1290

Station	Main Studio	Freq	Power	Date
CFRW	Winnipeg, MB	1290	10 kW/DA-2	1/19/77
CHRM	Matane, QU	1290	10 kW/DA-2	7/8/75
CJBK	London, ON	1290	10 kW/DA-2	6/27/77
CJBK	London, ON	1290	10 kW/DA-1	4/28/66
NEW	Lynchburg, TN	1290	1 kW/DA-D	8/22/80
KAPY	Port Angeles, WA	1290	1 kW/DA-D	8/12/60
KAZA	Gilroy, CA	1290	5 kW/DA-D	2/17/61
KGVO	Missoula, MT	1290	5 kW/DA-1	2/48
KHSL	Chico, CA	1290	5 kW/DA-N	7/18/49
KJEF	Jennings, LA	1290	0.5 kW/DA-N	2/16/54
KLEH	Anamosa, IA	1290	0.5 kW/DA-D	10/26/79
KLIQ	Lake Oswego, OR	1290	5 kW/DA-1	8/30/78
KMEN	San Bernardino, CA	1290	5 kW/DA-2	9/28/79
KOIL	Omaha, NE	1290	5 kW/DA-N	11/29/65
KOWB	Laramie, WY	1290	1/5 kW/DA-2	3/28/60
KRGV	Weslaco, TX	1290	5 kW/DA-N	3/29/49
KTRN	Wichita Falls, TX	1290	1/5 kW/DA-N	11/29/63
KUMA	Pendleton, OR	1290	5 kW/DA-2	9/8/55
KWNS	Pratt, KS	1290	0.5/5 kW/DA-2	1/30/63
WATO	Oak Ridge, TN	1290	0.5/1 kW/DA-N	10/19/53
WATO	Oak Ridge, TN	1290	0.5/5 kW/DA-2	3/30/64
WCHK	Canton, GA	1290	0.5/5 kW/DA-N	5/31/78
WFBG	Altoona, PA	1290	1/5 kW/DA-2	4/9/58
WFIG	Sumter, SC	1290	1 kW/DA-2	1/54
WGLI	Babylon, NY	1290	1/5 kW/DA-D	8/23/63
WGLI	Babylon, NY	1290	1 kW/DA-1	10/24/58

1290

Station	Main Studio	Freq	Power	Date
WGLI	Babylon, NY	1290	1/5 kW/DA-2	7/29/660
WHGR	Houghton Lake, MI	1290	5 kW/DA-N	3/26/58
WHIO	Dayton, OH	1290	5 kW/DA-N	8/14/74
WHKY	Hickory, NC	1290	1/5 kW/DA-N	11/12/42
WICE	Providence, RI	1290	1/5 kW/DA-2	2/26/60
WIRK	West Palm Beach, FL	1290	1/5 kW/DA-N	10/1/75
WIRL	Peoria, IL	1290	5 kW/DA-2	2/28/70
WKNE	Keene, NH	1290	5 kW/DA-1	10/28/71
WNBF	Binghamton, NY	1290	5 kW/DA-N	9/4/41
WNRS	Saline, MI	1290	0.5 kW/DA-D	8/22/61
WOPP	Opp, AL	1290	0.5/2.5 kW/DA-2	11/78
WREY	New Albany, IN	1290	0.5 kW/DA-D	5/27/66
WRRA	Frederiksted, VI	1290	0.5 kW/DA-D	11/13/74
WTMC	Ocala, FL	1290	1/5 kW/DA-N	10/19/79
WTOC	Savannah, GA	1290	5 kW	2/43
WVOW	Logan, WV	1290	1/5 kW/DA-N	3/5/52
WXXX	Hattiesburg, MS	1290	1 kW/DA-N	9/63
WXXX	Hattiesburg, MS	1290	1/5 kW/DA-2	5/61

ANTENNA DESCRIPTION SHEET

DIRECTIONAL DA-2

STATION CALL:	C F R W
LOCATION:	Winnipeg, Manitoba.
FREQUENCY:	1290 kc/s
POWER:	10,000 watts
CLASS:	III
TIME:	Unlimited

NOTIFICATION REFERENCE: No. 361 dated January 19, 1977

GEOGRAPHICAL COORDINATES: Lat 49°47'58", Lon 97°16'29"

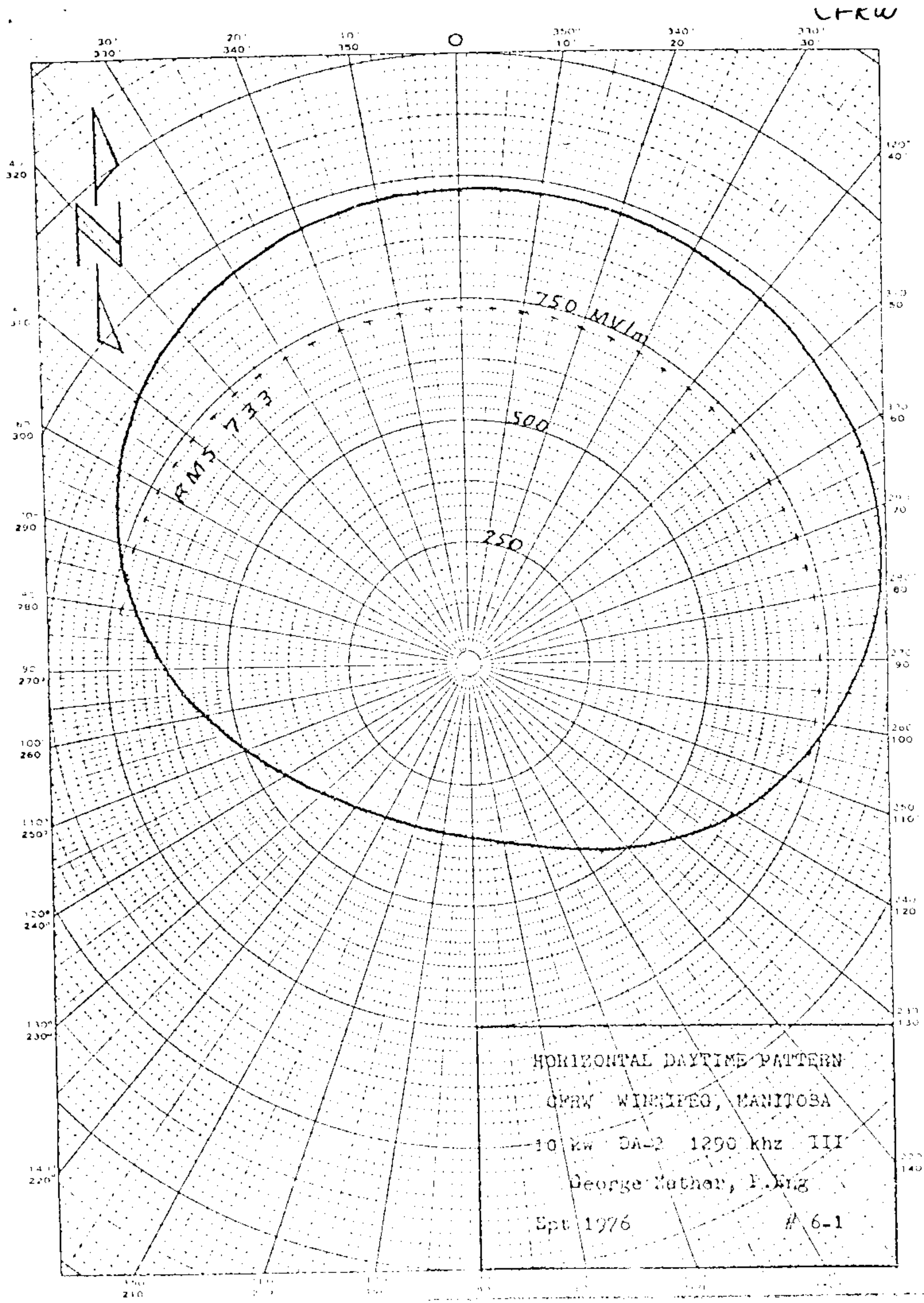
ARRAY CHARACTERISTICS: Three elements, guyed, uniform cross section, base insulated, series feed, no top loading.

ELEMENT		ONE	TWO	THREE
Height		170' 80.2°	423' 200.6°	170' 80.2°
Spacing		ref	177.9' 83.93°	334.6' 157.86°
Bearing		ref	015°	015°
DA-D Loop	F		1.00	0.50
	∅		000°	-090°
DA-N Loop	F	1.00	2.00	1.00
	∅	000°	-121°	+104°

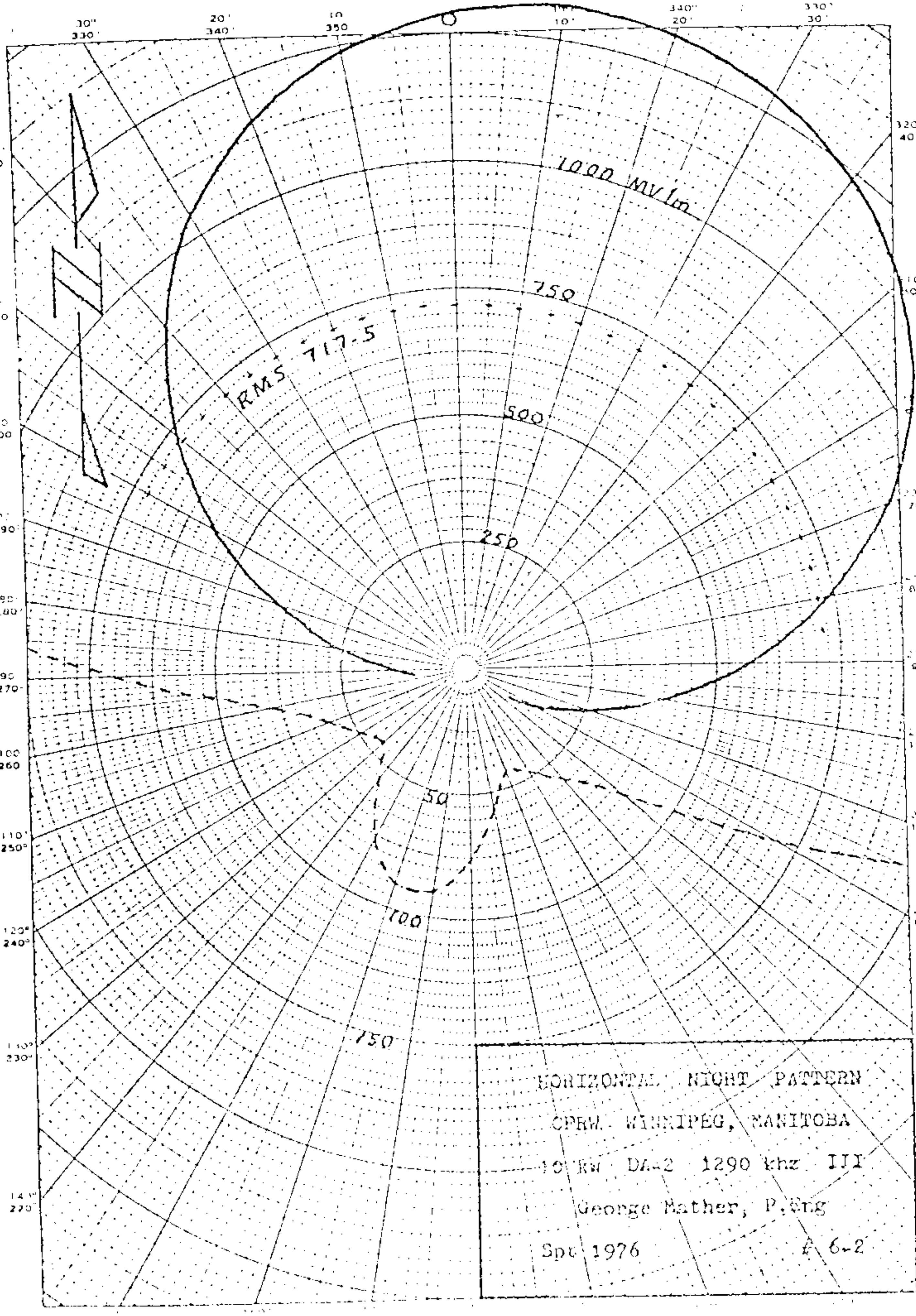
Ground System: 120 radials per tower, #10 AWG bare, soft copper wire, spaced uniformly, depth approximately 8 inches. Radials bonded along line between towers and bonded to soft copper straps at tower bases. Maximum length 268 feet

DA-D RMS: 733.0 mv/m at 1 mile for 10 kw
231.8 mv/m at 1 mile for 1 kw

DA-N RMS: 717.5 mv/m at 1 mile for 10 kw
226.9 mv/m at 1 mile for 1 kw


CFRW
0
750 MV/m
500
250
RMS 733
HORIZONTAL DAYTIME PATTERN
CFRW WINNIPEG, MANITOBA
10 kw DA-2 1290 khz III
George Mather, P.Eng
Spt 1976
6-1

CFKW



HORIZONTAL NIGHT PATTERN

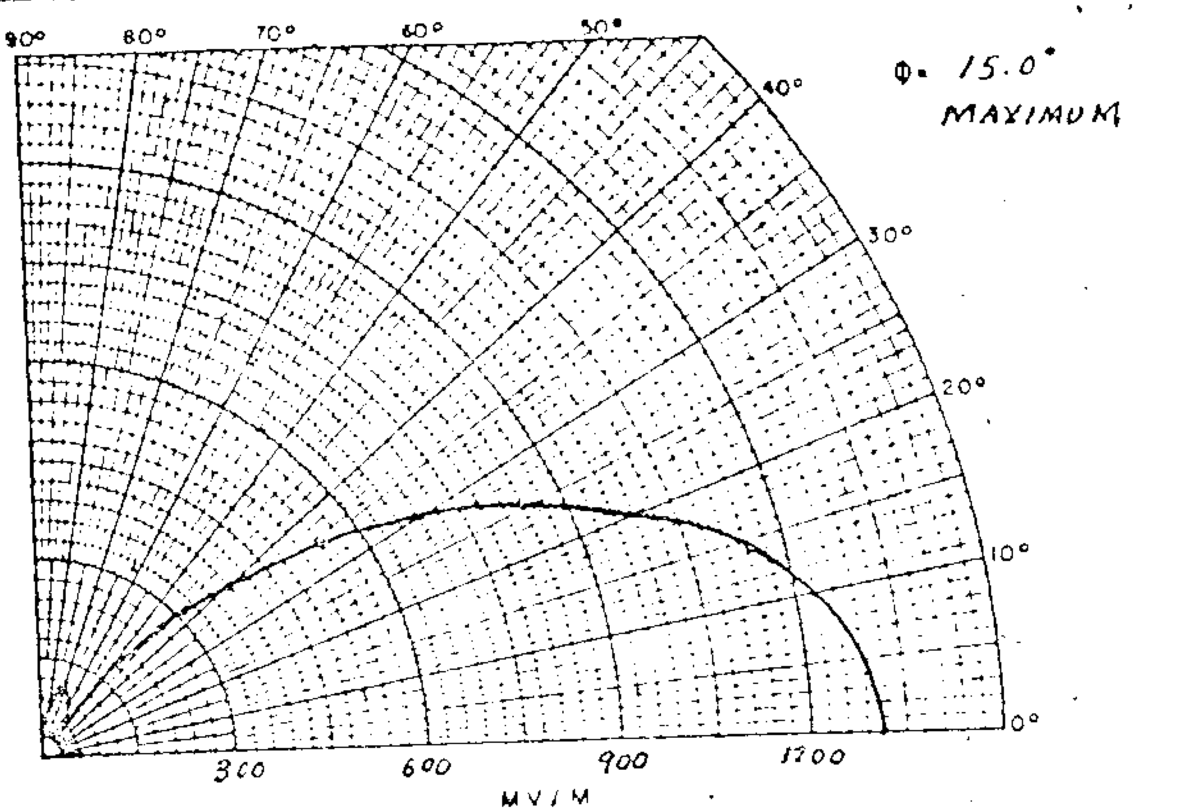
CFRW WINNIPEG, MANITOBA

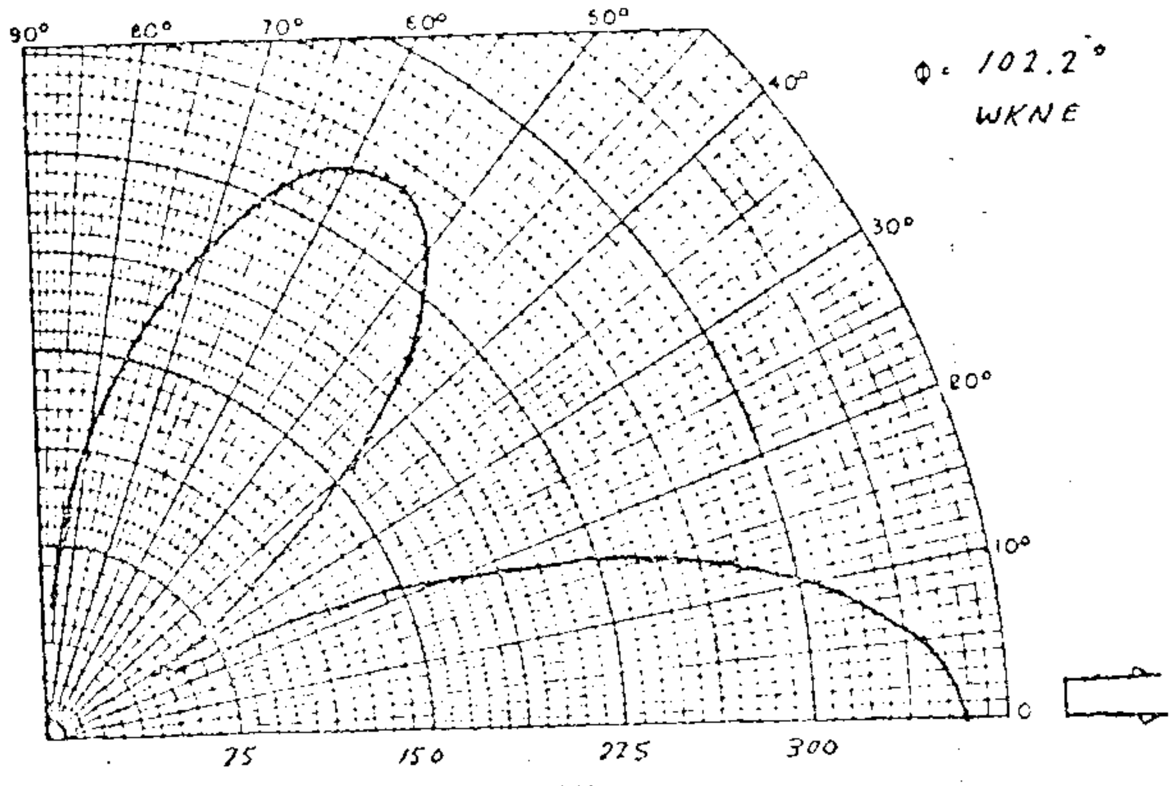
10 KW DA-2 1290 khz III

George Mather, P.Eng

Spt 1976 # 6-2

CFRW





VERTICAL RADIATION PATTERNS

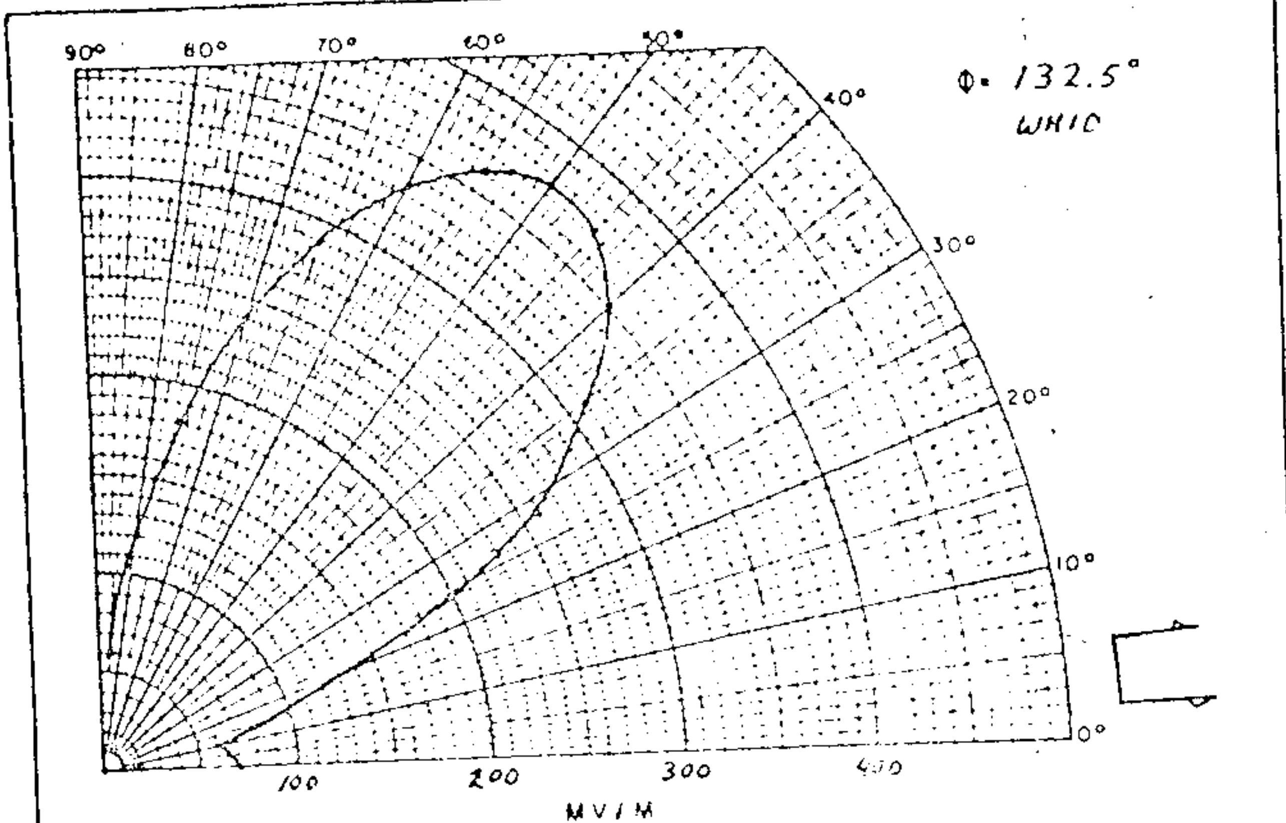
CFRW WINNIPEG, MANITOBA
10 KW DA-2 1290 kc III
George Mather, P.Eng

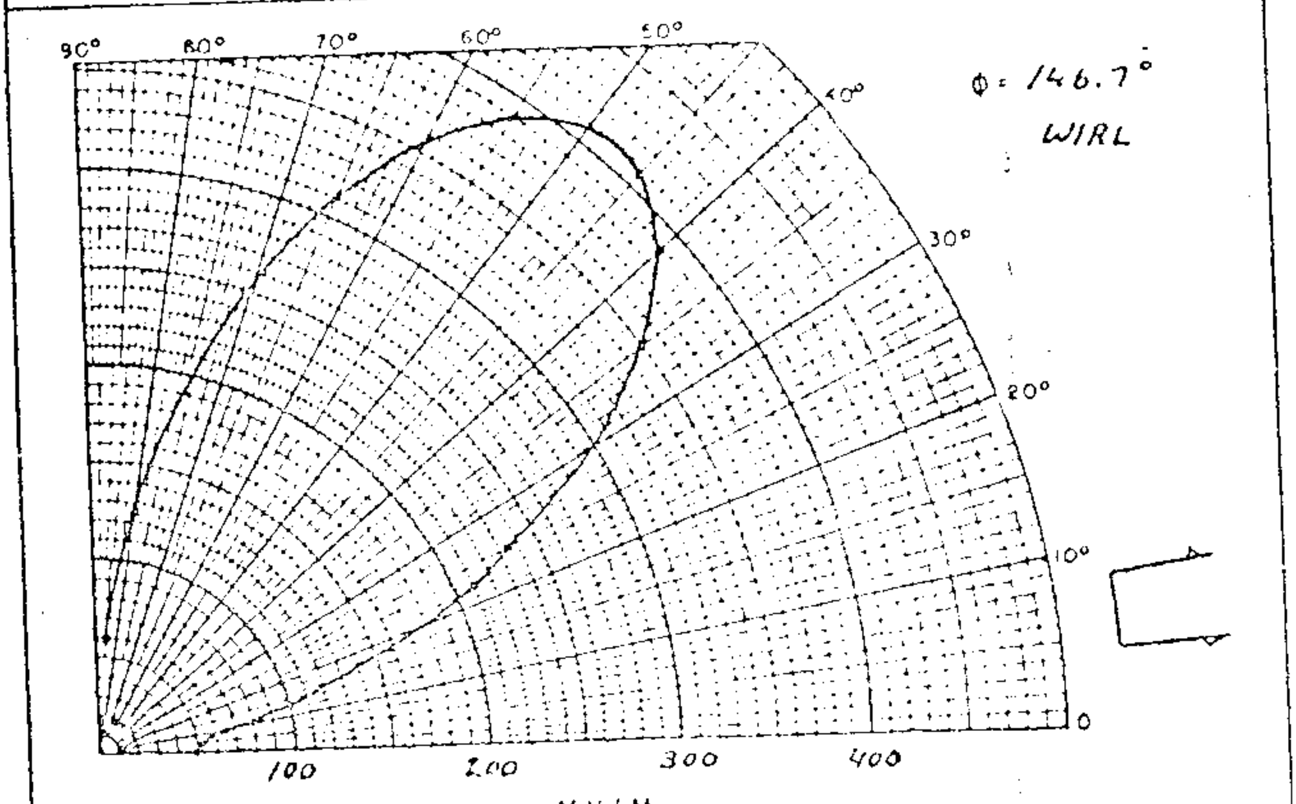
Spt 1976

\# 7-1

POLAR CO-ORDINATE

CFRW

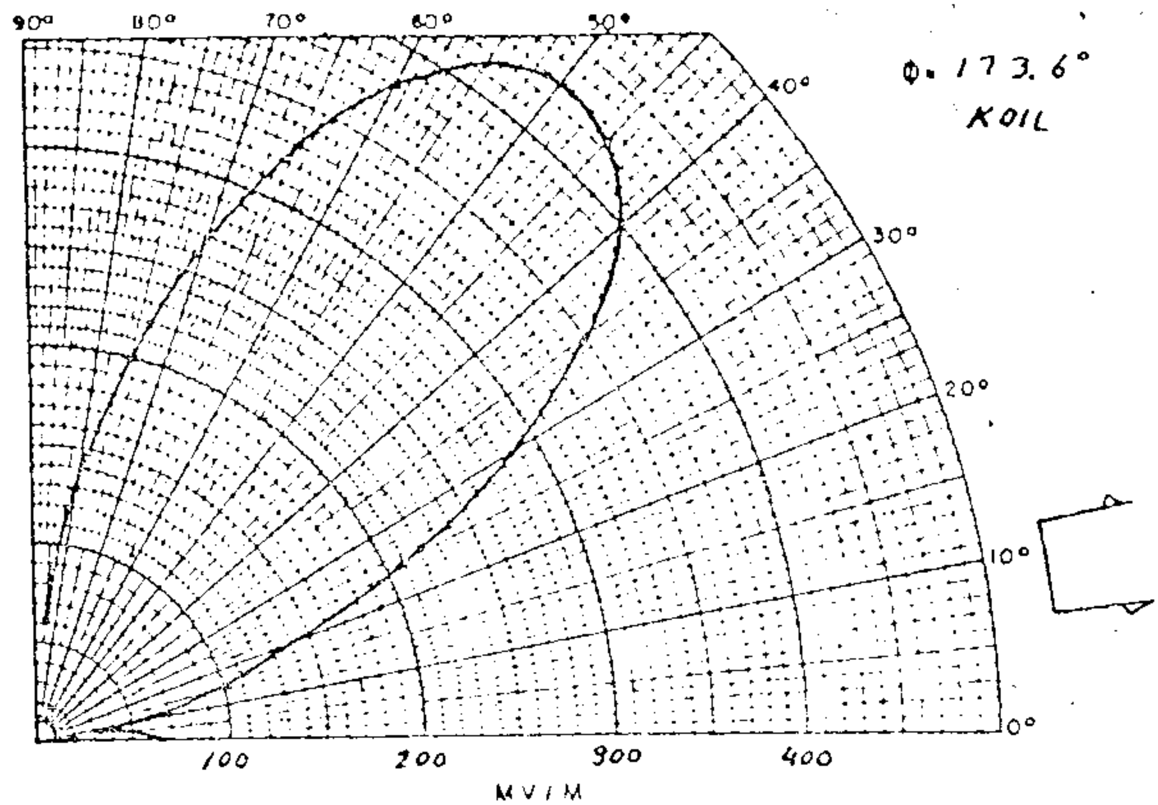


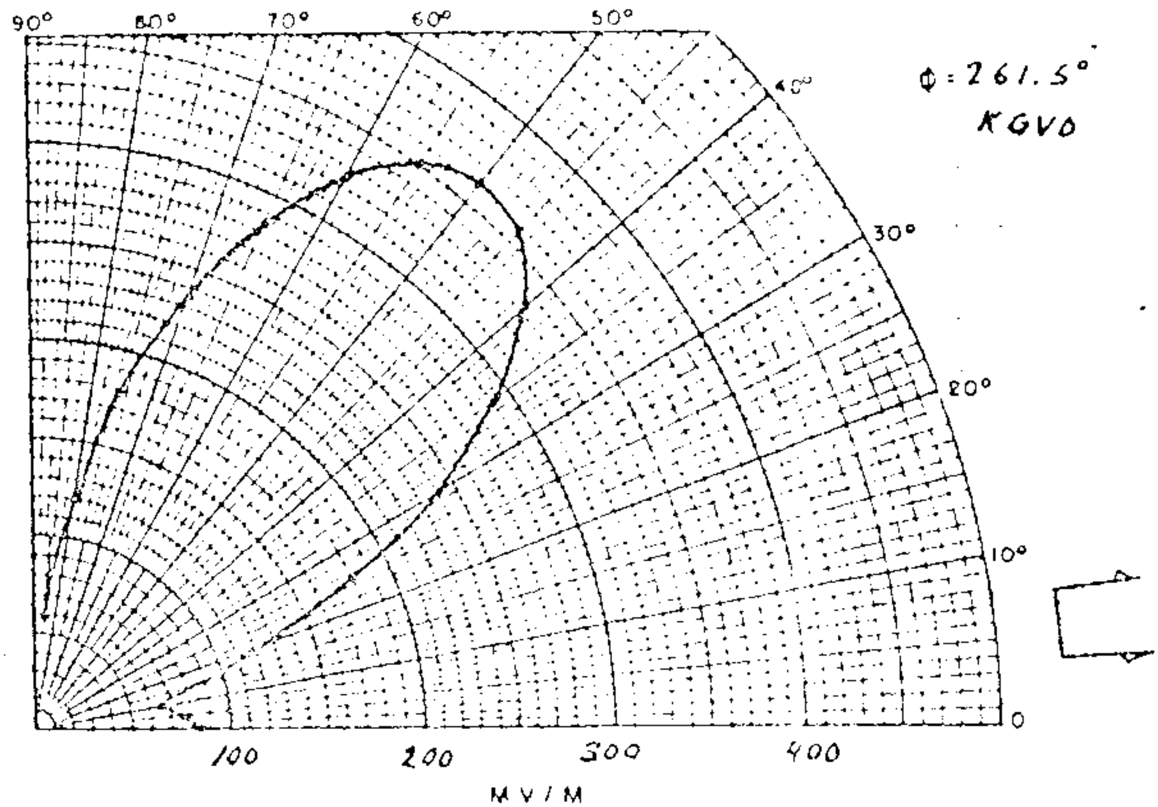


VERTICAL RADIATION PATTERNS

CFRW WINNIPEG, MANITOBA
10 kW DA-2 1290 Kc III
George Mather, P.Eng

CFRW





VERTICAL RADIATION PATTERNS

CFRW WINNIPEG, MANITOBA
10 kw DA-2 1290 kc III
George Mather, P.Eng

Spt 1976

7-3

CFRW

ANTENNA DESCRIPTION SHEET

DIRECTIONAL DA-2

STATION CALL:	C F R W
LOCATION:	Winnipeg, Manitoba.
FREQUENCY:	1290 kc/s
POWER:	10,000 watts
CLASS:	III
TIME:	Unlimited
NOTIFICATION REFERENCE:	334 dated May 12, 1976.
GEOGRAPHICAL COORDINATES:	Lat 49°47'58", Lon 97°16'29"
ARRAY CHARACTERISTICS:	Three elements, guyed, uniform cross section, base insulated, series feed, no top loading, height 170 feet or 80.2 degrees

ELEMENT		ONE	TWO	THREE
Spacing		ref	167.3' 78.93°	334.6' 157.86°
Bearing		ref	015°	015°
Day	R	1.0000	0.6000	
	ϕ	000°	-068°	
Night	R	1.0000	1.4243	0.5740
	ϕ	000°	-125.8°	+105.0°

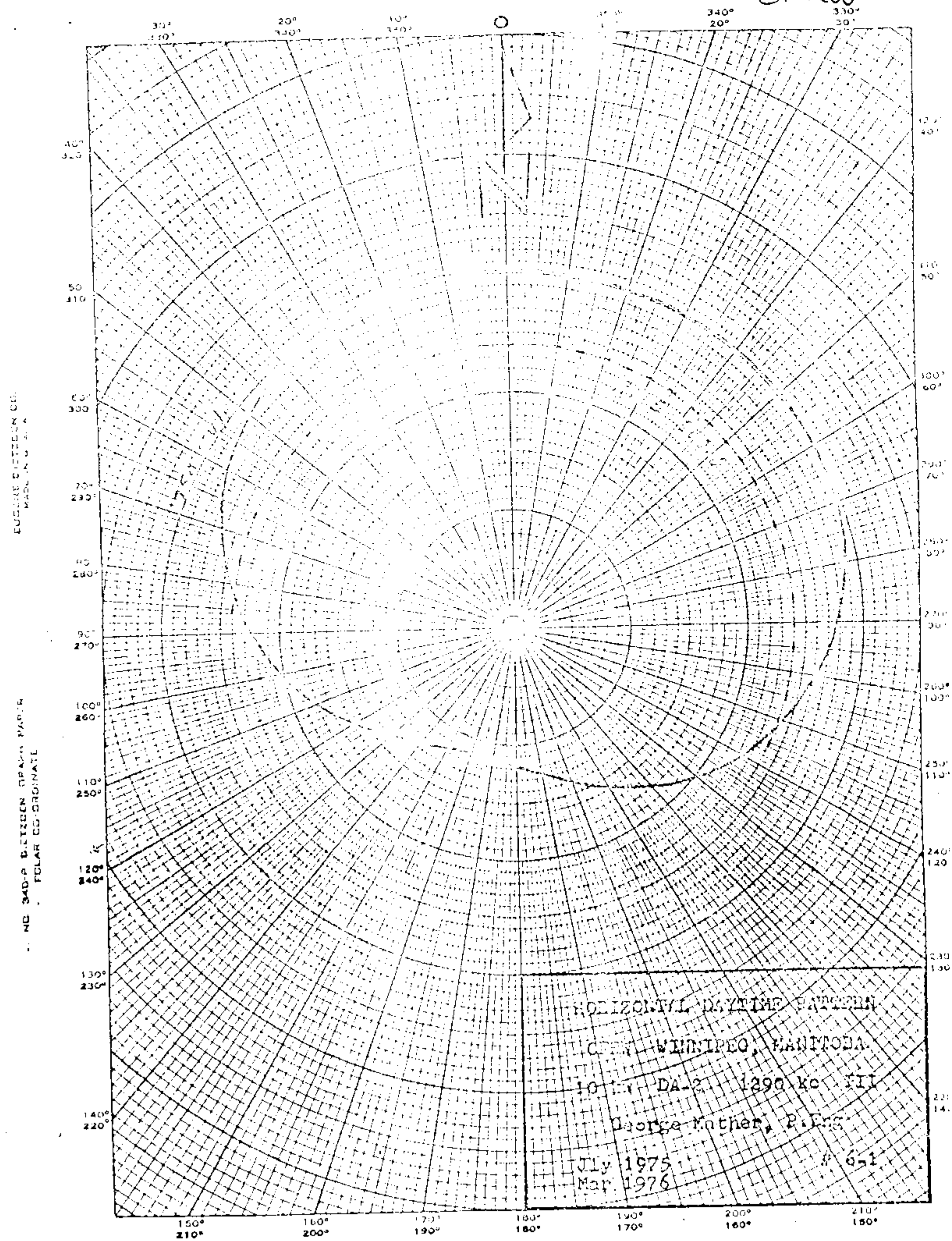
Ground System: 120 radials per tower, #10 AWG bare, soft copper wire, spaced uniformly, depth approximately 8 inches. Radials bonded along line between towers and bonded to soft copper straps at tower base. Maximum length 268 feet.

Predicted RMS: 600.8 mv/m at 1 mile for 10 kw

190.0 mv/m at 1 mile for 1 kw

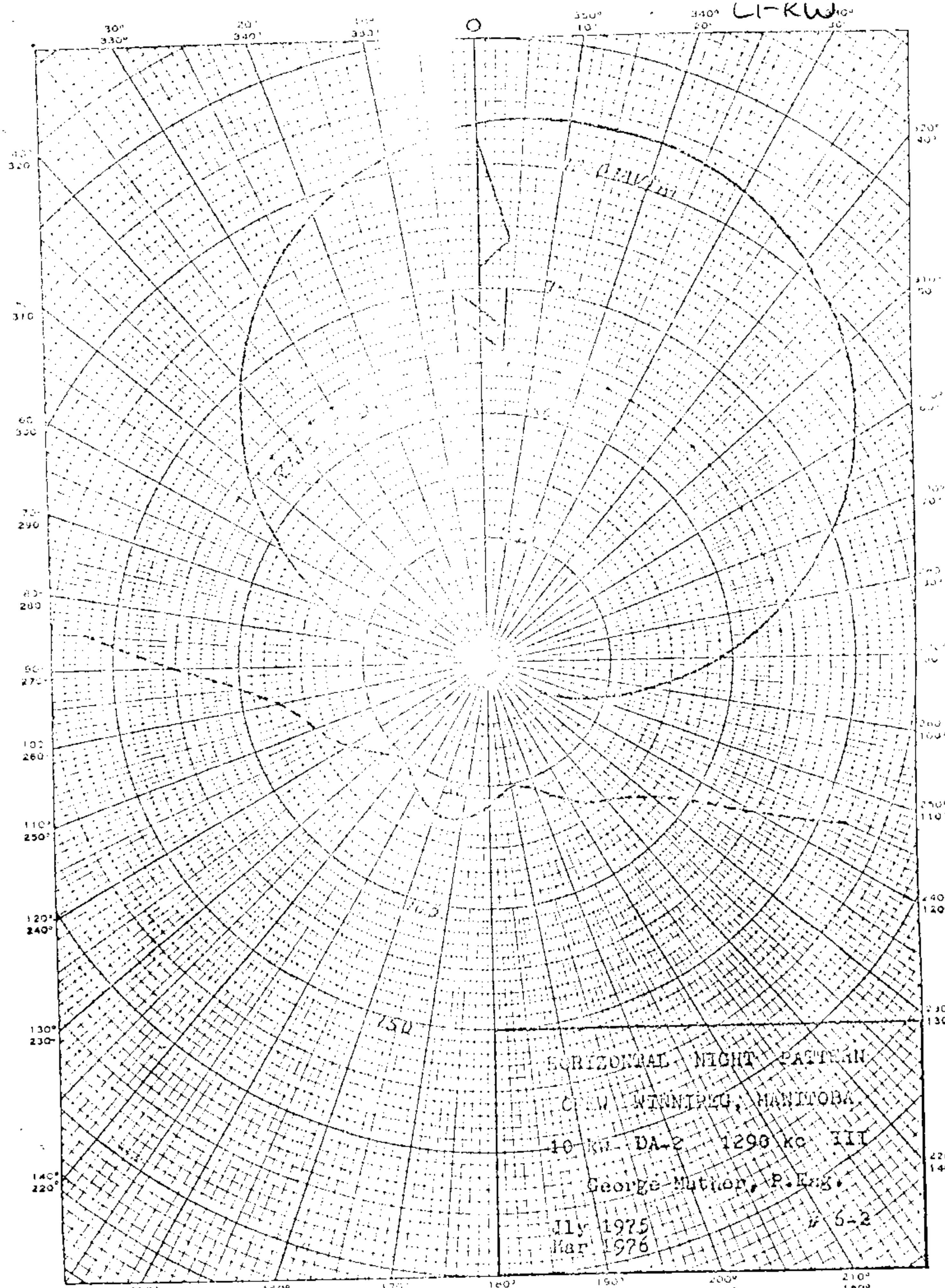
Jly 1975/Mar 1976

CFKW

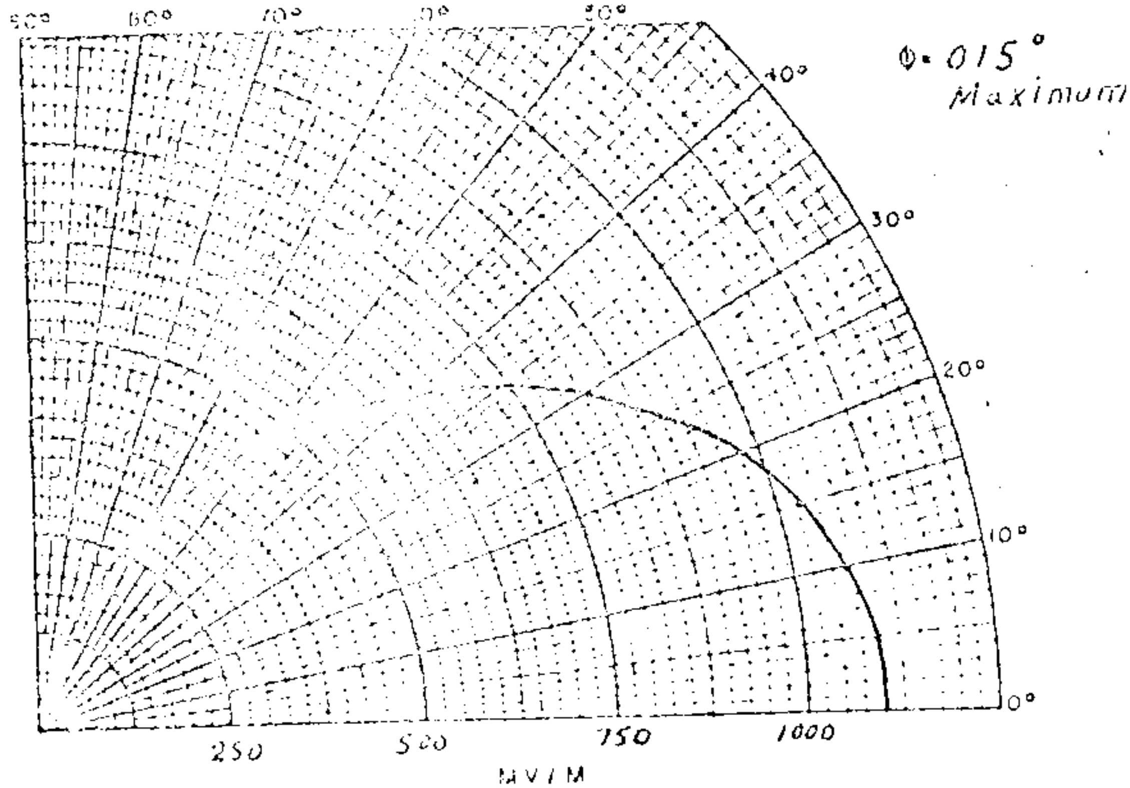


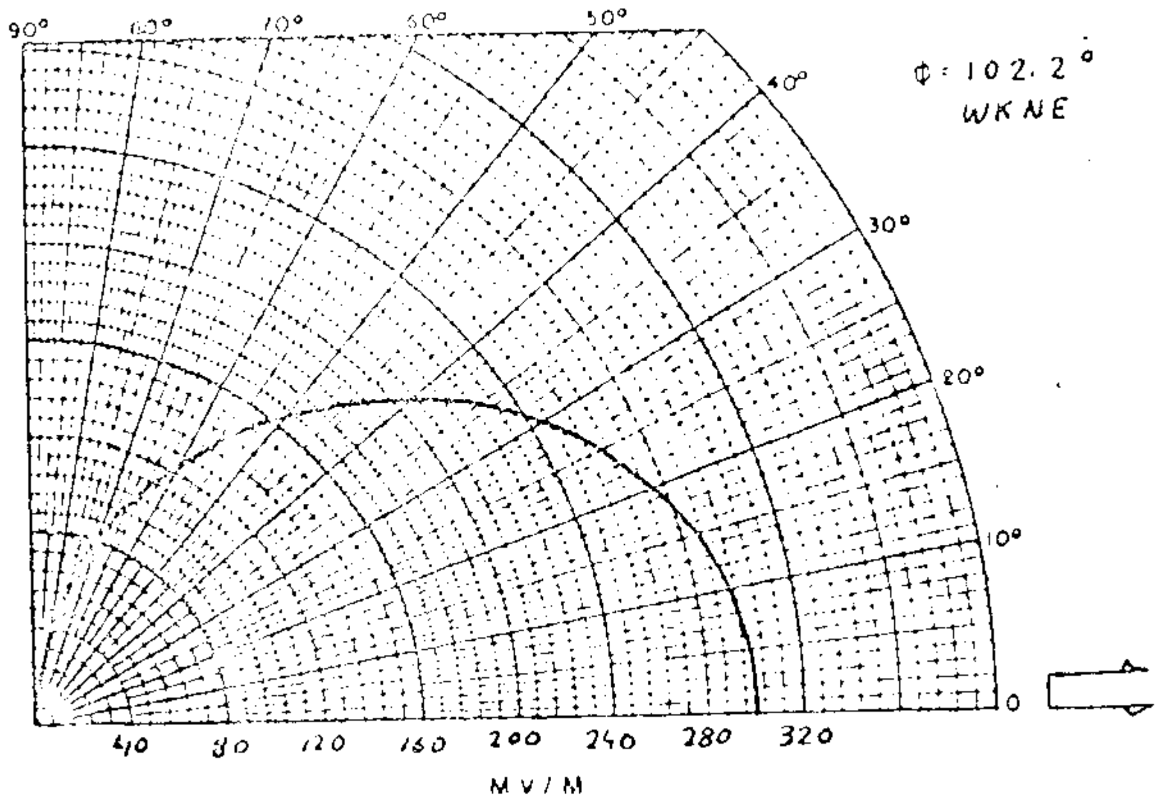
HORIZONTAL DAYTIME PATTERN
CFKW WINNIPEG, MANITOBA
10 kW DA-2 1290 kc III
George Mather, P.Eng
Jly 1975
Mar 1976
6-1
NO. 340-P DIETZGEN GRAPH PAPER
POLAR CO-ORDINATE
EUGENE DIETZGEN CO.
MADE IN U.S.A.

