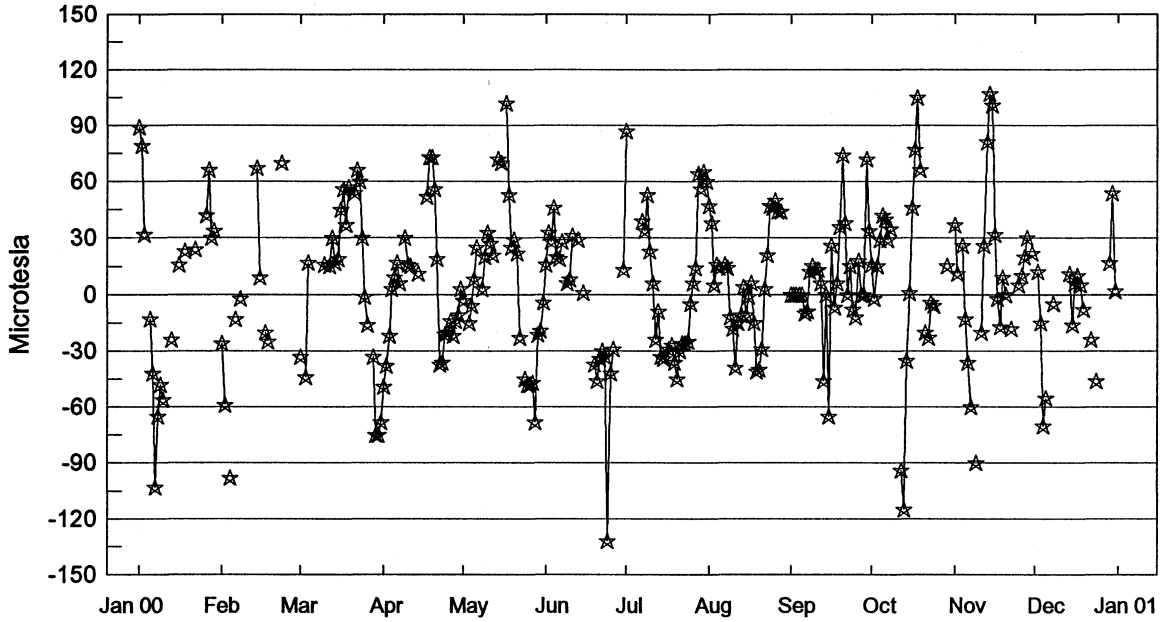
Explanation of Type Code:

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

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

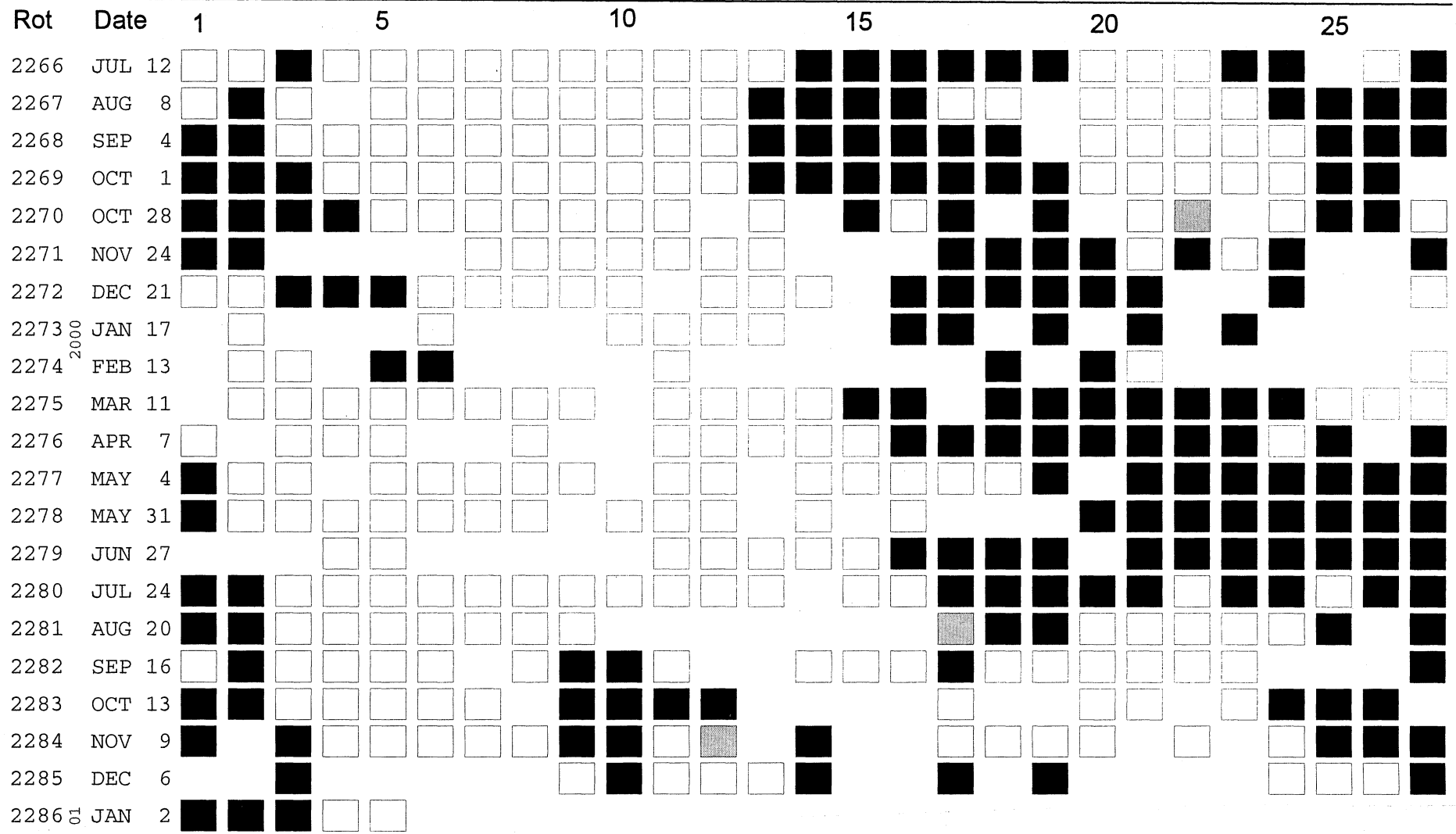
RSTN Site Information: Beginning in April 1986, the RSTN sites LEAR, PALE, SGMR, and SVTO fixed frequency solar radio data are periodically adjusted to several world standard stations. These world standard stations include: Kislovodsk, USSR 15,500 MHz; Penticton, Canada 2800 MHz; and Hiraiso, Japan 500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

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



Day	Jan 00	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1	89	-26	-33	-49	-3	16	87	47	---	16	37	---
2	79	-59	---	-38	---	33	---	38	---	-2	11	12
3	32	---	-44	-22	-15	28	---	5	---	15	---	-15
4	---	-98	17	3	-6	46	---	16	---	29	26	-70
5	-13	---	---	9	8	20	---	14	0	42	-13	-55
6	-42	-13	---	17	25	19	---	---	-10	40	-36	---
7	-103	---	---	6		28	39	16	-9	29	-60	---
8	-65	-2	---	---	3	---	34	14	12	35	---	-5
9	-48	---	---	30	20	6	53	-12	15	---	-90	---
10	-56	---	16	26	33	8	23	-18	13	---	---	---
11	---	---	---	15	27	31	6	-39	13	---	-20	---
12	---	---	15	---	21	---	-24	-15	6	-94	26	---
13	-24	---	30	---	---	29	-9	-11	-46	-115	81	---
14	---	67	17	11	72	---	-33	4	---	-35	107	11
15	---	9	19	---	70	1	-34	-11	-65	1	101	-16
16	16	---	45	---	---	---	---	-1	26	46	32	6
17	---	-20	56	52	102	---	-29	6	-7	77	-2	10
18	23	-25	37	73	53	---	-27	-15	6	105	-17	5
19	---	---	57	73	25	-37	-36	-41	36	66	9	-8
20	---	---	---	56	29	-46	-45	-40	74	---	0	---
21	---	---	54	19	22	-34	-30	-29	38	-20	---	---
22	24	---	66	-37	-23	-30	-26	3	---	-23	-18	-24
23	---	70	60	-36	---	-33	-26	21	15	-4	---	---
24	---	---	30	-21	-45	-132	-25	47	-8	-6	---	-46
25	---	---	-1	-20	-48	-42	-5	46	-12	---	5	---
26	42	---	-16	-14	-48	-29	6	50	18	---	10	---
27	66	---	---	-22	-47	---	14	44	---	---	20	---
28	30	---	-33	-14	-68	---	64	44	---	---	30	---
29	34	---	-75	-11	-21	---	56	---	72	15	---	17
30	---		-75	3	-19	13	65	---	34	---	22	54
31	---		-68		-4		60	---		---		2

STANFORD MEAN SOLAR MAGNETIC FIELD



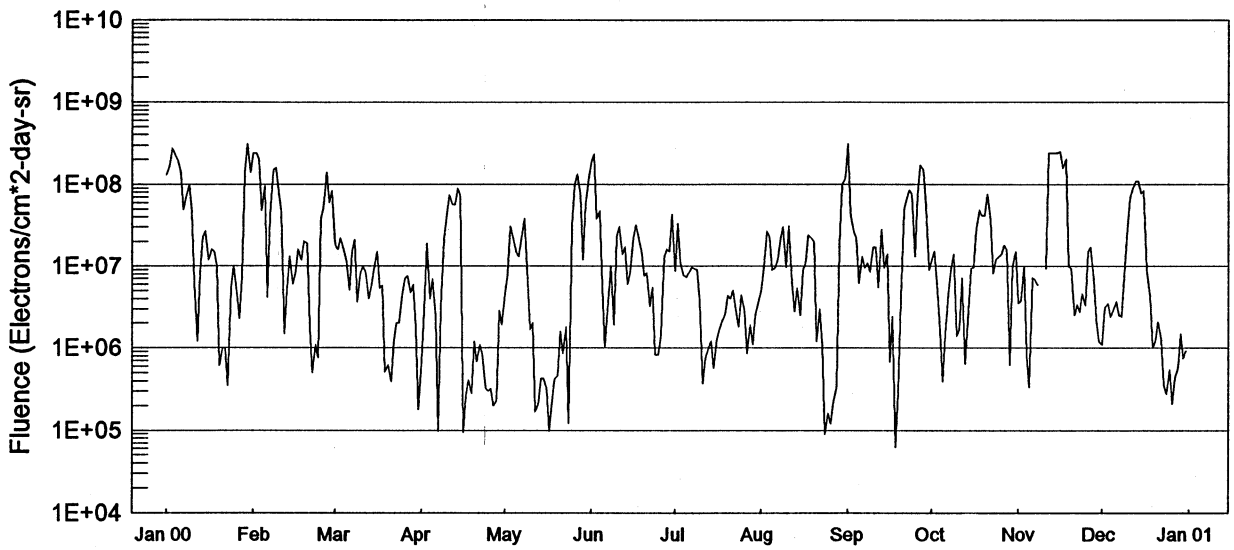
Mean Solar Magnetic Field Polarity:

□ = field > 2 microT; ▒ = -2 microT ≤ field ≤ 2 microT

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

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

GOES Daily Electron Fluence
Jan 2000 - Dec 2000



Day	Jan 00	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1	1.3E+08	2.4E+08	1.8E+07	6.8E+05	4.6E+06	1.9E+08	8.7E+06	5.0E+06	3.1E+08	1.2E+07	3.5E+06	1.1E+06
2	1.7E+08	2.4E+08	1.6E+07	2.9E+06	8.1E+06	2.3E+08	3.3E+07	9.5E+06	4.3E+07	1.5E+07	3.7E+06	3.1E+06
3	2.7E+08	2.0E+08	2.2E+07	1.9E+07	3.1E+07	3.8E+07	1.1E+07	2.7E+07	2.7E+07	4.8E+06	1.0E+07	3.5E+06
4	2.3E+08	4.8E+07	1.7E+07	4.0E+06	2.1E+07	4.7E+07	7.7E+06	2.3E+07	2.2E+07	1.6E+06	8.3E+05	2.4E+06
5	1.9E+08	9.6E+07	1.2E+07	6.9E+06	1.5E+07	5.5E+06	7.3E+06	9.0E+06	6.2E+06	3.9E+05	3.3E+05	2.9E+06
6	1.4E+08	4.1E+06	5.1E+06	2.4E+06	1.3E+07	1.0E+06	8.3E+06	9.4E+06	1.3E+07	1.5E+06	7.1E+06	3.7E+06
7	4.9E+07	4.2E+07	1.5E+07	9.7E+04	2.1E+07	3.7E+06	9.6E+06	1.2E+07	9.5E+06	4.8E+06	6.8E+06	2.5E+06
8	7.0E+07	1.5E+08	2.1E+07	3.1E+06	3.8E+07	1.0E+07	9.2E+06	2.1E+07	1.1E+07	9.5E+06	5.8E+06	2.4E+06
9	1.0E+08	1.6E+08	3.6E+06	2.2E+07	6.6E+06	1.9E+06	9.1E+06	3.0E+07	8.6E+06	1.4E+07	-999	7.6E+06
10	4.7E+07	8.4E+07	8.2E+06	4.1E+07	1.7E+06	2.3E+07	3.7E+06	9.7E+06	1.7E+07	1.4E+06	-999	2.8E+07
11	6.2E+06	4.7E+07	9.8E+06	7.4E+07	2.0E+06	3.0E+07	3.7E+05	3.1E+07	1.7E+07	1.7E+06	9.4E+06	6.9E+07
12	1.2E+06	1.5E+06	8.5E+06	5.7E+07	1.7E+05	1.4E+07	7.4E+05	6.3E+06	5.5E+06	7.1E+06	2.4E+08	8.9E+07
13	8.6E+06	5.2E+06	4.0E+06	5.7E+07	2.1E+05	1.7E+07	1.0E+06	2.8E+06	2.8E+07	6.4E+05	2.4E+08	1.1E+08
14	2.3E+07	1.3E+07	5.7E+06	8.8E+07	4.3E+05	6.0E+06	1.2E+06	5.4E+06	9.5E+06	2.1E+06	2.4E+08	1.1E+08
15	2.7E+07	6.0E+06	9.4E+06	7.4E+07	4.3E+05	8.2E+06	5.7E+05	2.5E+06	1.4E+07	9.4E+06	2.4E+08	7.8E+07
16	1.2E+07	8.2E+06	1.5E+07	9.3E+04	3.2E+05	2.2E+07	1.3E+06	9.1E+06	6.8E+05	9.7E+06	2.5E+08	8.3E+07
17	1.6E+07	1.6E+07	5.4E+06	2.6E+05	9.8E+04	3.2E+07	1.7E+06	1.1E+07	2.4E+06	2.9E+07	1.6E+08	8.9E+06
18	1.5E+07	1.2E+07	5.8E+06	4.1E+05	2.1E+05	2.3E+07	2.1E+06	2.4E+07	6.2E+04	4.8E+07	2.0E+08	4.3E+06
19	1.0E+07	2.0E+07	5.1E+05	2.8E+05	4.2E+05	1.5E+07	2.6E+06	2.2E+07	3.0E+05	4.2E+07	1.0E+07	1.0E+06
20	6.1E+05	1.9E+07	6.2E+05	1.2E+06	4.6E+05	7.6E+06	4.3E+06	2.0E+07	3.9E+06	4.2E+07	9.4E+06	1.2E+06
21	1.0E+06	1.8E+06	3.9E+05	6.8E+05	1.6E+06	8.3E+06	4.0E+06	1.2E+06	5.0E+07	7.6E+07	2.5E+06	2.1E+06
22	1.0E+06	5.0E+05	1.2E+06	1.1E+06	8.6E+05	3.2E+06	5.0E+06	3.0E+06	6.7E+07	3.7E+07	3.4E+06	1.3E+06
23	3.5E+05	1.1E+06	2.0E+06	8.1E+05	1.8E+06	5.5E+06	2.8E+06	1.1E+06	8.6E+07	8.1E+06	2.8E+06	3.5E+05
24	5.4E+06	7.5E+05	2.0E+06	3.2E+05	1.2E+05	8.3E+05	1.8E+06	8.9E+04	7.6E+07	1.2E+07	4.6E+06	2.8E+05
25	1.0E+07	3.8E+07	4.6E+06	3.0E+05	3.2E+07	8.3E+05	4.4E+06	1.6E+05	1.3E+07	1.3E+07	3.3E+06	5.5E+05
26	5.5E+06	5.2E+07	7.0E+06	3.2E+05	1.0E+08	1.4E+06	2.9E+06	1.2E+05	7.6E+07	1.4E+07	1.5E+07	2.1E+05
27	2.3E+06	1.4E+08	7.5E+06	2.0E+05	1.3E+08	1.3E+07	8.6E+05	2.2E+05	1.7E+08	1.8E+07	1.7E+07	4.3E+05
28	7.4E+06	6.0E+07	4.7E+06	2.3E+05	7.8E+07	1.6E+07	1.9E+06	3.3E+05	1.5E+08	1.6E+07	7.0E+06	5.8E+05
29	1.4E+08	8.3E+07	5.9E+06	2.9E+06	1.2E+07	1.5E+07	1.1E+06	1.8E+07	5.4E+07	6.2E+05	2.2E+06	1.5E+06
30	3.1E+08		1.8E+06	1.9E+06	5.7E+07	4.3E+07	2.6E+06	1.0E+08	9.0E+06	1.0E+07	1.2E+06	7.5E+05
31	1.4E+08		1.8E+05		1.2E+08		3.7E+06	1.2E+08		1.5E+07		9.3E+05

NOTE: The electron detector responds significantly to protons above 32 MeV; therefore, electron data are contaminated when a proton event is in progress. These days are indicated with '-999' in the table and are not plotted. '--' indicates data not available.
NOTE: GOES9 data began April, 1996 and ended on 26 July, 1998. GOES8 is primary satellite as of 27 July, 1998.

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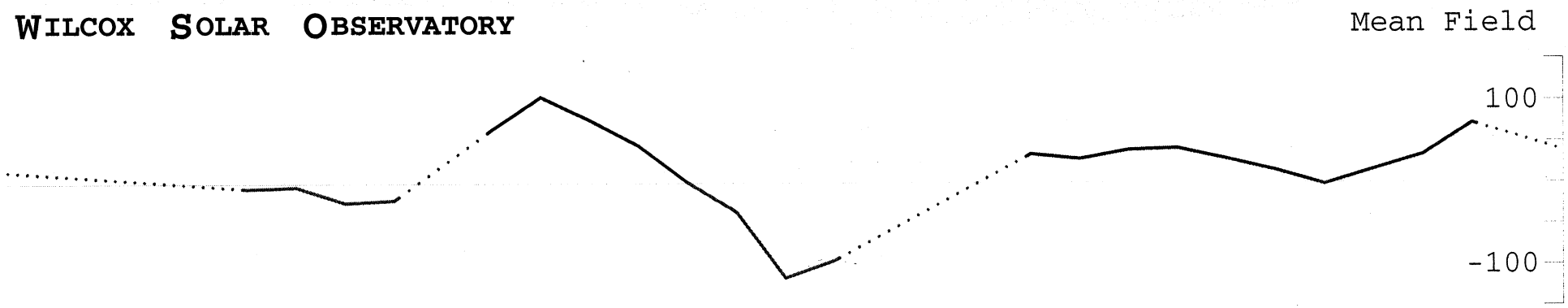
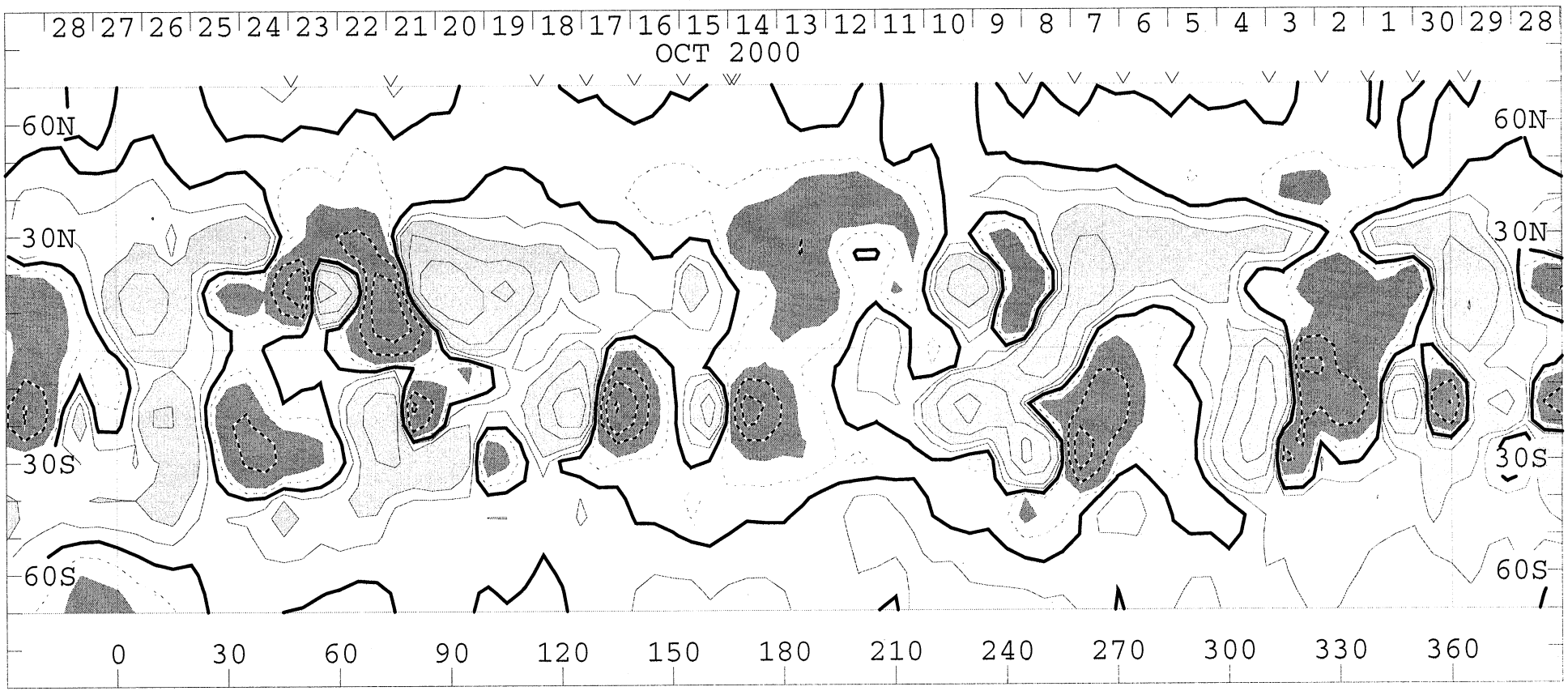
SOLAR MAGNETIC FIELD SYNOPTIC CHART

CARRINGTON ROTATION NUMBER 1968
(30 September to 27 October 2000)

WILCOX SOLAR OBSERVATORY



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



SOLAR MAGNETIC FIELD SYNOPTIC CHART

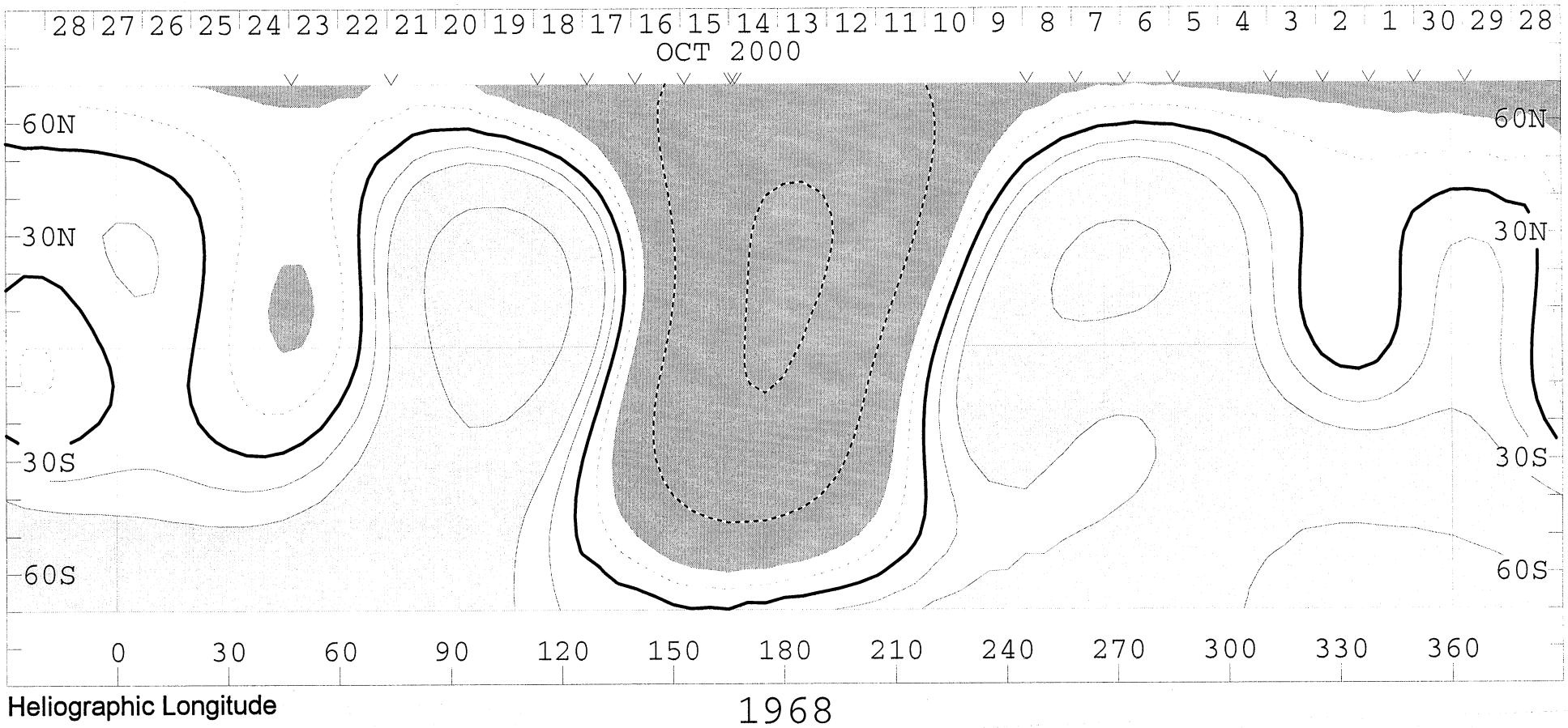
SOURCE SURFACE FIELD

CARRINGTON ROTATION NUMBER 1968

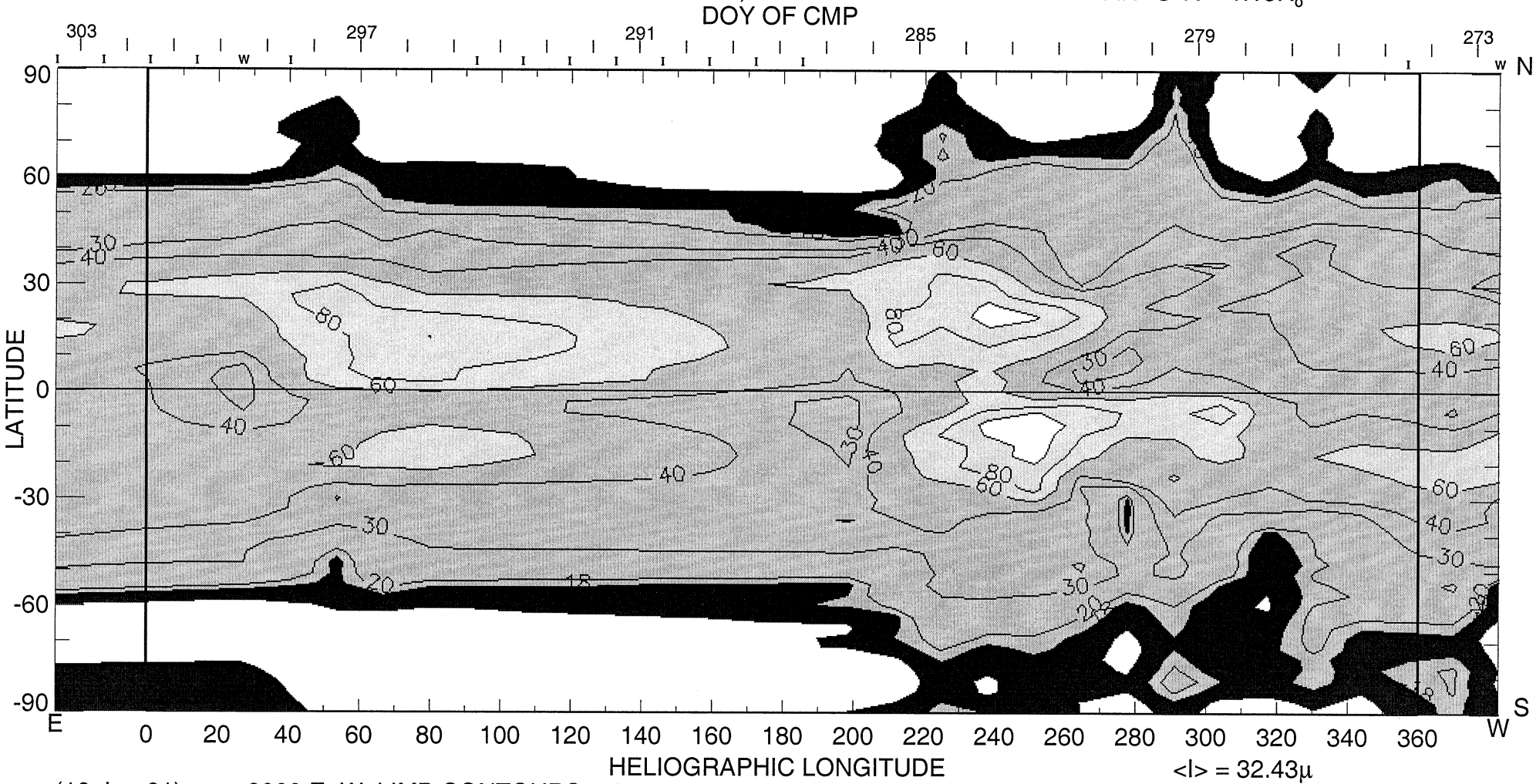
(30 September to 27 October 2000)

Wilcox Solar Observatory

0, ±1, 2, 5, 10, 20 microTesla



CARRINGTON ROTATION NUMBER 1968 ; NSO/SACRAMENTO PEAK FE XIV @ R = 1.15R_o

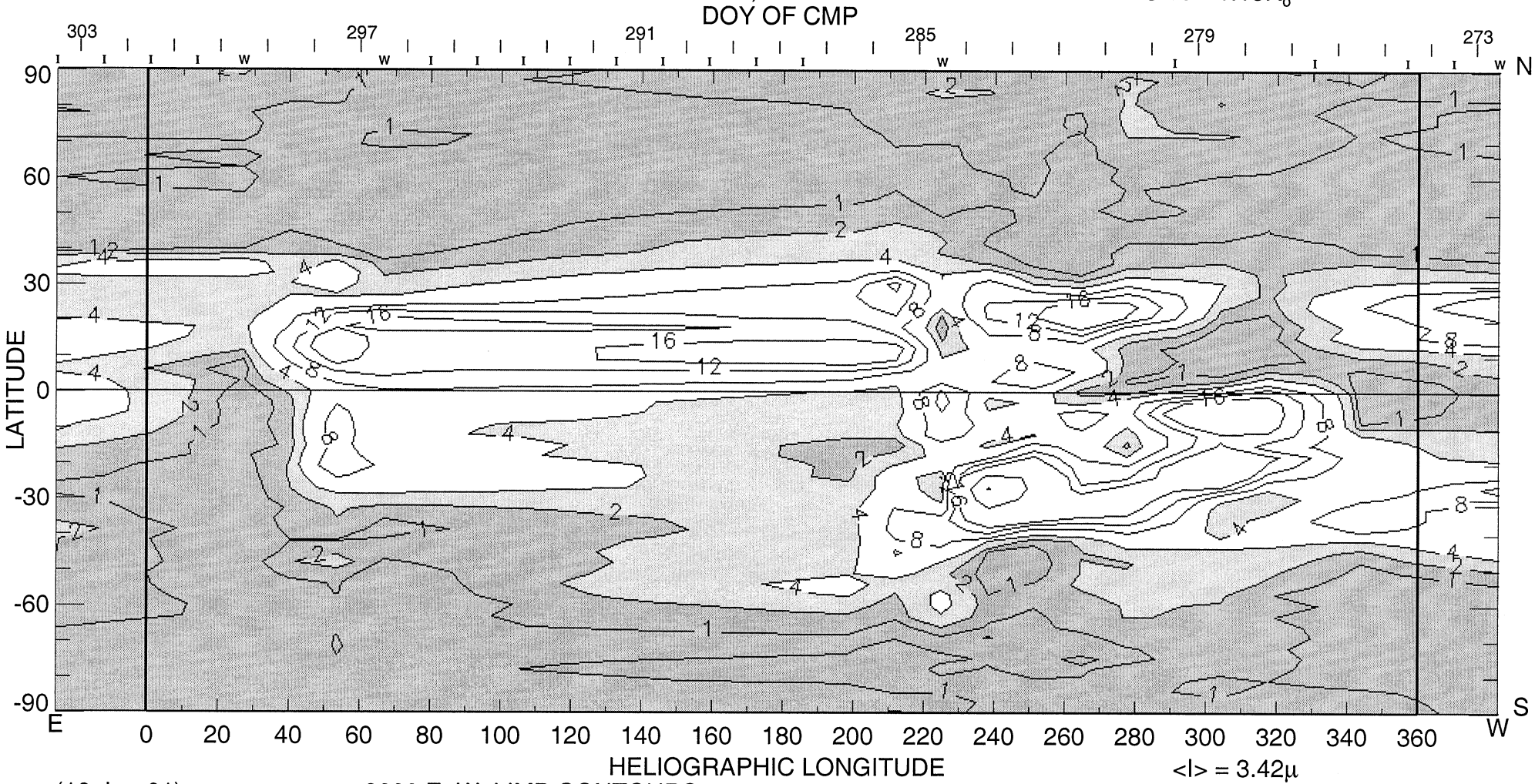


<I> = 32.43μ

(16-Jan-01) 2000 E+W LIMB CONTOURS: 14, 18, 20, 30, 40, 60, 80, 100, 120, 140, 160 MILLIONTHS OF I_o

CORONAL HOLES ARE SHOWN AS WHITE BORDERED BY BLACK

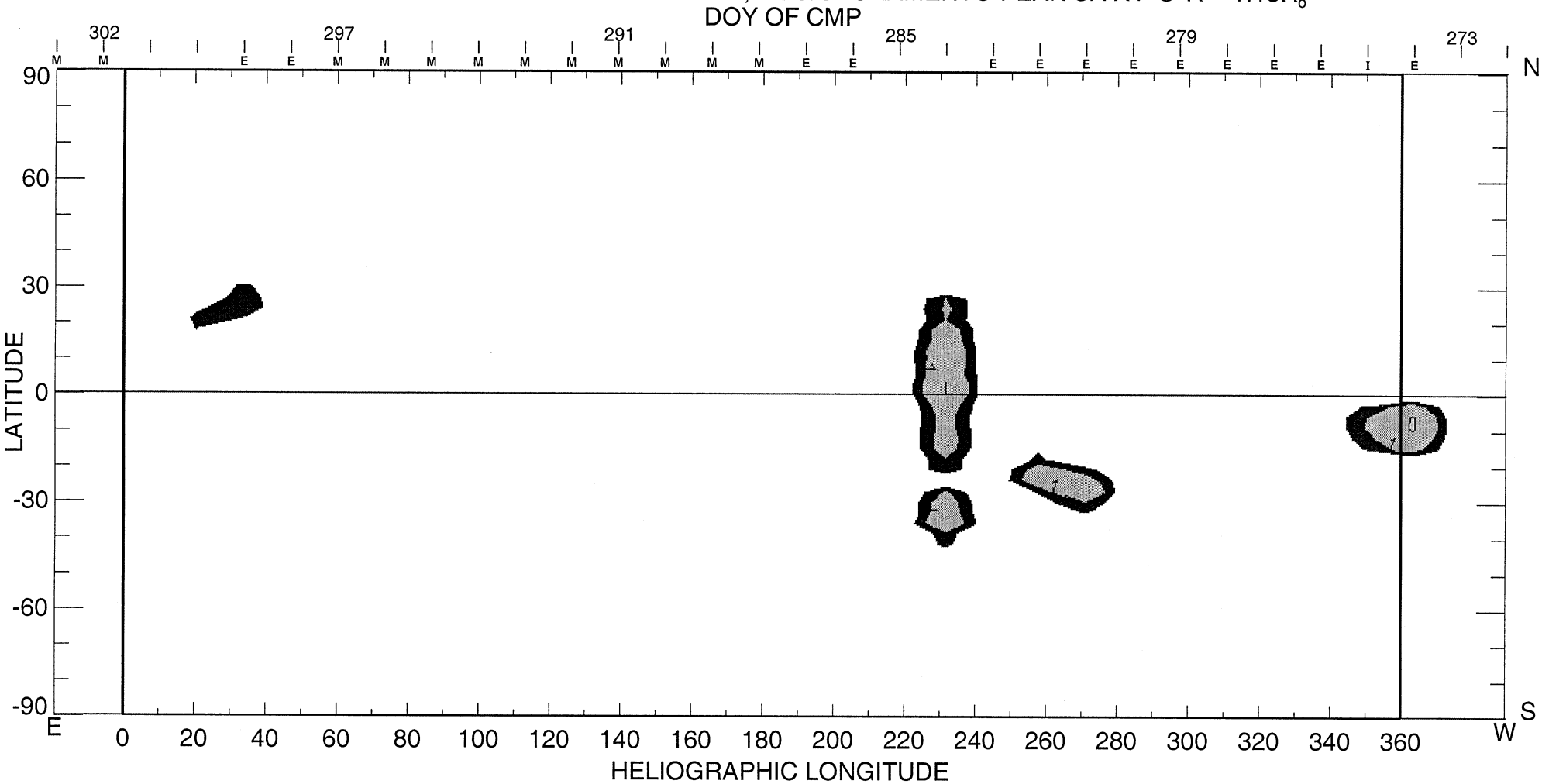
CARRINGTON ROTATION NUMBER 1968 ; NSO/SACRAMENTO PEAK FE X @ R = 1.15R_o



(16-Jan-01)

2000 E+W LIMB CONTOURS: 1, 2, 4, 8, 12, 16, 32, 48 MILLIONTHS OF I_o

CARRINGTON ROTATION NUMBER 1968 ; NSO/SACRAMENTO PEAK CA XV @ R = 1.15R_o



(16-Jan-01) 2000 W+E LIMB CONTOURS: YELMIN, 1, 2, 3, 4, 6, 8, 10, 12, 14, 16, 18, 20 MILLIONTHS OF I_o

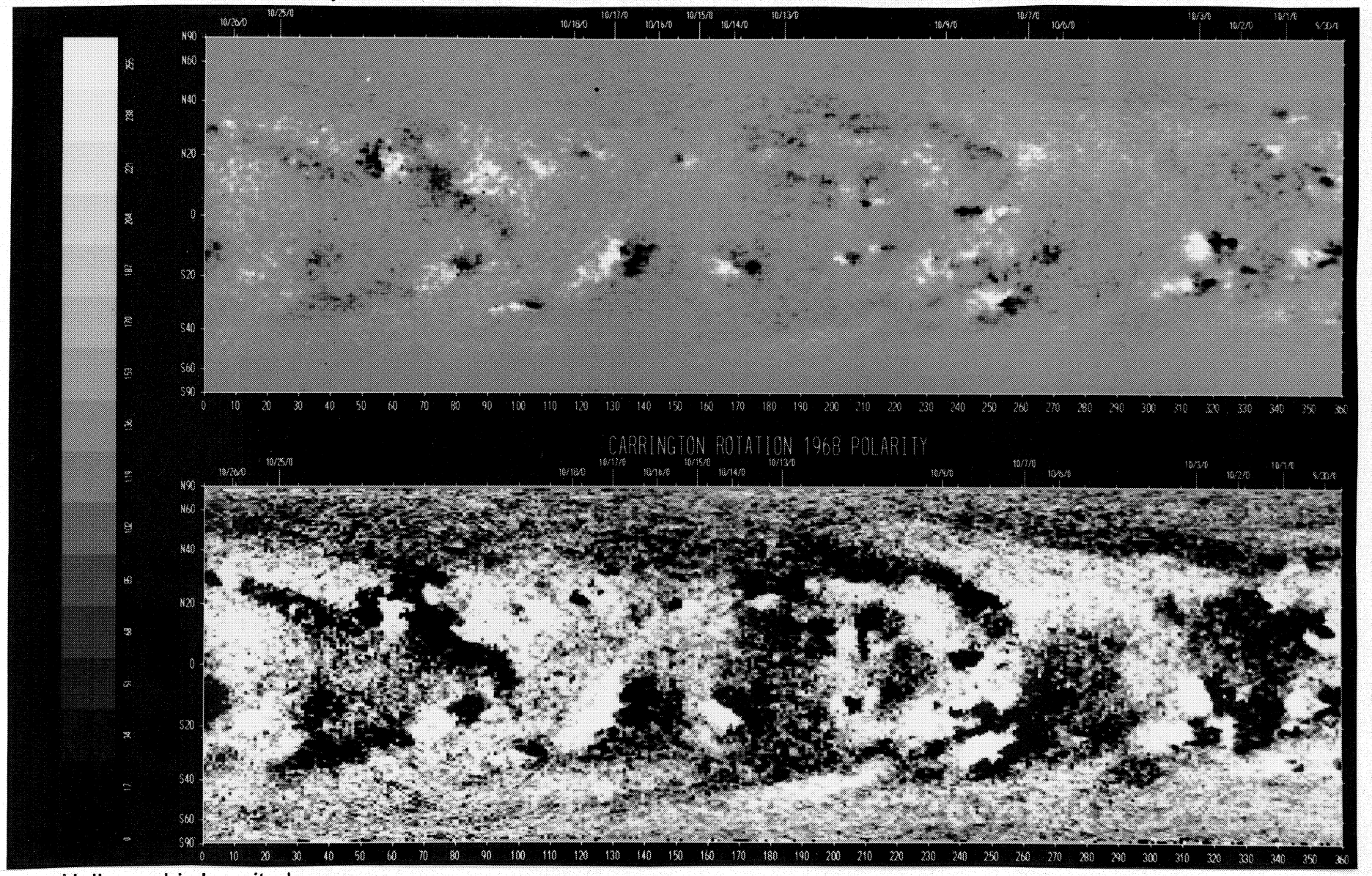
SOLAR MAGNETIC FIELD SYNOPTIC CHART

CARRINGTON ROTATION NUMBER 1968

(30 September to 27 October 2000)

National Solar Observatory/Kitt Peak

Dates of Observation



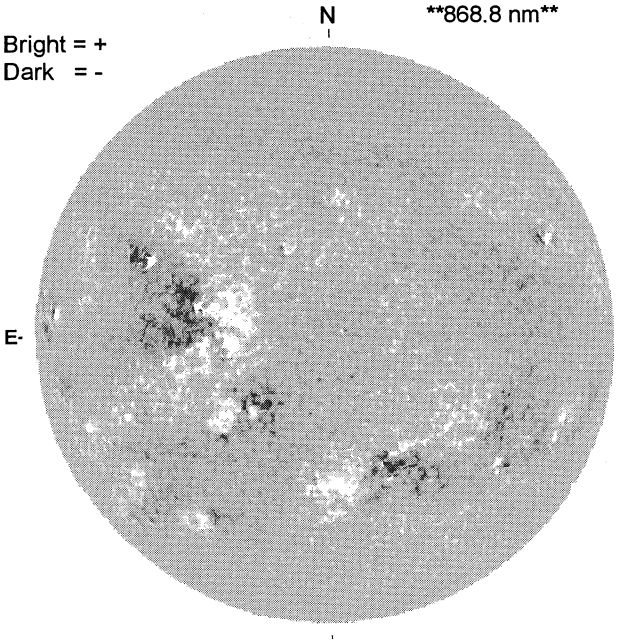
Heliographic Longitude

NOVEMBER 1, 2000 (P= 24.46, Bo = 4.35, Lo = 301.16)

KITT PEAK MAGNETOGRAM

868.8 nm

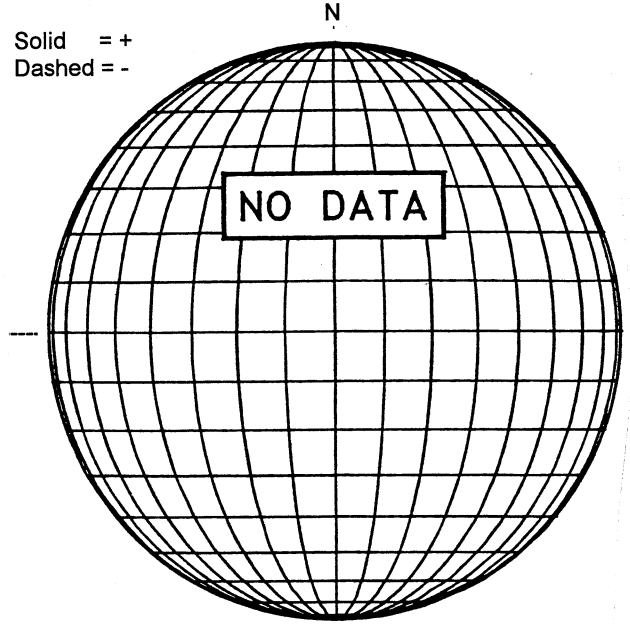
Bright = +
Dark = -



1739 UT

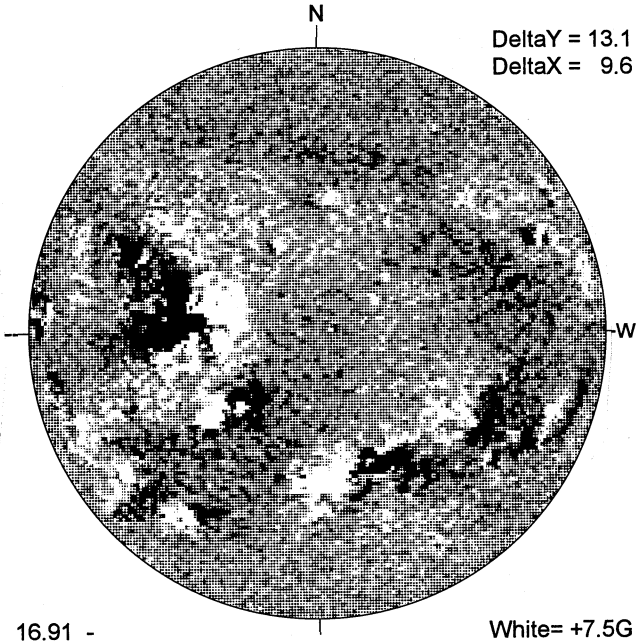
STANFORD MAGNETOGRAM

Solid = +
Dashed = -



MT. WILSON MAGNETOGRAM

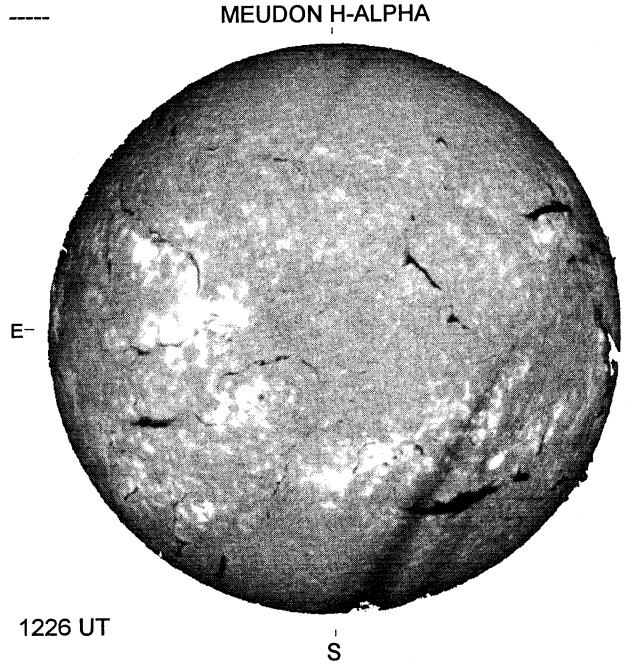
DeltaY = 13.1
DeltaX = 9.6



16.91 -
17.87 UT

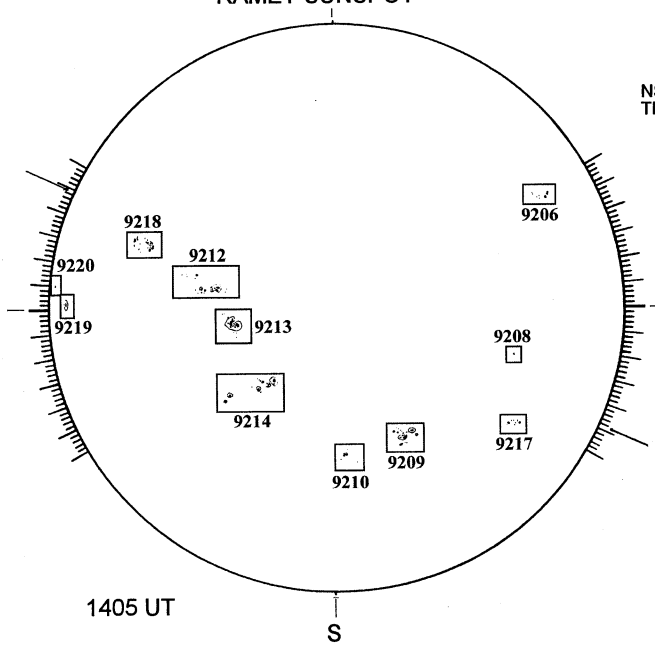
White= +7.5G
Black = -7.5G

MEUDON H-ALPHA



1226 UT

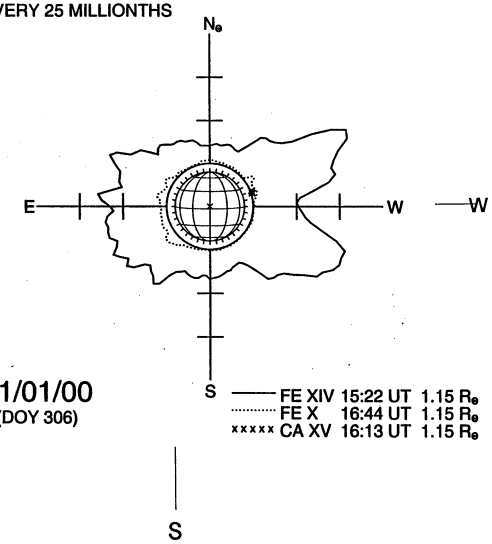
RAMEY SUNSPOT



1405 UT

SACRAMENTO PEAK CORONA (1.15 Radii)

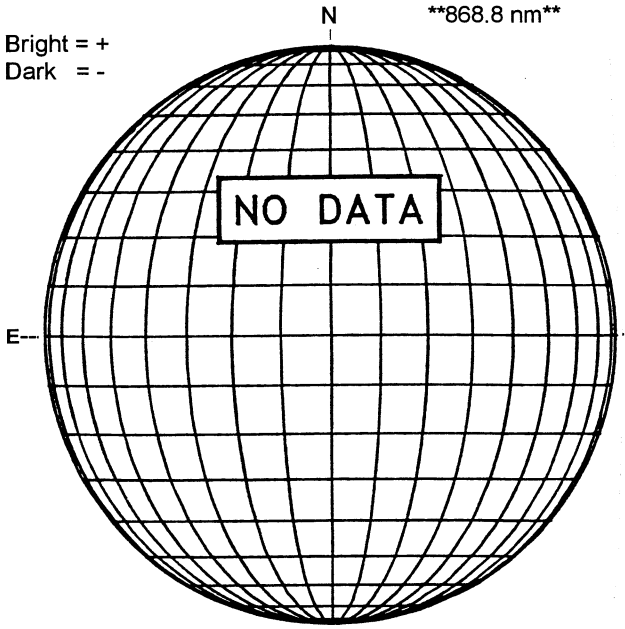
NSO / SACRAMENTO PEAK CORONAL DATA
TICK MARKS EVERY 25 MILLIONTHS



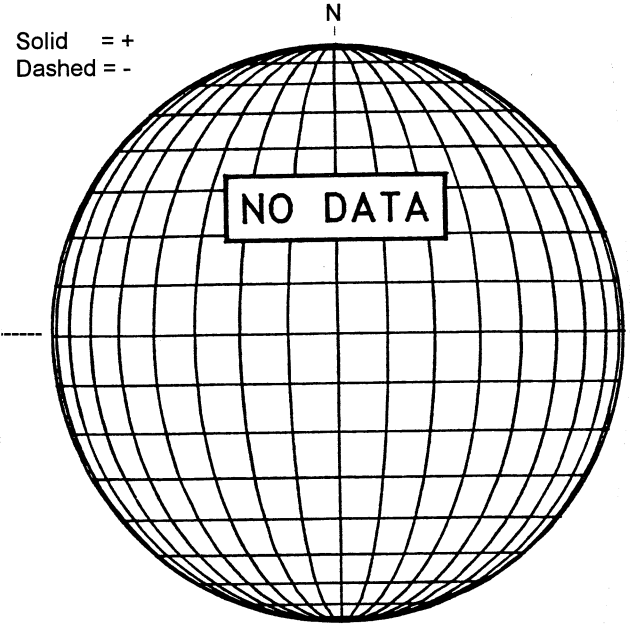
11/01/00
(DOY 306)

NOVEMBER 2, 2000 (P= 24.29, Bo = 4.24, Lo = 287.98)

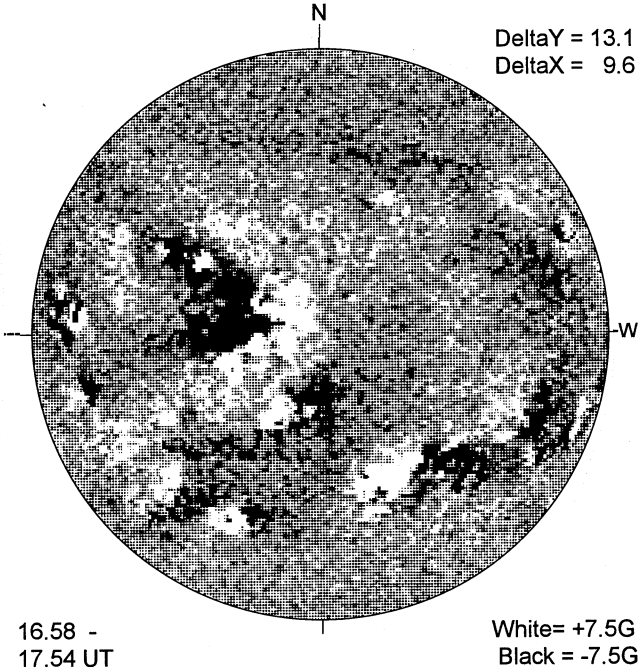
KITT PEAK MAGNETOGRAM



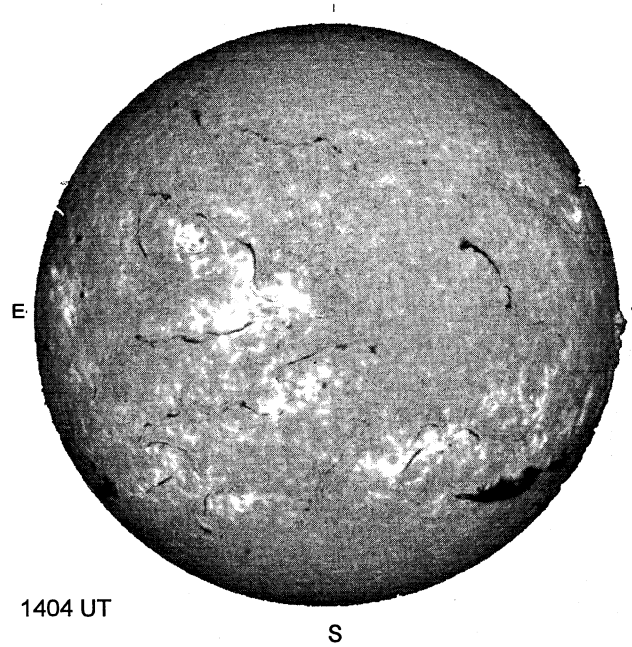
STANFORD MAGNETOGRAM



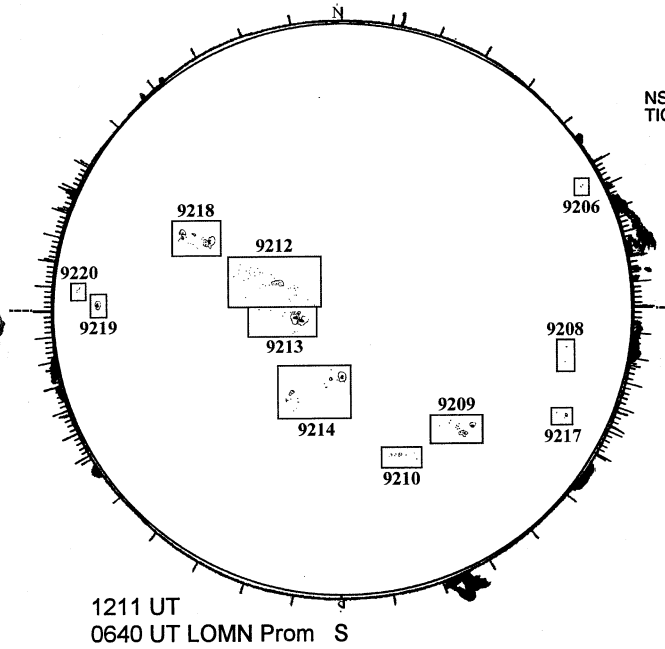
MT. WILSON MAGNETOGRAM



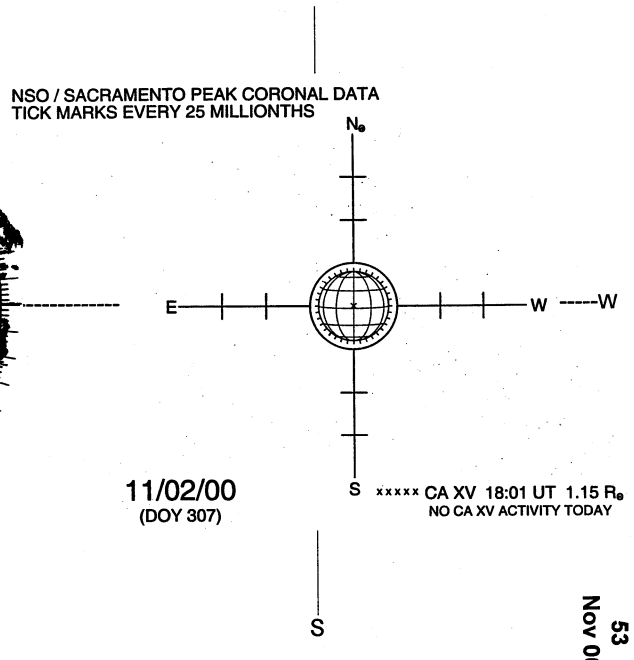
MEUDON H-ALPHA



RAMEY SUNSPOT



SACRAMENTO PEAK CORONA (1.15 Radii)

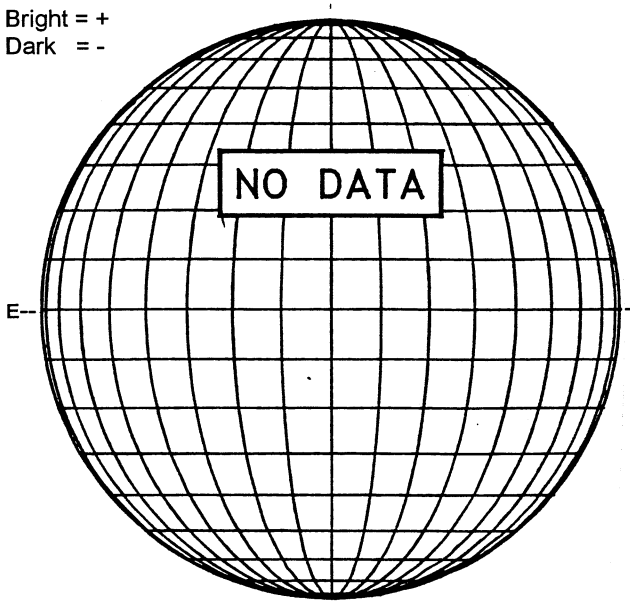


NOVEMBER 3, 2000 (P= 24.11, Bo = 4.14, Lo = 274.79)

KITT PEAK MAGNETOGRAM

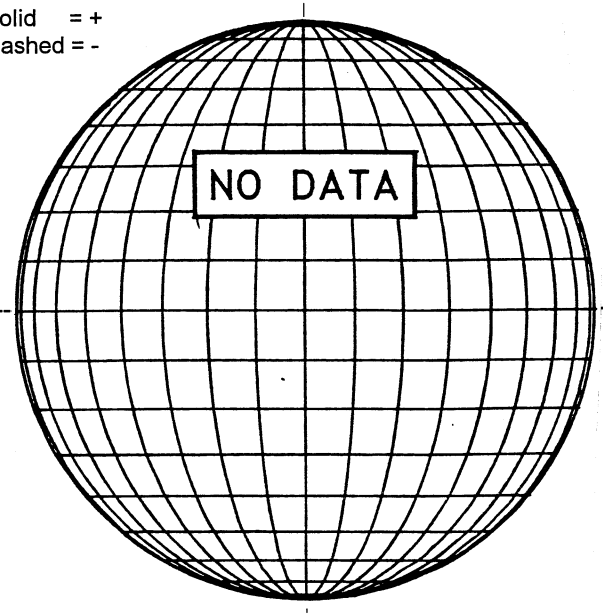
868.8 nm

Bright = +
Dark = -



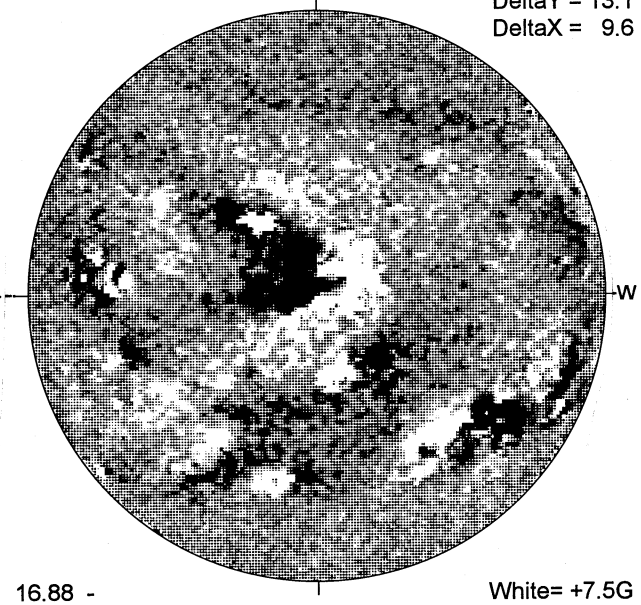
STANFORD MAGNETOGRAM

Solid = +
Dashed = -



MT. WILSON MAGNETOGRAM

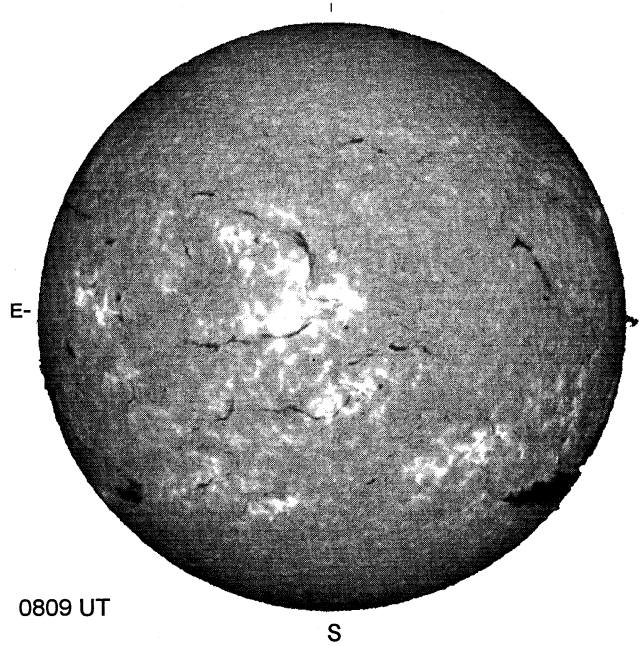
DeltaY = 13.1
DeltaX = 9.6



16.88 -
17.84 UT

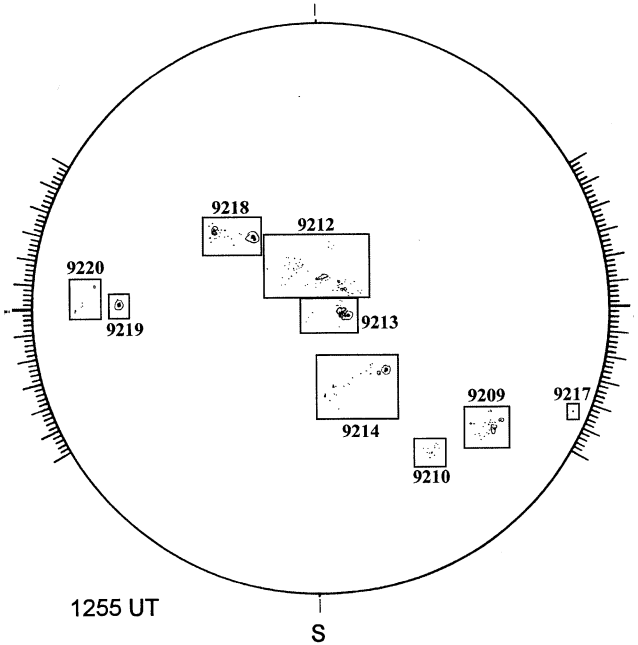
White= +7.5G
Black = -7.5G

MEUDON H-ALPHA



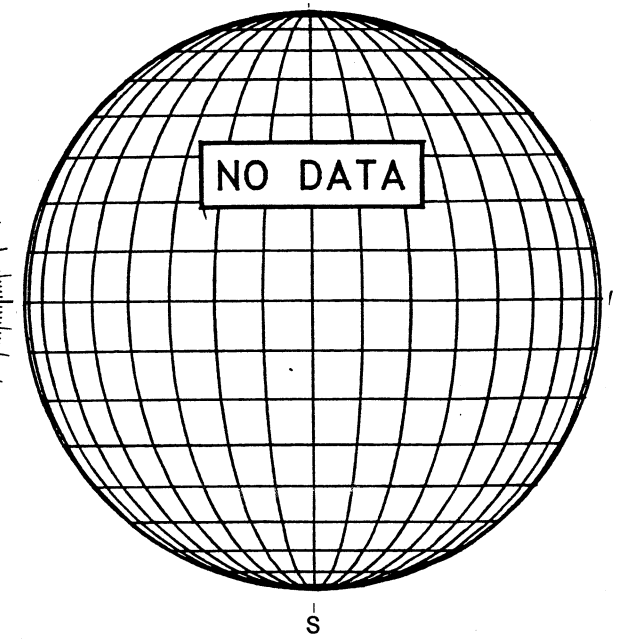
0809 UT

RAMEY SUNSPOT



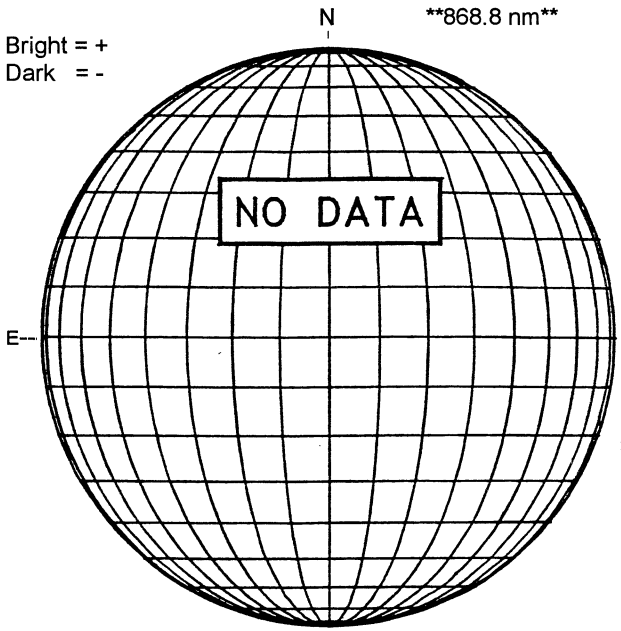
1255 UT

SACRAMENTO PEAK CORONA (1.15 Radii)----

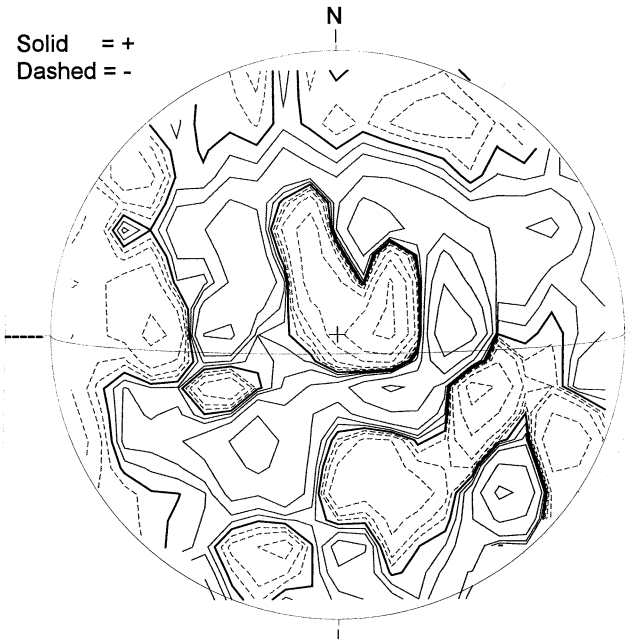


NOVEMBER 4, 2000 (P= 23.92, Bo = 4.04, Lo = 261.61)

KITT PEAK MAGNETOGRAM

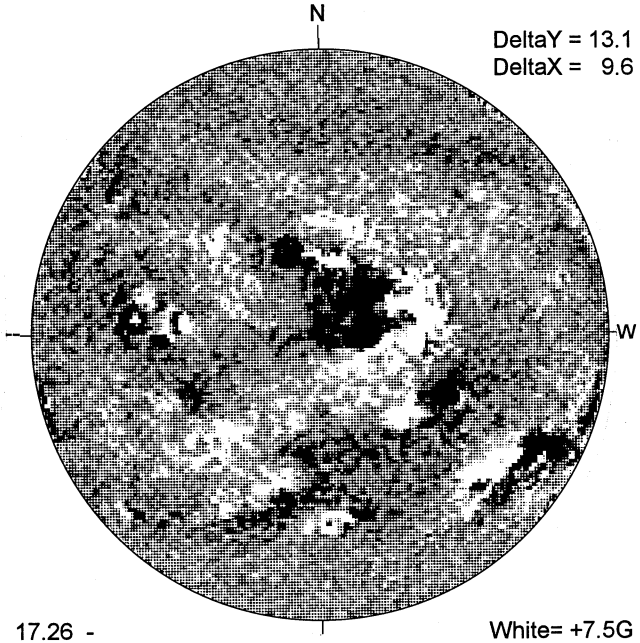


STANFORD MAGNETOGRAM



2138 UT

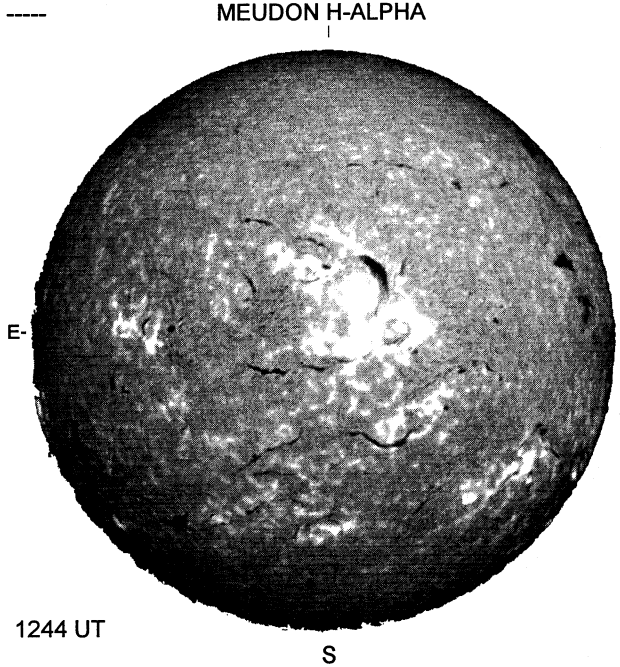
MT. WILSON MAGNETOGRAM



17.26 -
18.22 UT

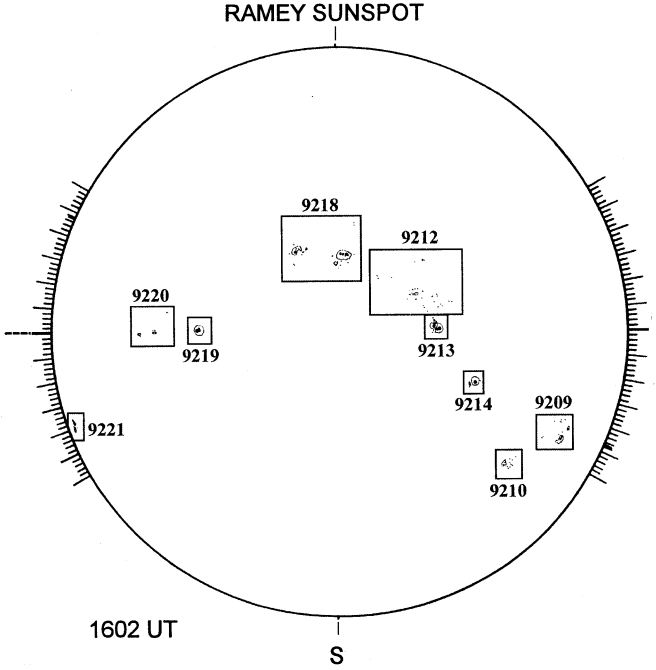
White= +7.5G
Black = -7.5G

MEUDON H-ALPHA



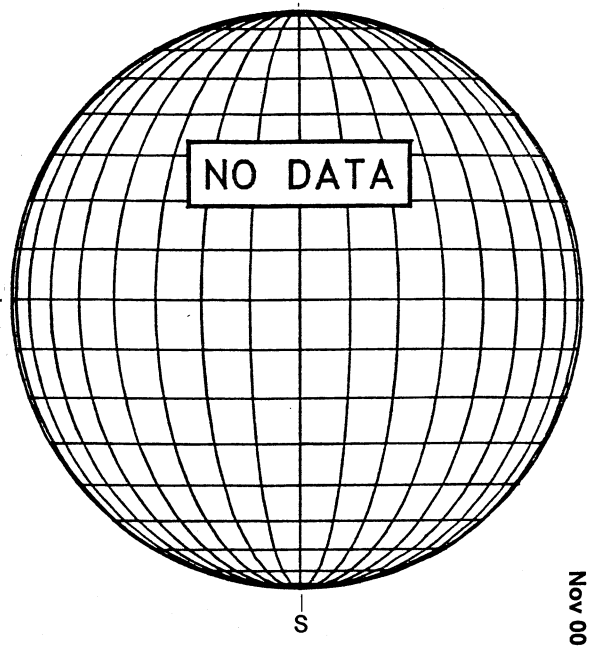
1244 UT

RAMEY SUNSPOT



1602 UT

SACRAMENTO PEAK CORONA (1.15 Radii)----

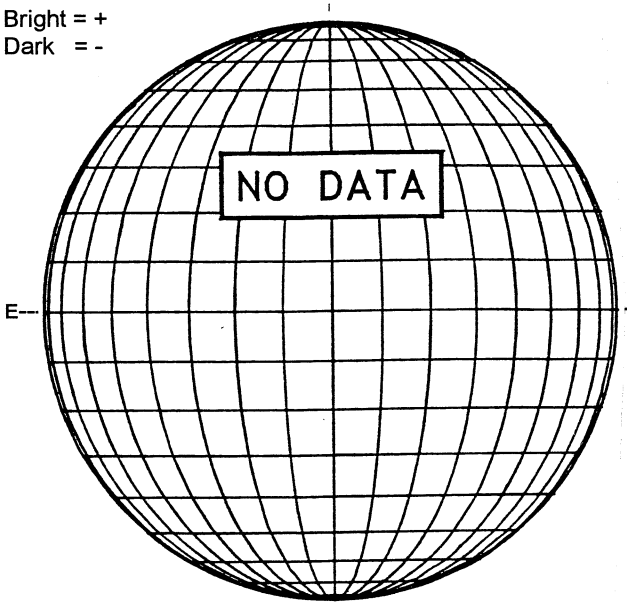


NOVEMBER 5, 2000 (P= 23.72, Bo = 3.93, Lo = 248.42)

KITT PEAK MAGNETOGRAM

868.8 nm

Bright = +
Dark = -



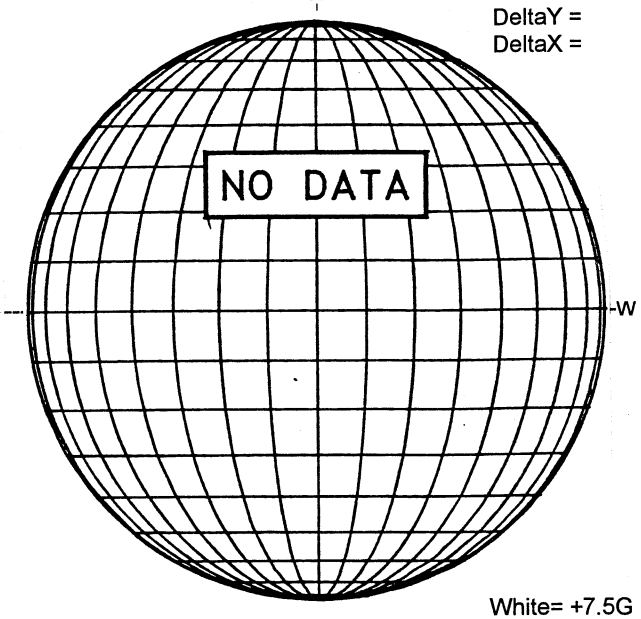
STANFORD MAGNETOGRAM

Solid = +
Dashed = -

2124 UT

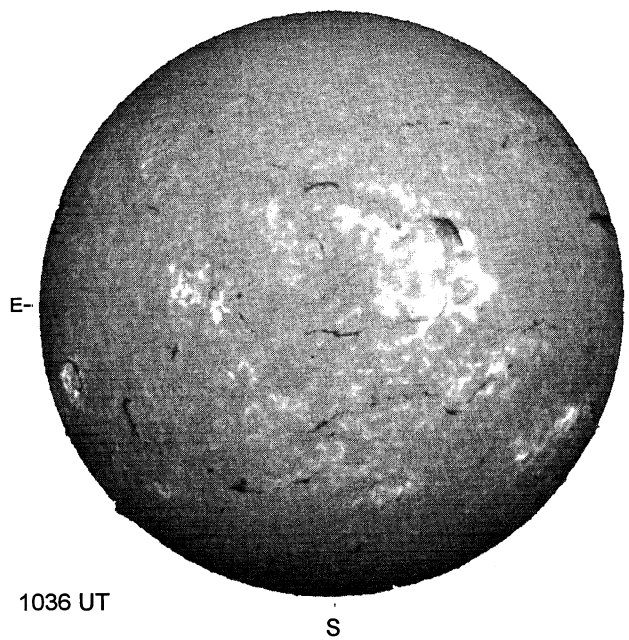
MT. WILSON MAGNETOGRAM

DeltaY =
DeltaX =



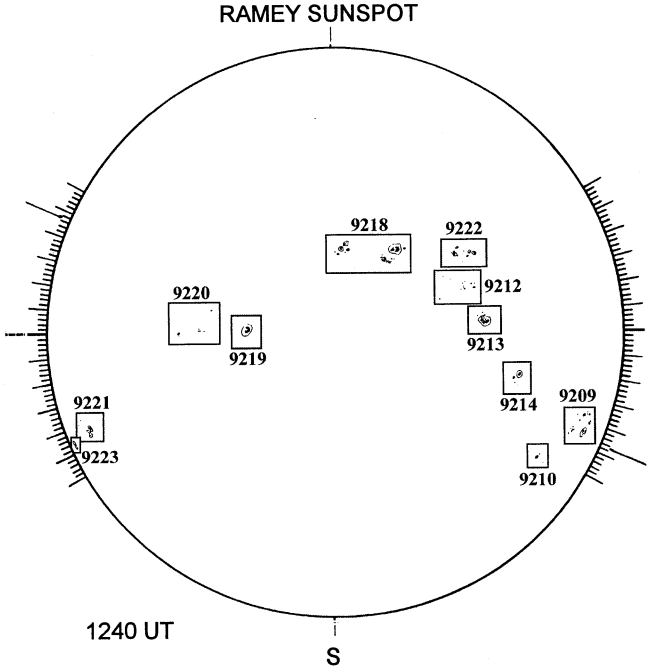
White= +7.5G
Black = -7.5G

MEUDON H-ALPHA



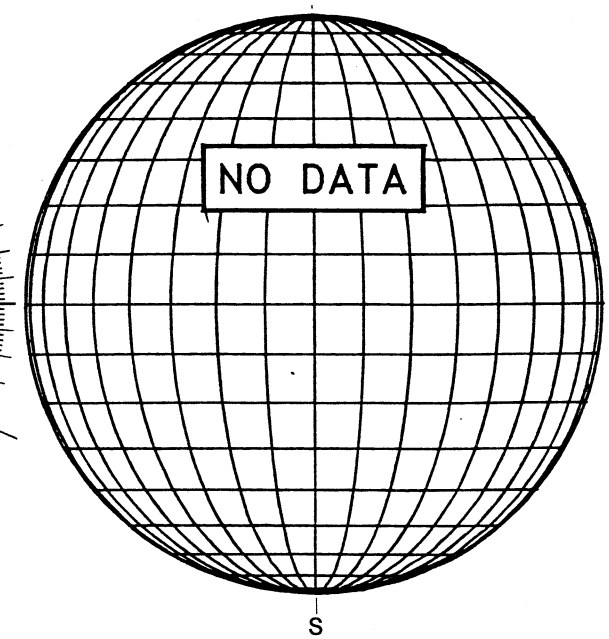
1036 UT

RAMEY SUNSPOT



1240 UT

SACRAMENTO PEAK CORONA (1.15 Radii)

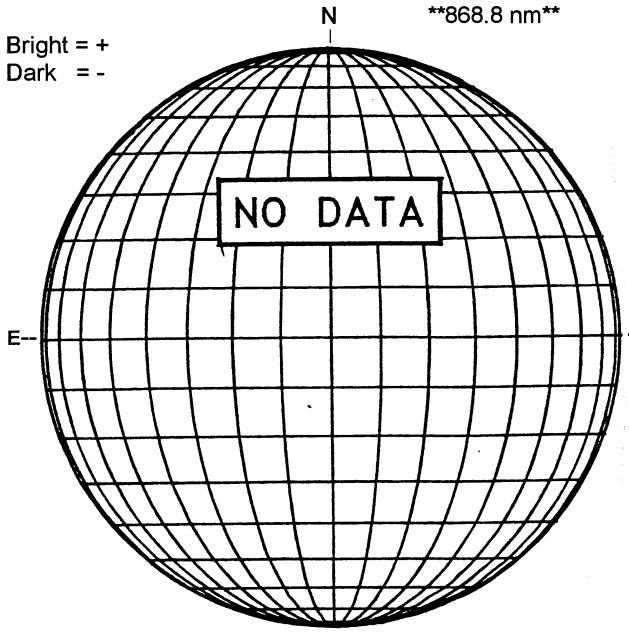


NOVEMBER 6, 2000 (P= 23.52, Bo = 3.82, Lo = 235.24)

