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Solar - Geophysical Data

NO. 423 NOVEMBER 1979

Part I (Prompt Reports)

DATA FOR
OCTOBER 1979
SEPTEMBER 1979

NATIONAL GEOPHYSICAL AND SOLAR - TERRESTRIAL DATA CENTER
BOULDER, COLORADO

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SOLAR-GEOPHYSICAL DATA

No. 423

Issued in two parts

Helen E. Coffey, Editor

J. Virginia Lincoln, Chief
Solar-Terrestrial Physics Division

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A = Part I, B = Part II.

—— = no data available.
blank = data not yet received.

SGD 423 Part I (Prompt)

OCTOBER 1979 DATA

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OCTOBER 1979

PRESTO MESSAGES (THE RAPID REPORT OF MAJOR EVENTS)

01 OCTOBER 1979 PRESTO BOULDER 01/1818Z SOFLARE M1/2B N12E66 01/1811Z DURATION 28 MINUTES.

07 OCTOBER 1979 PRESTO BOULDER 07/1451Z SOFLARE M2/1B N15E33 07/1405Z DURATION 12 MINUTES.
TENFLARE 480 FLUX UNITS 07/1404Z DURATION 20 MINUTES.

17 OCTOBER 1979 PRESTO BOULDER 17/1637Z SOFLARE M1/2B 17/1609Z N31W06 DURATION 50 MINUTES.

19 OCTOBER 1979 PRESTO BOULDER 19/0452Z SOFLARE M9/OPTICAL UNKNOWN, LOCATION UNKNOWN, 19/0413Z.
DURATION 15 MINUTES.
TENFLARE 280 FLUX UNITS 19/0416Z DURATION 10 MINUTES.

PRESTO BOULDER 19/1355Z SOFLARE X1/1B 19/1157Z N28E12 DURATION 45 MINUTES.
TENFLARE 19/1158Z 1600 FLUX UNITS DURATION 15 MINUTES.

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: Location Lat-Long	No. of Flares: Total	M	X	Outstanding events	Forecasts: Date	Location Lat-Long	Desc*	Alert Situations
274	01	30	303	231	017	S19W88	1	0	0		01	S19W88	Q	SOLALERT 01/02 MAGQUIET
						N20W46	8	0	0			N20W46	A	
						S13W80	0	0	0			S13W80	Q	
						N14W72	0	0	0			N14W72	Q	
						N14W33	1	0	0			N14W33	Q	
						S13W62	1	0	0			S13W62	Q	
						N23E16	0	0	0			N23E16	Q	
						S26E42	0	0	0			S26E42	Q	
						N12E64	2	0	0			N12E64	Q	
						S34E11	0	0	0			S34E11	Q	
						N15E45	2	0	0			N15E45	Q	
						S25E31	3	0	0			S25E31	Q	
						N17W20	2	0	0			N17W20	E	
						S22W14	1	0	0			S22W14	Q	
275	02	01	226	212	012	N20W59	6	1	0	PRESTO BOULDER SOFLARE 01/1818Z M1/2B N12E60 01/1811Z DURATION 28 MINUTES.	02	N20W59	E	SOLALERT 02/03 MAGQUIET
						N14W46	1	0	0			N14W46	Q	
						S12W75	1	0	0			S12W75	Q	
						S24W44	0	0	0			S24W44	Q	
						N17W35	0	0	0			N17W35	Q	
						S21W25	4	1	0			S21W25	E	
						N13W00	0	0	0			N13W00	Q	
						S28E29	0	0	0			S28E29	Q	
						N13E57	4	1	0			N13E57	E	
						N14E30	2	0	0			N14E30	Q	
						S12W13	0	0	0			S12W13	Q	
276	03	02	216	211	007	N19W73	1	0	0		03	N19W73	Q	SOLALERT 03/04 MAGQUIET
						N13W61	0	0	0			N13W61	Q	
						S15W85	0	0	0			S15W85	Q	
						S27W57	1	0	0			S27W57	Q	
						N16W50	0	0	0			N16W50	Q	
						S24W39	2	0	0			S24W39	Q	
						S29E16	1	0	0			S29E16	Q	
						N13E38	2	0	0			N13E38	Q	
						N14E14	3	0	0			N14E14	E	
						N11E74	1	0	0			N11E74	Q	
						N24E77	1	0	0			N24E77	Q	
						N12E51	1	1	0			N12E51	E	
277	04	03	210	205	013	N19W85	0	0	0		04	N19W85	Q	SOLALERT 04 MAGQUIET
						N12W73	0	0	0			N12W73	Q	
						S28W68	0	0	0			S28W68	Q	
						N16W62	1	1	0			N16W62	Q	
						S25W52	2	0	0			S25W52	Q	
						S29E06	0	0	0			S29E06	Q	
						N14E31	0	0	0			N14E31	Q	
						N15E02	1	0	0			N15E02	E	
						N13E60	0	0	0			N13E60	Q	
						N26E66	0	0	0			N26E66	Q	
						N14E36	0	0	0			N14E36	Q	
						N18E76	2	0	0			N18E76	E	
278	05	04	182	198	014	N13W85	1	0	0		05	N13W85	Q	SOLALERT 05/07 MAGQUIET
						N15W75	0	0	0			N15W75	Q	
						S24W64	0	0	0			S24W64	Q	
						S28W07	0	0	0			S28W07	Q	
						N13E13	0	0	0			N13E13	Q	
						N15W11	0	0	0			N15W11	Q	
						N18E67	6	2	0			N18E67	A	
						S32E73	0	0	0			S32E73	Q	
						N18W29	0	0	0			N18W29	Q	
						N13E46	0	0	0			N13E46	Q	
						N26E55	7	1	0			N26E55	A	
						N14E24	0	0	0			N14E24	Q	
279	06	05	223	198	008	N14W89	0	0	0		06	N14W89	E	SOLALERT 06/08 MAGQUIET
						S25W78	5	1	0			S25W78	E	
						S28W23	0	0	0			S28W23	Q	
						N11E01	0	0	0			N11E01	Q	
						N14W25	0	0	0			N14W25	Q	
						N13E33	0	0	0			N13E33	Q	
						N27E41	8	0	0			N27E41	E	
						N13E09	1	0	0			N13E09	Q	
						N18E54	10	1	0			N18E54	A	
						S32E60	2	0	0			S32E60	Q	
						N18W42	0	0	0			N18W42	Q	
						S19W39	1	0	0			S19W39	Q	
						S13E35	1	0	0			S13E35	Q	
280	07	06	230	196	028	S21W53	4	0	0	KAKIOKA REPORT MAGSTORM SSC 06/1128Z AND END 06/2200Z, SYDNEY REPORTS MODERATE MAGSTORM 06/1118Z TO ABOUT 06/1800Z.	07	S21W53	E	SOLALERT 07/08 MAGQUIET
						N14W39	0	0	0			N14W39	Q	
						S29W37	0	0	0			S29W37	Q	
						N13W17	0	0	0			N13W17	Q	
						N13W03	0	0	0			N13W03	Q	
						N13E21	0	0	0			N13E21	Q	
						S14E23	0	0	0			S14E23	Q	
						N26E27	7	2	0			N26E27	A	
						N16E38	2	0	0			N16E38	A	
						S32E47	1	0	0			S32E47	Q	
						N11E61	0	0	0			N11E61	Q	

ALERT PERIODS

INTERNATIONAL URSIGRAM AND WORLD DAYS SERVICE

OCTOBER 1979

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: Location Lat-Long	Flares: No. of Total	Flares: M	Flares: X	Outstanding events	Forecasts: Date	Forecasts: Location Lat-Long	Forecasts: Desc*	Alert Situations
281	08	07	231	197	025	S27W50	0	0	0	PRESTO BOULDER SO-	08	S27W50	Q	SOLALERT 08/09 MAGALERT 08
						N12W23	2	0	0	FLARE M2/1B N15E33		N12W23	Q	
						N14W56	1	0	0	07/1405Z DURATION		N14W56	Q	
						N12E11	0	0	0	12 MINUTES TENFLARE		N12E11	Q	
						N25E14	4	0	0	480 FLUX UNITS		N25E14	A	
						N12W14	4	0	0	07/1404Z DURATION		N12W14	D	
						N15E25	2	1	0	20 MINUTES.		N15E25	A	
						S33E35	0	0	0			S33E35	Q	
						S21W66	7	0	0			S21W66	E	
						S16E10	0	0	0			S16E10	Q	
						N12W32	0	0	0			N12W32	Q	
						N10E50	3	0	0			N10E50	Q	
						N21E36	0	0	0			N21E36	Q	
						N28E07	0	0	0			N28E07	Q	
282	09	08	265	201	029	S29W64	1	0	0	PRESTO TOYOKAWA	09	S29W64	Q	SOLALERT 09/10
						N11E41	0	0	0	08/0314Z TENFLARE		N11E41	Q	MAGALERT MINOR 09
						N13W71	0	0	0	120 FLUX UNITS		N13W71	Q	
						N12W04	1	0	0	07/2251Z WITH 13		N12W04	Q	
						N25E03	0	0	0	MINUTES DURATION.		N25E03	Q	
						N11W28	1	0	0			N11W28	Q	
						N16E12	0	0	0			N16E12	E	
						S33E23	0	0	0			S33E23	Q	
						S20W80	9	0	0			S20W80	E	
						S13W06	0	0	0			S13W06	Q	
						N10W47	0	0	0			N10W47	Q	
						N10E36	1	0	0			N10E36	Q	
						N21E23	3	0	0			N21E23	E	
						S12W53	0	0	0			S12W53	Q	
						N24E74	3	0	0			N24E74	Q	
283	10	09	242	214	018	S30W82	0	0	0		10	S30W82	Q	SOLALERT 10
						N09W51	1	0	0			N09W51	Q	MAGALERT MINOR 10
						N13W87	1	0	0			N13W87	Q	
						N25W12	0	0	0			N25W12	E	
						N11W45	1	0	0			N11W45	Q	
						N16W02	2	0	0			N16W02	E	
						S24W05	0	0	0			S24W05	Q	
						S14W21	1	0	0			S14W21	Q	
						N11E23	1	0	0			N11E23	Q	
						S14W71	4	0	0			S14W71	E	
						N25E66	1	0	0			N25E66	Q	
						S07W22	0	0	0			S07W22	Q	
						S32E60	0	0	0			S32E60	Q	
284	11	10	252	210	015	N25W23	1	0	0		11	N25W23	Q	SOLNIL MAGNIL
						N12W56	0	0	0			N12W56	Q	
						N15W17	4	0	0			N15W17	E	
						S33W04	0	0	0			S33W04	Q	
						S14W33	4	0	0			S14W33	Q	
						N12E09	4	0	0			N12E09	Q	
						N22W03	0	0	0			N22W03	Q	
						S13W83	0	0	0			S13W83	Q	
						N26E51	1	0	0			N26E51	Q	
						S06W34	0	0	0			S06W34	Q	
						S33E45	0	0	0			S33E45	Q	
						N30E60	4	0	0			N30E60	E	
						N14E70	0	0	0			N14E70	Q	
						S12E67	0	0	0			S12E67	Q	
285	12	11	198	213	011	N24W37	2	0	0		12	N24W37	E	SOLQUIET
						N12W70	1	0	0			N12W70	Q	MAGALERT MINOR 13
						N16W28	3	0	0			N16W28	E	
						S13W46	2	0	0			S13W46	Q	
						N12W04	5	0	0			N12W04	E	
						N24E34	0	0	0			N24E34	Q	
						S06W47	0	0	0			S06W47	Q	
						S32W33	1	0	0			S32W33	Q	
						N29E45	4	0	0			N29E45	E	
						N13E57	3	0	0			N13E57	Q	
						S12E59	0	0	0			S12E59	Q	
286	13	12	232	218	008	N25W49	0	0	0		13	N25W49	Q	SOLQUIET
						N10W84	0	0	0			N10W84	Q	MAGALERT MINOR 13/14
						N15W40	2	0	0			N15W40	E	
						S14W62	1	0	0			S14W62	Q	
						N11W17	1	0	0			N11W17	E	
						N22E18	1	0	0			N22E18	Q	
						S06W62	0	0	0			S06W62	Q	
						S33E20	0	0	0			S33E20	Q	
						N27E30	1	0	0			N27E30	E	
						N12E44	1	0	0			N12E44	E	
						S13E43	0	0	0			S13E43	Q	
						S06W00	0	0	0			S06W00	Q	
						N34E55	0	0	0			N34E55	Q	

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287	14	13	221	220	007	N24W65	0	0	0		14	N24W65	Q	SOLALERT 14/16 MAGNIL
						N14W52	8	0	0			N14W52	A	
						S14W74	7	0	0			S14W74	Q	
						N11W30	1	0	0			N11W30	E	
						N24E10	0	0	0			N24E10	Q	
						S07W76	0	0	0			S07W76	Q	
						S32E05	1	0	0			S32E05	Q	
						N28E20	4	1	0			N28E20	E	
						N12E31	0	0	0			N12E31	Q	
						N30E42	0	0	0			N30E42	Q	
						S06E62	0	0	0			S06E62	Q	
						N05E77	0	0	0			N05E77	Q	
						S16E39	0	0	0			S16E39	Q	
						N29W89	0	0	0			N29W89	Q	
						S23W69	0	0	0			S23W69	Q	
						S19W30	0	0	0			S19W30	Q	
						S12W29	0	0	0			S12W29	Q	
						N20E84	0	0	0			N20E84	E	
288	15	14	263	239	009	N23W78	0	0	0		15	N23W78	Q	SOLALERT 15/17 MAGQUIET
						N15W63	7	1	0			N15W63	E	
						S17W87	3	0	0			S17W87	Q	
						N11W42	0	0	0			N11W42	E	
						N23W06	0	0	0			N23W06	Q	
						S32W06	0	0	0			S32W06	Q	
						N28E08	3	0	0			N28E08	A	
						N12W18	0	0	0			N12W18	Q	
						N31E30	3	0	0			N31E30	A	
						S06E51	0	0	0			S06E51	Q	
						N07E63	0	0	0			N07E63	Q	
						S16E25	0	0	0			S16E25	Q	
						S12W43	0	0	0			S12W43	Q	
						N26E72	8	0	0			N26E72	A	
289	16	15	282	233	005	N24W88	0	0	0		16	N24W88	Q	SOLALERT MINOR 16/17
						N15W76	0	0	0			N15W76	Q	MAGQUIET
						N11W56	0	0	0			N11W56	Q	
						N23W17	0	0	0			N23W17	Q	
						N29W06	4	0	0			N29W06	E	
						N12E05	0	0	0			N12E05	Q	
						S26W40	0	0	0			S26W40	Q	
						N31E17	5	0	0			N31E17	E	
						S06E37	0	0	0			S06E37	Q	
						N07W50	0	0	0			N07W50	Q	
						S16E11	0	0	0			S16E11	Q	
						N27E59	5	0	0			N27E59	E	
						N15E18	0	0	0			N15E18	Q	
						S17E27	0	0	0			S17E27	Q	
						N06E37	0	0	0			N06E37	Q	
						S26E69	0	0	0			S26E69	Q	
290	17	16	267	232	010	N11W69	0	0	0		17	N11W69	Q	SOLALERT 17 MAGQUIET
						N23W30	0	0	0			N23W30	Q	
						N28W17	3	1	0			N28W17	E	
						N12W09	2	0	0			N12W09	Q	
						N31E04	1	0	0			N31E04	E	
						S07E24	2	0	0			S07E24	Q	
						N07E37	0	0	0			N07E37	Q	
						S16E02	0	0	0			S16E02	Q	
						N27E47	6	0	0			N27E47	E	
						N15E05	0	0	0			N15E05	Q	
						S18E13	0	0	0			S18E13	Q	
						N06E23	0	0	0			N06E23	Q	
						S26E56	0	0	0			S26E56	Q	
						S13E67	0	0	0			S13E67	Q	
						N17W84	0	0	0			N17W84	Q	
291	18	17	280	232	005	N15W95	0	0	0	PRESTO BOULDER SO-FLARE M2/1B N15E33 07/1405Z DURATION 12 MINUTES.	18	N15W95	Q	SOLALERT 18/19
						N10W84	0	0	0			N10W84	Q	MAGQUIET
						N22W47	0	0	0			N22W47	Q	
						N28W30	3	0	0			N28W30	E	
						N12W22	0	0	0			N12W22	Q	
						N32W08	14	1	0			N32W08	A	
						S06E11	1	0	0			S06E11	Q	
						N09E19	3	0	0			N09E19	Q	
						S15W15	0	0	0			S15W15	Q	
						N27E34	6	3	2			N27E34	A	
						S18W01	1	0	0			S18W01	Q	
						N05E15	0	0	0			N05E15	Q	
						S25E47	0	0	0			S25E47	Q	
						S13E55	0	0	0			S13E55	Q	
						S08E63	0	0	0			S08E63	Q	
						N18E21	0	0	0			N18E21	Q	
						S10E79	1	0	0			S10E79	Q	
						S13E30	0	0	0			S13E30	Q	

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						Location Lat-Long	No. of Flares Total	M	X		Date	Location Lat-Long	Desc*	
292	19	18	300	239	003	N23W58	0	0	0		19	N23W58	Q	SOLALERT 19/xx
						N28W41	5	0	0			N28W41	E	MAGQUIET
						N12W33	0	0	0			N12W33	Q	
						N31W21	10	0	0			N31W21	A	
						S06W01	0	0	0			S06W01	Q	
						N08E09	0	0	0			N08E09	Q	
						S15W28	0	0	0			S15W28	Q	
						N27E23	2	1	0			N27E23	A	
						S17W14	2	0	0			S17W14	Q	
						N06W00	0	0	0			N06W00	Q	
						S26E34	0	0	0			S26E34	Q	
						S12E42	0	0	0			S12E42	Q	
						S09E49	0	0	0			S09E49	Q	
						N18E07	0	0	0			N18E07	Q	
						S11E65	3	0	0			S11E65	E	
						N23E78	0	0	0			N23E78	Q	
						N26E12	0	0	0			N26E12	Q	
293	20	19	259	242	002	N22W74	0	0	0	X1/1B FLARE OC-	20	N22W74	Q	SOLALERT 20/22
						N28W55	1	0	0	CURRED AT 19/1157Z		N28W55	Q	MAGQUIET
						N11W48	0	0	0	AT N28E12 DURATION		N11W48	Q	
						N31W36	4	0	0	45 MINUTES WITH TEN-		N31W36	A	
						S07W18	3	0	0	FLARE OF 1600 FLUX		S07W18	Q	
						N04W04	0	0	0	UNITS AT 19/1158Z		N04W04	Q	
						S16W47	0	0	0	DURATION 15 MINUTES		S16W47	Q	
						N27E08	7	1	1	A TENFLARE OCCURRED		N27E08	A	
						N06W16	0	0	0	AT 19/0416Z 280		N06W16	Q	
						S12E28	0	0	0	FLUX UNITS 10 MIN-		S12E28	Q	
						S08E35	1	0	0	UTE DURATION WITH		S08E35	Q	
						N17W08	0	0	0	ASSOCIATED M9 FLARE		N17W08	Q	
						S12E25	0	0	0	THE OPTICAL IMPOR-		S12E25	Q	
						N24E63	0	0	0	TANCE AND LOCATION		N24E63	Q	
						N26W02	0	0	0	UNKNOWN.		N26W02	Q	
						N14E13	0	0	0			N14E13	Q	
294	21	20	316	241	006	N22W87	0	0	0	TENFLARE TOYOKAWA	21	N22W87	Q	SOLALERT 21/25
						N29W68	4	0	0	20/0302Z 130 FLUX		N29W68	A	MAGALERT MINOR 21/22
						N11W62	0	0	0	UNITS, TENFLARE		N11W62	Q	
						N31W49	1	0	0	20/0552Z 440 FLUX		N31W49	E	
						S07W31	0	0	0	UNITS M1/2B FLARE		S07W31	Q	
						N04W20	0	0	0	AT N26W04 20/1828Z.		N04W20	Q	
						S16W60	0	0	0			S16W60	Q	
						N28W04	6	3	0			N28W04	A	
						S26E07	0	0	0			S26E07	Q	
						S12E15	0	0	0			S12E15	Q	
						S09E22	1	0	0			S09E22	E	
						N16W27	0	0	0			N16W27	Q	
						S12E37	0	0	0			S12E37	E	
						S14W10	0	0	0			S14W10	Q	
						N25E50	1	0	0			N25E50	Q	
						N26W15	0	0	0			N26W15	Q	
						S15W00	0	0	0			S15W00	Q	
						N11E41	0	0	0			N11E41	Q	
						N12E78	0	0	0			N12E78	Q	
295	22	21	265	232	009	N29W80	1	1	0		22	N29W80	A	SOLALERT 22/xx
						N32W61	0	0	0			N32W61	E	MAGALERT 22/xx
						S07W45	0	0	0			S07W45	Q	
						N04W41	0	0	0			N04W41	Q	
						S16W75	0	0	0			S16W75	Q	
						N27W16	4	1	0			N27W16	A	
						N05W41	0	0	0			N05W41	Q	
						S27W05	0	0	0			S27W05	Q	
						S10E08	0	0	0			S10E08	Q	
						S12E22	1	0	0			S12E22	E	
						N24E38	0	0	0			N24E38	Q	
						N25W28	0	0	0			N25W28	Q	
						S16W13	0	0	0			S16W13	Q	
						N10E26	0	0	0			N10E26	Q	
						N11E63	0	0	0			N11E63	Q	
						S15E68	0	0	0			S15E68	Q	
						S24E69	0	0	0			S24E69	Q	
296	23	22	233	224	016	N32W77	1	0	0		23	N32W77	Q	SOLALERT 23/xx
						N27W30	6	2	0			N27W30	A	MAGALERT MINOR 23/25
						N06W54	0	0	0			N06W54	Q	
						S28W17	0	0	0			S28W17	Q	
						S09W04	2	0	0			S09W04	Q	
						N19W49	1	0	0			N19W49	Q	
						S12E08	0	0	0			S12E08	E	
						N23E26	0	0	0			N23E26	Q	
						N25W42	0	0	0			N25W42	Q	
						N11E50	5	0	0			N11E50	E	
						S14E54	0	0	0			S14E54	Q	
						S23E55	0	0	0			S23E55	Q	
						N19E13	0	0	0			N19E13	Q	

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297	24	23	207	226	008	N32W93	0	0	0		24	N32W93	Q	SOLALERT MINOR 24
						N28W41	2	0	0			N28W41	E	MAGALERT MINOR 24/25
						S28W31	0	0	0			S28W31	Q	
						N19W63	0	0	0			N19W63	Q	
						S12W06	0	0	0			S12W06	Q	
						N22E13	0	0	0			N22E13	Q	
						N25W54	0	0	0			N25W54	Q	
						N11E36	1	0	0			N11E36	Q	
						S13E39	1	0	0			S13E39	Q	
						S22E43	3	0	0			S22E43	E	
						N17E32	1	0	0			N17E32	Q	
						N27E77	0	0	0			N27E77	Q	
298	25	24	258	230	015	N03W84	0	0	0		25	N03W84	Q	SOLALERT 25 MAGNIL
						N27W55	1	0	0			N27W55	Q	
						S28W45	1	0	0			S28W45	Q	
						S10W32	0	0	0			S10W32	Q	
						S12W21	0	0	0			S12W21	Q	
						N23W02	0	0	0			N23W02	Q	
						N25W67	9	0	0			N25W67	E	
						N11E22	0	0	0			N11E22	Q	
						S12E22	0	0	0			S12E22	Q	
						S22E28	3	0	0			S22E28	E	
						N27E68	0	0	0			N27E68	Q	
						S19E27	8	0	0			S19E27	E	
						N13W64	1	0	0			N13W64	Q	
299	26	25	285	218	015	N27W67	0	0	0		26	N27W67	Q	SOLALERT 26/xx
						S29W57	6	1	0			S29W57	A	MAGQUIET
						S10W49	0	0	0			S10W49	Q	
						S12W33	0	0	0			S12W33	E	
						N23W13	0	0	0			N23W13	Q	
						N25W80	0	0	0			N25W80	Q	
						N10E09	0	0	0			N10E09	Q	
						S12E10	0	0	0			S12E10	Q	
						S22E17	0	0	0			S22E17	Q	
						N27E54	0	0	0			N27E54	Q	
						S18E15	10	1	0			S18E15	A	
						N13W67	2	0	0			N13W67	Q	
						S18W20	0	0	0			S18W20	Q	
						S15W16	0	0	0			S15W16	Q	
						N17E13	1	0	0			N17E13	Q	
						N19E21	0	0	0			N19E21	Q	
300	27	26	249	205	007	N26W79	2	0	0		27	N26W79	Q	SOLALERT 27/28
						S29W71	2	0	0			S29W71	Q	MAGQUIET
						S11W64	0	0	0			S11W64	Q	
						S12W47	0	0	0			S12W47	Q	
						N22W26	0	0	0			N22W26	Q	
						N08W07	0	0	0			N08W07	Q	
						S12W03	0	0	0			S12W03	Q	
						S22E05	0	0	0			S22E05	Q	
						N26E41	0	0	0			N26E41	Q	
						S18E02	6	0	0			S18E02	E	
						S19W33	1	0	0			S19W33	Q	
						S15W30	0	0	0			S15W30	Q	
						N15E01	0	0	0			N15E01	Q	
						N19E77	0	0	0			N19E77	Q	
301	28	27	163	214	008	S11W62	0	0	0		28	S11W62	Q	SOLALERT 28/xx
						N21W37	0	0	0			N21W37	Q	MAGQUIET
						S11W17	0	0	0			S11W17	Q	
						S22W10	0	0	0			S22W10	Q	
						N26E27	0	0	0			N26E27	Q	
						S17W12	2	0	0			S17W12	E	
						N16W16	0	0	0			N16W16	Q	
						N18E70	2	0	0			N18E70	E	
						N16W02	0	0	0			N16W02	Q	
						S17E17	0	0	0			S17E17	Q	
302	29	28	196	214	015	S12W74	0	0	0		29	S12W74	Q	SOLALERT 29/xx
						S12W30	0	0	0			S12W30	Q	MAGQUIET
						N15W28	0	0	0			N15W28	Q	
						S18W24	1	0	0			S18W24	A	
						S22W21	0	0	0			S22W21	Q	
						N14W15	1	0	0			N14W15	Q	
						N35W11	0	0	0			N35W11	Q	
						N26E15	0	0	0			N26E15	Q	
						N19E57	0	0	0			N19E57	E	
						N27E70	0	0	0			N27E70	Q	
						S11E78	0	0	0			S11E78	Q	

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303	30	29	205	214	008	S12W42	0	0	0		30	S12W42	Q	SOLALERT 30/31
						S22W34	0	0	0			S22W34	Q	MAGQUIET
						N27E03	0	0	0			N27E03	Q	
						S19W38	3	0	0			S19W38	Q	
						N15W42	1	0	0			N15W42	Q	
						N18E43	2	0	0			N18E43	E	
						N14W29	0	0	0			N14W29	E	
						N34W25	0	0	0			N34W25	Q	
						S10E64	1	1	0			S10E64	Q	
						N29E58	2	0	0			N29E58	Q	
						N13E69	0	0	0			N13E69	E	
304	31	30	243	221	004	S12W57	0	0	0		31	S12W57	Q	SOLNIL MAGQUIET
						S22W48	0	0	0			S22W48	Q	
						N27W11	0	0	0			N27W11	Q	
						S18W51	0	0	0			S18W51	Q	
						N16W56	0	0	0			N16W56	Q	
						N18E31	4	0	0			N18E31	E	
						N16W42	0	0	0			N16W42	Q	
						S11E51	0	0	0			S11E51	Q	
						N28E42	2	0	0			N28E42	E	
						N12E57	0	0	0			N12E57	Q	
						S13E64	0	0	0			S13E64	Q	
						N25E71	0	0	0			N25E71	Q	
						N14E74	0	0	0			N14E74	Q	
						S28E23	0	0	0			S28E23	Q	
305	01	31	252	220	003	S22W61	0	0	0		01	S22W61	Q	SOLQUIET
						N26W23	0	0	0			N26W23	Q	MAGALERT MINOR 02
						S18W66	0	0	0			S18W66	Q	
						N15W69	3	0	0			N15W69	Q	
						N18E18	2	0	0			N18E18	E	
						N14W56	0	0	0			N14W56	Q	
						S12E37	1	0	0			S12E37	Q	
						N24E28	0	0	0			N24E28	Q	
						N10E43	1	0	0			N10E43	E	
						S16E52	0	0	0			S16E52	Q	
						N24E58	1	0	0			N24E58	Q	
						N13E64	0	0	0			N13E64	Q	
						N14E31	1	0	0			N14E31	Q	
						S28E09	0	0	0			S28E09	Q	
						N13W61	0	0	0			N13W61	Q	
						N16E73	0	0	0			N16E73	Q	

* Q=Quiet E=Eruptive A=Active P=Proton C=Caution D=Doubtful O.G.=Other Groups MF=Major Flare

RELATIVE SUNSPOT NUMBERS

ZURICH, R_Z

	1978 FINAL		1979 PROVISIONAL									
DAY	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT
1	109	110	158	116	116	131	108	121	158	115	165	213
2	122	110	158	127	138	134	106	152	168	96	141	187
3	125	117	191	148	141	135	103	161	205	121	148	167
4	129	115	157	123	142	138	112	178	219	110	157	156
5	121	104	146	134	135	109	113	207	232	93	139	168
6	108	122	173	146	144	91	122	226	249	104	139	168
7	112	138	163	144	146	77	148	222	223	110	170	179
8	118	148	172	142	143	69	165	220	219	132	192	190
9	108	152	165	139	146	61	162	231	191	115	190	210
10	120	144	163	137	140	87	145	205	163	92	177	178
11	118	170	157	137	156	109	148	186	155	84	167	183
12	99	188	159	138	170	107	158	199	145	87	156	189
13	90	165	159	152	169	113	163	172	142	91	175	211
14	78	158	162	163	159	116	203	149	127	119	186	213
15	59	140	178	161	155	117	207	127	121	135	177	198
16	77	143	164	159	130	119	187	103	114	122	170	185
17	92	146	164	160	142	107	184	122	109	138	155	221
18	93	132	146	162	142	98	148	126	109	157	177	224
19	85	95	138	166	138	79	109	110	135	176	195	221
20	76	84	177	169	120	68	107	111	158	187	191	219
21	68	68	181	171	134	68	114	124	151	218	184	215
22	77	63	178	155	140	79	121	108	152	216	178	198
23	55	59	188	127	139	79	117	96	154	206	219	186
24	61	65	209	99	118	80	119	90	143	203	236	161
25	85	81	209	88	114	85	124	120	144	201	252	153
26	101	93	173	108	114	118	123	132	142	182	261	145
27	118	110	162	97	117	125	118	112	146	189	256	143
28	118	122	157	95	114	132	110	128	132	174	239	142
29	111	135	153		110	132	113	124	148	158	235	191
30	103	159	149		127	120	96	154	150	150	233	197
31		177	130		147		120		144	168		223
MEAN	97.9	122.7	165.8	138.0	137.0	102.8	134.6	150.5	159.6	143.5	188.7	188.2

1978 yearly mean = 92.5

DAILY SOLAR FLUX AT 2800 MHz
OTTAWA ARO

FLUX ADJUSTED TO 1 A.U., S_a

	1978		1979									
DAY	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT
1	152.0	166.6	194.1*	185.8	168.5	202.6*	180.4	189.5	186.3	149.1	175.8	212.8
2	159.0	167.6	200.1	185.6	170.7	203.4	179.2	206.8*	200.9*	143.9*	180.1	211.5
3	169.9	164.2	203.5*	187.4*	173.3	194.2	164.3	216.1*	213.4	145.1	180.8	204.7
4	177.4	165.3	192.7*	187.7	181.4	183.5	176.0	228.8*	218.1	141.7	175.3*	197.7*
5	181.2	169.5	194.9	197.4	180.1*	179.3	169.6	230.2	204.5	141.6	177.1	192.8*
6	172.2*	164.5	190.9	206.5	182.4	176.3	171.1*	238.1	211.3	149.5	180.4*	195.5
7	174.6	178.5*	186.2	203.4	183.1*	166.7	178.0	238.1	207.2	151.1	186.3	197.0
8	168.8*	189.9	200.1	207.2*	178.9	169.0*	182.4*	242.7	206.7	152.7	183.6	200.3
9	164.9*	189.6	192.6	198.7	181.4	169.6	181.3	247.4*	197.9*	157.3	187.4	209.5
10	166.3	204.7	186.2	198.4*	180.6	173.0	174.7	239.9	185.9	152.1*	184.6	208.7
11	163.7	210.5	179.5	202.2*	181.7*	170.0*	178.6	229.6	178.6	154.4	181.5*	211.8
12	150.4	217.3	174.5	195.4	188.7	174.5	184.2	208.3	170.1	144.8	181.7	216.4
13	145.3	210.6*	193.9	195.4	186.3	175.8	186.6	193.7	161.4	155.8	186.1	239.1
14	136.3	197.0	200.0*	204.2*	189.4	170.9	182.0	185.7	154.7*	158.2*	192.6*	236.4
15	133.8	192.7	192.1*	205.0*	181.3	168.1	181.9	176.0	151.1	167.6	193.8	230.7
16	128.8	180.5	189.9*	209.2	183.5*	171.7	176.4	167.5	143.6	164.8	196.3*	232.3
17	128.1	177.7	175.7	213.1	177.7	168.0	187.7	158.1	142.7	165.8	202.7*	226.0
18	127.4	161.5	177.6	237.7	188.6*	158.7	171.3*	152.6	141.2	180.0	215.7	236.8
19	128.9	152.9	187.8	237.8	177.6	159.4	161.5	146.2	143.6	186.4	218.1*	237.3*
20	134.9	138.1	197.2	230.1*	184.1	156.1	155.6	151.5	146.6	204.2*	213.9*	236.7*
21	126.0	132.1*	218.3	225.1	182.2	161.5	155.7	148.9	143.7*	207.6*	218.4	230.1
22	127.1	132.7	226.9	223.3	181.1	159.7*	156.5*	141.1	155.7	223.2	216.5	221.9
23	121.9	133.4	225.1	196.0	188.5	162.3	156.0	139.0	163.1*	218.6	224.2*	214.9*
24	123.5	135.2*	208.5	182.8	188.3	161.9	159.2*	141.2	168.6	225.2	230.7	225.6*
25	124.7*	138.0	206.1	167.5	188.2	172.5	153.3*	147.8	164.5	229.3*	235.5	215.2
26	132.7	144.2	192.9	166.0	200.2	182.0	149.1	153.7	165.6	223.3	229.9*	202.9
27	144.4*	148.7*	205.4	162.7	187.9	195.1*	149.4	158.5	159.1*	212.8	228.7*	211.2
28	154.1	164.1	209.6	163.6	188.6	192.1*	149.2	159.1	158.1	214.2	233.8	210.0
29	162.2	166.2	209.3		191.4	185.7	150.2	166.9	156.7	197.6	225.0	214.8
30	167.8	181.7	194.1*		186.6	185.2*	158.4	176.7*	160.3	187.8	231.9	213.7*
31		195.1	193.7		201.4*		174.9		152.4	179.9		214.9*
MEAN	148.2	170.0	196.5	199.1	184.0	175.0	168.9	186.0	171.4	177.0	202.3	216.4

* adjusted for burst
A = interpolated data point

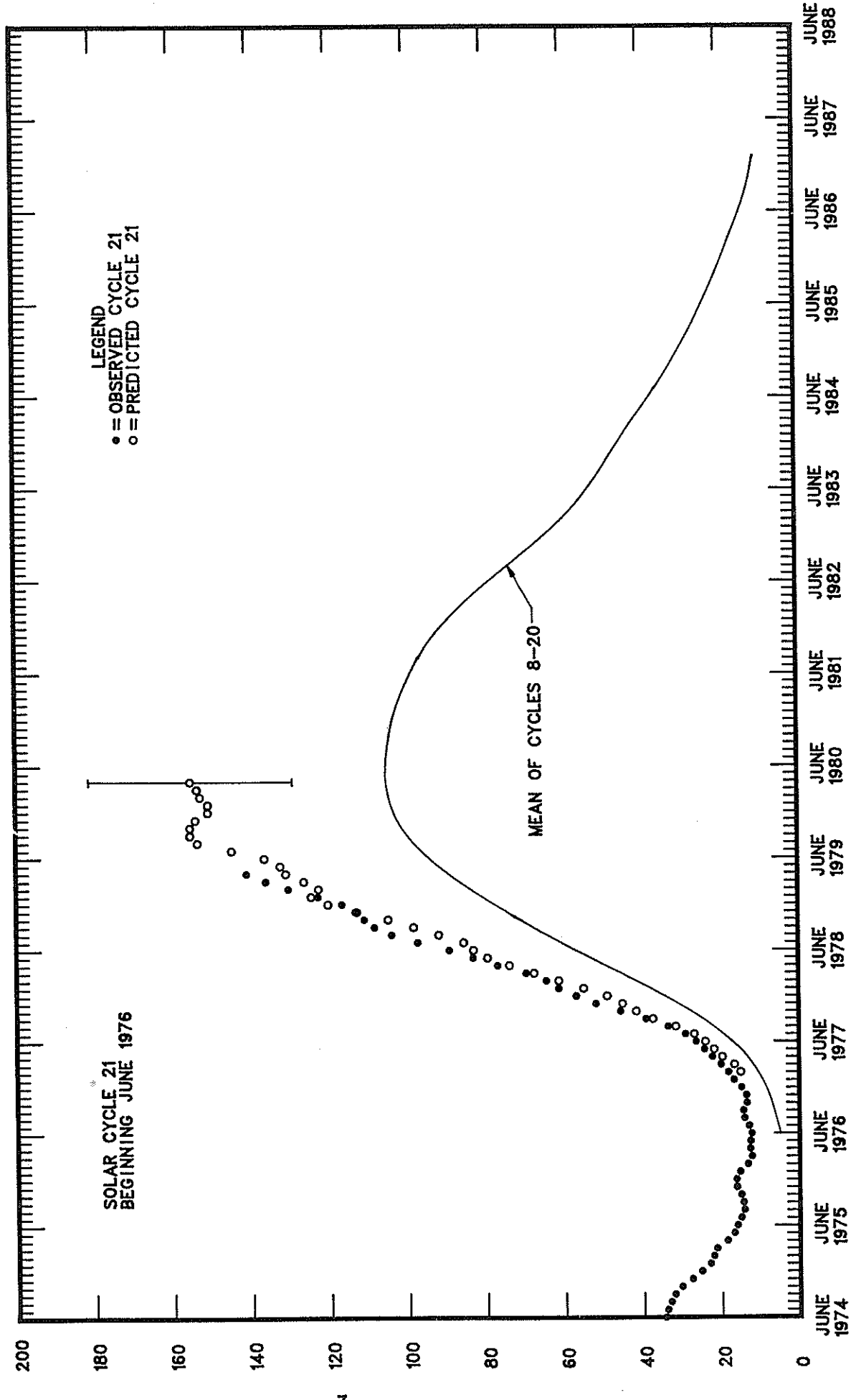
DAILY SOLAR INDICES

OCTOBER 1979

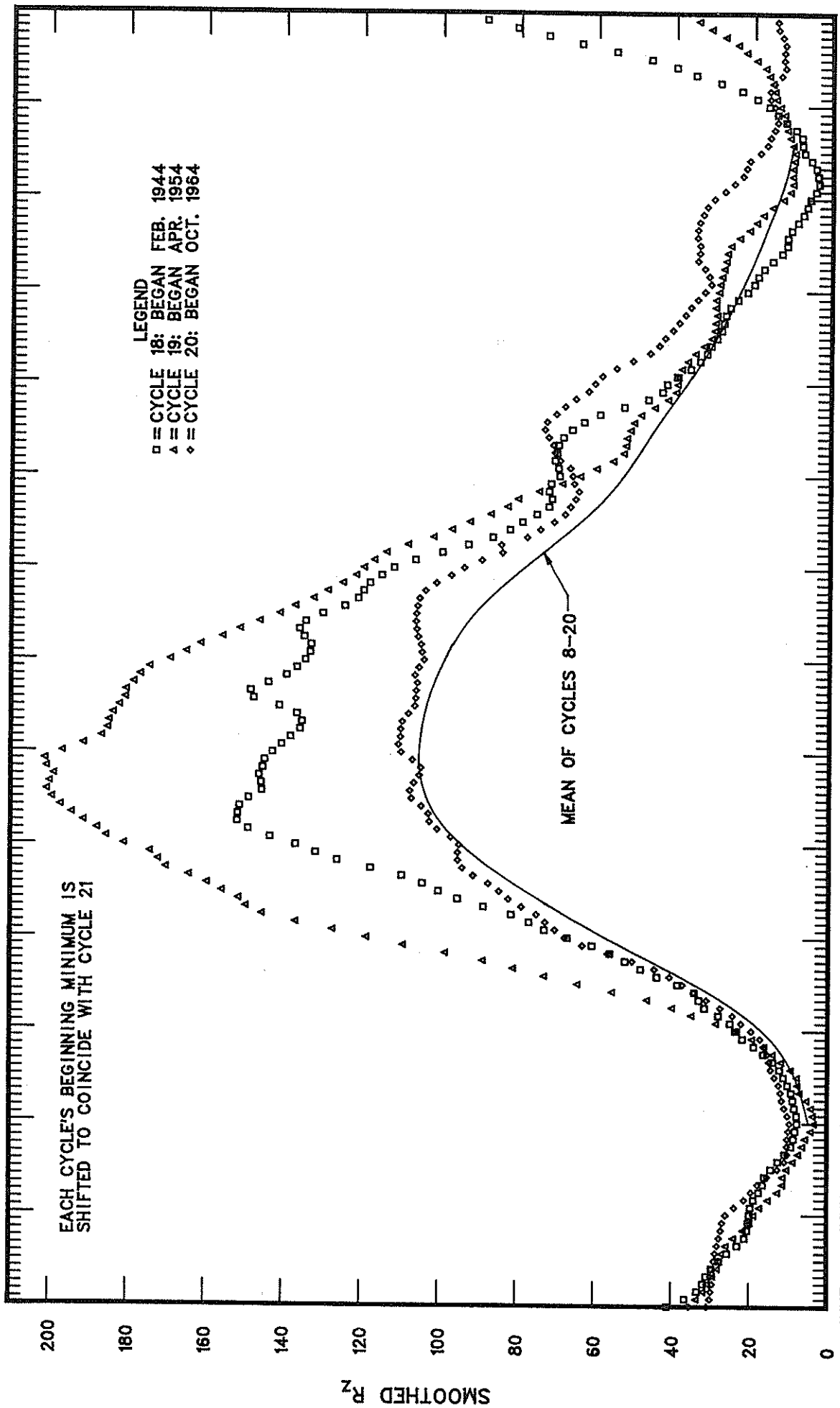
OCT 1979	YEAR DAY	BARTELS 27-DAY CYCLE NUMBER	SUNSPOT NUMBERS		OBSERVED FLUX	SOLAR FLUX ADJUSTED TO 1 A.U.								
			R_Z	$R_{A'}$	OTTAWA 2800	AFGL 15400	AFGL 8800	AFGL 4995	OTTAWA 2800	AFGL 2695	AFGL 1415	AFGL 606	AFGL 410	AFGL 245
1	274	8	213	206	212.4	576	399	241	212.8	206	176	87	48	
2	275	9	187	195	211.3	589	405	242	211.5	210	172	81	46	
3	276	10	167	175	204.5	552	387	224	204.7	206	179	79	43	
4	277	11	156	154	197.7*	601	425	235	197.7*	207	157	83	52	
5	278	12	168	155	192.8*	583	398	211	192.8*	192	177	94	51	
6	279	13	168	152	195.7	589	393	211	195.5	191	175	98	53	
7	280	14	179	178	197.2	583	392	217	197.0	203	176	114	48	
8	281	15	190	174	200.7	584	405	219	200.3	210	176	95	52	
9	282	16	210	193	210.1	550	356	214	209.5	198	142	105	50	
10	283	17	178	161	209.3	542	361	212	208.7	199	140	97	38	
11	284	18	183	160	212.7	575	398	229	211.8	219	138	89	47	
12	285	19	189	174	217.3	588	412	229	216.4	226	142	85	42	
13	286	20	211	203	240.3	580	409	249	239.1	240	141	92	59	
14	287	21	213	206	237.6	615	441	250	236.4	242	149	95	44	
15	288	22	198	192	232.1	602	446	248	230.7	243	154	95	48	
16	289	23	185	186	233.9	607	455	247	232.3	234			46	
17	290	24	221	196	227.6	593	456	263	226.0	238	156	93	45	
18	291	25	224	196	238.7	584	441	262	236.8	237	155		45	
19	292	26	221	214	239.2*	617	455	252	237.3*	247	155		57	
20	293	27	219	199	238.8*	606	435	245	236.7*	242	156		51	
21	294	1	215	185	232.2	583	412	233	230.1	223	156		49	
22	295	2	198	172	224.1	578	412	304	221.9	219	150		51	
23	296	3	186	164	217.1*	578	407	224	214.9*	215	154		48	
24	297	4	161	167	228.1*	577	418	237	225.6*	233			50	
25	298	5	153	169	217.8	588	420	228	215.2	219			46	
26	299	6	145	151	205.4	582	415	209	202.9	205			52	
27	300	7	143	131	214.0	585	405	230	211.2	216			44	
28	301	8	142	144	212.8	557	406	228	210.0	220			47	
29	302	9	191	175	217.8	580	412	223	214.8	218			46	
30	303	10	197	193	216.7*	577	414	231	213.7*	223			35	
31	304	11	223	204	218.2*	585	413	234	214.9*	223			50	
MEAN			188.2	178.2	217.9	583	413	235	216.4	219	158	93	48	

* Adjusted for burst.

OBSERVED AND PREDICTED SMOOTHED SUNSPOT NUMBERS



SUPERPOSITION OF CYCLES 18, 19, AND 20



SMOOTHED OBSERVED AND PREDICTED SUNSPOT NUMBERS
CYCLE 21

MONTH	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
1976	15.2	13.2	12.2	12.6	12.5	12.2	12.9	14.0	14.3	13.4	13.5	14.8
1977	16.7	18.1	20.0	22.2	24.2	26.3	29.0	33.4	39.1	45.6	51.9	56.9
1978	61.3	64.5	69.6	76.9	83.2	89.3	97.4	104.0	108.4	111.0	113.3	116.7
1979	122.8	130.4	136.1	141.0	144.1	149.0	153.7	157.0	159.3	160.5	160.9*	160.2
					(4)	(6)	(8)	(10)	(11)	(14)	(17)	(19)
1980	158.5	156.7	155.4	155.2	154.3	150.7	146.7	143.4	141.3	140.3	138.9	137.6
	(22)	(23)	(24)	(26)	(29)	(33)	(36)	(39)	(39)	(41)	(42)	(45)
1981	137.7	137.3	134.7	131.6	128.8	126.0	124.8	124.7	124.0	122.7	120.1	116.8
	(47)	(47)	(45)	(44)	(44)	(44)	(43)	(42)	(41)	(41)	(39)	(38)
1982	113.3	109.9	107.5	105.6	103.3	100.8	96.9	91.9	87.4	82.5	79.0	75.4
	(36)	(35)	(34)	(32)	(30)	(28)	(26)	(25)	(24)	(21)	(20)	(20)
1983	71.3	68.4	66.5	64.5	62.3	59.7	57.7	55.9	54.2	53.1	52.3	51.3
	(20)	(20)	(21)	(21)	(21)	(22)	(23)	(25)	(27)	(29)	(30)	(30)
1984	50.0	47.9	44.8	41.1	38.6	37.6	36.6	35.1	33.5	32.1	30.7	29.1
	(31)	(30)	(29)	(29)	(30)	(31)	(32)	(31)	(31)	(29)	(28)	(27)
1985	27.9	27.2	26.5	26.0	25.3	24.2	23.3	22.5	21.7	21.0	20.1	19.4
	(27)	(27)	(26)	(26)	(26)	(25)	(23)	(23)	(22)	(23)	(24)	(24)
1986	19.0	18.2	17.3	16.3	14.9	13.7	12.7	12.1	11.8	11.5	11.4	11.4
	(25)	(24)	(24)	(23)	(22)	(21)	(20)	(19)	(17)	(16)	(15)	(13)
1987	11.7	12.3	13.1	14.2	15.3	16.4	17.6					
	(12)	(12)	(11)	(12)	(13)	(14)	(14)					

The table gives observed Zürich smoothed sunspot numbers for Cycle 21 up to the one calculated from the latest observed data, marked by a vertical bar. They are based on final Zürich numbers through 1978 and provisional Zürich numbers thereafter. Some of these data after the June 1976 value will change slightly when final data for 1979 are received. The numbers after the vertical bar are predictions by the McNish-Lincoln method (see *Explanation of Data Reports*, February 1978). Shown in parentheses are the corresponding absolute values of the 90% confidence interval, an indication of the uncertainty above and below the predicted number.

The McNish-Lincoln method is very sensitive to the identification of a minimum epoch. In SGD 390-401 issues, the Cycle 21 predictions were based on March 1976 as the minimum epoch. Latest studies, including one published by Waldmeier, show that June 1976 is the more appropriate epoch of minimum. Thus, we have adopted a June 1976 mimimum.

*Prediction of Sunspot Maximum -- The McNish-Lincoln prediction method is recommended for predictions up to only one year ahead. From that point, the predictions regress rapidly towards the mean value. Combining this McNish-Lincoln prediction of sunspot maximum with the Ohl method (as done by Sargent, see *Explanation of Data Reports*, February 1979) indicates that the most probable value for sunspot maximum is 160 ± 24.

Hα SOLAR FLARES

OCTOBER 1979

OBSERV-ATORY	OBSERVED UT				LOCATION					DURA-TION	IM POR-TANCE	OBS.		MEASUREMENTS			REMARKS
	DAY	START	MAX. PHASE	END	APPROX. LAT.	APPROX. MER. DIST.	CENTRAL DISTANCE	HALE PLAGE REGION	CMP. DAY	MIN.		COND.	TYPE	TIME UT	MEAS. AREA Mill. of Disk	CORR. AREA Sq. Deg.	
ATHN	01	0600E	0601U	0619	S23	W15	.365		28.1	190	SB	3	C		127		F
ISTA	01	0740E		0805D	N20	W37	.713		26.5	25D	SF						E
ISTA	01	0740E		0816	N16	W52	.834		25.4	36D	1N						E
ISTA	01	0835	0836	0840	N19	W56	.875		25.2	5	SF						D
ISTA	01	0846		0900	N18	W53	.849		25.4	14	1N						U
ISTA	01	0853	0859	0912	N17	W26	.578		27.4	19	SN						D
ISTA	01	0907		0910	N14	E57	.870		5.7	3	SF						D
ATHN	01	0924	0927	0947	N16	W59	.890		25.0	23	SB	3	C		111		F
ISTA	01	0930E		0947	N18	W51	.832		25.6	17D	1B						E
ISTA	01	0945	0947	0959	N14	E38	.685		4.3	14	SN						D
RAMY	01	1136	1136	1149	N17	W53	.845		25.5	13	SN	3	C		46		F
RAMY	01	1444	1446	1532	N14	E60	.893		6.1	48	SF	3	C		17		
HUAN	01	1608		1615	N18	W56	.872		25.5	7	SF	1	C				
BIGB	01	1754	1824	1916	N09	E75	.972		7.4	82	SB	2	C	1824	120		
HUAN	01	1816E		1830D	N12	E74	.970		7.3	14D	SN	1	P	1816	60		E
BIGB	01	1822	1823	1825	N24	W55	.883		25.6	3	SF	2	C	1823	20	.4	
BIGB	01	1826	1827	1831	N20	W57	.885		25.5	5	SF	2	C	1827	60	1.1	
BIGB	01	1926	1928	1945	N28	W58	.914		25.5	19	SB	2	C	1928	60	1.2	
BIGB	01	2131	2133	2148	N20	W63	.925		25.2	17	SB	2	C	2133	80	1.8	
ATHN	02	0937E	0939U	0947	N13	E25	.530		4.3	10D	SB	2	C		48		DE
RAMY	02	1122	1123	1126	S25	W32	.579		28.1	4	SF	3	C		22		
RAMY	02	1201E	1201U	1208	N14	E84	.998		8.8	7D	SB	3	C		0		
RAMY	02	1201	1355	1418	N27	E78	.992		8.4	137	SF	3	C		0		
RAMY	02	1241	1242	1252	S25	W33	.590		28.1	11	SF	3	C		27		
RAMY	02	1336	1337	1350	S28	W50	.783		26.8	14	SF	3	C		20		
RAMY	02	1343	1344	1357	N15	E23	.528		4.3	14	SN	3	C		31		
RAMY	02	1400	1400	1418	N13	E56	.859		6.8	18	SF	3	C		15		
RAMY	02	1437	1446	1604	S28	E26	.533		4.6	87	1N	3	C		182		F
BIGB	02	1442	1458	1715	S29	E24	.521		4.4	153	SB	2	C	1458	140	1.6	
RAMY	02	1442	1443	1446	N13	E55	.850		6.7	4	SF	3	C		21		
BIGB	02	1558	1601	1615	N23	E90	1.001		9.4	17	SN	2	C	1601	40		
BIGB	02	1620	1622	1638	N12	E21	.475		4.3	18	SN	1	C	1622	60	.7	
HUAN	02	1627E		1633D	N13	E22	.497		4.3	6D	SN	1	P	1629	30	.3	E
BIGB	02	1719	1722	1736	S31	E22	.521		4.4	17	SN	1	C	1722	30	.3	
BIGB	02	1742	1743	1758	N22	E85	.999		9.1	16	SN	1	C	1743	60		
BIGB	02	1748	1750	1802	S24	W36	.620		28.0	14	SN	1	C	1750	40	.5	
BIGB	02	1827	1828	1832	N22	W78	.990		24.9	5	SN	2	C	1828	30		
BIGB	02	1850	1852	1905	N22	E85	.999		9.2	15	SN	2	C	1852	60		A
BIGB	02	1938	1940	1953	N22	E89	1.000		9.5	15	SN	2	C	1940	20		
BIGB	02	1944	1945	1959	N12	E62	.903		7.5	15	SF	2	C	1945	60	1.3	
BIGB	02	2031	2034	2053	S17	W40	.646		27.9	22	SF	2	C	2034	40	.5	
BIGB	02	2139	2145	2220	S26	W56	.833		26.7	41	SN	2	C	2145	60	1.1	
BIGB	02	2146	2147	2155	S13	W40	.640		27.9	9	SF	2	C	2147	30	.4	
BIGB	02	2159	2204	2246D	N14	E55	.853		7.0	47D	1B	2	P	2204	170	3.0	
ATHN	03	0834	0837	0850D	S23	W40	.663		28.4	16D	SB	3	C		111		FDE
RAMY	03	1236	1238	1241	N19	E83	.997		9.8	5	SF	3	C		11		DE
RAMY	03	1259	1304	1314	S25	W46	.735		28.1	15	SF	3	C		17		DE
RAMY	03	1401	1403	1417	N13	E 7	.365		4.1	16	SF	3	C		25		FDE
BIGB	03	1810	1812	1825	N15	E90	1.001		10.5	15	SN	1	C	1812	20		
BIGB	03	1828	1831	1839	N22	E72	.972		9.2	11	SN	1	C	1831	10		
PALE	04	0208	0211	0212	N13	W74	.971		26.5	4	SF	3	C		12		F
ISTA	04	0834	0835	0842	N18	E85	.999		10.7	8	SF						E
RAMY	04	1242E	1253	1328	S27	W71	.939		27.2	46D	SN	3	C		0		
RAMY	04	1332	1334	1346	S27	W71	.939		27.2	14	SF	3	C		17		
RAMY	04	1338	1340	1346	N11	E20	.454		6.1	8	SF	3	C		39		
RAMY	04	1423	1426	1438	N20	E66	.942		9.5	15	SB	3	C		29		
RAMY	04	1425E		1458	S27	W71	.939		27.3	33D	SB	3	C		0		FDE
RAMY	04	1510	1512	1545	S27	W71	.939		27.3	35	SF	3	C		0		
BIGB	04	1554	1607	1747	N14	E76	.979		10.4	113	SB	2	C	1607	150		A
BIGB	04	1640	1646	1715	S23	W88	.997		26.1	35	SB	2	C	1646	70		A
BIGB	04	1911	1913	1926	N24	E60	.916		9.3	15	SF	2	C	1913	50	1.0	
RAMY	04	1913	1913	1920	N27	E56	.899		9.0	7	SN	3	C		23		
PALE	04	1928E	1929U	2015D	N17	E71	.962		10.1	47D	SF	2	C		43		
BIGB	04	2103	2113	2135	N24	E62	.927		9.5	32	SB	1	C	2113	40	.9	
RAMY	04	2104	2105	2125D	N27	E60	.923		9.4	21D	SB	3	C		35		
HOLL	04	2104	2105U	2108D	N27	E55	.893		9.0	4D	SN	2	C		44		
PALE	04	2106E	2111	2130D	N25	E59	.912		9.3	24D	SN	3	C		67		F
BIGB	04	2114	2129	2151D	S36	E75	.959		10.5	37D	SF	1	P	2129	80		G
HOLL	04	2127	2131	2135	N18	E68	.949		10.0	8	SF	2	C		25		

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OBSERVATORY	OBSERVED UT				LOCATION				CMP. DAY	DURATION — MIN.	IMPORTANCE	OBS.		MEASUREMENTS			REMARKS
	DAY	START	MAX. PHASE	END	APPROX. LAT.	APPROX. MER. DIST.	CENTRAL DISTANCE	HALE PLAGE REGION				COND.	TYPE	TIME — UT	MEAS. AREA Mill. of Disk	CORR. AREA Sq. Deg.	
HOLL	04	2130	2141	2143	S31	E71	.940		10.2	13	SF	2	C		0		
HOLL	04	2151	2154	2235	N18	E67	.944		9.9	44	SN	2	C		24		F
PALE	04	2202	2202U	2216D	N26	E58	.909		9.3	14D	SN	3	C		78		F
PALE	04	2237	2253U	2309D	N17	E69	.953		10.1	32D	SF	3	C		56		F
PALE	04	2315	2325	2327D	N17	E69	.953		10.1	12D	1N	3	C		157		F
PALE	05	0202	0205	0255	N15	E63	.915		9.8	53	SN	3	C		64		DE H
PALE	05	0235	0238	0240	S25	W67	.914		28.1	5	SF	3	C		26		
PALE	05	0257	0321	0321D	N17	E65	.931		10.0	24D	1N	3	C		126		DE
PALE	05	0313	0319	0321D	S25	W68	.921		28.0	8D	SF	3	C		23		
HOLL	05	1410E	1421	1452	S28	W86	.993		27.1	42D	1B	3	C		0		
HOLL	05	1607	1609	1612	N27	E44	.816		9.0	5	SF	3	C		30		
HOLL	05	1619	1629	1706D	N18	E57	.880		10.0	47D	SF	3	C		37		
HOLL	05	1657	1701	1706D	N27	E44	.816		9.0	9D	SF	3	C		31		
HOLL	05	1739	1739	1746	N26	E47	.833		9.3	7	SN	3	C		29		
HOLL	05	1840	1844	1905	S29	W86	.993		27.3	25	SF	3	C		0		
HOLL	05	1842	1913	1919	N17	E56	.870		10.0	37	SN	3	C		36		
BIGB	05	2020	2023	2048	N14	E60	.893		10.3	28	SB	2	C	2023	60	1.2	
HOLL	05	2021	2022	2039	N15	E56	.864		10.0	18	SB	3	C		39		DE
HOLL	05	2024	2027	2034	S30	W86	.992		27.4	10	SN	3	C		0		
BIGB	05	2024	2026	2054	S24	W80	.978		27.9	30	SB	1	C	2026	60		
HOLL	05	2041	2103	2113	S15	E38	.616		8.7	32	SF	3	C		40		
HOLL	05	2043	2057	2118	N17	E55	.862		10.0	35	SN	3	C		31		
BIGB	05	2048	2054	2107	S36	E67	.922		10.9	19	SN	1	C	2054	110		
BIGB	05	2053	2057	2126	N15	E56	.864		10.1	33	SN	1	C	2057	40	.7	
PALE	05	2055	2058	2108	N16	E53	.842		9.8	13	SF	3	C		33		F
PALE	05	2057	2107	2109	S16	E39	.631		8.8	12	SF	3	C		23		F
PALE	05	2119	2124	2128	N25	E42	.789		9.0	9	SF	3	C		28		F
PALE	05	2119	2120	2129	N16	E52	.834		9.8	10	SF	3	C		39		F
PALE	05	2141E	2205U	2216	N25	E42	.789		9.1	35D	SF	3	C		24		DE
PALE	05	2141E	2217U	2248	N16	E52	.834		9.8	67D	SF	3	C		55		DE
PALE	05	2154	2159	2217	S25	W78	.971		28.1	23	SF	3	C		15		
HOLL	05	2157	2209	2216	S28	W87	.994		27.4	19	SN	3	C		0		
HOLL	05	2203	2209	2246	N18	E53	.849		9.9	43	SN	3	C		66		
BIGB	05	2205	2212	2244	N15	E55	.856		10.0	39	SN	1	C	2212	80	1.4	
HOLL	05	2209	2212	2233	S32	E61	.880		10.5	24	SN	3	C		52		
BIGB	05	2211	2213	2235	S36	E64	.905		10.7	24	SN	1	C	2213	70	1.6	
PALE	05	2216E	2217U	2238	S33	E63	.895		10.7	22D	SF	3	C		22		DE
PALE	05	2218E	2237U	2306	N25	E41	.780		9.0	48D	SF	3	C		39		DE
BIGB	05	2226	2231	2246	N25	E45	.813		9.3	20	SB	1	C	2231	50	.7	
HOLL	05	2227	2232	2310	N25	E43	.797		9.2	43	SN	3	C		72		
HOLL	05	2349	2351	0000	N26	E40	.778		9.0	11	SN	3	C		31		
ISTA	06	0625E	0631U	0703	N25	E41	.780		9.3	38D	2B						BF
ISTA	06	0700	0710	0728	N14	E42	.729		9.4	28	2B						F
ISTA	06	0743	0748	0825	N25	E39	.764		9.2	42	2B						F
RAMY	06	1401	1402	1411	S23	W48	.751		3.0	10	SN	3	C		19		
RAMY	06	1408	1409	1423	N27	E33	.729		9.1	15	SN	3	C		38		
RAMY	06	1417	1425	1438	S23	W48	.751		3.0	21	SF	3	C		15		
WEND	06	1428E		1443	N25	E34	.722		9.2	15D	SN		V				
WEND	06	1428E		1440	N14	E49	.799		10.3	12D	SF		V				
WEND	06	1454	1500	1506	N14	E49	.799		10.3	12	SN		V				
BIGB	06	1458	1501	1511	N13	E49	.796		10.3	13	SN	1	C	1501	70	1.1	
HOLL	06	1458	1500	1507	N15	E50	.812		10.4	9	SN	3	C		29		
HUAN	06	1500E		1510	N14	E50	.809		10.4	10D	SN	1	P	1502	40	.6	
HUAN	06	1512		1518	N16	E47	.788		10.2	6	SF	1	C				
HUAN	06	1529E		1533D	N18	E53	.849		10.6	4D	SF	1	P	1532	25	.4	
BIGB	06	1754	1755	1826	N25	E35	.730		9.4	32	SN	2	C	1755	50	.6	
HOLL	06	1754	1755	1804	N28	E35	.753		9.4	10	SN	3	C		41		
HUAN	06	1755E		1802	N25	E35	.730		9.4	7D	SN	1	P	1757	40	.5	E
BIGB	06	1859	1900	1911	N13	E49	.796		10.5	12	SF	2	C	1900	20	.3	
BIGB	06	1955	1959	2008	N09	E64	.912		11.6	13	SN	2	C	1959	30	.7	
HUAN	06	1957		2002	N25	E35	.730		9.5	5	SN	1	C	1959	65	.8	E
BIGB	06	1958	1959	2014	N24	E36	.732		9.5	16	SN	2	C	1959	30	.4	
HOLL	06	1958	2000	2012	N27	E35	.745		9.5	14	SB	3	C		61		
BIGB	06	1959	2001	2011	S19	W55	.815		2.7	12	SN	2	C	2001	50	.9	
HOLL	06	2000	2001	2006	S18	W50	.764		3.1	6	SN	3	C		24		
HOLL	06	2026	2028	2037	N27	E36	.753		9.6	11	SB	3	C		90		DE
BIGB	06	2030	2033	2045	S19	W55	.815		2.7	15	SN	2	C	2033	50	.9	
HOLL	06	2032	2032	2037	S18	W50	.764		3.1	5	SN	3	C		18		
BIGB	06	2047	2049	2057	N14	E44	.750		10.2	10	SF	2	C	2049	20	.3	
BIGB	06	2142	2143	2153	N14	E44	.750		10.2	11	SF	2	C	2143	50	.7	

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OBSERV-ATORY	OBSERVED UT				LOCATION					DURA-TION	IM POR-TANCE	OBS.		MEASUREMENTS			REMARKS
	DAY	START	MAX. PHASE	END	APPROX. LAT.	APPROX. MER. DIST.	CENTRAL DISTANCE	HALE PLAGE REGION	CMP. DAY	MIN.		COND.	TYPE	TIME UT	MEAS. AREA Mill. of Disk	CORR. AREA Sq. Deg.	
RAMY	07	1148E	1242	1258	S21	W60	.861		3.0	70D	SN	3	C		35		
RAMY	07	1149	1219	1305	N10	W 6	.313		7.0	76	SN	3	C		117		
RAMY	07	1208	1215	1222	N16	E35	.666		10.1	14	SN	3	C		22		
RAMY	07	1227	1228	1251	N11	E56	.854		11.7	24	SF	3	C		20		
RAMY	07	1310	1321	1337	N11	E56	.854		11.7	27	SF	3	C		32		
RAMY	07	1319	1319	1334	N10	W 8	.326		7.0	15	SF	3	C		25		
RAMY	07	1339	1339	1345	N11	W15	.400		6.4	6	SF	3	C		30		
RAMY	07	1354	1354	1403	N11	W 9	.347		6.9	9	SF	3	C		28		
RAMY	07	1405	1408	1424	S21	W63	.885		2.9	19	1B	3	C		187		DE
HOLL	07	1405	1408	1416D	S19	W59	.852		3.2	11D	1B	2	C		117		DE
RAMY	07	1405	1414	1631	N15	E33	.637		10.1	146	1B	3	C		308		U F
HOLL	07	1406E	1413	1416D	N16	E35	.666		10.2	10D	1B	2	C		225		U F
RAMY	07	1414	1417	1449	N25	E21	.618		9.2	35	SB	3	C		50		FDE
RAMY	07	1433	1434	1439	S21	W61	.869		3.0	6	SF	3	C		16		
RAMY	07	1443	1446	1509	N10	W 8	.326		7.0	26	SN	3	C		34		
BIGB	07	1453	1454	1459	N26	E25	.658		9.5	6	SN	1	C	1454	60	.7	
RAMY	07	1525	1525	1542	N11	E53	.827		11.6	17	SF	3	C		25		
BIGB	07	1529	1530	1546	N15	E46	.774		11.1	17	SB	1	C	1530	80	1.2	
RAMY	07	1529	1529	1600	N13	W47	.776		4.1	31	SN	3	C		57		
BIGB	07	1614	1615	1630	N26	E25	.658		9.6	16	SN	1	C	1615	80	.9	
HOLL	07	1615	1619	1628	N27	E25	.668		9.6	13	SN	3	C		89		DE
BIGB	07	1656	1657	1702	S19	W67	.913		2.7	6	SN	1	C	1657	60		
HOLL	07	1656	1658	1702	S21	W63	.885		3.0	6	SN	3	C		25		
RAMY	07	1656	1656	1702	S20	W63	.885		3.0	6	SN	3	C		28		
RAMY	07	1715	1715	1735	N13	W18	.454		6.4	20	SN	3	C		58		DE
HOLL	07	1715	1715	1729	N14	W18	.466		6.4	14	SN	3	C		54		
HOLL	07	1731	1731	1740	N23	E14	.548		8.8	9	SN	3	C		49		
HOLL	07	1843	1843	1852	N27	E17	.616		9.1	9	SF	3	C		20		
HOLL	07	2058	2059	2111	S20	W66	.906		2.9	13	SN	3	C		11		
RAMY	07	2058	2108	2111	S23	W65	.900		3.0	13	SF	3	C		14		DE
HOLL	07	2116	2122	2136	S19	W65	.899		3.0	20	SB	3	C		38		
RAMY	07	2118	2122	0000D	S20	W65	.899		3.0	162D	SN	3	C		44		DE
BIGB	07	2134	2136	2143	N26	E21	.629		9.5	9	SN	2	C	2136	20	.2	
BIGB	07	2230	2232	2237	N29	E90	1.002		14.7	7	SN	2	C	2232	30		
HOLL	07	2251	2252	2328	S19	W66	.906		3.0	37	SB	3	C		92		
BIGB	07	2251	2254	2311	S18	W70	.932		2.7	20	SB	3	C	2254	70		
BIGB	08	0036	0039	0044D	S18	W70	.932		2.8	8D	SB	3	P	0039	60		
BUCA	08	0815		0825	S23	W70	.932		3.1	10	SF		C	0819	32		D
BUCA	08	0826		0829	S25	W69	.927		3.2	3	SF		C	0826	32		D
RAMY	08	1200E	1209	1217	S20	W69	.926		3.3	17D	SF	3	C		0		
RAMY	08	1201	1206	1208	S30	W56	.839		4.3	7	SF	3	C		14		
RAMY	08	1207	1209	1212	N29	E85	.007		15.6	5	SF	3	C		0		
HOLL	08	1421	1422	1438	S20	W73	.949		3.1	17	SN	3	C		0		
RAMY	08	1509	1510	1514	N24	E85	1.000		15.0	5	SF	3	C		0		
HOLL	08	1509	1509	1538	N22	E85	.999		15.0	29	SF	3	C		0		
HOLL	08	1535	1536	1545	S21	W75	.959		3.0	10	SN	3	C		0		
RAMY	08	1535	1537	1540	S21	W68	.920		3.5	5	SN	3	C		11		
HOLL	08	1637	1648	1704	S21	W74	.954		3.1	27	1N	3	C		0		
RAMY	08	1638	1645	1705	S21	W71	.938		3.4	27	SN	3	C		0		
BIGB	08	1641	1647	1704	S19	W85	.992		2.3	23	SB	3	C	1647	70		A
BIGB	08	1657	1700	1720	N27	E90	1.002		15.5	23	SN	3	C	1700	20		
RAMY	08	1705	1706	1738	N14	W25	.540		6.8	33	SN	3	C		100		F
HOLL	08	1705	1708	1738	N13	W26	.542		6.8	33	SN	3	C		184		
BIGB	08	1705	1708	1730	N14	W26	.551		6.8	25	SN	3	C	1708	100	1.1	
BIGB	08	1719	1723	1730	N19	E80	.993		14.7	11	SN	3	C	1723	50		A
RAMY	08	1721	1723	1730	N21	E90	1.001		15.5	9	SF	3	C		0		
BIGB	08	1852	1857	1903	S18	W85	.993		2.4	11	SB	3	C	1857	30		A
RAMY	08	1853	1857	1904D	S19	W68	.920		3.7	11D	SN	3	C		0		
HOLL	08	1933	1937	2000	S23	W77	.967		3.0	27	1B	3	C		0		
BIGB	08	1935	1937	1952	S19	E85	.992		15.2	17	SB	3	C	1937	70		A
BIGB	08	1954	2001	2006	N25	E90	1.001		15.6	12	SB	3	C	2001	60		
BIGB	08	2048	2049	2052	S18	E87	.996		15.4	4	SB	3	C	2049	20		A
BIGB	08	2310	2314	2319	S17	E90	.999		15.7	9	SN	3	C	2314	20		
BUCA	09	0703		0754	N16	E09	.421		10.0	51	1F		C	0708	322	3.4	
RAMY	09	1141	1144	1155	S12	W57	.832		5.2	14	SN	3	C		27		
RAMY	09	1408	1409	1414	N32	E76	.991		15.3	6	SN	3	C		0		
HOLL	09	1424	1424	1440	S11	W67	.915		4.6	16	SN	2	C		40		
RAMY	09	1431	1435	1455	S13	W10	.198		8.9	24	SN	3	C		30		F
HOLL	09	1453	1455	1458	N10	W47	.765		6.1	5	SF	3	C		24		
RAMY	09	1453	1455	1505	N18	W 0	.426		9.6	12	SF	3	C		40		

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OBSERV-ATORY	OBSERVED UT				LOCATION				CMP. DAY	DURATION MIN.	IMPORTANCE	OBS.		MEASUREMENTS			REMARKS
	DAY	START	MAX. PHASE	END	APPROX. LAT.	APPROX. MER. DIST.	CENTRAL DISTANCE	HALE PLAGE REGION				COND.	TYPE	TIME UT	MEAS. AREA Mill. of Disk	CORR. AREA Sq. Deg.	
HOLL	09	1547	1551	1553	S11	W62	.877		5.0	6	SF	3	C		21		
BIGB	09	1646	1648	1658	N14	E83	.996		15.9	12	SB	1	C	1648	40		
RAMY	09	1646	1649	1705	N11	W78	.984		3.8	19	SF	3	C		49		
HOLL	09	1648	1656	1711	S11	W63	.885		5.0	23	SF	3	C		18		
RAMY	09	1706	1709	1715	N11	E27	.537		11.7	9	SF	3	C		25		
BIGB	09	1828	1831	1835	S11	W65	.900		4.9	7	SN	3	C	1831	60		
HOLL	09	1929	1931	1939	N17	E 4	.416		10.1	10	SN	3	C		34		
BIGB	09	2007	2010	2020	N13	W41	.713		6.8	13	SN	2	C	2010	20	.3	
BIGB	09	2120	2121	2132	N27	E75	.985		15.5	12	SN	2	C	2121	20		
BIGB	09	2122	2126	2206	N15	E05	.387		10.3	44	SB	2	C	2126	50	.5	
HOLL	09	2122	2124	2204	N17	E 3	.413		10.1	42	SN	3	C		170		
BIGB	09	2148	2151	2157	N28	E77	.990		15.7	9	SN	3	C	2151	30		
BIGB	09	2317	2318	2324	S10	W70	.934		4.7	7	SN	3	C	2318	40		
BIGB	09	2344	2345	2351	N13	E90	1.000		16.7	7	SF	3	C	2345	40		
WEND	10	1007		1024	N28	E68	.963		15.5	17	SF		V		70		
RAMY	10	1154	1154	1208	N27	W20	.634		9.0	14	SN	3	C		26		F
HOLL	10	1503	1504	1514	N15	W 6	.391		10.2	11	SF	3	C		72		
RAMY	10	1504	1504	1517	N15	W 7	.396		10.1	13	SN	3	C		120		F
RAMY	10	1531	1531	1543	S15	W26	.448		8.7	12	SF	3	C		22		
HOLL	10	1540	1545	1604	N29	E57	.911		14.9	24	SF	3	C		57		
RAMY	10	1540	1540	1601	N30	E64	.950		15.5	21	SN	3	C		25		
BIGB	10	1540	1542	1556	N27	E68	.962		15.8	16	SN	3	C	1542	40		
RAMY	10	1552	1553	1601	S14	W27	.460		8.6	9	SF	3	C		30		
HOLL	10	1703	1704	1714	N11	E13	.380		11.7	11	SF	3	C		25		
HOLL	10	1722	1724	1732	N19	W 4	.447		10.4	10	SN	3	C		93		
HOLL	10	1737	1745	1748	N30	E65	.954		15.6	11	SF	3	C		30		
BIGB	10	1905	1906	1919	N10	E13	.367		11.8	14	SF	3	C	1906	30	.3	
HOLL	10	1913	1944U	2011	N32	E63	.949		15.5	58	SN	3	C		43		
HOLL	10	2035	2045	2108	N16	W 8	.416		10.3	33	SF	3	C		36		
HOLL	10	2120	2120	2133	S16	W28	.481		8.8	13	SF	3	C		20		
HOLL	10	2259	2308	2359	N16	W13	.447		10.0	60	SN	3	C		86		F
HOLL	10	2323	2325	2354	S12	W33	.543		8.5	31	SF	3	C		25		
HOLL	10	2333	2334	2343	N11	E10	.355		11.7	10	SN	3	C		36		
HOLL	10	2348	2348	2355	N10	E10	.341		11.7	7	SN	3	C		52		
HOLL	11	0001	0001	0011	N11	W56	.854		6.8	10	SN	2	C		22		
MANI	11	0008E	0010	0020D	N15	W13	.434		10.0	12D	SF	3	C		25		
HOLL	11	0008	0015	0016D	N15	W14	.442		10.0	8D	SF	2	C		31		
MANI	11	0105E	0106	0115D	N26	W26	.666		9.1	10D	SF	3	C		15		
ATHN	11	0651	0653	0725	N11	E02	.315		11.4	34	SN	1		0653	147	1.4	
WEND	11	0655E		0726	N13	W03	.349		11.1	31D	1N		V		250	2.7	B
WEND	11	0712		0723	N27	W33	.729		8.8	11	SF		V				D
WEND	11	1146E		1203	N14	W04	.368		11.2	17D	SN		V		150	1.6	
RAMY	11	1146	1146	1220	N12	W 3	.333		11.3	34	SN	3	C		81		
WEND	11	1155	1207	1226	N09	E64	.912		16.3	31	1N		V		100	2.4	
RAMY	11	1258	1258	1304	S14	W39	.628		8.6	6	SN	3	C		21		
WEND	11	1302		1338	N16	W16	.471		10.3	36	1N		V		450	5.0	FL
RAMY	11	1302	1310	1402	N15	W15	.450		10.4	60	1N	3	C		268		F
HOLL	11	1336	1346	1356	N14	W17	.456		10.3	20	SF	3	C		27		
RAMY	11	1356	1357	1401	S32	E39	.693		14.5	5	SF	3	C		16		
RAMY	11	1419	1422	1455	N29	E48	.854		15.2	36	SN	3	C		44		F
HOLL	11	1421	1421	1432	N31	E52	.889		15.5	11	SN	3	C		16		
BIGB	11	1515	1517	1530	N31	W57	.917		7.4	15	SN	1	C	1517	30	.6	G
RAMY	11	1547	1550	1625	N12	E 1	.330		11.7	38	SF	3	C		101		
HOLL	11	1836	1839	1918	N11	W 4	.320		11.5	42	SN	3	C		106		F
HOLL	11	2000	2003	2018	N11	E60	.886		16.3	18	SN	3	C		29		
RAMY	11	2043	2045	2057	N29	E46	.841		15.3	14	SN	3	C		34		
RAMY	11	2050	2100	2117	N21	W41	.757		8.8	27	SN	3	C		59		
RAMY	11	2058	2058	2118	N29	E45	.834		15.2	20	SN	3	C		377		
HOLL	11	2123	2157	2231	N10	E57	.860		16.2	68	SN	3	C		58		F
HOLL	11	2202	2209	2231	N30	E46	.846		15.4	29	SN	3	C		42		
HOLL	11	2253	2300	2348	S15	W45	.704		8.6	55	SB	3	C		71		U
HOLL	11	2259	2328	0009D	N14	W 7	.380		11.4	70D	1B	3	C		345		U
WEND	12	0744		0758	S35	E29	.622		14.5	14	SN		V				
WEND	12	1042E		1109	N28	E30	.715		14.7	27D	1N		V	1046	180	2.4	
RAMY	12	1206	1208	1219	N10	W 6	.313		12.1	13	SB	3	C		100		
WEND	12	1210		1219	N11	W04	.320		12.2	9	SF		V				
RAMY	12	1331	1334	1355	N16	W35	.665		9.9	24	SF	3	C		41		
RAMY	12	1627	1641	1648	N17	W33	.651		10.2	21	SB	3	C		21		
BIGB	12	1827	1832	1905	S14	W56	.823		8.6	38	SN	3	C	1832	80	1.5	

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OBSERV-ATORY	OBSERVED UT				LOCATION				CMP. DAY	DURATION — MIN.	IMPORTANCE	OBS.		MEASUREMENTS			REMARKS
	DAY	START	MAX. PHASE	END	APPROX. LAT.	APPROX. MER. DIST.	CENTRAL DISTANCE	HALE PLAGE REGION				CONF.	TYPE	TIME — UT	MEAS. AREA Mill. of Disk	CORR. AREA Sq. Deg.	
HUAN	12	1827		1846D	S16	W55	.813		8.6	19D	SN	1	P	1831	35		E
BIGB	12	1936	1938	2026	N31	E51	.882		16.6	50	SN	3	C	1938	110	1.8	G
PALE	12	1951	1951	2003D	N34	E59	.936		17.3	12D	SF	3	C		36		DE
PALE	12	2035	2055U	2057D	N27	E32	.721		15.3	22D	SF	2	C		91		F
BIGB	12	2037	2102	2210	N27	E34	.737		15.4	93	SB	3	C	2102	130	1.6	
BIGB	12	2126	2143	2231	N08	E60	.881		17.4	65	SN	3	C	2143	90	1.8	
BIGB	12	2300	2328	2359D	N15	W05	.387		12.6	59D	SN	3	P	2328	110	1.1	
MANI	12	2330E	2330U	0020D	N15	W31	.615		10.7	50D	SF	2	C		60		
ATHN	13	0855E	0855	0900D	N17	W37	.693		10.6	5D	SN	1		0855	125	1.3	
ISTA	13	0856	0857	0900	N11	W15	.399		12.2	4	SN						D
RAMY	13	1122	1123	1141	N15	W41	.723		10.4	19	SF	3	C		23		
RAMY	13	1150	1207	1351	N15	W42	.733		10.3	121	SN	3	C		67		
RAMY	13	1200	1200	1227	S22	W88	.997		6.9	27	SF	3	C		0		
RAMY	13	1238	1318	1321D	S17	W69	.926		8.4	43D	SB	3	C		0		FDE
RAMY	13	1247	1248	1300	S32	E13	.463		14.5	13	SN	3	C		21		
RAMY	13	1317	1317	1353	N31	E46	.850		17.0	36	SF	3	C		30		
RAMY	13	1332	1339	1422	N28	E22	.658		15.2	50	SB	3	C		86		FDE
RAMY	13	1352	1442	1711	N14	W41	.718		10.5	199	SB	3	C		85		
HOLL	13	1411E	1500	1623	N13	W48	.786		10.0	132D	SN	2	C		151		F
RAMY	13	1443	1444	1504	S15	W72	.944		8.2	21	SF	3	C		0		
HUAN	13	1450		1535	N15	W49	.803		9.9	45	SF	1	C	1456	20	.3	D
HOLL	13	1451	1453	1500	S17	W69	.926		8.4	9	SF	2	C		19		
BIGB	13	1452	1502	1558	N16	W50	.816		9.9	66	SB	2	C	1502	50	.8	
HOLL	13	1631	1643	1649	N12	W41	.708		10.6	18	SN	3	C		32		F
BIGB	13	1634	1635	1647	N27	E30	.705		15.9	13	SN	2	C	1635	30	.4	
HOLL	13	1635	1636	1643	N29	E28	.709		15.8	8	SB	3	C		37		
RAMY	13	1635	1636	1650	N29	E21	.662		15.3	15	SN	3	C		39		
HOLL	13	1704	1714	1828	S17	W69	.926		8.5	84	SN	3	C		0		
HUAN	13	1705		1709	N14	W41	.718		10.6	4	SF	1	C				
BIGB	13	1706	1707	1712	N16	W42	.739		10.6	6	SF	2	C	1707	30	.4	
BIGB	13	1710	1716	1724	S15	W70	.933		8.5	14	SN	2	C	1716	60		
HOLL	13	1713	1730	1735	N14	W40	.707		10.7	22	SN	3	C		36		
HUAN	13	1717		1723	N13	W43	.734		10.5	6	SF	1	C				
PALE	13	1729E	1729U	1732	N14	W49	.799		10.1	3D	SF	3	C		21		DE
HOLL	13	1736	1736	1750	N12	W42	.719		10.6	14	SN	3	C		23		F
RAMY	13	1752	1752	1809	N13	W44	.745		10.4	17	SN	3	C		24		
PALE	13	1820	1835	1837	N14	W49	.799		10.1	17	SN	3	C		108		F
RAMY	13	1821	1835	1853	N13	W44	.745		10.5	32	SN	3	C		122		
HOLL	13	1823	1824	1829	N12	W49	.792		10.1	6	SN	3	C		21		
RAMY	13	1938	1939	1942	S17	W71	.938		8.5	4	SF	3	C		16		
PALE	13	1958E	1958U	2003D	S15	W76	.964		8.1	5D	SF	3	C		0		F
HOLL	13	2000	2004	2015	N29	E27	.702		15.9	15	SB	3	C		77		
BIGB	13	2001E	2003U	2016	N28	W28	.700		11.7	15D	SN	1	P	2003	1 60	.7	
BIGB	13	2002	2004	2038	S14	W75	.960		8.2	36	SN	1	C	2004	80		
RAMY	13	2005	2008	2020	N28	E25	.678		15.7	15	SB	3	C		29		
PALE	13	2026E	2026U	2027	N14	W50	.809		10.1	1D	SF	3	C		26		F
BIGB	13	2227	2233	2300	S13	W75	.960		8.3	33	SN	1	C	2233	90		
MANI	14	0120	0128	0151D	N13	W48	.786		10.5	31D	SN	3	C		150		F
ISTA	14	0630E		0800	N26	E86	1.000		20.7	90D	1N						BF
ISTA	14	0651	0653	0704	N28	E20	.645		15.8	13	SB						UV
ATHN	14	0656	0659	0712	N27	E19	.627		15.7	16	SB	3	C		32		DE
ISTA	14	0656	0659	0715	N14	W49	.799		10.6	19	1B						UV
ATHN	14	0658	0700	0719	N13	W51	.814		10.5	21	SB	1		0700	114	1.7	
RAMY	14	1115	1218	1324	N30	E33	.753		16.9	129	SB	3	C		68		
RAMY	14	1146	1150	1220	N26	E72	.975		19.9	34	1F	3	C		111		
RAMY	14	1150	1153	1204	S17	W80	.980		8.5	14	SF	3	C		23		
RAMY	14	1201	1203	1231	N13	W55	.850		10.4	30	SB	3	C		50		
RAMY	14	1211	1213	1228	S17	W80	.980		8.5	17	SF	3	C		11		
RAMY	14	1246	1250	1328	N13	W61	.898		10.0	42	SN	3	C		16		
HUAN	14	1254	1304	1312	N32	E42	.829		17.7	18	SN	1	C	1304	35	.5	
HUAN	14	1314	1316	1324	N25	E87	1.000		21.1	10	SN	1	C	1316	45		E
RAMY	14	1314	1315	1328	N26	E71	.972		19.9	14	SB	3	C		42		Y
ATHN	14	1314	1318	1327	N24	E75	.983		20.2	13	SB	3	C		64		F
RAMY	14	1412	1414	1420	N12	W56	.856		10.4	8	SN	3	C		28		
RAMY	14	1414	1418	1430	S 6	W81	.986		8.5	16	1N	3	C		94		
RAMY	14	1416	1418	1430	S17	W81	.983		8.5	14	SF	3	C		50		
BIGB	14	1510	1537	1604	N25	E85	1.000		21.0	54	SN	1	C	1537	90		A
HUAN	14	1534		1538D	N33	E31	.764		17.0	4D	SF	1	P				D
HOLL	14	1536	1554U	1611D	N33	E38	.809		17.5	35D	SN	2	C		144		F
HUAN	14	1537		1538D	N25	E87	1.000		21.2	1D	SF	1	P				

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OBSERV-ATORY	OBSERVED UT				LOCATION					DURA-TION	IM POR-TANCE	OBS.		MEASUREMENTS			REMARKS
	DAY	START	MAX. PHASE	END	APPROX. LAT.	APPROX. MER. DIST.	CENTRAL DISTANCE	HALE PLAGE REGION	CMP. DAY	MIN.		COND.	TYPE	TIME UT	MEAS. AREA Mill. of Disk	CORR. AREA Sq. Deg.	
RAMY	14	1537	1541	1545	N26	E74	.982		20.2	8	SF	3	C		0		Y
HOLL	14	1537	1538	1544	N27	E76	.988		20.4	7	SF	2	C		38		
RAMY	14	1553	1555	1601	N31	E32	.754		17.1	8	SN	3	C		55		
BIGB	14	1553	1554	1604	N31	E40	.810		17.7	11	SN	2	C	1554	40	.5	
BIGB	14	1626	1627	1629	N31	E40	.810		17.7	3	SF	2	C	1627	20	.3	
RAMY	14	1628	1628	1648	N31	E33	.761		17.2	20	SN	3	C		28		F
BIGB	14	1710	1711	1717	N24	E85	1.000		21.1	7	SB	2	C	1711	30		
RAMY	14	1720	1721	1735	N32	E36	.789		17.4	15	SB	3	C		95		FDE
BIGB	14	1720	1721	1731	N31	E39	.803		17.6	11	SN	2	C	1721	30	.4	
PALE	14	1720E	1720	1735	N31	E35	.775		17.3	15D	SN	3	C		101		FDE
HOLL	14	1722E	1726U	1731D	N32	E36	.789		17.4	9D	SB	2	C		93		DE
PALE	14	1758	1801	1830	N26	E79	.993		20.7	32	SN	3	C		0		FDE
BIGB	14	1758	1801	1807	N25	E85	1.000		21.1	9	SN	2	C	1801	70		
HOLL	14	1758	1802	1822	N28	E75	.986		20.4	24	SB	3	C		0		
HOLL	14	1801	1803	1817	N28	E 9	.591		15.4	16	SN	3	C		64		U
HOLL	14	1825	1829	1833	N30	E76	.989		20.5	8	SF	3	C		0		
BIGB	14	1848	1853	1909	N23	W55	.880		10.7	21	SN	2	C	1853	60	1.1	
PALE	14	1919	1924	1933	N26	E80	.995		20.8	14	SF	3	C		0		DE
BIGB	14	1919	1924	1945	N25	E80	.995		20.8	26	SN	2	C	1924	60		
HOLL	14	1920	1922	1939	N28	E76	.988		20.5	19	SN	3	C		0		
HOLL	14	1945	1945	1954	N15	W61	.902		10.2	9	SN	3	C		33		
BIGB	14	1945	1946	1953	N16	W64	.924		10.0	8	SN	2	C	1946	30	.7	
HOLL	14	1948	1950	2001	N29	E76	.989		20.5	13	SN	3	C		0		
BIGB	14	2014	2018	2032	N25	E80	.995		20.8	18	SN	2	C	2018	20		
BIGB	14	2124	2125	2130	N25	E80	.995		20.9	6	SF	2	C	2125	20		
BIGB	14	2140	2146	2227	N25	E80	.995		20.9	47	SN	2	C	2146	30		
PALE	14	2146E	2147U	2152	N26	E78	.991		20.8	6D	SF	3	C		0		DE
BIGB	14	2259	2300	2307	N25	E80	.995		21.0	8	SN	2	C	2300	30		
BIGB	14	2309	2345	0011	N24	E80	.994		21.0	62	SB	2	C	2345	30		
BIGB	14	2323	2327	2333	N30	E15	.641		16.1	10	SN	2	C	2327	30	.3	
MANI	14	2323E	2325U	2336	N28	E12	.603		15.9	13D	SF	2	C		50		
HOLL	14	2323	2328	2335	N32	E12	.654		15.9	12	SB	3	C		69		DE H
PALE	14	2324E	2328U	2334D	N30	E14	.637		16.0	10D	SN	3	C		80		
BIGB	15	0012	0017	0034D	N25	E78	.991		20.9	22D	SN	2	P	0017	40		
BIGB	15	0014	0016	0024	S28	E07	.372		15.5	10	SF	2	C	0016	90	.9	
MANI	15	0624E	0625	0638D	N29	E 8	.602		15.9	14D	SF	3	C		25		
ISTA	15	0625E		0647	N28	E03	.578		15.5	22D	SN						D
ISTA	15	0625E		0738	S15	W90	.999		8.5	73D	1N						A
ISTA	15	0639		0645	N26	E65	.947		20.2	6	SF						D
ISTA	15	0734		0740	N27	E01	.562		15.4	6	SF						E
RAMY	15	1219	1227	1302	N31	E24	.702		17.3	43	SN	3	C		45		
RAMY	15	1343	1347	1402	N32	E22	.700		17.2	19	SF	3	C		36		
RAMY	15	1409	1429	1544	N28	E64	.946		20.4	95	SN	3	C		35		
BIGB	15	1451	1458	1502	N31	E05	.622		16.0	11	SN	2	C	1458	50	.5	
RAMY	15	1452	1452	1505	N31	E 3	.619		15.8	13	SB	3	C		29		
HOLL	15	1452	1453	1505	N31	E 3	.619		15.8	13	SB	3	C		55		
BIGB	15	1551	1552	1557	N26	W85	1.000		9.3	6	SN	2	C	1552	20		
RAMY	15	1556	1611	1620D	N28	E63	.941		20.4	24D	SN	3	C		21		
BIGB	15	1613	1616	1704	N26	E67	.956		20.7	51	SN	2	C	1616	40		
BIGB	15	1751	1754	1817	N27	W85	1.000		9.4	26	SB	3	C	1754	40		A
HOLL	15	1847	1908	1920	N33	E18	.690		17.1	33	SB	3	C		93		DE
PALE	15	1900E	1907	1942D	N32	E21	.695		17.4	42D	SN	3	C		90		F
BIGB	15	1905	1906	1927	N31	E21	.684		17.4	22	SN	3	C	1906	50	.5	
BIGB	15	1920	1925	1934	N27	W85	1.000		9.4	14	SB	3	C	1925	30		A
BIGB	15	2007	2009	2023	N26	E65	.947		20.7	16	SN	3	C	2009	40		
PALE	15	2027E	2033U	2051D	N28	E62	.936		20.5	24D	SF	3	C		40		F
BIGB	15	2027	2034	2107	N26	E65	.947		20.7	40	SN	3	C	2034	40		
PALE	15	2058E	2058U	2109D	N27	W 5	.567		15.5	11D	SF	3	C		26		DE
PALE	15	2058E	2122	2152D	N32	E19	.684		17.3	54D	SF	3	C		41		F
BIGB	15	2106	2109	2119	N27	W90	1.002		9.1	13	SN	3	C	2109	20		
PALE	15	2145	2159	2200D	N26	E63	.937		20.6	15D	SF	3	C		31		F
BIGB	15	2154	2201	2215	N26	E65	.947		20.8	21	SN	3	C	2201	40		
PALE	15	2236E	2243U	2244	N26	E62	.931		20.6	8D	SF	3	C		13		
PALE	15	2258	2300U	2312	N27	E63	.939		20.7	14	SN	3	C		20		F
BIGB	16	0020	0027	0044D	N23	W67	.951		11.0	24D	SN	1	P	0027	70		
PALE	16	0025	0027	0045	N21	W66	.943		11.1	20	SF	3	C		36		F
PALE	16	0044	0046	0107	N26	E61	.926		20.6	23	SF	3	C		17		F
ISTA	16	0800		0825	N28	W09	.591		15.7	25	SF						D
RAMY	16	1204	1207	1313	N26	W13	.580		15.5	69	1B	3	C		205		FDE
RAMY	16	1419	1424	1437	N28	E51	.870		20.4	18	SN	3	C		30		F

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OBSERV-ATORY	OBSERVED UT				LOCATION					DURA-TION	IM POR-TANCE	OBS.		MEASUREMENTS			REMARKS
	DAY	START	MAX. PHASE	END	APPROX. LAT.	APPROX. MER. DIST.	CENTRAL DISTANCE	HALE PLAGE REGION	CMP. DAY	MIN.		COND.	TYPE	TIME UT	MEAS. AREA Mill. of Disk	CORR. AREA Sq. Deg.	
HOLL	16	1419	1425	1438	N28	E53	.883		20.6	19	SN	3	C		53		
HOLL	16	1448	1455	1601	N16	E 2	.394		16.8	73	SB	3	C		112		UDE
BIGB	16	1451	1458	1544	N17	E02	.410		16.8	53	SN	2	C	1458	110	1.1	
RAMY	16	1452	1458	1553	N17	E 2	.410		16.8	61	1N	3	C		265		U F
HOLL	16	1638	1645	1733	N28	W14	.611		15.6	55	SF	3	C		85		
RAMY	16	1638	1638	1652	N27	W13	.593		15.7	14	SN	3	C		55		F
BIGB	16	1642	1646	1659	N26	E56	.896		20.9	17	SF	2	C	1646	40	.7	
HOLL	16	1643	1650	1706	N29	E52	.881		20.6	23	SN	3	C		33		
HOLL	16	1645	1648	1658	N15	W 3	.380		16.5	13	SF	3	C		28		
HOLL	16	1727	1732	1920	N29	E49	.861		20.4	113	SB	3	C		40		F
HOLL	16	1727	1803	1920	N29	E49	.861		20.4	113	SB	3	C		106		F
PALE	16	1821E	1830	1902	N28	E50	.863		20.5	41D	SN	3	C		30		F
BIGB	16	2002E	2011	2022	N25	E56	.893		21.0	20D	SN	1	P	2011	30	.6	
BIGB	16	2009	2016	2033D	S18	W70	.932		11.6	24D	SN	1	P	2016	40		
PALE	16	2009E	2024U	2032	S11	E81	.984		22.9	23D	SF	3	C		15		
PALE	16	2017	2022	2047	S 6	E26	.436		18.8	30	SF	3	C		32		
PALE	16	2058	2100	2211	S20	W70	.932		11.6	73	SF	3	C		12		
HOLL	16	2239	2239	2317	S 5	E30	.499		19.2	38	SN	3	C		55		F
PALE	16	2319	2321	2325	N27	E48	.845		20.6	6	SF	3	C		76		
PALE	16	2319	2322	2324	N31	E 5	.622		17.3	5	SF	3	C		51		F
PALE	16	2321	2329	2340	S21	W74	.954		11.4	19	SF	3	C		18		
PALE	17	0038	0046	0128	N26	E43	.802		20.3	50	1N	3	C		239		ZDE
PALE	17	0218	0219	0221	N 7	E36	.624		19.8	3	SF	3	C		24		
ATHN	17	0652	0658	0738	N28	E45	.828		20.7	46	1B	4	C		222		DE
KODA	17	0702E	0702	0730	N27	E43	.807		20.5	28D	2N		P	0706	974	10.0	E
RAMY	17	1136	1139	1200	N30	W 1	.604		17.4	24	SB	3	C		79		FDE
ATHN	17	1138E	1141	1215	N31	E 0	.617		17.5	37D	SB	4	C		111		DE
ATHN	17	1144	1149	1152D	N31	E 0	.617		17.5	8D	SB	3	C		95		DE
RAMY	17	1211	1212	1217	N31	W 2	.618		17.4	6	SF	3	C		21		
RAMY	17	1240	1247	1500	N31	W 4	.620		17.2	140	SB	3	C		92		FDE
ATHN	17	1244	1249	1313	N31	E 0	.617		17.5	29	SB	3	C		95		DE
RAMY	17	1329	1329	1337	N28	E39	.783		20.5	8	SN	3	C		21		F
HOLL	17	1407	1411	1424	N30	W 4	.606		17.3	17	SN	3	C		51		F
HOLL	17	1432	1435	1440	N30	W 4	.606		17.3	8	SN	3	C		89		F
RAMY	17	1441	1441	1516	N27	W27	.682		15.6	35	SN	3	C		22		F
RAMY	17	1538	1603	1613	S10	E80	.982		23.7	35	SF	3	C		0		
BIGB	17	1550	1554	1608	S14	E89	.999		24.3	18	SB	2	C	1554	40	1.3	
RAMY	17	1553	1605	1610D	N31	W 6	.623		17.2	17D	1B	3	C		300		FDE
BIGB	17	1600	1604	1642	N31	W01	.618		17.6	42	SN	2	C	1604	130	1.3	
BIGB	17	1614	1617	1621	S13	E89	.999		24.4	7	SN	2	C	1617	30		
BIGB	17	1623	1624	1631	S07	E14	.240		18.7	8	SN	2	C	1624	50	.5	
BIGB	17	1639	1640	1648	S13	E89	.999		24.4	9	SN	2	C	1640	30		A
BIGB	17	1701	1706	1714	S13	E89	.999		24.4	13	SN	2	C	1706	30		A
HOLL	17	1743	1744	1750	N30	W23	.685		16.0	7	SB	3	C		38		
BIGB	17	1743	1744	1751	N31	W21	.683		16.2	8	SN	2	C	1744	10	1.4	
BIGB	17	1752	1753	1808	S13	E89	.999		24.4	16	SB	2	C	1753	30		
BIGB	17	1905	1911	1923	S13	E85	.994		24.2	18	SN	3	C	1911	40		
BIGB	17	1923	1925	1930	N36	W07	.690		17.3	7	SN	3	C	1925	30	.3	
BIGB	17	1930	1931	1939	S13	E85	.994		24.2	9	SB	3	C	1931	20		
HOLL	17	1935	1936	2001	S 5	E17	.293		19.1	26	SF	2	C		50		F
BIGB	17	1936	1938	2010	S07	E17	.290		19.1	34	SF	3	C	1938	60	.6	
RAMY	17	1936	1937	1939D	S 4	E16	.279		19.0	30	SF	3	C		22		
HUAN	17	1952E		2000D	S06	E18	.308		19.2	80	SF	1	P				D
BIGB	17	2009	2012	2016	N32	W25	.717		16.0	7	SF	2	C	2012	50	.6	
HOLL	17	2047	2049	2055	N32	W 6	.637		17.4	8	SF	3	C		25		
HOLL	17	2156	2156	2218	N32	W 7	.639		17.4	22	SB	3	C		23		F
HOLL	17	2234	2234	2248	S16	W 2	.158		17.8	14	SF	2	C		26		
HOLL	17	2242	2242	2258	N28	E37	.767		20.7	16	SF	2	C		24		
HOLL	17	2318	2320	2329	N31	W11	.637		17.1	11	SN	2	C		26		
MANI	18	0028E	0030	0048	N20	E31	.653		20.3	20D	SN	3	V		80	1.0	F
ATHN	18	0906	0915	0955	N25	E28	.671		20.5	49	SB	3	C		143		FDE
KODA	18	0925	0938	0948	N26	E27	.672		20.4	23	2F		P	0934	916	9.4	
ATHN	18	0950E	0953	0959	N31	W11	.637		17.6	9D	SN	1		0953	98	1.1	
ATHN	18	1010	1012	1050	N25	E34	.721		21.0	40	SN	1		1012	98	1.1	
RAMY	18	1304	1306	1320	S16	W23	.410		16.8	16	SF	3	C		34		
RAMY	18	1342	1401	1412	S11	E69	.928		23.7	30	SF	3	C		30		
RAMY	18	1348	1352	1405	N30	W34	.759		16.0	17	SB	3	C		38		
ATHN	18	1350E	1354U	1400D	N28	W33	.736		16.1	10D	SB	2	C		80		DE
HUAN	18	1359		1405	S13	E73	.951		24.1	6	SF	1	C				D
RAMY	18	1412	1622	1641	S11	E67	.915		23.6	149	SN	3	C		19		

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OBSERVATORY	OBSERVED UT				LOCATION					DURATION	IMPORTANCE	OBS.		MEASUREMENTS			REMARKS
	DAY	START	MAX. PHASE	END	APPROX. LAT.	APPROX. MER. DIST.	CENTRAL DISTANCE	HALE PLAGE REGION	CMP. DAY	MIN.		COND.	TYPE	TIME UT	MEAS. AREA Mill. of Disk	CORR. AREA Sq. Deg.	
RAMY	18	1438	1442	1453	N32	W22	.699		17.0	15	SN	3	C		45		F H
HUAN	18	1439E		1440D	N35	W21	.726		17.0	10	SN	1	P				E
RAMY	18	1506	1506	1513	N31	W18	.667		17.3	7	SB	3	C		25		
RAMY	18	1520	1529	1603	N27	W40	.784		15.6	43	SN	3	C		95		
BIGB	18	1744	1746	1751	S14	E66	.907		23.7	7	SB	2	C	1746	50		
RAMY	18	1745	1746	1753	S10	E65	.901		23.6	8	SN	3	C		70		
KODA	19	0419E	0419	0444	N26	E21	.627		20.8	25D	2F		V	0419			E
RAMY	19	1154	1157	1158D	N28	E12	.601		20.4	4D	1B	3	C		380		FDE
WEND	19	1248E		1325	N28	E14	.610		20.6	37D	1N		V	1302	420	5.0	BF
RAMY	19	1316	1316	1325	S17	W23	.415		17.8	9	SF	3	C		20		
HUAN	19	1327E		1338D	N26	E11	.570		20.4	11D	SF	1	P				
WEND	19	1430		1501	N34	W39	.821		16.7	31	1N		V	1448	200	3.2	D
HUAN	19	1431	1440	1507	N34	W40	.828		16.6	36	SN	2	C	1440	50	.7	
RAMY	19	1435	1439	1510	N32	W41	.822		16.5	35	SB	3	C		62		
HUAN	19	1500	1502	1504	N29	E13	.618		20.6	4	SF	1	C	1502	20	.2	D
BIGB	19	1620	1621	1633	N28	E13	.605		20.7	13	SN	2	C	1621	50	.5	
RAMY	19	1621	1621	1633	N26	E10	.566		20.4	12	SB	3	C		63		F
BIGB	19	1752	1753	1758	N33	W34	.782		17.2	6	SN	1	C	1753	40	.5	
BIGB	19	1828	1830	1844	S14	E55	.813		23.9	16	SN	1	C	1830	70	1.3	
PALE	19	1901	1902	1905	N31	W32	.753		17.4	4	SF	3	C		22		DE
RAMY	19	1909	1912	1917	S 7	W13	.223		18.8	8	SF	3	C		23		
PALE	19	1914	1914	1916	S 7	W12	.206		18.9	2	SF	3	C		52		DE
PALE	19	1920	1921	1922	N26	E13	.579		20.8	2	SF	3	C		23		
PALE	19	1920	1923	1925	N30	W30	.731		17.6	5	SF	3	C		20		F
PALE	19	1940	1943	1959	N29	E10	.607		20.6	19	SN	3	C		103		FDE
RAMY	19	1940	1941	1956	N29	E10	.607		20.6	16	SN	3	C		53		
BIGB	19	1946E	1948	2020	N27	E14	.597		20.9	34D	SN	1	P	1948	110	1.2	
PALE	19	2011E	2017	2024	S12	E36	.585		22.5	13D	SF	3	C		25		DE
PALE	19	2011E	2027	2100	N31	W31	.746		17.5	49D	SN	3	C		106		FDE
BIGB	19	2019E	2025	2058	N33	W30	.757		17.6	39D	SN	1	P	2025	70	.8	
HUAN	19	2036E		2041D	N31	W32	.753		17.5	5D	SN	1	P	2037	40	.5	E
PALE	19	2316E	2316U	2339D	N26	E 9	.562		20.6	23D	SN	3	C		150		F
KODA	20	0554E	0557	0628	N26	E03	.547		20.5	34D	2N		P	0600	713	7.4	E
WEND	20	0944		1010D	N27	E01	.560		20.5	26D	SF		V		160	1.9	T
ATHN	20	0950E	0952U	1013	N25	E 9	.548		21.1	23D	SB	3	C		48		DE
WEND	20	1118		1130	N31	W60	.932		16.0	12	1F		V		140	3.4	Z
WEND	20	1151	1155	1248	N27	E01	.560		20.6	57	1N		V	1202	440	5.1	T
RAMY	20	1152	1155	1233	N26	W 1	.546		20.4	41	1B	3	C		210		F
ATHN	20	1153E	1155U	1230	N24	E 8	.530		21.1	37D	SB	3	C		127		F
RAMY	20	1237	1237	1243	N31	W42	.822		17.4	6	SN	3	C		21		
HUAN	20	1356		1358	N24	W01	.516		20.5	2	SF	1	C				
RAMY	20	1424	1425	1428	N24	W63	.932		15.9	4	SN	3	C		24		
HUAN	20	1424	1425	1428	N26	W64	.941		15.8	4	SF	1	C	1425	30		
HUAN	20	1439	1443	1520	N27	W00	.560		20.6	41	SN	2	C	1443	165	1.8	E
HOLL	20	1440	1441U	1503	N26	W 2	.546		20.5	23	SN	1	C		150		F
RAMY	20	1440	1441	1503	N26	W 2	.546		20.5	23	SB	3	C		162		DE
WEND	20	1440	1445	1506	N27	W01	.560		20.5	26	1N		V	1445	300	3.5	T
WEND	20	1518	1525	1558	N27	W02	.561		20.5	40	1N		V	1525	280	3.2	T
RAMY	20	1520	1522	1602	N27	W 2	.561		20.5	42	SB	3	C		173		DE
HUAN	20	1521		1603	N25	W03	.533		20.4	42	SN	1	C	1523	120	1.3	E
HOLL	20	1522	1522	1617	N27	W 2	.561		20.5	55	1N	2	C		211		F
RAMY	20	1546	1546	1553	N27	W66	.953		15.7	7	SN	3	C		13		
RAMY	20	1658	1700	1706	N24	W66	.948		15.8	8	SN	3	C		22		
HOLL	20	1734	1737	1742	S 9	E26	.435		22.7	8	SF	3	C		19		
RAMY	20	1824	1828	1937D	N26	W 4	.549		20.5	73D	2B	3	C		890		ZDE
HOLL	20	1824	1829	1931	N26	W 1	.546		20.7	67	2B	3	C		916		UDE
HOLL	20	2005	2014	2033	N26	W66	.951		15.9	28	SN	3	C		48		
HUAN	20	2011		2025	N29	W65	.952		16.0	14	SF	1	C	2014	40		E
HOLL	20	2013	2036	2155	N26	W 2	.546		20.7	102	SN	3	C		61		
PALE	20	2016E	2019	2033	N30	W66	.958		15.9	17D	SF	3	C		60		DE
RAMY	20	2022E	2022U	2042D	N27	W65	.948		16.0	20D	SF	3	C		11		
PALE	20	2052	2104	2128	N26	W 6	.553		20.4	36	SF	3	C		67		FDE
HOLL	20	2214	2221	2309	N23	E52	.858		24.8	55	2N	3	C		1024		UDE
PALE	20	2215E	2217	2344D	N19	E52	.843		24.8	89D	1N	3	C		354		U F
HANI	21	0458	0502	0506D	N27	W 6	.567		20.8	8D	SN	3	C		180		F
RAMY	21	1122	1125	1132	N25	W13	.565		20.5	10	SF	3	C		20		
RAMY	21	1216	1219	1305	N28	W72	.977		16.1	49	SB	3	C		32		DE
ATHN	21	1218E	1222U	1302D	N33	W80	.997		15.5	44D	1B	3	C		95		DE
RAMY	21	1324	1329	1415D	N26	W 9	.561		20.9	51D	1B	3	C		387		

