

RECORDS OF RADIO AURORA AT SYOWA STATION, ANTARCTICA IN 1976

Isao SHIRO, Akihisa YAMAKOSHI and Tsutomu SASAKI

Radio Research Laboratories, Koganei-shi, Tokyo 184

1. Introduction

Observations of the aurora by means of the radar at 112.2 MHz have been carried out at Syowa Station, Antarctica, by staffs from the Radio Research Laboratories, since March 1966.

An alternative radar system was installed there in February 1974 and the observation of radio aurora using the system at four frequencies (50, 65, 80 and 112 MHz) in the VHF band was made during the period from January 1 to December 31, 1976.

The records of the 35 mm film in the form of A-scope display have been deposited in the Radio Research Laboratories.

Inquiries about the details of data should be addressed to:

Radio Research Laboratories
Ministry of Posts and Telecommunications
2-1, Nukui-Kitamachi 4-chome, Koganei-shi,
Tokyo 184, Japan.

2. Location

Syowa Station			
Geographic		Geomagnetic	
Latitude	Longitude	Latitude	Longitude
69°00' S	39°35' E	69.6° S	77.1° E

3. Observers

Akihisa YAMAKOSHI (Radio Research Laboratories)
Tsutomu SASAKI (Radio Research Laboratories)

4. Method of Measurement

The antenna was fixed in the direction of the magnetic south and with an elevation angle of 25 degrees. The declination and inclination of the geomagnetic field at Syowa Station in 1976 were 46°18' W and 65°28'S, respectively.

The observation was made for one minute at intervals of 5 minutes throughout 24 hours every day.

Characteristics of the system are as follows:

Antenna

An 8-element Yagi, 0.75λ height

	(50 MHz)	(65 MHz)	(80 MHz)	(112 MHz)
Gain	: 12.3 dB	12.3 dB	12.2 dB	12.3 dB
Directivity (front/back)	: 16 dB	19 dB	18 dB	17 dB
Polarization	: horizontal			

Main equipment

Frequency	: 50, 65, 80, 112 MHz
Transmission power	: 20 kW (peak)
Pulse width	: 50 or 100 μ s
Pulse repetition frequency	: 50 Hz
Receiver bandwidth	: 50 kHz
Receiver noise figure	: less than 4 dB

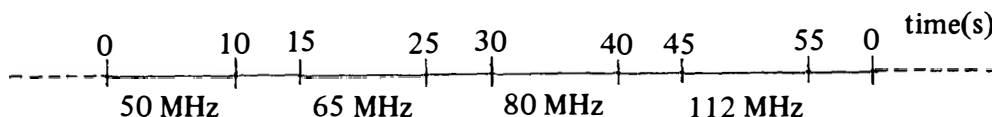
Indicator and recorder

A-scope display on 5-inch oscilloscope as shown in Fig. 1.

Recording	: 1 frame/10 s for each frequency with 35 mm film
Maximum range	: 1,000 or 1,500 km
Range mark	: every 50 and 100 km

Time schedule of operation

The following schedule was automatically carried out every minute.



5. Explanation of Tables

Table 1 shows the operation time of the radar in 1976.

Table 2 shows the relative field strengths and ranges of radio aurora echoes measured with 50 and 112 MHz at both 00 and 30 minutes of every hour. The local time is 45° E.M.T. and the symbols used in the tables are as follows:

F	: non-observation due to failure of operation
Blank	: non-reflection.

Typical examples of the A-scope record of radio aurora are shown in Fig. 1.

Sometimes the echo is not single but has multiple peaks at separated ranges. In case of isolated multiple echoes as shown in Fig. 1 (b) the strengths and ranges with respect to each peak are indicated in Table 2.

On the other hand, in case of diffused multiple echoes as shown in Fig. 1 (c), only the strength and range of the most intense echo is shown and marked by “•”.

Monthly means of echo strength are shown only for the echo range of 300 ~ 350 km, and the cases, in which the echoes are received less than three times a month are neglected.

The data for 00 and 30 minute in Table 2 include those obtained within 5 minutes centered at 00 and 30 minute of each hour, respectively.

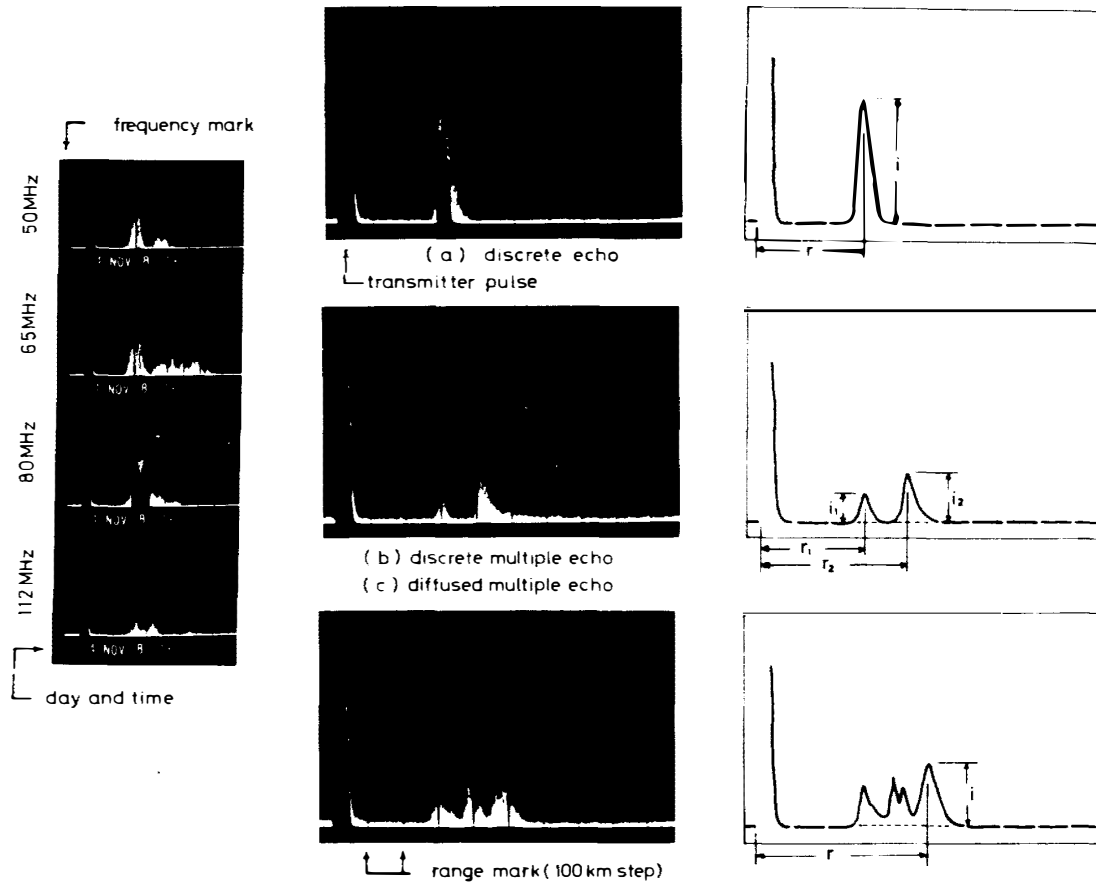


Fig. 1. A-scope examples of radar echoes observed at Syowa Station.

Table 1. Time interval of operation of auroral radar at Syowa Station (1976).

Date	Observing time interval (45° E.M.T.)				Total observing time interval (h. m.)	Date	Observing time interval (45° E.M.T.)				Total observing time interval (h. m.)
	Starting time	Ending time	Starting time	Ending time			Starting time	Ending time	Starting time	Ending time	
1976 Jan.						1976 Feb.					
1	00 00-23 59				23 59	1	00 00-23 59			23 59	
2	00 00-23 59				23 59	2	00 00-23 59			23 59	
3	00 00-23 59				23 59	3	00 00-13 29			13 29	
4	00 00-23 59				23 59	4	03 04-23 59			20 55	
5	17 00-23 59				6 59	5	00 00-23 59			23 59	
6	00 00-15 59		17 34-23 59		22 24	6	00 00-23 59			23 59	
7	00 00-02 07		17 01-23 59		9 05	7	00 00-05 29	06 00-23 59		23 28	
8	00 00-21 59				21 59	8	00 00-23 59			23 59	
9	00 00-07 29		17 05-23 59		14 23	9	00 00-23 59			23 59	
10	00 00-23 59				23 59	10	00 00-07 59	08 05-23 59		23 53	
11	00 00-06 29		09 30-14 29 17 05-23 59		18 22	11	00 00-18 09			18 09	
12	00 00-23 59				23 59	12					
13	00 00-23 59				23 59	13					
14	00 00-23 59				23 59	14					
15	00 00-23 59				23 59	15	21 00-23 59			2 59	
16	00 00-23 59				23 59	16	00 00-23 59			23 59	
17	00 05-09 59		10 05-23 59		23 50	17	00 00-23 59			23 59	
18	00 00-23 59				23 59	18	00 00-05 29	06 05-23 59		23 23	
19	00 00-23 59				23 59	19	00 00-08 59	09 04-23 59		23 54	
20	00 00-23 59				23 59	20	00 00-23 59			23 59	
21	00 00-23 59				23 59	21	00 00-05 59	06 04-23 59		23 54	
22	00 00-23 59				23 59	22	00 00-23 59			23 59	
23	00 00-23 59				23 59	23	00 00-23 59			23 59	
24	00 00-23 59				23 59	24	00 00-23 59			23 59	
25	00 00-23 59				23 59	25	00 00-23 59			23 59	
26	00 00-23 59				23 59	26	00 00-23 59			23 59	
27	00 00-14 15		22 00-23 59		16 14	27	00 00-16 29	18 00-20 29		18 58	
28	00 00-08 50		15 15-23 59		17 34	28	00 00-06 19	13 00-14 29 16 00-23 59		15 47	
29	00 00-23 59				23 59	29	00 00-11 29			11 29	
30	00 00-23 59				23 59	30					
31	00 00-23 59				23 59	31					

Date	Observing time interval (45° E.M.T.)				Total observing time interval (h. m.)	Date	Observing time interval (45° E.M.T.)				Total observing time interval (h. m.)
	Starting time	Ending time	Starting time	Ending time			Starting time	Ending time	Starting time	Ending time	
1976 Mar.						1976 Apr.					
1						1	00 00-10 05		11 41-23 59	22 23	
2	05 00-10 11		17 00-23 59		12 10	2	00 00-23 59			23 59	
3	00 00-23 59				23 59	3	00 00-23 59			23 59	
4	00 00-16 24		19 25-23 59		20 58	4	00 00-23 59			23 59	
5	00 00-23 59				23 59	5	00 00-14 59	17 31-23 59		21 27	
6	00 00-23 59				23 59	6	00 00-23 59			23 59	
7	00 00-23 59				23 59	7	00 00-23 59			23 59	
8	00 00-23 59				23 59	8	00 00-23 59			23 59	
9	00 00-23 59				23 59	9	00 00-23 59			23 59	
10	00 00-23 59				23 59	10	00 00-23 59			23 59	
11	00 00-23 59				23 59	11	00 00-23 59			23 59	
12	00 00-23 59				23 59	12	00 00-23 59			23 59	
13	00 00-23 59				23 59	13	00 00-23 59			23 59	
14	00 00-23 59				23 59	14	00 00-23 59			23 59	
15	00 00-23 59				23 59	15	00 00-23 59			23 59	
16	00 00-23 59				23 59	16	00 00-23 59			23 59	
17	00 00-23 59				23 59	17	00 00-23 59			23 59	
18	00 00-23 59				23 59	18	00 00-23 59			23 59	
19	00 00-23 59				23 59	19	00 00-23 59			23 59	
20	00 00-23 59				23 59	20	00 00-23 59			23 59	
21	00 00-23 59				23 59	21	00 00-23 59			23 59	
22	00 00-23 59				23 59	22	00 00-23 59			23 59	
23	00 00-23 59				23 59	23	00 00-23 59			23 59	
24	00 00-23 59				23 59	24	00 00-23 59			23 59	
25	00 00-23 59				23 59	25	00 00-23 59			23 59	
26	00 00-23 59				23 59	26	00 00-23 59			23 59	
27	00 00-23 59				23 59	27	00 00-23 59			23 59	
28	00 00-23 59				23 59	28	00 00-23 59			23 59	
29	00 00-23 59				23 59	29	00 00-23 59			23 59	
30	00 00-23 59				23 59	30	00 00-23 59			23 59	
31	00 00-23 59				23 59	31					

Date	Observing time interval (45° E.M.T.)				Total observing time interval (h. m.)	Date	Observing time interval (45° E.M.T.)				Total observing time interval (h. m.)
	Starting time	Ending time	Starting time	Ending time			Starting time	Ending time	Starting time	Ending time	
1976 May						1976 June					
1	00 00	23 59			23 59	1	00 00	23 59			23 59
2	00 00	23 59			23 59	2	00 00	20 59			20 59
3	00 00	23 59			23 59	3	00 00	23 59			23 59
4	00 00	23 59			23 59	4	00 00	23 59			23 59
5	00 00	23 59			23 59	5	00 00	23 59			23 59
6	00 00	23 59			23 59	6	00 00	23 59			23 59
7	00 00	23 59			23 59	7	00 00	23 59			23 59
8	00 00	23 59			23 59	8	00 00	23 59			23 59
9	00 00	23 59			23 59	9	00 00	23 59			23 59
10	00 00	23 59			23 59	10	00 00	23 59			23 59
11	00 00	23 59			23 59	11	00 00	23 59			23 59
12	00 00	18 09			18 09	12	00 00	23 59			23 59
13	00 00	23 59			23 59	13	00 00	23 59			23 59
14	00 00	23 59			23 59	14	00 00	23 59			23 59
15	00 00	11 59	18 01	23 59	16 57	15	00 00	11 59			11 59
16	00 00	23 59			23 59	16	00 00	23 59			23 59
17	00 00	23 59			23 59	17	00 00	23 59			23 59
18	00 00	23 59			23 59	18	00 00	23 59			23 59
19	00 00	23 59			23 59	19	00 00	23 59			23 59
20	00 00	23 59			23 59	20	00 00	23 59			23 59
21	00 00	23 59			23 59	21	00 00	12 24	18 21	23 59	18 02
22	00 00	23 59			23 59	22	00 00	23 59			23 59
23	00 00	23 59			23 59	23	09 36	23 59			14 23
24	00 00	23 59			23 59	24	00 00	01 59			1 59
25	00 00	23 59			23 59	25					
26	00 00	23 59			23 59	26	00 30	07 24			6 54
27	00 00	23 59			23 59	27					
28	00 41	23 59			23 59	28					
29	00 00	23 59			23 59	29					
30	00 00	23 59			23 59	30					
31	00 00	23 59			23 59	31					

Date	Observing time interval (45° E.M.T.)				Total observing time interval (h. m.)	Date	Observing time interval (45° E.M.T.)				Total observing time interval (h. m.)
	Starting time	Ending time	Starting time	Ending time			Starting time	Ending time	Starting time	Ending time	
1976 July						1976 Aug.					
1						1	00 00-13 19				13 19
2						2	00 41-23 59				23 18
3						3	00 00-23 59				23 59
4						4	00 00-23 59				23 59
5						5	00 00-23 59				23 59
6	14 01-22 03				8 02	6	00 00-23 59				23 59
7	16 36-23 59				7 23	7	00 00-23 59				23 59
8	00 00-12 04		17 06-17 49 21 00-23 59		15 46	8	00 00-23 59				23 59
9	00 06-02 19		15 00-23 59		11 12	9	00 00-23 59				23 59
10	00 00-23 59				23 59	10	00 00-23 59				23 59
11	00 00-23 59				23 59	11	00 00-23 59				23 59
12	00 00-23 59				23 59	12	00 00-23 59				23 59
13	00 00-15 34		18 31-23 59		21 02	13	00 00-23 59				23 59
14	00 00-23 59				23 59	14	00 00-23 59				23 59
15	00 00-15 19		21 16-23 59		18 02	15	00 00-23 59				23 59
16	00 00-23 59				23 59	16	00 00-23 59				23 59
17	00 00-23 59				23 59	17	00 00-23 59				23 59
18	00 00-23 59				23 59	18	00 00-23 59				23 59
19	00 00-12 04		16 56-23 59		19 07	19	00 00-23 59				23 59
20	00 00-23 59				23 59	20	00 00-23 59				23 59
21	00 00-04 09		09 01-23 59		19 07	21	00 00-23 59				23 59
22	00 00-01 49		15 26-23 59		10 22	22	00 00-23 59				23 59
23	00 00-06 29		15 00-17 59		9 28	23	00 00-23 59				23 59
24						24	00 00-23 59				23 59
25	05 19-23 59				18 40	25	00 00-18 49	20 46-23 59			22 02
26	00 00-12 24		15 00-23 59		21 23	26	00 00-23 59				23 59
27	00 00-23 59				23 59	27	00 00-23 59				23 59
28	00 00-07 14				7 14	28	00 00-23 59				23 59
29	06 39-19 24		21 36-23 59		15 08	29	00 00-23 59				23 59
30	00 00-01 49		03 00-23 59		22 48	30	00 00-23 59				23 59
31	00 00-23 59				23 59	31	00 00-23 59				23 59

Date	Observing time interval (45° E.M.T.)				Total observing time interval (h. m.)	Date	Observing time interval (45° E.M.T.)				Total observing time interval (h. m.)
	Starting time	Ending time	Starting time	Ending time			Starting time	Ending time	Starting time	Ending time	
1976 Sep.						1976 Oct.					
1	00 00	23 59			23 59	1	00 00	23 59			23 59
2	00 00	23 59			23 59	2	00 00	23 59			23 59
3	00 00	23 59			23 59	3	00 00	23 59			23 59
4	00 00	23 59			23 59	4	00 00	23 59			23 59
5	00 00	23 59			23 59	5	00 00-05 44		09 16-23 59		20 27
6	00 00	23 59			23 59	6	00 00	23 59			23 59
7	00 00	23 59			23 59	7	00 00	23 59			23 59
8	00 00	23 59			23 59	8	00 00	23 59			23 59
9	00 00	23 59			23 59	9	00 00	23 59			23 59
10	00 00	23 59			23 59	10	00 00	23 59			23 59
11	00 00	23 59			23 59	11	00 00	23 59			23 59
12	00 00	23 59			23 59	12	00 00	23 59			23 59
13	00 00	23 59			23 59	13	00 05	23 59			23 59
14	00 00	23 59			23 59	14	00 00	23 59			23 59
15	00 00	23 59			23 59	15	00 00	23 59			23 59
16	00 00	23 59			23 59	16	00 00-09 14		21 30-23 59		11 43
17	00 00	23 59			23 59	17	00 00	23 59			23 59
18	00 00-05 59		06 36-23 59		23 22	18	00 00	23 59			23 59
19	00 00	23 59			23 59	19	00 00	23 59			23 59
20	00 00	23 59			23 59	20	00 00	23 59			23 59
21	00 00	23 59			23 59	21	00 00	23 59			23 59
22	00 00	23 59			23 59	22	00 00	23 59			23 59
23	00 00	23 59			23 59	23	00 00	23 59			23 59
24	00 00	23 59			23 59	24	00 00	23 59			23 59
25	00 00	23 59			23 59	25	00 00	23 59			23 59
26	00 00	23 59			23 59	26	00 00	23 59			23 59
27	00 00	23 59			23 59	27	00 00	23 59			23 59
28	00 00	23 59			23 59	28	00 00	23 59			23 59
29	00 00	23 59			23 59	29	00 00	23 59			23 59
30	00 00	23 59			23 59	30	00 00	23 59			23 59
31						31	00 00	23 59			23 59

