

ATMOSPHERIC NOISE MEASUREMENTS

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

by

L. G. MEIRA Fº

and

F. DE MENDONÇA

Report N° LAFE - 24
July 1965

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

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

CONTENTS

Abstract	1
I - Description of Data	1
II - References	3

TABLES

1 - to - 12	Month - hour values of radio noise for the period July 64 - June 65	4
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ILLUSTRATIONS

Fig. 1 to 12	Radio Noise Curves	16
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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 (23.39S, 45.89W)

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_{am} = 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

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

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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- Watt, A. D. , R. M. Coon, E. L. Maxwell, and R. W. Plush, Performance of some radio systems in the presence of thermal and atmospheric noise, Proc. Ire, 46, (12), 1914 (1958) .

MONTH-HOUR VALUES OF RADIO NOISE

Station São José, Brasil

Lat. 23.3°S Long. 45.8°W

Month September 1964

Hour (EST)	Frequency (Mc)											
	.051				.113				.246			
	F _m	D _u	D _g	V _{dm}	F _m	D _u	D _g	V _{dm}	F _m	D _u	D _g	V _{dm}
00	132	10	8	8.0	117	10	7	6.5	106	8	8	5.5
01	132	8	8	7.5	118	9	8	8.0	103	9	8	7.0
02	133	7	9	9.0	117	8	7	7.0	105	6	10	9.0
03	133	7	6	7.5	116	9	6	6.0	102	9	8	6.0
04	132	8	6	9.0	116	8	6	7.0	101	7	6	6.0
05	134	5	8	9.5	115	8	7	6.0	98	7	7	7.5
06	128	7	8	7.5	101	11	9	6.0	81	10	6	8.0
07	122	12	12	10.5	97	14	5	6.0	79	14	7	6.0
08	121	11	13	10.0	99	14	8	6.0	81	14	6	5.5
09	124	10	14	5.5	98	14	8	5.5	81	10	4	8.0
10	124	8	14	9.0	96	15	5	8.0	81	10	4	7.5
11	126	8	16	3.5	100	14	8	6.0	82	7	5	8.5
12	124	12	16	10.5	100	12	10	8.0	79	14	2	8.5
13	126	10	14	8.5	100	14	8	8.0	81	13	4	9.0
14	128	8	10	8.0	102	17	8	8.5	81	19	4	8.0
15	128	13	7	5.5	104	21	9	5.0	83	26	4	7.5
16	130	14	6	6.5	108	19	12	5.0	85	27	6	9.0
17	128	18	9	6.0	107	22	12	5.5	85	26	6	8.5
18	128	17	11	7.0	108	21	10	9.0	85	20	9	7.5
19	132	16	10	6.5	114	18	8	6.5	101	15	8	6.0
20	132	13	9	7.5	116	11	7	6.0	106	11	11	6.0
21	132	13	7	6.0	119	11	9	6.0	105	11	9	6.0
22	132	9	8	6.5	117	10	7	5.5	105	7	8	5.5
23	132	8	8	8.0	116	8	6	7.0	105	7	7	6.0

F_m = median value of effective antenna noise in db above k1b

D_u = ratio of upper decile to median in db

D_g = ratio of median to lower decile in db

V_{dm} = median deviation of average voltage in db below mean power

L_{g10} = median deviation of average logarithm in db below mean power

000000-12-6

RN-13

São José, Brazil at 28.3°S Long. 45.8°W Month October 1964

Month October

Pl. 23.305

Station São

MONTH-HOUR VALUES OF RADIO NOISE

F_{0.05} = median value of effective antenna noise in db above kTb

 D_{11} = ratio of power decile to median in db

ପିପ୍ପାଲୀ ଗ୍ରାମପଞ୍ଚାୟତର ମଧ୍ୟସ୍ଥ ଗାଁରେ ଏହି ଗୁମାସ୍ତା ଗୋଷ୍ଠୀର ସଭା ଚାଲିଥିଲା । ସଭାରେ ଗୋଷ୍ଠୀର ସଭାସଭାମାନଙ୍କର ଉପସ୍ଥିତି ଥିଲା । ସଭାରେ ଗୋଷ୍ଠୀର ସଭାସଭାମାନଙ୍କର ଉପସ୍ଥିତି ଥିଲା ।

ପୃଷ୍ଠା ୨୨୩

$$V_{eff} = \text{median deviation of average velocity}$$
$$L_{std} = \text{standard deviation of average logarithm}$$
 σ_{avg} = standard 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

Hour (ST)	Frequency (Mc)																																																															
	.051								.113								.246								.545								2.15								5.0								10.0								80.0							
	Fam	Du	Df	Vdm	Ldm	Fam	Du	Df	Vdm	Ldm	Fam	Du	Df	Vdm	Ldm	Fam	Du	Df	Vdm	Ldm	Fam	Du	Df	Vdm	Ldm	Fam	Du	Df	Vdm	Ldm	Fam	Du	Df	Vdm	Ldm	Fam	Du	Df	Vdm	Ldm																								
00	140	6	9	6.5	12.0	120	8	6	6.0	11.0	104	8	6	7.0	12.5	93	4	6	4.0	7.5	67	6	8	6.5	11.0	61	6	9	6.0	10.0	45	6	4	6.0	10.0	25	5	2	3.0	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	8.5	67	6	10	6.0	11.5	59	5	9	5.5	10.5	43	9	6	6.0	11.0	25	6	2	2.5	5.0																								
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	8.5	66	7	9	7.0	12.0	57	6	7	5.0	9.5	43	9	8	5.5	10.0	25	3	2	1.5	3.5																								
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	10.0	66	7	8	6.0	10.5	57	6	8	6.0	10.5	43	7	9	6.0	11.0	25	3	2	2.0	4.0																								
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	8.5	66	7	10	8.0	14.0	57	6	10	7.0	12.0	43	8	8	4.0	7.5	25	1	2	1.5	3.5																								
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	45	4	11	5.5	10.0	25	4	2	1.5	3.5																								
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	14.5	54	6	9	6.0	11.0	55	2	14	5.5	10.5	45	4	8	4.0	7.5	25	2	0	2.0	4.0																								
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	41	6	8	5.5	10.0	26	1	1	3.0	6.0																								
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	7.5	12.5	25	6	0	2.5	5.5																								
09	124	10	6	9.5	17.0	100	7	11	10.0	17.5	78	5	5	8.5	15.0	87	6	8	4.5	8.5	36	12	6	6.5	12.0	37	4	6	5.0	10.5	33	9	6	6.5	12.0	25	6	0	2.5	5.5																								
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	8.5	36	11	5	6.0	11.0	35	6	5	6.5	12.0	37	4	8	7.5	13.5	27	6	2	2.5	5.0																								
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	6.5	12.0	29	4	4	3.0	6.0																								
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	7.0	11.5	27	6	3	3.0	6.0																								
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	5.5	10.0	27	13	2	3.0	6.0																								
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	7.0	12.5	29	12	2	4.0	7.5																								
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	5.0	9.0	31	8	4	4.5	8.5																								
16	142	10	11	9.0	14.5	122	12	19	10.0	17.5	102	16	24	11.5	18.0	92	13	9	6.5	11.5	52	22	22	12	8.5	14.5	51	10	10	5.5	10.0	48	5	10	5.0	9.0	33	6	6	3.0	6.0																							
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	5.5	10.0	33	5	3	4.0	7.5																								
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	7.0	12.5	66	6	17	6.5	11.5	61	3	6	6.0	11.0	49	4	6	5.0	9.0	31	6	4	3.5	6.5																								
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	4.5	8.0	27	10	4	3.0	6.0																								
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	47	6	4	4.0	7.5	27	7	3	3.0	6.0																								
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	6.0	10.5	47	5	6	5.0	9.0	25	5	2	2.5	5.0																								
22	140	6	6	5.5	9.5	120	8	6	5.5	10.0	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	45	8	3	5.5	9.5	25	5	2	2.5	5.0																								
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	10.0	45	6	4	5.0	9.0	25	4	2	2.5	5.0																								