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OBSERV-ATORY	OBSERVED UT				LOCATION					DURA-TION	IM POR-TANCE	OBS.		MEASUREMENTS			REMARKS
	DAY	START	MAX. PHASE	END	APPROX. LAT.	APPROX. MER. DIST.	CENTRAL DISTANCE	HALE PLAGE REGION	CMP. DAY	MIN.		COND.	TYPE	TIME UT	MEAS. AREA Mil. of Disk	CORR. AREA Sq. Deg.	
HUAN	21	1324	1331	1431	N26	W15	.589		20.4	67	1N	2	C	1331	360	4.1	E
ATHN	21	1328E	1330U	1345D	N27	W18	.619		20.2	17D	1B	3	C		206		F
HUAN	21	1451	1454	1454	N24	W15	.564		20.5	3	SN	1	C	1454	60	.6	
HUAN	21	1541		1547	N26	W54	.882		17.6	6	SF	1	C				
BIGB	21	1644	1645	1712	N31	W80	.996		15.7	28	SN	1	C	1645	40		
HUAN	21	1824E		1827	N24	E70	.966		27.0	3D	SF	1	P				E
BIGB	21	1846	1848U	1924	S12	E27	.455		23.8	38	SN	1	P	1848	90	1.0	
HUAN	21	1847E		1849D	S12	E27	.455		23.8	2D	SN	1	P	1849	65	.7	E
BIGB	21	2009	2010	2028	N32	W80	.997		15.8	19	SB	1	C	2010	20		
PALE	21	2106	2116	2143	N14	W26	.549		19.9	37	SF	3	C		57		U F
PALE	22	0054	0057	0107	N12	E67	.935		27.1	13	1N	3	C		193		F
PALE	22	0054	0105	0142	N12	E67	.935		27.1	48	1N	3	C		193		F
MANI	22	0100E	0100U	0110	N11	E67	.934		27.1	10D	SN	3	C		50		
MANI	22	0632E	0634	0653	N26	W16	.594		21.1	21D	SN	3	C		100		
RAMY	22	1258	1301	1314	N26	W25	.656		20.7	16	SN	3	C		37		F
RAMY	22	1335	1335	1402	S10	E 0	.053		22.6	27	SF	3	C		21		
RAMY	22	1354	1355	1408	N26	W25	.656		20.7	14	SF	3	C		34		
RAMY	22	1410	1419	1502D	N12	E56	.856		26.8	52D	SF	3	C		51		
BIGB	22	1510E	1514	1544	N11	E58	.870		27.0	34D	SF	1	P	1514	20	.4	
RAMY	22	1536	1536	1544	N29	W83	.999		16.4	8	SB	3	C		0		
RAMY	22	1541	1543	1623	N26	W26	.663		20.7	42	SB	3	C		85		DE
BIGB	22	1542	1544	1558	N29	W23	.672		20.9	16	SB	1	C	1544	20	.2	
RAMY	22	1713	1728	1731	N29	W84	.999		16.4	18	SF	3	C		15		
BIGB	22	1718	1721	1738	N31	W75	.988		17.1	20	SB	1	C	1721	40		
PALE	22	1719	1722	1733	N32	W75	.988		17.1	14	SN	3	C		16		F
HOLL	22	1726	2047	2048D	N14	E57	.869		27.0	202D	1N	3	C		364		U
BIGB	22	1808	1811	1825	N20	W50	.830		19.0	17	SN	1	C	1811	40	.6	
RAMY	22	1808	1810	1818	N18	W50	.822		19.0	10	SN	3	C		25		
PALE	22	1810	1825	1844	N27	W27	.681		20.7	34	SN	3	C		83		U F
RAMY	22	1810	1820	1920	N27	W27	.681		20.7	70	SB	3	C		85		FDE
RAMY	22	1816	1829	1857	N29	W85	1.000		16.4	41	SF	3	C		25		
BIGB	22	1819	1822	1834	N30	W25	.696		20.9	15	SN	2	C	1822	40	.5	
PALE	22	1904	1904	1920	N27	W27	.681		20.8	16	SF	3	C		20		F
RAMY	22	1905	1917	1925	N28	W78	.992		16.9	20	SF	3	C		0		
BIGB	22	2030	2037	2104D	N10	E55	.842		27.0	34D	SN	1	P	2037	50	.9	
RAMY	22	2031	2032	2118	N12	E53	.829		26.8	47	SN	3	C		45		
PALE	22	2041E	2042U	2111D	N12	E55	.847		27.0	30D	SN	3	C		28		U H
HOLL	22	2046	2051	2140	N14	E57	.869		27.1	54	1N	3	C		229		U
RAMY	22	2107	2109	2120	N26	W29	.687		20.7	13	SF	3	C		29		
HOLL	22	2219	2219	2252	S10	W 3	.074		22.7	33	SN	3	C		95		
BIGB	23	1625	1627	1643D	S12	E03	.102		23.9	18D	SN	1	P	1627	60	.6	
BIGB	23	1728	1730	1748	N26	W64	.941		18.9	20	SN	1	C	1730	60	1.4	
HOLL	23	1818	1824	1918	N15	E44	.753		27.1	60	SB	3	C		146		F
BIGB	23	1839	1843	1853	N28	W56	.901		19.6	14	SN	1	C	1843	40	.7	
BIGB	23	1851	1853	1907	N26	W44	.808		20.5	16	SN	1	C	1853	60	.9	
BIGB	23	1930	1931	1943	N26	W44	.808		20.5	13	SN	1	C	1931	60	.9	
HOLL	23	2026	2034	2127	S13	E45	.703		27.2	61	SB	3	C		96		U F
HOLL	23	2123E	2123U	2133	N18	E34	.667		26.4	10D	SF	3	C		55		
HOLL	23	2141	2147	2154	S15	E44	.693		27.2	13	SF	3	C		18		
HOLL	23	2201	2202	2218	S19	E44	.700		27.2	17	SF	3	C		17		
BIGB	23	2221	2224	2234	S19	E33	.563		26.4	13	SN	2	C	2224	30	.4	
HOLL	23	2222	2236	2310	S15	E44	.693		27.2	48	SN	3	C		25		
ATHN	24	0635	0638	0650	S18	E39	.637		27.2	15	SN	1		0638	98	1.3	
WEND	24	0845		0856	S18	E36	.599		27.1	11	SF		V	0850	100	1.3	
RAMY	24	1151	1151	1217	N24	W58	.902		20.1	26	SF	3	C		33		
HUAN	24	1318		1321D	S18	E38	.624		27.4	3D	SF	1	P	1320	35	.4	
RAMY	24	1349	1352	1357	S17	E35	.582		27.2	8	SF	3	C		40		
HUAN	24	1350E		1357	S18	E38	.624		27.4	7D	SF	1	P	1354	30	.4	
HOLL	24	1456E	1459U	1521	N21	W58	.894		20.3	25D	SF	2	C		15		
HUAN	24	1458E		1505D	S15	E38	.617		27.5	7D	SF	1	P				
RAMY	24	1539	1541	1603	N12	W60	.868		20.2	24	SF	3	C		20		
HOLL	24	1545	1602	1716	N22	W58	.897		20.3	91	1N	3	C		135		
RAMY	24	1553	1553	1601	S29	W39	.680		21.7	8	SF	3	C		21		
RAMY	24	1555	1556	1625	S16	E35	.580		27.3	30	SB	3	C		85		
HOLL	24	1555	1557	1631	S17	E38	.622		27.5	36	SN	2	C		70		U F
RAMY	24	1607	1621	1656	S29	W39	.680		21.7	49	SN	3	C		46		
PALE	24	1728	1728	1731	N24	W63	.932		20.0	3	SF	3	C		27		
HOLL	24	1739	1741	1748	S15	E34	.563		27.3	9	SN	3	C		29		
HOLL	24	1818	1818	1842	S17	E32	.542		27.2	24	SF	3	C		24		F

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OBSERVATORY	OBSERVED UT				LOCATION					DURATION	IMPORTANCE	OBS.		MEASUREMENTS			REMARKS
	DAY	START	MAX. PHASE	END	APPROX. LAT.	APPROX. MER. DIST.	CENTRAL DISTANCE	HALE PLAGE REGION	CMP. DAY	MIN.		COND.	TYPE	TIME UT	MEAS. AREA Mill. of Disk	CORR. AREA Sq. Deg.	
HOLL	24	1823	1824	1836	N25	W66	.949		19.8	13	SF	3	C		29		
HOLL	24	1840	1842	1924	N26	W55	.888		20.7	44	SN	3	C		37		U
HOLL	24	1844	1857	1916	S17	E32	.542		27.2	32	SF	3	C		23		
PALE	24	1851	1852	1859	N24	W64	.937		20.0	8	SF	3	C		24		F
BIGB	24	1851	1851	1904	S20	E60	.862		29.3	13	SN	1			50	1.0	T
BIGB	24	1927	1931	1952	S24	E57	.840		29.1	25	SN	1			50	.9	TW
HUAN	24	1928		1936D	N24	W63	.932		20.1	8D	SN	1	P	1932	40		
PALE	24	1928	1932	1942D	N24	W63	.932		20.1	14D	SF	3	C		60		F
HOLL	24	2051	2053	2108	N25	W68	.958		19.8	17	SF	3	C		15		
HOLL	24	2057	2136	2208	S16	E33	.552		27.3	71	SB	3	C		110		DE
PALE	24	2119	2133U	2141D	S18	E32	.546		27.3	22D	1N	3	C		253		FDE
HOLL	24	2142	2142	2148	N10	W62	.899		20.3	6	SN	3	C		21		
PALE	24	2145E	2145U	2201D	S20	E51	.778		28.7	16D	SF	3	C		59		DE
BIGB	24	2218	2221	2249	N38	E05	.709		25.3	31	SN	1			33	.3	
BIGB	24	2219	2222	2234	N44	W01	.776		24.9	15	SN	1			33	.3	M
HOLL	24	2221	2226	2234	S17	E26	.459		26.9	13	SB	3	C		64		DE H
HOLL	24	2242	2303	2333	N24	W65	.942		20.1	51	SN	3	C		66		F
BIGB	24	2246	2250	2250	S23	E58	.847		29.3	4	SN	1			33	.6	T
HOLL	24	2311	2324	2334	S17	E29	.501		27.1	23	SN	3	C		57		
RAMY	25	1230	1233	1242	S22	E24	.464		27.3	12	SF	3	C		20		
HOLL	25	1346E	1346U	1430	S19	E21	.403		27.1	44D	SF	2	C		102		
RAMY	25	1434	1438	1455	S17	E21	.389		27.2	21	SF	3	C		101		
HOLL	25	1449	1503	1516	S17	E21	.389		27.2	27	SN	3	C		43		
HOLL	25	1453	1458	1506	S30	W50	.790		21.9	13	SF	3	C		15		
RAMY	25	1457	1458	1503	S27	W48	.763		22.0	6	SF	3	C		21		
RAMY	25	1457	1501	1505	S17	E21	.389		27.2	8	SF	3	C		43		
RAMY	25	1521	1535	1606	S17	E21	.389		27.2	45	1F	3	C		98		
HOLL	25	1631	1631	1735	S16	E20	.368		27.2	64	SN	3	C		48		U F
BIGB	25	1708	1711	1722	S16	E20	.368		27.2	14	SF	2	C	1711	50	.5	
HOLL	25	1739	1746	1758	S31	W54	.827		21.7	19	SN	3	C		46		
RAMY	25	1740	1746	1803	S31	W54	.827		21.7	23	SF	3	C		59		
HOLL	25	1743	1803	1811	S16	E20	.368		27.2	28	SF	3	C		30		
HUAN	25	1745	1747	1755	S35	W55	.845		21.6	10	SF	1	C	1747	45		
BIGB	25	1745	1746	1756	S29	W57	.847		21.5	11	SN	2	C	1746	30	.6	
HOLL	25	1804	1804	1813	N11	W76	.977		20.1	9	SF	3	C		0		
HOLL	25	1846	1850	1901	N10	W76	.976		20.1	15	SF	3	C		0		
BIGB	25	1847	1849	1902	N14	W79	.988		19.9	15	SN	3	C	1849	30		A
HUAN	25	1849E		1855D	N11	W78	.984		19.9	6D	SN	1	P	1849	20		D
HOLL	25	1853	1909	1932	S18	E19	.368		27.2	39	SB	3	C		161		DE H
HOLL	25	1854	1857	2053	S31	W55	.835		21.7	119	SB	3	C		47		
PALE	25	1855	1857	1905	S31	W55	.835		21.7	10	SN	3	C		20		DE
BIGB	25	1855	1857	1924	S29	W57	.847		21.5	29	SN	3	C	1857	40	.8	
PALE	25	1855	1908	1925D	S18	E18	.355		27.1	30D	SN	3	C		35		FDE
BIGB	25	1857	1901	1918	S19	E19	.376		27.2	21	SF	3	C	1901	100	1.1	
HUAN	25	1903E		1915D	S18	E18	.355		27.1	12D	SF	1	P	1906	45	.5	E
HOLL	25	1958	1958	2012	N15	E15	.445		27.0	14	SF	3	C		55		
BIGB	25	2016	2022	2037	S29	W57	.847		21.6	21	SN	3	C	2022	30	.6	
HOLL	25	2017	2025	2033	S16	E17	.325		27.1	16	SN	3	C		32		
PALE	25	2030E	2043U	2043D	S31	W56	.843		21.7	13D	SN	3	C		25		DE
PALE	25	2030E	2056U	2126	S18	E18	.355		27.2	56D	SN	3	C		104		FDE
HOLL	25	2041	2047	2128	S15	E17	.318		27.1	47	1B	3	C		275		DE
BIGB	25	2044	2048	2116	S17	E17	.333		27.1	32	SN	3	C	2048	90	1.0	
BIGB	25	2044	2046	2104	S29	W57	.847		21.6	20	SN	3	C	2046	50	.9	
BIGB	25	2254	2255	2259	S28	W55	.829		21.8	5	SF	3	C	2255	30	.5	
HOLL	25	2324	2326	2339	S20	E17	.360		27.3	15	SB	3	C		75		DE
BIGB	25	2326	2327	2339	S19	E14	.313		27.0	13	SN	2	C	2327	10	.1	
PALE	26	0252	0253	0302	S19	E14	.313		27.2	10	SF	3	C		25		F
RAMY	26	1403	1404	1410	N26	W67	.955		21.6	7	SF	3	C		35		
RAMY	26	1414	1415	1428	S17	E11	.259		27.4	14	SF	3	C		40		
RAMY	26	1438	1440	1500	N26	W72	.975		21.2	22	SF	3	C		29		
HOLL	26	1440	1448	1458	N24	W76	.985		20.9	18	SF	3	C		0		
RAMY	26	1501	1502	1513	S17	E10	.244		27.4	12	SN	3	C		71		
BIGB	26	1629	1630	1634	S19	E08	.249		27.3	5	SN	2	C	1630	40	.4	
BIGB	26	1722	1723	1732	S19	E05	.227		27.1	10	SN	2	C	1723	40	.4	
HOLL	26	1817	1959	2021	S18	E 5	.211		27.1	124	1B	3	C		214		UDE
BIGB	26	1928	1930	1946	S19	E04	.221		27.1	18	SN	2	C	1930	30	.3	
BIGB	26	1933	1935	1940	S30	W70	.935		21.6	7	SF	2	C	1935	20		
BIGB	26	1949	1950	2017	S19	E05	.227		27.2	28	SN	2	C	1950	40	.4	
HOLL	26	2001	2003	2018	S21	W31	.547		24.5	17	SF	3	C		23		
BIGB	26	2029	2032	2035	S30	W70	.935		21.6	6	SF	2	C	2032	30		

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OBSERV-ATORY	OBSERVED UT				LOCATION					DURATION	IMPORTANCE	OBS.		MEASUREMENTS			REMARKS
	DAY	START	MAX. PHASE	END	APPROX. LAT.	APPROX. MER. DIST.	CENTRAL DISTANCE	HALE PLAGE REGION	CMP. DAY	MIN.		COND.	TYPE	TIME UT	MEAS. AREA Mill. of Disk	CORR. AREA Sq. Deg.	
BIGB	26	2056	2059	2109	S30	W70	.935		21.6	13	SN	2	C	2059	30		
MANI	26	2317E	2317U	2328D	S19	E 3	.217		27.2	11D	SF	3	C		20		
BIGB	26	2331	2332	2341	S30	W70	.935		21.7	10	SF	2	C	2332	40		
BIGB	27	1704	1725	1945	S22	E35	.602		30.3	161	SN	2	C	1725	110	1.3	G
BIGB	27	1727	1728	1735	N20	E70	.960		2.0	8	SN	1	C	1728	30		
BIGB	27	1754	1755	1758	N17	E78	.987		2.6	4	SN	1	C	1755	40		
HUAN	27	1755		1759	N18	E78	.987		2.6	4	SF	1	C				E
HUAN	27	1810		1814	N28	E90	1.002		3.5	4	SF	1	C	1812	20		D
PALE	27	1920	1943	1952	N17	E72	.966		2.2	32	SN	3	C		70		
BIGB	27	1937	1940	1946	N15	E76	.980		2.5	9	SB	2	C	1940	40		
HOLL	27	2106	2114	2122	N20	E74	.976		2.4	16	SN	3	C		0		
BIGB	27	2113	2114	2117	N15	E76	.980		2.6	4	SN	2	C	2114	20		
BIGB	28	1749	1750	1755	N17	E64	.924		2.5	6	SN	2	C	1750	30	.7	
HOLL	28	1923	2009	2225	N14	W12	.406		27.9	182	SF	3	C		54		
HUAN	28	1934E		1952D	N14	E12	.406		29.7	18D	SF	1	P	1945	20	.2	D
BIGB	28	1956	1957	2032	N14	W11	.398		28.0	36	SF	2	C	1957	30	.3	
BIGB	28	2151	2152	2201	S12	W74	.956		23.4	10	SF	2	C	2152	30		
BIGB	28	2303	2304	2322	N11	E90	1.000		4.7	19	SN	2	C	2304	30		
PALE	29	0058E	0058U	0104D	N19	E56	.873		2.2	6D	1F	3	C		211		U
MANI	29	0101E	0101U	0107	N18	E56	.871		2.2	6D	SF	3	C		50		F
RAMY	29	1208	1209	1219	S16	W36	.594		26.8	11	SB	3	C		158		FDE
HOLL	29	1505	1508	1522	N33	E70	.975		3.9	17	SF	2	C		40		
HOLL	29	1521	1522	1531	S22	W40	.662		26.6	10	SF	3	C		27		
HUAN	29	1523	1524	1529	S19	W41	.665		26.6	6	SF	1	C	1524	30	.4	
BIGB	29	1828	1832	1844	N12	E78	.984		4.6	16	SN	1	C	1832	30		
HUAN	29	1859	1901	1904	S12	E88	.998		5.4	5	SF	1	C	1901	15		D
BIGB	29	1931	1937	1945	N28	E68	.962		3.9	14	SN	1	C	1937	60		G
HOLL	29	1932	1936	1942	N29	E66	.955		3.8	10	SN	2	C		31		
HUAN	29	1935	1937	1940	N29	E70	.971		4.1	5	SF	1	C	1937	15		D
HOLL	29	1939	1943	1954	S16	E78	.973		4.7	15	SB	2	C		0		F
BIGB	29	1939	1941	2017	S16	E74	.955		4.4	38	SB	1	C	1941	100		
HUAN	29	1940	1943	2010	S15	E72	.945		4.2	30	SN	2	C	1943	140		
HUAN	29	1950	1951	1954	S19	W43	.689		26.6	4	SF	1	C	1951	30	.4	
MANI	30	0127E	0128	0151D	N20	E44	.775		2.4	24D	SN	3	C		100		F
MANI	30	0200E	0200U	0203D	N20	E45	.784		2.5	3D	SF	3	C		20		
HUAN	30	1358E		1402	N17	E30	.615		1.8	4D	SF	1	P				E
BIGB	30	1629	1644	1737	N33	E59	.931		4.1	68	SN	1	C	1644	70	1.4	
RAMY	30	1642	1643	1702	N33	E57	.921		4.0	20	SF	3	C		132		
HUAN	30	1727	1729	1733	N28	E50	.861		3.5	6	SF	1	C	1729	20	.3	D
BIGB	30	1809	1811	1822	N17	E38	.700		2.6	13	SF	2	C	1811	40	.5	
BIGB	30	2129	2134U	2147	S07	E25	.420		1.8	18	SF	1			37	.4	
HOLL	30	2203	2217	2256	N19	E31	.641		2.2	53	SN	2	C		105		F
BIGB	30	2248	2250	2302	S07	E23	.388		1.7	14	SF	1			50	.5	
BIGB	30	2355	2357	0005D	S01	E26	.447		1.9	10D	SF	1			33	.3	
WEND	31	1115E		1155D	N17	E25	.562		2.3	40D	2N		V	1124	510	6.1	
HOLL	31	1434	1436	1442	N16	E25	.552		2.5	8	SN	3	C		23		
HOLL	31	1439	1443	1501	S15	E47	.729		4.1	22	SF	3	C		39		
HUAN	31	1440		1457	S15	E46	.718		4.1	17	SF	1	C	1442	40	.6	E
HUAN	31	1628	1629	1635	N13	W66	.930		26.7	7	SF	1	C	1629	20		D
HOLL	31	1628	1629	1634	N13	W63	.910		27.0	6	SN	3	C		35		F
HUAN	31	2005		2021	S15	E56	.824		5.0	16	SN	1	C	2017	20	.3	D
HUAN	31	2023		2030	S09	E39	.625		3.8	7	SF	1	C				E
BIGB	31	2124	2125	2131	N15	W70	.954		26.6	7	SN	3	C	2125	50		
BIGB	31	2124	2125	2142	S16	E55	.815		5.0	18	SB	3	C	2125	60	1.1	

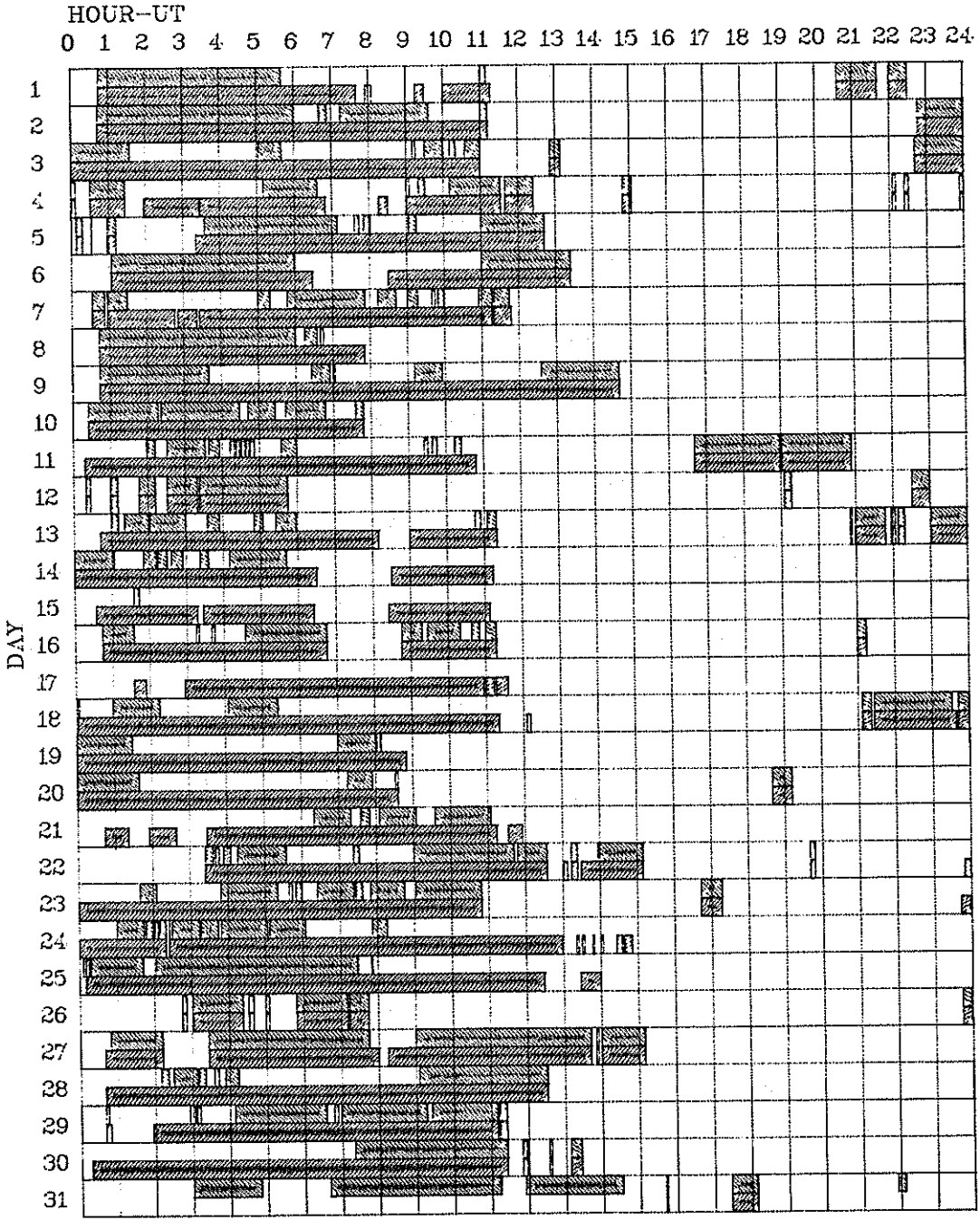
"Remarks":

A = Eruptive prominence whose base is less than 90° from central meridian.
B = Probably the end of a more important flare.
C = Invisible 10 minutes before.
D = Brilliant point.
E = Two or more brilliant points.
F = Several eruptive centers.
G = No visible spots in the neighborhood.
H = Flare accompanied by a high speed dark filament.
I = Active region very extended.
J = Distinct variations of plage intensity before or after the flare.
K = Several intensity maxima.
L = Existing filaments show signs of sudden activity.
M = White-light flare.
N = Continuous spectrum shows effects of polarization.
O = Observations have been made in the calcium II lines H and K.
P = Flare shows helium D_3 in emission.
Q = Flare shows the Balmer continuum in emission.
R = Marked asymmetry in Hα line suggests ejection of high velocity material.
S = Brightness follows disappearance of filament (same position).
T = Region active all day.
U = Two bright branches, parallel (||) or converging (Y).
V = Occurrence of an explosive phase: important and abrupt expansion in about a minute with or without important intensity increase.
W = Great increase in area after time of maximum intensity.
X = Unusually wide Hα line.
Y = System of loop-type prominences.
Z = Major sunspot umbra covered by flare.

INTERVALS OF NO FLARE PATROL OBSERVATION

FOR PRECEDING SOLAR FLARE TABLE

OCTOBER 1979



Observatories included in total patrol:

Athenes	Bucharest	Holloman	Istanboul	Manila	Ramey
Big Bear	Berne	Huancayo	Kandilli	Palehua	Upice
					Wendelstein

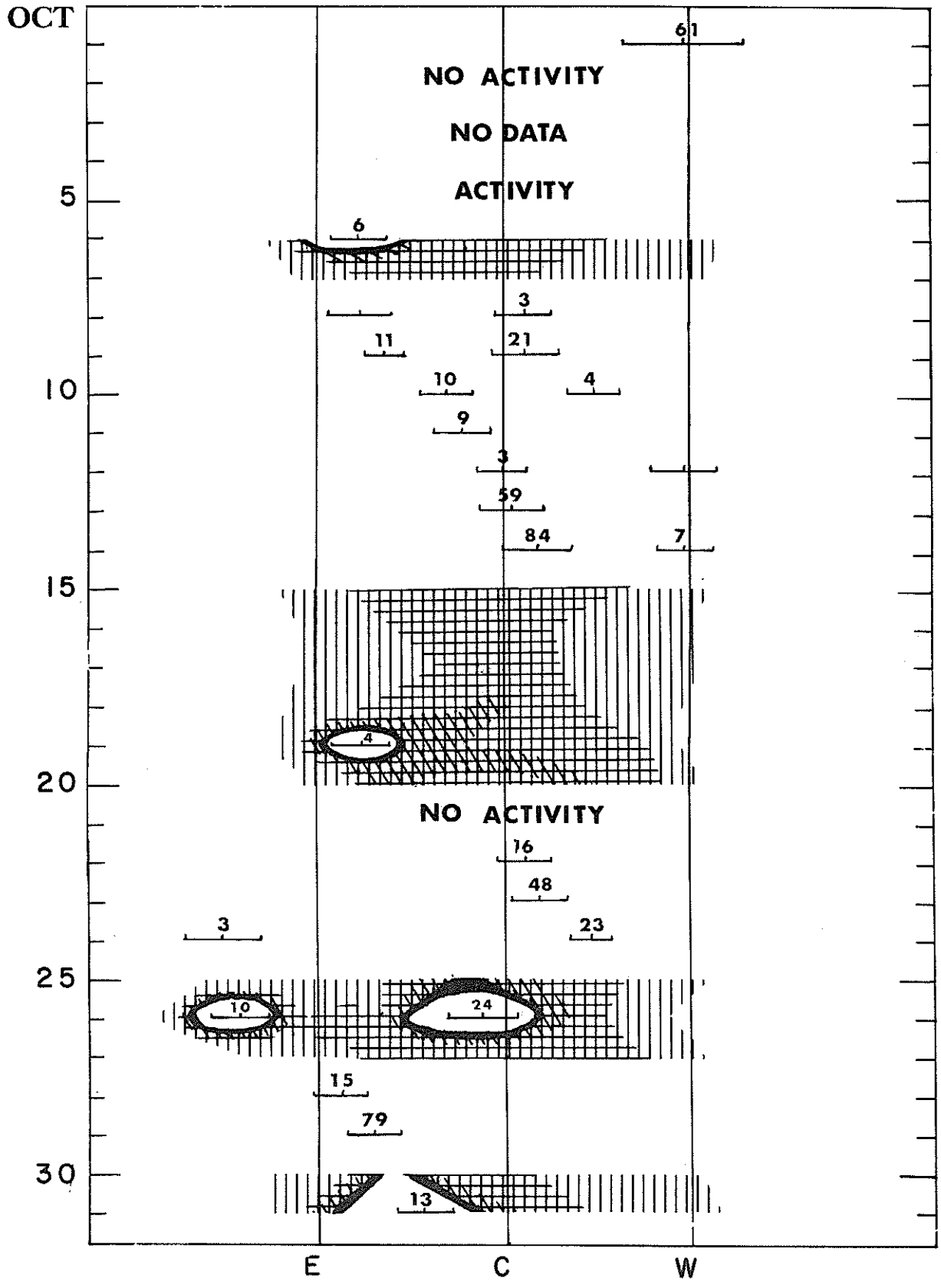
Times of no flare patrol are shown by the shaded area for each day divided into times of no cinematographic patrol (bottom half of day) and times of neither visual nor cinematographic patrol (top half of day).

SOLAR RADIO EMISSION
INTERFEROMETRIC OBSERVATION

OCTOBER 1979

Nançay

169 MHz



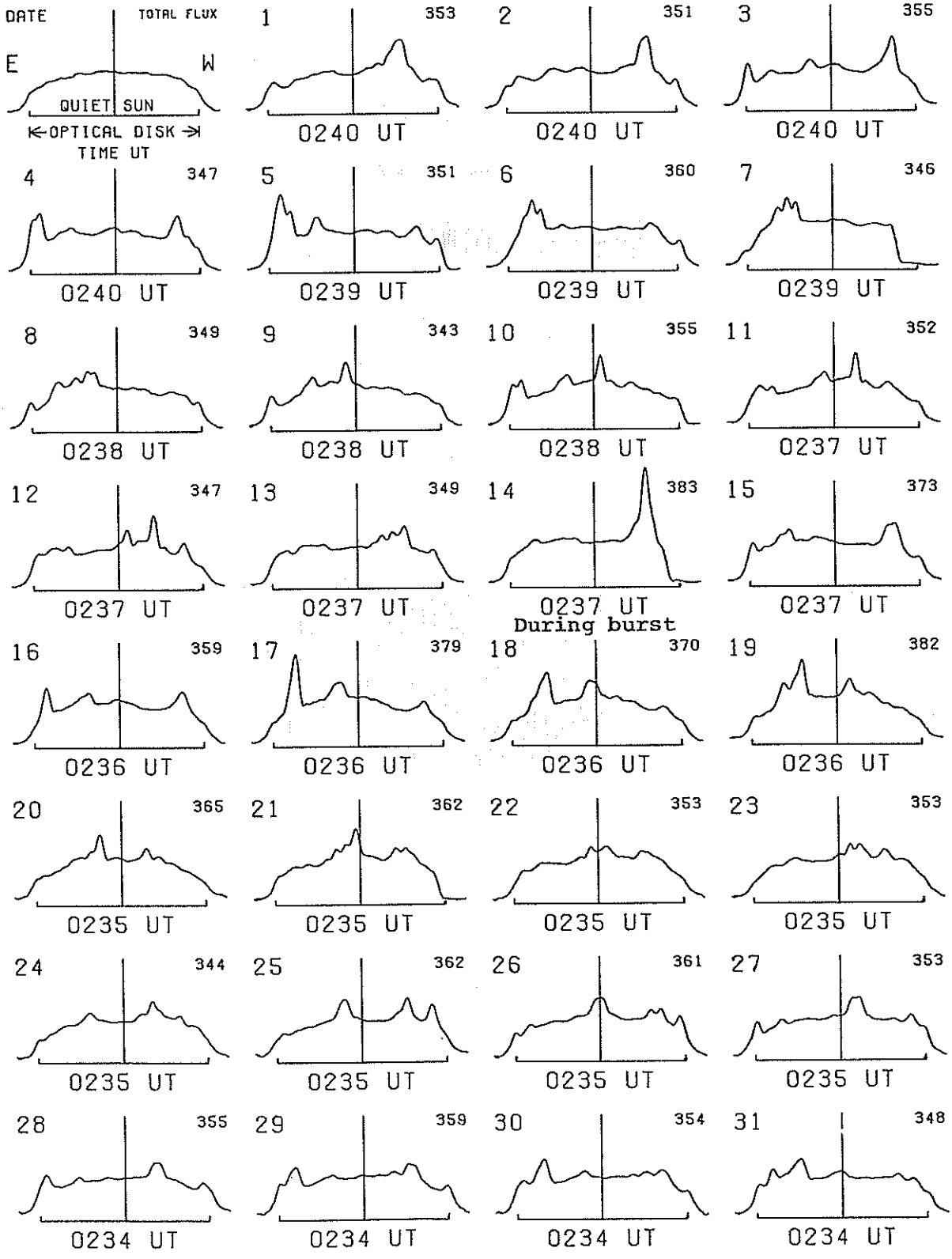
28
Oct 79

EAST-WEST SOLAR SCANS

OCTOBER 1979

TOYOKAWA, JAPAN

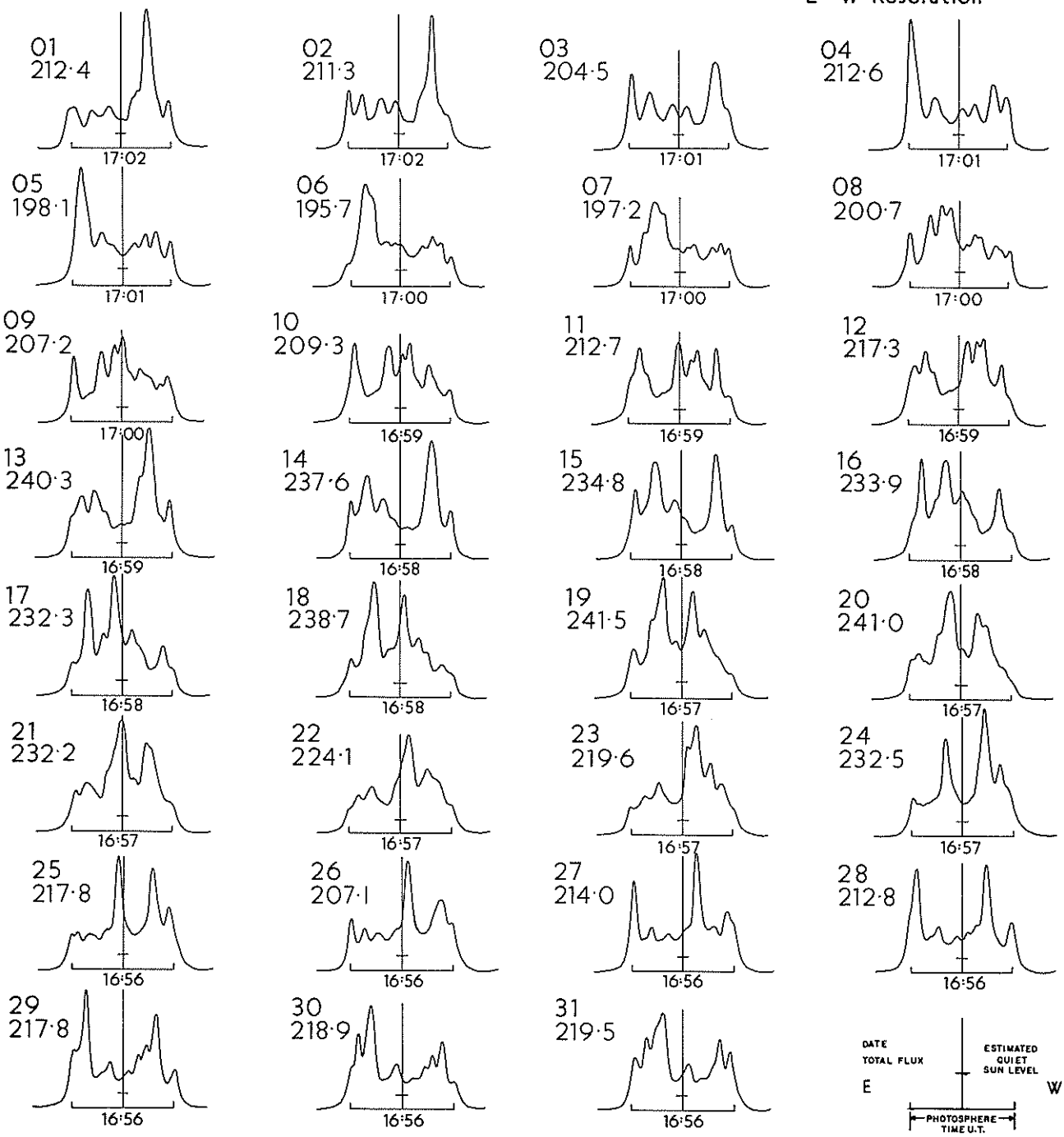
3 CM
FAN BEAM WITH 1.1 MINUTES OF ARC



EAST-WEST SOLAR SCANS
OCTOBER 1979

ALGONQUIN RADIO OBSERVATORY
CANADA

10·7 cm
Fan Beam with 1·5 minutes of arc
E-W Resolution



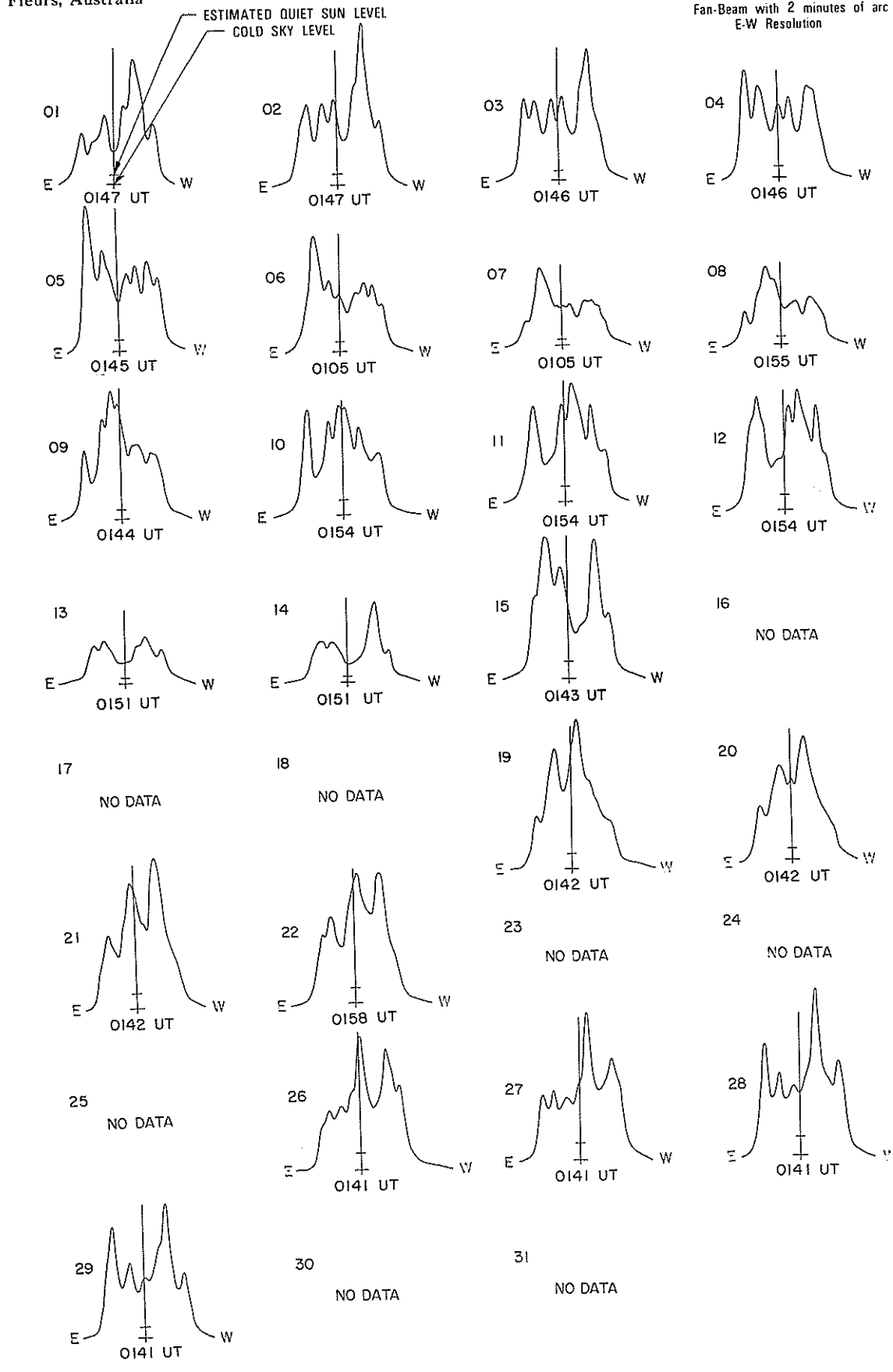
30
Oct 79

EAST-WEST SOLAR SCANS

OCTOBER 1979

Fleurs, Australia

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

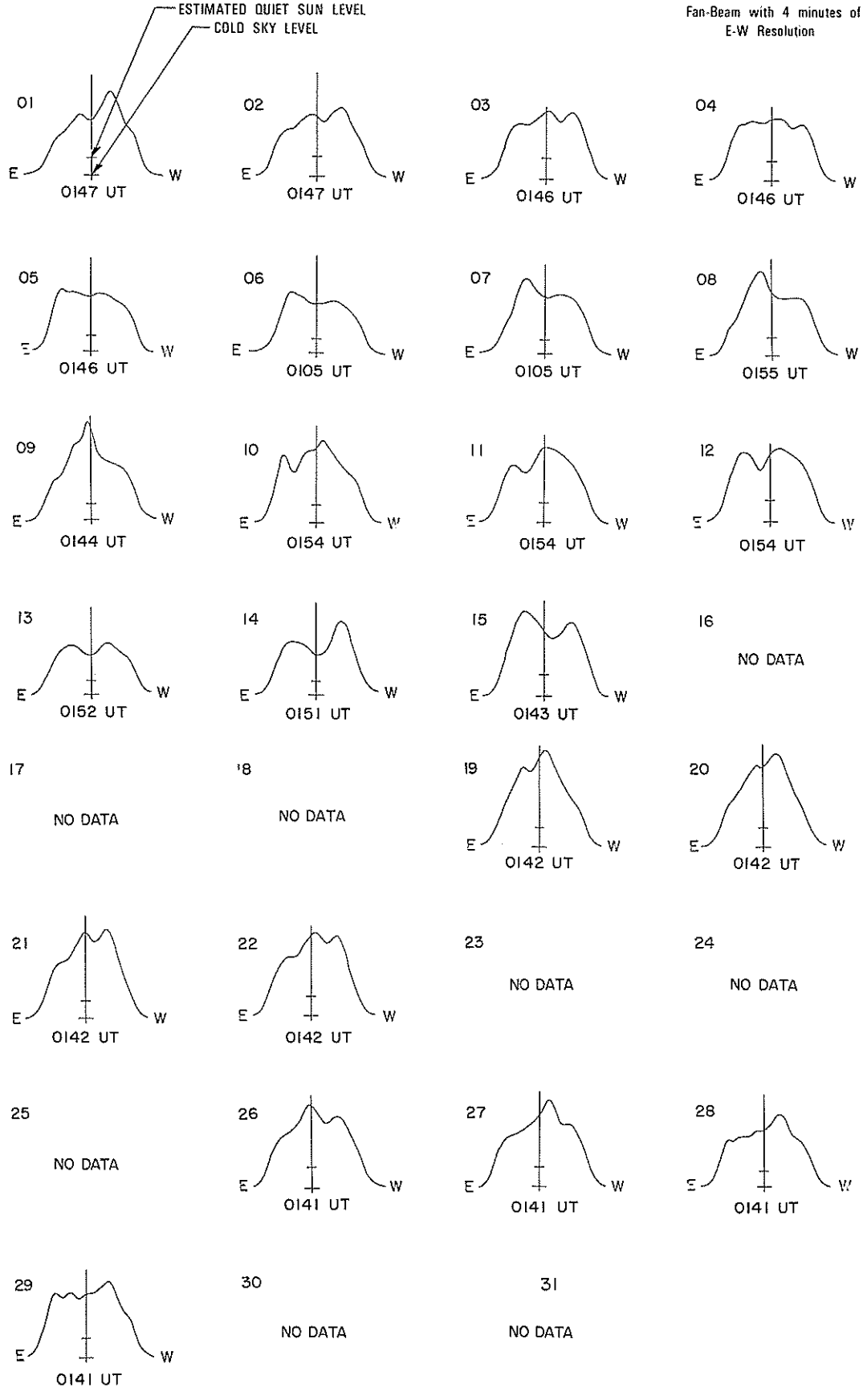


EAST-WEST SOLAR SCANS

OCTOBER 1979

Fleurs, Australia

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



SOLAR RADIO EMISSION
SELECTED FIXED FREQUENCY EVENTS
OCTOBER 1979

DAY OF MONTH	FREQUENCY	STATION	TYPE	STARTING TIME UT	TIME OF MAXIMUM UT	DURATION MINUTES	FLUX DENSITY 10^{-22} Wm^{-2} Hz^{-1} PEAK	FLUX DENSITY MEAN	INT	REMARKS
1	8400	BERN	3	0722.2	0724.3	7	63			
	8800	MANI	S	0723.1	0724.8	3.9	3 42.4	14.1		
	8400	BERN	3	0844.1	0846	7	39			
	8400	BERN	4	0920.7	0921.8	37	111			
	8400	BERN	41	0929.7	0937.4	17	20			
	8400	BERN	20	0958.2	1000.6	60	29			
	8400	BERN	3	1133.2	1135.4	58	266			
	2800	OTTA	20 GRF	1240	1500	225	9	4.5		
	8400	BERN	1	1307.3	1308.6	5	17			
	2800	OTTA	21 GRF	1735	1935	245	12.2	6.8		
	2800	OTTA	24 R	1756	1757	1	4.8	2.4		
	2800	OTTA	27 RF	1756		12	4.8	4.2		
	2800	OTTA	24P R	1757		9	4.8			
	2800	OTTA	26 FAL	1806	1808	2	-4.8	-2.4		
	2800	OTTA	3 S	1830	1833	12	16.4	5.4		
	2800	OTTA	8 S	1846	1846	.1	21			
	2800	OTTA	1 S	1924	1926	6	4.2	2.1		
	2695	PENT	20 GRF	2225	2300	70	3.2			
2	2800	OTTA	40 F	1427	1433	7	41.4			
	2800	OTTA	21 GRF	1435	1517	95	8.8	4.4		
	2800	OTTA	46F C	1442	1451.5	24	25	10.8		
	2800	OTTA	20 GRF	1710	1800	115	6.8	3.4		
	2800	OTTA	240 R	2005	2020	15	3.6	1.8		
	2695	PENT	21 GRF	2150	2205	135	13.8	6.9		
	2800	OTTA	40 F	2159.8	2200.2	2	113			
3	8400	BERN	20	0832.2	0836.1	17	15			
	2800	OTTA	3 S	2109.8	2110.7	5	36.6	9.2		
	2695	BOUL	3 S	2111 E	2112	2.50	21	7		
	2800	OTTA	3 S	2148.5	2150	8	28.6	7.2		
	2695	BOUL	3 S	2149 E	2151	4 D	22	7		
4	8400	BERN	1	0826.2	0826.7	1.5	19			
	8400	BERN	20	1044.5	1107.3	253	17			
	2800	OTTA	20 GRF	1240	1250	35	4	2		
	2800	OTTA	1 S	1421	1421.7	2	7.8	3.7		
	2800	OTTA	41 SER	1421	1421.7	8	7.8			
	2800	OTTA	1 S	1424.4	1424.8	1.5	2	1		
	2800	OTTA	1 S	1427.8	1428	1.2	3.4	1.6		
	2800	OTTA	21 GRF	1500	1634	260	22.6	12.3		
	2800	OTTA	1 S	1545	1546	1.2	3.8	1.9		
	2800	OTTA	4 S/F	1550	1556	27	148	44.9		
	2695	BOUL	45 C	1551 E	1557	15 D	107	36		
	2800	OTTA	4 S/F	1635.8	1638.5	7	43	13.4		
	2695	BOUL	3 S	1637 E	1640	5 D	16	5		
	2800	OTTA	45 C	1646.4	1651	13	45	22		
	2695	BOUL	4 SF	1647 E	1652	5 D	16	5		
	2800	OTTA	3 S	2103.5	2104.5	6.5	34.4	9.8		
	2800	OTTA	21 GRF	2103		140	8.8	4.4		
	2695	BOUL	3 S	2104 E	2105	3 D	25	8		
	2800	OTTA	22 GRF	2116	2124	16	14	7		
5	8400	BERN	1	0822.9	0823.1	2	21			
	8400	BERN	46	1030	1149.9	240	539			
	2800	OTTA		1145	1150	11.5	170			
	2800	OTTA	46F C	1145	1200	31	254	115		
	2800	OTTA		1156.5	1200	11.5	254			
	2800	OTTA		1208	1209.5	6	111			
	2800	OTTA	30 PBI	1214	1214	355	28.2	8.8		
	2800	OTTA	4 S/F	1224.3	1225.5	3.5	17.6	8.8		
	2800	OTTA	4 S/F	1255	1258.8	11	124	41.7		
	2800	OTTA	1 S	1310	1311	2	5	2.5		
	2800	OTTA	1 S	1614	1614.9	5.5	4.2	1.4		
	2800	OTTA	20 GRF	1840	1910	70	2.8	2		
	2800	OTTA	1 S	2020	2021.4	2.5	3	1.5		
	2695	PENT	20 GRF	2150	2213	90	3.2	1.8		
6	8400	BERN	1	0623.4	0623.6	8	28			
	8400	BERN	20	0740.9	0744.2	140	39			
	8400	BERN	46	1113.4	1114	3.5	22			
	2800	OTTA	20 GRF	1238	1312	70	5.2	2.6		
	2800	OTTA	1 S	1437	1437.5	1.5	4.2	2.1		
	2800	OTTA	20 GRF	1500	1525	50	3.2	1.6		
	2800	OTTA	1 S	1722.5	1724	3	2	1		
	2800	OTTA	20 GRF	1750	1830	85	2.8	1.6		
	2800	OTTA	20 GRF	1930	2000	110	2.8	1.4		
	2695	PENT	20 GRF	2125	2210	90	3.2	1.6		
7	8400	BERN	1	1206.3	1206.8	2	21			
	8400	BERN	46	1409.1	1412.3	80	471			
	2695	BOUL	3 S	1411 E	1413	10 D	475	158		
	2800	OTTA		1418 E	1418	6 D	44			
	2800	OTTA	30 PBI	1424	1424	160	20.6	10.3		

SOLAR RADIO EMISSION
SELECTED FIXED FREQUENCY EVENTS

OCTOBER 1979

DAY OF MONTH	FREQUENCY	STATION	TYPE	STARTING TIME UT	TIME OF MAXIMUM UT	DURATION MINUTES	FLUX DENSITY 10^{-22}Wm^{-2} Hz^{-1} PEAK	FLUX DENSITY MEAN	INT	REMARKS
	2800	OTTA	1 S	1656	1656.3	1	2	1		
	2800	OTTA	21 GRF	1835	1900	75	3.8	1.9		
	2800	OTTA	2 S/F	1843.2	1844.5	4	2	1		
	2800	OTTA	21 GRF	2117	2124	41	3.8	1.9		
	2800	OTTA	2 S/F	2123.3	2123.5	1	3.2			
	2695	PENT	40 F	2228	2232.7	8	4.6			
	2695	PENT	3 S	2250.8	2251.5	3.5	96	32		
	2695	BOUL	3 S	2252 E	2253	3 D	73	24		
	2695	PENT	30 PBI	2254.3	2254.3	11 -	7.8	3.9		
	2695	PENT	1 S	2259.2	2259.8	2.8	9.8	4.6		
	2695	PENT	1 S	2302.2	2302.8	1.2	6.6	3.3		
	2695	PENT	8 S	2336.5	2336.9	.5	9.8			
8	2800	OTTA	2 S/F	1631.9	1632	2	2.8	1.4		
	2800	OTTA	20 GRF	1700	1855	170	5	2.8		
	2800	OTTA	260 FAL	2135	2140	5	-3.2	-1.6		
	2695	PENT	21 GRF	2240	2322	70	6.2	3.1		
	2695	PENT	8 S	2256	2256.3	.5	6.6	3.3		
9	2800	OTTA	240 R	1320	1350	30	5	2.5		
	2800	OTTA	21 GRF	1405	1500	80	4	2.8		
	2800	OTTA	8 S	1459.9	1500	.5	2	1		
	2800	OTTA	8 S	1834	1834	.1	8.2			
	2800	OTTA	8 S	1959.4	1959.4	.1	7.8			
	2800	OTTA	1A S	1959	2000	1.5	2.4	1.2		
	2800	OTTA	27A RF	2122		143	4	3.8		
	2800	OTTA	24 R	2122	2123	1	4	3		
	2800	OTTA	24P R	2123		132	4			
	2800	OTTA	1 S	2125	2126	3	6.6	3.3		
	2695	PENT	26 FAL	2335	2345	10	-4			
10	2800	OTTA	20 GRF	1300	1320	55	2.8	2		
	2800	OTTA	21 GRF	1445	1545	105	6.6	3.3		
	2800	OTTA	1 S	1540	1540.2	1	2.4	1.2		
	2695	PENT	1 S	2249	2249.7	2	5.8	2.6		
11	8400	BERN	1	1144.5	1145.9	13	14			OPR
	2800	OTTA	24 R	1300	1305	5	4	2		
	2800	OTTA	27A RF	1300		270	4	3.6		
	2800	OTTA	24P R	1305		220	4			
	2800	OTTA	20 GRF	1308	1325	90	4			
	2800	OTTA	21 GRF	1546	1555	40	4	2		
	2800	OTTA	8 S	1552.5	1552.7	.8	4.8	2.2		
	2800	OTTA	26 FAL	1645	1730	45	-4	-2		
	2800	OTTA	1 S	1735	1735.5	1	9	2.3		
	2800	OTTA	3 S	1836	1836.7	6	22.8	7.6		
	2800	OTTA	29 PBI	1842	1842	45	4	2		
	2695	PENT	21 GRF	1955	2006	11	4			
	2800	OTTA	1 S	2000	2000.5	1.5	4	2		
	2800	OTTA	8 S	2045	2045.3	.5	5	2.5		
	2800	OTTA	20 GRF	2050	2145	120	10	5		
	2695	PENT	23 GRF	2256	2330	75	10.8			
	2695	PENT	4 S/F	2314.2	2314.5	1	15.6	7.8		
12	8400	BERN	1	1034	1035.6	80	24			
	8400	BERN	1	1210.2	1210.8	4	15			
	2800	OTTA	20 GRF	1525	1550	55	3.2	1.6		
	2800	OTTA	20 GRF	1755	1830	70	4.4	2.2		
	2800	OTTA	21 GRF	2030	2105	200 D	17.8			
	2800	OTTA	1 S	2035	2036	2	3.6	1.8		
	2800	OTTA	3 S	2044	2047	7	11.8	5.8		
13	2800	OTTA	240 R	1220	1300	40	8	4		
	2800	OTTA	240 R	1305	1317	12	7.2	3.6		
	2800	OTTA	20 GRF	1325	1335	65	5.6	2.8		
	2800	OTTA	40 F	1438	1450	14	30			
	2800	OTTA	29 PBI	1452	1452	55	8	4.2		
	2800	OTTA	40 F	1634	1636.8	6	4.6			
	2800	OTTA	21 GRF	1700	1740	160	6	3.2		
	2800	OTTA	40 F	1729	1733.5	5.5	8			
	2800	OTTA	45 C	1959	1959.5	9	22.6	9.9		
	2800	OTTA	1 S	2039	2039.4	1	3.6	1.7		
	2800	OTTA	3 S	2128.2	2128.8	1.5	11	4		
14	2800	OTTA	23 GRF	1200	1320	280	16.2	8.1		
	2800	OTTA	2 S/F	1613.7	1613.9	3	1.8			
	2800	OTTA	8 S	1720.9	1721	.2	4.8	2.4		
	2800	OTTA	20 GRF	1755	1900	85	4.8	2.8		
	2800	OTTA	20 GRF	1930	1945	40	3.4	1.7		
	2800	OTTA	260 FAL	2020	2045	25	-4.8	-2.6		
	2695	PENT	3 S	2322.7	2323.1	1	15.6	7.8		
15	2800	OTTA	4 S/F	1451.2	1452.1	2.7	28.2	9.4		
	8400	BERN	3	1451.4	1452.2	4	96			
	2800	OTTA	22 GRF	1530	1603	105	3.8	2		

SOLAR RADIO EMISSION
SELECTED FIXED FREQUENCY EVENTS
OCTOBER 1979

DAY OF MONTH	FREQUENCY	STATION	TYPE	STARTING TIME UT	TIME OF MAXIMUM UT	DURATION MINUTES	FLUX DENSITY 10^{-22} Wm^{-2} Hz^{-1} PEAK	FLUX DENSITY MEAN	INT	REMARKS
16	8400	BERN	20	1203.3	1206	137	22			
	2800	OTTA	20 GRF	1225	1245	75	8	4.1		
	2800	OTTA	24 R	1447	1454	7	4.8	2.6		
	2800	OTTA	27A RF	1447		268	4.8	4.6		
	2800	OTTA	24P R	1454		246	4.8			
	2800	OTTA	1 S	1637.8	1638	1	2.4	1.2		
	2800	OTTA	26 FAL	1900	1915	15	-4.8	-2.4		
	2695	PENT	20 GRF	2010	2110	135	7	3.5		
	2695	PENT	3 S	2304.5	2305.5	2.5	12.6	6.3		
17	8400	BERN	45	0657	0658.5	36	94			
	8400	BERN	20	1230	1319	180	46			
	2800	OTTA	23 GRF	1240	1345	105	7.6			
	2800	OTTA	3 S	1318	1319	3	25.4	8.4		
	2800	OTTA	20 GRF	1430	1440	30	4.8	2.4		
	2800	OTTA	23 GRF	1535	1605	145	11.8	5.4		
	2800	OTTA	40 F	1639.2	1639.2	1.1	3.8			
	2800	OTTA	2 S/F	1741.5	1743.2	3	8.6	4		
	2800	OTTA	240 R	1805	1835	30	3.4	1.9		
	2800	OTTA	240AR	1850	2010	80	4	3		
	2800	OTTA	1 S	1900	1901	3	3.4	1.7		
	2695	PENT	20 GRF	2120	2200	90	5.4	2.7		
18	2695	MANI	S/F	0022	0024.1	4	4 23.8	9.4		
	8400	BERN	1	0731.6	0734.5	6	32			
	8400	BERN	46	0859.6	0915.6	42	107			
	8400	BERN	1	0948.9	0949.9	4	17			
	8400	BERN	20	1000.9	1005.6	35	23			
	2800	OTTA	1 S	1347.5	1348	2	8.2	4		
	2800	OTTA	20 GRF	1518	1527	50	5.2	4		
	2800	OTTA	20 GRF	1955	2040	70	3.2	1.6		
	2695	PENT	2 S/F	2114.5	2115	1.5	7.8			
	2695	PENT	8 S	2152.5	2153	.8	3.2	1.6		
	2695	PENT	21 GRF	2157	2205	45	8	3.6		
	2695	PENT	40 F	2159	2159.2	.5	6			
	2695	PENT	8 S	2234	2234.2	.6	6.8			
	8800	MANI	S	2352.2	2352.5	1	3 66.9	22.9		
	2695	PENT	8 S	2352	2352.3	.6	17.4	8.7		
19	8800	MANI	S/F	0019.7	0023.1	6.3	4 144.2	48.1		
	2695	MANI	S/F	0021	0023.1	5	4 50.8	16.9		
	2695	MANI	S/F	0414	0419.3	12	4 280.1	93.3		
	8800	MANI	4 GB	0416.7	0418.7	9.3	7 2101	700.3		
	2695	MANI	S/F	0453	0501	9	4 28.3	9.4		
	2695	MANI	S/F	0621.1	0621.6	1.1	4 48.1	16		
	8800	MANI	S/F	0621.2	0621.6	2	4 16.5	5.5		
	8400	BERN	1	0836.4	0836.9	1	14			
	8400	BERN	22	1053.9	1108.6	51	19			
	8400	BERN	47	1153.7	1157.8	160	4700			
	2800	OTTA	260 FAL	1235	1425	110	-18			
	2800	OTTA	21 GRF	1430	1520	90	4.6	3		
	2800	OTTA	1 S	1439.3	1439.7	1	4.8	2.3		
	2800	OTTA	3 S	1620	1621.2	3	33.4	16.8		
	2800	OTTA	29 PBI	1623	1623	6	6.6	3		
	2800	OTTA	21 GRF	1640	2022	340	13.2	6.6		
	2800	OTTA	1 S	1945	1946.5	3	2.4	1.6		
	2800	OTTA	1 S	2001	2001.6	3	3.8	1.3		
	2695	PENT	1 S	2120	2120.5	1	3.8	1.9		
	2695	PENT	8 S	2152.1	2152.5	.8	3.4	1.7		
	2695	PENT	3 S	2314.5	2316.5	5	25	12.5		
	8800	MANI	S/F	2314.7	2315.8	4.3	4 44.1	14.7		
	2695	MANI	S/F	2316	2317.3	3	4 28.9	9.6		
20	8800	MANI	S	0256.8	0257.1	1.2	3 30.4	10.1		
	8800	MANI	S/F	0302.2	0304.8	4.3	4 116.8	38.9		
	2695	MANI	S/F	0303.6	0304.6	4.3	4 127.6	42.5		
	8800	MANI	S/F	0552.8	0554.5	6.8	4 436.8	145.6		
	2695	MANI	S	0553.7	0554.7	7.6	3 290.2	96.7		
	8400	BERN	20	0944.6	0948	27	18			
	8400	BERN	2	1111.2	1112.5	11	25			
	8400	BERN	46	1151.1	1154.3	37	150			
	2800	OTTA	21 GRF	1430	1545	195	8.6	4.3		
	8400	BERN	20	1437.3	1440.2	25	49			
	2800	OTTA	21 GRF	1440	1445	20	5.8	2.9		
	2800	OTTA	1 S	1441.7	1442	1	3.8	1.9		
	2800	OTTA	20 GRF	1520	1523	20	12	5		
	2800	OTTA	20 GRF	1751	1753.5	15	4.6			
	2800	OTTA	4 S/F	1823.5	1827.1	6.5	52	29.2		
	2800	OTTA	29 PBI	1830	1830	50	26.6	9.4		
	2800	OTTA	24 R	2000	2007	7	3.6	1.8		
	2800	OTTA	27AFRF	2000		210	3.6	3.3		
	2800	OTTA	24P R	2007		173	3.6			
	2800	OTTA	1 S	2040	2041.7	4	3.4	1.4		
	2800	OTTA	22 GRF	2055	2102	70	5.6	2.8		

SOLAR RADIO EMISSION
SELECTED FIXED FREQUENCY EVENTS

OCTOBER 1979

DAY OF MONTH	FREQUENCY	STATION	TYPE	STARTING TIME UT	TIME OF MAXIMUM UT	DURATION MINUTES	FLUX DENSITY $10^{-22}Wm^{-2}Hz^{-1}$ PEAK	FLUX DENSITY MEAN	INT	REMARKS
	2695	PENT	4 S/F	2211.2	2213	5	10.6	5		
	2695	PENT	3 S	2227	2229	9	13.2	4.4		
	2695	PENT	1 S	2244.5	2246.6	5	4	1.8		
	2695	PENT	1A S	2250	2253	6	3.8	1.9		
	2695	PENT	3 S	2251.2	2252	1	15.2	5.4		
	2695	PENT	26 FAL	2300	2330	30	-3.6	-1.8		
21	2800	OTTA	21 GRF	1225	1400	160	15.8			
	2800	OTTA	6 S	1324	1324	.3	18.4			
	2800	OTTA	3 S	1325.5	1328.3	10.5	97	38.2		
	2800	OTTA	29 PBI	1336	1336	22	16	6		
	2800	OTTA	1 S	1559	1600	3	2.4	1.2		
	2800	OTTA	21 GRF	1655	1850	170	4.8	2.5		
	2800	OTTA	4 S/F	1758.6	1758.9	1.8	14.6	7.3		
	2800	OTTA	4 S/F	2115	2115.6	2.5	19.4	7		
	2695	BOUL	3 S	2117 E	2117.5	1.5D	16	5		
22	2800	OTTA	27A RF	1245		250	4.8	4.4		
	2800	OTTA	24 R	1245	1300	15	4.8	2.4		
	2800	OTTA	24P R	1300		210	4.8			
	8400	BERN	4	1542.3	1542.9	8	150			OPR
	2800	OTTA	3 S	1542.5	1543.1	8	19.8	5		
	2800	OTTA	1 S	1556	1558	5	2.4	1.2		
	2800	OTTA	26 FAL	1630	1655	25	-4.8	-2.4		
	2800	OTTA	24O R	1710	1730	20	3.2	1.6		
	2800	OTTA	21 GRF	1805	1825	85	6.2	3		
	2800	OTTA	1 S	1808.5	1810	3	2.2	1.6		
	2800	OTTA	3 S	1819	1819.6	2	11.8	2.8		
	2800	OTTA	8 S	1903.3	1903.3	.1	12.2			
	2695	PENT	24 R	2015	2022	17	3.2	1.6		
	2695	PENT	27A RF	2015		180	3.2	2.9		
	2695	PENT	24P R	2022		143	3.2			
	2695	PENT	1 S	2030.9	2031	1	4	2		
	2695	PENT	20 GRF	2050	2115	50	4	2		
	2695	PENT	1 S	2210.8	2219	1.2	4.4	2.4		
	2695	PENT	26 FAL	2255	2315	20	-3.2	-1.6		
23	2800	OTTA	20 GRF	1520	1526	28	5.8	2.9		
	2800	OTTA	20 GRF	1551	1630	90	8.8	3.2		
	2800	OTTA	21 GRF	2020	2110	150	5.6	3		
	2800	OTTA	1 S	2031	2034	5	3	1.5		
24	8400	BERN	3	0943.3	0944.3	4	13			
	2800	OTTA	20 GRF	1310	1430	130	7.8	4.4		
	2800	OTTA	21 GRF	1555	1605	85	8.2	4.6		
	2800	OTTA	2 S/F	1559	1559.9	3	7.8	3.4		
	2800	OTTA	20 GRF	1835	1935	70	2.6	1.3		
	2695	PENT	20 GRF	2100	2140	105	5.8	2.9		
25	8800	MANI	S	0137.2	0138.3	4.6	3 38.4	12.8		
	2800	OTTA	21 GRF	1305	1420	135	3.6			
	2800	OTTA	8 S	1339.7	1339.7	.1	18.4			
	2800	OTTA	20 GRF	1640	1700	60	3.8	1.9		
	2800	OTTA	21 GRF	1830	1902	220	7.8	3.9		
	2800	OTTA	21 GRF	2043	2050	47	5.8	2.9		
	2800	OTTA	3 S	2047	2047.5	3	10.4	3.5		
26	2800	OTTA	1 S	1435.5	1436	1	4.4	2.2		
	2800	OTTA	21 GRF	1435	1438	14	3	1.5		
	2800	OTTA	24O R	1735	1755	20	3	1.5		
	2800	OTTA	24O R	1820	1935	75	4.8	2		
27	2800	OTTA	20 GRF	1710	1745	115	4.4	3		
	2800	OTTA	26O FAL	1925	1950	25	-4.4	-2.2		
29	2800	OTTA	20 GRF	1300	1340	55	4.2	2.1		
	2800	OTTA	22 GRF	1420 E	1523	105 D	5.8			
	2695	BOUL	3 S	1936	1939	10	19	6		
	2800	OTTA	4 S/F	1937.5	1939.5	8.5	56	15.6		
	2800	OTTA	30 PBI	1946	1946	30	2.2	1.1		
	2800	OTTA	1 S	1950	1950.3	1	3.4	1.5		
30	2800	OTTA	20 GRF	1630	1655	50	3.6	2		
	2800	OTTA	20 GRF	1807	1810	16	2.6	1.3		
	2800	OTTA	1 S	1849	1852	5	2.2	1.1		
	2800	OTTA	20 GRF	1920	2015	80	3.6	2.9		
	2695	PENT	26O FAL	2120	2140	20	-3.6	-1.8		
31	2695	MANI	S	0329.5	0330.3	1.9	1 8.3	2.8		
	8800	MANI	S	0329.7	0330.3	1.7	3 31.1	10.4		
	2800	OTTA	21 GRF	1425	1440	50	4.4	2.2		
	2800	OTTA	8 S	1428.1	1428.2	.5	3.6	1.8		
	2800	OTTA	20 GRF	1605	1620	100	2.6	1.8		
	2800	OTTA	1 S	2040	2045	10	2.8	1.2		

Observatories:

BERN = Berne BOUL = Boulder MANI = Manila OTTA = Ottawa ARO PENT = Penticton SGMR = Sagamore Hill

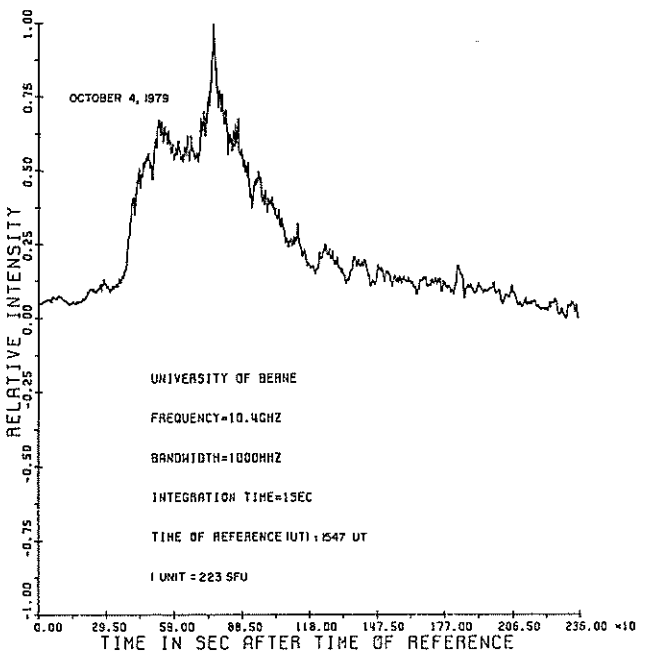
Explanation of Type Code:

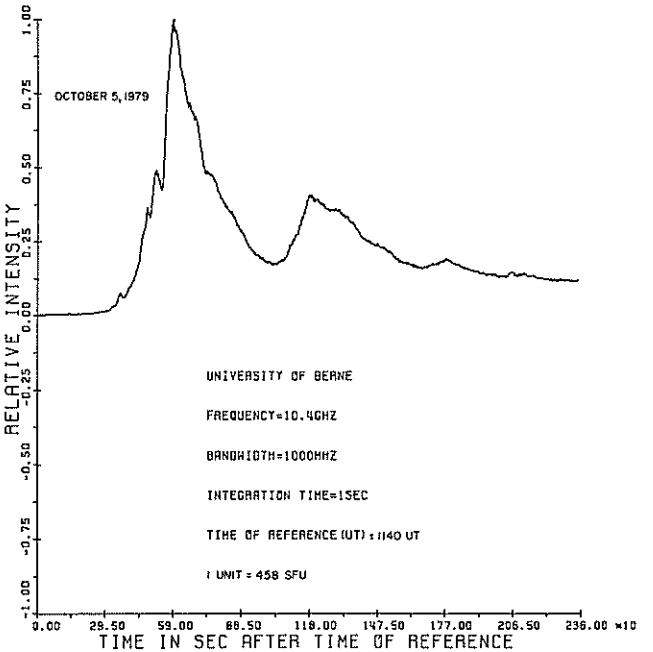
1 Simple 1	6 Minor	22 Simple 3F	27 Rise and Fall	32 Absorption	44 Noise Storm in Progress
2 Simple 1F	7 Minor +	23 Simple 3AF	28 Precursor	40 Fluctuation	45 Complex
3 Simple 2	8 Spike	24 Rise	29 Post Burst Increase	41 Group of Bursts	46 Complex F
4 Simple 2F	20 Simple 3	25 Rise A	30 Post Burst Increase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

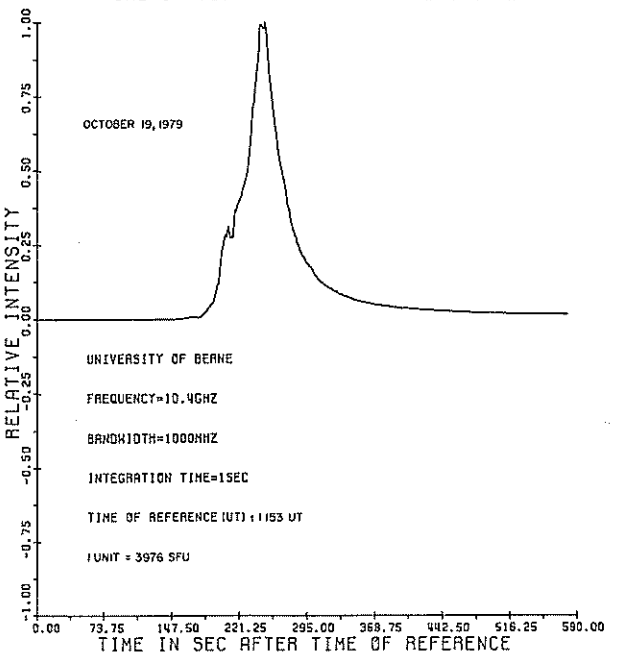
(Please see note on next page.)

SELECTED SOLAR NOISE BURSTS

OCTOBER 1979







Note: The September 1979 fixed frequency data from Palehua, Learmonth, Athens and Sagamore Hill that we published in SGD 422 Part I on pages 30-35 show peak flux densities a factor of 10 too small and burst durations incorrectly computed. A corrected version of these events will appear in the "Outstanding Occurrences" section of SGD 427 Part II in March 1980.

Palehua, Learmonth, Athens and Sagamore Hill fixed frequency observations for October 1979 have been omitted from the listing on pages 32-35 in this issue because of continued problems with the computer program that decodes these data.

PIONEER XII

OCTOBER 1979

DATE Oct '79	TIME (UT)	ESV (°)	U_{H^+} (Km/s)	N_{H^+} (H^+/CC)	T_{H^+} (x10^6 K)
1	0257	156.	604.	5.6	0.203
2	1604		603.	8.7	.269
3	1204		492.	17.3	.035
4	1505		368.	27.7	.076
5	1547		325.	19.7	.093
6	0042		303.	25.2	.052
7	----		----	----	----
8	1553		349.	28.7	.041
9	1449		292.	22.	.038
10	0805		----	----	----
11	1626		279.	20.7	.042
12	0825		334.	14.7	----
13	1010		325.	16.8	.075
14	1456		339.	10.2	.049
15	1524	148.	268.	21.7	----
16	1558		294.	43.5	.047
17	1501		298.	34.7	.082
18	1704		308.	20.4	.049
19	1228		370.	19.4	.09
20	1219		364.	28.3	.134
21	0538		378.	10.4	.115
22	1521		332.	17.4	----
23	1208		327.	17.	.122
24	1151		295.	15.6	.034
25	1301		302.	15.1	.029
26	1156		317.	32.5	.012
27	1148		297.	26.3	.017
28	0825		397.	72.3	.028
29	1221		331.	29.2	.044
30	1242		328.	21.7	.051
31	1429	138.	284.	58.	.025

*Solar wind velocities were in excess of 1200KM/SEC. Experienced some difficulty in the data reduction during this period.

INFERRED IP MAGNETIC FIELD

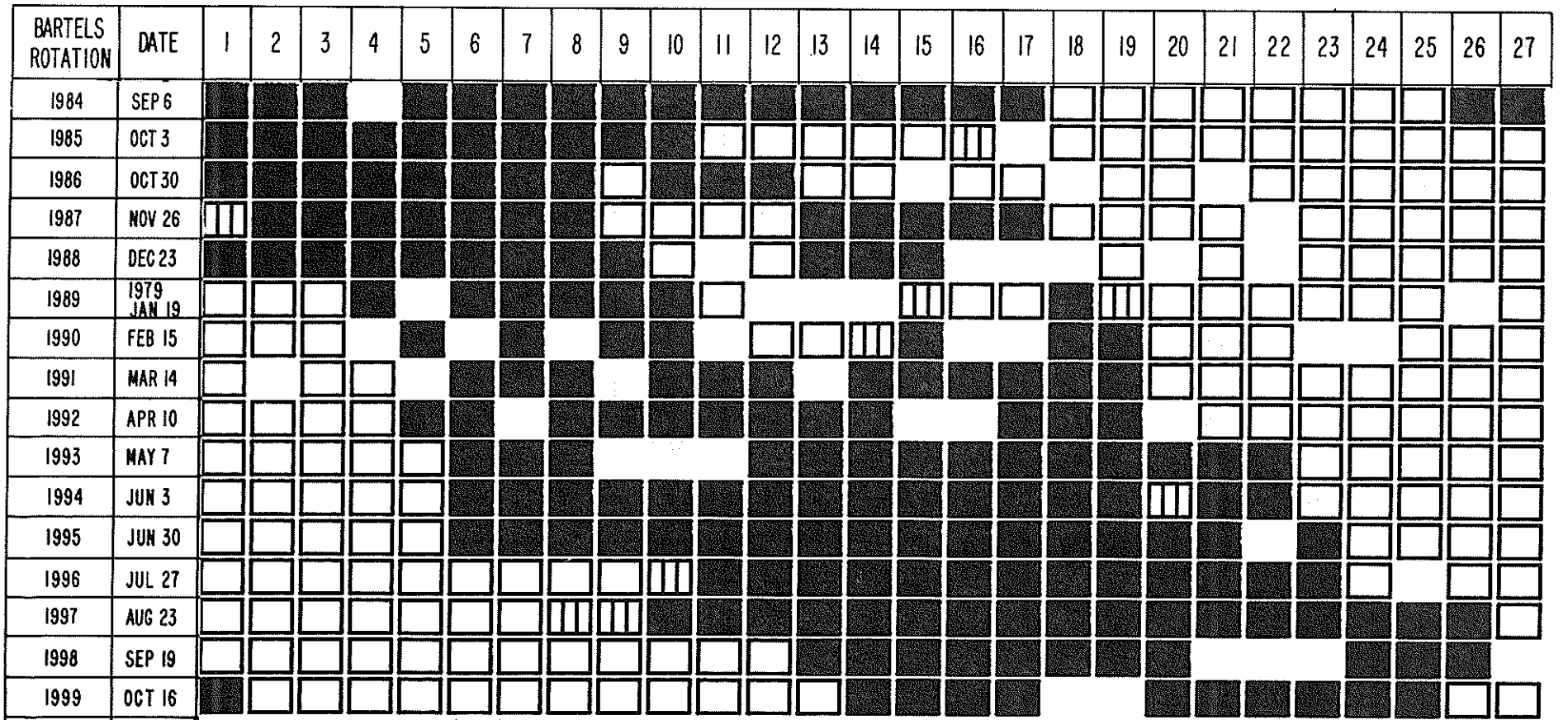
BARTELS ROTATION	DATE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27
1982	JUL 19									TA							–	–		TA				AT	AT *		TA	
1983	AUG 15					TA			AT		AT	AT		AT	TA						A*						TA	
1984	SEP 11			TA		AT				TA		T*					A*		–				–			A*	TA	–
1985	OCT 8		* TA		T*		AT					–	–						TA	TA –		AT		–				
1986	NOV 4			–			–	AT –	–			–						*	AT	–		AT	AT	AT	AT			
1987	DEC 1	AT	AT		–				–			– TA		–	AT –		– AT –	TA –	–	A*	–		*			–	AT –	–
1988	DEC 28		–	–	–	–			–	AT *			TA	TA T*			– AT –		– TA				–	TA –			– TA	–
1989	1979 JAN 24		–			*		TA				TA	TA							*							AT	
1990	FEB 20		TA		–	TA –	TA			–	TA –	TA		TA		TA A*		TA A*		TA A*				A*				
1991	MAR 19		AT			AT		T*						*	–	–	–	– TA –			AT		T* TA	TA –	A*	–		TA A*
1992	APR 15		A* TA	T* AT				TA TA			T*						TA	*	–	–	AT –	TA				A*		–	TA
1993	MAY 12									–	–		AT			*		TA			AT AT					– –		– –
1994	JUN 8	TA	TA A*		TA						–	AT		–					T*	–	TA		TA T*			AT T*	–	TA
1995	JUL 5	TA	TA	AT		TA		AT A*	TA		TA –			TA		AT				*				TA T*				TA
1996	AUG 1			AT		A*	–		TA –	–	–		T*				*	–			AT					AT *		
1997	AUG 28			–	A*						AT									–		T*	–	AT	TA –		TA AT	
1998	SEP 24						A*		AT	–		TA		A*	*			TA		–			TA			TA	TA –	*
- 1999	OCT 21								T*			TA																

■ = definitely towards the sun □ = definitely away from the sun

T = towards the sun A = away from the sun * = effect doubtful or not discernible - = 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.

STANFORD MEAN SOLAR MAGNETIC FIELD



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 which affect the Earth during the given Bartels Rotation.

STANFORD MEAN SOLAR MAGNETIC FIELD (MICROTESLA)

	1978		1979									
	NOV.	DEC.	JAN.	FEB.	MARCH	APRIL	MAY	JUNE	JULY	AUG.	SEPT.	OCT.
DAY												
01	-18	-72	11	.	-36	-4	26	41	97	24	-5	-32
02	-21	-39	.	-1	.	16	13	82	86	21	-8	-27
03	-36	-7	15	30	.	57	6	137	70	6	-36	-27
04	-28	17	-6	27	-24	44	10	115	35	4	-28	-36
05	-19	19	-25	-13	-6	11	45	104	-33	2	-20	-45
06	-12	9	-26	1	46	9	68	78	-61	-6	-24	-31
07	3	5	.	50	64	14	101	15	-81	-8	-39	-22
08	-6	-15	.	88	56	67	134	-27	-80	-8	-46	-45
09	-17	-26	.	59	.	102	126	-50	-70	-6	-54	.
10	-3	-37	27	39	.	124	75	-76	-68	-16	-45	.
11	5	-19	.	40	21	138	31	-82	-75	-43	-47	.
12	9	-16	27	30	63	100	-13	-52	-23	-59	-67	-55
13	.	13	.	.	100	51	-66	-52	-23	-46	-74	-62
14	16	31	45	78	106	-12	-104	-37	-20	-33	-53	-49
15	20	43	21	62	.	-51	.	-28	-24	-38	-41	.
16	.	65	36	27	24	.	.	-42	-30	-61	-26	-6
17	34	.	48	6	45	-121	.	-43	-26	-57	-18	20
18	42	59	59	.	.	-117	-27	-35	-32	-41	3	29
19	.	30	37	-52	-56	-72	-29	-32	-16	4	15	25
20	55	18	18	.	-81	-40	-36	-37	-10	.	41	52
21	35	32	9	-86	-81	-27	-34	-24	.	41	46	64
22	40	27	-15	.	.	-32	-43	0	-16	55	64	69
23	28	-3	.	-80	-51	-40	-56	-7	6	58	59	48
24	27	-20	-54	-52	-41	.	-51	-7	33	68	65	50
25	18	-26	-64	.	-28	.	-30	10	58	74	63	35
26	2	-32	-70	19	.	-99	-16	17	69	77	40	26
27	-17	-63	-64	10	-29	-92	-17	29	83	47	37	16
28	-48	-51	-27	0	-36	-57	-4	47	92	40	24	3
29	-61	-36	12		-12	.	19	64	90	32	21	-9
30	-65	-22	.		-26	3	10	93	82	1	7	-7
31		-21	.		-28		9		53	-1		-22

DOT SYMBOL ENTRY INDICATES NO DATA AVAILABLE FOR THE DAY.

CORONAL HOLES

Helium D3 Chromosphere at Solar Limb

OCTOBER 1979

Big Bear Solar Observatory

Only two D3 limb observations were made during the month of October. These data are presented in numerical form rather than graphically.

Position angles of coronal hole boundaries (in degrees)

Date	North	South
9 October	No holes.	
18 October		-166° to +168°

BOULDER GEOMAGNETIC SUBSTORM LOG

OCTOBER 1979

DATE	ONSET TIME	DIRECTION	COMMENTS
01	0950	West	
	1040	West	
	1130	West	
	1425	West	
02	1520		Slow onset.
03	0210	East	
	1150	West	
	1635		
04	0805	West	Initial onset. Strongest of several injections; moderate to strong SS; field recovery at 1100 UT.
05			Field quiet until 1430 UT, then unsettled balance of day.
06	0205	East	
	0605	≈center	Moderate to strong SS. SSC, minor magstorm conditions through 1800 UT.
07	0502		Small positive impulse H-component mid and low latitude stations. Field active balance of day.
	0610	East	
	1340	West	Strong SS. Moderate ring current established after 1700 UT.
08			Intermittent minor magstorm conditions
09	0625		Positive impulse H-component mid and low latitude stations. Minor magstorm conditions through 1800 UT.
	1010		Strong SS.
10	0200	East	1st of double onset.
	0230	East	2nd of double onset.
	0930	West	Onset of SS with numerous injections lasting to 1330 UT.
	1330	West	Final field recovery at 1510 UT.
11	0810	East	1st of double onset. Start of active period lasting through 1730 UT.
	0840	≈center	2nd of double onset.
	1140	West	
	1425		
12	1005	West	
	1100	West	
	1140	West	
	1345		
			Mid and low latitude and polar cap stations unsettled after 2000 UT. No distinctive SS activity.
13			Field intermittently unsettled, no distinctive SS activity.
14			Field intermittently unsettled, no distinctive SS activity.
15			Field active 0730-1730 UT.
	1055	West	
	1255	West	
16	0235	East	Weak SS.
	0525	East	1st of multiple SS, weak SS.
	0550	East	2nd of multiple SS, weak SS.
	0610	East	3rd of multiple SS, weak SS.
	0630	East	4th of multiple SS, weak SS.
17			Quiet day.
18			Quiet day.
19			Quiet day.
20	0715	East	Many injections maintained activity through 1315 UT.
21			Field unsettled after 0600 UT.
	1455		
22	0530	East	
	0740	East	
23			Field unsettled 0400 - 1600 UT. No distinctive SS activity.
24	0520		Weak SS, localized Gillam-Lynn Lake.
	0710	East	
	1025		Diffuse onset.
	1250	West	
	1610		
25	0705	West	Strong SS Alaska
26			Intermittent periods unsettled. No distinctive SS activity.
27	0440		Weak SS, localized Gillam-Lynn Lake.
	0730		Localized SS Ft. Yukon - Inuvik.
28			Field unsettled to active 0700 - 1600 UT. No distinctive SS activity.
29			Field intermittently unsettled.
	0905		1st of double onset, weak SS.
	0930		2nd of double onset, weak SS.
30			Field intermittently unsettled.
	0925	West	
	1230	West	
31	1020		Onset of unsettled period lasting through 1900 UT. Numerous minor injections during this time.

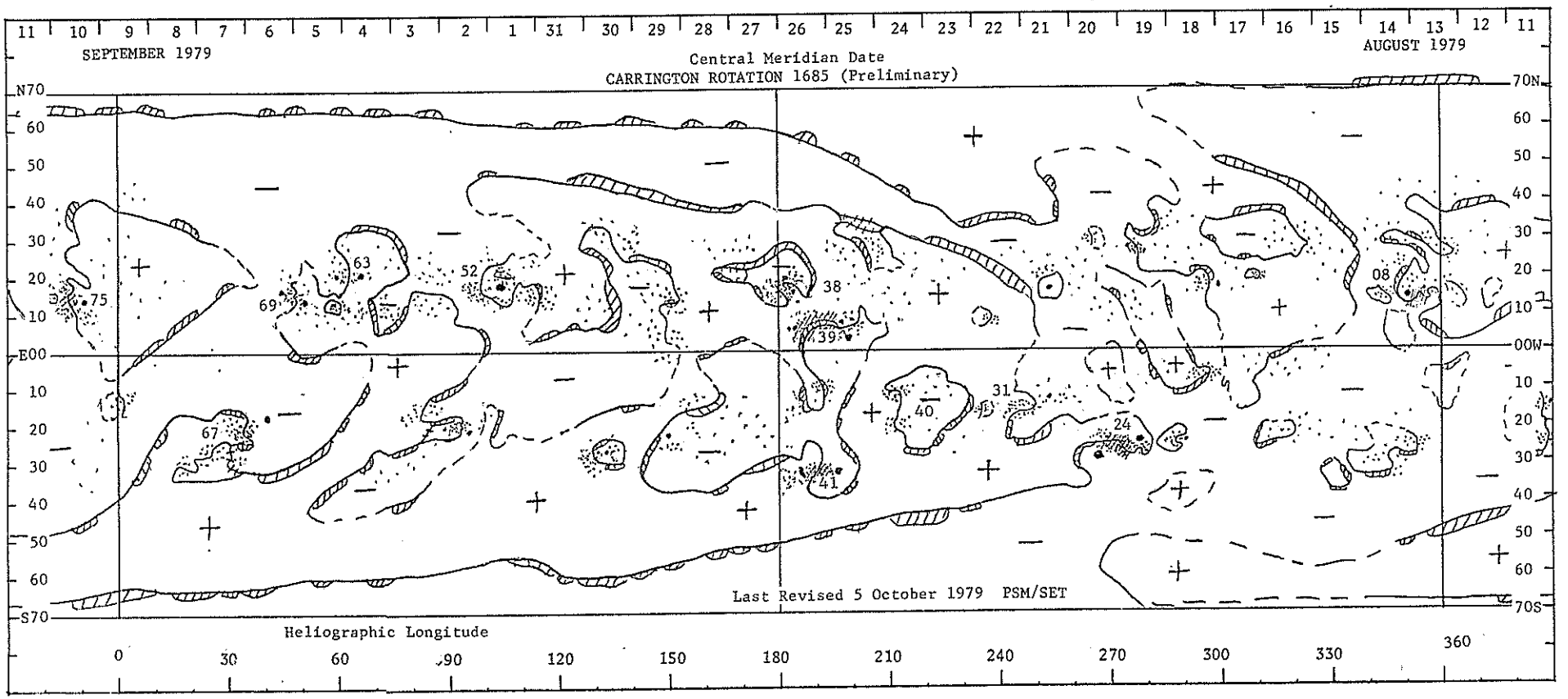
SGD 423 Part I (Prompt)

SEPTEMBER 1979 DATA

Contents

Hα SYNOPTIC CHART

CARRINGTON ROTATION 1685 (PRELIMINARY)



Hα SYNOPTIC CHART

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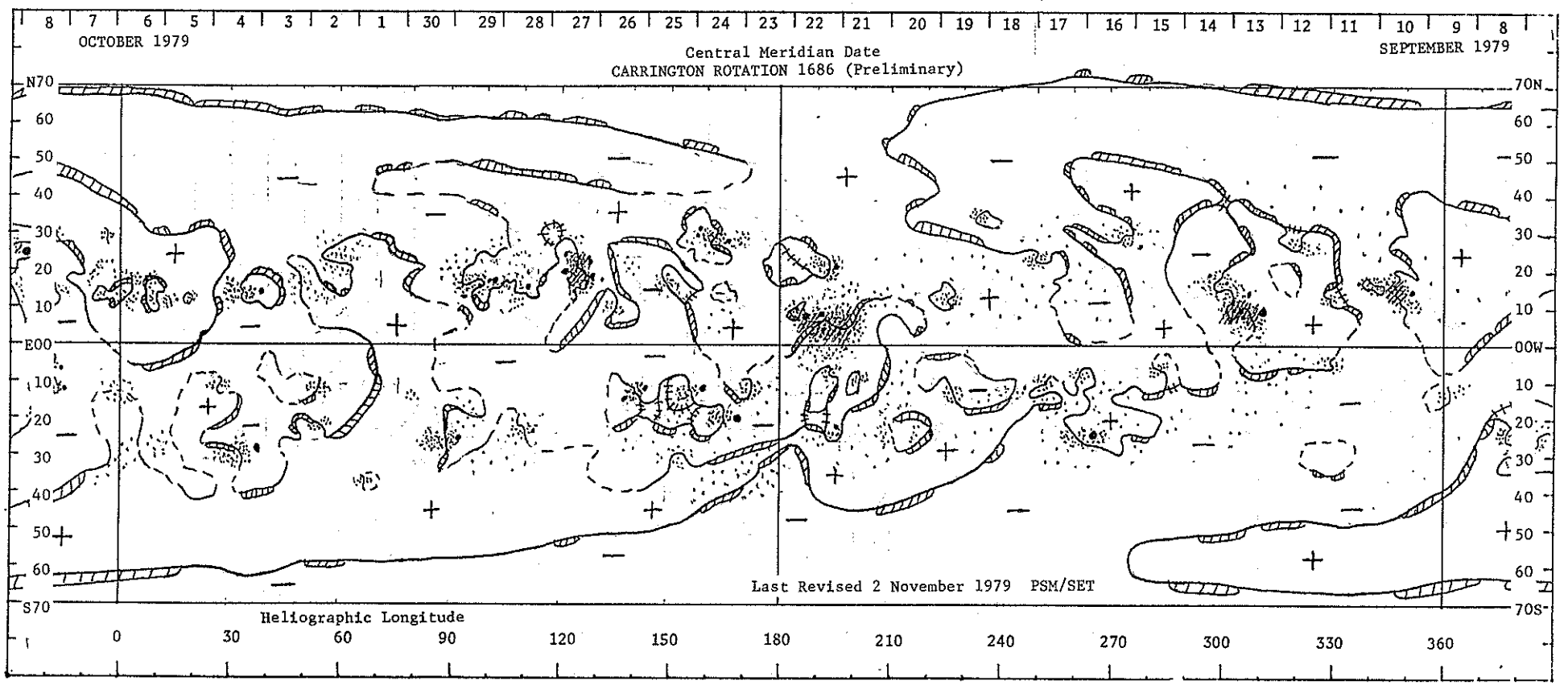
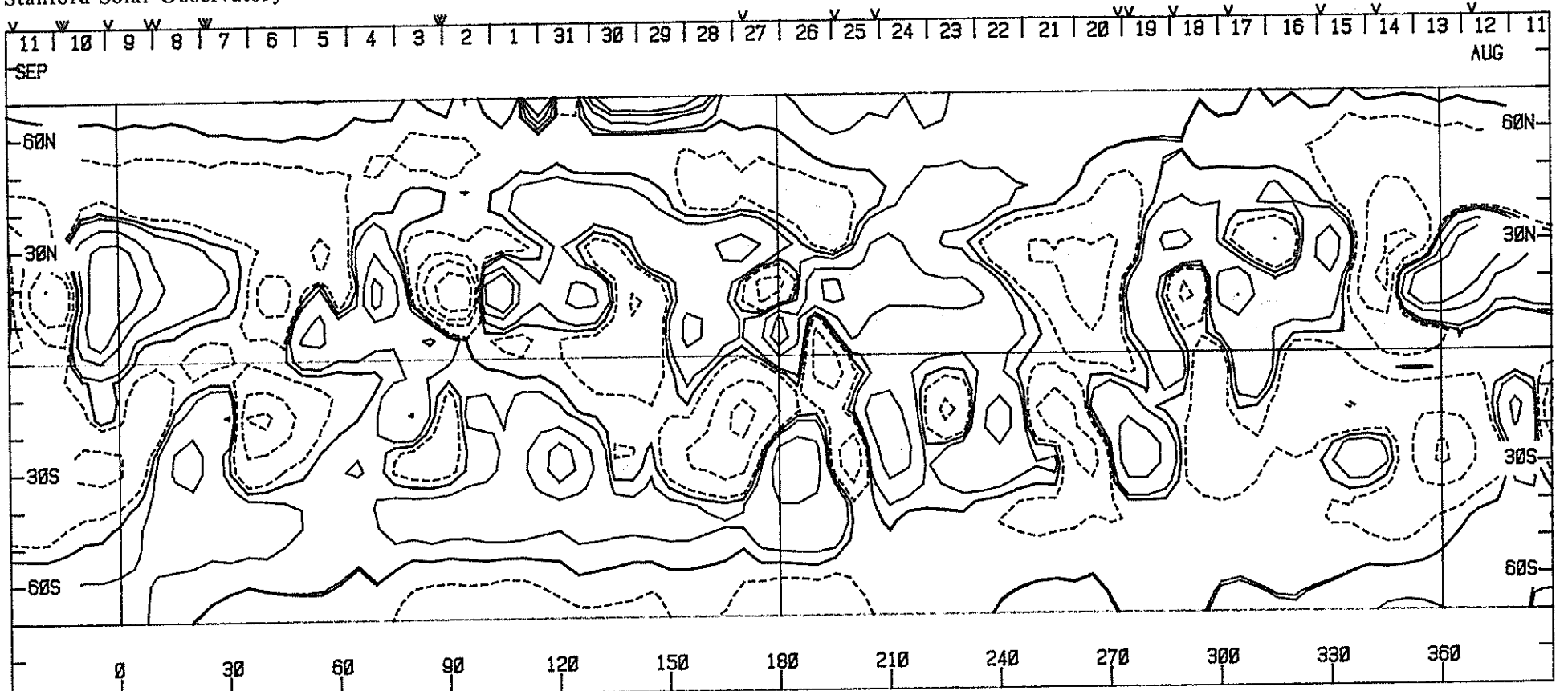


SOLAR MAGNETIC FIELD SYNOPTIC CHART

CARRINGTON ROTATION 1685

Stanford Solar Observatory

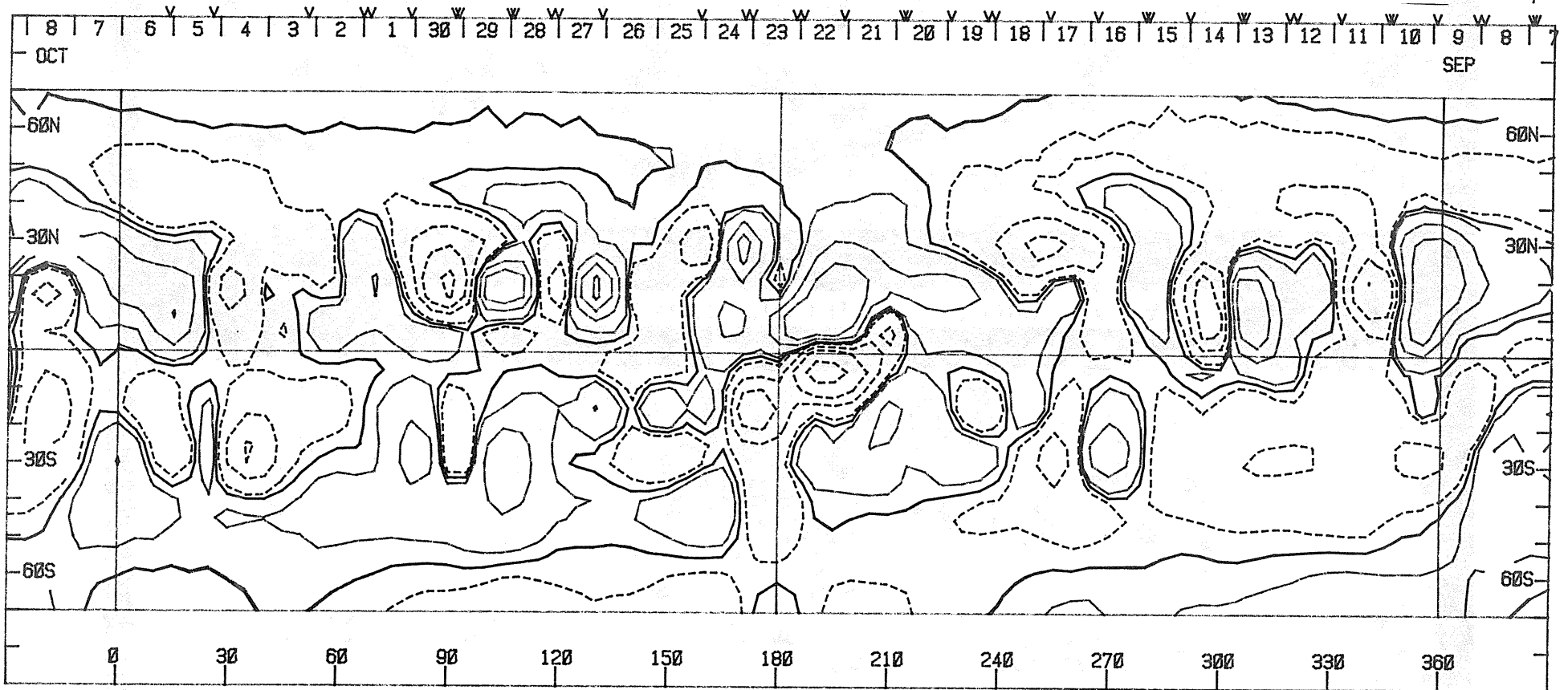
0,±100,200,500... μT

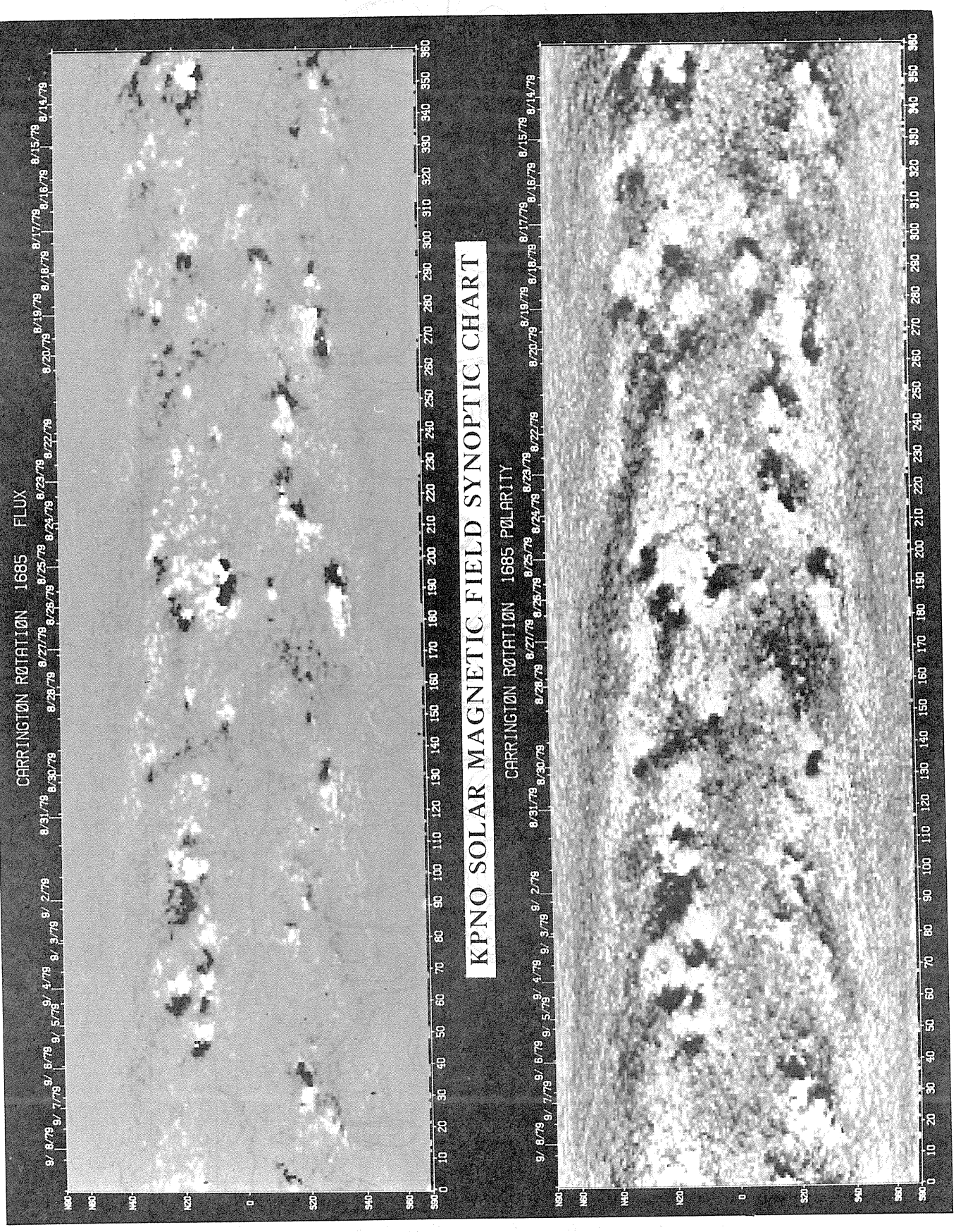


SOLAR MAGNETIC FIELD SYNOPTIC CHART
CARRINGTON ROTATION 1686

Stanford Solar Observatory

0, ±100, 200, 500... μT

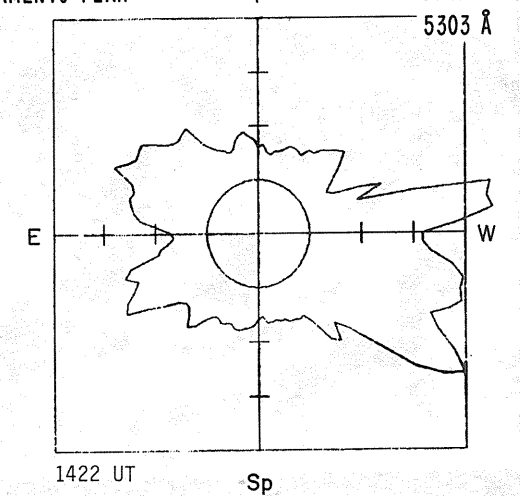



CARRINGTON ROTATION 1685 FLUX
CARRINGTON ROTATION 1685 POLARITY
KPNO SOLAR MAGNETIC FIELD SYNOPTIC CHART

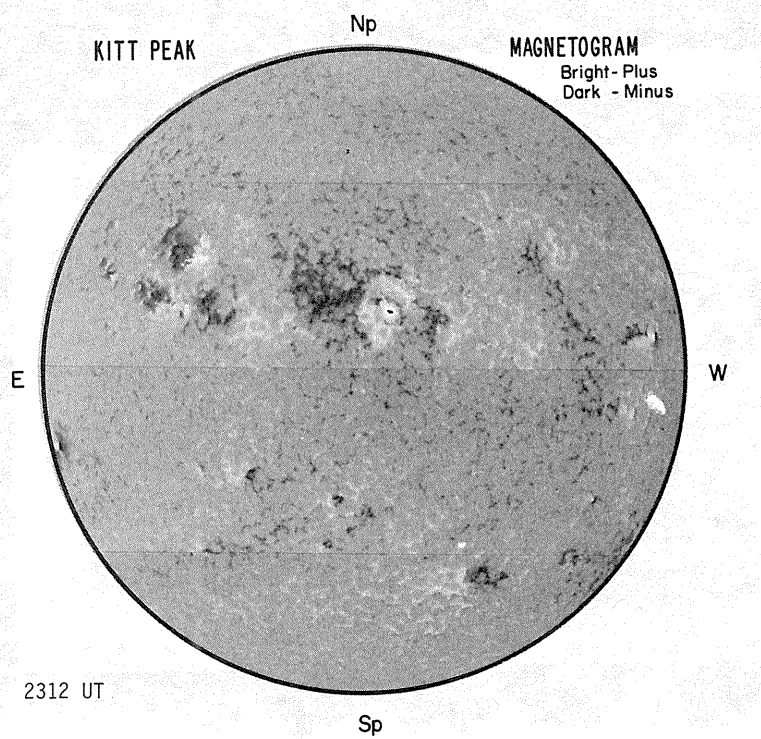
CARRINGTON ROTATION 1686 FLUX
CARRINGTON ROTATION 1686 POLARITY
KPNO SOLAR MAGNETIC FIELD SYNOPTIC CHART

