



**U.S. DEPARTMENT OF COMMERCE**

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**NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION**

John V. Byrne, Administrator

**ENVIRONMENTAL DATA AND INFORMATION SERVICE**

Margaret E. Courain, Acting Director

# Solar - Geophysical Data

NO. 459 NOVEMBER 1982

**Part I (Prompt Reports)**

DATA FOR  
OCTOBER 1982  
SEPTEMBER 1982

**NATIONAL GEOPHYSICAL DATA CENTER  
BOULDER, COLORADO**

For obtaining bulletins on a data exchange basis, send request to: World Data Center A for Solar-Terrestrial Physics, NOAA/EDIS/NGSDC, 0631, 325 Broadway, Boulder, Colorado 80303.

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To standardize referencing these reports in the open literature, the following format is recommended:  
Solar-Geophysical Data, 450 Part I (or Part II), pages, February 1982, U.S. Department of Commerce (Boulder, Colorado, U.S.A. 80303).

# SOLAR-GEOPHYSICAL DATA

No. 459

*Issued in two parts*

Helen E. Coffey, Editor

Joe H. Allen, Chief  
Solar-Terrestrial Physics Division

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## SGD 459 Part I (Prompt)

## OCTOBER 1982 DATA

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ALERT PERIODS  
INTERNATIONAL URSIGRAM  
AND WORLD DAYS SERVICE  
OCTOBER 1982

SUMMARY OF THE GEOALERT YWA MESSAGES

Message serial number	Date of issue	Date of observation	Wolf number	10 cm solar flux	A index	Active Regions				Outstanding events	Forecasts			Alert Situations									
						Location		No of Flares			Date	Location	Desc*										
						Lat-Long	Total	M	X						Lat-Long								
274	01	30	183	202	012	S18W52	1	0	0	Presto Tenflare 210 Flux Units 30/0134Z.Soflare M3/18 N16E06 30/0132Z Duration 46 Minutes.	01	S18W52	Q	SOLALERT 01/03 MAGALERT MINOR 01/03									
						S10W35	0	0	0			S10W36	Q										
						N15W26	2	0	0			N15W26	E										
						S12W26	5	0	0			S12W26	E										
						N14W11	10	1	0			N14W11	A										
						S19W00	1	0	0			S19W00	Q										
S02E01	1	0	0	S02E01	Q																		
275	02	01	258	205	020	S17W65	0	0	0		02	S17W65	Q	SOLALERT 02/04 MAGALERT 02/03									
						S09W51	0	0	0			S09W51	Q										
						S12W40	6	0	0			S12W40	E										
						N16W38	2	0	0			N16W38	E										
						N15W24	4	0	0			N15W24	A										
						N24W20	0	0	0			N24W20	Q										
						N29W19	0	0	0			N29W19	Q										
						S19W17	1	0	0			S19W17	E										
						S02W14	0	0	0			S02W14	Q										
						N12W13	0	0	0			N12W13	Q										
						N17E03	0	0	0			N17E03	Q										
						276	03	02	276			218	022		S17W79	0	0	0		03	S17W79	Q	SOLALERT 03/04 MAGNIL
															S08W65	0	0	0			S08W65	Q	
S12W53	6	0	0	S12W53	E																		
N17W50	0	0	0	N17W50	Q																		
N15W37	7	0	0	N15W37	E																		
N23W34	0	0	0	N23W34	Q																		
S18W28	2	0	0	S18W28	E																		
S02W27	1	0	0	S02W27	Q																		
N16W26	4	0	0	N16W26	Q																		
S20W22	0	0	0	S20W22	Q																		
N17W10	3	0	0	N17W10	Q																		
N09E16	0	0	0	N09E16	Q																		
S09E75	0	0	0	S09E75	Q																		
277	04	03	215	195	012					S12W67	4			0	0		04	S12W67			E	SOLALERT 04/05 MAGQUIET	
						N18W62	0	0	0	N18W62	Q												
						N14W50	5	0	0	N14W50	E												
						N23W43	0	0	0	N23W43	Q												
						S02W42	0	0	0	S02W42	E												
						S17W41	2	0	0	S17W41	E												
						N13W40	1	0	0	N13W40	Q												
						S21W32	0	0	0	S21W32	Q												
						N16W25	1	0	0	N16W25	Q												
						S10E63	0	0	0	S10E63	Q												
						278	05	04	179	184	013	S12W79	2	0	0				05	S12W79	E		SOLNIL MAGQUIET
N18W74	0	0	0	N18W74	Q																		
N14W63	5	0	0	N14W63	E																		
N01W56	0	0	0	N01W56	Q																		
S18W54	0	0	0	S18W54	Q																		
N13W53	2	0	0	N13W53	Q																		
S19W46	0	0	0	S19W46	Q																		
N17W40	0	0	0	N17W40	Q																		
S12E50	0	0	0	S12E50	Q																		
N07E74	0	0	0	N07E74	Q																		
279	06	05	169	164	009							S13W91	0	0	0		06			S13W91	Q	SOLQUIET MAGQUIET	
						N18W85	1	0	0	N18W85	Q												
						N14W75	2	0	0	N14W75	Q												
						S02W69	0	0	0	S02W69	Q												
						S18W68	0	0	0	S18W68	Q												
						N13W66	7	0	0	N13W66	Q												
						N16W53	0	0	0	N16W53	Q												
						N09W39	0	0	0	N09W39	Q												
						N15W20	0	0	0	N15W20	Q												
						S10E37	0	0	0	S10E37	Q												
						N07E60	0	0	0	N07E60	Q												
280	07	06	115	152	018	N14W89	4	1	0		07	N14W89	E	SOLQUIET MAGQUIET									
						S17W81	1	0	0			S17W81	Q										
						N13W80	4	0	0			N13W80	Q										
						N08W54	0	0	0			N08W54	Q										
						S21E17	0	0	0			S21E17	Q										
						S11E23	1	0	0			S11E23	Q										
						N22E45	1	0	0			N22E45	Q										
						N08E47	0	0	0			N08E47	Q										
281	08	07	096	140	028	N08W68	2	0	0		08	N08W68	Q	SOLQUIET MAGQUIET									
						S23E06	0	0	0			S23E06	Q										
						S12E07	0	0	0			S12E07	Q										
						S12E09	1	0	0			S12E09	Q										
						N08E34	0	0	0			N08E34	Q										
						N22E35	5	0	0			N22E35	Q										
282	09	08	080	137	017	N07W82	2	0	0		09	N07W82	Q	SOLQUIET MAGQUIET									
						S12W02	1	0	0			S12W02	Q										
						N15E19	0	0	0			N15E19	Q										
						N08E22	0	0	0			N08E22	Q										
						N22E23	1	0	0			N22E23	Q										

**ALERT PERIODS**  
INTERNATIONAL URSIGRAM  
AND WORLD DAYS SERVICE  
OCTOBER 1982

SUMMARY OF THE GEOALERT WWA MESSAGES

Message serial number	Date of issue	Date of observation	Wolf number	10 cm solar flux	A index	Active Regions				Outstanding events	Forecasts			Alert Situations
						Location		No. of Flares			Date	Location	Desc <sup>m</sup>	
						Lat-Long	Total	M	X					
283	10	09	127	138	005	N15W32	0	0	0		10	N15W32	Q	SOLQUIET MAGQUIET
						S12W15	0	0	0			S12W15	Q	
						N15E04	0	0	0			N15E04	Q	
						N08E05	0	0	0			N08E05	Q	
						N22E10	4	0	0			N22E10	E	
						N08E27	0	0	0			N08E27	Q	
						S12E74	0	0	0			S12E74	Q	
						N17E80	0	0	0			N17E80	Q	
284	11	10	134	135	010	S10W28	0	0	0		11	S10W28	Q	SOLQUIET MAGQUIET
						N15W11	0	0	0			N15W11	Q	
						N07W06	0	0	0			N07W06	Q	
						N22W04	2	0	0			N22W04	E	
						N09E11	2	0	0			N09E11	Q	
						S10E20	0	0	0			S10E20	Q	
						S13E61	0	0	0			S13E61	E	
						N16E66	0	0	0			N16E66	E	
285	12	11	157	138	012	S22W48	0	0	0		12	S22W48	Q	SOLQUIET MAGQUIET
						S18W41	0	0	0			S18W41	Q	
						N13W28	0	0	0			N13W28	Q	
						N23W18	9	0	0			N23W18	E	
						N08W18	0	0	0			N08W18	Q	
						N12W15	0	0	0			N12W15	Q	
						N09W03	1	0	0			N09W03	Q	
						S10E05	0	0	0			S10E05	Q	
						S13E47	0	0	0			S13E47	E	
						N16E52	0	0	0			N16E52	E	
						286	13	12	208			137	010	
S11W55	0	0	0	S11W55	Q									
N13W39	1	0	0	N13W39	Q									
S13E34	0	0	0	S13E34	Q									
N23W32	3	0	0	N23W32	E									
N13W29	0	0	0	N13W29	Q									
N09W18	0	0	0	N09W18	Q									
S11W07	0	0	0	S11W07	Q									
N03E06	0	0	0	N03E06	Q									
N12E14	0	0	0	N12E14	Q									
N07E22	3	0	0	N07E22	Q									
N17E40	0	0	0	N17E40	Q									
S08E80	0	0	0	S08E80	Q									
287	14	13	158	145	020					S24W75	0			0
						S11W67	0	0	0	S11W67	Q			
						N22W44	4	0	0	N22W44	E			
						S10W21	0	0	0	S10W21	Q			
						N03W09	1	0	0	N03W09	Q			
						N11W01	0	0	0	N11W01	Q			
						N07E07	2	0	0	N07E07	E			
						S13E25	0	0	0	S13E25	E			
S07E65	2	0	0	S07E65	E									
288	15	14	120	141	032	S11W81	0	0	0		15	S11W81	Q	SOLQUIET MAGQUIET
						N22W58	4	0	0			N22W58	E	
						S10W34	2	0	0			S10W34	Q	
						N03W23	3	0	0			N03W23	Q	
						N07W08	1	0	0			N07W08	E	
						N18E12	1	0	0			N18E12	Q	
S07E51	4	0	0	S07E51	E									
289	16	15	110	135	007	N23W72	0	0	0		16	N23W72	E	SOLQUIET MAGQUIET
						N03W37	1	0	0			N03W37	E	
						N07W21	0	0	0			N07W21	Q	
						N16E01	0	0	0			N16E01	Q	
						S15E01	1	0	0			S15E01	Q	
						S07E39	5	0	0			S07E39	E	
S09E47	2	0	0	S09E47	Q									
290	17	16	094	131	015	N22W84	0	0	0		17	N22W84	Q	SOLQUIET MAGQUIET
						S09W61	1	0	0			S09W61	Q	
						N03W50	1	0	0			N03W50	Q	
						N06W35	0	0	0			N06W35	Q	
						S15W14	0	0	0			S15W14	Q	
S07E25	4	0	0	S07E25	E									
291	18	17	091	131	017	S09W72	0	0	0		18	S09W72	Q	SOLQUIET MAGQUIET
						N04W63	1	0	0			N04W63	Q	
						N06W51	1	0	0			N06W51	Q	
						S14W26	1	0	0			S14W26	Q	
						N16E03	0	0	0			N16E03	Q	
						S07E12	2	0	0			S07E12	E	
N16E20	0	0	0	N16E20	Q									
292	19	18	062	134	018	N04W78	0	0	0		19	N04W78	Q	SOLQUIET MAGQUIET
						N06W66	0	0	0			N06W66	Q	
						S07W01	2	0	0			S07W01	E	
						S07E64	0	0	0			S07E64	Q	
						S09E80	1	0	0			S09E80	Q	

**ALERT PERIODS**  
**INTERNATIONAL URSIGRAM**  
**AND WORLD DAYS SERVICE**  
OCTOBER 1982

**SUMMARY OF THE GEOALERT WWA MESSAGES**

Message serial number	Date of issue	Date of observation	Wolf number	IO cm solar flux	A index	Active Regions			Outstanding events	Forecasts			Alert Situations	
						Location		No. of Flares		Date	Location			Desc*
						Lat-Long	Total				M	X		
293	20	19	102	138	014	N06W79	0	0	0		20	N06W79	Q	SOLQUIET MAGQUIET
						N08W63	0	0	0			N08W63	Q	
						N14W21	0	0	0			N14W21	Q	
						S07W15	3	0	0			S07W15	E	
						S14E17	1	0	0			S14E17	Q	
						S07E51	0	0	0			S07E51	Q	
S09E70	3	0	0	S09E70	E									
294	21	20	103	149	018	N06W93	0	0	0		21	N06W93	Q	SOLQUIET MAGQUIET
						S07W29	0	0	0			S07W29	Q	
						S14E05	0	0	0			S14E05	Q	
						N10E07	0	0	0			N10E07	Q	
						S07E37	0	0	0			S07E37	Q	
						S09E57	3	0	0			S09E57	E	
N12E64	0	0	0	N12E64	Q									
295	22	21	133	163	008	S08W42	1	0	0		22	S08W42	Q	SOLQUIET MAGQUIET
						S14W09	0	0	0			S14W09	Q	
						N10W08	1	0	0			N10W08	Q	
						S07E22	1	0	0			S07E22	Q	
						S10E43	3	0	0			S10E43	E	
						N12E50	0	0	0			N12E50	Q	
N13E72	3	0	0	N13E72	Q									
296	23	22	176	170	008	S07W56	0	0	0		23	S07W56	Q	SOLQUIET MAGQUIET
						S14W22	0	0	0			S14W22	Q	
						N12W20	0	0	0			N12W20	Q	
						S08E09	0	0	0			S08E09	E	
						S10E28	2	0	0			S10E28	E	
						N11E35	0	0	0			N11E35	Q	
						N12E65	7	0	0			N12E65	Q	
						S07E70	1	0	0			S07E70	Q	
						N06E75	0	0	0			N06E75	Q	
						297	24	23	214			182	008	
N10W35	0	0	0	N10W35	Q									
S13W35	0	0	0	S13W35	Q									
N13E13	3	0	0	N13E13	Q									
S10E13	14	1	0	S10E13	E									
N12E19	2	0	0	N12E19	Q									
S14E35	1	0	0	S14E35	Q									
N13E47	6	0	0	N13E47	Q									
S06E58	6	0	0	S06E58	Q									
N09E62	0	0	0	N09E62	Q									
298	25	24	227	193	006	S08W84	0	0	0		25	S08W84	Q	SOLALERT 25 MAGALERT 25
						S12W50	0	0	0			S12W50	Q	
						N10W48	3	0	0			N10W48	Q	
						N13W01	2	0	0			N13W01	Q	
						S10E02	9	0	0			S10E02	E	
						N12E07	4	0	0			N12E07	Q	
						S14E22	0	0	0			S14E22	Q	
						N11E34	12	1	0			N11E34	Q	
						N16E42	0	0	0			N16E42	Q	
						S06E43	2	0	0			S06E43	Q	
N07E48	1	0	0	N07E48	Q									
299	26	25	243	202	021	S07W93	0	0	0		26	S07W93	Q	SOLALERT 26 MAGALERT 26/27
						N10W62	0	0	0			N10W62	Q	
						N13W15	3	0	0			N13W15	Q	
						S10W11	14	0	0			S10W11	E	
						N12W07	3	0	0			N12W07	Q	
						S13E08	0	0	0			S13E08	Q	
						N12E20	7	1	0			N12E20	E	
						N16E28	5	0	0			N16E28	Q	
						S06E30	8	0	0			S06E30	Q	
						N07E35	0	0	0			N07E35	Q	
N07E53	0	0	0	N07E53	Q									
300	27	26	237	196	025	N09W73	0	0	0		27	N09W73	Q	SOLALERT MAGALERT
						N12W28	0	0	0			N12W28	E	
						S10W25	10	0	0			S10W25	Q	
						N12W20	1	0	0			N12W20	Q	
						S13W05	0	0	0			S13W05	Q	
						N10W03	2	0	0			N10W03	Q	
						N12E07	5	0	0			N12E07	E	
						N13E12	0	0	0			N13E12	Q	
						S06E15	4	0	0			S06E15	Q	
						N06E38	0	0	0			N06E38	Q	
301	28	27	210	191	016	N08W86	0	0	0	Presto Sofflare M3/28 S11W22 27/0331Z Duration 33 Minutes.TenFlare 730 Flux Units 27/0427Z Duration 40 Minutes.	28	N08W86	Q	SOLALERT MAGALERT
						N13W41	3	0	0			N13W41	Q	
						S12W38	5	2	0			S12W38	E	
						N11W36	0	0	0			N11W36	Q	
						N09W16	0	0	0			N09W16	Q	
						N12W06	10	0	0			N12W06	E	
						N14E02	0	0	0			N14E02	Q	
						S06E02	4	0	0			S06E02	E	
302	29	28	164	184	014	N13W54	2	0	0		29	N13W54	Q	SOLNIL MAGALERT MINOR 29
						S11W51	8	0	0			S11W51	E	

ALERT PERIODS

INTERNATIONAL URSIGRAM  
AND WORLD DAYS SERVICE  
OCTOBER 1982

SUMMARY OF THE GEOALERT WWA MESSAGES

Message serial number	Date of issue	Date of observation	Wolf number	10 cm solar flux	A index	Active Regions			Outstanding events	Forecasts			Alert Situations	
						Location		No. of Flares		Date	Location			Desc*
						Lat-Long	Total				M	X		
303	30	29	138	177	033	N12W48	0	0	0		30	N12W48	Q	SOLQUIET MAGALERT MINOR 30
						N10W32	1	0	0			N10W32	Q	
						N13W19	3	0	0			N13W19	E	
						S21W16	0	0	0			S21W16	Q	
						S06W11	2	0	0			S06W11	E	
						N08E12	0	0	0			N08E12	Q	
						N12W70	5	0	0			N12W70	Q	
						S11W65	7	0	0			S11W65	E	
						N14W57	1	0	0			N14W57	Q	
						N10W47	1	0	0			N10W47	Q	
304	31	30	137	169	028	N13W31	3	0	0		31	N12W84	Q	SOLQUIET MAGALERT MAGNIL
						S21W28	0	0	0			S10W80	E	
						S06W26	3	0	0			N14W71	Q	
						N07W00	1	0	0			N11W45	Q	
						N12W84	1	0	0			S06W39	E	
						S10W80	1	0	0			S19W35	Q	
						N14W71	0	0	0			S19W35	Q	
						N11W45	0	0	0			N07W12	Q	
						S06W39	1	0	0			S09W01	Q	
						S19W35	0	0	0					
305	01	31	118	168	025	N07W12	5	0	0		01	N13W84	Q	SOLQUIET MAGALERT 01
						S09W01	0	0	0			N10W58	Q	
						N13W84	1	0	0			S07W53	E	
						N10W58	0	0	0			N06W25	E	
						S07W53	1	0	0			S10W14	Q	
						N06W25	2	0	0			S24E51	Q	
						S10W14	0	0	0			N21E74	Q	
						S24E51	0	0	0					
						N21E74	0	0	0					

PRESTO MESSAGES (THE RAPID REPORT OF MAJOR EVENTS)

27 OCTOBER 1982 TOYOKAWA 27/0445Z TENFLARE 130 FLUX UNITS 27/0404Z DURATION 13 MINUTES  
 27 OCTOBER 1982 TOYOKAWA 27/0520Z TENFLARE 720 FLUX UNITS 27/0428Z DURATION 40 MINUTES  
 27 OCTOBER 1982 SYDNEY 27/0505Z TENFLARE 626 FLUX UNITS 27/0440Z  
 27 OCTOBER 1982 BOULDER 27/0646Z SOFLARE M3/2B S11W22 27/0331Z DURATION 32 MINUTES  
 27 OCTOBER 1982 BOULDER 27/0646Z TENFLARE 730 FLUX UNITS 27/0427Z DURATION 33 MINUTES



RELATIVE SUNSPOT NUMBERS  
INTERNATIONAL, R<sub>1</sub>

DAY	1981 FINAL		1982 FINAL			1982 PROVISIONAL						
	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT
1	165	193	92	258	168	145	63	70	50	55	115	132
2	222	197	94	241	174	115	57	83	41	68	124	164
3	218	212	112	232	175	151	46	94	33	68	146	143
4	221	212	109	221	177	137	58	104	42	81	176	120
5	233	219	112	219	163	112	63	111	50	97	160	109
6	199	234	86	230	165	117	64	108	32	128	141	55
7	192	244	94	226	146	130	69	115	33	144	117	54
8	184	249	97	232	140	131	89	127	49	150	115	55
9	134	258	98	211	116	132	47	142	61	161	100	54
10	147	253	85	181	122	138	53	147	110	155	81	88
11	146	263	46	158	119	152	58	138	146	157	86	87
12	160	240	52	156	135	142	75	144	177	138	78	92
13	158	185	51	162	155	148	78	139	219	113	81	98
14	178	159	58	142	153	136	58	137	222	100	104	88
15	139	113	81	134	140	127	52	125	234	100	129	71
16	126	66	76	111	156	122	69	128	263	86	133	65
17	103	80	111	120	180	108	76	136	272	93	127	54
18	108	79	139	103	168	91	89	134	220	105	107	39
19	90	74	143	107	167	87	110	134	200	91	117	56
20	82	57	134	119	160	93	112	139	180	77	104	70
21	82	65	134	120	153	91	98	143	129	79	102	91
22	73	75	121	100	146	109	121	146	99	90	95	100
23	65	86	93	97	144	138	107	116	74	71	97	128
24	59	68	70	120	122	145	110	112	27	79	109	145
25	60	62	82	128	152	149	88	92	25	101	118	134
26	60	100	119	136	147	150	117	94	37	98	138	135
27	77	104	125	154	182	126	130	49	22	104	133	131
28	130	136	168	163	179	90	108	36	19	120	140	103
29	148	132	216	169	169	85	102	32	23	132	144	94
30	165	112	211	162	162	75	66	38	38	134	160	96
31		126	237		132		89		54	109		73
MEAN	137.5	150.1	111.2	163.6	153.8	122.5	81.4	110.4	102.6	105.9	119.2	94.3

1981 Yearly Mean = 140.4

Zurich R<sub>2</sub> sunspot number replaced by international R<sub>1</sub> sunspot number beginning with January 1981 data.

Errata to SGD, 456 Part I, page 8, August issue: mean R<sub>1</sub> should be 102.6 and not 026.

DAILY SOLAR FLUX AT 2800 MHz  
OTTAWA ARO

FLUX ADJUSTED TO 1 A.U., S<sub>a</sub>

DAY	1981		1982									
	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT
1	222.5*	230.7*	179.9	284.8*	231.3	172.2*	151.7	134.2	106.5	123.4	184.3*	205.2
2	241.3*	230.3*	177.2	279.7*	228.3	172.0*	147.4	135.1	106.9	138.2*	168.7*	209.4*
3	255.3*	238.6	176.1	272.9*	230.1	169.9	147.7	141.5	109.4	153.5*	171.0*	197.0A
4	263.1	241.7	170.4	252.8*	238.3*	158.2	144.7	158.2*	111.5	167.3	188.1*	182.3*
5	254.1	260.0	165.5	245.2	245.4*	159.9*	148.7	156.6*	114.1	180.9	179.4	163.9
6	244.6	262.1	166.8	245.2	230.0*	165.2	153.0	149.6*	121.3	201.2	172.1	151.9
7	241.4	275.6*	166.9*	239.9	228.3	164.0*	151.0	158.6*	128.2*	219.6	176.8	140.2
8	234.7*	287.8	156.9	245.1*	207.1*	162.1*	150.8	167.3	150.3*	217.5*	178.5	136.9
9	232.6	292.4*	164.4	231.7	192.2	167.3*	139.8	177.4	176.6*	212.5	179.2	137.4
10	231.0*	278.7	145.7	213.7	178.9*	177.1*	130.7	196.0*	203.5*	209.5	165.6	134.8
11	217.0	266.7*	136.3	211.1*	178.2	178.7*	132.3	224.2	226.4*	205.0*	158.3	137.3
12	223.5	254.2*	132.4	204.0*	181.2	177.5*	132.3	238.3*	239.7*	195.2*	152.5*	136.4
13	215.9	218.9	127.5	194.9*	185.5	170.9	129.8	240.2	252.6*	182.9*	151.3	143.9
14	207.4	193.0	130.5	185.3	201.3	157.9	132.2	240.8	269.2*	176.8	147.4	140.4
15	191.2	172.6	136.3	180.3	207.6*	152.2	132.1	235.8	274.0	173.0	149.0*	134.1
16	181.2	157.4	146.7	170.5	227.7	148.2	139.0	210.6*	269.4*	161.4	147.3	129.8
17	172.7	144.2	152.6	162.5	230.4	145.9*	142.2*	206.0*	273.3	165.1	147.0*	130.1
18	160.8*	136.3*	167.6	165.7	226.8	147.0	146.8	200.7*	247.2*	166.4*	143.2	132.8
19	157.0	129.7	169.4	170.9*	219.7*	145.1	155.9	207.5	234.7	159.2	142.6*	136.7
20	152.0	133.9	167.0	171.3	217.0	144.2	155.6*	207.1	196.5	144.7	146.9	146.2*
21	153.9	142.2	163.3	165.2	212.4	145.2	165.4*	210.7	173.7*	138.6	145.4	161.4
22	152.7	145.9	152.9	163.7	213.7	156.9*	158.8	197.2*	149.5*	138.8	146.2	168.2
23	151.9	153.0	148.0	173.1	202.4	175.2	155.7*	187.3	128.5	141.2	152.6*	177.3*
24	150.4	156.1*	149.1	185.9*	189.0	181.0	144.8*	168.2	117.8	142.9	165.4*	190.9
25	159.1	162.1	169.3*	184.1	189.9	182.6*	145.7	159.1*	108.2	158.5	170.3	196.8*
26	178.3*	166.2	182.7*	204.0	192.8*	178.3	158.0	142.3	102.1	166.4	187.3	193.5
27	190.3	176.8	197.2	222.1	195.4*	167.3	171.5*	127.6	97.8	180.4	191.4	187.7*
28	206.4*	183.0	234.7	224.0	200.6	161.0*	171.3*	123.1	96.4	181.4	196.9	181.4
29	226.5*	183.6	267.0		198.0	155.6	170.9*	111.7	97.5	183.4	204.6	170.9*
30	231.6	185.7	284.5		194.5*	149.8*	142.8	108.5	112.4	174.5	202.4	166.7
31		182.8	289.1		184.1		136.7		114.4	175.0*		165.1
MEAN	203.3	201.4	173.4	208.9	208.3	162.9	147.9	177.4	164.8	172.1	167.1	160.9

\* adjusted for burst  
A = interpolated data point

DAILY SOLAR INDICES

OCTOBER 1982

DAY OF MONTH	YEAR DAY	BARTELS 27-DAY CYCLE NUMBER	PROVISIONAL SUNSPOT NUMBERS		OBSERVED FLUX OTTAWA 2800	SOLAR FLUX ADJUSTED TO 1 A.U.									
			R <sub>I</sub>	R <sub>A'</sub>		AFGL 15400	AFGL 8800	AFGL 4995	OTTAWA 2800	AFGL 2695	AFGL 1415	AFGL 606	AFGL 410	AFGL 245	
1	274	24	132	126	204.8	593	341	238	205.2	225	190	140	66	68	
2	275	25	164	149	209.2*	584	325	219	209.4*	187	170	122	47	21	
3	276	26	143	134	196.8A	598	312	202	197.0A	165	164	107	44	15	
4	277	27	120	115	182.3*	585	304	186	182.3*	160	151	110	42	18	
5	278	1	109	97	163.9	590	282	176	151.9	143	135	99	38	15	
6	279	2	55	56	152.1	573	273	163	140.2	133	132	102	40	14	
7	280	3	54	47	140.3	542	259	162	136.9	134	128	88	36	16	
8	281	4	55	55	137.2	549	251	155	137.4	130	127	83	34	17	
9	282	5	54	61	137.8	560	268	157	134.8	130	135	95	39	16	
10	283	6	88	82	135.2	589	269	160	137.3	126	124	96	37	17	
11	284	7	87	79	137.9	576	262	163	136.4	129	127	94	41	15	
12	285	8	92	89	136.9	574	283	164	143.9	138	132	98	37	14	
13	286	9	98	95	144.6	575	293	172	140.4	141	129	97	37	14	
14	287	10	88	82	141.1	581	287	163	134.1	129	126	92	37	11	
15	288	11	71	71	134.9	578	279	158	129.8	128	122	95	35	9	
16	289	12	65	58	130.7	591	278	157	130.1	140	125	93	37	13	
17	290	13	54	49	131.0	586	283	166	132.8	144	125	98	47	20	
18	291	14	39	39	133.9	589	285	169	136.7	137	121	91	40	19	
19	292	15	56	53	137.8	590	304	183	146.2*	145	125	105	44	22	
20	293	16	70	74	147.5*	599	332	199	161.4	157	147	100	37	15	
21	294	17	91	92	162.9	613	319	206	168.2	189	156	102	40	17	
22	295	18	100	103	169.9	617	320	213	177.3*	192	168	110	49	48	
23	296	19	128	125	179.1*	618	354	217	190.9	184	164	112	41	14	
24	297	20	145	130	193.0	600	315	209	196.8*	182	171	117	44	24	
25	298	21	134	130	199.2*	615	336	222	187.7*	199	197	120	42	17	
26	299	22	135	130	195.9	605	310	197	181.4	194	170	127	53	18	
27	300	23	131	118	190.2*	598	310	197	170.9*	176	166	124	48	24	
28	301	24	103	98	183.8	598	303	187	166.7	174	159	112	41	29	
29	302	25	94	100	173.3*	575	294	183	165.1	200	150	102	38	16	
30	303	26	96	87	169.1	588	298	184	160.9	159	146	105	41	20	
31	304	27	73	69	167.6	588	298	184	160.9	159	146	105	41	20	
MEAN			94.3	90.1	161.9	588	298	184	160.9	159	146	105	41	20	

\*Adjusted for burst.  
Data gaps in AFGL Sagamore Hill data are due to equipment problems.  
Errata to SGD, 456 Part I, page 9, August issue: mean R sub I should be 102.6 and not 026; mean R sub A prime should be 105.1 and not 051.

OBSERVED AND PREDICTED SOLAR ACTIVITY INDICES

Date	SUNSPOT NUMBERS						2800 MHz FLUX Adjusted to 1 AU	
	Rz or R <sub>I</sub>		Ra		Rs		Sa	
	Monthly Mean	Smoothed	Monthly Mean	Smoothed	Monthly Mean	Smoothed	Monthly Mean	Smoothed
Nov 79	183.3	162	176.5	149	182.9	149	226.8	196
Dec	176.3	164	157.6	152	151.0	152	197.2	199
Jan 80	159.6	164	145.3	153	153.6	154	199.6	200
Feb	155.0	163	133.9	154	148.7	155	195.1	200
Mar	126.2	161	107.9	153	117.8	153	166.5	200
Apr	164.1	159	138.5	151	164.0	152	209.3	198
May	179.7	156	172.3	149	185.4	151	229.1	197
Jun	157.3	155	153.6	149	153.2	151	199.3	198
Jul	136.3	153	136.0	144	144.1	151	190.8	197
Aug	135.4	150	133.0	144	121.9	150	170.3	196
Sep	155.0	150	150.0	146	138.8	152	185.9	198
Oct	164.7	150	160.8	149	157.1	154	202.9	200
Nov	147.9	148	149.9	149	168.5	153	213.4	199
Dec	174.4	143	167.5	145	174.3	150	218.8	196
Jan 81	114.0	140	115.4	144	120.5	149	169.0	195
Feb	141.3	142	143.7	146	153.5	152	199.5	198
Mar	135.5	143	149.2	149	157.5	156	203.2	202
Apr	156.4	143	169.2	149	180.7	158	224.7	204
May	127.5	143	141.3	149	152.8	159	198.9	204
Jun	90.9	142	99.0	147	112.9	158	161.9	203
Jul	143.8	140	154.3	146	152.1	157	198.2	203
Aug	158.7	141	170.4	147	182.1	158	226.0	203
Sep	167.3	143	174.5	148	177.7	158	221.9	204
Oct	162.4	142*	157.0	146	178.6	156	222.8	202
Nov	137.5	139*	138.8	142	157.6	151	203.3	197
Dec	150.1	138*	145.0	140	155.5	149	201.4	195
Jan 82	111.2	137*	110.4	139	124.2	148	173.4	195
Feb	163.6	133*	161.0	134	163.6	144	208.9	191
Mar	153.8	129*	155.5	130	163.0	139	208.3	186
Apr	122.5†	124*	121.9	127	113.9	134	162.9	182
May	81.4†	120(+ 4)*	82.6	123	97.7	130	147.9	---
Jun	110.4†	116(+ 8)*	113.5	119	129.6	126	177.4	---
Jul	102.6†	111(+ 9)*	113.3	113	116.0	120	164.8	---
Aug	105.9†	105(+ 9)*	110.5	107	123.9	113	172.1	---
Sep	119.2†	100(+ 9)*	117.8	102	118.5	107	167.1	---
Oct	94.3†	94(+ 9)*	---	95	111.8	100	160.9	---
Nov	---	89(+ 9)*	---	91	---	95	---	---
Dec	---	86(+10)*	---	87	---	91	---	---
Jan 83	---	81(+10)*	---	83	---	86	---	---
Feb	---	79(+11)*	---	80	---	83	---	---
Mar	---	77(+12)*	---	79	---	82	---	---
Apr	---	75(+13)*	---	77	---	80	---	---

\*An asterisk denotes either a value of the observed 12-month running mean or a predicted 12-month average that is based on preliminary observations of the international relative sunspot number (R<sub>I</sub>). Parentheses enclose the 90% confidence limits. Shaded boxes enclose the most recent smoothed values; boxes not shaded enclose predicted values. Ra is the new symbol for R<sub>A</sub>'. All tabulated entries of Ra are final values.

†R<sub>I</sub> replaces R<sub>Z</sub> as of January 1981.

## SMOOTHED OBSERVED AND PREDICTED SUNSPOT NUMBERS FOR CYCLE 21

Month	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1976	15	13	12	13	13	12	13	14	14	13	14	15
1977	17	18	20	22	24	26	29	33	39	46	52	57
1978	61	65	70	77	83	89	97	104	108	111	113	118
1979	124	131	137	141	147	153	155	155	156	158	162	165*
1980	164	163	161	159	156	155	153	150	150	150	148	143
1981	140	142	143	143	143	142	140	141	143	142	139	138
1982	137	133	129	124	120 ( 4)	116 ( 8)	111 ( 9)	105 ( 9)	100 ( 9)	94 ( 9)	89 ( 9)	86 (10)
1983	81 (10)	79 (11)	77 (12)	75 (13)	73 (14)	70 (15)	69 (16)	68 (18)	67 (20)	67 (21)	67 (21)	66 (22)
1984	65 (23)	62 (23)	58 (24)	54 (25)	52 (27)	51 (28)	50 (28)	48 (29)	46 (29)	44 (27)	42 (27)	40 (26)
1985	39 (26)	38 (25)	37 (25)	37 (24)	35 (24)	33 (24)	32 (22)	31 (21)	30 (21)	30 (22)	29 (23)	28 (23)
1986	28 (23)	27 (23)	26 (23)	24 (22)	23 (21)	21 (20)	19 (20)	17 (19)	17 (18)	16 (16)	16 (15)	16 (13)
1987	15 (12)	15 (12)	16 (12)	16 (12)	17 (14)	19 (14)	20 (15)					

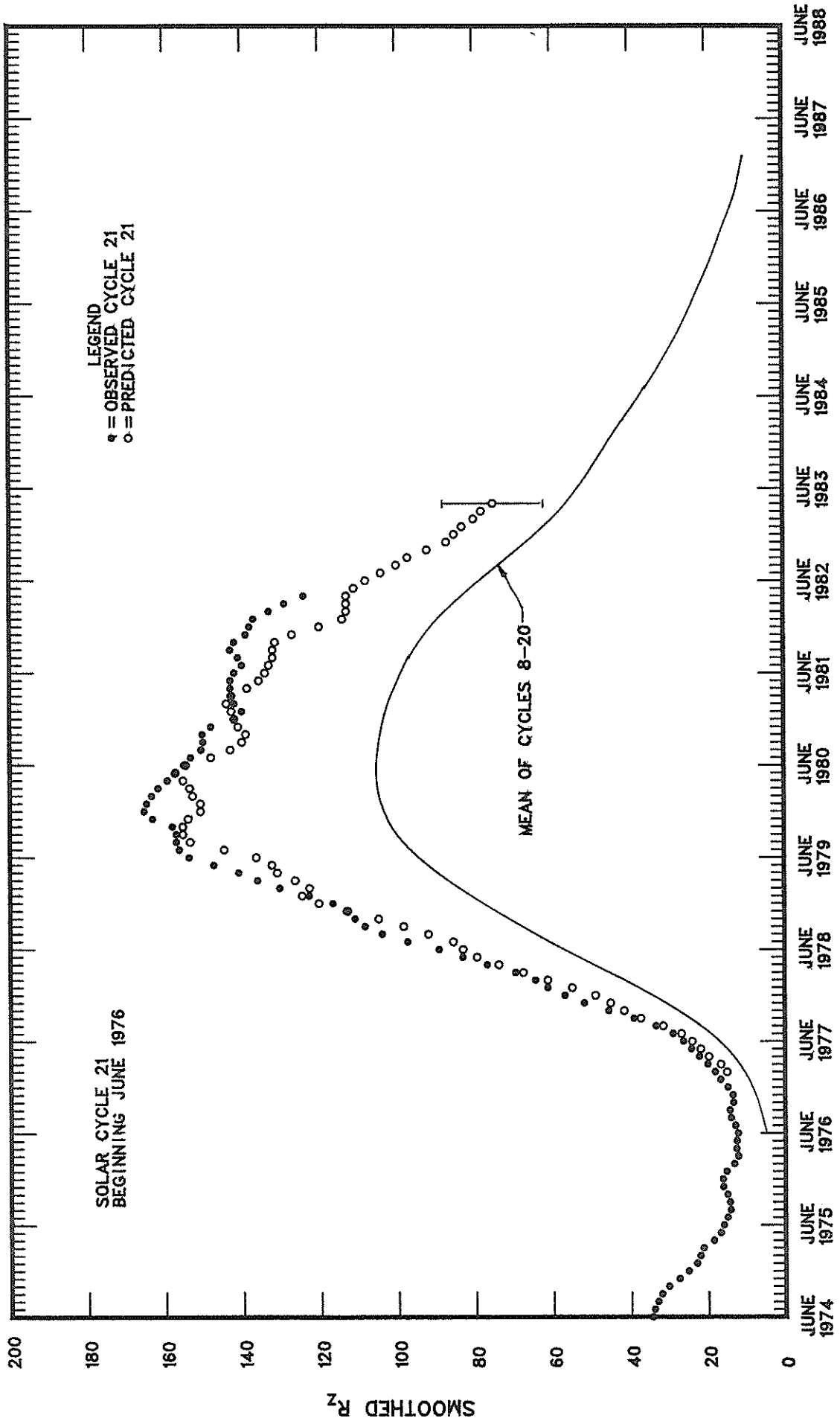
For the current solar cycle, this table gives observed smoothed sunspot numbers up to the one calculated from the most recently measured monthly mean. These smoothed observed values are based on final monthly mean Zurich numbers through 1980, on final international numbers through March 1982, and on provisional monthly mean international numbers thereafter. Some table entries after the June 1976 number will change slightly, when we incorporate final data for 1982.

The entries with numbers in parentheses below them denote predictions by the McNish-Lincoln method. (See page 10 in the February 1982 edition of the Solar-Geophysical Data supplement.) By adding to and subtracting from each prediction the number in parentheses, one generates the 90% confidence interval. Consider, for example, the April 1983 prediction tabulated above. There exists a 90% chance that in April 1983 the actual smoothed sunspot number will fall somewhere between 62 and 88.

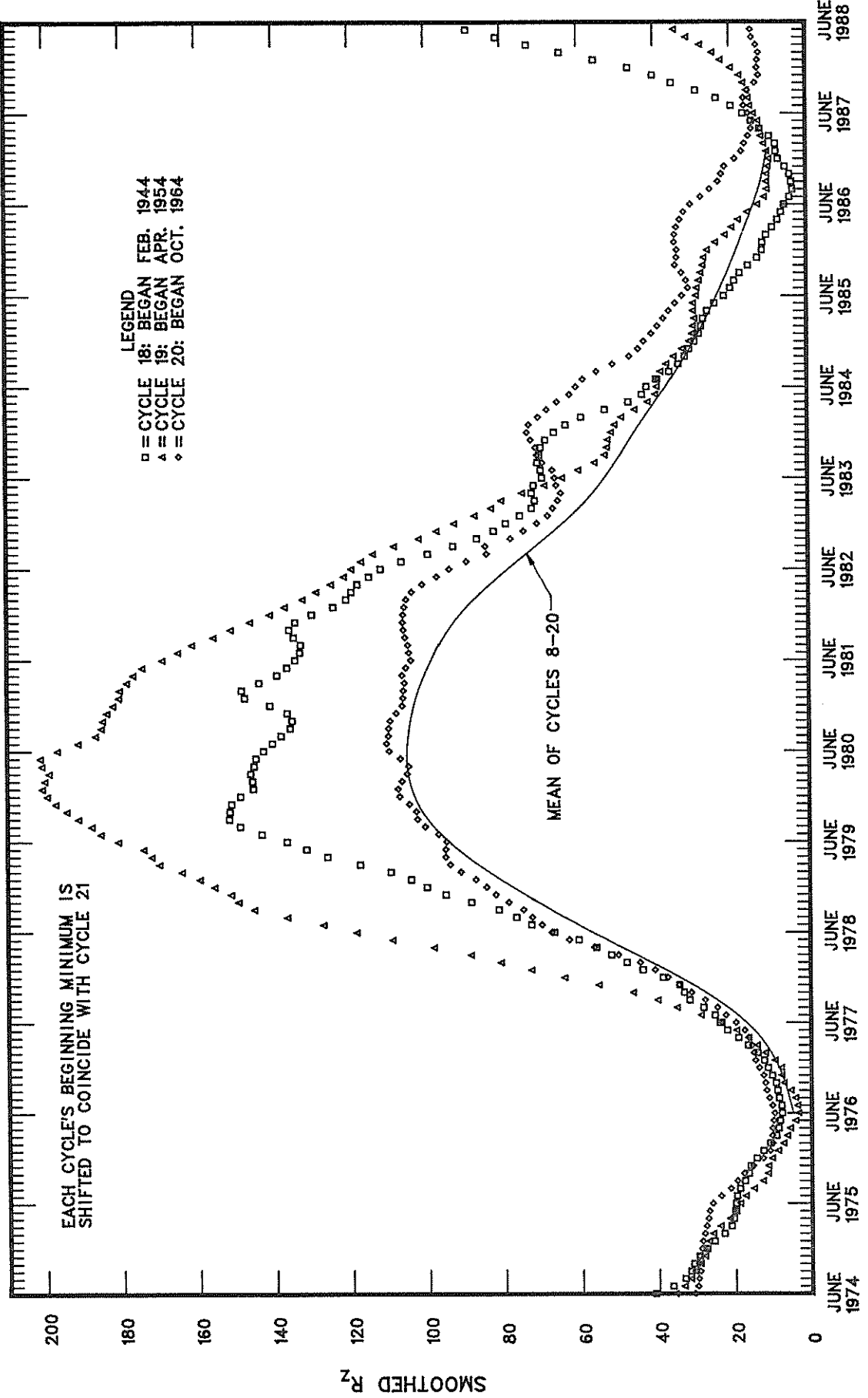
The McNish-Lincoln prediction method generates meaningful estimates of smoothed sunspot numbers for no more than 12 months ahead. Beyond a year the predictions regress rapidly toward the mean of all 13 cycles of data used in the computation. Furthermore, the method is very sensitive to the date defined as the beginning of the current sunspot cycle, that is, to the date of the most recent sunspot minimum. In Solar-Geophysical Data, issues 390-401, we based the current cycle predictions on March 1976 as the end of cycle 20 and the onset of the new cycle 21. Later studies, including one published by M. Waldmeier, showed that June 1976 was more appropriately the minimum epoch. We therefore generated this table using the June 1976 date.

\*MAXIMUM OF SUNSPOT CYCLE 21. The maximum smoothed sunspot number occurred in December 1979.

# OBSERVED AND ONE-YEAR-AHEAD PREDICTED SMOOTHED SUNSPOT NUMBERS



# SUPERPOSITION OF CYCLES 18, 19, AND 20



14  
Oct 82

H - ALPHA SOLAR FLARES

OCTOBER 1982

Sta	Day	Start (UT)	Max (UT)	End (UT)	Lat	CMD	NOAA/ USAF Region	CMP Mo	Day	Dur (Min)	Imp		Obs See	Type	Time (UT)	Area Measurement		Remarks	
											Opt	Xray				Apparent (10 <sup>-6</sup> Disk)	Corr (Sq Deg)		
[	YUNN	01	0029	0040U	0045D	S03	E02		10	1.2	16D	SN	C 3.3		P	0040	79	.8	F
	GOES	01	0031	0041	0047					16		C	3.3						
	LEAR	01	0352	0357	0411	S11	W30	3919	09	28.9	19	SN	C 1.6	3	C		54		
	LEAR	01	0626	0628	0638	S11	W27	3919	09	29.2	12	SN		3	C		46		F
	LEAR	01	0747	0753	0809	N16	W10	3922	09	30.6	22	SN	C 2.2	3	C		78		F
	LEAR	01	0819	0822	0834	N16	W11	3922	09	30.5	15	SF	C 1.8	3	C		31		F
	LEAR	01	0849	0853	0903	S11	W33	3919	09	28.9	14	SN		3	C		20		F
	GOES	01	1226	1228	1232					6		C	1.2						
	GOES	01	1437	1440	1442					5		C	2.0						
	HOLL	01	1511E	1520U	1541	N13	W19	3922	09	30.2	30D	SF		3	C		47		
	HOLL	01	1612	1621	1656	N14	W31	3917	09	29.3	44	SF		3	C		48		
	HOLL	01	1732	1756	1824	N14	W32	3917	09	29.3	52	SN	C 1.5	3	C		64		F
	HOLL	01	1955	1956	2032	S10	W39	3919	09	28.9	37	SN	C 2.0	3	C		57		
	HOLL	01	2012	2012	2027	S18	W15	3921	09	30.7	15	SF	C 1.7	3	C		22		
	HOLL	01	2100	2104	2108	S10	W40	3919	09	28.9	8	SN		3	C		45		
	HOLL	01	2124	2130	2213	N14	W23	3922	09	30.2	49	SN	C 1.4	3	C		95		F
	HOLL	01	2155	2211	2233	S09	W44	3919	09	28.6	38	SN		3	C		35		F
	GOES	01	2359	0002	0008					9		C	2.2						
	HOLL	02	0002	0002	0018D	S10	W41	3919	09	28.9	16D	SN	C 2.0	1	C		33		
	LEAR	02	0039	0048	0105	S11	W41	3919	09	28.9	26	SN	C 1.9	3	C		58		F
	GOES	02	0148	0151	0153					5		C	2.3						
	LEAR	02	0202	0206	0208	N16	E05	3931	10	2.5	6	SF		3	C		20		
	GOES	02	0250	0302	0304					14		C	1.3						
	YUNN	02	0316E	0317	0327	S10	W43		09	28.9	11D	SN			P		16	.2	
	YUNN	02	0320	0325	0327D	S23	W15		10	1.0	7D	SN			P		79	1.0	E
[	LEAR	02	0321	0325	0339	S21	W14	3921	10	1.1	18	SF	C 2.1	3	C		49		F
	LEAR	02	0516	0519	0531	N13	W27	3922	09	30.2	15	SF		3	C		20		
	LEAR	02	0808	0808	0829	N15	E01	3931	10	2.4	21	SF		3	C		22		K
[	LEAR	02	0808	0821	0829	N15	E01	3931	10	2.4	21	SF		3	C		33		K
	LEAR	02	0857	0859	0905	N15	E00	3931	10	2.4	8	SF		3	C		31		
	GOES	02	0951	1005	1010					19		C	1.2						
	GOES	02	1150	1155	1201					11		C	2.0						
	GOES	02	1356	1401	1405			3919		9		C	3.7						
[	HOLL	02	1406E	1407U	1417	S09	W53	3919	09	28.6	11D	1N		2	C		140		
	HOLL	02	1533	1535	1625	N13	W23	3930	09	30.9	52	SN	C 2.5	3	C		158		F
	RAMY	02	1533	1536	1551	N12	W27	3922	09	30.6	18	SB		3	C		75		
[	RAMY	02	1548	1613	1634D	S10	W52	3919	09	28.7	46D	SN		3	C		71		K
	RAMY	02	1548	1633	1634D	S10	W52	3919	09	28.7	46D	1B		3	C		191		FEK
[	HOLL	02	1559	1600	1620	S18	W18		10	1.3	21	SN		3	C		28		
	RAMY	02	1559	1601	1606	S18	W18	3921	10	1.3	7	SN		3	C		20		
	HOLL	02	1621	1622	1633	N15	W26	3922	09	30.7	12	SF		3	C		28		
	HOLL	02	1630	1633	1647	S08	W52	3919	09	28.8	17	SB	C 4.1	3	C		115		FE
	HOLL	02	1635	1637	1708	N14	W27	3922	09	30.6	33	SF		3	C		39		F
	HOLL	02	1635	1638	1648	N12	W23	3930	10	1.0	13	SF		3	C		25		
	HOLL	02	1708	1709	1715	N11	W21	3930	10	1.1	7	SF		3	C		23		
[	PALE	02	1716	1719	1932	N15	W26	3922	09	30.7	136	SN		3	C		45		F
	HOLL	02	1719	1720	1725	N14	W31	3922	09	30.4	6	SN		3	C		28		
[	PALE	02	1815	1819	1830	S01	W22	3923	10	1.1	15	1B		3	C		216		FE
	HOLL	02	1817	1819	1843	S01	W22	3923	10	1.1	26	SB	C 2.6	3	C		184		FE
[	PALE	02	1924	1926	1933	S10	W50	3919	09	29.0	9	SN		3	C		48		
	HOLL	02	1925	1926	1932	S10	W52	3919	09	28.9	7	SB		3	C		39		
	HOLL	02	2216	2219	2302	N16	W29	3922	09	30.7	46	SB		4	C		68		E
	HOLL	02	2217	2227	2252	N12	W25	3930	10	1.0	35	SN		4	C		46		
[	HOLL	02	2239	2239	2326	S10	W55	3919	09	28.8	47	SN		4	C		16		K
	HOLL	02	2239	2314	2326	S10	W55	3919	09	28.8	47	SN		4	C		18		K
	LEAR	02	2333	2333	2343	N11	W40	3922	09	30.0	10	SF	C 2.4	2	C		20		F
	LEAR	03	0034	0056U	0110	N17	W35	3922	09	30.4	36	SF		2	C		22		F
	LEAR	03	0212	0215	0235	N12	W40	3922	09	30.1	23	SF	C 2.1	2	C		89		F
	LEAR	03	0215	0221U	0224	N14	W29	3930	09	30.9	9	SF		2	C		26		F
	LEAR	03	0402	0404	0419	S09	W59	3919	09	28.7	17	SN		3	C		94		F
[	YUNN	03	0404E	0404U	0420	S18	W59		09	28.7	16D	SN			P	0404	47	1.0	D
	PEKG	03	0405	0406	0414	S07	W59		09	28.7	9	SF			C	0406	42	.9	D
	GOES	03	0616	0624	0627					11		C	1.3						
	RAMY	03	1210	1302	1318	S10	W61	3919	09	28.9	68	SN		3	C		102		
[	RAMY	03	1345	1345	1401	N14	W39	3922	09	30.6	16	SF		3	C		23		K
	RAMY	03	1345	1357	1401	N14	W39	3922	09	30.6	16	SF		3	C		23		K
	RAMY	03	1649	1724	1754	N14	W45	3922	09	30.3	65	SF		3	C		35		
[	HOLL	03	1653	1657	1659D	N16	W18	3931	10	2.3	6D	SB	C 3.0	3	C		186		
	RAMY	03	1654	1655	1722	N15	W18	3931	10	2.3	28	1N		3	C		209		

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Sta	Day	Start (UT)	Max (UT)	End (UT)	Lat	CMD	NOAA/ USAF Region	CMP Mo	Dur Day	Dur (Min)	Imp Opt	Xray	Obs See	Type	Area Measurement			Remarks		
															Time (UT)	Apparent (10 <sup>-6</sup> Disk)	Corr (Sq Deg)			
[	HOLL	03	1841	1850	1913	S12 W66	3919	09	28.8	32	SB		3	C			49			
	PALE	03	1842	1849	1911	S11 W68	3919	09	28.7	29	SB		2	C			40			
	HOLL	03	1853	1929	1941	S17 W37	3921	10	1.0	48	SF		3	C			25			
[	HOLL	03	2012	2014	2034	S18 W40	3921	09	30.8	22	SN	C 2.4	3	C			54			
	PALE	03	2012	2015	2032D	S19 W39	3921	09	30.9	20D	SF		2	C			42			
	PALE	03	2134	2135	2147D	N12 W51	3922	09	30.1	13D	SF		2	C			32		F	
	GOES	04	0052	0056	0107					15		C 1.3								
	GOES	04	0210	0214	0223					13		C 1.9								
	LEAR	04	0234	0239U	0246	N17 W49	3922	09	30.4	12	SN		2	C			48		F	
	GOES	04	0359	0402	0404					5		C 2.1								
	GOES	04	0533	0536	0538					5		C 2.5								
	LEAR	04	0751	0752	0758	N16 W51	3922	09	30.5	7	SB	C 1.9	3	C			107		EH	
	LEAR	04	0815	0816	0820	S11 W74	3919	09	28.8	5	SF	C 1.7	3	C						
	GOES	04	1020	1023	1036					16		C 1.9								
	GOES	04	1343	1347	1354					11		C 2.8								
	GOES	04	1503	1503	1513					10		C 1.9								
	GOES	04	1647	1655	1704					17		C 1.9								
[	PALE	04	1737E	1740U	1825D	N13 W60	3922	09	30.2	48D	SN		1	C			100		F	
	HOLL	04	1738	1757	1838	N16 W58	3922	09	30.3	60	SN	C 6.0	3	C			135		F	
	HOLL	04	1931	1932	1942	N16 W53	3922	09	30.8	11	SN		3	C			46		F	
	HOLL	04	1948	1951	1959	S09 W72	3919	09	29.4	11	SN		3	C			25			
	GOES	04	2142	2150	2155					13		C 3.3								
	PALE	04	2259	2259	2309	N14 W58	3922	09	30.6	10	SN		3	C			25			
	PALE	04	2331	2333	2353	N10 W53	3930	10	1.0	22	SN	C 2.8	3	C			70			
	PALE	04	2356	0001	0021	N10 W56	3930	09	30.8	25	SF		3	C			29			
[	PALE	05	0042	0058	0102	N10 W55	3930	09	30.9	20	SN		3	C			16			
	LEAR	05	0043	0058	0102	N11 W55	3930	09	30.9	19	SN		3	C			26			
	PALE	05	0125	0130	0135	N10 W56	3930	09	30.8	10	SF		3	C			20			
[	LEAR	05	0143	0157	0223	N12 W49	3930	10	1.4	40	SN	C 3.4	3	C			54		F	
	PALE	05	0144	0158	0233	N10 W56	3930	09	30.9	49	SN		3	C			47		F	
	LEAR	05	0346	0349	0406	N12 W61	3922	09	30.6	20	SF	C 2.8	3	C			34			
	LEAR	05	0416	0422	0442	N13 W64	3922	09	30.3	26	SF		3	C			43			
	LEAR	05	0525	0526	0528	N19 W74	3917	09	29.6	3	SF		3	C						
	GOES	05	0608	0612	0614					6		C 3.2								
	BUCA	05	0715		0740	N12 W62		09	30.6	25	SF			C	0719		43	.9	D	
	LEAR	05	0805	0808	0812	N12 W59	3930	09	30.9	7	SF		3	C			35			
	LEAR	05	0817	0818	0838	N12 W60	3930	09	30.8	21	SF		3	C			41			
	GOES	05	0910	1033	1053					103		C 4.6								
	GOES	05	1120	1122	1127					7		C 5.1								
[	GOES	05	1551	1559	1605					14		C 3.2								
	HOLL	05	1601	1601	1621	N13 W65	3930	09	30.8	20	SF		3	C			32			
[	PALE	05	1947	1948	1953	N11 W67	3930	09	30.8	6	SF		3	C			23			
	HOLL	05	1947	1948	1955	N13 W66	3930	09	30.8	8	SN		3	C			25			
	GOES	05	1958	2006	2023		3930			25		C 2.1								
	GOES	05	2142	2146	2148					6		C 3.8								
	GOES	06	0012	0016	0018					6		C 2.1								
	GOES	06	0120	0123	0125					5		C 2.0								
	LEAR	06	0201	0202	0212	N20 W69	3922	09	30.8	11	SN		3	C			29			
	PALE	06	0202	0204	0215	N11 W68	3930	10	1.0	13	SF		3	C			23			
	LEAR	06	0217	0217	0224	N13 W77	3922	09	30.3	7	SF		3	C						
	LEAR	06	0226	0229	0238	N12 W68	3930	10	1.0	12	SF		3	C			32			
	GOES	06	0343	0354	0403					20		C 2.1								
	GOES	06	0500	0506	0518					18		C 1.9								
	LEAR	06	0534		0605	N18 W90	3917	09	29.4	31	SB	C 3.8	3	C						
[	LEAR	06	0542	0548	0559	S18 W70	3921	09	30.9	17	SN		3	C						
	PEKG	06	0544	0546	0554	S17 W71		09	30.8	10	SF			C	0546		29		E	
[	BUCA	06	0703	0708	0714	N16 W77		09	30.4	11	1N			C	0708		107		E	
	LEAR	06	0704	0709	0722	N12 W78	3922	09	30.4	18	1N		3	C			139		H	
	GOES	06	0736	0739	0741					5		C 1.9								
	LEAR	06	0827	0830	0842	N15 W82	3922	09	30.1	15	SF		3	C						
	GOES	06	1643	1646	1652					9		C 2.2								
	GOES	06	1927	1931	1934					7		C 1.5								
	GOES	06	2016	2020	2030		3938			14		C 1.2								
	HOLL	06	2050	2054	2119	N21 E50		10	10.7	29	SN		3	C			41		F	
	HOLL	06	2116	2117	2134	S07 E22	3932	10	8.5	18	SF	C 1.7	3	C			21			
	GOES	06	2256	2306	2312		3922			16		M 2.2								
	HOLL	06	2303	2305U	2312D	N14 W79	3930	10	1.0	9D	SN		3	C						F
∇	LEAR	06	2322	2323	2338	N11 W76	3930	10	1.3	16	SF		3	C						



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Sta	Day	Start (UT)	Max (UT)	End (UT)	Lat	CMD	NOAA/ USAF/ Region	CMP Mo	Day	Dur (Min)	Imp Opt	Xray	Obs See	Type	Time (UT)	Area Measurement		Remarks
																Apparent (10 <sup>-6</sup> Disk)	Corr (Sq Deg)	
▲	HOLL	06	2322	2323	2353	N12 W77	3930	10	1.2	31	SN	C 3.2	3	C				F
	GOES	07	0111	0115	0121					10		C 1.5						
	LEAR	07	0202	0202	0206	N14 W85	3922	09	30.7	4	SN	C 2.2	3	C				
	PEKG	07	0202	0203	0207	N15 W89		09	30.3	5	SF			P	0203	17		D
	LEAR	07	0224	0224	0235	N07 W55	3936	10	3.0	11	SF	C 1.2	3	C		32		
	PEKG	07	0228	0230	0235	N08 W57		10	2.8	7	SN			P	0230	38	.7	D
	GOES	07	0247	0253	0257		3930			10		C 8.6						
	GOES	07	0351	0355	0403		3938			12		C 2.3						
	PEKG	07	0355	0357	0407	N22 E46		10	10.7	12	SF			P	0357	25	.4	E
	LEAR	07	0357	0359	0405	N22 E47		10	10.8	8	SN		3	C		54		
	GOES	07	0515	0519	0522					7		C 1.2						
	GOES	07	0735	0813	0831					56		C 1.1						
	ISTA	07	0822		0837	N14 W90		09	30.5	15	SN							DB
	GOES	07	1011	1014	1016					5		C 2.2						
	GOES	07	1409	1411	1414					5		C 1.0						
	HOLL	07	1534	1534	1544	S10 E14	3932	10	8.7	10	SF		3	C		30		F
	HOLL	07	1614	1627	1629	N22 E41	3938	10	10.8	15	SF		3	C		27		
	GOES	07	1751	1754	1756					5		C 1.0						
	HOLL	07	1826	1829	1850	N22 E42	3938	10	11.0	24	SN		3	C		25		F
	PALE	07	1827	1829	1842	N23 E41	3938	10	10.9	15	SF		3	C		28		F
	HOLL	07	1841	1842	1851	N08 W64	3936	10	3.0	10	SF		3	C		15		
	HOLL	07	1855	1859U	1902D	N21 E39	3938	10	10.8	7D	SF		3	C		21		F
	PALE	07	1906	1908	1916	N24 E40	3938	10	10.9	10	SF		3	C		24		F
	GOES	07	1928	1936	1941					13		C 1.0						
	LEAR	08	0020	0024	0040	N08 W67	3936	10	3.0	20	SF		3	C		14		
	PEKG	08	0305	0309	0326	N09 W69		10	2.9	21	SF			C	0326	29		E
	LEAR	08	0305	0313	0335	N08 W68	3936	10	3.0	30	SF	C 1.2	3	C		19		
	YUNN	08	0614	0616	0620D	S15 E09		10	8.9	6D	SN			P		47	.5	
	LEAR	08	0615	0617	0629	S17 E10	3932	10	9.0	14	SN		3	C		83		FH
	GOES	08	0847	0851	0856					9		C 1.0						
	GOES	08	1606	1614	1620					14		C .9						
	GOES	08	1707	1710	1712					5		C 1.0						
	PALE	08	1933	1936	1938	N23 E28	3938	10	11.0	5	SF		3	C		29		
	LEAR	09	0056	0057	0103	N22 E25	3938	10	11.0	7	SF		3	C		25		
	GOES	09	0334	0340	0347					13		C .7						
	HOLL	09	1425	1427	1449	N21 E16	3938	10	10.8	24	SF		3	C		35		F
	HOLL	09	1655	1657	1713	N23 E16	3938	10	10.9	18	SF		3	C		33		
	GOES	09	1900	1905	1912					12		C .7						
	GOES	09	2314	2316	2324		3938			10		C .8						
	HOLL	09	2358	0002	0015D	S13 W22	3939	10	8.3	17D	SN	C .9	3	C		101		
	LEAR	09	2359	0001	0016	S13 W22	3939	10	8.3	17	SN		3	C		68		F
	PEKG	10	0000E	0001	0015	S13 W22		10	8.3	15D	SF			P	0001	59	.7	E
	PEKG	10	0300	0307	0336	N22 E06		10	10.6	36	SF			P	0307	67	.7	E
	PALE	10	0305	0309	0328	N22 E05	3938	10	10.5	23	SF		3	C		27		F
	LEAR	10	0309	0318	0326	N22 E06	3938	10	10.6	17	SF		3	C		45		F
	LEAR	10	0355	0404	0408	N08 E23	3944	10	11.9	13	SF	C 1.0	3	C		25		F
	PEKG	10	0415	0430	0500	N22 E05		10	10.6	45	SF			P	0430	88	.9	E
	GOES	10	0717	0812	0901					104		C .7						
	GOES	10	1105	1116	1126					21		C 1.3						
	HOLL	10	1720	1733	1751	N08 E15	3944	10	11.8	31	SN		3	C		42		
	PALE	10	1726	1732	1745	N08 E15	3944	10	11.9	19	SF		3	C		25		
	HOLL	10	1737	1740	1801	N22 W02	3938	10	10.6	24	SF	C 1.1	3	C		69		
	PALE	10	1740	1741	1753	N21 W03	3938	10	10.5	13	SF		3	C		31		F
	LEAR	11	0605	0607	0612	N23 W06	3938	10	10.8	7	SF		3	C		22		
	KAND	11	1045		1115	N21 W09		10	10.8	30	SN			P				E
	GOES	11	1055	1059	1103		3938			8		C 1.2						
	GOES	11	1340	1346	1400					20		C .9						
	HOLL	11	1450	1459	1518	N08 E02	3944	10	11.8	28	SF		3	C		36		F
	HOLL	11	1644	1645	1649	N21 W13	3938	10	10.7	5	SF		3	C		21		F
	PALE	11	1724	1726	1829	N24 W12	3938	10	10.8	65	SN	C 1.0	3	C		76		F
	HOLL	11	1724	1726	1815	N22 W12	3938	10	10.8	51	SN		3	C		57		
	PALE	11	1848	1849	1852	N20 W16	3938	10	10.6	4	SN	C 1.2	3	C		68		
	HOLL	11	1848	1849	1851	N20 W16	3938	10	10.6	3	SN		3	C		56		
	HOLL	11	1950	1953	2006	N22 W14	3938	10	10.7	16	SF		3	C		33		
	HOLL	11	2041	2041	2054	N21 W14	3938	10	10.8	13	SF		3	C		32		
▼	GOES	11	2131	2135	2139					8		C .7						

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Sta	Day	Start (UT)	Max (UT)	End (UT)	Lat	CMD	NOAA/ USAF Region	CMP Mo Day	Dur (Min)	Imp Opt Xray	Obs See Type	Time (UT)	Area Measurement		Remarks	
													(10 <sup>-6</sup> Disk)	Corr (Sq Deg)		
▲	HOLL	11	2141	2149	2201	N22 W15	3938	10 10.7	20	SN				31		
	GOES	11	2235	2240	2244				9	C 2.3	3					
	PALE	11	2246E	2246U	2256D	N22 W15	3938	10 10.8	10D	SF				107		F
	GOES	12	0239	0245	0253				14	C .7						
	LEAR	12	0741	0744	0756	N14 W26	3940	10 10.4	15	SF				27		
	GOES	12	1455	1458	1504				9	C .6						
	HOLL	12	1503E	1505U	1529D	N22 W25	3938	10 10.7	26D	SF				34		F
	HOLL	12	1507E	1510U	1527	N07 E26	3948	10 14.6	20D	SF				43		
	PALE	12	1828	1828	1841	N07 E24	3948	10 14.6	13	SF				26		K
	PALE	12	1828	1839	1841	N07 E24	3948	10 14.6	13	SF				26		K
	HOLL	12	1854	1915	1940	N23 W28	3938	10 10.6	46	SN C .7	3			143		
	HOLL	12	1905	1906	1917	N07 E25	3948	10 14.7	12	SF				23		
	PALE	12	1909	1914	1935	N21 W29	3938	10 10.6	26	SF				113		
	HOLL	12	1940	1948	2007	N23 W29	3938	10 10.6	27	SF				65		
	GOES	12	2037	2040	2042				5	C .7						
	GOES	12	2248	2251	2253				5	C 1.2						
	GOES	12	2348	2351	2353				5	C .9						
	LEAR	13	0022	0027	0035	N22 W31	3938	10 10.6	13	SF				39		
	LEAR	13	0044	0048	0054	N21 W32	3938	10 10.6	10	SF				36		
	LEAR	13	0655	0656	0700	S06 E72	3950	10 18.7	5	SF						
	LEAR	13	0722	0723	0752	N25 W34	3938	10 10.7	30	SF C .6	3			46		
	GOES	13	1140	1146	1147				7	C .9						
	GOES	13	1400	1416	1421				21	C .9						
	HOLL	13	1409E	1411U	1418	N14 E16	3948	10 14.8	9D	SF				38		U
	HOLL	13	1449	1451	1457	N02 W04	3949	10 13.3	8	SN				28		
	HOLL	13	1558	1559	1614	N08 E11	3948	10 14.5	16	SF				34		F
	HOLL	13	1623	1624	1629	S10 E67	3950	10 18.7	6	SF				25		
	HOLL	13	1727	1727	1736	N22 W41	3938	10 10.6	9	SF				27		F
	GOES	13	1800	1803	1805				5	C .7						
	LEAR	14	0011	0015	0018	S10 E64	3950	10 18.8	7	SF C .6	3			40		
	PALE	14	0011	0015	0017	S09 E65	3950	10 18.9	6	SF				58		
	PALE	14	0019	0019	0032	S10 W22	3946	10 12.4	13	SF				23		
	LEAR	14	0045	0046	0050	N23 W45	3938	10 10.6	5	SF				21		
	LEAR	14	0151	0154	0200	S10 E63	3950	10 18.8	9	SB				99		
	PALE	14	0151	0155	0201	S08 E64	3950	10 18.9	10	SB C 3.3	3			102		
	YUNN	14	0152	0154	0159	S10 E61		10 18.7	7	1B				126		2.9
	LEAR	14	0237	0237	0245	N23 W46	3938	10 10.6	8	SF				18		
	PALE	14	0240	0242	0244	N26 W46	3938	10 10.5	4	SF				36		
	PALE	14	0252	0253	0257	N22 W46	3938	10 10.6	5	SF				25		
	LEAR	14	0914	0916	0924	N24 W51	3938	10 10.4	10	SF C .6	3			26		
	WEND	14	1050	1052	1056	S09 E58		10 18.8	6	SF			1052	31		.6
	GOES	14	1239	1250	1304				25	C 1.0						
	HOLL	14	1342E	1342U	1356D	S09 E57	3950	10 18.9	14D	SF				47		F
	PALE	14	1716	1718	1726	S09 W30	3946	10 12.5	10	SF				37		
	HOLL	14	1733	1736	1836	N16 E20	3945	10 16.2	63	SN C .7	3			105		
	PALE	14	1734	1738	1842	N17 E19	3945	10 16.2	68	SN				82		UF
	PALE	14	1824	1824	1947	N13 W01	3948	10 14.7	83	SF				21		K
	PALE	14	1824	1836	1947	N13 W01	3948	10 14.7	83	SN				40		H K
	GOES	14	1852	1901	1910				18	C 1.1						
	PALE	14	1856	1857	1902	N03 W21	3949	10 13.2	6	SN				33		
	HOLL	14	1856	1857	1925	N03 W21	3949	10 13.2	29	SN				45		
	PALE	14	2007	2015	2033	S08 E52	3950	10 18.7	26	SN				57		F
	HOLL	14	2007	2022	2032	S07 E54	3950	10 18.9	25	SN C .8	3			53		F
	HOLL	14	2109	2112	2131	N03 W22	3949	10 13.2	22	SN				47		
	HOLL	14	2243	2245	2257	N03 W23	3949	10 13.2	14	SN				22		
	PALE	15	0048	0058	0101	S11 W34	3946	10 12.5	13	SF				19		
	PALE	15	0135	0147U	0211	S08 E48	3950	10 18.7	36	SF				51		F
	LEAR	15	0145	0147	0204	S09 E49	3950	10 18.8	19	SF				25		
	PEKG	15	0145E	0150	0206	S09 E48		10 18.7	21D	SN			0150	42		.7 D
	PEKG	15	0205E	0205	0209	S15 E14		10 16.1	4D	SN			0205	55		.6 E
	LEAR	15	0205	0205	0209	S15 E14	3943	10 16.1	4	SN C .6	3			44		
	PALE	15	0205	0205	0211	S15 E14	3943	10 16.1	6	SN				38		
	YUNN	15	0426E	0430	0458	S10 W37		10 12.4	32D	SN				31		.4
	LEAR	15	0543	0552	0609	S09 E46	3950	10 18.7	26	SN C 1.5	3			68		F
	PEKG	15	0545E	0550	0607	S09 E46		10 18.7	22D	SN			0550	126		2.0 E
	KAND	15	0720	0723	0731	S04 E46		10 18.7	11	SB						D
	KAND	15	0932		0938	S04 E46		10 18.8	6	SN						D

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Sta	Day	Start (UT)	Max (UT)	End (UT)	Lat	CMD	NOAA/ USAF Region	CMP Mo Day	Dur (Min)	Imp Opt Xray	Obs See Type	Area Measurement			Remarks	
												Time (UT)	Apparent (10 <sup>-6</sup> Disk)	Corr (Sq Deg)		
KAND	15	1036	1040	1049	N03	W30		10	13.2	13	1B					
GOES	15	1144	1151	1154			3949			10		C 9.5				
HOLL	15	1401E	1402U	1420D	S08	W43	3946	10	12.4	19D	SN		3	C		25
HOLL	15	1823	1827	1835	S05	E41	3950	10	18.8	12	SN		3	C		24
[ HOLL	15	2037	2038	2038D	S08	E42	3950	10	19.0	1D	SB	C 3.5	3	C		79
[ PALE	15	2040E	2043	2100	S05	E40	3950	10	18.9	20D	SB		3	C		118
HOLL	15	2107	2111	2140	S06	E39	3950	10	18.8	33	SN		3	C		71
LEAR	16	0349E	0350U	0403	S09	E37	3950	10	18.9	14D	SF		2	C		39
[ I STA	16	0833		0848	S10	E33		10	18.8	15	SF					
LEAR	16	0833	0835	0852	S11	E39	3950	10	19.3	19	SB	C 2.0	2	C		79
[ MONT	16	0833	0836	0855	S09	E33		10	18.8	22	SB			C	0836	180
MONT	16	0944	0948	1002	N01	W42		10	13.3	18	SN	C 4.8		C	0948	150
GOES	16	1628	1632	1640			3950			12		C 2.2				
GOES	16	1838	1843	1845						7		C .4				
GOES	16	2059	2102	2107			3946			8		C 1.1				
GOES	16	2307	2325	2343						36		C .6				
[ LEAR	17	0208	0209	0214	S06	E26	3950	10	19.0	6	SF	C .5	3	C		36
[ PALE	17	0208	0209	0212	S04	E26	3950	10	19.0	4	SN		3	C		34
[ LEAR	17	0255	0256	0300	S04	E22	3950	10	18.8	5	SF		3	C		39
[ PALE	17	0256	0257	0258	S04	E22	3950	10	18.8	2	SF		3	C		23
LEAR	17	0738	0740	0753	S13	W22	3943	10	15.7	15	SF		3	C		28
PALE	17	1813	1818	1820	N02	W60	3949	10	13.3	7	SF		3	C		14
PALE	17	1841	1842	1847	N06	W46	3948	10	14.3	6	SF		3	C		17
GOES	17	2355	0004	0015						20		C .9				
GOES	18	0232	0239	0245						13		C 1.0				
LEAR	18	0627	0627	0636	S07	E11	3950	10	19.1	9	SF		3	C		60
WEND	18	0930	0940	1007	S04	E10		10	19.1	37	SF			C	0940	56
GOES	18	1123	1127	1132						9		C .9				
GOES	18	1206	1223	1229						23		C 1.3				
GOES	18	1522	1545	1547						25		C 1.8				
GOES	18	1711	1712	1718						7		C 1.0				
[ HOLL	18	1832	1848	1926	S07	E04	3950	10	19.1	54	SN	C 1.1	3	C		156
[ PALE	18	1848E	1851U	1910	S07	E05	3950	10	19.2	22D	SF		3	C		67
HOLL	18	2017E	2021	2023	S07	E87	3955	10	25.4	6D	SF		3	C		
HOLL	18	2202	2203	2215D	S06	E01	3950	10	19.0	13D	SF		3	C		26
GOES	18	2244	2300	2306						22		C .9				
GOES	19	0445	0447	0451						6		C .8				
GOES	19	0518	0532	0613						55		C 2.4				
[ GOES	19	0721	0727	0732						11		C 1.1				
[ I STA	19	0757E		0834	S14	E30		10	21.6	37D	1N					E
GOES	19	1131	1141	1147			3955			16		C 4.8				
HOLL	19	1403E	1403U	1413D	S08	W37	3950	10	16.8	10D	SF		2	C		35
HOLL	19	1530E	1536U	1549	S07	W09	3950	10	19.0	19D	SN		3	C		85
GOES	19	1646	1649	1651						5		C 1.0				
GOES	19	1718	1721	1723						5		C 1.2				
[ PALE	19	1748	1805	1826	S07	E81	3955	10	25.8	38	SN		3	C		
[ HOLL	19	1750	1752	1802	S10	E81	3955	10	25.8	12	SN	C 2.0	3	C		
HOLL	19	1804	1810	1823	S12	E74	3955	10	25.3	19	SN	C 2.7	3	C		
[ HOLL	19	1834	1835	1848	S08	W11	3950	10	18.9	14	SF		3	C		28
[ PALE	19	1835	1838	1842	S08	W09	3950	10	19.1	7	SF		3	C		71
[ PALE	19	1845	1846	1848	S08	W10	3950	10	19.0	3	SF		3	C		30
[ GOES	19	1846	1851	1857			3950			11		C 1.4				
GOES	19	2021	2024	2027						6		C 1.4				
HOLL	19	2232	2236	2248	S16	E22	3957	10	21.6	16	SF		3	C		21
GOES	19	2334	2347	2350						16		C .9				
LEAR	20	0327	0328	0333	S12	E65	3955	10	25.0	6	SF		3	C		27
GOES	20	0742	0749	0800						18		C 1.3				
GOES	20	0935	0940	0949						14		C 1.0				
GOES	20	1219	1222	1225						6		C 1.3				
GOES	20	1308	1313	1320						12		C 2.3				
GOES	20	1543	1557	1604						21		C 1.1				
HOLL	20	1629	1636	1638	S09	E63	3955	10	25.4	9	SF		3	C		16
HOLL	20	1812	1814	1820	S10	E62	3955	10	25.4	8	SF		3	C		23
GOES	20	1927	1929	1935						8		C 1.2				
√ PALE	21	0026	0029	0047	N11	E06	3958	10	21.5	21	SF	C 2.9	3	C		101

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Sta	Day	Start (UT)	Max (UT)	End (UT)	Lat	CMD	NOAA/ USAF Region	CMP Mo	Dur Day	Dur (Min)	Imp Opt	Xray	Obs See	Type	Time (UT)	Area Measurement		Remarks
																Apparent (10 <sup>-6</sup> Disk)	Corr (Sq Deg)	
▲	LEAR	21	0031E	0031U	0037D	N11 E06	3958	10	21.5	6D	SF		3	C		94		F
	GOES	21	0132	0136	0139					7		C 1.5						
	GOES	21	0211	0217	0225					14		C 1.3						
	GOES	21	0335	0337	0341					6		C 1.1						
	GOES	21	0506	0509	0516		3960			10		C 1.9						
	YUNN	21	0535E	0535U	0540D	N09 E03		10	21.5	5D	SN			P	0535	48	.5	E
	KAND	21	0641E		0710	N10 E03		10	21.5	29D	1N			C				U
	GOES	21	0644	0650	0702		3955			18		C 3.7						
	KAND	21	0655		0710	S10 E49		10	25.0	15	SN			C				
	ISTA	21	0719		0723	S14 E47		10	24.9	4	SN							D
	ISTA	21	0728		0818	S13 E46		10	24.8	50	3B							KIF
	LEAR	21	0735E	0736	0820D	S09 E44	3955	10	24.6	45D	1N	C 7.4	2	C		197		F
	KAND	21	0735	0755	0821	S08 E40		10	24.3	46	1N			C				E
	WEND	21	0751E		0833	S09 E41		10	24.4	42D	1N			C	0751	306	4.2	BF
	KAND	21	0842		0855	S08 E40		10	24.4	13	SN			C				E
	GOES	21	1056	1103	1109					13		C 2.9						
	GOES	21	1134	1138	1141					7		C 2.5						
	GOES	21	1303	1307	1311					8		C 2.3						
	WEND	21	1332	1338	1342	S10 E39		10	24.5	10	SF			C	1338	25	.3	
	WEND	21	1357	1359	1407	S09 W34		10	19.0	10	SN			C	1359	69	.9	
	RAMY	21	1359E	1359U	1424	S09 W34	3950	10	19.0	25D	SN		3	C		124		
	GOES	21	1600	1605	1609					9		C 2.5						
	HOLL	21	1804	1805	1811	N08 E81	3960	10	27.8	7	SF		3	C				
	HOLL	21	1850	1854	1900	N10 E91	3960	10	28.6	10	SF		3	C				
	HOLL	21	2139	2155	2240	S11 E46	3955	10	25.4	61	SF	C 1.4	3	C		24		K
	HOLL	21	2139	2157	2240	S11 E46	3955	10	25.4	61	SN		3	C		28		F K
	GOES	21	2251	2253	2314		3961			23		C 8.2						
	HOLL	21	2301E	2302U	2302D	S06 E89		10	28.6	1D	1B		3	C				
	LEAR	22	0214	0226	0232	S06 E83		10	28.3	18	SF		3	C				
	LEAR	22	0304	0304	0328	N12 E74	3960	10	27.7	24	SF		3	C				K
	LEAR	22	0304	0317	0328	N12 E74	3960	10	27.7	24	SF	C 6.0	3	C				F K
	GOES	22	0532	0535	0539					7		C 2.1						
	GOES	22	0702	0707	0713					11		C 4.8						
	BUCA	22	0730		0815	N11 W14		10	21.3	45	SF			C	0730	53	.6	D
	BUCA	22	0825	0826	0835	S09 W44		10	19.0	10	SF			C	0826	86	1.2	
	GOES	22	0910	0914	0918					8		C 1.9						
	GOES	22	1214	1221	1232					18		C 1.1						
	RAMY	22	1425E	1429U	1436	N14 E73	3960	10	28.1	11D	SF	C 2.7	3	C				
	HOLL	22	1428	1428	1437	N13 E86	3960	10	29.1	9	SF		3	C				
	HOLL	22	1618	1621	1629	N11 E68	3960	10	27.8	11	SF	C 1.6	3	C		25		
	HOLL	22	1701E	2124	2131D	S21 E12	3960	10	23.6	270D	1B	C 2.8	3	C		165		FE
	GOES	22	1713	1715	1720					7		C 5.5						
	HOLL	22	1801	1810	1815	S08 E34	3955	10	25.3	14	SF		3	C		54		
	HOLL	22	1940	2000	2008	N08 E63	3960	10	27.5	28	SN		3	C		34		
	PALE	22	1950	1958	2006	N10 E63	3960	10	27.6	16	SF		3	C		30		
	HOLL	22	2018	2020	2031	N09 E63	3960	10	27.6	13	SF		3	C		19		
	HOLL	22	2121	2124	2140	N12 E70	3960	10	28.2	19	1B		3	C		165		FE
	GOES	22	2357	0000	0002					5		C 2.0						
	PALE	23	0009	0017	0034	S11 E29	3955	10	25.2	25	SN		3	C		82		F
	LEAR	23	0011	0018	0035	S12 E28	3955	10	25.1	24	SN		3	C		81		F
	YUNN	23	0214	0227	0230D	S12 E36		10	25.8	16D	SN			P		32	.4	
	PALE	23	0216	0227	0247	S11 E28	3955	10	25.2	31	SN	C 3.0	3	C		83		F
	LEAR	23	0218	0226	0238	S12 E28	3955	10	25.2	20	SN		3	C		74		F
	LEAR	23	0251	0252	0301	S12 E24	3955	10	24.9	10	SF		3	C		22		F
	GOES	23	0342	0345	0404					22		C 1.9						
	LEAR	23	0414	0417	0438	S07 E08	3954	10	23.8	24	SF		3	C		31		F
	LEAR	23	0437	0441	0445	S13 E27	3955	10	25.2	8	SN	C 1.9	3	C		23		
	LEAR	23	0620	0620	0629	S06 E63	3961	10	28.0	9	SF	C 1.4	3	C		12		F
	LEAR	23	0644	0645	0652	N11 E34	3959	10	25.8	8	SF		3	C		27		
	LEAR	23	0706	0707	0715	S07 E26	3955	10	25.2	9	SF		3	C		29		
	LEAR	23	0742	0745	0812	S08 E26	3955	10	25.3	30	SF		3	C		73		F
	GOES	23	0931	0934	0943					12		C 1.0						
	GOES	23	0945	0951	0955					10		C 1.2						
	GOES	23	1110	1112	1123					13		C 1.0						
	GOES	23	1143	1146	1152					9		C 2.1						
	RAMY	23	1253	1259	1411	S11 E19	3955	10	25.0	78	SB	M 1.3	3	C		141		E
	GOES	23	1321	1334	1415		3961			54		C 5.6						
	RAMY	23	1343	1348	1401	S04 E68	3961	10	28.7	18	SN		3	C		77		
	HOLL	23	1344E	1344U	1425	S12 E28	3955	10	25.7	41D	SN		2	C		75		F