F_{am} = median value of effective antenna noise in db above ktb

 D_U = ratio of upper decile to median in db

D_2 = ratio of median to lower decile in db

V_{dm} = median deviation of average voltage in db below mean power

σ_{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 January 19 65

Hour (LST)	Frequency (Mc)												20.0																																						
	0.51						113						246						545						2.5						5.0						10.0						20.0								
	F _{am}	D _u	D _f	V _{dm}	L _{dm}	F _{dm}	F _{am}	D _u	D _f	V _{dm}	L _{dm}	F _{dm}	F _{am}	D _u	D _f	V _{dm}	L _{dm}	F _{dm}	F _{am}	D _u	D _f	V _{dm}	L _{dm}	F _{dm}	F _{am}	D _u	D _f	V _{dm}	L _{dm}	F _{dm}	F _{am}	D _u	D _f	V _{dm}	L _{dm}	F _{dm}	F _{am}	D _u	D _f	V _{dm}	L _{dm}	F _{dm}	F _{am}	D _u	D _f	V _{dm}	L _{dm}				
00	139	2	8	9.0	15.0	119	5	6	7.5	13.0	106	5	7	10.5	17.5	90	4	8	6.5	11.5	73	-6	6	6.5	11.5	61	10	13	4.5	8.0	42	10	12	4.5	8.0	25	5	2	2.0	4.0	42	10	12	4.5	8.0	25	5	2	2.0	4.0	
01	137	4	8	9.5	15.5	119	6	7	11.5	20.0	104	6	6	11.0	19.5	88	4	7	5.5	11.0	71	6	6	6.0	11.0	55	13	13	5.5	10.0	42	9	12	5.5	10.0	25	4	2	2.0	4.0	42	9	12	5.5	10.0	25	4	2	2.0	4.0	
02	135	6	8	11.0	17.0	117	8	7	10.5	16.5	104	4	8	11.5	20.0	88	4	5	6.0	11.0	71	5	6	6.0	10.0	55	12	13	6.0	11.0	40	11	12	6.0	11.0	25	4	2	2.0	4.0	40	11	12	6.0	11.0	25	4	2	2.0	4.0	
03	135	6	7	11.5	20.0	117	6	8	11.0	17.0	102	6	7	11.0	17.0	86	4	5	8.0	13.5	69	8	4	6.5	11.5	53	12	12	5.5	10.0	33	10	7	4.5	8.5	25	2	2	2.0	4.0	33	10	7	4.5	8.5	25	2	2	2.0	4.0	
04	135	6	8	11.0	17.0	117	5	11	11.0	17.5	102	4	9	10.0	18.0	86	3	10	7.0	12.5	69	8	5	7.0	12.5	53	14	12	6.0	11.0	38	10	8	6.0	11.0	25	2	2	2.0	4.0	38	10	8	6.0	11.0	25	2	2	2.0	4.0	
05	133	5	10	12.0	23.0	111	6	16	11.0	17.0	88	6	10	12.5	19.5	84	5	8	7.0	13.0	69	7	11	7.0	12.5	56	9	16	6.5	11.0	40	9	10	6.0	11.0	25	5	2	2.0	4.0	40	9	10	6.0	11.0	25	5	2	2.0	4.0	
06	127	6	10	11.0	19.5	99	12	9	13.5	23.5	80	12	3	10.5	18.5	86	3	10	6.0	11.0	59	7	7	5.5	10.0	51	13	12	6.0	11.0	40	9	10	5.0	9.5	27	6	2	3.0	6.0	40	9	10	5.0	9.5	27	6	2	3.0	6.0	
07	123	10	7	12.5	22.0	101	10	13	12.0	21.0	80	13	3	11.0	19.5	88	6	7	5.5	10.0	53	7	8	7.0	12.5	47	11	13	5.5	9.5	40	8	11	5.5	10.0	27	7	2	2.0	4.0	40	8	11	5.5	10.0	27	7	2	2.0	4.0	
08	123	10	8	8.0	14.5	101	9	10	12.5	19.5	80	12	4	10.0	17.5	86	6	10	—	—	—	—	—	—	—	—	39	12	7	5.0	9.5	36	6	18	6.5	12.0	27	4	2	2.0	4.0	36	6	18	6.5	12.0	27	4	2	2.0	4.0
09	123	8	8	7.5	13.5	101	13	10	10.5	18.5	82	15	6	11.5	20.0	86	5	6	6.5	11.5	45	10	6	2.5	5.0	41	4	10	5.5	10.5	36	3	16	8.0	14.5	25	5	1	3.0	6.0	36	3	16	8.0	14.5	25	5	1	3.0	6.0	
10	123	10	6	9.0	16.0	101	14	8	11.5	20.0	84	18	8	9.0	16.0	88	5	6	6.0	10.5	43	10	4	6.0	11.0	37	7	7	6.0	11.0	33	7	9	7.5	13.5	25	5	2	3.5	6.5	33	7	9	7.5	13.5	25	5	2	3.5	6.5	
11	129	12	10	12.0	21.0	103	22	7	13.5	23.5	88	18	6	13.0	22.5	87	8	9	5.0	10.0	48	7	9	12.5	22.0	37	10	10	8.5	14.0	34	8	10	7.0	12.0	25	11	2	4.0	7.5	34	8	10	7.0	12.0	25	11	2	4.0	7.5	
12	133	11	10	11.5	20.0	111	19	9	12.0	21.0	96	23	16	8.0	14.5	92	12	12	8.0	14.5	47	28	11	11.0	19.5	39	19	10	9.0	16.0	36	11	11	5.0	9.0	27	26	4	4.0	7.5	36	11	11	5.0	9.0	27	26	4	4.0	7.5	
13	137	10	10	11.0	19.5	121	10	16	13.0	20.0	106	18	22	12.0	23.0	92	18	8	7.0	12.0	55	24	17	12.0	21.0	41	18	8	1.0	11.5	40	12	8	7.0	12.5	29	17	4	4.0	7.5	40	12	8	7.0	12.5	29	17	4	4.0	7.5	
14	141	12	10	10.0	17.5	123	16	14	11.5	20.0	110	16	26	11.0	19.5	92	20	10	7.5	13.0	59	23	13	—	—	—	—	10	13.0	22.5	41	7	9	7.0	12.5	29	14	4	4.0	7.5	41	7	9	7.0	12.5	29	14	4	4.0	7.5	
15	143	11	10	11.0	17.5	123	16	14	11.5	20.0	114	11	27	11.0	17.0	96	13	8	6.5	12.0	65	19	23	8.0	14.0	52	14	14	10.0	17.5	45	7	15	7.0	12.5	33	9	6	5.0	9.5	45	7	15	7.0	12.5	33	9	6	5.0	9.5	
16	144	6	10	10.5	18.5	127	12	18	8.0	14.5	113	13	27	10.5	18.5	92	14	13	6.5	11.5	71	11	22	—	—	—	—	8	6.0	11.0	48	6	15	3.5	10.0	33	8	6	9.0	16.0	48	6	15	3.5	10.0	33	8	6	9.0	16.0	
17	143	6	10	12.5	22.0	126	7	15	11.5	20.0	108	11	20	11.0	17.0	89	14	10	6.5	11.0	70	12	14	6.5	11.0	60	8	10	6.0	11.0	48	8	11	5.0	9.5	33	6	4	4.5	8.5	48	8	11	5.0	9.5	33	6	4	4.5	8.5	
18	141	6	10	13.0	22.5	122	9	13	10.0	17.0	104	11	11	11.0	17.5	90	9	8	6.5	12.0	73	8	10	8.5	15.0	62	8	11	4.5	8.5	47	7	12	6.0	9.5	31	7	2	5.0	9.5	47	7	12	6.0	9.5	31	7	2	5.0	9.5	
19	141	9	11	9.5	15.0	123	9	11	9.0	15.0	108	7	9	8.0	15.0	90	5	8	7.0	12.0	77	9	8	5.5	11.0	62	9	12	5.5	10.0	46	10	9	5.0	9.5	29	6	5	4.0	7.5	46	10	9	5.0	9.5	29	6	5	4.0	7.5	
20	139	6	10	11.0	17.0	121	7	9	10.0	16.0	106	8	8	9.0	16.5	90	5	6	6.5	12.0	77	7	8	5.5	10.0	67	7	14	5.0	9.5	46	9	10	6.0	9.5	27	9	4	3.0	6.0	46	9	10	6.0	9.5	27	9	4	3.0	6.0	
21	139	4	8	10.5	16.5	122	5	9	9.0	15.0	108	6	9	9.0	14.5	90	6	8	7.5	12.0	77	4	10	6.0	11.0	61	12	10	5.0	9.5	44	11	8	5.0	9.5	27	5	4	4.0	7.5	44	11	8	5.0	9.5	27	5	4	4.0	7.5	
22	139	5	7	9.5	16.0	123	4	11	8.5	15.0	108	6	8	9.0	17.0	90	4	8	6.0	11.0	73	8	4	6.0	11.0	63	10	14	4.0	7.5	42	11	9	5.0	9.5	25	5	2	2.5	5.0	42	11	9	5.0	9.5	25	5	2	2.5	5.0	
23	137	6	4	10.5	17.5	121	4	9	9.0	15.5	106	6	7	10.5	17.0	90	4	10	6.5	12.0	73	6	6	7.5	13.5	61	11	10	5.0	9.5	40	12	7	5.0	9.5	25	2	2	2.0	4.0	40	12	7	5.0	9.5	25	2	2	2.0	4.0	

F_{am} = median value of effective antenna noise in db above k1b

D_u = ratio of upper decile to median in db

D_f = ratio of median to lower decile in db

V_{dm} = median deviation of average voltage in db below mean power

L_{dm} = median deviation of average logarithm in db below mean power

LOCAL-REC-14

RN-13

MONTH-HOUR VALUES OF RADIO NOISE

Station São José, Brazil Lat. 23.39S Long. 45.89W Month February 19 65

Hour (LST)	Frequency (Mc)																																								
	0.51			.113			.246			.545			2.5			5.0			10.0			20.0																			
	F _{am}	D _f	V _{dm}	L _{dm}	F _{am}	D _f	V _{dm}	L _{dm}	F _{am}	D _f	V _{dm}	L _{dm}	F _{am}	D _f	V _{dm}	L _{dm}	F _{am}	D _f	V _{dm}	L _{dm}	F _{am}	D _f	V _{dm}	L _{dm}																	
00	138	4	5	8.0	130	118	5	4	6.0	120	110	6	4	5.5	110	89	6	2	5.0	90	72	6	2	2	5.5	100	57	16	8	5	6.0	110	24	4	2	3.0	60				
01	138	4	4	8.5	150	119	3	5	7.0	125	108	6	2	6.0	110	89	4	4	5.0	90	72	7	3	3	6.5	120	56	18	5	6.0	110	47	4	8	5.0	95	24	4	2	3.0	60
02	138	4	7	9.0	150	118	4	4	7.0	140	108	6	4	5.5	110	87	6	4	4.5	90	73	5	5	5	5.0	95	57	14	8	4.5	80	47	2	7	5.0	95	24	2	2	3.0	60
03	138	4	6	9.0	150	117	5	5	6.0	120	108	4	6	7.0	135	87	4	5	5.5	115	74	5	6	6	8.0	135	55	15	6	7.5	135	43	4	5	4.5	85	26	0	2	3.0	60
04	138	4	9	8.0	150	116	5	4	7.5	140	106	5	6	5.5	110	86	6	3	4.0	75	72	9	6	6	5.0	95	54	15	7	5.5	100	41	7	4	5.0	95	24	2	2	2.0	40
05	136	6	8	10.0	160	114	6	10	8.0	140	98	12	8	6.0	125	83	4	12	6.5	120	72	8	2	2	5.0	90	56	15	5	5.5	100	41	8	4	4.5	85	26	0	4	3.0	60
06	130	4	6	10.0	160	98	10	6	8.0	130	84	6	4	6.0	110	83	8	12	5.0	90	66	6	6	6	6.0	110	54	15	7	7.0	115	47	6	6	4.0	75	24	2	2	2.5	50
07	128	4	8	9.0	160	100	8	8	9.0	150	82	6	2	5.0	130	85	2	12	5.0	100	56	18	6	6	6.5	110	50	13	7	10.0	175	44	5	7	6.5	120	26	2	2	3.0	60
08	126	4	6	9.5	155	100	8	6	8.0	130	82	10	2	5.5	110	84	3	11	5.0	115	48	8	4	4	6.0	100	49	12	8			42	13	7	6.5	120	26	2	3	4.0	75
09	128	6	4	9.0	150	100	4	10	8.0	130	82	8	4	3.5	70	85	5	9	5.0	110	48	6	6	5	4.5	85	39	12	5	8.0	145	39	9	10	5.5	100	24	3	0	3.0	60
10	130	6	6	10.0	175	100	9	6	6.0	120	80	13	2	6.0	100	85	4	8	3.5	75	46	10	5	4	4.5	85	39	12	5	7.5	135	39	4	8	5.0	95	24	2	2	2.4	40
11	129	6	7	10.5	170	100	10	6	7.5	130	82	16	4	9.0	160	85	2	7	5.5	90	45	7	6	4	4.0	85	35	10	6	7.5	135	39	4	8	5.0	95	25	1	1	2.0	40
12	134	5	7	9.0	150	107	9	6	7.0	120	90	11	13	11.0	170	85	6	8	4.0	90	46	9	5	4	4.0	85	35	14	6	5.0	95	39	4	6	5.0	95	26	2	4	3.5	65
13	138	6	8	9.0	145	110	10	8	9.0	145	96	10	8	12.5	205	85	6	6	5.0	105	52	20	8	10	10.0	175	39	14	8	6.0	100	43	4	8	4.0	75	27	5	4	3.5	70
14	138	6	4	8.0	145	114	10	10	10.0	175	100	12	12	12.0	210	86	15	9	6.5	150	52	14	6	6	9.5	170	39	14	6	8.0	130	43	4	5	5.0	95	30	12	4	4.5	90
15	140	6	6	10.0	175	116	11	9	8.0	130	104	19	18	8.5	150	87	16	4	7.5	150	55	24	9	8	8.5	170	48	12	7	6.5	115	47	6	9	8.0	130	30	12	2	3.5	65
16	142	7	6	9.0	160	118	12	11	10.0	170	106	12	16	6.0	170	87	10	4	8.0	140	58	21	4	4	6.5	120	55	10	24	6.5	110	49	3	5	4.5	85	32	8	4	3.0	60
17	140	9	5	9.0	145	118	13	8	12.5	220	104	16	14	12.0	210	83	14	8	8.0	130	72	9	6	6	8.5	150	58	16	4	4.0	75	51	4	4	5.0	95	32	6	2	3.5	70
18	140	8	6	9.0	145	116	12	6	10.0	170	106	10	10	8.0	145	85	10	2	6.0	120	72	8	6	6	5.0	95	65	16	8	6.0	110	51	4	6	3.0	60	32	4	6	4.5	80
19	140	6	4	8.5	140	118	7	5	7.0	140	110	6	6	7.5	130	89	6	4	5.0	95	76	8	5	5	6.5	120	66	13	8	4.5	85	53	4	8	2.0	60	31	5	5	4.5	80
20	140	4	4	7.5	140	118	6	4	7.0	115	111	3	7	6.5	120	91	4	4	4.0	80	76	7	3	7	7.0	125	63	18	8	6.0	95	52	5	6	2.0	60	28	4	4	4.5	80
21	140	3	3	7.5	135	118	6	4	6.5	115	112	5	6	7.0	130	91	4	4	5.0	90	76	5	2	2	5.0	95	64	14	8	4.0	80	49	5	10	3.5	70	26	6	4	3.5	65
22	140	2	4	7.0	120	118	6	5	6.0	110	111	5	7	6.0	125	90	4	3	4.0	90	74	7	3	3	5.0	95	62	12	7	5.0	95	48	5	10	5.0	95	24	6	2	4.0	75
23	139	3	3	8.0	140	117	7	3	6.0	115	110	6	4	5.5	115	89	6	2	5.0	90	74	6	4	4	5.0	95	62	13	8	3.0	60	47	6	8	3.5	65	24	4	2	3.0	60