SEPTEMBER 1, 1979 (P = 20.95, B_o = 7.19, L_o = 114.06)

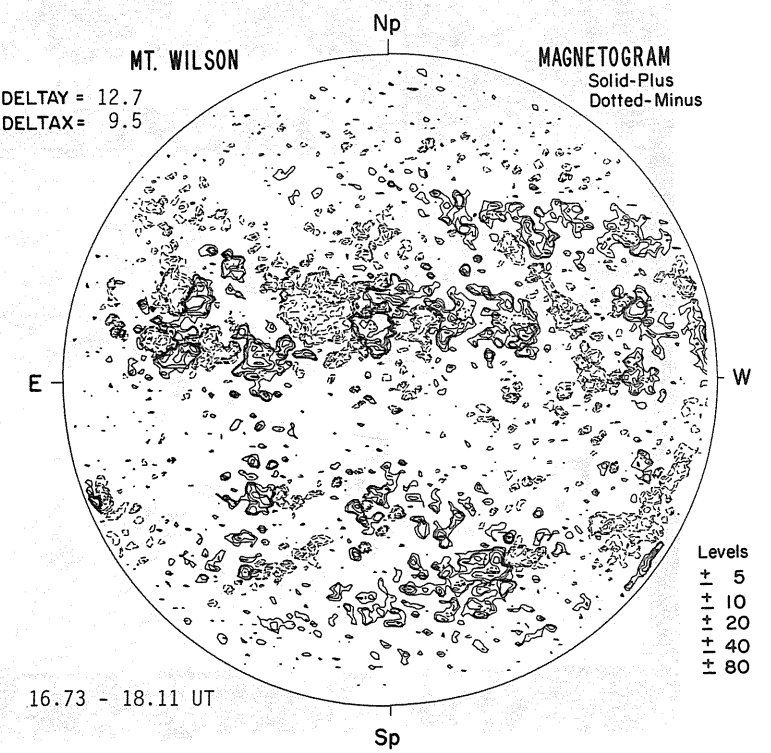
SACRAMENTO PEAK



1422 UT



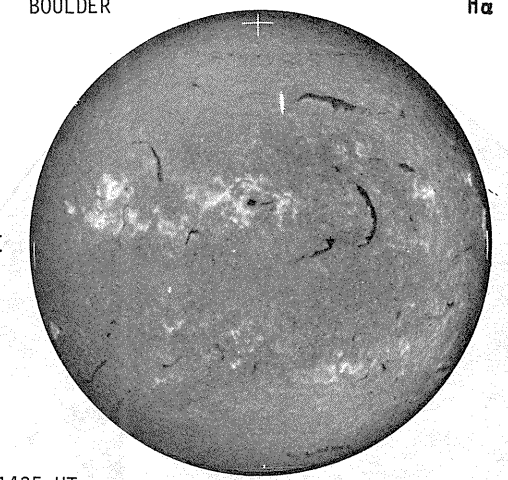
2312 UT



16.73 - 18.11 UT

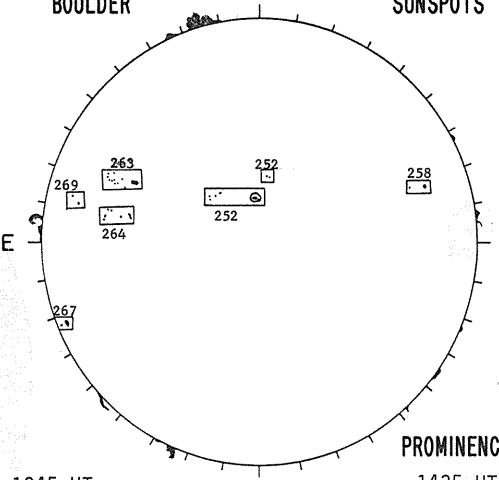
01

BOULDER Np Hα



1435 UT

BOULDER Np SUNSPOTS

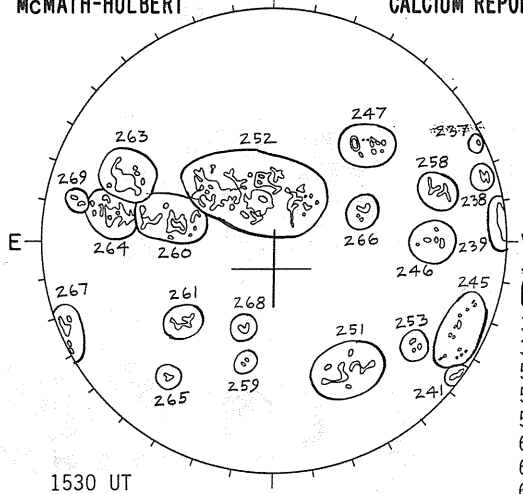


1345 UT

PROMINENCES

1435 UT

McMATH-HULBERT Np CALCIUM REPORT



1530 UT

GOOD	S
38- 0800-3.0	
39- 4500-3.0	
51- 1200-2.5	
52- 5500-3.0	
58- 0800-3.0	
60- 1800-2.5	
63- 2000-3.5	
64- 1800-3.0	
65- 0200-2.5	
67- 1200-3.0	
69- 0300-3.0	

NOSC LA POSTA Np 2.0 CM

NO DATA

E SCHEDULE W

---- UT Sp Ant. Temp. Unit 100° K

NOSC LA POSTA Np 8.6 MM

NO DATA

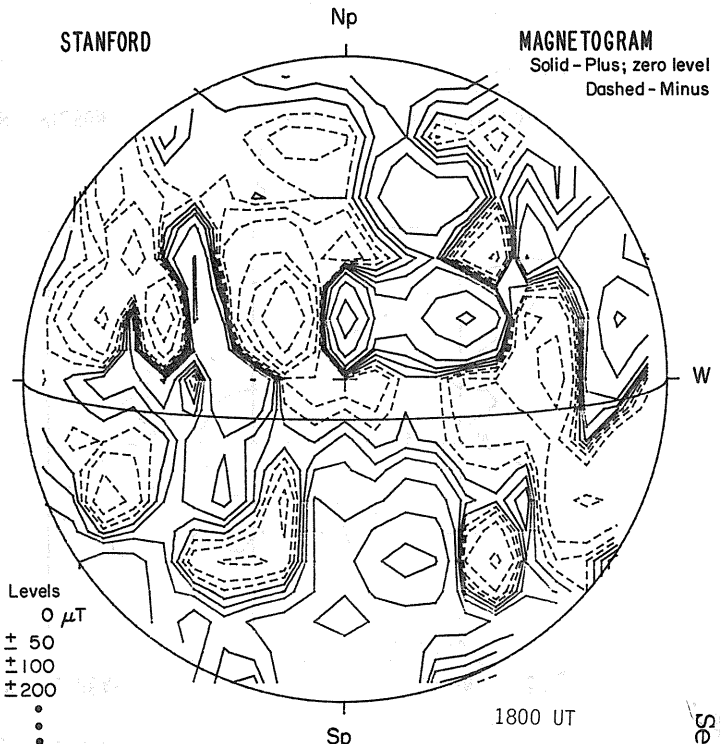
E SCHEDULE W

---- UT Sp Ant. Temp. Unit 100° K

STANFORD Np MAGNETOGRAM

Solid - Plus; zero level

Dashed - Minus



Levels

0 μT

± 50

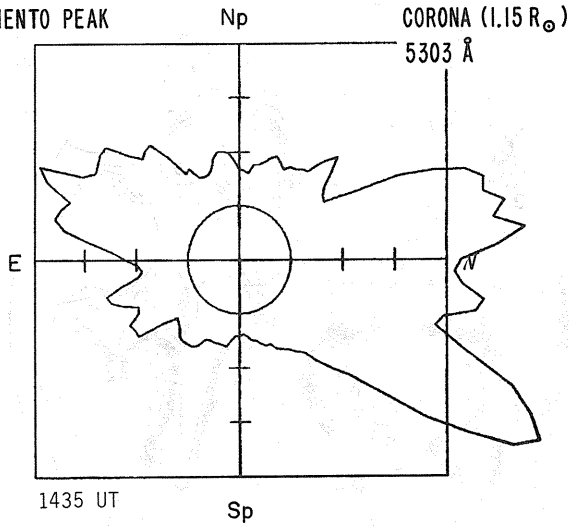
±100

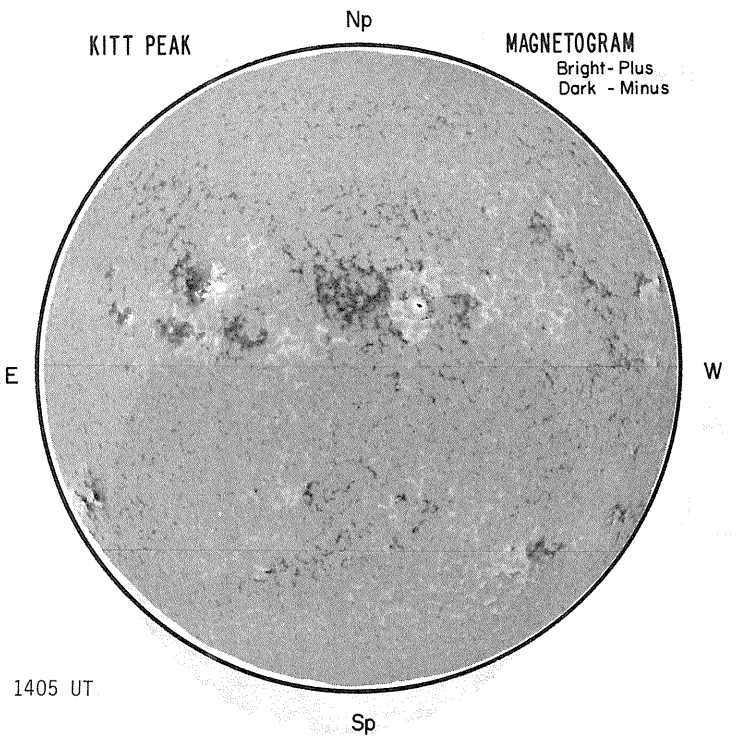
±200

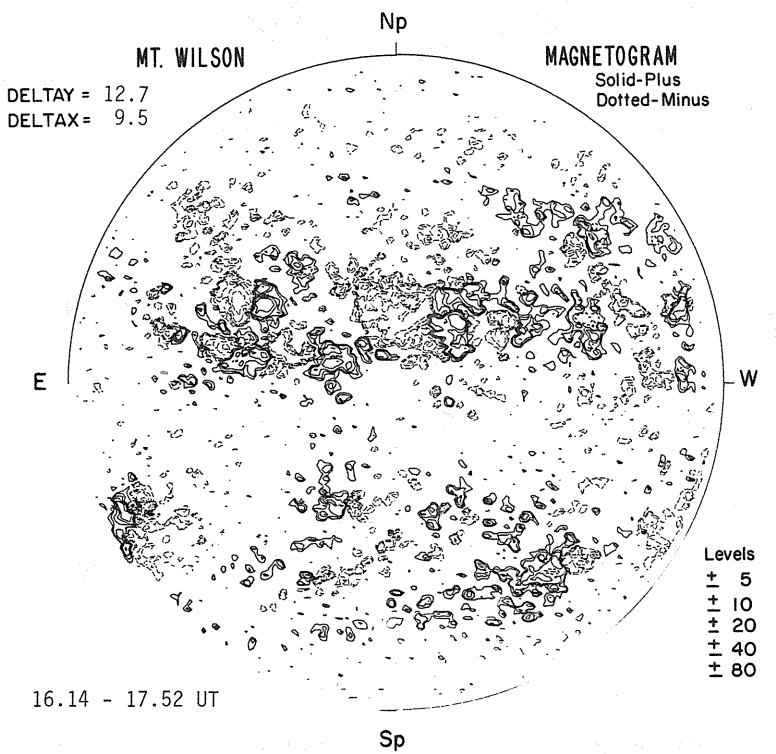
1800 UT

SEPTEMBER 2, 1979 (P = 21.20, B_o = 7.20, L_o = 100.86)

SACRAMENTO PEAK

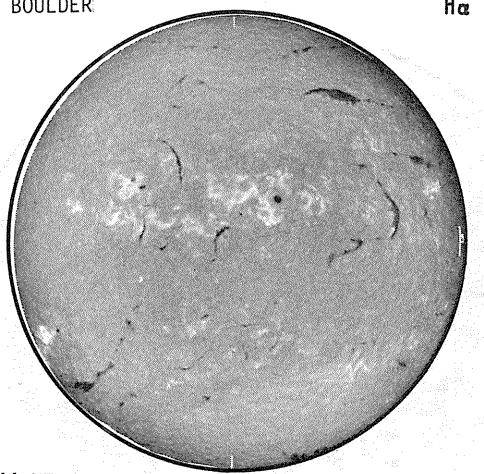






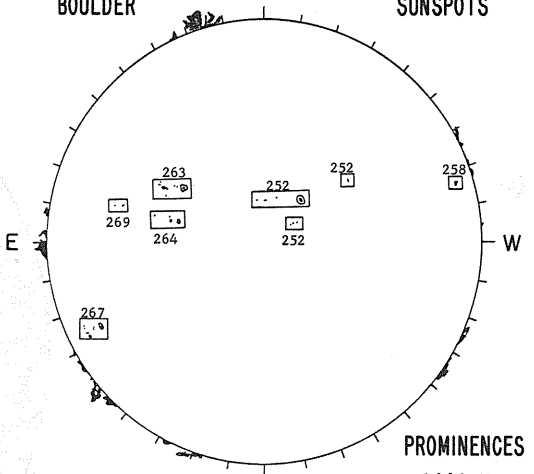
02

BOULDER Np Hα



1444 UT

BOULDER Np SUNSPOTS

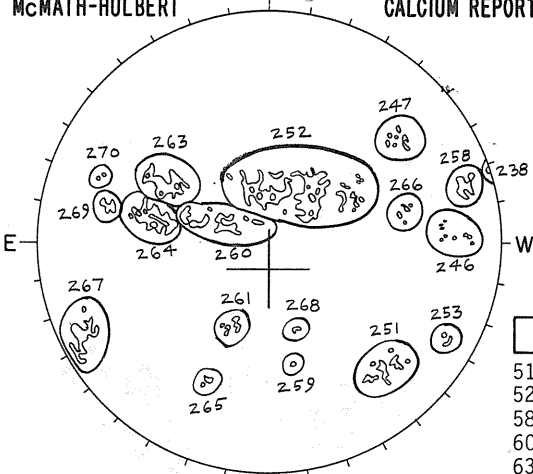


1400 UT

PROMINENCES

1444 UT

McMATH-HULBERT Np CALCIUM REPORT



1510 UT

POOR	S
51-	1400-3.0
52-	5500-3.0
58-	0800-3.0
60-	1500-2.5
63-	2000-3.5
64-	1800-3.0
67-	2500-3.5
69-	0500-3.0

NOSC LA POSTA Np 2.0 CM

NO DATA

E SCHEDULE W

---- UT Sp Ant. Temp. Unit 100° K

NOSC LA POSTA Np 8.6 MM

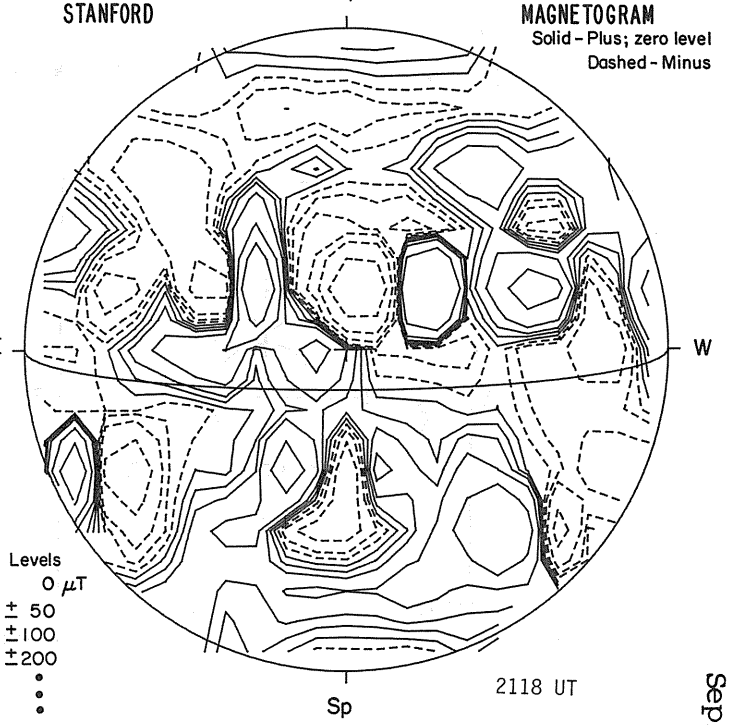
NO DATA

E SCHEDULE W

---- UT Sp Ant. Temp. Unit 100° K

STANFORD Np MAGNETOGRAM

Solid - Plus; zero level
Dashed - Minus

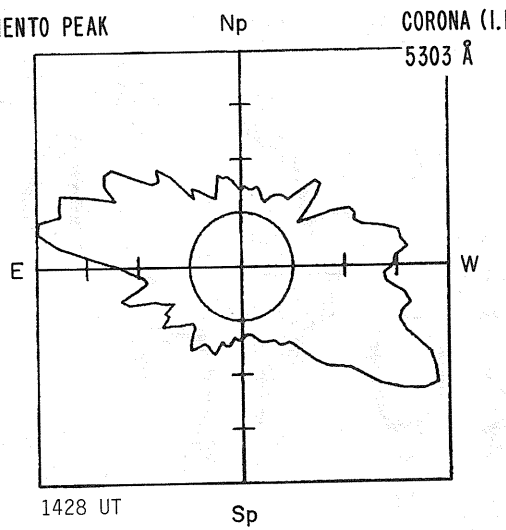


2118 UT

53
Sep 79

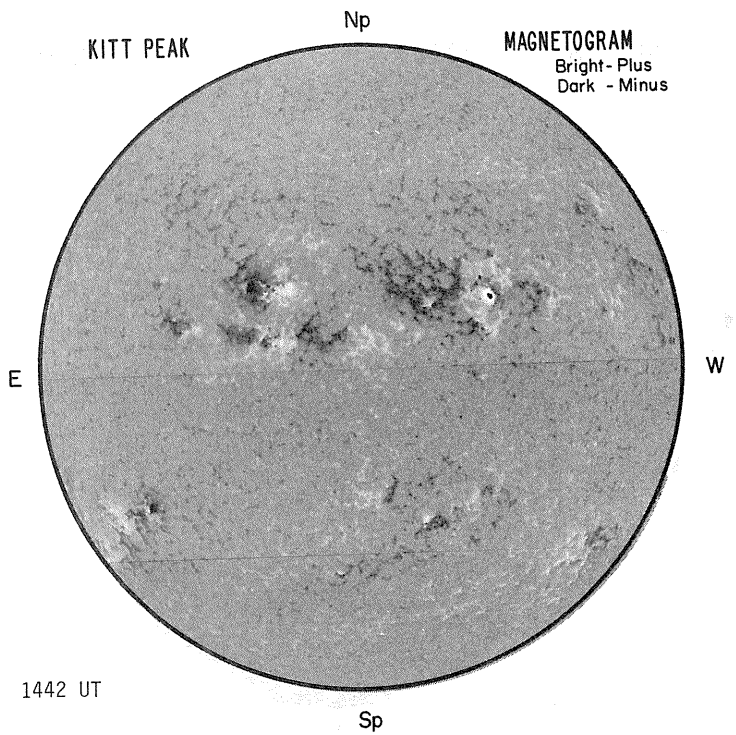
SEPTEMBER 3, 1979 (P = 21.45, B_o = 7.22, L_o = 87.65)

SACRAMENTO PEAK



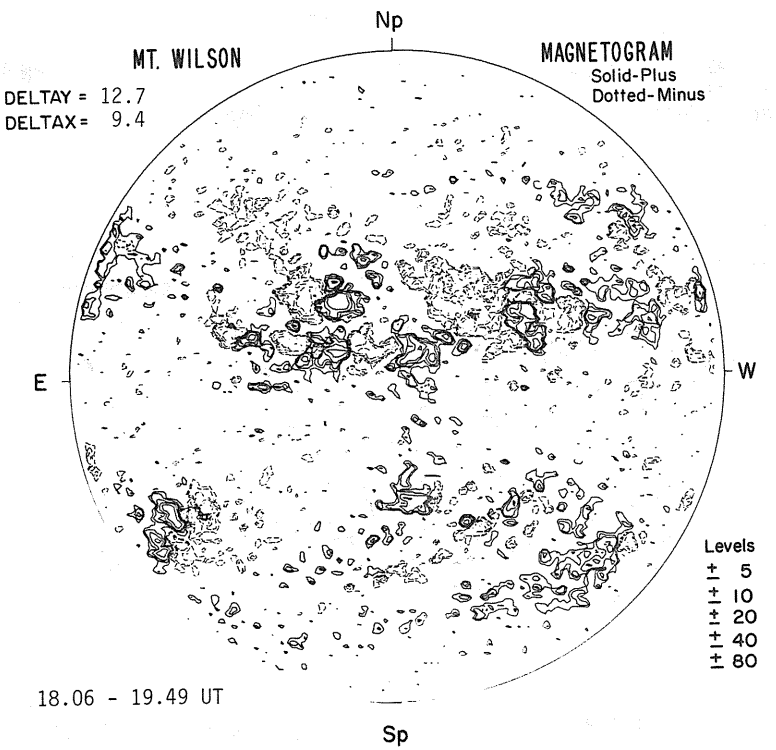
1428 UT

KITT PEAK



1442 UT

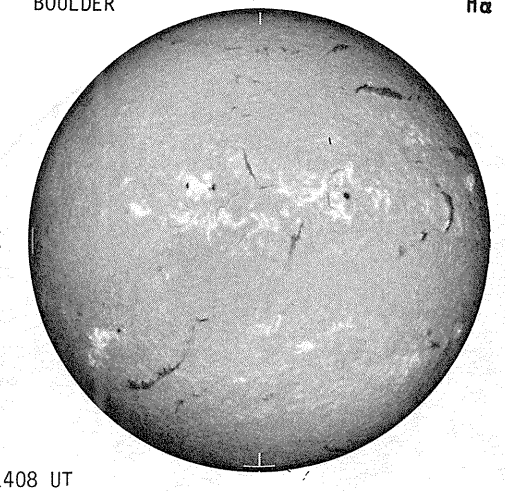
MT. WILSON



18.06 - 19.49 UT

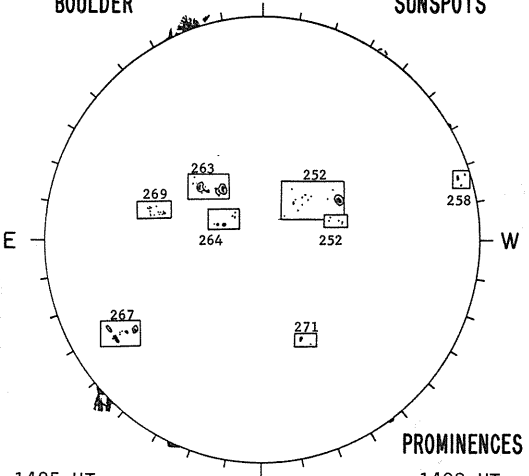
03

BOULDER Np Hα



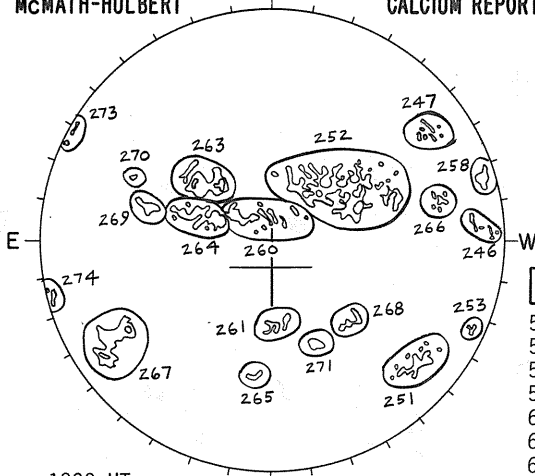
1408 UT

BOULDER Np SUNSPOTS



1425 UT PROMINENCES 1408 UT

McMATH-HULBERT Np CALCIUM REPORT



1230 UT

FAIR	S
51-	1900-2.5
52-	5800-3.0
53-	0300-2.5
58-	1000-3.0
60-	1500-2.5
63-	2300-3.0
64-	1700-2.5
65-	0200-2.5
67-	3600-3.0
69-	0900-3.5
71-	0500-2.5

NOSC LA POSTA Np 2.0 CM

NO DATA

E WEATHER W

---- UT Sp Ant. Temp. Unit 100° K

NOSC LA POSTA Np 8.6 MM

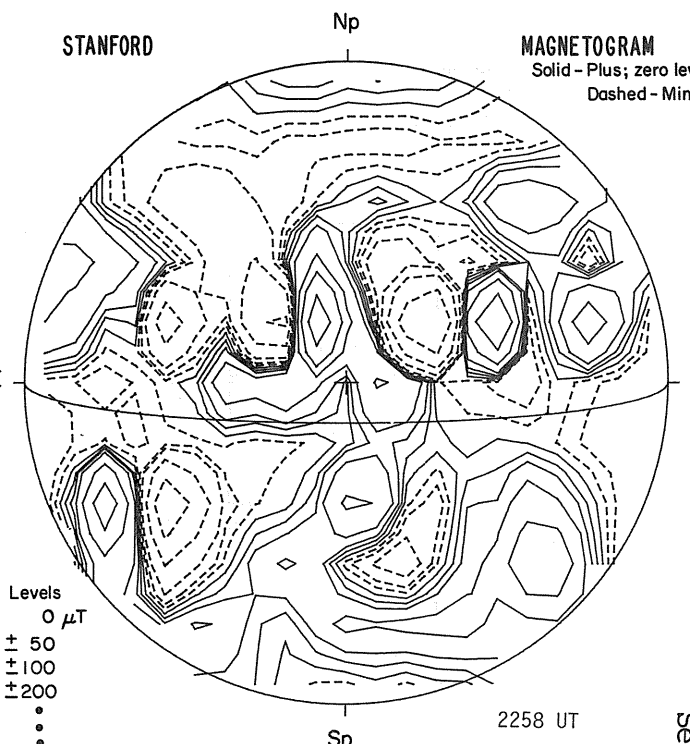
NO DATA

E WEATHER W

---- UT Sp Ant. Temp. Unit 100° K

STANFORD Np MAGNETOGRAM

Solid - Plus; zero level
Dashed - Minus



Levels
0 μT
± 50
± 100
± 200

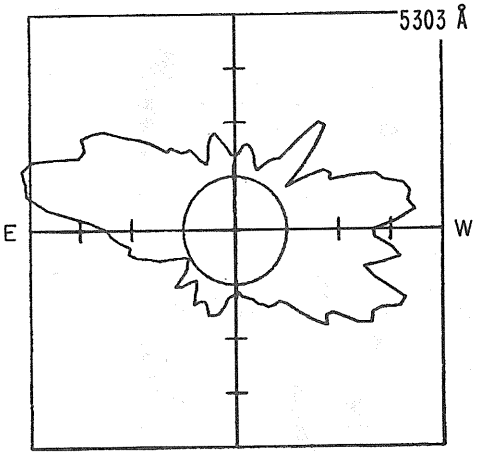
2258 UT

55
Sep 79

SEPTEMBER 4, 1979 (P = 21.69, B_o = 7.23, L_o = 74.44)

SACRAMENTO PEAK

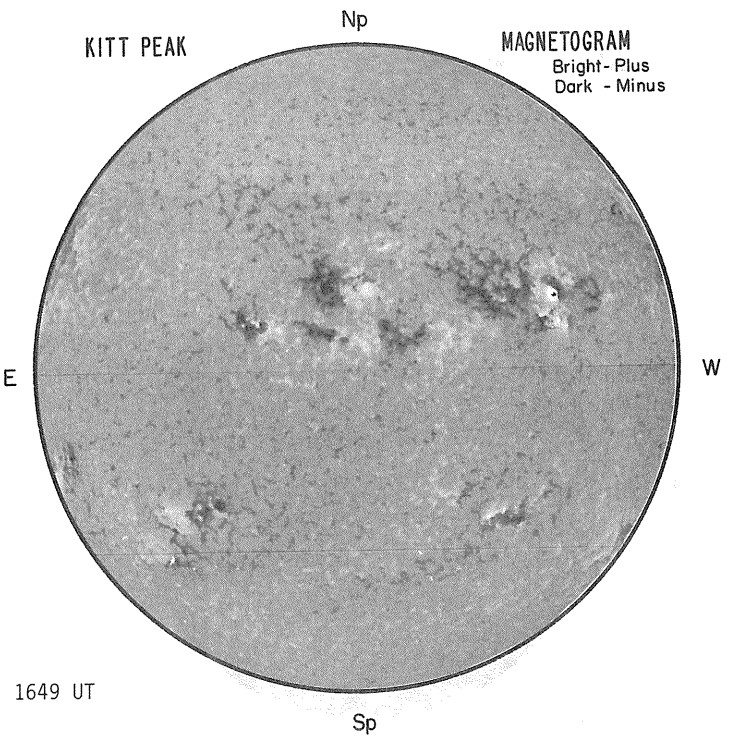
CORONA (1.15 $R_\odot$)
5303 Å



1418 UT

KITT PEAK

MAGNETOGRAM
Bright - Plus
Dark - Minus

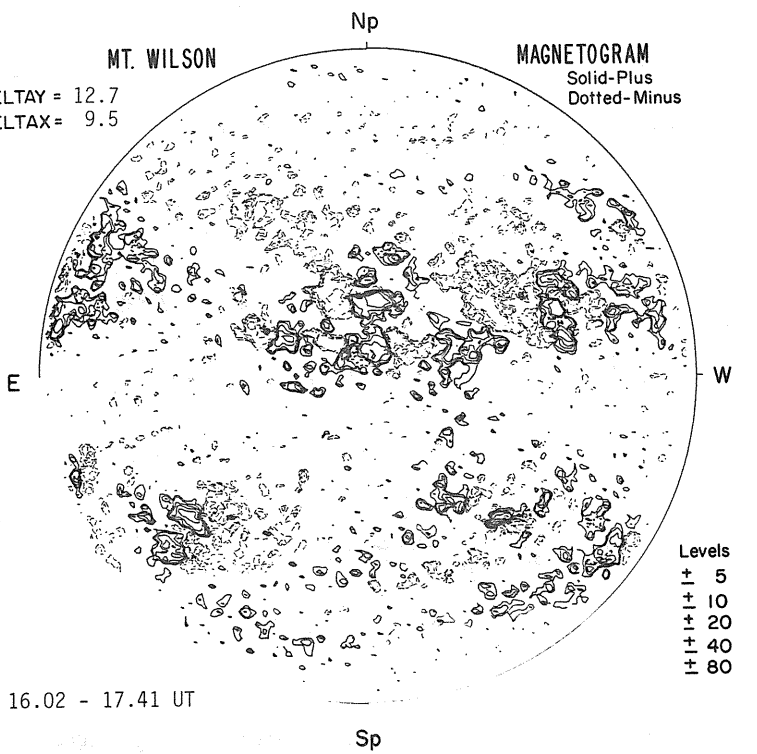


1649 UT

MT. WILSON

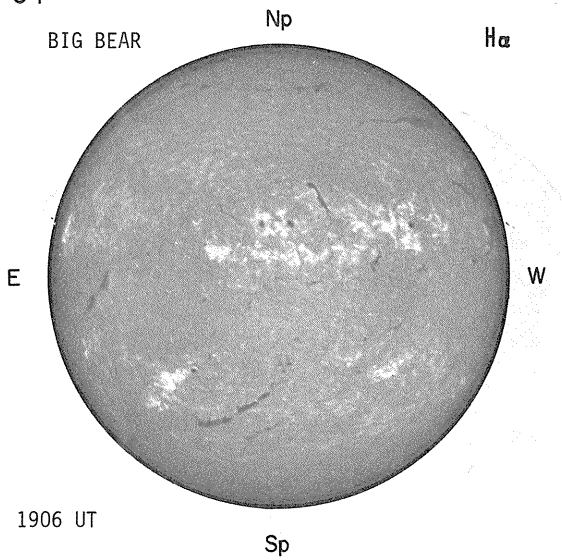
DELTAY = 12.7
DELTAX = 9.5

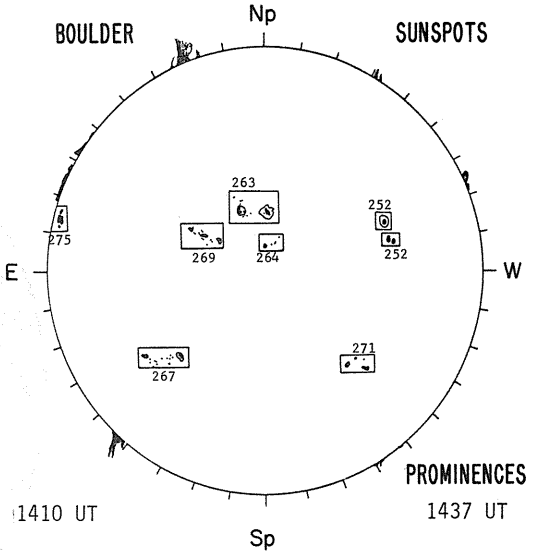
MAGNETOGRAM
Solid-Plus
Dotted-Minus

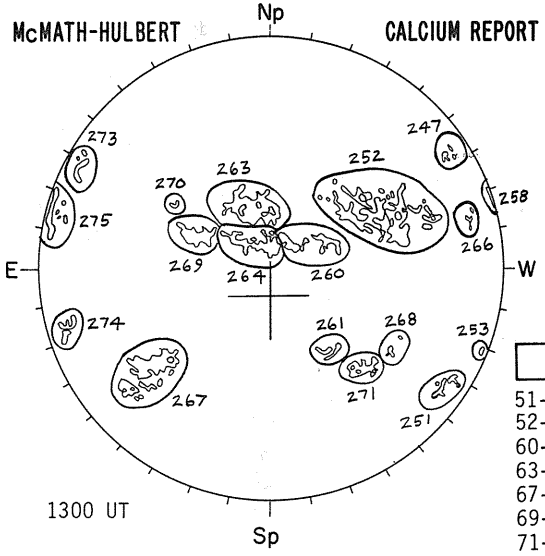


16.02 - 17.41 UT

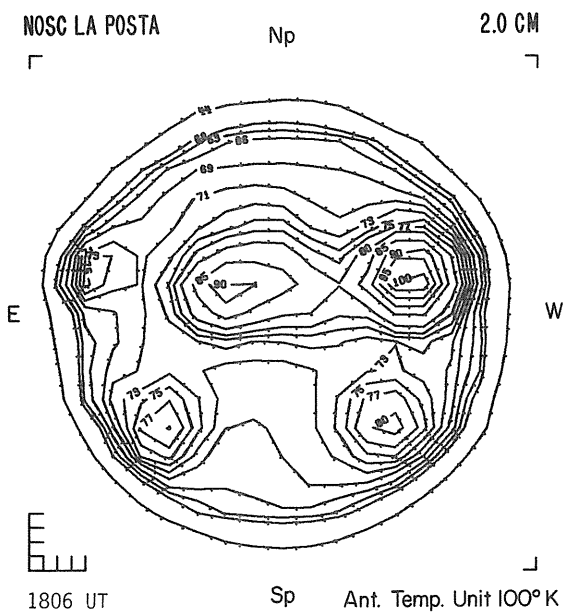
04

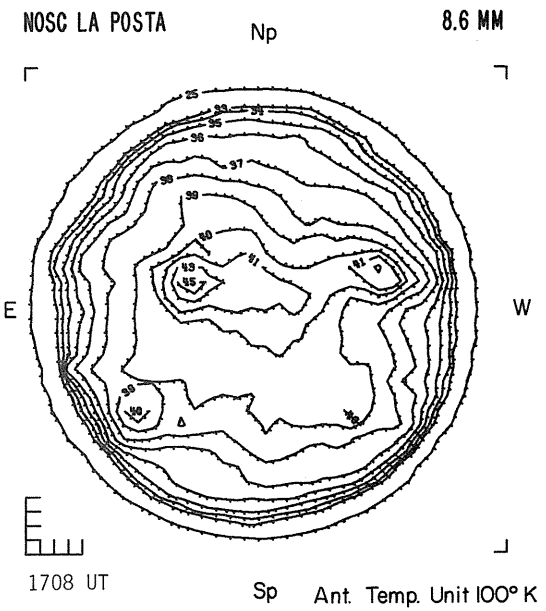


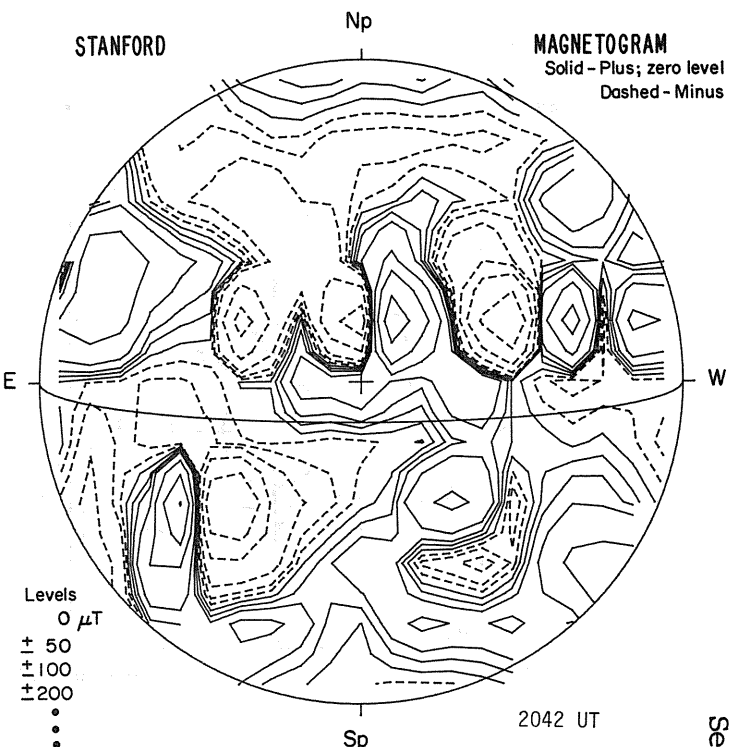




GOOD	S
51-	1600-2.5
52-	5800-4.0
60-	1500-2.5
63-	2800-3.0
67-	4000-3.0
69-	1400-3.0
71-	1000-3.0
75-	2700-3.5







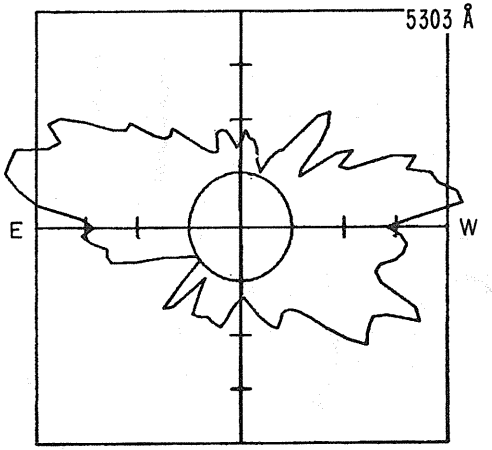
SEPTEMBER 5, 1979 (P = 21.93, B_o = 7.24, L_o = 61.23)

SACRAMENTO PEAK

Np

CORONA (1.15 $R_\odot$)

5303 Å



1539 UT

Sp

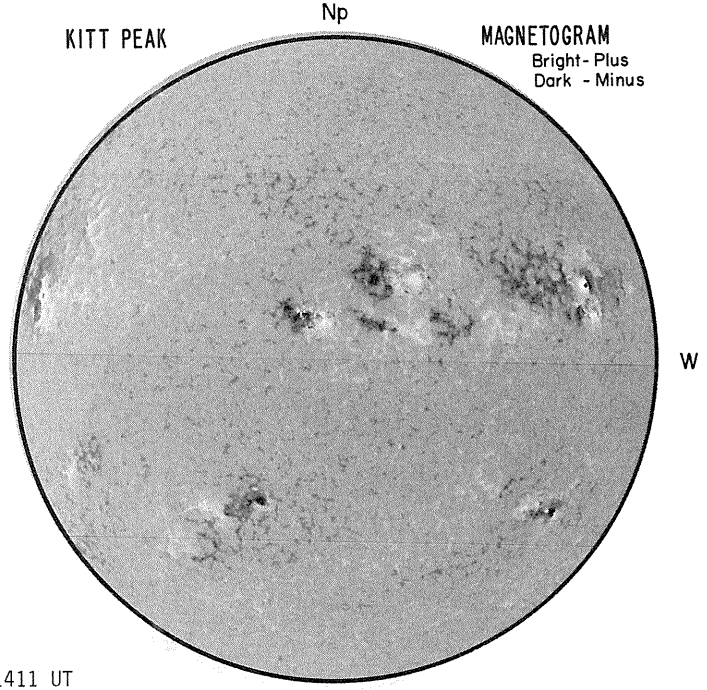
KITT PEAK

Np

MAGNETOGRAM

Bright - Plus

Dark - Minus



1411 UT

Sp

MT. WILSON

DELTAY = 12.7

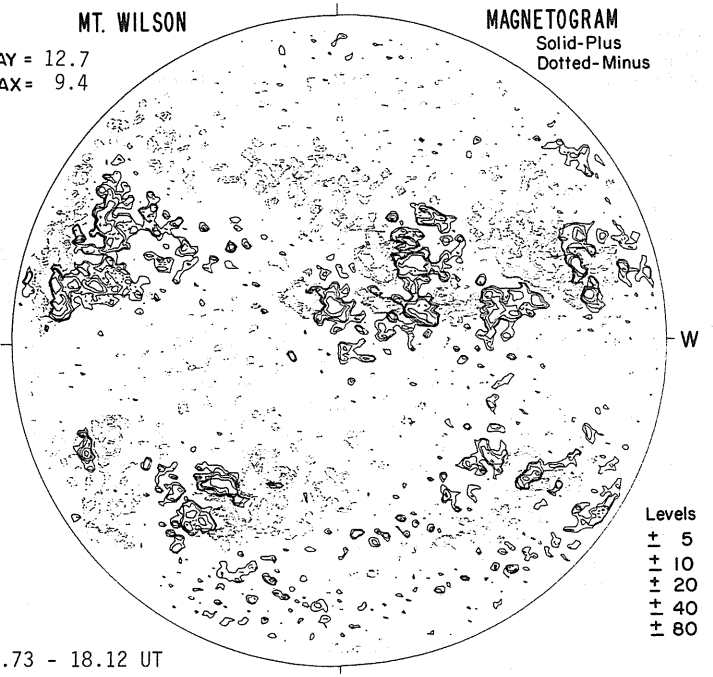
DELTAX = 9.4

Np

MAGNETOGRAM

Solid-Plus

Dotted-Minus

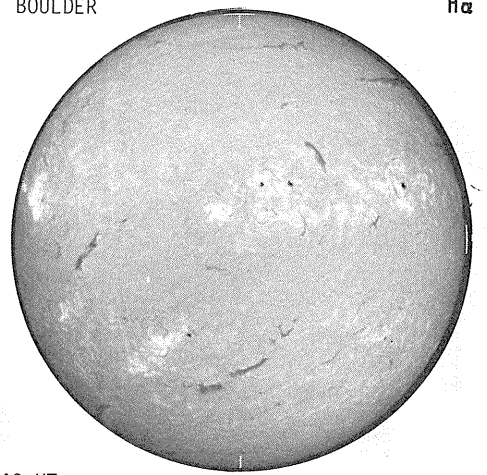


16.73 - 18.12 UT

Sp

05

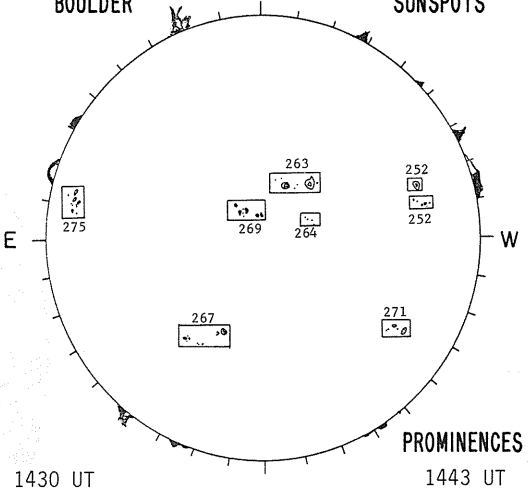
BOULDER Np Hα



E W Sp

1443 UT

BOULDER Np SUNSPOTS



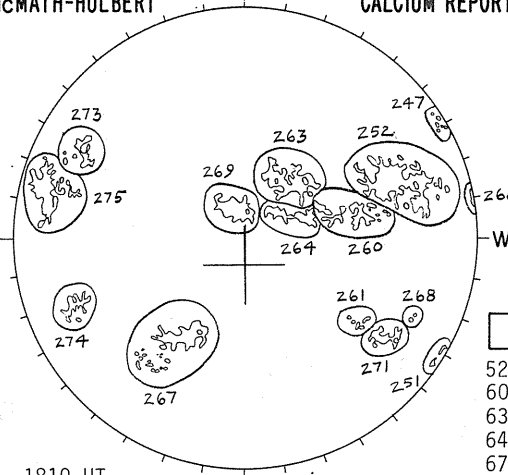
E W Sp

1430 UT

PROMINENCES

1443 UT

McMATH-HULBERT Np CALCIUM REPORT



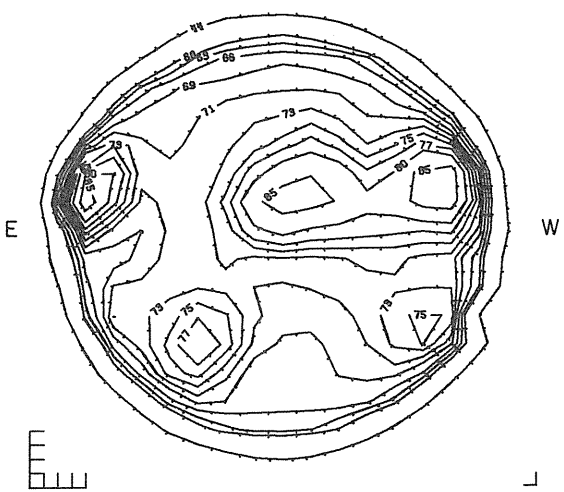
E W Sp

1810 UT

GOOD	B

52- 6500-3.0
60- 1700-2.5
63- 2500-3.0
64- 1400-4.0
67- 3600-3.0
69- 1800-3.0
71- 1400-2.5
74- 1300-2.5
75- 5500-3.5

NOSC LA POSTA Np 2.0 CM

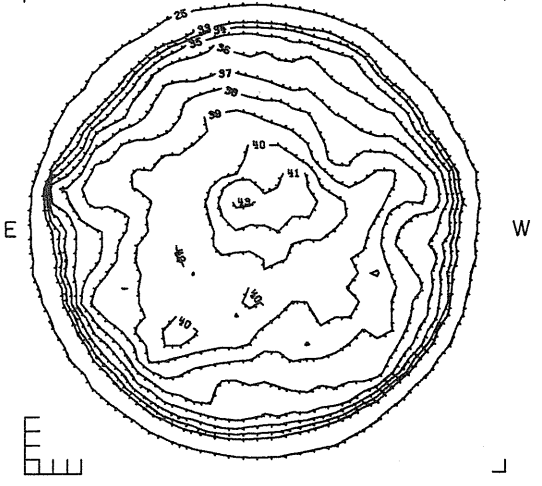


E W Sp

1716 UT

Ant. Temp. Unit 100° K

NOSC LA POSTA Np 8.6 MM



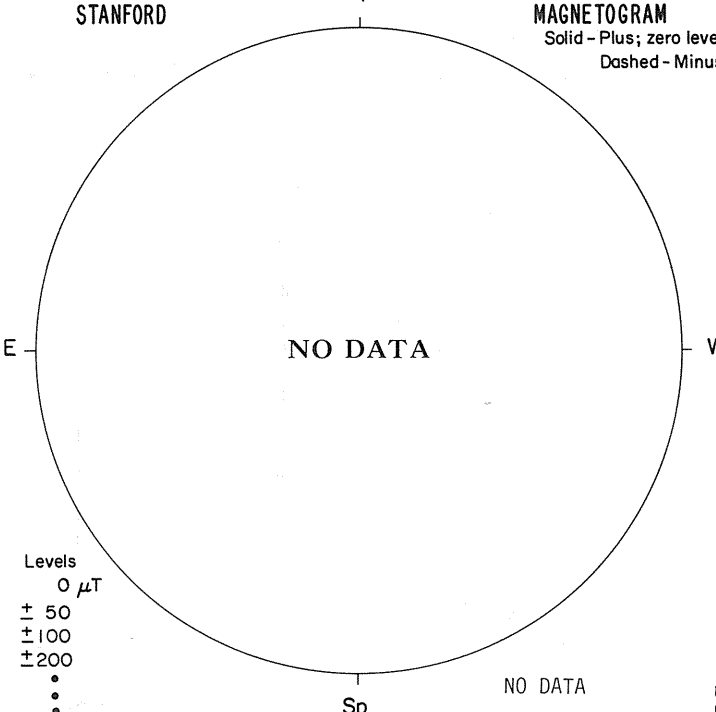
E W Sp

1623 UT

Ant. Temp. Unit 100° K

STANFORD Np MAGNETOGRAM

Solid - Plus; zero level
Dashed - Minus



E W Sp

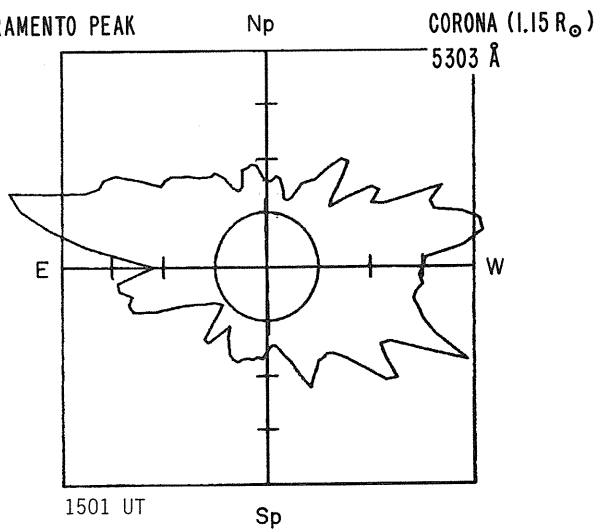
Levels
0 μT
± 50
±100
±200

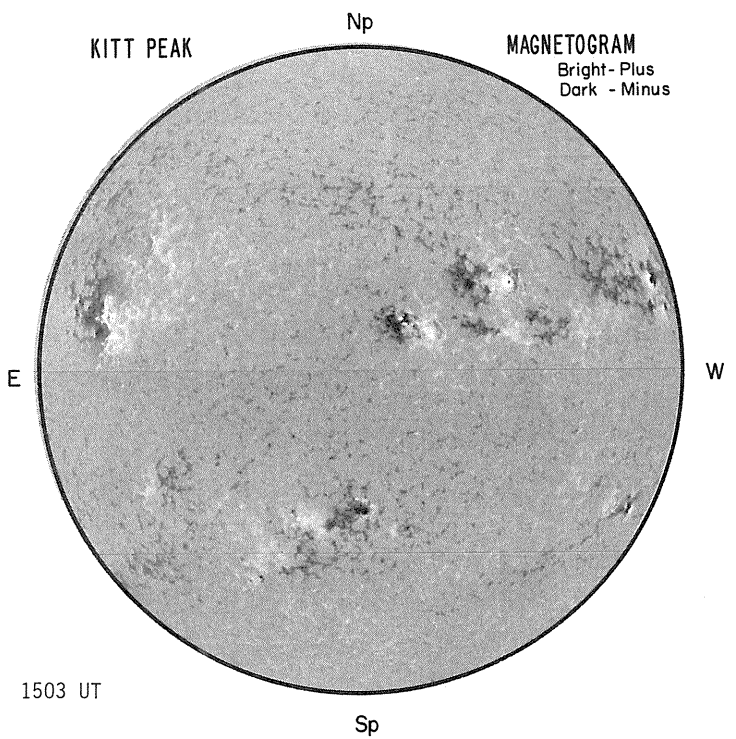
NO DATA

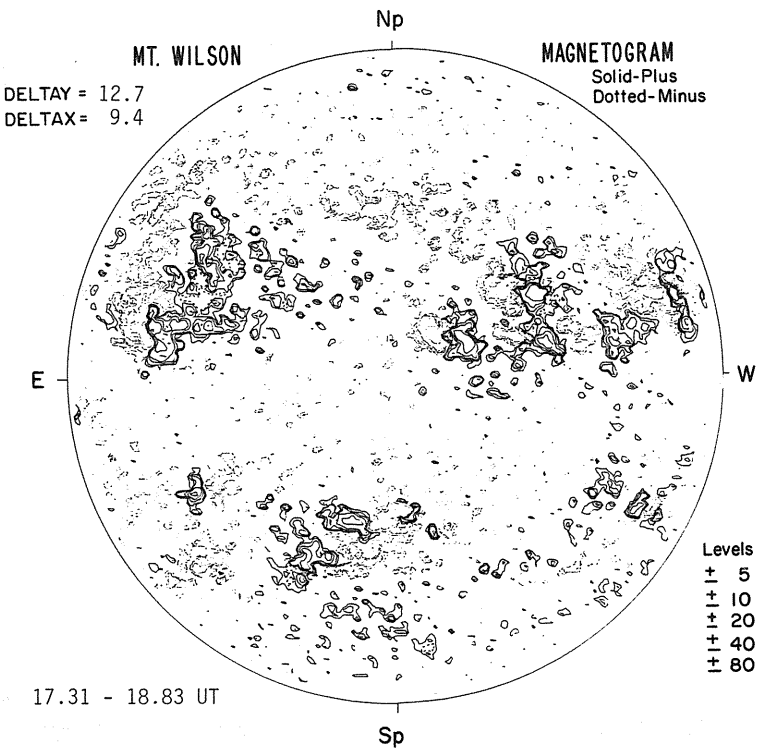
59
Sep 79

SEPTEMBER 6, 1979 (P = 22.16, B_o = 7.24, L_o = 48.02)

SACRAMENTO PEAK

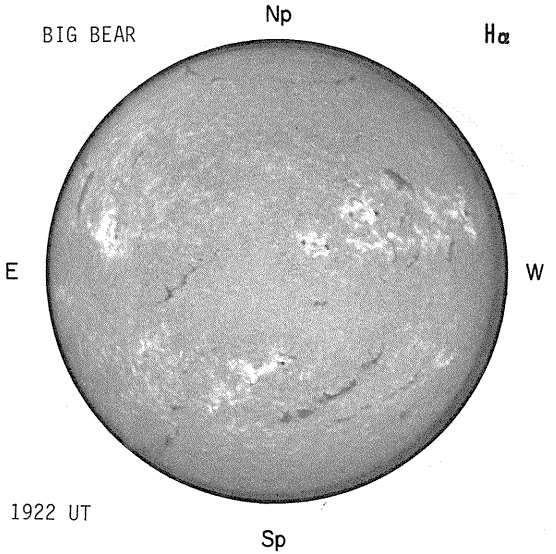






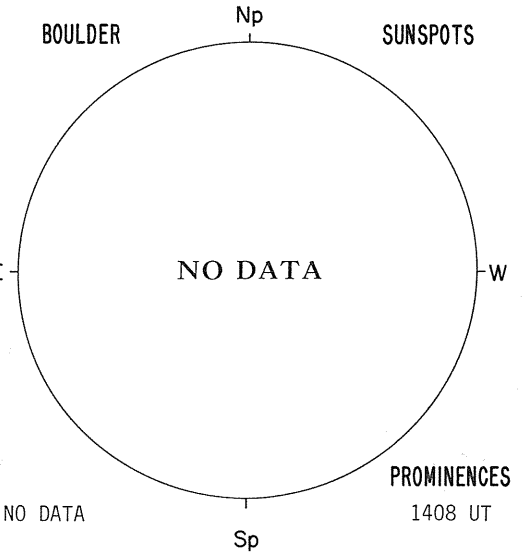
06

BIG BEAR Hα



1922 UT

BOULDER SUNSPOTS

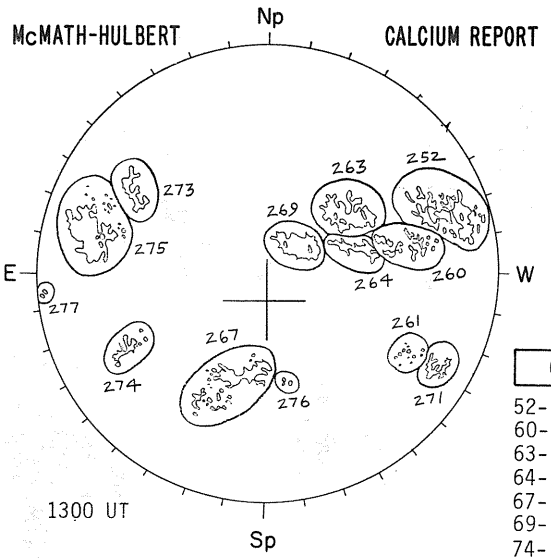


NO DATA

PROMINENCES

1408 UT

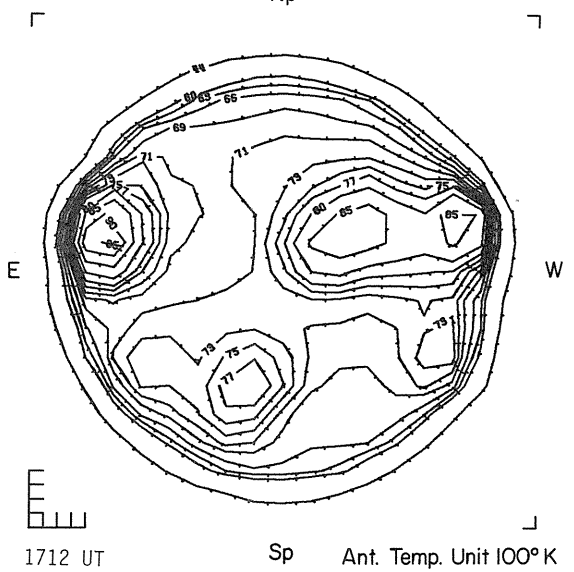
McMATH-HULBERT CALCIUM REPORT



1300 UT

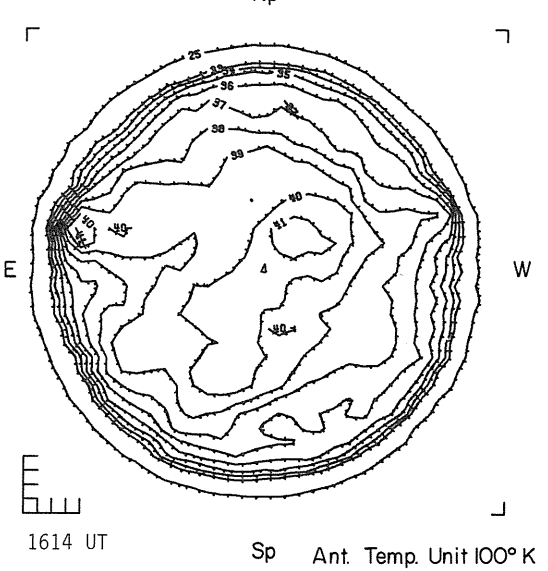
GOOD	M
52- 6500-3.0	
60- 1600-2.5	
63- 2700-3.0	
64- 1400-3.0	
67- 3400-3.0	
69- 2200-3.5	
74- 1000-2.5	
75- 5500-3.5	

NOSC LA POSTA 2.0 CM



1712 UT Ant. Temp. Unit 100° K

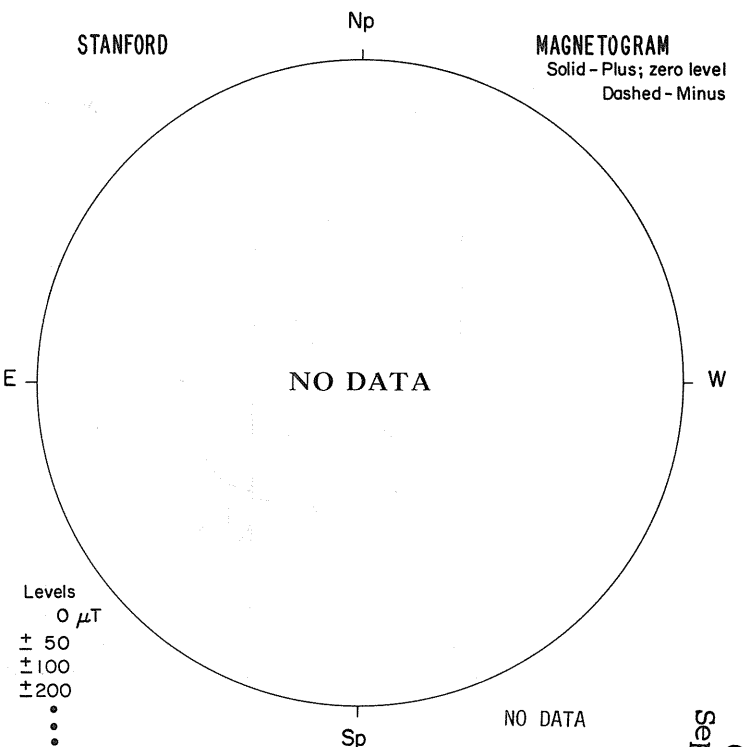
NOSC LA POSTA 8.6 MM



1614 UT Ant. Temp. Unit 100° K

STANFORD MAGNETOGRAM

Solid - Plus; zero level
Dashed - Minus



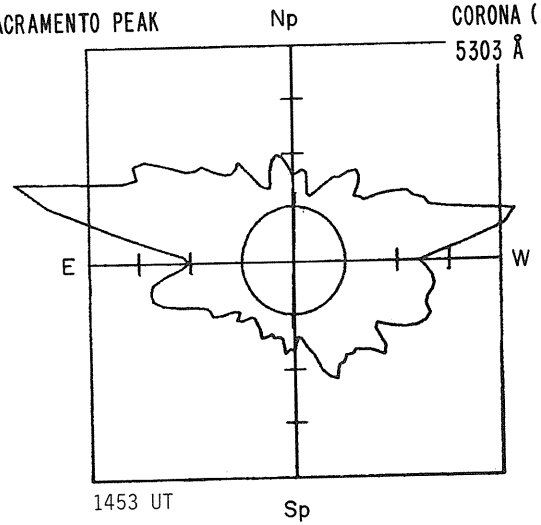
Levels
0 μT
± 50
± 100
± 200

NO DATA

61
Sep 79

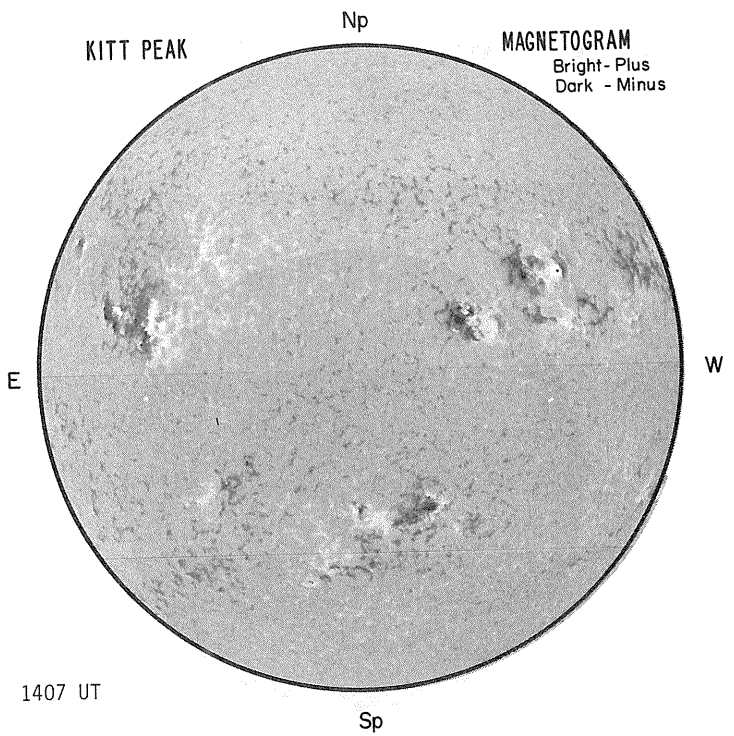
SEPTEMBER 7, 1979 (P = 22.39, B_o = 7.25, L_o = 34.82)

SACRAMENTO PEAK



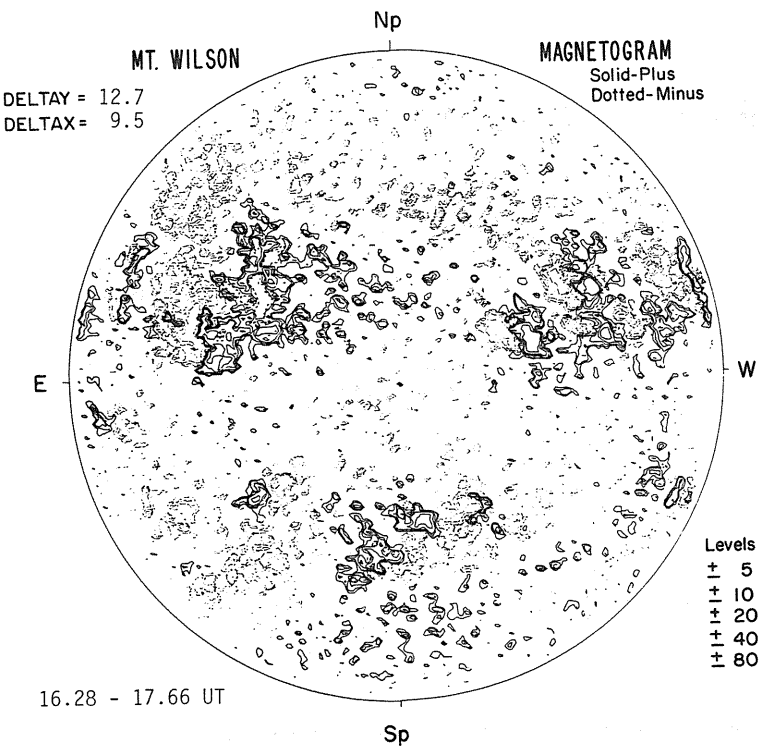
1453 UT

KITT PEAK



1407 UT

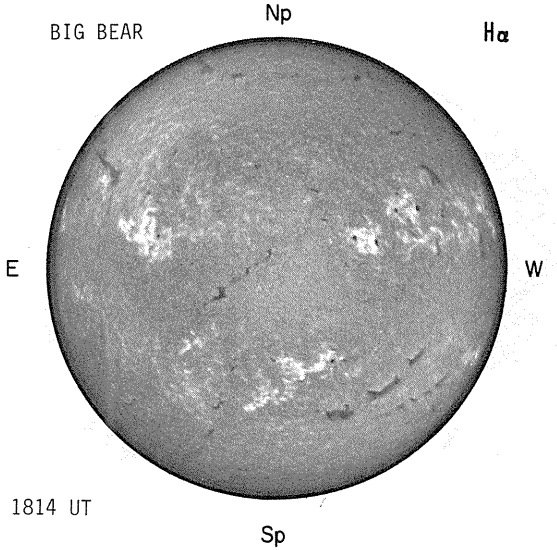
MT. WILSON



16.28 - 17.66 UT

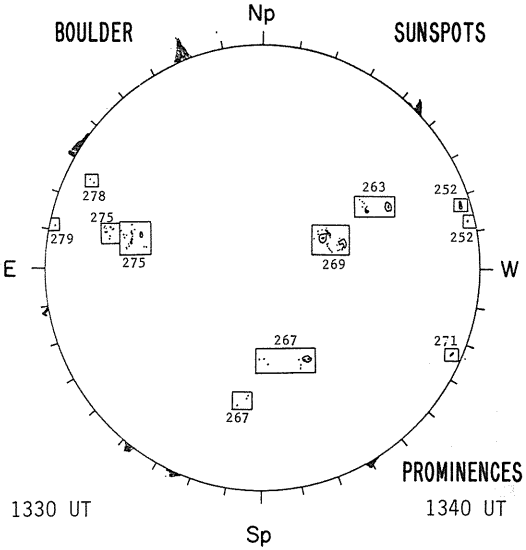
07

BIG BEAR Hα



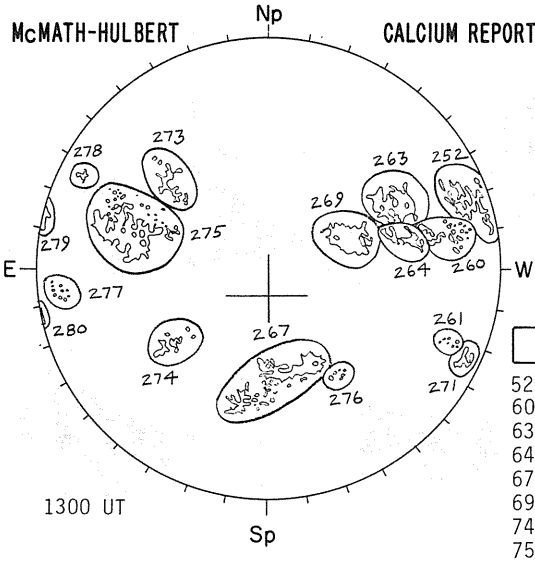
1814 UT

BOULDER SUNSPOTS



1330 UT 1340 UT PROMINENCES

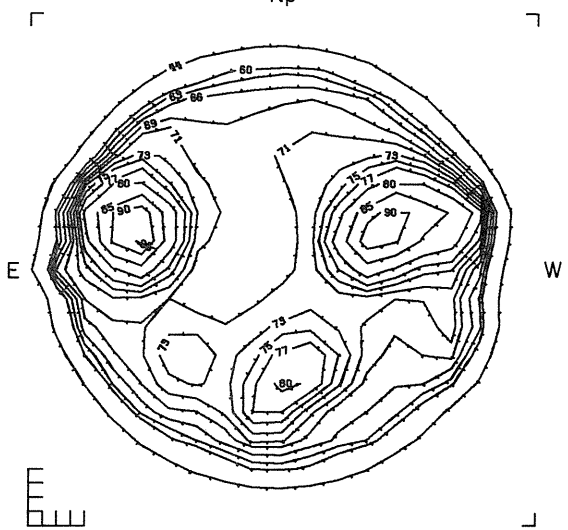
McMATH-HULBERT CALCIUM REPORT



1300 UT

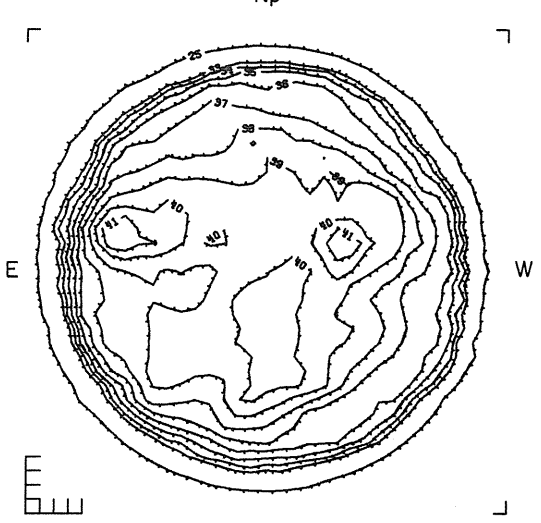
GOOD	M
52- 5500-2.5	
60- 1600-2.5	
63- 3300-3.0	
64- 1300-3.0	
67- 3500-2.5	
69- 2600-3.5	
74- 0800-2.5	
75- 6000-3.5	
78- 0300-2.5	

NOSC LA POSTA 2.0 CM



1625 UT Ant. Temp. Unit 100° K

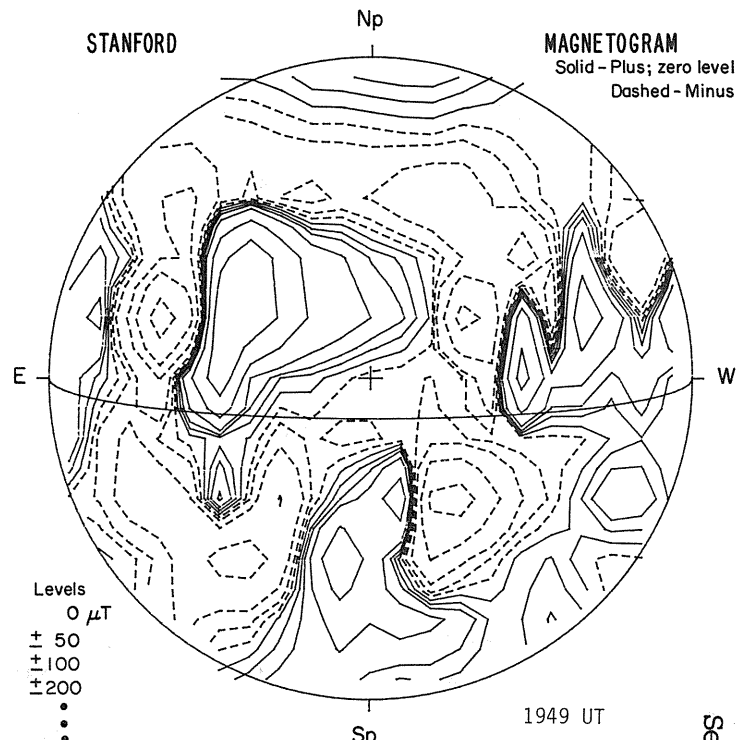
NOSC LA POSTA 8.6 MM



1530 UT Ant. Temp. Unit 100° K

STANFORD MAGNETOGRAM

Solid - Plus; zero level
Dashed - Minus



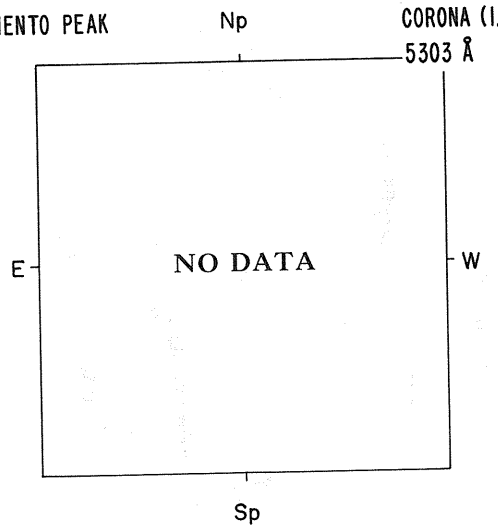
1949 UT

63
Sep 79

SEPTEMBER 8, 1979 (P = 22.61, B_o = 7.25, L_o = 21.61)

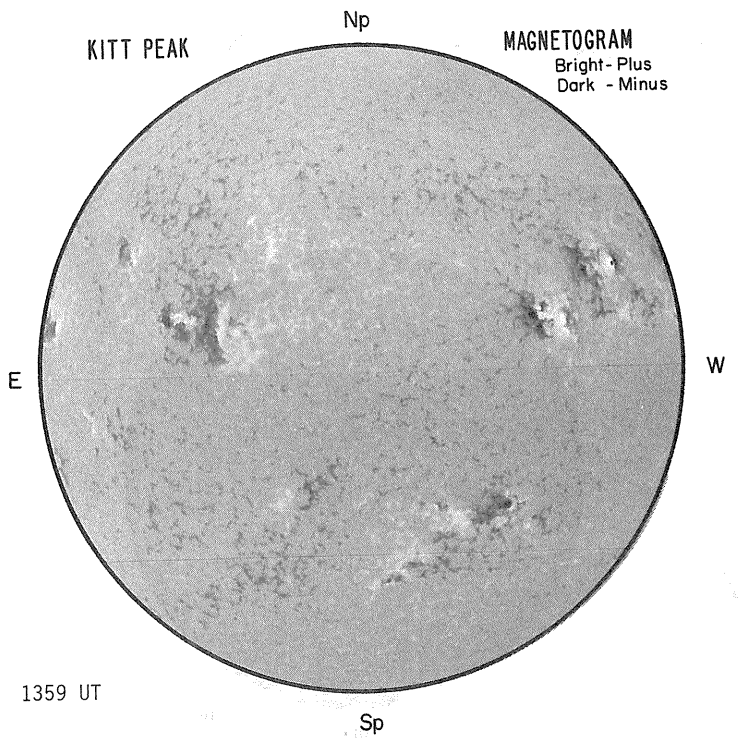
SACRAMENTO PEAK

CORONA (1.15 $R_\odot$)
5303 Å



KITT PEAK

MAGNETOGRAM
Bright - Plus
Dark - Minus

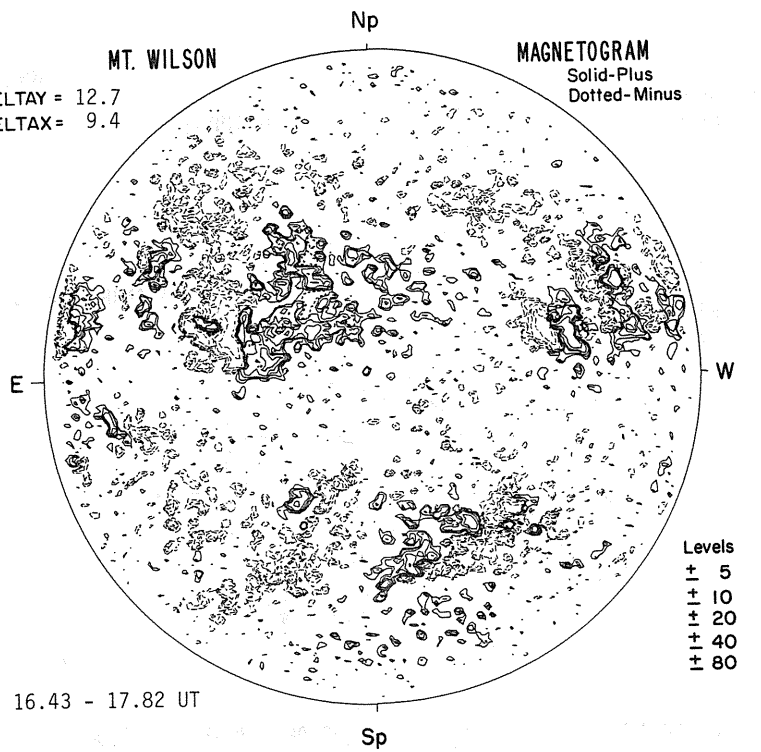


1359 UT

MT. WILSON

DELTAY = 12.7
DELTAX = 9.4

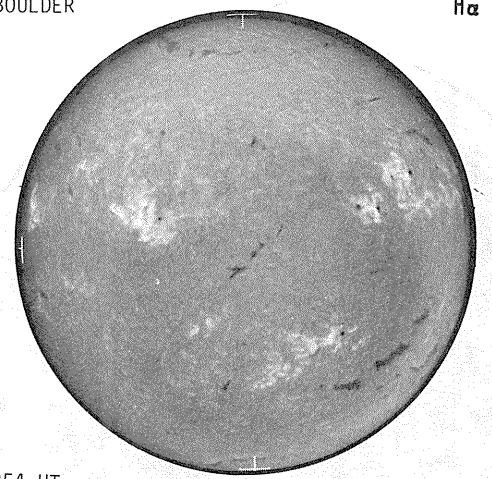
MAGNETOGRAM
Solid-Plus
Dotted-Minus



16.43 - 17.82 UT

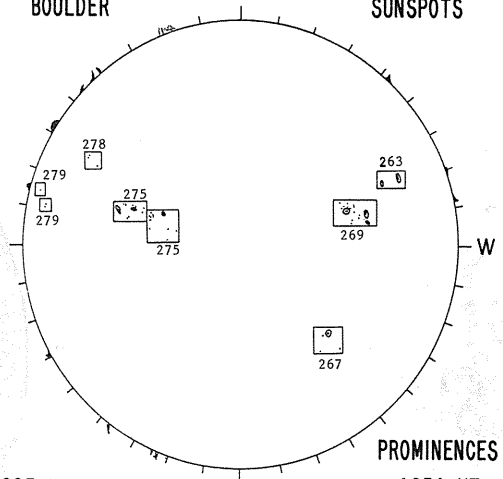
08

BOULDER Np Hα



1354 UT

BOULDER Np SUNSPOTS

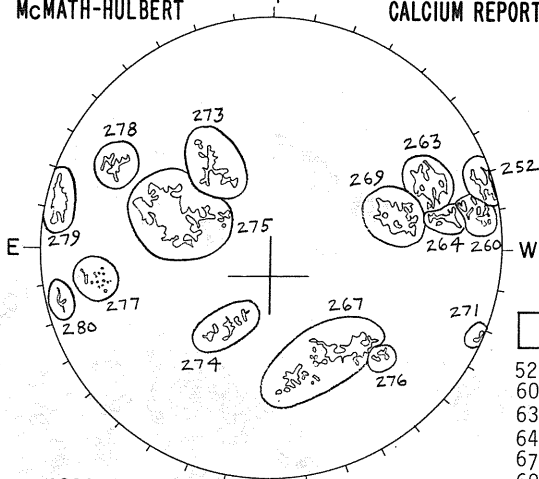


1335 UT

PROMINENCES

1354 UT

McMATH-HULBERT Np CALCIUM REPORT



1300 UT

FAIR	M

52- 3500-2.5
60- 1600-2.5
63- 3500-3.0
64- 1300-3.0
67- 3300-2.5
69- 2800-3.5
74- 0800-2.5
75- 6000-3.0
79- 3000-3.5

NOSC LA POSTA Np 2.0 CM

NO DATA

E SCHEDULE W

---- UT Sp Ant. Temp. Unit 100° K

NOSC LA POSTA Np 8.6 MM

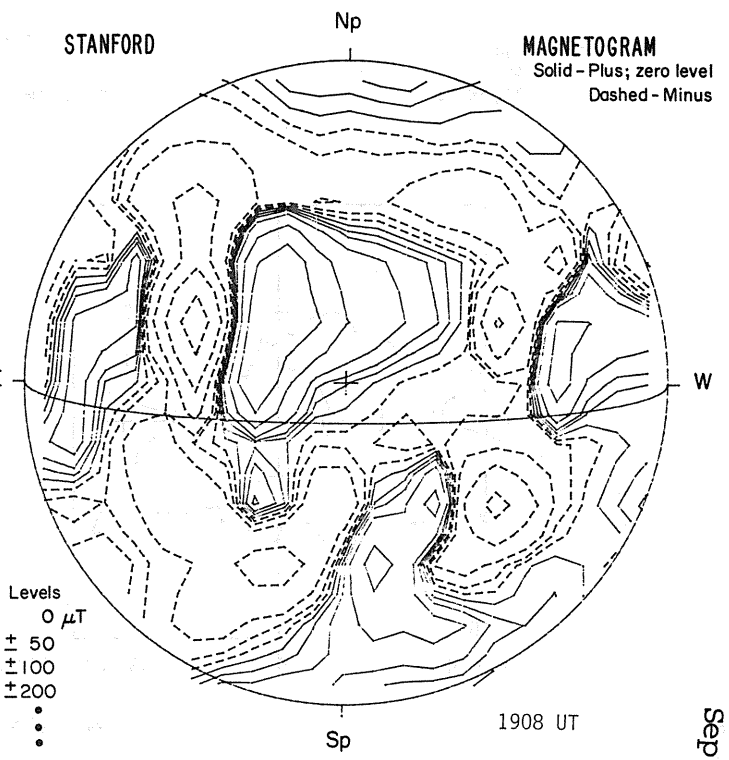
NO DATA

E SCHEDULE W

---- UT Sp Ant. Temp. Unit 100° K

STANFORD Np MAGNETOGRAM

Solid - Plus; zero level
Dashed - Minus

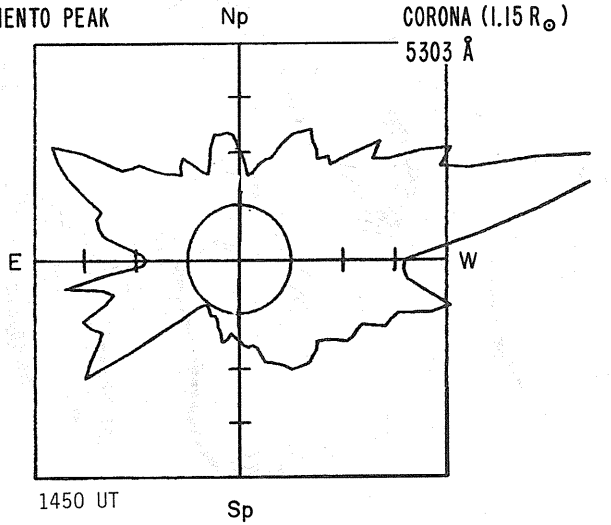


Levels
0 μT
± 50
±100
±200

1908 UT

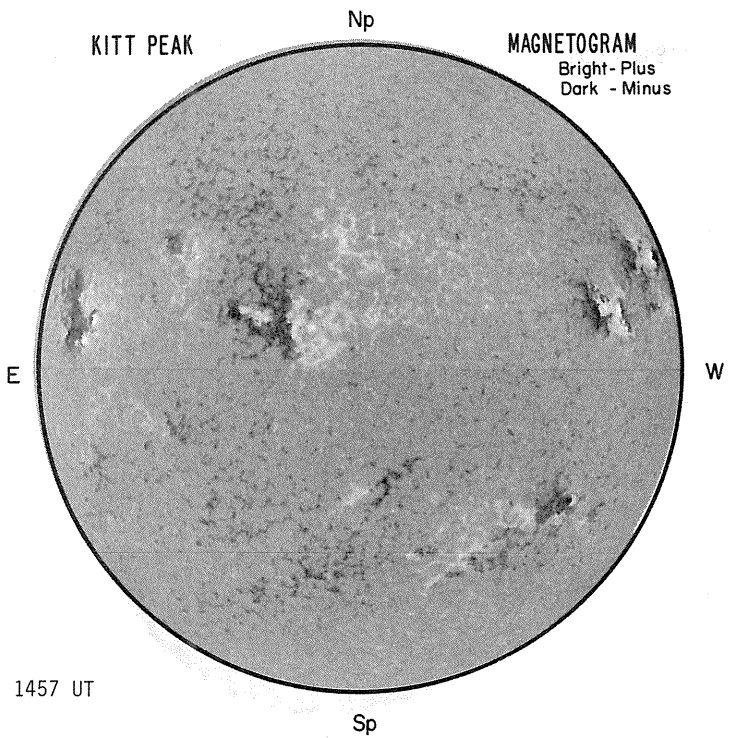
SEPTEMBER 9, 1979 (P = 22.82, B_o = 7.25, L_o = 8.40)

SACRAMENTO PEAK



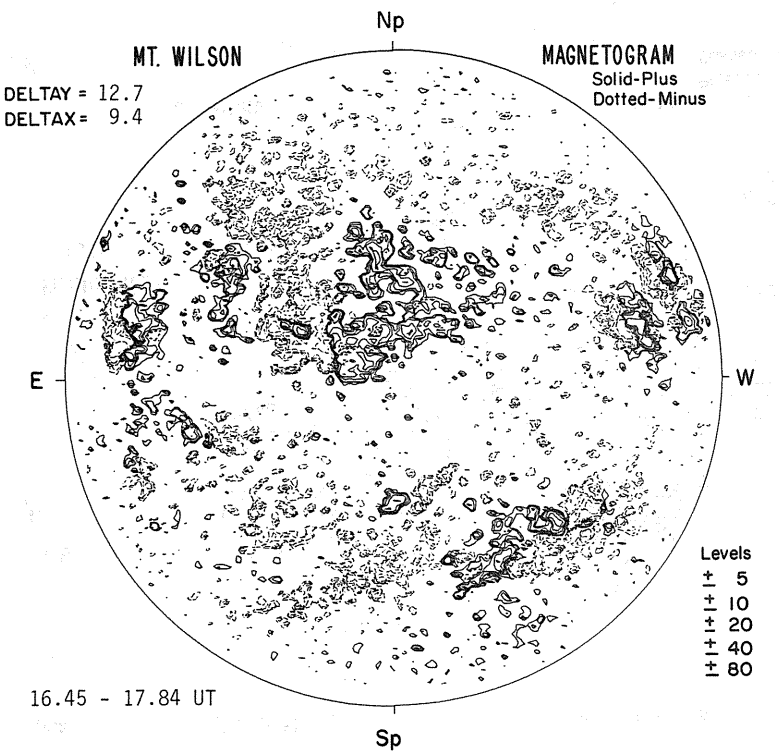
1450 UT

KITT PEAK



1457 UT

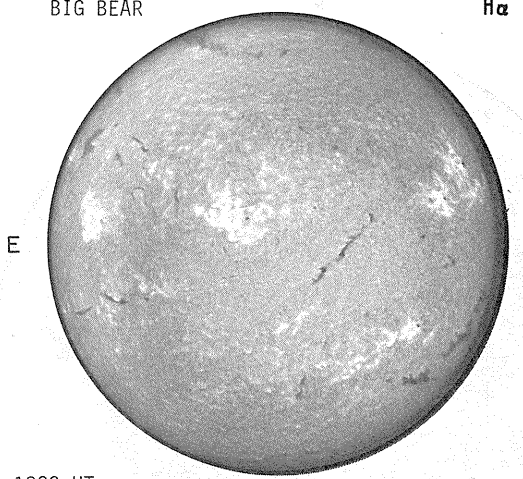
MT. WILSON



16.45 - 17.84 UT

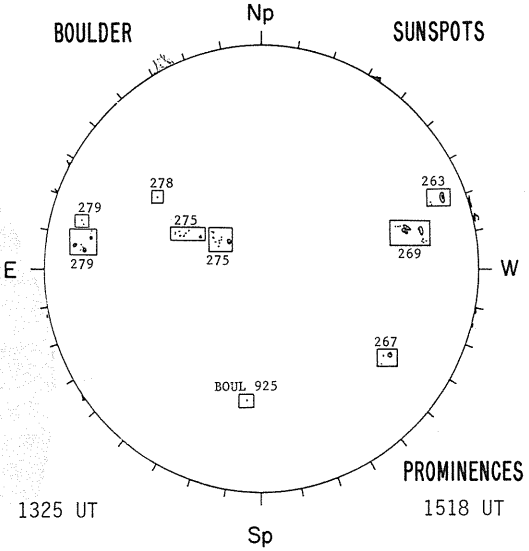
09

BIG BEAR Hα



1823 UT

BOULDER SUNSPOTS

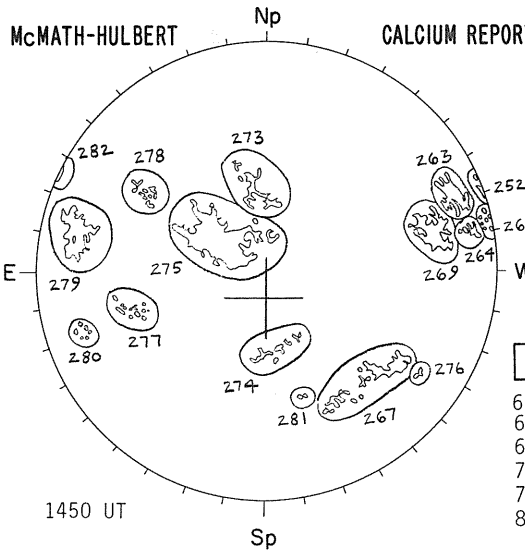


1325 UT

PROMINENCES

1518 UT

McMATH-HULBERT CALCIUM REPORT



1450 UT

GOOD	M

63- 3300-2.5
67- 3500-2.5
69- 3000-3.5
75- 6300-4.0
79- 4300-3.5
82- 0800-2.5

NOSC LA POSTA Np 2.0 CM

NO DATA

E SCHEDULE W

---- UT Sp Ant. Temp. Unit 100° K

NOSC LA POSTA Np 8.6 MM

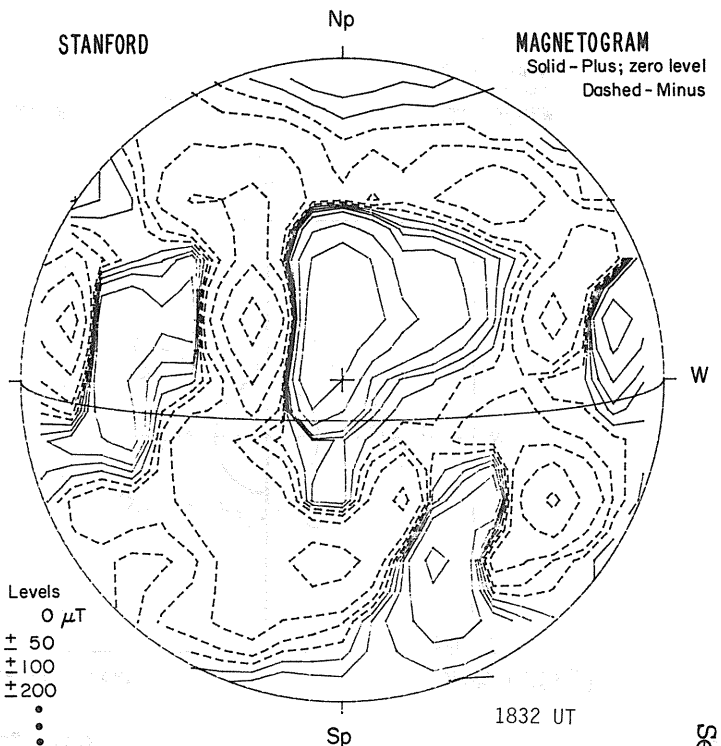
NO DATA

E SCHEDULE W

---- UT Sp Ant. Temp. Unit 100° K

STANFORD MAGNETOGRAM

Solid - Plus; zero level
Dashed - Minus

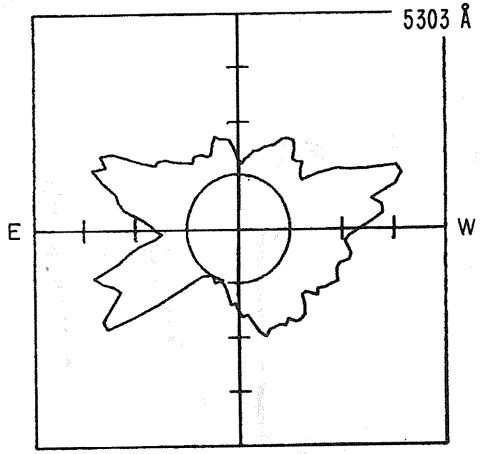


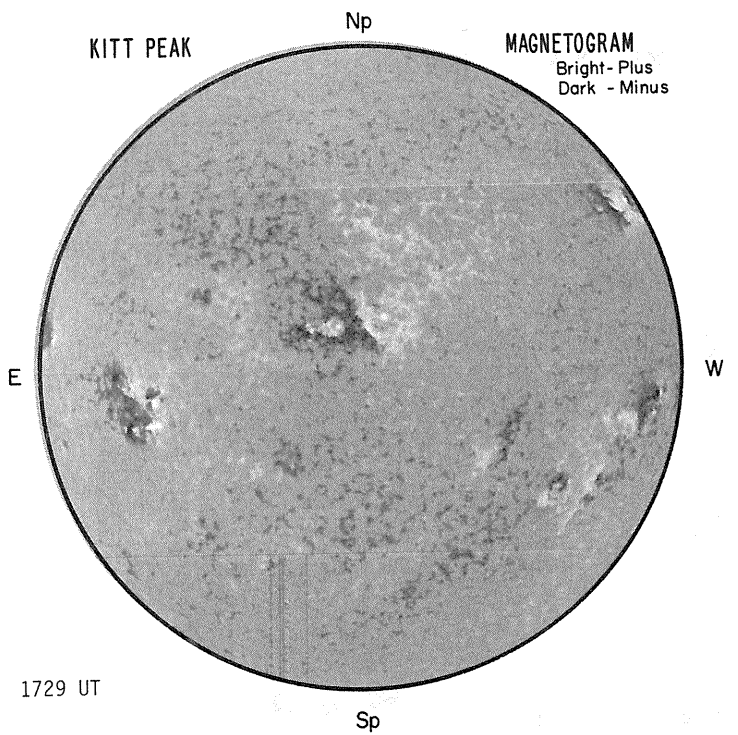
1832 UT

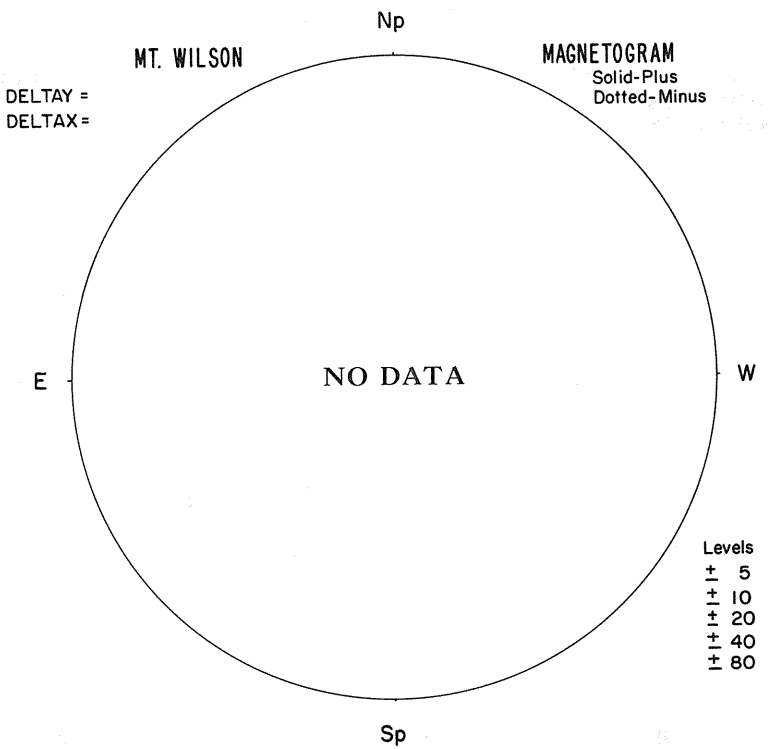
Sep 79

SEPTEMBER 10, 1979 (P = 23.03, B_o = 7.25, L_o = 355.20)

SACRAMENTO PEAK

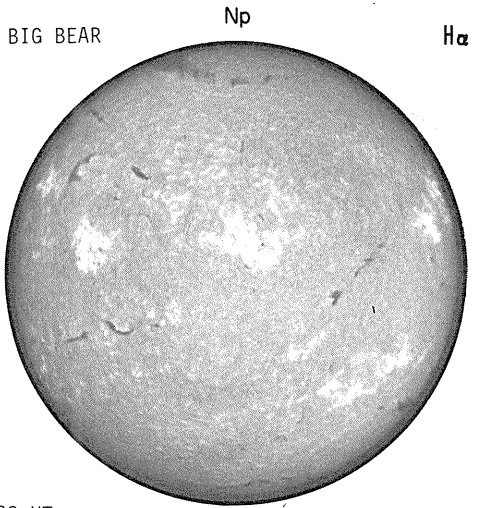






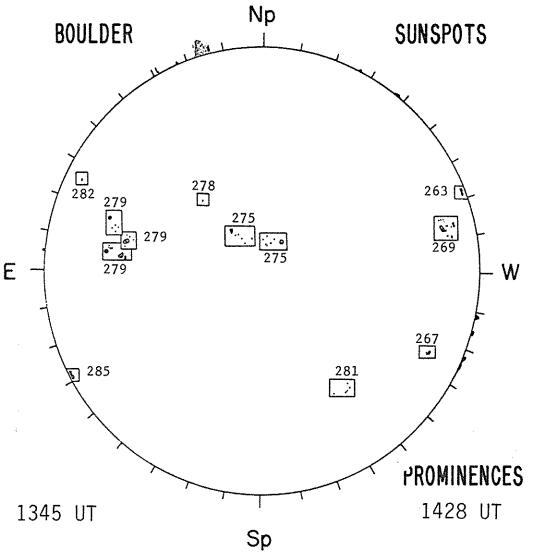
IO

BIG BEAR Hα



1928 UT

BOULDER SUNSPOTS

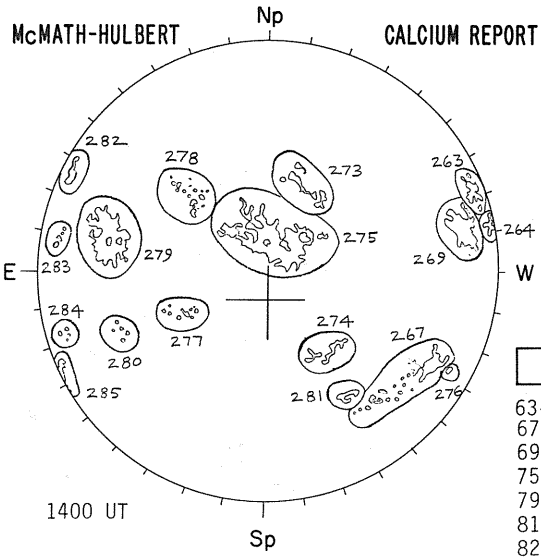


1345 UT

PROMINENCES

1428 UT

McMATH-HULBERT CALCIUM REPORT



1400 UT

POOR	S

63- 2700-2.5
67- 2700-2.5
69- 3900-3.5
75- 6600-3.5
79- 4700-3.5
81- 0400-2.5
82- 1100-3.0

NOSC LA POSTA Np 2.0 CM

NO DATA

E EQUIPMENT W

---- UT Sp Ant. Temp. Unit 100° K

NOSC LA POSTA Np 8.6 MM

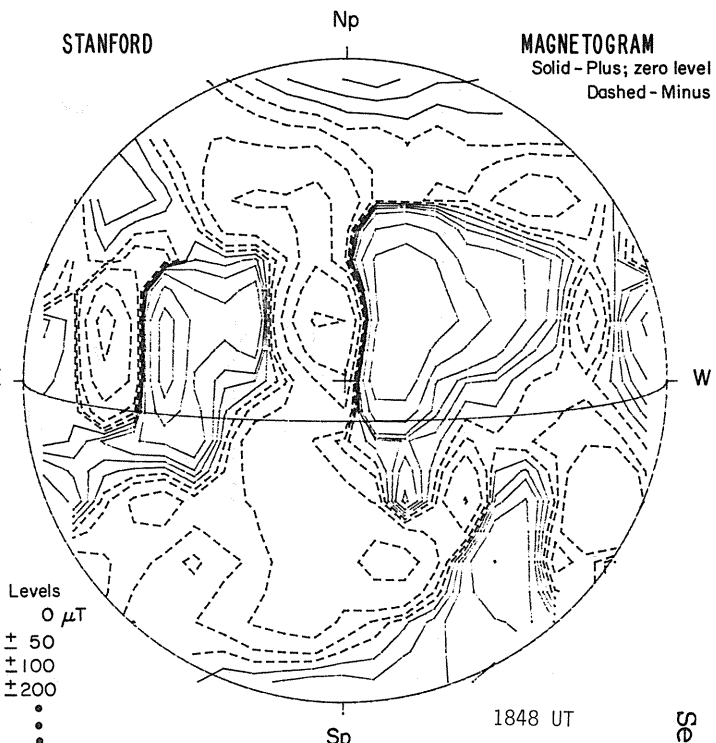
NO DATA

E EQUIPMENT W

---- UT Sp Ant. Temp. Unit 100° K

STANFORD MAGNETOGRAM

Solid - Plus; zero level
Dashed - Minus



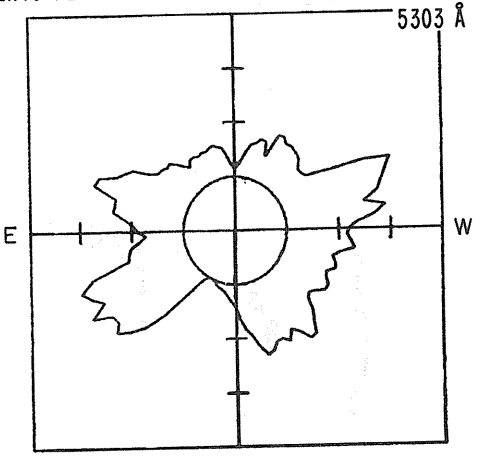
Levels
0 μT
± 50
±100
±200

1848 UT

69 Sep 79

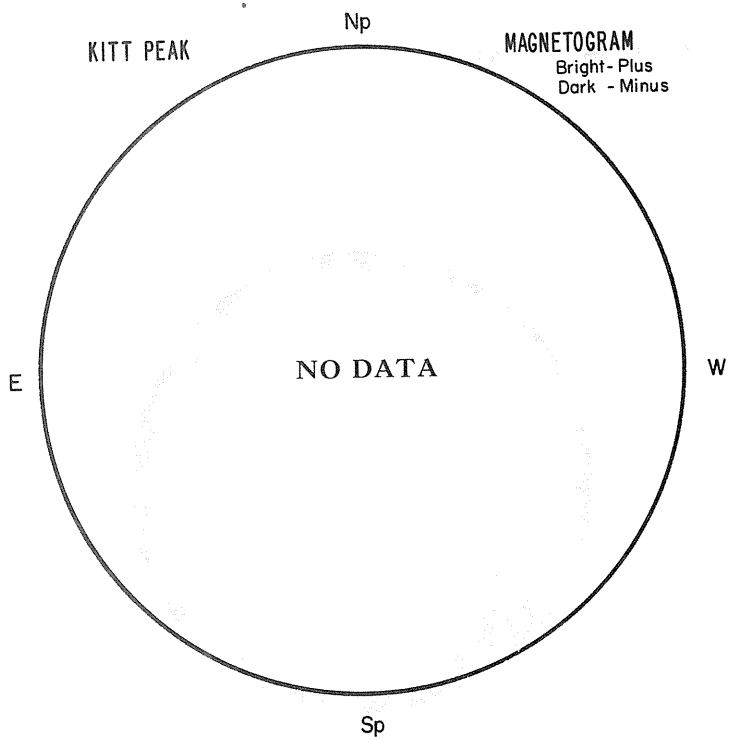
SEPTEMBER 11, 1979 (P = 23.23, B_o = 7.24, L_o = 341.99)