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Sta	Day	Start (UT)	Max (UT)	End (UT)	Lat	CMD	NOAA/ USAF/ Region	CMP Mo	Dur Day	Dur (Min)	Imp Opt	Xray	Obs See	Type	Time (UT)	Area Measurement			Remarks	
																Apparent (10 <sup>-6</sup> Disk)	Corr (Sq Deg)			
RAMY	23	1425	1428	1446	N16	E61	3960	10	28.2	21	SF		3	C			39			
HOLL	23	1541	1544	1554	N09	E52	3960	10	27.6	13	SF		3	C			17			
HOLL	23	1606	1608	1627	N10	E52	3960	10	27.6	21	SF		3	C			29			Z
HOLL	23	1649	1651	1722	N13	E18	3959	10	25.1	33	SN		3	C			62			
HOLL	23	1658	1658	1716	S11	E20	3955	10	25.2	18	SF		3	C			27			
HOLL	23	1754	1805	1807	N10	E52	3960	10	27.7	13	SF		3	C			19			Z
PALE	23	1808	1820	1828	N14	E17	3963	10	25.0	20	SF		3	C			37			
HOLL	23	1808	1820	1833	N13	E18	3963	10	25.1	25	SN		3	C			35			
PALE	23	1823	1825	1839	N11	E51	3960	10	27.6	16	SN		3	C			44			
HOLL	23	1823	1825	1845	N09	E51	3960	10	27.6	22	SB		3	C			62			ZE
PALE	23	1828	1829	1847	S11	E21	3955	10	25.4	19	SF	C 1.9	3	C			25			UF
HOLL	23	1834	1840	1851	S12	E20	3955	10	25.3	17	SF		3	C			50			F
PALE	23	1857	1905	1916	S13	E35	3964	10	26.4	19	SF		3	C			67			
HOLL	23	1857	1908	1916	S14	E35	3964	10	26.4	19	SF		3	C			58			
PALE	23	1904	1906	1918	N14	E16	3963	10	25.0	14	SF		3	C			34			
HOLL	23	1911	1957	2005	N13	E17	3963	10	25.1	54	SN		3	C			30			
HOLL	23	1922	1935	1938	S12	E21	3955	10	25.4	16	SF		3	C			21			
HOLL	23	1944	1958	2006	S12	E19	3955	10	25.3	22	SN		3	C			46			F
PALE	23	1946	1956	2010	S12	E19	3955	10	25.3	24	SN		3	C			33			F
PALE	23	1948	1956	2011	N14	E16	3963	10	25.0	23	SN		3	C			23			
HOLL	23	2052	2053	2059	S12	E13	3955	10	24.8	7	SB	C 1.7	3	C			41			E
HOLL	23	2105	2106	2110	N11	E53	3960	10	27.9	5	SF		3	C			21			
HOLL	23	2111	2111	2117	S08	E56	3961	10	28.1	6	SF		3	C			16			
HOLL	23	2208	2208	2216	S10	E21	3955	10	25.5	8	SF		3	C			24			
HOLL	23	2252	2304	2308	S07	E57	3961	10	28.2	16	SF		3	C			17			
HOLL	23	2331	2336	2338D	S07	E59	3961	10	28.4	7D	SF	C 2.0	3	C			38			F
PALE	23	2339	2341	2344D	S05	E59	3961	10	28.4	5D	SF		3	C			22			F
LEAR	24	0020	0021	0043	N13	E13	3963	10	25.0	23	SN	C 2.0	3	C			65			
PEKG	24	0020	0022	0036	N13	E13		10	25.0	16	SN		3	C	0022		168	1.8		E
LEAR	24	0158	0204	0217	S12	E10	3955	10	24.8	19	SN	C 2.2	3	C			136			F
LEAR	24	0203	0209	0220	N10	E46	3960	10	27.5	17	SF		3	C			29			ZF
PEKG	24	0204	0207	0224	N09	E47		10	27.6	20	SF		P	0207		55	.8		E	
PEKG	24	0205E	0205	0211	S12	E09		10	24.8	6D	SN		P	0205		92	1.0		E	
LEAR	24	0253	0254	0306	N15	E52		10	28.1	13	SF		3	C			30			F
GOES	24	0410	0412	0435			3960			25		C 2.2								
PEKG	24	0425	0426	0430	S13	E09		10	24.9	5	SN		P	0426		67	.7		E	
LEAR	24	0431E	0431U	0437	S13	E09	3955	10	24.9	6D	SF		3	C			41			H
LEAR	24	0500	0502	0506	S06	E52	3961	10	28.1	6	SF		3	C			20			
GOES	24	0517	0520	0523						6		C 2.0								
GOES	24	0534	0535	0558			3960			24		C 5.1								
PEKG	24	0544	0546	0600	N09	E44		10	27.5	16	SN		P	0546		71	1.0		E	
LEAR	24	0608	0610	0616	N12	W38	3958	10	21.4	8	SF		3	C			29			
LEAR	24	0612	0614	0623	N15	E50		10	28.0	11	SF		3	C			44			
LEAR	24	0635	0636	0642	S09	E17	3955	10	25.6	7	SF		3	C			46			
LEAR	24	0658	0705	0725	S12	E07	3955	10	24.8	27	SN	C 3.0	3	C			125			F
PEKG	24	0700	0705	0712	S13	E07		10	24.8	12	SN		P	0705		126	1.4		E	
PEKG	24	0704	0705	0706	S18	E11		10	25.1	2	SF		P	0705		34	.4		E	
KAND	24	0711E		0719	S11	E06		10	24.8	8D	SN		C							
LEAR	24	0715	0715	0732	N11	W39	3958	10	21.4	17	SF		3	C			22			
LEAR	24	0734	0743	0825	N12	E18	3959	10	25.7	51	SF		3	C			176			F
KAND	24	0738	0751	0807	N13	E17		10	25.6	29	SN		C							U
LEAR	24	0759	0808	0853D	N09	E42	3960	10	27.5	54D	SN		3	C			70			K
LEAR	24	0759	0827	0853D	N09	E42	3960	10	27.5	54D	1N	C 5.2	3	C			182			Z
KAND	24	0808	0823	0833D	N13	E42		10	27.5	25D	1B		C							Z
BUCA	24	0816		0845	N09	E42		10	27.5	29	SN		P	0822		150	2.0			Z
ISTA	24	0818	0826	0839	N08	E43		10	27.6	21	1B									E
LEAR	24	0836	0837	0847	N12	E08	3963	10	25.0	11	SF		3	C			33			
GOES	24	1333	1414	1414						41		C 2.6								
HOLL	24	1406	1511	1601	N12	E41	3960	10	27.7	115	1B	M 2.2	3	C			238			ZE
HOLL	24	1455E	1522U	1526D	S08	E30	3961	10	26.9	31D	SF		3	C			35			F
HOLL	24	1457	1512	1603	N12	E41	3960	10	27.7	66	1B		4	C			450			ZE
HOLL	24	1537	1538	1605	N12	W43	3958	10	21.4	28	SF		3	C			24			
HOLL	24	1712	1713	1722	N13	E15	3959	10	25.8	10	SF		3	C			20			
GOES	24	1720	1723	1728			3961			8		C 3.1								
HOLL	24	1722	1723	1733	S06	E51	3961	10	28.5	11	SF		3	C			34			
RAMY	24	1724	1725	1728	S04	E52	3961	10	28.6	4	SF		3	C			36			
PALE	24	1730	1734	1750	S04	E50	3961	10	28.5	20	SF		3	C			19			
PALE	24	1736	1748	1831	N10	E37	3960	10	27.5	55	SN		3	C			155			F
HOLL	24	1746	1752	1832	N10	E38	3960	10	27.6	46	SB		3	C			46			FE
PALE	24	1916	1917	1923	S09	E08	3955	10	25.4	7	SF		3	C			34			F

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Sta	Day	Start (UT)	Max (UT)	End (UT)	Lat	CMD	NOAA/ USAF Region	CMP Mo	Dur Day	Dur (Min)	Imp Opt	Xray	Obs See	Type	Area Measurement			Remarks
															Time (UT)	Apparent (10 <sup>-6</sup> Disk)	Corr (Sq Deg)	
HOLL	24	2034	2035	2104	S09	E09	3955	10	25.5	30	SN	C 1.7	3	C		37		
HOLL	24	2050	2100	2119	N03	E66	3962	10	29.8	29	SF		3	C		20		F
PALE	24	2121	2127	2142	N12	E40	3960	10	27.9	21	SF		3	C		63		F
HOLL	24	2123	2128	2141	N10	E40	3960	10	27.9	18	SN		3	C		21		F
HOLL	24	2156	2156	2213	N14	E12	3959	10	25.8	17	SF		3	C		49		
PALE	24	2212	2213U	2222D	N09	E35	3960	10	27.6	10D	SN		3	C		114		F
HOLL	24	2213	2213	2218	N07	E35	3960	10	27.5	5	SN		3	C		68		
HOLL	24	2239	2239	2244	S09	E03	3955	10	25.2	5	SN		3	C		29		
HOLL	24	2313	2323	2333D	N13	E30	3960	10	27.2	20D	SN		3	C		51		U
PALE	24	2315	2323	2330	N14	E38	3960	10	27.8	15	SF	C 2.5	3	C		53		
LEAR	24	2327	2332	2350	S07	E03	3955	10	25.2	23	SF		3	C		89		
HOLL	24	2329	2332	2333D	S12	W00	3955	10	25.0	4D	SN		3	C		85		F
PALE	25	0016	0017	0020	N12	E34	3960	10	27.6	4	SF		3	C		32		
LEAR	25	0026	0027	0036	S12	W02	3955	10	24.9	10	SN	C 2.7	3	C		71		
PALE	25	0026	0029	0039	S12	W02	3955	10	24.9	13	SF		3	C		42		F
LEAR	25	0236	0236	0244	S12	W04	3955	10	24.8	8	SF	C 1.9	3	C		24		
GOES	25	0314	0317	0321						7		C 2.1						
PEKG	25	0325E	0337	0409	S09	E05		10	25.5	44D	SN			P	0337	88	.9	E
YUNN	25	0325	0337	0414	S10	E04		10	25.4	49	SB			C		127	1.4	
LEAR	25	0327	0335	0442	S10	E05	3955	10	25.5	75	SB	C 9.4	3	C		144		ZF
PEKG	25	0502E	0508	0512	N09	E31		10	27.5	10D	SN			P	0508	21	.2	D
LEAR	25	0502	0508	0517	N09	E30	3960	10	27.5	15	SN		3	C		63		
PEKG	25	0527	0535	0541	S11	W04		10	24.9	14	SF			P	0535	139	1.5	F
LEAR	25	0529	0531	0536	S12	W06	3955	10	24.8	7	SF		2	C		31		F
PEKG	25	0531	0535	0555	N09	E30		10	27.5	24	SF			C	0535	34	.4	E
PEKG	25	0700E	0705	0715D	S07	W03		10	25.1	15D	SN			P	0705	59	.6	E
LEAR	25	0705	0714	0728	S08	W04	3955	10	25.0	23	SN	C 3.3	3	C		137		F
KAND	25	0709	0718	0734	S07	W03		10	25.1	25	SN			C				
ISTA	25	0710		0720	S11	W05		10	24.9	10	1N							E
YUNN	25	0726E	0726U	0730	S07	W05		10	24.9	4D	SN			P	0726	48	.5	E
YUNN	25	0728	0729	0731D	S07	E37		10	28.1	3D	SN			P		16	.2	D
LEAR	25	0729	0731	0738	S07	E37	3961	10	28.1	9	SN		3	C		42		
KAND	25	0733		0742	S05	E38		10	28.2	9	SF			C				E
YUNN	25	0748	0753	0816	S05	E43		10	28.5	28	SN			C		32	.5	
LEAR	25	0749	0750	0804	S05	E43	3961	10	28.5	15	SN	C 1.9	3	C		66		F
KAND	25	0752	0755	0808	S03	E43		10	28.5	16	1B			C				
KAND	25	0826		0833	S09	W02		10	25.2	7	SF			C				D
KAND	25	0836		0846	S08	W04		10	25.1	10	SF			C				E
KAND	25	0845	0848	0855	N15	W05		10	25.0	10	SB			C				D
YUNN	25	0848E	0848U	0851D	N14	W05		10	25.0	3D	SN			P	0848	16	.2	D
YUNN	25	0912E	0912U	0915D	S09	W01		10	25.3	3D	SN			P	0912	48	.5	E
GOES	25	1003	1006	1008						5		C 2.2						
KAND	25	1104		1149	S13	W08		10	24.9	45	SB			C				E
KAND	25	1107		1149	S03	W03		10	25.2	42	SN			C				D
RAMY	25	1131	1134	1201	S12	W07	3955	10	25.0	30	SB	C 3.8	3	C		100		FE
RAMY	25	1214	1217	1243	N11	W07	3963	10	25.0	29	SN	C 2.5	3	C		71		
KAND	25	1239		1250	N12	W07		10	25.0	11	SN			C				E
RAMY	25	1242	1244	1328	N11	E28	3960	10	27.6	46	SN	C 2.6	3	C		58		F
RAMY	25	1419	1523	1811	S05	E34	3961	10	28.1	232	SN		3	C		65		
RAMY	25	1526	1607	1638	N13	E02	3959	10	25.8	72	SF		3	C		68		
RAMY	25	1528	1612	1626	N11	W10	3963	10	24.9	58	SF		3	C		53		
RAMY	25	1542	1557	1645	S07	W08	3955	10	25.1	63	1B		3	C		354		UF
HOLL	25	1543E	1709U	1724	S06	E31	3961	10	28.0	101D	SF		3	C		169		F
HOLL	25	1545E	1558U	1643	S10	W09	3955	10	25.0	58D	1B		3	C		349		FE
GOES	25	1547	1602	1606			3955			19		C 8.6						
HOLL	25	1637	1657	1700	N13	W01	3959	10	25.6	23	SF		3	C		21		F
RAMY	25	1701	1701	1729	S10	W08	3955	10	25.1	28	SF		3	C		22		K
HOLL	25	1701	1709	1749	N09	E24	3960	10	27.5	48	SF		3	C		40		
RAMY	25	1701	1719	1729	S10	W08	3955	10	25.1	28	SN		3	C		105		K
HOLL	25	1706	1709	1717	S13	W11	3955	10	24.9	11	SN		3	C		40		F
RAMY	25	1734	1735	1746	S12	W11	3955	10	24.9	12	SF	C 2.2	3	C		35		
PALE	25	1800	1818	1839	N13	E01	3959	10	25.8	39	SN	C 2.0	3	C		175		F
HOLL	25	1807	1821	1833	N13	E02	3959	10	25.9	26	1N		3	C		207		F
GOES	25	1812	1816	1819			3959			7		C 2.5						
HOLL	25	1817	1820	1829	N10	E22	3960	10	27.4	12	SF		3	C		24		F
HOLL	25	1819	1827	1828	N12	W10	3963	10	25.0	9	SF		3	C		21		
HOLL	25	1821	1821	1829	S06	E34	3961	10	28.3	8	SF		3	C		21		
HOLL	25	1825	1827	1829	S09	W09	3955	10	25.1	4	SF		3	C		21		F
PALE	25	1835	1846	1920	N12	E25	3960	10	27.7	45	SN		3	C		72		F
HOLL	25	1838	1851	1958	N10	E24	3960	10	27.6	80	SN	C 3.8	3	C		105		

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Sta	Day	Start (UT)	Max (UT)	End (UT)	Lat	CMD	NOAA/ USAF Region	CMP Mo	Dur Day	(Min)	Imp Opt	Xray	Obs See	Type	Area Measurement			Remarks
															Time (UT)	Apparent (10 <sup>-6</sup> D1sk)	Corr (Sq Deg)	
[ PALE 25 1848 1848 1902 S12 W13 3955 10 24.8 14 SF 3 C 55 F																		
[ HOLL 25 1848E 1850U 1901 S12 W13 3955 10 24.8 13D SF 3 C 53 F																		
[ HOLL 25 1852 1903 1911 S07 E32 3961 10 28.2 19 SN 3 C 29																		
[ HOLL 25 1907 1911 1931 S11 W13 3955 10 24.8 24 SN 3 C 139 F																		
[ PALE 25 1908 1910 1917 S10 W10 3955 10 25.0 9 SN 3 C 73 F																		
[ HOLL 25 1946 1947 1955 N14 E32 3965 10 28.2 9 SF 3 C 27																		
[ HOLL 25 2017 2017 2042 S06 E32 3961 10 28.2 25 SF 3 C 27 F																		
[ HOLL 25 2019 2043 2141 N13 E31 3965 10 28.2 82 SF C 3.5 3 C 33																		
[ PALE 25 2045 2056 2132 N14 E31 3965 10 28.2 47 SF 3 C 94																		
[ PALE 25 2101 2107 2112 S12 W04 3955 10 25.6 11 SF 3 C 23																		
[ PALE 25 2248 0031 0105 N12 E23 3960 10 27.7 137 2B 3 C 504 K																		
[ PALE 25 2248 2304 0105 N12 E23 3960 10 27.7 137 2B M 2.1 3 C 545 ZUK																		
[ PALE 25 2250 2255 2303 S12 W15 3955 10 24.8 13 SF 3 C 198 F																		
[ LEAR 25 2305E 2305U 0022 N11 E23 3960 10 27.7 77D 1B 3 C 403 ZU																		
[ PALE 25 2317 2320 2323 N16 E29 3965 10 28.2 6 SF 3 C 31																		
[ LEAR 25 2332 2339 0015 N14 E29 3965 10 28.2 43 SN 3 C 49 F																		
[ PALE 25 2335 2345 0041 N14 E29 3965 10 28.2 66 SN 3 C 42																		
[ PALE 26 0007 0007 0009 N15 W14 3963 10 24.9 2 SF 3 C 28																		
[ YUNN 26 0015E 0024 0054 N11 E21 3960 10 27.6 39D SN 3 P 127 1.4 F																		
[ LEAR 26 0023 0026 0116 N09 E20 3960 10 27.5 53 1B C 8.2 3 C 349 ZF																		
[ YUNN 26 0025 0028 0054 N10 E20 3960 10 27.5 29 1N 3 C 223 2.5 F																		
[ PEKG 26 0025 0032 0052 S12 W16 3960 10 24.8 27 SN 3 P 0032 84 .9 E																		
[ YUNN 26 0027 0030 0037 S12 W17 3960 10 24.7 10 SN 3 C 127 1.4																		
[ PALE 26 0030 0034 0040 S12 W16 3955 10 24.8 10 SF 3 C 98																		
[ LEAR 26 0031 0033 0039 S12 W16 3955 10 24.8 8 SN 3 C 59																		
[ LEAR 26 0047 0047 0053 S12 W10 3955 10 25.3 6 SN 3 C 47																		
[ PALE 26 0134 0140 0153 S12 W16 3955 10 24.9 19 SN 3 C 74																		
[ YUNN 26 0135 0140 0144 S12 W18 3960 10 24.7 9 SN 3 C 143 1.6																		
[ LEAR 26 0137 0139 0152 S12 W17 3955 10 24.8 15 SN 3 C 109																		
[ LEAR 26 0315 0323 0333 S10 W14 3955 10 25.1 18 SF 3 C 47																		
[ LEAR 26 0402 0402 0409 N11 E18 3960 10 27.5 7 SF 3 C 24																		
[ LEAR 26 0519 0521 0539 N14 W04 3959 10 25.9 20 SF 3 C 49																		
[ YUNN 26 0526E 0526U 0534 N13 W05 3960 10 25.8 8D SN 3 P 0526 48 .5 E																		
[ GOES 26 0701 0703 0708 S09 E24 3960 10 28.1 6D SN 3 C 1.5 32																		
[ YUNN 26 0703E 0703U 0709 N14 W06 3960 10 25.8 22 SF 3 C 0703 32 .3																		
[ YUNN 26 0703 0710 0725 N12 W23 3960 10 24.6 3 SN 3 C 0818 31 .4																		
[ WEND 26 0818 0818 0821 S12 W23 3960 10 27.4 13D SN 3 P 64 .7 E																		
[ YUNN 26 0920 0924 0933D N12 E13 3960 10 27.3 17 C 1.5 41																		
[ GOES 26 0922 0933 0939 N10 E12 3960 10 24.8 7D SF 3 C 85 F																		
[ LEAR 26 0924 0926 0943D S12 W21 3955 10 28.1 8 SF 3 C 1008 62 .7																		
[ LEAR 26 0936 0938 0943D S10 E22 3960 10 28.1 9 C 1.3 22																		
[ WEND 26 1004 1008 1012 S10 E22 3960 10 28.2 26 SF 3 C 35 K																		
[ GOES 26 1153 1158 1202 S06 E21 3961 10 28.2 26 SN 3 C 30																		
[ RAMY 26 1405 1405 1431 S06 E21 3961 10 24.9 23 SN C 1.5 3 C 121 F																		
[ RAMY 26 1423 1423 1446 S12 W23 3955 10 25.3 53 SN 3 C 60																		
[ HOLL 26 1516 1527 1609 S10 W18 3955 10 25.5 40 SN 3 C 30																		
[ RAMY 26 1520 1527 1600 S12 W15 3955 10 28.2 16 SF 3 C 89																		
[ RAMY 26 1556 1606 1612 S06 E20 3961 10 28.2 13 SN C 2.1 3 C 67																		
[ RAMY 26 1630 1631 1643 S06 E20 3961 10 28.0 5 SN 3 C 48																		
[ HOLL 26 1631 1632 1636 S07 E18 3961 10 24.3 18 SF 3 C 79																		
[ HOLL 26 1644 1647 1702 S11 W32 3954 10 25.5 22 SF 3 C 62																		
[ HOLL 26 1711 1721 1733 S11 W16 3955 10 26.9 30D SN 3 C 116																		
[ HOLL 26 1817 1825 1847D N10 E02 3967 10 25.6 25 SF 3 C 62																		
[ HOLL 26 1820 1822 1845 S11 W16 3955 10 27.0 40D SN C 1.9 3 C 62																		
[ HOLL 26 1926E 1926U 2006 N10 E03 3967 10 27.7 76D SN 3 C 129																		
[ HOLL 26 1929 1950 2045D N11 E12 3960 10 27.7 46D SN 3 C 84																		
[ RAMY 26 1938 1947 2024D N11 E12 3960 10 28.2 17D SN 3 C 47																		
[ RAMY 26 2007 2011 2024D S06 E18 3961 10 27.7 6 C 1.8 33																		
[ GOES 26 2202 2205 2208 N10 E10 3960 10 25.5 9 SF C 1.4 3 C 53																		
[ LEAR 26 2304 2308 2315 S13 W20 3955 10 28.6 72 1N 3 P 0032 315 3.5 F																		
[ LEAR 26 2316 2320 2325 N12 E21 3960 10 27.6 30 SN C 2.2 3 C 148																		
[ PEKG 26 2358 0032 0110 N10 E07 3960 10 27.4 12D SB 3 P 0053 159 1.7 E																		
[ LEAR 27 0052 0053 0122 N10 E05 3960 10 28.0 15 SN 3 C 64 .7																		
[ YUNN 27 0104 0107 0119 S06 E13 3961 10 28.2 14 SF 3 C 32 F																		
[ LEAR 27 0106 0109 0120 S06 E15 3961 10 27.0 9 SF 3 C 33																		
[ LEAR 27 0124 0130 0133 N09 W01 3967 10 27.7 5 SF 3 C 38 F																		
[ LEAR 27 0214 0218 0219 N10 E08 3960 10 27.6 30 SN C 2.2 3 C 148																		
[ YUNN 27 0053E 0053U 0105 N10 E05 3960 10 27.4 12D SB 3 P 0053 159 1.7 E																		
[ YUNN 27 0104 0107 0119 S06 E13 3961 10 28.0 15 SN 3 C 64 .7																		
[ LEAR 27 0106 0109 0120 S06 E15 3961 10 28.2 14 SF 3 C 32 F																		
[ LEAR 27 0124 0130 0133 N09 W01 3967 10 27.0 9 SF 3 C 33																		
[ LEAR 27 0214 0218 0219 N10 E08 3960 10 27.7 5 SF 3 C 38 F																		

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Sta	Day	Start (UT)	Max (UT)	End (UT)	Lat	CMD	NOAA/ USAF Region	CMP Mo	Dur Day	Dur (Min)	Imp Opt	Xray	Obs See	Type	Time (UT)	Area Measurement		Remarks
																Apparent (10 <sup>-6</sup> Disk)	Corr (Sq Deg)	
YUNN	27	0214	0238	0258	N10	E09		10	27.8	44	SB			C		79	.8	F
LEAR	27	0221	0305	0402	N10	E06	3960	10	27.5	101	1B	C 2.1	3	C		327		FE
PEKG	27	0223E	0226	0240	N11	E06		10	27.6	170	SN			P	0226	97	1.0	F
GOES	27	0301	0306	0310			3960			9		C 7.5						
YUNN	27	0305E	0306	0345	S11	W38		10	24.3	400	SN			P		143	2.0	EG
YUNN	27	0305E	0307	0328	N11	E08		10	27.7	230	1N			P		318	3.3	FW
LEAR	27	0331	0409	0640	S11	W22	3955	10	25.5	189	2B	M 3.7	3	C		619		FEK
LEAR	27	0331	0433	0640	S11	W22	3955	10	25.5	189	1B		3	C		335		K
LEAR	27	0334	0337	0412	S11	W38	3954	10	24.3	38	1N		3	C		191		F
MANI	27	0338E	0338U	0344D	N13	W29		10	25.0	60	SN		1	V		60	.7	F
YUNN	27	0341	0405	0415	S09	W23		10	25.4	34	2B			C		604	7.0	FKU
YUNN	27	0418	0440	0525	S09	W24		10	25.4	67	2B			C		763	8.9	FK
GOES	27	0430	0438	0503			3955			33		M 2.1						
LEAR	27	0535	0536	0600	S07	E12	3961	10	28.1	25	SF		3	C		61		F
YUNN	27	0537	0541	0554	N11	W33		10	24.7	17	SN			C		16	.2	D
LEAR	27	0537	0542	0613	N11	W30	3963	10	25.0	36	SN		3	C		76		F
BUCA	27	0820		0846	N11	W05		10	27.0	26	SN			C	0825	53	.5	
YUNN	27	0820	0825	0844	N10	W05		10	27.0	24	SN			C		32	.3	E
YUNN	27	0900E	0900U	0909	S08	E11		10	28.2	90	SN			P	0900	16	.2	
YUNN	27	0930E	0930U	0950	N11	E04		10	27.7	200	SN			P	0930	32	.3	
MONT	27	0937	0939	0944	N11	E05		10	27.8	7	SF			C	0939	50		
WEND	27	0938	0940	0948	N11	E05		10	27.8	10	SN			C	0940	60	.6	
WEND	27	1038	1053	1118	N11	E04		10	27.7	40	SN			C	1053	68	.7	
MONT	27	1044	1046	1057D	N11	E05		10	27.8	130	SN			C	1046	70		
GOES	27	1047	1050	1052						5		C 2.3						
WEND	27	1230	1236	1246	S12	W40		10	24.5	16	SN			C	1236	22	.3	
GOES	27	1232	1238	1242						10		C 2.8						
RAMY	27	1315	1332	1410	N11	W00	3960	10	27.6	55	SF		3	C		67		
GOES	27	1511	1523	1529						18		C 1.1						
RAMY	27	1546	1547	1558	N10	W02	3960	10	27.5	12	SN	C 1.4	3	C		32		F
RAMY	27	1617	1635	1736	N11	W01	3960	10	27.6	79	SN	C 7.5	3	C		120		EU
RAMY	27	1632	1633	1649	S13	W38	3955	10	24.8	17	SN		3	C		62		
RAMY	27	1828	1829	1834	N10	W01	3960	10	27.7	6	SF		3	C		29		
RAMY	27	1912	1912	1924	S09	W31	3955	10	25.5	12	SF		3	C		28		
RAMY	27	1927	1927	2004	N09	W12	3967	10	26.9	37	SF		3	C		26		
RAMY	27	1951	1952	1958	S08	W31	3955	10	25.5	7	SF		3	C		52		
RAMY	27	2002	2007	2024	N10	W39	3963	10	24.9	22	SN		3	C		93		
RAMY	27	2010	2020	2024D	S06	E03	3961	10	28.1	140	SN		3	C		151		F
RAMY	27	2013	2019	2024D	N11	W04	3960	10	27.5	110	1N	C 4.5	3	C		251		U
HOLL	27	2121	2123	2128	S09	W32	3955	10	25.5	7	SF		3	C		30		
HOLL	27	2230	2235	2303	N10	W04	3960	10	27.6	33	SN	C 1.5	3	C		127		
HOLL	27	2318	2320	2345D	S07	W00	3961	10	28.0	270	SF		3	C		40		
LEAR	27	2330	2336	2352	S06	E02	3961	10	28.1	22	SF	C 1.1	3	C		35		F
LEAR	28	0015	0016	0108	S06	E01	3961	10	28.1	53	SN	C 2.1	3	C		76		F
YUNN	28	0016E	0018	0031	S05	E00		10	28.0	150	SN			P		79	.8	
LEAR	28	0028	0029	0049	N10	W06	3960	10	27.6	21	SN	C 2.5	3	C		124		F
YUNN	28	0028	0031	0045	N10	W05		10	27.6	17	1N			C		207	2.1	F
LEAR	28	0130	0131	0206	S12	W34	3955	10	25.5	36	SF	C 1.1	3	C		26		F
YUNN	28	0244	0251	0300	N14	W44		10	24.8	16	SN			P		16	.2	
LEAR	28	0247	0249	0252	N13	W06	3960	10	27.7	5	SF		3	C		39		
YUNN	28	0248E	0248U	0252	N10	W07		10	27.6	40	SN			P	0248	16	.2	
LEAR	28	0255	0303	0314	N10	W04	3960	10	27.8	19	SF	C 1.2	3	C		55		F
YUNN	28	0259	0302	0315	N11	W08		10	27.5	16	SN			C		16	.2	
LEAR	28	0338	0408	0414D	N10	W38	3963	10	25.3	360	SF	C 2.8	3	C		126		F
YUNN	28	0340	0347	0437	N12	W41		10	25.1	57	SB			C		48	.6	F
PEKG	28	0350E	0355	0423	N13	W40		10	25.1	330	SN			P	0355	118	1.6	E
PEKG	28	0355E	0355	0424	S09	W36		10	25.5	290	SF			P	0355	63	.8	E
YUNN	28	0357	0409	0425	S10	W37		10	25.4	28	SN			C		64	.9	E
LEAR	28	0359	0409	0414D	S09	W35	3955	10	25.5	150	SF		3	C		115		F
YUNN	28	0534E	0534U	0548	S04	E02		10	28.4	140	SN			P	0534	16	.2	D
LEAR	28	0753	0753	0809	S14	W46	3955	10	24.8	16	SF	C 1.2	3	C		20		
GOES	28	0925	0929	0930						5		C 1.3						
WEND	28	1009	1010	1014	N10	W25		10	26.5	5	SF			C	1010	18	.2	
GOES	28	1012	1015	1019						7		C 1.5						
GOES	28	1027	1033	1038						11		C 2.0						
MONT	28	1029	1032	1043	S06	W04		10	28.1	14	SN			C	1032	110		
WEND	28	1030	1033	1115	S06	W04		10	28.1	45	SN			C	1033	119	1.2	
MONT	28	1048	1052	1101	S11	W42		10	25.3	13	SN			C	1052	70		E
HOLL	28	1405E	1405U	1405D	S11	W49	3960	10	24.9	130	1B		3	C		380		E
HOLL	28	1429	1444	1450	S10	W46	3955	10	25.1	21	SF	C 1.9	3	C		42		



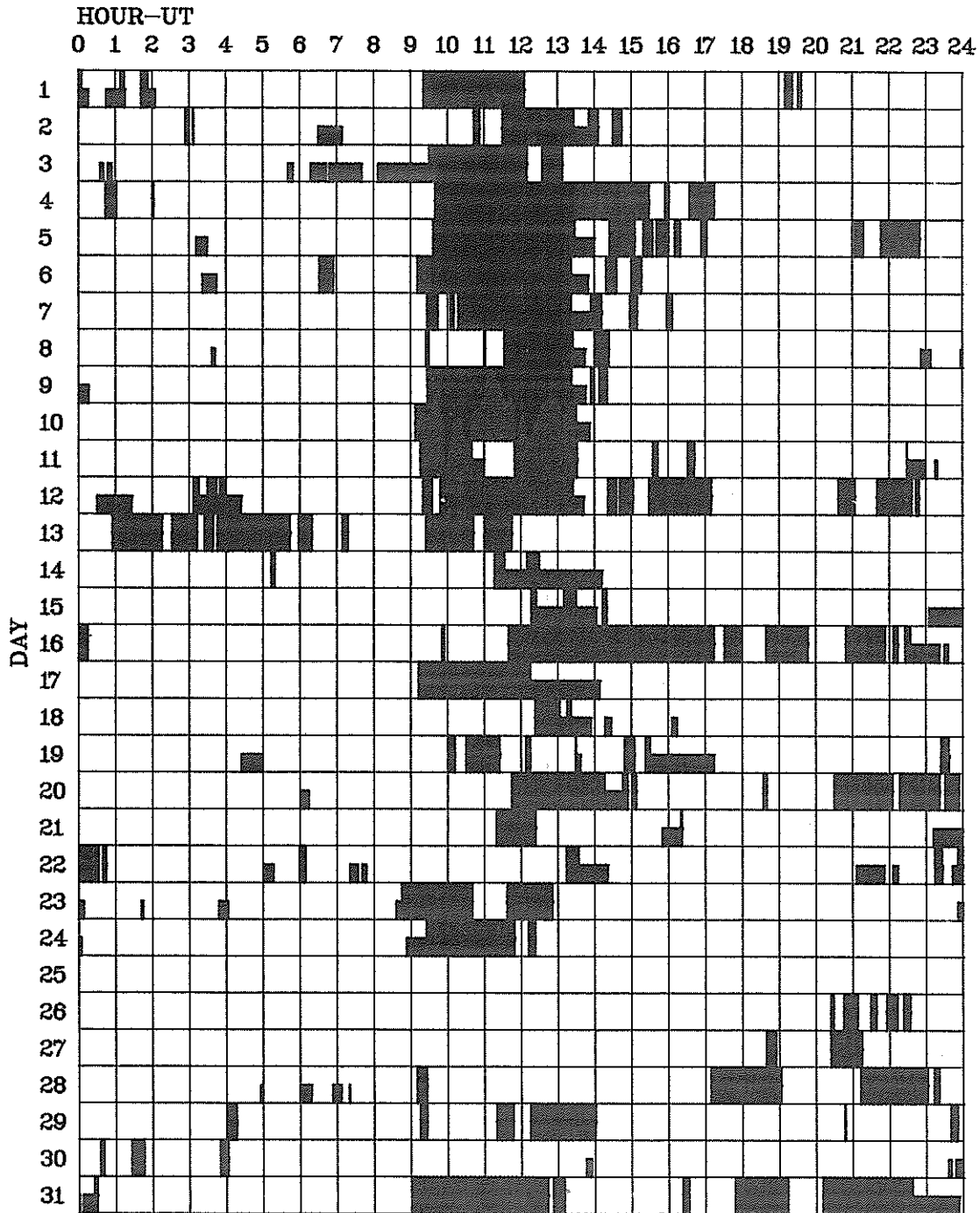
24  
Oct 82

H - ALPHA SOLAR FLARES

OCTOBER 1982

Sta	Day	Start (UT)	Max (UT)	End (UT)	NOAA/ USAF		CMP Mo	Dur (Min)	Imp Opt	Xray	Obs See	Type	Time (UT)	Area Measurement		Remarks
					Region	Lat CMD								Apparent (10 <sup>-6</sup> Disk)	Corr (Sq Deg)	
[	WEND	28	1439	1444	1501	N12 W50	3963	10 24.8	22	SN			1444	38	.6	
	HOLL	28	1439	1458	1500D	N12 W51	3963	10 24.8	21D	SN				48		
	RAMY	28	1442	1459	1515	N11 W52	3963	10 24.7	33	SN				32		FE
	RAMY	28	1502	1504	1521	S11 W42	3955	10 25.5	19	SN				40		FE
	RAMY	28	1557	1559	1605	N08 W27	3967	10 26.6	8	SN				54		
	HOLL	28	1931	1937	1940	S10 W46	3955	10 25.4	9	SF				29		F
	HOLL	28	1947	1948	2016	S06 W11	3961	10 28.0	29	SN C 1.8				83		F
	HOLL	28	1948	2000	2015	S09 W49	3955	10 25.1	27	SF				72		F
	LEAR	28	2355	2358	0013	S11 W47	3955	10 25.5	18	SF				31		
	LEAR	29	0038	0040	0050	S11 W52	3955	10 25.1	12	SF				37		
	LEAR	29	0120	0124	0203	N10 W19	3960	10 27.6	43	1N C 2.6				266		F
	LEAR	29	0522	0526	0537	N11 W56	3963	10 25.0	15	SF				19		
	LEAR	29	0526	0531	0559	S10 W53	3955	10 25.2	33	SN C 1.3				101		F
	LEAR	29	0543	0546	0613	N12 W57	3963	10 24.9	30	SF				20		
[	WEND	29	0846	0851	0908	S11 W54		10 25.3	22	1F			0851	144	2.5	
	LEAR	29	0847	0849	0907	S08 W51	3955	10 25.5	20	SF C 1.0				65		F
	WEND	29	0944	0947	1004	N12 W61		10 24.8	20	SF			0947	75	1.6	
	GOES	29	1314	1319	1323				9	C 1.1						
[	WEND	29	1401E		1422D	N13 W31		10 27.2	21D	1N			1403	319	3.9	
	HOLL	29	1405E	1405U	1511	N13 W28	3960	10 27.5	66D	1B C 5.7				380		E
[	RAMY	29	1605	1610	1653	N13 W58	3963	10 25.3	48	1B C 2.4				144		FE
	HOLL	29	1606	1608	1648	N14 W59	3963	10 25.2	42	1B				153		E
	RAMY	29	1607	1611	1623	N15 W51	3959	10 25.8	16	SN				41		
[	HOLL	29	1613	1659	1826	N11 W26	3960	10 27.7	133	1N C 4.7				221		F
	RAMY	29	1616	1701	1735	N11 W25	3960	10 27.8	79	SN				126		
	HOLL	29	1655	1655	1722	S10 W58	3955	10 25.3	27	SF				22		
	HOLL	29	1738	1739	1800	S11 W61	3955	10 25.1	22	SF				17		
	HOLL	29	1742	1743	1749	N08 W38	3967	10 26.9	7	SF				26		
	RAMY	29	1750	1750	1754	S06 W16	3961	10 28.5	4	SN				39		F
	HOLL	29	2042E	2108U	2124	N06 E03	3966	10 30.1	42D	SN				59		F
	HOLL	29	2052	2054	2100	S05 W17	3961	10 28.6	8	SN				53		
	HOLL	29	2059	2101	2107	N12 W66	3963	10 24.9	8	SN				42		
	HOLL	29	2130	2136	2200	S07 W27	3961	10 27.9	30	SF				37		
	HOLL	29	2132	2132	2142	S10 W63	3955	10 25.2	10	SF				15		
	HOLL	29	2149	2149	2201	N12 W67	3963	10 24.9	12	SF				12		
	HOLL	29	2216	2224	2251	S10 W63	3955	10 25.2	35	SN C 2.7				79		F
	GOES	30	0349	0352	0354				5	C 1.3						
	LEAR	30	0453	0454	0516	S10 W66	3955	10 25.2	23	SF				18		
	LEAR	30	0729	0731	0740	N05 W05	3966	10 29.9	11	SF				36		
[	WEND	30	0802	0805	0809	S25 E75		11 5.1	7	SF			0805	31		
	BUCA	30	0810		0813	S22 E75		11 5.1	3	SN			0811	53		D
[	LEAR	30	0811	0812	0817	N06 W02	3966	10 30.2	6	SN				29		F
	BUCA	30	0813		0820	N08 W01		10 30.3	7	SB			0815	53	.5	D
[	GOES	30	0952	1005	1013				21	C 1.2						
	WEND	30	0955	1001	1006	S25 E74		11 5.1	11	SF			1001	44		
	GOES	30	1141	1144	1153				12	C 2.1						
	WEND	30	1157	1213	1259	N07 W04		10 30.2	62	SF			1259	63	.7	
	GOES	30	1412	1415	1418				6	C 1.2						
	GOES	30	1505	1508	1515				10	C 1.8						
[	HOLL	30	1531	1539	1547	S04 W31	3961	10 28.3	16	SF				53		H
	RAMY	30	1538	1539	1559	S04 W30	3961	10 28.4	21	SF				40		
	GOES	30	1635	1639	1642				7	C 1.0						
	HOLL	30	1731	1732	1741	N06 W07	3966	10 30.2	10	SN C 1.3				32		F
[	HOLL	30	1836	1841	1858	N06 W07	3966	10 30.3	22	SN C 1.3				74		F
	GOES	30	1838	1839	1846				8	C 1.3						
	HOLL	30	1915	1917	1949	N11 W78	3963	10 24.9	34	1N C 2.4						
	HOLL	30	1931	1936	2019	N08 W51	3967	10 27.0	48	1B C 2.9				235		FE
	HOLL	30	2136	2155	2229	N07 W12	3966	10 30.0	53	SF				150		F
	LEAR	31	0225	0228	0236	N14 W68	3959	10 26.0	11	SF				37		
	LEAR	31	0521	0523	0525	S07 W41	3961	10 28.1	4	SF C 1.1				17		F
	GOES	31	1105	1115	1121				16	C 1.2						
	GOES	31	1136	1139	1143				7	C 2.0						
	GOES	31	2141	2143	2146				5	C 1.3						
[	GOES	31	2153	2212	2122		3966		1409	C 2.4						
	HOLL	31	2209E	2213	2255	N05 W25	3966	10 30.1	46D	SB				133		F

# INTERVALS OF NO FLARE PATROL OBSERVATION FOR PRECEDING SOLAR FLARE TABLE OCTOBER 1982



Observatories included in total patrol:

Bucharest	Istanbul	Learmonth	Monte Mario	Ramey
Holloman	Kandilli	Manila	Palehua	Wendelstein
			Peking	Yunnan

Times of no flare patrol are shown by the shaded area for each day divided into times of no cinematographic patrol (bottom half of day) and times of neither visual nor cinematographic patrol (top half of day).

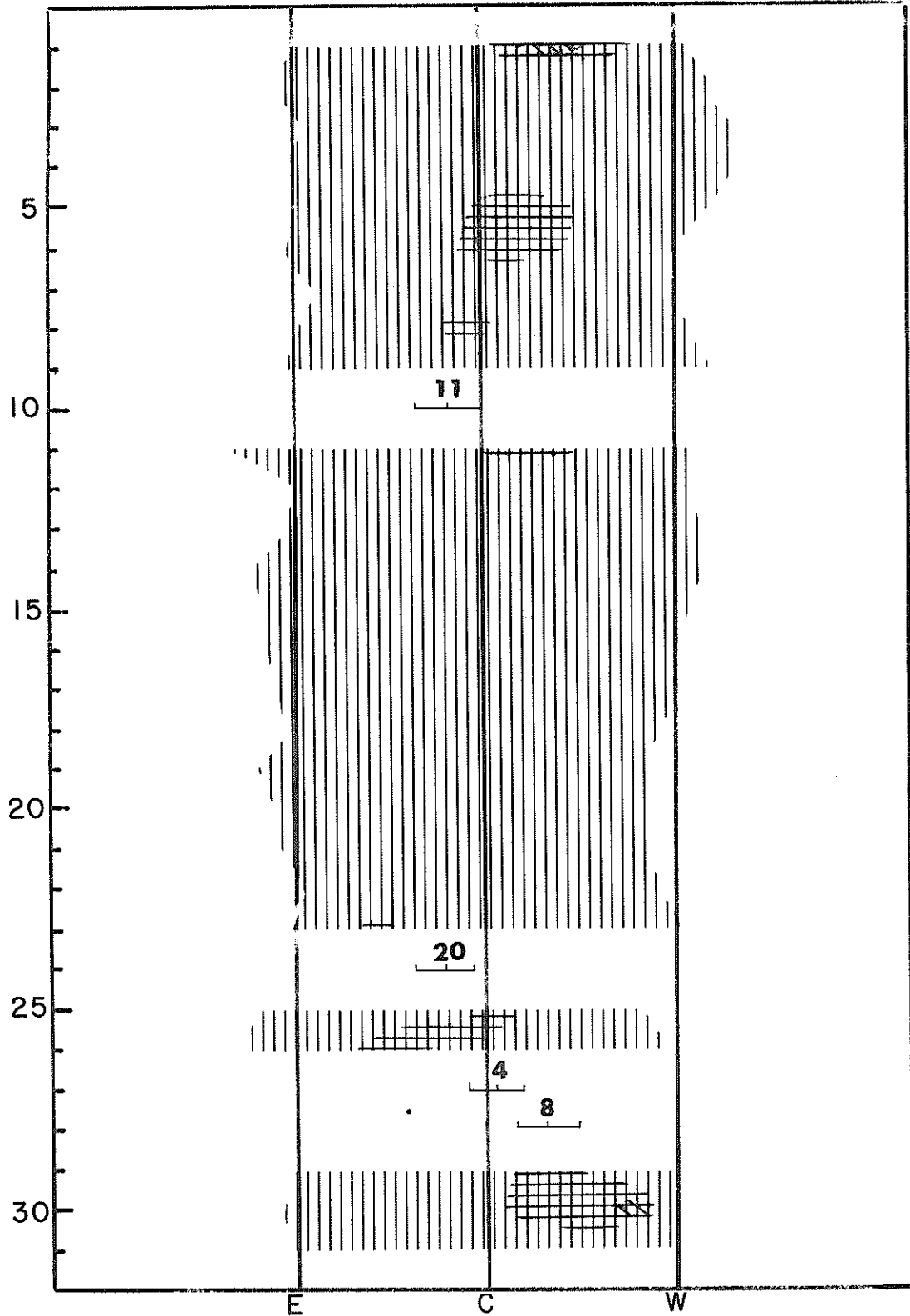
26  
Oct 82

# SOLAR RADIO EMISSION INTERFEROMETRIC OBSERVATION

OCTOBER 1982

Nancay

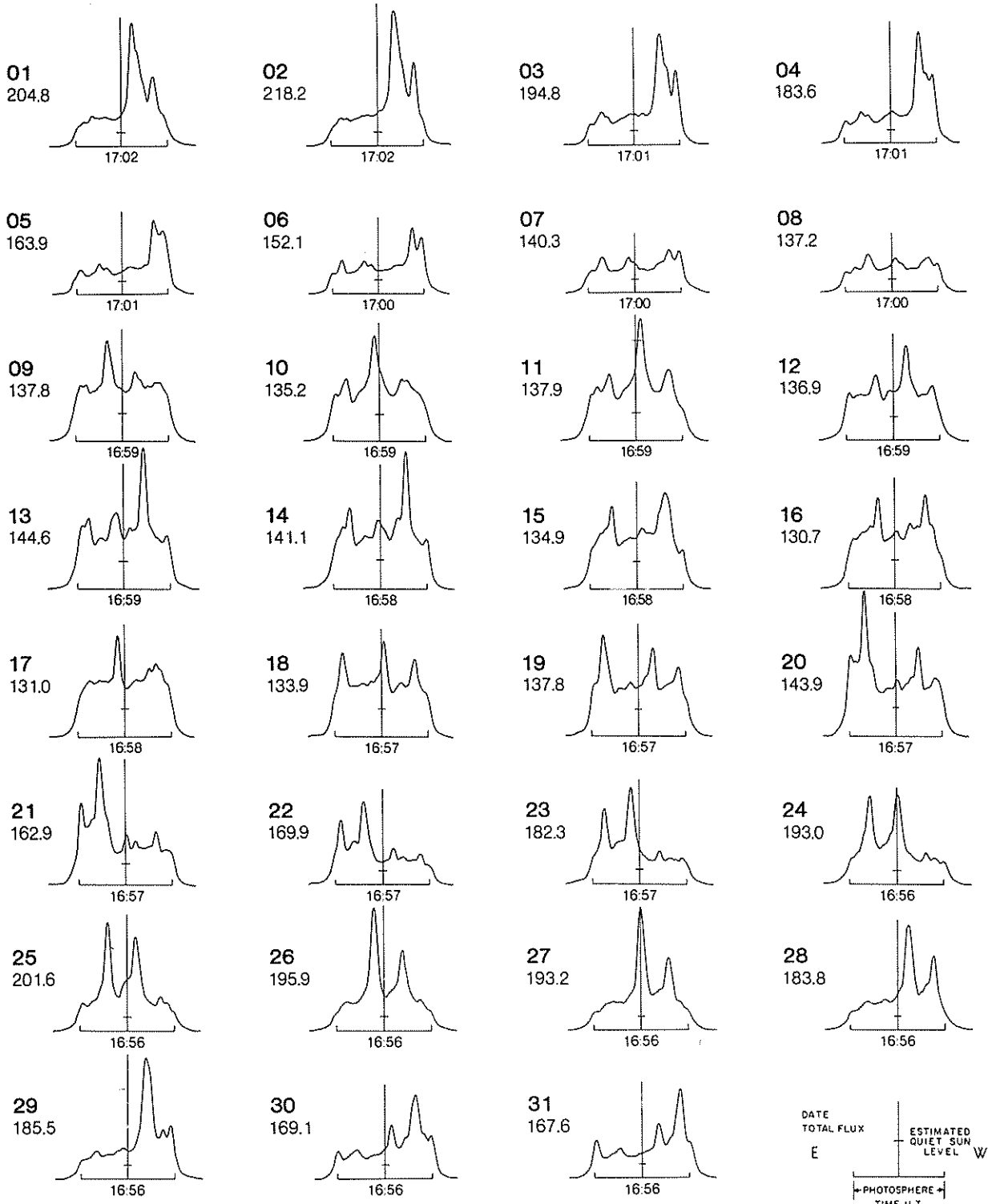
169 MHz



EAST-WEST SOLAR SCANS  
OCTOBER 1982

ALGONQUIN RADIO OBSERVATORY  
CANADA

10.7 cm  
Fan Beam with 1.5 minutes of arc  
E-W Resolution

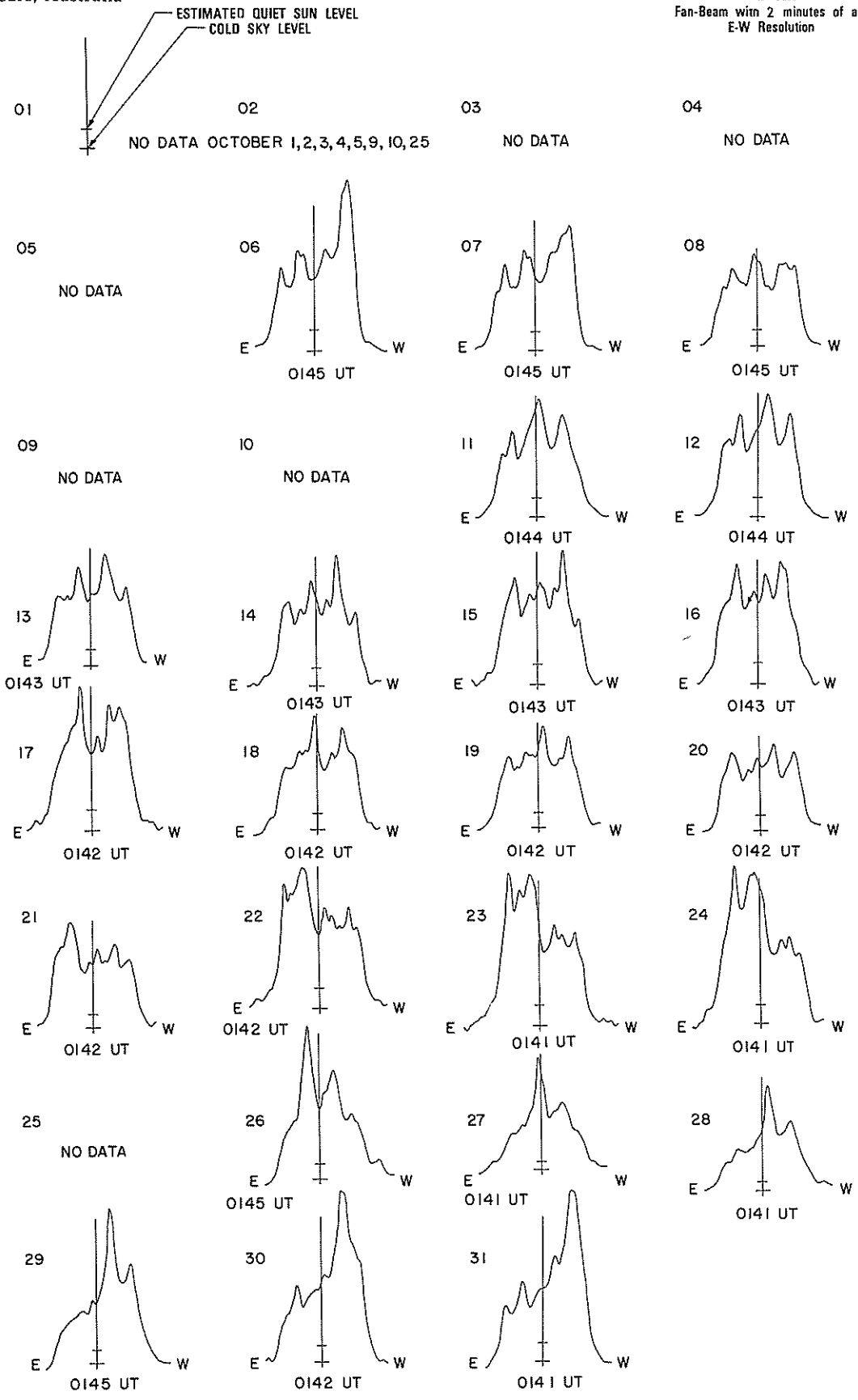


### EAST-WEST SOLAR SCANS

OCTOBER 1982

Fleurs, Australia

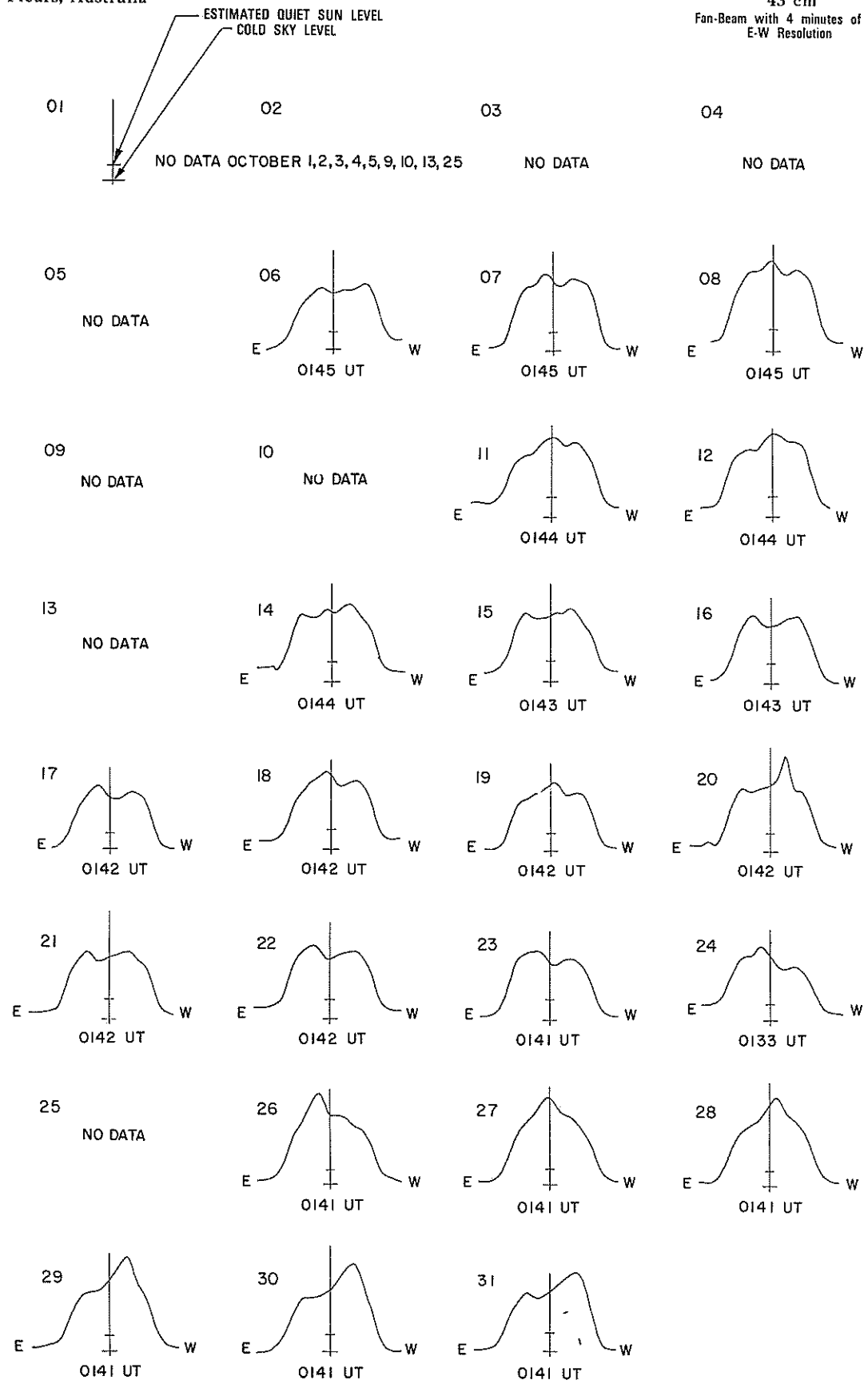
21 cm  
Fan-Beam with 2 minutes of arc  
E-W Resolution



EAST-WEST SOLAR SCANS  
OCTOBER 1982

Fleurs, Australia

43 cm  
Fan-Beam with 4 minutes of arc  
E-W Resolution



30  
Oct 82

SOLAR RADIO EMISSION  
SELECTED FIXED FREQUENCY EVENTS

OCTOBER 1982

Day	Freq	Sta	Type	Start (UT)	Time of Maximum (UT)	Duration (Min)	Flux Density Peak (10 <sup>-22</sup> W/m <sup>2</sup> Hz)	Flux Density Mean	Int	Remarks
01	2800	OTTA	20 GRF	1410.0	1455.0	60.0	4.0	2.2		
	2800	OTTA	20 GRF	1745.0	1830.0	85.0	4.8	2.4		
	2695	SGMR	4 S/F	1852.0	1857.0	5.00	18.0			QL=6 ST=2 TYP=3
02	2800	OTTA	21 GRF	1525.0	1650.0	205.0	9.0	4.5		
	2800	OTTA	8 S	1558.0	1558.0	.1	9.6			
	2800	OTTA	20 GRF	1816.0	1817.0	20.0	7.4	2.5		
	2695	PENT	20 GRF	2140.0	2220.0	80.0	3.8	1.9		
03	2800	OTTA	1A S	1654.0	1655.0	2.0	2.8	1.4		
	2800	OTTA	8 S	1655.0	1655.0	.2	25.6			
	2695	PENT	20 GRF	2010.0	2013.0	30.0	7.4	2.4		
	2695	PENT	20 GRF	2120.0	2132.0	70.0	4.4	2.2		
04	8400	BERN	8 S	0750.0	0750.2	1.0	25.0			ONLY PAPER REC
	8800	ATHN	8 S	0750.3	0750.5	.8	28.0			QL=6 ST=2 TYP=3
	2695	ATHN	8 S	0750.3	0750.5	.8	9.0			QL=6 ST=2 TYP=3
	2800	OTTA	20 GRF	1210.0	1235.0	80.0	5.2	2.8		
	2800	OTTA	20 GRF	1335.0	1430.0	165.0	4.2	2.6		
	2800	OTTA	22 GRF	1640.0	1746.0	120.0	7.8	2.8		
	2800	OTTA	20 GRF	1925.0	2000.0	70.0	3.0	1.5		
05	8400	BERN	22 GRF	1142.6	1146.4	19.0	22.0			ONLY PAPER REC
	2800	OTTA	260 FAL	1255.0	1410.0	75.0	-8.4	-4.4		
	8400	BERN	3 S	1552.5	1553.9	8.0	81.0			
	8800	SGMR	47 GB	1553.0	1553.8	2.6	61.0			QL=6 ST=2 TYP=5
	2800	OTTA	1 S	1558.0	1559.0	2.0	2.0	1.0		
	2800	OTTA	260 FAL	1615.0	1655.0	40.0	-3.4	-1.7		
	2800	OTTA	20 GRF	1800.0	1930.0	160.0	4.0	2.0		
	2695	PENT	1 S	2143.5	2144.0	7.0	7.2	2.0		
06	2695	PENT	20 GRF	2100.0	2130.0	115.0	3.4	2.6		
	8800	PALE	47 GB	2301.8	2302.3	2.3	57.0			QL=6 ST=2 TYP=5
07	8800	PALE	47 GB	0113.1	0113.3	2.0	82.0			QL=6 ST=2 TYP=5
	8800	PALE	8 S	0251.1	0251.1	.4	20.0			QL=6 ST=2 TYP=3
10	2695	SGMR	8 S	1702.8	1703.5	1.8	31.0			QL=6 ST=2 TYP=3
	2800	OTTA	20 GRF	1720.0	1745.0	100.0	3.0	1.5		
	2800	OTTA	240 R	1930.0	2020.0	50.0	3.8	2.2		
	2695	PENT	20 GRF	2200.0	2250.0	90.0	2.4	1.2		
11	2800	OTTA	1 S	1724.0	1725.0	3.0	2.2	1.5		
	2695	PENT	1 S	2238.0	2239.3	2.0	2.4	1.0		
12	2800	OTTA	8 S	1909.9	1910.0	.8	3.4	1.7		
14	8800	PALE	8 S	0014.8	0014.8	.3	20.0			QL=6 ST=2 TYP=3
	2695	PENT	3 S	0014.8	0015.0	1.0	48.0	12.0		
	2695	PALE	8 S	0014.8	0015.0	.5	47.0			QL=5 ST=2 TYP=3
	8800	PALE	8 S	0152.6	0152.8	1.0	30.0			QL=6 ST=2 TYP=3
	2800	OTTA	20 GRF	1815.0	1905.0	105.0	4.4	2.2		
	2800	OTTA	20 GRF	2010.0	2017.0	15.0	1.8	.8		
15	2800	OTTA	46F C	2036.5	2037.5	11.0	7.2	2.0		
	2695	SGMR	8 S	2037.3	2037.6	2.0	38.0			QL=6 ST=2 TYP=3
	2695	SGMR	4 S/F	2041.1	2041.5	6.4	23.0			QL=6 ST=2 TYP=3
16	8400	BERN	20 GRF	0832.8	0834.3	20.0	21.0			
	2800	OTTA	1 S	1454.4	1455.3	2.5	1.8	.9		
	2800	OTTA	4 S/F	1629.5	1631.5	4.0	53.0	13.2		
	2800	OTTA	1 S	2122.2	2122.9	1.5	3.8			
18	2800	OTTA	20 GRF	1840.0	1847.0	50.0	3.8	1.7		
19	2800	OTTA	21 GRF	1520.0	1600.0	100.0	2.0	1.0		
	2800	OTTA	8 S	1520.5	1520.7	.5	4.0			
20	2800	OTTA	8 S	1613.0	1613.2	.5	1.0	.5		
	2800	OTTA	20 GRF	1640.0	1750.0	105.0	3.0	1.5		

SOLAR RADIO EMISSION  
SELECTED FIXED FREQUENCY EVENTS

OCTOBER 1982

Day	Freq	Sta	Type	Start (UT)	Time of Maximum (UT)	Duration (Min)	Flux Density		Int	Remarks
							Peak (10 -22 W/m <sup>2</sup> Hz)	Mean		
21	8800	PALE	47 GB	0034.0	0034.6	2.8	300.0			QL=6 ST=2 TYP=5
	2695	ATHN	8 S	1022.1	1022.5	1.4	29.0			QL=2 ST=2 TYP=3
	2800	OTTA	1 S	1357.5	1358.3	2.0	6.2	2.1		
	2800	OTTA	1 S	2001.0	2002.5	3.0	7.4	2.6		
	8800	PALE	8 S	2002.1	2002.6	1.0	21.0			QL=6 ST=2 TYP=3
	2695	PENT	1 S	2115.5	2117.2	3.0	2.0	.8		
	2695	PENT	1 S	2156.5	2157.3	2.0	2.8	1.4		
	2695	PENT	1 S	2308.0	2308.5	1.5	6.4	2.8		
22	8800	PALE	8 S	0115.3	0115.5	1.0	23.0			QL=6 ST=2 TYP=3
	2695	PALE	47 GB	2015.6	2015.6	.4	97.0			QL=6 ST=2 TYP=5
	2800	OTTA	240AR	2121.0	2123.0	2.0	3.0			
	2800	OTTA	1 S	2122.0	2123.0	1.0	2.0	1.0		
23	2800	OTTA	240AR	1250.0	1320.0	30.0	8.0	4.0		
	8800	ATHN	4 S/F	1252.0	1252.8	3.8	38.0			QL=6 ST=2 TYP=3
	8400	BERN	3 S	1252.4	1254.3	5.5	68.0			
	2695	ATHN	8 S	1252.6	1253.0	1.2	24.0			QL=2 ST=2 TYP=3
	8800	SGMR	4 S/F	1252.6	1253.6	3.7	44.0			QL=6 ST=2 TYP=3
	2800	OTTA	3 S	1252.7	1253.5	7.0	29.0	8.0		
	2695	SGMR	47 GB	1253.3	1253.5	2.3	70.0			QL=6 ST=2 TYP=5
	2800	OTTA	20 GRF	1325.0	1340.0	150.0	8.0	4.2		
	2800	OTTA	20 GRF	1655.0	1705.0	75.0	3.8	1.9		
	2800	OTTA	240 R	1820.0	1840.0	20.0	3.2	1.6		
	2800	OTTA	1 S	2051.0	2052.0	2.5	3.2	1.6		
24	8800	ATHN	4 S/F	0601.8	0602.3	2.7	36.0			QL=6 ST=2 TYP=3
	8800	ATHN	4 S/F	0605.8	0607.5	4.8	29.0			QL=6 ST=2 TYP=3
	2695	ATHN	4 S/F	0605.8	0607.5	4.8	11.0			QL=2 ST=2 TYP=3
	8800	ATHN	4 S/F	0701.5	0704.6	6.8	29.0			QL=6 ST=2 TYP=3
	2695	ATHN	4 S/F	0702.1	0704.6	6.2	18.0			QL=2 ST=2 TYP=3
	8400	BERN	3 S	0704.2	0704.6	2.0	26.0			
	2800	OTTA	240 R	1350.0	1420.0	30.0	7.0	3.5		
	2800	OTTA	21 GRF	1455.0	1515.0	75.0	7.0	3.0		
	2800	OTTA	4 S/F	1503.5	1504.4	2.0	22.6	11.3		
	2695	SGMR	4 S/F	1503.8	1504.3	2.3	34.0			QL=6 ST=2 TYP=3
	2800	OTTA	4 S/F	1510.5	1511.2	4.0	60.0	20.0		
	8400	BERN	4 S/F	1510.6	1511.3	5.0	98.0			
	8800	ATHN	47 GB	1510.6	1511.5	1.9	54.0			QL=6 ST=3 TYP=5
	8800	SGMR	47 GB	1510.8	1511.3	3.5	91.0			QL=6 ST=2 TYP=5
	2695	ATHN	47 GB	1511.0	1511.1	1.8	85.0			QL=2 ST=2 TYP=5
	2695	SGMR	47 GB	1511.1	1511.1	2.7	139.0			QL=6 ST=2 TYP=5
	2800	OTTA	20 GRF	1710.0	1735.0	70.0	4.6	3.3		
	2800	OTTA	1 S	1840.0	1840.3	1.5	6.6	3.3		
25	2695	ATHN	4 S/F	0505.8	0508.1	5.5	40.0			QL=2 ST=3 TYP=3
	8800	ATHN	47 GB	0506.3	0508.5	4.7	68.0			QL=6 ST=3 TYP=5
	2695	ATHN	8 S	0710.0	0710.6	1.5	27.0			QL=2 ST=2 TYP=3
	8800	ATHN	8 S	0710.0	0710.6	.8	15.0			QL=6 ST=2 TYP=3
	8400	BERN	3 S	0710.5	0711.3	2.5	30.0			
	2800	OTTA	40 F	1253.0	1255.5	4.0	10.0			
	8800	SGMR	8 S	1253.1	1253.1	1.0	18.0			QL=6 ST=2 TYP=3
	2800	OTTA	21 GRF	1540.0	1610.0	135.0	11.4	4.0		
	2800	OTTA	2 S/F	1556.0	1559.0	7.0	9.0	4.2		
	2800	OTTA	20 GRF	1940.0	2100.0	185.0	9.6	4.4		
	2695	PENT	40 F	2250.0	2306.0	30.0	104.0			
	8800	PALE	47 GB	2253.1E	2254.1	17.2D	130.0			QL=2 ST=2 TYP=5
	2695	PALE	47 GB	2253.8E	2254.1	10.3D	23.0			QL=2 ST=2 TYP=5
	26	2695	PALE	4 S/F	0013.6	0013.6	12.0	11.0		
2800		OTTA	8 S	1314.9	1315.0	.7	9.8			
2800		OTTA	240AR	1415.0	1430.0	15.0	3.0	1.5		
2695		SGMR	4 S/F	1415.6	1417.3	2.7	23.0			QL=6 ST=2 TYP=3
2800		OTTA	1 S	1421.0	1423.0	6.0	2.6	1.3		
2800		OTTA	20 GRF	1920.0	2020.0	155.0	4.0	1.8		
27	8800	PALE	8 S	0052.5	0052.6	.5	20.0			QL=6 ST=2 TYP=3
	2800	OTTA	20 GRF	1515.0	1525.0	15.0	2.2	1.1		
	2800	OTTA	1 S	1550.0	1555.0	10.0	2.6	1.3		
	2800	OTTA	21 GRF	1625.0	1705.0	90.0	3.0	1.5		



32  
Oct 82

SOLAR RADIO EMISSION  
SELECTED FIXED FREQUENCY EVENTS

OCTOBER 1982

Day	Freq	Sta	Type	Start (UT)	Time of Maximum (UT)	Duration (Min)	Flux Density		Int	Remarks
							Peak (10 -22 W/m <sup>2</sup> Hz)	Mean		
27	2800	OTTA	46F C	1630.5	1633.0	6.0	21.4	5.4		
	2800	OTTA	1 S	1724.0	1725.0	1.5	3.6			
	2800	OTTA	21 GRF	1935.0	2030.0	135.0	6.2	3.0		
	2800	OTTA	8 S	1943.9	1944.0	.5	4.0	2.0		
	2695	PENT	8 S	2013.0	2013.2	.8	2.0	1.0		
	2800	OTTA	3 S	2017.0	2020.0	10.0	13.8	4.6		
	8800	SGMR	4 S/F	2018.3	2019.5	3.0	15.0			QL=6 ST=2 TYP=3
	8800	PALE	8 S	2019.0	2019.8	1.3	32.0			QL=3 ST=2 TYP=3
	2695	PALE	8 S	2019.3	2019.8	.8	17.0			QL=3 ST=2 TYP=3
	2695	SGMR	4 S/F	2019.3	2019.8	2.5	23.0			QL=6 ST=2 TYP=3
2695	PENT	3 S	2230.9	2231.1	1.5	17.6	5.0			
28	2800	OTTA	21 GRF	1430.0	1510.0	105.0	4.0	2.0		
	2800	OTTA	1 S	1503.0	1503.8	1.0	3.6	1.8		
	2800	OTTA	20 GRF	1630.0	1730.0	130.0	5.6	3.0		
	2800	OTTA	20 GRF	1945.0	1950.0	20.0	3.8	1.9		
	2695	PENT	20 GRF	2110.0	2120.0	25.0	2.2	1.1		
	2695	PENT	1 S	2217.0	2218.0	5.0	9.6	3.2		
29	2800	OTTA	2 S/F	1315.5	1316.0	2.5	4.6	1.8		
	2800	OTTA	21 GRF	1345.0		125.0	11.6	7.8		
	2800	OTTA	40 F	1347.0	1347.7	6.0	25.0			
	2695	SGMR	8 S	1347.3	1347.5	1.2	23.0			QL=6 ST=2 TYP=3
	2695	SGMR	8 S	1407.1	1407.3	1.4	24.0			QL=6 ST=2 TYP=3
	2800	OTTA	8 S	1514.0	1514.0	.5	5.0	1.6		
	2800	OTTA	21 GRF	1605.0	1700.0	115.0	13.0	6.5		
	2695	SGMR	4 S/F	1645.0	1646.8	3.0	19.0			QL=6 ST=2 TYP=3
	2695	SGMR	4 S/F	1651.1	1653.6	8.5	24.0			QL=6 ST=2 TYP=3
	2800	OTTA	1 S	1652.0	1653.3	3.0	2.4	1.2		
	2695	SGMR	4 S/F	1702.3	1704.6	11.8	20.0			QL=6 ST=2 TYP=3
	2800	OTTA	8 S	1718.8	1719.0	.3	4.6			
	2695	SGMR	4 S/F	1745.6	1749.6	17.2	37.0			QL=6 ST=2 TYP=3
30	2800	OTTA	1 S	1730.0	1731.0	7.0	2.2	1.0		
31	2800	OTTA	20 GRF	1730.0	1840.0	100.0	2.0	1.0		

Observatories:

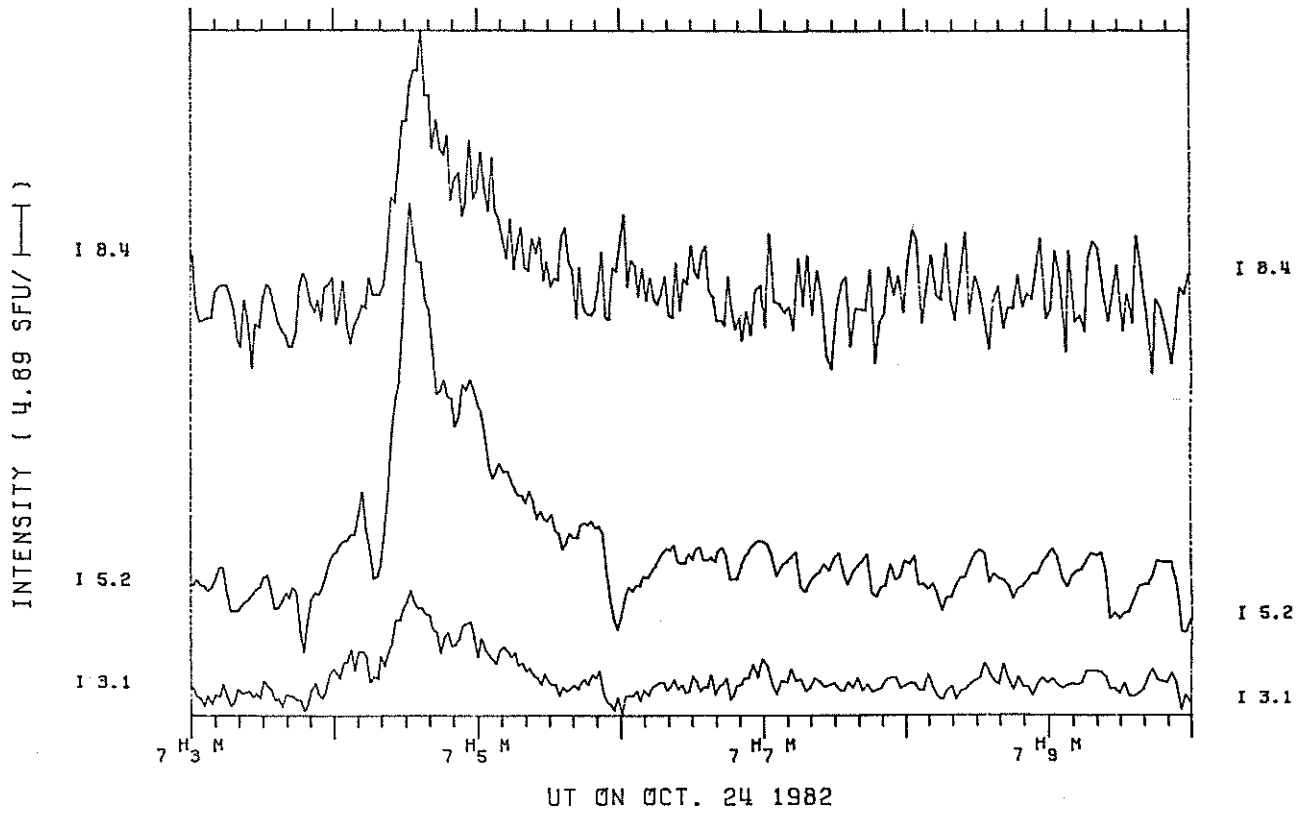
BERN = Berne      MANI = Manila      OTTA = Ottawa ARO      PENT = Penticton      SGMR = Sagamore Hill  
LEAR = Learmonth      ATHN = Athens      PALE = Palohua

Explanation of Type Code:

1 Simple 1	7 Minor +	24 Rise	30 Post Burst Increase A	43 Onset on 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	32 Absorption	45 Complex
4 Simple 2F	21 Simple 3A	27 Rise and Fall	40 Fluctuation	46 Complex F
5 Simple	22 Simple 3F	28 Precursor	41 Group of Bursts	47 Great Burstlike Storm
6 Minor	23 Simple 3AF	29 Post Burst Increase	42 Series of Bursts	48 Major
				49 Major +

### SELECTED SOLAR NOISE BURSTS

INSTITUTE OF APPLIED PHYSICS, UNIVERSITY OF BERN, SWITZERLAND  
INTEGRATION TIME= 1500 MS



INFERRED IP MAGNETIC FIELD

BARTELS ROTATION	DATE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27
2019	APR 13	TA	-	-	-	-	-	-	-	-	-	-	-	-	TA	-	-	-	-	-	-	-	-	-	-	-	-	-
2020	MAY 10	-	-	-	TA	TA	-	-	-	-	-	-	TA	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2021	JUN 6	-	*	-	-	-	-	-	-	-	AT	-	-	-	TA	-	-	-	-	-	-	-	-	-	-	-	-	-
2022	JUL 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2023	JUL 30	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2024	AUG 26	-	-	-	-	-	-	TA	-	-	-	-	-	-	TA	-	-	-	-	-	-	-	-	-	-	-	-	-
2025	SEP 22	-	-	-	-	-	-	-	-	AT	-	-	-	-	TA	-	-	-	-	-	-	-	-	-	-	-	-	-
2026	OCT 19	AT	TA	TA	-	-	-	-	-	-	-	TA	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2027	NOV 15	-	-	-	-	-	-	-	-	-	AT	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2028	DEC 12	TA	-	-	-	-	-	-	-	-	AT	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2029	JAN 8	-	-	-	-	-	-	TA	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2030	FEB 4	-	-	-	-	-	-	TA	TA	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2031	MAR 3	-	-	-	-	-	-	TA	TA	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2032	MAR 30	-	-	-	-	-	-	-	-	-	-	TA	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2033	APR 26	-	-	-	-	-	-	-	TA	TA	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2034	MAY 23	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2035	JUN 19	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2036	JUL 16	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2037	AUG 12	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2038	SEP 8	TA	AT	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2039	OCT 5	-	AT	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

= definitely towards the sun     = definitely away from the sun  
 = effect doubtful or not discernible    \* = effect doubtful or not discernible  
 T = towards the sun    A = away from the sun    - = missing data

The table shows daily inferences of the polarity of the interplanetary magnetic field. The first half of the day is based principally on magnetograms produced by the magnetometer at the Vostok Antarctic Station of the USSR. The magnetometer of the U.S. Air Weather Service now operated at Thule by the Danish Meteorological Institute is used for the second half of the day. The Thule magnetometer ceased operating in August 1981.

STANFORD MEAN SOLAR MAGNETIC FIELD

BARTELS ROTATION	DATE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27
2025	SEP 17	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■
2026	OCT 14	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■
2027	NOV 10	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■
2028	DEC 7	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■
2029	1982 JAN 3	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■
2030	JAN 30	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■
2031	FEB 26	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■
2032	MAR 25	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■
2033	APR 21	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■
2034	MAY 18	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■
2035	JUN 14	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■
2036	JUL 11	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■
2037	AUG 7	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■
2038	SEP 3	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■
2039	SEP 30	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■
2040	OCT 27	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■

POLARITY OF THE MEAN SOLAR MAGNETIC FIELD:  = FIELD >2μT,  = -2μT ≤FIELD ≤2μT,  = FIELD <-2μT  
 No box visible indicates no data available for that day.

NOTE: Data are taken daily at 2000 UT. Dates given are not Bartels Rotation dates. These earlier dates correspond to the occurrence of phenomena on the Sun that affect the Earth during the given Bartels Rotation.

STANFORD MEAN SOLAR MAGNETIC FIELD (MICROTESLA)

1981 1982

day	Dec.	Jan.	Feb.	March	April	May	June	July	Aug.	Sept.	Oct.	Nov.
01	43	15	-20	-19	.	-6	.	.	49	89	22	-31
02	.	-6	-44	-9	.	-6	33	85	19	102	53	-15
03	46	-17	-29	-20	.	23	38	75	19	34	37	-18
04	-3	.	-3	-39	-17	43	54	71	52	66	18	-38
05	.	-10	9	-44	3	48	80	53	85	68	-6	.
06	-12	-5	19	-21	38	16	82	35	105	55	-41	-63
07	.	-4	43	.	60	41	77	29	81	30	-54	-61
08	.	25	64	-2	57	69	80	42	63	-27	-76	-68
09	.	23	.	16	24	74	68	54	59	-55	-90	.
10	.	36	15	.	.	70	54	63	33	-74	-93	-54
11	.	45	24	34	61	65	50	87	-30	-93	-96	-21
12	.	35	33	35	46	79	58	79	-87	-124	-100	1
13	.	16	.	.	.	87	.	43	-118	-125	-70	19
14	.	-7	.	.	.	77	78	9	-121	-120	-35	34
15	57	-6	.	.	86	72	51	-39	-144	-112	-7	37
16	17	-12	14	21	93	51	-13	-112	-149	.	-1	52
17	-5	-1	16	.	71	38	-51	-164	-141	-49	4	.
18	.	-3	5	4	46	27	-93	-193	-124	-28	-43	.
19	-37	33	15	20	28	-15	-184	-201	-93	-14	55	.
20	.	.	27	31	-6	-57	-237	-189	-59	12	33	22
21	-39	.	38	25	-38	-68	-225	.	-32	40	.	33
22	-11	.	48	22	-78	-93	-170	-128	-16	44	.	.
23	-2	9	41	14	-113	-132	-123	-71	-12	26	17	.
24	35	25	28	-2	-107	-158	-69	-29	5	10	45	12
25	4	35	10	-26	-93	-151	-56	-5	32	8	.	-1
26	39	42	-3	.	-104	-118	-40	12	39	18	54	-31
27	17	36	-34	-61	-117	-26	11	28	47	36	55	-58
28	29	.	.	-56	-122	-26	37	38	46	72	34	.
29	.	15	.	-53	-77	-10	45	48	25	57	20	.
30	24	0	.	.	-26	19	59	61	39	52	.	.
31	.	-10	.	.	.	46	.	53	64	.	-11	.

DOT SYMBOL INDICATES NO DATA AVAILABLE FOR THE DAY.