Date	Observing time interval (45° E.M.T.)				Total observing time interval (h. m.)	Date	Observing time interval (45° E.M.T.)				Total observing time interval (h. m.)
	Starting time	Ending time	Starting time	Ending time			Starting time	Ending time	Starting time	Ending time	
1976 Nov.						1976 Dec.					
1	00 00-23 59				23 59	1	00 00-23 59			23 59	
2	00 00-23 59				23 59	2	00 00-23 59			23 59	
3	00 00-23 59				23 59	3	00 00-23 59			23 59	
4	00 00-23 59				23 59	4	00 00-23 59			23 59	
5	00 00-23 59				23 59	5	00 00-23 59			23 59	
6	00 00-23 59				23 59	6	00 00-23 59			23 59	
7	00 00-23 59				23 59	7	00 00-23 59			23 59	
8	00 00-23 59				23 59	8	00 00-23 59			23 59	
9	00 00-23 59				23 59	9	00 00-23 59			23 59	
10	00 00-23 59				23 59	10	00 00-23 59			23 59	
11	00 00-23 59				23 59	11	00 00-23 59			23 59	
12	00 00-23 59				23 59	12	00 00-23 59			23 59	
13	00 00-23 59				23 59	13	00 00-23 59			23 59	
14	00 00-23 59				23 59	14	00 00-23 59			23 59	
15	00 00-23 59				23 59	15	00 00-23 59			23 59	
16	00 00-23 59				23 59	16	00 00-23 59			23 59	
17	00 00-23 59				23 59	17	00 00-23 59			23 59	
18	00 00-23 59				23 59	18	00 00-23 59			23 59	
19	00 00-23 59				23 59	19	00 00-23 59			23 59	
20	00 00-23 59				23 59	20	00 00-23 59			23 59	
21	00 00-23 59				23 59	21	00 00-23 59			23 59	
22	00 00-23 59				23 59	22	00 00-23 59			23 59	
23	00 00-23 59				23 59	23	00 00-23 59			23 59	
24	00 00-23 59				23 59	24	00 00-23 59			23 59	
25	00 00-03 24		10 16-23 59		17 07	25	00 00-23 59			23 59	
26	00 00-23 59				23 59	26	00 00-23 59			23 59	
27	00 00-23 59				23 59	27	00 00-23 59			23 59	
28	00 00-23 59				23 59	28	00 00-16 19			16 19	
29	00 00-23 59				23 59	29	16 46-23 59			7 13	
30	00 00-23 59				23 59	30	00 00-23 29			23 29	
31						31	00 30-23 59			23 29	

Table 2. The relative field strengths and ranges of radio aurora echoes at Syowa Station (1976).

RADIO AURORA DATA F = 50 MHz INTENSITY (dB)

Syowa Station 45° EAST MERIDIAN TIME (U. T. + 3 hours) JANUARY 1976

Day	00		01		02		03		04		05		06		07		08		09		10		11	
	.00	.30	.00	.30	.00	.30	.00	.30	.00	.30	.00	.30	.00	.30	.00	.30	.00	.30	.00	.30	.00	.30	.00	.30
1																								
2																								
3															34	23								
4																								
5	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F
6		22		23																				
7					F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F
8																								
9															22	F	F	F	F	F	F	F	F	F
10									18															
11			15							22			F	F	F	F	F	F						
12		24	35	30	23	27	23	30																
13					30	20			32	22	20	22		30	20	21								
14											23													
15		25		18																				
16										18														
17	F	25	18	25										17		25	25	27	30	F				
18																								
19																								
20																								
21																								
22														17		27								
23																								
24																								
25			23																					
26																								
27																								
28																			F	F	F	F	F	F
29																								
30															13									
31					11	12		5							12	14	35	37	29					
Mean		24	23	24	21	20					20			24	19	27								

RADIO AURORA DATA F = 50 MHz RANGE (km)

Syowa Station 45° EAST MERIDIAN TIME (U. T. + 3 hours) JANUARY 1976

Day	00		01		02		03		04		05		06		07		08		09		10		11	
	.00	.30	.00	.30	.00	.30	.00	.30	.00	.30	.00	.30	.00	.30	.00	.30	.00	.30	.00	.30	.00	.30	.00	.30
1																								
2																								
3														330	320									
4																								
5	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F
6		310		300																				
7						F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F
8																								
9															320	F	F	F	F	F	F	F	F	F
10									320															
11			300							310			F	F	F	F	F	F						
12		310	300	310	300	300	330	300																
13					300	310			330		360	300	290		300	300	300							
14												290												
15		310		300																				
16											300													
17	F	310	300	300										300			310	300	300	300	F			
18																								
19																								
20																								
21																								
22														300			310							
23																								
24																								
25			330																					
26																								
27																								
28																			F	F	F	F	F	F
29															320									
30																								
31					310	280		320							290	370	360	360	340					

RADIO AURORA DATA F = 50 MHz INTENSITY (dB)

Syowa Station 45° EAST MERIDIAN TIME (U. T. + 3 hours) JANUARY 1976

Date	12		13		14		15		16		17		18		19		20		21		22		23	
	.00	.30	.00	.30	.00	.30	.00	.30	.00	.30	.00	.30	.00	.30	.00	.30	.00	.30	.00	.30	.00	.30	.00	.30
1																								
2																								
3									24															
4																								
5	F	F	F	F	F	F	F	F	F	F														
6									F	F	F	F			20	17								
7	F	F	F	F	F	F	F	F	F	F	F													
8																					F	F	F	F
9	F	F	F	F	F	F	F	F	F	F	F													
10												30										15		
11					F	F	F	F	F	F	F			25	27	23		18					32	32
12																23	17	19						
13																								20
14															22	24	22	17						
15															20			18	17	20	25			
16															18	17			20					23
17																								
18																								
19																								
20																								
21													22	15								16		
22																								
23																								
24																								
25																								
26																								
27					F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F			
28	F	F	F	F	F	F	F															7	9 5	7
29																								
30														13	12	13						12	9	
31									14	22	23	11	24	19	13	11	13	12		7				
Mean													20	19	19	19	16	17			14	15	17	21

RADIO AURORA DATA

F = 50 MHz

RANGE (km)

Syowa Station

45° EAST MERIDIAN TIME (U. T. + 3 hours)

JANUARY 1976

Day	12		13		14		15		16		17		18		19		20		21		22		23	
	.00	.30	.00	.30	.00	.30	.00	.30	.00	.30	.00	.30	.00	.30	.00	.30	.00	.30	.00	.30	.00	.30	.00	.30
1																								
2																								
3									310															
4																								
5	F	F	F	F	F	F	F	F	F	F														
6									F	F	F	F			330	330								
7	F	F	F	F	F	F	F	F	F	F	F													
8																				F	F	F	F	
9	F	F	F	F	F	F	F	F	F	F	F													
10												320									320			
11					F	F	F	F	F	F				330	320	320		310				320	290	
12																300	310	320						
13																								320
14														320	330	320	310							
15															320			310	320	320	320			
16															330	310			320					310
17																								
18																								
19																								
20																								
21														340	320							310		
22																								
23																								
24																								
25																								
26																								
27					F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F				
28	F	F	F	F	F	F	F														320	300 380	330	
29																								
30														330	320	320						300	310	
31									330	330	330	340	340	330	330	330	310	320		320				

RADIO AURORA DATA

F = 50 MHz

INTENSITY (dB)

Syowa Station

45° EAST MERIDIAN TIME (U. T. + 3 hours)

FEBRUARY 1976

Day	00		01		02		03		04		05		06		07		08		09		10		11	
	.00	.30	.00	.30	.00	.30	.00	.30	.00	.30	.00	.30	.00	.30	.00	.30	.00	.30	.00	.30	.00	.30	.00	.30
1		15	23	19	14		10				8		7	13	9	13								
2	20	15	14		5		5		5		16	8	22	23	5									
3										20	0													
4	F	F	F	F	F	F	F		13	20	17	13												
5			17	12							12													
6		20				23	25	25	15				23		12									
7				27					17	20	20	F	13	10	14	25								
8	12	13	17		23	20					13	12			13						15			
9																								
10	28												17			F	20							
11					18				12															
12	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F
13	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F
14	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F
15	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F
16																								
17						15							13											
18					15	8		8	14	12	F	F		5	12	12	19							
19		5		7												12	F							
20	22	14	18	11			14		12				20	10										
21		5								15	5	F		10										
22					17	14	5		17	7	10		20											
23					10																			
24																								
25						10		15			18	20												
26		5	5	7	7							10	13	14										
27	5		17	12		F			5	10	15		5			28	24	30	17	F				
28	13	35		14			7		7				F	F	F	F	F	F	F	F	F	F	F	F
29		22	8		8	8	22	10	13	15			20	7	17	16	16	32	22	23	22	35	18	5
30																								
31																								
Mean	17	15	15	14	14	15	13	13	10	13	15	10	15	15	13	14	17	22	24					

RADIO AURORA DATA

F = 50 MHz

RANGE (km)

Syowa Station

45° EAST MERIDIAN TIME (U. T. + 3 hours)

FEBRUARY 1976

Day	00		01		02		03		04		05		06		07		08		09		10		11	
	.00	.30	.00	.30	.00	.30	.00	.30	.00	.30	.00	.30	.00	.30	.00	.30	.00	.30	.00	.30	.00	.30	.00	.30
1		380	280	310	300		300				300		290	300	390		300							
2	320	380	320		330		330		320		370	330	310	320	270									
3										330	320													
4	F	F	F	F	F	F	F		310	320	340	280												
5			290	300							330													
6		310			320	280	300	330					330		320									
7			280					360	330	330	F	320	300	370	330									
8	290	300	300		330	330				280	290				390						380			
9																								
10	300												280			F	290							
11				280				300																
12	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F
13	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F
14	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F
15	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F
16																								
17					320							350												
18					370	300		300	320	320	F	F		300	320		300	330						
19		300		320												320		F						
20	280	300	320	300			330		310				310	300										
21		320								320	280	F		340										
22					310	340	330		380	320	290		370											
23					290																			
24																								
25						310		320			320	320												
26		350	320	320							320	320	330											
27	300		290	290		F			300	40	320			330			320	350	330	330	F			
28	310	290		310		290		300						F	F	F	F	F	F	F	F	F	F	F
29		300			290	290	280	40	330					300	430	330	320	400	330	300	210	330	320	300
30																								
31																								

RADIO AURORA DATA F = 50 MHz INTENSITY (dB)

Syowa Station 45° EAST MERIDIAN TIME (U. T. + 3 hours) FEBRUARY 1976

Day	12		13		14		15		16		17		18		19		20		21		22		23	
	.00	.30	.00	.30	.00	.30	.00	.30	.00	.30	.00	.30	.00	.30	.00	.30	.00	.30	.00	.30	.00	.30	.00	.30
1											10						12	7	18		8	7	7	6
2									5						7	20	7	10	7	5	9			
3			F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F
4													13	12	13							12		
5																								
6																								
7					17	16	17	10	20	20	23	15	22	23	22	25	25	20					23	32
8							19																	
9											13							15	22					
10																								
11													F	F	F	F	F	F	F	F	F	F	F	F
12	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F
13	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F
14	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F
15	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	18						
16																	5		5	17	12			
17																	10	8	8	7	15	16	12	
18										15								5						
19										13	12					18	14	15	7	5				
20													5				17		5					7
21																		10		20	24	10	13	
22																								5
23																								
24																								
25																							7	
26																								10
27							10		F	F	F	14		26	22	17	F	F	F	F	F	F	F	F
28	F	F			F	F	F		7	5			7	13	18	10	14	15	10					19
29	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F
30																								
Mean							15		11	13		12	14	19	17	15	12	11	13	12	10	12	16	

RADIO AURORA DATA

F = 50 MHz

RANGE (km)

Syowa Station

45° EAST MERIDIAN TIME (U. T. + 3 hours)

FEBRUARY 1976

Day	12		13		14		15		16		17		18		19		20		21		22		23	
	.00	.30	.00	.30	.00	.30	.00	.30	.00	.30	.00	.30	.00	.30	.00	.30	.00	.30	.00	.30	.00	.30	.00	.30
1											300						320	300	310		340	340	280	320
2									320						350	320	400	310	330	320	330			
3			F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F
4													340	320	320							320		
5																								
6																								
7					330	320	340	320	330	330	330	320	330	340	320	330	320	320					330	290
8							330																	
9										330									350	290				
10																								
11													F	F	F	F	F	F	F	F	F	F	F	F
12	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F
13	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F
14	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F
15	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	320						
16																330		330	290	350				
17																	320	340	300	280	270	350	320	330
18										320							320							
19										310	320					320	300	300	280	290				
20													320			310		310					320	
21																	350		260	320	330	300		
22																							360	
23																								
24																								
25																						320		
26																								300
27							310		F	F	F	330		330	300	300	F	F	F	F	F	F	F	
28	F	F			F	F	F		300	300			310	300	320	300	320	300	340				310	
29	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F
30																								
31																								

RADIO AURORA DATA

F = 50 MHz

INTENSITY (dB)

Syowa Station

45° EAST MERIDIAN TIME (U. T. + 3 hours)

MARCH 1976

Day	00		01		02		03		04		05		06		07		08		09		10		11	
	.00	.30	.00	.30	.00	.30	.00	.30	.00	.30	.00	.30	.00	.30	.00	.30	.00	.30	.00	.30	.00	.30	.00	.30
1	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F
2	F	F	F	F	F	F	F	F	F	F												F	F	F
3	22	13	20	5	17	22	7	8	12	10	5		28	14	5	22	12	8	22	32				
4	13	25	23	15	25	12	23	12	7	5	5	18	20											
5																								
6	18	20		17	12					7	25	23	25		5	30	8	15						
7	20	22	28	23			8	18	13	25	18	13	13	22	22			17		5				
8	30	7			5	12	5	38	20	17	28	25	23	27	22		33	35	35			8		
9		35	7	24									23	13	20	17	7	22		7	10			
10		26	28	7	20	25		15	13	7			5		23	24	20			7				
11				28	24	20	13	25	22	25	27	25	16	22	7			18						
12			10	25	22	12	20	15	10		8		22	24	10	20		17						
13			32	15				18		22	23	20	29											
14				12			12	13	12	20		13	22	28	22	23	30	32	12					
15		7			10				23	10	10			14	13	34	10	27	27					
16			5				9		17	8	8	10	7	19										
17	5	7						28	20	23	10	20												
18	17	5			27	14	10		7	18	12	8												
19	12	10			5				8		22	14		8	5	25	5							
20					8	15	12																	
21		7	5					5	7			13												
22																								
23																								
24		25		10				21	13	15		15	18											
25																								
26				7			12	5	17	22	15	10	7	23		36	35	22	28	12	35			20
27	10	28		10			5	23	13	20		10	24	24	10	14	25							
28	17	24	17	8	10	12	5	12	24	20	13	14	13	28	24	28	28	13	18	17				
29								-2		4	15	10	20	12	13	24	27	27						
30								17	10		6		-5											
31	15	15				15	7	2	17	14	0	-2	-2	13	-5									
Mean	16	17	18	15	15	16	11	15	14	15	15	15	16	19	13	25	21	22	25	10				

RADIO AURORA DATA

F = 50 MHz

RANGE (km)

Syowa Station

45° EAST MERIDIAN TIME (U. T. + 3 hours)

MARCH 1976

Day	00		01		02		03		04		05		06		07		08		09		10		11	
	.00	.30	.00	.30	.00	.30	.00	.30	.00	.30	.00	.30	.00	.30	.00	.30	.00	.30	.00	.30	.00	.30	.00	.30
1	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F
2	F	F	F	F	F	F	F	F	F	F												F	F	F
3	310	330	300	300	310	300	280	300	290	310	280		320	360	300	300	300	400	300	340				
4	300	320	300	300	280	310	290	280	290	330	300	300	300											
5																								
6	330	300		300	300					300	300	300	320		300	330	300	320						
7	330	320	280	300			300	330	300	300	290	340	280	330	330			360		310				
8	280	320			400	340	310	280	310	330	300	310	310	310	320		330	330	330			330		
9		300	300	310									320	350	310		340	300	300		300	300		
10		310	290	290	290	290		290	340	310			310		320	290	330			320				
11				290	280	290	300	350	340	300	320	310	270	310	300				320					
12			290	280	290	300	320	290	310		300		320	320	300	330		320						
13			300	290				330		310	330	320	350											
14				290			320	300	320	320		310	290	330	320	320	320	350	330					
15		360			280				340	320	330			310	310	350	550	340	350					
16			380				310		340	350	370	350	300	360										
17	300	300					310	300	380	290	300													
18	320	300			320	290	330		320	310	300	310												
19	320	330			420				320		320	320		340	310	330	310							
20					280	300	310																	
21		340	330					350	320			320												
22																								
23																								
24		300		300				320	300	300		300	310											
25																								
26				430			330	310	360	320	330	300	300	380		340	290	320	320	320	320			320
27	330	320		380			310	330	330	340		300	300	310	310	300	370							
28	300	320	310	310	380	310	300	310	320	320	400	360	310	320	300	330	310	320	330	320				
29								370		320	290	320	330	330	320	290	320	320						
30							300	300		320		300												
31	330	330				310	320	330	320	320	320	320	350	330	310									

RADIO AURORA DATA

F = 50 MHz

INTENSITY (dB)

Syowa Station

45° EAST MERIDIAN TIME (U. T. + 3 hours)