SACRAMENTO PEAK



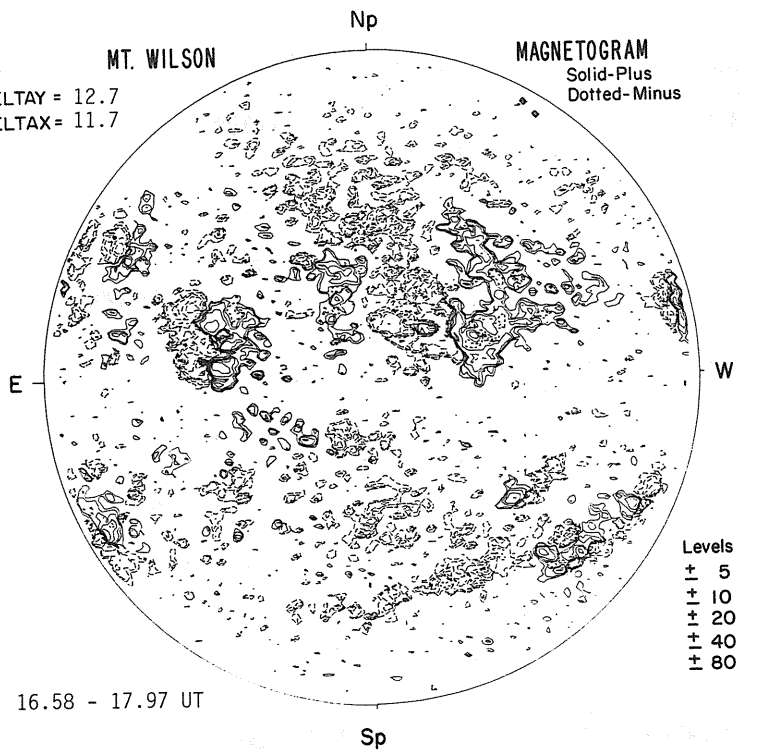
1431 UT

KITT PEAK



MT. WILSON

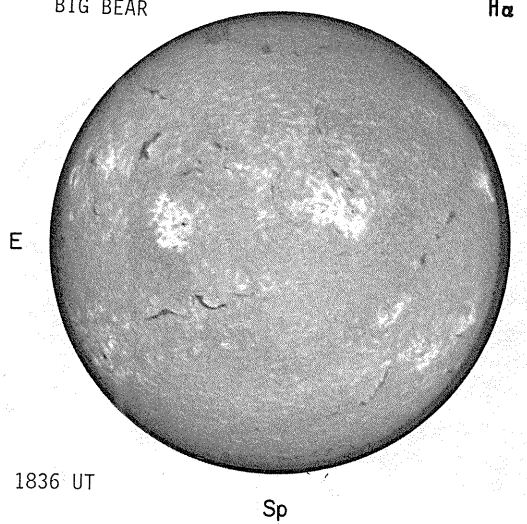
DELTAY = 12.7
DELTAX = 11.7



16.58 - 17.97 UT

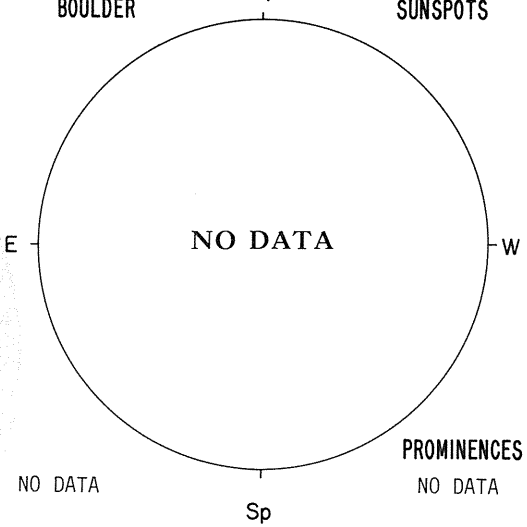
II

BIG BEAR Hα



1836 UT

BOULDER SUNSPOTS

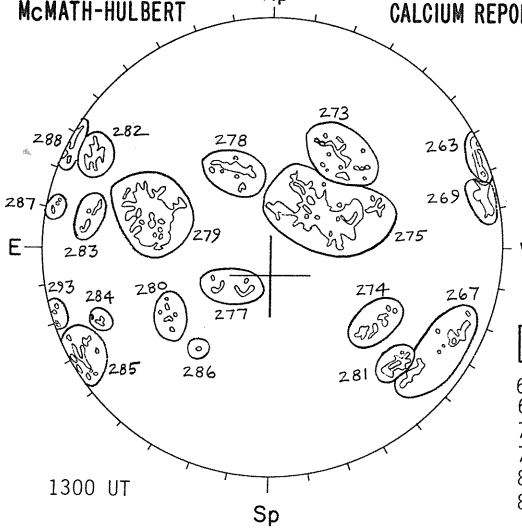


NO DATA

PROMINENCES

NO DATA

McMATH-HULBERT CALCIUM REPORT

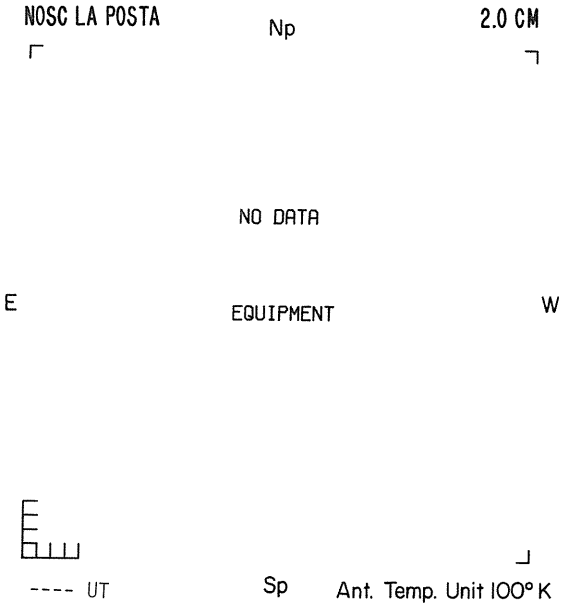


1300 UT

GOOD	M

67- 2900-3.0
69- 3500-3.5
75- 7000-3.5
79- 5400-3.5
81- 1000-3.0
82- 1400-2.5

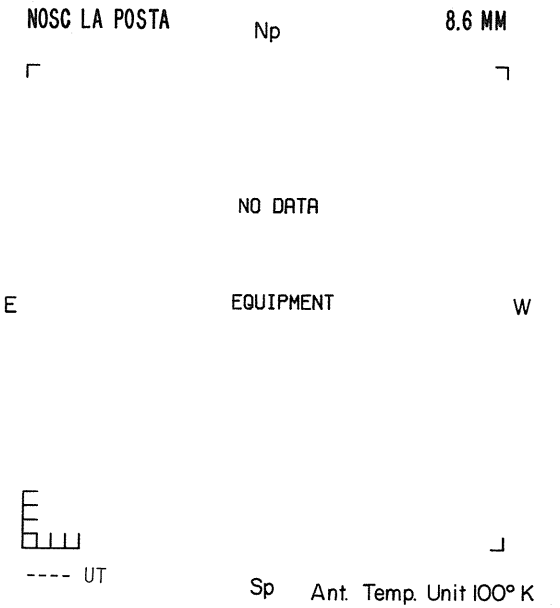
NOSC LA POSTA 2.0 CM



---- UT

Ant. Temp. Unit 100° K

NOSC LA POSTA 8.6 MM

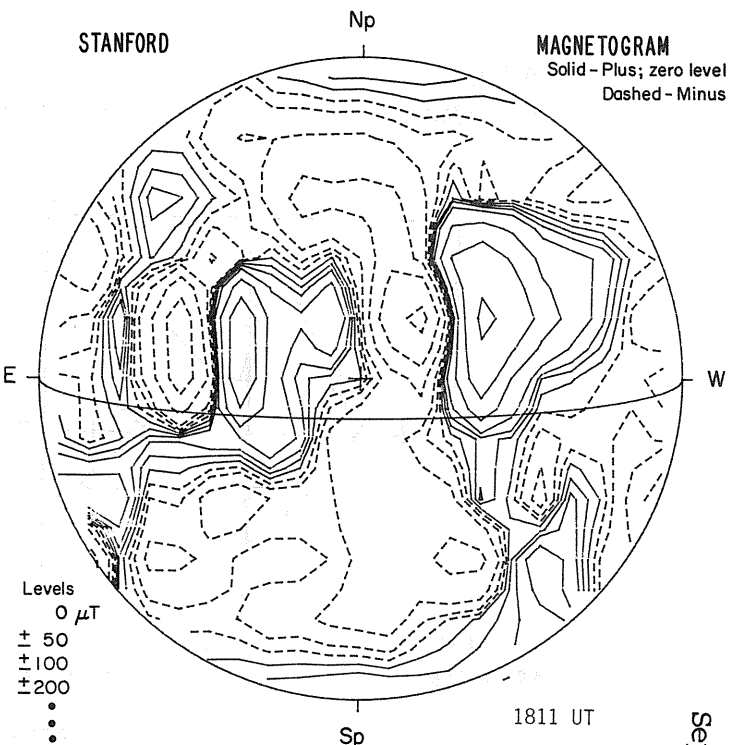


---- UT

Ant. Temp. Unit 100° K

STANFORD MAGNETOGRAM

Solid - Plus; zero level
Dashed - Minus



Levels
0 μT
± 50
±100
±200
• • •

1811 UT

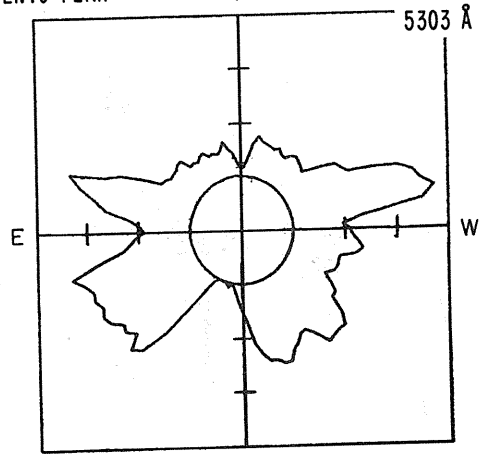
71
Sep 79

SEPTEMBER 12, 1979 (P = 23.43, B_o = 7.24, L_o = 328.79)

SACRAMENTO PEAK

Np

CORONA (1.15 $R_\odot$)
5303 Å



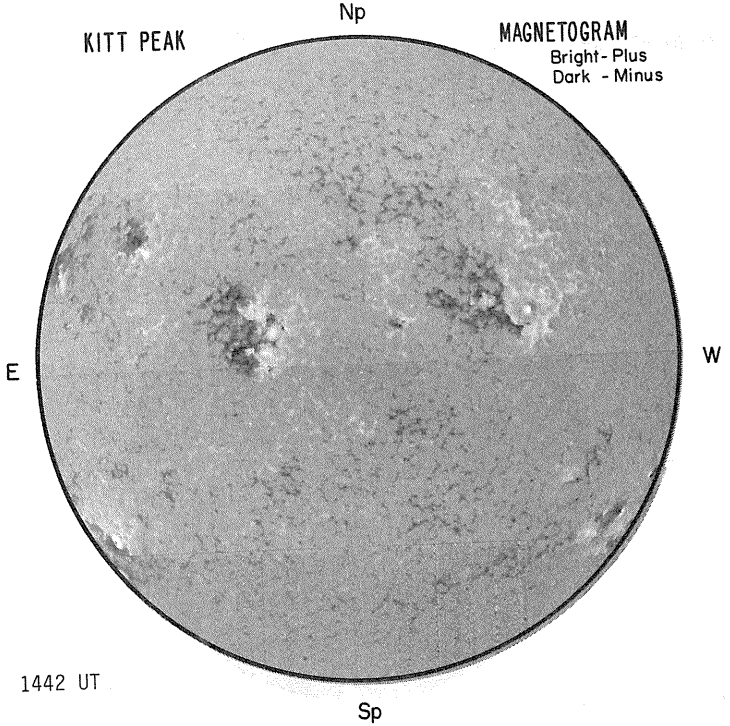
1432 UT

Sp

KITT PEAK

Np

MAGNETOGRAM
Bright - Plus
Dark - Minus



1442 UT

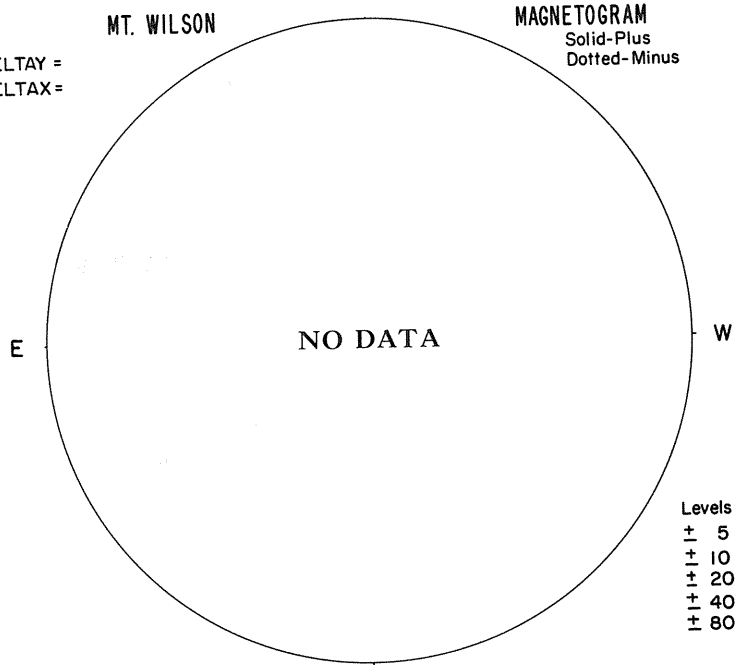
Sp

Np

MT. WILSON

MAGNETOGRAM
Solid-Plus
Dotted-Minus

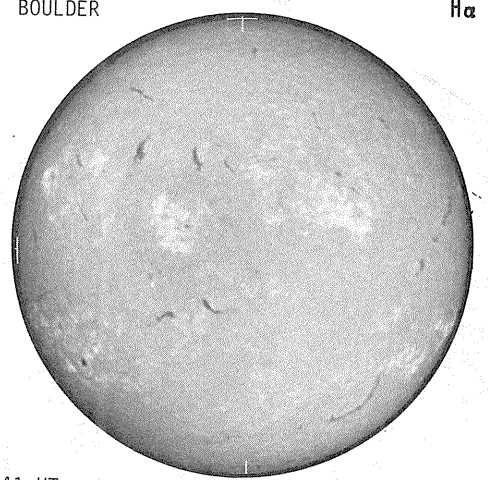
DELTAY =
DELTAX =



Levels
± 5
± 10
± 20
± 40
± 80

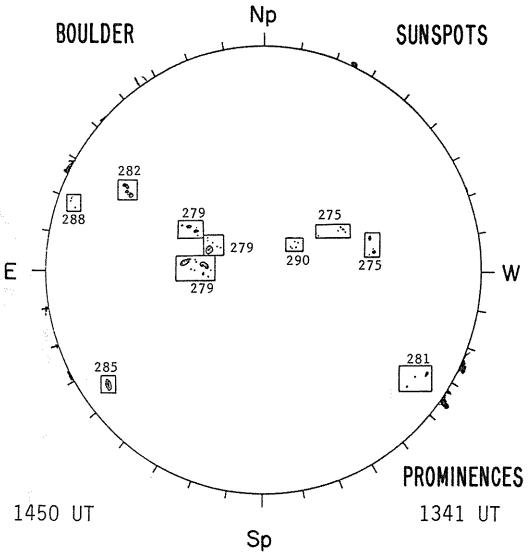
Sp

BOULDER Hα



1341 UT

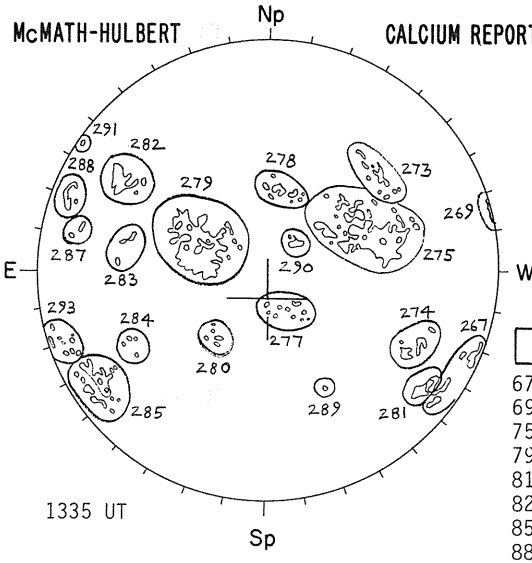
BOULDER SUNSPOTS



PROMINENCES

1450 UT 1341 UT

McMATH-HULBERT CALCIUM REPORT



FAIR	S

67- 2500-3.0
69- 0800-2.5
75- 7000-3.5
79- 6000-3.5
81- 1300-2.5
82- 1800-3.5
85- 2800-2.5
88- 1500-3.0
90- 0400-3.0

NOSC LA POSTA Np 2.0 CM

NO DATA

E EQUIPMENT W

---- UT Sp Ant. Temp. Unit 100° K

NOSC LA POSTA Np 8.6 MM

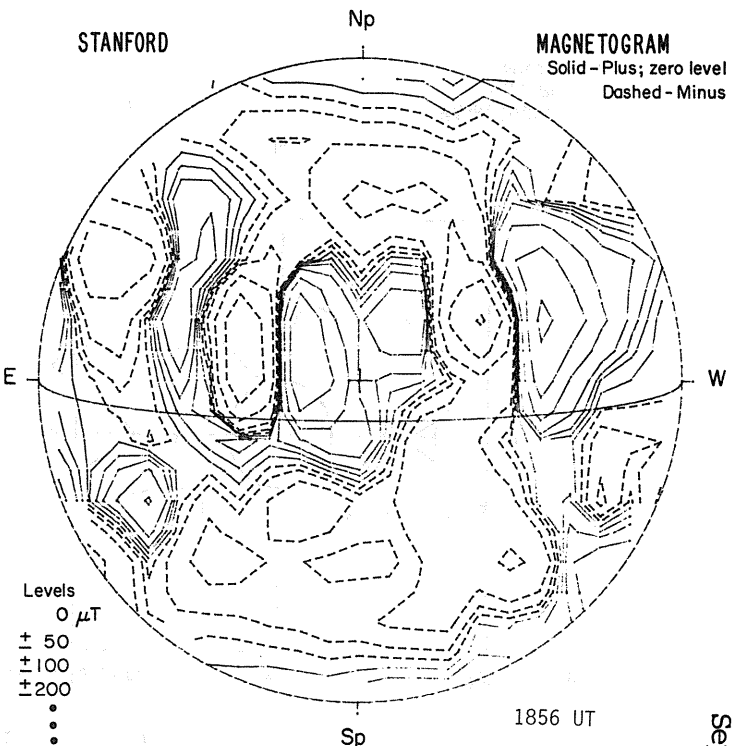
NO DATA

E EQUIPMENT W

---- UT Sp Ant. Temp. Unit 100° K

STANFORD MAGNETOGRAM

Solid - Plus; zero level
Dashed - Minus



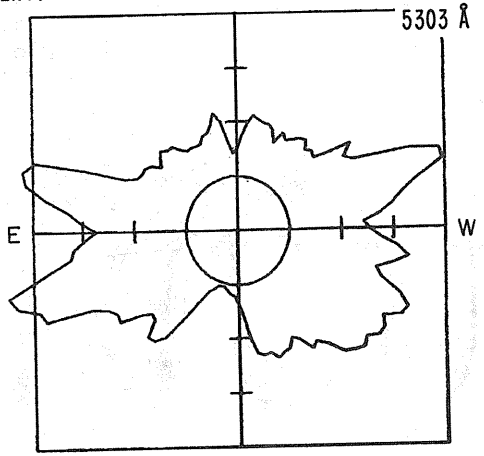
1856 UT

SEPTEMBER 13, 1979 (P = 23.62, B_o = 7.23, L_o = 315.58)

SACRAMENTO PEAK

Np

CORONA (1.15 $R_\odot$)
5303 Å



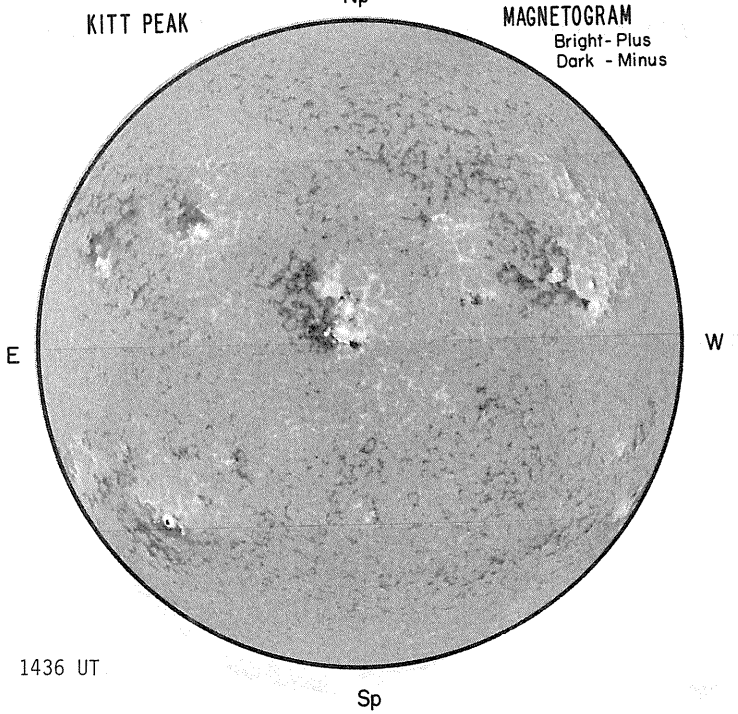
1539 UT

Sp

KITT PEAK

Np

MAGNETOGRAM
Bright - Plus
Dark - Minus



1436 UT

Sp

MT. WILSON

Np

MAGNETOGRAM
Solid-Plus
Dotted-Minus

DELTAY =
DELTAX =

E

NO DATA

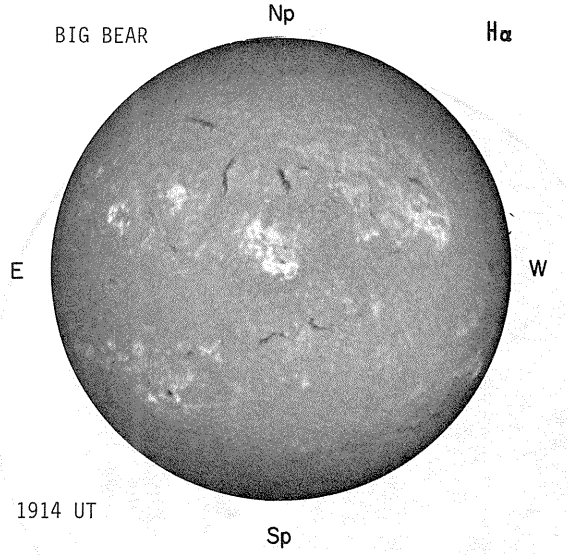
W

Levels
± 5
± 10
± 20
± 40
± 80

Sp

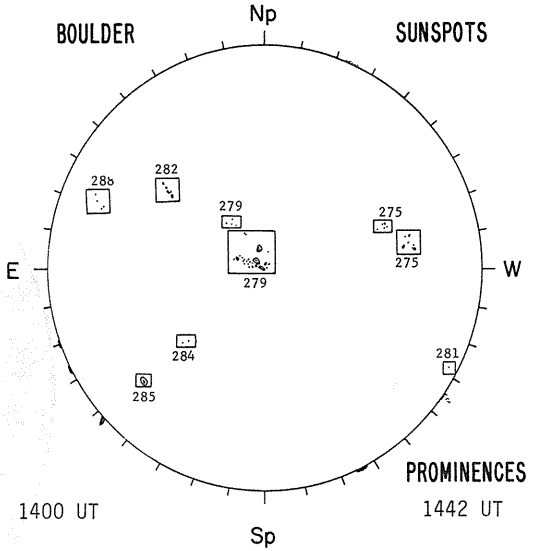
13

BIG BEAR Hα



1914 UT

BOULDER SUNSPOTS

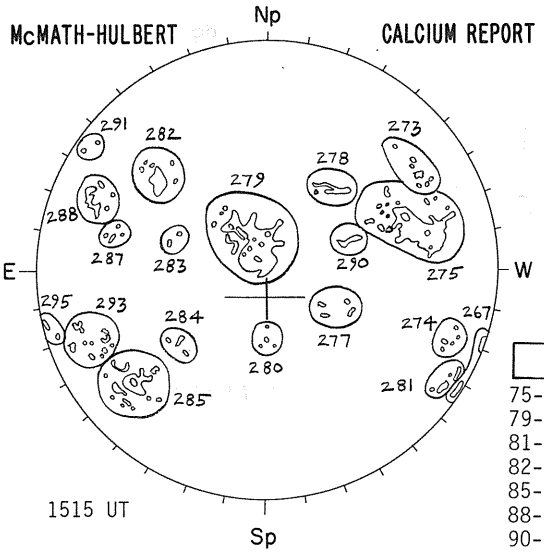


1400 UT

PROMINENCES

1442 UT

McMATH-HULBERT CALCIUM REPORT



POOR	S
75- 6800	3.0
79- 6300	3.5
81- 1200	2.5
82- 1600	2.5
85- 2600	3.0
88- 1500	3.0
90- 0400	2.5

NOSC LA POSTA Np 2.0 CM

NO DATA

E EQUIPMENT W

---- UT Sp Ant. Temp. Unit 100° K

NOSC LA POSTA Np 8.6 MM

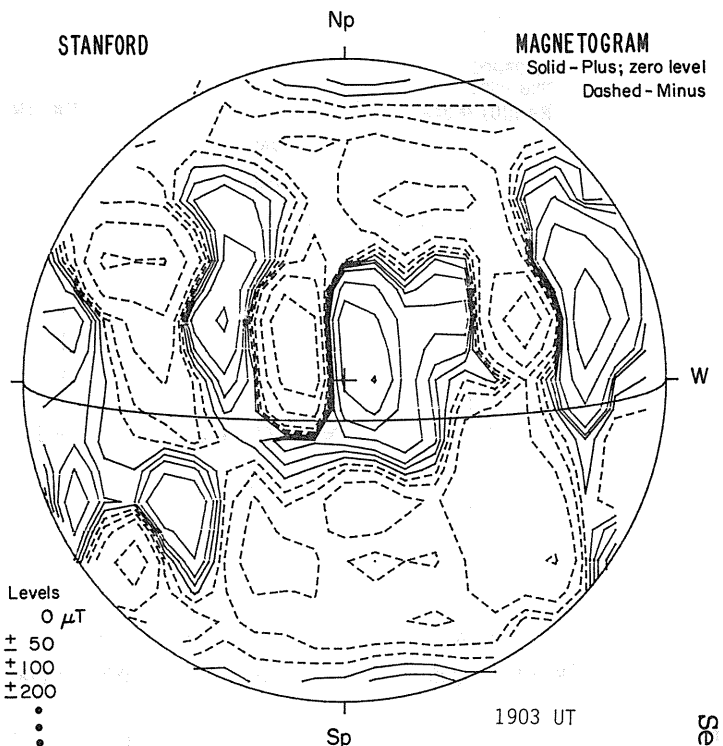
NO DATA

E EQUIPMENT W

---- UT Sp Ant. Temp. Unit 100° K

STANFORD MAGNETOGRAM

Solid - Plus; zero level
Dashed - Minus



1903 UT

75 Sep 79

SEPTEMBER 14, 1979 (P = 23.81, B_o = 7.22, L_o = 302.38)

SACRAMENTO PEAK

Np

CORONA (1.15 $R_\odot$)

5303 Å

E

NO DATA

W

Sp

KITT PEAK

Np

MAGNETOGRAM

Bright - Plus

Dark - Minus

E

W

1908 UT

Sp

MT. WILSON

DELTAY =

DELTAX =

Np

MAGNETOGRAM

Solid-Plus

Dotted-Minus

E

NO DATA

W

Levels

± 5

± 10

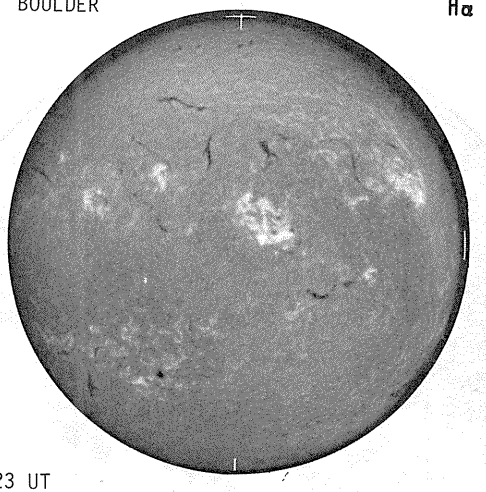
± 20

± 40

± 80

Sp

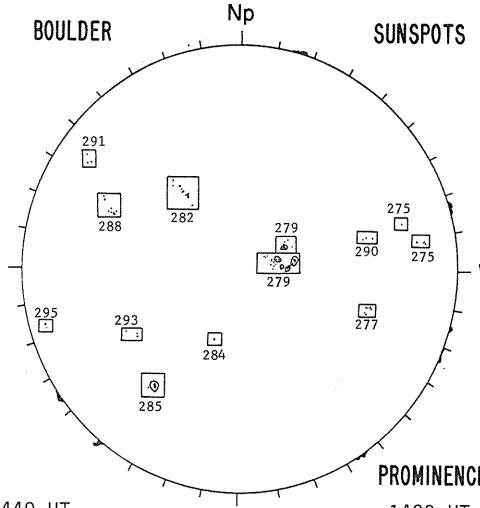
BOULDER Np Hα



E W

1423 UT Sp

BOULDER Np SUNSPOTS



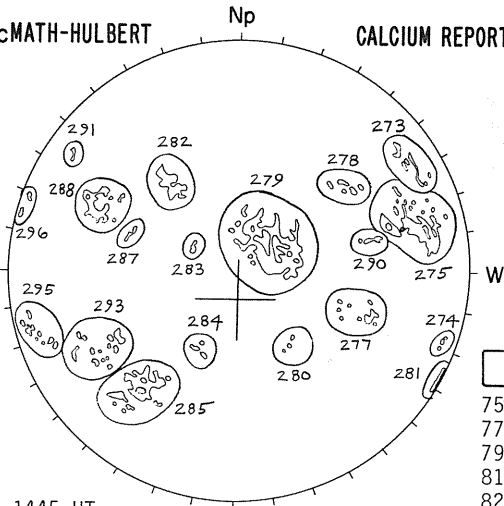
E W

1440 UT Sp

PROMINENCES

1423 UT

McMATH-HULBERT Np CALCIUM REPORT

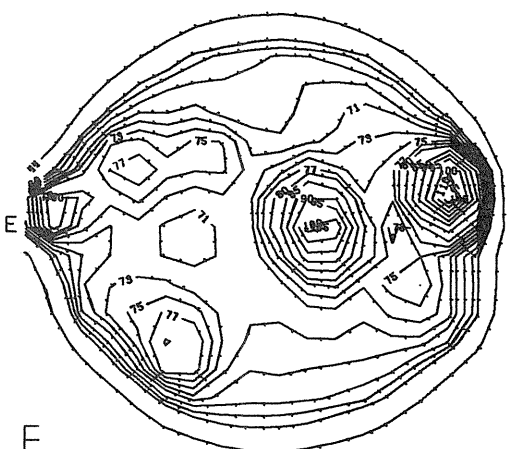


E W

1445 UT Sp

FAIR	S
75-	5800-3.0
77-	0600-3.0
79-	6200-3.0
81-	0800-2.5
82-	1600-3.0
85-	2800-2.5
88-	1500-3.0
90-	0300-3.0

NOSC LA POSTA Np 2.0 CM



E W

1700 UT Sp Ant. Temp. Unit 100° K

NOSC LA POSTA Np 8.6 MM

NO DATA

CALIBRATION

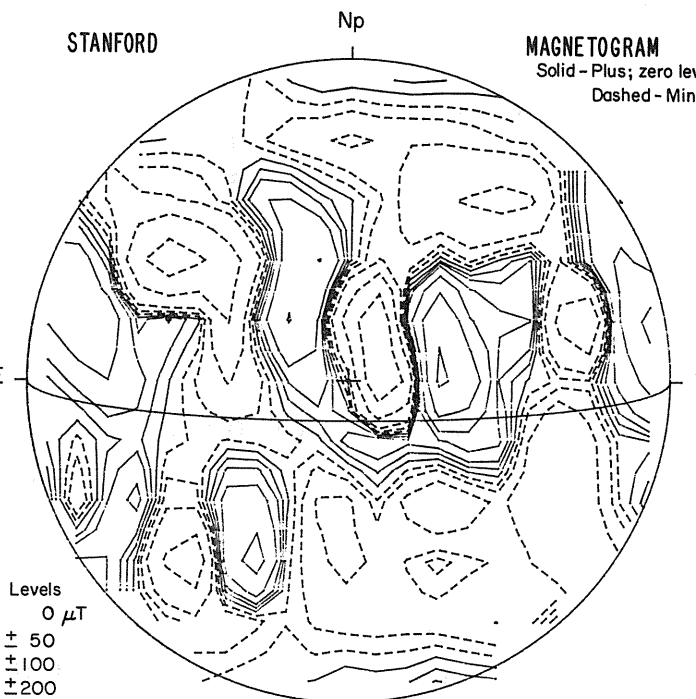
E W

1606 UT Sp Ant. Temp. Unit 100° K

STANFORD Np MAGNETOGRAM

Solid - Plus; zero level

Dashed - Minus



E W

Levels 0 μT ± 50 ±100 ±200 • • •

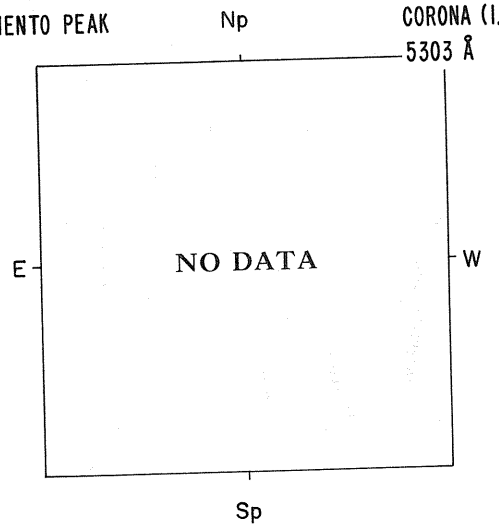
2042 UT Sp

Sep 77 79

SEPTEMBER 15, 1979 (P = 23.99, B_o = 7.21, L_o = 289.18)

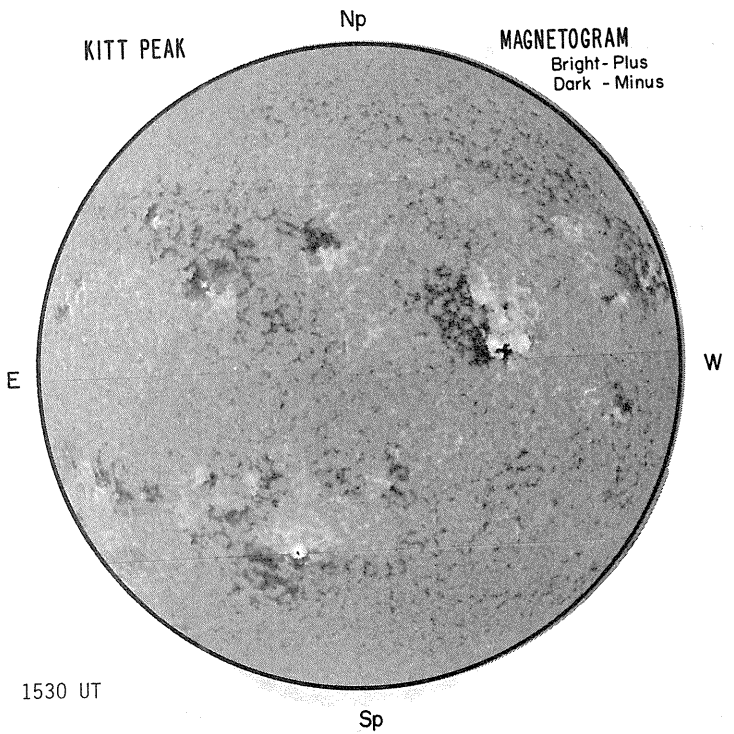
SACRAMENTO PEAK

CORONA (1.15 $R_\odot$)
5303 Å



KITT PEAK

MAGNETOGRAM
Bright - Plus
Dark - Minus

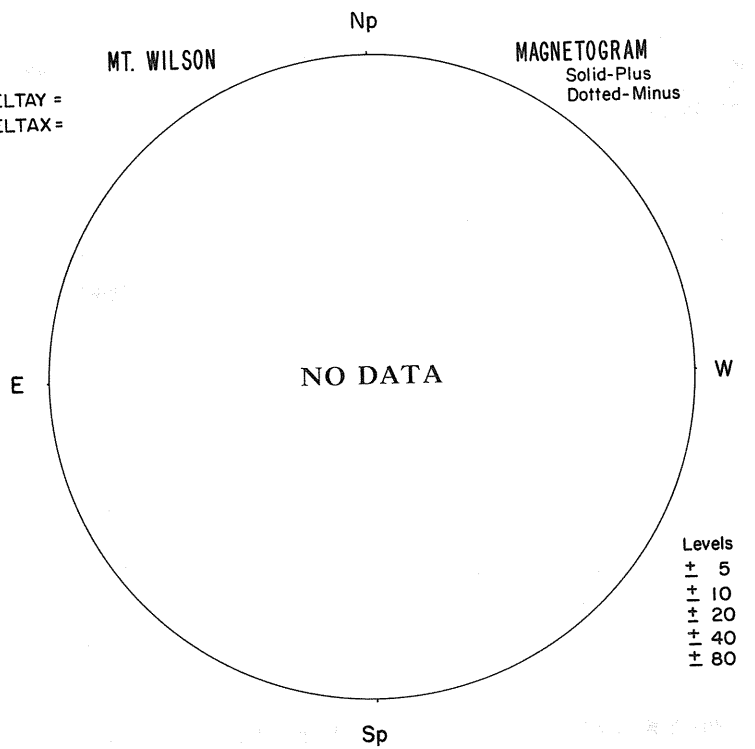


1530 UT

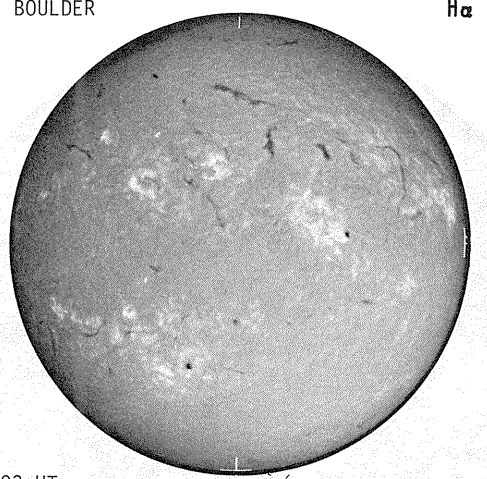
MT. WILSON

DELTAY =
DELTAX =

MAGNETOGRAM
Solid-Plus
Dotted-Minus

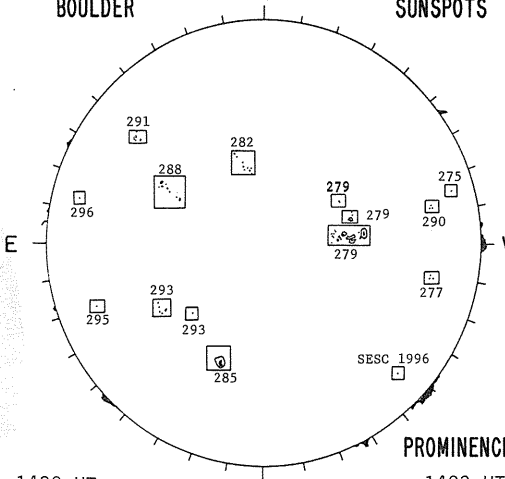


BOULDER Hα



1403 UT

BOULDER SUNSPOTS

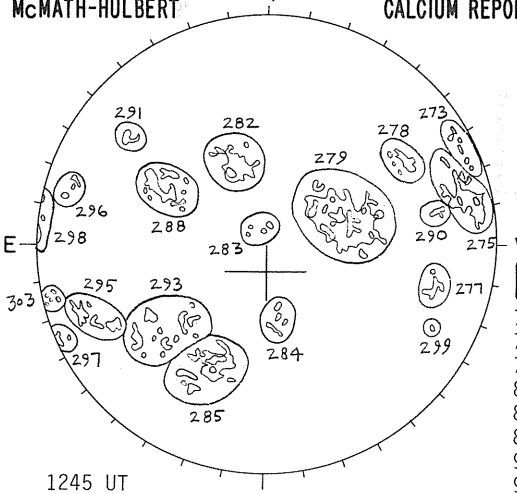


1430 UT

PROMINENCES

1403 UT

McMATH-HULBERT CALCIUM REPORT



1245 UT

GOOD	S
75-	5500-3.0
77-	0800-2.5
79-	7000-3.5
82-	1800-3.5
85-	2800-3.0
88-	1700-3.0
90-	0300-2.5
91-	0500-3.0
93-	1800-2.5
95-	1500-2.5
96-	0500-2.5
98-	2000-2.5

NOSC LA POSTA Np 2.0 CM

NO DATA

E SCHEDULE W

---- UT Sp Ant. Temp. Unit 100° K

NOSC LA POSTA Np 8.6 MM

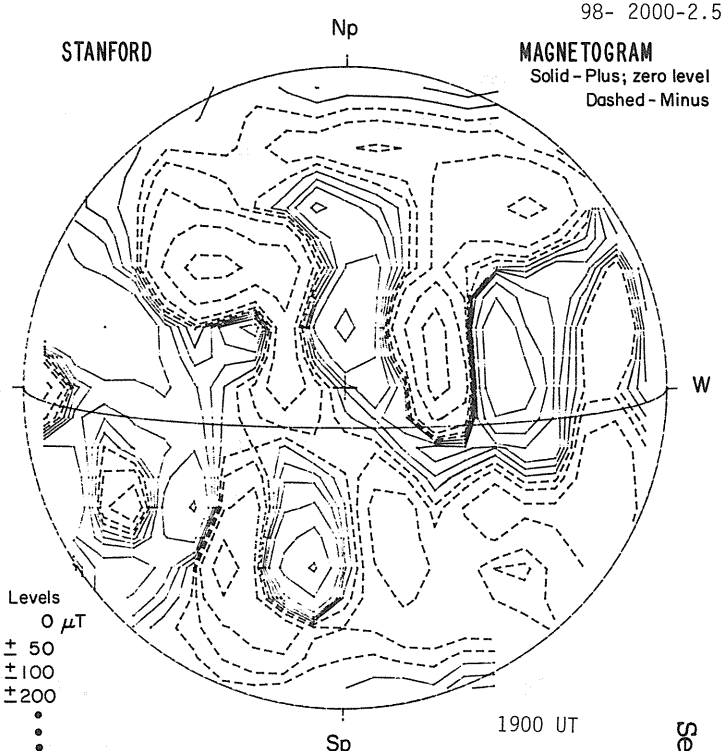
NO DATA

E SCHEDULE W

---- UT Sp Ant. Temp. Unit 100° K

STANFORD MAGNETOGRAM

Solid - Plus; zero level
Dashed - Minus



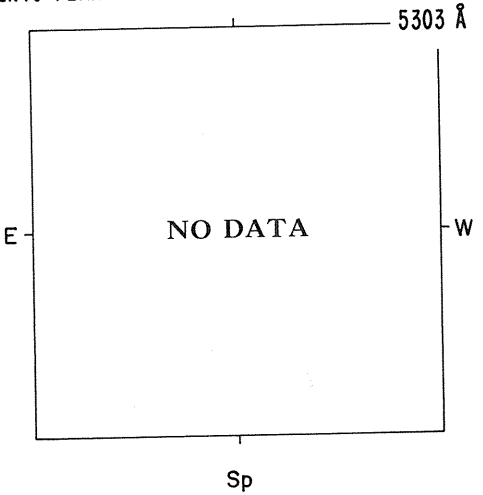
1900 UT

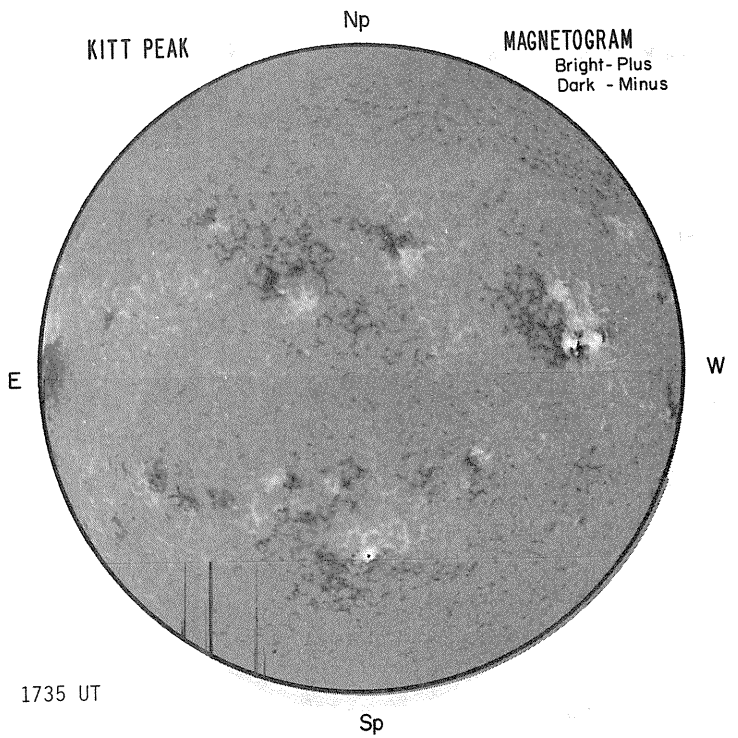
79 Sep 79

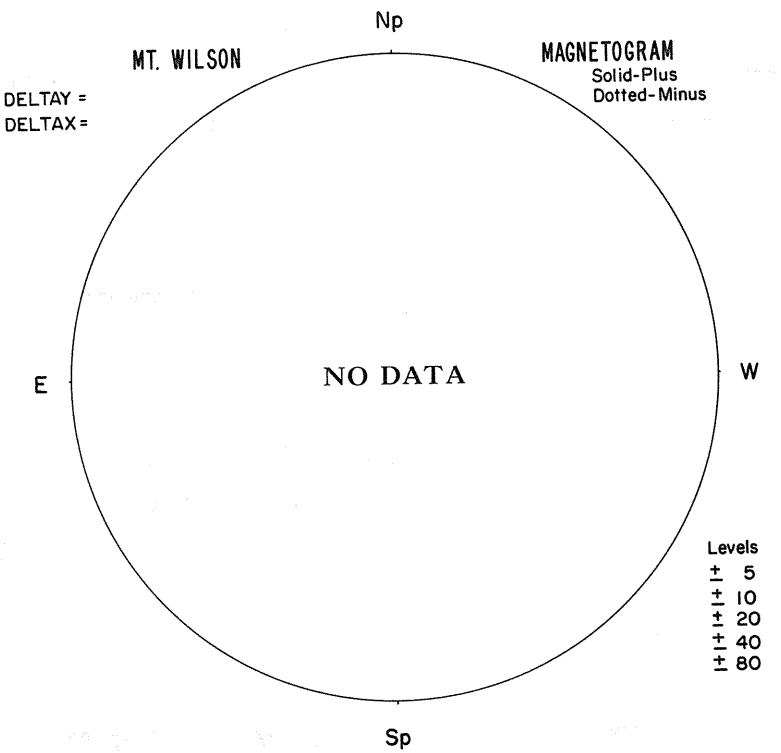
SEPTEMBER 16, 1979 (P = 24.16, B_o = 7.19, L_o = 275.98)

SACRAMENTO PEAK

CORONA (1.15 $R_\odot$)
5303 Å

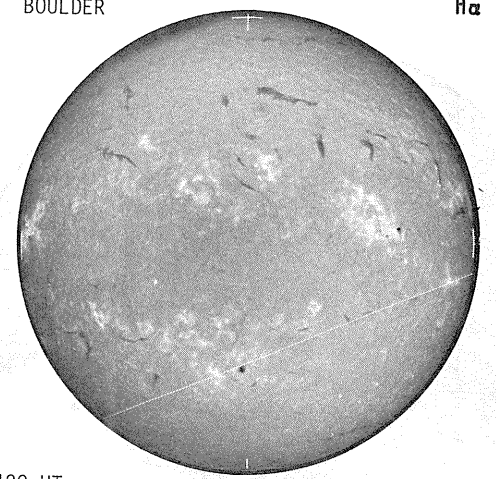






16

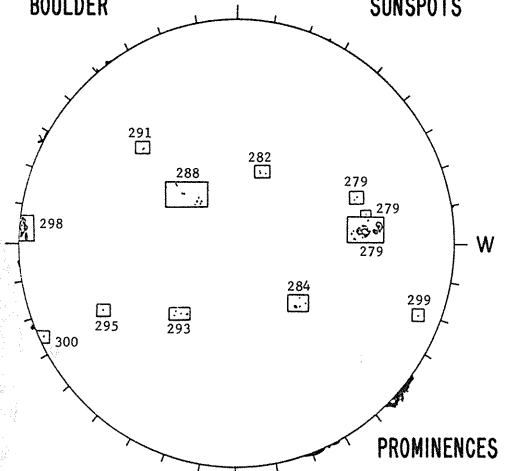
BOULDER Np Hα



E W Sp

1420 UT

BOULDER Np SUNSPOTS



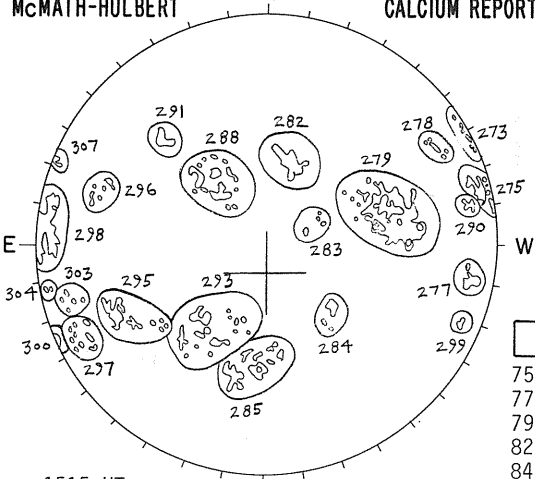
E W Sp

1415 UT

PROMINENCES

1420 UT

McMATH-HULBERT Np CALCIUM REPORT



E W Sp

1515 UT

GOOD	S
75-	3600-3.0
77-	1200-2.5
79-	6800-3.5
82-	2000-3.0
84-	0500-3.0
85-	2500-2.5
88-	2000-3.0
91-	0800-2.5
95-	1500-3.0
98-	7500-3.5

NOSC LA POSTA Np 2.0 CM

NO DATA

E SCHEDULE W

---- UT Sp Ant. Temp. Unit 100° K

NOSC LA POSTA Np 8.6 MM

NO DATA

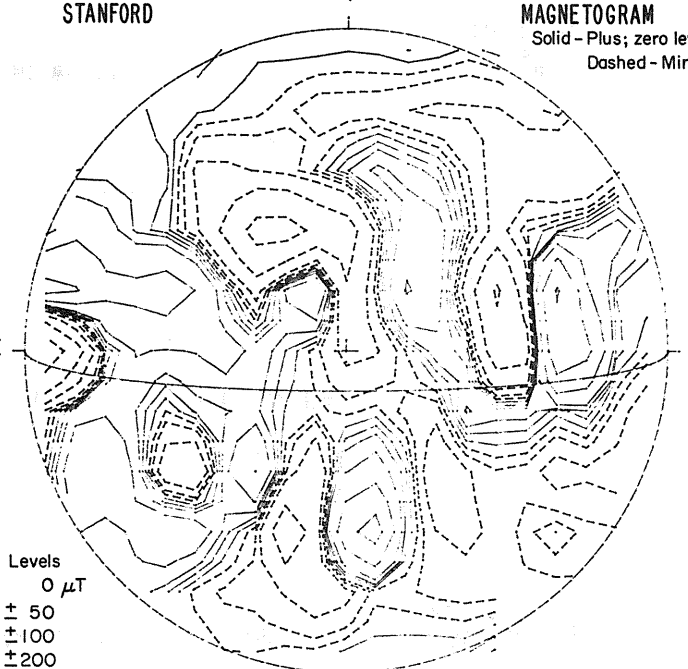
E SCHEDULE W

---- UT Sp Ant. Temp. Unit 100° K

STANFORD Np MAGNETOGRAM

Solid - Plus; zero level

Dashed - Minus



E W Sp

1830 UT

Levels

0 μT

± 50

±100

±200

81 Sep 79

SEPTEMBER 17, 1979 (P = 24.32, B_o = 7.18, L_o = 262.77)

SACRAMENTO PEAK

Np

CORONA (1.15 $R_\odot$)
5303 Å

E

NO DATA

W

Sp

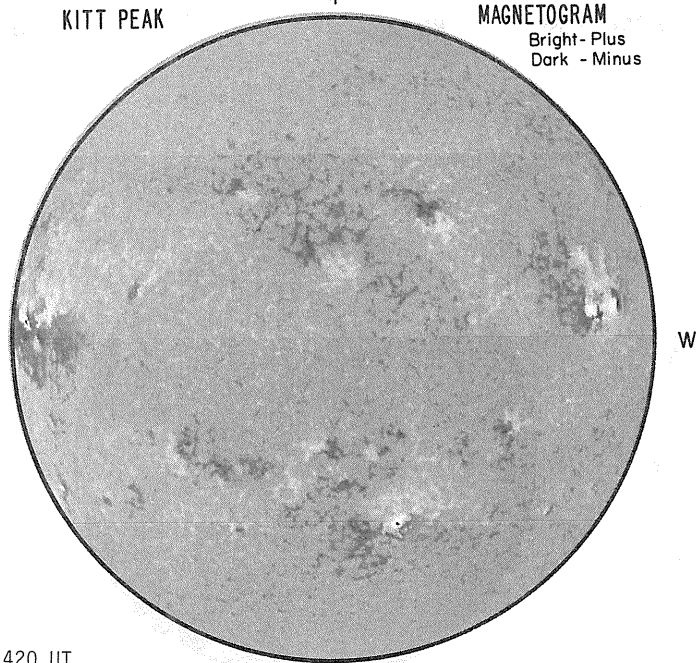
KITT PEAK

Np

MAGNETOGRAM
Bright - Plus
Dark - Minus

E

W



1420 UT

Sp

MT. WILSON

Np

MAGNETOGRAM
Solid - Plus
Dotted - Minus

DELTAY =
DELTAX =

E

NO DATA

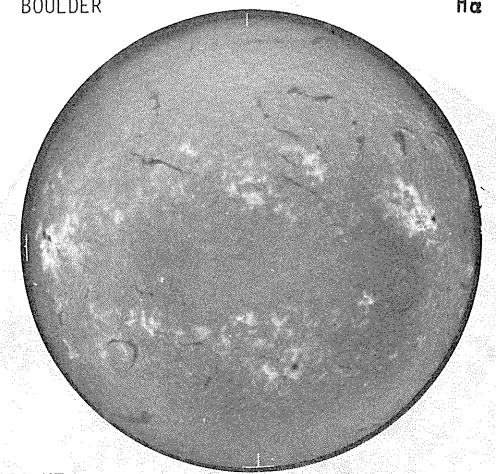
W

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

Sp

17

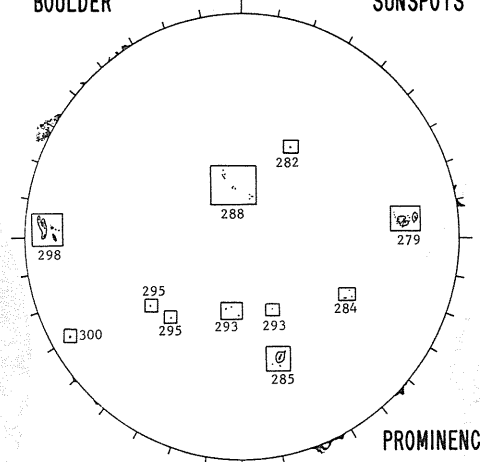
BOULDER Np Hα



E W

1400 UT Sp

BOULDER Np SUNSPOTS



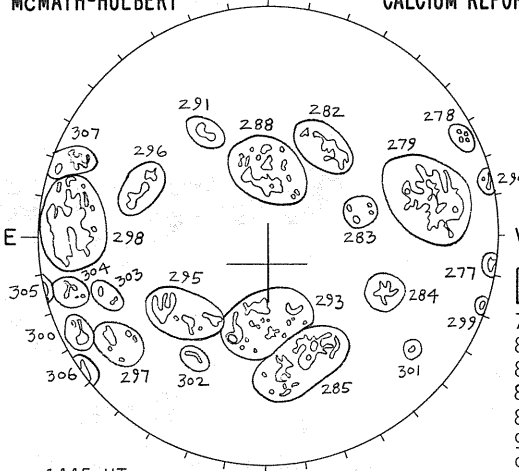
E W

1345 UT Sp

PROMINENCES

1400 UT

McMATH-HULBERT Np CALCIUM REPORT

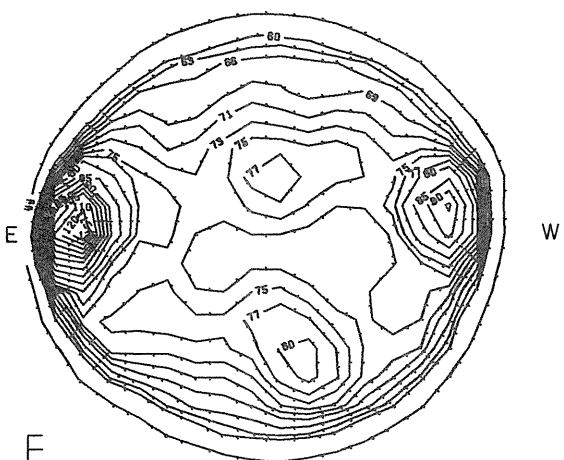


E W

1445 UT Sp

GOOD	S
79- 7100	3.5
82- 1800	3.0
84- 0600	2.5
85- 2800	2.5
88- 2000	2.5
91- 0800	2.5
93- 2000	2.5
95- 2300	2.5
96- 0800	2.5
98- 9000	3.5
02- 0300	2.5

NOSC LA POSTA Np 2.0 CM



E W

1709 UT Sp Ant. Temp. Unit 100° K

NOSC LA POSTA Np 8.6 MM

NO DATA

CALIBRATION

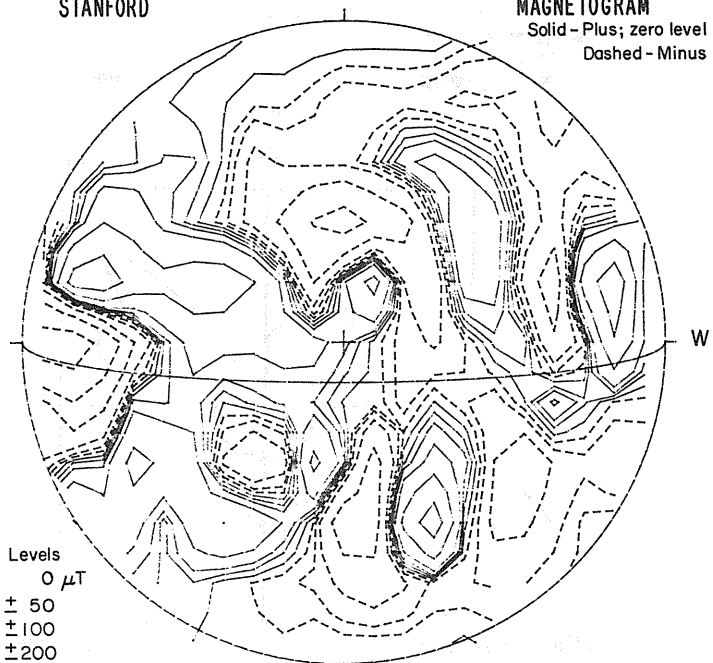
E W

1614 UT Sp Ant. Temp. Unit 100° K

STANFORD Np MAGNETOGRAM

Solid - Plus; zero level

Dashed - Minus



E W

Levels

0 μT

± 50

±100

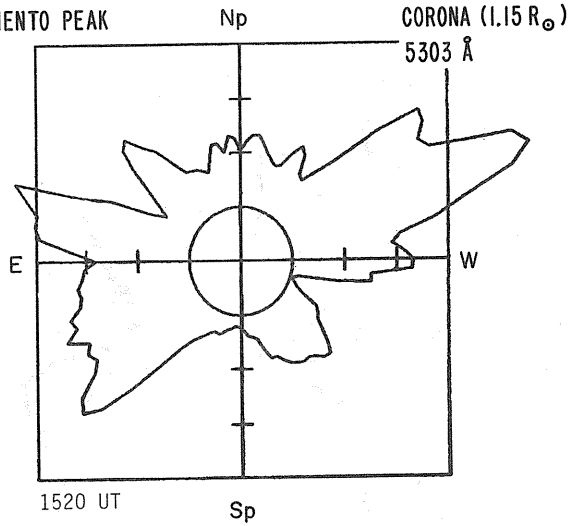
±200

1836 UT Sp

83 Sep 79

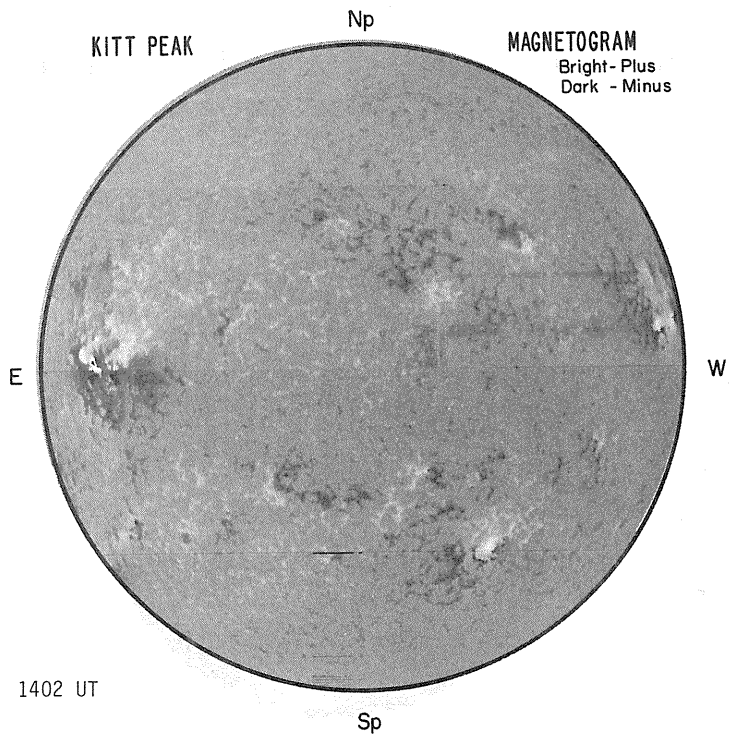
SEPTEMBER 18, 1979 (P = 24.48, B_o = 7.16, L_o = 249.57)

SACRAMENTO PEAK



1520 UT

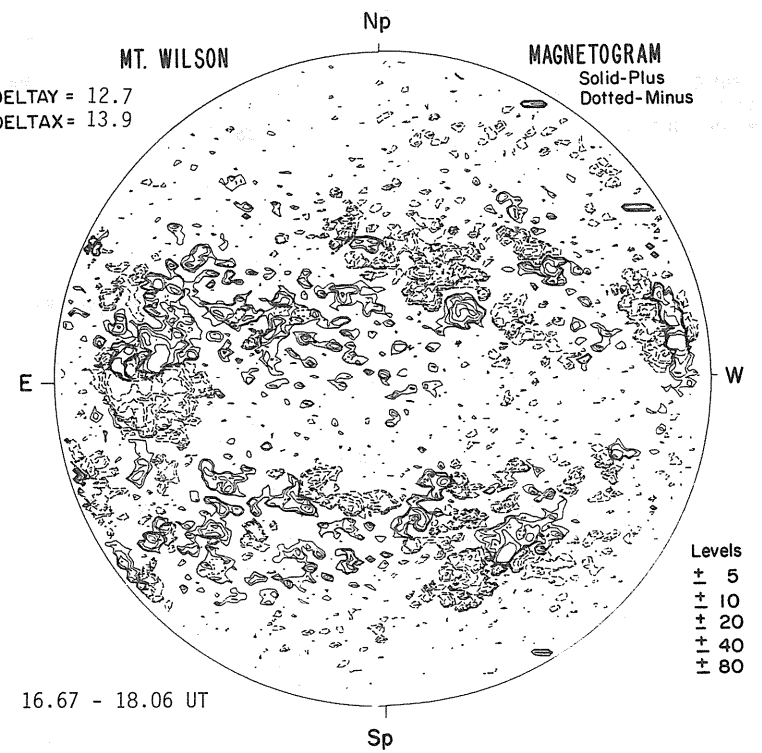
KITT PEAK



1402 UT

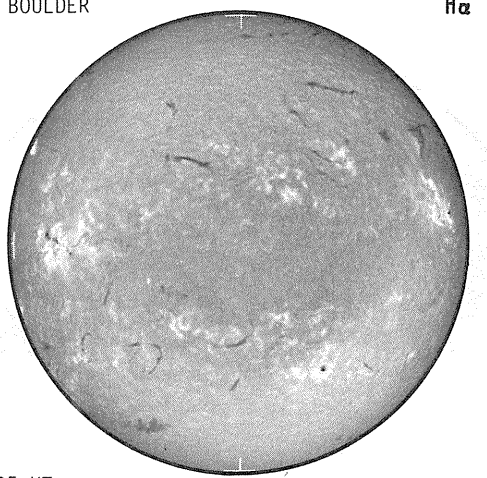
MT. WILSON

DELTAY = 12.7
DELTAX = 13.9



16.67 - 18.06 UT

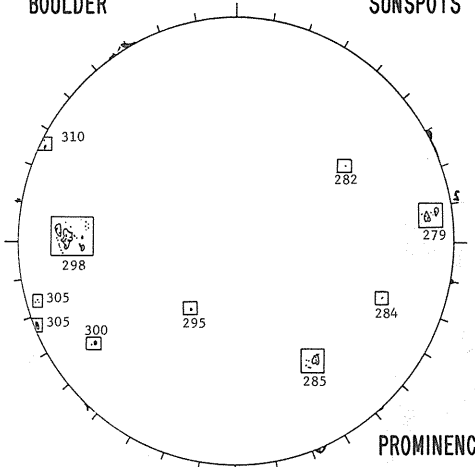
BOULDER Np Hα



E W

1435 UT Sp

BOULDER Np SUNSPOTS



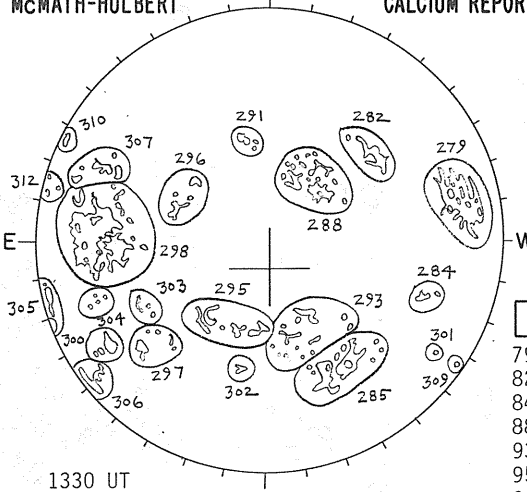
E W

1345 UT Sp

PROMINENCES

1435 UT

McMATH-HULBERT Np CALCIUM REPORT

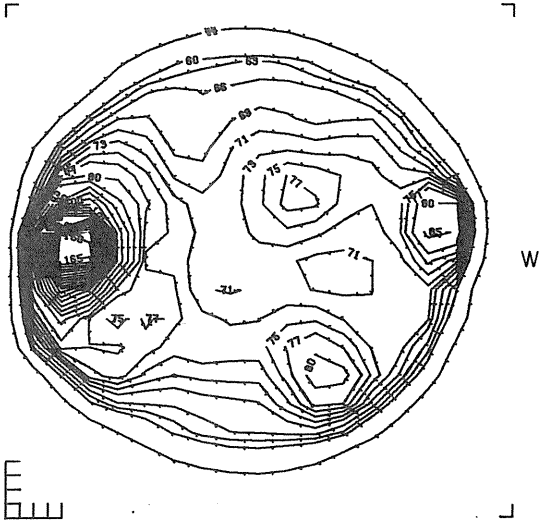


E W

1330 UT Sp

GOOD	S
79- 6500-3.5	
82- 1800-3.0	
84- 0500-3.0	
88- 2000-2.5	
93- 1700-2.5	
95- 2000-3.0	
98- 9000-3.5	
05- 2000-3.5	
10- 0500-3.5	

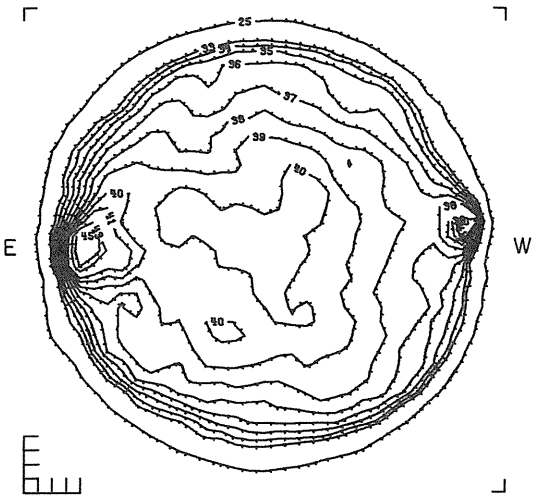
NOSC LA POSTA Np 2.0 CM



E W

1557 UT Sp Ant. Temp. Unit 100° K

NOSC LA POSTA Np 8.6 MM



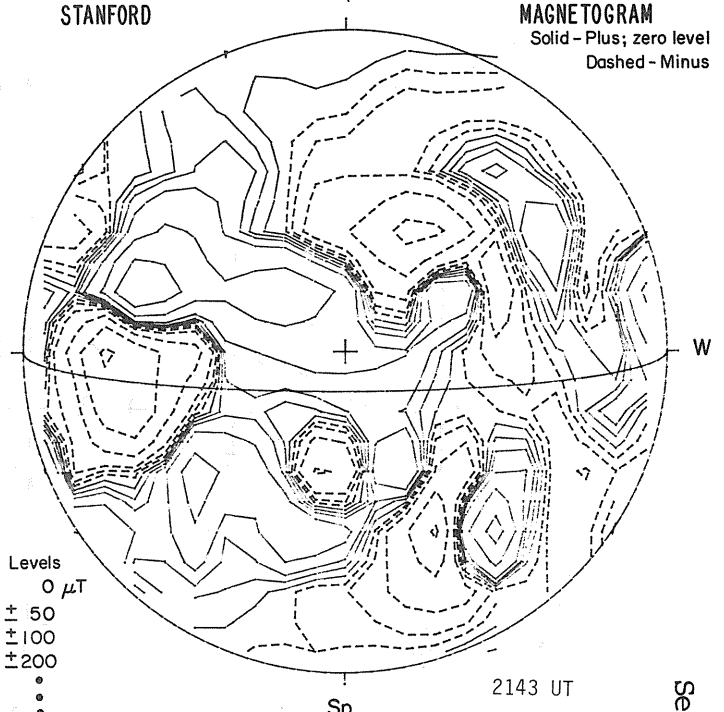
E W

1502 UT Sp Ant. Temp. Unit 100° K

STANFORD Np MAGNETOGRAM

Solid - Plus; zero level

Dashed - Minus



E W

Levels

0 μT

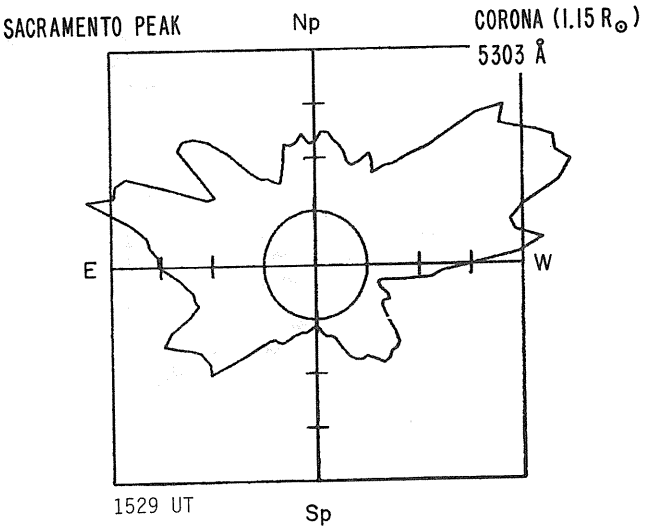
± 50

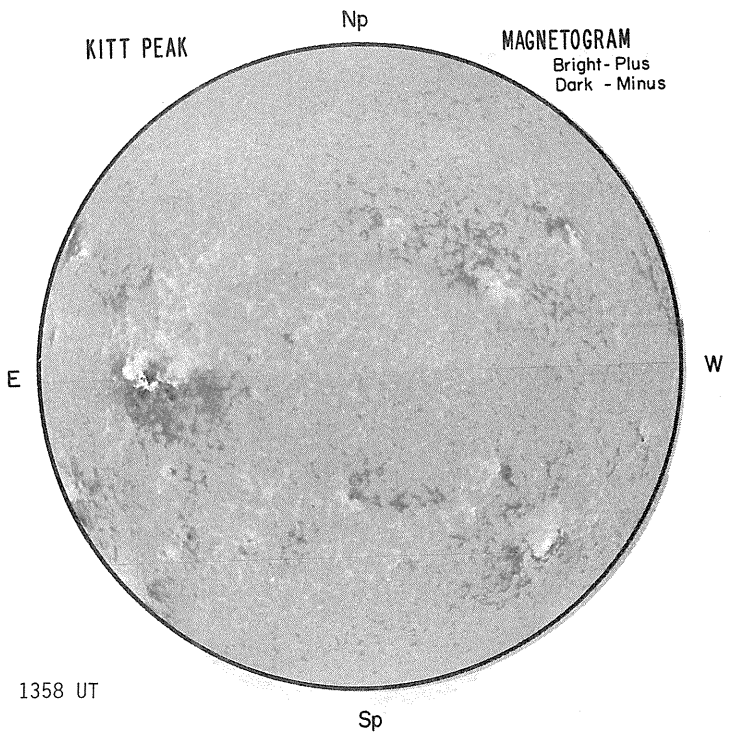
± 100

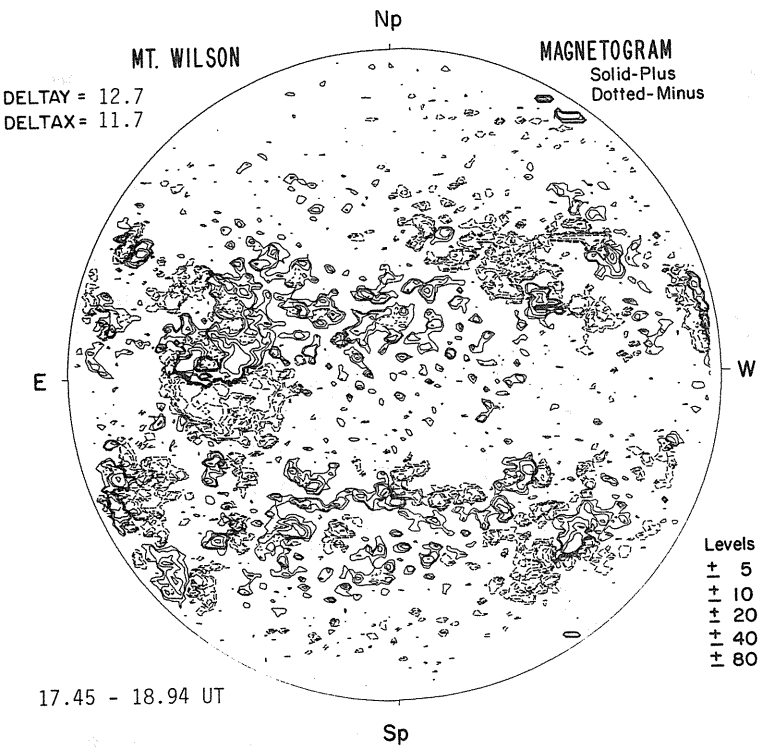
± 200

2143 UT Sp

SEPTEMBER 19, 1979 (P = 24.64, B_o = 7.14, L_o = 236.37)

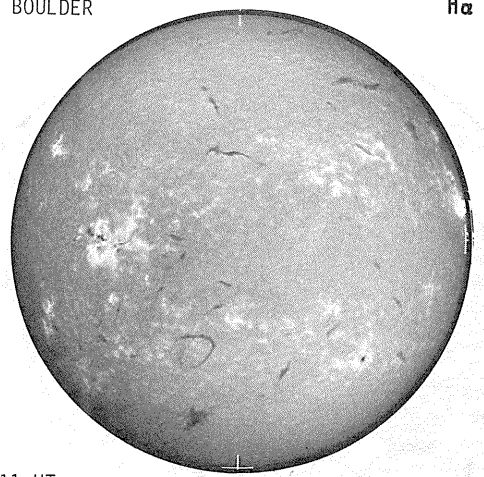






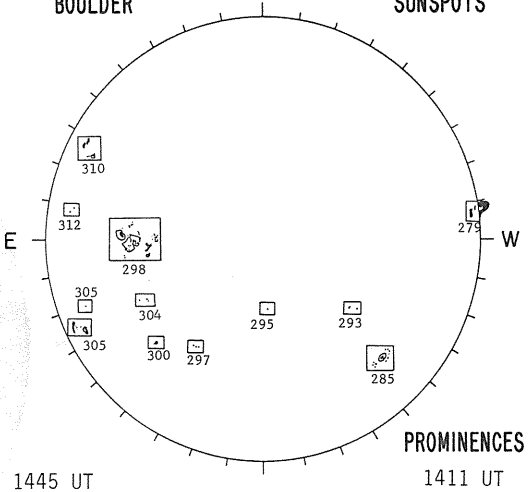
19

BOULDER Np Hα



1411 UT

BOULDER Np SUNSPOTS

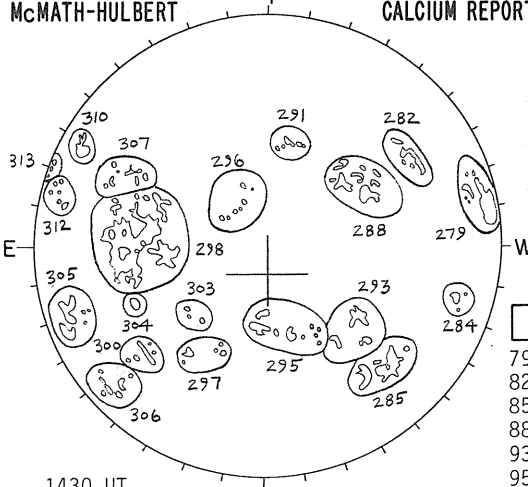


1445 UT

PROMINENCES

1411 UT

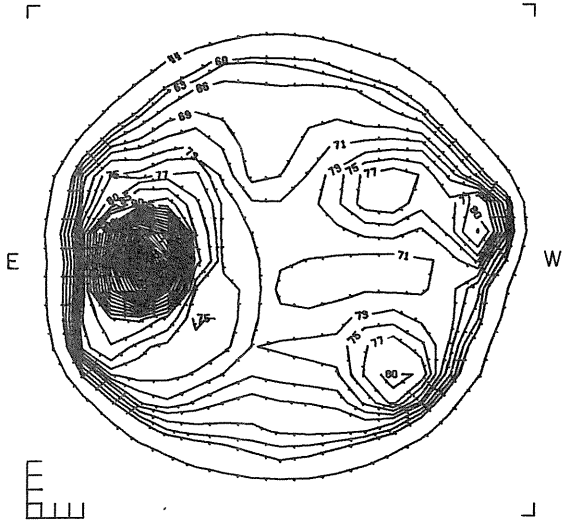
McMATH-HULBERT Np CALCIUM REPORT



1430 UT

FAIR	S
79-	5500-3.5
82-	1600-3.0
85-	2800-2.5
88-	2000-2.5
93-	1600-3.0
95-	1800-3.0
98-	9000-4.0
04-	0500-3.0
05-	3000-3.0
10-	1500-3.0

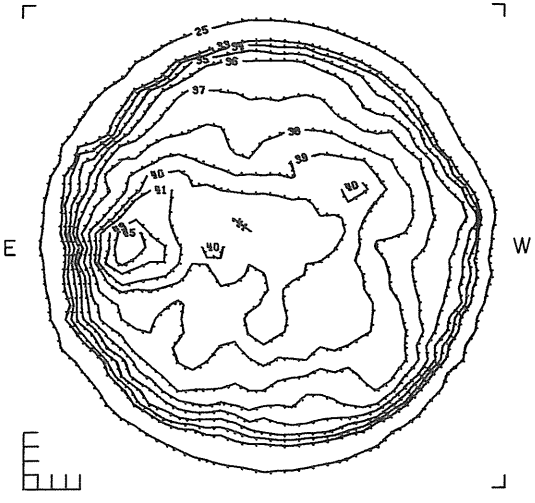
NOSC LA POSTA Np 2.0 CM



1612 UT

Ant. Temp. Unit 100° K

NOSC LA POSTA Np 8.6 MM



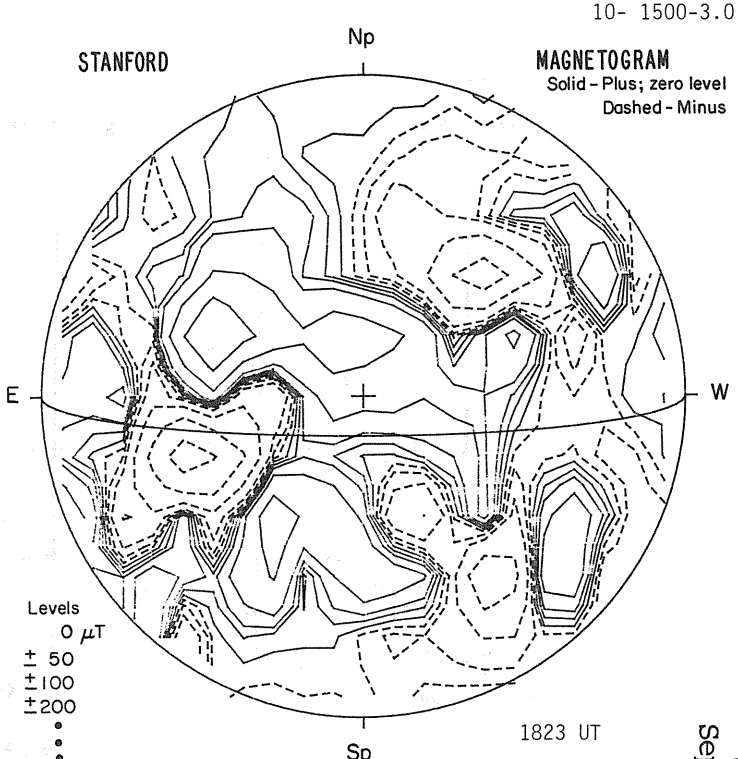
1519 UT

Ant. Temp. Unit 100° K

STANFORD Np MAGNETOGRAM

Solid - Plus; zero level

Dashed - Minus



Levels

0 μT

± 50

±100

±200

1823 UT

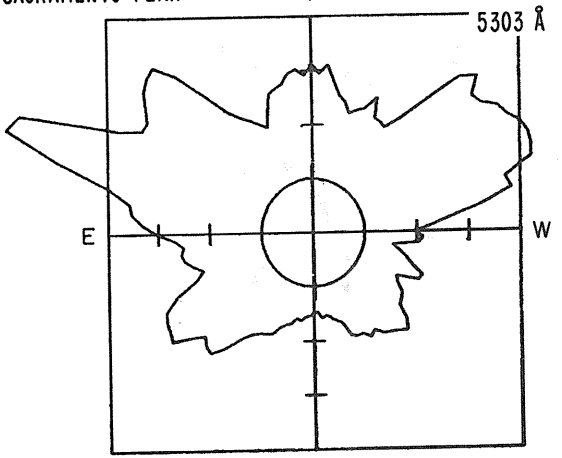
87 Sep 79

SEPTEMBER 20, 1979 (P = 24.79, B_o = 7.12, L_o = 223.17)

SACRAMENTO PEAK

CORONA (1.15 $R_\odot$)

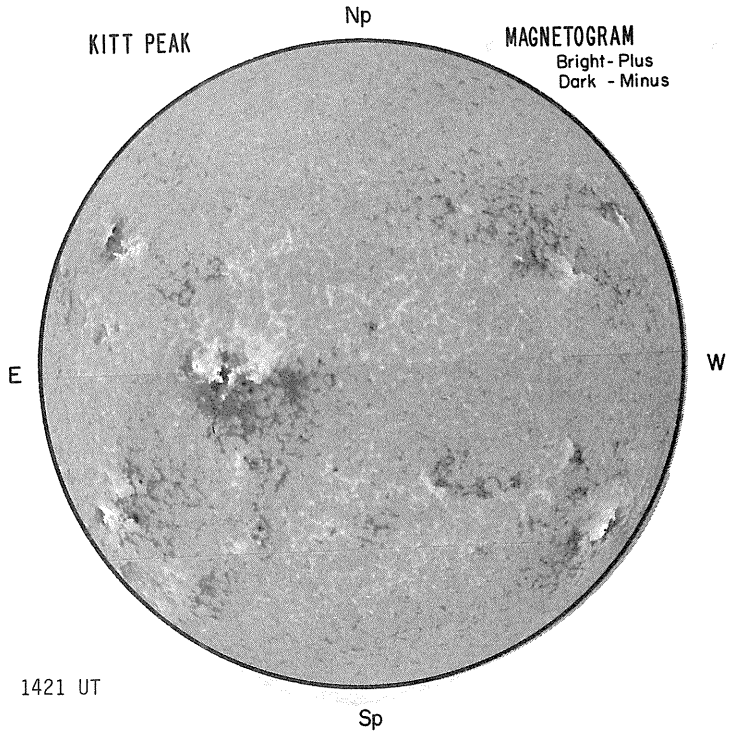
5303 Å



1452 UT

KITT PEAK

MAGNETOGRAM
Bright - Plus
Dark - Minus

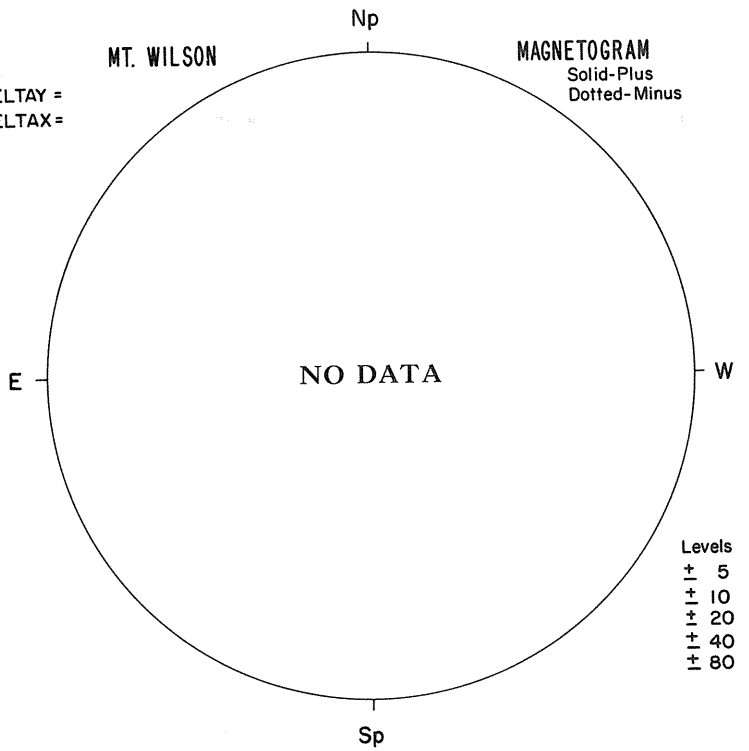


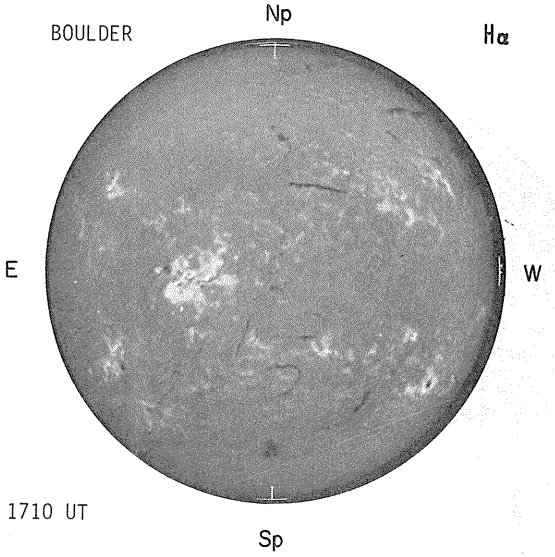
1421 UT

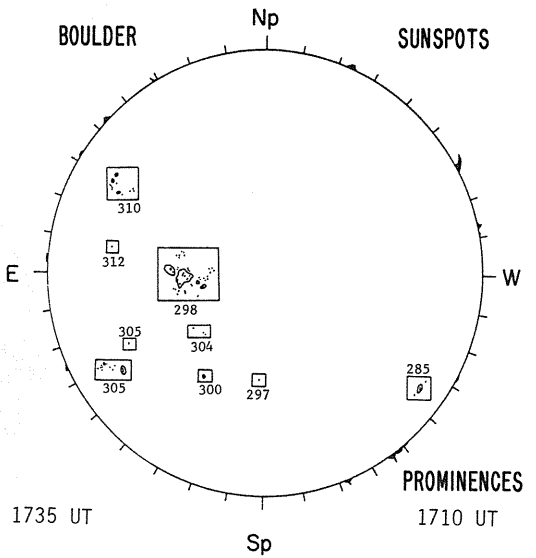
MT. WILSON

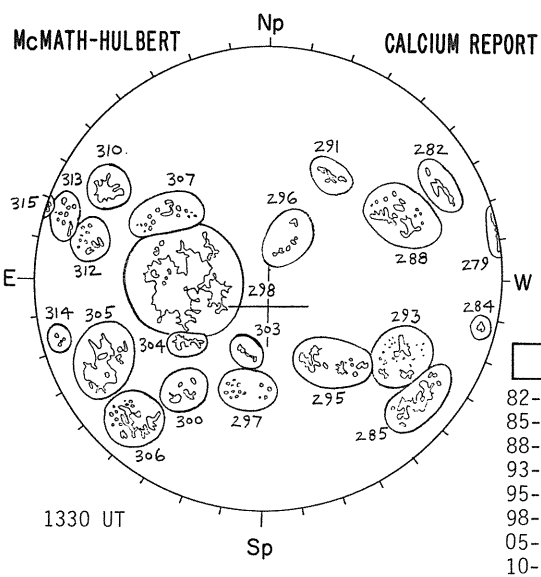
MAGNETOGRAM
Solid-Plus
Dotted-Minus

DELTAY =
DELTAX =

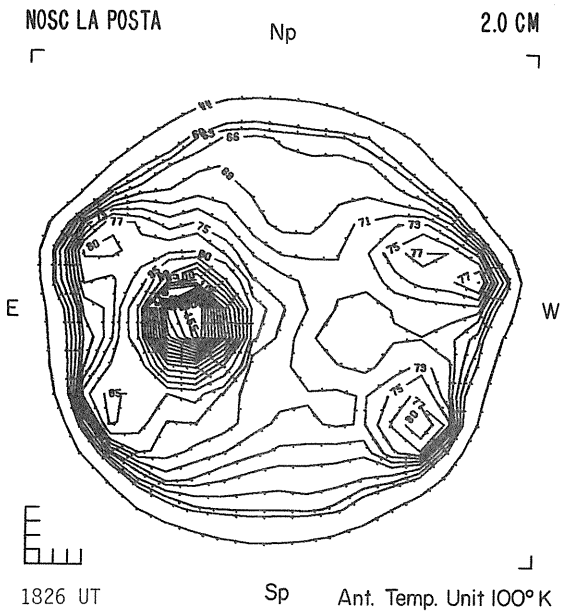


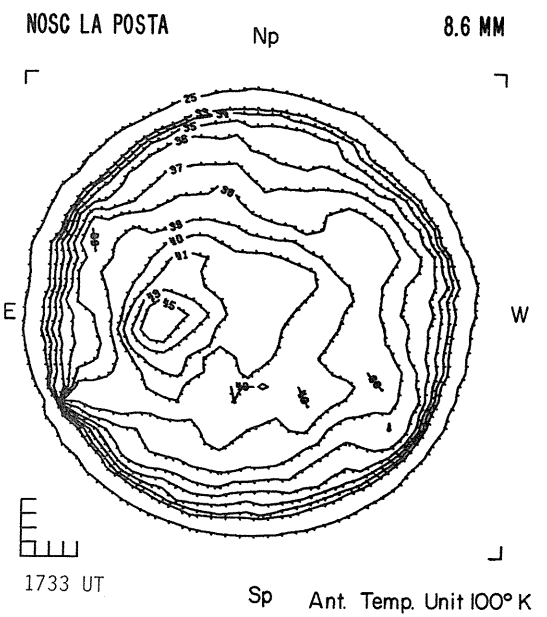


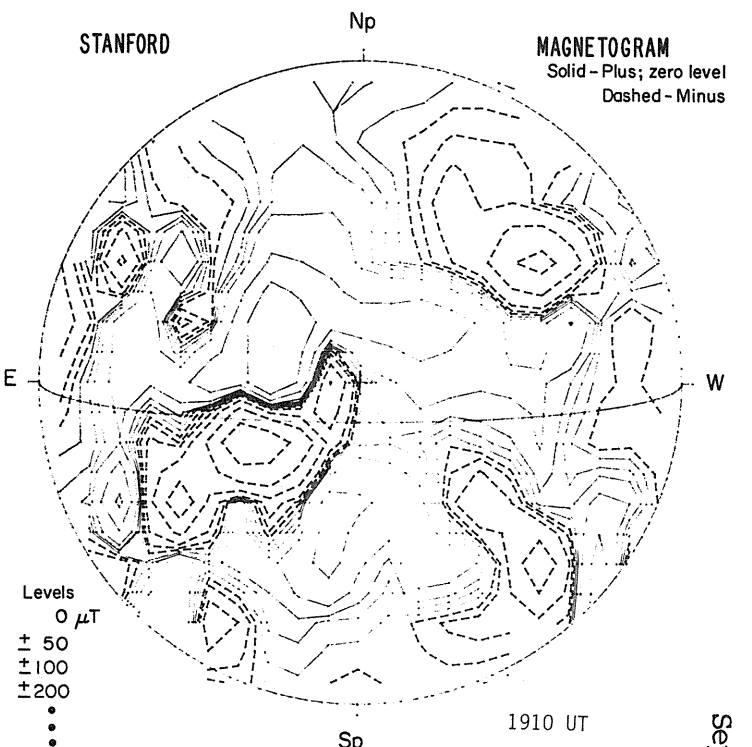




FAIR	M
82-	1600-2.5
85-	2200-2.5
88-	1800-2.5
93-	1400-3.0
95-	1500-2.5
98-	9000-4.0
05-	3600-2.5
10-	1700-3.0



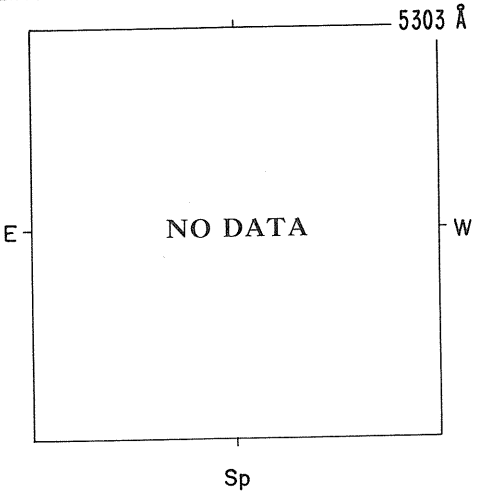


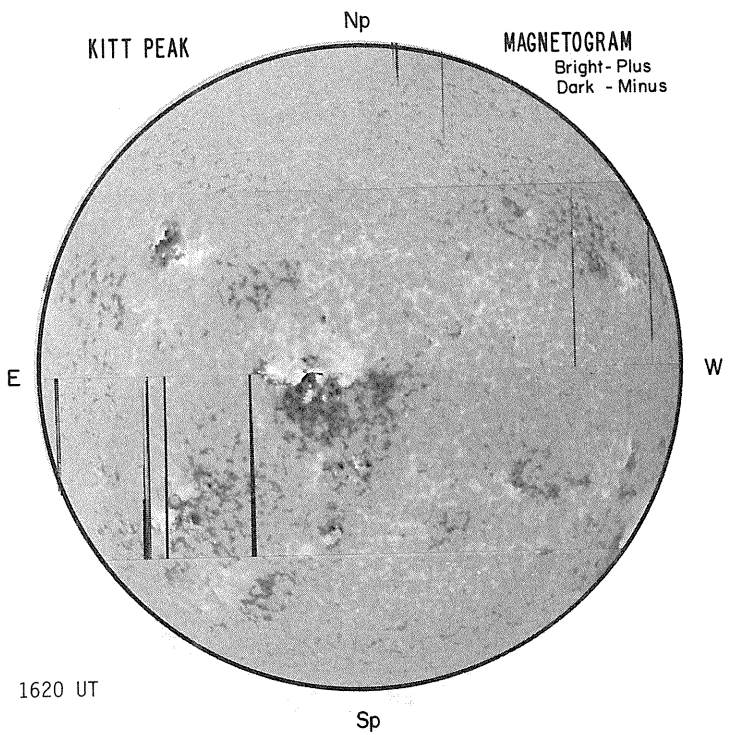


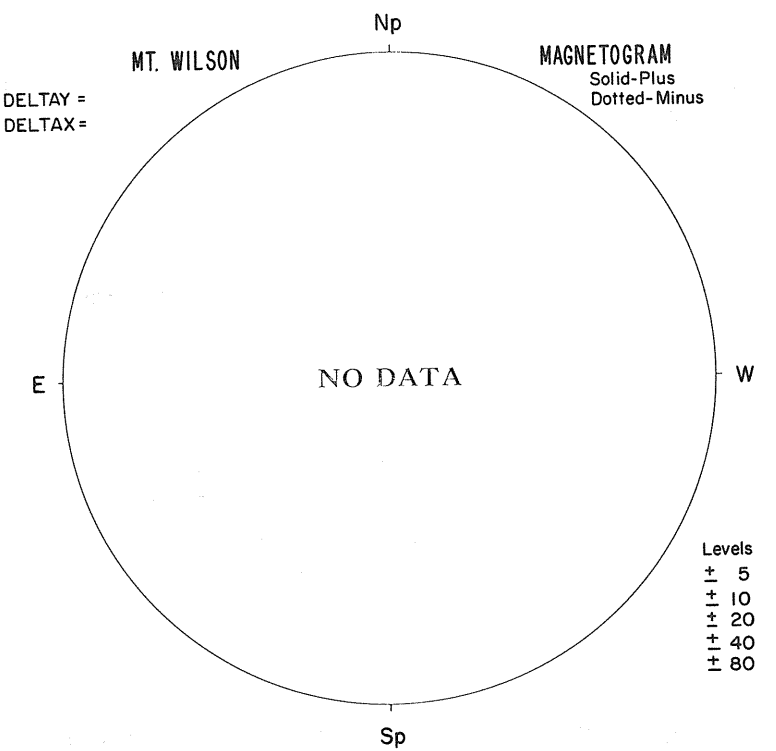
SEPTEMBER 21, 1979 (P = 24.93, B_o = 7.09, L_o = 209.97)

SACRAMENTO PEAK

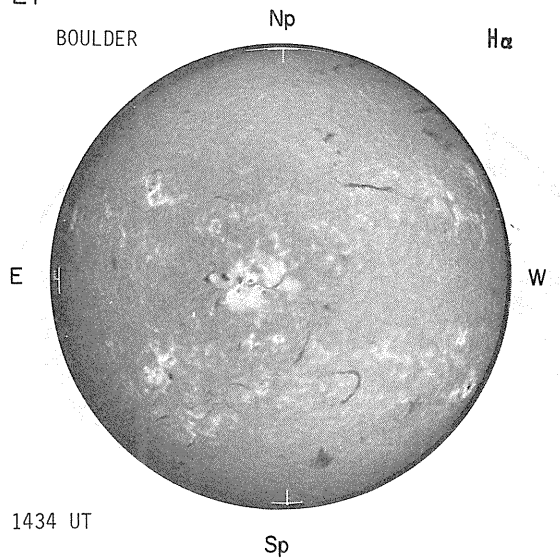
CORONA (1.15 $R_\odot$)
5303 Å

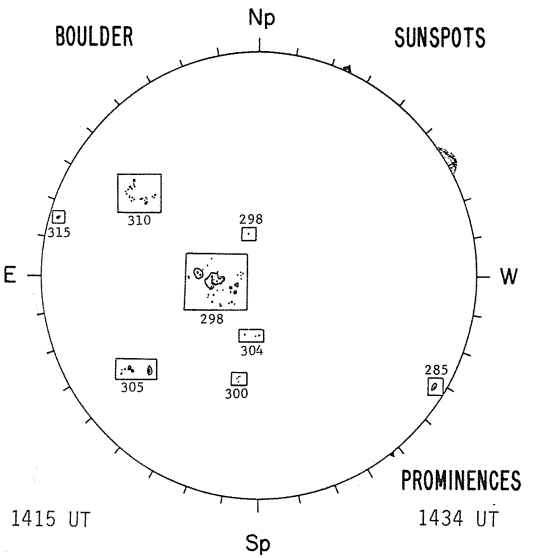


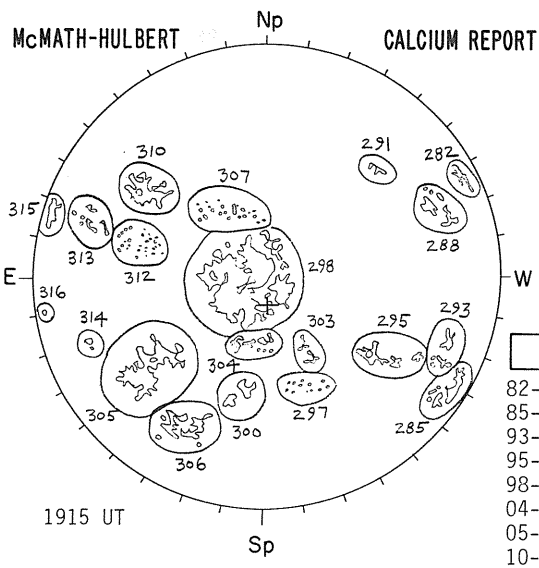




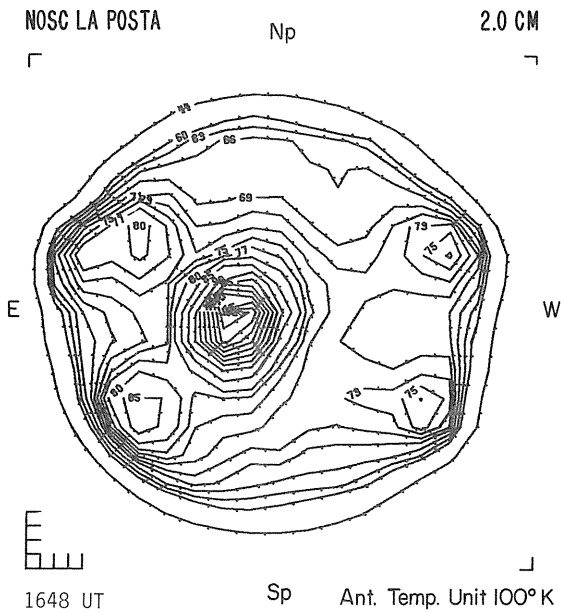
21

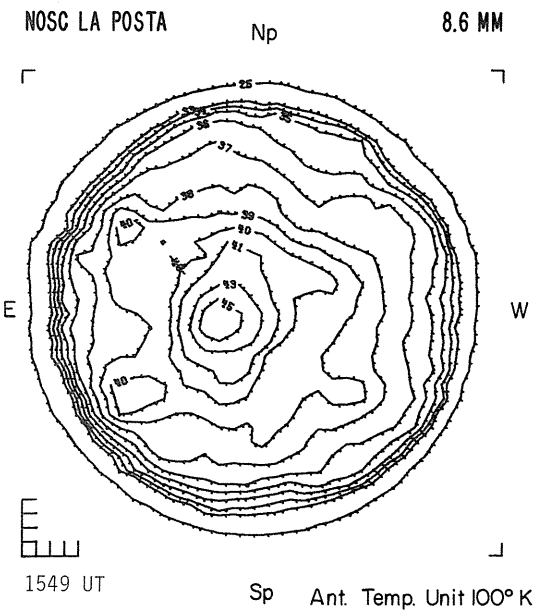


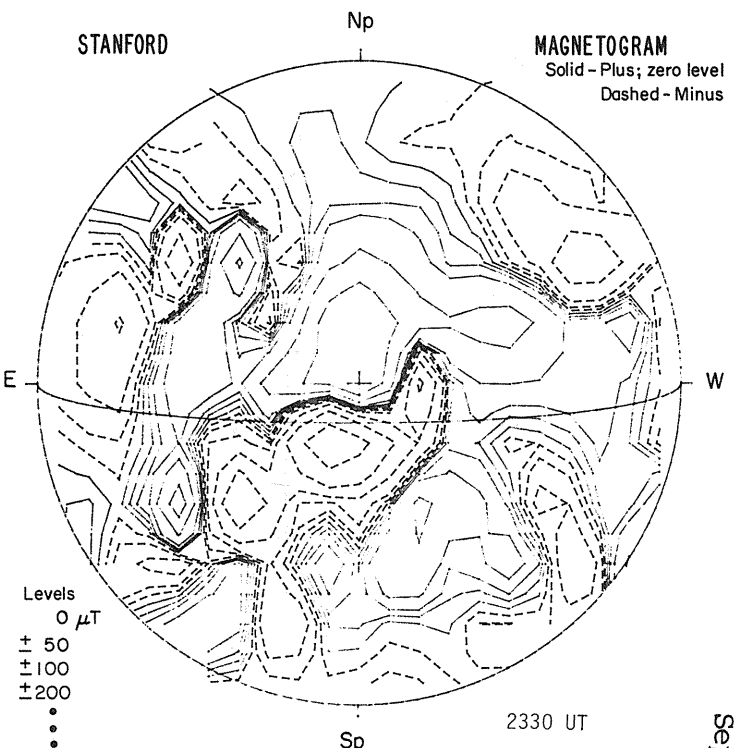




GOOD	M
82-	1500-2.5
85-	2500-2.5
93-	1100-3.0
95-	1200-2.5
98-	10000-4.0
04-	0700-2.5
05-	3800-3.0
10-	2000-3.5
15-	1700-3.5



