U.S. DEPARTMENT OF COMMERCE
Philip M. Klutznick, Secretary
NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION
Richard A. Frank, Administrator
ENVIRONMENTAL DATA AND INFORMATION SERVICE
Thomas D. Potter, Director

Solar - Geophysical Data

NO. 428 APRIL 1980

Part II (Comprehensive Reports)

DATA FOR
OCTOBER 1979

NATIONAL GEOPHYSICAL AND SOLAR - TERRESTRIAL DATA CENTER
BOULDER, COLORADO

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

For sale through the National Geophysical and Solar-Terrestrial Data Center, NOAA, Boulder, CO 80303. Subscription Price: $40.00 annually for both part I (Prompt Reports) and part II (Comprehensive Reports) or $21.00 annually for either part. Annual supplement containing explanation is included. For foreign mailing add $32.00 for both parts or $16.00 for either part. Single issue price is $1.75 for either part and $1.50 for the extra issue. Make checks and money orders payable to: Department of Commerce, NOAA/NGSDC.
Note: $2.00 handling charge per order.

To standardize referencing these reports in the open literature, the following format is recommended:
Solar-Geophysical Data, 426 Part I (or Part II), pages, February 1980, U.S. Department of Commerce (Boulder, Colorado, U.S.A. 80303).

SOLAR-GEOPHYSICAL DATA

No. 428

Issued in two parts

Helen E. Coffey, Editor

J. Virginia Lincoln, Chief
Solar-Terrestrial Physics Division

CONTENTS

Part I (Prompt Reports)

	PAGE
Index for 1979-1980	2
Data for March 1980	3-36
Data for February 1980	37-141
Late Data	143-168
Cosmic Rays	
Deep River/Alert/Climax/Huancayo Jan 1980	
Geomagnetic Indices Jan 1980	
Hourly Equatorial Dst Values (Provisional)	
Chart of Dst by Bartels 27-day Rotation	
Daily Solar Activity Centers	
Regions of Solar Activity, late Jan 1980/Dec 1979	

Part II (Comprehensive Reports)

Index for 1979-1980	2
Data for October 1979	3-29
Note on delay of Solar Flare Data	4

DETAILED COVERAGE FOR 1979-80 PUBLISHED IN "SOLAR-GEOPHYSICAL DATA"

		1979 Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	1980 Jan	Feb	Mar
A.	SOLAR AND INTERPLANETARY PHENOMENA												
A.1	Sunspot Drawings	418A 48	419A 48	420A 50	421A 50	422A 52	423A 50	424A 50	425A 48	426A 50	427A 50	428A 44	
A.2a	Zurich Provisional Relative Sunspot Numbers Rz	417A 9	418A 11	419A 11	420A 11	421A 11	422A 11	423A 11	424A 11	425A 11	426A 10	427A 9	428A 10
A.2b	Zurich Final Sunspot Numbers Rz	428A 9	428A 9	428A 9	428A 9	428A 9	428A 9	428A 9	428A 9	428A 9			
A.2c	American Relative Sunspot Numbers RA	417A 9	418A 11	419A 11	420A 11	421A 11	422A 11	423A 11	424A 11	425A 11	426A 10	427A 9	428A 10
A.3a	Mt. Wilson Magnetograms	418A 48	419A 48	420A 50	421A 50	422A 52	423A 50	424A 50	425A 48	426A 50	427A 50	428A 44	
A.3b	Mt. Wilson Magnetic Characteristics of Sunspots	418A108	419A110	420A110	421A112	422A 11	423A110	424A112	425A108	428A150	427A112	428A102	
A.3c	Kitt Peak Magnetograms	418A 48	419A 48	420A 50	421A 50	422A 52	423A 50	424A 50	425A 48	426A 50	427A 50	428A 44	
A.3d	Mean Solar Magnetic Field (Stanford)	417A 36	418A 38	419A 38	420A 40	421A 40	422A 42	423A 40	424A 40	425A 36	426A 38	427A 38	428A 34
A.3e	Stanford Magnetograms	418A 48	419A 48	420A 50	421A 50	422A 52	423A 50	424A 50	425A 48	426A 50	427A 50	428A 44	
A.4	H-alpha Filtergrams	418A 48	419A 48	420A 50	421A 50	422A 52	423A 50	424A 50	425A 48	426A 50	427A 50	428A 44	
A.5	Calcium Plage Drawings - Mt. Wilson	418A 48	419A 48	420A 50	421A 50	422A 52	423A 50	424A 50	425A 48	426A 50	427A 50	428A 44	
A.5a	Calcium Plage (Mt. Wilson) and Sunspot Regions	418A108	419A110	420A110	421A112	422A114	423A110	424A112	425A108	428A150	427A112	428A102	
A.5b	Mt. Wilson Daily Calcium Plage Indices	418A118	419A123	420A121	421A125	422A129	423A124	424A125	425A121	426A112	427A122	428A112	
A.6	H-alpha Synoptic Charts	418A 42	419A 43	420A 44	421A 44	422A 46	423A 44	424A 44	425A 40	426A 42	427A 42	428A 38	
A.6b	Synoptic Chart and Active Regions (Paris)	426B 38	426B 39	426B 40	426B 41	427B 48							
A.6c	Stanford Solar Magnetic Field Synoptic Charts	418A 43	419A 44	420A 46	421A 46	422A 48	423A 46	424A 46	425A 42	426A 44	427A 44	428A 40	
A.6d	Kitt Peak Solar Magnetic Field Synoptic Charts	418A 45	419A 45	420A 48	421A 48	422A 50	423A 48	424A 48	425A 44	426A 46	427A 46	428A 42	
A.7f	Helium D3 Chromosphere (Big Bear)	417A 33	418A 34	419A 34	420A 35	421A 37	422A 38	423A 41	425B 28	425A 37	426A 39	427A 39	428A 35
A.7g	Helium Synoptic Maps (KPNO)	417A 32	418A 33	419A 33	420A 34	421A 36	423B 75	425A 46	425A 47	426A 48	427A 48		
A.7h	Coronal Line Emission (Sac Peak)	418A 48	419A 48	420A 50	421A 50	422A 52	423A 50	424A 50	425A 48	426A 50	427A 50	428A 44	
A.8aa	2800 MHz - Daily Values of Solar Flux (ARO-Ottawa)	417A 9	418A 11	419A 11	420A 11	421A 11	422A 11	423A 11	424A 11	425A 11	426A 10	427A 9	428A 10
A.8ac	2800 MHz - Daily Values of Adj. Solar Flux (ARO-Ottawa)	417A 9	418A 11	419A 11	420A 11	421A 11	422A 11	423A 11	424A 11	425A 11	426A 10	427A 9	428A 10
A.8g	Daily Values of Adjusted Solar Flux (AFGL)	417A 9	418A 11	419A 11	420A 11	422B 84	422A 11	423A 11	424A 11	425A 11	426A 10	427A 9	428A 10
A.9cb	8.6 mm Radio Maps of the Sun (NOSC - La Posta)	---	419A 48	420A 50	421A 50	422A 52	423A 50	424A 50	425A 48	426A 50	427A 50	428A 44	
A.9d	2 cm Radio Maps of the Sun (NOSC - La Posta)	---	419A 48	420A 50	421A 50	422A 52	423A 50	424A 50	425A 48	426A 50	427A 50	428A 44	
A.10a	169 MHz - Interferometric Observations (Nancay)	417A 21	419B 52	420B 69	420A 24	422D 85	422A 25	423A 27	424A 25	426A148	426A 23	427A 23	428A 20
A.10c	21 cm East-West Solar Scans (Fleurs)	417A 24	418A 25	420B 70	420A 27	421A 28	422A 23	423A 30	424A 28	425A 27	426A 26	427A 26	
A.10d	43 cm East-West Solar Scans (Fleurs)	417A 25	418A 26	420B 71	420A 28	421A 29	422A 29	423A 31	424A 29	425A 28	426A 27	427A 27	
A.10e	10.7 cm East-West Solar Scans (Ottawa-ARO)	417A 23	418A 24	419A 26	420A 26	421A 27	422A 27	423A 29	424A 27	425A 26	426A 25	427A 25	428A 22
A.10f	3 cm East-West Solar Scans (Toyokawa)	417A 22	418A 23	419A 25	420A 25	421A 26	422A 26	423A 28	424A 26	425A 25	426A 24	427A 24	428A 21
A.11k	Solar X-ray Radiation (SOLRAD 11)	418A122	419A126	420A124	421A129	422A133	423A128	426A158	---	---	---	---	---
A.11g	Solar X-ray (SMS/GOES) (graphs)	422B 31	423B 17	424B 29	425B 20	426B 24	427B 28	428B 24					
A.12ba	Cosmic Ray Protons (Pioneers 6 & 7)	---	---	---	---	---	---	---	---	---	---	---	---
A.12bb	Cosmic Ray Protons (Pioneers 8 & 9)	---	---	---	---	---	424B 39	---	---	---	426A 32	427A 33	428A 28
A.12e	Energetic Solar Particles (IMP H & J)	422B 26	424B 40	427B 37	426B 33	427B 42							
A.13a	Solar Wind (Pioneers 6 & 7)	---	---	---	---	---	---	---	---	---	---	427A 32	428A 27
A.13ab	Solar Wind (Pioneers 8 & 9)	---	---	---	---	---	424B 39	---	---	---	426A 32	427A 33	428A 28
A.13d	Solar Wind from IPS Measurements	417A 37	418A 35	419A 35	420A 37	422B 89	422A 39	424B 36	424A 37	426A146	426A 34	427A 35	428A 30
A.13e	Solar Plasma (IMP H & J)	422B 25	423B 17	424B 28	425B 19	426B 23	427B 27	428B 23					
A.13f	Solar Wind (Pioneer 12 (Venus))	417A 31	418A 32	419A 32	420A 36	421A 35	422A 37	423A 37	424A 36	425A 32	426A 33	427A 34	428A 29
A.17	Interplanetary Magnetic Field (Pioneer 8)	---	---	---	---	---	---	---	---	---	---	---	---
A.17	Interplanetary Magnetic Field (Pioneer 9)	---	---	---	---	---	424B 39	---	---	---	426A 32	427A 33	428A 28
A.17	Interplanetary Magnetic Field (Pioneer 12)						423B 73	424B 38	425D 29	426A116			
A.17c	Inferred IP Magnetic Field	417A 34	418A 36	419A 36	420A 38	421A 38	422A 40	423A 38	424A 38	425A 34	426A 36	427A 36	428A 32
A.18	Interplanetary Electric Field (Pioneer 8)	---	---	---	---	---	---	---	---	---	---	---	---
A.18	Interplanetary Electric Field (Pioneer 9)	---	---	---	---	---	424B 39	---	---	---	426A 32	427A 33	428A 28
B.	IONOSPHERIC (AND RADIO WAVE PROPAGATION) PHENOMENA												
B.52	Graphs of Transmission Frequency Range	418A166	419A168	420A166	421A166	422A178	423A174	424A154	425A152	426A142	427A154	428A140	
B.53	Quality Figures Based on Frequency Ranges	418A165	419A167	420A168	421A165	422A180	423A173	424A153	425A151	426A141	427A153	428A139	
C.	FLARE-ASSOCIATED EVENTS												
C.1a	Optical Observations Flares	417A 12	418A 14	419A 14	420A 14	421A 14	422A 14	423A 15	424A 15	425A 15	426A 15	427A 14	428A 15
C.1ba	Optical Observations Flares (Standardized Data)												
C.1d	Flare Patrol Observations	417A 20	418A 23	419A 24	420A 23	421A 25	423B 72	423A 26	424A 24	425A 24	427A158	427A 22	
C.1d	Flare Patrol Observations												
C.1e	Flare Indices (by day)												
C.1f	Flare Indices (by Region)												
C.3	Solar Radio Waves - Outstanding Occurrences	422B 4	423B 4	424B 4	425B 5	426B 5	427B 5	428B 5					
	Solar Radio Waves - Fixed Frequencies - Selected	417A 26	418A 28	419A 27	420A 29	421A 30	422A 30	423A 32	424A 30	425A 29	426A 28	427A 28	428A 23
C.3t	43.25, 80 and 160 MHz Selected Bursts (Culgoora)												
C.4a	Solar Radio Spectral Obs. (Fort Davis)	420B 72	420B 75	420A139	423B 76	423B 78	423A143	426A149	426A153	426A117	427A126	428A116	
C.4d	Solar Radio Spectral Obs. (Culgoora)	418A137	419A142	420A139	421A145	422A149	423A143	424A130	425A125	426A117	427A126	428A116	
C.4e	Solar Radio Spectral Obs. (Weissenau)	418A137	419A142	420A139	422B 86	422A149	423A143	424A130	425A125	426A117	427A126	428A116	
C.4f	Solar Radio Spectral Obs. (Sagamore Hill)	418A137	419A142	420A139	421A145	---	---	---	---	---	---	---	
C.4h	Solar Radio Spectral Obs. (Dwingeloo)	418A137	419A142	---	421A145	422A149	423A143	424A130	425A125	426A117	427A126	428A116	
C.4i	Solar Radio Spectral Obs. (Bleien)	418A137	419A142	---	---	422A149	423A143	424A130	425A125	426A117	427A126	428A116	
C.4j	Solar Radio Spectral Obs. (Manila)	418A137	419A142	420A139	421A145	422A149	---	424A130	425A125	426A117	427A126	---	
C.4k	Solar Radio Spectral Obs. (Learmonth)					422A149	423A143		425A125		427A126	428A116	
C.4l	Solar Radio Spectral Obs. (Palehua)					422A149	423A143		425A125		427A126	428A116	
C.5e	Solar X-ray (SMS/GOES) (graphs)	422B 31	423B 17	424B 29	425B 20	426B 24	427B 28	428B 24					
C.6	Sudden Ionospheric Disturbances	418A119	419A124	420A122	421A126	422A130	423A125	424A126	425A122	426A113	427A123	428A113	
D.	GEOMAGNETIC AND MAGNETOSPHERIC PHENOMENA												
D.1a	Geomagnetic Indices Kp, Kn, Ks, Km, Ap, aa, Cp	418A158	419A160	420A160	421A159	422A170	423A166	424A147	425A144	426A133	427A148	428A135	
D.1ba	27-day Chart of Kp Indices	418A160	419A162	420A162	421A161	422A172	423A168	424A149	425A146	426A135	427A150	428A137	
D.1c	27-day Chart of C9	426A136	426A136	426A136	426A136	426A136	426A136	426A136	426A136	426A136			
D.1ca	aa graph 1868 - present	426A137	426A137	426A137	426A137	426A137	426A137	426A137	426A137	426A137			
D.1d	Principal Magnetic Storms	418A163	419A165	420A165	421A164	422A175	423A171	424A152	425A149	426A140	427A151	428A138	
D.1e	Reduced Magnetograms												
D.1f	Sudden Commencement and Solar Flare Effects	419B 63	419A166	421B 42	422B 90	422A177	423A172	425B 33	425A150	427A164	427A152		
D.1g	Equatorial Indices Dst	418A162	419A164	420A164	421A163	422A174	423A170	424A151	425A148	426A139	428A147		
D.1h	Geomagnetic Substorm Log (Boulder)	417A 38	418A 39	419A 39	420A 41	421A 41	422A 43	423A 42	424A 41	425A 38	426A 40	427A 40	428A 36
F.	COSMIC RAYS												
F.1a	Cosmic Ray Neutron Counts (Deep River)	418A151	419A153	420A155	421A158	422A165	423A161	425B 32	427A159	427A159	428A146		
F.1b	Cosmic Ray Neutron Counts (Climax)	418A151	419A153	420A155	421A158	422A165	423A161	425B 32	425A143	426A132	428A146		
F.1c	Cosmic Ray Neutron Counts (Alert)	418A151	420B 78	420A155	421A158	422A165	423A161	425B 32	427A159	427A159	428A146		
F.1f	Cosmic Ray Neutron Counts (Calgary)												
F.1h	Cosmic Ray Neutron Counts (Thule)	419B 62	419A153	420A155	421A158	422A165	423A161	424A146	425A143	426A132	427A147	428A134	
F.1i	Cosmic Ray Neutron Counts (Kiel)	418A151	419A153	420A155	421A158	422A165	423A161	427A159	425A143	426A132	427A147	428A134	
F.1j	Cosmic Ray Neutron Counts (Tokyo)	418A151	419A153	420A155	421A158	422A165	423A161	427A159	425A143	426A132	427A147	428A134	
F.1k	Cosmic Ray Neutron Counts (Kula)										---	---	
F.1l	Cosmic Ray Neutron Counts (Huancayo)	419B 58	420B 79	420A155	421A158	423B 81	425B 32	425D 32	426A177	427A159	428A146		
H.	MISCELLANEOUS												
H.60	IUWDS Alert Decisions	417A 4	418A 5	419A 5	420A 5	421A 5	422A 4	423A 4	424A 4	425A 4	426A 4	427A 4	428A 4
H.62	Abbreviated Calendar Record												

Notes:

"418A 48" listed under 1979 Apr means that the sunspot drawings for April 1979 were contained in *Solar-Geophysical Data* Number 418 - Part I, beginning on page 48.

A = Part I, B = Part II.

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

SGD 428 Part II (Comprehensive)

OCTOBER 1979 DATA

Contents

	Page
Active Regions (Data not available at time of publication.)	
Synoptic Solar Maps (Data not available at time of publication.)	SEE NOTE ON PAGE 4.
Solar Flares (Data not available at time of publication.)	
Hα Solar Flares (Standardized Data)	
Daily Flare Indices	
Intervals of No Flare Patrol Observation	
Solar Radio Emission	
Outstanding Occurrences (Fixed Frequencies)	5-22
Energetic Solar Particles and Plasma	
IMP 8 Solar Wind Plasma	23
IMP 8 Electrons, Protons and Alpha Particles (Data not available at time of publication.)	
Solar X-ray Radiation	
SMS-GOES	24-29

NOTE ON SOLAR FLARE DATA DELAY:

Solar Flare data for publication are now over a year delayed from date of observation, rather than the usual six months. Several problems have caused this delay. A basic step of flare processing is using the Carte Synoptique de la Chromosphere to identify active centers. Because these Carte Synoptique data are also currently delayed, the Meudon Observatory staff, who performs this analysis, are hindered in their efforts. Meudon is also changing to another computer, which can mean computer program conversion problems that can delay the work. NGSDC is also working on some conversion problems.

A delay in the final listing of the solar flare data also delays the Daily Flare Index, the Regional Flare Index and the Abbreviated Calendar Record. We deeply regret this situation and hope it will improve in the near future. We ask for your patience in the interim.

For researchers who need the solar flare data more promptly, NGSDC has available "Preliminary" final listings of solar flares for April-August 1979. These fairly complete listings do not have the final Meudon corrections, and thus will not be published until we receive these corrections. However, they are available on request with the stipulation that they are recognized as "Preliminary" final listings when used in research projects. A fee may be charged for reproducing these data if a large demand ensues. Please contact the editor, Helen Coffey, for copies of these listings (phone: (303) 499-1000 X6223; FTS: 323-6223; Telex: SOLTERWARN BLDR 45897.)