P I O N E E R X I I  
S O L A R W I N D

October 1982

DATE	TIME	ESV	$U_{H^+}$	$N_{H^+}$	$T_{H^+}$
Oct	(UT)	( $^{\circ}$ )	(km/s)	( $H^+$ /cc)	( $\times 10^6$ K)
'82					
1	0358	159	428.	27.4	0.165
2	0606		468.	21.4	.266
3	0759		489.	13.9	.317
4	0311		400.	20.8	.03
5	1659		493.	37.1	.368
6	1548		621.	14.8	.463
7	0333		570.	15.	.352
8	1450		509.	11.	.092
9	0418		559.	14.9	.132
10	0328		458.	10.4	.107
11	0420		389.	19.7	.069
12	0353		430.	16.	.164
13	1538		347.	18.9	.049
14	0400		321.	38.4	.079
15	1546	168	579.	60.9	.201
16	0636		522.	14.5	.082
17	0303		500.	10.4	.224
18	0352		412.	3.1	.35
	2313		409.	14.6	.169
19	0311		378.	16.2	.208
20	1731		413.	21.1	.126
21	0215		366.	15.8	.04
22	0005		325.	42.7	.077
23	0759		465.	13.1	.294
24					
25					
26					
27					
28					
29					
30					
31					

BOULDER GEOMAGNETIC  
SUBSTORM LOG  
October 1982

DATE	ONSET TIME	DIR	COMMENTS	DATE	ONSET TIME	DIR	COMMENTS
10/01			Field Intermittently active.	10/17			Field unsettled all day. Bay, H and D components, Boulder-Tucson.
	0635	East			0210		
	0920	West			0305		Bay, H and D components, Boulder-Tucson.
	1320	West	Slow onset, recovery near 1530 UT.		0925		Weak SS, College to Ft. Yukon.
	1620	West	Slow onset, recovery near 1900 UT.		1050		Weak SS, Ft. Yukon.
					1125		Weak SS, College to Anchorage.
10/02			Field unsettled all day.	10/18			Field unsettled all day.
	0900	West			0355	≈ Center	
	1205		Localized SS vicinity Anchorage.		0710	West	
	1310	West			1240	West	Several injections with recovery near 1700 UT.
10/03			Field Intermittently unsettled. Weak SS.	10/19			Field intermittently unsettled.
	0920				0630	West	Weak SS.
10/04			Field Intermittently unsettled.		1225		
	0835	West		10/20			Field unsettled through 1500 UT.
	0950	West			0810	West	Localized SS, Ft. Yukon to Anchorage. Several injections with recovery near 1400 UT.
	1155	West			1130		
	1420	West					
10/05			Field Intermittently unsettled.				
	0345	East					
10/06			Field unsettled all day.				
	1045	West	Injection into existing SS.	10/21			Field slightly unsettled. Positive impulse H-component all mid/low latitude stations.
	1125				2030		
	1300	West	Slow onset, several injections with recovery near 1630 UT.				
10/07			Field intermittently active.	10/22			Quiet day.
	0125	East					
	0950	Center	Several injections.	10/23			Field intermittently unsettled.
	0940	East			0555		Weak SS.
	1535	West			1525		Slow onset, slow expansion northward through Alaska.
10/08			Field unsettled.	10/24			Field slightly unsettled.
	0350	East					
	0815	West	Several injections with recovery near 1100 UT.	10/25			Field intermittently unsettled.
	1405	West	Several injections with recovery near 1800 UT.		0515	East	
					1310	West	
10/09			Field slightly unsettled.	10/26	0030	SSC	Variable temporal and spatial responses in the network through 0800 UT. Weak SS Talkeetna to College.
10/10			Field unsettled after 1100 UT.		1150		
	1140	West	Weak SS.				
10/11			Field Intermittently unsettled.	10/27			Field Intermittently unsettled.
	0545	≈ Center	Slow onset, weak SS.		0620		Weak SS.
10/12			Field unsettled after 0900 UT.		0940		Weak SS.
	1010	West			1410	West	
10/13	0230	East	Boulder in partial ring current sector.	10/28			Field intermittently unsettled.
	0625	East	Weak SS.		0600		Weak SS.
	0925		Initial SS onset. Numerous injections follow, field active with recovery near 1800 UT.		0940		Initial onset, several injections with recovery near 1400 UT.
10/14			Field Intermittently active.	10/29			Field at storm level 0500-1600 UT, unsettled balance of the day.
	0230	East	Strong bay, Boulder-Tucson.				
	0845	West	Strong SS.	10/30			Field at storm level 0630-1900 UT, unsettled balance of the day.
	1145	West	Moderate SS.		0450	East	
10/15			Field slightly unsettled.	10/31			Field intermittently unsettled.
	1010		Weak SS.		0500	East	Initial onset, several injections with recovery near 0700 UT.
10/16			Field intermittently unsettled.		1525	West	Weak SS.
	1415	West	Weak SS.		1820	West	Moderate SS.
	1520	West	Slow onset.		2040		Polar cap SS.
	1645	West	West SS.		2220		Polar cap SS.
	2125		Polar cap SS.				

SGD 459 Part I (Prompt)

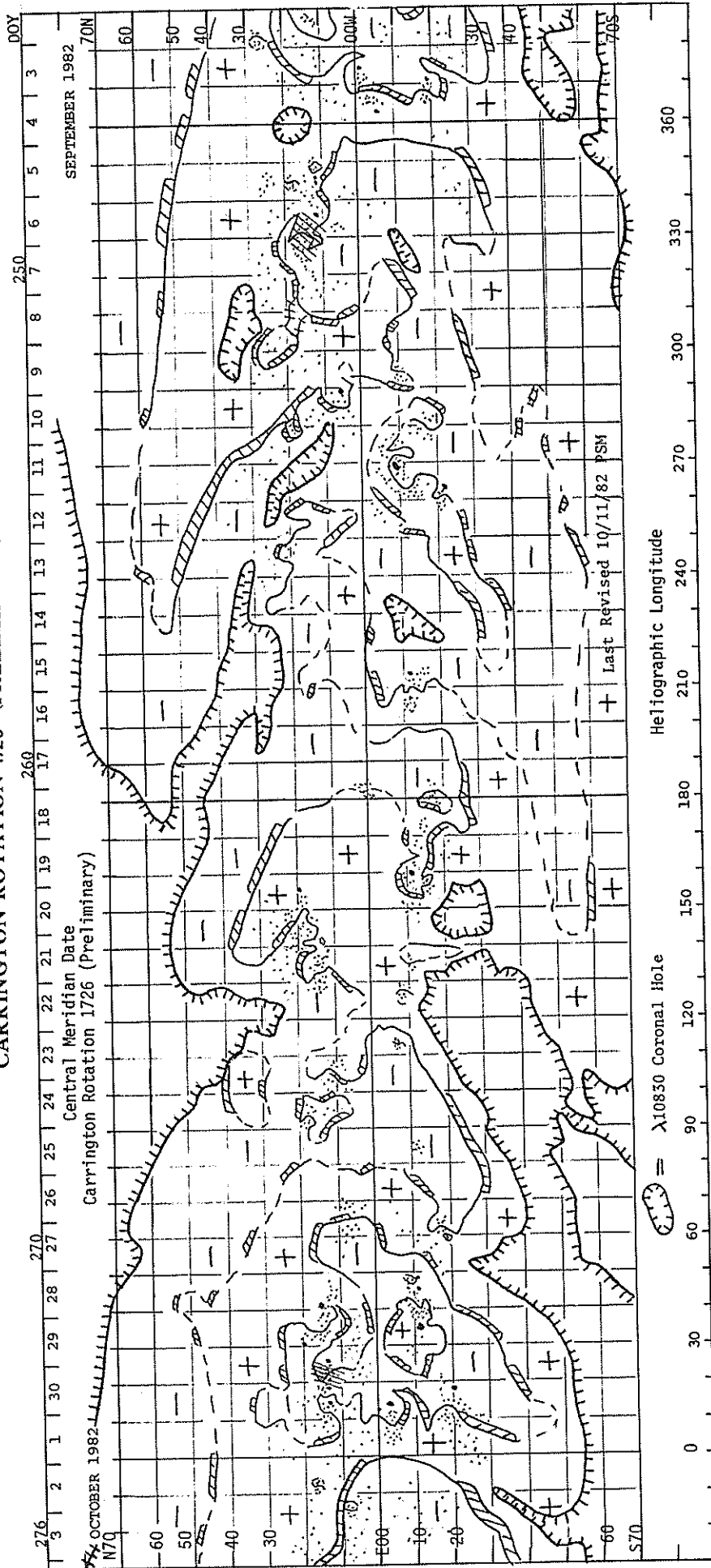
## SEPTEMBER 1982 DATA

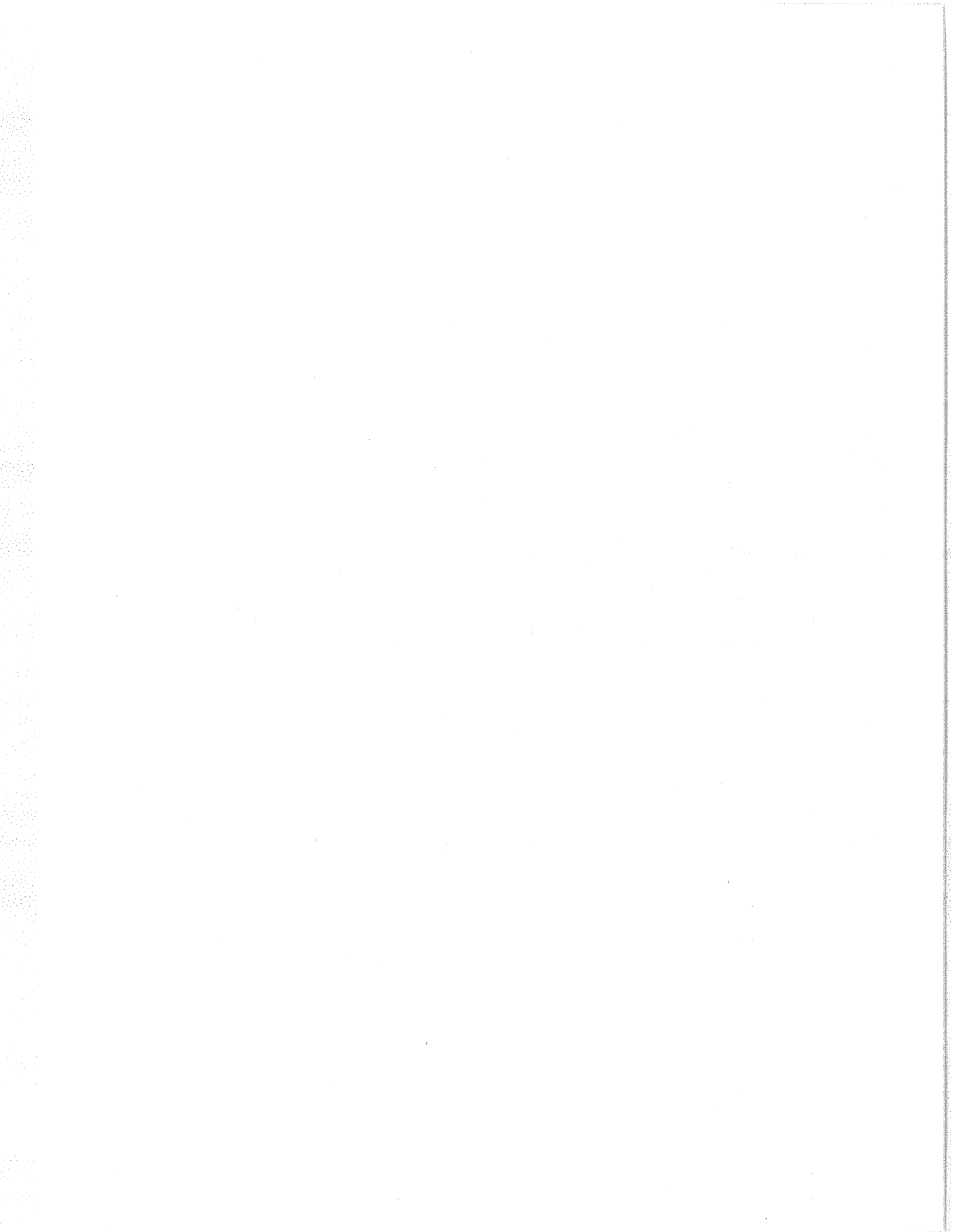
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### H $\alpha$ SYNOPTIC CHART CARRINGTON ROTATION 1726 (PRELIMINARY)



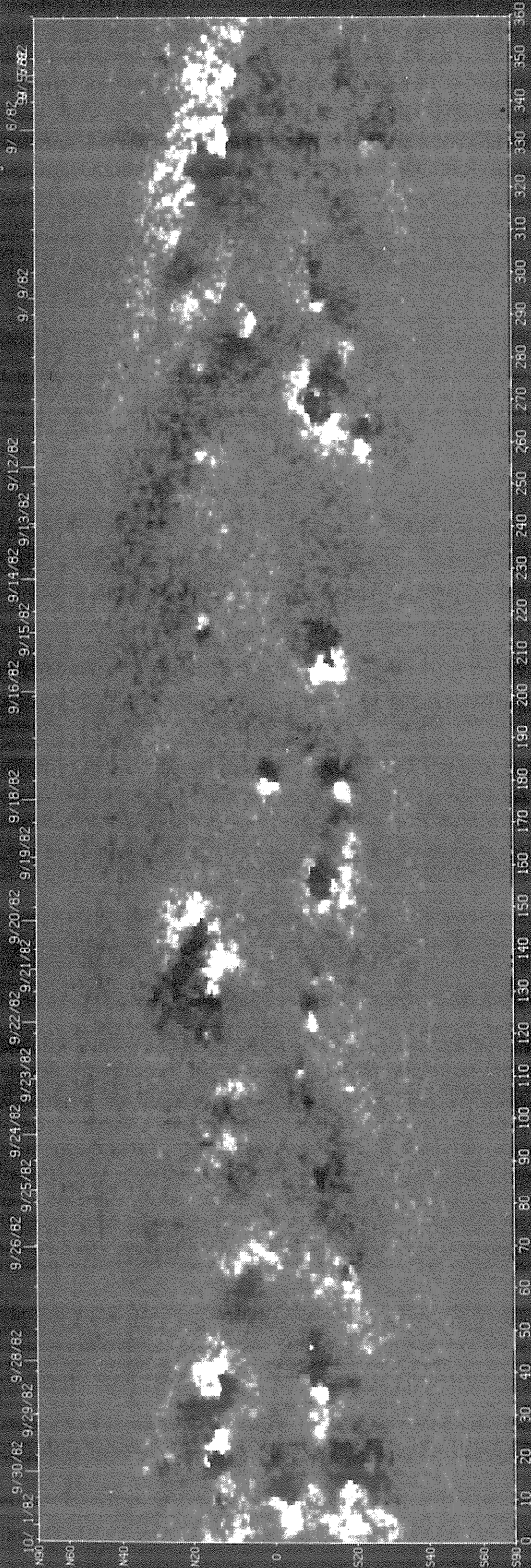


1368\*004

KPNO SYN VTCRL50

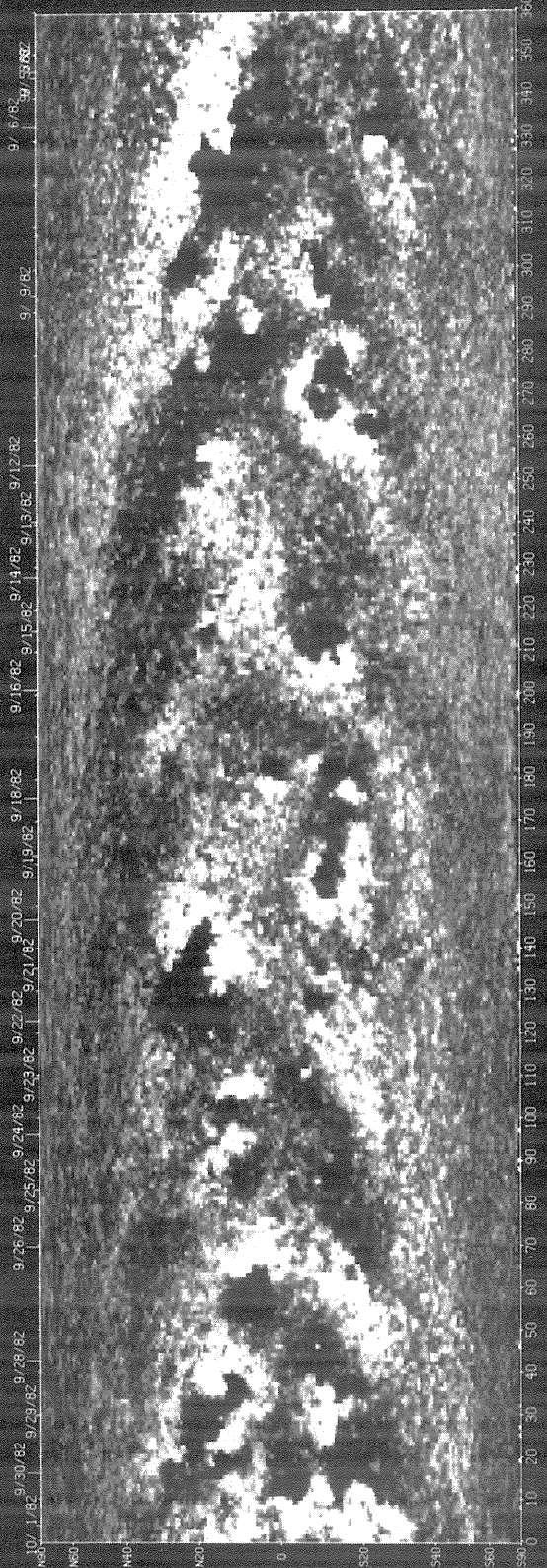
10/13/82 12.50.50 NPIC1E 2

CARRINGTON ROTATION 1726 FLUX



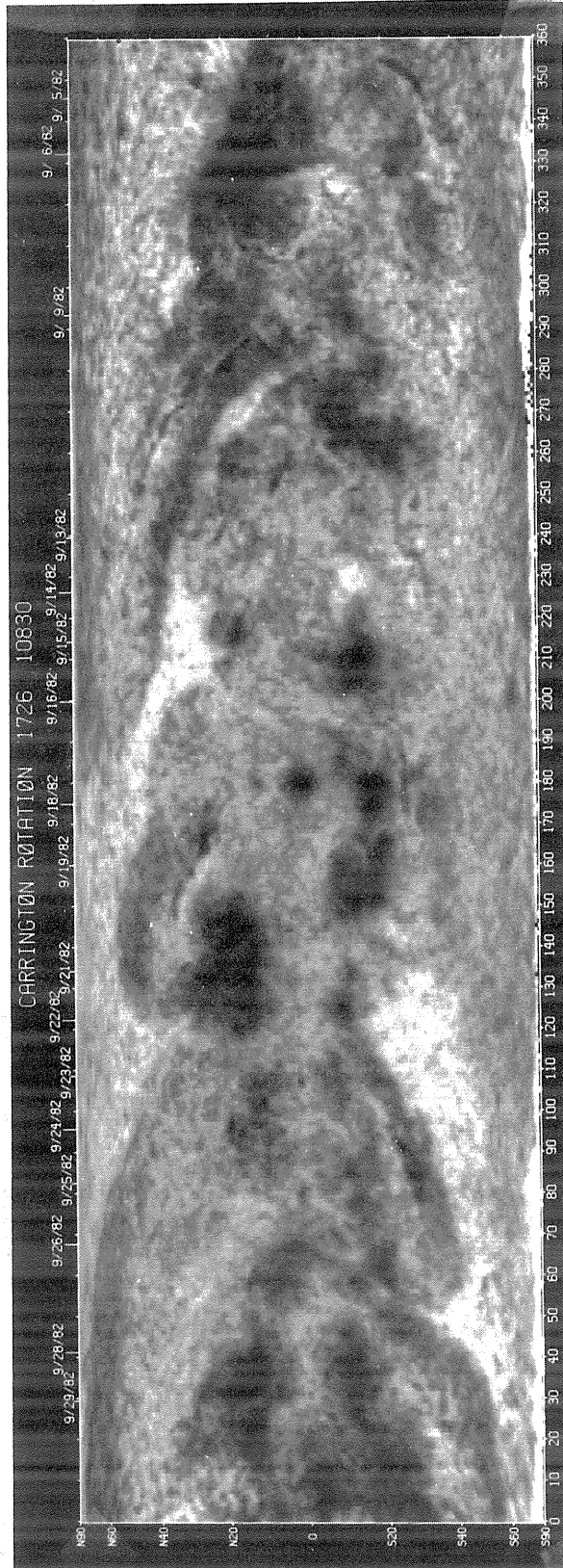
KPNO SOLAR MAGNETIC FIELD SYNOPTIC CHART

CARRINGTON ROTATION 1726 POLARITY



# HELIUM 10830Å SYNOPTIC MAPS CARRINGTON ROTATION 1726

KITT PEAK NATIONAL OBSERVATORY



SEPTEMBER 1, 1982 (P = 21.01, B<sub>0</sub> = 7.19, L<sub>0</sub> = 48.19)

SACRAMENTO PEAK Np CORONA  
5303 Å

E NO DATA SEPTEMBER 1, 4, 5, 6, 7, 9, 10, W  
11, 12, 13, 18, 20, 21, 24, 25, 28, 29, 30

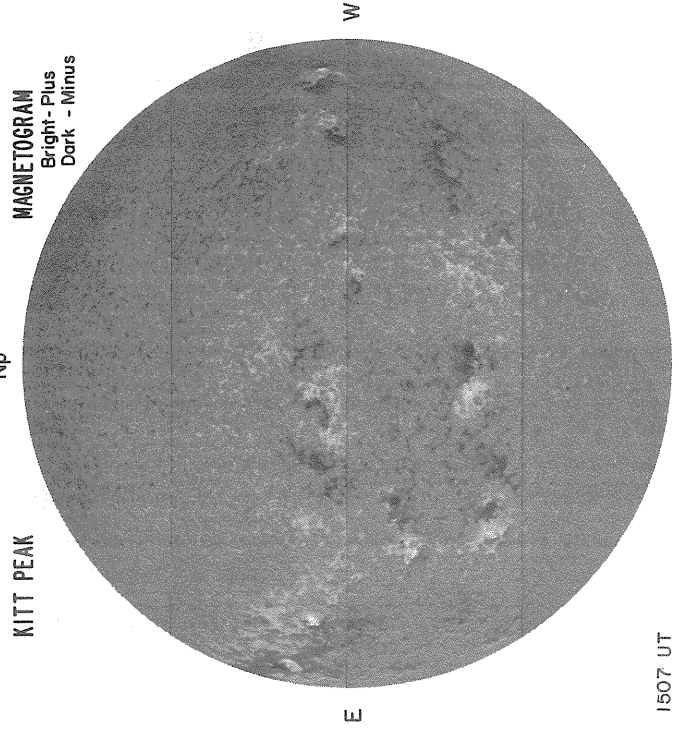
1.15 R<sub>0</sub>  
1.35 R<sub>0</sub>  
1.55 R<sub>0</sub>

Sp  
Np

KITT PEAK

Np

MAGNETOGRAM  
Bright-Plus  
Dark-Minus



MT. WILSON

DELTA =  
DELTA =

MAGNETOGRAM  
Solid-Plus  
Dotted-Minus

NO DATA SEPTEMBER 1, 5, 6, 8, 9, 15, 16, 17, 18, 19, 20, 23, 24, 25, 26, 27, 29

E

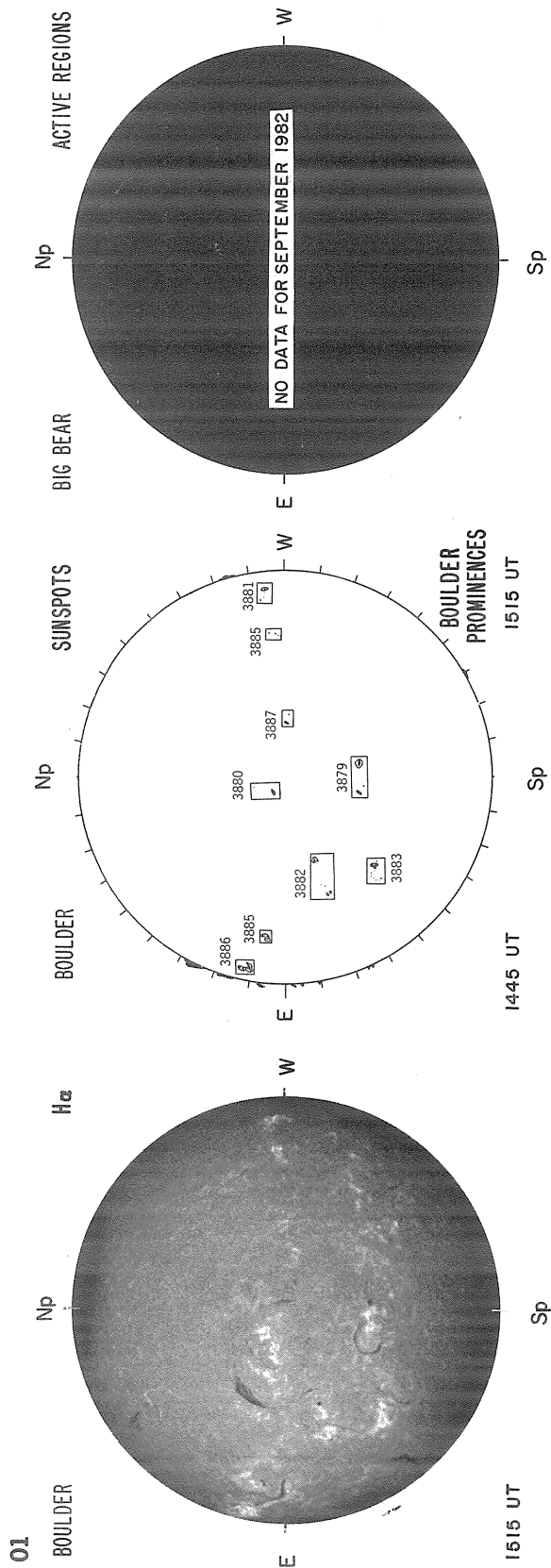
W

W

Levels  
+ 5  
+ 10  
+ 20  
+ 40  
+ 80

1507 UT

Sp



**STANFORD**

Np

**MAGNETOGRAM**  
Solid - Plus; zero level  
Dashed - Minus

E NO DATA SEPTEMBER 1, 2, 4, 6, 15, 16, 17, 18, 23, 24, 25 W

Levels  
0  $\mu$ T  
+ 50  
 $\pm$  100  
 $\pm$  200  
•••

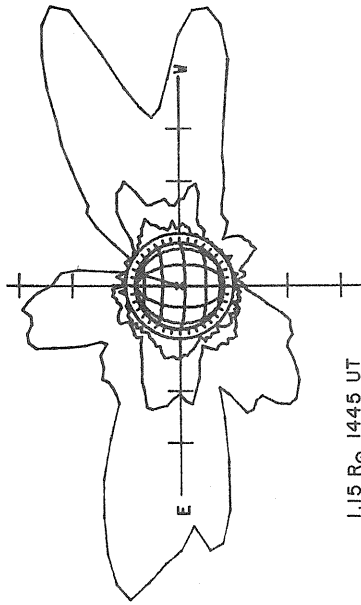
Sp

SEPTEMBER 2, 1982 (P = 21.26, B<sub>0</sub> = 7.21, L<sub>0</sub> = 34.98)

CORONA  
5303 Å

Np

SACRAMENTO PEAK



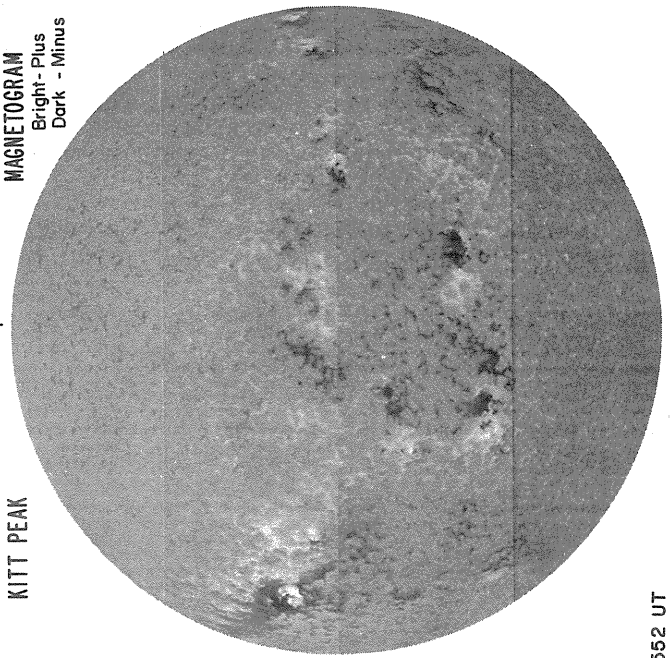
1.15 R<sub>⊙</sub> 1445 UT  
1.35 R<sub>⊙</sub> 1451 UT  
1.55 R<sub>⊙</sub> 1457 UT

Sp

KITT PEAK

Np

MAGNETOGRAM  
Bright - Plus  
Dark - Minus



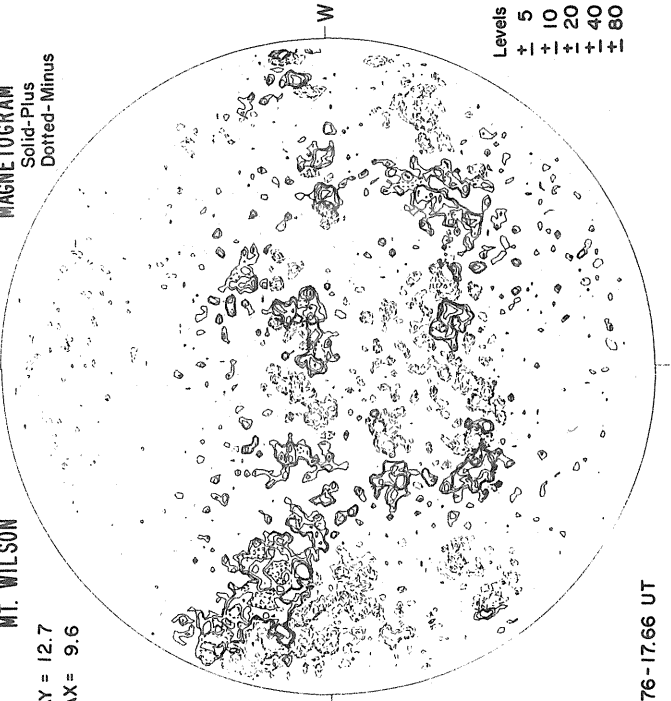
1552 UT

MT. WILSON

DELTA TAY = 12.7  
DELTA TAX = 9.6

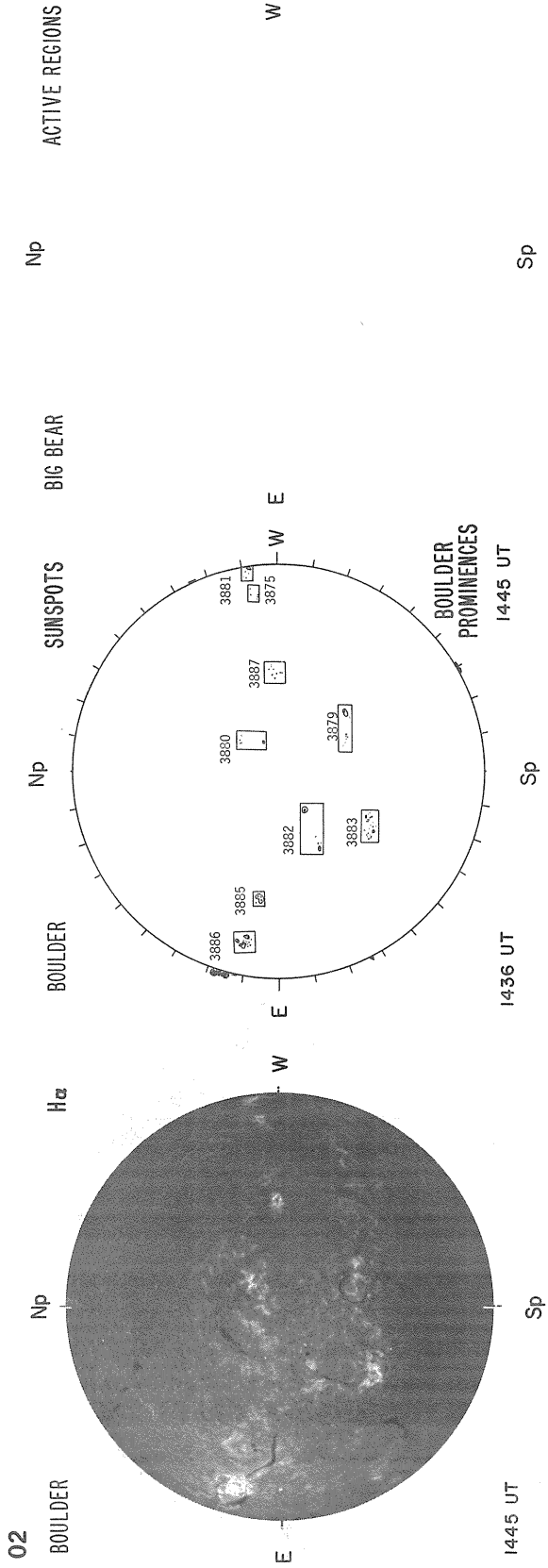
Np

MAGNETOGRAM  
Solid-Plus  
Dotted-Minus



16.76 - 17.66 UT

Levels  
± 5  
± 10  
± 20  
± 40  
± 80



**MAGNETOGRAM**  
Solid - Plus; zero level  
Dashed - Minus

**STANFORD**

W

NO DATA

E

Levels  
0  $\mu$ T  
+ 50  
+ 100  
+ 200  
•  
•

Sp

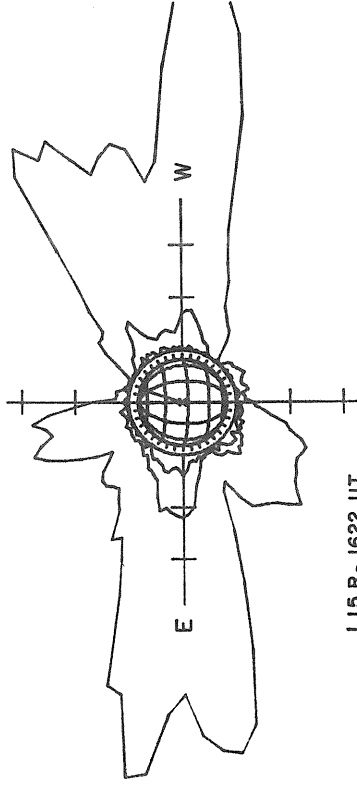


SEPTEMBER 3, 1982 (P= 21.51, B<sub>0</sub> = 7.22, L<sub>0</sub> = 21.77)

SACRAMENTO PEAK

Np

CORONA  
5303 Å



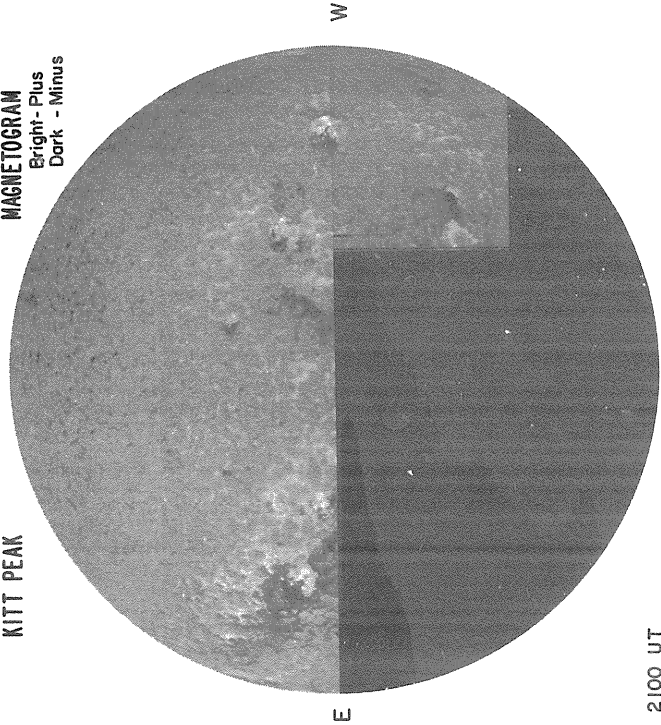
1.15 R<sub>0</sub> 1622 UT  
1.35 R<sub>0</sub> 1606 UT  
1.55 R<sub>0</sub> 1613 UT

Sp

KITT PEAK

Np

MAGNETOGRAM  
Bright - Plus  
Dark - Minus



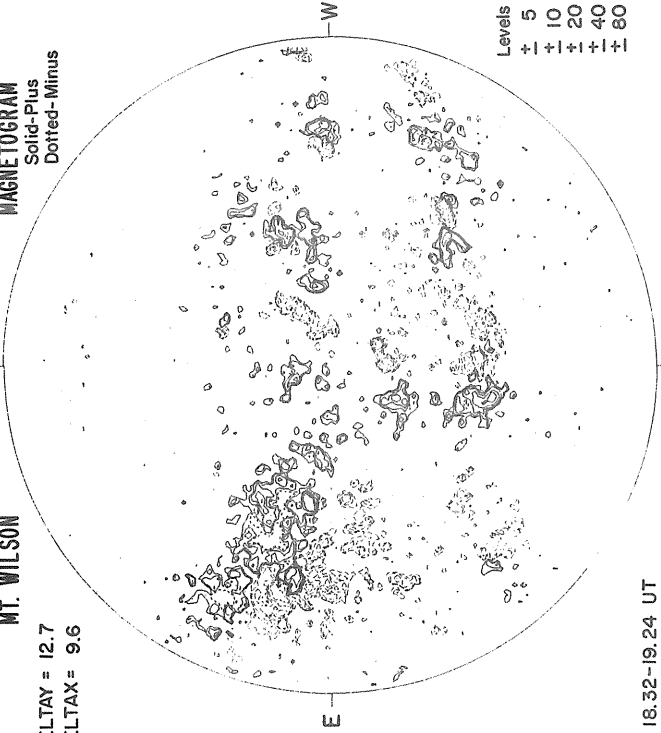
2100 UT

MT. WILSON

DELTA TAY = 12.7  
DELTA TAX = 9.6

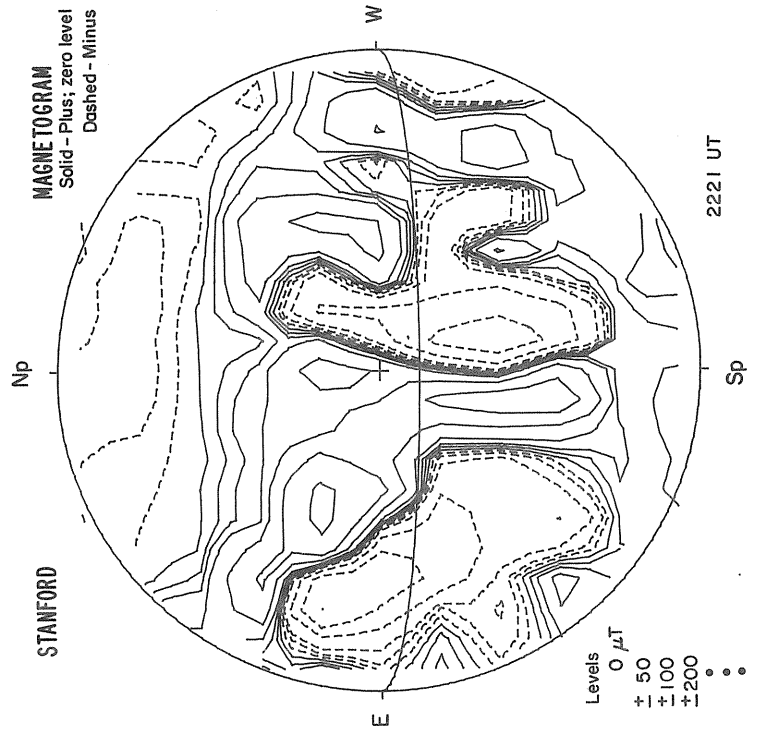
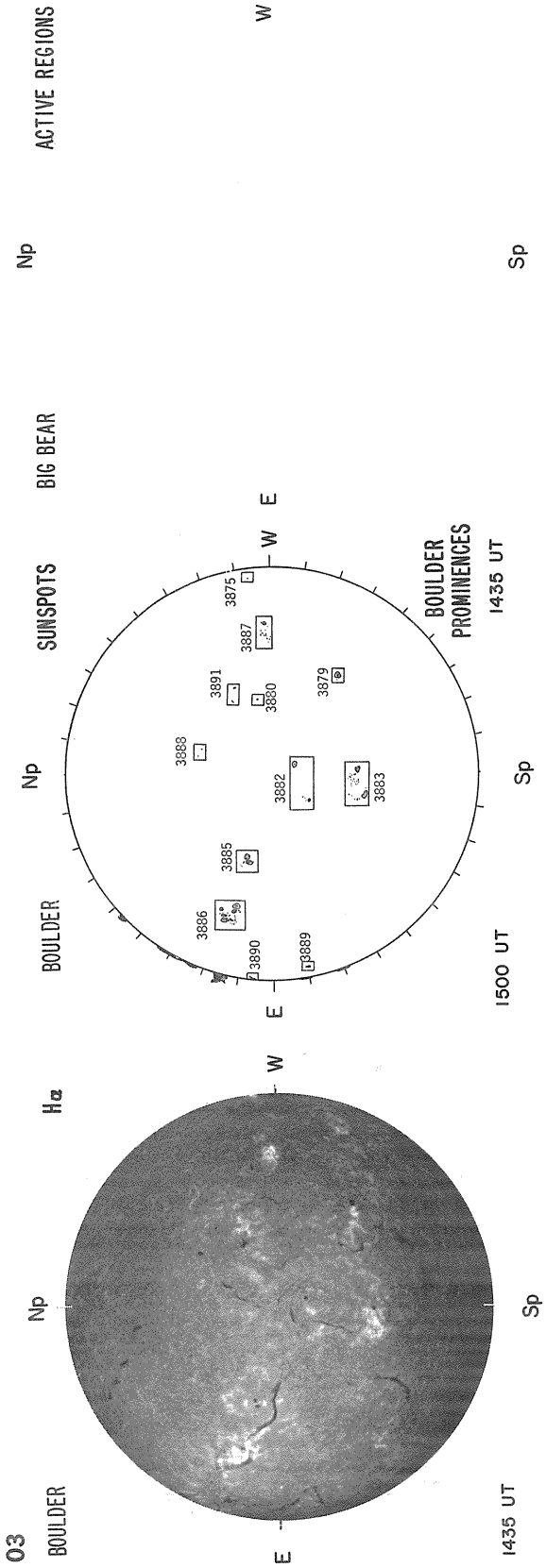
Sp

MAGNETOGRAM  
Solid-Plus  
Dotted-Minus



18.32-19.24 UT

Levels  
+ 5  
+ 10  
+ 20  
+ 40  
+ 80

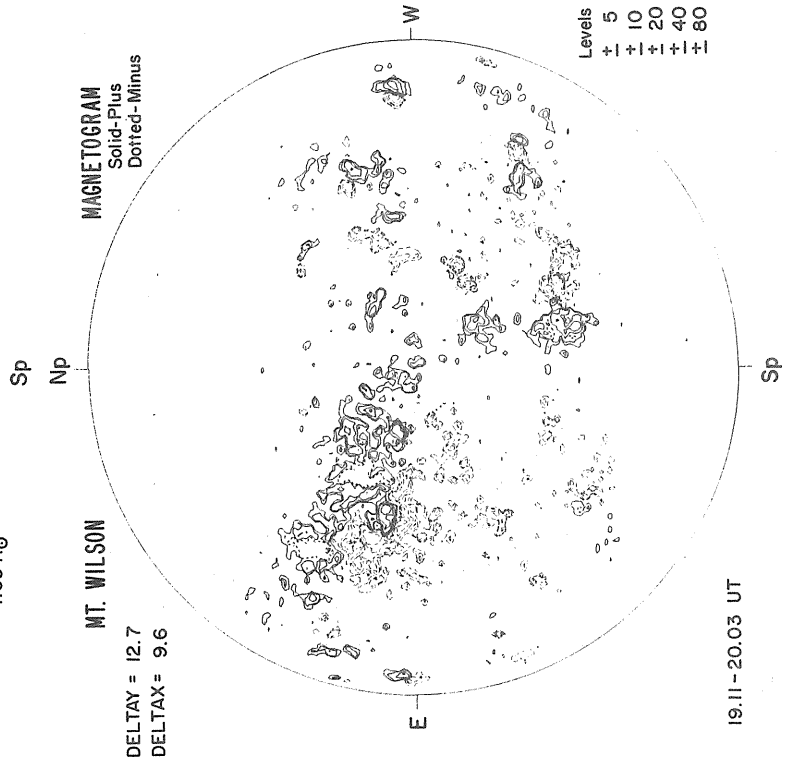
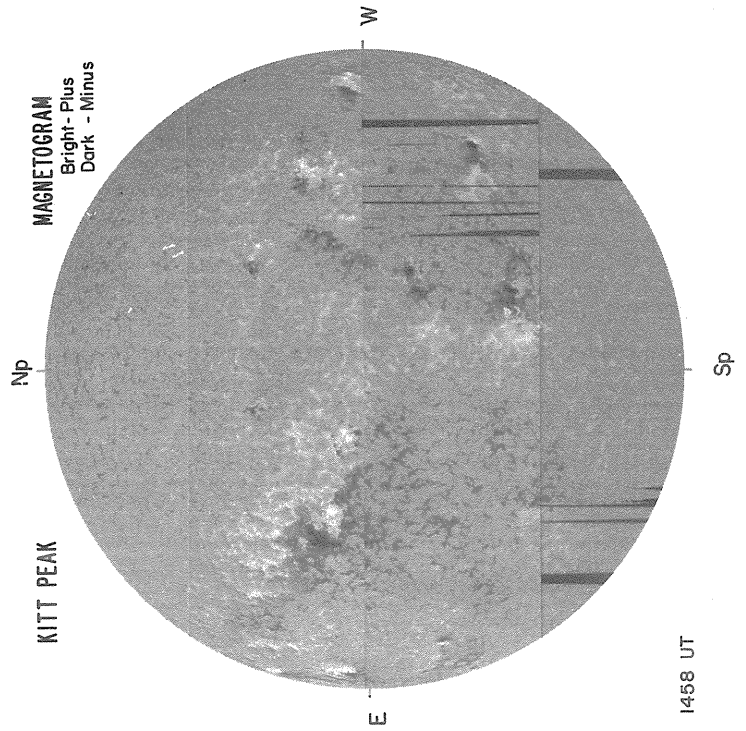


SEPTEMBER 4, 1982 (P= 21.75, B<sub>0</sub>= 7.23, L<sub>0</sub>= 8.56)

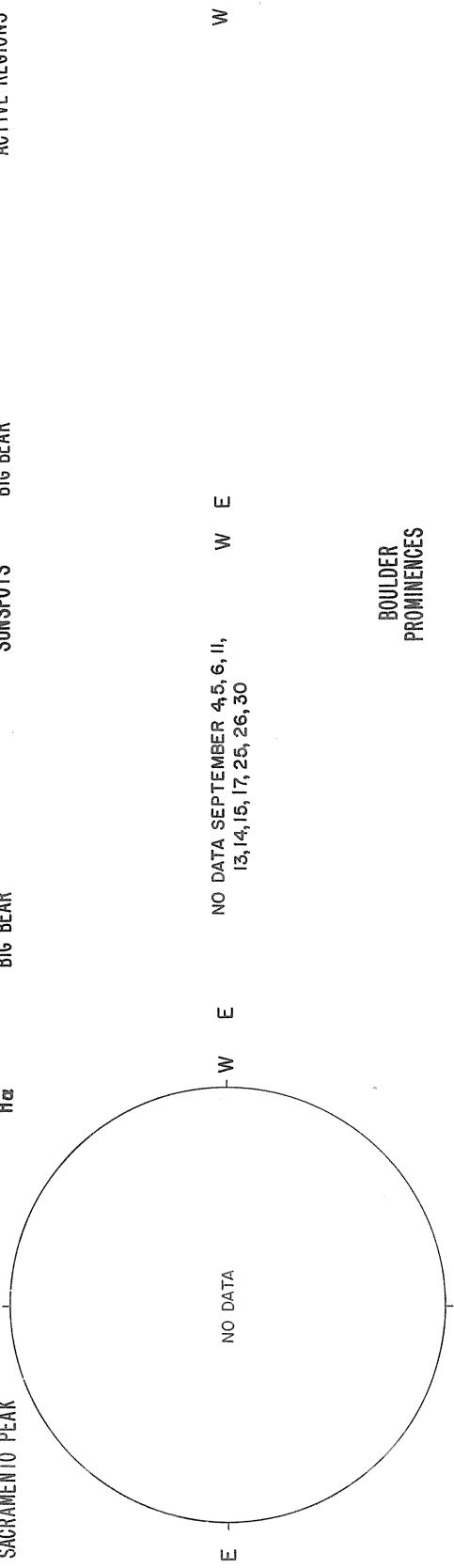
SACRAMENTO PEAK NP CORONA 5303 Å

E NO DATA W

1.15 R<sub>⊙</sub>  
1.35 R<sub>⊙</sub>  
1.55 R<sub>⊙</sub>



04 SACRAMENTO PEAK Np ACTIVE REGIONS



NO DATA SEPTEMBER 4, 5, 6, 11,  
13, 14, 15, 17, 25, 26, 30

BOULDER  
PROMINENCES

Np

Sp

MAGNETOGRAM  
Solid - Plus; zero level  
Dashed - Minus

Np

STANFORD

W

NO DATA

E

Levels  
0 μT  
± 50  
± 100  
± 200  
•  
•

Sp

SEPTEMBER 5, 1982 (P= 21.99, B<sub>0</sub> = 7.24, L<sub>0</sub> = 355.35)

CORONA  
5303 Å

Np

SACRAMENTO PEAK

W

NO DATA

E

1.15 R<sub>0</sub>  
1.35 R<sub>0</sub>  
1.55 R<sub>0</sub> (100%)

Sp

KITT PEAK

Np

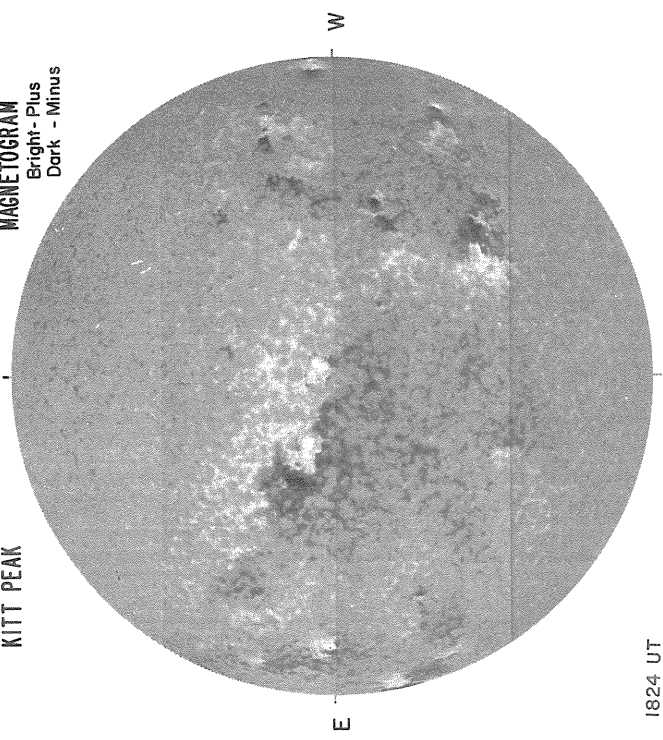
MAGNETOGRAM  
Bright - Plus  
Dark - Minus

MT. WILSON

DELTA TAY =  
DELTA TAX =

MAGNETOGRAM  
Solid-Plus  
Dotted-Minus

Np



W

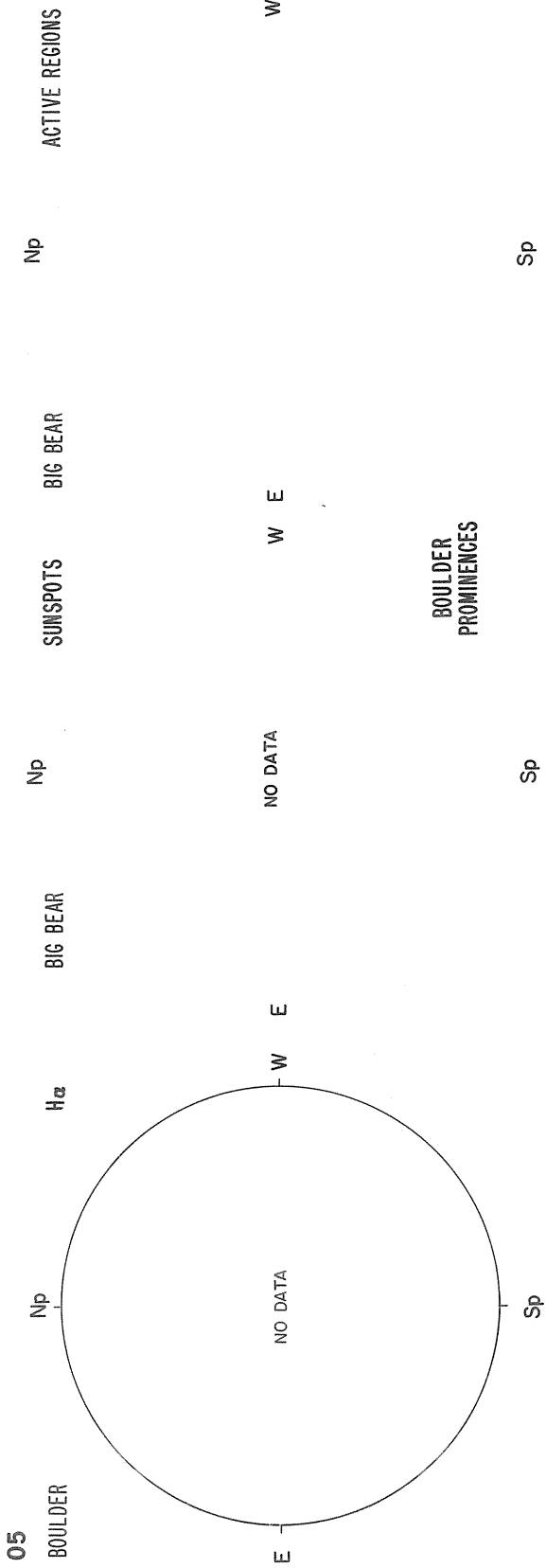
NO DATA

E

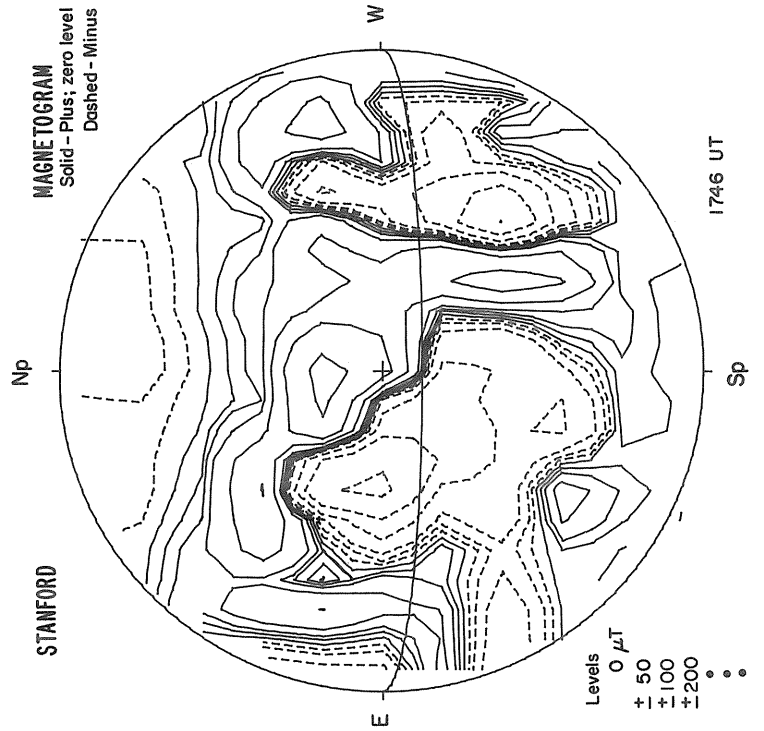
Levels  
5  
± 10  
± 20  
± 40  
± 80

1824 UT

Sp



BOULDER PROMINENCES



SEPTEMBER 6, 1982 (P=22.22, B<sub>0</sub>=7.24, L<sub>0</sub>=342.15)

CORONA  
5303 Å

Np

SACRAMENTO PEAK

W

NO DATA

E

1.15 R<sub>0</sub>  
1.35 R<sub>0</sub>  
1.55 R<sub>0</sub>

Sp

Np

MT. WILSON

MAGNETOGRAM  
Solid-Plus  
Dotted-Minus

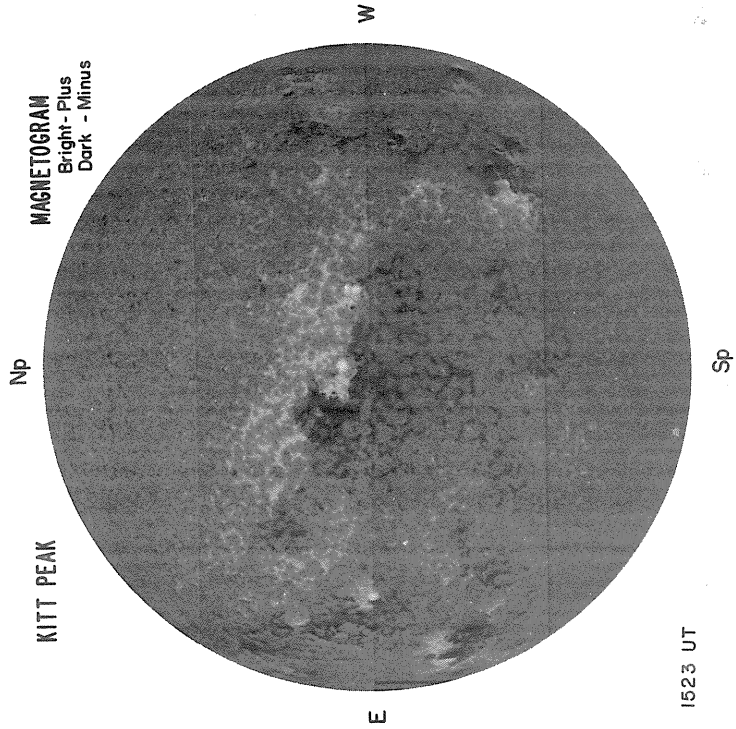
DELTA TAY =  
DELTA TAX =

W

NO DATA

E

Levels  
± 5  
± 10  
± 20  
± 40  
± 80



KITT PEAK

NP

MAGNETOGRAM  
Bright-Plus  
Dark-Minus

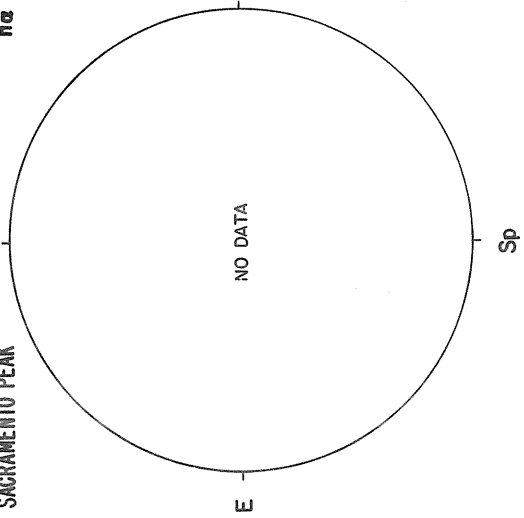
W

E

1523 UT

Sp

06 SACRAMENTO PEAK Np H $\alpha$  BIG BEAR Np SUNSPOTS BIG BEAR Np ACTIVE REGIONS



W

W E

NO DATA

W E

NO DATA

E

BOULDER PROMINENCES

Sp

Sp

Np

MAGNETOGRAM  
Solid - Plus; zero level  
Dashed - Minus

STANFORD

W

NO DATA

E

Sp

Levels  
0  $\mu$ T  
± 50  
± 100  
± 200  
•  
•

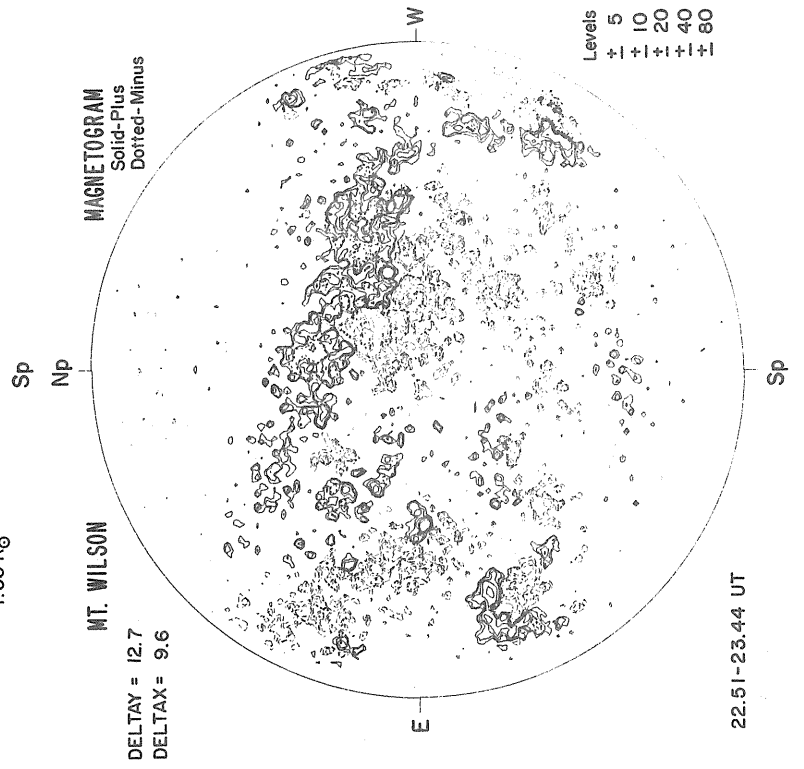
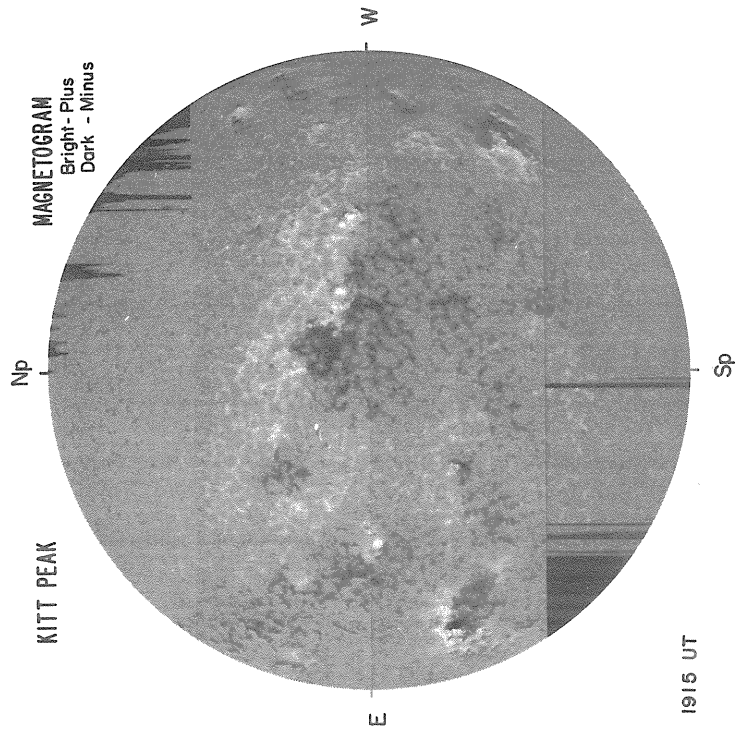


SEPTEMBER 7, 1982 (P=22.44, B<sub>0</sub>=7.25, L<sub>0</sub>=328.94)

SACRAMENTO PEAK Np CORONA  
5303 Å

E NO DATA W

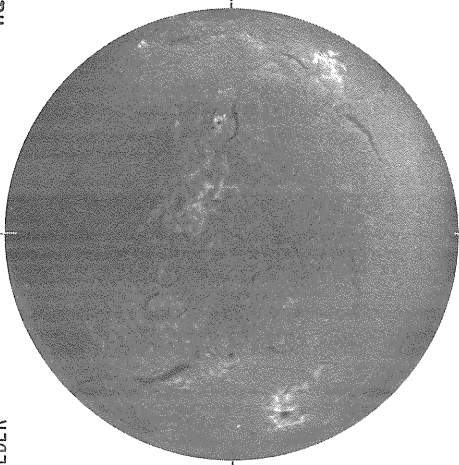
1.15 R<sub>⊙</sub>  
1.35 R<sub>⊙</sub>  
1.55 R<sub>⊙</sub>



07

BOULDER

Np



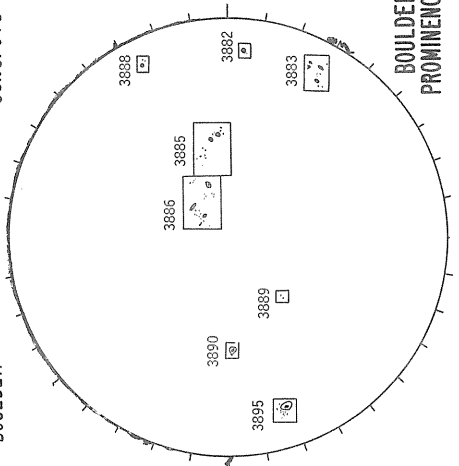
E

1900 UT

H $\alpha$

BOULDER

Np



BOULDER PROMINENCES

1900 UT

SUNSPOTS

BIG BEAR

Np

ACTIVE REGIONS

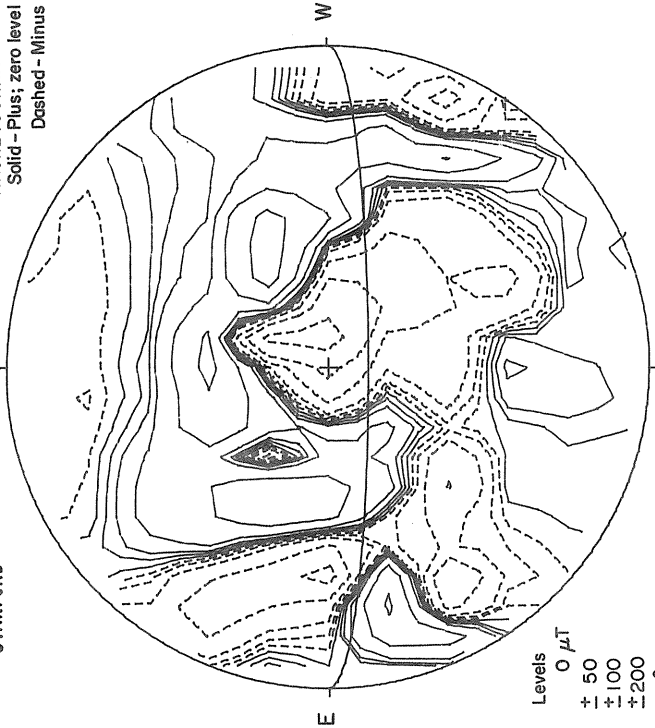
W

Sp

STANFORD

Np

MAGNETOGRAM  
Solid - Plus; zero level  
Dashed - Minus



Levels  
0  $\mu$ T  
+ 50  
+ 100  
+ 200  
•••

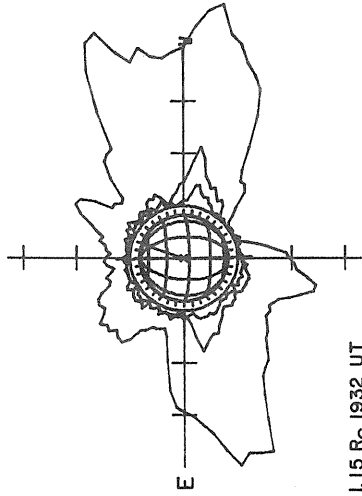
1821 UT

Sp

SEPTEMBER 8, 1982 (P= 22.66, B<sub>0</sub> = 7.25, L<sub>0</sub> = 315.73)

SACRAMENTO PEAK  
CORONA  
5303 Å

Np



1.15 R<sub>☉</sub> 1932 UT  
1.35 R<sub>☉</sub> 1849 UT  
1.55 R<sub>☉</sub> 1901 UT

Sp

Np

KITT PEAK

Np

MAGNETOGRAM  
Bright- Plus  
Dark - Minus

MT. WILSON

DELTA Y =  
DELTA X =

MAGNETOGRAM  
Solid-Plus  
Dotted-Minus

E

NO DATA SEPTEMBER 8, 17, 27

W

E

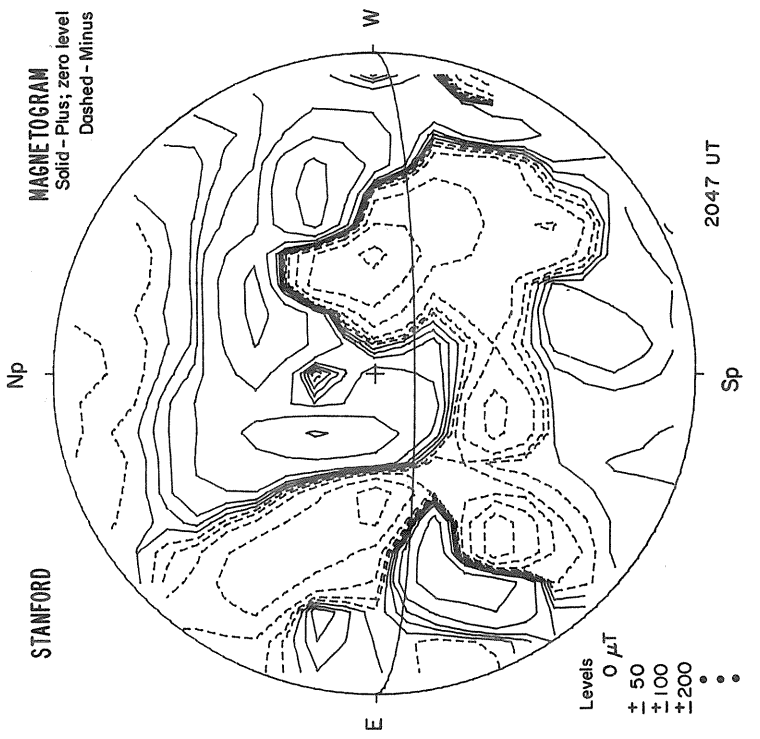
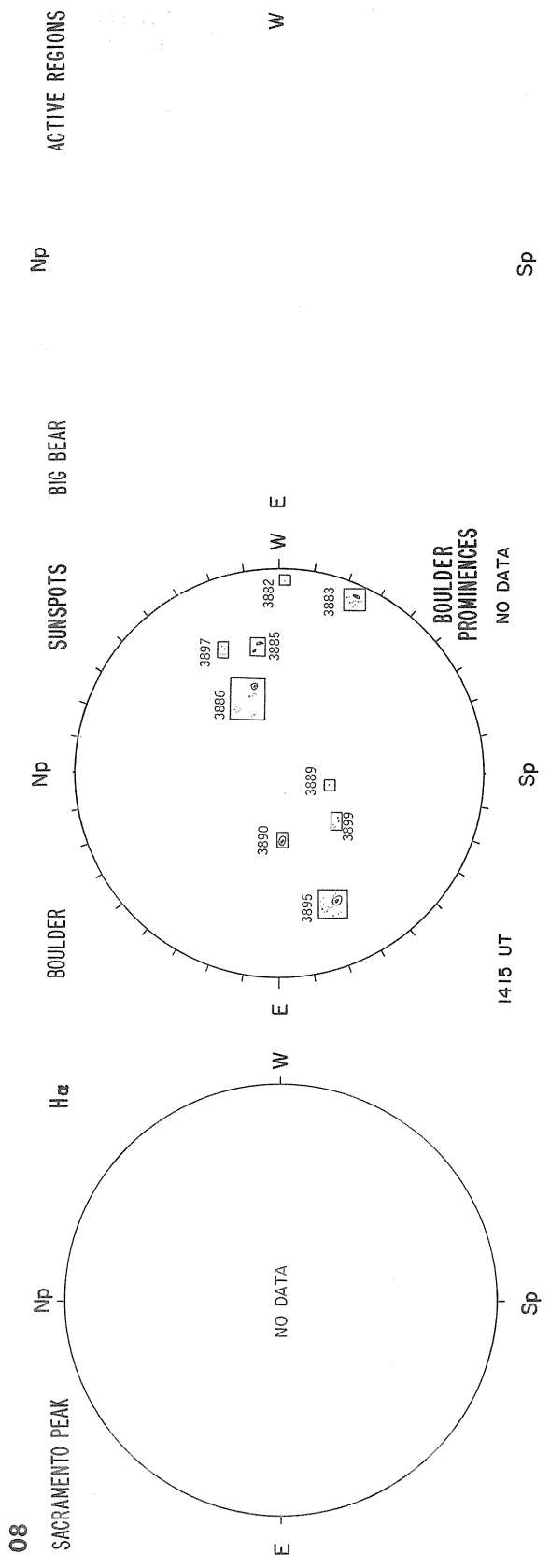
NO DATA

W

Levels  
± 5  
± 10  
± 20  
± 40  
± 80

Sp

Sp



SEPTEMBER 9, 1982 (P= 22.88, B<sub>0</sub>= 7.25, L<sub>0</sub>= 302.53)

CORONA  
5303 Å

Np

SACRAMENTO PEAK

W

NO DATA

E

1.15 R<sub>0</sub>  
1.35 R<sub>0</sub>  
1.55 R<sub>0</sub>

Sp

Np

KITT PEAK

Np

MAGNETOGRAM  
Bright-Plus  
Dark - Minus

MT. WILSON

DELTA Y =  
DELTA X =

MAGNETOGRAM  
Solid-Plus  
Dotted-Minus

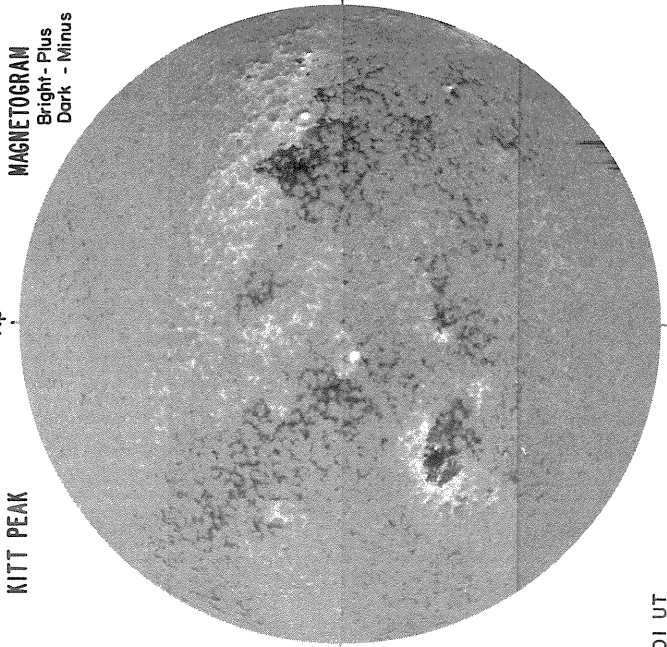
W

E

NO DATA

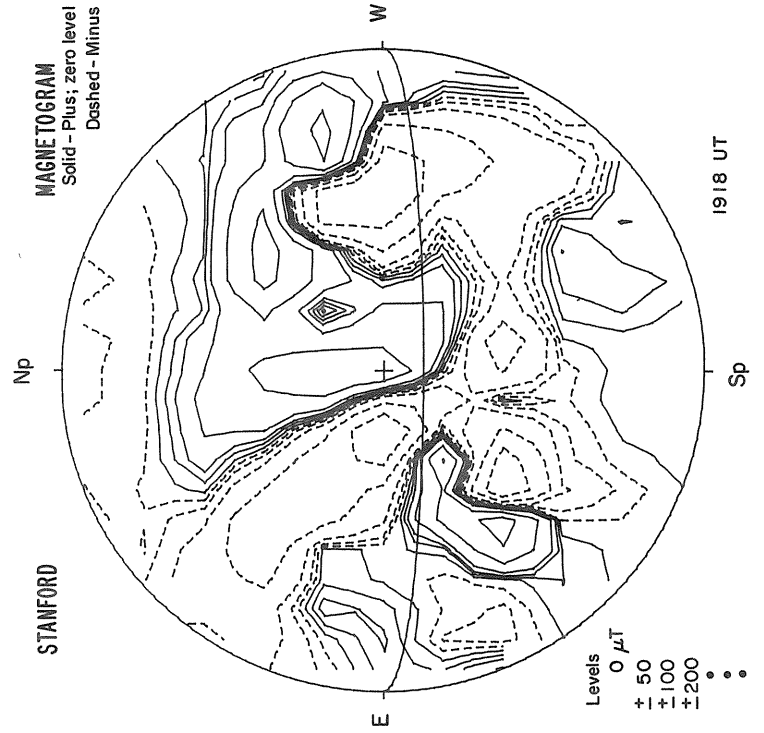
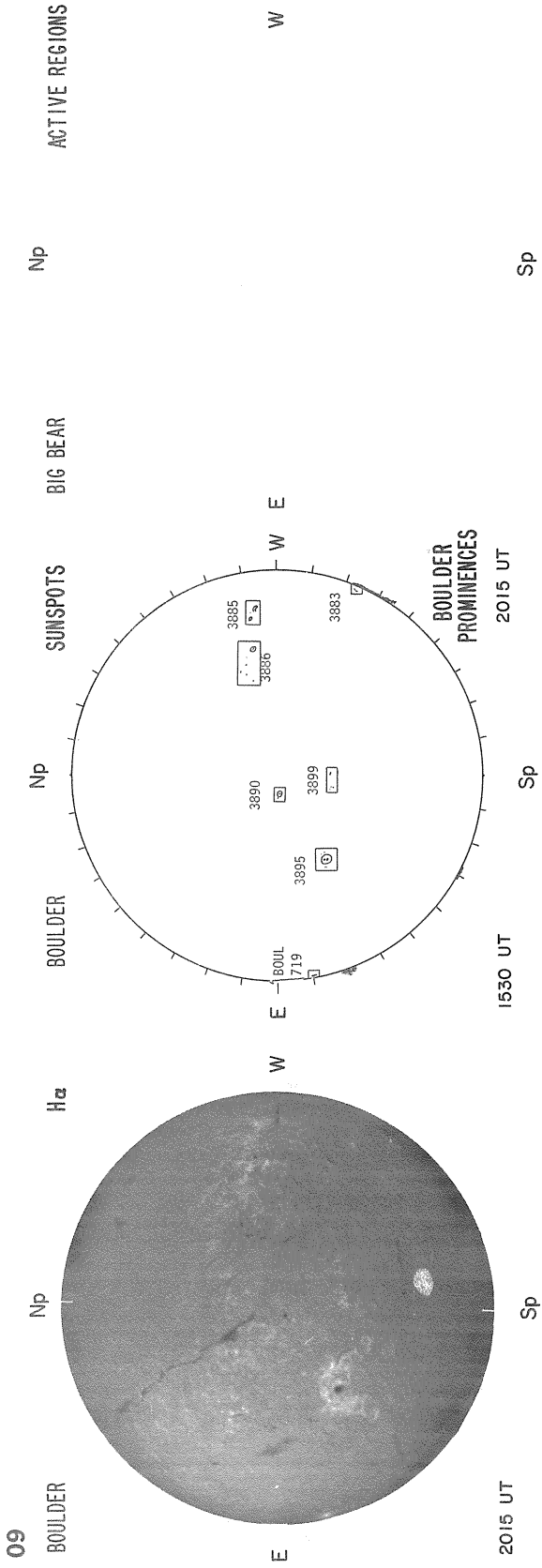
W

Levels  
+1 5  
+1 10  
+1 20  
+1 40  
+1 80



1501 UT

Sp

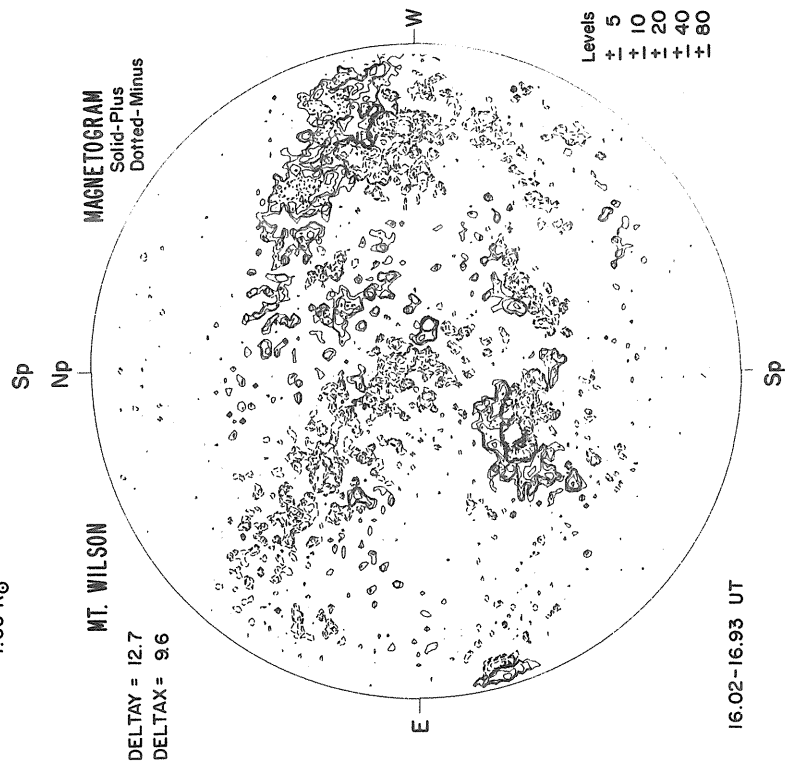
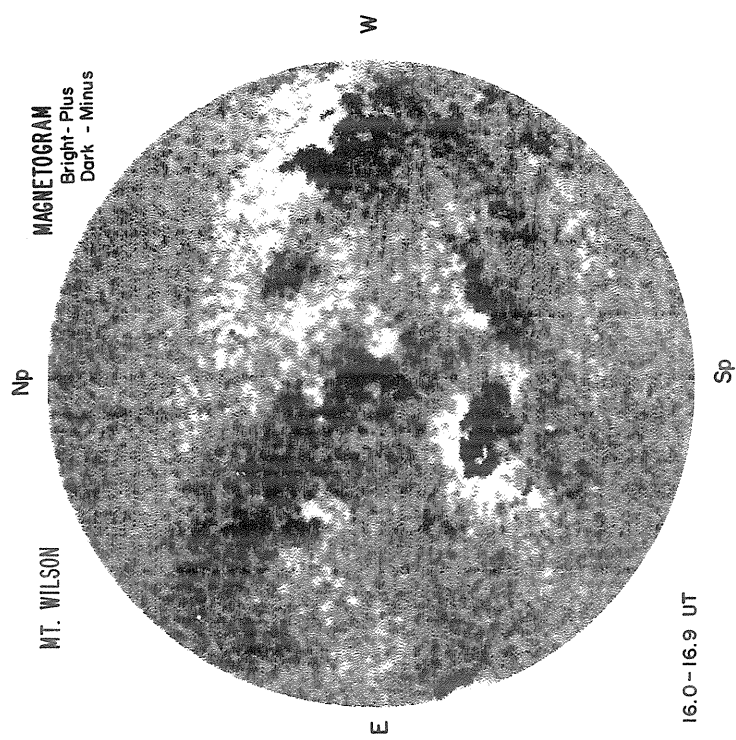


SEPTEMBER 10, 1982 (P= 23.08, B<sub>0</sub>= 7.25, L<sub>0</sub>= 289.32)

SACRAMENTO PEAK NP CORONA  
5303 Å

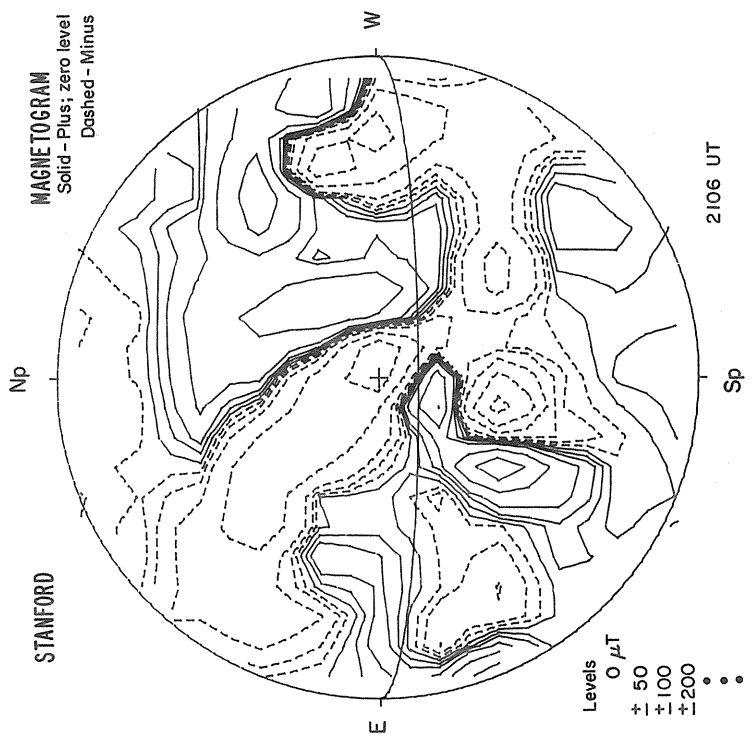
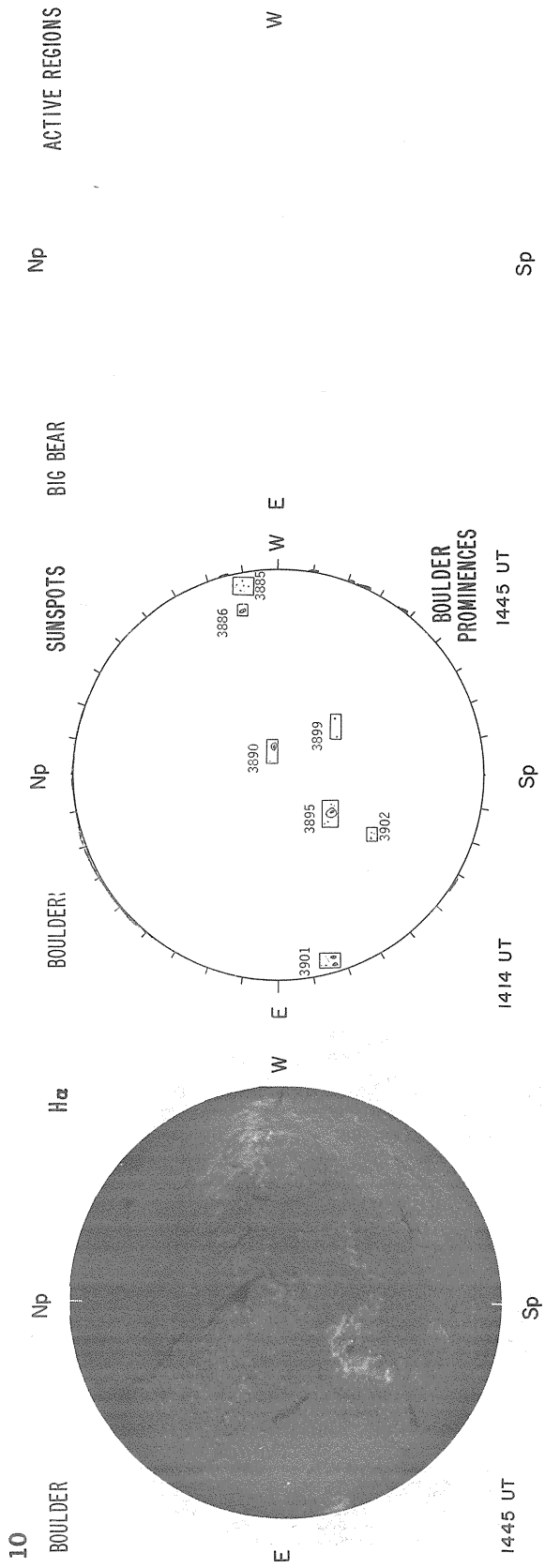
E NO DATA W