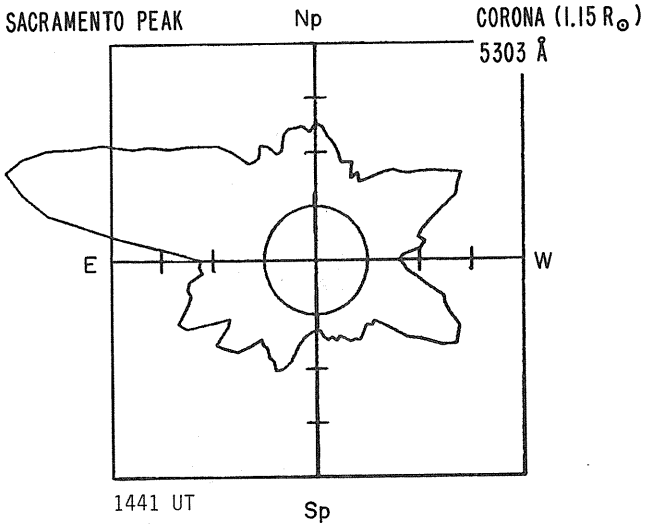




91
Sep 79

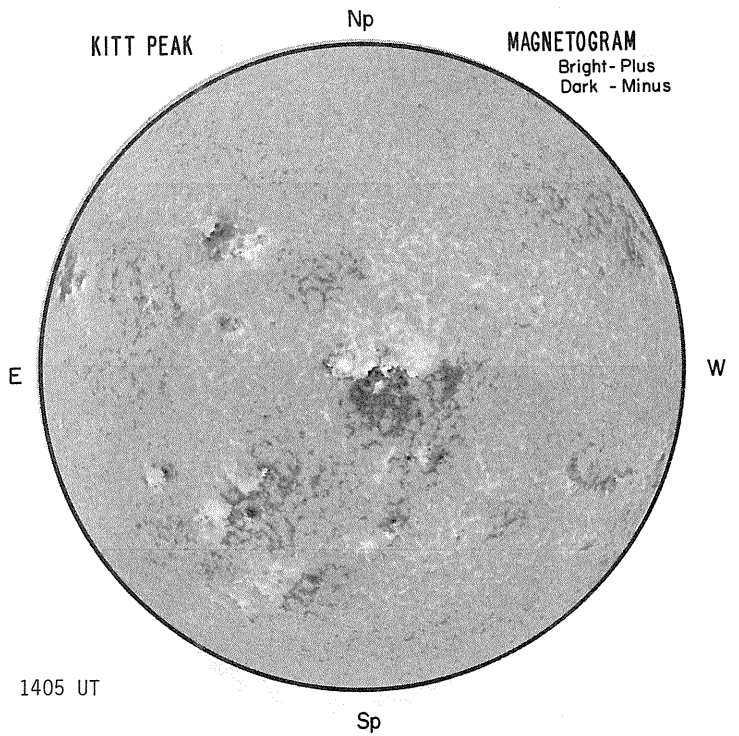
SEPTEMBER 22, 1979 (P = 25.06, B_o = 7.07, L_o = 196.77)

SACRAMENTO PEAK



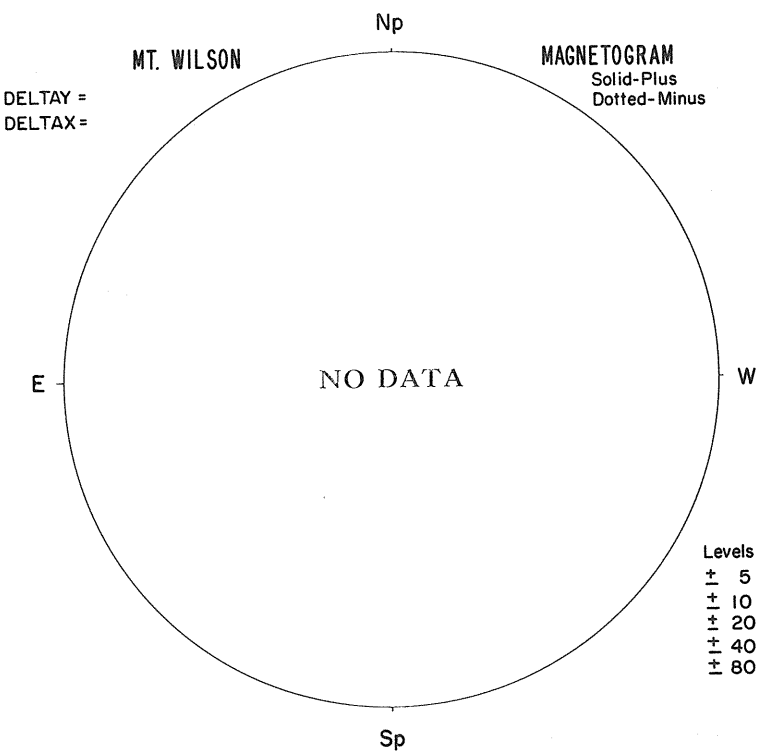
1441 UT

KITT PEAK

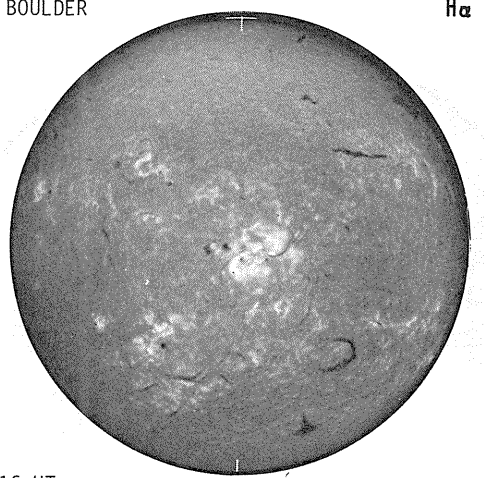


1405 UT

MT. WILSON

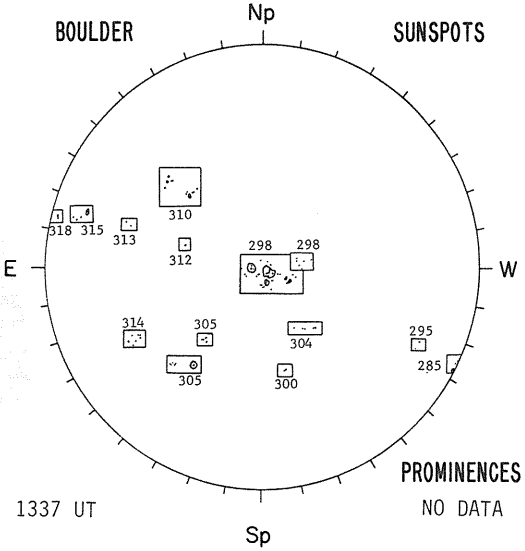


BOULDER Hα



1416 UT

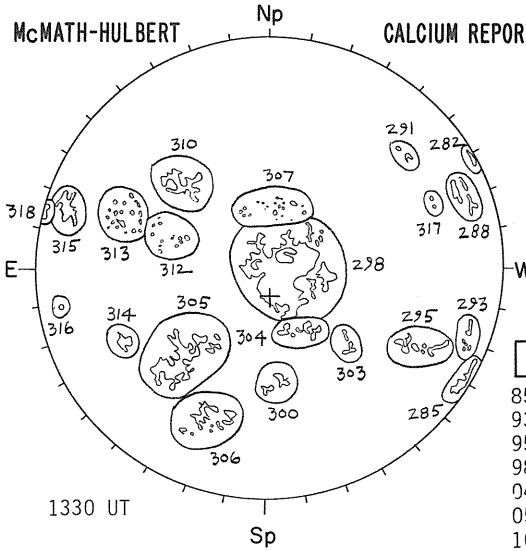
BOULDER SUNSPOTS



1337 UT

PROMINENCES
NO DATA

McMATH-HULBERT CALCIUM REPORT



1330 UT

FAIR	M

85- 1900-2.5
93- 0500-2.5
95- 1300-2.5
98-10000-3.5
04- 0700-2.5
05- 3800-2.5
10- 2000-2.5
14- 0500-2.5
15- 1700-2.5

NOSC LA POSTA Np 2.0 CM

NO DATA

E W

SCHEDULE

---- UT

Sp

Ant. Temp. Unit 100° K

NOSC LA POSTA Np 8.6 MM

NO DATA

E W

SCHEDULE

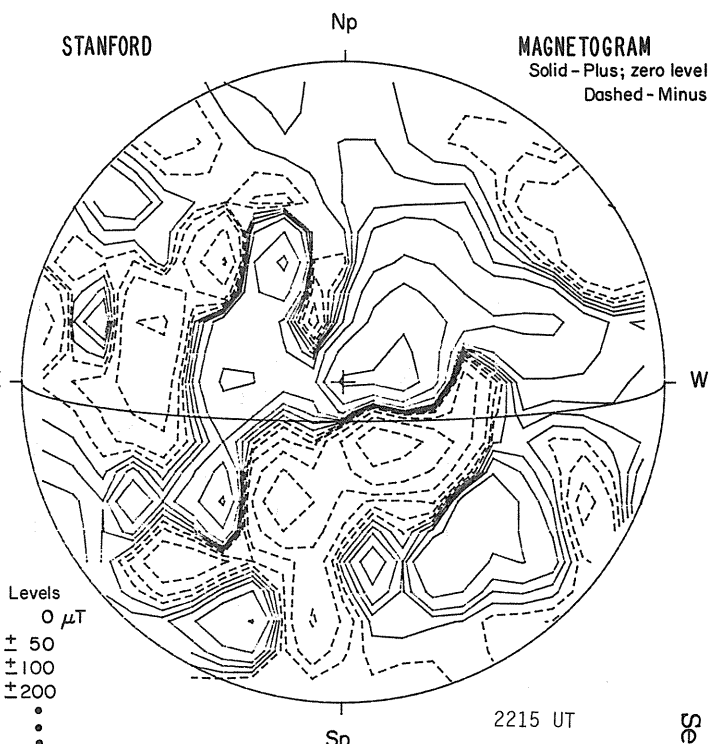
---- UT

Sp

Ant. Temp. Unit 100° K

STANFORD MAGNETOGRAM

Solid - Plus; zero level
Dashed - Minus



Levels
0 μT
± 50
±100
±200

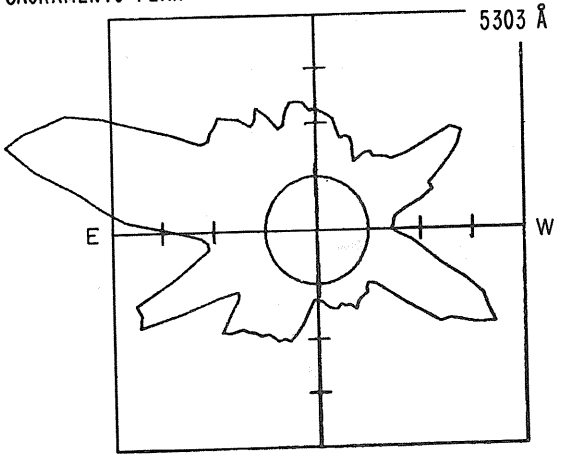
2215 UT

93
Sep 79

SEPTEMBER 23, 1979 (P = 25.19, B_o = 7.04, L_o = 183.58)

SACRAMENTO PEAK

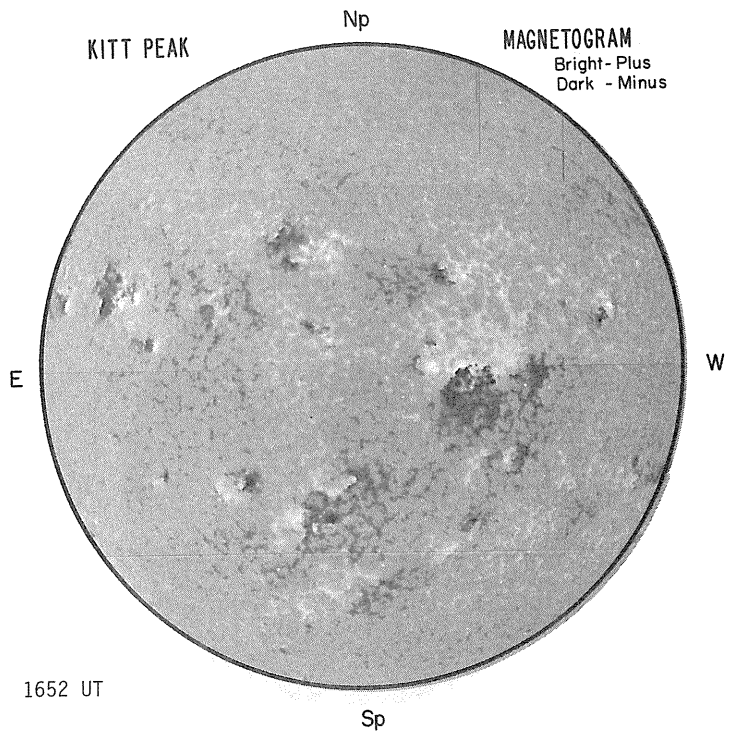
CORONA (1.15 $R_\odot$)
5303 Å



1419 UT

KITT PEAK

MAGNETOGRAM
Bright - Plus
Dark - Minus

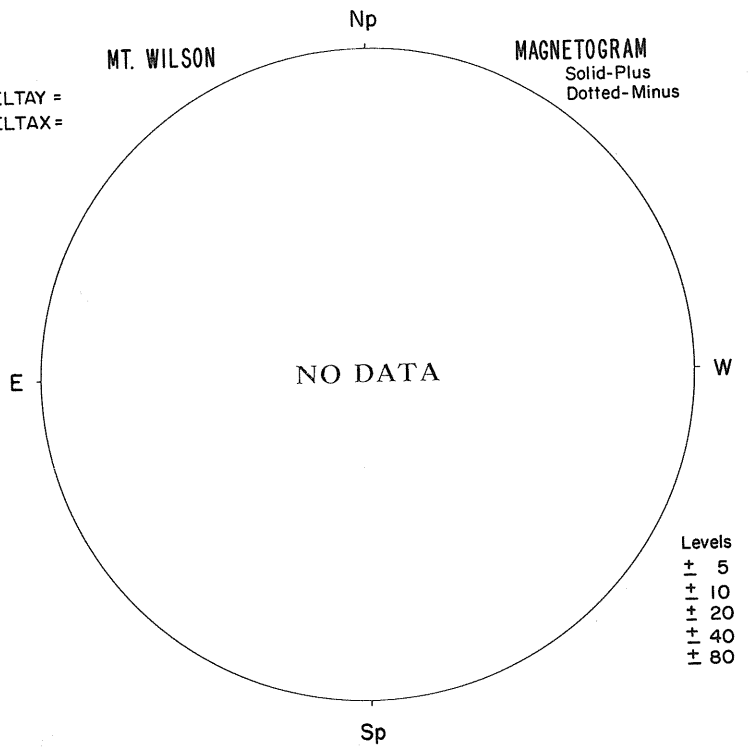


1652 UT

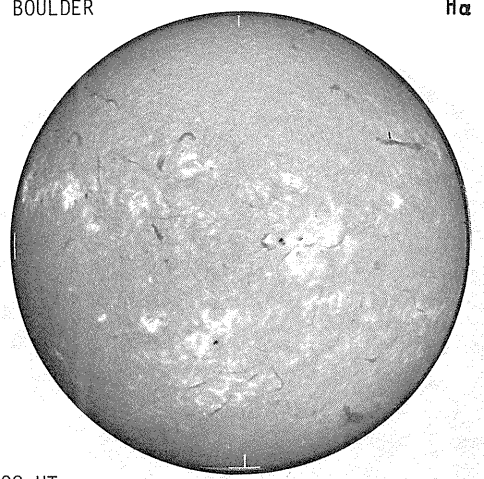
MT. WILSON

DELTAY =
DELTAX =

MAGNETOGRAM
Solid-Plus
Dotted-Minus

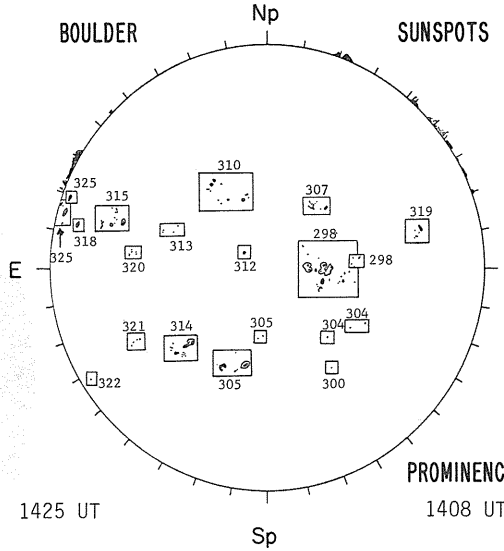


BOULDER Hα



1408 UT

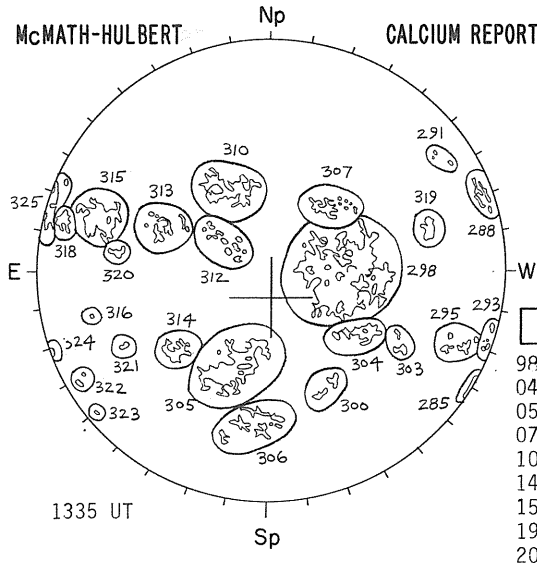
BOULDER SUNSPOTS



PROMINENCES

1425 UT 1408 UT

McMATH-HULBERT CALCIUM REPORT



1335 UT

GOOD	M
98-1100	0-3.5
04- 0700	-2.5
05- 4000	-2.5
07- 1200	-3.5
10- 2000	3.5
14- 0800	-3.0
15- 2700	3.0
19- 0800	-3.5
20- 0400	-3.0
21- 0200	-3.0
25- 2800	-3.0

NOSC LA POSTA Np 2.0 CM

NO DATA

E SCHEDULE W

---- UT Sp Ant. Temp. Unit 100° K

NOSC LA POSTA Np 8.6 MM

NO DATA

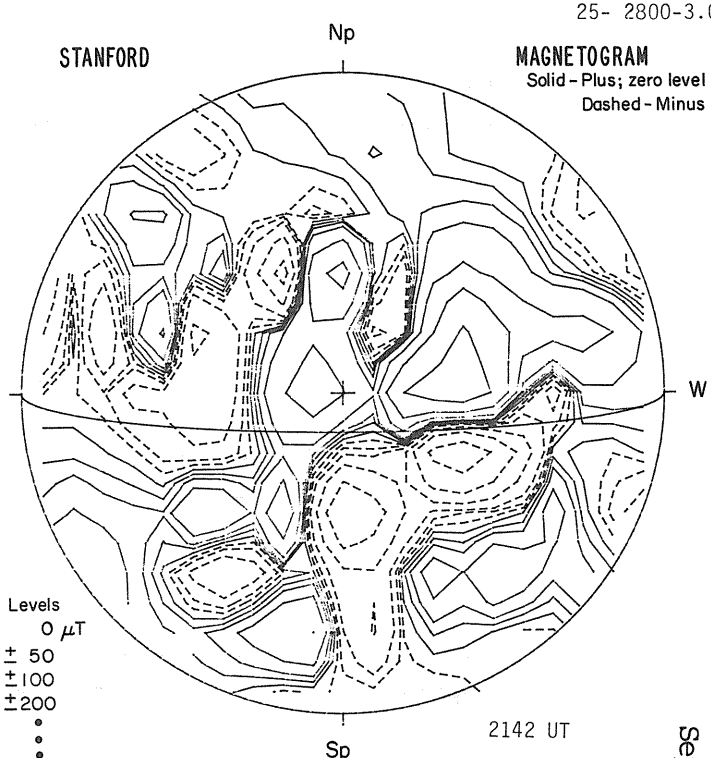
E SCHEDULE W

---- UT Sp Ant. Temp. Unit 100° K

STANFORD MAGNETOGRAM

Solid - Plus; zero level

Dashed - Minus



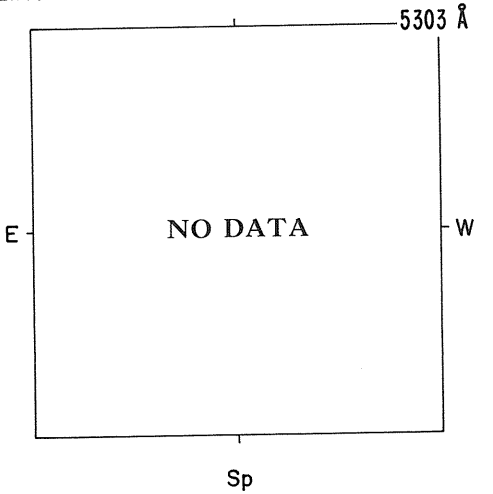
Levels
0 μT
± 50
±100
±200

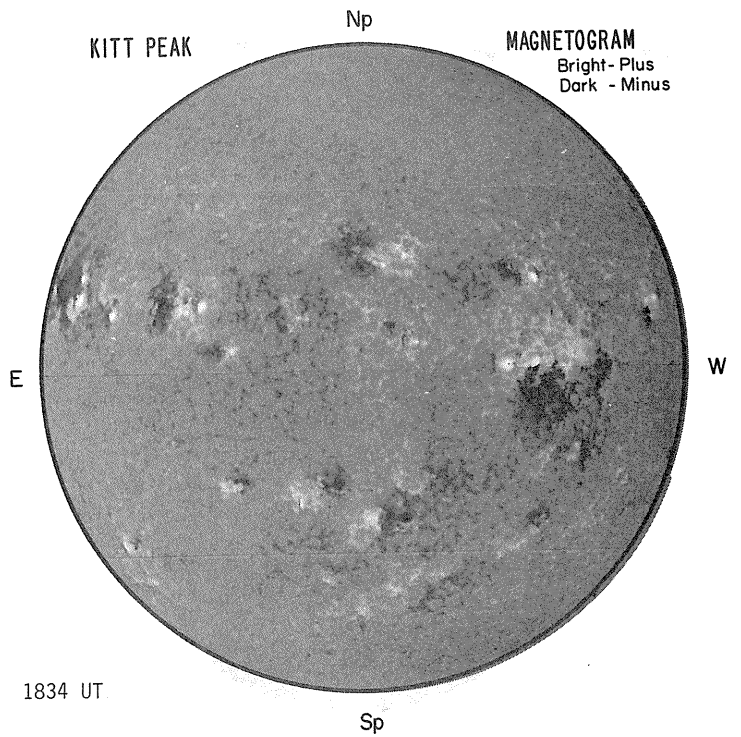
2142 UT

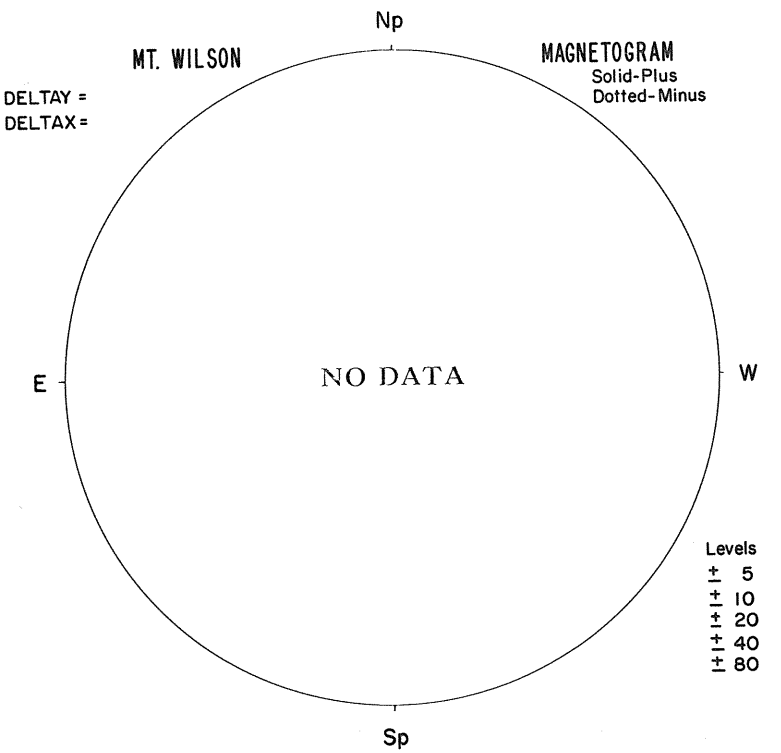
SEPTEMBER 24, 1979 (P = 25.31, B_o = 7.01, L_o = 170.38)

SACRAMENTO PEAK

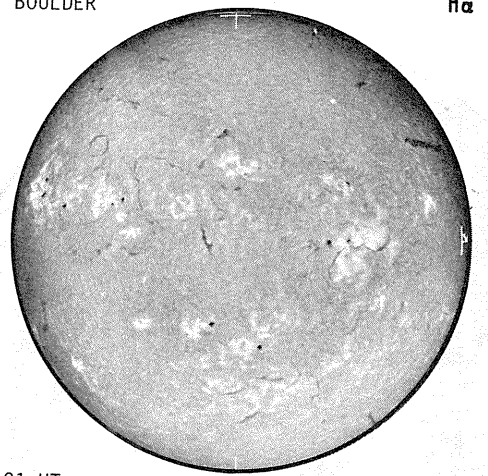
CORONA (1.15 $R_\odot$)
5303 Å





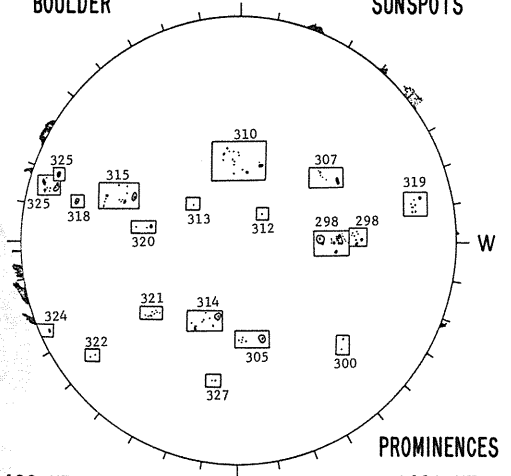


BOULDER Np Hα



1421 UT

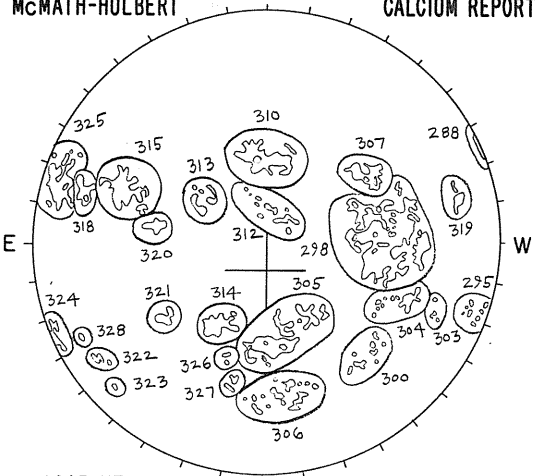
BOULDER Np SUNSPOTS



PROMINENCES

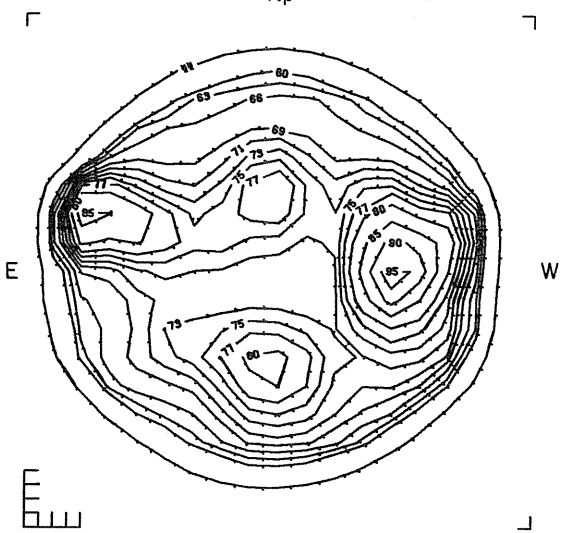
1430 UT 1421 UT

McMATH-HULBERT Np CALCIUM REPORT



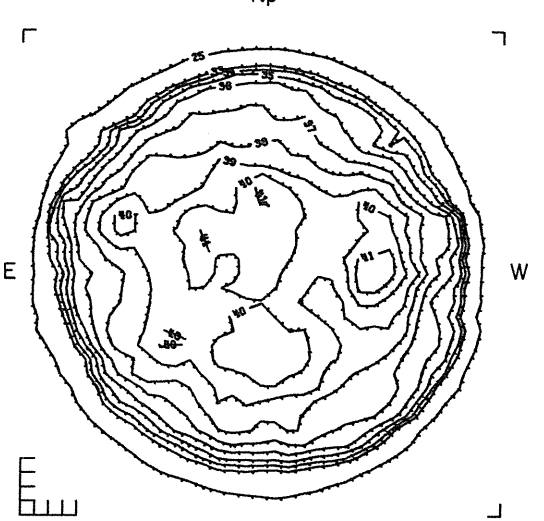
GOOD	S
98- 1080	0-3.5
04- 0900	-2.5
05- 3500	-3.0
07- 1400	-2.5
10- 2600	-3.5
14- 1300	-2.5
15- 3000	-3.5
19- 1200	-3.0
20- 0700	-2.5
21- 0700	-3.0
22- 0400	-2.5
24- 1500	-3.0
25- 4000	-3.5
27- 0400	-2.5

NOSC LA POSTA Np 2.0 CM



1618 UT Ant. Temp. Unit 100° K

NOSC LA POSTA Np 8.6 MM

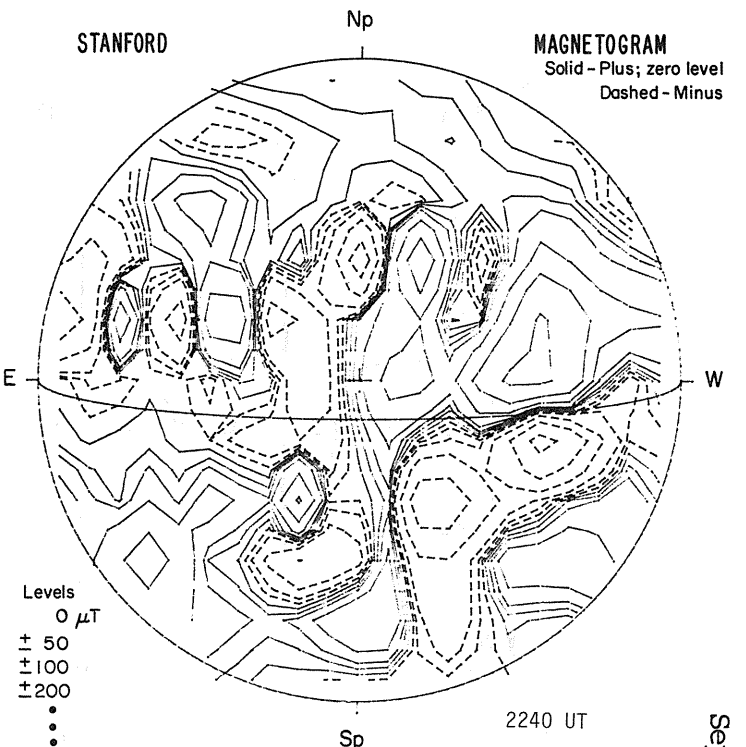


1525 UT Ant. Temp. Unit 100° K

STANFORD Np MAGNETOGRAM

Solid - Plus; zero level

Dashed - Minus

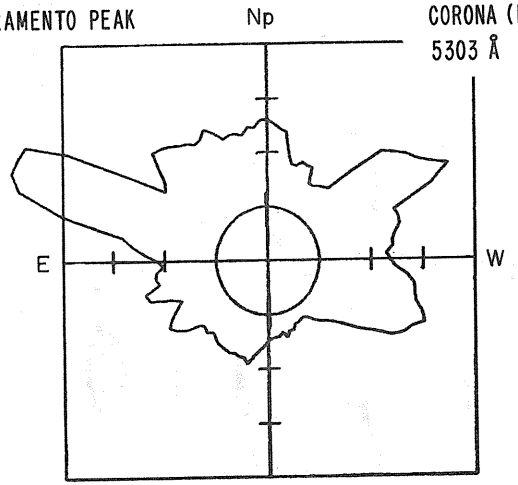


2240 UT

97 Sep 79

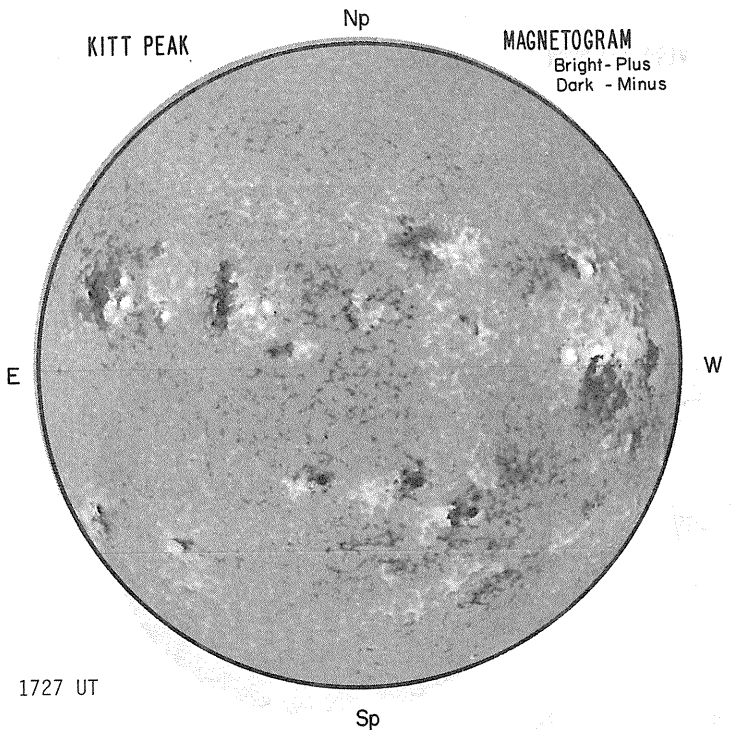
SEPTEMBER 25, 1979 (P = 25.43, B_o = 6.97, L_o = 157.18)

SACRAMENTO PEAK



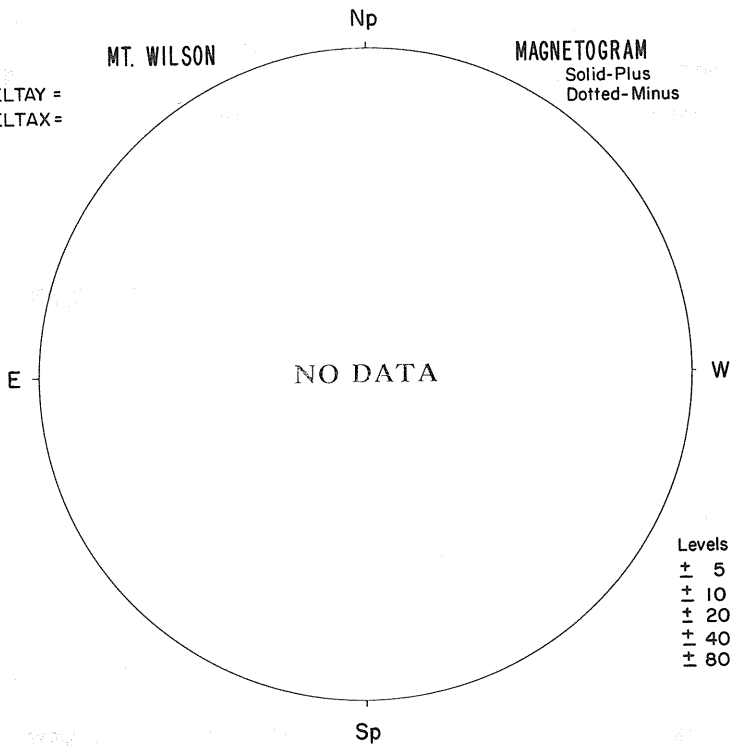
1408 UT

KITT PEAK

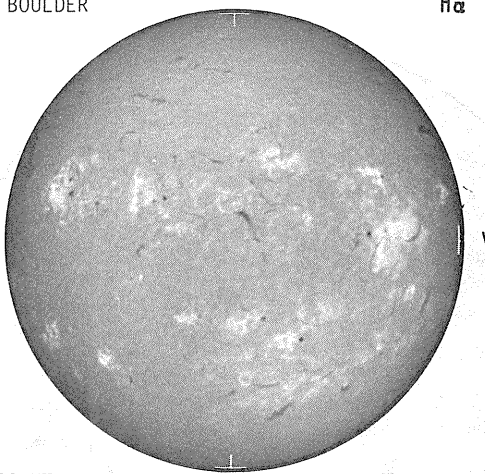


1727 UT

MT. WILSON

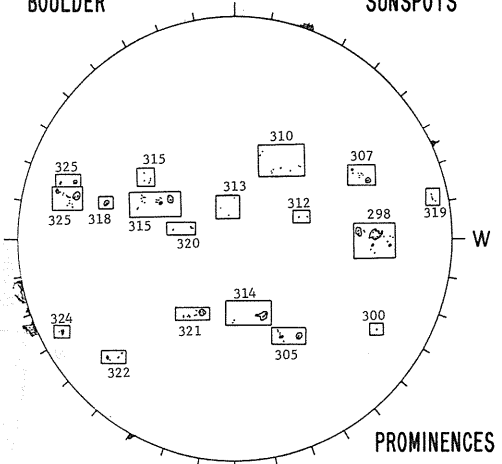


BOULDER Hα



1428 UT

BOULDER SUNSPOTS

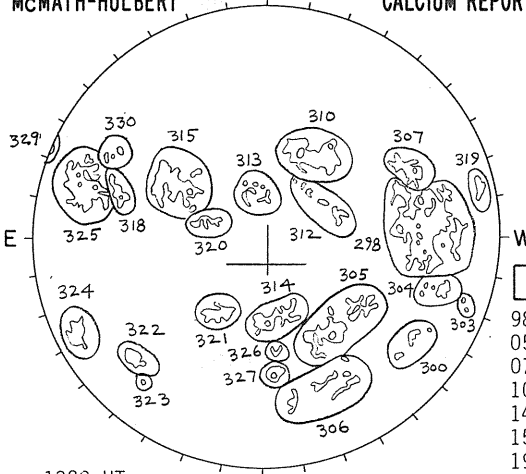


1450 UT

PROMINENCES

1428 UT

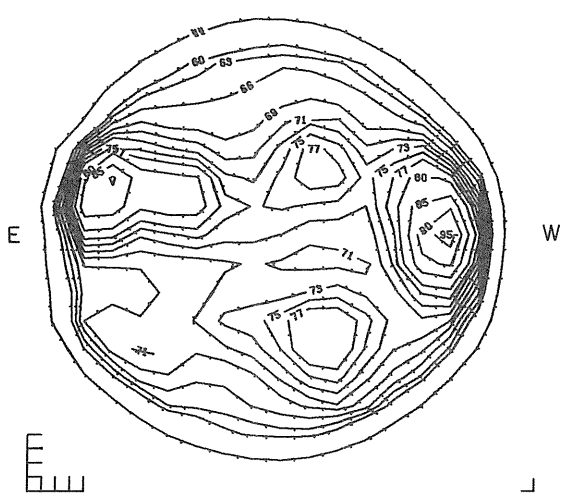
McMATH-HULBERT CALCIUM REPORT



1320 UT

GOOD	M
98-10600-3.5	
05- 3500-3.0	
07- 1500-3.5	
10- 3000-3.5	
14- 1700-2.5	
15- 3300-3.0	
19- 1200-2.5	
20- 0800-2.5	
21- 1200-3.0	
22- 0900-3.0	
24- 2100-2.5	
25- 5000-3.5	

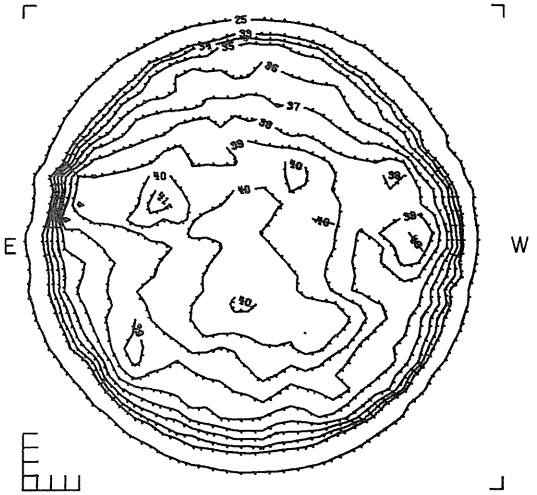
NOSC LA POSTA 2.0 CM



1722 UT

Ant. Temp. Unit 100° K

NOSC LA POSTA 8.6 MM

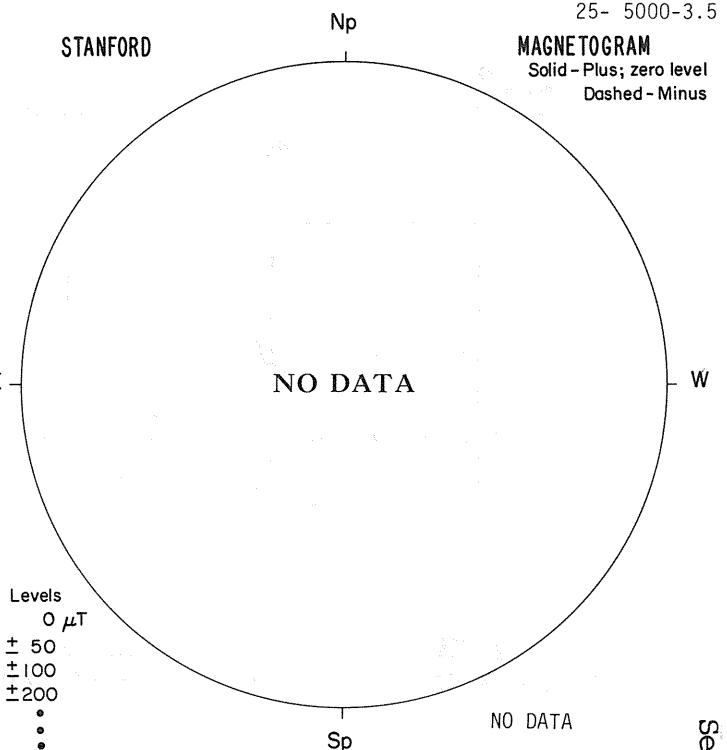


1629 UT

Ant. Temp. Unit 100° K

STANFORD MAGNETOGRAM

Solid - Plus; zero level
Dashed - Minus



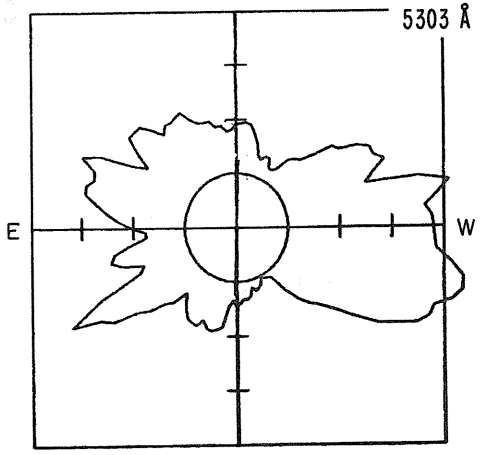
Levels
0 μT
± 50
±100
±200

NO DATA

99
Sep 79

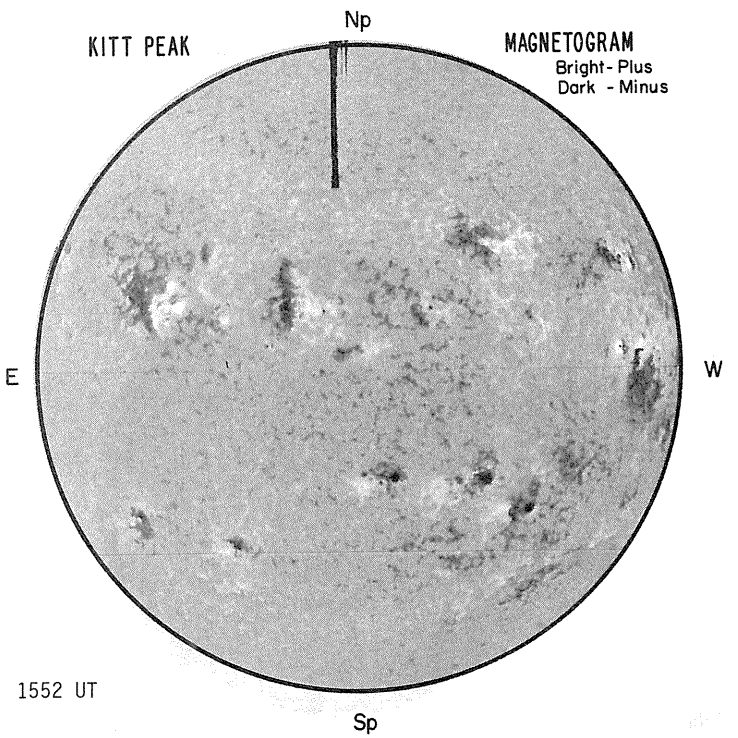
SEPTEMBER 26, 1979 (P = 25.53, B_o = 6.94, L_o = 143.98)

SACRAMENTO PEAK



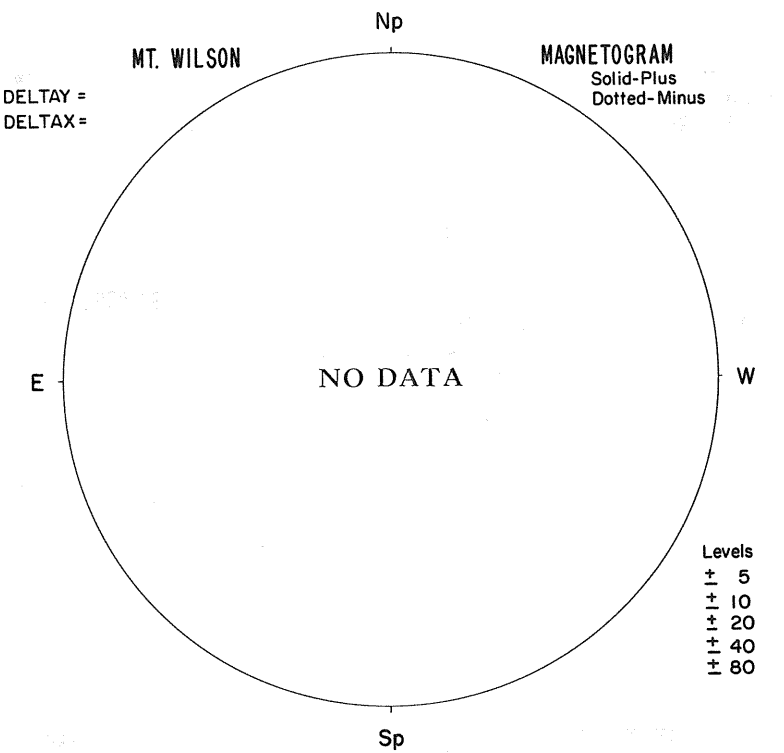
2014 UT

KITT PEAK

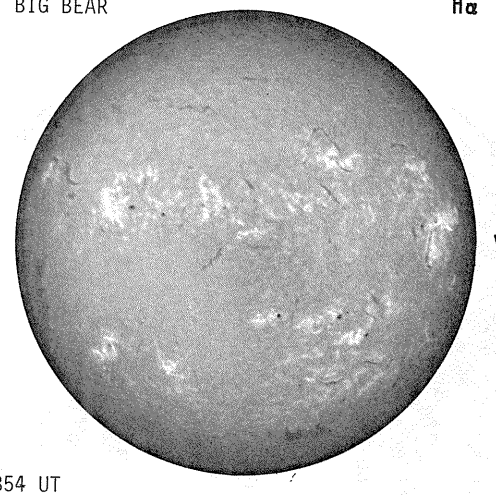


1552 UT

MT. WILSON

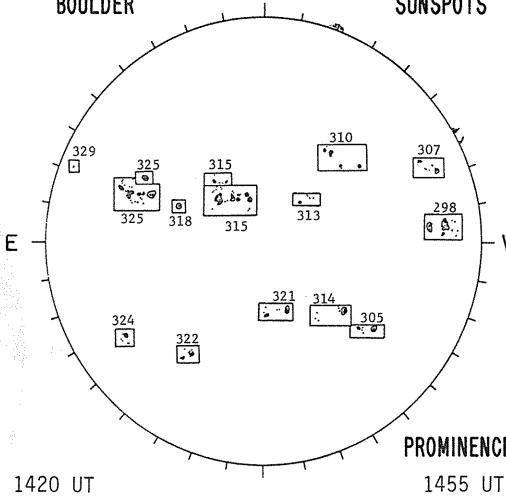


BIG BEAR Hα



1854 UT

BOULDER SUNSPOTS

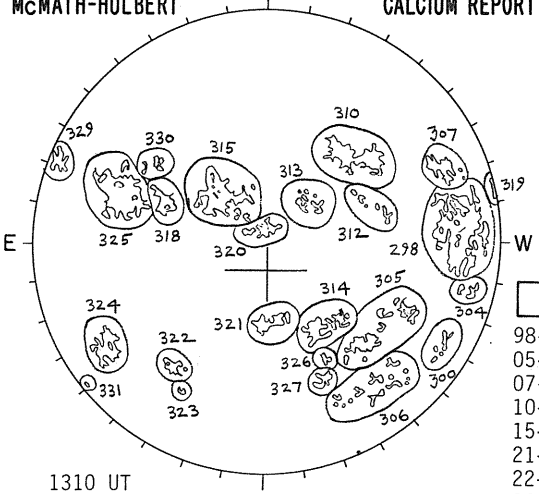


1420 UT

PROMINENCES

1455 UT

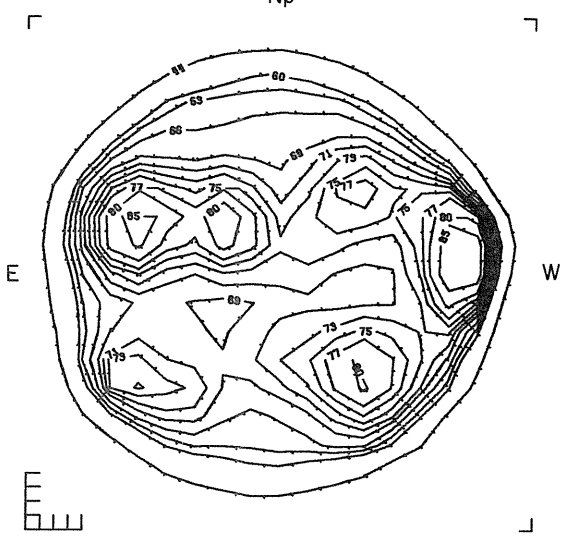
McMATH-HULBERT CALCIUM REPORT



1310 UT

GOOD	M
98-10500-3.5	
05- 3500-3.0	
07- 1900-2.5	
10- 3000-3.0	
15- 3100-3.5	
21- 1000-3.0	
22- 0700-2.5	
24- 2300-3.5	
25- 4700-3.5	
30- 0500-3.0	

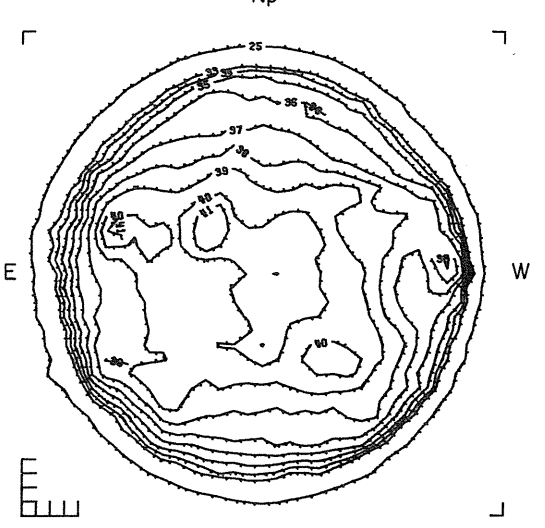
NOSC LA POSTA 2.0 CM



1625 UT

Ant. Temp. Unit 100° K

NOSC LA POSTA 8.6 MM



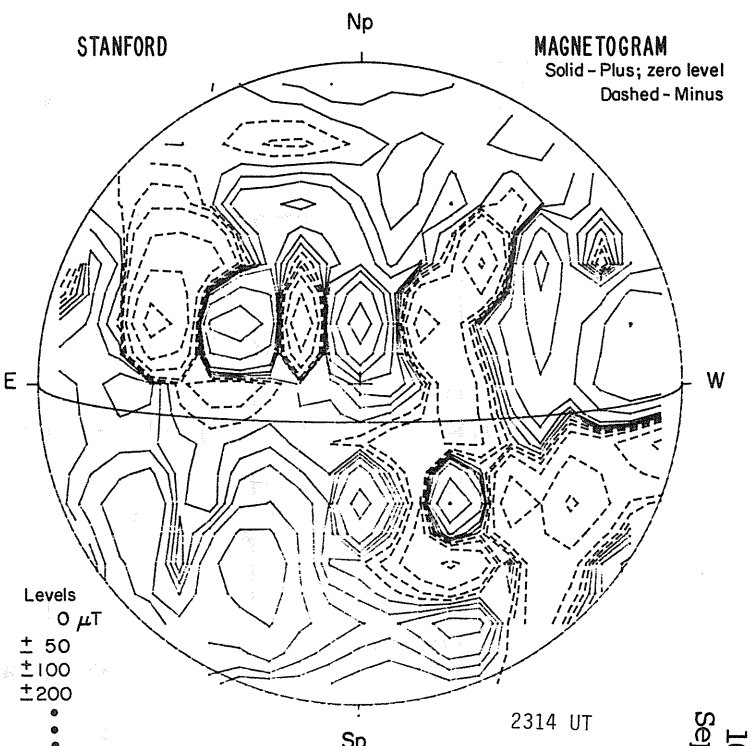
1531 UT

Ant. Temp. Unit 100° K

STANFORD MAGNETOGRAM

Solid - Plus; zero level

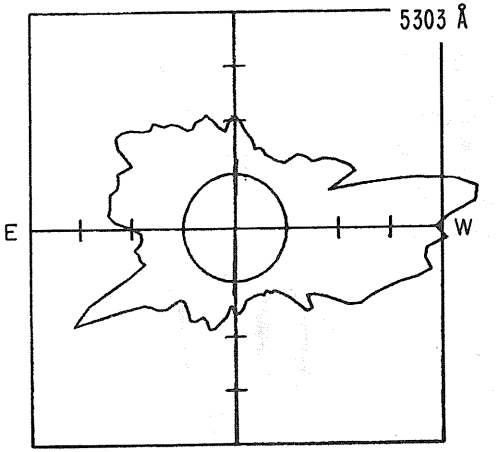
Dashed - Minus



2314 UT

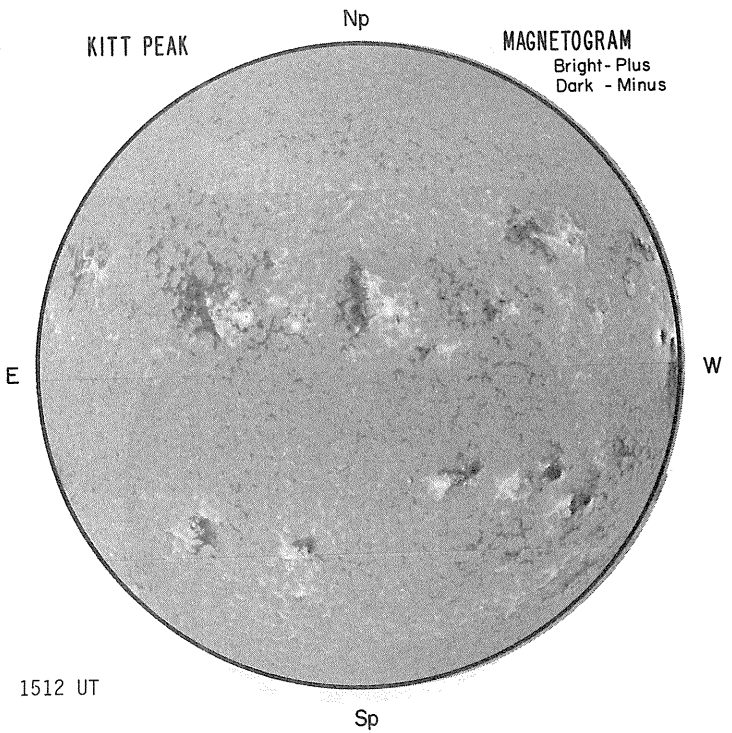
SEPTEMBER 27, 1979 (P = 25.63, B_o = 6.90, L_o = 130.78)

SACRAMENTO PEAK



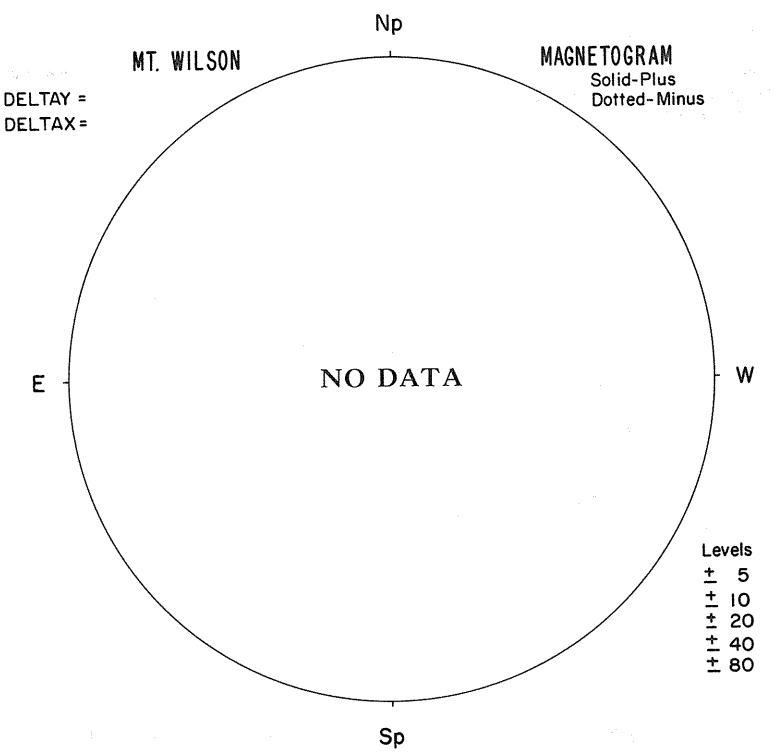
1432 UT

KITT PEAK



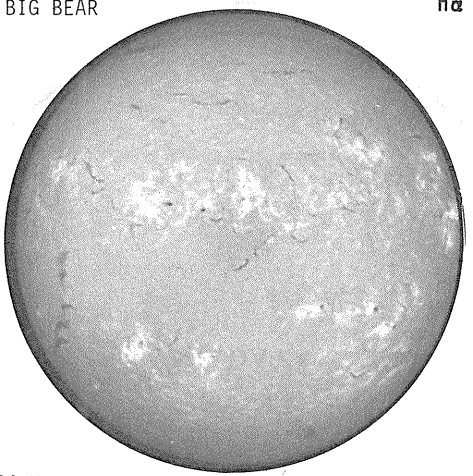
1512 UT

MT. WILSON



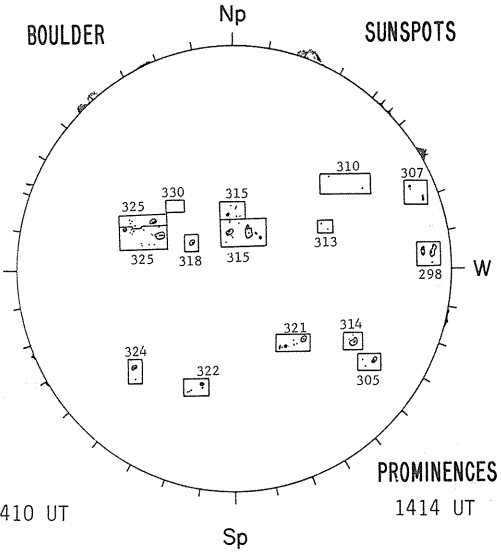
27

BIG BEAR Hα



1844 UT

BOULDER SUNSPOTS

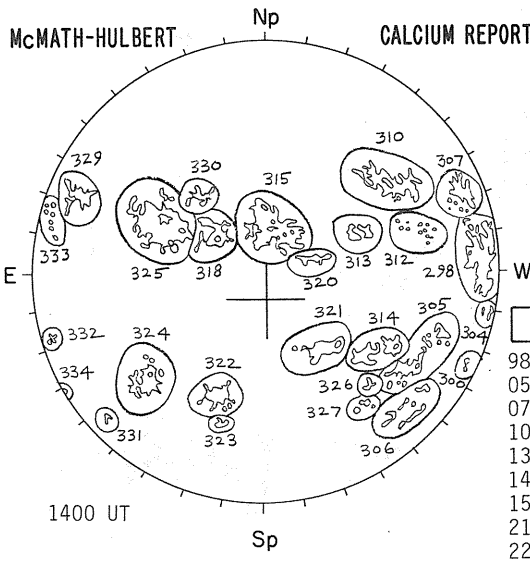


PROMINENCES

1414 UT

1410 UT

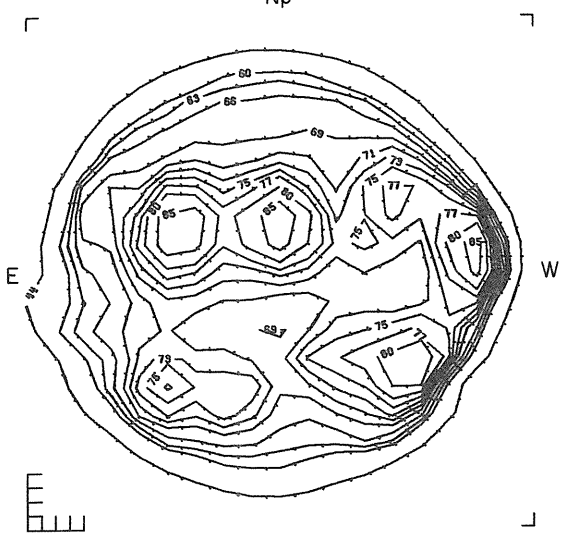
McMATH-HULBERT CALCIUM REPORT



1400 UT

GOOD	M
98-10500-3.0	
05- 2700-3.0	
07- 2300-2.5	
10- 3000-2.5	
13- 0800-2.5	
14- 1700-2.5	
15- 3700-3.5	
21- 1400-3.0	
22- 1200-3.0	
24- 2000-3.0	
25- 5000-3.5	

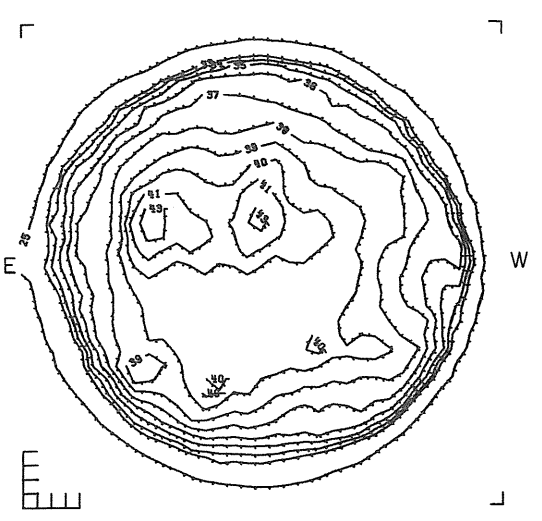
NOSC LA POSTA 2.0 CM



1647 UT

Ant. Temp. Unit 100° K

NOSC LA POSTA 8.6 MM



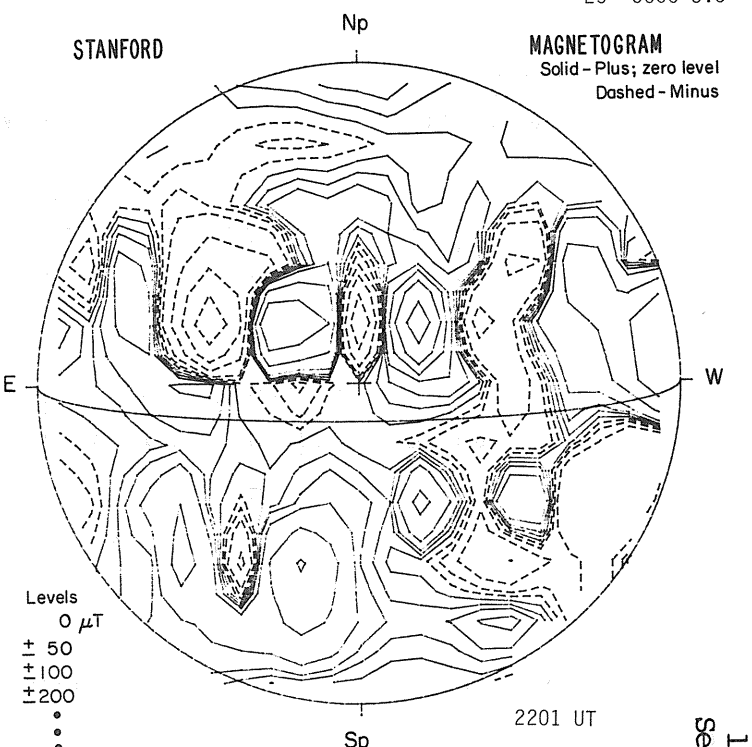
1538 UT

Ant. Temp. Unit 100° K

STANFORD MAGNETOGRAM

Solid - Plus; zero level

Dashed - Minus

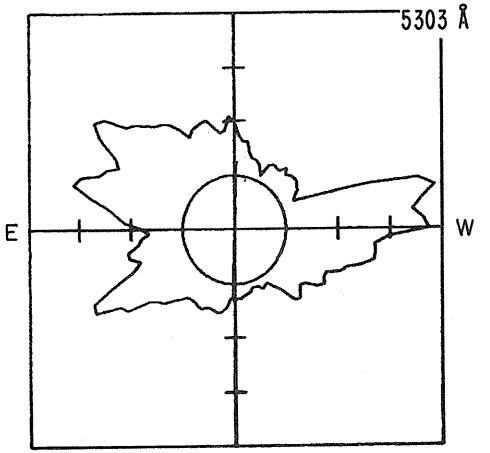


2201 UT

SEPTEMBER 28, 1979 (P = 25.73, B_o = 6.86, L_o = 117.59)

SACRAMENTO PEAK

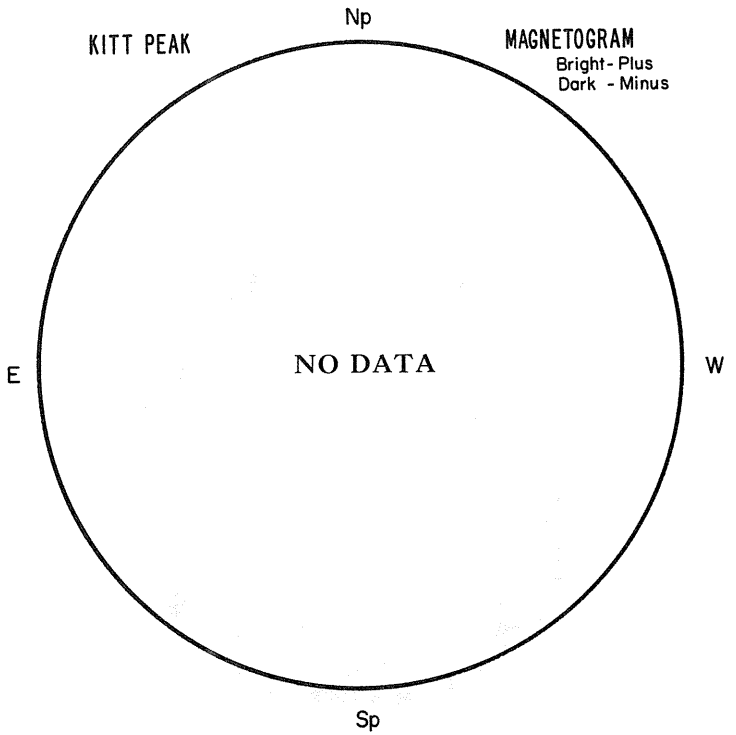
CORONA (1.15 $R_\odot$)
5303 Å



1429 UT

KITT PEAK

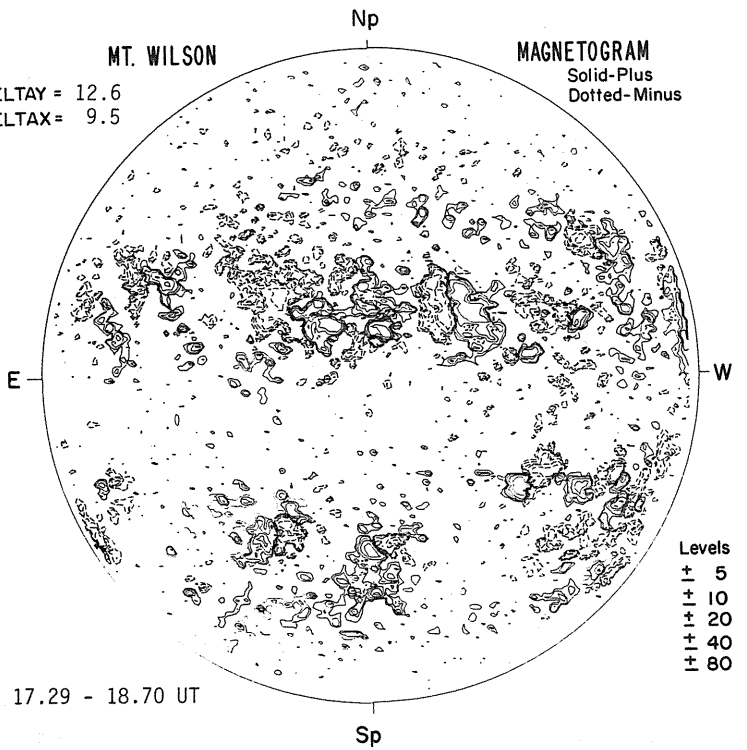
MAGNETOGRAM
Bright - Plus
Dark - Minus



MT. WILSON

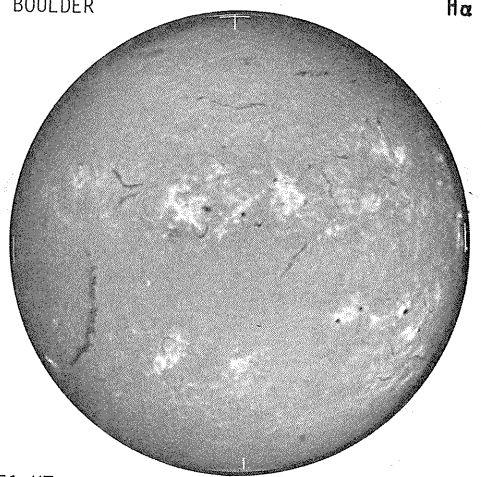
DELTAY = 12.6
DELTAX = 9.5

MAGNETOGRAM
Solid-Plus
Dotted-Minus



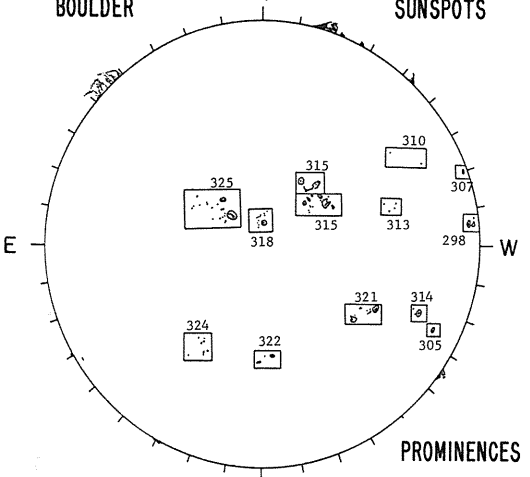
17.29 - 18.70 UT

BOULDER Hα



1351 UT

BOULDER SUNSPOTS

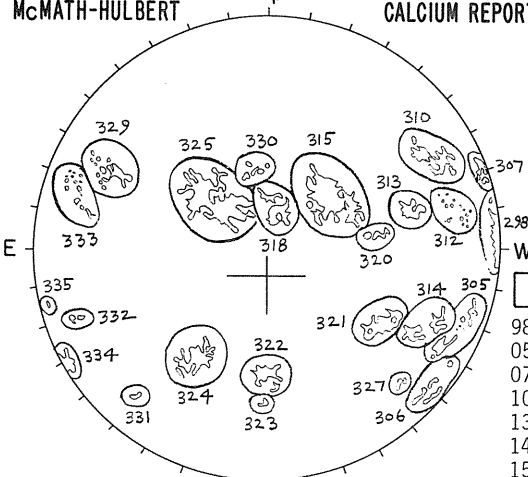


1405 UT

PROMINENCES

1351 UT

McMATH-HULBERT CALCIUM REPORT

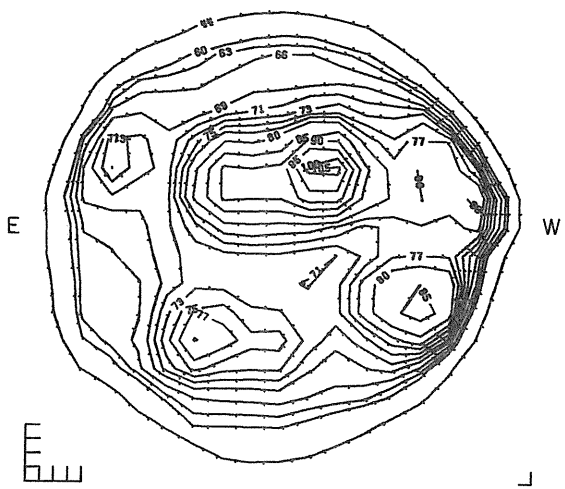


1800 UT

FAIR	M

98- 3600-2.5
05- 2500-3.0
07- 2100-3.0
10- 2700-3.0
13- 0900-2.5
14- 1700-3.0
15- 4000-3.5
21- 1800-2.5
22- 1100-2.5
24- 1700-2.5
25- 4600-3.0
34- 2500-3.0

NOSC LA POSTA 2.0 CM



1653 UT

Ant. Temp. Unit 100° K

NOSC LA POSTA 8.6 MM

NO DATA

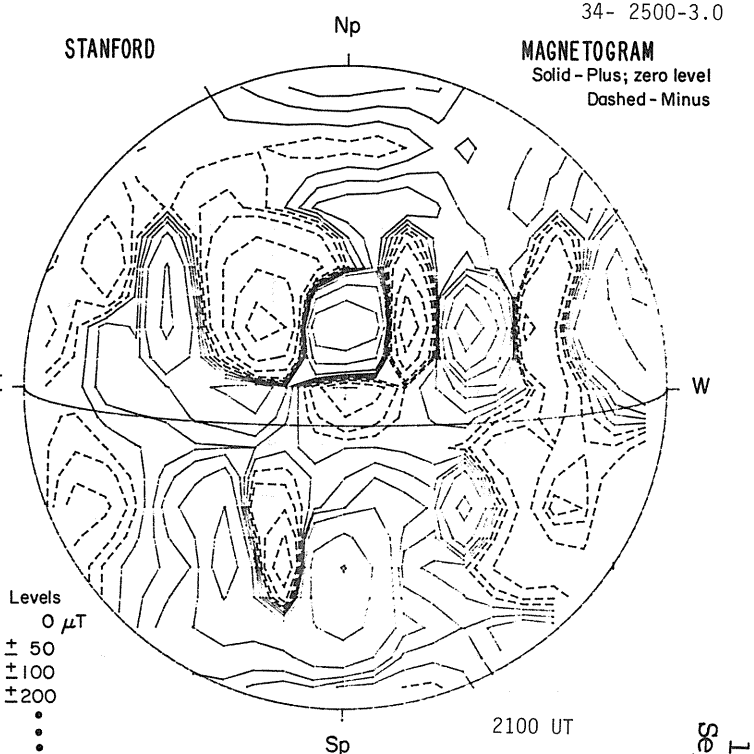
CLOUDY

1559 UT

Ant. Temp. Unit 100° K

STANFORD MAGNETOGRAM

Solid - Plus; zero level
Dashed - Minus

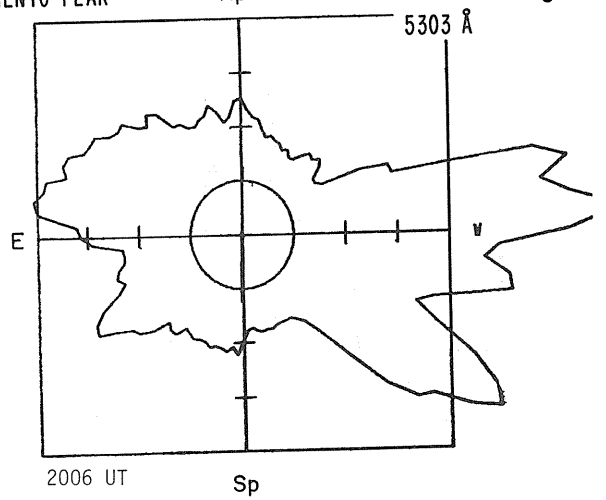


2100 UT

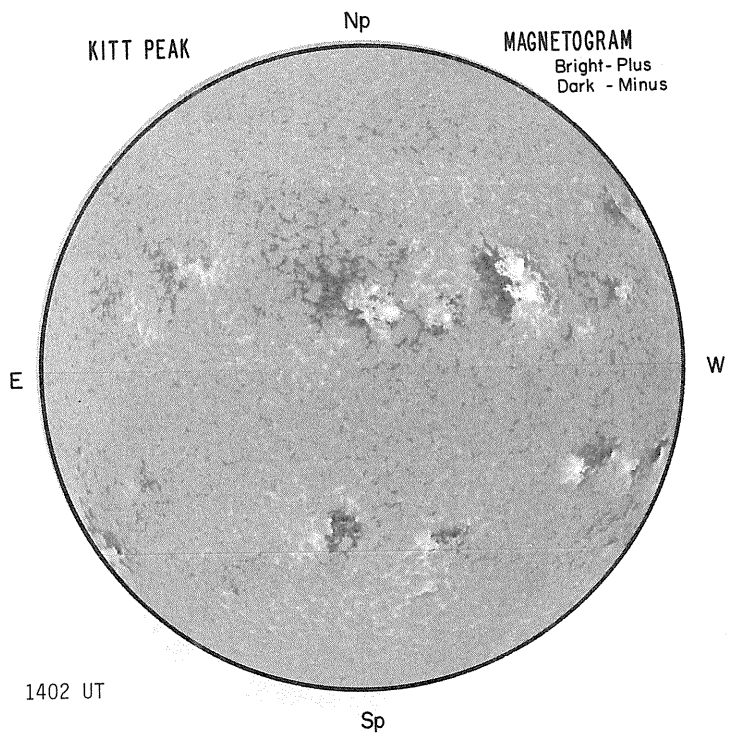
105
Sep 79

SEPTEMBER 29, 1979 (P = 25.82, B_o = 6.82, L_o = 104.39)

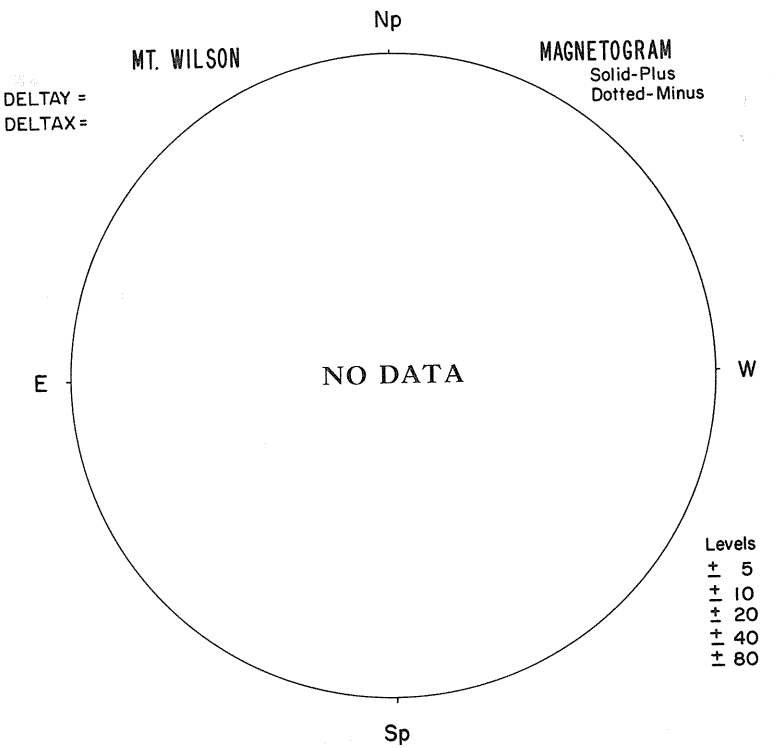
SACRAMENTO PEAK



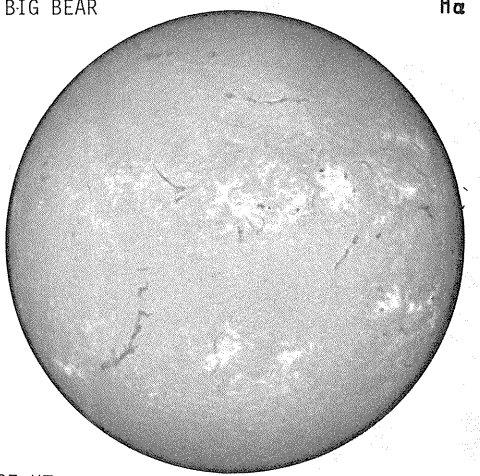
KITT PEAK



MT. WILSON



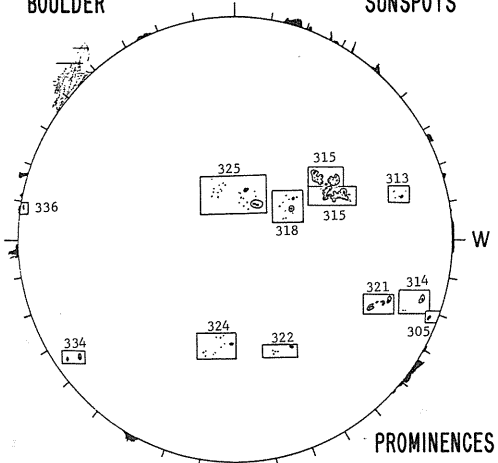
BIG BEAR Np Hα



E W

1827 UT Sp

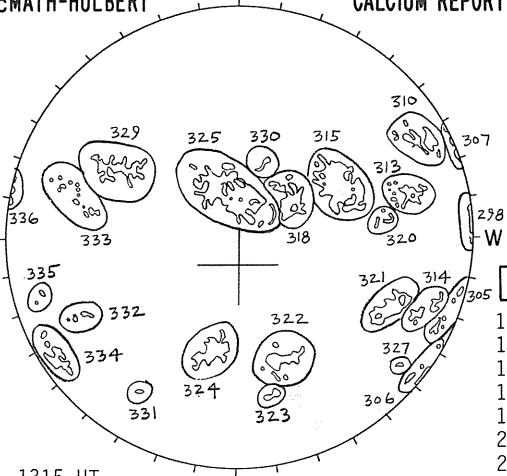
BOULDER Np SUNSPOTS



E W

1350 UT Sp PROMINENCES 1518 UT

McMATH-HULBERT Np CALCIUM REPORT



E W

1315 UT Sp

GOOD	S
10- 3100-2.5	
13- 1300-2.5	
14- 1500-2.5	
15- 5000-3.5	
18- 1600-2.5	
21- 2100-2.5	
22- 1400-3.0	
24- 2000-2.5	
25- 5000-3.0	
34- 2500-2.5	

NOSC LA POSTA Np 2.0 CM

NO DATA

E SCHEDULE W

---- UT Sp Ant. Temp. Unit 100° K

NOSC LA POSTA Np 8.6 MM

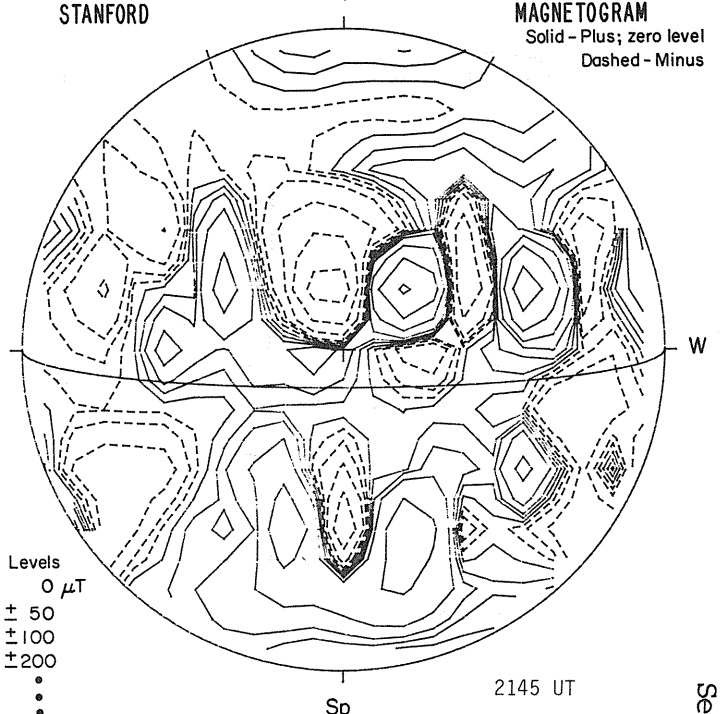
NO DATA

E SCHEDULE W

---- UT Sp Ant. Temp. Unit 100° K

STANFORD Np MAGNETOGRAM

Solid - Plus; zero level
Dashed - Minus



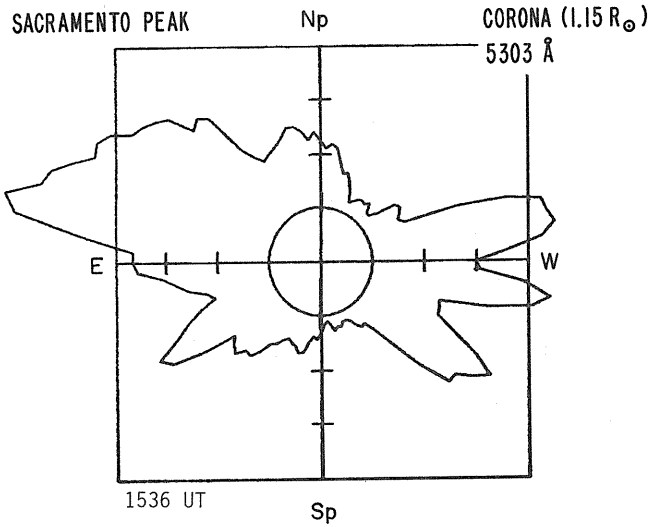
E W

Levels
0 μT
± 50
± 100
± 200

2145 UT Sp

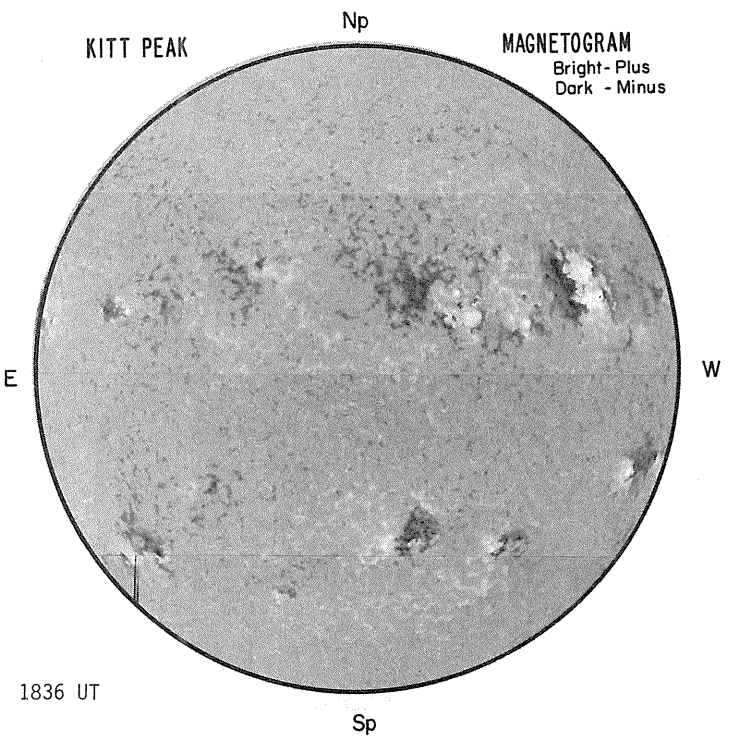
SEPTEMBER 30, 1979 (P = 25.90, B_o = 6.78, L_o = 91.19)

SACRAMENTO PEAK



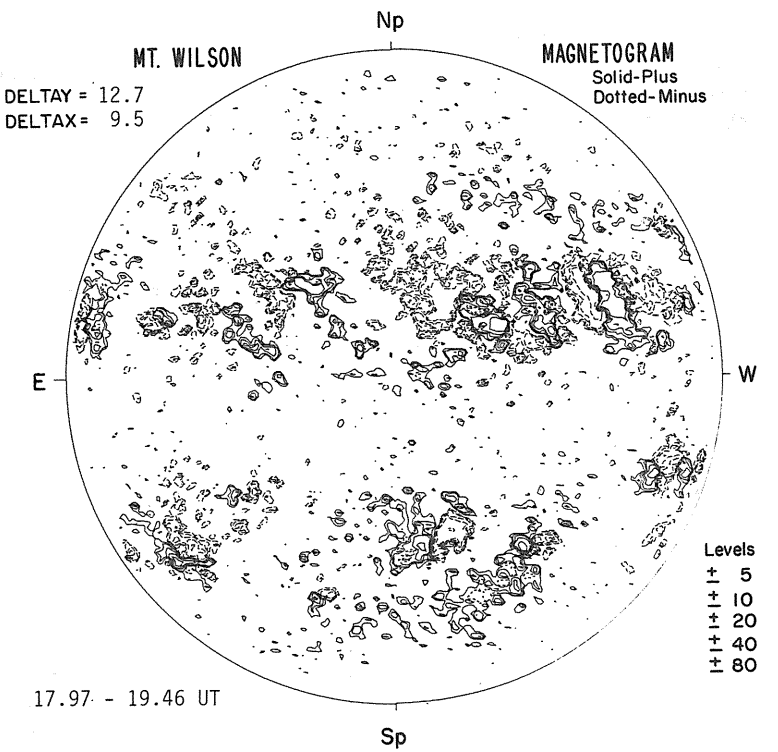
1536 UT

KITT PEAK



1836 UT

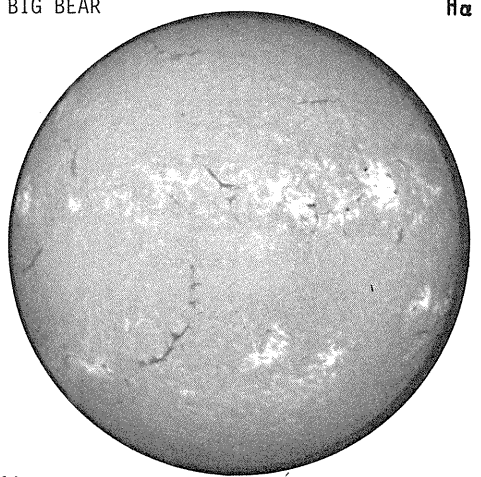
MT. WILSON



17.97 - 19.46 UT

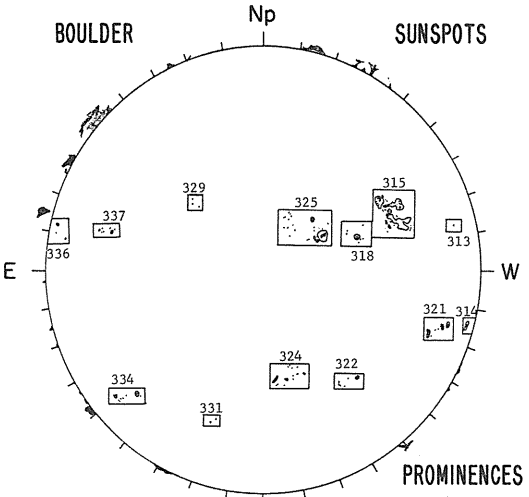
30

BIG BEAR Hα



1844 UT

BOULDER SUNSPOTS

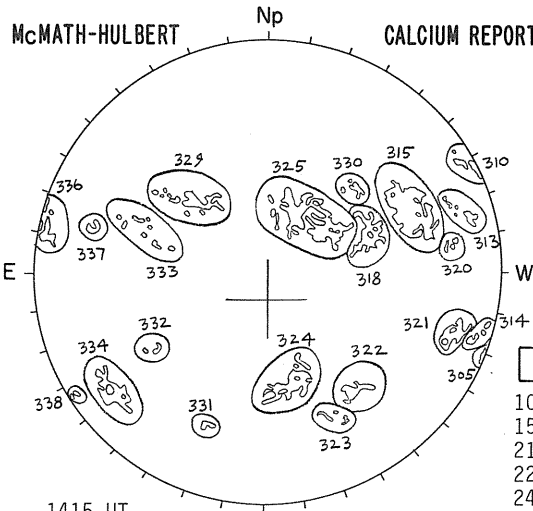


1345 UT

PROMINENCES

1519 UT

McMATH-HULBERT CALCIUM REPORT



1415 UT

GOOD	S
10-	1700-2.5
15-	5000-3.5
21-	2000-3.0
22-	1200-3.0
24-	2200-3.0
25-	4500-3.0
34-	2500-3.0

NOSC LA POSTA Np 2.0 CM

NO DATA

E SCHEDULE W

---- UT Sp Ant. Temp. Unit 100° K

NOSC LA POSTA Np 8.6 MM

NO DATA

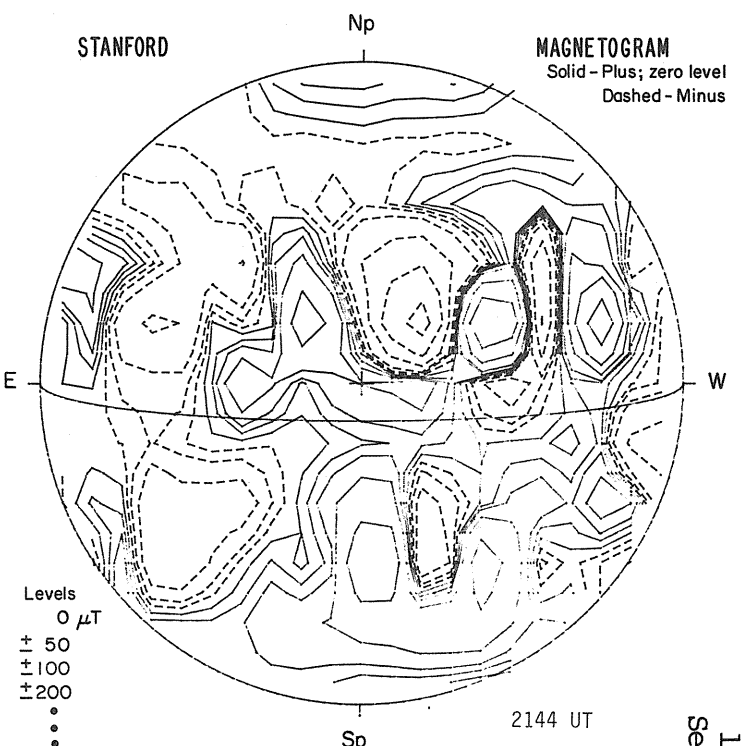
E SCHEDULE W

---- UT Sp Ant. Temp. Unit 100° K

STANFORD MAGNETOGRAM

Solid - Plus; zero level

Dashed - Minus



2144 UT

109
Sep 79

REGIONS OF SOLAR ACTIVITY

SEPTEMBER 1979

MCMATH REGION 16255 CMP DATE 1.3

				CALCIUM PLAGE DATA				SUNSPOT DATA							
YR	MO	DA	MC NO.	LAT CMD	L	AREA	INT	MW NO.	LAT CMD	L	MAG.	H	STA	AREA	CNT	CLASS
79	8	27	16255	N07 E64	109	100	2.0									
79	8	28	16255	N08 E48	111	100	1.0									

MCMATH REGION 16256 CMP DATE 2.0 RETURN OF REGION 16187 ROTATION 5

				CALCIUM PLAGE DATA				SUNSPOT DATA							
YR	MO	DA	MC NO.	LAT CMD	L	AREA	INT	MW NO.	LAT CMD	L	MAG.	H	STA	AREA	CNT	CLASS
79	8	27	16256	S20 E74	99	500	1.5									
79	8	28	16256	S18 E58	101	200	1.5									
79	8	29	16256	S19 E43	101	300	1.5									
79	8	30	16256	S19 E32	102	200	1.5									

MCMATH REGION 16252 CMP DATE 2.2

				CALCIUM PLAGE DATA				SUNSPOT DATA							
YR	MO	DA	MC NO.	LAT CMD	L	AREA	INT	MW NO.	LAT CMD	L	MAG.	H	STA	AREA	CNT	CLASS
79	8	26	16252	N17 E84	103	2400	2.5	20851	N18 E80	107	B	2	B	210	1	HHX
79	8	27	16252	N17 E73	100	5000	3.0	20851	N18 E72	101	(BP)	4	B	390	2	CHO
79	8	28	16252	N19 E60	99	5000	3.5	20851	N18 E58	101	(BP)	5				
79	8	29	16252	N19 E44	100	5300	3.5	20851	N18 E45	101	(BP)	5	B	20	3	BXO
79	8	30	16252	N20 E34	100	5000	3.5	20851	N18 E30	103	(BP)	5				
79	8	31	16252	N18 E21	101	5500	3.0	20851	N18 E19	101	(BP)	5	B	360	18	FHO
79	9	1	16252	N19 E07	98	5500	3.0	20851	N18 E03	103	(BP)	5				
79	9		16252					20862	N13 E04	102	(B)	3				
79	9	2	16252	N19 W07	98	5500	3.0	20851	N18 W08	100	(BP)	5	M	250	6	CHO
79	9		16252					20862	N13 W07	99	(BY)	2	M	20	4	CRO
79	9	3	16252	N19 W20	100	5800	3.0	20851	N18 W21	100	(BY)	5	M	270	4	EHO

MCMATH REGION 16268 CMP DATE 2.2

				CALCIUM PLAGE DATA				SUNSPOT DATA							
YR	MO	DA	MC NO.	LAT CMD	L	AREA	INT	MW NO.	LAT CMD	L	MAG.	H	STA	AREA	CNT	CLASS
79	9	1	16268	S16 E07	98	200	2.0	20863	S15 E06	100	(AP)	2				
79	9	2	16268	S15 W07	98	200	2.0		S16 W12				M	10	1	AXX
79	9	3	16268	S14 W20	100	500	2.0									
79	9	4	16268	S15 W32	98	300	1.5									
79	9	5	16268	S16 W48	99	100	1.0									

MCMATH REGION 16259 CMP DATE 2.3

				CALCIUM PLAGE DATA				SUNSPOT DATA							
YR	MO	DA	MC NO.	LAT CMD	L	AREA	INT	MW NO.	LAT CMD	L	MAG.	H	STA	AREA	CNT	CLASS
79	8	31	16259	S23 E21	101	200	2.0									
79	9	1	16259	S24 E08	97	200	2.0									
79	9	2	16259	S24 W06	97	100	1.0									

MCMATH REGION 16271 CMP DATE 2.6

				CALCIUM PLAGE DATA				SUNSPOT DATA							
YR	MO	DA	MC NO.	LAT CMD	L	AREA	INT	MW NO.	LAT CMD	L	MAG.	H	STA	AREA	CNT	CLASS
79	9	3	16271	S20 W12	92	500	2.5	20870	S20 W12	91	(BF)	4	M	60	7	CSO
79	9	4	16271	S20 W25	91	1000	3.0	20870	S20 W27	93	(B)	4	M	100	10	DSO
79	9	5	16271	S20 W40	91	1400	2.5	20870	S20 W40	93	(B)	4	P	110	11	CSO
79	9	6	16271	S20 W51	91	1200	2.0	20870	S20 W53	93	(BP)	4	P	110	4	CSO
79	9	7	16271	S20 W64	90	1200	1.5	20870	S21 W68	94	(AP)	3	P	80	1	HSX
79	9	8	16271	S20 W77	90	800	1.5									

MCMATH REGION 16261 CMP DATE 3.4 RETURN OF REGION 16192 ROTATION 2

				CALCIUM PLAGE DATA				SUNSPOT DATA							
YR	MO	DA	MC NO.	LAT CMD	L	AREA	INT	MW NO.	LAT CMD	L	MAG.	H	STA	AREA	CNT	CLASS
79	8	28	16261	S15 E82	77	1000	2.5									
79	8	29	16261	S14 E62	82	800	3.0									
79	8	30	16261	S14 E50	84	600	2.5									

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MCMATH REGION 16261 (CONT) CMP DATE 3.4 RETURN OF REGION 16192 ROTATION 2

				CALCIUM PLAGE DATA				SUNSPOT DATA							
YR	MO	DA	MC NO.	LAT CMD	L	AREA	INT	MW NO.	LAT CMD	L	MAG.	H	STA	AREA	CNT	CLASS
79	8	31	16261	S14 E38	84	400	2.5									
79	9	1	16261	S15 E24	81	400	2.0									
79	9	2	16261	S15 E10	81	400	2.0									
79	9	3	16261	S15 W02	82	500	2.0									
79	9	4	16261	S15 W15	81	400	1.5									
79	9	5	16261	S15 W30	81	300	1.5									
79	9	6	16261	S15 W41	81	300	1.0									
79	9	7	16261	S15 W54	80	300	1.0									

MCMATH REGION 16260 CMP DATE 3.7

				CALCIUM PLAGE DATA				SUNSPOT DATA							
YR	MO	DA	MC NO.	LAT CMD	L	AREA	INT	MW NO.	LAT CMD	L	MAG.	H	STA	AREA	CNT	CLASS
79	8	28	16260	N12 E80	79	1200	2.0									
79	8	29	16260	N13 E66	78	1400	2.5									
79	8	30	16260	N13 E56	78	1500	2.5									
79	8	31	16260	N13 E44	78	1800	2.5									
79	9	1	16260	N12 E28	77	1800	2.5									
79	9	2	16260	N12 E15	76	1500	2.5		N12 E12				M	10	1	AXX
79	9	3	16260	N13 E03	77	1500	2.5									
79	9	4	16260	N13 W10	76	1500	2.5	20871	N13 W15	81	(AP)	2	M	40	6	ORO
79	9	5	16260	N13 W26	77	1700	2.5									
79	9	6	16260	N13 W37	77	1600	2.5									
79	9	7	16260	N13 W51	77	1600	2.5									
79	9	8	16260	N14 W64	77	1600	2.5									
79	9	9	16260	N14 W78	77	1000	1.0									

MCMATH REGION 16265 CMP DATE 4.0

				CALCIUM PLAGE DATA				SUNSPOT DATA							
YR	MO	DA	MC NO.	LAT CMD	L	AREA	INT	MW NO.	LAT CMD	L	MAG.	H	STA	AREA	CNT	CLASS
79	8	29	16265	S30 E70	74	500	1.0									
79	8	30	16265	S30 E58	76	200	2.5									
79	8	31	16265	S30 E45	77	200	2.5									
79	9	1	16265	S30 E32	73	200	2.5	20864	S30 E30	76	(AP)	1				
79	9	2	16265	S30 E19	72	200	2.0									
79	9	3	16265	S30 E06	74	200	2.5									

MCMATH REGION 16263 CMP DATE 4.9

				CALCIUM PLAGE DATA				SUNSPOT DATA							
YR	MO	DA	MC NO.	LAT CMD	L	AREA	INT	MW NO.	LAT CMD	L	MAG.	H	STA	AREA	CNT	CLASS
79	8	29	16263	N22 E82	62	1100	3.0	20857	N22 E85	61	B	2				
79	8	30	16263	N22 E71	63	1500	3.0	20857	N20 E70	63	(B)	3	B	10	4	BXO
79	8	31	16263	N22 E59	63	2000	3.0	20857	N20 E54	66	(B)	4	B	170	12	ESI
79	9	1	16263	N22 E45	60	2000	3.5	20857	N19 E43	63	(BP)	4	M	180	17	EAO
79	9	2	16263	N22 E31	60	2000	3.5	20857	N19 E30	62	(BP)	4	M	250	15	DAO
79	9	3	16263	N22 E18	62	2300	3.0	20857	N21 E16	63	(B)	5	M	310	22	DKI
79	9	4	16263	N22 E05	61	2800	3.0	20857	N21 E03	63	(B)	4	M	280	18	EKO
79	9	5	16263	N22 W11	62	2500	3.0	20857	N21 W10	63	(BY)	5	P	460	18	EHO
79	9	6	16263	N22 W22	62	2700	3.0	20857	N21 W23	63	(B)	5	P	360	11	EHO
79	9	7	16263	N22 W35	61	3300	3.0	20857	N21 W36	62	(B)	5	P	220	12	DSO
79	9	8	16263	N22 W48	61	3500	3.0	20857	N21 W49	62	(B)	5	M	320	3	DSO
79	9	9	16263	N23 W62	61	3300	2.5	20857	N21 W61	61	(BP)	4	M	190	3	CSO
79	9	10	16263	N23 W75	63	2700	2.5	20857	N21 W77	65	(BP)	3	M	120	1	HSX
79	9	11	16263	N23 W87	62	2200	1.5									

MCMATH REGION 16264 CMP DATE 4.9

				CALCIUM PLAGE DATA				SUNSPOT DATA							
YR	MO	DA	MC NO.	LAT CMD	L	AREA	INT	MW NO.	LAT CMD	L	MAG.	H	STA	AREA	CNT	CLASS
79	8	29	16264	N14 E82	62	400	2.0									
79	8	30	16264	N13 E72	62	1300	2.0		N13 E72				B	10	3	BXO
79	8	31	16264	N13 E60	62	1300	3.5									
79	9	1	16264	N13 E46	59	1800	3.0	20858	N12 E43	63	(B)	4				
79	9	2	16264	N13 E32	59	1800	3.0	20858	N11 E26	66	(BP)	3	M	100	11	DSO
79	9	3	16264	N13 E19	61	1700	2.5	20858	N12 E13	66	(BY)	3	M	60	12	ERO
79	9	4	16264	N13 E05	61	1800	2.0	20858	N12 W01	67	(BP)	4				
79	9	5	16264	N13 W11	62	1400	4.0	20858	N13 W12	65	(BY)	3	P	20	11	BXO
79	9	6	16264	N13 W22	62	1400	3.0	20858	N13 W25	65	(B)	2	P	20	9	BXO
79	9	7	16264	N13 W36	62	1300	3.0									

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MCMATH REGION 16264 (CONT) CMP DATE 4.9

				CALCIUM PLAGE DATA				SUNSPOT DATA							
YR	MO	DA	MC NO.	LAT CMD	L	AREA	INT	MW NO.	LAT CMD	L	MAG.	H	STA	AREA	CNT	CLASS
79	9	8	16264	N13 W50	63	1300	3.0									
79	9	9	16264	N13 W64	63	1200	2.0									
79	9	10	16264	N13 W78	66	1500	2.0									

MCMATH REGION 16269 CMP DATE 6.1

				CALCIUM PLAGE DATA				SUNSPOT DATA							
YR	MO	DA	MC NO.	LAT CMD	L	AREA	INT	MW NO.	LAT CMD	L	MAG.	H	STA	AREA	CNT	CLASS
79	9	1	16269	N13 E61	44	300	3.0	20866	N14 E59	47	(B)	2				
79	9	2	16269	N13 E48	43	500	3.0	20866	N13 E45	47	(B)	3	M	50	11	CRO
79	9	3	16269	N14 E34	46	900	3.5	20866	N14 E32	47	(B)	3	M	60	14	DAO
79	9	4	16269	N14 E20	46	1400	3.0	20866	N14 E19	47	(B)	4	M	100	25	DAO
79	9	5	16269	N14 E04	47	1800	3.0	20866	N15 E06	47	(B)	4	P	150	34	DAI
79	9	6	16269	N14 W07	47	2200	3.5	20866	N14 W08	48	(BY)	4	P	410	31	DHO
79	9	7	16269	N14 W20	46	2600	3.5	20866	N14 W21	47	(D)	4	P	380	47	EAI
79	9	8	16269	N14 W34	47	2800	3.5	20866	N14 W34	47	(BY)	4	M	260	14	DAO
79	9	9	16269	N14 W47	46	3000	3.5	20866	N14 W48	48	(BY)	4	M	290	17	DSO
79	9	10	16269	N14 W60	48	3900	3.5	20866	N14 W60	48	(B)	3	M	240	7	DSO
79	9	11	16269	N14 W73	48	3500	3.5	20866	N14 W74	49	(B)	3	M	130	4	CSO
79	9	12	16269	N14 W86	47	800	2.5									