L1-KW


HORIZONTAL NIGHT PATTERN
C[illegible]W WINNIPEG, MANITOBA
10 KW DA-2 1290 kc III
George Mather, P.Eng.
Jly 1975
Mar 1976
6-2
750
NO. 340 P DIETZGEN GRAPH PAPER
POLAR CO-ORDINATE

CFRW





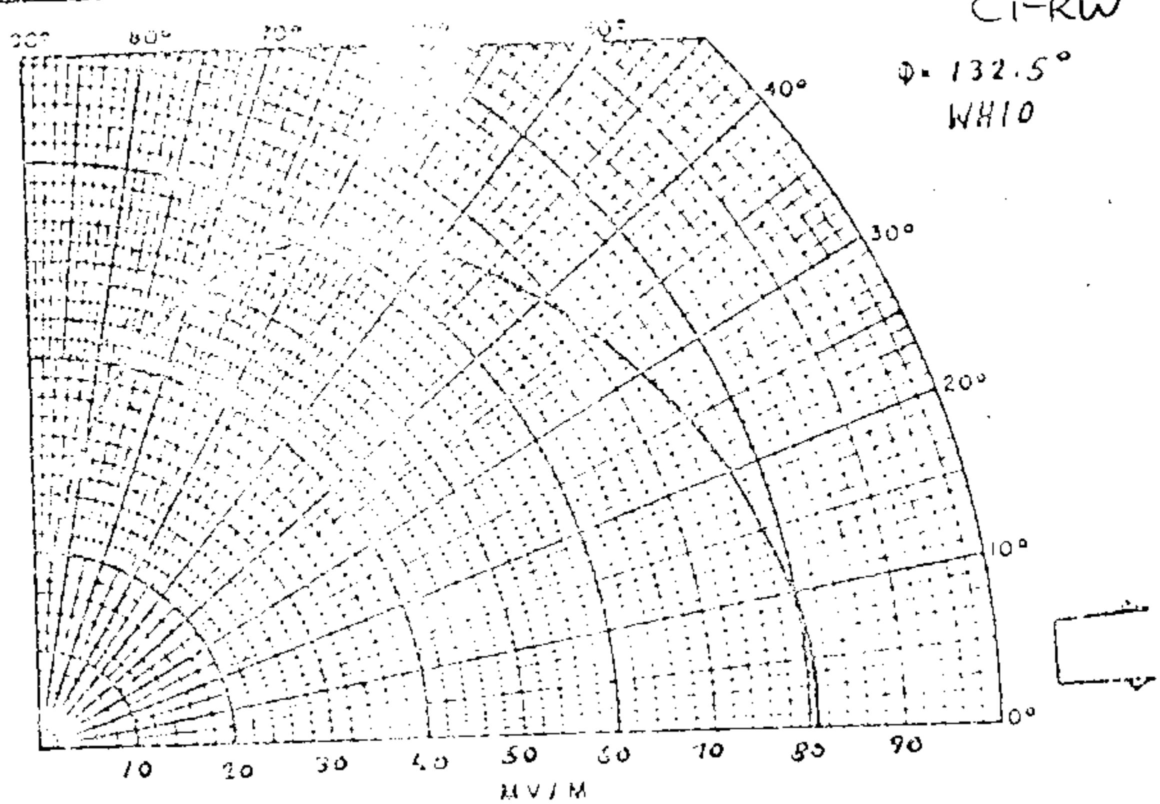
VERTICAL RADIATION PATTERNS

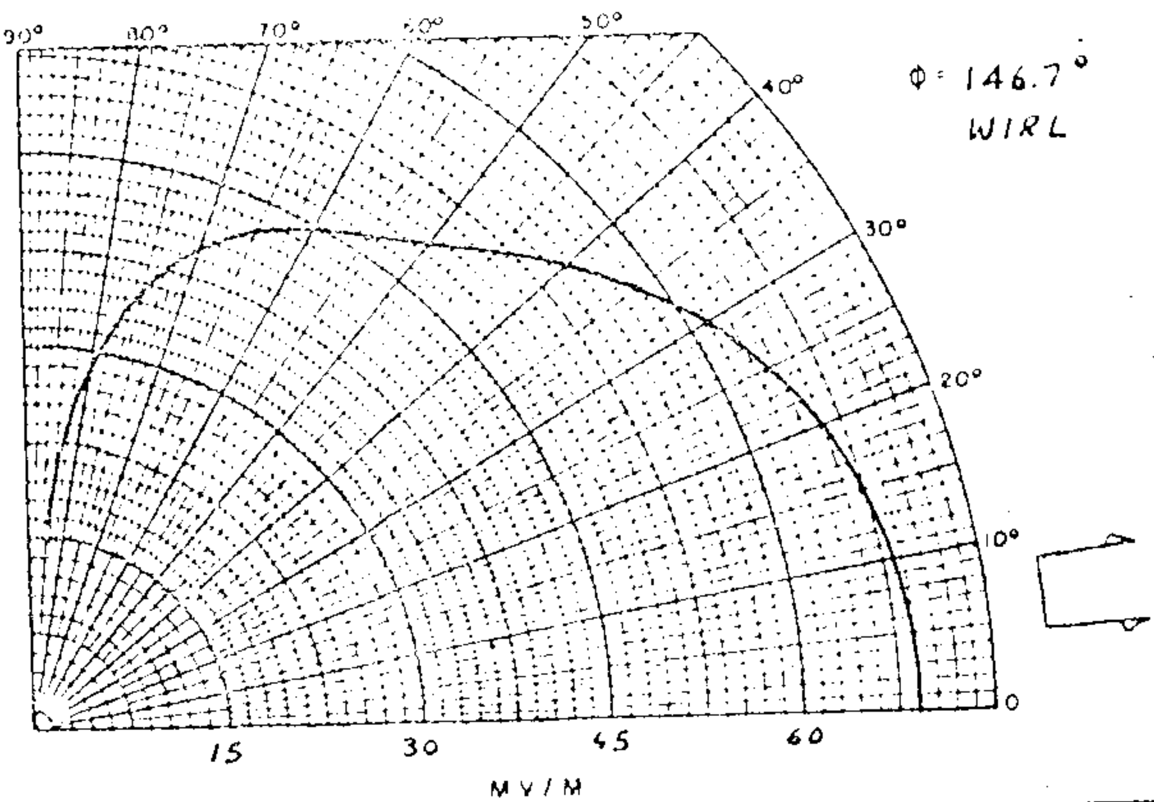
CFRW WINNIPEG, MANITOBA
10 kw DA-2 1290 kc III
George Mather, P.Eng.

Jly 1975
Mar 1976

7-1

CFRW





VERTICAL RADIATION PATTERNS

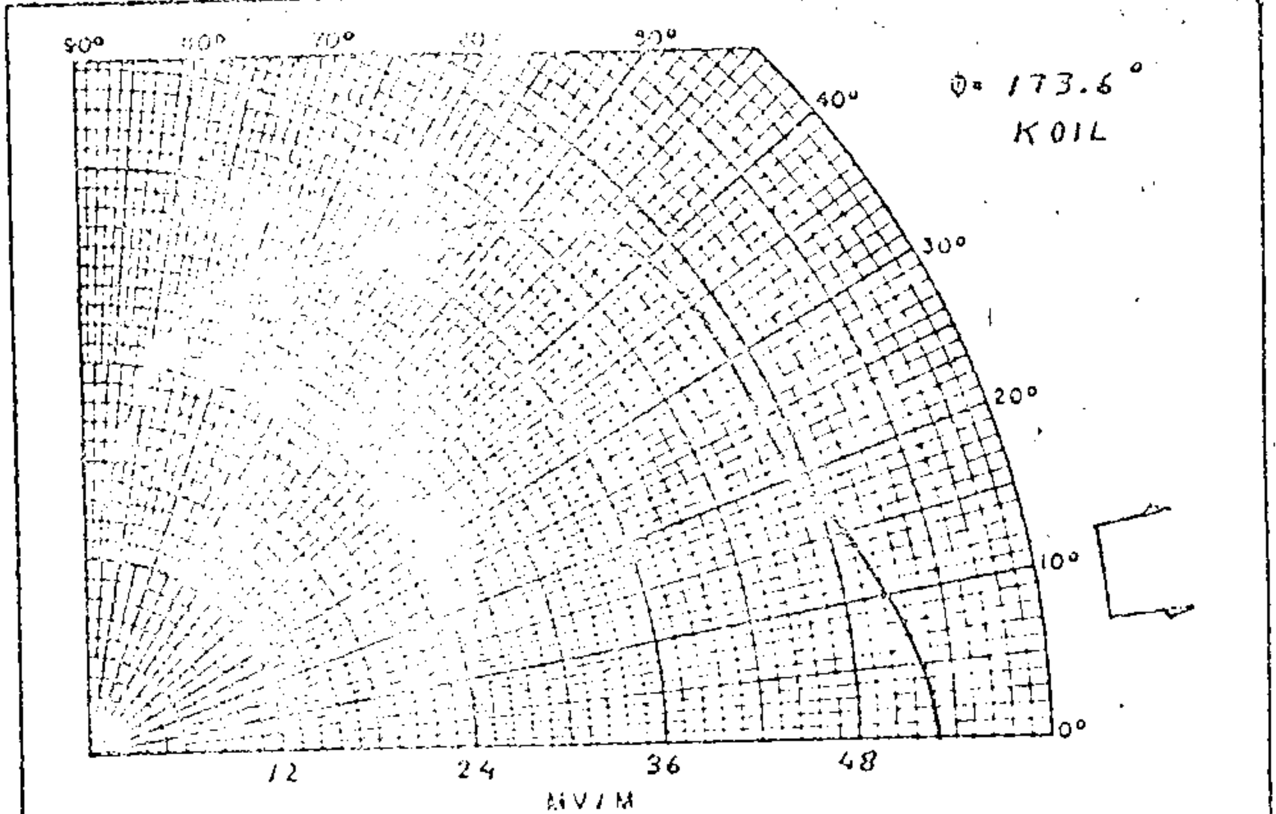
CFRW WINNIPEG, MANITOBA
10 kw DA-2 1290 kc III
George Mather, P.Eng.

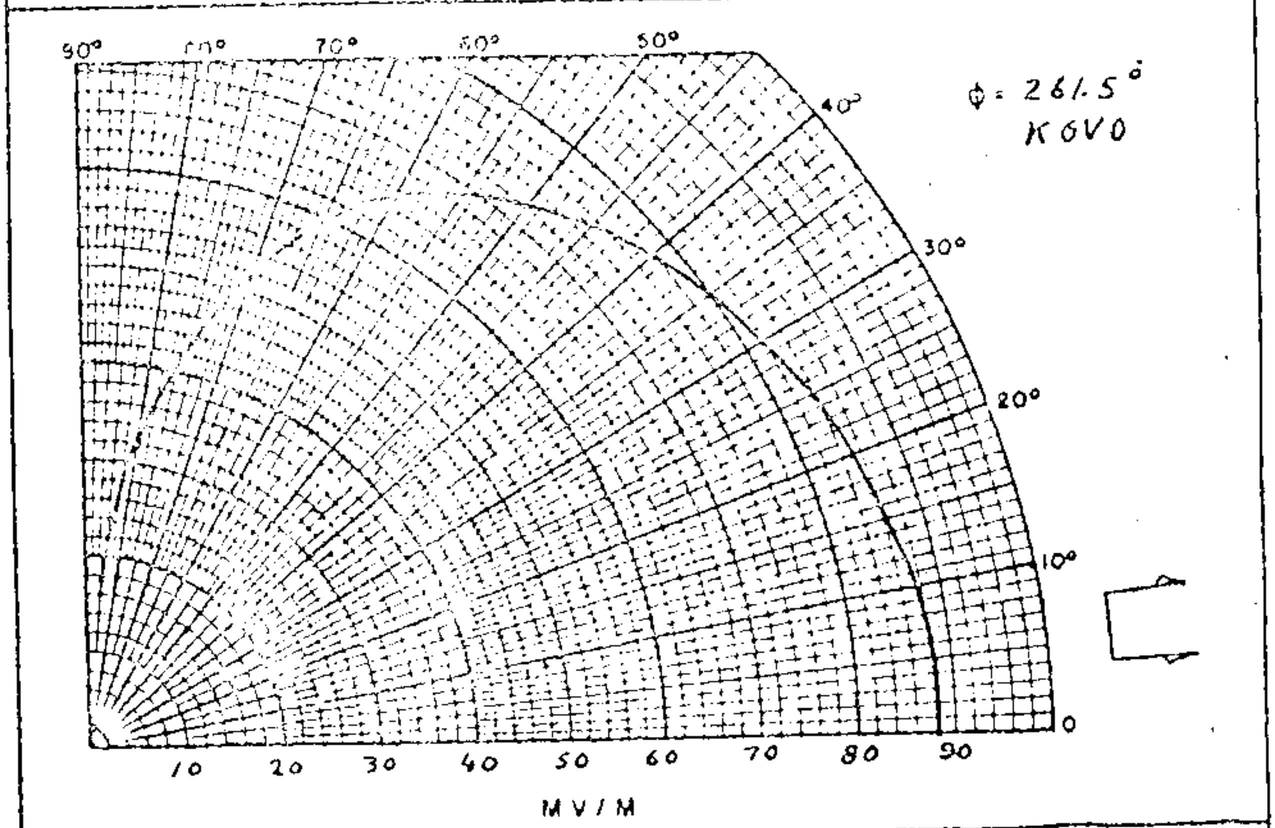
7-2

Jly 1975
Mar 1976

POLAR CO-ORDINATE

CFRW





VERTICAL RADIATION PATTERNS

CFRW WINNIPEG, MANITOBA
10 kw DA-2 1290 kc III
George Mather, P.Eng.

7-3

Jly 1975
Mar 1976

POLAR CO-ORDINATE

CHRM

DESCRIPTION DU RESEAU D'ANTENNES

Station : C H R M

Studio : Matane, Qué.

Puissance : 10 Kw (jour et nuit) DA/2

Fréquence: 1290 KHz

Classe : III

Liste de Notifications: 342

Date: July 8, 1975

Site d'émissiont: latitude nord : 48° 49'27.2"
Longitude ouest: 67° 34'27.8"

Antenne : Elle se compose de deux (2) éléments : tours verticales haubannées de section constante et alimentées en série; pas de charge au sommet

Pylone:	No.1 (ouest)	No.2 (est)
Hauteur au-dessus des isolateurs	190.5' (90°)	190.5' (90°)
Espacement	réf.	120°
Orientation	réf.	30°
Phases		
Jour	120°	0°
Nuit	60°	0°
Courants		
Jour	1.00	0.70
Nuit	1.00	0.97

Prise de terre: 120 fils radiaux no.10 B&S, également espacés, d'une longueur de 305 pieds (0.4 longueur d'ondes). Les fils sont réunis par une bande transversale à l'intersection des prises de terre

Champ effectif prévu : 635 mv/m (jour)
595 mv/m (nuit)

CHRM

DIRECTIONAL ANTENNA DESCRIPTION SHEET

Station: (New) | Main Studio: Matane, Quebec

Frequency: 1290 kHz | Power: 10 kW

Notification List No. 322 | Date: April 16, 1974 | Class: III

GEOGRAPHICAL LOCATION OF THE CENTER OF THE ANTENNA SYSTEM:

North Latitude: 48° 48' 01"
West Longitude: 67° 37' 03"

ANTENNA CHARACTERISTICS

Authorized for Daytime and Nighttime operation. (DA-2)
Number of elements: 2
Type of elements: Series-excited, uniform cross-section, guyed, vertical steel towers.

TOWER:	W(#1)	E(#2)	
HEIGHT ABOVE INSULATORS:	190.5'	190.5'	(90°)
NIGHT PHASING:	+60°	0°	
NIGHT FIELD RATIO:	0.97	1.00	
DAY PHASING:	+120°	0°	
DAY FIELD RATIO:	0.7	1.00	

SPACING AND ORIENTATION: Elements are spaced 120° on a line bearing 30° true.

GROUND SYSTEM: 120-0.4 wavelength equally spaced copper radials about each tow[er] Radials are shortened and bonded to a transverse strap along intersections between towers.

Predicted effective Night Field: 595 mv/m at rated power.

Predicted effective Day Field: 635 mv/m at rated power.

CHRM - [illegible]

DESCRIPTION DU RESEAU D'ANTENNES

Station: Nouvelle   Studio principal: Matane, Qué.

Puissance: 10kw (jour et nuit)   Fréquence: 1290 kc • Classe: III

Liste de notifications: 322   Date: April 16, 1974.

Site: latitude nord: 48° 48' 01"
      longitude ouest: 67° 37' 03"

Antenne: Elle se compose de deux (2) éléments:
Tours verticales haubannées de section constante et alimentées en série; pas de charge au sommet.
Mode de fonctionnement: DA-2

Pylone:	No 1 (ouest)	No 2 (est)
Hauteur au-dessus des isolants	190.5' (90°)	190.5' (90°)
Espacement	Réf.	120°
Orientation	Réf.	30°
Jour Décalage des phases	120	0°
Rapport de champ	0.7	1.00
Nuit Décalage des phases	60°	0°
Rapport de champ	0.97	1.00

Prise de terre: 120 fils radiaux no 10B & S., également espacés, d'une longueur de (0.4 longueur d'onde). Les fils sont réunis par une bande transversale à l'intersection des prises de terre.

Champ effectif prévu: 635 mv/m (jour)
595 mv/m (nuit)

brunelle, lambert & associés inc.
Conseillers en Communications

MATANE, QUE.
CHRM

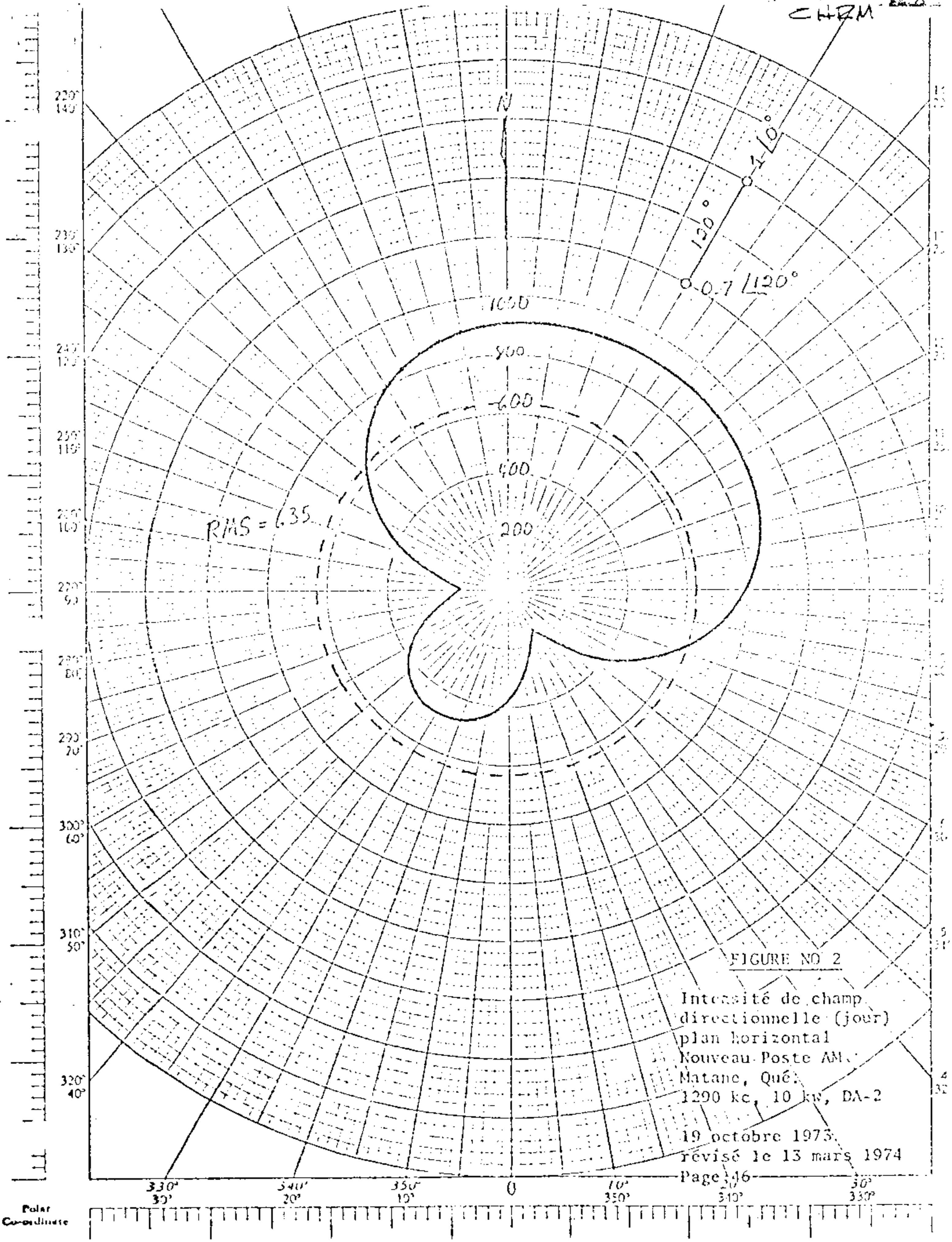
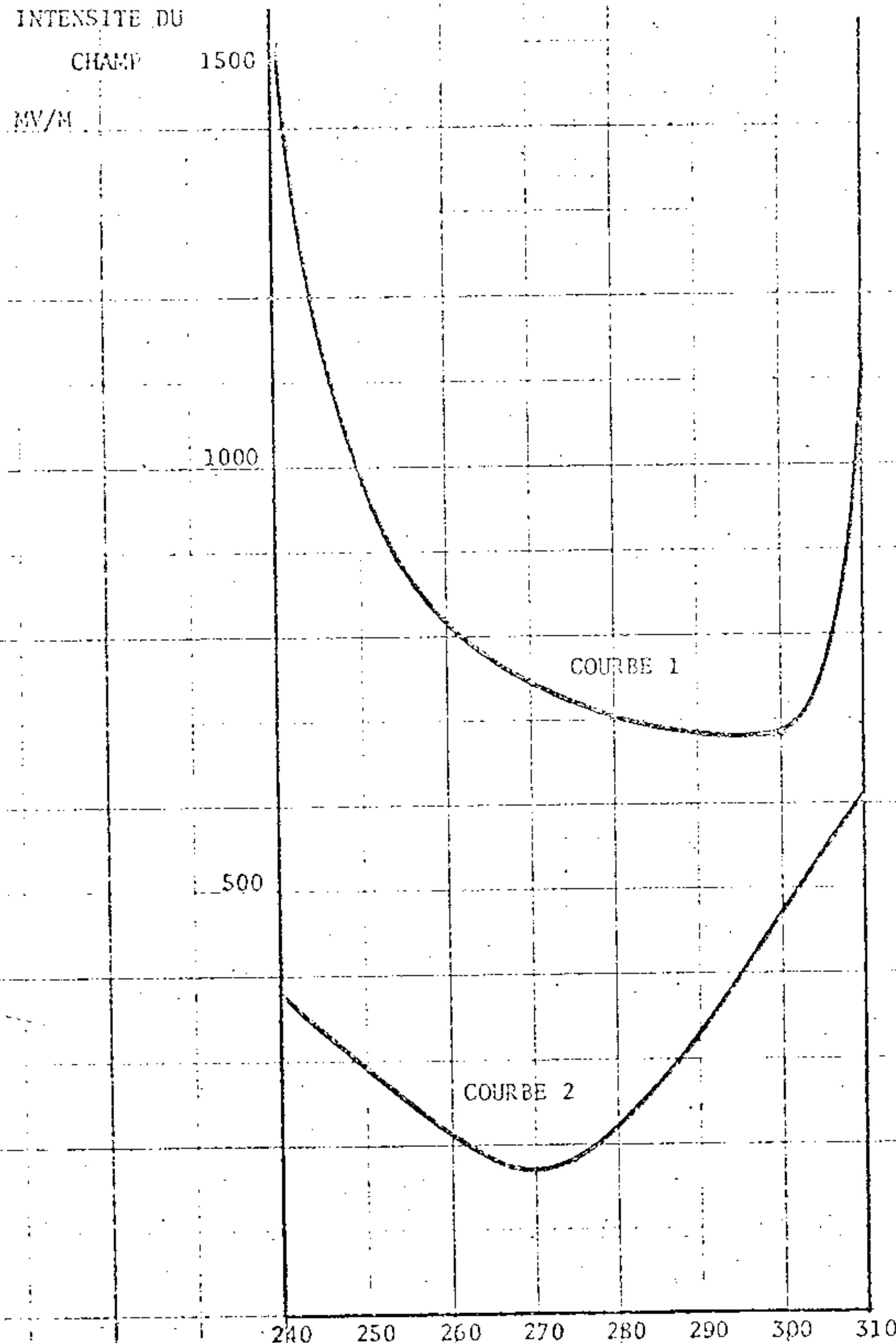


FIGURE NO 2

Intensité de champ
directionnelle (jour)
plan horizontal
Nouveau Poste AM.
Matane, Qué.
1290 kc, 10 kw, DA-2

19 octobre 1973
révisé le 13 mars 1974
Page 16

MATANE, QUE.
CHRM



COURBE 1: RAYONNEMENT MAXIMAL PERMISSIBLE EN DIRECTION DU CONTOUR DE SERVICE DE CHGB, 1310 kc

COURBE 2: RAYONNEMENT PROPOSE (JOUR)

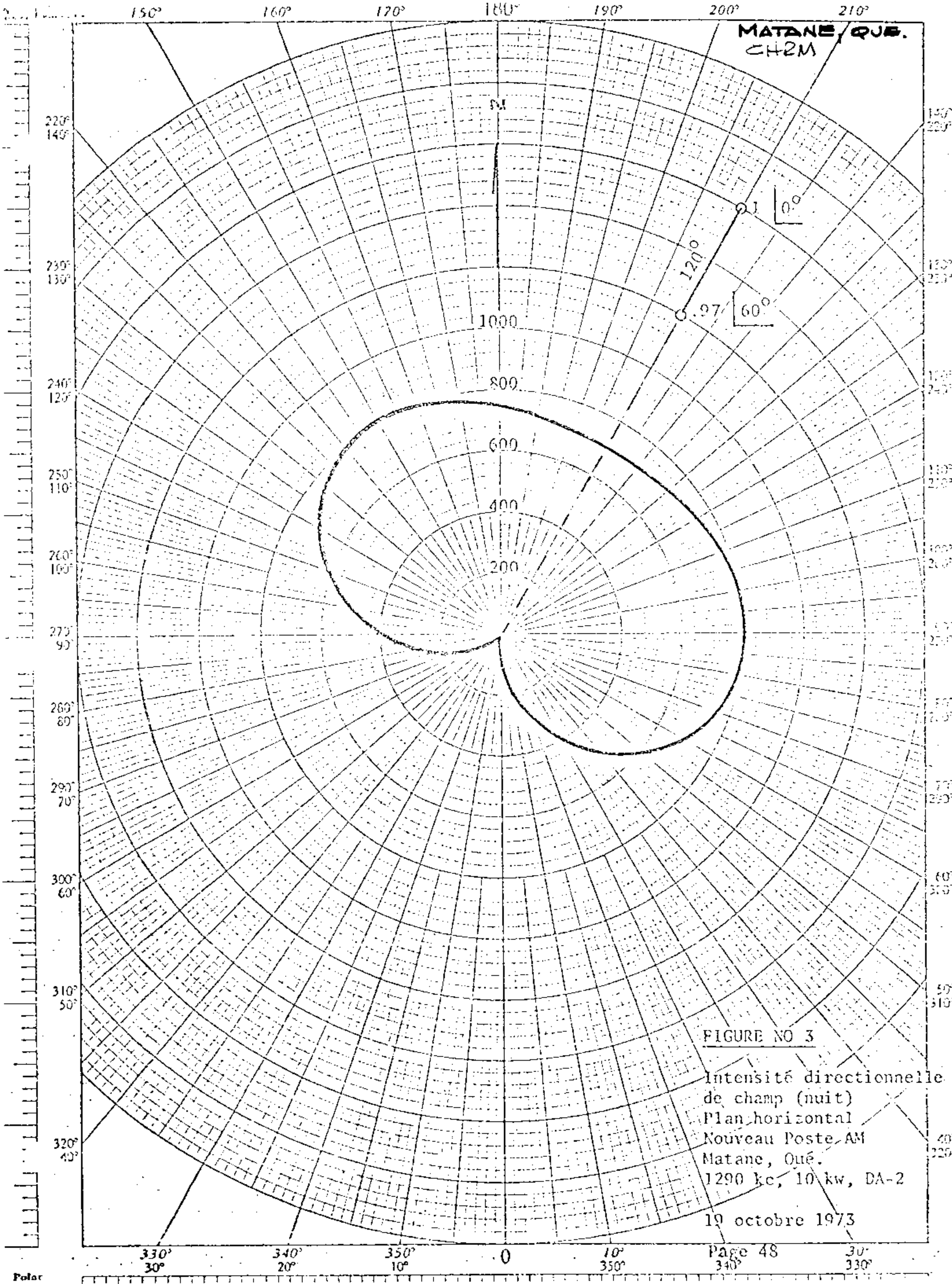


FIGURE NO 3

Intensité directionnelle
de champ (nuit)
Plan horizontal
Nouveau Poste AM
Matane, Qué.
1290 kc, 10 kw, DA-2

19 octobre 1973

MATANE, QUE.
CHRM

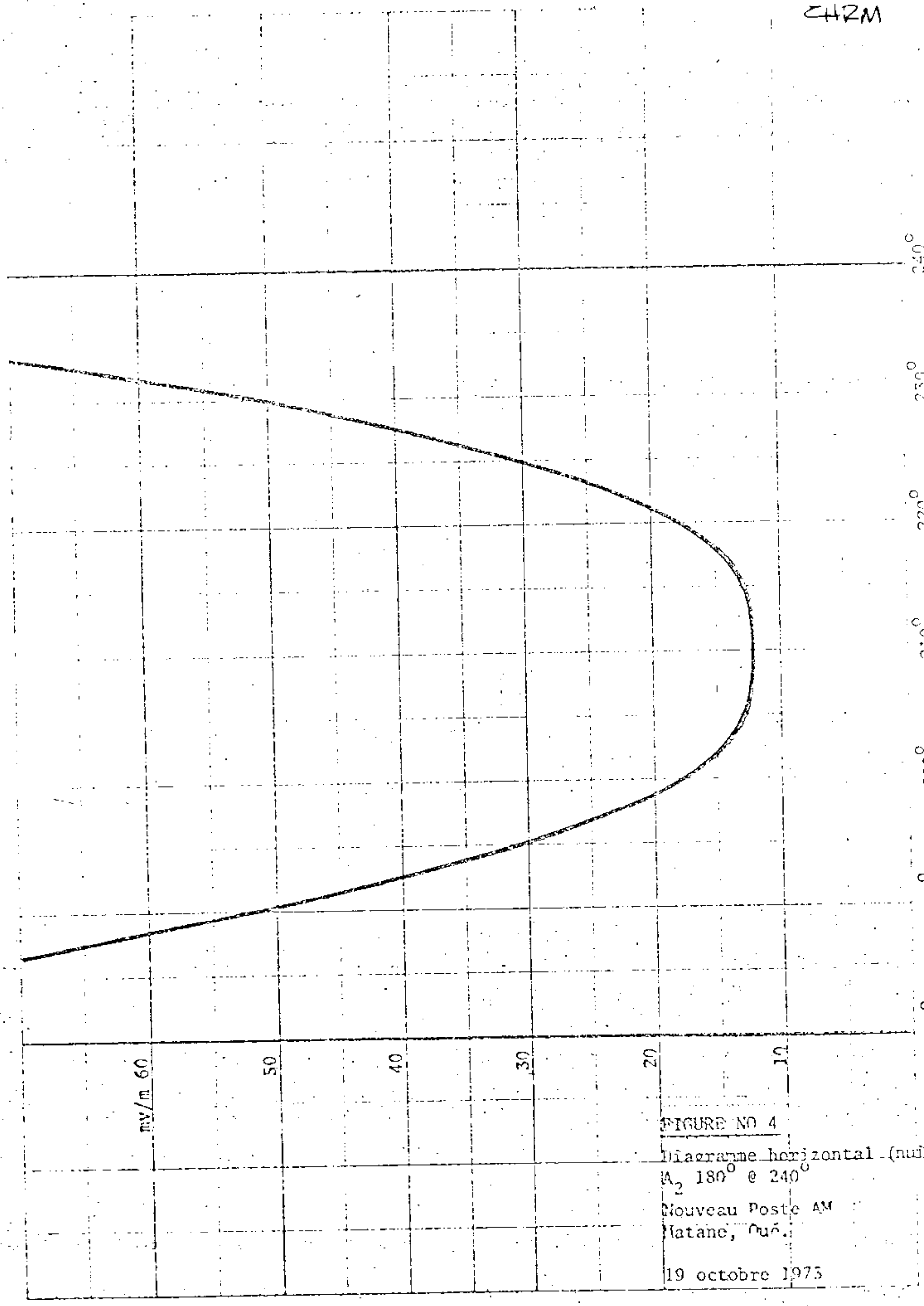


FIGURE NO 4

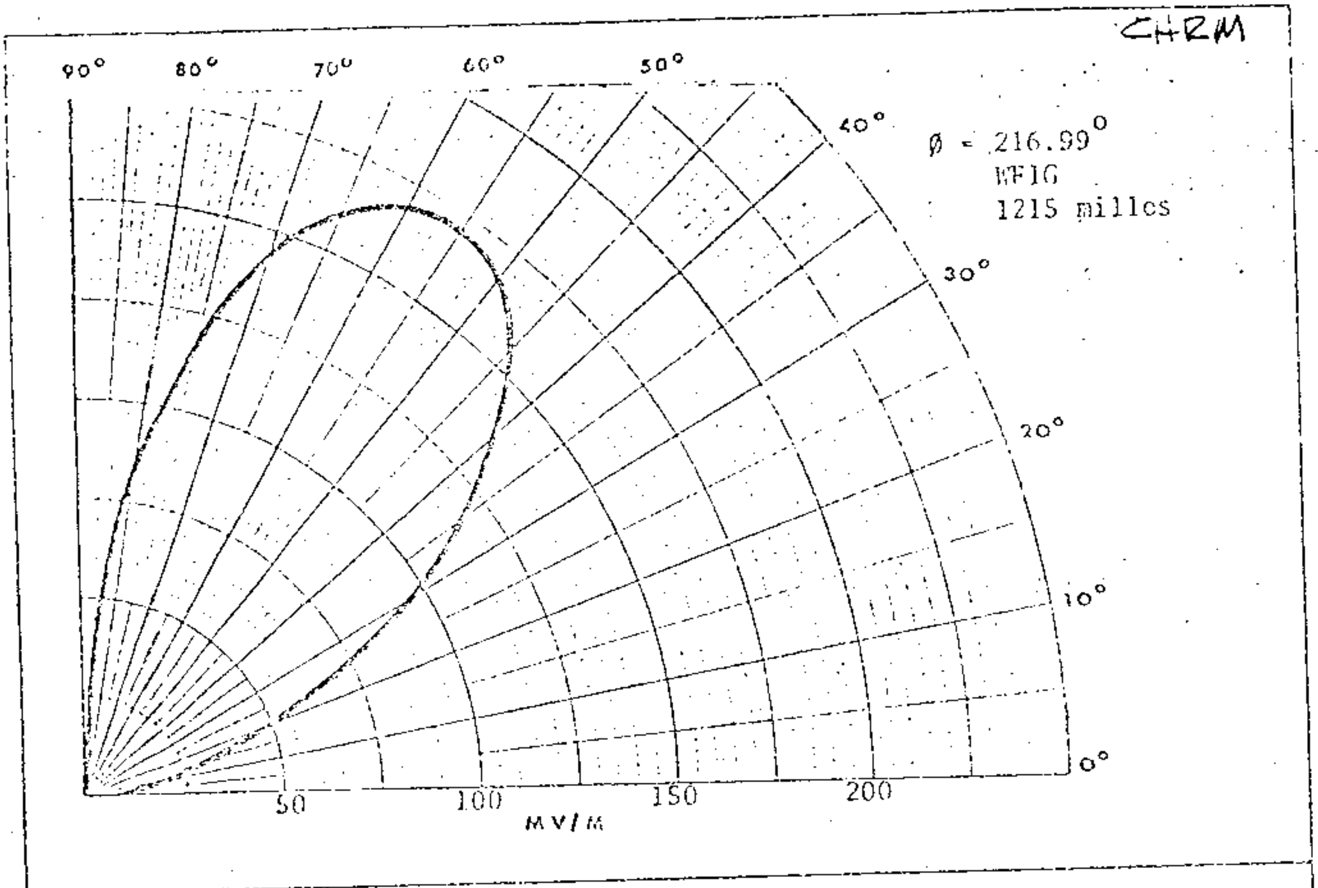
Diagramme horizontal (nuit)
A_2 180° @ 240°

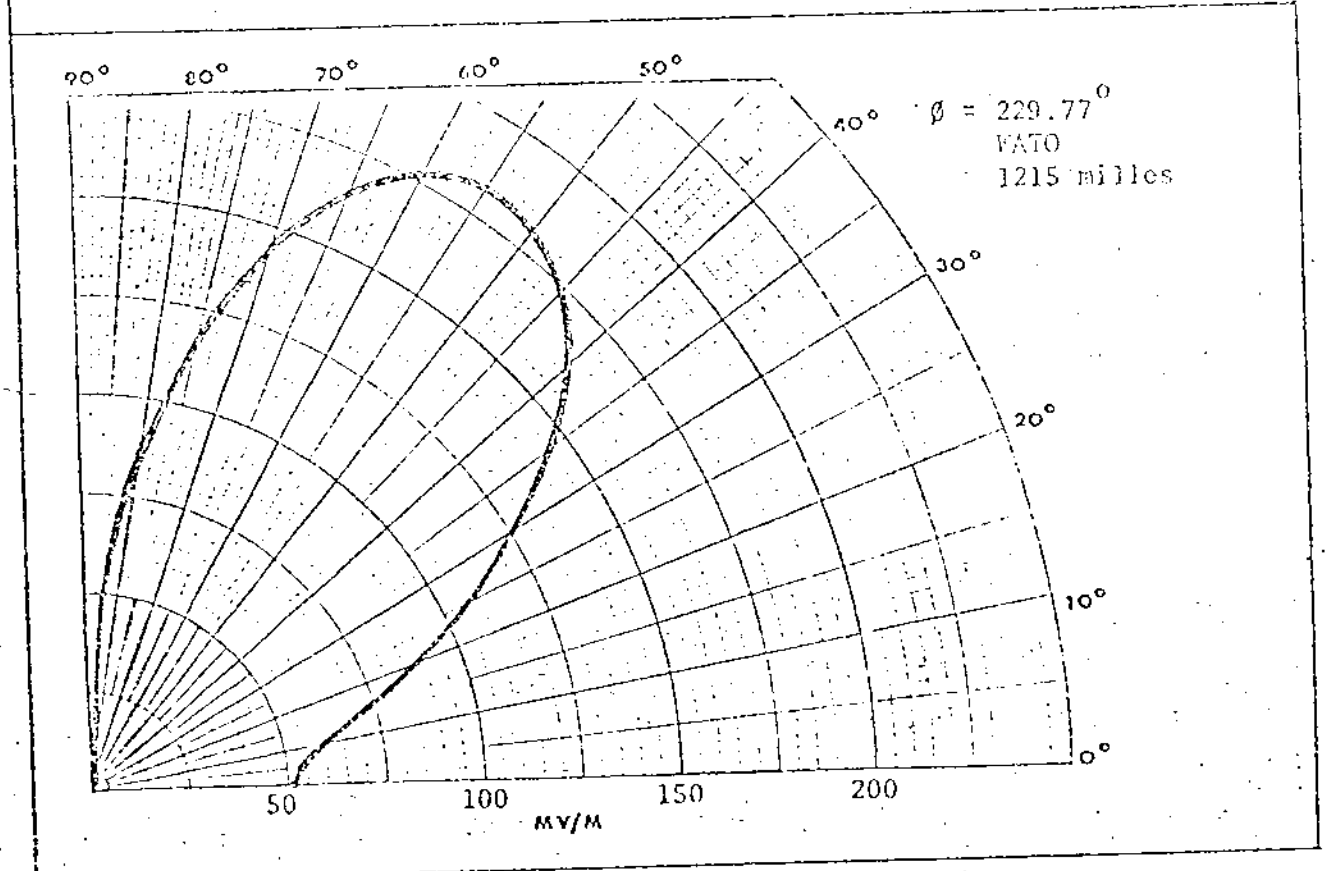
Nouveau Poste AM
Matane, Qué.

19 octobre 1973

MATANE, QUE.

CHRM





SECTIONS VERTICALES

NOUVEAU POSTE AM - MATANE - QUE.

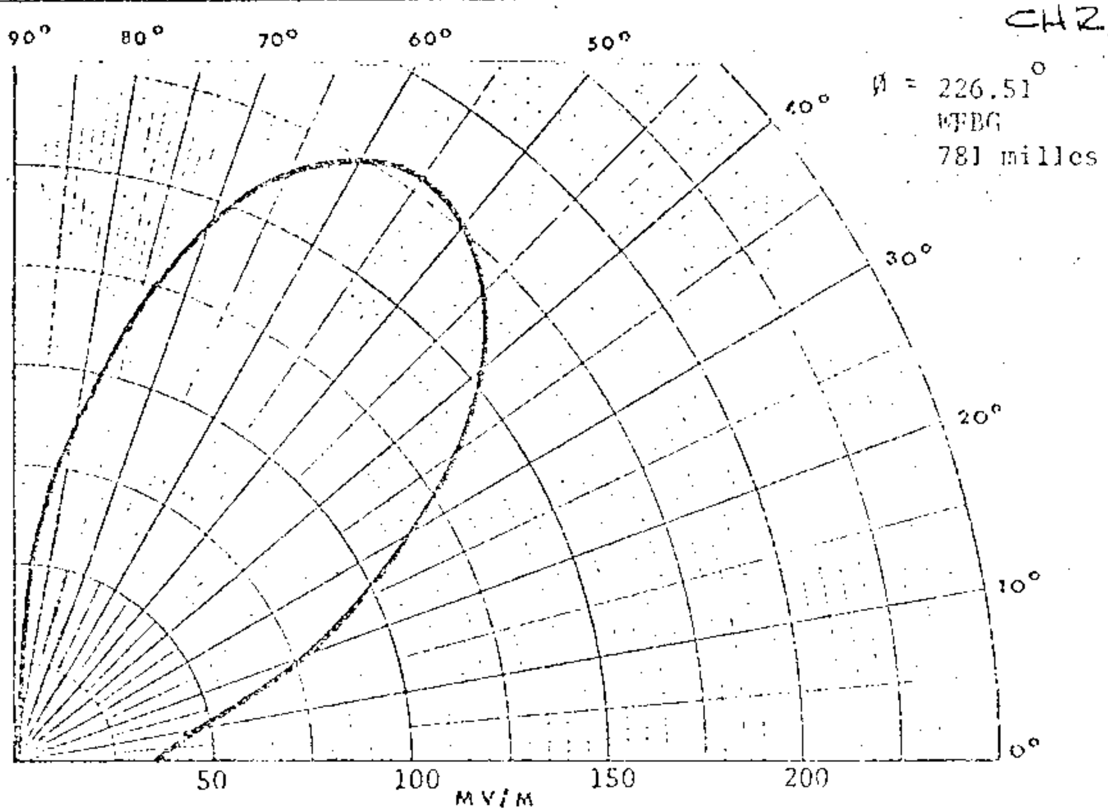
10 kw, DA-2, Classe III, 1290 kc

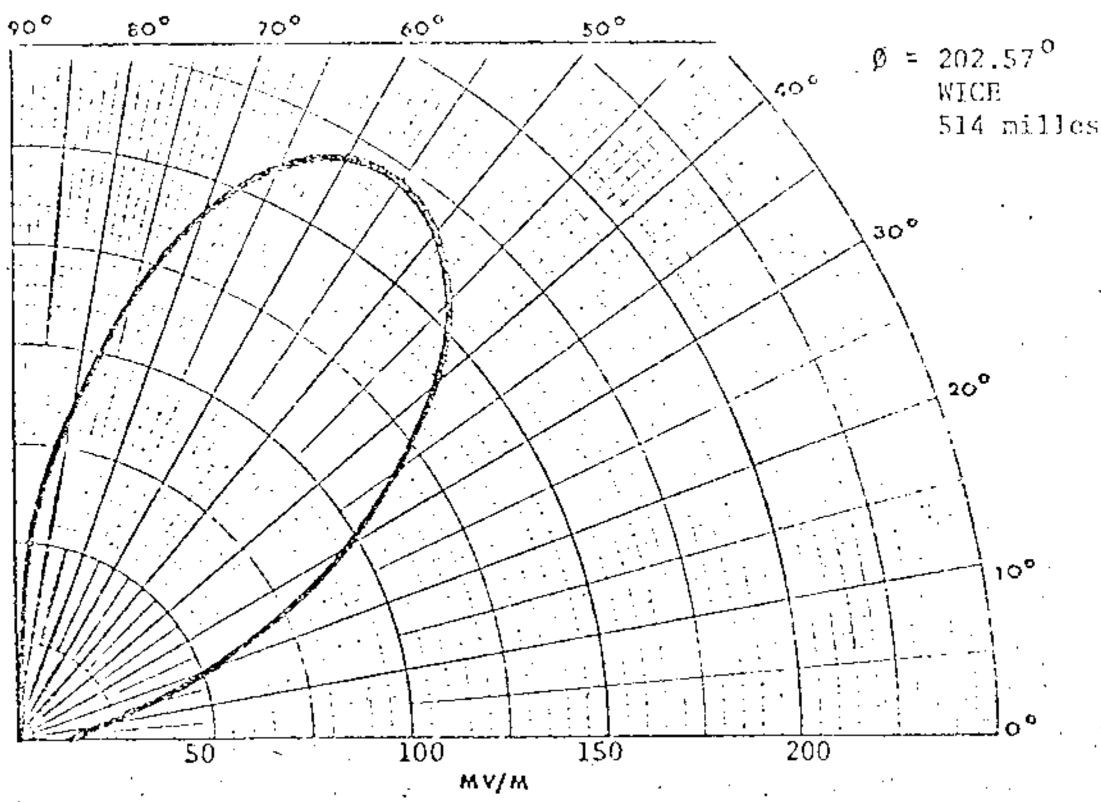
brunelle, lambert & associés inc.

Conseillers en Communications

FIGURE NO 5

WFIG - WATO



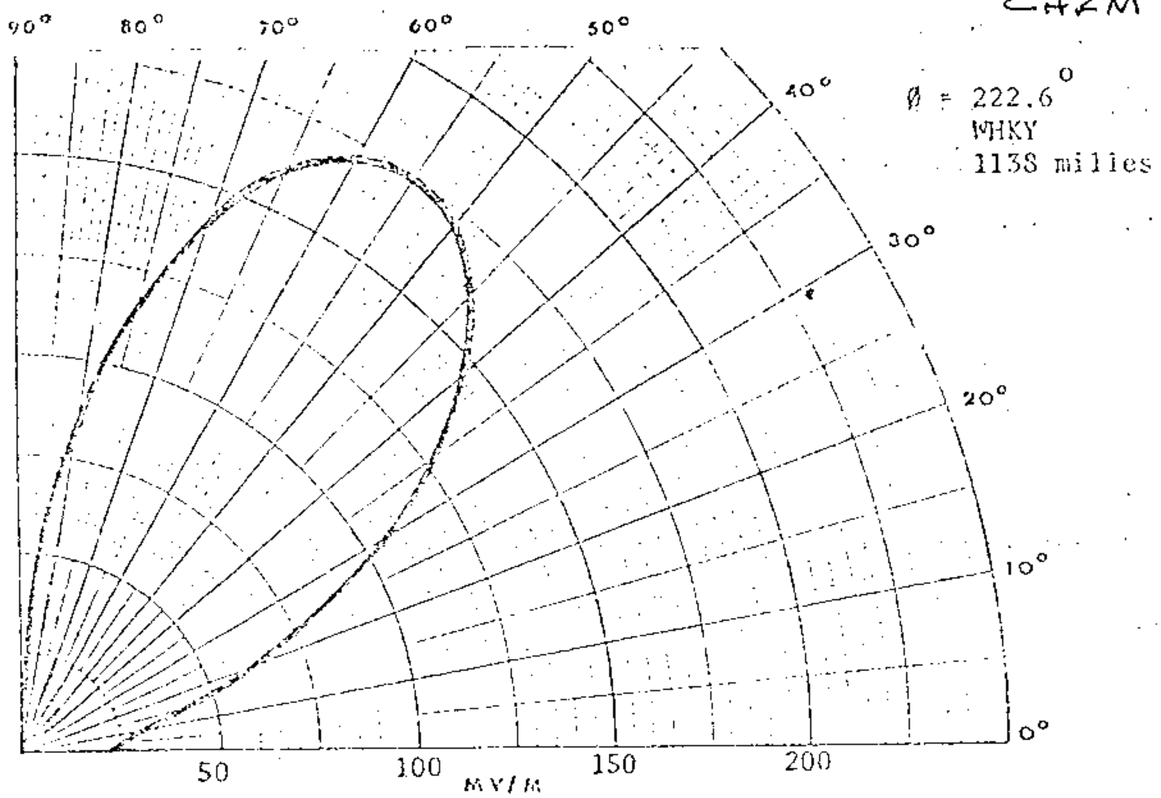


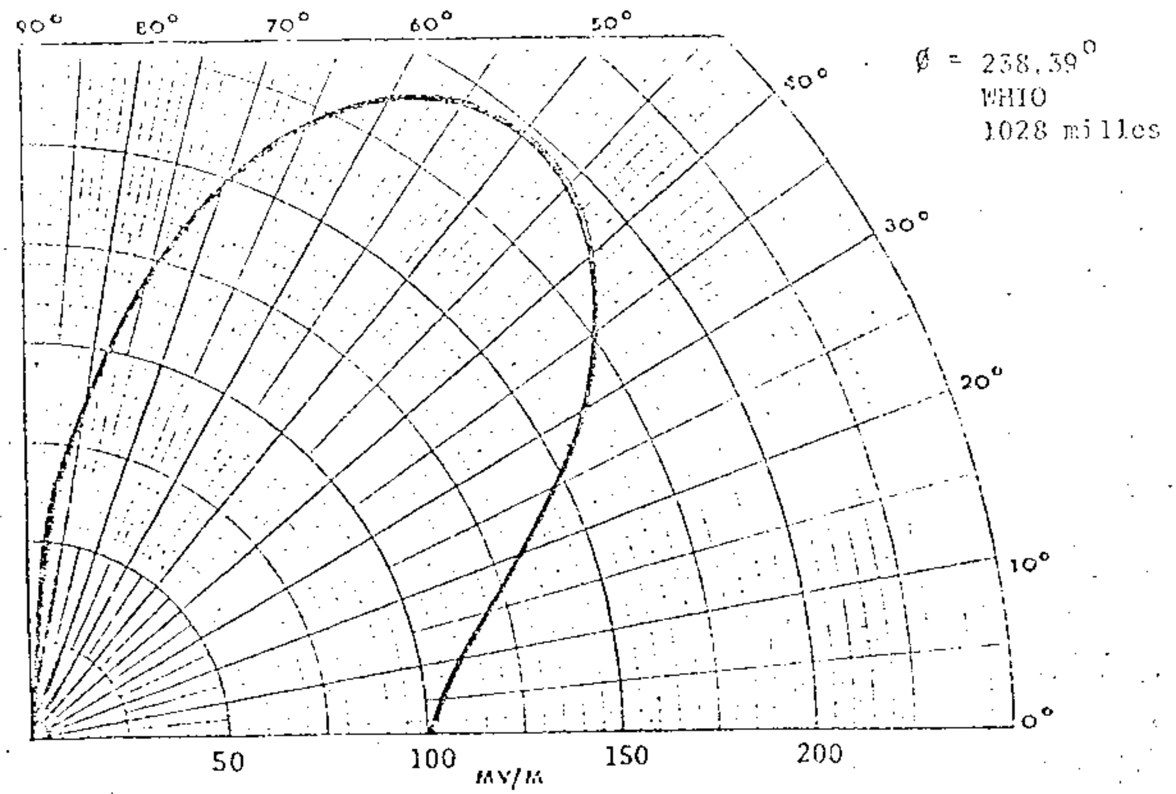
SECTIONS VERTICALES

NOUVEAU POSTE AM - MATANE - QUE.