KITT PEAK MAGNETOGRAM

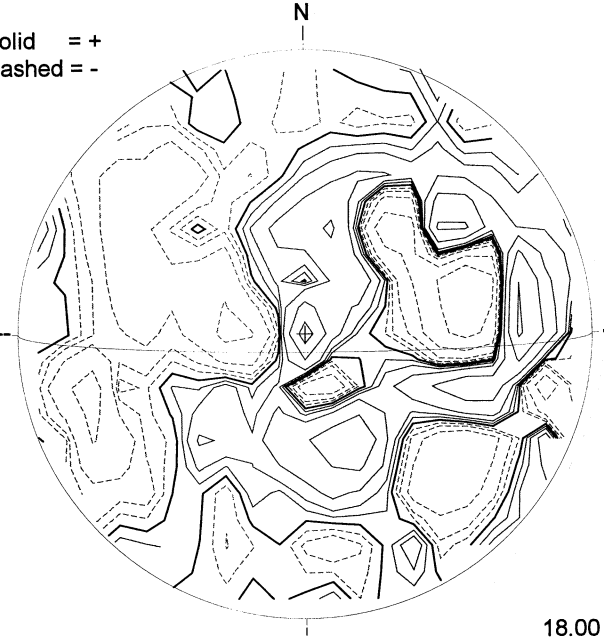
868.8 nm

Bright = +
Dark = -



STANFORD MAGNETOGRAM

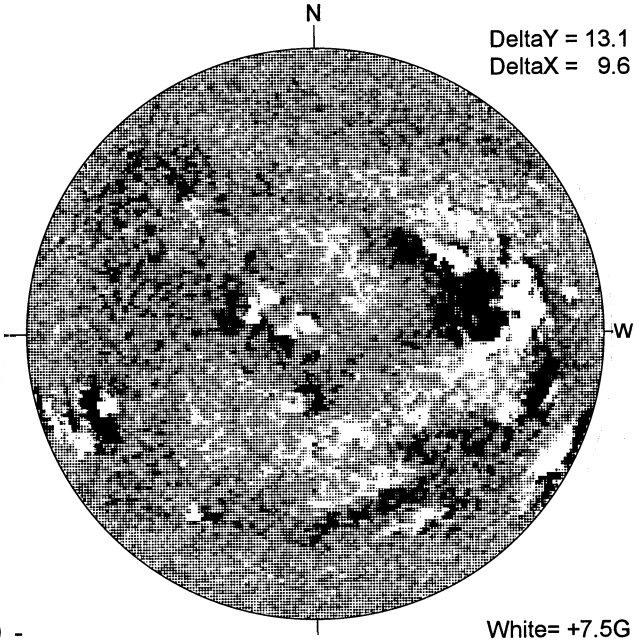
Solid = +
Dashed = -



2059 UT

MT. WILSON MAGNETOGRAM

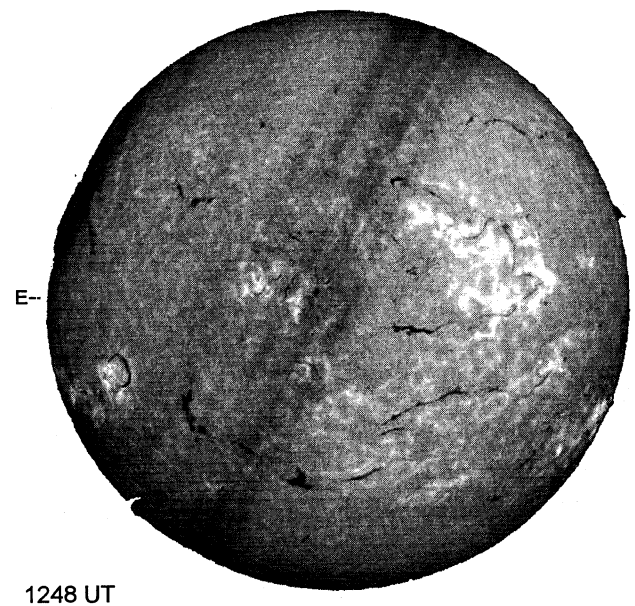
DeltaY = 13.1
DeltaX = 9.6



18.00 -
18.96 UT

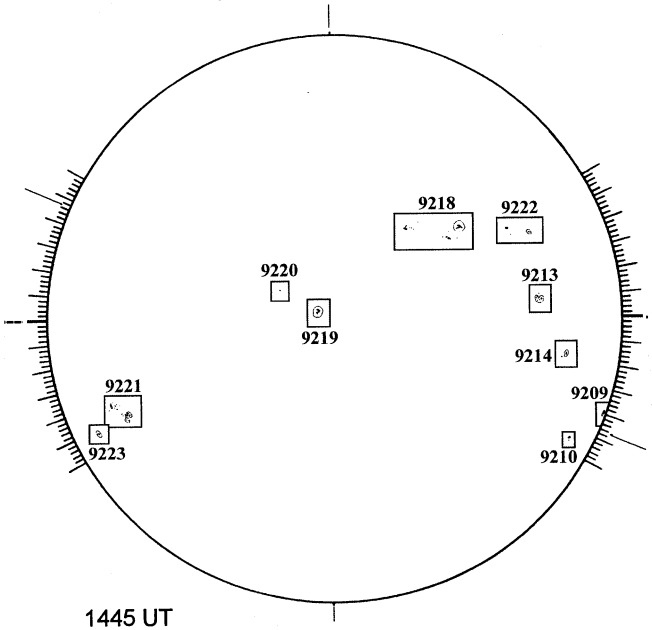
White= +7.5G
Black = -7.5G

MEUDON H-ALPHA



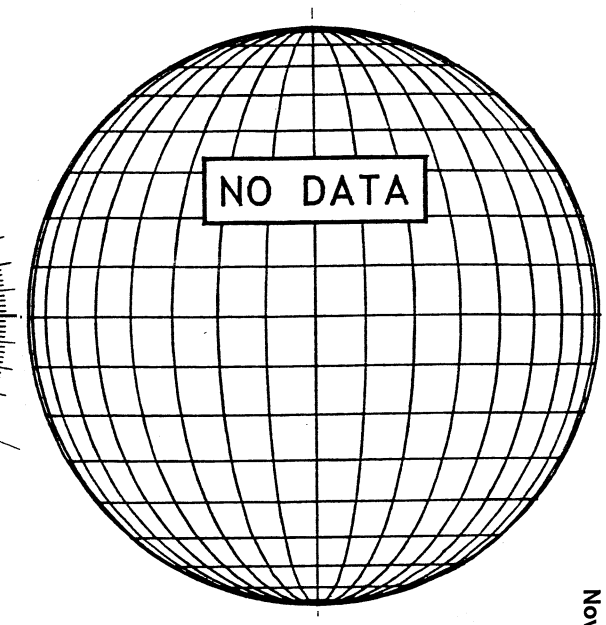
1248 UT

RAMEY SUNSPOT



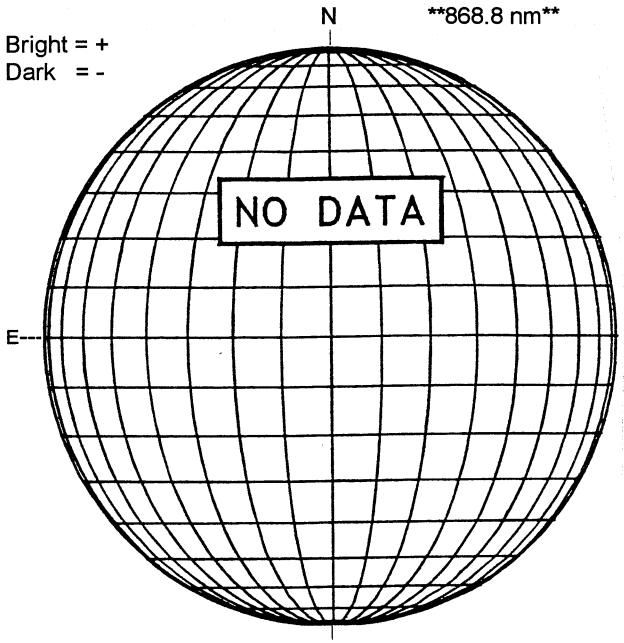
1445 UT

SACRAMENTO PEAK CORONA (1.15 Radii)----

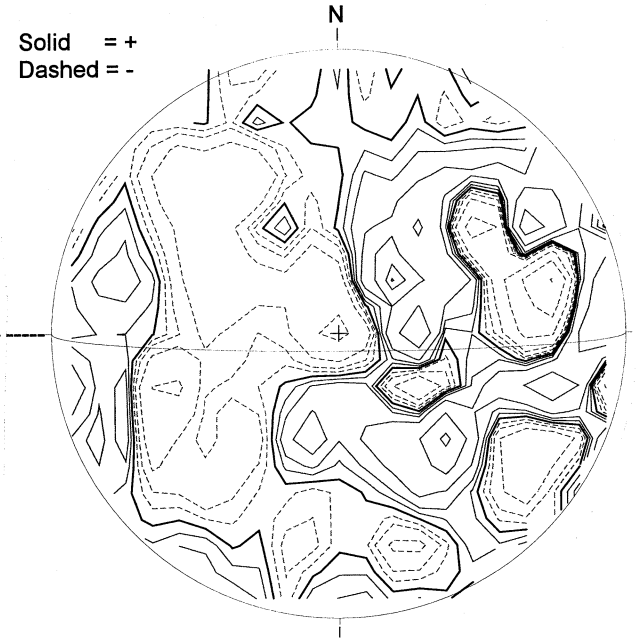


NOVEMBER 7, 2000 (P= 23.31, Bo = 3.72, Lo = 222.05)

KITT PEAK MAGNETOGRAM

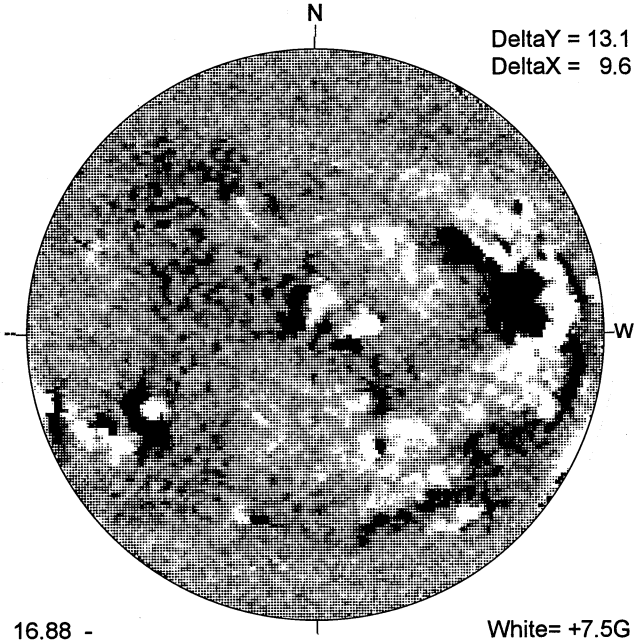


STANFORD MAGNETOGRAM



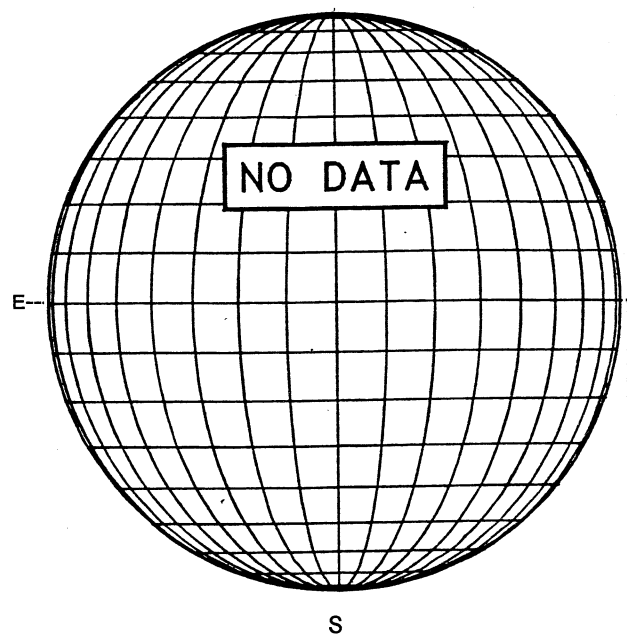
2117 UT

MT. WILSON MAGNETOGRAM

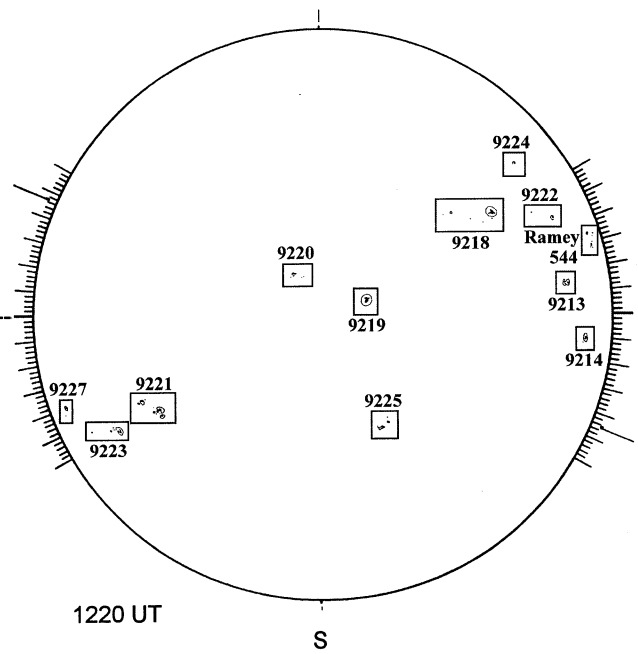


16.88 -
17.85 UT

MEUDON H-ALPHA

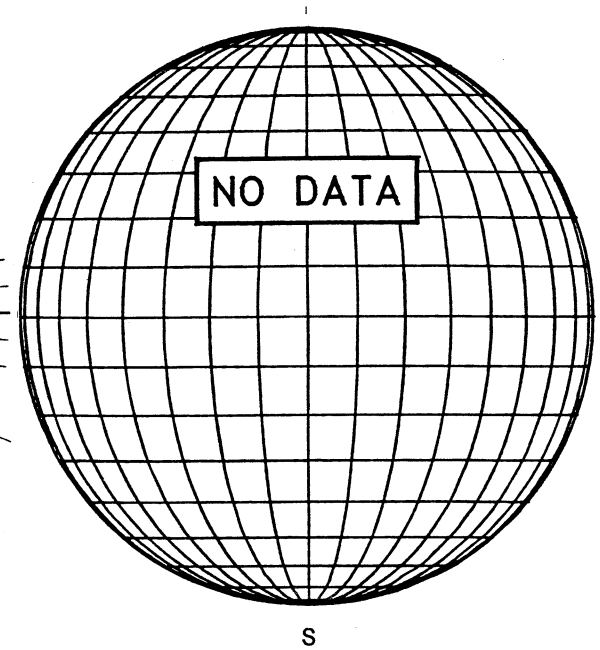


RAMEY SUNSPOTS



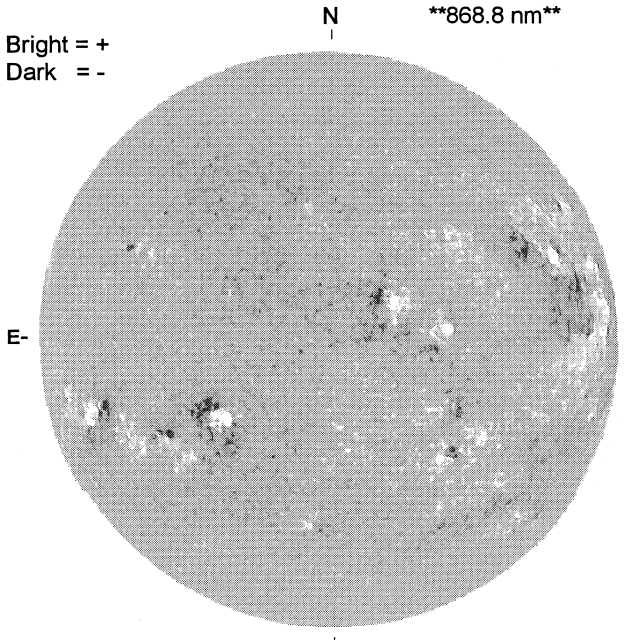
1220 UT

SACRAMENTO PEAK CORONA (1.15 Radii)

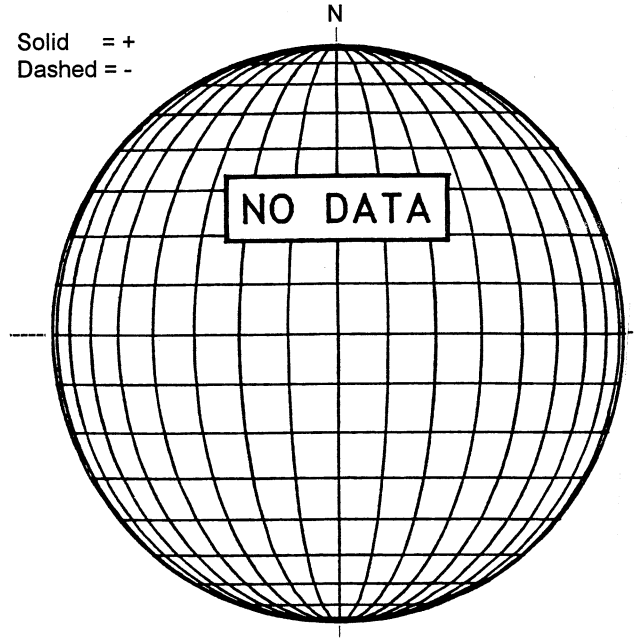


NOVEMBER 8, 2000 (P= 23.09, Bo = 3.61, Lo = 208.87)

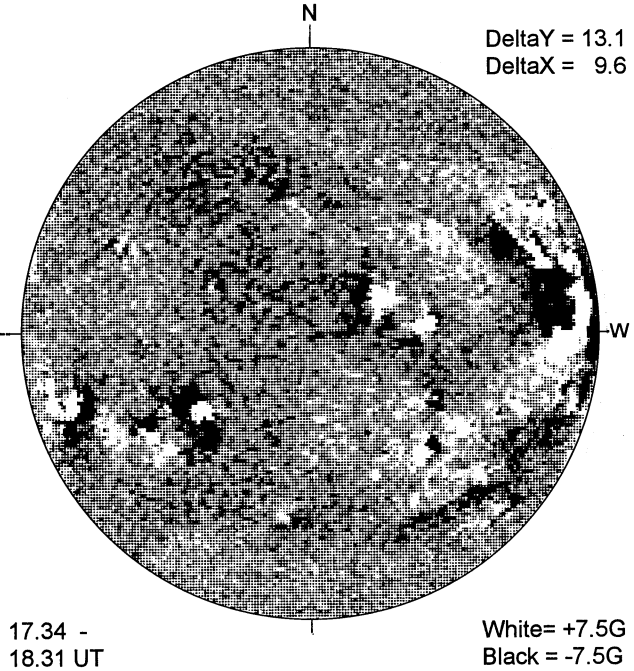
KITT PEAK MAGNETOGRAM



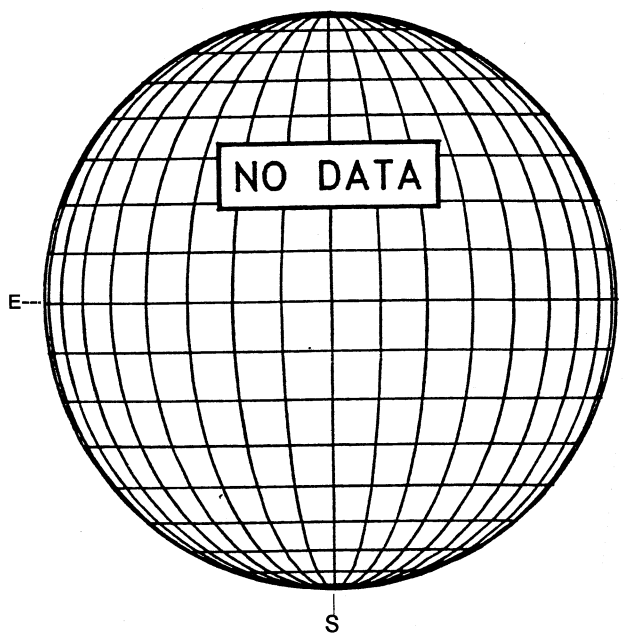
STANFORD MAGNETOGRAM



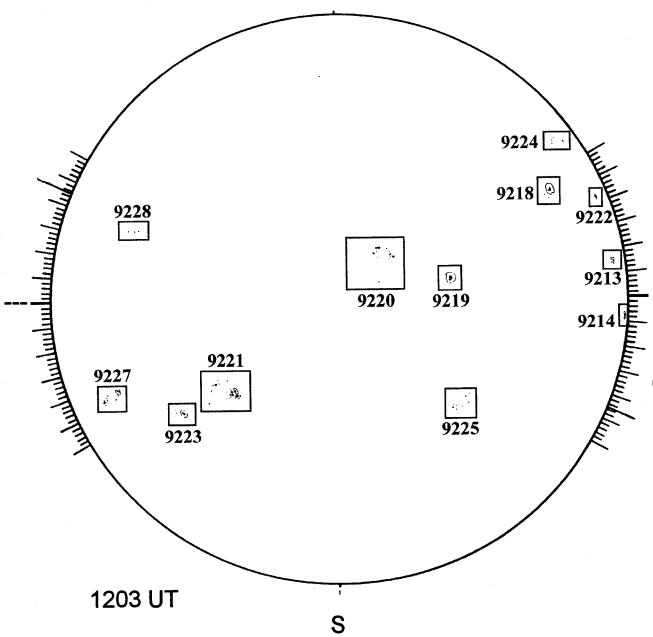
MT. WILSON MAGNETOGRAM



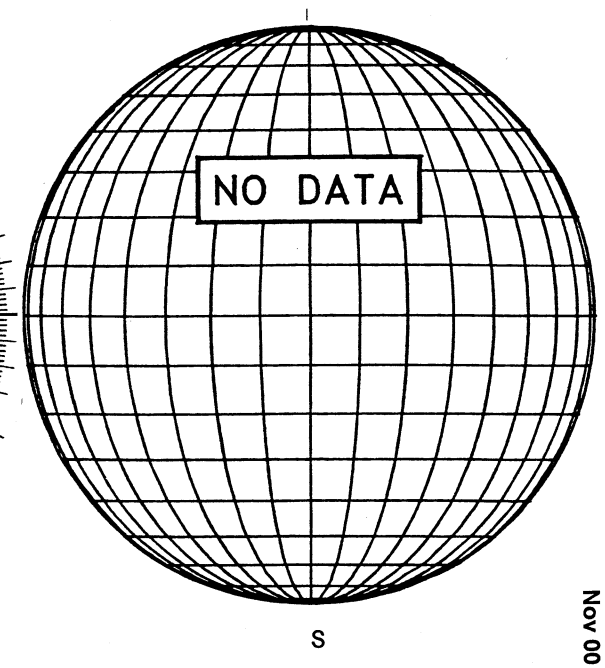
MEUDON H-ALPHA



RAMEY SUNSPOT



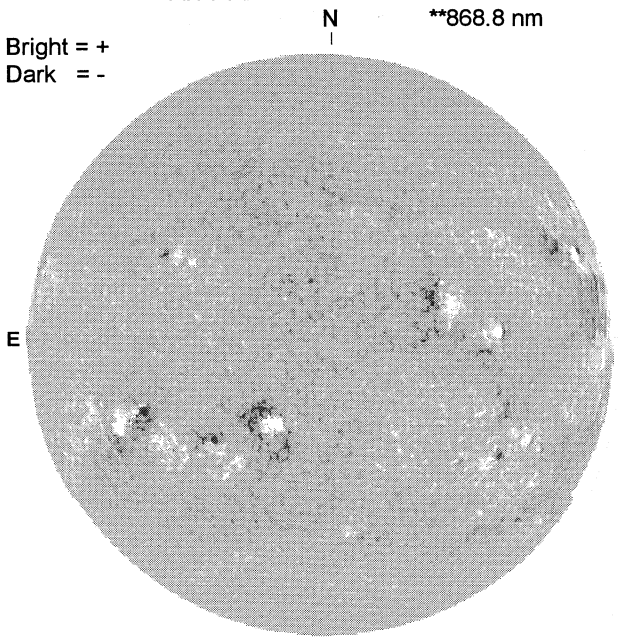
SACRAMENTO PEAK CORONA (1.15 Radii)----



NOVEMBER 9, 2000 (P= 22.86, Bo = 3.49, Lo = 195.68)

KITT PEAK MAGNETOGRAM

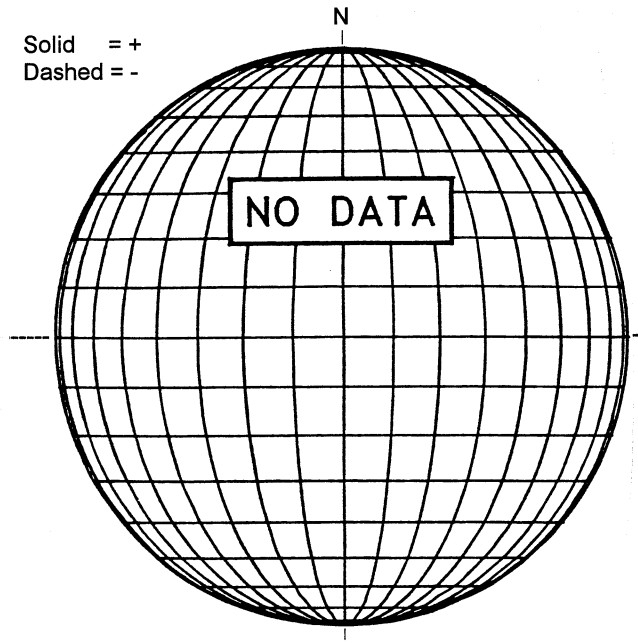
Bright = +
Dark = -



1612 UT

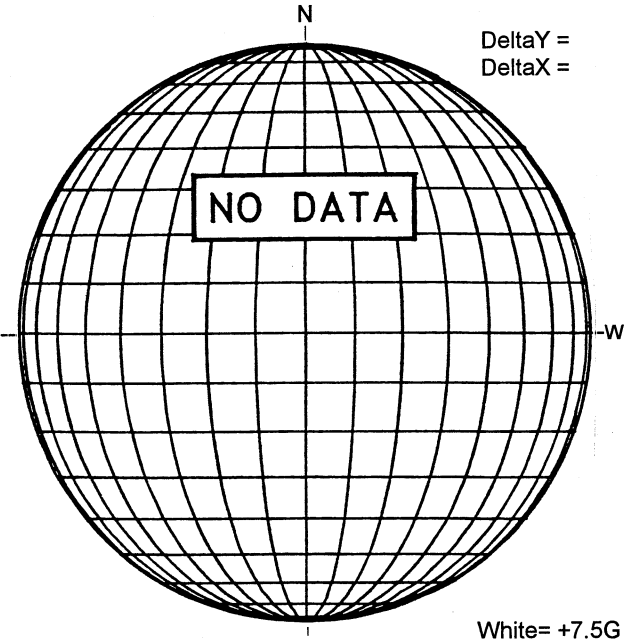
STANFORD MAGNETOGRAM

Solid = +
Dashed = -



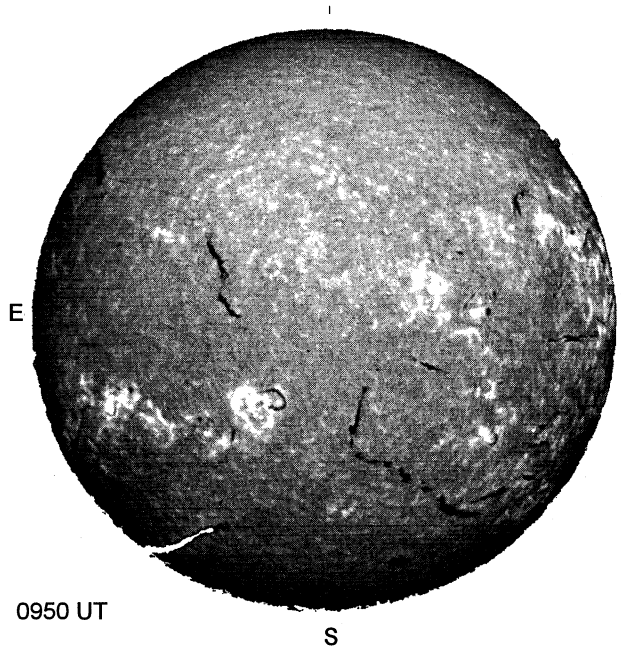
MT. WILSON MAGNETOGRAM

DeltaY =
DeltaX =



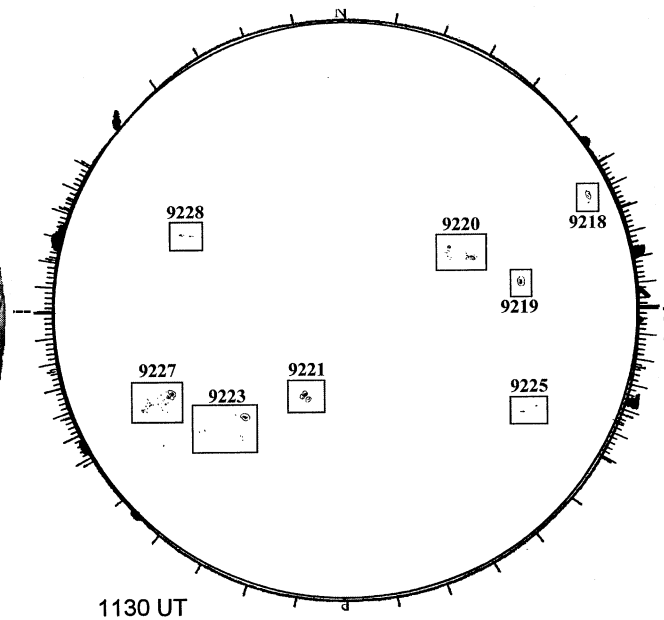
White= +7.5G
Black = -7.5G

MEUDON H-ALPHA



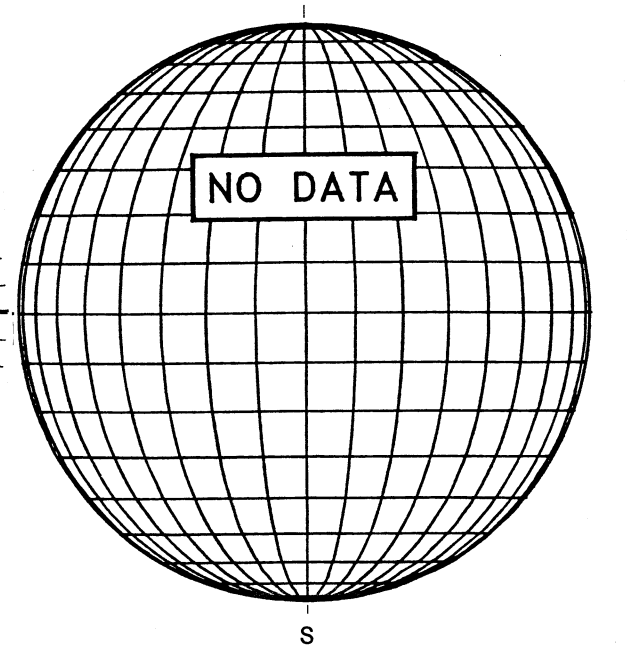
0950 UT

RAMEY SUNSPOT



1130 UT
1411 UT LOMN Prom

LOMNICKY PEAK CORONA (1.04 Radii)

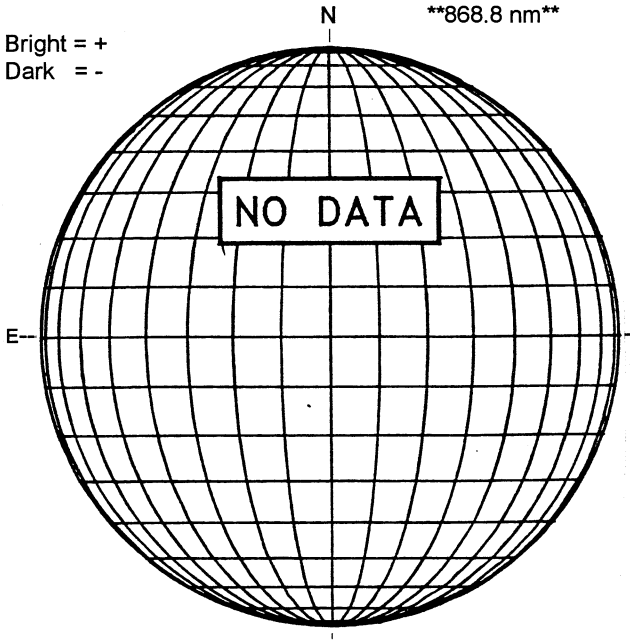


NOVEMBER 10, 2000 (P= 22.62, Bo = 3.38 Lo = 182.50)

KITT PEAK MAGNETOGRAM

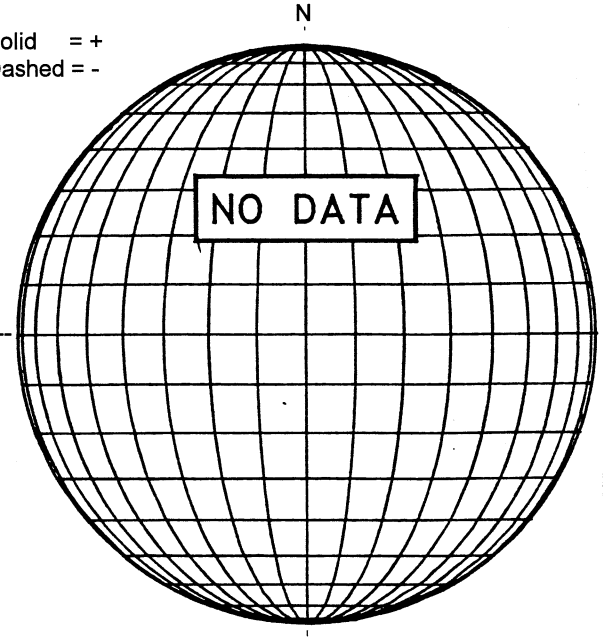
868.8 nm

Bright = +
Dark = -



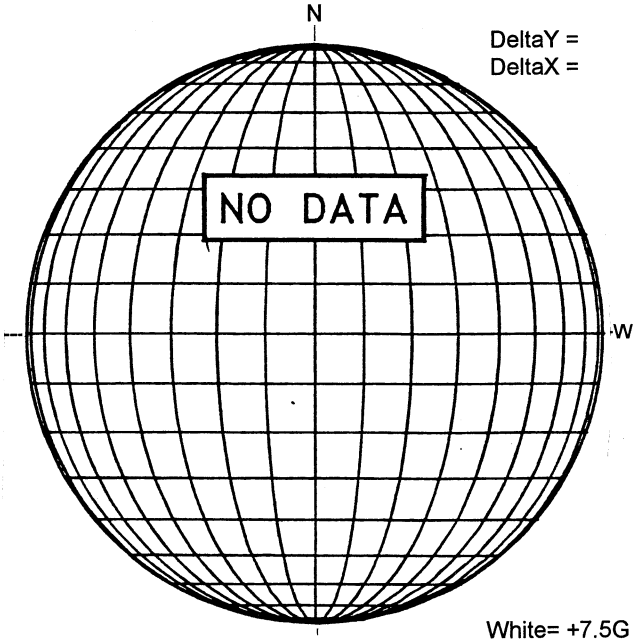
STANFORD MAGNETOGRAM

Solid = +
Dashed = -



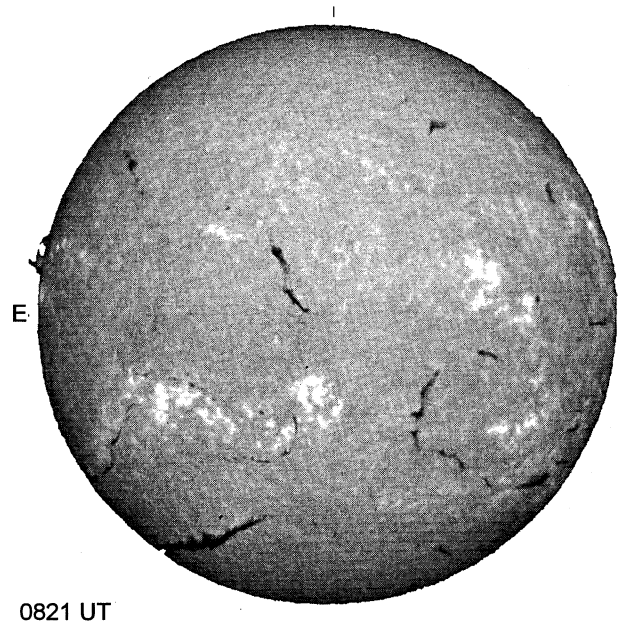
MT. WILSON MAGNETOGRAM

DeltaY =
DeltaX =



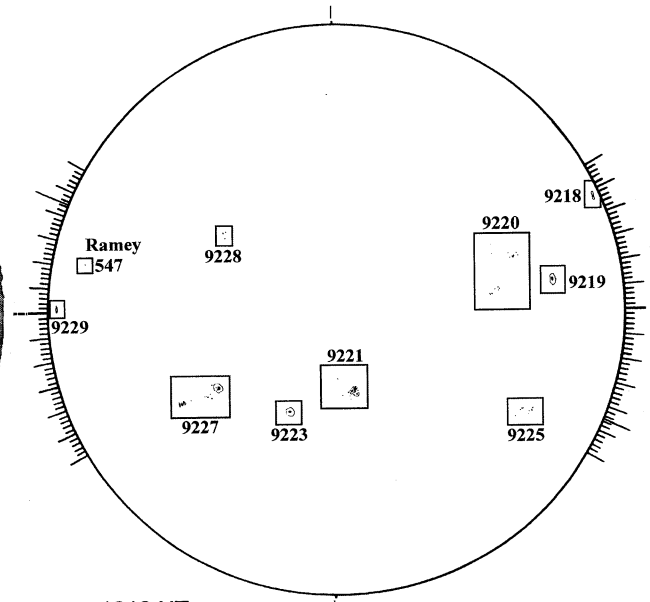
White= +7.5G
Black = -7.5G

MEUDON H-ALPHA



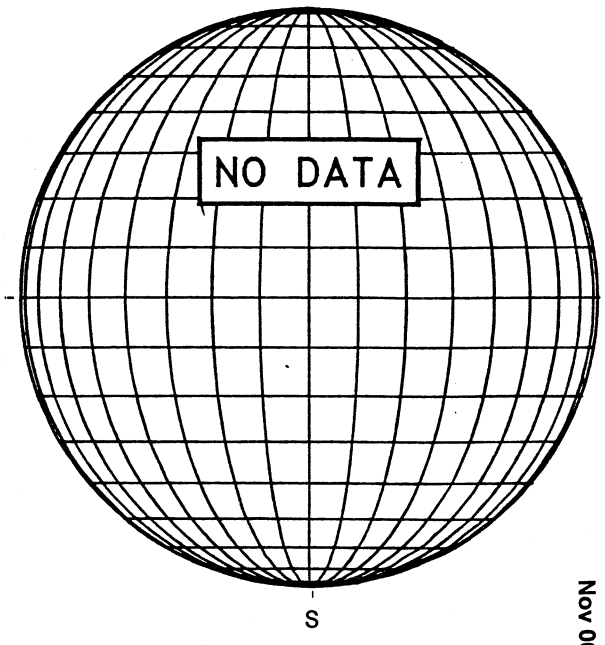
0821 UT

RAMEY SUNSPOTS



1218 UT

LOMNICKY PEAK CORONA (1.04 Radii)

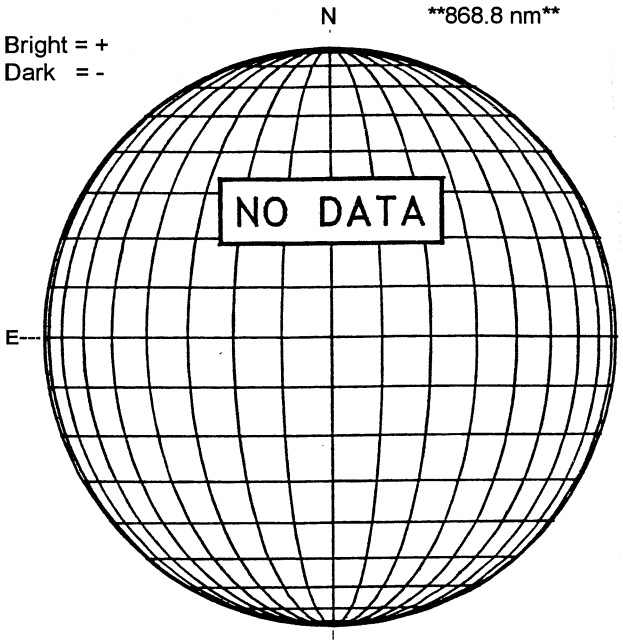


NOVEMBER 11, 2000 (P= 22.38, Bo = 3.27, Lo = 169.31)

KITT PEAK MAGNETOGRAM

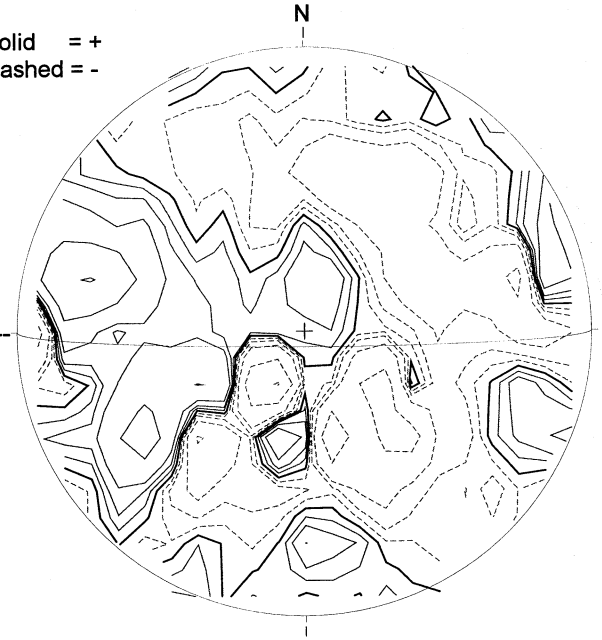
868.8 nm

Bright = +
Dark = -



STANFORD MAGNETOGRAM

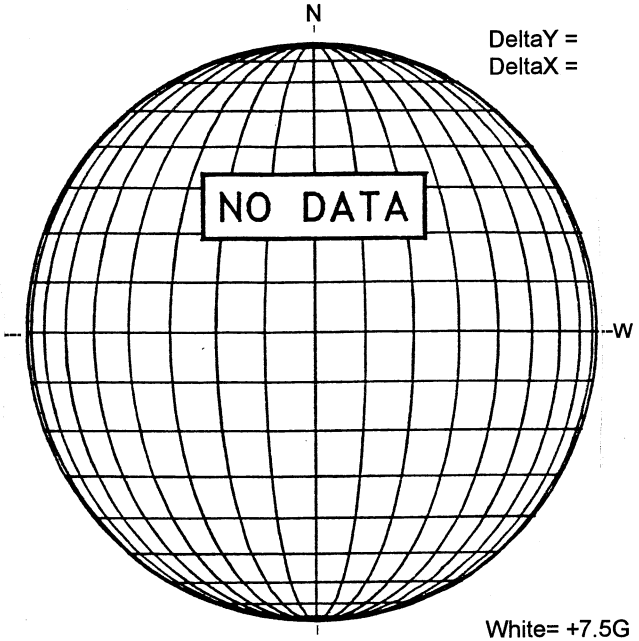
Solid = +
Dashed = -



2108 UT

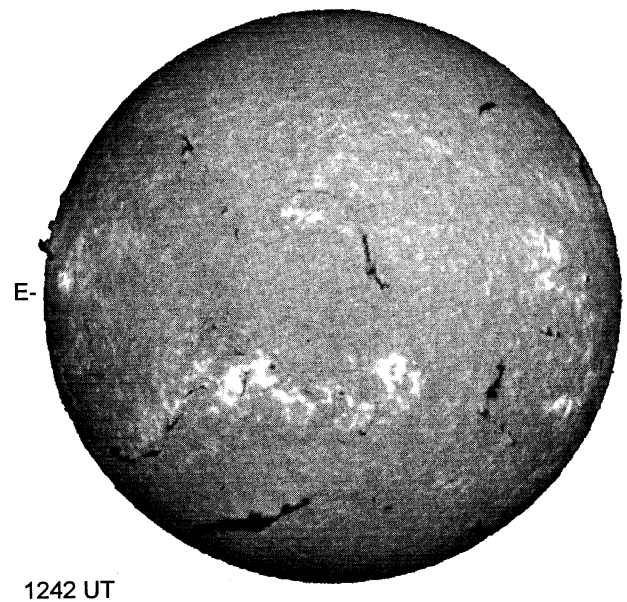
MT. WILSON MAGNETOGRAM

DeltaY =
DeltaX =



White= +7.5G
Black = -7.5G

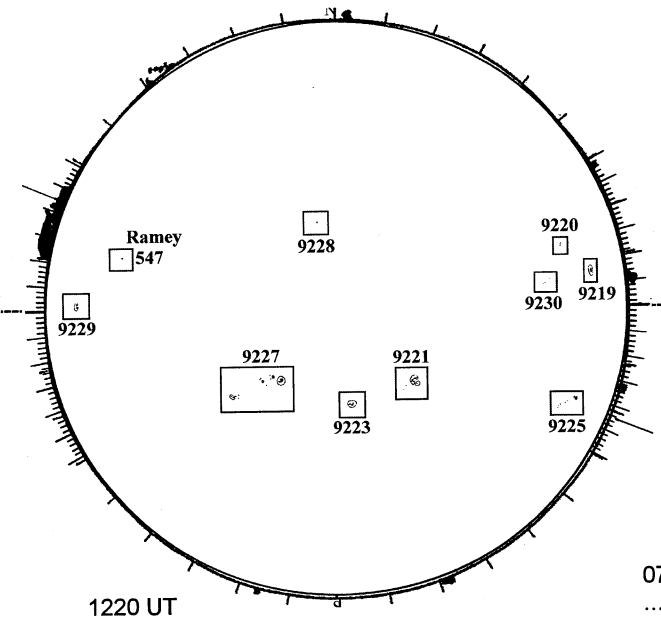
MEUDON H-ALPHA



1242 UT

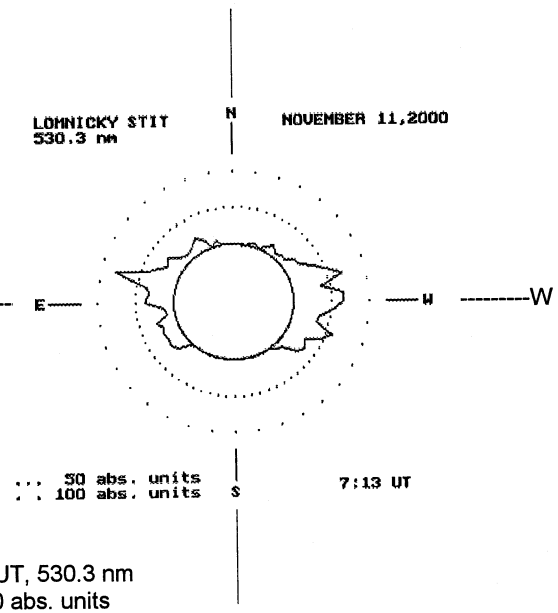
S

RAMEY SUNSPOTS



1220 UT
0713 UT LOMN Prom

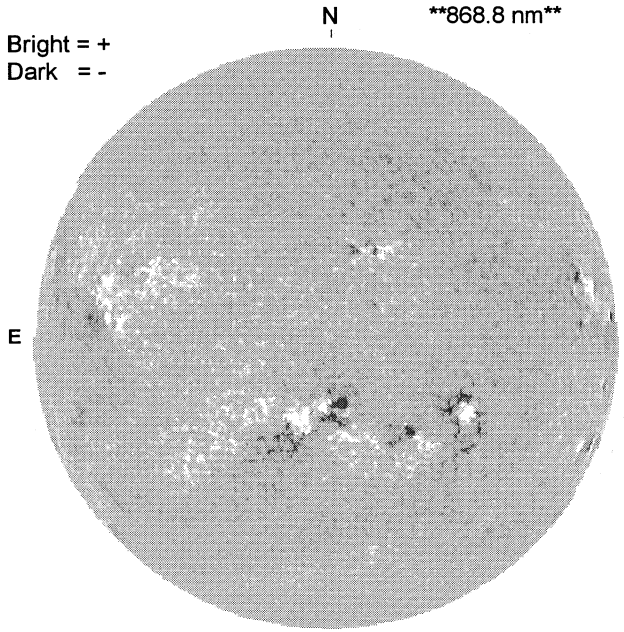
SACRAMENTO PEAK CORONA (1.15 Radii)



0713 UT, 530.3 nm
.... 50 abs. units
. . 100 abs. units

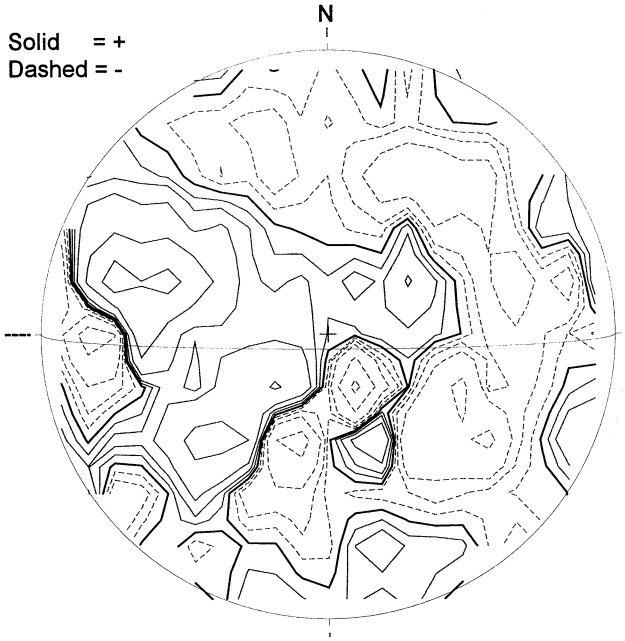
NOVEMBER 12, 2000 (P= 22.13, Bo = 3.16, Lo = 156.13)

KITT PEAK MAGNETOGRAM



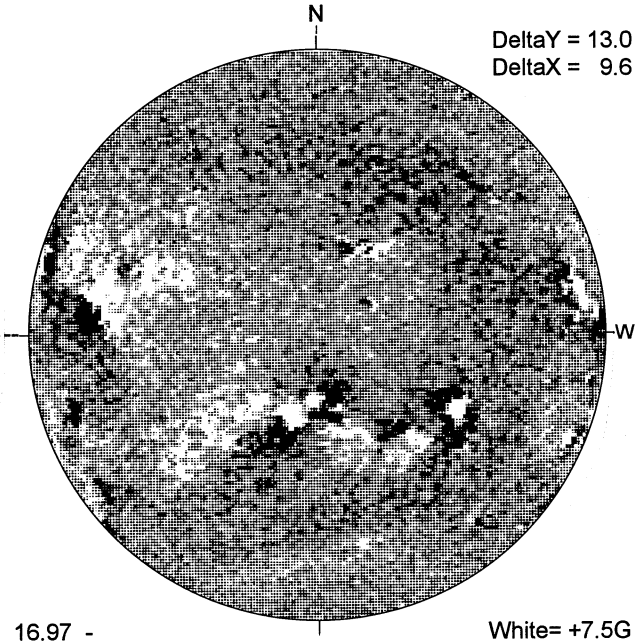
1625 UT

STANFORD MAGNETOGRAM



2124 UT

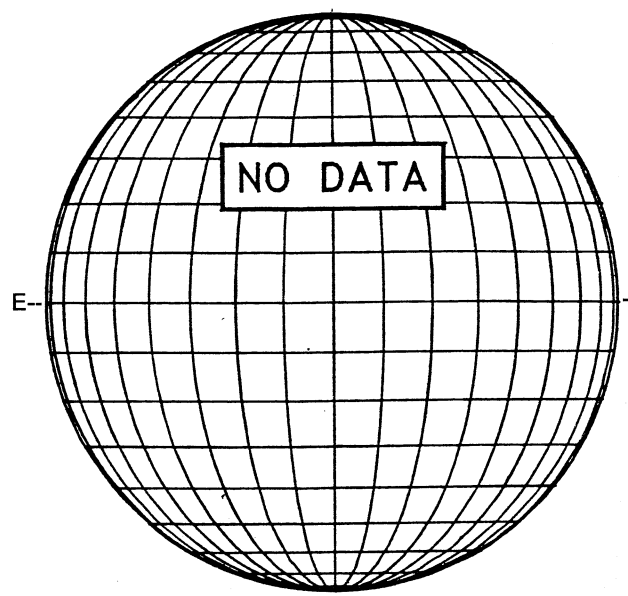
MT. WILSON MAGNETOGRAM



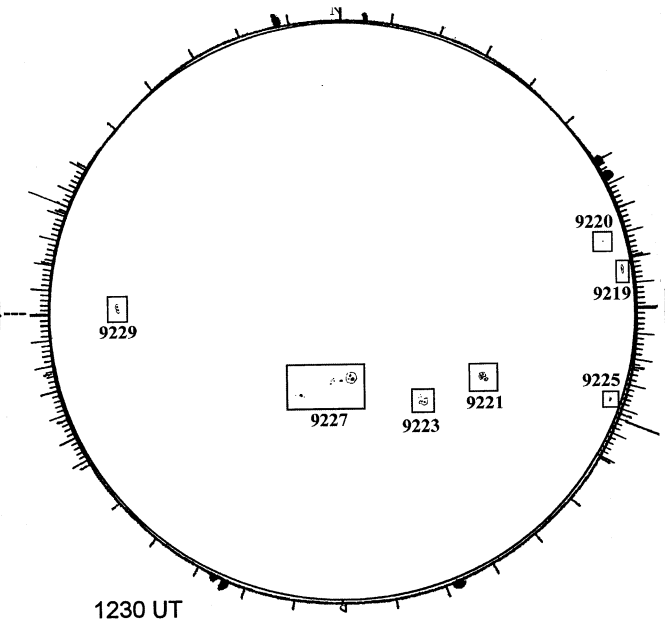
16.97 -
17.94 UT

White= +7.5G
Black = -7.5G

MEUDON H-ALPHA

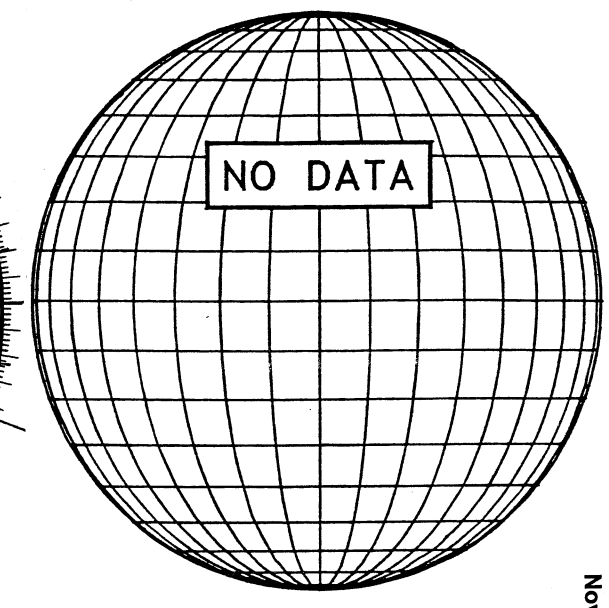


RAMEY SUNSPOTS



1230 UT
1018 UT LOMN Prom

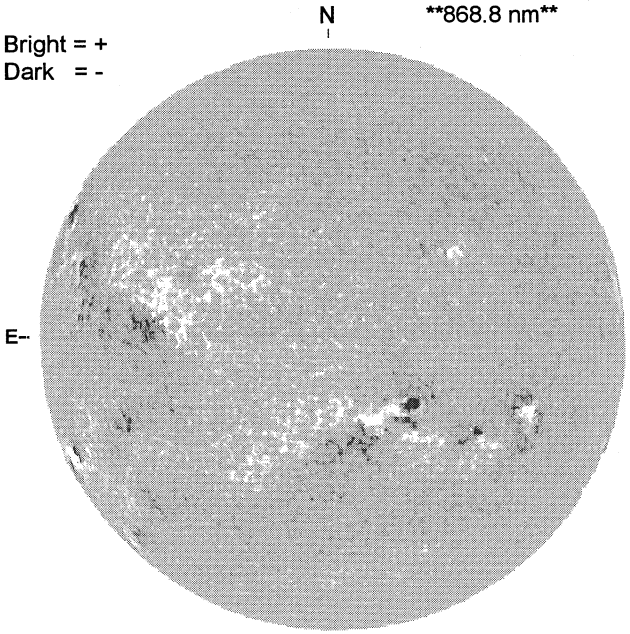
SACRAMENTO PEAK CORONA (1.15 Radii)



NOVEMBER 13, 2000 (P= 21.87, Bo = 3.04, Lo = 142.95)

KITT PEAK MAGNETOGRAM

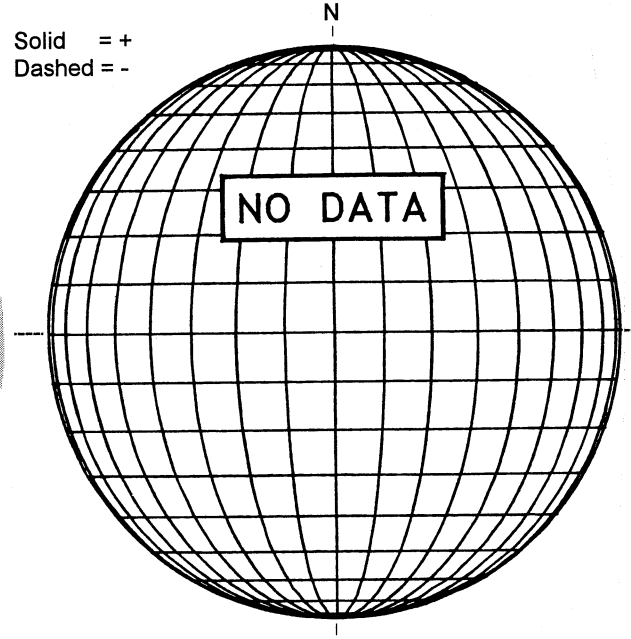
Bright = +
Dark = -



1619 UT

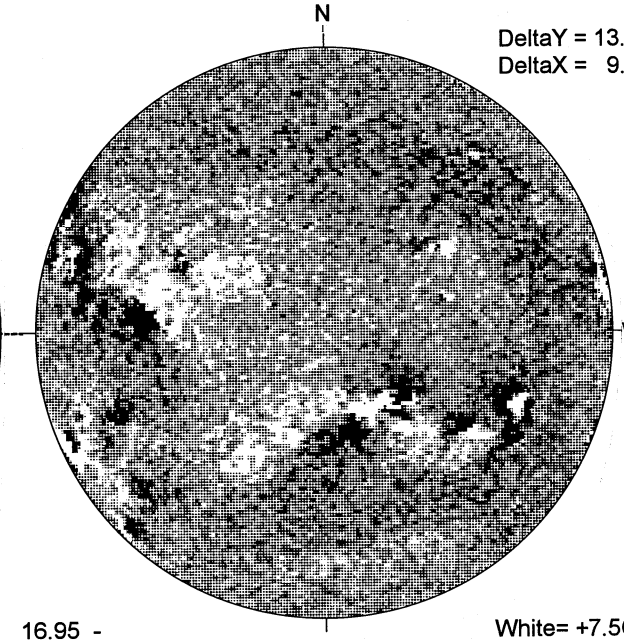
STANFORD MAGNETOGRAM

Solid = +
Dashed = -



MT. WILSON MAGNETOGRAM

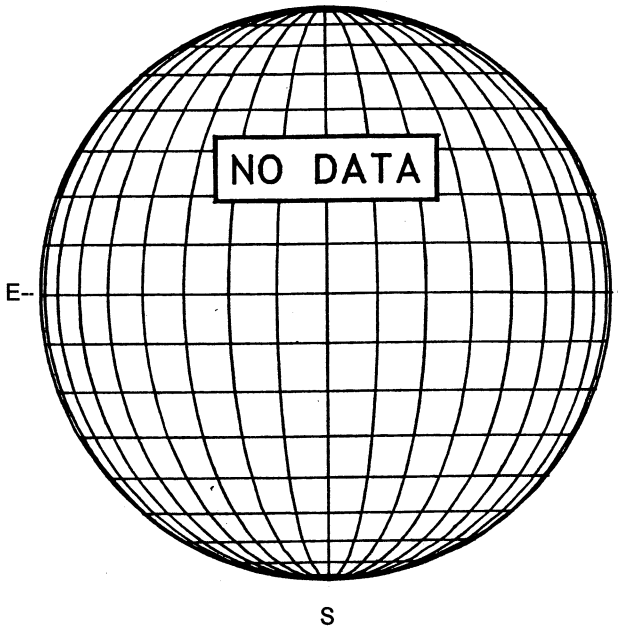
DeltaY = 13.0
DeltaX = 9.6



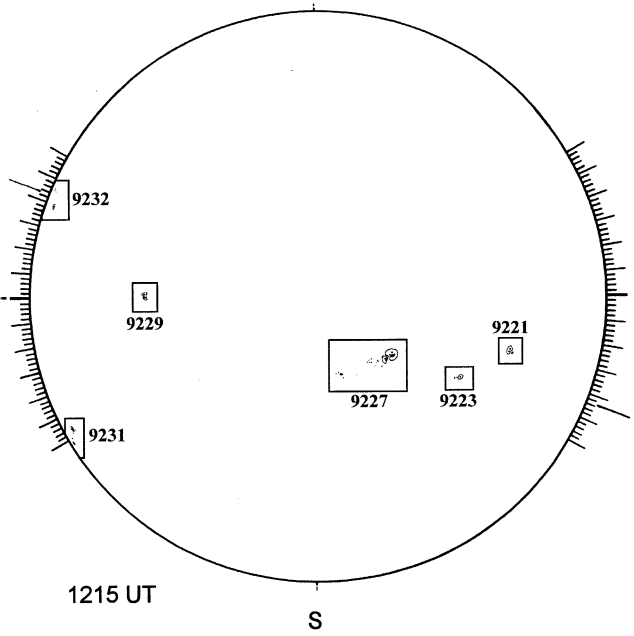
16.95 -
17.91 UT

White= +7.5G
Black = -7.5G

MEUDON H-ALPHA

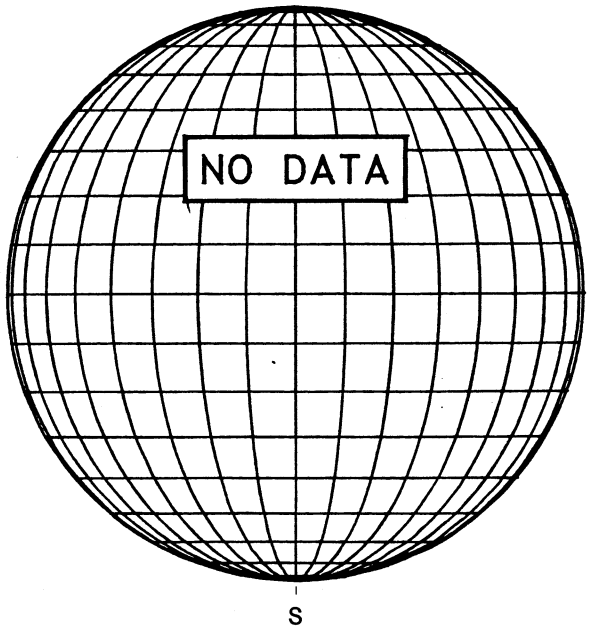


RAMEY SUNSPOT



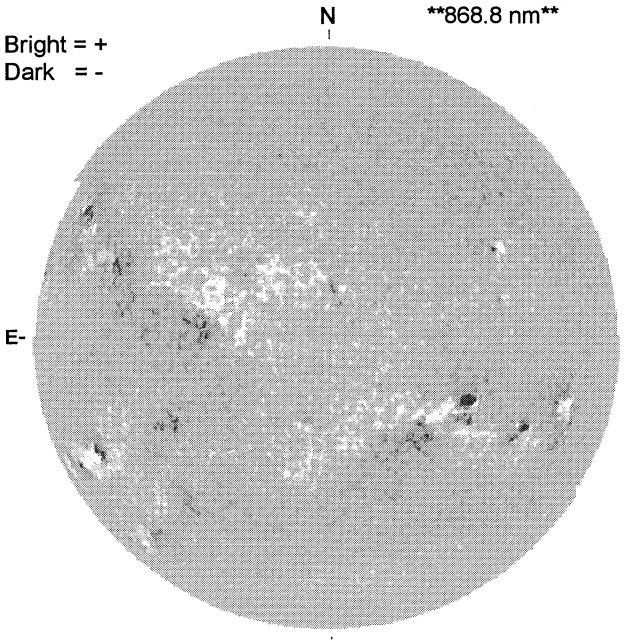
1215 UT

SACRAMENTO PEAK CORONA (1.15 Radii)

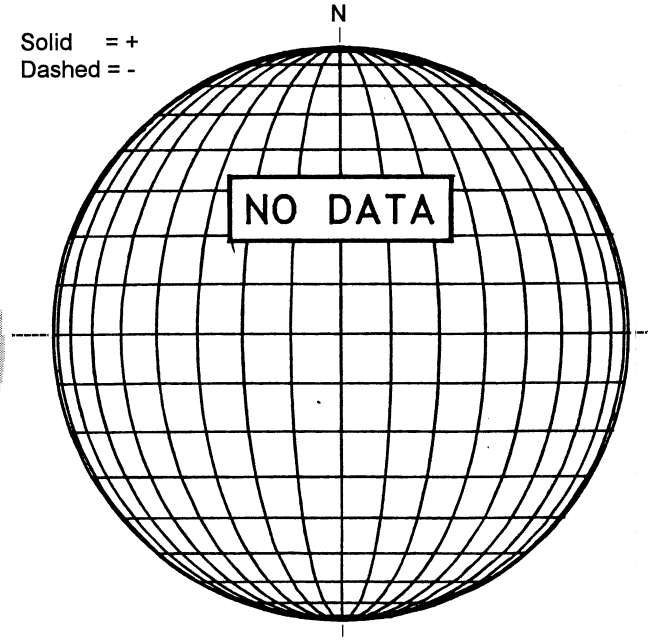


NOVEMBER 14, 2000 (P= 21.61, Bo = 2.93, Lo = 129.76)

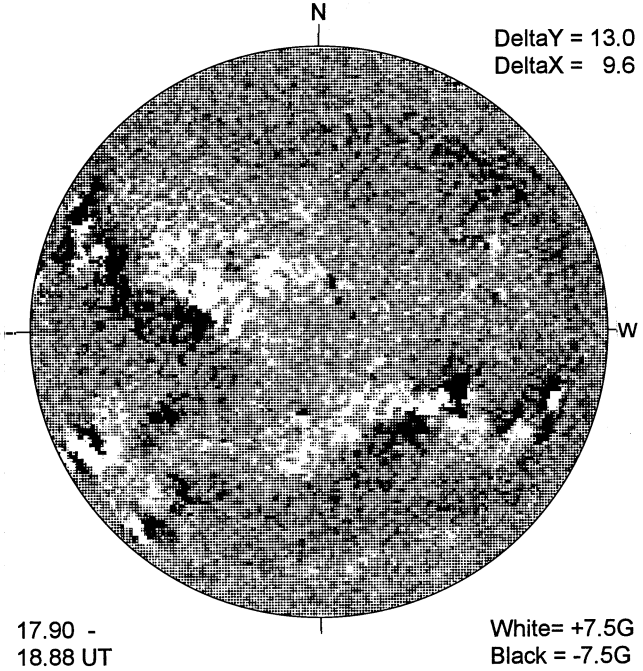
KITT PEAK MAGNETOGRAM



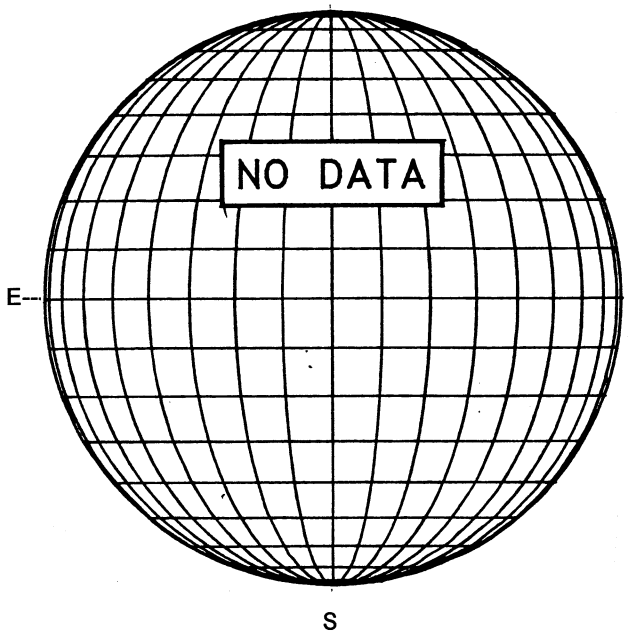
STANFORD MAGNETOGRAM



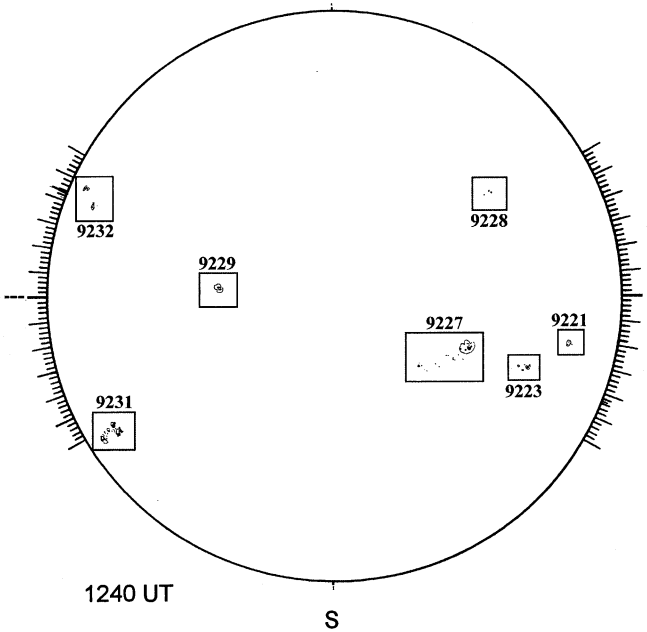
MT. WILSON MAGNETOGRAM



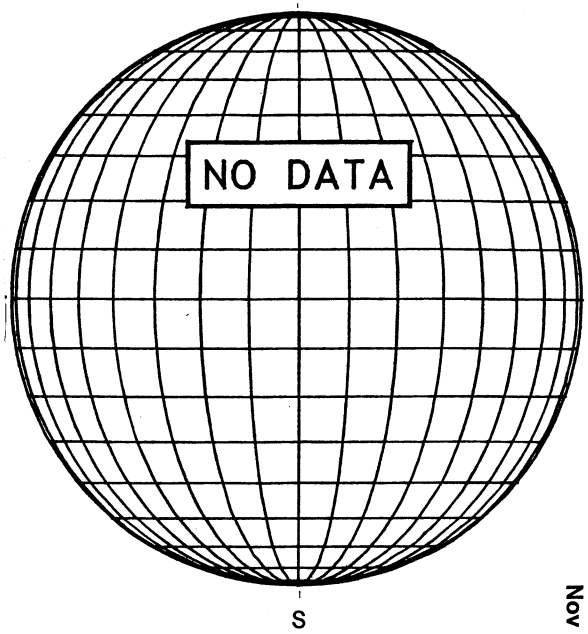
MEUDON H-ALPHA



RAMEY SUNSPOT

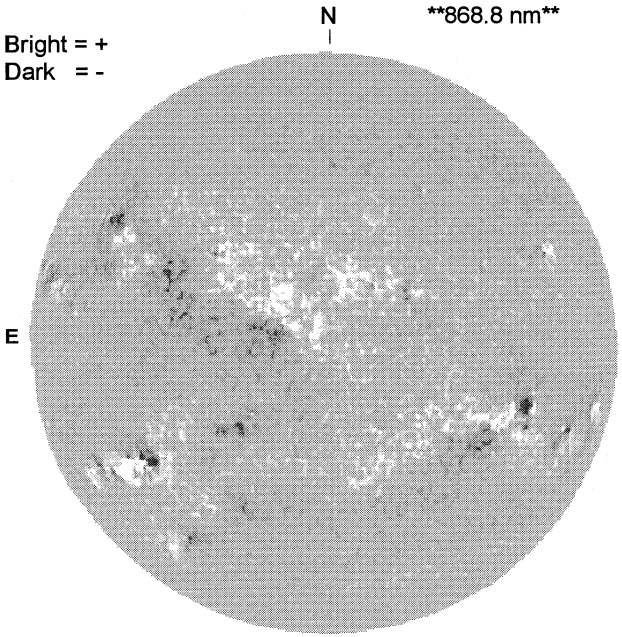


SACRAMENTO PEAK CORONA (1.15 Radii)----

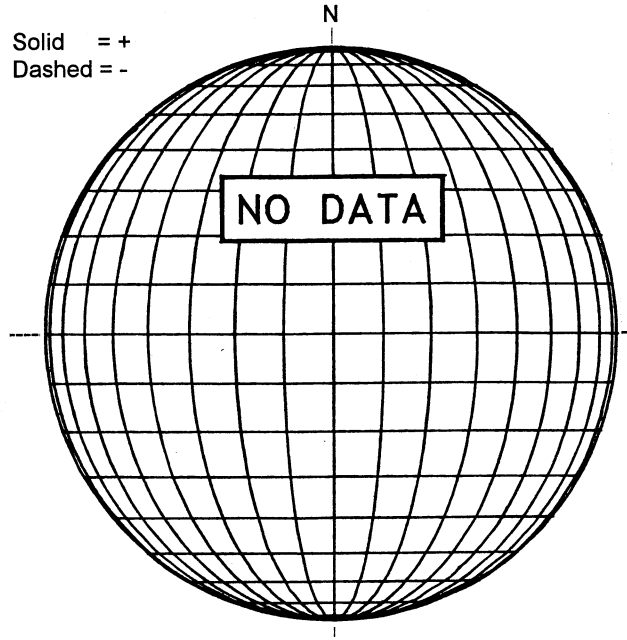


NOVEMBER 15, 2000 (P= 21.33, Bo = 2.81, Lo = 116.58)

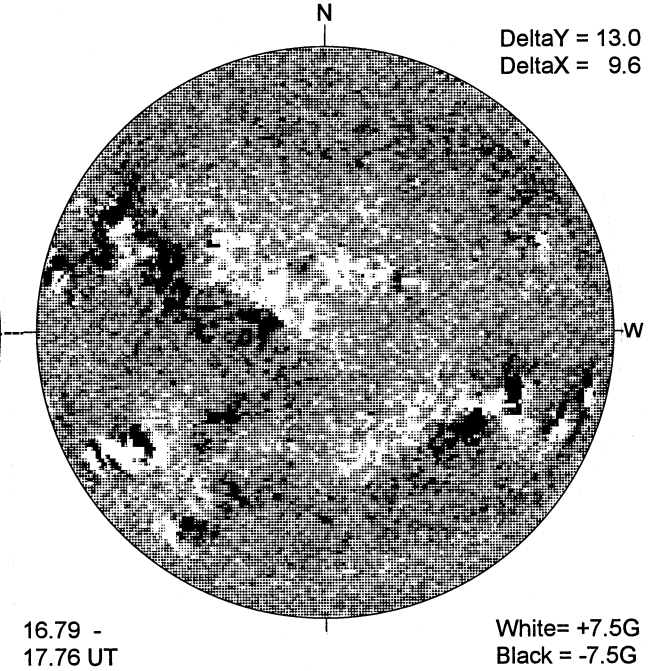
KITT PEAK MAGNETOGRAM



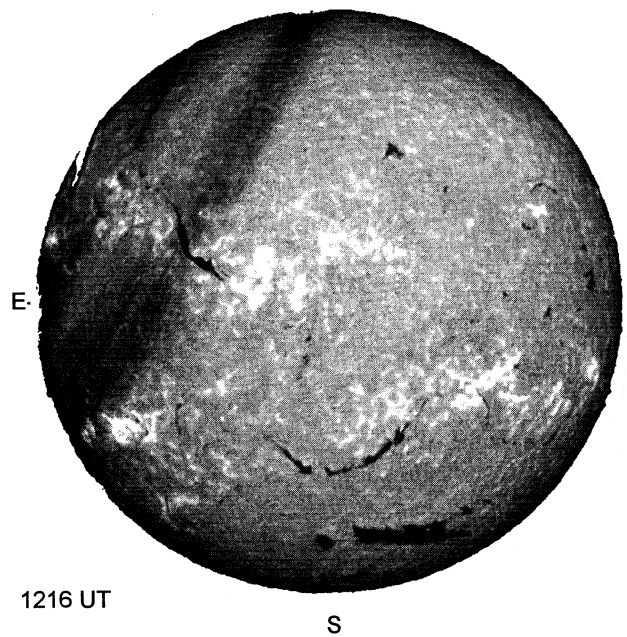
STANFORD MAGNETOGRAM



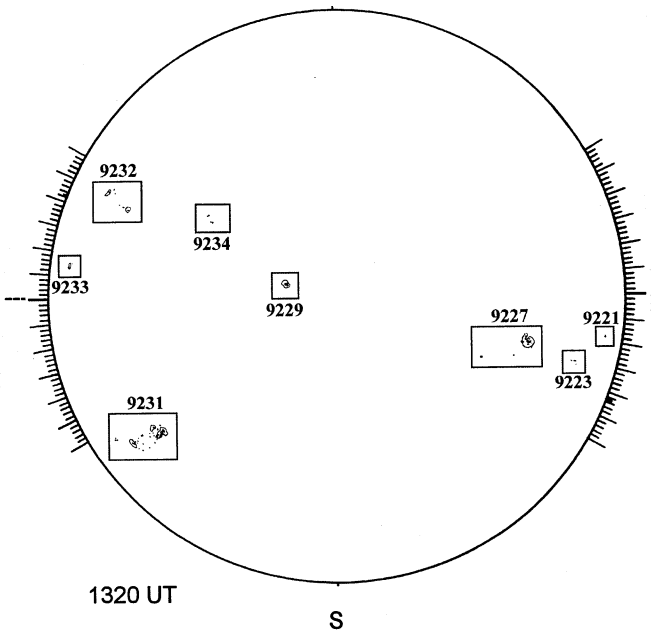
MT. WILSON MAGNETOGRAM



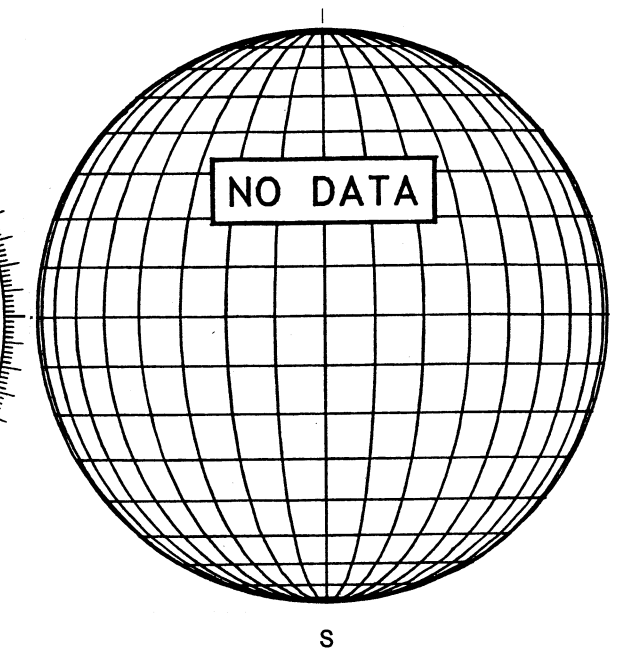
MEUDON H-ALPHA



RAMEY SUNSPOT

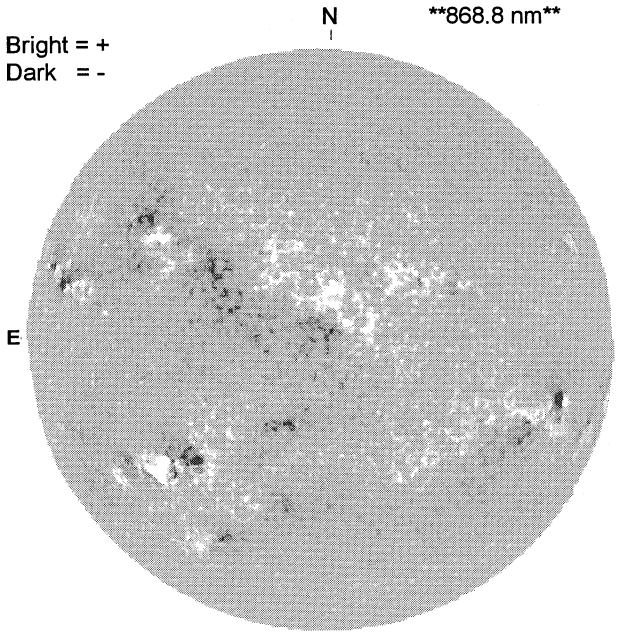


SACRAMENTO PEAK CORONA (1.15 Radii)

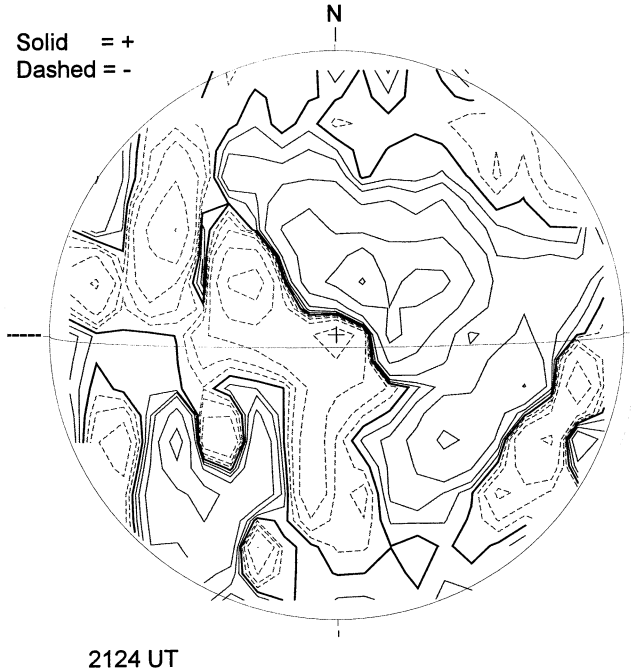


NOVEMBER 16, 2000 (P= 21.05, Bo = 2.69, Lo = 103.40)

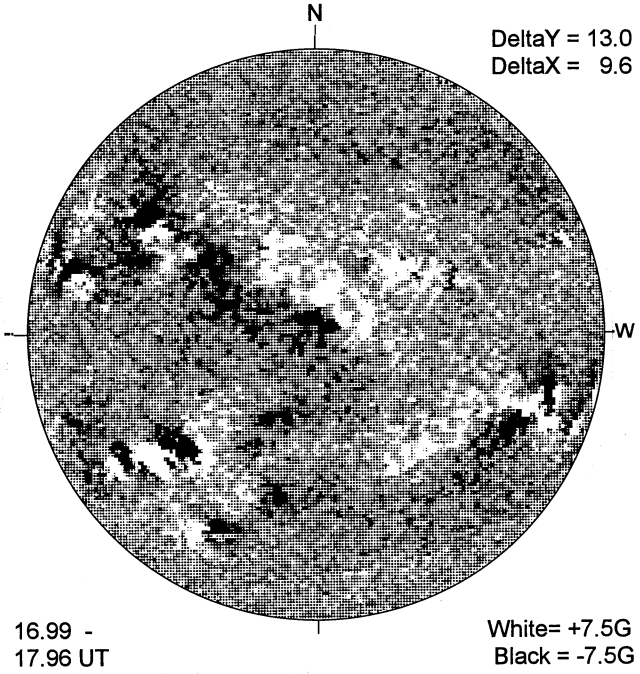
KITT PEAK MAGNETOGRAM



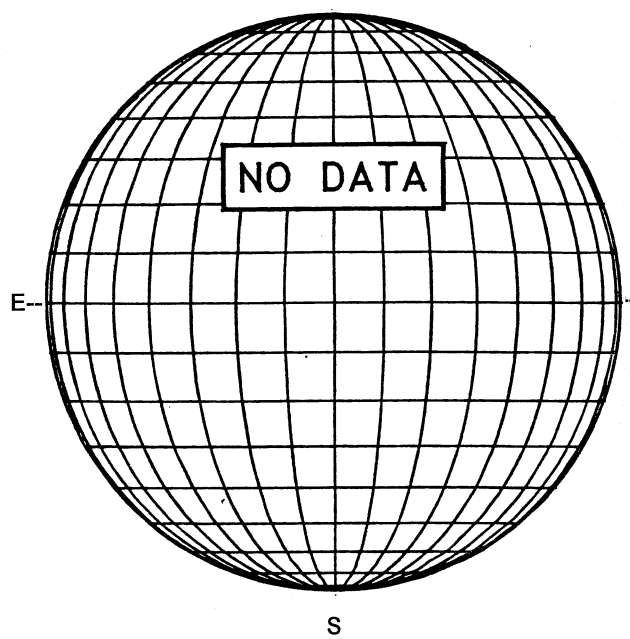
STANFORD MAGNETOGRAM



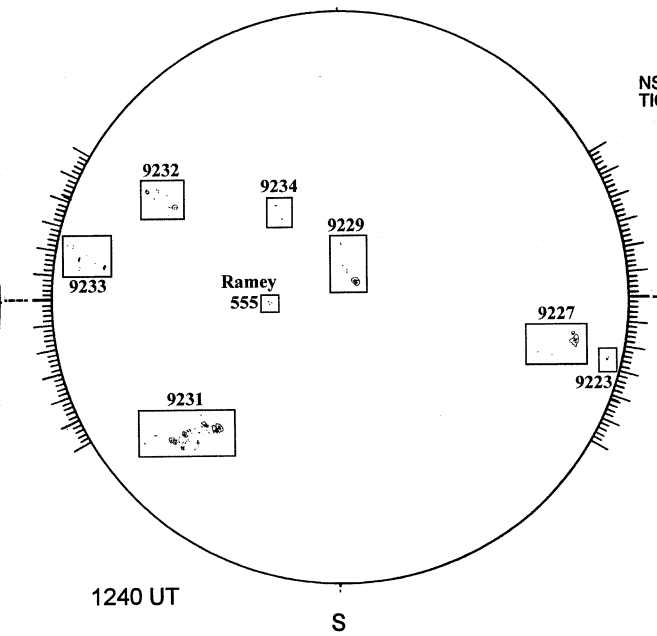
MT. WILSON MAGNETOGRAM



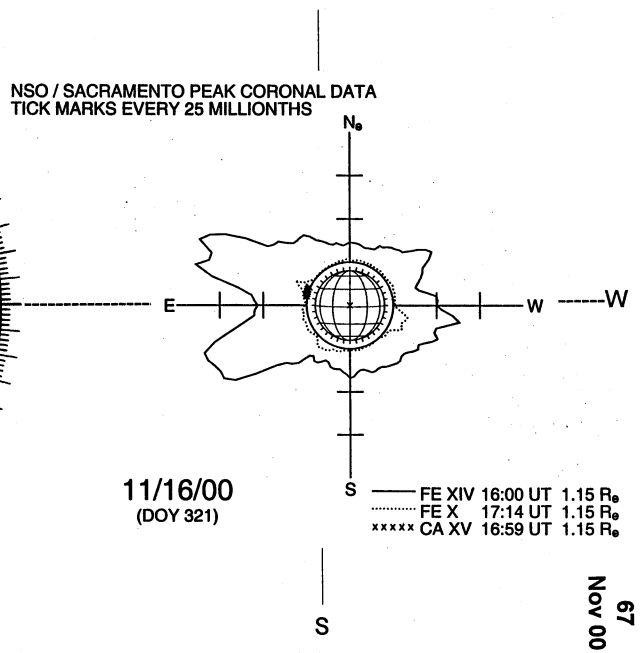
MEUDON H-ALPHA



RAMEY SUNSPOT



SACRAMENTO PEAK CORONA (1.15 Radii)

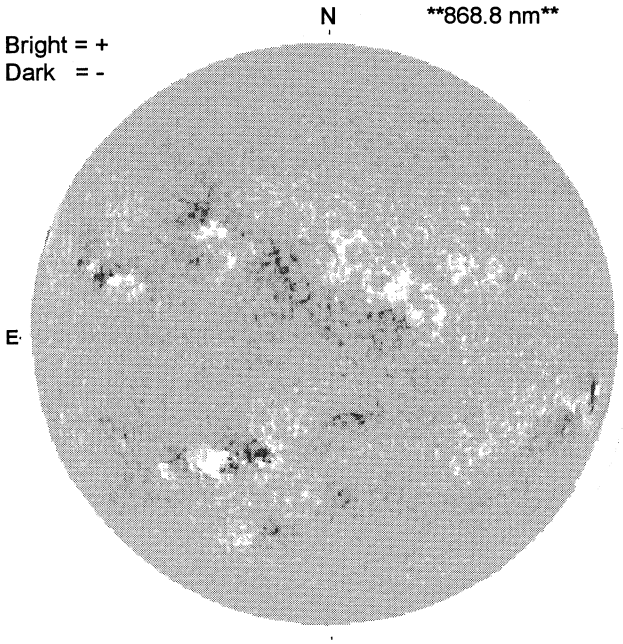


NOVEMBER 17, 2000 (P= 20.76, Bo = 2.57, Lo = 90.21)