MCMATH REGION 16276 CMP DATE 6.2

				CALCIUM PLAGE DATA				SUNSPOT DATA							
YR	MO	DA	MC NO.	LAT CMD	L	AREA	INT	MW NO.	LAT CMD	L	MAG.	H	STA	AREA	CNT	CLASS
79	9	6	16276	S21 W05	45	100	1.5	20874	S21 W08	48	(AP)	3				
79	9	7	16276	S21 W18	44	200	1.5									
79	9	8	16276	S21 W31	44	300	1.5	20879	S22 W27	40	(B)	3				
79	9	9	16276	S21 W44	43	300	1.5									
79	9	10	16276	S21 W57	45	100	1.0									

MCMATH REGION 16270 CMP DATE 6.6

				CALCIUM PLAGE DATA				SUNSPOT DATA							
YR	MO	DA	MC NO.	LAT CMD	L	AREA	INT	MW NO.	LAT CMD	L	MAG.	H	STA	AREA	CNT	CLASS
79	9	2	16270	N21 E53	38	200	1.5									
79	9	3	16270	N21 E40	40	100	1.5									
79	9	4	16270	N21 E27	39	200	1.5									

MCMATH REGION 16267 CMP DATE 7.3

				CALCIUM PLAGE DATA				SUNSPOT DATA							
YR	MO	DA	MC NO.	LAT CMD	L	AREA	INT	MW NO.	LAT CMD	L	MAG.	H	STA	AREA	CNT	CLASS
79	8	31	16267	S20 E87	35	400	2.0									
79	9	1	16267	S22 E78	27	1200	3.0	20865	S18 E70	36	(AP)	4	M	170	5	DSO
79	9	2	16267	S21 E63	28	2500	3.5	20865	S18 E57	35	(B)	4	M	180	21	DSI
79	9	3	16267	S21 E50	30	3600	3.0	20865	S19 E44	35	(BP)	4	M	220	15	ESO
79	9	4	16267	S21 E37	29	4000	3.0	20865	S19 E36	30	(BP)	5	M	220	20	ESO
79	9	5	16267	S21 E21	30	3600	3.0	20865	S18 E18	35	(BP)	5	P	170	26	ESO
79	9	6	16267	S21 E10	30	3400	3.0	20865	S18 E04	36	(BY)	4	P	180	9	EHO
79	9	7	16267	S22 W03	29	3500	2.5	20865	S17 W13	39	(AP)	4				
79	9		16267					20875	S18 E00	26	(B)	3	P	150	16	EAO
79	9		16267					20876	S30 E07	19	(AF)	3	P	20	5	CRO
79	9	8	16267	S22 W16	29	3300	2.5	20865	S17 W26	39	(BP)	4	M	90	4	CSO
79	9		16267					20875	S17 W15	28	(AF)	2				
79	9		16267					20876	S32 W03	16	(BY)	2	M	10	2	BXO
79	9	9	16267	S22 W29	28	3500	2.5	20865	S19 W39	39	(BP)	4	M	90	4	CSO
79	9		16267					20886	S28 W32	20	(AF)	2				
79	9	10	16267	S22 W42	30	2700	2.5	20865	S18 W52	40	(AP)	3	M	60	2	CSO
79	9		16267					20886	S28 W45	20	(BY)	2				
79	9	11	16267	S22 W55	30	2900	3.0	20865	S17 W66	41	(AP)	3	M	50	1	HRX
79	9	12	16267	S24 W68	29	2500	3.0		S19 W79				R	20	1	AXX
79	9	13	16267	S24 W81	28	1400	2.0									

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MCMATH REGION 16281 CMP DATE 8.9

CALCIUM PLAGE DATA

YR	MO	DA	MC NO.	LAT CMD	L	AREA	INT
79	9	9	16281	S26 W10	9	200	1.5
79	9	10	16281	S26 W23	11	400	2.5
79	9	11	16281	S26 W36	11	1000	3.0
79	9	12	16281	S26 W49	10	1300	2.5
79	9	13	16281	S26 W62	9	1200	2.5
79	9	14	16281	S26 W75	9	800	2.5

SUNSPOT DATA

MW NO.	LAT CMD	L	MAG.	H	STA	AREA	CNT	CLASS
20887	S26 W24	12	(B)	2				
20887	S26 W37	12	(BP)	4	M	40	7	CRO
	S25 W53				R	60	4	CSO
	S25 W59				M	30	1	HSX

MCMATH REGION 16274 CMP DATE 9.5

CALCIUM PLAGE DATA

YR	MO	DA	MC NO.	LAT CMD	L	AREA	INT
79	9	3	16274	S13 E79	1	700	2.0
79	9	4	16274	S13 E65	1	1500	2.0
79	9	5	16274	S13 E50	1	1300	2.5
79	9	6	16274	S14 E39	1	1000	2.5
79	9	7	16274	S14 E26	0	800	2.5
79	9	8	16274	S14 E12	1	800	2.5
79	9	9	16274	S14 W02	1	700	2.0
79	9	10	16274	S14 W15	3	800	2.0
79	9	11	16274	S14 W28	3	800	2.0
79	9	12	16274	S14 W41	2	1000	2.0
79	9	13	16274	S14 W55	2	700	1.5
79	9	14	16274	S14 W68	2	400	1.0

SUNSPOT DATA

MW NO.	LAT CMD	L	MAG.	H	STA	AREA	CNT	CLASS
	S14 E77				M	80	1	HSX
20872	S12 E60	6	(AP)	2	M	0	1	AXX
	S16 W03				M	0	1	AXX

MCMATH REGION 16273 CMP DATE 9.8 RETURN OF REGION 16207 ROTATION 3

CALCIUM PLAGE DATA

YR	MO	DA	MC NO.	LAT CMD	L	AREA	INT
79	9	3	16273	N28 E82	359	500	1.0
79	9	4	16273	N28 E69	358	800	1.0
79	9	5	16273	N27 E54	358	1000	2.0
79	9	6	16273	N27 E42	359	1000	2.0
79	9	7	16273	N27 E29	358	1000	2.0
79	9	8	16273	N27 E16	358	1200	2.0
79	9	9	16273	N27 E03	357	1000	2.0
79	9	10	16273	N27 W10	358	1000	2.0
79	9	11	16273	N28 W22	357	1000	2.0
79	9	12	16273	N29 W35	356	1000	2.0
79	9	13	16273	N30 W48	355	800	1.5
79	9	14	16273	N30 W61	355	1200	1.5
79	9	15	16273	N30 W73	356	900	1.5
79	9	16	16273	N30 W85	353	600	1.0

SUNSPOT DATA

MW NO.	LAT CMD	L	MAG.	H	STA	AREA	CNT	CLASS
20881	N28 E04	357	(AP)	2	M	10	1	AXX

MCMATH REGION 16275 CMP DATE 10.6 RETURN OF REGION 16208 ROTATION 3

CALCIUM PLAGE DATA

YR	MO	DA	MC NO.	LAT CMD	L	AREA	INT
79	9	4	16275	N15 E78	349	2700	3.5
79	9	5	16275	N15 E65	347	5500	3.5
79	9	6	16275	N15 E54	347	5500	3.5
79	9	7	16275	N15 E40	347	6000	3.5
79	9	8	16275	N15 E27	347	6000	3.0
79	9	9	16275	N15 E14	346	6300	4.0
79	9	10	16275	N15 E00	348	6600	3.5
79	9	11	16275	N15 W13	348	7000	3.5
79	9	12	16275	N15 W26	347	7000	3.5
79	9	13	16275	N15 W41	348	6800	3.0
79	9	14	16275	N15 W53	347	5800	3.0
79	9	15	16275	N15 W65	348	5500	3.0
79	9	16	16275	N15 W77	345	3600	3.0

SUNSPOT DATA

MW NO.	LAT CMD	L	MAG.	H	STA	AREA	CNT	CLASS
20873	N13 E78	349	(AP)	3	M	280	9	DAO
20873	N13 E65	349	(BP)	4	P	280	19	EAO
20873	N13 E50	351	(B)	4	P	280	32	EAI
20873	N14 E41	346	(BY)	4	P	150	43	DSI
20873	N14 E30	344	(D)	4	M	140	16	DSO
20873	N14 E16	345	(BY)	4	M	130	26	DSO
20873	N14 E04	344	(BY)	4	M	80	10	DSO
20873	N14 W11	346	(BY)	4	M	50	6	CSO
	N15 W21				R	40	13	CRO
	N12 W36				M	60	5	DSO
	N12 W56				R	50	6	CRO
	N16 W65				M	10	1	AXX

MCMATH REGION 16289 CMP DATE 11.4

CALCIUM PLAGE DATA

YR	MO	DA	MC NO.	LAT CMD	L	AREA	INT
79	9	12	16289	S24 W15	336	100	1.0

SUNSPOT DATA

MW NO.	LAT CMD	L	MAG.	H	STA	AREA	CNT	CLASS

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MCMATH REGION 16299 CMP DATE 11.8

			CALCIUM PLAGE DATA					SUNSPOT DATA							
YR	MO	DA	MC NO.	LAT CMD	L	AREA	INT	MW NO.	LAT CMD	L	MAG.	H	STA	AREA	CNT	CLASS
79	9	15	16299	S17 W49	332	100	1.5									
79	9	16	16299	S17 W62	330	500	1.5									
79	9	17	16299	S17 W75	329	400	1.5									

MCMATH REGION 16290 CMP DATE 12.0

			CALCIUM PLAGE DATA					SUNSPOT DATA							
YR	MO	DA	MC NO.	LAT CMD	L	AREA	INT	MW NO.	LAT CMD	L	MAG.	H	STA	AREA	CNT	CLASS
79	9	12	16290	N13 W08	329	400	3.0		N13 W07				R	10	2	BXO
79	9	13	16290	N13 W22	329	400	2.5		N13 W14				H	20	6	BXO
79	9	14	16290	N13 W35	329	300	3.0									
79	9	15	16290	N13 W49	332	300	2.5		N13 W57				H	10	2	BXO
79	9	16	16290	N13 W65	333	400	2.0									
79	9	17	16290	N14 W79	333	500	1.5									

MCMATH REGION 16277 CMP DATE 12.3

			CALCIUM PLAGE DATA					SUNSPOT DATA							
YR	MO	DA	MC NO.	LAT CMD	L	AREA	INT	MW NO.	LAT CMD	L	MAG.	H	STA	AREA	CNT	CLASS
79	9	6	16277	S04 E78	323	300	1.0									
79	9	7	16277	S04 E65	322	300	1.5									
79	9	8	16277	S04 E52	322	500	1.5									
79	9	9	16277	S04 E38	322	600	1.5									
79	9	10	16277	S04 E24	324	300	1.5									
79	9	11	16277	S04 E10	325	400	1.0									
79	9	12	16277	S04 W04	325	400	1.0									
79	9	13	16277	S04 W18	325	400	1.0									
79	9	14	16277	S04 W33	327	600	3.0		S05 W35				R	20	7	BXO
79	9	15	16277	S05 W47	330	800	2.5		S06 W54				H	10	2	BXO
79	9	16	16277	S05 W64	332	1200	2.5									
79	9	17	16277	S06 W77	331	900	1.5									

MCMATH REGION 16278 CMP DATE 12.4

			CALCIUM PLAGE DATA					SUNSPOT DATA							
YR	MO	DA	MC NO.	LAT CMD	L	AREA	INT	MW NO.	LAT CMD	L	MAG.	H	STA	AREA	CNT	CLASS
79	9	7	16278	N27 E65	322	300	2.5	20877	N26 E63	324	(B)	3	P	20	2	BXO
79	9	8	16278	N27 E51	323	700	2.0	20877	N26 E50	324	(B)	3	H	40	4	DRO
79	9	9	16278	N26 E37	323	600	1.5	20877	N25 E33	328	(B)	3	H	20	4	CRO
79	9	10	16278	N26 E24	324	600	2.0	20877	N25 E18	330	(AP)	3	H	10	1	AXX
79	9	11	16278	N27 E11	324	800	1.5	20888	N14 E16	319	(AP)	1	H	10	2	BXO
79	9	12	16278	N27 W02	323	600	1.5									
79	9	13	16278	N27 W17	324	700	1.5									
79	9	14	16278	N27 W31	325	600	1.5									
79	9	15	16278	N27 W43	326	800	1.5									
79	9	16	16278	N27 W57	325	600	1.0									
79	9	17	16278	N27 W72	326	400	1.0									

MCMATH REGION 16309 CMP DATE 12.5

			CALCIUM PLAGE DATA					SUNSPOT DATA							
YR	MO	DA	MC NO.	LAT CMD	L	AREA	INT	MW NO.	LAT CMD	L	MAG.	H	STA	AREA	CNT	CLASS
79	9	18	16309	S29 W80	322	100	2.0									

MCMATH REGION 16286 CMP DATE 13.0

			CALCIUM PLAGE DATA					SUNSPOT DATA							
YR	MO	DA	MC NO.	LAT CMD	L	AREA	INT	MW NO.	LAT CMD	L	MAG.	H	STA	AREA	CNT	CLASS
79	9	11	16286	S20 E19	316	100	1.5									

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MCMATH REGION 16280 CMP DATE 13.6 RETURN OF REGION 16221 ROTATION 3

CALCIUM PLAGE DATA

YR	MO	DA	MC NO.	LAT	CMD	L	AREA	INT
79	9	7	16280	S11	E83	304	400	1.0
79	9	8	16280	S11	E69	305	400	1.5
79	9	9	16280	S11	E56	304	400	1.0
79	9	10	16280	S11	E41	307	200	1.0
79	9	11	16280	S11	E27	308	300	1.0
79	9	12	16280	S11	E14	307	300	1.0
79	9	13	16280	S11	E00	307	200	1.0
79	9	14	16280	S11	W13	307	200	1.0

SUNSPOT DATA

MW NO.	LAT	CMD	L	MAG.	H	STA	AREA	CNT	CLASS

MCMATH REGION 16279 CMP DATE 14.0 RETURN OF REGION 16218 ROTATION 2

CALCIUM PLAGE DATA

YR	MO	DA	MC NO.	LAT	CMD	L	AREA	INT
79	9	7	16279	N13	E85	302	1000	2.0
79	9	8	16279	N13	E73	301	3000	3.5
79	9	9	16279	N13	E60	300	4300	3.5
79	9	10	16279	N13	E47	301	4700	3.5
79	9		16279					
79	9		16279					
79	9	11	16279	N13	E33	302	5400	3.5
79	9		16279					
79	9		16279					
79	9	12	16279	N13	E20	301	6000	3.5
79	9		16279					
79	9		16279					
79	9	13	16279	N13	E05	302	6300	3.5
79	9		16279					
79	9		16279					
79	9	14	16279	N13	W08	302	6200	3.0
79	9		16279					
79	9		16279					
79	9	15	16279	N13	W20	303	7000	3.5
79	9		16279					
79	9	16	16279	N13	W33	301	6800	3.5
79	9	17	16279	N13	W47	301	7100	3.5
79	9	18	16279	N13	W60	302	6500	3.5
79	9	19	16279	N13	W73	302	5500	3.5
79	9	20	16279	N13	W86	302	1200	1.5

SUNSPOT DATA

MW NO.	LAT	CMD	L	MAG.	H	STA	AREA	CNT	CLASS
20878	N13	E80	307	(AP)	3	P	20	1	HRX
20878	N14	E69	305	(BP)	3	M	110	4	CSO
20878	N11	E57	304	(B)	4	M	250	28	DAI
20878	N09	E44	304	(D)	4				
20882	N12	E40	308	(BP)	4	M	230	18	DAI
20884	N17	E47	301	(B)	3	M	100	6	DSO
20878	N09	E31	304	(BY)	4	M	210	35	DAI
20882	N13	E27	308	(BY)	4	M	100	8	DSO
20884	N17	E34	301	(BF)	3	M	110	8	DRO
	N13	E16				R	120	13	CAO
	N08	E20				R	200	39	DAI
	N18	E20				R	80	25	DRI
	N09	E12				M	180	21	DAI
	N17	E14				M	50	12	DRO
	N13	E09				M	80	2	HSX
	N17	W05				R	10	3	BXO
	N13	W10				R	70	8	CAO
	N08	W09				R	440	36	DKI
	N13	W31				M	50	6	CAO
	N09	W28				M	360	21	EAI
20878	N08	W79	308	(B)	3	P	220	4	DAO

MCMATH REGION 16301 CMP DATE 14.4

CALCIUM PLAGE DATA

YR	MO	DA	MC NO.	LAT	CMD	L	AREA	INT
79	9	17	16301	S25	W43	297	200	2.0
79	9	18	16301	S25	W54	296	100	1.5

SUNSPOT DATA

MW NO.	LAT	CMD	L	MAG.	H	STA	AREA	CNT	CLASS

MCMATH REGION 16284 CMP DATE 15.4

CALCIUM PLAGE DATA

YR	MO	DA	MC NO.	LAT	CMD	L	AREA	INT
79	9	10	16284	S13	E64	284	200	1.0
79	9	11	16284	S14	E51	284	200	1.0
79	9	12	16284	S13	E37	284	200	1.0
79	9	13	16284	S13	E23	284	300	1.5
79	9	14	16284	S13	E10	284	300	1.5
79	9	15	16284	S12	W02	285	500	1.0
79	9	16	16284	S10	W17	285	500	3.0
79	9	17	16284	S09	W30	284	600	2.5
79	9	18	16284	S09	W43	285	500	3.0
79	9	19	16284	S09	W57	286	500	2.0
79	9	20	16284	S09	W69	285	400	2.0

SUNSPOT DATA

MW NO.	LAT	CMD	L	MAG.	H	STA	AREA	CNT	CLASS
	S13	E09				R	20	1	AXX
	S11	W44				R	20	2	AXX
20889	S10	W57	286	(AP)	2	P	20	2	BXO
20889	S10	W71	286	(AP)	2				

MCMATH REGION 16283 CMP DATE 15.5

CALCIUM PLAGE DATA

YR	MO	DA	MC NO.	LAT	CMD	L	AREA	INT
79	9	10	16283	N11	E68	280	300	2.0
79	9	11	16283	N11	E55	280	400	1.0
79	9	12	16283	N11	E40	281	400	1.0
79	9	13	16283	N13	E25	282	200	1.0

SUNSPOT DATA

MW NO.	LAT	CMD	L	MAG.	H	STA	AREA	CNT	CLASS

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MCMATH REGION 16283 (CONT) CMP DATE 15.5

CALCIUM PLAGE DATA

YR	MO	DA	MC NO.	LAT CMD	L	AREA	INT
79	9	14	16283	N13 E12	282	200	1.0
79	9	15	16283	N12 E01	282	200	1.0
79	9	16	16283	N12 W12	280	200	1.0
79	9	17	16283	N12 W25	279	200	1.0

SUNSPOT DATA

MW NO.	LAT CMD	L	MAG.	H	STA	AREA	CNT	CLASS

MCMATH REGION 16282 CMP DATE 16.1 RETURN OF REGION 16229 ROTATION 2

CALCIUM PLAGE DATA

YR	MO	DA	MC NO.	LAT CMD	L	AREA	INT
79	9	9	16282	N26 E85	275	800	2.5
79	9	10	16282	N27 E73	275	1100	3.0
79	9	11	16282	N27 E60	275	1400	2.5
79	9	12	16282	N27 E47	274	1800	3.5
79	9	13	16282	N27 E33	274	1600	2.5
79	9	14	16282	N27 E21	273	1600	3.0
79	9	15	16282	N27 E08	275	1800	3.5
79	9	16	16282	N27 W06	274	2000	3.0
79	9	17	16282	N27 W18	272	1800	3.0
79	9	18	16282	N27 W31	273	1800	3.0
79	9	19	16282	N27 W44	273	1600	3.0
79	9	20	16282	N27 W57	273	1600	2.5
79	9	21	16282	N27 W73	273	1500	2.5
79	9	22	16282	N28 W83	272	900	1.5

SUNSPOT DATA

MW NO.	LAT CMD	L	MAG.	H	STA	AREA	CNT	CLASS
	N26 E79				M	50	1	HSX
20885	N26 E69	279	(BP)	4	M	60	1	HSX
20885	N26 E56	279	(BY)	4	M	100	8	CSO
	N27 E46				R	100	16	DAI
	N26 E39				M	100	8	DAO
	N26 E20				R	50	11	DRO
	N26 E02				M	40	7	DRO

MCMATH REGION 16285 CMP DATE 16.9 RETURN OF REGION 16224 ROTATION 2

CALCIUM PLAGE DATA

YR	MO	DA	MC NO.	LAT CMD	L	AREA	INT
79	9	10	16285	S25 E80	268	1200	2.0
79	9	11	16285	S25 E68	267	2000	2.0
79	9	12	16285	S25 E55	266	2800	2.5
79	9	13	16285	S25 E41	266	2600	3.0
79	9	14	16285	S24 E28	266	2800	2.5
79	9	15	16285	S25 E16	267	2800	3.0
79	9	16	16285	S25 E03	265	2500	2.5
79	9	17	16285	S25 W10	264	2800	2.5
79	9	18	16285	S25 W22	264	2800	2.0
79	9	19	16285	S25 W34	263	2800	2.5
79	9	20	16285	S25 W46	262	2800	2.5
79	9	21	16285	S25 W61	261	2500	2.5
79	9	22	16285	S25 W71	260	1900	2.5
79	9	23	16285	S27 W84	260	900	1.0

SUNSPOT DATA

MW NO.	LAT CMD	L	MAG.	H	STA	AREA	CNT	CLASS
20883	S26 E78	270	(AP)	3	M	190	1	HSX
20883	S25 E64	271	(AF)	3	M	200	1	HSX
	S26 E54				R	400	1	HHX
	S25 E46				M	220	1	HHX
	S26 E28				R	300	3	CSO
	S12 E17				M	10	5	BXO
	S26 W15				M	270	4	CHO
	S28 W24				R	230	21	CHO
20883	S27 W37	266	(Y)	4	P	240	13	CHO
20883	S27 W51	266	(BP)	4	R	240	6	CHO
20883	S27 W64	266	(AF)	4	M	160	3	CAO
20883	S27 W79	267	AF	2	P	60	1	HSX

MCMATH REGION 16287 CMP DATE 16.9 RETURN OF PART OF REGION 16227 ROTATION 3

CALCIUM PLAGE DATA

YR	MO	DA	MC NO.	LAT CMD	L	AREA	INT
79	9	11	16287	N12 E76	259	200	1.5
79	9	12	16287	N13 E60	261	200	1.5
79	9	13	16287	N13 E45	262	200	1.0
79	9	14	16287	N14 E30	264	200	1.0

SUNSPOT DATA

MW NO.	LAT CMD	L	MAG.	H	STA	AREA	CNT	CLASS

MCMATH REGION 16288 CMP DATE 17.8

CALCIUM PLAGE DATA

YR	MO	DA	MC NO.	LAT CMD	L	AREA	INT
79	9	11	16288	N26 E82	253	1400	2.0
79	9	12	16288	N21 E69	252	1500	3.0
79	9	13	16288	N22 E56	251	1500	3.0
79	9	14	16288	N22 E43	251	1500	3.0
79	9	15	16288	N21 E30	253	1700	3.0
79	9	16	16288	N21 E16	252	2000	3.0
79	9	17	16288	N21 E02	252	2000	2.5
79	9	18	16288	N21 W11	253	2000	2.5
79	9	19	16288	N21 W24	253	2000	2.5
79	9	20	16288	N21 W37	253	1800	2.5
79	9	21	16288	N21 W53	253	1800	2.0
79	9	22	16288	N21 W64	253	1700	2.0
79	9	23	16288	N21 W77	253	1700	1.5
79	9	24	16288	N21 W90	253	600	1.0

SUNSPOT DATA

MW NO.	LAT CMD	L	MAG.	H	STA	AREA	CNT	CLASS
	N21 E70				R	40	5	BXO
	N20 E61				H	30	4	CRO
	N19 E43				R	70	11	DRO
	N20 E23				H	30	8	DRO
	N21 W10				R	20	10	BXO
20891	N21 W23	252	AP	1	P	10	3	BXO

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MCMATH REGION 16293 CMP DATE 17.8 RETURN OF REGION 16243 AND PART OF REGION 16231 ROTATION 2 AND 3

			CALCIUM PLAGE DATA					SUNSPOT DATA							
YR	MO	DA	MC NO.	LAT CMD	L	AREA	INT	MW NO.	LAT CMD	L	MAG.	H	STA	AREA	CNT	CLASS
79	9	11	16293	S16 E82	253	700	1.0									
79	9	12	16293	S16 E70	251	1200	1.0									
79	9	13	16293	S15 E55	252	1200	1.5									
79	9	14	16293	S14 E40	254	1000	2.0		S12 E32				R	30	4	BXO
79	9	15	16293	S15 E28	255	1800	2.5									
79	9	16	16293	S15 E15	253	2100	2.0									
79	9	17	16293	S15 E02	252	2000	2.5									
79	9	18	16293	S15 W11	253	1700	2.5		S18 W13				R	20	4	BXO
79	9	19	16293	S14 W24	253	1600	3.0	20890	S12 W25	254	(B)	3	P	10	3	BXO
79	9	20	16293	S14 W37	253	1400	3.0									
79	9	21	16293	S14 W53	253	1100	3.0									
79	9	22	16293	S14 W63	252	500	2.5									
79	9	23	16293	S15 W76	252	400	1.5									

MCMATH REGION 16317 CMP DATE 18.9

			CALCIUM PLAGE DATA					SUNSPOT DATA							
YR	MO	DA	MC NO.	LAT CMD	L	AREA	INT	MW NO.	LAT CMD	L	MAG.	H	STA	AREA	CNT	CLASS
79	9	22	16317	N21 W49	238	100	1.5									

MCMATH REGION 16291 CMP DATE 19.1

			CALCIUM PLAGE DATA					SUNSPOT DATA							
YR	MO	DA	MC NO.	LAT CMD	L	AREA	INT	MW NO.	LAT CMD	L	MAG.	H	STA	AREA	CNT	CLASS
79	9	12	16291	N34 E82	239	200	1.0									
79	9	13	16291	N34 E71	236	200	2.0									
79	9	14	16291	N34 E60	234	300	2.0		N31 E58				R	30	3	BXO
79	9	15	16291	N33 E47	236	500	3.0		N33 E40				H	20	3	CRO
79	9	16	16291	N33 E33	235	800	2.5									
79	9	17	16291	N33 E20	234	800	2.5									
79	9	18	16291	N33 E07	235	500	2.0									
79	9	19	16291	N33 W06	235	600	1.5									
79	9	20	16291	N33 W19	235	500	2.0									
79	9	21	16291	N33 W35	235	400	2.0									
79	9	22	16291	N33 W45	234	300	1.0									
79	9	23	16291	N33 W58	234	200	1.0									

MCMATH REGION 16302 CMP DATE 19.2

			CALCIUM PLAGE DATA					SUNSPOT DATA							
YR	MO	DA	MC NO.	LAT CMD	L	AREA	INT	MW NO.	LAT CMD	L	MAG.	H	STA	AREA	CNT	CLASS
79	9	17	16302	S26 E21	233	300	2.5									
79	9	18	16302	S26 E08	234	200	1.0									

MCMATH REGION 16295 CMP DATE 19.3 RETURN OF PART OF REGIONS 16231 AND 16240 ROTATION 3

			CALCIUM PLAGE DATA					SUNSPOT DATA							
YR	MO	DA	MC NO.	LAT CMD	L	AREA	INT	MW NO.	LAT CMD	L	MAG.	H	STA	AREA	CNT	CLASS
79	9	13	16295	S13 E74	233	900	2.0									
79	9	14	16295	S13 E63	231	1500	2.0		S13 E67				R	50	2	CRO
79	9	15	16295	S14 E50	233	1500	2.5		S12 E50				H	20	1	AXX
79	9	16	16295	S13 E37	231	1500	3.0									
79	9	17	16295	S13 E24	230	2300	2.5									
79	9	18	16295	S13 E10	232	2000	3.0		S12 E09				R	30	8	BXO
79	9	19	16295	S13 W03	232	1800	3.0	20892	S12 E00	229	(AP)	2	P	10	1	AXX
79	9	20	16295	S13 W17	233	1500	2.5									
79	9	21	16295	S13 W34	234	1200	2.5									
79	9	22	16295	S14 W44	233	1300	2.5	20904	S17 W50	238	(B)	3	P	20	2	BXO
79	9	23	16295	S14 W57	233	1300	2.0									
79	9	24	16295	S14 W70	233	800	1.5									

MCMATH REGION 16296 CMP DATE 20.2

			CALCIUM PLAGE DATA					SUNSPOT DATA							
YR	MO	DA	MC NO.	LAT CMD	L	AREA	INT	MW NO.	LAT CMD	L	MAG.	H	STA	AREA	CNT	CLASS
79	9	14	16296	N17 E78	216	400	1.5									
79	9	15	16296	N17 E65	218	500	2.5		N17 E57				M	10	1	AXX

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MCMATH REGION 16296 (CONT) CMP DATE 20.2

CALCIUM PLAGE DATA

YR	MO	DA	MC NO.	LAT CMD	L	AREA	INT
79	9	16	16296	N17 E50	218	600	2.0
79	9	17	16296	N17 E37	217	800	2.5
79	9	18	16296	N16 E23	219	800	2.0
79	9	19	16296	N16 E08	221	500	1.5
79	9	20	16296	N16 W05	221	300	1.0

SUNSPOT DATA

MW NO.	LAT CMD	L	MAG.	H	STA	AREA	CNT	CLASS
20893	N20 E06	223	(AP)	2	P	10	1	AXX

MCMATH REGION 16319 CMP DATE 20.2

CALCIUM PLAGE DATA

YR	MO	DA	MC NO.	LAT CMD	L	AREA	INT
79	9	23	16319	N16 W45	221	600	3.5
79	9	24	16319	N15 W58	221	1200	3.0
79	9	25	16319	N15 W72	222	1200	2.5
79	9	26	16319	N14 W85	222	900	2.0

SUNSPOT DATA

MW NO.	LAT CMD	L	MAG.	H	STA	AREA	CNT	CLASS
	N13 W58				R	60	11	DSI

MCMATH REGION 16297 CMP DATE 21.0 RETURN OF PART OF REGION 1624Ø ROTATION 3

CALCIUM PLAGE DATA

YR	MO	DA	MC NO.	LAT CMD	L	AREA	INT
79	9	15	16297	S23 E72	211	300	1.0
79	9	16	16297	S20 E58	210	700	1.0
79	9	17	16297	S21 E46	208	900	1.5
79	9	18	16297	S21 E33	209	700	1.5
79	9	19	16297	S21 E19	210	400	1.0
79	9	20	16297	S21 E06	210	200	1.0
79	9	21	16297	S21 W10	210	200	1.0

SUNSPOT DATA

MW NO.	LAT CMD	L	MAG.	H	STA	AREA	CNT	CLASS
20894	S22 E20	209	(AF)	2	P	20	4	BXO
20894	S22 E04	211	(AF)	2	R	10	1	AXX

MCMATH REGION 16303 CMP DATE 21.0

CALCIUM PLAGE DATA

YR	MO	DA	MC NO.	LAT CMD	L	AREA	INT
79	9	15	16303	S11 E74	209	300	1.0
79	9	16	16303	S10 E60	208	300	1.0
79	9	17	16303	S10 E46	208	200	1.0
79	9	18	16303	S10 E33	209	400	1.0
79	9	19	16303	S10 E20	209	300	1.0
79	9	20	16303	S11 E06	210	300	1.5
79	9	21	16303	S12 W10	210	300	1.5
79	9	22	16303	S12 W20	209	300	1.5
79	9	23	16303	S12 W34	210	300	1.5
79	9	24	16303	S12 W48	211	300	1.5
79	9	25	16303	S12 W61	211	200	1.0

SUNSPOT DATA

MW NO.	LAT CMD	L	MAG.	H	STA	AREA	CNT	CLASS

MCMATH REGION 16304 CMP DATE 22.1 RETURN OF REGION 16248 ROTATION 2

CALCIUM PLAGE DATA

YR	MO	DA	MC NO.	LAT CMD	L	AREA	INT
79	9	16	16304	S10 E74	194	200	1.0
79	9	17	16304	S10 E62	192	400	1.5
79	9	18	16304	S10 E49	193	200	1.0
79	9	19	16304	S09 E35	194	500	3.0
79	9	20	16304	S09 E20	196	500	2.0
79	9	21	16304	S09 E04	196	700	2.5
79	9	22	16304	S09 W07	196	700	2.5
79	9	23	16304	S09 W21	197	700	2.5
79	9	24	16304	S09 W35	198	900	2.5
79	9	25	16304	S09 W48	198	800	2.0
79	9	26	16304	S09 W61	198	800	1.5
79	9	27	16304	S09 W75	198	500	1.0

SUNSPOT DATA

MW NO.	LAT CMD	L	MAG.	H	STA	AREA	CNT	CLASS
	S10 W36				R	10	3	BXO

MCMATH REGION 16298 CMP DATE 22.3 RETURN OF REGION 16239 AND NEW ROTATIONS 2 AND 1

CALCIUM PLAGE DATA

YR	MO	DA	MC NO.	LAT CMD	L	AREA	INT
79	9	15	16298	N06 E88	195	2000	2.5
79	9	16	16298	N06 E78	190	7500	3.5
79	9	17	16298	N06 E64	190	9000	3.5
79	9	18	16298	N06 E50	192	9000	3.5

SUNSPOT DATA

MW NO.	LAT CMD	L	MAG.	H	STA	AREA	CNT	CLASS
	N06 E81				H	220	3	DAO
	N06 E60				M	1070	19	FKI
	N05 E52				R	1120	59	EKI

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MCMATH REGION 16298 (CONT) CMP DATE 22.3 RETURN OF REGION 16239 AND NEW ROTATIONS 2 AND 1

				CALCIUM PLAGE DATA				SUNSPOT DATA								
YR	MO	DA	MC NO.	LAT CMD	L	AREA	INT	MW NO.	LAT CMD	L	MAG.	H	STA	AREA	CNT	CLASS
79	9	19	16298	N06 E35	194	9000	4.0	20895	N05 E37	192	(D)	5	P	1150	81	EKC
79	9		16298					20896	S03 E35	194	(AP)	2				
79	9	20	16298	N05 E21	195	9000	4.0	20895	N05 E25	190	(D)	4	R	900	48	EKI
79	9	21	16298	N05 E06	194	10000	4.0	20895	N05 E11	191	(BY)	4	M	740	58	FKI
79	9	22	16298	N06 W05	194	10000	3.5	20895	N05 W02	190	(Y)	5	P	740	40	EKI
79	9	23	16298	N06 W19	195	11000	3.5	20895	N05 W15	190	(B)	4				
79	9	24	16298	N06 W32	195	10800	3.5									
79	9	25	16298	N06 W46	196	10600	3.5	20895	N06 W42	191	(BP)	4				
79	9	26	16298	N06 W59	196	10500	3.5	20895	N07 W54	190	(BY)	4				
79	9	27	16298	N06 W73	196	10500	3.0	20895	N07 W69	191	(BY)	3				
79	9	28	16298	N05 W88	196	3600	2.5	20895	N07 W80	189	(B)	2				
79	9	29	16298	N06 W90	187	1200	1.0									

MCMATH REGION 16300 CMP DATE 22.3

				CALCIUM PLAGE DATA				SUNSPOT DATA								
YR	MO	DA	MC NO.	LAT CMD	L	AREA	INT	MW NO.	LAT CMD	L	MAG.	H	STA	AREA	CNT	CLASS
79	9	16	16300	S23 E87	181	500	2.0									
79	9	17	16300	S23 E63	191	1000	2.0									
79	9	18	16300	S23 E50	192	1200	2.0		S22 E47				R	60	5	CSO
79	9	19	16300	S22 E36	193	700	2.0	20898	S22 E33	196	(AP)	4	P	30	2	HSO
79	9	20	16300	S22 E23	193	700	2.0	20898	S22 E20	195	(AP)	4	R	30	1	HRX
79	9	21	16300	S23 E07	193	700	2.0	20898	S21 E07	195	(AP)	4	M	30	6	CSO
79	9	22	16300	S23 W03	192	500	2.0	20898	S20 W06	194	(AP)	3	P	20	2	HSX
79	9	23	16300	S23 W16	192	500	2.0	20898	S20 W19	194	(AP)	3				
79	9	24	16300	S23 W28	191	600	2.0									
79	9	25	16300	S23 W42	192	700	1.5	20898	S20 W45	194	AP	2				
79	9	26	16300	S23 W55	192	500	1.0									
79	9	27	16300	S23 W68	191	400	1.0									

MCMATH REGION 16307 CMP DATE 22.7 RETURN OF REGION 16238 ROTATION 4

				CALCIUM PLAGE DATA				SUNSPOT DATA								
YR	MO	DA	MC NO.	LAT CMD	L	AREA	INT	MW NO.	LAT CMD	L	MAG.	H	STA	AREA	CNT	CLASS
79	9	16	16307	N23 E78	190	300	1.0									
79	9	17	16307	N23 E64	190	1100	1.5									
79	9	18	16307	N23 E52	190	1200	1.5									
79	9	19	16307	N23 E40	189	1000	1.5									
79	9	20	16307	N23 E28	188	800	1.0									
79	9	21	16307	N23 E12	188	800	1.0									
79	9	22	16307	N23 E01	188	700	1.0		N23 W03				P	10	2	BXO
79	9	23	16307	N23 W13	189	1200	3.5									
79	9	24	16307	N23 W27	190	1400	2.5		N22 W27				R	150	17	CAO
79	9	25	16307	N23 W41	191	1500	3.5									
79	9	26	16307	N23 W54	191	1900	2.5									
79	9	27	16307	N23 W67	190	2300	2.5									
79	9	28	16307	N22 W82	190	2100	3.0									
79	9	29	16307	N22 W90	187	600	1.0									

MCMATH REGION 16306 CMP DATE 23.9 RETURN OF REGION 16241 ROTATION 2

				CALCIUM PLAGE DATA				SUNSPOT DATA								
YR	MO	DA	MC NO.	LAT CMD	L	AREA	INT	MW NO.	LAT CMD	L	MAG.	H	STA	AREA	CNT	CLASS
79	9	17	16306	S34 E84	170	800	1.0									
79	9	18	16306	S34 E70	172	1800	1.5									
79	9	19	16306	S33 E54	175	1500	2.0									
79	9	20	16306	S34 E41	175	1900	2.0									
79	9	21	16306	S34 E25	175	1700	2.0									
79	9	22	16306	S34 E16	173	1700	2.0									
79	9	23	16306	S34 E05	171	1700	2.0									
79	9	24	16306	S34 W07	170	1800	2.0									
79	9	25	16306	S34 W19	169	1800	1.5									
79	9	26	16306	S34 W32	169	1800	1.5									
79	9	27	16306	S33 W45	168	1800	1.5									
79	9	28	16306	S33 W59	167	1700	2.0									
79	9	29	16306	S33 W68	165	1500	1.0									

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MCMATH REGION 16305 CMP DATE 24.3

CALCIUM PLAGE DATA

YR	MO	DA	MC NO.	LAT CMD	L	AREA	INT
79	9	17	16305	S14 E88	166	300	1.0
79	9	18	16305	S15 E76	166	2000	3.5
79	9	19	16305	S15 E63	166	3000	3.0
79	9	20	16305	S16 E50	166	3600	2.5
79	9	21	16305	S17 E34	166	3800	3.0
79	9	22	16305	S16 E23	166	3800	2.5
79	9	23	16305	S16 E10	166	4000	2.5
79	9	24	16305	S16 W05	168	3500	3.0
79	9	25	16305	S16 W19	169	3500	3.0
79	9	26	16305	S17 W31	168	3500	3.0
79	9	27	16305	S17 W44	167	2700	3.0
79	9	28	16305	S17 W59	167	2500	3.0
79	9	29	16305	S17 W70	167	1900	1.5
79	9	30	16305	S20 W90	174	600	1.0

SUNSPOT DATA

MW NO.	LAT CMD	L	MAG.	H	STA	AREA	CNT	CLASS
	S13 E70				R	20	1	AXX
20901	S13 E56	173	(AP)	3	P	10	1	AXX
20901	S13 E42	173	(AP)	3				
20901	S13 E29	173	(AP)	3	M	20	4	CRO
20901	S12 E16	172	(BF)	2	P	10	5	BXO

MCMATH REGION 16310 CMP DATE 24.5

CALCIUM PLAGE DATA

YR	MO	DA	MC NO.	LAT CMD	L	AREA	INT
79	9	18	16310	N27 E79	163	500	3.5
79	9	19	16310	N27 E65	164	1500	3.0
79	9	20	16310	N27 E53	163	1700	3.0
79	9	21	16310	N27 E37	163	2000	3.5
79	9	22	16310	N27 E26	163	2000	2.5
79	9	23	16310	N27 E13	163	2000	3.5
79	9	24	16310	N27 E00	163	2600	3.5
79	9	25	16310	N27 W13	163	3000	3.5
79	9	26	16310	N27 W26	163	3000	3.0
79	9	27	16310	N27 W39	162	3000	2.5
79	9	28	16310	N27 W54	162	2700	3.0
79	9	29	16310	N27 W64	161	3100	2.5
79	9	30	16310	N28 W78	162	1700	2.5

SUNSPOT DATA

MW NO.	LAT CMD	L	MAG.	H	STA	AREA	CNT	CLASS
20899	N27 E64	165	(B)	4	P	180	10	DAO
20899	N27 E51	164	(B)	4	R	100	17	ESO
20899	N27 E38	164	(B)	4	M	160	25	ESI
20899	N27 E26	162	(B)	4	P	100	13	ESO
20899	N27 E13	162	(B)	3	P	150	30	ESI
	N26 E01				R	130	46	EAI
20899	N27 W11	160	B	3				
20899	N27 W24	160	(B)	3				
20899	N27 W38	160	(B)	2				
20899	N27 W50	159	(B)	3	M	20	2	BXO

MCMATH REGION 16312 CMP DATE 24.5 RETURN OF REGION 16258 ROTATION 2

CALCIUM PLAGE DATA

YR	MO	DA	MC NO.	LAT CMD	L	AREA	INT
79	9	18	16312	N14 E80	162	300	1.0
79	9	19	16312	N15 E68	161	800	1.0
79	9	20	16312	N14 E54	162	600	1.5
79	9	21	16312	N14 E38	162	700	1.0
79	9	22	16312	N14 E27	162	700	1.0
79	9	23	16312	N14 E14	162	900	1.5
79	9	24	16312	N14 W01	164	900	1.5
79	9	25	16312	N14 W15	165	900	2.0
79	9	26	16312	N14 W28	165	600	2.0
79	9	27	16312	N15 W43	166	500	1.0
79	9	28	16312	N15 W58	166	500	1.0

SUNSPOT DATA

MW NO.	LAT CMD	L	MAG.	H	STA	AREA	CNT	CLASS
20900	N12 E65	164	(B)	3	P	10	2	BXO
	N12 E32				M	20	2	CRO

MCMATH REGION 16326 CMP DATE 25.3

CALCIUM PLAGE DATA

YR	MO	DA	MC NO.	LAT CMD	L	AREA	INT
79	9	24	16326	S23 E10	153	200	2.0
79	9	25	16326	S23 W03	153	300	1.5
79	9	26	16326	S23 W16	153	200	1.0
79	9	27	16326	S23 W29	152	200	1.0

SUNSPOT DATA

MW NO.	LAT CMD	L	MAG.	H	STA	AREA	CNT	CLASS

MCMATH REGION 16327 CMP DATE 25.3

CALCIUM PLAGE DATA

YR	MO	DA	MC NO.	LAT CMD	L	AREA	INT
79	9	24	16327	S30 E09	154	400	2.5
79	9	25	16327	S30 W03	153	600	1.5
79	9	26	16327	S30 W15	152	500	1.0
79	9	27	16327	S30 W28	151	300	1.0
79	9	28	16327	S30 W43	151	100	1.0
79	9	29	16327	S30 W53	150	200	1.0

SUNSPOT DATA

MW NO.	LAT CMD	L	MAG.	H	STA	AREA	CNT	CLASS

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MCMATH REGION 16314 CMP DATE 25.6

			CALCIUM PLAGE DATA					SUNSPOT DATA								
YR	MO	DA	MC NO.	LAT CMD	L	AREA	INT	MW NO.	LAT CMD	L	MAG.	H	STA	AREA	CNT	CLASS
79	9	20	16314	S13 E68	148	300	1.0									
79	9	21	16314	S12 E52	148	200	1.5									
79	9	22	16314	S12 E40	149	500	2.5	20906	S13 E38	150	(B)	3	P	70	10	DAO
79	9	23	16314	S13 E26	150	800	3.0	20906	S14 E24	151	(B)	4				
79	9	24	16314	S14 E13	150	1300	2.5		S15 E12				R	260	20	DAO
79	9	25	16314	S14 W02	152	1700	2.5	20906	S13 W08	157	AP	4	R	170	19	CKO
79	9	26	16314	S14 W15	152	1700	2.0	20906	S13 W22	158	(BP)	4				
79	9	27	16314	S14 W29	152	1700	2.5	20906	S13 W35	157	(BP)	4				
79	9	28	16314	S14 W44	152	1700	3.0	20906	S13 W48	157	(BP)	5				
79	9	29	16314	S14 W56	153	1500	2.5									
79	9	30	16314	S14 W70	154	1400	1.5	20906	S13 W77	161	(AP)	3	R	70	1	HHX
79	10	1	16314	S15 W87		600	1.5									

MCMATH REGION 16313 CMP DATE 25.8

			CALCIUM PLAGE DATA					SUNSPOT DATA								
YR	MO	DA	MC NO.	LAT CMD	L	AREA	INT	MW NO.	LAT CMD	L	MAG.	H	STA	AREA	CNT	CLASS
79	9	19	16313	N19 E81	148	300	1.0									
79	9	20	16313	N18 E67	149	500	1.0									
79	9	21	16313	N18 E52	148	500	1.0		N20 E52				M	0	1	AXX
79	9	22	16313	N18 E42	147	500	1.0	20907	N16 E42	146	(B)	2				
79	9	23	16313	N17 E29	147	700	2.0	20907	N16 E28	147	AP	1				
79	9	24	16313	N17 E16	147	700	2.0									
79	9	25	16313	N17 E03	147	800	2.0	20907	N17 E01	148	B	3	R	20	13	BXO
79	9	26	16313	N17 W11	148	800	2.0	20907	N17 W11	147	(B)	2				
79	9	27	16313	N17 W25	148	800	2.5	20907	N16 W28	150	(AP)	3				
79	9	28	16313	N17 W39	147	900	2.5	20907	N16 W40	149	(B)	3				
79	9	29	16313	N16 W50	147	1300	2.5									
79	9	30	16313	N16 W64	148	1100	2.0	20907	N15 W67	151	(AP)	2	R	20	2	BXO
79	10	1	16313	N16 W81		500	1.0									

MCMATH REGION 16321 CMP DATE 26.5

			CALCIUM PLAGE DATA					SUNSPOT DATA								
YR	MO	DA	MC NO.	LAT CMD	L	AREA	INT	MW NO.	LAT CMD	L	MAG.	H	STA	AREA	CNT	CLASS
79	9	23	16321	S14 E40	136	200	3.0	20912	S13 E39	136	(AP)	3				
79	9	24	16321	S13 E26	137	700	3.0		S14 E26				R	40	12	CRI
79	9	25	16321	S13 E13	137	1200	3.0	20912	S13 E09	140	BP	3	R	130	23	DAI
79	9	26	16321	S13 W01	138	1000	3.0	20912	S13 W04	140	(BP)	4	B	110	11	DXX
79	9	27	16321	S13 W15	138	1400	3.0	20912	S13 W17	139	(B)	3				
79	9	28	16321	S13 W30	138	1800	2.5	20912	S13 W31	140	(B)	4				
79	9	29	16321	S13 W41	138	2100	2.5									
79	9	30	16321	S13 W55	139	2000	3.0	20912	S13 W57	141	(B)	4	R	210	11	DAO
79	10	1	16321	S14 W73		2000	2.0	20912	S13 W71		B	3	B	130	4	D
79	10	2	16321	S14 W85		800	2.0	20912	S13 E80		(AP)	3	B	30	1	H

MCMATH REGION 16320 CMP DATE 26.7

			CALCIUM PLAGE DATA					SUNSPOT DATA								
YR	MO	DA	MC NO.	LAT CMD	L	AREA	INT	MW NO.	LAT CMD	L	MAG.	H	STA	AREA	CNT	CLASS
79	9	23	16320	N09 E43	133	400	3.0									
79	9	24	16320	N10 E29	134	700	2.5		N09 E27				R	50	10	CRO
79	9	25	16320	N10 E15	135	800	2.5									
79	9	26	16320	N10 E02	135	600	2.0	20916	N09 E03	133	(AP)	3				
79	9	27	16320	N10 W12	135	400	2.0									
79	9	28	16320	N09 W27	135	300	2.0									
79	9	29	16320	N09 W40	137	400	2.0									
79	9	30	16320	N10 W54	138	400	1.5									

MCMATH REGION 16315 CMP DATE 27.5

			CALCIUM PLAGE DATA					SUNSPOT DATA								
YR	MO	DA	MC NO.	LAT CMD	L	AREA	INT	MW NO.	LAT CMD	L	MAG.	H	STA	AREA	CNT	CLASS
79	9	20	16315	N18 E88	128	300	1.0									
79	9	21	16315	N17 E77	123	1700	3.5	20903	N17 E76	126	(AP)	4	H	140	1	HSX
79	9	22	16315	N17 E67	122	1700	2.5	20903	N16 E63	125	(BP)	4				
79	9	23	16315	N17 E53	123	2700	3.0	20903	N17 E49	126	(BP)	4				
79	9	24	16315	N17 E40	123	3000	3.5									
79	9	25	16315	N18 E25	125	3300	3.0	20903	N19 E24	125	B	4	R	260	46	EAO
79	9	26	16315	N18 E12	125	3100	3.5	20903	N17 E09	127	(B)	4				

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MCMATH REGION 16315 (CONT) CMP DATE 27.5

				CALCIUM PLAGE DATA					SUNSPOT DATA								
YR	MO	DA	MC NO.	LAT CMD	L	AREA	INT		MW NO.	LAT CMD	L	MAG.	H	STA	AREA	CNT	CLASS
79	9	27	16315	N18 W02	125	3700	3.5		20903	N17 W04	126	(B)	4				
79	9	28	16315	N19 W17	125	4000	3.5		20903	N17 W16	125	(B)	4				
79	9	29	16315	N19 W28	125	5000	3.5			N21 W31				M	290	21	DKI
79	9	30	16315	N18 W42	126	5000	3.5		20903	N20 W41	125	(B)	5	R	1290	85	EKI
79	10	1	16315	N18 W58		5000	3.5		20903	N20 W54		(B)	5				
79	10	2	16315	N18 W69		5000	3.5		20903	N20 W65		(B)	4				
79	10	3	16315						20903	N20 W80		(B)	4				

MCMATH REGION 16316 CMP DATE 27.5

				CALCIUM PLAGE DATA				SUNSPOT DATA								
YR	MO	DA	MC NO.	LAT CMD	L	AREA	INT	MW NO.	LAT CMD	L	MAG.	H	STA	AREA	CNT	CLASS
79	9	22	16316	S08 E66	123	100	1.5									
79	9	23	16316	S08 E52	124	100	1.0									

MCMATH REGION 16318 CMP DATE 28.5 RETURN OF PART OF REGION 16252 ROTATION 2

				CALCIUM PLAGE DATA				SUNSPOT DATA								
YR	MO	DA	MC NO.	LAT CMD	L	AREA	INT	MW NO.	LAT CMD	L	MAG.	H	STA	AREA	CNT	CLASS
79	9	22	16318	N14 E81	108	800	2.0									
79	9	23	16318	N14 E68	108	1200	1.5									
79	9	24	16318	N16 E55	108	1400	1.5									
79	9	25	16318	N16 E41	109	1800	1.5	20914	N14 E37	112	AP	3	R	90	1	HSX
79	9	26	16318	N16 E28	109	1200	1.5	20914	N14 E24	112	(AP)	4				
79	9	27	16318	N16 E14	109	1300	1.5	20914	N15 E11	111	(AP)	5				
79	9	28	16318	N16 W03	111	1300	2.0	20914	N16 W03	112	(BY)	5				
79	9	29	16318	N16 W14	111	1600	2.5									
79	9	30	16318	N16 W27	111	1800	2.0	20914	N15 W28	112	(BP)	5	R	100	10	CSO
79	10	1	16318	N15 W44		1400	2.0	20914	N15 W41		(AP)	4	B	50	2	C
79	10	2	16318	N15 W56		1400	2.0	20914	N15 W55		(AP)	4	B	40	1	H
79	10	3	16318					20914	N14 W68		(AP)	2	B	60	1	H
79	10	4	16318					20914	N14 W86		(AP)	2	B	50	1	H

MCMATH REGION 16322 CMP DATE 28.6

				CALCIUM PLAGE DATA				SUNSPOT DATA								
YR	MO	DA	MC NO.	LAT CMD	L	AREA	INT	MW NO.	LAT CMD	L	MAG.	H	STA	AREA	CNT	CLASS
79	9	23	16322	S28 E67	109	300	2.0	20913	S26 E63	112	(AP)	2				
79	9	24	16322	S27 E53	110	400	2.5		S27 E54				R	20	4	BXO
79	9	25	16322	S26 E39	111	900	3.0	20913	S27 E38	111	B	2	R	70	12	DRI
79	9	26	16322	S27 E26	111	700	2.5	20913	S26 E25	111	(B)	3				
79	9	27	16322	S26 E13	110	1200	3.0	20913	S26 E12	110	(B)	3	R	50	12	CRO
79	9	28	16322	S26 W01	109	1100	2.5	20913	S26 W02	111	(B)	3				
79	9	29	16322	S25 W12	109	1400	3.0									
79	9	30	16322	S25 W26	110	1200	3.0	20913	S25 W27	111	(B)	4	R	50	9	DRO
79	10	1	16322	S26 W44		1800	3.0	20913	S26 W38		(BF)	3	B	20	6	C
79	10	2	16322	S26 W55		1800	2.5	20913	S26 W50		(B)	3	B	30	6	C
79	10	3	16322					20913	S27 W64		(B)	3	B	30	5	B

MCMATH REGION 16323 CMP DATE 28.6

				CALCIUM PLAGE DATA				SUNSPOT DATA								
YR	MO	DA	MC NO.	LAT CMD	L	AREA	INT	MW NO.	LAT CMD	L	MAG.	H	STA	AREA	CNT	CLASS
79	9	23	16323	S35 E65	111	100	1.0									
79	9	24	16323	S34 E51	112	100	1.0									
79	9	25	16323	S33 E38	112	100	1.0									
79	9	26	16323	S33 E25	112	100	1.0									
79	9	27	16323	S33 E13	110	200	1.0									
79	9	28	16323	S33 E00	108	100	1.5									
79	9	29	16323	S35 W11	108	400	1.0									
79	9	30	16323	S33 W21	105	400	1.0									
79	10	1	16323	S34 W37		500	1.0									
79	10	2	16323	S34 W47		300	1.0									

REGIONS OF SOLAR ACTIVITY

SEPTEMBER 1979

MCMATH REGION 16328 CMP DATE 28.8

				CALCIUM PLAGE DATA				SUNSPOT DATA							
YR	MO	DA	MC NO.	LAT CMD	L	AREA	INT	MW NO.	LAT CMD	L	MAG.	H	STA	AREA	CNT	CLASS
79	9	24	16328	S20 E56	107	200	1.0									

MCMATH REGION 16330 CMP DATE 29.1

				CALCIUM PLAGE DATA				SUNSPOT DATA							
YR	MO	DA	MC NO.	LAT CMD	L	AREA	INT	MW NO.	LAT CMD	L	MAG.	H	STA	AREA	CNT	CLASS
79	9	25	16330	N27 E47	103	300	1.5									
79	9	26	16330	N26 E34	103	500	3.0									
79	9	27	16330	N26 E19	104	600	2.0									
79	9	28	16330	N26 E04	104	500	1.5									
79	9	29	16330	N25 W07	104	300	1.0									
79	9	30	16330	N26 W25	109	400	1.5									

MCMATH REGION 16325 CMP DATE 29.8 RETURN OF PART OF REGION 16252 ROTATION 2

				CALCIUM PLAGE DATA				SUNSPOT DATA							
YR	MO	DA	MC NO.	LAT CMD	L	AREA	INT	MW NO.	LAT CMD	L	MAG.	H	STA	AREA	CNT	CLASS
79	9	23	16325	N16 E84	92	2800	3.0									
79	9	24	16325	N16 E70	93	4000	3.5									
79	9	25	16325	N16 E56	94	5000	3.5		N16 E52				R	460	35	EKI
79	9	26	16325	N16 E43	94	4700	3.5									
79	9	27	16325	N17 E30	93	5000	3.5									
79	9	28	16325	N17 E15	93	4600	3.0									
79	9	29	16325	N18 E03	94	5000	3.0									
79	9	30	16325	N19 W12	96	4500	3.0									
79	10	1	16325	N18 W29		3700	3.0	20908	N16 W31		(BP)	5	B	250	11	D
79	10		16325					20925	N21 W26		(B)	3				
79	10	2	16325	N18 W40		4000	3.0	20908	N17 W45		(AP)	5	B	250	6	D
79	10		16325	N20 W41				20925	N20 W41		(AP)	3				
79	10	3	16325					20908	N17 W57		AP	4	B	190	7	C
79	10		16325					20925	N20 W55		AP	1				
79	10	4	16325					20908	N16 W73		(AP)	3	B	130	1	H
79	10	5	16325	N19 W80		2400	2.0	20908	N16 W85		(AP)	2	B	90	1	H

MCMATH REGION 16324 CMP DATE 30.1 RETURN OF REGION 16271 ROTATION 2

				CALCIUM PLAGE DATA				SUNSPOT DATA							
YR	MO	DA	MC NO.	LAT CMD	L	AREA	INT	MW NO.	LAT CMD	L	MAG.	H	STA	AREA	CNT	CLASS
79	9	23	16324	S20 E88	88	300	1.0									
79	9	24	16324	S21 E75	88	1500	3.0									
79	9	25	16324	S21 E62	88	2100	2.5	20915	S21 E57	92	BP	2				
79	9	26	16324	S22 E48	89	2300	3.5	20915	S22 E44	92	(BP)	4				
79	9	27	16324	S23 E35	88	2000	3.0	20915	S20 E30	92	(BP)	3				
79	9		16324					20918	S23 E30	92	(AP)	3	R	100	9	CAO
79	9	28	16324	S23 E20	88	1700	2.5	20915	S20 E18	91	(BY)	4				
79	9		16324					20918	S23 E17	92	(AP)	4				
79	9	29	16324	S23 E07	90	2000	2.5									
79	9	30	16324	S23 W06	90	2200	3.0	20915	S23 W07	91	(BY)	3	R	90	18	DRI
79	10	1	16324	S24 W24		2600	3.0	20915	S24 W21		(BY)	3	B	120	27	D
79	10	2	16324	S24 W34		3000	3.0	20915	S23 W33		(B)	3	B	70	13	C
79	10	3	16324					20915	S24 W48		(B)	3	B	80	9	D
79	10	4	16324					20915	S23 W63		(B)	3	B	90	5	D
79	10	5	16324	S24 W75		2000	2.5	20915	S24 W76		B	2	B	160	4	D

NOTE: CALCIUM SPECTROHELIOGRAMS WERE SECURED AT THE MCMATH-HULBERT OBSERVATORY ON EVERY DAY OF SEPTEMBER 1979.

NO SUNSPOT OBSERVATIONS WERE MADE AT MT. WILSON ON SEPTEMBER 12, 13, 14, 15, 16, 17, 18, 24 AND 29, 1979.

REGIONS OF SOLAR ACTIVITY

SEPTEMBER 1979

DAILY CALCIUM PLAGE INDEX

SEPTEMBER 1979

YR	MO	DAY	INDEX	YR	MO	DAY	INDEX	YR	MO	DAY	INDEX
79	9	1	38.6	79	9	11	56.4	79	9	21	72.7
79	9	2	40.8	79	9	12	59.8	79	9	22	62.7
79	9	3	46.8	79	9	13	53.8	79	9	23	76.7
79	9	4	54.9	79	9	14	48.5	79	9	24	85.5
79	9	5	56.6	79	9	15	56.9	79	9	25	89.8
79	9	6	55.8	79	9	16	56.0	79	9	26	80.5
79	9	7	53.6	79	9	17	63.2	79	9	27	72.7
79	9	8	50.4	79	9	18	63.0	79	9	28	58.4
79	9	9	54.3	79	9	19	68.8	79	9	29	60.5
79	9	10	52.8	79	9	20	65.5	79	9	30	53.5

* NO OBSERVATIONS

SUDDEN IONOSPHERIC DISTURBANCES

SEPTEMBER 1979

DAY	UNIVERSAL TIME START	END	MAX	IMP	WIDE SPREAD INDEX	NUMBER OF STATION REPORTS BY TYPE SWF	SCNA	SEA	SPA	LF-SPA	SES	SFD	KNOWN FLARE	McMATH REGION
01	0619	0725	0631	1-	3			2					0620	16267
01	0733	0837	0743	1-	3			2					0731	16264
01	1950	2106	2008	1-	1						1		1949	16264
02	0025	0418	0045	1+	5	1		1	2		1		0030E	16267
02	0658	0829	0711	1+	5	1		2	2		2		0700E	16252
02	1201	1300	1223U	1-	3			2					*	
02	2300	2335	2316	1-	1				1				2255	16241
03	0426	0553	0444	2-	3	1			2				0424	16267
03	1222	1232	1223	1-	1						1		*	
03	1428	1500D	1500	1-	3				1		3		1421	16260
03	1859	2019	1909	1-	5	3			1		10		1857	16263
04	1339	1430	1350	1	5	2		1	2		2		NF	
04	1621	1636	1622	1-	1						1		1621	16264
04	1633	1702	1639	1-	1	1					1		1628	16264
04	1700	1807	1715	1-	5	3			1		7		1704	16264
04	1749	1845	1800	1-	1						1		1740	16271
04	2314	2345	2317	1-	1	1							2316	16263
05	0404	0520	0415	1+	3	1			1				0408	16269
05	0705	0737	0713	1-	3			1	1				0705E	16269
05	1426	1503	1443	1-	3				1		2		1424	16275
06	0736	0835	0745	1-	3				2		1		0732	16275
06	1238	1256	1252	1-	3			2					*	
06	1334	1420	1337U	1-	1			1					1333	16252
06	1407	1454	1420	1-	1						1		1411	16252
07	0057	0126	0102	1-	5	1			2		1		0057	16267
07	0349	0454	0400	1-	5	1			2				NF	
07	0549	0615	0558	1-	1				1				*	
07	1110	1145	1120	1-	1				1				1113	16267
07	1519	1552	1530	1-	3			2					1515	16275
07	1708	1717D	1717	1-	1						1		1712	16269
07	1950	2030U	2005U	1-	1	1							1950	16267
07	2100	2120	1206	1-	1						1		2058	16263
08	0406	0448	0415	1-	1				1				0405	16263
08	0645	0821	0656	2	5	3		4	2		2		0644	16271
08	0900	0935	0910	1	5	1		1	2		1		0904E	16275
09	0156	0413	0205	1-	3				2				0151	16275
09	0242E	0346	0251	1+	5	1			1		1		0241	16275
09	1212	1300	1220	1-	3				1		2		*	
09	1400	1500	1422	1-	3				1		2		1358	16264
09	1923	2000	1927	1-	1						1		1922	16279
09	2053	2115	2059	1-	1						1		2052	16263
09	2130	2210	2033	1-	1						1		*	
09	2213	2230	2223	1-	1						1		*	
10	0402E	0436	0409	1-	1				1				*	
10	0515	0620	0524	1+	5	1		1	2				*	
10	1359	1430	1407	1-	1				1		1		1357	16275
10	1505	1622	1523	1-	5	1			1		11		1505	16269
10	1737	1900	1750	1-	5	3			1		10		1735	16269
10	2242	2354	2254	1-	5	2			1		3		2239	16279
11	0151	0236	0202	1-	3				2				0150	16279
11	0524	0609	0530	1-	1				1				0525	16279
11	0842	0921	0847	1-	1				1				0844	16269
11	1258	1327	1309	1-	3			2					1259	16279
11	1345	1418	1356	1	5	4		5	2		10		1343	16275
11	1405E	1615	1405	1+	1				1		1		1403	16279
11	1637	1745	1655	1-	5	1			1		7		1635	16279
12	0052	0202	0106	1-	1				1				0054	16279
12	1229	1405	1250	1-	1				1		1		1228	16267
12	2311	0044	0021	1-	1				1				2311	16279
13	0624	0721	0630	1-	3			2					0623	16285
13	0804	0835	0812	1-	5			3	2		1		0802	16279
13	1310	1446	1321	1	5	3		5	2		6		1309	16279
13	1455	1524	1501	1-	3						2		1454	16279
13	1950	2045	2005	1	5						6		1949	16279
13	2050	2249	2105	1+	5	3			1		6		2058	16279
14	0113	0200D	0132	1-	3				1		1		0117	16279
14	0324	0452	0333	1+	5	2			1				*	
14	0606E	0650D	0623	1+	1				1				0616E	16279
14	0650E	1100	0745	3	5	4		3	2				NF	
14	0732	1310		1-	1	1							0731	16279
14	0815	0840	0822	1-	3			2					0810	16296
14	1432	1453	1442	1-	5			1	2		8		1421	16279
14	1700	1755	1715	1	5	1					6		1700	16275
14	1934	2040	1950	1-	5	1			1		12		1922	16279
14	2126	2157	2138	1-	5				1		3		2130	16279

SUDDEN IONOSPHERIC DISTURBANCES

SEPTEMBER 1979

DAY	UNIVERSAL TIME START	END	MAX	IMP	WIDE SPREAD INDEX	NUMBER OF STATION REPORTS BY TYPE SWF	SCNA	SEA	SPA	LF-SPA	SES	SFD	KNOWN FLARE	McMATH REGION
15	0113	0230	0122	2	5	1		1	2		1		NF	
15	1023	1200	1040	3	5	4		5	3		3		1024	12698
15	1615	1735	1632	1-	5				1		12		1616	16279
16	0102	0306	0116	3	5	1		1	2		3		0108	16298
16	0759	0933D	0808	2	5	3		6	3		2		0759	16298
16	0937	1112	0950	2+	5	5		6	3		3		0937	16298
16	1545	1715	1605	1	5	2			1		10		NF	
16	1738	1815	1740	1-	1						1		1740	16298
16	1952	2112	1959	1	5	3		2			12		1950	16279
16	2345	0008	2355	1-	1						1		2346E	16298
16	2347	0104	0010	1	3	1			1				2347	16298
17	0514	0716D	0538	1-	1				1				*	
17	0721	0748	0725	1-	1				1				0725	16298
17	1037	1130	1047	1-	5	2		5	2		3		1034	16298
17	1547	1706	1600U	1-	1						1		1543	16298
17	1643	1655D	1655	1-	5	2			1		9		1641	16298
17	1815	1838	1821	1-	1						1		1816	16298
18	0023	0118	0034	1-	1				1				0022	16298
18	0746	1002	0809	2	5	2		3	2		2		0748	16312
18	1439	1638	1454	1+	5	5		5	2		12		1432	16298
18	1921	2008	1931	1-	5	2				1	3		1922E	16298
18	2307	2352	2316	1-	5				2		1		2318E	16298
19	0357	0547	0408	2+	5	2			2				0400	16279
19	0643	0946	0712	1	5	1		1	3		1		0647	16298
19	0707	0730	0714	1-	5	2		1	1				0707	16298
19	1108	1145	1116	1-	1				1		1		1100	16300
19	1210	1315	1231	1	5	3		4	2		2		NF	
19	1356	1520	1406	2	5	6		7	2	1	9		1353E	16279
19	1423	1550	1435	1-	3				1	1			1420E	16298
19	1604	1655	1613	1	5	1		1	1		4		1602	16298
19	1740	1830	1750	1-	5	2		1	1	1	8		1740	16298
19	1825	1850D	1850	1-	5	1			1		5		1828	16298
19	1916	1940D	1940	1-	1				1		1		1916	16298
19	1936	2014	1943	1-	5	1				1	3		1937E	16298
19	2024	2133	2100	1+	3	1					4		2025	16298
19	2043	2153	2103	1	5	1			2	1	6		2039	16298
19	2202	2400D	2207	1-	1						1		2206	16298
19	2258	0056	2307	3	5	4			2	1	5		2256	16298
20	0341	0358	0347	1-	1				1				*	
20	0456	0609	0502	1-	1				1				*	
20	0800	0844	0806	1	5	2		3	3		1		0759	16298
20	0837E	1007	0853	2	5			2	2		1		0839	16298
20	1147	1245	1204	1-	5	2		3	2		1		*	
20	1258	1500	1315	1-	3						2		1254	16298
20	1325	1445	1354	1-	5	4		5	2		6		1340E	16298
20	1456	1545D	1545	1-	1				1		1		1459	16298
20	1532	1603	1542	1-	3				1		2		1534	16298
20	1632	1805	1653	1-	3				1		2		1633	16310
20	1815	1830D	1830	1-	1				1		1		1819	16298
20	1837	2053	1910	1-	1				1				1834	16298
20	1858	1812	1908	1+	5	3			1	1	10		1856	16298
20	2212	2246D	2224	1-	1				1				2214	16279
21	0321E	0350	0324	1-	1				1				*	
21	0358	0429D	0405	1-	1				1				*	
21	0430	0510	0441	1-	3				2				*	
21	1123	1221	1136	1-	3			1	1		1		*	
21	1159	1320	1220	1-	1				1		1		1212	16298
21	1341	1400	1344	1-	5	1		3	2		4		1338	16298
21	1400	1450	1408	1-	3				1		2		1359	16298
21	1500	1535D	1535	1-	5			3	1		2		1457	16398
21	1545	1640	1553	1-	5	1			1		4		1544	16298
21	2121	2145	2125	1-	3	1			1				2120	16310
21	2350	0027	0353	1+	5	2		1	1		4		2340	16298
22	0105E	0154	0116	1+	5	1			1		1		0106	16298
22	0120	0200		1-	1	1							0123E	16298
22	0151	0158D	0158	1-	1						1		0151	16298
22	0212	0450	0219	1	5	1		1	2		1		NF	
22	0233E	0416	0240	2	3	1			1		1		0238E	16298
22	0735	0855	0800	1-	3			2					0738	16298
22	0821	0905	0828	1-	5	1		1	2		1		0822	16298
22	1742	1815	1745	1-	3						2		1742	16298
23	0132	0350	0138	1-	3				2				0134	16298
23	0203E	0320	0211	1+	5	1		1	1		1		0202E	16298
23	0616	0730	0625	1	5	2		2	3				0618	16298
23	1023	1030D	1030	1-	5	2		2	3		2		1023	16298
23	1158	1220	1203	1-	5	1		4	2		2		1205E	16298
23	1403	1408D	1408	1-	1						1		1402	16298
23	1634	1728	1646	1-	5	2			1		11		1630	16305
23	1951	2015	1955	1-	1						1		1946	16314
23	2241	2317	2252	1-	3				1		1		2239	16319

SUDDEN IONOSPHERIC DISTURBANCES

SEPTEMBER 1979

DAY	UNIVERSAL TIME START	END	MAX	IMP	WIDE SPREAD INDEX	NUMBER OF STATION REPORTS BY TYPE SWF	SCNA	SEA	SPA	LF-SPA	SES	SFD	KNOWN FLARE	McMATH REGION
24	0507	0634	0514	1+	5	1		1	2				*	
24	1745	1840	1903	1-	5	2			1	1	12		1743	16298
25	0108	0200	0111	1-	1						1		*	
25	0406	0455	0417	1-	5	1			2				*	
25	0821	0915	0830	1-	5			1	2		1		0822	16298
25	1109	1228	1119	1+	5	3		3	2		1		1106	16298
25	2000	2010	2001	1-	3	1					1		1955	16329
25	2033	2124	2044	1-	5	3			1		8		2036	16298
25	2131	2152	2138	1-	1				1				2130	16307
26	1108	1120D	1120	1-	1				1		1		1108	16310
26	1145	1205D	1205	1-	1				1		1		1148	16298
26	1317	1412	1324	1-	1				1		1		1322E	16324
26	1344	1422	1348	1-	1			1					1346	16315
27	0215	0336	0226	1-	3				2				0218	16298
27	0306E	0337	0318	1-	1				1				0303	16310
27	0722	0757	0730	1-	1				1				0720	16332
27	1507	1615	1538	1-	3			3					1505	16315
27	2141	2200	2142	1-	1				1				2142	16315
28	0802	0925	0811	1-	3			2					0758	16330
28	1330	1430	1402	1-	1				1		1		1323	16315
28	1525	1633	1539	1-	3			2					1520	16324
28	2146	2233	2152	1-	1				1				*	
29	0041E	0124	0041	1-	1				1				*	
29	0353	0404	0356	1-	1				1				*	
29	0413	0451	0421	1-	3				2				*	
29	0502	0525	0514	1-	1				1				*	
29	0725	0753	0739	1-	3			3					0728	16298
29	0951	1005	0956	1-	3			3	1				0940	16307
29	1130	1200	1144	1-	1				1		1		*	
29	1213	1258	1240	1-	1				1		1		*	
30	0053	0130	0058	1-	1						1		*	
30	0436	0455	0444	1-	1				1				*	
30	0615	0754	0621	2	5	3		2	2				0614	16315
30	1042	1108	1055	1-	5	1		1	2		1		1040	16305
30	1106	1310	1125	1	5	2		4	3		3		NF	
30	1513	1605	1530	1-	1				1		1		1510	16315

PERIODS OF NO OBSERVATIONS:

DATE	TIME (UT) AND STATION
01-30	0000-2400 TM
01-04	0000-2400 TM-CF
02	0745-0910 UM (13 kHz)
04	1000-1345 UM (16 kHz)
06	0000-2400 TM-CF
09	0000-2400 TM-CF
11	1005-1400 UM (16 kHz)
24-25	2200-1200 UM (10, 13, 16 kHz)
26	0000-2400 TM-CF
29-30	0640-2400 KA
30	0000-2400 TM-CF

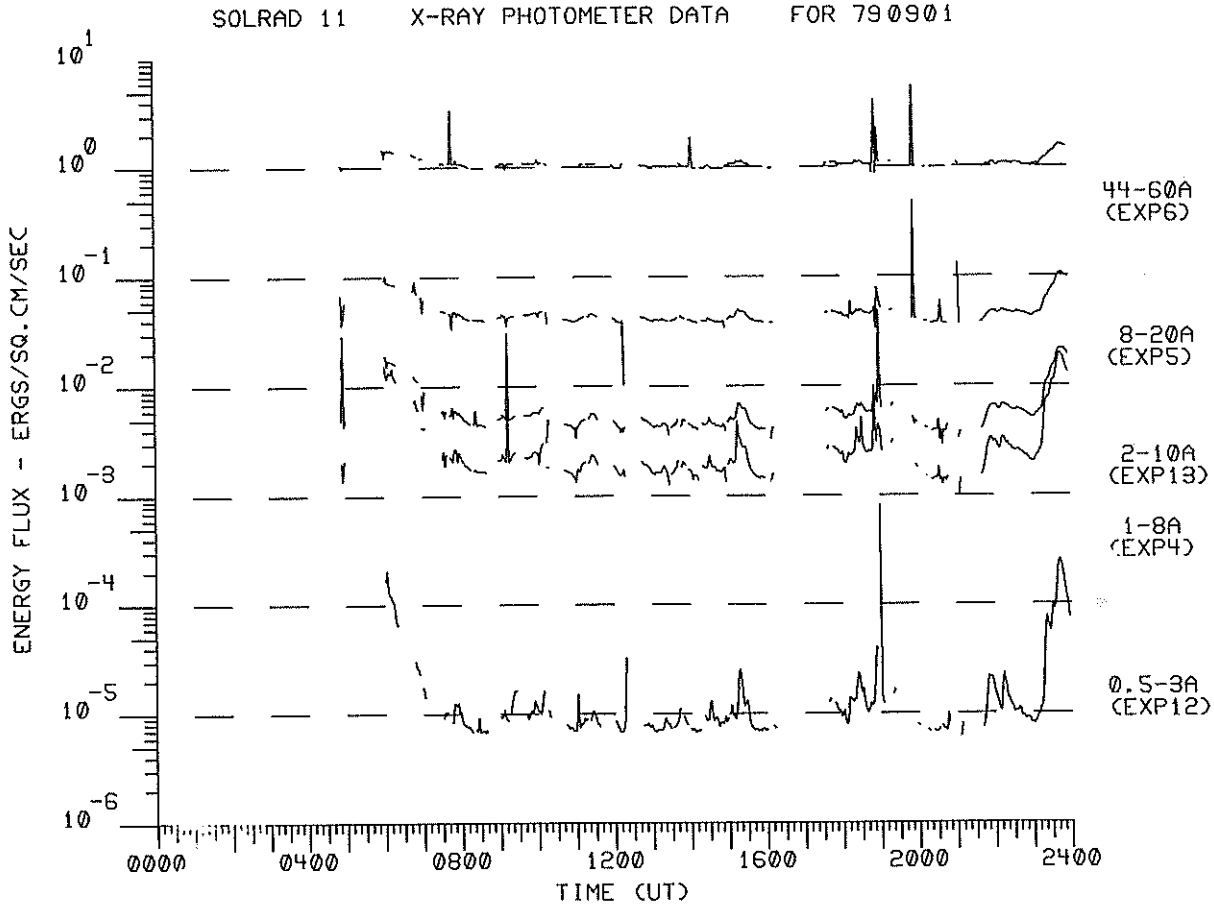
STATIONS REPORTING FOR SEPTEMBER 1979

AAVSO (A1, A5, A19, A21, A26, A28, A31, A34, A46, A48) (SES) (A31) (SWF)
ELLENSBURG (EB) (SES)
HIRAISO (HI) (SWF)
HOBART (TA) (SEA)
HUANCAYO (HU) (SWF)
INUBO (IN) (SPA)
JULIUSRUH (JH) (SWF)
KASUAGE (KA) (SPA)
KUHLUNGSBORN (KU) (SEA, SPA)
LUCHOW (LW) (SWF)
MC MATH (MC) (SWF)
NEW JERSEY (NJ) (SES)
PANSKA VES (PU) (SWF, SEA, SES)
PRESTON (LO) (SEA)
SAO PAULO (UM) (SES, SPA)
SOFIA (SF) (SES)
SOMERTON (SO) (SWF)
ST CLOUD (SC) (SES)
TABLE MOUNTAIN (TM) (SPA, LF-SPA)
UPICE (UI) (SEA)
VSETIN (VS) (SEA)
ZILINA (ZL) (SEA)

SIDs BY McMATH REGION

SEPTEMBER 1979

REGION	DAY 01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30
16241		1																												
16252		1				2																								
16260			1																											
16263			1	1			1	1	1																					
16264	2			3					1																					
16267	1	1	1				3						1																	
16269					2		1			2	1																			
16271				1				1																						
16275					1	1	1	1	2	1	1			1																
16279									1	1	5	2	5	6	1	1			2	1										
16285													1																	
16296														1																
16298															1	6	5	4	12	9	6	7	6	1	3	1	1		1	
16300																			1											
16305																							1							1
16307																									1				1	
16310																				1	1					1	1			
16312																		1												
16314																							1							
16315																										1	2	1		1
16319																							1							
16324																										1		1		
16329																									1					
16330																												1		
16332																											1			


SOLRAD 11 X-RAY PHOTOMETER DATA FOR 790901
ENERGY FLUX - ERGS/SQ.CM/SEC
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10^{0}
10^{-1}
10^{-2}
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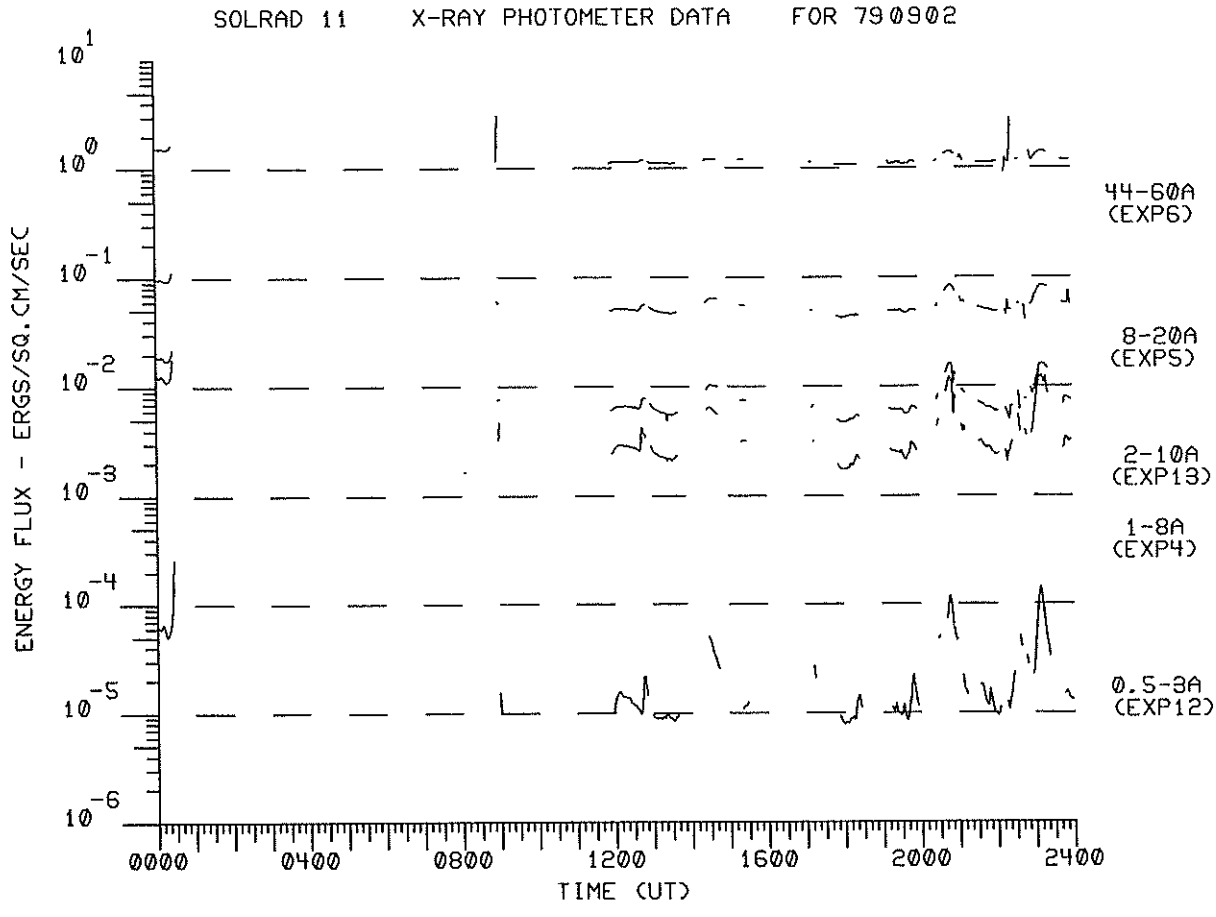
10^{-4}
10^{-5}
10^{-6}
44-60A (EXP6)
8-20A (EXP5)
2-10A (EXP13)
1-8A (EXP4)
0.5-3A (EXP12)
0000
0400
0800
1200
1600
2000
2400
TIME (UT)


SOLRAD 11 X-RAY PHOTOMETER DATA FOR 790902
ENERGY FLUX - ERGS/SQ.CM/SEC
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10^{0}
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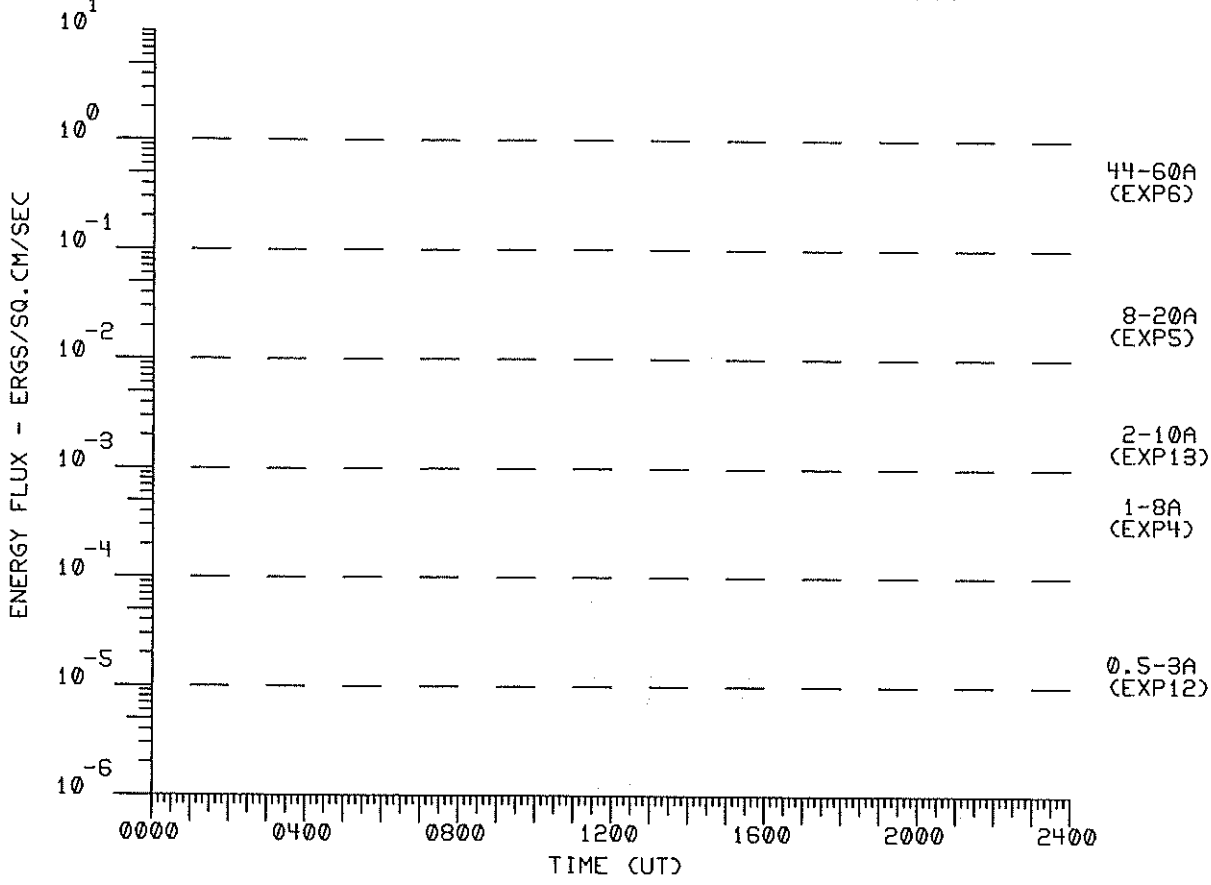
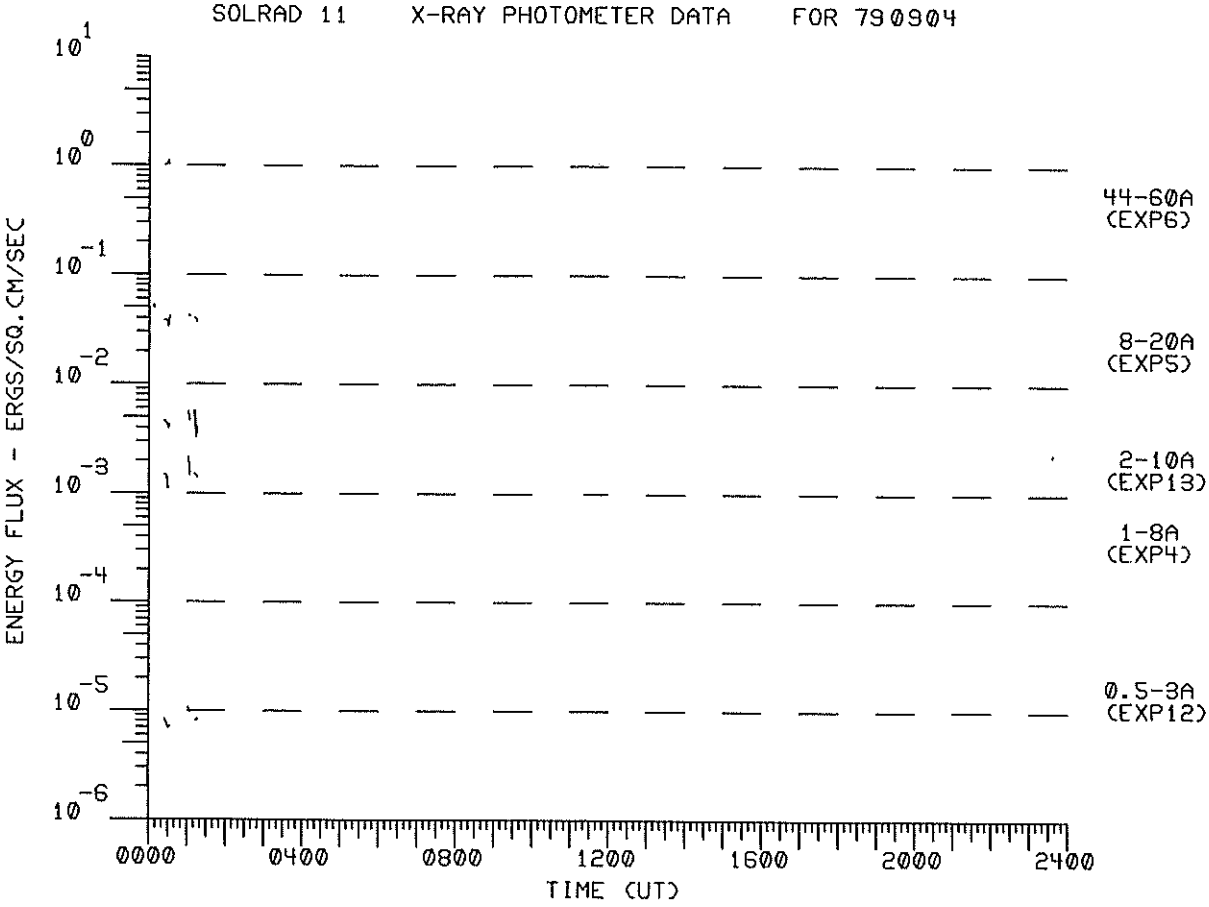
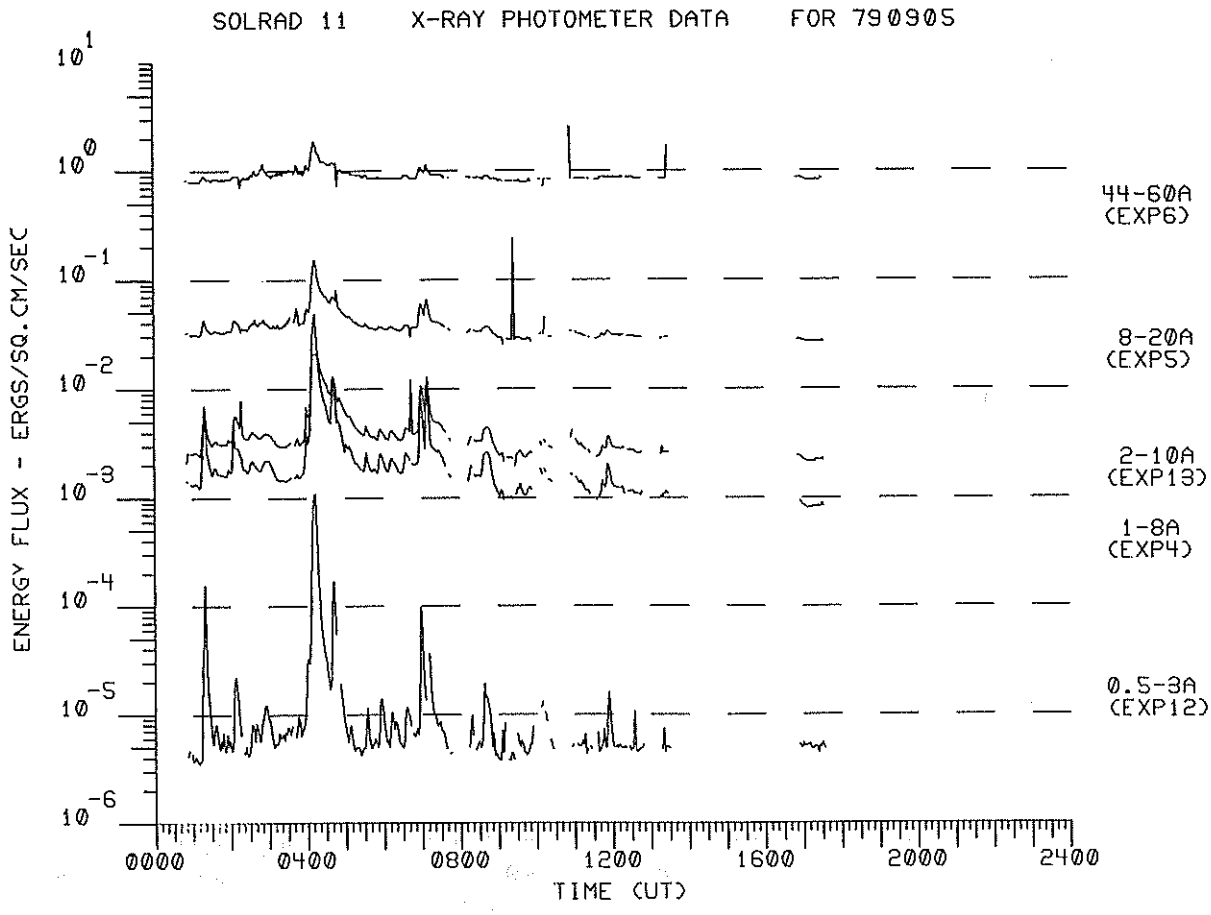
10^{-4}
10^{-5}
10^{-6}
44-60A (EXP6)
8-20A (EXP5)
2-10A (EXP13)
1-8A (EXP4)
0.5-3A (EXP12)
0000
0400
0800
1200
1600
2000
2400
TIME (UT)

SOLRAD 11 X-RAY PHOTOMETER DATA FOR 790903



SOLRAD 11 X-RAY PHOTOMETER DATA FOR 790904




SOLRAD 11 X-RAY PHOTOMETER DATA FOR 790905
ENERGY FLUX - ERGS/SQ.CM/SEC
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10^{0}
10^{-1}
10^{-2}
10^{-3}
10^{-4}
10^{-5}
10^{-6}
44-60A (EXP6)
8-20A (EXP5)
2-10A (EXP13)
1-8A (EXP4)
0.5-3A (EXP12)
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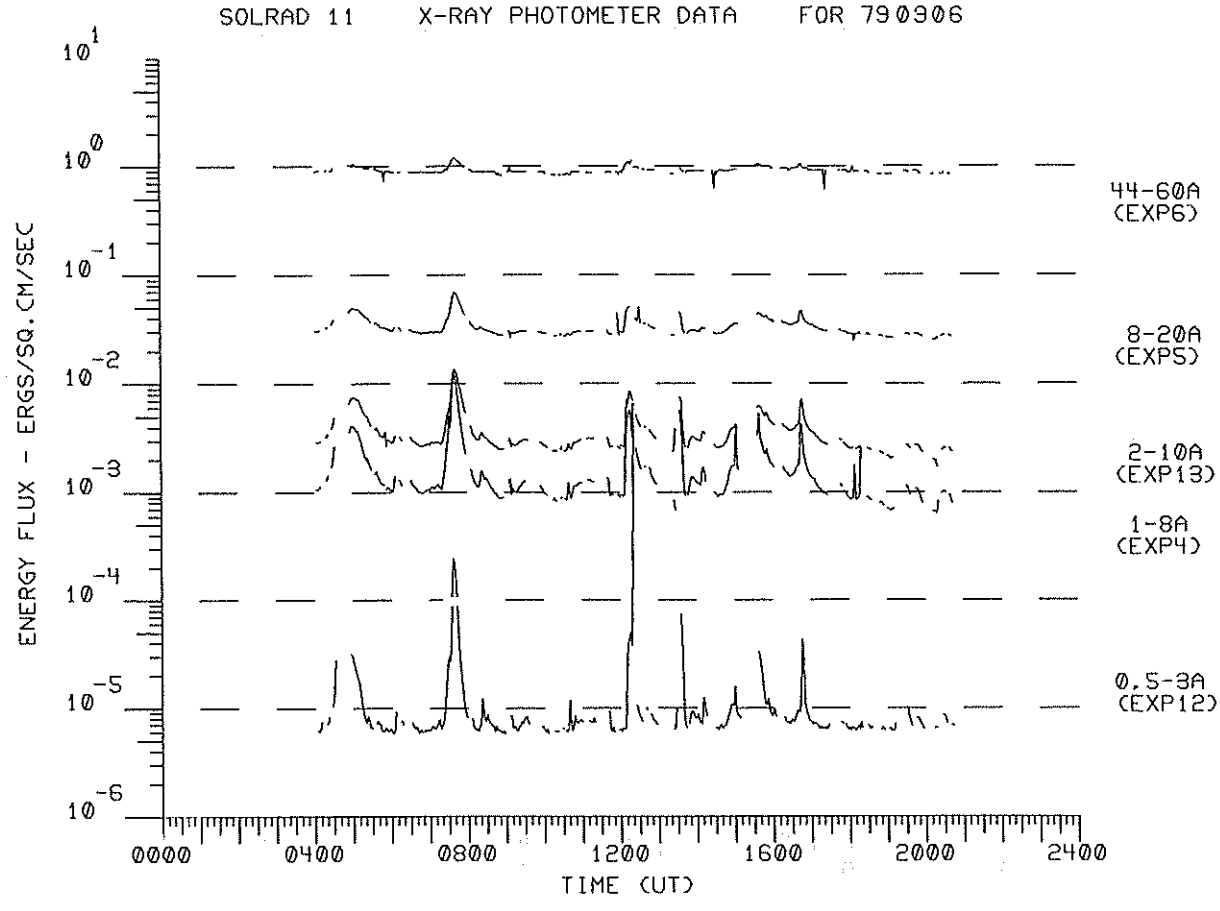
0800
1200
1600
2000
2400
TIME (UT)


SOLRAD 11 X-RAY PHOTOMETER DATA FOR 790906
ENERGY FLUX - ERGS/SQ.CM/SEC
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10^{-1}
10^{-2}
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10^{-4}
10^{-5}
10^{-6}
44-60A (EXP6)
8-20A (EXP5)
2-10A (EXP13)
1-8A (EXP4)
0.5-3A (EXP12)
0000
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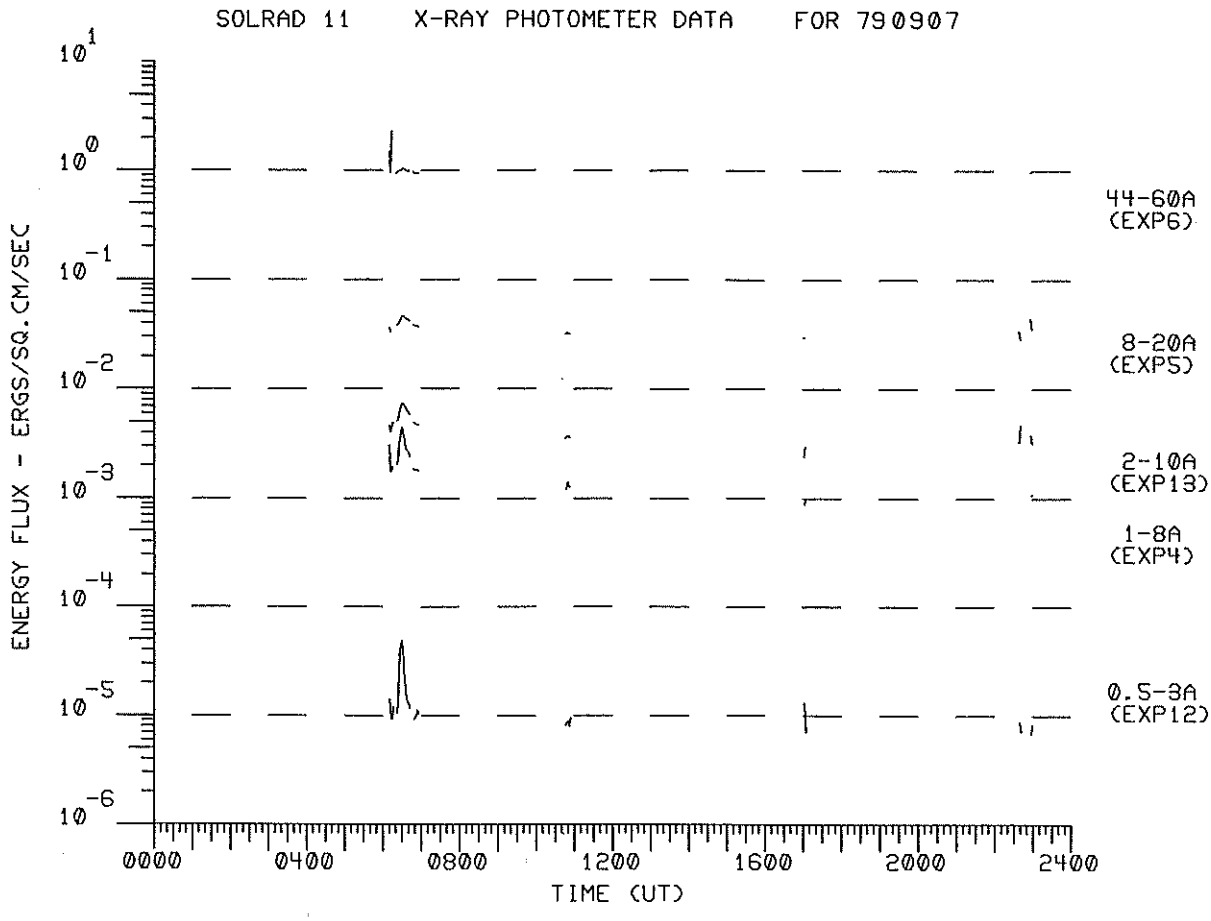
0800
1200
1600
2000
2400
TIME (UT)


SOLRAD 11 X-RAY PHOTOMETER DATA FOR 790907
ENERGY FLUX - ERGS/SQ.CM/SEC
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10^{-1}
10^{-2}
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10^{-4}
10^{-5}
10^{-6}
44-60A (EXP6)
8-20A (EXP5)
2-10A (EXP13)
1-8A (EXP4)
0.5-3A (EXP12)
0000
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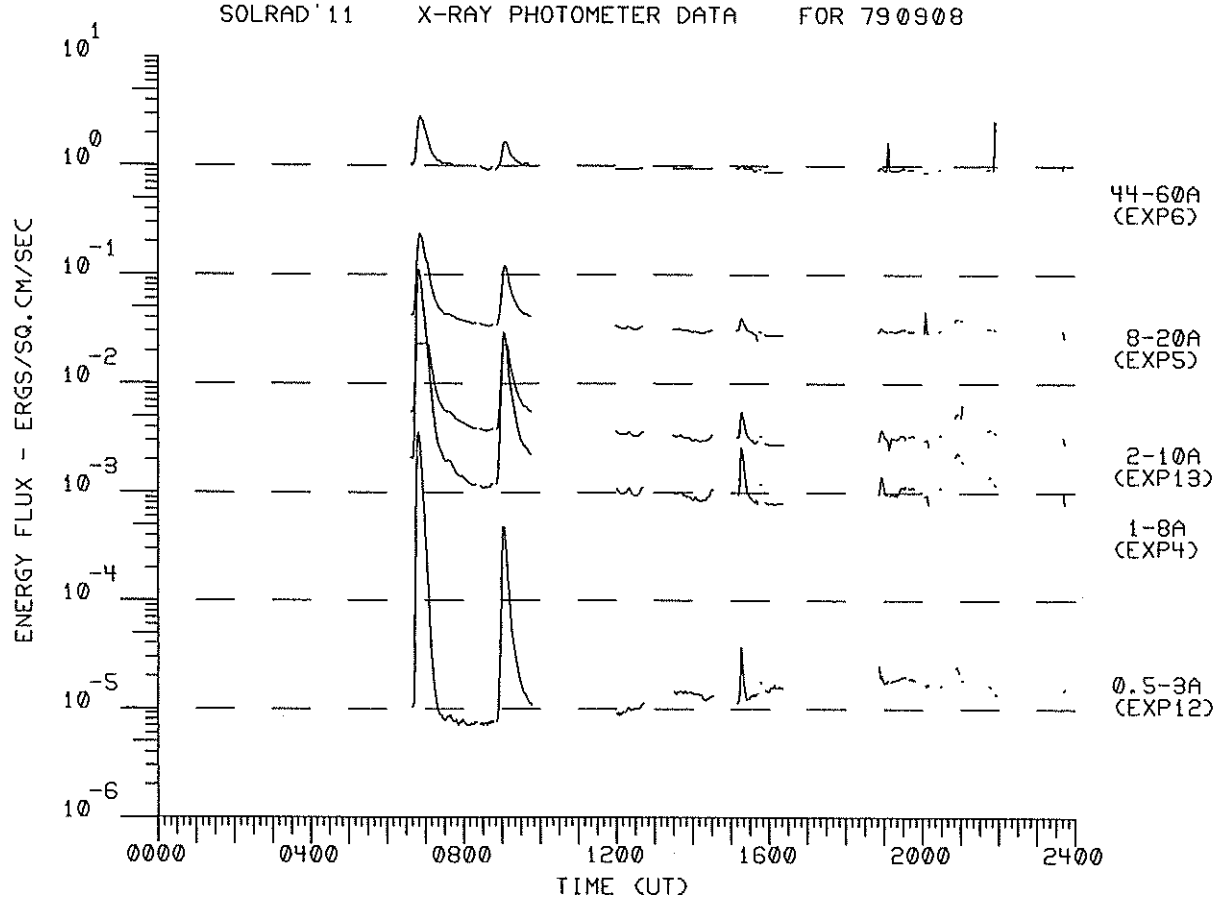
0800
1200
1600
2000
2400
TIME (UT)