MARCH

1976

Day	12		13		14		15		16		17		18		19		20		21		22		23	
	.00	.30	.00	.30	.00	.30	.00	.30	.00	.30	.00	.30	.00	.30	.00	.30	.00	.30	.00	.30	.00	.30	.00	.30
1	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F
2	F	F	F	F	F	F	F	F	F	F	13	13	15	23	27	20	18	14	18					• 17
3																10	• 15		10					15
4									F	F	F	F	F	F					5					
5														13	17		5	7	13					8
6													22	18	20	• 12		15		5				
7											13	25	23	23	22	• 18	20	7	5			7	• 8	
8							5	7	8			7	12		10	7		13		13				
9							10	7	13	12	12	7	22	13		18	18	25					5	
10								10	15	12	13	22	15	12	14	13		12	8					
11										12							22		8	10				
12			18													10			13					
13																					6	5	18	
14																								
15										14	13	10	12	22										
16											7				7	5		10	5		5	10	7	
17											7				5					8	12			19
18																					17			8
19			8															5	5			5	8	
20																								
21																								
22																								
23																		12	17	12				• 13
24																								
25																								
26		32	24	• 23	• 20	• 15	18	• 15	22	8	12		8		17	5			12		5		• 12	
27															5		10	7	8	5				• 10
28																	-12		7	-3	-3			
29																								
30																						-3		
31																					0			
Mean			16				10	12	10	13	11	10	20	16	14	10	14	13	8	8	3	6	12	

RADIO AURORA DATA

F = 50 MHz

RANGE (km)

Syowa Station

45° EAST MERIDIAN TIME (U. T. + 3 hours)

MARCH

1976

Day	12		13		14		15		16		17		18		19		20		21		22		23	
	.00	.30	.00	.30	.00	.30	.00	.30	.00	.30	.00	.30	.00	.30	.00	.30	.00	.30	.00	.30	.00	.30	.00	.30
1	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F
2	F	F	F	F	F	F	F	F	F	F	330	330	320	330	320	280	330	300	300					320
3																	330	290		320				310
4									F	F	F	F	F	F					320					
5															330	320		300	330	320				340
6													330	290	340	320		370		300				
7													330	330	320	330	330	320	320	320	410		400	350
8								320	320	340			320	340		330	330		300		310			
9								320	320	300	320	320	320	330	320		320	310	330					350
10									310	350	330	310	350	320	330	330	310		300	350				
11											290						330		320	320				
12				320													320		300					
13																						380	300	310
14																								
15											320	320	310	320	330									
16												350				310	310		320	310		290	300	300
17											300				310					300	350			310
18																					330			320
19				400															320	290			300	330
20																								
21																								
22																								
23																			330	320	330			330
24																								
25																								
26		310	330	310	330	350	330	330	310	310	320		370		310	340			320		320			320
27															320		330	290	290	310				300
28																320		320	360	310				
29																								
30																						330		
31																						310		

RADIO AURORA DATA

F = 50 MHz

INTENSITY (dB)

Syowa Station

45° EAST MERIDIAN TIME (U. T. + 3 hours)

APRIL

1976

Day	00		01		02		03		04		05		06		07		08		09		10		11	
	.00	.30	.00	.30	.00	.30	.00	.30	.00	.30	.00	.30	.00	.30	.00	.30	.00	.30	.00	.30	.00	.30	.00	.30
1									9	20	18	22	25	13	27		18		27	13	20	F	F	F
2		20	12	20	22	21	19	0	30	23	10	13 5	14 17		18	25	8							
3			20	17		20	25	23	21		22		23		16	33	30	25	24	10 14	25		30	
4	13	35	20	9	28				22	17	29	28	24	23	8 8				24	23				
5	14		27	22	27	33	F	16	27	15	28	18	33	26	22	27	28	34	22	23	10	12		
6		25	27			22				25	26			23	25	24	20	15	32	30	10			
7			12		F	27	22	20				13												13
8	F	27	22	F	30	F	21	23		25	15	17	10	25	22									
9	20		27	24		F	9	0	F			18	27	12	12 6									
10			7			8	20	20	23	18	22				24	15								
11			5								14													
12					10									22	5									
13			8							15	22	30	24	8										
14	8	5	10	20	14			7	10							8	5	7						
15	9			33	22	12	27			6	10													
16			5			5	12				23	22	25	22										
17			20 8	13	23	10				8	10	18	17											
18																								
19												10												
20																								
21																								
22														23	33		18	10		33	24	17	16	
23		25	23	22	32	25	22	22	21	17	22					32		15						
24																	23	23	28					13
25		15		12	19				12			20												
26																								
27					22		17	19	18	21	27					10	27	35	10					
28			10		21	17	5																	
29			22							17	15		20											
30			22	18		13		15		5	22				22	5	10	26						
31																								
Mean	13	22	17	18	23	18	18	15	19	17	20	19	22	20	19	19	18	23	24	19	20			20

RADIO AURORA DATA

F = 50 MHz

RANGE (km)

Syowa Station

45° EAST MERIDIAN TIME (U. T. + 3 hours)

APRIL

1976

Day	00		01		02		03		04		05		06		07		08		09		10		11	
	.00	.30	.00	.30	.00	.30	.00	.30	.00	.30	.00	.30	.00	.30	.00	.30	.00	.30	.00	.30	.00	.30	.00	.30
1									290	300	290	320	300	300	300		320		280	320	330	F	F	F
2		320	370	320	320	300	320	320	330	340	320	310	320	410	300	320	320							
3			320	330		300	320	310	340		330		330		370	340	360	320	320	320	390	310		350
4	310	290	300	320	280				320	330	300	280	300	320	320	400			310	320				
5	320		280	310	300	290	F	300	290	300	320	340	330	290	300	320	300	310	310	320	300	320		
6		300	330			300				320	290		300	290	320	330	310	290	340	330				
7			320		F	290	280	310				380												290
8	F	290	310	F	310	F	270	280		280	300	310	350	350	320									
9	330		310	320		F	330	300	F			370	290	300	300	420								
10			350			320	330	320	300	310	300				360	310								
11			320								280													
12					300										320	290								
13			310							320	310	350	320	290										
14	320	350	320	300	300			330	310							340	350	310						
15	310			300	300	300	310			310	330													
16			290			320	290				320	320	330	370										
17			300	300	300	300				320	340	350	320											
18																								
19												340												
20																								
21																								
22														320	320		310	310		330	290	300	310	
23		310	320	290	290	300	300	300	310	320	290					330		320						
24																	310	320	320					310
25		330		290	300				320			330												
26																								
27					300		300	320	310	310	340					360	350	330	310					
28			300		300	300	300																	
29			300							310	320		320											
30			290	310		350		320		350	310				320	320	290	310						
31																								

RADIO AURORA DATA

F = 50 MHz

INTENSITY (dB)

Syowa Station

45° EAST MERIDIAN TIME (U. T. + 3 hours)

APRIL

1976

Day	12		13		14		15		16		17		18		19		20		21		22		23	
	.00	.30	.00	.30	.00	.30	.00	.30	.00	.30	.00	.30	.00	.30	.00	.30	.00	.30	.00	.30	.00	.30	.00	.30
1		25	28	21	22	22	20	20	20	20	14	21	25				5	23	5					
2																						8		
3											12	22				10				8	27	15	30	33
4								22	5	20	23	23	23	23	15								8	
5				F	8	F	F	F	F	F	F	F				5		F	15					18
6										10	18	13	15		20	17		8	16	10				
7																	10						6	12
8																								
9																	15	20	7	20	23	12		13
10																								
11																					0			
12																								
13																							10	
14									F	F	F	F		7	5	0	10	13		8	5		7	
15																								
16																							8	10
17																			10					
18																								
19															5		10	10						
20																								
21																								
22																								
23																								
24										7	18								5					
25																								
26																								
27																						10		
28																								
29																24		15	20					
30																								
31																								
Mean										14	17	20	21		13	10		11	13	12	14	11	12	17

RADIO AURORA DATA

F = 50 MHz

RANGE (km)

Syowa Station

45° EAST MERIDIAN TIME (U. T. + 3 hours)

APRIL 1976

Day	12		13		14		15		16		17		18		19		20		21		22		23	
	.00	.30	.00	.30	.00	.30	.00	.30	.00	.30	.00	.30	.00	.30	.00	.30	.00	.30	.00	.30	.00	.30	.00	.30
1		320	310	300	300	290	300	300	310	320	290	340	330					380	310	290				
2																						320		
3											310	320				330				360	320	370	300	300
4								320	320	320	330	320	330	330	320									310
5					F	320	F	F	F	F	F	F				330		F	350					320
6										300	330	330	320			330	280		330	360	350			
7																			320				310	330
8																								
9																	320	330	320	320	350	290		300
10																								
11																						320		
12																								
13																								390
14									F	F	F	F		320	320	310	330	310		300	310		320	
15																								
16																							330	330
17																								
18																								
19																320		310	310					
20																								
21																								
22																								
23																								
24										300	320										320			
25																								
26																								
27																								310
28																								
29																360				300	300			
30																								
31																								

RADIO AURORA DATA

F = 50 MHz

INTENSITY (dB)

Syowa Station

45° EAST MERIDIAN TIME (U. T. + 3 hours)

MAY

1976

Day	00		01		02		03		04		05		06		07		08		09		10		11	
	.00	.30	.00	.30	.00	.30	.00	.30	.00	.30	.00	.30	.00	.30	.00	.30	.00	.30	.00	.30	.00	.30	.00	.30
1																								
2		8							5			23												
3	13		22		22	33	27	17	10	23	32	23	13	12	27	26	15	20	28	30	15	23	27	22
4	24					10	12						20	23	28				5					
5	20		15		10	23	15	8	15	22	18		22	13	10	10								
6						10	22	22	0				15	22	18									
7	F		25				18	25	23															
8			16	20	20	18	22			15			8	10										
9										20	15	24	19	16										
10																								
11									10															
12		22			5	14		10			17	15	12											
13					5			18																
14									11															
15																								
16						12					14	27	22											
17			13																					
18																								
19																								
20	F		14	36	13	24	24	22	10	5	20	13		11		8	14	22						
21	20	5							18	24	15		22		22	22	10							
22	5			25					22	12	8	17	20											
23	F																							
24										25	17													
25																								
26						10		18	10	25	23													
27	14	14	5	14																				
28	F	F							16		10	22	28	29	28	26			23	12	5	17	26	
29	12	8				22			14		10	17	25	25	28	20								
30	8				15	14	28	23	23	32		22	28	23	25									
31			17				17	15				29	23	23	12	10	12							
Mean	15	11	15	22	11	19	19	18	18	15	17	20	21	18	21	20				16				

RADIO AURORA DATA

F = 50 MHz

RANGE (km)

Syowa Station

45° EAST MERIDIAN TIME (U. T. + 3 hours)

MAY

1976

Day	00		01		02		03		04		05		06		07		08		09		10		11	
	.00	.30	.00	.30	.00	.30	.00	.30	.00	.30	.00	.30	.00	.30	.00	.30	.00	.30	.00	.30	.00	.30	.00	.30
1																								
2		330							320			320												
3	300		290 350		300	290	320	300	300	300	300	290	360	300	320	300	320	320	290	290	300	350	360	
4	300					300	280						300	310	320				350					
5	310		320		330	300	300	300	330	300			300	400	280									
6						300	300	300	310				290	300	330									
7	F		330				300	280	310															
8			370	310	300	300	300			300			340	320										
9										320	320	320	330	300										
10																								
11									400															
12		300			300	300		300			320	300	330											
13					310			320																
14								300																
15																								
16						320						310	360	310										
17				340																				
18																								
19																								
20	F		320	280	300	300	320	320	320	330	310	330		320		340	280	300						
21	310	300							320	300	300		300		300	380								
22	330			290					320	320	380	350	360											
23	F																							
24									300	290														
25																								
26						330		330	310	320	320													
27	320	320	300	350																				
28	F	F						310		320	310	320	350	320	310			320	320	310	390	310		
29	320	310				300			290		300	310	290	300	280	310								
30	310				320	290	270	310	310	320		310	310	300	320									
31			300			300	310				360	320	300	300	300	300								

RADIO AURORA DATA F = 50 MHz INTENSITY (dB)

Syowa Station 45° EAST MERIDIAN TIME (U. T. + 3 hours) MAY 1976

Date	12		13		14		15		16		17		18		19		20		21		22		23	
	.00	.30	.00	.30	.00	.30	.00	.30	.00	.30	.00	.30	.00	.30	.00	.30	.00	.30	.00	.30	.00	.30	.00	.30
1																								
2					12	15	15	22	24	22					5					24	15			
3	25		21					10															19	32
4					12								18	10			12	8			22			
5																								
6																								
7																								
8																						5		
9																								
10														10										
11																			15	7			10	
12													F	F	F	F	F	F	F	F	F	F	F	F
13																								
14																								
15	F	F	F	F	F	F	F	F	F	F	F	F	F											
16																								
17																								
18																								
19																							22	
20													14	17	22	18	18		11			5		
21																								5
22																			12					
23								5							10	13								
24																								
25																								
26																					5			
27																								5
28															18	22	24	17	15			19		
29																								5
30																	5	19	15			22	17	
31															11									
Mean								12							12	13	18	15			14	15	15	12

RADIO AURORA DATA

F = 50 MHz

RANGE (km)

Syowa Station

45° EAST MERIDIAN TIME (U. T. + 3 hours)

MAY

1976

Day	12		13		14		15		16		17		18		19		20		21		22		23	
	.00	.30	.00	.30	.00	.30	.00	.30	.00	.30	.00	.30	.00	.30	.00	.30	.00	.30	.00	.30	.00	.30	.00	.30
1																								
2						310	320	310	320	320	320					310					300	300		
3	300		280						300														310	290
4						270							320	330				320	390		320			
5																								
6																								
7																								
8																						320		
9																								
10														320										
11																			300	290			300	
12													F	F	F	F	F	F	F	F	F	F	F	F
13																								
14																								
15	F	F	F	F	F	F	F	F	F	F	F	F	F	F										
16																								
17																								
18																								
19																								330
20													320	320	330	300	320		320				310	
21																								320
22																						340		
23									300						330	340								
24																								
25																					320			
26																								330
27																								
28															320	320	320	320	320			310		
29																								320
30																	320	320	320			320	300	
31																300								

RADIO AURORA DATA

F = 50 MHz

RANGE (km)

Syowa Station

41° EAST MERIDIAN TIME (U. T. + 3 hours)

JUNE

1976

Day	00		01		02		03		04		05		06		07		08		09		10		11		
	.00	.30	.00	.30	.00	.30	.00	.30	.00	.30	.00	.30	.00	.30	.00	.30	.00	.30	.00	.30	.00	.30	.00	.30	
1																									
2					330	F																			
3					F	F	F	F	F	F	F	F	F	F	F	F	F								
4	290 380				300		300						300	300	330	290	290							310	
5	300								380		290	300	300	290	280	300	320							290	
6					300																				
7										300	300	290	300												
8				300						310	320	300	330												
9																									
10																									
11					300	300	340	300	320	330	300	320	300	290	400	280	280	380	300		330	310	320	320	330
12					330									390		310									
13																									
14		310		310																					
15																									
16	F	F	F	F				310		310	310	320	310	320	320										
17															300 400										
18	320		340	380		280				340	320	320	290	320	350	280	290			290	290				
19	320	300	300	300							320														
20																									
21																									
22																									
23	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	
24					F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	
25	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	
26	F	330	310													F	F	F	F	F	F	F	F	F	
27	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	
28	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	
29	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	
30	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	
31																									

RADIO AURORA DATA

f = 50 MHz

INTENSITY (dB)

Syowa Station

45° EAST MERIDIAN TIME (U.T. + 3 hours)

JUNE 1956

	00		01		02		03		04		05		06		07		08		09		10		11	
	.00	.30	.00	.30	.00	.30	.00	.30	.00	.30	.00	.30	.00	.30	.00	.30	.00	.30	.00	.30	.00	.30	.00	.30
1																								
2						26	F																	
3					F	F	F	F	F	F	F	F	F	F	F	F								
4	23				8		10						32	12	17	17	22							17
5	20								12		5	25	10	12	10	20	28							15
6					11																			
7											15	25	24	10										
8			20								12	18	17	30										
9																								
10																								
11					33	20	23	21	30	40	26	25	40	13	15	20	27	10	10	24	35	28	33	33
12					15									10		10								
13																								
14		15		10																				
15																								
16	F	F	F	F				17		5	20	18	33	28	23									
17															22	10								
18	14		18	12		14				25	30	31	25	18	13	17	22		5	12				
19	20	10	23	20								22												
20																								
21																								
22																								
23	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F
24					F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F
25	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F
26	F	25	5													F		F	F	F	F	F	F	F
27	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F
28	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F
29	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F
30	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F
31																								
Mean	19	17	15	16		22				20	20	24	24	20	16	17	25							

RADIO AURORA DATA F = 50 MHz INTENSITY (dB)

Syowa Station 45° EAST MERIDIAN TIME (U. T. + 3 hours) JUNE 1976

Date	12		13		14		15		16		17		18		19		20		21		22		23		
	.00	.30	.00	.30	.00	.30	.00	.30	.00	.30	.00	.30	.00	.30	.00	.30	.00	.30	.00	.30	.00	.30	.00	.30	
1																				F			15		
2																			F	F	F	F	F	F	F
3																			12					27	
4																									
5													10				5	15							
6																									
7					17																				
8																								13	
9																									
10																									
11	22	33	5	5	13	5	12	14	10	20	24		10	20	21	30	24	21	18	18			14	16	
12																									
13																									
14																									
15	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F
16																									
17													15				15								19
18													12								15	15	17		
19																									
20																									
21		F	F	F	F	F	F	F	F	F	F	F													
22																									
23																									
24	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F
25	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F
26	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F
27	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F
28	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F
29	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F
30	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F
31																									
Mean													12				16						17	17	

RADIO AURORA DATA F = 50 MHz RANGE (km)

Syowa Station 45° EAST MERIDIAN TIME (U. T. + 3 hours) JUNE 1976

Day	12		13		14		15		16		17		18		19		20		21		22		23		
	.00	.30	.00	.30	.00	.30	.00	.30	.00	.30	.00	.30	.00	.30	.00	.30	.00	.30	.00	.30	.00	.30	.00	.30	
1																					F		300		
2																				F	F	F	F	F	F
3																			330				330		
4																									
5													310				300	320							
6																									
7					320																				
8																							320		
9																									
10																									
11	330	320	310	300		310	290	320	310	320	310	320		300	330	310	320	320	330	320	350		310	310	
12																									
13																									
14																									
15	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	
16																									
17														320					330					320	
18														280								320	310	310	
19																									
20																									
21		F	F	F	F	F	F	F	F	F	F	F	F												
22																									
23																									
24	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	
25	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	
26	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	
27	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	
28	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	
29	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	
30	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	
31																									

