Observations of solar flux at the Algonquin Radio Observatory on 2800 MHz and at the Dominion Radio Astrophysical Observatory on 2700 MHz: monthly report July-December 1970

Covington, A. E.; Gagnon, H. P.; Moore, J. D.

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RADIO AND ELECTRICAL ENGINEERING DIVISION

OBSERVATIONS OF SOLAR FLUX AT THE ALGONQUIN RADIO OBSERVATORY ON 2800 MHz AND AT THE DOMINION RADIO ASTROPHYSICAL OBSERVATORY ON 2700 MHz MONTHLY REPORT JULY - DECEMBER 1970

- A. E. COVINGTON, H. P. GAGNON AND J. D. MOORE -

OTTAWA

FEBRUARY 1971

ABSTRACT

Detailed tabulations of the solar radio flux for the period July–December 1970 observed on a frequency of 2800 MHz at the Algonquin Radio Observatory and on 2700 MHz at the Dominion Radio Astrophysical Observatory are given.

OBSERVATIONS OF SOLAR FLUX AT THE ALGONQUIN RADIO OBSERVATORY ON 2800 MHz AND AT THE DOMINION RADIO ASTROPHYSICAL OBSERVATORY ON 2700 MHz MONTHLY REPORTS - JULY - DECEMBER 1970

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INTRODUCTION

Detailed tabulations of the solar radio flux observed on a frequency of 2800 MHz at the Algonquin Radio Observatory (ARO) and on 2700 MHz at the Dominion Radio Astrophysical Observatory (DRAO) are given monthly for the period July - December 1970 in two parts:

(a) basic values for the daily undisturbed level and

(b) tabulated values for the characteristics of the bursts.

Annual summaries for the basic level of solar flux observed at 1700 U.T. at ARO and at 2000 U.T. at DRAO are given in observed values of flux and also values adjusted to 1 A.U.

On September 15, the radio telescope at ARO with its 1.8 meter reflector, was removed from operation after 10 years of continuous service. It was replaced by an improved model and a relative calibration of the instrument was made against the solar flux values obtained at the Dominion Radio Astrophysical Observatory, Penticton, B.C., and the Sagamore Hill Radio Observatory of the Air Force Cambridge Research Laboratories. It was impossible to use the 1.2-m radio telescope at Goth Hill employed in the initial observations, because of severe radio interference from the nearby airport.

DAILY VALUES OF SOLAR FLUX AT 2800 MHz (OTTAWA-ARO)
AND 2700 MHz (PENTICTON-DRAO) -- SERIES "C"

Flux in watts/m^2/cycles/sec bandwidth (x 10^{-22}) -- 2 polarizations

1970	OTTAWA				PENTICTON	
	Observed			adj. to 1 A.U.	Observed	adj. to 1 A.U.
July	14:00	17:00	20:00	17:00	19:35	19:35
1	172.0	174.0	173.7	179.9	---	---
2	182.4	182.8*	182.2	189.0*	178.4	184.5
3	189.9	188.2*	188.3*	194.6*	184.9*	191.2*
4	188.1*	188.6	192.0*	195.0	---	---
5	182.1	184.7	186.6	191.0	---	---
6	179.9	180.3	175.8	186.4	172.1	178.1
7	162.3	160.8	161.5	166.3	155.6	160.9
8	157.2	155.1	156.1	160.4	151.7	156.9
9	142.5	143.5	139.9	148.4	139.0	143.7
10	136.2	139.1	138.6	143.8	136.6	141.2
11	133.4	133.2	134.2	137.7	---	---
12	130.5	131.1	132.2	135.4	---	---
13	125.9	126.5	126.5	130.7	124.5	128.7
14	123.1	122.3	121.4	126.3	121.5	125.5
15	118.7	118.0	117.7	121.9	116.3	120.1
16	116.1	117.5	118.0	121.4	116.6	120.4
17	120.0	121.9	121.0	125.9	118.1	122.0
18	126.7	126.8	127.2*	131.0	---	---
19	131.0	131.5	133.2	135.8	---	---
20	132.1*	132.0	138.8	136.4	135.2	139.7
21	145.3*	145.9*	151.5*	150.6*	144.7	149.3
22	155.4	158.7	157.6*	163.8	151.0	155.8
23	154.5	153.8*	153.9*	158.7*	148.3*	153.0*
24	157.5*	158.9	161.9	164.0	152.5	157.4
25	164.1	163.8	168.8	169.0	---	---
26	170.8*	170.8	174.4	176.3	---	---
27	178.3	180.3	180.3	185.9	175.9	181.4
28	175.7	176.6	168.5	182.1	164.3	169.4
29	158.7	156.2	156.9	161.0	151.7*	156.4*
30	152.2	151.4	148.0	156.1	144.4	148.9
31	141.2	137.4	137.4	141.5	132.5	136.5
Mean	151.7	152.0	152.4	157.0	146.2	151.0

*Corrected for burst

OUTSTANDING EVENTS - SOLAR RADIATION AT 2700 & 2800 MHz

DATE 1970	URANO KEY	CLASS	START U.T.	DURATION	MAXIMUM U.T.	PEAK FLUX	MEAN FLUX
July			H M	H M	H M		
1	1	Simple 2	01 09	0 00.8	01 09.5	10.2	6.1*
	1	Simple 1F	01 14	0 01	01 15.7	6.8	3.4*
	1	Simple 1	01 50	0 02	01 50.5	6.8	2.0*
	1	Simple 3F	11 57	0 30	12 05	6.0	3.0
	1	Simple 3	14 15	0 15	14 17	3.0	1.5
	1	Simple 3 A	16 50	2 40	18 15	7.4	4.0
	1	Simple 3	20 20	1 50	20 27	13.0	6.5
	1	Simple 1	21 31.5	0 01	21 32	2.0	1.0
2	1	Simple 3	00 35	1 15	00 50	6.0	3.0*
	1	Simple 3	11 10	1 05	11 50	4.2	2.1
	1	Simple 3	14 10	0 50	14 15	3.0	1.5
	1	Simple 3	15 55	1 00	16 05	4.8	2.4
	1	Simple 3A	17 00	3 00	18 40	16.0	5.4
	1	Simple 1	17 58	0 01	17 58.5	5.8	2.9
	1	Simple 2F	18 30	0 07	18 33	24.0	8.0
	8	Rise	20 35	0 05	---	2.2	---
	8	Rise	22 50	0 15	---	2.8	---
	1	Simple 2F	23 12	0 09	23 18	65.0	24.0
	2	Post B.I.A.	23 21	1 25	---	22.0	11.0
	1	Simple 2F	21 22.2	0 00.8	21 22.4	13.0	6.0
	1	Simple 3A	23 30	0 40	23 45	9.2	4.6*
	4	Fluctuations	23 34	0 04	23 35.8	14.0	---*
	3	Complex	23 39	0 04	23 41.5	12.2	6.1*
3	1	Simple 3	01 24	> 0 28	01 26	8.0	---*
	1	Simple 3A	15 35	1 25	15 48	3.6	1.8
	1	Simple 1	16 22	0 06	16 24	4.2	2.1
	1	Simple 1	16 29	0 03	16 30	4.6	2.3

*Only observed at Penticton.

OUTSTANDING EVENTS - SOLAR RADIATION AT 2700 & 2800 MHz

DATE 1970	URANO KEY	CLASS	START U.T.	DURATION	MAXIMUM U.T.	PEAK FLUX	MEAN FLUX
July			H M	H M	H M		
3	1	Simpel 3AF	17 10	5 25	indet.	8.8	4.4
	3	Complex	17 18	0 04	17 18.5	8.2	4.1
	1	Simple 3F	17 25	0 10	17 28	5.8	2.6
	1	Simple 1	18 23	0 09	18 25.2	9.6	3.2
	1	Simple 3A	18 38	0 20	18 44	8.0	4.0
	1	Simple 2F	18 40.5	0 04	18 42	25.0	12.5
	1	Simple 3A	19 30	0 30	19 37	9.6	4.8
	1	Simple 2	19 31.8	0 01	19 32	16.0	8.0
	3	Complex	19 34.5	0 02	19 36.3	22.0	5.6
	1	Simple 3A	23 25	0 35	23 42	3.6	1.8*
	1	Simple 2	23 40	0 01	23 40.3	16.6	4.0*
	1	Spike	23 59.5	---	23 59.5	4.4	---*
4	1	Simple 3F	12 10	2 10	14 00	6.4	3.2
	1	Simple 3	14 30	1 20	14 34	4.6	2.3
	1	Simple 1	16 52.8	0 01	16 53	3.8	1.4
	1	Simple 3A	18 10	3 50	20 50	23.0	10.0
	1	Simple 1	19 52	0 05	19 52.5	6.4	3.2
	1	Simple 2F	20 01	0 10	20 03	38.0	13.8
	3	Complex	20 18	0 18	20 27.8	30.0	15.0
		1st Compt.	20 18	0 08	20 24	27.0	---
		2nd Compt.	20 26	0 10	20 27.8	30.0	---
5	1	Simple 3	14 35	0 50	14 50	4.8	2.4
	1	Simple 1	16 55	0 04	16 56	9.6	2.8
	1	Simple 3	18 40	1 20	18 55	6.8	3.4
	1	Simple 1F	20 41	0 01.5	20 41.5	7.0	3.5
6	1	Simple 1	01 37.8	0 02	00 38	2.4	1.2*
	3	Complex	11 28	0 06	11 29.5	15.0	6.2

*Only observed at Penticton.

OUTSTANDING EVENTS - SOLAR RADIATION AT 2700 & 2800 MHz

DATE 1970	URANO KEY	CLASS	START U.T.	DURATION	MAXIMUM U.T.	PEAK FLUX	MEAN FLUX
July			H M	H M	H M		
6	1	Simple 3AF	13 00	1 20	13 07	13.0	6.5
	1	Simple 2	13 10.5	0 01	13 10.9	13.0	6.5
	1	Simple 1F	19 51	0 06	19 52.5	3.4	1.7
	1	Simple 1F	20 53	0 05	20 55.5	3.2	1.6
	3	Complex F	21 36	0 09	21 40.8	31.0	15.0
		1st Compt.	21 36	0 04	21 39	22.0	---
		2nd Compt.	21 40	0 05	21 40.8	31.0	---
	1	Simple 3	22 30	0 50	22 58	5.6	2.8
7	1	Simple 2	11 52.5	0 01.5	11 53	10.8	2.8
	1	Simple 1	15 05.5	0 00.8	15 05.8	5.8	2.9
	1	Simple 2F	16 50.8	0 04.2	16 51.2	58.0	29.0
	2	Post B.I.	16 55	0 15	---	9.6	3.2
	1	Simple 3	17 40	0 20	17 45	2.8	1.0
	1	Simple 3	18 55	0 15	18 57	3.6	1.4
	1	Simple 3	20 00	1 00	20 30	4.0	2.0
8	1	Simple 3	19 50	1 15	19 55	2.2	1.1
9	3	Complex F	00 54	0 05	00 55.8	16.0	8.0*
	2	Post B.I.	00 59	0 45	---	2.8	1.4*
10	8	Rise	15 20	0 10	---	3.2	---
	1	Simple 1F	17 08.3	0 02	17 09.3	6.0	3.0
	1	Simple 3A	18 32	0 30	18 40	2.2	1.1
	3	Complex	18 34.8	0 02	18 35.9	7.8	3.6
	8	Rise	20 15	0 05	---	2.2	---
	1	Simple 1F	22 39.4	0 01.5	22 39.5	4.2	2.1
	3	Complex F	23 51	0 05	23 53	34.0	17.0*
	2	Post B.I.	23 26	0 09	---	4.2	2.1*

*Only observed at Penticton.

OUTSTANDING EVENTS - SOLAR RADIATION AT 2700 & 2800 MHz

DATE 1970	URANO KEY	CLASS	START U.T.	DURATION	MAXIMUM U.T.	PEAK FLUX	MEAN FLUX
July			H M	H M	H M		
11	1	Simple 3A	00 25	>1 25	indet.	6.6	---*
	1	Simple 2F	00 28	0 09	00 31	17.8	10.0*
	2	Post B.I.F.	00 37	0 23	---	6.6	3.3*
		Fall	20 00	0 15	---	5.0	---
12	1	Simple 3	19 45	1 20	20 15	2.8	1.4
13	1	Simple 1	17 23.5	0 01.5	17 24	6.8	3.4
15	3	Complex	12 43	0 07	12 46.9	8.8	3.0
18	1	Simple 3 AF	17 30	6 00	21 15	9.2	4.6
	4	Fluctuations	17 56	0 02	17 57	16.0	---
	1	Simple 1	19 00	0 02	19 01	5.4	2.4
	1	Simple 1	20 48.5	0 04	20 49.1	2.2	1.1
19	1	Simple 3A	00 00 E	>2 30	01 30	12.8	---*
	1	Simple 1	00 29	0 01	00 29.5	2.0	1.0*
	1	Simple 1	00 52	0 03	00 53	5.4	2.7*
	1	Simple 2F	01 11	0 19	01 16	75.0	19.0*
	1	Simple 3F	20 10	>6 00	23 55	11.2	---
20		Precursor F	11 06	0 06	11 08.2	13.0	9.0
	1	Simple 2F	11 12	0 36	11 24	1900.0	725.0
	2	Post B.I.A.	11 48	4 25	---	26.0	6.6
	1	Simple 1	14 46	0 03	14 47.1	6.0	2.0
	1	Simple 1	15 20	0 03	15 21	3.4	1.7
	8	Rise	16 35	0 20	---	4.5	---
	1	Simple 3A	16 56	1 05	17 14	4.4	2.2
	1	Simple 2	16 59	0 03	17 02	14.0	5.0
	1	Simple 3A	19 00	0 20	19 10	8.8	4.4
	1	Simple 1	19 05	0 02	19 06	2.8	1.4

*Only observed at Penticton.