KITT PEAK MAGNETOGRAM

868.8 nm

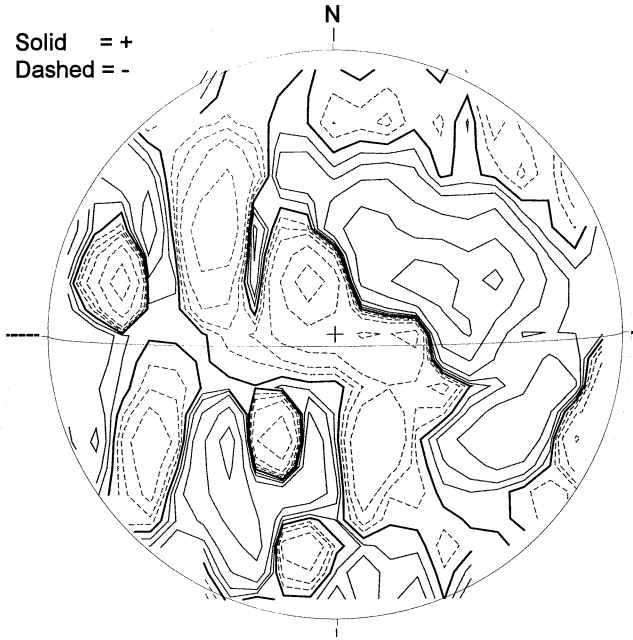
Bright = +
Dark = -



1605 UT

STANFORD MAGNETOGRAM

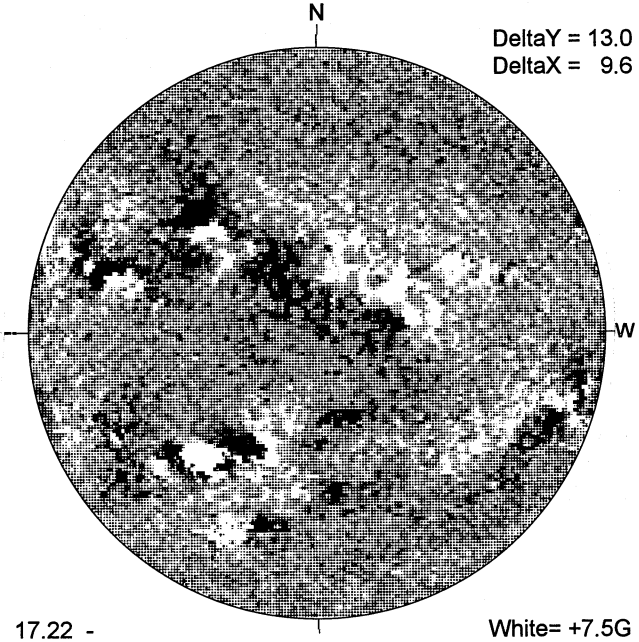
Solid = +
Dashed = -



2206 UT

MT. WILSON MAGNETOGRAM

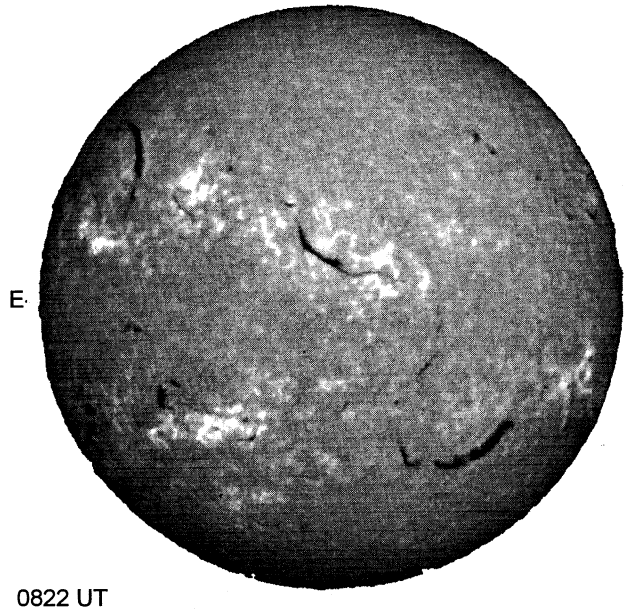
DeltaY = 13.0
DeltaX = 9.6



17.22 -
18.19 UT

White= +7.5G
Black = -7.5G

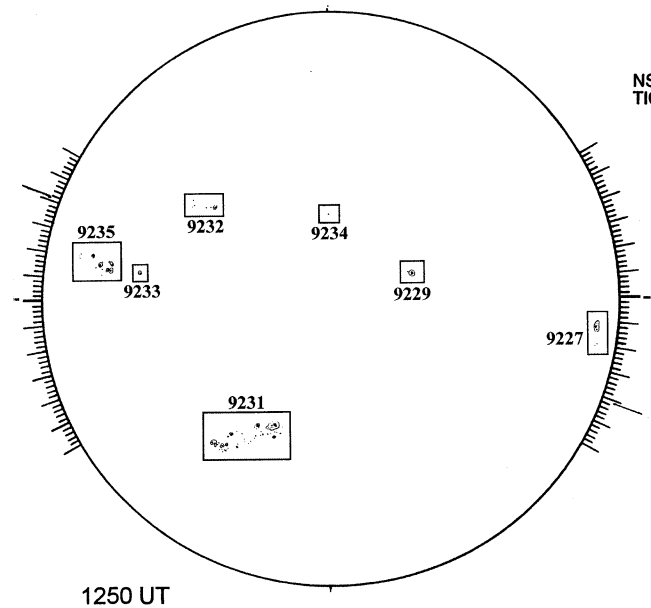
MEUDON H-ALPHA



0822 UT

S

RAMEY SUNSPOT

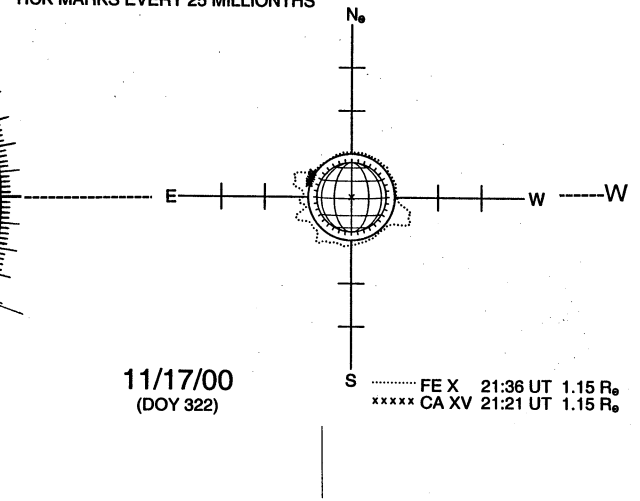


1250 UT

S

SACRAMENTO PEAK CORONA (1.15 Radii)

NSO / SACRAMENTO PEAK CORONAL DATA
TICK MARKS EVERY 25 MILLIONTHS



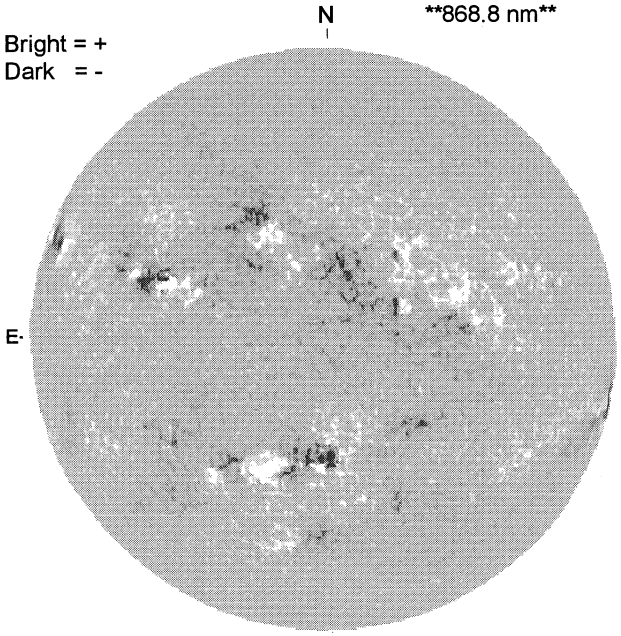
11/17/00
(DOY 322)

FE X 21:36 UT 1.15 $R_\odot$
CA XV 21:21 UT 1.15 $R_\odot$

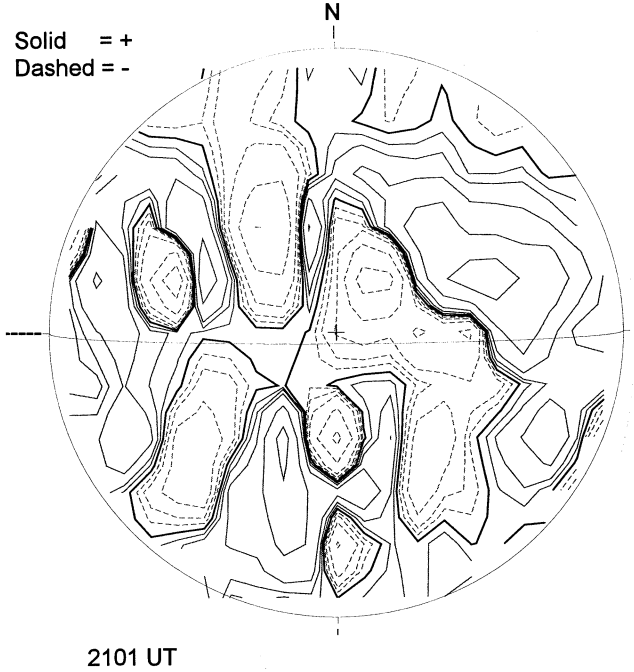
S

NOVEMBER 18, 2000 (P= 20.47, Bo = 2.45, Lo = 77.03)

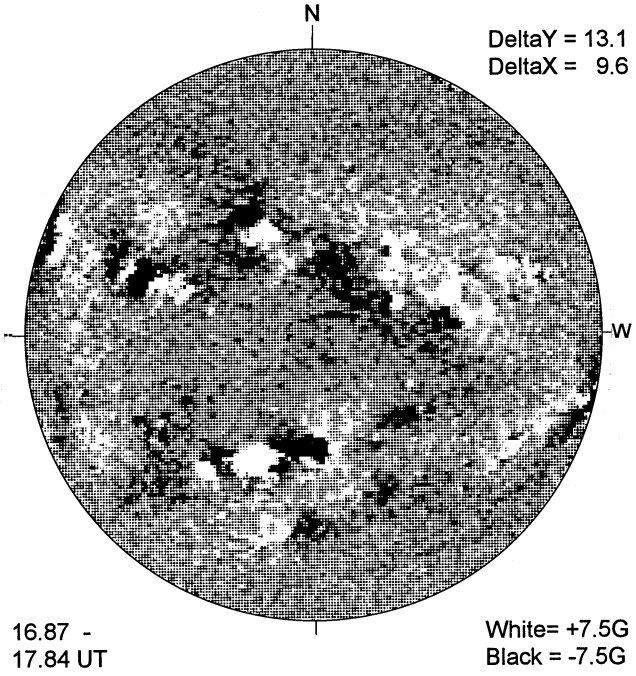
KITT PEAK MAGNETOGRAM



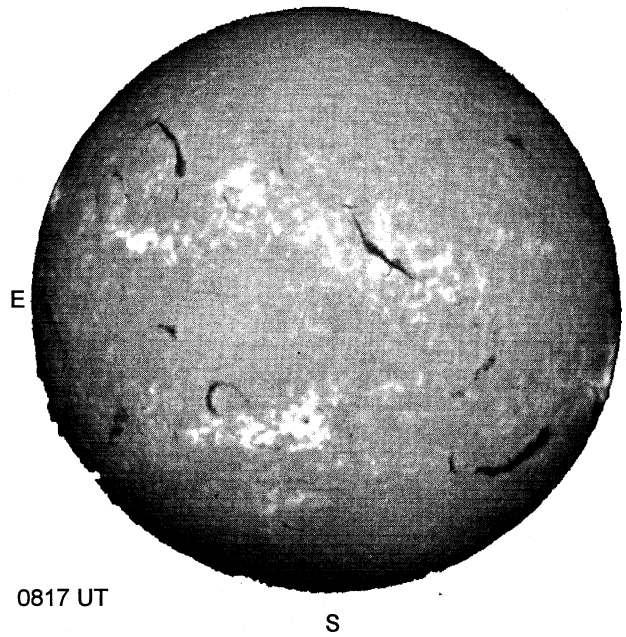
STANFORD MAGNETOGRAM



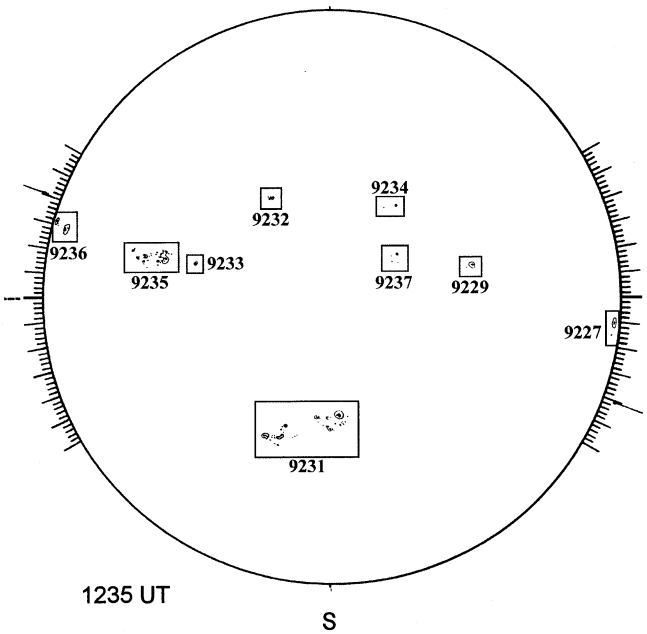
MT. WILSON MAGNETOGRAM



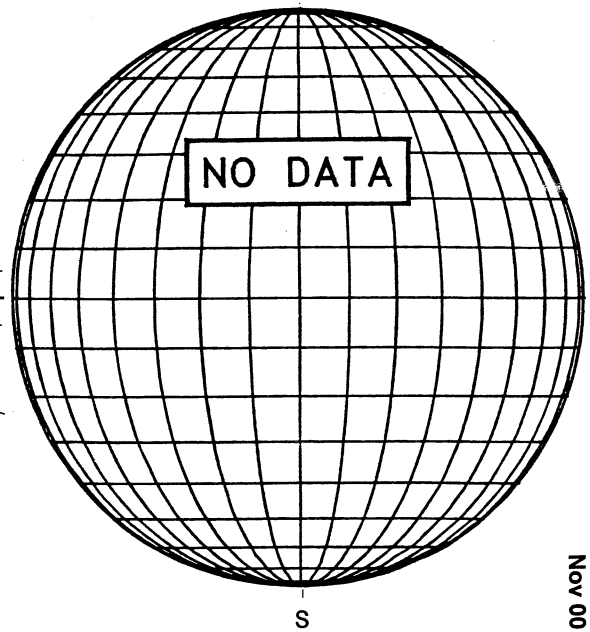
MEUDON H-ALPHA



RAMEY SUNSPOT

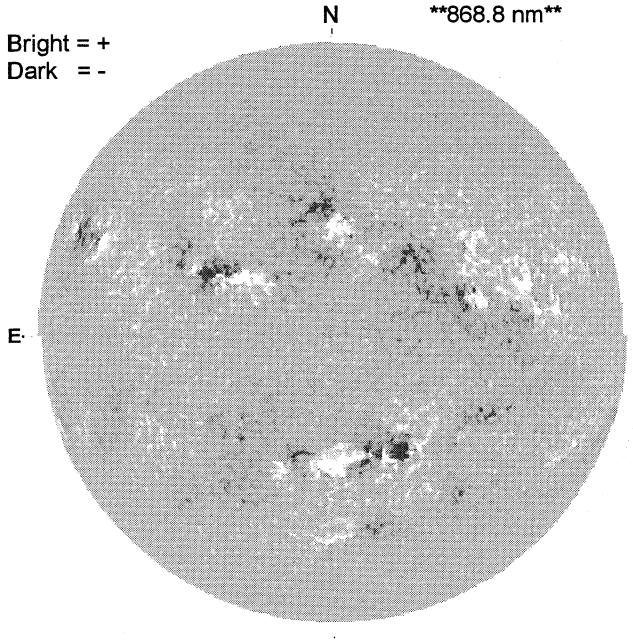


SACRAMENTO PEAK CORONA (1.15 Radii)

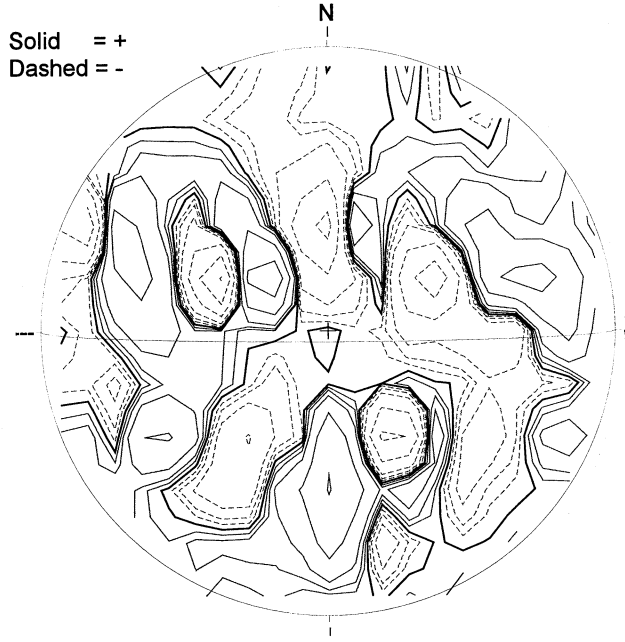


NOVEMBER 19, 2000 (P= 20.17, Bo = 2.33, Lo = 63.85)

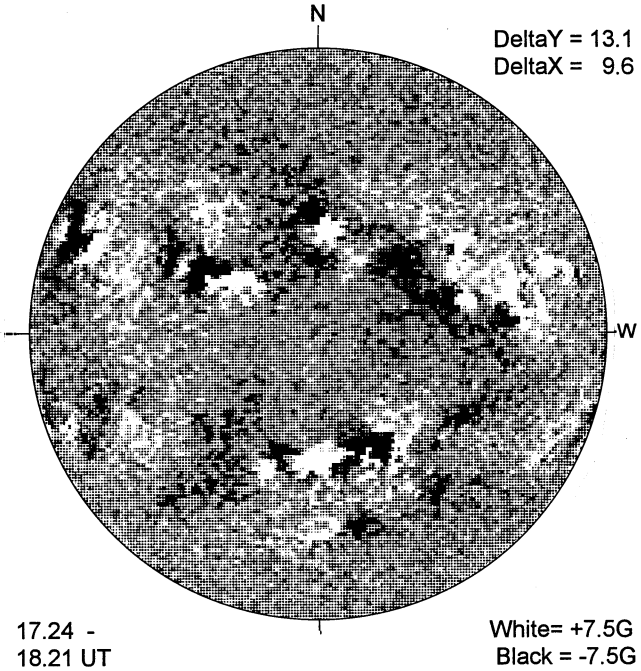
KITT PEAK MAGNETOGRAM



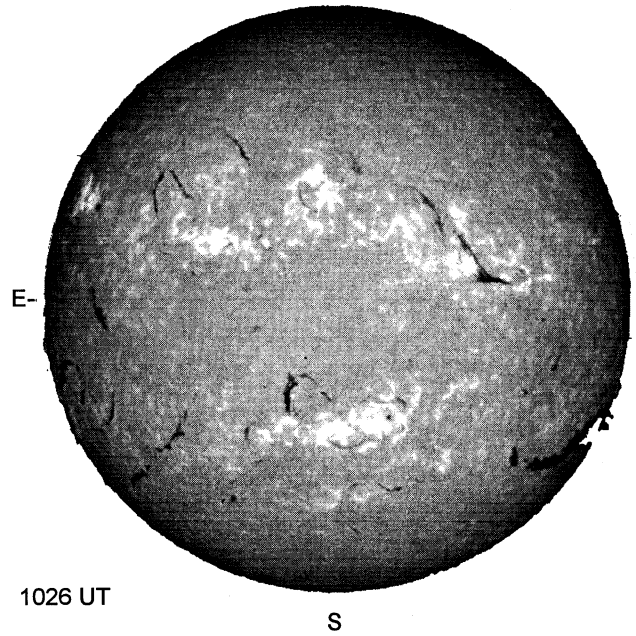
STANFORD MAGNETOGRAM



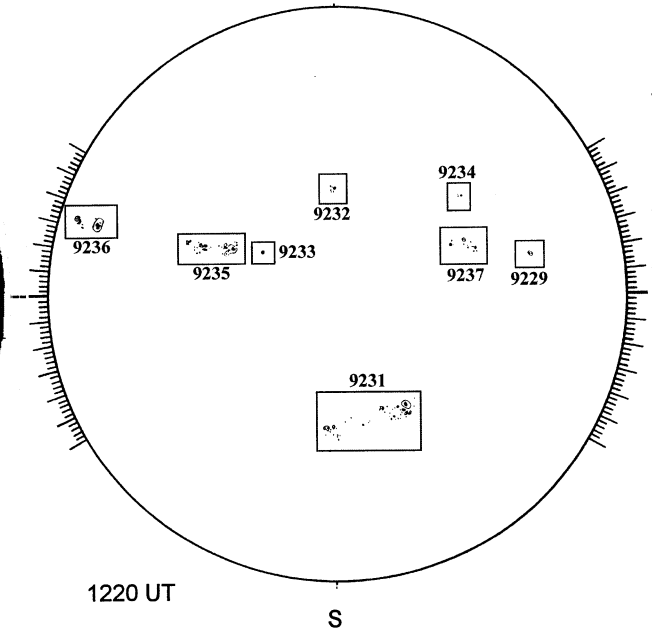
MT. WILSON MAGNETOGRAM



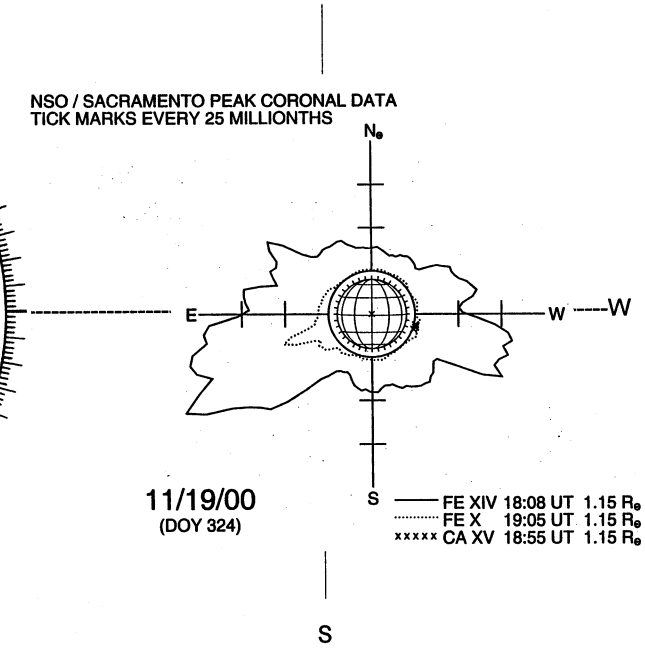
MEUDON H-ALPHA



RAMEY SUNSPOT

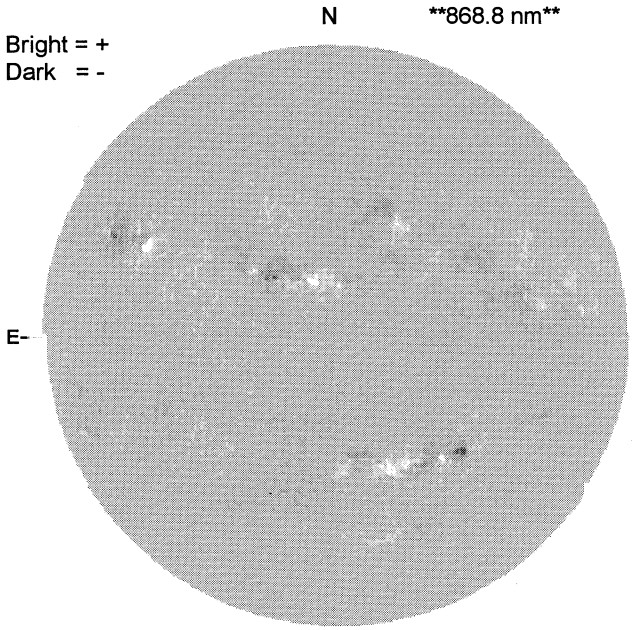


SACRAMENTO PEAK CORONA (1.15 Radii)

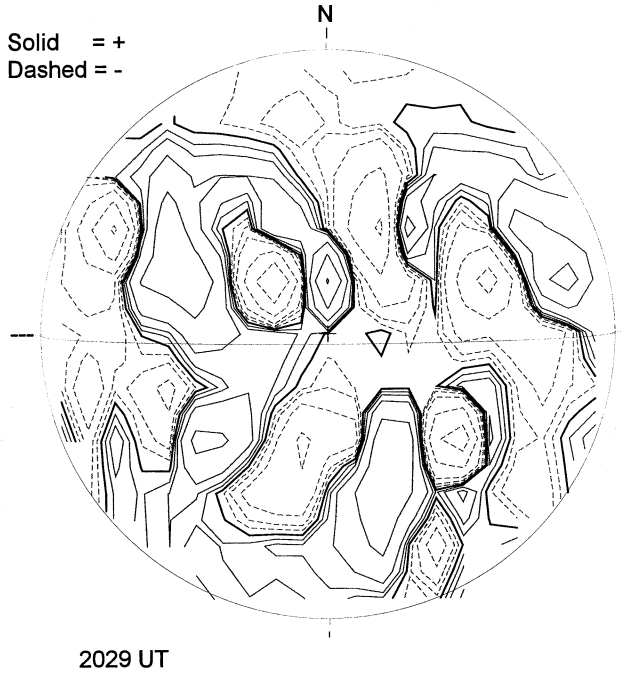


NOVEMBER 20, 2000 (P= 19.86, Bo = 2.21, Lo = 50.67)

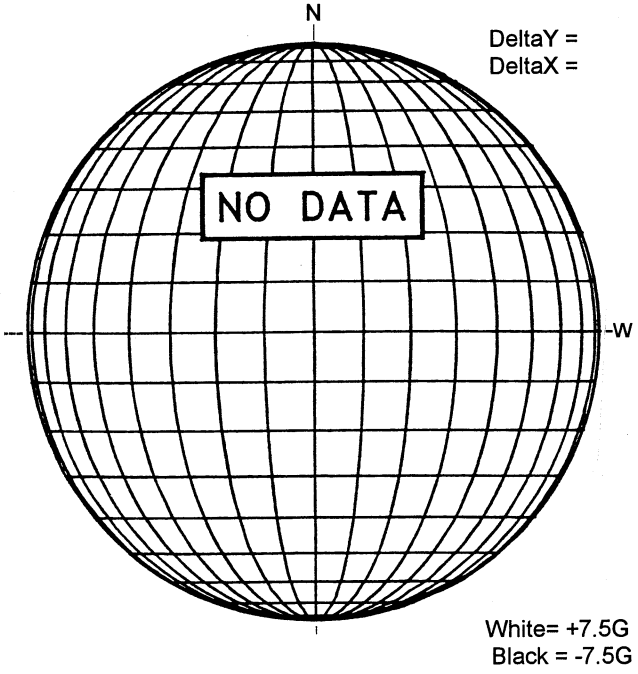
KITT PEAK MAGNETOGRAM



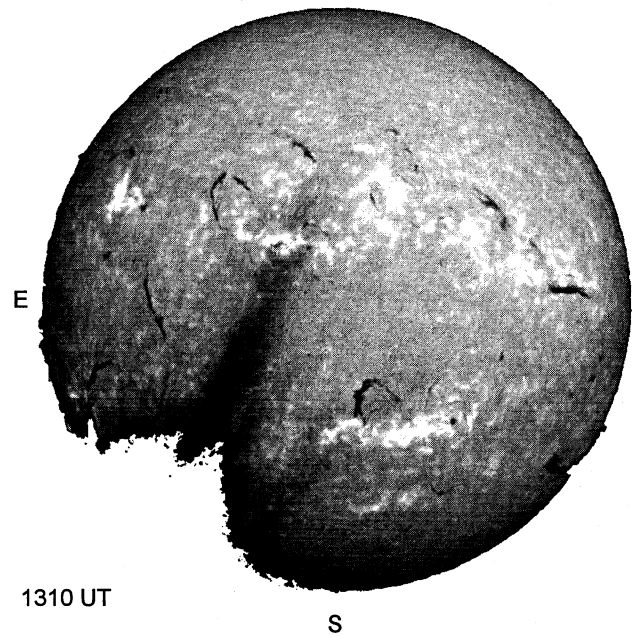
STANFORD MAGNETOGRAM



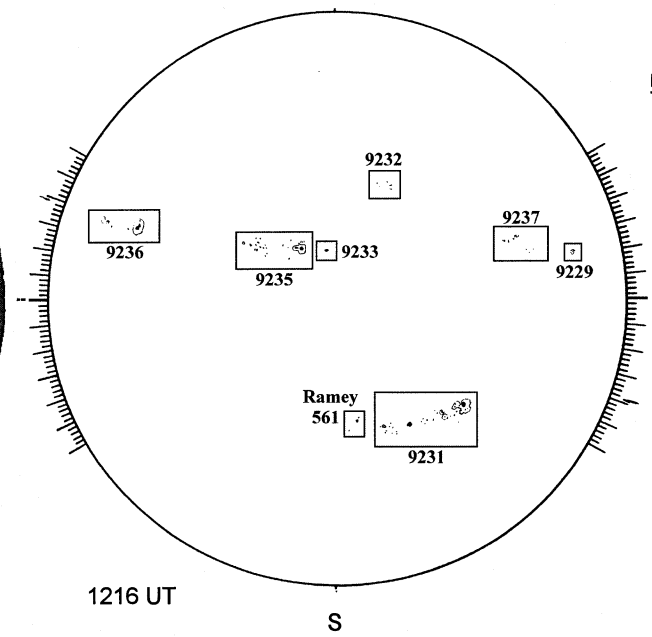
MT. WILSON MAGNETOGRAM



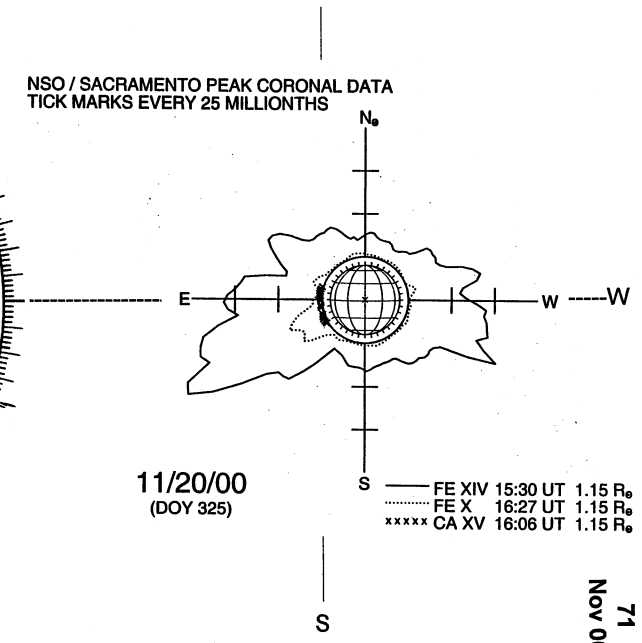
MEUDON H-ALPHA



RAMEY SUNSPOT



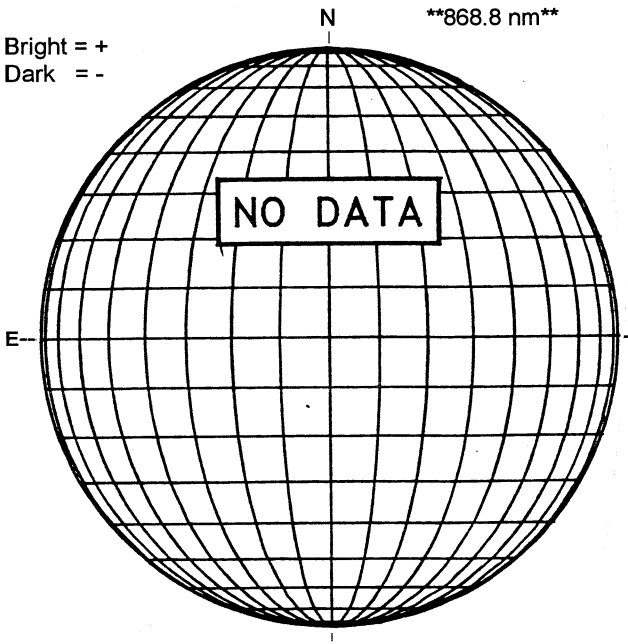
SACRAMENTO PEAK CORONA (1.15 Radii)----



NOVEMBER 21, 2000 (P= 19.54, Bo = 2.09, Lo = 37.49)

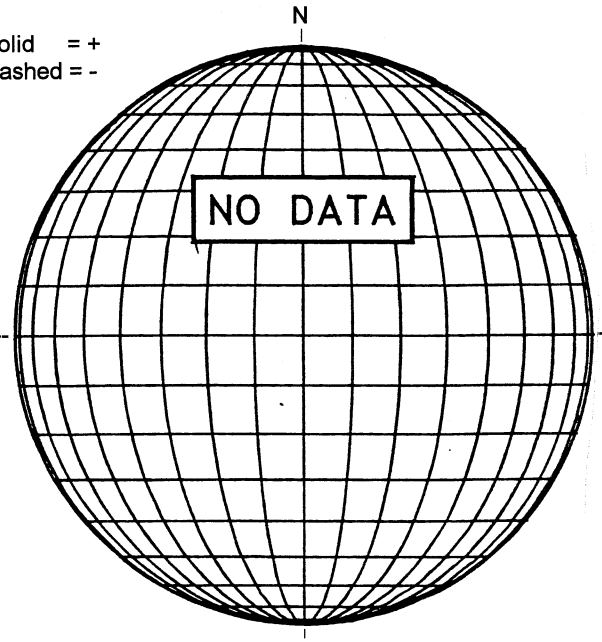
KITT PEAK MAGNETOGRAM

Bright = +
Dark = -



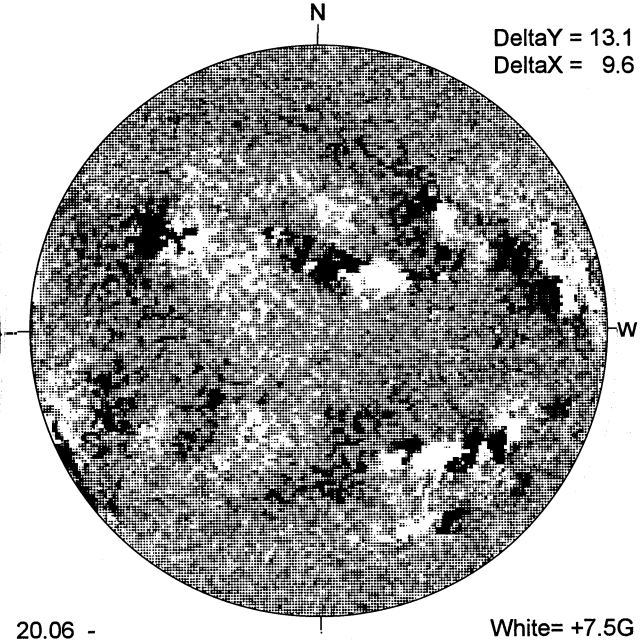
STANFORD MAGNETOGRAM

Solid = +
Dashed = -



MT. WILSON MAGNETOGRAM

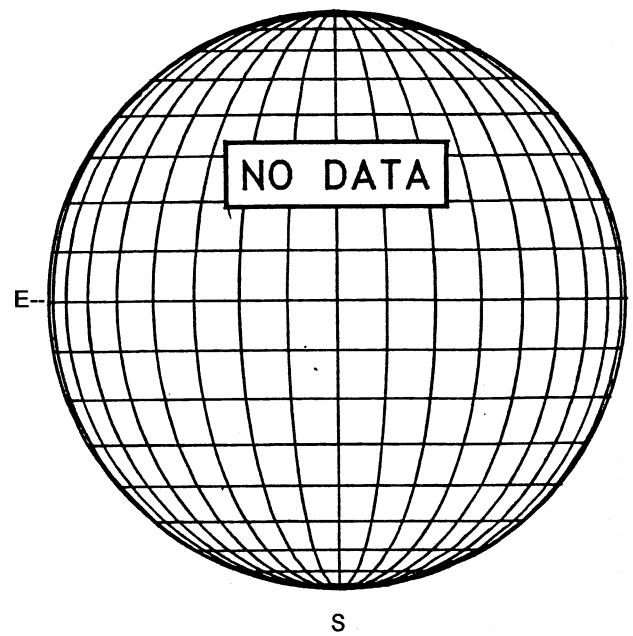
DeltaY = 13.1
DeltaX = 9.6



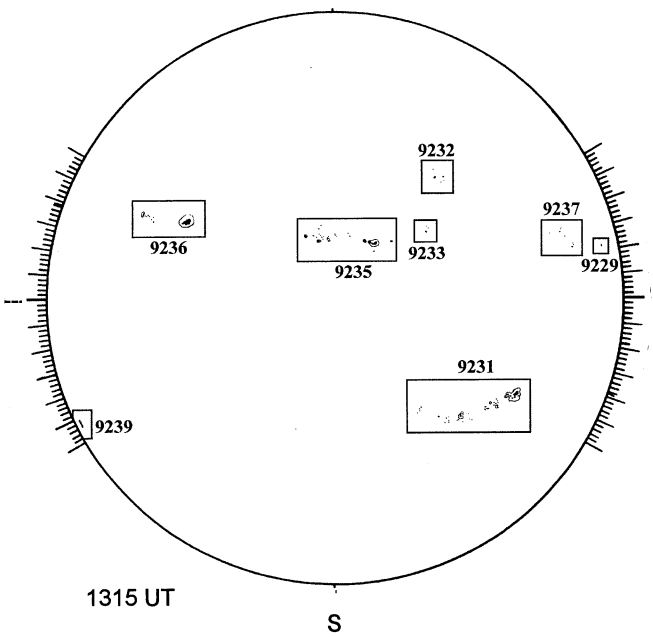
20.06 -
21.03 UT

White= +7.5G
Black = -7.5G

MEUDON H-ALPHA

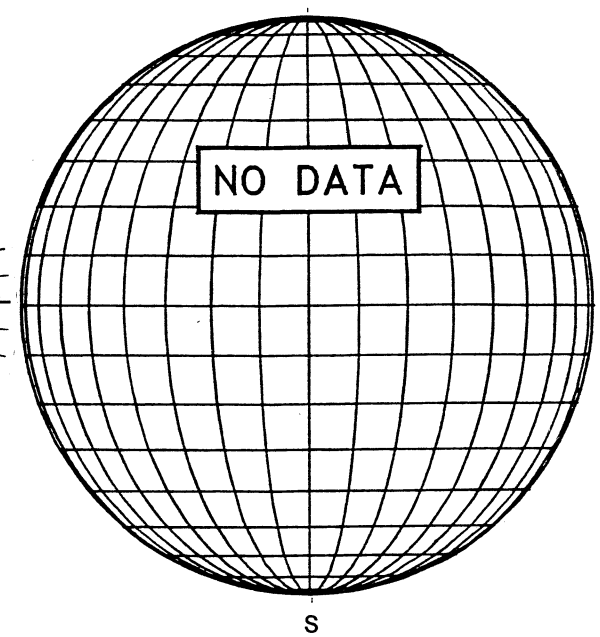


RAMEY SUNSPOT



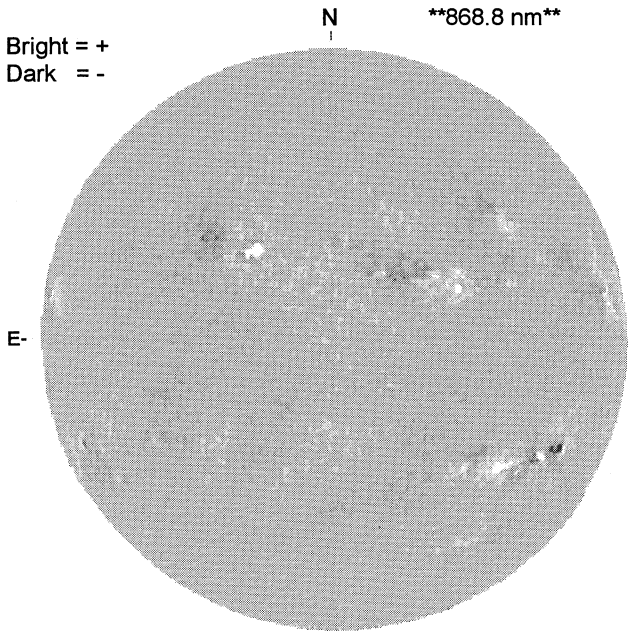
1315 UT

LOMNICKY PEAK CORONA (1.04 Radii)

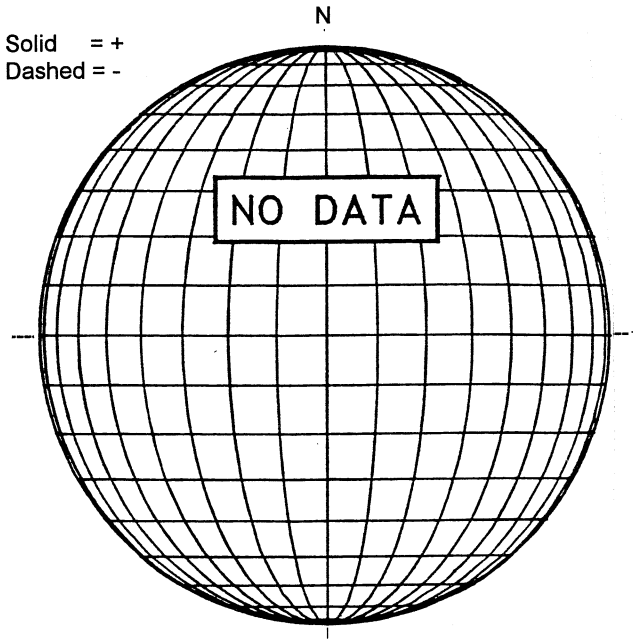


NOVEMBER 22, 2000 (P= 19.21, Bo = 1.97, Lo = 24.31)

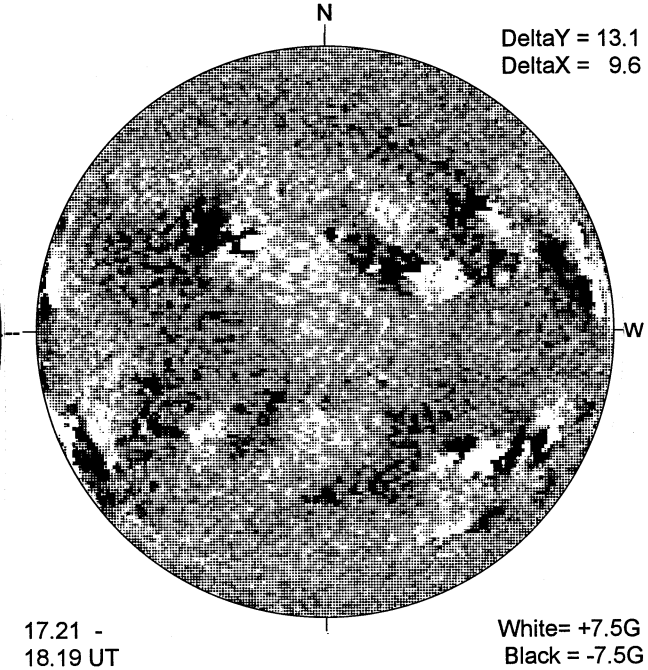
KITT PEAK MAGNETOGRAM



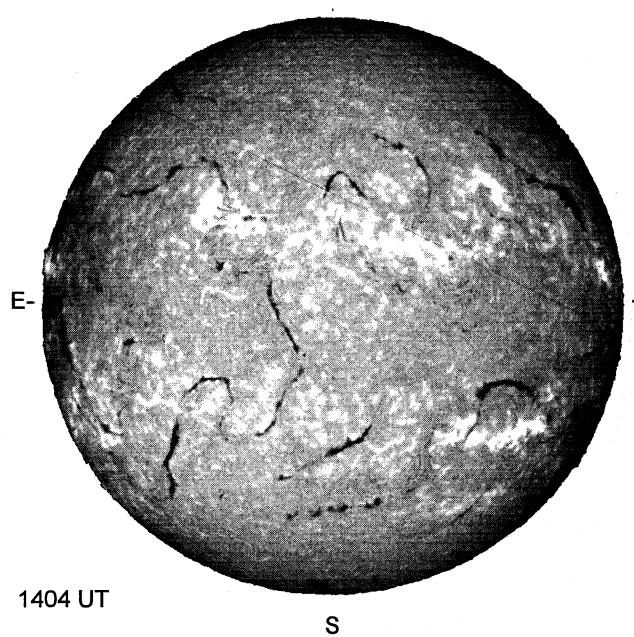
STANFORD MAGNETOGRAM



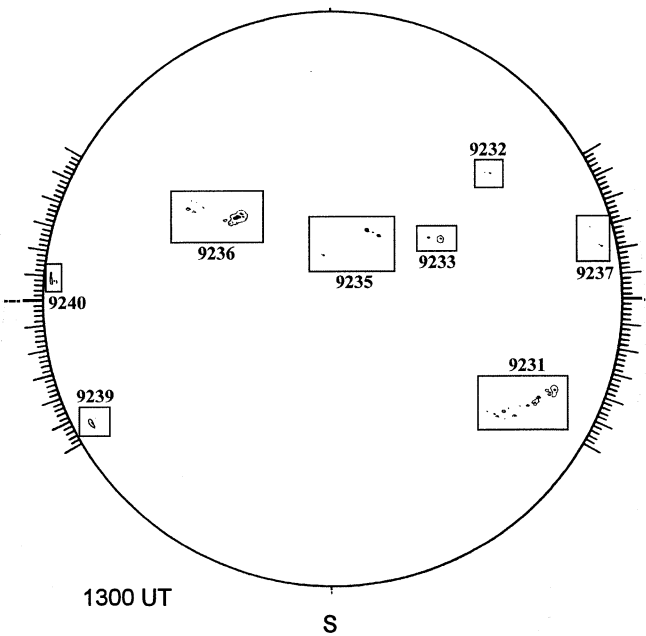
MT. WILSON MAGNETOGRAM



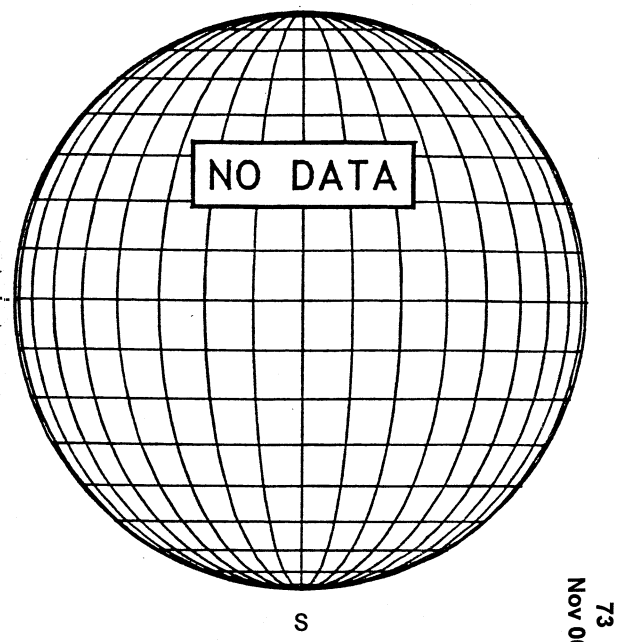
MEUDON H-ALPHA



RAMEY SUNSPOT



LOMNICKY PEAK CORONA (1.04 Radii)----



73
Nov 00

NOVEMBER 23, 2000 (P= 18.88, Bo = 1.84, Lo = 11.13)

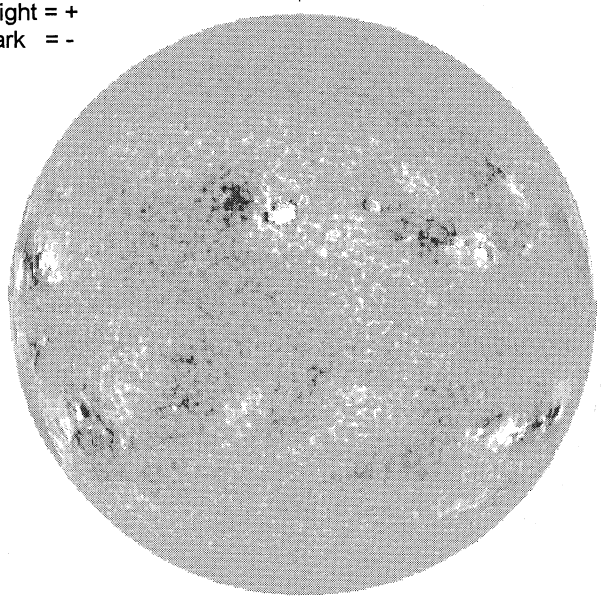
KITT PEAK MAGNETOGRAM

N

868.8 nm

Bright = +
Dark = -

E-

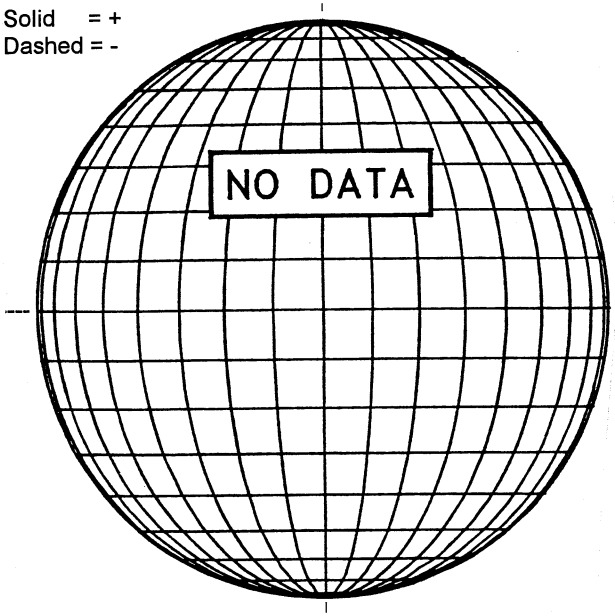


1609 UT

STANFORD MAGNETOGRAM

N

Solid = +
Dashed = -

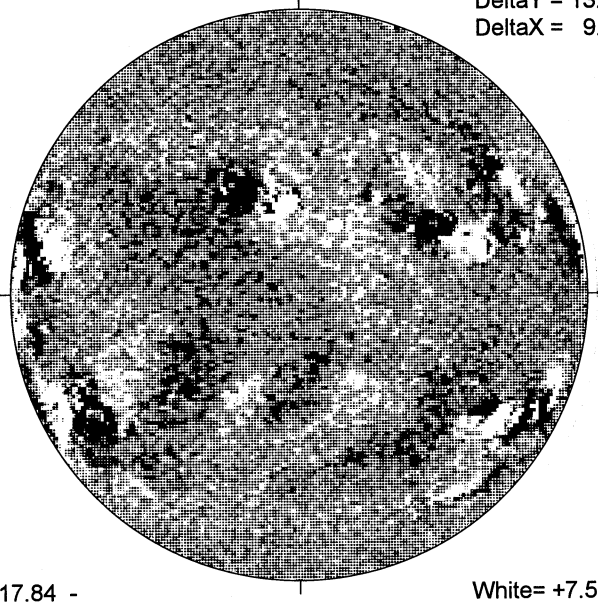


MT. WILSON MAGNETOGRAM

N

DeltaY = 13.1
DeltaX = 9.6

W

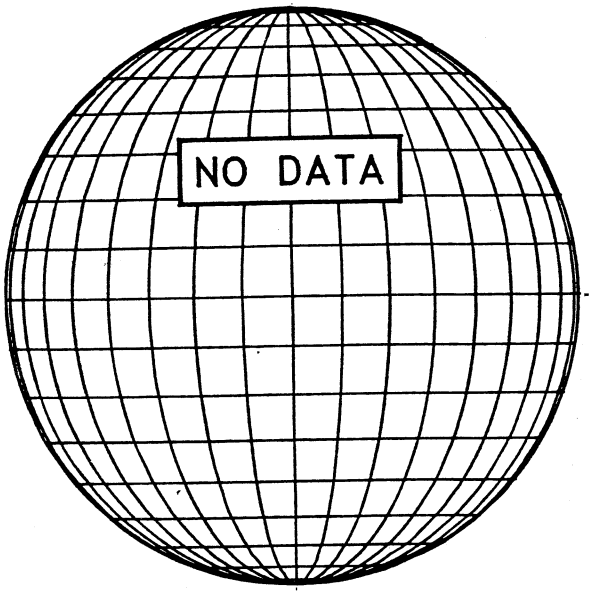


17.84 -
18.81 UT

White= +7.5G
Black = -7.5G

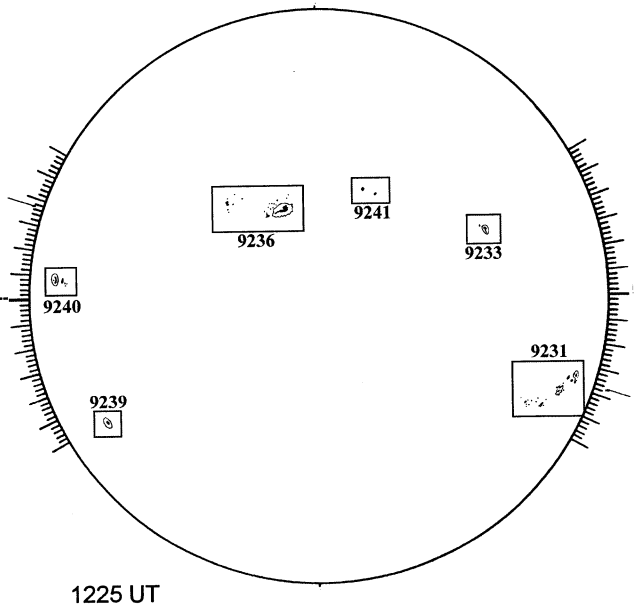
MEUDON H-ALPHA

E--



S

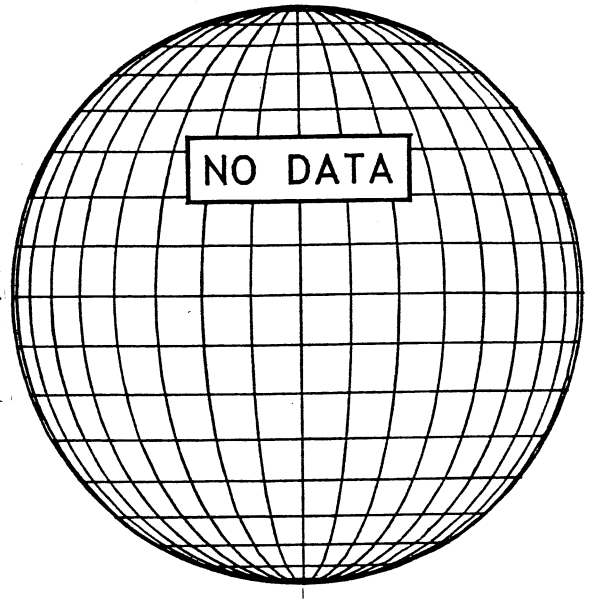
RAMEY SUNSPOT



1225 UT

S

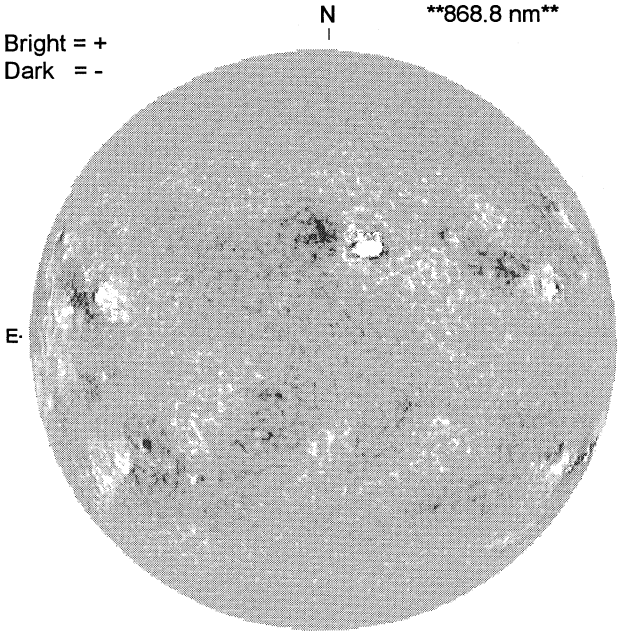
SACRAMENTO PEAK CORONA (1.15 Radii)----



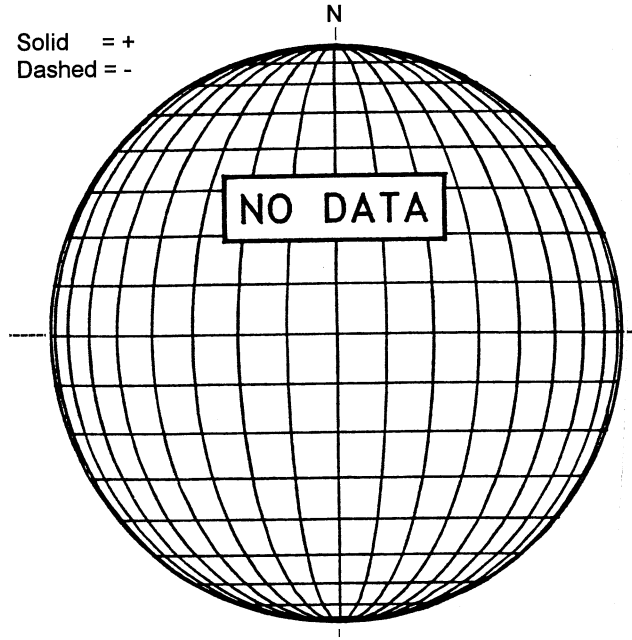
S

NOVEMBER 24, 2000 (P= 18.54, Bo = 1.72, Lo = 357.95)

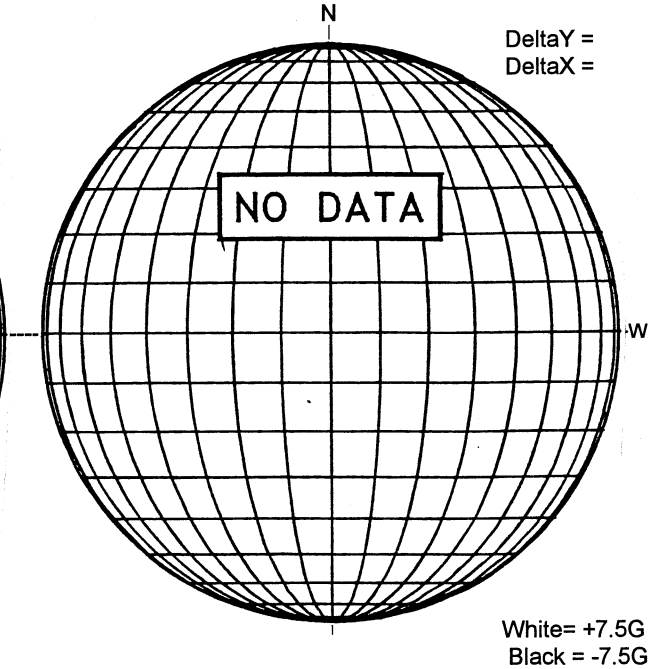
KITT PEAK MAGNETOGRAM



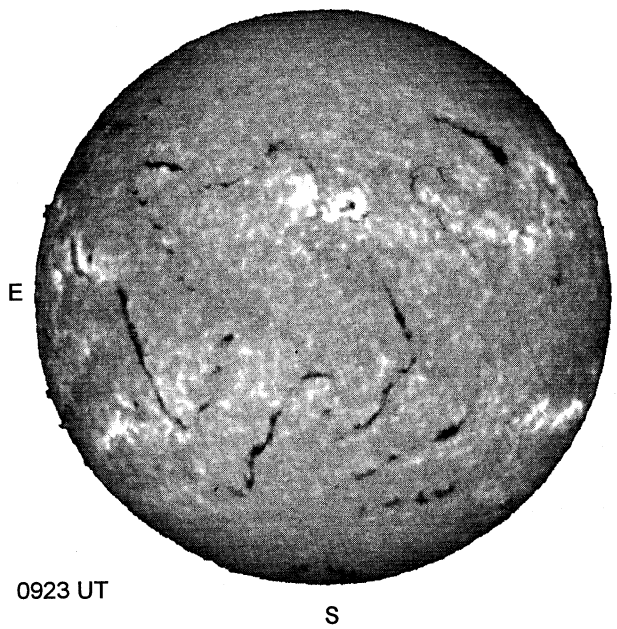
STANFORD MAGNETOGRAM



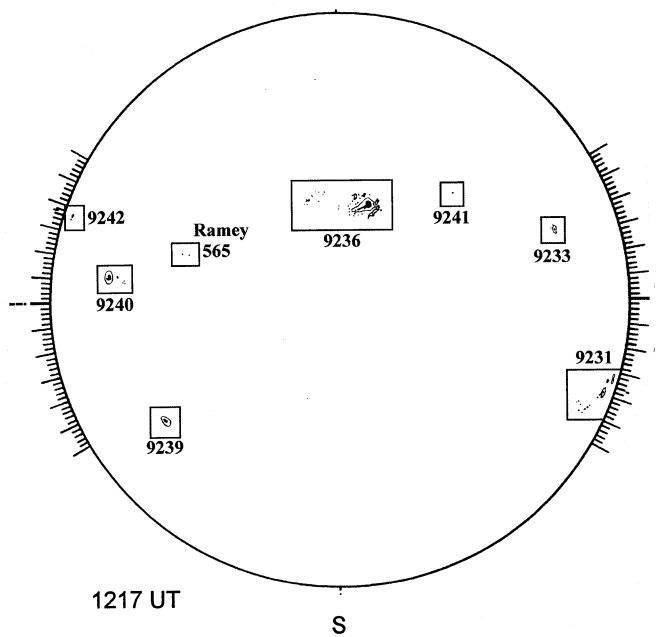
MT. WILSON MAGNETOGRAM



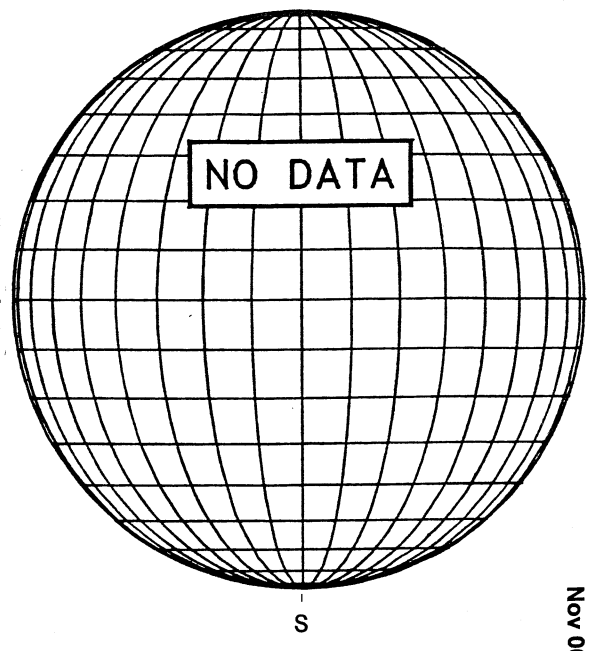
MEUDON H-ALPHA



RAMEY SUNSPOT



LOMNICKY PEAK CORONA (1.04 Radii)----

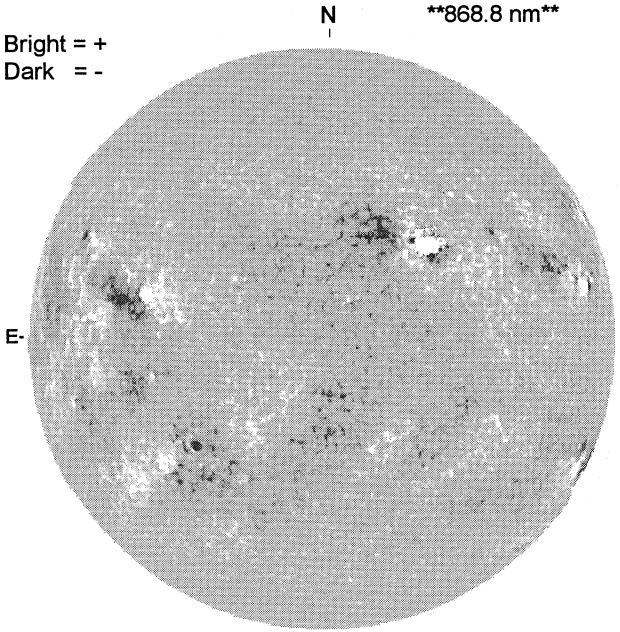


NOVEMBER 25, 2000 (P= 18.20, Bo = 1.60, Lo = 344.77)

KITT PEAK MAGNETOGRAM

868.8 nm

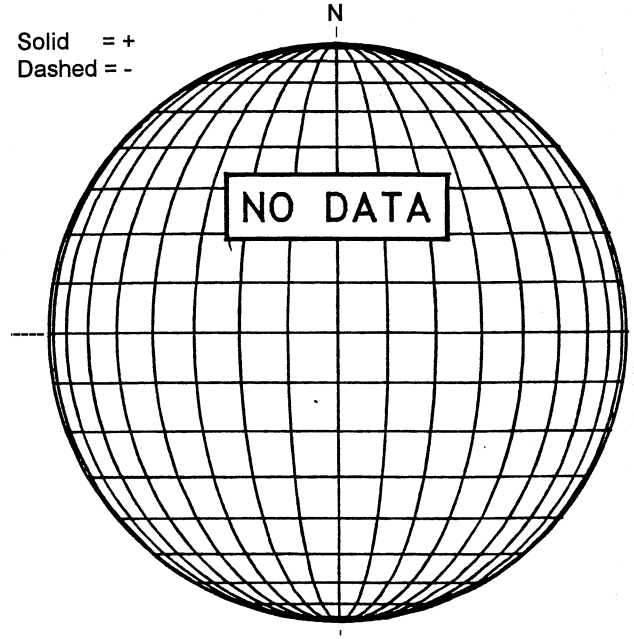
Bright = +
Dark = -



1619 UT

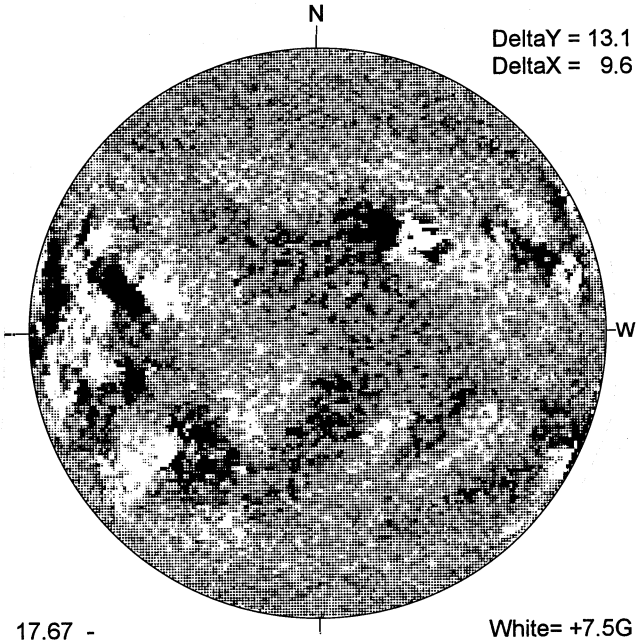
STANFORD MAGNETOGRAM

Solid = +
Dashed = -



MT. WILSON MAGNETOGRAM

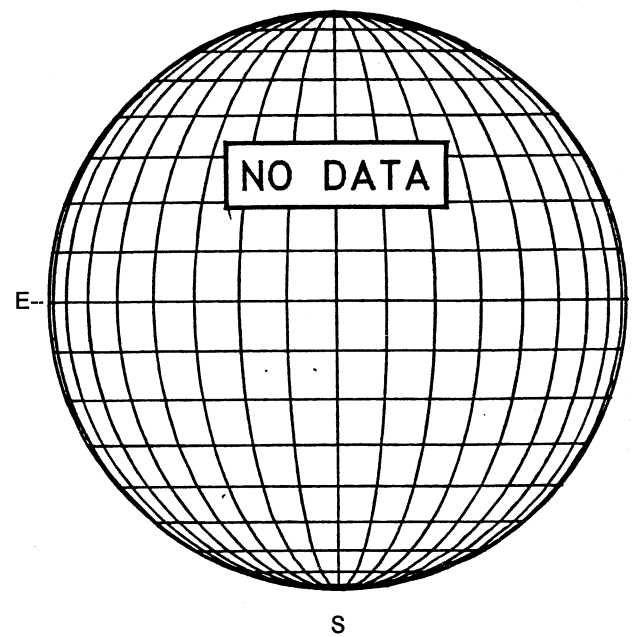
DeltaY = 13.1
DeltaX = 9.6



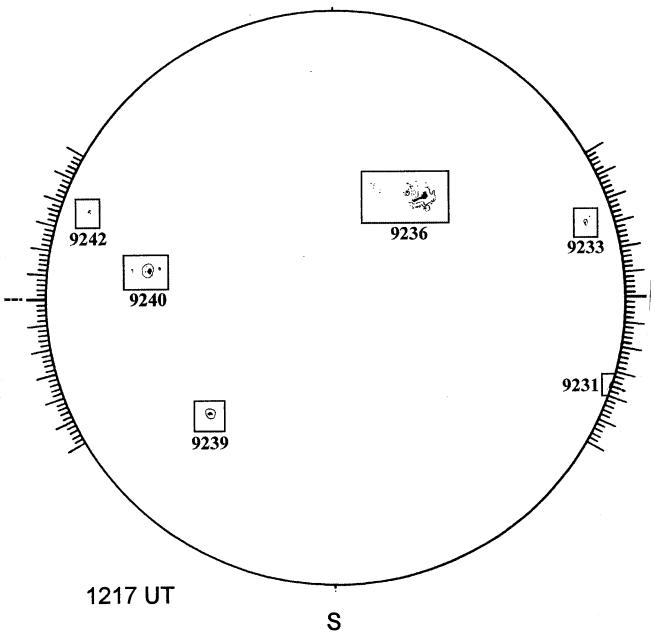
17.67 -
18.64 UT

White= +7.5G
Black = -7.5G

MEUDON H-ALPHA

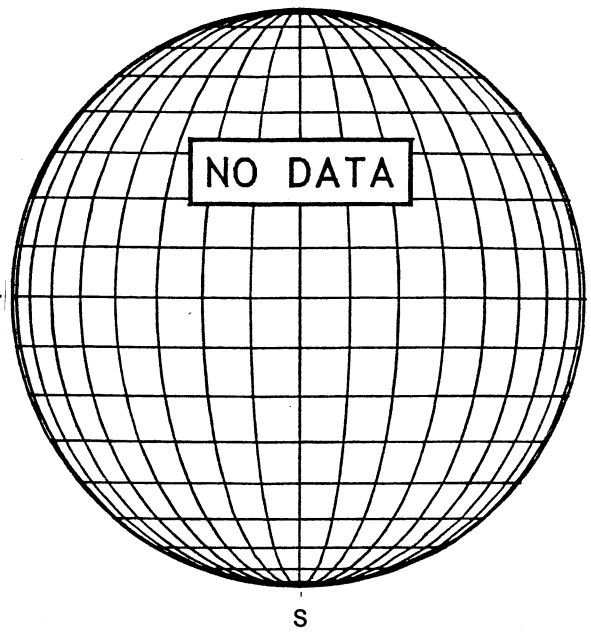


RAMEY SUNSPOT



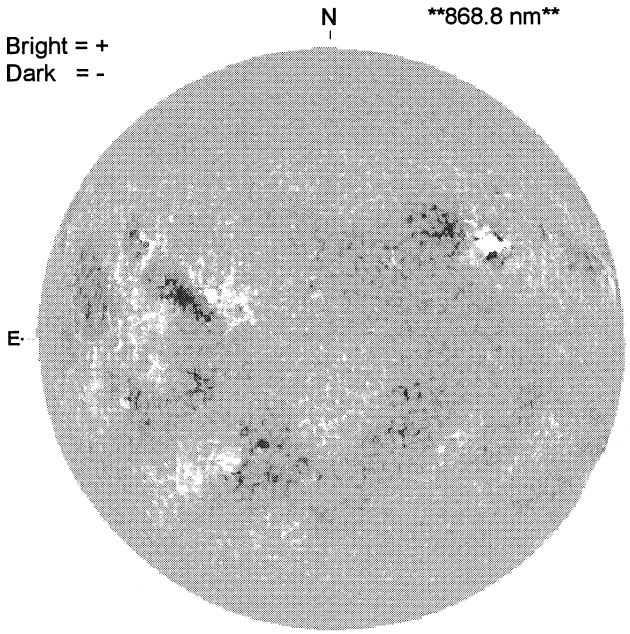
1217 UT

SACRAMENTO PEAK CORONA (1.15 Radii)

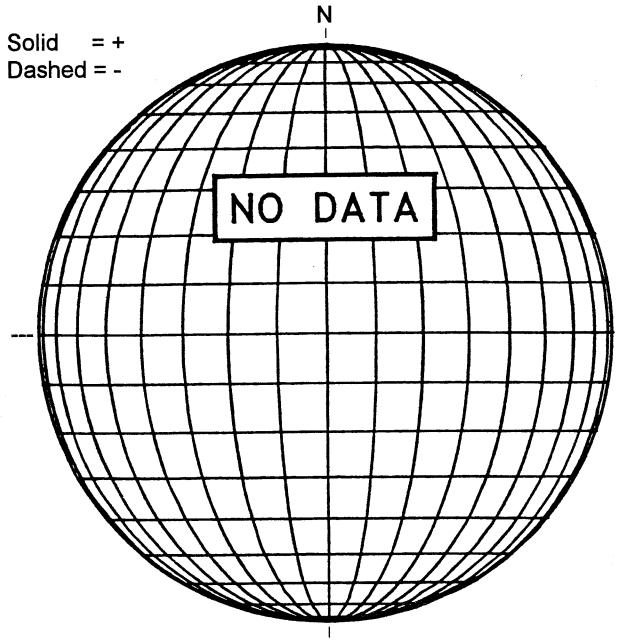


NOVEMBER 26, 2000 (P= 17.85, Bo = 1.47, Lo = 331.59)

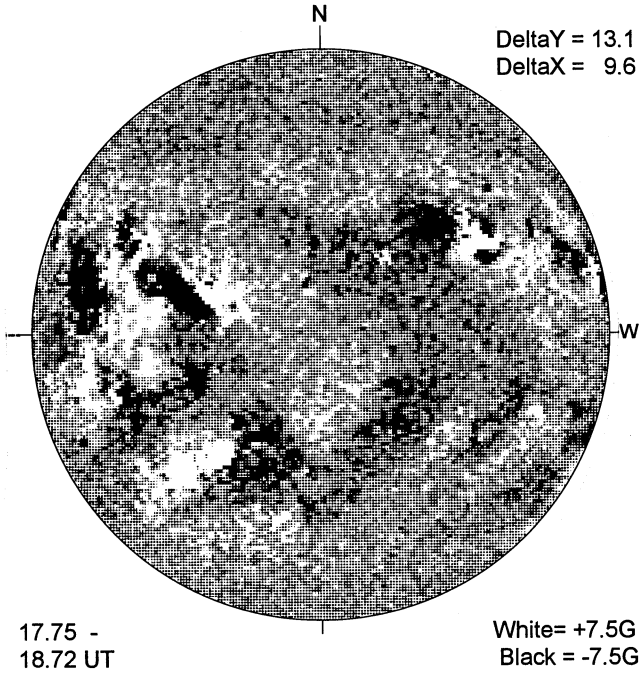
KITT PEAK MAGNETOGRAM



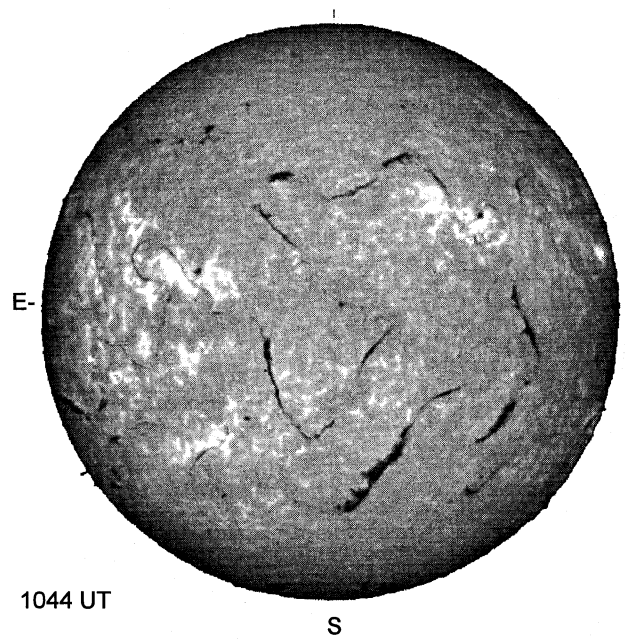
STANFORD MAGNETOGRAM



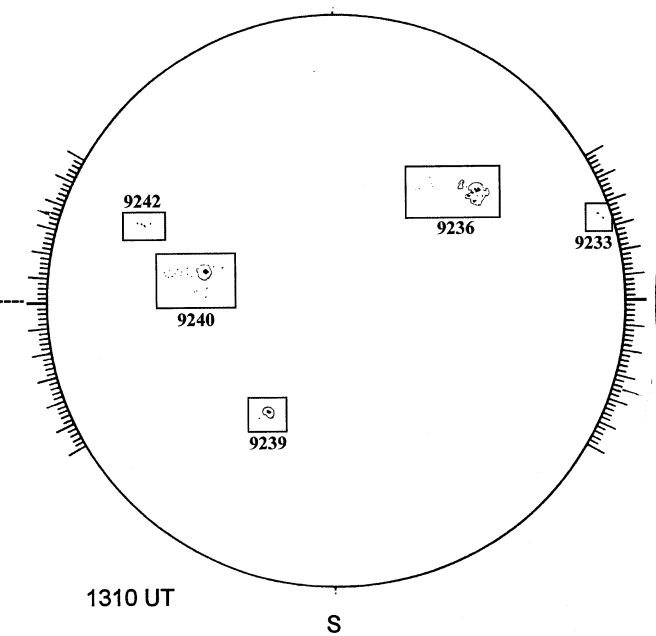
MT. WILSON MAGNETOGRAM



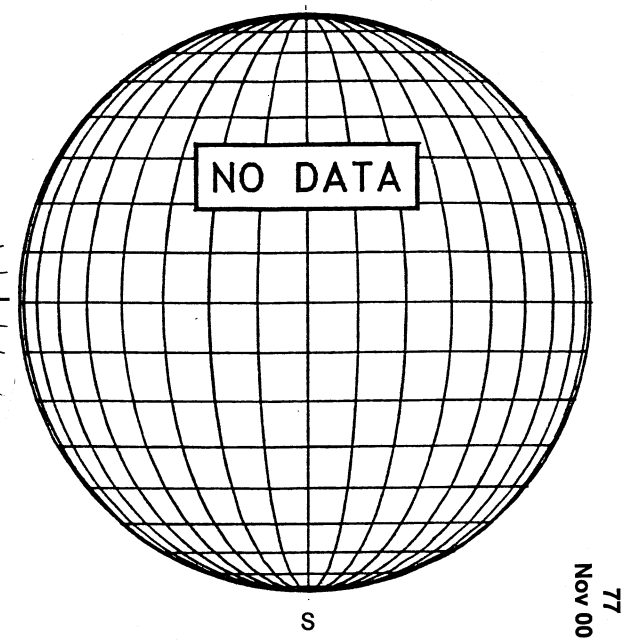
MEUDON H-ALPHA



RAMEY SUNSPOT



SACRAMENTO PEAK CORONA (1.15 Radii)



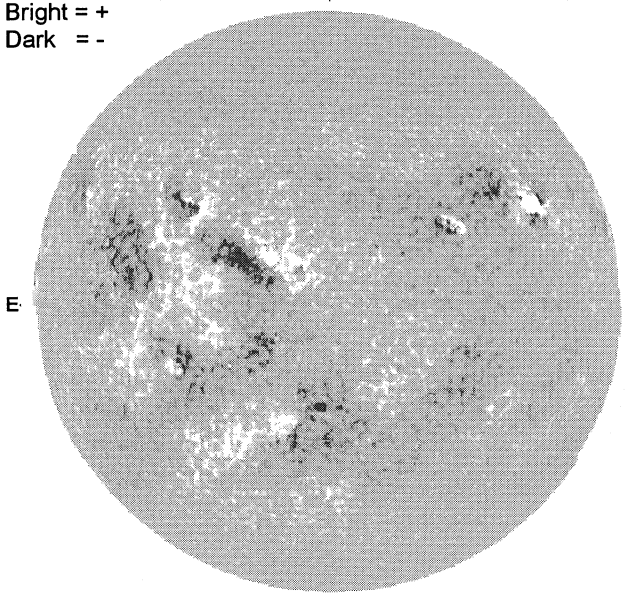
77
Nov 00

NOVEMBER 27, 2000 (P= 17.49, Bo = 1.35, Lo = 318.41)

KITT PEAK MAGNETOGRAM

N **868.8 nm**

Bright = +
Dark = -



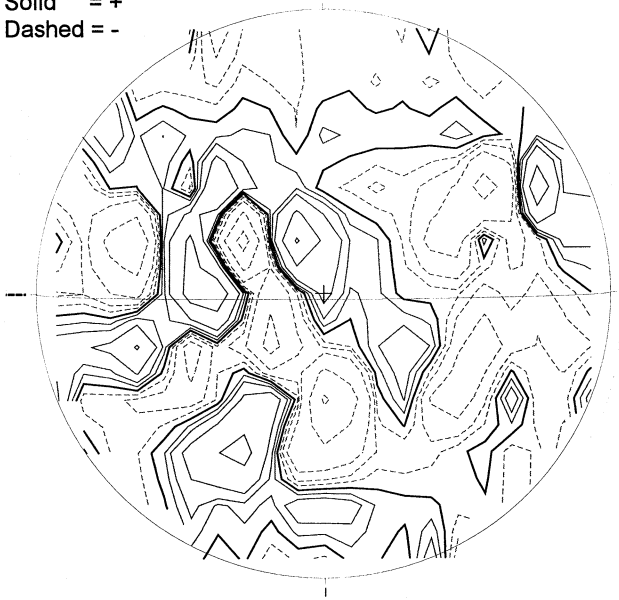
E

1604 UT

STANFORD MAGNETOGRAM

N

Solid = +
Dashed = -

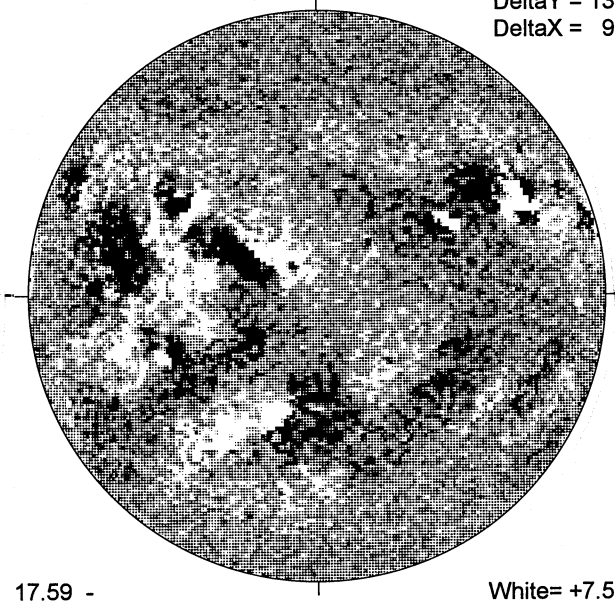


2134 UT

MT. WILSON MAGNETOGRAM

N

DeltaY = 13.1
DeltaX = 9.6

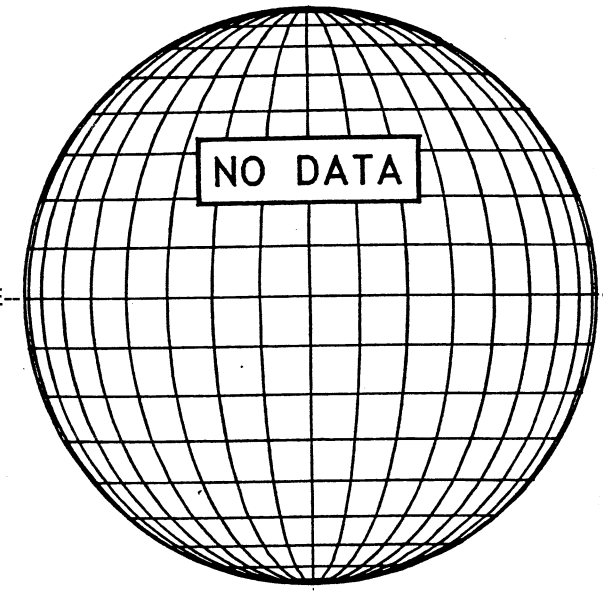


W

17.59 -
18.57 UT

White= +7.5G
Black = -7.5G

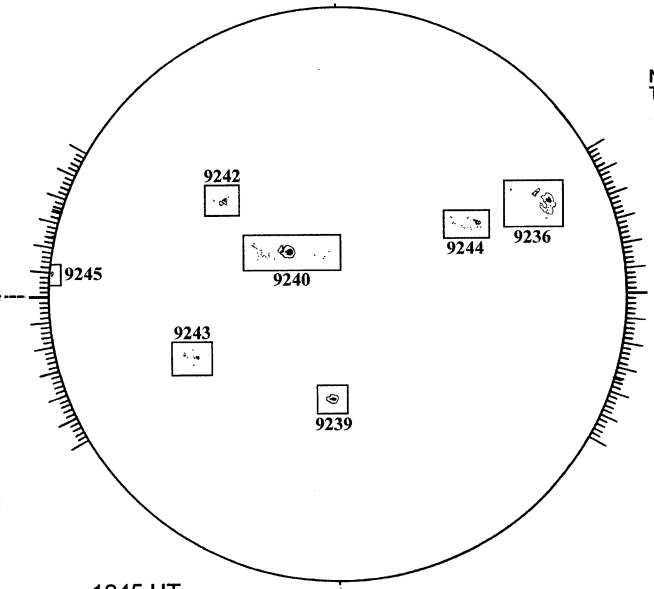
MEUDON H-ALPHA



E

S

RAMEY SUNSPOT

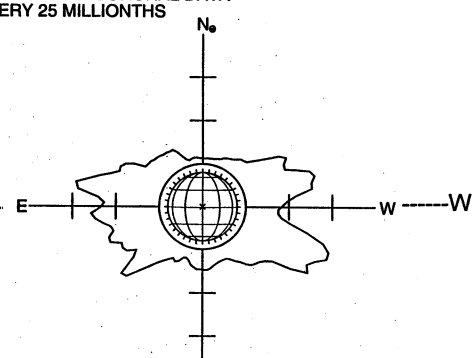


1845 UT

S

SACRAMENTO PEAK CORONA (1.15 Radii)

NSO / SACRAMENTO PEAK CORONAL DATA
TICK MARKS EVERY 25 MILLIONTHS



11/27/00
(DOY 332)

—— FE XIV 18:00 UT 1.15 $R_\odot$
xxxxx CA XV 18:42 UT 1.15 $R_\odot$
NO CA XV ACTIVITY TODAY

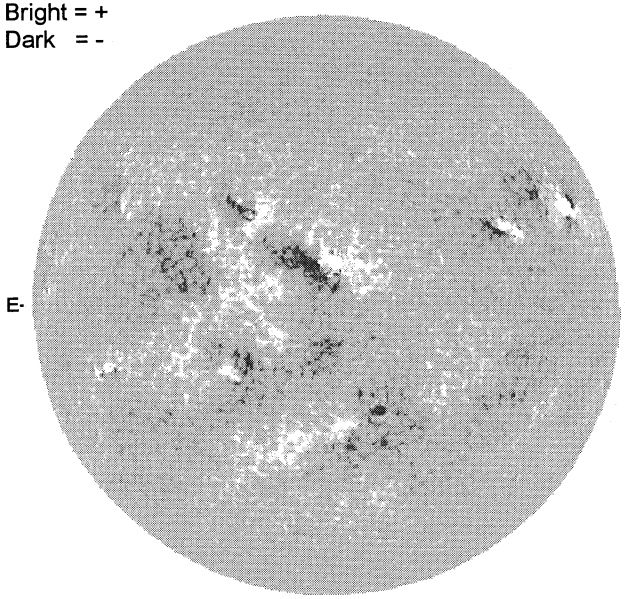
S

NOVEMBER 28, 2000 (P= 17.12, Bo = 1.22, Lo = 305.23)

