

ATMOSPHERIC NOISE MEASUREMENTS

Data Summary N° 3 - Station ARN-2 N° 10

by

L. G. MEIRA F°

and

F. DE MENDONÇA

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The measurements reported herein  
were performed in cooperation with  
the Radio Noise Section, Tropos -  
sphere and Space Telecommunica -  
tions Division of NBS - Boulder  
Laboratories

Comissão Nacional de Atividades Espaciais  
São José dos Campos  
São Paulo - Brasil

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## ABSTRACT

Under the designation of Project "OBRA", one of the sixteen Atmospheric Radio Noise Receiving Stations of the world-wide network supervised by the Boulder Laboratories, NBS, has been in operation at this Laboratory since August 1963.

This report presents the data collected during the period July - 64 - June 1965.

### I. DESCRIPTION OF DATA

This is a continuation of the reports LAFE - 13 and LAFE - 23 of this Laboratory.

The data presented were acquired through the standard ARN - 2 equipment developed by the National Bureau of Standards. Also the processing and presentation of data follow their recommendations. An exhaustive description can be found in the references.

It follows some pertinent information on the data:

Receiving site : São José dos Campos - Brazil ( 23.3°S, 45.8°W )

Time used : GMT minus 3 hours.

Receiver : ARN - 2 ( NBS ) with a vertical omnidirectional whip antenna above a ground plane.

Effective noise bandwidth : 200 c.p.s.

Data is presented in tables 1 to 12, as :

$F_{dm}$  = median value of daily  $F_a$  figures for a given hour ( local time ) over the month.

$D_u$  and  $D_l$  = upper and lower deciles of the distribution of daily values of  $F_a$  for a given hour.

$L_{dm}$  = median value of daily  $L_d$  figures for a given hour over the month.

$V_{dm}$  = the same for  $V_d$  figures.

where

$F_a$  = effective noise figure=external noise available from an equivalent short, lossless vertical antenna, in db above kTB ( Boltzmann's constant, absolute room temperature, taken as 288°C, and receiver bandwidth ) this can be converted to:

$E_n$  ( equivalent vertically polarized ground wave rms noise field strength in db above 1 V/m for a 1kc/s bandwidth ) through

$$E_n = F_a \cdot 20 \log_{10} f (\text{mc/s}) - 65.5$$

$L_d$  = db value of the ratio between the rms value and the logarithmic average of the noise envelope.

$V_d$  = db value of the ratio between the rms value and the average of the noise envelope.

A detailed description of the equipment and measurement technique employed can be found in the references .

The power measurements (  $F_a$  ) are obtained by integration on a 15 minutes interval, and this value is taken as representative of the conditions for the whole hour .

The eight channels are scanned two at a time, so that the four lower frequencies are recorded in successive intervals of fifteen minutes during one hour ; the same for the four higher ones, through another recorder.  $L_D$  and  $V_D$  are recorded simultaneously, one week with the high frequency channels and the next with the low frequency ones .

Hence, the measurements related to a given hour, for 51 kc/s and 2.5 mc/s were obtained between this hour and the hour plus fifteen minutes . The next two frequencies ( 113 kc/s and 5.0 mc/s ) between the hour plus fifteen minutes and the hour plus thirty minutes, and so on for the other pairs of simultaneous frequencies ( 246 kc/s with 10.0 mc/s, and 545 kc/s with 20.0 mc/s ) until the eight channels were scanned during one hour . This time difference between measurements was considered when the values of  $F_{am}$  were plotted ( figs. 1 to 12 ) .

Although special care is taken to avoid interference of man-made noise in the measurements, it is possible that sometimes the received signal is contaminated with fields other than atmospheric noise . In this case it has been verified ( Crichlow, et al., 1960 ) that the first parameter to reflect this is the log deviation (  $L_D$  ), whose absolute value will decrease so that, with the corresponding value of  $V_D$  they will not provide a solution for the amplitude probability as decided from experimental data by Crichlow, et al. ( 1960 ). The NBS has published ( Crichlow, Disney and Jenkins, 1959 ) curves that, for a given value of  $V_D$ , give the minimum value of  $L_D$  providing a solution of the amplitude probability distribution curve of the kind proper to atmospheric noise; also, the value of  $L_D$  that will give a best - fit to this solution . The above authors suggest that, whenever a value of  $L_D$  is found to be smaller than the minimum required, implying in a possible contamination of the signal, the most probable value of  $L_D$  should be used instead of the actually recorded one . This suggestion has been followed throughout this summary; a small circle above an  $L_{Dm}$  value indicates a quantity which is not the actually measured value, but a quantity obtained from the corresponding  $V_D$  from the above referred curves .

Figures 1 to 12 present the data in graphical form . The vertical thin lines indicate the variation during the month of the local sunrise and sunset time .

An asterisk above a median value indicates it was obtained from less than fifteen measurements for  $F_{am}$  or less than seven measurements for  $L_{Dm}$  and  $V_{Dm}$  .

## II . REFERENCES

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**MONTH-HOUR VALUES OF RADIO NOISE** Station São José, Brasil Lat. 23.3°S Long. 45.89W Month July 1964

Frequency (Mc)															
.051				.113				.246				.545			
EST	Fam	Du	D <sub>2</sub>	Vdm	Ldm	Fam	Du	D <sub>2</sub>	Vdm	Ldm	Fam	Du	D <sub>2</sub>	Vdm	Ldm
00	121	12	6	7.5	12.0	108	10	6	6.0	10.0	97	9	7	6.0	10.5
01	120	13	6	7.5	13.5	108	12	6	6.5	12.0	95	11	5	6.5	11.0
02	121	12	6	8.0	14.5	106	14	6	6.0	10.0	95	13	5	6.5	11.5
03	119	14	5	8.5	15.0	106	13	7	6.5	12.0	93	12	6	7.0	12.5
04	119	14	5	8.0	14.5	102	18	3	6.5	11.0	93	10	8	6.5	12.0
05	119	14	4	9.5	17.0	104	14	6	7.0	12.5	91	12	7	7.5	12.0
06	117	16	4	8.0	13.5	98	16	8	7.0	12.5	78	13	5	8.0	14.5
07	111	14	4	5.0	9.0	90	17	8	2.0	4.0	77	8	4	5.5	9.0
08	109	16	4	5.0	9.0	93	14	9	3.5	6.5	79	5	5	8.5	14.5
09	113	10	6	2.5	5.0	94	8	8	4.0	7.5	79	4	5	7.5	13.5
10	112	18	5	3.0	6.0	90	18	7	4.5	8.5	79	6	4	5.5	10.0
11	113	13	8	2.5	5.0	90	20	4	4.0	7.5	79	8	4	7.0	12.5
12	113	16	10	4.0	7.5	88	19	4	2.0	4.0	77	9	2	7.5	13.5
13	113	19	4	4.5	8.5	92	16	6	4.5	8.5	77	8	2	8.0	14.5
14	114	15	5	3.5	6.5	96	12	8	5.5	10.0	77	11	2	9.0	16.0
15	117	14	8	2.5	5.0	98	12	12	5.5	10.0	79	12	6	7.0	12.5
16	119	12	10	3.0	6.0	100	7	12	5.0	9.0	79	10	4	8.5	15.0
17	117	15	10	7.5	13.5	98	15	9	3.0	6.0	85	12	10	4.5	10.0
18	120	9	11	5.0	9.0	103	14	13	9.0	16.0	89	15	11	8.0	13.5
19	122	9	12	6.5	12.0	104	16	7	7.0	12.5	91	16	6	8.0	13.0
20	117	14	6	6.0	11.0	107	11	11	6.5	12.0	93	8	4	6.5	11.0
21	119	12	9	7.5	13.5	106	12	7	6.5	12.0	93	12	4	7.5	14.5
22	119	12	6	7.5	13.5	106	11	6	7.0	12.5	95	12	5	6.5	12.0
23	119	11	5	7.5	13.5	108	10	6	6.0	10.0	97	10	7	6.5	12.0

Fam = median value of effective antenna noise in db above ktb

D<sub>1</sub> = ratio of upper decile to median in db

D<sub>2</sub> = ratio of median to lower decile in db

Vdm = median deviation of average voltage in db below mean power

Ldm = median deviation of average logarithm in db below mean power

**MONTH-HOUR VALUES OF RADIO NOISE**      Station São José, Brasil      Lat. 23. 39S Long. 45. 8°W      Month August 1964

EST	.051	.113						.246						.545						2. 5						5. 0						10. 0									
		F <sub>am</sub>	D <sub>u</sub>	D <sub>L</sub>	V <sub>dm</sub>	L <sub>dm</sub>	F <sub>am</sub>	D <sub>u</sub>	D <sub>L</sub>	V <sub>dm</sub>	L <sub>dm</sub>	F <sub>am</sub>	D <sub>u</sub>	D <sub>L</sub>	V <sub>dm</sub>	L <sub>dm</sub>	F <sub>am</sub>	D <sub>u</sub>	D <sub>L</sub>	V <sub>dm</sub>	L <sub>dm</sub>	F <sub>am</sub>	D <sub>u</sub>	D <sub>L</sub>	V <sub>dm</sub>	L <sub>dm</sub>	F <sub>am</sub>	D <sub>u</sub>	D <sub>L</sub>	V <sub>dm</sub>	L <sub>dm</sub>										
00	135	5	13	6.5	12.0	11.9	8	1.5	5.5	10.0	1.03	9	11	5.0	9.5	3.0	9	4.0	7.5	6.4	1.2	6	4.5	8.0	80	8	24	4.5	8.0	38	7	8	3.0	6.0	23	2	2	1.5	3.5		
01	131	10	8	7.0	12.0	11.8	8	1.4	5.5	9.5	1.02	11	10	5.0	9.0	9.0	3	8	3.5	6.5	6.8	9	11	5.5	10.0	64	11	12	4.5	8.0	36	10	5	3.0	6.0	23	2	0	2.0	4.0	
02	133	8	10	6.5	12.0	12.0	6	1.5	5.5	9.5	1.03	9	11	5.5	10.0	8.9	10	6	4.5	8.0	68	10	14	5.0	9.5	62	13	9	5.0	9.0	36	10	5	3.0	6.0	23	2	2	2.0	4.0	
03	133	8	10	8.0	13.0	11.8	7	1.4	6.5	12.5	1.02	10	12	5.5	10.0	8.7	8	6	5.0	8.5	68	10	15	5.0	9.0	70	10	11	5.0	9.0	32	14	4	3.0	6.0	23	2	2	2.5	5.0	
04	133	9	10	9.0	16.0	11.6	8	1.4	7.5	14.0	1.00	10	10	5.5	9.5	8.8	7	7	4.5	8.0	66	12	13	4.5	9.0	64	10	16	4.5	8.0	30	10	6	3.0	6.0	23	0	2	2.0	4.0	
05	133	8	10	8.0	13.0	11.6	8	1.4	8.5	14.5	9.8	8	10	6.0	11.0	8.9	6	6	5.0	9.0	66	10	12	5.0	9.0	62	12	12	4.0	8.5	30	6	6	2.5	5.0	23	2	2	1.0	2.5	
06	129	10	6	8.5	14.0	10.3	13	11	8.0	13.0	8.0	12	6	4.0	7.5	8.9	4	6	5.5	11.5	66	12	13	4.5	8.5	66	8	18	5.0	9.0	32	9	4	4.0	7.5	21	2	0	1.0	3.0	
07	125	8	10	6.0	11.0	10.0	10	14	10.0	17.5	17.8	8	4	8.0	14.5	8.9	4	4	3.5	7.5	60	8	12	5.0	9.0	78	4	14	4.0	9.5	34	13	6	4.0	7.5	23	2	2	2.5	5.0	
08	121	12	8	10	11.5	9.8	13	10	8.0	14.5	19	8	5	7.5	13.5	8.9	4	6	7.0	12.5	50	14	10	5.0	9.0	72	4	16	5.5	10.5	33	16	6	5.0	9.0	23	4	2	3.0	6.0	
09	121	12	8	6.5	12.5	9.6	12	8	8.5	15.0	7.8	8	4	8.0	14.5	9.0	3	8	6.0	11.0	44	6	8	5.0	9.0	65	5	15	4.5	10.0	38	6	8	6.0	11.0	23	2	2	2.0	5.0	
10	121	10	8	3.0	6.0	6.0	9.8	8	10	4.5	8.5	18	5	2	6.5	12.0	8.9	4	4	4.5	9.0	44	4	7	5.5	10.0	60	4	8	6.0	11.0	36	7	9	6.0	11.0	23	7	2	2.0	4.0
11	122	10	8	5.5	10.0	9.6	12	6	6.0	11.0	1.8	4	2	8.0	14.5	8.9	4	8	5.0	12.0	42	3	7	4.0	7.5	56	6	8	7.0	12.0	33	10	7	6.5	11.0	23	6	2	3.5	6.5	
12	121	11	8	4.5	9.0	9.4	12	8	5.0	9.0	7.8	4	4	4.5	8.5	8.7	4	6	5.0	10.0	42	2	7	4.5	8.5	56	6	12	6.0	10.5	34	6	7	5.0	9.0	25	5	4	2.5	5.0	
13	121	10	6	5.0	9.0	9.6	9	9	3.5	7.0	7.8	5	2	6.5	12.0	8.7	2	4	5.0	11.0	41	5	7	3.5	6.5	58	4	12	9.5	11.0	35	8	9	10	12.5	25	6	4	3.0	6.0	
14	123	14	9	5.5	10.0	10.4	6	13	6.0	11.0	8.0	6	4	8.0	14.5	8.5	4	1	3.5	9.0	42	2	4	6.5	12.0	58	4	13	5.5	10.0	36	6	10	15	13.5	25	16	4	2.5	5.0	
15	125	8	10	5.5	10.0	10.0	11	12	8.0	14.0	8.0	10	4	5.5	10.0	8.4	6	13	4.5	10.0	44	6	4	6.0	11.0	62	8	12	6.5	11.0	40	4	12	4.5	8.0	29	18	6	3.5	6.5	
16	125	10	10	6.5	12.0	9.8	12	6	5.5	10.0	8.0	12	4	6.5	12.0	8.9	2	10	5.0	9.0	45	9	9	6.0	11.0	66	10	11	7.5	13.5	46	2	10	4.0	7.5	29	14	6	3.0	6.0	
17	125	10	8	4.0	7.5	3.9	11	13	6.5	12.0	8.2	11	4	5.0	9.0	8.5	5	8	6.5	11.0	52	10	6	5.0	9.0	74	8	13	6.0	11.0	48	8	12	4.0	7.5	21	8	4	4.0	7.5	
18	123	14	7	7.5	13.5	10.8	13	18	6.5	12.5	8.8	13	9	6.5	11.5	8.5	6	6	4.5	8.0	64	8	12	5.0	10.0	74	5	10	4.5	9.0	48	7	11	4.0	7.5	25	8	2	3.0	6.0	
19	128	9	11	7.0	12.5	11.0	12	16	7.0	12.5	9.6	10	13	5.5	9.5	8.7	6	7	4.0	8.0	68	8	13	6.0	11.0	54	6	10	5.0	9.5	42	11	8	4.0	7.5	23	8	1	2.0	4.0	
20	131	8	10	8.5	15.0	11.4	9	14	7.0	12.5	10.2	7	15	5.5	10.0	9.1	5	6	4.0	8.0	66	9	8	4.5	8.5	76	8	9	6.5	11.5	40	10	8	3.0	6.0	23	7	2	3.5	6.5	
21	133	6	10	9.0	16.0	11.4	11	13	8.0	14.5	10.2	8	12	6.5	11.0	9.1	7	6	4.5	8.0	68	8	10	4.5	8.5	74	8	12	5.0	11.0	38	8	8	4.0	7.5	23	6	2	2.5	5.0	
22	133	6	12	8.5	14.0	11.6	11	14	5.0	9.0	10.4	6	13	6.0	11.0	9.1	6	8	5.0	9.0	67	8	8	4.5	8.5	76	8	16	4.0	7.5	38	10	8	3.5	6.0	23	6	2	1.5	3.5	
23	134	7	13	8.0	13.0	11.6	11	12	7.5	13.5	10.0	12	9	5.5	10.0	8.9	8	5	5.0	9.5	64	11	5	4.5	8.0	17	8	12	4.0	7.5	36	11	5	4.0	7.5	23	4	1	1.5	3.5	