OUTSTANDING EVENTS - SOLAR RADIATION AT 2700 & 2800 MHz

DATE 1970	URANO KEY	CLASS	START U.T.	DURATION	MAXIMUM U.T.	PEAK FLUX	MEAN FLUX
July			H M	H M	H M		
20	1	Simple 3A	20 10	1 30	20 22	7.8	3.4
	1	Simple 2F	20 15.5	0 04	20 17.7	11.0	5.2
	1	Simple 3	22 00	3 00	23 40	4.2	2.1
21	1	Simple 3	01 15	0 40	01 35	2.8	1.4*
	1	Simple 3A	13 10	5 50	17 30	9.2	4.6
	4	Fluctuations	16 46	0 13	16 47	27.0	---
	1	Simple 2F	19 13	0 07	19 16	25.0	12.0
	1	Simple 1F	19 47	0 01.5	19 48	3.2	1.8
	3	Complex F	23 50.5	0 04	23 52.5	12.0	4.0*
22	1	Simple 2F	00 12	0 04	00 13.5	18.0	4.4*
	3	Complex F	00 21	0 24	00 32	880.0	285.0*
		1st Compt.	00 21	0 05.5	00 25.3	410.0	---
		2nd Compt.	00 26.5	0 18.5	00 32	880.0	---
	2	Post B.I.AF	00 45	0 55	---	13.0	6.0*
	1	Simple 2F	01 06	0 14	01 15	27.0	11.0*
	1	Simple 1	00 30	0 07	00 35	4.6	2.3*
	1	Simple 3F	14 25	0 40	14 58	2.6	1.3
	8	Rise A	15 45	0 10	---	2.8	---
	1	Simple 1F	15 51	0 05	15 51.8	5.2	2.4
	1	Simple 1	16 00	0 02	16 00.4	2.2	1.1
	1	Simple 3	17 45	1 05	18 15	2.2	1.1
	1	Simple 3A	19 35	4 10	21 25	4.2	2.1
	1	Simple 2F	19 39.2	0 02	19 40.3	149.0	70.0
	2	Post B.I.A	19 41.2	0 10	---	5.0	2.5
	1	Simple 1	19 45	0 01.5	19 46	9.2	4.6
	1	Simple 1	20 29	0 02	20 30.2	5.8	2.9

*Only observed at Penticton

OUTSTANDING EVENTS - SOLAR RADIATION AT 2700 & 2800 MHz

DATE 1970	URANO KEY	CLASS	START U.T.	DURATION	MAXIMUM U.T.	PEAK FLUX	MEAN FLUX
July			H M	H M	H M		
23	1	Simple 3A	00 40	1 10	00 50	5.0	2.5*
	1	Simple 1F	00 47	0 04	00 47.8	7.2	3.6*
	1	Simple 1F	01 33.5	0 03	01 34.5	5.2	2.0*
	1	Simple 1F	11 02	0 04.5	11 03	5.0	2.5
		Fall	11 06	0 50	---	7.8	---
	1	Simple 3A	13 10	0 04	13 15	5.4	2.7
	1	Simple 1	13 21.5	0 03	13 22	5.8	2.6
	1	Simple 3A	15 25	7 25	17 25	7.4	3.7
	1	Simple 2F	15 52.5	0 06	15 53.2	40.0	10.0
	1	Simple 2F	18 32	0 31	18 44	1040.0	155.0
	2	Post B.I.A	19 03	1 25	---	25.0	12.0
	4	Fluctuations	19 17.5	0 16	19 26	51.0	---
24	1	Simple 3	11 20	5 20	12 10	5.4	3.0
	1	Simple 2	22 05	0 01	22 05.2	15.0	4.0
	8	Rise	23 07	0 35	---	5.6	---*
25	1	Simple 3	13 25	0 35	13 30	3.0	1.5
	1	Simple 3A	18 25	1 45	18 50	6.6	3.3
	1	Simple 1	18 29	0 02	18 29.2	4.8	2.4
	1	Simple 3	20 15	1 05	20 45	3.0	1.5
	1	Simple 3A	22 20	2 20	23 10	6.0	3.0
	1	Simple 1	22 41	0 06	22 42.5	5.0	2.5
26	1	Simple 3AF	12 30	3 15	14 30	7.4	3.7
	1	Simple 1	12 38	0 04	12 40	4.0	2.0
	8	Rise	19 50	0 30	---	6.0	---
	1	Simple 3	20 19	0 35	20 21	3.0	1.5
	8	Rise	21 10	0 13	---	2.2	---
	1	Simple 3F	22 40	2 30	23 55	5.4	3.0

*Only observed at Penticton.

OUTSTANDING EVENTS - SOLAR RADIATION AT 2700 & 2800 MHz

DATE	URANO KEY	CLASS	START U.T.	DURATION	MAXIMUM U.T.	PEAK FLUX	MEAN FLUX
July			H M	H M	H M		
27	1	Simple 3A	01 10	> 0 45	01 17	8.4	---*
	1	Simple 2F	01 32	0 09	01 34.8	15.4	7.7*
	1	Simple 3	14 20	0 20	14 21	2.4	1.2
	1	Simple 2	14 53.5	0 01.5	15 54.5	16.0	8.0
	2	Post B.I.	14 55	0 20	---	8.4	4.2
	1	Simple 1	18 16	0 01	18 16.5	3.0	1.5
	1	Simple 1F	19 07.7	0 02	19 08	8.2	4.1
	1	Simple 3	21 10	2 20	22 05	2.8	1.4
28	1	Simple 3	00 05	1 45	00 40	5.6	2.8*
	1	Simple 3A	12 55	0 55	13 02	6.8	3.4
	1	Simple 2	12 59	0 02	13 00	26.0	12.0
	1	Simple 3	14 40	0 40	14 55	4.6	2.3
	1	Simple 2	15 25.5	0 05	15 27	10.0	4.6
	1	Simple 3AF	20 10	1 15	20 35	7.6	4.2
	1	Simple 2	20 27	0 05	20 29	10.0	4.8
	1	Simple 2F	21 24.5	0 02.5	21 26	11.8	5.6
	1	Simple 3A	22 10	2 45	23 45	8.4	4.2
	1	Simple 2F	22 49.5	0 01	22 49.7	20.0	9.0
	1	Simple 2F	24 35.5	0 01	24 35.8	70.0	24.0
29		Fall	12 20	0 50	---	8.2	---
	1	Simple 3	14 27	0 45	14 28	3.0	1.5
	1	Simple 3	19 20	1 00	19 25	4.6	2.3
	1	Simple 3A	21 15	1 30	22 00	3.2	1.6
	4	Fluctuations	21 20	0 10	21 28.5	2.6	---
	1	Simple 1	23 26	0 09	23 28.5	6.4	3.0*

*Only observed at Penticton.

OUTSTANDING EVENTS - SOLAR RADIATION AT 2700 & 2800 MHz

DATE 1970	URANO KEY	CLASS	START U.T.	DURATION	MAXIMUM U.T.	PEAK FLUX	MEAN FLUX
July			H M	H M	H M		
30	1	Simple 3	00 15	> 1 30	01 25	4.0	---*
	1	Simple 3	11 30	0 40	11 37	5.4	2.2
	1	Simple 2F	12 46	0 02	12 47.2	22.0	11.0
	1	Simple 3	15 40	0 25	15 42	3.0	1.5
	1	Simple 1	17 04	0 01	17 04.3	3.0	1.5
	1	Simple 3	18 05.	0 05	18 23	3.6	2.0
	1	Simple 3A	21 05	1 05	21 30	6.0	3.0
	1	Simple 2	21 11	0 04	21 12.5	13.0	6.5
	1	Simple 1	21 26	0 04	21 26.5	8.6	4.3
	3	Complex	22 58	0 05	23 00	10.0	5.0
31	1	Simple 1	11 40	0 06	11 41.5	3.6	1.8
	1	Simple 3	17 45	1 05	18 15	3.0	1.5
	1	Simple 3A	20 00	3 10	indet.	5.0	3.0
	1	Simple 1	20 33	0 05	20 35	5.2	2.6

*Only observed at Penticton.

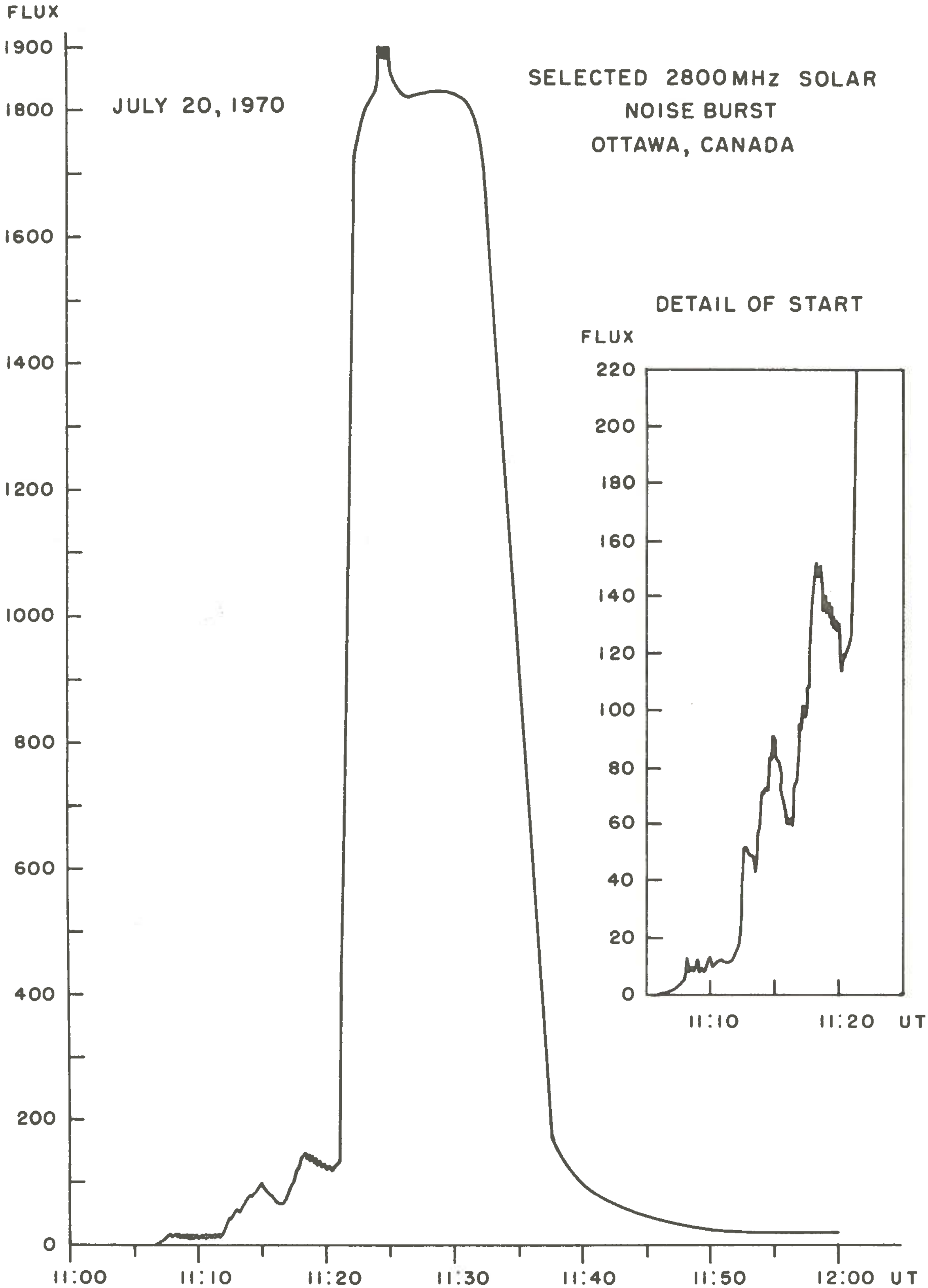
FLUX
1900
1800
1600
1400
1200
1000
800
600
400
200
0
JULY 20, 1970
SELECTED 2800MHz SOLAR
NOISE BURST
OTTAWA, CANADA
DETAIL OF START
FLUX
220
200
180
160
140
120
100
80
60
40
20
0
11:10
11:20
UT
11:00
11:10
11:20
11:30
11:40
11:50
12:00
UT

Figure 1

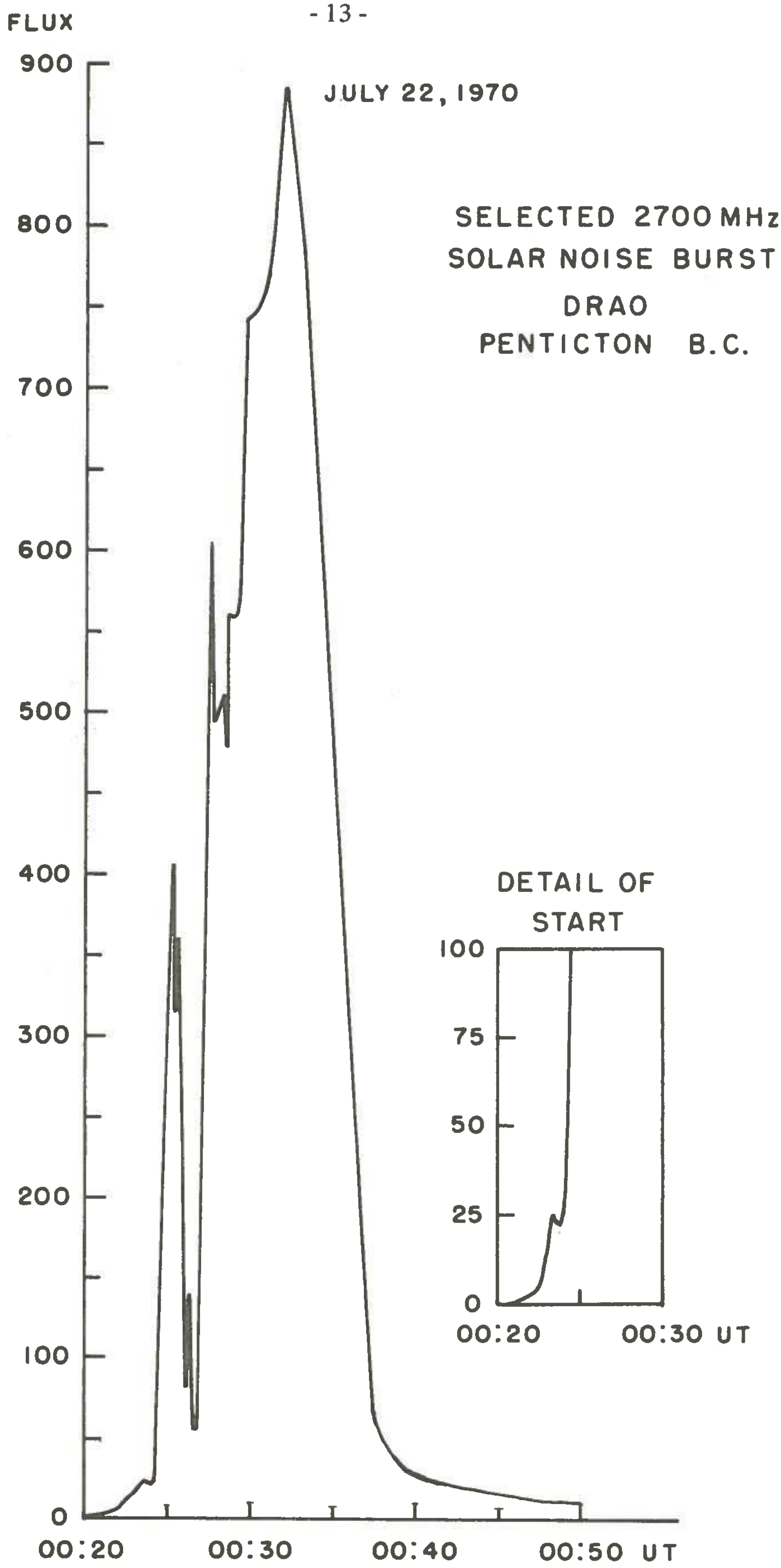
FLUX
900
800
700
600
500
400
300
200
100
0
JULY 22, 1970
SELECTED 2700 MHz
SOLAR NOISE BURST
DRAO
PENTICTON B.C.
DETAIL OF
START
100
75
50
25
0
00:20
00:30 UT
00:20
00:30
00:40
00:50 UT