KITT PEAK MAGNETOGRAM

N **868.8 nm**

Bright = +
Dark = -



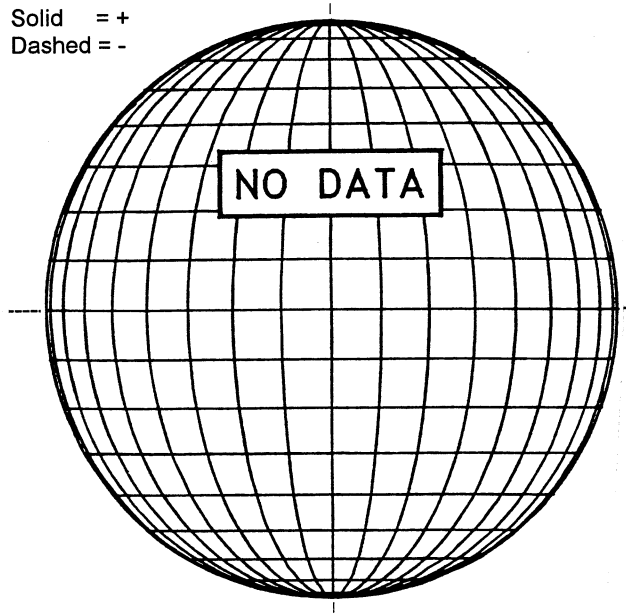
E-

1551 UT

STANFORD MAGNETOGRAM

N

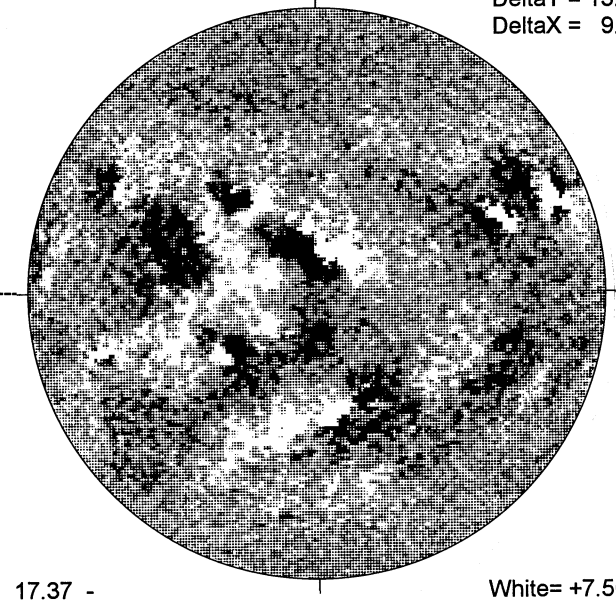
Solid = +
Dashed = -



MT. WILSON MAGNETOGRAM

N

DeltaY = 13.1
DeltaX = 9.6

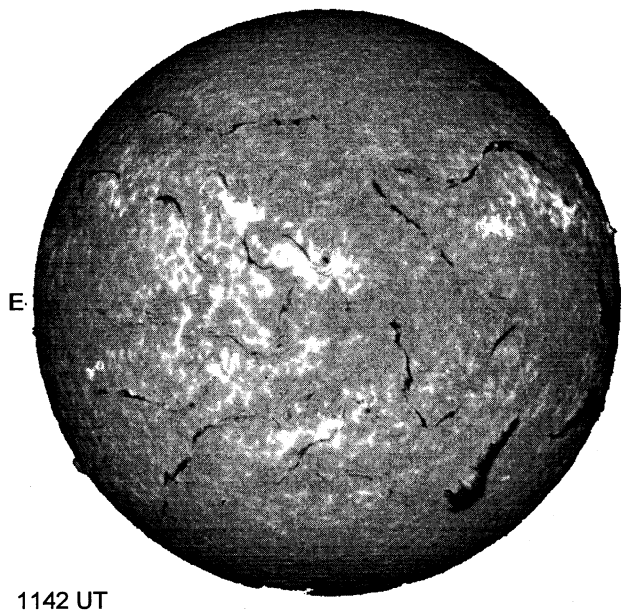


-W

17.37 -
18.34 UT

White= +7.5G
Black = -7.5G

----- MEUDON H-ALPHA

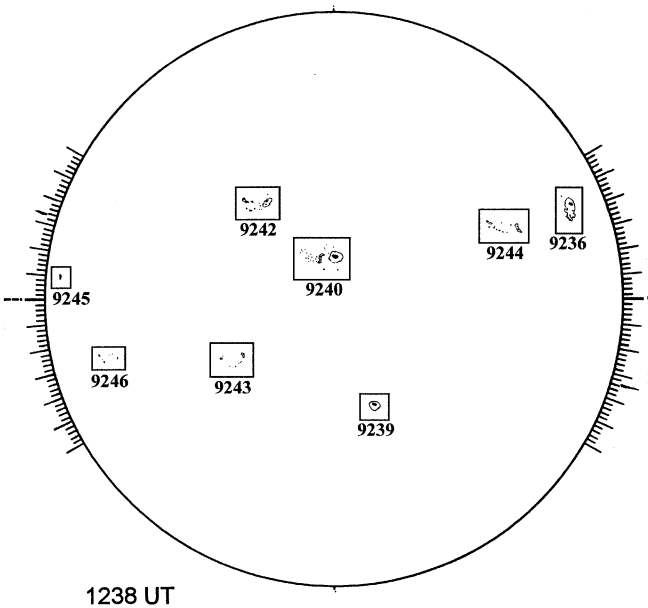


E-

1142 UT

S

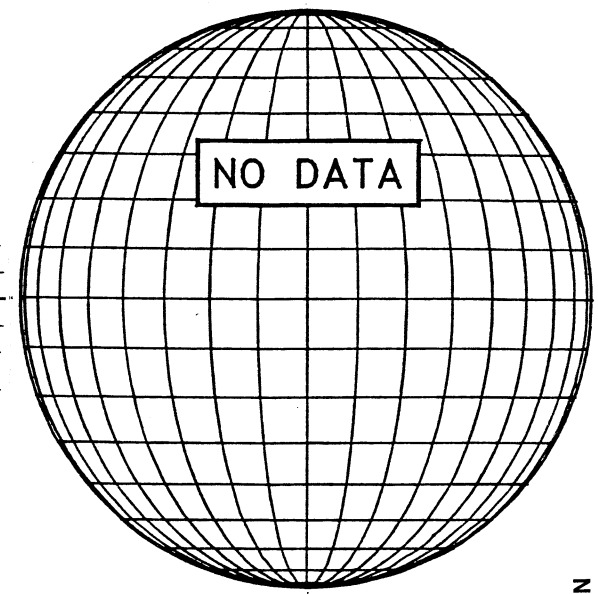
RAMEY SUNSPOT



1238 UT

S

LOMNICKY PEAK CORONA (1.04 Radii)----

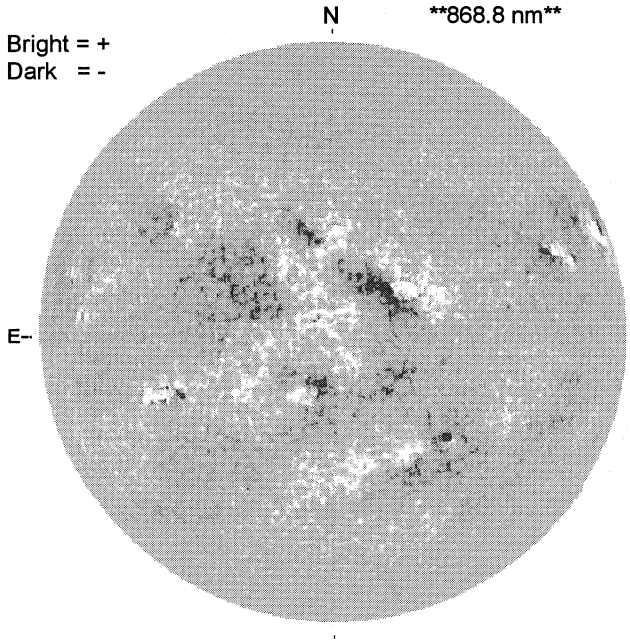


S

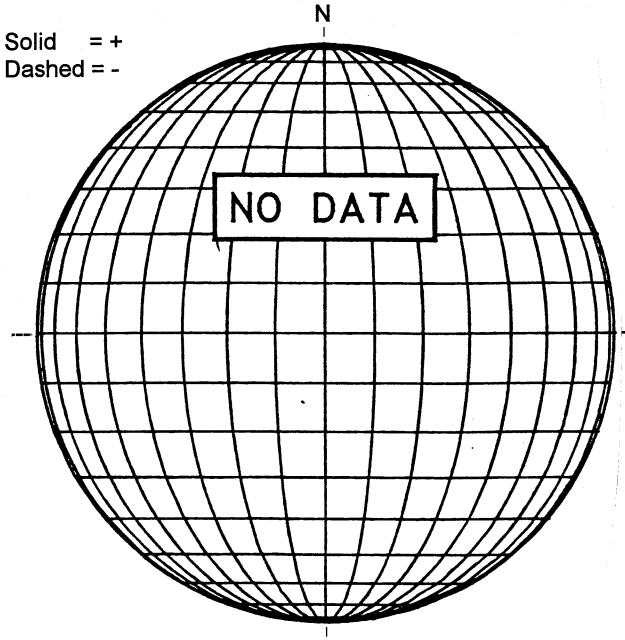
79
Nov 00

NOVEMBER 29, 2000 (P= 16.75, Bo = 1.09, Lo = 292.05)

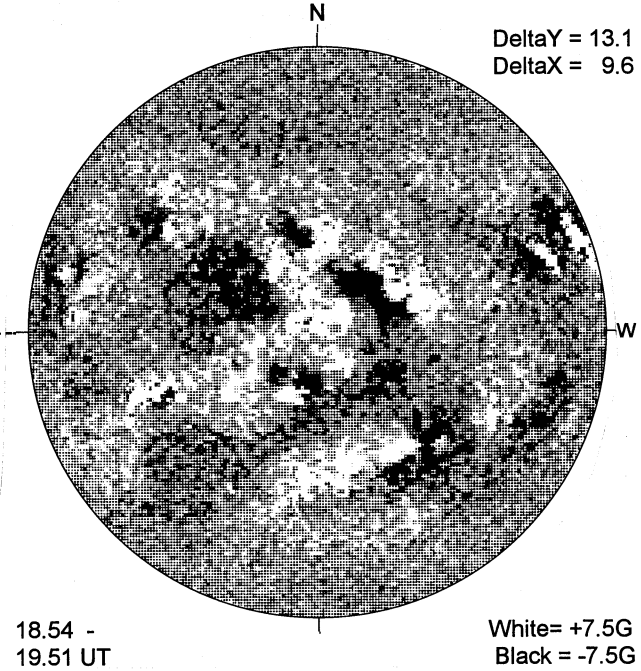
KITT PEAK MAGNETOGRAM



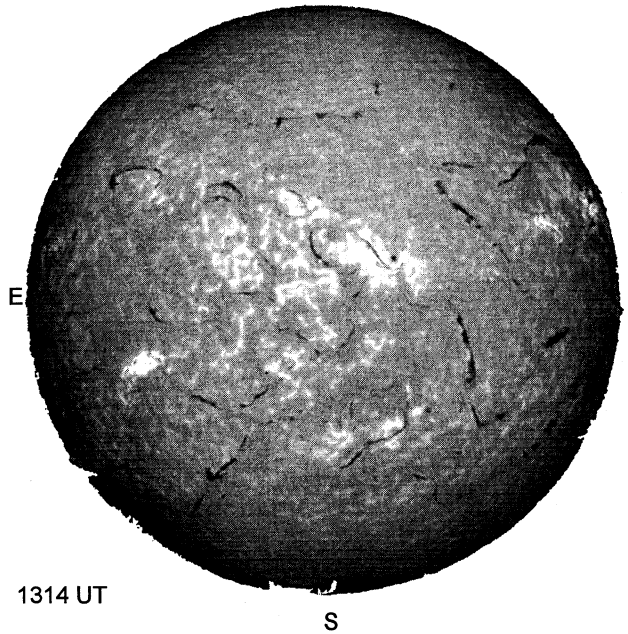
STANFORD MAGNETOGRAM



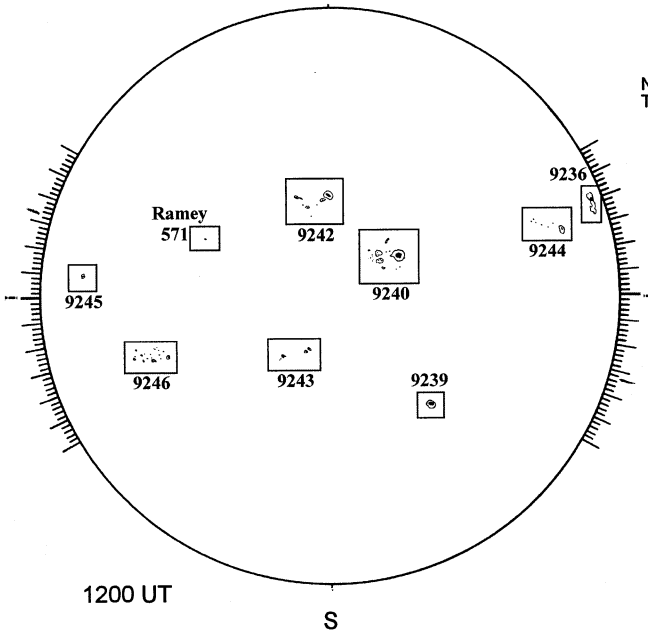
MT. WILSON MAGNETOGRAM



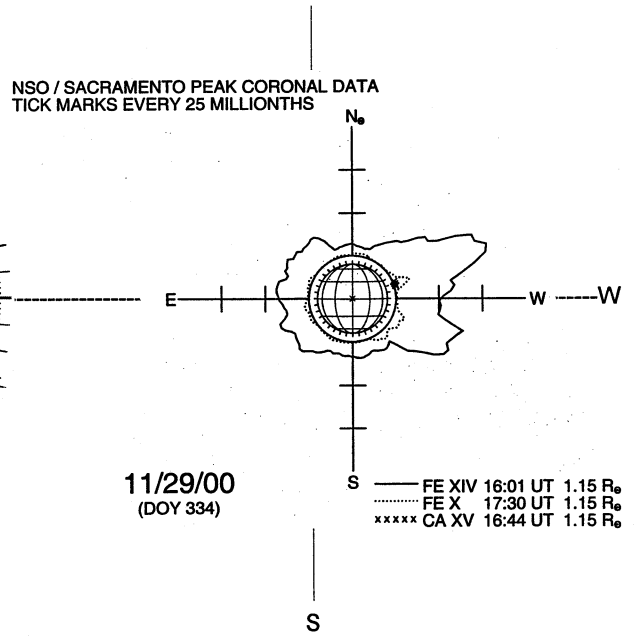
MEUDON H-ALPHA



RAMEY SUNSPOT



SACRAMENTO PEAK CORONA (1.15 Radii)----

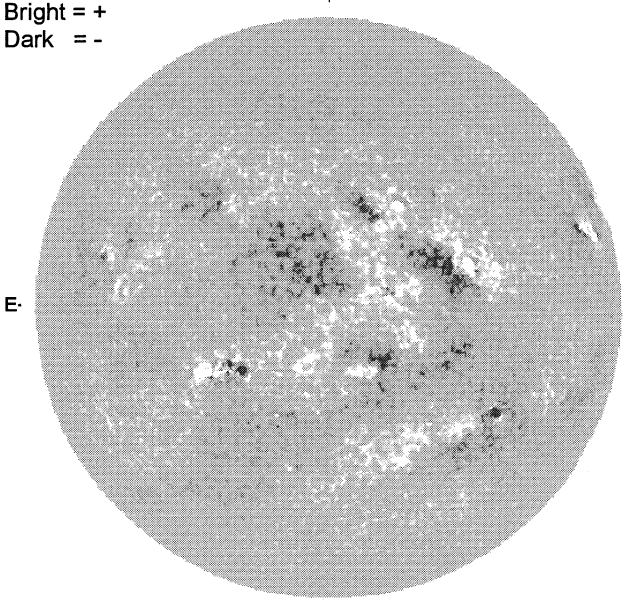


NOVEMBER 30, 2000 (P= 16.38, Bo = 0.97, Lo = 278.87)

KITT PEAK MAGNETOGRAM

N **868.8 nm**

Bright = +
Dark = -



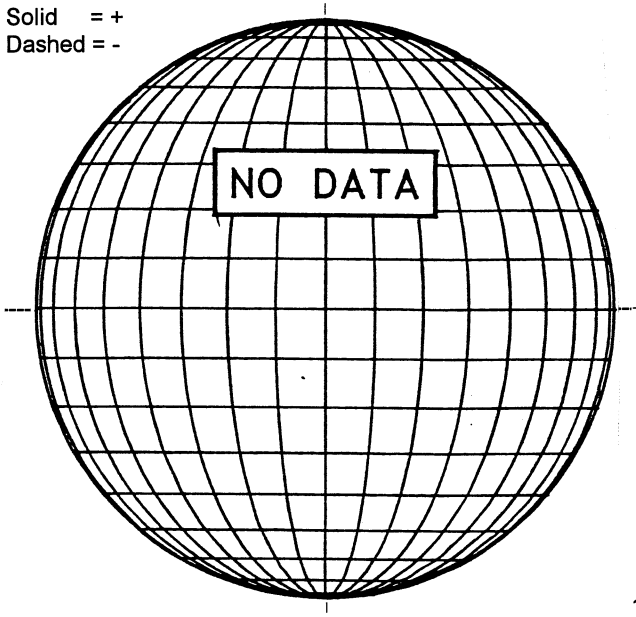
E

1629 UT

STANFORD MAGNETOGRAM

N

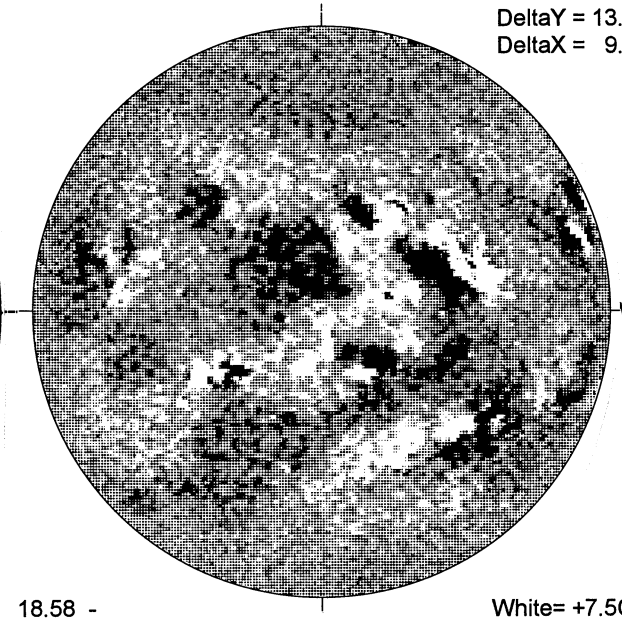
Solid = +
Dashed = -



MT. WILSON MAGNETOGRAM

N

DeltaY = 13.1
DeltaX = 9.6

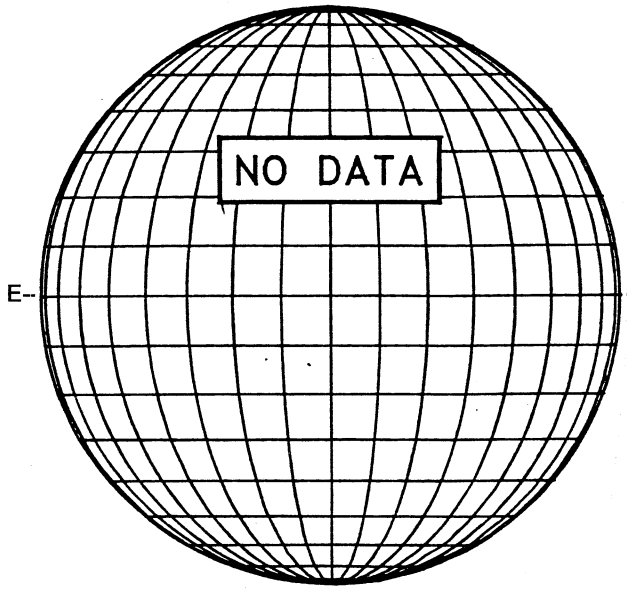


W

18.58 -
19.56 UT

White= +7.5G
Black = -7.5G

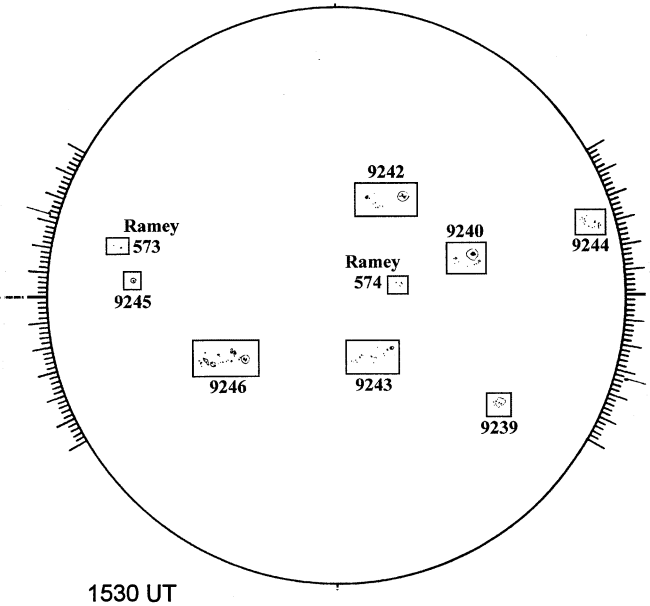
MEUDON H-ALPHA



E

S

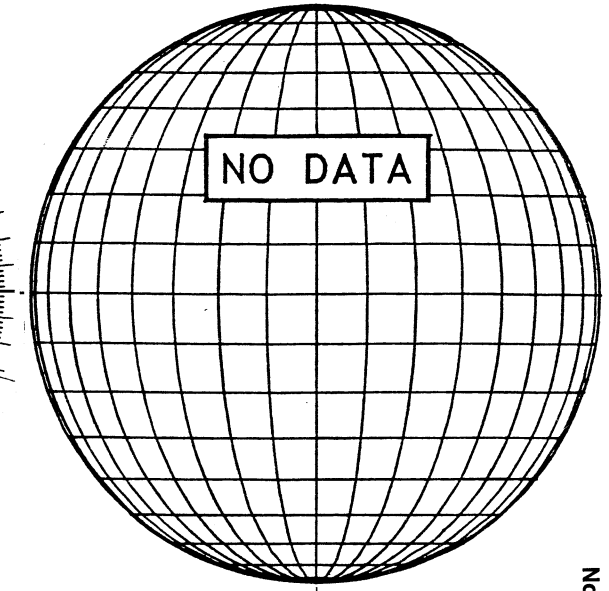
RAMEY SUNSPOT



1530 UT

S

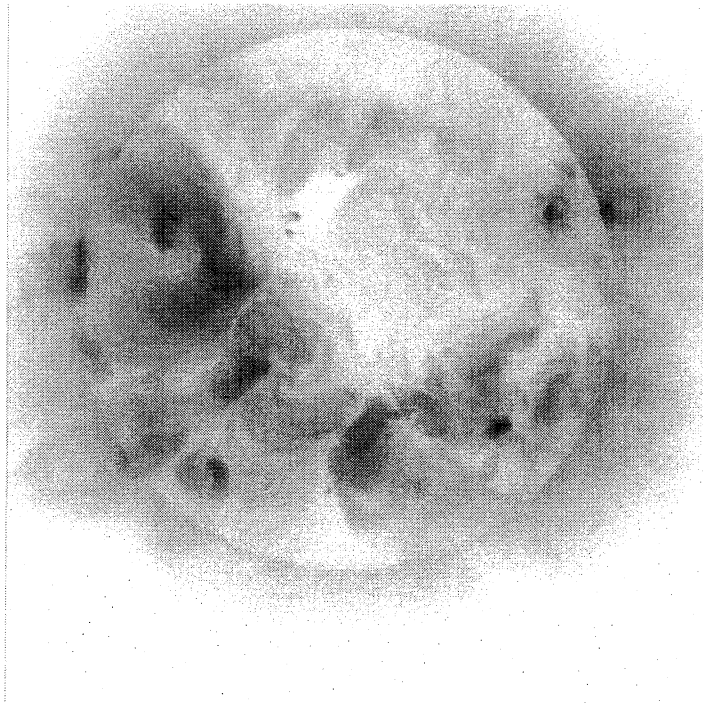
SACRAMENTO PEAK CORONA (1.15 Radii)



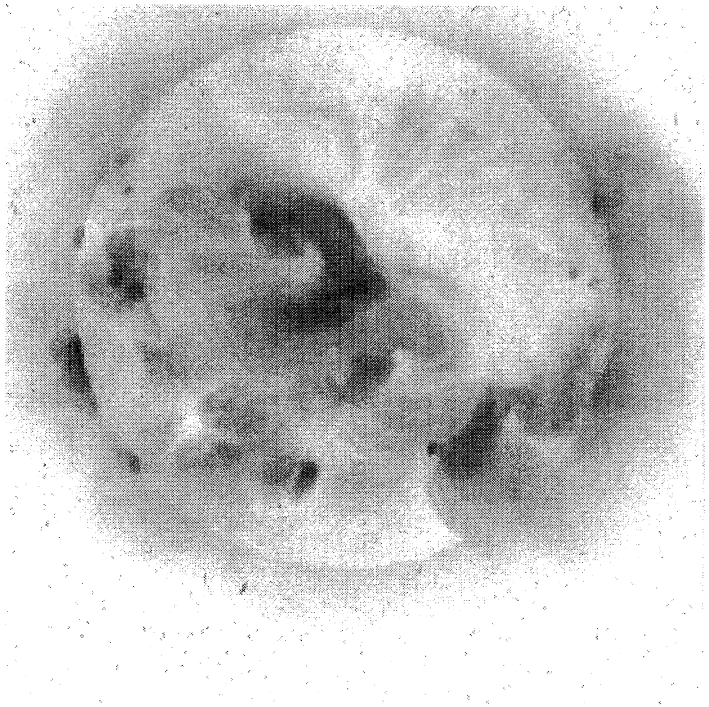
S

YOHKOH SOFT X-RAY TELESCOPE IMAGES

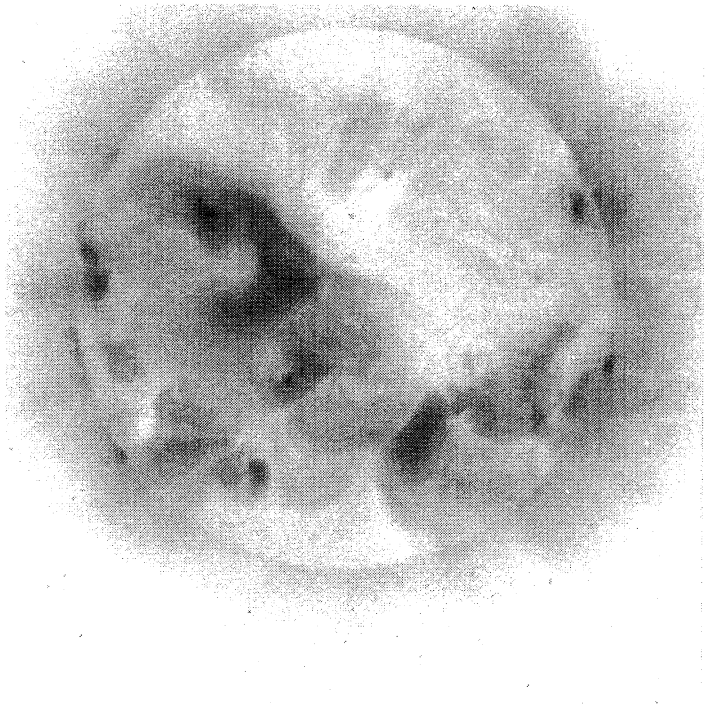
November 2000



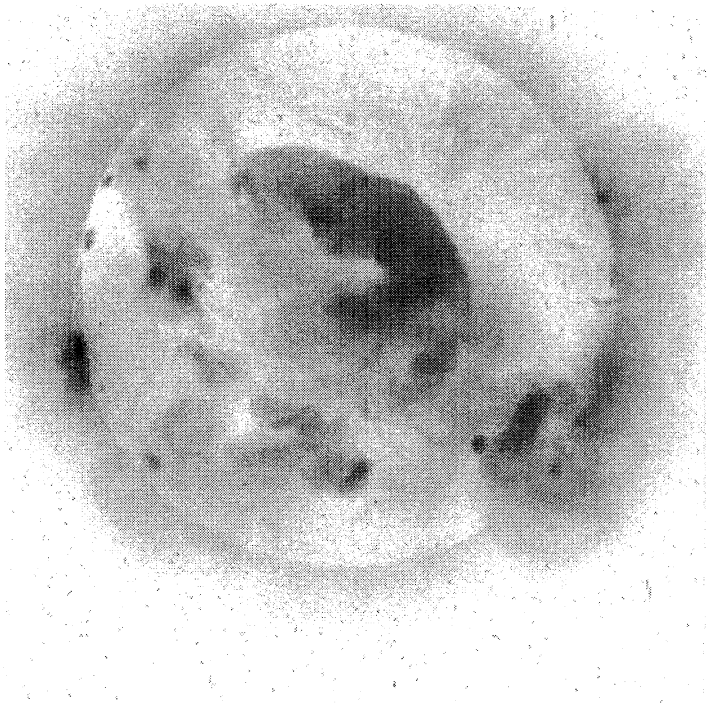
Day 1
12:04:36 UT



Day 3
11:56:57 UT



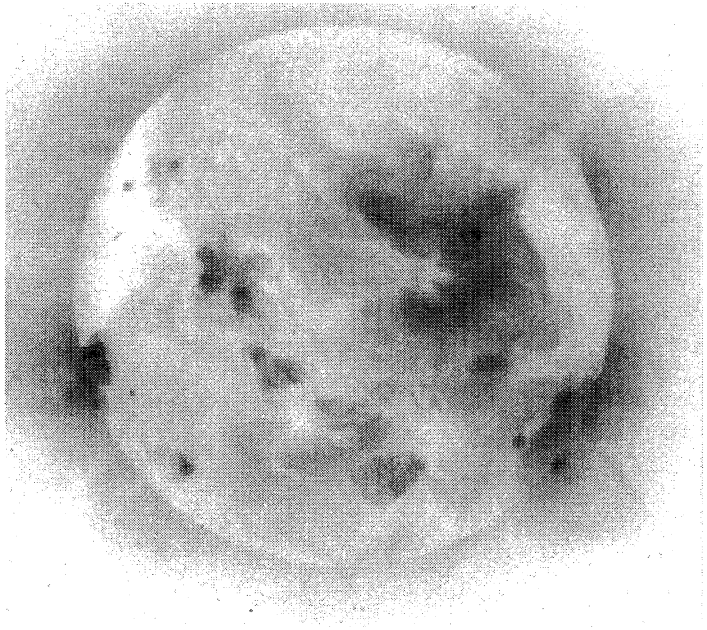
Day 2
12:03:22 UT



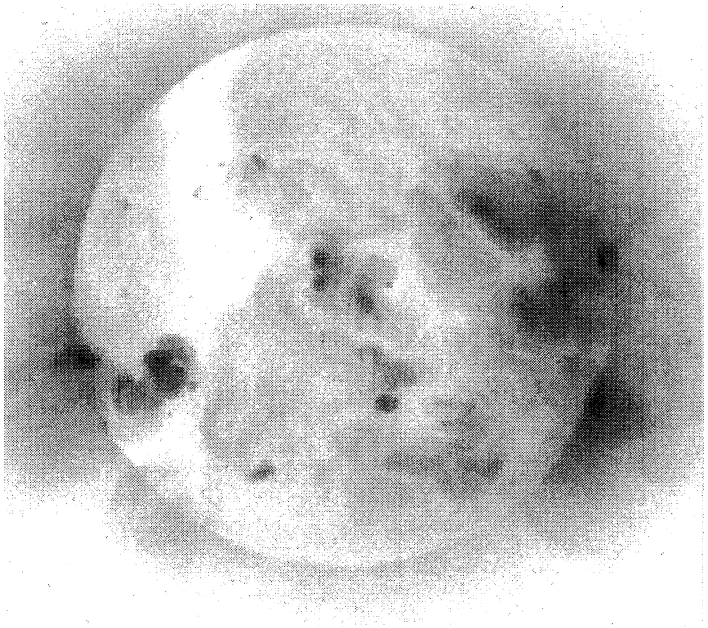
Day 4
12:01:29 UT

YOHKOH SOFT X-RAY TELESCOPE IMAGES

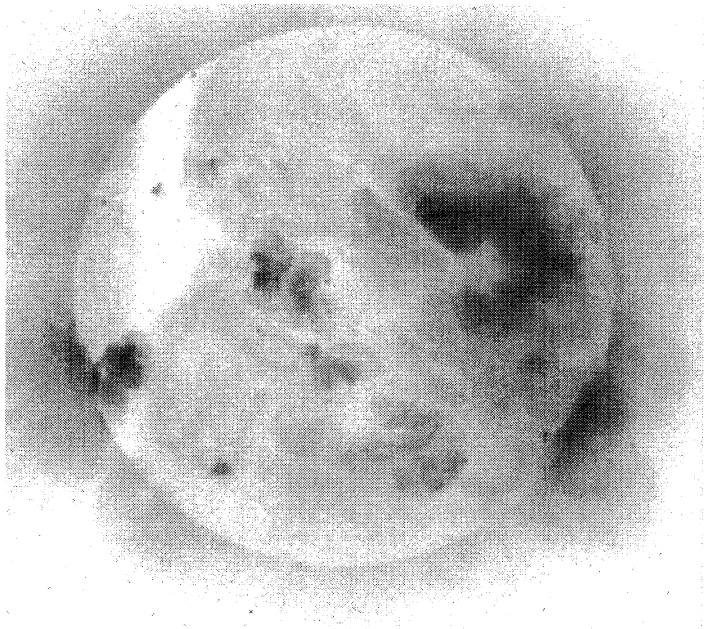
November 2000



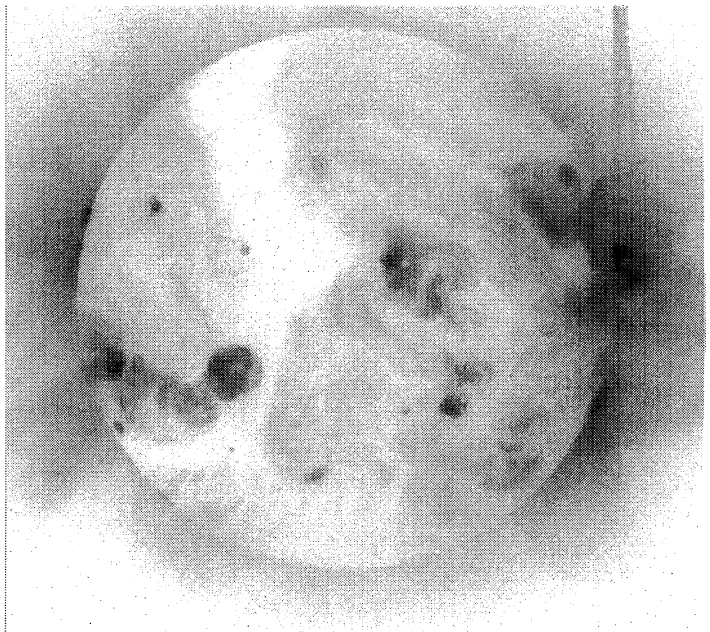
Day 5
13:31:07 UT



Day 7
10:47:21 UT



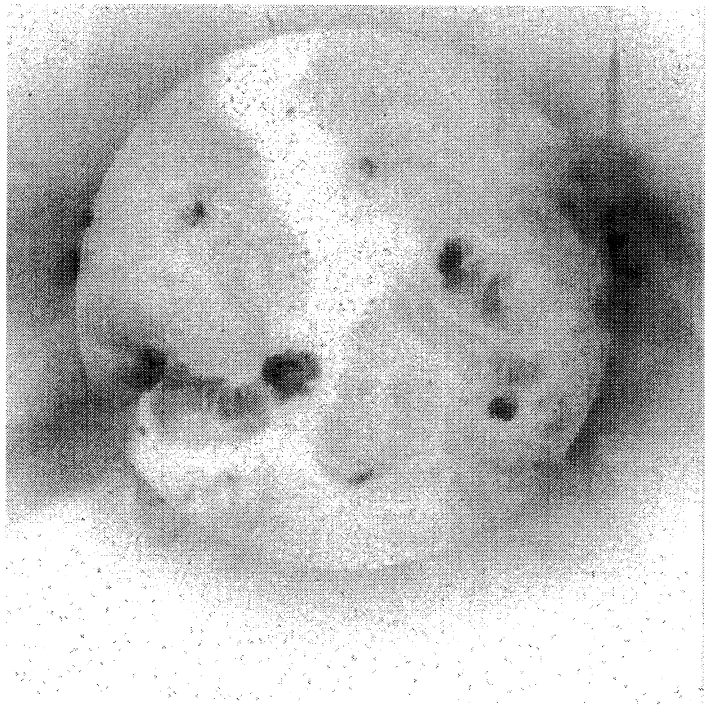
Day 6
12:02:01 UT



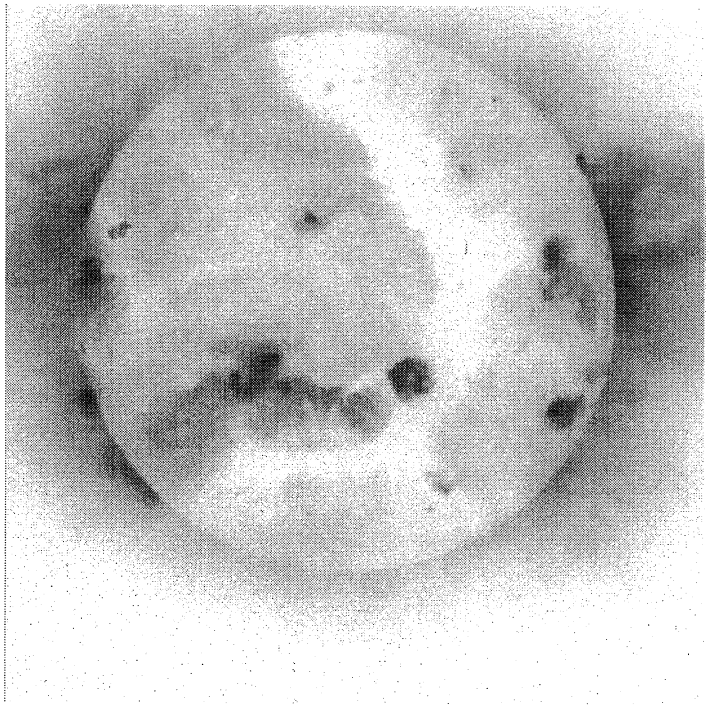
Day 8
12:37:38 UT

YOHKOH SOFT X-RAY TELESCOPE IMAGES

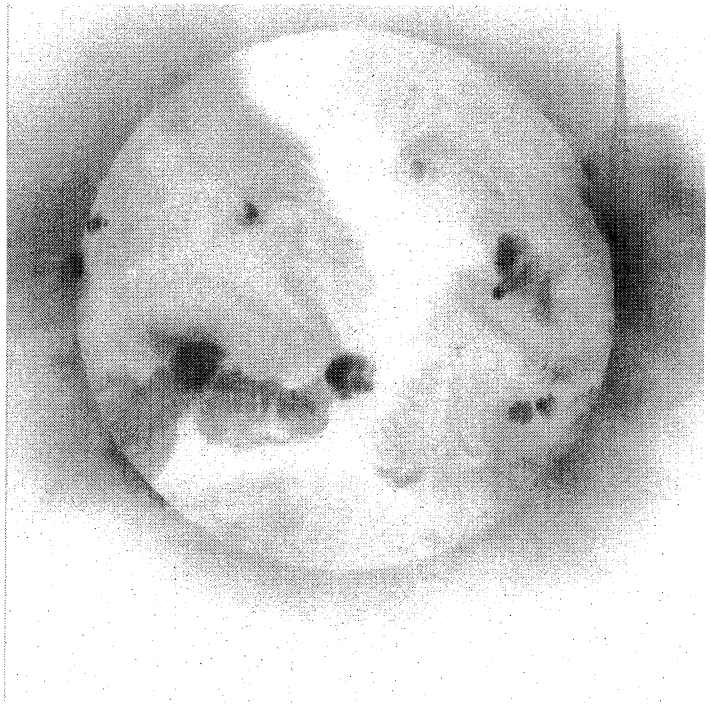
November 2000



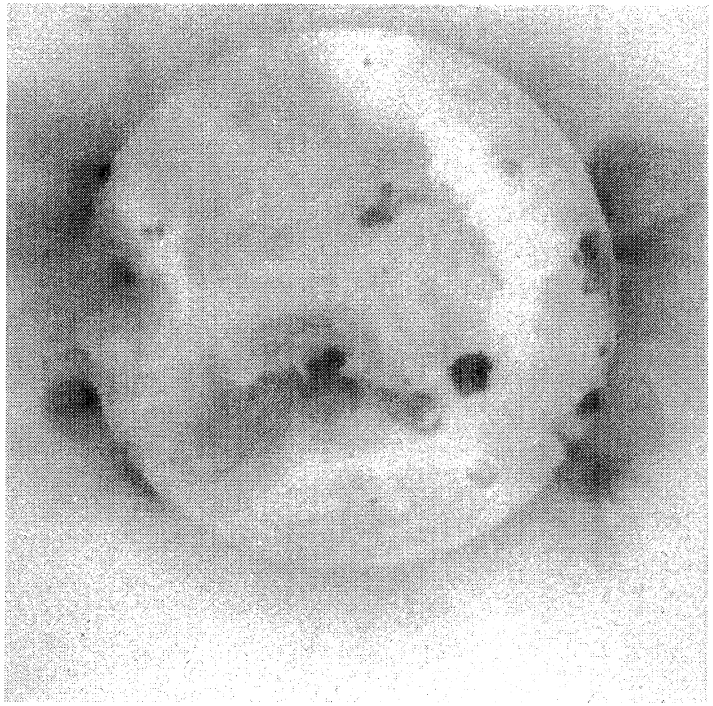
Day 9
12:28:56 UT



Day 11
12:19:10 UT



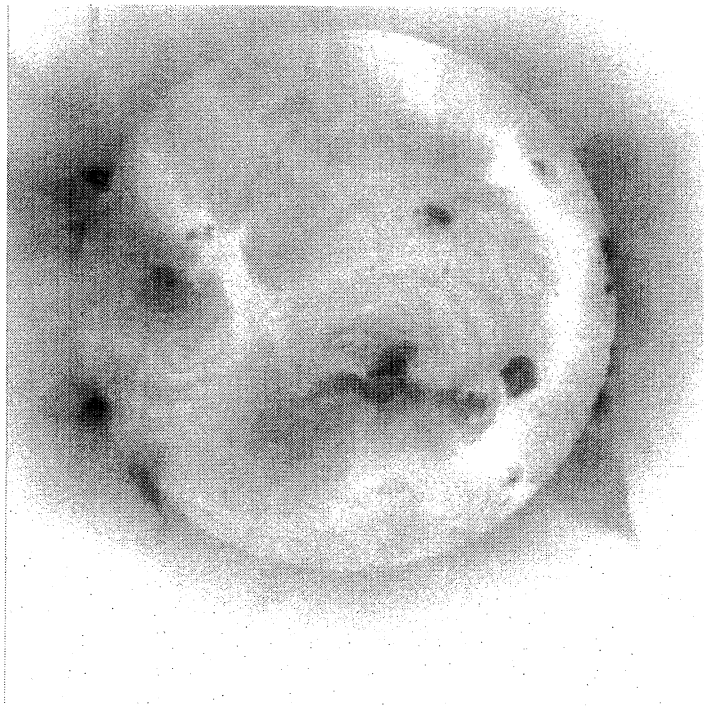
Day 10
12:14:54 UT



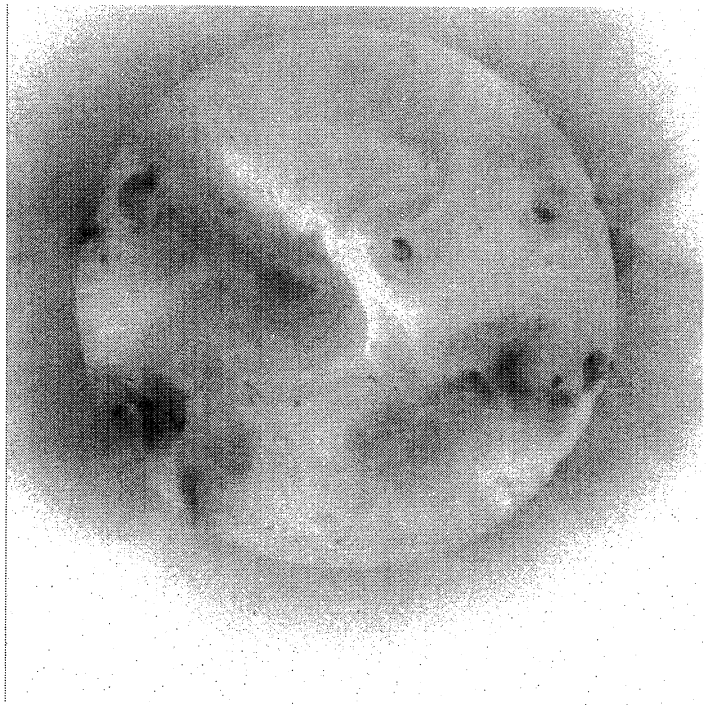
Day 12
11:33:14 UT

YOHKOH SOFT X-RAY TELESCOPE IMAGES

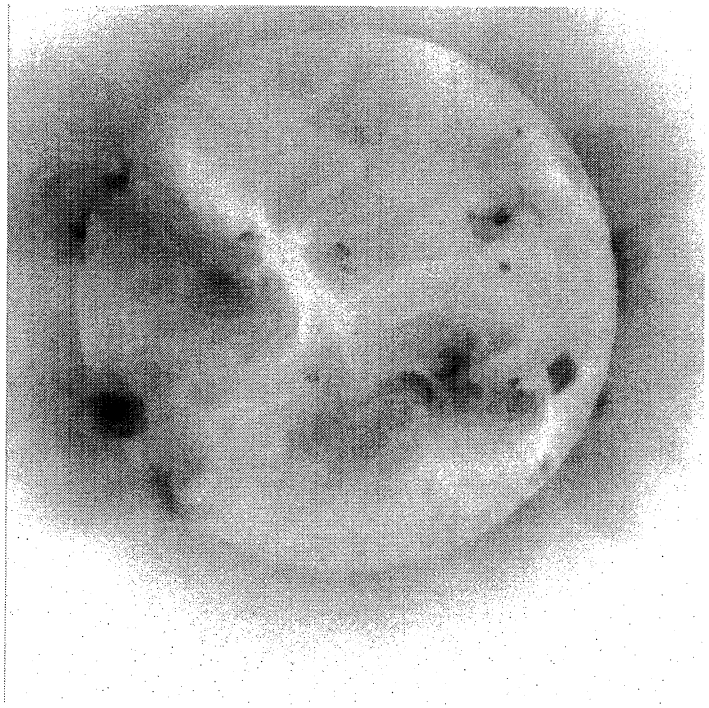
November 2000



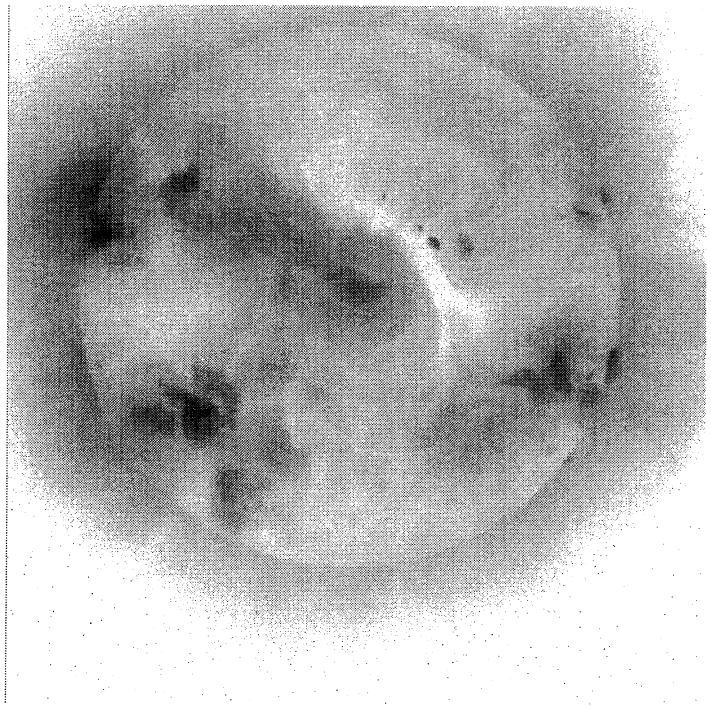
Day 13
11:42:45 UT



Day 15
11:52:43 UT



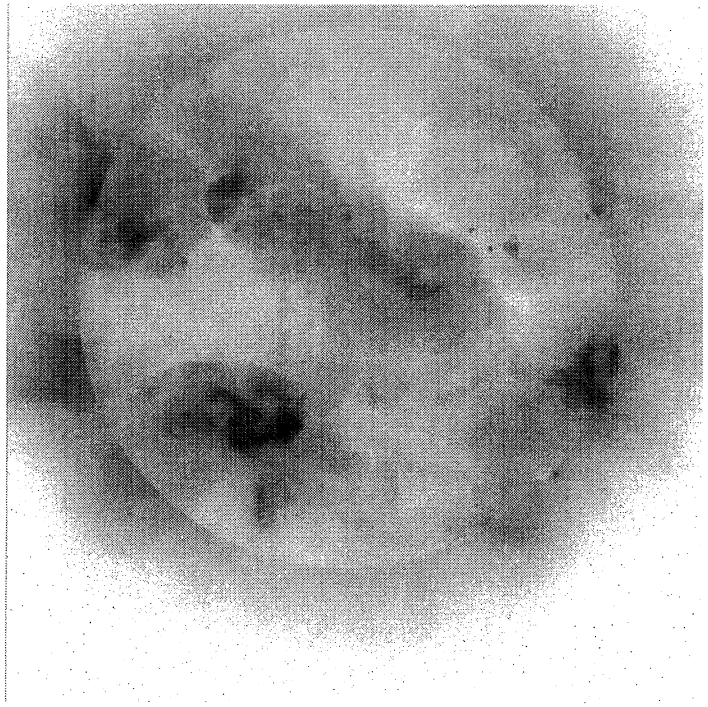
Day 14
11:44:49 UT



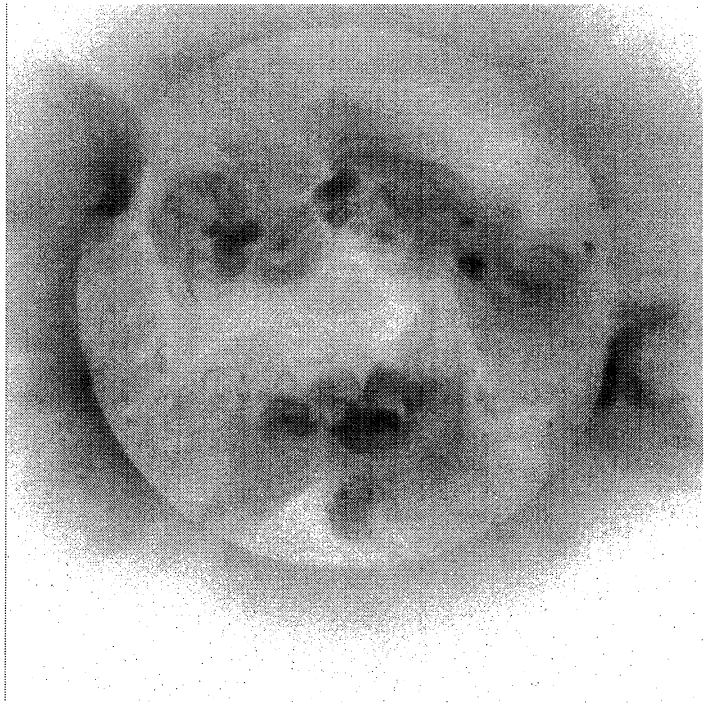
Day 16
11:59:17 UT

YOHKOH SOFT X-RAY TELESCOPE IMAGES

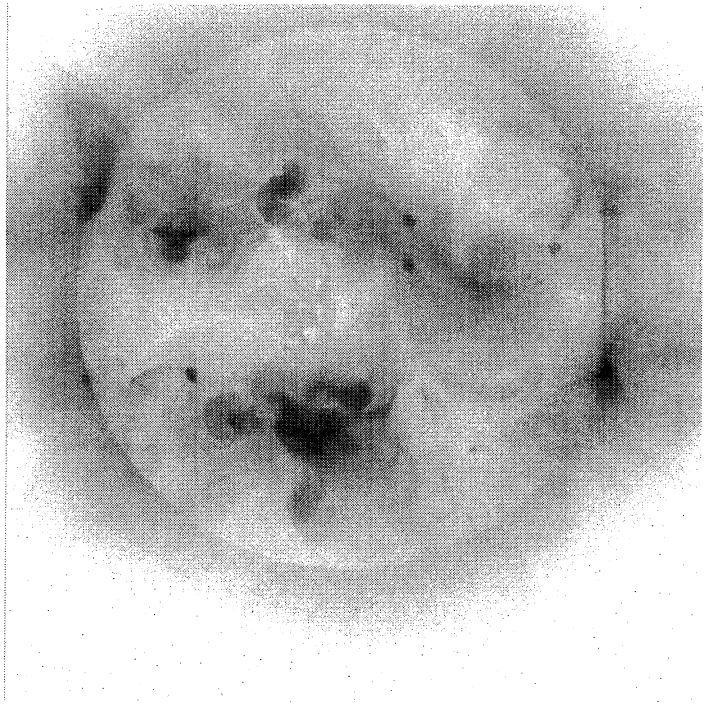
November 2000



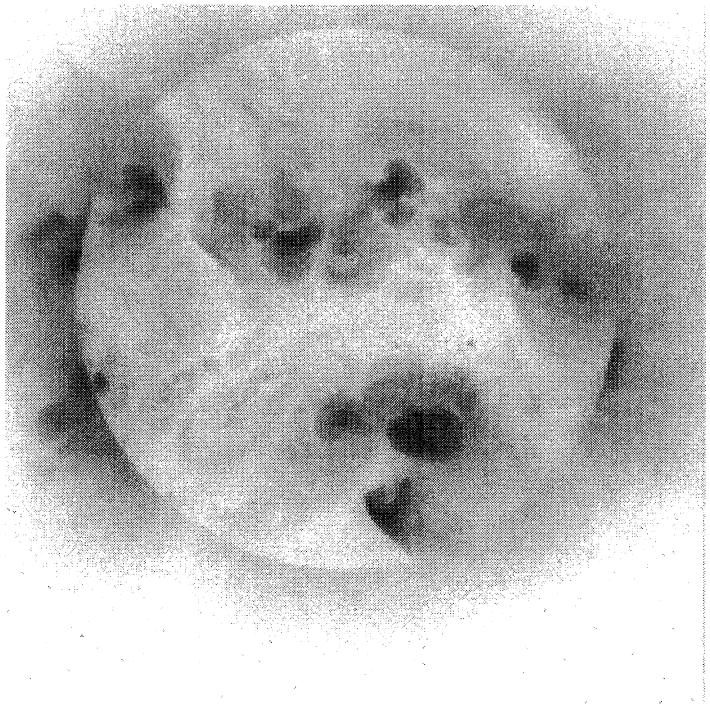
Day 17
11:59:15 UT



Day 19
12:02:58 UT



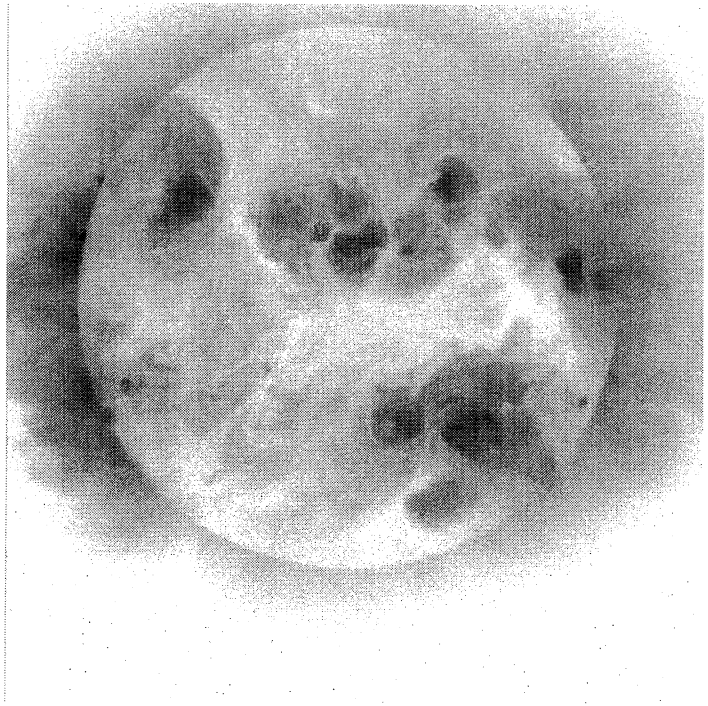
Day 18
11:59:32 UT



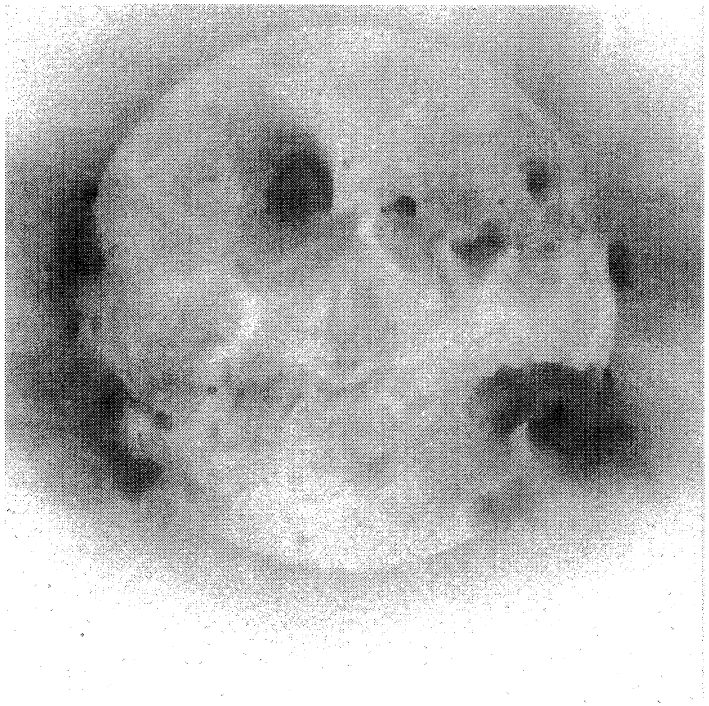
Day 20
12:01:58 UT

YOHKOH SOFT X-RAY TELESCOPE IMAGES

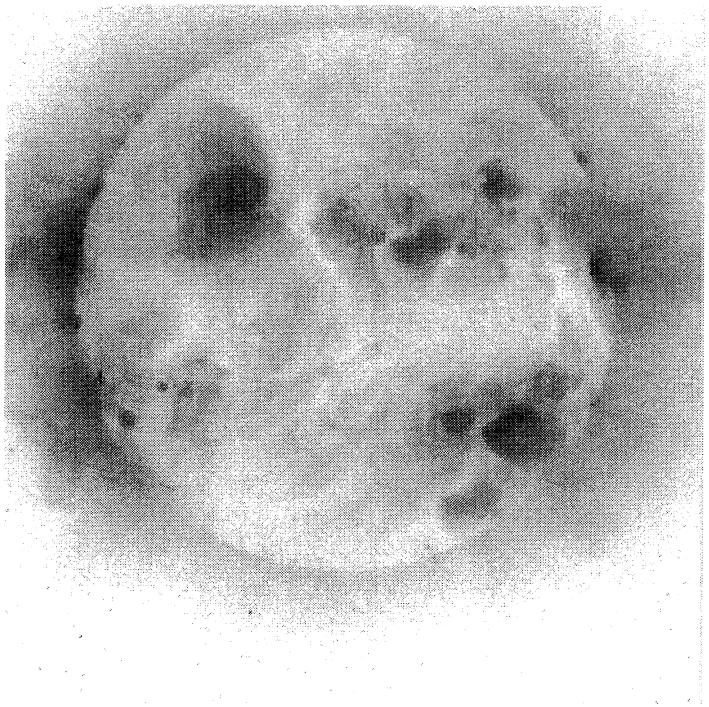
November 2000



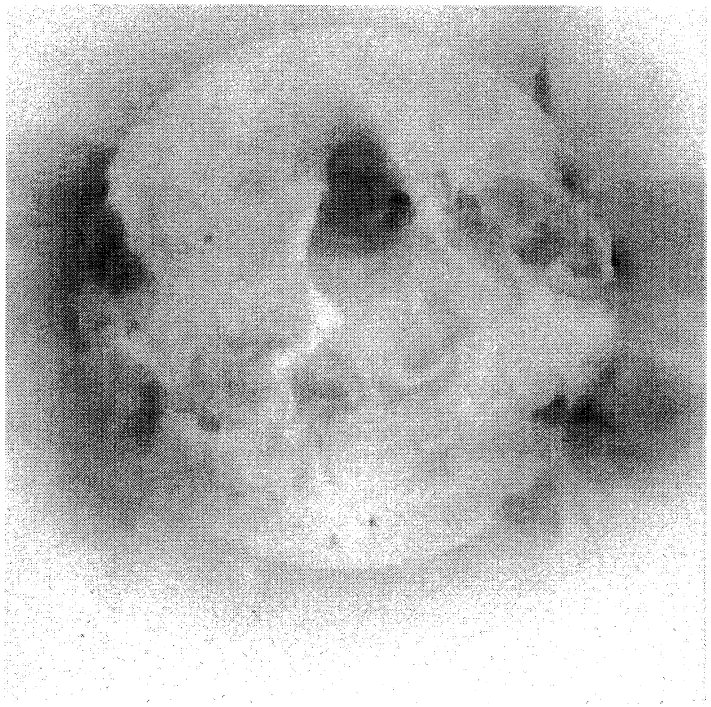
Day 21
10:45:38 UT



Day 23
10:49:41 UT



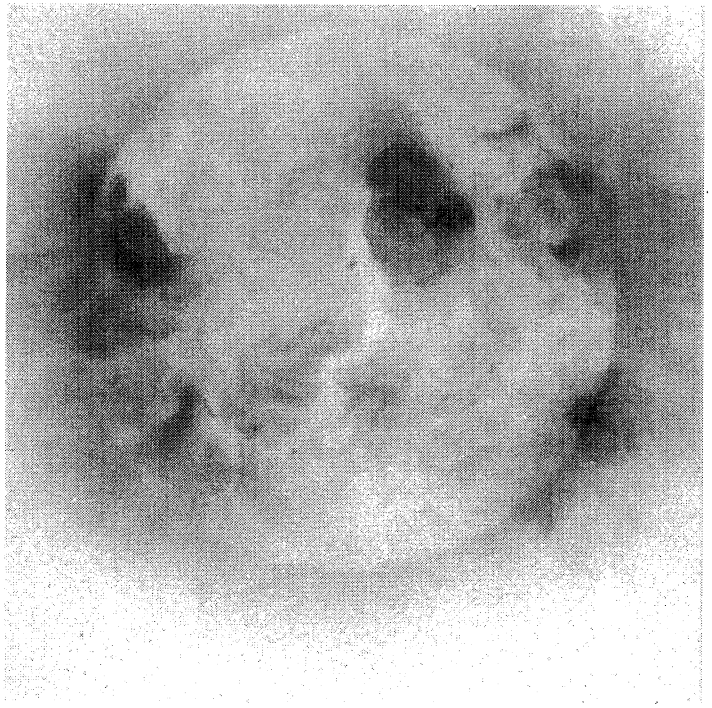
Day 22
10:42:14 UT



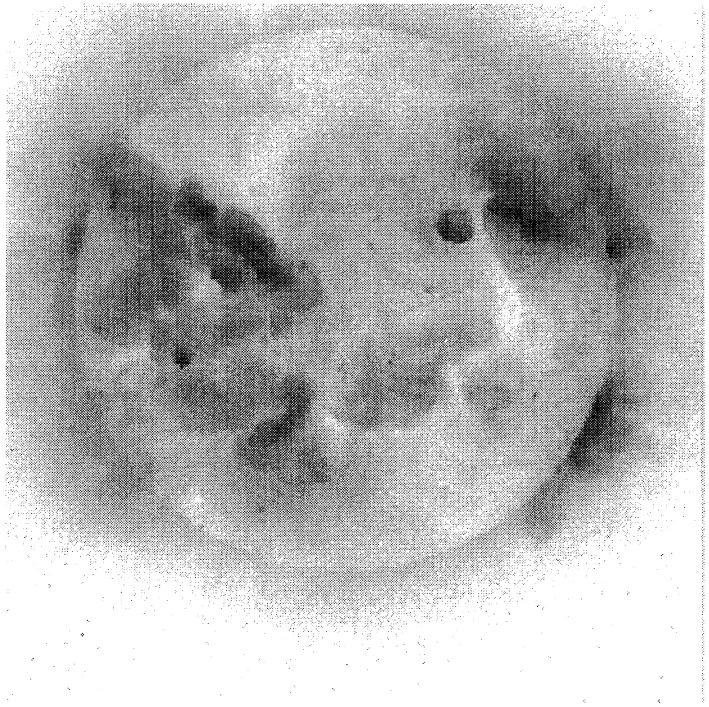
Day 24
13:36:37 UT

YOHKOH SOFT X-RAY TELESCOPE IMAGES

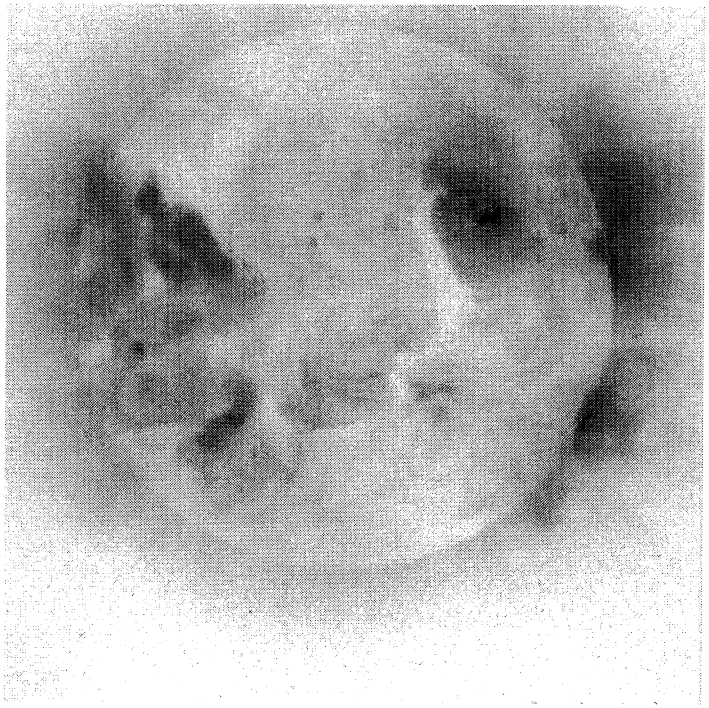
November 2000



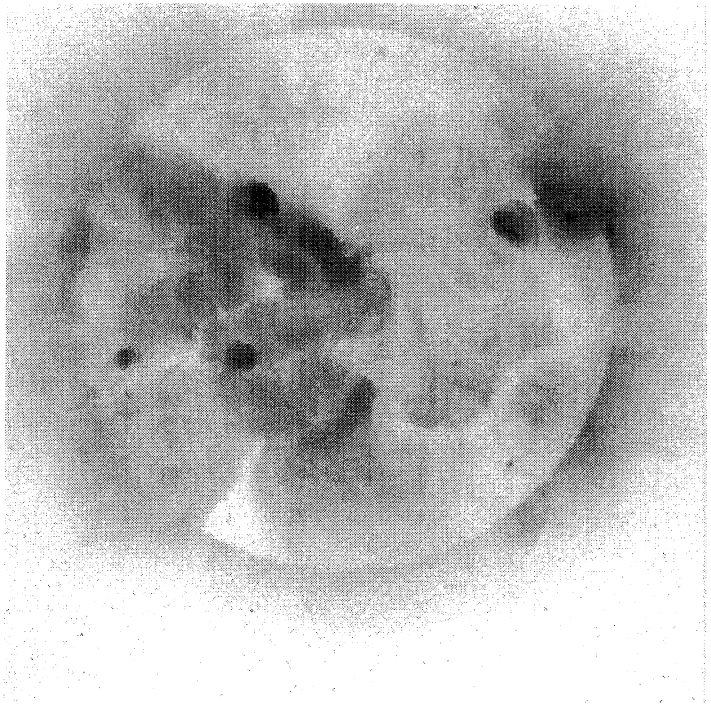
Day 25
09:02:13 UT



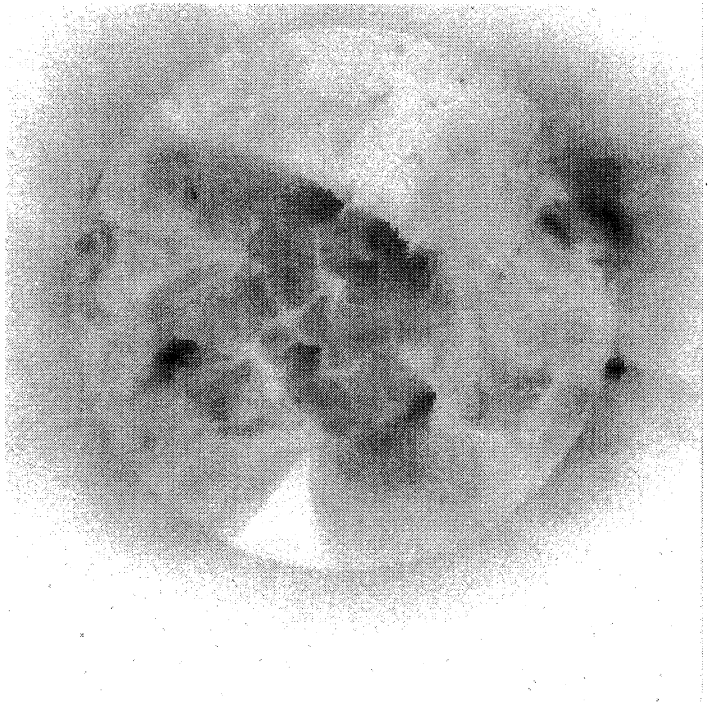
Day 27
09:42:45 UT



Day 26
12:01:57 UT



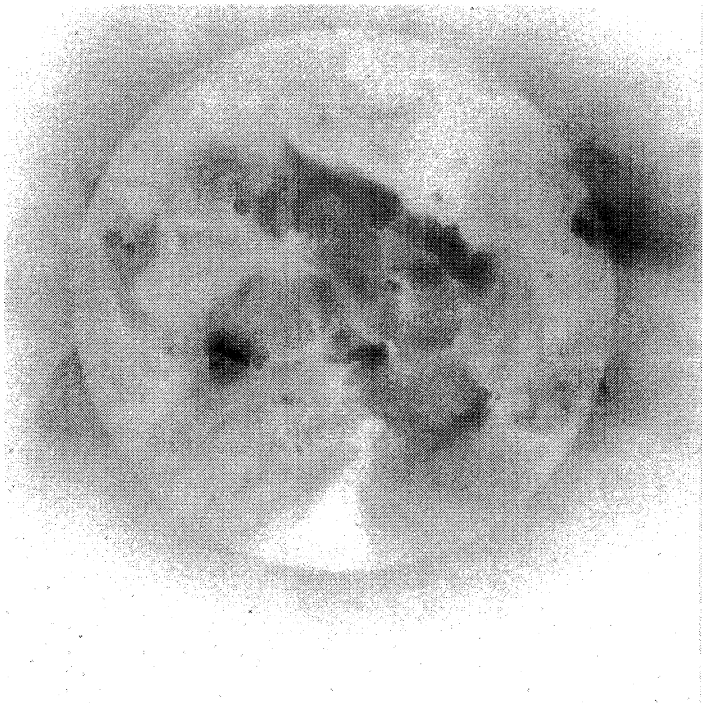
Day 28
12:08:20 UT



YOHKOH SOFT X-RAY TELESCOPE IMAGES

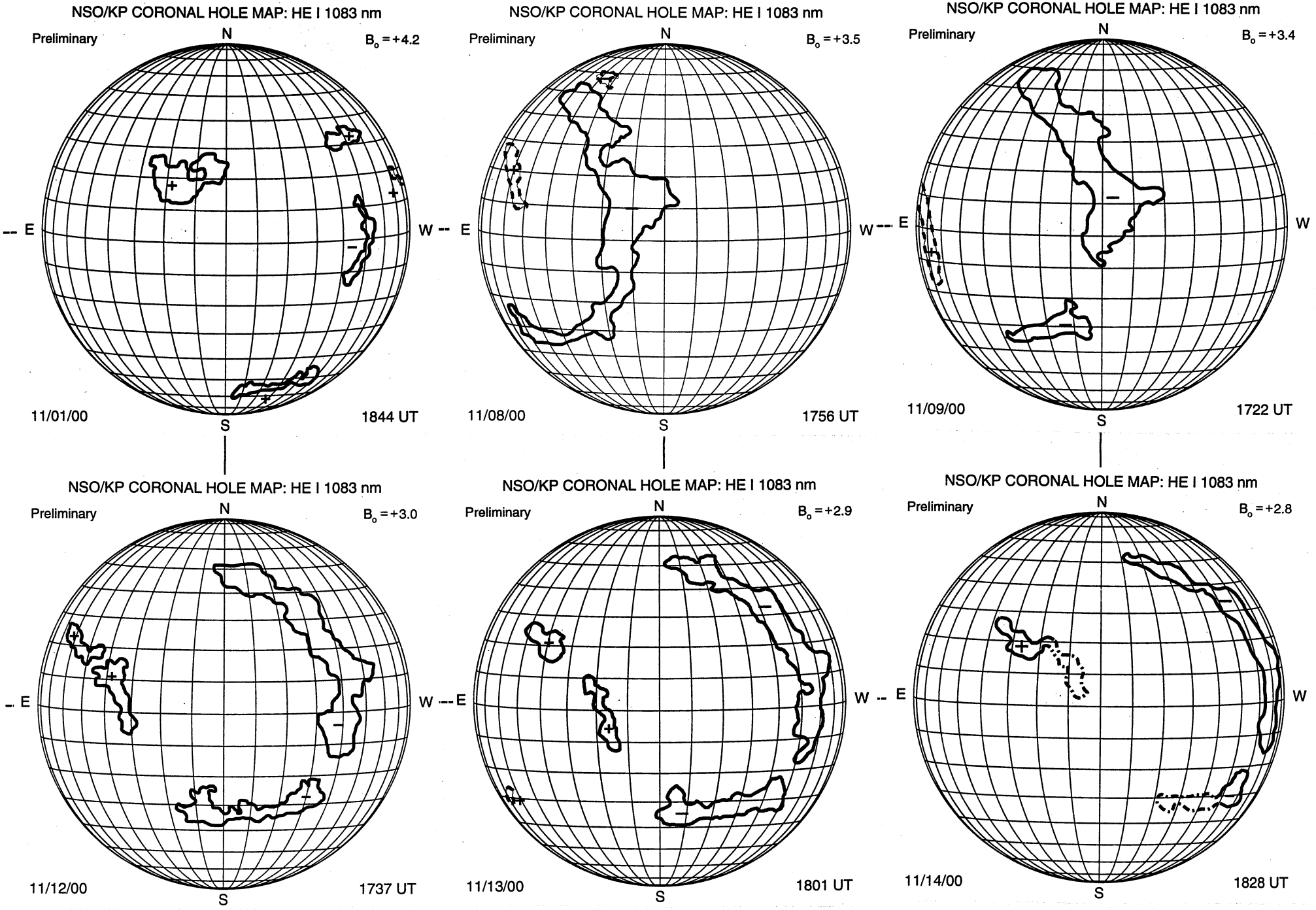
November 2000

Day 29
11:30:28 UT

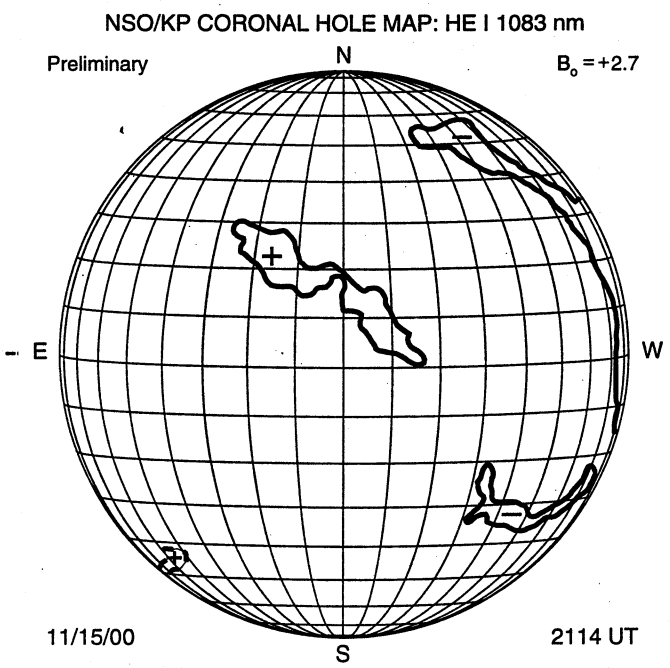


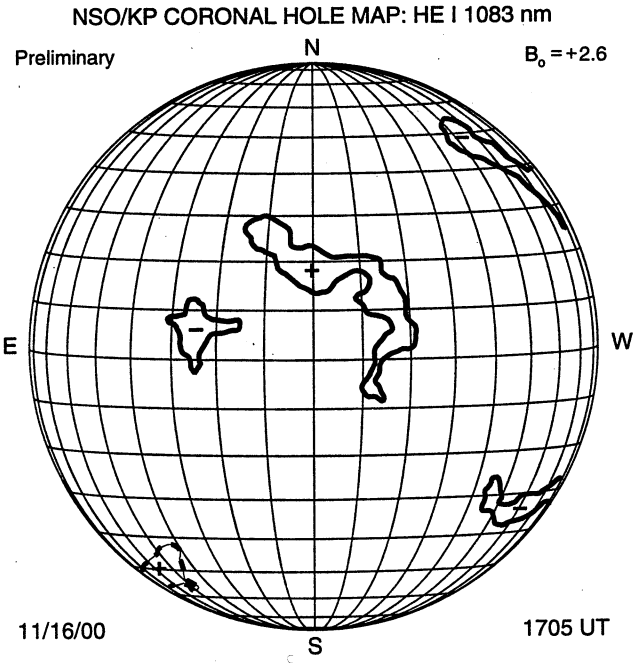
Day 30
12:41:08 UT

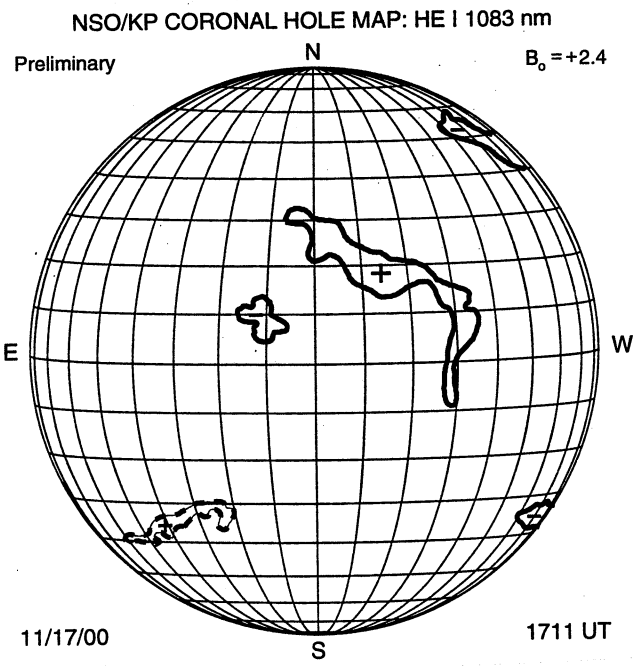
KITT PEAK CORONAL HOLE MAPS HE I 1083 nm
November 2000

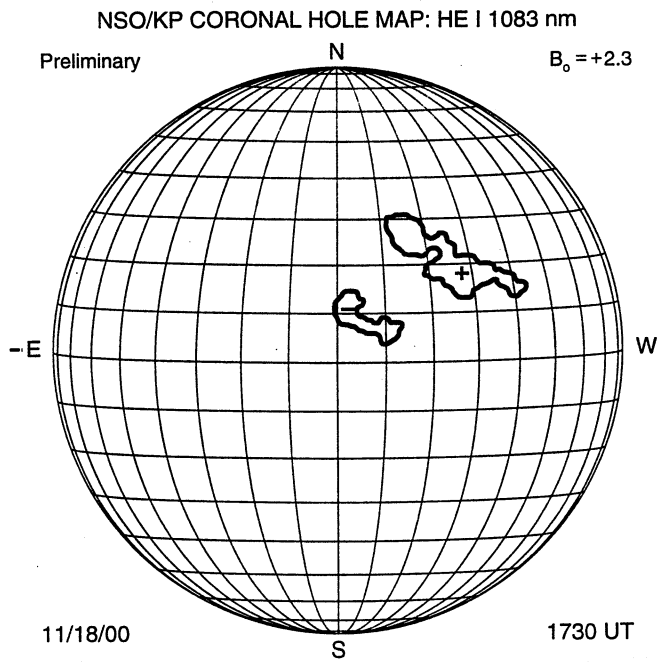


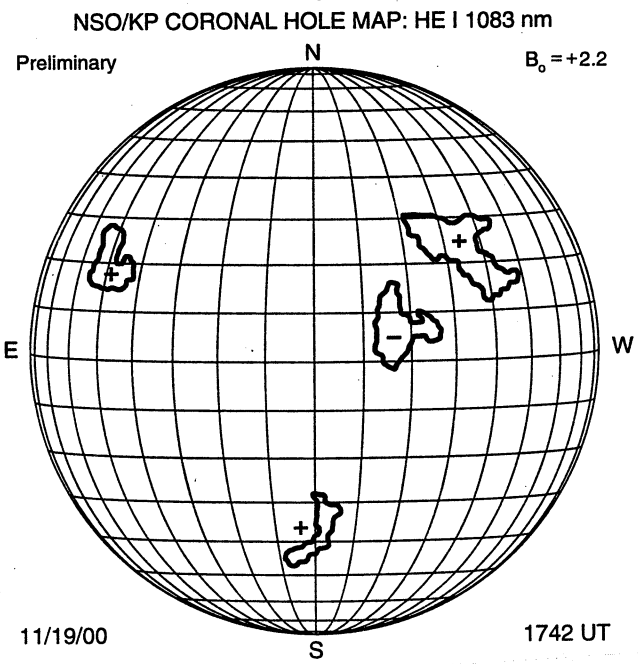
KITT PEAK CORONAL HOLE MAPS HE I 1083 nm
November 2000

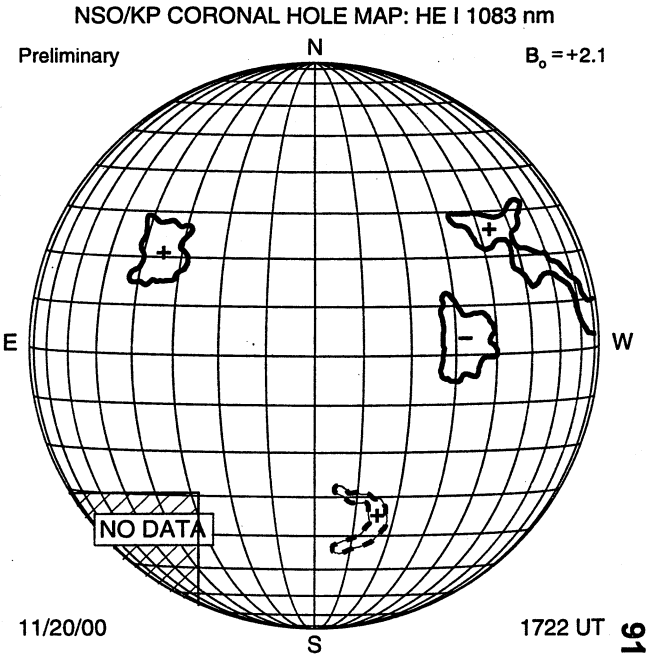




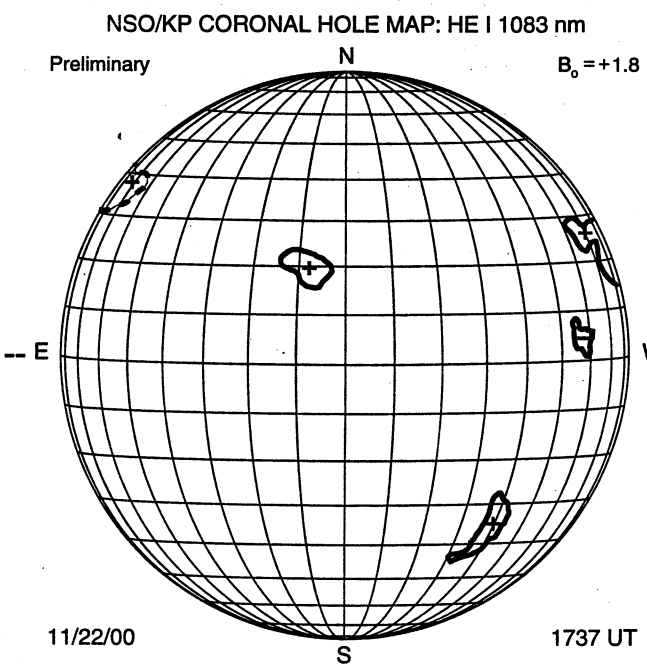


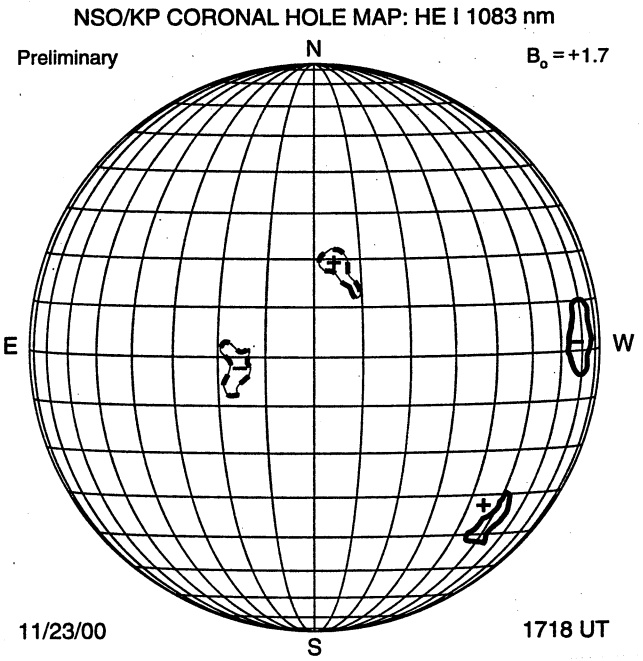


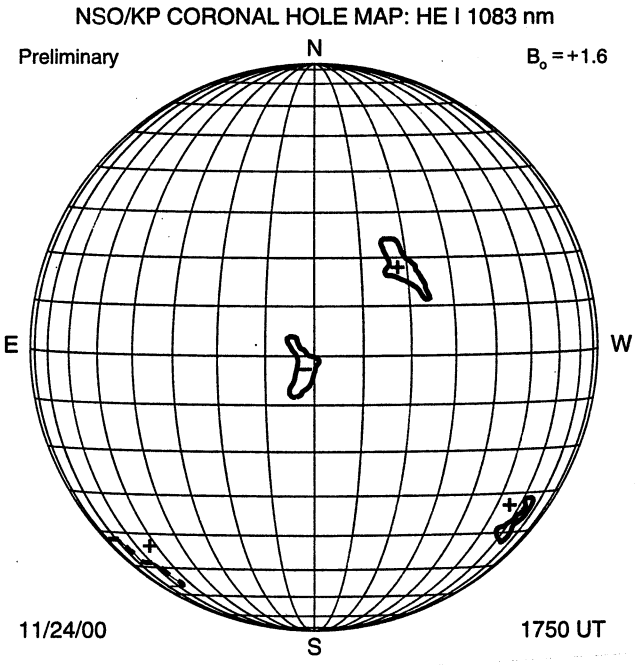


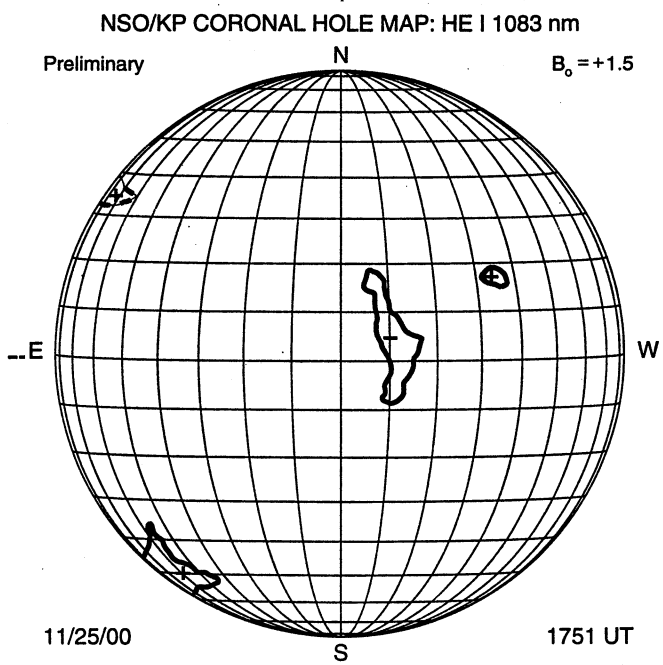


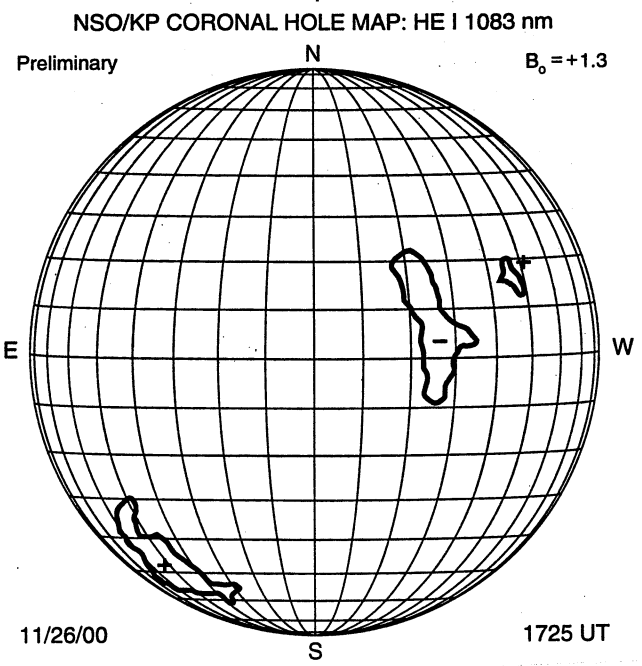
KITT PEAK CORONAL HOLE MAPS HE I 1083 nm
November 2000