1.15 R<sub>0</sub>  
1.35 R<sub>0</sub>  
1.55 R<sub>0</sub>



DELTA Y = 12.7  
DELTA X = 9.6

Levels  
+ 5  
+ 10  
+ 20  
+ 40  
+ 60



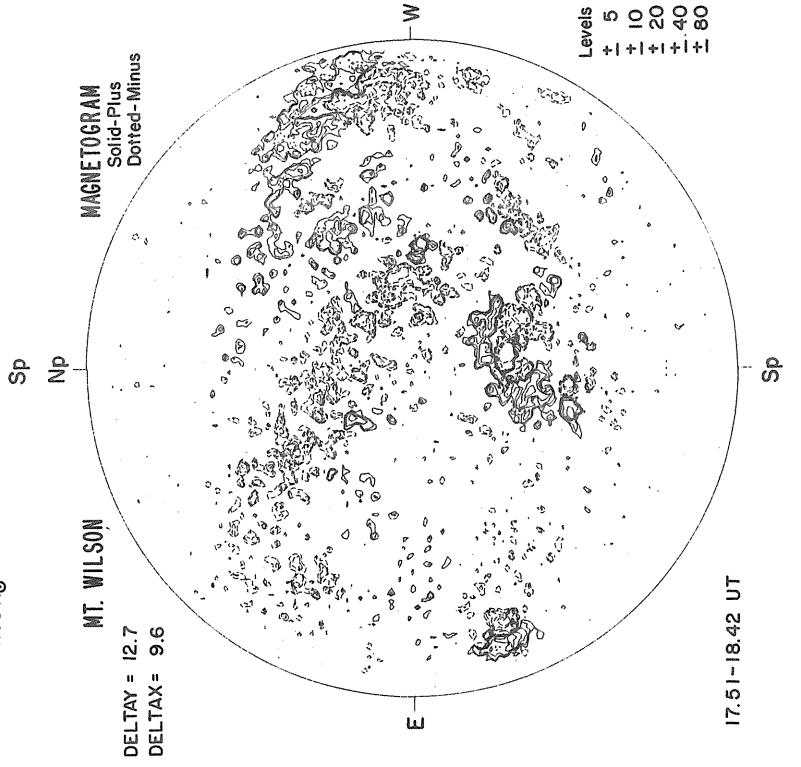
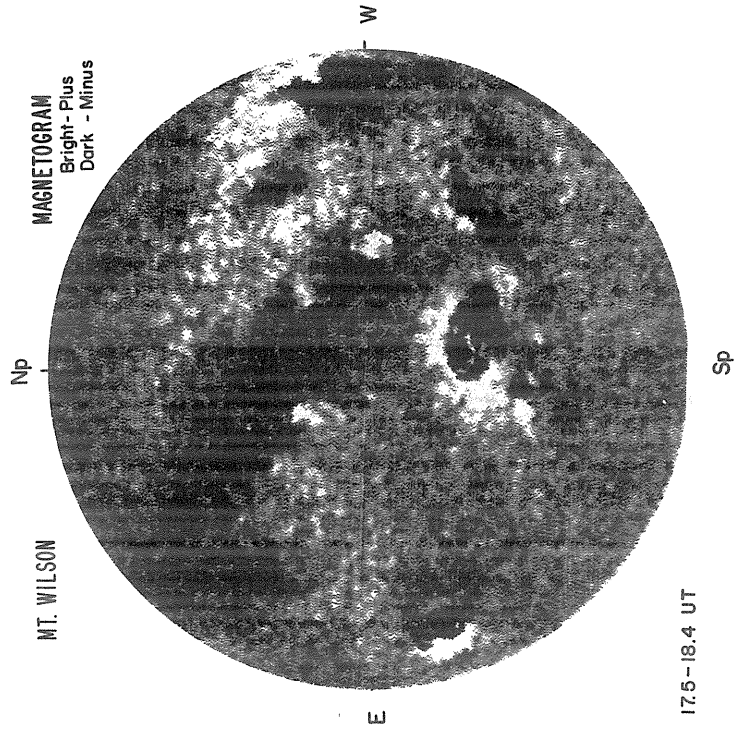


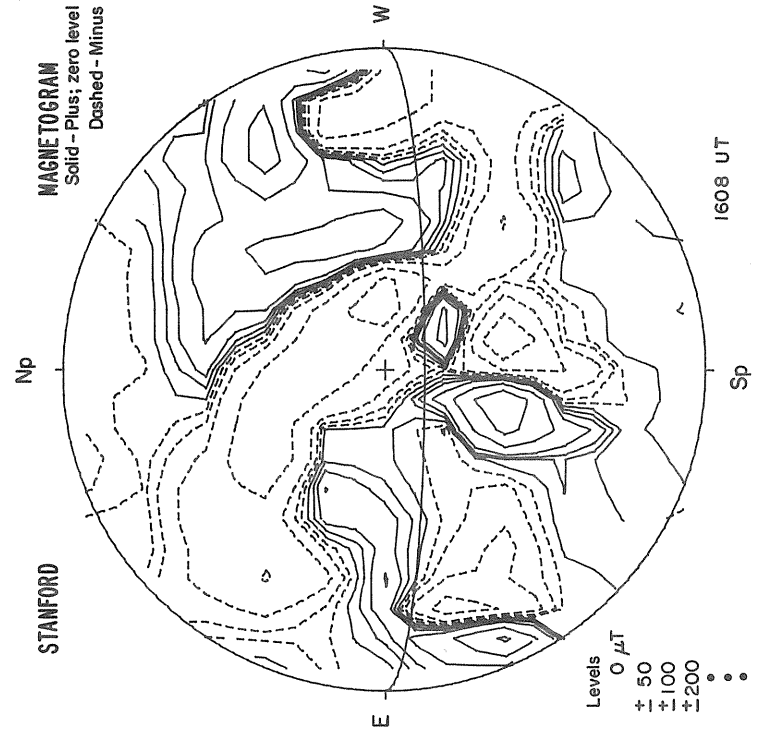
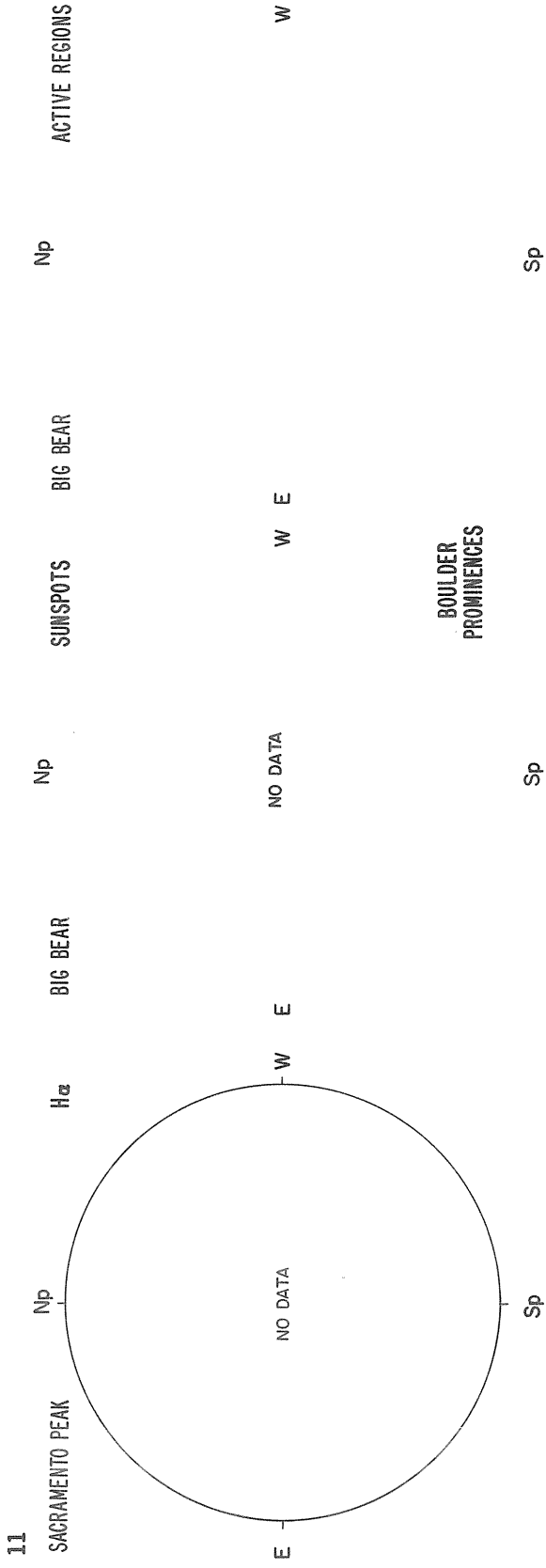
SEPTEMBER 11, 1982 (P= 23.29, B<sub>o</sub>= 7.24, L<sub>o</sub>= 276.12)

SACRAMENTO PEAK      NP      CORONA  
5303 Å

E      NO DATA      W

1.15 R<sub>o</sub>  
1.35 R<sub>o</sub>  
1.55 R<sub>o</sub>





SEPTEMBER 12, 1982 (P = 23.48, B<sub>0</sub> = 7.24, L<sub>0</sub> = 262.91)

SACRAMENTO PEAK  
CORONA  
5303 Å

Np

NO DATA

E

W

Sp

Sp

1.15 R<sub>0</sub>  
1.35 R<sub>0</sub>  
1.55 R<sub>0</sub>

KITT PEAK

Np

MAGNETOGRAM  
Bright-Plus  
Dark - Minus

E

W

Sp

1541 UT

MT. WILSON

MAGNETOGRAM  
Solid-Plus  
Dotted-Minus

DELTA TAY = 12.7  
DELTA TAX = 9.6

E

W

Sp

Sp

E

W

Sp

E

W

Sp

E

W

Sp

E

W

Sp

E

W

Sp

E

W

Sp

E

W

Sp

E

W

Sp

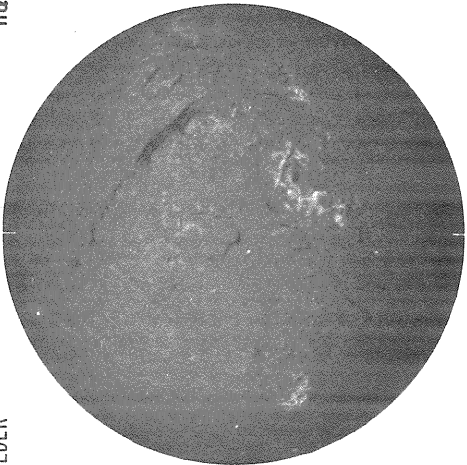
Levels  
± 5  
± 10  
± 20  
± 40  
± 80

17.77-18.69 UT

12

BOULDER

Np



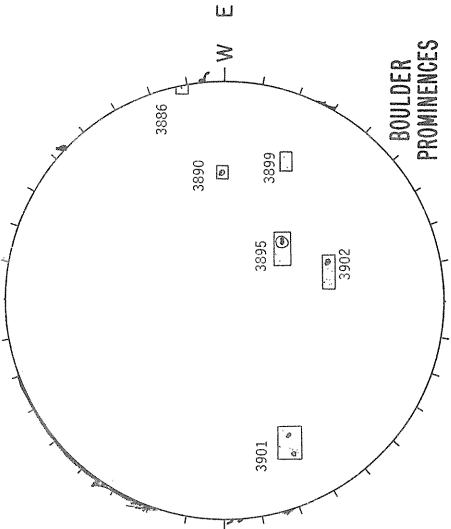
E

1420 UT

Sp

BOULDER

Np



1434 UT

Sp

BIG BEAR

Np

ACTIVE REGIONS

W

Sp

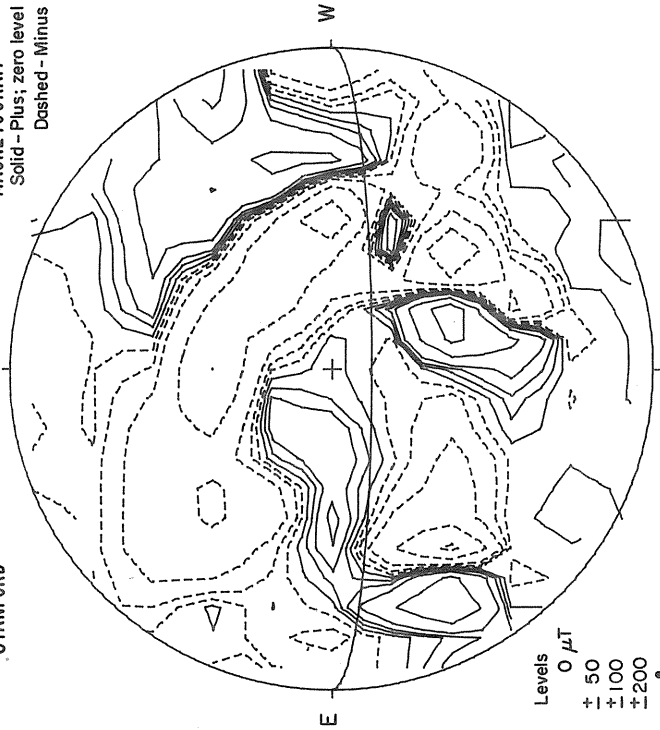
STANFORD

Np

MAGNETOGRAM

Solid - Plus; zero level

Dashed - Minus



Levels

0  $\mu$ T

$\pm$  50

$\pm$  100

$\pm$  200

$\pm$  300

SEPTEMBER 13, 1982 (P= 23.67, B<sub>0</sub>= 7.23, L<sub>0</sub>= 249.71)

CORONA  
5303 Å

NP

SACRAMENTO PEAK

W

NO DATA

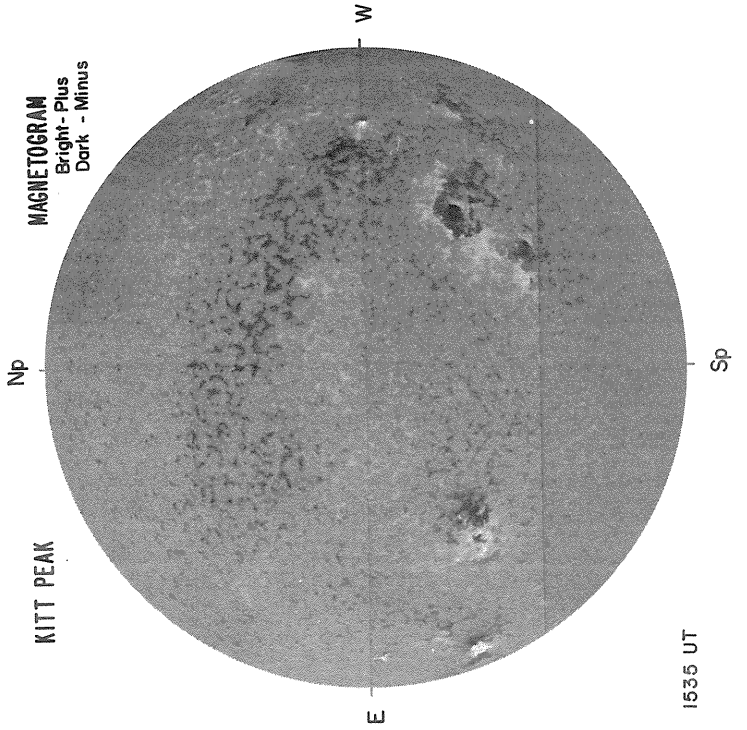
E

1.15 R<sub>0</sub>  
1.35 R<sub>0</sub>  
1.55 R<sub>0</sub>

KITT PEAK

NP

MAGNETOGRAM  
Bright-Plus  
Dark-Minus



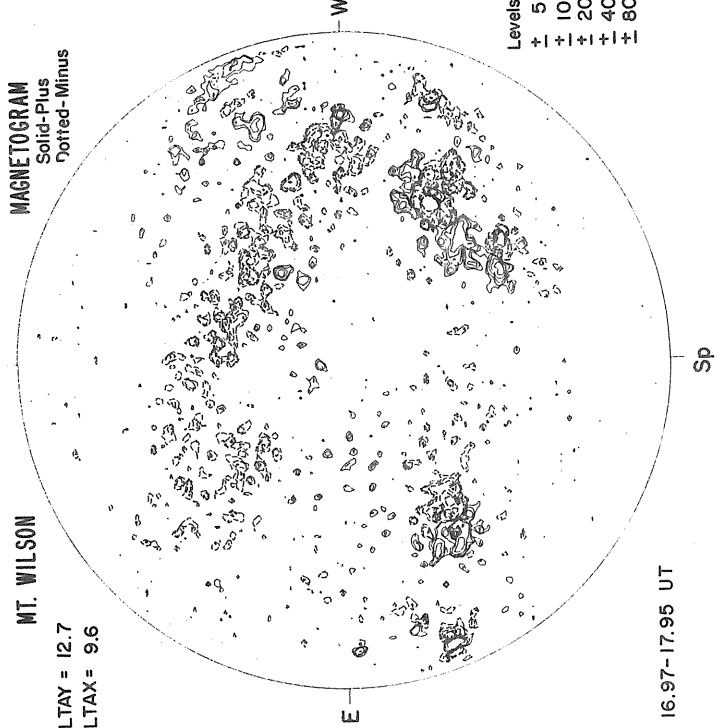
MT. WILSON

DELTA TAY = 12.7  
DELTA TAX = 9.6

MAGNETOGRAM  
Solid-Plus  
Dotted-Minus

Sp

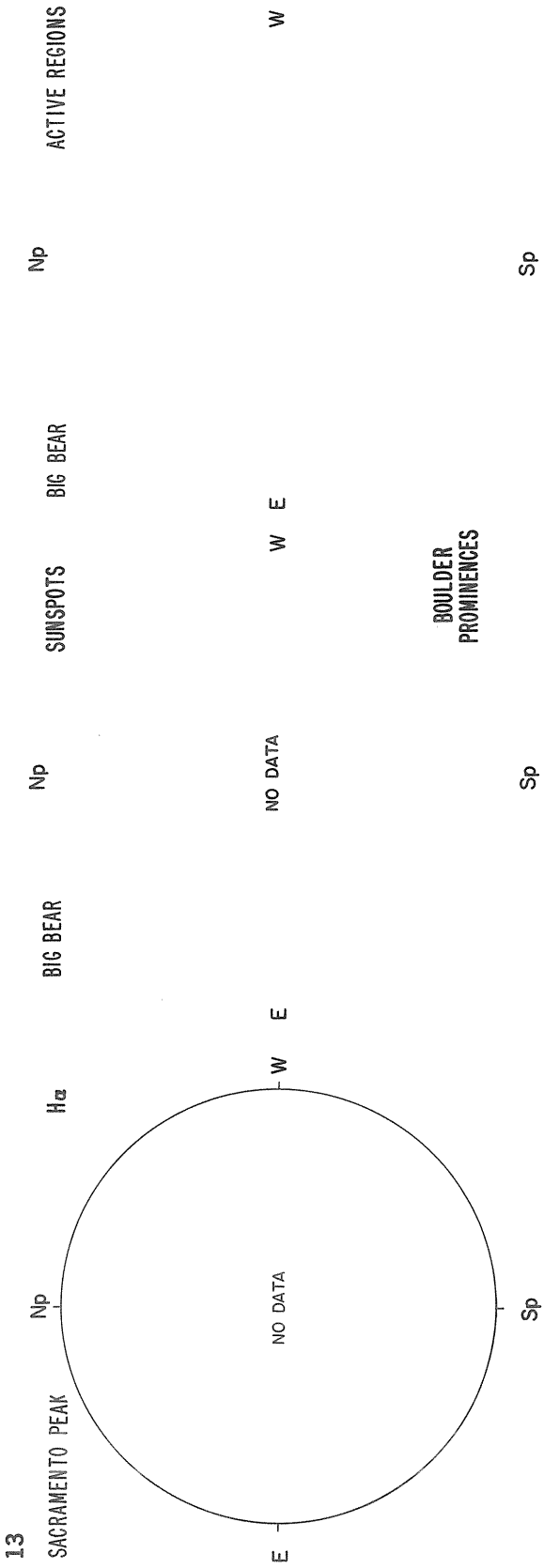
Np



Levels  
5  
+ 10  
+ 20  
+ 40  
+ 80

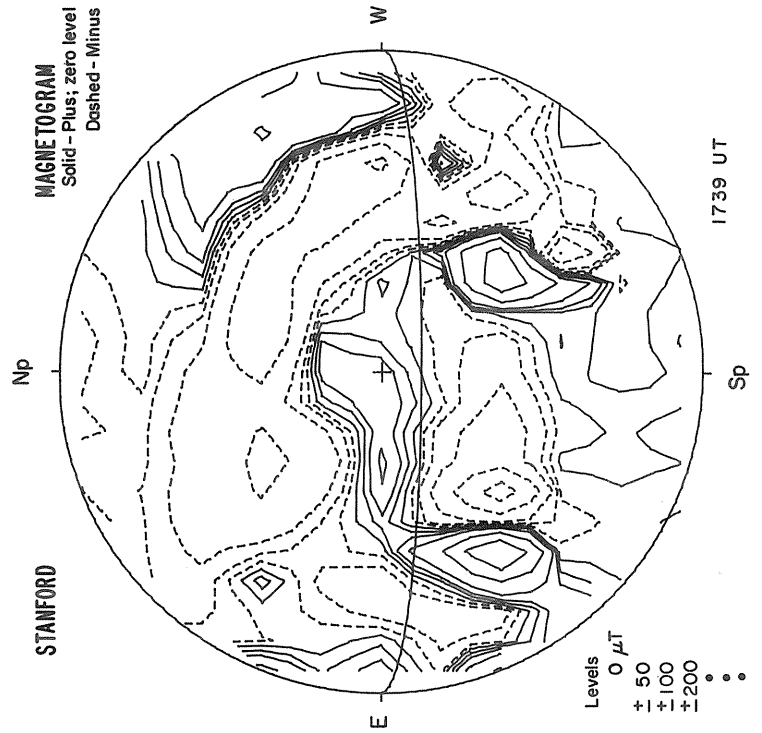
1535 UT

16.97-17.95 UT



**BOULDER PROMINENCES**

Sp

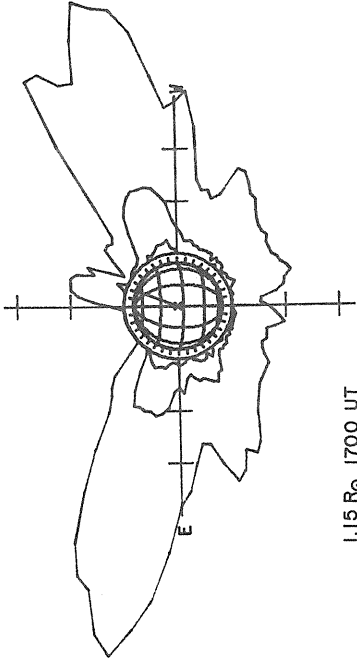


Levels  
0  $\mu$ T  
± 50  
± 100  
± 200

SEPTEMBER 14, 1982 (P= 23.85, B<sub>0</sub>= 7.22, L<sub>0</sub>= 236.51)

SACRAMENTO PEAK  
CORONA  
5303 Å

Np



1.15 R<sub>⊙</sub> 1700 UT  
1.35 R<sub>⊙</sub> 1705 UT  
1.55 R<sub>⊙</sub> 1713 UT

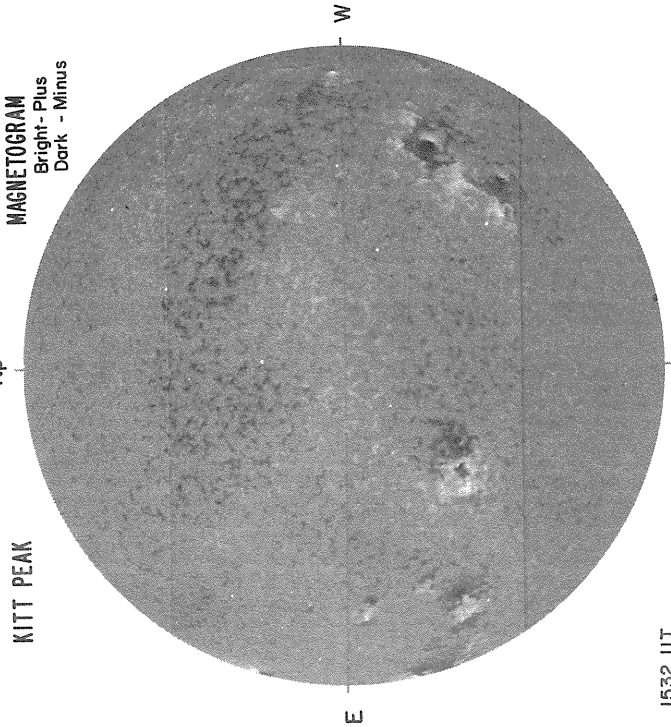
Sp  
Np

MT. WILSON

DELTA TAY = 12.6  
DELTA TAX = 9.6

MAGNETOGRAM  
Bright-Plus  
Dark-Minus

Np

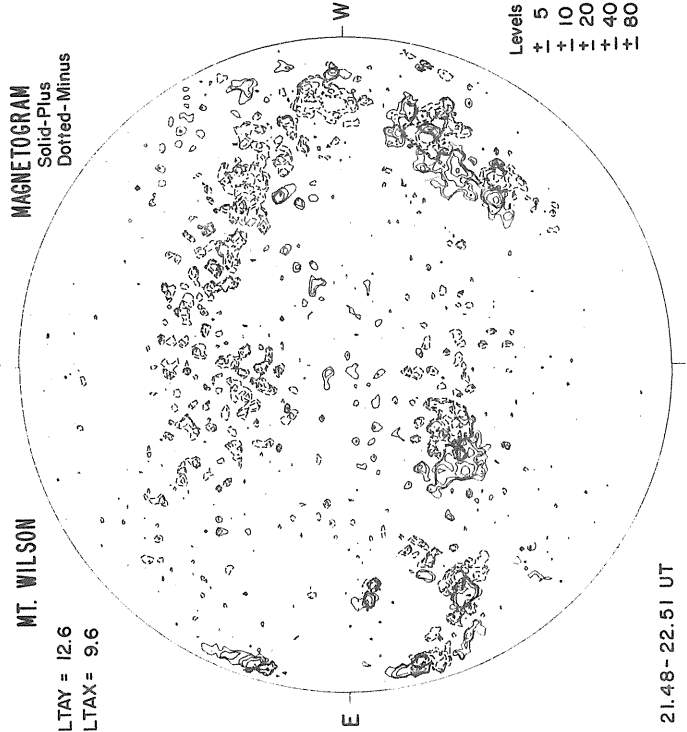


KITT PEAK

1532 UT

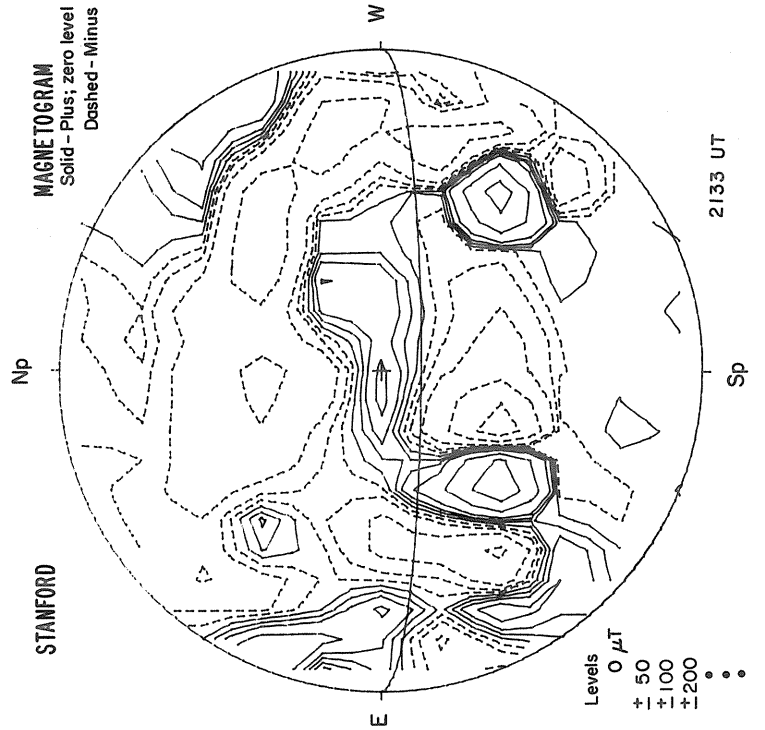
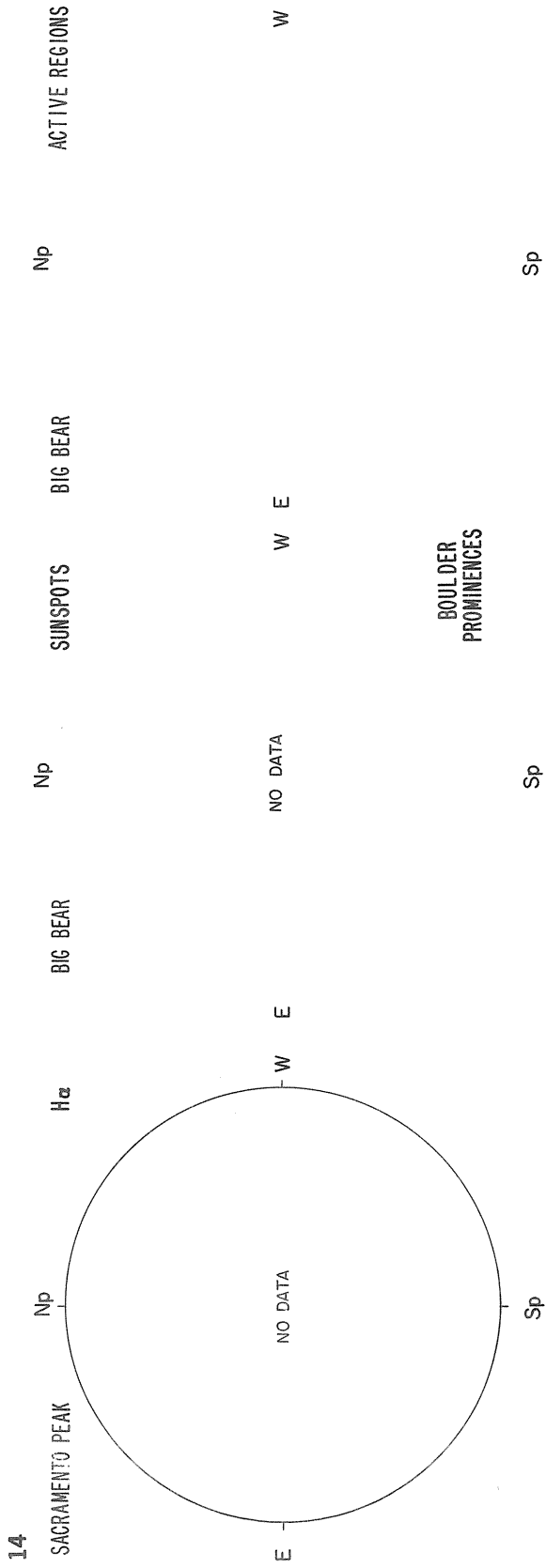
MAGNETOGRAM  
Solid-Plus  
Dotted-Minus

Np



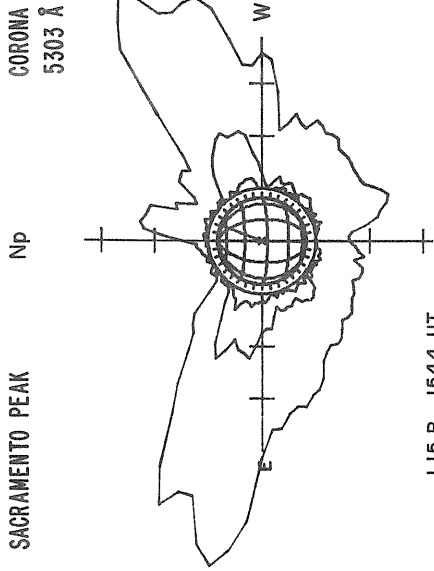
Levels  
5  
+ 10  
+ 20  
+ 40  
+ 80

21.48 - 22.51 UT





SEPTEMBER 15, 1982 (P=24.03, B<sub>0</sub>= 7.21, L<sub>0</sub>= 223.31)

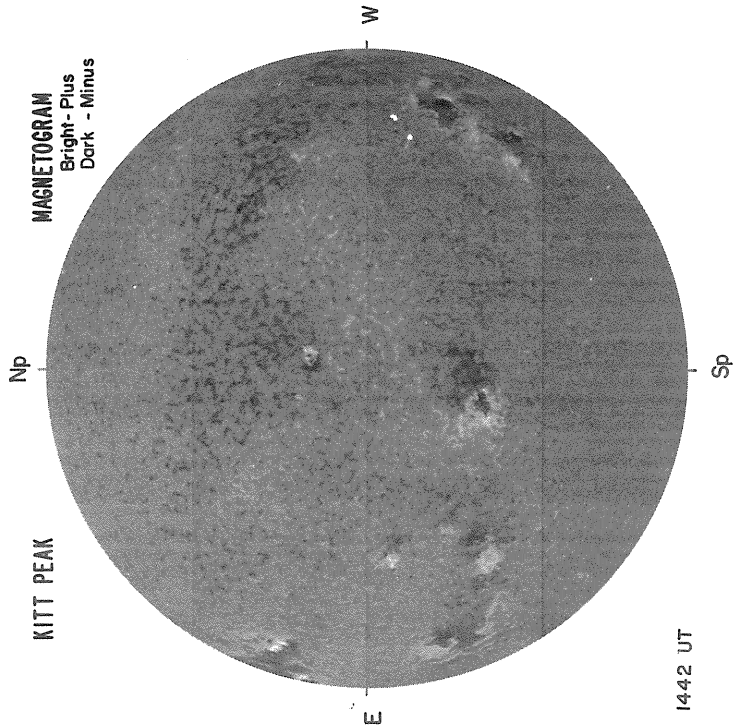


1.15 R<sub>⊙</sub> 1544 UT  
1.35 R<sub>⊙</sub> 1549 UT  
1.55 R<sub>⊙</sub> 1556 UT

MAGNETOGRAM  
Solid-Plus  
Dotted-Minus

MT. WILSON

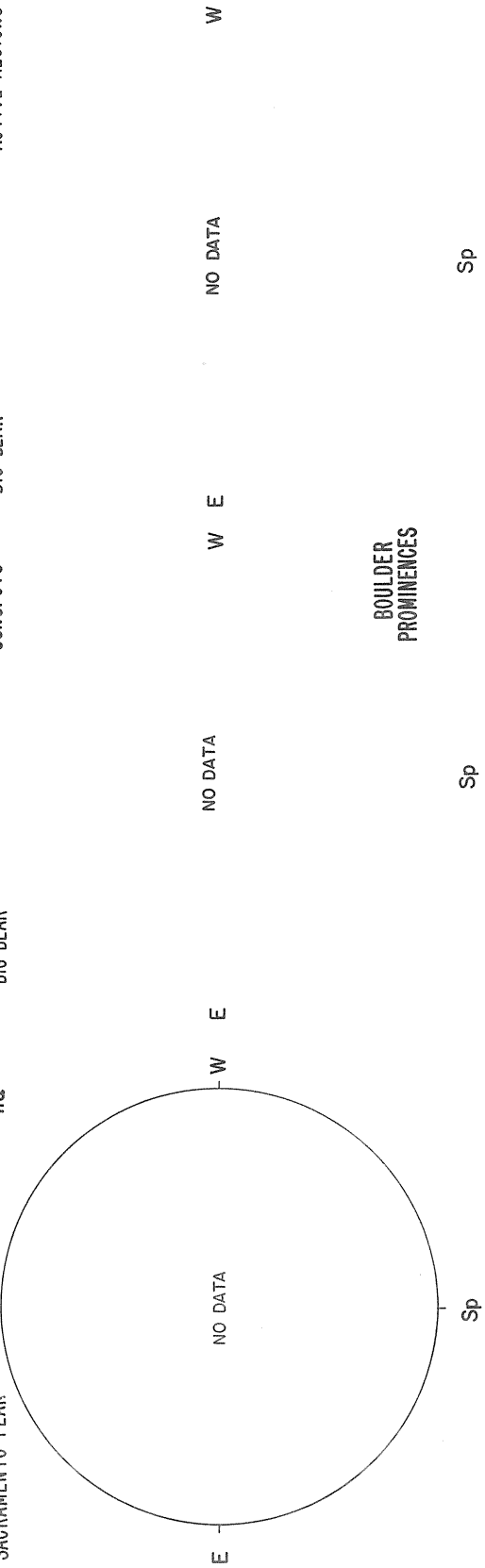
DELTA Y =  
DELTA X =



NO DATA

Levels  
5  
±1 ±10  
±1 ±20  
±1 ±40  
±1 ±80

15 SACRAMENTO PEAK H $\alpha$  BIG BEAR Np BIG BEAR SUNSPOTS BIG BEAR Np ACTIVE REGIONS



NO DATA W E NO DATA W

BOULDER PROMINENCES

Sp Sp

MAGNETOGRAM  
Solid - Plus; zero level  
Dashed - Minus

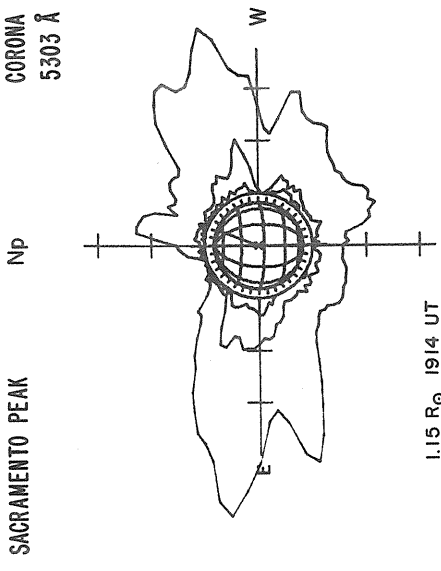
STANFORD

NO DATA W

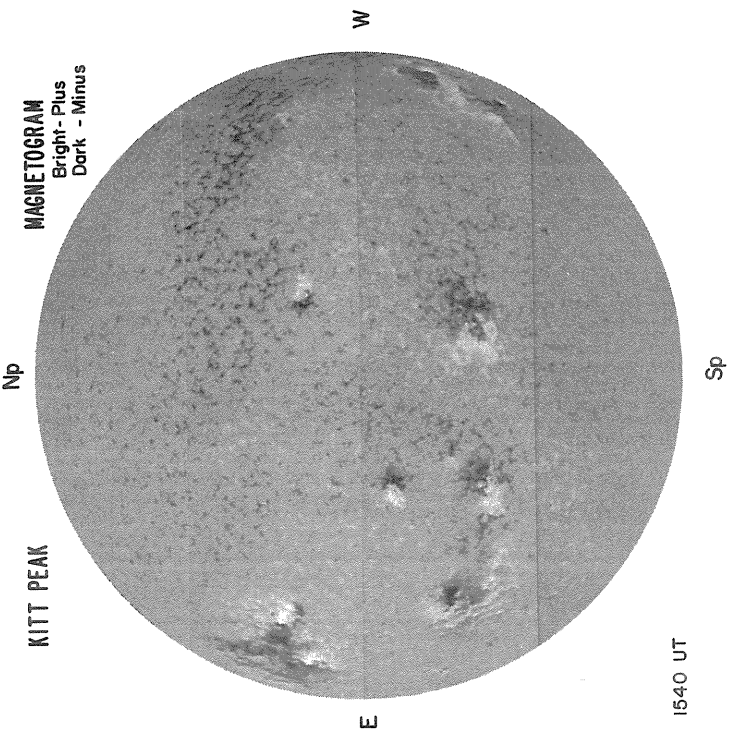
Levels  
0  $\mu T$   
+ 50  
+ 100  
+ 200  
•  
•

Sp

SEPTEMBER 16, 1982 (P= 24.20, B<sub>0</sub> = 7.19, L<sub>0</sub> = 210.10)



1.15 R<sub>0</sub> 1914 UT  
1.35 R<sub>0</sub> 1924 UT  
1.55 R<sub>0</sub> 1935 UT



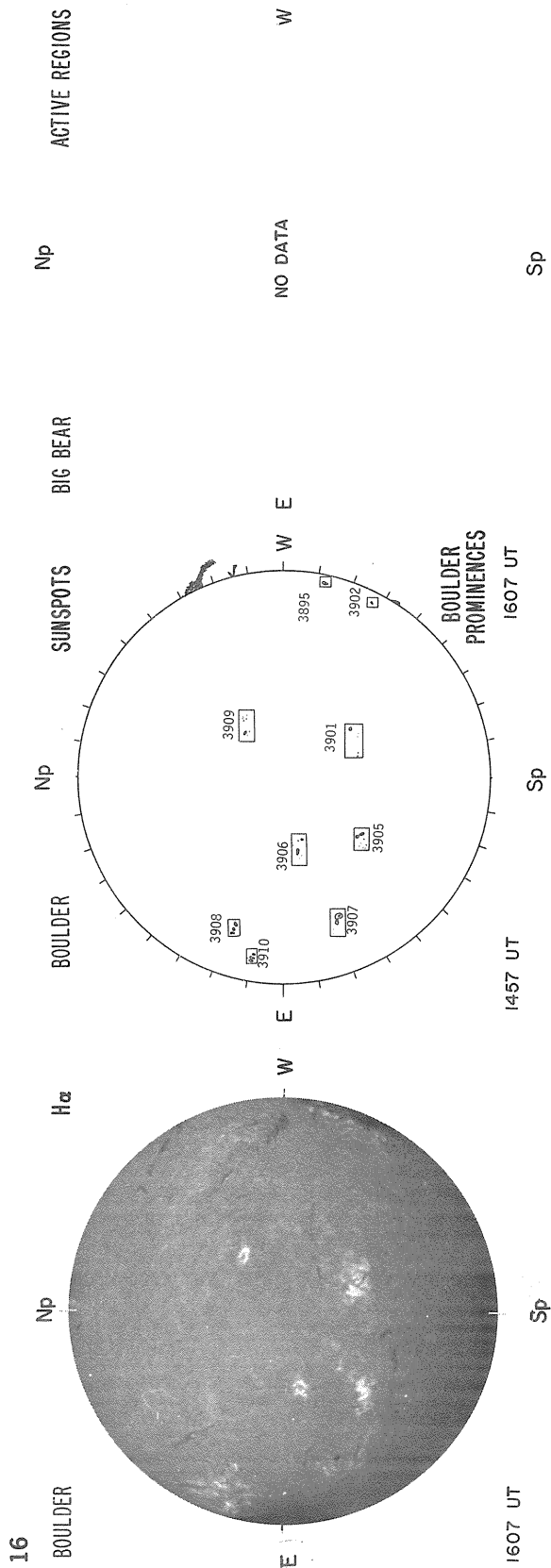
MAGNETOGRAM  
Solid-Plus  
Dotted-Minus

MT. WILSON

DELTA Y =  
DELTA X =

NO DATA

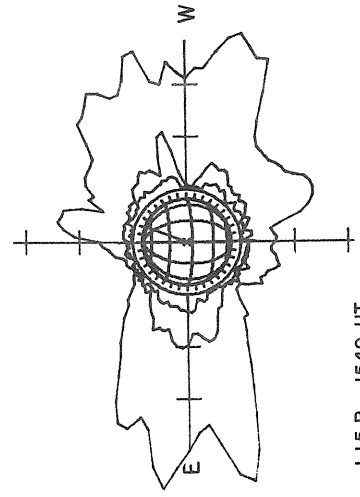
Levels  
± 5  
± 10  
± 20  
± 40  
± 80



SEPTEMBER 17, 1982 (P= 24.37, B<sub>0</sub>= 7.17, L<sub>0</sub>= 196.90)

CORONA  
5303 Å

SACRAMENTO PEAK



1.15 R<sub>0</sub> 1549 UT  
1.35 R<sub>0</sub> 1554 UT  
1.55 R<sub>0</sub> 1601 UT

KITT PEAK

Np

MAGNETOGRAM  
Bright-Plus  
Dark - Minus

MT. WILSON

DELTA Y =  
DELTA X =

Np

MAGNETOGRAM  
Solid-Plus  
Dotted-Minus

Sp

W

NO DATA

E

W

NO DATA

E

Levels  
+ 5  
+ 10  
+ 20  
+ 40  
+ 80

Sp

Sp

17

SACRAMENTO PEAK

Np

H $\alpha$

BIG BEAR

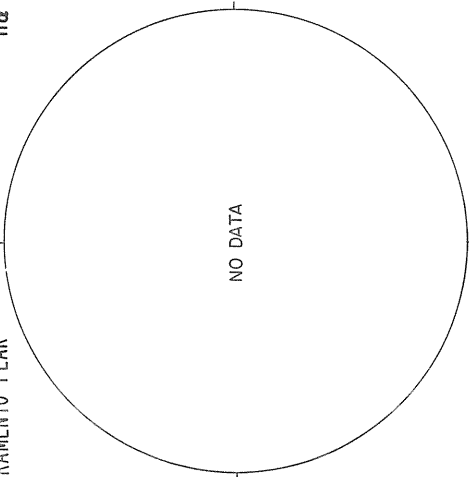
Np

SUNSPOTS

BIG BEAR

Np

ACTIVE REGIONS



NO DATA

W E

NO DATA

W E

NO DATA

W

BOLDER  
PROMINENCES

Sp

Sp

STANFORD

Np

MAGNETOGRAM  
Solid - Plus; zero level  
Dashed - Minus

E

NO DATA

W

Levels  
 0  $\mu$ T  
 $\pm$  50  
 $\pm$  100  
 $\pm$  200  
 •  
 •  
 •

Sp

SEPTEMBER 18, 1982 (P= 24.52, B<sub>o</sub>= 7.16, L<sub>o</sub>= 183.70)

CORONA  
5303 Å

Np

SACRAMENTO PEAK

W

NO DATA

E

1.15 R<sub>0</sub>  
1.35 R<sub>0</sub>  
1.55 R<sub>0</sub>

Sp

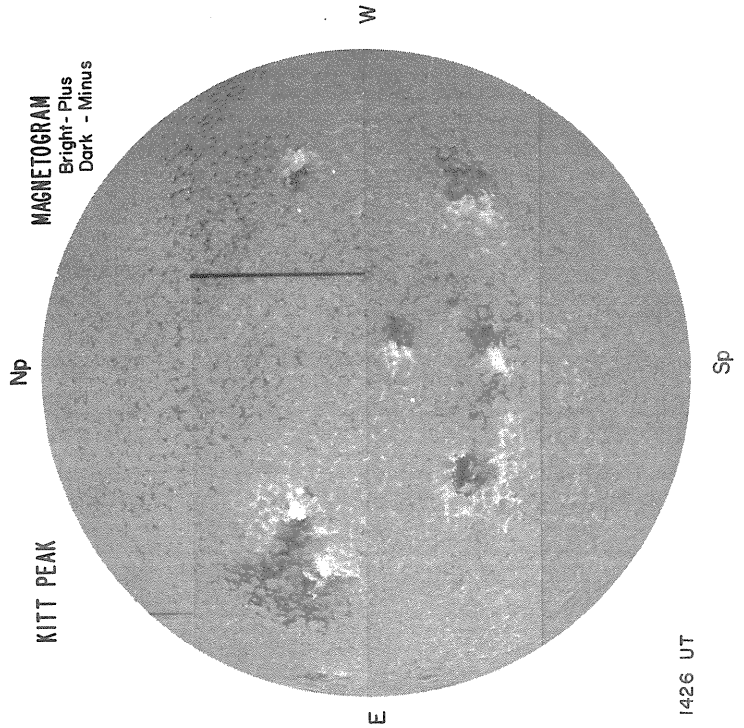
Np

MT. WILSON

MAGNETOGRAM  
Bright - Plus  
Dark - Minus

DELTA =  
DELTA =

MAGNETOGRAM  
Solid-Plus  
Dotted-Minus



W

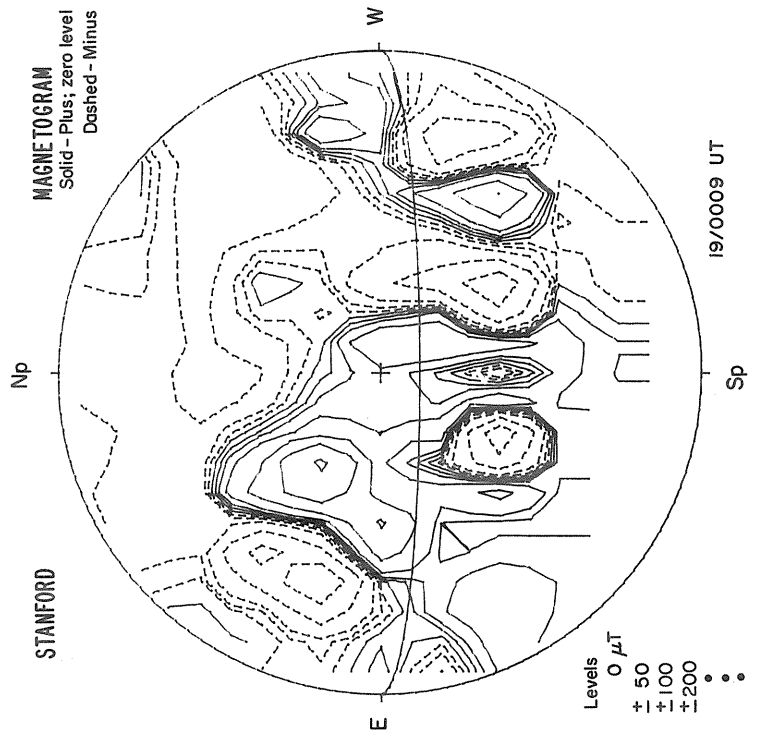
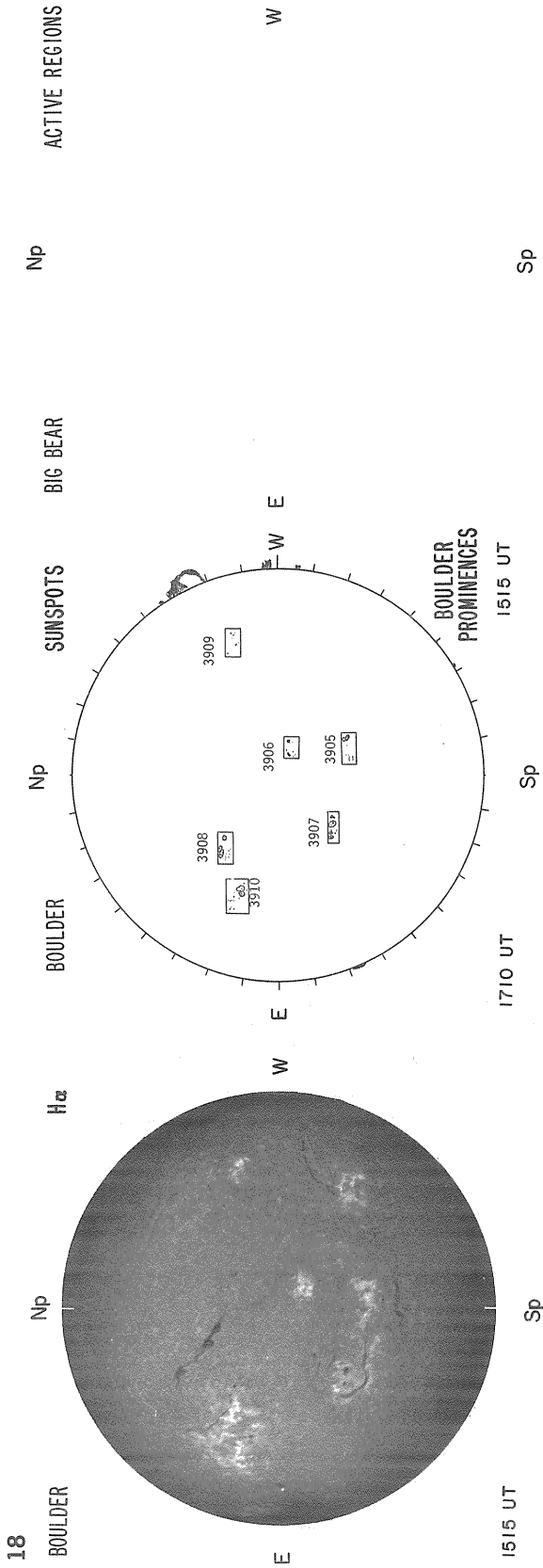
NO DATA

E

Levels  
± 5  
± 10  
± 20  
± 40  
± 80

1426 UT

Sp

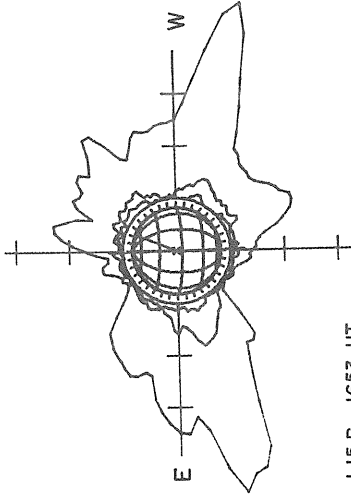




SEPTEMBER 19, 1982 (P= 24.68, B<sub>0</sub>= 7.13, L<sub>0</sub>= 170.50)

SACRAMENTO PEAK

Np  
CORONA  
5303 Å

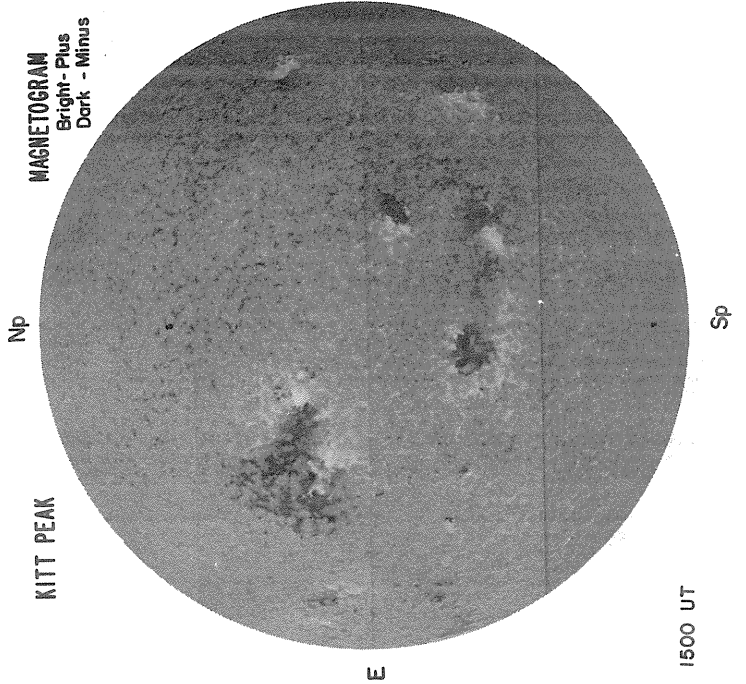


1.15 R<sub>0</sub> 1653 UT  
1.35 R<sub>0</sub> 1659 UT  
1.55 R<sub>0</sub> 1706 UT

Sp  
Np

MT. WILSON

DELTA Y =  
DELTA X =



MAGNETOGRAM  
Bright-Plus  
Dark - Minus

Np

KITT PEAK

W

E

1500 UT

Sp

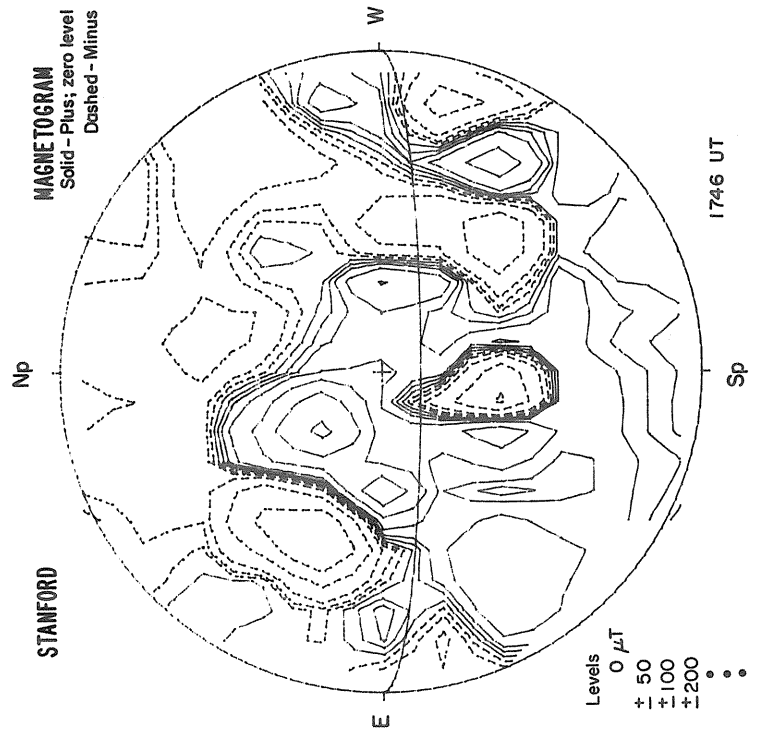
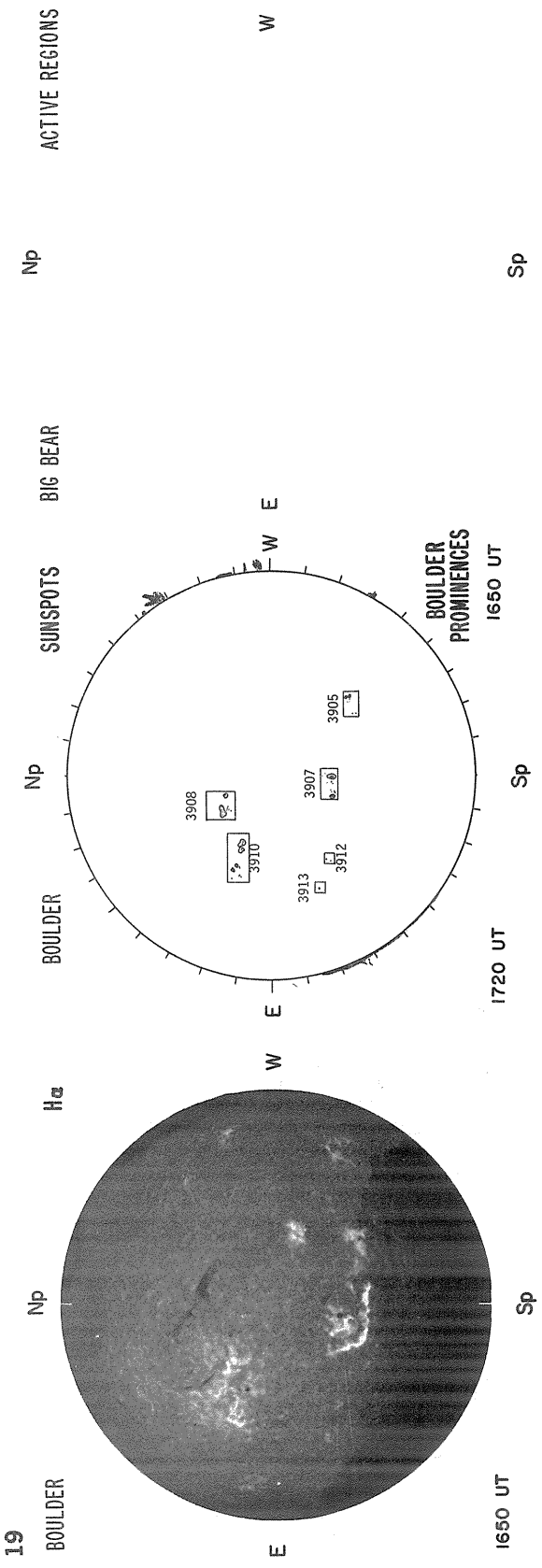
MAGNETOGRAM  
Solid-Plus  
Dotted-Minus

NO DATA

W

Levels  
± 5  
± 10  
± 20  
± 40  
± 80

Sp



SEPTEMBER 20, 1982 (P= 24.82, B<sub>0</sub>= 7.11, L<sub>0</sub>= 157.30)

CORONA  
5303 Å

Np

SACRAMENTO PEAK

W

NO DATA

E

1.15 R<sub>0</sub>  
1.35 R<sub>0</sub>  
1.55 R<sub>0</sub>

Sp

Np

KITT PEAK

Np

MAGNETOGRAM  
Bright - Plus  
Dark - Minus

MT. WILSON

DELTA =  
DELTA =

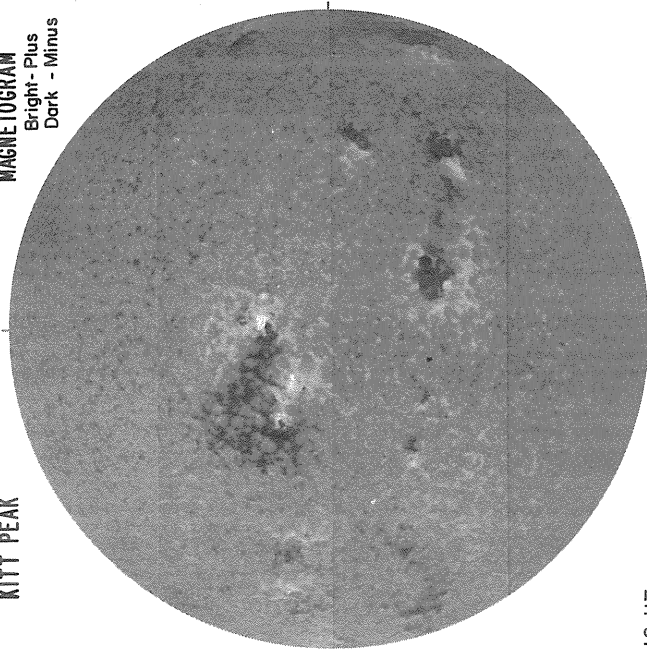
MAGNETOGRAM  
Solid-Plus  
Dotted-Minus

W

E

NO DATA

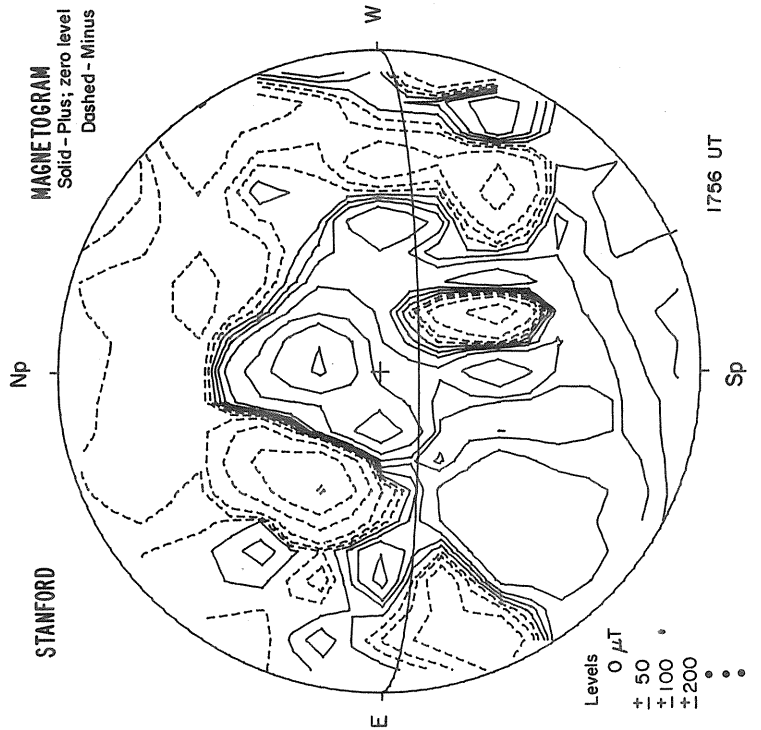
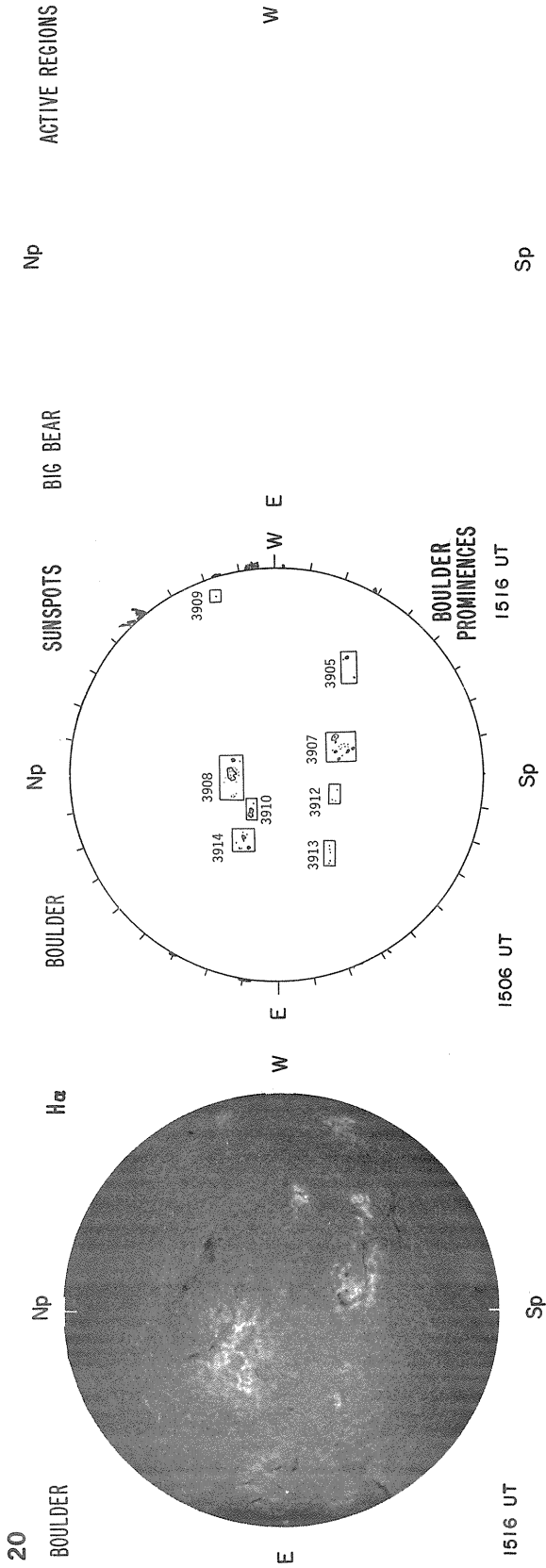
W



1818 UT

Levels  
± 5  
± 10  
± 20  
± 40  
± 80

Sp



SEPTEMBER 21, 1982 (P= 24.96, B<sub>0</sub>= 7.09, L<sub>0</sub>= 144.10)

SACRAMENTO PEAK  
CORONA  
5303 Å

Np

NO DATA

E

W

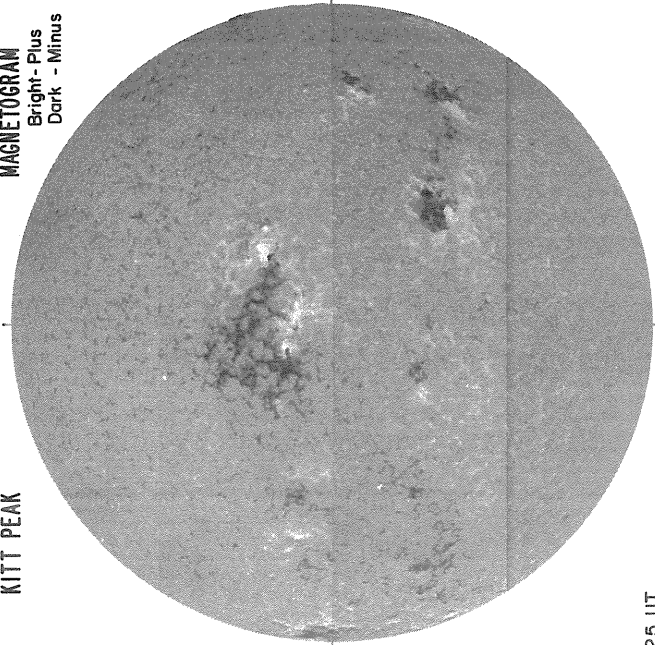
1.15 R<sub>0</sub>  
1.35 R<sub>0</sub>  
1.55 R<sub>0</sub>

KITT PEAK

Np

MAGNETOGRAM

Bright-Plus  
Dark-Minus



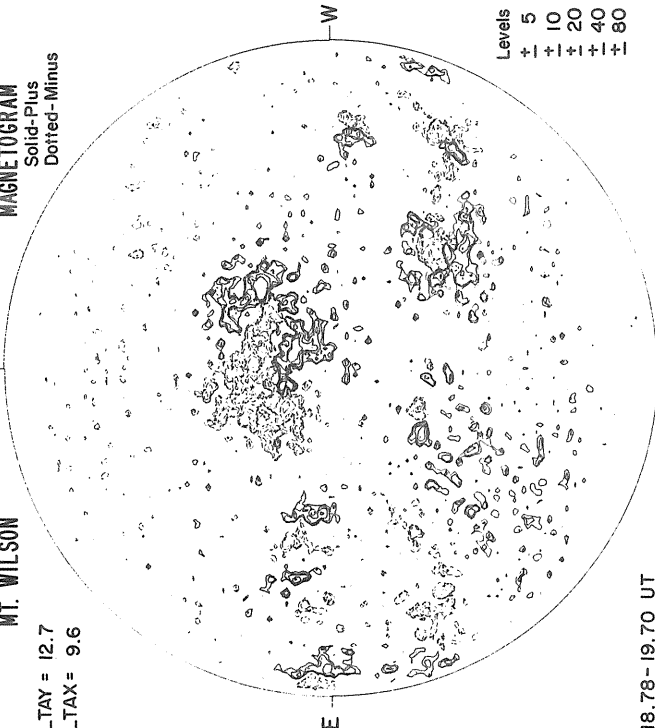
1525 UT

MT. WILSON

Sp  
Np

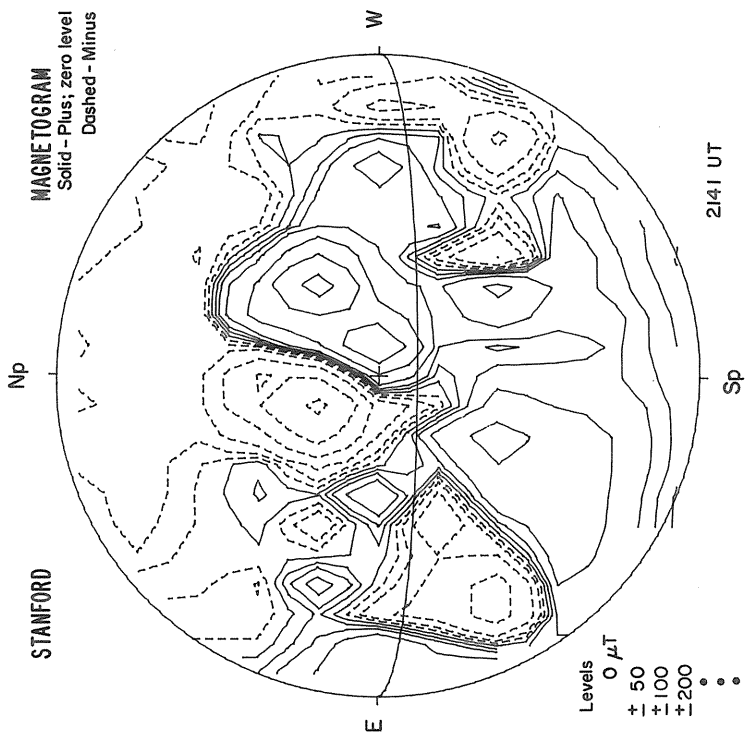
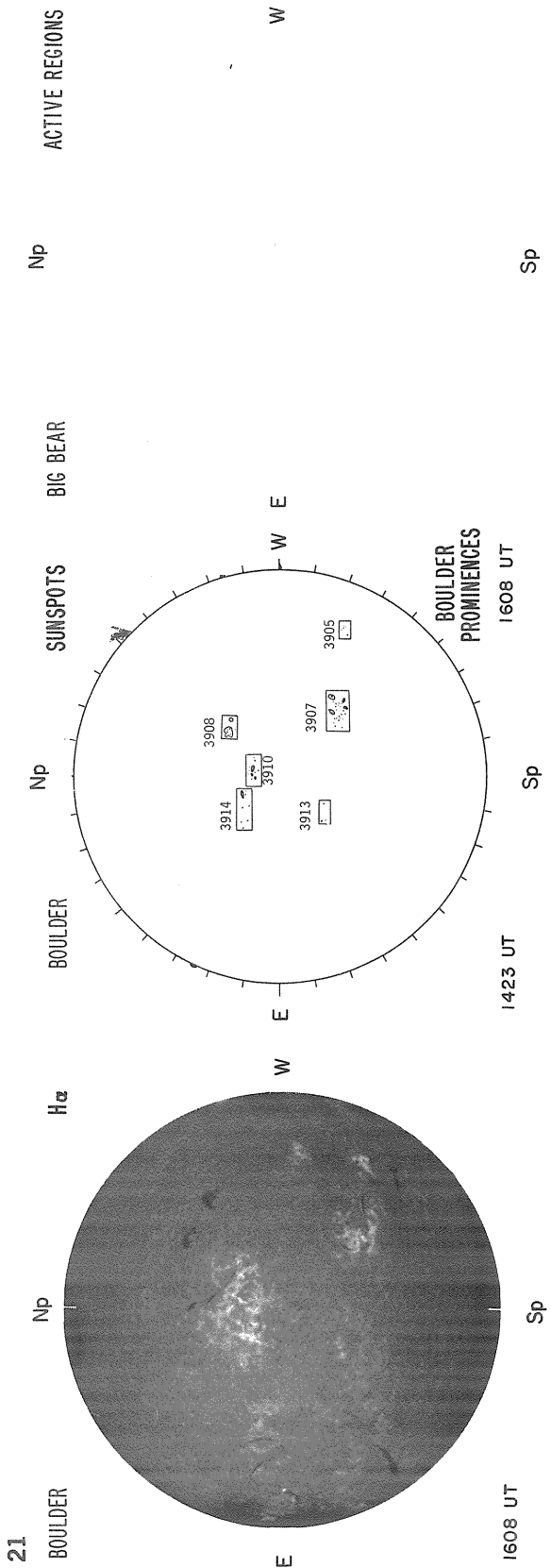
MAGNETOGRAM

Solid-Plus  
Dotted-Minus



18.78-19.70 UT

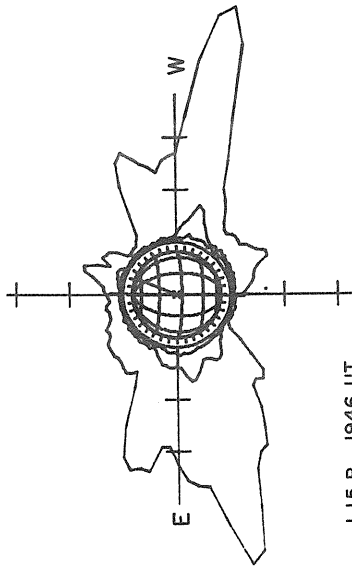
Levels  
+ 5  
+ 10  
+ 20  
+ 40  
+ 80



SEPTEMBER 22, 1982 (P = 25.09, B<sub>0</sub> = 7.06, L<sub>0</sub> = 130.90)

SACRAMENTO PEAK  
CORONA  
5303 Å

Np  
E  
W  
Sp

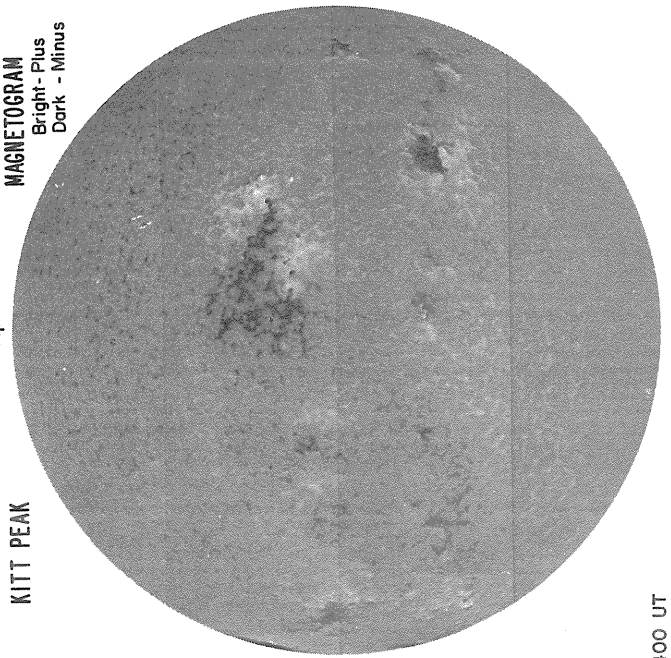


1.15 R<sub>⊙</sub> 1946 UT  
1.35 R<sub>⊙</sub> 1953 UT  
1.55 R<sub>⊙</sub> 2001 UT

KITT PEAK

Np

MAGNETOGRAM  
Bright-Plus  
Dark-Minus



1400 UT

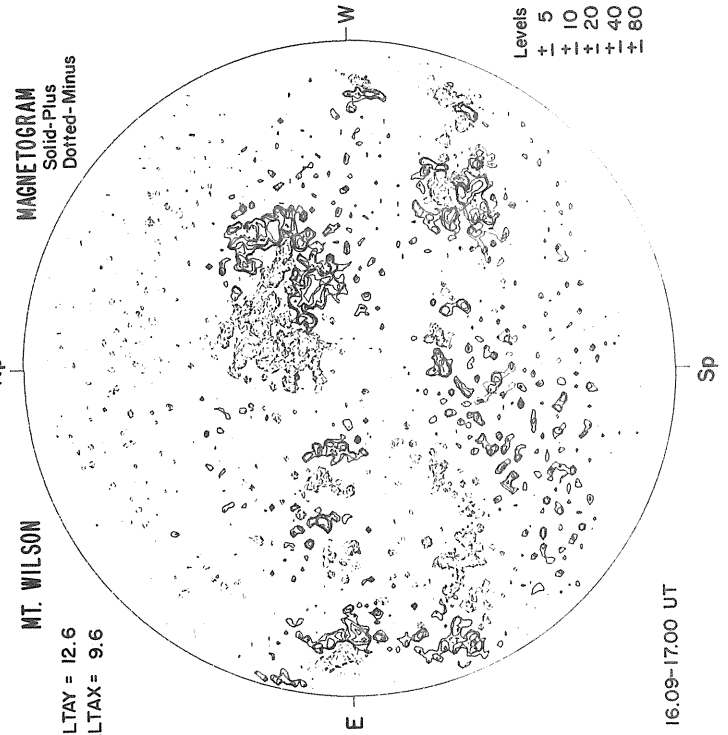
MT. WILSON

DELTA TAY = 12.6  
DELTA TAX = 9.6

MAGNETOGRAM  
Solid-Plus  
Dotted-Minus

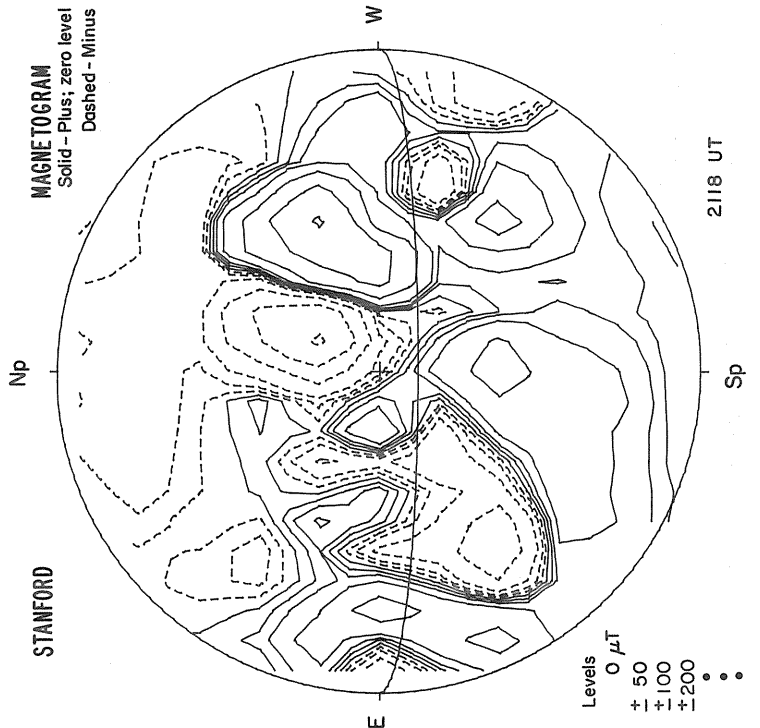
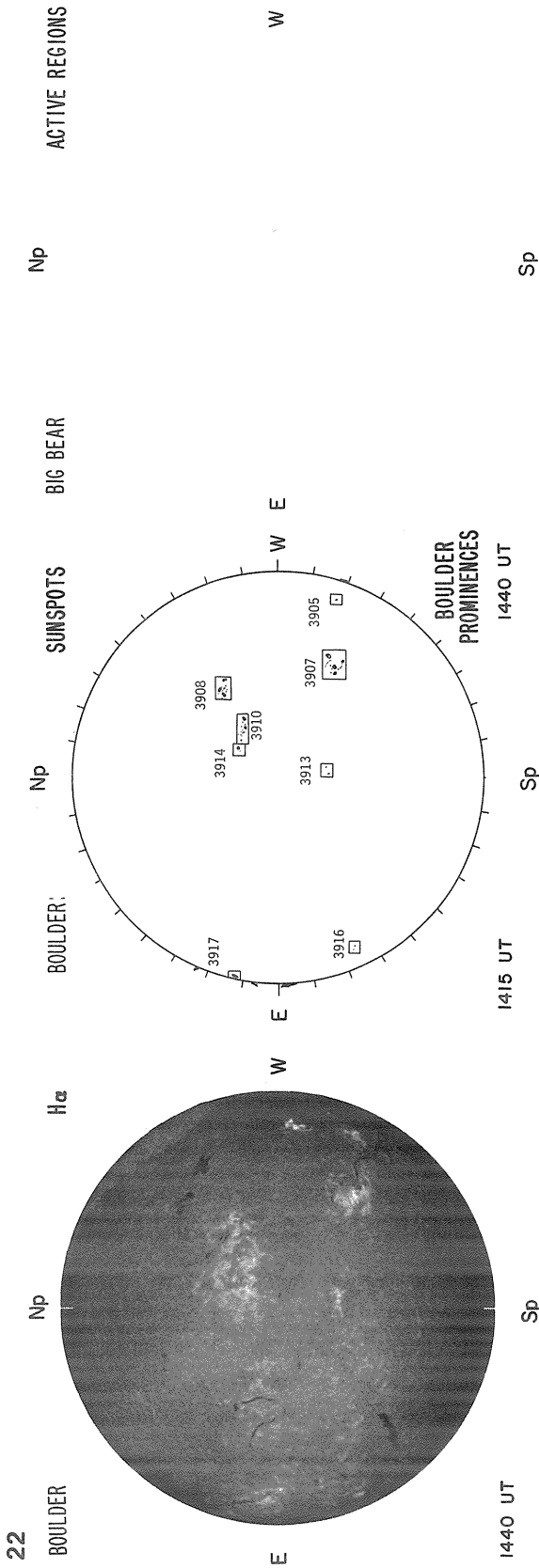
Sp