10 kw, DA-2, Classe III, 1290 kc

CH2M





SECTIONS VERTICALES

NOUVEAU POSTE AM - MATANE, - QUE.

10 kw, DA-2, Classe III, 1290 kc

brunelle, lambert & associés inc.
Conseillers en Communications

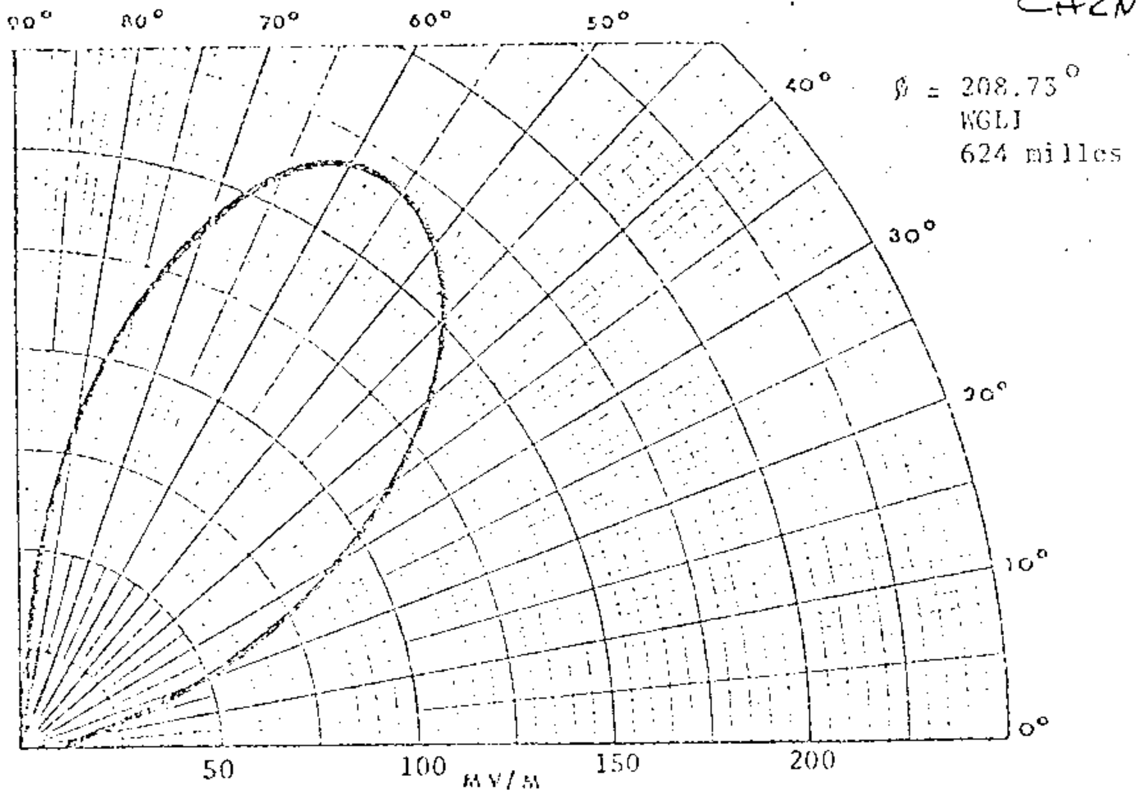
Le 19 octobre 1973

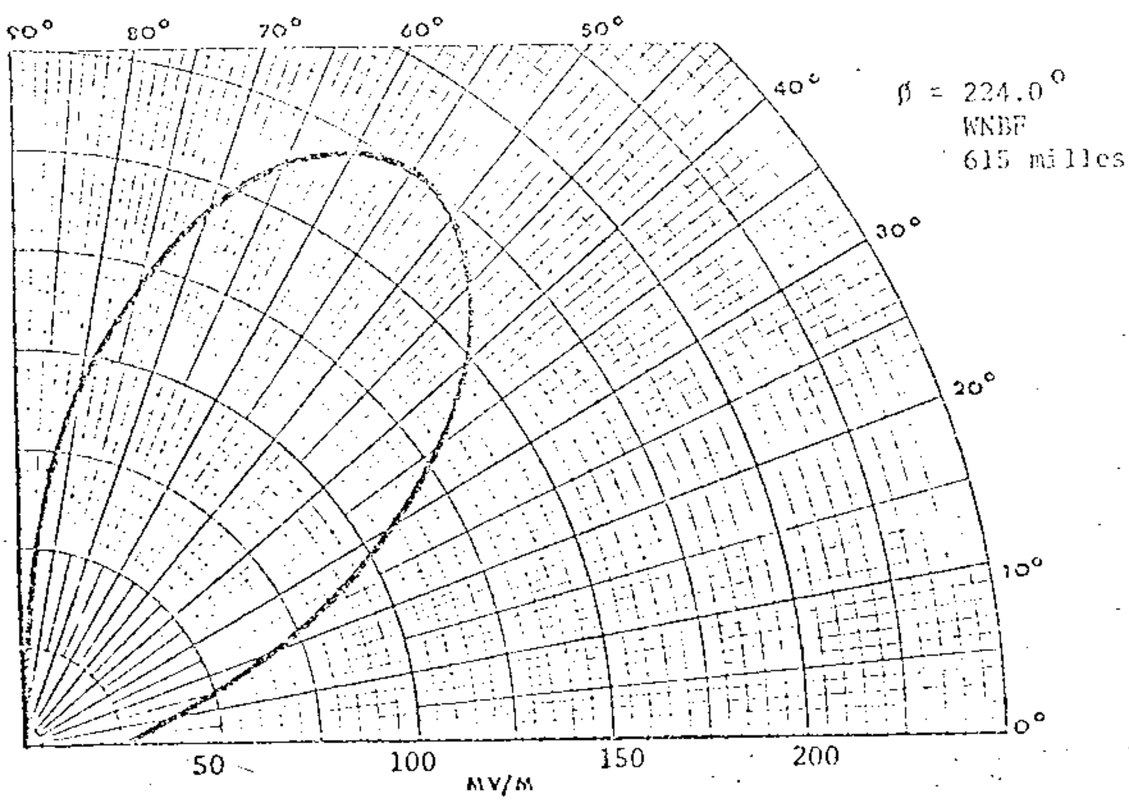
FIGURE NO 7

WHKY - WHIO

MATANE, QUE.

CH2M



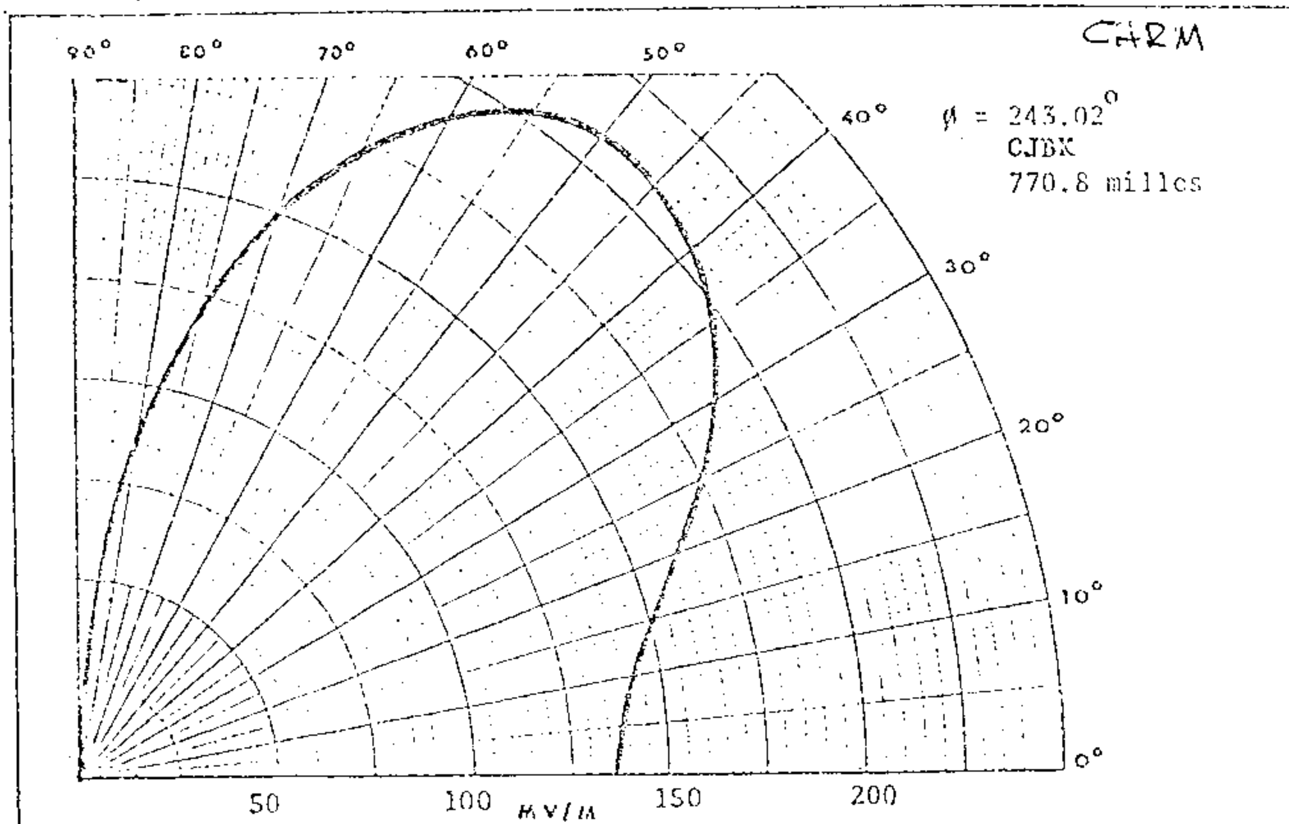


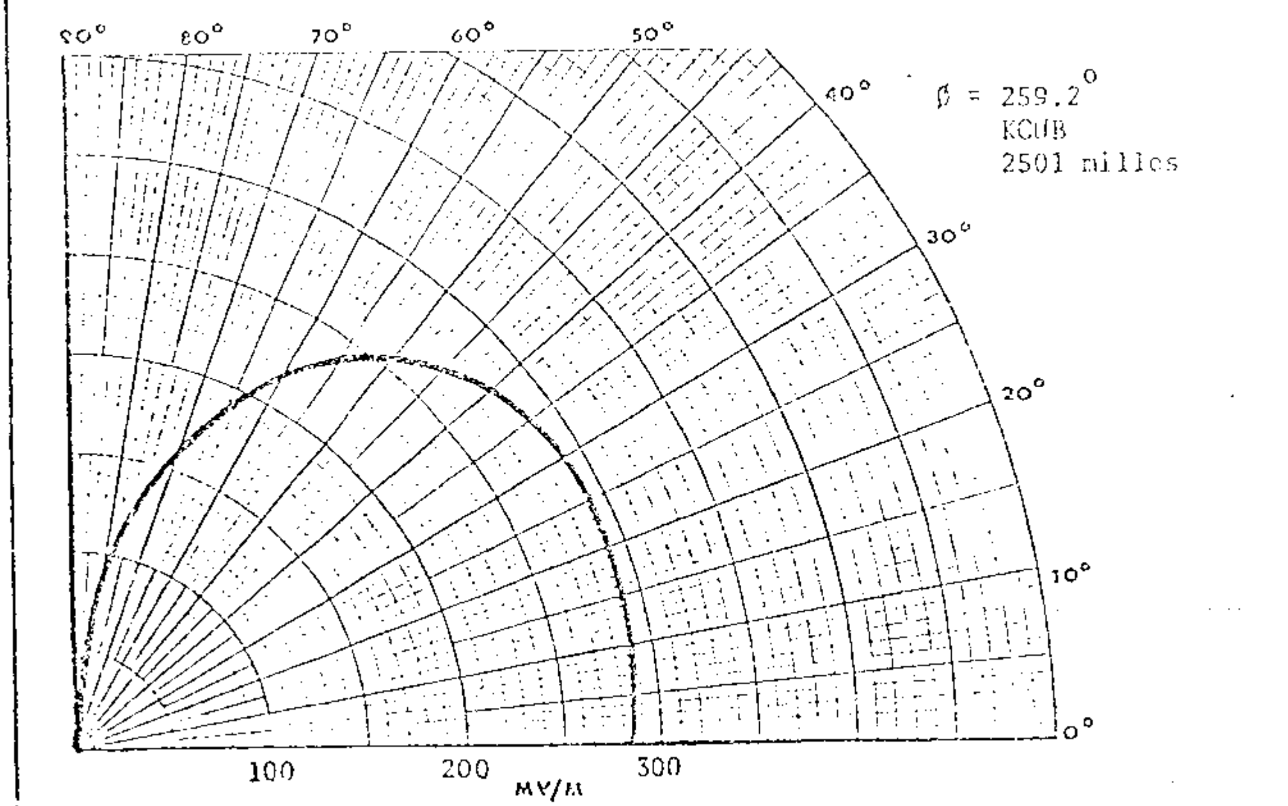
SECTIONS VERTICALES

NOUVEAU POSTE AM - MATANE - QUE.

10 kw, DA-2, Classe III, 1290 kc

CHRM





SECTIONS VERTICALES

NOUVEAU POSTE AM - MATANE - QUE.

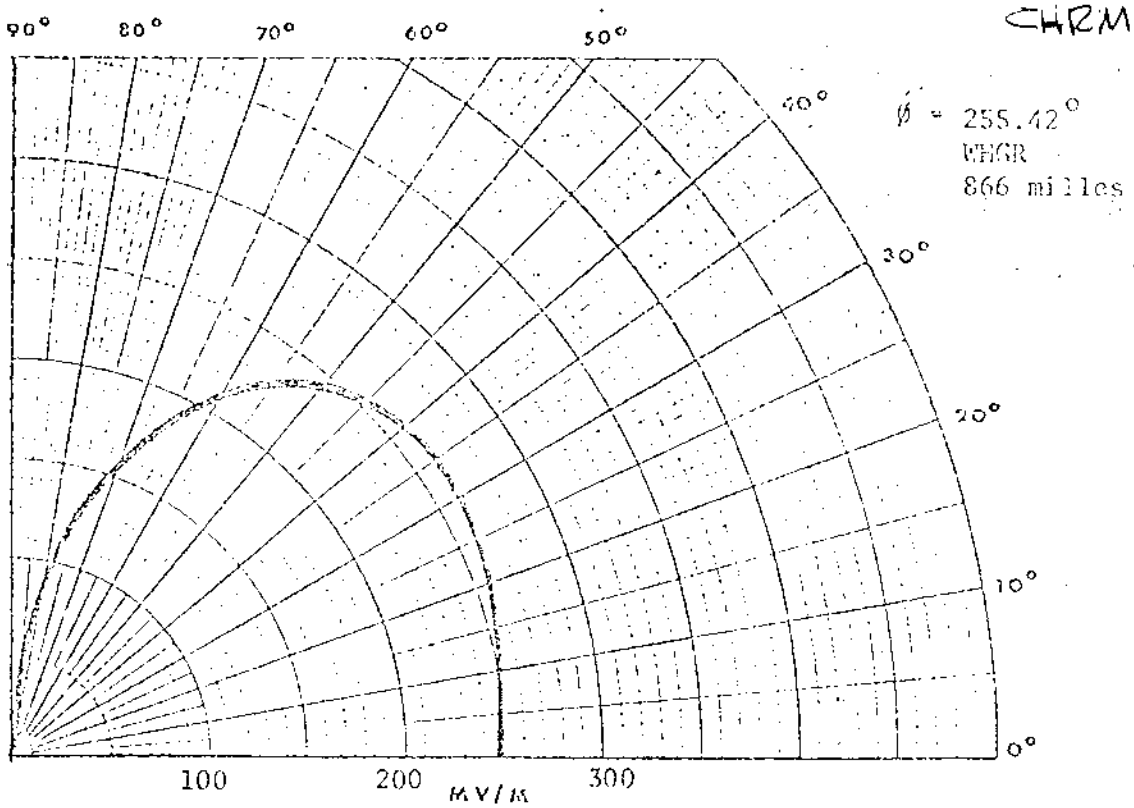
10 kw, DA-2, Classe III, 1290 kc

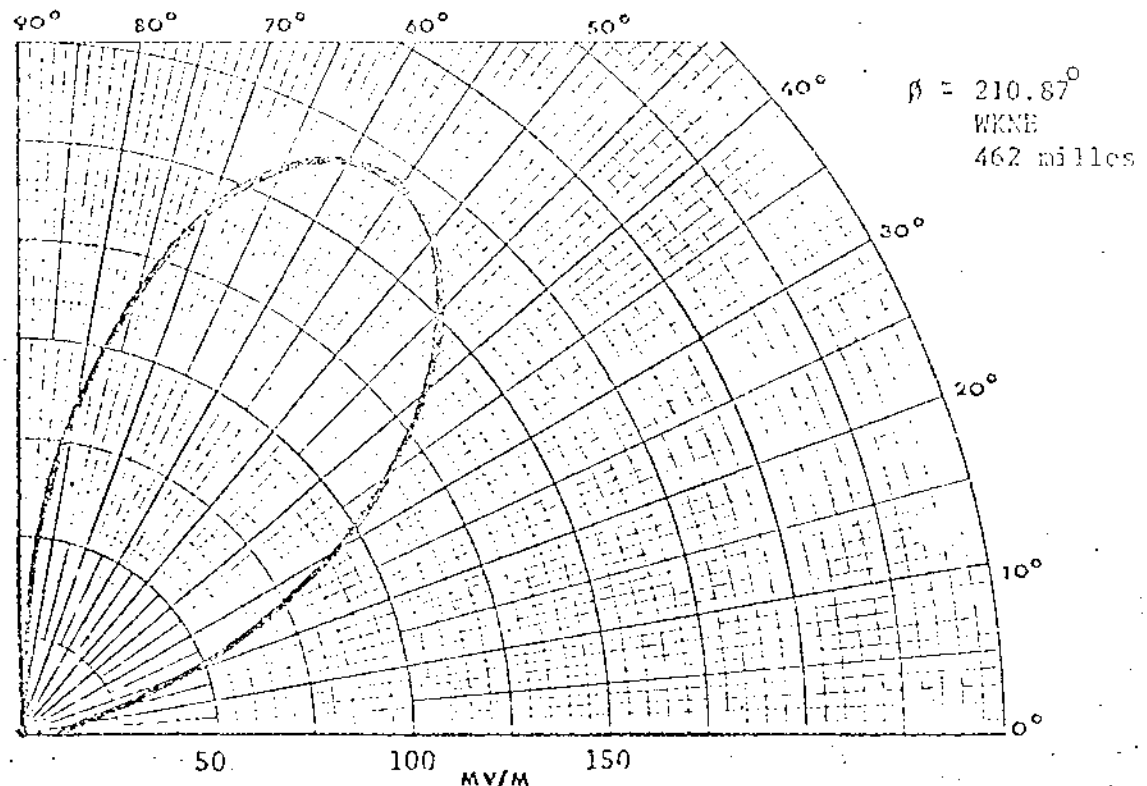
brunelle, lambert & associés inc.
Conseillers en Communications

FIGURE NO 9

CGBK - KCUB

Le 19 octobre 1973





SECTIONS VERTICALES

NOUVEAU POSTE AM - MATANE - QUE.

10 kw, DA-2, Classe III, 1290 kc

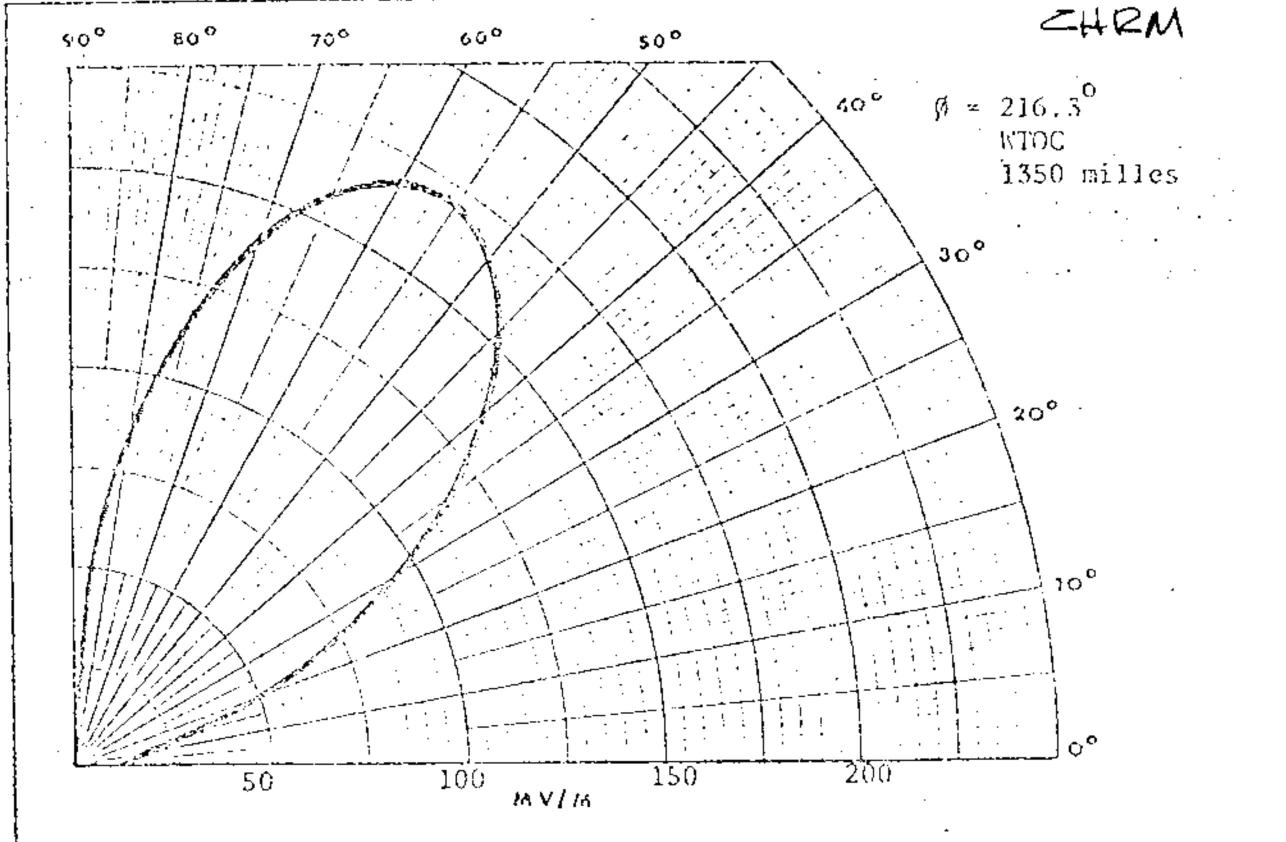
brunelle, lambert & associés inc.
Conseillers en Communications

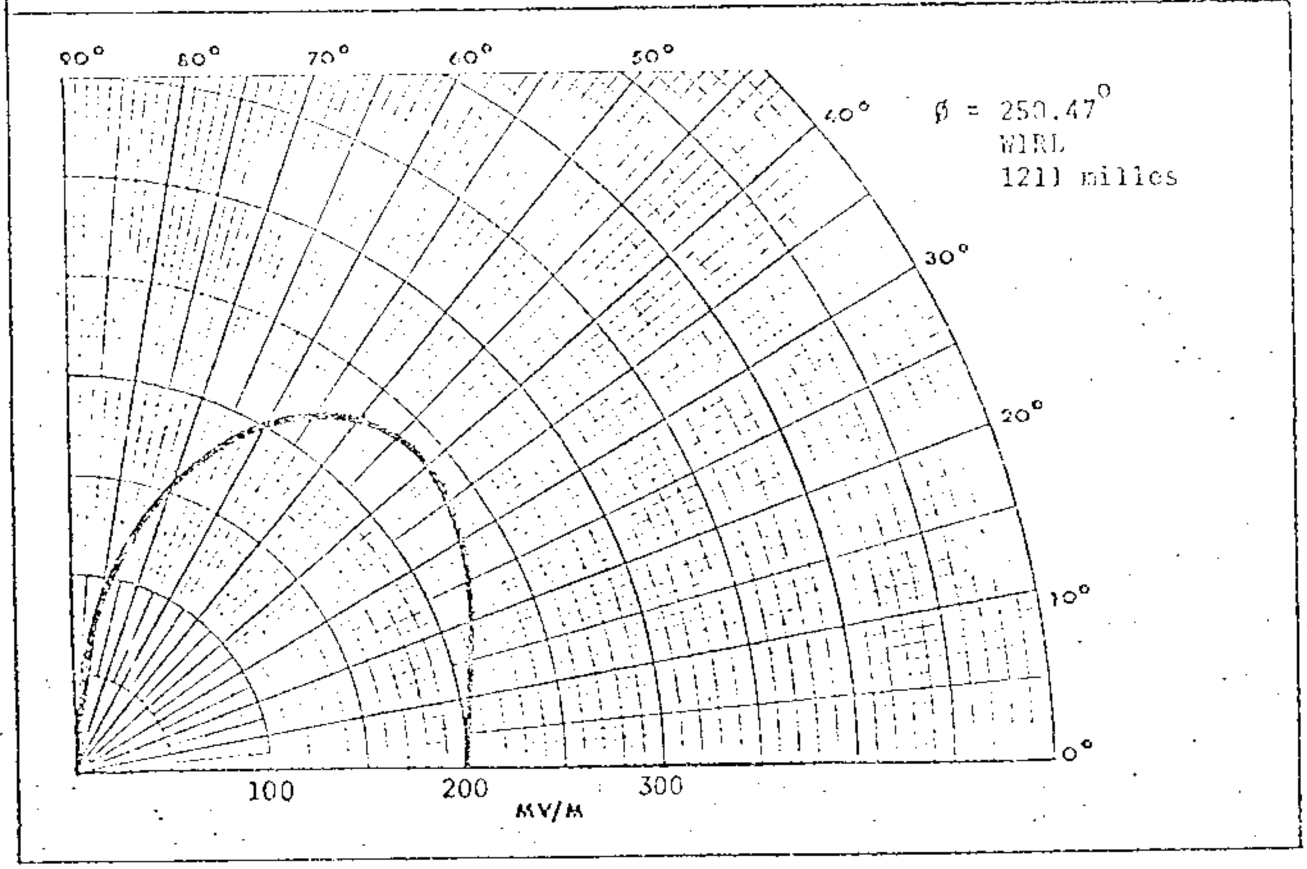
Le 19 octobre 1973

FIGURE NO 10

WHGR - WKNE

CHRM





SECTIONS VERTICALES

NOUVEAU POSTE AM - MATANE - QUE.

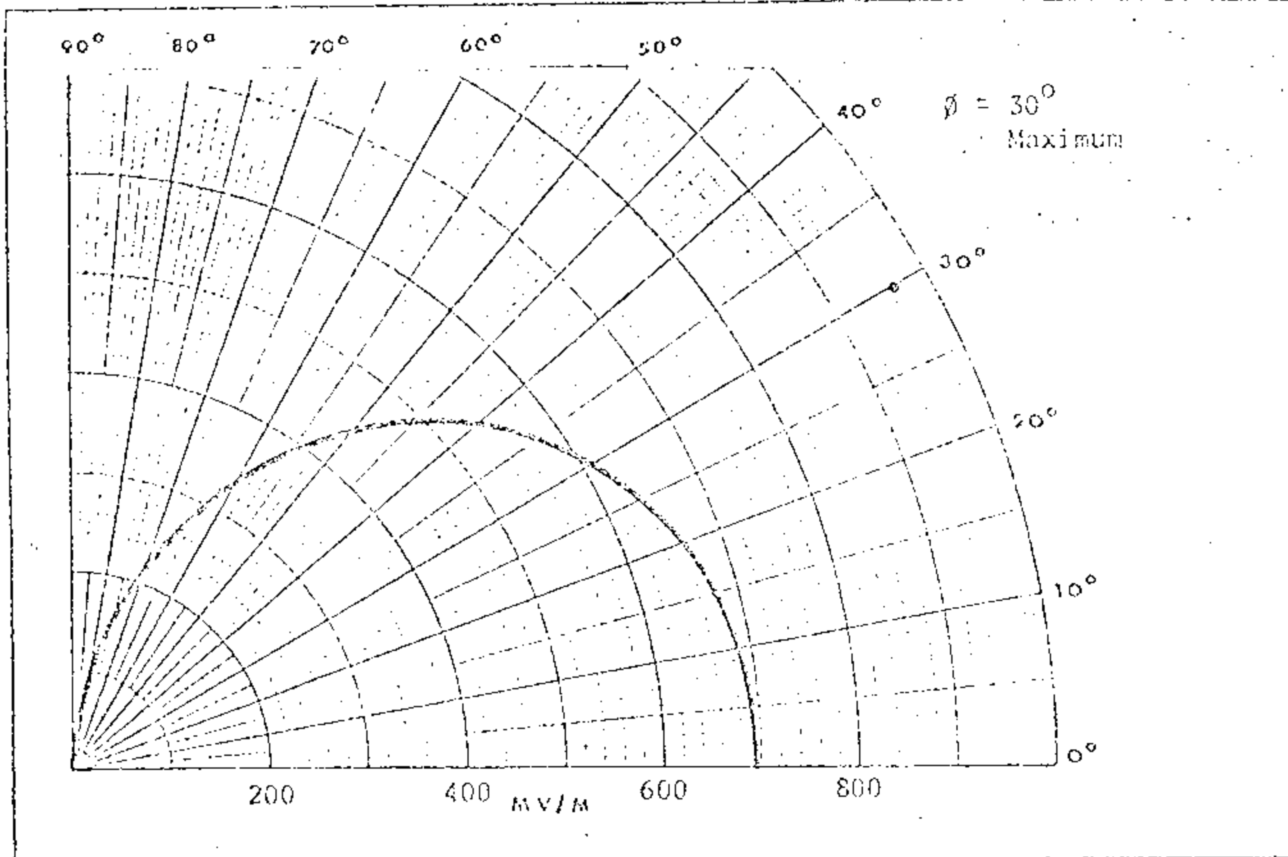
10 kw, DA-2, Classe III, 1290 kc

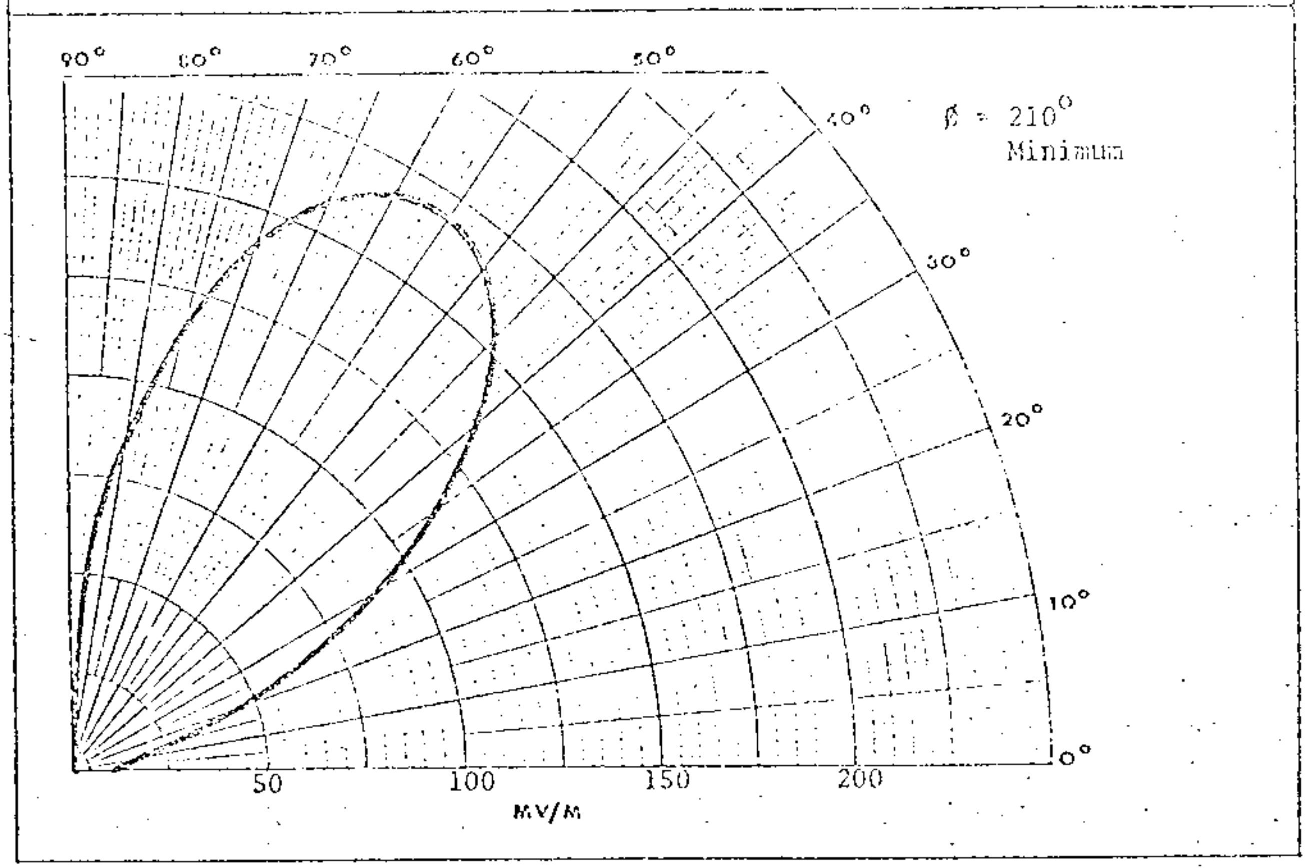
brunelle, lambert & associés inc.
Conseillers en Communications

FIGURE NO 11

WTOC - WIRL

Le 19 octobre 1973





SECTIONS VERTICALES

NOUVEAU POSTE AM - MATANE - QUE.

10 kw, DA-2, Classe III, 1290 kc

FIGURE NO 15

Minimum et Maximum

CJBK

DESCRIPTION SHEET

Revised May, 1976

Station:	CJBK	Main Studios:	London, Ont.
Frequency:	1290 kHz	Power:	10 kW
Time:	Unlimited	Class:	III
Notification List No.:	364	Date:	June 27, 1977

Geographic Location: North Lat. 42°52'05"
West Long. 81°13'58"

Antenna System:

Mode of Operation: DA-2
Elements: Nine uniform cross-section, guyed steel towers, base insulated and series fed. Tower height 190.5 ft (90 degrees)

Tower Parameters:

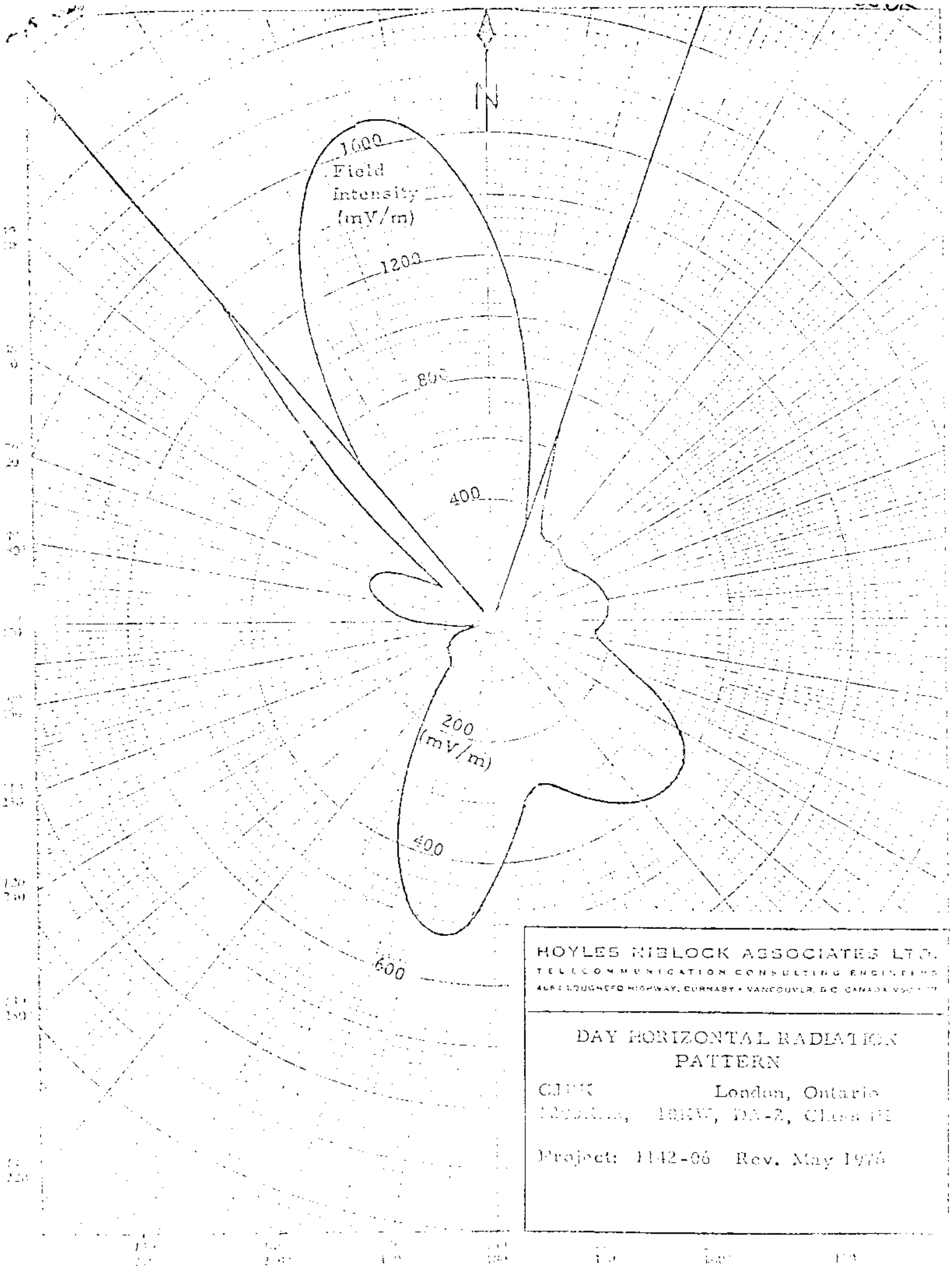
Day Pattern

Tower	Spacing (deg.)	Azimuth (deg.)	Ratio	Phase (deg.)
1	ref.	ref.	1.080	138.7
2	80	336.0	1.110	9.4
3	160.0	336.0	.667	-160.5
4	210.0	76.0	1.189	132.5
5	211.3	54.1	1.210	0
6	240.9	35.1	.757	-165.1
7	420.0	76.0	.710	142.0
8	413.7	65.0	.920	-34.9
9	422.7	54.1	.249	101.0

Night Pattern
(same as presently notified)

Ground System: The ground system consists of 120 No. 10 copper wire radials approximately 300' long, around each tower base. These are joined to radials of adjacent towers at the common intersections.

Predicted Effective Field: 570 mV/m for 10 kW
(180 mV/m for 1 kW)


N
1600
Field
Intensity
(mV/m)
1200
800
400
200
(mV/m)
400
600
HOYLES NIBLOCK ASSOCIATES LTD.
TELECOMMUNICATION CONSULTING ENGINEERS
DAY HORIZONTAL RADIATION PATTERN
London, Ontario
Project: 1142-06 Rev. May

#208

CJBK CJOE

RECEIVED
F.C.C.
MAIL & FILES

ANTENNA DESCRIPTION

STATION: CJOE

MAIN STUDIO: London,Ontario

POWER: 10 KW Day and Night

FREQUENCY: 1290 Kc/s, Class 111
DA-1

LOCATION: Latitude: N42° 52' 8"
Longitude: W81° 13' 58"

NOTIFICATION LIST NO: 208

DATE: February 25, 1966

ANTENNA: Nine elements, guyed, uniform cross section, base insulated, series fed, no top loading.
Height of 190.5' (90°) plus 3' for tower bases.

TOWERS: Tower parameters as per attached diagram.

GROUND SYSTEM: 120 radials, 300' long around each tower and joined at intersections. Wire to be #10 AWG, soft copper.

PREDICTED EFFECTIVE FIELD

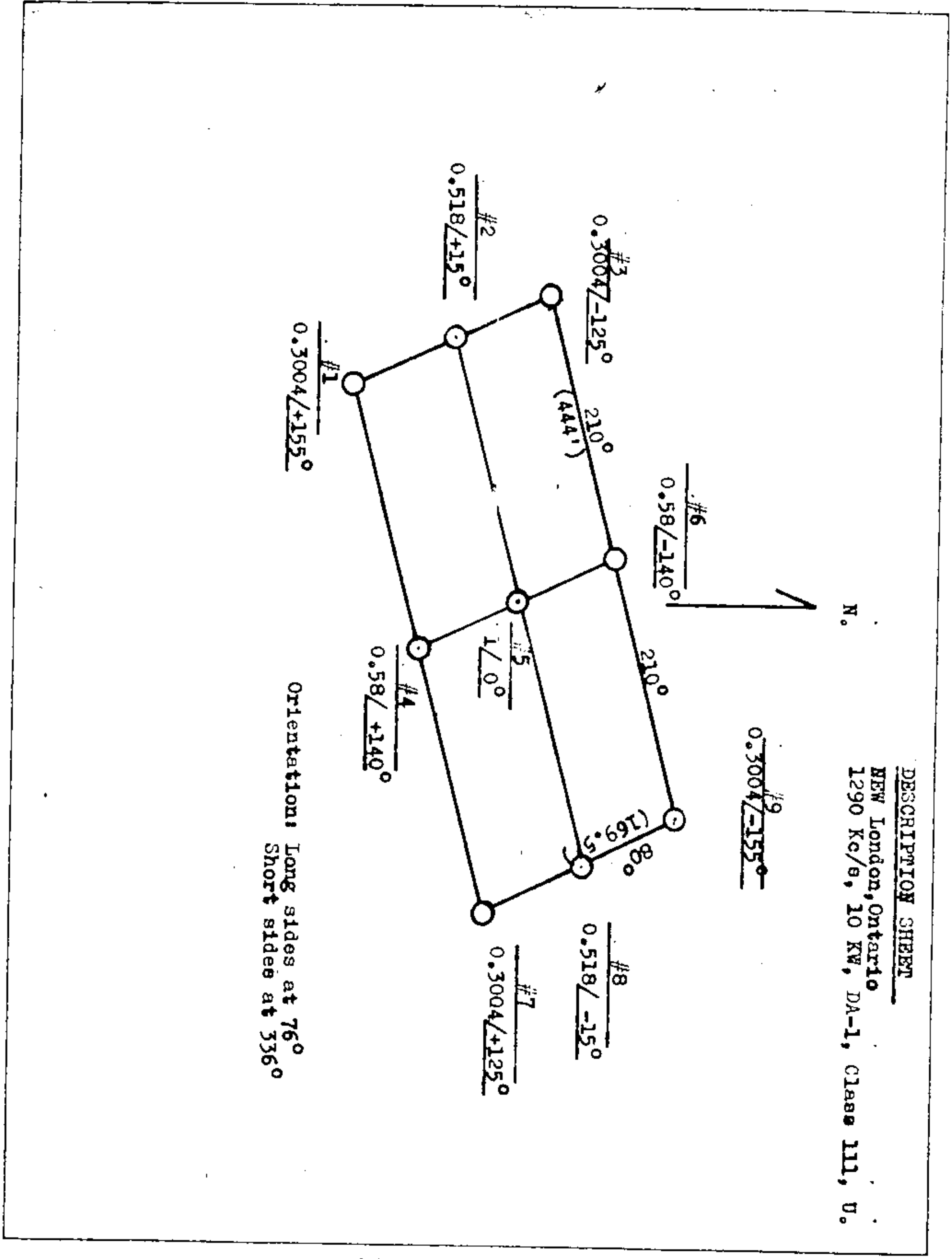
569 MV/M for 10 KW
(180 MV/M for 1 KW)

ORIENTATION: The towers to be arranged as shown by the diagram on attached sheet.

#208

CJBK

~~CJOE~~



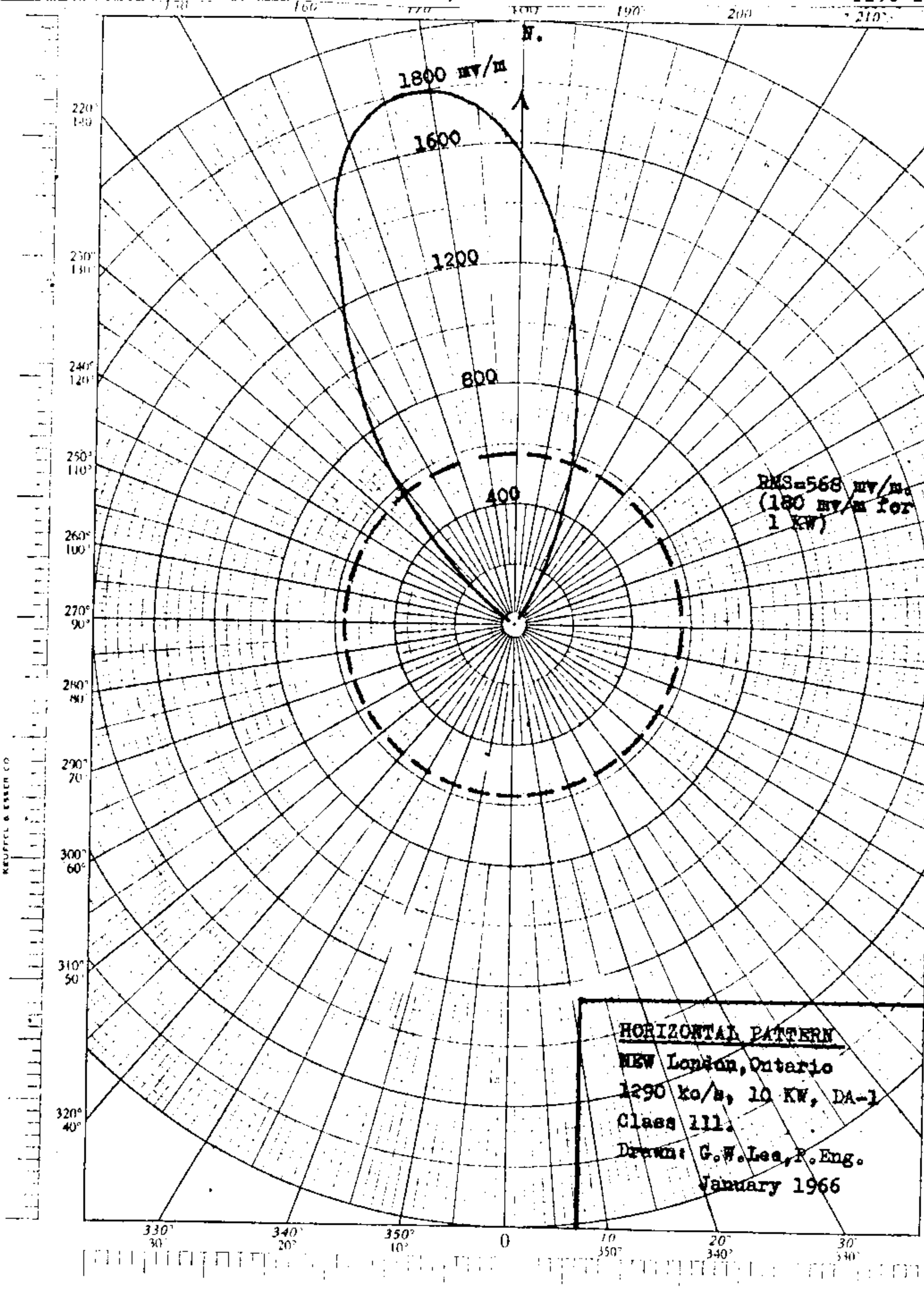
#208

CJOE BK

Proposed Day & Night
(4-28-66ct)

Station CJOE
London, Ontario

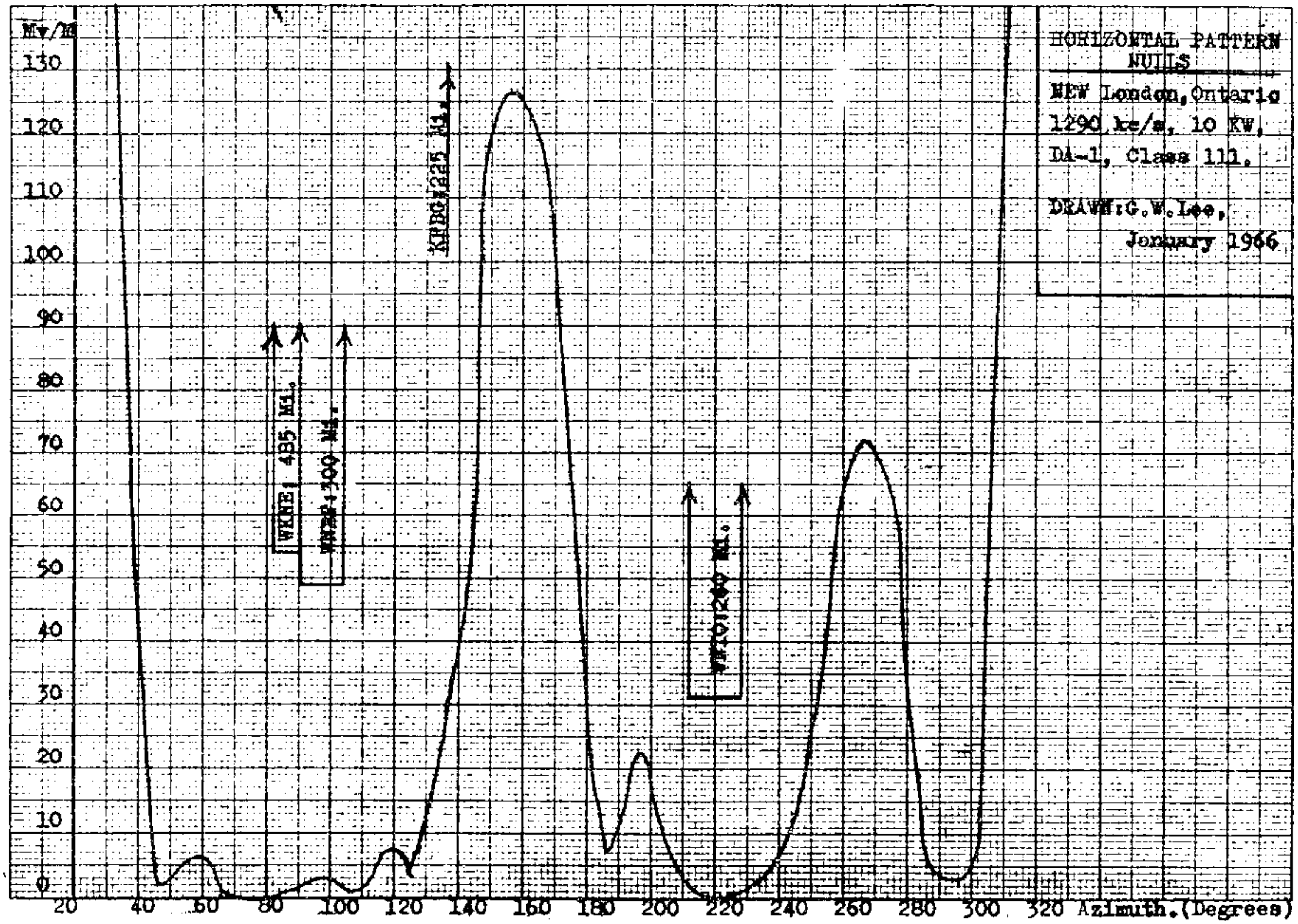
10kw,DA-1,U,Class 111
1290 kc



#108

CJBK CJOE

Proposed Day & Night Nulls Station CJOE 10kw, DA-1, U, Class 111
(4-28-66ct) London, Ontario 1290 kc



K+E 10 X 10 TO ½ INCH 46 1322
KEUFFEL & ESSER CO.