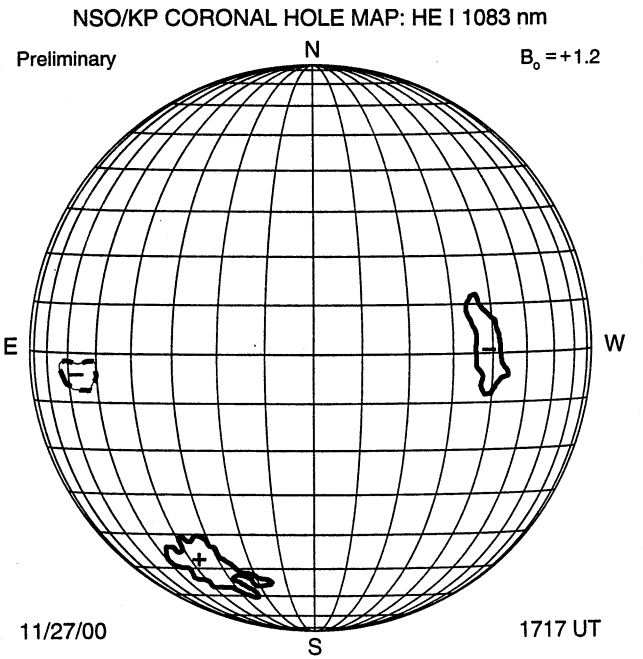




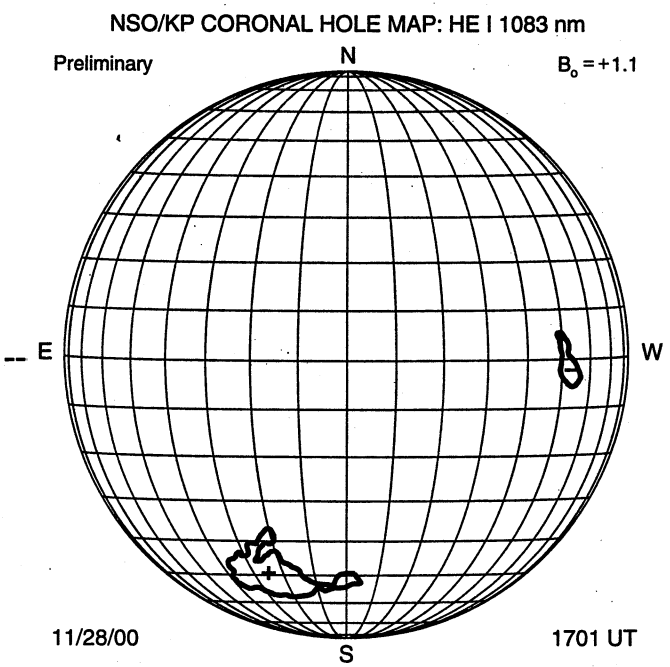


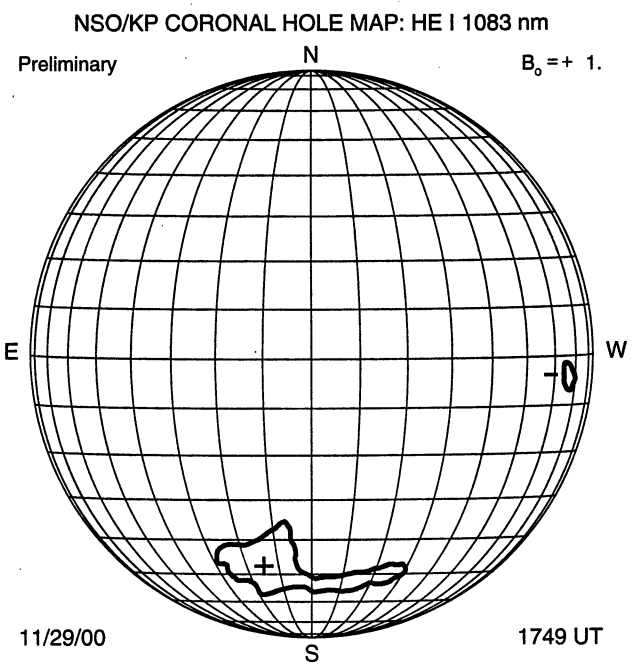


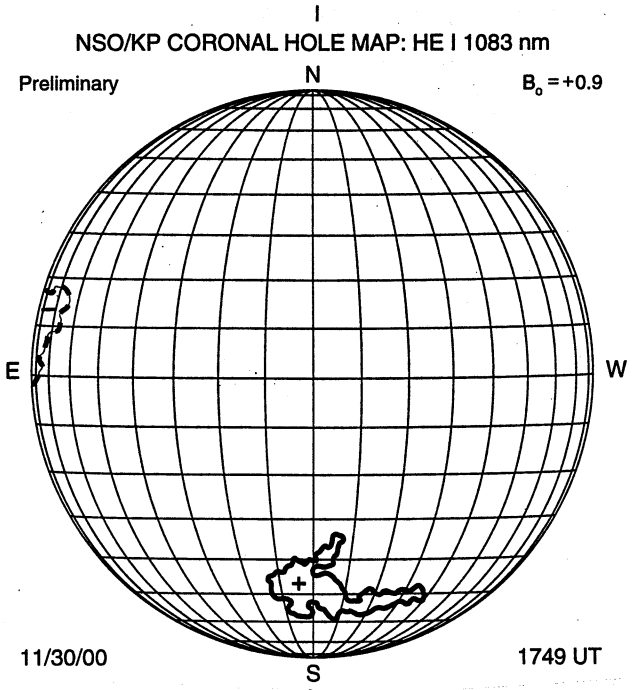




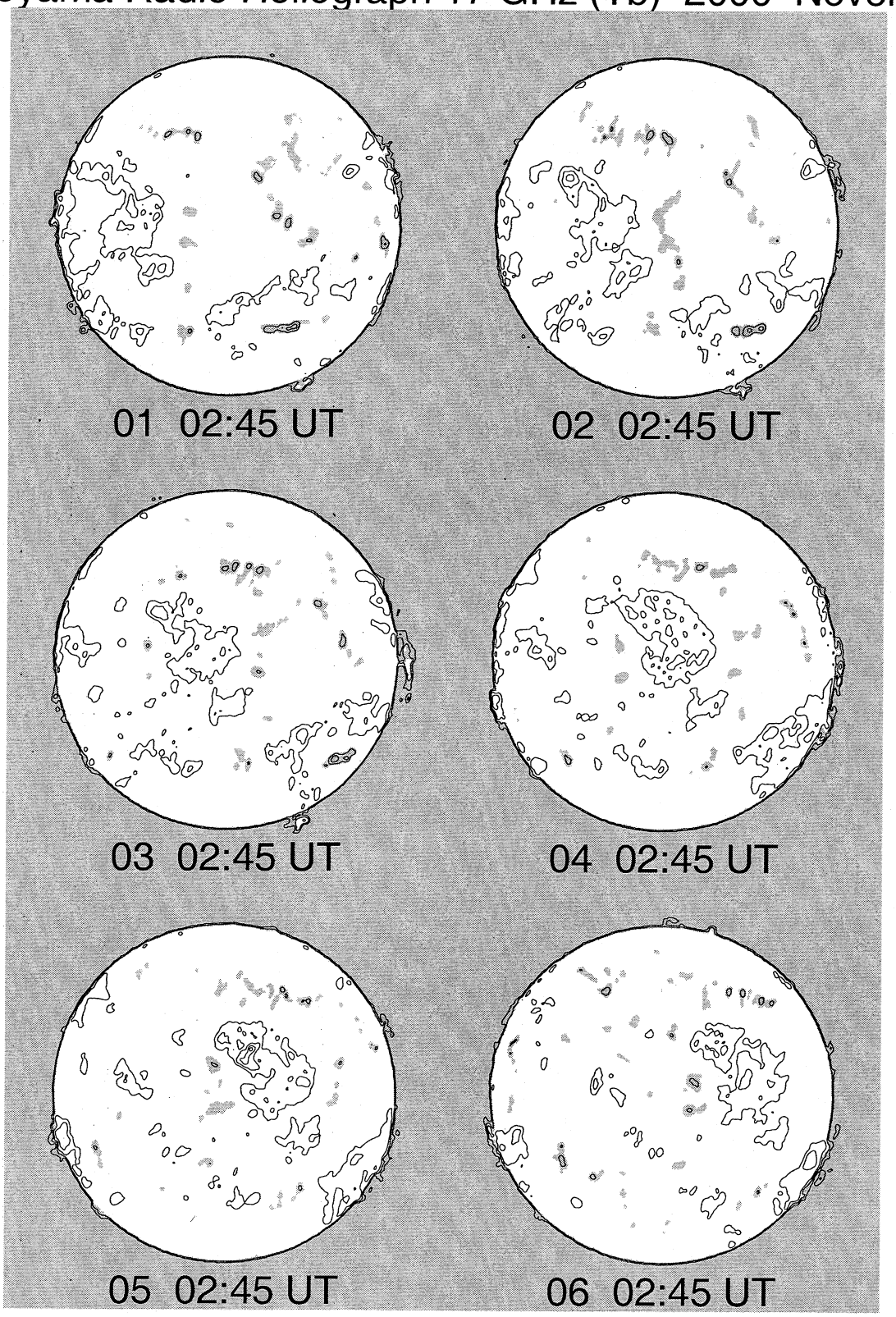
KITT PEAK CORONAL HOLE MAPS HE I 1083 nm
November 2000





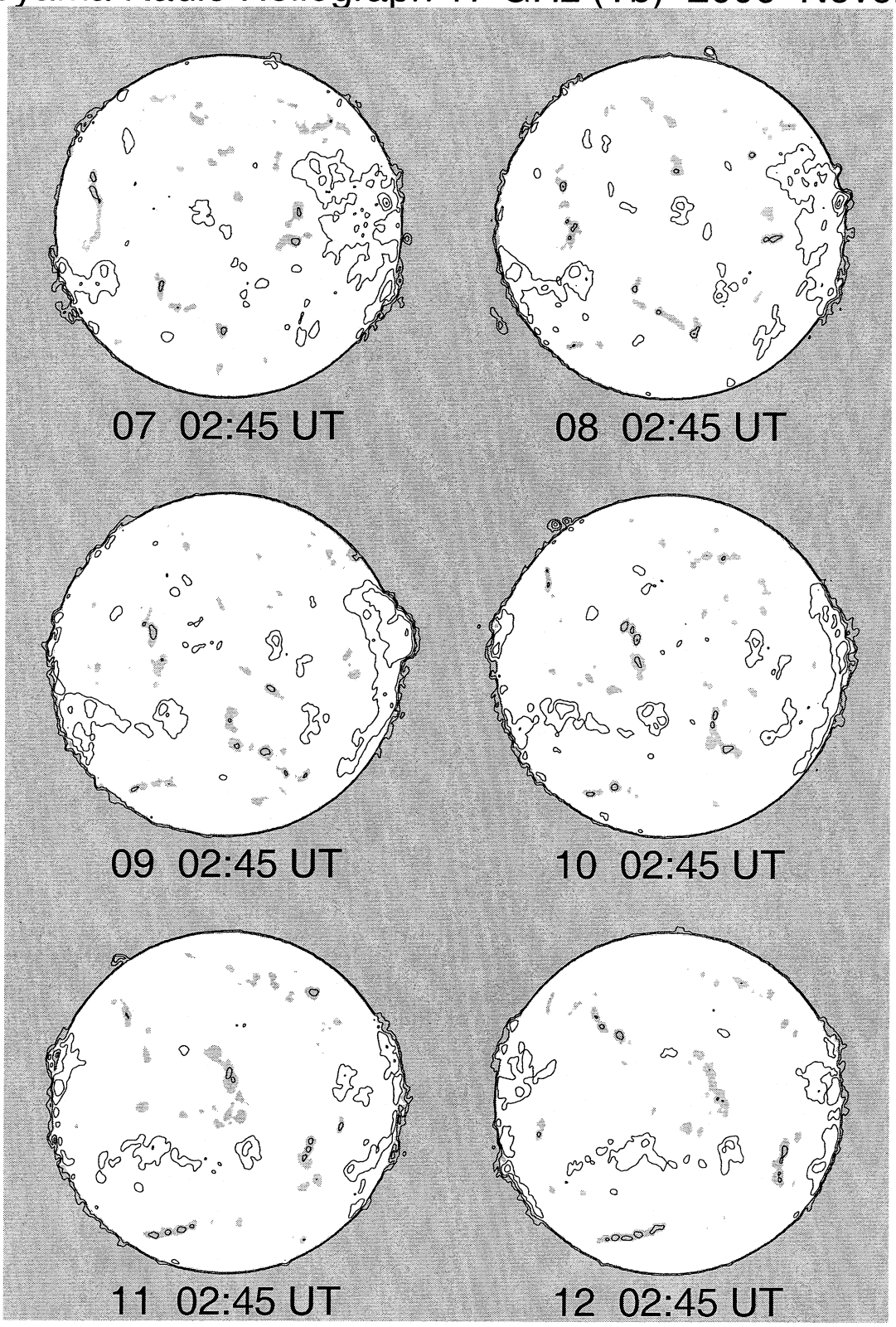


Nobeyama Radio Heliograph 17 GHz (Tb) 2000 November



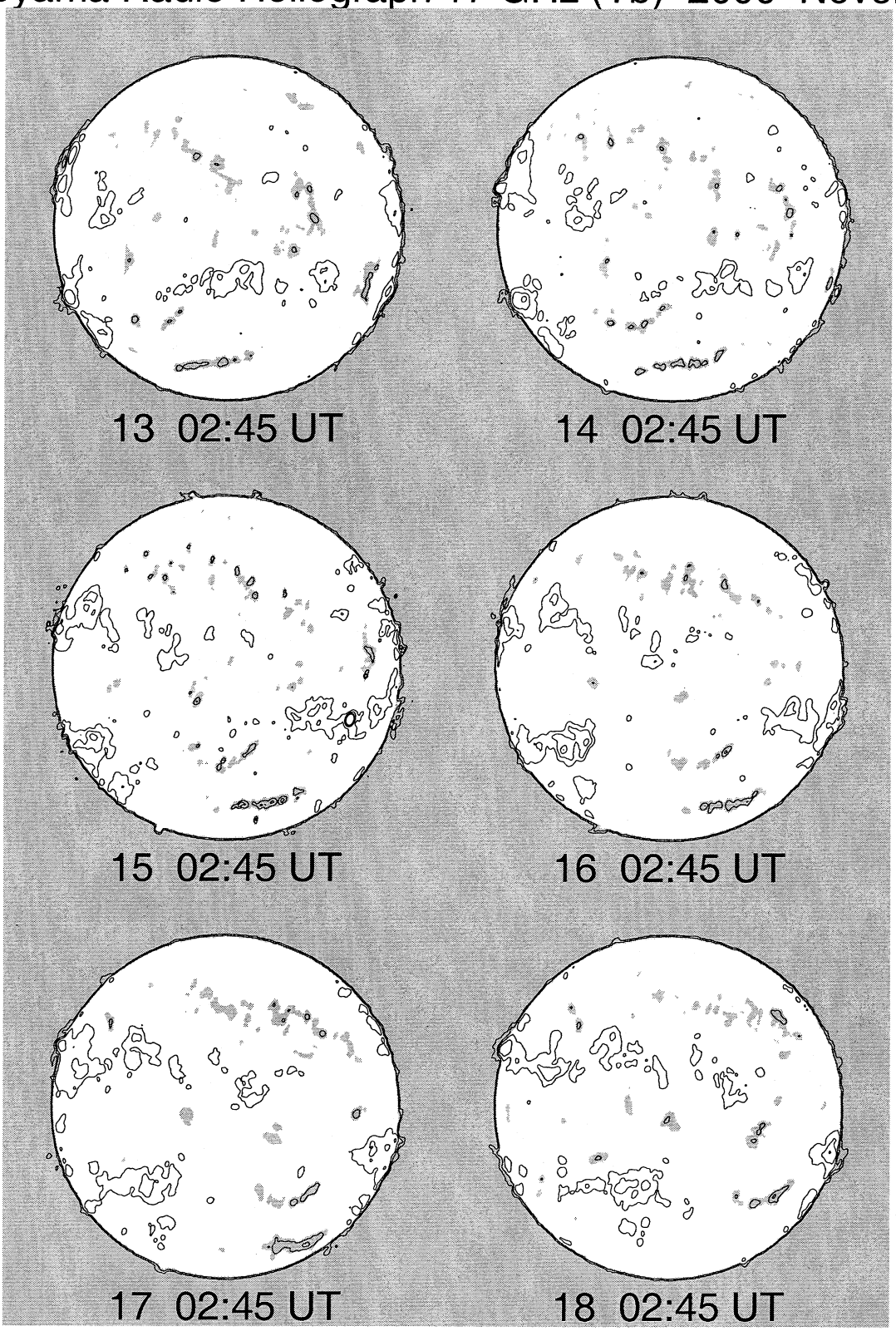
Contour Levels Tb=[5,8,12,20,50,100] x 10^3 K
Grey level Tb <= 9,500 K

Nobeyama Radio Heliograph 17 GHz (Tb) 2000 November



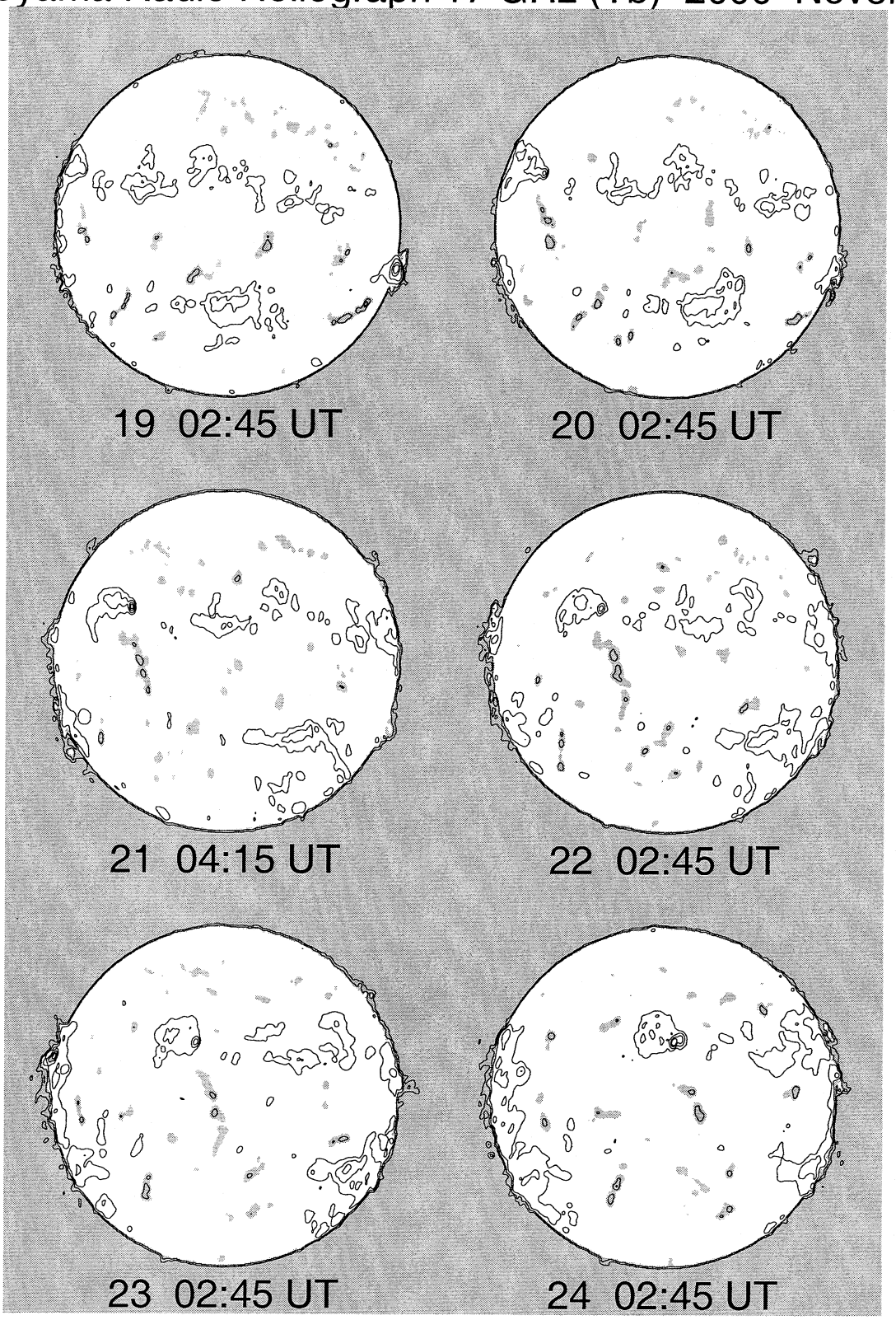
Contour Levels Tb=[5,8,12,20,50,100] x 10^3 K
Grey level Tb <= 9,500 K

Nobeyama Radio Heliograph 17 GHz (Tb) 2000 November



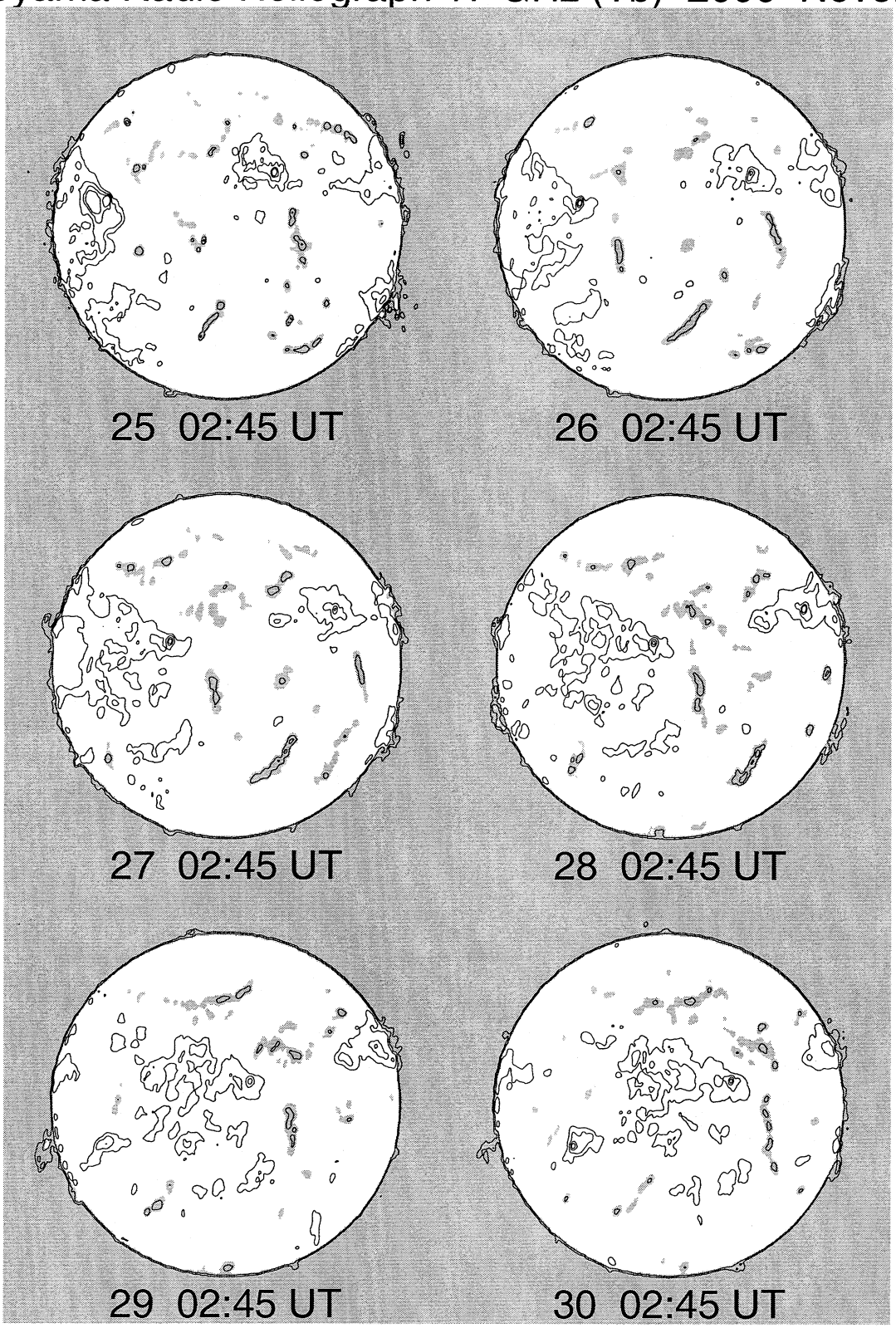
Contour Levels Tb=[5,8,12,20,50,100] x 10^3 K
Grey level Tb <= 9,500 K

Nobeyama Radio Heliograph 17 GHz (Tb) 2000 November



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

Nobeyama Radio Heliograph 17 GHz (Tb) 2000 November



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

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

NOVEMBER 2000

NOAA/ USAF Group	Mt Wilson Group	Sta	Observation Time Mo	Day	(UT)	Lat	CMD	CMP Mo	Day	Max H	Mag Class	Spot Class	Corrected Area (10-6 Hemi)	Spot Count	Long. Extent (Deg)	Qual
9210		TACH	10	26	0515	S26	E80	11	1.4			HSX	40	2	2	3
9210		RAMY	10	26	1215	S32	E82	11	2.0		B	DSO	80	3	2	3
9210		HOLL	10	26	1618	S29	E75	11	1.5		A	HSX	60	1	2	3
9210		LEAR	10	27	0140	S28	E69	11	1.5		B	DSI	90	6	3	2
9210		TACH	10	27	0535	S23	E63	11	1.1			DAI	246	6	4	3
9210		TACH	10	27	0535	S29	E77	11	2.3			DRO	55	2	5	3
9210		KAND	10	27	0700	S28	E70	11	1.8			DSO		3	4	3
9210		SVTO	10	27	1016	S27	E69	11	1.8		B	DAO	180	4	6	2
9210		RAMY	10	27	1302	S33	E65	11	1.7		B	DSO	110	10	10	3
9210		HOLL	10	27	1606	S29	E61	11	1.4		B	CSO	90	3	3	3
9210		VORO	10	27	2238	S28	E61	11	1.7			DAO	63	2	2	2
9210		TACH	10	28	0548	S27	E56	11	1.6			DRO	130	2	3	3
9210		SVTO	10	28	0910	S28	E57	11	1.8		B	DAO	60	3	5	2
9210		RAMY	10	28	1213	S32	E55	11	1.9		B	DSI	120	5	9	3
9210		VORO	10	28	2224	S29	E48	11	1.7			CAO	72	2	3	2
9210		SVTO	10	29	0700	S28	E45	11	1.8		B	DAO	140	8	6	3
9210		TACH	10	29	0705	S27	E44	11	1.7			CAI	45	3	3	3
9210		KAND	10	29	1320	S28	E40	11	1.7			CSO		4	5	2
9210		RAMY	10	29	1340	S32	E40	11	1.7		B	CSO	40	9	5	3
9210		HOLL	10	29	1420	S27	E40	11	1.7		B	CAO	80	8	5	3
9210		VORO	10	29	2224	S30	E34	11	1.6			HAX	67	2		2
9210		TACH	10	30	0447	S27	E32	11	1.7			CAO	58	4	3	4
9210		KAND	10	30	0730	S28	E30	11	1.6			DAO		7	6	4
9210		SVTO	10	30	0905	S28	E31	11	1.8		B	DAO	50	7	6	2
9210		RAMY	10	30	1210	S30	E26	11	1.5		B	DSO	40	12	6	3
9210		LEAR	10	31	0044	S28	E20	11	1.6		A	CAO	30	10	4	3
9210		TACH	10	31	0527	S27	E18	11	1.6			BR	32	8	4	3
9210		VORO	10	31	0614	S30	E19	11	1.7			AXX	26	2		3
9210		SVTO	10	31	0727	S28	E17	11	1.6		B	BXO	40	9	7	3
9210		KAND	10	31	0755	S28	E17	11	1.6			AX		7	3	4
9210		RAMY	10	31	1220	S30	E12	11	1.4		B	DSO	40	19	5	3
9210		HOLL	10	31	1523	S27	E13	11	1.6		B	CSO	40	6	3	3
9210		VORO	10	31	2303	S26	E09	11	1.6			HRX	26	1		2
9210		LEAR	11	01	0155	S29	E08	11	1.7		B	BXO	20	10	3	2
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9210		SVTO	11	01	1015	S27	E04	11	1.7		B	CRO	30	6	4	3
9210		RAMY	11	01	1405	S28	W02	11	1.4		B	DSO	20	5	4	2
9210		HOLL	11	01	1500	S27	W01	11	1.5		B	BXO	20	9	4	3
9210		LEAR	11	02	0330	S27	W04	11	1.8		A	AXX	10	5	3	3
9210		SVTO	11	02	0650	S27	W07	11	1.7		B	DAO	50	11	8	3
9210		KAND	11	02	0740	S28	W07	11	1.8			AX		3	4	3
9210		RAMY	11	02	1211	S26	W13	11	1.5		B	CSO	20	8	7	3
9210		HOLL	11	02	1524	S27	W13	11	1.6		B	CSO	40	8	5	4
9210		VORO	11	02	2255	S27	W14	11	1.9			AXX	23	2		3
9210		LEAR	11	03	0145	S28	W17	11	1.7		B	CSO	10	12	4	3
9210		TACH	11	03	0441	S27	W19	11	1.7			AXX	20	1	1	3
9210		KAND	11	03	0900	S28	W20	11	1.8			BXO		13	6	3
9210		RAMY	11	03	1255	S26	W25	11	1.6		B	CRO	20	15	4	3
9210		SVTO	11	03	1410	S28	W24	11	1.7		B	DSO	30	9	4	2
9210		LEAR	11	04	0050	S28	W29	11	1.8		B	DSO	40	7	3	3
9210		KAND	11	04	0830	S28	W34	11	1.7			DSO		7	4	4
9210		LEAR	11	05	0056	S27	W42	11	1.8		B	CSO	40	4	2	2
9210		TACH	11	05	0836	S28	W43	11	2.0			AXX	10	1	1	4
9210		KAND	11	05	0930	S28	W46	11	1.8			HR		2	2	3
9210		SVTO	11	05	1000	S27	W46	11	1.8		A	HSX	10	1	1	2
9210		RAMY	11	05	1240	S23	W49	11	1.7		B	CSO	20	2	1	3
9210		HOLL	11	05	1528	S28	W49	11	1.8		B	CSO	40	2	1	3
9210		LEAR	11	06	0105	S26	W54	11	1.8		B	CSO	30	3	2	3
9210		SVTO	11	06	0825	S27	W58	11	1.8		A	HSX	10	1	1	3
9210		RAMY	11	06	1445	S23	W61	11	1.9		B	CSO	20	2	1	3
9210		LEAR	11	07	0055	S28	W69	11	1.6		B	CSO	70	3	2	2
9226		KAND	11	07	0715	N10	W74	11	1.7			BXO		3	5	3
9226		LEAR	11	08	0110	N10	W80	11	2.0		A	HSX	60	2	2	3
9226		SVTO	11	08	0815	N09	W89	11	1.7		B	CAO	40	2	2	3
9210A		LEAR	11	01	0155	N20	E16	11	2.3		B	BXO	10	2	1	2
9214		SVTO	10	28	0910	S11	E78	11	3.2		B	DAO	60	3	5	2

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NOVEMBER 2000

NOAA/ USAF Group	Mt Wilson Group	Sta	Observation Time Mo	Day	(UT)	Lat	CMD	CMP Mo	Day	Max H	Mag Class	Spot Class	Corrected Area (10-6 Hemi)	Spot Count	Long. Extent (Deg)	Qual
9214		RAMY	10	28	1213	S15	E75	11	3.2		B	CSO	40	6	7	3
9214		VORO	10	28	2224	S11	E67	11	3.0			DAO	118	2	6	2
9214		SVTO	10	29	0700	S10	E66	11	3.2		B	DSO	170	5	9	3
9214		TACH	10	29	0705	S09	E64	11	3.1			DAI	103	4	7	4
9214		KAND	10	29	1320	S10	E60	11	3.1			DSO		3	9	2
9214		RAMY	10	29	1340	S15	E59	11	3.0		B	DSO	180	7	9	3
9214		HOLL	10	29	1420	S09	E59	11	3.0		B	DAO	220	6	8	3
9214		VORO	10	29	2224	S11	E55	11	3.1			DAO	213	2	7	2
9214		TACH	10	30	0447	S09	E51	11	3.0			DRO	201	3	8	4
9214		KAND	10	30	0730	S10	E51	11	3.1			DSO		7	10	4
9214		SVTO	10	30	0905	S11	E50	11	3.1		B	EAO	220	6	11	2
9214		RAMY	10	30	1210	S14	E45	11	2.9		B	DSO	130	12	10	3
9214	30141	MWIL	10	30	1530	S11	E46	11	3.1	5	(B)					
9214		LEAR	10	31	0044	S12	E40	11	3.0		B	DAO	80	12	7	3
9214		TACH	10	31	0527	S10	E37	11	3.0			DAO	194	8	9	3
9214		VORO	10	31	0614	S11	E38	11	3.1			DSO	265	4	9	3
9214		SVTO	10	31	0727	S11	E36	11	3.0		B	EAO	140	8	13	3
9214		KAND	10	31	0755	S11	E36	11	3.0			ESO		10	12	4
9214		RAMY	10	31	1220	S13	E31	11	2.8		B	EAI	110	20	11	3
9214	30141	MWIL	10	31	1515	S11	E32	11	3.0	5	(B)					
9214		HOLL	10	31	1523	S09	E31	11	3.0		B	DSO	80	16	10	3
9214		VORO	10	31	2303	S11	E28	11	3.1			ESO	237	4	10	2
9214		LEAR	11	01	0155	S12	E25	11	3.0		B	ESO	150	12	12	2
9214		TACH	11	01	0620	S09	E23	11	3.0			CAO	190	5	11	2
9214		SVTO	11	01	1015	S11	E22	11	3.1		B	EAO	160	20	13	3
9214		RAMY	11	01	1405	S12	E18	11	2.9		B	EAO	150	14	11	2
9214	30141	MWIL	11	01	1500	S11	E19	11	3.0	5	(BG)					
9214		HOLL	11	01	1500	S12	E18	11	3.0		B	EAO	190	14	12	3
9214		VORO	11	01	2258	S11	E15	11	3.1			EAI	231	6	10	2
9214		LEAR	11	02	0330	S12	E12	11	3.0		B	ESO	160	18	12	3
9214		TACH	11	02	0606	S10	E09	11	2.9			DAI	170	6	9	3
9214		SVTO	11	02	0650	S12	E09	11	3.0		B	ESO	190	14	15	3
9214		KAND	11	02	0740	S11	E10	11	3.1			ESO		12	14	3
9214		RAMY	11	02	1211	S13	E05	11	2.9		B	ESO	130	18	12	3
9214	30141	MWIL	11	02	1500	S12	E05	11	3.0	5	(BG)					
9214		HOLL	11	02	1524	S11	E08	11	3.2		B	EAO	150	17	12	4
9214		VORO	11	02	2255	S12	E02	11	3.1			ESI	266	6	12	3
9214		LEAR	11	03	0145	S12	E00	11	3.1		BG	EAO	130	13	14	3
9214		KAND	11	03	0900	S11	W05	11	3.0			CSO		9	14	3
9214		RAMY	11	03	1255	S11	W06	11	3.1		B	ESO	130	19	14	3
9214		SVTO	11	03	1410	S12	W07	11	3.1		B	ESO	90	7	14	2
9214	30141	MWIL	11	03	1530	S10	W10	11	2.9	5	(BP)					
9214		LEAR	11	04	0050	S11	W13	11	3.0		B	CSO	90	6	13	3
9214		VORO	11	04	2339	S09	W32	11	2.6			HAX	116	2		2
9214		LEAR	11	05	0056	S08	W33	11	2.6		B	CSO	100	2	2	2
9214		TACH	11	05	0836	S09	W35	11	2.7			HSX	71	2	2	4
9214		KAND	11	05	0930	S09	W37	11	2.6			HS		2	3	3
9214		SVTO	11	05	1000	S09	W36	11	2.7		B	CSO	50	3	4	2
9214		RAMY	11	05	1240	S06	W39	11	2.6		B	DSO	60	4	3	3
9214	30141	MWIL	11	05	1515	S09	W40	11	2.6	5	(BG)					
9214		HOLL	11	05	1528	S09	W41	11	2.6		B	CAO	60	4	3	3
9214		LEAR	11	06	0105	S08	W47	11	2.5		B	CSO	70	3	2	3
9214		SVTO	11	06	0825	S09	W49	11	2.7		B	CSO	100	3	4	3
9214		RAMY	11	06	1445	S06	W53	11	2.6		B	CSO	40	2	2	3
9214	30141	MWIL	11	06	1515	S09	W53	11	2.6	5	(AP)					
9214		KAND	11	07	0715	S09	W62	11	2.6			HS		1	2	3
9214		SVTO	11	07	0735	S10	W63	11	2.6		A	HSX	80	1	2	2
9214	30141	MWIL	11	07	1545	S09	W67	11	2.6	4	(AP)					
9214		VORO	11	07	2353	S09	W72	11	2.6			HAX	39	1		2
9214		LEAR	11	08	0110	S08	W70	11	2.8		A	HSX	60	1	2	3
9214		KAND	11	08	0725	S10	W77	11	2.5			HS		1	2	4
9214		SVTO	11	08	0815	S08	W80	11	2.3		A	HSX	60	1	1	3
9214	30141	MWIL	11	08	1545	S10	W72	11	3.2	4	(B)					
9214		HOLL	11	08	1625	S08	W78	11	2.8		A	HAX	60	1	2	2
9212		TACH	10	28	0548	N12	E81	11	3.3			HSX	85	2	1	3
9212		SVTO	10	28	0910	N08	E80	11	3.4		B	DAO	140	2	5	2
9212		RAMY	10	28	1213	N05	E84	11	3.8		B	BHO	240	3	8	3
9212		VORO	10	28	2224	N09	E73	11	3.4			HAX	300	2	0	2

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9212		SVTO	10	29	0700	N08	E70	11	3.5		B	DAO	250	6	6	3
9212		TACH	10	29	0705	N10	E69	11	3.5			HSX	115	3	1	3
9212		KAND	10	29	1320	N11	E67	11	3.6			CAI		10	6	2
9212		RAMY	10	29	1340	N05	E66	11	3.5		B	DKC	270	9	6	3
9212		HOLL	10	29	1420	N10	E66	11	3.5		B	DAO	290	7	5	3
9212		VORO	10	29	2224	N10	E61	11	3.5			HAX	295	1		2
9212		TACH	10	30	0447	N11	E57	11	3.5			HSX	206	3	2	4
9212		KAND	10	30	0730	N11	E57	11	3.6			CAI		14	9	4
9212		SVTO	10	30	0905	N10	E55	11	3.5		B	DAO	200	9	7	2
9212		RAMY	10	30	1210	N05	E52	11	3.4		B	DAI	170	20	9	3
9212	30142	MWIL	10	30	1530	N09	E50	11	3.4	5	(BG)					
9212		LEAR	10	31	0044	N08	E48	11	3.6		B	DSI	110	10	5	3
9212		TACH	10	31	0527	N10	E43	11	3.4			HSX	566	12	3	3
9212		VORO	10	31	0614	N10	E43	11	3.5			HAX	195	4		3
9212		SVTO	10	31	0727	N11	E43	11	3.5		B	DAO	100	8	6	3
9212		KAND	10	31	0755	N09	E42	11	3.5			DSI		7	5	4
9212		RAMY	10	31	1220	N08	E39	11	3.4		B	DAO	110	16	6	3
9212	30142	MWIL	10	31	1515	N09	E39	11	3.6	5	(BG)					
9212		HOLL	10	31	1523	N11	E38	11	3.5		B	DSI	100	11	7	3
9212		VORO	10	31	2303	N11	E36	11	3.7			HAX	286	4	4	2
9212		LEAR	11	01	0155	N09	E33	11	3.5		B	DSO	140	13	7	2
9212		TACH	11	01	0620	N12	E31	11	3.6			CAI	108	8	5	2
9212		SVTO	11	01	1015	N11	E30	11	3.7		B	EAO	130	16	11	3
9212		RAMY	11	01	1405	N10	E26	11	3.5		B	EAI	110	20	11	2
9212		HOLL	11	01	1500	N10	E27	11	3.6		B	EAO	110	23	13	3
9212	30142	MWIL	11	01	1500	N11	E27	11	3.6	5	(BP)					
9212		VORO	11	01	2258	N10	E21	11	3.5			HAX	119	1		2
9212		LEAR	11	02	0330	N09	E17	11	3.4		B	CAI	60	20	7	3
9212		TACH	11	02	0606	N11	E14	11	3.3			HSX	120	1	1	3
9212		SVTO	11	02	0650	N12	E16	11	3.5		B	EAO	100	23	11	3
9212		KAND	11	02	0740	N10	E16	11	3.5			CAO		8	7	3
9212		RAMY	11	02	1211	N09	E13	11	3.5		B	CAO	120	43	16	3
9212	30142	MWIL	11	02	1500	N09	E10	11	3.4	4	(BG)					
9212		HOLL	11	02	1524	N08	E10	11	3.4		B	CAI	70	19	11	4
9212		VORO	11	02	2255	N11	E10	11	3.7			DAI	160	5	5	3
9212		LEAR	11	03	0145	N09	E04	11	3.4		B	ESO	770	21	12	3
9212		TACH	11	03	0441	N09	W00	11	3.2			CAO	100	6	5	3
9212		KAND	11	03	0900	N10	E00	11	3.4			CAO		28	13	3
9212		RAMY	11	03	1255	N13	W03	11	3.3		B	FSO	130	65	18	3
9212		SVTO	11	03	1410	N09	W03	11	3.4		B	EAO	170	19	15	2
9212	30142	MWIL	11	03	1530	N10	W03	11	3.4	4	(BP)					
9212		LEAR	11	04	0050	N09	W08	11	3.4		B	DSO	40	16	6	3
9212		KAND	11	04	0830	N10	W12	11	3.4			CRO		20	10	4
9212	30142	MWIL	11	04	1500	N09	W17	11	3.3	4	(AP)					
9212		LEAR	11	05	0056	N10	W23	11	3.3		B	DSO	50	8	5	2
9212		TACH	11	05	0836	N13	W27	11	3.3			CAI	86	10	2	4
9212		KAND	11	05	0930	N10	W27	11	3.4			BXO		6	4	3
9212		SVTO	11	05	1000	N09	W27	11	3.4		B	BXO	10	7	4	2
9212		RAMY	11	05	1240	N12	W25	11	3.6		B	CSO	20	12	8	3
9212	30142	MWIL	11	05	1515	N10	W30	11	3.4	4	(AP)					
9212		HOLL	11	05	1528	N09	W32	11	3.2		A	AXX	20	4	2	3
9222		KAND	11	03	0900	N15	W01	11	3.3			AX		2	1	3
9222	30149	MWIL	11	04	1500	N16	W18	11	3.2	4	(B)					
9222		LEAR	11	05	0056	N17	W22	11	3.4		B	DSO	60	6	4	2
9222		KAND	11	05	0930	N17	W27	11	3.3			DAO		5	5	3
9222		SVTO	11	05	1000	N16	W27	11	3.4		B	DAO	60	7	7	2
9222		RAMY	11	05	1240	N19	W29	11	3.3		B	DSO	50	8	5	3
9222	30149	MWIL	11	05	1515	N17	W30	11	3.3	5	(B)					
9222		HOLL	11	05	1528	N17	W31	11	3.3		B	DAO	60	7	7	3
9222		LEAR	11	06	0105	N17	W36	11	3.3		B	DSO	40	5	6	3
9222		SVTO	11	06	0825	N17	W41	11	3.2		B	DAO	40	3	7	3
9222		RAMY	11	06	1445	N20	W43	11	3.3		B	DSO	40	3	7	3
9222	30149	MWIL	11	06	1515	N17	W44	11	3.3	4	(B)					
9222		VORO	11	06	2317	N17	W52	11	3.0			HAX	52	1		1
9222		LEAR	11	07	0055	N17	W49	11	3.3		B	CSO	40	2	6	2
9222		KAND	11	07	0715	N16	W54	11	3.2			DSO		2	8	3
9222		SVTO	11	07	0735	N16	W55	11	3.1		B	DSO	50	2	9	2
9222	30149	MWIL	11	07	1545	N16	W60	11	3.1	4	(AP)					

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9222		LEAR	11	08	0110	N17	W62	11	3.3		B	CSO	40	3	9	3
9222		KAND	11	08	0725	N15	W70	11	3.0			HA		1	2	4
9222		SVTO	11	08	0815	N16	W72	11	2.9		A	HAX	40	1	1	3
9222	30149	MWIL	11	08	1545	N15	W75	11	3.0	4	(AP)					
9222		HOLL	11	08	1625	N16	W75	11	3.0		A	HAX	60	1	1	2
9222		LEAR	11	09	0114	N16	W80	11	3.0		A	HRX	30	1	1	3
9224		LEAR	11	07	0055	N29	W48	11	3.3		A	AXX		1		2
9224		KAND	11	07	0715	N28	W54	11	3.1			HR		1	1	3
9224		SVTO	11	07	0735	N28	W54	11	3.1		A	HSX		1		2
9224	30152	MWIL	11	07	1545	N28	W57	11	3.2	4	(AP)					
9224		LEAR	11	08	0110	N29	W60	11	3.3		B	CSO	30	4	6	3
9224		KAND	11	08	0725	N28	W69	11	2.9			AX		1	1	4
9224		SVTO	11	08	0815	N30	W67	11	3.1		B	CAO	30	4	8	3
9224	30152	MWIL	11	08	1545	N27	W72	11	3.0	3	(AP)					
9213		TACH	10	28	0548	N04	E79	11	3.1			HSX	100	1	1	3
9213		SVTO	10	28	0910	N02	E79	11	3.3		A	HAX	120	2	3	2
9213		RAMY	10	28	1213	S01	E77	11	3.2		A	HHX	240	2	3	3
9213		VORO	10	28	2224	N02	E70	11	3.2			HAX	238	1		2
9213		SVTO	10	29	0700	N04	E65	11	3.1		A	HSX	130	4	4	3
9213		TACH	10	29	0705	N04	E65	11	3.1			HSX	300	2	2	3
9213		KAND	10	29	1320	N03	E62	11	3.2			HA		3	4	2
9213		RAMY	10	29	1340	S02	E62	11	3.2		A	HHX	280	4	3	3
9213		HOLL	10	29	1420	N03	E62	11	3.2		A	HKX	230	4	3	3
9213		VORO	10	29	2224	N02	E57	11	3.2			HAX	365	3		2
9213		TACH	10	30	0447	N03	E53	11	3.1			HSX	300	2	2	4
9213		KAND	10	30	0730	N03	E53	11	3.3			HA		6	4	4
9213		SVTO	10	30	0905	N04	E51	11	3.2		A	HKX	250	2	4	2
9213		RAMY	10	30	1210	S02	E49	11	3.2		B	DAO	210	11	3	3
9213	30143	MWIL	10	30	1530	N02	E47	11	3.1	5	(AP)					
9213		LEAR	10	31	0044	N02	E43	11	3.2		A	CAX	230	6	2	3
9213		TACH	10	31	0527	N03	E40	11	3.2			HSX	433	6	3	3
9213		VORO	10	31	0614	N03	E40	11	3.2			HKX	330	1		3
9213		SVTO	10	31	0727	N03	E39	11	3.2		B	CAO	200	6	5	3
9213		KAND	10	31	0755	N02	E38	11	3.2			HK		6	3	4
9213		RAMY	10	31	1220	S01	E35	11	3.1		B	DAO	170	7	4	3
9213	30143	MWIL	10	31	1515	N02	E34	11	3.2	5	(AP)					
9213		HOLL	10	31	1523	N04	E34	11	3.2		A	CKO	200	9	2	3
9213		VORO	10	31	2303	N02	E29	11	3.1			HKX	326	1		2
9213		LEAR	11	01	0155	N02	E28	11	3.2		A	HAX	160	8	4	2
9213		TACH	11	01	0620	N04	E26	11	3.2			HSX	440	3	2	2
9213		SVTO	11	01	1015	N03	E24	11	3.2		B	CKO	230	8	5	3
9213		RAMY	11	01	1405	N01	E21	11	3.1		B	DAO	170	15	4	2
9213		HOLL	11	01	1500	N03	E21	11	3.2		A	HKX	250	6	4	3
9213		VORO	11	01	2258	N02	E17	11	3.2			HKX	655	4		2
9213		LEAR	11	02	0330	N02	E14	11	3.2		B	CKO	240	9	5	3
9213		TACH	11	02	0606	N04	E11	11	3.1			HA	500	4	2	3
9213		SVTO	11	02	0650	N03	E13	11	3.2		B	DAO	240	12	9	3
9213		KAND	11	02	0740	N03	E12	11	3.2			CKO		6	7	3
9213		RAMY	11	02	1211	N03	E12	11	3.4		B	CAO	240	12	10	3
9213	30143	MWIL	11	02	1500	N02	E08	11	3.2	5	(AP)					
9213		HOLL	11	02	1524	N03	E07	11	3.2		B	CAO	160	6	4	4
9213		VORO	11	02	2255	N03	E04	11	3.2			HKX	405	2		3
9213		LEAR	11	03	0145	N03	E02	11	3.2		A	HAX	200	7	4	3
9213		TACH	11	03	0441	N04	W01	11	3.1			HSX	315	2	2	3
9213		KAND	11	03	0900	N02	E00	11	3.4			CKO		11	10	3
9213		RAMY	11	03	1255	N03	W02	11	3.4		B	CAO	200	14	8	3
9213		SVTO	11	03	1410	N03	W06	11	3.1		A	HAX	160	8	5	2
9213	30143	MWIL	11	03	1530	N03	W05	11	3.3	5	(AP)					
9213		LEAR	11	04	0050	N03	W12	11	3.1		A	HAX	250	3	3	3
9213		KAND	11	04	0830	N03	W16	11	3.1			HK		3	3	4
9213	30143	MWIL	11	04	1500	N03	W19	11	3.2	5	(AP)					
9213		VORO	11	04	2339	N03	W24	11	3.2			HAX	301	2		2
9213		LEAR	11	05	0056	N03	W25	11	3.2		A	HAX	130	3	3	2
9213		TACH	11	05	0836	N03	W28	11	3.3			HSX	250	2	2	4
9213		KAND	11	05	0930	N03	W30	11	3.1			HK		2	3	3
9213		SVTO	11	05	1000	N02	W29	11	3.2		A	HAX	130	2	4	2
9213		RAMY	11	05	1240	N05	W32	11	3.1		A	HAX	100	7	2	3

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NOVEMBER 2000

NOAA/ USAF Group	Mt Wilson Group	Sta	Observation Time Mo	Day	(UT)	Lat	CMD	CMP Mo	Day	Max H	Mag Class	Spot Class	Corrected Area (10-6 Hemi)	Spot Count	Long. Extent (Deg)	Qual
9213	30143	MWIL	11	05	1515	N03	W32	11	3.2	5	(AP)					
9213		HOLL	11	05	1528	N02	W33	11	3.2		B	CAI	90	4	2	3
9213		LEAR	11	06	0105	N04	W38	11	3.2		A	HAX	110	4	2	3
9213		SVTO	11	06	0825	N03	W42	11	3.2		B	CAO	110	6	4	3
9213		RAMY	11	06	1445	N06	W45	11	3.2		A	HAX	90	6	3	3
9213	30143	MWIL	11	06	1515	N03	W46	11	3.2	4	(AP)					
9213		LEAR	11	07	0055	N03	W52	11	3.1		B	DSO	90	3	3	2
9213		KAND	11	07	0715	N02	W55	11	3.2			CAO		4	4	3
9213		SVTO	11	07	0735	N02	W55	11	3.2		B	CAO	150	6	5	2
9213	30143	MWIL	11	07	1545	N03	W60	11	3.2	4	(AP)					
9213		LEAR	11	08	0110	N05	W63	11	3.3		B	CAO	80	4	3	3
9213		KAND	11	08	0725	N02	W70	11	3.1			HA		1	2	4
9213		SVTO	11	08	0815	N04	W72	11	3.0		B	DAO	80	3	4	3
9213	30143	MWIL	11	08	1545	N02	W74	11	3.1	4	(AP)					
9213		HOLL	11	08	1625	N03	W75	11	3.1		A	HAX	60	2	3	2
9213		LEAR	11	09	0114	N04	W80	11	3.1		A	HSX	60	1	2	3
9213A		TACH	11	03	0441	N02	E10	11	3.9			CAO	270	4	12	3
9222A		KAND	11	03	0900	N03	E20	11	4.9			AX		1		3
9218		RAMY	10	30	1210	N15	E70	11	4.8		A	AXX	10	1	1	3
9218		RAMY	10	31	1220	N16	E60	11	5.1		A	AXX	10	1	1	3
9218		LEAR	11	01	0155	N19	E50	11	4.9		B	BXO	10	6	5	2
9218		TACH	11	01	0620	N21	E48	11	4.9			AR	6	3	4	2
9218		KAND	11	01	0820	N19	E46	11	4.8			AX		7	5	4
9218		SVTO	11	01	1015	N19	E46	11	4.9		B	DAO	70	9	7	3
9218		RAMY	11	01	1405	N16	E45	11	5.0		B	DSO	60	14	7	2
9218		HOLL	11	01	1500	N18	E43	11	4.9		B	DAI	110	16	6	3
9218	30146	MWIL	11	01	1500	N19	E43	11	4.9	5	(B)					
9218		VORO	11	01	2258	N19	E40	11	5.0			DAI	239	4	6	2
9218		LEAR	11	02	0330	N19	E36	11	4.9		B	DAO	240	17	8	3
9218		TACH	11	02	0606	N20	E34	11	4.8			DAI	347	5	6	3
9218		SVTO	11	02	0650	N19	E33	11	4.8		B	DAI	320	14	10	3
9218		KAND	11	02	0740	N20	E33	11	4.8			DSI		10	10	3
9218		RAMY	11	02	1211	N18	E32	11	4.9		B	DAI	250	18	10	3
9218	30146	MWIL	11	02	1500	N19	E30	11	4.9	5	(B)					
9218		HOLL	11	02	1524	N19	E31	11	5.0		B	DAI	200	15	10	4
9218		VORO	11	02	2255	N20	E27	11	5.0			DAI	416	7	8	3
9218		LEAR	11	03	0145	N19	E24	11	4.9		B	DAO	260	11	11	3
9218		TACH	11	03	0441	N21	E21	11	4.8			DAO	445	4	8	3
9218		KAND	11	03	0900	N20	E20	11	4.9			EAO		18	11	3
9218		RAMY	11	03	1255	N19	E18	11	4.9		B	ESO	140	24	12	3
9218		SVTO	11	03	1410	N20	E16	11	4.8		B	EAO	290	13	13	2
9218	30146	MWIL	11	03	1530	N19	E17	11	4.9	5	(B)					
9218		LEAR	11	04	0050	N20	E12	11	4.9		B	EAO	270	10	13	3
9218		KAND	11	04	0830	N20	E06	11	4.8			ESO		13	12	4
9218	30146	MWIL	11	04	1500	N19	E03	11	4.8	5	(B)					
9218		VORO	11	04	2339	N20	W02	11	4.8			EAO	381	5	11	2
9218		LEAR	11	05	0056	N20	W01	11	5.0		B	EAO	320	17	13	2
9218		TACH	11	05	0836	N19	W06	11	4.9			DAI	555	10	11	4
9218		KAND	11	05	0930	N20	W07	11	4.9			EAO		14	15	3
9218		SVTO	11	05	1000	N19	W07	11	4.9		B	EAO	280	13	14	2
9218		RAMY	11	05	1240	N21	W08	11	4.9		B	ESO	220	18	14	3
9218	30146	MWIL	11	05	1515	N19	W10	11	4.9	5	(BP)					
9218		HOLL	11	05	1528	N19	W10	11	4.9		B	DSO	200	15	14	3
9218		LEAR	11	06	0105	N21	W16	11	4.8		B	EAO	220	25	13	3
9218		SVTO	11	06	0825	N19	W19	11	4.9		B	FAO	220	15	16	3
9218		RAMY	11	06	1445	N21	W22	11	4.9		B	ESO	200	12	14	3
9218	30146	MWIL	11	06	1515	N20	W25	11	4.7	5	(BP)					
9218		VORO	11	06	2317	N19	W35	11	4.3			DAO	448	3	2	1
9218		LEAR	11	07	0055	N20	W31	11	4.7		B	ESO	130	5	14	2
9218		KAND	11	07	0715	N20	W34	11	4.7			EAO		3	15	3
9218		SVTO	11	07	0735	N21	W33	11	4.8		B	EAO	170	7	15	2
9218	30146	MWIL	11	07	1545	N20	W42	11	4.4	4	(AP)					
9218		VORO	11	07	2353	N20	W47	11	4.4			HHX	256	1		2
9218		LEAR	11	08	0110	N21	W47	11	4.4		A	HSX	120	4	2	3
9218		KAND	11	08	0725	N19	W52	11	4.3			HS		1	3	4
9218		SVTO	11	08	0815	N21	W53	11	4.3		A	HSX	140	1	2	3

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9218	30146	MWIL	11	08	1545	N19	W55	11	4.4	5	(AP)					
9218		HOLL	11	08	1625	N19	W56	11	4.4		A	HAX	110	1	2	2
9218		LEAR	11	09	0114	N19	W61	11	4.4		A	HAX	200	1	3	3
9218		TACH	11	09	0436	N19	W61	11	4.5			HSX	150	1	1	4
9218		VORO	11	09	0458	N19	W62	11	4.5			HSX	158	1		2
9218		KAND	11	09	0750	N19	W65	11	4.4			HS		1	3	3
9218		SVTO	11	09	0930	N19	W65	11	4.4		A	HAX	120	1	4	2
9218		RAMY	11	09	1130	N24	W67	11	4.3		B	CSO	100	3	3	3
9218		HOLL	11	09	1437	N18	W67	11	4.5		A	HAX	140	1	2	3
9218		VORO	11	09	2316	N19	W70	11	4.6			HAX	148	1		2
9218		LEAR	11	10	0037	N20	W70	11	4.7		A	HAX	120	1	1	3
9218		TACH	11	10	0548	N18	W73	11	4.7			HSX	70	1	1	4
9218		KAND	11	10	0655	N19	W77	11	4.4			HS		1	2	4
9218		SVTO	11	10	1100	N18	W79	11	4.4		A	HSX	60	1	2	2
9218		RAMY	11	10	1218	N24	W77	11	4.6		A	HSX	60	1	2	3
9218		HOLL	11	10	1440	N22	W78	11	4.6		A	HAX	120	1	2	3
9218		LEAR	11	11	0035	N21	W85	11	4.5		A	HAX	30	1	5	2
9219		RAMY	10	31	1220	N02	E84	11	6.8		A	HAX	50	1	3	3
9219	30144	MWIL	10	31	1515	N06	E86	11	7.1	5	AP					
9219		HOLL	10	31	1523	N08	E79	11	6.6		A	AXX	30	1	1	3
9219		VORO	10	31	2303	N07	E79	11	6.9			HAX	100	1		2
9219		LEAR	11	01	0155	N05	E75	11	6.7		A	HSX	120	11	1	2
9219		TACH	11	01	0620	N08	E76	11	7.0			HSX	110	1	2	2
9219		KAND	11	01	0820	N07	E76	11	7.0			HS		1	2	4
9219		SVTO	11	01	1015	N07	E74	11	7.0		A	HSX	120	1	2	3
9219		RAMY	11	01	1405	N03	E70	11	6.8		A	HSX	80	1	1	2
9219		RAMY	11	01	1405	N06	E69	11	6.7		A	AXX	10	1	1	2
9219		HOLL	11	01	1500	N06	E69	11	6.8		A	HSX	130	1	2	3
9219	30144	MWIL	11	01	1500	N07	E72	11	7.0	5	BP					
9219		VORO	11	01	2258	N07	E67	11	7.0			HSX	304	2		2
9219		LEAR	11	02	0330	N05	E64	11	6.9		A	HSX	100	1	2	3
9219		TACH	11	02	0606	N08	E60	11	6.7			HSX	90	1	1	3
9219		SVTO	11	02	0650	N08	E61	11	6.8		A	HSX	160	1	4	3
9219		KAND	11	02	0740	N08	E61	11	6.9			HS		1	2	3
9219		RAMY	11	02	1211	N03	E57	11	6.8		A	HSX	110	1	2	3
9219	30144	MWIL	11	02	1500	N06	E57	11	6.9	5	(AP)					
9219		HOLL	11	02	1524	N07	E59	11	7.1		A	HSX	110	1	2	4
9219		VORO	11	02	2255	N08	E57	11	7.2			DSI	305	2	8	3
9219		LEAR	11	03	0145	N06	E51	11	6.9		A	HSX	150	1	3	3
9219		TACH	11	03	0441	N08	E48	11	6.8			HSX	120	1	2	3
9219		KAND	11	03	0900	N07	E47	11	6.9			HS		1	3	3
9219		RAMY	11	03	1255	N04	E44	11	6.8		A	HSX	140	1	2	3
9219		SVTO	11	03	1410	N07	E43	11	6.8		A	HSX	130	1	3	2
9219	30144	MWIL	11	03	1530	N06	E43	11	6.9	5	(AP)					
9219		LEAR	11	04	0050	N06	E38	11	6.9		A	HSX	130	1	3	3
9219		KAND	11	04	0830	N07	E33	11	6.8			HS		1	2	4
9219	30144	MWIL	11	04	1500	N06	E29	11	6.8	5	(AP)					
9219		VORO	11	04	2339	N06	E25	11	6.8			HAX	214	1		2
9219		LEAR	11	05	0056	N06	E23	11	6.8		A	HSX	140	1	3	2
9219		TACH	11	05	0836	N07	E19	11	6.8			HSX	250	1	2	4
9219		KAND	11	05	0930	N06	E19	11	6.8			HS		1	2	3
9219		SVTO	11	05	1000	N06	E19	11	6.8		A	HSX	100	1	3	2
9219		RAMY	11	05	1240	N05	E17	11	6.8		A	HSX	100	1	2	3
9219	30144	MWIL	11	05	1515	N06	E16	11	6.8	5	(AP)					
9219		HOLL	11	05	1528	N07	E17	11	6.9		A	HSX	100	1	2	3
9219		LEAR	11	06	0105	N06	E11	11	6.9		A	HSX	100	3	2	3
9219		SVTO	11	06	0825	N06	E06	11	6.8		A	HSX	150	1	2	3
9219		RAMY	11	06	1445	N06	E03	11	6.8		A	HSX	100	1	2	3
9219	30144	MWIL	11	06	1515	N06	E03	11	6.8	5	(AP)					
9219		VORO	11	06	2317	N05	W02	11	6.8			HAX	251	5	3	1
9219		LEAR	11	07	0055	N07	W03	11	6.8		A	HSX	100	3	2	2
9219		KAND	11	07	0715	N06	W06	11	6.8			HS		1	2	3
9219		SVTO	11	07	0735	N07	W06	11	6.9		A	HSX	200	1	3	2
9219	30144	MWIL	11	07	1545	N06	W10	11	6.9	4	(AP)					
9219		VORO	11	07	2353	N05	W15	11	6.9			HHX	222	1		2
9219		LEAR	11	08	0110	N06	W16	11	6.8		A	HSX	150	2	3	3
9219		KAND	11	08	0725	N05	W20	11	6.8			HS		1	2	4
9219		SVTO	11	08	0815	N05	W20	11	6.8		A	HSX	200	1	3	3

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9219	30144	MWIL	11	08	1545	N05	W24	11	6.9	5	(AP)					
9219		HOLL	11	08	1625	N05	W25	11	6.8		A	HAX	100	1	2	2
9219		LEAR	11	09	0114	N05	W31	11	6.7		A	HSX	110	1	2	3
9219		TACH	11	09	0436	N05	W31	11	6.9			HSX	200	1	2	4
9219		VORO	11	09	0458	N05	W32	11	6.8			HSX	177	1		2
9219		KAND	11	09	0750	N05	W34	11	6.8			HS		1	2	3
9219		SVTO	11	09	0930	N05	W35	11	6.8		A	HSX	120	1	4	2
9219		RAMY	11	09	1130	N08	W37	11	6.7		A	HSX	100	1	2	3
9219		HOLL	11	09	1437	N05	W37	11	6.8		A	HSX	130	1	2	3
9219		VORO	11	09	2316	N05	W42	11	6.8			HAX	215	1		2
9219		LEAR	11	10	0037	N07	W43	11	6.8		A	HSX	130	1	1	3
9219		TACH	11	10	0548	N04	W45	11	6.9			HSX	140	1	1	4
9219		KAND	11	10	0655	N05	W47	11	6.8			HS		1	2	4
9219		SVTO	11	10	1100	N05	W51	11	6.6		A	HSX	150	1	3	2
9219		RAMY	11	10	1218	N08	W49	11	6.8		A	HSX	120	1	2	3
9219		HOLL	11	10	1440	N07	W50	11	6.9		A	HSX	140	1	2	3
9219		VORO	11	10	2334	N05	W56	11	6.8			HAX	193	1		2
9219		LEAR	11	11	0035	N06	W56	11	6.8		A	HSX	110	1	3	2
9219		SVTO	11	11	0740	N04	W59	11	6.9		A	HSX	140	1	3	3
9219		KAND	11	11	0855	N04	W61	11	6.8			HA		2	2	1
9219		RAMY	11	11	1220	N09	W62	11	6.9		A	HSX	90	1	2	3
9219	30144	MWIL	11	11	1600	N05	W65	11	6.8	4	(AP)					
9219		VORO	11	11	2350	N05	W69	11	6.8			HAX	162	1		2
9219		LEAR	11	12	0005	N07	W70	11	6.7		A	HSX	90	1	2	3
9219		SVTO	11	12	0700	N04	W70	11	7.0		A	HSX	80	1	3	2
9219		KAND	11	12	0925	N04	W76	11	6.7			HS		1	3	3
9219		RAMY	11	12	1230	N09	W75	11	6.9		A	HSX	60	1	2	3
9219		VORO	11	12	2254	N05	W79	11	7.0			HRX	87	1		3
9219		LEAR	11	13	0050	N07	W81	11	7.0		A	HSX	50	1	2	3
9225		KAND	11	07	0715	S19	W07	11	6.8			DSO		2	3	3
9225		SVTO	11	07	0735	S19	W07	11	6.8		B	DSO	20	2	2	2
9225	30153	MWIL	11	07	1545	S20	W12	11	6.7	4	(BF)					
9225		LEAR	11	08	0110	S18	W18	11	6.7		B	DSO	40	7	4	3
9225		KAND	11	08	0725	S20	W20	11	6.8			BXO		8	4	4
9225		SVTO	11	08	0815	S20	W24	11	6.5		B	DAI	60	9	6	3
9225	30153	MWIL	11	08	1545	S20	W25	11	6.7	4	(B)					
9225		HOLL	11	08	1625	S21	W25	11	6.8		B	CSO	20	6	5	2
9225		LEAR	11	09	0114	S21	W32	11	6.6		B	CRO	10	4	4	3
9225		TACH	11	09	0436	S20	W31	11	6.8			BRO	8	3	3	4
9225		VORO	11	09	0458	S21	W33	11	6.7			BXO	33	3	4	2
9225		KAND	11	09	0750	S21	W35	11	6.6			BXO		3	4	3
9225		SVTO	11	09	0930	S22	W37	11	6.5		B	DRO	30	3	5	2
9225		RAMY	11	09	1130	S18	W39	11	6.5		B	BXO	40	3	4	3
9225		HOLL	11	09	1437	S22	W38	11	6.7		B	BXO	100	3	4	3
9225		VORO	11	09	2316	S22	W44	11	6.6			BXO	12	2	3	2
9225		LEAR	11	10	0037	S20	W35	11	7.3		B	B X	10	3	4	3
9225		TACH	11	10	0548	S22	W37	11	7.4			BRO	12	3	4	4
9225		KAND	11	10	0655	S22	W40	11	7.2			CRO		4	5	4
9225		SVTO	11	10	1100	S22	W42	11	7.2		B	DAO	60	9	7	2
9225		RAMY	11	10	1218	S18	W42	11	7.3		B	BXO	10	7	5	3
9225		HOLL	11	10	1440	S19	W44	11	7.2		B	CAO	40	5	5	3
9225		VORO	11	10	2334	S21	W52	11	7.0			BXO	22	2	3	2
9225		LEAR	11	11	0035	S20	W48	11	7.3		B	CAO	20	5	5	2
9225		SVTO	11	11	0740	S22	W51	11	7.4		B	CSO	50	7	9	3
9225		RAMY	11	11	1220	S18	W55	11	7.3		B	CSO	30	7	8	3
9225	30153	MWIL	11	11	1600	S20	W61	11	7.0	3	(AP)					
9225		VORO	11	11	2350	S21	W65	11	7.0			HAX	29	1		2
9225		LEAR	11	12	0005	S19	W67	11	6.9		A	HAX	20	2	1	3
9225		SVTO	11	12	0700	S22	W67	11	7.1		A	HSX	20	1	1	2
9225		KAND	11	12	0925	S22	W74	11	6.7			HA		1	2	3
9225		RAMY	11	12	1230	S18	W71	11	7.1		B	CSO	30	2	1	3
9220		HOLL	11	01	1500	N09	E79	11	7.5		A	AXX	10	1	1	3
9220		LEAR	11	02	0330	N09	E72	11	7.5		A	AXX	10	1	1	3
9220		SVTO	11	02	0650	N10	E70	11	7.5		A	HSX		1		3
9220		KAND	11	02	0740	N11	E69	11	7.5			AX		1	1	3
9220		RAMY	11	02	1211	N06	E65	11	7.4		A	AXX	90	4	1	3
9220	30147	MWIL	11	02	1500	N09	E65	11	7.5	4	(AP)					

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NOVEMBER 2000

NOAA/ USAF Group	Mt Wilson Group	Sta	Observation Time Mo	Day	(UT)	Lat	CMD	CMP Mo	Day	Max H	Mag Class	Spot Class	Corrected Area (10-6 Hemi)	Spot Count	Long. Extent (Deg)	Qual
9220		HOLL	11	02	1524	N09	E68	11	7.7		A	AXX	10	1	1	4
9220		LEAR	11	03	0145	N09	E58	11	7.4		A	AXX	10	1		3
9220		TACH	11	03	0441	N09	E58	11	7.5			BRO	8	2	4	3
9220		KAND	11	03	0900	N11	E55	11	7.5			AX		1		3
9220		RAMY	11	03	1255	N05	E55	11	7.6		B	CRO	20	6	11	3
9220		SVTO	11	03	1410	N10	E51	11	7.4		A	HSX		1		2
9220	30147	MWIL	11	03	1530	N10	E51	11	7.5	3	(AP)					
9220		LEAR	11	04	0050	N06	E49	11	7.7		B	CRO	30	7	8	3
9220		KAND	11	04	0830	N10	E41	11	7.4			HR		1		4
9220	30147	MWIL	11	04	1500	N10	E36	11	7.3	4	(AP)					
9220		LEAR	11	05	0056	N08	E34	11	7.6		B	DSO	40	5	7	2
9220		TACH	11	05	0836	N07	E32	11	7.7			BRO	6	2	6	4
9220		KAND	11	05	0930	N11	E27	11	7.4			AX		2	1	3
9220		SVTO	11	05	1000	N08	E31	11	7.7		B	CRO	20	5	9	2
9220		RAMY	11	05	1240	N04	E29	11	7.7		B	CSO	20	7	7	3
9220	30147	MWIL	11	05	1515	N10	E24	11	7.4	4	(AP)					
9220		HOLL	11	05	1528	N07	E27	11	7.7		A	AXX	20	3	9	3
9220		LEAR	11	06	0105	N08	E22	11	7.7		B	BXO	20	3	8	3
9220		SVTO	11	06	0825	N08	E17	11	7.6		B	BXO	10	5	9	3
9220		RAMY	11	06	1445	N09	E11	11	7.4		A	AXX	10	1	1	3
9220	30147	MWIL	11	06	1515	N10	E11	11	7.5	3	(AP)					
9220	30154	MWIL	11	07	1545	N11	E02	11	7.8	4	(BP)					
9220		VORO	11	07	2353	N12	W02	11	7.8			BXO	28	2	3	2
9220		LEAR	11	08	0110	N12	W02	11	7.9		B	DSO	40	9	5	3
9220		KAND	11	08	0725	N11	W07	11	7.8			DSO		5	4	4
9220		SVTO	11	08	0815	N14	W07	11	7.8		B	DAO	30	6	6	3
9220	30154	MWIL	11	08	1545	N12	W11	11	7.8	5	(B)					
9220		HOLL	11	08	1625	N12	W12	11	7.8		B	DAO	40	6	5	2
9220		LEAR	11	09	0114	N12	W17	11	7.8		B	DSO	20	10	5	3
9220		TACH	11	09	0436	N12	W18	11	7.8			BRO	25	5	3	4
9220		VORO	11	09	0458	N12	W19	11	7.8			CAO	43	3	4	2
9220		KAND	11	09	0750	N11	W21	11	7.7			DRO		11	6	3
9220		SVTO	11	09	0930	N12	W22	11	7.7		B	DAO	40	6	6	2
9220		RAMY	11	09	1130	N14	W24	11	7.7		B	DSO	70	17	7	3
9220		HOLL	11	09	1437	N12	W24	11	7.8		B	DAO	70	12	6	3
9220		VORO	11	09	2316	N12	W29	11	7.8			CAO	35	4	5	2
9220		LEAR	11	10	0037	N13	W30	11	7.8		B	CAO	30	8	6	3
9220		TACH	11	10	0548	N09	W33	11	7.8			BRO	28	5	5	4
9220		KAND	11	10	0655	N11	W34	11	7.7			CSO		4	6	4
9220		SVTO	11	10	1100	N11	W39	11	7.5		B	CAO	10	2	3	2
9220		RAMY	11	10	1218	N11	W36	11	7.8		B	BXO	30	15	12	3
9220		HOLL	11	10	1440	N13	W40	11	7.6		A	AXX	10	2	1	3
9220		VORO	11	10	2334	N10	W44	11	7.7			CAO	24	2	4	2
9220		LEAR	11	11	0035	N12	W47	11	7.5		A	HAX	20	4	1	2
9220		SVTO	11	11	0740	N09	W50	11	7.6		B	BXO	10	2	1	3
9220		KAND	11	11	0855	N11	W51	11	7.5			AX		2	1	1
9220		RAMY	11	11	1220	N14	W51	11	7.6		B	BXO	10	2	1	3
9220	30154	MWIL	11	11	1600	N11	W56	11	7.4	3	(AP)					
9220		LEAR	11	12	0005	N13	W60	11	7.5		A	AXX		1		3
9220		SVTO	11	12	0700	N10	W64	11	7.5		A	AXX		1		2
9220		RAMY	11	12	1230	N15	W66	11	7.5		A	AXX	10	1	1	3
9230		KAND	11	03	0900	N06	E60	11	7.9			BXO		3	3	3
9230	30148	MWIL	11	03	1530	N05	E56	11	7.8	4	(BP)					
9230		KAND	11	04	0830	N06	E46	11	7.8			BXO		6	5	4
9230	30148	MWIL	11	04	1500	N06	E42	11	7.8	4	(B)					
9230		KAND	11	05	0930	N07	E32	11	7.8			BXO		3	6	3
9230	30148	MWIL	11	05	1515	N06	E29	11	7.8	4	(B)					
9230		LEAR	11	10	0037	N06	W26	11	8.1		B	B X		3	3	3
9230		KAND	11	10	0655	N04	W31	11	8.0			CSO		2	3	4
9230		SVTO	11	10	1100	N05	W34	11	7.9		B	DAO	30	3	5	2
9230		HOLL	11	10	1440	N05	W35	11	8.0		B	BXO	10	4	3	3
9230		LEAR	11	11	0035	N05	W40	11	8.0		B	BXO	10	5	4	2
9230		RAMY	11	11	1220	N08	W47	11	8.0		B	BXO	10	3	3	3
9221		KAND	11	04	0830	S13	E83	11	10.6			BSO		2	4	4
9221	30150	MWIL	11	04	1500	S14	E78	11	10.5	4	AF					
9221		LEAR	11	05	0056	S15	E70	11	10.3		B	DSO	240	3	4	2
9221		TACH	11	05	0836	S09	E66	11	10.3			CRO	109	3	2	4

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NOAA/ USAF Group	Mt Wilson Group	Sta	Observation Time Mo	Day	(UT)	Lat	CMD	CMP Mo	Day	Max H	Mag Class	Spot Class	Corrected Area (10-6 Hemi)	Spot Count	Long. Extent (Deg)	Qual
9221		KAND	11	05	0930	S13	E67	11	10.4			HA		2	2	3
9221		SVTO	11	05	1000	S13	E67	11	10.5		B	DSO	100	2	4	2
9221		RAMY	11	05	1240	S18	E64	11	10.4		B	DAO	100	6	9	3
9221	30150	MWIL	11	05	1515	S14	E62	11	10.3	4	(AF)					
9221		HOLL	11	05	1528	S12	E61	11	10.2		B	CSO	60	2	2	3
9221		LEAR	11	06	0105	S13	E58	11	10.4		B	DSO	60	5	5	3
9221		SVTO	11	06	0825	S12	E55	11	10.5		B	DAO	200	11	7	3
9221		RAMY	11	06	1445	S16	E49	11	10.3		B	DAO	110	16	6	3
9221	30150	MWIL	11	06	1515	S12	E52	11	10.5	4	(B)					
9221		VORO	11	06	2317	S13	E46	11	10.4			DAI	473	10	7	1
9221		LEAR	11	07	0055	S12	E43	11	10.3		B	DSO	100	5	6	2
9221		KAND	11	07	0715	S12	E42	11	10.5			DAO		12	6	3
9221		SVTO	11	07	0735	S12	E42	11	10.5		B	DAI	120	9	8	2
9221	30150	MWIL	11	07	1545	S12	E38	11	10.5	4	(B)					
9221		VORO	11	07	2353	S12	E34	11	10.5			DAI	121	3	5	2
9221		LEAR	11	08	0110	S12	E32	11	10.4		B	DAO	120	14	7	3
9221		KAND	11	08	0725	S12	E29	11	10.5			DAO		7	7	4
9221		SVTO	11	08	0815	S12	E27	11	10.4		B	DSO	60	7	8	3
9221	30150	MWIL	11	08	1545	S11	E25	11	10.5	5	(BP)					
9221		HOLL	11	08	1625	S12	E24	11	10.5		B	DAO	90	11	8	2
9221		LEAR	11	09	0114	S13	E20	11	10.6		B	CAO	40	9	7	3
9221		TACH	11	09	0436	S12	E18	11	10.5			CAI	118	8	5	4
9221		VORO	11	09	0458	S12	E18	11	10.6			CAI	115	4	5	2
9221		KAND	11	09	0750	S13	E15	11	10.4			CAO		5	5	3
9221		SVTO	11	09	0930	S14	E15	11	10.5		B	DSO	90	10	8	2
9221		RAMY	11	09	1130	S15	E08	11	10.1		B	DSO	100	4	3	3
9221		HOLL	11	09	1437	S13	E10	11	10.4		B	CAO	100	8	3	3
9221		VORO	11	09	2316	S14	E05	11	10.3			HAX	134	5		2
9221		LEAR	11	10	0037	S12	E04	11	10.3		B	CAO	120	4	2	3
9221		TACH	11	10	0548	S12	E01	11	10.3			AXX	90	3	2	4
9221		KAND	11	10	0655	S12	E01	11	10.4			HS		6	3	4
9221		SVTO	11	10	1100	S13	W02	11	10.3		B	DAO	50	6	4	2
9221		RAMY	11	10	1218	S12	W02	11	10.4		B	CAO	90	11	6	3
9221		HOLL	11	10	1440	S13	W04	11	10.3		B	CAO	100	4	3	3
9221		VORO	11	10	2334	S13	W08	11	10.4			HAX	126	3		2
9221		LEAR	11	11	0035	S12	W09	11	10.3		B	CAO	80	6	3	2
9221		SVTO	11	11	0740	S12	W10	11	10.6		B	CAO	110	10	9	3
9221		KAND	11	11	0855	S13	W12	11	10.5			HA		5	2	1
9221		RAMY	11	11	1220	S12	W16	11	10.3		B	DAO	60	6	4	3
9221	30150	MWIL	11	11	1600	S12	W17	11	10.4	4	(AF)					
9221		VORO	11	11	2350	S13	W21	11	10.4			HAX	129	3		2
9221		LEAR	11	12	0005	S12	W23	11	10.3		B	CAO	70	6	4	3
9221		SVTO	11	12	0700	S13	W24	11	10.5		B	DAO	70	3	3	2
9221		KAND	11	12	0925	S12	W27	11	10.3			HA		3	2	3
9221		RAMY	11	12	1230	S11	W29	11	10.3		B	DAO	50	3	2	3
9221		VORO	11	12	2254	S12	W34	11	10.4			HAX	119	3		3
9221		LEAR	11	13	0050	S12	W36	11	10.3		B	CAO	80	3	2	3
9221		TACH	11	13	0505	S12	W36	11	10.5			HSX	65	3	1	3
9221		KAND	11	13	0820	S12	W38	11	10.5			HA		4	2	4
9221		SVTO	11	13	0832	S13	W38	11	10.5		B	CSO	50	3	2	3
9221		RAMY	11	13	1215	S09	W42	11	10.3		B	CSO	50	3	2	4
9221		HOLL	11	13	1458	S12	W43	11	10.4		A	HAX	70	3	2	3
9221	30150	MWIL	11	13	1545	S12	W43	11	10.4	5	(AF)					
9221		VORO	11	13	2313	S12	W47	11	10.4			HRX	55	2		3
9221		LEAR	11	14	0040	S11	W49	11	10.3		B	CSO	30	3	2	3
9221		TACH	11	14	0600	S12	W50	11	10.5			HSX	75	2	1	3
9221		KAND	11	14	0920	S13	W54	11	10.3			HS		2	3	2
9221		SVTO	11	14	1118	S14	W54	11	10.4		B	CSO	40	3	1	2
9221		HOLL	11	14	1527	S13	W58	11	10.3		A	HAX	40	2	2	3
9221	30150	MWIL	11	14	1545	S12	W56	11	10.4	5	(AF)					
9221		VORO	11	14	2313	S12	W61	11	10.4			HRX	44	1		3
9221		LEAR	11	15	0020	S12	W62	11	10.3		B	CSO	40	3	3	3
9221		KAND	11	15	0910	S13	W67	11	10.3			AX		2	1	3
9221		SVTO	11	15	1130	S12	W68	11	10.3		A	HRX	20	1	1	2
9221		RAMY	11	15	1320	S08	W69	11	10.4		A	AXX		2		3
9221	30150	MWIL	11	15	1500	S11	W69	11	10.4	3	(AF)					
9221		HOLL	11	15	1558	S13	W70	11	10.4		A	AXX	10	1	1	2
9223		KAND	11	05	0930	S16	E85	11	11.8			HS		1	2	3