F_{am} = median value of effective antenna noise in db above ktb

D_f = ratio of upper decile to median in db

D_f = ratio of median to lower decile in db

V_{dm} = median deviation of average voltage in db below mean power

V_{dm} = median deviation of average logarithm in db below mean power

1000-100-10

RN-13

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

Time (hr)	Frequency (Mc)											
	0.5				1.13				2.46			
	F _{am}	D _f	V _{dm}	L _{dm}	F _{am}	D _f	V _{dm}	L _{dm}	F _{am}	D _f	V _{dm}	L _{dm}
00	139	5	6	11.5	180	123	7	7	8.0	109	6	7
01	138	6	6	12.5	190	121	8	7	8.5	108	9	5
02	137	6	5	10.5	165	121	8	7	8.5	107	8	6
03	136	8	5	11.0	120	119	8	6	8.0	108	4	9
04	136	8	8	12.0	185	119	9	8	8.5	107	7	10
05	136	5	9	12.5	190	117	11	7	10.0	103	8	14
06	130	8	8	13.0	200	105	14	12	11.5	180	8	16
07	128	14	8	11.0	170	107	16	12	10.5	165	8	19
08	134	2	15	12.5	190	109	14	12	10.5	175	8	20
09	131	12	11	10.0	160	106	17	11	6.0	100	85	22
10	133	9	12	10.0	160	109	15	12	7.0	115	89	16
11	126	14	8	11.0	170	105	18	10	11.0	170	89	14
12	128	12	7	11.0	170	108	17	10	13.0	200	93	19
13	136	11	8	8.5	150	115	13	13	10.5	165	97	14
14	140	13	12	9.0	145	119	8	14	10.5	165	107	7
15	144	4	10	10.5	165	121	8	14	10.0	160	107	14
16	144	10	14	10.5	165	125	14	17	10.0	160	111	14
17	142	9	11	12.0	185	123	13	13	11.0	200	107	16
18	141	12	12	9.5	150	122	14	11	10.5	170	107	20
19	141	10	7	9.0	150	123	15	4	8.5	135	111	10
20	142	8	8	8.5	140	125	12	6	7.5	130	111	10
21	140	7	6	7.5	130	125	7	6	7.5	125	111	10
22	140	7	4	9.0	145	123	7	5	9.5	155	111	7
23	138	8	4	10.5	170	123	6	8	9.0	155	111	4

F_{am} = median value of effective antenna noise in db above ktb

D_f = ratio of upper decile to median in db

V_{dm} = ratio of median to lower decile in db

L_{dm} = median deviation of average voltage in db below mean power

L_{dm} = 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

Fm	Frequency (Mc)																																							
	0.51				1.13				2.46				5.45				2.5				5.0				10.0				20.0											
	Fam	Du	Df	Vdm	Ldm	Fam	Du	Df	Vdm	Ldm	Fam	Du	Df	Vdm	Ldm	Fam	Du	Df	Vdm	Ldm	Fam	Du	Df	Vdm	Ldm	Fam	Du	Df	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	66	8	18	7.0	11.5	69	6	10	5.0	9.0	46	4	8	5.5	9.5	27	2	4	2.5	5.0
01	137	13	11	10.5	170	126	10	12	10.5	165	108	8	10	9.5	165	92	12	4	6.0	10.0	66	8	16	7.5	12.5	61	10	8	8.0	13.0	46	4	8	6.5	11.0	26	3	5	2.5	5.0
02	137	13	11	11.0	170	126	12	12	8.0	135	108	8	12	8.0	130	92	10	2	5.0	9.0	66	8	15	5.5	9.5	61	12	8	7.5	12.5	46	6	10	5.0	9.0	27	3	6	3.0	6.0
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	66	6	14	7.0	11.5	59	12	10	7.0	11.5	42	10	10	6.0	10.5	27	2	6	3.0	6.0
04	138	9	11	11.0	180	124	8	12	10.0	165	108	9	12	9.0	160	91	7	5	7.0	13.5	66	6	13	6.5	11.0	61	8	6	7.5	12.5	40	8	8	6.0	10.5	27	2	6	3.0	6.0
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	66	6	12	7.0	12.0	61	8	8	8.0	13.0	36	10	6	3.5	6.5	27	2	2	3.0	6.0
06	136	10	12	12.0	185	116	14	17	10.5	175	84	20	6	9.0	145	90	6	6	6.0	12.0	64	6	17	7.0	11.5	67	4	14	7.0	11.5	40	10	10	5.0	9.0	27	4	4	3.0	6.0
07	130	10	10	11.5	180	108	18	14	10.0	165	82	20	6	9.0	145	91	5	3	5.0	11.0	52	10	9	8.0	13.0	63	8	12	7.5	12.5	40	12	6	8.5	14.0	29	8	8	4.0	7.5
08	127	11	15	11.0	170	106	18	10	9.0	145	82	18	6	6.0	100	90	4	8	5.0	10.5	46	10	8	5.0	9.0	53	10	6	6.0	10.5	41	11	9	7.5	12.5	29	2	4	3.0	6.0
09	124	14	10	7.0	115	106	16	8	10.0	160	84	16	4	7.0	115	92	5	7	4.5	9.0	42	8	4	8.0	13.0	49	8	4	7.5	12.5	40	10	8	8.0	13.0	28	3	5	3.0	6.0
10	128	12	14	9.5	160	104	18	8	10.0	160	84	14	6	8.0	130	92	4	6	5.0	9.0	42	6	6	7.0	11.5	47	8	8	6.0	10.0	38	12	10	8.0	13.0	29	4	4	4.0	7.5
11	126	16	11	10.0	160	108	18	10	10.5	165	82	22	4	7.0	115	94	2	7	5.0	8.5	42	6	14	5.0	9.0	49	6	6	8.5	14.0	40	10	6	9.0	14.5	29	6	4	5.0	9.0
12	127	13	9	10.0	160	102	22	4	11.5	180	82	20	6	6.0	100	90	4	8	5.5	11.0	40	8	7	7.0	12.0	45	6	4	7.0	11.5	38	8	8	7.0	11.5	28	7	5	4.0	7.5
13	128	13	6	6.5	130	105	21	5	7.0	115	82	21	7	6.5	110	90	10	6	5.0	9.0	39	11	6	7.0	11.5	50	5	7	5.5	9.5	40	10	10	7.5	12.5	29	4	4	6.0	10.5
14	132	8	6	11.5	180	106	14	6	8.0	110	86	44	10	8.5	155	90	24	8	5.0	9.5	42	11	6	14.5	22.0	49	10	2	7.0	11.5	42	8	8	7.0	11.5	31	4	4	5.0	9.0
15	134	16	10	7.0	120	112	24	12	6.0	105	86	30	8	9.0	145	90	12	6	6.0	10.0	42	38	6	9.0	14.5	55	10	6	6.5	11.0	44	6	9	5.5	9.5	33	8	8	4.5	8.0
16				6.5	110	114	24	14	10.0	120	84	33	8	8.0	130	90	12	6	4.0	7.5	48	20	10	4.5	8.0	60	7	9	6.0	10.5	46	6	6	6.0	10.5	33	6	6	7.0	11.5
17	132	16	10	7.5	125	115	25	11	9.5	150	89	29	11	7.5	120	90	12	8	2.5	6.0	53	20	11	8.0	14.0	71	6	8	4.5	8.0	48	6	9	5.5	9.5	33	4	4	4.5	8.0
18	133	17	9	9.0	145	115	21	9	9.0	145	80	14	8	7.0	135	90	8	6	4.0	8.0	64	12	10	7.5	12.5	75	7	7	5.0	9.0	50	6	11	5.0	9.0	31	6	6	4.0	7.5
19	136	12	8	9.0	155	113	13	7	9.0	150	106	12	6	8.0	145	94	10	4	5.0	9.0	69	9	13	6.0	10.5	79	4	7	5.5	9.5	54	4	14	3.5	6.5	29	6	4	4.0	7.5
20	138	8	8	9.0	145	112	14	10	8.0	130	106	12	8	8.0	135	96	8	6	4.5	8.0	69	9	12	6.5	11.0	79	4	6	4.5	8.0	52	7	10	4.0	7.5	29	4	4	3.5	6.5
21	138	8	10	9.0	150	124	12	12	8.0	135	110	10	10	7.0	130	96	8	6	4.0	7.5	68	8	12	7.0	11.5	77	4	6	5.5	9.5	50	7	11	4.5	8.0	27	4	6	4.0	7.5
22	138	10	8	11.0	170	124	14	8	8.5	150	108	8	8	7.0	130	94	8	6	5.5	10.0	68	10	11	6.0	10.5	79	3	9	4.5	8.0	48	6	8	3.5	6.5	27	4	4	4.0	7.5
23	140	9	11	12.0	190	126	8	10	8.5	150	108	10	6	8.5	145	93	11	5	5.0	9.0	68	8	16	7.0	11.5	71	12	10	5.5	9.5	48	6	8	4.5	8.0	27	4	6	2.5	5.0