NEW
1290kHz

DIRECTIONAL ANTENNA DESCRIPTION SHEET

Station: NEW

Main Studio: Lynchburg, Tennessee

Frequency: 1290 kHz

Power: 1kw Day

Notification List No. 1788

Date: August 22, 1980 Class: III

GEOGRAPHICAL LOCATION OF THE CENTER OF THE ANTENNA SYSTEM:

North Latitude: 35° 17' 16"
West Longitude: 86° 23' 28"

ANTENNA CHARACTERISTICS

Authorized for Daytime operation. (DA-D)
Number of elements: 3
Type of elements: Series excited, uniform cross-section, guyed, vertical steel towers.

TOWER:	W(#1)	C(#2)	E(#3)
HEIGHT ABOVE INSULATORS:	190'	190'	190' (89.6°)
DAY PHASING:	0°	-80.8°	-164.1°
DAY FIELD RATIO:	1.0	1.4743	0.5603

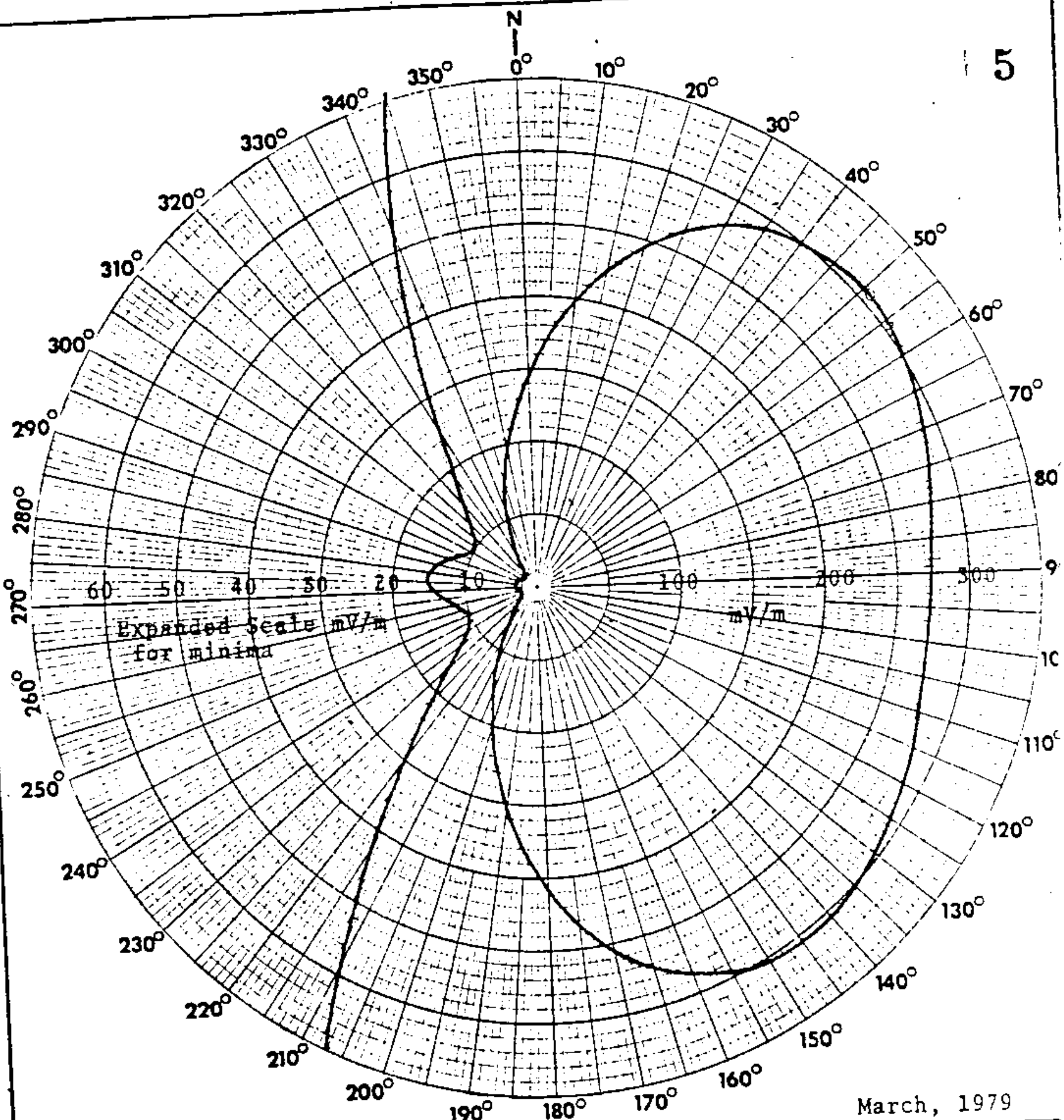
SPACING AND ORIENTATION: Adjacent towers in a row are spaced 254.3' (120°) on a line bearing 96° true.

GROUND SYSTEM: 120 - 190(ave)' equally spaced copper radials plus a 24' square ground screen about each tower. Radials are shortened and bonded to transverse straps along intersections between towers. Centers of system are bonded together.

PREDICTED EFFECTIVE FIELDS AT RATED POWER:

THEORETICAL RMS	THEORETICAL RSS	STANDARD RMS
191.36 mv/m	178.50 mv/m	201.0 mv/m

NEW
1290 kHz



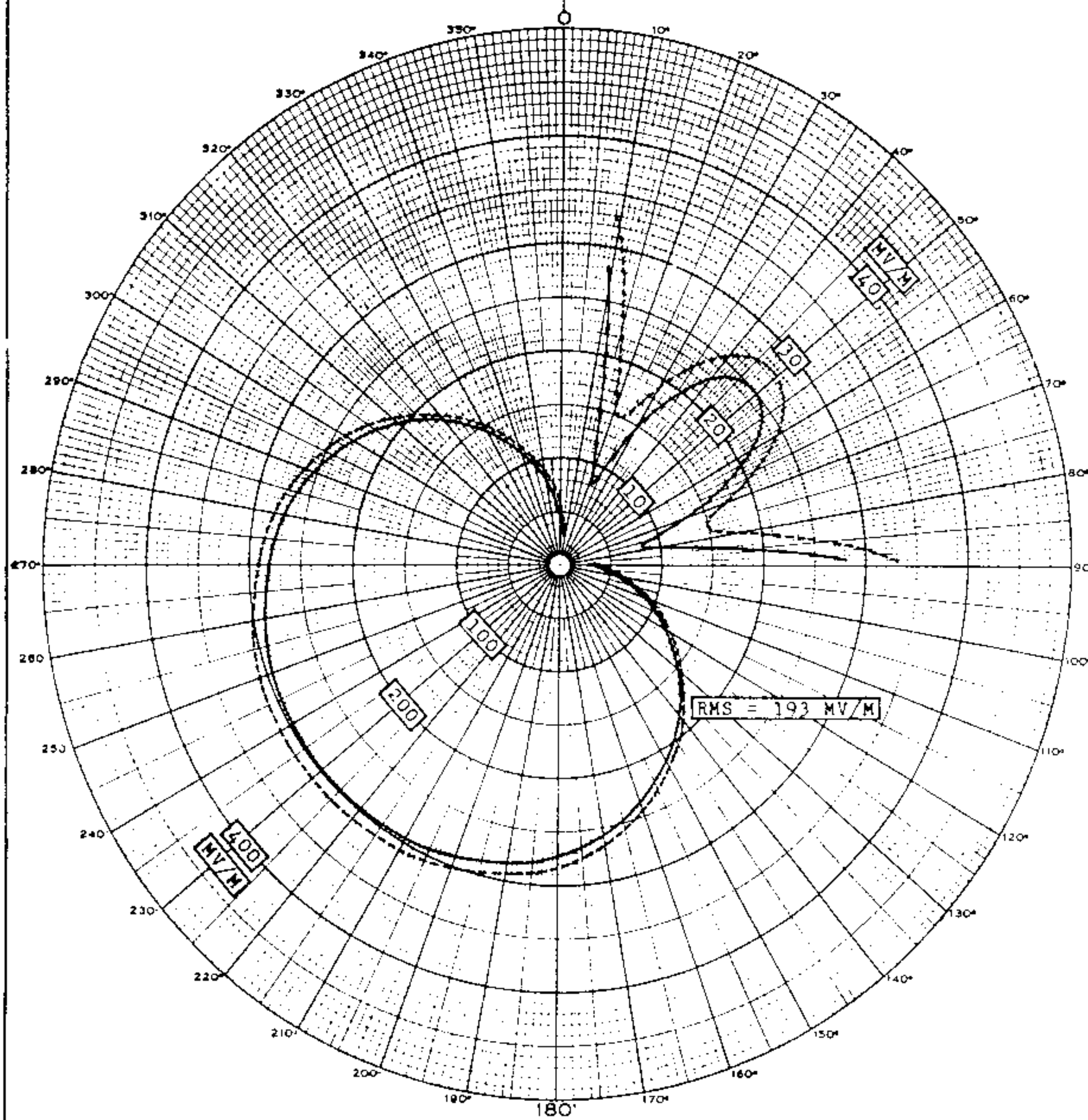
March, 1979

STANDARD HORIZONTAL PLANE PATTERN		EXHIBIT E-1 FIGURE 2
1390 kHz. 1 kW DA-D N. Lat. 35°17'16" W. Lng. 86°23'28" Theo. RMS 191.36 Theo. RSS 178.50 Theo. K_L 95.58 FCC 'Q' 6.000 Std. RMS 201.0	#1 #2 #3 → 96° 1/0° 1.4743 /-80.8° 0.5603 /-164.1° S=120°=254.3' G=89.6°=190.0'	LYNCHBURG RADIO COMPANY PROPOSED DAYTIME STANDARD PATTER 1390 kHz. - LYNCHBURG, TENNESSEE JAMES H. HAYES Franklin, Tennessee RADIO TECHNICAL CONSULTANT

PORT ANGELES, WASH.
KAPY

12-1-60
granted CP
new station

PROPOSED DAY (8-12-60g)	New; Port Angeles Radio, Inc. Port Angeles, Washington	1kw, DA-D,D 1290 KC



MEOV — - - -

SITE COORDINATES
48° 05' 55" N
123° 24' 21" W

PROPOSED HORIZONTAL PLANE RADIATION PATTERN

S=80°=169.5' G=94.5°=200' 49° True (2) .95/109° S (1) 1/0°	PORT ANGELES RADIO, INC. PORT ANGELES, WASHINGTON Jules Cohen Consulting Electronic Engineer	PROPOSED OPERATION 1290 KC 1 KW D DA June, 1960

FCC File No. BP-12521
Accepted 8-4-60 (Amended)

Port Angeles Radio, Inc.
Port Angeles, Washington 1290 KC

KAPY

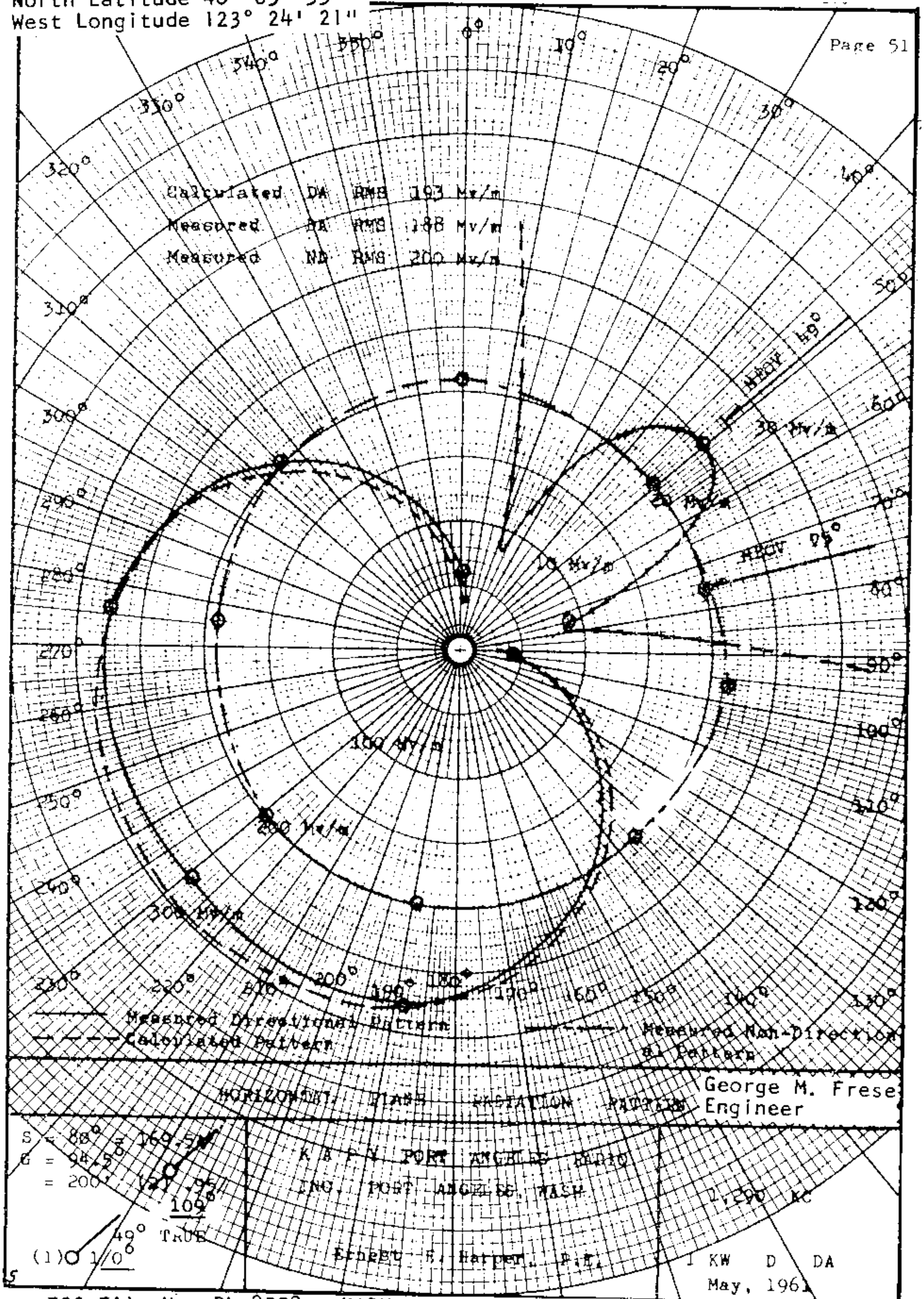
1-23-61 granted L for new station

MEASURED DAY (8-22-61ct)

KAPY
Port Angeles, Washington

1kw, DA-D,D
1290 KC

North Latitude 48° 05' 55"
West Longitude 123° 24' 21"



FCC File No. BL-8558
Accepted 8-11-61

KAPY
Port Angeles, Washington

1290 KC

KAZA ~~KPER~~

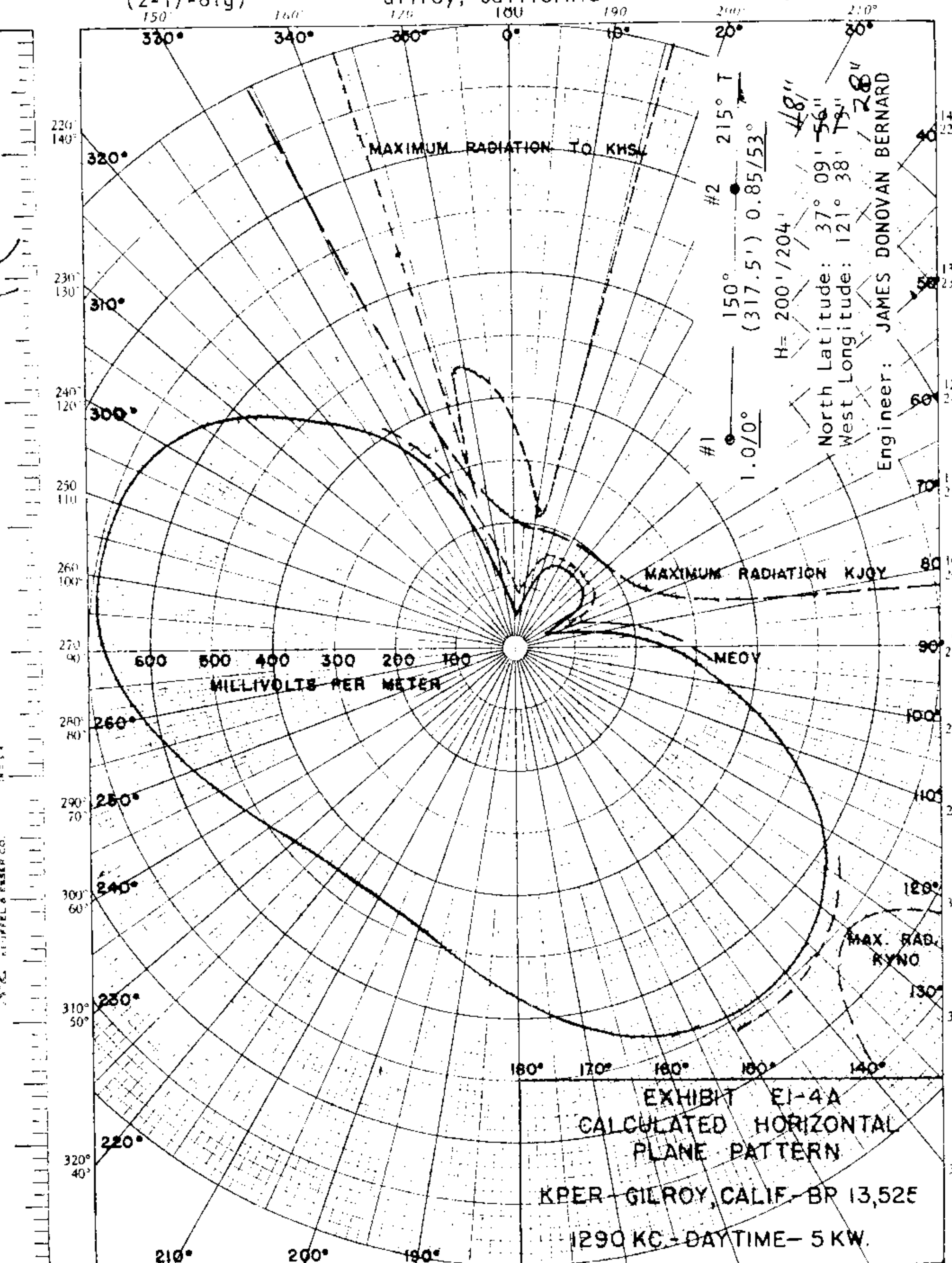
PROPOSED DAY
(2-17-61g)

Station KPER
Gilroy, California

5kw, DA-D,U
1290 KC

10-4-61
granted CP for
1A-D

over



FCC File No. BP-13525
Accepted 2-9-61

KPER
Gilroy, California

1290 KC

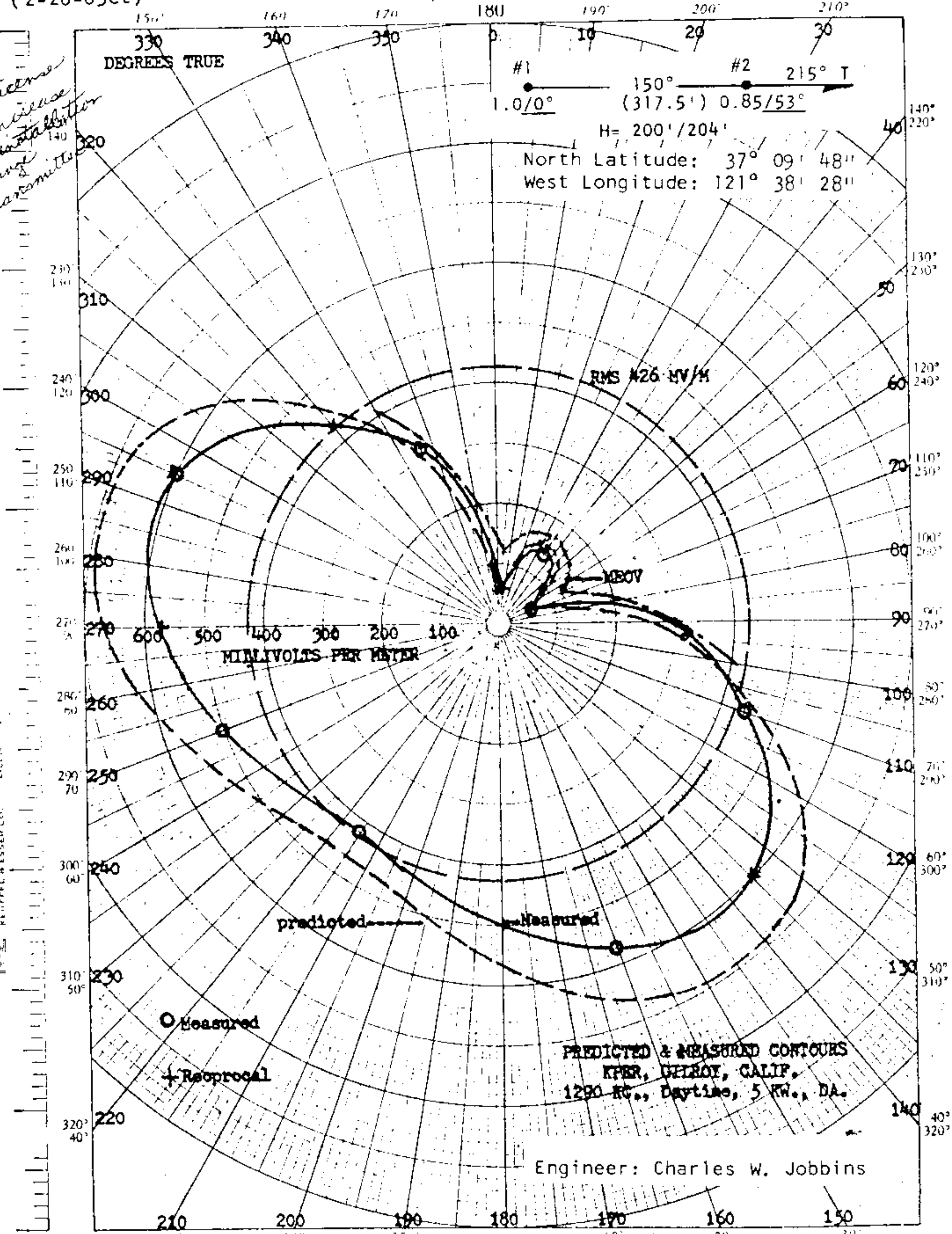
KAZA ~~KPER~~

Measured Day
(2-26-63ct)

Station KPER
Gilroy, California

5kw,DA-D,D
1290 kc

5-2-63 granted license covering increase in power, installation DA-D, + change antenna-transmitter location.

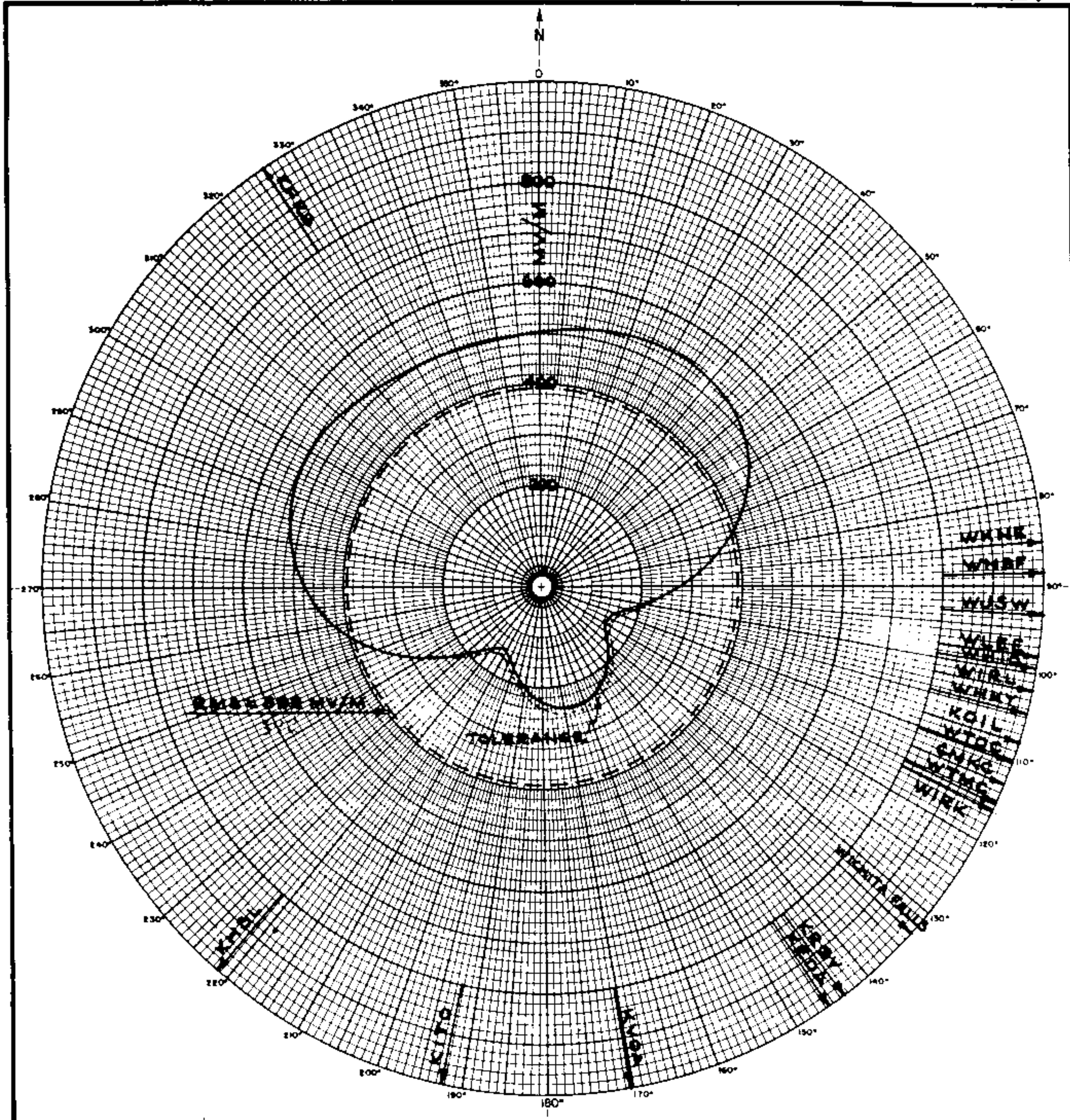


FCC File No.BL-9732
Accepted 2-5-63

Station KPER
Gilroy, California

1290 kc

KGVO
1290



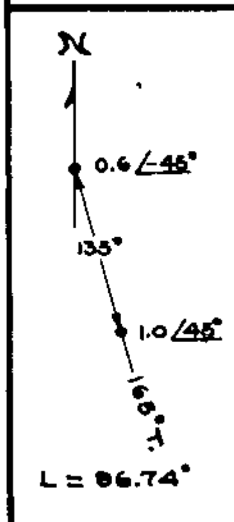


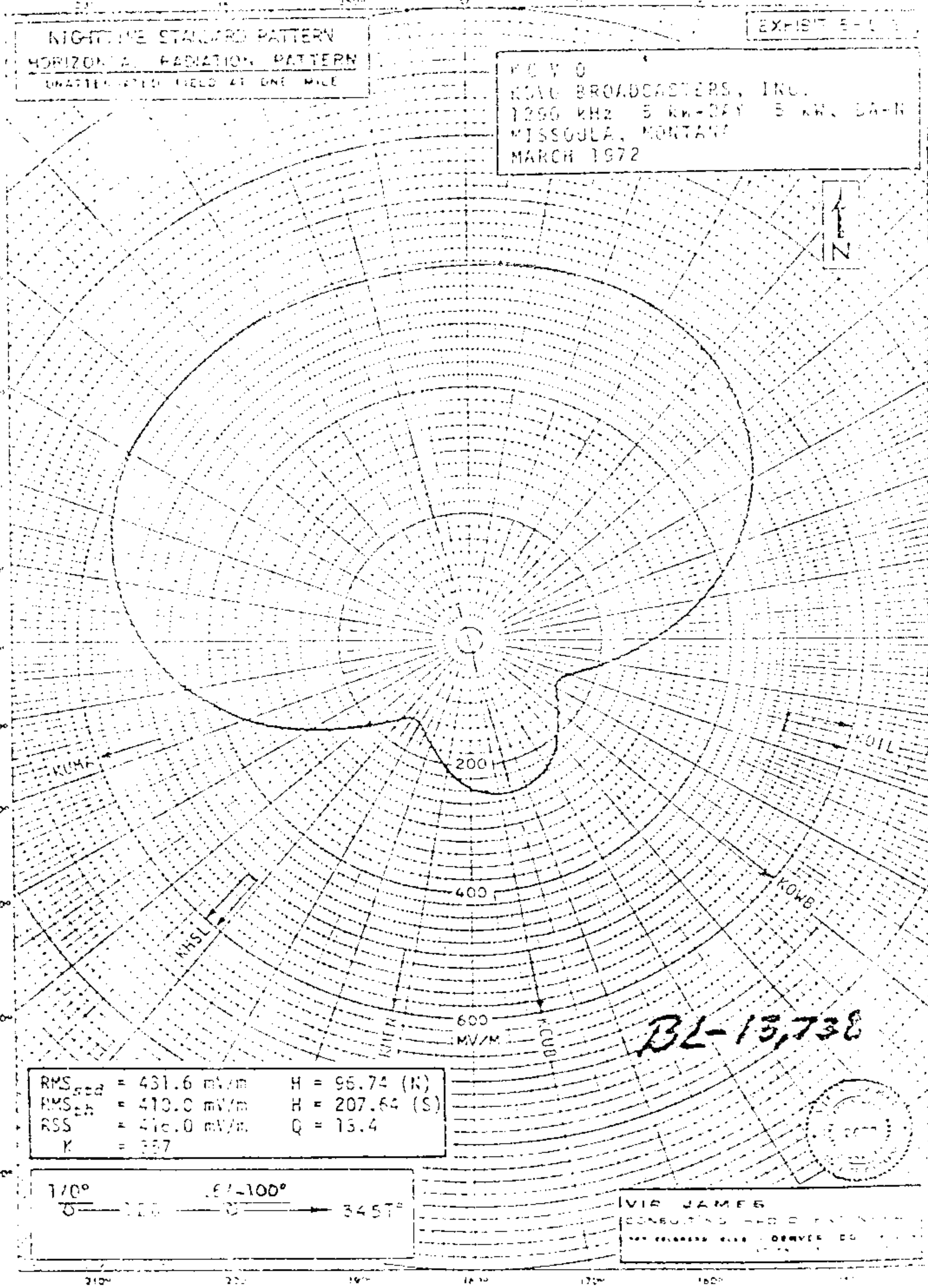
EXHIBIT IV

PROPOSED HORIZONTAL RADIATION PATTERN

KGVO
MISSOULA, MONTANA
1290 KC/S   5KW-U; DA-1   FEB. 1948

PATTERN NO. 480215
SUPERSEDES
APP.

KGVO

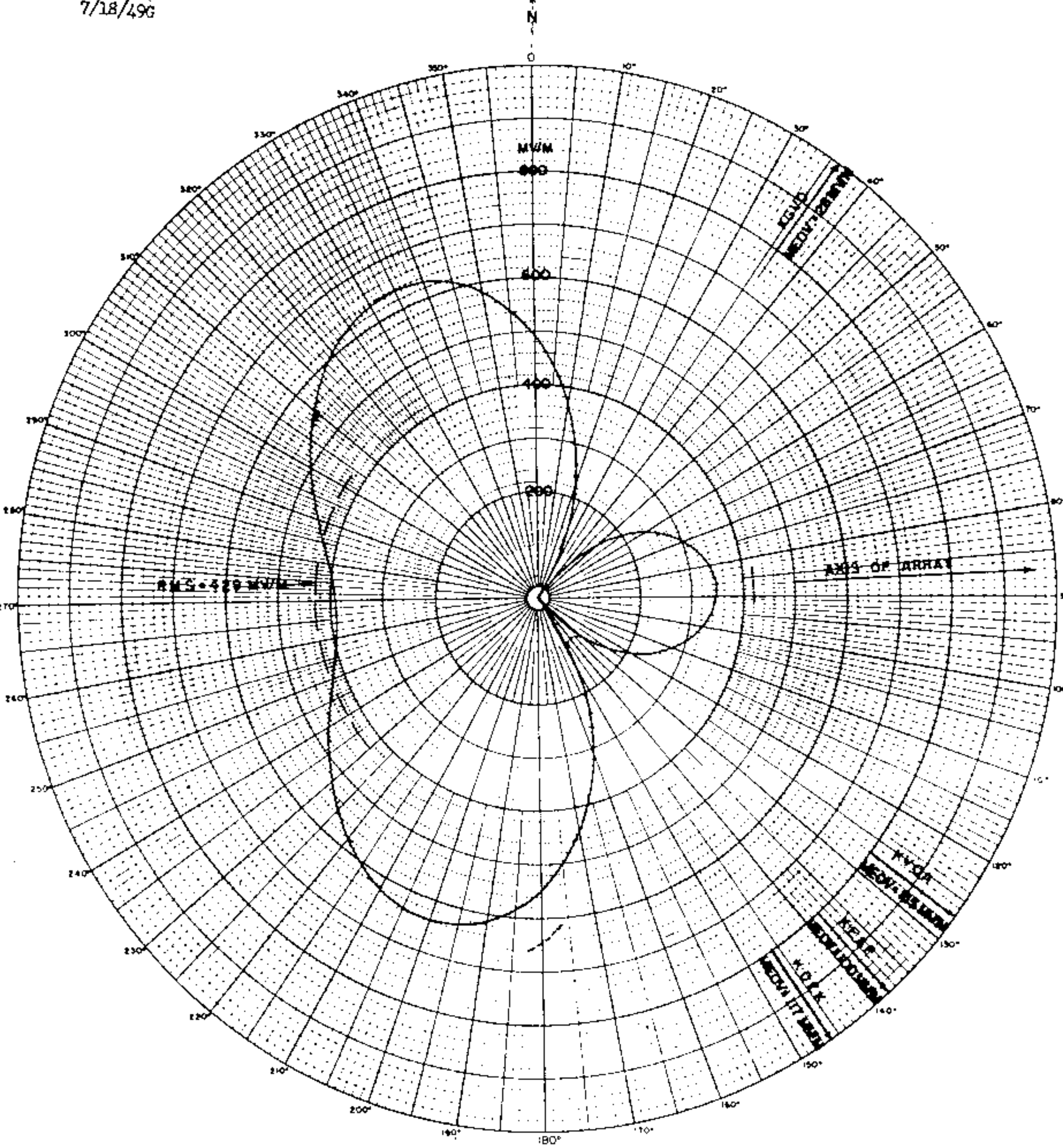


BL-13,738

KHSL

PROPOSED NIGHT KHSL, CHICO, CAL. 7-14-49 5kw, DAN 1290 kc

7/18/49G



1 o—— 175° ——o 2 → 87° T.

G_1 = 117° PLUS TOP LOADING = 30°

G_2 = 145°

LATITUDE 39° 44' 00" N
LONGITUDE 121° 47' 10" W

ANTENNA NUMBER	AZIMUTH DEG	SPACING DEG	PHASING DEG	FIELD RATIO	MV/M FOR 1 KW	HEIGHT DEG
1	—	—	0	1.0	196	147
2	87	175	70	1.0	196	145

CALCULATED HORIZONTAL PLANE PATTERN
PROPOSED KHSL
CHICO, CALIFORNIA
1290 KC. 5 KW. U, DA-N

KEAR AND KENNEDY
CONSULTING ENGINEERS
WASHINGTON, D. C.

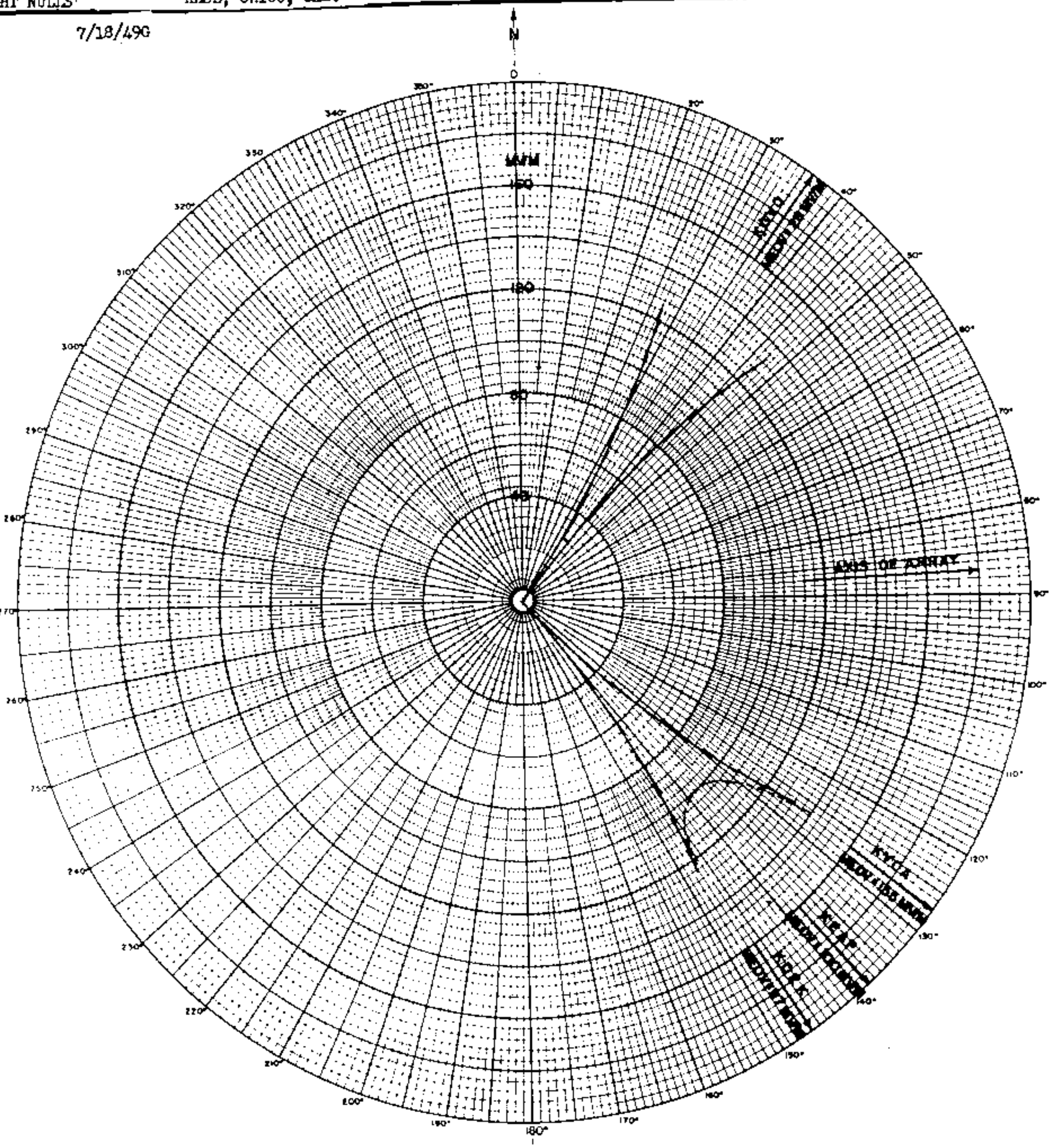
490615

KHSL, Chico, Cal. 1290 kc

PROPOSED
NIGHT NULLS KHSL, CHICO, CAL. 7-14-49 5kw, DAN 1290 kc

KHSL

7/18/49G



------- • MEOV

LATITUDE	
LONGITUDE	

ANTENNA NUMBER	AZIMUTH DEG	SPACING DEG	PHASING DEG	FIELD RATIO	MV/M FOR 1 KW	HEIGHT DEG

EXPANDED SCALE
CALCULATED HORIZONTAL
PLANE PATTERN
PROPOSED KHSL
CHICO, CALIFORNIA
1290 KC. 5 KW U, DA-N

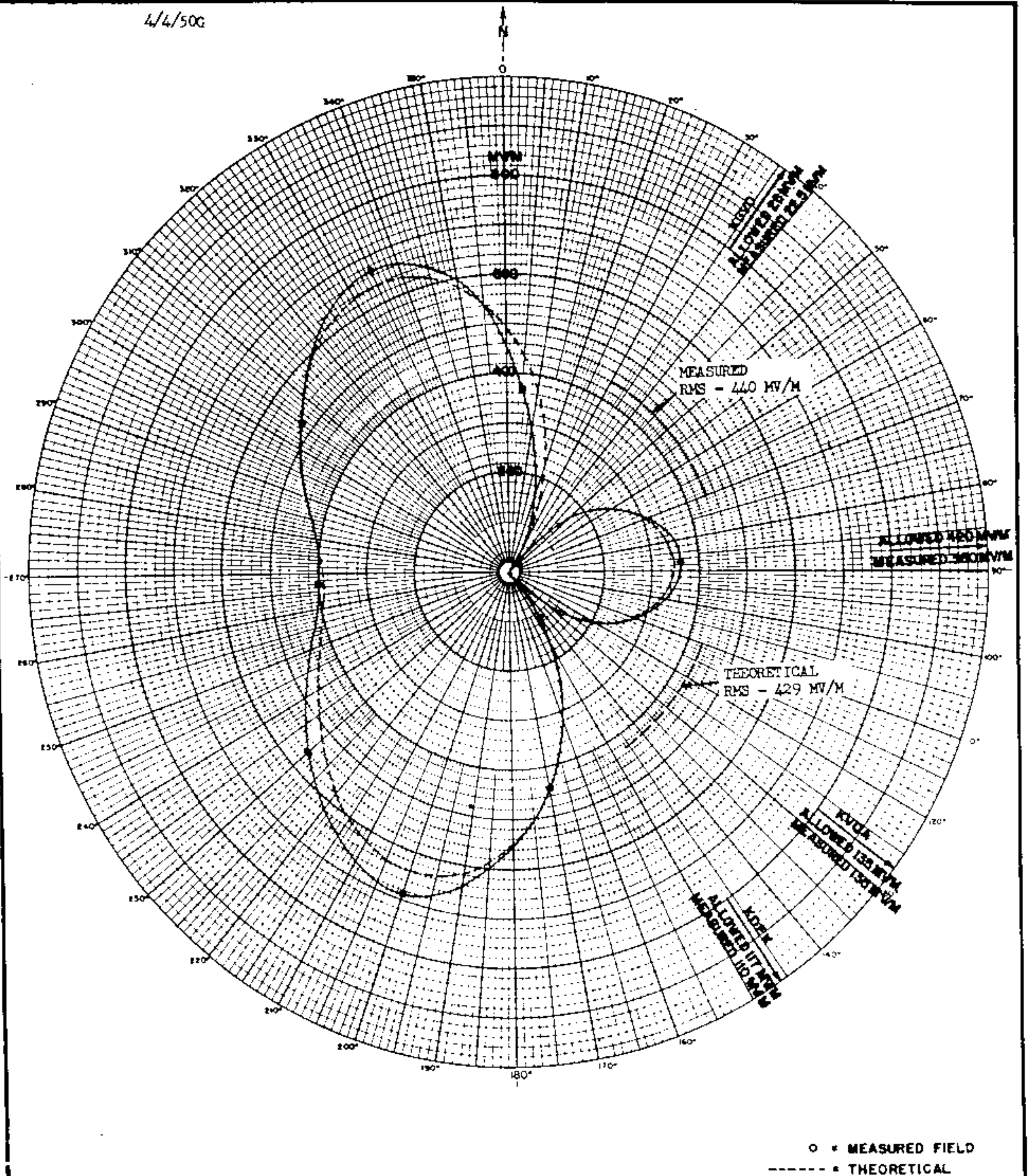
KEAR AND KENNEDY
CONSULTING ENGINEERS
WASHINGTON, D. C.

490615

KHSL, Chico, Cal. 1290 kc

MEASURED NIGHT KHSL, CHICO, CAL. 5kw, DAN 1290 kc

4/4/50G



(1) (2)
o—— 175° ——o——→ 87° T.

G_1 = 117° PLUS TOP LOADING = 30°
G_2 = 145°

LATITUDE 39° 44' 00"
LONGITUDE 121° 47' 10"

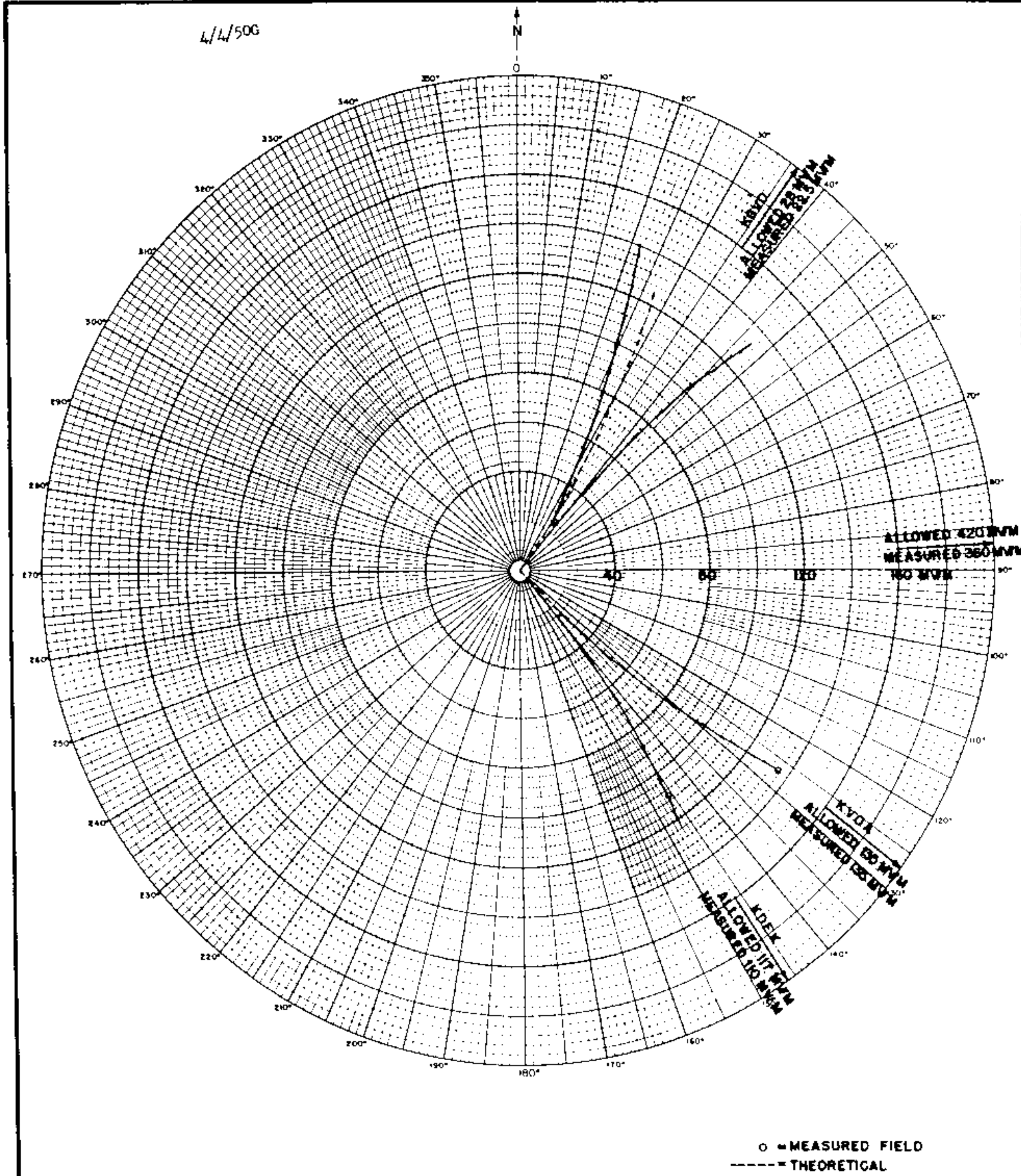
ANTENNA NUMBER	AZIMUTH DEG	SPACING DEG	PHASING DEG	FIELD RATIO	MV/M FOR 1 KW	HEIGHT DEG
1	—	—	0	1.0	196	147
2	87	175	70	1.0	196	145

MEASURED NIGHTTIME HORIZONTAL PLANE PATTERN FOR
KHSL
CHICO , CALIFORNIA
1290 KC. 5 KW. U, DA-N

KEAR AND KENNEDY
CONSULTING ENGINEERS
WASHINGTON, D. C.