Figure 2

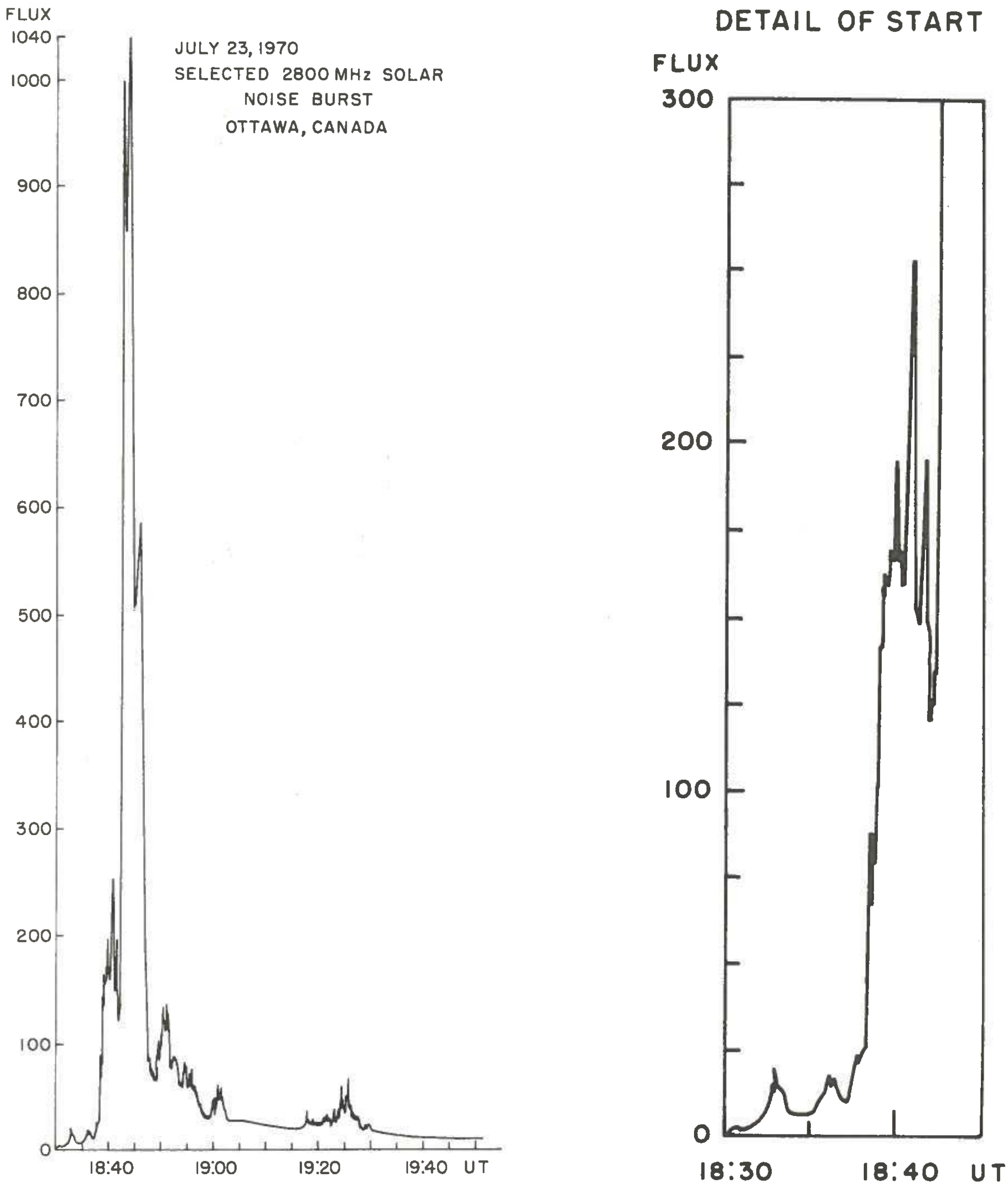
FLUX
1040
1000
900
800
700
600
500
400
300
200
100
0
JULY 23, 1970
SELECTED 2800 MHz SOLAR
NOISE BURST
OTTAWA, CANADA
18:40
19:00
19:20
19:40
UT
DETAIL OF START
FLUX
300
200
100
0
18:30
18:40
UT

Figure 3

DAILY VALUES OF SOLAR FLUX AT 2800 MHz (OTTAWA-ARO)
AND 2700 MHz (PENTICTON-DRAO) -- SERIES "C"

Flux in watts/m^2/cycles/sec bandwidth (x 10^{-22}) -- 2 polarizations

1970	OTTAWA				PENTICTON	
	Observed			adj. to 1 A.U.	Observed	adj. to 1 A.U.
August	14:00	17:00	20:00	17:00	19:35	19:35
1	130.0*	130.1*	131.5	134.0*	---	---
2	127.9	124.8	123.3	128.5	---	---
3	122.6	124.2	123.4	127.9	---	---
4	124.6	123.8	125.0	127.4	122.0	125.5
5	124.5	124.8	121.6	128.4	119.2	122.7
6	123.1	124.4	123.0	128.0	120.7	124.2
7	122.2	124.7	127.3	128.2	124.3	127.8
8	127.8	128.2	128.5	131.8	125.6	129.1
9	134.2	134.5	134.3	138.3	---	---
10	133.8	133.7	133.5	137.3	130.3	133.8
11	123.6	123.9	125.6	127.2	120.7	124.0
12	132.8	133.3*	134.8*	136.9*	129.6*	133.1*
13	144.8*	145.9	146.2*	149.7	138.6*	142.2*
14	159.0*	(162.8)*	164.2*	(167.0)*	160.9*	165.1*
15	166.0	164.8	165.5	169.1	---	---
16	165.2	158.5	160.9	162.5	---	---
17	150.8	147.9*	146.5	151.6*	142.4	146.0
18	141.1	145.4	146.4	149.0	140.2	143.7
19	140.4*	142.0	141.3	145.4	138.2	141.5
20	144.0	145.1	144.8	148.6	140.4	143.8
21	137.0	139.6	135.8	142.8	133.5	136.6
22	138.0	138.5	137.2	141.7	---	---
23	142.8	143.1	144.3	146.2	---	---
24	138.1	137.2	136.4	140.2	132.5	135.4
25	134.1	133.6	134.8	136.5	130.6	133.5
26	133.6	132.9	133.7	135.7	129.1	131.8
27	132.8*	134.4*	134.8	137.2*	129.4	132.1
28	140.8	138.8	141.7	141.6	134.7	137.4
29	145.5	145.8	147.3	148.7	---	---
30	147.5	146.2	151.0	149.0	---	---
31	151.4	151.6	151.9*	154.5	147.2*	150.0*
Mean	138.1	138.2	138.6	141.6	132.9	136.2

*Corrected for burst.

(   ) Interpolated.

OUTSTANDING EVENTS - SOLAR RADIATION AT 2700 & 2800 MHz

DATE 1970	URANO KEY	CLASS	START U.T.	DURATION	MAXIMUM U.T.	PEAK FLUX	MEAN FLUX
Aug.			H M	H M	H M		
1	1	Simple 3	11 00 E	>3 30	11 30	24.0	---
	1	Simple 3	16 00	2 00	17 00	5.0	2.5
3	8	Rise	01 10	0 10	---	3.4	---*
	1	Simple 3	15 10	0 40	15 15	3.0	1.5
6	1	Simple 3	12 30	2 00	13 20	2.0	1.0
7	1	Simple 2	14 07.7	0 02	14 08.1	56.0	19.0
	1	Simple 1	14 34.8	0 01	14 35	3.8	1.9
	8	Rise	18 45	0 05	---	3.2	---
9	1	Simple 2	14 14.5	0 02	14 15.5	16.0	7.0
	1	Simple 3A	20 20	2 25	21 25	2.2	1.1
	1	Simple 2	21 02	0 03	21 03	33.0	11.0
	1	Simple 2	21 43	0 05	21 44.5	21.0	9.0
10	1	Simple 1	14 49.9	0 02	14 50	2.2	1.1
	1	Simple 1	17 44.8	0 03	17 45	3.4	1.4
	1	Spikes	21 47	0 00.3	21 47	5.2	---
	1	Simple 3F	23 26	1 05	23 30	5.2	2.8*
11	1	Simple 2	18 35	0 01	18 35.4	13.8	6.4
	1	Simple 3A	21 25	3 35	22 30	7.2	3.6
	1	Simple 1	21 30	0 05	21 33	6.6	3.0
	3	Complex F	23 22	0 38	23 29	104.0	36.0
		1st Compt.	23 22	0 13	23 29	104.0	---
		2nd Compt.	23 35	0 05.5	23 35.5	80.0	---
		3rd Compt.	23 40.5	0 19.5	23 42	59.0	---
12	1	Simple 1F	15 13	0 03	15 13.7	8.0	3.0

*Only observed at Penticton.

OUTSTANDING EVENTS - SOLAR RADIATION AT 2700 & 2800 MHz

DATE 1970	URANO KEY	CLASS	START U.T.	DURATION	MAXIMUM U.T.	PEAK FLUX	MEAN FLUX
Aug.			H M	H M	H M		
12	1	Simple 3A	15 50	6 40	19 20	12.0	6.0
	1	Simple 1F	16 06.3	0 00.7	16 06.5	6.6	3.3
	1	Simple 1F	16 56.5	0 00.5	16 56.8	2.2	1.1
	4	Group	17 44	0 04	17 47.8	5.0	---
	1	Simple 2	19 26	0 02	19 26.5	12.8	4.2
	3	Complex	20 08	0 37	20 26	1035.0	328.0
		1st Compt.	20 08	0 13.5	20 15.5	845.0	---
		2nd Compt.	20 21.5	0 23.5	20 26	1035.0	---
	2	Post B.I.A.	20 45	1 15	---	10.0	5.2
	3	Complex	21 06	0 04	21 08	8.8	2.2
13	8	Rise A	00 05	0 10	---	4.0	---*
	1	Simple 1	00 13	0 01	00 13.5	3.6	1.8*
	1	Simple 3A	12 50	2 00	14 10	4.2	2.4
	1	Simple 1	14 18.8	0 01	14 19	5.4	2.7
	1	Simple 3A	18 34	4 35	21 25	19.0	9.5
	1	Simple 2	18 34	0 06	18 36	12.4	6.0
	1	Simple 3	18 45	1 15	18 55	6.6	3.3
	1	Simple 1	21 12	0 01	21 12.8	2.6	1.3
	1	Simple 2	21 43	0 03	21 44	21.0	10.2
	1	Simple 3	23 30	0 50	23 53	3.4	1.7*
14	1	Simple 2F	00 43	0 04	00 44.5	11.4	5.7*
	1	Simple 3A	11 10	3 50	12 15	9.8	5.4
	1	Simple 1	13 11	0 02.5	13 12	6.2	3.0
	1	Simple 1	14 29	0 03	14 30	9.8	3.2
	1	Simple 1	14 41	0 02	14 42	2.2	1.1
	1	Simple 3	15 05	0 10	15 07	7.6	3.8

*Only observed at Penticton.

OUTSTANDING EVENTS - SOLAR RADIATION AT 2700 & 2800 MHz

DATE 1970	URANO KEY	CLASS	START U.T.	DURATION	MAXIMUM U.T.	PEAK FLUX	MEAN FLUX
Aug.			H M	H M	H M		
14	3	Complex F	15 57	2 00	16 21	600.0	158.0
		1st Compt.	15 57	0 34.5	16 21	600.0	---
		2nd Compt.	16 31.5	0 09.5	16 32.5	280.0	---
		3rd Compt.	16 41	0 16	16 46	150.0	---
		4th Compt.	16 57	1 00	17 07	310.0	---
	2	Post B.I.F.	17 57	4 53	---	50.0	15.0
	1	Simple 3	23 15	2 00	24 05	4.6	2.3*
15	1	Simple 1	11 56	0 03	11 57	5.6	2.8
	1	Simple 3A	12 20	1 20	13 05	2.6	1.3
	1	Simple 2F	13 11	0 04	13 11.5	40.0	14.0
		Precursor F	14 11	0 02.2	14 12	7.2	3.0
	1	Simple 2	14 13.2	0 04.8	14 14	124.0	31.0
	1	Simple 3	15 00	1 10	15 45	3.2	1.6
	1	Simple 3	19 35	1 20	20 10	4.0	2.0
	1	Simple 3	21 50	0 10	21 55	4.0	2.0
16	1	Simple 1F	15 39	0 07	15 42.8	7.8	3.6
	1	Simple 3	17 35	2 00	19 00	3.2	2.0
	1	Simple 3	19 50	3 00	21 15	4.6	2.6
	1	Simple 1	23 58.3	0 01	23 58.9	5.2	2.0*
17	1	Simple 3	13 30	0 20	13 33	3.0	1.5
	1	Simple 3A	15 25	4 00	16 40	3.6	1.8
	1	Simple 2	17 41.5	0 06.5	17 42.5	56.0	20.0
	2	Post B.I.	17 48	0 20	---	6.4	3.2
	1	Simple 1	18 35.5	0 03	18 36	3.4	1.0
	1	Simple 2	20 44.5	0 03	20 45.5	11.0	4.0
	1	Simple 1	23 33	0 02	23 33.5	7.8	3.6
	1	Simple 3	12 05	2 25	13 10	4.2	3.0

*Only observed at Penticton.

OUTSTANDING EVENTS - SOLAR RADIATION AT 2700 & 2800 MHz

DATE 1970	URANO KEY	CLASS	START U.T.	DURATION	MAXIMUM U.T.	PEAK FLUX	MEAN FLUX
Aug.			H M	H M	H M		
18	8	Rise	16 20	0 15	---	4.0	---
	1	Simple 2F	16 45	0 03	16 47	17.0	6.0
	2	Post B.I.	16 48	0 12	---	3.8	1.9
	1	Simple 1	17 02	0 01.5	17 02.1	2.0	1.0
	1	Simple 3A	17 30	3 30	18 55	6.6	4.0
	1	Simple 2	18 55.5	0 00.4	18 55.6	13.0	6.5
	1	Simple 1	20 41	0 03	20 42	7.8	3.9
	3	Complex	22 06.2	0 05.8	22 07.5	246.0	38.0
		1st Compt.	22 06.2	0 01.6	22 07.5	246.0	---
		2nd Compt.	22 07.8	0 04.2	22 08	186.0	---
	2	Post B.I.	22 12	1 40	---	6.2	2.8
19	1	Simple 1	00 01.8	0 01	00 02	7.0	3.5*
	3	Complex	11 13.5	0 11	11 18.5	332.0	88.0
		1st Compt.	11 13.5	0 03.7	11 15	190.0	---
		2nd Compt.	11 17.2	0 07.3	11 18.5	332.0	---
	1	Simple 3A	11 35	4 10	12 45	10.0	5.0
	3	Complex	11 38	0 09	11 41	39.0	18.0
		1st Compt.	11 38	0 05.5	11 41	39.0	---
		2nd Compt.	11 43.5	0 03.5	11 45	16.0	---
	2	Post B.I.	11 47	0 09	---	5.6	2.8
	1	Simple 3	13 06	0 20	13 08	7.0	3.5
20	3	Complex F	14 24	0 07	14 28.3	14.0	4.4
	1	Simple 3 A	15 19	0 50	15 21	5.6	2.0
	1	Simple 1	15 23.5	0 01	15 24	6.4	3.2
	3	Complex	17 23.5	0 07	17 26	15.0	5.0
	1	Simple 3	21 40	1 10	22 05	2.0	1.0
21	1	Simple 3	00 00	1 20	00 15	7.6	3.8*

*Only observed at Penticton.