Np



16.09-17.00 UT

Levels  
+ 5  
+ 10  
+ 20  
+ 40  
+ 80



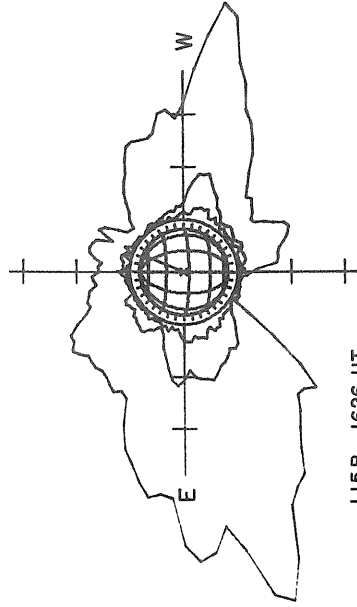


SEPTEMBER 23, 1982 (P= 25.22, B<sub>0</sub>= 7.03, L<sub>0</sub>= 117.70)

SACRAMENTO PEAK  
CORONA  
5303 Å

Np

E W



1.15R<sub>0</sub> 1626 UT  
1.35R<sub>0</sub> 1632 UT  
1.55R<sub>0</sub> 1639 UT

Sp Np

MT. WILSON

MAGNETOGRAM  
Solid-Plus  
Dotted-Minus

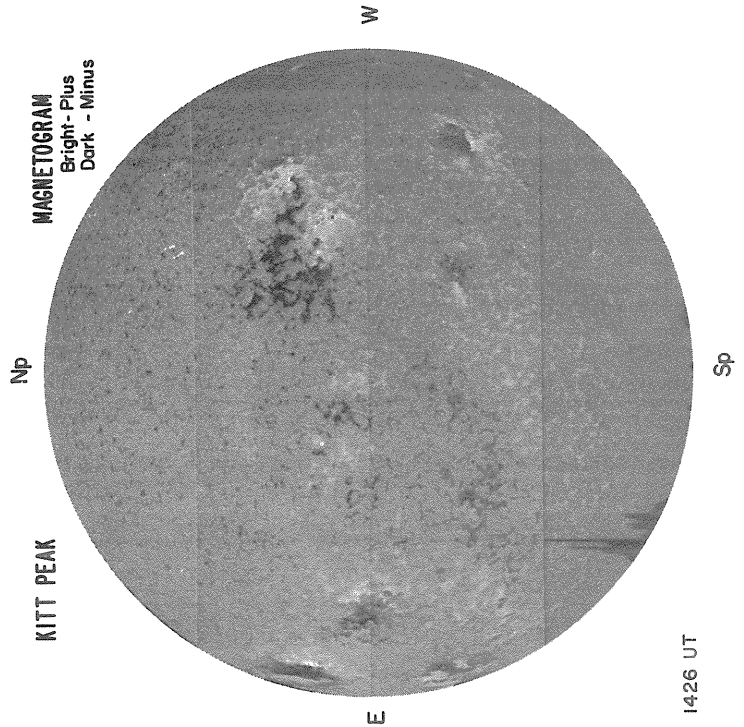
DELTA Y =  
DELTA X =

NO DATA

E

W

Levels  
+1 5  
+1 10  
+1 20  
+1 40  
+1 80



KITT PEAK

Np

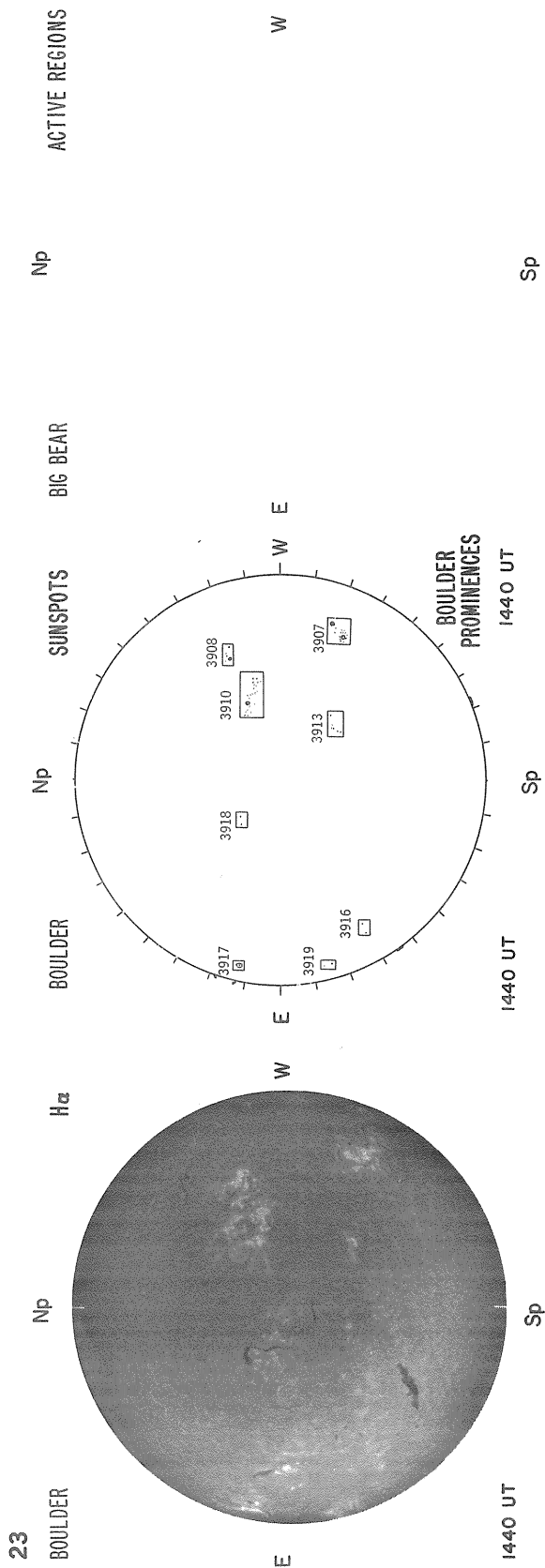
MAGNETOGRAM  
Bright-Plus  
Dark - Minus

W

E

1426 UT

Sp



**MAGNETOGRAM**  
Solid - Plus; zero level  
Dashed - Minus

**STANFORD**

W

NO DATA

E

Levels  
0  $\mu T$   
± 50  
± 100  
± 200  
•••

Sp

90  
Sep 82

SEPTEMBER 24, 1982 (P= 25.34, B<sub>0</sub>= 7.00, L<sub>0</sub>= 104.5 I)

CORONA  
5303 Å

Np

SACRAMENTO PEAK

W

NO DATA

E

1.15 R<sub>0</sub>  
1.35 R<sub>0</sub>  
1.55 R<sub>0</sub>

Sp

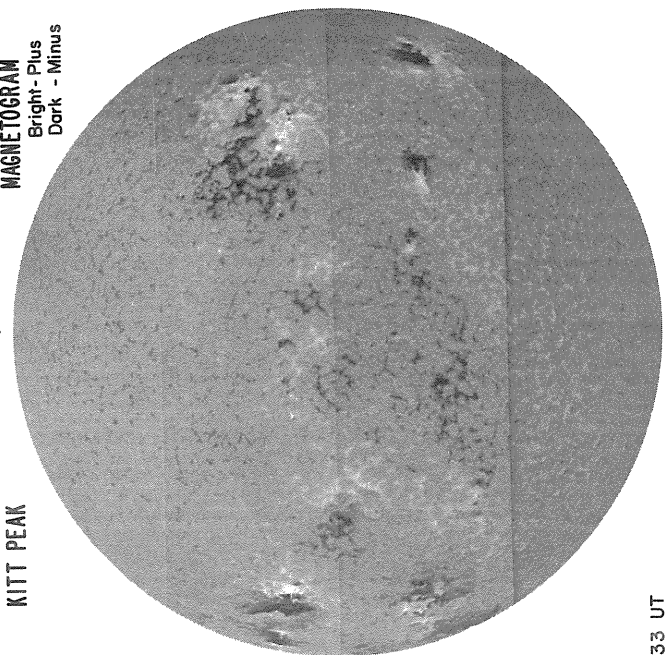
Np

KITT PEAK

Np

MAGNETOGRAM  
Bright - Plus  
Dark - Minus

W



W

E

NO DATA

W

MT. WILSON

DELTA Y =  
DELTA X =

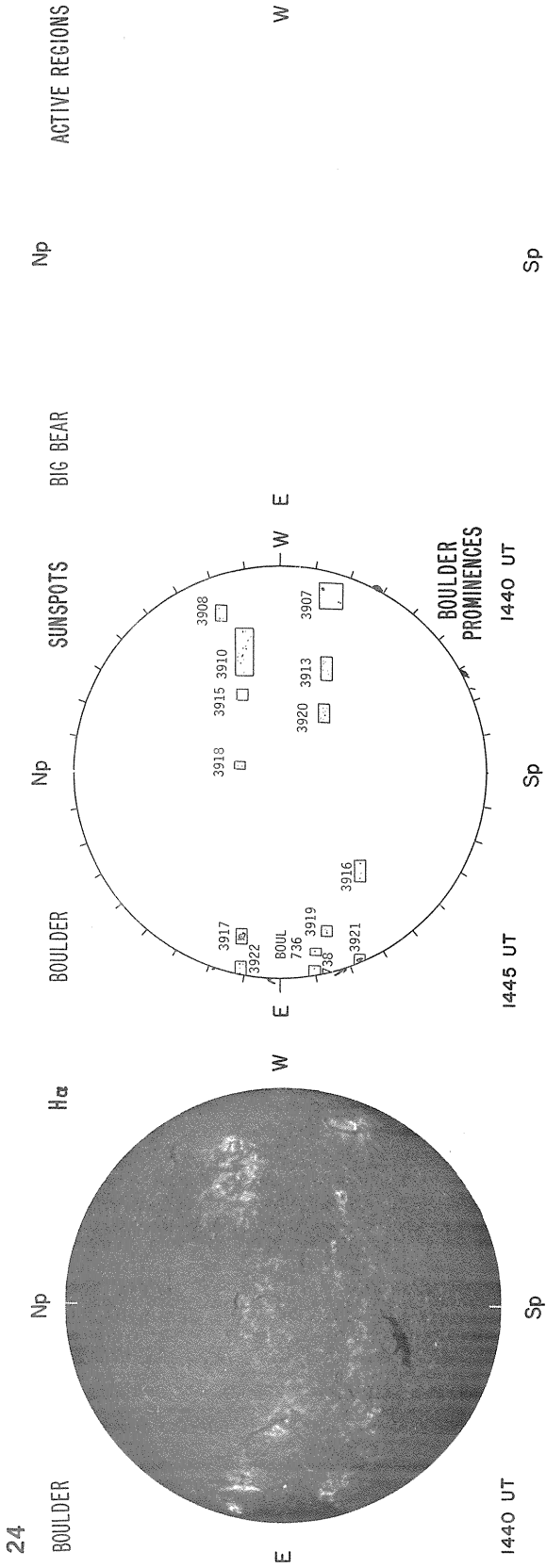
MAGNETOGRAM  
Solid-Plus  
Dotted-Minus

Levels  
± 5  
± 10  
± 20  
± 40  
± 80

1433 UT

Sp

Sp



MAGNETOGRAM  
Solid - Plus; zero level  
Dashed - Minus

Np

STANFORD

W

NO DATA

E

Levels  
0  $\mu$ T  
+ 50  
+ 100  
+ 200  
•  
•

Sp

SEPTEMBER 25, 1982 (P= 25.45, B<sub>0</sub>= 6.96, L<sub>0</sub>= 91.31)

CORONA  
5303 Å

Np

SACRAMENTO PEAK

W

NO DATA

E

1.15 R<sub>0</sub>  
1.35 R<sub>0</sub>  
1.55 R<sub>0</sub>

Sp

Np

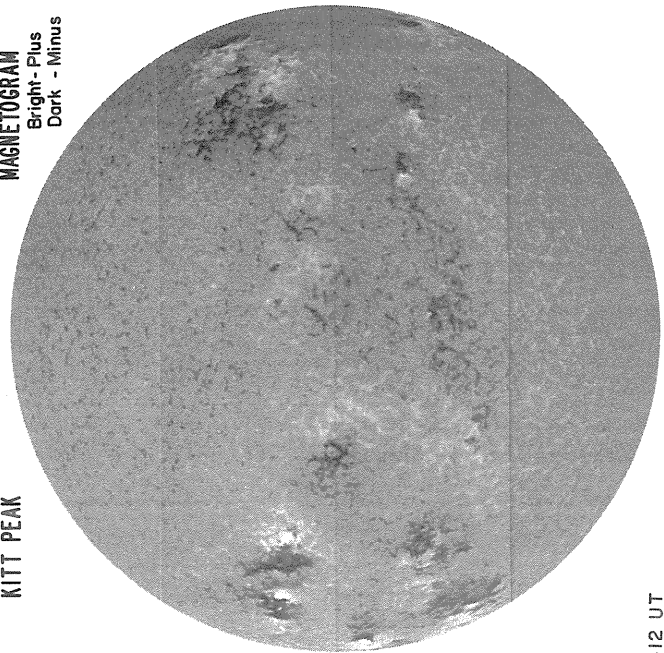
MT. WILSON

MAGNETOGRAM  
Bright - Plus  
Dark - Minus

DELTA Y =  
DELTA X =

KITT PEAK

Np



1412 UT

Sp

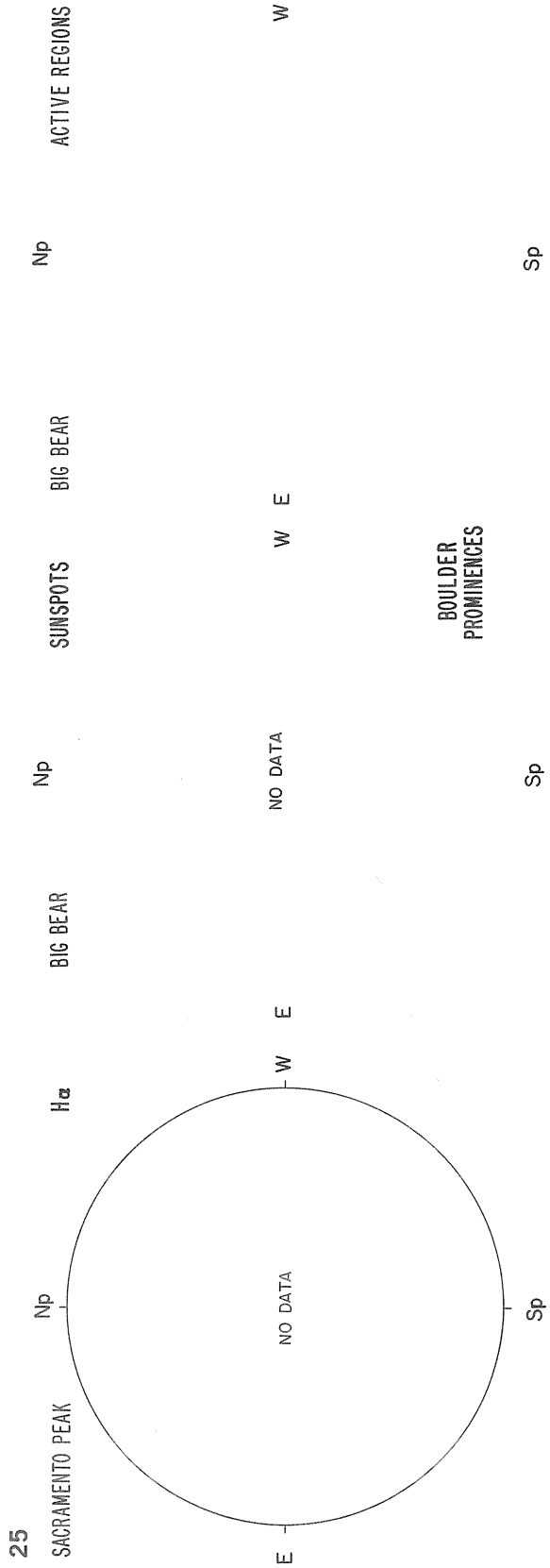
NO DATA

E

W

MAGNETOGRAM  
Solid-Plus  
Dotted-Minus

Levels  
± 5  
± 10  
± 20  
± 40  
± 80



BOULDER  
PROMINENCES

Sp

MAGNETOGRAM  
Solid - Plus; zero level  
Dashed - Minus

Sp

NP

STANFORD

W

NO DATA

E

Sp

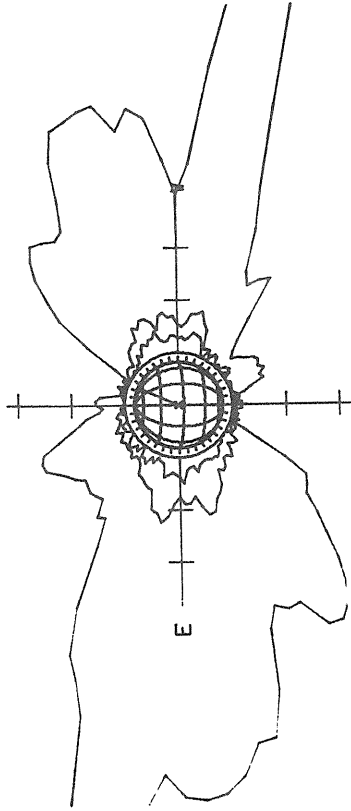
Levels  
0  $\mu$ T  
+ 50  
+ 100  
+ 200  
•  
•

SEPTEMBER 26, 1982 (P= 25.56, B<sub>0</sub>= 6.93, L<sub>0</sub>= 78.11)

CORONA  
5303 Å

Np

SACRAMENTO PEAK



1.15 R<sub>⊙</sub> 1508 UT  
1.35 R<sub>⊙</sub> 1436 UT  
1.55 R<sub>⊙</sub> 1443 UT

Sp  
Np

MAGNETOGRAM  
Solid-Plus  
Dotted-Minus

MT. WILSON

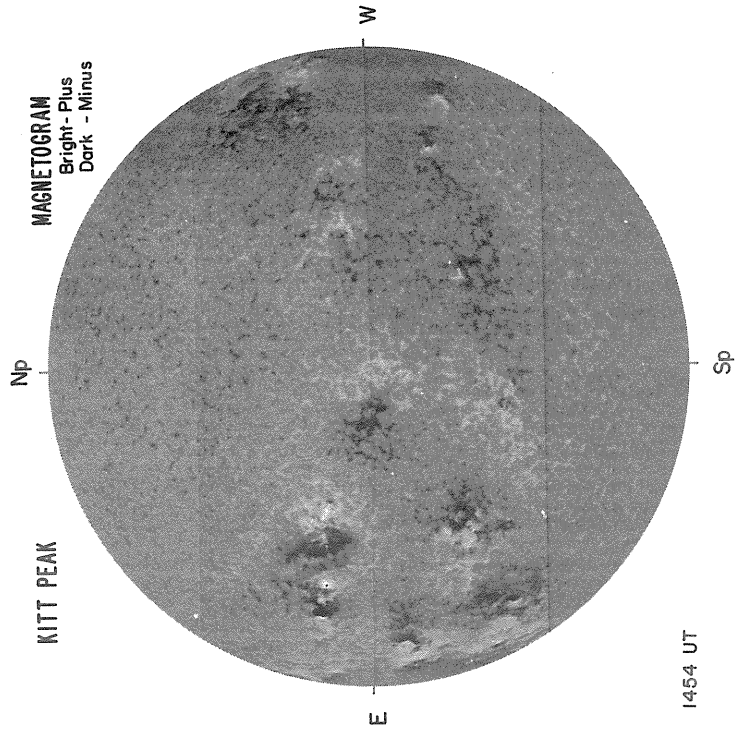
DELTA TAY =  
DELTA TAX =

W

NO DATA

E

Levels  
± 5  
± 10  
± 20  
± 40  
± 80



MAGNETOGRAM  
Bright-Plus  
Dark - Minus

KITT PEAK

Np

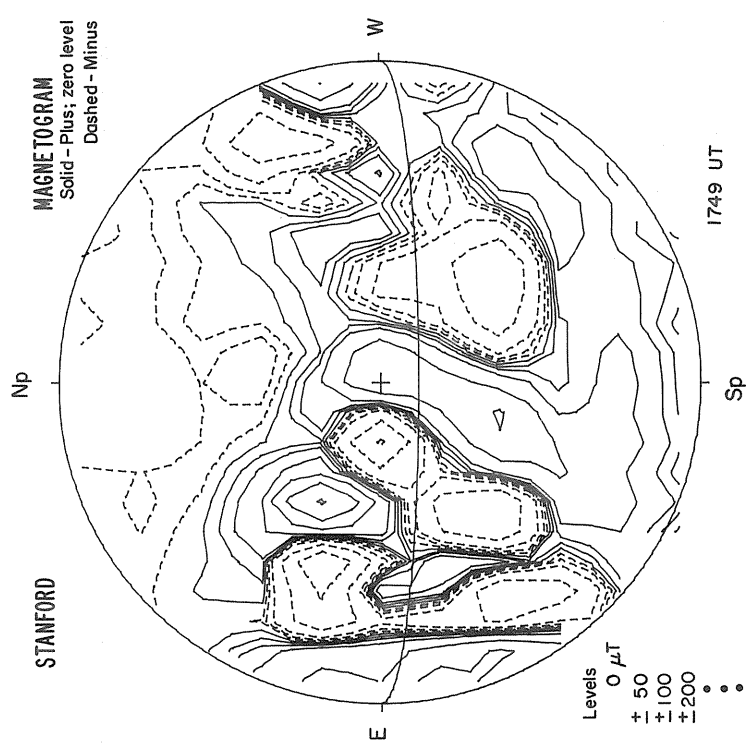
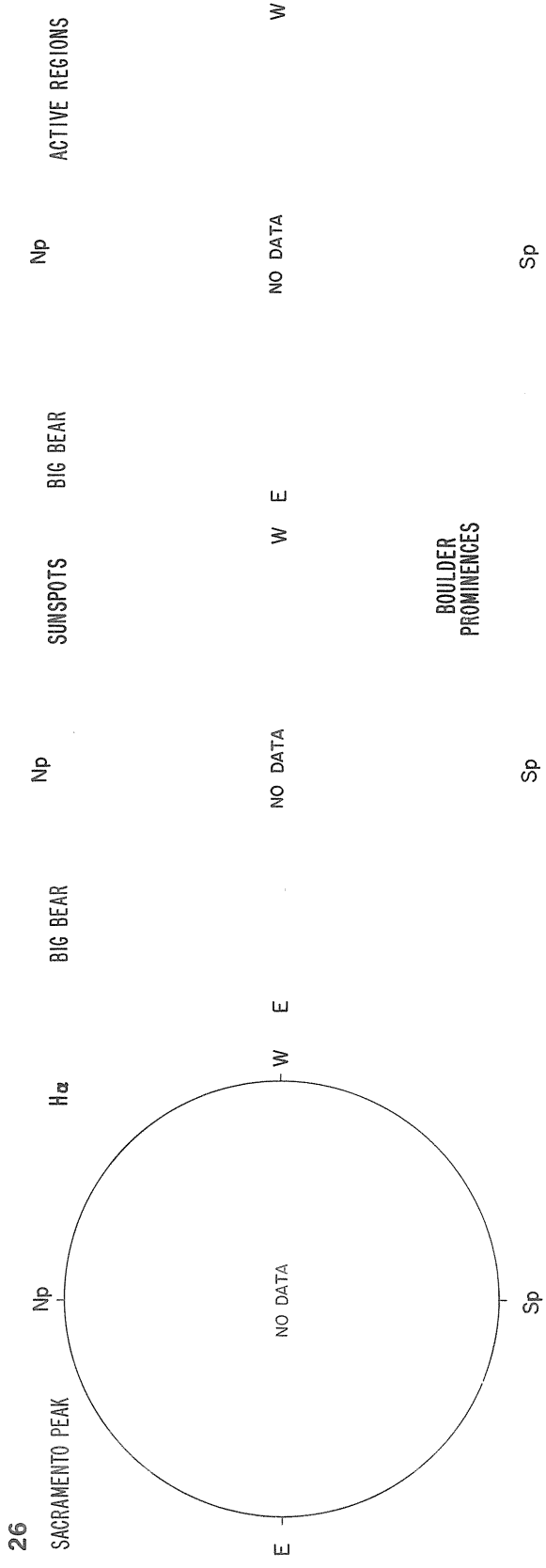
Sp

W

E

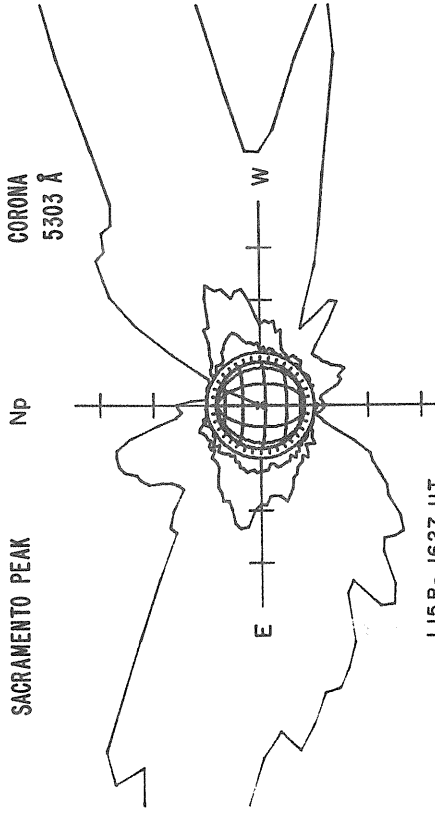
1454 UT

Sp





SEPTEMBER 27, 1982 (P= 25.66, B<sub>0</sub>= 6.89, L<sub>0</sub>= 64.9 I)



1.15 R<sub>0</sub> 1627 UT  
1.35 R<sub>0</sub> 1611 UT  
1.55 R<sub>0</sub> 1618 UT

KITT PEAK

Np

MAGNETOGRAM  
Bright-Plus  
Dark - Minus

NO DATA

W

Sp

MT. WILSON

DELTA Y =  
DELTA X =

E

NO DATA

Sp

Sp

Np

MAGNETOGRAM  
Solid-Plus  
Dotted-Minus

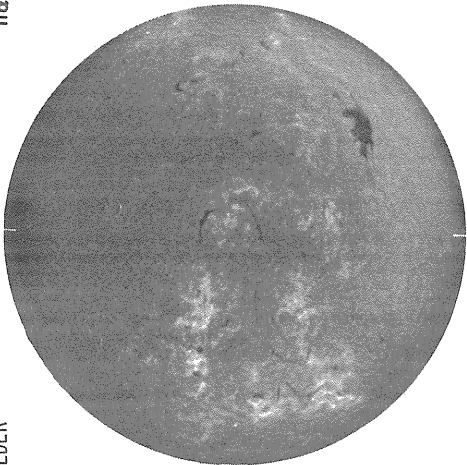
W

Levels  
+ 5  
+ 10  
+ 20  
+ 40  
+ 60

27

BOULDER

Np



E

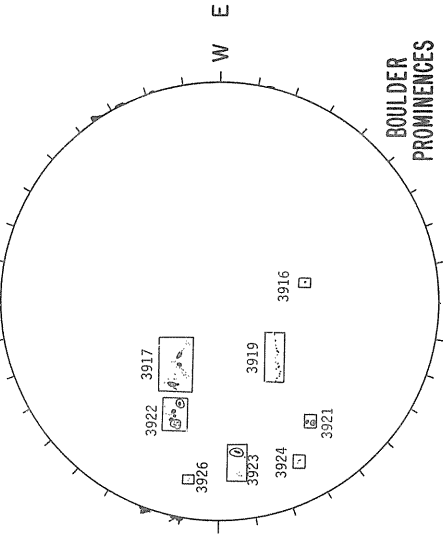
1445 UT

Sp

H<sub>z</sub>

BOULDER

Np



BOULDER  
PROMINENCES

1445 UT

Sp

BIG BEAR

SUNSPOTS

Np

ACTIVE REGIONS

W

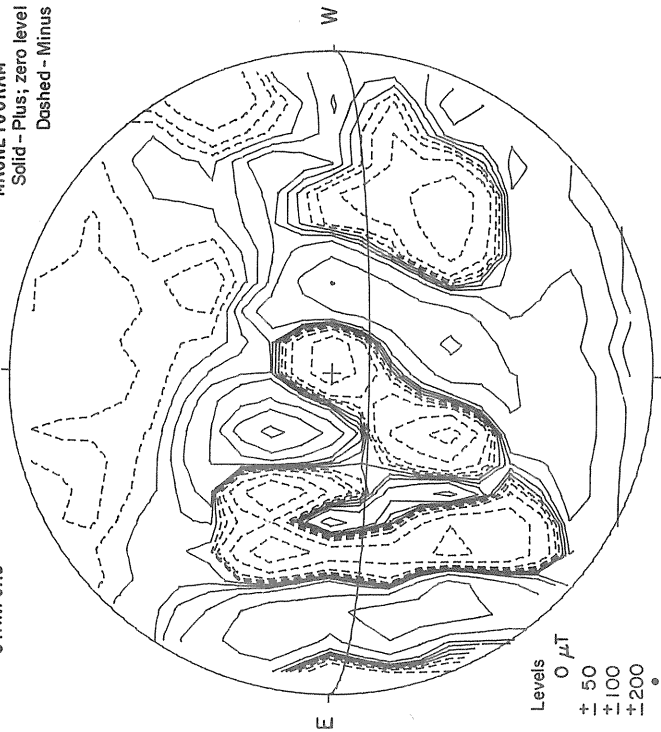
Sp

STANFORD

Np

MAGNETOGRAM

Solid - Plus; zero level  
Dashed - Minus



Levels  
0  $\mu$ T  
+ 50  
+ 100  
+ 200  
• • •

1808 UT

Sp

SEPTEMBER 28, 1982 (P = 25.75, B<sub>0</sub> = 6.85, L<sub>0</sub> = 51.71)

SACRAMENTO PEAK  
CORONA  
5303 Å

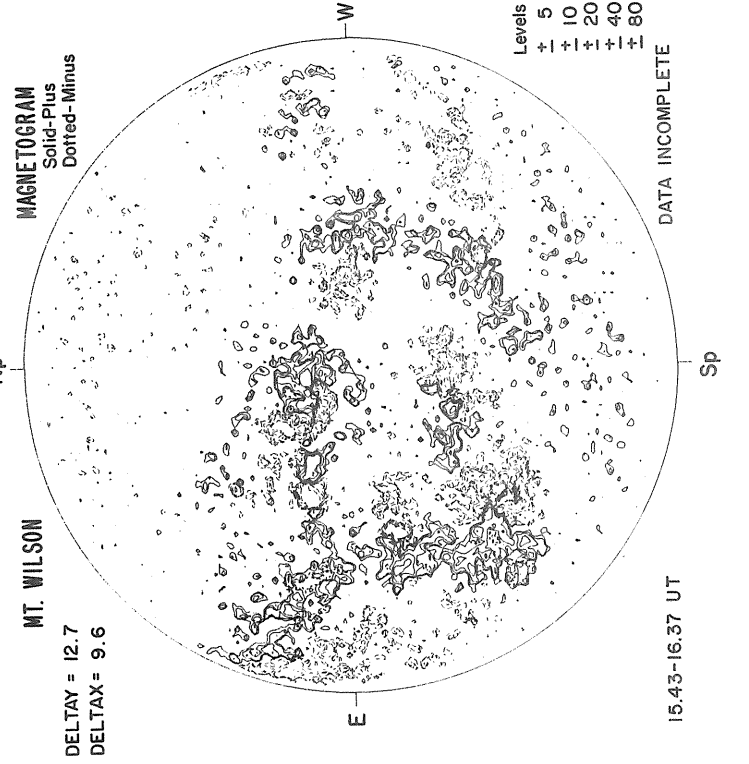
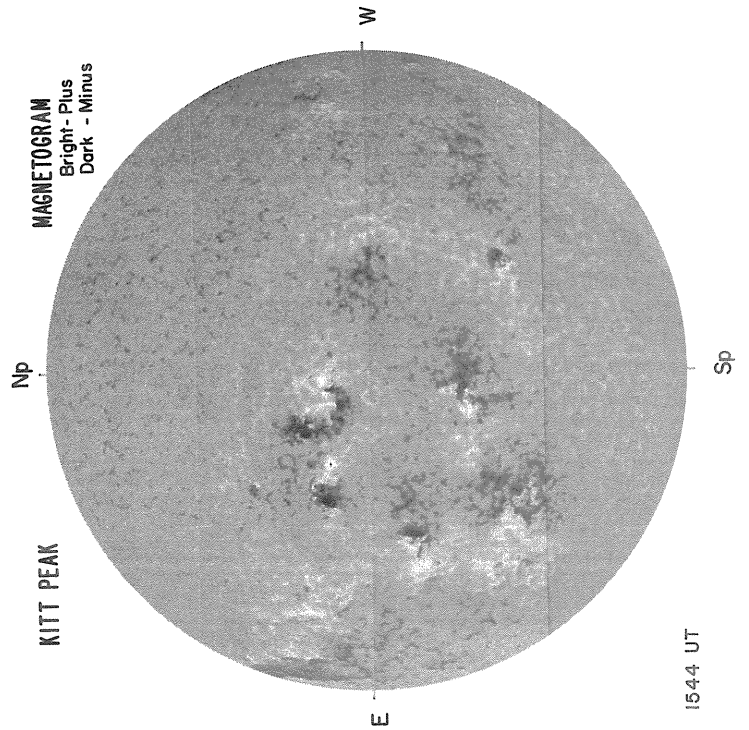
Np

NO DATA

E

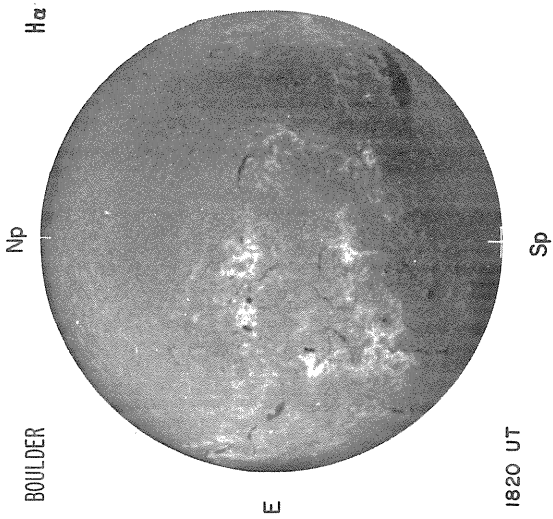
W

1.15 R<sub>0</sub>  
1.35 R<sub>0</sub>  
1.55 R<sub>0</sub>

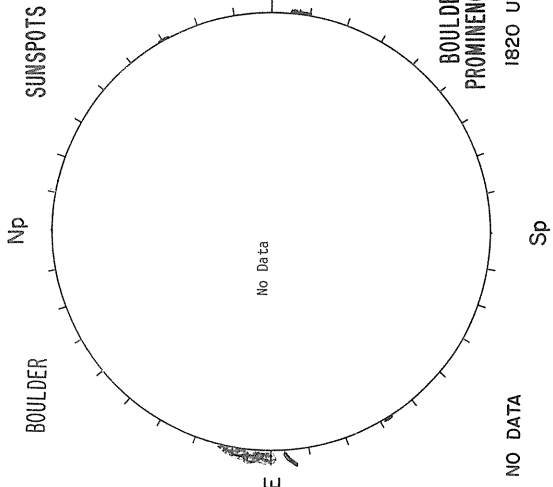


28

BOULDER

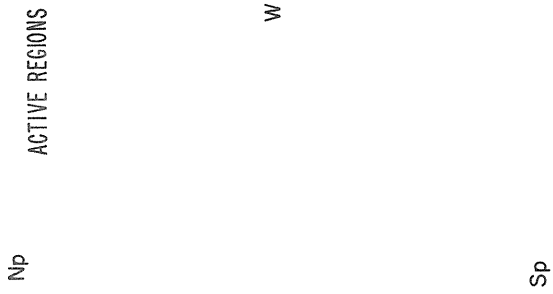


BOULDER

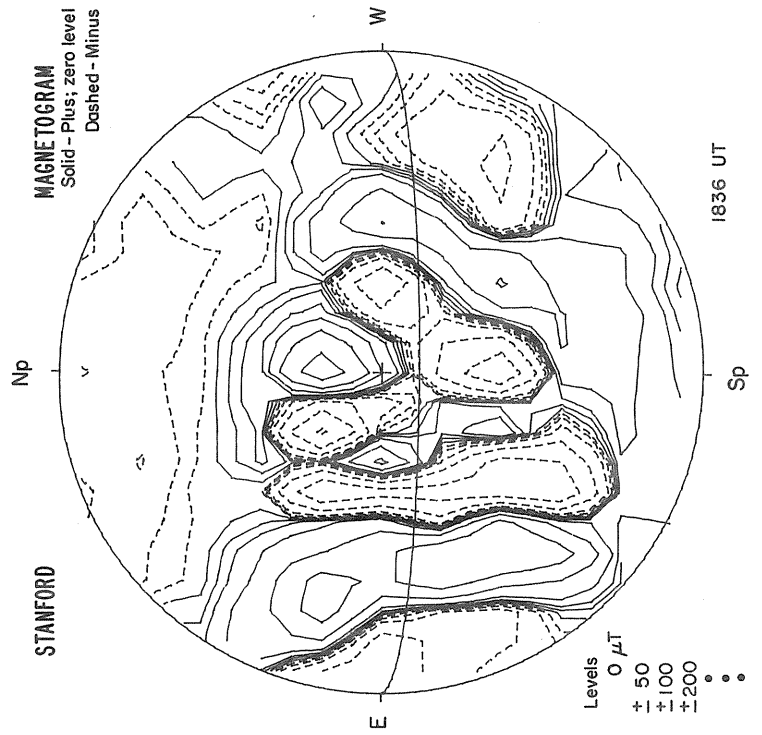


BIG BEAR

ACTIVE REGIONS



STANFORD



SEPTEMBER 29, 1982 (P=25.84, B<sub>o</sub>= 6.8I, L<sub>o</sub>= 38.52)

CORONA  
5303 Å

Np

SACRAMENTO PEAK

NO DATA W

E

1.15 R<sub>g</sub>  
1.35 R<sub>g</sub>  
1.55 R<sub>g</sub>

Sp

Np

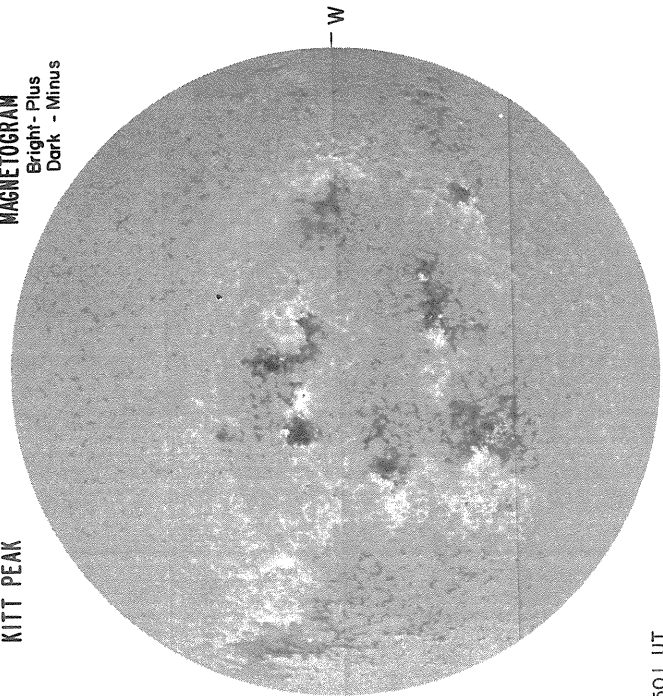
MT. WILSON

DELTA =  
DELTA =

MAGNETOGRAM  
Bright - Plus  
Dark - Minus

Np

KITT PEAK



1501 UT

Sp

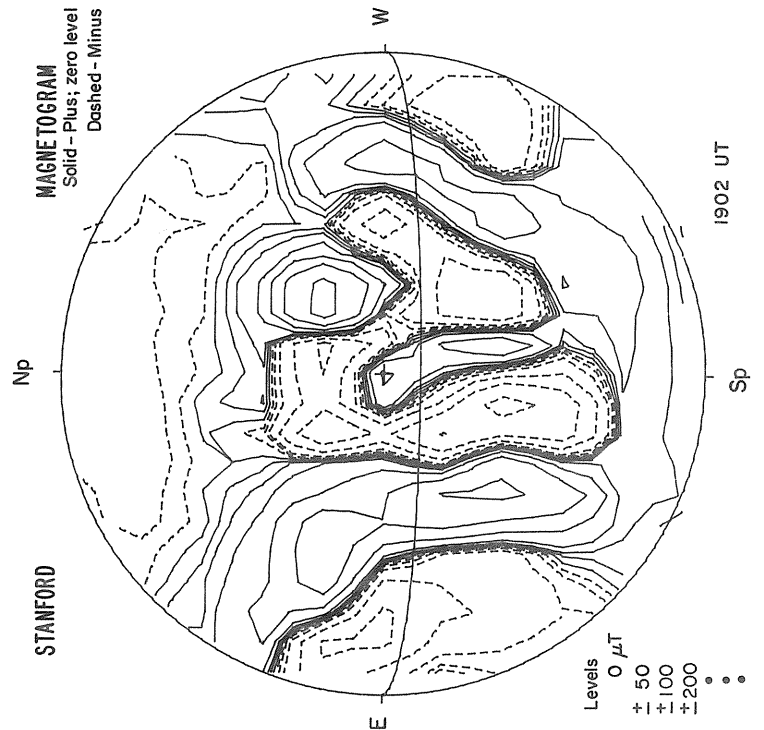
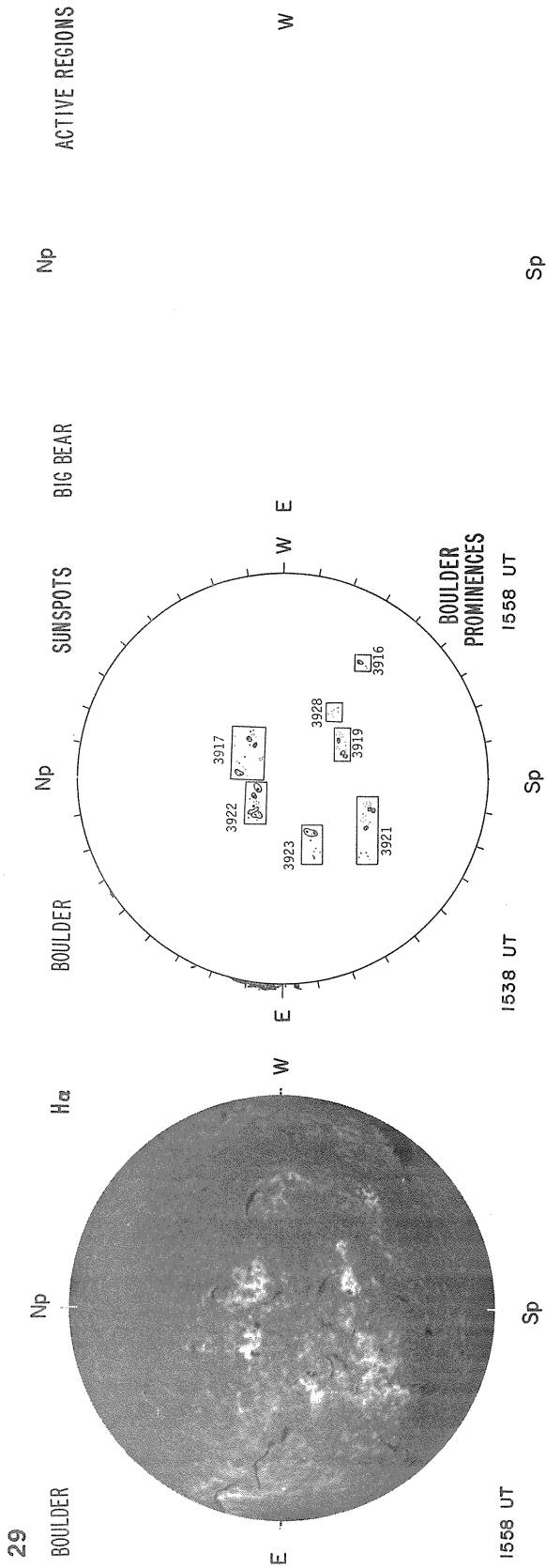
NO DATA

E

W

MAGNETOGRAM  
Solid-Plus  
Dotted-Minus

Levels  
+ 5  
+ 10  
+ 20  
+ 40  
+ 80



SEPTEMBER 30, 1982 (P= 25.92, B<sub>0</sub> = 6.77, L<sub>0</sub> = 25.32)

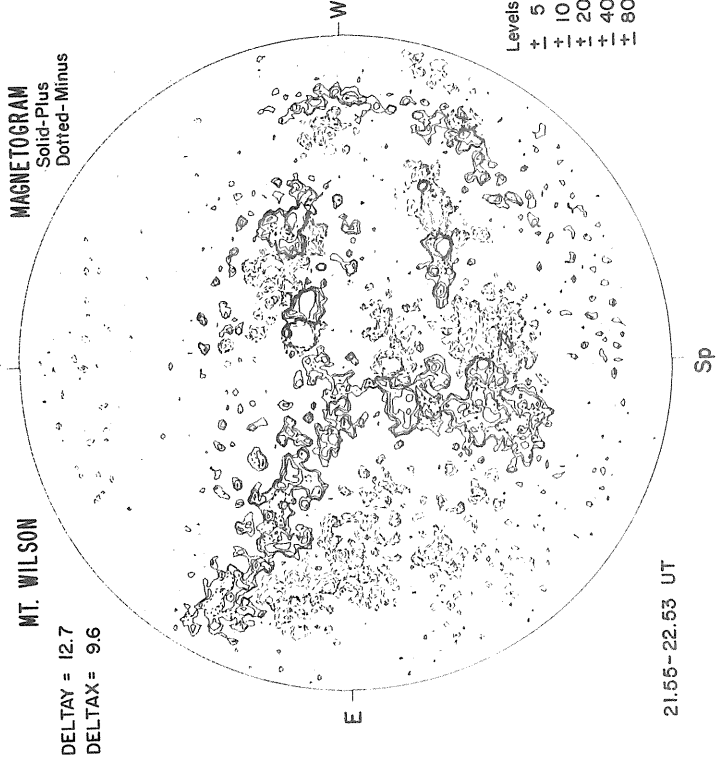
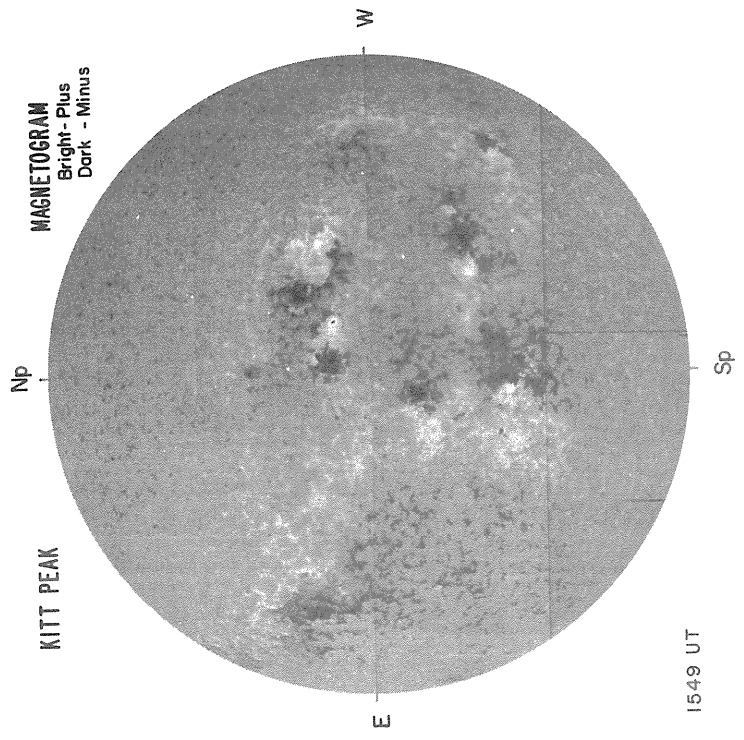
CORONA  
5303 Å

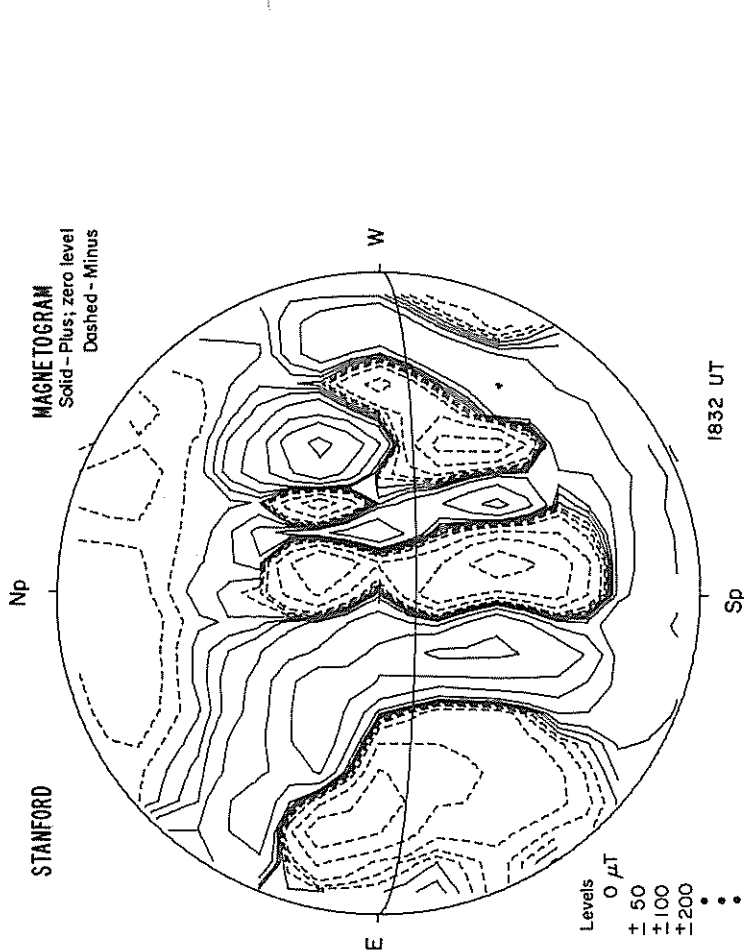
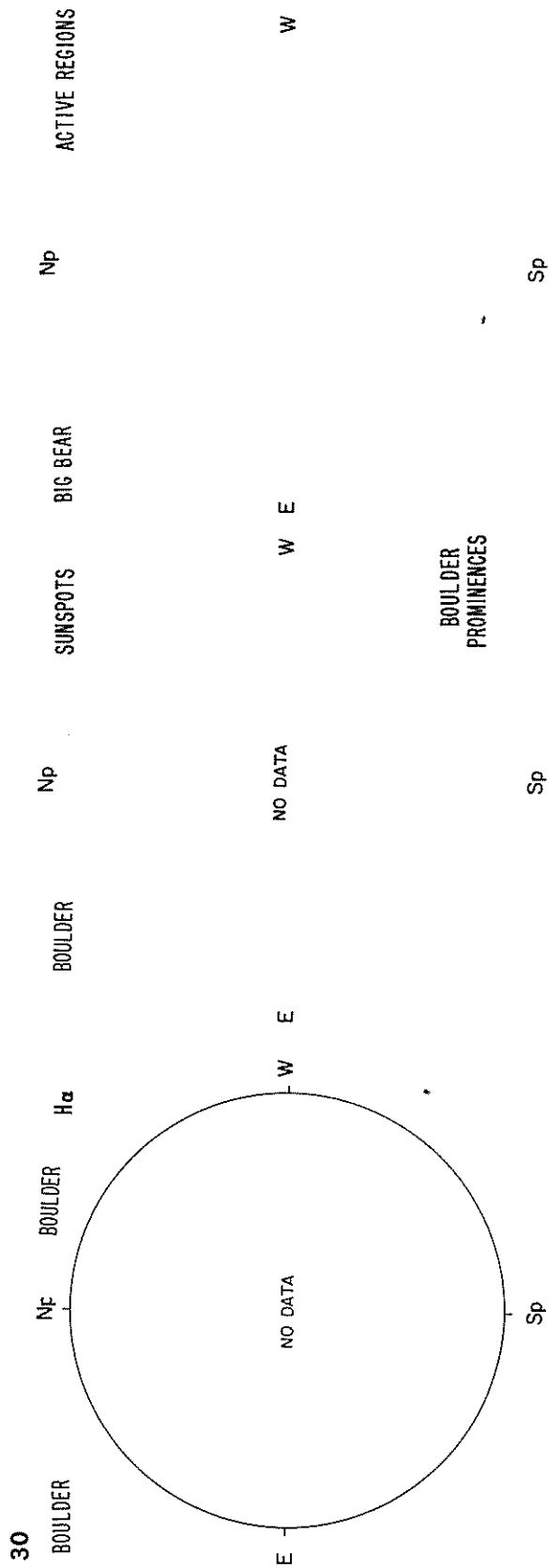
Np

SACRAMENTO PEAK

E NO DATA W

1.15 R<sub>⊙</sub>  
1.35 R<sub>⊙</sub>  
1.55 R<sub>⊙</sub>







EDITOR'S NOTE: A crisis is occurring in long term solar synoptic observing programs. Funding for these programs is extremely scarce. Because of further data center budget reductions, we are unable to continue providing the added extra amount that for years has kept some of these programs alive. We deeply regret this occurrence. Unless an alternate source of funds is found, the following data bases will simply cease:

Mt. Wilson daily sunspot magnetic classifications (available since 1917);

Big Bear (previously McMath) daily Calcium plage data (photos and reduced daily listings of regions -- available since 1942), and the

Big Bear daily solar flare listings and daily sunspot drawings;

Harvard/Fort Davis daily solar radio spectral observations (available since 1952); and the

AAVSO American daily sunspot number Ra (available since 1946).

The value of such long term synoptic data bases in solar-terrestrial and solar/stellar research studies is indisputable.

Because of the loss of the daily Calcium plage data, we have expanded on the sunspot information available in the table Regions of Solar Activity. On the following pages are given the Regions of Sunspot Activity ordered by Central Meridian Passage (CMP) date. Daily reports from a number of stations are listed, giving the station code, the date of observation, the Universal Time of the measurement, the sunspot position (latitude and longitude), the CMP month and decimal day, the Mt. Wilson magnetic field intensity and classification (see the February 1982 SGD Supplement, Explanation of Data Reports, page 24), the modified Zurich/Penumbral/Compactness classification, the corrected area in millionths of the solar hemisphere, the number of spots in the group, its longitudinal extent, and the quality of the observation (from 1 (poor) to 5 (excellent)). The first column contains the NOAA/USAF region number assigned by the NOAA Space Environment Services Center (SESC). The Mt. Wilson sunspot region number is also included when the Mt. Wilson reports are available. We expect this table to evolve, possibly to include the group CMP date and its Carrington longitude.

REGIONS OF SUNSPOT ACTIVITY  
(ORDERED BY CENTRAL MERIDIAN PASSAGE DATE)

105  
Sep 82

SEPTEMBER 1982

NOAA/ USAF Region	Mt Wilson Region	Sta	Observation Time		Lat	CMD	CMP		Max H	Mag Class	Spot Class	Corrected Area (10 <sup>-6</sup> Hemi)	Spot Count	Long. Extent (Deg)	Qual
			Mo	Day	(UT)		Mo	Day							
3879	23305	MWIL	08	26	1530	S13	E80	09	1.7	1	AP				
3879		LEAR	08	27	0110	S15	E75	09	1.7		A				
3879		HOLL	08	27	1424	S14	E69	09	1.8		B				3
3879	23305	MWIL	08	27	1545	S14	E69	09	1.9	3	(B)	40	4	7	4
3879		MANI	08	27	2333	S13	E66	09	2.0		DRO	110	4	9	2
3879		LEAR	08	28	0055	S15	E63	09	1.8		B	40	6	9	3
3879		RAMY	08	28	1330	S14	E56	09	1.8		B	120	15	9	4
3879		BOUL	08	28	1425	S16	E55	09	1.8		B	70	9	9	3
3879	23305	MWIL	08	28	1715	S14	E55	09	1.9	3	(BY)				
3879		PALE	08	28	2000	S14	E54	09	1.9		B	100	16	9	2
3879		LEAR	08	29	0110	S14	E49	09	1.8		B	200	14	9	3
3879		MANI	08	29	0758	S14	E47	09	1.9		DAO	170	14	9	2
3879		HOLL	08	29	1410	S15	E42	09	1.8		B	330	13	8	4
3879	23305	MWIL	08	29	1615	S15	E40	09	1.7	5	(B)				
3879		PALE	08	29	1745	S15	E41	09	1.8		B	290	9	9	3
3879		LEAR	08	30	0033	S15	E36	09	1.8		B	250	13	9	3
3879		RAMY	08	30	1400	S15	E29	09	1.8		B	170	6	9	3
3879		BOUL	08	30	1430	S14	E28	09	1.7		B	170	12	10	2
3879		HOLL	08	30	1438	S15	E28	09	1.7		B	240	18	10	3
3879	23305	MWIL	08	30	1515	S15	E28	09	1.8	5	(B)				
3879		PALE	08	30	2115	S15	E25	09	1.8		B	230	17	9	3
3879		LEAR	08	31	0024	S15	E23	09	1.8		B	240	15	10	3
3879		MANI	08	31	0544	S15	E20	09	1.8		CSO	310	10	9	2
3879		HOLL	08	31	1422	S15	E14	09	1.7		B	180	13	10	4
3879		BOUL	08	31	1445	S15	E14	09	1.7		B	160	18	9	3
3879	23305	MWIL	08	31	1530	S15	E13	09	1.6	4	(B)				
3879		LEAR	09	01	0140	S15	E09	09	1.8		B	170	10	9	2
3879		RAMY	09	01	1250	S15	E03	09	1.8		B	200	6	10	2
3879		BOUL	09	01	1445	S14	W00	09	1.6		B	230	5	11	2
3879		HOLL	09	01	1456	S15	W00	09	1.6		B	160	7	9	4
3879	23305	MWIL	09	01	1500	S15	E02	09	1.8	5	(B)				
3879		LEAR	09	02	0100	S15	W05	09	1.7		B	180	4	10	2
3879		RAMY	09	02	1343	S15	W15	09	1.4		B	150	2	5	3
3879		BOUL	09	02	1436	S13	W12	09	1.7		B	100	9	11	3
3879	23305	MWIL	09	02	1515	S15	W14	09	1.6	5	(B)				
3879		HOLL	09	02	1520	S15	W11	09	1.8		B	190	10	12	4
3879		PALE	09	02	2030	S15	W18	09	1.5		B	150	2	4	2
3879		LEAR	09	03	0130	S15	W18	09	1.7		B	150	3	9	2
3879		RAMY	09	03	1305	S15	W29	09	1.3		A	140	1	2	3
3879		BOUL	09	03	1500	S13	W29	09	1.4		A	90	2	3	3
3879	23305	MWIL	09	03	1515	S15	W28	09	1.5	5	(BP)				
3879		PALE	09	03	1835	S13	W31	09	1.4		A	180	3	3	3
3879		LEAR	09	04	0115	S15	W35	09	1.4		A	170	1	2	2
3879		RAMY	09	04	1335	S15	W42	09	1.4		B	160	4	4	3
3879		HOLL	09	04	1445	S15	W41	09	1.5		B	170	5	4	4
3879	23305	MWIL	09	04	1530	S15	W42	09	1.5	5	(AP)				
3879		PALE	09	04	1800	S15	W44	09	1.4		B	180	3	4	2
3879		LEAR	09	05	0025	S15	W47	09	1.5		A	150	2	3	2
3879		RAMY	09	05	1205	S15	W53	09	1.5		A	130	1	3	4
3879	23305	MWIL	09	05	1600	S15	W56	09	1.4	5	(AP)				
3879		HOLL	09	05	1700	S16	W57	09	1.4		A	250	1	2	2
3879		PALE	09	05	2240	S16	W58	09	1.5		A	200	1	2	3
3879		LEAR	09	06	0023	S15	W61	09	1.4		A	160	1	2	3
3879		HOLL	09	06	1512	S16	W68	09	1.5		A	110	1	2	3
3879	23305	MWIL	09	06	1530	S15	W69	09	1.4	4	(AP)				
3879		PALE	09	06	1754	S15	W70	09	1.4		A	110	1	2	4
3879		LEAR	09	07	0223	S13	W76	09	1.4		A	140	1	2	3
3879		RAMY	09	07	1223	S15	W75	09	1.8		A	60	1	1	2
3879	23305	MWIL	09	07	1500	S15	W85	09	1.2	3	(AF)				
3879		PALE	09	07	1806	S14	W88	09	1.1		A	20	1	2	4
3891	23317	MWIL	09	01	1500	N14	E04	09	1.9	3	(AP)				
3891		LEAR	09	02	0100	N15	W02	09	1.9		A		1		2
3891		RAMY	09	02	1343	N18	W10	09	1.8		B	20	3	4	3
3891	23317	MWIL	09	02	1515	N16	W09	09	2.0	2	(B)				
3891		HOLL	09	02	1520	N16	W09	09	2.0		B	10	3	3	4
3891		LEAR	09	03	0130	N16	W15	09	1.9		B	10	4	4	2
3891		RAMY	09	03	1305	N16	W22	09	1.9		B	20	3	5	3
3891	23317	MWIL	09	03	1515	N16	W23	09	1.9	4	(B)				
3891		PALE	09	03	1835	N17	W26	09	1.8		B	30	4	6	3
3891		LEAR	09	04	0115	N16	W29	09	1.9		B	10	6	5	2

REGIONS OF SUNSPOT ACTIVITY  
(ORDERED BY CENTRAL MERIDIAN PASSAGE DATE)

SEPTEMBER 1982

NOAA/ USAF Region	Mt Wilson Region	Sta	Observation Time		Lat	CMD	CMP Mo	Day	Max H	Mag Class	Spot Class	Corrected Area (10 <sup>-6</sup> Hem1)	Spot Count	Long. Extent (Deg)	Qual	
3891		RAMY	09	04	1335	N16	W36	09	1.8	B	BX0	30	6	7	3	
3891		HOLL	09	04	1445	N17	W38	09	1.7	B	BX0	30	6	6	4	
3891	23317	MWIL	09	04	1530	N16	W37	09	1.8	3	(B)					
3891		PALE	09	04	1800	N16	W49	09	1.0	B	BX0	30	8	6	2	
3891		LEAR	09	05	0025	N16	W43	09	1.8	B	CRO	10	2	6	2	
3891		RAMY	09	05	1205	N17	W49	09	1.8	B	CA0	50	7	8	4	
3891	23317	MWIL	09	05	1600	N17	W51	09	1.8	3	(B)					
3891		HOLL	09	05	1700	N15	W53	09	1.7	B	BX0	10	4	7	2	
3891		PALE	09	05	2240	N16	W56	09	1.7	B	BX0	10	4	8	3	
3891		LEAR	09	06	0023	N16	W56	09	1.8	B	BX0	10	6	7	3	
3891		HOLL	09	06	1512	N15	W64	09	1.8	B	BX0	10	2	7	3	
3891	23317	MWIL	09	06	1530	N16	W64	09	1.8	3	(B)					
3891		PALE	09	06	1754	N17	W67	09	1.7	B	BX0	20	2	8	4	
3891		LEAR	09	07	0223	N17	W68	09	1.9	A	AXX		1		3	
3891	23317	MWIL	09	07	1500	N17	W77	09	1.8	3	(AP)					
3880	23306	MWIL	08	26	1530	N11	E88	09	2.3	2	(AP)					
3880		LEAR	08	27	0110	N10	E81	09	2.1	A	HSX	70	1	1	3	
3880		HOLL	08	27	1424	N12	E74	09	2.2	B	CS0	150	3	10	4	
3880	23306	MWIL	08	27	1545	N11	E72	09	2.1	4	(BP)					
3880		MANI	08	27	2333	N12	E69	09	2.2		DS0	190	3	4	2	
3880		LEAR	08	28	0055	N12	E66	09	2.0	B	DS0	80	5	4	3	
3880		RAMY	08	28	1330	N12	E60	09	2.1	B	DA0	110	13	10	4	
3880		BOUL	08	28	1425	N09	E60	09	2.1	B	DS1	70	9	4	3	
3880	23306	MWIL	08	28	1715	N11	E58	09	2.1	4	(B)					
3880		PALE	08	28	2000	N11	E58	09	2.2	B	CS0	100	12	7	2	
3880		LEAR	08	29	0110	N11	E53	09	2.0	B	DS1	120	11	7	3	
3880		MANI	08	29	0758	N11	E50	09	2.1		DS0	80	10	6	2	
3880		HOLL	08	29	1410	N11	E46	09	2.1	B	CS0	90	11	7	4	
3880	23306	MWIL	08	29	1615	N11	E44	09	2.0	5	(B)					
3880		PALE	08	29	1745	N12	E45	09	2.1	B	CS0	80	7	7	3	
3880		LEAR	08	30	0033	N11	E41	09	2.1	B	CS0	70	12	8	3	
3880		RAMY	08	30	1400	N11	E33	09	2.1	B	CA0	70	4	8	3	
3880		BOUL	08	30	1430	N11	E33	09	2.1	B	CS0	60	9	8	2	
3880		HOLL	08	30	1438	N12	E33	09	2.1	B	DS0	80	10	9	3	
3880	23306	MWIL	08	30	1515	N11	E33	09	2.1	5	(B)					
3880		PALE	08	30	2115	N11	E28	09	2.0	B	DS0	80	6	7	3	
3880		LEAR	08	31	0024	N11	E27	09	2.0	B	CS0	30	7	7	3	
3880		MANI	08	31	0544	N11	E24	09	2.0		CS0	60	4	6	2	
3880		HOLL	08	31	1422	N11	E18	09	2.0	B	CS0	30	3	7	4	
3880		BOUL	08	31	1445	N11	E19	09	2.0	B	CS0	30	9	7	3	
3880	23306	MWIL	08	31	1530	N10	E18	09	2.0	4	(BP)					
3880		LEAR	09	01	0140	N10	E14	09	2.1	B	CS0	30	5	10	2	
3880		RAMY	09	01	1250	N10	E07	09	2.1	B	CA0	40	3	2	2	
3880		BOUL	09	01	1445	N12	E04	09	1.9	B	CS0	30	4	2	2	
3880		HOLL	09	01	1456	N10	E04	09	1.9	A	HSX	20	1	2	4	
3880	23306	MWIL	09	01	1500	N10	E04	09	1.9	4	(AP)					
3880		LEAR	09	02	0100	N10	W01	09	2.0	A	HSX	30	1	1	2	
3880		RAMY	09	02	1343	N09	W08	09	2.0	A	HSX	20	1	1	3	
3880		BOUL	09	02	1436	N13	W08	09	2.0	B	CS0	20	4	7	3	
3880	23306	MWIL	09	02	1515	N09	W08	09	2.0	4	(AP)					
3880		HOLL	09	02	1520	N09	W08	09	2.0	A	AXX	10	1	1	4	
3880		PALE	09	02	2030	N09	W11	09	2.0	A	HSX	20	1	1	2	
3880		LEAR	09	03	0130	N10	W14	09	2.0	A	HRX	10	1	1	2	
3880		RAMY	09	03	1305	N10	W20	09	2.0	A	HRX	20	1	1	3	
3880		BOUL	09	03	1500	N14	W22	09	2.0	B	CRO	30	5	5	3	
3880	23306	MWIL	09	03	1515	N09	W21	09	2.1	4	(AP)					
3880		PALE	09	03	1835	N10	W22	09	2.1	A	HRX	20	1	1	3	
3880		LEAR	09	04	0115	N10	W27	09	2.0	A	HRX	20	1	1	2	
3880		RAMY	09	04	1335	N10	W35	09	1.9	A	HRX	20	1	1	3	
3880		HOLL	09	04	1445	N09	W35	09	2.0	A	AXX	10	1	1	4	
3880	23306	MWIL	09	04	1530	N10	W35	09	2.0	4	(AP)					
3880		PALE	09	04	1800	N09	W37	09	2.0	A	AXX	10	1	1	2	
3880		LEAR	09	05	0025	N09	W41	09	1.9	A	AXX	10	1	1	2	
3880		RAMY	09	05	1205	N09	W48	09	1.9	A	AXX	10	1	1	4	
3880	23306	MWIL	09	05	1600	N09	W50	09	1.9	2	(AP)					
		BOUL	08	31	1445	S10	E24	09	2.4		A	AXX		1		3
	23328	MWIL	09	04	1530	N13	W22	09	3.0	3	(AF)					
3888		RAMY	09	03	1305	N26	W05	09	3.2		B	BX0	20	3	3	3

REGIONS OF SUNSPOT ACTIVITY  
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NOAA/ USAF Region	Mt Wilson Region	Sta	Observation Time			Lat	CMD	CMP Mo Day	Max H	Mag Class	Spot Class	Corrected Area (10 <sup>-6</sup> Heml)	Spot Count	Long. Extent (Deg)	Qual
3888		BOUL	09	03	1500	N27	W08	09	3.0	B	BXO	20	3	3	3
3888	23320	MWIL	09	03	1515	N26	W06	09	3.2	4	( B)				
3888		PALE	09	03	1835	N27	W08	09	3.2	B	BXO	20	2	4	3
3888		LEAR	09	04	0115	N26	W13	09	3.0	B	BXO	10	3	4	2
3888		RAMY	09	04	1335	N26	W20	09	3.0	B	CRO	30	3	6	3
3888		HOLL	09	04	1445	N25	W20	09	3.1	B	CRO	30	3	5	4
3888	23320	MWIL	09	04	1530	N26	W20	09	3.1	4	( B)				
3888		PALE	09	04	1800	N26	W23	09	3.0	B	DRO	30	2	6	2
3888		LEAR	09	05	0025	N26	W26	09	3.0	B	BXO	10	2	6	2
3888		RAMY	09	05	1205	N26	W32	09	3.0	B	BXO	20	4	7	4
3888	23320	MWIL	09	05	1600	N26	W34	09	3.0	3	( B)				
3888		HOLL	09	05	1700	N25	W35	09	3.0	B	BXO	10	3	7	2
3888		HOLL	09	06	1512	N25	W44	09	3.2	A	AXX	10	1		3
3888		RAMY	09	07	1223	N25	W62	09	2.7	B	CSO	20	3	5	2
3888	23337	MWIL	09	07	1500	N26	W61	09	2.9	4	( B)				
3888		HOLL	09	07	1655	N25	W64	09	2.7	B	DSO	40	4	5	2
3888		BOUL	09	07	1700	N25	W62	09	2.9	A	AXX	20	6	7	2
3888		PALE	09	07	1806	N26	W66	09	2.6	B	DAO	80	6	5	4
3888		LEAR	09	08	0233	N27	W70	09	2.7	B	CRO	40	5	6	3
3888		HOLL	09	08	1542	N25	W78	09	2.6	B	BXO	10	3	5	2
3888		PALE	09	08	1820	N25	W80	09	2.6	A	AXX	10	1	1	3
3888		LEAR	09	09	0055	N26	W86	09	2.4	B	BXO	2	2	4	3
3882		RAMY	08	28	1330	S01	E80	09	3.5	A	HAX	60	1	1	4
3882	23309	MWIL	08	28	1715	S02	E78	09	3.6	3	AP				
3882		PALE	08	28	2000	S02	E79	09	3.7	A	HSX	60	1	2	2
3882		LEAR	08	29	0110	S02	E75	09	3.7	A	HSX	140	1	2	3
3882		MANI	08	29	0758	S02	E73	09	3.8		HSX	80	1	2	2
3882		HOLL	08	29	1410	S03	E70	09	3.8	B	CSO	110	3	8	4
3882	23309	MWIL	08	29	1615	S03	E70	09	3.9	5	( B)				
3882		PALE	08	29	1745	S03	E70	09	4.0	B	DSO	130	4	8	3
3882		LEAR	08	30	0033	S04	E65	09	3.9	B	ESO	180	3	11	3
3882		RAMY	08	30	1400	S04	E59	09	4.0	B	ESO	150	4	11	3
3882		BOUL	08	30	1430	S03	E57	09	3.9	B	EHO	160	6	12	2
3882		HOLL	08	30	1438	S04	E58	09	3.9	B	ESO	230	6	11	3
3882	23309	MWIL	08	30	1515	S03	E57	09	3.9	5	( B)				
3882		PALE	08	30	2115	S04	E54	09	3.9	B	ESO	210	4	11	3
3882		LEAR	08	31	0024	S04	E52	09	3.9	B	ESO	190	8	11	3
3882		MANI	08	31	0544	S03	E50	09	4.0		ESO	240	3	11	2
3882		HOLL	08	31	1422	S04	E43	09	3.8	B	ESO	130	7	12	4
3882		BOUL	08	31	1445	S02	E42	09	3.8	B	ESO	140	6	11	3
3882	23309	MWIL	08	31	1530	S04	E43	09	3.9	4	( B)				
3882		LEAR	09	01	0140	S04	E38	09	3.9	B	ESO	160	5	11	2
3882		RAMY	09	01	1250	S03	E32	09	3.9	B	EHO	180	8	13	2
3882		BOUL	09	01	1445	S05	E27	09	3.6	B	ESO	160	6	12	2
3882		HOLL	09	01	1456	S04	E30	09	3.9	B	ESO	90	10	11	4
3882	23309	MWIL	09	01	1500	S04	E30	09	3.9	5	(BY)				
3882		LEAR	09	02	0100	S05	E25	09	3.9	B	ESO	170	10	13	2
3882		RAMY	09	02	1343	S04	E18	09	3.9	B	EAO	110	5	12	3
3882		BOUL	09	02	1436	S03	E17	09	3.9	B	ESO	120	5	11	3
3882	23309	MWIL	09	02	1515	S04	E17	09	3.9	5	( B)				
3882		HOLL	09	02	1520	S05	E17	09	3.9	B	CSO	140	7	12	4
3882		PALE	09	02	2030	S04	E14	09	3.9	B	CSO	130	5	12	2
3882		LEAR	09	03	0130	S05	E11	09	3.9	B	ESO	120	5	12	2
3882		RAMY	09	03	1305	S03	E03	09	3.8	B	EAO	110	6	12	3
3882		BOUL	09	03	1500	S02	E03	09	3.8	B	ESO	100	7	11	3
3882	23309	MWIL	09	03	1515	S03	W01	09	3.6	5	(AP)				
3882		PALE	09	03	1835	S02	E01	09	3.8	B	ESO	100	6	12	3
3882		LEAR	09	04	0115	S05	W03	09	3.8	B	CSO	80	3	11	2
3882		RAMY	09	04	1335	S02	W12	09	3.7	B	EAO	60	3	12	3
3882		HOLL	09	04	1445	S04	W10	09	3.9	B	CSO	90	12	13	4
3882	23309	MWIL	09	04	1530	S02	W16	09	3.4	5	(AP)				
3882		PALE	09	04	1800	S03	W12	09	3.9	B	CSO	100	7	12	2
3882		LEAR	09	05	0025	S02	W22	09	3.4	A	HSX	50	1	1	2
3882		RAMY	09	05	1205	S04	W24	09	3.7	B	EHO	90	5	14	4
3882	23309	MWIL	09	05	1600	S02	W30	09	3.4	5	(AP)				
3882		HOLL	09	05	1700	S03	W30	09	3.5	B	CSO	60	3	5	2
3882		PALE	09	05	2240	S03	W31	09	3.6	B	CSO	80	3	6	3
3882		LEAR	09	06	0023	S02	W36	09	3.3	A	HSX	70	1	2	3
3882		HOLL	09	06	1512	S03	W43	09	3.4	A	HSX	60	1	2	3
3882	23309	MWIL	09	06	1530	S02	W44	09	3.4	5	(AP)				

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NOAA/ USAF Region	Mt Wilson Region	Sta	Observation			CMP Mo Day	Max H	Mag Class	Spot Class	Corrected		Spot Count	Long. Extent (Deg)	Qual
			Mo	Day	Time (UT)					Lat	CMD			
3882		PALE	09	06	1754	S02 W47	09 3.2		A	HSX	60	1	2	4
3882		LEAR	09	07	0223	S01 W52	09 3.2		B	CSO	60	2	4	3
3882		RAMY	09	07	1223	S02 W58	09 3.2		A	HSX	30	1	2	2
3882	23309	MWIL	09	07	1500	S02 W59	09 3.2	4	(AP)					
3882		HOLL	09	07	1655	S02 W59	09 3.3		A	HSX	60	1	2	2
3882		BOUL	09	07	1700	S01 W60	09 3.2		A	AXX	20	2	2	2
3882		PALE	09	07	1806	S01 W61	09 3.2		A	HSX	20	1	2	4
3882		LEAR	09	08	0233	S01 W65	09 3.2		A	HSX	60	1	2	3
3882		RAMY	09	08	1236	S02 W71	09 3.2		A	HSX	30	1	2	2
3882		BOUL	09	08	1415	N01 W70	09 3.4		A	AXX	30	1	1	2
3882		HOLL	09	08	1542	S02 W72	09 3.3		A	HSX	20	1	1	2
3882		PALE	09	08	1820	S02 W74	09 3.2		A	AXX	10	1	1	3
3882		LEAR	09	09	0055	S01 W79	09 3.1		A	HRX	20	1	1	3
	23318	MWIL	09	02	1515	N13 E16	09 3.8	2	(AP)					
3883	23311	MWIL	08	29	1615	S20 E68	09 3.9	3	(AP)					
3883		PALE	08	29	1745	S20 E68	09 3.9		A	AXX		1		3
3883		LEAR	08	30	0033	S19 E64	09 3.9		A	AXX	10	2	1	3
3883		RAMY	08	30	1400	S20 E56	09 3.9		B	BXO	40	2	2	3
3883		BOUL	08	30	1430	S19 E55	09 3.8		B	BXO	10	4	5	2
3883		HOLL	08	30	1438	S19 E57	09 4.0		A	BXO	10	2	3	3
3883	23311	MWIL	08	30	1515	S20 E55	09 3.8	3	( B )					
3883		PALE	08	30	2115	S19 E52	09 3.9		A	HSX	30	2	1	3
3883		LEAR	08	31	0024	S20 E51	09 3.9		A	AXX		2		3
3883		MANI	08	31	0544	S19 E50	09 4.1			BXO	20	2	5	2
3883		HOLL	08	31	1422	S20 E43	09 3.9		B	DRO	50	5	6	4
3883	23311	MWIL	08	31	1530	S20 E43	09 3.9	3	( B )					
3883		LEAR	09	01	0140	S20 E38	09 4.0		B	DRO	70	10	5	2
3883		RAMY	09	01	1250	S20 E32	09 4.0		B	DAO	150	17	7	2
3883		BOUL	09	01	1445	S20 E29	09 3.8		B	DAI	140	14	7	2
3883		HOLL	09	01	1456	S20 E31	09 4.0		B	DSO	80	12	6	4
3883	23311	MWIL	09	01	1500	S20 E31	09 4.0	4	( B )					
3883		LEAR	09	02	0100	S20 E25	09 4.0		B	DR1	100	16	9	2
3883		RAMY	09	02	1343	S20 E19	09 4.0		B	DAI	210	27	10	3
3883		BOUL	09	02	1436	S20 E17	09 3.9		B	DSI	80	23	9	3
3883	23311	MWIL	09	02	1515	S21 E17	09 3.9	4	( B )					
3883		HOLL	09	02	1520	S21 E17	09 3.9		BG	DRO	130	22	9	4
3883		PALE	09	02	2030	S21 E15	09 4.0		B	DAO	130	12	8	2
3883		LEAR	09	03	0130	S21 E12	09 4.0		B	DAI	190	22	9	2
3883		RAMY	09	03	1305	S20 E05	09 3.9		B	DAO	170	2	10	3
3883		BOUL	09	03	1500	S18 E03	09 3.9		B	DAI	120	41	10	3
3883	23311	MWIL	09	03	1515	S21 E04	09 3.9	4	( B )					
3883		PALE	09	03	1835	S21 E02	09 3.9		BG	DAO	160	11	10	3
3883		LEAR	09	04	0115	S21 W02	09 3.9		B	DAO	180	14	10	2
3883		RAMY	09	04	1335	S20 W10	09 3.8		B	EAO	220	22	12	3
3883		HOLL	09	04	1445	S20 W09	09 3.9		B	ESO	230	23	11	4
3883	23311	MWIL	09	04	1530	S20 W10	09 3.9	5	( B )					
3883		PALE	09	04	1800	S22 W12	09 3.8		B	ESO	250	22	11	2
3883		LEAR	09	05	0025	S21 W15	09 3.9		B	EKI	140	18	12	2
3883		RAMY	09	05	1205	S20 W22	09 3.8		B	EKO	210	35	11	4
3883	23311	MWIL	09	05	1600	S20 W25	09 3.8	4	( B )					
3883		HOLL	09	05	1700	S20 W25	09 3.8		B	EKO	220	19	12	2
3883		PALE	09	05	2240	S20 W26	09 4.0		B	DAO	270	18	9	3
3883		LEAR	09	06	0023	S20 W29	09 3.8		B	DKI	120	23	10	3
3883		HOLL	09	06	1512	S20 W39	09 3.6		B	DSO	160	14	9	3
3883	23311	MWIL	09	06	1530	S20 W38	09 3.7	4	(BY)					
3883		PALE	09	06	1754	S20 W40	09 3.7		B	DAO	200	18	9	4
3883		LEAR	09	07	0223	S19 W46	09 3.6		B	DSI	230	17	10	3
3883		RAMY	09	07	1223	S20 W50	09 3.7		BG	DAI	180	13	9	2
3883	23311	MWIL	09	07	1500	S20 W53	09 3.6	5	(BP)					
3883		HOLL	09	07	1655	S21 W54	09 3.6		B	EAO	270	8	11	2
3883		BOUL	09	07	1700	S18 W55	09 3.5		B	DRO	110	12	10	2
3883		PALE	09	07	1806	S20 W54	09 3.6		BG	DAI	180	14	10	4
3883		LEAR	09	08	0233	S19 W60	09 3.5		BG	DAI	110	12	8	3
3883		RAMY	09	08	1236	S21 W65	09 3.5		BG	DAO	80	13	10	2
3883		BOUL	09	08	1415	S18 W63	09 3.8		B	BXO	80	12	10	2
3883		HOLL	09	08	1542	S21 W65	09 3.7		B	CSO	90	4	10	2
3883		PALE	09	08	1820	S21 W68	09 3.5		B	CSO	120	6	10	3
3883		LEAR	09	09	0055	S20 W71	09 3.6		B	DSO	190	3	9	3
3883	23311	MWIL	09	09	1500	S20 W75	09 3.9	3	( B )					