SOLAR RADIO EMISSION
OUTSTANDING OCCURRENCES

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	POLARIZATION OR REMARKS
01	202	IZMI	44	NS	0600.0E		360.0D	60			
	127	TORN	44	NS	0630.0E	1224.2	550.0D	840	10		V2
	113	POTS	44	NS	0632.0E	1006	332.0D	28			
	260	ONDR	44	NS	0710.0E		539.0D	104	14		
	536	ONDR	44	NS	0720.0E		368.0D	22			
	200	HIRA	44	NS	2029.0E	0340	710.0D	240	95		ML
	100	HIRA	44	NS	2032.0E	2203	230.0D	35	8		SL
	5730	IRKU	1	S	0143.0	0143.7	3.5	35			L
	3100	CRIM	3	S	0554.0	0556.0	3.0	35	12		
	5730	IRKU	2	S	0555.3	0556.7	3.5	100			L
	9100	GORK	21	GRF	0555.7	0602.9	21.0	20	7.5		
	9100	GORK	2	S/F	0556.1	0556.9	1.4	26	12		
	6100	KISV	45	C	0617.5	0618.3	13.0	90			
	6100	KISV			0617.5	0625.5		50			
	6100	KISV	26	FAL	0630.0	0720		9			
	113	POTS	4	S/F	0650.6	0650.8	.3	200	40		
	33	UPIC	42	SER	0650.6	0650.6	125.2				
	29	UPIC	42	SER	0650.7	0650.8	125.1				
	6100	KISV	8	S	0654.5	0655.5	2.0	9			
	6100	KISV	4	S/F	0720.0	0724.7	10.0	65			
	10400	BERN	3		0722.2	0724.3	7.0	39.0			
	8400	BERN	3		0722.2	0724.3	7.0	63.0			
	3100	CRIM	3	S	0722.5	0724.5	6.0	59	20		
	5730	IRKU	2	S	0723.0U	0725	8.0	150			L
	3000	POTS	3	S	0723.0	0724.8	6.5	36			
	10715	DWIN	1	S	0723.0	0724	6.0	20	10		
	9100	GORK	21	GRF	0723.0	0726.7	46.0	16	6		
	15000	KISV	20	GRF	0723.0	0725	5.0	16			
	2650	DWIN	1	S	0723.0	0724	7.0	25	15		
	8800	MANI	3	S	0723.1	0724.8	3.9	42.4	14.1		
	4995	MANI	3	S	0723.3	0724.6	4.7	69.9	23.3		
	9100	GORK	3	S	0723.3	0724.6	3.1	50	21		
	9500	POTS	3	S	0723.5	0724.9	5.5	45			
	3100	CRIM	26	FAL	0728.5	0924.5	100.0	8	3		
	6100	KISV	26	FAL	0730.0	0830		13			
	6100	KISV			0753.0	0753.5		4			
	6100	KISV	45	C	0753.0	0757.7	17.0	9			
	9100	GORK	1	S	0757.9	0758.8	4.2	7	3.5		
	650	GORK	22	GRF	0806.0	0820.5	63.7	6			
	9100	GORK	1	S	0839.9	0840.4	1.4	7	3		
	8400	BERN	3		0844.1	0846.0	7.0	39.0			
	9100	GORK	21	GRF	0844.3	0847.1	9.5	16	6.3		
	5730	IRKU	2	S	0845.0	0846.0	4.0	76			L
	9500	POTS	3	S	0845.0	0846.0	5.0	26			
	9100	GORK	2	S/F	0845.5	0846.0	1.3	24	11		
	10400	BERN	3		0846.0	0846.0	7.0	20.0			
	9100	GORK	1	S	0859.5	0900.4	1.9	7	3.5		
	3100	CRIM	1	S	0909.0	0910.0	2.0	13	4		
	3100	CRIM	29	PBI	0911.0	0911.0		3			
	9100	GORK	21	GRF	0916.9	0922.8	40.0	39	13		
	2650	DWIN	8	S	0917.0			70			
	5730	IRKU	2	S	0917.0	0917.7	3.0	55			L
	9100	GORK	1	S	0917.3	0917.8	.7	8	5		
	650	GORK	20	GRF	0918.4	0943.2	50.0	4.5			
	10400	BERN	4		0920.7	0921.8	37.0	70.0			
	8400	BERN	4		0920.7	0921.8	37.0	111.0			
	5730	IRKU			0921.0	0921.8		205			L
	15000	KISV	45	C	0921.0	0922	2.0	45			
	9500	POTS	29	PBI	0921.0	0921.8	34.0	95			
	5730	IRKU	45	C	0921.0	0921.5	7.0	405			L
	10715	DWIN	4	S/F	0921.0	0922	30.0	60	15		
	9100	GORK	4	S/F	0921.1	0921.9	1.7	90	53		
	10400	BERN	41		0929.7	0937.0	17.0	10.0			
	8400	BERN	41		0929.7	0937.4	17.0	20.0			
	8400	BERN	20		0958.2	1000.6	60.0	29.0			
	10400	BERN	20		0958.2	1000.6	60.0	11.0			
	29	UPIC	41	F	1033.5	1034.5	10.1				
	33	UPIC	41	F	1036.2	1036.2U	7.0				
	7000	SAOP	4	S/F	1132.0	1135.5	4.4	257.0			12L
	9100	GORK	21	GRF	1133.1	1139.5	47.0	20	6		
	8400	BERN	3		1133.2	1135.4	58.0	266.0			
	10400	BERN	3		1133.2	1135.4	58.0	216.0			
	9400	HUAN		S	1133.8	1135.4	7.4	304.0	76.1		L
	3100	CRIM	1	S	1134.0	1135.5	4.0	20	7		
	10715	DWIN	3	S	1134.0	1135	7.0	160	80		
	9500	POTS	29	PBI	1134.5	1135.1	31.0	269			
	9100	GORK	3	S	1134.6	1136.4	4.9	63			
	15000	KISV	8	S	1134.7	1135.5	5.0	140			
	33	UPIC	45	C	1146.7	1146.8	1.5				
	29	UPIC	45	C	1146.8	1147.6	1.3				
	2800	OTTA	20	GRF	1240.0	1500	225.0	9.0	4.5		
	234	POTS	8	S	1248.5	1248.7	.5	280	45		
	10400	BERN	1		1307.3	1308.5	5.0	7.0			
	8400	BERN	1		1307.3	1308.6	5.0	17.0			

SOLAR RADIO EMISSION
OUTSTANDING OCCURRENCES

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	POLARIZATION OR REMARKS
01	7000	SAOP	45	C	1307.8	1308.5	1.7	15.0			13L 2 PARTS
	9400	HUAN		S	1321.0	1431.0	107.4	10.2	5.8		L
	9400	HUAN		S	1512.1	1529.4	26.0	5.1	3.4		0
	9400	HUAN		S	1605.5	1610.8	22.3	6.8	2.3		0
	7000	SAOP	45	C	1635.0	1647.2	22.4	24.0			11L
	7000	SAOP	41	F	1635.0						3 BURSTS
	9400	HUAN		S	1646.1	1646.8	1.5	8.5	4.1		0
	9400	HUAN		S	1654.6	1655.0	2.0	10.2	7.4		L
	9400	HUAN		S	1718.4	1719.6	2.4	8.5	4.6		0
	7000	SAOP	2	S/F	1718.4	1719.5	3.4	9.0			0
	2800	OTTA	21	GRF	1735.0	1935	245.0	12.2	6.8		
	7000	SAOP	45	C	1735.0	1741.3	17.0	36.0			18L
	9400	HUAN		S	1738.5	1748.7	18.2	6.8	3.4		L
	4995	BOUL	4	SF	1739.0	1740	4.0	16.0	5.0		
	9400	HUAN		S	1740.4	1741.3	3.2	22.2	11.2		L
	4995	BOUL	4	SF	1755.0	1800	12.0	12.0	4.0		
	2800	OTTA	27	RF	1756.0		12.0	4.8	4.2		
	2800	OTTA	24	R	1756.0	1757	1.0	4.8	2.4		
	2800	OTTA	24P	R	1757.0		9.0	4.8			
	9400	HUAN		S	1800.6	1832.4	55.7	23.9	13.7		L
	2800	OTTA	26	FAL	1806.0	1808	2.0	-4.8	-2.4		
	4995	BOUL	4	SF	1826.5	1827.5	3.0	10.0	3.0		
	2800	OTTA	3	S	1830.0	1833	12.0	16.4	5.4		
	1420	BOUL	4	SF	1845.0E	1846	2.0D	27.0	9.0		
	2800	OTTA	8	S	1846.0	1846	.1	21.0			
	2800	OTTA	1	S	1924.0	1926	6.0	4.2	2.1		
	4995	BOUL	4	SF	2108.0	2110	3.0	34.0	11.0		
	9400	HUAN		S	2130.6	2131.7	1.9	39.3	17.6		L
	9400	HUAN		PBI	2132.5	2132.5	13.0	6.8	4.9		L
	2695	PENT	20	GRF	2225.0	2300	70.0	3.2			
02	127	TORN	44	NS	0600.0E	0727.0	202.0D	2030	8		V1
	260	ONDR	44	NS	0730.0E		459.0D	23	4		
	200	HIRA	44	NS	2030.0E	2235	710.0D	20	5		WL,WR
	950	GORK	2	S/F	0625.1	0625.5	.7	24			
	9100	GORK	8	S	0626.5	0626.8	.5	40	27		
	9100	GORK	1	S	0936.0	0937.0	2.1	12	4.5		
	3100	CRIM	3	S	0936.0	0936.5	2.0	30	10		
	1470	POTS	4	S/F	0936.5	0937.5	2.2	33			
	9500	POTS	1	S	0936.5	0937.0	1.0	10			
	930	BORD	41	F	0936.7	0937	3.0	21	3		
	6100	KISV	8	S	0936.8	0937	1.0	12			
	3000	POTS	8	S	0936.9	0937.0	.6	23			
	2650	DWIN	1	S	0937.0	0937	1.0	15	10		
	9100	GORK	21	GRF	0938.5	1014.1	170.0	21			
	9100	GORK	1	S	0939.2	0940.3	2.7	7	4		
	6100	KISV	3	S	0959.0	1000.5	8.0	18			
	3100	CRIM	1	S	0959.0	1000.5	3.0	6	2		
	9100	GORK	1	S	0959.5	1008.0	2.9	15	7		
	3100	CRIM	29	PBI	1002.0	1002.0	12.0	3			
	29	UPIC	3	S	1005.9	1006	.4				
	33	UPIC	4	S/F	1006.0	1006	.5				
	9400	HUAN		S	1250.5	1320.4	38.5	11.7	6.1		L
	7000	SAOP	20	GRF	1314.0	1315.4		6.0			33L 2 PARTS
	9400	HUAN		S	1337.1	1403.2	44.3	6.7	3.0		0
	7000	SAOP	4	S/F	1400.8	1403.5	3.4	10.0			13R
	808	ONDR	2	S/F	1402.4	1403.7	1.5	15			
	536	ONDR	4	S/F	1403.0	1403.4	2.0	52	3		
	808	ONDR	46	C	1424.0	1452.5	32.0	20	5		
	2800	OTTA	40	F	1427.0	1433	7.0	41.4			
	2800	OTTA	21	GRF	1435.0	1517	95.0	8.8	4.4		
	2650	DWIN	31	GRF	1440.0	1452	23.0	30	20		
	536	ONDR	46	C	1441.5	1457.5	18.0	21	8		
	1470	POTS	23	GRF	1441.5	1452.0	24.0	49			
	2800	OTTA	46F	C	1442.0	1451.5	24.0	25.0	10.8		
	3000	POTS	23	GRF	1442.0	1451.5	19.0	25			
	930	BORD	40	F	1442.0	1451.8	20.0	31	9		
	9500	POTS	20	GRF	1444.0	1453.5	26.0	8.6			
	228	HARS	45	C	1445.0	1445.6	5.3	75	15		
	9400	HUAN		S	1447.4	1516.7	57.8	8.4	6.3		L
	2800	OTTA	20	GRF	1710.0	1800	115.0	6.8	3.4		
	9400	HUAN		S	1730.8	1757.8	58.5	10.0	3.5		0
	7000	SAOP	1	S	1801.4	1802.7		8.0			35L
	9400	HUAN		S	1927.6	1929.4	2.8	13.4	4.3		L
	7000	SAOP	4	S/F	1928.0	1929.3	5.8	16.0			34L
	2800	OTTA	24O	R	2005.0	2020	15.0	3.6	1.8		
	2695	PENT	21	GRF	2150.0	2205	135.0	13.8	6.9		
	500	HIRA	46	C	2154.0	2201.1	17.0	80	30		ML
	700	SYDN	27	RF	2154.3E	2157.2	14.7D				
	1400	SYDN	45	C	2154.3E	2206.1	18.1D				
	2800	OTTA	40	F	2159.8	2200.2	2.0	113.0			
03	260	ONDR	44	NS	0820.0E		410.0D	11			
	200	HIRA	44	NS	2348.0E	0000	600.0D	15	5		WL
	3100	CRIM	21	GRF	0638.0	0837.0	201.0	24	8		

SOLAR RADIO EMISSION
OUTSTANDING OCCURRENCES

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	MEAN	INT	POLARIZATION OR REMARKS
03	9500	POTS	20	GRF	0826.5	0836.2	19.0	16			
	3000	POTS	3	S	0831.0	0834.5	6.5	26			
	3100	CRIM	3	S	0831.0	0834.5	5.0	21	7		
	9100	GORK	22	GRF	0831.4	0834.5	15.7	14	7		
	1470	POTS	1	S	0831.5	0832.5	1.5	4.9			
	8400	BERN	20		0832.2	0836.1	17.0	15.0			
	10400	BERN	20		0832.2	0836.1	17.0	9.0			
	950	GORK	1	S	0837.6	0838.0	.6	1			
	650	GORK	1	S	0837.8	0837.8	.5	3	1.5		
	930	BORD	8	S	1108.2	1108.4	.3	16	2		
	1470	POTS	4	S/F	1153.0	1153.5	2.0	21			
	9400	HUAN		S	1249.6	1305.8	50.5	9.4	3.5		0
	7000	SAOP	20	GRF	1254.0	1309.4	21.4	12.0			0
	113	POTS	8	S	1419.1	1419.2	.1	400	150		
	7000	SAOP	3	S	1635.0	1636.0	6.2	10.0			7L
	7000	SAOP	20	GRF	1705.3	1710.9	9.6	10.0			0 2 COMPONENTS
	9400	HUAN		S	1752.1	1804.5	31.5	9.9	6.4		R
	7000	SAOP	45	C	1754.4	1755.2	1.4	28.0			11L
	9400	HUAN		S	1754.7	1755.1	1.1	13.1	7.9		L
	9400	HUAN		S	2040.5	2041.4	1.7	6.6	6.4		0
	2800	OTTA	3	S	2109.8	2110.7	5.0	36.6	9.2		
	2695	BOUL	3	S	2111.0E	2112	2.5D	21.0	7.0		
	2800	OTTA	3	S	2148.5	2150	8.0	28.6	7.2		
	9400	HUAN		S	2148.8	2149.8	2.8	27.9	15.9		0
	2695	BOUL	3	S	2149.0E	2151	4.0D	22.0	7.0		
04	127	TORN	44	NS	0620.0E		560.0D		1		V1 DISTURBED
	260	ONDR	44	NS	0805.0E		435.0D	27			
	930	BORD	41	F	0741.8	0742.3	.6	29	3		
	113	POTS	8	S	0807.6	0807.6	.1E	150	50		
	9100	GORK	1	S	0823.5	0824.0	1.0	12	6		
	6100	KISV	8	S	0826.0	0826.7	2.0	8			
	8400	BERN	1		0826.2	0826.7	1.5	19.0			
	10400	BERN	1		0826.2	0826.7	1.5	11.0			
	113	POTS	8	S	0909.2	0909.2	.1E	100	30		
	6100	KISV	3	S	1023.0	1023.7	2.0	3			
	10400	BERN	20		1044.5	1107.3	153.0	11.0			
	8400	BERN	20		1044.5	1107.3	253.0	17.0			
	6100	KISV	45	C	1045.0	1050.7		13			
	6100	KISV			1045.0	1050		12			
	9100	GORK	22	GRF	1046.5	1107.1	109.0	14			
	950	GORK	20	GRF	1048.5	1050.3	10.4	12	6		
	350	GORK	20	GRF	1049.0	1050.2	17.7	6.5	2		
	930	BORD	3	S	1049.0	1050.2	5.0	17	6		
	2650	DWIN	45	C	1049.0	1050	2.0	100	40		
	202	IZMI	4	S/F	1050.0	1050.2	2.0	360	150		
	228	HARS	45	C	1050.0	1050.3	2.8	210	30		
	127	TORN	4	S/F	1050.1	1050.7	2.7	282	176		
	33	UPIC	46	C	1050.2		2.2				
	234	POTS	4	S/F	1050.4	1050.4	1.0	100	20		
	113	POTS	4	S/F	1050.4	1050.4	1.4	400	35		
	29	UPIC	46	C	1050.5	1051.1	2.1				
	1470	POTS	4	S/F	1118.0	1119.1	2.0	9.1			
	2800	OTTA	20	GRF	1240.0	1250	35.0	4.0	2.0		
	9400	HUAN		S	1240.4	1245.6	26.6	8.1	4.2		0
	9500	POTS	20	GRF	1242.0	1251	43.0	5.3			
	9400	HUAN		S	1345.5	1400.6	49.2	11.3	6.8		R
	7000	SAOP	45	C	1359.0	1403.9	6.6	10.0			7R
	9400	HUAN		S	1401.8	1403.8	3.3	12.9	5.2		R
	4995	BOUL	4	SF	1420.0	1421	3.0	19.0	6.0		
	9400	HUAN		S	1420.8	1421.8	2.1	9.7	3.6		0
	2800	OTTA	41	SER	1421.0	1421.7	8.0	7.8			
	2800	OTTA	1	S	1421.0	1421.7	2.0	7.8	3.7		
	7000	SAOP	45	C	1421.0	1421.8	13.4	12.0			12R
	2800	OTTA	1	S	1424.4	1424.9	1.5	2.0	1.0		
	2800	OTTA	1	S	1427.8	1428	1.2	3.4	1.6		
	2800	OTTA	21	GRF	1500.0	1634	260.0	22.6	12.3		
	9400	HUAN		C	1540.6	1559.6	25.4	355.5	122.7		R
	10400	BERN	1		1544.9	1545.6	2.0	16.0			
	2800	OTTA	1	S	1545.0	1546	1.2	3.8	1.9		
	7000	SAOP	46	C	1545.0	1559.6	55.6	405.0			1L INVERTED POL
	930	BORD	41	F	1545.4	1545.6	.3	17	2		
	10400	BERN	45		1549.1	1559.6	34.0	223.0			
	1420	BOUL	45	C	1550.0E	1555	30.0D	43.0	14.0		
	2800	OTTA	4	S/F	1550.0	1556	27.0	148.0	44.9		
	10715	DWIN	4	S/F	1550.0	1600	30.0	190	100		SUNSET
	2650	DWIN	3	S/F	1550.0	1556	25.0	130	50		SUNSET
	4995	BOUL	45	C	1551.0	1556	16.0	350.0	117.0		
	2695	BOUL	45	C	1551.0E	1557	15.0D	107.0	36.0		
	930	BORD	40	F	1551.0	1555.3	12.0	19	6		
	9400	HUAN		PBI	1606.0	1606.0	174.4	98.6	31.7		0
	930	BORD	40	F	1612.0	1614.7	13.0	23	3		
	9400	HUAN		C	1635.4	1639.2	6.1	79.2	28.3		0
	2800	OTTA	4	S/F	1635.8	1638.5	7.0	43.0	13.4		
	2695	BOUL	3	S	1637.0E	1640	5.0D	16.0	5.0		