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

Du = ratio of upper decile to median in db

Df = 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

USCIB-MF-A

RN-13

MONTH-HOUR VALUES OF RADIO NOISE

Station São José, Brazil Lat. 23.39S Long. 45.89W Month May 19 85

Hour (LST)	Frequency (Mc)																																																	
	0.51						1.13						2.46						5.46						8.0						10.0						20.0													
	F _{am}	D _f	V _{dm}	L _{dm}	F _{am}	D _f	V _{dm}	L _{dm}	F _{am}	D _f	V _{dm}	L _{dm}	F _{am}	D _f	V _{dm}	L _{dm}	F _{am}	D _f	V _{dm}	L _{dm}	F _{am}	D _f	V _{dm}	L _{dm}	F _{am}	D _f	V _{dm}	L _{dm}	F _{am}	D _f	V _{dm}	L _{dm}																		
00	124	18	9	11.0	17.5	*	*	106	20	11	9.0	14.5	*	*	89	22	10	6.5	11.0	*	*	74	24	8	4.5	8.5	56	10	1.0	5.5	10.0	*	*	38	18	6	3.0	6.0	*	*	24	8	4	20	4.0					
01	126	14	8	13.0	23.0	*	*	110	18	12	9.5	17.0	*	*	91	20	14	8.0	13.0	*	*	79	18	14	4.5	8.5	54	12	8	5.5	10.0	*	*	38	12	6	3.0	6.0	*	*	24	8	2	20	4.0					
02	124	14	8	11.5	20.5	*	*	112	18	17	8.0	14.0	*	*	91	21	15	9.5	15.0	*	*	77	20	12	4.5	8.0	54	12	10	6.0	11.0	*	*	38	10	6	3.0	6.0	*	*	24	8	2	20	4.0					
03	126	12	10	10.5	17.0	*	*	110	16	16	9.0	15.0	*	*	91	20	16	8.5	14.5	*	*	75	24	10	7.0	12.0	53	13	7	7.0	13.0	*	*	38	14	8	3.0	6.0	*	*	24	8	2	20	4.0					
04	128	12	12	14.0	24.5	*	*	112	14	19	6.0	10.5	*	*	91	18	18	7.0	13.0	*	*	77	18	16	6.0	12.5	54	12	8	7.0	12.5	*	*	34	8	6	2.5	5.0	*	*	24	8	2	20	4.0					
05	127	11	12	13.0	23.0	*	*	109	15	17	11.5	20.5	*	*	89	16	18	8.5	15.0	*	*	83	12	17	6.5	13.5	52	18	8	6.0	11.0	*	*	47	16	6	5.0	9.0	*	*	32	10	4	20	4.0					
06	126	10	10	9.0	15.0	*	*	102	18	12	13.5	23.0	*	*	79	24	14	7.5	15.0	*	*	79	14	12	6.0	11.5	54	14	10	6.5	11.0	*	*	53	12	10	5.0	9.0	*	*	36	10	4	20	4.0					
07	118	14	10	9.0	16.5	*	*	95	24	14	8.5	15.5	*	*	74	23	11	8.5	16.0	*	*	83	10	12	4.0	8.0	43	13	11	5.0	9.0	*	*	42	12	10	7.5	13.5	*	*	34	14	4	20	4.0					
08	116	15	9	10.0	18.0	*	*	96	21	7	11.0	17.0	*	*	73	18	8	10.0	18.0	*	*	80	11	7	6.5	12.0	42	12	10	7.5	13.5	*	*	47	16	6	5.5	10.0	*	*	34	14	4	20	4.0					
09	120	12	13	6.0	11.0	*	*	101	14	10	8.0	14.0	*	*	73	22	8	8.5	15.5	*	*	83	8	9	5.5	11.0	38	12	10	5.0	9.0	*	*	45	12	5	8.5	9.5	*	*	34	10	4	20	4.0					
10	116	18	8	9.0	17.5	*	*	103	14	15	11.0	19.5	*	*	73	23	6	10.0	17.5	*	*	85	6	10	5.0	9.0	35	11	9	5.0	9.0	*	*	39	8	4	5.0	9.0	*	*	32	12	4	20	4.0					
11	122	11	5	11.5	18.5	*	*	102	13	11	10.0	18.0	*	*	72	19	5	9.5	17.0	*	*	85	10	8	4.0	7.5	34	12	8	5.0	9.0	*	*	39	8	4	8.0	14.5	*	*	31	9	7	6.5	11.0	26	5	40	7.5	
12	120	8	10	9.0	16.0	*	*	96	18	6	13.5	23.5	*	*	73	20	8	11.5	20.5	*	*	81	12	6	8.5	15.5	34	12	10	5.0	9.0	*	*	37	8	2	6.0	11.0	*	*	32	6	4	25	5.0					
13	122	10	9	10.0	18.0	*	*	100	14	14	11.5	19.0	*	*	73	13	9	10.5	18.5	*	*	82	10	6	2.0	5.0	34	10	8	4.5	8.5	*	*	37	12	2	6.5	12.0	*	*	34	8	11	6.0	11.0	26	5	4	20	4.5
14	122	7	8	11.0	19.5	*	*	98	15	9	7.0	12.5	*	*	73	21	11	12.0	21.0	*	*	81	10	8	5.0	9.0	34	11	4	4.0	7.5	*	*	39	14	4	6.5	12.0	*	*	34	6	2	7.0	12.5	26	7	5	35	6.5
15	122	14	10	8.0	14.5	*	*	98	11	9	15.0	26.0	*	*	71	24	8	11.5	20.5	*	*	79	21	7	4.5	9.0	38	10	10	4.5	8.5	*	*	43	10	6	4.0	7.5	*	*	38	9	9	5.0	9.0	28	10	4	40	7.5
16	122	21	10	8.0	14.0	*	*	100	26	12	7.0	12.5	*	*	77	26	14	9.0	16.5	*	*	83	10	8	3.5	6.5	40	14	10	5.5	10.0	*	*	49	10	6	4.5	8.0	*	*	40	6	6	5.5	10.0	28	7	3	40	7.5
17	122	18	10	8.0	14.5	*	*	98	22	9	10.0	18.0	*	*	77	24	12	9.0	16.0	*	*	79	12	10	6.5	11.0	49	15	13	7.0	12.5	*	*	53	9	4	6.0	11.0	*	*	42	7	6	5.0	9.0	28	5	5	30	6.0
18	122	20	10	10.0	18.0	*	*	102	22	12	11.5	20.5	*	*	83	26	16	8.0	14.5	*	*	79	11	6	4.0	7.5	54	12	11	6.0	11.0	*	*	57	9	6	5.0	9.0	*	*	42	8	8	5.0	9.0	26	4	4	25	5.0
19	124	16	10	9.0	16.0	*	*	104	20	6	8.5	15.5	*	*	89	14	16	6.0	10.0	*	*	81	8	10	3.5	6.5	56	10	10	5.5	10.0	*	*	57	12	8	4.0	7.5	*	*	42	9	8	4.5	8.5	24	10	2	15	3.5
20	124	20	8	9.5	16.5	*	*	106	20	12	6.0	11.0	*	*	91	18	14	7.0	13.0	*	*	81	12	8	5.0	10.0	58	10	11	4.5	8.0	*	*	58	13	5	7.0	12.5	*	*	42	9	8	3.5	6.5	24	8	2	25	5.0
21	124	18	10	9.0	16.0	*	*	102	18	14	6.0	11.0	*	*	91	18	14	8.0	13.0	*	*	81	12	8	4.0	7.5	58	10	10	4.0	7.5	*	*	57	14	6	4.0	8.0	*	*	42	7	9	4.0	7.5	24	6	4	15	3.5
22	124	12	10	9.5	15.0	*	*	110	14	14	11.0	19.5	*	*	91	16	14	7.0	13.0	*	*	80	13	7	6.5	13.0	58	9	10	4.5	8.5	*	*	59	11	6	4.0	8.0	*	*	41	11	7	3.0	6.0	24	8	4	20	4.0
23	126	12	12	8.5	15.5	*	*	111	15	15	8.5	13.0	*	*	91	16	12	5.5	9.5	*	*	81	18	12	4.0	7.5	57	11	7	5.5	10.0	*	*	58	13	5	5.0	9.0	*	*	42	14	8	3.5	6.5	24	8	4	20	4.0

F_{am} = median value of effective antenna noise in db above ktb

D_f = ratio of upper decile to median in db

D_f = ratio of median to lower decile in db

V_{dm} = median deviation of average voltage in db below mean power

L_{dm} = 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 85

Frequency (Mc)											
0.51				1.13				2.46			
F _{am}	D ₂	V _{dm}	L _{dm}	F _{am}	D ₂	V _{dm}	L _{dm}	F _{am}	D ₂	V _{dm}	L _{dm}
00 133 8	14	8.5	15.0	115	14	16	10.0	98	16	10	7.0
01 133 6	14	9.0	17.0	115	14	12	11.0	96	18	8	5.0
02 133 6	12	11.0	19.5	115	14	18	5.5	98	14	10	12.0
03 131 8	14	8.0	14.5	115	14	18	7.0	98	10	14	8.0
04 129 10	10	8.0	14.0	113	14	18	12.0	92	16	8	5.5
05 132 7	13	12.5	20.0	113	14	14	6.0	94	16	10	7.0
06 131 6	10	8.5	16.0	109	16	10	10.0	90	14	12	13.0
07 126 7	11	13.0	21.0	97	10	10	19.0	78	16	8	7.0
08 121 9	11	11.5	20.5	95	33	7	10.0	80	12	8	3.0
09 119 18	16	14.0	24.0	98	19	7	12.5	80	24	8	1.5
10 122 11	11	2.5	5.0	97	18	4	10.0	82	20	8	7.5
11 119 12	12	8.5	14.0	97	15	9	5.5	78	22	4	5.0
12 121 12	12	4.0	7.5	99	18	8	8.5	76	14	6	7.0
13 126 8	13	10.0	16.5	101	12	10	10.0	78	18	6	2.0
14 123 14	8	11.0	19.5	105	22	14	14.0	82	30	8	9.5
15 125 15	12	13.0	20.0	103	31	13	—	81	23	9	9.5
16 128 10	16	11.0	17.0	107	24	14	10.0	82	21	10	7.0
17 127 12	16	10.0	18.0	107	16	13	9.0	88	18	14	10.5
18 129 12	14	9.5	17.0	113	20	14	6.0	93	21	13	4.0
19 133 8	10	11.5	20.5	111	18	8	10.0	96	22	10	7.5
20 131 8	8	9.0	15.5	111	18	8	14.0	98	20	12	12.0
21 131 10	10	10.5	18.5	111	20	10	12.0	99	15	11	9.0
22 133 6	14	9.5	16.5	114	17	7	8.0	99	12	8	7.0
23 135 6	14	9.5	16.0	115	16	16	8.0	99	18	8	8.0