REGIONS OF SUNSPOT ACTIVITY  
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NOAA/ USAF Region	Mt Wilson Region	Sta	Mo	Day	Time (UT)	Lat	CMD	CMP Mo	Day	Max H	Mag Class	Spot Class	Corrected Area (10 <sup>-6</sup> Hemi)	Spot Count	Long. Extent (Deg)	Qual
3883		RAMY	09	09	1510	S23	W75	09	3.8		B	DRO	40	3	4	2
3883		PALE	09	09	1830	S20	W80	09	3.6		B	DSO	80	2	5	2
0001	23321	MWIL	09	03	1515	S06	E08	09	4.2	4	(AF)					
0001	23321	MWIL	09	04	1530	S06	W06	09	4.2	4	(AF)					
0001	23321	MWIL	09	05	1600	S04	W20	09	4.2	2	(AF)					
0001	23321	MWIL	09	06	1530	S03	W31	09	4.3	3	(AF)					
	23322	MWIL	09	03	1515	N08	E17	09	4.9	2	X					
3893		RAMY	09	04	1335	N25	E08	09	5.2		A	AXX	10	1	1	3
3893		HOLL	09	04	1445	N25	E08	09	5.2		A	AXX		1		4
3893	23329	MWIL	09	04	1530	N25	E07	09	5.2	3	(AP)					
3893		PALE	09	04	1800	N25	E06	09	5.2		A	AXX	10	1		2
3893		LEAR	09	05	0025	N25	E02	09	5.2		A	AXX		1		2
3893		LEAR	09	07	0223	N21	W28	09	5.0		A	AXX		1		3
3855		RAMY	08	30	1400	N11	E79	09	5.5		A	HAX	130	1	2	3
3897	23323	MWIL	09	03	1515	N18	E27	09	5.7	3	(AP)					
3897	23323	MWIL	09	04	1530	N18	E13	09	5.6	3	(AP)					
3897	23323	MWIL	09	05	1600	N18	W02	09	5.5	3	(AP)					
3897	23323	MWIL	09	06	1530	N19	W15	09	5.5	3	(AP)					
3897		PALE	09	06	1754	N19	W16	09	5.5		A	AXX	10	2	1	4
3897	23323	MWIL	09	07	1500	N19	W29	09	5.4	3	(AP)					
3897		HOLL	09	07	1655	N19	W31	09	5.3		A	AXX		1		2
3897		PALE	09	07	1806	N20	W31	09	5.4		A	AXX	10	2	1	4
3897		LEAR	09	08	0233	N19	W35	09	5.4		B	BXO	10	5	3	3
3897		RAMY	09	08	1236	N20	W40	09	5.5		B	BXO	50	7	5	2
3897		BOUL	09	08	1415	N22	W39	09	5.6		A	AXX	30	6	3	2
3897		HOLL	09	08	1542	N20	W42	09	5.4		B	BXO	30	3	4	2
3897		PALE	09	08	1820	N20	W44	09	5.4		B	BXO	10	3	5	3
3897		RAMY	09	09	1510	N19	W55	09	5.5		B	DAO	100	5	5	2
3885		LEAR	08	30	0033	N11	E88	09	5.6		A	HSX	90	1	2	3
3885		BOUL	08	30	1430	N12	E77	09	5.4		A	HHO	180	2	4	2
3885		HOLL	08	30	1438	N11	E80	09	5.6		A	HKX	250	2	3	3
3885	23313	MWIL	08	30	1515	N11	E80	09	5.7	4	(AP)					
3885		PALE	08	30	2115	N11	E78	09	5.8		A	HAX	190	2	3	3
3885		LEAR	08	31	0024	N11	E75	09	5.7		A	HSX	220	2	2	3
3885		MANI	08	31	0544	N11	E72	09	5.7		A	HHX	420	2	3	2
3885		HOLL	08	31	1422	N11	E68	09	5.7		A	HSX	160	2	2	4
3885		BOUL	08	31	1445	N11	E65	09	5.5		A	HKX	170	2	3	3
3885	23313	MWIL	08	31	1530	N10	E67	09	5.7	4	(AP)					
3885		LEAR	09	01	0140	N10	E61	09	5.7		A	HAX	150	2	2	2
3885		RAMY	09	01	1250	N13	E52	09	5.5		A	HKX	170	3	3	2
3885		BOUL	09	01	1445	N10	E53	09	5.6		A	HKX	190	4	3	2
3885		HOLL	09	01	1456	N11	E53	09	5.6		A	HKX	160	3	3	4
3885	23313	MWIL	09	01	1500	N10	E54	09	5.7	5	(AP)					
3885		LEAR	09	02	0100	N10	E48	09	5.7		B	CKO	210	5	6	2
3885		RAMY	09	02	1343	N10	E40	09	5.6		B	CKO	250	4	3	3
3885		BOUL	09	02	1436	N10	E39	09	5.5		A	HAX	230	4	3	3
3885	23313	MWIL	09	02	1515	N10	E40	09	5.6	5	(AP)					
3885		HOLL	09	02	1520	N10	E40	09	5.6		A	HHX	200	5	3	4
3885		PALE	09	02	2030	N09	E38	09	5.7		B	DSJ	170	2	3	2
3885		LEAR	09	03	0130	N10	E34	09	5.6		A	HSX	190	4	3	2
3885		RAMY	09	03	1305	N10	E28	09	5.7		B	DAI	170	6	3	3
3885		BOUL	09	03	1500	N13	E25	09	5.5		B	CSO	210	8	4	3
3885	23313	MWIL	09	03	1515	N10	E27	09	5.7	5	(BP)					
3885		PALE	09	03	1835	N10	E26	09	5.7		B	DSO	150	6	3	3
3885		LEAR	09	04	0115	N10	E21	09	5.6		A	HSX	190	6	3	2
3885		RAMY	09	04	1335	N10	E15	09	5.7		B	DAO	140	16	5	3
3885		HOLL	09	04	1445	N10	E13	09	5.6		B	CKO	270	12	5	4
3885	23313	MWIL	09	04	1530	N10	E14	09	5.7	5	(BY)					
3885		PALE	09	04	1800	N10	E13	09	5.7		B	CSO	300	13	6	2
3885		LEAR	09	05	0025	N10	E08	09	5.6		B	CSO	160	10	5	2
3885		RAMY	09	05	1205	N09	E02	09	5.7		B	DHO	200	12	5	4
3885	23313	MWIL	09	05	1600	N10	W01	09	5.6	5	(BF)					
3885		HOLL	09	05	1700	N10	W01	09	5.6		B	DSO	150	9	6	2
3885		PALE	09	05	2240	N11	W02	09	5.8		B	CSO	140	4	5	3
3885		LEAR	09	06	0023	N14	W05	09	5.6		B	CSO	160	13	4	3

REGIONS OF SUNSPOT ACTIVITY  
(ORDERED BY CENTRAL MERIDIAN PASSAGE DATE)

SEPTEMBER 1982

NOAA/ USAF Region	Mt Wilson Region	Sta	Observation			CMP Mo Day	Max H	Mag Class	Spot Class	Corrected		Spot Count	Long. Extent (Deg)	Qual
			Mo	Day	Time (UT)					Lat	CMD			
3885		HOLL	09	06	1512	N10 W12	09 5.7		B	DHO	130	9	5	3
3885	23313	MWIL	09	06	1530	N10 W14	09 5.6	5	(BP)					
3885		PALE	09	06	1754	N11 W14	09 5.7		B	DSO	160	9	5	4
3885		LEAR	09	07	0223	N10 W19	09 5.7			CSO	150	5	5	3
3885		RAMY	09	07	1223	N10 W28	09 5.4		B	DAO	110	11	7	2
3885	23313	MWIL	09	07	1500	N10 W27	09 5.6	5	(BY)					
3885		HOLL	09	07	1655	N11 W27	09 5.7		B	DSO	140	12	7	2
3885		BOUL	09	07	1700	N11 W28	09 5.6		B	CSO	130	24	8	2
3885		PALE	09	07	1806	N11 W28	09 5.6		B	DSO	120	13	6	4
3885		LEAR	09	08	0233	N11 W33	09 5.6		B	CAI	160	14	7	3
3885		RAMY	09	08	1236	N10 W38	09 5.7		B	DAO	130	13	10	2
3885		BOUL	09	08	1415	N11 W38	09 5.7		B	DAO	100	2	3	2
3885		HOLL	09	08	1542	N10 W42	09 5.5		B	DAO	200	4	5	2
3885		PALE	09	08	1820	N10 W44	09 5.5		B	DAO	160	3	4	3
3885		LEAR	09	09	0055	N11 W46	09 5.6		BD	DAI	100	5	5	3
3885	23313	MWIL	09	09	1500	N11 W55	09 5.5	4	(BY)					
3885		PALE	09	09	1830	N10 W57	09 5.5		B	DRO	130	5	5	2
3885		LEAR	09	10	0014	N11 W61	09 5.4		B	DRI	50	8	6	3
3885		BOUL	09	10	1414	N12 W70	09 5.3		B	BXO	50	7	8	3
3885		RAMY	09	10	1515	N09 W68	09 5.5		B	CXO	80	6	6	3
3885	23313	MWIL	09	10	1515	N10 W67	09 5.6	3	(BY)					
3885		HOLL	09	10	1520	N09 W67	09 5.6		B	CSO	40	7	7	2
3885		LEAR	09	11	0043	N11 W74	09 5.5		B	CRO	10	3	7	3
3885		RAMY	09	11	1200	N11 W78	09 5.6		A	HSX	60	1	1	3
3885		HOLL	09	11	1430	N12 W81	09 5.5		A	AXX	10	2		4
3885	23313	MWIL	09	11	1515	N12 W80	09 5.6	2	(AP)					
		PALE	09	07	1806	S03 W25	09 5.9		A	AXX	10	1	1	4
	23319	MWIL	09	02	1515	N07 E51	09 6.5	3	(AF)					
	23330	MWIL	09	04	1530	N19 E28	09 6.8	3	(AP)					
3900		RAMY	09	05	1205	S09 E18	09 6.9		B	BXX	10	2	1	4
3900	23333	MWIL	09	05	1600	S09 E15	09 6.8	2	(AP)					
3900		LEAR	09	09	0055	S15 W40	09 6.0		B	BXO	10	3	3	3
3900	23338	MWIL	09	09	1500	S15 W48	09 6.0	3	( B)					
3900		RAMY	09	09	1510	S16 W49	09 5.9		A	AXX	20	3	2	2
3900		RAMY	09	10	1515	S09 W51	09 6.8		A	AXX	20	2	2	3
3886		HOLL	08	31	1422	N14 E88	09 7.3		A	HSX	80	1	1	4
3886		BOUL	08	31	1445	N15 E87	09 7.2		B	CHO	200	4	5	3
3886	23314	MWIL	08	31	1530	N14 E85	09 7.1	3	AP					
3886		LEAR	09	01	0140	N13 E79	09 7.0		A	HKX	260	4	3	2
3886		RAMY	09	01	1250	N15 E73	09 7.1		B	DKI	390	19	5	2
3886		BOUL	09	01	1445	N12 E72	09 7.0		B	DKC	750	14	10	2
3886		HOLL	09	01	1456	N14 E73	09 7.1		B	CKI	540	9	5	4
3886	23314	MWIL	09	01	1500	N14 E73	09 7.1	4	(BF)					
3886		LEAR	09	02	0100	N14 E66	09 7.0		BG	DAI	330	13	7	2
3886		RAMY	09	02	1343	N15 E58	09 7.0		BG	DKI	710	29	10	3
3886		BOUL	09	02	1436	N13 E58	09 7.0		BG	DAI	470	27	8	3
3886	23314	MWIL	09	02	1515	N13 E59	09 7.1	4	( B)					
3886		HOLL	09	02	1520	N15 E58	09 7.0		B	DAI	220	22	8	4
3886		PALE	09	02	2030	N13 E56	09 7.1		BG	DAI	200	11	8	2
3886		LEAR	09	03	0130	N14 E53	09 7.1		BG	DAI	270	19	8	2
3886		RAMY	09	03	1305	N13 E45	09 6.9		B	DAI	250	32	8	3
3886		BOUL	09	03	1500	N16 E45	09 7.0		BG	DAI	340	43	9	3
3886	23314	MWIL	09	03	1515	N13 E45	09 7.0	4	( B)					
3886		PALE	09	03	1835	N14 E44	09 7.1		BG	DAI	220	21	9	3
3886		LEAR	09	04	0115	N13 E39	09 7.0		B	DSI	260	22	8	2
3886		RAMY	09	04	1335	N13 E31	09 6.9		BG	DAI	340	42	9	3
3886		HOLL	09	04	1445	N15 E32	09 7.0		BGD	DKI	530	38	9	4
3886	23314	MWIL	09	04	1530	N13 E32	09 7.1	5	( B)					
3886		PALE	09	04	1800	N14 E30	09 7.0		BGD	DKI	550	44	8	2
3886		LEAR	09	05	0025	N13 E26	09 7.0		B	DHI	350	28	8	2
3886		RAMY	09	05	1205	N15 E22	09 7.2		BGD	DHI	430	40	9	4
3886	23314	MWIL	09	05	1600	N13 E17	09 7.0	5	(BY)					
3886		HOLL	09	05	1700	N13 E15	09 6.8		BGD	DKI	430	37	10	2
3886		PALE	09	05	2240	N13 E15	09 7.1		BGD	ESI	450	36	11	3
3886		LEAR	09	06	0023	N14 E13	09 7.0		B	DHI	340	26	9	3
3886		HOLL	09	06	1512	N12 E04	09 6.9		B	EKI	270	38	12	3

REGIONS OF SUNSPOT ACTIVITY  
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Sep 82

SEPTEMBER 1982

NOAA/ USAF Region	Mt Wilson Region	Sta	Observation Time			Lat	CMD	CMP		Max H	Mag Class	Spot Class	Corrected Area		Spot Count†	Long. Extent (Deg)	Qual
			Mo	Day	(UT)			Mo	Day			(10 <sup>-6</sup>	Hem1)				
3886	23314	MWIL	09	06	1530	N13	E04	09	6.9	5	( B)						
3886		PALE	09	06	1754	N13	E02	09	6.9		B	EKI	270	43	12	4	
3886		LEAR	09	07	0223	N14	W03	09	6.9		B	DSI	250	35	10	3	
3886		RAMY	09	07	1223	N14	W08	09	6.9		BG	EHI	340	65	13	2	
3886	23314	MWIL	09	07	1500	N13	W10	09	6.9	5	( D)						
3886		HOLL	09	07	1655	N13	W10	09	6.9		B	ESI	320	25	11	2	
3886		BOUL	09	07	1700	N14	W11	09	6.9		B	ESO	160	28	14	2	
3886		PALE	09	07	1806	N14	W11	09	6.9		BG	EHI	240	42	12	4	
3886		LEAR	09	08	0233	N14	W15	09	7.0		B	ESO	330	37	12	3	
3886		RAMY	09	08	1236	N14	W20	09	7.0		B	EA0	210	36	12	2	
3886		BOUL	09	08	1415	N15	W20	09	7.1		B	CS0	140	11	11	2	
3886		HOLL	09	08	1542	N13	W23	09	6.9		B	CS0	160	12	10	2	
3886		PALE	09	08	1820	N13	W25	09	6.9		B	CS0	180	14	11	3	
3886		LEAR	09	09	0055	N14	W27	09	7.0		B	CS0	180	19	14	3	
3886	23314	MWIL	09	09	1500	N13	W38	09	6.8	5	( B)						
3886		RAMY	09	09	1510	N12	W38	09	6.8		B	CA0	90	7	12	2	
3886		PALE	09	09	1830	N12	W43	09	6.5		B	CA0	110	3	6	2	
3886		LEAR	09	10	0014	N14	W42	09	6.8		B	CS0	110	7	8	3	
3886		BOUL	09	10	1414	N13	W55	09	6.4		A	HSX	70	1	2	3	
3886		RAMY	09	10	1515	N11	W50	09	6.9		B	CS0	80	5	13	3	
3886	23314	MWIL	09	10	1515	N12	W50	09	6.9	5	( B)						
3886		HOLL	09	10	1520	N11	W55	09	6.5		A	HSX	60	1	2	2	
3886		LEAR	09	11	0043	N13	W55	09	6.9		B	ESO	100	5	12	3	
3886		RAMY	09	11	1200	N11	W65	09	6.6		A	HAX	70	1	2	3	
3886		HOLL	09	11	1430	N13	W62	09	6.9		B	CS0	100	4	12	4	
3886	23314	MWIL	09	11	1515	N13	W67	09	6.6	4	(BP)						
3886		MANI	09	11	2307	N11	W71	09	6.6			HSX	40	1	2	3	
3886		LEAR	09	12	0057	N12	W74	09	6.5		A	HSX	70	1	2	3	
3886		PALE	09	12	0110	N11	W75	09	6.4		A	HSX	30	1	2	2	
3886		BOUL	09	12	1434	N12	W80	09	6.6		A	AXX	30	1	2	2	
3886	23314	MWIL	09	12	1600	N11	W81	09	6.6	3	(AP)						
3886		HOLL	09	12	1702	N11	W85	09	6.3		A	HSX	30	2	2	1	
3886		PALE	09	12	1803	N12	W88	09	6.1		A	HSX	30	1	1	3	
0002	23334	MWIL	09	05	1600	N05	E18	09	7.0	3	(AP)						
0002	23334	MWIL	09	06	1530	N05	E05	09	7.0	3	(AF)						
0003	23324	MWIL	09	03	1515	N20	E54	09	7.8	2	(AP)						
0003		HOLL	09	07	1655	N21	W02	09	7.6		B	BX0	10	3	5	2	
0004	23336	MWIL	09	06	1530	N25	E16	09	7.9	3	(AP)						
0004		LEAR	09	07	0223	N26	E10	09	7.9		A	AXX		1		3	
3889		RAMY	09	03	1305	S09	E72	09	9.0		A	HRX	30	1	1	3	
3889		BOUL	09	03	1500	S09	E71	09	9.0		A	HSX	60	1	1	3	
3889	23325	MWIL	09	03	1515	S10	E70	09	8.9	3	(AP)						
3889		PALE	09	03	1835	S10	E71	09	9.1		A	AXX	20	1	1	3	
3889		LEAR	09	04	0115	S10	E66	09	9.0		A	HSX	30	1	1	2	
3889		RAMY	09	04	1335	S10	E59	09	9.0		A	HRX	30	1	1	3	
3889		HOLL	09	04	1445	S09	E59	09	9.0		A	HSX	50	1	1	4	
3889	23325	MWIL	09	04	1530	S10	E58	09	9.0	4	(AP)						
3889		PALE	09	04	1800	S10	E57	09	9.0		A	HSX	60	1	1	2	
3889		LEAR	09	05	0025	S10	E53	09	9.0		A	HSX	30	1	1	2	
3889		RAMY	09	05	1205	S09	E48	09	9.1		A	HSX	30	2	2	4	
3889	23325	MWIL	09	05	1600	S10	E45	09	9.1	4	(AP)						
3889		HOLL	09	05	1700	S09	E45	09	9.1		A	HSX	30	1	1	2	
3889		PALE	09	05	2240	S09	E42	09	9.1		A	HSX	40	1	2	3	
3889		LEAR	09	06	0023	S09	E40	09	9.0		A	HRX	20	1	1	3	
3889		HOLL	09	06	1512	S09	E32	09	9.0		A	HRX	20	1	1	3	
3889	23325	MWIL	09	06	1530	S10	E31	09	9.0	4	(AP)						
3889		PALE	09	06	1754	S10	E30	09	9.0		A	HSX	20	2	1	4	
3889		LEAR	09	07	0223	S10	E25	09	9.0		A	AXX		2	1	3	
3889		RAMY	09	07	1223	S08	E20	09	9.0		B	BX0	20	3	2	2	
3889	23325	MWIL	09	07	1500	S10	E17	09	8.9	2	AP						
3889		BOUL	09	07	1700	S07	E14	09	8.8		A	AXX	10	2	1	2	
3889		PALE	09	07	1806	S09	E16	09	9.0		B	BX0	20	6	3	4	
3889		LEAR	09	08	0233	S09	E11	09	8.9		A	AXX	20	4	2	3	
3889		RAMY	09	08	1236	S09	E05	09	8.9		A	AXX	20	1	1	2	
3889		BOUL	09	08	1415	S07	E03	09	8.8		A	AXX	10	1	1	2	
3889		HOLL	09	08	1542	S09	E03	09	8.9		A	AXX	20	2	1	2	
3889		PALE	09	08	1820	S09	E01	09	8.8		A	AXX		1		3	



REGIONS OF SUNSPOT ACTIVITY  
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SEPTEMBER 1982

NOAA/ USAF Region	Mt Wilson Region	Sta	Observation Time		Lat	CMD	CMP Mo	Day	Max H	Mag Class	Spot Class	Corrected Area (10 <sup>-6</sup> Heml)	Spot Count	Long. Extent (Deg)	Qual
3889		LEAR	09	09	0055	S09 W03	09	8.8		A	AXX		1		3
3899		RAMY	09	08	1236	S11 E18	09	9.9		B	DRO	40	6	4	2
3899		BOUL	09	08	1415	S09 E13	09	9.6		B	BXO	30	8	3	2
3899		HOLL	09	08	1542	S11 E13	09	9.6		B	BXO	40	6	3	2
3899		PALE	09	08	1820	S11 E11	09	9.6		B	BXO	40	7	3	3
3899		LEAR	09	09	0055	S11 E08	09	9.6		B	CRO	30	6	4	3
3899	23339	MWIL	09	09	1500	S11 W00	09	9.6	4	( B )					
3899		RAMY	09	09	1510	S11 W01	09	9.6		B	CSO	30	4	4	2
3899		PALE	09	09	1830	S11 W01	09	9.7		B	BXO	20	3	6	2
3899		LEAR	09	10	0014	S12 W05	09	9.6		B	CRO	20	6	6	3
3899		BOUL	09	10	1414	S09 W13	09	9.6		B	BXO	10	2	6	3
3899		RAMY	09	10	1515	S11 W13	09	9.7		B	BXO	20	2	5	3
3899	23339	MWIL	09	10	1515	S11 W13	09	9.7	3	( B )					
3899		HOLL	09	10	1520	S11 W13	09	9.7		B	BXO	10	5	6	2
3899		LEAR	09	11	0043	S13 W16	09	9.8		B	BXO	20	2	3	3
3899		PALE	09	12	0110	S12 W32	09	9.6		B	BXO	20	3	3	2
3899		BOUL	09	12	1434	S12 W40	09	9.6		B	BXO	10	3	4	2
3899	23339	MWIL	09	12	1600	S13 W40	09	9.6	4	( B )					
3899		PALE	09	12	1803	S12 W42	09	9.6		B	BXO	20	4	4	3
3899		MANI	09	12	2314	S12 W44	09	9.7			BXO	10	2	3	3
3899		LEAR	09	13	0212	S13 W46	09	9.6		B	CRO	20	3	4	3
3899		HOLL	09	13	1410	S13 W54	09	9.5		A	AXX	10	2	2	3
3899	23339	MWIL	09	13	1515	S12 W54	09	9.6	4	( B )					
3899		PALE	09	13	1756	S13 W57	09	9.4		A	AXX	10	2	1	4
3899		MANI	09	13	2320	S12 W58	09	9.6			AXX		1		3
3899		LEAR	09	14	0229	S13 W63	09	9.3		A	AXX		1		3
3890		BOUL	09	03	1500	N07 E83	09	9.8		A	HHX	140	1	3	3
3890	23326	MWIL	09	03	1515	N06 E86	09	10.1	2	AP					
3890		PALE	09	03	1835	N06 E84	09	10.1		A	HSX	90	1	2	3
3890		LEAR	09	04	0115	N05 E80	09	10.0		A	HSX	140	1	2	2
3890		RAMY	09	04	1335	N06 E72	09	10.0		A	HAX	160	1	2	3
3890		HOLL	09	04	1445	N05 E72	09	10.0		A	HSX	210	2	1	4
3890	23326	MWIL	09	04	1530	N05 E72	09	10.0	4	(AP)					
3890	23331	MWIL	09	04	1530	N08 E73	09	10.1	2	(AP)					
3890		PALE	09	04	1800	N05 E73	09	10.2		B	CSO	250	2	5	2
3890		LEAR	09	05	0025	N05 E66	09	10.0		A	HSX	160	2	2	2
3890		RAMY	09	05	1205	N06 E61	09	10.1		A	HHX	200	1	3	4
3890	23326	MWIL	09	05	1600	N05 E58	09	10.0	5	(AP)					
3890		HOLL	09	05	1700	N07 E59	09	10.1		A	HSX	250	1	2	2
3890		PALE	09	05	2240	N06 E56	09	10.1		A	HSX	240	1	2	3
3890		LEAR	09	06	0023	N06 E54	09	10.1		A	HSX	180	1	2	3
3890		HOLL	09	06	1512	N07 E46	09	10.1		A	HSX	110	1	2	3
3890	23326	MWIL	09	06	1530	N05 E46	09	10.1	5	(AP)					
3890		PALE	09	06	1754	N05 E45	09	10.1		A	HSX	140	1	2	4
3890		LEAR	09	07	0223	N05 E39	09	10.0		A	HSX	120	1	2	3
3890		RAMY	09	07	1223	N07 E35	09	10.1		A	HHX	160	1	3	2
3890	23326	MWIL	09	07	1500	N05 E33	09	10.1	5	(AP)					
3890		HOLL	09	07	1655	N06 E41	09	10.8		A	HSX	120	1	2	2
3890		BOUL	09	07	1700	N05 E30	09	10.0		A	HSX	170	1	2	2
3890		PALE	09	07	1806	N05 E31	09	10.1		A	HSX	120	1	2	4
3890		LEAR	09	08	0233	N05 E26	09	10.1		A	HSX	120	1	2	3
3890		RAMY	09	08	1236	N05 E21	09	10.1		A	HSX	130	1	2	2
3890		BOUL	09	08	1415	N06 E19	09	10.0		A	HSX	100	1	2	2
3890		HOLL	09	08	1542	N06 E19	09	10.1		A	HSX	160	1	2	2
3890		PALE	09	08	1820	N05 E17	09	10.0		A	HSX	110	1	2	3
3890		LEAR	09	09	0055	N05 E13	09	10.0		A	HSX	150	1	2	3
3890	23326	MWIL	09	09	1500	N05 E06	09	10.1	5	(AP)					
3890		RAMY	09	09	1510	N05 E06	09	10.1		A	HSX	110	2	2	2
3890		PALE	09	09	1830	N05 E03	09	10.0		A	HSX	120	2	2	2
3890		LEAR	09	10	0014	N05 E01	09	10.1		A	HSX	140	2	2	3
3890		BOUL	09	10	1414	N08 W08	09	10.0		A	CSO	80	2	2	3
3890		RAMY	09	10	1515	N05 W09	09	10.0		A	HSX	70	2	2	3
3890	23326	MWIL	09	10	1515	N07 W07	09	10.1	5	( B )					
3890		HOLL	09	10	1520	N05 W08	09	10.0		A	HSX	100	1	2	2
3890		LEAR	09	11	0043	N05 W13	09	10.1		A	HSX	120	1	2	3
3890		RAMY	09	11	1200	N05 W19	09	10.1		B	CHO	100	3	5	3
3890		HOLL	09	11	1430	N05 W20	09	10.1		B	CHO	180	3	5	4
3890	23326	MWIL	09	11	1515	N05 W22	09	10.0	5	(AP)					
3890		MANI	09	11	2307	N05 W27	09	9.9			CSO	80	2	4	3

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NOAA/ USAF Region	Mt Wilson Region	Sta	Observation Time Mo Day (UT)	Lat CMD	CMP Mo Day	Max H	Mag Class	Spot Class	Corrected Area (10 <sup>-6</sup> Hem1)	Spot Count	Long. Extent (Deg)	Qual
3890		LEAR	09 12 0057	N06 W27	09 10.0		A	HSX	100	1	2	3
3890		PALE	09 12 0110	N05 W28	09 10.0		A	HSX	110	1	2	2
3890		BOUL	09 12 1434	N06 W35	09 10.0		A	HSX	70	1	1	2
3890	23326	MWIL	09 12 1600	N04 W36	09 10.0	5	(AP)					
3890		HOLL	09 12 1702	N04 W36	09 10.0		A	HSX	100	1	2	1
3890		PALE	09 12 1803	N05 W37	09 10.0		A	HAX	70	1	2	3
3890		MANI	09 12 2314	N05 W40	09 10.0			HSX	100	1	2	3
3890		LEAR	09 13 0212	N06 W42	09 9.9		A	HSX	100	1	2	3
3890		HOLL	09 13 1410	N05 W48	09 10.0		A	HSX	90	1	2	3
3890	23326	MWIL	09 13 1515	N05 W48	09 10.0	5	(AP)					
3890		PALE	09 13 1756	N05 W51	09 9.9		A	HSX	90	1	2	4
3890		MANI	09 13 2320	N05 W53	09 10.0			HSX	80	1	2	3
3890		LEAR	09 14 0229	N05 W56	09 9.9		A	HSX	60	1	2	3
3890		RAMY	09 14 1318	N04 W61	09 10.0		A	HSX	60	2	2	2
3890		HOLL	09 14 1506	N05 W62	09 10.0		A	HSX	30	1	2	4
3890	23326	MWIL	09 14 1530	N05 W62	09 10.0	4	(AP)					
3890		PALE	09 14 1900	N05 W65	09 9.9		A	HSX	60	1	2	3
3890		MANI	09 15 0045	N05 W66	09 10.1			HSX	100	1	2	2
3890		LEAR	09 15 0110	N04 W68	09 10.0		A	HSX	30	1	1	3
3890		HOLL	09 15 1410	N04 W76	09 9.9		A	AXX		1	1	3
		HOLL	09 10 1520	N10 W01	09 10.6		B	BXO	10	2	6	2
0005		LEAR	09 12 0057	S08 W15	09 10.9		A	AXX	10	3	2	3
0005		PALE	09 12 0110	S08 W14	09 11.0		A	AXX	10	1	1	2
3894		HOLL	09 04 1445	N16 E81	09 10.8		A	AXX		1		4
3894	23332	MWIL	09 04 1530	N16 E80	09 10.7	3	(AF)					
3894		PALE	09 04 1800	N16 E79	09 10.7		A	AXX		1		2
3894		LEAR	09 05 0025	N15 E75	09 10.7		A	AXX		1		2
3894		RAMY	09 05 1205	N18 E69	09 10.8		A	AXX	10	1	1	4
3894	23332	MWIL	09 05 1600	N16 E68	09 10.8	3	(AP)					
3894		HOLL	09 05 1700	N16 E67	09 10.8		A	AXX		1		2
3894		PALE	09 05 2240	N16 E65	09 10.9		A	AXX		1		3
3894		LEAR	09 06 0023	N16 E63	09 10.8		A	AXX		1		3
3894	23332	MWIL	09 06 1530	N16 E55	09 10.8	2	(AP)					
3894		PALE	09 06 1754	N16 E53	09 10.8		A	AXX	10	1	1	4
3894	23332	MWIL	09 07 1500	N15 E44	09 11.0	1	AP					
3895		RAMY	09 05 1205	S09 E82	09 11.7		B	EKO	310	2	15	4
3895	23335	MWIL	09 05 1600	S10 E80	09 11.7	3	(AP)					
3895		HOLL	09 05 1700	S09 E75	09 11.3		B	CHO	390	2	10	2
3895		PALE	09 05 2240	S10 E73	09 11.4		B	CHO	420	2	9	3
3895		LEAR	09 06 0023	S09 E71	09 11.3		B	CHO	500	2	11	3
3895	23335	MWIL	09 06 1530	S10 E65	09 11.5	5	(AP)					
3895		PALE	09 06 1754	S10 E65	09 11.6		B	CHO	380	3	3	4
3895		LEAR	09 07 0223	S11 E59	09 11.5		A	HHX	250	1	3	3
3895		RAMY	09 07 1223	S08 E56	09 11.7		B	CKO	420	6	8	2
3895	23335	MWIL	09 07 1500	S10 E53	09 11.6	5	(BP)					
3895		HOLL	09 07 1655	S09 E53	09 11.7		B	CSO	390	7	6	2
3895		BOUL	09 07 1700	S11 E51	09 11.5		B	CHO	530	14	8	2
3895		PALE	09 07 1806	S10 E52	09 11.7		BG	CKI	460	16	8	4
3895		LEAR	09 08 0233	S11 E46	09 11.6		B	CHO	510	20	6	3
3895		RAMY	09 08 1236	S10 E44	09 11.8		B	CHO	470	32	10	2
3895		BOUL	09 08 1415	S10 E41	09 11.7		B	CHO	400	22	8	2
3895		HOLL	09 08 1542	S09 E40	09 11.7		B	CHI	490	11	6	2
3895		PALE	09 08 1820	S10 E39	09 11.7		B	CHI	420	22	8	3
3895		LEAR	09 09 0055	S11 E34	09 11.6		B	DHI	440	21	8	3
3895	23335	MWIL	09 09 1500	S10 E25	09 11.5	5	(D)					
3895		RAMY	09 09 1510	S10 E26	09 11.6		B	CHO	460	13	10	2
3895		PALE	09 09 1830	S10 E24	09 11.6		B	CHO	370	11	8	2
3895		LEAR	09 10 0014	S13 E20	09 11.5		B	CHI	390	10	7	3
3895		BOUL	09 10 1414	S08 E11	09 11.4		B	CHO	300	5	7	3
3895		RAMY	09 10 1515	S10 E12	09 11.5		B	CHO	380	8	6	3
3895	23335	MWIL	09 10 1515	S10 E12	09 11.5	5	(BY)					
3895		HOLL	09 10 1520	S09 E11	09 11.5		B	CHO	440	9	7	2
3895		LEAR	09 11 0043	S10 E07	09 11.6		B	CHO	360	5	5	3
3895		RAMY	09 11 1200	S10 E02	09 11.7		B	DHO	410	12	7	3
3895		HOLL	09 11 1430	S10 W00	09 11.6		B	CHO	350	7	7	4
3895	23335	MWIL	09 11 1515	S10 W01	09 11.6	5	(BY)					
3895		MANI	09 11 2307	S10 W05	09 11.6			CHO	380	7	5	3

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NOAA/ USAF Region	Mt Wilson Region	Sta	Observation Time (UT)		Lat CMD	CMP Mo Day	Max H	Mag Class	Spot Class	Corrected Area (10 <sup>-6</sup> Heml)	Spot Count	Long. Extent (Deg)	Qual	
3895		LEAR	09	12	0057	S10 W06	09 11.6		B	CHO	350	8	6	3
3895		PALE	09	12	0110	S10 W05	09 11.7		B	CKO	360	4	5	2
3895		BOUL	09	12	1434	S09 W15	09 11.5		B	CHO	300	4	8	2
3895	23335	MWIL	09	12	1600	S10 W16	09 11.5	5	(BP)					
3895		HOLL	09	12	1702	S10 W16	09 11.5		A	HHX	400	2	4	1
3895		PALE	09	12	1803	S10 W17	09 11.5		A	HKX	350	1	3	3
3895		MANI	09	12	2314	S10 W19	09 11.5			HHX	370	1	3	3
3895		LEAR	09	13	0212	S10 W22	09 11.4		B	CHO	350	4	4	3
3895		HOLL	09	13	1410	S10 W25	09 11.7		B	CHO	340	6	8	3
3895	23335	MWIL	09	13	1515	S10 W27	09 11.6	5	(BP)					
3895		PALE	09	13	1756	S09 W29	09 11.6		B	CHO	330	6	8	4
3895		MANI	09	13	2320	S10 W32	09 11.6			CHO	360	2	5	3
3895		LEAR	09	14	0229	S10 W35	09 11.5		A	HHX	260	1	3	3
3895		RAMY	09	14	1318	S11 W38	09 11.7		B	CHO	320	6	6	2
3895		HOLL	09	14	1506	S09 W40	09 11.6		B	CHO	320	4	6	4
3895	23335	MWIL	09	14	1530	S10 W41	09 11.6	6	(BP)					
3895		PALE	09	14	1900	S09 W41	09 11.7		B	CHO	270	2	6	3
3895		MANI	09	15	0045	S10 W45	09 11.6			CHO	360	2	5	2
3895		LEAR	09	15	0110	S10 W46	09 11.6		B	CHO	270	4	5	3
3895		HOLL	09	15	1410	S10 W55	09 11.5		A	HHX	330	1	4	3
3895		PALE	09	15	1938	S10 W58	09 11.5		A	HHX	240	1	3	3
3895		MANI	09	16	0324	S10 W65	09 11.3			CHO	150	3	4	2
3895		LEAR	09	16	0555	S10 W64	09 11.4		A	HHX	270	1	3	2
3895		RAMY	09	16	1320	S12 W69	09 11.4		A	HHX	310	1	3	4
3895		BOUL	09	16	1457	S10 W70	09 11.4		A	HSX	120	1	2	2
3895		HOLL	09	16	1500	S10 W70	09 11.4		A	HHX	290	1	3	4
3895		PALE	09	16	1720	S10 W69	09 11.5		A	HSX	280	1	2	3
3895		LEAR	09	17	0142	S09 W75	09 11.4		A	HHX	220	1	3	3
3895		HOLL	09	17	1445	S10 W79	09 11.7		A	HHX	140	1	4	4
3895		PALE	09	17	1740	S11 W82	09 11.6		A	HHX	120	1	3	4
3902		BOUL	09	10	1414	S21 E18	09 12.0		B	BXO	10	3	3	3
3902	23341	MWIL	09	10	1515	S21 E19	09 12.1	3	(BP)					
3902		RAMY	09	10	1515	S21 E20	09 12.2		B	BXO	30	7	4	3
3902		HOLL	09	10	1520	S21 E19	09 12.1		B	CRO	50	7	3	2
3902		LEAR	09	11	0043	S21 E15	09 12.2		B	DAO	60	9	5	3
3902		RAMY	09	11	1200	S21 E09	09 12.2		B	DKO	140	19	7	3
3902		HOLL	09	11	1430	S21 E06	09 12.1		B	DSI	160	19	7	4
3902	23341	MWIL	09	11	1515	S22 E07	09 12.2	4	(B)					
3902		MANI	09	11	2307	S21 E03	09 12.2			DSO	120	16	7	3
3902		LEAR	09	12	0057	S22 E01	09 12.1		B	DAI	210	18	6	3
3902		PALE	09	12	0110	S22 E02	09 12.2		B	DAO	210	13	7	2
3902		BOUL	09	12	1434	S21 W08	09 12.0		B	CSO	90	9	8	2
3902	23341	MWIL	09	12	1600	S23 W07	09 12.1	5	(B)					
3902		HOLL	09	12	1702	S22 W07	09 12.2		B	DAI	90	8	9	1
3902		PALE	09	12	1803	S22 W07	09 12.2		B	DAO	170	13	7	3
3902		MANI	09	12	2314	S21 W11	09 12.1			DSO	140	10	7	3
3902		LEAR	09	13	0212	S21 W13	09 12.1		B	DAO	180	18	9	3
3902		HOLL	09	13	1410	S22 W19	09 12.1		B	DSO	14	14	31	3
3902	23341	MWIL	09	13	1515	S22 W20	09 12.1	5	(B)					
3902		PALE	09	13	1756	S22 W22	09 12.1		B	DAO	140	9	9	4
3902		MANI	09	13	2320	S21 W24	09 12.1			DAO	110	9	7	3
3902		LEAR	09	14	0229	S23 W26	09 12.1		B	DSO	150	18	10	3
3902		RAMY	09	14	1318	S23 W30	09 12.2		B	DAO	100	5	10	2
3902		HOLL	09	14	1506	S22 W33	09 12.1		B	CSO	120	6	9	4
3902	23341	MWIL	09	14	1530	S22 W34	09 12.0	5	(B)					
3902		PALE	09	14	1900	S22 W36	09 12.0		B	CSO	100	5	9	3
3902		MANI	09	15	0045	S21 W37	09 12.2			CSO	100	6	7	2
3902		LEAR	09	15	0110	S22 W38	09 12.1		B	CSO	90	6	8	3
3902		HOLL	09	15	1410	S22 W46	09 12.1		B	CAO	120	4	9	3
3902		PALE	09	15	1938	S23 W49	09 12.0		B	CAO	70	2	8	3
3902		MANI	09	16	0324	S21 W59	09 11.6			CRO	80	4	5	2
3902		LEAR	09	16	0555	S23 W55	09 12.0		B	CSO	110	2	9	2
3902		RAMY	09	16	1320	S24 W63	09 11.7		B	CAO	130	3	4	4
3902		BOUL	09	16	1457	S22 W67	09 11.5		A	HSX	40	1	1	2
3902		HOLL	09	16	1500	S24 W65	09 11.6		A	HSX	60	1	1	4
3902		PALE	09	16	1720	S22 W65	09 11.7		A	HSX	90	3	1	3
3902		LEAR	09	17	0142	S23 W69	09 11.8		A	HSX	30	1	2	3
0006		RAMY	09	16	1320	N03 W22	09 14.9		B	BXO	10	2	3	4
0006		HOLL	09	16	1500	N03 W23	09 14.9		A	AXX	1	1	4	4

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NOAA/ USAF Region	Mt Wilson Region	Sta	Observation Time			Lat CMD	CMP Mo Day	Max H	Mag Class	Spot Class	Corrected Area		Spot Count	Long. Extent (Deg)	Qual
			Mo	Day	(UT)						(10 <sup>-6</sup>	HemI)			
3909		LEAR	09	15	0110	N17 E06	09 15.5		B	BXO	10	4	3	3	
3909		HOLL	09	15	1410	N17 W02	09 15.4		B	BXO	20	6	4	3	
3909		PALE	09	15	1938	N17 W04	09 15.5		B	CRO	30	6	5	3	
3909		LEAR	09	16	0555	N17 W11	09 15.4		B	CRO	20	10	6	2	
3909		RAMY	09	16	1320	N18 W14	09 15.5		B	DAO	30	10	8	4	
3909		BOUL	09	16	1457	N17 W13	09 15.6		B	CSO	30	11	7	2	
3909		HOLL	09	16	1500	N18 W15	09 15.5		B	CRO	20	10	7	4	
3909		PALE	09	16	1720	N18 W16	09 15.5		B	DSO	30	12	8	3	
3909		LEAR	09	17	0142	N18 W21	09 15.5		B	CR1	60	25	7	3	
3909		HOLL	09	17	1445	N18 W28	09 15.5		B	DAO	80	11	6	4	
3909		PALE	09	17	1740	N16 W29	09 15.5		B	DSO	80	12	6	4	
3909		MANI	09	17	2343	N16 W32	09 15.6			DRO	50	8	6	3	
3909		LEAR	09	18	0030	N17 W34	09 15.4		B	DRO	30	10	7	3	
3909		RAMY	09	18	1345	N16 W40	09 15.5		B	CAO	40	7	8	3	
3909		PALE	09	18	1920	N18 W44	09 15.5		B	BXO	30	7	9	3	
3909		LEAR	09	19	0114	N17 W47	09 15.5		B	BXO	30	6	9	3	
3909		RAMY	09	19	1241	N15 W55	09 15.4		B	BXO	70	5	8	2	
3909		HOLL	09	19	1435	N17 W55	09 15.4		B	BXO	10	1	9	2	
3909		LEAR	09	20	0138	N18 W57	09 15.7		A	AXX		1		3	
3909		RAMY	09	20	1241	N18 W67	09 15.4		A	AXX	20	1	1	2	
3909		HOLL	09	20	1428	N18 W65	09 15.6		A	AXX		1		3	
3909		BOUL	09	20	1506	N18 W66	09 15.6		A	AXX		1		2	
3909	23347	MWIL	09	20	1600	N18 W67	09 15.6	3	(AF)						
3901	23340	MWIL	09	09	1500	S13 E80	09 15.7	2		B					
3901		RAMY	09	09	1510	S11 E81	09 15.7		A	HSX	40	1	2	2	
3901		PALE	09	09	1830	S12 E81	09 15.9		A	HSX	60	1	1	2	
3901		LEAR	09	10	0014	S12 E80	09 16.0		B	DSO	160	4	9	3	
3901		BOUL	09	10	1414	S13 E70	09 15.9		B	DAO	120	6	8	3	
3901		RAMY	09	10	1515	S12 E70	09 15.9		B	DAO	310	11	10	3	
3901	23340	MWIL	09	10	1515	S12 E70	09 15.9	4	(B)						
3901		HOLL	09	10	1520	S13 E70	09 15.9		B	DAO	240	11	9	2	
3901		LEAR	09	11	0043	S11 E66	09 16.0		B	DAO	320	13	10	3	
3901		RAMY	09	11	1200	S12 E59	09 15.9		B	EKO	260	17	11	3	
3901		HOLL	09	11	1430	S13 E57	09 15.9		B	DAI	340	21	10	4	
3901	23340	MWIL	09	11	1515	S12 E57	09 15.9	4	(B)						
3901		MANI	09	11	2307	S13 E52	09 15.9			DAO	200	14	10	3	
3901		LEAR	09	12	0057	S12 E52	09 16.0		BG	EAI	370	20	11	3	
3901		PALE	09	12	0110	S12 E53	09 16.0		B	ESI	190	22	11	2	
3901		BOUL	09	12	1434	S13 E42	09 15.8		B	DSO	110	10	9	2	
3901	23340	MWIL	09	12	1600	S12 E43	09 15.9	4	(D)						
3901		HOLL	09	12	1702	S12 E42	09 15.9		B	EAI	180	11	11	1	
3901		PALE	09	12	1803	S13 E43	09 16.0		B	DSO	140	22	10	3	
3901		MANI	09	12	2314	S13 E38	09 15.8			DAO	210	15	10	3	
3901		LEAR	09	13	0212	S13 E36	09 15.8		BGD	ESO	220	29	11	3	
3901		HOLL	09	13	1410	S13 E33	09 16.1		BGD	EAI	190	20	12	3	
3901	23340	MWIL	09	13	1515	S12 E30	09 15.9	5	(D)						
3901		PALE	09	13	1756	S14 E30	09 16.0		BGD	EAI	160	30	11	4	
3901		MANI	09	13	2320	S13 E27	09 16.0			EAI	220	25	11	3	
3901		LEAR	09	14	0229	S13 E24	09 15.9		BG	ESO	150	26	11	3	
3901		RAMY	09	14	1318	S12 E20	09 16.1		BGD	EAO	110	16	12	2	
3901		HOLL	09	14	1506	S13 E18	09 16.0		BGD	ESI	150	20	11	4	
3901	23340	MWIL	09	14	1530	S13 E17	09 15.9	5	(D)						
3901		PALE	09	14	1900	S13 E17	09 16.1		BGD	ESI	120	16	12	3	
3901		MANI	09	15	0045	S13 E14	09 16.1			DSO	120	16	10	2	
3901		LEAR	09	15	0110	S14 E13	09 16.0		BG	EAI	90	18	11	3	
3901		HOLL	09	15	1410	S13 E06	09 16.0		BG	CSI	110	20	10	3	
3901		PALE	09	15	1938	S13 E03	09 16.0		BG	DSO	100	21	10	3	
3901		MANI	09	16	0324	S13 E07	09 16.7			CSO	100	13	12	2	
3901		LEAR	09	16	0555	S13 W03	09 16.0		B	CAO	30	21	10	2	
3901		RAMY	09	16	1320	S14 W08	09 16.0		BG	EAO	50	15	11	4	
3901		BOUL	09	16	1457	S13 W08	09 16.0		B	CSO	30	7	11	2	
3901		HOLL	09	16	1500	S12 W10	09 15.9		B	CAO	40	8	11	4	
3901		PALE	09	16	1720	S15 W09	09 16.0		B	CSO	50	12	11	3	
3901		LEAR	09	17	0142	S13 W19	09 15.6		A	HSX	10	2	1	3	
3901		HOLL	09	17	1445	S10 W23	09 15.9		A	AXX	10	1		4	
3901		PALE	09	17	1740	S14 W28	09 15.6		A	AXX	10	1		4	
3905	23342	MWIL	09	12	1600	S14 E75	09 18.3	2	(AP)						
3905		HOLL	09	12	1702	S16 E75	09 18.4		A	AXX	10	2	2	1	
3905		PALE	09	12	1803	S16 E76	09 18.5		A	AXX	10	2	1	3	

REGIONS OF SUNSPOT ACTIVITY  
(ORDERED BY CENTRAL MERIDIAN PASSAGE DATE)

SEPTEMBER 1982

NOAA/ USAF Region	Mt Wilson Region	Observation Sta	Mo	Day	Time (UT)	Lat CMD	CMP Mo	Day	Max H	Mag Class	Spot Class	Corrected Area (10 <sup>-6</sup> Heml)	Spot Count	Long. Extent (Deg)	Qual
3905		MANI	09	12	2314	S16 E71	09	18.4			HRX	20	2	1	3
3905		LEAR	09	13	0212	S15 E66	09	18.1		B	BXO	20	5	6	3
3905		HOLL	09	13	1410	S16 E64	09	18.4		B	DAI	80	16	7	3
3905	23342	MWIL	09	13	1515	S16 E61	09	18.3	3	(BP)					
3905		PALE	09	13	1756	S16 E63	09	18.5		B	CRI	80	13	7	4
3905		MANI	09	13	2320	S16 E59	09	18.5			CRO	80	10	6	3
3905		LEAR	09	14	0229	S15 E55	09	18.3		B	CSO	40	13	7	3
3905		RAMY	09	14	1318	S15 E50	09	18.3		B	DAO	70	4	8	2
3905		HOLL	09	14	1506	S15 E49	09	18.3		B	CSO	60	8	9	4
3905	23342	MWIL	09	14	1530	S15 E47	09	18.2	5	(BP)					
3905		PALE	09	14	1900	S15 E47	09	18.4		B	CSO	110	13	8	3
3905		MANI	09	15	0045	S16 E46	09	18.5			CSO	50	10	9	2
3905		LEAR	09	15	0110	S16 E44	09	18.4		B	CAI	90	1	9	3
3905		HOLL	09	15	1410	S15 E36	09	18.3		B	CSO	130	10	9	3
3905		PALE	09	15	1938	S16 E33	09	18.3		B	CSO	100	11	10	3
3905		MANI	09	16	0324	S16 E25	09	18.0			DSO	140	4	11	2
3905		LEAR	09	16	0555	S16 E26	09	18.2		B	CSO	120	13	9	2
3905		RAMY	09	16	1320	S16 E23	09	18.3		B	DAO	110	20	9	4
3905		BOUL	09	16	1457	S15 E18	09	18.0		B	CSO	50	6	5	2
3905		HOLL	09	16	1500	S15 E20	09	18.1		B	DAO	130	15	9	4
3905		PALE	09	16	1720	S16 E21	09	18.3		B	DSO	80	17	8	3
3905		LEAR	09	17	0142	S15 E16	09	18.3		B	DAI	110	26	8	3
3905		HOLL	09	17	1445	S13 E12	09	18.5		B	DAO	130	17	7	4
3905		PALE	09	17	1740	S17 E08	09	18.3		B	DAO	130	24	7	4
3905		MANI	09	17	2343	S16 E05	09	18.4			DAO	160	20	9	3
3905		LEAR	09	18	0030	S16 E03	09	18.2		B	DAO	150	27	7	3
3905		RAMY	09	18	1345	S14 W06	09	18.1		B	DAO	90	6	4	3
3905		PALE	09	18	1920	S17 W07	09	18.3		B	DAO	70	12	8	3
3905		LEAR	09	19	0114	S16 W12	09	18.1		B	CAO	100	15	7	3
3905		RAMY	09	19	1241	S16 W19	09	18.1		B	CSO	50	6	3	2
3905		HOLL	09	19	1435	S16 W22	09	17.9		B	DAO	60	8	3	2
3905	23342	MWIL	09	19	1700	S15 W21	09	18.1	4	AP					
3905		BOUL	09	19	1720	S16 W24	09	17.9		B	DSO	20	6	7	2
3905		PALE	09	19	1940	S15 W22	09	18.2		B	DSO	20	2	1	2
3905		LEAR	09	20	0138	S16 W25	09	18.2		B	CSO	50	4	6	3
3905		RAMY	09	20	1241	S18 W30	09	18.2		B	DSO	80	3	8	2
3905		HOLL	09	20	1428	S17 W32	09	18.2		B	CRO	40	3	6	3
3905		BOUL	09	20	1506	S16 W32	09	18.2		B	DSO	30	7	8	2
3905	23342	MWIL	09	20	1600	S16 W32	09	18.2	4	( B)					
3905		PALE	09	20	1850	S16 W34	09	18.2		B	CRO	30	4	7	3
3905		LEAR	09	21	0005	S16 W40	09	18.0		A	HRX	20	2	2	4
3905		MANI	09	21	0009	S16 W36	09	18.3			CRO	30	3	3	2
3905		RAMY	09	21	1215	S17 W46	09	18.0		B	CSO	70	3	3	4
3905		BOUL	09	21	1423	S14 W46	09	18.1		B	BXO	10	3	4	3
3905	23342	MWIL	09	21	1600	S16 W48	09	18.0	3	(AP)					
3905		PALE	09	21	1705	S15 W48	09	18.1		A	AXX	10	1		3
3905		MANI	09	22	0028	S15 W52	09	18.1			BXO	20	2	3	2
3905		LEAR	09	22	0130	S14 W53	09	18.1		B	BXO		2	3	3
3905		BOUL	09	22	1415	S13 W62	09	17.9		A	AXX	10	1	1	8
3905		HOLL	09	22	1440	S16 W60	09	18.1		A	AXX	10	1		3
3905	23342	MWIL	09	22	1530	S17 W61	09	18.0	4	(AP)					
3905		PALE	09	22	1818	S15 W64	09	17.9		A	AXX	10	1	1	3
3905		MANI	09	23	0035	S15 W66	09	18.0			AXX	10	1	1	2
3905		LEAR	09	23	0120	S15 W67	09	18.0		A	HRX	10	1	1	3
3905		HOLL	09	23	1540	S16 W76	09	17.9		A	AXX		1		3
3906		HOLL	09	13	1410	N02 E62	09	18.2		A	AXX		1		3
3906	23343	MWIL	09	13	1515	N02 E61	09	18.2	3	(AF)					
3906		PALE	09	13	1756	N02 E60	09	18.2		B	BXO	20	3	3	4
3906		MANI	09	13	2320	N02 E57	09	18.2			BXO	20	4	3	3
3906		LEAR	09	14	0229	N02 E55	09	18.2		B	CRO	30	4	4	3
3906		RAMY	09	14	1318	N03 E48	09	18.1		B	CSO	10	3	3	2
3906		HOLL	09	14	1506	N02 E48	09	18.2		B	CRO	50	4	5	4
3906	23343	MWIL	09	14	1530	N02 E48	09	18.2	4	( B)					
3906		PALE	09	14	1900	N02 E47	09	18.3		B	DAO	60	3	6	3
3906		MANI	09	15	0045	N02 E44	09	18.3			CSO	30	6	5	2
3906		LEAR	09	15	0110	N01 E43	09	18.3		B	DSO	50	3	6	3
3906		HOLL	09	15	1410	N02 E35	09	18.2		B	DSO	90	7	7	3
3906		PALE	09	15	1938	N01 E33	09	18.3		B	DSO	70	11	6	3
3906		MANI	09	16	0324	N02 E28	09	18.2			CSO	180	13	5	2
3906		LEAR	09	16	0555	N01 E26	09	18.2		B	DSO	60	13	6	2

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NOAA/ USAF Region	Mt Wilson Region	Observation Sta	Time			Lat	CMD	CMP Mo	Day	Max H	Mag Class	Spot Class	Corrected Area		Spot Count	Long. Extent (Deg)	Qual
			Mo	Day	(UT)								(10 <sup>-6</sup>	Hemi)			
3906		RAMY	09	16	1320	N03	E23	09	18.3		B	DAO	130	21	7	4	
3906		BOUL	09	16	1457	N03	E20	09	18.1		B	DSO	50	8	6	2	
3906		HOLL	09	16	1500	N02	E20	09	18.1		B	DAO	90	13	6	4	
3906		PALE	09	16	1720	N02	E21	09	18.3		B	DSO	60	10	5	3	
3906		LEAR	09	17	0142	N01	E16	09	18.3		B	DAO	110	7	6	3	
3906		HOLL	09	17	1445	N03	E09	09	18.3		B	DSO	80	10	4	4	
3906		PALE	09	17	1740	N01	E06	09	18.2		B	DSO	80	17	5	4	
3906		MANI	09	17	2343	N02	E03	09	18.2			DAO	70	11	5	3	
3906		LEAR	09	18	0030	N01	E02	09	18.2		B	DAO	90	21	6	3	
3906		RAMY	09	18	1345	N03	W05	09	18.2		B	CAO	40	7	6	3	
3906		PALE	09	18	1920	S01	W07	09	18.3		B	DSO	50	7	7	3	
3906		LEAR	09	19	0114	N02	W12	09	18.2		B	BXO	40	9	6	3	
3906		RAMY	09	19	1241	N02	W17	09	18.3		B	BXO	40	5	5	2	
3906		HOLL	09	19	1435	N02	W19	09	18.2		B	BXO	10	4	5	2	
3906		LEAR	09	20	0138	S01	W27	09	18.1		A	AXX		1		3	
3907		HOLL	09	13	1410	S09	E87	09	20.1			HSX	100	1	2	3	
3907	23344	MWIL	09	13	1515	S10	E82	09	19.8	2	(AP)						
3907		PALE	09	13	1756	S11	E85	09	20.1		B	CHO	180	3	7	4	
3907		LEAR	09	14	0229	S11	E77	09	19.9		A	HKX	250	2	5	3	
3907		RAMY	09	14	1318	S09	E74	09	20.1		B	DKO	390	6	7	2	
3907		HOLL	09	14	1506	S09	E71	09	20.0		A	HHX	380	4	5	4	
3907	23344	MWIL	09	14	1530	S10	E70	09	19.9	4	(AP)						
3907		PALE	09	14	1900	S10	E70	09	20.1		B	CHO	260	3	6	3	
3907		MANI	09	15	0045	S11	E70	09	20.3			HAX	70	5	3	2	
3907		LEAR	09	15	0110	S10	E66	09	20.0		A	HKX	400	4	4	3	
3907		HOLL	09	15	1410	S09	E58	09	19.9		BD	DKC	260	4	5	3	
3907		MANI	09	16	0324	S11	E51	09	20.0			HAX	390	4	3	2	
3907		LEAR	09	16	0555	S10	E49	09	19.9		BD	CKC	350	6	6	2	
3907		RAMY	09	16	1320	S08	E46	09	20.0		B	DKO	340	16	7	4	
3907		BOUL	09	16	1457	S10	E45	09	20.0		BD	DKI	210	6	9	2	
3907		HOLL	09	16	1500	S10	E45	09	20.0		BD	DKI	350	11	8	4	
3907		PALE	09	16	1720	S11	E44	09	20.0		BD	CKI	230	10	6	3	
3907		LEAR	09	17	0142	S10	E39	09	20.0		B	DKC	290	16	5	3	
3907		HOLL	09	17	1445	S05	E34	09	20.2		B	DHI	210	8	5	4	
3907		PALE	09	17	1740	S11	E31	09	20.1		B	DSO	220	7	4	4	
3907		MANI	09	17	2343	S10	E29	09	20.2			DHO	320	14	8	3	
3907		LEAR	09	18	0030	S10	E26	09	20.0		B	DKI	340	16	7	3	
3907		RAMY	09	18	1345	S10	E19	09	20.0		B	DKO	150	10	7	3	
3907		PALE	09	18	1920	S11	E16	09	20.0		B	DSO	170	11	7	3	
3907		LEAR	09	19	0114	S12	E13	09	20.0		B	DKI	290	21	6	3	
3907		RAMY	09	19	1241	S10	E08	09	20.1		B	DHI	230	23	6	2	
3907		HOLL	09	19	1435	S11	E06	09	20.1		B	CSI	230	2	6	2	
3907	23344	MWIL	09	19	1700	S10	E04	09	20.0	5	BP						
3907		BOUL	09	19	1720	S10	E03	09	19.9		B	DHI	210	16	7	2	
3907		PALE	09	19	1940	S12	E02	09	20.0		B	DSO	170	9	8	2	
3907		LEAR	09	20	0138	S12	E01	09	20.1		B	DSI	250	28	10	3	
3907		RAMY	09	20	1241	S13	W05	09	20.2		B	DSI	250	34	9	2	
3907		HOLL	09	20	1428	S12	W07	09	20.1		B	DSI	260	25	8	3	
3907		BOUL	09	20	1506	S12	W07	09	20.1		BG	DSI	130	23	8	2	
3907	23344	MWIL	09	20	1600	S12	W07	09	20.1	5	(BP)						
3907		PALE	09	20	1850	S12	W09	09	20.1		B	DAI	190	21	8	3	
3907		LEAR	09	21	0005	S12	W12	09	20.1		B	DSI	260	27	8	4	
3907		MANI	09	21	0009	S11	W12	09	20.1			DSI	330	23	8	2	
3907		RAMY	09	21	1215	S13	W19	09	20.1		B	DKI	270	36	9	4	
3907		BOUL	09	21	1423	S11	W19	09	20.2		BG	ESI	180	31	12	3	
3907	23344	MWIL	09	21	1600	S12	W21	09	20.1	5	(BP)						
3907		PALE	09	21	1705	S12	W21	09	20.1		BG	DSI	160	27	8	3	
3907		MANI	09	22	0028	S11	W25	09	20.1			DSI	380	21	8	2	
3907		LEAR	09	22	0130	S12	W26	09	20.1		B	DSI	200	21	8	3	
3907		BOUL	09	22	1415	S10	W34	09	20.0		B	DSO	200	20	8	8	
3907		HOLL	09	22	1440	S13	W34	09	20.0		B	DSO	500	29	8	3	
3907	23344	MWIL	09	22	1530	S13	W35	09	20.0	4	(BP)						
3907		PALE	09	22	1818	S13	W36	09	20.0		B	DSO	130	23	7	3	
3907		MANI	09	23	0035	S13	W40	09	20.0			DSO	350	22	8	2	
3907		LEAR	09	23	0120	S12	W39	09	20.1		B	DSI	190	16	7	3	
3907		BOUL	09	23	1440	S13	W47	09	20.1		B	DSO	120	13	7	3	
3907	23344	MWIL	09	23	1525	S13	W48	09	20.0	5	(BP)						
3907		HOLL	09	23	1540	S13	W47	09	20.1		B	DSO	130	11	8	3	
3907		PALE	09	23	1953	S13	W50	09	20.1		B	DSO	120	12	6	2	
3907		LEAR	09	24	0055	S12	W54	09	20.0		B	DSO	130	8	7	3	

REGIONS OF SUNSPOT ACTIVITY  
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NOAA/ USAF Region	Mt Wilson Region	Sta	Observation Time		Lat	CMD	CMP Mo	Day	Max H	Mag Class	Spot Class	Corrected Area (10 <sup>-6</sup> Heml)	Spot Count	Long. Extent (Deg)	Qual
3907		RAMY	09	24	1350	S15	W60	09	20.0	B	CAO	140	6	5	3
3907		BOUL	09	24	1445	S12	W62	09	19.9	B	CSO	70	3	8	3
3907		HOLL	09	24	1520	S13	W61	09	20.0	B	DAO	90	5	6	3
3907		MANI	09	24	2312	S13	W67	09	19.9		CSO	160	3	4	2
3907		LEAR	09	25	0228	S12	W68	09	20.0	B	CSO	70	2	5	3
3907		RAMY	09	25	1319	S12	W75	09	19.9	A	HSX	90	1	2	1
3907		PALE	09	25	1950	S11	W85	09	19.4	A	HSX	40	1	2	3
3907		MANI	09	25	2353	S13	W82	09	19.8		HSX	90	1	2	2
3908		PALE	09	13	1756	N18	E90	09	20.6	B	BXO	20	2	3	4
3908		MANI	09	13	2320	N17	E87	09	20.6		HAX	200	1	2	3
3908		LEAR	09	14	0229	N18	E80	09	20.2	A	HSX	250	1	2	3
3908		RAMY	09	14	1318	N11	E80	09	20.6	B	DKO	250	4	5	2
3908		HOLL	09	14	1506	N19	E78	09	20.6	B	DSO	260	5	6	4
3908	23345	MWIL	09	14	1530	N18	E78	09	20.6	4	(AP)				
3908		PALE	09	14	1900	N19	E78	09	20.7	B	DSO	300	4	7	3
3908		MANI	09	15	0045	N17	E73	09	20.6		DAI	100	8	6	2
3908		LEAR	09	15	0110	N18	E74	09	20.7	B	DAI	290	8	9	3
3908		HOLL	09	15	1410	N18	E65	09	20.5	B	DKO	250	7	7	3
3908		PALE	09	15	1938	N18	E62	09	20.5	B	DKI	240	11	7	3
3908		MANI	09	16	0324	N17	E59	09	20.6		DAI	650	6	9	2
3908		LEAR	09	16	0555	N18	E56	09	20.5	B	DKO	240	5	6	2
3908		RAMY	09	16	1320	N21	E53	09	20.6	B	DKO	260	10	7	4
3908		BOUL	09	16	1457	N18	E51	09	20.5	B	DSO	210	4	5	2
3908		HOLL	09	16	1500	N20	E51	09	20.5	B	DKI	220	7	7	4
3908		PALE	09	16	1720	N19	E51	09	20.6	B	DSO	220	4	5	3
3908		LEAR	09	17	0142	N19	E46	09	20.6	B	DAI	230	9	6	3
3908		HOLL	09	17	1445	N20	E36	09	20.4	B	DAO	140	10	7	4
3908		PALE	09	17	1740	N19	E38	09	20.6	B	DSO	150	13	7	4
3908		MANI	09	17	2343	N18	E32	09	20.4		DKI	230	15	7	3
3908		LEAR	09	18	0030	N19	E34	09	20.6	B	DAI	220	15	6	3
3908		RAMY	09	18	1345	N20	E27	09	20.6	B	DAO	140	14	6	3
3908		PALE	09	18	1920	N19	E23	09	20.6	B	DAO	170	10	8	3
3908		LEAR	09	19	0114	N18	E19	09	20.5	B	DSO	190	17	8	3
3908		RAMY	09	19	1241	N20	E13	09	20.5	B	DKO	270	29	8	2
3908		HOLL	09	19	1435	N20	E13	09	20.6	BD	EAI	210	21	12	2
3908	23345	MWIL	09	19	1700	N19	E12	09	20.6	5	BP				
3908		BOUL	09	19	1720	N20	E11	09	20.6	B	DKO	260	20	12	2
3908		PALE	09	19	1940	N18	E10	09	20.6	BD	DAI	240	10	7	2
3908		LEAR	09	20	0138	N18	E08	09	20.7	B	CKO	240	21	8	3
3908		RAMY	09	20	1241	N20	W02	09	20.4	B	DKO	300	19	6	2
3908		HOLL	09	20	1428	N18	E01	09	20.7	B	EKI	280	17	11	3
3908		BOUL	09	20	1506	N19	E01	09	20.7	BG	EKI	190	24	12	2
3908	23345	MWIL	09	20	1600	N19	W02	09	20.5	4	(D)				
3908		PALE	09	20	1850	N19	W02	09	20.6	BG	EKO	260	18	12	3
3908		LEAR	09	21	0005	N18	W06	09	20.5	B	DKO	250	14	7	4
3908		MANI	09	21	0009	N18	W04	09	20.7		DKO	310	17	10	2
3908		RAMY	09	21	1215	N18	W13	09	20.5	BG	DKO	290	23	8	4
3908		BOUL	09	21	1423	N20	W15	09	20.5	B	DKI	170	10	6	3
3908	23345	MWIL	09	21	1600	N19	W15	09	20.5	4	(BP)				
3908		PALE	09	21	1705	N19	W17	09	20.4	B	DKI	210	13	6	3
3908		MANI	09	22	0028	N19	W19	09	20.6		DKO	300	13	6	2
3908		LEAR	09	22	0130	N19	W20	09	20.5	B	DSI	160	12	6	3
3908		BOUL	09	22	1415	N21	W27	09	20.5	B	DSO	90	10	6	8
3908		HOLL	09	22	1440	N19	W28	09	20.5	B	DSO	150	26	7	3
3908	23345	MWIL	09	22	1530	N19	W27	09	20.6	4	(B)				
3908		PALE	09	22	1818	N19	W28	09	20.6	B	DSO	110	13	5	3
3908		MANI	09	23	0035	N19	W33	09	20.5		DSO	150	11	6	2
3908		LEAR	09	23	0120	N19	W34	09	20.5	B	DSI	90	15	7	3
3908		BOUL	09	23	1440	N20	W40	09	20.5	B	CSO	50	7	5	3
3908	23345	MWIL	09	23	1525	N19	W41	09	20.5	4	(B)				
3908		HOLL	09	23	1540	N19	W42	09	20.4	B	CRO	60	9	7	3
3908		PALE	09	23	1953	N20	W43	09	20.5	B	CRO	40	6	6	2
3908		LEAR	09	24	0055	N19	W47	09	20.4	B	CRO	20	2	5	3
3908		RAMY	09	24	1350	N18	W55	09	20.4	B	BXO	40	4	7	3
3908		BOUL	09	24	1445	N20	W55	09	20.4	B	BXO	30	3	6	3
3908		HOLL	09	24	1520	N18	W54	09	20.5	B	CAO	20	5	5	3
3908		MANI	09	24	2312	N19	W61	09	20.3		AXX	10	2	1	2
3908		LEAR	09	25	0228	N20	W58	09	20.7	A	AXX		1		3
3908		RAMY	09	25	1319	N18	W71	09	20.1	A	AXX	10	1	1	1
3908		MANI	09	25	2353	N19	W74	09	20.3		AXX	10	1		2

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NOAA/ USAF Region	Mt Wilson Region	Observation Sta	Mo	Day	Time (UT)	Lat	CMD	CMP Mo	Day	Max H	Mag Class	Spot Class	Corrected Area (10 <sup>-6</sup> Heml)	Spot Count	Long. Extent (Deg)	Qual
3908		LEAR	09	26	0343	N16	W76	09	20.4		A	AXX		1		3
3912		HOLL	09	19	1435	S10	E28	09	21.7		B	BXO		2	3	2
3912		BOUL	09	19	1720	S10	E25	09	21.6		B	BXO		2	2	2
3912		LEAR	09	20	0138	S12	E22	09	21.7		A	AXX		1		3
3912		BOUL	09	20	1506	S09	E08	09	21.2		B	BXO		3	4	2
3910		LEAR	09	15	0110	N13	E85	09	21.5		B	BXO	10	5	7	3
3910		HOLL	09	15	1410	N14	E78	09	21.5		A	HKX	170	2	5	3
3910		PALE	09	15	1938	N13	E77	09	21.6		B	DKO	170	4	5	3
3910		MANI	09	16	0324	N11	E73	09	21.6			DAI	220	3	6	2
3910		LEAR	09	16	0555	N13	E68	09	21.4		B	DAI	170	6	5	2
3910		RAMY	09	16	1320	N16	E68	09	21.7		B	DKO	270	13	7	4
3910		BOUL	09	16	1457	N12	E63	09	21.4		B	DSI	110	8	7	2
3910		HOLL	09	16	1500	N14	E65	09	21.5		B	DSO	220	7	5	4
3910		PALE	09	16	1720	N13	E62	09	21.4		B	DSI	210	9	6	3
3910		LEAR	09	17	0142	N13	E59	09	21.5		B	DAI	280	11	7	3
3910		HOLL	09	17	1445	N14	E50	09	21.4		B	DSO	160	4	6	4
3910		PALE	09	17	1740	N15	E52	09	21.7		B	DSO	160	15	8	4
3910		MANI	09	17	2343	N13	E46	09	21.5			DSO	150	9	8	3
3910		LEAR	09	18	0030	N14	E46	09	21.5		B	DAI	260	11	7	3
3910		RAMY	09	18	1345	N15	E41	09	21.7		B	EKO	120	12	11	3
3910		PALE	09	18	1920	N14	E38	09	21.7		B	DSO	200	10	10	3
3910		LEAR	09	19	0114	N14	E35	09	21.7		B	EAO	240	20	13	3
3910		RAMY	09	19	1241	N16	E30	09	21.8		B	DAO	250	27	13	2
3910		HOLL	09	19	1435	N16	E29	09	21.8		B	EAO	290	28	14	2
3910	23346	MWIL	09	19	1700	N14	E28	09	21.8	5	BP					
3910		BOUL	09	19	1720	N14	E24	09	21.5		B	EAO	220	14	14	2
3910		PALE	09	19	1940	N13	E28	09	21.9		B	EAO	250	8	12	2
3910		LEAR	09	20	0138	N15	E23	09	21.8		B	EAO	260	23	14	3
3910		RAMY	09	20	1241	N17	E17	09	21.8		B	EKO	260	33	13	2
3910		HOLL	09	20	1428	N15	E16	09	21.8		B	EAO	220	25	15	3
3910		BOUL	09	20	1506	N13	E10	09	21.4		B	CAO	100	8	5	2
3910	23346	MWIL	09	20	1600	N14	E14	09	21.7	4	(BP)					
3910		PALE	09	20	1850	N15	E14	09	21.8		B	EKO	190	20	15	3
3910		LEAR	09	21	0005	N13	E06	09	21.5		B	DAI	100	13	5	4
3910		MANI	09	21	0009	N13	E09	09	21.7			EKO	240	17	15	2
3910		RAMY	09	21	1215	N14	W00	09	21.5		B	DKO	160	23	8	4
3910		BOUL	09	21	1423	N12	W03	09	21.4		A	CSI	70	16	6	3
3910	23346	MWIL	09	21	1600	N14	E01	09	21.7	4	(BP)					
3910		PALE	09	21	1705	N13	W03	09	21.5		B	DAO	60	15	7	3
3910		MANI	09	22	0028	N13	W07	09	21.5			DKI	250	23	7	2
3910		LEAR	09	22	0130	N13	W07	09	21.5			CRJ	70	22	8	3
3910		BOUL	09	22	1415	N17	W13	09	21.6		B	CRO	60	11	8	8
3910		HOLL	09	22	1440	N13	W14	09	21.6		B	CRO	200	23	7	3
3910	23346	MWIL	09	22	1530	N15	W13	09	21.7	4	(BY)					
3910		PALE	09	22	1818	N13	W16	09	21.6		B	DSO	80	22	6	3
3910		MANI	09	23	0035	N13	W20	09	21.5			DKO	120	19	7	2
3910		LEAR	09	23	0120	N14	W20	09	21.5		B	DAI	70	21	7	3
3910		BOUL	09	23	1440	N16	W24	09	21.8		BG	ESI	50	22	13	3
3910	23346	MWIL	09	23	1525	N15	W26	09	21.7	3	(BY)					
3910		HOLL	09	23	1540	N13	W26	09	21.7		BG	EAI	100	20	11	3
3910		PALE	09	23	1953	N14	W29	09	21.6		BG	DAO	120	14	10	2
3910		LEAR	09	24	0055	N15	W31	09	21.7		B	DAO	70	12	10	3
3910		RAMY	09	24	1350	N13	W39	09	21.6		B	BXO	50	10	9	3
3910		BOUL	09	24	1445	N16	W38	09	21.7		B	CSO	50	18	16	3
3910		HOLL	09	24	1520	N14	W40	09	21.6		BG	DAI	50	12	10	3
3910		MANI	09	24	2312	N15	W46	09	21.5			DAO	170	11	10	2
3910		LEAR	09	25	0228	N15	W46	09	21.6		B	BXI	70	13	10	3
3910		RAMY	09	25	1319	N14	W55	09	21.4		B	CSO	70	7	8	1
3910		PALE	09	25	1950	N13	W59	09	21.4		B	CSO	20	3	9	3
3910		MANI	09	25	2353	N15	W60	09	21.4			CRO	30	4	6	2
3910		LEAR	09	26	0343	N14	W67	09	21.1		A	AXX		1		3
		HOLL	09	23	1540	N24	W24	09	21.8		A	AXX		1		3
3914		HOLL	09	20	1428	N16	E20	09	22.1		B	CSO	50	9	5	3
3914		BOUL	09	20	1506	N16	E18	09	22.0		B	DAO	90	13	5	2
3914		LEAR	09	21	0005	N15	E15	09	22.1		B	DRJ	60	13	7	4
3914		RAMY	09	21	1215	N16	E08	09	22.1		B	CKO	100	12	7	4
3914		BOUL	09	21	1423	N17	E08	09	22.2		B	CSO	50	13	13	3



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NOAA/ USAF Region	Mt Wilson Region	Sta	Observation Time Mo Day (UT)	Lat CMD	CMP Mo Day	Max H	Mag Class	Spot Class	Corrected Area (10 <sup>-6</sup> Heml)	Spot Count	Long. Extent (Deg)	Qual
3914		PALE	09 21 1705	N15 E06	09 22.2		B	CSO	50	11	6	3
3914		MANI	09 22 0028	N15 W00	09 22.0			CSO	90	8	5	2
3914		LEAR	09 22 0130	N15 W01	09 22.0		A	HSX	50	5	2	3
3914		BOUL	09 22 1415	N18 W08	09 22.0		A	HRX	20	2	2	8
3914		HOLL	09 22 1440	N16 W07	09 22.1		B	CRO	40	6	5	3
3914		PALE	09 22 1818	N15 W10	09 22.0		A	HAX	40	2	2	3
3914		MANI	09 23 0035	N15 W13	09 22.0			CSO	60	3	3	2
3914		LEAR	09 23 0120	N16 W14	09 22.0		A	HSX	40	3	2	3
3913		HOLL	09 19 1435	S08 E38	09 22.5		B	BXO	10	3	3	2
3913		BOUL	09 19 1720	S08 E36	09 22.4		A	AXX		1		2
3913		LEAR	09 20 0138	S08 E32	09 22.5		B	BXO	30	7	4	3
3913		RAMY	09 20 1241	S07 E26	09 22.5		B	BXO	50	4	5	2
3913		HOLL	09 20 1428	S08 E24	09 22.4		B	BXO	20	5	6	3
3913		BOUL	09 20 1506	S08 E24	09 22.4		B	CRO	10	8	6	2
3913	23348	MWIL	09 20 1600	S09 E23	09 22.4	3	( B)					
3913		PALE	09 20 1850	S09 E23	09 22.5		B	BXO	20	5	4	3
3913		LEAR	09 21 0005	S09 E19	09 22.4		B	BXO	20	7	6	4
3913		MANI	09 21 0009	S09 E20	09 22.5			CRO	40	7	7	2
3913		RAMY	09 21 1215	S08 E13	09 22.5		B	DRO	80	6	6	4
3913		BOUL	09 21 1423	S07 E10	09 22.3		B	BXO	10	3	6	3
3913	23348	MWIL	09 21 1600	S09 E11	09 22.5	3	( B)					
3913		PALE	09 21 1705	S09 E10	09 22.5		B	BXO	10	3	5	3
3913		MANI	09 22 0028	S09 E05	09 22.4			BXO	10	3	5	2
3913		LEAR	09 22 0130	S08 E02	09 22.2		A	AXX		1		3
3913		BOUL	09 22 1415	S07 W02	09 22.4		B	BXO	10	2	3	8
3913		HOLL	09 22 1440	S09 W04	09 22.3		B	BXO	20	9	6	3
3913	23348	MWIL	09 22 1530	S09 W04	09 22.3	3	( B)					
3913		PALE	09 22 1818	S09 W05	09 22.4		B	BXO	20	8	7	3
3913		MANI	09 23 0035	S09 W09	09 22.3			BXO	20	7	7	2
3913		LEAR	09 23 0120	S09 W10	09 22.3		B	BXO	10	6	5	3
3913		BOUL	09 23 1440	S08 W16	09 22.4		B	CRO	20	7	6	3
3913	23348	MWIL	09 23 1525	S09 W17	09 22.4	3	( B)					
3913		HOLL	09 23 1540	S09 W17	09 22.4		B	CRO	20	3	4	3
3913		PALE	09 23 1953	S09 W18	09 22.5		B	CSO	40	7	6	2
3913		LEAR	09 24 0055	S09 W22	09 22.4		B	CRO	20	5	5	3
3913		RAMY	09 24 1350	S10 W29	09 22.4		B	BXO	50	7	5	3
3913		BOUL	09 24 1445	S07 W30	09 22.4		B	BXO	20	10	5	3
3913		HOLL	09 24 1520	S09 W30	09 22.4		B	DSO	50	9	8	3
3913		MANI	09 24 2312	S09 W35	09 22.3			CSO	90	7	8	2
3913		LEAR	09 25 0228	S08 W37	09 22.3		B	BXO	40	8	6	3
3913		RAMY	09 25 1319	S10 W43	09 22.3		B	CSO	60	8	7	1
3913		PALE	09 25 1950	S11 W45	09 22.4		B	CRO	20	3	3	3
3913		MANI	09 25 2353	S09 W39	09 23.1			CRO	30	5	8	2
3913		LEAR	09 26 0343	S09 W52	09 22.2		B	BXO	10	2	6	3
3913		RAMY	09 26 1335	S11 W55	09 22.4		B	BXO	20	4	5	2
		HOLL	09 22 1440	N28 W04	09 22.3		B	BXO		2	4	3
3915		RAMY	09 21 1215	N18 E17	09 22.8		B	BXO	10	3	3	4
3915		RAMY	09 24 1350	N16 W24	09 22.8		A	AXX	10	1	1	3
3915		BOUL	09 24 1445	N17 W24	09 22.8		B	BXO	10	2	2	3
3915		HOLL	09 24 1520	N16 W24	09 22.8		A	AXX		1		3
3920		PALE	09 23 1920	S08 W18	09 22.5		B	BXO	10	3	5	2
3920		RAMY	09 24 1350	S08 W15	09 23.5		B	BXO	20	4	4	3
3920		BOUL	09 24 1445	S04 W17	09 23.3		B	BXO	20	6	4	3
3920		HOLL	09 24 1520	S07 W15	09 23.5		B	BXO	20	8	5	3
3920		MANI	09 24 2312	S08 W21	09 23.4			BXO	10	4	5	2
3920		LEAR	09 25 0228	S06 W24	09 23.3		A	AXX		1		3
3920		RAMY	09 25 1319	S07 W28	09 23.5		B	CSO	50	5	4	1
3920		PALE	09 25 1950	S06 W32	09 23.4		B	CRO	30	2	4	3
3920		MANI	09 25 2353	S08 W34	09 23.4			CRO	30	3	3	2
3920		LEAR	09 26 0343	S06 W36	09 23.5		B	CRO	20	3	4	3
3920		RAMY	09 26 1335	S07 W41	09 23.5		A	HSX	30	1	1	2
3920		PALE	09 26 1808	S05 W44	09 23.5		A	AXX		1		3
3920		LEAR	09 27 0013	S06 W47	09 23.5		A	AXX		1		3
		HOLL	09 23 1540	N09 E04	09 24.0		A	AXX		1		3
3918		LEAR	09 23 0120	N17 E21	09 24.7		A	AXX		1		3

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NOAA/ USAF Region	Mt Wilson Region	Sta	Observation Time			Lat CMD	CMP Mo Day	Max H	Mag Class	Spot Class	Corrected Area		Spot Count	Long. Extent (Deg)	Qual
			Mo	Day	(UT)						(10 <sup>-6</sup>	Heml)			
3918		BOUL	09	23	1440	N18 E12	09 24.5		B	BX0	10	2	3	3	
3918	23351	MWIL	09	23	1525	N17 E13	09 24.6	2	( B)						
3918		HOLL	09	23	1540	N17 E14	09 24.7		B	BX0		2	3	3	
3918		PALE	09	23	1953	N17 E12	09 24.7		B	BX0	10	2	3	2	
3918		LEAR	09	24	0055	N17 E08	09 24.6		B	BX0		2	3	3	
3918		BOUL	09	24	1445	N17 W03	09 24.4		B	BX0	10	2	3	3	
3925		LEAR	09	25	0228	S14 E06	09 25.6		A	AXX		1		3	
3925		PALE	09	25	1950	S10 W07	09 25.3		B	BX0	20	3	2	3	
3925		MANI	09	25	2353	S10 W09	09 25.3			BX0	20	5	3	2	
3925		LEAR	09	26	0343	S11 W11	09 25.3		B	BX0	20	4	3	3	
3925		RAMY	09	26	1335	S11 W18	09 25.2		A	HRX	20	1	1	2	
3925		PALE	09	26	1808	S10 W20	09 25.3		A	AXX		1		3	
3925		LEAR	09	27	0013	S10 W23	09 25.3		A	AXX		1		3	
3916		BOUL	09	22	1415	S17 E60	09 27.2		B	BX0	30	2	2	8	
3916		HOLL	09	22	1440	S18 E62	09 27.3		B	CS0	20	4	4	3	
3916	23349	MWIL	09	22	1530	S18 E63	09 27.4	3	(AP)						
3916		PALE	09	22	1818	S19 E62	09 27.5		B	BX0	20	3	7	3	
3916		MANI	09	23	0035	S19 E59	09 27.5			BX0	30	3	6	2	
3916		LEAR	09	23	0120	S19 E57	09 27.4		B	BX0		3	6	3	
3916		BOUL	09	23	1440	S19 E50	09 27.4		B	BX0	10	2	4	3	
3916	23349	MWIL	09	23	1525	S18 E50	09 27.5	3	( B)						
3916		HOLL	09	23	1540	S19 E51	09 27.5		B	BX0		2	5	3	
3916		PALE	09	23	1953	S18 E43	09 27.1		B	BX0	20	4	6	2	
3916		LEAR	09	24	0055	S18 E40	09 27.1		B	BX0	10	3	4	3	
3916		RAMY	09	24	1350	S19 E35	09 27.2		B	BX0	30	2	6	3	
3916		BOUL	09	24	1445	S16 E31	09 27.0		B	BX0	20	3	4	3	
3916		HOLL	09	24	1520	S18 E33	09 27.2		B	BX0	20	4	6	3	
3916		MANI	09	24	2312	S19 E27	09 27.0			BX0	20	5	6	2	
3916		LEAR	09	25	0228	S18 E27	09 27.2		B	BX0	20	5	8	3	
3916		RAMY	09	25	1319	S18 E22	09 27.2		B	BX0	30	3	3	1	
3916		PALE	09	25	1950	S18 E19	09 27.3		B	BX0	30	3	3	3	
3916		MANI	09	25	2353	S19 E14	09 27.1			BX0	10	2	3	2	
3916		LEAR	09	26	0343	S18 E15	09 27.3		B	BX0	10	3	3	3	
3916		RAMY	09	26	1335	S17 E11	09 27.4		A	AXX	20	1	1	2	
3916		PALE	09	26	1808	S17 E07	09 27.3		B	BX0	10	2	4	3	
3916		RAMY	09	27	1345	S19 W03	09 27.3		A	HSX	20	1	1	3	
3916		BOUL	09	27	1440	S16 W05	09 27.2		A	AXX		1		3	
3916		HOLL	09	27	1506	S18 W04	09 27.3		A	AXX	40	1	1	2	
3916	23349	MWIL	09	27	1730	S19 W05	09 27.3	3	(AF)						
3916		PALE	09	27	1800	S17 W06	09 27.3		B	BX0	20	4	3	3	
3916		LEAR	09	28	0024	S17 W11	09 27.2		B	CR0	20	8	4	3	
3916		LEAR	09	29	0108	S17 W25	09 27.1		B	DA0	70	11	6	3	
3916		RAMY	09	29	1210	S19 W31	09 27.1		B	CS0	90	12	7	4	
3916		BOUL	09	29	1538	S18 W35	09 27.0		B	CS0	60	4	4	3	
3916		HOLL	09	29	1717	S18 W34	09 27.1		B	CS0	70	8	5	2	
3916		PALE	09	29	1842	S17 W35	09 27.1		B	CS0	50	5	4	3	
3916		LEAR	09	30	0421	S16 W40	09 27.1		B	CS0	50	7	4	3	
3916		RAMY	09	30	1325	S20 W47	09 27.0		B	CA0	70	3	4	3	
3916	23349	MWIL	09	30	1515	S17 W46	09 27.1	4	( B)						
3916		PALE	09	30	1920	S18 W49	09 27.1		B	CR0	40	3	4	3	
3916		LEAR	10	01	0227	S17 W53	09 27.1		B	BX0	10	3	4	3	
3916		HOLL	10	01	1710	S17 W62	09 27.0		A	AXX		0		4	
3916		LEAR	10	02	0020	S17 W66	09 27.0		A	AXX		1		3	
3928		LEAR	09	29	0108	S09 W09	09 28.4		B	CR0	10	6	4	3	
3928		RAMY	09	29	1210	S09 W16	09 28.3		B	DA0	40	11	4	4	
3928		BOUL	09	29	1538	S08 W18	09 28.3		B	BX0	10	8	3	3	
3928		HOLL	09	29	1717	S09 W18	09 28.4		B	BX0	20	7	4	2	
3928		PALE	09	29	1842	S09 W19	09 28.4		B	CS0	30	9	4	3	
3928		LEAR	09	30	0421	S08 W25	09 28.3		B	DR0	40	7	4	3	
3928		RAMY	09	30	1325	S11 W30	09 28.3		B	CS0	50	7	4	3	
3928	23358	MWIL	09	30	1515	S09 W31	09 28.3	4	( B)						
3928		PALE	09	30	1920	S10 W34	09 28.2		B	CS0	30	3	6	3	
3928		LEAR	10	01	0227	S08 W37	09 28.3		B	CR0	40	6	7	3	
3928		RAMY	10	01	1250	S08 W45	09 28.2		B	CS0	60	4	2	2	
3928	23358	MWIL	10	01	1600	S10 W46	09 28.2	3	(BP)						
3928		HOLL	10	01	1710	S10 W48	09 28.1		B	BX0	10	3	3	4	
3928		PALE	10	01	2000	S09 W49	09 28.2		B	BX0	20	2	3	2	
3928		LEAR	10	02	0020	S08 W52	09 28.1		B	BX0		2	3	3	