F<sub>am</sub> = median value of effective antenna noise in db above kdb

D<sub>u</sub> = ratio of upper decile to median in db

D<sub>L</sub> = ratio of median to lower decile in db

V<sub>dm</sub> = median deviation of average voltage in db below mean power

L<sub>dm</sub> = median deviation of average logarithm in db below mean power

**MONTH-HOUR VALUES OF RADIO NOISE** Station São José, Brasil Lat. 23.3°S Long. 45.8°W Month September 1964

ES <sup>a</sup>	Frequency (Mc)																									
	.051			.113			.246			.545			2.5			5.0			10.0			20.0				
00	132	10	8	8.0	14.5	11.7	10	7	6.5	11.0	10.5	8	8	5.5	10.0	9.0	8	4	5.0	9.0	6.3	8	9	5.0	10.0	
01	132	8	8	7.5	13.5	11.8	9	8	8.0	13.5	10.3	9	8	7.0	12.5	9.0	6	6	5.0	8.5	6.1	10	6	6.5	11.0	
02	133	7	9	9.0	14.5	11.7	8	7	7.0	12.0	10.5	6	10	9.0	16.0	9.1	6	7	5.0	9.0	6.3	11	10	4.5	9.0	
03	133	7	6	7.5	12.5	11.6	9	6	6.0	11.0	10.2	9	8	6.0	11.5	8.9	7	5	5.5	10.0	6.1	10	8	5.5	10.0	
04	132	8	6	9.0	16.0	11.6	8	6	7.0	13.0	10.1	7	6	6.0	11.0	9.0	6	7	5.5	10.0	6.1	10	9	5.0	10.0	
05	134	5	8	9.5	16.0	11.5	8	7	6.0	11.0	9.8	7	7	7.5	13.0	8.9	4	11	5.0	10.0	6.1	10	8	4.5	10.0	
06	128	7	8	7.5	13.5	10.1	11	9	6.0	10.5	8.1	10	6	8.0	14.5	8.1	6	5	6.0	11.0	5.8	11	7	5.0	10.5	
07	122	12	12	10.5	17.0	9.1	14	5	6.0	11.0	7.9	14	7	6.0	11.0	9.0	3	4	4.0	9.0	4.9	10	6	5.0	10.5	
08	121	11	13	10.0	17.5	9.9	14	8	6.0	10.0	8.1	14	6	5.5	10.5	8.8	6	4	6.0	12.5	3.9	10	4	4.0	10.5	
09	124	10	14	11.5	11.0	9.8	14	8	5.5	9.5	8.1	10	4	8.0	14.5	8.8	9	7	5.5	11.0	3.5	9	2	4.5	10.5	
10	124	8	14	9.0	15.5	9.6	15	6	8.0	14.5	8.1	10	4	7.5	13.5	9.2	4	6	6.0	10.5	3.5	9	2	4.5	10.5	
11	126	8	16	3.5	9.5	10.0	14	8	6.0	11.5	8.2	7	5	8.5	15.0	8.8	5	3	7.0	13.0	3.3	5	2	4.0	10.5	
12	124	12	16	10.5	18.5	10.0	12	10	8.0	14.5	7.9	14	2	8.5	15.0	9.0	2	5	7.0	14.0	3.3	9	3	4.0	10.5	
13	126	10	14	8.5	13.5	10.0	14	8	8.0	14.5	8.1	13	4	9.0	16.0	8.8	6	6	5.0	9.0	6.3	11	12	4	5.0	10.0
14	128	8	10	8.0	14.5	10.2	17	8	8.5	13.5	8.1	19	4	8.0	14.5	9.0	4	6	6.0	12.3	3.3	3	2	4.0	10.5	
15	128	13	7	5.5	9.5	10.4	21	9	5.0	9.0	8.3	26	4	7.5	13.5	9.0	8	5	5.5	9.5	3.5	12	2	4.5	10.5	
16	130	14	6	6.5	12.0	10.8	11.9	12	5.0	9.0	8.5	27	6	9.0	16.0	9.0	10	4	7.5	12.5	4.0	21	5	6.0	11.0	
17	128	18	18	9	6.0	11.0	10	5.7	12.2	12	5.5	10.0	26	6	8.5	13.0	8.4	15	6	7.0	11.5	6.9	19	6	5.0	10.5
18	128	17	11	7.0	12.5	10.8	21	10	9.0	14.5	9.5	20	9	7.5	13.0	8.8	15	8	5.5	10.0	5.8	15	8	6.0	10.5	
19	132	16	10	6.5	11.0	11.4	18	8	6.5	12.0	10.1	15	8	6.0	11.0	9.0	11	5	5.5	10.0	6.3	11	10	5.0	10.5	
20	132	13	9	7.5	13.5	11.6	11	7	6.0	11.0	10	11	11	6.0	10.0	9.2	10	5	5.0	9.0	6.5	11	7	5.0	10.5	
21	132	13	7	6.0	11.0	11.9	11	9	6.0	10.0	10.5	11	9	6.0	10.0	9.2	7	5	4.5	8.5	6.3	12	6	4.5	10.5	
22	132	9	8	6.5	12.0	11.7	10	7	5.5	10.0	10.5	7	8	5.5	10.0	9.2	7	7	6.0	11.0	6.3	10	6	5.0	10.5	
23	132	8	8	8.0	14.5	11.6	8	6	7.0	12.5	10.3	7	7	6.0	11.0	9.2	5	6	6.0	11.0	6.1	11	8	6.0	10.5	

F<sub>m</sub> = median value of effective antenna noise in db above ktb

D<sub>U</sub> = ratio of upper decile to median in db

D<sub>S</sub> = ratio of median to lower decile in db

V<sub>m</sub> = median deviation of average voltage in db below mean power

L<sub>dm</sub> = median deviation of average logarithm in db below mean power

# MONTH-HOUR VALUES OF RADIO NOISE

Station

São José, Brasil Lat. 23. 39S Long. 45. 89W Month October 1964

Frequency (Mc)

.51 .113 .246 .545 2.5 5.0 10.0 20.0

US	Fm	D <sub>1</sub>	D <sub>2</sub>	V <sub>m</sub> -dm	F <sub>m</sub>	D <sub>1</sub>	V <sub>m</sub>	L <sub>dm</sub>	F <sub>m</sub>	D <sub>1</sub>	V <sub>m</sub>	L <sub>dm</sub>	F <sub>m</sub>	D <sub>1</sub>	V <sub>m</sub>	L <sub>dm</sub>	F <sub>m</sub>	D <sub>1</sub>	V <sub>m</sub>	L <sub>dm</sub>	F <sub>m</sub>	D <sub>1</sub>	V <sub>m</sub>	L <sub>dm</sub>	F <sub>m</sub>	D <sub>1</sub>	V <sub>m</sub>	L <sub>dm</sub>													
00	137	8	6	7.0	12.0	12.1	6	6	5.5	10.0	11.1	4	6	6.0	10.5	9.5	6	6	5.0	9.5	7.1	4	8	4.5	12.0	6.9	4	6	7.0	13.0	4	6	8.5	11.0	24	4	2	2.5	5.0		
01	137	6	6	7.0	12.0	12.0	7	5	6.0	11.0	10.9	6	6	5.5	10.0	9.5	6	6	5.0	9.5	6.9	6	8	8.0	13.5	5.9	6	6.0	11.0	24	6	2	3.0	6.0							
02	137	8	6	7.0	12.0	12.1	6	7	7.0	11.5	10.9	4	9	6.0	11.0	9.5	4	10	6.5	8.5	6.9	6	8	7.0	13.5	5.8	7	7	7.0	12.0	4.5	6	6	5.5	10.0	22	8	2	2.5	5.0	
03	137	8	8	8.0	13.5	12.1	6	10	7.0	12.0	10.9	4	10	5.0	9.5	9.3	6	6	5.0	9.0	6.7	8	8	6.5	12.0	5.8	7	9	8.0	14.5	4.3	6	6	5.5	10.0	22	2	2	2.0	4.0	
04	135	10	8	7.0	13.0	11.9	7	10	6.0	10.5	10.7	6	10	6.0	12.0	9.2	5	7	5.0	9.5	6.7	6	10	6.0	11.0	6.5	6	10	5.5	10.0	40	11	7	6.0	11.0	22	6	2	2.0	4.0	
05	134	7	9	8.0	14.0	11.1	12	6	7.0	12.5	9.1	10	6	7.5	15.5	8.5	4	2	6.0	10.5	6.5	6	10	6.0	10.5	6.2	5	5	9.5	42	7	11	5.5	10.0	22	4	2	3.0	6.0		
06	127	11	12	8.0	14.5	10.4	13	12	10.0	17.5	8.5	10	8	8.0	16.5	8.9	4	6	5.0	10.0	5.9	5	6	5.0	10.0	5.3	4	6	7.5	13.5	4.3	4	8	8.0	14.5	22	4	2	2.5	5.0	
07	123	11	6	7.5	13.5	10.4	10	8	7.0	12.5	8.3	12	6	7.0	12.5	9.1	2	4	6.0	13.5	4.7	6	8	6.0	11.0	4.5	6	2	7.0	12.5	41	6	8	7.0	12.0	24	4	2	3.0	6.0	
08	127	13	10	5.0	9.5	10.5	8	8	7.0	12.5	8.3	12	6	7.5	13.5	8.9	6	2	6.5	11.5	3.9	7	6	5.0	9.5	4.5	6	2	6.0	11.0	39	8	10	9.5	12.0	24	4	4	4.0	7.5	
09	127	7	9	4.5	8.0	8.0	7	7	8.0	13.0	8.3	12	4	9.0	14.5	8.9	10	6	3.5	6.5	3.7	6	6	7.0	12.5	4.1	5	4	6.0	11.0	37	6	6	8.0	14.5	24	4	4	3.0	6.0	
10	129	9	10	7.0	12.0	10.4	9	7	10.0	16.0	8.5	12	6	7.0	12.5	9.1	8	4	9.0	10.0	3.7	7	6	5.5	10.0	3.9	4	6	8.0	14.5	39	6	8	9.0	16.0	24	6	2	3.5	6.5	
11	129	10	6	7.0	12.5	10.7	12	8	6.5	12.0	8.7	28	6	6.5	12.0	8.9	11	4	4.5	8.5	3.7	19	6	6.5	12.0	9.0	13	6	8.0	13.5	37	10	8	8.0	13.0	24	9	2	4.0	7.5	
12	131	14	8	7.6	12.0	10.7	18	8	7.5	13.0	8.5	27	6	5.5	10.0	8.9	8	6	5.0	10.0	3.5	36	4	5.0	9.5	3.5	16	4	6.5	11.5	37	8	2	7.5	13.5	24	6	2	4.0	7.5	
13	131	14	6	7.0	12.5	11.0	15	9	6.5	11.0	9.1	23	8	9.0	16.0	8.0	11	3	5.5	11.5	3.7	28	5	5.5	12.0	3.8	17	5	8.0	14.0	41	7	5	6.5	12.0	28	4	3	4.0	7.5	
14	134	10	5	6.5	12.0	11.3	11	6	5.5	10.0	9.1	17	10	5.5	16.0	9.1	10	7	7.0	13.0	4.1	19	8	8.0	16.0	4.1	18	2	7.0	12.5	43	10	4	6.0	11.0	30	4	4	4.0	7.5	
15	137	11	5	7.0	12.5	11.7	12	8	8.0	16.0	9.7	18	6	11.5	20.0	9.1	13	10	6.5	16.0	5.3	16	13	8.5	16.0	4.8	11	6	8.0	16.0	45	9	2	6.0	11.0	32	5	4	4.0	7.5	
16	139	8	4	6.0	9.0	11.3	11	8	7.0	12.0	9.7	24	6	6.0	15.0	9.2	13	9	6.0	17.0	5.3	19	10	6.5	17.0	5.5	9	4	6.0	11.0	49	8	2	5.5	10.0	34	2	4	4.0	7.5	
17	137	12	4	6.5	12.0	11.3	19	4	8.5	16.0	9.5	21	6	8.5	14.5	8.9	2	5.0	9.5	58	17	3	7.0	12.5	61	4	4	5.0	9.5	51	6	4	5.0	9.5	34	4	4	4.0	7.5		
18	139	16	4	7.5	13.5	11.7	12	6	7.0	12.0	10.5	8	6	5.5	10.0	9.1	13	10	6.5	12.0	6.5	16	13	8.5	16.0	5.5	4	6	5.5	10.0	51	4	2	5.0	9.5	32	5	4	4.0	7.5	
19	139	8	6	6.5	11.0	12.1	10	6	6.0	9.0	10.7	8	4	5.5	10.0	9.5	6	4	5.0	9.5	72	5	5	5.5	10.5	51	4	4	5.5	10.5	51	4	2	6.0	10.0	34	2	4	4.5	8.5	
20	139	6	4	6.0	9.0	11.0	12.1	10	4	5.0	9.5	10.9	8	4	5.0	9.5	9.7	4	6	4.0	7.5	73	4	6	7.0	12.5	67	4	2	5.5	10.0	51	2	6	5.5	10.0	28	6	4	4.0	7.5
21	134	4	6	5.5	10.0	12.3	6	6	5.0	9.0	11.1	6	6	5.5	9.5	9.7	4	6	4.0	7.5	71	6	4	6.5	12.0	64	5	3	4.0	7.5	48	5	5	5.5	9.5	24	8	2	3.0	6.0	
22	139	4	6	7.0	12.0	12.3	4	6	5.5	10.0	11.1	4	6	5.0	9.5	9.5	6	4	4.5	8.5	71	6	6	6.0	11.0	68	5	3	5.0	10.0	47	6	6	6.0	10.0	25	6	3	3.0	6.0	
23	137	6	4	7.0	12.5	12.1	6	6	6.0	11.0	11.1	4	6	6.0	10.5	9.7	4	6	4.5	8.0	71	4	6	7.0	12.0	69	2	6	6.5	12.0	45	8	4	6.5	12.0	24	10	2	3.0	6.0	

Fm = median value of effective antenna noise in db above ktb

D<sub>1</sub> = ratio of upper decile to median in db

D<sub>2</sub> = ratio of median to lower decile in db

V<sub>m</sub> = median deviation of average voltage in db below mean power

L<sub>dm</sub> = median deviation of average logaritum in db below mean power

MONTH-HOUR VALUES OF RADIO NOISE Station São José, Brasil Lat. 23° 39'S Long. 45.89W Month November 19 64