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9223		SVTO	11	05	1000	S16	E80	11	11.5		A	HSX	30	1	1	2
9223		RAMY	11	05	1240	S22	E79	11	11.6		A	HSX	60	1	1	3
9223	30151	MWIL	11	05	1515	S17	E76	11	11.4	4	AP					
9223		HOLL	11	05	1528	S17	E72	11	11.1		A	AXX	30	1	1	3
9223		LEAR	11	06	0105	S17	E70	11	11.4		A	HSX	40	1	2	3
9223		SVTO	11	06	0825	S16	E67	11	11.4		A	HSX	50	2	2	3
9223		RAMY	11	06	1445	S21	E63	11	11.4		A	HSX	80	2	2	3
9223	30151	MWIL	11	06	1515	S17	E62	11	11.3	4	(AP)					
9223		VORO	11	06	2317	S17	E58	11	11.4			DAO	79	2	2	1
9223		LEAR	11	07	0055	S16	E55	11	11.2		A	HSX	40	1	2	2
9223		KAND	11	07	0715	S16	E58	11	11.7			CSO		3	11	3
9223		SVTO	11	07	0735	S16	E56	11	11.6		B	CAO	80	2	4	2
9223	30151	MWIL	11	07	1545	S16	E49	11	11.4	4	(AP)					
9223		VORO	11	07	2353	S16	E45	11	11.4			HAX	103	1		2
9223		LEAR	11	08	0110	S16	E44	11	11.4		B	CAO	60	3	4	3
9223		KAND	11	08	0725	S16	E42	11	11.5			CAO		3	6	4
9223		SVTO	11	08	0815	S16	E41	11	11.4		B	CSO	90	2	4	3
9223	30151	MWIL	11	08	1545	S15	E37	11	11.4	5	(AP)					
9223		HOLL	11	08	1625	S16	E37	11	11.5		A	HAX	100	1	3	2
9223		LEAR	11	09	0114	S17	E31	11	11.4		A	HSX	70	1	2	3
9223		TACH	11	09	0436	S14	E29	11	11.4			HSX	205	1	2	4
9223		VORO	11	09	0458	S16	E29	11	11.4			HSX	139	1		2
9223		KAND	11	09	0750	S16	E27	11	11.4			HS		1	2	3
9223		SVTO	11	09	0930	S17	E27	11	11.4		B	CSO	70	2	4	2
9223		RAMY	11	09	1130	S21	E26	11	11.5		B	CSO	100	7	11	3
9223		HOLL	11	09	1437	S16	E24	11	11.4		A	HSX	80	2	3	3
9223		VORO	11	09	2316	S16	E19	11	11.4			HSX	115	1		2
9223		LEAR	11	10	0037	S16	E18	11	11.4		A	HSX	90	1	2	3
9223		TACH	11	10	0548	S15	E15	11	11.4			HSX	50	1	1	4
9223		KAND	11	10	0655	S16	E15	11	11.4			CSO		2	5	4
9223		SVTO	11	10	1100	S16	E12	11	11.4		A	HSX	100	1	3	2
9223		RAMY	11	10	1218	S17	E10	11	11.3		A	HSX	100	1	2	3
9223		HOLL	11	10	1440	S17	E09	11	11.3		A	HSX	90	1	2	3
9223		VORO	11	10	2334	S17	E06	11	11.4			HAX	141	1		2
9223		LEAR	11	11	0035	S16	E05	11	11.4		A	HSX	80	1	2	2
9223		SVTO	11	11	0740	S16	E03	11	11.5		B	CAO	110	4	5	3
9223		KAND	11	11	0855	S16	E01	11	11.4			HA		3	2	1
9223		RAMY	11	11	1220	S16	W03	11	11.3		A	HSX	60	1	2	3
9223	30151	MWIL	11	11	1600	S16	W04	11	11.4	5	(AP)					
9223		VORO	11	11	2350	S17	W08	11	11.4			HAX	109	1		2
9223		LEAR	11	12	0005	S16	W07	11	11.5		B	CAO	80	4	5	3
9223		SVTO	11	12	0700	S16	W11	11	11.4		B	CAO	60	4	3	2
9223		KAND	11	12	0925	S16	W14	11	11.3			HA		3	2	3
9223		RAMY	11	12	1230	S15	W16	11	11.3		B	CAO	60	5	3	3
9223		VORO	11	12	2254	S16	W21	11	11.4			HAX	110	2		3
9223		LEAR	11	13	0050	S16	W22	11	11.4		B	CAO	60	4	2	3
9223		TACH	11	13	0505	S16	W24	11	11.4			HA	80	2	2	3
9223		KAND	11	13	0820	S16	W25	11	11.4			HA		2	2	4
9223		SVTO	11	13	0832	S17	W26	11	11.4		B	CSO	20	2	2	3
9223		RAMY	11	13	1215	S13	W30	11	11.2		B	CSO	30	3	3	4
9223		HOLL	11	13	1458	S16	W29	11	11.4		A	HAX	60	6	2	3
9223	30151	MWIL	11	13	1545	S16	W30	11	11.4	4	(AP)					
9223		VORO	11	13	2313	S17	W35	11	11.3			HRX	91	4		3
9223		LEAR	11	14	0040	S15	W35	11	11.4		B	CSO	70	7	3	3
9223		TACH	11	14	0600	S15	W37	11	11.4			AXX	46	4	1	3
9223		KAND	11	14	0920	S17	W40	11	11.3			HA		4	2	2
9223		SVTO	11	14	1118	S16	W41	11	11.4		B	DSO	50	4	3	2
9223		RAMY	11	14	1210	S12	W42	11	11.3		B	DSO	50	4	4	4
9223		HOLL	11	14	1527	S16	W43	11	11.4		B	CAO	30	3	4	3
9223	30151	MWIL	11	14	1545	S15	W43	11	11.4	4	(BP)					
9223		VORO	11	14	2313	S16	W48	11	11.3			HRX	55	2		3
9223		LEAR	11	15	0020	S15	W47	11	11.4		B	DSO	30	8	5	3
9223		SVTO	11	15	1130	S16	W55	11	11.3		B	CAO	30	3	2	2
9223		RAMY	11	15	1320	S11	W57	11	11.3		A	AXX	10	3	2	3
9223	30151	MWIL	11	15	1500	S15	W58	11	11.2	4	(AP)					
9223		HOLL	11	15	1558	S16	W57	11	11.3		A	HSX	40	2	2	2
9223		VORO	11	15	2313	S16	W62	11	11.3			AXX	20	1		3
9223		SVTO	11	16	1220	S16	W71	11	11.1		A	HRX	20	1	1	2
9223		HOLL	11	16	1459	S16	W71	11	11.2		A	AXX	10	1	1	3

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NOAA/ USAF Group	Mt Wilson Group	Sta	Observation Time Mo	Day	(UT)	Lat	CMD	CMP Mo	Day	Max H	Mag Class	Spot Class	Corrected Area (10-6 Hemi)	Spot Count	Long. Extent (Deg)	Qual
9223	30151	MWIL	11	16	1545	S15	W71	11	11.3	4	(AP)					
9223		LEAR	11	17	0107	S15	W77	11	11.2		A	HRX	10	1		4
9228		SVTO	11	08	0815	N22	E48	11	12.0		A	AXX		1		3
9228	30155	MWIL	11	08	1545	N22	E46	11	12.2	4	(BP)					
9228		HOLL	11	08	1625	N22	E47	11	12.3		A	AXX		3	2	2
9228		VORO	11	08	2353	N21	E41	11	12.1			AXX	14	1		2
9228		KAND	11	09	0750	N23	E39	11	12.3			BXO		4	4	3
9228		SVTO	11	09	0930	N21	E37	11	12.2		A	BXO	10	2	4	2
9228		RAMY	11	09	1130	N18	E35	11	12.1		B	BXO	10	5	5	3
9228		HOLL	11	09	1437	N21	E34	11	12.2		B	BXO	10	4	4	3
9228		LEAR	11	10	0037	N20	E30	11	12.3		A	ARX		1	1	3
9228		TACH	11	10	0548	N23	E26	11	12.2			AXX	5	1	1	4
9228		KAND	11	10	0655	N22	E27	11	12.4			AX		2	1	4
9228		SVTO	11	10	1100	N22	E23	11	12.2		A	AXX		1		2
9228		RAMY	11	10	1218	N18	E24	11	12.3		A	AXX		3	2	3
9228		LEAR	11	11	0035	N20	E17	11	12.3		A	AXX		1		2
9228		RAMY	11	11	1220	N20	E08	11	12.1		A	AXX	10	1	1	3
9228	30155	MWIL	11	11	1600	N20	W00	11	11.7	4	(AP)					
9228		LEAR	11	12	0005	N20	W03	11	11.8		A	AXX		1		3
9228		TACH	11	14	0600	N22	W33	11	11.7			AXX	13	2	1	3
9228		KAND	11	14	0920	N20	W36	11	11.6			CRO		2	2	2
9228		RAMY	11	14	1210	N24	W36	11	11.7		B	BXO	10	3	2	4
9228		HOLL	11	14	1527	N21	W39	11	11.6		A	AXX	10	4	3	3
9228	30160	MWIL	11	14	1545	N21	W38	11	11.7	4	(B)					
9228		VORO	11	14	2313	N20	W41	11	11.8			AXX	21	1		3
9228		LEAR	11	15	0020	N21	W43	11	11.7		B	CSO	30	6	5	3
9228		SVTO	11	15	1130	N21	W48	11	11.8		B	CRO	20	2	2	2
9228	30160	MWIL	11	15	1500	N21	W51	11	11.7	3	(B)					
9228		VORO	11	15	2313	N21	W53	11	11.9			AXX	2	1		3
9227		KAND	11	07	0715	S12	E77	11	13.1			HS		1	2	3
9227		SVTO	11	07	0735	S12	E75	11	13.0		A	HSX		1		2
9227		VORO	11	07	2353	S11	E63	11	12.7			HAX	43	1		2
9227		LEAR	11	08	0110	S12	E65	11	12.9		B	DSO	140	6	9	3
9227		KAND	11	08	0725	S11	E66	11	13.3			CSO		7	8	4
9227		SVTO	11	08	0815	S13	E60	11	12.9		B	DAO	60	8	6	3
9227	30156	MWIL	11	08	1545	S11	E55	11	12.8	4	(BP)					
9227		HOLL	11	08	1625	S13	E56	11	12.9		B	DAO	110	7	9	2
9227		LEAR	11	09	0114	S13	E51	11	12.9		B	DSO	80	8	9	3
9227		TACH	11	09	0436	S10	E48	11	12.8			DAI	222	8	6	4
9227		VORO	11	09	0458	S12	E48	11	12.8			DAI	248	5	6	2
9227		KAND	11	09	0750	S11	E47	11	12.9			ESO		16	11	3
9227		SVTO	11	09	0930	S13	E46	11	12.9		B	EAO	130	14	11	2
9227		RAMY	11	09	1130	S15	E43	11	12.7		B	DAO	130	28	9	3
9227		HOLL	11	09	1437	S12	E43	11	12.8		B	EAO	130	15	11	3
9227		VORO	11	09	2316	S12	E38	11	12.8			DAI	164	5	9	2
9227		LEAR	11	10	0037	S13	E37	11	12.8		B	DAO	240	12	10	3
9227		TACH	11	10	0548	S10	E36	11	12.9			CAO	158	4	8	4
9227		KAND	11	10	0655	S11	E34	11	12.8			EAO		9	12	4
9227		SVTO	11	10	1100	S11	E32	11	12.9		B	EAO	120	9	14	2
9227		RAMY	11	10	1218	S14	E30	11	12.8		B	ESO	160	12	12	3
9227		HOLL	11	10	1440	S13	E29	11	12.8		B	EAO	170	7	11	3
9227		VORO	11	10	2334	S12	E25	11	12.9			CAI	235	5	10	2
9227		LEAR	11	11	0035	S12	E24	11	12.8		B	EAO	140	9	12	2
9227		SVTO	11	11	0740	S11	E22	11	13.0		B	EAO	130	13	14	3
9227		KAND	11	11	0855	S12	E19	11	12.8			ESO		13	12	1
9227		RAMY	11	11	1220	S13	E17	11	12.8		B	ESO	110	13	13	3
9227	30156	MWIL	11	11	1600	S12	E15	11	12.8	5	(B)					
9227		VORO	11	11	2350	S12	E12	11	12.9			DAI	234	6	11	2
9227		LEAR	11	12	0005	S11	E11	11	12.8		B	EAO	160	18	12	3
9227		SVTO	11	12	0700	S11	E08	11	12.9		B	EAO	220	11	13	2
9227		KAND	11	12	0925	S10	E05	11	12.8			ESO		8	12	3
9227		RAMY	11	12	1230	S12	E03	11	12.7		B	ESO	180	12	13	3
9227		VORO	11	12	2254	S12	W01	11	12.9			EAI	342	6	11	3
9227		LEAR	11	13	0050	S11	W02	11	12.9		B	EAO	140	8	12	3
9227		TACH	11	13	0505	S11	W04	11	12.9			CAI	408	5	11	3
9227		KAND	11	13	0820	S10	W06	11	12.9			EAO		23	13	4
9227		SVTO	11	13	0832	S11	W06	11	12.9		B	EAO	180	8	14	3

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9227		RAMY	11	13	1215	S11	W12	11	12.6		B	EAI	220	21	14	4
9227		HOLL	11	13	1458	S12	W09	11	12.9		B	EKI	260	13	13	3
9227	30156	MWIL	11	13	1545	S11	W12	11	12.7	5	(BP)					
9227		VORO	11	13	2313	S12	W15	11	12.8			CKI	473	5	11	3
9227		LEAR	11	14	0040	S10	W15	11	12.9		B	EKO	180	12	12	3
9227		TACH	11	14	0600	S10	W17	11	13.0			CAI	425	8	11	3
9227		KAND	11	14	0920	S11	W20	11	12.9			EAO		7	13	2
9227		SVTO	11	14	1118	S12	W22	11	12.8		B	EAI	270	13	14	2
9227		RAMY	11	14	1210	S09	W24	11	12.7		B	EKO	300	19	12	4
9227		HOLL	11	14	1527	S12	W24	11	12.8		B	EKO	290	17	13	3
9227	30156	MWIL	11	14	1545	S11	W25	11	12.8	5	(BP)					
9227		VORO	11	14	2313	S12	W27	11	12.9			EKI	454	5	12	3
9227		LEAR	11	15	0020	S12	W27	11	13.0		BG	EKO	250	17	15	3
9227		KAND	11	15	0910	S10	W35	11	12.7			CAO		5	13	3
9227		SVTO	11	15	1130	S11	W34	11	12.9		B	EAO	250	9	14	2
9227		RAMY	11	15	1320	S08	W37	11	12.8		B	CKO	250	7	13	3
9227	30156	MWIL	11	15	1500	S11	W39	11	12.7	5	(BP)					
9227		HOLL	11	15	1558	S12	W37	11	12.9		B	CKO	290	6	13	2
9227		VORO	11	15	2313	S11	W41	11	12.9			CAO	281	3	12	3
9227		SVTO	11	16	1220	S09	W55	11	12.4		B	DAO	190	6	4	2
9227		HOLL	11	16	1459	S11	W56	11	12.4		A	HAX	200	5	3	3
9227	30156	MWIL	11	16	1545	S10	W55	11	12.5	5	(AP)					
9227		LEAR	11	17	0107	S10	W60	11	12.5		A	HAX	200	3	4	4
9227		VORO	11	17	0350	S11	W63	11	12.4			HAX	186	1		3
9227		SVTO	11	17	0738	S12	W64	11	12.5		B	CAO	130	2	2	2
9227		KAND	11	17	0855	S11	W68	11	12.2			HA		1	3	2
9227		RAMY	11	17	1250	S07	W67	11	12.5		B	CSO	130	5	2	3
9227	30156	MWIL	11	17	1545	S10	W68	11	12.5	4	(AP)					
9227		HOLL	11	17	1655	S11	W69	11	12.5		A	HAX	130	2	2	2
9227		LEAR	11	18	0005	S10	W73	11	12.5		A	HAX	120	2	4	3
9227		VORO	11	18	0040	S11	W74	11	12.5			HSX	131	1		4
9227		TACH	11	18	0538	S11	W76	11	12.5			HA	120	3	1	3
9227		SVTO	11	18	0900	S12	W79	11	12.4		B	CSO	60	3	3	3
9227		KAND	11	18	0945	S12	W78	11	12.5			HA		1	2	3
9227		RAMY	11	18	1235	S06	W80	11	12.5		B	CSO	120	2	2	3
9227	30156	MWIL	11	18	1545	S11	W81	11	12.6	4	AP					
9227A		LEAR	11	10	0037	N14	E67	11	15.1		A	ARX		1	1	3
9227A		SVTO	11	10	1100	N16	E63	11	15.2		A	AXX		1		2
9227A		RAMY	11	10	1218	N12	E62	11	15.2		A	AXX		1		3
9227A		HOLL	11	10	1440	N14	E61	11	15.2		A	AXX	10	2	2	3
9227A		LEAR	11	11	0035	N15	E53	11	15.0		B	BXO		2	7	2
9227A		SVTO	11	11	0740	N16	E52	11	15.3		A	AXX		1		3
9227A		RAMY	11	11	1220	N12	E49	11	15.2		A	AXX	10	1	1	3
9227A		HOLL	11	14	1527	N13	W03	11	14.4		A	AXX	10	3	1	3
9227A	30161	MWIL	11	14	1545	N13	W04	11	14.3	4	(AP)					
9227A	30162	MWIL	11	14	1545	N14	E04	11	14.9	3	(AP)					
9227A		SVTO	11	15	1130	N14	W12	11	14.6		A	AXX		1		2
9227B		RAMY	11	14	1210	N39	E01	11	14.6		BG	C	2030	20	27	2
9227D		KAND	11	10	0655	N06	E67	11	15.3			AX		1	1	4
9229		KAND	11	10	0655	N07	E85	11	16.6			HA		1	2	4
9229		SVTO	11	10	1100	N07	E76	11	16.1		A	HAX	20	2	2	2
9229		RAMY	11	10	1218	N02	E76	11	16.2		A	HSX	40	2	1	3
9229		HOLL	11	10	1440	N03	E76	11	16.3		A	HAX	150	2	2	3
9229		VORO	11	10	2334	N06	E71	11	16.3			HAX	135	1		2
9229		LEAR	11	11	0035	N05	E70	11	16.3		A	HAX	60	3	4	2
9229		SVTO	11	11	0740	N07	E67	11	16.3		A	HSX	90	2	2	3
9229		KAND	11	11	0855	N06	E67	11	16.4			HA		2	2	1
9229		RAMY	11	11	1220	N02	E62	11	16.1		A	HSX	80	2	2	3
9229	30157	MWIL	11	11	1600	N06	E62	11	16.3	4	(AP)					
9229		VORO	11	11	2350	N06	E58	11	16.3			HAX	117	2		2
9229		LEAR	11	12	0005	N06	E58	11	16.3		A	HAX	60	3	3	3
9229		SVTO	11	12	0700	N06	E54	11	16.3		A	HAX	60	2	3	2
9229		KAND	11	12	0925	N07	E53	11	16.4			HA		2	2	3
9229		RAMY	11	12	1230	N03	E49	11	16.2		A	HAX	50	2	2	3
9229		VORO	11	12	2254	N06	E45	11	16.3			HRX	70	2		3

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9229		LEAR	11	13	0050	N05	E44	11	16.3		A	HSX	50	3	2	3
9229		TACH	11	13	0505	N07	E41	11	16.3			HSX	60	2	1	3
9229		KAND	11	13	0820	N06	E39	11	16.3			CAO		6	6	4
9229		SVTO	11	13	0832	N07	E39	11	16.3		A	HSX	70	2	2	3
9229		RAMY	11	13	1215	N03	E37	11	16.3		A	HAX	50	2	2	4
9229		HOLL	11	13	1458	N07	E34	11	16.2		B	CAO	100	8	6	3
9229	30157	MWIL	11	13	1545	N06	E35	11	16.3	5	(AP)					
9229		VORO	11	13	2313	N05	E29	11	16.1			CAO	79	3	4	3
9229		LEAR	11	14	0040	N05	E28	11	16.1		A	HSX	40	4	5	3
9229		TACH	11	14	0600	N07	E27	11	16.3			HSX	150	3	1	3
9229		KAND	11	14	0920	N06	E25	11	16.3			CAO		4	5	2
9229		SVTO	11	14	1118	N07	E24	11	16.3		A	HAX	80	2	2	2
9229		RAMY	11	14	1210	N05	E24	11	16.3		A	HAX	80	2	2	4
9229		HOLL	11	14	1527	N05	E20	11	16.1		B	CAO	90	5	6	3
9229	30157	MWIL	11	14	1545	N05	E21	11	16.2	4	(AP)					
9229		VORO	11	14	2313	N06	E18	11	16.3			HAX	157	1		3
9229		LEAR	11	15	0020	N06	E17	11	16.3		A	HAX	60	3	2	3
9229		KAND	11	15	0910	N06	E12	11	16.3			HA		2	2	3
9229		SVTO	11	15	1130	N06	E12	11	16.4		A	HAX	80	2	2	2
9229		RAMY	11	15	1320	N06	E11	11	16.4		A	HSX	70	3	2	3
9229	30157	MWIL	11	15	1500	N06	E08	11	16.2	5	(AP)					
9229		HOLL	11	15	1558	N06	E08	11	16.3		A	HSX	80	2	2	2
9229		VORO	11	15	2313	N06	E05	11	16.3			HAX	113	2		3
9229		SVTO	11	16	1220	N06	W04	11	16.2		A	HAX	80	2	2	2
9229		HOLL	11	16	1459	N06	W05	11	16.2		A	HSX	80	2	2	3
9229	30157	MWIL	11	16	1545	N06	W05	11	16.3	5	(AP)					
9229		LEAR	11	17	0107	N07	W09	11	16.4		B	DSO	90	7	3	4
9229		VORO	11	17	0350	N06	W12	11	16.3			HSX	76	1		3
9229		SVTO	11	17	0738	N07	W13	11	16.3		B	CSO	40	2	2	2
9229		KAND	11	17	0855	N06	W15	11	16.2			HS		3	1	2
9229		RAMY	11	17	1250	N09	W16	11	16.3		B	CSO	40	2	2	3
9229	30157	MWIL	11	17	1545	N06	W18	11	16.3	5	(AP)					
9229	30167	MWIL	11	17	1545	N11	W15	11	16.5	4	(AP)					
9229		HOLL	11	17	1655	N06	W19	11	16.3		A	HSX	40	1	2	2
9229		LEAR	11	18	0005	N08	W22	11	16.3		B	CSO	60	4	5	3
9229		VORO	11	18	0040	N06	W24	11	16.2			HAX	69	1		4
9229		TACH	11	18	0538	N06	W26	11	16.3			HSX	120	1	1	3
9229		SVTO	11	18	0900	N06	W28	11	16.3		B	BSO	30	2	1	3
9229		KAND	11	18	0945	N05	W29	11	16.2			HA		1	2	3
9229		RAMY	11	18	1235	N09	W29	11	16.3		B	CSO	50	2	2	3
9229	30157	MWIL	11	18	1545	N06	W32	11	16.3	5	(AP)					
9229	30167	MWIL	11	18	1545	N11	W30	11	16.4	4	(AP)					
9229		LEAR	11	19	0020	N07	W37	11	16.2		A	HAX	20	1	1	3
9229		SVTO	11	19	0857	N05	W42	11	16.2		A	HAX	50	1	2	3
9229		KAND	11	19	0915	N05	W42	11	16.2			HA		1	1	3
9229		RAMY	11	19	1220	N09	W42	11	16.4		A	HSX	30	2	2	3
9229		HOLL	11	19	1500	N06	W45	11	16.2		A	HAX	50	1	2	2
9229	30157	MWIL	11	19	1530	N06	W45	11	16.3	4	(AP)					
9229		LEAR	11	20	0105	N07	W50	11	16.3		A	HAX	30	1	1	3
9229		TACH	11	20	0547	N05	W52	11	16.3			AXX	30	1	1	4
9229		SVTO	11	20	0720	N05	W53	11	16.3		A	HAX		1		2
9229		KAND	11	20	0925	N05	W55	11	16.3			HS		1	1	3
9229		RAMY	11	20	1216	N11	W56	11	16.3		A	HAX	30	1	2	4
9229		HOLL	11	20	1515	N07	W58	11	16.3		A	HAX	30	1	1	3
9229	30157	MWIL	11	20	1730	N06	W58	11	16.4	4	(AP)					
9229		LEAR	11	21	0116	N06	W63	11	16.3		A	HSX	20	1	1	3
9229		TACH	11	21	0601	N06	W69	11	16.1			AXX	15	1	1	3
9229		SVTO	11	21	0730	N06	W68	11	16.2		A	HAX		1		3
9229		KAND	11	21	0850	N05	W69	11	16.2			AX		1		4
9229		RAMY	11	21	1315	N11	W72	11	16.1		A	HSX	10	1	1	3
9229	30157	MWIL	11	21	1715	N06	W73	11	16.2	4	(AP)					
9237		RAMY	11	18	1235	N10	W13	11	17.5		B	CSO	20	4	2	3
9237	30170	MWIL	11	18	1545	N09	W15	11	17.5	4	(B)					
9237		LEAR	11	19	0020	N10	W20	11	17.5		B	DRO	30	14	5	3
9237		SVTO	11	19	0857	N09	W25	11	17.5		B	DRO	30	10	6	3
9237		KAND	11	19	0915	N09	W26	11	17.4			BXO		9		3
9237		RAMY	11	19	1220	N11	W26	11	17.5		B	DSO	50	13	6	3
9237		HOLL	11	19	1500	N08	W29	11	17.4		B	DSO	50	12	7	2

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NOVEMBER 2000

NOAA/ USAF Group	Mt Wilson Group	Sta	Observation Time Mo	Day	(UT)	Lat	CMD	CMP Mo	Day	Max H	Mag Class	Spot Class	Corrected Area (10-6 Hemi)	Spot Count	Long. Extent (Deg)	Qual
9237	30170	MWIL	11	19	1530	N09	W29	11	17.5	5	(BF)					
9237		LEAR	11	20	0105	N08	W33	11	17.6		B	CSO	10	10	7	3
9237		SVTO	11	20	0720	N08	W38	11	17.4		B	DSO	70	10	7	2
9237		KAND	11	20	0925	N08	W40	11	17.4			CAO		5	8	3
9237		RAMY	11	20	1216	N12	W40	11	17.5		B	DSO	60	8	8	4
9237		HOLL	11	20	1515	N08	W42	11	17.5		B	CSO	20	6	7	3
9237	30170	MWIL	11	20	1730	N09	W43	11	17.5	4	(BF)					
9237		VORO	11	21	0044	N07	W50	11	17.3			AXX	7	2	2	3
9237		LEAR	11	21	0116	N08	W48	11	17.4		B	CRO	20	5	7	3
9237		TACH	11	21	0601	N08	W52	11	17.3			BRO	39	6	7	3
9237		SVTO	11	21	0730	N09	W51	11	17.5		B	DSO	60	10	9	3
9237		KAND	11	21	0850	N08	W53	11	17.4			BXI		10	8	4
9237		RAMY	11	21	1315	N14	W56	11	17.3		B	BXO	10	8	7	3
9237	30170	MWIL	11	21	1715	N09	W57	11	17.4	4	(BG)					
9237		HOLL	11	21	1742	N07	W59	11	17.3		B	CSO	70	6	7	2
9237		VORO	11	21	2313	N08	W61	11	17.4			BXI	34	7	3	3
9237		LEAR	11	22	0158	N08	W62	11	17.4		B	CRO	20	3	4	3
9237		TACH	11	22	0655	N08	W66	11	17.3			BRO	15	2	4	3
9237		KAND	11	22	0850	N07	W69	11	17.2			BXO		2	4	3
9237		SVTO	11	22	1200	N08	W67	11	17.5		B	DRO	10	2	5	2
9237		RAMY	11	22	1300	N13	W70	11	17.3		B	CSO	30	3	3	3
9237		HOLL	11	22	1727	N10	W70	11	17.5		B	CSO	50	2	2	2
9234		RAMY	11	15	1320	N19	E28	11	17.7		B	BXO	10	4	2	3
9234	30163	MWIL	11	15	1500	N20	E25	11	17.5	3	(AP)					
9234		HOLL	11	15	1558	N21	E24	11	17.5		B	BXO	10	3	2	2
9234		HOLL	11	16	1459	N23	E12	11	17.5		A	AXX	10	1	1	3
9234		SVTO	11	17	0738	N19	E03	11	17.5		A	AXX	10	2	1	2
9234		RAMY	11	17	1250	N19	E01	11	17.6		A	AXX	10	1	1	3
9234	30168	MWIL	11	17	1545	N20	W03	11	17.4	4	(AP)					
9234		HOLL	11	17	1655	N21	E01	11	17.8		A	AXX	10	1	1	2
9234		LEAR	11	18	0005	N19	W08	11	17.4		B	BXO	10	5	3	3
9234		TACH	11	18	0538	N20	W10	11	17.5			AXX	28	3	2	3
9234		SVTO	11	18	0900	N19	W13	11	17.4		B	BXO	10	3	3	3
9234		KAND	11	18	0945	N18	W12	11	17.5			BXO		4	3	3
9234		RAMY	11	18	1235	N20	W14	11	17.4		B	CSO	10	2	3	3
9234	30168	MWIL	11	18	1545	N19	W17	11	17.3	4	(AP)					
9234		LEAR	11	19	0020	N19	W22	11	17.3		A	AXX		1		3
9234		SVTO	11	19	0857	N18	W27	11	17.3		A	AXX		1		3
9234		RAMY	11	19	1220	N21	W27	11	17.4		B	CSO	10	3	2	3
9231		KAND	11	13	0820	S23	E83	11	19.7			DSO		3	9	4
9231		SVTO	11	13	0832	S19	E76	11	19.1		A	HSX	60	1	3	3
9231		RAMY	11	13	1215	S26	E74	11	19.2		B	DSO	50	5	7	4
9231		HOLL	11	13	1458	S23	E76	11	19.5		B	DAO	140	6	9	3
9231	30158	MWIL	11	13	1545	S23	E74	11	19.3	4	(B)					
9231		VORO	11	13	2313	S23	E71	11	19.4			DAI	204	4	7	3
9231		LEAR	11	14	0040	S25	E69	11	19.4		B	DSO	70	5	7	3
9231		TACH	11	14	0600	S21	E64	11	19.1			CAI	90	9	1	3
9231		KAND	11	14	0920	S22	E65	11	19.4			ESO		8	14	2
9231		SVTO	11	14	1118	S21	E62	11	19.2		B	EAI	300	10	12	2
9231		RAMY	11	14	1210	S27	E61	11	19.3		B	EAI	310	22	12	4
9231		HOLL	11	14	1527	S23	E61	11	19.3		B	EAI	310	13	12	3
9231	30158	MWIL	11	14	1545	S23	E62	11	19.4	4	(B)					
9231		VORO	11	14	2313	S23	E57	11	19.3			EAI	492	6	11	3
9231		LEAR	11	15	0020	S23	E55	11	19.2		B	EAI	320	22	11	3
9231		KAND	11	15	0910	S22	E54	11	19.5			EAO		13	15	3
9231		SVTO	11	15	1130	S23	E53	11	19.6		B	EAO	270	18	25	2
9231		RAMY	11	15	1320	S27	E49	11	19.4		B	FAI	360	31	20	3
9231	30158	MWIL	11	15	1500	S23	E47	11	19.2	5	(BG)					
9231		HOLL	11	15	1558	S22	E47	11	19.3		B	EAI	310	10	14	2
9231		VORO	11	15	2313	S23	E44	11	19.3			EAI	614	8	12	3
9231		SVTO	11	16	1220	S23	E35	11	19.2		B	FAC	310	26	21	2
9231		HOLL	11	16	1459	S23	E35	11	19.3		B	FAC	410	36	20	3
9231	30158	MWIL	11	16	1545	S23	E34	11	19.3	5	(BG)					
9231		LEAR	11	17	0107	S24	E30	11	19.4		BG	FAC	440	30	18	4
9231		VORO	11	17	0350	S23	E29	11	19.4			EAI	505	13	14	3
9231		SVTO	11	17	0738	S23	E25	11	19.2		B	FAC	310	21	17	2
9231		KAND	11	17	0855	S23	E24	11	19.2			FAO		30	17	2

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9231		RAMY	11	17	1250	S26	E28	11	19.7		BG	FAC	240	48	19	3
9231	30158	MWIL	11	17	1545	S23	E21	11	19.3	5	(BG)					
9231		HOLL	11	17	1655	S23	E20	11	19.2		BG	FSO	270	33	18	2
9231		LEAR	11	18	0005	S23	E16	11	19.2		BG	FAC	220	32	18	3
9231		VORO	11	18	0040	S23	E16	11	19.3			EAI	539	27	16	4
9231		TACH	11	18	0538	S21	E07	11	18.8			DAI	244	12	5	3
9231		SVTO	11	18	0900	S24	E11	11	19.2		B	FAC	180	43	18	3
9231		KAND	11	18	0945	S24	E10	11	19.2			FSO		40	20	3
9231		RAMY	11	18	1235	S25	E15	11	19.7		BG	FAC	210	36	18	3
9231	30158	MWIL	11	18	1545	S23	E07	11	19.2	5	(BG)					
9231		LEAR	11	19	0020	S23	E02	11	19.2		BG	FAO	280	40	20	3
9231		VORO	11	19	0150	S23	E03	11	19.3			EAI	318	17	18	3
9231		SVTO	11	19	0857	S24	W02	11	19.2		BG	FAO	310	38	21	3
9231		KAND	11	19	0915	S23	W02	11	19.2			FKO		17	20	3
9231		RAMY	11	19	1220	S24	W05	11	19.1		BG	FAC	210	40	19	3
9231		HOLL	11	19	1500	S25	W06	11	19.2		BG	FAO	300	44	19	2
9231	30158	MWIL	11	19	1530	S24	W06	11	19.2	5	(BG)					
9231		LEAR	11	20	0105	S23	W11	11	19.2		BG	FAO	280	47	20	3
9231		TACH	11	20	0547	S23	W16	11	19.0			DAI	681	17	8	4
9231		SVTO	11	20	0720	S25	W13	11	19.3		BG	FAI	460	37	21	2
9231		KAND	11	20	0925	S23	W15	11	19.2			FHI		13	25	3
9231		RAMY	11	20	1216	S22	W19	11	19.0		BG	FKI	470	30	20	4
9231		HOLL	11	20	1515	S26	W18	11	19.2		BG	FKI	410	45	21	3
9231	30158	MWIL	11	20	1730	S24	W20	11	19.2	5	(BG)					
9231		VORO	11	21	0044	S24	W24	11	19.2			EAI	617	23	18	3
9231		LEAR	11	21	0116	S23	W24	11	19.2		BG	FAI	240	23	20	3
9231		TACH	11	21	0601	S23	W32	11	18.8			DAI	441	14	8	3
9231		SVTO	11	21	0730	S24	W29	11	19.1		BG	FAI	350	19	21	3
9231		KAND	11	21	0850	S24	W28	11	19.2			FKI		32	26	4
9231		RAMY	11	21	1315	S20	W31	11	19.2		B	FKI	380	37	25	3
9231	30158	MWIL	11	21	1715	S24	W34	11	19.1	5	(BG)					
9231		HOLL	11	21	1742	S24	W33	11	19.2		BG	FKI	530	22	21	2
9231		VORO	11	21	2313	S24	W36	11	19.2			EAI	649	47	20	3
9231		LEAR	11	22	0158	S24	W37	11	19.2		BG	FAO	350	21	22	3
9231		TACH	11	22	0655	S23	W45	11	18.8			DAI	358	8	5	3
9231		KAND	11	22	0850	S24	W40	11	19.3			FKC		20	22	3
9231		SVTO	11	22	1200	S24	W42	11	19.2		BG	FKI	360	22	23	2
9231		RAMY	11	22	1300	S19	W44	11	19.2		BG	FAI	310	15	20	3
9231	30158	MWIL	11	22	1545	S24	W48	11	18.9	5	(D)					
9231		HOLL	11	22	1727	S24	W49	11	18.9		BG	FAI	280	22	20	2
9231		VORO	11	22	2352	S24	W50	11	19.1			DAI	452	17	18	2
9231		LEAR	11	23	0004	S23	W49	11	19.2		BG	FKI	320	21	21	5
9231		KAND	11	23	0945	S24	W56	11	19.1			FAO		20	20	3
9231		SVTO	11	23	1010	S23	W56	11	19.1		B	FAI	330	17	23	3
9231		RAMY	11	23	1225	S19	W57	11	19.2		BG	FAI	260	21	20	3
9231	30158	MWIL	11	23	1630	S24	W61	11	19.0	5	(BP)					
9231		VORO	11	23	2321	S23	W63	11	19.1			DAI	435	17	19	3
9231		LEAR	11	24	0042	S24	W58	11	19.5		B	EKO	110	12	18	3
9231		TACH	11	24	0521	S21	W70	11	18.8			DAO	190	3	6	3
9231		SVTO	11	24	0829	S23	W66	11	19.3		B	FAI	260	5	24	2
9231		KAND	11	24	0835	S23	W72	11	18.8			FHO		10	20	3
9231		RAMY	11	24	1217	S19	W70	11	19.2		B	FAI	250	13	20	3
9231		HOLL	11	24	1530	S25	W71	11	19.1		B	FKI	380	9	33	3
9231	30158	MWIL	11	24	1700	S21	W78	11	18.7	4	(BP)					
9231		LEAR	11	25	0055	S22	W79	11	19.0		A	HAX	120	1	2	3
9231		RAMY	11	25	1217	S19	W86	11	18.9		B	CSO	30	2	3	3
9232		TACH	11	13	0505	N26	E80	11	19.4			HSX	30	1	1	3
9232		KAND	11	13	0820	N27	E87	11	20.1			DSO		2	5	4
9232		SVTO	11	13	0832	N26	E80	11	19.6		A	HSX	60	1	5	3
9232		RAMY	11	13	1215	N22	E76	11	19.3		B	CSO	40	4	4	4
9232		HOLL	11	13	1458	N26	E80	11	19.8		B	DAO	120	3	8	3
9232	30159	MWIL	11	13	1545	N25	E78	11	19.7	4	(B)					
9232		VORO	11	13	2313	N26	E75	11	19.8			DRO	175	2	8	3
9232		LEAR	11	14	0040	N24	E72	11	19.6		B	ESO	80	4	10	3
9232		TACH	11	14	0600	N26	E71	11	19.8			DAO	105	3	7	3
9232		KAND	11	14	0920	N26	E69	11	19.7			DSO		3	10	2
9232		SVTO	11	14	1118	N27	E65	11	19.5		B	DAO	150	4	9	2
9232		RAMY	11	14	1210	N22	E67	11	19.6		B	DSO	160	6	9	4

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9232		HOLL	11	14	1527	N26	E66	11	19.8		B	DAO	140	7	10	3
9232	30159	MWIL	11	14	1545	N25	E65	11	19.7	4	(B)					
9232		VORO	11	14	2313	N25	E62	11	19.8			DAO	180	3	8	3
9232		LEAR	11	15	0020	N25	E60	11	19.7		B	DAO	160	5	10	3
9232		KAND	11	15	0910	N26	E57	11	19.8			ESO		6	12	3
9232		SVTO	11	15	1130	N26	E50	11	19.4		B	DAO	70	4	10	2
9232		RAMY	11	15	1320	N22	E55	11	19.8		B	ESO	120	8	11	3
9232	30159	MWIL	11	15	1500	N25	E52	11	19.6	4	(BP)					
9232		HOLL	11	15	1558	N26	E53	11	19.8		B	EAO	80	6	12	2
9232		VORO	11	15	2313	N25	E49	11	19.8			DAO	117	4	9	3
9232		SVTO	11	16	1220	N27	E43	11	19.9		B	EAO	60	6	13	2
9232		HOLL	11	16	1459	N26	E38	11	19.6		B	CAO	70	11	11	3
9232	30159	MWIL	11	16	1545	N25	E38	11	19.6	4	(BP)					
9232		LEAR	11	17	0107	N25	E35	11	19.7		B	DAO	70	8	10	4
9232		VORO	11	17	0350	N23	E29	11	19.4			HRX	51	2		3
9232		SVTO	11	17	0738	N24	E27	11	19.4		B	CAO	20	2	2	2
9232		KAND	11	17	0855	N24	E25	11	19.3			CSO		5	2	2
9232		RAMY	11	17	1250	N21	E29	11	19.7		B	CSO	20	7	6	3
9232	30159	MWIL	11	17	1545	N25	E25	11	19.6	4	(BP)					
9232		HOLL	11	17	1655	N23	E24	11	19.5		B	CAO	50	9	6	2
9232		LEAR	11	18	0005	N23	E21	11	19.6		B	CAO	20	8	10	3
9232		VORO	11	18	0040	N24	E18	11	19.4			HRX	31	3		4
9232		TACH	11	18	0538	N24	E15	11	19.4			HSX	65	2	1	3
9232		SVTO	11	18	0900	N23	E14	11	19.4		B	CSO	20	3	2	3
9232		KAND	11	18	0945	N23	E13	11	19.4			AX		4	2	3
9232		RAMY	11	18	1235	N21	E14	11	19.6		B	DSO	30	3	2	3
9232	30159	MWIL	11	18	1545	N23	E09	11	19.3	5	(AP)					
9232		LEAR	11	19	0020	N23	E06	11	19.5		A	HRX	10	3	1	3
9232		VORO	11	19	0150	N23	E05	11	19.5			HRX	24	1		3
9232		SVTO	11	19	0857	N23	E01	11	19.4		A	HRX	10	4	2	3
9232		KAND	11	19	0915	N22	E00	11	19.4			HS		6	2	3
9232		RAMY	11	19	1220	N23	E01	11	19.6		B	CSO	20	6	1	3
9232		HOLL	11	19	1500	N23	W02	11	19.5		B	CSO	10	5	2	2
9232		HOLL	11	19	1500	N28	E04	11	19.9		A	AXX		1		2
9232	30159	MWIL	11	19	1530	N25	W00	11	19.6	4	(BP)					
9232		LEAR	11	20	0105	N23	W09	11	19.3		B	BXO		2	1	3
9232		LEAR	11	20	0105	N28	W02	11	19.9		B	BXO		2	1	3
9232		TACH	11	20	0547	N26	W05	11	19.8			BRO	18	10	6	4
9232		SVTO	11	20	0720	N23	W12	11	19.4		B	DSO	20	3	2	2
9232		KAND	11	20	0925	N24	W10	11	19.6			BXO		4	8	3
9232		RAMY	11	20	1216	N25	W12	11	19.6		B	DSO	30	6	3	4
9232		HOLL	11	20	1515	N25	W15	11	19.5		B	CSO	20	6	4	3
9232		HOLL	11	20	1515	N27	W08	11	20.0		A	AXX		3	2	3
9232	30159	MWIL	11	20	1730	N25	W15	11	19.6	4	(AP)					
9232		VORO	11	21	0044	N24	W21	11	19.4			AXX	6	1		3
9232		LEAR	11	21	0116	N23	W19	11	19.6		B	CRO	10	5	3	3
9232		TACH	11	21	0601	N24	W22	11	19.5			AXX	44	4	2	3
9232		SVTO	11	21	0730	N25	W24	11	19.4		B	DSO	40	4	4	3
9232		KAND	11	21	0850	N24	W24	11	19.5			BXO		5	4	4
9232		RAMY	11	21	1315	N27	W24	11	19.7		B	BXO	10	5	4	3
9232	30159	MWIL	11	21	1715	N24	W28	11	19.5	4	(AP)					
9232		HOLL	11	21	1742	N24	W30	11	19.4		B	CSO	20	3	3	2
9232		VORO	11	21	2313	N24	W32	11	19.5			AXX	13	2		3
9232		LEAR	11	22	0158	N24	W33	11	19.5		A	AXX	10	2	2	3
9232		TACH	11	22	0655	N22	W27	11	20.2			CAO	641	7	12	3
9232		TACH	11	22	0655	N24	W37	11	19.4			AXX	26	2	1	3
9232		KAND	11	22	0850	N24	W38	11	19.4			AX		2	1	3
9232		RAMY	11	22	1300	N27	W37	11	19.6		A	AXX	20	2	2	3
9232	30159	MWIL	11	22	1545	N24	W42	11	19.4	3	(AP)					
9232		LEAR	11	23	0004	N25	W45	11	19.5		A	AXX		1		5
9232		SVTO	11	23	1010	N24	W56	11	19.1		A	AXX		1		3
9238		TACH	11	14	0600	S24	E71	11	19.7			CAI	50	5	1	3
9238		TACH	11	18	0538	S23	E18	11	19.6			CAI	115	18	5	3
9238		LEAR	11	20	0105	S22	E04	11	20.3		B	BXO		2	2	3
9238		TACH	11	20	0547	S22	E03	11	20.5			BRO	19	4	3	4
9238		TACH	11	20	0547	S24	W08	11	19.6			CAI	75	9	5	4
9238		SVTO	11	20	0720	S23	E02	11	20.4		B	DSO	20	3	4	2
9238		RAMY	11	20	1216	S23	W04	11	20.2		B	CSO	10	3	3	4

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NOAA/ USAF Group	Mt Wilson Group	Sta	Observation Mo	Day	Time (UT)	Lat	CMD	CMP Mo	Day	Max H	Mag Class	Spot Class	Corrected Area (10-6 Hemi)	Spot Count	Long. Extent (Deg)	Qual
9238		HOLL	11	20	1515	S24	W02	11	20.5		A	AXX		3	2	3
9238	30171	MWIL	11	20	1730	S23	W03	11	20.5	4	(BF)					
9238		LEAR	11	21	0116	S23	W07	11	20.5		B	CAO	10	3	4	3
9238		TACH	11	21	0601	S22	W13	11	20.2			AXX	23	2	1	3
9238		TACH	11	21	0601	S24	W20	11	19.7			CAO	115	8	5	3
9238		SVTO	11	21	0730	S22	W14	11	20.2		B	DSO	30	4	2	3
9238	30171	MWIL	11	21	1715	S22	W27	11	19.6	4	(BP)					
9238		HOLL	11	21	1742	S22	W18	11	20.3		A	AXX	10	1	1	2
9238		LEAR	11	22	0158	S22	W23	11	20.3		A	HRX	10	1		3
9238		TACH	11	22	0655	S26	W35	11	19.6			DAI	59	8	6	3
9238		TACH	11	24	0521	S24	W58	11	19.7			CAO	64	5	5	3
9233		HOLL	11	14	1527	N13	E80	11	20.7		A	HSX	50	2	2	3
9233		VORO	11	14	2313	N11	E78	11	20.8			HRX	69	1		3
9233		LEAR	11	15	0020	N12	E76	11	20.7		A	HSX	60	2	2	3
9233		KAND	11	15	0910	N13	E74	11	21.0			HS		1	2	3
9233		SVTO	11	15	1130	N12	E78	11	21.3		A	HRX	20	1	3	2
9233		RAMY	11	15	1320	N08	E70	11	20.8		A	HSX	50	1	1	3
9233	30164	MWIL	11	15	1500	N12	E67	11	20.7	4	(AP)					
9233		HOLL	11	15	1558	N13	E67	11	20.7		A	HSX	50	1	1	2
9233		VORO	11	15	2313	N12	E63	11	20.7			HAX	73	1		3
9233		SVTO	11	16	1220	N13	E62	11	21.2		B	EAO	80	10	11	2
9233		HOLL	11	16	1459	N13	E56	11	20.8		B	CAO	50	2	5	3
9233	30164	MWIL	11	16	1545	N12	E54	11	20.7	4	(AP)					
9233		LEAR	11	17	0107	N12	E54	11	21.1		B	DSO	90	9	10	4
9233		VORO	11	17	0350	N12	E47	11	20.7			HRX	46	1		3
9233		SVTO	11	17	0738	N13	E47	11	20.9		B	DAO	60	3	9	2
9233		KAND	11	17	0855	N12	E44	11	20.7			HR		1	1	2
9233		RAMY	11	17	1250	N09	E42	11	20.7		A	HSX	10	1	1	3
9233	30164	MWIL	11	17	1545	N12	E40	11	20.7	4	(AP)					
9233		HOLL	11	17	1655	N12	E40	11	20.7		A	HSX	30	2	3	2
9233		LEAR	11	18	0005	N11	E35	11	20.6		A	HAX	20	1	1	3
9233		VORO	11	18	0040	N11	E36	11	20.7			HRX	23	1		4
9233		TACH	11	18	0538	N12	E32	11	20.6			HSX	80	1	1	3
9233		SVTO	11	18	0900	N12	E30	11	20.6		A	HAX	10	1	1	3
9233		RAMY	11	18	1235	N09	E29	11	20.7		A	HSX	10	1	1	3
9233	30164	MWIL	11	18	1545	N12	E26	11	20.6	5	(AP)					
9233		LEAR	11	19	0020	N11	E21	11	20.6		A	HRX	10	1	1	3
9233		VORO	11	19	0150	N12	E22	11	20.7			HRX	28	1		3
9233		SVTO	11	19	0857	N12	E16	11	20.6		A	HSX	20	1	1	3
9233		KAND	11	19	0945	N12	E20	11	20.9			HS		1	1	3
9233		RAMY	11	19	1220	N10	E16	11	20.7		A	HSX	10	1	1	3
9233		HOLL	11	19	1500	N12	E13	11	20.6		A	HAX	20	1	1	2
9233	30164	MWIL	11	19	1530	N12	E13	11	20.6	4	(AP)					
9233		LEAR	11	20	0105	N12	E07	11	20.6		A	HAX	20	2	2	3
9233		TACH	11	20	0547	N13	E05	11	20.6			AXX	25	1	1	4
9233		SVTO	11	20	0720	N12	E04	11	20.6		A	HSX		1		2
9233		KAND	11	20	0925	N12	E03	11	20.6			HR		1		3
9233		RAMY	11	20	1216	N12	E02	11	20.7		A	HSX	10	1	1	4
9233		HOLL	11	20	1515	N12	W01	11	20.6		A	HSX	20	1	1	3
9233	30164	MWIL	11	20	1730	N12	W01	11	20.6	4	(AP)					
9233		LEAR	11	21	0116	N12	W06	11	20.6		A	HRX	10	1		3
9233		TACH	11	21	0601	N13	W09	11	20.6			AXX	10	1	1	3
9233		SVTO	11	21	0730	N13	W11	11	20.5		A	HSX		1		3
9233		KAND	11	21	0850	N08	W07	11	20.8			AX		1		4
9233		KAND	11	21	0850	N11	W10	11	20.6			AX		1		4
9233		RAMY	11	21	1315	N16	W09	11	20.9		A	AXX	10	3	1	3
9233		TACH	11	22	0655	N12	W20	11	20.8			HSX	110	2	2	3
9233		RAMY	11	22	1300	N14	W21	11	20.9		B	DSO	60	2	3	3
9233		RAMY	11	23	1225	N15	W35	11	20.9		B	CSO	70	3	3	3
9233		TACH	11	24	0521	N16	W49	11	20.5			HSX	80	1	1	3
9233		RAMY	11	24	1217	N15	W49	11	20.8		B	CSO	60	4	3	3
9233		TACH	11	25	0613	N11	W61	11	20.7			AXX	15	1	1	3
9233		RAMY	11	25	1217	N15	W64	11	20.7		B	CSO	50	2	4	3
9233		TACH	11	26	0757	N11	W75	11	20.7			AXX	10	1	1	3
9233		RAMY	11	26	1310	N16	W73	11	21.0		B	BXO	30	2	4	3
9233A		KAND	11	23	0945	N23	W36	11	20.6			AX		1		3
9235		HOLL	11	16	1459	N14	E67	11	21.7		B	CAO	130	7	11	3

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NOAA/ USAF Group	Mt Wilson Group	Sta	Observation Time Mo	Day	(UT)	Lat	CMD	CMP Mo	Day	Max H	Mag Class	Spot Class	Corrected Area (10-6 Hemi)	Spot Count	Long. Extent (Deg)	Qual
9235	30165	MWIL	11	16	1545	N13	E62	11	21.3	4	(B)					
9235	30166	MWIL	11	16	1545	N16	E70	11	22.0	4	(B)					
9235		LEAR	11	17	0107	N15	E66	11	22.0		B	DSO	150	3	6	4
9235		SVTO	11	17	0738	N14	E59	11	21.8		B	CAO	80	4	8	2
9235		KAND	11	17	0855	N13	E55	11	21.5			DAO		11	6	2
9235		KAND	11	17	0855	N16	E61	11	22.0			CRO		3	5	2
9235		RAMY	11	17	1250	N09	E56	11	21.7		B	EAI	140	13	12	3
9235	30165	MWIL	11	17	1545	N14	E50	11	21.4	5	(B)					
9235	30166	MWIL	11	17	1545	N16	E57	11	22.0	4	(BP)					
9235		HOLL	11	17	1655	N14	E50	11	21.5		BG	DSO	160	18	8	2
9235		LEAR	11	18	0005	N12	E47	11	21.5		B	EAI	150	22	14	3
9235		VORO	11	18	0040	N14	E47	11	21.6			DAI	278	11	7	4
9235		TACH	11	18	0538	N15	E43	11	21.5			DAI	322	16	8	3
9235		SVTO	11	18	0900	N14	E42	11	21.5		B	EAI	130	14	11	3
9235		KAND	11	18	0945	N13	E39	11	21.3			DAO		21	7	3
9235		KAND	11	18	0945	N16	E44	11	21.7			CAO		5	3	3
9235		RAMY	11	18	1235	N10	E40	11	21.5		B	EAI	180	27	11	3
9235	30165	MWIL	11	18	1545	N13	E36	11	21.4	5	(B)					
9235	30166	MWIL	11	18	1545	N15	E42	11	21.8	4	(AP)					
9235		LEAR	11	19	0020	N13	E32	11	21.4		B	EAO	190	32	11	3
9235		VORO	11	19	0150	N14	E32	11	21.5			DAI	311	11	7	3
9235		SVTO	11	19	0857	N14	E27	11	21.4		B	EAC	230	22	12	3
9235		KAND	11	19	0915	N13	E25	11	21.3			DAO		12	9	3
9235		KAND	11	19	0915	N14	E30	11	21.6			HS		1	1	3
9235		RAMY	11	19	1220	N11	E27	11	21.5		BG	EAI	170	26	11	3
9235		HOLL	11	19	1500	N13	E23	11	21.4		BG	EAI	260	38	13	2
9235	30165	MWIL	11	19	1530	N14	E24	11	21.4	5	(BG)					
9235	30166	MWIL	11	19	1530	N15	E31	11	22.0	4	(BP)					
9235		LEAR	11	20	0105	N14	E17	11	21.3		BG	EAI	270	30	14	3
9235		TACH	11	20	0547	N15	E16	11	21.4			CAI	506	15	11	4
9235		SVTO	11	20	0720	N14	E15	11	21.4		BG	EAI	230	14	13	2
9235		KAND	11	20	0925	N13	E12	11	21.3			DAO		12	9	3
9235		KAND	11	20	0925	N15	E20	11	21.9			DSO		2	3	3
9235		RAMY	11	20	1216	N13	E12	11	21.4		B	EAI	230	23	13	4
9235		HOLL	11	20	1515	N12	E09	11	21.3		BG	EAI	200	22	13	3
9235	30165	MWIL	11	20	1730	N14	E09	11	21.4	6	(BG)					
9235	30166	MWIL	11	20	1730	N15	E16	11	21.9	4	(AP)					
9235		VORO	11	21	0044	N14	E06	11	21.5			DAI	276	14	13	3
9235		LEAR	11	21	0116	N13	E05	11	21.4		B	EAO	110	14	14	3
9235		TACH	11	21	0601	N14	E06	11	21.7			CAI	332	15	13	3
9235		SVTO	11	21	0730	N15	W01	11	21.2		BG	FAI	180	16	16	3
9235		KAND	11	21	0850	N14	E06	11	21.8			CAO		3	2	4
9235		KAND	11	21	0850	N14	W01	11	21.3			CAO		14	12	4
9235		RAMY	11	21	1315	N14	W02	11	21.4		BG	FAI	170	26	18	3
9235	30165	MWIL	11	21	1715	N13	W05	11	21.3	5	(BG)					
9235	30166	MWIL	11	21	1715	N15	E03	11	21.9	4	(BP)					
9235		HOLL	11	21	1742	N14	W04	11	21.4		BG	FAI	170	15	16	2
9235		VORO	11	21	2313	N13	W08	11	21.4			EAI	167	20	15	3
9235		LEAR	11	22	0158	N13	W10	11	21.3		B	FSO	110	10	16	3
9235		TACH	11	22	0655	N15	W06	11	21.8			BR	27	4	3	3
9235		KAND	11	22	0850	N12	W16	11	21.2			CSO		9	15	3
9235		KAND	11	22	0850	N14	W07	11	21.8			HS		1	1	3
9235		SVTO	11	22	1200	N15	W17	11	21.2		B	FAI	120	11	18	2
9235		RAMY	11	22	1300	N13	W14	11	21.5		B	ESO	50	4	12	3
9235	30165	MWIL	11	22	1545	N13	W19	11	21.2	5	(BP)					
9235	30166	MWIL	11	22	1545	N15	W10	11	21.9	4	(AP)					
9235		HOLL	11	22	1727	N13	W20	11	21.2		BG	FAO	110	10	17	2
9235		VORO	11	22	2352	N13	W22	11	21.3			CAI	163	5	16	2
9235		LEAR	11	23	0004	N15	W22	11	21.3		B	FAO	100	14	16	5
9235		KAND	11	23	0945	N11	W36	11	20.7			HA		4	3	3
9235		SVTO	11	23	1010	N13	W28	11	21.3		B	CAO	80	8	16	3
9235	30165	MWIL	11	23	1630	N12	W40	11	20.7	5	(AP)					
9235		VORO	11	23	2321	N11	W43	11	20.7			HAX	124	5		3
9235		LEAR	11	24	0042	N12	W44	11	20.7		B	CAO	60	2	2	3
9235		SVTO	11	24	0829	N12	W49	11	20.7		B	DSO	70	3	2	2
9235		KAND	11	24	0835	N11	W49	11	20.7			HA		5	3	3
9235		HOLL	11	24	1530	N09	W54	11	20.6		B	CSO	100	2	3	3
9235	30165	MWIL	11	24	1700	N12	W54	11	20.6	4	(AP)					
9235		LEAR	11	25	0055	N12	W58	11	20.7		A	HAX	40	1	2	3

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9235		KAND	11	25	0855	N10	W64	11	20.6			HA		1	1	3
9235		HOLL	11	25	1500	N11	W67	11	20.6		A	HSX	90	1	2	2
9235	30165	MWIL	11	25	1645	N12	W66	11	20.7	4	(AP)					
9235		VORO	11	26	0053	N11	W72	11	20.6			HAX	51	1		3
9235		LEAR	11	26	0200	N12	W71	11	20.7		A	HAX	60	1	2	2
9235		SVTO	11	26	0720	N11	W76	11	20.6		A	HAX	30	1	1	2
9235		HOLL	11	26	1530	N09	W78	11	20.8		A	HAX	60	2	2	3
9235	30165	MWIL	11	26	1530	N12	W78	11	20.8	4	(AP)					
9241	30172	MWIL	11	21	1715	N22	E12	11	22.6	4	(B)					
9241		KAND	11	23	0945	N22	W11	11	22.6			CSO		3	3	3
9241		SVTO	11	23	1010	N22	W12	11	22.5		B	DRO	20	2	3	3
9241		RAMY	11	23	1225	N20	W13	11	22.5		B	DSO	20	2	3	3
9241	30172	MWIL	11	23	1630	N23	W15	11	22.5	4	(B)					
9241		VORO	11	23	2321	N22	W18	11	22.6			BXO	22	3	3	3
9241		LEAR	11	24	0042	N23	W18	11	22.6		A	HSX	30	3	4	3
9241		TACH	11	24	0521	N21	W23	11	22.4			AXX	5	1	1	3
9241		SVTO	11	24	0829	N21	W25	11	22.4		A	HRX	10	1	1	2
9241		KAND	11	24	0835	N22	W22	11	22.7			BXO		3	4	3
9241		RAMY	11	24	1217	N22	W27	11	22.4		A	AXX	10	1	1	3
9241		HOLL	11	24	1530	N19	W29	11	22.4		B	BXO	10	2	2	3
9241	30172	MWIL	11	24	1700	N21	W30	11	22.4	3	(AP)					
9241B		TACH	11	20	0547	N09	E37	11	23.0			BRO	64	7	3	4
9241A	30177	MWIL	11	25	1645	N32	W29	11	23.4	3	(B)					
9241A	30177	MWIL	11	26	1530	N32	W42	11	23.3	3	(B)					
9236	30169	MWIL	11	17	1545	N20	E84	11	24.1	5	AP					
9236		LEAR	11	18	0005	N19	E79	11	24.0		A	HAX	100	4	6	3
9236		TACH	11	18	0538	N21	E76	11	24.1			HSX	120	3	1	3
9236		SVTO	11	18	0900	N19	E76	11	24.2		A	HAX	120	1	5	3
9236		KAND	11	18	0945	N20	E76	11	24.2			HA		2	3	3
9236		RAMY	11	18	1235	N15	E71	11	23.9		A	HSX	170	2	3	3
9236		RAMY	11	18	1235	N16	E83	11	24.8		B	CSO	70	3	2	3
9236	30169	MWIL	11	18	1545	N20	E72	11	24.2	5	(B)					
9236		LEAR	11	19	0020	N19	E68	11	24.2		B	EHO	290	4	13	3
9236		VORO	11	19	0150	N20	E66	11	24.1			HKX	524	1		3
9236		SVTO	11	19	0857	N21	E64	11	24.3		B	EAO	260	5	12	3
9236		KAND	11	19	0915	N20	E65	11	24.3			EAO		4	14	3
9236		RAMY	11	19	1220	N16	E65	11	24.4		B	EAO	400	8	13	3
9236		HOLL	11	19	1500	N20	E63	11	24.4		B	EAO	280	5	13	2
9236	30169	MWIL	11	19	1530	N20	E60	11	24.2	5	(BP)					
9236		LEAR	11	20	0105	N20	E56	11	24.3		B	ESO	200	9	13	3
9236		TACH	11	20	0547	N22	E53	11	24.3			DAO	451	5	10	4
9236		SVTO	11	20	0720	N22	E52	11	24.3		B	ESO	490	5	15	2
9236		KAND	11	20	0925	N20	E53	11	24.4			EHO		4	14	3
9236		RAMY	11	20	1216	N17	E52	11	24.5		B	EHO	490	6	13	4
9236		HOLL	11	20	1515	N20	E48	11	24.3		B	EKI	450	13	15	3
9236	30169	MWIL	11	20	1730	N20	E47	11	24.3	5	(BP)					
9236		VORO	11	21	0044	N21	E46	11	24.5			DAI	463	8	12	3
9236		LEAR	11	21	0116	N20	E45	11	24.5		B	EHO	510	4	13	3
9236		TACH	11	21	0601	N22	E42	11	24.5			DAO	725	8	12	3
9236		SVTO	11	21	0730	N20	E38	11	24.2		B	EHO	480	9	15	3
9236		KAND	11	21	0850	N21	E40	11	24.4			EHO		12	15	4
9236		RAMY	11	21	1315	N17	E38	11	24.4		B	EHO	330	9	15	3
9236	30169	MWIL	11	21	1715	N20	E35	11	24.4	5	(BP)					
9236		HOLL	11	21	1742	N23	E35	11	24.4		B	EHI	460	6	14	2
9236		VORO	11	21	2313	N21	E33	11	24.5			DKI	532	15	12	3
9236		LEAR	11	22	0158	N21	E31	11	24.4		B	EKO	390	7	14	3
9236		KAND	11	22	0850	N20	E25	11	24.3			EKO		12	13	3
9236		SVTO	11	22	1200	N18	E24	11	24.3		B	FKO	580	16	16	2
9236		RAMY	11	22	1300	N19	E25	11	24.4		B	EKO	400	12	14	3
9236	30169	MWIL	11	22	1545	N21	E22	11	24.3	5	(BG)					
9236		HOLL	11	22	1727	N22	E23	11	24.5		BG	EHO	380	23	13	2
9236		VORO	11	22	2352	N21	E19	11	24.4			DKI	572	12	13	2
9236		LEAR	11	23	0004	N21	E20	11	24.5		BG	EKO	400	15	15	5
9236		KAND	11	23	0945	N20	E13	11	24.4			EKO		15	14	3
9236		SVTO	11	23	1010	N22	E13	11	24.4		B	EKO	400	16	15	3

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NOAA/ USAF Group	Mt Wilson Group	Sta	Observation Time Mo	Day	(UT)	Lat	CMD	CMP Mo	Day	Max H	Mag Class	Spot Class	Corrected Area (10-6 Hemi)	Spot Count	Long. Extent (Deg)	Qual
9236		RAMY	11	23	1225	N19	E12	11	24.4		B	EKI	350	21	14	3
9236	30169	MWIL	11	23	1630	N21	E08	11	24.3	5	(BG)					
9236		VORO	11	23	2321	N21	E06	11	24.4			DKI	556	25	12	3
9236		LEAR	11	24	0042	N22	E03	11	24.2		B	EKO	310	33	16	3
9236		TACH	11	24	0521	N22	E05	11	24.6			CAI	870	10	11	3
9236		SVTO	11	24	0829	N21	W01	11	24.3		B	FKO	400	17	16	2
9236		KAND	11	24	0835	N20	E00	11	24.3			FKO		32	16	3
9236		RAMY	11	24	1217	N20	W01	11	24.4		BG	FKC	390	36	18	3
9236		HOLL	11	24	1530	N21	W04	11	24.3		BG	FKC	640	27	16	3
9236	30169	MWIL	11	24	1700	N21	W08	11	24.1	6	(D)					
9236		LEAR	11	25	0055	N23	W09	11	24.3		B	FKO	640	19	16	3
9236		TACH	11	25	0613	N20	W18	11	23.9			HHX	1200	12	7	3
9236		KAND	11	25	0855	N20	W16	11	24.1			EKO		15	13	3
9236		RAMY	11	25	1217	N21	W14	11	24.4		BG	FKC	460	38	16	3
9236		HOLL	11	25	1500	N23	W18	11	24.2		BG	EKC	670	30	14	2
9236	30169	MWIL	11	25	1645	N21	W21	11	24.1	5	(D)					
9236		VORO	11	26	0053	N20	W28	11	23.9			HKX	792	20		3
9236		LEAR	11	26	0200	N21	W23	11	24.3		BG	FKI	600	34	14	2
9236		SVTO	11	26	0720	N20	W27	11	24.2		BG	EKI	600	11	15	2
9236		TACH	11	26	0757	N20	W31	11	24.0			HHX	1102	11	8	3
9236		RAMY	11	26	1310	N23	W34	11	23.9		BG	FKI	620	17	17	3
9236		HOLL	11	26	1530	N18	W36	11	23.9		BG	DKO	590	26	9	3
9236	30169	MWIL	11	26	1530	N21	W34	11	24.0	6	(D)					
9236		VORO	11	26	2307	N20	W39	11	24.0			KI	956	8		3
9236		LEAR	11	27	0122	N19	W40	11	24.0		A	HKX	560	11	6	3
9236		TACH	11	27	0535	N22	W36	11	24.5			CAI	1036	15	14	3
9236		HOLL	11	27	1515	N19	W45	11	24.2		BG	EKO	750	14	12	2
9236	30169	MWIL	11	27	1545	N21	W47	11	24.0	6	(D)					
9236		RAMY	11	27	1845	N19	W47	11	24.2		B	EKO	610	11	15	3
9236		VORO	11	27	2336	N21	W53	11	23.9			HKX	875	7		3
9236		LEAR	11	28	0025	N20	W51	11	24.1		BG	DKO	580	10	8	3
9236		KAND	11	28	0755	N19	W58	11	23.9			HK		5	5	3
9236		SVTO	11	28	0805	N18	W55	11	24.1		BG	DKO	380	9	5	3
9236		RAMY	11	28	1238	N18	W60	11	23.9		B	CKO	600	8	8	4
9236	30169	MWIL	11	28	1530	N20	W61	11	24.0	5	(D)					
9236		VORO	11	28	2325	N20	W66	11	23.9			HKX	741	2		2
9236		LEAR	11	29	0148	N20	W67	11	23.9		A	HKX	360	5	5	3
9236		TACH	11	29	0517	N21	W70	11	23.8			HSX	312	4	2	3
9236		SVTO	11	29	0753	N19	W68	11	24.1		B	CAO	340	3	5	2
9236		RAMY	11	29	1230	N18	W73	11	24.0		A	HKX	450	1	8	4
9236	30169	MWIL	11	29	1530	N21	W74	11	24.0	5	(AP)					
9236		HOLL	11	29	1545	N19	W76	11	23.8		A	HKX	420	7	5	3
9236		VORO	11	30	0020	N21	W84	11	23.6			HKX	581	1		3
9236		TACH	11	30	0544	N20	W80	11	24.1			HSX	80	1	4	3
9236		SVTO	11	30	1108	N20	W82	11	24.2		A	HAX	150	1	3	3
9244		TACH	11	27	0535	N20	W20	11	25.7			BRO	14	8	11	3
9244		HOLL	11	27	1515	N15	W26	11	25.7		B	DAO	100	13	7	2
9244	30180	MWIL	11	27	1545	N16	W26	11	25.7	4	(BG)					
9244		RAMY	11	27	1845	N16	W28	11	25.6		B	CSO	50	19	7	3
9244		VORO	11	27	2336	N16	W30	11	25.7			CRI	163	12	6	3
9244		LEAR	11	28	0025	N15	W30	11	25.7		B	DAO	100	15	9	3
9244		KAND	11	28	0755	N15	W31	11	26.0			DSO		11	9	3
9244		SVTO	11	28	0805	N15	W34	11	25.8		B	DAO	70	13	9	3
9244		RAMY	11	28	1238	N15	W37	11	25.7		B	DAO	110	13	9	4
9244	30180	MWIL	11	28	1530	N16	W39	11	25.7	4	(BG)					
9244		VORO	11	28	2325	N16	W44	11	25.6			CAI	179	5	9	2
9244		LEAR	11	29	0148	N16	W44	11	25.7		B	DAO	90	7	9	3
9244		TACH	11	29	0517	N15	W43	11	26.0			CAI	101	10	15	3
9244		SVTO	11	29	0753	N15	W46	11	25.8		B	DAO	130	9	9	2
9244		RAMY	11	29	1230	N14	W51	11	25.7		B	CSO	110	7	10	4
9244	30180	MWIL	11	29	1530	N16	W55	11	25.5	5	(BP)					
9244		HOLL	11	29	1545	N15	W54	11	25.6		B	CAO	120	10	11	3
9244		VORO	11	30	0020	N16	W58	11	25.6			DAI	200	7	10	3
9244		TACH	11	30	0544	N15	W60	11	25.7			CAO	31	5	9	3
9244		SVTO	11	30	1108	N15	W64	11	25.6		B	DAO	140	8	8	3
9244		RAMY	11	30	1530	N15	W64	11	25.8		B	DAO	70	16	10	2
9244	30180	MWIL	11	30	1545	N16	W67	11	25.6	5	B					
9244		HOLL	11	30	1550	N15	W66	11	25.7		B	CAO	140	12	10	3

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9244		VORO	11	30	2327	N16	W65	11	26.0			HRX	89	1		2
9244		LEAR	12	01	0035	N17	W70	11	25.8		B	DSO	50	4	8	2
9244		TACH	12	01	0558	N15	W72	11	25.9			BRO	40	3	7	3
9244		SVTO	12	01	0725	N17	W75	11	25.7		B	DRO	90	5	10	2
9244		HOLL	12	01	1530	N15	W75	11	26.1		A	HAX	60	1	2	3
9244A		VORO	11	23	2321	N13	E39	11	26.9			BXO	7	2	2	3
9244A		LEAR	11	24	0042	N13	E40	11	27.0		A	AXX		1		3
9244A		KAND	11	24	0835	N14	E35	11	27.0			AX		1		3
9244A		RAMY	11	24	1217	N12	E33	11	27.0		B	BXO	20	2	3	3
9244A		SVTO	11	29	0753	N12	W38	11	26.5		A	AXX		1		2
9239		VORO	11	21	0044	S20	E84	11	27.4			HAX	168	1		3
9239		KAND	11	21	0850	S19	E85	11	27.8			HA		1	2	4
9239		RAMY	11	21	1315	S26	E77	11	27.5		A	HSX	60	1	3	3
9239	30173	MWIL	11	21	1715	S20	E79	11	27.8	4	AP					
9239		HOLL	11	21	1742	S18	E77	11	27.6		A	HSX	150	1	2	2
9239		LEAR	11	22	0158	S19	E74	11	27.7		A	HSX	60	1	2	3
9239		TACH	11	22	0655	S18	E71	11	27.7			HSX	70	1	1	3
9239		KAND	11	22	0850	S20	E71	11	27.8			HS		1	3	3
9239		SVTO	11	22	1200	S24	E68	11	27.7		A	HAX	110	1	2	2
9239		RAMY	11	22	1300	S25	E66	11	27.6		A	HSX	100	1	2	3
9239	30173	MWIL	11	22	1545	S20	E66	11	27.7	4	(AP)					
9239		HOLL	11	22	1727	S18	E66	11	27.7		A	HAX	100	1	2	2
9239		VORO	11	22	2352	S20	E62	11	27.7			HAX	172	3		2
9239		LEAR	11	23	0004	S20	E63	11	27.8		A	HSX	170	1	2	5
9239		KAND	11	23	0945	S19	E58	11	27.8			HA		1	3	3
9239		SVTO	11	23	1010	S20	E56	11	27.7		A	HSX	110	1	2	3
9239		RAMY	11	23	1225	S24	E53	11	27.6		A	HSX	110	1	3	3
9239	30173	MWIL	11	23	1630	S19	E54	11	27.8	4	(AP)					
9239		VORO	11	23	2321	S20	E49	11	27.7			HSX	204	1		3
9239		LEAR	11	24	0042	S20	E49	11	27.8		A	HSX	90	1	2	3
9239		TACH	11	24	0521	S19	E46	11	27.7			HSX	150	1	1	3
9239		SVTO	11	24	0829	S19	E45	11	27.8		A	HSX	140	1	3	2
9239		KAND	11	24	0835	S20	E46	11	27.9			HS		2	3	3
9239		RAMY	11	24	1217	S22	E40	11	27.6		A	HSX	110	1	3	3
9239		HOLL	11	24	1530	S18	E42	11	27.8		A	HAX	140	1	2	3
9239	30173	MWIL	11	24	1700	S20	E40	11	27.8	5	(AP)					
9239		LEAR	11	25	0055	S20	E36	11	27.8		A	HSX	120	1	2	3
9239		TACH	11	25	0613	S19	E32	11	27.7			HHX	250	1	2	3
9239		KAND	11	25	0855	S19	E32	11	27.8			HS		1	2	3
9239		RAMY	11	25	1217	S21	E28	11	27.6		A	HSX	120	1	3	3
9239		HOLL	11	25	1500	S21	E32	11	28.1		B	CSO	190	4	6	2
9239	30173	MWIL	11	25	1645	S20	E28	11	27.8	5	(AP)					
9239		VORO	11	26	0053	S20	E24	11	27.9			HKX	231	1		3
9239		LEAR	11	26	0200	S21	E22	11	27.8		A	HSX	150	1	2	2
9239		SVTO	11	26	0720	S20	E19	11	27.7		B	DSO	130	2	4	2
9239		TACH	11	26	0757	S19	E19	11	27.8			HHX	300	1	2	3
9239		RAMY	11	26	1310	S22	E15	11	27.7		B	CSO	170	2	3	3
9239	30173	MWIL	11	26	1530	S20	E15	11	27.8	6	(AP)					
9239		HOLL	11	26	1530	S21	E14	11	27.7		B	CSO	150	4	4	3
9239		VORO	11	26	2307	S20	E11	11	27.8			HSX	221	1		3
9239		LEAR	11	27	0122	S21	E09	11	27.7		A	HSX	150	1	3	3
9239		TACH	11	27	0535	S19	E09	11	27.9			HSX	250	1	2	3
9239		HOLL	11	27	1515	S20	E03	11	27.9		A	HSX	130	1	2	2
9239	30173	MWIL	11	27	1545	S22	E03	11	27.9	5	(BP)					
9239		RAMY	11	27	1845	S20	E02	11	27.9		A	HSX	130	2	2	3
9239		VORO	11	27	2336	S21	W02	11	27.8			HSX	248	1		3
9239		LEAR	11	28	0025	S20	W02	11	27.9		A	HSX	150	1	2	3
9239		KAND	11	28	0755	S20	W06	11	27.9			HS		1	3	3
9239		SVTO	11	28	0805	S21	W06	11	27.9		A	HSX	100	1	2	3
9239		RAMY	11	28	1238	S21	W09	11	27.8		A	HSX	120	1	3	4
9239	30173	MWIL	11	28	1530	S20	W11	11	27.8	5	(AP)					
9239		VORO	11	28	2325	S21	W15	11	27.8			HSX	232	1		2
9239		LEAR	11	29	0148	S20	W17	11	27.8		A	HSX	160	1	2	3
9239		TACH	11	29	0517	S20	W18	11	27.8			HSX	120	1	2	3
9239		SVTO	11	29	0753	S21	W18	11	27.9		B	CSO	100	2	3	2
9239		RAMY	11	29	1230	S21	W22	11	27.8		A	HSX	90	1	2	4
9239	30173	MWIL	11	29	1530	S20	W24	11	27.8	5	(AP)					

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9239		HOLL	11	29	1545	S21	W24	11	27.8		A	HAX	130	1	2	3
9239		VORO	11	30	0020	S21	W29	11	27.8			HSX	219	1		3
9239		TACH	11	30	0544	S20	W31	11	27.9			HSX	120	1	2	3
9239		SVTO	11	30	1108	S20	W35	11	27.8		A	HAX	80	3	2	3
9239		RAMY	11	30	1530	S21	W37	11	27.8		A	HAX	90	5	2	2
9239	30173	MWIL	11	30	1545	S20	W37	11	27.8	5	AP					
9239		HOLL	11	30	1550	S21	W37	11	27.8		A	HAX	120	4	3	3
9239		VORO	11	30	2327	S21	W42	11	27.7			HSX	257	1		2
9239		LEAR	12	01	0035	S18	W41	11	28.0		A	HSX	60	2	3	2
9239		TACH	12	01	0558	S20	W43	11	28.0			CAO	112	5	4	3
9239		SVTO	12	01	0725	S20	W45	11	28.0		B	DAO	150	7	4	2
9239		HOLL	12	01	1530	S21	W49	11	28.0		B	DAO	70	8	4	3
9239		LEAR	12	02	0110	S20	W56	11	27.9		A	HSX	40	2	2	3
9239		KAND	12	02	0720	S22	W60	11	27.8			HS		3	4	2
9239		SVTO	12	02	0725	S20	W56	11	28.1		B	DSO	70	5	5	3
9239		RAMY	12	02	1210	S22	W63	11	27.8		B	DSO	30	2	2	3
9239	30173	MWIL	12	02	1545	S20	W63	11	27.9	4	(AP)					
9239		LEAR	12	03	0151	S20	W70	11	27.8		A	HSX	10	1	1	2
9239		RAMY	12	03	1215	S22	W76	11	27.8		B	CSO	30	2	1	3
9239	30173	MWIL	12	03	1545	S21	W76	11	27.9	4	(AP)					
9239B	30184	MWIL	11	28	1530	S27	W04	11	28.3	3	(AP)					
9239A		KAND	11	24	0835	S05	E52	11	28.2			AX		1		3
9239A	30175	MWIL	11	24	1700	S05	E45	11	28.1	3	(AP)					
9239A	30181	MWIL	11	27	1545	S07	E13	11	28.6	4	(AP)					
9239A		LEAR	12	03	0151	S10	W67	11	28.1		A	HRX		1		2
9239A		RAMY	12	03	1215	S11	W75	11	28.0		A	AXX	10	1	1	3
9239A	30194	MWIL	12	03	1545	S11	W75	11	28.1	4	(B)					
9240		LEAR	11	22	0158	N09	E87	11	28.6		A	HSX	60	1	4	3
9240		KAND	11	22	0850	N10	E84	11	28.7			CAO		4	9	3
9240		SVTO	11	22	1200	N07	E76	11	28.2		B	DAO	150	3	8	2
9240		RAMY	11	22	1300	N04	E75	11	28.1		B	CSO	120	3	6	3
9240	30174	MWIL	11	22	1545	N10	E76	11	28.4	4	(AP)					
9240		HOLL	11	22	1727	N12	E74	11	28.3		B	CHO	170	4	7	2
9240		VORO	11	22	2352	N10	E73	11	28.5			HAX	439	3		2
9240		LEAR	11	23	0004	N09	E73	11	28.5		B	DAO	270	4	7	5
9240		KAND	11	23	0945	N10	E68	11	28.5			DAO		4	9	3
9240		SVTO	11	23	1010	N09	E64	11	28.2		B	DSO	290	4	7	3
9240		RAMY	11	23	1225	N05	E63	11	28.2		B	DSO	170	6	8	3
9240	30174	MWIL	11	23	1630	N09	E62	11	28.3	4	(AP)					
9240		VORO	11	23	2321	N10	E60	11	28.5			HAX	364	3		3
9240		LEAR	11	24	0042	N08	E58	11	28.4		B	DAO	150	4	3	3
9240		TACH	11	24	0521	N10	E56	11	28.4			HA	212	3	2	3
9240		SVTO	11	24	0829	N10	E53	11	28.3		B	CAO	170	3	7	2
9240		KAND	11	24	0835	N10	E56	11	28.6			CHO		4	7	3
9240		RAMY	11	24	1217	N06	E51	11	28.3		B	CSO	160	5	7	3
9240		HOLL	11	24	1530	N12	E51	11	28.5		B	CHI	220	4	7	3
9240	30174	MWIL	11	24	1700	N10	E50	11	28.5	5	(BP)					
9240		LEAR	11	25	0055	N09	E46	11	28.5		B	CKO	210	2	5	3
9240		TACH	11	25	0613	N10	E43	11	28.5			HHX	351	2	2	3
9240		KAND	11	25	0855	N11	E42	11	28.5			CHO		4	7	3
9240		RAMY	11	25	1217	N08	E40	11	28.5		B	DSO	190	7	7	3
9240		HOLL	11	25	1500	N12	E39	11	28.6		B	CHO	270	3	7	2
9240	30174	MWIL	11	25	1645	N10	E39	11	28.6	6	(BP)					
9240		VORO	11	26	0053	N10	E34	11	28.6			HKX	366	2		3
9240		LEAR	11	26	0200	N09	E33	11	28.6		B	CHO	220	9	10	2
9240		SVTO	11	26	0720	N10	E32	11	28.7		B	DAO	300	4	7	2
9240		TACH	11	26	0757	N10	E29	11	28.5			HHX	400	2	2	3
9240		RAMY	11	26	1310	N06	E30	11	28.8		B	CKO	400	22	14	3
9240		HOLL	11	26	1530	N08	E23	11	28.4		B	EAO	240	18	12	3
9240	30174	MWIL	11	26	1530	N10	E25	11	28.5	6	(BP)					
9240		VORO	11	26	2307	N09	E21	11	28.5			CKI	443	7	12	3
9240		LEAR	11	27	0122	N08	E22	11	28.7		B	CHO	230	5	7	3
9240		TACH	11	27	0535	N10	E17	11	28.5			CAI	468	9	11	3
9240		HOLL	11	27	1515	N09	E12	11	28.5		A	HAX	240	18	13	2
9240	30174	MWIL	11	27	1545	N10	E13	11	28.6	6	(BP)					
9240		RAMY	11	27	1845	N10	E10	11	28.5		B	EAO	170	29	16	3

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NOAA/ USAF Group	Mt Wilson Group	Sta	Observation Time Mo	Day	(UT)	Lat	CMD	CMP Mo	Day	Max H	Mag Class	Spot Class	Corrected Area (10-6 Hemi)	Spot Count	Long. Extent (Deg)	Qual
9240		VORO	11	27	2336	N10	E08	11	28.6			CSI	427	9	12	3
9240		LEAR	11	28	0025	N09	E11	11	28.8		B	DAO	260	19	12	3
9240		KAND	11	28	0755	N09	E06	11	28.8			DSI		13	9	3
9240		SVTO	11	28	0805	N07	E05	11	28.7		B	DAO	260	20	10	3
9240		RAMY	11	28	1238	N10	E03	11	28.7		B	DSC	310	28	9	4
9240	30174	MWIL	11	28	1530	N10	W01	11	28.6	6	(BG)					
9240		VORO	11	28	2325	N10	W03	11	28.7			DHI	672	8	7	2
9240		LEAR	11	29	0148	N08	W06	11	28.6		BG	DAO	260	13	7	3
9240		TACH	11	29	0517	N10	W10	11	28.5			CAI	390	14	10	3
9240		SVTO	11	29	0753	N09	W07	11	28.8		B	DAO	310	18	8	2
9240		RAMY	11	29	1230	N10	W12	11	28.6		B	DAI	330	23	9	4
9240	30187	MWIL	11	29	1530	N04	W21	11	28.1	4	(AP)					
9240	30174	MWIL	11	29	1530	N10	W15	11	28.5	6	(D)					
9240		HOLL	11	29	1545	N09	W14	11	28.6		B	CKO	280	39	10	3
9240		VORO	11	30	0020	N09	W19	11	28.6			DSI	428	12	4	3
9240		TACH	11	30	0544	N10	W19	11	28.8			CAI	448	16	7	3
9240		SVTO	11	30	1108	N09	W24	11	28.7		B	DSO	250	16	10	3
9240		RAMY	11	30	1530	N09	W27	11	28.6		B	DSO	190	10	6	2
9240	30174	MWIL	11	30	1545	N10	W27	11	28.6	5	BG					
9240		HOLL	11	30	1550	N09	W26	11	28.7		B	CSO	230	22	9	3
9240		VORO	11	30	2327	N09	W33	11	28.5			HHX	472	7		2
9240		LEAR	12	01	0035	N09	W32	11	28.7		B	CSO	110	5	6	2
9240		TACH	12	01	0558	N08	W32	11	28.9			CAI	310	11	7	3
9240		SVTO	12	01	0725	N10	W34	11	28.8		B	ESI	190	20	11	2
9240		HOLL	12	01	1530	N09	W39	11	28.8		B	DHO	110	10	9	3
9240		LEAR	12	02	0110	N10	W48	11	28.5		A	HSX	110	1	2	3
9240		KAND	12	02	0720	N09	W51	11	28.6			HS		1	3	2
9240		SVTO	12	02	0725	N10	W50	11	28.6		A	HSX	150	1	3	3
9240		RAMY	12	02	1210	N09	W55	11	28.5		A	HSX	140	1	2	3
9240	30174	MWIL	12	02	1545	N10	W56	11	28.5	5	(BP)					
9240		VORO	12	02	2337	N10	W59	11	28.6			HHX	352	1		3
9240		LEAR	12	03	0151	N10	W62	11	28.5		A	HSX	150	1	3	2
9240		RAMY	12	03	1215	N09	W69	11	28.4		A	HSX	140	1	2	3
9240	30174	MWIL	12	03	1545	N09	W69	11	28.6	5	(AP)					
9240		VORO	12	03	2324	N09	W73	11	28.6			HHX	463	1		2
9240		LEAR	12	04	0118	N10	W74	11	28.6		A	HSX	180	1	2	4
9240		RAMY	12	04	1550	N09	W81	11	28.7		A	HSX	90	1	2	1
9240	30174	MWIL	12	04	1730	N09	W84	11	28.5	4	(AP)					
9240		HOLL	12	04	1835	N07	W82	11	28.7		A	HSX	60	1	1	2
9240C	30183	MWIL	11	27	1545	N14	E26	11	29.6	4	(AF)					
9240C	30183	MWIL	11	28	1530	N14	E12	11	29.5	3	(AF)					
9240D	30182	MWIL	11	27	1545	S30	E24	11	29.5	3	(AF)					
9248		TACH	11	30	0544	N03	W07	11	29.7			AXX	2	1	1	3
9248		SVTO	11	30	1108	N04	W11	11	29.6		A	AXX		2	1	3
9248		RAMY	11	30	1530	N04	W12	11	29.7		A	AXX	10	3	2	2
9248	30191	MWIL	11	30	1545	N04	W13	11	29.7	3	AP					
9248		HOLL	11	30	1550	N04	W13	11	29.7		A	AXX	10	3	2	3
9248		LEAR	12	01	0035	N04	W19	11	29.7		A	AXX		1		2
9248		HOLL	12	01	1530	N04	W22	11	30.0		A	AXX	10	3	2	3
9248		RAMY	12	02	1210	N05	W36	11	29.9		B	BXO		3	3	3
9248		LEAR	12	03	0151	N06	W42	11	30.0		A	HSX		1	1	2
9248		RAMY	12	03	1215	N04	W49	11	29.9		B	DAO	40	5	4	3
9248	30195	MWIL	12	03	1545	N05	W51	11	29.9	4	(B)					
9248		LEAR	12	04	0118	N06	W55	11	30.0		A	HRX	10	1		4
9242		KAND	11	24	0835	N22	E80	11	30.5			AX		1		3
9242		RAMY	11	24	1217	N18	E76	11	30.3		B	CSO	40	2	2	3
9242		HOLL	11	24	1530	N23	E70	11	30.0		B	BXO	30	2	10	3
9242	30176	MWIL	11	24	1700	N21	E69	11	30.0	3	(B)					
9242		LEAR	11	25	0055	N22	E69	11	30.3		A	AXX		1		3
9242		RAMY	11	25	1217	N19	E63	11	30.3		B	CSO	30	2	2	3
9242		HOLL	11	25	1500	N24	E52	11	29.6		A	AXX	20	2	1	2
9242	30176	MWIL	11	25	1645	N21	E57	11	30.1	4	(B)					
9242		VORO	11	26	0053	N19	E49	11	29.8			CRO	65	4	5	3
9242		LEAR	11	26	0200	N19	E52	11	30.0		B	BXO	10	3	5	2
9242		SVTO	11	26	0720	N22	E48	11	30.0		B	ERO	50	5	11	2

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9242		RAMY	11	26	1310	N17	E43	11	29.8		B	BXO	30	4	5	3
9242	30179	MWIL	11	26	1530	N17	E43	11	29.9	3	AP					
9242		HOLL	11	26	1530	N20	E42	11	29.8		B	BXO	10	4	4	3
9242	30176	MWIL	11	26	1530	N21	E41	11	29.8	4	(AP)					
9242		LEAR	11	27	0122	N18	E36	11	29.8		B	CSO	20	5	3	3
9242		TACH	11	27	0535	N20	E35	11	29.9			BRO	24	5	4	3
9242		HOLL	11	27	1515	N20	E27	11	29.7		B	DAO	70	11	5	2
9242	30176	MWIL	11	27	1545	N20	E28	11	29.8	5	(BP)					
9242		RAMY	11	27	1845	N20	E25	11	29.7		B	CAO	60	6	4	3
9242		VORO	11	27	2336	N20	E25	11	29.9			CAI	173	4	4	3
9242		LEAR	11	28	0025	N19	E24	11	29.8		B	DAO	110	11	5	3
9242		KAND	11	28	0755	N20	E20	11	29.8			DSI		7	6	3
9242		SVTO	11	28	0805	N19	E17	11	29.6		B	DAO	130	8	7	3
9242		RAMY	11	28	1238	N20	E17	11	29.8		B	DAC	170	15	6	4
9242	30176	MWIL	11	28	1530	N20	E15	11	29.8	5	(BP)					
9242		VORO	11	28	2325	N21	E12	11	29.9			DAI	397	4	6	2
9242		LEAR	11	29	0148	N19	E10	11	29.8		B	DAO	110	10	7	3
9242		TACH	11	29	0517	N20	E08	11	29.8			CAI	175	7	6	3
9242		SVTO	11	29	0753	N20	E06	11	29.8		B	DAO	170	4	7	2
9242		RAMY	11	29	1230	N20	E03	11	29.7		B	DAO	160	8	8	4
9242	30176	MWIL	11	29	1530	N20	E02	11	29.8	5	(BP)					
9242		HOLL	11	29	1545	N20	E03	11	29.9		B	DAO	200	12	8	3
9242		VORO	11	30	0020	N21	W02	11	29.9			DSI	299	6	7	3
9242		TACH	11	30	0544	N20	W05	11	29.8			DAI	371	9	7	3
9242		SVTO	11	30	1108	N21	W08	11	29.8		B	DSO	180	10	8	3
9242		RAMY	11	30	1530	N20	W11	11	29.8		B	DSO	150	10	8	2
9242	30176	MWIL	11	30	1545	N21	W12	11	29.7	5	BP					
9242		HOLL	11	30	1550	N22	W12	11	29.7		B	DSO	240	13	10	3
9242		VORO	11	30	2327	N21	W15	11	29.8			DSI	335	4	8	2
9242		LEAR	12	01	0035	N22	W15	11	30.0		B	CSO	110	7	10	2
9242		TACH	12	01	0558	N20	W18	11	30.0			CAI	280	9	8	3
9242		SVTO	12	01	0725	N21	W18	11	30.0		B	EAI	220	11	12	2
9242		HOLL	12	01	1530	N20	W26	11	29.7		BG	DKI	170	13	10	3
9242		LEAR	12	02	0110	N22	W29	11	29.9		B	DSO	140	8	9	3
9242		KAND	12	02	0720	N21	W33	11	29.9			CSO		6	9	2
9242		SVTO	12	02	0725	N22	W32	11	29.9		B	DAI	230	11	10	3
9242		RAMY	12	02	1210	N20	W36	11	29.8		B	DSO	170	16	10	3
9242	30176	MWIL	12	02	1545	N21	W38	11	29.8	5	(BP)					
9242		VORO	12	02	2337	N21	W41	11	29.9			DAI	403	6	7	3
9242		LEAR	12	03	0151	N20	W42	11	30.0		B	DSO	180	12	10	2
9242		RAMY	12	03	1215	N20	W49	11	29.9		B	DSO	180	9	9	3
9242	30176	MWIL	12	03	1545	N20	W50	11	29.9	5	(BP)					
9242		VORO	12	03	2324	N20	W53	11	30.0			DAI	383	6	8	2
9242		LEAR	12	04	0118	N20	W56	11	29.9		B	DSO	200	9	10	4
9242		RAMY	12	04	1550	N20	W65	11	29.8		B	CAO	130	5	10	1
9242	30176	MWIL	12	04	1730	N20	W64	11	29.9	5	(BP)					
9242		HOLL	12	04	1835	N18	W66	11	29.8		B	CAO	240	4	4	2
9242		VORO	12	05	0004	N20	W71	11	29.7			HAX	273	1		2
9242		LEAR	12	05	0030	N21	W67	11	30.0		B	CAO	130	2	2	3
9242		KAND	12	05	0940	N19	W77	11	29.6			CSO		3	10	2
9242		RAMY	12	05	1230	N19	W75	11	29.9		B	CSO	120	2	8	3
9242		HOLL	12	05	1542	N18	W78	11	29.8		A	HAX	120	1	2	3
9242	30176	MWIL	12	05	1545	N20	W78	11	29.8	4	(AP)					
9242		LEAR	12	06	0024	N20	W82	11	29.8		A	HSX	60	1	1	4
9243		KAND	11	25	0855	S09	E62	11	30.0			AX		2	1	3
9243	30178	MWIL	11	25	1645	S12	E58	11	30.1	3	(AP)					
9243	30178	MWIL	11	26	1530	S11	E45	11	30.0	3	(AP)					
9243		TACH	11	27	0535	S10	E41	11	30.3			AXX	14	3	1	3
9243		HOLL	11	27	1515	S12	E34	11	30.2		B	BXO	20	6	3	2
9243	30178	MWIL	11	27	1545	S12	E33	11	30.1	4	(B)					
9243		RAMY	11	27	1845	S12	E31	11	30.1		B	DSO	20	8	3	3
9243		VORO	11	27	2336	S12	E28	11	30.1			HRX	37	1	2	3
9243		LEAR	11	28	0025	S12	E28	11	30.1		B	DRO	60	7	5	3
9243		KAND	11	28	0755	S12	E22	11	30.0			CSO		5	5	3
9243		SVTO	11	28	0805	S12	E24	11	30.1		B	DAO	40	7	6	3
9243		RAMY	11	28	1238	S11	E21	11	30.1		B	DAO	40	9	6	4
9243	30178	MWIL	11	28	1530	S11	E19	11	30.1	5	(B)					
9243		VORO	11	28	2325	S11	E14	11	30.0			CRO	70	3	5	2

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9243		LEAR	11	29	0148	S12	E12	11	30.0		B	DSO	30	4	6	3
9243		TACH	11	29	0517	S10	E11	11	30.0			CAO	70	3	5	3
9243		SVTO	11	29	0753	S11	E10	11	30.1		B	DAO	50	4	6	2
9243		RAMY	11	29	1230	S10	E07	11	30.0		B	DAO	50	5	6	4
9243	30178	MWIL	11	29	1530	S11	E06	11	30.1	5	(BP)					
9243		HOLL	11	29	1545	S10	E05	11	30.0		B	CAO	50	14	7	3
9243		VORO	11	30	0020	S10	E00	11	30.0			CRI	56	5	6	3
9243		TACH	11	30	0544	S09	W02	11	30.1			BRI	78	10	6	3
9243		SVTO	11	30	1108	S10	W06	11	30.0		B	DAO	70	13	9	3
9243		RAMY	11	30	1530	S11	W08	11	30.0		B	DSO	40	17	8	2
9243	30178	MWIL	11	30	1545	S10	W09	11	30.0	5	BP					
9243		HOLL	11	30	1550	S11	W07	11	30.1		B	CAO	60	18	8	3
9243		VORO	11	30	2327	S11	W13	11	30.0			CRI	124	5	6	2
9243		LEAR	12	01	0035	S10	W15	11	30.0		B	DSO	30	5	7	2
9243		TACH	12	01	0558	S08	W19	11	29.9			AR	41	3	1	3
9243		SVTO	12	01	0725	S08	W20	11	29.9		B	DSO	50	4	2	2
9243		HOLL	12	01	1530	S11	W22	11	30.0		B	CSO	20	10	8	3
9243		LEAR	12	02	0110	S10	W27	11	30.0		B	DAO	20	5	8	3
9243		KAND	12	02	0720	S11	W31	11	30.0			BXO		6	8	2
9243		SVTO	12	02	0725	S11	W32	11	30.0		B	DSO	60	8	9	3
9243		RAMY	12	02	1210	S11	W34	11	30.0		B	CSO	20	10	7	3
9243	30178	MWIL	12	02	1545	S10	W36	11	30.0	4	(B)					
9243		VORO	12	02	2337	S08	W43	11	29.9			AXX	15	1		3
9243		LEAR	12	03	0151	S11	W41	11	30.0		B	DSO	20	5	8	2
9243		RAMY	12	03	1215	S10	W47	11	30.0		B	DSO	40	6	8	3
9243	30178	MWIL	12	03	1545	S10	W50	11	30.0	4	(B)					
9243		LEAR	12	04	0118	S08	W58	11	29.8		A	HRX	10	1		4
9243	30178	MWIL	12	04	1730	S08	W68	11	29.7	3	(AP)					
9243D	30188	MWIL	11	29	1530	N05	E16	11	30.8	4	(AP)					

Stations reporting:

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

SUDDEN IONOSPHERIC DISTURBANCES
NOVEMBER 2000

Day	Start (UT)	Max (UT)	End (UT)	Imp	Wide Spread Index	Number of Station Reports by Type SWF	SEA	SPA	LF-SPA	SES	Flare (UT)	X-ray Class	NOAA Region
01	1300	1309	1338	1-	5		1			2	1302	C3.2	
01	1542	1545	1604	1	3					2	1551	C2.2	
01	1552	1554	1615	1	1					1	1551	C2.2	
01	1836	1843	1907	1+	3					4	1831	C3.8	9218
02	0912	0926	0954	1	1		1				No flare		
02	1833	1843	1922	2	3					2	1826	C2.5	9212
03	1848	1900	1924	2	1					1	1835	C3.2	9213
03	2057	2100	2126	1+	3					2	2058	C5.3	9209
04	0721	0725	0731	2-	3					2	0719	C3.9	
04	0738	0741	0918	2+	1					1	0736	C5.0	9212
04	1024	1032	1117	2	3					2	1026	C3.4	
04	1057	1104	1122	1	1		1				*		
04	1204	1215	1253	1	1		1				*		
05	1547	1600	1630	2	1					1	1539	C2.9	
07	1049	1055	1113	1-	3		1			3	1048	C4.2	
07	1159	1203	1215	3	5	1	2	1		3	1155	M1.6	9213
07	1629	1632	1656	1+	3					2	1624	C2.2	
08	0607D	0612	0622	1-	1					1	No flare		
08	0745	0750	0813	2-	3					2	0749	C4.0	
08	0952	0956	1004	3	5	1	2	1		4	0948	M1.5	
08	1105	1108	1115	1-	1					1	No flare		
08	1137	1144	1211	1+	3		1			3	1136	C5.7	
08	1620	1625	1710	2-	3					3	1622	M2.9	
08	1808	1811	1839	1+	3					2	1810	C6.8	
08	1947	1949	2045	2+	1					1	1945	C6.1	
09	0601	0608	0707	2	3					2	0601	M1.2	
09	1132	1139	1213	1	3		1			1	*		
09	1410	1428	1450	2	1		1				No flare		
09	1552	1604	1620	1+	5					3	1545	M1.0	9221
09	2116	2120	2156	2	1					1	2113	C6.4	9215
10	1208	1228U	1316	1	1		1				1218	C2.4	
11	0739	0743	0802	1	1					1	0736	C2.9	
11	1507	1513	1537	1+	1					1	No flare		
12	1416	1459U	1524	1	1		1				1405	C4.4	9227
13	1521	1547	1617	3	1		1				No flare		
14	0535	0540	0558	1	1					1	0534	C2.0	
14	0753	0806	0843	2	3		1			3	0752	C7.1	9231
14	1452	1454	1500	1-	1					1	1448	C1.4	9231
14	1503	1509	1522	1	1					1	1500	C2.0	9231
14	1627	1634	1740	2	3					4	1619	M1.0	
15	1815	1817	1845	1+	3					2	1815	C1.7	9231
16	0710	0722	0741	1	1		1				No flare		
16	0752	0805	0814U	1	1		1				No flare		
16	0820	0833	0848	2	1		1				No flare		
16	2133	2145	2245	2+	1					1	2130	C3.5	9235
17	0512	0517	0532	2	1					1	No flare		
17	0858	0917U	1003	2	1		1				No flare		
17	1055	1105	1140	2	1					1	1054	C2.3	9231
17	1545	1548	1715	3	1					1	No flare		
18	1056	1100	1122	3-	5	1	1	1		3	1051	M1.5	9231
18	1311	1311U	1311D	2+	5		1	1		6	1302	M1.5	9235
18	1650	1655	1750	2	3					4	1645	C5.9	
19	0934	0943	1026	2-	1					1	0933	C1.7	
19	1408	1413	1446	1+	5					3	1403	C2.4	

* = no flare patrol.