SOLRAD 11 X-RAY PHOTOMETER DATA FOR 790908
ENERGY FLUX - ERGS/SQ.CM/SEC
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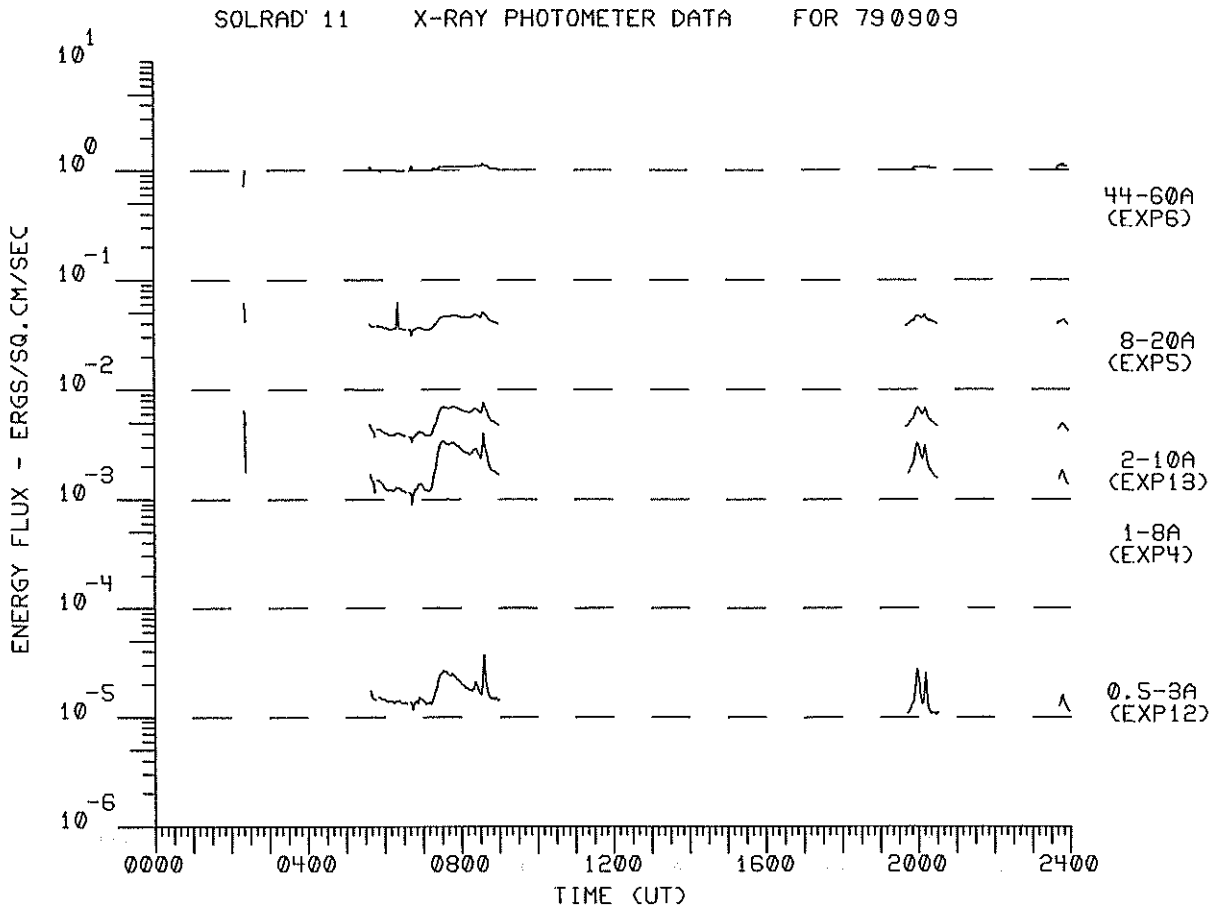
10^{-4}
10^{-5}
10^{-6}
44-60A (EXP6)
8-20A (EXP5)
2-10A (EXP13)
1-8A (EXP4)
0.5-3A (EXP12)
0000
0400
0800
1200
1600
2000
2400
TIME (UT)


SOLRAD' 11 X-RAY PHOTOMETER DATA FOR 790909
ENERGY FLUX - ERGS/SQ.CM/SEC
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10^{-1}
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10^{-4}
10^{-5}
10^{-6}
44-60A (EXP6)
8-20A (EXP5)
2-10A (EXP13)
1-8A (EXP4)
0.5-3A (EXP12)
0000
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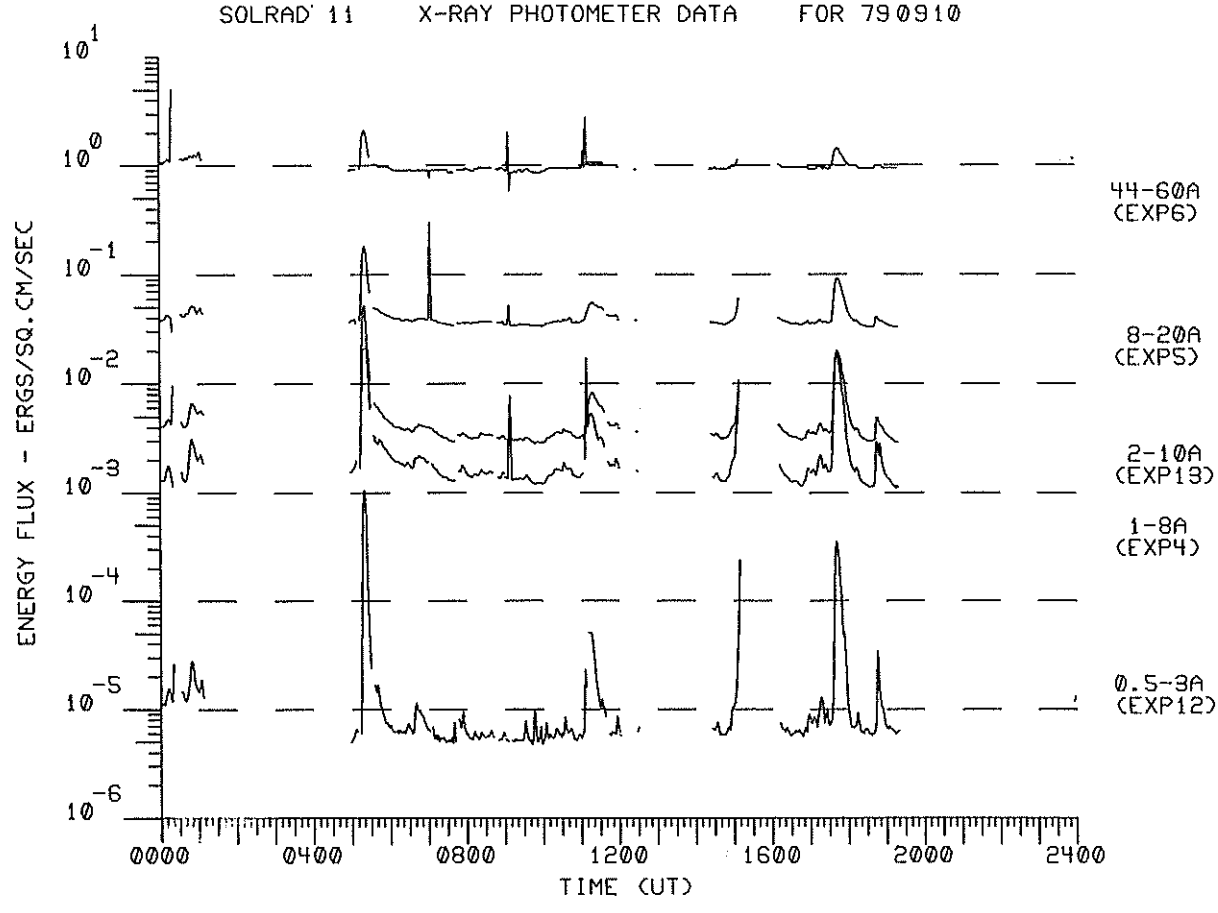
0800
1200
1600
2000
2400
TIME (UT)


SOLRAD' 11 X-RAY PHOTOMETER DATA FOR 790910
ENERGY FLUX - ERGS/SQ.CM/SEC
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10^{-1}
10^{-2}
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10^{-4}
10^{-5}
10^{-6}
44-60A (EXP6)
8-20A (EXP5)
2-10A (EXP13)
1-8A (EXP4)
0.5-3A (EXP12)
0000
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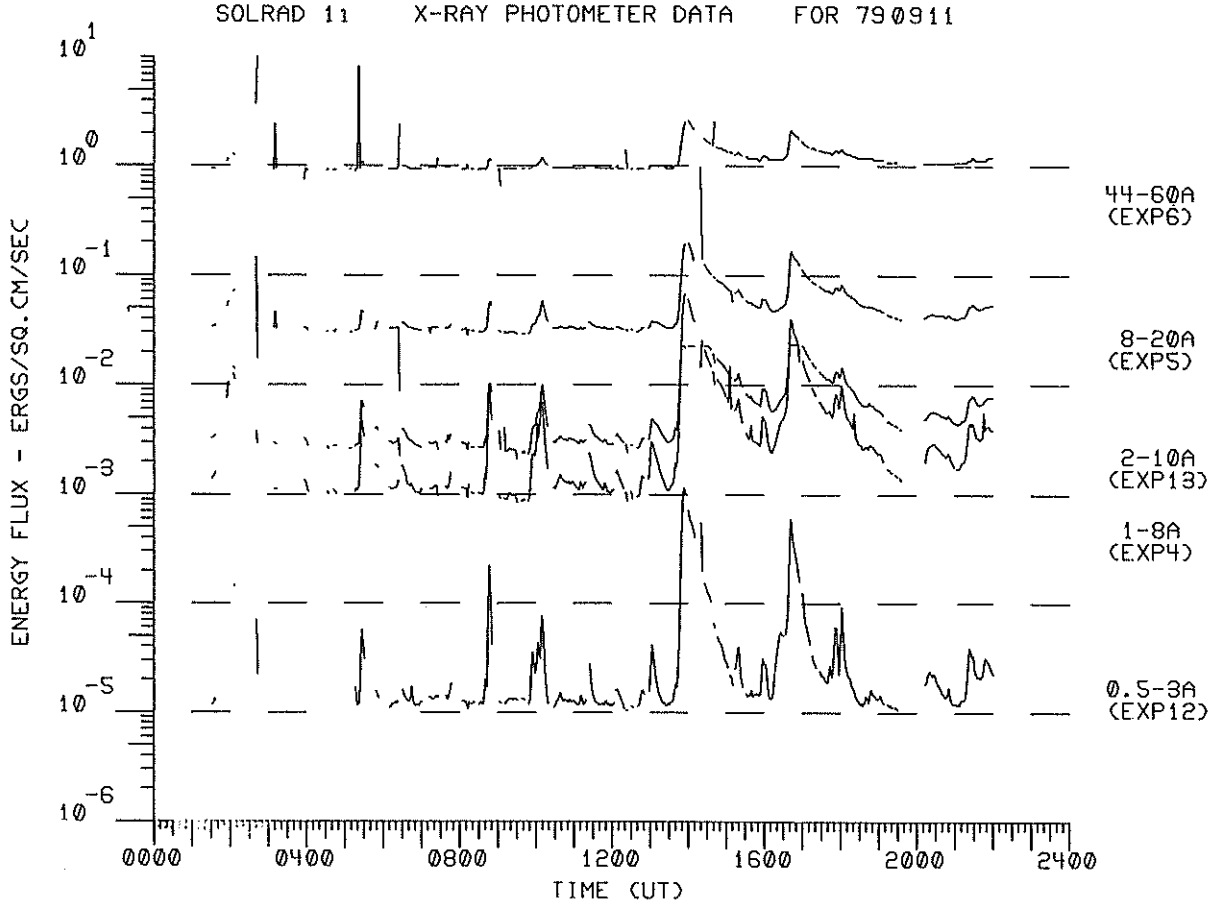
0800
1200
1600
2000
2400
TIME (UT)


SOLRAD 11 X-RAY PHOTOMETER DATA FOR 790911
ENERGY FLUX - ERGS/SQ.CM/SEC
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10^{0}
10^{-1}
10^{-2}
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10^{-4}
10^{-5}
10^{-6}
44-60A (EXP6)
8-20A (EXP5)
2-10A (EXP13)
1-8A (EXP4)
0.5-3A (EXP12)
0000
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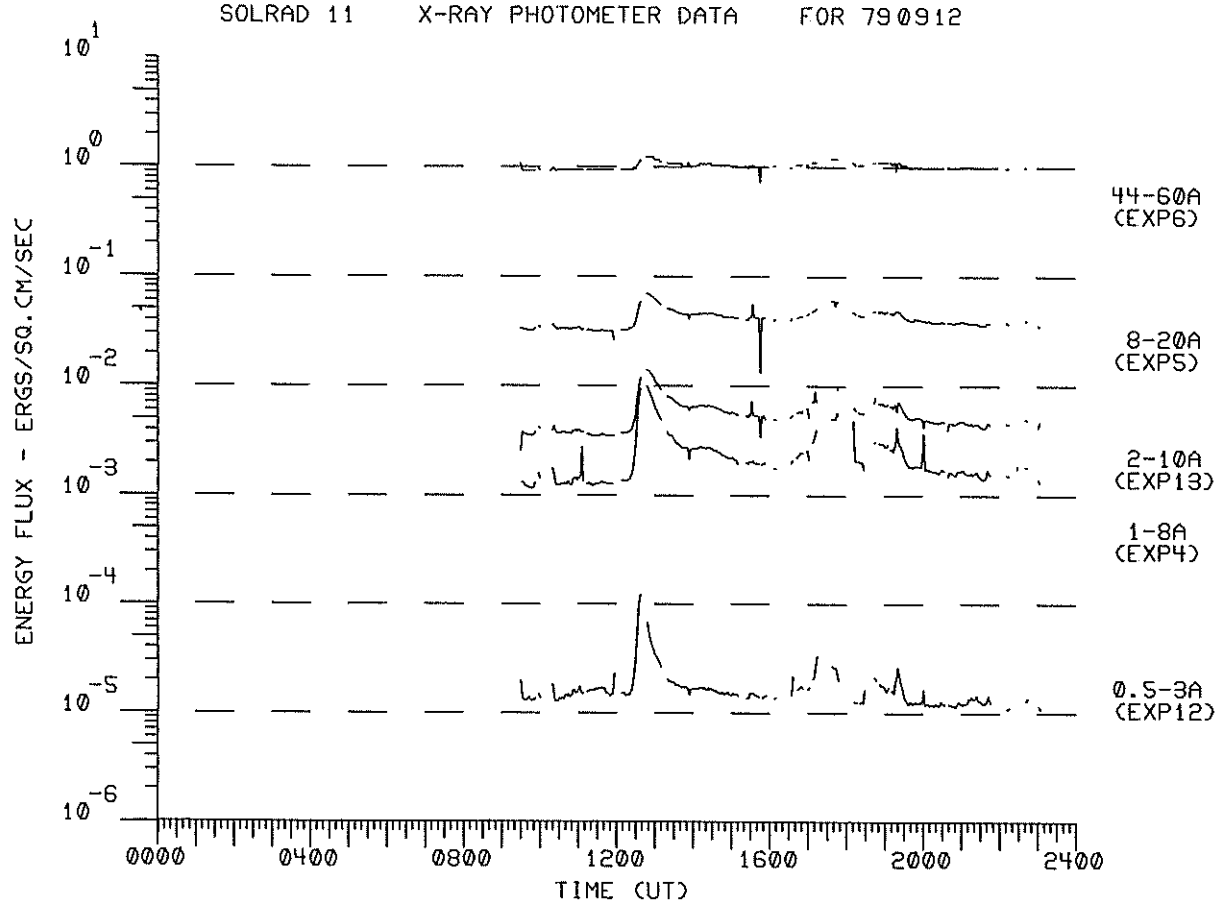
1200
1600
2000
2400
TIME (UT)


SOLRAD 11 X-RAY PHOTOMETER DATA FOR 790912
ENERGY FLUX - ERGS/SQ.CM/SEC
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10^{-1}
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10^{-4}
10^{-5}
10^{-6}
44-60A (EXP6)
8-20A (EXP5)
2-10A (EXP13)
1-8A (EXP4)
0.5-3A (EXP12)
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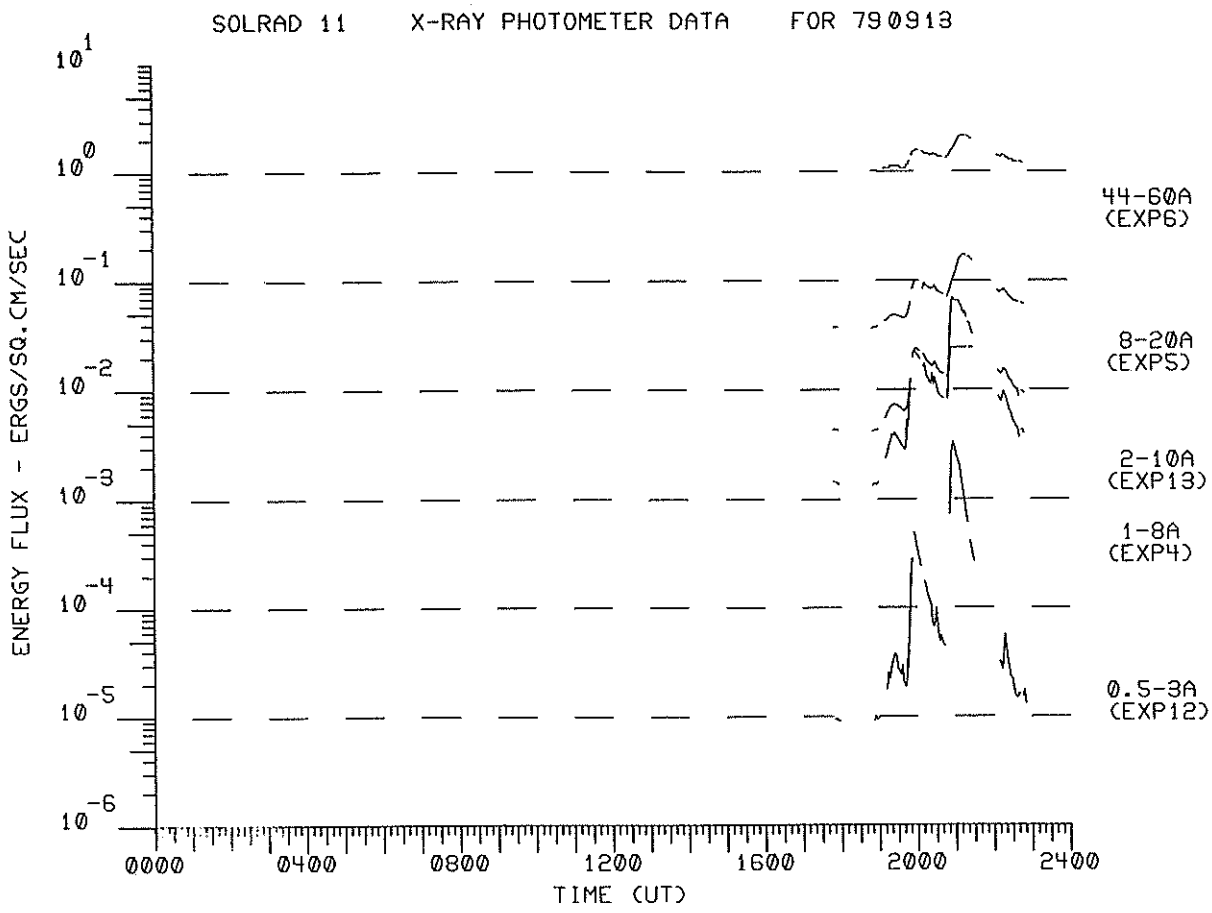
0400
0800
1200
1600
2000
2400
TIME (UT)


SOLRAD 11 X-RAY PHOTOMETER DATA FOR 790913
ENERGY FLUX - ERGS/SQ.CM/SEC
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10^{0}
10^{-1}
10^{-2}
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10^{-4}
10^{-5}
10^{-6}
44-60A (EXP6)
8-20A (EXP5)
2-10A (EXP13)
1-8A (EXP4)
0.5-3A (EXP12)
0000
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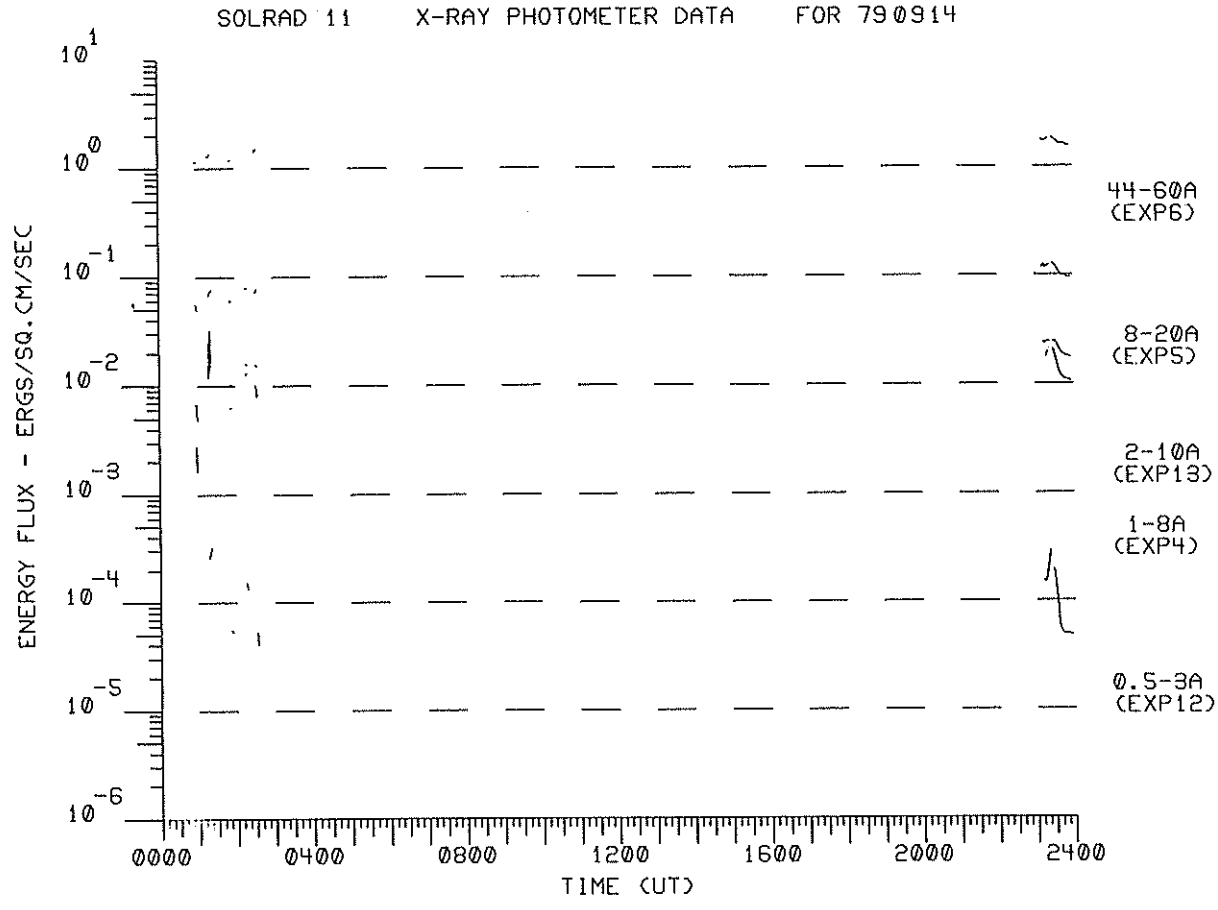
0800
1200
1600
2000
2400
TIME (UT)


SOLRAD 11 X-RAY PHOTOMETER DATA FOR 790914
ENERGY FLUX - ERGS/SQ.CM/SEC
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10^{0}
10^{-1}
10^{-2}
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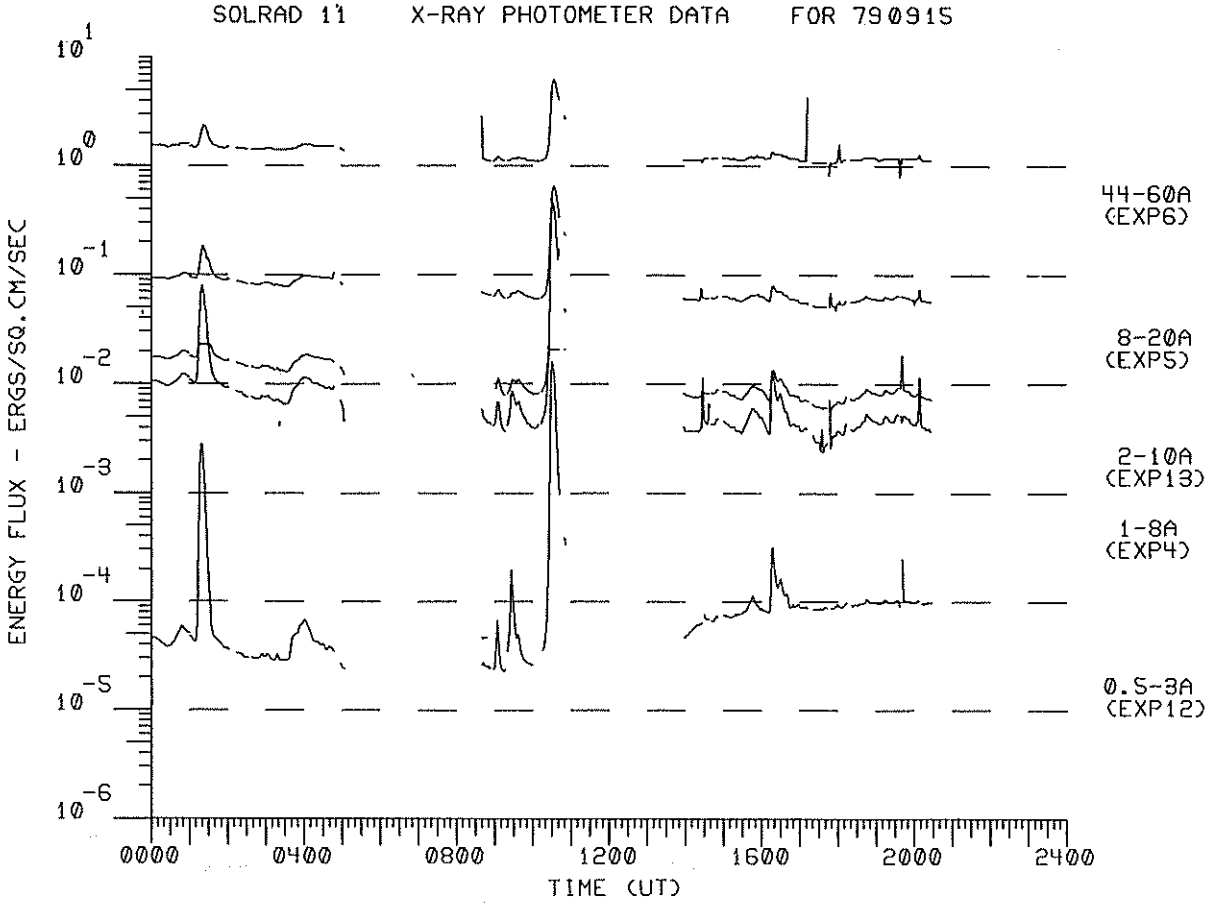
10^{-4}
10^{-5}
10^{-6}
44-60A (EXP6)
8-20A (EXP5)
2-10A (EXP13)
1-8A (EXP4)
0.5-3A (EXP12)
0000
0400
0800
1200
1600
2000
2400
TIME (UT)


SOLRAD 11 X-RAY PHOTOMETER DATA FOR 790915
ENERGY FLUX - ERGS/SQ.CM/SEC
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10^{0}
10^{-1}
10^{-2}
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10^{-4}
10^{-5}
10^{-6}
44-60A (EXP6)
8-20A (EXP5)
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0.5-3A (EXP12)
0000
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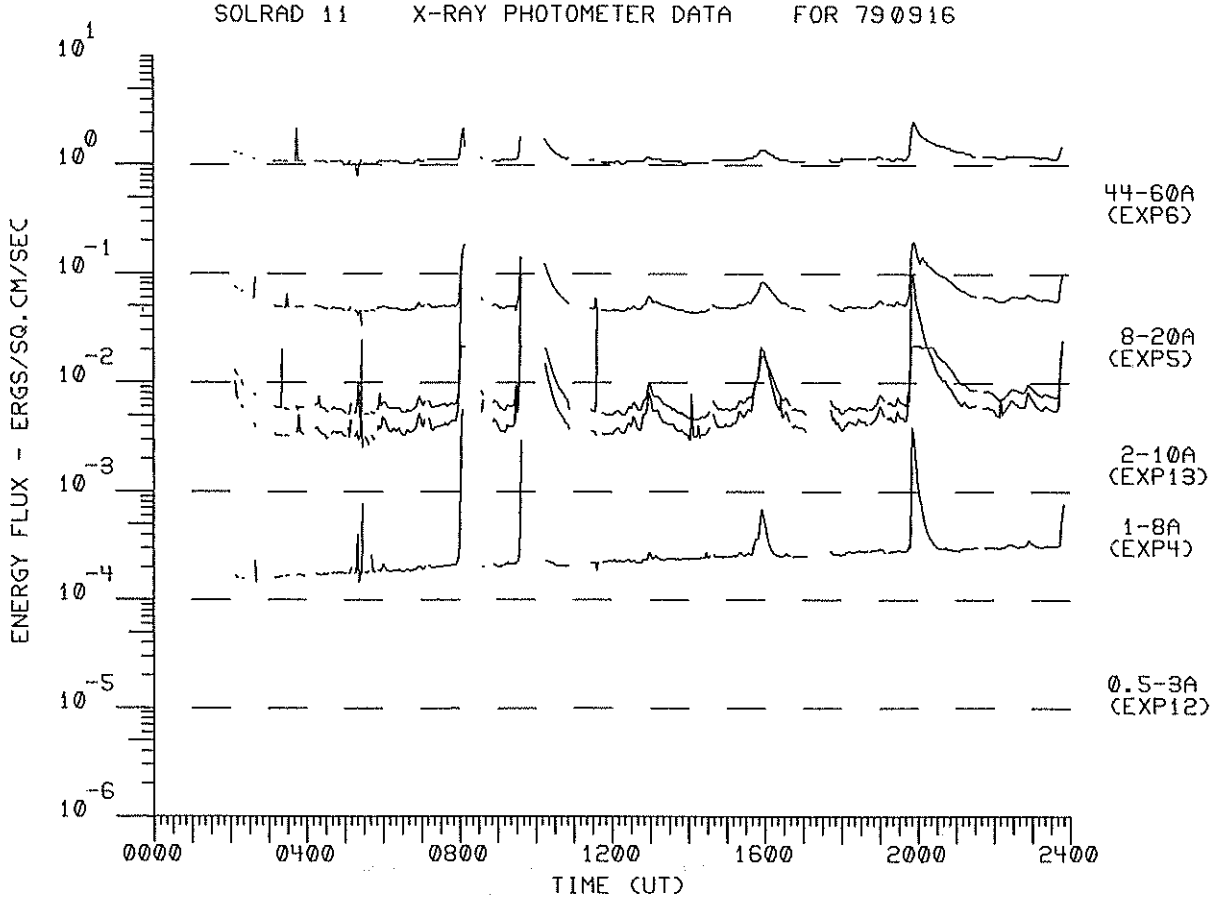
1200
1600
2000
2400
TIME (UT)


SOLRAD 11 X-RAY PHOTOMETER DATA FOR 790916
ENERGY FLUX - ERGS/SQ.CM/SEC
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10^{0}
10^{-1}
10^{-2}
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10^{-4}
10^{-5}
10^{-6}
44-60A (EXP6)
8-20A (EXP5)
2-10A (EXP13)
1-8A (EXP4)
0.5-3A (EXP12)
0000
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1200
1600
2000
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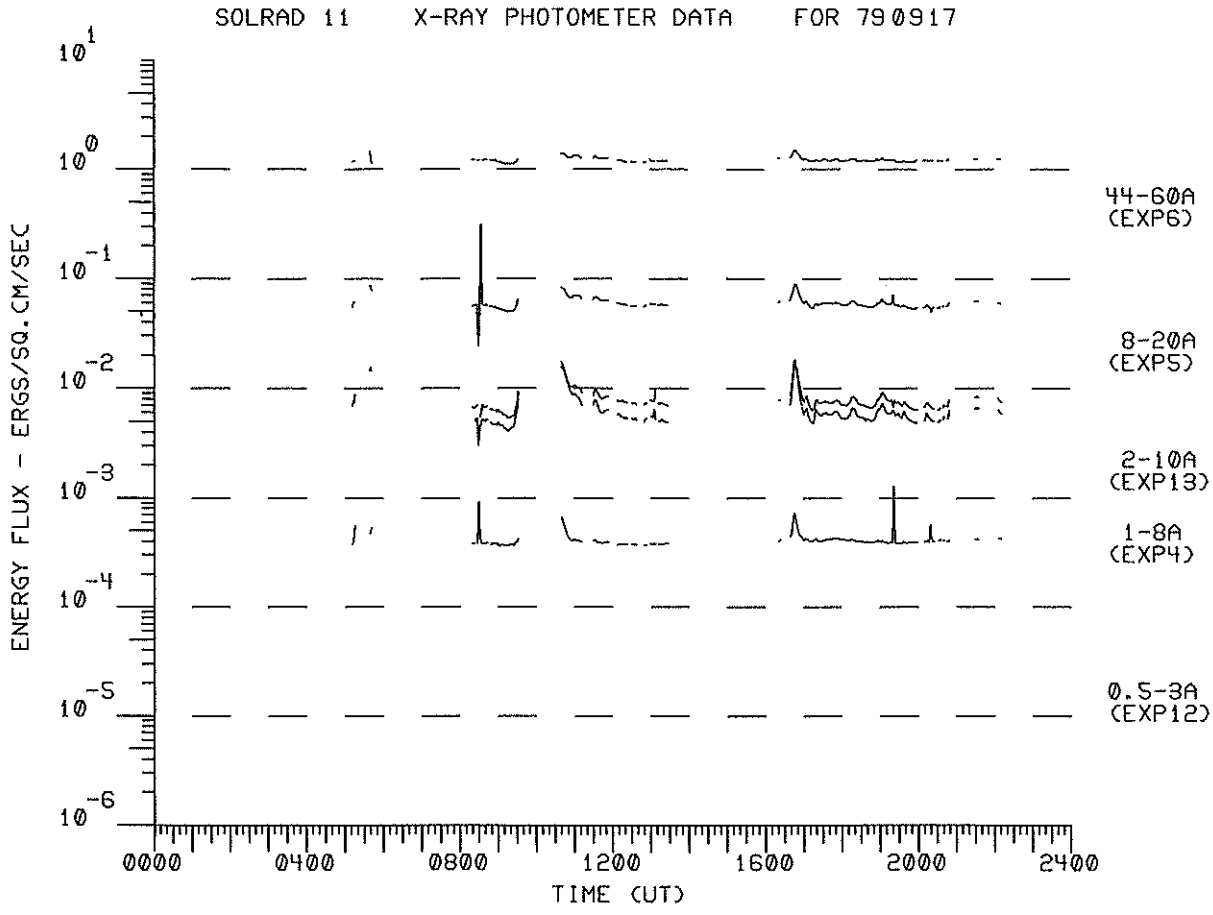
TIME (UT)


SOLRAD 11 X-RAY PHOTOMETER DATA FOR 790917
ENERGY FLUX - ERGS/SQ.CM/SEC
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10^{-5}
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44-60A (EXP6)
8-20A (EXP5)
2-10A (EXP13)
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0.5-3A (EXP12)
0000
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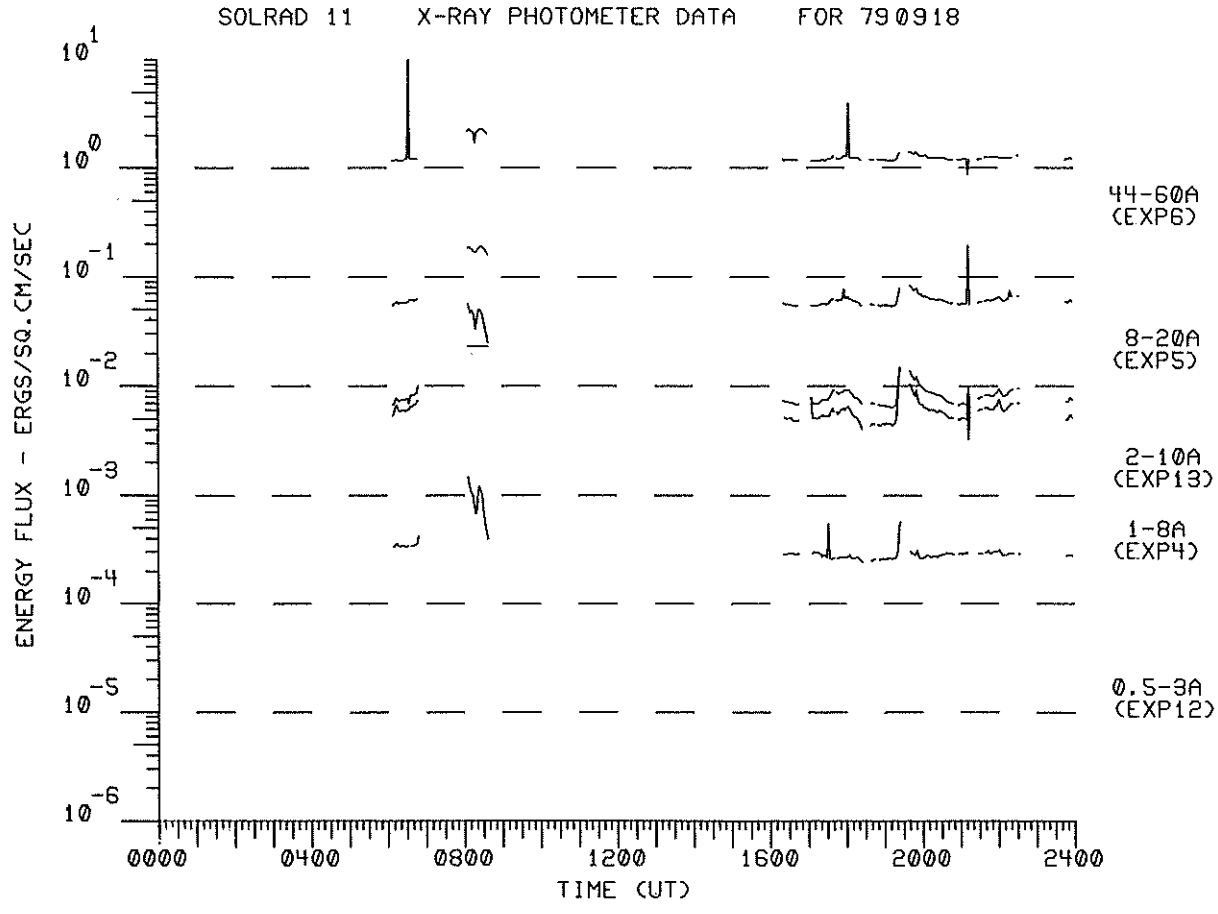
2000
2400
TIME (UT)


SOLRAD 11 X-RAY PHOTOMETER DATA FOR 790918
ENERGY FLUX - ERGS/SQ.CM/SEC
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10^{-5}
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8-20A (EXP5)
2-10A (EXP13)
1-8A (EXP4)
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0400
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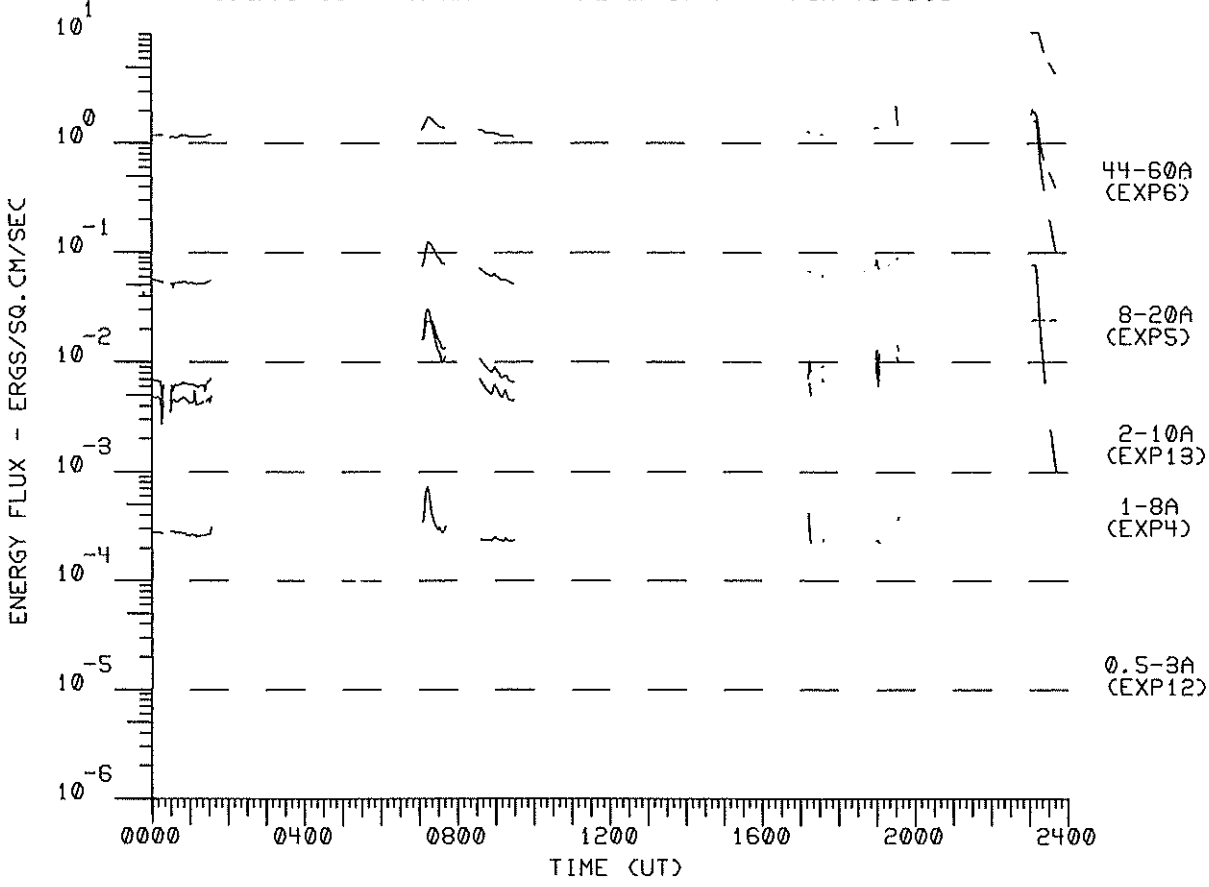
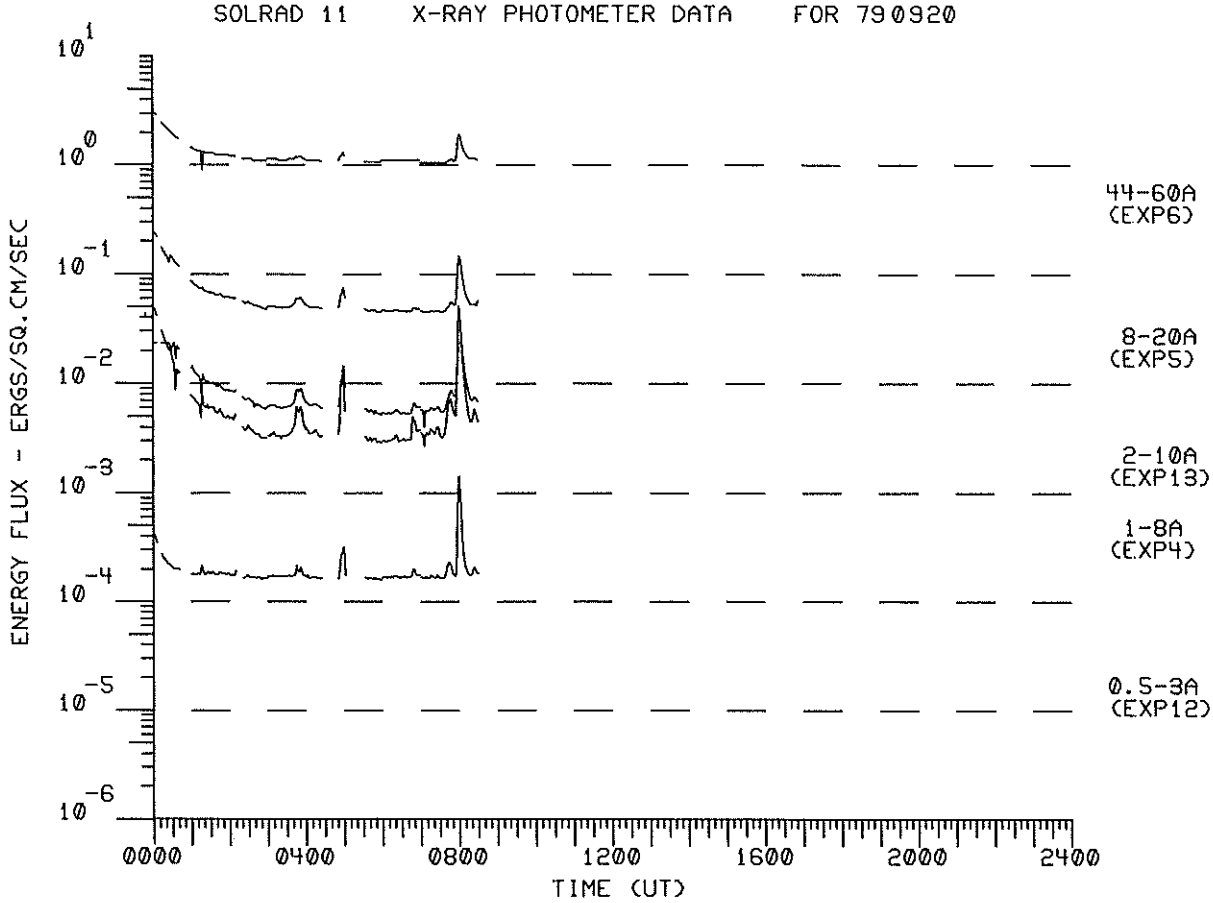
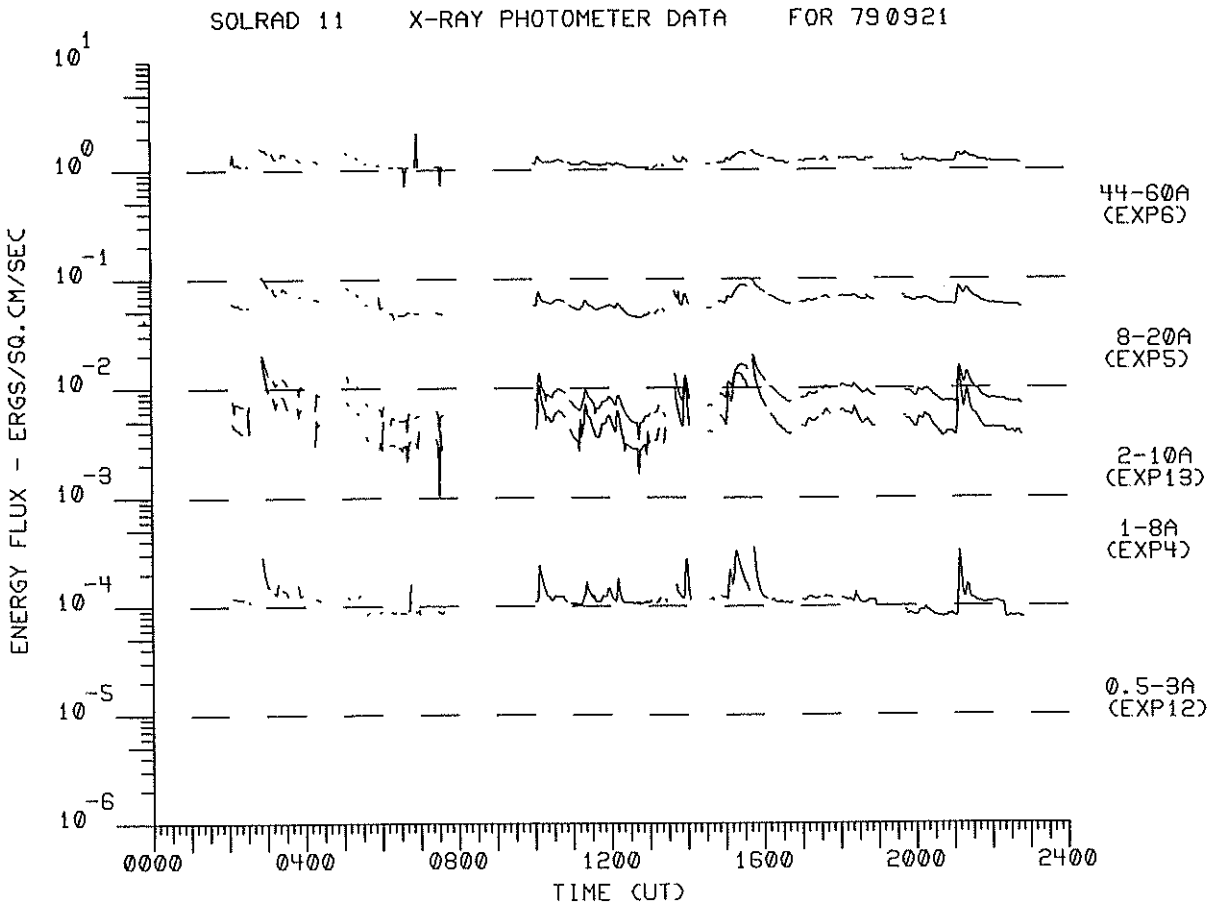
1200
1600
2000
2400
TIME (UT)

SOLRAD 11 X-RAY PHOTOMETER DATA FOR 790919



SOLRAD 11 X-RAY PHOTOMETER DATA FOR 790920




SOLRAD 11 X-RAY PHOTOMETER DATA FOR 790921
ENERGY FLUX - ERGS/SQ.CM/SEC
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10^{-1}
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10^{-4}
10^{-5}
10^{-6}
44-60A (EXP6)
8-20A (EXP5)
2-10A (EXP13)
1-8A (EXP4)
0.5-3A (EXP12)
0000
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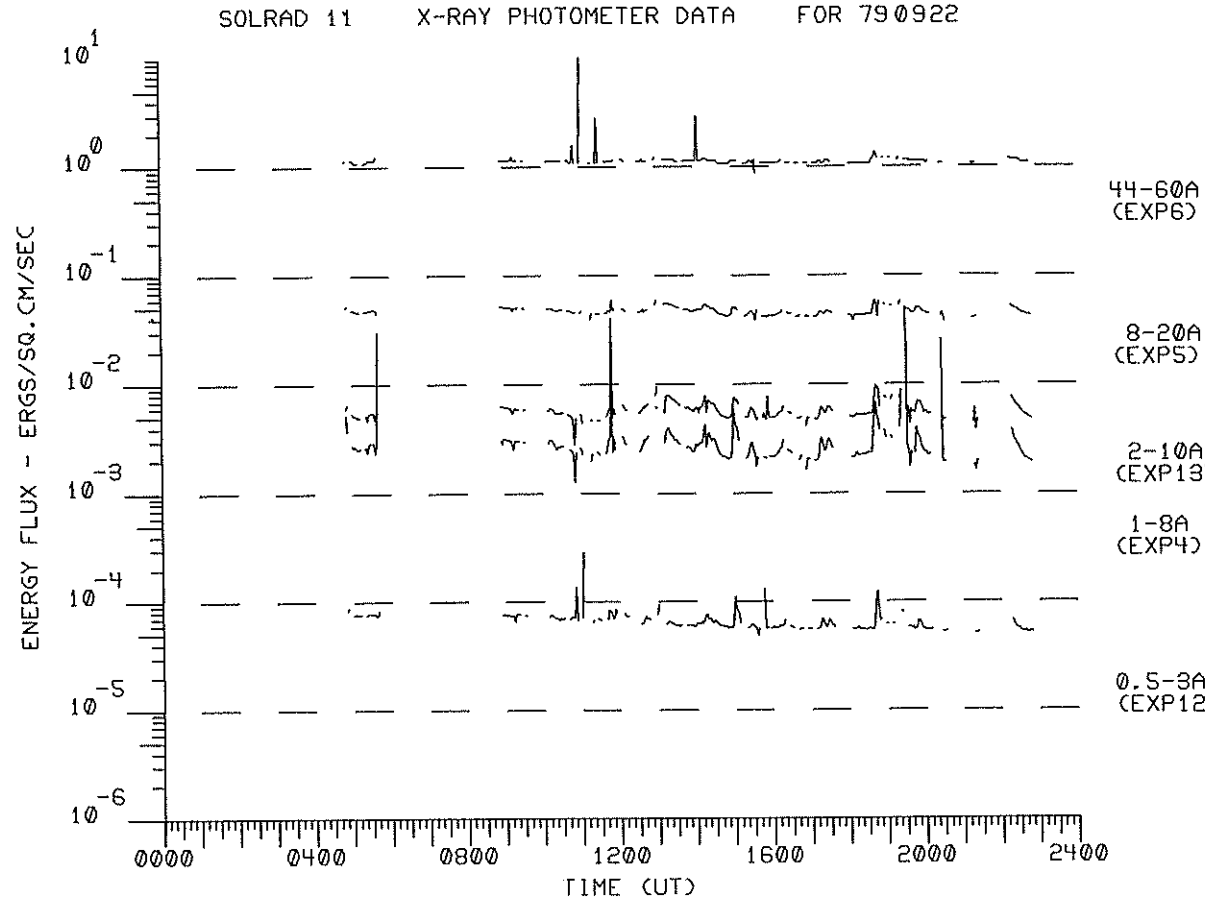
1200
1600
2000
2400
TIME (UT)


SOLRAD 11 X-RAY PHOTOMETER DATA FOR 790922
ENERGY FLUX - ERGS/SQ.CM/SEC
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10^{0}
10^{-1}
10^{-2}
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10^{-4}
10^{-5}
10^{-6}
44-60A (EXP6)
8-20A (EXP5)
2-10A (EXP13)
1-8A (EXP4)
0.5-3A (EXP12)
0000
0400
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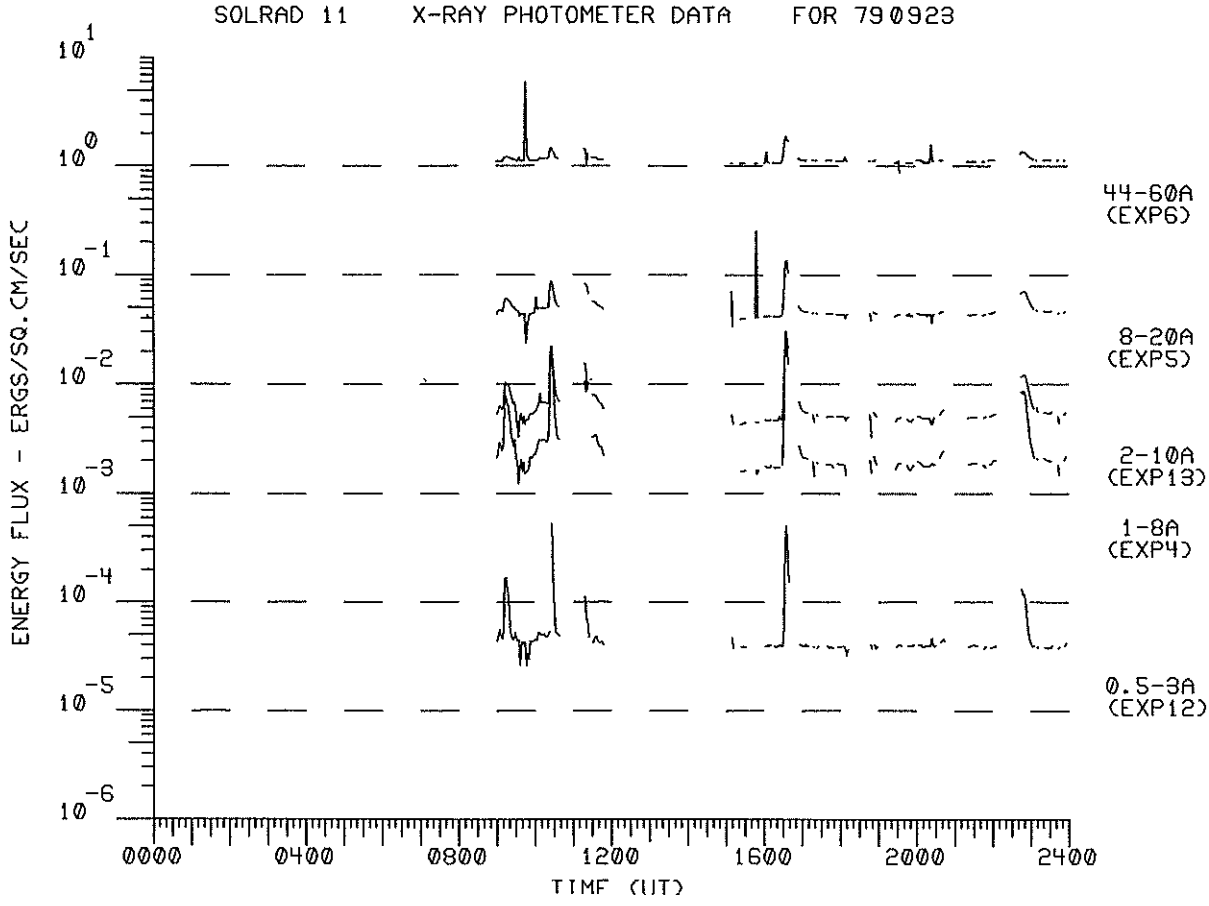
1200
1600
2000
2400
TIME (UT)


SOLRAD 11 X-RAY PHOTOMETER DATA FOR 790923
ENERGY FLUX - ERGS/SQ.CM/SEC
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10^{-1}
10^{-2}
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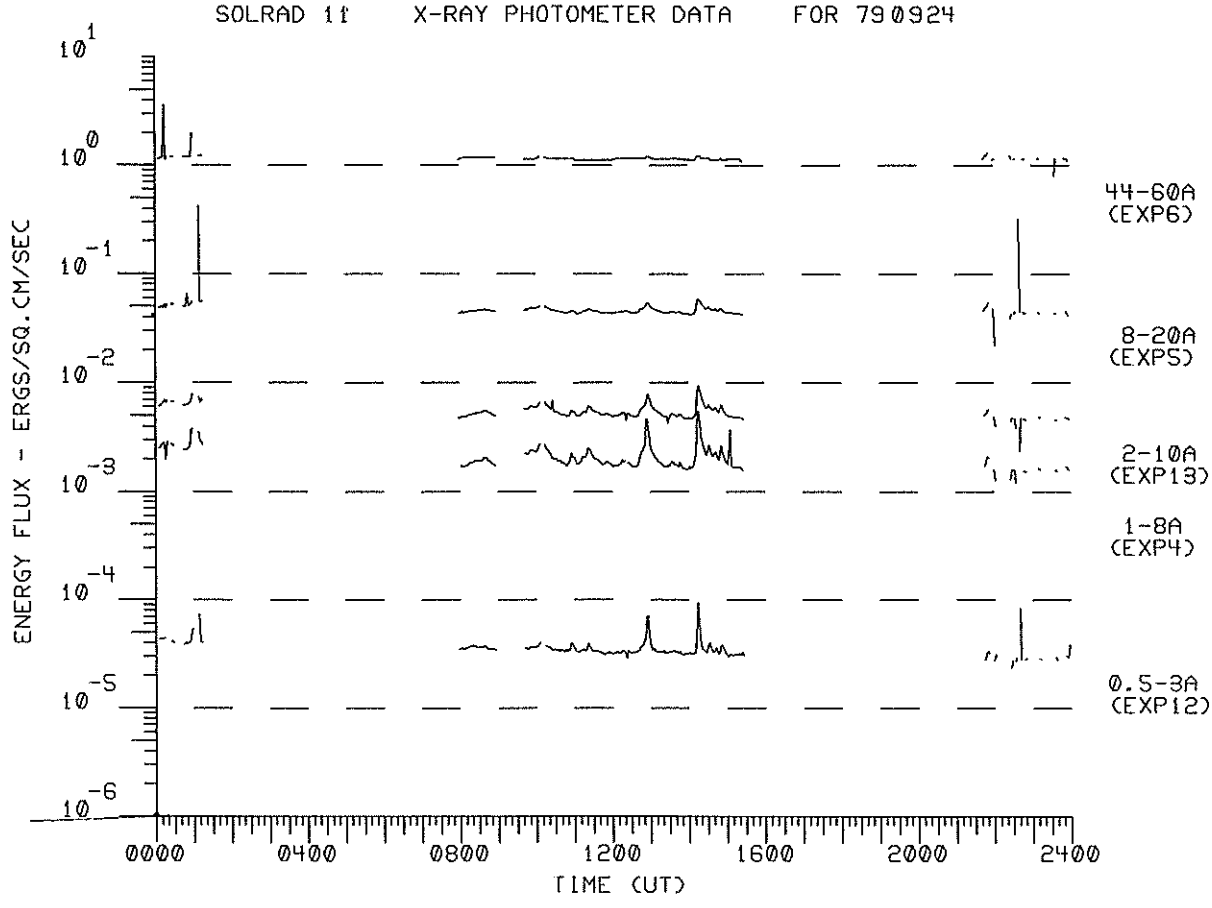
10^{-4}
10^{-5}
10^{-6}
44-60A (EXP6)
8-20A (EXP5)
2-10A (EXP13)
1-8A (EXP4)
0.5-3A (EXP12)
0000
0400
0800
1200
1600
2000
2400
TIME (UT)


SOLRAD 11 X-RAY PHOTOMETER DATA FOR 790924
ENERGY FLUX - ERGS/SQ.CM/SEC
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10^{-1}
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10^{-4}
10^{-5}
10^{-6}
44-60A (EXP6)
8-20A (EXP5)
2-10A (EXP13)
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0.5-3A (EXP12)
0000
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0800
1200
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2000
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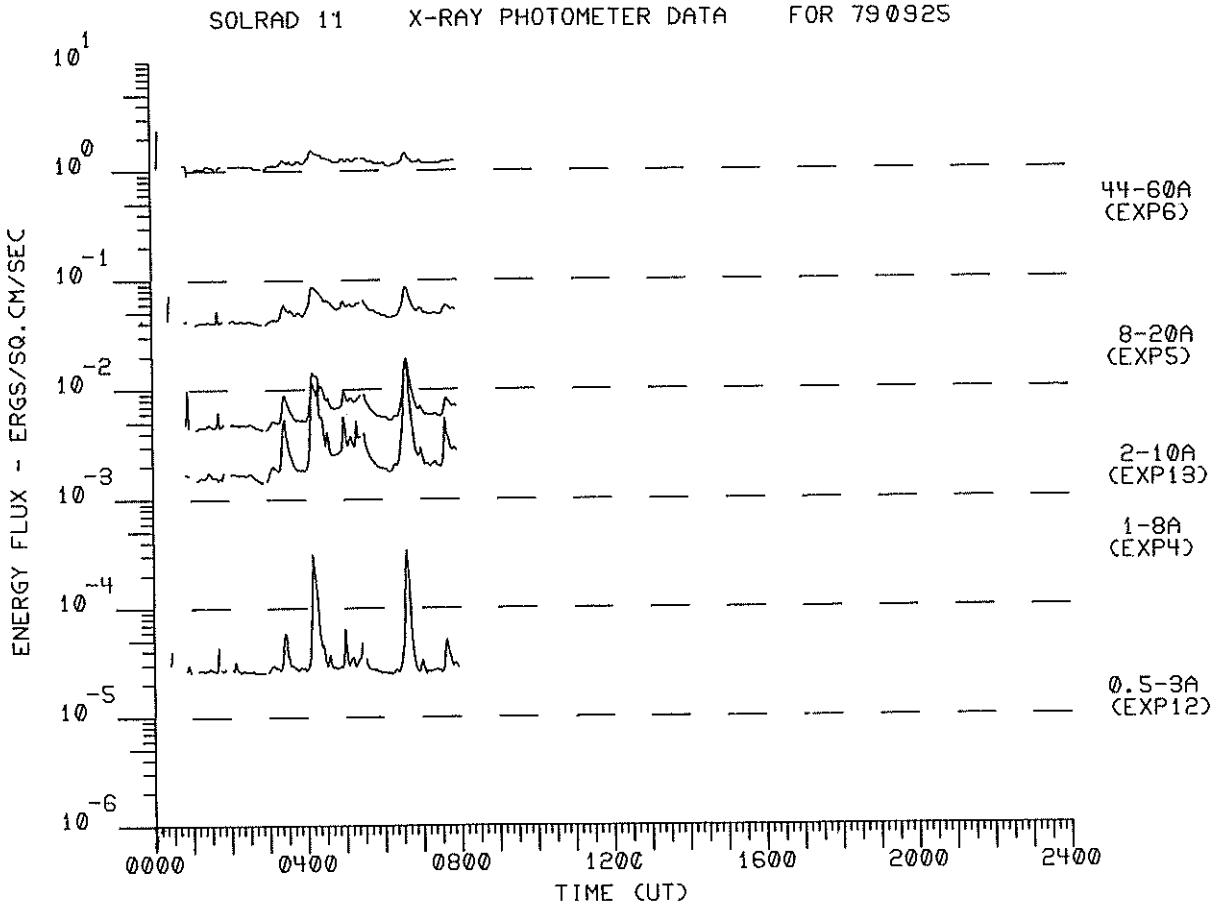
TIME (UT)


SOLRAD 11 X-RAY PHOTOMETER DATA FOR 790925
ENERGY FLUX - ERGS/SQ.CM/SEC
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10^{-1}
10^{-2}
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10^{-4}
10^{-5}
10^{-6}
44-60A (EXP6)
8-20A (EXP5)
2-10A (EXP13)
1-8A (EXP4)
0.5-3A (EXP12)
0000
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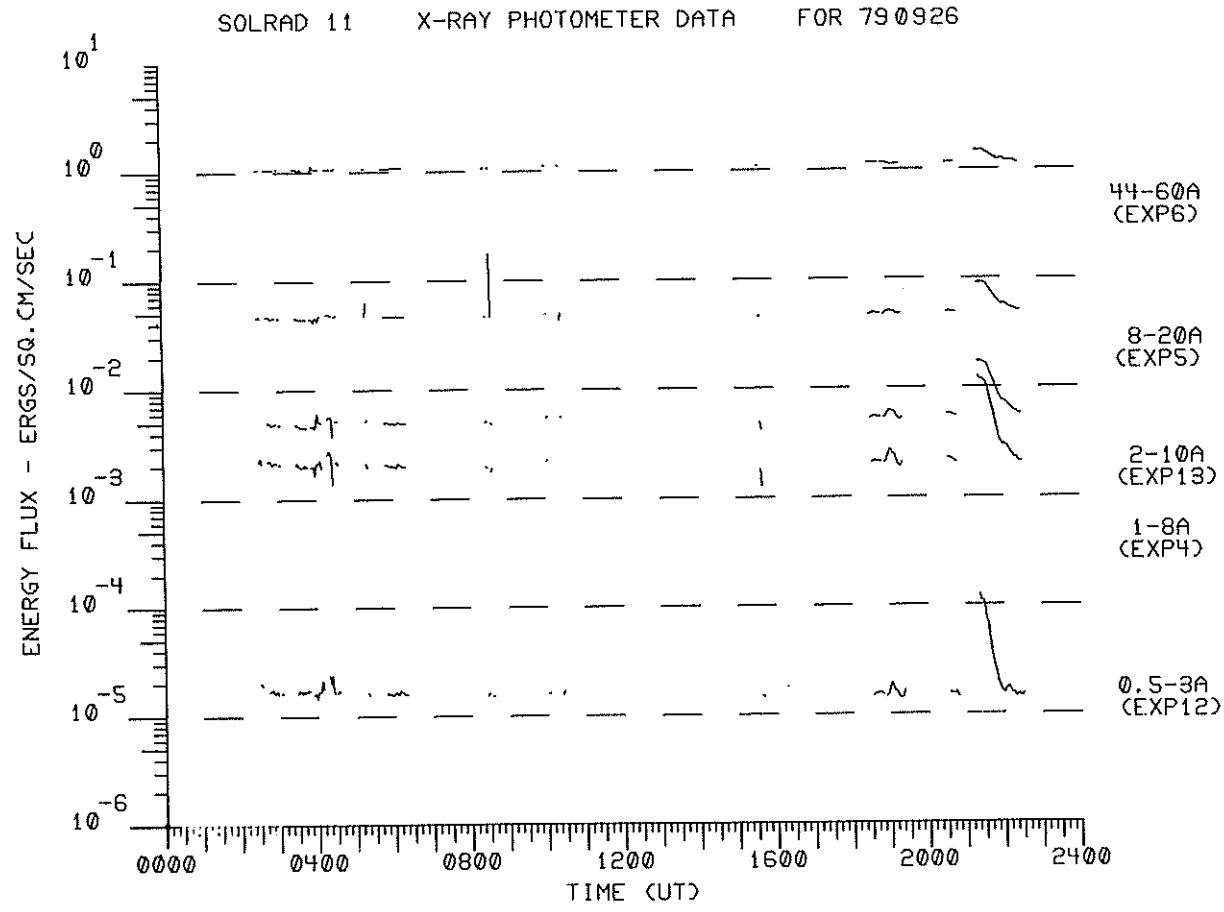
1600
2000
2400
TIME (UT)


SOLRAD 11 X-RAY PHOTOMETER DATA FOR 790926
ENERGY FLUX - ERGS/SQ.CM/SEC
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10^{-1}
10^{-2}
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10^{-4}
10^{-5}
10^{-6}
44-60A (EXP6)
8-20A (EXP5)
2-10A (EXP13)
1-8A (EXP4)
0.5-3A (EXP12)
0000
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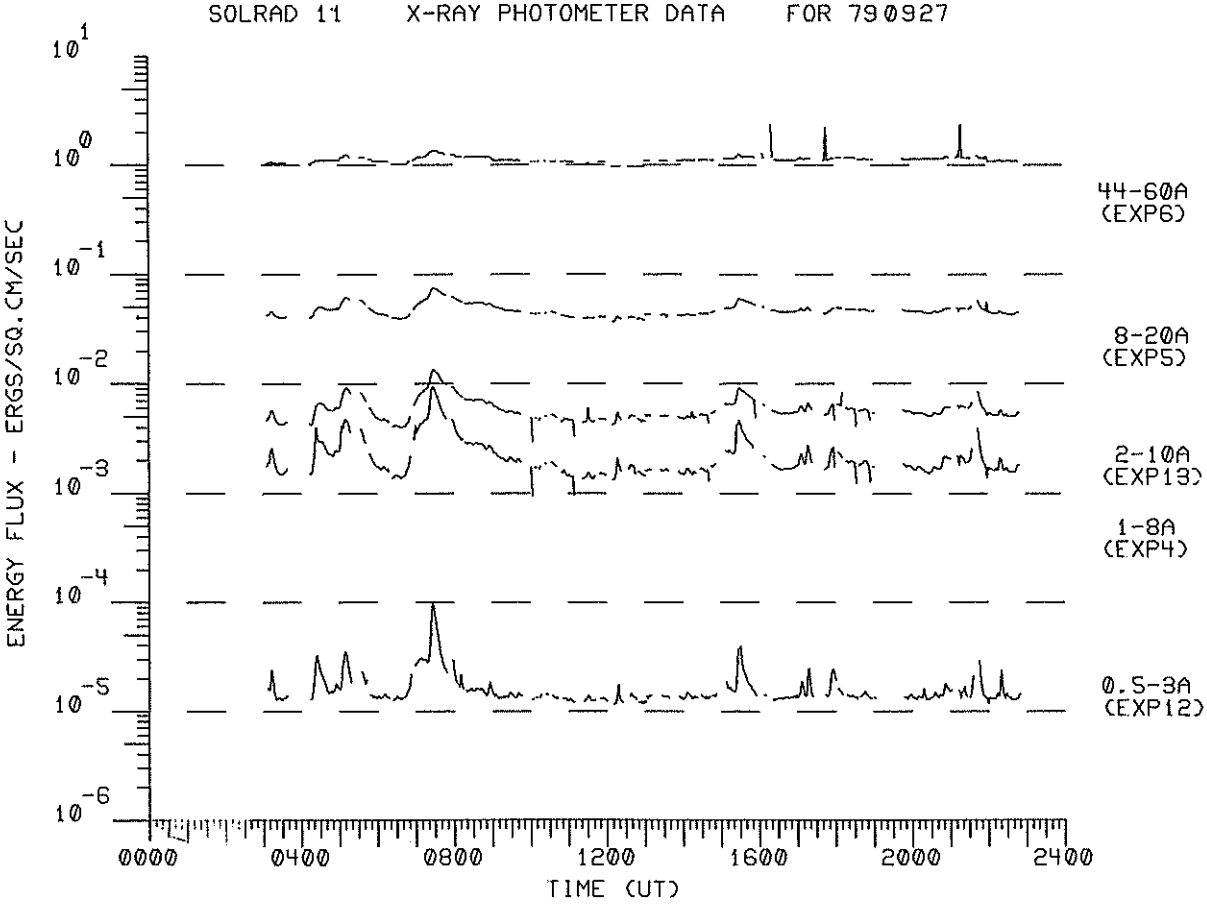
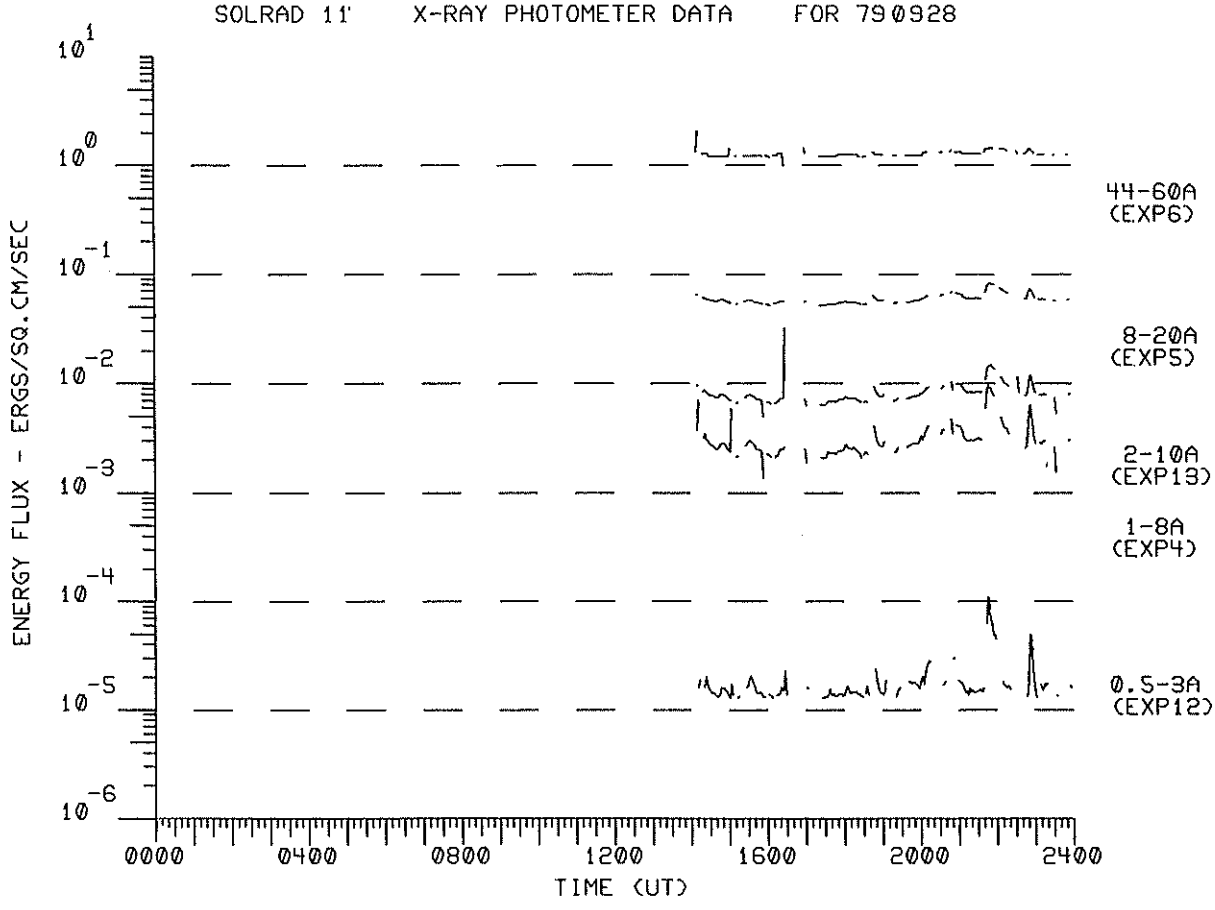
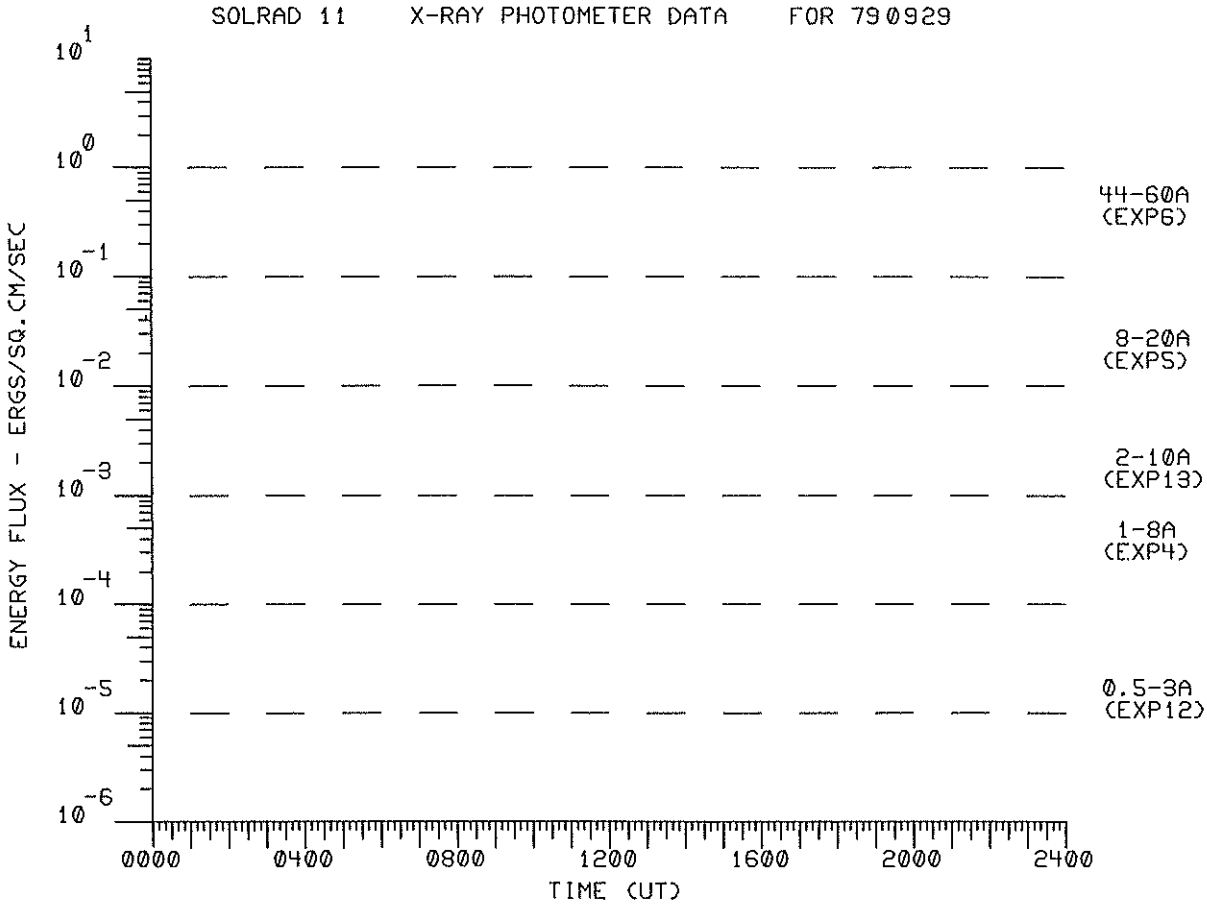
1600
2000
2400
TIME (UT)

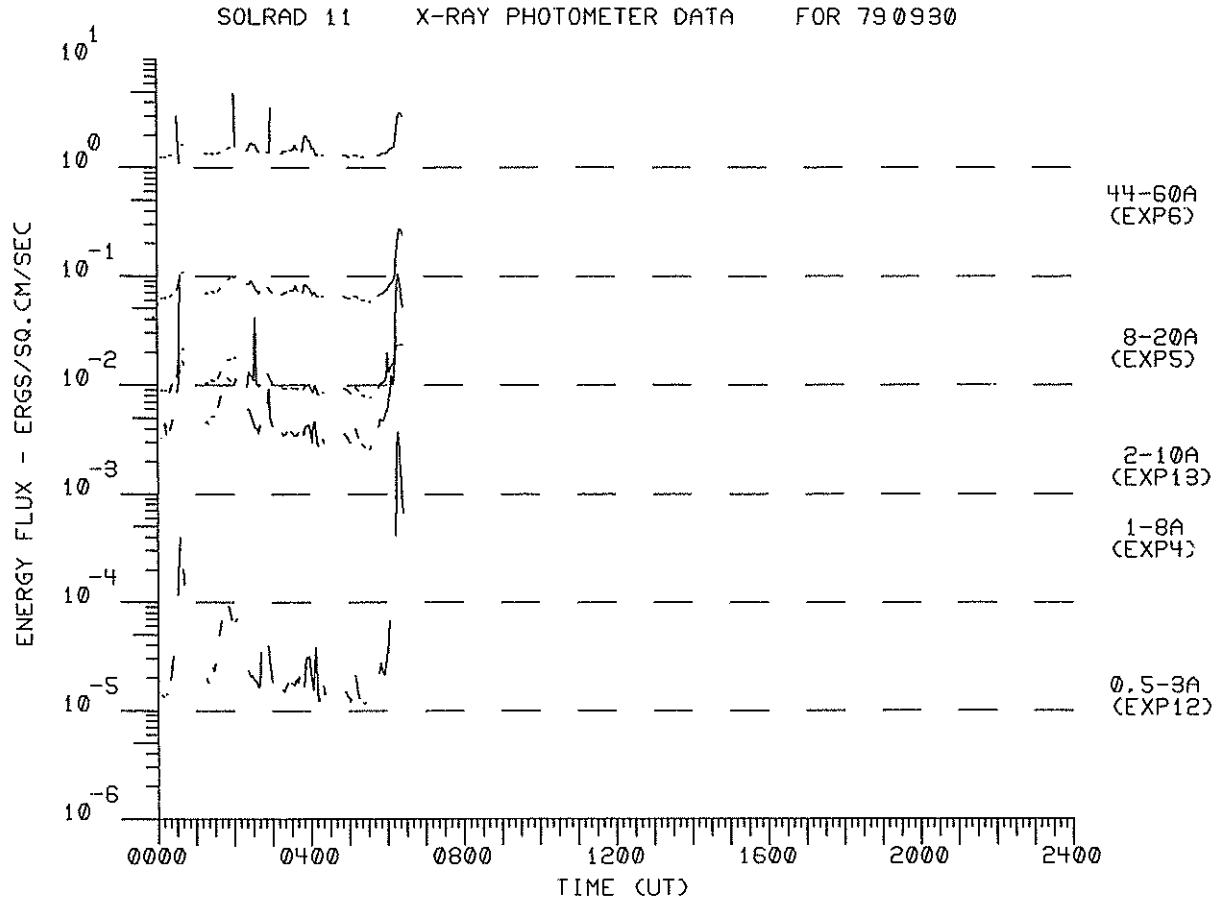
SOLRAD 11 X-RAY PHOTOMETER DATA FOR 790927



SOLRAD 11 X-RAY PHOTOMETER DATA FOR 790928




SOLRAD 11 X-RAY PHOTOMETER DATA FOR 790929
ENERGY FLUX - ERGS/SQ.CM/SEC
10^{1}
10^{0}
10^{-1}
10^{-2}
10^{-3}
10^{-4}
10^{-5}
10^{-6}
44-60A (EXP6)
8-20A (EXP5)
2-10A (EXP13)
1-8A (EXP4)
0.5-3A (EXP12)
0000
0400
0800
1200
1600
2000
2400
TIME (UT)


SOLRAD 11 X-RAY PHOTOMETER DATA FOR 790930
ENERGY FLUX - ERGS/SQ.CM/SEC
10^{1}
10^{0}
10^{-1}
10^{-2}
10^{-3}
10^{-4}
10^{-5}
10^{-6}
44-60A (EXP6)
8-20A (EXP5)
2-10A (EXP13)
1-8A (EXP4)
0.5-3A (EXP12)
0000
0400
0800
1200
1600
2000
2400
TIME (UT)

SOLAR RADIO EMISSION
SPECTRAL OBSERVATIONS

SEPTEMBER 1979

DAY	TIMES OF OBSERVATION		STATION	EVENTS									SPECTRAL TYPE
				DECIMETRIC BAND			METRIC BAND			DEKAMETRIC BAND			
	START UT	END UT		START UT	END UT	INT	START UT	END UT	INT	START UT	END UT	INT	
01	0000	0732	CULG							0000	0435		SWF,W
			PALE				0057.4	0059.8	2				CONT
			CULG				0106						IIIB,W
			CULG				0158.5						IIIB,W
			CULG				0159		1				IIIB
			LEAR				0200.0	0410.0	1				B
			CULG				0200		1				IIIB
			CULG				0205.5		1				IIIB,U
			LEAR				0250.1	0253.1	2				CONT
			LEAR				0316.4	0317.3	2				CONT
			CULG				0317.5	0319	2				IIIGG
			LEAR				0342.5	0346.6	2				CONT
			CULG				0345	0346.5	1				IIIG
			CULG				0409.5						IIIB,W
			LEAR				0410.0	1016.0	2				B
			CULG				0505	0520					IN,W
	0501	0841	WEIS				0513.7	0513.9	1				IIIG
			CULG				0550.5						IIIB,W
	0533	0910	BLEN	0551.6	0600.9	2	0551.6	0551.8	2				IIIG
	0515	1730	DWIN	0600.3	0600.7	1							IIIG
			BLEN	0628.4	0628.8	2							III
			CULG				0628.5		1				IIIB
			CULG				0711	0732					IS,W
			BLEN	0722.7	0733.7	1	0722.7	0723.7	1				III
			DWIN	0732.9	0734.1	1							IIIG
			DWIN	0819.5	0819.6	2							IIIG
			BLEN	0819.5	0822.9	1							IIIGG
			DWIN	0822.1	0824.0	1							IIIG
	1003	1214	WEIS										
	1223	1400	WEIS				1315.6	1320.7	2				IIIG
	1017	1715	BLEN	1317.4	1320.7	2	1315.0	1320.7	2				IIIGG
	1302	2245	HARV				1317	1321	2				IIIGG
			WEIS				1328.6	1328.9	2				IIIB
			DWIN	1356.6	1356.8	1							IIIG
			HARV				1459		2	1459		2	IIIG
			BLEN	1524.9	1531.0	3	1524.9	1531.1	3				IIIGG,V
			HARV				1525	1531	3				IIIGG
			HARV				1611		1	1611		2	IIIG
			PALE				1645.0	2332.0	1				B
			HARV				1758	1801	2	1759		1	IIIGG,U
			HARV				1825		1				I
			HARV				1831		1				IIIG
	2033	2400	CULG				2045	2327					IIIN,W
			HARV				2048		1	2048		2	IIIG
			PALE				2214.0	0426.0	1				B
			CULG				2250.5	2252	2				IIIGG
			CULG							2300	2400	1	SWF
02	0000	0732	CULG				0015.5		1				IIIB
			CULG				0024	0025.5					IIIG,V,W
			CULG				0027	0041.5	1			IV	
			CULG				0033	0035.5	1				IIIG
			CULG				0040	0047				II	W
			CULG				0041.5	0100				IV,	W
			CULG				0042.5		1				DP
			CULG				0047	0055	1			II	
			CULG				0050.5		1				DP
			CULG				0312		1				IIIB
			LEAR				0420.9	0423.1	2				V
			CULG				0449.5		1				UNCLF
			CULG				0458.5						UNCLF,W
	0515	1700	DWIN										
			LEAR				0539.6	0540.1	2				V
	0534	0910	BLEN	0552.9	0553.5	1							I
			CULG				0554.5						IIIB,W
			BLEN	0609.6	0610.8	2	0609.6	0610.3	2				IIIG
			CULG				0610.5	0611					IIIG,W
			BLEN				0620.4	0620.6	1				IIIG
			LEAR				0650.1	0651.2	1				V
			LEAR				0657.2	0657.3	1				III

SOLAR RADIO EMISSION
SPECTRAL OBSERVATIONS

SEPTEMBER 1979

DAY	TIMES OF OBSERVATION		STATION	EVENTS									SPECTRAL TYPE
				DECIMETRIC BAND			METRIC BAND			DEKAMETRIC BAND			
	START UT	END UT		START UT	END UT	INT	START UT	END UT	INT	START UT	END UT	INT	
02			LEAR				0828.6	0828.8	1				III
			BLEN	0907.2	0907.9	1							IIIG
	1017	1713	BLEN	1225.6	1225.8	1	1225.6	1238.0	2				IIIG
	0908	1741	WEIS				1226.7	1226.9	1				IIIB
	1302	2245	HARV										
			BLEN	1447.7	1448.3	1							IIIG
			PALE				1645.0	0110.0	1				B
			BLEN	1707.2	1708.9	1							IIIG
	2032	2400	CULG				2032	2202					IS,W
			CULG				2045	2340					IIIN,W
			CULG							2220	2400	1	SWF
			CULG				2339.5		1				IIIB
03	0000	0731	CULG							0000	0450	1	SWF
			CULG				0118	0124					IIIS,W
			CULG				0142	0330	1				IS
			CULG				0330	0641					IN,W
			CULG				0434						IIIB,W
			CULG				0435.5	0440	2			II	
			CULG				0439	0454	1			IV	
			CULG				0441	0442.5	1				IIIGG
			CULG				0443.5	0444	1				UNCLF
			CULG				0449.5		1				IIIB
			LEAR				0501.2	0502.3	1				CONT
	0515	1800	DWIN										
	0515	1450	DWIN	0521.6		2							IIIB
	0535	0910	BLEN	0535 E	0910 D	2	0535 E	0910 D	2				I
			BLEN	0544.2	0545.8	2	0544.2	0545.8	2				IIIG
	0509	1425	WEIS				0643.2	0643.3	1				IIIB
			BLEN				0645.9	0646.0	1				IIIG
			WEIS				0732.4	0732.5	1				IIIB
			WEIS				0825.5	0825.8	1				IIIG
			BLEN	0845.3	0845.4	2							IIIG
			LEAR				0846.7	0849.6	1				CONT
			WEIS				0931.4	0931.6	1				IIIG
			WEIS				0943.2	0943.2	1				IIIB
	1017	1050	BLEN	1017 E	1712 D	2	1017 E	1712 D	2				I
			DWIN	1245		1							IIIB
	1434	1739	WEIS				1449.7	1451.0	2				IIIG
	1249	1712	BLEN	1449.7	1450.0	1	1449.6	1450.3	1				IIIGG,RS
	1302	2245	HARV				1450		2	1450		1	IIIG
			WEIS				1454.4	1455.7	1				IIIG
			WEIS				1502.8	1502.9	1				IIIG
			BLEN				1541.0	1541.2	1				IIIG
			WEIS				1541.2	1541.3	1				IIIB
			BLEN	1621.2	1621.2	1	1628.0	1630.3	2				IIIGG
			WEIS				1627.8	1631.1	3				IIIGG
			HARV				1628	1630	2	1628	1630	2	IIIG
			WEIS				1700.4	1700.5	1				IIIB
			PALE				1850.1	1851.0	1				III
			HARV				1857	1901	3	1857	1901	3	IIIG,V
			HARV				1907	1909	1				I
			HARV				1940	2245	1				INH
	2033	2400	CULG										
			CULG				2033	2053	1				IIIS
			CULG				2051	2225	1				IS
			CULG				2053	2128					IIIS,W
			CULG				2117.5		1				IIIB
			HARV				2117		1				IIIGW
			CULG				2128	2337					IIIN,W
			CULG				2224.5	2349					IN,W
			CULG				2318	2322	2	2318	2321	1	IIIGG
04	0000	0731	CULG				0029.5	0030					IIIG,W
			CULG				0119	0312					IN,W
			CULG				0139						IIIB,W
			CULG				0312	0731					IS,W
	0537	0910	BLEN	0537 E	1710 D	2	0537 E	1710 D	2				I,DC
			CULG				0553						IIIB,W
	0510	1737	WEIS				0601.1	0607.3	2				IIIGG

SOLAR RADIO EMISSION
SPECTRAL OBSERVATIONS

SEPTEMBER 1979

DAY	TIMES OF OBSERVATION		STATION	EVENTS									SPECTRAL TYPE
				DECIMETRIC BAND			METRIC BAND			DEKAMETRIC BAND			
	START UT	END UT		START UT	END UT	INT	START UT	END UT	INT	START UT	END UT	INT	
04			BLEN	0601.3	0605.3	2	0601.3	0607.2	2				IIIGG
			CULG				0601.5	0606	2	0601.5	0604.5	1	IIIGG
			CULG				0607						IIIB,W
			WEIS				0611.7	0613.6	2				IIIG
			CULG				0611	0613					IIIGG,W
			BLEN	0634.0	0634.2	1							IIIG
			BLEN	0846.7	0846.8	1							DCIM
	0520	0918	DWIN	0846.7	0846.8	2							IIIG
	1017	1710	BLEN				1121.3	1123.8	1				III
			BLEN	1304.4	1304.8	1							UNCLF
			BLEN	1309.0	1309.1	1							DCIM
	1240	1730	DWIN	1309.2	1309.3	2							
			WEIS				1341.4	1341.5	1				IIIB
	1302	2245	HARV				1627	1633	2	1627	1633	2	IIIG
			BLEN	1634.0	1637.3	1	1634.0	1637.3	1				IIIG
			WEIS				1637.7	1637.9	1				IIIB
			HARV				1743	1815	1				IN
			HARV				1815	2000	2				I
			PALE				1820.2	1820.6	1				III
			PALE				1846.6	1846.9	1				III
			HARV				2000	2110	1				IN
	2031	2400	CULG				2031	2400	1				IS
			CULG				2034	2400					IIIN,W
			PALE				2040.2	2042.8	2				V
05	0000	0731	CULG				0000	0550					IS,W
			CULG				0123	0706					IIIN,W
			LEAR				0200.0	0245.2	1				S
			LEAR				0200.5	0202.2	2				CONT
			PALE				0200.8	0201.8	1				V
			LEAR				0438.5	0443.8	1				CONT
			LEAR				0528.3	0528.6	1				III
	0537	0910	BLEN	0537 E	1710 D	2	0537 E	1710 D	2				I
			CULG				0550	0731	1				IS
			LEAR				0624.4	0626.6	1				CONT
			BLEN	0624.9	0624.9	2							IIIB
			BLEN	0705.1	0708.0	2							III
	0515	1730	DWIN	0706.2	0707.3	2							IIIG
			CULG				0706	0731					IIIS,W
	0511	0921	WEIS				0708.2	0708.7	2				IIIG
			CULG				0708	0708.5	1				IIIB
			BLEN	0801.7	0806.1	2							IIIG,RS
			BLEN	0817.3	0817.3	1							IIIB
			LEAR				0936.6	0937.2	1				V
			DWIN	0946.5	0747.5	1							IIIG
			DWIN	1048.6	1049.1	1							IIIG
	1017	1710	BLEN	1048.6	1053.6	2							IIIGG
			BLEN	1141.8	1141.8	1							IIIB
			BLEN	1142.8	1144.4	1							IIIGG
			DWIN	1148.2	1148.4	1							IIIG
			BLEN	1205.9	1214.8	1							IIIGG,RS
	1029	1333	WEIS				1328.7	1329.2	1				IIIG
			BLEN	1441.8	1441.8	2							IIIB
	1302	2245	HARV				1540	2245	1				IN
	1337	1407	WEIS				1548.2	1548.4	1				IIIG
	1433	1738	WEIS				1600.6	1600.7	1				IIIB
			WEIS				1617.3	1617.4	1				IIIB
			WEIS				1621.4	1621.6	1				IIIB
			HARV				1734	1738	1				IIINH
			HARV				1858	1859	2	1858	1859	2	IIIG
			HARV				1908		1	1908		1	IIIG
	2031	2400	CULG				2031	2400	1				IS
			CULG				2059.5	2100	1				IIIB,U
			CULG				2138.5	2139	2				IIIG,U
			HARV				2138		2				IIIB
			CULG				2211	2212	1				IIIG,U
			CULG				2216	2217					IIIG,W
			CULG				2335.5	2336	2	2335.5	2336	1	IIIG
			CULG				2338	2338.5	2				IIIG
			CULG				2340.5						IIIB,W

SOLAR RADIO EMISSION
SPECTRAL OBSERVATIONS

SEPTEMBER 1979

DAY	TIMES OF OBSERVATION		STATION	EVENTS									SPECTRAL TYPE
				DECIMETRIC BAND			METRIC BAND			DEKAMETRIC BAND			
	START UT	END UT		START UT	END UT	INT	START UT	END UT	INT	START UT	END UT	INT	
06			CULG				0000	0710					IIIN,W
	0000	0731	CULG				0000	0259					IS,DC,W
			PALE				0053.0	0415.0	1				B
			CULG				0145.5		1	0145.5		1	IIIB
			LEAR				0200.0	1015.0	1				B
			CULG				0204	0204.5	2	0204	0205	2	IIIG
			CULG				0206.5	0207.5	1				IIIG
			CULG				0259	0345	1				IS,DC
			LEAR				0303.7	0304.4	2				V
			CULG				0345	0438					IS,W
			CULG				0349	0349.5	1	0349	0349.5	1	IIIG
			CULG				0438	0731	1				IN
	0515	1415	DHIN										
	0538	0910	BLEN	0538 E	1710 D		0538 E	1710 D					I
	0510	1537	WEIS				0542.0	1533.0	2				IIIN
			CULG				0614.5		1				IIIB
			WEIS				0625.7	0629.4	3				IIIGG
			CULG				0626	0629	2				IIIGG
			BLEN	0628.3	0629.2	2	0626.2	0629.3	2				IIIGG
			BLEN				0652.1	0652.3	2				IIIG
			CULG				0652		1				IIIB
			CULG				0653.5		1				IIIB
			CULG				0656		1				IIIB
			CULG				0710	0731					IIIS,W
			WEIS				0711.0	0717.9	3				IIIGG
			BLEN	0715.9	0716.6	2	0715.7	0716.6	2				IIIGG
			CULG				0716	0717	2				IIIG
			BLEN	0746.2	0746.4	1	0746.2	0746.4	1				IIIG
			BLEN				0838.1	0838.5	2				IIIG
			BLEN				0906.0	0909.8	2				IIIGG
	1017	1710	BLEN	1027.6	1027.7	1	1027.4	1027.6	1				IIIG
			BLEN	1058.5	1059.9	2	1043.8	1059.9	2				IIIGG
			WEIS				1138.2	1143.3	3				IIIGG
			BLEN	1139.2	1153.4	2	1138.7	1157.7	2				IIIGG
			WEIS				1148.3	1150.2	3				IIIG
			WEIS				1211.6	1213.2	3				IIIG
			BLEN	1211.6	1212.9	2	1211.6	1212.9	2				IIIGG
			BLEN	1257.6	1258.9	2	1257.6	1259.2	1				IIIGG
			BLEN				1258.3	1258.7	1				IIIG
			WEIS				1331.6	1334.3	2				IIIGG
	1302	2250	HARV				1332	1337	3	1336	1337	1	IIIGG,V
			BLEN	1333.0	1337.6	2	1332.4	1347.6	2				IIIGG
			WEIS				1335.3	1339.4	3				IIIGG/V
			HARV				1347		2				IIIG
			BLEN				1411.4	1412.0	1				IIIG
			HARV				1451		1				IIIG
	1500	1730	DHIN										
			BLEN	1530.3	1531.5	2							OCIM
			BLEN				1542.2	1542.3	1				IIIB
			HARV				1542	1543	2				IIIG
			BLEN	1606.8	1607.0	2							OCIM
			HARV				1607		1				IIIB
			BLEN	1617.3	1620.0	1	1617.3	1621.0	1				IIIGG
			HARV				1620	1653	1				IN,IIIN
			BLEN	1645.2	1649.7	2	1645.2	1647.5	2				IIIGG
			HARV				1645	1649	3	1646	1649	3	IIIGG,V
	1656	1720	WEIS										
			HARV				1717	2245					IIIN,IN
			HARV				1851	1855	2	1851	1855	2	IIIGG
			HARV				1942	1951	2	1942	1951	2	IIIN
			CULG				2031	2400					IIIS,W
	2031	2400	CULG				2031	2400					IS,W
			HARV				2039	2134	1				IN,IIIN
			CULG				2044	2045.5	1				IIIG
			CULG				2133.5	2134	1				IIIG
			CULG				2234.5	2235	1	2234.5	2235	1	IIIG
			CULG				2246		2				IIIB
			CULG				2343		1				IIIB
			CULG				2352	2352.5	2				IIIG
			CULG				2355	2356	2				IIIG

SOLAR RADIO EMISSION
SPECTRAL OBSERVATIONS

SEPTEMBER 1979

DAY	TIMES OF OBSERVATION		STATION	EVENTS										SPECTRAL TYPE
				DECIMETRIC BAND			METRIC BAND			DEKAMETRIC BAND				
	START UT	END UT		START UT	END UT	INT	START UT	END UT	INT	START UT	END UT	INT		
06			CULG				2356	2357	1					IIIG
07			CULG				0000	0158						IS,W
	0000	0730	CULG				0000	0021						IIIS,W
			CULG				0021	0423						IIIN,W
			CULG				0026.5	0027	1					UNCLF
			CULG				0056.5	0059	3	0056.5	0059.5	3		IIIGG,V
			CULG				0100.5	0101	1					IIIG
			CULG				0102.5	0117.5	3	0113.5	0115.5	1	II	H
			CULG				0119	0120	1					IIIG
			LEAR				0231.8	1015.0	1					B
			CULG				0242.5			0242.5				IIIB,W
			CULG				0252	0253	1	0252.5	0253	1		IIIG
			CULG				0310.5	0311	1	0311	0311.5	2		IIIB,V
			CULG				0326.5	0327	1					IIIG
			CULG							0327	0327.5			IIIG,W
			CULG				0414	0415.5	1	0414.5	0415.5	1		IIIG
			CULG				0418.5	0420	3	0419	0420	2		IIIG,V
			CULG				0421	0540						IS,W
			CULG				0423	0708						IIIS,W
			CULG				0427.5	0428	1					IIIG
			CULG				0515	0518	2	0515.5	0518	2		IIIGG
			LEAR				0516.8	0517.5	2					V
			CULG				0519	0520	2	0519	0520	2		IIIGG
			CULG				0521	0522.5	1					IIIG
	0522	1717	WEIS				0526	1710	2					IIIN
			CULG				0533.5		1	0533.5		1		IIIB
			WEIS				0535.0	1656.0	2					IN,DC
			CULG				0540	0730	1					IS,DC
	0539	0850	BLEN	0547	0632	1	0547	0632	1					I
			CULG				0551.5	0552	2					IIIG
			BLEN	0551.7	0617.7	2	0551.7	0617.7	2					IIIGG,S
			CULG				0555	0556	2	0555	0556	1		IIIG
			CULG				0704	0730	1					SCINT
			CULG				0705.5	0714	2					DC
	1017	1700	BLEN	1030.0	1031.7	1								IIIG
			WEIS				1030.2	1032.8	3					IIIGG
			WEIS				1111.4	1115.8	3					IIIGG,RS
			BLEN	1112.8	1114.0	1	1111.3	1114.0	1					UNCLF
	0515	1700	DWIN	1113.1	1140.0	1								IIIG
			WEIS				1147.7	1150.4	3					IIIG/V
			BLEN	1147.9	1148.9	1	1147.9	1149.0	1					IIIG,RS
			DWIN	1148.0	1148.8	1								IIIG
			BLEN	1151.7	1154.2	1								DCIM
			BLEN				1200.6	1217.8	1					III
			BLEN	1221.7	1223.8	1								III
			BLEN				1324.0	1325.2	1					IIIG
			BLEN				1345.9	1353.0	1					IIIG
	1302	2245	HARV				1349	2107	1	1904	2107	1		IIIN
			BLEN	1420	1700	D 2	1420	1700	D 2					I,DC
			BLEN	1607.6	1612.6	1	1606.9	1612.6	1					IIIGG
			HARV				1607	1613	2	1607	1613			IIIG
			HARV				1704		2	1704		2		IIIG
			HARV				1732	1738	3	1732	1738	3		IIIGG
			PALE				1800.0	0415.0	1					B
			HARV				1807	1808	3	1807	1808	3		IIIG
			HARV				1931	1937	3	1931	1937	3		IIIG
			HARV				1943	1951	3	1943	1951	3		IIIGG,V
			HARV				1954	1957	3	1954	1957	3		IIIGG
			HARV				1956	2010	3	1957	2010	3	II	
	2030	2400	CULG				2030	2103						IS,W
			CULG				2030	2257						IIIS,W
			CULG				2049.5	2050	2					IIIG
			CULG				2050	2207	1					IIIN
			HARV				2050	2051	3	2050	2051	3		IIIG
			CULG				2113.5	2114	1					IIIG
			HARV				2114		3	2114		3		IIIB
			CULG				2140.5		2					IIIB
			HARV				2140		3	2140		3		IIIG
			CULG				2210	2210.5	1					IIIG

SOLAR RADIO EMISSION
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DAY	TIMES OF OBSERVATION		STATION	EVENTS									SPECTRAL TYPE
				DECIMETRIC BAND			METRIC BAND			DEKAMETRIC BAND			
	START UT	END UT		START UT	END UT	INT	START UT	END UT	INT	START UT	END UT	INT	
07			CULG				2210	2400					IS,W
			CULG				2257	2400					IIIN,W
			CULG				2355		1	2355	2355.5	1	IIIB
			CULG				2356	2356.5	2	2356	2356.5	2	IIIG
			CULG							2357.5	2359		IIIG,W
08	0000	0730	CULG				0000	0702					IN,W
			CULG				0000	0730					IIIN,W
			CULG				0015.5	0017					POSS II,W
			CULG				0016	0558	1	0016	0557	1	IIIG,N
			LEAR				0212.0	0214.2	2				CONT
			LEAR				0240.6	1015.0	1				B
			CULG				0247.5	0249	2	0247.5	0249	2	IIIG
			CULG				0431.5		2				IIIG
	0523	0826	WEIS				0530.0	1640.0	2				IIIN
			CULG				0530.5	0532.5	3	0531	0532	2	IIIG,V
			CULG				0535	0536.5	3	0535	0536	2	IIIG
	0540	0910	BLEN	0540 E	1700 D	2	0540 E	1700 D	2				I,DC,N
			BLEN				0552.7	0556.9	2				IIIG
	0840	1026	WEIS				0624.9	1630.1	3				IIIGG
			CULG				0627.5	0630	3				IIIGG
	0515	1630	DWIN	0628.3	0629.5	1							IIIG
			BLEN	0628.5	0631.4	2	0627.7	0631.6	2				IIIGG,DCIM
			BLEN	0647.3	0647.9	3							IIIG,U,RS
			CULG				0702	0730					IS,W
			BLEN	0819.3	0819.3	2	0819.3	0820.8	2				IIIGG
			BLEN				0844.0	0849.0	2				IIIGG
	1034	1716	WEIS				0844.0	0846.6	3				IIIGG
			BLEN	0855.2	0901.0	2							IIIGG
	1017	1700	BLEN				1202.2	1208.9	3				IIIG
			WEIS				1208.7	1209.2	2				IIIG,U
			BLEN				1236.4	1246.0	2				IIIGG
			BLEN	1247.0	1434.3	3							IIIGG
			DWIN	1430.4	1430.5	1							IIIG
			BLEN	1503.8	1504.5	1							IIIGG
			BLEN	1547.3	1547.8	2	1547.3	1547.8	2				IIIG
			BLEN				1614.7	1615.1	3				IIIG
	1302	2245	HARV				1615		2				IIIG
			HARV				1731	1733	2	1731	1733	2	IIIG
			PALE				1800.0	0415.0	1				B
			HARV				1804	1805	2	1804	1805	2	IIIG
			HARV				1826	1828	2	1826		2	IIIG
			HARV				1925	1926	3				IIIG
	2031	2400	CULG				2031	2045					IIIS,W
			CULG				2104.5						IIIB,W
			CULG				2114.5		1				IIIB
			HARV				2115		1				IIIB
			HARV				2125	2126	1				IIIG
			CULG				2125	2126	1				IIIG
			CULG				2253.5	2254.5					IIIG,W
			CULG				2301.5	2302.5					IIIG,W
			CULG				2309	2310					IIIG,W
			CULG				2317	2318.5	2				IIIG
			CULG				2343						IIIB,W
09	0000	0730	CULG				0014						IIIB,W
			CULG				0050	0050.5					IIIG,W
			CULG				0056	0100					IIIG,W
			CULG				0154.5	0156	2	0154.5	0156	2	IIIG
			CULG				0156.5	0157	1	0156.5	0157	1	IIIG
			CULG				0157.5		2				IIIB
			LEAR				0200.0	0920.0	1				B
			CULG				0201.5						IIIB,W
			CULG				0202.5						IIIB,W
			CULG				0222.5	0223.5					IIIG,W
			CULG							0245	0255	1	SHF
			CULG				0400.5	0402	2				IIIGG
	0541	0910	BLEN	0541 E	1700 D	3	0541 E	1700 D	3				I,DC
	0523	1457	WEIS				0652.0	1425.0	2				IIIN
			CULG				0653						IIIB,W