F <sub>S</sub>	Frequency (Mc)											
	0.51	1.13	2.46	5.45	2.5	5.0	10.2	10.0				
00 134 8 4 8.0 14.0 11.8 10 6 7.0 12.0 10.6 7 7 6.0 11.5 9.1 7 4 5.0 9.5 6.6 8 5 5.5 9.5 7.1 4 11 7.0 11.5 4.6 8 4 #0.75 25 8 2 3.5 6.5												
01 134 9 4 7.5 14.5 12.0 6 8 6.0 11.5 10.5 8 6 7.5 14.0 9.1 6 4 5.0 9.5 6.6 7 6 6.0 11.0 5.9 8 6 5.5 9.0 4.5 7 4 5.0 9.5 27 4 4 2.0 4.0												
02 133 7 3 8.0 14.0 11.8 9 5 7.0 12.5 10.3 9 5 6.5 12.5 8.9 6 4 5.0 9.0 6.6 7 8 6.0 10.5 5.9 6 6 6.0 10.0 4.7 6 10 5.0 9.5 25 4 4 2.0 4.0												
03 132 9 4 8.0 14.0 11.7 11 5 6.0 11.0 10.1 9 7 7.5 14.0 8.7 8 4 5.5 10.5 6.4 9 7 6.0 11.0 5.7 8 6 6.0 11.0 4.5 8 9 4.5 8.0 25 2 2 2.5 5.0												
04 134 10 6 9.0 15.0 11.4 13 4 7.0 12.0 9.8 14 6 8.0 14.0 8.5 10 5 5.5 11.0 6.4 10 8 6.0 11.0 5.5 11 4 6.0 11.0 4.3 10 8 4.5 8.5 25 1 2 2.0 4.0												
05 128 7 8 8.5 15.0 10.5 6 9 9.0 14.5 8.1 12 6 10.5 18.5 8.1 11 9 6.5 12.0 6.0 12 9 6.5 12.0 6.5 5 12 5.0 9.0 4.5 7 6 5.0 9.5 25 2 2 2.5 5.0												
06 123 9 6 8.0 13.0 9.9 10 7 9.5 17.0 7.8 11 7 5.5 10.0 8.5 8 6 6.0 11.0 5.2 10 6 6.0 11.0 5.9 10 12 5.0 10.5 4.5 7 9 6.0 11.0 4.5 8 9 4.5 8.0 25 2 2 2.5 5.0												
07 120 11 4 7.0 12.5 10.0 9 8 9.5 17.0 7.9 15 4 7.0 12.5 9.1 4 13 6.5 8.5 6.2 8 6 6.0 10.5 5.3 6 8 7.0 12.0 4.1 8 8 7.5 13.5 27 4 2 2.5 5.0												
08 122 13 6 8.0 14.5 10.2 16 8 8.0 13.0 8.1 23 6 8.0 14.5 8.9 4 22 4.0 7.5 3.8 14 8 3.0 6.0 4.5 8 8 5.0 9.0 3.8 9 9 5.0 9.5 27 8 4 2.5 5.0												
09 126 10 8 8.5 15.0 10.2 14 12 6.0 8.0 8.1 19 6 7.5 13.5 8.7 6 8 4.0 8.5 3.6 15 4 5.5 10.0 3.9 14 2 7.0 12.0 3.7 8 8 7.0 12.5 27 6 4 2.5 4.0												
10 126 8 8 9.0 16.0 10.2 10 8 10.0 17.5 8.0 11 7 10.5 18.5 9.0 3 9 5.0 9.0 3.6 9 4 5.0 9.5 3.9 4 8 7.0 11.5 3.5 10 6 7.5 13.5 27 2 2 2.5 5.0												
11 126 7 9 9.5 17.0 10.1 10 8 7.5 13.5 8.5 11 10 6.5 12.0 8.9 4 12 7.0 13.0 3.6 6 2 4.0 7.5 3.8 3 5 7.5 13.5 35 6 4 7.5 13.0 27 6 4 3.0 6.0												
12 129 11 7 10.0 17.5 10.6 21 6 9.5 17.0 8.7 30 10 10.0 17.5 9.1 8 10 6.0 12.0 3.4 3.2 3 3.0 6.0 3.7 18 6 5.0 9.5 3.8 10 6 7.0 12.5 29 8 4 3.5 6.5												
13 130 14 4 8.0 13.0 10.6 26 6 8.0 14.5 8.7 34 10 10.0 17.5 9.1 8 10 5.5 11.0 3.8 3.3 8 4.5 8.5 4.1 18 8 4.5 8.0 3.9 10 4 6.5 12.0 29 8 4 3.0 6.0												
14 132 13 4 7.5 13.5 10.8 21 6 7.5 13.5 8.5 32 8 10.0 17.5 8.9 12 8 6.0 11.0 4.0 2.9 8 6.0 11.5 4.3 13 6 7.5 13.5 35 4.1 10 4 5.0 9.5 31 6 5 4.0 7.5												
15 134 12 6 7.5 12.5 11.0 19 6 6.0 11.0 8.9 28 9 9.5 15.5 8.9 12 14 4.5 8.5 4.0 2.9 8 8.5 14.0 4.5 14 4 6.0 10.0 4.5 12 6 5.0 9.5 32 9 5 4.0 7.5												
16 134 10 4 6.0 11.0 11.3 12 9 8.0 14.5 8.9 22 10 8.0 14.5 9.0 5 7 6.0 12.0 4.4 2.0 8 6.0 11.0 5.3 8 10 7.0 13.0 4.7 6 6 5.0 9.5 35 2 6 4.0 7.5												
17 134 8 6 6.0 11.0 11.3 16 11 8.5 15.0 9.2 23 13 7.5 13.5 8.9 7 11 6.0 12.5 5.2 13 10 7.0 12.0 5.9 7 10 6.0 10.0 5.0 4 5 5.0 9.5 35 2 6 4.0 7.5												
18 133 10 7 7.0 12.5 11.4 12 9 8.5 15.0 9.8 12 5 5.0 10.0 8.7 6 4 5.0 9.5 6.0 8 17 7.0 12.0 6.3 6 3 6.0 10.0 5.1 4 5 5.0 9.5 33 2 6 4.0 7.5												
19 134 6 4 7.0 12.5 11.8 7 4 5.5 10.0 10.5 6 5 5.5 10.0 9.1 4 4 4.5 8.0 6.8 5 8 5.0 9.0 6.5 9 6 4.0 7.5 5.1 4 5 5.0 9.5 31 2 6 4.0 7.5												
20 136 6 4 6.0 10.0 12.0 4 6 6.0 11.0 10.5 6 4 5.5 10.0 9.1 6 2 6.0 10.5 6.8 8 4 5.0 9.5 6.7 5 3 4.5 8.0 5.1 2 6 4.0 7.5 29 4 3 3.5 6.5												
21 135 7 3 6.0 10.0 12.0 5 6 6.0 11.0 10.6 5 3 6.5 11.5 9.1 4 3 4.0 7.5 6.8 6 4 5.0 9.5 6.7 9 5 5.0 9.0 6.7 9 5 5.5 6.5 47 5 4 2.5 5.0												
22 136 8 4 6.5 11.0 12.0 5 5 5.0 9.0 10.7 7 6 6.0 11.0 9.1 6 4 4.5 8.0 6.7 7 4 6.0 11.0 6.9 6 7 5.0 9.0 4.7 6 4 5.5 10.0 27 4 3 3.5 6.5												
23 134 10 4 7.0 12.5 11.8 10 4 6.0 11.0 10.7 7 6 6.5 11.5 9.1 5 5 5.0 9.0 6.8 7 6 5.0 9.0 6.7 9 6 3.5 6.5 47 5 4 2.5 5.0												

F<sub>m</sub> = median value of effective antenna noise in db above kitb

D<sub>u</sub> = ratio of upper decile to median in db

D<sub>l</sub> = ratio of median to lower decile in db

V<sub>dm</sub> = median deviation of average voltage in db below mean power

L<sub>dm</sub> = median deviation of average logarithm in db below mean power

**MONTH-HOUR VALUES OF RADIO NOISE**      Station São José, Brasil      Lat. 23. 39S Long: 45. 89W      Month December 19 64

Date	Frequency (Mc)												Frequency (Mc)																			
	0.51				1/3				2/6				5/5				2.5				5.0				10.0							
Fam	D <sub>U</sub>	D <sub>L</sub>	V <sub>dm</sub>	L <sub>dm</sub>	Fam	D <sub>U</sub>	D <sub>L</sub>	V <sub>dm</sub>	L <sub>dm</sub>	Fam	D <sub>U</sub>	D <sub>L</sub>	V <sub>dm</sub>	L <sub>dm</sub>	Fam	D <sub>U</sub>	D <sub>L</sub>	V <sub>dm</sub>	L <sub>dm</sub>	Fam	D <sub>U</sub>	D <sub>L</sub>	V <sub>dm</sub>	L <sub>dm</sub>	Fam	D <sub>U</sub>	D <sub>L</sub>	V <sub>dm</sub>	L <sub>dm</sub>			
00 140	6	9	6.5	1.0	120	8	6	6.0	1.0	104	8	6	7.0	1.25	93	4	6	4.0	0.75	67	6	8	6.5	11.0	61	6	9	6.0	10.0	4.5	6	6.0
01 138	8	7	8.0	14.5	118	10	6	5.0	9.0	104	6	6	5.0	9.0	91	6	6	4.5	0.85	67	6	10	6.0	11.5	59	5	9	5.5	10.5	4.3	9	6.0
02 138	8	8	6.5	11.5	118	8	7	5.0	10.0	102	8	6	5.0	9.0	89	8	4	4.5	0.85	66	7	9	7.0	12.0	57	6	7	5.0	9.5	4.3	9	8
03 138	9	10	6.5	11.5	116	10	6	6.5	11.0	100	8	4	5.5	9.5	89	6	8	5.5	0.0	66	7	8	6.0	10.5	57	6	8	6.0	10.0	4.3	7	9
04 138	8	8	7.0	11.5	116	8	8	6.0	10.5	100	8	6	6.0	10.5	87	7	8	4.5	0.85	66	7	10	8.0	14.0	57	6	10	7.0	12.0	4.3	8	8
05 132	8	8	8.5	15.0	104	8	9	11.0	19.5	78	14	4	8.0	14.5	84	7	11	7.5	13.0	62	8	12	7.5	12.5	59	6	13	6.0	11.5	4.5	4	11
06 128	8	9	8.0	13.0	98	11	6	9.5	15.0	78	7	4	7.0	12.5	87	8	15	8.0	0.45	54	6	9	6.0	11.0	55	2	14	5.5	10.5	4.5	4	8
07 125	7	7	7.5	13.5	100	13	8	8.5	15.0	78	10	4	8.0	14.5	93	2	9	6.5	12.0	44	8	8	6.0	11.0	47	5	10	6.0	11.0	4.7	5	10
08 126	6	7	7.5	13.0	99	5	9	7.5	12.5	78	6	4	6.0	11.5	89	4	10	5.5	10.0	38	6	9	7.5	12.5	43	6	10	5.0	10.0	35	6	8
09 124	10	6	9.5	17.0	100	7	11	11.0	17.5	78	5	5	8.5	15.0	87	6	8	4.5	0.85	36	12	6	6.5	12.0	37	4	6	5.0	10.5	33	9	6
10 128	9	7	9.0	16.0	102	12	8	9.0	14.5	80	10	6	8.5	15.0	91	4	2	4.5	0.85	36	11	5	6.0	11.0	35	6	5	6.5	12.0	37	4	8
11 132	8	8	8.5	15.0	106	16	8	10.0	17.5	84	18	7	13.5	21.5	92	9	3	8.5	15.0	39	11	5	10.5	18.5	35	8	8	9.0	16.0	37	4	6
12 136	10	12	8.5	15.0	114	20	20	13.0	20.5	91	27	17	13.5	22.5	93	17	8	10.0	16.0	38	21	9	9.5	15.5	37	13	7	7.0	11.5	39	6	11
13 140	10	15	9.0	16.0	120	12	19	15.0	26.0	98	26	15	13.5	23.0	93	16	6	5.5	11.5	44	31	10	6.5	12.0	42	11	11	7.0	12.0	42	6	13
14 142	12	15	9.0	14.5	122	16	26	11.0	18.0	104	19	31	13.5	23.5	94	17	5	10.0	17.5	46	31	12	7.0	12.5	45	18	20	6.5	12.0	43	8	14
15 144	11	14	9.0	16.0	123	15	25	10.5	16.5	104	18	30	12.5	21.0	95	12	11	10.0	17.5	52	24	22	7.0	12.0	47	14	16	5.5	10.0	47	7	15
16 142	10	11	9.0	17.5	122	12	19	18.0	17.5	102	16	24	11.5	18.0	92	13	9	6.5	11.5	52	22	12	8.5	14.5	51	10	10	5.5	10.0	48	5	10
17 144	6	13	9.0	15.0	123	11	19	11.0	18.5	104	12	25	11.5	20.0	89	12	6	8.0	13.5	58	13	14	6.5	11.5	59	6	14	5.5	10.0	51	3	10
18 143	5	14	8.5	14.0	122	8	21	13.0	20.5	100	12	15	10.0	18.5	91	11	10	12.0	12.5	66	6	17	6.5	11.5	61	3	6	6.0	11.0	49	4	6
19 142	5	10	7.5	12.5	122	8	13	8.0	14.5	106	8	15	8.5	14.5	93	4	8	5.5	9.5	72	2	15	4.5	8.5	63	2	11	3.5	7.0	49	4	5
20 142	3	10	6.5	11.0	122	6	8	7.0	11.5	106	6	12	7.0	14.5	95	4	8	4.5	9.5	70	4	13	5.5	10.0	63	4	6	4.5	8.5	67	6	2
21 140	5	5	6.5	12.0	122	6	8	5.0	9.0	106	6	8	6.5	11.0	93	4	6	4.5	8.5	70	4	10	5.5	10.0	62	5	7	4.0	7.5	67	6	2
22 140	6	6	5.5	9.5	120	8	6	5.5	9.0	108	4	8	9.5	15.5	93	6	6	3.5	6.5	68	6	10	5.5	10.0	61	6	7	4.5	8.5	65	8	3
23 140	6	7	7.0	11.5	122	6	8	4.5	8.5	106	6	8	7.5	14.0	91	6	4	5.5	9.5	68	4	10	6.0	11.0	63	5	10	4.5	8.5	64	6	4

Fam = median value of effective antenna noise in db above ktb

D<sub>U</sub> = ratio of upper decile to median in db

D<sub>L</sub> = ratio of median to lower decile in db

V<sub>dm</sub> = median deviation of average voltage in db below mean power

L<sub>dm</sub> = median deviation of average logarithm in db below mean power

**MONTH-HOUR VALUES OF RADIO NOISE**      Station São José, Brasil      Lat. 23.3°S Long. 45.8°W Month January 19 65

FS	Frequency (Mc)												2000																															
	0.51				1.13				2.46				5.45				2.5				5.0				10.0																			
00	139	2	8	9.0	15.0	11.9	5	6	7.5	13.0	10.5	5	7	10.5	17.0	9.0	4	8	6.5	11.5	7.3	6	6.5	11.5	6.1	10	13	4.5	8.0	4.2	10	12	4.5	8.0	2.5	2	2.0	4.0						
01	137	4	8	9.5	15.5	11.9	6	7	11.5	20.0	10.4	6	6	11.0	19.5	8.8	4	7	5.5	11.0	7.1	6	6.0	11.0	5.5	13	13	6.5	10.0	4.2	9	12	5.5	10.0	2.5	4	2	2.0	4.0					
02	135	6	8	11.0	17.0	11.7	8	7	10.5	16.5	10.4	4	3	11.5	20.0	8.8	4	5	6.0	11.0	7.1	5	6	10.0	5.5	12	13	6.0	11.0	4.0	11	12	6.0	11.0	1.0	2.5	4	2	2.0	4.0				
03	135	6	7	11.5	20.0	11.7	6	8	11.0	17.0	10.2	6	7	11.0	17.0	8.6	4	5	8.0	13.5	6.9	8	4	6.5	11.5	5.3	12	12	5.5	10.0	3.3	10	7	4.5	9.5	2.5	2	2.0	4.0					
04	135	6	8	11.0	17.0	11.7	5	11	11.0	17.5	10.2	4	9	10.0	18.0	8.6	3	10	7.0	12.5	6.9	8	5	7.0	12.5	5.3	14	12	6.0	11.0	3.8	10	8	6.0	11.0	1.0	2.5	2	2.0	4.0				
05	133	5	10	12.0	23.0	11.1	6	16	11.0	17.0	8.8	6	10	12.5	19.5	8.4	5	8	7.0	13.0	6.9	7	11	7.0	12.5	5.6	9	16	6.5	11.0	4.0	9	10	6.0	11.0	1.0	2.5	2	2.0	4.0				
06	127	6	10	11.0	19.5	9.9	12	9	13.5	23.5	8.0	12	3	10.5	18.5	8.6	3	10	6.0	11.0	5.9	7	7	5.5	10.0	5.1	13	12	6.0	11.0	4.0	9	10	5.0	9.5	2.5	2	3.0	6.0					
07	123	10	7	12.5	22.0	10.1	10	13	12.0	21.0	8.0	13	3	11.0	19.5	8.8	6	7	5.5	10.0	5.0	3	7	8	7.0	12.5	4.7	11	13	5.5	10.0	4.0	8	11	5.5	10.0	2.7	7	2	2.0	4.0			
08	123	10	8	8.0	14.5	10.1	9	10	12.5	19.5	8.0	12	4	10.0	17.5	8.6	6	10	-	-	47	8	6	6.5	11.0	3.9	12	7	5.0	9.5	3.6	6	18	6.5	12.0	2.7	4	2	2.5	5.0				
09	123	8	8	7.5	13.5	10.1	13	10	10.5	18.5	8.2	15	6	11.5	20.0	8.6	5	6	6.5	11.5	4.5	10	6	2.5	5.0	4	4	10	5.5	10.5	3.6	3	16	8.0	14.5	2.5	5	1	3.0	6.0				
10	123	10	6	9.0	16.0	10.1	14	8	11.5	20.0	8.4	18	8	9.0	16.0	8.8	5	6	6.0	10.5	4.3	10	4	6.0	11.0	3.7	7	7	6.0	11.0	3.3	7	9	7.5	13.5	2.5	5	2	3.0	6.5				
11	129	12	10	12.0	21.0	10.3	22	7	13.5	23.5	8.8	18	6	13.0	29.5	8.7	8	9	5.0	10.0	4.8	7	9	12.5	22.0	3.1	10	10	8.5	14.0	3.4	8	10	7.0	12.0	1.1	2	4.0	7.5					
12	133	11	10	11.5	20.0	11.1	19	9	12.0	21.0	9.6	23	16	8.0	14.5	9.2	12	1.2	8.0	14.5	4.7	2.8	11	11.0	19.5	3.9	19	10	9.0	14.5	3.6	11	11	5.0	9.0	2.7	4	4.0	7.5					
13	137	10	10	11.0	19.5	12.1	10	16	13.0	20.0	10.6	18	22	12.0	23.0	9.2	18	8	7.0	12.0	5.5	24	17	12.0	21.0	4.1	18	8	10	11.5	4.0	12	8	10	12.5	2.9	17	4	4.0	7.5				
14	141	2	10	10.0	17.5	12.3	16	14	11.5	20.0	11.0	16	26	11.0	19.5	9.2	20	10	7.5	13.0	5.9	23	13	-	-	4.5	19	10	13.0	22.5	4.1	7	9	10	12.5	2.9	14	4	6.0	11.0				
15	143	11	10	11.0	17.5	12.3	16	14	11.5	20.0	11.4	11	27	11.0	17.0	9.6	13	8	6.5	12.0	6.5	19	23	8.0	14.0	5.2	14	14	10.0	17.5	4.7	7	15	7.0	12.5	3.3	9	6	5.0	9.5				
16	144	6	10	10.5	18.5	12.7	12	18	8.0	14.5	11.3	13	27	10.5	18.5	9.2	14	13	6.5	11.5	7.1	11	22	-	-	53	16	8	6.0	11.0	4.8	6	15	3.5	10.0	3.3	8	6	9.0	14.0	2.7	4	4.0	7.5
17	143	6	10	12.5	22.0	12.6	7	15	11.5	20.0	10.8	11	20	11.0	17.0	8.9	14	10	6.5	11.0	7.0	12	14	6.5	11.0	60	8	10	6.0	11.0	4.8	8	11	5.0	9.5	3.3	6	4	4.5	8.5				
18	141	6	10	13.0	22.5	12.2	9	13	10.0	17.0	10.4	11	11	11.0	17.5	9.0	9	8	6.5	12.0	7.3	8	10	8.5	15.0	6.2	8	11	4.5	8.5	4.7	7	12	6.0	9.5	3.1	7	2	5.0	9.5				
19	141	9	11	9.5	15.0	12.3	9	11	9.0	15.0	10.8	7	9	8.0	15.0	9.0	11	5	8	7.0	12.0	7.1	9	8	5.5	11.0	62	9	12	5.5	10.0	4.6	10	9	5.0	9.5	2.9	6	5	4.0	7.5			
20	139	6	10	11.0	17.0	12.1	7	9	10.0	16.0	10.6	8	8	9.0	16.5	9.0	5	6	6.5	12.0	7.7	7	8	5.5	10.0	67	7	14	3.0	9.5	4.6	9	10	6.0	9.5	2.7	9	4	3.0	6.0				
21	139	4	8	10.5	16.5	12.2	5	9	9.0	15.0	10.8	6	9	9.0	14.5	9.0	6	8	7.5	12.0	7.7	4	10	6.0	11.0	61	12	10	5.0	9.5	4.4	11	8	5.0	9.5	2.7	5	4	4.0	7.5				
22	139	5	7	9.5	16.0	12.3	4	11	9.5	15.0	10.8	6	8	9.0	17.0	9.0	4	8	6.0	11.0	63	10	14	4.0	7.5	4.2	11	9	5.0	9.5	2.6	5	2	2.5	5.0	1	0	0	0	0	0			
23	137	6	4	10.5	17.5	12.1	4	9	9.0	15.6	10.6	6	7	10.5	17.0	9.0	4	10	6.5	12.0	7.3	6	6	7.5	13.5	61	11	10	5.0	9.5	4.0	12	1	5.0	9.5	2.5	2	2.0	4.0					