SOLAR RADIO EMISSION
OUTSTANDING OCCURRENCES

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	MEAN	INT	POLARIZATION OR REMARKS
04	2800	OTTA	45	C	1646.4	1651	13.0	45.0	22.0		
	2695	BOUL	4	SF	1647.0E	1652	5.0D	16.0	5.0		
	930	BORD	41	F	1648.5	1648.8	.5	17	3		
	9400	HUAN		S	2101.8	2104.3	3.4	45.2	18.6		R
	2800	OTTA	21	GRF	2103.0		140.0	8.8	4.4		
	2800	OTTA	3	S	2103.5	2104.5	6.5	34.4	9.8		
	2695	BOUL	3	S	2104.0E	2105	3.0D	25.0	8.0		
	9400	HUAN		S	2107.6	2108.3	1.5	11.3	7.1		O
	2800	OTTA	22	GRF	2116.0	2124	16.0	14.0	7.0		
05	127	TORN	43	NS	0731.0	1050.2	489.0	73	16		V1 DISTURBED
	260	ONDR	44	NS	0800.0E		418.0D	22			
	500	HIRA	6	S	0200.1	0200.3	.6	240	150		WL
	15000	KISV	21	GRF	0555.0	0602.7	30.0	24			
	1415	MANI	4	S/F	0600.0	0600.7	3.3	221.9	73.9		
	6100	KISV			0600.0	0602.7		16			
	5730	IRKU			0600.0	0608.6		11			L
	6100	KISV			0600.0	0608.5		8			
	6100	KISV	46	C	0600.0	0602.5	20.0	17			
	6100	KISV			0600.0	0608.7		9			
	3100	CRIM	3	S	0600.0	0603.0	4.0	32	11		
	5730	IRKU	21	GRF	0600.0	0602.8	12.0	21			R
	9100	GORK	23	GRF	0600.2	0603.9	16.8	12	6		
	4995	MANI	3	S	0601.8	0602.5	1.2	11.6	3.9		
	650	GORK	4	S/F	0601.8	0603.0	2.0	38			
	606	MANI	4	S/F	0602.0	0602.2	.8	29.1	9.7		
	950	GORK	4	S/F	0602.0	0603.2	2.0	63 D			
	9100	GORK	2	S/F	0602.5	0603.3	1.3	15	8		
	202	IZMI	41	F	0654.0	0655.0	1.2	625			
	3100	CRIM	26	FAL	0752.0	0844.0	52.0	8			
	9100	GORK	21	GRF	0821.2	0831.0	19.6	5	3		
	2650	DWIN	1	S	0822.0	0823	3.0	50	30		
	3000	POTS	4	S/F	0822.5	0823.5	2.0	44			
	1470	POTS	3	S	0822.7	0823.5	1.8	8.8			
	8400	BERN	1		0822.9	0823.1	2.0	21.0			
	10400	BERN	1		0822.9	0823.1	2.0	9.0			
	3100	CRIM	3	S	0823.0	0823.5	1.0	42	14		
	9100	GORK	1	S	0823.0	0823.2	.9	9	4.5		
	9500	POTS	1	S	0823.0	0823.3	1.0	7.0			
	536	ONDR	3	S	0826.0	0826	.3	25			
	536	ONDR	42	SER	0954.0	0954.2	61.0	27			
	9500	POTS	20	GRF	1025.0	1039	50.0	19			
	8400	BERN	46		1030.0	1149.9	240.0	539.0			
	10400	BERN	46		1030.0	1149.9	240.0	458.0			
	3000	POTS	25	R	1030.0	1032.5	45.0	24			
	9100	GORK	23	GRF	1030.9		105.0				
	3100	CRIM	3	S	1031.0	1033.0	3.0	21	7		
	1470	POTS	28	PRE	1032.0	1037.5	11.0	19			
	2650	DWIN	45	C	1032.0	1039	8.0	20	10		
	3100	CRIM	28	PRE	1036.0	1145.0	69.0	13			
	33	UPIC	45	C	1046.5	1047.1U	1.5				
	29	UPIC	45	C	1046.8	1047.1	1.5				
	15000	KISV			1137.0	1200.5		90			
	15000	KISV	46	C	1137.0	1150		420			
	6100	KISV	46	C	1137.0	1150		500			
	6100	KISV			1137.0	1159.5		300			
	6100	KISV			1137.0	1209.5		150			
	7000	SAOP	46	C	1139.0			620.0D			1L INVERTED POL
	9500	POTS	45	C	1140.0	1149.8	150.0	505			
	950	GORK	46	C	1141.2	1150.4	78.0	40			
	950	GORK			1141.2	1244.0		100			
	950	GORK			1141.2	1203.8		36			
	3000	POTS	46	C	1142.0	1200	147.0	320			
	1470	POTS	46	C	1143.0	1300.2	125.0	2100			
	9400	HUAN		C	1144.2	1149.8	21.2	757.7	270.2		L
	536	ONDR	49	GB	1144.5	1215.7	84.0	88	44		
	2800	OTTA			1145.0	1150	11.5	170.0			
	2800	OTTA	46F	C	1145.0	1200	31.0	254.0	115.0		
	930	BORD		PRE	1145.0	1244	65.0	257	20		
	9100	GORK			1145.0	1159.8		210			
	10715	DWIN	47	GB	1145.0	1150	120.0	230 D			
	808	ONDR	28	PRE	1145.0	1215.3	69.0	88	23		
	2650	DWIN	47	GB	1145.0	1200	60.0	250	100		
	9100	GORK	46	C	1145.0	1150.0	27.7	575			
	650	GORK			1145.8	1215.9		140			
	650	GORK	47	GB	1145.8	1154.1	75.0	49			
	3100	CRIM	47	GB	1146.0	1150.0	27.0	181	60		
	3100	CRIM			1146.0	1200.0		300	100		
	228	HARS	49	GB	1147.5	1149.0	150.0	500	70		
	260	ONDR	46	C	1147.6		3.0	212 D	119		
	202	IZMI	45	C	1147.8	1148.3	4.2	2000	900		
	113	POTS	48	C	1148.0	1149.0	167.0D	7000			
	234	POTS	48	C	1148.0	1148.5	167.0D	3900			
	33	UPIC	2	S/F	1148.5	1148.5	.4				
	29	UPIC	2	S/F	1148.5	1148.9	.8				

SOLAR RADIO EMISSION
OUTSTANDING OCCURRENCES

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	MEAN	INT	POLARIZATION OR REMARKS
05	2800	OTTA			1156.5	1200	11.5	254.0			
	9400	HUAN		PBI	1205.4	1205.4	120.0	161.3	34.7		L
	2800	OTTA			1208.0	1209.5	6.0	111.0			
	3100	CRIM	29	PBI	1213.0	1213.0	47.0D	37			
	2800	OTTA	30	PBI	1214.0	1214	355.0	28.2	9.8		
	2800	OTTA	4	S/F	1224.3	1225.5	3.5	17.6	8.8		
	930	BORD	47	GB	1250.0	1300 U	16.0	3267 D			
	808	ONDR	48	C	1254.7		14.0	616 D	515		
	2800	OTTA	4	S/F	1255.0	1258.8	11.0	124.0	41.7		
	2650	DWIN	45	C	1255.0	1258	11.0	240	100		
	930	BORD		PBI	1306.0	1403	101.0	149	25		
	536	ONDR	29	PBI	1308.5	1406.5	110.0	19	8		
	2800	OTTA	1	S	1310.0	1311	2.0	5.0	2.5		
	808	ONDR	46	C	1343.6	1401.2	57.0	50	21		
	9400	HUAN		S	1421.2	1426.6	26.3	6.7	3.3		O
	9400	HUAN		S	1520.5	1621.5	86.2	15.1	5.1		R
	930	BORD	41	F	1604.0	1605.4	7.5	35	3		
	2800	OTTA	1	S	1614.0	1614.9	5.5	4.2	1.4		
	930	BORD	46	C	1623.0	1629.2	45.0D	99 D			
	7000	SAOP	40	F	1632.0		115.0				
	2800	OTTA	20	GRF	1840.0	1910	70.0	2.8	2.0		
	2800	OTTA	1	S	2020.0	2021.4	2.5	3.0	1.5		
	2695	PENT	20	GRF	2150.0	2213	90.0	3.2	1.8		
06	536	ONDR	44	NS	0750.0E		434.0D	15	3		
	260	ONDR	44	NS	0750.0E		434.0D	33	4		
	127	TORN	43	NS	0756.0	0818.7	466.0	416	11		V2
	200	HIRA	44	NS	2037.0E	0111	700.0D	20	5		WL
	17000	NOBE	1	S	0334.6	0334.9	7.0	24			O
	6100	KISV	45	C	0622.0	0623.7	9.0	15			
	6100	KISV			0622.0	0630		11			
	15000	KISV	45	C	0622.5	0623.7	8.0	14			
	15000	KISV			0622.5	0629.0		10			
	10400	BERN	1		0623.4	0623.6	8.0	17.0			
	8400	BERN	1		0623.4	0623.6	8.0	28.0			
	9100	GORK	21	GRF	0623.8	0748.0	200.0	18	9		
	15000	KISV	24	R	0630.0	0630	32.0	9			
	6100	KISV	24	R	0630.5	0633	10.0	9			
	3100	CRIM	3	S	0658.0	0704.0	7.0	34	8		
	6100	KISV	20	GRF	0700.0	0702.5	40.0	10			
	650	GORK	2	S/F	0701.8E	0703.2	2.5	5.5			
	950	GORK	20	GRF	0701.8	0703.0	8.6	5.5	1.8		
	15000	KISV	24	R	0702.0	0702	39.0	9			
	3100	CRIM	30	PBI	0705.0	0705.0	172.0	17			
	6100	KISV	4	S/F	0740.0	0744.3	8.0	20			
	8400	BERN	20		0740.9	0744.2	140.0	39.0			
	10400	BERN	20		0740.9	0744.2	140.0	27.0			
	9500	POTS	29	PBI	0741.0	0744.2	150.0	21			
	3000	POTS	4	S/F	0741.0	0744.1	6.5	22			
	15000	KISV	20	GRF	0741.0	0744.3	109.0	17			
	3100	CRIM	3	S	0741.0	0744.0	5.0	32	11		
	9100	GORK	1	S	0743.6	0744.5	2.6	19	9		
	6100	KISV	24	R	0748.0	0748	32.0	10			
	6100	KISV	26	FAL	0820.0	0820	140.0	40			
	29	UPIC	3	S	0900.5	0900.6	.4				
	33	UPIC	4	S/F	0900.5	0900.6	.5				
	15000	KISV	26	FAL	1030.0	1107	37.0	-20			
	9500	POTS	22	GRF	1107.0	1114	28.0	13			
	15000	KISV	21	GRF	1107.0	1114	33.0	26			
	8400	BERN	46		1113.4	1114.0	3.5	22.0			
	10400	BERN	46		1113.4	1114.0	3.5	12.0			
	930	BORD	41	F	1116.0	1116.1	.2	19	2		
	3100	CRIM	1	S	1121.5	1122.0	1.0	15	5		
	113	POTS	27	RF	1203.0	1325.5	147.0	56	15		
	2800	OTTA	20	GRF	1238.0	1312	70.0	5.2	2.6		
	7000	SAOP	40	F	1420.0		88.0				
	2800	OTTA	1	S	1437.0	1437.5	1.5	4.2	2.1		
	930	BORD	8	S	1437.3	1437.3	.1	22	2		
	2800	OTTA	20	GRF	1500.0	1525	50.0	3.2	1.6		
	2800	OTTA	1	S	1722.5	1724	3.0	2.0	1.0		
	2800	OTTA	20	GRF	1750.0	1830	85.0	2.8	1.6		
	9400	HUAN		S	1858.2	1914.8	32.5	5.0	4.0		R
	2800	OTTA	20	GRF	1930.0	2000	110.0	2.8	1.4		
	9400	HUAN		S	2026.1	2027.0	2.3	11.7	5.7		O
	2695	PENT	20	GRF	2125.0	2210	90.0	3.2	1.6		
07	536	ONDR	44	NS	0810.0E		130.0	14			
	260	ONDR	44	NS	0810.0E		410.0D	34	2		
	200	HIRA	44	NS	2038.0E	0340	540.0D	50	10		ML
	9100	GORK	22	GRF	0454.6	0502.0	23.0	14	7		
	650	GORK	23	GRF	0539.0		45.0	16	6		
	950	GORK	20	GRF	0539.0	0551.0	38.4	6			
	3100	CRIM	21	GRF	0714.0	0813.0	179.0	13	4		
	650	GORK	23	GRF	0757.5		121.0	8.5	4		
	6100	KISV	27	RF	0800.0	0830	60.0	12			

SOLAR RADIO EMISSION
OUTSTANDING OCCURRENCES

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	MEAN	INT	POLARIZATION OR REMARKS
07	9500	POTS	20	GRF	0805.0	0812	40.0	10			
	3000	POTS	20	GRF	0805.0	0827	45.0	8.1			
	9100	GORK	20	GRF	0807.2	0812.0	130.0	8	4		
	1470	POTS	20	GRF	0810.0	0815	35.0	5.1			
	930	BORD	8	S	0854.1	0854.3	.3	18	2		
	930	BORD	8	S	0922.7	0922.8	.2	25	2		
	113	POTS	4	S/F	0951.0	0952.1	2.3	2100	85		
	234	POTS	4	S/F	0951.0	0952.1	2.4	560	12		
	228	HARS	45	C	0951.3	0951.4	1.3	260	45		
	260	ONDR	8	S	0951.8	0951.8	.3	209 D			
	127	TORN	47	GB	0952.0	0952.2	2.2	1070	193		
	3100	CRIM	1	S	0952.0	0953.0	2.0	11	4		
	202	IZMI	45	C	0952.0	0952.0	1.5	1000	450		
	3000	POTS	3	S	0952.5	0953.0	1.5	9.9			
	1470	POTS	1	S	0952.5	0953.2	1.5	2.9			
	930	BORD	8	S	1008.6	1008.7	.2	16	2		
	930	BORD	8	S	1028.3	1028.4	.2	20	2		
	930	BORD	8	S	1046.7	1046.8	.2	22	2		
	930	BORD	8	S	1100.0	1100.1	.2	22	2		
	930	BORD	8	S	1130.0	1130.2	.2	17	2		
	930	BORD	8	S	1140.8	1140.9	.2	17	2		
	930	BORD	8	S	1150.5	1150.6	.2	21	2		
	9400	HUAN		S	1204.8	1206.8	4.3	9.0	6.9		L
	8400	BERN	1		1206.3	1206.8	2.0	21.0			
	10400	BERN	1		1206.3	1206.8	2.0	8.0			
	9500	POTS	3	S	1206.5	1206.8	1.5	14			
	930	BORD	8	S	1212.3	1212.3	.3	20	2		
	7000	SAOP	3	S	1221.0	1221.8	2.0	14.0			10L
	930	BORD	8	S	1237.4	1237.5	.2	17	2		
	930	BORD	8	S	1258.9	1258.9	.1	26	1		
	930	BORD	8	S	1310.1	1310.1	.2	20	2		
	930	BORD	8	S	1320.0	1320.1	.1	17	2		
	113	POTS	8	S	1323.3	1323.3	.1E	100	40		
	930	BORD	8	S	1358.8	1358.9	.2	15	2		
	7000	SAOP	4	S/F	1404.0			630.0D			10L SATURATION
	9400	HUAN		C	1404.6	1412.2	10.4	563.8	195.7		L
	1470	POTS	29	PBI	1405.0	1413.2	80.0	162			
	9500	POTS	29	PBI	1405.0	1412.4	80.0	386			
	3000	POTS	29	PBI	1405.0	1412.5	80.0	610			
	4995	BOUL	47	GB	1408.0	1413	12.5	612.0	204.0		
	10400	BERN	46		1409.1	1412.3	80.0	369.0			
	8400	BERN	46		1409.1	1412.3	80.0	471.0			
	930	BORD	45	C	1410.0	1414.7	27.0	53	12		
	1420	BOUL	3	S	1410.0E	1413	13.0D	141.0	47.0		
	2650	DWIN	3	S	1410.0		13.0	470 D			
	10715	DWIN	3	S	1410.0		15.0	250 D			
	2695	BOUL	3	S	1411.0E	1413	10.0D	475.0	158.0		
	808	ONDR	45	C	1411.8	1413.5	8.5	40	29		
	536	ONDR	41	F	1412.0	1415.8	48.0	13	2		
	9400	HUAN		PBI	1415.0	1415.0	130.8	99.0	19.4		L
	2800	OTTA			1418.0E	1418	6.0D	44.0			
	2800	OTTA	30	PBI	1424.0	1424	160.0	20.6	10.3		
	930	BORD	8	S	1539.7	1539.7	.2	20	2		
	930	BORD	8	S	1552.5	1552.5	.2	17	2		
	930	BORD	41	F	1615.4	1615.5	.3	17	3		
	2800	OTTA	1	S	1656.0	1656.3	1.0	2.0	1.0		
	2800	OTTA	21	GRF	1835.0	1900	75.0	3.8	1.9		
	2800	OTTA	2	S/F	1843.2	1844.5	4.0	2.0	1.0		
	2800	OTTA	21	GRF	2117.0	2124	41.0	3.8	1.9		
	2800	OTTA	2	S/F	2123.3	2123.5	1.0	3.2			
	2695	PENT	40	F	2228.0	2232.7	8.0	4.6			
	2695	PENT	3	S	2250.8	2251.5	3.5	96.0	32.0		
	4995	BOUL	3	S	2251.0	2251.5	2.0	85.0	28.0		
	1420	BOUL	4	SF	2251.0E	2151.5	3.0D	37.0	12.0		
	1400	SYDN	4	S	2251.0	2251.6	4.8				
	17000	NOBE	4	S/F	2251.0	2251.4	2.0	158			0
	700	SYDN	4	S	2251.1	2251.6	4.6				
	2695	BOUL	3	S	2252.0E	2253	3.0D	73.0	24.0		
	2695	PENT	30	PBI	2254.3	2254.3	11.0	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			
	700	SYDN	8	S	2336.5	2336.6	.4				
08	200	HIRA	44	NS	0000.0E	0230	480.0D	70	30		ML
	127	TORN	44	NS	0600.0E	0914.2	580.0D	34	3.4		V1
	202	IZMI	44	NS	0600.0E		360.0D	70			
	260	ONDR	44	NS	0814.0E		404.0D	47	3		
	536	ONDR	44	NS	0814.0E		384.0D	24	2		
	200	HIRA	44	NS	2040.0E	2245	630.0D	110	25		ML
	200	HIRA	46	C	0127.0U	0128	3.0	500	35		MR
	100	HIRA	46	C	0127.0	0129	5.0	14000	300		
	500	HIRA	27	RF	0153.0	0227	90.0	30	10		SL
	1400	SYDN	41	F	0204.7	0207.2	9.3				
	650	GORK	22	GRF	0707.4	0715.4	28.1	16	4		