F_{am} = median value of effective antenna noise in db above ktb

D₂ = ratio of upper decile to median in db

D₂ = ratio of median to lower decile in db

V_{dm} = median deviation of average voltage in db below mean power

L_{dm} = median deviation of average logarithm in db below mean power

USC-100-100-10

RN-13

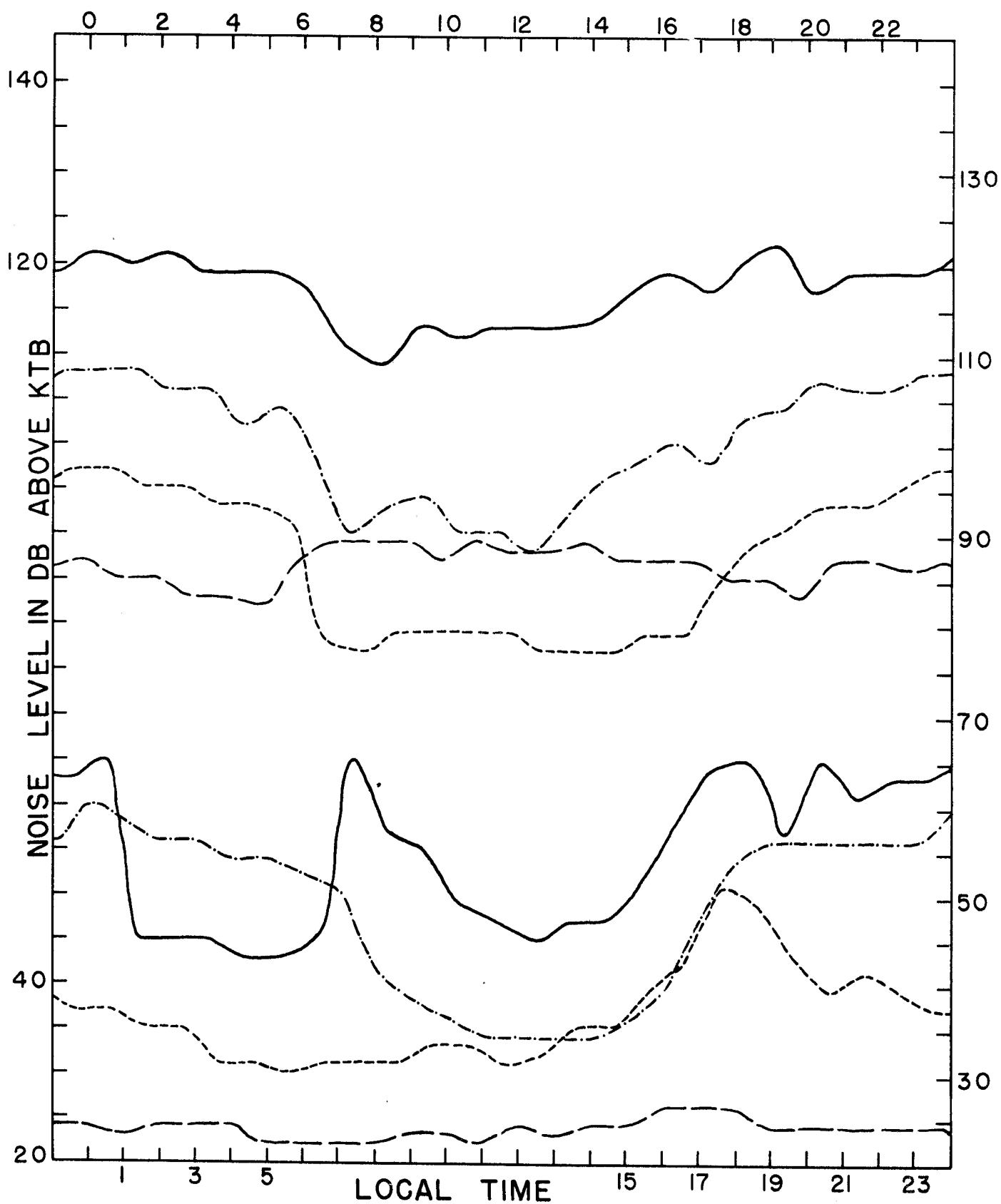