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NOAA/ USAF Region	Mt Wilson Region	Sta	Observation Time			CMP Mo Day	Max H	Mag Class	Spot Class	Corrected		Spot Count	Long. Extent (Deg)	Qual
			Mo	Day	(UT)					Lat	CMD			
		BOUL	09	27	1440	S04 E16	09 28.8		A	AXX		1		3
3919		LEAR	09	23	0120	S10 E75	09 28.7		B	BXO		3	3	3
3919		BOUL	09	23	1440	S11 E66	09 28.6		B	CRO	20	2	3	3
3919	23352	MWIL	09	23	1525	S10 E68	09 28.8	2		AP				
3919		HOLL	09	23	1540	S09 E70	09 28.9		B	BXO	10	3	5	3
3919		PALE	09	23	1953	S08 E67	09 28.9		B	BRO	20	2	6	2
3919		LEAR	09	24	0055	S07 E64	09 28.8		B	CRO	10	2	7	3
3919		RAMY	09	24	1350	S09 E60	09 29.1		B	CSO	90	4	10	3
3919		BOUL	09	24	1445	S08 E50	09 28.4		B	BXO	20	3	2	3
3919		HOLL	09	24	1520	S09 E52	09 28.5		A	AXX	10	1	1	3
3919		MANI	09	24	2312	S09 E50	09 28.7			BXO	30	3		2
3919		LEAR	09	25	0228	S08 E49	09 28.8		B	BXO	20	3	8	3
3919		RAMY	09	25	1319	S10 E45	09 28.9		B	BXO	60	5	10	1
3919		PALE	09	25	1950	S10 E40	09 28.8		B	CSO	50	6	11	3
3919		MANI	09	25	2353	S09 E36	09 28.7			DAO	80	11	10	2
3919		LEAR	09	26	0343	S11 E36	09 28.9		B	CSI	90	15	10	3
3919		RAMY	09	26	1335	S10 E30	09 28.8		B	ERO	150	17	12	2
3919		PALE	09	26	1808	S11 E28	09 28.9		B	CSO	80	19	11	3
3919		LEAR	09	27	0013	S12 E25	09 28.9		B	BXI	30	29	9	3
3919		RAMY	09	27	1345	S11 E18	09 28.9		B	ESO	100	18	12	3
3919		BOUL	09	27	1440	S09 E15	09 28.7		BG	BXI	20	17	12	3
3919		HOLL	09	27	1506	S11 E16	09 28.8		B	ERO	80	14	13	2
3919	23352	MWIL	09	27	1730	S10 W13	09 26.8	3		B				
3919		PALE	09	27	1800	S10 E15	09 28.9		B	CSO	80	24	14	3
3919		LEAR	09	28	0024	S11 E10	09 28.8		B	CRO	40	18	14	3
3919		LEAR	09	29	0108	S10 W01	09 29.0		B	DAI	90	21	9	3
3919		RAMY	09	29	1210	S11 W06	09 29.1		B	DKO	170	39	8	4
3919		BOUL	09	29	1538	S10 W10	09 28.9		B	DSO	120	17	7	3
3919		HOLL	09	29	1717	S11 W09	09 29.0		B	DAO	220	33	8	2
3919		PALE	09	29	1842	S10 W10	09 29.0		B	DAI	170	34	9	3
3919		LEAR	09	30	0421	S11 W15	09 29.1		B	DAI	250	18	7	3
3919		RAMY	09	30	1325	S13 W20	09 29.0		B	DKO	160	14	9	3
3919	23352	MWIL	09	30	1515	S11 W21	09 29.1	5		(BY)				
3919		PALE	09	30	1920	S11 W24	09 29.0		B	DAO	240	15	10	3
3919		LEAR	10	01	0227	S12 W27	09 29.1		B	DKO	430	29	10	3
3919		RAMY	10	01	1250	S11 W35	09 28.9		B	EKO	490	32	11	2
3919	23352	MWIL	10	01	1600	S12 W35	09 29.0	5		(B)				
3919		HOLL	10	01	1710	S12 W37	09 28.9		B	EKO	650	41	13	4
3919		PALE	10	01	2000	S12 W38	09 29.0		B	EKO	500	10	14	2
3919		LEAR	10	02	0020	S12 W40	09 29.0		B	EK1	600	50	11	3
3919	23352	MWIL	10	02	1500	S12 W48	09 29.0	5		(D)				
3919		RAMY	10	02	1503	S12 W48	09 29.0		B	EKO	1540	38	11	2
3919		HOLL	10	02	1520	S12 W48	09 29.0		BG	EKO	580	21	14	2
3919		PALE	10	02	1808	S12 W49	09 29.1		BG	EKO	470	15	13	3
3919		MANI	10	02	2303	S12 W53	09 29.0			EAI	810	18	14	3
3919		LEAR	10	03	0040	S12 W54	09 29.0		B	EK1	560	26	13	3
3919		RAMY	10	03	1330	S13 W62	09 28.9		BG	FH1	850	17	16	3
3919		BOUL	10	03	1435	S11 W60	09 29.1		BG	EKO	1000	23	15	3
3919		HOLL	10	03	1516	S12 W62	09 29.0		BG	EKO	730	20	15	3
3919	23352	MWIL	10	03	1600	S12 W61	09 29.1	5		(D)				
3919		PALE	10	03	1838	S12 W64	09 29.0		BG	EKO	740	15	14	3
3919		MANI	10	03	2325	S13 W67	09 28.9			EHI	810	9	14	3
3919		LEAR	10	04	0015	S12 W68	09 28.9		BD	FK1	870	18	16	3
3919		BOUL	10	04	1415	S11 W70	09 29.3		B	FAI	600	11	17	3
3919	23352	MWIL	10	04	1515	S12 W75	09 29.0	3		(B)				
3919		HOLL	10	04	1752	S12 W76	09 29.0		B	FHO	800	3	21	3
3919		PALE	10	04	1824	S12 W79	09 28.8		B	FK1	640	15	18	3
3919		MANI	10	05	0001	S12 W79	09 29.0		BG	EHO	840	5	15	3
3919		LEAR	10	05	0105	S12 W79	09 29.1		B	DKO	390	10	9	3
3919		RAMY	10	05	1430	S14 W83	09 29.3		B	CAO	130	7	3	4
3919		BOUL	10	05	1450	S11 W88	09 29.0		B	DS1	430	3	8	2
3919		HOLL	10	05	1520	S13 W81	09 29.5		B	DAO	200	3	4	4
3919	23352	MWIL	10	05	1530	S12 W82	09 29.5	3		AF				
		BOUL	09	24	1445	S06 E60	09 29.1		A	AXX	10	1	1	3
3917		BOUL	09	22	1415	N14 E82	09 28.8		A	HSX	140	1	2	8
3917		HOLL	09	22	1440	N14 E80	09 28.7		A	HSX	180	1	3	3
3917	23350	MWIL	09	22	1530	N16 E85	09 29.1	2		AP				
3917		PALE	09	22	1818	N14 E81	09 28.9		A	HHX	120	1	3	3

REGIONS OF SUNSPOT ACTIVITY  
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NOAA/ USAF Region	Mt Wilson Region	Sta	Observation Time (UT)		Lat CMD	CMP Mo Day	Max H	Mag Class	Spot Class	Corrected Area (10 <sup>-6</sup> Heml)	Spot Count	Long. Extent (Deg)	Qual
3917		MANI	09	23	0035	N14 E78	09 28.9		HSX	370	1	2	2
3917		LEAR	09	23	0120	N15 E76	09 28.8		HHX	140	1	3	3
3917		BOUL	09	23	1440	N13 E68	09 28.7		HSX	200	1	2	3
3917	23350	MWIL	09	23	1525	N16 E69	09 28.9	5	(AP)				
3917		HOLL	09	23	1540	N14 E68	09 28.8		A HSX	200	2	2	3
3917		PALE	09	23	1953	N14 E65	09 28.7		B CSO	160	4	3	2
3917		LEAR	09	24	0055	N15 E63	09 28.8		B CHO	160	5	5	3
3917		RAMY	09	24	1350	N15 E58	09 29.0		B CKO	140	5	4	3
3917		BOUL	09	24	1445	N16 E55	09 28.8		B CSO	180	8	3	3
3917		HOLL	09	24	1520	N14 E55	09 28.8		B CAO	150	8	3	3
3917		MANI	09	24	2312	N14 E50	09 28.7		CSO	220	8	3	2
3917		LEAR	09	25	0228	N15 E47	09 28.7		B CAO	110	9	4	3
3917		RAMY	09	25	1319	N16 E43	09 28.8		B CKO	190	7	3	1
3917		PALE	09	25	1950	N14 E41	09 28.9		B CSO	150	5	10	3
3917		MANI	09	25	2353	N14 E38	09 28.9		DAO	240	14	10	2
3917		LEAR	09	26	0343	N15 E37	09 29.0		B CSO	160	13	10	3
3917		RAMY	09	26	1335	N16 E34	09 29.1		B EKO	300	25	12	2
3917		PALE	09	26	1808	N15 E30	09 29.0		BG EAI	210	29	12	3
3917		LEAR	09	27	0013	N15 E26	09 29.0		BG EAI	240	22	14	3
3917		RAMY	09	27	1345	N15 E20	09 29.1		BG EKO	300	36	14	3
3917		BOUL	09	27	1440	N18 E20	09 29.1		BG ESI	160	34	14	3
3917		HOLL	09	27	1506	N16 E19	09 29.1		BG EAI	330	28	15	2
3917	23350	MWIL	09	27	1730	N15 E19	09 29.2	4	(BP)				
3917		PALE	09	27	1800	N17 E17	09 29.0		BG EKI	250	34	14	3
3917		LEAR	09	28	0024	N16 E14	09 29.1		BG EKI	230	47	14	3
3917		LEAR	09	29	0108	N17 E01	09 29.1		BG EAI	440	41	13	3
3917		RAMY	09	29	1210	N16 W05	09 29.1		BG FKI	320	43	16	4
3917		BOUL	09	29	1538	N17 W08	09 29.0		BG EAO	320	30	12	3
3917		HOLL	09	29	1717	N17 W08	09 29.1		BG EAO	360	27	13	2
3917		PALE	09	29	1842	N16 W07	09 29.2		BG EAO	290	25	13	3
3917		LEAR	09	30	0421	N17 W14	09 29.1		BG ESI	330	39	13	3
3917		RAMY	09	30	1325	N13 W23	09 28.8		BG EKO	190	13	11	3
3917	23350	MWIL	09	30	1515	N17 W18	09 29.3	5	(BY)				
3917		PALE	09	30	1920	N16 W21	09 29.2		BG EAO	210	15	12	3
3917		LEAR	10	01	0227	N16 W24	09 29.3		BG EAO	230	23	13	3
3917		RAMY	10	01	1250	N15 W36	09 28.8		BG EAO	140	14	4	2
3917	23350	MWIL	10	01	1600	N17 W31	09 29.3	4	(B)				
3917		HOLL	10	01	1710	N16 W34	09 29.1		B EAO	150	13	13	4
3917		PALE	10	01	2000	N18 W35	09 29.2		B EAO	140	9	12	2
3917		LEAR	10	02	0020	N17 W37	09 29.2		BG EAO	100	18	12	3
3917	23350	MWIL	10	02	1500	N18 W44	09 29.3	5	(D)				
3917		RAMY	10	02	1503	N15 W45	09 29.2		BG EAI	250	12	11	2
3917		HOLL	10	02	1520	N17 W46	09 29.1		B CSO	150	8	12	2
3917		PALE	10	02	1808	N18 W47	09 29.2		B CSO	160	10	12	3
3917		MANI	10	02	2303	N15 W50	09 29.2		ESO	210	7	12	3
3917		LEAR	10	03	0040	N17 W50	09 29.2		B CAO	130	8	11	3
3917		RAMY	10	03	1330	N19 W52	09 29.6		BG CSO	130	5	4	3
3917		BOUL	10	03	1435	N17 W60	09 29.0		B CSO	100	9	10	3
3917		HOLL	10	03	1516	N17 W58	09 29.2		B CAO	140	8	12	3
3917	23350	MWIL	10	03	1600	N19 W56	09 29.4	4	(D)				
3917		PALE	10	03	1838	N20 W57	09 29.4		B CKO	140	8	5	3
3917		MANI	10	03	2325	N17 W60	09 29.4		B CAO	100	5	10	3
3917		LEAR	10	04	0015	N16 W63	09 29.2		B DSO	70	10	10	3
3917		BOUL	10	04	1415	N18 W64	09 29.7		A HSX	20	1	1	3
3917	23350	MWIL	10	04	1515	N20 W67	09 29.5	4	(D)				
3917		HOLL	10	04	1752	N18 W68	09 29.6		A HHX	100	2	3	3
3917		PALE	10	04	1824	N19 W69	09 29.5		B CSO	70	3	3	3
3917		MANI	10	05	0001	N18 W71	09 29.6		A HSX	90	2	2	3
3917		LEAR	10	05	0105	N18 W73	09 29.5		A HAX	60	3	2	3
3917		RAMY	10	05	1430	N18 W79	09 29.6		B CAO	60	2	3	4
3917		BOUL	10	05	1450	N20 W81	09 29.4		A HSX	80	1	1	2
3917		HOLL	10	05	1520	N18 W79	09 29.6		A HRX	20	1	1	4
3917	23350	MWIL	10	05	1530	N19 W79	09 29.6	2	AF				
3917		PALE	10	05	1840	N18 W82	09 29.5		B BXO	20	3	3	3
		BOUL	09	24	1445	S07 E76	09 30.3		B BXO	10	2	8	3
3922		PALE	09	23	1920	N13 E72	09 29.2		B CAO	50	4	8	2
3922		LEAR	09	24	0055	N15 E81	09 30.2		B BXO		2	3	3
3922		RAMY	09	24	1350	N16 E74	09 30.2		B BXO	60	3	9	3
3922		BOUL	09	24	1445	N14 E80	09 30.7		B CSO	70	4	12	3

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3922		HOLL	09	24	1520	N14 E75	09 30.3		B	DAO	140	7	10	3
3922		MANI	09	24	2312	N13 E70	09 30.3			DAO	460	9	8	2
3922		LEAR	09	25	0228	N14 E67	09 30.2		B	DAI	190	14	9	3
3922		RAMY	09	25	1319	N15 E62	09 30.3		B	EKO	750	13	12	1
3922		PALE	09	25	1950	N13 E60	09 30.4		B	DKO	320	8	10	3
3922		MANI	09	25	2353	N13 E55	09 30.1			DSO	490	10	10	2
3922		LEAR	09	26	0343	N14 E54	09 30.2		B	DHI	330	12	10	3
3922		RAMY	09	26	1335	N15 E48	09 30.2		B	DKO	360	16	10	2
3922		PALE	09	26	1808	N15 E46	09 30.2		B	EKI	370	19	11	3
3922		LEAR	09	27	0013	N14 E43	09 30.3		B	DKI	440	23	10	3
3922		RAMY	09	27	1345	N14 E35	09 30.2		BG	DKO	440	16	10	3
3922		BOUL	09	27	1440	N17 E33	09 30.1		B	DHI	430	16	10	3
3922		HOLL	09	27	1506	N15 E34	09 30.2		B	DHI	480	15	10	2
3922	23353	MWIL	09	27	1730	N14 E35	09 30.4	5	(B)					
3922		PALE	09	27	1800	N15 E32	09 30.2		BG	DKI	380	17	10	3
3922		LEAR	09	28	0024	N14 E30	09 30.3		B	DKI	510	27	9	3
3922		LEAR	09	29	0108	N15 E16	09 30.3		B	EKI	730	30	11	3
3922		RAMY	09	29	1210	N15 E11	09 30.3		B	EKI	820	34	11	4
3922		BOUL	09	29	1538	N13 E06	09 30.1		B	DKI	620	22	10	3
3922		HOLL	09	29	1717	N14 E06	09 30.2		B	DKO	880	24	10	2
3922		PALE	09	29	1842	N14 E06	09 30.2		B	DKI	720	32	10	3
3922		LEAR	09	30	0421	N14 E01	09 30.3		BD	EKI	1120	35	11	3
3922		RAMY	09	30	1325	N14 W06	09 30.1		B	EKI	700	23	11	3
3922	23353	MWIL	09	30	1515	N14 W05	09 30.3	6	(D)					
3922		PALE	09	30	1920	N14 W07	09 30.3		B	DKI	760	24	10	3
3922		LEAR	10	01	0227	N15 W12	09 30.2		BD	DKI	1010	36	10	3
3922		RAMY	10	01	1250	N15 W18	09 30.2		B	EKI	720	53	12	2
3922	23353	MWIL	10	01	1600	N14 W19	09 30.2	5	(D)					
3922		HOLL	10	01	1710	N14 W20	09 30.2		BD	DKI	1060	34	10	4
3922		PALE	10	01	2000	N16 W21	09 30.2		BD	EKI	700	23	11	2
3922		LEAR	10	02	0020	N15 W24	09 30.2		BD	EKC	880	48	11	3
3922	23353	MWIL	10	02	1500	N15 W32	09 30.2	5	(D)					
3922		RAMY	10	02	1503	N14 W32	09 30.2		B	EKI	930	56	12	2
3922		HOLL	10	02	1520	N15 W31	09 30.3		BGD	EKI	840	26	12	2
3922		PALE	10	02	1808	N15 W33	09 30.3		BGD	EKI	880	29	12	3
3922		MANI	10	02	2303	N13 W33	09 30.5			FKI	1080	26	19	3
3922		LEAR	10	03	0040	N15 W37	09 30.2		BD	EKC	930	39	11	3
3922		RAMY	10	03	1330	N14 W44	09 30.2		BGD	EKO	660	26	12	3
3922		BOUL	10	03	1435	N15 W45	09 30.2		BD	EKI	980	37	13	3
3922		HOLL	10	03	1516	N13 W45	09 30.2		BD	EKI	840	32	14	3
3922	23353	MWIL	10	03	1600	N14 W44	09 30.3	5	(D)					
3922		PALE	10	03	1838	N14 W46	09 30.3		BD	EKI	780	23	14	3
3922		MANI	10	03	2325	N13 W48	09 30.4			EKI	860	23	13	3
3922		LEAR	10	04	0015	N14 W50	09 30.2		BGD	EKI	870	38	11	3
3922		BOUL	10	04	1415	N12 W57	09 30.3		B	EHI	950	20	13	3
3922	23353	MWIL	10	04	1515	N14 W59	09 30.2	5	(D)					
3922		HOLL	10	04	1752	N13 W59	09 30.3		BD	EKI	1130	15	12	3
3922		PALE	10	04	1824	N15 W60	09 30.2		B	EKI	1030	29	12	3
3922		MANI	10	05	0001	N13 W61	09 30.4		BD	EKI	950	17	12	3
3922		LEAR	10	05	0105	N14 W63	09 30.3		BD	EKI	940	17	13	3
3922		RAMY	10	05	1430	N14 W70	09 30.3		BD	EKI	800	26	13	4
3922		BOUL	10	05	1450	N14 W73	09 30.1		BD	EKI	860	14	11	2
3922		HOLL	10	05	1520	N13 W70	09 30.4		BD	EKI	940	19	13	4
3922	23353	MWIL	10	05	1530	N13 W70	09 30.4	5	(B)					
3922		PALE	10	05	1840	N14 W73	09 30.3		BD	EKI	920	18	13	3
3922		LEAR	10	06	0110	N14 W77	09 30.2		BD	EKO	690	8	13	3
3922		HOLL	10	06	1445	N14 W81	09 30.5		A	HKX	260	6	4	2
3922	23353	MWIL	10	06	1515	N13 W88	09 30.0	4	(B)					
3922		PALE	10	06	1905	N14 W84	09 30.4		B	CKO	380	5	6	2
3922		MANI	10	07	0019	N14 W88	09 30.4			HAX	280	1	2	2
3922		LEAR	10	07	0038	N14 W86	09 30.5		BD	HKX	470	1	3	3
3927		LEAR	09	29	0108	N27 E19	09 30.5		B	BXO	10	3	3	3
3927		RAMY	09	29	1210	N28 E11	09 30.4		A	AXX	10	1	1	4
3927		HOLL	10	01	1710	N29 W15	09 30.5		A	AXX		0		4
	23360	MWIL	09	30	1515	N02 W02	09 30.5	3	(AF)					
	23363	MWIL	10	01	1600	N23 W15	09 30.5	3	(AP)					
3929		HOLL	10	01	1710	N24 W16	09 30.5		A	AXX		0		4
3929		LEAR	10	02	0020	N23 W21	09 30.4		B	BXO		2	3	3

REGIONS OF SUNSPOT ACTIVITY  
(ORDERED BY CENTRAL MERIDIAN PASSAGE DATE)

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SEPTEMBER 1982

NOAA/ USAF Region	Mt Wilson Region	Sta	Observation Time			Lat	CMD	CMP		Max H	Mag Class	Spot Class	Corrected Area		Spot Count	Long. Extent (Deg)	Qual
			Mo	Day	UT			Mo	Day				(10 <sup>-6</sup>	Heml)			
3929	23363	MWIL	10	02	1500	N22	W30	09	30.3	3	(AF)						
3929		LEAR	10	03	0040	N23	W30	09	30.7		A	AXX		1		3	
3921		PALE	09	23	1920	S22	E76	09	29.7		A	HHX	100	2	3	2	
3921		RAMY	09	24	1350	S20	E80	09	30.7		B	CKO	130	2	9	3	
3921		BOUL	09	24	1445	S18	E76	09	30.4		A	HSX	130	1	1	3	
3921		HOLL	09	24	1520	S21	E80	09	30.8		A	HHX	120	2	4	3	
3921		MANI	09	24	2312	S22	E74	09	30.7			HHX	320	2	3	2	
3921		LEAR	09	25	0228	S21	E73	09	30.7		A	HHX	140	2	3	3	
3921		RAMY	09	25	1319	S20	E65	09	30.5		A	HKX	250	3	3	1	
3921		PALE	09	25	1950	S20	E63	09	30.6		A	HKX	150	2	3	3	
3921		MANI	09	25	2353	S22	E60	09	30.6			HHX	230	2	3	2	
3921		LEAR	09	26	0343	S21	E56	09	30.5		A	HHX	150	2	3	3	
3921		RAMY	09	26	1335	S20	E51	09	30.5		B	CHO	140	3	3	2	
3921		PALE	09	26	1808	S21	E49	09	30.5		A	HSX	80	2	2	3	
3921		LEAR	09	27	0013	S20	E45	09	30.5		B	DXO	130	2	4	3	
3921		RAMY	09	27	1345	S21	E39	09	30.6		B	DSO	130	2	2	3	
3921		BOUL	09	27	1440	S20	E36	09	30.4		B	DSO	130	2	3	3	
3921		HOLL	09	27	1506	S20	E37	09	30.5		B	DAO	110	2	3	2	
3921	23354	MWIL	09	27	1730	S20	E37	09	30.6	5	(AP)						
3921		PALE	09	27	1800	S21	E36	09	30.5		A	HSX	100	2	2	3	
3921		LEAR	09	28	0024	S20	E35	09	30.7		B	DSI	120	5	7	3	
3921		LEAR	09	29	0108	S19	E25	10	1.0		B	FSO	160	13	16	3	
3921		RAMY	09	29	1210	S18	E21	10	1.1		B	FHO	240	33	17	4	
3921		BOUL	09	29	1538	S18	E17	09	30.9		B	FSO	120	24	16	3	
3921		HOLL	09	29	1717	S18	E15	09	30.9		B	FSO	210	21	18	2	
3921		PALE	09	29	1842	S19	E15	09	30.9		B	FSO	190	31	17	3	
3921		LEAR	09	30	0421	S18	E10	09	30.9		B	FSO	370	44	19	3	
3921	23354	MWIL	09	30	1515	S19	E01	09	30.7	4	( D)						
3921	23359	MWIL	09	30	1515	S24	W04	09	30.3	2	(AP)						
3921		PALE	09	30	1920	S20	E01	09	30.9		B	FSO	170	21	16	3	
3921		LEAR	10	01	0227	S19	W01	10	1.0		B	FSO	310	38	19	3	
3921		RAMY	10	01	1250	S19	W11	09	30.7		B	DAI	140	32	7	2	
3921	23354	MWIL	10	01	1600	S19	W13	09	30.7	4	(BP)						
3921		HOLL	10	01	1710	S20	W15	09	30.6		BGD	DKI	260	27	10	4	
3921		PALE	10	01	2000	S20	W16	09	30.6		BGD	DKI	220	12	8	2	
3921		LEAR	10	02	0020	S20	W13	10	1.0		B	FKO	200	47	18	3	
3921	23354	MWIL	10	02	1500	S18	W23	09	30.9	4	( D)						
3921		RAMY	10	02	1503	S18	W22	10	1.0		B	DAO	220	25	13	2	
3921		HOLL	10	02	1520	S18	W23	09	30.9		BD	EKI	210	23	13	2	
3921		PALE	10	02	1808	S18	W24	10	1.0		B	EKO	230	31	13	3	
3921		MANI	10	02	2303	S20	W24	10	1.1			FAO	270	19	16	3	
3921		LEAR	10	03	0040	S18	W27	10	1.0		B	CAO	150	34	13	3	
3921		RAMY	10	03	1330	S18	W38	09	30.7		B	CSO	80	15	8	3	
3921		BOUL	10	03	1435	S16	W36	09	30.9		B	CAI	30	24	10	3	
3921		HOLL	10	03	1516	S18	W37	09	30.8		BG	CSI	140	23	11	3	
3921	23354	MWIL	10	03	1600	S18	W34	10	1.1	3	(BY)						
3921		PALE	10	03	1838	S17	W36	10	1.0		B	CSO	130	22	10	3	
3921		MANI	10	03	2325	S19	W39	10	1.0			DSO	140	10	10	3	
3921		LEAR	10	04	0015	S17	W41	09	30.9		B	ESO	40	22	13	3	
3921		BOUL	10	04	1415	S17	W49	09	30.9		B	CSO	60	6	6	3	
3921	23354	MWIL	10	04	1515	S18	W52	09	30.7	4	( D)						
3921		HOLL	10	04	1752	S18	W51	09	30.9		B	CSO	80	10	11	3	
3921		PALE	10	04	1824	S19	W52	09	30.8		B	DAO	90	7	6	3	
3921		MANI	10	05	0001	S19	W54	09	30.9		B	CRO	80	8	7	3	
3921		LEAR	10	05	0105	S17	W54	09	30.9		B	CAO	30	6	10	3	
3921		RAMY	10	05	1430	S18	W64	09	30.7		B	CAO	50	3	2	4	
3921		BOUL	10	05	1450	S15	W64	09	30.8		A	HSX	70	1	1	2	
3921		HOLL	10	05	1520	S17	W63	09	30.8		B	BXO	10	3	3	4	
3921	23354	MWIL	10	05	1530	S17	W62	09	30.9	3	(BP)						
3921		PALE	10	05	1840	S17	W65	09	30.8		B	BXO	10	2	4	3	
3921		LEAR	10	06	0110	S17	W68	09	30.9		B	BXO	10	3	5	3	
3921	23354	MWIL	10	06	1515	S17	W77	09	30.8	3	(AF)						
3921		LEAR	10	07	0038	S16	W85	09	30.6		A	AXX		1		3	

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September 1982

Day	Start (UT)	Max (UT)	End (UT)	Imp	Wide- spread Index	Number of Station Reports by Type					Known Flare	NOAA/USAF Region
						SWF	SEA	SPA	LF- SPA	SES		
01	0107E	0130	0238	1-	3			1		4	NF	
01	0558	0628	0740U	1	3		2				NF	
01	0732	0758	1145	3	5	4	3	1	1	2	0731	3886
01	0850	0903	0930	1	3		1		1	1	NF	
01	1033	1038	1120	1	3		2				*	
01	1214	1218	1242	1	3		2				*	
01	1444	1500	1537	1-	3		2	1			NF	
01	1621	1626	1750	1	3			1		9	*	
01	2226	2234	2310	1-	3			1		1	*	
01	2334	2345	0045	1-	3	1		1		4	*	
02	1300	1310	1535	1-	3	1	3	1	1	3	1303	3885
02	1832	1857	2030	1-	3			1		10	1826	3886
02	1842	1901	1945	2	3					2	1839	3883
03	0041	0052	0114	1-	1			1			0026	3882
03	0122	0127	0154	1-	3			1		1	0120	3886
03	0200	0210	0248	1-	3			1		1	0155	3886
03	0609	0618	0746	1-	3			1		1	0609	3886
03	0848	0855	0930U	1	3		2				*	
03	1045	1115	1124	1	3		2				NF	
03	1505	1513	1607	1-	3			1		6	1505	3886
03	1600	1602	1630	1+	1					1	1608	3883
04	0028	0058	0147D	3	3	2		1		6	0026	3886
04	0730	0747	0751	1	3		1			1	0723	3878
04	1641	1643	1706	1-	3					5	1638	3886
05	0312	0330	0420	1-	3			1		1	0310	3887
05	0958	1024	1125	1+	3	1		1	1	2	1010	No Data
05	2000	2008	2025	1-	1					1	1959E	3891
06	0055	0059	0100	1-	3					2	0106E	No Data
06	0150	0408	0201	2+	3	1		1		1	0150	No Data
06	1238	1248	1330	2	3	1	3		1		*	
06	1800	1812	1848	1	3					2	NF	
07	1815	1826	1900	1	3	1				3	1818	3885
08	0641	0701	0839	1-	1			1			0640	3886
08	1030	1058	1132	1	3		2				*	
08	1429	1433U	1620	1-	3		1			1	NF	
09	0012	0044	0242	1	3	1		1		4	0014	3895
09	0604	0622	0656	1-	3			1		1	0600	3885
09	0712	0720	0744D	1	3			1		1	0712	3885
09	1405	1432	1442	1-	3		1	1		1	1404	3901
09	1458	1520	1610	1+	3					3	NF	
10	0222	0228	0347	1-	3			1		4	0223	3895
10	0436	0447	0605	1	3			1		4	0438	3895
10	0826	0838	0939	2	5	2		1	1	3	0826	3886
10	1615	1645	1800	1	3					2	1616	3901
10	1644	1656	1835	1-	3			1		2	1640	3901
11	0024	0030	0122	1-	3			1		1	0024	3901
11	0526	0532	0607	1-	1			1			0524E	3885
11	0636	0644	0808	1-	3			1		3	0636	3901
11	1203	1216	1245	1	3					7	1212	3901
11	1323	1345	1435	1-	3		1	1			1324	3902
11	1654	1705	1830	2	3					14	NF	
11	2045	2108	2145	1	3					3	NF	
12	0655	0706	0757	1-	1			1			0655	3895
12	1553	1644	1815	1	3			1		3	1539	3902

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Day	Start (UT)	Max (UT)	End (UT)	Imp	Wide- spread Index	Number of Station Reports by Type					Known Flare	NOAA/USAF Region
						SWF	SEA	SPA	LF- SPA	SES		
13	0451	0509	0623	1-	1			1			0455	3905
13	0635	0643	0714	1-	1			1			0634	No Data
13	0831	0838	0921	1	1		1				NF	
13	0922	0927	1029	1	1		1				NF	
13	1134	1150	1227	1-	1			1			*	
13	1333	1340	1420	1-	3		1	1			*	
13	1455	1530	1655	2	3					4	NF	
13	1524	1535	1630	2	3					6	NF	
14	0110	0122	0254	1	3			1		4	0109	3908
14	1448	1513	1545	1-	3		1			2	NF	
14	1600	1615	1634	1	3		2				NF	
14	1738	1800	1830	1-	3					3	NF	
15	0214	0227	0345	1	3			1		5	0216E	No Data
15	0600	0627	0736	1-	3			1		2	0602	3908
15	0743	0805	0840	1-	3			1		1	0745	No Data
15	0916	0920	0950	1	3		2				NF	
15	1328	1335	1410	1	1		1				1334	3908
15	1823	1831	2045	1+	5	1	1	1	1	15	1824E	3908
16	0303	0315	0345	1-	1					1	NF	
16	0800	0813	0844	1	1		1				NF	
17	1353		1407	1-	3		1	1			NF	
17	1429	1434	1456	1	3		2				NF	
18	1829	1833	2000	1	1					1	1832	3906
18	2004	2011	2035	1-	1					1	*	
19	1242	1330	1338	1	3		2				NF	
19	1422	1434	1500	1-	3			1		3	NF	
19	1447	1508	1610	1	3		2				1435	3905
19	2313	2329	2356	1-	1			1			2315	3910
20	1408	1422	1515	1+	3					5	1404	3907
20	1724	1743	1800	1	3					4	NF	
21	0345	0400	0430	1-	1					1	*	
21	1914	1928	2000	2	3	1				8	1921E	3910
21	2139	2152	2247	2	3	1				9	NF	
22	0915	0924	1000	1	1					1	0922	3910
22	1820	1822	1910	1-	3					7	1821	3910
23	1405	1415	1517	1-	1			1			1405	3919
24	0706	0713	0804	1-	1			1			0702	3917
24	0835	0838	0854	1-	3		1	1			0821E	3908
24	1431	1443	1501	1	3					3	NF	
24	1540	1553	1630	1	3					2	1548	3919
25	1332	1400	1445	1+	3					2	NF	
25	1930	1954	2045	1+	3					6	NF	
25	2048	2106	2145	1-	3					9	NF	
26	0634	0644	0733	2	1			1			NF	
26	1510	1528	1600	1	3					2	NF	
26	1833	1853	1930	1	3	1				1	1834	3919
26	2108	2128	2238	1-	3	1		1		3	2100	3917
26	2316	2334	0030	1	5	3		1		5	2317	3917
27	0407	0415	0438	1-	3			1		1	0406	3917
27	1538	1540	1605	1+	1					1	1532	3922
27	1615	1627	1735	1-	3			1		1	1620E	3922



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September 1982

Day	Start (UT)	Max (UT)	End (UT)	Imp	Wide- spread Index	Number of Station Reports by Type					Known Flare	NOAA/USAF Region	
						SWF	SEA	SPA	LF- SPA	SES			
27	2332	2345	0000	1-	1						1	2341	3924
28	0339	0350	0425	1-	1			1				0340	3917
28	1117	1138	1230	1	3	1	1		1		1	*	
28	1616	1620	1628	1-	1	1						NF	
29	0016	0024	0045	1-	1						1	0014	3919
29	0107	0114	0144	1-	1						1	0105	3923
29	0809	0827	0956	1-	3						1	0802	3922
29	1520	1527	1620	1	5	3	2				2	1519	3922
29	1755	1810	1900	1-	3						1	1800E	3919
29	1829	1833	1900	1	3						2	1832E	3919
29	1928	1930	2001	1	3						2	1932	3921
29	2230	2246	2322	1-	1						1	2235	3928
30	0135	0145	0342	2+	3	2					7	0132	3922
30	0616	0621	0739	1-	3						1	0615	3922
30	0835	0842	0920	1-	3	1	2				1	0837	3922
30	1036	1042	1120	1-	3	1	3				1	*	
30	1205	1210	1258	1-	3	1					1	1214	3922
30	1343	1400	1430	1-	3	1	2				1	1317	3922
30	1515	1523	1550	1-	3						2	*	
30	1632	1636	1730	1-	3						1	1630	3922
30	1803	1807	1900	1-	3						1	1803	3922
30	2003	2052	2056	1-	3						2	2003	3922
30	2338	2345	0015	1-	1						1	2336	3922

\* = No Flare Patrol  
NF = No Flare Reported

S U D D E N I O N O S P H E R I C D I S T U R B A N C E S

September 1982

OBSERVATORIES REPORTING FOR SEPTEMBER 1982\*

Ayrshire, Scotland (AY)	SES	Maui, Hawaii, USA (MI)	SWF
Darmstadt, GFR (DA)	SWF	Mayfield Village, Ohio, USA (A28)	SES
Edenvale, South Africa (A52)	SES	Missoula, Montana, USA (A31)	SWS, SWF
Frenchtown, Montana, USA (A56)	SES	Panska Ves, Czechoslovakia (PU)	SEA, SWF, SFA
Glenorchy, Tasmania, Australia (GH)	SES	Paterson, New Jersey, USA (A46)	SES
Hiraiso, Japan (HI)	SWF	Portage, Michigan, USA (A51)	SES
Hobart, Tasmania, Australia (TA)	SEA	Roswell, New Mexico, USA (RW)	SES
Houston, Texas, USA (A50)	SES	San Antonio, Texas, USA (SA)	SES
Huancayo, Peru (HU)	SWF	Sao Paulo, Brazil (UM)	SES, SPA
Inubo, Japsan (IN)	SPA	Simi Valley, California, USA (A57)	SES
Jullusruh, GDR (JU)	SWF	Tavares, Florida, USA (A49)	SES
Kuhlungsborn, GDR (KU)	SPA, SEA	Upice, Czechoslovakia (UI)	SEA
Lake Hiawatha, New Jersey, USA (A32)	SES	Valley Cottage, New York, USA (A01)	SES
Latrobe, Pennsylvania, USA (A19)	SES	Vsetin, Czechoslovakia (VS)	SEA
Louisville, Kentucky, USA (A26)	SES	Walla Walla, Washington, USA (A55)	SES

\* Observations are not necessarily continuous for each reporting station.

SIDs by NOAA/USAF REGION

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	25	26	27	28	29	30	
Region Number																															
3878				1																											
3882			1																												
3883		1	1																												
3885		1					1		2		1																				
3886	1	1	4	2				1		1																					
3887					1																										
3891				1																											
3895									1	2		1																			
3901								1	2	3																					
3902										1	1																				
3905													1						1												
3906																		1													
3907																				1											
3908														1	3									1							
3910																			1		1	2									
3917																								1		2	1	1			
3919																							1	1		1				3	
3921																														1	
3922																											2		2	9	
3923																														1	
3924																										1				1	
3928																															1
No Reported Flares	4		1			1		1	1		2		4	3	1	2	2		2	1	1			1	3	2		1			
No Flare Patrol	5		1			1		1					2					1			1							1		2	
No Data					1	2						1		2																	
Event Totals	10	3	8	3	3	4	1	3	5	5	7	2	8	4	6	2	2	2	2	4	2	3	2	1	4	3	5	4	3	8	11

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Sep 82

P I O N E E R X I I  
(VENUS ORBITER)  
INTERPLANETARY MAGNETIC FIELD  
MAGNITUDES

SEPTEMBER 1982

DAY	TIME	BMAG (GAMMAS)
1	13:38:30	16.40
2	13:35:50	11.55
3	13:38:20	12.50
4	--	--
5	--	--
6	16:41:10	13.36
7	13:35:50	26.60
8	13:44:10	17.41
9	13:35:40	9.23
10	13:35:40	13.22
11	13:42:20	11.72
12	13:37:00	10.16
13	13:36:30	14.77
14	13:35:40	15.04
15	14:34:00	15.01
16	16:41:20	16.93
17	13:31:50	12.28
18	13:31:20	10.67
19	13:42:00	12.88
20	13:30:40	14.84
21	13:31:00	15.47
22	13:30:50	13.66
23	15:47:00	49.94
24	13:30:50	14.17
25	14:19:00	12.45
26	13:30:40	13.09
27	13:30:40	15.02
28	13:33:00	12.19
29	13:30:50	11.32
30	20:58:30	11.87

SOLAR RADIO EMISSION  
SPECTRAL OBSERVATIONS

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Sep 82

SEPTEMBER 1982

Day	Observation		Sta	Decimetric Band			Metric Band			Dekametric Band			Spectral Type				
	Start (UT)	End (UT)		Start (UT)	End (UT)	Int (1-3)	Start (UT)	End (UT)	Int (1-3)	Start (UT)	End (UT)	Int (1-3)					
01	0000	0732	CULG	0000.0	0150.0								IS,W				
			CULG										IIIS,W				
			CULG						0020.0	0115.0				IS			
							0023.0	0114.5	1					IS			
							0116.5	0727.5	1					IIIN			
							0252.2	0252.9	1					III			
				0331.5	0406.0									IS,W			
				0551.0	0731.5	1	0606.0	0730.0	1					IS,C			
		0517	1809	WEIS				0750.0	1809.0	2				IN			
	WEIS						0754.7	0754.9	1					IIIG			
	WEIS						1104.5	1105.9	3					IIIGG			
		1300	2305	HARV	1334.0	1940.0	1							DCIM			
	HARV															IN	
	HARV									1417.0	1625.0	1					IN
	HARV									1425.0	1426.0	2					IIIG
	HARV									1517.0	1518.0	2					IIIG
		2032	2400	CULG	2059.5	2142.5	1				1947.0		1	IIIGW			
	CULG															IN	
	HARV									2127.0	2128.5	2					IIIGG
CULG									2127.0	2128.0	3					IIIGG	
CULG								2300.5	2316.0	1	2247.5	2253.0	1				IIIN
CULG								2319.5	2320.0	2	2319.5	2320.0	1				IIIG
02	0000	0732	CULG	0104.5	0543.5	1							IS,W				
			CULG												IIIG		
			CULG						0136.5	0719.0	1					IIIN	
				0131.0	0133.5	1							III				
							0255.9	0256.1	1				IIIB				
							0256.0		2				IIIB				
							0424.0		2				IIIB				
							0714.0		2				IIIB				
		0519	1721	WEIS				1105.0	1428.0	1				IN			
	HARV						1811.0	1812.0	1					IIIB			
		1300	2250	HARV				1844.0		1				IIIB			
	HARV			1846.0	1847.0	1								IIIG			
	HARV			2021.0	2023.0	2	2021.0	2023.0	2					IIIG			
		2032	2400	CULG				2048.0		1				IIIB			
	HARV						2048.0	2049.0	1					IIIB			
	CULG						2056.0	2058.5	1					IIIG			
	HARV						2056.0	2100.0	3	2059.0	2100.0	2			IIIGG,V		
	PALE								2059.4	2100.8	2				III		
	CULG								2059.5	2100.0	3				IIIG,V,U		
	03	0000	0730	LEAR				0016.4	0021.8	1				III			
				CULG				0016.5		2				IIIB,U			
PALE							0019.3	0021.3	2				III				
								0019.5	0021.0	2	0019.5	0021.0	1	IIIG			
								0133.9	0134.2	1				III			
								0134.0		1				IIIG			
								0210.5	0719.0	1				IIIN			
								0307.2	0307.4	1				III			
								0449.0	0449.1	1				III			
		0522	1328	WEIS				0759.5	0759.8	1				IIIG			
LEAR							0759.6	0759.8	1					III			
WEIS							0909.7	0909.9	1					IIIB			
WEIS							0928.2	0928.4	2					IIIG			
WEIS							1202.6	1204.1	2					DCIM,RS			
		1400	1723	WEIS													
				1300	2325	HARV	1424.0	1425.0	1							IW	
						CULG				2039.0					IIIB		
						CULG	2039.0		2						DCIM		
						HARV				2039.0					IIIBW		
						CULG				2142.5					IIIB,U		
						CULG				2201.0	2202.0	1				IIIG	
			CULG				2340.5		1				IIIB				
04	0000	0731	CULG				0045.5	0050.5	3	0047.5	0049.5	1	IIIG,V				
			LEAR				0045.8	0051.3	2				V				
			CULG	0046.0	0054.5	3	0046.0	0054.5	2				IIIS				
				PALE				0046.9	0050.8	3				II			
				CULG							0050.0	0110.0	1	SWF			
				CULG				0056.5	0116.5	3				II			
				LEAR				0057.0	0117.5	1				II			

S O L A R R A D I O E M I S S I O N  
S P E C T R A L O B S E R V A T I O N S

SEPTEMBER 1982

Observation		Decimetric Band			Metric Band			Dekametric Band			Spectral Type
Day	Start (UT) End (UT) Sta	Start (UT)	End (UT)	Int (1-3)	Start (UT)	End (UT)	Int (1-3)	Start (UT)	End (UT)	Int (1-3)	
04	PALE				0057.5	0107.8	2				II
	CULG	0101.5	0106.0	1	0101.5	0106.0	1				IIIN
	CULG				0117.5	0131.5	1				IN
	CULG	0120.5	0121.0	1	0120.5	0121.0	1				IIIG
	CULG				0155.0	0157.5	2				IIIG,V
	CULG				0155.0	0400.0	2				IS,C,DC
	LEAR				0155.2	0159.5	1				V
	PALE				0156.0	0157.9	2				III
	CULG	0202.5	0206.5	1							DCIM,N
	CULG				0221.0		1				IIIB
	LEAR				0224.2	0229.0	1				III
	CULG				0236.0	0248.5	1				POSS II
	LEAR				0237.0	0700.0	1				IV
	CULG	0245.0	0300.0	3							CONT
	CULG	0245.0	0344.0	1							DCIM,N
	CULG	0300.0	0329.0	2							CONT
	CULG	0329.0	0337.5	3							CONT
	CULG				0400.0	0530.0	1				IS,C,DC
	CULG				0721.5	0722.5	2				IIIG
	LEAR				0722.3	0722.8	1				III
0520 1721	WEIS				0722.3	0722.7	2				IIIG
	WEIS				0839.8	0840.2	3				U
	WEIS				0938.1	0938.2	2				U
	WEIS				1004.3	1004.6	2				U
	WEIS				1013.6	1013.8	1				U
1300 2245	HARV				1300.0		1				IIIGW
	WEIS				1300.1	1300.4	2				IIIG
	HARV				1358.0	1906.0	2	1620.0			IIIN
	HARV				1502.0		1				IIIG
	HARV				1513.0	1514.0	3				IIIG
	WEIS				1533.6	1513.8	3				U
	HARV				1553.0	1554.0	2	1553.0		1	IIIG
	WEIS				1553.3	1553.9	2				IIIG
	HARV				1640.0	1641.0	2	1640.0	1641.0	2	IIIGG
	WEIS				1640.3	1640.8	2				IIIG
	HARV				1946.0	1947.0	2	1946.0	1947.0	2	IIIG,V
	PALE				1946.6	1947.1	2				V
	HARV				2028.0	2029.0	2				IIIG
	CULG				2051.0		2				IIIB
	HARV				2051.0		2				IIIG
2031 2400	CULG				2077.5	2052.0	1				IIIG
	CULG				2143.0	2146.0	1				IIIN
	HARV				2144.0	2146.0	2				IIIG,V
05 0000 0731	CULG				0005.0	0006.0	2				IIIG
	LEAR				0005.3	0006.3	1				III
	CULG	0126.5	0127.0	1							DCIM
	CULG				0433.0	0433.5	1				IIIG
	CULG				0458.5	0500.0	2				IIIG,V
	LEAR				0458.6	0500.2	1				III
	CULG				0538.0	0538.5	2				IIIG
	CULG				0547.5	0548.0	1				IIIG
	CULG				0720.0		1				IIIB
	LEAR				0720.2	0720.8	1				III
0746 1149	WEIS				0950.1	0950.8	1				IIIG
	WEIS				0959.4	0959.7	1				IIIG
	WEIS				1023.1	1023.3	1				IIIB
	WEIS				1032.7	1033.0	1				IIIB
	WEIS				1114.8	1114.9	2				IIIB
1217 1721	WEIS				1237.4	1237.6	1				IIIB
	WEIS				1302.4	1303.5	2				IIIG
	WEIS				1321.3	1322.0	2				IIIG
1300 2250	HARV	1352.0	1353.0	1							IIIGW
	WEIS				1352.4	1352.6	2				IIIG
	HARV	1810.0	1811.0	2	1810.0	1811.0	2				IIIG
	HARV				1909.0	1912.0	1	1909.0	1912.0	1	IIIGW
2031 2400	CULG	2021.0	2022.0	2							IIIG
06 0000 0730	CULG										P,N
	CULG	0152.0	0300.0	1							

SOLAR RADIO EMISSION  
SPECTRAL OBSERVATIONS

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Sep 82

SEPTEMBER 1982

Observation Day	Start (UT)	End (UT)	Sta	Decimetric Band			Metric Band			Dekametric Band			Spectral Type
				Start (UT)	End (UT)	Int (1-3)	Start (UT)	End (UT)	Int (1-3)	Start (UT)	End (UT)	Int (1-3)	
06			CULG	0153.0	0153.5	1							
	0522	1718	WEIS				1017.3	1017.8	3	0154.0	0203.0		CONT
	1300	2245	HARV				1722.0		1				SWF, W
			HARV				1752.0		1				G
			HARV				1830.0	1831.0	2				
	2031	2400	HARV	2021.0	2022.0	2				1830.0	1831.0	2	BW
			CULG										B
													G
07	0000	0730	CULG				0253.5	0300.0	1				
			CULG	0503.0	0504.0	1							GG
			CULG				0513.5		1				DCIM
	0522	1839	WEIS				0955.3	0955.7	2				B
	1300	2300	HARV				1607.0	1608.0	1				B
			HARV							1656.0		1	BW
			HARV							1702.0		2	BW
			HARV	1709.0	1711.0	2	1709.0	1710.0	2				B
			HARV				1920.0	1921.0	2	1920.0	1921.0	2	GG
			PALE				1920.2	1921.1	2				GG
			HARV				1945.0	1947.0	1	1945.0	1947.0	1	V
			HARV				2108.0	2110.0	2				
	2030	2302	CULG				2108.5	2112.0	1				
			CULG				2119.5		1				
			HARV				2136.0	2137.0	1				B
			CULG				2136.5	2138.0	1				GW
			HARV				2143.0	2144.0	1	2143.0	2144.0	1	G
			HARV				2200.0	2202.0	2				BW
			CULG				2201.0	2202.5	2				GG
			CULG				2227.0	2227.5	1				G
			LEAR				2359.7	0009.9	1				G
													CONT
08			LEAR				0025.9	0034.6	1				
			PALE				0025.9	0026.6	2				
			PALE				0032.9	0034.5	2				V
			LEAR				0058.5	0058.7	1				
			LEAR				0118.5	0118.7	1				
			LEAR				0136.9	0146.6	1				
			PALE				0144.1	0146.5	2				
			LEAR				0201.8	0202.1	1				
			LEAR				0210.8	0211.1	1				
			LEAR				0226.1	0238.1	1				
			PALE				0227.9	0229.0	2				CONT
	0214	0530	CULG				0228.0	0229.0	2	0228.5	0229.0	2	
			CULG				0234.5	0237.5	1				G
			LEAR				0305.2	0327.9	1				GG
			CULG				0317.0	0318.5	2				CONT
			LEAR				0351.7	0352.0	1				G
			CULG				0352.0		2				
			LEAR				0452.0	0459.5	1				B
			CULG	0505.0	0530.0								
			LEAR				0553.9	0555.1	1				IS, W
	0552	1714	WEIS				0554.6	0554.8	1				
			LEAR				0637.7	0653.2	1				G
			WEIS				0638.2	0638.4	1				CONT
			WEIS				0643.4	0647.6	1				B
			LEAR				0736.6	0816.1	1				G
			WEIS				0736.7	0736.9	2				CONT
			WEIS				0741.2	0741.7	3				G
			WEIS				0811.9	0812.4	2				G
			WEIS				0815.9	0816.2	1				G
			WEIS				0827.0	0827.2	1				B
			WEIS				0828.9	0829.0	1				B
			WEIS				0832.3	0833.1	1				G
			WEIS				0834.7	0834.9	2				B
			WEIS				0921.2	0922.0	1				G
			WEIS				0956.1	0958.2	2				G
			WEIS				1004.1	1004.3	1				G
			WEIS				1020.8	1020.9	1				B
	1300	2245	HARV	1325.0	1326.0	2	1246.0	1246.5	2				G
			WEIS				1326.0		2				G
							1325.6	1326.6	2				DCIM

S O L A R R A D I O E M I S S I O N  
S P E C T R A L O B S E R V A T I O N S

SEPTEMBER 1982

Observation		Decimetric Band			Metric Band			Dekametric Band			Spectral Type		
Day	Start (UT) End (UT) Sta	Start (UT)	End (UT)	Int (1-3)	Start (UT)	End (UT)	Int (1-3)	Start (UT)	End (UT)	Int (1-3)			
08	2030 2400	HARV	1434.0		1	1434.0		1				IIIB	
		HARV				1513.0	1519.0	2	1516.0		2	IIIGG	
		WEIS				1513.2	1513.5	1				IIIG	
		WEIS				1515.7	1518.7	2				IIIG	
		HARV				1736.0	1740.0	2	1736.0	1740.0	2	IIIG	
		HARV				1921.0	1927.0	3	1921.0	1927.0	2	IIIGG	
		CULG	2136.0	2137.0	1							IIIG	
		HARV	2136.0	2137.0	2							IIIG	
		CULG				2137.5			2				IIIB
		HARV	2145.0	2146.0	1								IIIGW
		CULG				2146.0	2151.0	1					IIIGG
		HARV				2147.0	2151.0	2					IIIGG
		CULG				2150.0			2				IIIB
		09	0000 0729	LEAR				0012.2	0203.5	2			
CULG						0012.5	0036.0	3	0012.5	0035.0	1	IIIS	
CULG	0016.5			0040.0	2							CONT	
PALE						0016.6	0027.7	2				II	
CULG						0018.0	0335.0	1				IS,C,DC	
CULG						0021.5	0039.0	1				POSS II	
CULG	0026.5			0058.0	2							DCIM,N	
PALE						0027.7	0035.9	2					IV
PALE						0035.9	0305.0	2					B
CULG						0104.5	0550.0	2	0057.0	0549.0	1		IIIG,N
CULG						0200.5	0202.5	1	0201.0	0201.5	1		IIIGG
CULG	0200.5			0202.5	2								DCIM
CULG						0225.0	0707.0	1					IIIN
CULG	0409.5		0410.5	3	0410.5							IIIG	
LEAR					0410.4	0411.5	1					III	
CULG					0411.0	0411.5	3	0411.0	0411.5	2		IIIG	
LEAR					0420.2	0421.0	1					III	
LEAR					0449.0	0509.7	1					CONT	
LEAR					0542.3	0549.2	1					III	
0531 0605	WEIS					0543.9	0550.3	2					IIIGG
	CULG					0544.5	0546.0	3	0545.0	0545.5	1		IIIGG
	CULG		0549.5	0600.0	1								IIIN
	CULG		0711.5	0718.0	1								IS,C
0611 1713	WEIS					0711.6	0717.7	2					DCIM
	LEAR					0733.5	0735.3	1					III
	WEIS					0733.7	0735.2	2					IIIG
	WEIS					0823.9	0824.1	1					IIIB
	WEIS					0827.1	0828.6	2					IIIG
	LEAR					0827.7	0828.5	1					III
	LEAR					0906.7	0910.2	1					III
	WEIS					0907.7	0911.8	3					IIIGG
	WEIS					0929.3	0930.9	2					IIIG
	LEAR					0930.5	0931.1	1					III
	WEIS					0933.3	0934.2	1					IIIG
	LEAR					0941.7	0942.4	1					III
	WEIS					0942.2	0943.2	2					IIIG
	WEIS					1008.1	1009.9	2					IIIG
	WEIS					1043.9	1044.7	2					IIIG
	WEIS					1050.0	1129.0	1					CONT
	WEIS					1050.4	1054.7	1					IIIG
	WEIS					1056.3	1140.8	2					IIIS
	WEIS					1146.2	1146.3	1					IIIB
	WEIS					1148.2	1149.1	3					IIIG
	WEIS				1205.7	1206.1	2					IIIG	
	WEIS				1208.7	1209.5	1					IIIG	
	1300 2305	HARV	1305.0	1347.0	1								IIIN
		HARV	1305.0	1446.0	1								IN
		HARV				1505.0	1704.0	1	1559.0	1704.0	1		IIIN
HARV		1555.0	1556.0	2								IIIG	
HARV		1617.0	1623.0	2								IIIGG	
HARV		1753.0	1756.0	1								IIIGW	
CULG					2155.5	2201.5	1					IIIN	
2030 2400	CULG											IIIN	
	CULG	0113.0	0115.5	1								IIIN	
	CULG				0354.0							IIIB	
0528 1432	WEIS				0826.6	0828.3	2					DCIM	
	WEIS				1124.5	1124.6	1					IIIB	

S O L A R R A D I O E M I S S I O N  
S P E C T R A L O B S E R V A T I O N S

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S E P T E M B E R 1 9 8 2

Observation Day	Start End (UT) (UT)		Sta	Decimetric Band			Metric Band			Dekametric Band			Spectral Type	
	Start (UT)	End (UT)		Int (1-3)	Start (UT)	End (UT)	Int (1-3)	Start (UT)	End (UT)	Int (1-3)				
10	1300	2250	HARV	1340.0	1341.0	1							IIIGW	
	1446	1711	WEIS											
			HARV	1457.0	2228.0	1							INW	
	2045	2400	HARV				1654.0			2			IIIG	
11	0000	0729	CULG											
	1300	2255	HARV				1314.0	1315.0	1				I	
			HARV				1603.0	1605.0	2		1603.0	1605.0	1	IIIG
	0529	1709	WEIS				1603.2	1604.8	1					IIIG
			HARV				1719.0	1721.0	2		1719.0	1721.0	1	IIIG
			HARV				1943.0	1944.0	2		1943.0	1944.0	1	IIIB
	2029	2400	CULG				2050.0							IIIB
			HARV				2050.0				2050.0		1	IIIB
			PALE				2050.4	2105.0	1					S
			HARV				2104.0	2105.0	2		2104.0	2105.0	2	IIIB
			CULG				2105.0							IIIB
			HARV				2151.0	2154.0	2					I
12	0000	0728	CULG				0643.5	0644.0	3					IIIB,V
			LEAR				0643.6	0644.0	1					III
	0530	1012	WEIS				0643.6	0643.7	1					IIIG
	1016	1707	WEIS				1057.9	1058.2	2					U
			WEIS				1100.7	1101.2	2					IIIG
			WEIS				1103.7	1104.2	1					IIIG
			WEIS				1106.2	1106.9	1					IIIG,RS
			WEIS				1110.7	1111.1	1					IIIG
			WEIS				1142.4	1143.1	3					IIIG,U
			WEIS				1144.0	1151.7	2					IIIG
			WEIS				1206.1	1215.6	3					IIIGG
			WEIS				1229.4	1229.7	1					IIIG
			WEIS				1303.6	1306.7	2					IIIG
	1300	2340	HARV				1336.0	1337.0	2					IIIG
			WEIS				1336.4	1336.7	3					IIIB
			HARV				1529.0	1533.0	2		1529.0	1533.0	1	IIIGG
			WEIS				1529.6	1533.0	2					IIIG
			HARV				1537.0	1548.0	2		1537.0	1542.0	1	IIIGG
			WEIS				1537.3	1538.0	1					IIIG
			WEIS				1541.1	1541.8	1					IIIG
			HARV	1550.0	1609.0	2	1550.0	1620.0	3		1552.0	1550.0	1	IIIGG
			HARV	1550.0	1609.0	2	1600.0	1623.0	3					IV
			WEIS				1551.0	1607.0	2					IIIS
			WEIS				1604.0	1623.0	2					CONT
			HARV				1622.0	1649.0	1					I
			HARV				1631.0	1636.0	2					IIIGG
			HARV				1647.0	1654.0	2		1651.0	1654.0	1	IIIGG
			WEIS				1647.2	1647.4	1					IIIG
			HARV				1713.0	1714.0	2					IIIG
			HARV				1829.0		1					IIIG
			PALE				1854.8	1937.1	1					S
			HARV				1855.0	1858.0	3					IIIG
			HARV				1930.0	1931.0	1					IIIG
		HARV				1936.0	1938.0	3		1937.0		2	IIIGG	
		HARV				2006.0	2007.0	1					IIIGW	
		HARV				2018.0		1					IIIB	
2029	2400	HARV	2039.0		1								IIIGW	
		CULG				2054.5	2055.5	3					IIIG,V	
		PALE				2054.9	2055.2	2					III	
		HARV				2055.0		3					IIIGG,V,U	
		CULG				2154.0		1					IIIB,U	
		HARV				2154.0	2155.0	2					IIIG,U	
		CULG				2225.0	2226.0	2					IIIG	
		HARV				2225.0	2226.0	2					IIIG	
		HARV				2238.0	2239.0	1					IIIG	
		CULG				2257.0	2259.0	1					IIIGG	
		HARV				2257.0	2259.0	2					IIIGG	
		LEAR				2305.9	2306.4	1					III	
		CULG				2306.0	2306.5	3					IIIG	
		HARV				2306.0		3					IIIG,U	
		CULG				2325.5	2329.0	2					IIIGG	
		HARV				2326.0	2329.0	2					IIIGG	



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Day	Observation		Sta	Decimetric Band			Metric Band			Dekametric Band			Spectral Type		
	Start (UT)	End (UT)		Start (UT)	End (UT)	Int (1-3)	Start (UT)	End (UT)	Int (1-3)	Start (UT)	End (UT)	Int (1-3)			
12			LEAR				2326.1	2329.1	1				III		
			PALE				2326.3	2326.4	2				III		
13	0000	0728	CULG				0023.0	0024.0	1				IIIGG		
			LEAR				0024.4	0024.5	1				III		
	CULG				0024.5	0721.0	1					IIIN			
	CULG				0045.0	0726.5	2	0155.0			2	IIIG,N			
	LEAR				0045.3	0045.6	1					III			
	LEAR				0154.9	0155.8	1					III			
	CULG				0219.0	0220.5	3						IIIG,V,U		
	LEAR				0219.2	0222.8	1						III		
	PALE				0219.2	0222.5	2						III		
	CULG				0221.5	0222.5	3						IIIG,V,U		
	CULG				0410.0	0705.0	1						IS,C,DC		
	CULG				0428.0	0705.0	1						IIIS		
	LEAR				0430.2	0433.6	1						III		
	LEAR				0438.0	0550.5	1						B		
	CULG				0508.0	0513.5	1						POSS II		
	LEAR				0606.0	0609.5	1						III		
	LEAR				0630.0	0726.5	1						B		
	0532	0822	WEIS				0711.3	0711.4	1				IIIG		
			WEIS				0722.1	0722.4	1				IIIB,U		
	0838	1705	WEIS				0726.1	0726.3	1				IIIB,U		
			WEIS				0839.4	0842.1	1				IIIG		
	1300	2250	LEAR				0839.8	0840.4	1				III		
			LEAR				0927.8	0934.0	1				III		
			WEIS				0927.8	0930.8	3				IIIGG		
			WEIS				0932.3	0934.3	3				IIIGG		
			WEIS				1238.9	1239.0	1				IIIB		
			WEIS				1241.2	1242.9	2				IIIG		
			HARV				1341.0	1342.0	2				IIIGG		
			WEIS				1341.1	1342.3	1				IIIG		
			HARV				1410.0	1417.0	1				IIIGGW		
			HARV				1420.0	1428.0	2				IIIGG		
			HARV				1433.0	1434.0	2				IIIGG		
			HARV				1545.0	1546.0	1				IIIGG		
			HARV				1602.0		1				IIIBW		
			HARV				1617.0	1626.0	2				IIIGG		
WEIS						1620.0	1621.3	2				IIIG			
HARV				1646.0	1648.0	2				IIIGG					
HARV				1746.0		1	1746.0			1	IIIBW				
HARV	1807.0	2131.0	1	2016.0	2017.0	2	2016.0	2017.0	2		INW				
HARV				2016.3	2016.7	1					III				
CULG				2037.5	2107.5	1					IIIN				
2029	2202	CULG	2044.0	2202.5	1							IS			
		HARV				2117.0	2244.0	1				I			
2202	2400	CULG				2141.0	2202.5	1				IN			
		CULG				2336.0		1				IIIG			
14	0000	0730	CULG				0102.5	0108.0	1				IIIN		
			LEAR				0104.8	0108.5	1				III		
			LEAR				0109.7	0115.3	2				III		
			PALE				0110.3	0114.5	2				V		
			CULG	0111.0	0114.0	2	0110.0	0115.0	3	0110.0	0114.0	1	IIIGG		
			CULG				0120.0	0135.0	3				II		
			LEAR				0120.0	0143.5	2				II		
			PALE				0120.0	0132.0	2				II		
			CULG				0142.0	0722.0	2				IIIN		
			LEAR				0154.0	0154.7	1				III		
			LEAR				0242.2	0242.9	1				III		
			LEAR				0311.8	0312.1	1				III		
			CULG				0354.0	0705.5	1				IIIN		
			0531	0716	WEIS				0721.5	0721.8	1				III
					LEAR				0938.1	0941.4	3				IIIGG,U
			0724	1703	WEIS				0938.7	0941.3	1				III
					LEAR				1017.1	1018.8	1				IIIG
			1300	2255	WEIS				1151.1	1152.3	2				IIIG
					HARV				1309.0	2241.0	2				IIIN
					HARV				1356.0	1357.0	3				IIIG,V

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Observation			Decimetric Band			Metric Band			Dekametric Band			Spectral Type
Day	Start (UT)	End (UT)	Start (UT)	End (UT)	Int (1-3)	Start (UT)	End (UT)	Int (1-3)	Start (UT)	End (UT)	Int (1-3)	
14						1356.4	1357.4	3				IIIG
						1405.0	1407.0	2				IIIGG,V
						1406.5	1407.7	3				IIIG
						1407.1	1407.3	1				III
						1440.0		2				IIIG
						1544.0		2				IIIG
						1627.0	1628.0	3	1627.0	1628.0	2	IIIGG
						1628.0	1628.5	1				III
						1628.2	1628.4	2				IIIG
						1850.0		2				IIIG
						1905.0	1906.0	1				IIIGG
						2003.0	2015.0	2	2008.0		1	IIIGG
						2010.3	2010.6	1				III
						2016.8	2018.5	2				V
			2017.0		1	2016.0	2018.0	3	2017.0	2018.0	2	IIIGG,V
						2021.0	2025.0	2	2023.0	2025.0	1	IIIGG
						2028.0	2030.0	1				IIIGG
						2030.0	2034.0	2				II
						2037.0	2038.0	2				IIIG
						2112.0	2018.0	2	2116.0		2	IIIGG
						2115.9	2116.4	2				III
2055	2400					2116.0	2118.5	2				IIIG
						2147.0	2255.0	1				I
			2215.0	2215.5	1	2215.0	2216.0	3				IIIG
			2215.0		2	2214.0	2216.0	3	2215.0		2	IIIGG
						2215.2	2224.5	2				III
			2223.0	2225.0	2	2224.0	2225.0	3	2224.0		1	IIIGG
						2223.5	2225.5	2				IIIG
						2248.0	2250.0	2				IIIGG
						2345.9	2346.3	1				III
						2345.9	2346.2	2				III
						2346.0	2347.0	2				IIIG
						2352.9	2355.7	3				III
						2352.9	2354.6	3				V
						2353.0	2355.0	3	2353.0	2355.0	3	IIIG,V
15						0116.3	0117.3	2				III
						0116.3	0117.3	3				III
0000	0213					0116.5	0117.5	3				IIIG
						0143.8	0159.1	1				CONT
						0144.0	0159.0	2				IIIG,N
						0150.0	0154.2	2				III
0213	0728					0213.0	0307.0					IS,W,DC
						0214.0	0223.5	2				IIIS
						0215.7	0230.7	1				CONT
						0215.9	0230.4	2				CONT
						0217.5		3				IIIB
			0219.0	0224.5	1							IS
						0248.5		3				IIIB
						0248.6	0249.0	1				III
						0248.7	0249.1	2				III
						0249.0	0722.0	1				IIIN
						0359.2	0359.9	1				III
						0359.5		3				IIIB
						0445.0	0454.0					IIIS,W
			0558.5	0608.5	1	0558.5	0603.0	3				IIIGG,V
						0558.8	0602.8	2				IIIG
						0558.9	0606.0	1				III
						0608.0	0620.5	3				II
0535	1557					0608.6	0619.6	2				II HARM
						0608.8	0621.0	1				II
						0615.0	0700.0					IV W
						0615.0	0717.0	1				IN
						0746.3	0747.1	1				III
						0746.3	0746.8	1				IIIG
						0749.4	0750.9	1				IIIG
						0758.2	0758.4	1				III
						0758.2	0758.3	2				IIIB
						0807.2	0810.0	1				IIIG
						0901.0	1151.0	1				IN
						0947.2	0947.4	1				IIIB

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Observation		Decimetric Band			Metric Band			Dekametric Band			Spectral Type			
Day	Start (UT) End (UT) Sta	Start (UT)	End (UT)	Int (1-3)	Start (UT)	End (UT)	Int (1-3)	Start (UT)	End (UT)	Int (1-3)				
15	1300 2300	WEIS				0957.7	0957.9	1				IIIG		
		WEIS				1026.6	1927.8	2				IIIG		
		WEIS				1122.4	1122.6	2				U		
		WEIS				1222.6	1232.7	1				IIIB		
		HARV				1329.0	2229.0	2				IIIN		
		WEIS				1333.4	1341.0	3				IIIGG		
		HARV				1334.0	1341.0	2				IIIGG		
		HARV				1348.0	1351.0	3				IIIGG		
		WEIS				1348.6	1351.2	2				IIIG,DCIM		
		WEIS				1437.8	1438.0	1				IIIB		
		HARV				1610.0	1611.0	2				IIIG,U		
		WEIS				1651.3	1651.6	1				IIIG		
		HARV	1652.0			2	1651.0	1652.0	3				IIIGG,U	
		HARV					1703.0	1707.0	2				IIIGG	
		1629 1700	PALE				1816.7	1821.5	2				V	
	HARV		1817.0	1823.0	1	1816.0	1827.0	3	1817.0	1827.0	2	IIIGG,V		
	SGMR					1817.0	1825.8	2				V		
	PALE					1822.5	1825.3	3				V		
	HARV		1823.0	1830.0	2							IV		
	HARV					1827.0	1851.0	3	1830.0	1843.0	2	II		
	PALE					1829.2	1842.3	2				II		
	SGMR					1830.7	1837.0	1				II		
	HARV					1834.0	1853.0	2				I		
	PALE					1851.2	1851.5	2				III		
	HARV		2019.0	2022.0	2	2019.0	2023.0	3				IIIGG		
	CULG					2120.0	2338.5	1				IIIN		
	CULG					2145.0		2				IIIB,U		
	16		0000 0727	CULG				0041.0	0704.5	1				IIIN
				LEAR				0041.5	0041.7	1				III
		LEAR					0131.9	0135.7	1				III	
CULG						0133.0	0318.5	2				IIIN		
CULG		0149.5				1	0150.0			0150.0		1	IIIG,U	
LEAR						0149.8	0150.6	2				III		
PALE						0149.9	0150.4	2				III		
CULG		0316.0		0316.5	1	0316.0	0317.0	3				IIIG,U		
LEAR						0316.0	0318.9	1				III		
PALE						0316.1	0318.9	2				III		
CULG						0329.0	0329.5	3				IIIG,U		
LEAR						0329.1	0329.5	1				III		
CULG		0509.5		0510.0	1	0509.5	0511.0	3				IIIG,U,V		
LEAR						0509.9	0511.6	2				III		
LEAR						0605.7	0606.1	1				III		
0550 1657		CULG				0626.5	0628.0	3				IIIG,V		
		WEIS				0626.7	0628.2	3				IIIGG		
		LEAR				0626.8	0628.3	2				III		
		WEIS				0657.6	0700.6	3				IIIG		
		CULG				0659.0	0700.0	3				IIIG		
		LEAR				0659.2	0659.8	1				III		
		WEIS				0928.9	0930.8	2				IIIG,DCIM		
		WEIS				0935.8	0938.3	2				IIIGDCIMRS		
		WEIS				1158.4	1158.5	2				IIIB		
		1300 2245	HARV				1326.0	1333.0	2				IIIGG	
			WEIS				1326.2	1326.8	1				IIIG	
			WEIS				1329.4	1329.5	1				IIIG	
			HARV				1339.0	1342.0	2				IIIGG	
			WEIS				1339.7	1342.2	2				IIIG	
			HARV				1458.0	1501.0	1				IIIG	
HARV					1628.0		1				IIIBW			
WEIS					1648.6	1650.6	3				IIIGG			
HARV	1649.0		1650.0	1	1649.0	1650.0	3	1649.0	1650.0	2	IIIGG,V			
SGMR					1649.8	1851.2	1				V			
HARV					1653.0		1				IIIBW			
HARV					1708.0		2				IIIGG			
HARV					1745.0	1747.0	2				IIIGG			
HARV					1750.0	1752.0	2				IIIGG			
2027 2400	HARV					1928.0		2				IIIB		
	HARV				2116.0	2117.0	1				IIIG			
	CULG	2321.5	2322.0	2	2321.5	2322.5	2				IIIG			
17	0000 0727	CULG	0145.5	0146.0	2	0145.5	0146.5	3				IIIG,U		

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Observation Day	Start End		Sta	Decimetric Band			Metric Band			Dekametric Band			Spectral Type
	(UT)	(UT)		Start (UT)	End (UT)	Int (1-3)	Start (UT)	End (UT)	Int (1-3)	Start (UT)	End (UT)	Int (1-3)	
17			CULG				0552.5		1				11B
			CULG				0646.0	7072.7					IS,W
	0543	1408	WEIS				0729.7	0732.8	3				11G,DCIM
			LEAR				0732.2	0733.4	1				111
			WEIS				0807.7	0808.0	1				11G
			WEIS				1043.9	1046.3	2				11G
			WEIS				1118.7	1119.1	2				11G,U
			WEIS				1231.0	1231.3	2				11G
			WEIS				1233.1	1233.9	3				11G
			SGMR				1233.2	1233.3	1				V
			WEIS				1235.9	1236.1	1				11G
	1300	2245	HARV				1305.0		2				11G
			WEIS				1305.1	1305.9	2				11G
			HARV				1308.0	2122.0	2	1803.0		1	11N
			WEIS				1310.9	1311.1	1				11B
			HARV				1321.0	1328.0	3	1322.0	1323.0	1	11GG
			WEIS				1323.6	1328.3	3				11GG
			SGMR				1324.8	1325.5	1				V
			WEIS				1328.3	1328.5	1				11G
			HARV				1348.0		2				11G
			WEIS				1354.3	1358.8	3				11GG
			HARV	1355.0	1359.0	2	1354.0	1403.0	3	1356.0	1358.0	1	11GG,V
			SGMR				1355.9	1358.5	1				V
			WEIS				1401.9	1403.2	2				11G
			HARV				1408.0	1420.0	3				11GG,U
			SGMR				1436.4	1508.1	1				S
			HARV	1438.0	1441.0	1	1435.0	1441.0	3	1436.0		1	11GG
			HARV	1446.0	1447.0	1	1447.0	1451.0	3	1450.0	1451.0	1	11GG,V
			HARV				1502.0		3				11G
			HARV				1506.0	1510.0	3	1508.0	1510.0	2	11GG,V
			HARV	1534.0	1535.0	1	1534.0	1535.0	3	1534.0	1535.0	2	11GG
	1520	1656	WEIS				1534.2	1535.3	2				11G,U
			SGMR				1541.7	1541.9	1				V
			WEIS				1541.8	1542.2	2				11G
			HARV				1542.0		2	1542.0		2	11G
			HARV				1723.0	1724.0	1				11GG
			HARV				1737.0	1738.0	1				11G
			HARV	1808.0		1	1808.0	1817.0	2				11GG
			HARV				1906.0	1909.0	2				11GG,U
			HARV	1940.0	1941.0	1	1940.0	1941.0	2	1940.0	1941.0	2	11G
			PALE				1940.4	1940.9	1				111
			HARV				2152.0	2153.0	2				11G
	2027	2400	CULG				2322.0		1				11B
18	0000	0725	CULG				0027.0		1				11B
			CULG	0142.0	0142.5	2	0142.0	0142.5	2				11G
			CULG	0142.0	0146.0	1							11G,N
			LEAR				0142.2	0142.4	1				111
			CULG	0540.0	0540.5	1	0540.0	0540.5	1				11G
			CULG	0557.5	0559.5	1	0557.5	0558.5	2				11G,V
			LEAR				0557.7	0558.4	1				111
			CULG				0718.5		1				11B
	0640	1653	WEIS				1020.3	1021.2	2				11G
			WEIS				1028.2	1038.9	2				DCIM
			WEIS				1242.8	1243.6	2				11G,DCIM
			WEIS				1300.7	1302.8	2				11,DCIM
	1315	2320	HARV	1334.0	1335.0	1							1W
			HARV				1344.0		2				11G
			HARV	1408.0	1411.0	1	1408.0	1411.0	2				11GG
			WEIS				1408.6	1411.4	2				DCIM,U
			HARV				1457.0	1500.0	1				11GG
			HARV				1506.0	1507.0	1				11G
			HARV				1513.0	1518.0	1				11GG
			HARV				1639.0	1640.0	3				11GG
			WEIS				1639.6	1640.1	2				11G
			HARV	1652.0	1653.0	1	1652.0	1653.0	3	1652.0	1653.0	1	11G
			WEIS				1652.3	1652.7	2				11G,U
			HARV				1820.0	1823.0	3	1823.0		1	11GG
	2027	2400	CULG	2045.0	2045.5	1	2045.0	2047.0	1				11G
			HARV	2045.0		1	2043.0	2047.0	2				11GG
			CULG	2358.0	2359.0	1	2358.0	2359.5	2				11G,V,U

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Day (UT)	Start (UT) End (UT)		Start (UT)	End (UT)	Int (1-3)	Start (UT)	End (UT)	Int (1-3)	Start (UT)	End (UT)	Int (1-3)	
18		LEAR				2358.6	2359.4	1				III
19	0000 0726	CULG	0000.0	0001.0	1							IIIG
	0543 0917	WEIS										IN
	1315 2250	HARV	1425.0	2105.0	1							IN
		HARV				1432.0	1456.0	1	1501.0	1537.0	1	IIIG,RS
		HARV	1434.0	1439.0	2							IIIG
		HARV				1442.0	1443.0	2				
		HARV	1445.0	1626.0	2	1500.0	2250.0	3	1540.0	2100.0	2	IV
		WEIS				1458.0	1518.0	2				IS
	0932 1654	WEIS				1459.0	1521.0	2				II RS,H
		HARV				1500.0	2250.0	3	1540.0	2100.0	2	IC
		WEIS	1505.0	1515.5	2							SPIKES
		WEIS				1507.0	1654.0	3				IV
		WEIS	1511.0	1534.0	1							CONT
		SGMR				1526.3	2226.0	1				B
		HARV				1543.0		2	1543.0		2	IIIB
		WEIS				1559.7	1601.6	2				SPIKES
		HARV	1616.0	1618.0	2	1617.0	1618.0	1	1617.0	1618.0	1	IIIGG
		WEIS				1616.0	1618.2	1				DCIM
		PALE				1630.8	0405.0	2				B
	2026 2400	CULG				2036.0	2400.0	3				IS,C
		HARV	2119.0	2120.0	2	2119.0	2120.0	2				IIIGG
		CULG	2119.5	2120.0	2	2119.5	2120.0	2				IIIG
		LEAR				2232.0	1002.0	1				B
		LEAR				2358.6	2359.4	1				III
20	0000 0721	CULG				0000.0	0355.0	3				IS,C
		CULG				0216.0		2				IIIB
		CULG				0355.0	0721.0	2				IS,C
	0541 1651	WEIS				0544.0	1100.0	2				IS
	1315 2245	HARV				1453.0		1				IIIGW
		HARV				1604.0		2				IIIG
		HARV				1631.0	1632.0	1				IIIG
		HARV				1744.0		3	1744.0		2	IIIG
		SGMR				1744.0	1744.3	1				III
		PALE				1744.1	1744.3	2				V
		HARV				1748.0		2				IIIG
		HARV				1819.0		1				IIIGW
		HARV				1846.0	1848.0	1				IIIG
	2026 2400	CULG										
21	0000 0720	CULG	0049.5	0050.0	1							IIIG
		CULG	0224.0	0224.5	2							IIIG
		CULG				0343.0	0347.0	1				IIIG,N
	0544 0704	WEIS										
		CULG				0626.0	0630.0	1				IIIG,N
	0710 1649	WEIS				1105.3	1108.3	3				DCIM
	1315 2255	HARV				2207.0	2208.0	2				IIIG
	2025 2400	CULG				2250.0	2250.5	1				IIIG
		HARV				2250.0		2				IIIG
22	0000 0725	CULG										
	0543 1131	WEIS										
	1240 1615	WEIS										
	1315 2300	HARV	1448.0	1454.0	1							IIIGW
	1628 1646	WEIS										
		HARV	1821.0	1826.0	3							IIIGG
		HARV				1822.0		1				IW
		HARV				1826.0	1832.0	2				II
		HARV				1904.0		1				IIIGW,U
		HARV	1925.0	1928.0	1							IIIGG
		HARV	1951.0	1956.0	2							IIIGG
		HARV	2020.0	2021.0	2							IIIG
	2025 2400	CULG	2110.0	2111.0	2	2111.0		1				IIIG
		HARV	2110.0	2114.0	3	2111.0		2				IIIGG
		CULG	2310.5	2312.5	2							IIIG
		CULG	2349.5	2356.5	1							IIIN
23	0000 0713	CULG	0102.5		1							IIIG
		LEAR				0240.4	0240.5	1				III

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	Start (UT)	End (UT)		Start (UT)	End (UT)	Int (1-3)	Start (UT)	End (UT)	Int (1-3)	Start (UT)	End (UT)	Int (1-3)		
23			CULG				0240.5		1				IIIB	
			CULG				0409.5		1	0409.5		1	IIIB	
			CULG				0528.0	0528.5	1				IIIG,V	
			LEAR				0528.0	0528.0	1				III	
	0546	1645	WEIS											
	1315	2245	HARV	1527.0	1529.0	1								
			HARV				1751.0		2	1751.0		2	IIIGG	
			PALE				1751.5	1751.6	1				III	
			HARV				1806.0		2	1806.0		2	IIIG	
			HARV				2038.0	2041.0	2	2038.0	2041.0	2	IIIGG	
	2025	2400	CULG				2038.5	2041.0	3				IIIG	
			PALE				2038.8	2040.5	2				III	
			HARV	2141.0	2143.0	1	2141.0	2144.0	2	2144.0		2	IIIGG	
			CULG				2141.5	2142.0	2				IIIG	
			PALE				2141.6	2145.1	2				III	
			CULG				2143.5	2144.0	3				IIIG	
			HARV				2234.0	2235.0	2				IIIG	
			CULG				2234.5	2254.0	1				IIIN	
			PALE				2252.7	2321.0	2				CONT	
			CULG	2308.5	2309.0	1							I	
	24			PALE				0012.9	0036.1	2				CONT
		0000	0724	CULG				0023.5	0057.0	1				IIIN
				LEAR				0053.4	0056.8	1				III
			LEAR				0358.9	0401.3	1				III	
			CULG	0359.0	0400.5	1	0359.0	0401.0	2	0359.0	0401.0	1	IIIGG	
			CULG				0414.5	0707.5	1				IIIN	
			LEAR				0414.7	0414.8	1				III	
			LEAR				0525.7	0528.8	1				III	
			CULG				0528.5	0705.5	2				IIIN	
			LEAR				0542.0	0544.7	1				III	
			LEAR				0627.5	0628.0	1				III	
			LEAR				0644.9	0645.3	1				III	
0545		1645	WEIS				0702.9	0703.6	1				IIIG	
			LEAR				0704.2	0705.7	1				III	
			WEIS				0816.4	0816.5	1				IIIB	
			WEIS				0839.7	0839.8	1				IIIB	
			WEIS				0850.1	0850.2	1				IIIB	
			WEIS				0928.7	0928.8	1				IIIB	
			WEIS				0950.4	0950.7	1				IIIB	
			WEIS				0952.4	0952.7	2				IIIG	
			WEIS				1033.3	1033.6	2				IIIB	
			WEIS				1034.7	1037.0	3				IIIG	
			WEIS				1042.8	1043.1	1				IIIB	
			WEIS				1111.3	1111.7	2				IIIG	
			WEIS				1113.0	1113.2	2				IIIB	
			WEIS				1118.9	1119.1	1				IIIB	
			WEIS				1122.1	1122.7	1				IIIG	
			WEIS				1158.6	1159.2	2				IIIG	
			WEIS				1317.6	1317.7	1				IIIB	
			WEIS				1333.3	1333.4	1				IIIB	
			WEIS				1347.8	1348.2	1				IIIG	
1315		2245	HARV				1348.0	1349.0	1				IIIGW	
			HARV	1517.0	1518.0	1							I	
			HARV	1812.0	1814.0	1	1812.0	1814.0	2	1814.0		2	IIIGG,U	
		PALE				1813.6	1813.9	2				III		
		HARV				1818.0	1819.0	1				IIIG		
		HARV				2004.0		1	2004.0		1	IIIG		
2025	2400	CULG												
25	0000	0724	CULG				0145.0		1				IIIB	
	0547	1641	WEIS				1048.0	1048.3	2				IIIG	
			WEIS				1135.6	1136.7	2				IIIG	
			WEIS				1143.6	1143.7	1				IIIB	
			WEIS				1303.2	1303.5	1				IIIB	
	1315	2255	HARV	1326.0	1903.0	1							INW	
			WEIS				1501.5	1501.6	1				IIIB	
			HARV				1543.0		1				IIIBW	
			WEIS				1548.7	1549.3	1				IIIG	
			HARV				1549.0		1	1549.0		1	IIIG	
			WEIS				1623.2	1624.3	2				IIIG	