Fam = median value of effective antenna noise in db above ktb  
D<sub>u</sub> = ratio of upper decile to median in db  
D<sub>z</sub> = ratio of median to lower decile in db  
V<sub>dm</sub> = median deviation of average voltage in db below mean power  
L<sub>dm</sub> = median deviation of average logarithm in db below mean power

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**MONTH-HOUR VALUES OF RADIO NOISE**      Station São José, Brasil      Lat. 23.39S Long. 45.89W Month February 19 65

E.S.J.	Frequency (Mc)												20.0																												
	0.5 /				1 / 3				.2 / 6				.5 / 5				2.5				5.0																				
00 138	4	5	8.0	13.0	11.8	5	4	6.0	12.0	11.0	6	4	5.5	11.0	8.9	6	2	5.5	9.0	7.2	6	2	5.5	10.0	5.7	1.6	9	5.5	9.5	4.1	4	6.0	11.0	2.4	4	2	3.0	6.0			
01 138	4	4	8.5	15.0	11.9	3	5	7.0	12.5	10.8	6	2	6.0	11.0	8.9	4	4	5.0	9.0	7.2	7	3	6.5	12.0	6.6	18	5	6.0	11.0	4.1	4	8	5.0	9.5	2.4	4	2	3.0	6.0		
02 138	4	7	9.0	15.0	11.8	4	4	7.0	14.0	10.8	6	4	5.5	11.0	8.7	6	4	4.5	9.0	7.3	5	5	5.0	9.5	5.7	14	8	4.5	8.0	4.1	2	7	5.0	9.5	2.4	2	2	3.0	6.0		
03 138	4	6	9.0	15.0	11.7	5	5	6.0	12.0	10.8	4	6	7.0	13.5	8.7	4	5	5.5	11.5	7.4	5	6	8.0	13.5	5.5	15	6	7.5	13.5	4.3	4	5	5.5	9.5	2.6	0	2	3.0	6.0		
04 138	4	9	8.0	15.0	11.6	5	4	7.5	14.0	10.6	5	6	5.5	11.0	8.6	6	3	4.0	7.5	7.2	9	6	5.0	9.5	5.4	15	7	5.5	10.0	4.1	7	4	5.0	9.5	2.4	2	2	2.0	4.0		
05 136	6	8	10.0	16.0	11.4	6	10	8.0	14.0	9.8	12	8	6.0	12.5	8.3	4	12	6.5	12.0	7.2	8	2	5.0	9.0	5.6	15	5	5.5	10.0	4.1	8	4	4.5	8.5	2.6	0	4	3.0	6.0		
06 130	4	6	10.0	16.0	9.8	10	6	8.0	13.0	9.4	6	4	6.0	11.0	9.3	8	12	5.0	9.0	6.6	6	6	6.0	11.0	5.4	15	7	7.0	7.5	4.7	6	4.0	7.5	2.4	2	2	2.5	6.0			
07 128	4	8	9.0	16.0	10.0	8	8	9.0	15.0	8.2	6	2	5.0	9.0	8.5	2	12	5.0	10.0	10.0	18	6	6.5	11.0	5.4	15	7	10.0	11.0	4.4	5	7	6.5	12.0	2.6	2	2	3.0	6.0		
08 126	4	6	9.5	15.5	10.0	8	6	8.0	13.0	8.2	10	2	5.5	11.0	8.4	3	11	5.0	11.5	4.8	8	4	6.0	10.0	4.9	12	8	4.0	13	7	6.5	12.0	2.6	2	3	4.0	7.5	2.4	2	3.0	6.0
09 128	6	4	9.0	15.0	10.0	4	10	9.0	13.0	9.2	8	4	3.5	7.0	9.5	5	9	5.0	11.0	4.8	6	6	5.0	9.5	4.1	10	8	3.8	10	7	5.5	10.0	2.4	3	0	3.0	6.0				
10 130	6	6	10.0	17.5	10.0	9	6	6.0	12.0	8.0	13	2	6.0	10.0	9.5	4	8	3.5	7.5	4.6	10	5	4.5	9.5	3.9	12	5	8.0	14.5	3.9	9	10	5.5	10.0	2.4	2	2	2.4	4.0		
11 129	6	7	10.5	17.0	10.0	10	6	7.5	13.0	8.2	16	4	9.0	16.0	8.5	2	7	5.5	9.0	4.5	7	6	4.0	8.5	3.5	10	6	7.5	13.5	3.9	4	8	5.0	9.5	2.5	1	1	2.0	4.0		
12 134	5	7	9.0	15.0	10.7	9	6	7.0	12.0	9.0	11	13	11.0	17.0	8.5	6	8	4.0	9.0	4.6	9	5	4.0	9.5	3.5	14	6	6.0	9.5	3.9	4	6	5.0	9.5	2.6	2	4	3.5	6.5		
13 138	6	8	9.0	14.5	11.0	10	8	9.0	14.5	9.6	10	8	12.5	20.5	8.5	6	6	5.0	10.5	5.2	20	8	10.0	17.5	3.9	14	8	6.0	10.0	4.3	4	8	4.0	7.5	2.7	5	4	3.5	7.0		
14 138	6	4	8.0	14.5	11.4	10	10	10.0	17.5	10.0	12	12	12.0	21.0	8.6	15	9	6.5	15.0	5.2	14	6	9.5	17.0	3.9	14	6	8.0	13.0	4.3	4	5	5.0	9.5	3.0	12	4	4.5	9.0		
15 140	6	6	10.0	17.5	11.6	11	9	8.0	13.0	10.6	19	18	8.5	15.0	9.7	16	4	7.5	15.0	5.5	24	9	8.5	17.0	4.8	12	7	6.5	11.5	4.7	6	9	8.0	13.0	3.0	12	2	3.5	6.5		
16 142	7	6	9.0	16.0	11.8	12	11	10.0	17.0	10.6	12	16	6.0	17.0	8.7	10	4	8.0	14.0	5.8	21	4	6.5	12.0	5.5	10	24	6.5	11.0	4.9	3	5	4.5	8.5	3.2	8	4	3.0	6.0		
17 140	9	5	9.0	14.5	11.8	13	8	12.5	22.0	10.6	16	14	12.0	21.0	8.3	14	8	8.0	13.0	7.2	9	6	8.5	12.0	6.6	13	8	4.5	8.5	53	4	8	3.0	6.0	2	3.5	7.0				
18 140	8	6	9.0	14.5	11.6	12	6	10.0	17.0	10.6	10	10	6.0	14.5	8.5	10	2	6.0	12.0	7.2	8	6	5.0	9.5	6.5	16	8	6.0	11.0	5.1	4	6	3.0	6.0	3.2	6	2	3.5	7.0		
19 140	6	4	8.5	14.0	11.8	7	5	7.0	14.0	11.0	6	6	7.5	13.0	8.9	6	4	5.0	9.5	7.6	8	5	6.5	12.0	6.6	13	8	4.5	8.5	53	4	8	3.0	6.0	3.1	5	5	4.5	8.0		
20 140	4	4	7.5	14.0	11.8	6	4	7.0	11.5	11.1	3	7	6.5	12.0	9.1	4	4	4.0	8.0	7.6	7	3	7.0	12.5	6.3	18	8	5.0	9.5	5.2	5	6.0	3.0	6.0	2	2.8	4	4	4.5	8.0	
21 140	3	3	7.5	12.5	11.8	6	4	6.5	11.5	11.2	5	6	7.0	13.0	9.1	4	4	5.0	9.0	7.6	5	2	5.0	9.5	6.4	14	8	4.0	9.0	4.9	5	10	3.5	7.0	3.6	6	4	3.5	6.5		
22 140	2	4	7.0	12.0	11.8	6	5	6.0	11.0	11.1	5	7	6.0	12.5	9.0	4	3	4.0	9.0	7.4	7	3	5.0	9.5	6.2	12	7	5.0	9.5	4.8	5	10	5.0	9.5	2.4	6	2	4.0	7.5	-	
23 139	3	3	8.0	14.0	11.7	7	3	6.0	11.5	8.9	6	2	5.5	11.5	8.9	6	2	5.0	9.0	7.4	6	4	5.0	9.5	6.2	13	8	3.0	6.0	4.7	6	8	3.5	6.5	2.4	4	2	3.0	6.0	-	

Fam = median value of effective antenna noise in db above ktb

D<sub>u</sub> = ratio of upper decile to median in db

D<sub>z</sub> = ratio of median to lower decile in db

V<sub>din</sub> = median deviation of average voltage in db below mean power

L<sub>din</sub> = median deviation of average logarithm in db below mean power

**MONTH-HOUR VALUES OF RADIO NOISE**      Station São José, Brasil      Lat. 23, 39°S Long. 45, 89°W Month March 19 65

Hour (EST)	Frequency (Mc)												
	0.5			1.1			2.4			5.45			
F <sub>am</sub>	D <sub>u</sub>	D <sub>z</sub>	V <sub>dm</sub>	L <sub>dm</sub>	F <sub>am</sub>	D <sub>u</sub>	D <sub>z</sub>	V <sub>dm</sub>	L <sub>dm</sub>	F <sub>am</sub>	D <sub>u</sub>	D <sub>z</sub>	
00 139 5 6	115 180 0	123 7	7	90 160 109 6	7	8.0 140 91 10	4	6.0 110 66 10	5	8.0 13.0	4.9 12.1	11	
01 138 6 6	125 190 0	121 8	7	10.5 165 108 9	5	8.5 145 91 8	8	6.5 13.0 6.7	8	8.0 14.0	4.9 13.0	8	
02 137 6 5	105 165 0	121 8	7	10.5 165 102 8	6	8.5 160 91 8	7	7.5 15.0 6.5	9	6 8.0 13.0	5.1 12.5	6	
03 136 8 5	110 170 0	119 8	6	10.5 165 102 4	9	8.0 13.5 90 7	6	7.0 14.5 6.4	8	4 8.5 13.5	4.9 14.0	7	
04 136 8 8	12.0 18.5 0	11.9 9	8	10.5 16.5 107 7	7	10 8.0 14.5 89 7	7	5.0 9.0 6.4	7	8 8.0 13.5	4.8 14.0	8	
05 136 5 9	12.5 19.0 0	11.2 11	7	10.0 17.0 103 8	14	10.0 16.0 87 6	10	7.0 11.5 6.5	5	9 8.5 13.5	4.8 13.0	5	
06 130 8 8	13.0 20.0 0	10.5 14	12 11.5 18.1 88	16	11 10.0 17.0 89 6	8	5.0 10.0 5.6	10	7 8.0 13.0	5.1 4 13	6.0 10.0	4	
07 128 14 8	11.0 17.0 0	10.7 16	12 10.5 16.5 87	19	6 7.0 11.5 89 5	11	6.0 11.0 5.2	10	10 11.0 11.0	4.4 13 1.3	5.5 10.0	4	
08 134 2 15	12.5 19.0 0	10.9 14	12 10.5 17.5 87	20	8 10.0 16.0 89 4	2.2	6.0 10.0 4.7	10	9 8.0 13.0	4.1 11 1.1	6.5 11.0	4	
09 131 12 11	10.0 16.0 0	10.6 17	11 6.0 10.0 85 2.2	8	5.0 9.0 87 4	2.2	6.0 11.5 4.0	9	4 8.0 13.0	3.2 15	5 7.0 11.5	4	
10 133 9 12	10.0 16.0 0	10.9 15	12 11.5 89 16	5	10.0 16.0 87 8	8	3.5 8.0 4.2	11	6 8.0 13.0	3.6 5 6	8.5 13.5	5	
11 126 14 8	11.0 17.0 0	10.5 18	10 11.0 12.0 89 14	8	10.5 16.5 87 7	12	8.0 13.0 4.0	8	6 5.5 9.5 3.1	8 10 10.5	9.5 14.0	8	
12 128 12 7	11.0 17.0 0	10.8 17	10 13.0 20.0 93 19	8	8 10.0 13.0 89 8	10	8.0 13.5 4.0	21	5 5.0 9.0 3.5	8 12 7.0 11.5	3.7 8 9	11	
13 136 11 8	8.5 15.0 0	11.5 13	13 10.5 16.5 97	14	10 11.0 17.0 89 10	24	7.0 11.5 4.1	27	5 5.5 9.5 3.5	14 12 7.0 11.5	3.5 10 6	7	
14 140 13 12	9.0 14.5 0	11.9 8	14 10.5 16.5 102	7	18 11.5 22.0 93 9	2.6	9.5 15.0 4.8	16	10 8.0 13.0 3.5	14 9 4.5 8.0	8.0 13.5	7 1	
15 144 4 10	10.5 16.5 0	12.1 8	14 10.0 16.0 107 14	20	11.0 17.0 90 19	9	5.0 11.0 4.1	12	12 5.5 9.5 4.1	11 9 4.5 8.0	9.5 14.0	3 11	
16 144 10 14	10.5 16.5 0	12.5 14	17 10.0 16.0 111 14	22	9.0 15.0 93 13	10	7.5 12.5 5.9	19	16 7.5 12.5 4.9	15 12 6.0 10.0	7.0 11.5 4.7	8 4	
17 142 9 11	12.0 18.5 0	12.3 13	13 11.0 20.0 107 16	20	10.0 10.0 18.0 91	16	10 7.5 12.5 6.2	14	10 6.0 11.0 5.9	8 15.0 10.5	7.0 12.0 3.4	11 4	
18 141 12 12	9.5 15.0 0	12.2 14	11 10.5 17.0 107 20	8	7.5 12.5 9.2	15	8 5.0 10.5 7.0	12	10 6.5 11.0 6.3	12 16 6.5	11.0 11.5 4.7	8 4	
19 141 10 7	9.0 15.0 0	12.3 15	4 8.5 13.5 11 10	6	6.5 13.0 9.5 5	5	5.0 10.0 7.2	8	7 6.0 11.0 6.1	10 6.0 10.0	4.9 8 4	5.0 9.0	
20 142 8 8	8.5 14.0 0	12.5 12	6 7.5 13.0 11 10	3	6.0 11.5 9.5 7	2	4.5 9.0 7.0 6	6	6.0 10.0 5.9	10 12 6.0	11.0 11.5 4.7	8 4	
21 140 7 6	7.5 13.0 0	12.5 7	6 7.5 12.5 11 10	4	6.0 11.0 9.5 10	8	6.0 10.0 7.0	6	7.0 12.5 6.2	9 10 10.5	4.7 8 4	4.0 7.5	
22 140 7 4	9.0 14.5 0	12.3 7	5 9.5 15.5 11 11	7	6 7.0 14.0 93 8	4	5.0 9.0 8 8	8 6.5 11.0 5.0	13 9 4.5 9.0	6 5.0 9.0	7.5 12 2	3.5 6.5	
23 138 8 4	10.5 17.0 0	12.2 6	8 9.0 15.0 11 11	4	8 9.0 15.5 91 8	5	7.0 12.0 6.8	8 22	7.5 12.5 5.5 8	11 5.0 9.0 8 6	5.0 9.0	2.6 1.4	2 3.0 6.0