SOLAR RADIO EMISSION
OUTSTANDING OCCURRENCES

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	MEAN	INT	POLARIZATION OR REMARKS
08	29	UPIC	42	SER	0841.9	0942.6	155.3				
	33	UPIC	42	SER	0842.1	0902.9	154.4				
	650	GORK	22	GRF	0918.3	0923.8	35.8	11	4		
	9400	HUAN		S	1600.5	1611.2	56.8	7.4	3.2		R
	2800	OTTA	2	S/F	1631.9	1632	2.0	2.8	1.4		
	2800	OTTA	20	GRF	1700.0	1855	170.0	5.0	2.8		
	2800	OTTA	26O	FAL	2135.0	2140	5.0	-3.2	-1.6		
	2695	PENT	21	GRF	2240.0	2322	70.0	6.2	3.1		
	2930	VORO	3	S	2250.0	2252	10.0	131			
	2695	PENT	8	S	2256.0	2256.3	.5	6.6	3.3		
09	200	HIRA	44	NS	0034.0E	0131	500.0D	15	5		WR
	127	TORN	44	NS	0600.0E	0735.3	580.0D	2600	14		V2 DISTURBED
	202	IZMI	44	NS	0600.0E		360.0D	35			
	260	ONDR	44	NS	0750.0E		422.0D	64	5		
	100	HIRA	44	NS	2037.0E	2103	110.0D	250	30		
	234	POTS	42	SER	0626.9	0627.0	2.3	450	3		
	6100	KISV	4	S/F	0654.0	0658.5	7.0	20			
	9100	GORK	20	GRF	0655.6	0656.4	46.4	9	4.5		
	6100	KISV	24	R	0702.0	0702		6			
	202	IZMI	41	F	0853.0	0854.2	.2	600			
	228	HARS	45	C	0854.4	0854.5	1.0	325	110		
	536	ONDR	42	SER	0903.0	0948.4	107.0	17			
	6100	KISV	26	FAL	0905.0	0913	28.0	6			
	6100	KISV	4	S/F	0933.0	0934.3	4.0	8			
	113	POTS	4	S/F	0958.6	0958.9	.3	280	45		
	930	BORD	8	S	1037.7	1037.7	.2	34	2		
	930	BORD	8	S	1117.8	1117.8	.2	32	2		
	9100	GORK	20	GRF	1127.0	1303.0	63.0	7			
	930	BORD	8	S	1157.3	1157.4	.2	57	2		
	930	BORD	8	S	1217.8	1217.8	.2	25	2		
	930	BORD	8	S	1236.0	1236.3	.3	35	2		
	930	BORD	8	S	1311.9	1311.9	.1	34	2		
	9400	HUAN		S	1313.7	1335.5	41.8	5.4	4.4		O
	2800	OTTA	24O	R	1320.0	1350	30.0	5.0	2.5		
	930	BORD	8	S	1323.8	1323.8	.1	35	2		
	930	BORD	8	S	1338.8	1338.8	.2	47	2		
	930	BORD	8	S	1353.8	1353.8	.2	28	2		
	2800	OTTA	21	GRF	1405.0	1500	80.0	4.0	2.8		
	930	BORD	8	S	1407.2	1407.2	.2	56	2		
	234	POTS	8	S	1408.9	1409.0	.1	420	150		
	930	BORD	8	S	1420.5	1420.5	.2	24	2		
	930	BORD	8	S	1430.1	1430.3	.3	23	2		
	930	BORD	8	S	1434.2	1434.3	.2	45	2		
	930	BORD	41	F	1442.0	1442.8	1.0	34	3		
	930	BORD	8	S	1450.8	1450.9	.2	13	2		
	930	BORD	41	F	1458.7	1458.7	1.4	42	2		
	2800	OTTA	8	S	1459.9	1500	.5	2.0	1.0		
	930	BORD	8	S	1509.8	1509.8	.2	38	2		
	1420	BOUL	45	C	1524.5E	1526	4.0D	159.0	53.0		
	930	BORD	41	F	1525.0	1526	2.5	131	5		
	930	BORD	8	S	1543.4	1543.4	.2	32	2		
	930	BORD	8	S	1601.0	1601	.2	39	2		
	930	BORD	8	S	1617.0	1617	.2	32	2		
	930	BORD	8	S	1635.3	1635.4	.2	34	2		
	930	BORD	8	S	1655.0	1655	.2	37	2		
	2800	OTTA	8	S	1834.0	1834	.1	8.2			
	2800	OTTA	1A	S	1959.0	2000	1.5	2.4	1.2		
	2800	OTTA	8	S	1959.4	1959.4	.1	7.8			
	2800	OTTA	24	R	2122.0	2123	1.0	4.0	3.0		
	2800	OTTA	27A	RF	2122.0		143.0	4.0	3.8		
	9400	HUAN		S	2122.6	2126.1	16.7	16.3	7.2		R
	2800	OTTA	24P	R	2123.0		132.0	4.0			
	2800	OTTA	1	S	2125.0	2126	3.0	6.6	3.3		
	2695	PENT	26	FAL	2335.0	2345	10.0	-4.0			
10	260	ONDR	44	NS	0800.0E		418.0D	91	3		
	127	TORN	43	NS	0900.0	1111.6	580.0D	238	12		V2
	113	POTS	43	NS	1121.0	1335	232.0D	75			
	100	HIRA	44	NS	2328.0E	2358	60.0D	100	30		SR
	200	HIRA	44	NS	2346.0E	0309	310.0D	10	5		WR
	1415	MANI	4	S/F	0053.4	0054.7	4.6	51.9	17.3		
	1400	SYDN	41	F	0053.8	0054.7	4.2				
	606	MANI	4	S/F	0053.9	0054.7	4.1	46.2	15.4		
	234	POTS	8	S	0626.9	0627.1	.7	1600	500		
	113	POTS	8	S	0643.3	0643.3	.1	200	70		
	113	POTS	4	S/F	0711.8	0711.8	.2	200	20		
	113	POTS	8	S	0740.0	0740.1	.1E	200	70		
	202	IZMI	8	S	0907.0	0907.1	.3	380	100		
	113	POTS	42	SER	0919.5	0919.6	3.9	1400	20		
	29	UPIC	45	C	1105.5	1106.2	1.3				
	33	UPIC	45	C	1105.5	1106.1	1.1				
	228	HARS	45	C	1111.4	1111.6	.6	200	60		
	113	POTS	4	S/F	1111.5	1111.6	.6	300	30		
	33	UPIC	45	C	1111.6	1111.7	.8				

SOLAR RADIO EMISSION
OUTSTANDING OCCURRENCES

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	MEAN	INT	POLARIZATION OR REMARKS
10	29	UPIC	4	S/F	1112.0	1112.1	.6				
	930	BORD	46	C	1245.4	1245.9	.8	27	3		
	1470	POTS	8	S	1245.5	1245.7	1.0	12			
	2800	OTTA	20	GRF	1300.0	1320	55.0	2.8	2.0		
	536	ONDR	3	S	1340.9	1340.9	.2	25			
	930	BORD	8	S	1419.4	1419.6	.3	42	2		
	930	BORD	8	S	1440.1	1440.3	.3	38	2		
	2800	OTTA	21	GRF	1445.0	1545	105.0	6.6	3.3		
	930	BORD	8	S	1457.2	1457.3	.2	32	2		
	9400	HUAN		S	1459.0	1539.6	78.6	6.5	3.1		R
	930	BORD	8	S	1515.3	1515.4	.2	37	2		
	930	BORD	8	S	1533.0	1533.1	.2	32	2		
	2800	OTTA	1	S	1540.0	1540.2	1.0	2.4	1.2		
	930	BORD	8	S	1551.8	1551.9	.2	39	2		
	930	BORD	8	S	1611.7	1611.8	.2	34	2		
	930	BORD	8	S	1631.7	1631.8	.2	39	2		
	2695	PENT	1	S	2249.0	2249.7	2.0	5.8	2.6		
11	100	HIRA	43	NS	0223.0	0251	70.0	60	20		ML
	127	TORN	43	NS	0736.0	1051.6	544.0	63	5.4		V1
	260	ONDR	44	NS	0810.0E		402.0D	78	2		
	100	HIRA	44	NS	2040.0E	0534	630.0D	200	15		MR
	200	HIRA	44	NS	2040.0E	0007	630.0D	220	45		MR
	1400	SYDN	45	C	0355.3	0357.3	3.2				
	6100	KISV	1	S	0637.5	0638	2.0	2			
	3100	CRIM	20	GRF	0641.0	0650.0	40.0	10	3		
	6100	KISV	8	S	0645.5	0646	2.0	9			
	9100	GORK	20	GRF	0645.5	0701.4	45.5	12	6		
	500	HIRA	6	S	0646.0	0646.3	.6	210	100		WR
	113	POTS	41	F	0646.3	0646.3	.2	190	8		
	6100	KISV	24	R	0647.0	0647	4.0	3			
	6100	KISV	8	S	0700.5	0701.2	3.0	10			
	6100	KISV	45	C	0902.0	0913	33.0	6			
	6100	KISV			0902.0	0926		3			
	2650	DWIN	45	C	0943.0	0945	7.0	165	50		
	234	POTS	4	S/F	1010.5	1010.5	.2	200	40		
	2650	DWIN	1	S	1035.0	1036	5.0	30	20		
	930	BORD	46	C	1053.0	1053.2	.3	25	3		
	9100	GORK	20	GRF	1114.5	1116.2	20.6	15	7		
	9400	BERN	1		1144.5	1145.9	13.0	14.0			OPR
	10400	BERN	1		1144.5	1145.9	13.0	12.0			OPR
	7000	SAOP	3	S	1144.7	1146.1	3.8	17.0			8R
	9400	HUAN		S	1144.8	1145.9	4.7	12.6	7.2		R
	15000	KISV	28	PRE	1144.8	1144.8	1.0	3			
	3100	CRIM	1	S	1145.0	1145.5	1.0	32	11		
	1470	POTS	8	S	1145.5	1146.0	1.0	16			
	15000	KISV	8	S	1145.5	1146	2.0	18			
	3000	POTS	8	S	1145.5	1146.0	.9	75			
	2950	GORK	3	S	1145.7	1146.1	1.1	72	36		
	2650	DWIN	8	S	1146.0		75.0				
	9500	POTS	8	S	1146.0	1146.0	.5	8.6			
	2650	DWIN	45	C	1218.0	1219	150.0	100			
	2650	DWIN	45	C	1255.0	1258	8.0	65	30		
	2800	OTTA	27A	RF	1300.0		270.0	4.0	3.6		
	2800	OTTA	24	R	1300.0	1305	5.0	4.0	2.0		
	1470	POTS	40	F	1303.0	1304.0	10.0	44			
	2800	OTTA	24P	R	1305.0		220.0	4.0			
	7000	SAOP	3	S	1307.6	1309.3	10.8	17.0			O
	2800	OTTA	20	GRF	1308.0	1325	90.0	4.0			
	536	ONDR	8	S	1440.0	1440	.2	34			
	113	POTS	8	S	1444.1	1444.2	.1	175	60		
	234	POTS	8	S	1444.1	1444.1	.1	175	60		
	930	BORD	41	F	1511.7	1512.2	.6	66	3		
	930	BORD	41	F	1529.2	1529.3	.3	94	2		
	2800	OTTA	21	GRF	1546.0	1555	40.0	4.0	2.0		
	2800	OTTA	8	S	1552.5	1552.7	.8	4.8	2.2		
	930	BORD	8	S	1552.6	1552.9	.3	29	2		
	930	BORD	41	F	1629.0	1629.3	.3	17	2		
	2800	OTTA	26	FAL	1645.0	1730	45.0	-4.0	-2.0		
	2800	OTTA	1	S	1735.0	1735.5	1.0	9.0	2.3		
	4995	BOUL	4	SF	1836.0	1838	5.0	22.0	7.0		
	2800	OTTA	3	S	1836.0	1838.7	6.0	22.8	7.6		
	9400	HUAN		S	1837.2	1838.6	2.4	14.1	9.1		R
	2800	OTTA	29	PBI	1842.0	1842	45.0	4.0	2.0		
	2695	PENT	21	GRF	1955.0	2006	11.0	4.0			
	2800	OTTA	1	S	2000.0	2000.5	1.5	4.0	2.0		
	2800	OTTA	8	S	2045.0	2045.3	.5	5.0	2.5		
	2800	OTTA	20	GRF	2050.0	2145	120.0	10.0	5.0		
	500	HIRA	27	RF	2200.0	2231	50.0	20	10		
	2695	PENT	23	GRF	2256.0	2330	75.0	10.8			
	2695	PENT	4	S/F	2314.2	2314.5	1.0	15.6	7.8		
12	127	TORN	44	NS	0600.0E	0803.0	226.0	4300	13.5		V3 DISTURBED
	202	IZMI	44	NS	0600.0E		360.0D	100			
	113	POTS	44	NS	0622.0E	0715	118.0D	70			

SOLAR RADIO EMISSION
OUTSTANDING OCCURRENCES

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	MEAN	INT	POLARIZATION OR REMARKS
12	260	ONDR	44	NS	0800.0E		410.0D	168	6		
	200	HIRA	44	NS	2043.0E	0152	690.0D	140	15		MR
	100	HIRA	27	RF	0148.0	0208	60.0	800	200		SR
	500	HIRA	27	RF	0158.0	0207	18.0	20	10		SR
	202	IZMI	4	S/F	0722.5	0723.0	1.0	370	120		
	234	POTS	42	SER	0722.8	0729.4	6.8	420	5		
	113	POTS	42	SER	0722.9	0729.4	6.8	3200	16		
	202	IZMI	5	S	0729.0	0729.1	.6	870	450		
	113	POTS	42	SER	0741.9	0748.4	7.3	4500	30		
	228	HARS	45	C	0810.4	0810.5	1.2	500	170		
	202	IZMI	4	S/F	0811.3	0811.5	.8	500	200		
	234	POTS	42	SER	0811.3	0811.6	11.0	560	1		
	113	POTS	42	SER	0811.4	0821.0	11.0	1400	7		
	29	UPIC	42	SER	0905.3	1035	210.6				
	33	UPIC	42	SER	0905.3	1034.8	210.4				
	127	TORN	42	SER	1029.2	1042.0	18.0	348			
	113	POTS	42	SER	1029.5	1041.9	13.0	1000	4		
	234	POTS	42	SER	1029.5	1041.5	13.0	200	1		
	536	ONDR	46	C	1033.6	1035.6	16.0	169	10		
	8400	BERN	1		1034.0	1035.6	80.0	24.0			
	930	BORD	45	C	1034.0	1041.8	9.0	73	15		
	10400	BERN	1		1034.0	1035.6	80.0	14.0			
	808	ONDR	46	C	1034.0	1035.8	13.5	55	15		
	6100	KISV			1034.0	1043		14			
	6100	KISV	46	C	1034.0	1038	26.0	18			
	6100	KISV			1034.0	1038.5		14			
	3100	CRIM	1	S	1034.0	1036.0	7.0	17	6		
	6100	KISV			1034.0	1039.3		13			
	7000	SAOP	3	S	1034.1	1035.9	74.0	23.0			3R
	950	GORK	46	C	1034.4	1035.6	13.6	54			
	950	GORK			1034.4	1042.0		30			
	950	GORK			1034.4	1038.5		40			
	650	GORK	46	C	1034.5	1035.4	7.9	31			
	650	GORK			1034.5	1042.0		24			
	9100	GORK	22	GRF	1034.6	1035.7	48.0	17	8		
	15000	KISV	45	C	1035.0	1035.5	5.0	10			
	15000	KISV			1035.0	1039		3			
	650	GORK	29	PBI	1042.4	1042.4	12.8	2			
	6100	KISV	21	GRF	1105.0	1120.5	40.0	11			
	202	IZMI	41	F	1118.7	1119.0	2.1	350			
	234	POTS	4	S/F	1120.4	1120.7	.5	560	20		
	260	ONDR	8	S	1120.6	1120.8	.5	216 D			
	536	ONDR	3	S	1131.5	1131.5	.2	15			
	536	ONDR	46	C	1206.0	1210.7	8.5	55	5.3		
	3100	CRIM	1	S	1206.0	1206.5	1.5	5	2		
	6100	KISV	8	S	1206.3	1206.7	2.0	7			
	7000	SAOP	45	C	1206.4	1210.8	6.0	18.0			20L
	1470	POTS	3	S	1206.5	1207.0	1.0	8.2			
	650	GORK	41	F	1206.6	1207.1	4.9	6			
	650	GORK			1206.6	1210.6	35.0				
	113	POTS	8	S	1207.8	1207.8	.1E	200	70		
	930	BORD	45	C	1210.0	1210.6	1.4	52	10		
	950	GORK	4	S/F	1210.0	1210.8	1.8	39			
	808	ONDR	4	S/F	1210.0	1210.8	2.0	38	9		
	3000	POTS	3	S	1210.0	1210.5	1.5	9.6			
	3100	CRIM	1	S	1210.0	1210.5	2.0	6	2		
	1470	POTS	3	S	1210.0	1210.5	1.5	11			
	9100	GORK	1	S	1210.0	1211.0	3.0	11	5		
	8400	BERN	1		1210.2	1210.8	4.0	15.0			
	10400	BERN	1		1210.2	1210.8	4.0	9.0			
	6100	KISV	8	S	1210.3	1210.5	2.0	16			
	9500	POTS	1	S	1210.5	1211.0	2.0	6.9			
	930	BORD	8	S	1218.8	1218.9	.1	16	2		
	930	BORD	8	S	1227.8	1227.9	.2	25	2		
	113	POTS	42	SER	1232.4	1232.6	2.8	1000	60		
	234	POTS	42	SER	1232.5	1232.7	2.7	1200	7		
	536	ONDR	3	S	1239.2	1239.2	.2	17			
	930	BORD	8	S	1334.4	1334.5	.3	36	2		
	930	BORD	8	S	1352.4	1352.6	.3	31	2		
	113	POTS	8	S	1410.6	1410.6	.1E	300	100		
	930	BORD	8	S	1412.3	1412.4	.2	28	2		
	930	BORD	8	S	1429.3	1429.4	.2	28	2		
	930	BORD	8	S	1446.4	1446.4	.2	25	2		
	536	ONDR	3	S	1447.3	1447.3	.3	35			
	930	BORD	8	S	1507.1	1507.2	.2	34	2		
	2800	OTTA	20	GRF	1525.0	1550	55.0	3.2	1.6		
	930	BORD	8	S	1526.8	1526.9	.2	28	2		
	930	BORD	8	S	1542.6	1542.7	.2	24	2		
	930	BORD	8	S	1618.7	1618.8	.2	24	2		
	7000	SAOP	1	S	1622.4	1626.9		10.0			15R
	2800	OTTA	20	GRF	1755.0	1830	70.0	4.4	2.2		
	9400	HUAN		S	1800.9	1838.7	65.8	8.4	5.0		O
	2800	OTTA	21	GRF	2030.0	2105	200.0D	17.8			
	2800	OTTA	1	S	2035.0	2036	2.0	3.6	1.8		
	2800	OTTA	3	S	2044.0	2047	7.0	11.8	5.8		