OUTSTANDING EVENTS - SOLAR RADIATION AT 2700 & 2800 MHz

DATE 1970	URANO KEY	CLASS	START U.T.	DURATION	MAXIMUM U.T.	PEAK FLUX	MEAN FLUX
Aug.			H M	H M	H M		
21	1	Simple 3A	15 00	3 30	15 10	4.2	2.1
	1	Simple 1	15 04.9	0 01	15 05	2.2	1.1
	1	Simple 3	21 30	1 15	22 20	4.0	2.0
	1	Simple 3A	23 10	>2 40	25 10	11.0	---*
	1	Simple 2	24 44	0 21	24 51	98.0	40.0*
22	1	Simple 3	12 20	3 05	13 00	5.4	3.0
25	1	Simple 3	19 12	0 20	19 15	2.0	1.0
27	1	Simple 3	13 25	3 55	14 40	10.0	5.0
28	1	Simple 1F	00 18	0 02.5	00 19	4.6	2.3*
	1	Simple 1	11 06	0 02	11 07	6.4	3.2
	1	Simple 2	11 20.5	0 01	11 21	14.0	7.0
	1	Simple 2	14 41.9	0 02	14 42	25.0	7.0
	1	Simple 1	14 45	0 02	14 45.5	2.8	1.4
	1	Simple 2	17 19.2	0 02	17 20	11.0	4.0
	1	Simple 2	17 21.5	0 04	17 22	28.0	7.0
	1	Simple 1	17 37	0 02	17 37.5	2.2	1.0
	1	Simple 1	18 20.9	0 02	18 21.3	6.6	3.0
	1	Simple 1	20 46	0 02	20 46.2	5.8	2.9
	1	Simple 2F	23 05.5	0 02	23 06	13.0	7.0
29	1	Simple 3A	18 46	0 55	18 58	6.8	3.4
	3	Complex	18 48.5	0 04.5	18 50.7	20.0	12.0
	1	Simple 2F	22 55	0 05	22 56.5	18.0	6.0
30	1	Simple 2F	13 14	0 02	13 15.2	25.0	11.0
	1	Simple 3	14 20	2 00	15 10	3.6	1.8
	8	Rise	17 40	0 20	---	3.0	---
31	1	Simple 3	17 10	4 20	18 40	2.6	1.6

*Only observed at Penticton.

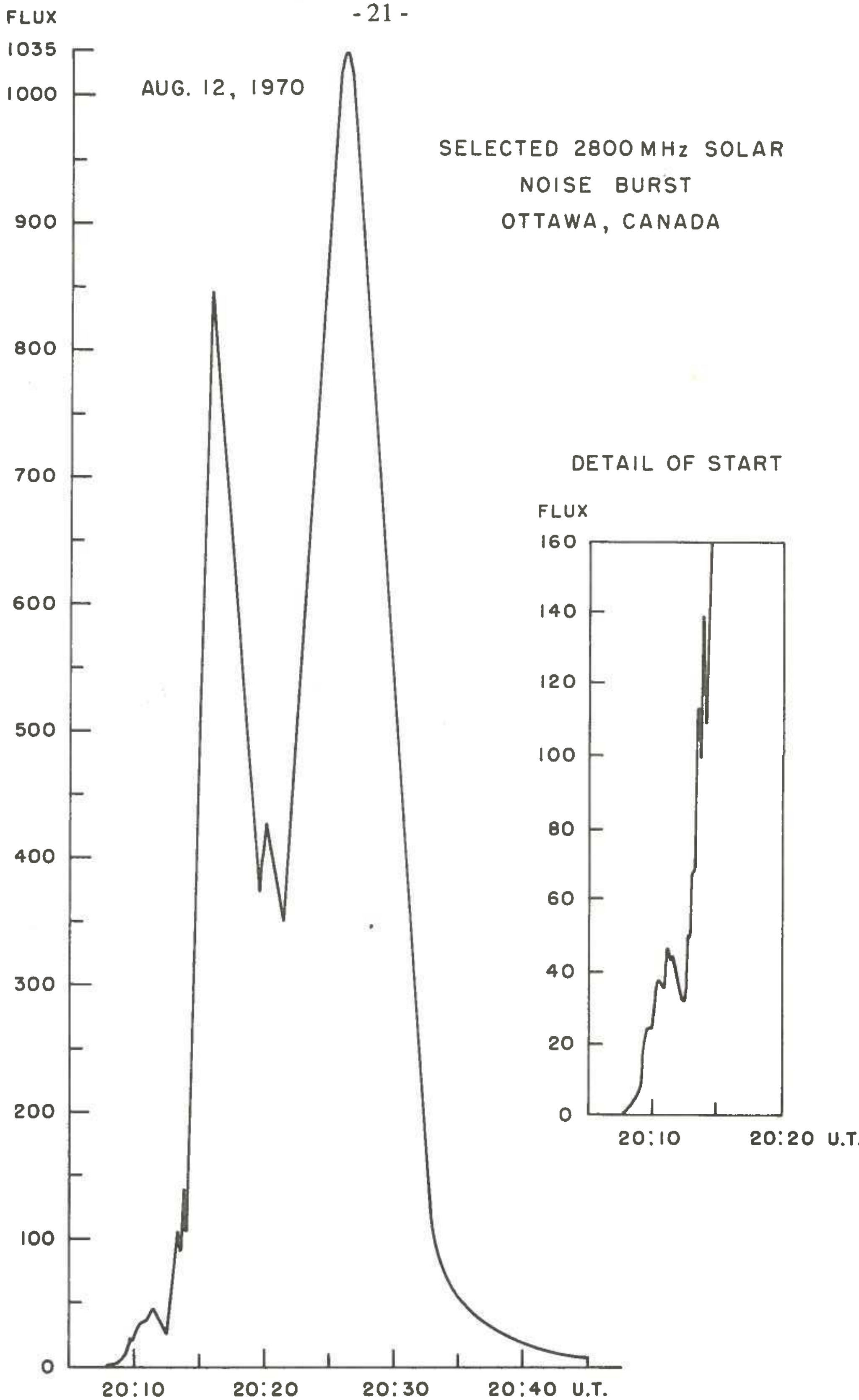
FLUX
1035
1000
AUG. 12, 1970
SELECTED 2800 MHz SOLAR
NOISE BURST
OTTAWA, CANADA
900
800
700
600
500
400
300
200
100
0
20:10
20:20
20:30
20:40 U.T.
DETAIL OF START
FLUX
160
140
120
100
80
60
40
20
0
20:10
20:20 U.T.

Figure 4

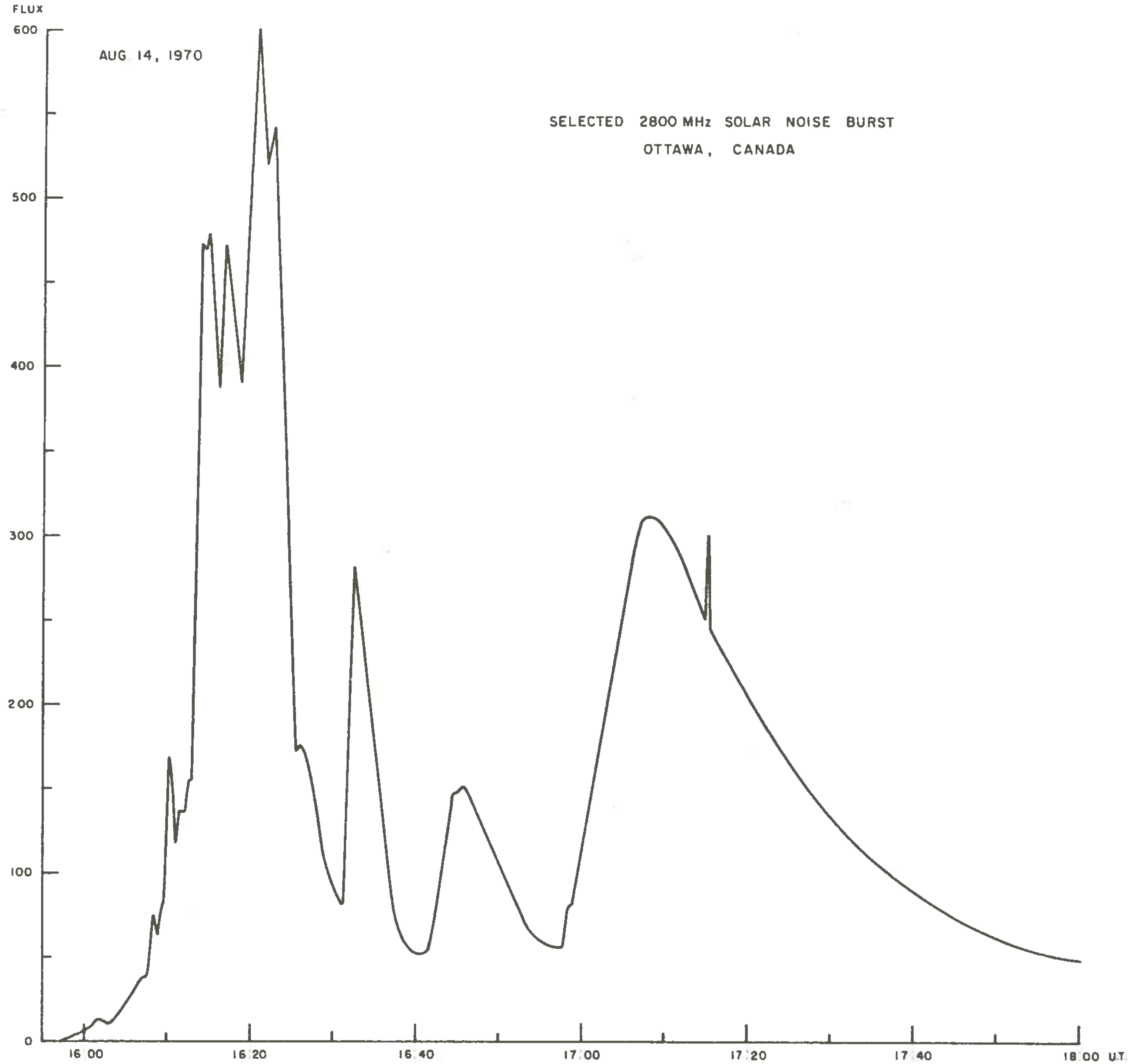
FLUX
600
500
400
300
200
100
0
AUG 14, 1970
SELECTED 2800 MHz SOLAR NOISE BURST
OTTAWA, CANADA
16 00
16 20
16 40
17 00
17 20
17 40
18 00 U.T.

Figure 5

DAILY VALUES OF SOLAR FLUX AT 2800 MHz (OTTAWA-ARO)
AND 2700 MHz (PENTICTON-DRAO) -- SERIES "C"

Flux in watts/m^2/cycles/sec bandwidth (x 10^{-22}) -- 2 polarizations

	OTTAWA				PENTICTON	
1970		Observed		adj. to 1 A.U.	Observed	adj. to 1 A.U.
Sept.	14:00	17:00	20:00	17:00	19:35	19:35
1	150.0*	151.4	153.6	154.1	147.8	150.5
2	154.2	153.9	154.4	156.7	150.3	153.0
3	158.0	160.5*	160.7	163.2*	---	---
4	159.4*	160.7*	159.4	163.4*	---	---
5	160.3	159.8*	159.0*	162.4*	---	---
6	160.1	159.0	161.9	161.5	---	---
7	160.7*	162.0	162.4*	164.4	---	---
8	155.0	154.6	157.6	156.9	---	---
9	154.5	155.0	153.6*	157.2	147.7*	149.8*
10	143.2	141.9	140.8	143.9	137.2	139.1
11	132.8	132.7	133.4	134.4	128.7	130.4
12	126.1	124.5	122.9	126.1	---	---
13	119.0	118.6	119.8	120.1	---	---
14	120.5	120.3	120.6*	121.9	119.1*	120.6*
15	118.5	116.7	---	118.0	114.9	116.2
16	118.2	117.1	117.8	118.4	113.4*	114.6*
17	116.3	115.7	116.0	116.9	112.7	113.8
18	119.8	119.6	121.2	120.7	118.6	119.7
19	132.7	133.5*	134.4	134.7*	---	---
20	144.9	145.7	146.3	146.9	---	---
21	150.0	148.2	152.7	149.4	146.8	148.0
22	154.2	154.1	157.5*	155.2	154.5*	155.6*
23	159.7	160.5	159.1	161.6	156.8*	157.9*
24	153.0	155.1*	156.4*	156.0*	150.0*	150.9*
25	158.9	155.0	155.0	155.8	148.5	149.2
26	157.1	155.1	152.3	155.9	---	---
27	150.0	149.4	145.7	150.0	---	---
28	144.8	143.9*	140.6	144.5*	136.8	137.3
29	139.9	138.3	136.4	138.7	131.3	131.7
30	133.6	134.3	132.3	134.7	126.5	126.9
Mean	143.5	143.2	144.3	144.8	135.6	137.0

*Corrected for burst.

OUTSTANDING EVENTS - SOLAR RADIATION AT 2700 & 2800 MHz

DATE 1970	URANO KEY	CLASS	START U.T.	DURATION	MAXIMUM U.T.	PEAK FLUX	MEAN FLUX
Sept.			H M	H M	H M		
1	1	Simple 3	12 20	4 10	13 00	9.8	4.9
	1	Simple 3	21 35	0 25	21 40	2.0	1.0
	1	Simple 1	22 27.5	0.02	22.28	8.4	4.0
2	1	Simple 1	00 52.8	0 01.2	00 53.1	4.8	2.2*
	1	Simple 3	13 20	3 30	14 30	9.6	4.8
	8	Rise	21 22	0 08	---	2.0	---
	1	Spike	23 12	---	23 12	6.2	---*
3	1	Simple 2	01 45	0 01.5	01 45.2	20.0	10.0*
	1	Simple 3A	12 05	0 23	12 08	6.6	3.3
	1	Simple 1F	12 10	0 05	12 12.5	9.4	4.7
	1	Simple 3A	13 05	0 45	13 40	2.8	1.4
	1	Simple 1	13 30	0 07	13 32	4.6	2.3
	1	Simple 3	16 40	2 40	17 30	4.4	2.2
4	1	Simple 3	13 00	1 50	indet.	2.6	1.3
	1	Simple 3A	16 05	2 50	16 45	15.0	7.0
	1	Simple 2F	16 16	0 14	16 25.2	37.0	18.0
	2	Post B.I.	16 30	0 10	---	7.4	5.4
	1	Simple 1	17 45.6	0 01	17 45.8	3.4	0.9
	4	Fluctuations	17 05	0 20	indet.	4.4	---
	1	Simple 1	20 12	0 01	20 12.2	7.8	3.9
	1	Spike	21 10.5	---	21 10.5	2.8	---
	3	Complex	22 01	0 06	22 04.8	15.0	5.0
	2	Post B.I.	22 07	0 20	---	2.6	1.3
	1	Simple 1	23 42.9	0 02	23 43	2.0	1.0*

*Only observed at Penticton.