Fig:1 Monthly Median Values for July 1964

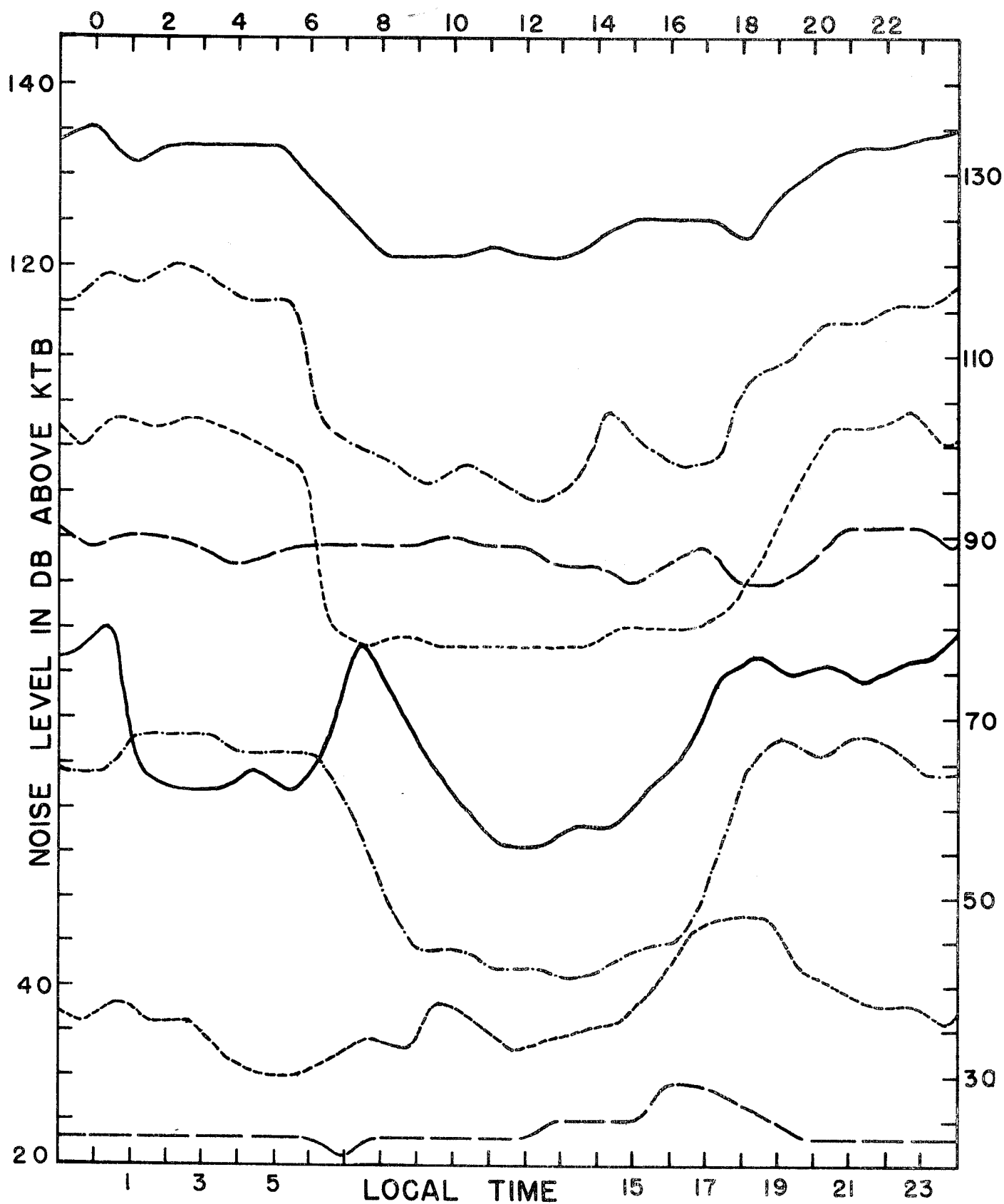


Fig: 2 Monthly Median Values for August 1964

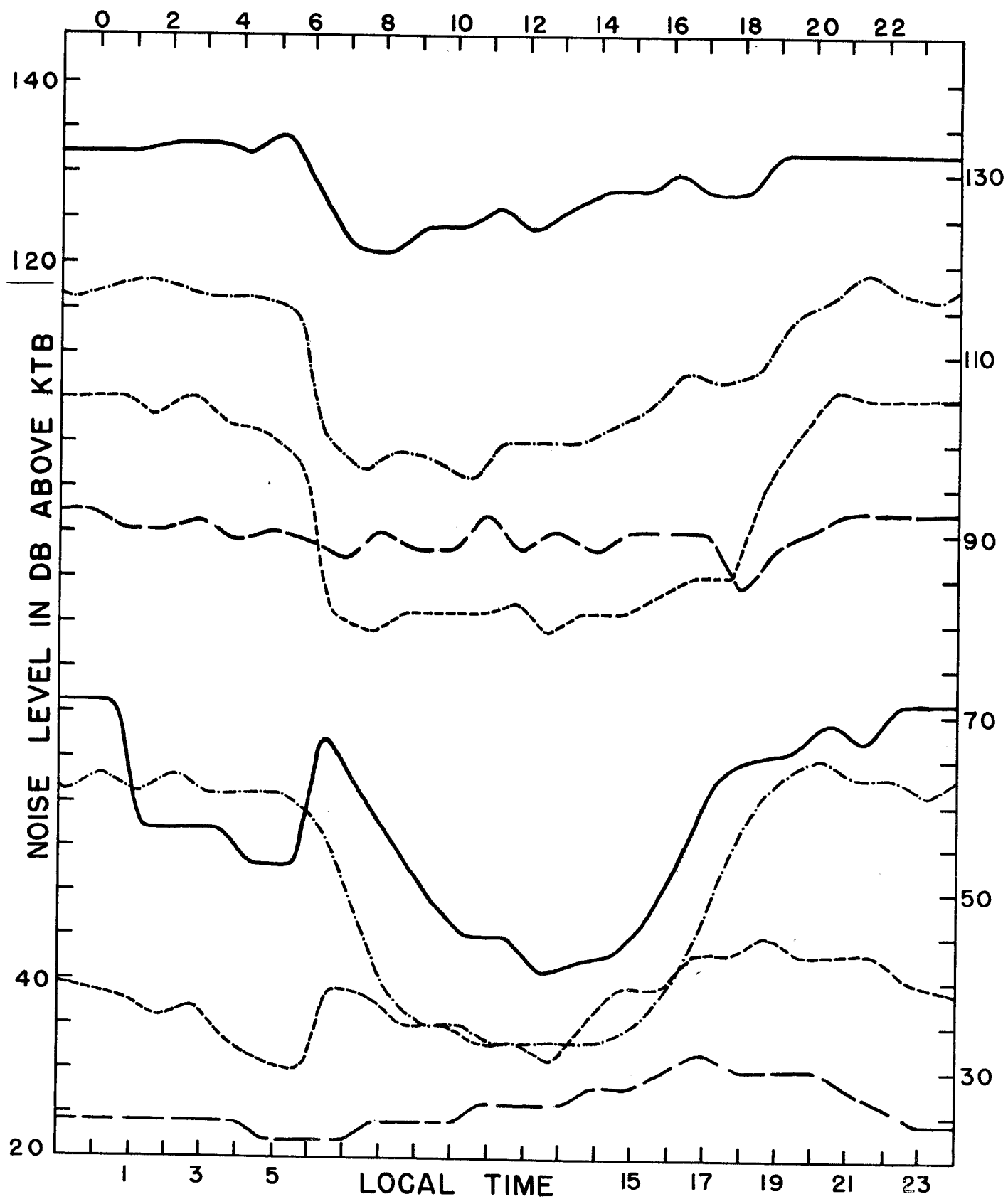


Fig: 3 Monthly Median Values for September 1964

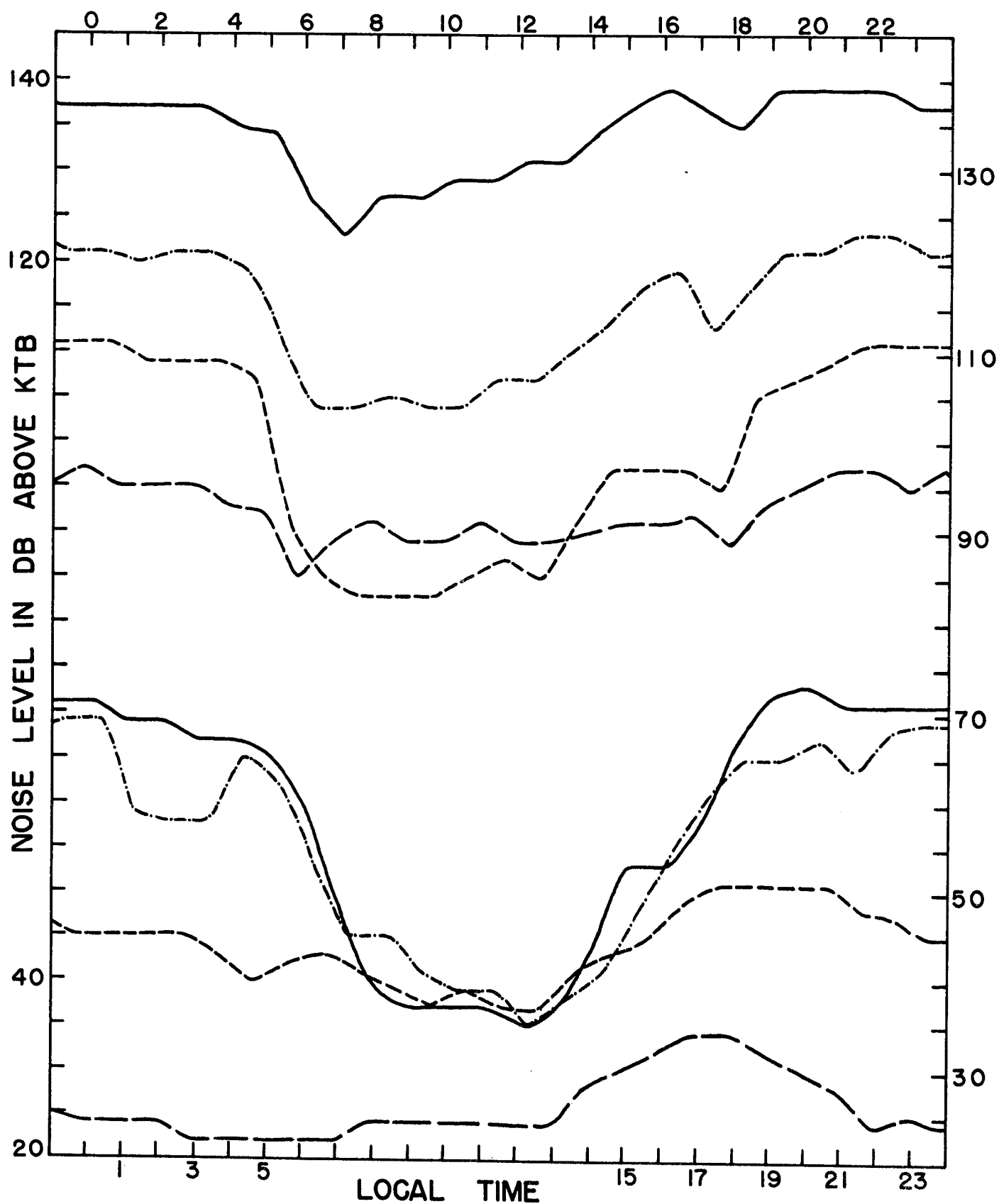


Fig. 4 Monthly Median Values for October 1964