SOLAR RADIO EMISSION
OUTSTANDING OCCURRENCES

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	MEAN	INT	POLARIZATION OR REMARKS
13	100	HIRA	43	NS	0100.0	0233	170.0	27	8		MR
	127	TORN	44	NS	0730.0E	0926.7	490.0D	564	68		V2
	260	ONDR	44	NS	0754.0E		426.0D	91	9		
	202	IZMI	43	NS	0800.0		240.0	80			
	113	POTS	43	NS	0808.0	1423	382.0D	200			
	200	HIRA	44	NS	2040.0E	2320	630.0D	240	50		MR
	100	HIRA	44	NS	2040.0E	0123	490.0D	250	50		SR
	17000	NOBE	1	S	0416.1	0416.5	.8	13			R
	6100	KISV	46	C	0635.0	0643	18.0	5			
	6100	KISV	27	RF	0653.0	0715	42.0	8			
	29	UPIC	4	S/F	0848.6	0848.7	.6				
	33	UPIC	4	S/F	0848.6	0848.6	.6				
	536	ONDR	2	S/F	0856.3	0856.3	1.0	29			
	202	IZMI	5	S	1052.0	1052.3	.8	750	350		
	202	IZMI	5	S	1140.3	1141.0	.5	550	300		
	2800	OTTA	240	R	1220.0	1300	40.0	8.0	4.0		
	2800	OTTA	240	R	1305.0	1317	12.0	7.2	3.6		
	9500	POTS	20	GRF	1310.0	1345	60.0	10			
	9400	HUAN		S	1312.3	1330.0	56.2	13.5	6.3		O
	3000	POTS	20	GRF	1314.0	1335	65.0	12			
	2800	OTTA	20	GRF	1325.0	1335	65.0	5.6	2.8		
	1470	POTS	20	GRF	1325.0	1346.5	48.0	3.3			
	2800	OTTA	40	F	1438.0	1450	14.0	30.0			
	10400	BERN	20		1438.8	1456.6	68.0	10.0			OPR
	2650	DWIN	45	C	1442.0	1450	10.0	60	10		
	9400	HUAN		S	1442.2	1500.0	65.6	11.8	9.4		R
	2800	OTTA	29	PBI	1452.0	1452	55.0	8.0	4.2		
	2800	OTTA	40	F	1634.0	1636.8	6.0	4.6			
	2800	OTTA	21	GRF	1700.0	1740	160.0	6.0	3.2		
	2800	OTTA	40	F	1729.0	1733.5	5.5	8.0			
	2800	OTTA	45	C	1959.0	1959.5	9.0	22.6	9.9		
	2800	OTTA	1	S	2039.0	2039.4	1.0	3.6	1.7		
	2800	OTTA	3	S	2128.2	2128.8	1.5	11.0	4.0		
14	260	ONDR	44	NS	0755.0E		425.0D	30	2		
	536	ONDR	43	NS	1032.0		224.0	14			
	2930	VORO	42	SER	0110.0	0146	47.0	119			
	17000	NOBE	20	GRF	0123.2	0142.6	100.0	63			R
	500	HIRA	40	F	0130.0	0147	21.0	50			MR
	1415	MANI	4	S/F	0134.5	0142.7	11.5	245.5	81.8		
	113	POTS	27	RF	0630.0E	0740	111.0D	56			
	9100	GORK	20	GRF	0649.5	0655.4	55.5	12	6		
	3100	CRIM	1	S	0650.0	0652.0	7.0	13	4		
	2950	GORK	1	S	0651.2	0651.4	1.3	4.5	2.2		
	3100	CRIM	20	GRF	0800.0	0821.0	72.0	5	2		
	33	UPIC	2	S/F	0818.0	0818.4	.5				
	29	UPIC	2	S/F	0818.0	0818.5	.6				
	536	ONDR	2	S/F	0820.0	0821.3	2.5	29	2.8		
	3100	CRIM	26	FAL	0912.0	1012.0	77.0	8	3		
	3100	CRIM	25	R	1029.0	1048.0	61.0D	5			
	3100	CRIM	1	S	1041.0	1043.0	6.0	7	2		
	2800	OTTA	23	GRF	1200.0	1320	280.0	16.2	8.1		
	9400	HUAN		S	1208.0	1242.0	104.0	10.4	5.9		O
	536	ONDR	8	S	1445.3	1445.3	.3	45			
	228	HARS	45	C	1452.2	1453.4	2.0	155	40		
	2800	OTTA	2	S/F	1613.7	1613.9	3.0	1.8			
	7000	SAOP	3	S	1720.2	1721.1	12.4	20.0			O
	9400	HUAN		S	1720.2	1721.3	2.1	19.1	9.2		O
	2800	OTTA	8	S	1720.9	1721	.2	4.8	2.4		
	2800	OTTA	20	GRF	1755.0	1900	85.0	4.8	2.8		
	2800	OTTA	20	GRF	1930.0	1945	40.0	3.4	1.7		
	2800	OTTA	260	FAL	2020.0	2045	25.0	-4.8	-2.6		
	2695	PENT	3	S	2322.7	2323.1	1.0	15.6	7.8		
	500	HIRA	6	S	2322.7	2323.0	1.0	42	20		ML
	200	HIRA	45	C	2323.0	2323	2.0	1600	500		WR
	100	HIRA	45	C	2323.0	2323	1.0	15000	5000		SL
15	260	ONDR	44	NS	0740.0E		436.0D	15			
	9100	GORK	1	S	0543.3	0543.8	4.6	5	2.5		
	3100	CRIM	20	GRF	0720.0	0747.0	68.0	8	3		
	950	GORK	4	S/F	0832.2	0832.4	.7	43			
	650	GORK	4	S/F	0832.3	0832.5	.7	98	49		
	3100	CRIM	1	S	0846.0	0846.5	1.0	8	3		
	202	IZMI	41	F	0929.0	0941.0	13.0	120			
	2650	DWIN	45	C	1052.0	1054	2.0	125	30		
	536	ONDR	42	SER	1251.5	1327.8	134.0	52			
	7000	SAOP	4	S/F	1447.5	1453.2	1.8	125.0			13L
	228	HARS	45	C	1450.3	1451.5	3.0	275	60		
	260	ONDR	45	C	1450.5	1451.7	2.0	202	32		
	10715	DWIN	1	S	1451.0	1452	2.0	40	20		
	2650	DWIN	1	S	1451.0	1452	2.0	30	15		
	2800	OTTA	4	S/F	1451.2	1452.1	2.7	28.2	9.4		
	10400	BERN	3		1451.4	1452.2	4.0	66.0			
	8400	BERN	3		1451.4	1452.2	4.0	96.0			

SOLAR RADIO EMISSION
OUTSTANDING OCCURRENCES

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	MEAN	INT	POLARIZATION OR REMARKS
15	9400	HUAN		S	1451.5	1452.1	3.4	94.8	24.0		L
	2800	OTTA	22	GRF	1530.0	1603	105.0	3.8	2.0		
	4995	BOUL	3	S	1900.0E	1901	2.0D	54.0	18.0		
16	260	ONDR	44	NS	0750.0E		418.0D	34			
	9100	GORK	22	GRF	0448.4	0457.8	25.0	6	3		
	234	POTS	8	S	0745.0	0745.0	.1E	230	80		
	536	ONDR	42	SER	0820.0	0850.8	51.0	84			
	234	POTS	41	F	0850.8	0850.8	.5	350	10		
	260	ONDR	4	S/F	0851.0	0851	.6	222 D			
	9100	GORK	22	GRF	1130.5	1207.5	60.0	26			
	3000	POTS	29	PBI	1202.5	1205.4	115.0	32			
	9500	POTS	29	PBI	1203.0	1206.0	120.0	19			
	3100	CRIM	3	S	1203.0	1205.5	4.0	34	11		
	10400	BERN	20		1203.3	1206.0	137.0	14.0			
	8400	BERN	20		1203.3	1206.0	137.0	22.0			
	1470	POTS	29	PBI	1203.5	1205.4	105.0	19			
	9400	HUAN		S	1204.0	1206.0	3.1	16.4	10.9		L
	2650	DWIN	1	S	1204.0	1205	3.0	30	20		
	7000	SAOP	45	C	1204.0	1207.0	22.0	35.0			18L
	3100	CRIM	29	PBI	1207.0	1207.0	29.0	13			
	9400	HUAN		PBI	1207.1	1207.1	88.7	9.8	6.8		L
	2800	OTTA	20	GRF	1225.0	1245	75.0	8.0	4.1		
	536	ONDR	42	SER	1334.0	1423.2	68.0	162			
	9400	HUAN		S	1350.4	1359.8	14.5	8.2	2.8		O
	2800	OTTA	27A	RF	1447.0		268.0	4.8	4.6		
	2800	OTTA	24	R	1447.0	1454	7.0	4.8	2.6		
	9400	HUAN		S	1453.4	1525.0	54.4	9.8	4.5		O
	2800	OTTA	24P	R	1454.0		246.0	4.8			
	4995	BOUL	4	SF	1637.0	1637.5	2.5	16.0	5.0		
	2800	OTTA	1	S	1637.8	1638	1.0	2.4	1.2		
	7000	SAOP	45	C	1638.0	1639.2	7.6	20.0			15L
	9400	HUAN		S	1736.2	1803.0	60.2	11.5	5.7		R
	2800	OTTA	26	FAL	1900.0	1915	15.0	-4.8	-2.4		
	2695	PENT	20	GRF	2010.0	2110	135.0	7.0	3.5		
	2695	PENT	3	S	2304.5	2305.5	2.5	12.6	6.3		
17	260	ONDR	44	NS	0755.0E		409.0D	27			
	100	HIRA	45	C	0319.0	0320	3.0	10	6		WL
	100	HIRA	46	C	0328.0	0330	2.0	41	13		WR
	200	HIRA	45	C	0354.0	0354	1.0	49	11		WR
	9100	GORK	20	GRF	0525.7	0607.0	70.3	10	5		
	100	HIRA	45	C	0642.0	0643	1.0	500	300		WR
	6100	KISV			0649.0	0704		77			
	6100	KISV	45	C	0649.0	0658.5	31.0	97			
	9100	GORK	1	S	0649.5	0650.6	2.7	13	6		
	9100	GORK	21	GRF	0649.5	0709.0	195.0	54			
	3100	CRIM	3	S	0650.0	0702.0	15.0	60	20		
	5730	IRKU	45	C	0655.0	0659.1	17.0	48			L
	5730	IRKU			0655.0	0704.2		68			L
	500	HIRA	7	C	0655.7	0655.9	.8	60	35		SR
	100	HIRA	46	C	0656.0	0657	1.0	700	200		WL
	8400	BERN	45		0657.0	0658.5	36.0	94.0			
	10400	BERN	45		0657.0	0658.5	36.0	108.0			
	9100	GORK	46	C	0658.0	0658.6	10.0	114			
	9100	GORK			0658.0	0707.2		65			
	17000	NOBE	8	S	0658.1	0658.5	.6	89			R
	500	HIRA	41	F	0700.0	0701.6	4.0	40			SR
	9500	POTS	3	S	0702.0	0704.2	5.0	40			
	3000	POTS	3	S	0703.0	0704.4	4.0	21			
	3100	CRIM	30	PBI	0705.0	0705.0	145.0	37			
	5730	IRKU	29	PBI	0712.0		30.0	22			L
	3100	CRIM	1	S	0804.0	0804.5	1.0	9	3		
	6100	KISV	4	S/F	1036.0	1038	8.0	6			
	9100	GORK	20	GRF	1037.9	1039.3	10.0	7	3.5		
	7000	SAOP	20	GRF	1038.0	1040.0	12.4	12.0			O 2 COMPONENTS
	7000	SAOP	20	GRF	1112.3	1113.2	18.8	12.0			O
	9400	HUAN		S	1222.0	1330.5	102.0	19.8	11.2		L
	8400	BERN	20		1230.0	1319.0	180.0	46.0			
	10400	BERN	20		1230.0	1319.0	180.0	36.0			
	2800	OTTA	23	GRF	1240.0	1345	105.0	7.6			
	10715	DWIN	1	S	1313.0	1314	2.0	30	15		
	2650	DWIN	1	S	1314.0	1314	2.0	25	10		
	7000	SAOP	4	S/F	1318.0	1320.1	2.0	57.0			O
	2800	OTTA	3	S	1318.0	1319	3.0	25.4	8.4		
	1470	POTS	2	S/F	1318.0	1318.0	2.0	2.7			
	3000	POTS	3	S	1318.0	1319.1	3.0	32			
	9400	HUAN		S	1318.3	1319.0	2.5	44.6	20.7		L
	9500	POTS	3	S	1318.4	1319.0	2.6	34			
	2800	OTTA	20	GRF	1430.0	1440	30.0	4.8	2.4		
	2800	OTTA	23	GRF	1535.0	1605	145.0	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	3.0	8.6	4.0		
	7000	SAOP	45	C	1742.4	1743.1	2.0	18.0			20L
	2800	OTTA	24O	R	1805.0	1835	30.0	3.4	1.9		

SOLAR RADIO EMISSION
OUTSTANDING OCCURRENCES

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	MEAN	INT	POLARIZATION OR REMARKS
17	2800	OTTA	240AR		1850.0	2010	80.0	4.0	3.0		
	2800	OTTA	1	S	1900.0	1901	3.0	3.4	1.7		
	2695	PENT	20	GRF	2120.0	2200	90.0	5.4	2.7		
18	260	ONDR	44	NS	0742.0E		391.0D	81			
	2930	VORO	3	S	0015.0	0023	13.0	38			
	606	MANI	4	S/F	0020.2	0024.4	5.8	167.0	55.7		
	700	SYDN	41	F	0020.4	0024.6	5.6				
	1415	MANI	4	S/F	0020.5	0024.3	5.5	24.7	8.2		
	100	HIRA	42	SER	0022.0	0023	3.0	75			WL
	2695	MANI	4	S/F	0022.0	0024.1	4.0	23.8	9.4		
	500	HIRA	46	C	0022.3	0024.2	4.0	300	50		ML
	1400	SYDN	45	C	0023.1	0024.4	4.1				
	200	HIRA	45	C	0024.0	0024	1.0	1300	400		O
	5730	IRKU	20	GRF	0236.3	0236.9	4.0	15			L
	606	MANI	4	S/F	0350.0	0351.2	3.6	56.8	18.9		
	500	HIRA	46	C	0350.0	0352.0	5.0	250	100		MR
	700	SYDN	2	S	0350.5	0352.0	3.5				
	5730	IRKU	20	GRF	0350.8	0351.7	12.0	26			L
	200	HIRA	46	C	0351.0	0352	2.0	160	24		O
	100	HIRA	46	C	0351.0	0352	2.0	120	25		O
	100	HIRA	46	C	0402.0	0404	8.0	220	40		WR
	9100	GORK	22	GRF	0531.0	0536.1	18.0	20	10		
	9100	GORK	21	GRF	0556.1	0637.0	89.0	14	7		
	3100	CRIM	1	S	0635.0	0637.0	3.0	11	4		
	6100	KISV	8	S	0636.0	0636.5	3.0	7			
	6100	KISV	31	ABS	0639.0	0648	26.0	-5			
	6100	KISV	8	S	0705.0	0706.5	5.0	17			
	5730	IRKU	1	S	0705.3	0706.5	5.0	14			R
	9100	GORK	1	S	0706.0	0706.5	1.0	10	5		
	6100	KISV	24	R	0713.0	0713	17.0	6			
	8400	BERN	1		0731.6	0734.5	6.0	32.0			
	10400	BERN	1		0731.6	0734.5	6.0	32.0			
	9100	GORK	21	GRF	0732.3	0735.7	9.4	11	5		
	6100	KISV	8	S	0734.0	0734.5	3.0	10			
	9100	GORK	1	S	0734.2	0734.6	.9	26	13		
	536	ONDR	42	SER	0745.0	0938	180.0	65			
	9100	GORK	21	GRF	0759.0	1005.5	267.0	46	18		
	10400	BERN	46		0859.6	0915.6	42.0	77.0			
	8400	BERN	46		0859.6	0915.6	42.0	107.0			
	6100	KISV			0900.0	0922		69			
	6100	KISV			0900.0	0902.5		15			
	6100	KISV	45	C	0900.0	0920.3	22.0	92			
	1470	POTS	1	S	0901.0	0902.5	2.5	2.8			
	9500	POTS	3	S	0901.0	0902.5	3.0	21			
	5730	IRKU	1	S	0901.0	0902.6	4.0	18			R
	9100	GORK	1	S	0901.5	0902.6	2.9	15	7		
	2950	GORK	21	GRF	0901.7	0913.9	121.0	20			
	9100	GORK	46	C	0902.0	0903.7	12.7	106			
	9100	GORK			0902.0	0908.4		40			
	3000	POTS	3	S	0902.0	0902.5	2.0	20			
	3100	CRIM	1	S	0902.0	0902.5	2.0	21	7		
	2950	GORK	1	S	0902.3	0902.5	.8	15	7		
	5730	IRKU			0910.0	0914.9		52			R
	5730	IRKU	45	C	0910.0	0912.5	13.0	18			R
	5730	IRKU			0910.0	0918.4		34			R
	5730	IRKU			0910.0	0920.6		36			R
	5730	IRKU			0910.0	0914.5		32			R
	5730	IRKU			0910.0	0915.5		81			R
	950	GORK	22	GRF	0910.4	0924.4	17.1	4.7			
	2650	DWIN	45	C	0911.0	0916	16.0	70	40		
	9500	POTS	29	PBI	0911.0	0915.5	259.0	100			
	1470	POTS	29	PBI	0911.0	0914.1	229.0	19			
	3000	POTS	29	PBI	0911.5	0916.1	219.0	65			
	10715	DWIN	45	C	0912.0	0916	18.0	80	40		
	3100	CRIM	3	S	0912.0		13.0	41 D			
	2950	GORK	46	C	0914.1	0916.3	10.3	47			
	2950	GORK			0914.1	0920.4		31			
	6100	KISV	29	PBI	0922.0	0922	198.0	37			
	3100	CRIM	29	PBI	0925.0	0925.0	180.0D	19			
	10400	BERN	1		0948.9	0949.9	4.0	11.0			
	8400	BERN	1		0948.9	0949.9	4.0	17.0			
	6100	KISV	4	S/F	0949.0	0950	2.0	9			
	9100	GORK	1	S	0949.4	0950.0	1.5	15	7		
	8400	BERN	20		1000.9	1005.6	35.0	23.0			
	10400	BERN	20		1000.9	1005.6	35.0	13.0			
	6100	KISV	27	RF	1001.0	1007	16.0	17			
	930	BORD	46	C	1039.2	1039.3	.6	24	3		
	536	ONDR	42	SER	1254.0	1348.3	56.0	32			
	127	TORN	41	F	1344.6	1347.9	6.0	25			
	2800	OTTA	1	S	1347.5	1348	2.0	8.2	4.0		
	7000	SAOP	40	F	1439.0		168.0				
	2800	OTTA	20	GRF	1518.0	1527	50.0	5.2	4.0		
	9400	HUAN		S	1520.1	1548.0	70.1	4.9	1.7		O
	2800	OTTA	20	GRF	1955.0	2040	70.0	3.2	1.6		