OUTSTANDING EVENTS - SOLAR RADIATION AT 2700 & 2800 MHz

DATE 1970	URANO KEY	CLASS	START U.T.	DURATION	MAXIMUM U.T.	PEAK FLUX	MEAN FLUX
Sept.			H M	H M	H M		
5	1	Simple 1	14 45	0 05	14 48	8.0	4.0
	2	Post B.I.	14 50	0 35	---	4.0	2.0
	1	Simple 3AF	15 30	5 10	16 25	15.2	7.6
	3	Complex F	15 33	0 05	15 36	42.0	11.0
	1	Simple 1F	15 40	0 06	15 43	7.4	3.4
	1	Simple 1	16 20	0 04	16 22	4.6	2.3
	1	Simple 1	16 49	0 03	16 49.5	8.8	2.2
6	4	Fluctuations	01 13	0 05	01 14	4.4	---*
	1	Simple 3	12 35	0 55	12 50	2.8	1.4
	1	Simple 3	14 05	0 45	14 25	2.8	1.4
	8	Rise	18 00	0 20	---	2.8	---
	1	Simple 1	22 10	0 05	22 11	2.4	1.2
7	1	Simple 3A	12 00	3 15	13 05	7.2	3.8
	4	Fluctuations	14 51	0 04	14 52.1	6.0	---
	1	Simple 3	16 25	0 25	16 32	2.6	1.3
	1	Simple 3A	18 25	3 35	19 55	5.0	2.5
	1	Simple 1	19 13.5	0 06.5	19 15	3.4	1.7
8	1	Simple 2F	12 29.5	0 05	12 31.5	68.0	24.0
	8	Rise	18 55	0 15	---	2.7	---
9	1	Simple 3	14 10	0 45	14 45	2.6	1.3
	1	Simple 3	16 05	0 15	16 11	2.4	1.2
	1	Simple 3A	18 40	2 30	19 25	9.0	4.5
	1	Simple 1	20 33	0 02	20 33.6	4.0	2.0
10	1	Simple 2	01 32.5	0 02	01 33	16.0	8.0*
	1	Simple 3A	12 55	0 11	12 58	2.8	1.4
	1	Simple 1	12 56.8	0 01	12 57	5.0	2.5
		Fall	23 55	0 15	---	5.4	---*

*Only observed at Penticton.

OUTSTANDING EVENTS - SOLAR RADIATION AT 2700 & 2800 MHz

DATE 1970	URANO KEY	CLASS	START U.T.	DURATION	MAXIMUM U.T.	PEAK FLUX	MEAN FLUX
Sept.			H M	H M	H M		
11	1	Simple 1	11 55	0 01	11 55.5	3.4	1.7
	1	Simple 1	14 32.9	0 01	14 33	2.2	1.1
	1	Simple 3A	17 20	2 20	18 10	4.0	2.0
	1	Simple 2	17 52.5	0 02.5	17 53.2	17.0	7.0
	1	Simple 1	18 50	0 02	18 51	2.2	1.1
	1	Simple 1F	23 16	0 02	23 16.1	4.6	2.3*
12	1	Simple 3	13 10	2 25	14 00	4.0	2.0
14	1	Simple 3	19 20	1 35	20 00	2.6	1.3
16	4	Fluctuations	17 56	0 01	17 56.2	12.0	---
	1	Simple 3	19 18	1 25	19 30	2.4	1.2
19	1	Simple 3	16 15	1 00	16 40	2.2	1.4
	1	Simple 3	19 10	1 00	19 35	2.2	1.1
20	1	Simple 3	12 50	1 00	13 10	2.4	1.2
	1	Simple 3	19 05	0 45	19 20	2.6	1.3
22	1	Simple 3	14 50	1 35	15 00	2.6	1.3
	1	Simple 3F	19 20	3 40	20 25	5.0	2.8
23	1	Simple 3A	18 05	2 10	18 50	6.8	3.4
	1	Simple 3	18 15	0 11	18 23	2.4	1.2
		Fall	20 25	0 45	---	4.8	---
24	1	Simple 3F	16 20	5 05	17 25	7.6	3.2
25	1	Simple 1	17 02	0 01.5	17 03	7.2	1.8
	1	Simple 3	20 10	0 30	20 15	3.0	1.4
	1	Simple 3	20 57	0 20	21 02	3.0	1.5
26	8	Rise	13 32.5	0 01	---	2.4	---
	1	Simple 3	14 50	2 00	15 30	3.4	1.7
	1	Simple 3	19 00	1 20	19 20	3.8	1.9

*Only observed at Penticton.

OUTSTANDING EVENTS - SOLAR RADIATION AT 2700 & 2800 MHz

DATE 1970	URANO KEY	CLASS	START U.T.	DURATION	MAXIMUM U.T.	PEAK FLUX	MEAN FLUX
Sept.			H M	H M	H M		
27	1	Simple 3	15 10	0 50	15 25	3.2	1.6
	1	Simple 3	18 00	1 20	18 35	3.4	1.7
	1	Simple 3A	21 15	2 35	22 15	12.0	6.0
	1	Simple 2F	21 33	0 10	21 34.5	48.0	20.0
28	1	Simple 3	16 25	1 00	16 40	2.6	1.3
29	8	Rise	20 40	0 10	---	2.0	---

DAILY VALUES OF SOLAR FLUX AT 2800 MHz (OTTAWA-ARO)
AND 2700 MHz (PENTICTON-DRAO) -- SERIES "C"

Flux in watts/m^2/cycles/sec bandwidth (x 10^{-22}) -- 2 polarizations

	OTTAWA				PENTICTON	
1970		Observed		adj. to 1 A.U.	Observed	adj. to 1 A.U.
Oct.	14:00	17:00	20:00	17:00	19:35	19:35
1	130.7	128.4	126.6	128.7	126.1	126.4
2	124.7	125.3	121.3	125.4	120.7	120.8
3	127.0	125.9	125.6	126.0	---	---
4	138.4*	137.3	136.2	137.3	---	---
5	135.5	134.5	133.3	134.5	129.9	129.9
6	129.1	128.1*	126.8	128.0*	123.6	123.5
7	135.0	133.4	133.1*	133.3	130.4*	129.8*
8	144.6	142.3	140.4*	142.0	136.8*	136.5*
9	146.8	145.3*	141.9	144.9*	138.6	138.2
10	146.3	148.0	145.9	147.6	---	---
11	145.0*	143.4	139.0	142.8	---	---
12	134.2	135.9	134.3	135.4	---	---
13	135.2	132.5*	134.5*	131.8*	133.4*	132.7*
14	136.3*	135.6*	135.6	134.9*	132.8	132.1
15	138.8	141.0*	139.7	140.2*	137.0*	136.2*
16	133.9*	134.9	133.3	134.0	130.6	129.7
17	133.2	132.4	131.6*	131.5	---	---
18	139.1	139.6	138.5*	138.5	---	---
19	138.5	140.1	136.4	139.0	135.4	134.3
20	139.2	138.4	138.6	137.2	136.2	135.0
21	137.2	137.7	136.4	136.5	134.8	133.6
22	134.3	136.4	---	135.0	138.9	137.5
23	150.2	150.5	150.6	149.0	144.2	142.8
24	160.2	163.0*	163.1*	161.2*	---	---
25	170.5	170.6*	174.3*	168.6*	---	---
26	184.8	189.4	189.0*	187.1	188.4	186.1
27	193.0	194.3	190.9	191.8	186.5	184.1
28	198.4	192.8	191.1	190.3	186.2	183.8
29	193.7	191.7	187.9	189.0	184.6	182.0
30	179.3	177.7	173.7	175.2	170.6	168.2
31	172.3	171.2	170.6	168.6	---	---
Mean:	148.6	148.3	147.3	147.3	145.0	144.0

*Corrected for burst.

OUTSTANDING EVENTS - SOLAR RADIATION AT 2700 & 2800 MHz

DATE 1970	URANO KEY	CLASS	START U.T.	DURATION	MAXIMUM U.T.	PEAK FLUX	MEAN FLUX
Oct.			H M	H M	H M		
3	1	Simple 1	14 15	0 06	14 17	2.4	1.2
	1	Simple 2F	18 50	0 04.5	18 51	42.0	14.0
4	1	Simple 3	12 30	2 45	13 55	4.8	2.4
	1	Simple 3AF	17 30	2 30	17 34.3	7.8	3.9
	1	Simple 2	17 39	0 02	17 39.7	12.0	6.0
	1	Simple 3	20 10	1 45	21 10	2.6	1.8
5	1	Spike	21 45.2	---	21 45.2	4.0	---
	1	Simple 3	22 10	0 20	22 12	2.0	1.0*
6	1	Simple 3	15 00	3 10	15 45	3.4	2.0
	1	Simple 3	18 40	0 50	19 20	2.6	1.3
7	1	Simple 3AF	17 05	4 35	19 55	5.8	2.9
	1	Simple 1	17 54.2	0 02	17 54.5	2.8	1.0
	8	Rise	21 52	0 15	---	3.2	---
8	1	Simple 1	16 13	0 02	16 14	5.2	2.6
	1	Simple 3	19 15	1 35	20 00	3.2	1.6
	1	Simple 3AF	21 00	1 45	22 20	2.0	1.0
	1	Simple 1	22 12.5	0 04	22 14	2.0	1.0
9	1	Simple 3	14 25	4 25	16 25	7.4	3.7
	1	Simple 3	20 10	1 35	20 50	2.8	1.6
	1	Simple 2F	22 03	0 05	22 05.5	32.0	10.0*
	2	Post B.I.	22 08	0 07	---	2.4	1.2*
10	1	Simple 3	20 30	0 22	20 35	2.6	1.3
	8	Rise	13 00	0 07	---	2.0	---
11	1	Simple 3	13 35	0 30	13 40	2.0	1.0
	1	Simple 3	14 10	0 30	14 35	2.4	1.2

*Only observed at Penticton.

OUTSTANDING EVENTS - SOLAR RADIATION AT 2700 & 2800 MHz

DATE 1970	URANO KEY	CLASS	START U.T.	DURATION	MAXIMUM U.T.	PEAK FLUX	MEAN FLUX
Oct.			H M	H M	H M		
11	1	Simple 3A	15 30	0 10	indet.	2.6	1.3
	1	Simple 1F	15 11	0 01	15 11.1	3.6	2.0
	1	Simple 3	17 20	1 25	17 50	3.0	1.8
13	1	Simple 3A	16 25	4 50	18 30	13.8	7.4
	1	Simple 1	16 45	0 02	16 45.5	3.8	1.6
	1	Simple 3	22 25	1 05	22 45	4.6	2.6*
14	1	Simple 3	12 35	0 35	12 40	2.6	1.6
	1	Simple 1F	13 34	0 04.5	13 35	5.0	2.2
	1	Simple 3	13 40	1 45	14 25	4.2	2.1
	1	Simple 3F	15 35	1 05	16 05	3.8	1.9
	1	Simple 3A	16 45	1 25	17 15	2.6	1.3
	1	Simple 2	17 06.5	0 03	17 07	14.0	4.0
	1	Simple 3 AF	20 30	1 50	21 15	6.4	3.2
	1	Spike	20 41	---	20 41	2.8	---
15	1	Simple 1	13 15	0 05	13 18	2.0	1.0
	8	Rise	15 20	0 10	---	2.8	---
	1	Simple 3	16 20	1 30	17 10	3.0	1.5
	1	Simple 3	18 05	1 50	18 50	5.0	2.5
16	1	Simple 3F	12 35	2 10	13 05	5.8	3.4
	1	Simple 3	15 00	0 50	15 15	2.0	1.0
	1	Simple 1	19 05	0 02	19 05.5	2.0	1.0
	1	Simple 3	21 25	0 50	21 40	2.2	1.1
17	1	Simple 3	17 50	2 45	18 55	5.6	3.0
	8	Rise	20 40	0 40	---	3.4	---*
18	1	Simple 3	17 50	5 00	18 35	2.0	2.0

*Only observed at Penticton.

OUTSTANDING EVENTS - SOLAR RADIATION AT 2700 & 2800 MHz

DATE 1970	URANO KEY	CLASS	START U.T.	DURATION	MAXIMUM U.T.	PEAK FLUX	MEAN FLUX
Oct.			H M	H M	H M		
19	1	Simple 3	17 40	0 30	17 45	2.4	1.2
21	1	Simple 1	15 24	0 02	15 25	9.0	4.0
22	1	Simple 3A	17 55	0 45	18 04	2.6	1.3
	1	Simple 2	18 00	0 03	18 00.7	24.0	8.0
	1	Simple 3	20 55	0 40	21 10	2.2	1.1
23	1	Simple 3 AF	20 05	> 3 00	22 15	12.4	---*
	1	Simple 2F	22 02	0 13	22 07	13.0	6.5*
24	8	Rise A	14 25	0 05	---	2.6	---
	1	Spike	14 27.8	0 00.4	14 27.8	14.0	---
	1	Simple 3F	15 45	0 25	indet.	2.0	1.0
	1	Simple 3F	16 15	1 10	17 00	4.2	2.0
	1	Simple 3	19 00	4 00	19 45	14.0	7.0
25	1	Simple 3A	14 30	5 00	16 30	12.6	6.3
	1	Simple 2	15 07	0 08	15 09	42.0	17.0
	2	Post B.I.	15 15	0 25	---	9.0	3.0
	1	Simple 3	17 46	0 35	17 50	6.6	3.8
	1	Simple 3	19 45	1 20	20 35	4.0	2.4
	8	Rise	21 20	0 35	---	6.6	---*
26	1	Simple 2F	12 38.5	0 02.5	12 39	40.0	20.0
	1	Simple 3	14 25	0 15	14 34	2.8	1.4
	8	Rise	15 07	0 03	---	2.8	---
	1	Simple 2	17 46	0 04	17 47.5	48.0	18.0
	2	Post B.I.	17 50	0 11	---	6.0	2.0
	1	Simple 3A	18 07	2 15	18 28	9.6	5.2
	4	Fluctuations	18 07	0 03	18 08.2	16.0	---
	1	Simple 1	18 12	0 03	18 13	6.4	3.2

*Only observed at Penticton.