Day	Start (UT)	Max (UT)	End (UT)	Imp	Wide Spread Index	Number of Station Reports by Type SWF	SEA	SPA	LF-SPA	SES	Flare (UT)	X-ray Class	NOAA Region
20	0810	0832	0856	1	1		1				0812	C1.6	
20	1255	1320	1335	2	1					1	1255	C2.1	9231
21	1420	1445	1450	1+	1					1	1422	C2.4	9237
21	1906	1909	2030	2+	1					1	No flare		
21	1917	1923	2028	2+	3					3	1913	M1.6	9237
22	0759	0813	0818	1+	3		1			1	0803	C2.7	9236
22	0828	0845	0920	2	1		1				0828	C2.4	9240
22	1005	1038	1118	1	1		1				No flare		
22	1616	1621	1634	1-	3					4	1616	C7.0	9236
22	1633	1635	1707	1+	3					2	1630	C2.6	9236
23	0406	0408	0430	1	1					1	0407	C2.9	9231
23	0535	0542	0630	2+	1					1	0534	C5.4	9238
23	0920	0925	0930	1-	1					1	0921	C2.4	9231
23	1422	1429	1454	1	5		1			3	1419	C7.5	9231
24	0458	0500	0539	2	1					1	0455	X2.0	9236
24	0725	0740	0815	2+	1					1	0736	C4.2	9236
24	0904	0912	0935	1	1		1				No flare		
24	1154	1215	1258	1	1		1				No flare		
24	1306	1411U	1426	1	1		1				1315	C2.6	9236
24	1450	1505	1604	2	5		1			5	1451	X2.3	9236
24	1504	1515	1606	2+	5		1			2	1451	X2.3	9236
24	1537	1545	1607	1+	1					1	1544		9231
24	1630	1645	1715	2	1					1	1639		9231
24	2156	2159	2252	2	1					1	2143	X1.8	9236
25	0558	0605	0645	2+	1					1	No flare		
25	0908	0932	1018	3	5	1	2	1		4	0906	M3.5	9236
25	1419	1422	1433	1-	1					1	1416	C2.1	
25	1533	1536	1545	1-	3					4	1529	C3.3	9236
25	1551	1553	1610	1	3					3	1547	C1.9	9236
25	1714	1721	1802	2	3					4	1712	C3.2	9236
25	1835	1839	1943	2+	3					4	1833	X1.9	9236
25	1940	1946	2006	1	1					1	No flare		
26	0944	0949U	1025	1	1		1				0951		9236
26	1510	1513	1527	1-	3					3	1508	C2.2	9236
26	1537	1539	1600	1	1					1	1537		9236
26	1637	1645	1806	2+	5					5	1634	X4.0	9236
27	2045	2048	2137	2+	1					1	2041	C4.4	9242
28	1200	1221U	1359	1	1		1				No flare		
29	0622	0626	0705	2-	1					1	0619	C9.1	9246
29	0858	0905	0934	1	1		1				0843	C2.2	9246
29	1045	1102	1142	1	1		1				No flare		
29	1143	1145	1204	1	1		1				No flare		
29	1207	1222	1313	1+	3		1			1	1205	C6.4	9246
29	1443	1455	1534	2	1		1				1459	C1.7	9246
29	1909	1910	1930	1	1					1	1907	C2.3	9246
30	0858	0910	1005	2-	3		1			2	0900	M1.0	
30	0903	0928	1013	2+	1					1	0900	M1.0	
30	1306	1315	1354	1	1		1				*		
30	1331	1335	1344	1-	1					1	1326	C2.4	
30	1405	1412	1424	1-	5		1			2	1402	C3.7	

OBSERVATORIES REPORTING FOR NOVEMBER 2000

Cambridge, England, UK	SES	New Milford, New York, USA	SES
Edenvale, Rep of S. Africa	SES	Panska Ves, Czech Republic	SES, SEA, SWF
Houston, Texas, USA	SES	Parma, Ohio, USA	SES
Hudson, Ohio, USA	SES	Sofia, Bulgaria	SES
Isola del Gran Sasso, Italy	SES	Upice, Czech Republic	SEA
Koniz, Switzerland	SES		

Observations are not necessarily continuous.

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

NOVEMBER 2000

Day	OBSERVATION Start (UT)	End (UT)	Sta	EVENT Start (UT)	End (UT)	Spectral Class	Event Remarks	Int (1-3)	FREQUENCY Lower (MHz)	Upper (MHz)	Remarks
01	0000	0742	HIRA								
	0050	0800	CULG								
	0720	1510	BLEN								
	0700	1200	IZMI	0724.6	0724.8	III	G	2	110	190	
			IZMI	0905.4	0906.5	III	GG,C	2	40	180	
			IZMI	0911.2	0912.5	III	B	2	45	160	
			IZMI	0937.0	0937.3	III	B	1	45	90	
	0709	1420	ONDR	1012.2	1016.0	DCIM	G	1	800X	1742	
			IZMI	1108.2	1108.7	III	GG	2	65	250	
			SVTO	1139.0	1139.0	III		2	75	159	
			IZMI	1139.4	1139.8	III	G,C	2	40	270X	
			SGMR	1724.0	1900.0	CONT		1	30	80	
	2000	2400	CULG	2000.0E	2100.0	III	N	1	20	120	
	2101	2338	HIRA								
			CULG	2314.0	2316.0	III	G	1	30	90	
02	0000	0800	CULG								
	0334	0741	HIRA								
	0711	1417	ONDR								
	0720	1510	BLEN								
	0700	1200	IZMI	0753.0	0753.1	III	B	1	40	95	
			IZMI	0835.1	0835.3	III	G	1	45	70	
			IZMI	0956.7	0956.9	III	B	1	40	65	
			SVTO	1038.0	1039.0	III		1	49U	75U	
	2000	2400	CULG	2221.0	2221.0	III	B	1	30	70	
			CULG	2243.0	2244.0	III	G	1	130	180U	
			LEAR	2243.0	2243.0	III		1	80	180	
	2102	2400	HIRA	2243.0	2244.0	III	B	2	120	220	
03			LEAR	0030.0	0032.0	III		1	35	180	
	0000	0800	CULG	0031.0	0033.0	III	G	1	35	260	
	0000	0740	HIRA	0031.5	0032.0	III	B	2	80	210	
			CULG	0135.0	0135.0	III	B	1	50	180	
			HIRA	0135.0	0135.5	III	B	2	50	160	
			LEAR	0135.0	0135.0	III		1	54	167	
			CULG	0259.0	0301.0	III	G	3	20	180	
			LEAR	0259.0	0307.0	III		2	25	180	
			CULG	0330.0	0333.0	III	G	3	18X	170	
			LEAR	0330.0	0332.0	III		2	25	180	
			HIRA	0330.5	0332.5	III	G	3	25X	160	
			CULG	0353.0	0353.0	III	B	2	23	100	
			LEAR	0353.0	0356.0	III		1	25	135	
	0713	1415	ONDR								
	0720	1500	BLEN	0720.0X	1500.0X	I		1	220X	340	
			BLEN	0946.1	0950.0	III		2	220X	410	
	0650	1200	IZMI	1043.3	1043.8	III	G	2	30	95	
			IZMI	1100.4	1100.7	III	G,HARM	2	45	170	
			SVTO	1237.0	1240.0	III		2	25	180	
			SVTO	1305.0	1306.0	III		1	30U	148U	
			SVTO	1323.0	1327.0	III		2	30U	180U	
			HOLL	1359.0	1359.0	III		1	25	180	
			SVTO	1359.0	1359.0	III		2	34U	180U	
			SVTO	1404.0	1521.0	CONT		1	35U	154U	
			HOLL	1522.0	1522.0	III		1	25	150	
			HOLL	1547.0	1550.0	III		1	25	180	
			HOLL	1744.0	1745.0	III		1	25	180	
			HOLL	1748.0	1749.0	III		1	25	172	
			HOLL	1824.0	1826.0	III		1	25	135	
			HOLL	1840.0	1841.0	III		1	25	87	
			HOLL	1854.0	1858.0	III		1	25	180	
	2000	2400	CULG	2000.0E	2253.0	I	S,C	1	40	150	
			CULG	2004.0	2031.0	III	N	1	25	100	
	2103	2400	HIRA								
			CULG	2125.0	2125.0	III	B	2	23	160	
			HOLL	2125.0	2125.0	III		1	25	130	
			LEAR	2155.0	0305.0	CONT		1	25	180	
04	0000	0739	HIRA	0008.0	0009.0	III	G	2	50	120	
	0000	0800	CULG	0008.0	0009.0	III	G	2	23	130	

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

NOVEMBER 2000

OBSERVATION Day	Start (UT)	End (UT)	Sta	EVENT Start (UT)	End (UT)	Spectral Class	Event Remarks	Int (1-3)	FREQUENCY Lower (MHz)	Upper (MHz)	Remarks
04			CULG	0013.0	0013.0	III	B	2	18	110	
			CULG	0455.0	0456.0	III	G	1	20	160	
			LEAR	0455.0	0455.0	III		1	25	148	
			LEAR	0526.0	0528.0	III		1	32	133	
			CULG	0527.0	0528.0	III	G	1	28	130	
			LEAR	0559.0	0600.0	III		1	25	139	
			CULG	0600.0	0600.0	III	B	2	20	130	
			CULG	0635.0	0635.0	III	B	1	28	70	
	0659	1200	IZMI	0659.1	0704.0	III	N,FS	1	45	90	
	0715	1413	ONDR								
			LEAR	0721.0	0850.0	III	N	1	25	180	
			IZMI	0721.2	0721.8	III	G,FS	2	40	160	
			CULG	0722.0	0722.0	III	B	1	23	140	
			CULG	0730.0	0732.0	III	G	1	23	150	
			IZMI	0730.3	0732.6	III	GG	2	35	140	
	0725	1500	BLEN	0737.5	0738.9	III	GG	3	400	550X	
			BLEN	0738.5	0802.0	I	DC,C	2	220X	440	
			IZMI	0753.7	0756.1	III	GG	1	40	60	
			IZMI	0803.6	0804.7	III	G	2	30	270X	
			LEAR	0804.0	0804.0	III		3	25	180	
			SVTO	0804.0	0804.0	III		2	25U	170U	
			IZMI	0804.1	0804.4	V		2	45	90	
			IZMI	0823.2	0823.6	III	G	2	50	160	
			IZMI	0850.1	0850.4	III	G	1	90	180	
			IZMI	0904.4	0904.6	III	B	1	45	95	
			IZMI	0911.5	0911.6	III	B	1	45	95	
			BLEN	0920.0	1500.0X	I	DC,C	1	220X	440	
			IZMI	0959.4	1000.7	III	G,FS	2	45	90	
			SVTO	1018.0	1029.0	CONT		2	50	159	
			IZMI	1018.1	1019.0	III	GG	2	35	260	
			BLEN	1020.3	1021.5	III	GG	3	220X	400	
			IZMI	1020.3	1021.9	III	GG,FS	2	45	270X	
			IZMI	1024.5	1029.8	III	GG	2	30	270X	
			IZMI	1030.0U	1111.0U	I	N	1	80	270X	
			IZMI	1038.7	1039.4	III	G	2	70	170	
			IZMI	1126.6	1126.8	III	G	1	110	180	
	2000	2400	CULG	2004.0	2005.0	III	G	1	25	95	
			CULG	2039.0	2043.0	III	GG	2	20	150	
			CULG	2049.0	2052.0	III	G	1	23	180	
			CULG	2105.0	2106.0	III	G	1	60	100	
			CULG	2202.0	2203.0	III	G	2	18X	160	
			HOLL	2202.0	2203.0	III		1	25	87	
			LEAR	2202.0	2202.0	III		1	25	118	
	2104	2400	HIRA	2202.5	2203.0	III	B	2	50	100	
			CULG	2215.0	2216.0	III	G	1	40	90	
			CULG	2234.0	2236.0	III	G	1	40	150	
			CULG	2325.0	2325.0	III	G	1	60	150	
			LEAR	2334.0	2341.0	III		1	25	87	
			CULG	2335.0	2335.0	III	B	1	18	150	
			CULG	2342.0	2342.0	III	B	1	28	130	
			LEAR	2355.0	2357.0	III		2	25	180	
			CULG	2356.0	2357.0	III	G	3	18X	180	
			HIRA	2356.0	2357.0	III	B	3	30	190	
05	0000	0800	CULG	0044.0	0047.0	UNCLF		1	500	700	
			LEAR	0055.0	0055.0	III		2	25	149	
			CULG	0056.0	0056.0	III	B	1	23	160	
	0000	0738	HIRA	0120.0	0120.5	III	B	2	30	130	
			LEAR	0122.0	0122.0	III		2	25	146	
			CULG	0127.0	0132.0	UNCLF		1	270	420	
			CULG	0131.0	0134.0	III	G	2	20	300	
			LEAR	0131.0	0133.0	III		2	25	178	
			HIRA	0133.0	0133.5	III	B	2	50	300	
			CULG	0139.0	0141.0	III	G	1	110	420	
			LEAR	0230.0	0231.0	III		1	32	175	
			CULG	0231.0	0232.0	III	G	1	30	240	
			CULG	0251.0	0251.0	III	B	1	30	150	
			LEAR	0251.0	0257.0	III		1	30	138	
			CULG	0257.0	0257.0	III	B	1	30	90	

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

NOVEMBER 2000

OBSERVATION Day	Start (UT)	End (UT)	Sta	EVENT Start (UT)	End (UT)	Spectral Class	Event Remarks	Int (1-3)	FREQUENCY Lower (MHz)	Upper (MHz)	Remarks
05			CULG	0329.0	0330.0	III	G	1	23	180	
			LEAR	0329.0	0330.0	III		1	26	180	
			CULG	0357.0	0357.0	III	G	1	30	60	
			LEAR	0357.0	0357.0	III		1	38	58	
			CULG	0409.0	0412.0	III	G	1	30	90	
			LEAR	0642.0	0742.0	III	N	1	39	136	
			CULG	0700.0	0701.0	III	G	1	23	80	
	0657	1200	IZMI	0700.0	0701.2	III	G	1	45	95	
			IZMI	0708.0	0709.4	III	G,FS	1	45	240	
			CULG	0709.0	0709.0	III	B	1	30	50	
			IZMI	0711.1	0711.5	III	G	1	75	95	
	0717	1411	ONDR								
			IZMI	0724.0	1200.0D	I	N	1	120	270	
	0725	1500	BLEN	0725.0X	1500.0X	I		2	220X	350	
			CULG	0735.0	0738.0	III	G	1	40	90	
			IZMI	0736.0	0738.3	III	N	1	45	100	
			IZMI	0811.5	0812.8	I	GG,DS	2	190	230	
			IZMI	0814.1	0817.2	I	GG,DS	2	145	230	
			IZMI	1014.3	1014.3	III	B	2	190	220	
			IZMI	1152.8	1153.7	I	GG,DS	2	120	160	
	2000	2400	CULG	2027.0	2028.0	III	G	1	30	90	
			LEAR	2231.0	2232.0	III		1	25	140	
			CULG	2232.0	2233.0	III	G	2	23	160	
	2105	2400	HIRA	2232.0	2232.5	III	B	1	40	150	
			LEAR	2317.0	2323.0	III		1	25	63	
			CULG	2324.0	2324.0	III	B	1	20	60	
06			LEAR	0152.0	0155.0	III		2	25	180	
	0000	0800	CULG	0152.0	0156.0	III	G	2	18	180	
			PALE	0153.0	0154.0	III		1	25	180	
	0000	0738	HIRA	0154.0	0154.5	III	B	2	50	130	
			HIRA	0318.0	0318.5	III	B	2	120	400	
			LEAR	0732.0	0733.0	III		1	40	180	
			SVTO	0732.0	0733.0	III		1	61	180	
	0650	1200	IZMI	0732.8	0733.1	III	GG,FS	3	45	270X	
	0725	1500	BLEN	0732.8	0735.3	III	GG	3	220X	500	
			CULG	0733.0	0733.0	III	B	2	40	180	
			IZMI	0734.9	0735.3	III	G	2	255	270X	
			BLEN	0826.8	0827.9	III	GG,U	3	290	400	
			IZMI	0932.7	0936.2	III	GG,C	2	30	270X	
			LEAR	0933.0	0936.0	III		1	25	180	
			ONDR	0934.0	0935.3	DCIM	G	1	800X	2000X	
			SVTO	0934.0	0935.0	III		1	25U	180U	
	0719	1409	ONDR	0934.1	0935.4	CONT		1	2000X	4500X	
			BLEN	0934.3	0935.9	DCIM	P,S	3	220X	550X	
			IZMI	1123.4	1123.7	III	G	1	45	95	
			SVTO	1234.0	1237.0	III		1	55	180	
			BLEN	1234.6	1235.5	III	GG,U,V	3	220X	390	
			HOLL	1633.0	1634.0	III		1	25U	63U	
			HOLL	2217.0	2219.0	III		1	25	166	
			LEAR	2217.0	2222.0	III		1	25	180	
			PALE	2217.0	2237.0	III	N	1	25U	65U	
	2000	2400	CULG	2218.0	2219.0	III	G	2	18X	180	
	2105	2400	HIRA	2218.0	2218.5	III	B	2	50	120	
			CULG	2221.0	2223.0	III	G	1	40	150	
			LEAR	2235.0	2237.0	V		1	25	175	
			CULG	2236.0	2238.0	III	G	2	18X	180	
			HIRA	2236.0	2237.0	III	B	2	40	170	
			HOLL	2236.0	2237.0	III		1	25	169	
			CULG	2339.0	2339.0	III	B	1	30	130	
			LEAR	2339.0	2339.0	III		1	26	150	
			CULG	2343.0	2344.0	III	G	2	20	130	
			HIRA	2343.0	2343.5	III	B	2	40	110	
			CULG	2350.0	2350.0	III	B	1	20	140	
07	0000	0800	CULG	0007.0	0010.0	III	G	2	18	180	
	0000	0322	HIRA	0008.5	0010.0	III	G	2	50	180	
			CULG	0016.0	0017.0	III	G	1	40	130	
			CULG	0048.0	0051.0	III	G	2	18X	180	

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NOVEMBER 2000

Day	OBSERVATION Start (UT)	End (UT)	Sta	EVENT Start (UT)	End (UT)	Spectral Class	Event Remarks	Int (1-3)	FREQUENCY Lower (MHz)	Upper (MHz)	Remarks
07			HIRA	0048.0	0048.5	III	B	2	50	120	
			PALE	0048.0	0050.0	III		1	25	155	
			HIRA	0050.5	0051.0	III	B	3	30	210	
	0400	0737	HIRA								
			SVTO	0548.0	1408.0	CONT		1	25	180	
			CULG	0628.0	0628.0	III	B	2	18	180	
			LEAR	0628.0	0629.0	III		1	25	150	
			CULG	0633.0	0633.0	III	B	1	25	40	
	0650	1207	IZMI	0720.7	0720.9	III	B	1	45	95	
			CULG	0721.0	0721.0	III	B	1	20	80	
	0740	1500	BLEN								
			IZMI	1034.5	1034.6	III	B	1	40	70	
			ONDR	1158.3	1208.0	CONT		1	988	2000X	
	0721	1407	ONDR	1158.3	1206.0	CONT		2	2000X	4500X	
	2000	2400	CULG	2013.0	2013.0	III	B	1	20	75	
			CULG	2032.0	2033.0	III	G	1	20	120	
	2106	2400	HIRA								
			CULG	2222.0	2224.0	III	G	1	18	90	
			LEAR	2342.0	2349.0	III		1	25	135	
08	0000	0800	CULG	0110.0	0110.0	III	B	1	28	80	
	0000	0223	HIRA	0133.0	0133.5	III	B	1	50	500	
	0305	0735	HIRA								
			CULG	0311.0	0311.0	III	B	1	28	60	
			SVTO	0553.0	0743.0	III	N	1	25	180	
			LEAR	0559.0	0600.0	III		1	25	127	
			CULG	0600.0	0601.0	III	G	2	18	100	
	0740	1500	BLEN	0740.0X	1145.0	I	N	1	220X	330	
			BLEN	0950.6	0953.5	III	GG	2	220X	550X	
	0659	1200	IZMI	0951.0	0951.8	III	B	2	45	215	
	0723	1405	ONDR	0951.2	0953.5	CONT		1	2000X	4500X	
			ONDR	0951.4	0953.4	CONT	W	1	800X	2000X	
			SVTO	1045.0	1053.0	III		1	53U	162U	
			BLEN	1045.8	1053.6	III	GG	3	220X	500	
			IZMI	1045.8	1046.3	III	G	2	110	270X	
			IZMI	1053.0	1053.2	III	G	2	85	270X	
	2000	2400	CULG	2246.0	2351.0	III	S,C	1	18X	180	
	2108	2400	HIRA	2249.0	2324.0	III	G	2	25X	400	
			LEAR	2250.0	2250.0	III		1	66	170	
			LEAR	2251.0	2330.0	IV		1	25	180	
			CULG	2252.0	2308.0	III	GG	2	18	140	
			HIRA	2306.0	2345.0	IV		1	500	2000	
			HOLL	2306.0	2307.0	III		1	51	142	
			CULG	2316.0	2322.0	UNCLF		2	100	200	
			HOLL	2316.0	2318.0	III		1	109U	180U	
			LEAR	2330.0	0002.0	III	N	1	25	106	
09	0000	0104	HIRA								
	0306	0735	HIRA								
	0000	0800	CULG	0317.0	0317.0	III	B	1	30	120	
			CULG	0557.0	0558.0	III	G	1	40	90	
			LEAR	0557.0	0557.0	III		1	25	144	
	0726	1403	ONDR								
	0740	1500	BLEN	1018.9	1019.2	III	GG	2	220X	480	
	0650	1200	IZMI	1019.0	1019.1	III	G	2	130	270X	
			BLEN	1229.8	1230.0	III	GG,S	2	220X	550X	
			SVTO	1230.0	1230.0	III		1	35	180	
			BLEN	1300.7	1301.2	III	GG	1	320	550X	
			BLEN	1302.0	1420.0	I	DC	2	220X	400	
			HOLL	1538.0	1600.0	III	N	2	25	180	
	2000	2400	CULG	2016.0	2123.0	III	N	1	20	180	
			HOLL	2116.0	2130.0	III	N	1	25	172	
			CULG	2123.0	2132.0	II	FN	1	18X	55	ESS 1000
			CULG	2125.0	2134.0	II	SH	1	25	90	
			CULG	2129.0	2131.0	III	G	2	18X	70	
			LEAR	2247.0	2250.0	III		1	25	180	
			CULG	2248.0	2250.0	III	G	1	18	180	
			HOLL	2248.0	2249.0	III		1	75	171	
	2109	2400	HIRA	2248.0	2249.0	III	B	1	50	260	

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OBSERVATION Day	Start (UT)	End (UT)	Sta	EVENT Start (UT)	End (UT)	Spectral Class	Event Remarks	Int (1-3)	FREQUENCY Lower (MHz)	Upper (MHz)	Remarks
09			CULG	2256.0	2257.0	II	SH	1	320	450	
			CULG	2257.0	2258.0	II	FN	1	140	200	
10	0000	0734	HIRA								
	0000	0800	CULG								
	0728	1401	ONDR								
	0750	1450	BLEN	0812.0	1450.0X	I	DC	3	220X	400	
	0726	1200	IZMI	0818.6	0818.8	III	B	1	45	95	
	2000	2400	CULG	2029.0	2029.0	III	B	1	100	180	
			HOLL	2235.0	2237.0	III		1	33	167	
			CULG	2236.0	2238.0	III	G	2	28	180	
			LEAR	2236.0	2238.0	III		2	25	180	
	2110	2400	HIRA	2236.0	2238.0	III	B	3	30	240	
			CULG	2242.0	2242.0	III	B	1	100	180	
11	0000	0733	HIRA								
	0000	0800	CULG								
	0730	1359	ONDR								
	0755	1450	BLEN	0800.0	1225.0	I	DC	2	220X	380	
	0650	1200	IZMI	0808.6	0809.0	III	G	2	45	95	
			IZMI	0829.7	0832.4	III	G	1	50	240	
	2000	2400	CULG								
	2111	2400	HIRA								
12	0000	0732	HIRA								
			LEAR	0402.0	0403.0	III		1	31	116	
	0000	0800	CULG	0402.0	0403.0	III	G	1	25	90	
			CULG	0622.0	0623.0	III	G	2	18	160	
			CULG	0622.0	0627.0	V		2	18	35	
			LEAR	0622.0	0622.0	III		1	25	107	
			SVTO	0622.0	0622.0	III		1	75	163	
	0732	1357	ONDR								
	0712	1200	IZMI	0812.0	0812.3	III	G,C	2	45	95	
			IZMI	0819.5	0819.9	III	B	1	45	95	
			LEAR	0848.0	0849.0	III		2	25	180	
			SVTO	0848.0	0849.0	III		2	25	180	
			IZMI	0848.6	0850.1	III	GG,C	2	25	270X	
	0755	1450	BLEN	0848.7	0859.1	III	GG,S	3	220X	420	
			IZMI	0851.9	0852.3	III	G	2	40	170	
			IZMI	0853.0	0853.3	III	G	2	145	270X	
			IZMI	0903.6	0910.6	III	N	1	45	95	
			SVTO	0915.0	0916.0	III		1	48	140	
			IZMI	0945.4	0946.3	III	GG,FS	2	50	245	
			IZMI	0952.2	0952.6	III	G	1	40	270	
			IZMI	0953.3	0953.7	III	B	1	45	95	
			BLEN	1016.8	1017.2	III	GG,S	3	220X	430	
			IZMI	1016.9	1017.1	III	G	2	180	270X	
			IZMI	1121.9	1122.1	III	B	2	35	90	
			BLEN	1238.9	1240.2	DCIM	S	2	250	380	
			BLEN	1406.0	1450.0X	I	DC,C	3	220X	550X	
	2000	2400	CULG	2010.0	2010.0	III	B	1	20	70	
	2112	2400	HIRA								
			CULG	2139.0	2139.0	III	B	1	25	80	
			CULG	2204.0	2204.0	III	B	1	20	80	
			CULG	2317.0	2317.0	III	B	1	20	50	
13	0000	0731	HIRA								
			LEAR	0659.0	0700.0	III		1	30	164	
			SVTO	0659.0	0659.0	III		1	75	180	
	0000	0800	CULG	0659.0	0659.0	III	B	1	28	180	
	0658	1200	IZMI	0659.1	0659.8	III	G	2	40	200U	
	0734	1355	ONDR								
	0755	1450	BLEN	0755.0X	1450.0X	I	N	1	220X	300	
			IZMI	0951.2	0951.3	III	B	2	45	55	
			IZMI	1048.0	1048.3	III	B	1	45	95	
			BLEN	1346.7	1346.9	III	G	1	480	550X	
			PALE	1840.0	1844.0	III		1	25	55	
	2000	2400	CULG	2152.0	2154.0	III	G	2	23	180	
	2113	2400	HIRA	2153.5	2154.0	III	B	1	40	180	

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OBSERVATION Day	Start (UT)	End (UT)	Sta	EVENT Start (UT)	End (UT)	Spectral Class	Event Remarks	Int (1-3)	FREQUENCY Lower (MHz)	Upper (MHz)	Remarks
13			LEAR	2228.0	2228.0	III		1	25	180	
			PALE	2228.0	2228.0	III		1	45U	175U	
			CULG	2229.0	2229.0	III	B	1	35	180	
			HIRA	2233.5	2334.0	III	B	1	40	200	
			LEAR	2245.0	2252.0	III		1	25	140	
			CULG	2246.0	2246.0	III	B	1	35	180	
			HIRA	2246.0	2246.5	III	B	1	50	240	
			HIRA	2250.5	2251.0	III	B	1	30	210	
			CULG	2251.0	2251.0	III	B	1	30	140	
			CULG	2306.0	2306.0	III	B	1	30	70	
			CULG	2328.0	2331.0	III	G	1	25	250	
			HIRA	2328.0	2330.5	III	G	1	50	220	
			LEAR	2328.0	2330.0	III		1	28	180	
			CULG	2348.0	2349.0	III	G	1	35	100	
14			LEAR	0040.0	0043.0	III		1	30	157	
	0000	0800	CULG	0041.0	0043.0	III	G	1	30	180	
			LEAR	0103.0	0103.0	III		1	25	152	
			CULG	0109.0	0109.0	III	B	1	30	160	
			CULG	0249.0	0251.0	III	G	1	30	180	
			LEAR	0249.0	0251.0	III		1	25	180	
	0000	0730	HIRA	0249.0	0251.5	III	G	2	50	300	
			LEAR	0339.0	0340.0	III		1	25	180	
			CULG	0340.0	0341.0	III	G	1	25	180	
			HIRA	0340.0	0340.5	III	B	2	60	230	
			CULG	0416.0	0416.0	III	B	1	28	180	
			HIRA	0416.0	0416.5	III	B	2	60	120	
			LEAR	0416.0	0421.0	III		1	25	180	
			CULG	0420.0	0421.0	III	G	2	35	250	
			HIRA	0420.0	0420.5	III	B	3	50	300	
			LEAR	0434.0	0524.0	III	N	1	25	180	
			LEAR	0434.0	0525.0	III	N	1	25	180	
			CULG	0435.0	0436.0	III	G	2	30	230	
			HIRA	0435.0	0436.0	III	B	3	50	260	
			CULG	0443.0	0443.0	III	B	1	30	180	
			CULG	0457.0	0500.0	III	G	1	28	330	
			HIRA	0457.0	0459.5	III	G	2	50	410	
			CULG	0525.0	0525.0	III	B	1	40	180	
	0700	1200	IZMI	0700.0E	0800.0	I	N	1	190U	270	
			IZMI	0721.7	0725.4	III	GG,FS	2	45	95U	
			IZMI	0727.0	0728.0	III	GG,FS	2	45	95	
			LEAR	0754.0	0821.0	III	N	3	25	180	
			IZMI	0754.1	0802.7	III	GG,FS	2	30	270X	
	0736	1354	ONDR	0754.3	0758.1	CONT	SP	1	800X	1170	
	0755	1450	BLEN	0755 X	0950.0	I	DC,C	3	220X	550X	
			IZMI	0755.0U	0800.7	CONT		2	45	95U	
			SVTO	0755.0	0800.0	III		2	27U	151U	
			IZMI	0800.0U	0840.0U	I	S	2	190U	270X	
			IZMI	0803.2	0805.0	I	GG,DS	3	50	75	
			IZMI	0809.5	0812.2	II	HARM	2	45	95U	
			IZMI	0812.0U	1049.0U	IV		2	45	95U	
			IZMI	0820.6	0821.3	I	GG,DS	2	45	95U	
			LEAR	0831.0	1024.0	IV		1	25	180	
			SVTO	0831.0	1209.0	IV		1	63U	132U	
			IZMI	0840.0U	1200.0D	I	N	1	190U	270	
			IZMI	0842.0U	1005.0	III	N	1		95U	
			SVTO	0902.0	0905.0	II		1	28	41	ESS 1154
			IZMI	1026.5	1026.7	III	G	2	50	255	
			IZMI	1030.4	1031.0	III	GG	2	30	270X	
			BLEN	1030.5	1033.0	III	GG,S	3	220X	400	
			IZMI	1031.5	1032.6	III	GG	2	80	270X	
			IZMI	1042.2	1042.5	III	G	1	80	270	
			IZMI	1115.8	1117.8	III	GG	2	40	270X	
			BLEN	1122.2	1122.5	III	GG,S	2	220X	350	
			IZMI	1153.1	1155.1	III	GG	2	190U	270X	
			SGMR	1334.0	1335.0	III		1	30	45	
			HOLL	1912.0	1914.0	III		1	25	180	
			SGMR	1913.0	1914.0	III		1	30	80	
	2113	2400	HIRA								

SOLAR RADIO EMISSION
Spectral Observations

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Day	OBSERVATION Start (UT)	OBSERVATION End (UT)	Sta	EVENT Start (UT)	EVENT End (UT)	Spectral Class	Event Remarks	Int (1-3)	FREQUENCY Lower (MHz)	FREQUENCY Upper (MHz)	Remarks
14	2000	2400	CULG	2127.0	2128.0	III	G	1	60	100	
			LEAR	2150.0	0040.0	CONT		1	67	180	
			CULG	2157.0	2233.0	III	N	1	30	170	
15			LEAR	0226.0	0227.0	III		1	81	124	
			LEAR	0242.0	0246.0	III		3	25	180	
			PALE	0242.0	0245.0	III		2	25	180	
	0000	0729	HIRA	0242.5	0245.5	III	G	3	25X	600	
	0000	0800	CULG	0243.0	0246.0	III	GG	3	18X	800	
	0650	1200	IZMI	0650.0E	1200.0D	I	N	1	200	270	
	0739	1352	ONDR	0850.0	0852.0	DCIM	G	3	800X	1264	
	0755	1450	BLEN	0853.8	0856.4	III	GG	2	220X	380	
			IZMI	0855.0	0857.0	III	GG,C	2	30	270X	
			LEAR	0855.0	0857.0	V		3	25	180	
			IZMI	0857.0	0859.5	III	GG,FS	2	45	200	
			IZMI	0908.3	0908.8	III	G	1	45	90	
			ONDR	1013.2	1019.5	DCIM	G	1	800X	2000X	
			SGMR	1545.0	1545.0	III		1	30	50	
	2000	2400	CULG								
	2114	2400	HIRA								
16	0000	0728	HIRA	0027.0	0047.0	II		1	50	200	
			LEAR	0036.0	0043.0	III		1	25	92	
			CULG	0037.0	0042.0	II	FN	1	28	40	
	0000	0800	CULG	0037.0	0044.0	II	SH	1	50	90	ESS 550
			CULG	0148.0	0150.0	III	G	1	35	160	
			LEAR	0148.0	0148.0	III		1	25	94	
			LEAR	0217.0	0218.0	III		1	25	160	
			CULG	0218.0	0218.0	III	B	1	30	180	
			HIRA	0218.0	0218.5	III	B	1	30	1000	
	0703	1200	IZMI	0712.0U	1200.0D	I	N	1	70	270	
	0753	1350	ONDR								
			IZMI	0758.0	0801.5	III	G	1	45	95	
			IZMI	0809.4	0811.8	III	G	1	45	95	
			IZMI	0819.7	0819.9	UNCLF		1	45	95	
			IZMI	0822.7	0828.0	I	N	1	70	95	
			LEAR	0824.0	0825.0	III		1	25	121	
			SVTO	0824.0	0825.0	III		1	25	85	
			IZMI	0824.7	0825.6	III	G,FS	2	30	160	
			IZMI	0930.3	0930.4	I	GG	2	180	215	
			IZMI	1017.9	1018.1	III	B	1	45	90	
	0755	1450	BLEN	1342.0	1450.0X	I		2	220X	330	
			SGMR	1742.0	1742.0	III		1	30	80	
	2000	2400	CULG								
	2115	2400	HIRA								
17			LEAR	0202.0	0208.0	III		1	25	180	
	0000	0728	HIRA	0203.0	0206.0	III	G	1	30	220	
	0000	0800	CULG	0203.0	0208.0	III	G	1	18	180	
			HIRA	0443.0	0443.5	III	B	1	80	300	
			LEAR	0456.0	0456.0	III		1	25	100	
			CULG	0457.0	0457.0	III	B	1	23	90	
	0650	1200	IZMI	0650.0E	0954.0	I	N	1	180	270X	
			IZMI	0704.5	0704.6	III	G	1	240	270X	
	0743	1348	ONDR								
	0750	1450	BLEN								
			IZMI	0834.6	0834.7	III	G	1	170	270	
			IZMI	0849.9	0850.3	III	G	1	45	70	
			IZMI	0912.7	0912.8	III	B	1	50	70	
			IZMI	0933.0	0934.8	III	GG	2	40	270	
			IZMI	0948.3	0950.9	III	GG	2	45	150	
			IZMI	0954.0	1022.0U	III	N	1	45	95	
			IZMI	0954.0	1200.0	I	N	1	45	270X	
			IZMI	1111.6	1114.1	III	GG	2	15D	270X	
			IZMI	1122.6	1123.1	III	G	1	55	240	
	2116	2400	HIRA								
	2000	2400	CULG	2142.0	2244.0	III	N	1	30	180	
			LEAR	2149.0	0317.0	CONT		1	25	180	

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OBSERVATION Day	Start (UT)	End (UT)	Sta	EVENT Start (UT)	End (UT)	Spectral Class	Event Remarks	Int (1-3)	FREQUENCY Lower (MHz)	Upper (MHz)	Remarks
18	0000	0800	CULG	0132.0	0134.0	III	G	1	35	90	
			CULG	0305.0	0307.0	III	G	2	28	180	
			LEAR	0305.0	0309.0	III		2	25	180	
	0000	0727	HIRA	0305.0	0307.5	III	G	3	30	210	
			CULG	0427.0	0428.0	III	G	1	18	140	
			LEAR	0427.0	0428.0	III		1	25	153	
			LEAR	0455.0	0457.0	III		1	25	140	
			CULG	0456.0	0456.0	III	B	1	20	120	
			LEAR	0515.0	0521.0	III		1	25	163	
			CULG	0517.0	0522.0	III	G	1	60	180	
			CULG	0536.0	0536.0	III	B	2	35	180	
			LEAR	0536.0	0537.0	III		1	25	172	
			HIRA	0536.5	0537.0	III	B	2	40	200	
			CULG	0626.0	0629.0	III	G	1	20	180	
			LEAR	0626.0	0629.0	III		1	25	172	
			HIRA	0629.0	0629.5	III	B	2	40	180	
	0658	1200	IZMI	0658.0E	1200.0D	I	N	1	45	270	
			LEAR	0703.0	0834.0	III	N	2	25	180	
			IZMI	0703.5	0720.0	III	N	2	45	240	
			IZMI	0722.0	0722.7	III	G	2	40	240	
			IZMI	0723.7	0733.6	I	S	2	75	135	
			IZMI	0734.7	0740.8	III	GG,FS	2	40	250	
			IZMI	0746.4	0746.6	III	B	2	50	85	
			IZMI	0807.0	0808.3	III	GG	2	45	270X	
			IZMI	0815.8	0823.2	III	GG	2	30	270X	
			SVTO	0817.0	0822.0	III		1	25U	145U	
	0745	1347	ONDR	0817.2	0818.5	DCIM		1	800X	2000X	
			IZMI	0831.9	0834.4	III	GG	2	80	270X	
			IZMI	0902.0	0905.4	III	GG	2	45	270X	
			LEAR	0902.0	0904.0	III		1	25	180	
			LEAR	0928.0	0950.0	III	N	1	25	180	
			IZMI	0928.4	0928.8	III	G,C	2	30	120	
			IZMI	0935.1	0936.5	III	G	2	45	215	
			IZMI	0940.6	0941.1	III	G	2	45	270	
			IZMI	0950.1	0950.5	III	G	2	45	250	
			IZMI	0951.8	0953.7	III	N	2	45	95	
	0557	1200	IZMI	1000.9	1002.4	III	G	1	45X	125	
			IZMI	1013.0	1013.9	III	G	1	40	100	
			IZMI	1049.0	1051.2	III	G	1	45	100	
			ONDR	1053.2	1058.5	DCIM	G	2	2000X	4500X	
			ONDR	1054.0	1055.0	DCIM	G	2	800X	1761	
			SVTO	1054.0	1055.0	III		3	25	162	
	0750	1450	BLEN	1054.0	1057.8	DCIM	C	3	2300X	4000X	
	0557	1200	IZMI	1054.4	1056.0	III	G,C	2	25	145	
			IZMI	1101.6	1106.1	III	N	1	45	145	
			IZMI	1117.0U	1142.5	III	N	1	45	215	
			ONDR	1305.5	1342.4	DCIM	GG	2	800X	2000X	
			ONDR	1307.3	1318.3	DCIM	G	1	2000X	4500X	
			BLEN	1308.0	1318.0	DCIM	C	3	2300X	4000X	
			SVTO	1316.0	1317.0	II		2	75	180	ESS 0611
	2000	2400	CULG	2017.0	2017.0	III	B	1	28	80	
	2118	2400	HIRA								
			CULG	2317.0	2322.0	III	G	1	80	180	
19	0000	0727	HIRA								
			LEAR	0057.0	0102.0	III		1	35	104	
	0000	0800	CULG	0058.0	0103.0	III	G	1	40	90	
			CULG	0449.0	0449.0	III	B	1	30	80	
			CULG	0535.0	0540.0	III	G	1	18	90	
	0650	1200	IZMI	0744.4	0744.5	III	B	1	45	95	
	0747	1345	ONDR								
	0750	1450	BLEN								
			IZMI	0803.0U	1200.0D	I	N	1	180	270	
			IZMI	0807.2	0808.1	III	G	2	190	270X	
	2118	2400	HIRA								
	2000	2400	CULG	2301.0	2301.0	III	B	1	23	90	
20	0000	0727	HIRA								
			LEAR	0019.0	0023.0	III		1	25	149	

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OBSERVATION Day	Start (UT)	End (UT)	Sta	EVENT Start (UT)	End (UT)	Spectral Class	Event Remarks	Int (1-3)	FREQUENCY Lower (MHz)	Upper (MHz)	Remarks
20	0000	0800	CULG	0020.0	0024.0	III	G	1	18	180	
			CULG	0042.0	0048.0	UNCLF		2	23	40	
			LEAR	0042.0	0047.0	UNCLF		1	25	41	
			LEAR	0336.0	0341.0	III		1	25	159	
			CULG	0337.0	0341.0	III	G	1	23	170	
			LEAR	0438.0	1028.0	CONT		1	29	105	
	0658	1200	IZMI	0658.0E	0841.0U	I	N	1	135	270	
			IZMI	0709.7	0709.8	III	B	1	45	95	
			IZMI	0719.3	0719.5	III	B	1	45	95	
			IZMI	0754.5	0759.2	III	GG	2	35	250	
			IZMI	0801.0	0802.1	III	G	1	35	60	
			IZMI	0817.6	0817.7	III	B	1	45	90	
			IZMI	0848.1	0848.3	III	G	1	45	60	
			IZMI	0923.5	0927.5	III	G	1	40	70	
	0749	1343	ONDR	0934.1	0934.2	DCIM	G	2	2674	4500X	
	0750	1450	BLEN	0934.2	0934.4	III	GG,RS	2	2300	4000X	
			IZMI	0941.2	0942.6	III	G	2	30	200	
			IZMI	0945.1	0947.4	III	G	2	45	240U	
			IZMI	0959.2	0959.4	III	B	1	45	70	
			IZMI	1033.2	1033.5	III	G	1	40	90	
			IZMI	1120.4	1120.5	III	B	1	45	70	
			IZMI	1145.3	1146.3	III	GG	1	45	170	
			SVTO	1155.0	1155.0	III		1	28	170	
			IZMI	1155.4	1157.2	III	GG	2	35	215	
			SVTO	1237.0	1238.0	III		1	28	166	
			SGMR	1346.0	1347.0	III		1	30	75	
			SVTO	1348.0	1351.0	III		1	32	159	
			HOLL	1549.0	1552.0	III		2	25	180	
			SGMR	1550.0	1551.0	III		1	30	80	
			HOLL	1652.0	1653.0	III		2	25	180	
			SGMR	1652.0	1953.0	III	N	1	30	80	
			HOLL	1712.0	1713.0	III		1	25	180	
			HOLL	1717.0	1719.0	III		1	25	180	
			HOLL	1740.0	1741.0	III		2	25	180	
			PALE	1740.0	1741.0	III		1	25	180	
			HOLL	1846.0	1848.0	III		1	25	146	
	2000	2400	CULG	2000.0E	2149.0	III	N	1	20	150	
	2119	2400	HIRA								
			CULG	2306.0	2307.0	III	G	1	30	150	
21	0000	0800	CULG	0009.0	0104.0	I	S	1	110	170	
			CULG	0022.0	0022.0	III	B	1	110	380	
	0000	0727	HIRA	0022.0	0022.5	III	B	2	130	330	
			CULG	0334.0	0334.0	III	B	1	25	90	
			LEAR	0334.0	0334.0	III		1	25	103	
			LEAR	0411.0	1029.0	CONT		1	25	180	
			CULG	0412.0	0413.0	III	G	1	30	80	
			CULG	0541.0	0654.0	I	S	1	70	170	
			CULG	0544.0	0628.0	III	N	1	23	90	
			SVTO	0630.0	0631.0	III		1	75	164	
			HIRA	0630.5	0631.0	III	B	3	80	280	
			CULG	0631.0	0631.0	III	B	1	40	420	
			SVTO	0635.0	1309.0	CONT		1	25	180	
			IZMI	0658.0E	1200.0D	III	N	1	45	95	
	0658	1200	IZMI	0658.0E	1200.0D	I	S	2	70	270	
			CULG	0709.0	0739.0	III	N	1	23	160	
			IZMI	0709.1	0709.5	III	G,FS	2	45	270X	
			IZMI	0718.4	0723.5	III	GG	2	40	100	
	0750	1450	BLEN								
	0751	1341	ONDR								
			IZMI	0759.0	0801.8	III	G	2	145	245	
			IZMI	0808.1	0808.5	III	G	2	45	170	
			IZMI	0909.3	0909.4	III	B	2	45	100	
			IZMI	1006.8	1007.2	III	G	2	85	270	
			IZMI	1104.0	1104.8	UNCLF		2	45	240	
			IZMI	1113.5	1113.7	III	G	2	45	180	
			IZMI	1116.4	1116.6	III	G	2	130	250	
			SGMR	1234.0	1234.0	III		1	30	50	
			HOLL	1504.0	1512.0	III		2	25	180	

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OBSERVATION Day	Start (UT)	End (UT)	Sta	EVENT Start (UT)	End (UT)	Spectral Class	Event Remarks	Int (1-3)	FREQUENCY Lower (MHz)	Upper (MHz)	Remarks
21			SGMR	1512.0	1512.0	III		1	30	80	
			SGMR	1647.0	1648.0	III		1	30	80	
			HOLL	1648.0	1648.0	III		1	25	180	
	2000	2400	CULG	2000.0E	2028.0	III	N	1	25	90	
	2120	2400	HIRA								
			CULG	2140.0	2400.0D	I	S,C	1	100	170	
			LEAR	2149.0	0433.0	CONT		1	78	180	
			CULG	2157.0	2157.0	III	B	1	40	180	
			LEAR	2157.0	2157.0	III		1	70	180	
			CULG	2220.0	2225.0	III	G	1	50	180	
			CULG	2231.0	2400.0D	III	N	1	20	180	
			LEAR	2339.0	0212.0	III	N	2	25	180	
22			CULG	0000.0E	0038.0	III	N	1	28	160	
	0000	0800	CULG	0000.0E	0225.0	I	S,C	1	60	160	
			CULG	0028.0	0029.0	III	G	3	18X	180	
			LEAR	0028.0	0029.0	III		3	25	180	
			PALE	0028.0	0029.0	III		2	25	180	
	0000	0726	HIRA	0028.0	0029.0	III	B	3	30	180	
			CULG	0105.0	0213.0	III	N	1	23	170	
			HIRA	0123.5	0124.0	III	B	2	130	400	
			CULG	0124.0	0124.0	III	B	1	70	400	
			LEAR	0144.0	0148.0	III		3	25	180	
			PALE	0144.0	0151.0	III		2	25	180	
			CULG	0145.0	0149.0	III	G	2	18	180	
			HIRA	0145.0	0148.0	III	G	2	30	150	
			CULG	0151.0	0152.0	III	G	3	18	180	
			LEAR	0151.0	0152.0	III		3	25	180	
			HIRA	0151.5	0152.0	III	B	3	30	240	
			CULG	0220.0	0220.0	III	B	2	60	270	
			HIRA	0220.0	0220.5	III	B	3	60	220	
			LEAR	0220.0	0220.0	III		3	62	180	
			CULG	0315.0	0408.0	III	N	1	25	130	
			LEAR	0332.0	0333.0	III		1	25	95	
			LEAR	0342.0	0408.0	III	N	2	25	180	
			CULG	0407.0	0407.0	III	B	2	23	140	
			HIRA	0407.0	0407.5	III	B	2	50	120	
			CULG	0526.0	0531.0	III	G	1	30	80	
			CULG	0604.0	0610.0	III	G	1	20	420	
			LEAR	0604.0	0611.0	III		2	25	180	
			CULG	0609.0	0741.0	I	S,C	1	100	170	
			LEAR	0616.0	1029.0	CONT		1	75	180	
			CULG	0636.0	0737.0	III	N	1	23	250	
			LEAR	0636.0	0736.0	III	N	2	25	180	
			HIRA	0648.0	0649.5	III	G	2	50	210	
			SVTO	0648.0	0723.0	III	N	1	75	180	
			CULG	0705.0	0707.0	III	G	1	250	400	
			IZMI	0705.0E	1200.0D	III	N	1	45	95	
	0705	1200	IZMI	0705.0E	1200.0D	I	S,C	2	90	270X	
			IZMI	0705.7	0707.1	III	GG	2	210	270X	
			IZMI	0718.6	0720.4	III	G	1	45	200	
			IZMI	0734.3	0738.1	III	GG	2	40	110	
	0800	1420	BLEN	0804.5	0807.5	III	GG,RS	3	2080X	3500X	
	0753	1340	ONDR	0805.5	0808.1	DCIM	GG	2	800X	2000X	
			LEAR	0828.0	0832.0	III		3	25	180	
			SVTO	0828.0	0832.0	III		3	25	180	
			IZMI	0828.1	0830.3	III	GG,C	2	30	240	
			IZMI	0830.5	0832.2	III	GG,C	2	25X	270X	
			IZMI	0837.1	0841.8	III	GG	2	45	95	
			BLEN	0853.3	0855.2	III	G,RS	1	2080X	3500X	
			IZMI	0858.2	0859.8	III	GG	2	30	220	
			LEAR	0859.0	0901.0	V		2	25	124	
			SVTO	0859.0	0901.0	III		1	25U	83U	
			IZMI	0859.6	0901.1	V		2	40	100	
			LEAR	0919.0	0924.0	III		2	25	180	
			SVTO	0919.0	0924.0	III		2	25	180	
			IZMI	0919.1	0920.3	III	G	2	30	190	
			IZMI	0923.6	0924.0	III	GG	2	30	270X	
			IZMI	0923.8	0924.6	V	G	2	45	85	

SOLAR RADIO EMISSION
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OBSERVATION Day	Start (UT)	End (UT)	Sta	EVENT Start (UT)	End (UT)	Spectral Class	Event Remarks	Int (1-3)	FREQUENCY Lower (MHz)	Upper (MHz)	Remarks
22			IZMI	1042.8	1046.3	III	GG,U	2	45	270X	
			SVTO	1043.0	1046.0	III		1	58	180	
			ONDR	1045.0	1045.1	DCIM	G	1	800X	1827	
			IZMI	1049.1	1049.2	III	B	2	215	270X	
			IZMI	1109.3	1110.4	III	G	2	40	65	
			IZMI	1113.8	1113.9	III	B	1	200	270X	
			IZMI	1114.9	1115.8	III	G	2	40	90	
			BLEN	1239.7	1240.3	III	G,RS	3	2080X	3500X	
			SVTO	1240.0	1240.0	III		1	113	180	
			SGMR	1404.0	2051.0	III	N	1	30	80	
			SVTO	1405.0	1406.0	III		1	34	82	
			HOLL	1621.0	1633.0	II		1	48	174	ESS 0604
			HOLL	1916.0	1918.0	III		1	40	180	
			HOLL	1928.0	1929.0	III		1	25	131	
			PALE	1928.0	1948.0	III		1	25	55	
			CULG	2000.0E	2400.0D	I	S,C	1	50	160	
	2000	2400	CULG	2000.0E	2400.0D	III	N	1	18	180	
	2121	2400	HIRA								
			CULG	2141.0	2141.0	III	B	2	18	110	
			LEAR	2149.0	1030.0	CONT		1	73	180	
			LEAR	2215.0	1030.0	III	N	2	25	180	
			CULG	2230.0	2231.0	III	G	2	18	170	
23			CULG	0000.0E	0800.0D	I	S,C	1	60	180	
	0000	0800	CULG	0000.0E	0800.0D	III	N	1	20	90	
			CULG	0140.0	0140.0	III	B	2	18X	150	
	0000	0726	HIRA	0404.5	0405.0	III	B	3	100	280	
			CULG	0405.0	0405.0	III	B	1	100	400	
			CULG	0429.0	0429.0	III	G	2	18	75	
			CULG	0536.0	0540.0	III	G	2	18	750	
			HIRA	0536.0	0540.0	III	B	1	40	1100	
			SVTO	0620.0	1351.0	CONT		1	75	180	
			SVTO	0620.0	1351.0	III	N	1	75	180	
			IZMI	0655.0E	1200.0D	III	N	1	40X	100	
	0655	1200	IZMI	0655.0E	1200.0D	I	S,C	2	40	270X	
			IZMI	0743.7	0744.5	III	G	2	45	100	
			IZMI	0802.6	0807.5	UNCLF	RS	2	45	85	
			IZMI	0906.8	0909.1	III	GG	2	75	270X	
			IZMI	0910.3	0911.2	III	GG	2	145	270X	
			IZMI	0912.8	0913.3	III	G	2	145	270X	
			SVTO	0913.0	0917.0	III		1	25U	180U	
			IZMI	0915.5	0917.6	III	GG	2	30	270X	
			IZMI	0928.3	0930.3	UNCLF		2	40	70U	
			SVTO	0930.0	0931.0	III		1	25U	159U	
			IZMI	0930.2	0931.1	III	G,C	2	40	190	
			IZMI	0944.1	0946.4	III	G	2	35	70	
			IZMI	0951.2	0952.9	III	GG	2	45	100	
	0810	1450	BLEN	1007.0	1007.1	III	B	1	2000X	2400	
			IZMI	1013.9	1015.3	III	GG,FS	2	40	95	
			IZMI	1017.5	1019.2	III	GG	2	35	90	
			IZMI	1045.4	1045.5	III	G	2	45	95	
			SVTO	1050.0	1053.0	III		1	25U	180U	
			IZMI	1050.6	1051.5	III	GG	2	30	100	
			SVTO	1102.0	1502.0	III	N	2	25	140	
			IZMI	1102.5	1102.7	III	B	2	40	200	
			BLEN	1117.2	1119.0	III	G	1	2000X	3700	
	0755	1339	ONDR	1117.2	1118.5	DCIM	G	1	1039	2000	
			IZMI	1117.4	1117.8	III	G,C	2	30	270X	
			IZMI	1118.8	1119.2	III	G	2	35	270	
			IZMI	1132.2	1132.4	III	G	2	120	270X	
			IZMI	1142.8	1144.9	I	GG,DC	2	80	245	
			SGMR	1253.0	1553.0	III	N	1	30	60	
			BLEN	1422.4	1424.0	DCIM	C	2	2000X	4000X	
			SGMR	1443.0	1446.0	III		1	30	80	
			SVTO	1443.0	1443.0	III		2	75	180	
			BLEN	1443.4	1443.7	III	GG,RS	3	2000X	3300	
			HOLL	1529.0	1540.0	III		1	25	84	
			HOLL	1550.0	1556.0	III		1	25	86	
			HOLL	1607.0	1612.0	III		1	25	86	

S O L A R R A D I O E M I S S I O N
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NOVEMBER 2000

OBSERVATION Day	Start (UT)	End (UT)	Sta	EVENT Start (UT)	End (UT)	Spectral Class	Event Remarks	Int (1-3)	FREQUENCY Lower (MHz)	Upper (MHz)	Remarks
23			HOLL	1628.0	1632.0	III		1	25	86	
			HOLL	1641.0	1652.0	III		1	25	180	
			HOLL	1700.0	1708.0	III		2	25	180	
			SGMR	1700.0	1703.0	III		2	30	80	
			HOLL	1715.0	1722.0	III		1	25	162	
			HOLL	1734.0	1734.0	III		1	60	180	
			HOLL	1742.0	1755.0	III	N	1	25	180	
			SGMR	1742.0	1808.0	III	N	1	30	80	
			PALE	1754.0	1838.0	III	N	1	25	180	
			HOLL	1802.0	1830.0	III	N	1	25	180	
			HOLL	1934.0	1940.0	III	N	1	25	149	
			PALE	1934.0	1935.0	III		2	25	130	
			HOLL	2000.0	2008.0	III	N	1	25	180	
			PALE	2000.0	2106.0	III	N	1	25	180	
	2000	2400	CULG	2000.0E	2400.0D	III	N	1	20	180	
			CULG	2001.0	2006.0	III	GG	2	20	160	
			HOLL	2033.0	2044.0	III		1	25	180	
			CULG	2034.0	2043.0	III	GG	3	20	300	
			HOLL	2047.0	2100.0	III		1	25	136	
			CULG	2049.0	2059.0	III	GG	3	18	180	
			CULG	2104.0	2106.0	III	G	2	18	180	
			HOLL	2104.0	2135.0	III	N	1	25	180	
			LEAR	2149.0	0053.0	CONT		1	25	180	
			CULG	2234.0	2240.0	III	G	2	20	180	
			LEAR	2234.0	0219.0	III	N	2	25	180	
	2122	2400	HIRA	2234.0	2241.0	III	G	1	30	700	
			HIRA	2247.0	2247.5	III	B	1	40	200	
			HIRA	2252.0	2252.5	III	B	1	30	230	
			CULG	2308.0	2310.0	III	G	2	18X	130	
			HOLL	2316.0	2331.0	III		1	25	180	
			LEAR	2316.0	2325.0	III		3	25	180	
			CULG	2317.0	2324.0	III	GG	3	18	350	
			HIRA	2317.0	2324.0	III	G	3	30	300	
			PALE	2318.0	2327.0	III		2	15	180	
			CULG	2324.0	2335.0	II	FN,H	2	18X	100	
			CULG	2327.0	2336.0	II	SH,H	2	25	140	ESS 1000
			HIRA	2327.5	2336.0	II		2	30	100	
			PALE	2330.0	2335.0	II		1	25	180	ESS 0610
			HIRA	2330.5	2331.5	III	G	2	30	170	
			LEAR	2331.0	2337.0	II		1	25	97	ESS 1002
24	0000	0800	CULG	0000.0E	0602.0	III	N	1	20	180	
			CULG	0154.0	0154.0	III	B	2	18	90	
			LEAR	0204.0	1032.0	CONT		1	75	180	
			CULG	0230.0	0302.0	I	S	1	110	170	
			LEAR	0257.0	1032.0	III	N	2	25	180	
			CULG	0307.0	0307.0	III	B	2	25	160	
	0000	0726	HIRA	0307.0	0307.5	III	B	2	50	120	
			CULG	0317.0	0324.0	III	GG	2	20	180	
			HIRA	0317.0	0326.0	III	G	2	30	210	
			HIRA	0354.5	0357.5	III	G	3	25X	190	
			CULG	0355.0	0357.0	III	G	3	18	180	
			LEAR	0355.0	0357.0	III		3	25	180	
			HIRA	0400.5	0401.0	III	B	2	50	130	
			CULG	0414.0	0414.0	III	B	2	18	150	
			HIRA	0414.5	0415.0	III	B	1	30	150	
			CULG	0430.0	0436.0	III	GG	2	20	180	
			HIRA	0430.0	0430.5	III	B	2	30	210	
			HIRA	0435.5	0436.5	III	G	2	50	120	
			HIRA	0458.5	0502.0	III	G	3	30	2000X	
			CULG	0459.0	0502.0	III	G	3	18X	900	
			CULG	0502.0	0510.0	II	FN	3	18X	90	
			CULG	0502.0	0511.0	II	SH	3	30	180	ESS 1100
			HIRA	0502.0	0516.0	II		3	30	190	
			LEAR	0502.0	0529.0	II		3	25	180	ESS 1090
			CULG	0505.0	0507.0	III	G	3	18X	750	
			HIRA	0505.5	0507.0	III	G	3	X	300	
			CULG	0510.0	0516.0	III	G	3	18	80	
			HIRA	0516.0	0518.5	III	G	1	50	120	

SOLAR RADIO EMISSION
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OBSERVATION Day	Start (UT)	End (UT)	Sta	EVENT Start (UT)	End (UT)	Spectral Class	Event Remarks	Int (1-3)	FREQUENCY Lower (MHz)	Upper (MHz)	Remarks
24			CULG	0519.0	0528.0	II	FN	1	20	25	
			CULG	0519.0	0528.0	II	SH	1	30	50	ESS 700
			CULG	0528.0	0800.0D	I	S	1	110	170	
			CULG	0645.0	0647.0	III	G	3	20	130	
			HIRA	0645.0	0646.5	III	G	2	50	110	
	0702	1205	IZMI	0648.1E	0652.2	III	GG	2	45U	95U	
			CULG	0649.0	0800.0D	III	N	2	20	180	
			IZMI	0702.0E	1205.0D	I	S,C	2	45	270X	
			IZMI	0702.0E	1205.0D	III	N	2	40	100	
			IZMI	0715.6	0716.4	III	G,C	2	40	110	
			IZMI	0720.0	0720.6	III	G	2	35	135	
			IZMI	0723.4	0724.6	III	GG	2	35	270X	
			IZMI	0726.8	0729.4	III	GG,C	2	35	215	
			IZMI	0730.1	0755.0	III	S	2	35	145	
			IZMI	0736.7	0738.3	III	GG,C	2	40	255	
			IZMI	0741.1	0746.7	III	GG	2	25X	270X	
			IZMI	0903.9	1110.0U	III	S	2	35	135	
			IZMI	0955.7	0957.9	III	GG	2	30	215	
			IZMI	1017.5	1018.4	III	G	2	30	100	
			IZMI	1035.3	1037.7	III	GG	2	35	270X	
			IZMI	1111.1	1113.5	III	GG,C	2	30	160	
			IZMI	1117.6	1121.7	III	GG	2	35	270	
			IZMI	1124.4	1125.3	III	GG,C	2	30	145	
			IZMI	1126.1	1126.2	III	B	2	50	190	
			IZMI	1127.7	1129.0	III	GG	2	35	190	
	0757	1337	ONDR	1130.2	1138.3	DCIM	G	1	2000X	4461	
			IZMI	1132.0	1137.0	III	GG	2	35	145	
	0800	1450	BLEN	1133.5	1134.1	DCIM	P	3	2300	3800	
			BLEN	1133.8	1138.5	III	GG,RS	1	2025X	3800	
			IZMI	1137.5	1141.3	III	GG,C	2	30	270X	
			SGMR	1359.0	1405.0	III		1	30	60	
			HOLL	1422.0	1615.0	CONT		1	42	180	
			SGMR	1457.0	1523.0	III	N	3	30	80	
			HOLL	1507.0	1514.0	II		1	38	180	ESS 1200
			SGMR	1512.0	1523.0	II		3	30	80	ESS 0800
			HOLL	1715.0	2313.0	III	N	1	25	127	
			SGMR	1751.0	1817.0	III	N	2	30	80	
			PALE	1831.0	2220.0	III	N	3	25	180	
			CULG	2000.0E	2141.0	III	S,C	1	18	720	
			CULG	2000.0E	2220.0	III	N	2	18	180	
	2000	2400	CULG	2000.0E	2400.0D	I	S,C	1	60	180	
			SGMR	2017.0	2017.0	III		1	30	60	
			CULG	2018.0	2018.0	III	B	3	18X	180	
			CULG	2126.0	2126.0	III	B	3	18X	90	
			CULG	2131.0	2131.0	III	B	3	18	130	
			CULG	2145.0	2147.0	III	G	3	18	180	
			LEAR	2149.0	0107.0	CONT		2	25	180	
			LEAR	2149.0	2240.0	III	N	2	25	180	
			CULG	2152.0	2157.0	II	FN,H	3	18X	45	
			CULG	2152.0	2157.0	II	SH,H	3	35	90	ESS 800
			CULG	2300.0	2400.0D	III	N	1	30	90	
			CULG	2346.0	2346.0	III	B	2	18	170	
			LEAR	2346.0	0056.0	III	N	1	25	146	
			LEAR	2346.0	2346.0	III		1	25	146	
			PALE	2346.0	2346.0	III		1	25U	150U	
	2123	2400	HIRA	2346.0	2346.5	III	B	2	30	180	
25			CULG	0000.0E	0532.0	III	N	2	18X	180	
	0000	0800	CULG	0000.0E	0800.0D	I	S,C	1	50	180	
	0000	0725	HIRA	0001.0	0002.0	III	G	2	30	120	
			HIRA	0014.0	0015.5	III	G	2	50	170	
			PALE	0017.0	0215.0	III	N	3	25	150	
			HIRA	0019.5	0020.0	III	B	3	25X	160	
			HIRA	0027.5	0028.0	III	B	3	30	100	
			HIRA	0031.5	0032.0	III	B	1	50	110	
			HIRA	0036.0	0036.5	III	B	3	50	130	
			HIRA	0040.0	0040.5	III	B	2	30	120	
			HIRA	0041.5	0047.0	III	B	2	30	120	
			CULG	0104.0	0107.0	III	G	3	18	140	

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OBSERVATION Day	Start (UT)	End (UT)	Sta	EVENT Start (UT)	End (UT)	Spectral Class	Event Remarks	Int (1-3)	FREQUENCY Lower (MHz)	Upper (MHz)	Remarks
25			LEAR	0104.0	0215.0	III	N	3	25	180	
			HIRA	0104.5	0106.5	III	G	3	25X	200	
			CULG	0107.0	0113.0	II	FN	3	18X	75	
			CULG	0107.0	0116.0	II	SH	3	18X	150	ESS 2000
			LEAR	0107.0	0121.0	II		3	25	146	ESS 0953
			LEAR	0107.0	0137.0	II		3	25	146	ESS 1300
			LEAR	0107.0	1031.0	IV		2	25	180	
			PALE	0107.0	0116.0	II		3	25	147	ESS 0770
			HIRA	0108.0	0119.0	II		3	25X	130	
			CULG	0113.0	0545.0U	IV	FS	1	20	1000	
			CULG	0114.0U	0120.0	II	FN	3	18X	50	
			CULG	0114.0U	0120.0	II	SH	3	30	90	ESS 900
			HIRA	0118.0	0259.0	IV		2	400	2000X	
			CULG	0130.0	0137.0	UNCLF		2	18	50	
			HIRA	0210.0	0213.0	III	G	2	25X	290	
			LEAR	0245.0	0255.0	III		2	25	137	
			HIRA	0250.0	0250.5	III	B	2	30	120	
			HIRA	0252.5	0253.0	III	B	2	30	90	
			HIRA	0329.5	0330.0	III	B	1	25X	90	
			LEAR	0330.0	0330.0	III		1	25	112	
			LEAR	0353.0	0358.0	III		1	25	103	
			CULG	0452.0	0452.0	III	B	3	18X	300	
			HIRA	0452.0	0452.5	III	B	3	30	280	
			LEAR	0528.0	0532.0	III		2	25	180	
			CULG	0538.0	0800.0D	III	N	1	20	120	
			SVTO	0657.0	1225.0	IV		2	25	180	
			IZMI	0704.0E	1200.0U	III	N	2	40	135	
	0704	1200	IZMI	0704.0E	1200.0D	I	S	2	45	270X	
			IZMI	0818.0U	0902.0U	III	S	2	40	270X	
			IZMI	0906.1	0955.0U	III	S,C	2	30	270X	
	0759	1336	ONDR	0908.4	0922.4	DCIM	GG	2	2000X	4500X	
			ONDR	0909.5	0920.3	DCIM	GG,FS	2	800X	2000X	
	0810	1450	BLEN	0909.8	0925.0	DCIM	C	3	1415X	4000X	
			BLEN	0909.9	0917.0	DCIM	S	3	2055X	2800	
			IZMI	0912.0U	0955.0U	CONT		2	45	270X	
			IZMI	1011.1	1011.5	III	G,C	2	35	95	
			IZMI	1040.0	1042.0	III	GG,C	2	40	170	
			IZMI	1127.8	1129.3	III	GG	2	30	160	
			IZMI	1131.4	1131.8	III	G	2	30	120	
			SVTO	1313.0	1315.0	III		1	25	133	
			SGMR	1415.0	1422.0	III		2	30	80	
			SVTO	1415.0	1423.0	III		2	25	180	
			HOLL	1533.0	1535.0	III		2	25	180	
			SGMR	1533.0	1535.0	III		2	30	80	
			HOLL	1553.0	1600.0	III		1	25	180	
			PALE	1723.0	1729.0	III		1	25	60	
			HOLL	1838.0	1842.0	III		2	25	180	
			SGMR	1838.0	1842.0	III		3	30	80	
			HOLL	1839.0	1849.0	II		2	25	180	ESS 0916
			SGMR	1845.0	1857.0	II		3	30	80	ESS 0800
			PALE	1856.0	1856.0	III		1	25	50	
	2000	2400	CULG	2000.0E	2210.0	III	S	1	20	160	
	2124	2400	HIRA								
			LEAR	2337.0	0210.0	CONT		1	29	130	
26	0000	0800	CULG	0019.0	0019.0	III	B	1	28	90	
			CULG	0035.0	0210.0	I	S	1	100	170	
			CULG	0052.0	0052.0	III	B	1	23	90	
			LEAR	0227.0	0321.0	III	N	2	25	180	
			CULG	0228.0	0320.0	III	N	2	18X	350	
	0000	0725	HIRA	0257.5	0258.0	III	B	2	200	310	
			HIRA	0306.0	0311.0	III	G	1	30	130	
			CULG	0445.0	0445.0	III	B	1	100	480	
			HIRA	0445.0	0445.5	III	B	1	100	700	
			CULG	0529.0	0529.0	III	B	1	18	180	
			LEAR	0529.0	0530.0	III		1	25	153	
			LEAR	0612.0	0612.0	III		1	25	88	
			HIRA	0612.5	0613.0	III	B	1	80	360	
			CULG	0613.0	0613.0	III	B	1	30	100	

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OBSERVATION Day	Start (UT)	End (UT)	Sta	EVENT Start (UT)	End (UT)	Spectral Class	Event Remarks	Int (1-3)	FREQUENCY Lower (MHz)	Upper (MHz)	Remarks
26			LEAR	0629.0	0634.0	III		2	25	110	
			SVTO	0629.0	0630.0	III		1	54	82	
			CULG	0630.0	0633.0	III	G	1	23	100	
			IZMI	0700.0E	1200.0D	III	N	1	45	215	
	0700	1200	IZMI	0700.0E	1200.0D	I	N	1	45	270X	
			IZMI	0722.0	0734.0	I	S	2	45	95	
			IZMI	0729.1	0729.6	III	G	1	190	270	
			IZMI	0734.5	0736.8	III	GG	2	35	140	
			CULG	0735.0	0737.0	III	G	1	25	130	
	0801	1334	ONDR								
	0810	1450	BLEN								
			IZMI	0812.5	0813.3	III	G	2	40	95	
			IZMI	1019.1	1019.6	III	G	2	45	160	
			IZMI	1033.0U	1130.0U	I	S	1	45	270X	
			IZMI	1055.0U	1130.0U	III	S	1	45	95	
			IZMI	1119.9	1120.5	III	GG	2	40	270X	
			IZMI	1122.6	1124.3	III	GG	2	35	160	
			SVTO	1123.0	1123.0	III		1	45	83	
			IZMI	1141.4	1141.5	III	B	2	40	90	
			SGMR	1302.0	1303.0	III		1	30	50	
			HOLL	1634.0	1643.0	III		2	25	180	
			SGMR	1634.0	1644.0	II		2	30	80	ESS 1000
			SGMR	1647.0	1658.0	III	N	2	30	80	
			HOLL	1655.0	1701.0	II		2	25	180	ESS 0999
	2000	2400	CULG	2015.0U	2057.0	III	N	1	28	90	
			CULG	2109.0	2109.0	III	B	1	60	300	
			CULG	2115.0	2115.0	III	B	1	70	180	
			CULG	2127.0	2400.0D	III	N	1	30	180	
			CULG	2323.0	2325.0	III	G	1	30	250	
			LEAR	2323.0	2324.0	III		1	28	180	
	2125	2400	HIRA	2323.0	2323.5	III	B	1	70	300	
27	0000	0800	CULG	0000.0E	0800.0D	III	S,C	1	30	180	
			LEAR	0410.0	1033.0	CONT		1	33	150	
			SVTO	0628.0	1500.0	CONT		1	25	180	
			LEAR	0631.0	0633.0	III		3	25	180	
			CULG	0633.0	0633.0	III	B	2	18	180	
	0000	0725	HIRA	0633.0	0633.5	III	B	3	40	150	
			IZMI	0650.0E	0702.0	III	S	2	80	135	
	0650	1200	IZMI	0650.0E	1200.0D	III	N	1	40	150	
	0803	1333	ONDR								
	0810	1450	BLEN								
			IZMI	0820.0U	0918.0U	I	N	1	45	90	
			IZMI	0823.1	0829.3	UNCLF		1	45	90	
			SVTO	0828.0	0828.0	III		2	25	180	
			LEAR	0904.0	0905.0	III		1	25	180	
			IZMI	0904.7	0905.9	III	G	2	40	200	
			IZMI	0938.0	0947.0	I	N	1	230	270	
			IZMI	1027.3	1028.4	III	G	2	45	110	
			IZMI	1101.6	1104.7	I	GG,DS	2	200	270	
			SGMR	1358.0	1948.0	III	N	2	30	80	
			HOLL	1940.0	1952.0	III		1	25	145	
			PALE	1942.0	1952.0	III	N	1	25	180	
	2000	2400	CULG	2000.0E	2151.0	III	N	1	18	180	
			CULG	2043.0	2400.0D	I	S,C	1	100	160	
			PALE	2112.0	2208.0	III	N	1	25	140	
			CULG	2134.0	2134.0	III	B	2	18	150	
			LEAR	2148.0	0858.0	CONT		1	75	180	
			HOLL	2155.0	2158.0	III		1	25	153	
			LEAR	2155.0	2158.0	III		2	25	180	
			CULG	2156.0	2158.0	III	G	3	18	180	
	2126	2400	HIRA	2156.5	2157.5	III	G	2	40	140	
			LEAR	2247.0	0009.0	III	N	2	25	180	
			CULG	2250.0	2400.0D	III	N	1	23	160	
			CULG	2331.0	2331.0	III	B	3	18	250	
			HIRA	2331.0	2333.0	III	G	3	30	280	
			PALE	2331.0	2331.0	III		2	25	156	
			CULG	2351.0	2353.0	III	G	2	18	450	