RADIO AURORA DATA

F = 50 MHz

INTENSITY (dB)

Syowa Station

45° EAST MERIDIAN TIME (U. T. + 3 hours)

JULY 1976

Day	00		01		02		03		04		05		06		07		08		09		10		11	
	.00	.30	.00	.30	.00	.30	.00	.30	.00	.30	.00	.30	.00	.30	.00	.30	.00	.30	.00	.30	.00	.30	.00	.30
1	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F
2	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F
3	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F
4	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F
5	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F
6	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F
7	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F
8														12		13	19 15							
9	F	15				F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F
10																								
11	18	17	17		15	22			18 22	25														
12									5															
13			5																					
14									8	18	18	12	19	14			29							
15						13					23	13												
16				13		24			11					15		28	32	33	27	21	35			
17		10	15 12	10																				
18													15	24										
19					25	-6																		
20									14															
21	15		18		20		13	10	16	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F
22					F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F
23														F	F	F	F	F	F	F	F	F	F	F
24	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F
25	F	F	F	F	F	F	F	F	F	F	F	25												
26		20								18														
27	17	12			10											12								
28				32	18	15		40	22	10		10		16	26	F	F	F	F	F	F	F	F	F
29	F	F	F	F	F	F	F	F	F	F	F	F	F											
30					F	F	15							24	18 18									
31					13																			
mean	17	15	14	18	15	21	12		15	16		15	19	17			25							

RADIO AURORA DATA

F = 50 MHz

RANGE (km)

Syowa Station

45° EAST MERIDIAN TIME (U. T. + 3 hours)

JULY

1976

Day	00		01		02		03		04		05		06		07		08		09		10		11	
	.00	.30	.00	.30	.00	.30	.00	.30	.00	.30	.00	.30	.00	.30	.00	.30	.00	.30	.00	.30	.00	.30	.00	.30
1	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F
2	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F
3	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F
4	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F
5	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F
6	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F
7	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F
8														340		350	280 340							
9	F	280			F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F
10																								
11	390	320	370		320	310			280 330	330														
12									310															
13			310																					
14									280	290	300	320	340	290			260							
15							330				320	290												
16				290			290			300				330		330	320	290	280	310	320			
17		300	290 350	320																				
18													320	300										
19						290	280																	
20										300														
21	300		350		310		330	290	290	F	F	F	F	F	F	F	F	F	F	F				
22				F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F
23													F	F	F	F	F	F	F	F	F	F	F	F
24	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F
25	F	F	F	F	F	F	F	F	F	F	F	330												
26		360								350														
27	320	280			290											330								
28				290	320	320		290	300	300		310		310	320	F	F	F	F	F	F	F	F	F
29	F	F	F	F	F	F	F	F	F	F	F	F	F	F										
30				F	F	310							300	290 370										
31				290																				

RADIO AURORA DATA F = 50 MHz

INTENSITY (dB)

Syowa Station

45° EAST MERIDIAN TIME (U. T. + 3 hours)

JULY

1976

Date	12		13		14		15		16		17		18		19		20		21		22		23	
	.00	.30	.00	.30	.00	.30	.00	.30	.00	.30	.00	.30	.00	.30	.00	.30	.00	.30	.00	.30	.00	.30	.00	.30
1	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F
2	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F
3	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F
4	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F
5	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F
6	F	F	F	F	F																	F	F	F
7	F	F	F	F	F	F	F	F	F					5			12							
8		F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	18	20					
9	F	F	F	F	F	F																		
10																						5	20	14
11																								
12																								
13									F	F	F	F	F	F										
14																								
15								F	F	F	F	F	F	F	F	F	F	F	13				21	
16															10					10			12	
17																								
18																					10	10	13	15
19		F	F	F	F	F	F	F	F	F														
20																								
21																								
22	F	F	F	F	F	F	F																	
23	F	F	F	F	F	F							F	F	F	F	F	F	F	F	F	F	F	F
24	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F
25																								
26		F	F	F	F	F															15	18	17	15
27																								
28	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F
29									10						F	F	F	F	F					
30									20														5	12
31																								
Mean																					12	11	15	14

RADIO AURORA DATA F = 50 MHz RANGE (km)

Syowa Station 45° EAST MERIDIAN TIME (U. T. + 3 hours) JULY 1976

Date	12		13		14		15		16		17		18		19		20		21		22		23		
	.00	.30	.00	.30	.00	.30	.00	.30	.00	.30	.00	.30	.00	.30	.00	.30	.00	.30	.00	.30	.00	.30	.00	.30	
1	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	
2	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	
3	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	
4	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	
5	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	
6	F	F	F	F	F																	F	F	F	
7	F	F	F	F	F	F	F	F	F					290			320								
8		F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	320	310						
9	F	F	F	F	F	F																			
10																						330	330	320	
11																									
12																									
13									F	F	F	F	F	F											
14																									
15								F	F	F	F	F	F	F	F	F	F	F	F	320			290		
16														320							320		330		
17																									
18																						320	320	330	330
19		F	F	F	F	F	F	F	F																
20																									
21																									
22	F	F	F	F	F	F	F																		
23	F	F	F	F	F	F							F	F	F	F	F	F	F	F	F	F	F	F	
24	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	
25																									
26		F	F	F	F	F																320	310	320	320
27																									
28	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	
29									310						F	F	F	F	F						
30								300															310	310	
31																									

RADIO AURORA DATA F = 50 MHz INTENSITY (dB)

Syowa Station 45° EAST MERIDIAN TIME (U. T. + 3 hours) AUGUST 1976

Day	00		01		02		03		04		05		06		07		08		09		10		11	
	.00	.30	.00	.30	.00	.30	.00	.30	.00	.30	.00	.30	.00	.30	.00	.30	.00	.30	.00	.30	.00	.30	.00	.30
1							8	16			15													
2	F	F																						
3																								
4									17	5														
5					15																			
6									18		•	16												
7																								
8			32	16					10							16								
9						•	14	7										42	33	•	37	20	15	
10									16	22	23	15		•	19	22								
11	13				24		•	13	12	10		22												
12																								
13																								
14																								
15																								
16		10	10	20	17									18	23									
17				13		10	•	23	23	17	7													
18										•	25	21												
19																								
20								13	16	32														
21			16	10																				
22					17	23				5			7											
23		17	5			10	13							23										
24	20	•	25		11	20	•	25	•	12	10	26	17	10	20		•	20	•	27	10			
25	17							28	5						26	27	15							
26		13		13	8			10	13	32	22	22	27	18										
27	18		7	16					20	14														
28	20			20		22																		
29										10				24										
30									7	13	20	•	18	31	28									
31																								
Mean	18	16	10	19	12	19	16	14	12	20	17	18	22	26	18	22								

RADIO AURORA DATA

F = 50 MHz

RANGE (km)

Syowa Station

45° EAST MERIDIAN TIME (U. T. + 3 hours)

AUGUST 1976

Day	00		01		02		03		04		05		06		07		08		09		10		11	
	.00	.30	.00	.30	.00	.30	.00	.30	.00	.30	.00	.30	.00	.30	.00	.30	.00	.30	.00	.30	.00	.30	.00	.30
1							310	310			310													
2	F	F																						
3																								
4									280	310														
5					320																			
6									320		350													
7																								
8			340	330					300						310									
9							280	310											300	310	270	300	390	
10										310	320	300	300		350	320								
11	320				310		320	370	320		320													
12																								
13																								
14																								
15																								
16		320	310	330	320									320	320									
17					310		300	300	280	310	300													
18										330	320													
19																								
20																								
21			330	370																				
22					290	320			280			320												
23		350	290		330	310							320											
24	310	310			300	290	300	280	300	300	310	410	320		290	320	310							
25	320							330	310					290	290	310								
26		320		320	370	320		290	290	310	310	380	300	280										
27	320		430	280					300	320														
28	290			310		320																		
29										320			320											
30										340	310	330	320	330	330									
31																								

RADIO AURORA DATA F = 50 MHz INTENSITY (dB)

Syowa Station 45° EAST MERIDIAN TIME (U. T. + 3 hours) AUGUST 1976

Day	12		13		14		15		16		17		18		19		20		21		22		23	
	.00	.30	.00	.30	.00	.30	.00	.30	.00	.30	.00	.30	.00	.30	.00	.30	.00	.30	.00	.30	.00	.30	.00	.30
1			F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F
2																								
3															10									
4																								
5																								
6																								
7																								
8																						17		
9									16															
10																								
11																								
12																							13	
13																								
14																								
15																								13
16																								
17																								
18																								
19																								
20																								
21																			5	15				
22																								
23				8							23	30		27	27	25	30	34	23	F			5	17
24															22	15	14		23	27	16	7	F	
25												5	10	F	F	F	F							
26														10		5	18	22	22	10	15			
27																10		15	22		23	24	23	
28															16		17	20	18					10
29																								
30																						16	16	7
31																10	22	22						
Mean															20	17	14	23	19	21		16	15	14

RADIO AURORA DATA F = 50 MHz

RANGE (km)

Syowa Station

45° EAST MERIDIAN TIME (U. T. + 3 hours)

AUGUST 1976

Date	12		13		14		15		16		17		18		19		20		21		22		23	
	.00	.30	.00	.30	.00	.30	.00	.30	.00	.30	.00	.30	.00	.30	.00	.30	.00	.30	.00	.30	.00	.30	.00	.30
1			F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F
2																								
3															320									
4																								
5																								
6																								
7																								
8																						320		
9								300																
10																								
11																								
12																							320	
13																								
14																								
15																								320
16																								
17																								
18																								
19																								
20																								
21																		310	320					
22																								
23				280						330	320		300	320	320	350	340	300	F				310	310
24													320	320	330		320	320	310	310	F			
25												320	320	F	F	F	F							
26														310		300	320	370	300	320	310			
27															310		320	320			330	290	320	
28														310		330	320	300						310
29																								
30																						320	310	320
31																	340	340	330					

RADIO AURORA DATA F = 50 MHz INTENSITY (dB)

Syowa Station 45° EAST MERIDIAN TIME (U. T. + 3 hours) SEPTEMBER 1976

Day	00		01		02		03		04		05		06		07		08		09		10		11		
	.00	.30	.00	.30	.00	.30	.00	.30	.00	.30	.00	.30	.00	.30	.00	.30	.00	.30	.00	.30	.00	.30	.00	.30	
1		10	12		13	27	12		13	16					28	5									
2	18						15				12						15	31	30	7	23	13			
3			10					27									15								
4									13		20	22	12		16		10								
5							18	12						28											
6										24	27	30	28	29	27	15									
7							15	14	22	23	14	19	10												
8								17	10	12	10														
9												7	10												
10																									
11		10																							
12	10		12								10		18												
13										10		7	25	12											
14																									
15														15	22	28	22	10	10						
16							10			22	5														
17												21	24	20											
18	20	5	7				F	15				22	F	F	37	25	30		F	30	24	F	12	12	33
19																									
20	15				7	13		24	17			10	22		23	21	33	10	30		13				
21	16				23	15	30						10	16	15	25	7								
22		10			22		15							10											
23		21					25			17	12	10		15											
24		16							12		21														
25		9							20	23	33	23	25	25	19										
26		5					32	25	10					22	10	18									
27																									
28										23	24	10	12	5											
29																									
30															23	18									
31	8	12							5	19	24			27	13										
31																									
Mean	15	11	10		16	15	20	18	14	19	18	18	19	17	23	20	20	12	24		15				

RADIO AURORA DATA

F = 50 MHz

RANGE (km)

Syowa Station

45° EAST MERIDIAN TIME (U. T. + 3 hours)

SEPTEMBER 1976

Day	00		01		02		03		04		05		06		07		08		09		10		11	
	.00	.30	.00	.30	.00	.30	.00	.30	.00	.30	.00	.30	.00	.30	.00	.30	.00	.30	.00	.30	.00	.30	.00	.30
1		340	330		300	300	320		310	300					310	300								
2	310						320				330						290	330	320	290	290	390		
3			350					300									290							
4									330		310	310	290		300		310							
5							310	300						350										
6										290	300	310	310	320	330	310								
7							310	300	290	310	290	300	270											
8								290	280	310	310													
9												330	310											
10																								
11		300																						
12	320		340								330		330											
13										330		310	300	280										
14																								
15														310	320	290	300	320	380					
16							330		300	300														
17											330	300	320											
18	320	300	290				F	320			320	F	F	310	290	300		F	300	300	F	320	390	320
19																								
20	300			300	300		300	280			310	370		300	320	330	300	300	300	320				
21	300			300	320	310						300	300	300	330	400								
22		300		280		300							310											
23		300				310			320	310	390		320											
24		300	350		330				300		310													
25		330							290	290	300	320	320	300	330									
26		300				300	300	310					330	240	310									
27										300	310	310	340	390										
28					300	300	300	290			320													
29													320	300										
30	310	300							300	310	320		310	300										
31																								

RADIO AURORA DATA

F = 50 MHz

INTENSITY (dB)

Syowa Station

45° EAST MERIDIAN TIME (U. T. + 3 hours)

SEPTEMBER 1976

Day	12		13		14		15		16		17		18		19		20		21		22		23	
	.00	.30	.00	.30	.00	.30	.00	.30	.00	.30	.00	.30	.00	.30	.00	.30	.00	.30	.00	.30	.00	.30	.00	.30
1													13						17	20	15		25	19
2																								
3																							16	23
4																								10
5																				12		10	10	10
6																								
7																								
8																			15	17				
9																								
10																				15	15			
11																							10	10
12															10	12	17		10					
13																								
14																								
15																								
16																								
17																								
18	24	35	10				8		10	15														
19													5	12	17	5	10	10					14	
20							13	18	21	12		14	18		15	12	13		12					
21										7			7	20	13	16					17			
22															19	15								19
23																							5	
24																								
25										12	21	23	8	17	22	16	14	21	10	20	23			13
26																								
27																	14							
28																								
29																				5				
30																								
31																								
Mean										11				11	16	16	13	14	16	13	17		13	15

RADIO AURORA DATA F = 50 MHz RANGE (km)

Syowa Station 45° EAST MERIDIAN TIME (U. T. + 3 hours) SEPTEMBER 1976

Day	12		13		14		15		16		17		18		19		20		21		22		23	
	.00	.30	.00	.30	.00	.30	.00	.30	.00	.30	.00	.30	.00	.30	.00	.30	.00	.30	.00	.30	.00	.30	.00	.30
1													320						300	350	330		330	320
2																								
3																							310	320
4																								310
5																				330		310	340	320
6																								
7																								
8																				330	290			
9																								
10																					330	300		
11																							320	320
12																330	320	330		320				
13																								
14																								
15																								
16																								
17																								
18	320	320	410				310		320	320														
19													310	350	320	330	310	300					310	
20							300	330	320	320		300	320			310	310	310		320				
21										310			330	320	300	320					310			
22																320	320							320
23																								290
24																								
25										320	320	320	320	320	310	320	320	330	270	280	330		320	
26																								
27																	310							
28																								
29																					310			
30																								
31																								

RADIO AURORA DATA F = 50 MHz INTENSITY (dB)

Syowa Station 45° EAST MERIDIAN TIME (U. T. + 3 hours) OCTOBER 1976

Day	00		01		02		03		04		05		06		07		08		09		10		11	
	.00	.30	.00	.30	.00	.30	.00	.30	.00	.30	.00	.30	.00	.30	.00	.30	.00	.30	.00	.30	.00	.30	.00	.30
1		12				10	23			12														
2				14					21	12	26	33	40	27	35	27	31	43	30					
3					12								21			25								
4																								
5	5	20			10			13		22	12	25	16	F	F	F	F	F	F	F				
6							5										28							
7		7			10																			
8							F																	
9			23					10				19	25											
10	10				16			23								10								
11	10			15	17	11			10	23	10													
12				15					10	10					20									
13	F	24					12		12			24	14	16	25	27								
14																								
15	10	26	19	10	10	14						5				22	12	30	18					
16	7		25				15		26	18	27	21	28	19	23		7	18		F	F	F	F	F
17				26	22	F	12	10	17				7		12	16	22	17	18	12				
18			21			29				15		22			22									
19	5	10	5																					
20									12	13	10													
21														21	21									
22					5			12																
23														21										
24							10	18	12					15										
25							7		20		7		19		12									
26								33	25	5														
27	5						17			12		5	5											
28		20		24		12		12																
29	10	14														17								
30																								
31					30						18	20	15				20	25	42	40	32	17		
Mean	8	17	19	18	14	16	12	16	18	13	18	18	19	21	21	22	18	27	27					

RADIO AURORA DATA

F = 50 MHz

RANGE (km)

Syowa Station

45° EAST MERIDIAN TIME (U. T. + 3 hours)

OCTOBER 1976

Day	00		01		02		03		04		05		06		07		08		09		10		11	
	.00	.30	.00	.30	.00	.30	.00	.30	.00	.30	.00	.30	.00	.30	.00	.30	.00	.30	.00	.30	.00	.30	.00	.30
1		300				320	300			350														
2				290					300	310	290	300	310	330	360	320	300	280	320					
3					320								280			350								
4																								
5	320	300			310			320	290	370	290	290	F	F	F	F	F	F	F					
6						310										320								
7		320			310																			
8						F																		
9			360					340			290	300												
10	300					300		320								310								
11	300			340		330	290			330	320	300												
12					300				320	300				320										
13	F	320					330		310			320	300	300	310	320								
14																								
15	330	320	300	310	350	300					370					320	300	300	330					
16	300		330				310		290	310	300	300	300	310	300		410	380		F	F	F	F	F
17				290	290	F	290	300	290				370		300	300	300	300	310	290				
18			300			290				300		300			270									
19	300	300	290																					
20									300	300	290													
21															310	300								
22					290			300																
23														310										
24							330	300	310					310										
25							320		300		300		300		320									
26								290	300	300														
27	300						320			330		310	350											
28		290		260		320		300																
29	330	300														330								
30																								
31					300						330	320	360				300	360	320	320	320	320	370	

RADIO AURORA DATA F = 50 MHz INTENSITY (dB)

Syowa Station 45° EAST MERIDIAN TIME (U. T. + 3 hours) OCTOBER 1976

Day	12		13		14		15		16		17		18		19		20		21		22		23	
	.00	.30	.00	.30	.00	.30	.00	.30	.00	.30	.00	.30	.00	.30	.00	.30	.00	.30	.00	.30	.00	.30	.00	.30
1																								
2								10					13	13										
3																								
4																								
5																		12			14	21	10	15
6																								
7																	14		12				10	
8																						10		
9																		12			14	10	12	
10																							5	10
11															12							12		
12																					12			
13																								
14																								
15								22			21	21		18	13	17		15					40	
16	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	22	12			
17				5				11	20		14							21	18					
18																		7				18	10	18
19													14	14			13	17	17	20	17	17		
20																								
21																								
22																								
23																						7		
24																								
25																								
26																								
27																								
28																								7
29																								
30										18	13	10				17	22	12	13	14	12			
31									10	22	32	25	24		18			5						
Mean								17		16	21		17	14	16		13	12	15	13	15	15	13	