F<sub>am</sub> = median value of effective antenna noise in db above ktb

D<sub>u</sub> = ratio of upper decile to median in db

D<sub>z</sub> = ratio of median to lower decile in db

V<sub>dm</sub> = median deviation of average voltage in db below mean power

L<sub>dm</sub> = median deviation of average logarithm in db below mean power

**MONTH-HOUR VALUES OF RADIO NOISE**      Station São José, Brasil      Lat. 23.39S Long. 45.89W Month April 19 65

Hour (LST)	Frequency (Mc)												20.0																											
	0.51				1.13				2.46				5.45				5.0				10.0																			
Fam	D <sub>u</sub>	Vdm	Ldm	Fam	D <sub>u</sub>	Vdm	Ldm	Fam	D <sub>u</sub>	Vdm	Ldm	Fam	D <sub>u</sub>	Vdm	Ldm	Fam	D <sub>u</sub>	Vdm	Ldm	Fam	D <sub>u</sub>	Vdm	Ldm																	
00	137	7	9	11.5	180	124	10	10	100	160	106	10	8	8.5	150	92	10	4	5.0	9.0	6.6	8	18	7.0	11.5	6.9	6	10	5.0	9.0	4.8	8.5	9.0	4						
01	132	13	11	10.5	170	126	10	12	10.5	165	108	9	10	9.5	165	92	12	4	6.0	10.0	6.6	8	16	7.5	12.5	6.1	10	8.0	4.8	8.5	9.0	4								
02	132	13	11	11.0	170	126	12	12	9.0	135	108	8	12	8.0	130	92	10	2	5.0	9.0	6.6	8	15	5.5	9.5	6.1	12	8	7.5	12.5	6.0	3	5.0	4						
03	138	8	10	10.5	165	124	13	11	11.0	170	108	10	8	10.5	185	92	8	4	7.0	12.5	6.6	6	14	7.0	11.5	5.9	12	10	7.0	11.5	4.2	10	10	2	4					
04	138	9	11	11.0	180	124	8	12	10.0	165	108	9	12	9.0	160	91	7	5	7.0	12.5	6.6	6	13	6.5	11.0	6.1	8	6	7.5	12.5	4.0	8	8.0	2	4					
05	138	9	13	11.0	170	122	12	10	11.0	170	105	5	9	10.0	175	92	4	4	4.5	9.5	6.6	6	12	7.0	12.0	6.1	8	8	8.0	13.0	3.6	10	6	2	4					
06	136	10	12	12.0	185	116	14	17	10.5	175	84	20	6	9.0	14.5	90	6	6	6.0	12.0	6.4	6	17	7.0	11.5	6.7	4	14	7.0	11.5	4.2	10	10	2	4					
07	130	10	10	11.5	180	108	18	14	10.0	165	82	20	6	9.0	14.5	91	5	3	5.0	11.0	5.2	10	9	8.0	13.0	6.3	8	12	7.5	12.5	4.0	12	6	2	4					
08	122	11	15	11.0	170	106	18	10	9.0	14.5	92	18	6	6.0	10.0	90	9	8	5.0	10.5	4.6	10	8	5.0	9.0	5.3	10	6	6.0	10.5	4.0	12	6	2	4					
09	124	14	14	10	20	11.5	106	16	8	10.0	16.0	84	16	4	10.0	16.0	92	5	7	4.5	9.0	6.4	6	17	7.0	11.5	6.7	4	14	7.0	11.5	4.0	10	10	2	4				
10	128	12	14	9.5	160	104	18	8	10.0	16.0	84	14	6	9.0	13.0	92	4	6	4	9.0	4.2	6	6	7.0	11.5	6.7	4	14	7.0	11.5	4.0	10	10	2	4					
11	126	16	11	10.0	160	108	18	10	10.5	165	92	22	4	7.0	11.5	94	2	7	5.0	9.5	4.2	6	14	5.0	9.0	9.0	10	4.0	14	7.0	11.5	4.0	10	10	2	4				
12	127	13	9	10.0	16.0	102	22	4	11.5	180	82	20	6	6.0	10.0	90	4	8	5.5	10.0	4.0	9	7	7.0	13.0	4.5	6	4	14	7.0	11.5	4.0	10	10	2	4				
13	128	13	6	6.5	130	105	21	5	7.0	11.5	82	21	7	6.5	11.0	90	10	6	5.0	9.0	4.2	6	11	6.0	11.5	5.0	7	5.5	9.5	4.0	10	10	2	4						
14	132	8	6	11.5	180	106	14	6	8.0	11.0	96	44	10	8.5	15.5	90	24	8	5.0	9.5	4.2	6	11	6.0	12.0	4.9	10	2.0	4.0	14	7.0	11.5	4.0	10	10	2	4			
15	134	16	10	20	120	112	24	12	6.0	10.5	86	30	8	9.0	14.5	90	4	8	6.0	10.0	4.2	6	28	6	9.0	14.5	5.5	10	6	6.5	11.5	3.0	14	5.0	9.0	4				
16	6.5	11.0	11.4	24	14	10.0	120	84	33	8	8.0	13.0	90	12	6	4.0	7.5	4.9	20	10	4.5	8.0	10.5	4.5	4.0	10.5	11.5	5.5	10	6	6.5	11.5	3.0	14	5.0	9.0	4			
17	132	16	10	7.5	125	115	25	11	9.5	15.0	89	29	11	7.5	12.0	90	8	8	2.5	6.0	5.3	20	11	6	8.0	11.0	7.9	4	14	7.0	11.5	3.0	14	5.0	9.0	4				
18	133	17	9	9.0	14.5	11.5	21	9	9.0	14.5	80	14	8	7.0	13.5	90	8	6	4.0	8.0	4.4	12	10	25	13.5	7.5	7	2	5.0	10.0	5.5	10	6	6.5	11.5	3.0	14	5.0	9.0	4
19	136	12	8	9.0	15.5	11.3	7	9.0	15.0	86	12	6	8.0	14.5	94	10	4	5.0	9.0	4.0	10.5	7.9	4	7	5.5	9.5	5.4	4	14	7.0	11.5	3.0	14	5.0	9.0	4				
20	133	8	8	9.0	14.5	11.2	14	10	8.0	13.0	106	12	8	9.0	13.5	96	8	6	4.5	8.0	4.9	9	12	6.5	11.0	7.9	4	14	7.0	11.5	3.0	14	5.0	9.0	4					
21	138	8	10	9.0	15.0	124	12	8.0	13.5	110	10	10	7.0	13.0	96	8	6	4.0	7.5	6.8	7	12	7.0	11.5	7.7	4	14	7.0	11.5	3.0	14	5.0	9.0	4						
22	138	10	8	11.0	170	124	14	8	8.5	15.0	108	8	8	7.0	13.0	94	8	6	5.5	10.0	6.8	10	11	6.0	10.5	7.9	3	9.5	8.0	4.0	14	7.0	11.5	3.0	14	5.0	9.0	4		
23	110	9	11	12.0	190	126	8	10	8.5	15.0	108	10	6	8.5	14.5	93	11	5	5.0	9.0	6.8	8	16	7.0	11.5	7.1	12	10	5.5	9.5	4.8	8	8.5	9.0	2.7	4	4.0	7.5	5.5	4

Fam = median value of effective antenna noise in db above ktb  
 Du = ratio of upper decile to median in db  
 D<sub>2</sub> = ratio of median to lower decile in db  
 Vdm = median deviation of average voltage in db below mean power  
 Ldm = median deviation of average logarithm in db below mean power

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**MONTH-HOUR VALUES OF RADIO NOISE**      Station São José, Brasil      Lat. 23.39S Long. 45.89W Month May 19 85

E.S.T.	Frequency (Mc)												Frequency (Mc)																																
	0.51				1.3				2.46				5.46				2.5				5.0				10.0																				
Fam	D <sub>u</sub>	D <sub>z</sub>	Vdm	Ldm	Fam	D <sub>u</sub>	D <sub>z</sub>	Vdm	Ldm	Fam	D <sub>u</sub>	D <sub>z</sub>	Vdm	Ldm	Fam	D <sub>u</sub>	D <sub>z</sub>	Vdm	Ldm	Fam	D <sub>u</sub>	D <sub>z</sub>	Vdm	Ldm	Fam	D <sub>u</sub>	D <sub>z</sub>	Vdm	Ldm																
00	124	18	9	11.0	17.5	106	20	11	9.0	14.5	8.9	22	10	6.5	11.0	7.4	2.4	8	4.5	8.5	5.6	10	5.5	10.1	5.9	8	6	4.5	8.0	3.8	1.8	6	3.0	6.0	3.0	0									
01	126	16	8	13.0	23.0	110	18	12	9.5	17.0	9.1	20	14	8.0	13.0	7.9	1.8	14	4.5	8.5	5.4	12	8	5.5	10.0	5.3	8	8	5.0	9.0	3.8	1.2	6	3.0	6.0	3.0	0								
02	126	14	8	11.5	20.5	112	18	17	8.0	14.0	9.1	21	15	9.5	15.0	7.7	2.0	12	4.5	8.0	5.4	1.2	10	6.0	11.0	5.1	8	7	5.0	9.0	3.8	1.0	6	3.0	6.0	3.0	0								
03	126	12	10	10.5	17.0	110	16	16	9.0	15.0	9.1	20	16	8.5	14.5	7.5	2.4	10	7.0	12.0	5.3	1.3	7	7.0	13.0	5.1	1.2	8	6.0	11.0	3.8	1.4	8	3.0	6.0	3.0	0								
04	128	12	12	14.0	24.5	112	16	19	6.0	10.5	9.1	18	18	7.0	13.0	7.7	1.8	16	6.0	12.5	5.4	1.2	8	7.0	12.5	5.0	1.7	5	5.0	9.0	3.8	1.2	6	2.5	5.0	3.4	8	6	2.0	4.0					
05	127	11	12	13.0	23.0	109	15	17	11.5	20.5	8.9	16	18	8.5	15.0	8.3	1.2	17	6.5	12.5	5.2	1.8	8	6.0	11.0	4.7	1.6	6	5.0	9.0	3.2	1.0	4	2.0	4.0	3.4	8	2	1.5	0					
06	126	10	10	9.0	15.0	102	12	18	13.5	23.0	79	24	14	7.5	15.0	7.9	1.4	12	6.0	11.5	5.4	1.4	10	6.5	11.0	5.3	1.2	10	5.0	9.0	3.6	1.0	6	3.0	6.0	3.0	0	2.0	4.0						
07	118	14	10	9.0	16.5	9.5	24	16	8.5	15.5	7.4	23	11	8.5	16.0	8.3	1.0	12	4.0	8.0	4.3	1.3	11	5.0	9.0	3.4	1.0	5	6.0	10.5	3.6	1.0	4	6.0	11.0	3.4	8	6	2.0	4.0					
08	116	15	9	10.0	18.0	9.6	21	7	11.0	17.0	73	18	8	10.0	18.0	8.0	11	7	6.5	12.0	4.2	1.2	10	7.5	13.5	4.7	1.6	6	5.5	10.0	3.4	1.4	4	6.5	12.0	3.2	1.0	4	6.0	2.0	4.0				
09	120	12	13	6.0	11.0	101	14	10	8.0	14.0	7.3	22	8	8.5	15.5	8.3	8	9	5.5	11.0	3.8	1.2	10	5.0	9.0	4.5	1.2	5	5.5	9.5	3.4	1.0	4	8.0	14.5	3.2	1.0	4	3.0	6.0	3.0	0			
10	116	18	8	9.0	17.5	10.5	21	14	11.0	19.5	7.3	23	6	10.0	17.5	8.5	6	10	5.0	9.0	3.5	1.1	9	5.0	9.0	3.9	8	4	5.0	9.0	3.2	1.2	4	3.0	6.0	3.0	0	2.0	4.0						
11	122	11	5	11.5	18.5	10.2	13	11	10.0	18.0	7.2	19	5	9.5	17.0	8.5	10	8	4.0	7.5	3.4	1.2	8	5.0	9.0	3.9	8	4	8.0	14.5	3.1	1.0	7	6.0	11.0	3.2	1.0	4	4.0	7.5					
12	120	8	10	9.0	16.0	9.6	18	6	13.5	23.5	73	20	8	11.5	20.5	8.1	12	6	8.5	15.5	3.4	1.2	10	5.0	9.0	3.7	8	2	6.0	11.0	3.2	1.0	4	5.5	9.5	2.5	1.0	6	4	2.5	5.0				
13	122	10	9	10.0	18.0	10.0	14	14	11.5	19.0	7.3	13	9	10.5	18.5	8.2	10	6	20	5.0	3.4	1.0	8	4.5	8.5	3.7	1.2	2	6.5	12.0	3.4	8	11	6.0	11.0	2.6	5	4	2.0	4.5					
14	122	7	8	11.0	19.5	9.8	15	9	7.0	12.5	7.3	21	11	12.0	21.0	8.1	10	8	5.0	9.0	3.4	1.1	4	4.0	7.5	3.9	1.4	4	6.5	12.0	3.4	6	2	7.0	12.5	2.6	7	5	3.5	6.5					
15	122	14	10	10.0	18.0	9.8	11	9	15.0	26.0	7.1	24	8	11.5	20.5	7.9	21	7	4.5	9.0	3.8	1.0	10	4.5	8.5	4.3	1.0	6	4.0	7.5	3.8	9	9	5.0	9.0	2.8	1.0	4	4.0	7.5					
16	122	21	10	8.0	14.0	10.0	22	18	7.0	12.5	7.7	26	14	9.0	16.5	8.3	10	8	3.5	6.5	4.0	1.4	10	5.5	10.0	4.9	1.0	6	4.5	8.0	3.7	1.2	2	6.0	11.0	3.4	8	11	4.0	2.0	4.5				
17	122	18	10	8.0	14.5	9.8	22	9	10.0	18.0	7.2	24	12	9.0	16.0	7.9	12	10	6.5	11.0	4.9	1.5	13	7.0	12.5	5.3	9	4	6.0	11.0	4.0	1.0	6	5.0	9.0	3.0	1.0	4	4.0	7.5					
18	122	20	10	10.0	18.0	10.2	22	12	11.5	20.5	8.3	25	16	9.0	14.5	7.9	11	6	4.0	7.5	5.4	1.2	11	6.0	11.0	5.1	9	6	5.0	9.0	4.2	1.0	6	4.0	7.5	3.8	9	9	5.0	9.0	2.8	1.0	4	4.0	7.5
19	124	16	10	9.0	16.0	10.4	20	6	8.5	15.5	8.9	14	16	6.0	10.0	8.1	8	10	3.5	6.5	5.6	1.0	10	5.5	10.0	5.2	1.2	8	4.0	7.5	4.2	1.0	6	5.0	9.0	3.0	1.0	4	4.0	7.5					
20	124	20	8	9.5	16.5	10.6	20	12	6.0	11.0	9.1	18	14	7.0	13.0	8.1	12	8	5.0	10.0	5.8	1.1	11	4.5	8.0	4.0	1.0	6	4.0	8.0	4.1	1.1	7	3.0	6.0	2.4	1.0	4	4.0	7.5					
21	124	18	10	9.0	16.0	10.8	18	14	6.0	11.0	9.1	18	14	8.0	13.0	8.1	12	8	4.0	7.5	5.8	1.0	10	4.0	7.5	5.7	1.4	6	4.0	8.0	4.2	1.0	6	3.0	6.0	2.4	1.0	4	4.0	7.5					
22	124	12	10	9.5	15.0	11.0	16	14	11.0	15.5	9.1	16	14	7.0	12.0	8.0	13	7	6.5	12.0	5.8	1.0	10	4.5	8.5	5.9	1.1	11	6	4.0	8.0	4.1	1.1	7	3.0	6.0	2.4	1.0	4	4.0	7.5				
23	126	12	12	8.6	15.5	11.1	15	15	8.5	13.0	9.1	16	12	5.5	9.5	8.1	18	12	4.0	7.5	5.7	1.1	7	3.5	5.5	10.0	5.8	1.3	5	5.0	9.0	4.2	1.4	8	3.5	6.5	2.4	1.0	4	4.0	7.5				