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

NOVEMBER 2000

OBSERVATION Day	Start (UT)	End (UT)	Sta	EVENT Start (UT)	End (UT)	Spectral Class	Event Remarks	Int (1-3)	FREQUENCY Lower (MHz)	Upper (MHz)	Remarks
28			CULG	0000.0E	0355.0	I	S,C	1	100	180	
	0000	0800	CULG	0000.0E	0007.0	III	N	1	25	180	
	0000	0724	HIRA	0004.5	0007.5	III	G	2	50	150	
			CULG	0053.0	0219.0	III	N	1	25	230	
			HIRA	0153.5	0155.5	III	G	1	80	400	
			CULG	0339.0	0350.0	III	G	1	25	150	
			CULG	0438.0	0438.0	III	B	1	18	120	
			CULG	0442.0	0541.0	III	S	1	18	180	
			LEAR	0609.0	0612.0	III		2	25	180	
			HIRA	0609.5	0612.5	III	G	2	60	180	
			CULG	0610.0	0612.0	III	G	2	18	200	
			CULG	0618.0	0618.0	III	B	1	23	90	
			CULG	0640.0	0640.0	III	B	1	20	120	
			IZMI	0700.0E	1200.0D	III	N	1	45	95	
	0700	1200	IZMI	0700.0E	1200.0D	I	S	1	120	270X	
			SVTO	0719.0	0720.0	III		1	113U	180U	
			IZMI	0719.9	0723.0	III	GG,FS	2	45	200	
			CULG	0720.0	0721.0	III	G	1	45	200	
			IZMI	0729.2	0733.0	III	GG	2	40	270X	
	0805	1332	ONDR								
	0810	1450	BLEN								
			IZMI	0810.0	0814.6	III	GG	2	40	270	
			IZMI	0830.3	0831.9	III	GG,C,FS	2	45	95	
			IZMI	0837.1	0838.1	III	G	1	45	270	
			IZMI	0857.8	0858.2	III	G	2	50	175	
			IZMI	0920.5	0920.8	III	B	2	70	110	
			IZMI	0925.6	0927.3	III	GG	2	40	160	
			IZMI	0930.7	0931.1	III	B	2	45	130	
			LEAR	0955.0	0956.0	III		1	77	180	
			SVTO	0955.0	0956.0	III		1	147U	180U	
			IZMI	0955.6	0957.7	III	GG	2	45	190	
			SVTO	1123.0	1459.0	III	N	2	46U	180U	
			IZMI	1123.7	1124.1	III	GG	2	35	270X	
			IZMI	1123.9U	1124.3	V	HARM	2	50	160	
			IZMI	1129.1	1129.8	III	G	2	75	170	
			IZMI	1133.1	1133.4	III	GG	2	40	160	
			SGMR	1248.0	1443.0	III	N	1	30	80	
			HOLL	1908.0	1908.0	III		1	25	147	
	2000	2400	CULG	2000.0E	2400.0D	I	S	1	110	160	
	2123	2400	HIRA								
29	0000	0800	CULG	0000.0E	0800.0D	I	S	1	110	170	
			LEAR	0044.0	0045.0	III		1	41	79	
			LEAR	0106.0	0106.0	III		1	25	90	
			LEAR	0245.0	0247.0	III		1	82	121	
			LEAR	0258.0	0258.0	III		1	117	180	
			LEAR	0408.0	0409.0	III		1	25	93	
			CULG	0428.0	0430.0	III	G	1	57X	300	
			LEAR	0428.0	0431.0	III		3	25	180	
	0000	0724	HIRA	0431.5	0432.0	III	B	2	30	300	
			CULG	0432.0	0432.0	III	B	1	57X	160	
			LEAR	0504.0	0505.0	III		1	39	106	
			LEAR	0528.0	0528.0	III		1	28	180	
			HIRA	0528.5	0529.0	III	B	3	40	190	
			LEAR	0623.0	0638.0	V		2	25	180	
			SVTO	0623.0	0624.0	III		1	25U	180U	
			HIRA	0623.5	0624.5	III	B	3	40	260	
			CULG	0624.0	0625.0	III	G	3	57X	260	
			CULG	0629.0	0634.0	II	FN	1	57X	95	
			CULG	0629.0	0644.0	II	SH	2	57X	190	ESS 500
			HIRA	0629.0	0644.0	II		3	50	180	
			LEAR	0629.0	0645.0	II		1	36	180	ESS 0528
			SVTO	0629.0	0638.0	II		1	75	167	ESS 0397
			LEAR	0639.0	1034.0	CONT		1	70	180	
			SVTO	0641.0	0934.0	III	N	1	114	180	
			LEAR	0644.0	1034.0	III	N	1	25	180	
	0659	1206	IZMI	0651.6E	0655.0	III	GG,C	2	45U	95U	
			SVTO	0657.0	1459.0	CONT		1	75	180	
			IZMI	0659.0E	1206.0D	I	S	2	70	270X	

SOLAR RADIO EMISSION
Spectral Observations

NOVEMBER 2000

OBSERVATION Day	Start (UT)	End (UT)	Sta	EVENT Start (UT)	End (UT)	Spectral Class	Event Remarks	Int (1-3)	FREQUENCY Lower (MHz)	Upper (MHz)	Remarks
29			IZMI	0802.2	0809.7	III	GG	2	45	215	
	0807	1331	ONDR								
			IZMI	0811.7	0841.5	III	N	1	40	245	
	0820	1450	BLEN								
			IZMI	0859.6	0901.7	UNCLF	DS	1	45	65	
			IZMI	0920.5	0920.8	III	B	2	30	190	
			IZMI	0922.6	0941.0U	III	N,FS	2	45	95	
			IZMI	0930.9	0931.2	III	G	1	45	200	
			IZMI	0950.7	1005.0	III	N	1	55	145	
			IZMI	1009.0	1009.7	III	G	2	45	270X	
			SVTO	1009.0	1009.0	III		1	56	180	
			IZMI	1014.2	1014.4	III	G	2	170	240	
			SVTO	1040.0	1149.0	III	N	1	75	123	
			IZMI	1040.4	1041.4	III	G,C	2	45	200	
			IZMI	1042.4	1042.5	III	G	2	55	150	
			IZMI	1058.1	1100.7	III	GG	1	45	100	
			IZMI	1115.7	1115.9	III	G	1	80	105	
			SVTO	1357.0	1359.0	III		2	25U	180U	
			HOLL	1441.0	1441.0	III		1	25	180	
			SGMR	1441.0	1441.0	III		2	30	80	
	2000	2400	CULG								
	2123	2400	HIRA								
30			LEAR	0239.0	1036.0	CONT		1	77	180	
	0000	0800	CULG	0240.0	0315.0	I	S,C	1	110	180	
			CULG	0243.0	0246.0	III	G	1	57X	520	
			LEAR	0245.0	0246.0	III		1	37	136	
			CULG	0315.0	0541.0	I	S,C	2	57X	180	
	0000	0724	HIRA	0521.5	0522.5	III	B	2	80	280	
			CULG	0522.0	0522.0	III	G	1	80	420	
			CULG	0541.0	0800.0D	I	S,C	1	57X	180	
			SVTO	0615.0	1458.0	CONT		2	25	180	
			IZMI	0659.0E	1200.0D	I	S	2	45	270X	
			IZMI	0659.0E	1200.0D	III	N	1	45	100	
			IZMI	0826.8	0827.3	III	GG	2	45	95	
	0820	1450	BLEN	0904.5	0925.0	DCIM	C	2	1415X	4000X	
	0809	1330	ONDR	0906.1	0914.0	DCIM	GG	1	959	1934	
			IZMI	0918.0	0918.1	III	G	2	215	270X	
			IZMI	1008.8	1010.4	III	G	2	40	75	
			BLEN	1324.5	1332.0	DCIM	C	3	1415X	4000X	
			SVTO	1417.0	1418.0	III		1	60	142	
			BLEN	1443.0	1452.8X	DCIM	C	3	1415X	4000X	
	2000	2400	CULG	2026.0	2032.0	III	G	2	57X	150	
			HOLL	2027.0	2031.0	III		1	25	158	
			PALE	2027.0	2031.0	III		1	25	45	
			CULG	2113.0	2114.0	III	G	2	57X	300	
			HOLL	2213.0	2214.0	III		1	48	180	
			LEAR	2213.0	2214.0	III		1	50	180	
	2124	2400	HIRA	2213.0	2214.0	III	B	3	50	300	

SOLAR RADIO NOISE STORM AT 164 MHZ
FROM NANCAY RADIOHELIOGRAPH
NOVEMBER 2000

	HELIOGRAPHICS POSITIONS MEAN VALUES[1]		IMP[2]	OBSERVING TIME[3]	
DAY	E-W	S-N		START (UT)	END (UT)
01/11/00	-0.34	-0.50	I	11H20	13H20
02/11/00	-1.01	+0.16	I	10H50	15H05 D
02/11/00	+0.05	-0.76	I	8H14 E	13H25
03/11/00	-0.62	+0.09	I	9H30	13H00
03/11/00	+0.74	-0.71	I	12H30	15H14 D
03/11/00	+0.20	+0.68	I	8H03 E	15H14 D
04/11/00	+0.62	-0.54	I	8H03 E	15H14 D
04/11/00	+1.26	-0.71	II	10H20	11H50
05/11/00	+0.31	+0.34	I	8H03 E	15H14 D
05/11/00	+0.81	+0.57		8H03 E	15H14 D
08/11/00	-0.57	-0.29	I	9H27	12H50
08/11/00	-0.90	-0.59	I	13H09	15H15 D
09//11/00	+0.95	+0.47	I	8H04 E	15H15 D
12/11/00	+0.03	-0.64	I	8H04 E	15H15 D
13/11/00	+0.73	-0.31	I	8H04 E	15H15 D
14/11/00*	-1.15	-0.85	III	8H13 E	15H15 D
15/11/00	-0.99	-0.70	I	8H04 E	13H40
16/11/00*	-0.57	-0.84	I	8H06 E	15H16 D
16/11/00*	+1.16	-0.28	I	8H06 E	15H16 D
17/11/00*	-0.48	-0.85	II	8H06 E	15H16 D
17/11/00*	-0.16	-0.60	IV	11H00	15H16 D
17/11/00*	+1.29	-0.62	I	9H50	13H00
18/11/00*	-0.68	-0.06	II	8H05 E	>13H15**
18/11/00*	-0.22	-0.68	II	8H05 E	>13H15**
18/11/00*	-1.04	+0.14	IV	13H15	15H16 D
19/11/00*	-1.16	+0.65	I	8H24 E	15H16 D
19/11/00*	-0.50	+0.16	II	8H24 E	15H16 D
19/11/00*	-0.05	-0.54	I	8H24 E	11H30
20/11/00*	+0.14	-0.57	III	8H05 E	15H16 D
20/11/00*	+0.64	-0.19	II	11H45	15H16 D
21/11/00*	+0.36	-0.70	II	8H06 E	15H17 D
21/11/00*	+0.87	-0.26	III	8H06 E	15H17 D
22/11/00*	-0.28	+0.70	II	10H10	15H17 D
22/11/00*	+0.48	-0.68	I	8H06 E	15H17 D
22/11/00*	+0.98	-0.28	III	8H06 E	15H17 D
23/11/00*	-1.22	+0.36	II	8H06 E	15H17 D
23/11/00*	+0.25	+0.81	II	8H06 E	15H17 D
23/11/00*	+1.01	-0.08	IV	8H06 E	15H17 D
23/11/00*	+1.52	-0.34	III	8H06 E	15H17 D
24/11/00*	+0.11	+0.37	IV	8H24 E	15H18 D
25/11/00*	+0.54	+0.45	IV	8H07 E	15H18 D
26/11/00*	-0.57	+0.12	II	8H07 E	15H18 D
26/11/00*	+0.85	+0.37	III	8H07 E	15H18 D
27/11/00*	-0.33	+0.42	III	8H10 E	15H18 D
27/11/00*	-0.03	-0.26	II	8H10 E	15H18 D
28/11/00*	+0.00	+0.31	III	8H08 E	15H15 D
28/11/00*	+0.22	-0.31	II	8H08 E	15H15 D
29/11/00*	-0.65	-0.31	I	8H08 E	11H00
29/11/00*	+0.20	+0.42	II	8H08 E	15H20 D
29/11/00*	+0.54	-0.26	III	8H08 E	15H20 D
30/11/00*	+0.33	+0.34	III	8H09 E	15H19 D

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

SOLAR RADIO NOISE STORM AT 327 MHZ
FROM NANCAY RADIOHELIOGRAPH
NOVEMBER 2000

	HELIOGRAPHICS POSITIONS MEAN VALUES[1]		IMP[2]	OBSERVING TIME[3]	
DAY	E-W	S-N		START (UT)	END(UT)
02/11/00	+0.16	-0.76	I	8H04 E	15H05 D
03/11/00	-0.37	+0.25	I	8H03 E	15H14 D
03/11/00	+0.74	-0.71	I	12H14	15H14 D
04/11/00	-0.40	+0.11	I	9H00	15H14D
04/11/00	+0.45	-0.74	I	8H03 E	15H14 D
05/11/00	+0.71	+0.43	I	8H03 E	15H14 D
09/11/00	+0.71	+0.23	II	12H01	15H15 D
09/11/00	+1.02	+0.33	I	8H04 E	15H15 D
11/11/00	+1.09	+0.09	I	8H04 E	13H30
12/11/00	+0.19	-0.54	I	8H04 E	15H15 D
13/11/00	-1.10	-0.54	I	8H04 E	15H15 D
13/11/00	+0.64	-0.39	I	8H04 E	15H15 D
14/11/00	-1.10	-0.70	II	8H13 E	15H15 D
14/11/00	+0.87	-0.37	I	8H13 E	15H15 D
15/11/00	-0.85	-0.71	I	8H04 E	15H15 D
15/11/00	+0.78	-0.64	I	8H04 E	14H00
16/11/00	-0.84	-0.67	I	8H06 E	15H16 D
16/11/00	-0.45	-0.56	I	8H06 E	15H16 D
16/11/00	+1.05	-0.53	I	8H06 E	15H16 D
17/11/00	-0.71	-0.62	I	8H06 E	15H16 D
17/11/00	-0.17	-0.60	III	8H06 E	15H16 D
18/11/00	-0.74	+0.06	III	8H05 E	15H16 D
18/11/00	-0.40	-0.54	I	8H05 E	15H16 D
18/11/00	+0.03	-0.43	I	8H05 E	15H16 D
18/11/00	+0.06	-0.45		8H05 E	15H16 D
19/11/00*	-1.05	+0.39	I	8H24 E	15H16 D
19/11/00*	-0.54	+0.14	II	8H24 E	15H16 D
19/11/00*	-0.39	+0.17	II	8H24 E	15H16 D
19/11/00*	+0.28	-0.37	I	8H24 E	15H16 D
20/11/00*	-0.96	+0.37	I	8H05 E	15H16 D
20/11/00*	-0.09	+0.17	I	8H05 E	15H16 D
20/11/00*	+0.12	-0.68	I	9H30	15H16 D
20/11/00*	+0.50	+0.36	I	8H05 E	15H16 D
21/11/00*	+0.40	-0.67	II	8H06 E	15H17 D
21/11/00*	+0.76	-0.37	III	8H06 E	15H17 D
22/11/00*	-0.20	+0.43	II	8H06 E	15H17 D
22/11/00*	+0.59	-0.65	II	8H06 E	15H17 D
22/11/00*	+1.04	-0.39	II	8H06 E	15H17 D
23/11/00*	+0.09	+0.48	II	8H06 E	15H17 D
23/11/00*	+0.93	-0.11	I	8H06 E	15H17 D
23/11/00*	+1.16	-0.31	I	8H06 E	15H17 D
24/11/00	+0.28	+0.33	IV	8H24 E	15H18 D
25/11/00	+0.56	+0.26	IV	8H07 E	15H18 D
26/11/00*	+0.78	+0.31	III	8H07 E	15H18 D
27/11/00*	-0.19	+0.26	I	8H10 E	15H18 D
27/11/00*	+0.00	-0.36	I	8H10 E	15H18 D
27/11/00*	+0.64	+0.26	I	8H10 E	15H18 D
27/11/00*	+0.91	+0.32	I	8H10 E	15H18 D
28/11/00*	+0.02	+0.23	III	8H08 E	15H15 D
28/11/00*	+1.09	+0.54	I	8H08 E	15H15 D
29/11/00*	+0.29	+0.23	II	8H08 E	15H20 D
29/11/00*	+0.54	-0.39	II	8H08 E	15H20 D
29/11/00*	+1.22	+0.37	II	8H08 E	15H20 D
30/11/00*	+0.26	+0.29	III	8H09 E	15H19 D

NO DATA

OTHERS DAYS: NO DETECTABLE NOISE STORM

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

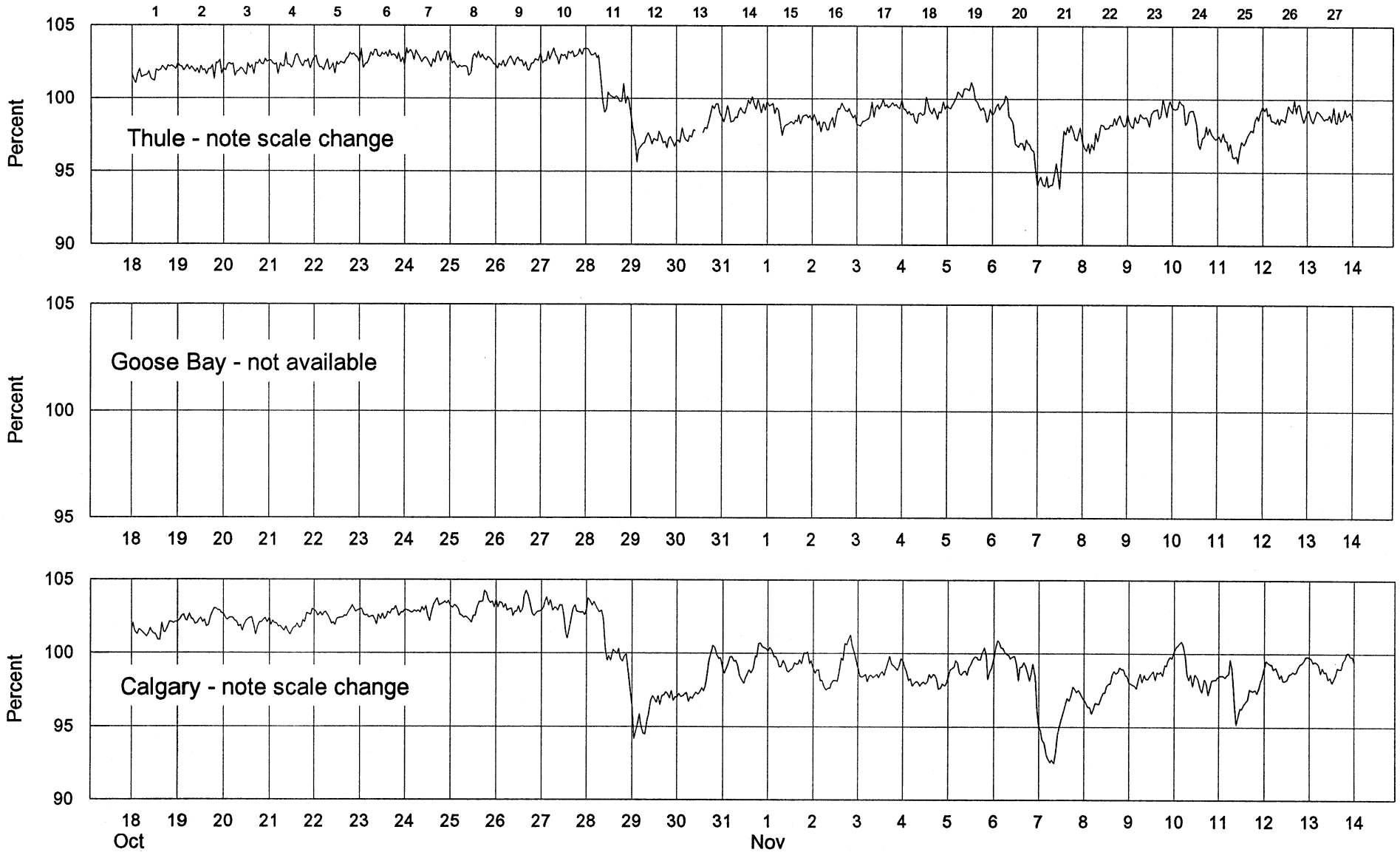
** Due to the onset of the strongest storm at 13H15, the end time cannot be determined

COSMIC RAY INDICES
(Neutron Monitor)
November 2000

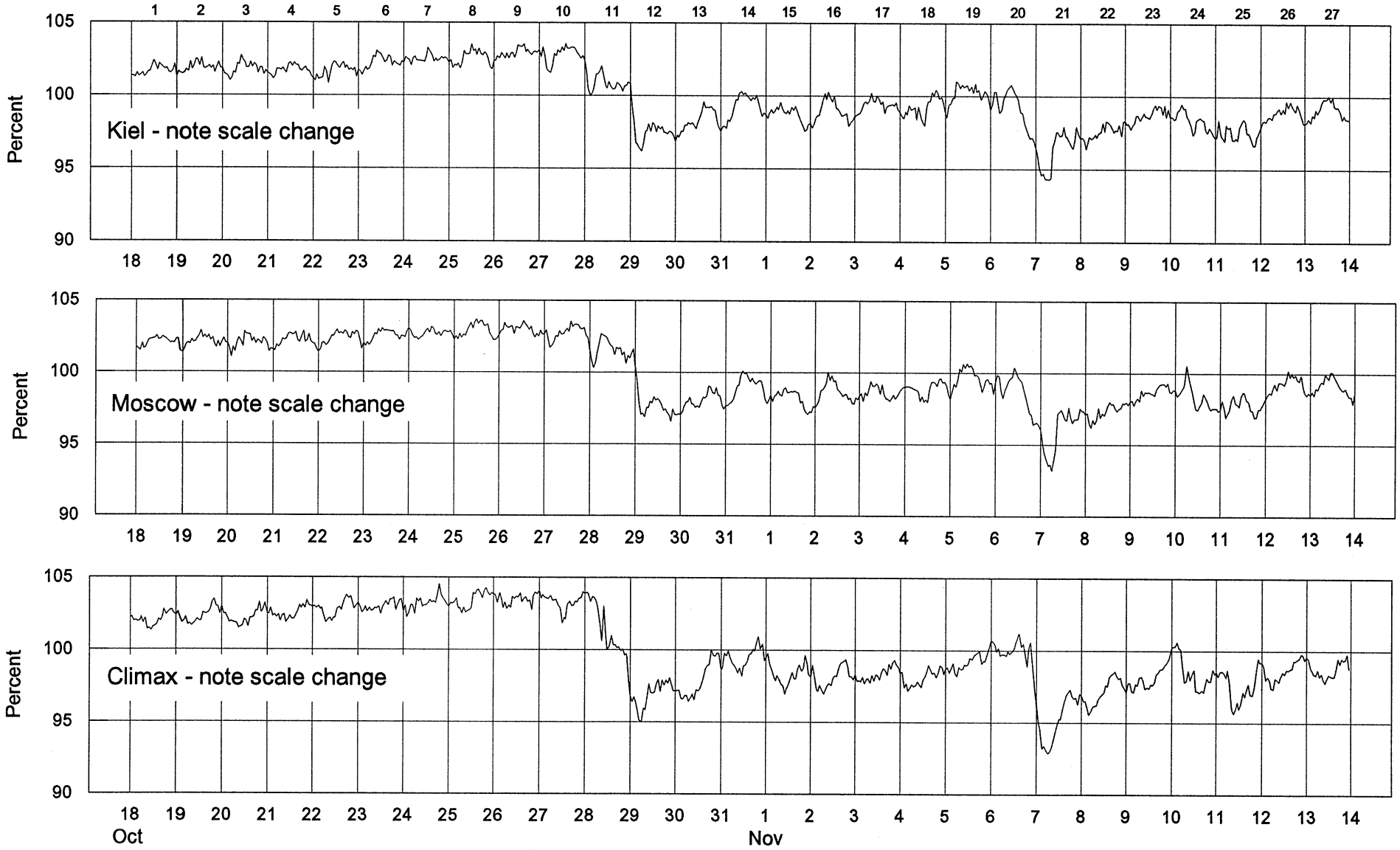
Day	THULE Average (cts/h)/100	GOOSE BAY Average (cts/h)/100	CALGARY Average (cts/h)/300	KIEL Average (cts/h)/100	MOSCOW Average (cts/h)/64	CLIMAX Average (cts/h)/100	BEIJING Average (cts/h)/256	HALEAKALA Average (cts/h)/1000
1	3964.6	not	3450.2	5485.5	8118.7	3626.3	1944.4	3453.3
2	3962.6	available	3433.0	5497.7	8154.8	3619.1	1950.8	3438.9
3	3980.8		3425.3	5520.8	8154.0	3627.4	1949.4	3441.8
4	3980.8		3404.7	5513.0	8175.6	3617.7	1950.5	3441.2
5	4010.2		3439.3	5567.0	8235.8	3656.9	1952.8	3457.4
6	3934.7		3446.0	5512.5	8153.5	3687.0	1974.8	3471.4
7	3848.4		3305.0	5353.0	7938.3	3512.8	1939.6	3399.9
8	3923.5		3383.5	5417.3	8046.7	3582.9	1948.4	3433.0
9	3969.9		3417.3	5482.8	8155.5	3616.2	1961.9	3434.5
10	3951.6		3424.8	5463.3	8129.5	3633.9	1975.2	3437.9
11	3906.0		3382.5	5414.4	8081.6	3597.9	1959.6	3420.1
12	3974.2		3431.5	5492.5	8204.0	3638.4	1967.4	3430.1
13	3969.0		3437.8	5503.2	8194.7	3641.9	1960.4	3440.1
14	3968.9		3431.3	5499.2	8172.1	3623.2	1946.3	3444.0
15	3973.7		3430.0	5509.5	8156.2	3638.6	1943.8	3454.9
16	3978.6		3435.2	5481.2	8128.3	3629.2	1935.5	3459.0
17	4002.5		3450.3	5519.3	8194.4	3645.3	1936.5	3465.6
18	4003.7		3455.2	5546.1	8237.8	3669.0	1936.4	3484.5
19	4026.6		3498.5	5579.0	8275.0	3693.0	1941.5	3494.3
20	4042.6		3511.7	5627.9	8316.6	3707.8	1949.1	3503.7
21	4068.1		3529.8	5645.7	8363.7	3722.0	1945.8	3511.4
22	4027.9		3512.5	5614.4	8345.4	3716.8	1941.2	3508.6
23	3990.1		3453.7	5534.6	8239.5	3660.8	1925.5	3486.5
24	4002.3		3446.2	5526.1	8253.1	3650.2	1916.9	3486.8
25	4010.0		3444.7	5545.0	8271.2	3650.7	1921.6	3493.0
26	3966.2		3439.7	5528.0	8240.0	3611.0	1918.5	3475.9
27	3797.8		3306.5	5310.8	7931.5	3463.0	1878.9	3423.0
28	3797.0		3269.8	5254.0	7890.9	3443.7	1876.2	3416.4
29	3741.5		3230.2	5215.0	7778.3	3407.7	1864.5	3399.2
30	3775.8		3278.8	5260.6	7850.4	3457.7	1876.6	3416.1
31								
Mean	3951.0		3416.8	5480.7	8146.2	3614.9	1936.3	3454.1

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.

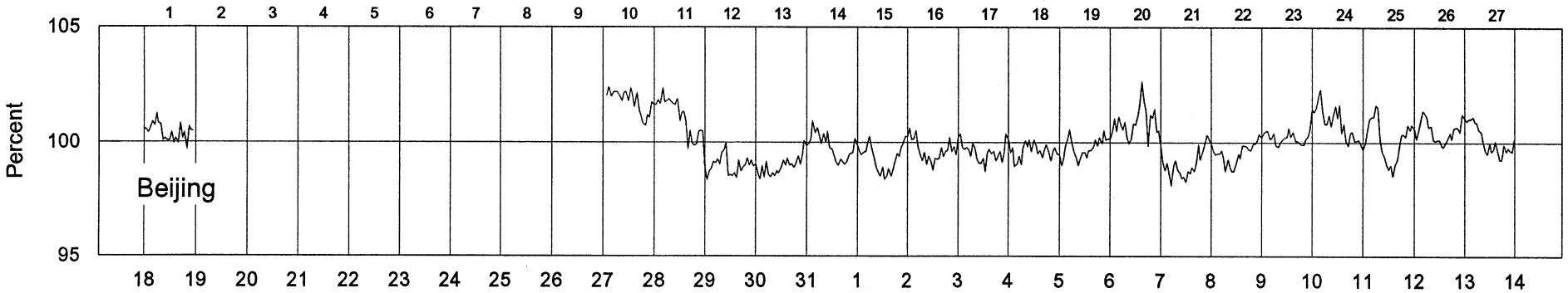
COSMIC RAY INDICES
(Neutron Monitor)
Bartels Rotation 2283 - Beginning 18 Oct 2000

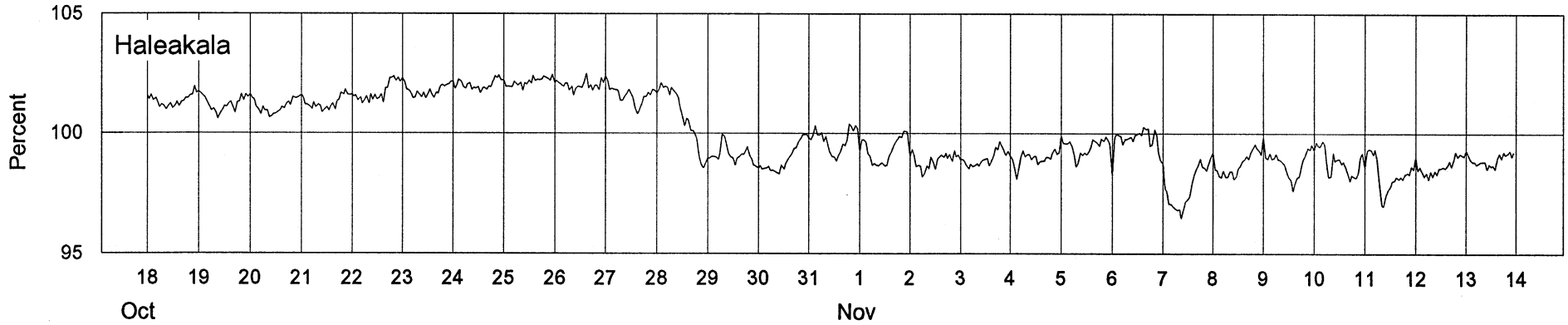


COSMIC RAY INDICES
(Neutron Monitor)
Bartels Rotation 2283 - Beginning 18 Oct 2000

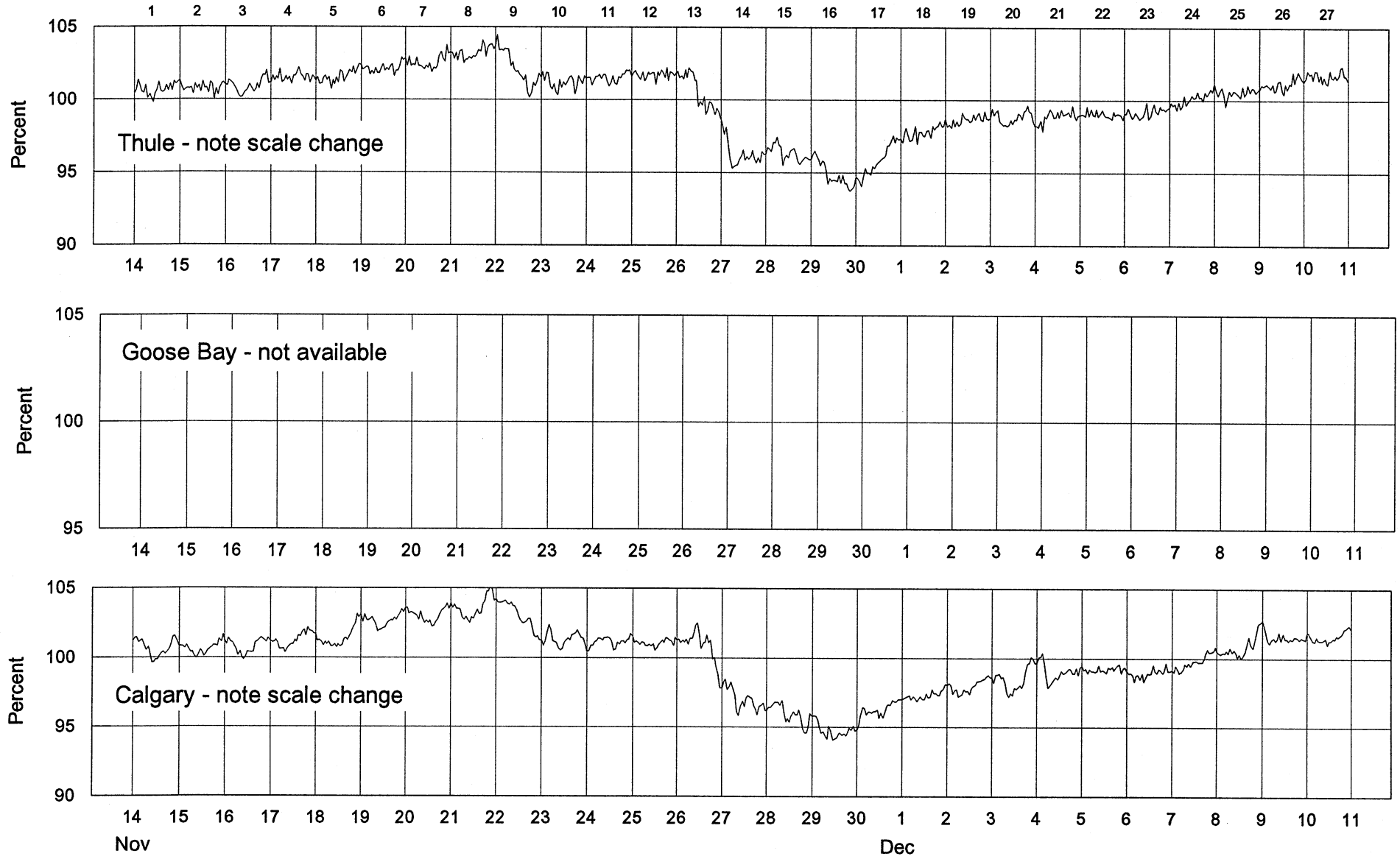


COSMIC RAY INDICES
(Neutron Monitor)
Bartels Rotation 2283 - Beginning 18 Oct 2000

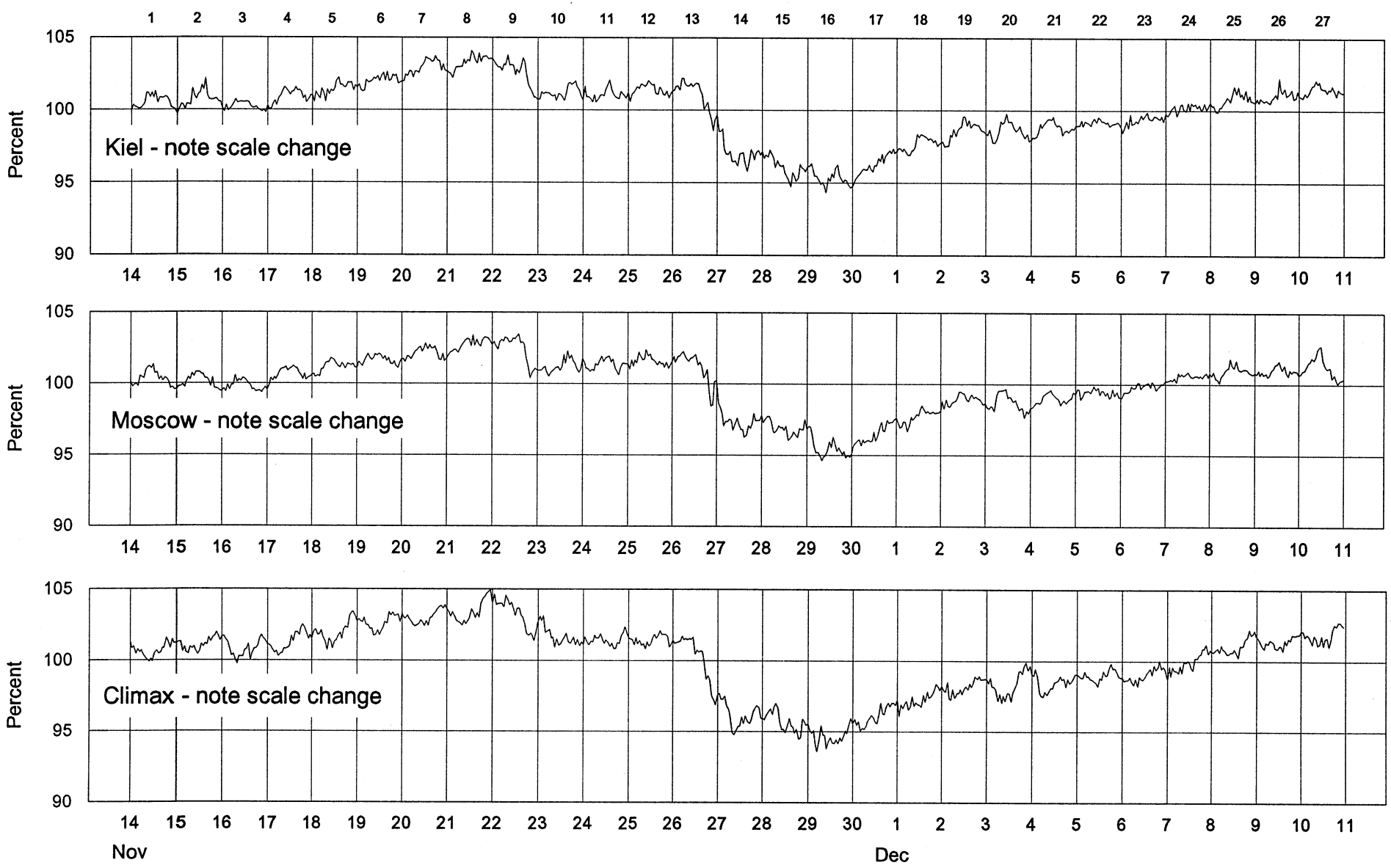




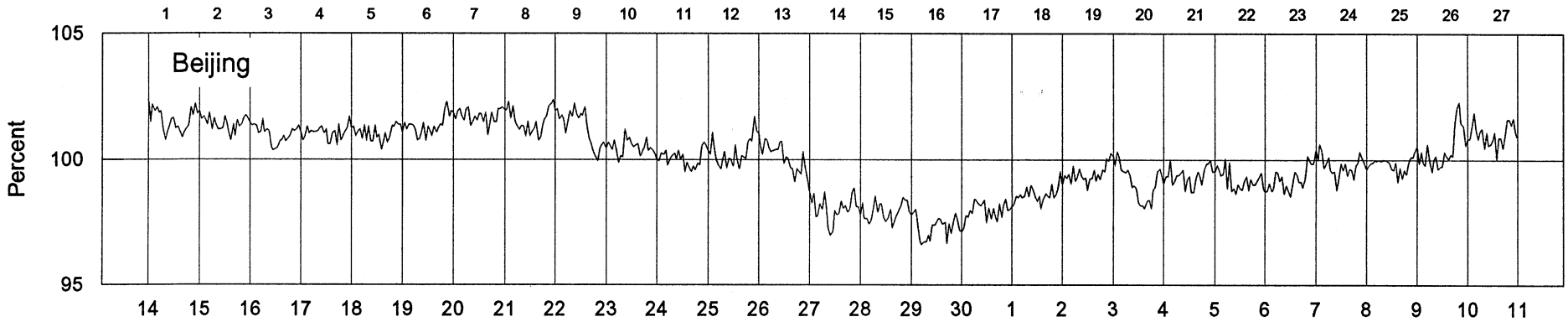
COSMIC RAY INDICES
(Neutron Monitor)
Bartels Rotation 2284 - Beginning 14 Nov 2000

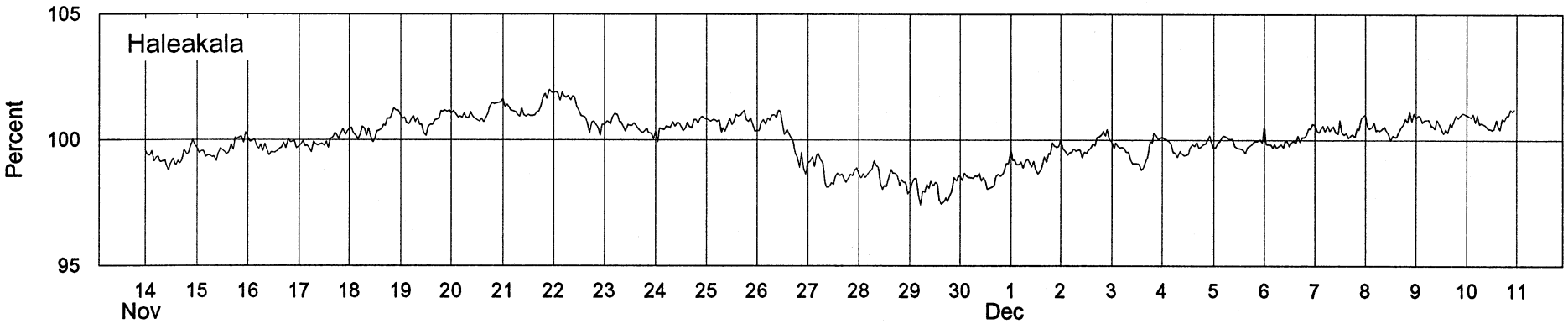


COSMIC RAY INDICES
(Neutron Monitor)
Bartels Rotation 2284 - Beginning 14 Nov 2000

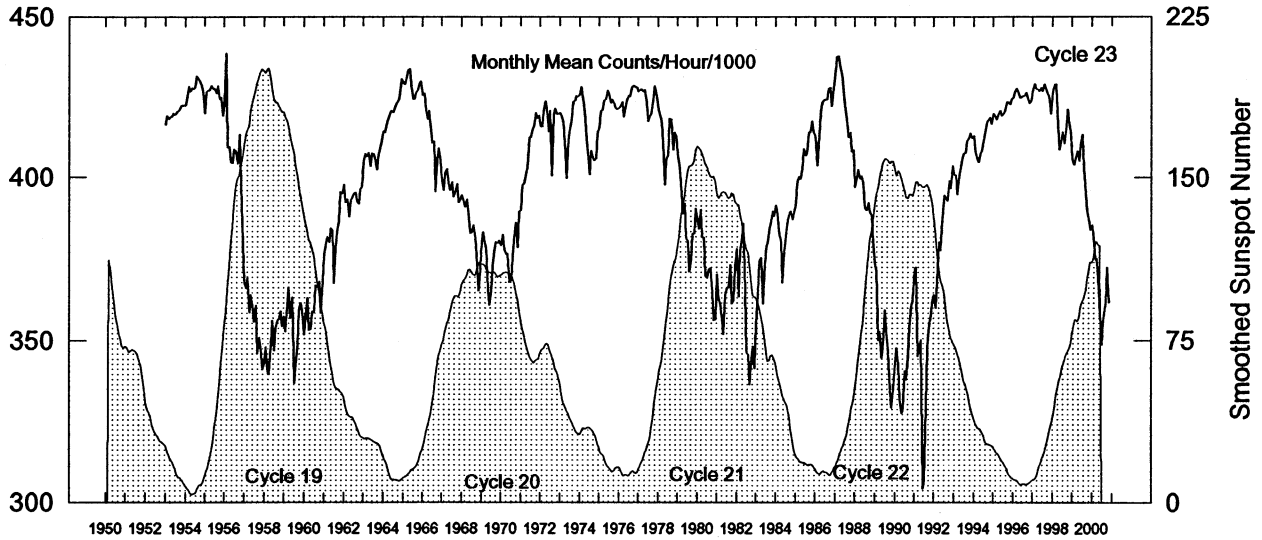


COSMIC RAY INDICES
(Neutron Monitor)
Bartels Rotation 2284 - Beginning 14 Nov 2000





Climax Neutron Monitor Pressure-Corrected Values
Jan 1953 - Nov 2000



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

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

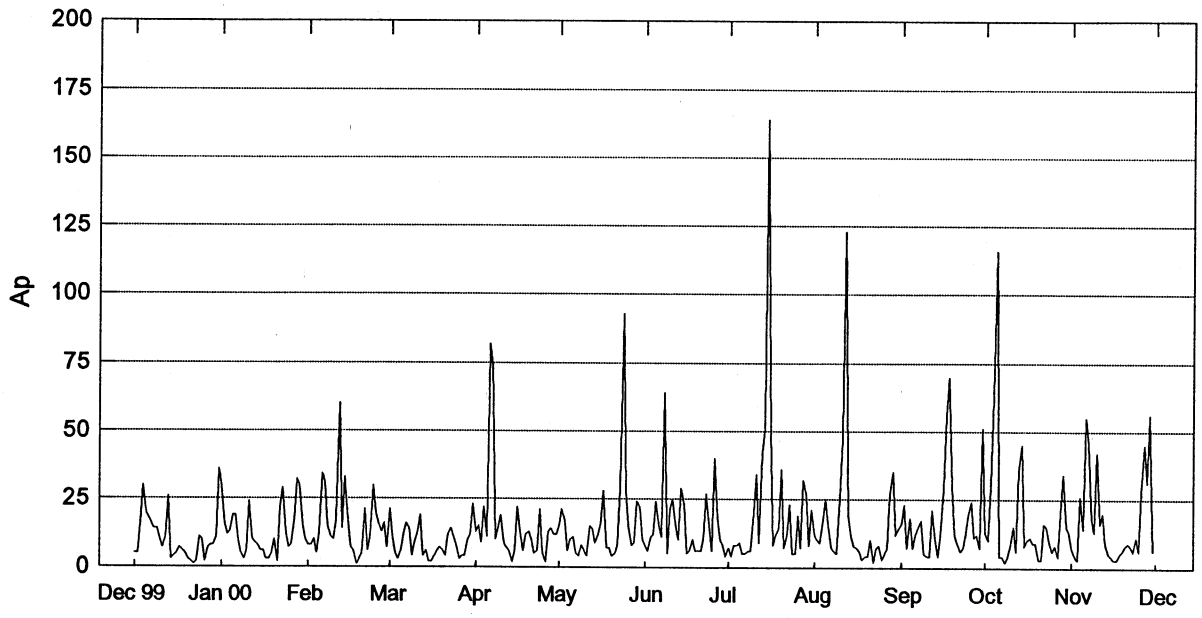
NOTE: Data may differ from previously reported values due to subsequent cleanup of data and slight changes in the averaging algorithm. See http://astro.uchicago.edu/home/web/pyle/neutron.html for latest changes. Sunspot numbers are preliminary after March, 2000.

Geomagnetic Activity Indices
November 2000

Day		Kp Three-Hourly Indices 1	2	3	4	5	6	7	8	Sum	Ap	Cp	Km Three-Hourly Indices 1	2	3	4	5	6	7	8	Am	aa Provisional N	S	M	
1		3+	2+	2	0+	1	1	1+	2+	14-	7	0.4	3-	2o	2+	1-	1+	2-	2-	3-	15	15	15	17	13	
2	Q5	3-	1-	0+	0+	1	1-	1-	1-	7	4	0.1	2+	1-	0+	0+	1+	1-	1+	1o	7	9	8	9	8	CC
3	Q4	0	0	0+	0+	1	1	2	2	7-	3	0.1	1-	0+	0+	1-	1+	2-	2+	2+	9	12	6	4	15	C
4		3	5	4	4	4-	4	4-	4-	31	26	1.2	3o	5-	3+	4-	3+	4-	4-	3+	45	52	43	54	40	
5		4-	3	2	1-	3	3+	3+	3+	22+	14	0.8	3o	3-	1+	1-	3o	3+	4-	3+	26	31	29	20	40	
6	D1	3+	4-	4	5	5+	6-	7	6-	40-	55	1.6	3-	3o	3o	5-	5o	5-	6+	5+	80	76	67	44	100	
7	D3	6	7-	5+	5+	4-	3-	4	2	36-	46	1.5	5-	5o	5-	4o	4-	3o	4o	3-	57	60	48	69	40	
8		2	4-	5-	4+	3+	3-	2-	2+	25-	18	1.0	2o	4o	4+	4o	3o	3-	2+	3-	36	30	62	70	22	
9		3-	2	2-	1	3	3+	3	4	21-	13	0.7	3-	1+	1+	1+	3o	3o	3+	4-	25	22	26	10	38	
10	D5	4	4	6	6+	5+	3+	3	3	35	42	1.5	4-	4-	5+	6+	5+	3o	3+	3-	74	42	78	83	37	
11		2+	3+	2-	2+	3+	4	4	3	24	16	0.9	3-	4-	2-	3-	4-	4o	4o	3o	35	40	35	28	48	
12		3	4	4	4-	3+	4	2+	3-	27	20	1.0	3o	3+	3+	3+	3o	4-	2+	3-	33	36	33	37	33	
13		2-	3	1+	3-	2	2	2+	2+	17+	9	0.5	1+	2+	1+	2+	2o	2+	3-	2+	16	21	18	18	21	
14	Q6	2	3-	1-	1-	1-	1-	1+	2-	10+	5	0.2	1+	2-	1-	1o	1+	1o	1o	2-	9	11	8	10	9	CC
15	Q3	1	1	1	1-	1	0+	2	1	8	4	0.1	1+	1o	1o	1-	1+	1-	2+	1+	8	10	7	8	10	CC
16	Q2	1-	0	1-	0	0+	0	1	2+	5	3	0.0	1-	0o	0+	0o	0+	0o	1+	2+	5	10	7	5	12	CC
17	Q1	1+	0+	1-	1-	1-	1-	0+	0	5-	3	0.0	1o	1-	1o	1+	1-	1o	1-	0o	6	6	8	10	4	CC
18	Q7K	0	0	0	0+	1+	1+	3-	3	9-	5	0.2	0o	0+	0+	0+	1+	2-	3-	3-	10	13	10	4	19	KC
19		2-	2+	2	2	1+	2-	1	2	14	6	0.3	1+	2+	2o	3-	1+	2-	1+	2o	14	12	10	13	9	CC
20		1+	2-	3-	2	2-	3	2+	1	16-	8	0.4	1+	2-	3-	2o	2-	3-	3-	1+	15	16	15	12	19	
21		3	2	2	2-	2+	2+	3-	2+	18+	9	0.5	2+	1+	2-	2o	3-	2o	3o	2+	18	21	14	15	20	
22		2+	2-	1+	2+	3-	3-	2-	2-	16+	8	0.4	2o	2-	1+	2-	3-	3-	2o	2+	16	14	16	12	18	
23	Q9	2	3-	1-	2-	2-	2-	2-	0	12	6	0.3	2-	2+	1o	2o	2-	2+	2-	0+	12	10	8	11	7	CK
24		0+	2+	2-	3-	2-	3	3+	4-	19-	11	0.6	1+	2o	2+	3-	2-	3o	4-	4o	26	25	23	16	33	
25	Q10K	3	3-	1-	1-	0+	1-	2+	1+	12-	6	0.3	3-	2o	1o	1-	0+	1+	3-	2-	12	15	9	12	12	K
26		1+	2-	4-	3-	4	4-	6-	6-	28+	28	1.2	1+	2+	3+	3o	4-	4o	6-	6-	54	55	48	26	77	
27	D4	6+	6	6-	5-	4	3-	4	3-	36	45	1.5	5+	5o	5o	4+	4o	3-	4o	3-	66	58	78	95	42	
28		3	4+	5	4+	5-	4-	4+	4	33+	31	1.3	3o	4-	5-	5-	5o	4-	4o	4-	60	54	69	63	60	
29	D2	6+	7-	7-	5-	5	3+	2+	3	38	56	1.6	5o	5+	6-	5-	5+	4-	2+	3o	77	66	75	97	44	
30	Q8	2-	2	2-	2-	1+	2-	1	2	13	6	0.3	2-	2-	1+	2-	1+	2o	2-	2o	12	12	13	13	12	C
Mean											17	0.68									29.3	28.5	29.6	29.1	

Day	Kn Three-Hourly Indices 1	2	3	4	5	6	7	8	An	Ks Three-Hourly Indices 1	2	3	4	5	6	7	8	As	Sa	Prov Ri	Ra	Rs	IMF
1	3-	2o	2o	1-	1+	2o	2-	3-	15	3o	2o	3-	1-	1o	1+	2o	3-	15	201.2	135	144	155	
2	2o	0+	0+	0+	1+	1-	1o	1-	6	3-	1-	0o	0o	1+	1-	2-	1+	8	193.2	147	135	147	
3	0+	0+	0+	1-	2o	2-	2+	2+	9	1o	0+	0o	0+	1o	1+	2+	2+	8	195.5	141	147	149	
4	3-	4+	3+	4-	4-	4o	4-	3+	45	4-	5-	3+	4o	3o	3+	4-	3o	45	191.4	130	146	145	
5	3o	2+	2-	1-	3o	3+	4-	3+	25	3o	3o	1+	1-	3o	3+	3+	3+	27	183.1	133	138	136	
6	3-	3o	3o	5o	5+	5o	6+	5-	81	3-	3-	3+	4+	5o	5-	6o	6-	78	174.9	108	121	127	
7	5o	5o	5o	4+	4-	3+	4-	2o	61	4+	5-	4+	4o	3+	3-	4+	3o	53	176.6	122	137	129	
8	2-	3+	4o	4o	3o	3-	2+	2+	31	2+	5-	5o	4+	3o	3-	3-	3-	43	169.5	127	122	121	
9	3-	1+	1+	1+	3o	3+	3+	4-	25	3-	2-	1o	1+	3o	3o	3+	4o	25	163.0	95	98	114	
10	3+	3+	5o	6+	5o	3o	3o	3o	66	4-	4o	6-	7-	6-	3-	3+	3-	81	150.4	101	107	100	
11	3-	3+	2-	3-	4-	4o	4-	3-	34	2+	4-	2o	3-	4-	4-	4o	3o	36	146.6	90	93	96	
12	3o	4-	4-	4-	3+	4o	2+	3-	37	3o	3o	3+	3o	3-	3+	3-	3o	30	143.6	72	72	93	
13	1+	2+	1o	2+	2-	2+	2+	2+	15	1+	2+	2o	2+	2+	2+	3-	2+	17	140.6	70	78	90	
14	1+	2o	1-	1o	2-	1+	1o	1+	8	1+	2-	1o	1+	1o	1o	1+	2o	9	145.4	84	93	95	
15	1o	1o	1o	1o	1+	1-	2+	1-	8	1+	1+	1o	1-	1o	0+	3-	2-	9	143.2	98	97	93	
16	0+	0o	1-	0o	0+	0o	1-	2+	4	1+	0+	0+	0o	0o	0o	2o	2o	6	150.7	95	94	101	
17	1-	0+	0+	1+	1-	1+	0+	0o	4	1+	1+	1+	1+	1-	1o	1o	0+	7	159.6	94	103	110	
18	0o	0o	0o	0+	1+	2-	3-	3-	9	0o	1-	0+	0o	2-	2o	3-	3o	11	172.9	116	130	125	
19	1+	2-	2o	3-	2-	2-	1+	2+	14	2-	3-	2o	3-	1o	1+	1+	2-	14	170.7	125	133	122	
20	1+	1o	3-	2o	2o	3o	3-	1-	16	2-	2o	2+	2+	1+	2+	3-	2-	15	169.6	110	115	121	
21	2+	1+	2-	2+	3-	2o	3o	2+	18	2+	1+	2o	2-	2o	2+	3-	3-	17	180.9	120	116	133	
22	2o	1+	1+	2-	3-	3o	2o	2o	15	2o	2o	1+	2o	2+	3-	2+	2+	16	190.1	113	110	143	
23	1+	2+	1-	2o	2o	2+	2-	0o	11	2o	2+	1+	2o	1+	2+	2-	1o	13	200.1	91	101	154	
24	1-	1+	2-	2o	2-	3-	3+	4-	20	2-	3-	3-	3o	2-	3o	4o	4+	31	192.1	98	97	145	
25	3-	2o	0+	0+	0+	1o	3-	2-	11	3-	2o	1+	1o	0o	1+	3o	2o	13	197.0*	74	76	151	
26	1o	1+	3o	3-	4-	4o	5+	5o	49	1+	3-	4-	3o	4-	4-	6-	6o	60	197.0	59	76	151	
27	5+	5-	5o	4o	4-	3o	4o	3-	63	5o	6-	5o	5-	4+	2+	4-	3-	69	186.6	79	103	140	
28	2+	4-	4+	5o	5+	4o	4+	4-	60	3+	4o	5-	4+	5o	4-	4-	4-	59	190.3	106	121	144	
29	5o	5+	6-	5o	6-	4-	2o	3o	82	5o	5o	5+	5-	5o	4-	3-	3+	71	183.2	123	125	136	
30	1+	2-	1+	2-	1+	2o	1+	2o	11	2-	2-	1+	2-	1o	2o	2-	2o	12	187.0	138	133	140	
Mean									28.4									29.9	174.9	106.5	112.0	126.9	

Daily Average Indices Ap
Dec 1999 - Nov 2000

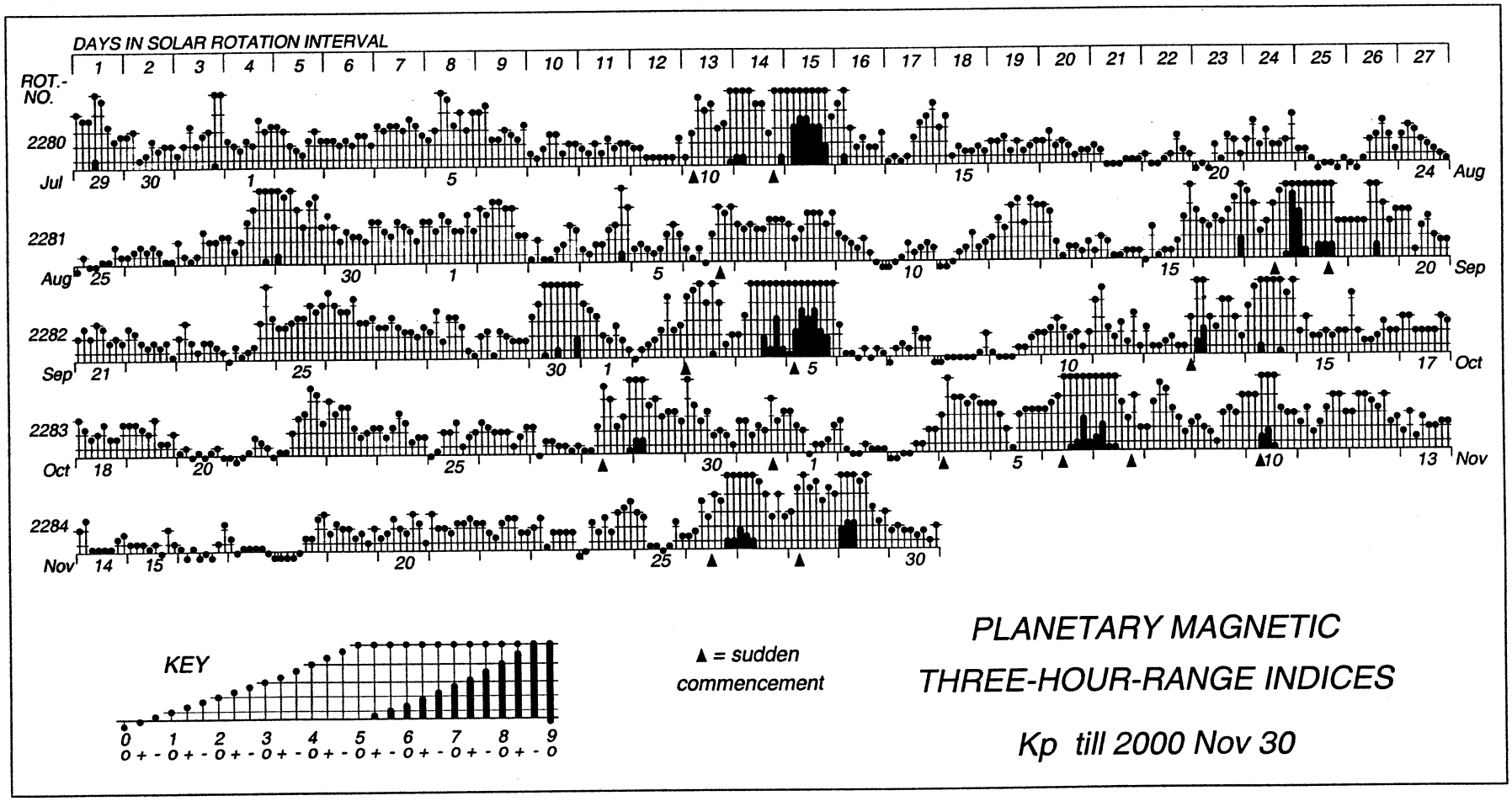


Day	Dec 99	Jan 00	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov
1	5	30	8	21	13	15	8	7	12	16	13	7
2	5	16	8	11	15	21	6	4	10	23	10	4
3	16	12	10	5	9	17	11	8	9	7	30	3
4	30	13	5	3	22	6	12	8	17	18	63	26
5	20	19	12	6	11	10	24	9	25	7	116	14
6	18	19	34	12	82	11	15	5	16	12	4	55
7	16	10	31	16	74	5	11	5	7	15	4	46
8	14	5	15	14	10	4	64	6	6	17	2	18
9	14	3	11	4	14	8	5	6	5	5	4	13
10	10	6	10	9	19	6	21	20	25	4	8	42
11	7	24	17	13	9	4	25	34	47	4	15	16
12	11	10	60	19	7	15	15	9	123	21	6	20
13	26	9	14	4	6	14	10	42	19	10	36	9
14	3	8	33	6	2	9	29	51	12	4	45	5
15	4	6	17	2	6	12	23	164	8	12	8	4
16	5	6	7	2	22	16	5	50	7	29	10	3
17	7	3	6	4	12	28	6	8	6	56	11	3
18	6	3	1	6	6	7	10	12	3	70	9	5
19	5	5	3	7	12	7	6	14	4	30	9	6
20	3	10	5	6	13	4	6	36	4	12	3	8
21	2	2	21	4	10	5	6	7	10	9	3	9
22	1	22	6	12	5	8	11	12	2	6	16	8
23	2	29	11	14	6	29	27	23	7	7	15	6
24	11	13	30	11	21	93	15	5	8	12	9	11
25	10	7	20	8	5	28	6	5	3	19	6	6
26	2	8	16	3	2	15	40	19	5	24	8	28
27	7	17	13	4	13	8	18	7	7	11	4	45
28	8	32	16	4	14	9	10	32	27	12	20	31
29	8	30	7	10	12	24	8	27	35	7	34	56
30	11	15		12	12	22	4	8	12	51	15	6
31	36	10		23		10		21	14		13	
Mean	10	13	16	9	15	15	15	21	16	18	18	17

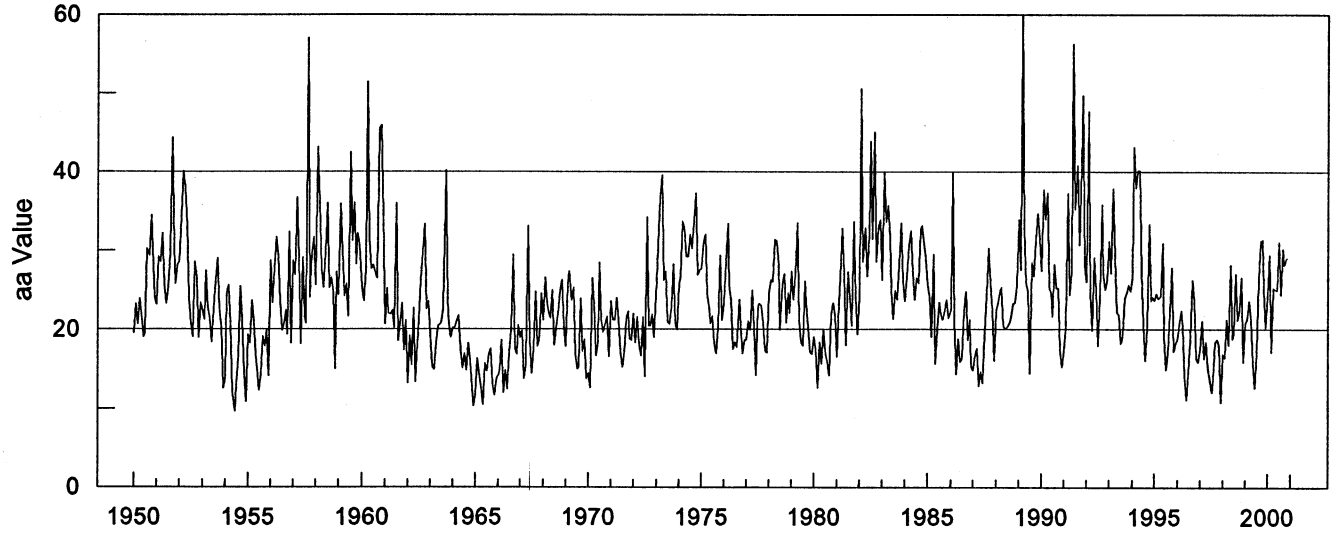
PLANETARY 3-HOUR-RANGE INDICES (Kp) BY 27-DAY SOLAR ROTATION INTERVAL

GeoForschungsZentraum Potsdam

Kp through November 30, 2000



Monthly Mean aa Index Jan 1950 - Nov 2000

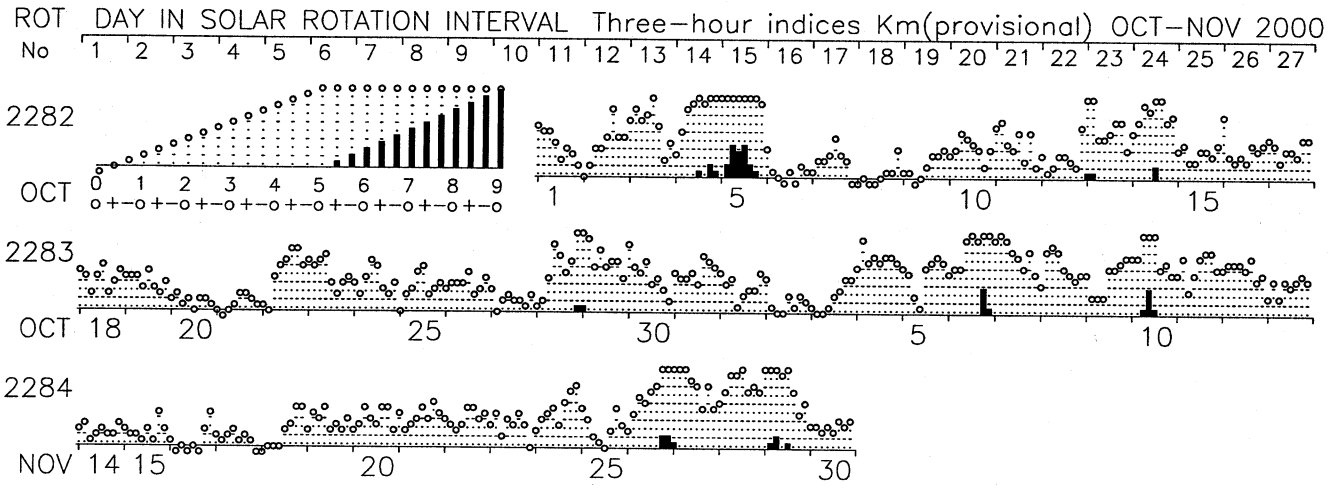


Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Mean
1950	19.5	23.2	20.6	23.8	21.7	19.0	19.5	30.2	29.3	34.5	28.0	24.0	24.4
1951	23.1	29.2	28.5	32.1	25.5	23.2	25.2	29.7	44.4	30.3	25.7	28.2	28.8
1952	28.5	34.3	40.1	38.0	33.1	23.8	20.7	19.0	28.5	26.4	18.9	23.4	27.9
1953	22.3	21.2	27.4	22.7	21.4	18.4	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		26.2

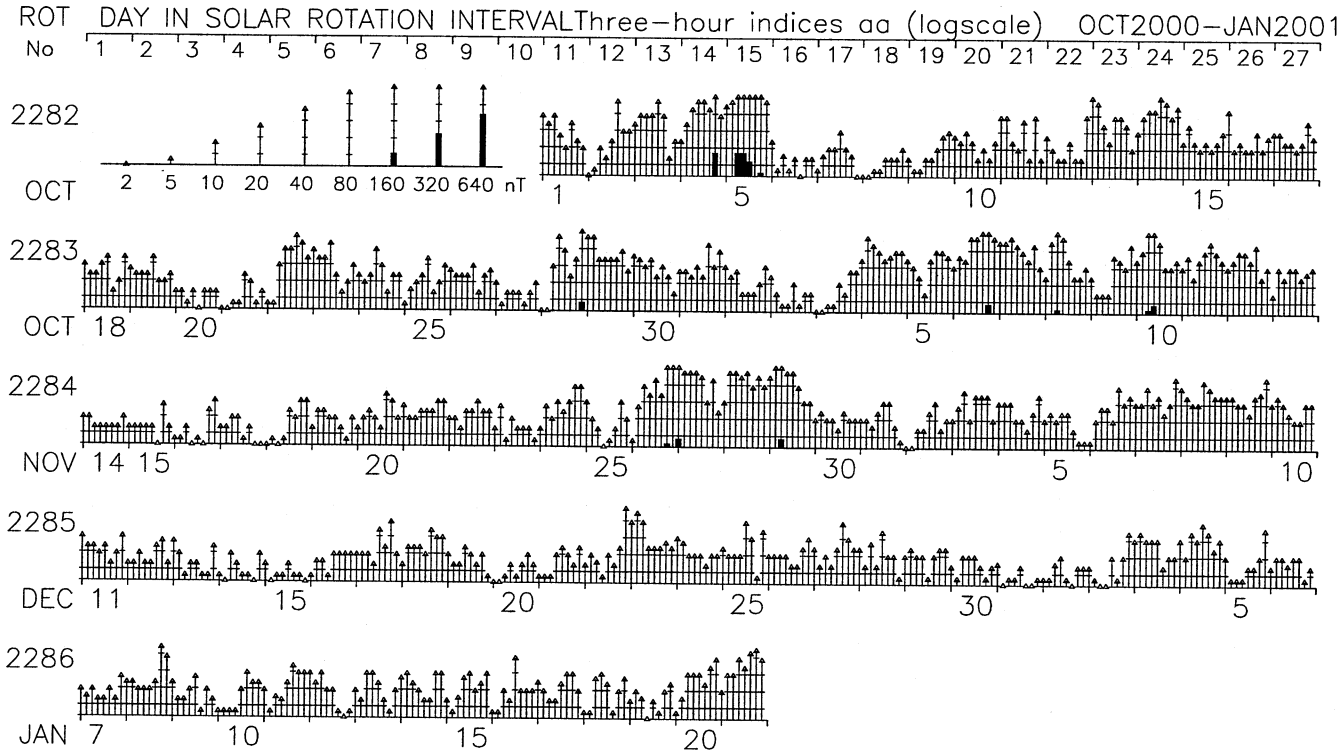
PLANETARY GEOMAGNETIC ACTIVITY

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

ISGI PUBLICATION OFFICE – EMail : ISGI.PUBOFF@cetp.ipsl.fr
CETP, 4 Avenue de Neptune, F-94107 Saint Maur des Fosses CEDEX – FRANCE



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



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

WDC-C2 FOR GEOMAGNETISM, KYOTO UNIVERSITY

HOURLY EQUATORIAL DST VALUES(PROVISIONAL)

NOVEMBER 2000

UNIT=NT

DAY	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24 (U.T.)
1	-12	-21	-23	-21	-22	-20	-14	-16	-11	-9	-9	-11	-11	-9	-6	-7	-10	-13	-16	-15	-11	-14	-13	-15
2	-15	-15	-15	-11	-10	-10	-10	-8	-6	-5	-7	-9	-9	-10	-10	-6	-4	-5	-5	-3	-2	3	4	2
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4	8	10	30	38	15	-7	-33	-30	-45	-47	-39	-28	-30	-28	-29	-27	-26	-32	-33	-28	-39	-43	-32	-29
5	-29	-25	-22	-22	-24	-23	-19	-16	-9	-4	-4	-6	-8	-12	-24	-30	-30	-22	-23	-32	-39	-40	-37	-40
6	-34	-30	-33	-38	-43	-45	-46	-42	-34	-29	-28	-35	-31	-30	-59	-93	-83	-102	-92	-123	-144	-159	-132	-136
7	-142	-143	-134	-124	-113	-114	-111	-112	-108	-104	-106	-97	-92	-88	-76	-64	-60	-54	-48	-33	-33	-42	-41	-42
8	-36	-39	-40	-31	-31	-33	-17	-28	-30	-29	-1	3	-6	-23	-29	-30	-33	-28	-24	-27	-25	-30	-28	-25
9	-25	-28	-24	-18	-13	-10	-10	-8	-8	-12	-13	-10	-6	-6	-6	-16	-13	-11	-19	-18	-9	-10	-11	-19
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11	-56	-51	-51	-51	-43	-32	-29	-28	-23	-20	-19	-24	-28	-31	-32	-28	-37	-34	-29	-35	-28	-34	-34	-31
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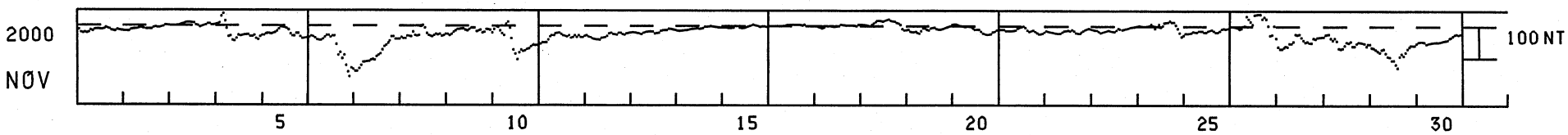
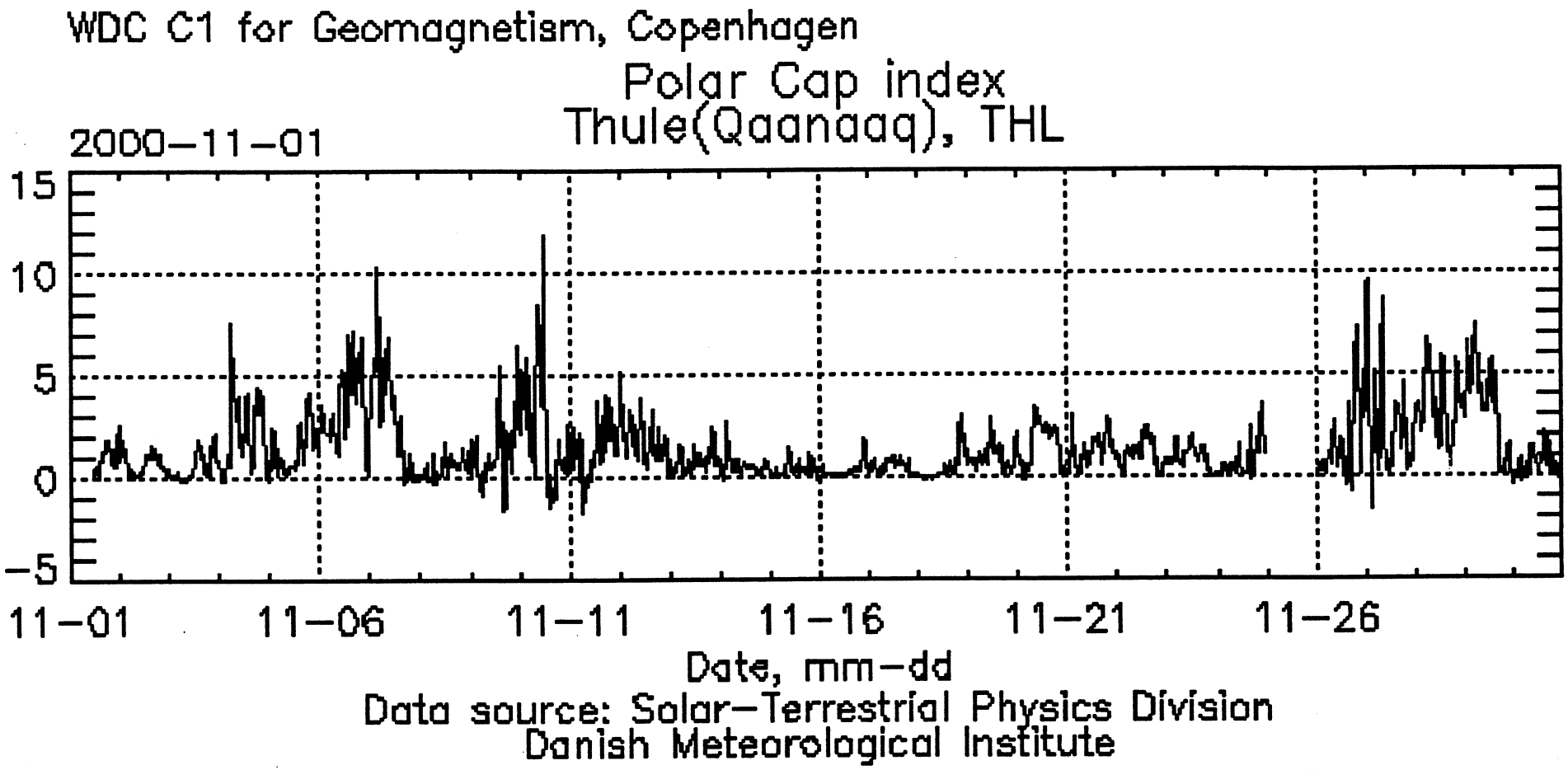
29	-67	-68	-74	-77	-81	-73	-70	-83	-95	-96	-107	-108	-120	-130	-95	-86	-91	-82	-72	-64	-60	-61	-60	-54
30	-49	-47	-47	-50	-55	-53	-52	-51	-49	-49	-50	-49	-47	-46	-45	-44	-38	-34	-31	-26	-25	-26	-24	-22



Note: The baselines for the observatories were adjusted for secular change for the Provisional Dst values for November 2000.

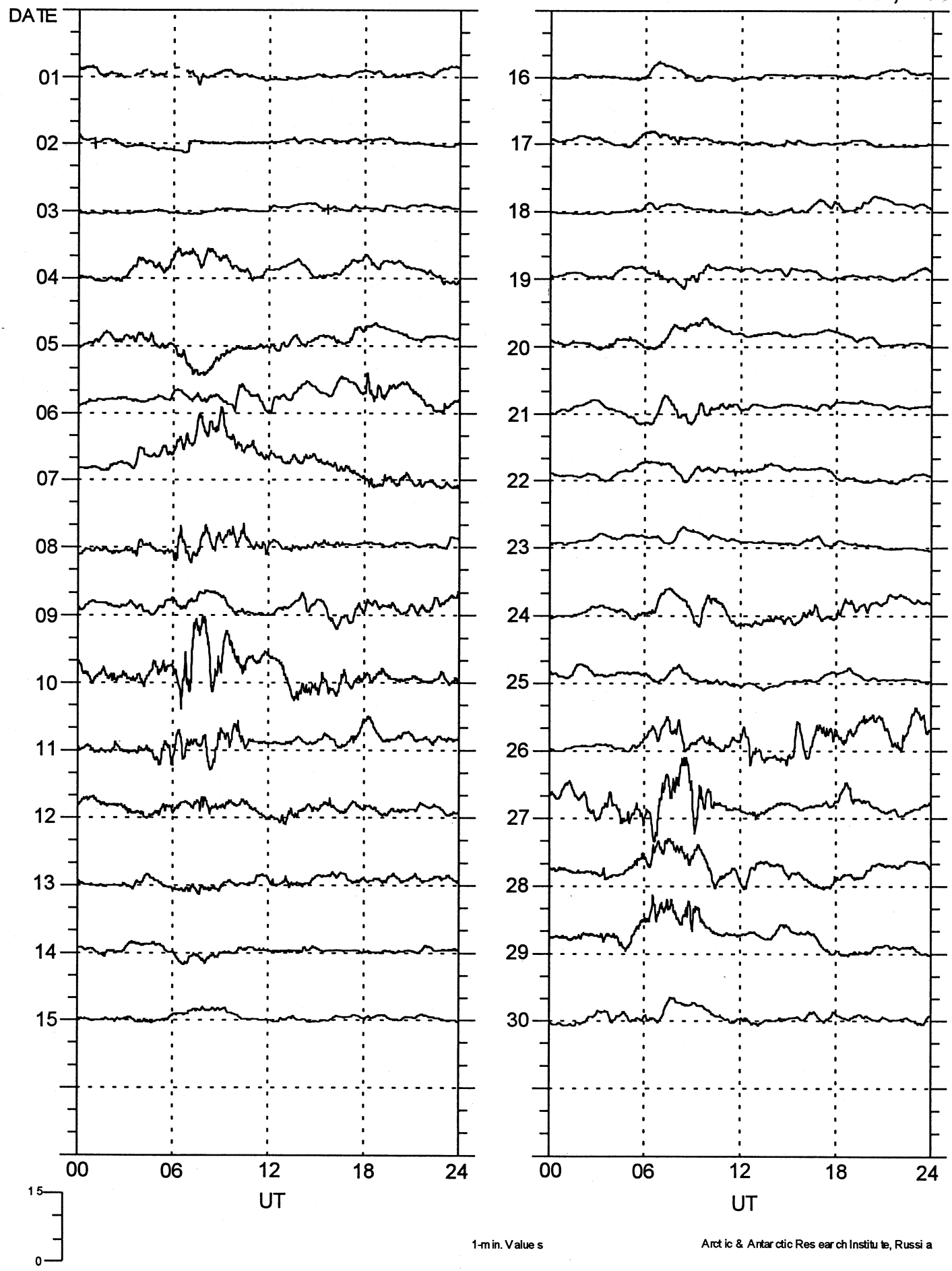

WDC C1 for Geomagnetism, Copenhagen
Polar Cap index
Thule(Qaanaaq), THL
2000-11-01
15
10
5
0
-5
11-01
11-06
11-11
11-16
11-21
11-26
Date, mm-dd
Data source: Solar-Terrestrial Physics Division
Danish Meteorological Institute

160
Nov 00

PC-INDEX

Vostok

November, 2000



1-min. Values

Arctic & Antarctic Research Institute, Russia

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

NOVEMBER 2000

Sta	Geomag Lat	Commencement Day	Commencement Time (UT)	Type	SC Amplitudes D (Min)	SC Amplitudes H (Gamma)	SC Amplitudes Z (Gamma)	Maximum 3-Hour K Index Day(3-Hour Periods)	K	Ranges D (Min)	Ranges H (Gamma)	Ranges Z (Gamma)	End Day	End Hour (UT)
UJJ	13.6N	04	0221	SC*	- 0.6	19	- 5		-	3	111	18	06	01
NGP	11.3N	04	0221	SC*	- 0.3	22	- 3		-	3	149	23	06	01
ABG	09.4N	04	0221	SC	- 0.5	19	- 7	04(1,2) 05(5)	5	3	133	32	06	01
HYB	07.6N	04	0221	SC	- 0.5	18	- 1	04(1,2)	5	3	136	22	06	02
PND	02.0N	04	0221	SC*	--	--	--		-	--	--	--	06	01
TIR	00.6S	04	0221	SC*	- 0.4	17	20		-	5	227	93	06	01
ETT	00.7S	04	0222	SC	0	20	18		-	--	216	79	05	24
BJI	28.8N	06	0947	SC	0.6	18	0	06(5)	6	13	157	30	07	24
KRC	16.4N	06	0950	SC	- 2.0	25	46	06(4,5,7,8) 07(7)	6	12	179	84	07	21
UJJ	13.6N	06	0948	SC	- 0.4	17	- 3		-	5	247	44	08	18
NGP	11.3N	06	0948	SC	- 0.1	16	- 3		-	6	302	29	08	18
ABG	09.4N	06	0948	SC	- 0.4	14	- 5	06(4,5) 08(3,4)	6	6	286	49	08	18
HYB	07.6N	06	0948	SC	- 0.3	15	- 2	06(5,6,7) 08(2,3,4)	6	5	284	26	08	22
PND	02.0N	06	0948	SC	--	--	--		-	--	--	--	08	18
TIR	00.6S	06	0948	SC	- 0.4	19	24		-	6	302	148	08	18
ETT	00.7S	06	0948	SC	0	20	15		-	--	349	118	08	21
HER	33.6S	06	09--	..	..	..	..	06(7,8)	6	42	204	201	08	16
KRC	16.4N	07	2219	..	..	..	..	08(3)	7	9	141	97	09	07
BJI	28.8N	10	0613	SC	4.1	76	0	10(3)	6	17	221	25	10	21
KRC	16.4N	10	0630	SC	- 6.0	123	41	10(3)	6	7	285	85	11	06
UJJ	13.6N	10	0626	SC	- 1.5	84	- 12		-	3	242	36	11	22
NGP	11.3N	10	0626	SC	- 1.4	66	- 22		-	3	286	28	11	22
ABG	09.4N	10	0626	SC	- 1.8	81	- 15	10(3,4)	6	4	275	39	11	22
HYB	07.6N	10	0628	SC	- 1.1	82	- 8	10(3,4,5)	6	4	283	19	11	23
PND	02.0N	10	0626	SC	--	--	--		-	--	--	--	11	22
TIR	00.6S	10	0626	SC	- 2.4	108	129		-	6	331	191	11	22
ETT	00.7S	10	0628	SC	- 0.1	110	87		-	--	351	158	12	21
HER	33.6S	10	0627	SC	1	40	20	10(4)	6	33	221	115	10	15
BJI	28.8N	26	0552	SC	0.8	17	0	26(8)	6	15	149	19	27	15
KRC	16.4N	26	0525	..	..	..	..	26(7,8) 27(5)	6	8	147	66	28	02
UJJ	13.6N	26	0552	SC	- 0.3	15	- 5		-	6	143	32	27	23
NGP	11.3N	26	0552	SC	0.1	18	- 2		-	8	181	24	27	23
ABG	09.4N	26	0552	SC	- 0.3	16	- 4	26(3,4,6,7,8) 27(1,2,3,4,5,7)	5	7	174	32	27	23
HYB	07.6N	26	0551	SC	- 0.4	15	- 1	26(3,4,7,8) 27(2,3,4,5,7)	5	6	166	20	27	24
HYB	07.6N	26	0759	SC	- 0.2	32	- 3		-	--	--	--	--	--
HYB	07.6N	26	1159	SC	- 0.7	26	- 2		-	--	--	--	--	--
PND	02.0N	26	0552	SC	--	--	--		-	--	--	--	27	23
TIR	00.6S	26	0552	SC	- 0.3	23	23		-	7	230	115	27	23
ETT	00.7S	26	0300	..	..	..	..		-	--	284	102	29	24
HER	33.6S	26	05--	..	..	..	..	26(7)	6	34	126	164	27	20
UJJ	13.6N	28	0530	SC	- 0.4	23	- 5		-	4	121	19	28	20
NGP	11.3N	28	0530	SC	0.7	26	- 4		-	5	151	15	28	20
ABG	09.4N	28	0530	SC	- 0.4	20	- 2	28(3,4,6)	-	4	145	27	28	20
HYB	07.6N	28	0530	SC	- 0.2	26	- 4	29(3,5)	6	5	224	32	30	02
PND	02.0N	28	0530	SC	--	--	--		-	--	--	--	28	20
TIR	00.6S	28	0530	SC	- 0.9	55	60		-	5	230	103	28	20
KRC	16.4N	29	0324	..	..	..	..	29(3)	7	9	202	59	30	06
UJJ	13.6N	29	0100	..	..	..	..		-	4	186	21	29	23
NGP	11.3N	29	0100	..	..	..	..		-	3	218	22	29	23
ABG	09.4N	29	0100	..	..	..	..	29(3)	7	4	202	42	29	23
PND	02.0N	29	0100	..	..	..	..		-	--	--	--	29	23
TIR	00.6S	29	0100	..	..	..	..		-	5	230	160	29	23
HER	33.6S	29	00--	..	..	..	..	29(1,2,3)	5	33	186	80	29	18

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

NOVEMBER 2000

Storm Sudden Commencements (SSC)

Day	Time	Quality: Station Group*
04	0221	A: NAG BJI LNP
		B: NUR WNG GCK EBR SPT* KAK HTY KNY* HYB
		C: BDV MMB*
06	0947	A: BJI SPT* LNP
		B: NUR* WNG* VAL* MMB* EBR KAK* KNY* HYB
		C: NGK* BDV* GCK*
10	0628	A: WNG* VAL* CLF* MMB* EBR SPT* KAK* HTY* KNY* LNP HYB
		B: NGK* BDV*
		C: HER
26	0758	A: SOD* EBR* BJI HYB
		B: GCK
		C: BDV*
		si: VAL
26	1158	A: EBR BJI SPT* LNP HYB
		B: SOD* NUR* WNG* NGK* VAL* BDV* HRB HTY
28	0531	A: HYB
		B: WNG* BDV* LNP
		C: NGK* VAL*

Solar Flare Effects (sfe)

Day	Begin-End	Station(s)
18	1054-1115	BDV+
23	2319-2345	HTY+
24	0457-0530	MMB+KAK+KNY CNB+
24	0559-0612	HYB

REPORTING OBSERVATORIES (up to the 3rd of January 2001):
SOD NUR WNG NGK VAL BDV CLF HRB NAG GCK MMB EBR BJI SPT KAK HTY KNY LNP HYB GNA HER 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 (+).