SOLAR RADIO EMISSION
OUTSTANDING OCCURRENCES

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	MEAN	INT	POLARIZATION OR REMARKS
18	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	2157.0	2205	45.0	8.0	3.6		
	2695	PENT	40	F	2159.0	2159.2	.5	6.0			
	2695	PENT	8	S	2234.0	2234.2	.6	6.8			
	2695	PENT	8	S	2352.0	2352.3	.6	17.4	8.7		
	4995	MANI	3	S	2352.2	2352.5	1.6	14.7	4.9		
	8800	MANI	3	S	2352.2	2352.5	1.0	68.9	22.9		
19	260	ONDR	44	NS	0800.0E		410.0D	57	7		
	536	ONDR	44	NS	0800.0E		410.0D	26	3		
	127	TORN	43	NS	0928.0	0944.8	128.0	82	1.4		VO
	700	SYDN	8	S	0014.1	0014.2	.2				
	1400	SYDN	8	S	0014.3	0014.6	.4				
	2930	VORO	3	S	0015.0	0017	60.0	113			
	8800	MANI	4	S/F	0019.7	0023.1	6.3	144.2	48.1		
	4995	MANI	4	S/F	0019.7	0023.2	6.3	70.6	23.5		
	1400	SYDN	40	F	0020.1	0021.5	4.2				
	2695	MANI	4	S/F	0021.0	0023.1	5.0	50.8	16.9		
	1415	MANI	4	S/F	0412.0	0412.3	14.0	79.6	25.6		
	2695	MANI	4	S/F	0414.0	0419.3	12.0	280.1	93.3		
	4995	MANI	47	GB	0415.0	0419.2	11.0	766.4	255.5		
	8800	MANI	47	GB	0416.7	0418.7	9.3	2101.0	700.3		
	17000	NOBE	45	C	0417.5	0418.4	5.5	1323			R
	3040	GORK	3	S	0452.4	0454.0	2.9	12	3		
	606	MANI	4	S/F	0452.7	0500.8	10.3	97.5	32.5		
	2695	MANI	4	S/F	0453.0	0501.0	9.0	28.3	9.4		
	4995	MANI	4	S/F	0453.0	0501.0	9.0	11.7	3.9		
	1415	MANI	4	S/F	0453.2	0500.9	8.8	446.0	148.7		
	950	GORK	45	C	0459.4	0459.6	2.0	55 D			
	950	GORK			0459.4	0500.8		55 D			
	2950	GORK	3	S	0459.6	0500.9	1.8	24	10		
	650	GORK	4	S/F	0500.3	0500.7	1.0	79	20		
	1415	MANI	4	S/F	0619.4	0622.1	4.8	80.6	26.8		
	4995	MANI	2	S/F	0619.4	0621.6	5.2	7.8	2.6		
	6100	KISV	45	C	0620.0	0622.5	5.0	17			
	6100	KISV			0620.0	0622.6		16			
	650	GORK	4	S/F	0621.0	0621.4	1.1	49	16		
	606	MANI	4	S/F	0621.1	0621.4	2.1	53.3	17.7		
	2695	MANI	4	S/F	0621.1	0621.6	1.1	48.1	16.0		
	9100	GORK	2	S/F	0621.1	0621.6	2.3	19	10		
	8800	MANI	4	S/F	0621.2	0621.6	2.0	16.5	5.5		
	950	GORK			0621.2	0622.2		38			
	950	GORK	46	C	0621.2	0621.6	2.0	54			
	2950	GORK	3	S	0621.3	0621.5	2.1	50	25		
	10400	BERN	1		0836.4	0836.9	1.0	10.0			
	8400	BERN	1		0836.4	0836.9	1.0	14.0			
	3100	CRIM	1	S	0836.5	0837.2	1.5	12	4		
	9100	GORK	1	S	0836.7	0837.4	5.3	13	6		
	127	TORN	8	S	0844.9	0845.3	.9	20	10		
	9100	GORK	23	GRF	0903.5	1221.0	236.0	38			
	127	TORN	48	C	0912.6	0914.9	3.3	263	47		
	930	BORD	41	F	0914.2	0914.3	.4	22	2		
	930	BORD	41	F	0944.6	0944.9	.5	34	2		
	1470	POTS	8	S	1000.0	1000.5	.5	11			
	1470	POTS	8	S	1026.0	1026.4	.8	9.2			
	10400	BERN	22		1053.9	1103.0	51.0	25.0			
	8400	BERN	22		1053.9	1108.6	51.0	19.0			
	9500	POTS	20	GRF	1100.0	1103	40.0	26			
	1470	POTS	20	GRF	1101.0	1109	24.0	2.9			
	3000	POTS	20	GRF	1102.0	1106.5	47.0	7.0			
	9100	GORK	1	S	1103.0	1103.4	2.1	11	6		
	10400	BERN	47		1153.7	1157.8	160.0	3976.0			
	8400	BERN	47		1153.7	1157.8	160.0	4700.0			
	9400	HUAN		S	1153.8	1157.0	7.0	5743.6	1774.3		R
	9100	GORK	47	GB	1154.9	1157.6	11.0	5920			
	2650	DWIN	45	C	1155.0		15.0	430 D			
	10715	DWIN	45	C	1155.0		30.0	220 D			
	950	GORK	20	GRF	1155.0	1158.8	11.2	23			
	9500	POTS	29	PBI	1155.2	1157 U	125.0	3840 U			
	3000	POTS	29	PBI	1155.5	1157.4	125.0	1825			
	808	ONDR	45	C	1156.0	1158.8	12.0	18	13		
	2950	GORK	3	S	1156.1	1158.0	6.5	1780			
	2950	GORK			1156.1	1202.6	60.0	94			
	1470	POTS	29	PBI	1156.5	1157.5	129.0	157			
	930	BORD	3	S	1156.6	1158.5	11.4	27	13		
	9400	HUAN		PBI	1200.8	1200.8	123.4	201.3	22.2		R
	2800	OTTA	260	FAL	1235.0	1425	110.0	-18.0			
	7000	SAOP	45	C	1254.0						SATURATION
	2800	OTTA	21	GRF	1430.0	1520	90.0	4.6	3.0		
	2800	OTTA	1	S	1439.3	1439.7	1.0	4.8	2.3		
	2800	OTTA	3	S	1620.0	1621.2	3.0	33.4	16.8		
	9400	HUAN		S	1620.0	1621.3	2.1	57.8	30.2		R
	7000	SAOP	4	S/F	1621.3E	1621.3	5.6	74.0			11R CALIBRATION
	9400	HUAN		PBI	1622.1	1622.1	14.5	11.6	5.8		O

SOLAR RADIO EMISSION
OUTSTANDING OCCURRENCES

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	MEAN	INT	POLARIZATION OR REMARKS
19	2800	OTTA	29	PBI	1623.0	1623	6.0	6.6	3.0		
	2800	OTTA	21	GRF	1640.0	2022	340.0	13.2	6.6		
	2800	OTTA	1	S	1945.0	1946.5	3.0	2.4	1.6		
	2800	OTTA	1	S	2001.0	2001.6	3.0	3.8	1.3		
	2695	PENT	1	S	2120.0	2120.5	1.0	3.8	1.9		
	2695	PENT	8	S	2152.1	2152.5	.8	3.4	1.7		
	17000	NOBE	20	GRF	2313.9	2314.7	22.0	36			R
	2695	PENT	3	S	2314.5	2316.5	5.0	25.0	12.5		
	4995	MANI	4	S/F	2314.7	2317.3	4.3	16.9	5.6		
	8800	MANI	4	S/F	2314.7	2315.8	4.3	44.1	14.7		
	2695	MANI	4	S/F	2316.0	2317.3	3.0	28.9	9.6		
	1415	MANI	1	S	2316.0	2317.3	6.0	8.9	3.0		
20	260	ONDR	44	NS	0750.0E		412.0D	34	2		
	17000	NOBE	3	S	0256.3	0257.0	1.8	46			L
	5730	IRKU	1	S	0256.6	0257.0	2.0	13			R
	4995	MANI	3	S	0256.8	0257.1	2.0	12.2	4.0		
	8800	MANI	3	S	0256.8	0257.1	1.2	30.4	10.1		
	17000	NOBE	21	GRF	0300.0	0304.8	120.0D	21			0
	1415	MANI	4	S/F	0301.2	0304.0	6.4	17.6	5.8		
	5730	IRKU	2	S	0302.0	0304.4	14.0	163			R
	8800	MANI	4	S/F	0302.2	0304.8	4.3	116.8	38.9		
	4995	MANI	4	S/F	0302.2	0304.8	6.6	138.2	46.0		
	2695	MANI	4	S/F	0303.6	0304.6	4.3	127.6	42.5		
	17000	NOBE	8	S	0304.2	0304.4	.4	32			R
	1415	MANI	4	S/F	0520.9	0523.0	3.4	33.0	11.0		
	606	MANI	4	S/F	0521.7	0523.0	2.4	61.2	20.4		
	100	HIRA	46	C	0531.0	0531	1.0	900	100		ML
	6100	KISV	4	S/F	0551.0	0554.3	6.0	314			
	3100	CRIM	3	S	0551.0	0554.5	7.0	394	134		
	606	MANI	2	S/F	0552.0	0552.8	2.5	10.1	3.4		
	5730	IRKU	2	S	0552.0	0553.5	10.0	67 D			R
	9100	GORK	21	GRF	0552.1	0557.0	126.0	34			
	4995	MANI	4	S/F	0552.2	0554.5	10.2	488.2	162.7		
	2950	GORK	21	GRF	0552.2		300.0				
	650	GORK	2	S/F	0552.3	0552.5	1.9	9			
	8800	MANI	4	S/F	0552.8	0554.5	6.8	436.8	145.6		
	9100	GORK	4	S/F	0552.9	0554.7	4.1	290			
	17000	NOBE	4	S/F	0553.1	0554.1	3.0D	228			R
	2950	GORK	3	S	0553.4	0554.8	4.3	330			
	2695	MANI	3	S	0553.7	0554.7	7.6	290.2	96.7		
	1415	MANI	3	S	0553.7	0555.0	4.3	16.5	5.5		
	950	GORK	1	S	0554.0	0554.6	3.0	4.2			
	6100	KISV	29	PBI	0557.0	0557	5.0	14			
	6100	KISV	1	S	0610.0	0613	6.0	4			
	202	IZMI	41	F	0713.5	0713.8	1.3	115			
	536	ONDR	46	C	0805.0	0904.4	80.0	91	40		
	9100	GORK	22	GRF	0907.5	0913.2	13.4	10	5		
	9100	GORK	20	GRF	0943.9	0947.8	26.0	13	6		
	10400	BERN	20		0944.6	0948.0	27.0	10.0			
	8400	BERN	20		0944.6	0948.0	27.0	18.0			
	9500	POTS	20	GRF	0945.0	0947	35.0	16			
	3000	POTS	20	GRF	0945.0	0948	38.0	12			
	3100	CRIM	1	S	0946.0	0948.0	3.0	15	5		
	3100	CRIM	29	PBI	0949.0	0949.0	34.0	10			
	536	ONDR	46	C	1011.0	1045	38.0D	117	54		
	9400	HUAN		C	1111.0	1112.5	6.1	29.2	9.6		L
	10400	BERN	2		1111.2	1112.5	11.0	13.0			
	8400	BERN	2		1111.2	1112.5	11.0	25.0			
	7000	SAOP	3	S	1111.4	1112.5	6.2	14.0			18L
	9500	POTS	3	S	1111.5	1112.4	2.0	23			
	6100	KISV	4	S/F	1112.0	1112.5	2.0	8			
	930	BORD	8	S	1112.4	1112.5	.3	20	2		
	7000	SAOP	46	C	1131.0	1154.4	6.9	209.0			7R
	6100	KISV	28	PRE	1144.0	1146.5	6.0	4			
	9400	HUAN		C	1150.3	1154.2	5.5	150.5	58.4		R
	6100	KISV	4	S/F	1151.0	1154.5	14.0	119			
	8400	BERN	46		1151.1	1154.3	37.0	150.0			
	10400	BERN	46		1151.1	1154.3	37.0	117.0			
	9500	POTS	4	S/F	1151.5	1154.5	6.0	142			
	3000	POTS	4	S/F	1151.7	1154.8	5.8	82			
	10715	DWIN	45	C	1152.0	1154	8.0	110	50		
	2650	DWIN	45	C	1152.0	1155	5.0	65	40		
	9400	HUAN		PBI	1155.8	1155.8	86.0	26.1	7.0		0
	7000	SAOP	1	S	1356.0	1357.0		9.0			0
	1470	POTS	8	S	1357.0	1357.0	.5	9.4			
	2800	OTTA	21	GRF	1430.0	1545	195.0	8.6	4.3		
	8400	BERN	20		1437.3	1440.2	25.0	49.0			
	10400	BERN	20		1437.3	1440.2	25.0	18.0			
	7000	SAOP	45	C	1438.0	1444.0	23.2	21.0			0
	7000	SAOP	41	F	1438.0						2 BURSTS
	9400	HUAN		S	1438.4	1440.6	19.9	21.5	9.2		0
	2800	OTTA	21	GRF	1440.0	1445	20.0	5.8	2.9		
	2800	OTTA	1	S	1441.7	1442	1.0	3.8	1.9		
	7000	SAOP	45	C	1509.0	1522.6		30.0			0 CALIBRATION

SOLAR RADIO EMISSION
OUTSTANDING OCCURRENCES

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	POLARIZATION OR REMARKS
20	9400	HUAN		S	1519.0	1522.7	55.2	24.6	8.1		R
	2800	OTTA	20	GRF	1520.0	1523	20.0	12.0	5.0		
	10400	BERN	22		1520.0	1524.7	18.0	16.0			OPR
	7000	SAOP	1	S	1708.0	1708.7	1.2	9.0			15R
	2800	OTTA	20	GRF	1751.0	1753.5	15.0	4.6			
	7000	SAOP	1	S	1751.7	1753.4	2.6	9.0			8R
	7000	SAOP	46	C	1823.0	1823.9	31.4	119.0			8R
	9400	HUAN		C	1823.1	1824.2	6.7	95.2	44.5		R
	2800	OTTA	4	S/F	1823.5	1827.1	6.5	52.0	29.2		
	9400	HUAN		PBI	1829.8	1829.8	68.5	38.4	17.4		R
	2800	OTTA	29	PBI	1830.0	1830	50.0	26.6	9.4		
	2800	OTTA	27A	FRF	2000.0		210.0	3.6	3.3		
	2800	OTTA	24	R	2000.0	2007	7.0	3.6	1.8		
	9400	HUAN		S	2000.4	2019.4	38.6	20.0	13.7		0
	2800	OTTA	24P	R	2007.0		173.0	3.6			
	2800	OTTA	1	S	2040.0	2041.7	4.0	3.4	1.4		
	2800	OTTA	22	GRF	2055.0	2102	70.0	5.6	2.8		
	2695	PENT	4	S/F	2211.2	2213	5.0	10.6	5.0		
	2695	PENT	3	S	2227.0	2229	9.0	13.2	4.4		
	2695	PENT	1	S	2244.5	2246.6	5.0	4.0	1.8		
	2695	PENT	1A	S	2250.0	2253	6.0	3.8	1.9		
	2695	PENT	3	S	2251.2	2252	1.0	15.2	5.4		
	2695	PENT	26	FAL	2300.0	2330	30.0	-3.6	-1.8		
	2930	VORO	3	S	2310.0	2315	10.0	38			
21	260	ONDR	44	NS	0747.0E		406.0D	24			
	200	HIRA	46	C	0346.0	0347	5.0	500	50		WR,WL
	500	HIRA	46	C	0347.7	0349.0	4.0	60	20		
	100	HIRA	46	C	0348.0	0349	4.0	1100	130		ML
	606	MANI	4	S/F	0348.0	0349.8	3.2	30.0	10.0		
	1415	MANI	4	S/F	0348.5	0349.3	3.2	17.1	5.7		
	2950	GORK	20	GRF	0452.0	0457.8	28.1	21			
	9100	GORK	22	GRF	0455.5	0457.8	316.5	30	7.5		
	606	MANI	4	S/F	0507.2	0517.0	13.6	77.2	25.7		
	202	IZMI	41	F	0632.0	0633.2	2.1	90			
	7000	SAOP	46	C	1213.0	1215.8	52.8	154.0			4L
	7000	SAOP	41	F	1213.0						2 BURSTS
	9400	HUAN		C	1214.3	1215.7	5.5	153.9	85.5		L
	9400	HUAN			1214.3	1218.2		150.2			L
	10715	DWIN	45	C	1215.0	1219	5.0	85	60		
	9500	POTS	29	PBI	1215.0	1218.0	55.0	122			
	1470	POTS	20	GRF	1215.0	1217.4	20.0	4.7			
	6100	KISV	45	C	1215.0	1219	6.0	90			
	6100	KISV			1215.0	1217		83			
	3000	POTS	3	S	1215.0	1218.4	6.0	20			
	9400	HUAN		PBI	1219.8	1219.8	64.5	32.6	18.8		L
	2800	OTTA	21	GRF	1225.0	1400	160.0	15.8			
	4995	BOUL	3	S	1319.5	1328.5	15.0	177.0	59.0		
	930	BORD	41	F	1323.8	1324.1	.5	19	2		
	7000	SAOP	46	C	1324.0	1327.8	9.4	250.0			10R
	2800	OTTA	8	S	1324.0	1324	.3	18.4			
	10715	DWIN	3	S	1325.0	1328	10.0	80	40		
	2650	DWIN	3	S	1325.0	1328	10.0	80	40		
	2800	OTTA	3	S	1325.5	1328.3	10.5	97.0	38.2		
	9500	POTS	29	PBI	1326.5	1327.7	36.0	125			
	1470	POTS	20	GRF	1326.5	1329.8	24.0	10			
	3000	POTS	29	PBI	1326.5	1328.6	43.0	104			
	9400	HUAN		PBI	1331.3E	1331.3U	85.8	41.6	15.2		0
	2800	OTTA	29	PBI	1336.0	1336	22.0	16.0	8.0		
	7000	SAOP	1	S	1338.3E	1338.3	.5	8.0			0
	930	BORD	41	F	1401.0	1401.7	2.0	72	4		
	2800	OTTA	1	S	1559.0	1800	3.0	2.4	1.2		
	2800	OTTA	21	GRF	1655.0	1850	170.0	4.8	2.5		
	1420	BOUL	3	S	1758.0E	1759	2.0D	23.0	8.0		
	7000	SAOP	45	C	1758.5	1759.0	.6	12.0			17R 2 PARTS
	2800	OTTA	4	S/F	1758.6	1758.9	1.8	14.6	7.3		
	9400	HUAN		S	1840.7	1904.3	38.1	3.6	2.4		0
	4995	BOUL	3	S	2105.0	2106	2.5	12.0	4.0		
	9400	HUAN		S	2105.2	2106.1	1.8	12.7	8.7		R
	4995	BOUL	8	S	2113.0	2115	4.0	47.0	16.0		
	9400	HUAN		S	2114.7	2115.6	1.8	43.4	22.4		R
	2800	OTTA	4	S/F	2115.0	2115.6	2.5	19.4	7.0		
	9400	HUAN		PBI	2116.5	2116.5	10.9	10.9	7.4		0
	2695	BOUL	3	S	2117.0E	2117.5	1.5D	16.0	5.0		
	4995	BOUL	3	S	2125.0	2125.5	2.0	12.0	4.0		
	4995	BOUL	4	SF	2225.0	2226	3.0	18.0	6.0		
22	100	HIRA	43	NS	0120.0	0700	390.0D	70	15		WL
	127	TORN	43	NS	0650.0	1343.1	510.0	72	21		VO
	260	ONDR	44	NS	0742.0E		404.0D	30	2		
	100	HIRA	44	NS	2050.0E	0655	620.0D	100	34		SL
	200	HIRA	44	NS	2050.0E	0300	620.0D	40	20		ML
	6100	KISV	3	S	0630.0	0632.3	5.0	13			
	3100	CRIM	3	S	0631.0	0632.5	3.0	33	11		
	2950	GORK	3	S	0631.5	0632.3	4.4	23	8		