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	Start (UT)	End (UT)		Start (UT)	End (UT)	Int (1-3)	Start (UT)	End (UT)	Int (1-3)	Start (UT)	End (UT)	Int (1-3)		
25			HARV	1626.0		1	1623.0	1624.0	3	1623.0	1625.0	2	IIIGG	
			HARV				1644.0		2	1644.0		2	IIIG	
			HARV				1653.0		2	1653.0		1	IIIG	
			HARV				1823.0	1824.0	2	1823.0	1824.0	2	IIIG	
			HARV				1857.0	1858.0	2	1857.0	1858.0	2	IIIGG	
			PALE				1857.8	1858.5	1				III	
			HARV				1950.0	1955.0	2	1950.0	1955.0	2	IIIGG	
			PALE				1953.3	2046.1	2				CONT	
			HARV				2000.0		1	2000.0		1	IIIB	
			HARV				2012.0	2013.0	2	2012.0	2013.0	2	IIIG	
			HARV				2033.0	2034.0	2	2033.0	2034.0	2	IIIG	
	2025	2400	CULG				2033.5	2231.5	2	2217.5	2231.5	2	IIIN	
			HARV				2046.0		2	2046.0		2	IIIG	
			HARV				2133.0	2139.0	2	2133.0	2139.0	1	IIIGG	
			PALE				2133.0	2139.3	2				III	
			HARV				2217.0	2219.0	3	2219.0		2	IIIGG	
			PALE				2217.2	2219.3	2				V	
			LEAR				2218.9	2219.2	1				III	
			CULG				2219.0	2219.5	3	2219.0	2219.5	3	IIIB	
			HARV				2231.0	2232.0	2				IIIG	
		PALE				2231.2	2231.8	2				V		
26			LEAR				0022.8	0023.2	1				III	
	0000	0723	CULG				0023.0	0701.5	1				IIIN	
			CULG				0047.0	0659.0	2				IIIN	
			PALE				0047.1	0048.3	2				III	
			LEAR				0047.2	0048.7	1				III	
			PALE				0100.8	0101.4	2				V	
			LEAR				0100.9	0101.5	1				III	
			CULG				0101.0	0101.5	3	0101.0	0101.5	2	IIIG	
			LEAR				0110.8	0111.1	1				III	
			CULG		0122.5	0123.0	1	0122.5	0123.0	3	0122.5	0123.0	2	IIIG
			LEAR				0122.5	0123.5	2				III	
			PALE				0122.6	0122.9	3				III	
			LEAR				0249.9	0251.0	1				III	
			LEAR				0317.8	0318.2	1				III	
			LEAR				0329.9	0330.3	1				III	
			LEAR				0337.8	0338.1	1				III	
			LEAR				0421.6	0421.9	1				III	
			LEAR				0435.4	0435.7	1				III	
			CULG		0545.5	0547.0	1						IS	
	0549	1347	WEIS				0639.6	0639.7	1				IIIB	
			LEAR				0641.2	0641.9	1				III	
			WEIS				0641.2	0641.6	1				IIIG	
			LEAR				0656.2	0659.0	1				III	
			WEIS				0656.2	0656.4	3				IIIB	
			CULG		0710.5	0711.0	1						I	
			WEIS				0758.7	0758.9	2				IIIB	
			WEIS				1117.2	1117.3	1				IIIB	
			WEIS				1145.7	1145.9	2				IIIG	
			WEIS				1151.1	1151.3	2				IIIG	
			WEIS		1305.7	1306.4	1						DCIM	
			WEIS				1326.7	1326.8	2				IIIG	
	1315	2250	HARV				1327.0		1				IIIB	
			HARV				1345.0		1				IIIBW	
		HARV		1411.0	2250.0	1						INW		
		HARV				1438.0		1				IIIBW		
		HARV				1446.0	1447.0	3	1446.0	1447.0	2	IIIG		
		SGMR				1446.4	1446.6	1				V		
		HARV				1458.0	1459.0	2	1458.0	1459.0	1	IIIG		
		HARV				1515.0	1517.0	3	1515.0	1517.0	2	IIIGG		
1502	1638	WEIS				1515.3	1517.2	2				IIIG		
		SGMR				1515.4	1517.2	1				V		
		HARV				1606.0	1607.0	2	1606.0	1607.0	2	IIIG		
		WEIS				1607.5	1606.8	2				IIIG		
		HARV				1620.0		3	1618.0	1620.0	2	IIIGG		
		WEIS				1620.2	1620.6	3				IIIG		
		HARV				1646.0	2223.0	1				IN		
		HARV				1725.0	1726.0	2	1725.0	1726.0	2	IIIG		
		HARV				1735.0		2	1735.0		1	IIIG		
		HARV				1753.0		1	1753.0		1	IIIGW		

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Day	Start (UT)	End (UT)	Start (UT)	End (UT)	Int (1-3)	Start (UT)	End (UT)	Int (1-3)	Start (UT)	End (UT)	Int (1-3)			
26			HARV				1823.0	2	1823.0		1	IIIG		
			HARV				1843.0	2	1843.0		2	IIIG		
			HARV				1931.0	1	1931.0	1937.0	1	IIIGG		
			HARV				2011.0	2	2011.0	2014.0	2	IIIGG		
			PALE				2011.2	2	2014.3			2	III	
			HARV				2028.0	2	2029.0	2028.0	2029.0	1	IIIG	
		2025	2400	CULG			2028.5	1	2029.0				IIIG	
				HARV			2040.0	2	2042.0				IIIG	
				HARV	2055.0				2				IIIG	
				CULG	2104.0	2400.0	1						IN	
				CULG	2114.5	2115.0	2	2114.5	2115.0	3				IIIG,U
				PALE				2114.8	2	2115.3				V
				HARV				2115.0	3	2115.0		2		IIIGG
				CULG				2203.5	1					IIIB
				HARV	2249.0		1	2249.0	2					IIIG
				PALE				2249.2	1	2249.3				III
				CULG				2249.5	1					IIIB
27	0000	0723	CULG	0000.0	0528.5	1							IN	
			PALE				0129.9	2	0130.6				V	
			LEAR				0130.1	2	0130.5				III	
			LEAR				0140.5	1	0142.9				III	
			CULG	0142.0	0143.0	2	0140.5	0143.0	2					IIIG,V
			PALE				0142.0	2	0142.7					III
			LEAR				0205.8	1	0209.8					III
			PALE				0236.8	2	0237.0					III
			CULG	0237.0		1	0237.0		3					IIIB
			CULG	0239.0	0239.5	1	0235.5	0240.5	1					IIIN
			LEAR				0254.0	1	0254.4					III
			LEAR				0304.8	1	0305.4					III
			CULG	0337.0	0338.0	2								DCIM
			LEAR				0341.5	0341.2	1					III
			CULG				0441.0	0611.0	1					IIIN
			CULG	0656.5	0657.0	2								DCIM
			LEAR				0728.9	0729.1	1					III
			LEAR				0758.5	0759.4	1					III
		0550	1637	WEIS			0758.6	0758.8	1					IIIG
				WEIS				1015.7	1	1015.8				IIIB
				HARV				1436.0	1	1437.0				IIIB
				HARV	1455.0	2305.0	1							INW
				HARV	1614.0	1618.0	3	1614.0	1616.0	2	1614.0	1616.0	2	IIIGG
				WEIS				1614.4	1	1616.7				IIIG
				HARV	1624.0		1	1624.0	2					IIIB
				HARV				1626.0	1	1735.0				IN
				HARV				1736.0	2	1820.0				IC
				HARV				1820.0	3	1935.0				I
				HARV	1845.0	1846.0	1							IIIG
				HARV				1858.0	2	1900.0	1858.0	1900.0	2	IIIGG
				HARV	1928.0		2							IIIG
				HARV				1936.0	1	2228.0				IN
				HARV				2039.0	2	2041.0	2039.0	2040.0	1	IIIGG
	2024	2400	CULG	2039.5	2040.5	1	2039.5	2041.5	2				IIIGG	
			CULG	2106.5	2217.5	1							IIIN	
			HARV	2107.0		2							IIIG	
			HARV	2146.0	2147.0	1							IIIGG	
			CULG	2155.5	2323.5	1							IS	
			HARV				2204.0	2	2205.0	2204.0	2205.0	1	IIIG	
			PALE				2204.3	2	2204.6				III	
			CULG				2204.5	3	2205.0	2204.5	2205.0	2	IIIG	
			CULG				2210.0		2257.5				IIIS,W	
			CULG				2214.5	1	2250.5				IIIN	
			HARV	2217.0		2	2217.0	2					IIIG	
			CULG				2225.0	1	2323.5				IS	
			HARV				2228.0	2	2305.0				I	
			HARV				2229.0	2	2257.0				IIIN	
28			LEAR				0045.8	1	0047.4				III	
		0000	0722	CULG			0047.0	2	0047.5				IIIG	
				CULG	0048.0	0722.5	1	0057.0	1	0722.5				IS,C,DC
				CULG				0116.0		0301.0				IIIS,W
				LEAR				0117.5	1	0220.0				B



S O L A R   R A D I O   E M I S S I O N  
S P E C T R A L   O B S E R V A T I O N S

SEPTEMBER 1982

Day	Observation		Sta	Decimetric Band			Metric Band			Decametric Band			Spectral Type		
	Start (UT)	End (UT)		Start (UT)	End (UT)	Int (1-3)	Start (UT)	End (UT)	Int (1-3)	Start (UT)	End (UT)	Int (1-3)			
28			CULG				0207.0			2	0207.0		1	IIIB	
			CULG				0217.0		0703.0	1				IIIN	
			CULG	0404.0			0404.0		0404.5	3				IIIG	
			CULG			3	0600.5		0703.5	2				IIIN	
			LEAR				0600.5		0601.2	1				III	
			LEAR				0619.5		0624.3	1				III	
			CULG				0623.0		0722.5					IIIS,W	
			LEAR				0637.7		0637.8	1				III	
		0552	1327	WEIS			0656.0		0658.9	3				IIIG	
				LEAR			0656.9		0703.3	1				III	
				CULG			0657.0		0657.5	3				IIIG	
				WEIS			0702.3		0703.3	1				IIIG	
				WEIS			0711.0		1552.0	1				IN	
				LEAR			0843.6		0844.6	2				III	
				WEIS			1050.4		1050.7	2				IIIB	
				WEIS			1122.7		1122.9	1				IIIG	
				WEIS			1125.7		1126.1	1				IIIG	
				WEIS			1127.6		1128.5	1				IIIG	
				WEIS			1141.4		1143.8	1				IIIG	
				WEIS			1159.4		1159.7	3				IIIG	
				WEIS			1205.6		1205.7	1				IIIB	
				WEIS			1241.8		1244.1	3				IIIGG	
				WEIS			1247.8		1250.7	3				IIIGG	
				WEIS			1325.5		1325.6	1				IIIB	
		1331	1635	WEIS			1333.1		1333.2	2				IIIB	
		1315	2250	HARV	1410.0	2239.0	1	1316.0		2141.0	1			INW	
				HARV				1730.0			1	1730.0		1	IIIB
				HARV				1934.0		1938.0	2	1938.0		1	IIIGG
				HARV				2009.0			1				IIIB
		2023	2400	CULG	2023.0	2052.0									IS,W
			CULG	2100.0	2104.0	1								IIIN	
			HARV	2100.0	2104.0	2								IIIGG	
			HARV				2132.0			1				IIIBW	
			CULG	2257.0	2257.5	2								I	
29	0000	0722	CULG	0016.0	0016.5	1								I	
			CULG	0032.5	0722.5	1								IS	
			CULG				0049.0		0049.5	1	0049.5		1	IIIG,U	
			CULG	0049.0	0049.5	1									DCIM
			PALE				0049.2		0049.3	2					III
			CULG				0207.5			1					IIIB
			LEAR				0207.6		0207.8	1					III
			CULG				0336.0		0336.5	1					IIIG
			LEAR				0336.3		0336.5	1					III
			CULG				0349.0		0435.0	1					IS
			CULG				0623.0		0722.5	1					IS,C
		0552	0804	WEIS			0730.0		1630.0	3					IS
				LEAR			0808.0		0818.6	1					CONT
		0846	1633	WEIS			0903.3		0903.5	1					IIIB
				WEIS			1014.6		1014.9	2					IIIG
				WEIS			1056.1		1056.2	1					IIIB
				WEIS			1057.8		1058.2	1					IIIB
				WEIS			1154.2		1154.5	1					IIIG
				WEIS			1204.7		1205.2	1					IIIG
		1315	2300	HARV			1317.0		1400.0	2					I
				WEIS			1354.2		1355.0	1					IIIG
				HARV			1400.0		1533.0	1					IN
				HARV	1438.0	1522.0	1								INW
				HARV				1439.0			2				IIIG
				HARV	1522.0	1608.0	2								I
				WEIS				1522.8		1526.3	3				IIIG
				HARV	1523.0	1615.0	2								IV
				SGMR				1523.2		1525.4	1				V
				HARV	1525.0		2	1523.0		1527.0	3	1523.0	1525.0	2	IIIGG,V
				HARV				1526.0		1529.0	2				UNCL
				HARV				1531.0		1554.0	2	1541.0	1554.0	1	IIIGG
				WEIS				1532.6		1532.8	1				IIIG
				HARV				1533.0		1730.0	3				IC
			WEIS				1540.3		1540.6	1				IIIB	
			WEIS				1551.4		1551.7	1				IIIG	
			WEIS				1553.7		1553.8	1				IIIB	

SOLAR RADIO EMISSION  
SPECTRAL OBSERVATIONS

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Sep 82

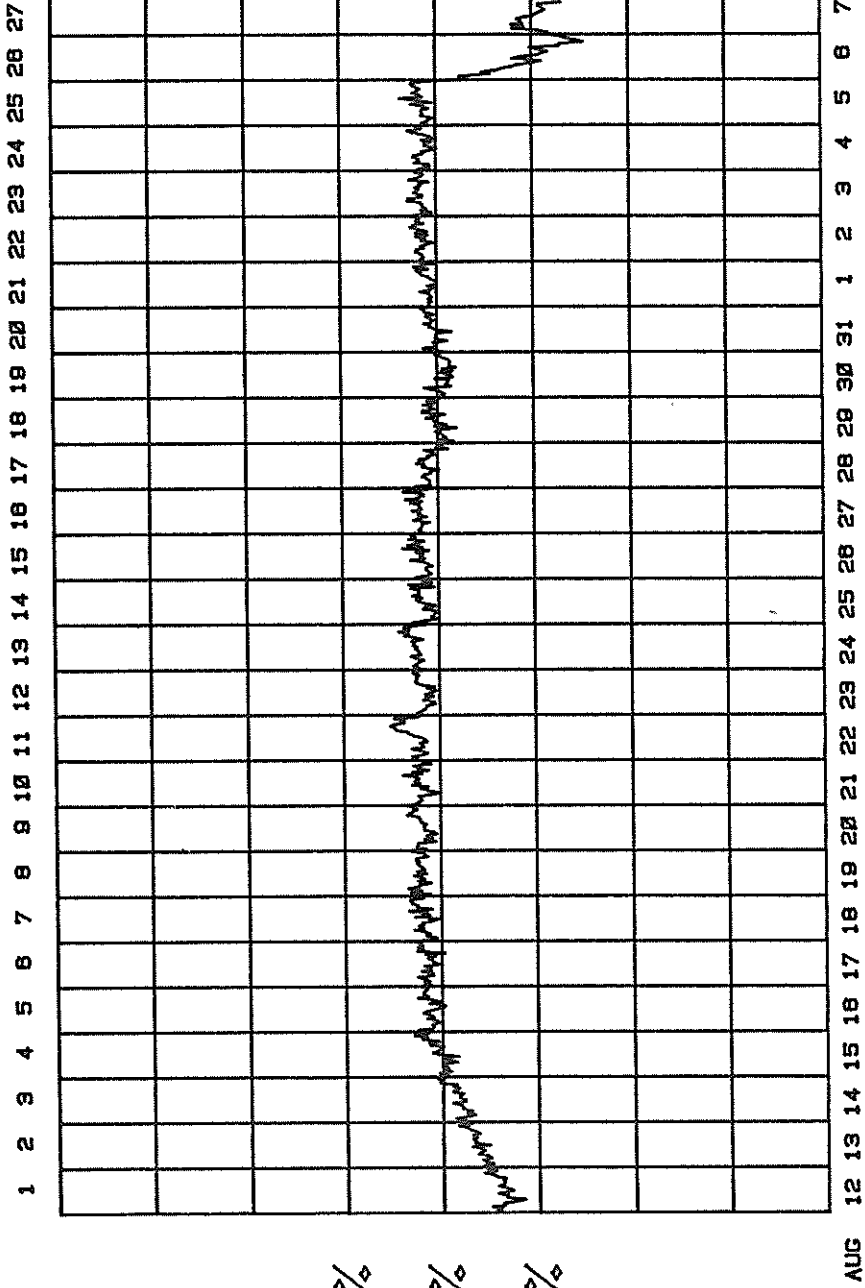
SEPTEMBER 1982

Day	Observation		Sta	Decimetric Band			Metric Band			Dekametric Band			Spectral Type
	Start (UT)	End (UT)		Start (UT)	End (UT)	Int (1-3)	Start (UT)	End (UT)	Int (1-3)	Start (UT)	End (UT)	Int (1-3)	
29			HARV	1608.0	2300.0	1							INW
			HARV				1730.0	2234.0	1				IN
			HARV				1800.0	1803.0	3	1800.0	1803.0	2	IIIGG
			PALE				1801.0	1802.4	1				III
			HARV				1947.0	1949.0	2	1949.0	1949.0	2	IIIGG
			PALE				1947.2	1948.6	2				III
	2023	2400	CULG	2023.0	2049.0								IS,W
			HARV				2047.0	2050.0	2	2047.0	2050.0	1	IIIGG
			PALE				2047.4	2049.2	1				III
			CULG				2047.5	2049.5	2				IIIGG
			CULG				2051.5	2308.5	1				IIIN
			CULG	2055.0	2358.5	1	2150.5	2358.0	1				IN
			HARV				2234.0	2300.0	2				I
30	0000	0722	CULG				0008.5	0016.5	1				IN
			LEAR				0031.8	0032.0	1				III
			CULG				0032.0		1				IIIB
			LEAR				0116.8	0116.9	1				III
			CULG	0136.0	0542.0	1							IV
			CULG							0136.5	0152.0	1	SWF
			CULG				0137.0	0137.5	3	0137.0	0137.5	2	IIIB,V
			CULG				0137.0	0142.0	3				II
			LEAR				0137.0	0147.0	3				III
			PALE				0137.0	0137.3	2				III
			PALE				0138.9	0140.1	3				II
			CULG				0139.0	0140.0	3	0139.5	0140.0	1	IIIGG
			CULG				0142.0	0147.0	2	0142.0	0143.5	1	IIIN
			CULG				0142.0	0345.0	3				IV
			LEAR				0147.0	0932.0	1				IV
			CULG				0150.0	0155.0	2				II
			CULG				0210.5		3				IIIB
			PALE				0210.8	0353.0	2				B
			CULG				0342.5	0457.5	2				IIIN
			CULG				0345.0	0613.5	2				IV
			CULG				0355.0	0722.0					IIIS,W
			CULG				0613.5	0722.0	1				IV
	0555	1224	WEIS				0802.0	0922.0	2				IN
			LEAR				0823.6	0823.9	1				III
			LEAR				0837.7	0837.9	1				III
			WEIS				0854.2	0854.3	1				IIIB
			WEIS				0866.2	0856.4	1				IIIG
			WEIS				0901.8	0902.0	2				IIIG
			WEIS				0956.1	0956.3	1				IIIG
	1229	1621	WEIS				1242.7	1246.3	1				IIIG
			WEIS				1311.2	1313.3	1				IIIG
	1315	2255	HARV				1319.0	2255.0	1				IN
			HARV	1409.0	1605.0	1							IN
			HARV				1514.0		1				IIIB
			WEIS				1514.3	1514.4	1				IIIB
			HARV	1803.0	2255.0	1							IN
			HARV				1832.0	1902.0	1	1832.0	1902.0	1	IIINW
			HARV				2157.0	2158.0	2				IIIG
	2022	2400	CULG				2158.0		3				IIIB,U
			CULG	2214.5	2400.0	1	2324.5	2400.0	1				IS
			CULG				2336.0	2357.5	1				IIIN
			CULG				2336.0	2400.0					IIIS,W

The symbols used under the column heading SPECTRAL TYPE have the following definitions:

- |                                                                          |                               |
|--------------------------------------------------------------------------|-------------------------------|
| B = Single burst                                                         | RS = Reverse slope burst      |
| G = Small group (< 10) of bursts                                         | DP = Drifting pairs           |
| GG = Large group (> 10) of burst                                         | DC = Drifting Chains          |
| C = Underlying continuum (particularly with Type I)                      | H = Herringbone               |
| S = Storm in the sense of intermittent but apparently connected activity | W = Weak                      |
| N = Intermittent activity in this period                                 | P = Pulsations                |
| U = U-shaped burst of Type III                                           | CONT = Continuum              |
|                                                                          | UNCLF = Unclassified activity |
|                                                                          | DCIM = Fast drift             |

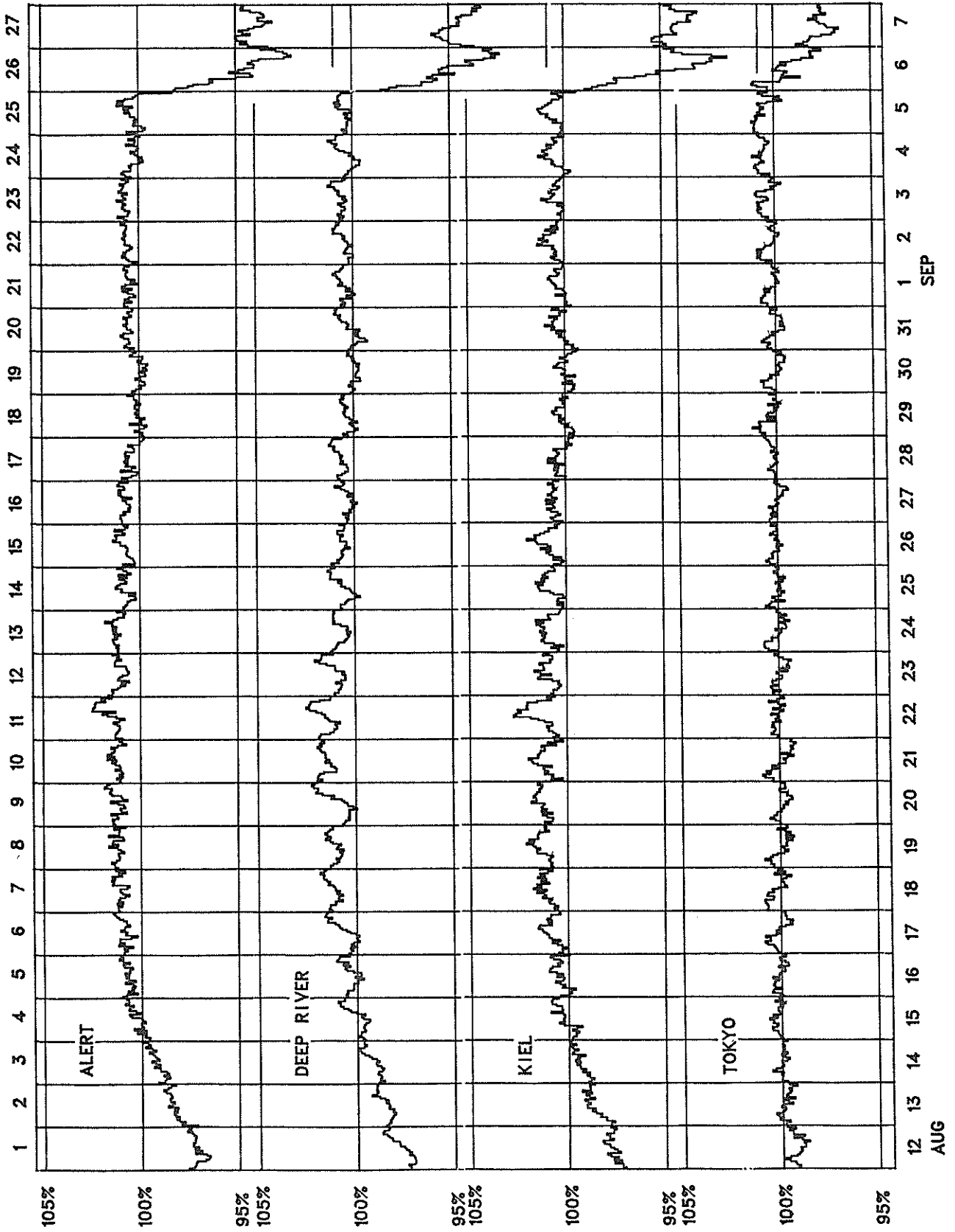
# THULE NEUTRON MONITOR



BARTELS ROTATION 2037

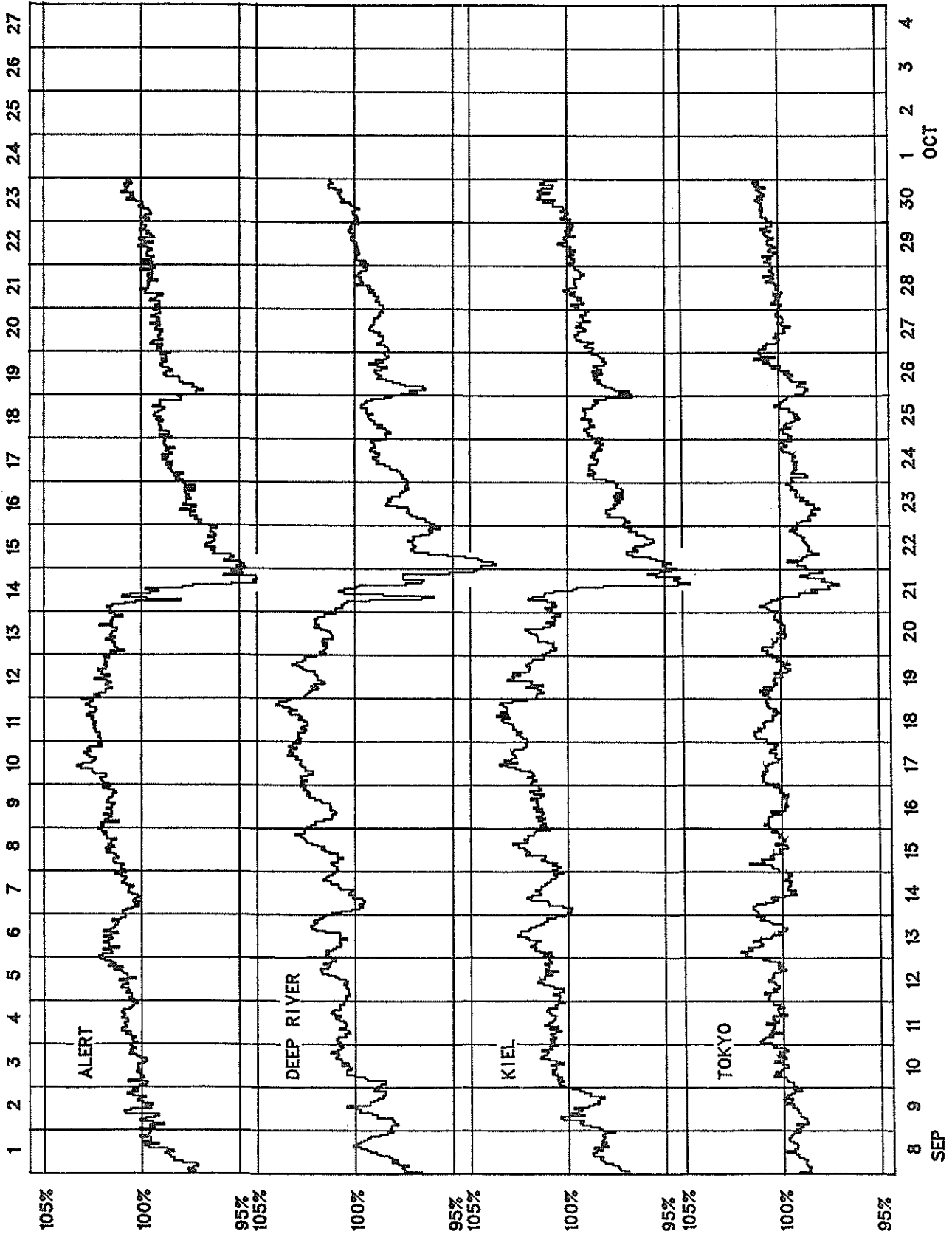
COSMIC RAY INDICES  
(Neutron Monitor)

Bartels Rotation 2037 (August 1982-September 1982)



### COSMIC RAY INDICES (Neutron Monitor)

Bartels Rotation 2038 (September 1982--October 1982)



COSMIC RAY INDICES  
(Neutron Monitor)  
September 1982

Day	THULE	ALERT	DEEP RIVER	KIEL	CLIMAX	TOKYO	HUANCAYO
	Average (cts/h)/100	Average (cts/h)/100	Average (cts/h)/300	Average (cts/h)/100	Average (cts/h)/100	Average (cts/h)/100	Average (cts/h)/100
1	3863	6273.3	5927.7	5359.0		3423.6	
2	3877	6278.3	5924.2	5379.7		3426.4	
3	3879	6286.1	5935.8	5365.4		3432.5	
4	3872	6254.5	5918.0	5371.5		3438.0	
5	3874	6254.8	5922.4	5373.5		3438.0	
6	3660	5912.1	5599.2	5079.5		3392.2	
7	3646	5876.7	5579.6	5044.3		3335.0	
8	3699	5973.1	5646.7	5096.5		3344.2	
9	3737	6050.0	5660.3	5152.5		3347.6	
10	3765	6062.6	5739.3	5236.3		3369.7	
11	3781	6093.2	5769.5	5237.2		3385.8	
12	3780	6111.3	5779.0	5243.1		3385.0	
13	3792	6144.1	5806.3	5277.7		3401.0	
14	3768	6090.1	5757.3	5245.5		3376.4	
15	3792	6143.5	5825.3	5280.6		3380.0	
16	3804	6152.1	5832.6	5273.7		3375.9	
17	3832	6199.1	5889.0	5321.8		3389.0	
18	3854	6199.4	5899.5	5345.8		3395.2	
19	3804	6166.7	5859.3	5296.2		3377.8	
20	3784	6139.3	5818.5	5253.5		3376.7	
21	3654	5935.2	5636.9	5115.4		3335.2	
22	3582	5809.5	5479.5	4988.1		3330.4	
23	3631	5900.5	5576.2	5062.9		3328.9	
24	3665	5963.5	5639.2	5119.2		3348.0	
25	3687	5985.1	5666.6	5129.9		3354.8	
26	3668	5946.5	5623.2	5098.8		3358.7	
27	3697	6002.1	5655.9	5152.6		3373.2	
28	3706	6020.0	5685.1	5171.7		3375.6	
29	3710	6035.9	5724.4	5189.5		3385.0	
30	3741	6067.2	5756.5	5232.0		3398.5	
Mean	3753	6077.6	5751.1	5216.5		3379.3	

Data not available at time of publication

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

GEOMAGNETIC ACTIVITY INDICES  
SEPTEMBER 1982

Day	Three-Hourly Indices (Kp)									Three-Hourly Indices (Km)									aa (Provisional)					
	1	2	3	4	5	6	7	8	Sum	Ap	Cp	1	2	3	4	5	6	7	8	Am	N	S	M	
1	Q2A	3-	2	2-	3-	3-	3-	2	2-	18	9	0.5								16	21	18	17	22
2	Q8A	3-	2+	3-	2+	3-	3-	3	3	21+	12	0.7								25	24	22	24	22
3		3-	4-	4	5-	4+	3-	3	3-	28-	21	1.1								31	32	27	30	29
4		3	4-	4	5-	5	4+	4	5	34-	32	1.3								49	54	42	39	57
5		4-	4+	5	4	5-	4	2+	7-	35-	39	1.4								55	42	50	38	54
6	D1	8	8+	8+	8+	9-	7+	7	6+	62+	199	2.1								286	214	195	201	209
7	D3	7	6+	5	7-	6-	6	7+	4-	48-	88	1.8								107	97	71	79	89
8	Q7A	2-	3	2+	3	2-	2+	3	4-	21-	12	0.7								21	21	17	16	23
9		7-	4+	5	5+	4+	5	5+	3+	39+	50	1.6								64	76	57	79	55
10	Q3A	3+	3	1+	1+	1+	3+	2+	2	18	10	0.6								16	22	12	15	20
11		3-	3-	2	3	3+	3+	2+	3	22+	13	0.8								23	26	20	21	26
12		3+	3+	2	2	1+	2-	4-	4	21+	14	0.8								21	28	19	24	24
13		4+	3+	2-	3+	3-	3	1+	3	23-	15	0.9								23	27	20	26	22
14		2-	4	2	1+	2+	3-	4+	3-	21	14	0.8								25	26	22	20	29
15	Q9A	1	3+	3	2	3-	3-	3-	3+	21-	12	0.7								20	28	16	20	25
16	Q6A	3-	2	2+	2+	3	3-	3	3	21	12	0.7								22	22	17	15	25
17	Q5A	2-	2	3	4	2-	3-	2	1+	18+	11	0.6								20	18	23	28	13
18		4+	4+	3+	3	4	4-	5+	5-	33-	30	1.3								44	54	41	36	58
19		3+	4	3+	4	4+	5-	4+	4	32	28	1.2								42	40	35	29	46
20		3-	3+	5-	4	4	4-	2+	5-	29+	24	1.2								41	31	41	39	33
21	D5	5	7-	6	6-	6-	5-	5-	7+	46-	76	1.8								96	88	83	79	92
22	D2	8-	8+	8	8-	7-	6	4+	5+	54	135	1.9								184	171	137	228	81
23		4	5	4+	4	3	3+	4-	3+	31-	26	1.2								40	42	39	43	38
24		3+	4	5-	4-	4	4-	2	3-	28	22	1.1								35	36	31	39	28
25	Q0A	2	2	1+	2	2+	4-	4+	3	21-	13	0.7								22	29	16	10	36
26	D4	2+	4-	4+	6-	7+	7+	7+	6	44	84	1.8								115	79	78	38	120
27		7-	5-	4+	4	4-	5+	4	4-	36+	42	1.5								60	59	29	43	45
28		4+	4	2+	2	1+	2-	2-	3+	21-	14	0.8								22	25	16	24	18
29	Q1A	2	2+	3	3-	2+	1+	2+	1	17	9	0.5								17	16	13	15	14
30	Q4A	1-	1+	3-	3-	3+	3-	3	3+	20-	12	0.7								24	19	19	13	26
Mean										36	1.09									52.2	48.9	41.0	45.1	

Day	Three-Hourly Indices (Kn)								An	Three-Hourly Indices (Ks)								As	Sa	RI	Ra	Rs	IMF	
	1	2	3	4	5	6	7	8		1	2	3	4	5	6	7	8							
1									18										14	184.3*	115	121	137	A -
2									24										26	168.7*	124	136	120	A -
3									35										27	171.0*	146	161	123	A -
4									50										47	188.1*	176	166	141	A -
5									57										53	179.4	160	159	132	A -
6									289										283	172.1	141	144	124	A -
7									103										111	176.8	117	119	129	A -
8									23										18	178.5	115	116	131	TA -
9									66										63	179.2	100	91	132	AT -
10									18										14	165.6	81	83	117	T -
11									23										23	158.3	86	85	109	T -
12									23										19	152.5*	78	80	103	T -
13									25										22	151.3	81	89	101	T -
14									24										26	147.4	104	104	97	T -
15									22										18	149.0*	129	130	99	T -
16									24										19	147.3	133	130	97	T -
17									20										20	147.0*	127	126	97	T -
18									41										48	143.2	107	111	93	T -
19									43										42	142.6*	117	106	92	T -
20									40										42	146.9	104	104	97	T -
21									104										89	145.4	102	92	95	TA -
22									187										180	146.2	95	96	96	A -
23									38										43	152.6*	97	100	103	AT -
24									36										35	165.4*	109	112	117	T -
25									24										19	170.3	118	115	122	T -
26									122										108	187.3	138	130	140	A -
27									61										59	191.4	133	132	145	A -
28									24										19	196.9	140	138	151	T -
29									19										16	204.6	144	149	159	TA -
30									24										24	202.4	160	155	157	A -
Mean									53.6										50.9	167.1	119.2	119.3	118.5	

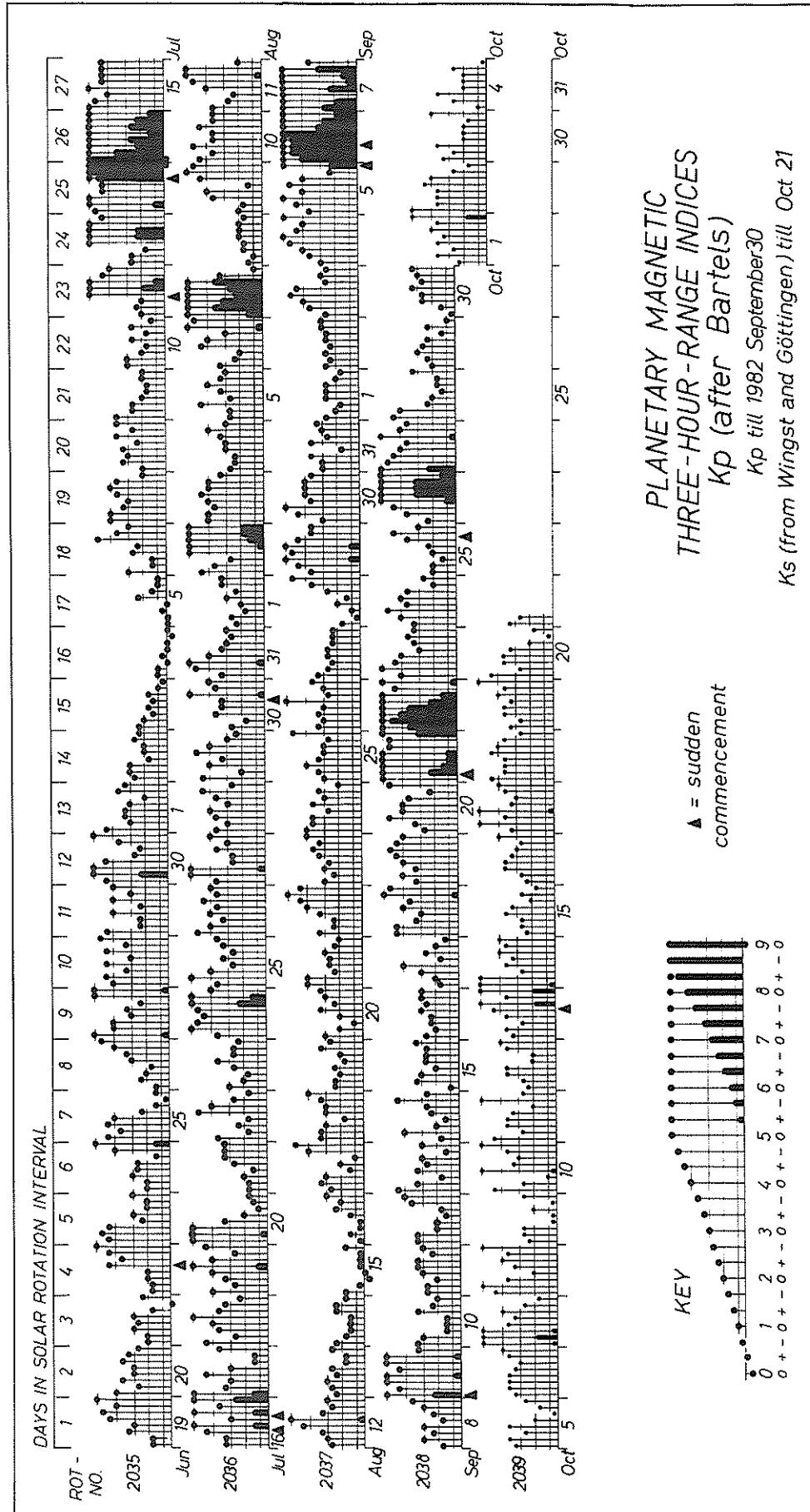
The Geophysikalisches Institut, University of Goettingen, prepares the quiet (Q) and disturbed (D) days, geomagnetic planetary 3-hour-range indices (Kp), magnetic character figures (Cp) and average amplitude (Ap). The 10 most quiet days (Q1-Q0(10)) and the five most disturbed days (D1-D5) are ordered from most quiet and from most disturbed, respectively. A or K means "not really quiet" (A implies Ap>6 and K implies Ap<6 with either one Kp>30 or two Kp values >3-). An asterisk means "not really disturbed" (Ap<20).  
 Geomagnetic 3-hour indices Km, Kn, Ks and daily mean values Am, An, As and indices aa are prepared by M. Menvielle of the Institut de Physique du Globe, Paris, France. For aa indices, daily north (N) and south (S) values and half-daily antipodal mean (M) values are given. C indicates really quiet 24- and 48-hour intervals centered on 1200 UT; K indicates similar periods with some slightly disturbed 3-hour intervals.  
 NOTE: All aa indices are provisional from 1 January 1981 until further notice, because of the change in the Southern Hemisphere observatory.

DAILY AVERAGE INDICES Ap

Day	1981 Oct	Nov	Dec	1982 Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1	9	7	6	9	41	68	20	22	20	18	12	9
2	22	5	9	9	60	107	42	30	18	10	55	12
3	36	8	8	20	35	13	48	45	9	6	26	21
4	17	6	10	12	49	12	22	19	7	2	15	32
5	7	11	9	4	37	16	21	14	6	4	18	39
6	6	9	4	10	39	3	18	6	14	15	25	199
7	32	19	3	12	26	3	5	4	14	21	107	88
8	25	27	15	9	18	11	12	5	9	15	6	12
9	21	4	10	4	15	20	10	8	16	10	23	50
10	27	13	9	4	35	16	61	5	51	10	27	10
11	46	31	6	5	45	10	47	9	32	36	28	13
12	12	39	23	2	41	8	15	6	59	48	22	14
13	17	5	12	4	54	13	11	6	62	144	10	15
14	73	27	6	3	42	11	6	8	24	153	7	14
15	20	20	6	12	18	7	10	20	26	36	3	12
16	8	17	4	17	6	4	11	10	10	50	6	12
17	18	32	7	10	30	14	19	12	6	24	16	11
18	6	26	14	13	34	20	12	20	7	24	16	30
19	23	14	10	3	36	10	8	12	24	28	10	28
20	67	13	6	6	26	12	20	8	18	24	12	24
21	33	15	6	14	21	23	32	8	9	11	15	76
22	72	11	3	27	51	38	18	4	20	16	24	135
23	27	20	6	22	29	8	9	2	20	12	17	26
24	18	9	10	21	24	12	15	4	21	50	18	22
25	18	27	8	9	42	20	52	8	17	22	20	13
26	10	9	6	7	43	11	7	24	16	27	20	84
27	10	4	6	13	12	9	24	54	32	27	11	42
28	19	6	12	17	10	6	21	56	27	21	12	14
29	12	4	32	11		13	31	35	19	22	38	9
30	12	1	30	27		15	30	35	39	23	28	12
31	4		18	34		20		31		25	16	
Mean	23	15	10	12	33	18	22	17	22	30	21	36



# GEOMAGNETIC ACTIVITY INDICES



PRINCIPAL MAGNETIC STORMS

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Sep 82

SEPTEMBER 1982

Sta	Geomag Lat	Commencement			SC Amplitudes			Maximum 3-Hour K Index Day(3-Hour Periods)	Ranges			End Hour Day (UT)	
		Day	Time (UT)	Type	D (Min)	H (Gamma)	Z (Gamma)		D (Min)	H (Gamma)	Z (Gamma)		
HYB 07.6N	02	1400	..	..	..	..	03(4)	4	6	94	31	03 22	
COL 64.6N	04	0031	SC*	9	- 47	..	06(4)	9	574	3560	2270	07 21	
HYB 07.6N	04	0200	..	..	..	..	04(5)	5	8	170	40	05 18	
HUA 00.6S	04	0030	SC	..	3	2	04(6)	6	9	169	44	05 21	
SIT 60.0N	05	2248	SC*	27 *	113 *	- 8	06(5)	8	..	..	..	07 23	
WIT 54.2N	05	2250	SC	- 8	130	- 2	06(2,5)	8	90	675	605	07 20	
FRD 49.6N	05	2249	SC*	7	108	- 17	06(3,4)	8	84	659	507	00 00	
HON 21.1N	05	2249	SC	01	34	16	06(3,4)	7	12	331	61	08 01	
JAI 17.3N	05	2248	SC	- 2.9	53	- 15	..	..	13	433	49	08 04	
SHL 14.6N	05	2248	SC	- 1.3	47	8	..	..	13	..	74	08 04	
UJJ 13.5N	05	2248	SC	- 1.7	60	- 16	..	..	..	434	69	08 04	
ABG 09.5N	05	2248	SC	- 2.0	4.8	- 17	06(1,5,6)	7	12	434	79	08 04	
HYB 07.6N	05	2250	SC	- 1.1	51	- 3	06(4,5)	9	11	451	51	08 13	
GUA 04.0N	05	2249	SC*	..	40	- 11	06(5)	8	10	480	50	07 21	
ANN 01.5N	05	2248	SC	- 2.5	63	34	..	..	11	460	140	08 04	
HUA 00.6S	05	2248	SC	3	86	14	06(5,6)	8	32	609	101	07 22	
TRD 01.1S	05	2248	SC	- 0.3	44	60	..	..	8	..	..	08 04	
PMG 18.6S	05	2249	SC	- 2.2	48	39	..	..	8	13	430	140	08 00
HER 33.7S	05	2249	SC	6	76	47	06(2,3,4,5,6)	7	72	359	281	07 24	
GNA 43.2S	05	2250	SC*	8.6*	17	32	* 06(4,5)	8	90	350	..	08 00	
KGL 56.5S	05	2250	SC	10	27	11	06(1,2,4,5)	9	270	2210	1313	08 01	
WIT 54.2N	09	0106	SC	- 6	130	0	09(1,7)	6	38	215	40	09 22	
HON 21.1N	09	0106	SC	..	73	21	09(1)	6	70	134	45	10 05	
JAI 17.3N	09	0104	..	..	..	..	..	..	11	104	64	09 22	
SHL 14.6N	09	0104	..	..	..	..	..	..	10	134	60	09 22	
UJJ 13.5N	09	0104	..	..	..	..	..	..	9	120	65	09 22	
ABG 09.5N	09	0104	..	..	..	..	09(1)	6	10	115	74	09 22	
HYB 07.6N	09	0105	SC	- 0.4	73	- 5	09(1)	6	9	123	41	10 01	
GUA 04.0N	09	0036	SC*	..	- 13	- 02	..	..	..	..	..	10 05	
GUA 04.0N	09	0105	SC*	..	21	- 08	09(1)	7	10	250	10	10 05	
ANN 01.5N	09	0104	..	..	..	..	..	..	10	182	118	09 22	
HUA 00.6S	09	0106	SC	2	116	20	09(1,6)	6	7	358	62	09 24	
TRD 01.1S	09	0104	..	..	..	..	..	..	5	210	163	09 22	
PMG 18.6S	09	0105	SC	0.5	122	111	09(1)	6	7	190	170	10 00	
HER 33.7S	09	0105	SC	6	68	49	09(1,7)	5	22	102	75	09 22	
KGL 56.5S	09	0106	SC	..	..	..	09(7)	7	27	299	126	10 05	
GUA 04.0N	12	2240	..	..	..	..	13(1)	5	10	70	40	13 07	
HYB 07.6N	17	0700	..	..	..	..	17(4) 18(5)	5	7	147	40	20 18	
GUA 04.0N	18	1316	..	..	..	..	18(7)	5	10	110	30	19 19	
HUA 00.6S	18	0044	..	..	..	..	18(5,6,7)	6	7	296	36	18 24	
HUA 00.6S	19	0122	..	..	..	..	19(6)	6	8	326	54	19 23	
COL 64.6N	20	0600	..	..	..	..	22(2,4)	8	648	2760	2310	23 18	
SIT 60.0N	20	0600	..	..	..	..	22(2)	9	..	..	..	23 11	
FRD 49.6N	20	0340	SC	2	83	- 16	22(2,3,4)	7	55	265	330	24 00	
WIT 54.2N	21	0339	SC*	- 11 *	20 *	0	22(1,3)	8	75	460	245	22 20	
HON 21.1N	21	0339	SC	..	42	21	22(2,3,4)	6	08	257	58	23 21	
JAI 17.3N	21	0339	SC	- 0.9	34	- 9	..	..	11	365	49	23 21	
SHL 14.6N	21	0339	SC	0.7	42	8	..	..	10	390	63	23 21	
UJJ 13.5N	21	0339	SC	- 0.4	42	- 10	..	..	12	369	60	23 21	
ABG 09.5N	21	0339	SC	- 0.8	35	- 10	21(8)22(1,2,4,5)	6	12	355	72	23 21	
HYB 07.6N	21	0339	SC	- 0.5	45	- 7	22(4)	8	11	373	53	24 17	
GUA 04.0N	21	0339	SC*	..	75	- 24	21(2)	6	..	170	50	21 21	
GUA 04.0N	21	2127	SC	..	20	- 06	22(4)	7	10	350	70	22 18	
ANN 01.5N	21	0339	SC	..	..	..	..	..	..	..	..	23 21	
HUA 00.6S	21	0338	SC	2	82	16	21(6)	6	18	450	66	22 24	
TRD 01.1S	21	0339	SC	- 0.2	106	105	..	..	8	461	332	23 21	
PMG 18.6S	21	0339	SC*	1.4*	58	47	22(3,4)	7	11	370	160	23 00	
HER 33.7S	21	0339	SC	9	28	28	22(3)	7	64	278	193	22 24	
GNA 43.2S	21	0300	..	..	..	..	22(3,5)	7	42	310	400	24 16	
KGL 56.5S	21	0339	SC	12	55	- 15	21(8) 22(1,2)	8	150	1258	519	23 09	
GUA 04.0N	24	0249	..	..	..	..	24(2)	5	10	90	30	24 16	

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Sep 82

PRINCIPAL MAGNETIC STORMS

SEPTEMBER 1982

Sta	Geomag Lat	Commencement		Type	SC Amplitudes			Maximum 3-Hour K Index Day(3-Hour Periods)	Ranges			End Day (UT) Hour		
		Time Day (UT)	D (Min)		H (Gamma)	Z (Gamma)	D (Min)		H (Gamma)	Z (Gamma)				
SIT	60.0N	25	2030	SC*	7	* - 21	* - 7	26(5)	8			27 12		
WIT	54.2N	25	1703	SC	- 1	10	*	0	26(6,7)	7	45	165	295	27 21
FRD	49.6N	25	0000	..	..	..	..	..	26(5)	7	49	200	123	29 00
HON	21.1N	25	2030	SC	..	17	05	..	26(5,6,8)	5	05	131	55	27 02
JAI	17.3N	25	1700	..	..	..	..	..	..	..	11	297	55	27 09
SHL	14.6N	25	1700	..	..	..	..	..	..	..	8	303	58	27 09
UJJ	13.5N	25	1700	..	..	..	..	..	..	..	9	303	53	27 09
ABG	09.5N	25	1700	..	..	..	..	..	26(4,5,6,7)	6	12	329	48	27 09
HYB	07.6N	25	0900	..	..	..	..	..	26(6)	8	8	349	37	27 23
ANN	01.5N	25	1700	..	..	..	..	..	..	..	..	..	..	27 09
HUA	00.6S	25	1703	SC*	3	81	7	..	26(5,7)	7	10	548	62	27 09
TRD	01.1S	25	1700	..	..	..	..	..	..	..	6	419	160	27 09
COL	64.6N	26	0300	..	..	..	..	..	26(5,6)	8	534	2280	1420	27 20
GUA	04.0N	26	0827	..	..	..	..	..	26(5)	6	10	160	30	27 20
PMG	18.6S	26	0800	..	..	..	..	..	26(5,6)	6	10	170	100	28 00
HER	33.7S	26	1000	..	..	..	..	..	26(5,6,7)	6	47	286	267	27 03
GNA	43.2S	26	1000	..	..	..	..	..	26(5,6,7)	6	37	170	220	28 09
KGL	56.5S	26	1034	SC	4	46	- 11	..	26(4,5) 27(1)	8	244	1487	562	28 06

REPORTS WERE RECEIVED FROM THE FOLLOWING OBSERVATORIES:

ALIBAG	ANNAMALAINAGAR	COLLEGE	FREDERICKSBURG	GNANGARA	GUAM	HERMANUS	HONOLULU
HUANCAYO	HYDERABAD	JAIPUR	KERGUELEN	PORT MORESBY	SHILLONG	SITKA	TRIVANDRUM
UJJAIN	WITTEVEEN						

# SUDDEN COMMENCEMENTS AND SOLAR FLARE EFFECTS

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Sep 82

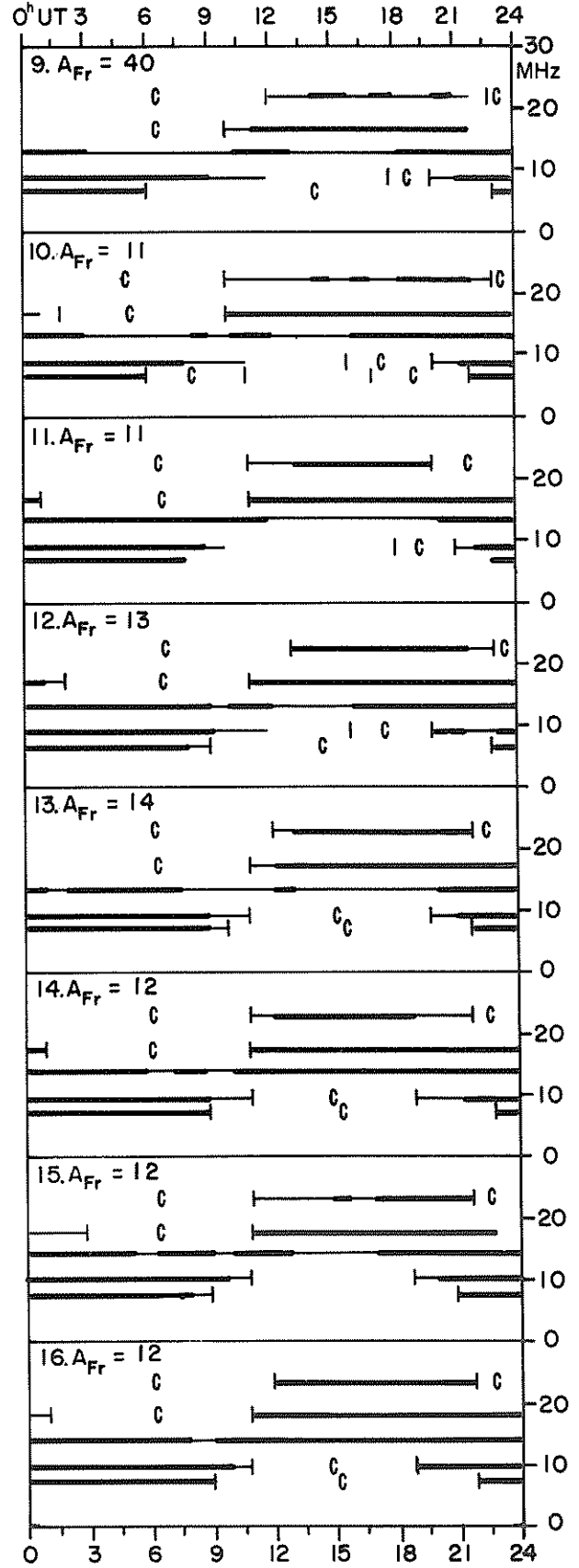
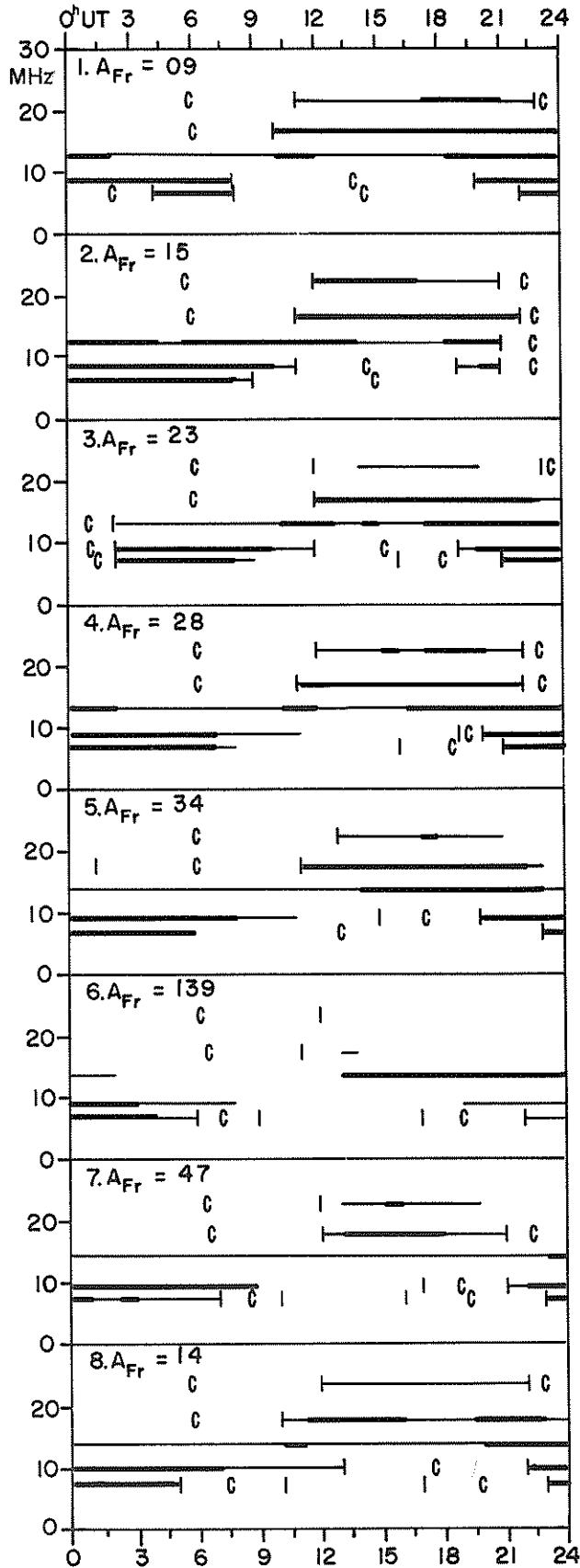
SEPTEMBER 1982

## PRELIMINARY REPORT ON RAPID VARIATIONS

Sudden Commencements (ssc)		Solar Flare Effects (sfe)
05	22 50 A: DOB WNG WIT NGK DOU BDV VIC CLF HRB MMB AQU EBR COI TOL FRD KAK HTY KNY LNP PMG HUA NPO CZT; B: HAD GNA AMS KGL DUM	1 07 37 - 07 51 LNP MPO 3 01 22 - 01 25 LNP 3 09 20 - 10 21 TOL
06	07 53 A: WNG WIT CLF; B: DUM (si: B: MPO)	<u>4 00 31 - 01 00</u> KAK HTY KNY LNP(ssc:C:HUA) 8 15 51 - 16 06 MPO
09	01 05 A: WIT NGK DOU CLF HRB COI PMG HUA MPO; B: WNG BDV TOL KAK KNY LNP; C: ESK MMB AMS CZT KGL DUM (si: A: EBR)	<u>15 17 14 - 17 30</u> HUA <u>30 01 35 - 02 00</u> MMB KAK KNY LNP 30 12 03 - 12 26 NGK TOL (ssc: C: WNG BDV)
21	03 39 A: WNG DOU CLF HRB MMB AQU KAK HTY KNY LNP PMG HUA AMS DUM; B: WIT NGK HAD BDV EBR TOL FRD MPO CZT KGL (si: A: VIC)	
24	09 45 B: WNG; C: NGK HUA AMS (sfe: TOL)	
25	17 03 A: HUA; B: WNG VIC HRB MMB KAK KNY; C: WIT NGK HAD BDV CLF EBR TOL	
25	20 30 A: COI; B: HAD EBR TOL HUA MPO; C: NGK CLF AMS DUM (si: A: WNG)	
26	10 33 A: HRB; B: NGK; C: MPO CZT KGL	

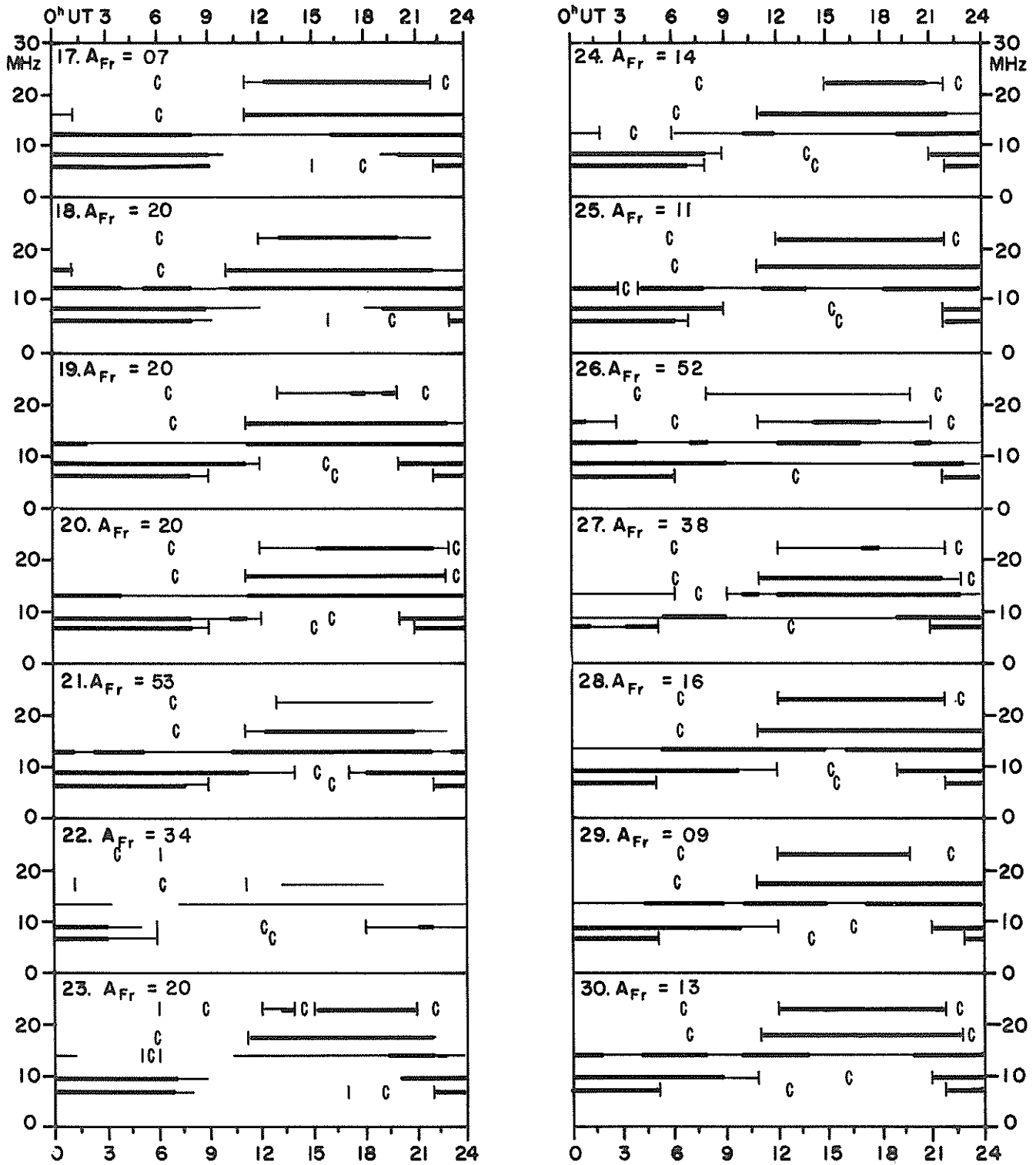
TRANSMISSION FREQUENCY RANGES -- NORTH ATLANTIC PATH

SEPTEMBER 1982



# TRANSMISSION FREQUENCY RANGES -- NORTH ATLANTIC PATH

SEPTEMBER 1982



Field strengths from five frequencies, 6.4, 8.6, 13.0, 17.0 and 22.5 MHz, observed on a Norddeich -New York circuit are represented above. Heavy solid lines represent field strengths  $\geq -12$  dB above  $1 \mu\text{V/m}$  (transmitter power reduced to 1 kW). Observed field strengths between  $-12$  dB above  $1 \mu\text{V/m}$  and  $-40$  dB above  $1 \mu\text{V/m}$  are represented by the fine line.

RADIO PROPAGATION QUALITY INDICES

September 1982

DAY	TOKYO	NEW YORK	TEHERAN	OSLO	BRACKNELL
1	7.1	6.9	5.4	5.4	4.8
2	6.8	7.1	6.3	5.4	4.2
3	6.5	5.4	7.9	4.7	3.4
4	5.8	5.4	6.1	5.1	5.2
5	5.6	2.7	5.0	5.3	5.3
6	0.4	0.0	0.0	2.9	2.7
7	2.1	1.1	5.0	2.6	4.5
8	4.8	3.3	4.3	3.0	3.2
9	6.5	4.2	3.7	3.4	3.4
10	6.9	7.8	8.7	4.8	4.9
11	7.5	7.1	4.9	4.1	5.3
12	7.3	7.1	4.3	4.9	5.5
13	7.0	7.0	8.4	7.8	6.9
14	7.2	7.0	7.6	4.7	7.8
15	7.3	7.5	6.8	4.4	7.5
16	7.6	8.5	9.1	7.6	8.7
17	7.5	7.6	7.9	4.9	5.5
18	6.9	6.4	6.5	4.8	5.0
19	6.5	6.4	5.5	4.9	6.1
20	6.9	6.8	7.8	5.0	6.7
21	5.8	4.1	7.7	4.6	4.6
22	2.7	0.0	2.9	0.3	1.3
23	4.8	3.3	4.3	5.0	5.5
24	5.6	5.8	4.7	5.3	6.2
25	7.3	7.6	4.7	5.6	6.4
26	6.3	2.5	4.4	5.0	5.1
27	4.6	5.7	6.1	5.6	5.1
28	6.3	8.5	3.7	5.3	5.1
29	7.2	7.7	4.4	7.0	6.0
30	6.6	7.0	4.4	8.4	8.3
MEAN	6.0	5.6	5.6	4.9	5.3

CALCULATION OF QUALITY INDICES (Q)

From all 24 hourly field strength values and from all frequencies of the same circuit a median field strength value is calculated (FD). This daily value is compared with the average value (FA) of the preceding 27 days (1 sun rotation).

$$Q = 6.0 + 20 \log(FD/FA)/3.0$$

The quality indices vary from 0.0 to 9.9 where 6.0 is normal. Conditions are "normal" (index = 6.0), if they correspond to the average of the preceding 27 days.

Scale for Quality Indices

- 0.0 - 1.0 = very poor
- 1.1 - 3.0 = poor
- 3.1 - 5.0 = fair
- 5.1 - 7.0 = normal
- 7.1 - 9.0 = good
- 9.1 - 9.9 = very good

SGD 459 Part I (Prompt)

## LATE DATA

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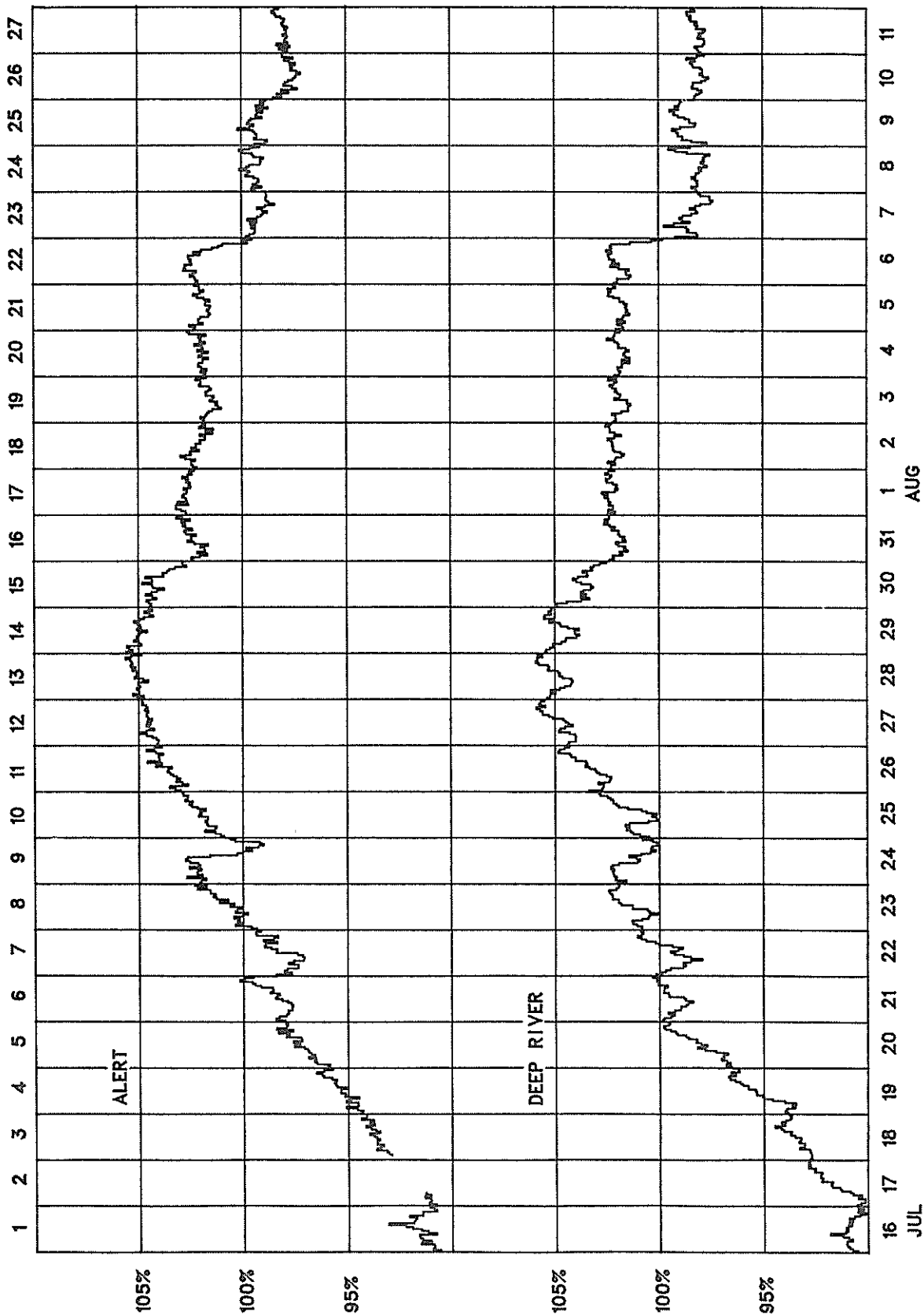
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Late  
Aug 82

C O S M I C R A Y I N D I C E S  
(Neutron Monitor)  
August 1982

AUG 1982	ALERT	DEEP RIVER
Day	Average (cts/h)/100	Average (cts/h)/300
1	6348.0	5978.5
2	6311.6	5969.6
3	6280.7	5955.2
4	6301.8	5950.6
5	6298.8	5952.1
6	6297.3	5950.0
7	6127.0	5747.3
8	6146.5	5736.3
9	6135.2	5773.3
10	6039.5	5731.9
11	6058.2	5733.4
12	6066.3	5764.7
13	6135.8	5813.5
14	6192.0	5850.0
15	6252.8	5899.3
16	6282.4	5918.0
17	6294.2	5934.6
18	6306.8	5972.8
19	6313.6	5964.0
20	6318.0	5954.0
21	6314.0	5992.1
22	6334.5	5993.1
23	6304.8	5959.8
24	6314.6	5944.2
25	6286.1	5935.9
26	6287.2	5937.1
27	6289.2	5916.3
28	6264.8	5941.8
29	6242.8	5917.0
30	6235.2	5895.8
31	6274.5	5910.3
Mean	6246.9	5899.8

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

**COSMIC RAY INDICES**  
(Neutron Monitor)  
**Bartels Rotation 2036 (July 1982–August 1982)**



GEOMAGNETIC ACTIVITY INDICES  
AUGUST 1982

Day		Three-Hourly Indices (Kp)								Sum	Ap	Cp	Three-Hourly Indices (Km)								aa (Provisional)			
		1	2	3	4	5	6	7	8				1	2	3	4	5	6	7	8	Am	N	S	M
1	Q0A	2+	3-	2-	2	3	2+	3+	3+	21-	12	0.7						22	25	19	17	28		
2	D2	4+	4-	3-	5	5+	6	6+	6+	40-	55	1.6						64	91	39	44	86		
3		4	4	4-	4	4+	4	4	3+	31+	26	1.2						45	42	36	34	43		
4		3-	2+	2+	3	3	3+	4	3	24-	15	0.8						27	32	25	25	33		
5		3-	3-	4+	3-	3+	4	3+	3	26	18	1.0						33	33	23	28	28		
6		3+	2+	2	4+	4	3	5+	5-	29	25	1.2						38	49	27	30	47		
7	D1	6	8-	7+	7-	7	8-	3+	1	47-	107	1.9						129	114	87	128	74		
8	Q2	1+	1	2-	2-	2	2	2	2-	13+	6	0.3						12	17	7	8	16 C		
9		2	2-	4-	4	1+	4+	5	5-	27-	23	1.1						34	36	22	25	33		
10	D5	4+	4-	5-	4-	4-	4+	4-	4-	32-	27	1.2						43	42	37	38	41		
11		4-	3-	2+	4	5-	5+	5	2	30-	28	1.2						40	41	33	29	45		
12		3-	3	3+	4+	5+	3+	3-	3	28-	22	1.1						37	31	31	30	32		
13	Q6A	2+	3-	3	2+	3-	2-	2-	3-	19	10	0.6						19	24	16	22	19		
14	Q4A	2+	2-	1+	1+	1+	2+	2+	2-	14+	7	0.3						14	19	8	13	14 K		
15	Q1	2-	1-	0	0+	1-	1-	1-	2-	6+	3	0.1						6	9	4	6	8 CC		
16	Q3K	1-	1+	1-	1-	1+	2+	2	3	12	6	0.3						12	16	6	4	18 KK		
17		3-	3+	3	1+	2	1	4	5-	22	16	0.9						35	28	22	24	27		
18		3+	3+	3	2-	3	3	3+	4	25-	16	0.9						29	33	20	25	29		
19	Q5A	2+	2+	2	2+	2-	2	3+	3-	19-	10	0.5						19	20	13	15	18		
20	Q9A	3	2	1	2	3+	2+	3	3+	20	12	0.7						22	25	17	15	28		
21		4	4	2+	3-	3-	3	2+	2	23	15	0.8						25	31	27	38	21		
22		3+	2+	2+	3+	4	4+	5	4+	29	24	1.2						39	46	27	24	50		
23		3	2+	3	3-	3+	4-	3+	4	25+	17	0.9						31	34	25	22	38		
24		4	4-	4-	3-	4-	3	3+	2	26	18	1.0						34	34	27	31	31		
25		3	3+	4	3+	3	3	3-	5-	27	20	1.0						36	40	32	36	36		
26		3+	3	3+	3	5	3-	3	4-	27	20	1.0						35	38	36	29	44		
27	Q8A	3+	3-	2+	3-	3-	2+	2+	2+	21-	11	0.6						20	27	12	21	19		
28	Q7A	2-	1-	1	2	1+	3-	4-	5-	18-	12	0.7						19	28	19	11	35		
29	D3	4-	4+	6-	5-	6-	4+	4-	4-	36-	38	1.4						52	48	47	53	43		
30	D4	3	4+	5	4-	4	4	4	4-	32-	28	1.2						43	48	42	45	46		
31		3	3	4-	2-	4-	3-	3	3+	24	16	0.9						29	27	20	20	28		
Mean										21	0.91							33.6	36.5	26.0		31.4		

Day	Three-Hourly Indices (Kn)								An	Three-Hourly Indices (Ks)								As	Sa	R1	Ra	Rs	IMF
	1	2	3	4	5	6	7	8		1	2	3	4	5	6	7	8						
1									22									22	123.4	55	61	71	A -
2									65									63	138.2*	68	66	87	A -
3									46									44	153.5*	68	76	104	A -
4									28									26	167.5	81	88	119	A -
5									35									30	180.9	97	109	133	A -
6									41									35	201.2	128	141	155	A -
7									141									118	219.6	144	163	175	T -
8									15									9	217.5*	150	174	173	A -
9									40									29	212.5	161	167	167	A -
10									43									43	209.5	155	160	164	T -
11									41									38	205.0*	157	150	159	A -
12									41									32	195.2*	138	134	149	A -
13									21									18	182.9*	113	113	136	A -
14									16									13	176.8	100	110	129	A -
15									6									5	173.0	100	110	125	A -
16									13									12	161.4	86	92	112	T -
17									27									43	165.1	93	104	116	T -
18									28									31	166.4*	105	111	118	T -
19									20									19	159.2	91	94	110	T -
20									23									22	144.7	77	88	94	T -
21									25									26	138.6	79	85	88	T -
22									34									44	138.8	90	84	88	T -
23									32									31	141.2	71	79	90	T -
24									33									34	142.9	79	86	92	T -
25									35									36	158.5	101	107	109	T -
26									34									36	166.4	98	102	118	T -
27									21									20	180.4	104	123	133	T -
28									21									18	181.4	120	139	134	TA -
29									55									49	183.4	132	139	136	A -
30									45									41	174.5	134	141	126	A -
31									30									28	175.0*	109	115	127	A -
Mean									34.7									32.7	172.1	105.9	113.3	123.9	

The Geophysikalisches Institut, University of Goettingen, prepares the quiet (Q) and disturbed (D) days, geomagnetic planetary 3-hour-range indices (Kp), magnetic character figures (Cp) and average amplitude (Ap). The 10 most quiet days (Q1-Q0(10)) and the five most disturbed days (D1-D5) are ordered from most quiet and from most disturbed, respectively. A or K means "not really quiet" (A implies Ap>6 and K implies Ap<6 with either one Kp>30 or two Kp values >3-). An asterisk means "not really disturbed" (Ap<20).

Geomagnetic 3-hour Indices Km, Kn, Ks and daily mean values Am, An, As and Indices aa are prepared by M. Menvielle of the Institut de Physique du Globe, Paris, France. For aa indices, daily north (N) and south (S) values and half-daily antipodal mean (M) values are given. C indicates really quiet 24- and 48-hour intervals centered on 1200 UT; K indicates similar periods with some slightly disturbed 3-hour intervals.

NOTE: All aa indices are provisional from 1 January 1981 until further notice, because of the change in the Southern Hemisphere observatory.

DAILY AVERAGE INDICES Ap

Day	1981				1982							
	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug
1	5	9	7	6	9	41	68	20	22	20	18	12
2	18	22	5	9	9	60	107	42	30	18	10	55
3	9	36	8	8	20	35	13	48	45	9	6	26
4	11	17	6	10	12	49	12	22	19	7	2	15
5	17	7	11	9	4	37	16	21	14	6	4	18
6	8	6	9	4	10	39	3	18	6	14	15	25
7	5	32	19	3	12	26	3	5	4	14	21	107
8	10	25	27	15	9	18	11	12	5	9	15	6
9	11	21	4	10	4	15	20	10	8	16	10	23
10	9	27	13	9	4	35	16	61	5	51	10	27
11	21	46	31	6	5	45	10	47	9	32	36	28
12	10	12	39	23	2	41	8	15	6	59	48	22
13	12	17	5	12	4	54	13	11	6	62	144	10
14	10	73	27	6	3	42	11	6	8	24	153	7
15	10	20	20	6	12	18	7	10	20	26	36	3
16	7	8	17	4	17	6	4	11	10	10	50	6
17	4	18	32	7	10	30	14	19	12	6	24	16
18	18	6	26	14	13	34	20	12	20	7	24	16
19	38	23	14	10	3	36	10	8	12	24	28	10
20	9	67	13	6	6	26	12	20	8	18	24	12
21	7	33	15	6	14	21	23	32	8	9	11	15
22	13	72	11	3	27	51	38	18	4	20	16	24
23	4	27	20	6	22	29	8	9	2	20	12	17
24	7	18	9	10	21	24	12	15	4	21	50	18
25	13	18	27	8	9	42	20	52	8	17	22	20
26	32	10	9	6	7	43	11	7	24	16	27	20
27	21	10	4	6	13	12	9	24	54	32	27	11
28	6	19	6	12	17	10	6	21	56	27	21	12
29	14	12	4	32	11		13	31	35	19	22	38
30	15	12	1	30	27		15	30	35	39	23	28
31		4		18	34		20		31		25	16
Mean	12	23	15	10	12	33	18	22	17	22	30	21

164  
Late  
Aug 82

# SUDDEN COMMENCEMENTS AND SOLAR FLARE EFFECTS

AUGUST 1982

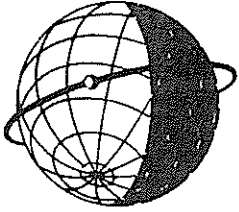
## PRELIMINARY REPORT ON RAPID VARIATIONS

### Sudden Commencements (ssc)

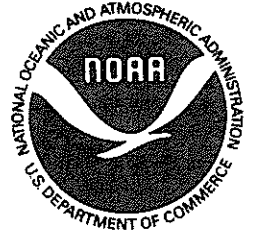
6 18 36 A: VIC HTY LNP; B: WNG CLF MMB  
TOL KAK KNY BNG; C: NGK MPO

### Solar Flare Effects (sfe)

4 03 42 - 03 46 LNP (ssc: B: COI)  
4 13 20 - 13 32 TOL  
8 02 04 - 02 30 MMB KAK HTY KNY LNP  
8 22 06 - 22 12 LNP  
8 23 41 - 23 49 LNP  
9 01 09 - 01 17 LNP  
9 08 28 - .. .. BNG  
11 08 45 - 08 50 LNP (ssc: B: BNG)  
14 02 40 - 03 09 KAK HTY  
14 04 00 - 04 20 MMB KAK HTY KNY  
14 05 06 - 05 25 MMB KAK KTY KNY  
17 13 15 - 13 48 SOD  
19 01 03 - 01 07 LNP  
22 04 14 - 04 21 LNP (ssc: A: COI)  
27 03 24 - 03 26 LNP  
27 05 42 - 05 52 LNP  
27 10 18 - 10 26 NGK  
29 12 48 - .. .. BNG



**WORLD DATA CENTER A**  
**FOR**  
**SOLAR-TERRESTRIAL PHYSICS**



The ICSU Panel on WDCs has recommended that it would be appropriate courtesy to acknowledge in publications that data were obtained from the originating station or investigator through the intermediary of the WDCs. The following statement is suggested:

"Data used in this study were provided by WDC-A for Solar-Terrestrial Physics, NOAA E/GC2, 325 Broadway, Boulder Colorado 80303, USA."