OUTSTANDING EVENTS - SOLAR RADIATION AT 2700 & 2800 MHz

DATE 1970	URANO KEY	CLASS	START U.T.	DURATION	MAXIMUM U.T.	PEAK FLUX	MEAN FLUX
Oct.			H M	H M	H M		
26	1	Simple 3A	20 50	2 40	22 17	16.0	8.0*
	1	Simple 1	20 56	0 02	20 56.5	3.2	1.6*
	1	Simple 1	22 31	0 02	22 31.8	4.0	2.0*
27	1	Simple 3A	14 10	1 15	14 30	8.8	4.4
	4	Fluctuations	14 13	0 07	14 18	15.0	---
	1	Simple 2F	14 23.7	0 02	14 24.2	22.0	11.0
	1	Simple 1	18 15.5	0 04	18 17	8.8	4.4
	1	Simple 1	20 08	0 01.5	20 09	2.2	1.1
	1	Simple 1	22 29.5	0 01.5	22 30.5	8.8	4.4*
	2	Post B.I.	22 31	0 05	---	3.6	1.8*
	1	Simple 2	22 46	0 04	22 47.2	24.0	8.0*
28	1	Simple 3	14 20	0 35	14 25	3.8	1.9
	1	Simple 3	18 20	0 15	18 24	3.4	1.7
	1	Simple 3	20 30	2 40	21 20	3.6	2.0
29	3	Complex F	17 15	0 06	17 16.5	44.0	15.0
	2	Post B.I.	17 21	0 20	---	5.2	2.6
30	1	Simple 1	12 58	0 01.5	12 58.3	6.8	3.4
	1	Simple 1	15 55	0 01	15 55.4	5.6	2.8
	4	Fluctuations	17 38	0 07	17 39	4.0	----
	1	Simple 3A	20 45	1 15	21 23	4.6	2.3*
	4	Fluctuations	21 19	0 08	21 20	6.2	---*
	1	Simple 2F	23 32	0 08	23 35	136.0	58.0*
31	8	Rise	21 00	0 05	---	2.0	---*

*Only observed at Penticton

DAILY VALUES OF SOLAR FLUX AT 2800 MHz (OTTAWA-ARO)
AND 2700 MHz (PENTICTON-DRAO) -- SERIES "C"

Flux in watts/m^2/cycles/sec bandwidth (x 10^{-22}) -- 2 polarizations

	OTTAWA				PENTICTON	
1970	Observed			adj. to 1 A.U.	Observed	adj. to 1 A.U.
Nov.	14:00	17:00	20:00	17:00	19:35	19:35
1	167.1*	165.8	165.8	163.3	---	---
2	161.8	161.7	158.5	159.1	159.4	156.8
3	156.2	155.7*	154.8	153.2*	152.6	150.2
4	148.8	150.9	150.3	148.3	148.7*	146.2*
5	150.0*	150.0	148.3	147.5	147.2	144.7
6	151.7	152.5	150.3	149.8	148.4	145.7
7	151.7	153.4	149.9	150.6	---	---
8	143.8	143.8	141.8	141.1	---	---
9	144.0	144.6	142.5	141.9	141.6	138.9
10	151.1	150.8	150.9*	147.8	149.8*	146.8*
11	162.4	158.8	158.2*	155.6	---	---
12	168.8	168.6*	167.3	165.1*	165.0*	161.5*
13	---	182.9	179.2*	179.1	177.7*	174.0*
14	---	190.4*	194.8*	186.4*	---	---
15	198.5	204.5	201.3*	200.0	---	---
16	203.0*	197.9	199.5	193.5	196.2*	191.9*
17	190.3*	188.4*	186.8	184.1*	178.8*	174.7*
18	198.0*	197.6*	197.5	193.1*	193.9*	189.4*
19	190.2*	190.1*	188.4	185.5*	184.0	179.6
20	185.8	178.0	175.5	173.7	171.1	167.0
21	169.9*	167.3*	166.1	163.3*	---	---
22	159.8	158.2	157.6	154.2	---	---
23	149.4	146.1	147.9	142.4	144.5	140.9
24	138.4*	137.5	135.3*	133.9	133.2*	129.7*
25	135.6	131.3	---	127.9	128.5	125.2
26	133.8	132.8	132.8	129.3	131.8	128.4
27	138.4	138.9	144.6	135.1	142.4	138.6
28	153.0	153.0	147.9	148.9	---	---
29	153.1	152.5	150.6	148.4	---	---
30	158.0	156.9	155.6	152.5	154.4	150.1
Mean	161.2	162.0	162.1	158.5	157.5	154.0

*Corrected for burst.

OUTSTANDING EVENTS - SOLAR RADIATION AT 2700 & 2800 MHz

DATE 1970	URANO KEY	CLASS	START U.T.	DURATION	MAXIMUM U.T.	PEAK FLUX	MEAN FLUX
Nov.			H M	H M	H M		
1	1	Simple 3F	12 40	2 00	13 02	13.0	6.5
	1	Simple 3	17 40	1 15	18 00	2.4	1.2
	1	Simple 3	21 40	1 20	22 10	3.4	1.7*
2	1	Simple 3F	14 40	0 55	14 52	4.6	2.3
	1	Simple 3	17 50	1 05	18 15	3.4	1.7
	1	Simple 3	21 00	0 50	21 30	2.0	1.0*
	1	Simple 2F	21 59.5	0 02	21 59.8	15.0	4.0*
3	1	Simple 3	13 05	0 25	13 17	3.2	1.8
	1	Simple 3F	14 20	1 20	15 15	5.0	2.5
	1	Simple 3A	16 10	1 10	16 23	6.8	3.4
	1	Simple 1F	16 40	0 01	16 40.5	3.0	1.5
	1	Simple 3A	18 30	1 10	18 55	4.4	2.2
	1	Simple 1	18 30	0 06	18 33	5.0	2.5
	1	Simple 1	18 43	0 05	18 44	3.0	1.5
4	8	Rise	16 00	0 15	---	2.6	---
	1	Simple 1	16 18	0 08	16 20	2.4	1.2
	1	Simple 3	18 20	1 30	19 00	4.4	1.8
	1	Simple 3	21 30	0 55	21 55	11.0	5.5*
	1	Simple 2F	22 49.9	0 02	22 50	17.0	6.0*
5	1	Simple 3	13 30	2 10	15 05	2.6	1.8
	1	Simple 3	20 00	2 20	21 05	2.2	1.1
6	1	Simple 3	15 55	0 40	16 05	2.6	1.3
	1	Simple 1	22 53	0 01	22 53.8	5.4	2.7*
7	8	Rise	15 07	0 05	---	2.0	---
		Fall	18 00	0 40	---	4.4	---

*Only observed at Penticton.

OUTSTANDING EVENTS - SOLAR RADIATION AT 2700 & 2800 MHz

DATE 1970	URANO KEY	CLASS	START U.T.	DURATION	MAXIMUM U.T.	PEAK FLUX	MEAN FLUX
Nov.			H M	H M	H M		
10	1	Simple 3	14 25	1 05	14 40	3.8	1.9
	1	Simple 1	15 32	0 03	15 32.3	2.2	1.0
	1	Simple 1F	17 23	0 02	17 24	4.0	2.0
	1	Simple 3A	17 50	2 35	19 55	3.0	2.0
	1	Simple 1	20 21	0 03	20 21.5	3.2	1.6
11	1	Simple 3F	15 25	0 20	15 27	3.6	1.8
	1	Simple 2F	18 29	0 07	18 31	22.0	8.0
	1	Simple 3	19 10	1 10	19 33	5.0	2.5
12	1	Simple 3F	14 20	0 10	14 22	7.0	3.5
	1	Simple 1F	14 49	0 05	14 50	9.6	2.8
	1	Simple 3A	16 10	4 00	18 25	8.0	5.0
	1	Simple 1	17 47.5	0 01.5	17 48	9.4	4.4
13	8	Rise	16 00	0 30	---	6.2	---
	1	Simple 3A	16 55	0 45	17 00	4.8	3.0
	1	Simple 1	17 13	0 06	17 15	2.6	1.3
	1	Simple 3	17 45	3 40	19 00	6.8	4.4
	8	Rise	21 55	0 15	---	5.4	---*
14	1	Simple 3A	13 35	3 45	14 37	17.4	8.7
	1	Simple 1F	14 31	0 04	14 32	8.0	4.4
	1	Simple 1F	14 36	0 03	14 38	4.8	2.4
	8	Rise	18 15	0 10	---	3.6	---
	1	Simple 2F	18 41	0 01	18 41.1	15.0	7.0
	1	Simple 3A	18 50	>4 00	20 25	24.0	---
	1	Simple 1	19 12	0 06	19 14.5	5.4	2.7
	1	Simple 1	19 32	0 09	19 35	3.2	1.6
	1	Simple 3A	19 45	0 25	19 58	9.8	5.0
	1	Simple 1F	19 49	0 06	19 52	8.0	4.0
	1	Simple 3	21 09	0 18	21 09.5	2.8	1.4*
	1	Simple 1F	21 32	0 08	21 38	5.2	1.4*

*Only observed at Penticton.

OUTSTANDING EVENTS - SOLAR RADIATION AT 2700 & 2800 MHz

DATE 1970	URANO KEY	CLASS	START U.T.	DURATION	MAXIMUM U.T.	PEAK FLUX	MEAN FLUX
Nov.			H M	H M	H M		
15	1	Simple 1F	14 18	0 03	14 20	2.8	2.6
	1	Simple 1F	15 15.5	0 01	15 16	6.4	3.2
	8	Rise A	15 58	0 35	---	6.0	---
	1	Simple 1F	15 58	0 07	16 01	3.2	1.6
	1	Simple 1F	16 30	0 01.5	16 30.5	7.4	3.0
	1	Simple 3	17 35	0 20	17 45	3.0	1.5
	1	Simple 3A	17 55	4 40	18 15	37.0	18.0
	1	Simple 2	18 02	0 07	18 04	48.0	19.0
	1	Simple 2	18 14	0 02.5	18 15	17.0	8.5
16		Fall	13 30	2 30	---	31.0	---
		Fall	16 55	0 20	---	4.6	---
	8	Rise	19 15	0 15	---	7.0	---
	1	Simple 3	19 25	0 35	19 40	4.8	2.4
	1	Simple 1	20 29	0 06	20 31	3.6	1.8
	1	Simple 2	23 05	0 01.5	23 05.7	12.0	6.0*
17	1	Simple 3A	14 10	2 55	15 30	11.0	6.0
		1st compt.	14 10	1 05	15 00	10.4	---
		2nd compt.	15 15	1 50	15 30	11.0	---
	1	Simple 2F	15 45	0 04	15 47	28.0	9.0
	1	Simple 2	17 54	0 06	17 58	78.0	38.0
	2	Post B.I.F.	18 00	2 00	---	29.0	13.0
	8	Rise	20 05	0 20	---	6.8	---
	1	Simple 2F	20 35	0 07	20 38	71.0	12.0
	1	Simple 2	21 38	0 04	21 38.5	136.0	45.0*
	2	Post B.I.	21 42	0 27	---	12.0	4.0*

*Only Observed at Penticton.

OUTSTANDING EVENTS - SOLAR RADIATION AT 2700 & 2800 MHz

DATE 1970	URANO KEY	CLASS	START U.T.	DURATION	MAXIMUM U.T.	PEAK FLUX	MEAN FLUX
Nov.			H M	H M	H M		
18	1	Simple 3	13 40	1 00	14 13	7.0	3.5
	1	Simple 3A	14 55	0 15	15 05	2.8	1.4
	1	Simple 1F	15 00	0 02	15 00.8	9.6	4.6
	1	Simple 3AF	15 10	5 15	15 25	18.0	10.5
	1	Simple 2	15 18	0 03	15 19	10.0	4.0
	4	Fluctuations	15 36	0 03	15 38	30.0	---
	1	Simple 3	18 33	0 10	18 35	9.2	4.6
19	1	Simple 1	13 23	0 02	13 24	5.8	2.0
	1	Simple 3A	13 50	5 40	16 23	17.0	7.4
	1	Simple 1	14 47	0 03	14 49	2.6	1.3
	1	Simple 3A	15 00	0 11	15 08	4.6	2.3
	1	Simple 1	15 00.5	0 02.5	15 01.7	3.2	1.6
	3	Complex	16 41	0 03	16 42	26.0	15.0
	1	Simple 1	18 57	0 03	18 58	3.2	1.6
	1	Simple 3	21 10	0 30	21 20	3.4	1.7*
20	1	Simple 3	13 32	0 10	13 38	6.6	3.0
		Fall	15 05	0 35	---	8.0	---
	1	Simple 1	21 02	0 04	21 04	3.2	1.6*
21	1	Simple 3A	13 00	6 30	13 37	37.0	13.6
	1	Simple 2F	13 25	0 07	13 28	16.0	7.6
		Pre	15 10	0 05	---	7.4	5.6
	1	Simple 2F	15 15	0 20	15 21.5	336.0	136.0
	2	Post B.I.	15 35	0 55	---	19.0	6.4
	8	Rise	19 35	0 10	---	3.6	---
22	1	Simple 2	16 39	0 04	16 40	30.0	7.0
	1	Simple 3	18 40	1 20	19 00	2.6	1.6
	1	Simple 3	20 00	1 05	indet.	2.8	2.0

*Only observed at Penticton

November, 1970

OUTSTANDING EVENTS - SOLAR RADIATION AT 2700 & 2800 MHz

DATE 1970	URANO KEY	CLASS	START U.T.	DURATION	MAXIMUM U.T.	PEAK FLUX	MEAN FLUX
Nov.			H M	H M	H M		
24	1	Simple 3	13 30	2 50	15 19	12.0	4.3
	1	Simple 3	19 10	1 25	19 35	2.2	1.1
26	1	Simple 2F	21 00	0 13	21 03	27.0	9.0*
27	1	Simple 2F	15 23	0 01.5	15 23.4	12.8	5.0
28	1	Simple 3	17 25	2 00	18 40	2.6	1.3
	8	Rise	19 55	0 15	---	2.8	---*
	8	Rise	20 55	0 10	---	6.4	---*
29	1	Simple 3A	20 40	0 50	20 55	5.6	2.8*
	1	Simple 1F	20 45	0 06	21 49	3.6	2.2*
30	1	Simple 1	18 03.8	0 01	18 03.9	3.2	1.0

*Only observed at Penticton.