SOLAR RADIO EMISSION
OUTSTANDING OCCURRENCES

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	MEAN	INT	POLARIZATION OR REMARKS
22	9100	GORK	1	S	0631.7	0632.2	4.3	8.6	4		
	9100	GORK	20	GRF	0918.8	0921.0	14.0	7	3		
	6100	KISV	20	GRF	0919.0	0922	22.0	4			
	9100	GORK	21	GRF	0937.2	0938.6	137.8	11	5		
	6100	KISV	4	S/F	0957.0	0958	8.0	7			
	6100	KISV	29	PBI	1005.0	1005	33.0	2			
	7000	SAOP	20	GRF	1036.5	1037.8	10.8	15.0			18R
	9100	GORK	1	S	1037.3	1037.8	.9	6.1	3.5		
	6100	KISV	4	S/F	1037.5	1038.7	7.0	11			
	536	ONDR	45	C	1038.2	1041.2	3.5	46	2		
	2800	OTTA	27A	RF	1245.0		250.0	4.8	4.4		
	2800	OTTA	24	R	1245.0	1300	15.0	4.8	2.4		
	9400	HUAN		S	1252.3	1301.7	23.9	6.7	3.1		0
	7000	SAOP	27	RF	1254.0		28.0	9.0			
	7000	SAOP	41	F	1254.0						2 BURSTS
	2800	OTTA	24P	R	1300.0		210.0	4.8			
	9400	HUAN		S	1336.5	1356.7	55.9	5.0	4.0		0
	7000	SAOP	21	GRF	1337.2			9.0			7R
	9400	HUAN		PRE	1510.7	1542.4	31.7	11.8	3.9		0
	10400	BERN	4		1542.3	1542.9	8.0	157.0			OPR
	8400	BERN	4		1542.3	1542.9	8.0	150.0			OPR
	9400	HUAN		S	1542.4	1543.1	2.6	212.4	91.0		R
	7000	SAOP	4	S/F	1542.4	1543.1	3.6	255.0			11R
	2800	OTTA	3	S	1542.5	1543.1	8.0	19.8	5.0		
	9400	HUAN		PBI	1545.0	1545.0	43.4	27.0	7.2		R
	2800	OTTA	1	S	1556.0	1558	5.0	2.4	1.2		
	2800	OTTA	26	FAL	1630.0	1655	25.0	-4.8	-2.4		
	7000	SAOP	40	F	1706.0		87.0				
	2800	OTTA	24O	R	1710.0	1730	20.0	3.2	1.6		
	2800	OTTA	21	GRF	1805.0	1825	85.0	6.2	3.0		
	2800	OTTA	1	S	1808.5	1810	3.0	2.2	1.6		
	9400	HUAN		S	1808.7	1826.0	48.0	13.5	4.6		0
	9400	HUAN		S	1819.0	1820.0	2.3	42.2	25.0		R
	2800	OTTA	3	S	1819.0	1819.6	2.0	11.8	2.8		
	2800	OTTA	8	S	1903.3	1903.3	.1	12.2			
	2695	PENT	24	R	2015.0	2022	17.0	3.2	1.6		
	2695	PENT	27A	RF	2015.0		180.0	3.2	2.9		
	2695	PENT	24P	R	2022.0		143.0	3.2			
	2695	PENT	1	S	2030.9	2031	1.0	4.0	2.0		
	2695	PENT	20	GRF	2050.0	2115	50.0	4.0	2.0		
	2695	PENT	1	S	2218.8	2219	1.2	4.4	2.4		
	2695	PENT	26	FAL	2255.0	2315	20.0	-3.2	-1.6		
23	127	TORN	44	NS	0600.0E	1438.6	580.0D	200 D	36		V2 SUNRISE
	202	IZMI	44	NS	0600.0E		360.0D	65			
	260	ONDR	44	NS	0750.0E		355.0D	34	3		
	100	HIRA	44	NS	2050.0E	0000	630.0D	25	20		ML
	200	HIRA	44	NS	2050.0E	0210	630.0D	60	30		ML
	202	IZMI	5	S	1014.5	1015.0	1.0	600	300		
	7000	SAOP	3	S	1242.0	1243.1	4.8	10.0			29R
	2800	OTTA	20	GRF	1520.0	1526	28.0	5.8	2.9		
	2800	OTTA	20	GRF	1550.0	1630	90.0	8.8	3.2		
	9400	HUAN		S	1801.0	1825.0	37.9	5.6	2.0		0
	2800	OTTA	21	GRF	2020.0	2110	150.0	5.6	3.0		
	2800	OTTA	1	S	2031.0	2034	5.0	3.0	1.5		
	100	HIRA	46	C	2050.0	2051	2.0	200	25		
24	127	TORN	44	NS	0600.0E	1107.3	520.0D	418	3.9		V1 SUNRISE
	202	IZMI	44	NS	0600.0E		360.0D	55			
	260	ONDR	44	NS	0750.0E		400.0D	88	5		
	202	IZMI	4	S/F	0633.2	0634.0	1.0	400	150		
	234	POTS	42	SER	0633.4	0635.8	2.7	250	2		
	3100	CRIM	1	S	0929.0	0929.5	2.0	4	1		
	2950	GORK	1	S	0929.5	0929.8	.7	10			
	9100	GORK	20	GRF	0942.0	0944.4	18.0	8.4	3		
	3100	CRIM	3	S	0943.0	0954.5	5.0	22	7		
	3000	POTS	3	S	0943.0	0944.5	3.5	19			
	8400	BERN	3		0943.3	0944.3	4.0	13.0			
	10400	BERN	3		0943.3	0944.3	4.0	7.0			
	9500	POTS	1	S	0943.5	0944.5	2.5	6.1			
	2950	GORK	3	S	0946.4	0947.5	3.0	49	23		
	3100	CRIM	41	F	0948.0	0950.5	8.0	3	1		
	3100	CRIM			0948.0	0953.0		4			
	9100	GORK	20	GRF	1016.5	1156.7	118.0	10.8			
	2950	GORK	21	GRF	1016.8	1034.8	120.0	20			
	234	POTS	8	S	1140.6	1140.7	.2	160	40		
	2950	GORK	3	S	1156.9	1157.2	.8	206	100		
	234	POTS	42	SER	1237.1	1246.9	11.0	280	1		
	2800	OTTA	20	GRF	1310.0	1430	130.0	7.8	4.4		
	234	POTS	41	F	1345.3	1346.9	1.6	700	3		
	7000	SAOP	40	F	1406.0		17.0				
	9400	HUAN		S	1554.4	1606.1	74.1	11.5	4.9		0
	2800	OTTA	21	GRF	1555.0	1605	85.0	8.2	4.6		
	7000	SAOP	20	GRF	1556.7		16.0	10.0			0 2 COMPONENTS
	2800	OTTA	2	S/F	1559.0	1559.9	3.0	7.8	3.4		

SOLAR RADIO EMISSION
OUTSTANDING OCCURRENCES

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	POLARIZATION OR REMARKS
24	9400	HUAN	8	S	1753.1	1753.6	1.1	50.0	19.2		L
	2800	OTTA	20	GRF	1835.0	1935	70.0	2.6	1.3		
	2695	PENT	20	GRF	2100.0	2140	105.0	5.8	2.9		
25	200	HIRA	43	NS	0333.0	0555	200.0D	20	5		WL
	127	TORN	43	NS	0832.0	0915.4	388.0U	331	1.5		V1 DISTURBED
	260	ONDR	44	NS	1010.0E		270.0D	18			
	17000	NOBE	20	GRF	0126.9	0144.9	52.0	13			O
	5730	IRKU	1	S	0137.0	0137.9	4.0	18			O
	8800	MANI	3	S	0137.2	0138.3	4.6	38.4	12.8		
	4995	MANI	1	S	0137.7	0138.6	3.6	8.0	2.7		
	9100	GORK	21	GRF	0518.0	0535.0	59.0	9.7	5.5		
	9100	GORK	1	S	0518.4	0518.6	.7	10.9	7		
	2950	GORK	1	S	0531.0	0531.8	1.7	5.8	2.9		
	5730	IRKU	1	S	0531.0	0531.8	3.0	13			L
	9100	GORK	1	S	0531.2	0531.8	.8	6	2.5		
	9100	GORK	1	S	0646.3	0646.5	1.0	3.6	2		
	9100	GORK	1	S	0647.8	0648.3	1.8	2.4	1.5		
	9100	GORK	20	GRF	0659.0	0710.7	26.7	7.2	3		
	234	POTS	4	S/F	0839.6	0839.8	.4	130	10		
	234	POTS	8	S	0903.8	0903.8	.1E	5000	1500		
	9100	GORK	20	GRF	1015.8	1039.7	80.2	9.7	5		
	2950	GORK	1	S	1023.4	1024.6	3.5	4.3	2		
	234	POTS	8	S	1240.4	1240.4	.1E	400	150		
	2800	OTTA	21	GRF	1305.0	1420	135.0	3.6			
	2800	OTTA	8	S	1339.7	1339.7	.1	18.4			
	2800	OTTA	20	GRF	1640.0	1700	60.0	3.8	1.9		
	9400	HUAN		S	1640.2	1657.7	44.1	8.0	4.8		O
	9400	HUAN		S	1733.8	1734.5	1.4	9.6	4.0		O
	9400	HUAN		S	1751.0	1811.3	41.2	6.4	3.2		O
	2800	OTTA	21	GRF	1830.0	1902	220.0	7.8	3.9		
	7000	SAOP	21	GRF	1852.0		36.0	10.0			O
	4995	BOUL	3	S	1854.0	1855	2.5	19.0	6.0		
	7000	SAOP	3	S	1855.2E	1855.2		10.0			O
	2800	OTTA	21	GRF	2043.0	2050	47.0	5.8	2.9		
	4995	BOUL	3	S	2045.0	2046.5	3.0	47.0	16.0		
	9400	HUAN		S	2046.2	2047.4	2.4	20.8	14.2		L
	2800	OTTA	3	S	2047.0	2047.5	3.0	10.4	3.5		
	9400	HUAN		PBI	2048.6	2048.6	33.9	11.2	5.4		O
26	200	HIRA	43	NS	0108.0	0300	400.0D	15	5		ML
	260	ONDR	44	NS	0750.0E		362.0D	67	5		
	536	ONDR	43	NS	0846.0		306.0D	22	2		
	127	TORN	44	NS	1030.0E	1259.2	280.0D	518	5.3		V1 DISTURBED
	200	HIRA	44	NS	2052.0E	2320	240.0D	10	5		
	234	POTS	41	F	0710.5	0711.1	.8	220	3		
	9100	GORK	1	S	0735.0	0735.5	1.0	12.9	7		
	9100	GORK	1	S	0751.5	0754.0	5.1	4.7	2		
	9100	GORK	1	S	0813.3	0813.8	1.4	8.2	4.5		
	2650	DWIN	1	S	1404.0	1405	2.0	20	18		
	2650	DWIN	8	S	1430.0			75			
	2800	OTTA	21	GRF	1435.0	1438	14.0	3.0	1.5		
	7000	SAOP	45	C	1435.0	1436.2	12.0	14.0			O
	2800	OTTA	1	S	1435.5	1436	1.0	4.4	2.2		
	7000	SAOP	8	S	1618.2	1618.6	.5	17.0			O
	7000	SAOP	3	S	1721.6	1722.8	3.4	13.0			O
	9400	HUAN		S	1721.8	1722.9	2.4	14.6	9.6		O
	2800	OTTA	240	R	1735.0	1755	20.0	3.0	1.5		
	7000	SAOP	3	S	1751.0	1754.2	4.6	13.0			O
	2800	OTTA	240	R	1820.0	1935	75.0	4.8	2.0		
	9400	HUAN		S	1820.2	1821.4	2.1	17.8	8.3		R
27	260	ONDR	44	NS	0752.0E		370.0D	27			
	6100	KISV	8	S	0837.0	0837.5	1.0	3			
	29	UPIC	8	S	1020.2	1020.4	.5				
	33	UPIC	8	S	1020.5	1020.5	.4				
	9400	HUAN		S	1357.5	1430.3	47.5	4.8	1.5		O
	7000	SAOP	27	RF	1400.6			8.0			9R
	2800	OTTA	20	GRF	1710.0	1745	115.0	4.4	3.0		
	2800	OTTA	260	FAL	1925.0	1950	25.0	-4.4	-2.2		
28	260	ONDR	44	NS	0800.0E		375.0D	84	7		
	200	HIRA	44	NS	2055.0E	2235	600.0D	25	10		WL
	100	HIRA	44	NS	2055.0E	0550	600.0D	35	15		SL
	6100	KISV	27	RF	0824.0	0828	3.0				
	29	UPIC	4	S/F	0958.5	0958.7	.4				
	33	UPIC	4	S/F	0958.5	0958.6	1.0				
29	260	ONDR	44	NS	0730.0E		373.0D	44	5		
	100	HIRA	44	NS	2100.0E	0307	600.0D	140	53		SL
	200	HIRA	44	NS	2100.0E	2305	600.0D	35	15		ML
	100	HIRA	45	C	0012.0	0012.2	1.0	3600	1500		WL
	500	HIRA	46	C	0044.6	0045.8	2.0	25	8		WR
	202	IZMI	4	S/F	0747.8	0748.0	1.5	90	45		
	29	UPIC	4	S/F	1030.2	1030.5	.7				

SOLAR RADIO EMISSION
OUTSTANDING OCCURRENCES

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	POLARIZATION OR REMARKS
29	33	UPIC	4	S/F	1030.2	1030.3	.7				
	9100	GORK	1	S	1030.4	1030.6	.7	5	2.5		
	3100	CRIM	25	R	1032.0	1210.0		13			
	536	ONDR	2	S/F	1115.0	1117.7	7.0	10	7		
	3000	POTS	22	GRF	1115.0	1208.5	114.0	18			
	9500	POTS	22	GRF	1115.0	1209	120.0	12			
	950	GORK	2	S/F	1116.9	1118.0	2.0	8			
	650	GORK	1	S	1117.0	1118.2	2.0	8	4		
	29	UPIC	2	S/F	1135.4	1135.6	.4				
	33	UPIC	3	S	1135.4	1135.5	.4				
	9400	HUAN		S	1205.6	1209.2	21.7	9.6	4.1		O
	536	ONDR	46	C	1206.0	1208.8	4.0	55	6		
	228	HARS	45	C	1206.6	1207.8	1.8	240	80		
	2950	GORK	1	S	1206.9	1208.5	2.5	6.7	3		
	3100	CRIM	1	S	1207.0	1208.5	3.0	10	3		
	9100	GORK	1	S	1207.5	1209.0	4.0	7	3.5		
	2800	OTTA	20	GRF	1300.0	1340	55.0	4.2	2.1		
	2800	OTTA	22	GRF	1420.0E	1523	105.0D	5.8			
	7000	SAOP	45	C	1936.0	1939.4	5.2	108.0			12L
	2695	BOUL	3	S	1936.0	1939	10.0	19.0	6.0		
	9400	HUAN		S	1937.1	1939.3	3.9	64.2	29.3		L
	2800	OTTA	4	S/F	1937.5	1939.5	8.5	56.0	15.6		
	9400	HUAN		PBI	1941.0	1941.0	61.5	8.0	6.8		L
	2800	OTTA	30	PBI	1946.0	1946	30.0	2.2	1.1		
	2800	OTTA	1	S	1950.0	1950.3	1.0	3.4	1.5		
30	202	IZMI	44	NS	0600.0E		240.0D	45			
	260	ONDR	44	NS	0750.0E		398.0D	30	2		
	200	HIRA	44	NS	2100.0E	0600	600.0D	15	10		WL
	100	HIRA	44	NS	2100.0E	0536	600.0D	110	34		ML
	2930	VORO	3	S	0120.0	0125	10.0	23			
	650	GORK	3	S	0529.8	0530.2U	1.0	60 D	30		
	950	GORK	20	GRF	0530.0	0533.5	9.4	10	5		
	2950	GORK	1	S	0531.9	0533.1	2.0	6	3		
	2950	GORK	1	S	0706.1	0706.5	1.0	2.1	1		
	228	HARS	45	C	0710.0	0712.0	4.2	295	115		
	202	IZMI	41	F	0713.3	0713.5	1.0	135			
	9100	GORK	1	S	0722.8	0723.1	2.5	3	1.5		
	9100	GORK	1	S	0845.6	0845.9	1.6	5.5	2.5		
	3040	GORK	1	S	1006.3	1007.9	2.6	6.1	3		
	9100	GORK	1	S	1007.6	1007.9	.8	4	2		
	9100	GORK	1	S	1012.6	1013.4	1.4	2.5	1.2		
	29	UPIC	42	SER	1035.5	1035.6	15.5				
	33	UPIC	42	SER	1035.8	1035.8	14.2				
	3100	CRIM	1	S	1306.0	1308.0	3.0	9	3		
	9400	HUAN		S	1625.2	1649.6	54.6	6.9	4.3		O
	2800	OTTA	20	GRF	1630.0	1655	50.0	3.6	2.0		
	2800	OTTA	20	GRF	1807.0	1810	16.0	2.6	1.3		
	2800	OTTA	1	S	1849.0	1852	5.0	2.2	1.1		
	2800	OTTA	20	GRF	1920.0	2015	80.0	3.6	2.9		
	2695	PENT	260	FAL	2120.0	2140	20.0	-3.6	-1.8		
31	127	TORN	44	NS	0600.0E	0933.6	450.0D	121	7.2		V1 SUNRISE
	260	ONDR	44	NS	0730.0E		410.0D	25	1		
	100	HIRA	44	NS	2100.0E	0243	600.0D	50	19		ML
	200	HIRA	44	NS	2100.0E	0247	600.0D	25	10		ML
	4995	MANI	3	S	0329.0	0330.3	2.4	29.0	9.7		
	2695	MANI	1	S	0329.5	0330.3	1.9	8.3	2.8		
	8800	MANI	3	S	0329.7	0330.3	1.7	31.1	10.4		
	9100	GORK	1	S	0756.9	0757.2	2.7	4	2		
	3100	CRIM	25	R	0800.0	1200.0	240.0	18			
	9100	GORK	1	S	0849.3	0849.4	1.5	6.5	3		
	3000	POTS	3	S	1006.0	1007.4	3.5	6.5			
	3100	CRIM	1	S	1006.5	1007.5	2.0	7	2		
	9500	POTS	1	S	1006.5	1007.5	2.5	4.6			
	2950	GORK	1	S	1006.7	1007.5	2.5	4.4	2		
	9100	GORK	1	S	1006.9	1007.4	1.7	6.5	3		
	3100	CRIM	3	S	1030.0	1045.0	29.0	24	8		
	2950	GORK	20	GRF	1031.5	1045.2	72.0	24	12		
	9100	GORK	20	GRF	1031.7	1055.3	58.3	17	5.5		
	2800	OTTA	21	GRF	1425.0	1440	50.0	4.4	2.2		
	2800	OTTA	8	S	1428.1	1428.2	.5	3.6	1.8		
	2800	OTTA	20	GRF	1605.0	1620	100.0	2.6	1.8		
	9400	HUAN		S	1623.7	1639.3	41.0	5.0	1.8		O
	2800	OTTA	1	S	2040.0	2045	10.0	2.8	1.2		