RADIO AURORA DATA

F = 50 MHz

RANGE (km)

Syowa Station

45° EAST MERIDIAN TIME (U. T. + 3 hours)

OCTOBER 1976

Date	12		13		14		15		16		17		18		19		20		21		22		23	
	.00	.30	.00	.30	.00	.30	.00	.30	.00	.30	.00	.30	.00	.30	.00	.30	.00	.30	.00	.30	.00	.30	.00	.30
1																								
2									310					300	300									
3																								
4																								
5																			330		330	320	300	300
6																								
7																		320		320			300	
8																								
9																				320		320	300	310
10																							310	320
11															320							320		
12																					320			
13																								
14																								
15									320			330	330		310	310	300		320				290	
16	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	320	300		
17				290				300	300		300							300	410					
18																		310				320	300	300
19															320	330		310	330	300	300	300	300	300
20																								
21																								
22																								
23																						320		
24																								
25																								
26																								
27																								
28																								310
29																								
30										320	310	310				320	320	290	320	300	290			
31										320	330	320	330	330		330			310					

RADIO AURORA DATA

F = 50 MHz

INTENSITY (dB)

Syowa Station

45° EAST MERIDIAN TIME (U. T. + 3 hours)

NOVEMBER 1976

Day	00		01		02		03		04		05		06		07		08		09		10		11	
	.00	.30	.00	.30	.00	.30	.00	.30	.00	.30	.00	.30	.00	.30	.00	.30	.00	.30	.00	.30	.00	.30	.00	.30
1	20	12		5				10		15			18											
2	18					0			12			17	17	13										
3	3	0				2		0					6		5									
4		4											7											
5				-4																				
6												16	16	7	13	15								
7	3														13	22				8				
8			0						2	8	7	7												
9		22		16				-5					20	2	11									
10					10							11	16	8		18	17							
11		22	24	3	6		16			11	18	9			23	16								
12	13	6					1	19	23	17	23	10												
13	30				18	5	0			19	15			13	24	25	23							
14		14	0						9	25	14	9	12											
15	10			22	6	12	19	19	8	16	12			6										
16		7	8					11						15	18	-2								
17				0			3		17		3													
18		16	2			0			13															
19		22											20		3									
20		9	15									13												
21	-5	-5	-5					10		7														
22				4								19												
23									9	0		14												
24							12		18	11		2												
25								F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F
26					4	11	8	8	11	6	7			6	6		7							
27	4	9	5				9	13	4		10	15	5	14	18		17				25			
28																								
29																								
30													7	25	10	7								
31																								
Mean	11	11	6	7	9	5	9	9	9	11	12	13	11	12	12	13	13	17						

RADIO AURORA DATA

F = 50 MHz

RANGE (k:)

Syowa Station

45° EAST MERIDIAN TIME (U. T. + 3 hours)

NOVEMBER 1976

Day	00		01		02		03		04		05		06		07		08		09		10		11	
	.00	.30	.00	.30	.00	.30	.00	.30	.00	.30	.00	.30	.00	.30	.00	.30	.00	.30	.00	.30	.00	.30	.00	.30
1	290	320		290				300		310			310											
2	340					330			290			290	290	300										
3	300	300				300		280					300		290									
4		300											300											
5				320																				
6											300	310	320	310	330									
7	290															320	320		290					
8			290						310	320	350	320												
9		290		320				300						300	300	290								
10					300							300	300	310		310	310							
11		330	340	310	300		310			300	300	310			350	300								
12	330	340				300	300	300	320	310	300													
13	290				290	300	320			300	300			310	310	310	310							
14		300	310						310	320	290	300	290											
15	300			280	320	300	280	300	290	300	300		280											
16		310	320					320						340	310	350								
17				300			320		300		320													
18		320	330			300				310														
19		290											310		300									
20		320	310									280												
21	290	300	320					320		300														
22				290								320												
23										300	300		390											
24							320			310	300		300											
25								F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F
26					290	300	300	330	320	340	290			320	320		290							
27	300	320	300				310	350	320		310	320	280	300	310		320			310				
28																								
29																								
30													330	320	290	290								
31																								

RADIO AURORA DATA F = 50 MHz INTENSITY (dB)

Syowa Station 45° EAST MERIDIAN TIME (U. T. + 3 hours) NOVEMBER 1976

Day	12		13		14		15		16		17		18		19		20		21		22		23	
	.00	.30	.00	.30	.00	.30	.00	.30	.00	.30	.00	.30	.00	.30	.00	.30	.00	.30	.00	.30	.00	.30	.00	.30
1																								
2															13	14	20	17	19	13	20	4		
3																							5	-5
4																								
5																								
6																								-5
7																								
8																								-4
9																								
10										4	22	5			9	18	13	12	14					
11							0	28	32	19	26	21	30	26	17	22	18		14	5				
12											12	17	16				2	13		11	13	7		
13						21	12	25	14	12	18	11	26	0	23		17	15	7			-5	38	
14							22	22	13	22	12			23	14	16			5					
15												2	7	13	8	4						6	6	
16												0	10											
17																						-5	6	
18																					7			
19													3										6	
20																								
21																								
22																						12	6	
23																								
24																								
25									11	8					13	23	22	21	17	15	13	15	18	
26											13	13	12	6	13				13		0		10	
27																								
28																								
29															6	18								
30															13									
31																								
Mean							25	20	11	19	11	14	12	13	17	14	16	13	13	9	4	10		

RADIO AURORA DATA

F = 50 MHz

RANGE (km)

Syowa Station

45° EAST MERIDIAN TIME (U. T. + 3 hours)

NOVEMBER 1976

Day	12		13		14		15		16		17		18		19		20		21		22		23	
	.00	.30	.00	.30	.00	.30	.00	.30	.00	.30	.00	.30	.00	.30	.00	.30	.00	.30	.00	.30	.00	.30	.00	.30
1																								
2															310	310	320	330	320	300	330	290		
3																						320	320	
4																								
5																								
6																								320
7																								
8																							310	
9																								
10										320	310	300			300	310	300	280	290					
11							320	320	330	320	320	310	320	310	290	350	340		310	300				
12											300	310	320				320	310		330	320	300		
13						310	290	300	330	330	320	320	320	290	320		300	290	320			320	290	
14								320	310	310	300	310		300	320	320			300					
15													300	300	310	310	330					360	320	
16												320	320											
17																							310	340
18																					340			
19													300										330	
20																					300			
21																								
22																						330	290	
23																								
24																								
25								320	320						320	320	300	300	320	290	290	320	320	
26											330	310	320	310	310				340		300		300	
27																								
28																								
29														300	320									
30														320										
31																								

RADIO AURORA DATA F = 50 MHz INTENSITY (dB)

Syowa Station 45° EAST MERIDIAN TIME (U. T. + 3 hours) DECEMBER 1976

Day	00		01		02		03		04		05		06		07		08		09		10		11	
	.00	.30	.00	.30	.00	.30	.00	.30	.00	.30	.00	.30	.00	.30	.00	.30	.00	.30	.00	.30	.00	.30	.00	.30
1																								
2																								
3																								
4			4								12	5			8	0								
5	0						7	13						0	4	-5								
6									5		13	-5												
7			0										23	7										
8				8			6	7			14	17	19	16				15	20	28			-10	
9				-5																	2		-5	
10	-5		10	-5	9		10							15		25								
11					0	9		-7	0						25	27	23							
12	2									3	-5	-5			8									
13							-5									10	13							
14	3																							
15																								
16																								
17				-7	10	4																		
18					-7	0							5	6	22	25	27	30	25	30	26			
19	0						12			8	10				7	2	12							
20					-5																			
21																								
22				-7						-7		7	13	13	10	18	16	26	12					
23	3	0									15		17		-5									
24					-5	-5																		
25	5			4						8	16	17	22	25	17									
26	4		2			4						-7												
27					-5	-5			0															
28								0							9									
29	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F
30																								
31	F	10	21	11									12	9	0									
Mean	2		5	6	0	2	5	3		3	10	9	16	13	10	14	16		19					

RADIO AURORA DATA

F = 50 MHz

RANGE (km)

Syowa Station

45° EAST MERIDIAN TIME (U. T. + 3 hours)

DECEMBER 1976

	00	01	02	03	04	05	06	07	08	09	10	11				
Day	.00	.30	.00	.30	.00	.30	.00	.30	.00	.30	.00	.30				
1																
2																
3																
4		330				290	290		330	430						
5	300			360	350			300	300	300						
6						290	330	410								
7		360					310	360								
8		330		330	320	280	290	300	320		320	290	350	320		
9												290	330			
10	310	290	290	320	320			300	310							
11			270	280	300	300			330	320	320					
12	320					290	450	290		320						
13				300					290	300						
14	310															
15																
16																
17		310	300	320												
18			310	290				380	140	320	360	300	330	310	320	340
19	300			320		370	320			330	390	330				
20			300													
21																
22		300				320		310	310	300	310	320	310	330	310	
23	290	310				310		320		310						
24			290	330												
25	550		330	390		320	320	320	370	360	320					
26	320	300		310				320								
27			290	340		280										
28				300					330							
29	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F
30																
31	F	310	290	310				360	300	290						

RADIO AURORA DATA F = 50 MHz INTENSITY (dB)

Syowa Station 45° EAST MERIDIAN TIME (U. T. + 3 hours) DECEMBER 1976

Day	12		13		14		15		16		17		18		19		20		21		22		23	
	.00	.30	.00	.30	.00	.30	.00	.30	.00	.30	.00	.30	.00	.30	.00	.30	.00	.30	.00	.30	.00	.30	.00	.30
1																								
2																								
3																								0
4										18	18	22	20	16	12									
5																								
6																			-5					6
7																								
8			13	13	19	22	8																	
9							7	12	11	15	17	18	17	19	3	20	19	11				22	-7	
10												13	23	19	12									
11																								0
12								12	15	21	13	22	21	19	18	13	13							
13																								
14																								
15																								
16													11				7	12	12					
17												-5	7			2	14	-7	6					
18																		6	0				15	
19																								
20																								
21																								
22												9	10	3			7	17	10			2	-5	
23																								
24																								
25								-5	10	6	5													
26																								
27																						13	13	6
28									F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F
29	F	F	F	F	F	F	F	F	F	F	23	29	22	7	0									
30								0			12	14	10	13	6	7	6	-5	12					F
31																			10					
Mean								3	11	15	17	14	14	15	11	14	10	6	8	8			13	0

RADIO AURORA DATA

F = 50 MHz

RANGE (km)

Syowa Station

45° EAST MERIDIAN TIME (U. T. + 3 hours)

DECEMBER 1976

Day	12		13		14		15		16		17		18		19		20		21		22		23	
	.00	.30	.00	.30	.00	.30	.00	.30	.00	.30	.00	.30	.00	.30	.00	.30	.00	.30	.00	.30	.00	.30	.00	.30
1																								
2																								
3																								300
4										300	300	300	300	300	300									
5																								
6																		300						330
7																								
8				320	310	300	300	290																
9								290	320	310	300	320	320	300	310	470	320	320	290				300	300
10													320	320	320	310								
11																								290
12									320	320	320	320	340	320	320	310	290	330						
13																								
14																								
15																								
16														320				320	350	350				
17										300		300				320	320	390	300	310	390			
18																			300	290			370	
19																								
20																								
21																								
22													300	310	320			320	320	300		330	350	
23																								
24																								
25								310	320	300	310													
26																								
27																					330		320	300
28									F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F
29	F	F	F	F	F	F	F	F	F	F	330	320	360	290		290								
30								300			320	330	320	320	310	300	320	320	320					F
31																			310					

RADIO AURORA DATA F = 112MHz INTENSITY (dB)

Syowa Station 45° EAST MERIDIAN TIME (U.T. + 3 hours) JANUARY 1976

Day	00		01		02		03		04		05		06		07		08		09		10		11	
	.00	.30	.00	.30	.00	.30	.00	.30	.00	.30	.00	.30	.00	.30	.00	.30	.00	.30	.00	.30	.00	.30	.00	.30
1																								
2																								
3				-4											-3									
4																								
5	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F
6		0		-1																				
7					F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F
8																								
9															-2	F	F	F	F	F	F	F	F	F
10									0															
11			0							-3			F	F	F	F	F	F						
12			4	-3				-4																
13									2						-2									
14																								
15																								
16																								
17	F			-2												-1	-2		1	F				
18																								
19																								
20																								
21																								
22														-3			-3							
23																								
24																								
25				-1																				
26																								
27																								
28																			F	F	F	F	F	F
29																								
30																								
31																	2	6	-4					
Mean			1	-3													-1							

RADIO AURORA DATA F = 112MHz

RANGE (km)

Syowa Station

45° EAST MERIDIAN TIME (U.T. + 3 hours)

JANUARY 1976

Day	00		01		02		03		04		05		06		07		08		09		10		11	
	.00	.30	.00	.30	.00	.30	.00	.30	.00	.30	.00	.30	.00	.30	.00	.30	.00	.30	.00	.30	.00	.30	.00	.30
1																								
2																								
3				300										320										
4																								
5	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F
6		310		310																				
7						F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F
8																								
9															320	F	F	F	F	F	F	F	F	F
10										310														
11			300							310			F	F	F	F	F	F						
12			310	300			300																	
13								320						320										
14																								
15																								
16																								
17	F			300												310	300		310	F				
18																								
19																								
20																								
21																								
22													300		330									
23																								
24																								
25			320																					
26																								
27																								
28																	F	F	F	F	F	F	F	F
29																								
30																								
31																320	330	320						

RADIO AURORA DATA F = 112 MHz

INTENSITY (dB)

Syowa Station

45° EAST MERIDIAN TIME (U.T. + 3 hours)

JANUARY 1976

Date	12		13		14		15		16		17		18		19		20		21		22		23	
	.00	.30	.00	.30	.00	.30	.00	.30	.00	.30	.00	.30	.00	.30	.00	.30	.00	.30	.00	.30	.00	.30	.00	.30
1																								
2																								
3																								
4																								
5	F	F	F	F	F	F	F	F	F	F														
6									F	F	F	F				-4	-3							
7	F	F	F	F	F	F	F	F	F	F	F													
8																					F	F	F	F
9	F	F	F	F	F	F	F	F	F	F	F													
10												-2												
11					F	F	F	F	F	F					-3	-3								
12																								
13																								
14																								
15																								
16																								
17																								
18																								
19																								
20																								
21																								
22																								
23																								
24																								
25																								
26																								
27							F	F	F	F	F	F	F	F	F	F	F	F	F	F	F			
28	F	F	F	F	F	F	F																	
29																								
30																								
31																								
Mean																								

RADIO AURORA DATA

F = 112 MHz

RANGE (km)

Syowa Station

45° EAST MERIDIAN TIME (U.T. + 3 hours)

JANUARY 1976

Date	12		13		14		15		16		17		18		19		20		21		22		23	
	.00	.30	.00	.30	.00	.30	.00	.30	.00	.30	.00	.30	.00	.30	.00	.30	.00	.30	.00	.30	.00	.30	.00	.30
1																								
2																								
3																								
4																								
5	F	F	F	F	F	F	F	F	F	F														
6									F	F	F	F				330	320							
7	F	F	F	F	F	F	F	F	F	F	F													
8																					F	F	F	F
9	F	F	F	F	F	F	F	F	F	F	F													
10												310												
11						F	F	F	F	F	F				320	320								
12																								
13																								
14																								
15																						300		
16																								
17																								
18																								
19																								
20																								
21															330	310								
22																								
23																								
24																								
25																								
26																								
27						F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F			
28	F	F	F	F	F	F	F																	
29																								
30																								
31												310	320		330									

RADIO AURORA DATA F = 112 MHz INTENSITY (dB)

Syowa Station 45° EAST MERIDIAN TIME (U.T. + 3 hours) FEBRUARY 1976

Day	00		01		02		03		04		05		06		07		08		09		10		11	
	.00	.30	.00	.30	.00	.30	.00	.30	.00	.30	.00	.30	.00	.30	.00	.30	.00	.30	.00	.30	.00	.30	.00	.30
1			-4																					
2	-7										-10	-2	-5	-3										
3											F	F												
4	F	F	F	F	F	F	F			-7														
5																								
6						-2	-4	-5																
7											-7	F				-6								
8																								
9																								
10	-3					2	-5										F							
11																								
12	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F
13	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F
14	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F
15	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F
16																								
17																								
18												F	F					-10	-9					
19																			F					
20																								
21													F											
22																								
23																								
24																								
25																								
26																								
27			-8			F												-2	-5	-7	F			
28														F	F	F	F	F	F	F	F	F	F	F
29																								F
30																								
31																								
Mean																								

RADIO AURORA DATA

F = 112 MHz

RANGE (km)

Syowa Station

45° EAST MERIDIAN TIME (U.T. + 3 hours)

FEBRUARY 1976

Day	00		01		02		03		04		05		06		07		08		09		10		11	
	.00	.30	.00	.30	.00	.30	.00	.30	.00	.30	.00	.30	.00	.30	.00	.30	.00	.30	.00	.30	.00	.30	.00	.30
1			300																					
2	320										320	320	300	320										
3										F	F													
4	F	F	F	F	F	F	F			310														
5																								
6					300	290	300																	
7										320	F				320									
8																								
9																								
10	300				280	300										F								
11																								
12	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F
13	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F
14	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F
15	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F
16																								
17																								
18											F	F				320	320							
19																	F							
20																								
21												F												
22																								
23																								
24																								
25																								
26																								
27			290		F											320		320	330	F				
28												F	F	F	F	F	F	F	F	F	F	F	F	F
29																								F
30																								
31																								

RADIO AURORA DATA

F = 112 MHz

INTENSITY (dB)

Syowa Station

45° EAST MERIDIAN TIME (U.T. + 3 hours)

FEBRUARY 1976

Day	12		13		14		15		16		17		18		19		20		21		22		23		
	.00	.30	.00	.30	.00	.30	.00	.30	.00	.30	.00	.30	.00	.30	.00	.30	.00	.30	.00	.30	.00	.30	.00	.30	
1																								-7	
2																	-7	-7							
3			F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	
4																									
5																									
6																									
7																									-7
8																									
9																									
10																									
11													F	F	F	F	F	F	F	F	F	F	F	F	F
12	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F
13	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F
14	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F
15	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F							
16																									
17																									
18																									
19																									
20																									
21																									
22																									
23																									
24																									
25																									
26																									
27									F	F	F						F	F	F	F	F	F	F	F	F
28	F	F			F	F	F																		
29	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F
30																									
31																									
Mean																									