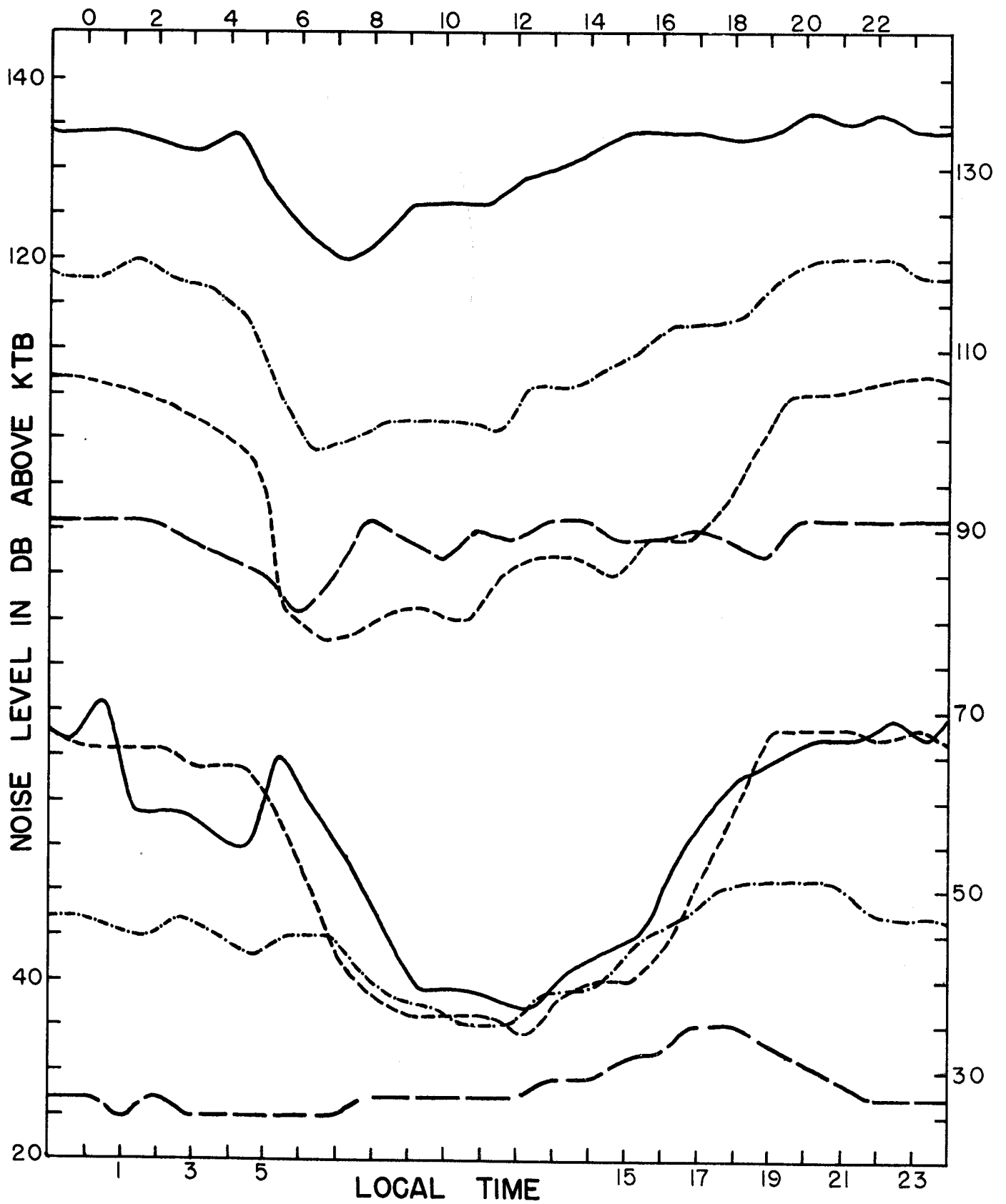


Fig:5 Monthly Median Values for November 1964

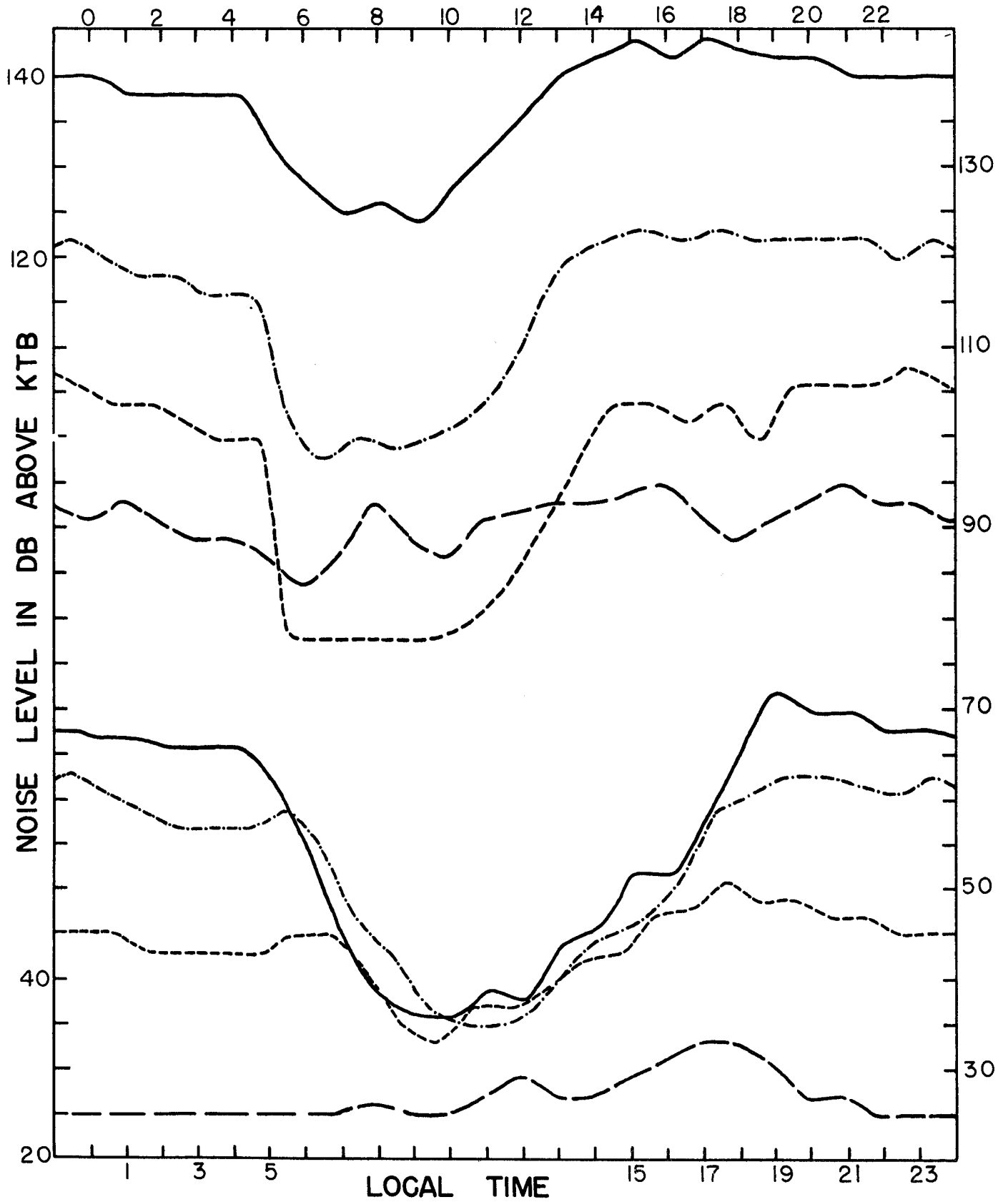


Fig:6 Monthly Median Values for December 1964

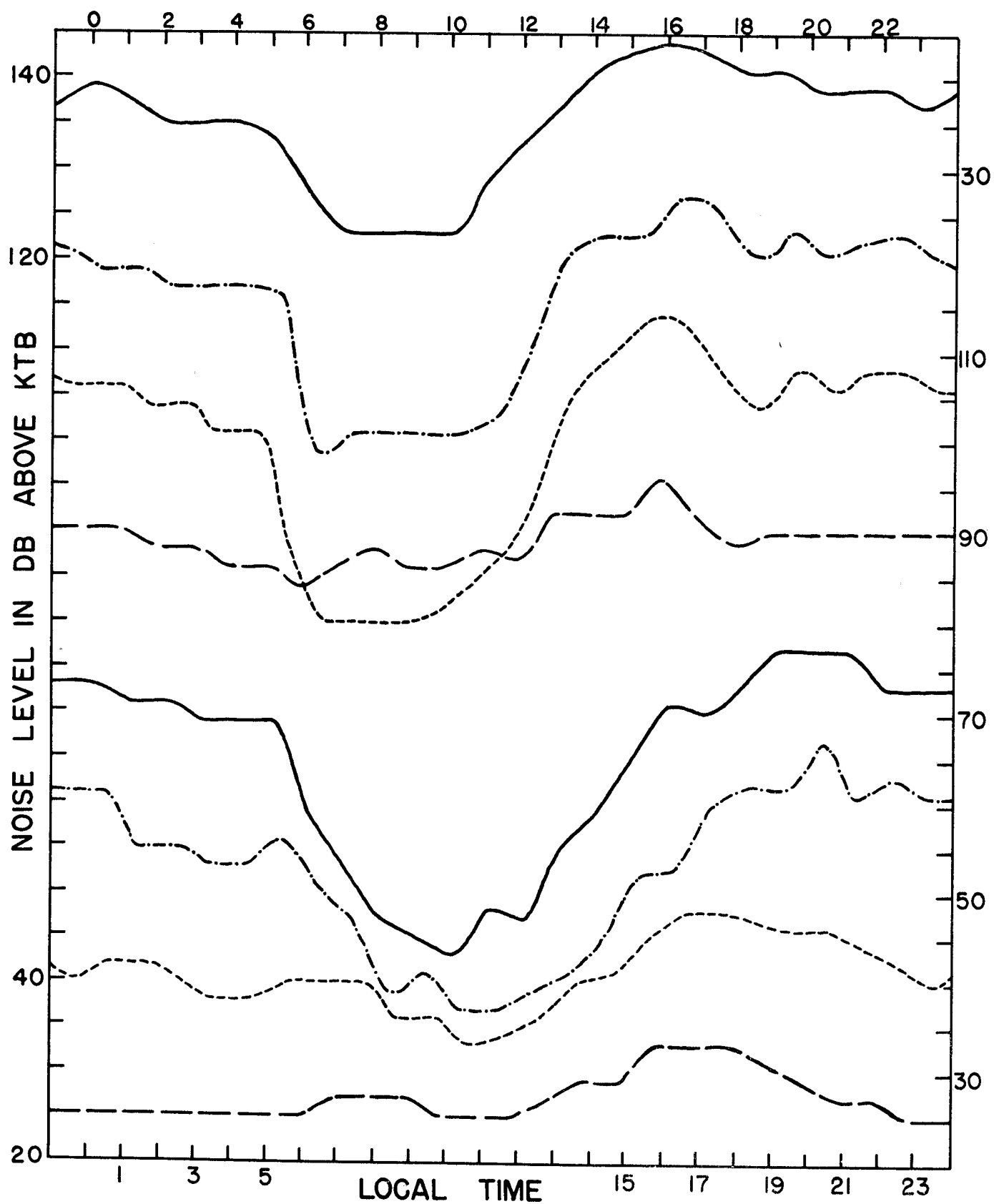


Fig.: 7 Monthly Median Values for January 1965

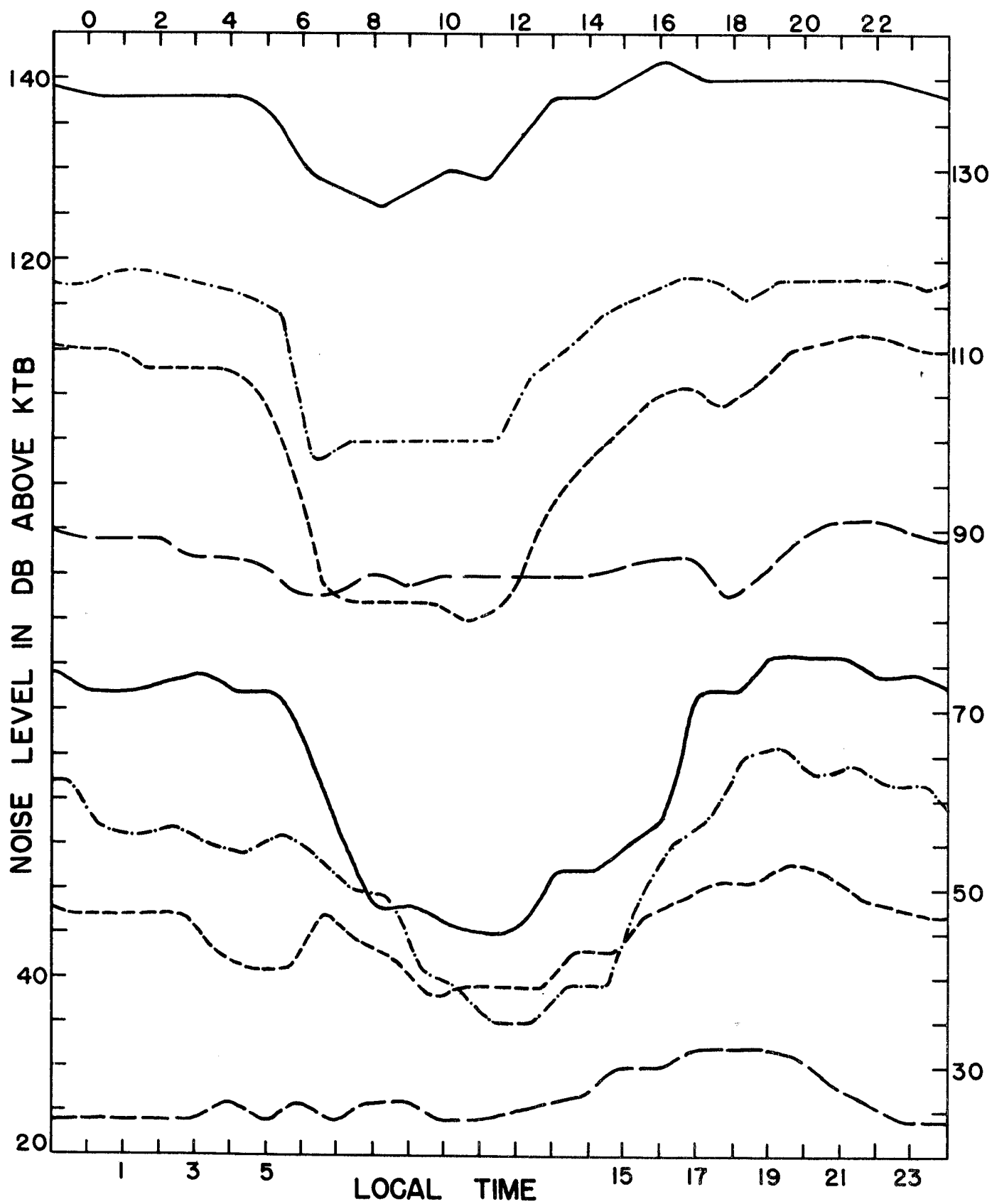


Fig.:8 Monthly Median Values for February 1965