500324

AMENDMENT RECD 3-28-50



LATITUDE
LONGITUDE

ANTENNA NUMBER	AZIMUTH DEG	SPACING DEG	PHASING DEG	FIELD RATIO	MV/M FOR 1 KW	HEIGHT DEG

EXPANDED SCALE
MEASURED NIGHTTIME
HORIZONTAL PLANE PATTERN
FOR
KHSL
CHICO, CALIFORNIA
1290 KC.   5 KW   U, DA-N

KEAR AND KENNEDY
CONSULTING ENGINEERS
WASHINGTON, D C

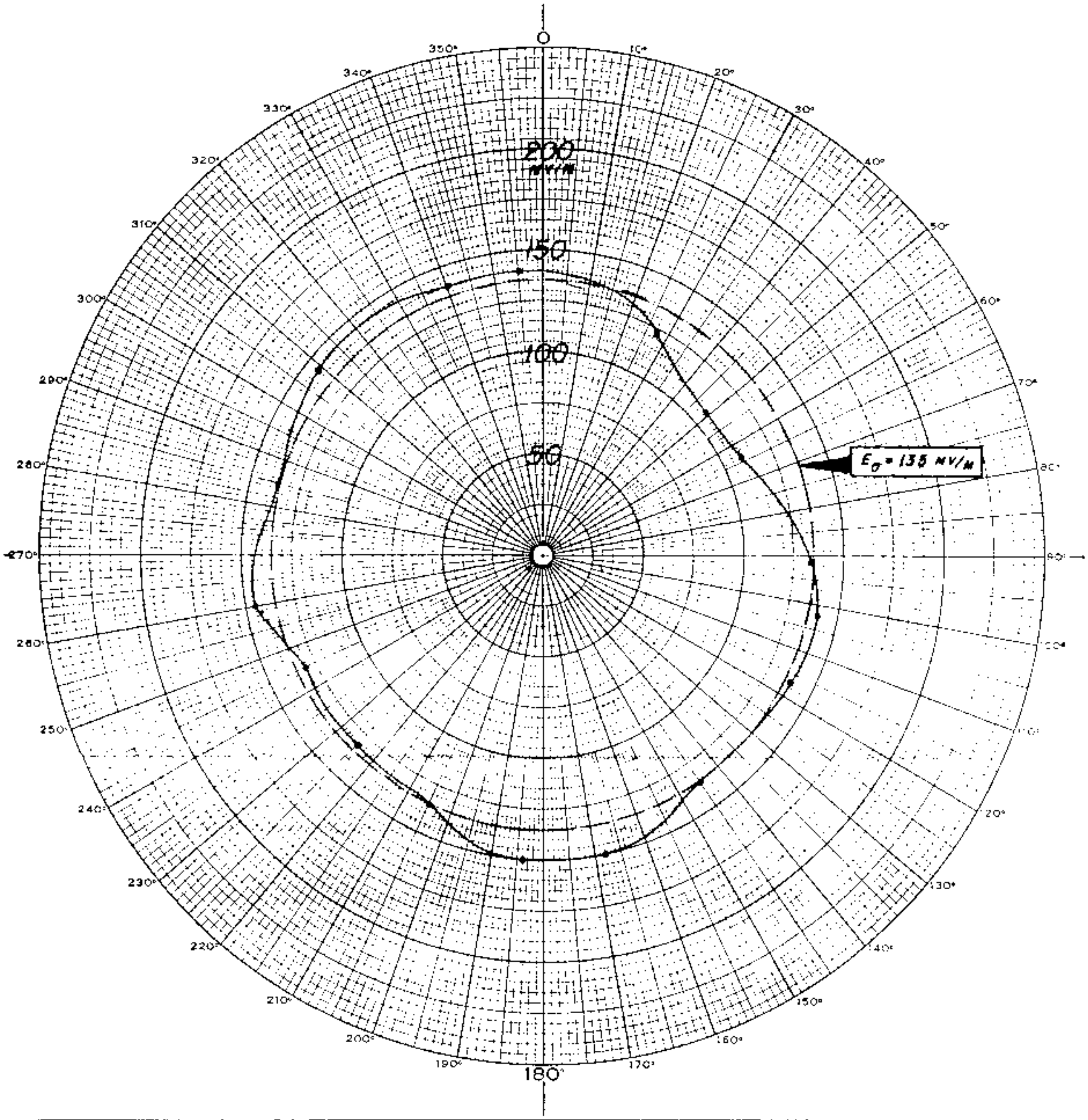
500324.

IND DIII

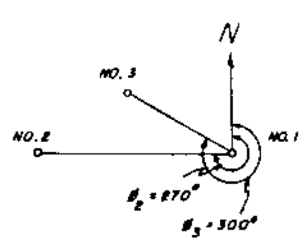
KJEF

.5-1KW L.S. DA-N

MEASURED KJEF, Jennings, Louisiana ~~500W, U, DA-N~~ 1290 kc
DAY (2/16/54G)



TOWER PLACEMENT SKETCH



PATTERN PARAMETERS

TOWER No	ELECTRICAL HEIGHT $G°$	TRUE TOWER ORIENTATION $\phi°$	SPACING $S°$	PHASING $\psi°$	HORIZONTAL FIELD mv/m E	FIELD RATIO F	ELEV ANGLE $\theta°$	ELEVATION RMS FIELD mv/m E_θ
1	80 *						0	135
2	80 *						10	
3	80 *						20	
4							30	
5							40	
6	* PLUS 30° TOP LOADING						50	
7							60	
8							70	
9							80	
10							E_r =	mv/m
	DAYTIME OPERATION [X]		NIGHTTIME OPERATION [ ]				Z =	kw

STATION DATA

CALL	KJEF
FREQUENCY	1290 kc
POWER	0.5 kw
TIME OF OPERATION	U
TYPE OF OPERATION	DA-N
DAYTIME TOWERS	No. 1
NIGHTTIME TOWERS	1, 2, 3
No. RADIALS PER TOWER	120
LENGTH OF RADIALS	90° 191 ft
GROUND SCREEN DIMENSION	
LAT	30° 12' 37.8"
LONG	92° 39' 55.5"
SUPERSEDES	
PATTERN No	53106

CARL E. SMITH
CONSULTING RADIO ENGINEERS
4900 Euclid Ave. Cleveland 3, Ohio

FIG. 19
DAYTIME NON-DIRECTIONAL PATTERN
JENNINGS BROADCASTING COMPANY, INC.
JENNINGS, LOUISIANA

KLEH

DIRECTIONAL ANTENNA DESCRIPTION SHEET

Station : KLEH Main Studio: Anamosa, Iowa

Frequency : 1290 KHz Power : ______ Night .5 kW Day

Notification: 1782 Date : October 26, 1979 Class: III

GEOGRAPHICAL LOCATION OF THE CENTER OF THE ANTENNA SYSTEM: North Latitude: 42 ° 06 ' 00 "
West Longitude: 91 ° 15 ' 22 "

ANTENNA CHARACTERISTICS

Authorized for Daytime operation. (DA-D)
Number of elements: 2
Type of elements: Series excited, uniform cross-section, guyed, vertical steel towers.

TOWER	:	SE(#1)	NW(#2)				
HEIGHT ABOVE INSULATORS	:	150'	150'	(70.8°)			
DAY PHASING	:	0°	-123.5°				
DAY FIELD RATIO:		1.0	0.7				

SPACING AND ORIENTATION: The towers in a row are spaced 127' (60°) on a line bearing 322° true.

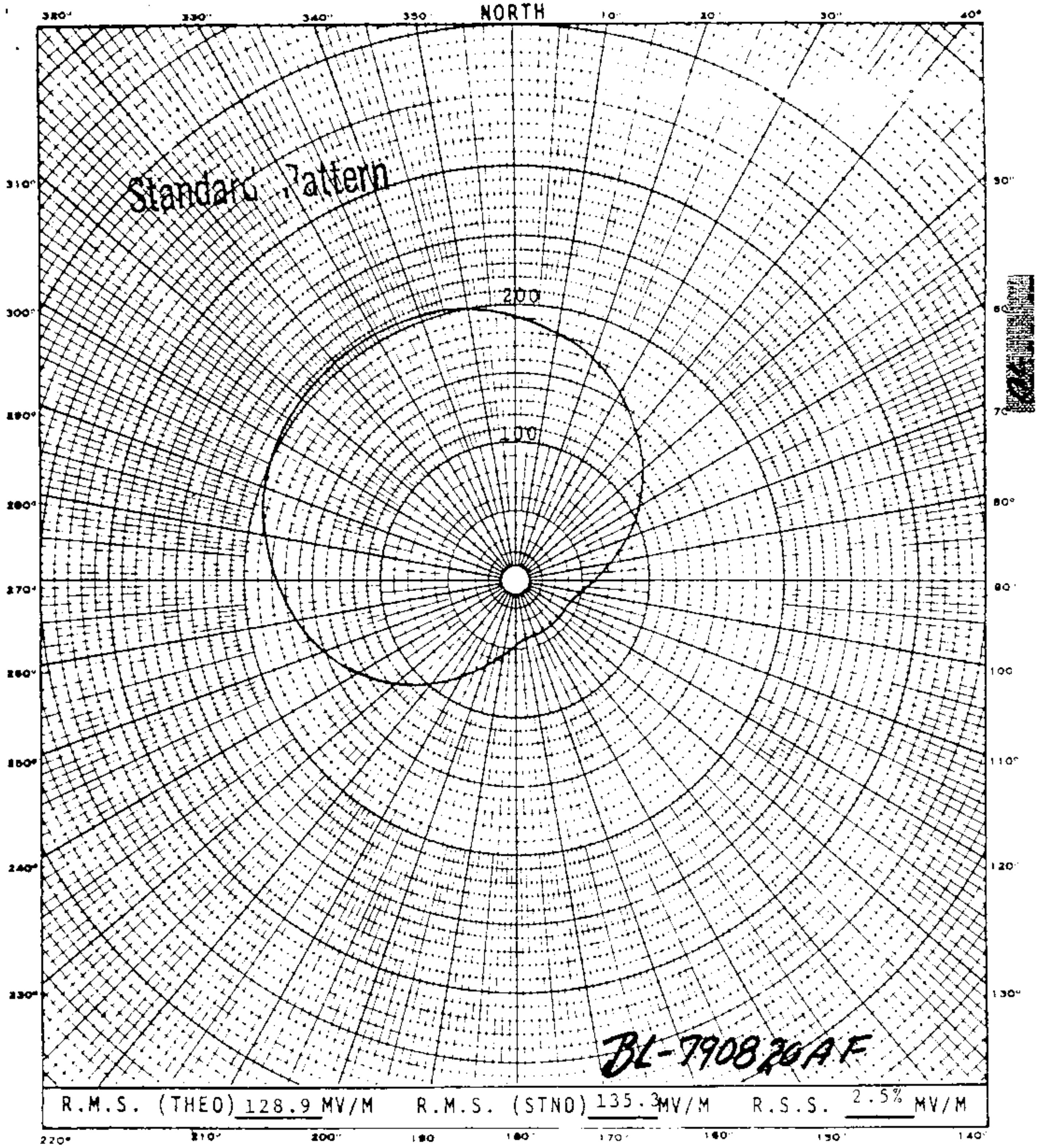
GROUND SYSTEM: 120 - 190' equally spaced copper radials about each tower. Radials are shortened and bonded to a transverse strap along intersections between towers.

KLEH

PREDICTED EFFECTIVE FIELDS AT RATED POWER:

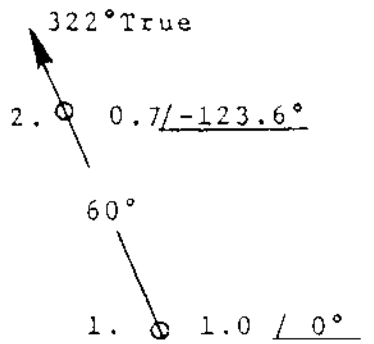
	THEORETICAL RMS	THEORETICAL RSS	STANDARD RMS
Day	128.9 mV/m	132.12 mV/m	135.3 mV/m

KLEH



R.M.S. (THEO) 128.9 MV/M R.M.S. (STND) 135.3 MV/M R.S.S. 2.5% MV/M

PATTERN PARAMETERS



Louise E. Hamlin

☐ MEASURED **KLEH** ☒ PROPOSED

FREQ. 1290 (KHZ) POWER 0.5 (KW) ☒ DA-D

N. LAT 42° 06' 00" ☐ DA-N

W. LONG. 91° 15' 22" ☐ N-D

LOCATION: Anamosa, Iowa

DATE: July 1977

ROBERT A. JONES
CONSULTING ENGINEERS

KLIQ

DIRECTIONAL ANTENNA DESCRIPTION SHEET

Station: KLIQ :

Main Studio: Lake Oswego, Oregon

Frequency: 1290 KHz

Power: 5 Kw Night 5 Kw Day

Notification: 1778

Date: August 30, 1978 Class: III

GEOGRAPHICAL LOCATION OF THE CENTER OF THE ANTENNA SYSTEM:

North Latitude:	45°	23'	32"
West Longitude:	122°	33'	35"

ANTENNA CHARACTERISTICS

Authorized for Daytime and Nighttime operation. (DA-1)
Number of elements: 3
Type of elements: Series excited, uniform cross-section, guyed, Shunt excited, Self supporting, tapered, vertical steel towers.

TOWER	:	S (#1)	C (#2)	N (#3)				
HEIGHT ABOVE INSULATORS	:	191'	191'	191'	(90.2°)			
PHASING	:	-123°	0°	-123°				
FIELD RATIO	:	0.5	1	0.5				

SPACING AND ORIENTATION : Towers in a row are spaced 191' (90.2°) on a line bearing 303° true.

KHQ

GROUND SYSTEM: 120 - 190' equally spaced copper radials plus 120 - 50' interspaced radials about each tower. Radials are shortened and bonded to transverse straps along intersections between towers. Centers of system are bonded together.

PREDICTED EFFECTIVE FIELDS AT RATED POWER:

THEORETICAL RMS	THEORETICAL RSS	STANDARD RMS
453.17 mv/m	542.23 mv/m	476.04 mv/m
______ mv/m	______ mv/m	______ mv/m

Note: This notification concerns a change in the Daytime operation and Nighttime to use the same directional antenna system day and night.

KLIQ

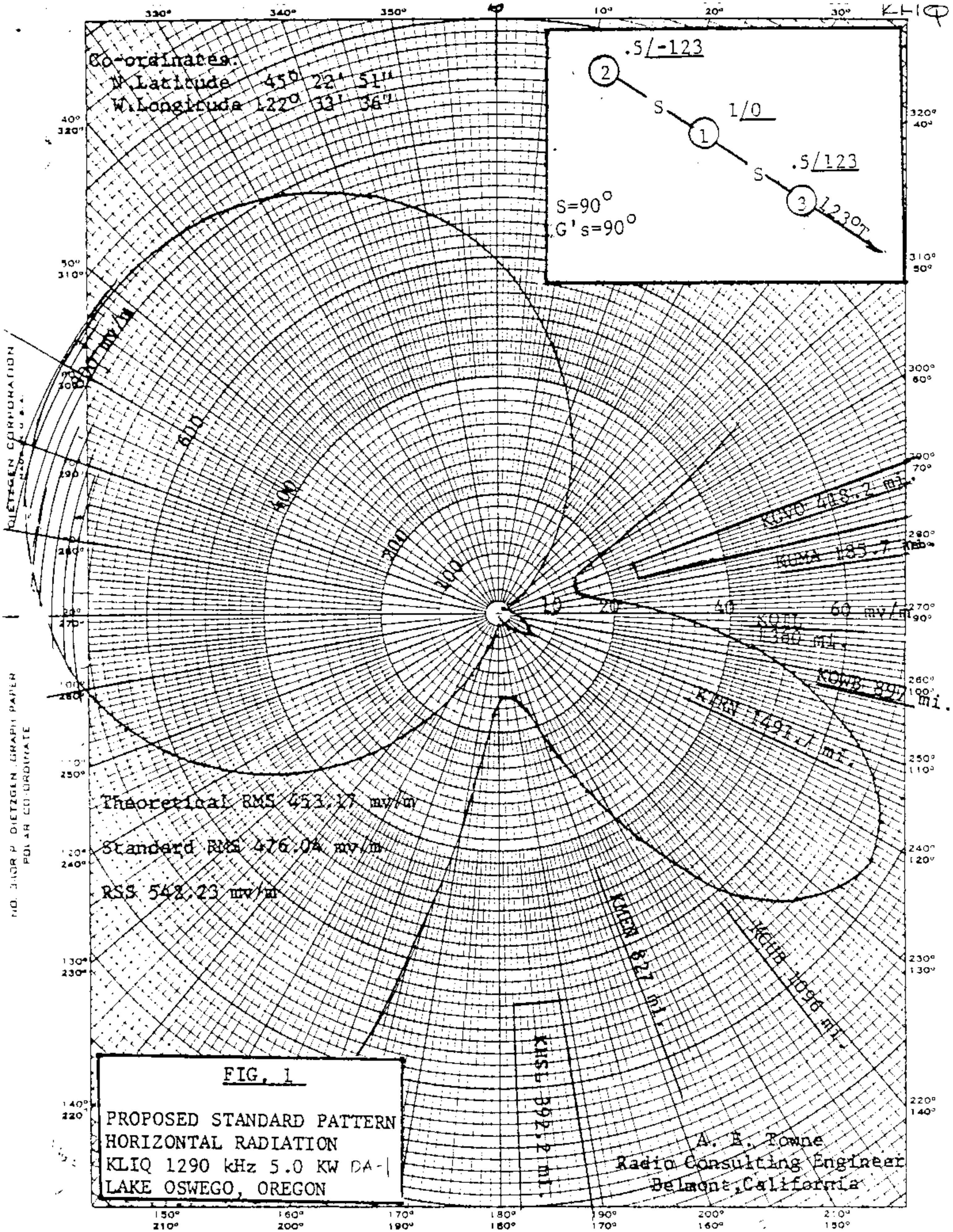


FIG. 1

PROPOSED STANDARD PATTERN
HORIZONTAL RADIATION
KLIQ 1290 kHz 5.0 KW DA-1
LAKE OSWEGO, OREGON

KMEN

DIRECTIONAL ANTENNA DESCRIPTION SHEET

Station : KMEN   Main Studio: San Bernardino, California

Frequency : 1290 KHz   Power : 5 kW Night 5 kW Day

Notification : 1780   Date : Sept. 28, 1979   Class: III

GEOGRAPHICAL LOCATION OF THE CENTER OF THE ANTENNA SYSTEM:

North Latitude: 34 07 27
West Longitude: 117 14 14

ANTENNA CHARACTERISTICS

Authorized for Nighttime and Daytime operation. (DA-2)
Number of elements: 3
Type of elements : Series excited, Self supporting, tapered, vertical steel towers.

TOWER	SW(#3)	C(#1)	NE(#2)			
HEIGHT ABOVE INSULATORS	191'	191'	191'	(90°)		
NIGHT PHASING	-125°	0°	+125°			
NIGHT FIELD RATIO	0.541	1.0	0.541			
DAY PHASING	+125°	0°	+125°			
DAY FIELD RATIO	3.030	1.0	3.636			

SPACING AND ORIENTATION : Adjacent towers in a row are spaced 191' (90°) on a line bearing 48° true.

GROUND SYSTEM : 120 - 191 equally spaced copper radials plus a 32' square ground screen about each tower. Radials are shortened and bonded to a transverse strap along intersections between towers.

KMEN

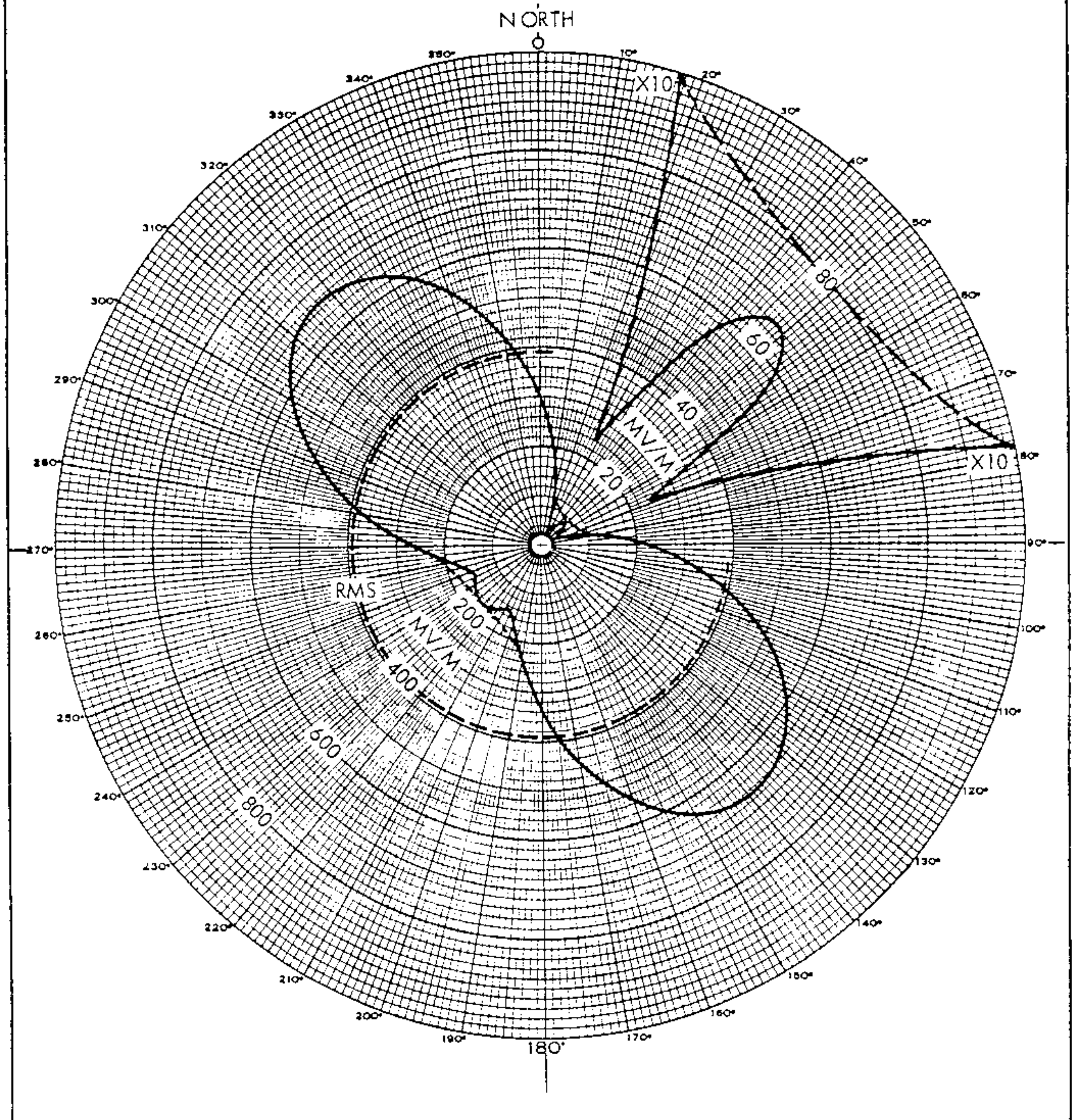
PREDICTED EFFECTIVE FIELDS AT RATED POWER:

	THEORETICAL RMS	THEORETICAL RSS	STANDARD RMS
Day	394.2 mV/m	____ mV/m	____ mV/m
Night 1/	400 mV/m	____ mV/m	____ mV/m

1/ By adjustment of input power.

Note:

KMEN



THEORETICAL HORIZONTAL RADIATION DAYTIME

UNATTENUATED FIELD STRENGTH AT ONE MILE

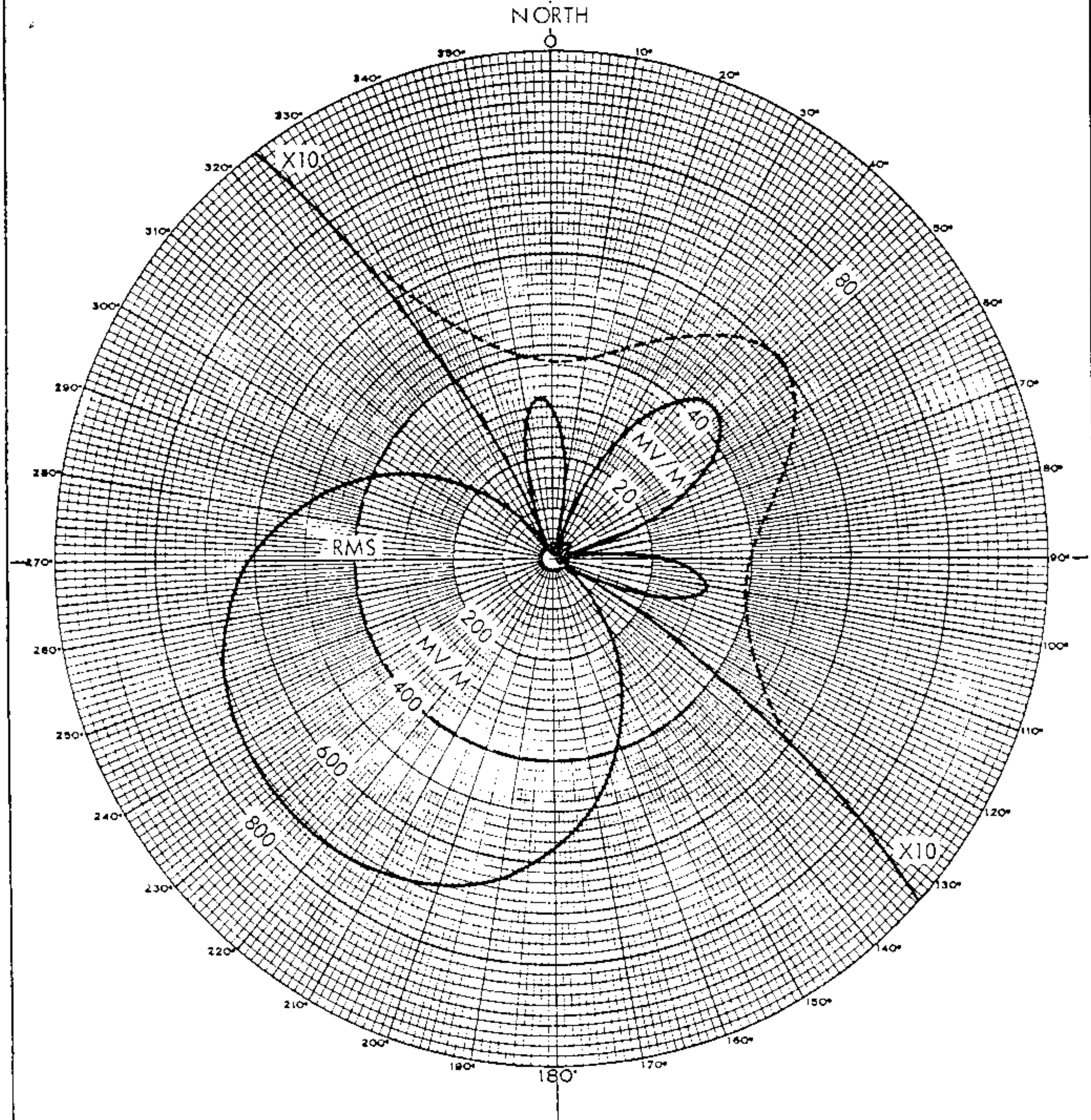
HAMMETT & EDISON INC.
CONSULTING ENGINEERS
SAN FRANCISCO

RADIO STATION KMEN
1290 KHZ, 5 KW, DA-2
SAN BERNARDINO, CALIFORNIA

790605

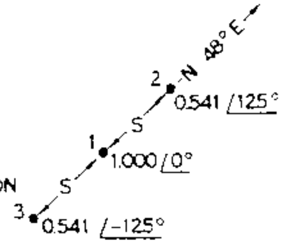
FIGURE 1B

KMEN



N. LAT 34° 07' 27"
W. LONG 117° 14' 14"
RMS = 400.0 MV/M*
S = 90° = 191 FT
G = 90° = 191 FT

* RMS ADJUSTED BY REDUCTION OF THEORETICAL INPUT POWER TO 3.85 KW



THEORETICAL HORIZONTAL RADIATION NIGHTTIME

UNATTENUATED FIELD STRENGTH AT ONE MILE

HAMMETT & EDISON, INC. CONSULTING ENGINEERS SAN FRANCISCO	RADIO STATION KMEN 1290 KHZ 5 KW DA-2 SAN BERNARDINO, CALIFORNIA	790605	FIGURE 2B

ER9,73

CORRECTED
DIRECTIONAL ANTENNA DESCRIPTION SHEET

Station: KMEN

Main Studio: San Bernardino, California

Frequency: 1290 kHz

Power: 5kw

Notification List No. 1452

Date: November 24, 1971 Class: III

GEOGRAPHICAL LOCATION OF THE CENTER OF THE ANTENNA SYSTEM:

North Latitude: 34° 07' 27"

West Longitude: 117° 14' 14"

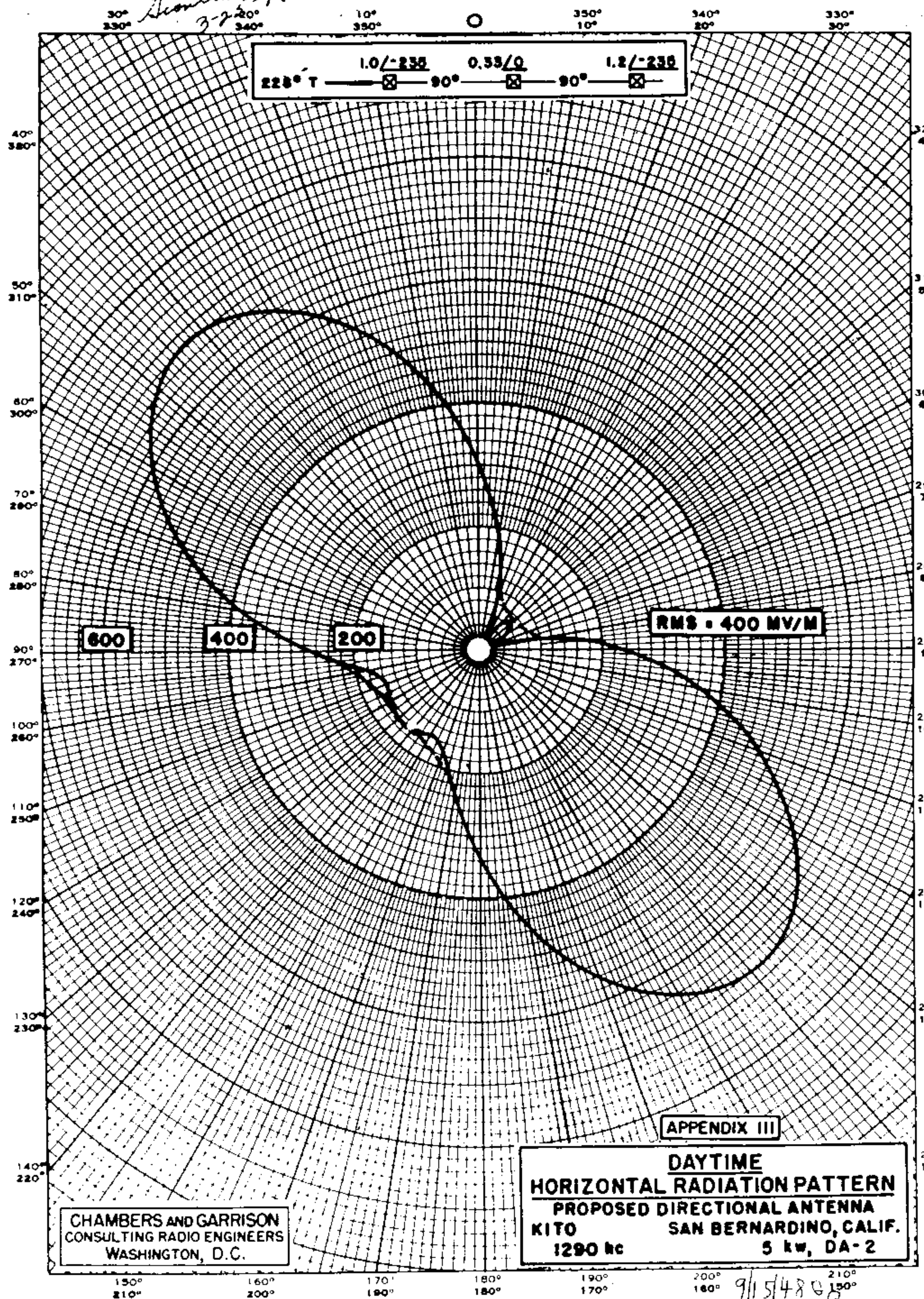
Authorized for day and night operation. (DA-2)

Note: Please retain the description sheet and directional antenna radiation patterns notified for station KITO (now KMEN) in United States Change List Number 269, dated March 26, 1948 and attach to this supplemental Description Sheet. This notification is for the purpose of indicating only a correction in the geographical coordinates of the center of the antenna system.

CTR NO 30944A4

KMEN
1290

Granted -48
3-22



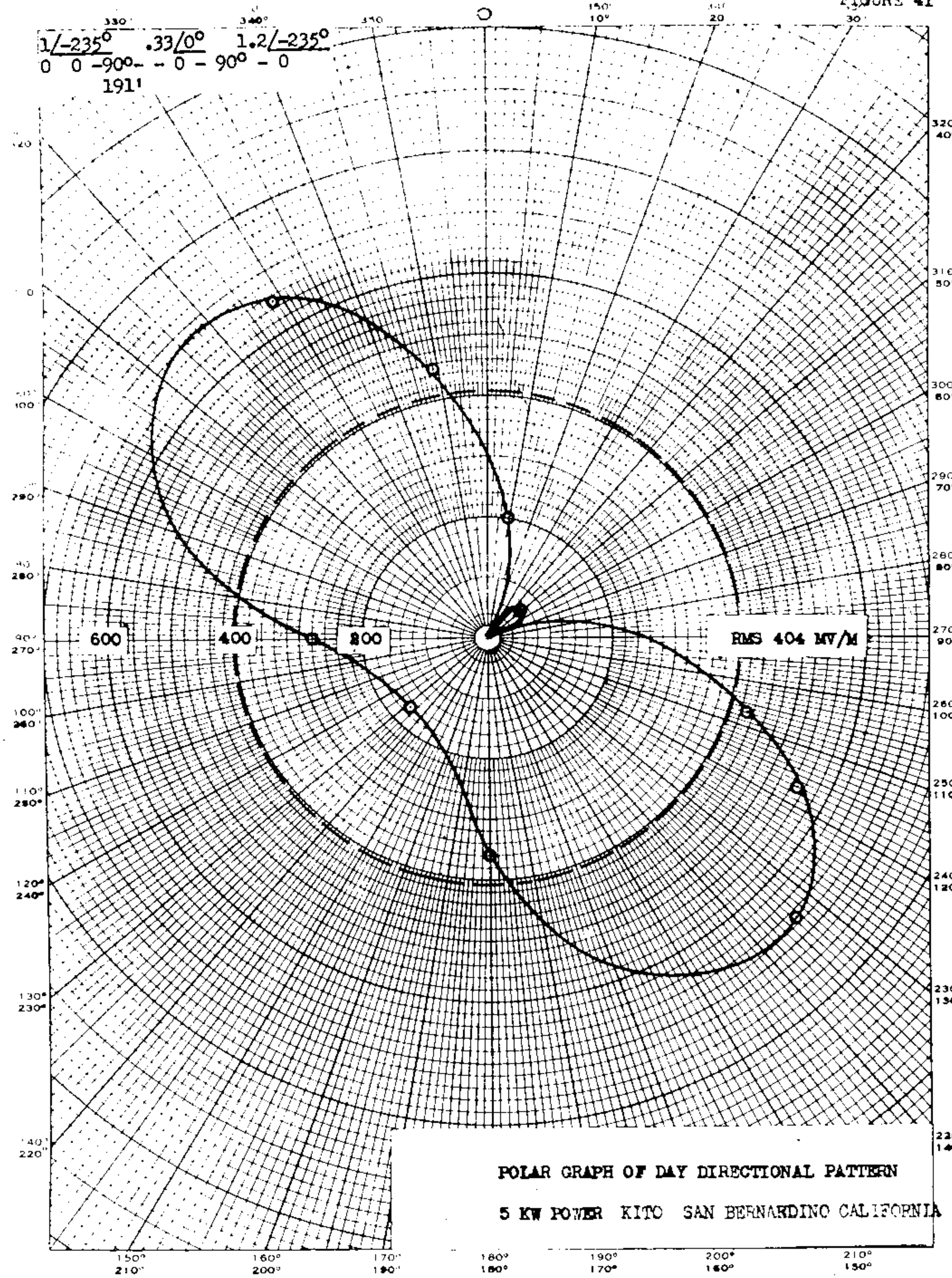
9/15/48

KMEN

MEASURED DAY   KITO SAN BERNARDINO, CAL.   11/4/48 G   5kw, DA-2   1290

License 10-28-48

FIGURE 41

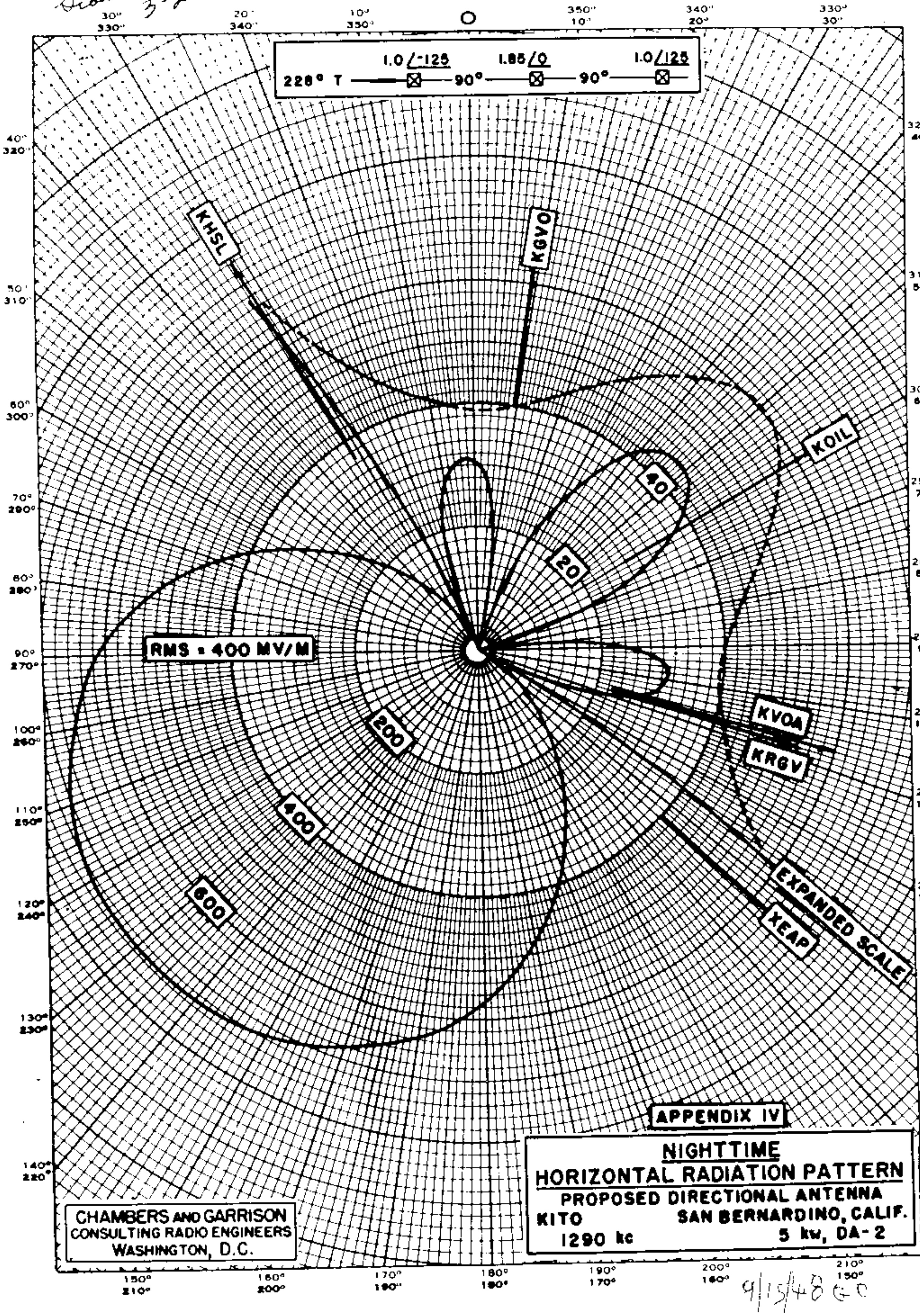


POLAR GRAPH OF DAY DIRECTIONAL PATTERN

5 KW POWER KITO SAN BERNARDINO CALIFORNIA

KMEN
1290

Granted 3-25-48



APPENDIX IV

NIGHTTIME
HORIZONTAL RADIATION PATTERN
PROPOSED DIRECTIONAL ANTENNA
KITO SAN BERNARDINO, CALIF.
1290 kc 5 kw, DA-2

CHAMBERS AND GARRISON
CONSULTING RADIO ENGINEERS
WASHINGTON, D.C.

9/15/48 GO

KMEN
1290

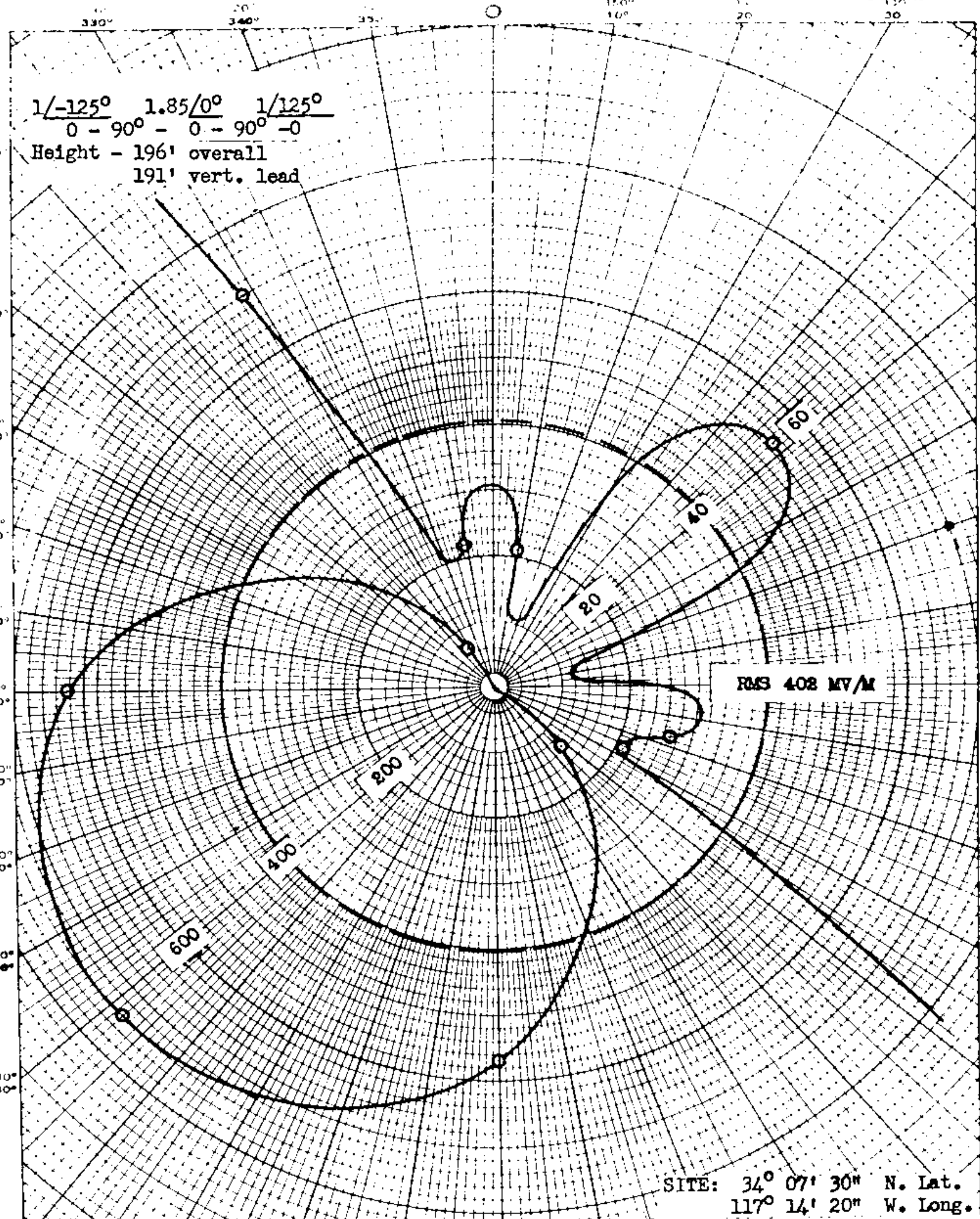
11/4/48 G

MEASURED
NIGHT

KITO SAN BERNARDINO, CAL.

License 10-28-48

5kw, DA-2 1290
FIGURE 29



POLAR GRAPH OF NIGHT DIRECTIONAL PATTERN

5 KW POWER KITO SAN BERNARDINO CALIFORNIA

KOIL

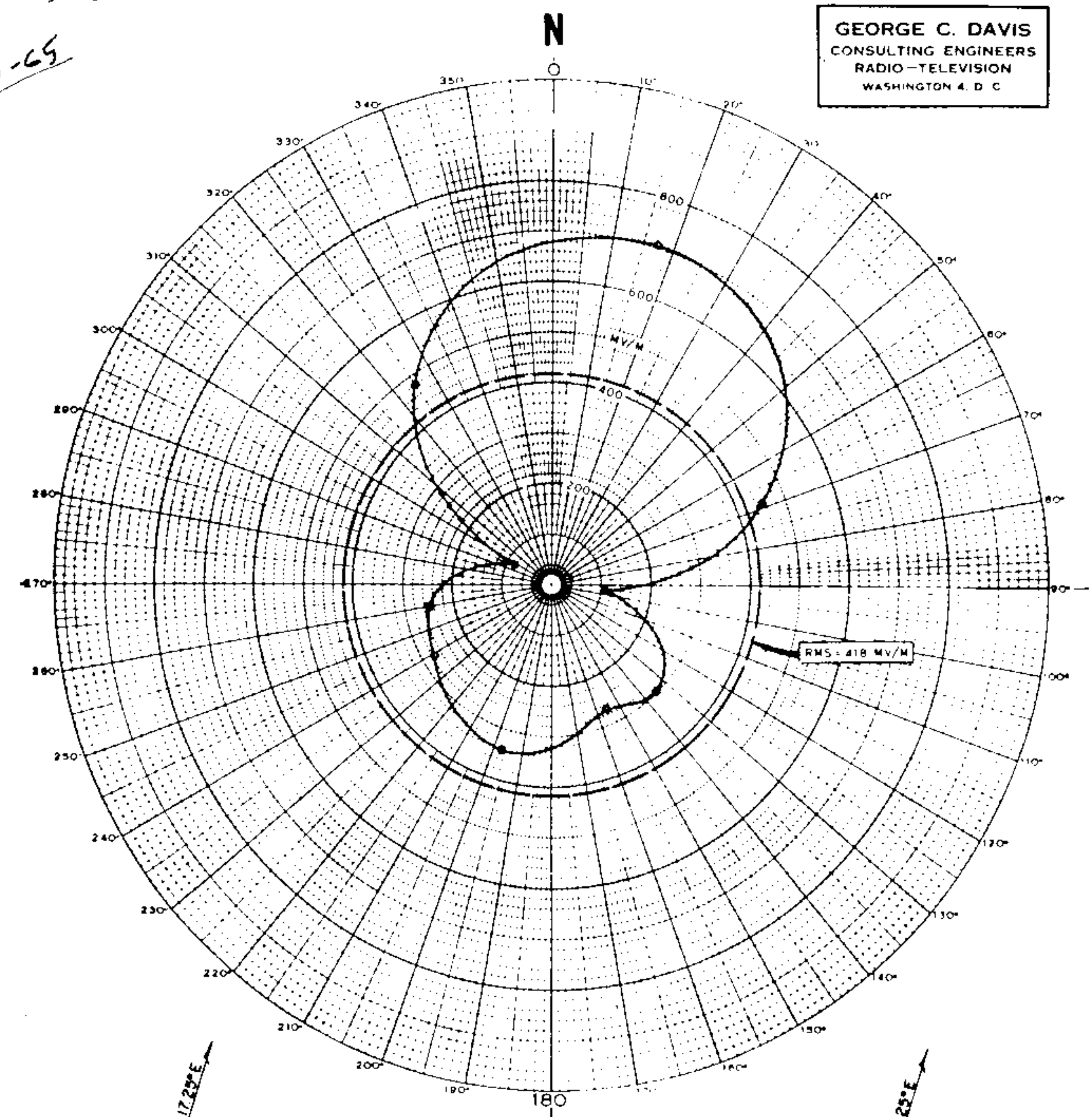
Measured Night
(11-29-65ct)

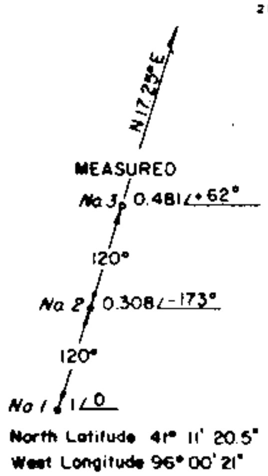
Station KOIL
Omaha, Nebraska

5kw, DA-N, U
1290 kc

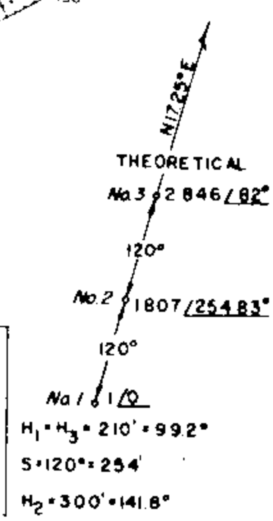
GEORGE C. DAVIS
CONSULTING ENGINEERS
RADIO-TELEVISION
WASHINGTON 4, D. C.