RADIO AURORA DATA

F = 112 MHz

RANGE (km)

Syowa Station

45° EAST MERIDIAN TIME (U.T. + 3 hours)

FEBRUARY 1976

Date	12		13		14		15		16		17		18		19		20		21		22		23		
	.00	.30	.00	.30	.00	.30	.00	.30	.00	.30	.00	.30	.00	.30	.00	.30	.00	.30	.00	.30	.00	.30	.00	.30	
1																								310	
2																	310	380							
3			F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	
4																									
5																									
6																									
7																								300	
8																									
9																									
10																									
11													F	F	F	F	F	F	F	F	F	F	F	F	
12	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	
13	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	
14	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	
15	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F								
16																									
17																									
18																									
19																									
20																									
21																									
22																									
23																									
24																									
25																									
26																									
27									F	F	F						F	F	F	F	F	F	F	F	
28	F	F			F	F	F																		
29	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	
30																									
31																									

RADIO AURORA DATA F = 112 MHz INTENSITY (dB)

Syowa Station 45° EAST MERIDIAN TIME (U.T. + 3 hours) MARCH 1976

Day	00		01		02		03		04		05		06		07		08		09		10		11	
	.00	.30	.00	.30	.00	.30	.00	.30	.00	.30	.00	.30	.00	.30	.00	.30	.00	.30	.00	.30	.00	.30	.00	.30
1	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F
2	F	F	F	F	F	F	F	F	F												F	F	F	
3	0	-10	8		-3	0		-10	-7	-5			7	-8	-10	0	-5	3						
4	-6	-6	3	-4	5	-7	2	-5			0	-3												
6	0	-5		-3							5	4	4			5	-7	-2						
7	-3		14	2			-8	-2	-3	4	4	-8		3	-5			-8						
8	8				-8	-7		17	-2	2	8	0	12	7	-3	-7	9	14	17					
9		7	-7	8									5	-3	0			7	-8	-7	-3			
10		-2	7	-5	4	8		-10	-7						5	4	0							
11				4	10		-2	-3		5	5	5	3	2	-6	0		2						
12			-7	5	3	-3	-2	-3	-3		-2		7	7	-5		-6	2						
13			12	-2				0		3	3	-2	7											
14			-5	-5			-3		-4	0		-7	8	12	3	12	10	11	-2					
15					-5				2					-4	-5	12	10	5						
16									-3	-8		-2		0										
17								0	6			0												
18	-2				13	7	-8	-7	-5	2	-3	-6												
19	-7	-7							-7		4	-3			-7	10								
20					-8	-4	-6																	
21												-5												
22																								
23																								
24		-3		-7				5	-5	2		-2	2											
25																								
26							-7	-5	-5	5	-2	-5		-2	5	20	15	3	10	-6	15			1
27	-8	12						4	-7	6	-3	-3	7	7	-6	-2	-2							
28	0	8		-5		-5		5	2	0	-7	-3	-5	10	5	8	12	2	-2					
29										-11	-2	-8	4	-4	-3	9	12	8	-13					
30								12	-10		-12													
31	-7	-12				-7	-10	-12	0	-5	-12	-12		-6										
Mean	-3	-2	3	-1	1	-3	-5	-1	-3	0	-1	-3	5	2	-2	6	4	4	0					

RADIO AURORA DATA F = 112 MHz RANGE (km)

Syowa Station 45° EAST MERIDIAN TIME (U.T. + 3 hours) MARCH 1976

Day	00		01		02		03		04		05		06		07		08		09		10		11	
	.00	.30	.00	.30	.00	.30	.00	.30	.00	.30	.00	.30	.00	.30	.00	.30	.00	.30	.00	.30	.00	.30	.00	.30
1	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F
2	F	F	F	F	F	F	F	F	F	F												F	F	F
3	350	320	300		330	310		300	320	320			320	380	300	300	320							
4	300	350	300	310	290	290	320	290			300	290												
5																								
6	330	300		300							310	310	320			350	320	330						
7	340		290	340			320	330	300	310	300	350		330	340			320						
8	290				400	320		290	290	350	320	310	330	310	350	320	320	330	340					
9		320	300	310									320	350	310			310	300	300	290			
10		300	310	290	290	300		390	320						320	320	320							
11				310	290		300	370		300	310	310	290	310	300	320		340						
12			290	290	300	290	320	290	320		310		320	320	300		290	330						
13			300	290				330		310	310	320	360											
14			290	300			310		310	310		320	310	360	320	320	360	320	330					
15					280				320					310	320	320	320	380						
16									320	320		320		370										
17								300	310			320												
18	320				310	310	310	390	320	310	310	310												
19	330	310							320		320	320			300	320								
20					290	300	310																	
21												320												
22																								
23																								
24		300		330				320	300	300		300	320											
25																								
26						320	310	330	320	320	300		400	360	300	300	320	320	310	320			320	
27	320	350					330	330	320	330	360	300	320	310	330	340								
28	300	320		300		300		330	320	320	400	380	320	320	300	320	310	320	310					
29										320	320	380	340	320	320	310	320	320	380					
30							300	310		320														
31	320	360				320	330	320	320	320	310	320		320										

RADIO AURORA DATA

F = 112 MHz

INTENSITY (dB)

Station

45° EAST MERIDIAN TIME (U.T. + 3 hours)

MARCH

1976

Day	12		13		14		15		16		17		18		19		20		21		22		23	
	.00	.30	.00	.30	.00	.30	.00	.30	.00	.30	.00	.30	.00	.30	.00	.30	.00	.30	.00	.30	.00	.30	.00	.30
1	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F
2	F	F	F	F	F	F	F	F	F	F	-5	-7	0	0	7	-2	-2	-4	-5					4
3																	-5		-10					2
4									F	F	F	F	F	F										
5															-6	-5					-6			
6														0	-5	-2	-8			3				
7														2	2	2	2	-4	-2					-8
8									-8					-8		-10	-8		-6		-7			
9									-7	-7	-5	-8	-10	-10	-2	-7		-3	-5	7				
10											-5		-5	3	-5	-7	-3	-7		-5				
11											-7							3		5	-7			
12				-5													-7			-4				
13																								-2
14																								
15											-5	-5	-7	-6	5									
16												-7				-4			-3				-6	-8
17																				-8	-7			-2
18																					-5			
19																				-8				
20																								
21																								
22																								
23																				-7	-2	-6		-6
24																								
25																								
26	3	12	5	7	4	-7	-3	-3	-2		-6				-2					-7			-4	-5
27																-6								7
28																				-11	-10			
29																								
30																								
31																								
Mean											-6	-7	-6	-2	-1	-4	-4	-4	-4	-4	-5	-6		-2

RADIO AURORA DATA

F = 112 MHz

RANGE (km)

Syowa Station

45° EAST MERIDIAN TIME (U.T. + 3 hours)

MARCH

1976

Day	12		13		14		15		16		17		18		19		20		21		22		23	
	.00	.30	.00	.30	.00	.30	.00	.30	.00	.30	.00	.30	.00	.30	.00	.30	.00	.30	.00	.30	.00	.30	.00	.30
1	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F
2	F	F	F	F	F	F	F	F	F	F	320	320	320	320	330	320	320	310	290					330
3																	300		320					280
4									F	F	F	F	F	F										
5															320	320				320				
6													330	300	330	320		380						
7													320	330	330	330	320	320						300
8									320				320		320	320		320		300				
9								320	320	310	320	320	320	320		310	300	330						
10											330		320	320	310	320	320	300		320				
11											300						330		320	320				
12			330													320			310					
13																								320
14																								
15											330	320	300	310	320									
16											300				320			310				300	300	
17																				390	320			300
18																					320			
19																		310						
20																								
21																								
22																								
23																		330	330	320				330
24																								
25																								
26	320	310	320	330	330	320	350	320	320		310				330				320			320	310	
27																320								290
28																		320	310					
29																								
30																								
31																								

RADIO AURORA DATA F = 112 MHz INTENSITY (dB)

Syowa Station 45° EAST MERIDIAN TIME (U.T. + 3 hours) APRIL 1976

Day	00		01		02		03		04		05		06		07		08		09		10		11	
	.00	.30	.00	.30	.00	.30	.00	.30	.00	.30	.00	.30	.00	.30	.00	.30	.00	.30	.00	.30	.00	.30	.00	.30
1							-10	-15	-3	4	5	5	10	5		0		15	12	-5		F	F	F
2	-3	-6			2	0			10	7	-5	-5	-2	5	-3	7	-7							
3		9	-2	-5					0				5			15	17		10	5	15			16
4		12	0	-2	19				2	2		13	7	7	-4			2	8	4	-2	-5		
5	-7	12	8	6	12	13	F	-2	7	-5	10	-2	17	10	6	12	15	21	3	12	-5	-5		
6	-5		2			2		-2	-4	10	8	13	5	15	10	0	5	27	15	-7				
7			-6		F	13	7					-2	4											-5 -5
8	F	15	3	F	10	F	-5	9	5	12	-3	-2		7	-2									
9			12		15	F	0	-7	F			7	10		2									
10						-6	-3	2	-2	-2	-2					3	-3							
11												-8												
12						-6									3									
13				-8							3	7	13	7	-7									
14	-7		-7	5	-5					-5														
15	0		-7	13	-8	-2	7				-7	-2												
16												7	2	10	3									
17			5 4	0	12								-5	5	-2									
18																								
19																								
20																								
21																								
22															5	13		-2	6		15	17	7	-3
23		7	-5	8	6	7	5	0	2	2	8					18	-5	2						
24																		7	5	13		-5		-8
25			-5			-7							0	-7										
26			-6																					
27						4		2	2	-3	2	7						9	15					
28				-2	-3	2	0	-8	-6							0								
29				0																				
30																								
31																								
Mean	-4	5	0	3	4	3	-1	-3	1	1	2	4	5	5	3	5	5	10	10	4	4	-1	2	

RADIO AURORA DATA F = 112 MHz RANGE (km)

Syowa Station 45° EAST MERIDIAN TIME (U.T. + 3 hours) APRIL 1976

Day	00		01		02		03		04		05		06		07		08		09		10		11		
	.00	.30	.00	.30	.00	.30	.00	.30	.00	.30	.00	.30	.00	.30	.00	.30	.00	.30	.00	.30	.00	.30	.00	.30	
1							300	310	290	300	310	300	310	290		320		310	290	310			F	F	F
2	320	320			320	300			310	330	320	310	320	350	320	320	320								
3		320	320	350					340				340			330	320		320	330	320			320	
4		300	330	350	290				320	320		300	310	320	320			330	290	330	330	330			
5	310	320	300	310	310	320	F	300	300	300	320	340	320	310	310	330	320	310	300	310	350	330			
6	320		340			320		320	340	300	300	300	300	320	320	340	300	300	360	410					
7			320		F	300	290				300	310												300	420
8	F	310	300	F	310	F	310	300	300	300	310	310		350	320										
9			320		300	F	330	300	F			370	300		320										
10						310	330	340	300	320	300				320	310									
11											290														
12					300											320									
13			320							320	310	320	320	300											
14	320		300	300	300				320																
15	300		300	300	310	300	300			310	320														
16												320	320	340	320										
17			300	310	300							330	360	320											
18																									
19													350												
20																									
21										320															
22															320	320		310	310		320	300	310	320	
23		310	310	330	320	300	300	300	320	320	300					320	360	320							
24																	310	310	320		310		310		
25		320			320					320			320	320											
26		310																							
27					330		320	320	310	320	320						350	350							
28			300	320	350	310	310	310							320										
29			300							310	300		320												
30			290	300		300		310			320					320	310		320						
31																									

RADIO AURORA DATA F = 112 MHz INTENSITY (dB)

Syowa Station 45° EAST MERIDIAN TIME (U.T. + 3 hours) APRIL 1976

Day	12		13		14		15		16		17		18		19		20		21		22		23		
	.00	.30	.00	.30	.00	.30	.00	.30	.00	.30	.00	.30	.00	.30	.00	.30	.00	.30	.00	.30	.00	.30	.00	.30	
1		8		1	2	0	-2	-3	-2	-3	-4	-3	6	4					4						
2																									
3											-7	3							-5	0	-5	11	13		
4		-6					0	-5	-4	4	3	5	2	-6											
5				F	-4	F	F	F	F	F	F						F	-2						0	
6												-7	-7		-2	-4			-3						
7											-2								-5					-5	
8																									
9																	-2	0		0	4			-5	
10																									
11																									
12																									
13																									
14									F	F	F	F						-7	-3		-7	-8		-7	
15																									
16																								-7	-6
17																									
18																									
19																									
20																									
21																									
22																									
23																									
24																									
25																									
26																									
27																									
28																									
29																									
30																									
31																									
Mean																									

RADIO AURORA DATA

F = 112 MHz

RANGE (km)

Syowa Station

45° EAST MERIDIAN TIME (U.T. + 3 hours)

APRIL 1976

Dist	12		13		14		15		16		17		18		19		20		21		22		23	
	.00	.30	.00	.30	.00	.30	.00	.30	.00	.30	.00	.30	.00	.30	.00	.30	.00	.30	.00	.30	.00	.30	.00	.30
1		310		300	300	300	300	300	300	300	300	320	320	330					310					
2																								
3											310	330								360	320	300	310	340
4		330						320	310	320	330	320	330	330	320									
5				F	320	F	F	F	F	F	F							F	300					330
6												320	320		330	290			340					
7											320							320						320
8																								
9																	320	320		330	330			290
10																								
11																								
12																								
13																								
14								F	F	F	F						320	310		310	310		320	
15																								
16																								330 330
17																								
18																								
19																330	320	310	310					
20																								
21																								
22																								
23																								
24										320	320								310					
25																								
26																								
27																				320	320	320		
28																						320		320
29																310			300	300				
30																								
31																								

RADIO AURORA DATA F = 112 MHz INTENSITY (dB)

Syowa Station 45° EAST MERIDIAN TIME (U.T. + 3 hours) MAY 1976

Day	00		01		02		03		04		05		06		07		08		09		10		11	
	.00	.30	.00	.30	.00	.30	.00	.30	.00	.30	.00	.30	.00	.30	.00	.30	.00	.30	.00	.30	.00	.30	.00	.30
1						-7				-7														
2		-5								-7			5	-10										
3	-2			15		10	12	3	-7		7	17	0	-2	18	15	3	-8	15	8	5	12	17	2
4	13					-10	7							5	4	5							-10	
5	-2		-6		-3	2	-5	-10	-3	5	-2	-10	7	7	-5									
6	8		-10			-7	2	6	-10				-3	0	2									
7	F	2	2					10	10	11														
8				2	-3	-1	7			-5				-7	-4									
9										0	2	8	-2	-2										
10																								
11																								
12	-10	-7				-5	-6	-7			0	-5	-5											
13					-10			-1																
14										-5														
15																								
16					-7							0	8	3										
17				-5																				
18																								
19																								
20	F		7	25	-5	12	10	4	5		0	7		-5		-5	-7	12	6	-7				
21	4	-8							-5	4	-4		1	-7	4									
22			-10	7					-6	-7		-2	6											
23	F	-10																						
24										7	0													
25																								
26						-10		-4	-8	7	4													
27	-3	-4	-10	-10																				
28	F	F	-10					-5	-2		-7	6	15	11	12	12		-5	11	-7	4	-2	10	
29	-5					0			-3		-2	0	13	12	11	-6								
30	-3					0	15	5	7	15		4	12	7	9									
31						-3	-4				7	4	10	-3	-10	-5	-5							
Mean	0	-5	-8	6	-6	1	0	-1	-1	0	1	2	3	1	4	3	-3	0	7	-4				

RADIO AURORA DATA F = 112 MHz RANGE (km)

Syowa Station 45° EAST MERIDIAN TIME (U.T. + 3 hours) MAY 1976

Day	00		01		02		03		04		05		06		07		08		09		10		11	
	.00	.30	.00	.30	.00	.30	.00	.30	.00	.30	.00	.30	.00	.30	.00	.30	.00	.30	.00	.30	.00	.30	.00	.30
1					300				300															
2		330							320			310	300											
3	300		310		320	310	320	300		310	300	310	300	310	310	310	310	350	290	320	310	320	350	
4	300					320	330						310	340	310				310					
5	300		320		320	310	300	300	320	300	310	310	310	300	350									
6	300		300			320	310	320	320				300	300	330									
7	F	350	370					300	300	310														
8			310	300	300	300			300				370	320										
9									310	310	320	320	310											
10																								
11																								
12	300	300			300	330	300			320	310	310												
13					330			320																
14									320															
15																								
16					320							320	320	310										
17			320																					
18																								
19																								
20	F		310	300	350	320	310	320	320		320	370		320		330	320	300	290	360				
21	370	300							320	300	320		310	320	320									
22			320	290					330	310		350	360											
23	F	290																						
24										310	290													
25																								
26						340		320	310	310	310													
27	320	310	300	320																				
28	F	F	320					300	300		320	310	320	320	320		300	330	320	320	320	320		
29	310				310			300		310	310	310	300	280	310									
30	340				290	290	310	320	320		310	320	300	310										
31						310	310			320	310	300	300	320	330	290								

RADIO AURORA DATA F = 112 MHz INTENSITY (dB)

Syowa Station 45° EAST MERIDIAN TIME (U.T. + 3 hours) MAY 1976

Day	12		13		14		15		16		17		18		19		20		21		22		23	
	.00	.30	.00	.30	.00	.30	.00	.30	.00	.30	.00	.30	.00	.30	.00	.30	.00	.30	.00	.30	.00	.30	.00	.30
1																								
2						-3	-2	-5	6	8	6					-8	-10		-10			8	-5	
3	12	-3	-7		-5	-7	-10		0									-10	-10				0	13
4						-10							0	-10			-10	-7				-2		
5																								
6																								
7																								
8																						-10	-8	
9																								
10																								
11																					-7			-8
12														F	F	F	F	F	F	F	F	F	F	F
13																								
14																								
15	F	F	F	F	F	F	F	F	F	F	F	F	F											
16																								
17																								
18																								
19																								3
20														-5	-3	0	-3	0		-5			-7	
21																								-7
22																						-4		
23										-10							-10	-3						
24																								
25																						-10		
26																								
27																								
28											-10					-2	5	7	-5	-4	-10	-3		
29						-7										-8						-5	-10	
30																			0	-3		5		
31																	-5							
Mean						-7				-1						-7	-5	-4	-3	-6	-5	-5	-3	-4

RADIO AURORA DATA

F = 112 MHz

RANGE (km)