Fam = median value of effective antenna noise in db above kib

D<sub>u</sub> = ratio of upper decile to median in db

D<sub>z</sub> = ratio of median to lower decile in db

Vdm = median deviation of average voltage in db below mean power

Ldm = median deviation of average logarithm in db below mean power

**MONTH-HOUR VALUES OF RADIO NOISE**      Station São José, Brasil      Lat. 23.39S Long. 45.89W      Month June 19 65

E.S.T.	Frequency (Mc)												20.0																		
	.051				.113				246				545				2.5				5.0				10.0						
	$\frac{D_u}{D_L}$	F <sub>am</sub>	D <sub>u</sub>	V <sub>dm</sub>	L <sub>dm</sub>	F <sub>am</sub>	D <sub>u</sub>	D <sub>L</sub>	V <sub>dm</sub>	L <sub>dm</sub>	F <sub>am</sub>	D <sub>u</sub>	D <sub>L</sub>	V <sub>dm</sub>	L <sub>dm</sub>	F <sub>am</sub>	D <sub>u</sub>	D <sub>L</sub>	V <sub>dm</sub>	L <sub>dm</sub>	F <sub>am</sub>	D <sub>u</sub>	D <sub>L</sub>	V <sub>dm</sub>	L <sub>dm</sub>						
00	13.3	8	14	8.5	15.0	11.5	14	16	10.0	17.5	9.8	16	10	7.0	12	80	8	10	7.5	13.0	6.3	11	9	5.0	13.0	51	8	6	3.0	6.5	
01	13.3	6	14	9.0	17.0	11.5	14	12	11.0	17.0	9.6	18	8	5.0	9.5	80	8	10	7.5	13.0	55	6	10	4.0	7.5	38	7	9	2.0	5.0	
02	13.3	6	12	11.0	19.5	11.5	14	18	5.5	10.0	9.8	14	10	12.0	20.0	80	6	12	4.0	7.5	6.5	9	13	5.5	10.5	52	9	7	6.0	6.0	
03	13.1	8	14	8.0	14.5	11.5	14	19	7.0	14.0	9.8	10	14	8.0	15.0	78	8	12	6.0	12.0	6.4	10	14	6.0	11.0	51	12	6	6.0	9.0	
04	12.9	10	10	8.0	14.0	11.3	14	19	9.2	21.0	9.2	16	8	5.5	12.5	78	6	12	6.5	13.0	51	6	8	6.0	11.0	33	10	8	4.0	7.5	
05	13.2	7	13	12.5	20.0	11.3	14	14	6.0	14.5	9.4	16	10	7.6	15.0	82	6	14	8.0	17.0	6.2	12	12	6.0	100	47	6	6	6.5	12.0	
06	13.1	6	10	8.5	16.0	10.9	16	10	13.0	24.0	9.0	14	12	13.0	23.0	81	11	16	6.0	11.0	6.2	12	10	7.0	12.5	47	6	6	5.5	11.0	
07	12.6	7	11	13.0	19.0	11.3	14	19	11.0	29.0	7.8	16	8	7.0	13.0	82	12	16	1.0	2.5	54	10	10	7.0	12.5	56	5	5	-	-	
08	12.1	9	11	11.5	20.5	9.5	33	7	10.0	16.5	8.0	12	8	3.0	4.0	80	6	14	8.0	13.0	51	4	4	8.0	9.5	35	10	10	6.0	10.0	
09	11.9	18	16	14.0	24.0	9.8	19	7	12.5	2.0	80	24	8	1.5	3.5	84	10	16	3.0	6.0	44	9	9	5.0	9.5	46	6	10	5.0	10.5	
10	12.2	11	11	2.5	5.0	9.7	18	4	10.0	17.6	8.2	20	8	7.5	13.5	82	10	14	7.0	13.0	40	10	8	6.0	11.0	43	4	8	6.0	10.0	
11	11.9	12	12	8.5	14.0	9.7	15	9	5.5	10.0	8.2	19	22	4	5.0	8.0	82	6	14	1.5	3.0	41	7	7	6.0	11.0	31	12	8	7.0	13.0
12	12.1	12	12	4.0	7.5	9.9	18	8	8.5	15.5	7.6	14	6	7.6	13.5	81	11	5	4.6	10.5	35	7	7	6.0	11.0	39	4	6	10.0	17.5	
13	12.6	8	13	10.0	16.5	10.1	12	10	10.0	16.0	7.8	18	6	9.0	1.5	45	80	12	4	-	36	8	6	4.0	7.5	40	6	6	9.5	11.0	
14	12.3	14	8	11.0	19.5	10.5	22	14	14.0	24.5	8.2	30	8	9.5	17.0	82	13	3	-	38	6	8	7.5	13.5	43	6	6	7.0	12.0		
15	12.0	15	12	13.0	20.0	10.3	31	13	-	81	23	9	9.5	17.0	79	15	7	1.0	2.5	39	6	10	6.0	100	45	7	7	5.0	11.0		
16	12.8	10	16	11.0	17.0	10.7	24	14	10.0	16.5	82	21	10	7.0	12.5	80	6	10	3.5	7.5	49	13	13	7.0	12.5	53	6	10	7.5	13.5	
17	12.1	12	16	10.6	14.0	10.6	11	13	9.0	15.5	8.8	18	14	10.5	18.5	80	12	6	1.5	6.0	57	7	13	5.5	11.0	39	10	6	6.0	11.0	
18	12.9	12	14	9.5	17.0	11.3	20	14	6.0	10.5	9.3	21	13	4.0	9.5	80	10	5	2.5	7.0	60	12	10	6.0	11.0	37	7	13	8.0	14.5	
19	13.3	8	10	11.5	20.5	11.1	18	8	10.0	19.0	9.6	23	10	7.5	16.5	84	10	8	4.0	9.0	64	10	10	4.0	7.5	59	6	8	5.0	9.0	
20	13.1	8	8	9.0	19.0	15.5	11.1	18	8	14.0	24.0	9.8	20	12	12.0	2.0	84	10	8	6.0	11.5	64	10	10	4.0	8.0	59	8	6	5.0	11.0
21	13.1	10	10	10.5	18.5	11.1	20	10	12.0	2.5	9.9	15	11	9.0	16.0	85	5	9	1.5	2.5	66	8	12	4.5	9.0	59	6	8	4.0	9.5	
22	13.3	6	14	9.5	16.5	11.4	17	7	8.0	22	9.1	12	8	7.0	1.5	64	12	10	4.5	10.0	61	6	10	4.5	8.5	41	10	10	3.0	6.0	
23	13.5	6	14	9.5	16.0	11.5	16	16	8.0	13.0	9.9	18	8	8.0	14.5	86	8	6	6.0	10.5	66	10	12	3.5	7.5	61	6	10	6.5	10.0	