LIC 12-20-65





MEASURED HORIZONTAL
PLANE RADIATION PATTERN
FOR THE NIGHTTIME OPERATION OF
KOIL, OMAHA, NEBRASKA
1290 KC 5 KW DA-N
JULY 1965



FCC File No. BL-11074
Accepted 10-27-65

Station KOIL
Omaha, Nebraska

1290 kc

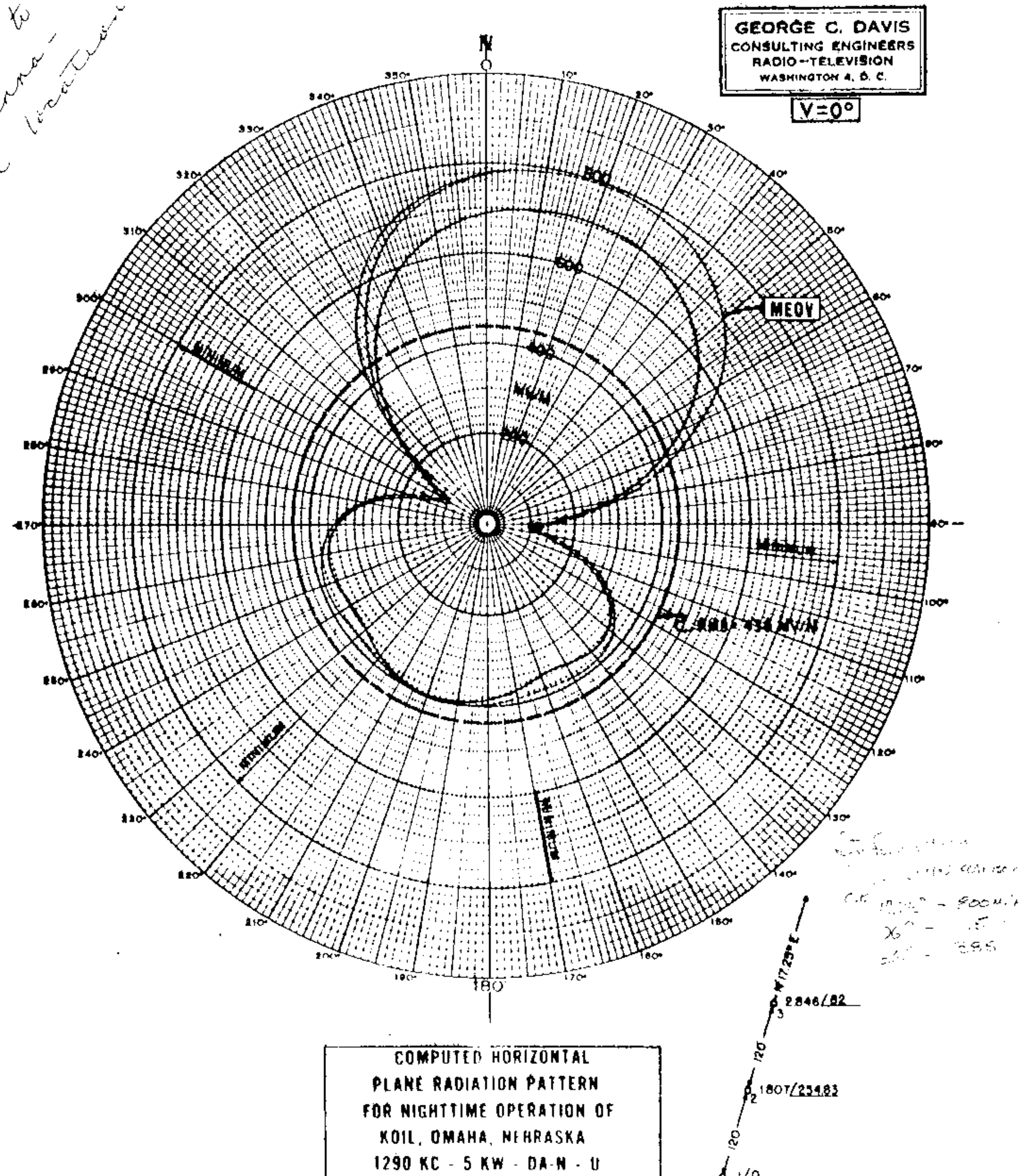
KOIL

Proposed Night (6-29-64ct)

Station KOIL
Omaha, Nebraska

5kw, DA-N, U
1290 kc

7/9/64 granted CP to change antenna - transmitter location



COMPUTED HORIZONTAL
PLANE RADIATION PATTERN
FOR NIGHTTIME OPERATION OF
KOIL, OMAHA, NEBRASKA
1290 KC - 5 KW - DA-N - U
APRIL 1964

NORTH LATITUDE 41° 11' 20.5"
WEST LONGITUDE 96° 00' 21"

$H_1 = H_3 = 210° = 99.2°$ $S = 120° = 254'$
$H_2 = 300° = 141.8°$

FCC File No. BP-16058
Accepted 6-19-64 Amended

Station KOIL
Omaha, Nebraska

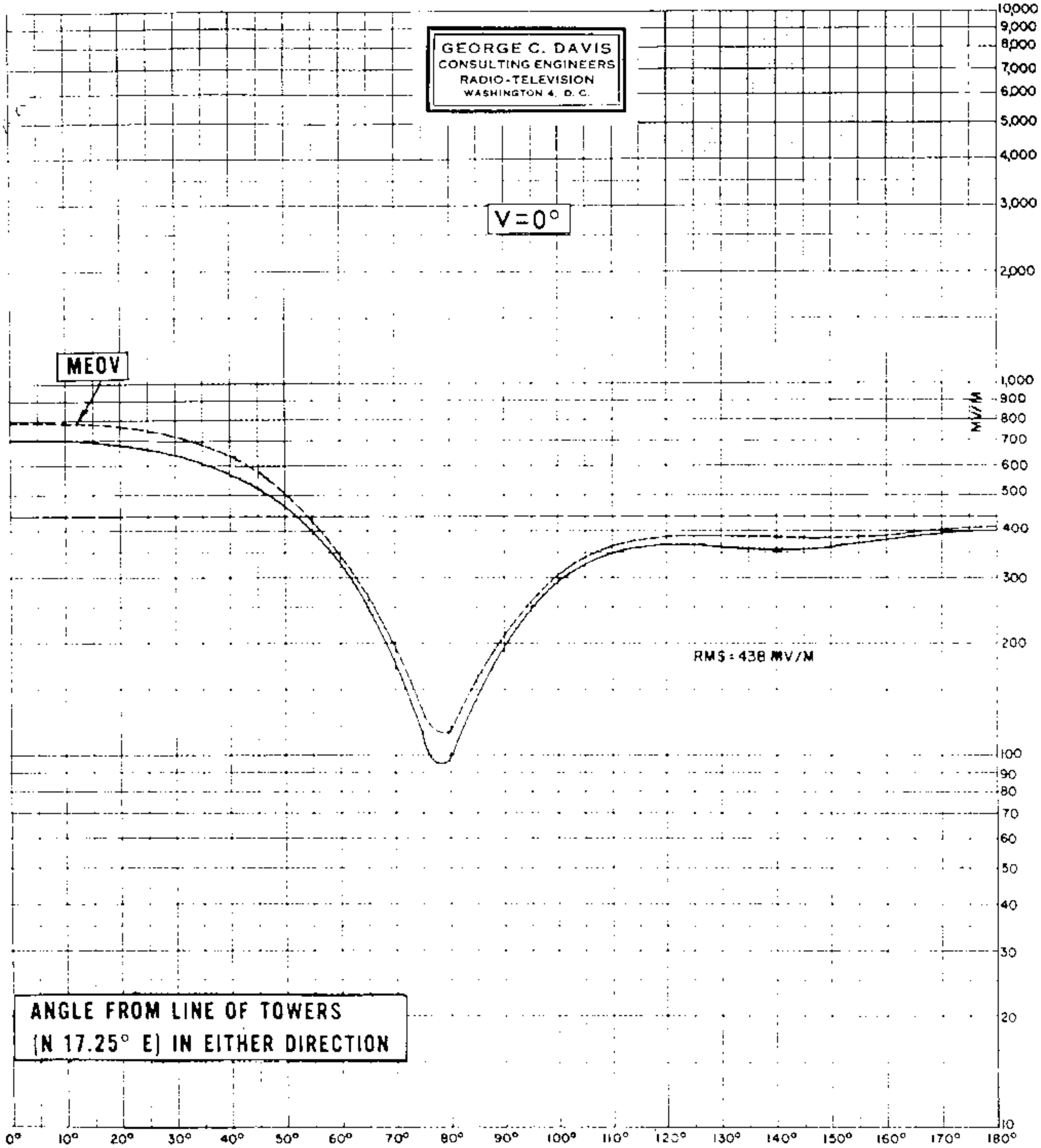
1290 kc

KOIL

Proposed Night Nulls
(6-29-64ct)

Station KOIL
Omaha, Nebraska

5kw,DA-N,U
1290 kc



COMPUTED HORIZONTAL
PLANE RADIATION PATTERN
FOR NIGHTTIME OPERATION OF
KOIL, OMAHA, NEBRASKA
1290 KC - 5 KW - DA-N - U
APRIL 1964

FCC File No.BP-16058
Accepted 6-19-64 Amended

Station KOIL
Omaha, Nebraska

1290 kc

KOIL

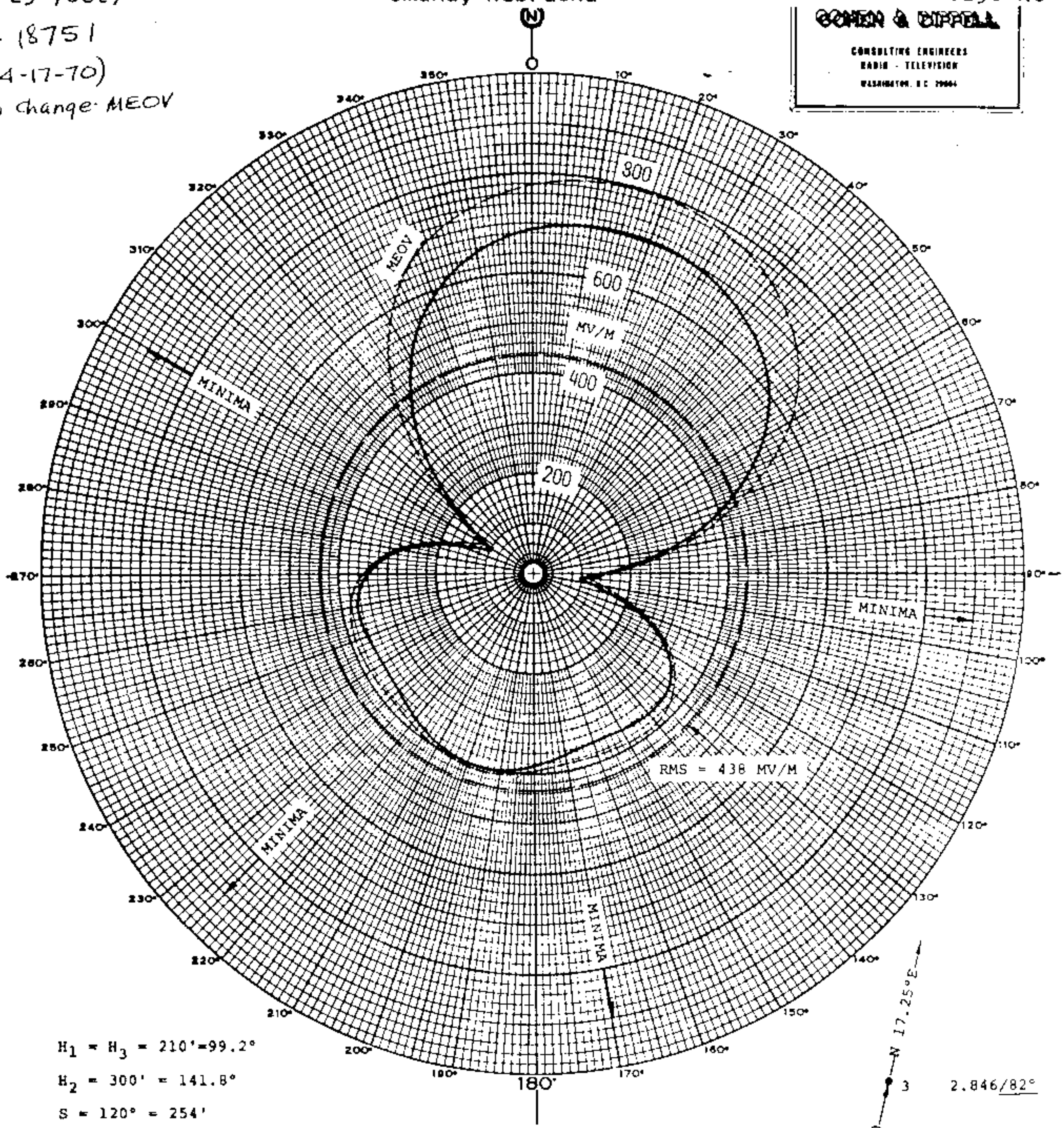
Proposed Night
(4-29-70ct)

BP- 18751
GR (4-17-70)
CP to change MEOV

Station KOIL
Omaha, Nebraska

5kw, DA-N, U
1290 kc

COHEN & DIPPELL
CONSULTING ENGINEERS
RADIO - TELEVISION
WASHINGTON, D.C.



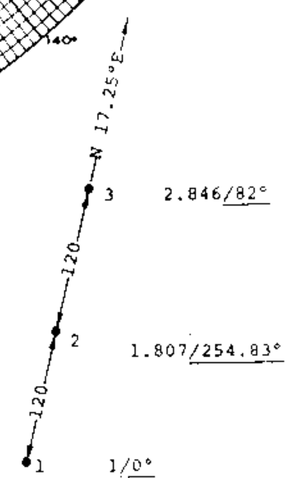
$H_1 = H_3 = 210' = 99.2°$

$H_2 = 300' = 141.8°$

$S = 120° = 254'$

NORTH LATITUDE 41° 11' 20.5"

WEST LONGITUDE 96° 00' 21"



COMPUTED HORIZONTAL
PLANE RADIATION PATTERN
FOR NIGHTTIME OPERATION OF
KOIL, OMAHA, NEBRASKA
1290 KC - 5KW - DA-N U
MARCH 1970

FCC File No. BP-18751
Accepted 4-17-70

Station KOIL
Omaha, Nebraska

1290 kc

KOIL

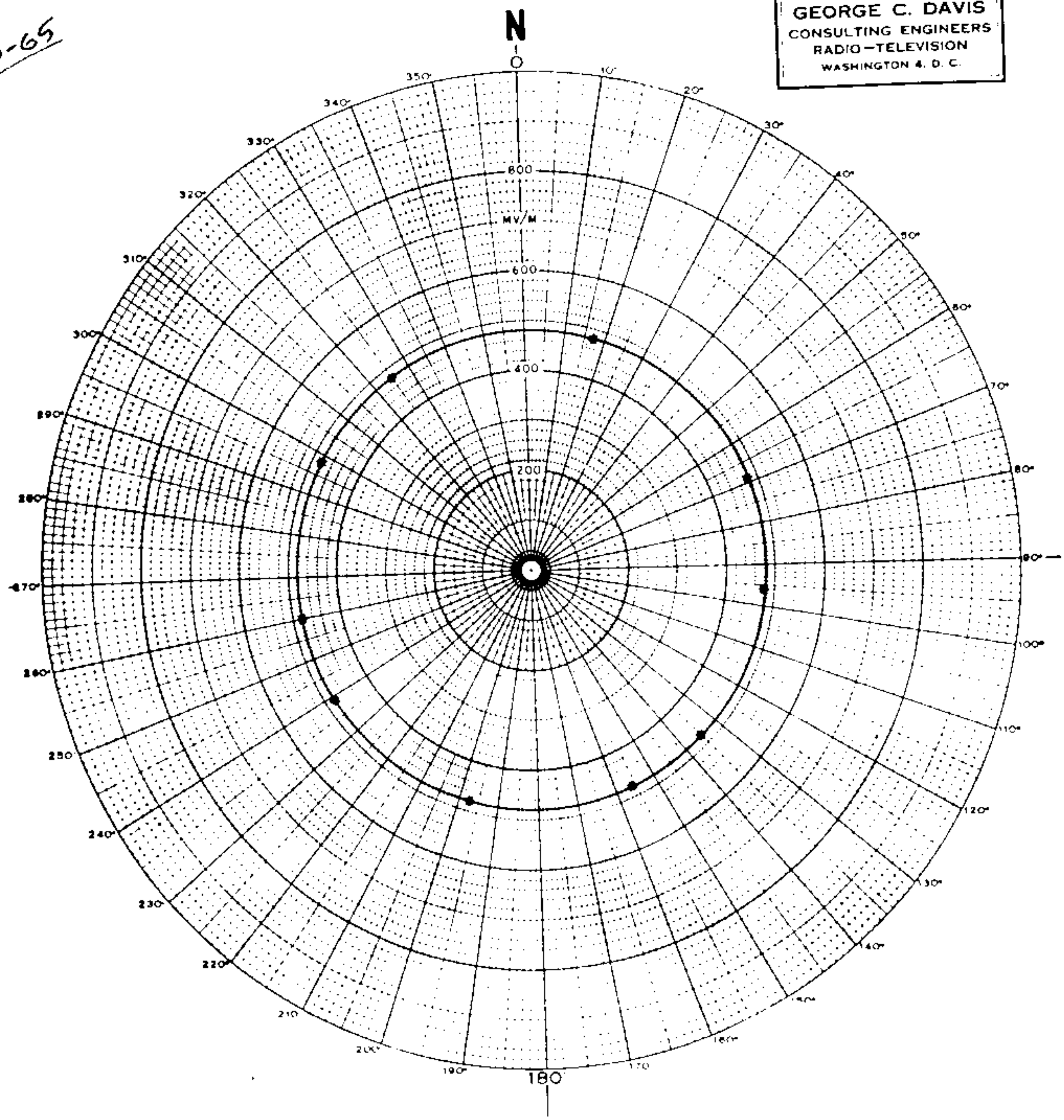
Measured Non-DA
(11-29-65ct)

Station KOIL
Omaha, Nebraska

5kw, DA-N, U
1290 kc

GEORGE C. DAVIS
CONSULTING ENGINEERS
RADIO—TELEVISION
WASHINGTON 4, D. C.

IC. 12-20-65



NON-DIRECTIONAL
UNATTENUATED FIELD INTENSITY
AT ONE MILE FOR
KOIL, OMAHA, NEBRASKA
1290 KC 5 KW DA-N
JULY 1965

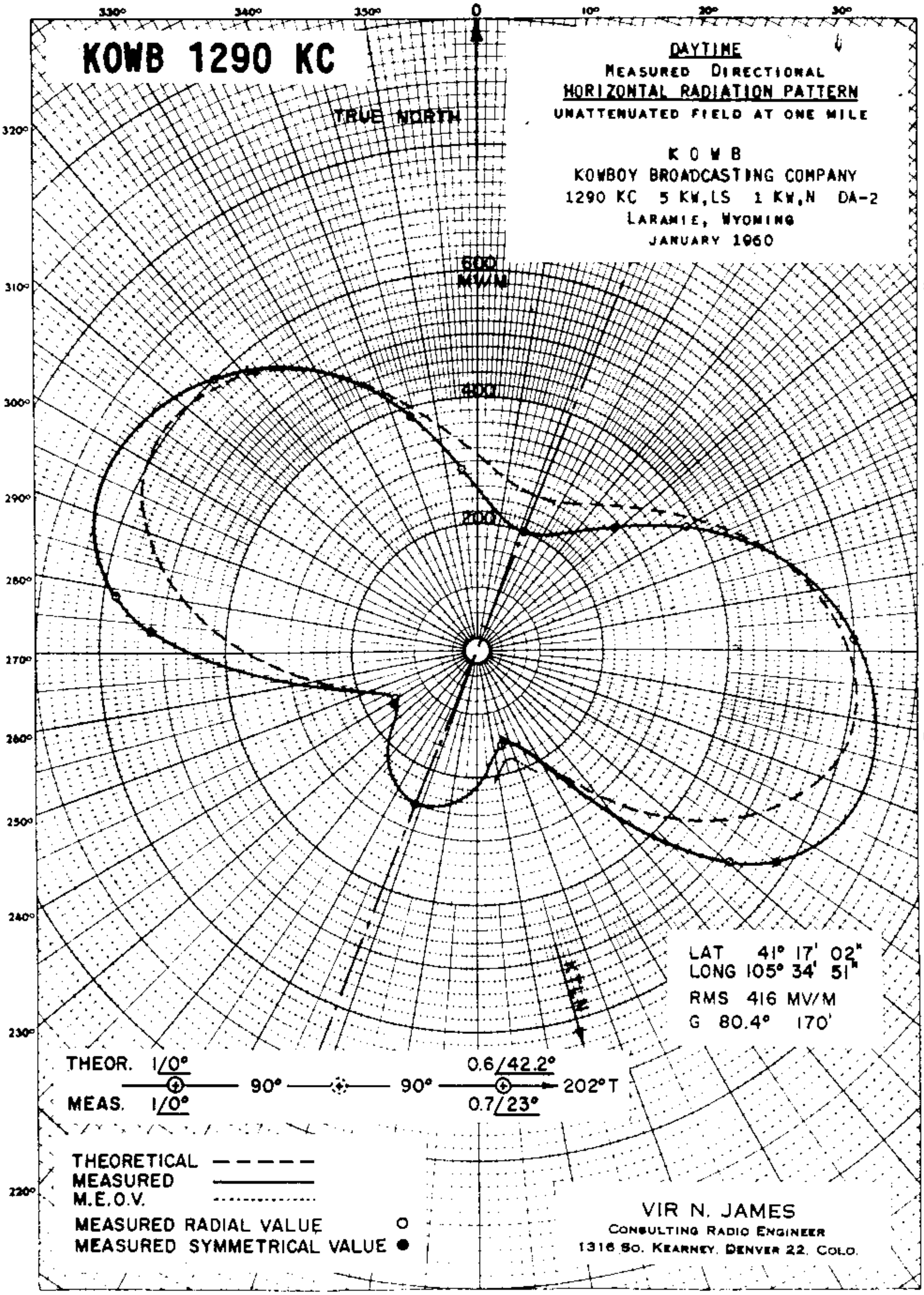
FCC File No. BL-11074
Accepted 10-27-65

Station KOIL
Omaha, Nebraska

1290 kc

KOWE

MEASURED DAY (3-28-60g) | Station KOWB, Laramie, Wyoming | 1kw, 5kw-LS, DA-2,U | 1290 KC



granted for DA-2, 6-27-61

FCC File No. BL-7842
Accepted 2-26-60

KOWB
Laramie, Wyoming

1290 KC

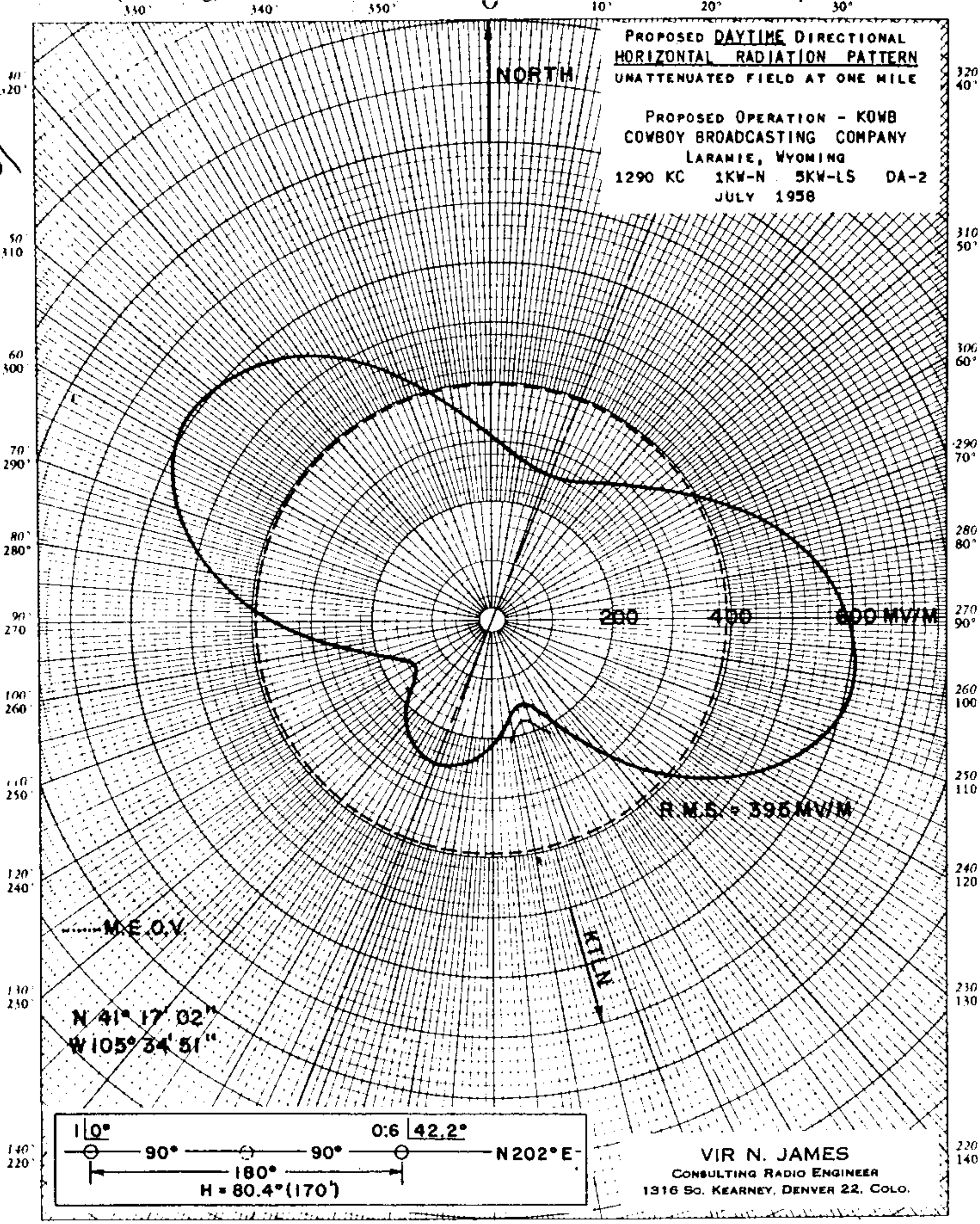
KOWB

PROPOSED DAY
(9-25-58g)

Station KOWB
Laramie, Wyoming

1kw,5kw-LS, DA-2,U
1290 KC

Granted CP for change in freq.
and inst DA-2 7-29-59



FCC File No. BP-12,253
Accepted 9-15-58

KOWB
Laramie, Wyoming

1290 KC

KOWB

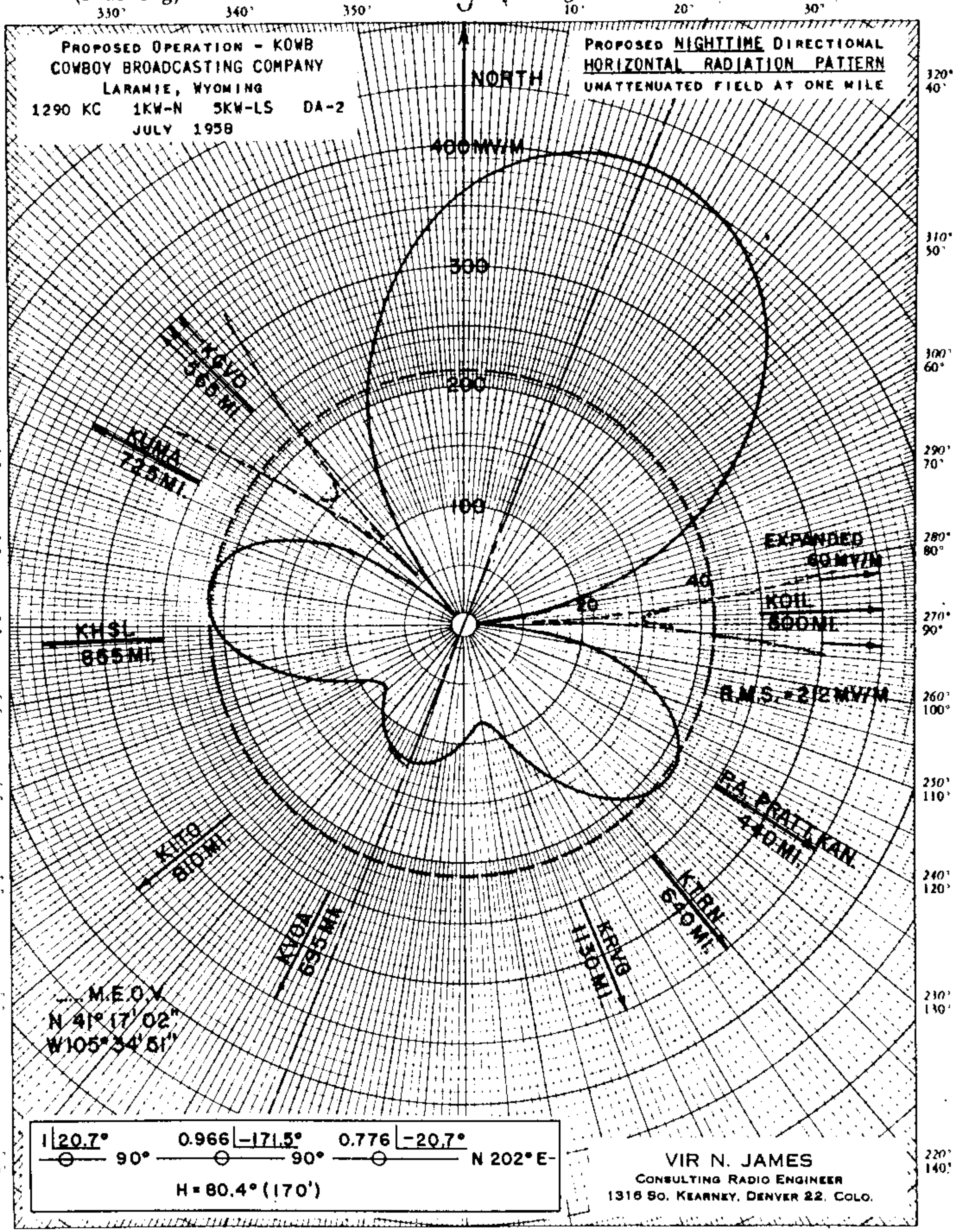
PROPOSED NIGHT
(9-25-58g)

Station KOWB
Laramie, Wyoming

1kw,5kw-LS, DA-2,U
1290 KC

Granted CP to change freq & install DA-2 7-29-59

Granted L → 6-27-60



FCC File No. BP-12,253
Accepted 9-15-58

KOWB
Laramie, Wyoming

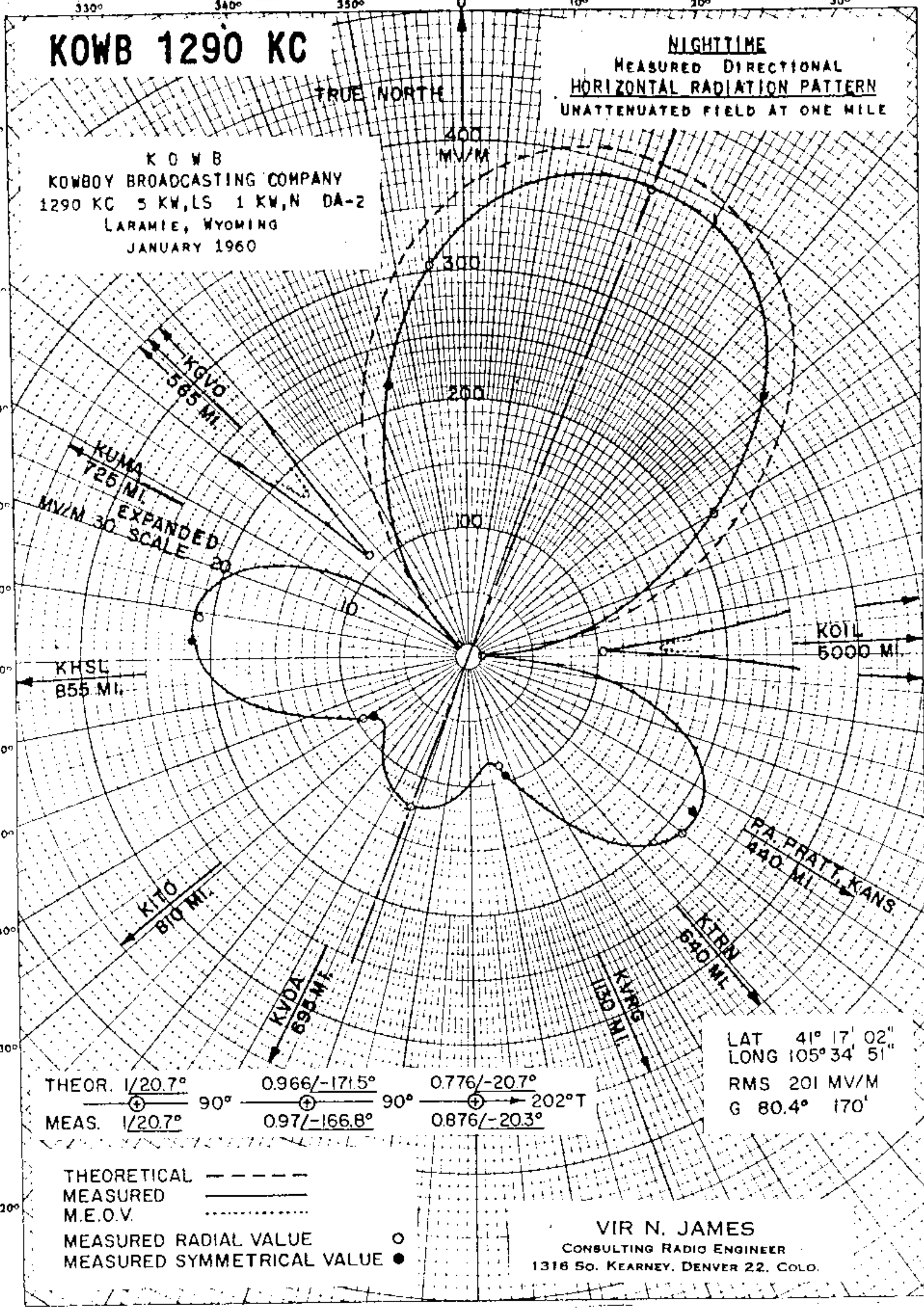
1290 KC

KOWB

MEASURED NIGHT
(3-28-60g)

Station KOWB
Laramie, Wyoming

1kw,5kw-LS, DA-2,U
1290 KC



FCC File No. BL-7842
Accepted 2-26-60

KOWB
Laramie, Wyoming

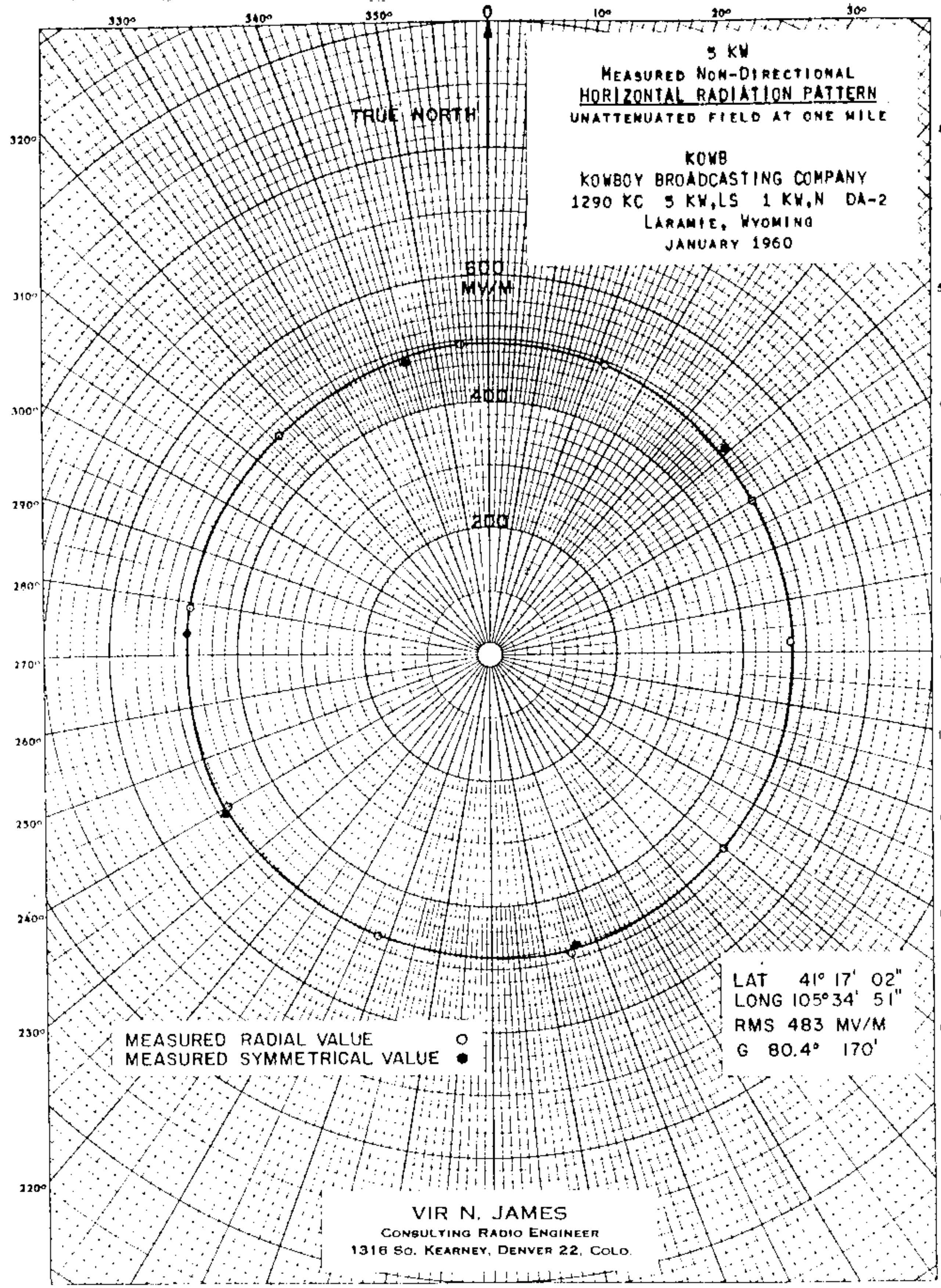
1290 KC

KOWB

MEASURED NON-DA
(3-28-60g)

Station KOWB
Laramie, Wyoming

1kw, 5kw-LS, DA-2,U
1290 KC



FCC File No. BL-7842
Accepted 2-26-60

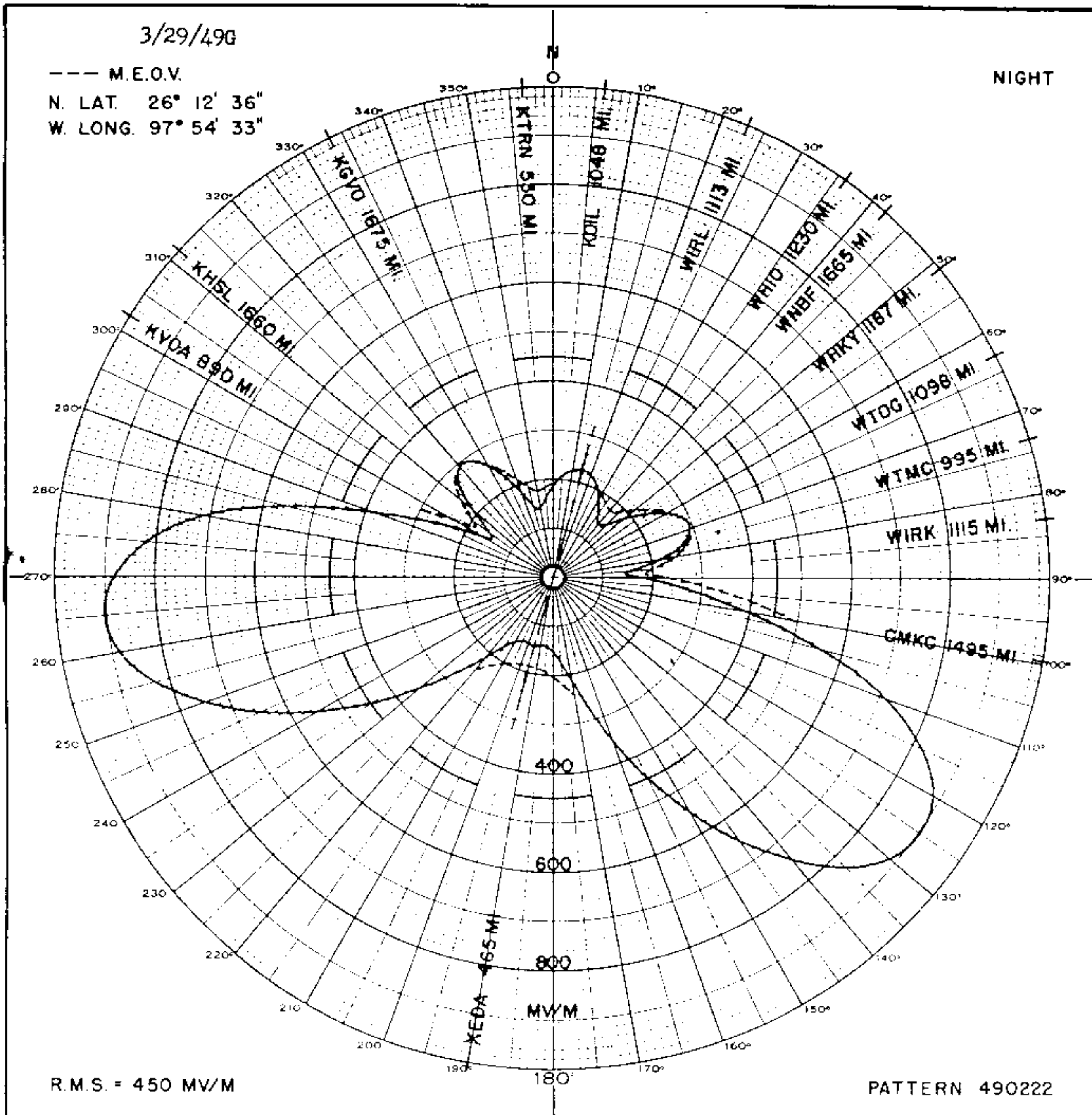
KOWB
Laramie, Wyoming

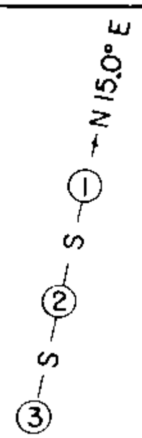
1290 KC

Granted for DA 2, 6 24 60

KRGV

PROPOSED NIGHT KRGV, WESLACO, TEX. 5kw,DAN 1290kc





TOWER	FIELD	PHASE
1	1.000	0°
2	0.795	-66°
3	0.562	-132°

G_1 = 182.0°

G_2 = G_3 = 96.6°

S = 190°

RADIO STATION KRGV

WESLACO, TEXAS

PROPOSED 1290 KC, 5 KW, DA-N

A. EARL CULLUM, JR.

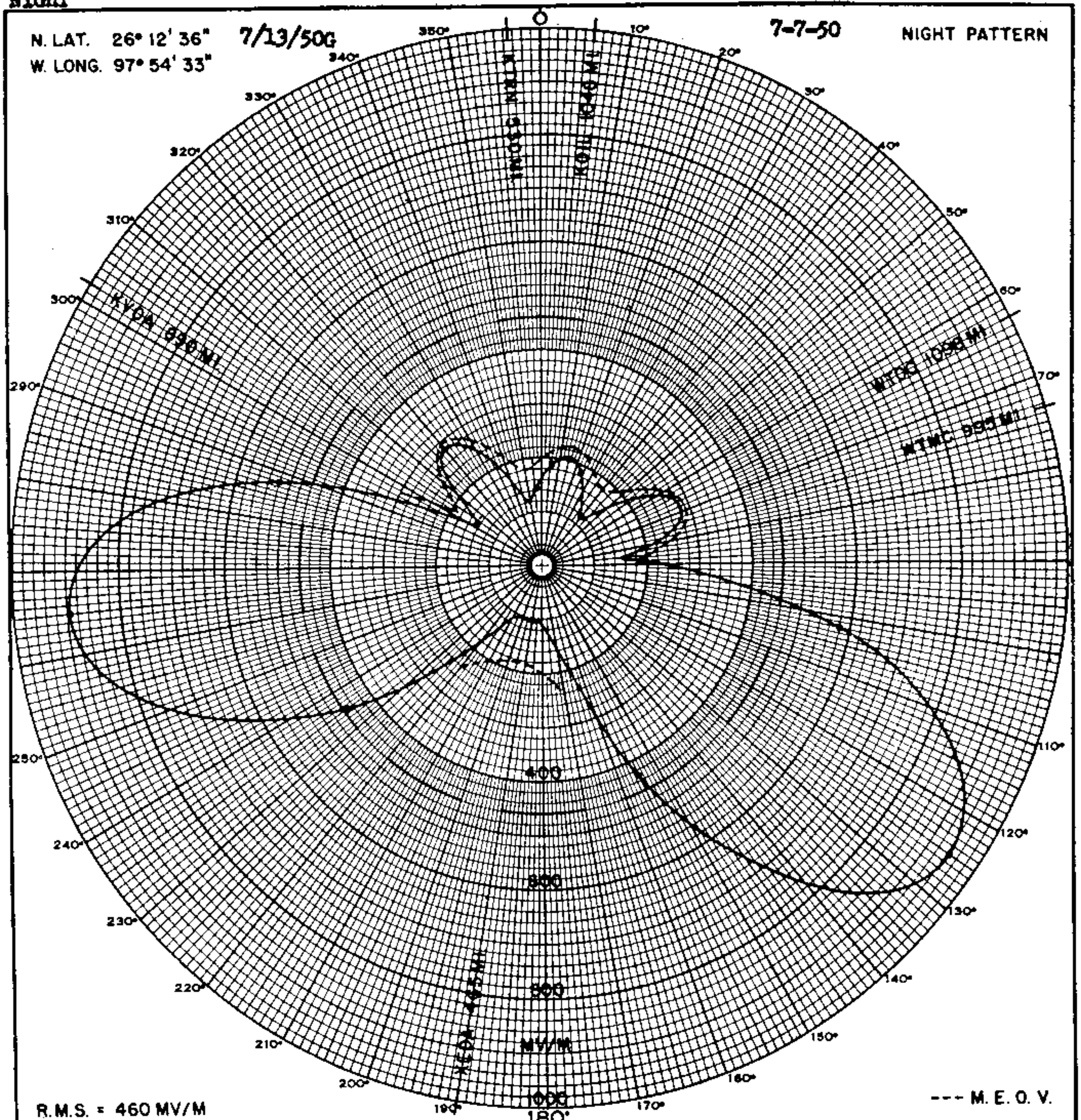
CONSULTING RADIO ENGINEERS

490222 FIGURE 5A

AMENDMENT RECD 3-7-49 BP-5734 KRGV, Weslaco, Tex. 1290 kc

KRGV

MEASURED NIGHT — KRGV, WESLACO, TEX. — 5kw, DAN — 1290 kc



① — S — ② — S — ③

S = 190° = 403'

G_1 = 181° = 384'

G_2 = G_3 = 95° = 200'