Reports received from the following observatories:

ARCE = Arcetri
BERL = Berlin-Adlershof
BERN = Berne
BORD = Bordeaux
BOUL = Boulder
CRIM = Simferopol
DWIN = Dwingeloo
GORK = Gorky
HARS = Harestua
HIRA = Hiraiso
HUAN = Huancayo
IRKU = IRKUTSK
KIEV = Kiev
MANI = Manila
MCMA = McMath-Hulbert
NAGO = Nagoya
ONDR = Ondrejov
OTTA = Ottawa
PENT = Penticton
POTS = Potsdam
SAOP = Sao Paulo
SGMR = Sagamore Hill
SYDN = Sydney
TORN = Torun
TYKW = Toyokawa
TRST = Trieste
VORO = Voroshilov (Ussurisk)

Explanation of Type Code:

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

UAG Series of Reports

UAG Reports are issued on an irregular basis, with 6 to 12 reports being issued each year. Subscriptions may be ordered through the National Geophysical and Solar-Terrestrial Data Center, Environmental Data and Information Service, NOAA, Boulder, CO 80303, USA. The annual subscription price is $25.20 ($17.30 additional for foreign mailing). In years when the single price copies are less than $25.20, arrangements will be made to extend the subscription duration. Single issues are also available at the prices shown below. Some of the issues are now out of print and are available only on microfiche. Orders must include check or money order payable in U.S. currency to the Department of Commerce, NOAA/NGSDC. $2.00 handling charge per order.

UAG-1 "IQSY Night Airglow Data", price $1.75.
UAG-2 "A Reevaluation of Solar Flares, 1964-1966", price 30 cents.
UAG-3 "Observations of Jupiter's Sporadic Radio Emission in the Range 7.6-41 MHz, 6 July 1966 through 8 September 1968", microfiche only, price 45 cents.
UAG-4 "Abbreviated Calendar Record 1966-1967", price $1.25.
UAG-5 "Data on Solar Event of May 23, 1967 and its Geophysical Effects", price 65 cents.

UAG-6 "International Geophysical Calendars 1957-1969", price 30 cents.
UAG-7 "Observations of the Solar Electron Corona: February 1964-January 1968", price 15 cents.
UAG-8 "Data on Solar-Geophysical Activity October 24-November 6, 1968", price (includes Parts 1 & 2) $1.75.
UAG-9 "Data on Cosmic Ray Event of November 18, 1968 and Associated Phenomena", price 55 cents.
UAG-10 "Atlas of Ionograms", price $1.50.

UAG-11 "Catalogue of Data on Solar-Terrestrial Physics" (now obsolete).
UAG-12 "Solar-Geophysical Activity Associated with the Major Geomagnetic Storm of March 8, 1970", price (includes Parts 1-3) $3.00.
UAG-13 "Data on the Solar Proton Event of November 2, 1969 through the Geomagnetic Storm of November 8-10, 1969, price 50 cents.
UAG-14 "An Experimental, Comprehensive Flare Index and Its Derivation for 'Major' Flares, 1955-1969", price 30 cents.
UAG-15 "Catalogue of Data on Solar-Terrestrial Physics" (now obsolete).

UAG-16 "Temporal Development of the Geographical Distribution of Auroral Absorption for 30 Substorm Events in each of IQSY (1964-65) and IASY (1969)", price 70 cents.
UAG-17 "Ionospheric Drift Velocity Measurements at Jicamarca, Peru (July 1967-March 1970)", microfiche only, price 45 cents.
UAG-18 "A Study of Polar Cap and Auroral Zone Magnetic Variations", price 20 cents.
UAG-19 "Reevaluation of Solar Flares 1967", price 15 cents.
UAG-20 "Catalogue of Data on Solar-Terrestrial Physics" (now obsolete).

UAG-21 "Preliminary Compilation of Data for Retrospective World Interval July 26 - August 14, 1972", price 70 cents.
UAG-22 "Auroral Electrojet Magnetic Activity Indices (AE) for 1970", price 75 cents.
UAG-23 "U.R.S.I. Handbook of Ionogram Interpretation and Reduction, Second Edition, November 1972", edited by W. R. Piggott and K. Rawer, NGSDC/EDS/NOAA, November 1972, 324 pages, price $1.75.

UAG-23A "U.R.S.I. Handbook of Ionogram Interpretation and Reduction, Second Edition, November 1972", Revision of Chapters 1-4, edited by W. R. Piggott and K. Rawer, NGSDC/EDS/NOAA, July 1978, 135 pages, price $2.14.

UAG-24 "Data on Solar-Geophysical Activity Associated with the Major Ground Level Cosmic Ray Events of 24 January and 1 September 1971", price (includes Parts 1 and 2) $2.00.
UAG-25 "Observations of Jupiter's Sporadic Radio Emission in the Range 7.6-41 MHz, 9 September 1968 through 9 December 1971", price 35 cents.

UAG-26 "Data Compilation for the Magnetospherically Quiet Periods February 19-23 and November 29 - December 3, 1970", price 70 cents.
UAG-27 "High Speed Streams in the Solar Wind", price 15 cents.
UAG-28 "Collected Data Reports on August 1972 Solar-Terrestrial Events", price (includes Parts 1-3) $4.50.
UAG-29 "Auroral Electrojet Magnetic Activity Indices AE (11) for 1968", price 75 cents.
UAG-30 "Catalogue of Data on Solar-Terrestrial Physics", price $1.75.

UAG-31 "Auroral Electrojet Magnetic Activity Indices AE (11) for 1969", price 75 cents.
UAG-32 "Synoptic Radio Maps of the Sun at 3.3 mm for the Years 1967-1969", price 35 cents.
UAG-33 "Auroral Electrojet Magnetic Activity Indices AE (10) for 1967", price 75 cents.
UAG-34 "Absorption Data for the IGY/IGC and IQSY", price $2.00.
UAG-35 "Catalogue of Digital Geomagnetic Variation Data at World Data Center A for Solar-Terrestrial Physics", price 20 cents.

UAG-36 "An Atlas of Extreme Ultraviolet Flashes of Solar Flares Observed Via Sudden Frequency Deviations During the ATM-SKYLAB Missions", price 55 cents.
UAG-37 "Auroral Electrojet Magnetic Activity Indices AE (10) for 1966", price 75 cents.
UAG-38 "Master Station List for Solar-Terrestrial Physics Data at WDC-A for Solar-Terrestrial Physics", price $1.60.
UAG-39 "Auroral Electrojet Magnetic Activity Indices AE (11) for 1971", by Joe Haskell Allen, Carl C. Abston and Leslie D. Morris, National Geophysical and Solar-Terrestrial Data Center, Environmental Data Service, February 1975, 144 pages, price $2.05.

UAG-40 "H-Alpha Synoptic Charts of Solar Activity For the Period of Skylab Observations, May, 1973-March, 1974", by Patrick S. McIntosh, NOAA Environmental Research Laboratories, February 1975, 32 pages, price 56 cents.

UAG-41 "H-Alpha Synoptic Charts of Solar Activity During the First Year of Solar Cycle 20, October, 1964 - August, 1965", by Patrick S. McIntosh, NOAA Environmental Research Laboratories, and Jerome T. Nolte, American Science and Engineering, Cambridge, Massachusetts, March 1975, 25 pages, price 48 cents.

UAG-42 "Observations of Jupiter's Sporadic Radio Emission in the Range 7.6-80 MHz 10 December 1971 through 21 March 1975", by James W. Warwick, George A. Dulk, and Anthony C. Riddle, Department of Astro-Geophysics, University of Colorado, Boulder, Colorado 80302, April 1975, 49 pages, price $1.15.

UAG-43 "Catalog of Observation Times of Ground-Based Skylab-Coordinated Solar Observing Programs", compiled by Helen E. Coffey, World Data Center A for Solar-Terrestrial Physics, May 1975, 159 pages, price $3.00.

UAG-44 "Synoptic Maps of Solar 9.1 cm Microwave Emission from June 1962 to August 1973", by Werner Graf and Ronald N. Bracewell, Radio Astronomy Institute, Stanford University, Stanford, California 94305, May 1975, 183 pages, price $2.55.

UAG-45 "Auroral Electrojet Magnetic Activity Indices AE (11) for 1972", by Joe Haskell Allen, Carl C. Abston and Leslie D. Morris, National Geophysical and Solar-Terrestrial Data Center, Environmental Data Service, May 1975, 144 pages, price $2.10.

UAG-46 "Interplanetary Magnetic Field Data 1963-1974", by Joseph H. King, National Space Science Data Center, NASA Goddard Space Flight Center, Greenbelt, Maryland 20771, June 1975, 382 pages, price $2.95.

UAG-47 "Auroral Electrojet Magnetic Activity Indices AE (11) for 1973", by Joe Haskell Allen, Carl C. Abston and Leslie D. Morris, National Geophysical and Solar-Terrestrial Data Center, Environmental Data Service, June 1975, 144 pages, price $2.10.

UAG-48A "Synoptic Observations of the Solar Corona during Carrington Rotations 1580-1596 (11 October 1971 - 15 January 1973)", [Reissue with quality images] by R. A. Howard, M. J. Koomen, D. J. Michels, R. Tousey, C. R. Detwiler, D. E. Roberts, R. T. Seal and J. D. Whitney, E. O. Hulbert Center for Space Research, NRL, Washington, D. C. 20375 and R. T. and S. F. Hansen, C. J. Garcia and E. Yasukawa, High Altitude Observatory, NCAR, Boulder, Colorado 80303, February 1976, 200 pages, price $4.27.

UAG-49 "Catalog of Standard Geomagnetic Variation Data", prepared by Environmental Data Service, NOAA, Boulder, Colorado, August 1975, 125 pages, price $1.85.

UAG-50 "High-Latitude Supplement to the URSI Handbook on Ionogram Interpretation and Reduction", by W. R. Piggott, British Antarctic Survey, c/o SRC, Appleton Laboratory, Ditton Park, Slough, England, October 1975, 292 pages, price $4.00.

UAG-51 "Synoptic Maps of Solar Coronal Hole Boundaries Derived from He II 304Å Spectroheliograms from the Manned Skylab Missions", by J. D. Bohlin and D. M. Rubenstein, E. O. Hulbert Center for Space Research, Naval Research Laboratory, Washington, D. C. 20375 U.S.A., November 1975, 30 pages, price 54 cents.

UAG-52 "Experimental Comprehensive Solar Flare Indices for Certain Flares, 1970-1974", compiled by Helen W. Dodson and E. Ruth Hedeman, McMath-Hulbert Observatory, The University of Michigan, 895 Lake Angelus Road North, Pontiac, Michigan 48055 U.S.A., November 1975, 27 pages, price 60 cents.

UAG-53 "Description and Catalog of Ionospheric F-Region Data, Jicamarca Radar Observatory (November 1966 - April 1969)", by W. L. Clark and T. E. Van Zandt, Aeronomy Laboratory, NOAA, Boulder, Colorado 80302 and J. P. McClure, University of Texas at Dallas, Dallas, Texas 75230, April 1976, 10 pages, price 33 cents.

UAG-54 "Catalog of Ionosphere Vertical Soundings Data", prepared by Environmental Data Service, NOAA, Boulder, Colorado 80302, April 1976, 130 pages, price $2.10.

UAG-55 "Equivalent Ionospheric Current Representations by a New Method, Illustrated for 8-9 November 1969 Magnetic Disturbances", by Y. Kamide, Cooperative Institute for Research in Environmental Sciences, University of Colorado, Boulder, Colorado 80302 and Geophysical Institute, University of Alaska, Fairbanks, Alaska 99701, H. W. Kroehl, Data Studies Division, NOAA/EDS/NGSDC, Boulder, Colorado 80302, M. Kanamitsu, Advanced Study Program, National Center for Atmospheric Research, Boulder, Colorado 80303, J. H. Allen, Data Studies Division, NOAA/EDS/NGSDC, Boulder, Colorado 80302, and S.-I. Akasofu, Geophysical Institute, University of Alaska, Fairbanks, Alaska 99701, April 1976, 91 pages, price $1.60.

UAG-56 "Iso-intensity Contours of Ground Magnetic H Perturbations for the December 16-18, 1971 Geomagnetic Storm", by Y. Kamide, Cooperative Institute for Research in Environmental Sciences, University of Colorado, Boulder, Colorado 80302 and Geophysical Institute, University of Alaska, Fairbanks, Alaska 99701 (currently Guest worker at Data Studies Division, NOAA/EDS/NGSDC, Boulder, Colorado 80302), April 1976, 37 pages, price $1.39.

UAG-57 "Manual on Ionospheric Absorption Measurements", edited by K. Rawer, Institut für Physikalische Weltraumforschung, Freiburg, G.F.R., June 1976, 202 pages, price $4.27.

UAG-58 "ATS6 Radio Beacon Electron Content Measurements at Boulder, July 1974 - May 1975", by R. B. Fritz, Space Environment Laboratory (currently with Wave Propagation Laboratory), NOAA, Boulder, Colorado 80302 USA, September 1976, 61 pages, price $1.04.

UAG-59 "Auroral Electrojet Magnetic Activity Indices AE(11) for 1974", by Joe Haskell Allen, Carl C. Abston and Leslie D. Morris, National Geophysical and Solar-Terrestrial Data Center, Environmental Data Service, December 1976, 144 pages, price $2.16.

UAG-60 "Geomagnetic Data for January 1976 (AE(7) Indices and Stacked Magnetograms)" by J. H. Allen, C. C. Abston and L. D. Morris, NGSDC/EDS/NOAA, July 1977, 57 pages, price $1.07.

UAG-61 "Collected Data Reports for STIP Interval II 20 March - 5 May 1976", edited by Helen E. Coffey and John A. McKinnon, National Geophysical and Solar-Terrestrial Data Center, Environmental Data Service, August 1977, 313 pages, price $2.95.

UAG-62 "Geomagnetic Data For February 1976 (AE(7) Indices and Stacked Magnetograms)" by J. H. Allen, C. C. Abston and L. D. Morris, NGSDC/EDS/NOAA, September 1977, 55 pages, price $1.11.

UAG-63 "Geomagnetic Data for March 1976 (AE(7) Indices and Stacked Magnetograms)" by J. H. Allen, C. C. Abston and L. D. Morris, NGSDC/EDS/NOAA, September 1977, 57 pages, price $1.11.

UAG-64 "Geomagnetic Data for April 1976 (AE(8) Indices and Stacked Magnetograms)" by J. H. Allen, C. C. Abston and L. D. Morris, NGSDC/EDS/NOAA, February 1978, 55 pages, price $1.00.

UAG-65 "The Information Explosion and Its Consequences for Data Acquisition, Documentation, and Processing" by G. K. Hartmann, Max-Planck-Institut für Aeronomie, D-3411 Katlenburg-Lindau 3, GFR, May 1978, 36 pages, price 75 cents.

UAG-66 "Synoptic Radio Maps of the Sun at 3.3mm 1970-1973" by Earle B. Mayfield, Space Science Lab., and Fred I. Shimabukuro Electronics Res. Lab., The Ivan A. Getting Laboratories, The Aerospace Corp., El Segundo, California 90245, May 1978, 30 pages, price 75 cents.

UAG-67 "Ionospheric D-Region Profile Data Base, A Collection of Computer-Accessible Experimental Profiles of the D and Lower E Regions", by L. F. McNamara, Ionospheric Prediction Service, Sydney, Australia, August 1978, 30 pages, price 88 cents.

UAG-68 "A Comparative Study of Methods of Electron Density Profile Analysis", by L. F. McNamara, Ionospheric Prediction Service, Sydney, Australia, September 1978, 56 pages, price $1.41.

UAG-69 "Selected Disturbed D-Region Electron Density Profiles. Their relation to the undisturbed D region", by L. F. McNamara, Ionospheric Prediction Service, Sydney, Australia, October 1978, 50 pages, price $1.29.

UAG-70 "Annotated Atlas of Hα Synoptic Charts for Solar Cycle 20 (1964-1974) Carrington Solar Rotations 1487-1616", by Patrick S. McIntosh, Space Environment Laboratory, ERL/NOAA, February 1979, 327 pages, price $3.50.

UAG-71 "Magnetic Potential Plots Over the Northern Hemisphere for 26-28 March 1976", by A.D. Richmond, SEL/ERL/NOAA, H.W. Kroehl, NGSDC/EDIS/NOAA, M.A. Henning, Lockheed Missiles and Space Co., Aurora, CO, and Y. Kamide, Kyoto Sangyo Univ., Kyoto, Japan, April 1979, 115 pages, price $1.50.

UAG-72 "Energy Release in Solar Flares, Proceedings of the Workshop on Energy Release in Flares, 26 February-1 March 1979, Cambridge, Massachusetts, U.S.A.", edited by David M. Rust, American Science and Engineering, Inc., Cambridge, MA and A. Gordon Emslie, Harvard-Smithsonian Center for Astrophysics, Cambridge, MA, July 1979, 68 pages, price $1.50.

UAG-73 "Auroral Electrojet Magnetic Activity Indices AE(11-12) for January-June 1975", by J. H. Allen, C. C. Abston, J. E. Salazar and J. A. McKinnon, NGSDC/EDIS/NOAA, August 1979, 114 pages, price $1.75.

UAG-74 "ATS-6 Radio Beacon Electron Content Measurements at Ootacamund, India, October - July 1976", by S.D. Bouwer, K. Davies, R.F. Donnelly, R.N. Grubb, J.E. Jones and J.H. Taylor, NOAA Space Environment Laboratory, Boulder, CO, and R.G. Rastogi, M.R. Deshpande, H. Chandra and G. Sethia, Physical Research Laboratory, Ahmedabad, India, March 1980, 58 pages, price $2.50.

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."