F<sub>am</sub> = median value of effective antenna noise in db above ktb

D<sub>u</sub> = ratio of upper decile to median in db

D<sub>2</sub> = ratio of median to lower decile in db

V<sub>dm</sub> = median deviation of average voltage in db below mean power

L<sub>dm</sub> = median deviation of average logarithm in db below mean power

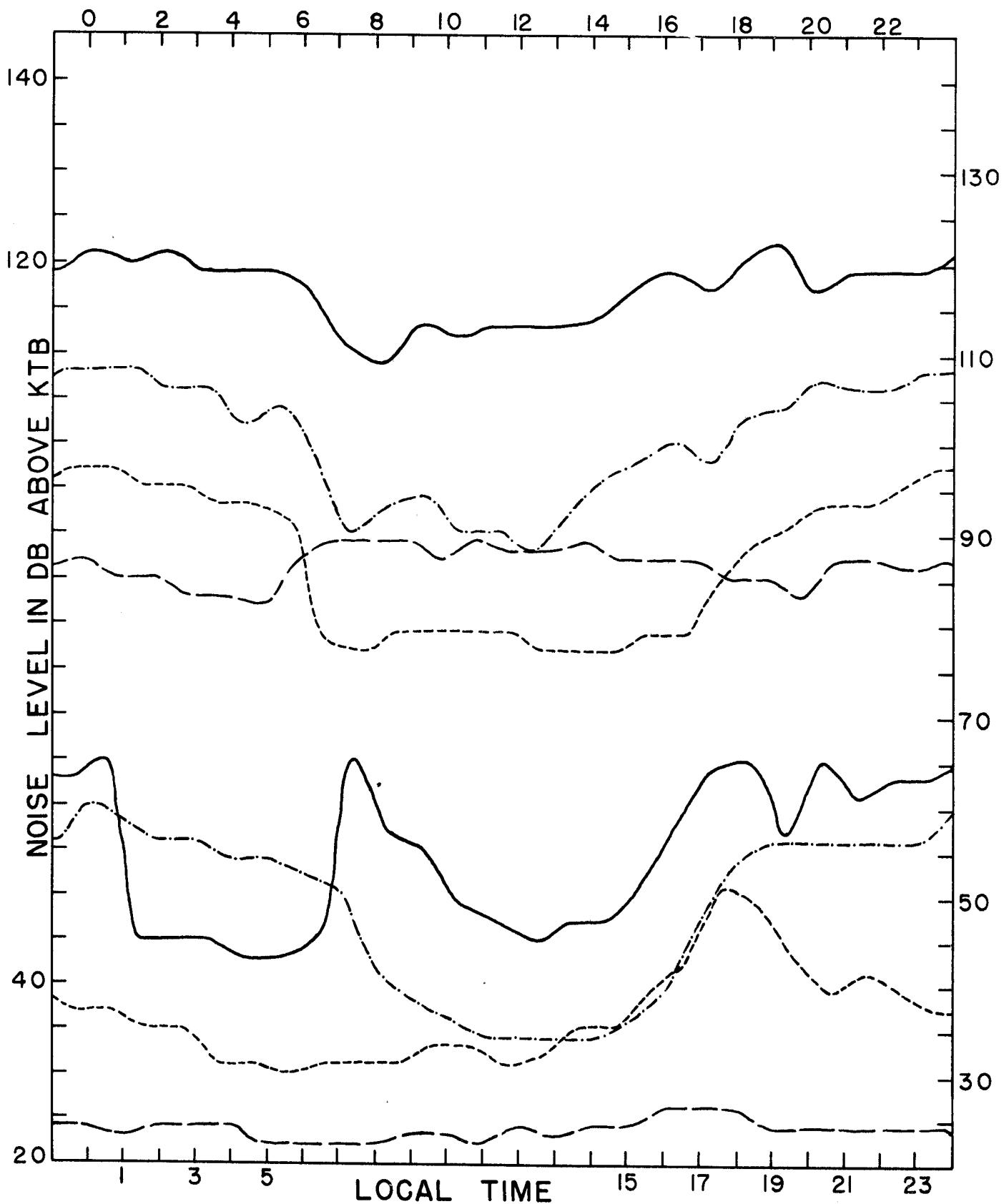


Fig. I Monthly Median Values for July 1964

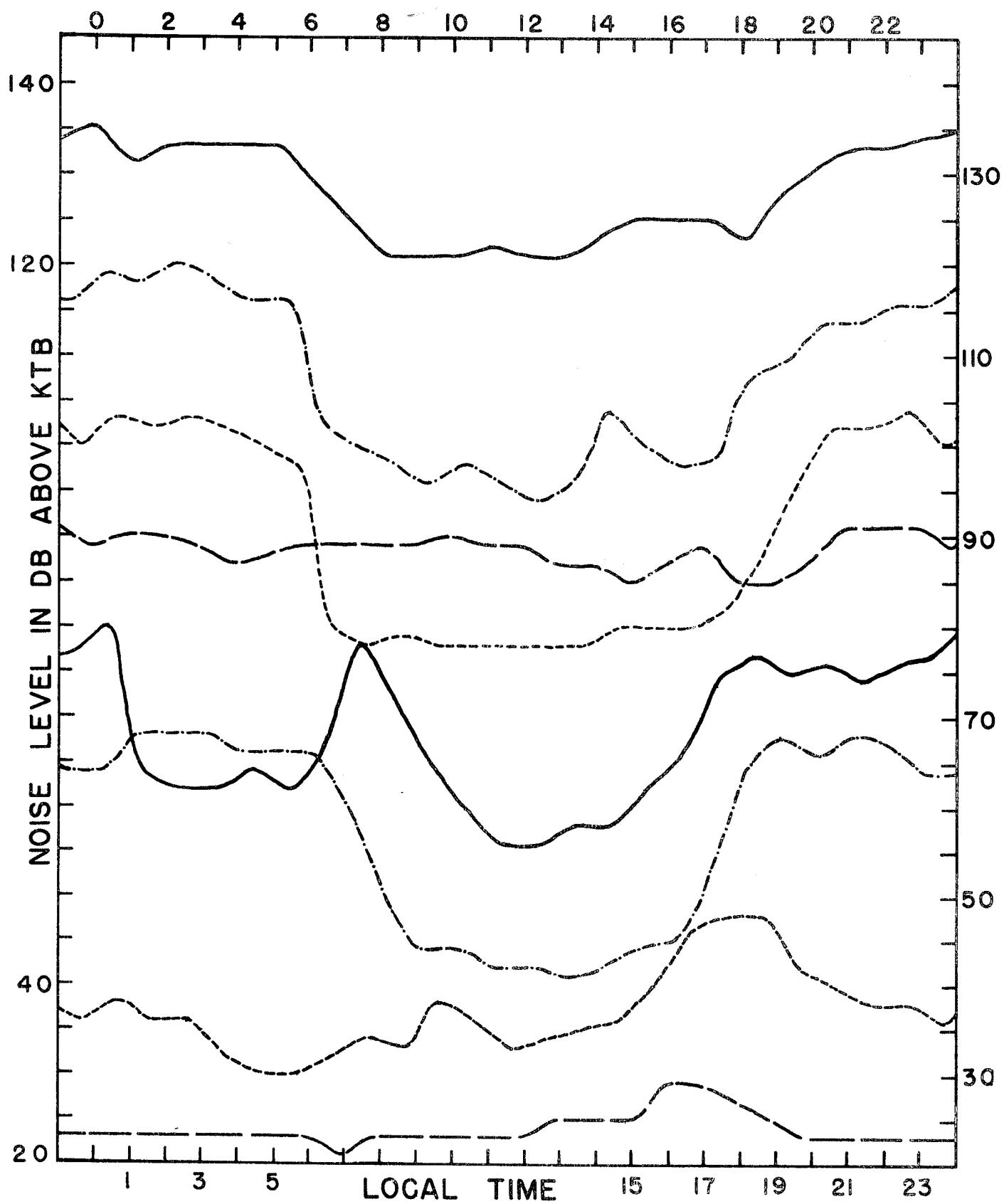


Fig. 2 Monthly Median Values for August 1964

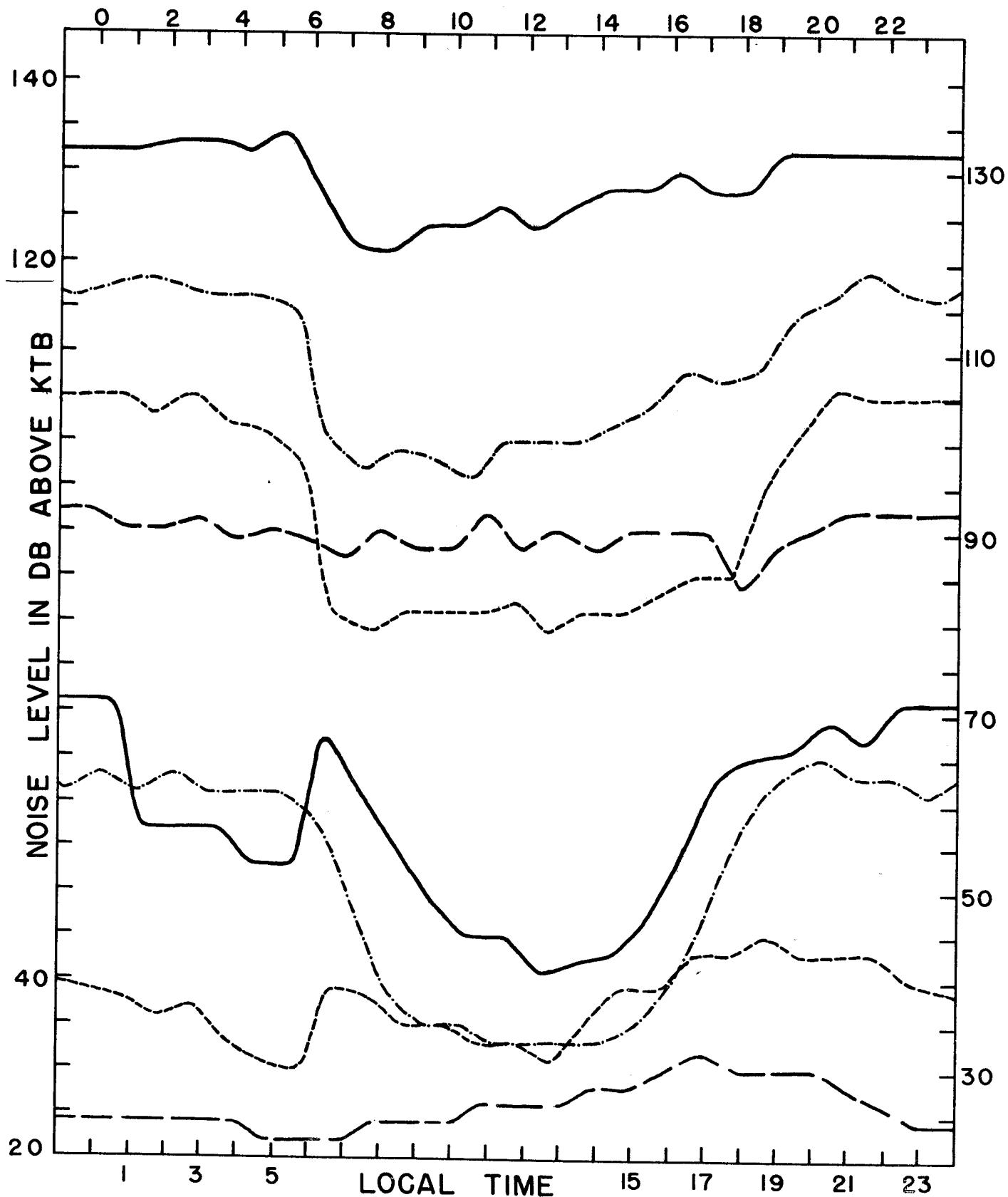


Fig. 3 Monthly Median Values for September 1964

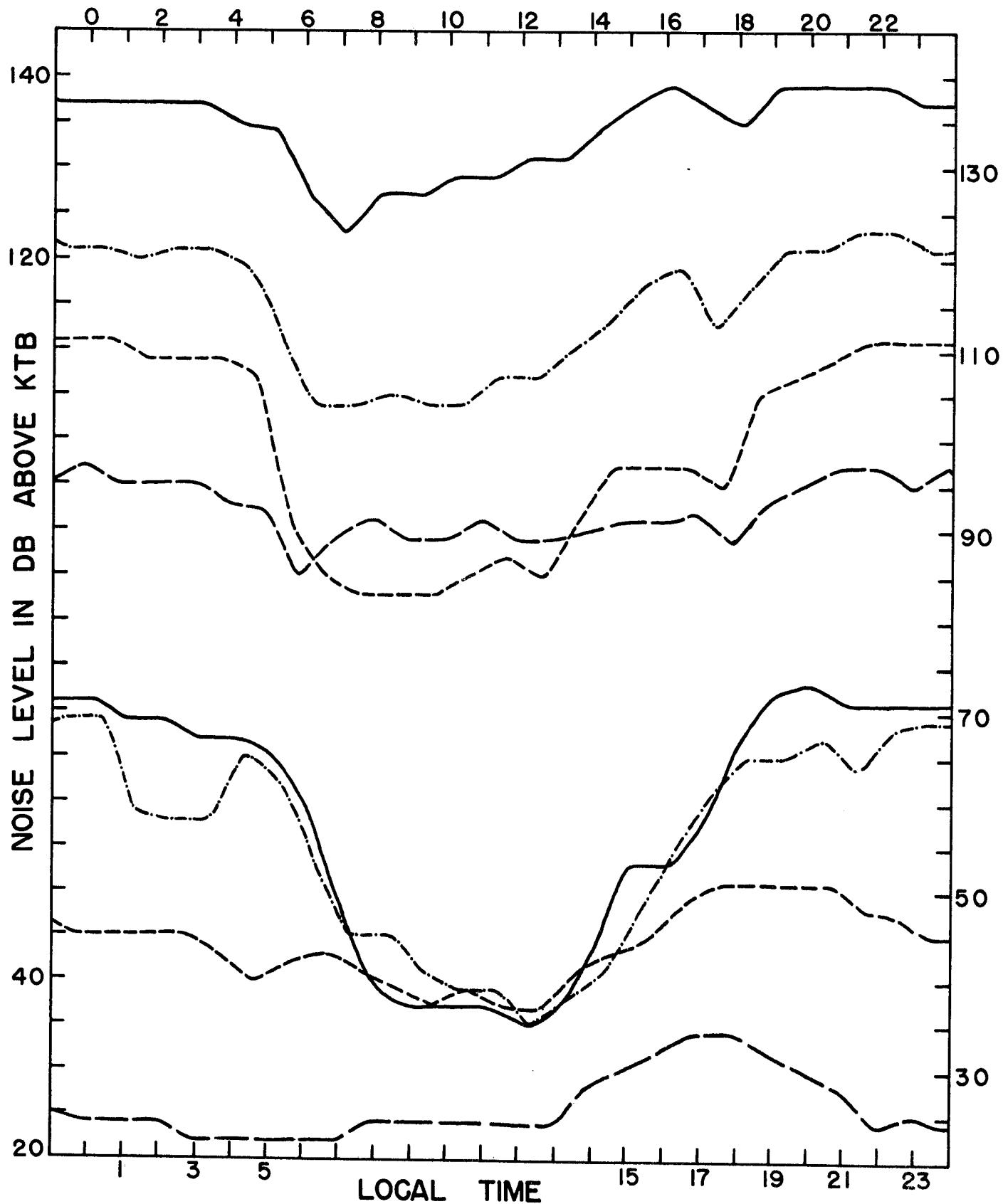


Fig. 4 Monthly Median Values for October 1964