DAILY VALUES OF SOLAR FLUX AT 2800 MHz (OTTAWA-ARO)
AND 2700 MHz (PENTICTON-DRAO) -- SERIES "C"

Flux in watts/m^2/cycles/sec bandwidth (x 10^{-22}) -- 2 polarizations

1970 Dec.	OTTAWA Observed 14:00	OTTAWA Observed 17:00	OTTAWA Observed 20:00	OTTAWA adj. to 1 A.U. 17:00	PENTICTON Observed 19:35	PENTICTON adj. to 1 A.U. 19:35
1	151.5	150.6	150.1	146.4	149.6	145.4
2	152.5	152.7	152.1	148.4*	150.8	146.6
3	153.9	152.5	149.6	148.1	147.4	143.1
4	158.1	158.6	159.5*	154.0	158.6*	154.0*
5	169.8	166.7*	164.0	161.9*	---	---
6	166.2	172.5	171.4	167.5	---	---
7	168.5	171.7*	171.5	166.5*	169.6	164.5
8	172.9	172.5	173.9	167.3	169.6	164.5
9	174.0	176.8	176.7	171.5	171.7	166.5
10	176.0	176.2	175.1	170.9	172.4	167.2
11	177.4	178.1*	179.1	172.6*	174.7	169.3
12	183.8	184.1*	178.5	178.4*	---	---
13	171.8	169.6	168.0	164.3	---	---
14	163.4	159.5	158.6*	154.6	156.4*	151.6*
15	158.4	159.0	153.3	154.1	152.7	148.0
16	153.7	151.5	152.8*	146.7	152.7*	147.8*
17	152.6	151.7	153.2	146.8	150.8*	146.0*
18	157.3	156.6*	155.7*	151.6*	155.4*	150.4*
19	158.5	157.4*	160.6	152.4*	---	---
20	162.3	160.7	160.4	155.6	---	---
21	153.9	151.1*	153.0	146.3*	149.8*	145.0*
22	144.9	141.3*	136.9*	136.8*	133.5*	129.2*
23	137.2	136.6	134.0	132.1	130.0	125.7
24	130.1	128.6	129.6	124.4	125.3	121.2
25	129.8	(128.2)	130.1	(124.0)	---	---
26	127.0	126.5	124.1	122.3	---	---
27	122.8	123.9	123.5	119.8	---	---
28	118.9	121.3	118.8	117.3	---	---
29	126.4	127.6	128.3	123.4	---	---
30	132.6	133.4*	135.8*	129.0*	137.6	133.1
31	134.3	137.9	140.3	133.3	136.6	132.1
Mean	152.9	152.8	152.2	148.0	152.3	147.6

*Corrected for burst

( ) Interpolated from 2700 MHz calibration

OUTSTANDING EVENTS - SOLAR RADIATION AT 2700 & 2800 MHz

DATE 1970	URANO KEY	CLASS	START U.T.	DURATION	MAXIMUM U.T.	PEAK FLUX	MEAN FLUX
Dec.			H M	H M	H M		
1	1	Simple 3 A	15 56	2 50	16 11	12.2	5.0
	1	Simple 1	16 03	0 06	16 05	8.4	4.2
4	1	Simple 2	14 24.8	0 03.2	14 26	56.0	24.0
	1	Simple 1	15 34	0 04	15 35	2.0	1.0
	1	Simple 3	17 05	3 20	19 20	4.8	2.4
5	1	Simple 1	13 20	0 02.5	13 22	6.0	3.0
	1	Simple 3A	15 45	2 10	16 35	4.4	2.2
	1	Simple 1	16 32.8	0 01.5	16 33.8	1.8	0.9
	1	Simple 3A	19 00	0 30	19 10	3.4	1.2
	1	Simple 1	19 11.5	0 02.5	19 12	4.2	2.0
	1	Simple 1	21 15	0 03	21 16.5	3.0	1.5*
	1	Simple 1	21 21	0 04	21 21.5	4.2	2.1*
	1	Simple 3	21 40	0 35	22 00	3.8	1.9*
6	1	Simple 2	13 48.5	0 02	13 49	12.8	6.0
	1	Simple 1	15 50	0 01	15 50.7	2.0	1.0
	1	Simple 3A	17 53	0 50	17 59	6.4	3.2
	1	Simple 3F	18 06	0 23	18 15	15.6	8.0
	1	Simple 1F	21 58	0 06	22 02.5	8.0	2.8*
7	1	Simple 3 AF	15 10	2 00	15 28	7.8	3.4
	1	Simple 2F	15 19	0 09	15 21	12.6	6.3
	1	Simple 1	15 59	0 01	15 59.7	2.8	1.4
8	1	Simple 2	13 27.5	0 01.5	13 27.9	22.0	8.0
	1	Simple 1F	16 10	0 06	16 12.5	4.0	1.6
	1	Simple 3	17 00	1 35	17 40	2.6	1.3
9	1	Spike	13 47	0 00.3	13 47	6.0	---
	1	Simple 1	14 54	0 04	14 56	2.4	1.2

*Only observed at Penticton

OUTSTANDING EVENTS - SOLAR RADIATION AT 2700 & 2800 MHz

DATE 1970	URANO KEY	CLASS	START U.T.	DURATION	MAXIMUM U.T.	PEAK FLUX	MEAN FLUX
Dec.			H M	H M	H M		
9	8	Rise A	15 20	0 35	---	3.0	---
	1	Simple 1	15 22.5	0 01	15 22.6	4.4	2.2
	1	Simple 1	17 18	0 03	17 18.9	4.0	2.0
	1	Simple 3A	17 48	0 55	18 05	3.0	1.5
	1	Simple 2	17 52	0 10	17 53	10.4	3.4
	1	Simple 2F	19 05.5	0 01	19 06	13.2	4.4
	1	Simple 3A	20 11	0 40	20 25	5.0	2.5
	1	Simple 1	20 12.5	0 01.5	20 12.9	5.8	2.2
	1	Simple 3A	21 45	0 30	22 00	3.8	1.9*
	1	Simple 1	21 48.5	0 01	21 49	5.4	2.7*
10	1	Simple 1	13 56	0 03	13 56.5	5.2	2.6
	1	Simple 3A	14 25	0 55	15 00	6.8	3.4
	1	Simple 2F	14 29	0 03	14 30	31.0	15.5
	2	Post B.I.A.	14 32	0 16	---	9.2	4.6
	1	Simple 1	14 37	0 03	14 37.5	3.0	1.5
	1	Simple 3A	15 35	1 00	15 47	5.2	2.6
	3	Complex	15 40	0 04.5	15 41.7	13.0	5.0
	1	Simple 1	17 41	0 02	17 42	8.6	4.3
	2	Post B.I.	17 43	1 00	---	2.8	2.0
	1	Simple 3 AF	19 03	0 20	19 06	6.2	3.1
	1	Simple 1	19 23	0 03	19 24	8.0	4.0
	1	Simple 1F	20 13	0 04	20 14	5.0	2.5
11	1	Simple 2F	13 22.5	0 01.5	13 23.2	38.0	17.0
	2	Post B.I.F	13 24	0 04	---	6.4	5.0
	1	Simple 1	13 29	0 05	13 32	3.2	1.6

*Only observed at Penticton.

OUTSTANDING EVENTS - SOLAR RADIATION AT 2700 & 2800 MHz

DATE 1970	URANO KEY	CLASS	START U.T.	DURATION	MAXIMUM U.T.	PEAK FLUX	MEAN FLUX
Dec.			H M	H M	H M		
11	1	Simple 3A	14 25	4 15	15 15	10.2	5.4
	4	Fluctuations	14 30	0 11	14 32	8.8	---
	1	Simple 1F	14 45	0 01.5	14 45.4	4.2	2.1
	1	Simple 1	14 51.2	0 01.8	14 52	4.4	2.2
	1	Simple 3	15 20	0 40	15 23	6.2	3.1
	1	Simple 3	17 30	0 40	17 40	4.4	2.2
	1	Simple 3	20 20	1 00	20 25	3.2	1.6
		Incomplete	22 05	> 0 45	22 20.5	72.0	---***
12	1	Simple 3A	14 05	4 30	15 15	23.0	11.5
	1	Simple 2F	14 37.5	0 07	14 38.5	216.0	27.0
	1	Simple 2F	14 54	0 09	14 58.5	25.0	12.0
	1	Spike	16 04.5	0 00.5	16 04.6	6.0	3.0
	1	Simple 1	16 16	0 03	16 18	2.6	1.3
	3	Complex F	18 40.2	0 05.8	18 43.5	88.0	39.0
		1st Compt.	18 40.2	0 01.8	18 41	49.0	---
		2nd Compt.	18 42	0 04	18 43.5	88.0	---
	2	Post B.I.	18 46	0 45	---	16.2	4.4
	1	Simple 1	19 18	0 03	19 18.5	4.0	1.4
	3	Complex	20 46	0 06	20 48.2	12.0	4.4*
	1	Simple 1	21 05.5	0 01.2	21.06	3.4	1.6*
	1	Simple 1	21 08	0 02	21 08.7	4.8	2.4
13	1	Simple 3	14 05	0 15	14 13	4.0	2.0
	1	Simple 1	17 17	0 08	17 20	9.6	2.4
	3	Complex F	18 31.5	0 07	18 32	60.0	21.0
		1st Compt.	18 31.5	0 02	18 32	60.0	---
		2nd Compt.	18 33.5	0 05	18 34	48.0	---
14	1	Simple 1	17 00	0 02	17 01.5	7.2	3.6
	2	Post B.I.	17 02	1 15	---	3.2	1.6
	1	Simple 3	19 00	2 20	19 27	6.4	3.2

*Only observed at Penticton.

**Peak time and peak flux for period observed.

OUTSTANDING EVENTS - SOLAR RADIATION AT 2700 & 2800 MHz

DATE 1970	URANO KEY	CLASS	START U.T.	DURATION	MAXIMUM U.T.	PEAK FLUX	MEAN FLUX
Dec.			H M	H M	H M		
15	1	Simple 3	15 25	0 27	15 45	3.4	1.7
	1	Simple 1	20 27	0 06	20 29	2.0	1.2
16	1	Simple 3A	14 15	2 40	14 35	2.8	1.4
	1	Simple 1F	14 39.5	0 04.5	14 42	2.4	1.2
	1	Simple 3F	19 55	1 05	20 20	8.2	4.1
	1	Simple 1	21 31	0 02	21 31.5	2.6	1.3*
17	1	Simple 3F	15 45	1 00	16 30	4.6	2.3
	1	Simple 3A	18 30	1 30	18 40	3.0	1.5
	1	Simple 1F	19 23.2	0 01.2	19 23.5	5.6	2.8
	1	Simple 1F	21 05.2	0 01	21 05.5	6.6	3.0*
18	1	Simple 3A	15 00	3 15	16 40	4.8	2.8
	1	Spike	15 31.7	---	15 31.7	8.8	---
	1	Spike	17 38.8	---	17 38.8	7.2	---
	1	Spike	18 00.2	---	18 00.2	5.8	---
	1	Simple 3	18 20	2 15	indet.	2.6	2.0
	1	Simple 2F	21 44	0 03	21 45.8	14.0	5.0*
19	1	Simple 1	13 46	0 02	13 47	5.4	2.5
	1	Simple 3	14 25	1 05	15 05	3.0	1.5
	1	Simple 3 A	15 38	0 20	15 45	3.0	1.5
	3	Complex F	15 38	0 05	15 39	17.8	4.4
	1	Simple 3	16 00	1 10	16 50	3.6	2.2
	1	Simple 3	18 00	0 55	18 25	5.8	3.0
	1	Simple 1	20 21	0 05	20 22	4.4	2.2
	4	Fluctuations	20 40	0 01	20 40.2	5.0	---
20	1	Simple 3A	15 55	1 55	16 40	4.0	2.0
	1	Simple 1	16 26	0 02	16 26.2	3.0	1.5
21	1	Simple 3	18 00	1 50	18 50	3.6	1.8
22	1	Simple 3A	15 10	1 25	15 35	7.4	3.7
	1	Simple 2	15 16.5	0 05.5	15 18	135.0	52.0
	2	Post B.I.	15 22	0 08	---	8.8	3.0

*Only observed at Penticton.

OUTSTANDING EVENTS - SOLAR RADIATION AT 2700 & 2800 MHz

DATE 1970	URANO KEY	CLASS	START U.T.	DURATION	MAXIMUM U.T.	PEAK FLUX	MEAN FLUX
Dec.			H M	H M	H M		
22	1	Simple 3	16 40	1 20	17 10	5.2	2.6
	1	Simple 3A	19 10	2 05	19 35	8.2	4.6
	4	Fluctuations	19 18.5	0 01.5	19 19.5	3.8	---
	1	Simple 2F	19 24	0 05	19 26.5	29.0	14.5
	1	Simple 1	20 45.9	0 01	20 46	3.0	1.5
23	1	Simple 2	14 58.5	0 01.5	14 59	28.0	12.0
24	3	Complex	13 48.5	0 06.5	13 51.8	15.0	4.0
		1st Compt.	13 48.5	0 02	13 50	11.2	---
		2nd Compt.	13 50.5	0 04.5	13 51.8	15.0	---
25	1	Simple 1F	14 34.5	0 03.5	14 36	6.0	2.0
26	1	Simple 1	14 58.3	0 01	14 58.6	3.0	1.5
	1	Simple 2	18 26	0 07	18 27.7	13.6	6.0
	1	Spike	22 39	--	22 39	24.0	---*
27	1	Simple 1	21 12.5	0 05	21 14	3.6	1.8*
30	1	Simple 1	14 52.5	0 01	14 52.7	2.0	1.0
	3	Complex F	15 23	0 06	15 24.3	6.6	1.6
	1	Simple 3A	16 00	4 45	18 20	6.0	3.0
	3	Complex	16 44.5	0 10	16 49.8	46.0	9.2
	1	Simple 1	17 23	0 03	17 23.5	6.2	3.1
	4	Group	18 26	0 18	18 27.8	92.0	---
	1	Simple 2F	18 26	0 06	18 27.8	92.0	12.0
	1	Simple 1	18 35	0 02	18 35.3	3.6	1.2
	1	Simple 2	18 39.5	0 03	18 40.2	10.2	2.8
	1	Simple 2F	19 09.8	0 01.5	19 10	14.4	3.6
	1	Simple 1	19 18	0 01	19 18.5	2.4	1.2
	1	Simple 1	19 30	0 01	19 30.4	2.0	1.0
	1	Simple 2	20 10	0 01.5	20 10.2	10.6	3.6
	1	Simple 1	20 12.5	0 00.8	20 12.7	2.2	1.1
	1	Simple 2	20 59.5	0 04	21 00.5	40.0	10.0*

*Only observed at Penticton.