LINE OF TOWERS: N 15° E

RADIO STATION KRGV

WESLACO, TEXAS

1290 KC 5 KW DA-N

PATTERN BASED ON

FIELD INTENSITY

MEASUREMENTS

A. EARL CULLUM, JR.

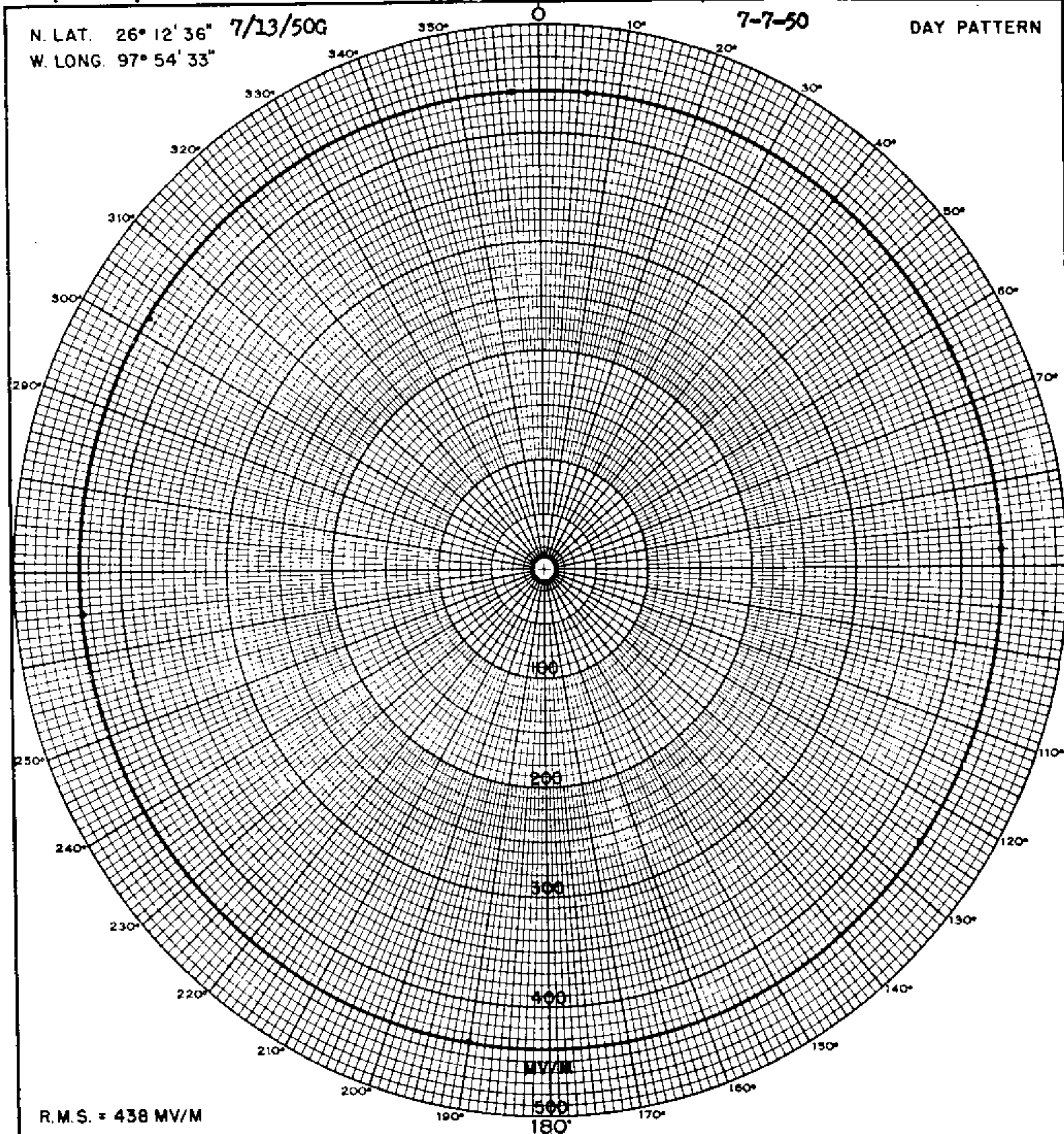
CONSULTING RADIO ENGINEERS

500701-N FIGURE 2B

KRGV, Weslaco, Tex. 1290 kc

KRGV

MEASURED KRGV, WESLACO, TEX. 5kw, DAN 1290 kc
DAY (non-DA)



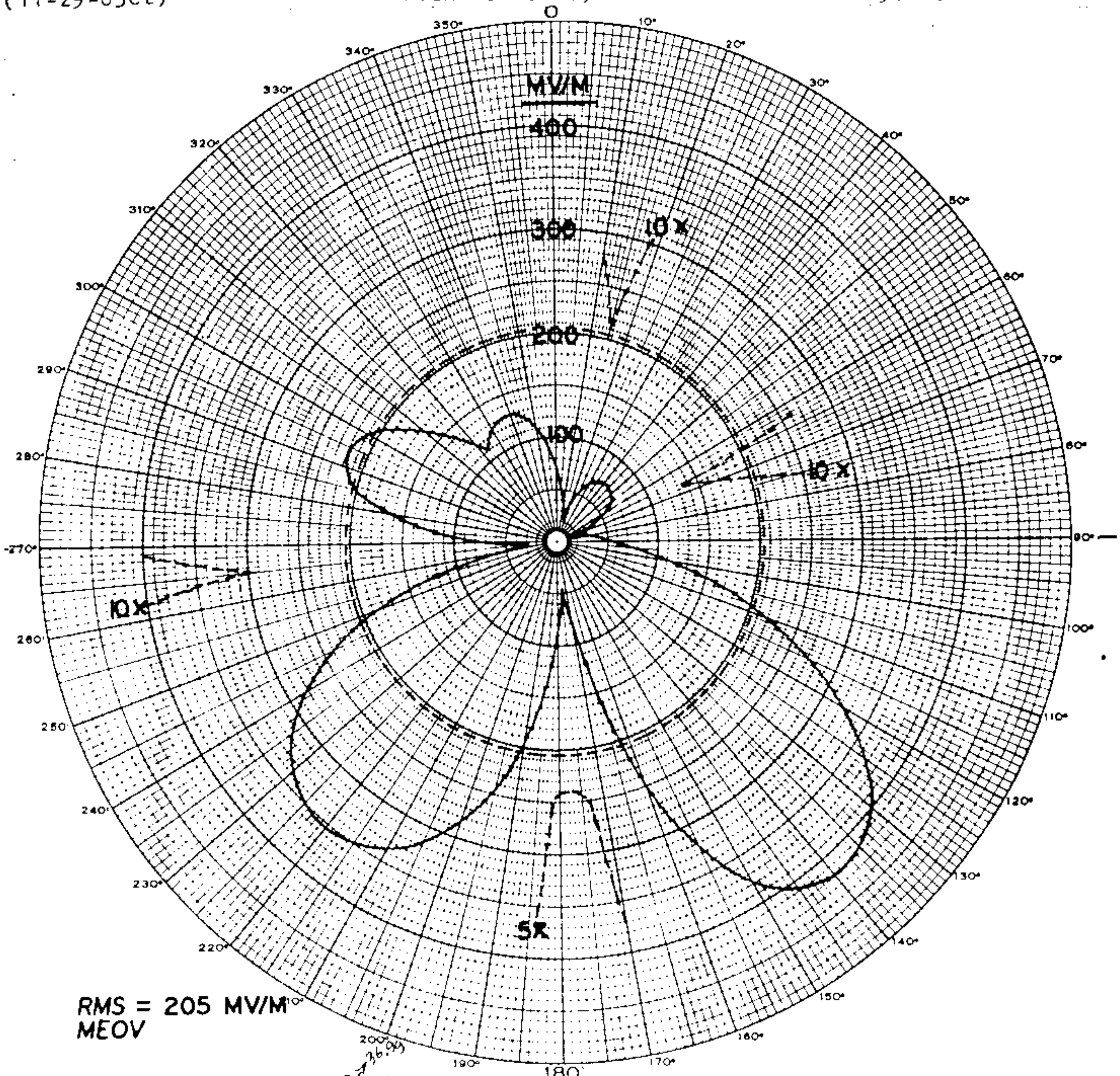
S = 190° = 403' G_1 = 181° = 384' G_2 = G_3 = 95° = 200' LINE OF TOWERS: N 15° E	RADIO STATION KRGV WESLACO, TEXAS 1290 KC 5 KW DA-N
PATTERN BASED ON FIELD INTENSITY MEASUREMENTS	A. EARL CULLUM, JR. CONSULTING RADIO ENGINEERS 500701-D FIGURE 2A

KTRN

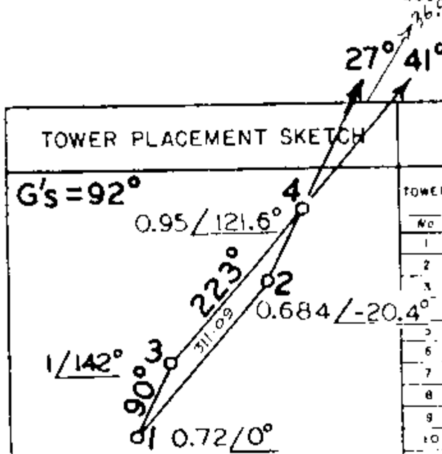
Proposed Night
(11-29-63ct)

Station KTRN
Wichita Falls, Texas

1kw,5kw-LS,DA-N,U
1290 kc



RMS = 205 MV/M
MEOV



PATTERN PARAMETERS

TOWER No	ELECTRICAL HEIGHT G°	SPACING S°	PHASING ψ	FIELD RATIO f
1				
2				
3				
4				
5				
6				
7				
8				
9				
10				

DAYTIME OPERATION ☐ NIGHTTIME OPERATION ☒

FIGURE 5

θ=0

STATION DATA

CALL KTRN
FREQ 1290 KC.
POWER 1 KW.
TYPE DA-N
TIME NIGHT
LAT. 33-57-38
LONG. 98-33-42

E.H.MUNN,JR.
RADIO ENGINEER
COLDWATER, MICH.

FCC File No. BP-16006
Accepted 11-13-63

Station KTRN
Wichita Falls, Texas

1290 kc

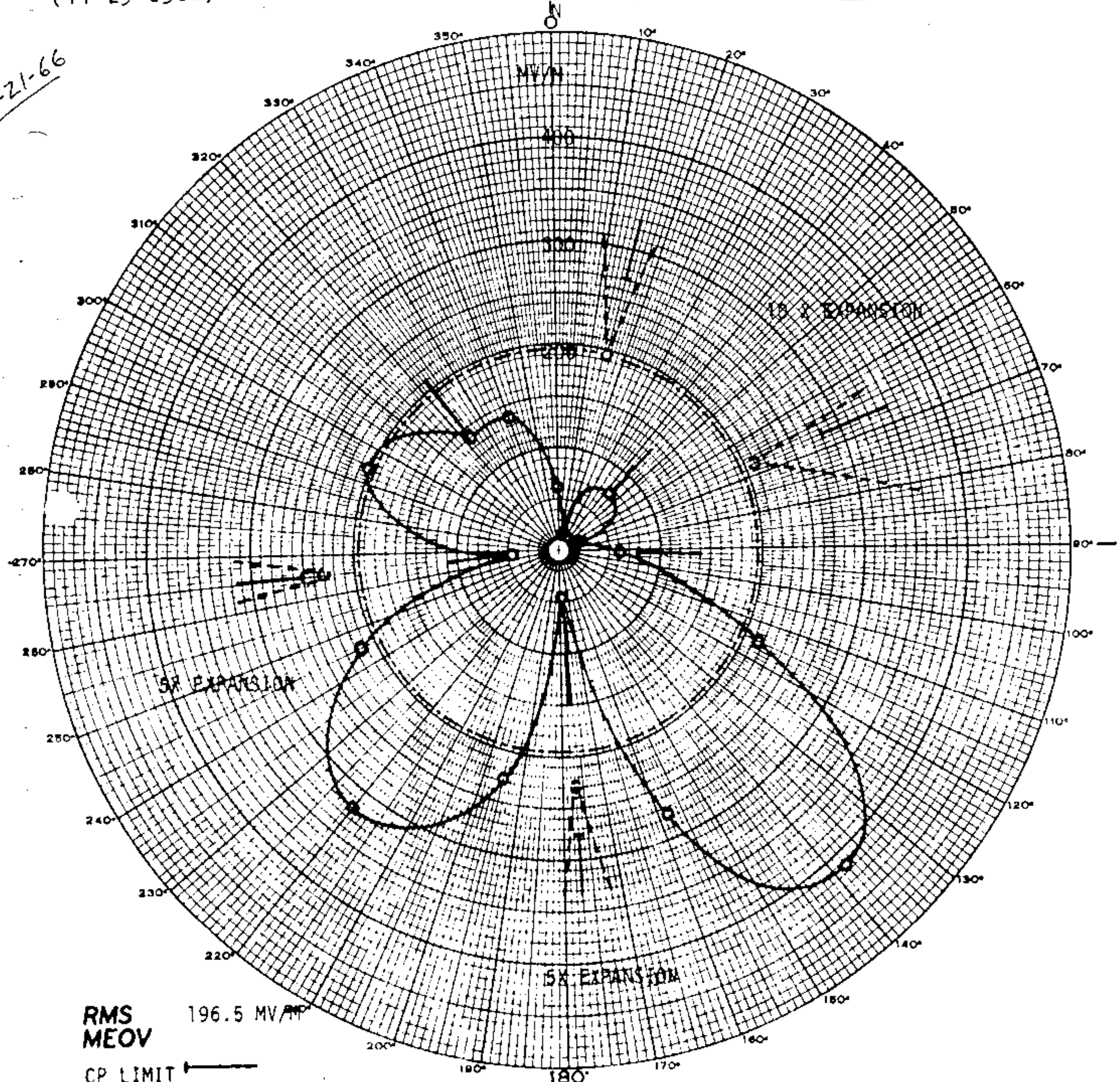
KTRN

Measured Night
(11-29-65ct)

Station KTRN
Wichita Falls, Texas

1kw,5kw-LS,DA-N,U
1290 kc

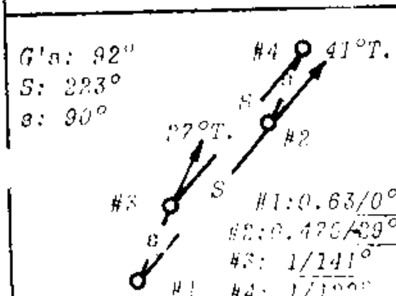
IC 4-21-66



RMS 196.5 MV/M
MEOV

CP LIMIT

TOWER PLACEMENT SKETCH



PATTERN PARAMETERS

TOWER No.	ELECTRICAL HEIGHT G°	SPACING S°	PHASING ψ°	FIELD RATIO f
1				
2				
3				
4				
5				
6				
7				
8				
9				
10				

DAYTIME OPERATION ☐ NIGHTTIME OPERATION ☒

FIGURE 2

KTRN MEASURED NIGHT
DIRECTIONAL PATTERN

July - 1965

θ° 0°

STATION DATA

CALL KTRN
FREQ 1290 Kc
POWER 1 Kw
TYPE DA-N
TIME NIGHT
LAT. 33°57' 38"
LONG. 98° 33' 42"

E.H.MUNN,JR.
RADIO ENGINEER
COLDWATER, MICH.

FCC File No. BL-11134
Accepted 11-23-65

Station KTRN
Wichita Falls, Texas

1290 kc

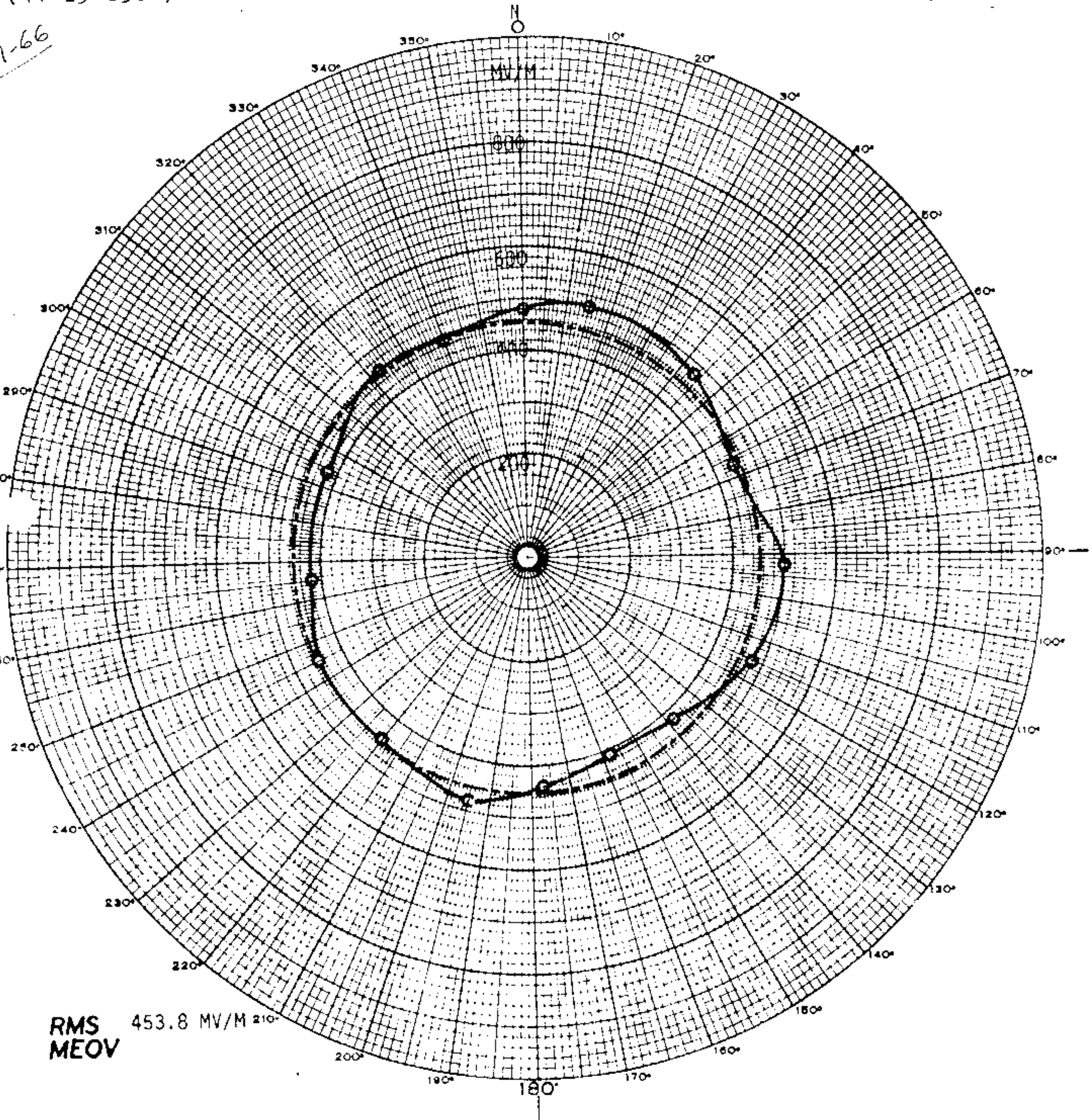
KTRN

LIC 4-21-66

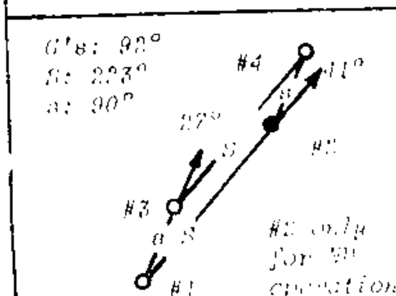
Measured Non-DA
(11-29-65ct)

Station KTRN
Wichita Falls, Texas

1kw,5kw-LS,DA-N,U
1290 kc



RMS MEOV 453.8 MV/M

TOWER PLACEMENT SKETCH	PATTERN PARAMETERS	FIGURE 1	STATION DATA
		KTRN MEASURED DAY NON-DIRECTIONAL TOWER NUMBER 2	**CALL** KTRN **FREQ** 1290 Kc **POWER** 5 Kw **TYPE** DA-N **TIME** DAY **LAT.** 33° 57' 38" **LONG.** 98° 33' 42"
	DAYTIME OPERATION ☑ NIGHTTIME OPERATION ☐	θ^0 0°	**E.H.MUNN, JR.** **RADIO ENGINEER** **COLDWATER, MICH.**

TOWER No	ELECTRICAL HEIGHT $\theta°$	SPACING $S°$	PHASING $\psi°$	FIELD RATIO F
1				
2				
3				
4				
5				
6				
7				
8				
9				
10				

FCC File No. BL-11134
Accepted 11-23-65

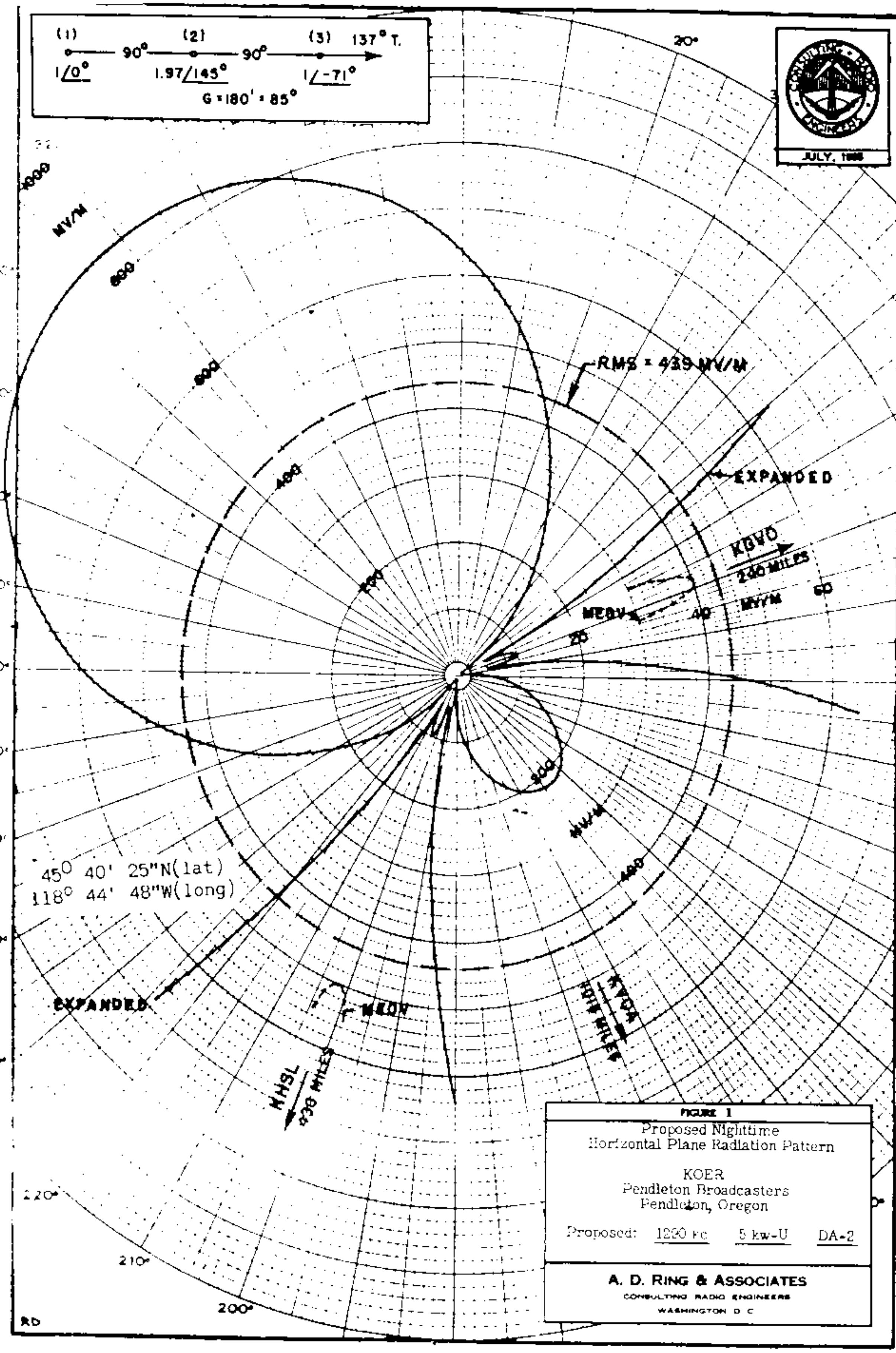
Station KTRN
Wichita Falls, Texas

1290 kc

KUMA

PROPOSED NIGHT (9/8/55G) | STATION KUMA PENDLETON, OREGON | 5KW DA-2, U | 1290 KC

application for change to DA-N granted cp to change to DA-U 0-4-61

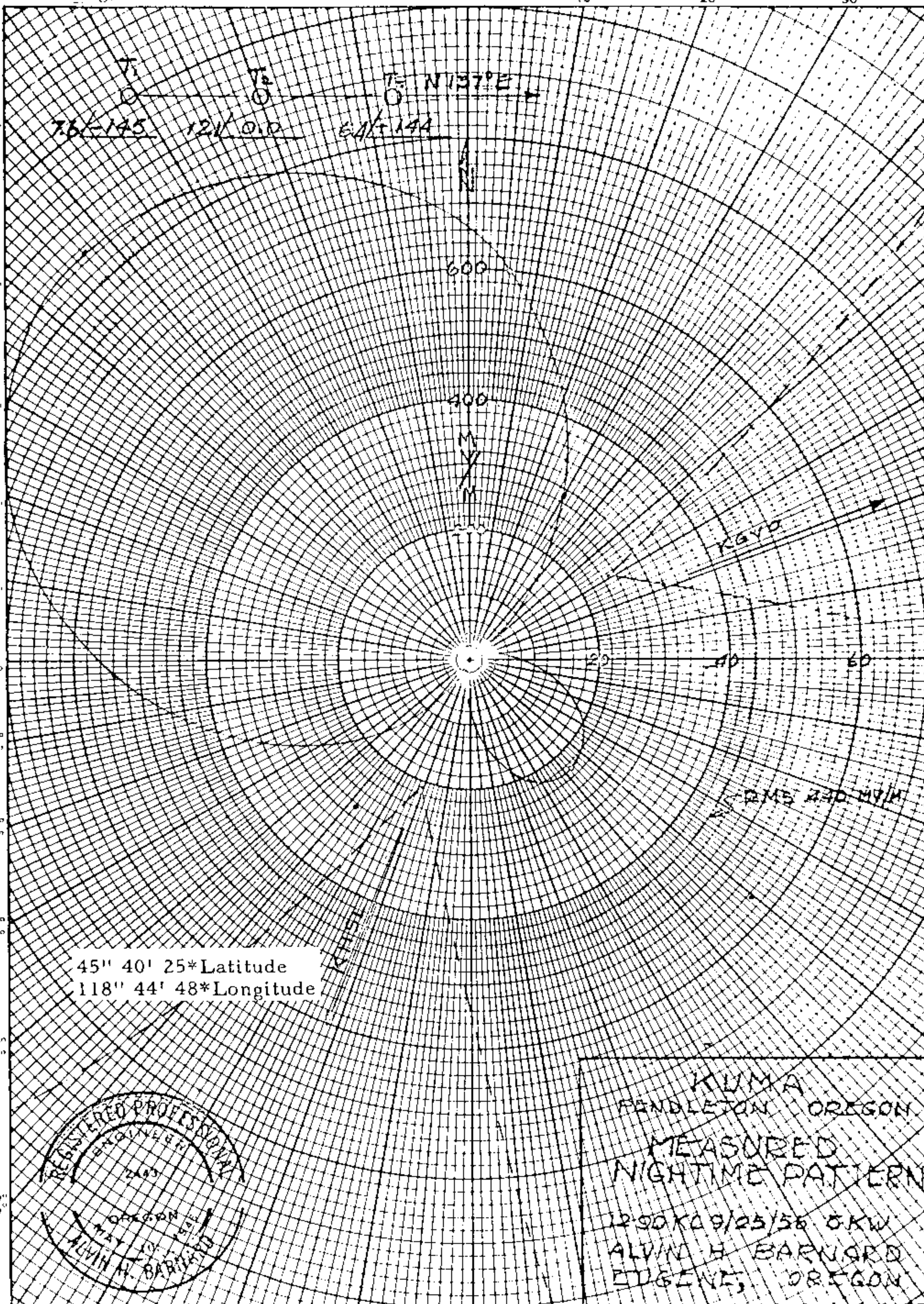


FILE NO. BMP-6928 ACCEPTED FCC 8/11/55 KUMA, Pendleton, Oregon 1290 KC

Granted license
2/6/57

KUMA

MEASURED NIGHT (10-21-56g)   Station K U M A Pendleton, Oregon   5 K W, DA-2, U   1290 K C



FCC File No. BL-6354   Accepted 10-11-56   Station K U M A Pendleton, Oregon   1290 K C

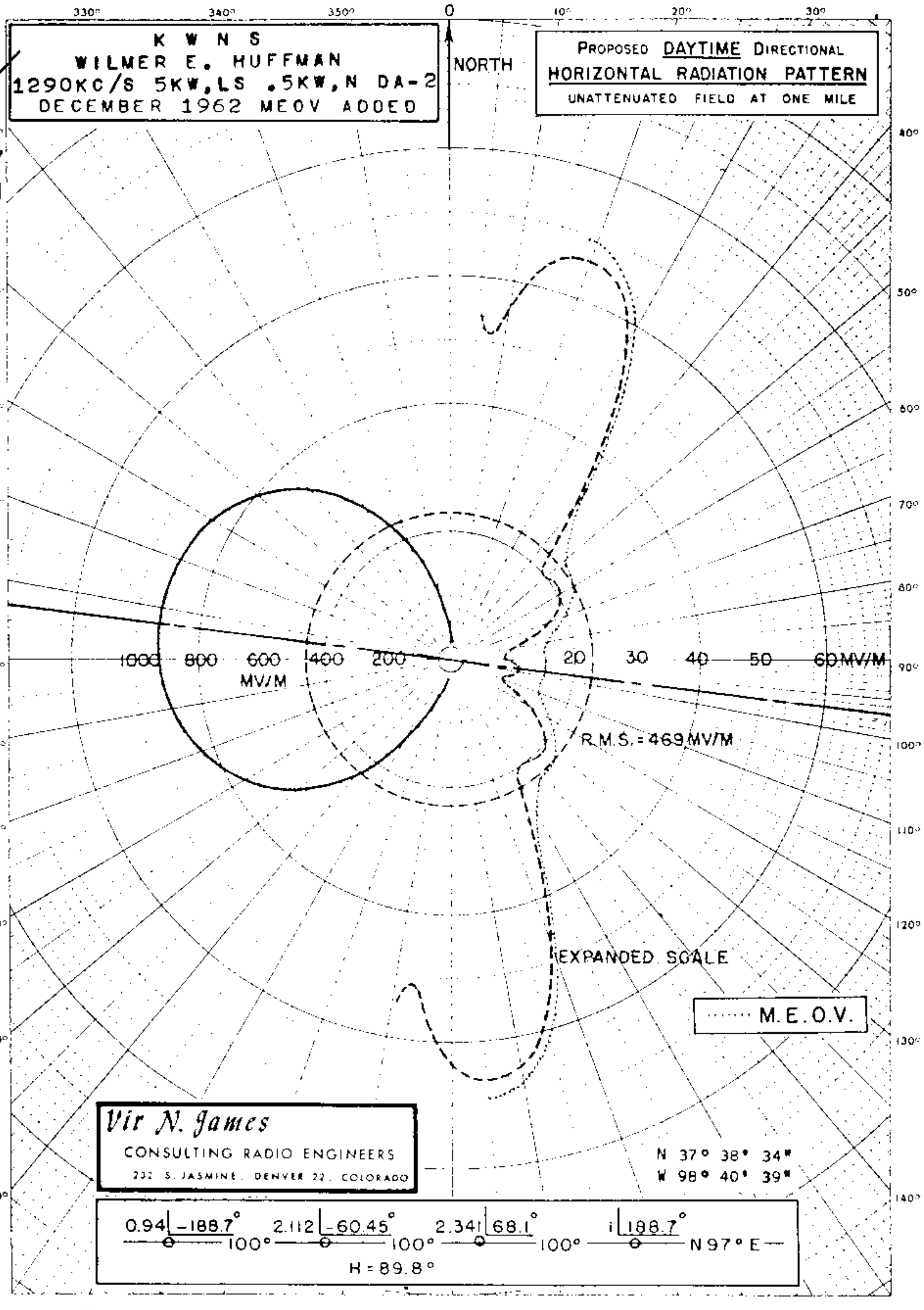
KWNS

Proposed Day
(1-30-63ct)

Station KWNS
Pratt, Kansas

500w,5kw-LS,DA-2,U
1290 kc

12/21/62 granted MCP
day DA changes.
1-16-63 granted
CP to make day
DA changes.



FCC File No. BMP-10737
Accepted 1-10-63

Station KWNS
Pratt, Kansas

1290 kc

KWNS

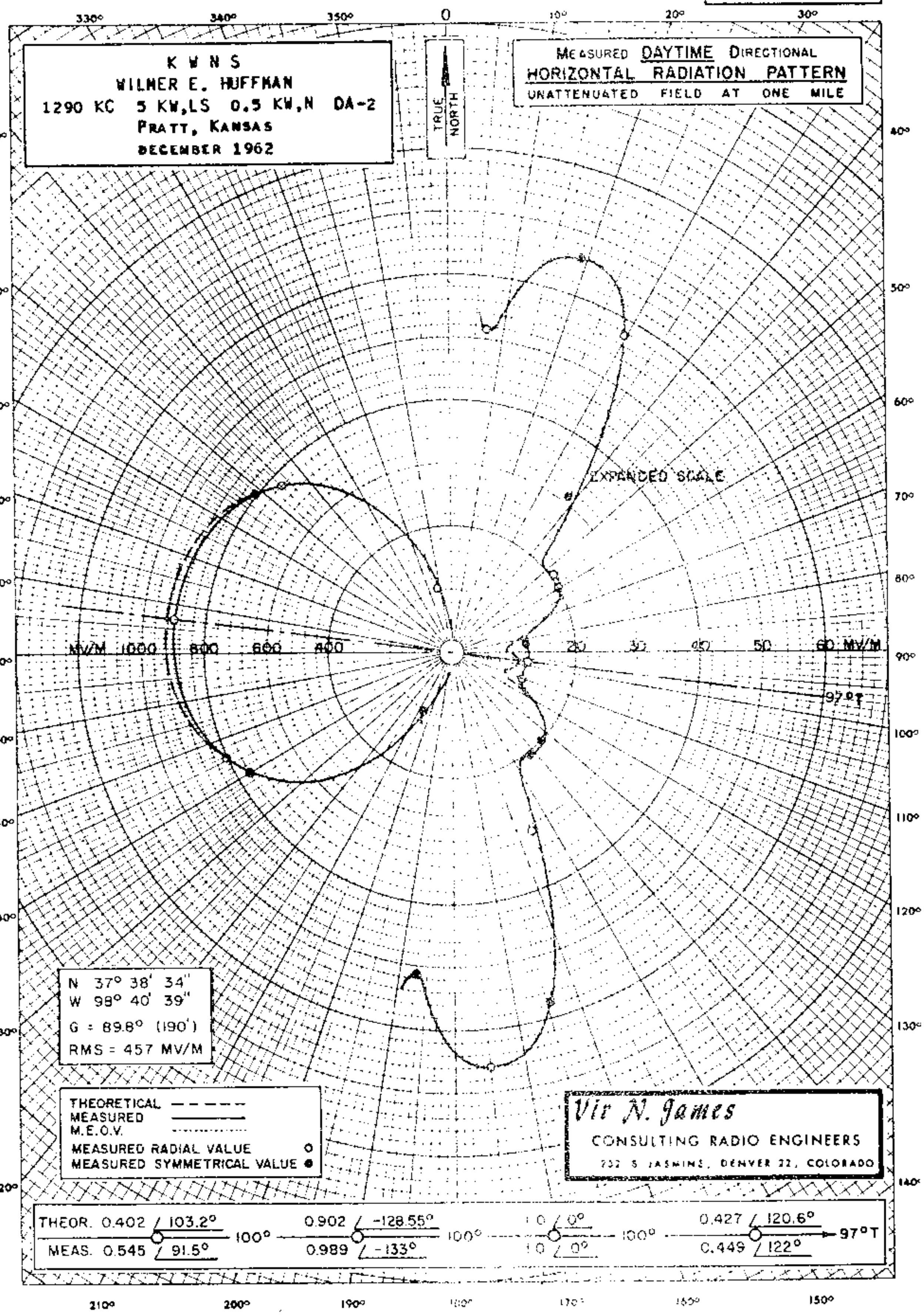
Measured Day
(4-30-63ct)

Station KWNS
Pratt, Kansas

500w,5kw-LS,DA-2,U
1290 kc

4-29-63 granted lic. for new AM station

EXHIBIT E-8.04A



FCC File No.BL-9897
Accepted 4-12-63

Station KWNS
Pratt, Kansas

1290 kc

KWNS

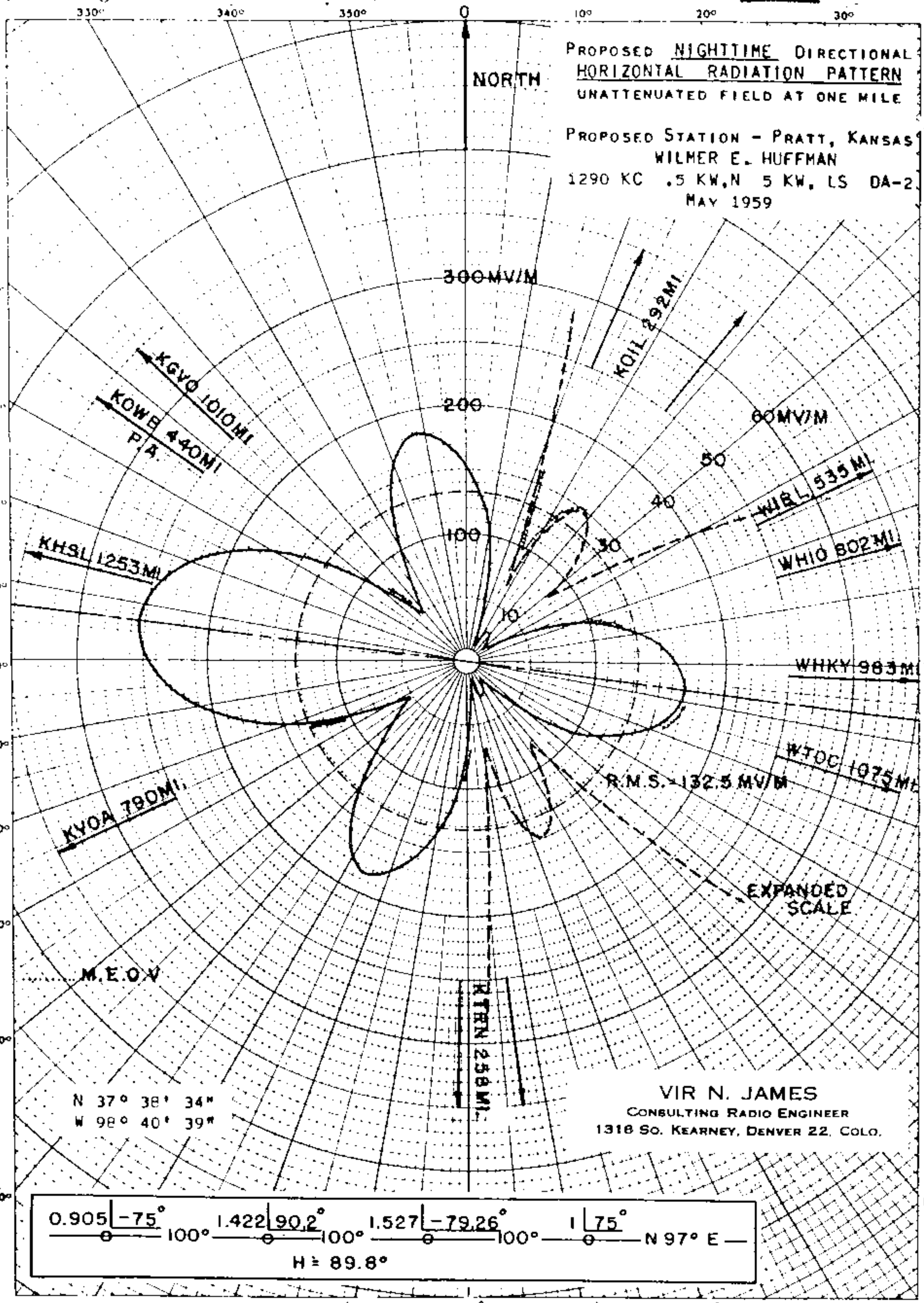
PRATT KANSAS

6-15-61

PROPOSED NIGHT
(6-16-59g)

New; Wilmer E. Huffman 0.50 kw, 5kw-LS, DA-2, U
Pratt, Kansas
1290 KC

1-2-62 granted CP for new station



FCC File No. BP-12021
Accepted 5-18-59 (Amended)

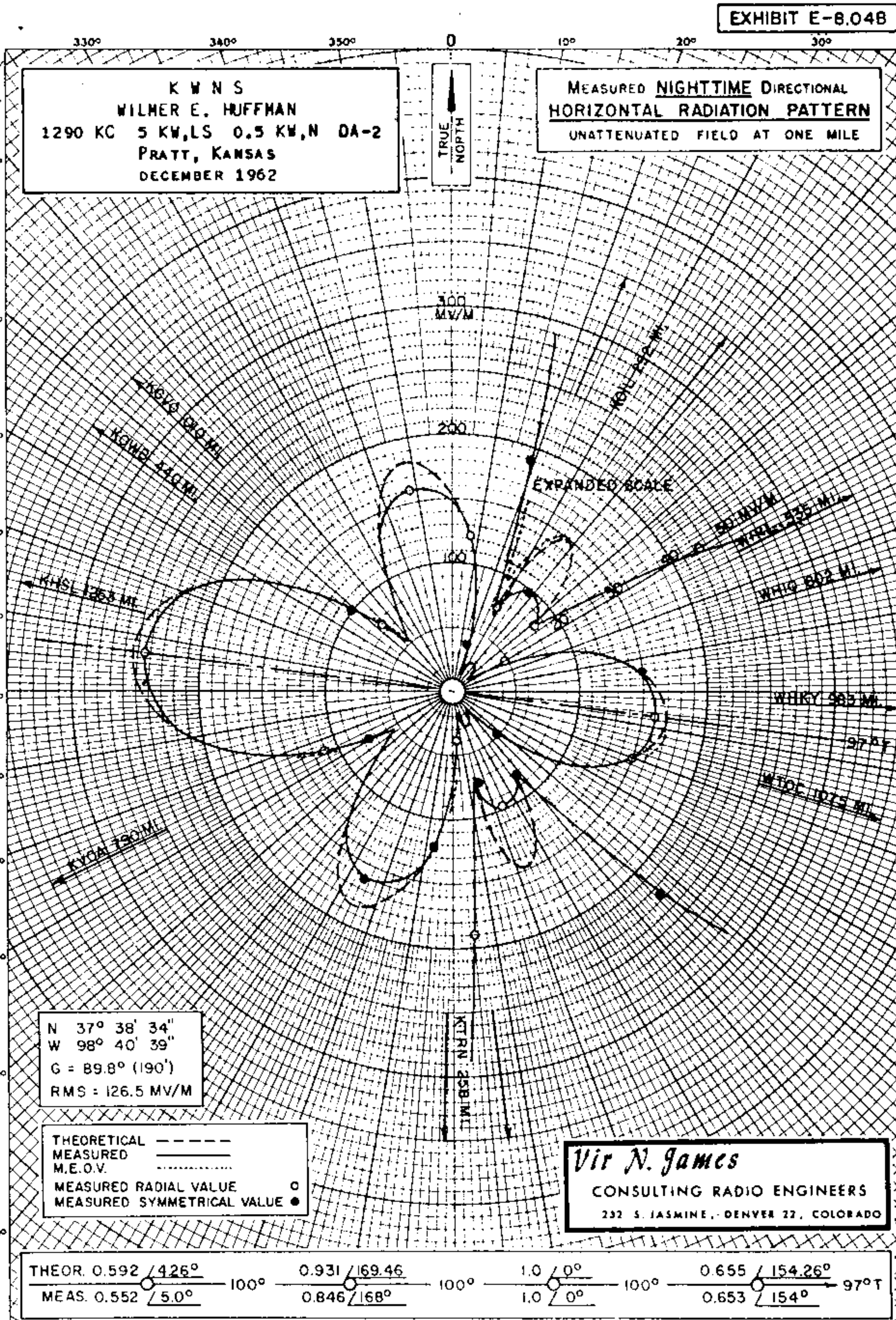
Wilmer E. Huffman
Pratt, Kansas

1290 KC

KWNS

4-29-63 granted lic. for new AM station

EXHIBIT E-6.048



KWNS

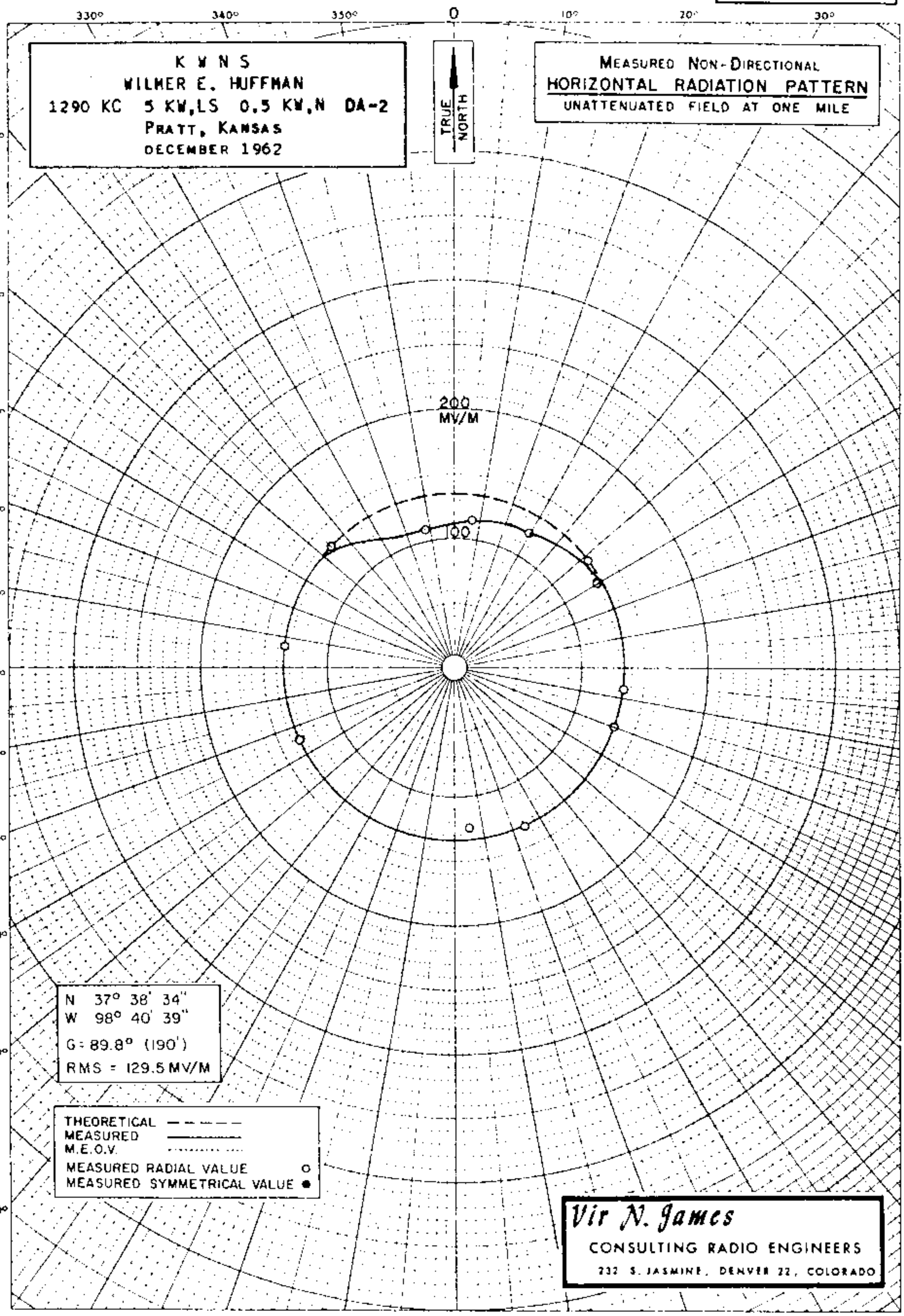
Measured Non-DA
(4-30-63ct)

Station KWNS
Pratt, Kansas

500w,5kw-LS,DA-2,U
1290 kc

EXHIBIT E-8.03A

4-29-63 granted lic. for new AM station



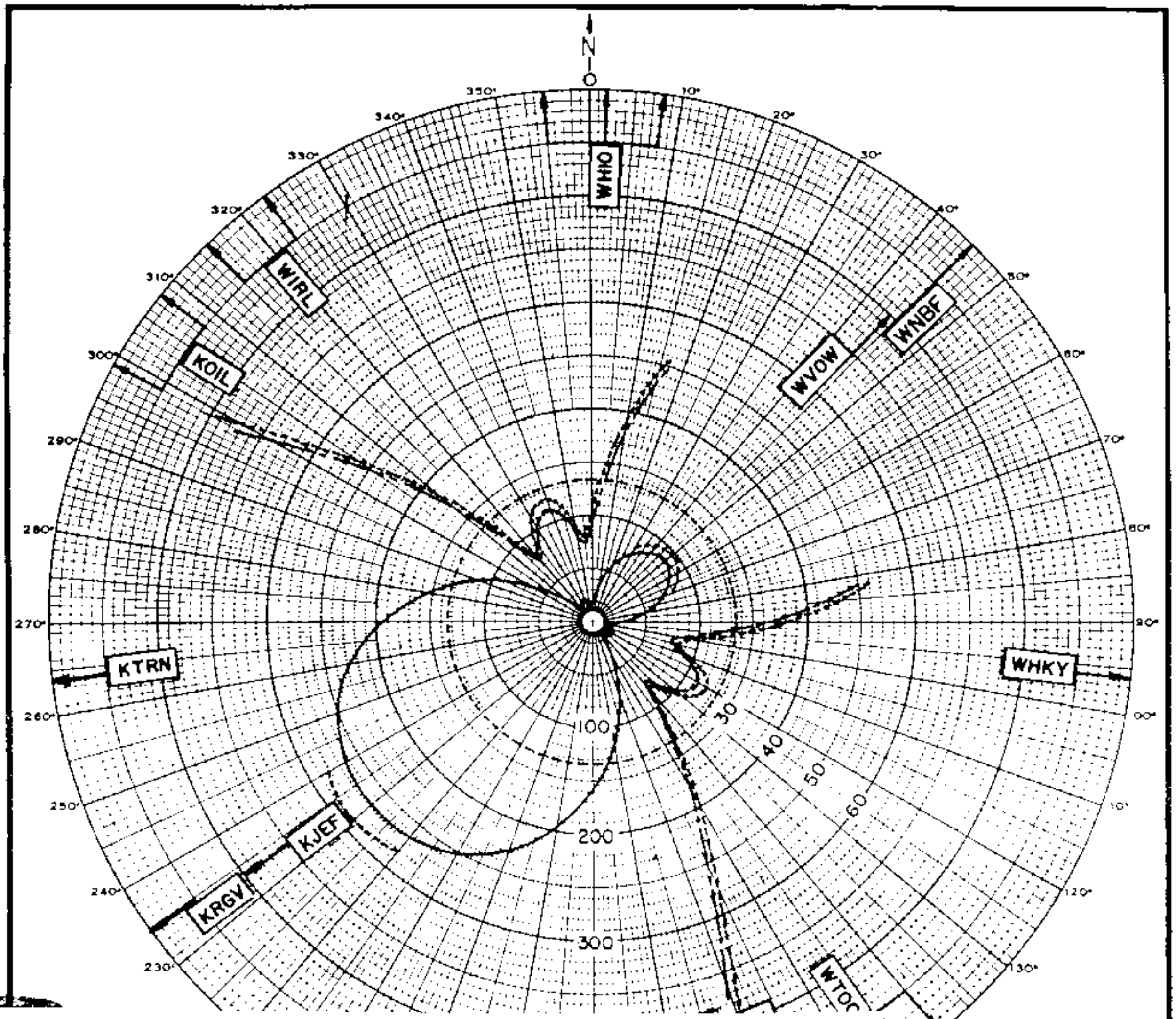
FCC File No.BL-9897
Accepted 4-12-63

Station KWNS
Pratt, Kansas

1290 kc

WATO

PROPOSED NIGHT (10/19/53G) WOKE, OAK RIDGE, TENN. 500W, 1KW-LS, U, DA-N 1290 kc



WATO - Oak Ridge, Tennessee; BP-13833. An application was accepted to increase daytime (non-directional) power to 5kw. Make notation on Measured Night and Measured Non-DA patterns dated 9-30-54g and Proposed Night pattern dated 10-19-53g.