Syowa Station

45° EAST MERIDIAN TIME (U.T. + 3 hours)

MAY

1976

Day	12		13		14		15		16		17		18		19		20		21		22		23	
	.00	.30	.00	.30	.00	.30	.00	.30	.00	.30	.00	.30	.00	.30	.00	.30	.00	.30	.00	.30	.00	.30	.00	.30
1																								
2					310	330	320	310	320	320					320	310		300		300	310			
3	320	330	300		290	300	300		320								320	310					310	300
4					280								320	330		310	320			320				
5																								
6																								
7																								
8																				320	320			
9																								
10																								
11																			330				300	
12													F	F	F	F	F	F	F	F	F	F	F	F
13																								
14																								
15	F	F	F	F	F	F	F	F	F	F	F	F												
16																								
17																								
18																								
19																								320
20													320	320	320	310	320		320				310	
21																								310
22																				340				
23																320	320							
24																								
25																					320			
26																								
27																								
28										310					320	320	320	320	320	360	310			
29				310										320								320	320	
30																	320	310			320			
31															310									

RADIO AURORA DATA F = 112 MHz INTENSITY (dB)

Syowa Station 45° EAST MERIDIAN TIME (U.T. + 3 hours) JUNE 1976

Day	00		01		02		03		04		05		06		07		08		09		10		11	
	.00	.30	.00	.30	.00	.30	.00	.30	.00	.30	.00	.30	.00	.30	.00	.30	.00	.30	.00	.30	.00	.30	.00	.30
1																								
2						7	5	-12																
3							-8	-8	-2				3	-10	2	2	-3							
4	0				-10								4	-7	2		-10			4				
5	6								-10		-8	5	-6	-5	-5	-2	13	-10						-12
6					11																			-10
7						0	-10			-13	2	10	5	-2										
8	-10	-10		10	-3	-10						-10	-3	-4	9	-10								
9																								
10																								
11						6	8	0	3	16	23	7	5	20	-4	6	17	-2		4	20	13	10	12
12						-7											-7							
13																								
14		-10			-12																			
15																								
16	F	F	F	F				0	-12	-12	5	3	15	12	6									
17																4								
18	-3	-7	2	4						5	9	8	2	-7		4	2		-10	-5			-8	
19		-10	5	-10								7												
20																								
21																								
22																								
23	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F
24					F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F
25	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F
26	F	-5	-5													F	F	F	F	F	F	F	F	F
27	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F
28	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F
29	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F
30	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F
31																								
Mean	-2	-8	-1	-4	-3	2	-1	-5	-5	-1	2	5	3	1	-1	1	4							-4

RADIO AURORA DATA F = 112 MHz RANGE (km)

Syowa Station 45° EAST MERIDIAN TIME (U.T. + 3 hours) JUNE 1976

Day	00		01		02		03		04		05		06		07		08		09		10		11	
	.00	.30	.00	.30	.00	.30	.00	.30	.00	.30	.00	.30	.00	.30	.00	.30	.00	.30	.00	.30	.00	.30	.00	.30
1																								
2					310	310	300																	
3							300	330	300				320	320	320	320	350							
4	310				300								360	290	320		310			330				
5	310								290		290	300	300	290	290	300	320	330						300
6					310																			290
7						320	290			320	310	300	310	300										
8	320	310		310	350	400					310	310	330	330	320									
9																								
10																								
11						380	320	340	310	310	300	320	320	320	300	290	300	300		310	300	330	320	320
12						360											310							
13																								
14		300		300																				
15																								
16	F	F	F	F				310	310	300	300	310	310	320	320									
17																310								
18	320	320	320	370						360	320	310	300	320		300	390	300		300	300		310	
19		300	310	300								320												
20																								
21																								
22																								
23	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F
24					F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F
25	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F
26	F	300	300														F	F	F	F	F	F	F	F
27	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F
28	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F
29	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F
30	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F
31																								

RADIO AURORA DATA

F = 112 MHz

INTENSITY (dB)

Syowa Station

45° EAST MERIDIAN TIME (U.T. + 3 hours)

JUNE

1976

Date	12		13		14		15		16		17		18		19		20		21		22		23	
	.00	.30	.00	.30	.00	.30	.00	.30	.00	.30	.00	.30	.00	.30	.00	.30	.00	.30	.00	.30	.00	.30	.00	.30
1																								
2																								
3																								
4																								
5																								
6																								
7																								
8																								
9																								
10																								
11	7	12	-8																					
12																								
13																								
14																								
15	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F
16																								
17																								
18																								
19																								
20																								
21																								
22																								
23																								
24	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F
25	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F
26	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F
27	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F
28	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F
29	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F
30	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F
31																								
Mean																								

RADIO AURORA DATA

F = 112 MHz

RANGE (Km)

Syowa Station

45° EAST MERIDIAN TIME (U.T. + 3 hours)

JUNE

1976

Day	12		13		14		15		16		17		18		19		20		21		22		23	
	.00	.30	.00	.30	.00	.30	.00	.30	.00	.30	.00	.30	.00	.30	.00	.30	.00	.30	.00	.30	.00	.30	.00	.30
1																					310		290	
2																			320	320			310	320
3																			320			300	330	
4									300															
5													310				300	310						
6																								
7																								
8																							320	
9																								
10																								
11	320	320	310			310	300		320	320	320	310	360	320	320	320	310	320	310	320	290	310	290	
12																								
13																								
14																								
15	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F
16																								
17													320					320						320
18													290								320	310	310	
19																								
20																								
21		F	F	F	F	F	F	F	F	F	F	F												
22																								
23																								
24	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F
25	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F
26	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F
27	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F
28	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F
29	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F
30	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F
31																								

RADIO AURORA DATA F = 112 MHz INTENSITY (dB)

Syowa Station 45° EAST MERIDIAN TIME (U.T. + 3 hours) JULY 1976

Day	00		01		02		03		04		05		06		07		08		09		10		11	
	.00	.30	.00	.30	.00	.30	.00	.30	.00	.30	.00	.30	.00	.30	.00	.30	.00	.30	.00	.30	.00	.30	.00	.30
1	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F
2	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F
3	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F
4	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F
5	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F
6	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F
7	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F
8															-5	-10	• -8	• 0						
9	F	-5			F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F
10																								
11	-7	-4	0		-7	4			0	5														
12									-7															
13			-11																					
14									-3	0	-2	• -2	-7											
15										7														
16			0		• -3	-2							-10		7	12	15	8	8	10				
17		-12	• -4	-10									-12											
18													-2	5										
19			-10		-3	-10																		
20								-10		2														
21	-7		0	-12	-5		• -5	-10	-3	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F
22				F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F
23		-12					-12			-10				-3	F	F	F	F	F	F	F	F	F	F
24	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F
25	F	F	F	F	F	F	F	F	F	F	F	10												
26		• -3			-12					-5	-12													
27	-3	-12			-10											-7								
28			12	0	-4		12	2	-10		-5		-4	5	F	F	F	F	F	F	F	F	F	F
29	F	F	F	F	F	F	F	F	F	F	F	F	F											
30				F	F	-10							4	• -8				-12						
31					-5																			
Mean	-6	-8	-4	-4	-7	-2	-8	-3	-2	-4	-2	1	-3	-5		-3								

RADIO AURORA DATA

F = 112 MHz

RANGE (km)

Syowa Station

45° EAST MERIDIAN TIME (U.T. + 3 hours)

JULY

1976

Day	00		01		02		03		04		05		06		07		08		09		10		11	
	.00	.30	.00	.30	.00	.30	.00	.30	.00	.30	.00	.30	.00	.30	.00	.30	.00	.30	.00	.30	.00	.30	.00	.30
1	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F
2	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F
3	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F
4	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F
5	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F
6	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F
7	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F
8															340	300	290	280						
9	F	290			F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F
10																								
11	320	330	330		320	320			330	340														
12									300															
13			310																					
14									300	310	320	320	320											
15									310															
16			300		310	320						320			310	310	300	290	320	330				
17		300	320	310								320												
18												310	310											
19			300		300	290																		
20							310		370															
21	310		350	320	320	320	300	290	F	F	F	F	F	F	F	F	F	F	F					
22				F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F
23		320				310			340			300	F	F	F	F	F	F	F	F	F	F	F	F
24	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F
25	F	F	F	F	F	F	F	F	F	F	F	360												
26		350			330				370	320														
27	310	290			290										320									
28			290	320	320		300	300	300		320		310	310	F	F	F	F	F	F	F	F	F	F
29	F	F	F	F	F	F	F	F	F	F	F	F	F											
30				F	F	310						300	360				300							
31					300																			

RADIO AURORA DATA F = 112 MHz INTENSITY (dB)

Syowa Station 45° EAST MERIDIAN TIME (U.T. + 3 hours) JULY 1976

Date	12		13		14		15		16		17		18		19		20		21		22		23		
	.00	.30	.00	.30	.00	.30	.00	.30	.00	.30	.00	.30	.00	.30	.00	.30	.00	.30	.00	.30	.00	.30	.00	.30	
1	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F		
2	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F		
3	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F		
4	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F		
5	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F		
6	F	F	F	F	F																F	F	F		
7	F	F	F	F	F	F	F	F	F					-12			-6								
8		F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	-2	-1						
9	F	F	F	F	F																				
10																						-10	-2	-5	
11																									
12																									
13									F	F	F	F	F	F											
14																	-12								
15								F	F	F	F	F	F	F	F	F	F	F	-5	-12		4			
16																					-10		-7		
17																									
18																						-10	-5	-5	
19		F	F	F	F	F	F	F	F																
20																									
21																									
22	F	F	F	F	F	F	F																		
23	F	F	F	F	F	F							F	F	F	F	F	F	F	F	F	F	F	F	
24	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	
25																									
26		F	F	F	F	F																-7	-1	-3	-4
27																									
28	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	
29										-6					F	F	F	F	F						
30									0												-12			-8	
31																									
Mean																					-6	-10	-7	-3	-6

RADIO AURORA DATA F = 112 MHz RANGE (km)

Syowa Station

45° EAST MERIDIAN TIME (U.T. + 3 hours)

JULY

1976

Day	12		13		14		15		16		17		18		19		20		21		22		23		
	.00	.30	.00	.30	.00	.30	.00	.30	.00	.30	.00	.30	.00	.30	.00	.30	.00	.30	.00	.30	.00	.30	.00	.30	
1	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	
2	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	
3	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	
4	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	
5	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	
6	F	F	F	F	F																	F	F	F	
7	F	F	F	F	F	F	F	F	F					290			320								
8		F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	310	310						
9	F	F	F	F	F	F																			
10																						320	310	310	
11																									
12																									
13									F	F	F	F	F	F											
14																	290								
15								F	F	F	F	F	F	F	F	F	F	F	320	320		290			
16																					310		330		
17																									
18																						300	320	320	
19		F	F	F	F	F	F	F	F																
20																									
21																									
22	F	F	F	F	F	F	F																		
23	F	F	F	F	F	F							F	F	F	F	F	F	F	F	F	F	F	F	
24	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	
25																									
26		F	F	F	F	F																320	310	320	310
27																									
28	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	
29										320						F	1	F	F	F					
30										300											310			310	
31																									

RADIO AURORA DATA F = 112 MHz INTENSITY (dB)

Syowa Station 45° EAST MERIDIAN TIME (U.T. + 3 hours) AUGUST 1976

Day	00		01		02		03		04		05		06		07		08		09		10		11	
	.00	.30	.00	.30	.00	.30	.00	.30	.00	.30	.00	.30	.00	.30	.00	.30	.00	.30	.00	.30	.00	.30	.00	.30
1							-3	-8			-2													
2	F	F																						
3																								
4									-3	-7														
5					-3						-12													
6									-3		2	• -5	-8											
7					-12																			
8			5	• -4	-12			-12								-2								
9							3	-10											14	• 12	14	3		
10									-3	2	2	-3		• 3	• -3									
11	-9				0		-8	-10	-10	-2		-3												
12																								
13			-5																					
14																								
15																								
16	-10	-7	3	3									-2	7	-12									
17			-11	-10		-3	• 6	7	2	-7														
18									-5	7	-10													
19																								
20							0	-2	12															
21			0																					
22					3						-7													
23		-5			-8	-8							4											
24	1	5		-10	• 4	10	• -7	-4	7	-3	3			• -3	7									
25	-6				-4		12	-9	-5	-10		8	8	-12				-9						
26		• 6		-3	-10			• -4	12	-3 -3	• 10	8	-5 -10								-4			
27	2		10	1			-11	3	• -4															
28	-5		-2		0							-11												
29									-5		-11	-2												
30								-10	-1	7	5	12	12	-10										
31	-10		-10																					
Mean	-5	-1	-2	-1	-5	-4	1	-3	-5	0	-2	-3	2	3	-7	1								

RADIO AURORA DATA

F = 112 MHz

RANGE (km)

Syowa Station

45° EAST MERIDIAN TIME (U.T. + 3 hours)

AUGUST 1976

Day	00		01		02		03		04		05		06		07		08		09		10		11	
	.00	.30	.00	.30	.00	.30	.00	.30	.00	.30	.00	.30	.00	.30	.00	.30	.00	.30	.00	.30	.00	.30	.00	.30
1							310	300			310													
2	F	F																						
3																								
4									290	300														
5					300						300													
6									320		320	350	310											
7					320																			
8			320	320	320			300							320									
9						310	310										310	310	280	300				
10									310	310	300	310		300	320									
11	320				310		320	300	330	320		310												
12																								
13			320																					
14																								
15																								
16		320	320	320	320								320	310	320									
17			320	290		310	300	310	300															
18									320	320	310													
19																								
20							330	320	330															
21			310																					
22					320						310													
23		330			320	310						320												
24	310	340			300	300	290	290	300	300	320	320		300	320									
25	300				320		330	330	310	310			300	290	330			330						
26		310		320	320			330	310	310	380	300	290	310	360							280		
27	320		290	280			300	300	310															
28	290			300	370							350												
29									320		300	330												
30								360	310	320	310	310	320	300										
31	300		290																					

RADIO AURORA DATA F = 112 MHz INTENSITY (dB)

Syowa Station 45° EAST MERIDIAN TIME (U.T. + 3 hours) AUGUST 1976

Date	12		13		14		15		16		17		18		19		20		21		22		23			
	.00	.30	.00	.30	.00	.30	.00	.30	.00	.30	.00	.30	.00	.30	.00	.30	.00	.30	.00	.30	.00	.30	.00	.30		
1			F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F		
2																										
3															-12											
4																										
5																										
6																										
7																								-12		
8																						-3				
9									-2																	
10																										
11																										
12																								-10		
13																										
14																										
15																								-4		
16																										
17																										
18																										
19																										
20																										
21																			-8	-5						
22																										
23				-5						2	11		8	7	3	12	13	-2	F				-10	-5		
24									-12					-1	-5	-10		5	5	-4	-10	3				
25													-12	-8	F	F	F	F						-12		
26														-10		-10	0	3	0	-12	-7					
27													-10				-8		-3	5		6	3	5		
28															-10		-2	-2	-3					-5		
29																	-10							-12		
30																				-12	-12	-2	-4	-8		
31																	-10	3	5							
Mean																	-1	-6	-6	4	0	-2	-9	-3	-5	-6

RADIO AURORA DATA F = 112 MHz RANGE (km)

Syowa Station 45° EAST MERIDIAN TIME (U.T. + 3 hours) AUGUST 1976

Day	12		13		14		15		16		17		18		19		20		21		22		23	
	.00	.30	.00	.30	.00	.30	.00	.30	.00	.30	.00	.30	.00	.30	.00	.30	.00	.30	.00	.30	.00	.30	.00	.30
1			F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F
2																								
3														320										
4																								
5																								
6																								
7																								320
8																					320			
9								310																
10																								
11																								
12																							300	
13																								
14																								
15																								320
16																								
17																								
18																								
19																								
20																								
21																		330	320					
22																								
23				290						330	320		310	320	320	330	320	300	F				310	310
24								320						320	310	310		320	320	310	310	310		
25												310	320	F	F	F	F							360
26														300		310	320	320	300	310	310			
27												310				320		310	320		320	300	310	
28															310		330	310	310					310
29																	300							320
30																			320	320	320	310	320	
31																	320	330	320					

RADIO AURORA DATA F = 112 MHz INTENSITY (dB)

Syowa Station 45° EAST MERIDIAN TIME (U.T. + 3 hours) SEPTEMBER 1976

Day	00		01		02		03		04		05		06		07		08		09		10		11	
	.00	.30	.00	.30	.00	.30	.00	.30	.00	.30	.00	.30	.00	.30	.00	.30	.00	.30	.00	.30	.00	.30	.00	.30
1		-8	-8		3 -5	10	2		-7	-4					13	-4								
2	0					10						-10						-1	18	12	-1	-2		
3			-10					9									-3	-11						
4									-1		-2	-2	-4	-4	3	-8	-5							
5		10					2	0							6	-4								
6				-10						1	10	13	8	7	-2									
7							-4	-10	6	0	-2	0	0	-10										
8				-12		-10		-1	-10	-5	-3													
9												-10	-12											
10												-13												
11		-10																						
12	-8		-7									-10		-5										
13				-10	-11					-10		-10	7	-5										
14			-12			-12				-12	-12													
15														-10	-2	7	3	-3	-2					
16								-12		0	-8	-12												
17										-10		-2	6	0										
18	2		-12	-10	-4	-12	0	-4				7	F	F	10	7	6	-5	15	17	13	13	-1	15
19																								
20	-11			-11	-10	0		6	-1			-10	2		8	12	12	-2	23	-4 -10	-8			
21	12	0	-10		7		-1	-10						-4	-3	4	-10							
22		-3			2	-12	-11							-10	-8				-11					
23		-10						-2		-4	-2	-9		-3										
24		-2	-10	-13						-13		-2												
25		-6	-10							8	7	17	5	8	8	-2	-13	-11						
26		-11						12	10	-11				-3		-4								
27								-15			5	8	-9	-6	-10									
28								-9	3	-2	-2			6										
29														6	-6									
30	-12	-9								-10	5	10	-10	14	-2									
31																								
Mean	-3	-5	-10	-11	-2	-4	-1	-1	-4	-2	-1	-3	1	-3	2	1	-1	-6	14	8	1			

RADIO AURORA DATA

F = 112 MHz

RANGE (km)

Syowa Station

45° EAST MERIDIAN TIME (U.T. + 3 hours)