DAILY VALUES OF SOLAR FLUX AT 2800 MHz (OTTAWA - ARO) SERIES "C"

FLUX IN WATTS/M^2/CYCLES/SECOND BANDWIDTH (x 10^{-22}) - 2 POLARIZATIONS

1970 OBSERVED VALUES AT 1700 U.T. 1970

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	156.0	138.6	178.9	161.0	157.0	141.5	174.0	130.1	151.4	128.4	165.8	150.6
2	149.4	137.1	176.0	167.3	158.2	137.8	182.8	124.8	153.9	125.3	161.7	152.7
3	141.8	127.4	170.2	163.5	160.8	129.6	188.2	124.2	160.5	125.9	155.7	152.5
4	136.0	122.8	168.0	170.2	159.6	128.0	188.6	123.8	160.7	137.3	150.9	158.6
5	130.8	124.5	172.6	179.2	164.9	129.0	184.7	124.8	159.8	134.5	150.0	166.7
6	121.6	135.7	170.4	192.5	160.4	126.2	180.3	124.4	159.0	128.1	152.5	172.5
7	116.9	143.3	171.0	193.0	159.4	130.6	160.8	124.7	162.0	133.4	153.4	171.7
8	117.2	156.8	175.3	202.5	153.8	130.3	155.1	128.2	154.6	142.3	143.8	172.5
9	123.7	158.4	166.8	217.8	152.0	134.0	143.5	134.5	155.0	145.3	144.6	176.8
10	139.1	174.8	160.4	223.8	159.6	141.5	139.1	133.7	141.9	148.0	150.8	176.2
11	165.6	189.2	158.4	205.4	172.7	164.4	133.2	123.9	132.7	143.4	158.8	178.1
12	177.5	206.4	166.4	197.5	176.6	166.5	131.1	133.3	124.5	135.9	168.6	184.1
13	178.8	202.7	154.3	184.2	189.1	194.1	126.5	145.9	118.6	132.5	182.9	169.6
14	177.7	201.2	148.9	172.8	192.6	201.0	122.3	162.8	120.3	135.6	190.4	159.5
15	186.1	206.8	146.5	162.5	201.9	202.7	118.0	164.8	116.7	141.0	204.5	159.0
16	180.1	198.1	140.4	151.1	201.4	192.4	117.5	158.5	117.1	134.9	197.9	151.5
17	186.6	198.7	135.0	146.8	192.6	184.7	121.9	147.9	115.7	132.4	188.4	151.7
18	185.3	202.4	134.7	140.6	190.0	176.0	126.8	145.4	119.6	139.6	197.6	156.6
19	181.1	203.2	131.2	134.5	192.8	169.5	131.5	142.0	133.5	140.1	190.1	157.4
20	174.0	200.9	142.2	129.9	179.6	158.1	132.0	145.1	145.7	138.4	178.0	160.7
21	182.8	195.4	150.8	125.0	170.6	155.5	145.9	139.6	148.2	137.7	167.3	151.1
22	165.6	187.1	152.0	127.2	166.1	145.3	158.7	138.5	154.1	136.4	158.2	141.3
23	158.3	187.8	165.9	128.7	159.6	139.1	153.8	143.1	160.5	150.5	146.1	136.6
24	148.2	189.9	170.8	128.6	158.5	137.8	158.9	137.2	155.1	163.0	137.5	128.6
25	154.3	183.3	167.0	133.2	156.5	144.5	163.8	133.6	155.0	170.6	131.3	128.2
26	161.4	181.9	167.1	133.6	158.5	146.4	170.8	132.9	155.1	189.4	132.8	126.5
27	168.0	180.3	159.8	136.1	151.1	154.7	180.3	134.4	149.4	194.3	138.9	123.9
28	167.0	177.5	154.3	146.5	149.8	155.2	176.6	138.8	143.9	192.8	153.0	121.3
29	168.3		153.6	153.8	154.2	162.5	156.2	145.8	138.3	191.7	152.5	127.6
30	159.6		149.7	151.0	159.2	169.1	151.4	146.2	134.3	177.7	156.9	133.4
31	147.7		149.6		160.7		137.4	151.6		171.2		137.9
Mean:	158.3	175.4	158.4	162.0	168.4	154.9	152.0	138.2	143.2	148.3	162.0	152.8

DAILY VALUES OF SOLAR FLUX AT 2800 MHz (OTTAWA -ARO) SERIES "C"

FLUX IN WATTS/M^2/CYCLES/SECOND BANDWIDTH (x 10^{-22}) - 2 POLARIZATIONS

ADJUSTED TO 1 ASTRONOMICAL UNIT AT 1700 U.T.

1970 | 1970

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	150.9	134.6	175.7	160.8	159.5	145.6	179.9	134.0	154.1	128.7	163.3	146.4
2	144.5	133.1	173.0	167.1	160.7	141.8	189.0	128.5	156.7	125.4	159.1	148.4
3	137.1	123.7	167.3	163.5	163.5	133.4	194.6	127.9	163.2	126.0	153.2	148.1
4	131.5	119.4	165.3	170.4	162.3	131.7	195.0	127.4	163.4	137.3	148.3	154.0
5	126.5	121.0	169.8	179.4	167.9	132.9	191.0	128.4	162.4	134.5	147.5	161.9
6	117.6	131.9	167.8	192.9	163.3	130.0	186.4	128.0	161.5	128.0	149.8	167.5
7	113.0	139.4	168.4	193.4	162.4	134.5	166.3	128.2	164.4	133.3	150.6	166.5
8	113.3	152.6	172.8	203.1	156.7	134.2	160.4	131.8	156.9	142.0	141.1	167.3
9	119.6	154.1	164.4	218.5	154.9	138.2	148.4	138.3	157.2	144.9	141.9	171.5
10	134.5	170.3	158.3	224.7	162.8	145.9	143.8	137.3	143.9	147.6	147.8	170.9
11	160.1	184.3	156.3	206.4	176.2	169.5	137.7	127.2	134.4	142.8	155.6	172.6
12	171.6	201.0	164.4	198.5	180.3	171.7	135.4	136.9	126.1	135.4	165.1	178.4
13	172.9	197.4	152.4	185.3	193.1	200.3	130.7	149.7	120.1	131.8	179.1	164.3
14	171.8	196.2	147.3	173.8	196.8	207.4	126.3	167.0	121.9	134.9	186.4	154.6
15	180.0	201.6	144.9	163.6	206.3	209.2	121.9	169.1	118.0	140.2	200.0	154.1
16	174.3	193.3	139.0	152.2	206.0	198.6	121.4	162.5	118.4	134.0	193.5	146.7
17	180.6	193.9	133.7	148.0	197.0	190.6	125.9	151.6	116.9	131.5	184.1	146.8
18	179.4	197.7	133.5	141.9	194.6	181.8	131.0	149.0	120.7	138.5	193.1	151.6
19	175.3	198.5	130.2	135.7	197.4	175.1	135.8	145.4	134.7	139.0	185.5	152.4
20	168.4	196.5	141.1	131.2	183.9	163.3	136.4	148.6	146.9	137.2	173.7	155.6
21	177.0	191.1	149.7	126.3	174.9	160.6	150.6	142.8	149.4	136.5	163.3	146.3
22	160.5	183.3	150.9	128.6	170.3	150.1	163.8	141.7	155.2	135.0	154.2	136.8
23	153.4	183.9	164.9	130.1	163.7	143.7	158.7	146.2	161.6	149.0	142.4	132.1
24	143.6	185.9	169.8	130.1	162.6	142.3	164.0	140.2	156.0	161.2	133.9	124.4
25	149.5	179.6	167.2	134.8	160.6	149.3	169.0	136.5	155.8	168.6	127.9	124.0
26	156.4	178.3	166.4	135.3	162.8	151.4	176.3	135.7	155.9	187.1	129.3	122.3
27	163.0	176.9	159.2	138.0	155.2	160.0	185.9	137.2	150.0	191.8	135.1	119.8
28	162.0	174.1	153.8	148.6	153.8	160.5	182.1	141.6	144.5	190.3	148.9	117.3
29	163.3		153.1	156.1	158.5	168.0	161.0	148.7	138.7	189.0	148.4	123.4
30	154.8		149.4	153.3	163.7	174.8	156.1	149.0	134.7	175.2	152.5	129.0
31	143.4		149.3		165.2		141.5	154.5		168.6		133.3
Mean	153.2	171.2	156.8	163.1	172.2	159.9	157.0	141.6	144.8	147.3	158.5	148.0

DAILY VALUES OF SOLAR FLUX AT 2700 MHz (PENTICTON - DRAO) SERIES "C"

FLUX IN WATTS/M^2/CYCLES/SECOND BANDWIDTH (x 10^{-22}) - 2 POLARIZATIONS

1970 OBSERVED VALUES AT 1935 U.T. 1970

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	148.3	135.6	167.8	159.7	153.0	139.2	-----	-----	147.8	126.1	-----	149.6
2	141.0	134.0	169.0	162.0	-----	135.2	178.4	-----	150.3	120.7	159.4	150.8
3	136.9	125.2	171.1	158.2	-----	125.2	184.9	-----	-----	-----	152.6	147.4
4	131.1	118.9	162.5	-----	159.0	126.5	-----	122.0	-----	-----	148.7	158.6
5	124.5	124.3	168.0	-----	160.6	123.8	-----	119.2	-----	129.9	147.2	-----
6	117.9	133.3	166.8	182.5	155.4	-----	172.1	120.7	-----	123.6	148.4	-----
7	-----	-----	172.3	193.4	156.3	---	155.6	124.3	-----	130.4	-----	169.6
8	114.0	158.6	-----	200.5	149.5	127.9	151.7	125.6	-----	136.8	-----	169.6
9	123.3	162.7	162.9	212.5	-----	131.2	139.0	-----	147.7	138.6	141.6	171.7
10	-----	175.4	158.2	212.9	-----	140.0	136.6	130.3	137.2	-----	149.8	172.4
11	163.1	185.5	161.9	-----	168.2	163.4	-----	120.7	128.7	-----	-----	174.7
12	175.5	199.4	158.9	-----	172.4	166.9	-----	129.6	-----	-----	165.0	-----
13	174.8	199.2	153.6	180.1	182.7	-----	124.5	138.6	-----	133.4	177.7	-----
14	180.5	199.1	147.9	168.8	185.6	-----	121.5	160.9	119.1	132.8	-----	156.4
15	183.9	200.1	142.8	156.2	192.1	198.7	116.3	-----	114.9	137.0	-----	152.7
16	183.1	194.5	137.6	146.5	196.9	186.5	116.6	-----	113.4	130.6	196.2	152.7
17	183.9	198.4	132.4	144.8	190.8	183.3	118.1	142.4	112.7	-----	178.8	150.8
18	182.4	195.5	132.1	-----	185.8	174.2	-----	140.2	118.6	-----	193.9	155.4
19	179.7	200.0	128.4	-----	184.7	162.0	-----	138.2	-----	135.4	184.0	-----
20	173.9	189.9	140.3	125.1	175.6	-----	135.2	140.4	-----	136.2	171.1	-----
21	175.7	190.6	151.3	122.7	167.0	-----	144.7	133.5	146.8	134.8	-----	149.8
22	160.2	188.3	-----	124.1	160.9	138.9	151.0	-----	154.5	138.9	-----	133.5
23	153.7	188.2	164.0	125.5	-----	137.7	148.3	-----	156.8	144.2	144.5	130.0
24	144.4	186.7	162.6	128.3	-----	136.3	152.5	132.5	150.0	-----	133.2	125.3
25	151.4	179.4	166.1	-----	152.7	140.7	-----	130.6	148.5	-----	128.5	-----
26	158.0	175.0	163.0	-----	155.4	144.9	-----	129.1	-----	188.4	131.8	-----
27	158.9	175.9	-----	134.4	147.3	-----	175.9	129.4	-----	186.5	142.4	-----
28	164.3	170.5	150.0	144.4	-----	-----	164.3	134.7	136.8	186.2	-----	-----
29	166.8		-----	151.1	151.8	167.0	151.7	-----	131.3	184.6	-----	-----
30	155.2		-----	149.3	-----	168.8	144.4	-----	126.5	170.6	154.4	137.6
31	144.6		144.6		-----		132.5	147.2		-----		136.6
Mean	156.9	173.5	155.2	158.3	168.4	150.8	146.2	132.9	135.6	145.0	157.5	152.3

DAILY VALUES OF SOLAR FLUX AT 2700 MHz (PENTICTON - DRAO) SERIES "C"

FLUX IN WATTS/M^2/CYCLES/SECOND BANDWIDTH (x 10^{-22}) - 2 POLARIZATIONS

ADJUSTED TO 1 ASTRONOMICAL UNIT AT 1935 U.T.

1970 Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec. 1970
1	143.4	131.7	164.8	159.5	155.4	143.2	-----	-----	150.5	126.4	-----	145.4
2	136.3	130.1	166.1	161.8	-----	139.1	184.5	-----	153.0	120.8	156.8	146.6
3	132.4	121.6	168.2	158.2	-----	128.8	191.2	-----	-----	-----	150.2	143.1
4	126.8	115.6	159.9	-----	161.7	130.2	-----	125.5	-----	-----	146.2	154.0
5	120.4	120.8	165.3	-----	163.5	127.5	-----	122.7	-----	129.9	144.7	-----
6	114.0	129.6	164.3	182.9	158.2	-----	178.0	124.2	-----	123.5	145.7	-----
7	-----	-----	169.7	193.8	159.3	-----	160.9	127.8	-----	129.8	-----	164.5
8	110.2	154.3	-----	201.1	152.3	131.7	156.9	129.1	-----	136.5	-----	164.5
9	119.2	158.3	160.6	213.1	-----	135.3	143.7	-----	149.8	138.2	138.9	166.5
10	-----	170.8	156.1	213.8	-----	144.3	141.2	133.8	139.1	-----	146.8	167.2
11	157.7	180.7	159.8	-----	171.6	168.5	-----	124.0	130.4	-----	-----	169.3
12	169.7	194.2	157.0	-----	176.0	172.1	-----	133.1	-----	-----	161.5	-----
13	169.0	194.2	151.8	181.2	186.5	-----	128.7	142.2	-----	132.7	174.0	-----
14	174.5	194.1	146.3	169.8	189.7	-----	125.5	165.1	120.6	132.1	-----	151.6
15	177.8	195.1	141.2	157.3	196.3	205.1	120.1	-----	116.2	136.2	-----	148.0
16	177.2	189.8	136.2	147.5	201.4	192.5	120.4	-----	114.6	129.7	191.9	147.8
17	178.0	193.6	131.1	146.0	195.2	189.2	122.0	146.0	113.8	-----	174.7	146.0
18	176.6	191.0	130.9	-----	190.3	179.9	-----	143.7	119.7	-----	189.4	150.4
19	173.9	195.4	127.4	-----	189.1	167.3	-----	141.5	-----	134.3	179.6	-----
20	168.3	185.7	139.2	126.4	179.8	-----	139.7	143.8	-----	135.0	167.0	-----
21	170.1	186.4	150.2	123.9	171.2	-----	149.3	136.6	148.0	133.6	-----	145.0
22	155.2	184.8	-----	125.5	164.9	143.5	155.8	-----	155.6	137.5	-----	129.2
23	148.9	184.2	163.0	126.9	-----	142.2	153.0	-----	157.9	142.8	140.9	125.7
24	139.9	182.8	161.6	129.8	-----	140.8	157.4	135.4	150.9	-----	129.7	121.2
25	146.7	175.8	165.3	-----	156.7	145.3	-----	133.5	149.2	-----	125.2	-----
26	153.1	171.5	162.3	-----	159.6	149.8	-----	131.8	-----	186.1	128.4	-----
27	154.1	172.6	-----	136.3	151.3	-----	181.4	132.1	-----	184.1	138.6	-----
28	159.4	167.3	149.6	146.4	-----	-----	169.4	137.4	137.3	183.8	-----	-----
29	161.8		-----	153.4	156.1	172.7	156.4	-----	131.7	182.0	-----	-----
30	150.5		-----	151.5	-----	174.5	148.9	-----	126.9	168.2	150.1	133.1
31	140.4		144.3		-----		136.5	150.0		-----		132.1
Mean:	151.9	169.3	153.5	159.4	172.1	155.6	151.0	136.2	137.0	144.0	154.0	147.6