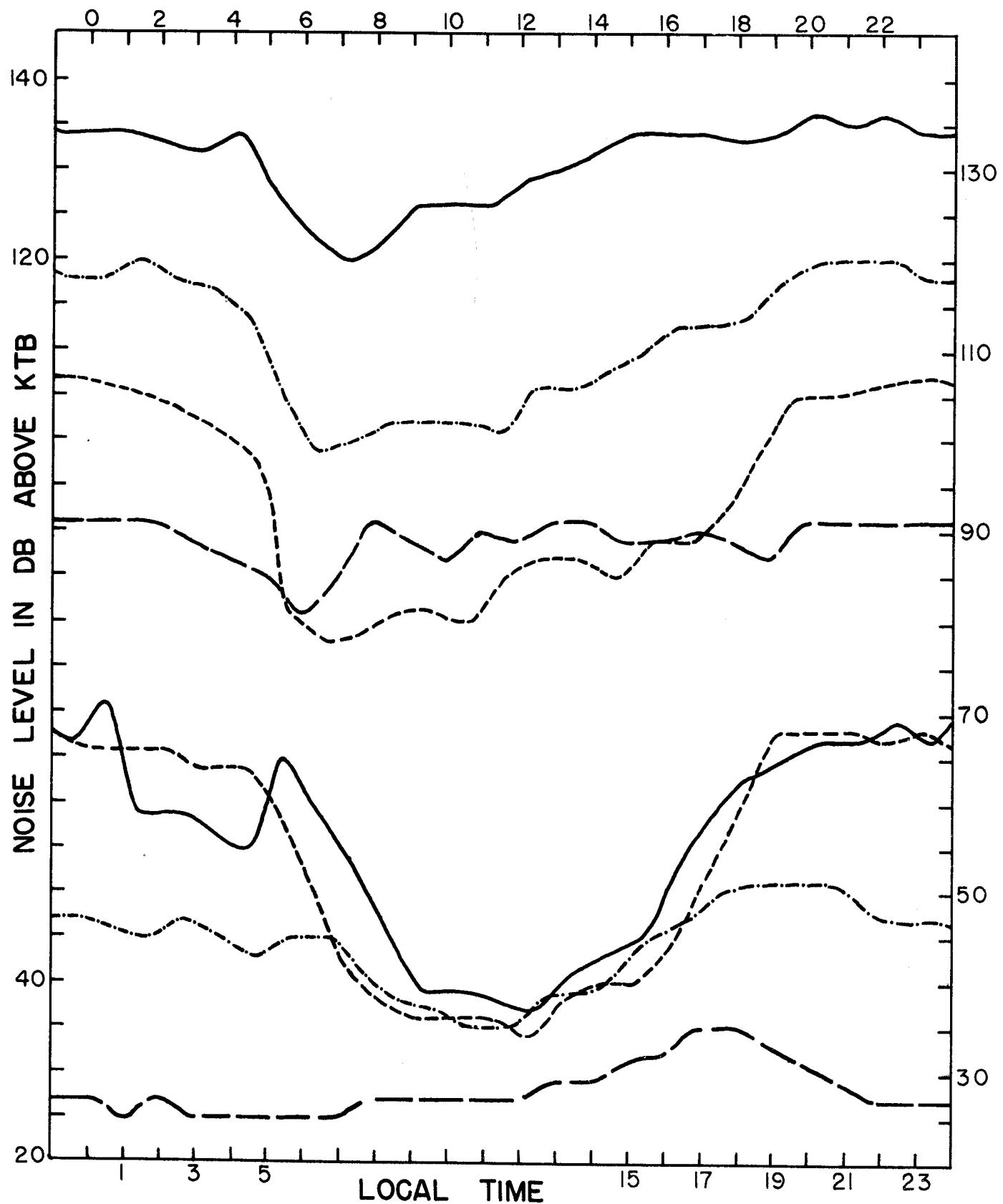


Fig.5 Monthly Median Values for November 1964

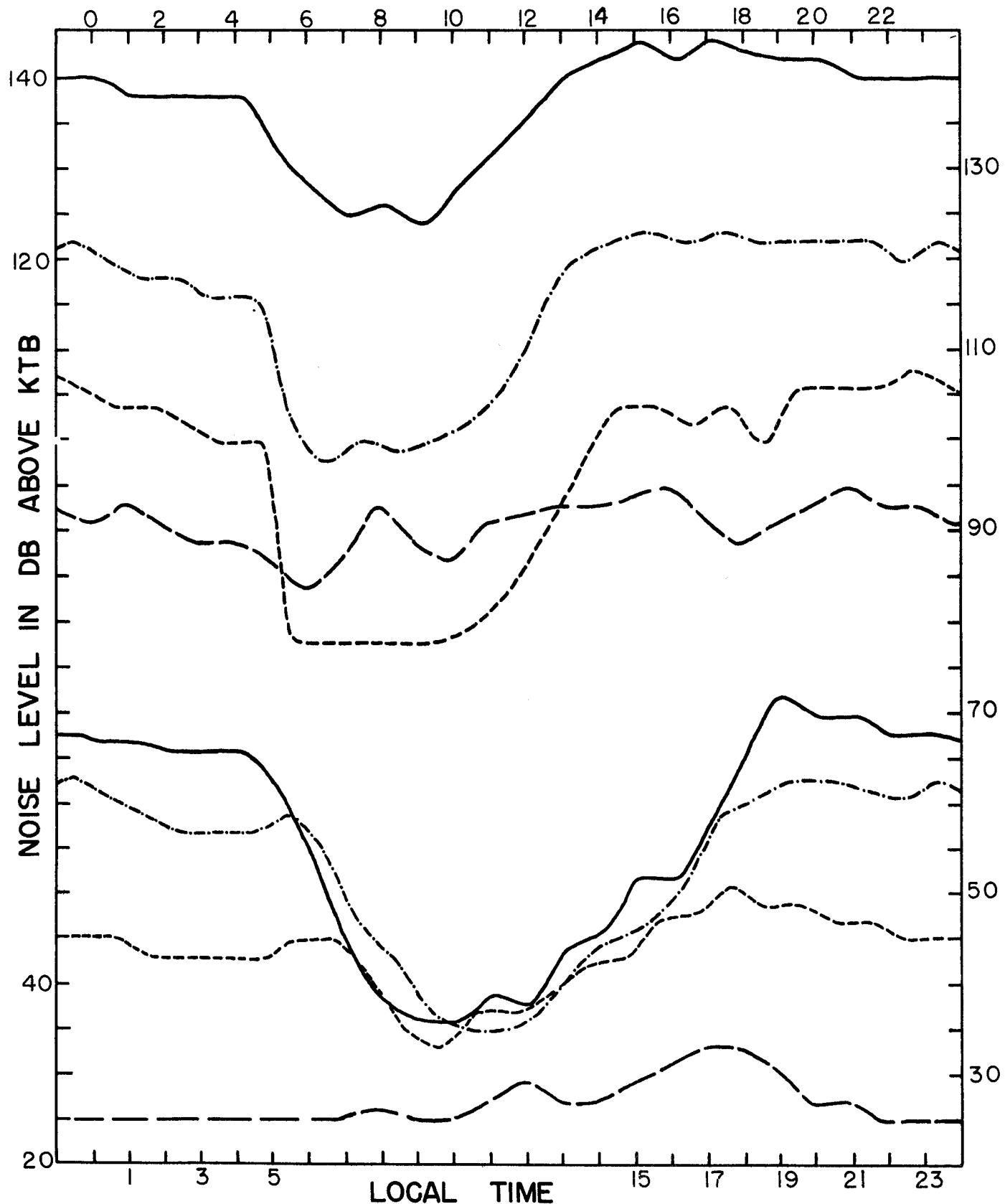


Fig.6 Monthly Median Values for December 1964

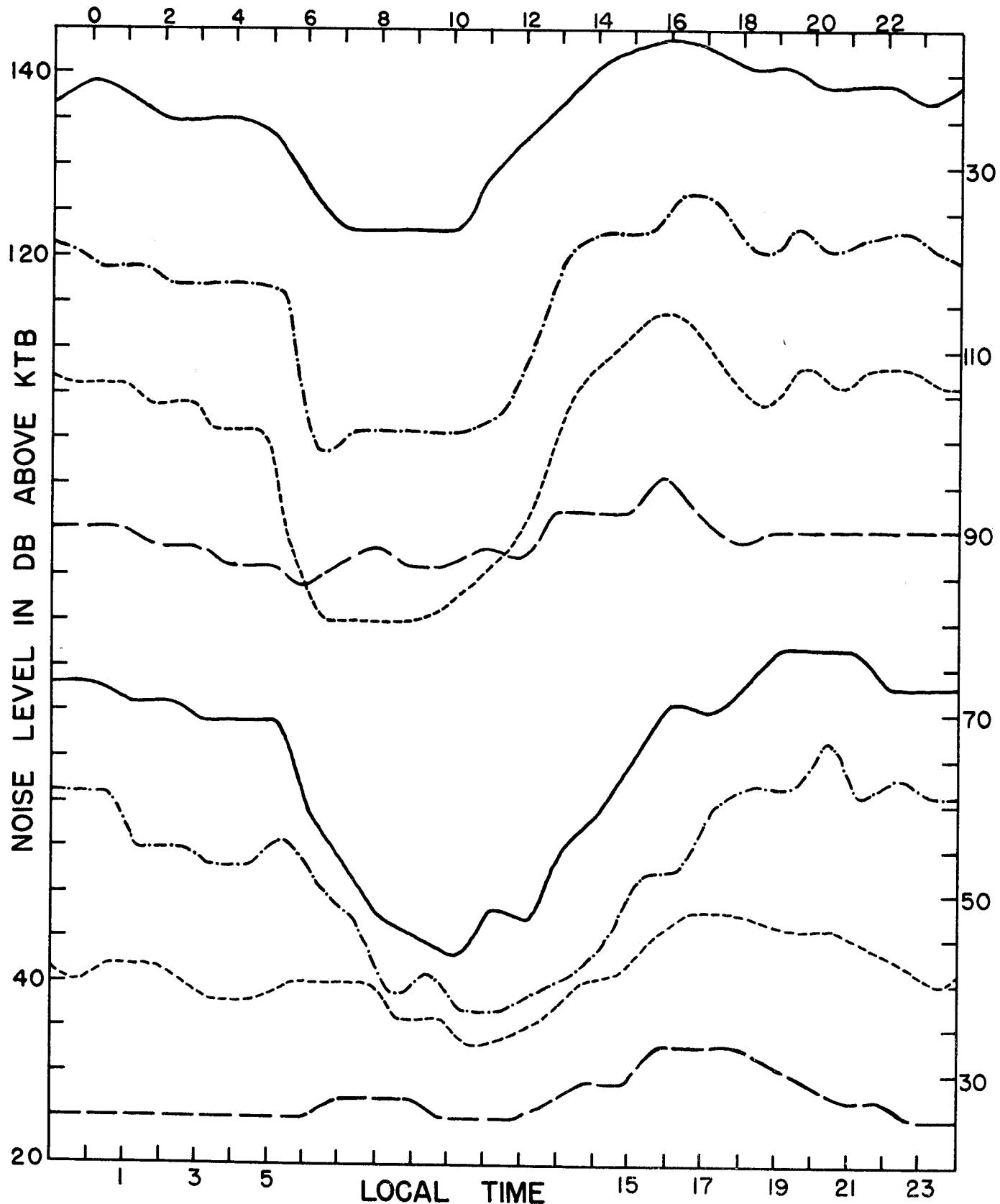


Fig. 7 Monthly Median Values for January 1965

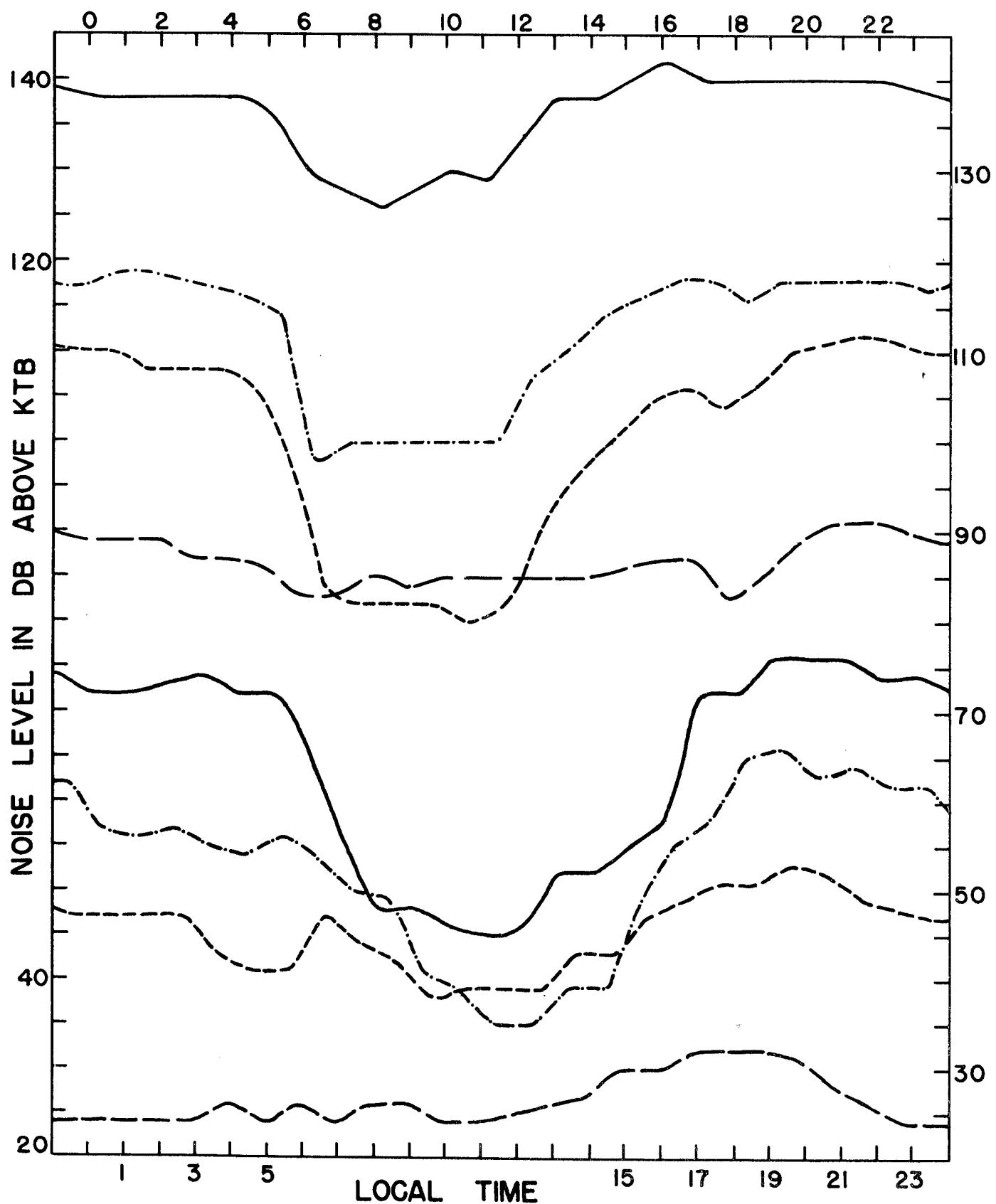


Fig.: 8 Monthly Median Values for February 1965

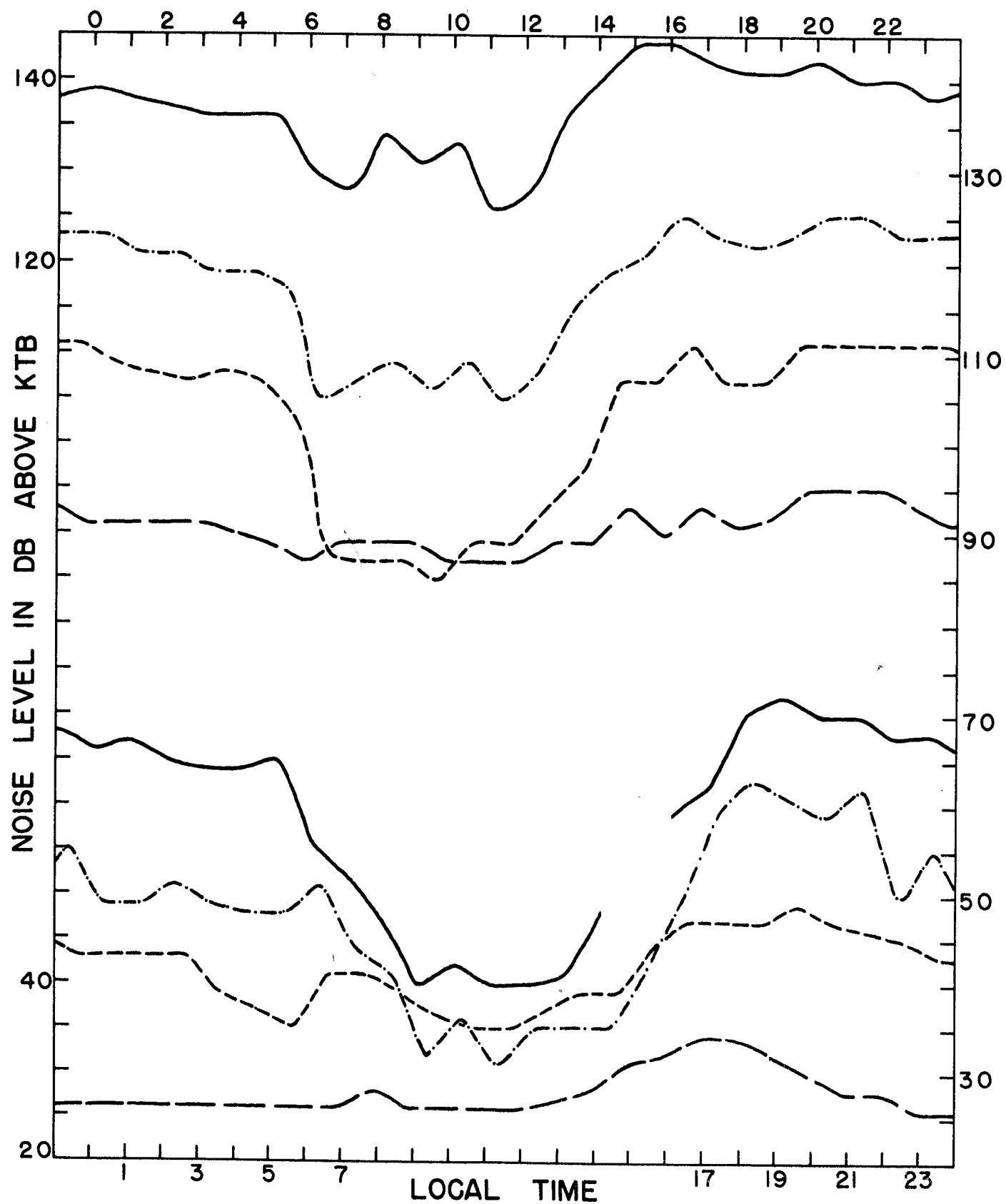


Fig. 9 Monthly Median Values for March 1965

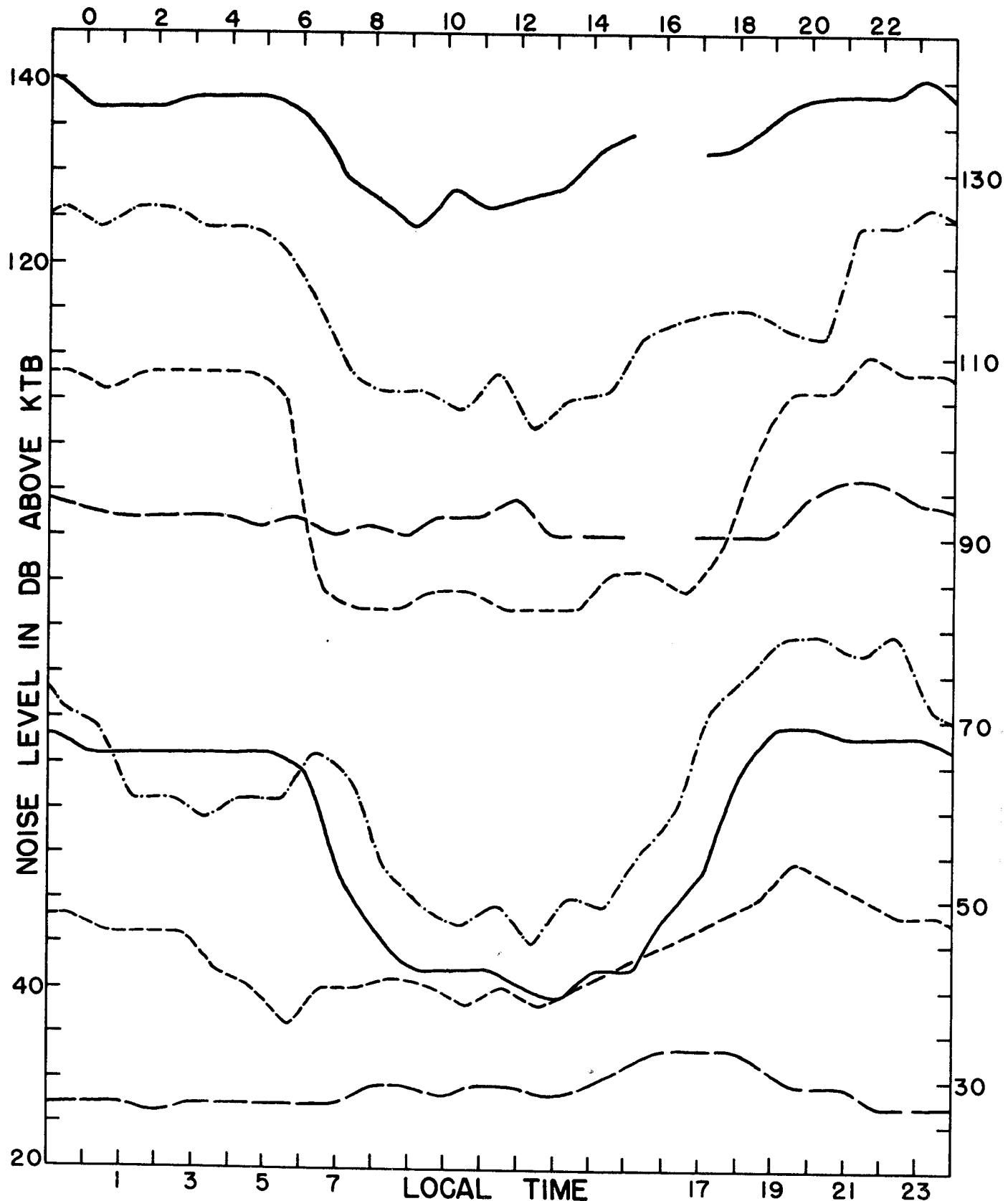


Fig.10 Monthly Median Values for April 1965

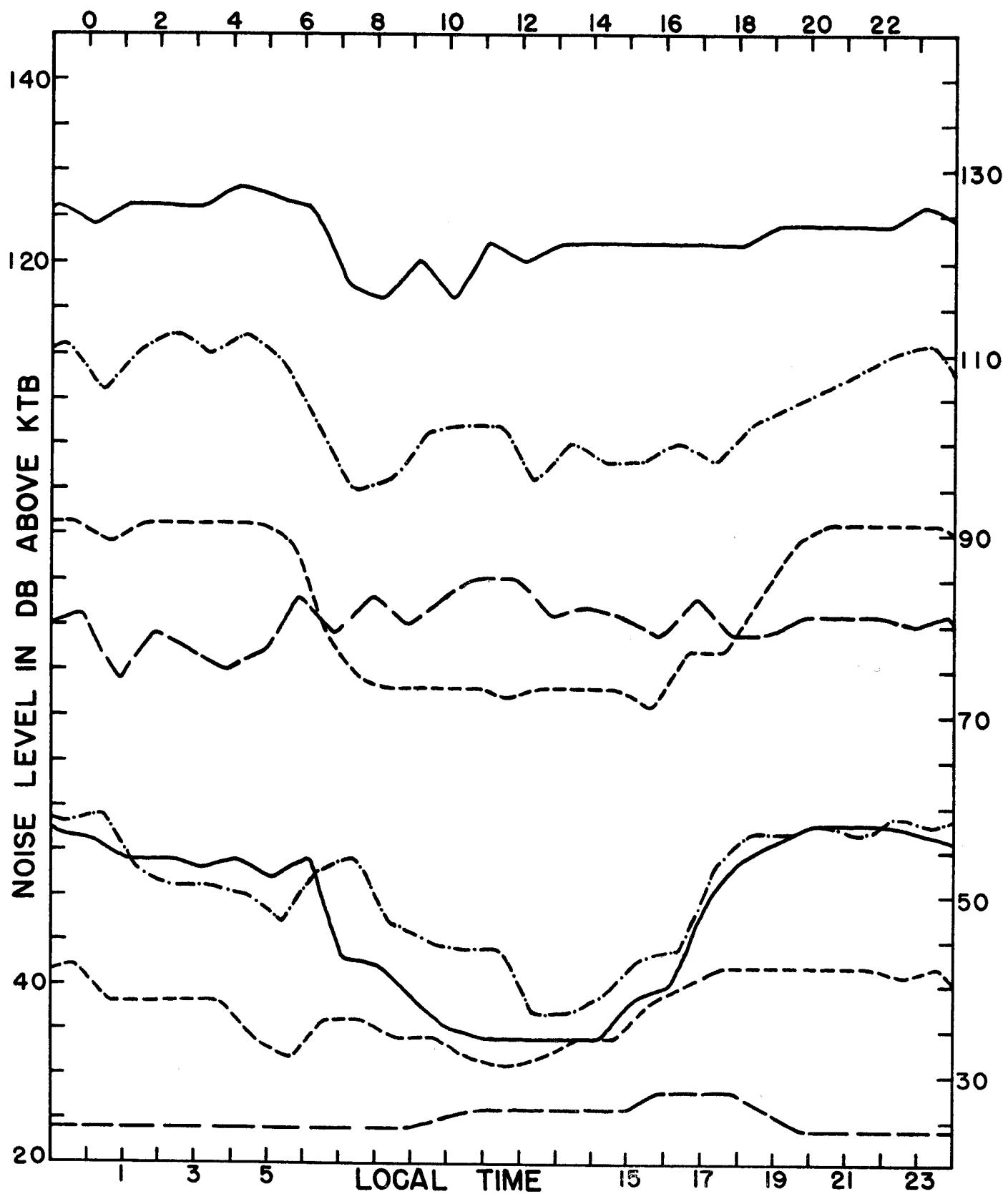


Fig. 11 Monthly Median Values for May 1965

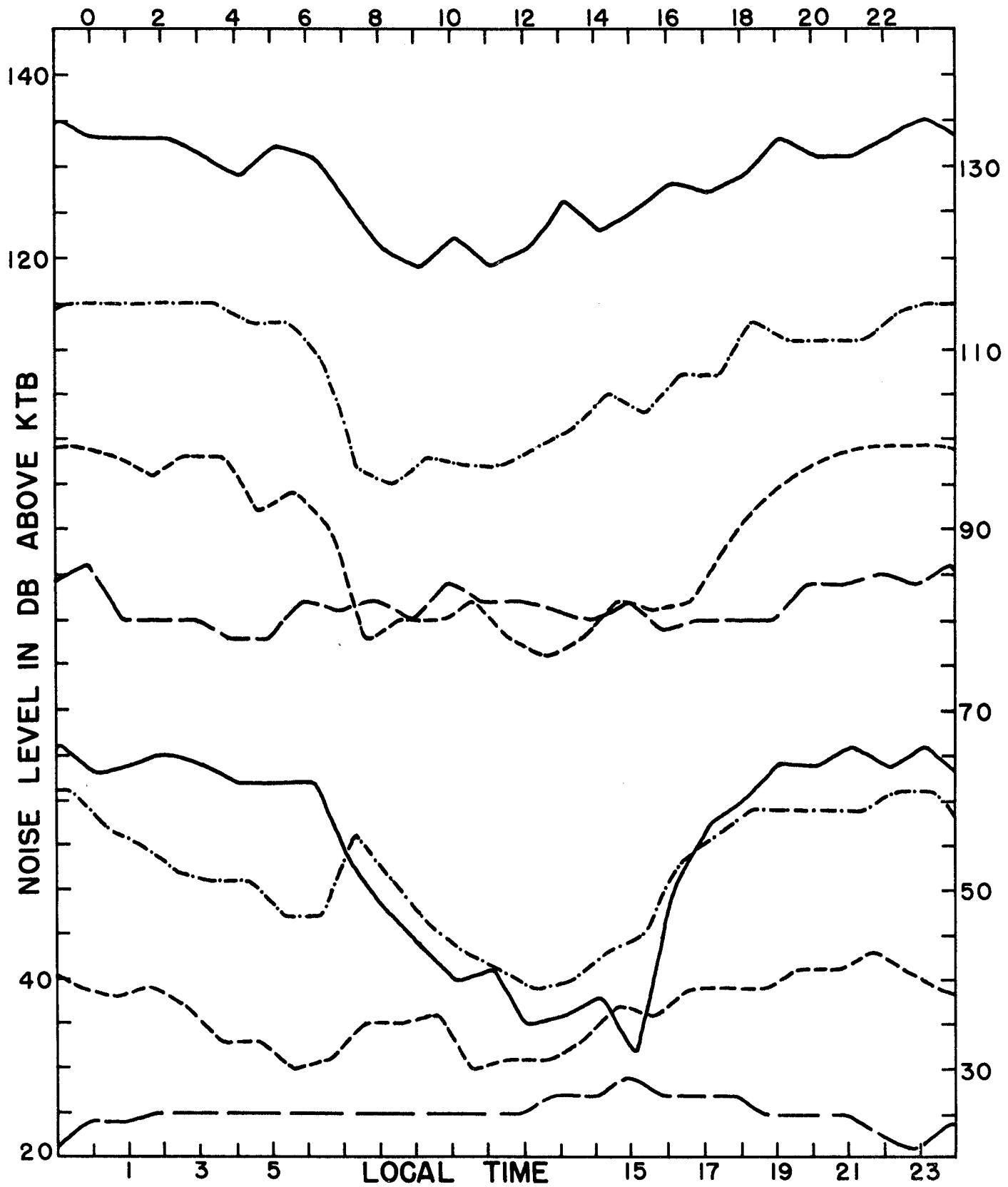


Fig.12 Monthly Median Values for June 1965