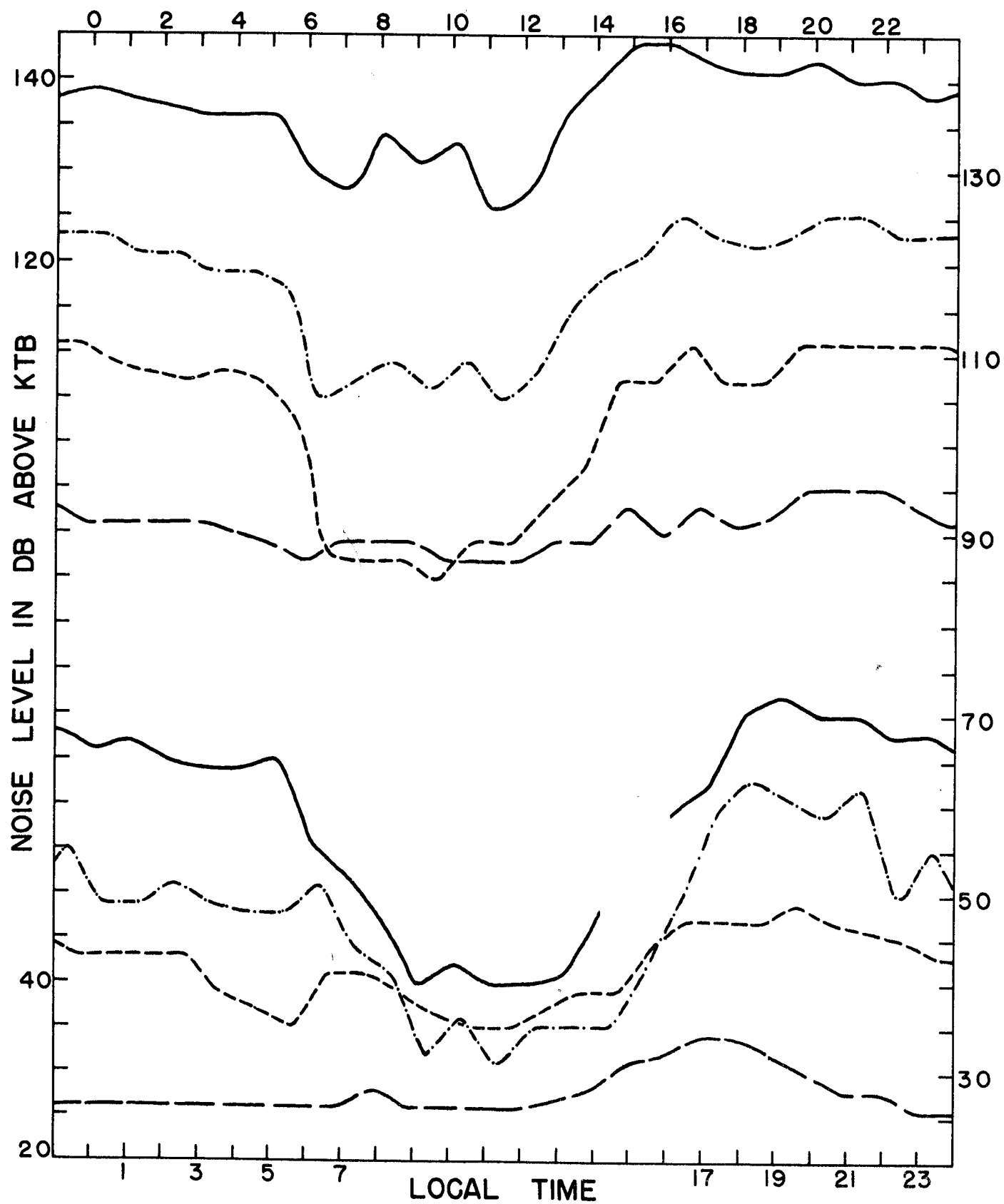


Fig. 9 Monthly Median Values for March 1965

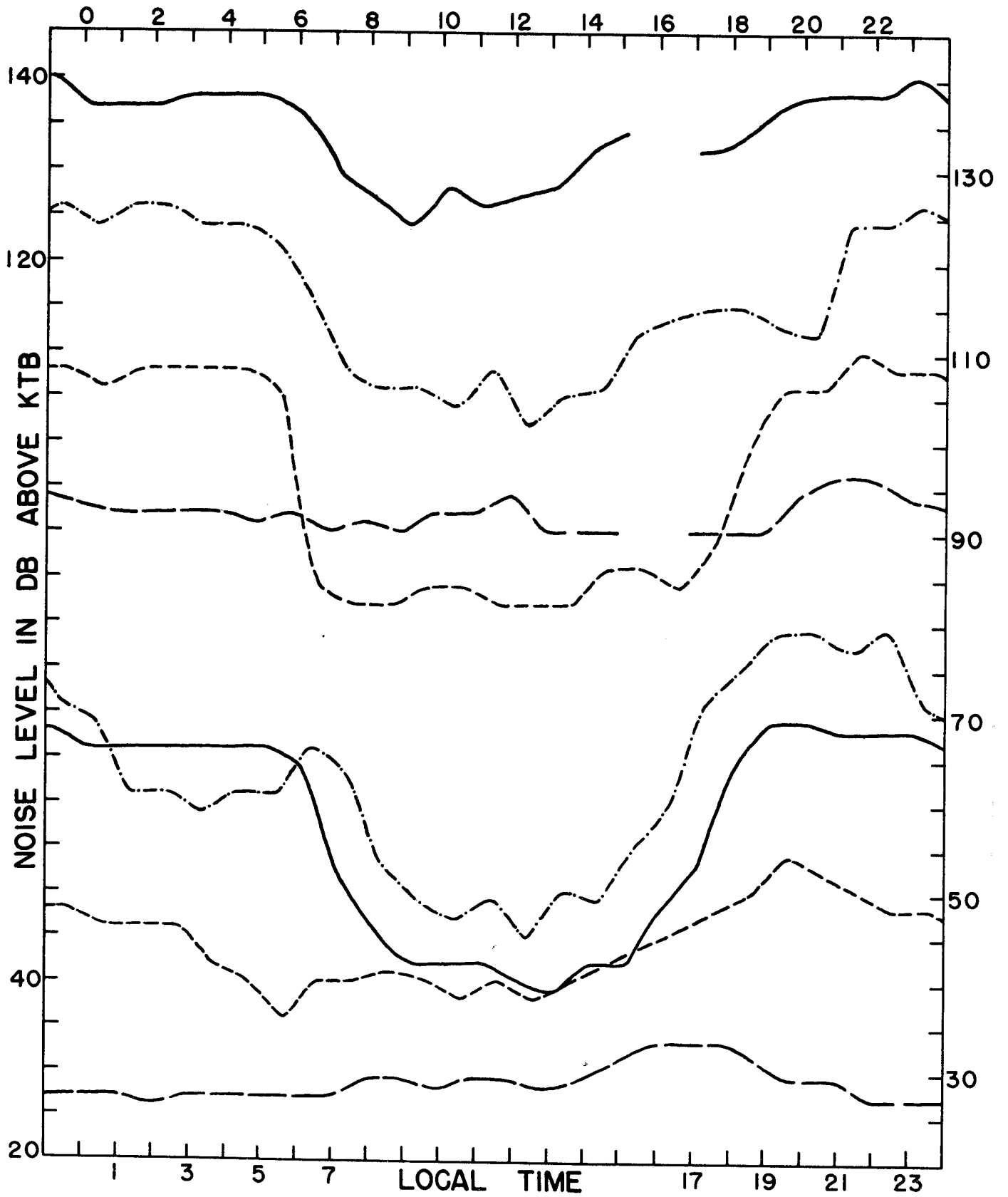


Fig.10 Monthly Median Values for April 1965

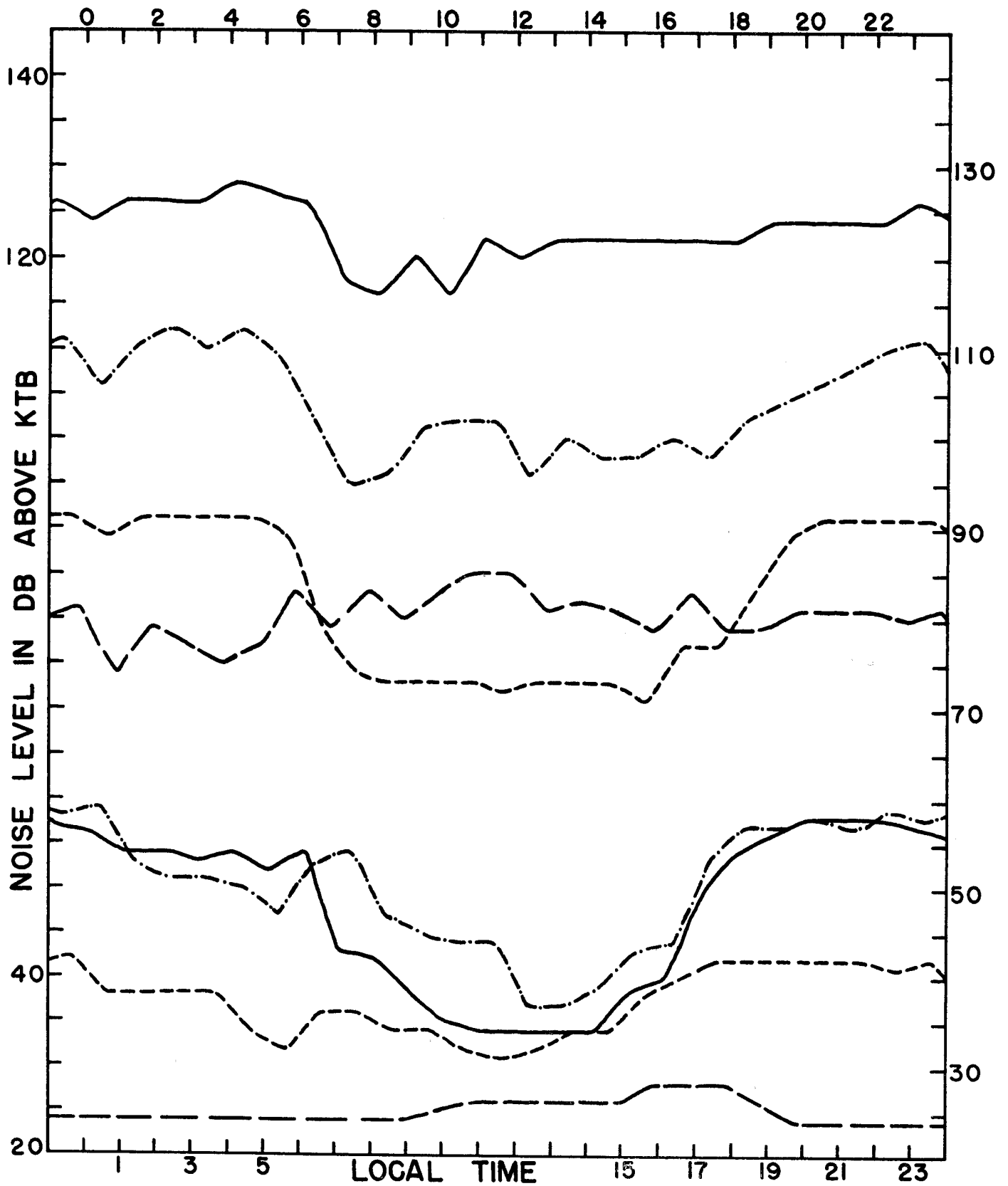


Fig. 11 Monthly Median Values for May 1965

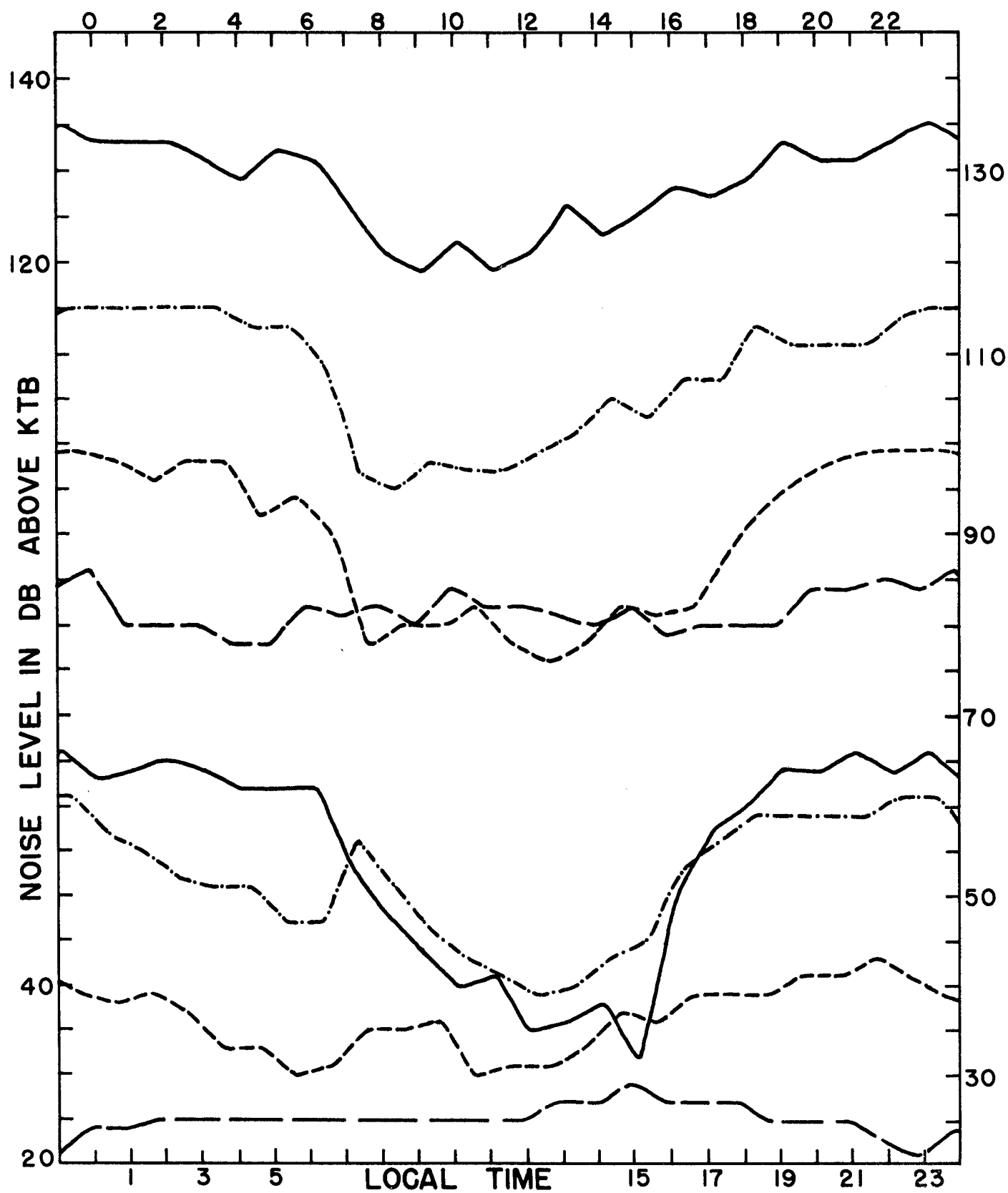


Fig.12 Monthly Median Values for June 1965