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DAY	TIMES OF OBSERVATION START UT	TIMES OF OBSERVATION END UT	STATION	EVENTS: DECIMETRIC BAND START UT	DECIMETRIC BAND END UT	DECIMETRIC BAND INT	METRIC BAND START UT	METRIC BAND END UT	METRIC BAND INT	DEKAMETRIC BAND START UT	DEKAMETRIC BAND END UT	DEKAMETRIC BAND INT	SPECTRAL TYPE
09			LEAR				0659.8	0701.5	2				CONT
			BLEN				0717.2	0717.6	2				IIIG
			CULG				0717	0718	1				IIIG
			CULG				0721.5						IIIB,W
			BLEN				0744.7	0745.0	2				IIIG
			BLEN	0823.3	0823.6	1	0823.3	0823.6	1				IIIG
			WEIS				0919.9	0928.9	3				IIIGG
	0520	1500	OWIN	0921.7	0923.1	1							IV P
			OWIN	0924.8	0925.8	1							IIIG
	1015	1700	BLEN				1015.5	1016.3	2				IIIGG
			BLEN				1029.2	1029.7	2				IIIG
			BLEN	1059.5	1100.6	3	1052.3	1105.9	3				IIIGG,V
			BLEN				1145.2	1147.3	2				IIIGG
	0520	1500	OWIN	1147.5	1147.8	2							IIIG
			BLEN	1147.7	1147.9	2							DCIM
			BLEN				1156.8	1201.3	1				IIIGG
			OWIN	1211.7	1212.5	2							IIIG
			BLEN	1211.9	1212.6	3							DCIM,III
			WEIS	1212.0	1212.6	2							RS
			WEIS				1227.5	1231.0	3				IIIGG
			BLEN	1227.8	1234.1	3	1227.8	1230.9	3				III,DCIM
			OWIN	1228.2	1228.6	3							IIIG
			BLEN	1356.5	1359.9	3	1358.5	1359.9	3				IIIG,V
			WEIS				1358.4	1359.8	2				IIIG
	1302	2245	HARV				1359	1815					IIIN
			BLEN	1421.9	1421.9	2	1420.7	1422.2	2				IIIGG
			HARV				1422		2				IIIG
			HARV				1532	1547	3				IIIGG,I
			BLEN				1551.5	1551.5	1				IIIB
			BLEN				1604.8	1604.9	1				IIIB
			BLEN				1647.9	1648.0	1				IIIB
			BLEN				1659.5	1700.0	2				IIIG
			HARV				1659	1700	2	1659	1700	2	IIIG
			PALE				1846.0	0412.0	1				B
			HARV				1911	1912	3				IIIG
			HARV				1925	1927	3				UNCL
			HARV				1944	1948	2				IIIG
			HARV				1954	1955	2	1954	1955	1	IIIG
			PALE				2006.5	2014.1	1				CONT
			PALE				2030.0	0414.0	1				B
	2030	2400	CULG				2102	2102.5	2				IIIG
			HARV				2102		3	2102		3	IIIG
			PALE				2115.6	2115.8	1				V
			CULG				2126						IIIB,W
			PALE				2237.8	2241.0	1				V
			CULG				2248	2250.5					UNCLF,W
			CULG				2251.5						IIIB,W
			CULG				2323						IIIB,W
			CULG				2353.5	2354.5	1	2353		1	IIIG
10	0000	0730	CULG				0022	0022.5	1				IIIB
			CULG				0035.5						IIIB,W
			CULG	0037.5	0038.5	1							IIIG,RS
			LEAR				0200.0	1015.0	1				B
			CULG				0222						IIIB,W
			LEAR				0325.8	0326.8	2				V
			CULG				0327.5	0328	1				IIIG
			CULG				0410	0412		0410.5	0411		UNCLF,W
			CULG				0416	0417.5	1				IIIG,RS
			LEAR				0419.9	0421.0	2				V
			CULG	0515.5	0516.5	1	0515.5	0518	3	0515.5	0518	2	IIIGG,V
			CULG				0518.5	0543	1				II
			CULG				0518	0528					IIIS,W
			CULG				0534	0534.5	1				UNCLF
			CULG				0537	0537.5	1				UNCLF
	0558	1711	WEIS				0559.0	1609.0	2				IIIN
			CULG				0559	0600	1				IIIG
			CULG				0601.5	0602	1				IIIG
			BLEN	0643.6	0646.1	2							IIIG
			CULG				0708.5	0709.5	1				IIIG

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DAY	TIMES OF OBSERVATION		STATION	EVENTS									SPECTRAL TYPE
				DECIMETRIC BAND			METRIC BAND			DEKAMETRIC BAND			
	START UT	END UT		START UT	END UT	INT	START UT	END UT	INT	START UT	END UT	INT	
10	0700	1700	DWIN	0712.4	0714.0	1							IIIG
			BLEN	0712.4	0714.1	1	0708.8	0714.1	1				IIIGG
			CULG				0712.5	0714	1				IIIG
			LEAR				0739.9	0740.8	2				CONT
	0541	0910	BLEN	0855.5	0602.1	2	0855.5	0602.1	2				IIIG
	1017	1700	BLEN	1124.1	1128.8	3							IIIGG
			WEIS				1124.3	1125.7	3				IIIG
			BLEN				1136.0	1136.3	1				IIIG
			BLEN	1147.0	1159.9	3	1147.0	1156.6	3				IIIGG
			WEIS				1154.4	1156.7	3				IIIGG
			DWIN	1154.7	1155.6	1							IIIG
			BLEN	1225.4	1226.0	2	1225.4	1226.0	2				IIIGG
			BLEN	1304.3	1310.6	1	1303.5	1310.6	1				IIIG
			BLEN	1319.4	1319.6	1	1319.4	1319.6	1				IIIG
			BLEN				1334.6	1334.9	2				IIIG
	1302	2245	HARV				1350	1351	3				IIIG
			BLEN	1357.0	1358.7	3	1350.0	1358.7	3				IIIGG
			WEIS				1357.7	1358.7	3				IIIG
			DWIN	1357.8	1358.1	2							IIIG
			HARV				1358	1359	2				IIIG
			BLEN	1422.8	1422.9	2							IIIG
			BLEN				1505.2	1506.2	1				IIIG
			BLEN				1537.3	1537.9	2				IIIG
			HARV				1537	1538	1				IIIG
			HARV				1605	1609	1				IIIG
			BLEN	1659.2	1659.4	1	1659.2	1659.4	1				IIIG
			HARV				1750	1754	2				IIIG,U
			HARV				1814	1815	3	1814	1815	3	IIIG
			HARV				1827		1	1827		1	IIIB
			HARV				1835		3	1835		1	IIIG
			HARV				1917		3				IIIG
	2030	2400	CULG										
			CULG				2035.5	2036					IIIB,W,U
			CULG				2036						IIIB,W
			CULG				2039.5						IIIB,W
			CULG				2056						IIIB,W
			CULG				2102	2102.5	1				UNCLF
			CULG				2124.5	2125	1				IIIG
			HARV				2125		2				IIIG
			CULG				2215.5	2216					IIIG,W
			CULG				2232.5						IIIB,W
			CULG				2252	2253	2				IIIG
			CULG							2253	2253.5		IIIG,W
			CULG				2255.5		1				IIIB
			CULG				2351	2351.5					IIIB,W
11	0000	0729	CULG				0001	0003.5					IIIG,W
			CULG				0002.5	0003	1	0002.5	0003.5	1	IIIG
			CULG				0024						IIIB,W
			CULG				0027		1				IIIB
			CULG				0044		1				IIIB
			CULG				0103	0104.5	2	0103.5	0104.5	2	IIIG,V
			CULG				0105.5	0107	3				IIIG
			CULG				0149	0150	2				IIIG
			CULG				0153	0155.5		0155.5			IIIG,W
			CULG				0226		1				IIIB
			LEAR				0231.0	0232.5	1				CONT
			CULG				0252	0252.5					IIIG,W
			CULG				0422	0729					IIIN,W
			LEAR				0501.4	0501.8	1				V
			CULG				0505.5		1				IIIB
			LEAR				0518.1	0518.3	1				III
			CULG				0523	0525	3	0524	0524.5	1	IIIGG,V
	0542	0910	BLEN				0544.3	0544.5	1				IIIG
	0528	1413	WEIS				0559.0	1557.0	2				IIIN
			CULG				0617	0617.5	1				IIIG
			BLEN	0618.6	0620.3	3	0619.2	0620.6	1				IIIG,DCIM
			DWIN	0619.8	0620.4	1							IV
	0520	1617	DWIN	0623.0	0530	2							IV Z
			LEAR				0626.4	0627.1	1				V

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SPECTRAL OBSERVATIONS

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DAY	TIMES OF OBSERVATION		STATION	EVENTS									SPECTRAL TYPE
				DECIMETRIC BAND			METRIC BAND			DEKAMETRIC BAND			
	START UT	END UT		START UT	END UT	INT	START UT	END UT	INT	START UT	END UT	INT	
11			LEAR				0706.0	0718.0	1				S
			BLEN	0800.3	0811.6	3	0800.3	0810.3	3				IIIGG
			OWIN	0809	0811	2							IV
			BLEN				0905.0	0908.5	2				IIIGG
	1421	1709	WEIS				1003.8	1004.9	3				IIIGG,RS
			OWIN	1007	1011	2							IV
			WEIS				1009.2	1010.3	3				IIIG,UU
			WEIS				1022.6	1023.5	3				IIIG,RS
	1017	1507	BLEN	1022.6	1023.5	3	1020.1	1023.5	3				IIIGG
			OWIN	1022.8	1023.0	1							IIIG
			BLEN	1034.1	1039.6	3	1034.3	1039.0	2				IIIGG,DCIM
			OWIN	1034	1039	2							IV
			WEIS				1038.4	1039.4	3				IIIG
			BLEN	1145.9	1146.3	2							IIIG
			BLEN	1229.5	1231.2	2	1229.5	1233.8	1				IIIGG
			OWIN	1229.5	1231.0	1							IV Z
			BLEN				1318.7	1318.9	1				IIIG
			BLEN				1445.5	1447.2	1				IIIG
	1301	2245	HARV				1448	1449	2				IIIG
			HARV				1517	1519	2				IIIG
			OWIN	1545.9	1546.6	1							IV
			HARV				1546	1548	2				IIIG
	1552	1657	BLEN	1555.9	1600.7	1	1555.9	1600.7	2				IIIG
			HARV				1601	1605	1				I
			WEIS				1603.1	1605.6	1				II
			HARV				1656		1				IIIB
			HARV				1818		1				IIIB
			HARV				1910		2				IIIB
			HARV				2023		1				IIIBW
			HARV				2025		1				IIIB
			CULG				2029	2211					IS,W
	2029	2400	CULG										
			CULG				2036	2037	1				IIIG
			HARV				2037		2				IIIG
			HARV				2119		2				IIIG
			CULG				2119	2120	1				IIIG
			HARV				2128		1				IIIG,W
			CULG				2211	2339					IN,W
			HARV				2212	2213	1				IIIG
			PALE				2237.8	2241.0	1				V
			CULG				2313						IIIB,W
12	0000	0729	CULG										
			CULG				0137						IIIB,W
			LEAR				0200.0	1015.0	1				B
			CULG				0335.5	0337	3	0336	0337	1	IIIGG
	0600	1700	OWIN										
	0542	0910	BLEN				0618.6	0619.2	2				IIIGG
			BLEN	0651.1	0652.0	2	0651.1	0652.0	2				IIIGG
	0530	1709	WEIS				0651.3	0651.9	2				IIIG
			CULG				0651	0652	1				IIIG
			LEAR				0722.8	0728.0	2				CONT
			LEAR				0729.2	0729.7	3				CONT
			LEAR				0743.0	0749.2	2				CONT
			WEIS				0811.0	0811.4	2				IIIG
			BLEN	0811.0	0811.6	2	0811.0	0812.1	2				IIIGG,RS
			LEAR				0811.3	0812.3	2				CONT
			LEAR				0820.8	0821.9	2				CONT
	1017	1650	BLEN				1140.5	1140.7	1				IIIB
			WEIS				1142.6	1142.8	2				IIIB
			BLEN	1459.1	1459.7	2	1459.1	1459.3	2				IIIGG
			WEIS				1459.2	1459.7	2				IIIG
	1302	2345	HARV				1459	1500	2				I
			WEIS				1621.2	1621.3	2				IIIB
			HARV				1621		1	1621		1	IIIB
			PALE				1815.2	1815.4	1				III
	2028	2400	CULG				2239.5						IIIB,W
			CULG				2339						IIIB,W
13	0000	0728	CULG				0006	0006.5					UNCLF,W

SOLAR RADIO EMISSION
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DAY	TIMES OF OBSERVATION		STATION	EVENTS									SPECTRAL TYPE
				DECIMETRIC BAND			METRIC BAND			DEKAMETRIC BAND			
	START UT	END UT		START UT	END UT	INT	START UT	END UT	INT	START UT	END UT	INT	
13			CULG				0010	0010.5					IIIG,W
			CULG				0105.5						IIIB,W
			CULG				0106.5		1				IIIB
			LEAR				0235.0	0500.0	1				B
			CULG				0412	0413	1				IIIGG
			CULG				0419.5	0420	1	0419.5	0420	1	IIIG
			LEAR				0549.2	0600.3	1				CONT
	0542	0910	BLEN				0555.3	0556.6	2				IIIGG
			CULG				0555	0556.5					IIIG,W,U
	0600	0923	DWIN										
			CULG				0632.5	0633.5	2				IIIG
			LEAR				0714.8	0715.3	1				CONT
			LEAR				0802.4	0802.7	1				V
			BLEN	0837.3	0838.2	2							IIIGG
	0530	1034	WEIS				0837.6	0837.8	1				IIIG
	1022	1700	DWIN										
	1016	1650	BLEN	1034.3	1034.9	1							IIIG
	1302	2245	HARV										
	1045	1705	WEIS				1349.5	1351.6	2				IIIG
			BLEN	1357.2	1357.2	1							IIIB
			PALE				1959.2	2003.2	2				V
	2028	2400	CULG				2215.5						IIIG,W
			CULG				2216.5						IIIB,W
			CULG				2242.5						IIIB,W
			CULG				2308	2308.5					IIIG,W
14	0000	0751	CULG				0139	0139.5	1	0139	0140	1	IIIG,V
			CULG				0150.5						IIIB,W
			LEAR				0200.0	1015.0	1				B
			CULG				0204.5						IIIB,W
			CULG							0326	0334	1	SWF
			CULG				0454	0455	3	0454.5	0455	2	IIIG
			CULG				0455	0456	1				IIIG
			CULG				0529.5	0530	1				IIIG
			CULG				0535	0536	2				IIIG
			CULG				0543	0544	1				IIIG
			CULG				0545	0546					IIIG,W
			CULG				0608	0608.5	2				IIIG
			CULG				0625.5	0626					IIIG,W
			CULG				0628.5	0629					IIIG,W
	0542	0910	BLEN				0628.7	0634.2	1				IIIG
			CULG				0633.5	0634.5	2				IIIG
	0531	1703	WEIS				0633.8	0634.2	2				IIIG
			CULG				0639.5						IIIB,W
			CULG				0654						IIIB,W
	0600	1700	DWIN	0656	1151	1							IV F
			BLEN	0659.9	0805.0	3	0659.9	0805.0	3				II, IV
			CULG				0700	0751	3				IIH
			WEIS				0707.0	1630.0	2				IS,CONT
			CULG				0717	0718	1				IIIG
			CULG				0719.5	0722.5	3				IIIGG,V
			WEIS				0719.8	0721.7	2				IIIG
			CULG				0728	0747	2				IIIS
			WEIS				0738.2	0753.0	2				IIIGG/V
			BLEN	0815.0	0910 D	3	0815.0	0910 D	3				IV, DCIM
	1015	1657	BLEN	1015 E	1100	3	1015 E	1100	3				IV, S
			BLEN	1127.3	1127.7	1							IIIG
			BLEN	1343.8	1344.2	2							IIIGG
	1302	2245	HARV				1400	1720	1				IN
			HARV				1701		1				IIIBW
			HARV				1705		1				IIIB
			PALE				1845.8	1850.8	2				CONT
			PALE				1959.2	0410.0	1				B
	2027	2400	CULG				2027	2200					IS,W
			CULG				2145.5	2152					IIIG,W
			CULG				2200	2342					IN,W
			PALE				2323.1	2323.7	3				V
15	0000	0728	CULG							0116	0129	1	SWF
			CULG				0253						IIIB,W

SOLAR RADIO EMISSION
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DAY	TIMES OF OBSERVATION		STATION	EVENTS									SPECTRAL TYPE
				DECIMETRIC BAND			METRIC BAND			DEKAMETRIC BAND			
	START UT	END UT		START UT	END UT	INT	START UT	END UT	INT	START UT	END UT	INT	
15			LEAR				0254.3	0255.2	1				CONT
			LEAR				0523.8	0525.0	1				CONT
	0600	1400	DWIN										
			LEAR				0653.1	0653.4	1				CONT
	0818	1032	WEIS										
	0558	0910	BLEN	0858.0	0910 D	1	0858.0	0910 D	1				I
	1015	1653	BLEN	1032.1	1044.8	2	1032.1	1044.8	2				IIIGG,DCIM
			BLEN	1102.4	1103.0	1							IIIG
			BLEN	1215.5	1219.8	1							IIIGG,RS
			BLEN	1253.7	1254.2	2							IIIGG
	1202	1703	WEIS				1350.0	1652.0					IN
	1302	2245	HARV				1435	1630	1				I
			WEIS				1440.4	1440.5	1				IIIB
			WEIS				1447.1	1447.3	1				IIIB
			HARV				1630	2245	1				IN
			HARV				1639		1				IIIBW
	2027	2400	CULG				2027	2153					IIIS,W
			CULG				2027	2400	1				IS,DC
			CULG				2153	2400					IIIN,W
			PALE				2335.8	2336.1	1				III
16	0000	0727	CULG				0000	0055					IS,W
			CULG				0055	0319					IN,W
			CULG							0109	0125	3	SWF
			CULG				0115.5	0120	1			II	
			LEAR				0202.3	0207.1	1				CONT
			LEAR				0234.9	0235.3	1				V
			LEAR				0304.4	0305.6	2				CONT
			LEAR				0308.8	0309.7	1				CONT
			CULG				0319	0611					IS,W
			CULG				0459	0459.5	2				IIIG
			LEAR				0523.9	0531.2	1				CONT
	0557	0910	BLEN	0557 E	1215 D		0557 E	1215 D					I,DC
			LEAR				0631.2	0632.5	2				CONT
			BLEN	0734.5	0734.9	1	0734.5	0734.9	1				IIIG
			BLEN	0749.7	0756.9	2	0749.7	0756.9	2				IIIG,U
			LEAR				0800.4	0802.1	1				CONT
			LEAR				0922.4	0927.4	2				CONT
	1016	1215	BLEN	1031.9	1032.2	1	1031.9	1032.2	1				IIIG
	0534	1701	WEIS				1200.6	1607.0	1				IN
			BLEN	1208.7	1209.2	2							IIIG
	1312	2245	HARV				1312	2005	1				INW
	2027	2400	CULG				2125.5	2126					IIIG,W
			CULG				2244.5	2246	2				IIIG
			HARV				2245		2				IIIG
			CULG				2252	2252.5					IIIG,W
			CULG				2255.5		2				IIIB
			CULG				2335						IIIG,W
17	0000	0727	CULG				0021.5						IIIB,W
			CULG				0026						IIIB,W
			CULG				0049.5	0050	1				IIIG
			CULG				0051						IIIB,W
			PALE				0100.8	0101.0	1				III
			CULG				0313	0313.5					IIIG,W
			LEAR				0328.4	0330.3	1				CONT
			CULG				0341.5						IIIB,W
			CULG				0609.5		2				IIIB
			LEAR				0642.6	0642.9	1				CONT
			LEAR				0642.6	0642.9	1				S
	0750	1645	DWIN										
	0743	1056	WEIS				0801.7	0801.8	1				IIIB
			LEAR				0803.8	0830.8	1				S
	1120	1643	BLEN	1128.9	1643 D	2	1128.9	1643 D	2				I,N
	1101	1658	WEIS				1516.6	1516.7	1				IIIB
			WEIS				1554.7	1555.4	1				IIIG
	1313	2255	HARV				1734	1735	1	1734	1735	1	IIIG
			HARV				1813		1				IIIG
			PALE				1933.9	1940.0	1				CONT
			HARV				2006	2007	2				IIIG

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DAY	TIMES OF OBSERVATION		STATION	EVENTS									SPECTRAL TYPE
				DECIMETRIC BAND			METRIC BAND			DEKAMETRIC BAND			
	START UT	END UT		START UT	END UT	INT	START UT	END UT	INT	START UT	END UT	INT	
17			PALE				2008.2	2010.8	2				V
			PALE				2033.9	2040.0	1				CONT
	2026	2400	CULG				2044	2244					IIIN,W
			CULG				2055	2056.5	2				IIIGG
			HARV				2055	2058	2				IIIG
			CULG				2057.5		1				IIIB
			CULG				2245	2246	1				IIIG
			HARV				2245	2246	2				IIIG
			CULG				2356	2356.5					I,W
18	0000	0711	CULG				0004	0036					IS,W
			CULG				0005.5	0006	2				IIIG
			CULG				0225.5						IIIB,W
			CULG				0226.5	0227.5	1				IIIG
			CULG				0304	0305	2				IIIG,U
			CULG				0305.5	0307	1				IIIG,U
			LEAR				0351.8	0352.4	1				V
			LEAR				0402.6	0410.0	1				II
			CULG				0417	0417.5					IIIG,W
			CULG				0427	0427.5	1				IIIG
			CULG				0448.5						IIIB,W
			CULG				0450	0450.5	1				IIIG
			LEAR				0521.3	0522.3	1				CONT
			CULG				0525.5	0528.5	3				IIIGG,U
			CULG				0532.5		1				IIIB
			CULG				0539						IIIB,W
	0548	0910	BLEN	0548 E	1535	2	0548 E	1535	2				I,DC,S
	0600	1410	DWIN										
			CULG				0637.5	0638					IIIG,W
	0536	1656	WEIS				0637.7	0637.9	1				IIIB
			CULG				0640	0640.5					IIIG,W
			LEAR				0727.0	0727.4	1				V
			WEIS				0811.9	0812.1	1				IIIB
			LEAR				0904.9	0905.9	1				CONT
	1015	1640	BLEN										
			WEIS				1041.5	1041.6	1				IIIB
			WEIS				1058.0	1129.0	1				I
			WEIS				1122.8	1125.3	1				IIIG
			WEIS				1145.1	1145.5	2				IIIG
			WEIS				1147.8	1148.6	2				IIIG
			WEIS				1150.4	1150.8	2				IIIG
	1430	1630	DWIN										
			WEIS				1550.0	1550.7	1				IIIG
			WEIS				1614.4	1614.7	1				IIIG
	1313	2245	HARV				1614		1				IIIB
			HARV				1645		1				IIIGW
			HARV				1922	1923	1	1922	1923	1	IIIG
			HARV				2051		1				IIIGW
	2026	2400	CULG				2051	2051.5	1				IIIG
			CULG				2053.5	2054					IIIG,W
			CULG				2153	2154	1				IIIG
			HARV				2153	2154	1				IIIG
			CULG				2234	2234.5					IIIG,W
			CULG				2235.5		1				IIIB
			HARV				2235		1				IIIB
			CULG				2301						IIIB,W
			CULG				2335.5	2336					IIIG,W
			CULG				2339						IIIB,W
			CULG				2341.5		2				IIIB
			CULG				2341	2342					IIIG,W
19	0000	0731	CULG				0028			0028			IIIB,W
			CULG				0154						IIIB,W
			CULG				0157	0157.5	1				IIIG
			LEAR				0307.8	0308.1	1				II
			LEAR				0343.2	0343.9	1				CONT
			CULG				0404			0404			IIIB,W
			CULG							0405	0422	1	SHF
			LEAR				0413.0	0414.1	1				CONT
			LEAR				0452.8	0549.1	1				S

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DAY	TIMES OF OBSERVATION		STATION	EVENTS									SPECTRAL TYPE
				DECIMETRIC BAND			METRIC BAND			DEKAMETRIC BAND			
	START UT	END UT		START UT	END UT	INT	START UT	END UT	INT	START UT	END UT	INT	
19			CULG				0455	0457	1				IIIG
	0600	1630	DWIN										
			CULG				0612						IIIB,W
			LEAR				0613.9	0635.6	1				S
			LEAR				0621.3	0621.8	2				CONT
	0550	0910	BLEN	0645.2	0646.8	2							DCIM
			BLEN	0711.0	0715.5	2							IIIG,RS
	0536	1553	WEIS	0711.2	0711.3	2							RS
			BLEN	0736	0853.1	1	0736	0853.1	1				I,DC
			LEAR				0910.6	1015.0	1				B
			WEIS				1034.4	1034.5	1				IIIB
	1015	1637	BLEN	1130.0	1130.0	2	1130.0	1130.0	2				IIIB
			BLEN	1213.5	1213.7	2							IIIB
			BLEN	1410.2	1411.9	2							DCIM
			WEIS				1501.8	1502.0	1				IIIB
	1313	2245	HARV				1836		2	1836		2	IIIG
			HARV				1910	2120	1				I
			PALE				2009.9	2015.5	1				CONT
			HARV				2012	2014	2				IIIG
	2026	2400	CULG				2026	2125					IIIS,W
			CULG				2026	2238	1				IS
			PALE				2152.4	2152.8	2				V
			CULG							2303	2330	3	SWF
			CULG				2328.5	2329	2				IIIG
			CULG				2334.5	2335	2				IIIG
			CULG				2337.5	2338	2				IIIG
			PALE				2344.1	0005.1	2				S
20	0000	0721	CULG				0005	0005.5	1				IIIB
			CULG				0131.5	0132.5	1	0132	0132.5	1	IIIG
			LEAR				0200.0	1014.0	1				B
			LEAR				0213.5	0221.6	2				CONT
			CULG				0233	0234	1	0233.5		1	IIIG
			LEAR				0255.8	0256.6	2				CONT
			CULG				0334.5		1				IIIB
			CULG				0406						IIIB,W
			LEAR				0530.6	0531.4	2				CONT
	0600	1100	DWIN										
	0551	0910	BLEN	0621.2	0625.7	1	0621.2	0625.7	1				IIIG
			BLEN	0626	1520	2	0626	1520	2				I,DC
			CULG				0633.5						IIIB,W
			CULG				0635	0635.5					IIIG,W
	0541	1621	WEIS				0748.3	0749.3	2				IIIG
			WEIS				0849	1231.0	2				IN
			WEIS				0950.7	0951.0	1				IIIG
			WEIS				0954.7	0955.8	2				IIIG
			WEIS				1005.1	1005.3	2				IIIG
			WEIS				1134.1	1134.3	1				IIIG
	1151	1630	DWIN										
			WEIS				1227.7	1228.2	2				IIIG
			SGMR				1301.8	1302.0	1				III
	1015	1635	BLEN				1608.3	1608.8	1				IIIG
			WEIS				1608.4	1608.7	1				IIIG
	1313	2245	HARV				1608	1609	2				IIIG
			PALE				1915.9	1916.1	1				III
	2025	2400	CULG										
21			LEAR				0200.0	1014.0	1				B
			CULG				0258.5		1				RS,DP
	0000	0725	CULG				0258	0258.5					IIIG,W
			LEAR				0346.9	0351.0	2				CONT
			CULG				0501	0505					IIIS,W
			CULG				0502		1				IIIB
			CULG				0550.5	0551	2				IIIG
			CULG				0550.5	0551	1				RS,DP
	0558	1630	DWIN										
	0552	0800	BLEN				0601.3	0606.0	1				IIIG
			CULG				0601.5		2				IIIB
			CULG				0601	0602.5	1				RS,DP
			CULG				0601	0602.5	1				IIIG

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DAY	TIMES OF OBSERVATION		STATION	EVENTS									SPECTRAL TYPE
				DECIMETRIC BAND			METRIC BAND			DEKAMETRIC BAND			
	START UT	END UT		START UT	END UT	INT	START UT	END UT	INT	START UT	END UT	INT	
21			CULG				0605.5	0606					IIIG,W
			LEAR				0633.0	0634.2	2				CONT
			CULG				0636.5	0638					IIIG,W
			CULG				0643						IIIB,W
			CULG				0655.5	0658.5	1				IIIGG
			CULG				0655.5	0658.5	1				RS,DP
	1000	1633	BLEN				1439.2	1439.3	2				IIIB
	0657	1649	WEIS				1439.3	1439.5	2				IIIG
	1313	2250	HARV				1439		1				IIIG
			WEIS				1453.0	1453.3	2				IIIG
			WEIS				1458.4	1459.2	1				IIIG
			WEIS				1547.2	1547.6	1				IIIG
			WEIS				1600.7	1601.6	1				IIIG
			HARV				1709	1710	1	1709	1710	1	IIIG
			HARV				1737		1				IIIGW
	2025	2400	CULG				2314.5		1				IIIB
			CULG				2352	2352.5					IIIG,W
			CULG							2354	2400	2	SWF
22	0000	0725	CULG							0000	0335	2	SWF
			CULG				0004.5	0008	3	0004.5	0008	2	IIIGG
			CULG				0032	0033	2	0032.5	0033	2	IIIG
			CULG				0034	0035	2	0034.5	0035	2	IIIG
			CULG				0041	0041.5	2	0041	0041.5	2	IIIG,U
			LEAR				0200.0	1014.0	1				B
			LEAR				0207.6	0209.1	2				CONT
			PALE				0208.3	0208.9	1				III
			CULG				0255.5			0255.5			IIIB,W
			CULG				0349.5	0351	2	0349.5	0351	1	IIIG,V
			CULG				0352.5	0353	1				IIIG
			CULG				0404	0404.5					IIIG,W
			CULG				0440.5	0441	1				IIIG
			CULG				0446	0446.5					IIIG,W
			CULG				0453.5	0458.5	2				IIIGG
			LEAR				0520.3	0523.1	2				CONT
	0542	1600	WEIS				0553.5	0554.5	1				IIIG
			CULG				0554	0554.5					IIIG,W
	0552	0945	BLEN				0557.4	0600.0	2				IIIG
			CULG				0557.5	0559	2				IIIG
	1626	1647	WEIS				0557.5	0600.8	3				IIIG
			WEIS				0842.0	0842.3	2				IIIG
			WEIS				0948.1	0948.3	2				IIIB
	0600	1630	DWIN	1114.8	1115.9	2							IIIG
			WEIS				1126.9	1127.1	1				IIIB
			DWIN	1154.5	1155.0	2							IIIG
	1313	2245	HARV										
	1510	1632	BLEN										
			PALE				1940.0	0400.0	1				B
	2025	2400	CULG										
23	0000	0710	CULG				0154			0154			IIIB,W
			LEAR				0200.0	1014.0	2				B
			CULG							0205	0216	1	SWF
			CULG				0403						IIIB,W
	0557	0910	BLEN				0616.2	0616.5	1				IIIG
	0546	1645	WEIS				0643.0	1554.0	2				IIIN
	0718	0730	CULG										
			BLEN	0734	0810	1	0734	0810	1				I
	0600	1400	DWIN	0900.5		1							IIIB
	1016	1632	BLEN	1123.1	1124.9	1	1122.9	1124.9	2				IIIG
			BLEN	1124.8	1125.7	1							IIIG
			BLEN	1239.2	1240.6	2	1239.2	1241.2	2				IIIGG
			WEIS				1239.3	1241.4	3				IIIG
			BLEN	1256.6	1310.3	2	1256.6	1310.3	2				IIIGG,RS
			WEIS				1259.1	1302.3	2				IIIG
			BLEN	1442.1	1442.2	2							IIIG
			BLEN				1450.6	1452.3	2				IIIG
			BLEN	1526.9	1527.1	1	1526.9	1527.1	2				IIIG
			WEIS				1527.0	1527.0	3				IIIB,U
	1313	2255	HARV				1527		3	1527		2	IIIG

SOLAR RADIO EMISSION
SPECTRAL OBSERVATIONS

SEPTEMBER 1979

DAY	TIMES OF OBSERVATION		STATION	EVENTS									SPECTRAL TYPE
				DECIMETRIC BAND			METRIC BAND			DEKAMETRIC BAND			
	START UT	END UT		START UT	END UT	INT	START UT	END UT	INT	START UT	END UT	INT	
23			HARV				1812	1813	2	1812	1813	2	IIIG
	2025	2400	CULG				2027	2109					IS,W
			CULG				2032	2033					IIIG,W
			CULG				2055.5	2056.5					IIIG,W
			CULG				2228.5	2229					IIIG,W
24	0000	0724	CULG				0057	0724					IIIN,W
			CULG				0112.5			0112.5	0113		IIIB,W
			CULG				0126.5		1	0126.5	0127	1	IIIB
			CULG				0139.5	0141	1				IIIGG
			LEAR				0200.0	1014.0	1				B
			LEAR				0246.5	0249.5	2				CONT
			CULG				0302	0348					IN,W
			CULG				0508.5		1	0508.5		1	IIIB
			CULG				0509.5	0510.5	2	0509.5	0510.5	1	IIIG
			CULG				0512.5	0513.5		0513			IIIG,W
	0546	1437	WEIS				0622.0	1547.0	2				IIIN
			LEAR				0633.5	0636.1	1				CONT
	0603	0910	BLEN	0651	1632	D 2	0651	1632	D 2				I
			CULG				0655.5	0659.5	2				IIIGG,V
	1445	1643	WEIS				0655.7	0700.3	3				IIIGG
			BLEN	0656.4	0658.1	2	0656.0	0658.5	3				IIIGG
	0725	1630	DWIN	1007.1	1007.7	1							IIIG
	1016	1151	BLEN				1120.4	1127.9	2				IIIG
			BLEN				1146.8	1147.2	1				IIIG
	1313	2300	HARV				1618	1624	2				IIIGG
	1441	1632	BLEN	1619.5	1624.2	3	1617.7	1625.8	3				IIIGG
			WEIS				1619.6	1619.7	2				IIIG
			WEIS				1623.6	1624.2	2				IIIG
			WEIS				1625.6	1626.1	3				IIIG
			HARV				1625	1626	2	1625	1626		IIIG
			HARV				1640	2240	1				INW
			PALE				1830.0	0400.0	1				B
			HARV				1841		1	1841		1	IIIBW
	2024	2400	CULG				2034	2128					IS,W
			CULG				2224.5						IIIB,W
25			LEAR				0200.0	1015.0	1				B
	0000	0724	CULG				0327.5	0328	1	0327.5	0328	1	IIIG
			CULG				0412	0601					IS,W
			CULG				0459	0500	2	0459.5		1	IIIG
			CULG				0502	0503					IIIG,W
	0600	1630	DWIN										
	0603	1632	BLEN	0603	1110	1	0603	1110	1				I,N
	0547	1641	WEIS				0608.0	1639.0	1				IIIN
			CULG				0617.5	0620.5					IIIG,W
			BLEN				1113.7	1114.0	1				IIIG
			BLEN	1127.3	1135	1	1127.3	1135	1			IV	
			BLEN				1138.7	1140.7	2				IIIG
			BLEN	1154.2	1154.2	2							IIIB
			BLEN	1309.7	1309.9	1							IIIG
			BLEN				1346.3	1347.2	2				IIIG
			WEIS				1459.8	1500.8	3				IIIG
	1313	2245	HARV				1500		3				IIIB
			HARV				1807	1808	1				IIIG
			HARV				1811	1813	3	1811	1813	3	IIIGG,V
	2024	2400	CULG				2039						IIIB,W
			CULG				2136.5	2137					IIIG,W
			CULG				2148.5		1	2148.5		1	IIIB
26	0000	0724	CULG				0123	0724					IIIN,W
			CULG				0601	0724					IN,W
			LEAR				0624.3	0625.1	1				CONT
			LEAR				0635.5	0641.3	2				CONT
	0549	1241	WEIS				0705.7	0707.3	2				IIIG
	0605	1625	BLEN	0706.1	0707.4	3	0706.1	0707.4	3				IIIGG,RS
			CULG				0706.5	0707.5	1				IIIG
			BLEN	0732.8	0733.1	1	0732.8	0733.1	1				IIIG
			BLEN	0815.4	0825.7	2	0815.4	0825.7	2				IIIGG,RS
			WEIS				0815.4	0816.3	2				IIIG

SOLAR RADIO EMISSION
SPECTRAL OBSERVATIONS

SEPTEMBER 1979

DAY	TIMES OF OBSERVATION		STATION	EVENTS									SPECTRAL TYPE
				DECIMETRIC BAND			METRIC BAND			DEKAMETRIC BAND			
	START UT	END UT		START UT	END UT	INT	START UT	END UT	INT	START UT	END UT	INT	
26			BLEN				1104.4	1104.5	2				IIIB
			BLEN	1241.2	1241.2	1	1241.2	1241.2	1				IIIB
			BLEN	1252.0	1255.3	3	1252.0	1255.3	3				IIIGG
	1244	1639	WEIS				1253.5	1255.3	3				IIIG
			BLEN	1311.2	1319.3	3	1311.2	1316.4	3				IIIGG,RS
			WEIS				1311.4	1312.2	3				IIIG
			WEIS				1315.6	1316.7	3				IIIG
	0600	1630	DWIN	1315.6	1315.9	1							IIIG
	1313	2310	HARV				1316		3				IIIG,V
			BLEN	1337.2	1357.5	3	1334.0	1357.8	3				IIIGG
			WEIS				1337.2	1339.1	3				IIIGG
			HARV				1337	1339	2				IIIGG
			WEIS				1344.7	1347.9	3				IIIGG
			HARV				1345	1348	2				IIIGG
			WEIS				1431.1	1431.7	2				IIIG
			WEIS				1527.4	1532.8	3				IIIGG
			HARV				1528	1532	2	1528	1532	2	IIIBB,V
			BLEN	1531.4	1532.0	1	1527.6	1532.7	2				IIIGG
			HARV				1658	1659	3	1658	1659	3	IIIG,V
			HARV				1831	1834	3	1831	1834	3	IIIG,V
			HARV				1847		3	1847		3	IIIG,V
			HARV				1856	1857	3	1856	1857	3	IIIG,V
			HARV				1903	1907	3	1903	1907	3	IIIGG,V
			HARV				1952		1	1952		1	IIIB
			HARV				2005		2	2005		3	IIIG,V
			HARV				2010	2013	3	2010	2013	3	IIIGG,V
			HARV				2018	2025	3	2018	2025	3	IIIGG,V
	2023	2400	CULG				2023	2400					IS,W
			CULG				2025		2				IIIB
			CULG				2027	2400					IIIN,W
			PALE				2101.6	2101.9	1				III
			CULG				2142	2144.5	3	2142.5	2144.5	2	IIIGG,V
			HARV				2142	2147	3	2142	2147	3	IIIGG,V
			CULG				2145	2147	3	2145.5	2147	2	IIIGG
			CULG				2147.5	2148	1				IIIG
			CULG				2216.5	2217.5	1				IIIG
			CULG				2221.5	2222	2				IIIB
			HARV				2222		2				IIIB
			CULG				2224.5	2225	1				IIIG
			CULG				2311	2312	1				IIIG
			CULG				2317.5		2				IIIB
			CULG				2321	2322	3	2321	2322	2	IIIG
27	0000	0723	CULG				0000	0035					IS,W
			CULG				0009	0723					IIIN,W
			CULG				0014.5		1	0014.5		1	IIIB
			CULG				0035	0723					IN,W
			CULG				0241.5	0242	3	0241.5	0242	3	IIIG
			LEAR				0348.4	0349.3	2				V
			CULG				0350.5	0351	1				IIIG
			CULG				0401.5		1				IIIB
			CULG				0403.5	0405.5	1				IIIGG
			CULG				0450	0450.5	1				UNCLF
			LEAR				0459.3	0459.5	1				CONT
			LEAR				0539.7	0541.2	2				V
			LEAR				0552.3	0552.8	1				CONT
			CULG				0659	0706					POSS CONT
	0600	1039	DWIN	0702	0705	1						IV	W
			CULG				0707.5	0708	1				IIIG
	0649	1637	WEIS				0710.0	1542.0	2				IIIN
			CULG				0710		2				IIIB
			WEIS				0733.7	0734.7	2				IIIG,U
			DWIN	0840.7	0842.0	1						IV	
			DWIN	1019.5	1021.5	1						IV	
	1105	1630	DWIN	1214.9	1215.2	2							IIIG
	1313	2246	HARV				1313	2246	1				IN
			HARV				1453		2	1453		1	IIIG
			HARV				1535	1541	2				IIIGG
			HARV				1623	1624	1				IIIG
			HARV				1658		2	1658		2	IIIG

SOLAR RADIO EMISSION
SPECTRAL OBSERVATIONS

SEPTEMBER 1979

DAY	TIMES OF OBSERVATION		STATION	EVENTS									SPECTRAL TYPE
				DECIMETRIC BAND			METRIC BAND			DEKAMETRIC BAND			
	START UT	END UT		START UT	END UT	INT	START UT	END UT	INT	START UT	END UT	INT	
27			HARV				1716	1717	2	1716	1717	1	IIIG
			HARV				1725	1730	3	1726	1730	3	IIIGG,V
			HARV				1813		1				IIIBW
			PALE				1855.5	1907.1	1				S
			HARV				1927	1928	3	1927	1928	3	IIIG,V
			HARV				2019		2				IIIG
	2023	2400	CULG				2023	2050					IS,W
			CULG				2039	2039.5	3				IIIG
			HARV				2039		3	2039		3	IIIG
			CULG				2050	2400					IN,W
			CULG				2153.5	2154					IIIG,W
			CULG				2153.5		2				IIIB
			HARV				2154		2				IIIB
			CULG				2214	2400					IIIN,W
			CULG				2224	2224.5	1				IIIG
			CULG				2321		1				IIIB
28	0000	0723	CULG				0000	0615					IN,W
			CULG				0001.5	0002.5					IIIG,W
			CULG				0055						IIIB,W
			LEAR				0200.0	1016.0	1				B
			CULG				0215.5	0216	2	0215.5	0216	1	IIIG
			LEAR				0305.8	0306.5	2				V
			CULG				0331		1				IIIB
			CULG				0348.5	0349					IIIG,W
			CULG				0354						IIIB,W
			CULG				0357.5						RS,DP
			CULG				0358		2				IIIB
			CULG				0535.5						IIIB,W
			LEAR				0600.0	0600.4	2				V
	0600	1630	DHIN	0614.4	0614.5	1						IV	
			CULG				0615	0723					IS,W
	0551	1107	WEIS				0629.0	1543.0	2				IIIN
			CULG				0658						IIIB,W
	1122	1635	WEIS				0757.9	0758.9	2				IIIG
	1313	2305	HARV				1313	2305	1				INW,IIINW
	1040	1607	BLEN	1439.7	1440.8	1	1439.7	1440.8	2				IIIG
			BLEN	1532	1607 D	1	1532	1607 D	1				I
			HARV				1532		2	1532		1	IIIG
			HARV				1542		2				IIIG
			HARV				1757		1				IIIB
	2024	2400	CULG				2024	2400					IS,W
			CULG				2028	2400					IIIN,W
			PALE				2035.7	2036.7	2				V
			PALE				2102.3	2103.5	1				III
			CULG				2149	2150					UNCLF
			CULG				2152.5	2153	3				IIIG
			HARV				2153	2157	3				IIIG
			CULG				2157		1				IIIB
			PALE				2319.8	2322.1	2				V
			CULG				2332	2332.5	2				IIIG
29	0000	0723	CULG				0000	0723					IS,W
			CULG				0011	0647					IIIN,W
			PALE				0012.8	0013.1	2				V
			LEAR				0201.8	0247.1	1				S
			LEAR				0238.8	0241.5	2				CONT
			LEAR				0317.6	0318.1	1				CONT
			LEAR				0336.5	0347.5	2				S
	0552	0809	WEIS				0603.0	1633.0	2				IN
			LEAR				0612.0	1016.0	1				B
	0612	1610	BLEN	0612 E	1610 D	2	0612 E	1610 D	2				I,DC
	0915	1633	WEIS				0623.0	1633.0	2				IIIN
			BLEN	0824.2	0829.5	1	0824.2	0829.5	1				IIIGG
			BLEN	1028.1	1028.6	2							DCIM
	0600	1630	DHIN	1028.3	1028.6	1							IIIG
			BLEN	1044.2	1045.3	2	1044.2	1045.3	2				IIIGG
			WEIS				1044.3	1045.9	2				IIIG
	1313	2245	HARV				1313	2245	1				I
			HARV				1349	1354	2				IIIG

SOLAR RADIO EMISSION
SPECTRAL OBSERVATIONS

SEPTEMBER 1979

DAY	TIMES OF OBSERVATION START UT	TIMES OF OBSERVATION END UT	STATION	EVENTS: DECIMETRIC BAND START UT	DECIMETRIC BAND END UT	DECIMETRIC BAND INT	METRIC BAND START UT	METRIC BAND END UT	METRIC BAND INT	DEKAMETRIC BAND START UT	DEKAMETRIC BAND END UT	DEKAMETRIC BAND INT	SPECTRAL TYPE
29			HARV				1410	1531	2				I
			BLEN	1504.6	1505.3	1	1504.6	1505.3	1				IIIGG
			HARV				1531	1706	3				I
			HARV				1628	1634	2				IIIG
			HARV				1706	1824	2				I
			HARV				1824	2245	1				I
			PALE				1937.1	1942.5	2				V
			PALE				2018.0	2018.6	1				III
			PALE				2019.8	2020.2	1				III
	2023	2400	CULG				2023	2051					IIIN,W
			CULG				2023	2400	1				IS,DC
			CULG				2051	2400					IIIS,W
			CULG				2123	2136	1				IIIN
			CULG				2220.5	2221	1				IIIG
			CULG				2336	2337	1				IIIG
30	0000	0723	CULG				0000	0123	1				IS,DC
			CULG				0000	0125					IIIS,W
			CULG				0009		2				IIIB,U
			CULG				0010.5		1				IIIB
			PALE				0115.9	0116.8	2				V
			CULG				0123	0524					IS,W
			CULG				0125	0723					IIIN,W
			LEAR				0200.0	1016.0	1				B
			CULG				0318.5		2	0318.5		1	IIIB
			CULG				0318.5	0320	1				IIIG
			CULG				0432		1				IIIB
			CULG				0524	0624	1				IS,DC
			CULG				0528.5	0529	1				IIIG
	0554	1134	WEIS				0550	1617	2				IS,DC
	1148	1631	WEIS				0608	1615.0	2				IIIN
			CULG				0624	0723	2				IS,C,DC
			CULG				0713	0723					SCINT
	0600	1505	DWIN	0803.9	0807.3	1						IV	
			BLEN	0804	0807.8	1	0804	0807.8	1				DCIM
			LEAR				0833.3	0835.2	2				CONT
			WEIS				1111.5	1113.5	3				IIIG
			DWIN	1129	1138.5	1						IV	P
			BLEN	1130.2	1137.0	2							DCIM
			BLEN	1143.3	1143.6	2							IIIG
			BLEN	1156.7	1157.3	2	1157.1	1157.6	1				IIIG
			DWIN	1156.8	1157.5	1						IV	
	1313	2245	HARV				1313	1800	1				I
	0615	1610	BLEN	1400	1610	D 2	0615 E	1610	D 2				I
			HARV				1439	1600	2				IIIN
			BLEN				1604.0	1604.3	2				IIIG
			WEIS				1604.0	1605.2	2				IIIG
			HARV				1604	1605	3	1604	1605	2	IIIG
			HARV				1631		1				IIIG
			HARV				1646	1647	1	1646	1647	1	IIIG
			HARV				1701	1704	3	1701	1704	3	IIIGG
			HARV				1712		2	1712		3	IIIG
			HARV				1800	2150	2				I
			HARV				1811	1812	2				IIIG
			HARV				1901	1911	1	1901	1911	1	IIIG
			HARV				1948	1950	3	1948	1950	3	IIIGG
			HARV				2014		2	2014		1	IIIG
			CULG				2023	2212					IS,W
	2023	2400	CULG				2023	2156					IIIN,W
			CULG				2110	2111.5	1				IIIGG
			HARV				2150	2245	3				I
			CULG				2156	2240					IIIS,W
			CULG				2157.5	2200.5	1				IIIGG
			CULG				2212	2241	1				IS,DC
			CULG				2213.5	2214	1	2213.5		1	IIIG
			PALE				2235.0	2239.6	1				CONT
			CULG				2240	2300	2				IIIS
			CULG				2241	2400	2				IS,C,DC
			CULG				2245						POSS RS,DP
			CULG				2300	2400	1				IIIS

ERRATA: The June 1979 spectral data reported by the Harvard Radio Astronomy Station (HARV) and published in SGD 420 Part I, pages 139-154 (August 1979 issue), contain three transcription errors in the spectral type. Data entries that need to be changed are the following:

(1) IIG,V should read IIIG,V for the 17 June 1305 UT entry on page 148
(2) IIG,N should read IIIG,N for the 17 June 1634 UT entry on page 148
(3) IIB,W should read IIIB,W for the 27 June 1823 UT entry on page 152

The April 1979 spectral data reported by the Harvard Radio Astronomy Station (HARV) and published in SGD 420 Part II, pages 72-74 (August 1979 issue), contain two transcription errors in the spectral type. Data entries that need to be changed are the following:

(1) IIG should read IIIG for the 10 April 2042 UT entry on page 72
(2) IIN,W should read IIIN,W for the 12 April 1330 UT entry on page 72

COSMIC RAY INDICES
(Neutron Monitors)

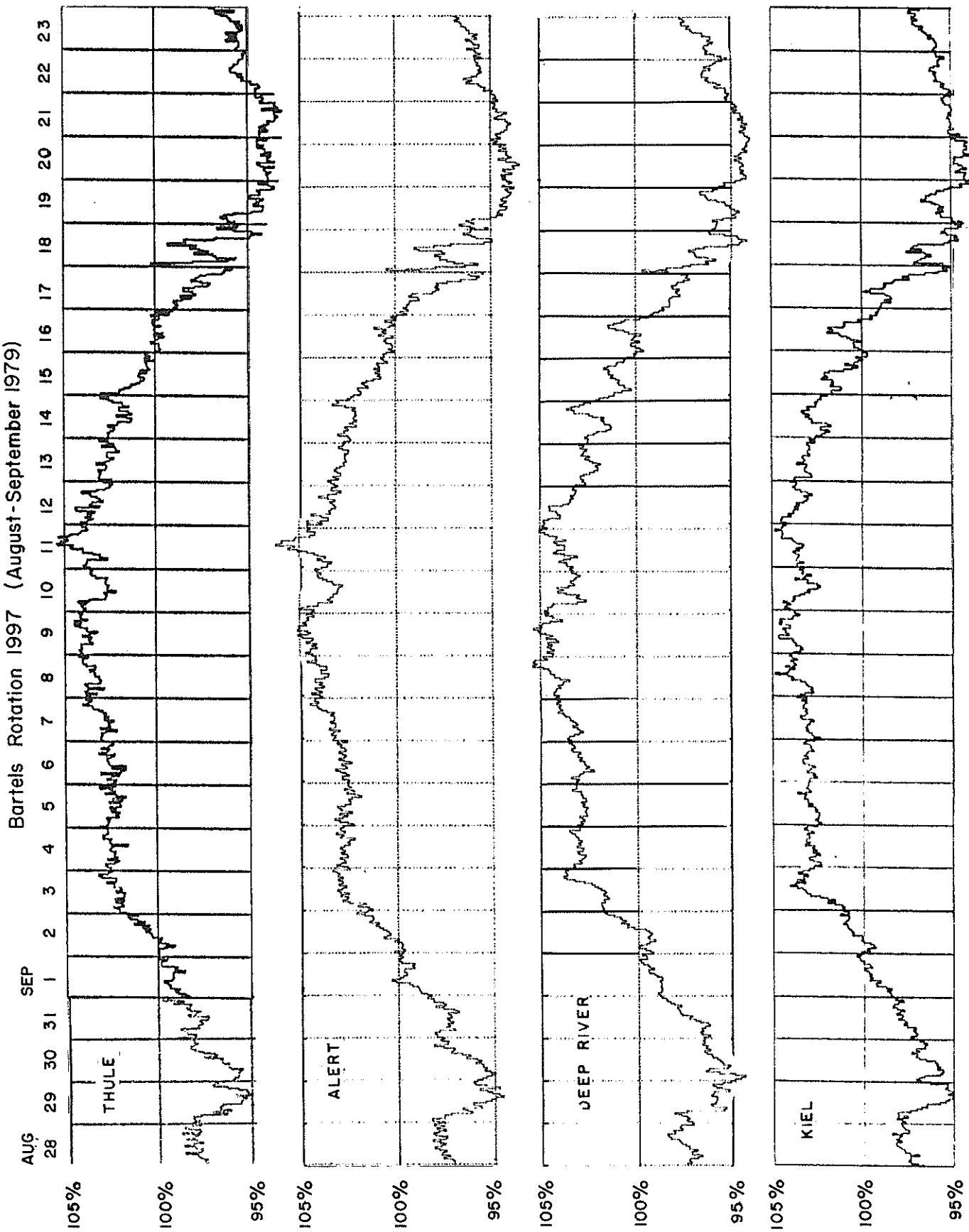
Sep. 1979	THULE Average (cts/h)/100	ALERT Average (cts/h)/100	DEEP RIVER Average (cts/h)/300	CALGARY Average (cts/h)/100	KIEL Average (cts/h)/100	CLIMAX Average (cts/h)/100	TOKYO Average (cts/h)/256	KULA Average (cts/h)/100	HUANCAYO Average (cts/h)/100
1	4075.6	6675.2	6237.7		5678.0	3706.6	3541.7		
2	4124.4	6754.8	6293.0		5733.6	3720.0	3547.1		
3	4200.5	6887.3	6439.3		5867.2	3851.3	3584.9		
4	4211.2	6894.0	6480.0		5871.2	3873.9	3591.0		
5	4204.9	6882.1	6467.4		5870.6	3870.2	3589.9		
6	4209.0	6893.5	6476.0		5877.6	3878.1	3587.8		
7	4231.6	6945.0	6510.5		5884.5	3875.4	3577.8		
8	4253.7	6974.7	6565.0		5916.8	3898.0	3591.1		
9	4268.0	7015.6	6574.7		5936.4	3904.0	3603.5		
10	4237.5	6953.7	6514.4		5901.2	3895.0	3604.2		
11	4275.2	7012.7	6534.3		5929.4	3902.8	3608.3		
12	4245.0	6946.8	6535.0		5916.9	3909.3	3604.7		
13	4217.3	6898.2	6447.0		5882.0	3853.3	3575.1		
14	4192.2	6870.5	6430.7		5849.8	3838.6	3559.1(18)		
15	4144.0	6795.4	6355.8		5765.9	3769.3	3541.0		
16	4101.9	6732.3	6303.9		5727.6	3732.7	3524.3		
17	4014.8	6582.1	6164.8		5589.6	3636.8	3485.9		
18	3979.5	6511.6	6057.2		5470.1	3607.9	3488.0		
19	3887.3	6355.0	6011.3		5446.0	3534.2	3467.8		
20	3859.3	6315.8	5946.6		5388.4	3489.4	3464.8(23)		
21	3854.1	6340.5	5938.8		5427.3	3501.7	3465.5		
22	3905.6	6405.1	6024.3		5460.4	3530.7	3471.5		
23	3932.1	6444.6	6073.2		5508.0	3547.2	3482.9		
24	3968.0	6505.0	6142.8		5568.2	3603.3	3511.3		
25	4021.8	6563.1	6189.8		5615.0	3655.7	3531.4		
26	4053.5	6610.2	6244.1		5652.9	3698.3	3538.7		
27	4094.9	6673.1	6301.7		5688.8	3740.0	3538.0		
28	4109.4	6700.9	6327.1		5738.0	3771.2	3554.5		
29	4138.6	6739.3	6316.7		5739.0	3757.3	3546.0		
30	4159.6	6789.3	6366.5		5790.8	3785.4	3568.5		
MEAN	4105.6	6722.2	6309.6		5723.0	3744.8	3544.9		

Data not available at time of publication.

Data not available at time of publication.

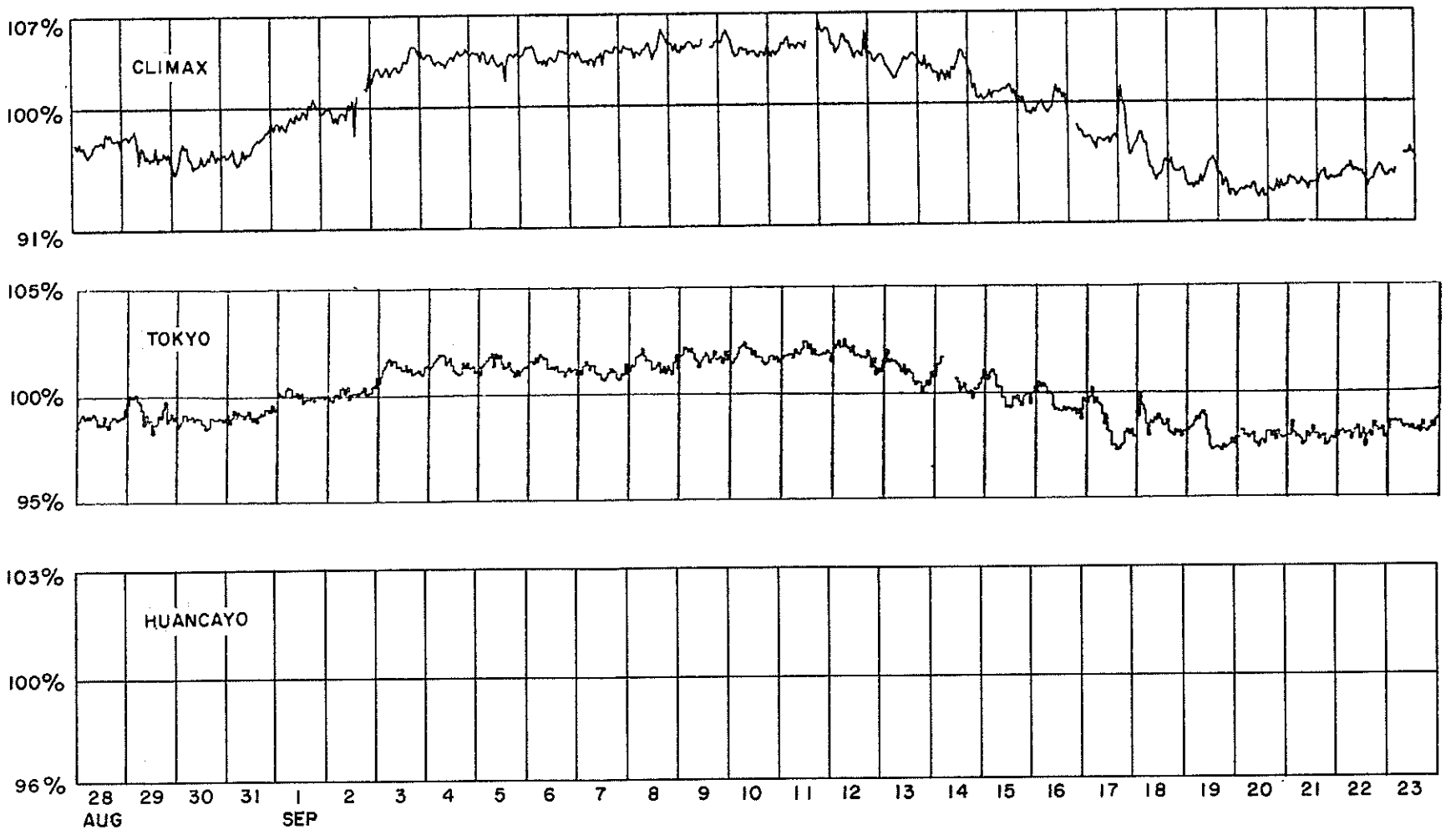
Data not available at time of publication.

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.


COSMIC RAY INDICES
(Neutron Monitors)
Bartels Rotation 1997 (August-September 1979)
AUG
SEP
28 29 30 31 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23
THULE
ALERT
DEEP RIVER
KIEL
105%
100%
95%

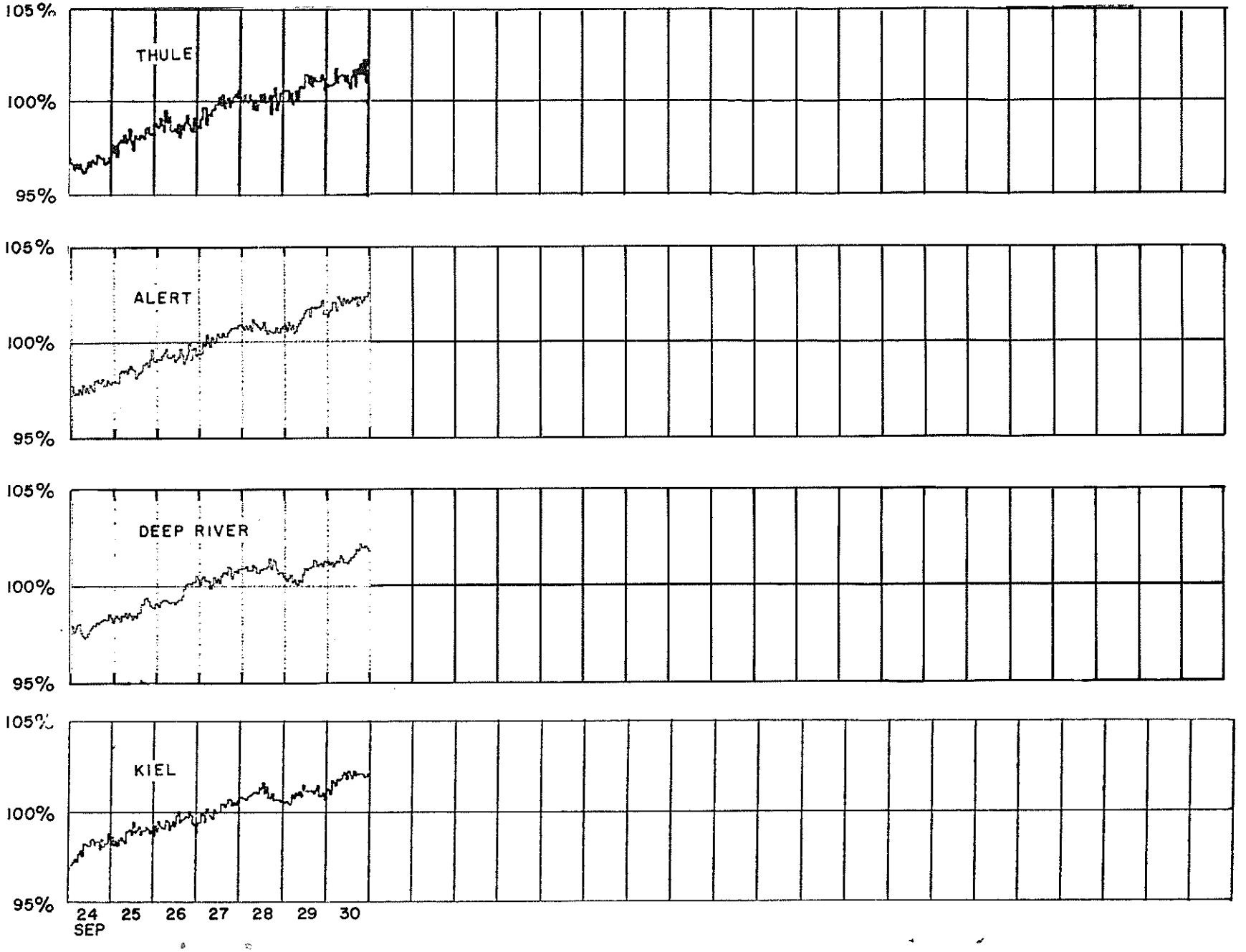
COSMIC RAY INDICES
(Neutron Monitors)

Bartels Rotation 1997 (August - September 1979)



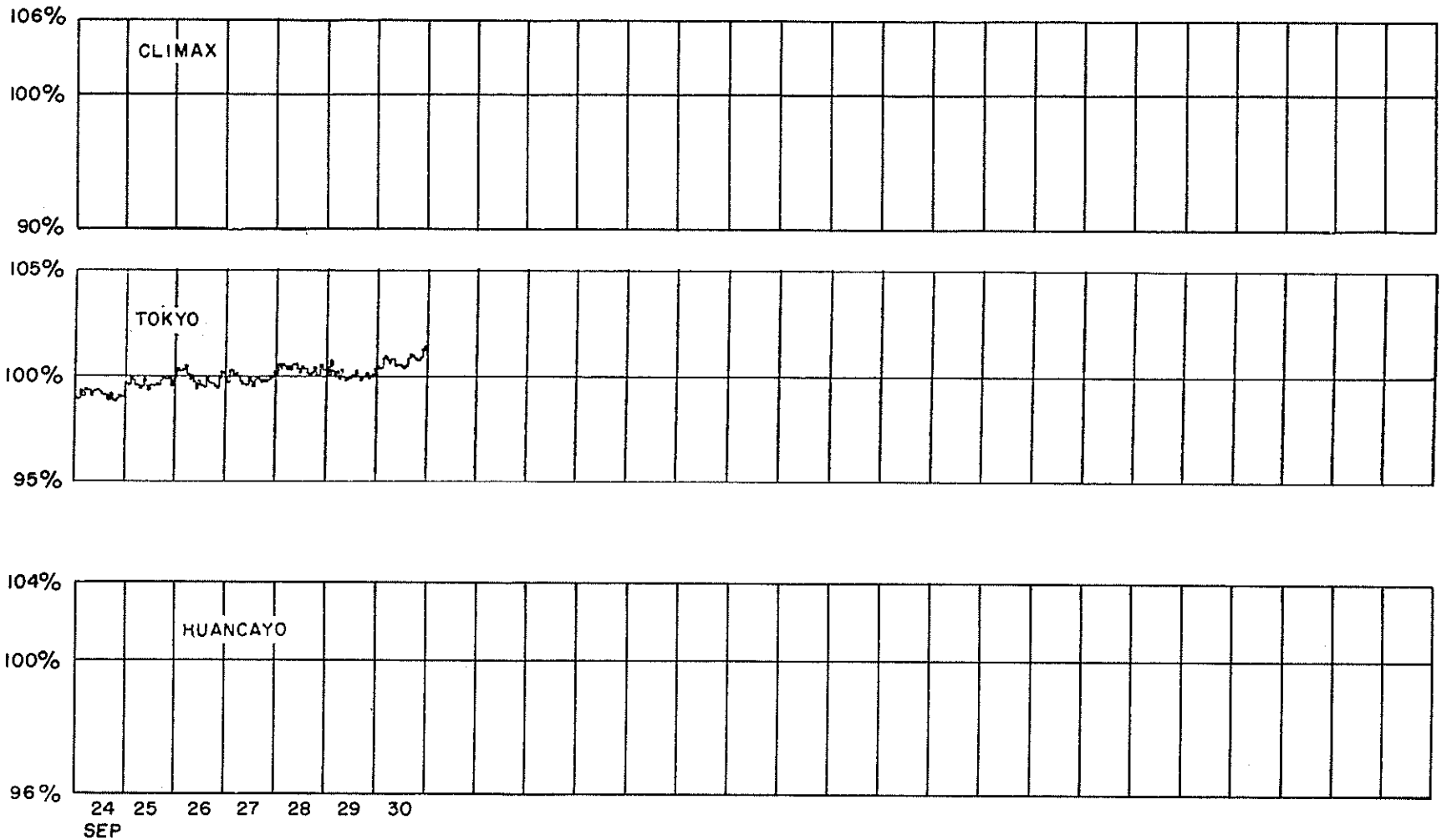
COSMIC RAY INDICES
(Neutron Monitors)

Bartels Rotation 1998 (September 1979)



COSMIC RAY INDICES
(Neutron Monitors)

Bartels Rotation 1998 (September 1979)



GEOMAGNETIC ACTIVITY INDICES

SEPTEMBER 1979

Day	Three-Hourly Indices Kp									Three-Hourly Indices Km								Ap	aa *					Cp
		1	2	3	4	5	6	7	8	Sum	1	2	3	4	5	6	7	8		N	S	M		
1		2	1	1-	1+	2-	2+	4	3	16	2-	1-	1-	2-	1+	2-	3+	3-	10	19	13	6	25		0.5
2	Q2	2+	1	1+	1+	1	2-	1	2-	11+	2+	1	1	1	1	2-	1	2-	5	11	11	10	12	C	0.2
3		3+	2+	2+	2+	3-	1+	2+	1	18-	3	2	2+	2	3-	1	2	1	9	17	15	18	15		0.5
4		1	2+	3	3-	2+	3-	3	2	19	0+	2+	3	2+	2+	3-	3-	2	10	20	18	17	22		0.6
5		4-	3+	3-	3	3+	3+	4-	3-	26-	3	3-	2	3-	3	3	4	3	17	33	26	22	38		0.9
6		4-	4+	3+	2+	3	3-	1-	2-	22-	3	4-	3+	2+	3-	3-	1-	2-	15	29	20	31	19		0.8
7	Q3K	2	3	1+	1-	1-	1-	1+	1-	10+	2+	3-	1	1-	1-	1-	1+	1-	6	11	9	11	9	CK	0.2
8	Q4	1+	1	3-	2	1+	1	2	2-	13	1+	1+	3-	2+	1+	1+	2	2-	6	14	12	14	12	CC	0.3
9	Q1	2	1+	2-	0+	1	1	1+	2-	10+	2	2-	2-	0+	1-	1+	1+	2	5	13	10	10	13	CC	0.2
10		2+	3-	1+	2	2-	3-	2+	2+	17+	2+	3-	2-	2+	2	3-	3-	2+	9	15	19	17	18		0.5
11		2+	2-	3-	4	3	4-	2+	2+	22	2-	1+	3-	4-	3	3+	2	2	14	26	22	20	28		0.8
12	Q9A	3-	1	1-	1-	1+	2	2+	4-	14+	2+	1	1-	0+	1+	2-	2+	3	8	18	8	8	18	K	0.4
13	Q8A	3	3	1-	1	2+	1+	1+	2+	15	2+	2+	1	1	2	1+	1	2	8	20	8	14	14		0.4
14		1+	1+	2	1+	0+	2-	4+	3+	16-	1+	1+	1+	1+	0+	1+	3+	3	10	20	11	9	23		0.6
15	Q0A	3-	2	1	2+	3-	2	2	2-	16+	3-	2-	1+	2+	2+	2-	1+	2-	8	18	13	15	16		0.4
16		3+	3	2+	4-	3+	2+	2	3+	23+	3	2+	2	3-	3	2	2-	3-	14	25	17	26	17		0.8
17		3-	2+	2-	2+	2	3-	2-	4	19+	2	2	2-	2+	2	2+	2-	4-	11	20	19	14	26		0.6
18	D1	6-	5-	7	6+	6-	6	4	2+	42-	5-	5-	6	6	6-	5+	3+	3-	64	66	97	101	63		1.7
19	Q5K	2-	1+	1	1	1+	1	3-	3-	13-	2-	1+	1	1	1	1-	2	3-	6	11	11	9	13	C	0.3
20	D3	3+	2-	2	3-	5	5	2+	4	26	3-	1	2	2+	4+	4+	2+	3+	22	35	34	18	51		1.1
21	D2	5	5+	4-	2+	3-	2	3+	3-	27	4+	4+	3-	2+	2+	1+	3-	3-	23	38	26	45	20		1.1
22	Q6	3-	2+	1-	1	2+	2-	1+	1	13	3-	2-	0+	1+	2+	1+	1	1+	6	12	13	12	14	K	0.3
23	Q7A	2-	2+	2-	1-	2+	3-	1+	1	14-	2	2	1+	1-	2	2+	1+	1-	7	9	15	11	13	C	0.3
24		1-	3+	2+	3+	4	3-	2+	4	23-	1	3-	2	3	4-	3-	2+	3+	15	29	25	20	34		0.9
25	D5*	4	4	3+	1+	2	4	4-	3+	26-	3+	3	3	1	1+	4-	3+	3+	19	29	26	26	29		1.0
26	D4*	4-	4-	3+	3-	3+	3+	4	3+	27+	3+	3	3	2+	3	3	4-	3	19	31	32	26	37		1.0
27		3+	5-	2+	2+	3-	3-	3-	2	23-	3-	4-	1+	2	3-	2+	3-	2	15	23	18	22	20		0.8
28		2+	4	4	2+	2	3-	3+	4-	24+	2	3+	3	2+	2+	3-	3	3+	16	23	30	23	30		0.9
29		4-	4-	3-	2-	4-	3	2+	3-	23+	3+	3	2	1+	3+	3	2+	3-	15	25	25	21	29		0.8
30		4-	4+	4-	3-	3-	3+	2	3	25+	3+	3+	3	2	2+	3	2	3	18	26	19	26	20		1.0
																			14	22.9	20.7	22.0			0.66

Day	Three-Hourly Indices Kn								Three-Hourly Indices Ks							
	1	2	3	4	5	6	7	8	1	2	3	4	5	6	7	8
1	2-	0+	1-	2	2-	2-	3+	3	2	1+	0+	1+	1	1+	3+	2+
2	2+	1-	1	1+	1	2	1	2-	2+	1+	1-	1-	1+	2-	1-	1+
3	3	2-	2	2	3-	1+	2+	1+	3	2	3-	2	2+	1-	2-	1
4	0+	2+	3-	3-	3-	3	2+	2+	1-	2+	3	2+	2	2+	3-	2
5	3	3-	2+	3-	3	3+	4-	3-	3-	3	2	3-	3	3-	4+	3
6	3	4-	3-	3-	3	3-	1	2-	3	4-	4-	2+	2+	2+	1-	1+
7	2	2+	1	1	1-	1-	1+	1-	2+	3-	1	0+	1-	1	1+	1-
8	1+	1	3-	2+	1+	2-	2+	2-	1+	2-	3-	2+	1+	1-	2-	2-
9	2-	1+	1+	1-	1	1+	1+	2+	2+	2	2-	0	0+	1+	1+	2-
10	2	2+	2-	2+	2	3-	3-	2	3-	3-	2-	2+	2	2+	3-	2+
11	2-	1+	3-	4-	3	3+	2+	2	2	2-	3-	4-	3-	3	2-	2
12	2	1-	1	1-	1+	2	2+	3+	3-	1+	1-	0	1-	2-	2+	3-
13	2+	2+	1	1+	2+	1+	1+	2+	2+	2	1	1	2	1	1-	2
14	1	1	2-	1+	0+	2-	4-	3	2-	1+	1+	1+	0+	1-	3+	3+
15	2+	1+	1	2+	2+	2	2-	2-	3	2+	1+	2+	2	1+	1	1+
16	3-	2+	2	3-	3	2+	2-	2+	3+	2+	2	3-	3	2-	1+	3
17	2-	2	2	2+	2+	3-	2	3+	2	2	2-	2+	2	2	1+	4
18	5-	4	6	6	5+	5	4-	3-	5-	5+	6	6	6-	5+	3	2+
19	2-	1+	1+	1	1+	1	2+	3-	2	1+	1	1	1-	0	2-	3-
20	2+	1	2-	3-	5-	4+	2+	3+	3-	1+	2	2+	4	4	2+	3+
21	4	5-	3	2+	2+	2-	3-	3-	5-	4	3-	3-	2+	1+	3-	3-
22	2+	2-	1-	1	3-	1+	1	1+	3-	2-	0+	1+	2	1+	1	1+
23	1+	2-	2-	1-	2	2+	1+	1-	2+	2+	1+	1-	2	2+	1+	1-
24	1-	3-	2-	3	4	3-	2	3+	1+	3-	2	3	3	3-	2+	3
25	3	3	3	1	1+	4-	4-	3	4-	3	3	1	1+	4-	3+	4-
26	3+	3-	3	2+	3	3	4-	3	3+	3	3	3-	3+	3-	4-	3
27	3-	4	1+	2	3-	3-	3-	2+	3-	4-	2-	2	3-	2+	2+	2
28	2	3+	3	2+	2+	3-	3	3+	2	3+	3	2	2	3-	3-	3
29	3+	3-	2	1+	3+	3	2+	3-	3+	3	2	1+	3+	3-	2+	3
30	3+	3+	3	2	3-	3	2	3	4-	4-	3	2+	2+	3	2-	3

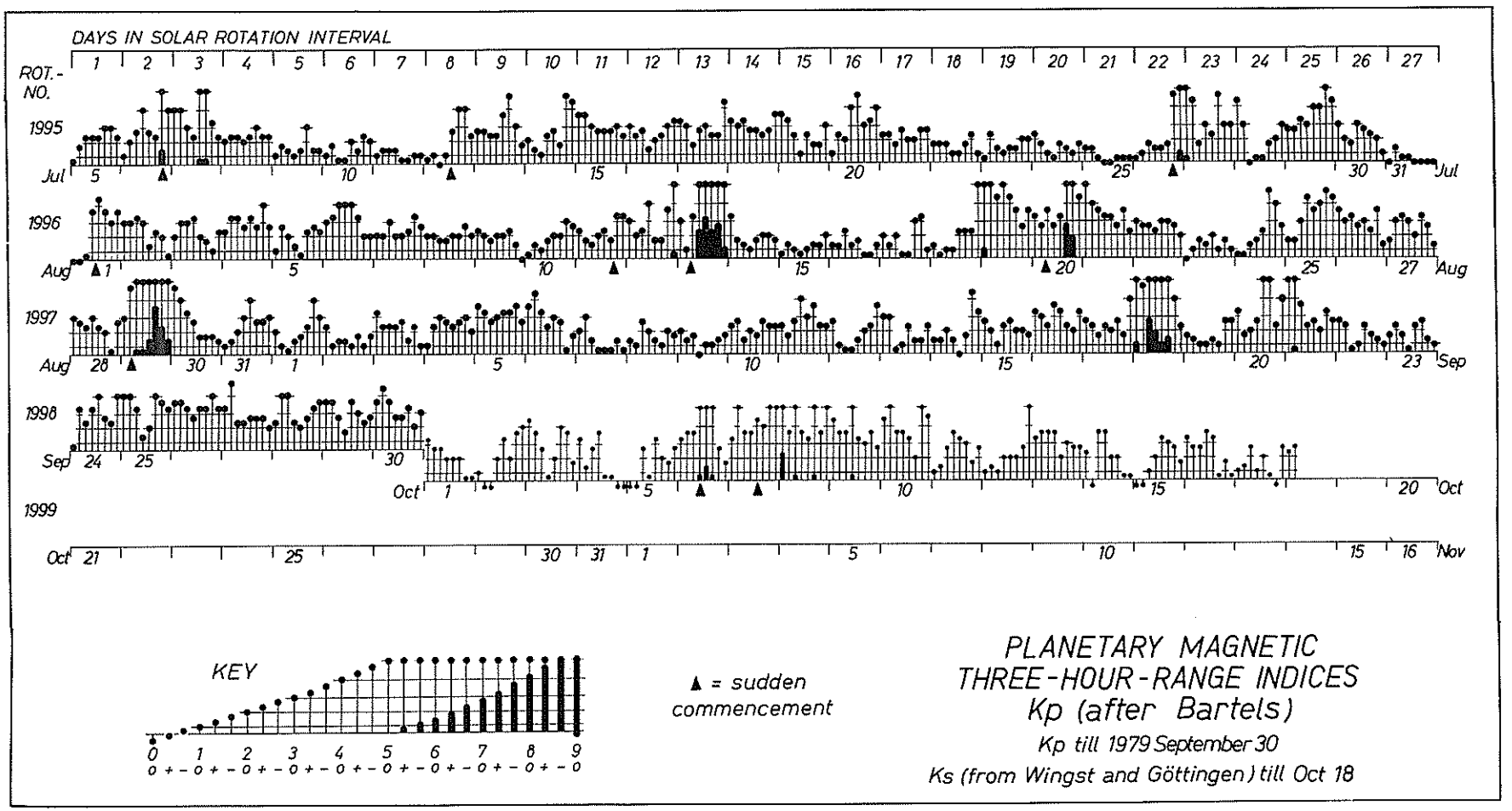
Quiet days (Q) and disturbed days (D), geomagnetic planetary three-hour-range indices (Kp) (integers alone are equivalent to those normally given with a small zero), magnetic character figures (Cp), and average amplitude (Ap) (unit 2 nT) are prepared by Geophysikalisches Institut at the University of Göttingen, F.R. of Germany for the International Service of Geomagnetic Indices. Ten most quiet days [Q1-Q0(10)] and five most disturbed days [D1-D5] are ordered from most quiet or disturbed, respectively. A or K means "not really quiet" (A = "Ap>6", K = "Ap≤ 6 but one Kp≥ 3o or two Kp values ≥ 3-"). An asterisk means "not really disturbed" (Ap<20).

Geomagnetic three-hourly indices Kn, Ks and Km as in *IAGA-Bulletin No. 32* and indices aa ("antipodal") as in *IAGA-Bulletin No. 33* are prepared by M. Menvielle of the Institut de Physique du Globe, Paris, France. Really quiet (C) and quiet but slightly disturbed three-hourly intervals (K) are given for 24-hour and 48-hour intervals centered on 1200 UT.

DAILY AVERAGE INDICES Ap

	1978			1979								
DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	13	13	11	10	6	12	33	18	5	7	15	10
2	12	10	3	19	10	20	36	14	6	4	11	5
3	8	12	5	19	9	13	54	6	4	14	10	9
4	17	5	12	45	19	27	47	7	6	9	15	10
5	8	6	10	23	9	13	52	7	4	9	8	17
6	4	2	5	18	16	30	12	6	34	22	18	15
7	4	9	2	32	6	7	12	11	26	27	10	6
8	5	14	3	8	9	7	12	8	14	9	7	6
9	11	8	3	15	9	15	9	14	15	6	6	5
10	15	16	1	4	6	54	12	7	14	6	7	9
11	5	10	1	4	12	18	6	19	10	4	10	14
12	14	53	4	10	17	6	15	9	7	11	18	8
13	8	22	7	5	3	7	11	8	8	16	76	8
14	5	11	28	8	2	3	15	11	7	14	7	10
15	5	8	28	15	11	8	18	11	10	15	4	8
16	4	6	14	12	7	11	16	5	16	11	5	14
17	5	6	9	7	5	21	11	3	14	14	8	11
18	32	5	48	11	22	7	6	11	6	15	11	64
19	22	13	24	19	15	11	6	24	6	11	35	6
20	9	22	26	12	6	6	2	13	8	18	42	22
21	13	16	12	11	59	4	21	13	15	9	22	23
22	10	28	19	14	33	45	45	36	24	6	12	6
23	6	12	7	27	31	12	23	11	19	6	5	7
24	5	18	6	23	17	15	14	27	10	5	13	15
25	7	60	21	34	14	21	126	34	9	3	22	19
26	18	33	8	28	22	26	12	25	20	17	15	19
27	23	17	14	23	24	18	27	17	10	23	12	15
28	14	5	14	13	17	39	31	11	4	10	10	16
29	16	4	20	13		68	47	30	7	24	77	15
30	25	5	27	16		16	26	10	10	9	15	18
31	20		18	13		19		6		3	12	
MEAN	12	15	13	16	15	19	25	14	12	12	18	14

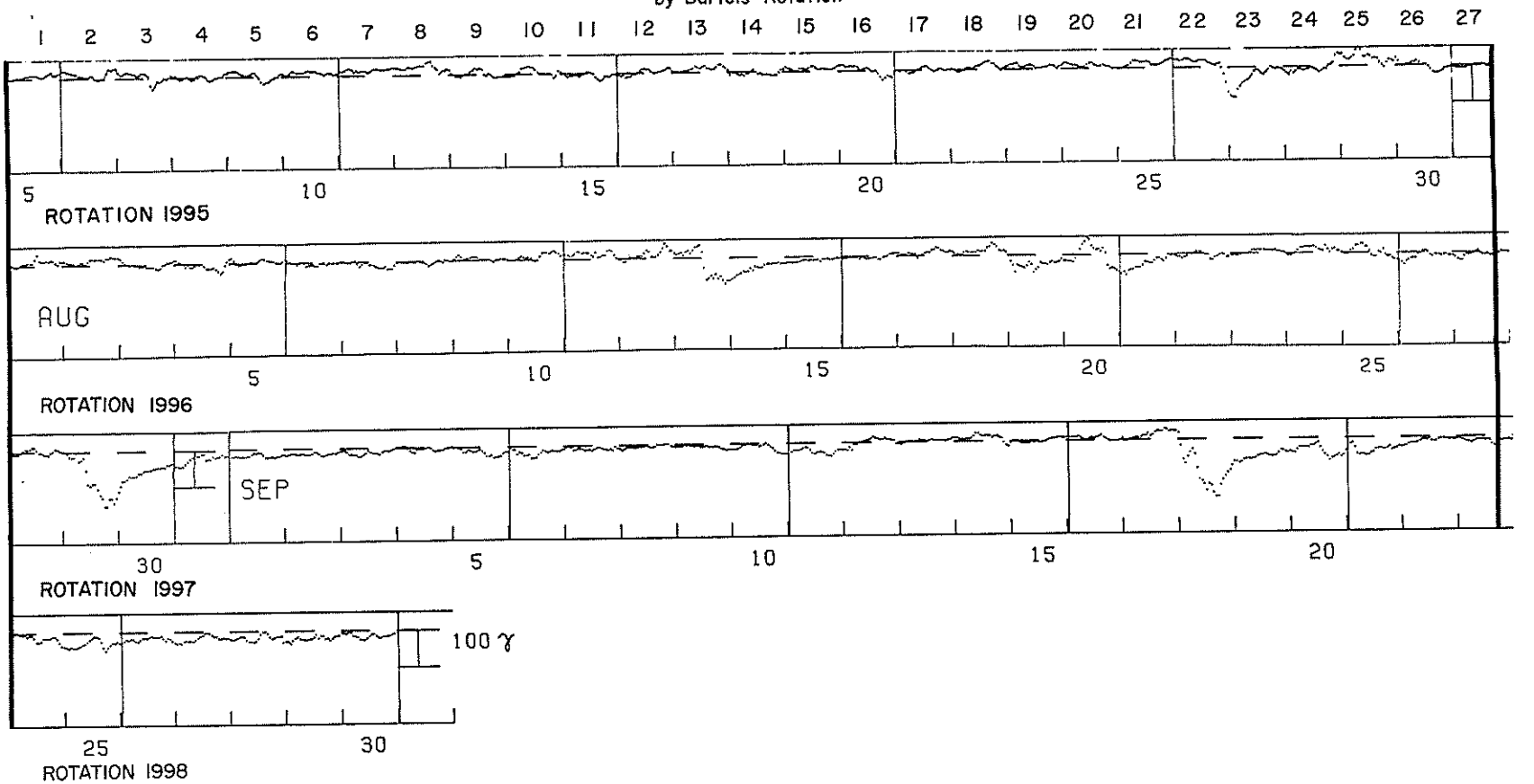
GEOMAGNETIC ACTIVITY INDICES



GEOMAGNETIC ACTIVITY INDICES

Hourly Equatorial Dst

by Bartels Rotation



Note: Both the sensitivity indicator placed on the last day of the month and the zero reference level change from month to month.

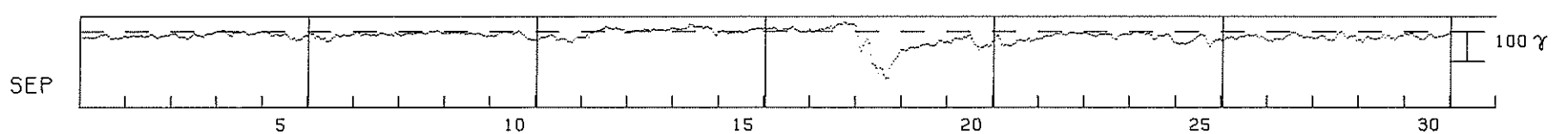
HOURLY EQUATORIAL Dst VALUES (PROVISIONAL)

SEPTEMBER 1979

NASA/GODDARD SPACE FLIGHT CENTER

(Time-UT) (Units-Gammas)

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
1	-20	-21	-19	-20	-21	-21	-21	-20	-18	-14	-11	-12	-9	-11	-16	-23	-24	-23	-21	-24	-21	-20	-16	-15
2	-18	-16	-14	-13	-15	-16	-15	-13	-16	-18	-16	-14	-10	-11	-15	-20	-21	-17	-15	-14	-13	-14	-12	-9
3	-8	-7	-12	-18	-17	-19	-19	-24	-23	-18	-13	-7	-12	-14	-14	-16	-18	-12	-8	-9	-9	-6	-3	1
4	2	1	4	4	-3	-10	-14	-16	-5	-4	-3	-3	-1	1	-2	-9	-12	-9	-9	-8	-4	-2	-1	1
5	-2	0	-4	-7	-14	-14	-9	-11	-14	-14	-10	-7	-12	-17	-25	-26	-22	-30	-28	-27	-24	-17	-13	-14
6	-5	-9	-9	-21	-15	-18	-25	-25	-22	-33	-33	-31	-22	-17	-11	-13	-17	-14	-12	-13	-13	-14	-11	-9
7	-4	0	-5	-13	-12	-8	-8	-10	-13	-12	-11	-14	-10	-6	-5	-7	-10	-12	-13	-10	-14	-4	-8	-11
8	-15	-12	-8	-7	-6	-7	-9	-6	-6	-4	-3	-3	-7	-8	-6	0	0	-1	1	2	1	-4	-7	-8
9	-7	-7	-6	-3	-3	-3	-4	-8	-5	-4	-9	-9	-6	-7	-9	-9	-7	-7	-10	-13	-14	-17	-15	-15
10	-14	-16	-14	-11	-6	-4	-2	-1	-3	-4	-5	-10	-6	-3	1	-4	-10	-13	-20	-20	-27	-30	-29	-30
11	-31	-24	-19	-23	-21	-17	-14	-12	-13	-19	-28	-30	-26	-24	-25	-28	-34	-36	-37	-30	-23	-19	-19	-20
12	-19	-21	-13	-21	-5	-5	0	1	4	6	7	10	15	12	10	7	8	12	8	7	5	5	-5	-6
13	-7	-3	1	2	3	1	1	2	7	5	5	0	4	7	4	3	3	4	3	2	5	6	11	11
14	10	7	7	5	8	7	9	14	22	22	16	13	15	15	14	10	13	15	11	6	-4	-12	-14	-5
15	0	2	3	-4	-8	-6	-6	-6	-1	-5	0	-4	-5	-2	-1	3	6	7	7	9	10	9	8	10
16	9	8	10	8	12	9	4	1	1	7	8	6	9	11	14	7	4	0	-3	-2	-3	-3	0	6
17	-4	-2	2	3	6	8	6	6	12	11	17	10	13	20	24	23	22	30	27	22	24	22	22	17
18	-17	-55	-66	-47	-35	-27	-41	-79	-109	-113	-122	-139	-121	-126	-145	-156	-156	-123	-109	-99	-90	-84	-71	-61
19	-62	-65	-62	-56	-54	-54	-55	-53	-52	-47	-44	-44	-41	-43	-47	-48	-48	-45	-30	-31	-32	-37	-38	-35
20	-38	-39	-30	-24	-24	-24	-25	-25	-19	-20	-15	-12	-25	-37	-45	-51	-61	-54	-52	-48	-44	-51	-46	-34
21	-31	-16	-13	-27	-44	-47	-44	-47	-49	-47	-41	-39	-31	-30	-29	-31	-32	-26	-24	-34	-31	-28	-24	-26
22	-24	-22	-17	-15	-15	-15	-14	-11	-7	-7	-8	-4	-11	-12	-11	-6	-4	-4	-5	-6	-6	-7	-7	-5
23	-5	-8	-10	-13	-14	-17	-13	-10	-9	-9	-8	-10	-9	-11	-21	-25	-27	-16	-12	-10	-9	-8	-11	-10
24	-7	-3	0	-1	-4	-6	-6	-11	-7	-7	-13	-25	-26	-22	-14	-13	-14	-13	-10	-11	-16	-27	-36	-38
25	-40	-43	-39	-41	-42	-39	-37	-33	-30	-25	-19	-15	-11	-11	-14	-26	-41	-51	-40	-34	-28	-30	-25	-30
26	-29	-25	-20	-22	-18	-19	-25	-27	-21	-16	-16	-17	-13	-11	-14	-13	-14	-11	-18	-24	-16	-19	-25	-30
27	-33	-31	-34	-26	-24	-26	-25	-27	-22	-17	-13	-11	-5	-4	-5	-10	-14	-14	-20	-20	-17	-19	-18	-22
28	-24	-22	-19	-15	-14	-16	-25	-29	-29	-31	-28	-20	-9	-3	-1	-8	-17	-22	-16	-15	-16	-14	-32	-29
29	-30	-36	-27	-20	-16	-23	-24	-25	-26	-24	-22	-17	-11	-21	-13	-14	-23	-21	-27	-21	-16	-14	-13	-7
30	-8	-11	-6	-6	-15	-17	-19	-25	-27	-27	-22	-16	-11	-10	-15	-20	-21	-16	-17	-15	-14	-11	-9	-7



NOTE: The above values are based on data from three observatories: Hermanns, Kakioka, and San Juan. The data from Honolulu are not used because of instrumental difficulties. The Provisional Dst values for July and August 1979 were also derived from the same three observatories; see the footnote in the July tabulation of provisional Dst values.

PRINCIPAL MAGNETIC STORMS

SEPTEMBER 1979

OBS. 3 letter IAGA code	GEOMAG-NETIC LATI-TUDE	COMMENCEMENT DAY	hr min (UT)	TYPE	SC - AMPLITUDES D(')	H(γ)	Z(γ)	MAXIMUM 3 HOUR - INDEX K DAY(3 HOUR PERIOD)	K	RANGES D(')	H(γ)	Z(γ)	UT END DAY	HOUR
NEW	55.1N	4	03--	..	..	..	..	06(2)	5	24	88	84	07	06
COL	64.6N	17	23--	..	..	..	..	18(4)	8	204	2020	900	18	21
SIT	60.0N	17	23--	..	..	..	..	18(5)	7	--	--	680	18	18
NEW	55.1N	17	0622	SC	2	9	2	18(5)	7	66	547	368	19	05
WIT	54.2N	17	21--	..	..	..	..	18(1,3)	6	38	240	150	19	20
FRD	49.6N	17	21--	..	..	..	..	18(3)	6	37	246	122	22	04
SJG	29.9N	17	2030	..	..	..	..	18(1)	6	10	178	33	19	08
JAI	17.3N	17	2300	..	..	..	..		-	11	241	71	19	03
SHL	14.6N	17	2300	..	..	..	..		-	9	312	62	19	03
ABG	09.5N	17	2300	..	..	..	..	18(3)	7	10	287	85	19	03
HYB	07.6N	17	0448	SC	- .4	14	- 1	18(1)	5	9	143	37	18	05
GUA	04.0N	17	2127	..	..	..	..	18(3)	7	10	270	50	19	04
ANN	01.5N	17	2300	..	..	..	..		-	12	381	130	19	03
HUA	00.6S	17	1100	..	..	..	..	18(6)	7	8	394	72	18	24
TRD	01.1S	17	2300	..	..	..	..		-	6	--	210	19	03
PMG	18.6S	17	21--	..	..	..	..	18(3)	8	9	280	100	20	00
GNA	43.2S	17	23--	..	..	..	..	18(4)	7	36	210	240	18	23
KGL	56.5S	17	21--	..	..	..	..	18(4,5,6)	8	--	--	--	18	21
HYB	07.6N	18	0549	SC	- 1.3	68	-10	18(3,4,5)	8	9	338	45	19	13
HER	33.7S	18	0547	SC*	- 7	26	--	18(3,4)	6	23	192	70	19	12
HYB	07.6N	19	1842	SC	- .1	9	- 1	20(5)	5	8	138	44	22	04
NEW	55.1N	20	08--	..	..	..	..	21(2)	6	35	119	206	22	04
JAI	17.3N	20	0800	..	..	..	..		-	10	102	32	22	03
SHL	14.6N	20	0800	..	..	..	..		-	7	104	40	22	03
ABG	09.5N	20	0800	..	..	..	..	20(5) 21(1,2)	5	9	118	64	22	03
ANN	01.5N	20	0800	..	..	..	..		-	8	157	97	22	03
TRD	01.1S	20	0800	..	..	..	..		-	5	220	105	22	03
HER	33.7S	20	1100	..	..	..	..	21(1)	5	25	90	79	21	16
FRD	49.6N	24	12--	..	..	..	..	27(2)	5	20	112	51	30	
HYB	07.6N	24	0900	..	..	..	..	25(6)	5	7	156	47	27	05
KGL	56.5S	25	13--	..	..	..	..	25(6)	5	--	--	--	26	16
HUA	00.6S	26	1200	..	..	..	..	26(5,6)	5	7	293	48	26	23

Reports were received from the following observatories:

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

SUDDEN COMMENCEMENTS AND SOLAR FLARE EFFECTS

SEPTEMBER 1979

PRELIMINARY REPORT ON RAPID MAGNETIC VARIATIONS

The meaning of the station symbols is given in the IAGA-Bulletin no. 32h, page 106-116.
Times of ssc are mean values.

Sudden commencements followed by a magnetic storm or a period of storminess (ssc)

18 0546: A: FUR MMB KAK HAZ MPO

Solar-flare effects (sfe)

Effects confirmed by ionospheric or solar observations are underlined.

05	0407 - 0423	HAZ		19	1423 - 1434	HUA	
09	0241 - 0305	KAK HAZ		19	1844 - 1852	HUA	(bp: B: MPO)
10	0514 - 0538	HAZ KNY		19	2301 - 2330	HAZ	
11	1453 - 1512	HUA		21	2350 - 2425	HAZ	
11	1539 - 1614	HUA (b: A: MPO)		22	0105 - 0134	HAZ	
13	1310 - 1339	WNG EBR HUA		22	0218 - 0232	HAZ	
14	0325 - 0334	HAZ		22	0234 - 0245	MMB KAK HAZ	
14	1501 - 1514	HUA		23	0202 - 0235	KAK HAZ KNY	
15	1018 - 1045	WNG NGK AQU (si: A: FUR-bp: B: MPO)		23	1531 - 1543	HUA	
16	0105 - 0154	KAK HAZ KNY		24	0507 - 0523	HAZ KNY	(si: C: MPO)
16	0939 - 0958	WNG NGK AQU EBR		24	0918 - 1003	NGK	
16	1212 - 1231	HUA		24	1621 - 1633	HUA	
19	0359 - 0439	HAZ		26	0918 - 0946	NGK	

Very unusual events

n o n e

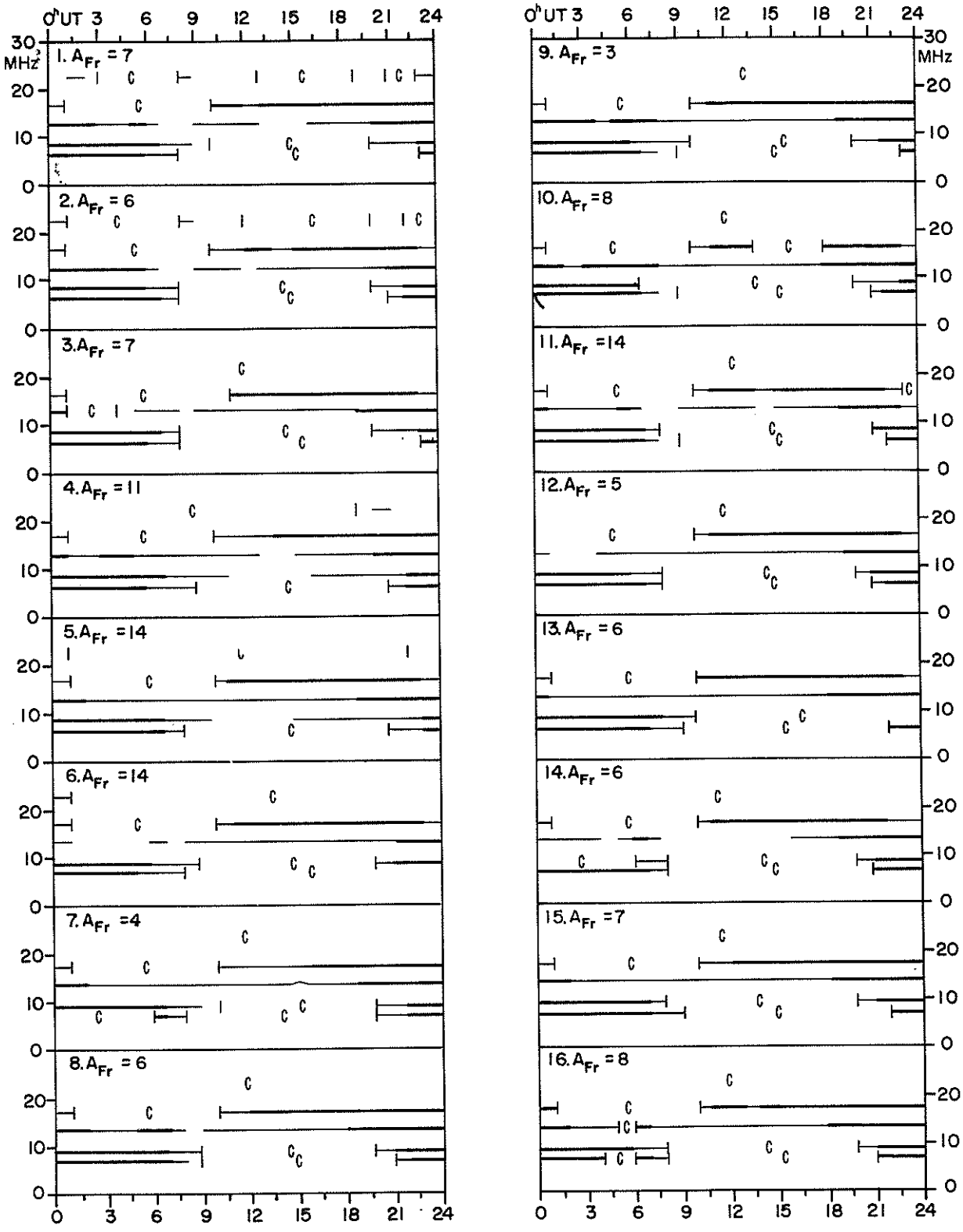
RADIO PROPAGATION QUALITY INDICES

SEPTEMBER 1979

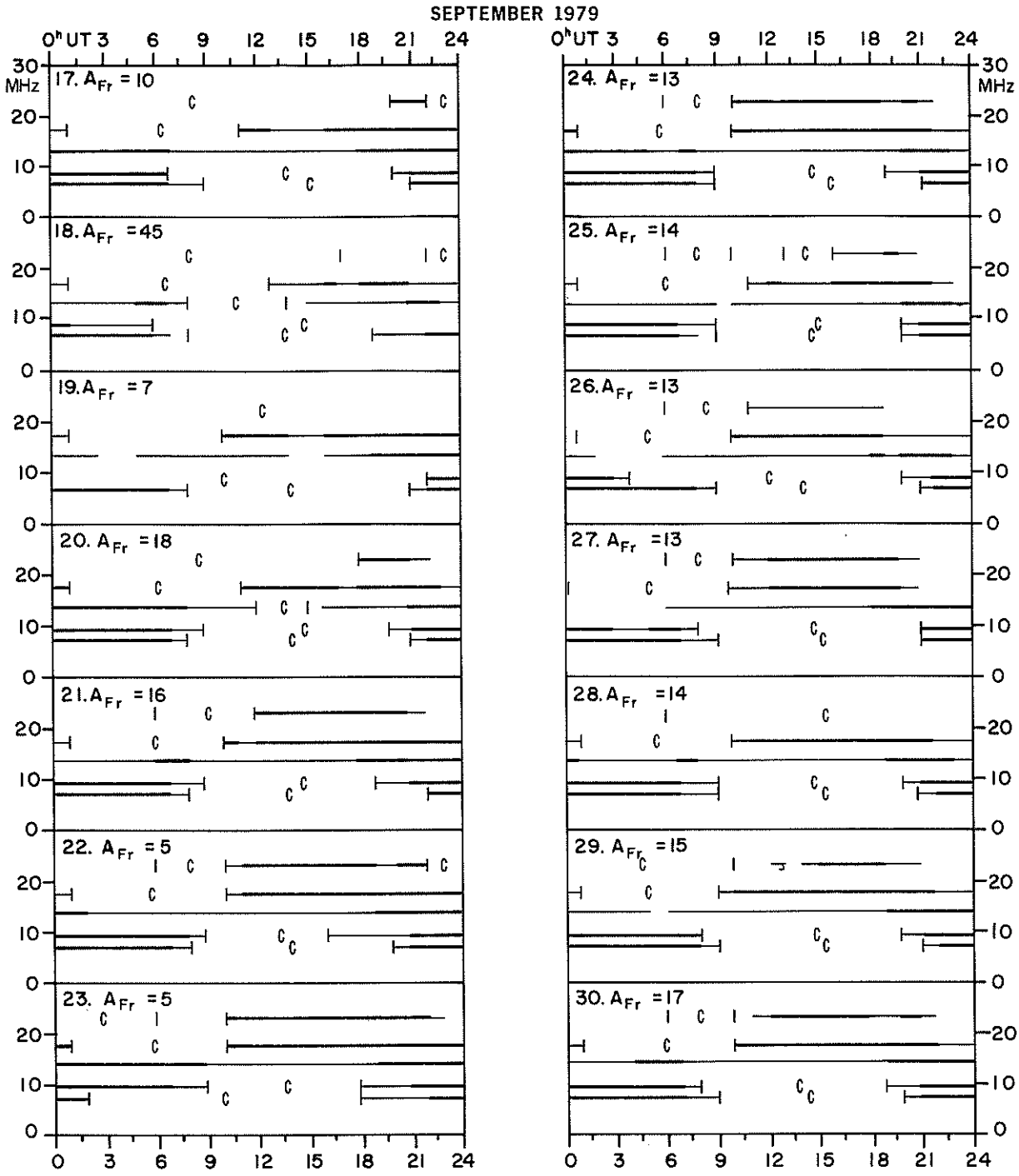
DAY	TOKYO	HALIFAX	TEHERAN	MOSCOW	CANBERRA	BRACKNELL
1	3.8	5.2	10.3	11.8	2.5	11.8
2	4.0	5.4	10.7	10.6	2.4	11.7
3	3.8	5.7	10.9	11.9	2.9	11.2
4	4.5	5.5	10.2	11.6	2.7	12.8
5	3.7	5.4	10.8	11.6	2.8	12.4
6	3.3	5.6	11.1	12.2	2.8	11.9
7	3.8	5.6	11.3	11.8	3.2	12.5
8	3.8	6.0	11.3	12.1	3.4	12.8
9	3.5	6.2	11.0	12.3	3.5	12.3
10	3.5	5.8	11.4	12.2	3.7	12.4
11	2.7	5.4	10.9	12.0	3.6	12.3
12	3.5	6.0	10.7	12.2	3.4	12.6
13	3.7	6.5	11.3	11.9	3.3	12.1
14	3.6	6.0	9.7	10.4	3.0	12.3
15	4.6	6.3	11.8	11.5	3.7	12.7
16	4.7	5.9	11.8	11.4	3.7	12.2
17	3.8	5.4	10.5	10.9	3.5	12.9
18	3.0	4.6	10.8	10.1	2.9	12.5
19	5.0	6.1	11.8	12.3	3.4	12.6
20	3.1	5.1	11.3	12.5	3.1	12.9
21	3.4	6.4	11.4	11.1	3.4	11.6
22	4.5	6.5	11.8	11.7	3.7	12.5
23	5.0	7.0	12.2	11.5	3.6	12.7
24	3.1	6.5	11.1	11.5	3.3	11.6
25	3.4	5.9	10.9	11.9	3.4	12.2
26	3.0	5.4	12.0	12.2	3.4	11.9
27	4.0	6.5	11.9	11.8	2.9	12.6
28	2.6	6.1	11.8	12.5	3.0	12.2
29	2.9	6.1	10.7	11.6	2.3	11.0
30	3.2	6.4	11.9	12.0	2.6	12.4
MEAN	3.7	5.9	11.2	11.7	3.2	12.3

TRANSMISSION FREQUENCY RANGES -- NORTH ATLANTIC PATH

SEPTEMBER 1979



TRANSMISSION FREQUENCY RANGES -- NORTH ATLANTIC PATH



Field strengths from five frequencies, 6.4, 8.5, 12.8, 17.1 and 22.4 MHz, observed on a Lüchow - Halifax circuit are represented above. Heavy solid lines represent field strengths ≥ -12 dB above 1 μv/m (transmitter power reduced to 1 kW). Observed field strengths between -12 dB above 1 μv/m and -40 dB above 1 μv/m are represented by the fine line.

Adapted from Observations by Deutsche Bundespost

☆ GPO1979—677-108/7

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."