SEPTEMBER 1976

Day	00		01		02		03		04		05		06		07		08		09		10		11	
	.00	.30	.00	.30	.00	.30	.00	.30	.00	.30	.00	.30	.00	.30	.00	.30	.00	.30	.00	.30	.00	.30	.00	.30
1		330	330		310 410	290	320		310	310					310	310								
2	320					310					370						300	320	320	290	300			
3			390				300									290	290							
4									310		300	310	310	300	310	340	310							
5		300					310	290						360	310									
6				310						290	300	310	320	330	370									
7						300	300	300	340	290	300	290	290											
8				290		340		300	290	320	310													
9												320	300											
10												300												
11		300																						
12	320		320									320		350										
13				320	310					320		310	300	290										
14			300			300				400	390													
15														320	350	310	300	300	320					
16							330			310	310	300												
17										310		320	310	320										
18	300		290	300	320	300	300	370				320	F	F	310	310	310	340	300	310	300	330	330	320
19																								
20	300			310	310	310		310	300			300	380		300	300	340	310	300	320	380	320		
21	320	390	300		330		310	300						300	300	310	320							
22		290			280	330	300							300	310			300						
23		300					320		320	320	360		320											
24		320	290	340					300		320													
25		330	320						310	300	300	310	320	320	310	300	300							
26		300					300	310	310					350		310								
27							310				300	310	320	330	320									
28						300	300	300	300				320											
29															320	300								
30	310	300							310	320	320	310	310	310										
31																								

RADIO AURORA DATA

F = 112 MHz

INTENSITY (dB)

Syowa Station

45° EAST MERIDIAN TIME (U.T. + 3 hours)

SEPTEMBER 1976

Day	12		13		14		15		16		17		18		19		20		21		22		23				
	.00	.30	.00	.30	.00	.30	.00	.30	.00	.30	.00	.30	.00	.30	.00	.30	.00	.30	.00	.30	.00	.30	.00	.30			
1														-5						-1	2	-4	-8	6	-2		
2												-10						-12	-6			-10					
3																					-10		-10	-5	6		
4																									-7		
5																		-8			-5		-10		-8		
6																											
7																											
8																					-10	-3					
9																											
10																						-5	-3				
11																								-10	-6		
12																-10	-4	0	-12	-10							
13																											
14																											
15																									-10		
16																							-12				
17																							-12				
18	5	15	-8	-12			-12	-9			-8	-5															
19														-12	-12	1	-12	-10	-5	-12					-12		
20						-12	-4	0	2	-2		-2	-1			-4	-5	-3			-8						
21																											
22																											
23																											
24																											
25														-8	0	-2	-3	-3	2	-4	-7	5		-5	6	-10	-11
26																											
27																											
28																											
29																											
30																											
31																											
Mean																											

RADIO AURORA DATA

F = 112 MHz

RANGE (km)

Syowa Station

45° EAST MERIDIAN TIME (U.T. + 3 hours)

SEPTEMBER 1976

Day	12		13		14		15		16		17		18		19		20		21		22		23		
	.00	.30	.00	.30	.00	.30	.00	.30	.00	.30	.00	.30	.00	.30	.00	.30	.00	.30	.00	.30	.00	.30	.00	.30	
1														320					350	330	320	320	320	320	
2										320							310	320			300				
3																				320		310	310	310	
4																								320	
5																	320		330			310		320	
6																									
7																									
8																				320	300				
9																									
10																					320	300			
11																							320	320	
12																320	320	320	300	310					
13																									
14																									
15																								320	
16																						310			
17																						320			
18	310	310	400	420			310	320		310	310														
19														310	380	310	310	310	300	310				290	
20					300	300	320	300	320		330	310			310	300	300				320				
21										320		300	320	320	310	300						320			
22						300									320	320	310							320	
23																								290	
24																									
25										320	320	320	320	320	320	310	320					280	310	300	310
26																310						300			
27																	310								
28																									
29																						320	320	300	
30																									
31																									

RADIO AURORA DATA F = 112 MHz INTENSITY (dB)

Syowa Station 45° EAST MERIDIAN TIME (U.T. + 3 hours) OCTOBER 1976

Day	00		01		02		03		04		05		06		07		08		09		10		11				
	.00	.30	.00	.30	.00	.30	.00	.30	.00	.30	.00	.30	.00	.30	.00	.30	.00	.30	.00	.30	.00	.30	.00	.30			
1		-10			-4		-3			•	-5																
2				-8					1	-10	•	10	10	12	7	•	8	0	13	20	12	-10					
3					-11		-7			-4				5		-10	•	7									
4																											
5	-10	10			-6			-13		7	•	7	10	F	F	F	F	F	F	F							
6				-10													12										
7		-10			0																						
8							F																				
9			•	2					-12			0	5														
10	-12				-12	-8		4								-10	-5										
11	-10				•	-8	•	-8		-10	-12	7	-5														
12					-7				-11	-10	-9				4		-11										
13	F	5					-3					5	-9	-6	7	•	9										
14																											
15	-10	1	7			-7										-10	-4	13	5								
16			•	6				-5		12	0	8	-10	9	•	-2	7	-11		•	7		F	F	F	F	F
17				7	5	1	-1	-2	3							-5	4	5	4	5	-1	-12					
18		-10	14			6				-10		-5		-10	9												
19	-6	-10	-15																								
20										-2	-2	-8															
21															2	4		-10									
22								-7																			
23						-13									4												
24							-8	-2	-4																		
25							-12		2		-8		0		-3												
26					-10	-12			4	-10																	
27	-12						-6			-5		-10	-12														
28		-4		-1	-12	-10		-5																			
29		-4	•	-7					-10			-9					-4										
30																											
31				•	-4	-10					0	2	-10				4	•	2	17	18	12	-8	-8			
Mean	-9	-4	3	-3	-7	-7	-6	-6	-1	-6	0	0	0	-1	1	-1	2	9	10	2							

RADIO AURORA DATA

F = 112 MHz

RANGE (km)

Syowa Station

45° EAST MERIDIAN TIME (U.T. + 3 hours)

OCTOBER 1976

Day	00		01		02		03		04		05		06		07		08		09		10		11	
	.00	.30	.00	.30	.00	.30	.00	.30	.00	.30	.00	.30	.00	.30	.00	.30	.00	.30	.00	.30	.00	.30	.00	.30
1		300			330		310			370														
2				290					310	300	320	330	310	320	380	320	310	300	320	320				
3					300		310			320			290		290	320								
4																								
5	320	310			310			300		300	300	290	F	F	F	F	F	F	F					
6				330													320							
7		320			300																			
8							F																	
9			320					340				290	300											
10	300				310	300		320								300	310							
11	300					390	300		330	300	320	300												
12					320				300	320	300				320		320							
13	F	310					310					310	300	300	320	310								
14																								
15	320	310	300			300										350	300	300	300					
16			300				310		300	300	300	350	320	300	300	290		370		F	F	F	F	F
17				330	300	F	300	300	300						300	290	300	300	310	300	300			
18		300	310			300				310		300		290	290									
19	300	300	290																					
20									300	300	300													
21														310	310		320							
22								300																
23					310									310										
24							330	300	310															
25							310		300		300		310		320									
26					320	310			300	300														
27	300						320			300		310	370											
28		310		300	310	300		290																
29	320	300						310			290					340								
30																								
31				300	300						320	320	390				300	350	320	320	300	320	390	

RADIO AURORA DATA

F = 112 MHz

INTENSITY (dB)

Syowa Station

45° EAST MERIDIAN TIME (U.T. + 3 hours)

OCTOBER 1976

Day	12		13		14		15		16		17		18		19		20		21		22		23		
	.00	.30	.00	.30	.00	.30	.00	.30	.00	.30	.00	.30	.00	.30	.00	.30	.00	.30	.00	.30	.00	.30	.00	.30	
1																									
2							-11	-10					-8	-10										-10	
3																									
4																									
5																			-9		-4	4	-7	-8	
6																								-10	
7																		-6		-10				-8	
8																								-10	
9																				-4	-10	-6	-12	-6	-12
10																								-11	-7
11																								-10	
12																								-12	
13																									
14																									
15																									10
16	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	0	-9		
17																									
18																									
19																									
20																									
21																									
22																									
23																									
24																									
25																									
26																									
27																									
28																									
29																									
30																									
31																									
Mean																									

RADIO AURORA DATA

F = 112 MHz

RANGE (km)

Syowa Station

45° EAST MERIDIAN TIME (U.T. + 3 hours)

OCTOBER 1976

Day	12		13		14		15		16		17		18		19		20		21		22		23	
	.00	.30	.00	.30	.00	.30	.00	.30	.00	.30	.00	.30	.00	.30	.00	.30	.00	.30	.00	.30	.00	.30	.00	.30
1																								
2								310	320					310	310									300
3																								
4																								
5																			320		320	310	300	300
6																								310
7																		320		320				310
8																						300		
9																			320	300	320	310	310	300
10																								310 320
11														320		320							310	
12																				320				
13																								
14																								
15								300	310	320		330	320		310	310	300	300	320					300
16	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	310	300			
17								310	300	310	300		310				310	310						
18																	310	300					310	290 300
19													310	310	300	310		310	320	310	300	300	290	
20																		320						
21																								
22																								
23																					310			320
24																								
25																								
26																								
27																								
28																								320
29																								
30									320	310	300					320	320	300	320	300		300	360	
31									310	320	320	330	320		320			300						320

RADIO AURORA DATA

F = 112 MHz

INTENSITY (dB)

Syowa Station

45° EAST MERIDIAN TIME (U.T. + 3 hours)

NOVEMBER 1976

Day	00		01		02		03		04		05		06		07		08		09		10		11	
	.00	.30	.00	.30	.00	.30	.00	.30	.00	.30	.00	.30	.00	.30	.00	.30	.00	.30	.00	.30	.00	.30	.00	.30
1		-8						-5		-5				-3										
2	0								-4			2	3	2										
3	-12					-12								-10		-7								
4		-10												-8										
5																								
6											0	2	-8	-4	-8									
7																-1	6							
8			-12						-9	-9	-10	-7												
9		15		-6										-1	-12	-8								
10						-11							-5	3	-4		2	7						
11			-8													2								
12									-2	-12	-10													
13	-6					-12				-5	-11					-5	-12	-11						
14										1	-12													
15				-11			-10	-9		-9														
16		-10	-11					-5						0		1								
17				-8			-8		3															
18		-4	-7						-8															
19		4												7		-8								
20		-5	-10									-7												
21	-10	-10	-11					-6		-6														
22				-9							0													
23									-7															
24							2		2	-4		10												
25								F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F
26						-10	-10	-10	-10		-10			-10			-12							
27		-10						-10			-7	-5		-4	14		-2			7				
28																								
29																								
30														-9	7	-7	-8							
31																								
Mean	-7	-4	-10	-9			-7	-8	-4	-6	-8	-2	-3	-3	-3	-5	-2							

RADIO AURORA DATA F = 112 MHz

RANGE (km)

Syowa Station

45° EAST MERIDIAN TIME (U.T. + 3 hours)

NOVEMBER 1976

Day	00		01		02		03		04		05		06		07		08		09		10		11	
	.00	.30	.00	.30	.00	.30	.00	.30	.00	.30	.00	.30	.00	.30	.00	.30	.00	.30	.00	.30	.00	.30	.00	.30
1		330					300		310			320												
2	300							290			300	300	310											
3	300				300							300		300										
4		300										300												
5																								
6										310	310	310	300	340										
7																320	320							
8			300					310	310	330	320													
9		300		320								300	300	300										
10					300						300	300	300		310	320								
11			320												310									
12								310	310	310														
13	300				290				300	300				300	300	300								
14									310	290														
15				290		290	300		290															
16		300	300				310						300	310										
17				300			310		310															
18		320	330						310															
19		290											310		300									
20		330	310									320												
21	290	310	320				330		300															
22				290							320													
23									310			330												
24						310			310	300		300												
25							F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F
26					290	300	330	350		290			320			300								
27		300					290			300	320		300	310		320			310					
28																								
29																								
30												320	320	300	300									
31																								

RADIO AURORA DATA F = 112 MHz INTENSOTY (dB)

Syowa Station 45° EAST MERIDIAN TIME (U.T. + 3 hours) NOVEMBER 1976

Date	12		13		14		15		16		17		18		19		20		21		22		23	
	.00	.30	.00	.30	.00	.30	.00	.30	.00	.30	.00	.30	.00	.30	.00	.30	.00	.30	.00	.30	.00	.30	.00	.30
1																								
2															-5	-8	2	1	3	-4	-3		-8	
3																							-11	
4																								
5																								
6																								
7																								
8																								
9																								
10												-8					-10							
11								-2	1	-13	-2	-9	-3	-1		-7	-13				-11			
12												-12	-14											
13							-10		-2	-13		-12		0		-5		-10	-12					
14									-10	-8		-9				-8								
15														-10	-7	-2	-8						-11	-5
16													-10	-8										
17																								-10
18																								-9
19														-10										-10
20																								-12
21																								
22																								-10 -10
23																								
24																								
25										-7	-7					0	5	5	3	1	-7	-5	-1	-1
26												-6	-1	-3	-10	-1				-6				-6
27																								
28																								
29																-10	2							
30																-8								
31																								
Mean									-5	-7		-7	-8	-7	-6	-4	-4	-4	-3	-1	-7	-8	-9	-4

RADIO AURORA DATA F = 112 MHz RANGE (km)

Syowa Station 45° EAST MERIDIAN TIME (U.T. + 3 hours) NOVEMBER 1976

Day	12		13		14		15		16		17		18		19		20		21		22		23	
	.00	.30	.00	.30	.00	.30	.00	.30	.00	.30	.00	.30	.00	.30	.00	.30	.00	.30	.00	.30	.00	.30	.00	.30
1																								
2															300	310	330	300	330	300	320	300		
3																							320	
4																								
5																								
6																								
7																								
8																								
9																								
10											310					300								
11								310	320	310	310	320	310	310		330	320			310				
12												310	320											
13						300		300	300		300		320		320		300	280						
14								320	320		300			300										
15													300	320	310	300							340	320
16												300	310											
17																							320	
18																					320			
19													300										300	
20																						300		
21																								
22																						290	290	
23																								
24																								
25									320	310					310	310	300	300	310	290	290	320	320	
26										320	320	310	310	320				330					330	
27																								
28																								
29															300	310								
30															320									
31																								

RADIO AURORA DATA F = 112 MHz INTENSITY (dB)

Syowa Station 45° EAST MERIDIAN TIME (U.T. + 3 hours) DECEMBER 1976

Day	00		01		02		03		04		05		06		07		08		09		10		11	
	.00	.30	.00	.30	.00	.30	.00	.30	.00	.30	.00	.30	.00	.30	.00	.30	.00	.30	.00	.30	.00	.30	.00	.30
1																								
2																								
3																								
4											-6	-12				-9								
5	-11						0	-6						-10										
6									-12		-6													
7												4	-10											
8			-10				-8			-2	4	4	0					2	7	11			-8	
9																							-10	
10			-3	-5		-9							2		11									
11					-9		-12							4	12	11								
12	-12								-5															
13															-7	2								
14																								
15																								
16																								
17			-13																					
18					-9							-7	4	12	12	13	7	16	7					
19			-10			-9				-10				-10		-1								
20																								
21																								
22											-12	-5	-1	-5	2	2	12	0						
23										2		0	-9											
24																								
25										-8	0	2	4	3	0									
26	-11		-11			-11						-10												
27							-11																	
28																								
29	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F
30																								
31	F	-7	2											-10										
Mean	-11			-9		-10	-6	-9		-8	-3	-6	0	-3	0	4	5		6					

RADIO AURORA DATA $f_oF_2 = 11.2$ MHz RANGE (km)

Syowa Station

45° EAST MERIDIAN TIME (U.T. + 3 hours)

DECEMBER 1976

Day	00		01		02		03		04		05		06		07		08		09		10		11	
	.00	.30	.00	.30	.00	.30	.00	.30	.00	.30	.00	.30	.00	.30	.00	.30	.00	.30	.00	.30	.00	.30	.00	.30
1																								
2																								
3																								
4										290	290				380									
5	300					300	370						300											
6								300		350														
7												310	300											
8			350			310			290	300	310	300					320	310	320		340			
9																					290			
10			310	310		300						310		310										
11					290		320							360	320	310								
12	320								300															
13															290	300								
14																								
15																								
16																								
17			320																					
18					300							310	290	290	310	310	310	310	310					
19			330			320			300					300		320								
20																								
21																								
22										300	310	310	290	310	300	310	320							
23										310		310	320											
24																								
25									320	320	310	310	380	320										
26	310		300			330					310													
27							300																	
28																								
29	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F
30																								
31	F	310	300										310											

RADIO AURORA DATA

F = 112 MHz

INTENSITY (dB)

Syowa Station

45° EAST MERIDIAN TIME (U.T. + 3 hours)

DECEMBER 1976

Date	12		13		14		15		16		17		18		19		20		21		22		23	
	.00	.30	.00	.30	.00	.30	.00	.30	.00	.30	.00	.30	.00	.30	.00	.30	.00	.30	.00	.30	.00	.30	.00	.30
1																								
2																								
3																								
4										0	3	4	4	0	-5									
5																								
6																								
7																								
8					-6	-5	2	5	-8															
9										-10	-6	-7	-2	1	2	0	2	2	-3	-8				-10
10															-5	6	4	-4						
11																								
12										-7	0	4	-8	8	4	2	2	-9	-2					
13																								
14																								
15																								
16																-6				-8	-1	-7		
17																-11			-10	-5		-12		
18																					-12	-12		-4
19																								
20																								
21																								
22																								
23																								
24																								
25																								
26																								
27																								
28																								
29	F	F	F	F	F	F	F	F	F	F	4	7	3	-13		-10								
30																								
31																								
Mean																								

RADIO AURORA DATA

F = 112 MHz

RANGE (km)

Syowa Station

45° EAST MERIDIAN TIME (U.T. + 3 hours)

DECEMBER 1976

	12		13		14		15		16		17		18		19		20		21		22		23	
Day	.00	.30	.00	.30	.00	.30	.00	.30	.00	.30	.00	.30	.00	.30	.00	.30	.00	.30	.00	.30	.00	.30	.00	.30
1																								
2																								
3																								
4											300	300	300	310	310	300								
5																								
6																								
7																								
8				300	300	310	300	300																
9									300	320	310	300	320	390	300	310	310	310	300				300	
10														310	320	310	300							
11																								
12									310	310	310	310	320	320	320	310	290	310						
13																								
14																								
15																								
16														330				320	340	330				
17														300			320	310		300				
18																			320	300			320	
19																								
20																								
21																								
22													300	300	310			310	310	300			290	
23																								
24																								
25										320	310	300												
26																								
27																					320		300	300
28										F	F	F	F	F	F	F	F	F	F	F	F	F	F	F
29	F	F	F	F	F	F	F	F	F	F	310	320	320	290		290								
30												320	320	320	320	320	300	310		320				F
31																					300			