——— EXPANDED SCALE
------- MEOV

ERMS = 134 MV/M

LATITUDE: 36° 03' 02.4"
LONGITUDE: 84° 12' 37.7"

JOHN H. MULLANEY
CONSULTING RADIO ENGINEER
WASHINGTON, D. C.

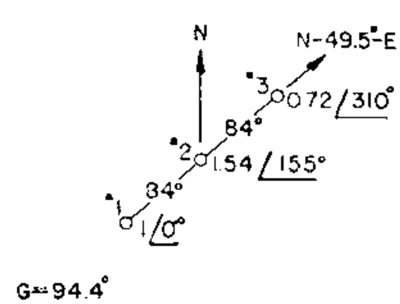


FIGURE 3

NIGHTTIME HORIZONTAL PATTERN

RADIO STATION WOKE
OAK RIDGE, TENN.

1290 KC .5 KW, 1 KW-LS, DA-N, U

FCC File No. BMP-6148 Accepted 10/9/53 WOKE, OAK RIDGE, TENN. 1290 kc

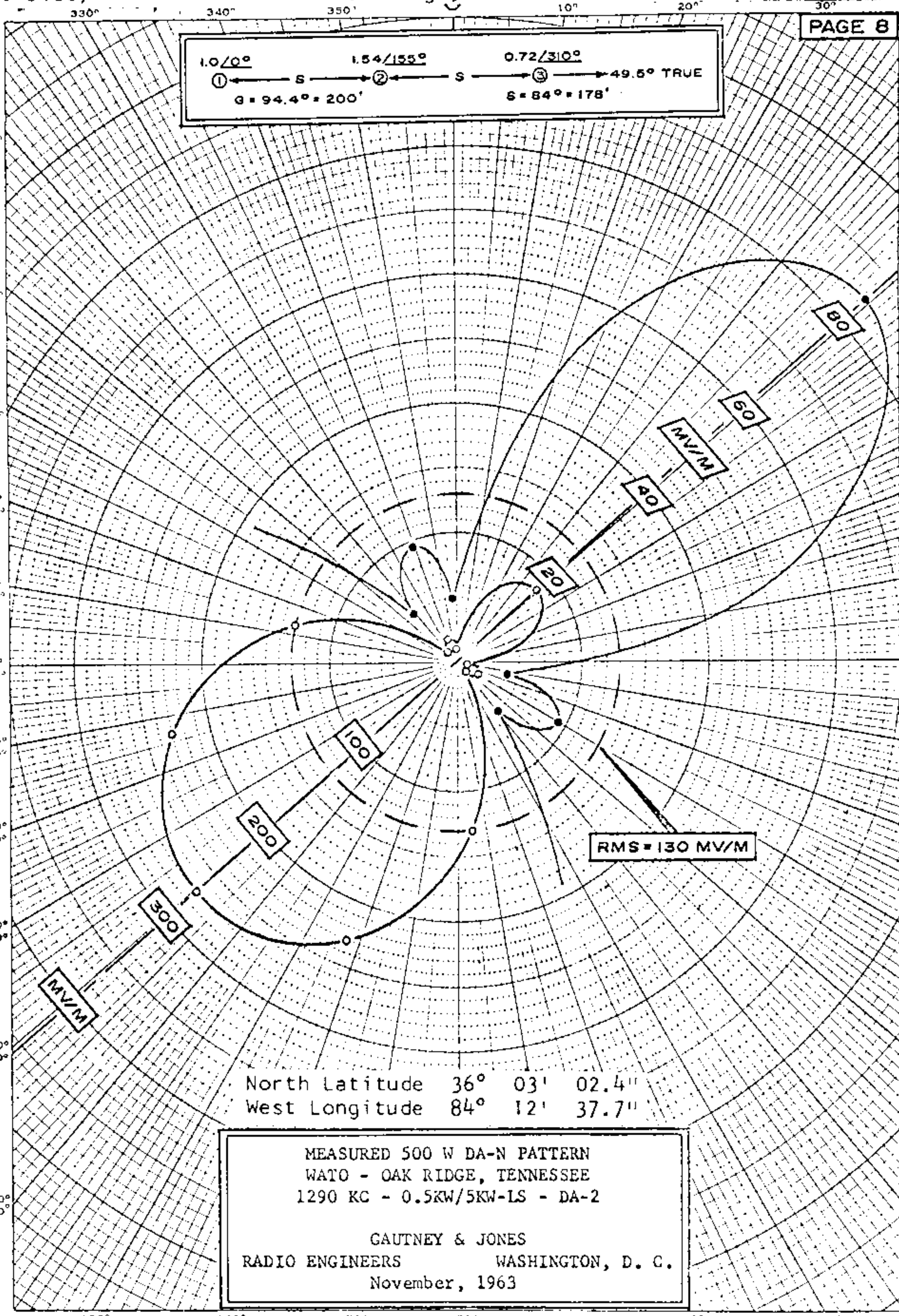
WATO

Measured Night
(3-30-64ct)

Station WATO
Oak Ridge, Tennessee

500w,5kw-LS,DA-2,U
1290kc

01-8-27-64
granted for
DA-2



MEASURED 500 W DA-N PATTERN
WATO - OAK RIDGE, TENNESSEE
1290 KC - 0.5KW/5KW-LS - DA-2

GAUTNEY & JONES
RADIO ENGINEERS WASHINGTON, D. C.
November, 1963

FCC File No. BL-10388
Accepted 2-25-64

Station WATO
Oak Ridge, Tennessee

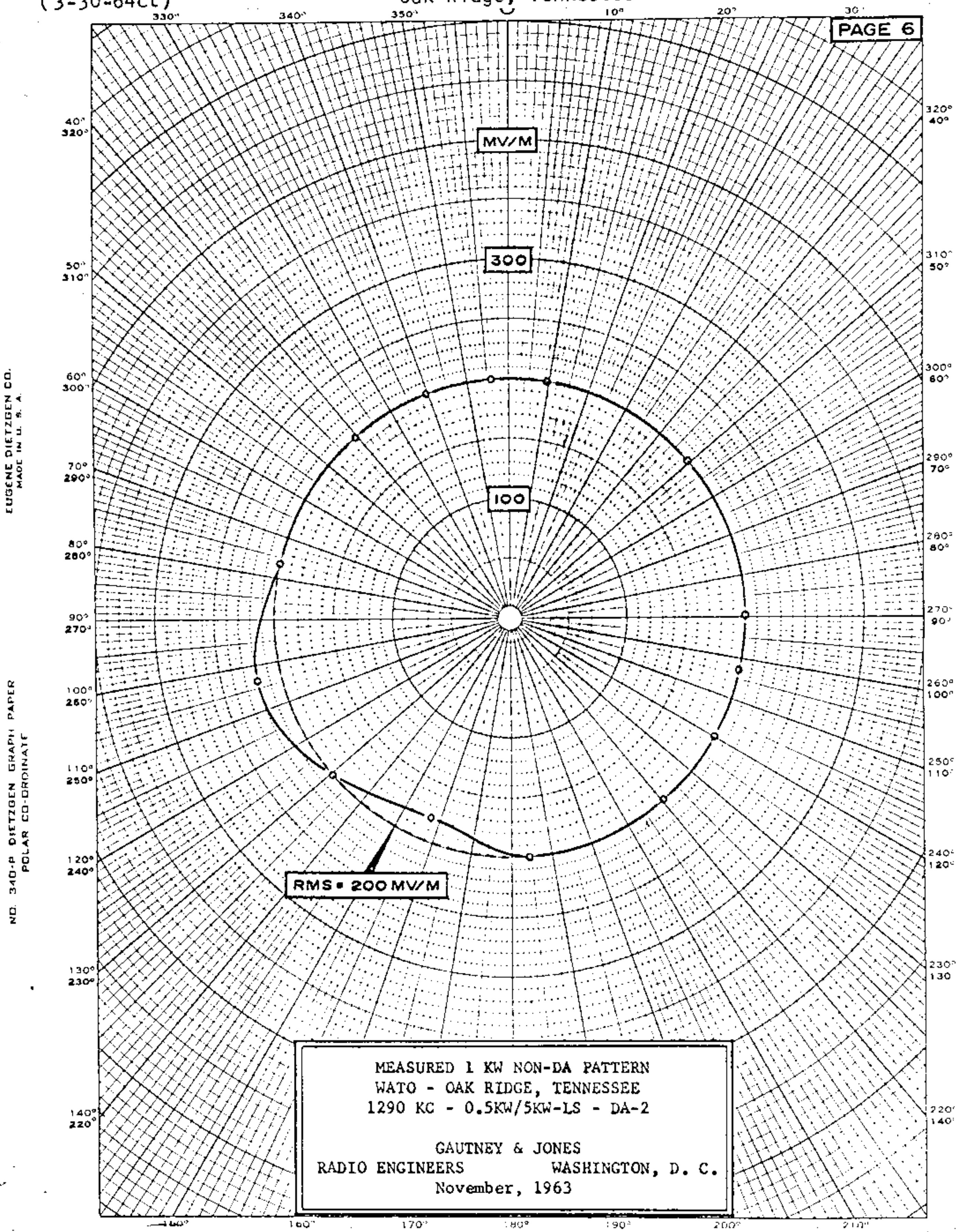
1290kc

WATO

Measured Non-DA
(3-30-64ct)

Station WATO
Oak Ridge, Tennessee

500w,5kw-LS,DA-2,U
1290kc



FCC File No. BL-10388
Accepted 2-25-64

Station WATO
Oak Ridge, Tennessee

1290kc

02/9/73 CP TO MAKE CHANGES IN DA-D PATTERN

WATO

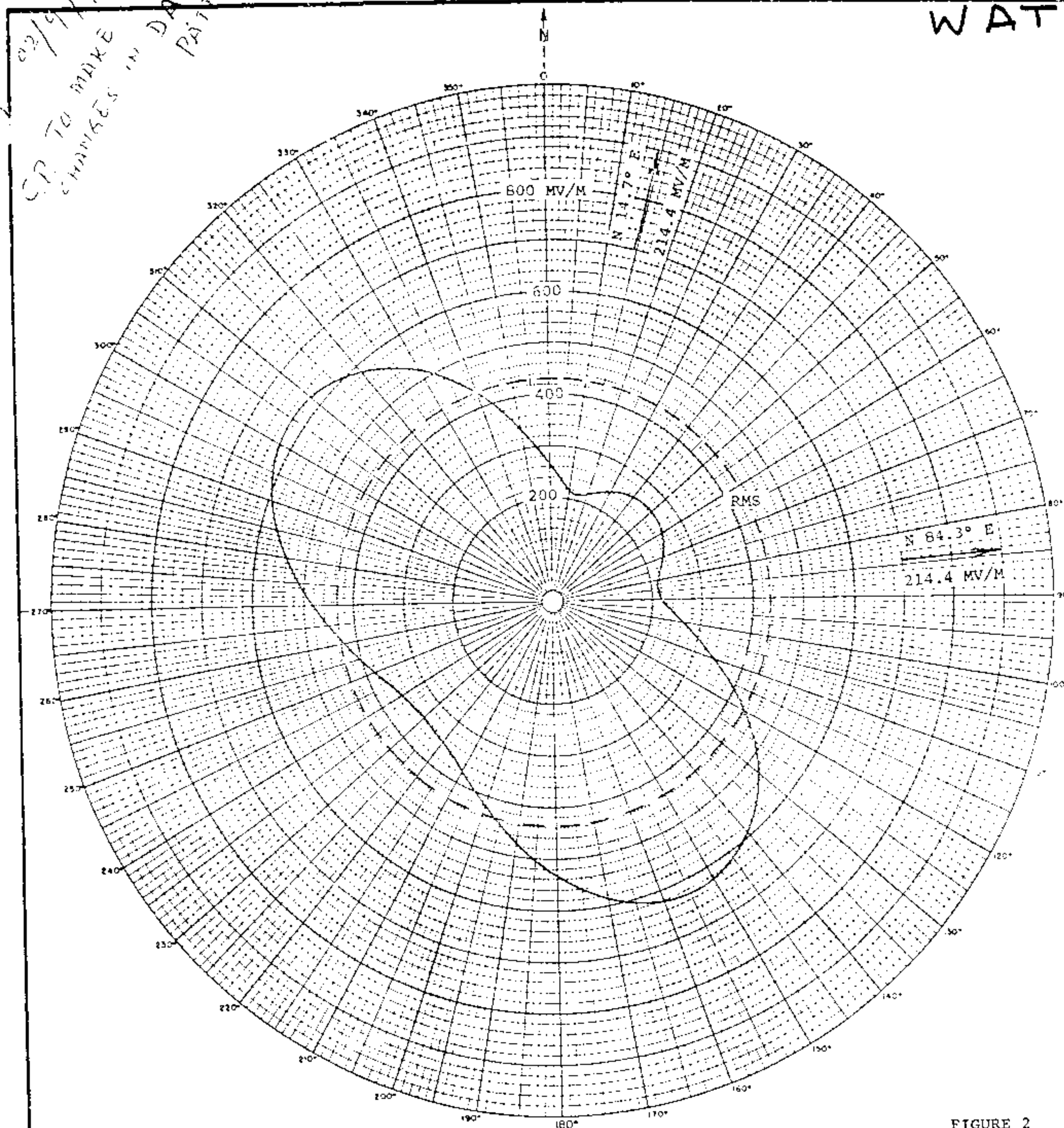
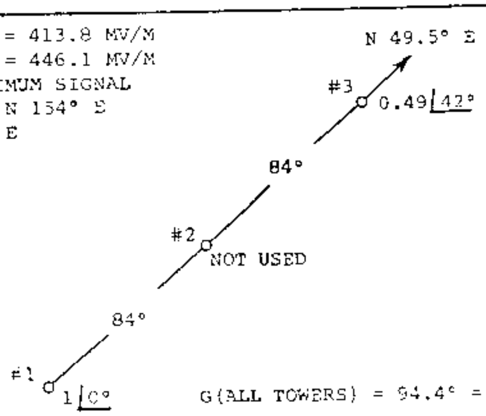


FIGURE 2

HORIZONTAL RADIATION PATTERN

THEORETICAL RMS = 413.8 MV/M
THEORETICAL RSS = 446.1 MV/M
THEORETICAL MAXIMUM SIGNAL
596.5 MV/M @ N 154° E
& N 305° E



G(ALL TOWERS) = 94.4° = 203'

APPLICANT	WATO
LOCATION	OAK RIDGE, TENNESSEE
FREQUENCY	1290 KC/S
POWER	5 KW
LATITUDE	36 DEG 03 MIN. 02 SEC
LONGITUDE	84 DEG. 12 MIN. 38 SEC.
WHEN USED	DAYTIME
RMS FIELD	434.4 MV/M
DATE	JANUARY 1972

Raymond E. Rohrer
CONSULTING ENGINEER
RADIO-TV-COMMUNICATIONS-CATV

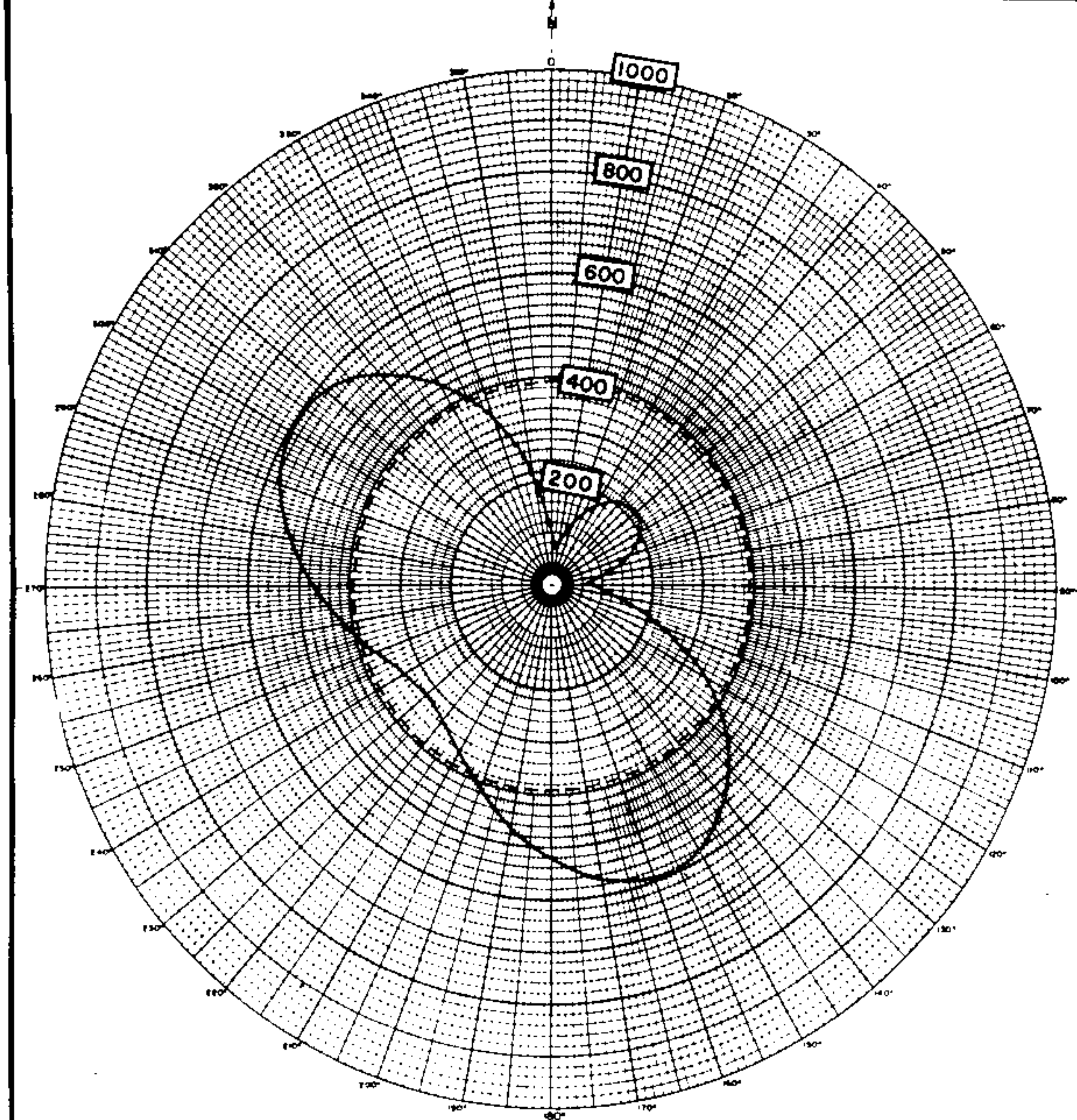
WATO

Proposed Day
(4-27-62ct)

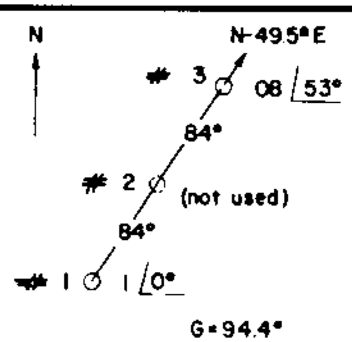
Station WATO
Oak Ridge, Tennessee

500w,5kw-LS,DA-2,U
1290 kc

4-27-62
granted CP
to increase
day power to
5 Kw; change
to DA-2



E_{RMS} = 392 MV/M (by adjustment)



WATO

PROPOSED DAYTIME HORIZONTAL PATTERN

LATITUDE : 36° 03' 02.4"

LONGITUDE : 84° 12' 37.7"

LYNNE C. SMEBY, CONSULTING RADIO ENGINEER
WASHINGTON 15, D. C.
FIGURE 1

FCC File No. BP-13833
Accepted 4-11-62

Station WATO
Oak Ridge, Tennessee

1290 kc

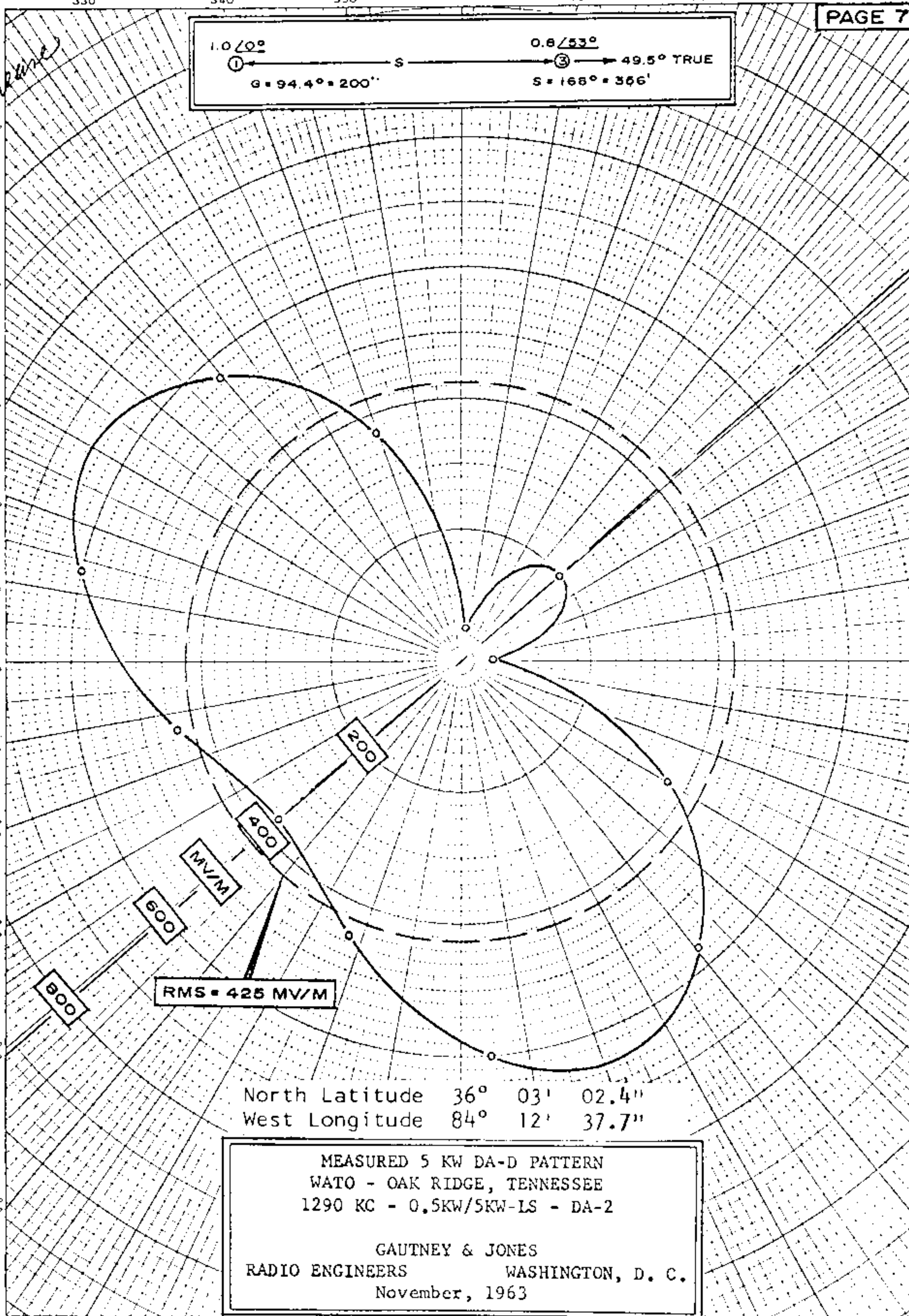
WATO

Measured Day
(3-30-64ct)

Station WATO
Oak Ridge, Tennessee

500w,5kw-LS,DA-2,U
1290kc

.01 granted 8-27-64 for power increase and DA-2



MEASURED 5 KW DA-D PATTERN
WATO - OAK RIDGE, TENNESSEE
1290 KC - 0.5KW/5KW-LS - DA-2

GAUTNEY & JONES
RADIO ENGINEERS WASHINGTON, D. C.
November, 1963

FCC File No. BL-10388
Accepted 2-25-64

Station WATO
Oak Ridge, Tennessee

1290kc

WCHK

DIRECTIONAL ANTENNA DESCRIPTION SHEET

Station: WCHK

Frequency: 1290 kHz

Notirication List No. 1775

Main Studio: Canton, Georgia

Power: 0.5kw Night 5kw Day

Date May 31, 1978 Class: III

GEOGRAPHICAL LOCATION OF THE CENTERS OF THE DAYTIME AND NIGHTTIME ANTENNA SYSTEMS:

DAYTIME

North Latitude: 34° 13' 05"
West Longitude: 84° 30' 19"

NIGHTTIME

North Latitude: 34° 15' 08"
West Longitude: 84° 27' 49"

DAYTIME ANTENNA CHARACTERISTICS

Authorized for Daytime operation. ND-D-192 $\frac{mv}{m}$/kw
Number of elements: 1
Type of elements: Series excited, uniform cross-section, guyed, vertical steel tower.

HEIGHT ABOVE INSULATORS: 199' (94°)

GROUND SYSTEM: 120 200' equally spaced copper radials plus 120 - 50' interspaced radials about the tower.

NIGHTTIME ANTENNA CHARACTERISTICS

Authorized for Nighttime operation. (DA-N)
Number of elements: 3
Type of elements: Series excited, uniform cross-section, guyed, vertical steel towers.

TOWER:	S(#1)	C(#2)	NE(#3)
HEIGHT ABOVE INSULATORS:	191	191	191 (90.18°)
NIGHT PHASING:	0°	+141.5°	+283.0°
NIGHT FIELD RATIO:	1.0	2.049	1.413

SPACING AND ORIENTATION: Adjacent towers in a row are spaced 211.7' (99.96°) on a line bearing 53° true.

GROUND
SYSTEM: 120 - 190.5' equally spaced copper radials plus a 24' square ground screen about each tower. Radials are shortened and bonded to transverse straps along intersections between towers. Centers of system are bonded together.

PREDICTED EFFECTIVE FIELDS AT RATED POWER:

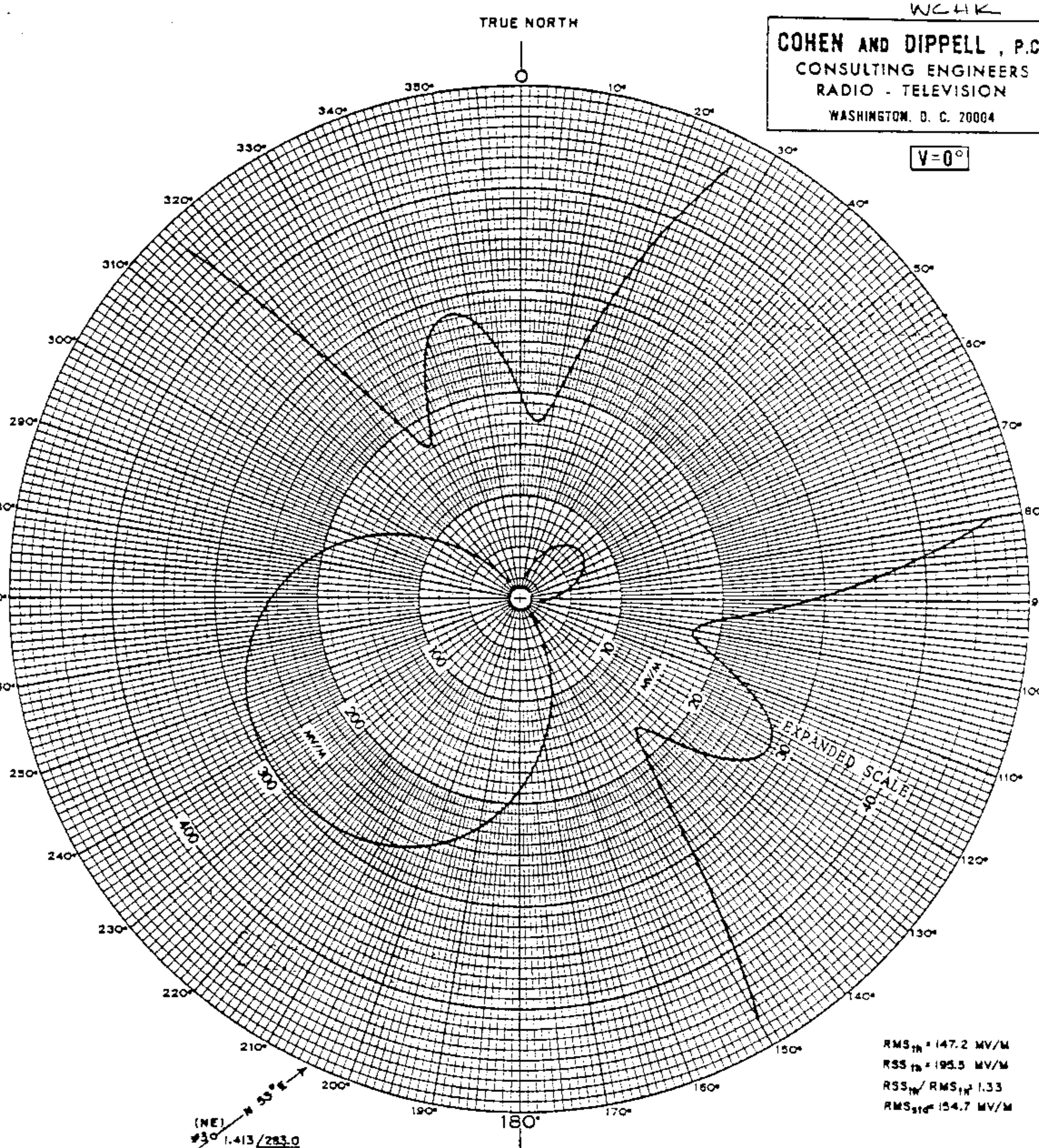
	THEORETICAL		STANDARD
	RMS	RSS	RMS
Night	147.2 mv/m	195.5 mv/m	154.7

Note: This notification concerns a daytime power increase at the previously notified daytime antenna site and the addition of a directional nighttime operation from a different antenna site.

WCHK

COHEN AND DIPPELL, P.C.
CONSULTING ENGINEERS
RADIO - TELEVISION
WASHINGTON, D. C. 20004

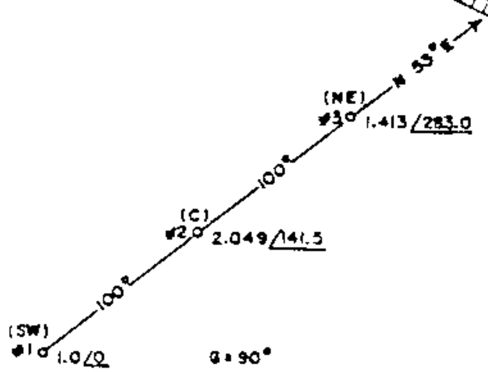
V = 0°



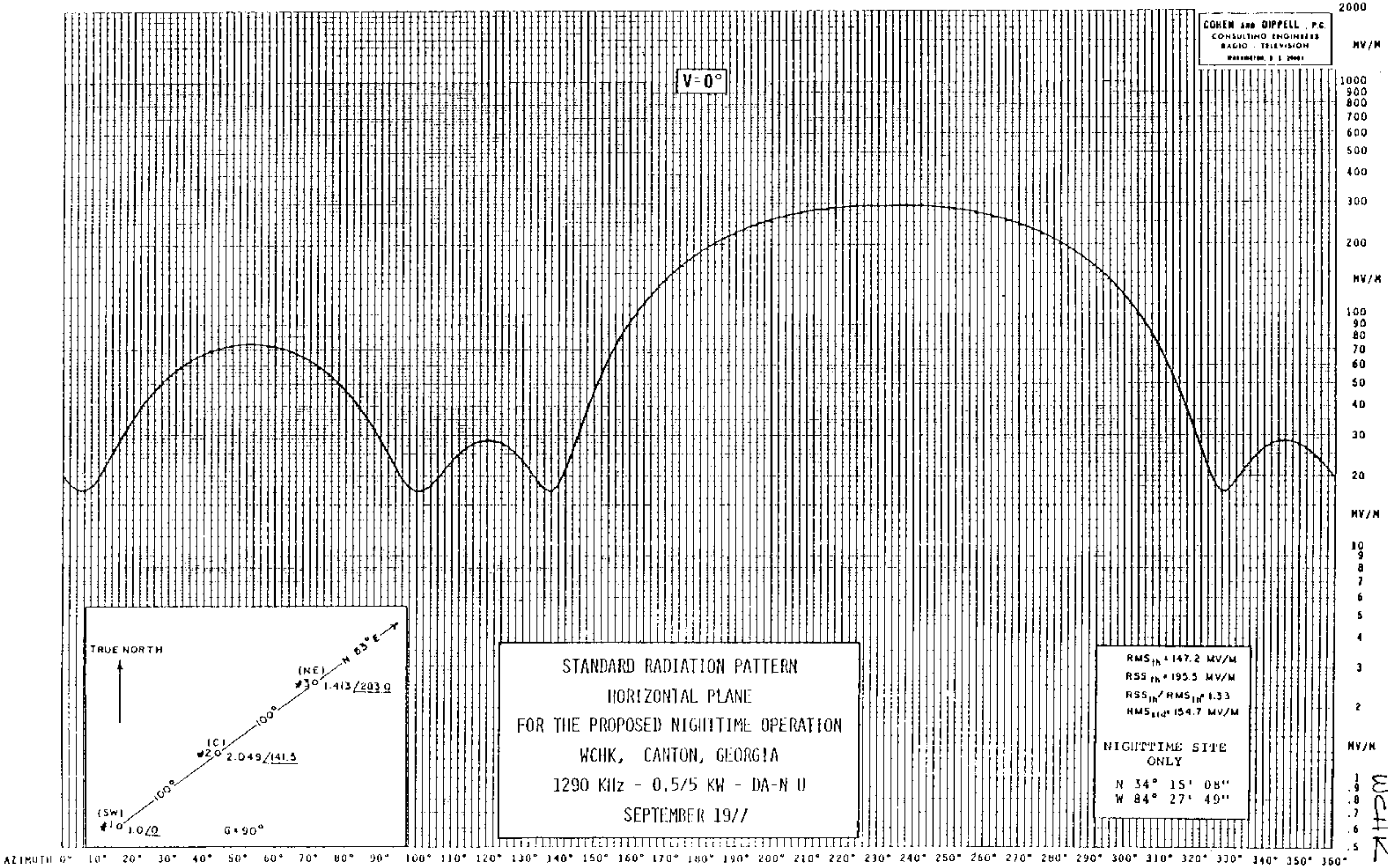
RMS$_{th}$ = 147.2 MV/M
RSS$_{th}$ = 195.5 MV/M
RSS$_{th}$/RMS$_{th}$ = 1.33
RMS$_{std}$ = 154.7 MV/M

NIGHTTIME SITE ONLY

N 34° 15' 08"
W 84° 27' 49"



STANDARD RADIATION PATTERN
HORIZONTAL PLANE
FOR THE PROPOSED NIGHTTIME OPERATION
WCHK, CANTON, GEORGIA
1290 KHz - 0.5/5 KW - DA-N U
SEPTEMBER 1977


COHEN and DIPPELL, P.C.
CONSULTING ENGINEERS
RADIO · TELEVISION
V=0°
STANDARD RADIATION PATTERN
HORIZONTAL PLANE
FOR THE PROPOSED NIGHTTIME OPERATION
WCHK, CANTON, GEORGIA
1290 KHz - 0.5/5 KW - DA-N U
SEPTEMBER 1977
TRUE NORTH
(NE) #3 1.413/203.0
N 63° E
100°
(C) #2 2.049/141.5
100°
(SW) #1 1.0/0
G=90°
RMSth = 147.2 MV/M
RSSth = 195.5 MV/M
RSSth/RMSth = 1.33
RMSstd = 154.7 MV/M
NIGHTTIME SITE ONLY
N 34° 15' 08"
W 84° 27' 49"
MV/M
AZIMUTH
WCHK

WFBG

PROPOSED DAY N10 new freq 10-11-60 Station WFBG 1kw,5kw-LS, DA-2,U
(4-9-58g) Altoona, Pennsylvania 1290 KC

granted CP for Maximfac. (10-28-59)

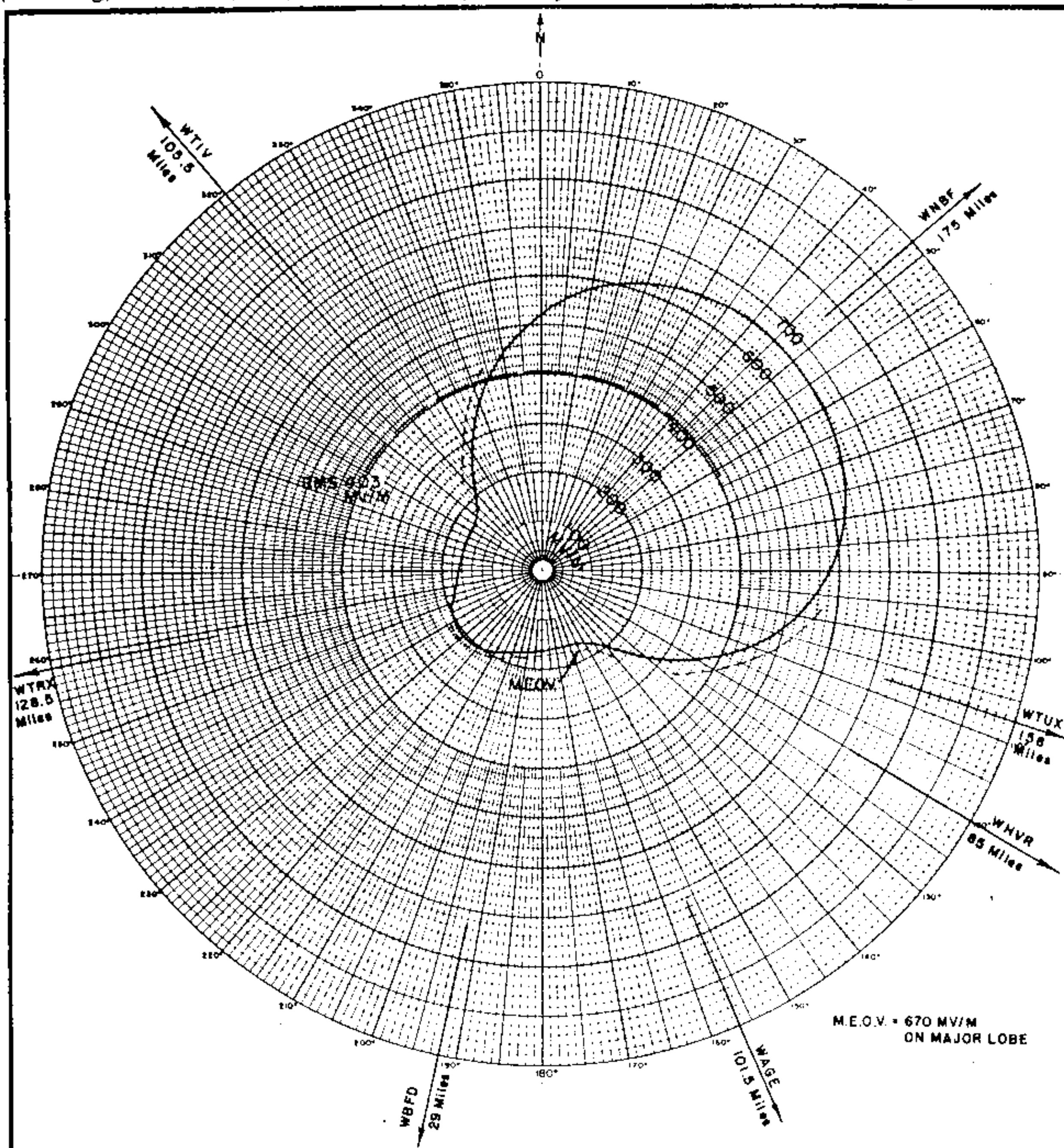
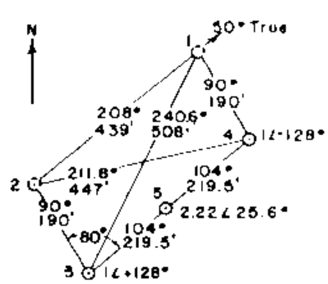


EXHIBIT B

DAYTIME ARRAY



LATITUDE 40° 27' 20" N
LONGITUDE 78° 23' 50" W

ANTENNA NUMBER	AZIMUTH DEG	SPACING DEG	PHASING DEG	FIELD RATIO	MV/M FOR 1 KW	HEIGHT DEG
4	SEE DIAGRAM	SEE DIAGRAM	-128	1.0	211	140°
5			+25.6	2.22	211	140°
3			+128	1.0	211	140°
2			—	—	—	140°
1			—	—	—	140°

DAYTIME HORIZONTAL RADIATION PATTERN FOR PROPOSED WFBG
ALTOONA, PENNSYLVANIA
1290 KC 1KW-5KW U-DA-2
580228

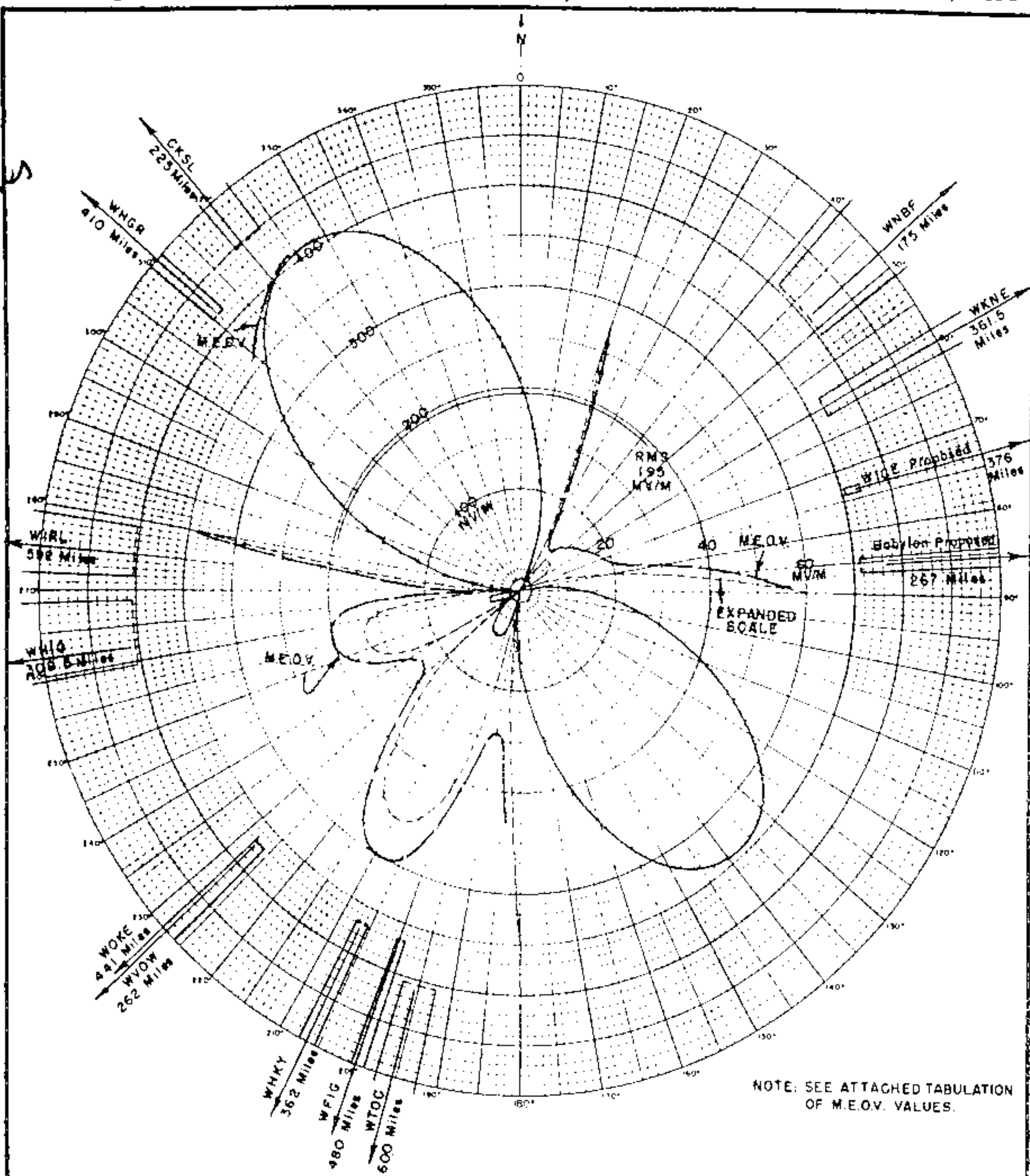
KEAR AND KENNEDY
CONSULTING ENGINEERS
WASHINGTON, D.C.

FCC File No. BP-11,902 WFBG
Accepted 3-31-58 Altoona, Pennsylvania 1290 KC

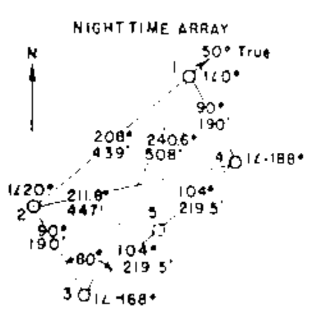
WFBG

PROPOSED NIGHT (12-12-58g) N10 new freq 10-11-60 | Station WFBG Altoona, Pennsylvania | 1kw, 5kw-LS, DA-2, U 1290 KC

granted CP for change in facilities (10-28-59)



APPENDIX "A"



LATITUDE 40° 27' 20" N
LONGITUDE 78° 23' 50" W

ANTENNA NUMBER	AZIMUTH DEG	SPACING DEG	PHASING DEG	FIELD RATIO	MV/M FOR 1 KW	HEIGHT DEG
1	SEE DIAGRAM	SEE DIAGRAM	0	1	211	140°
2			+20°	1	211	140°
3			-168°	1	211	140°
4			-188°	1	211	140°
5			—	—	—	140°

NIGHTTIME HORIZONTAL RADIATION PATTERN FOR PROPOSED WFBG ALTOONA, PENNSYLVANIA

1290 KC 1KW-5KW U-DA-2

681107

KEAR AND KENNEDY
CONSULTING ENGINEERS
WASHINGTON, D.C.

FCC File No. BP-11902 | WFBG
Accepted 11-25-58 Amended | Altoona, Pennsylvania | 1290 KC

MEASURED DAY
(10-18-60g)

Station WFBG — 1kw,5kw-LS, DA-2,U
Altoona, Pennsylvania — 1290 KC

BL-8126 granted L for DA-2 - 3-26-62 change in Xmtr location & change in frequency.

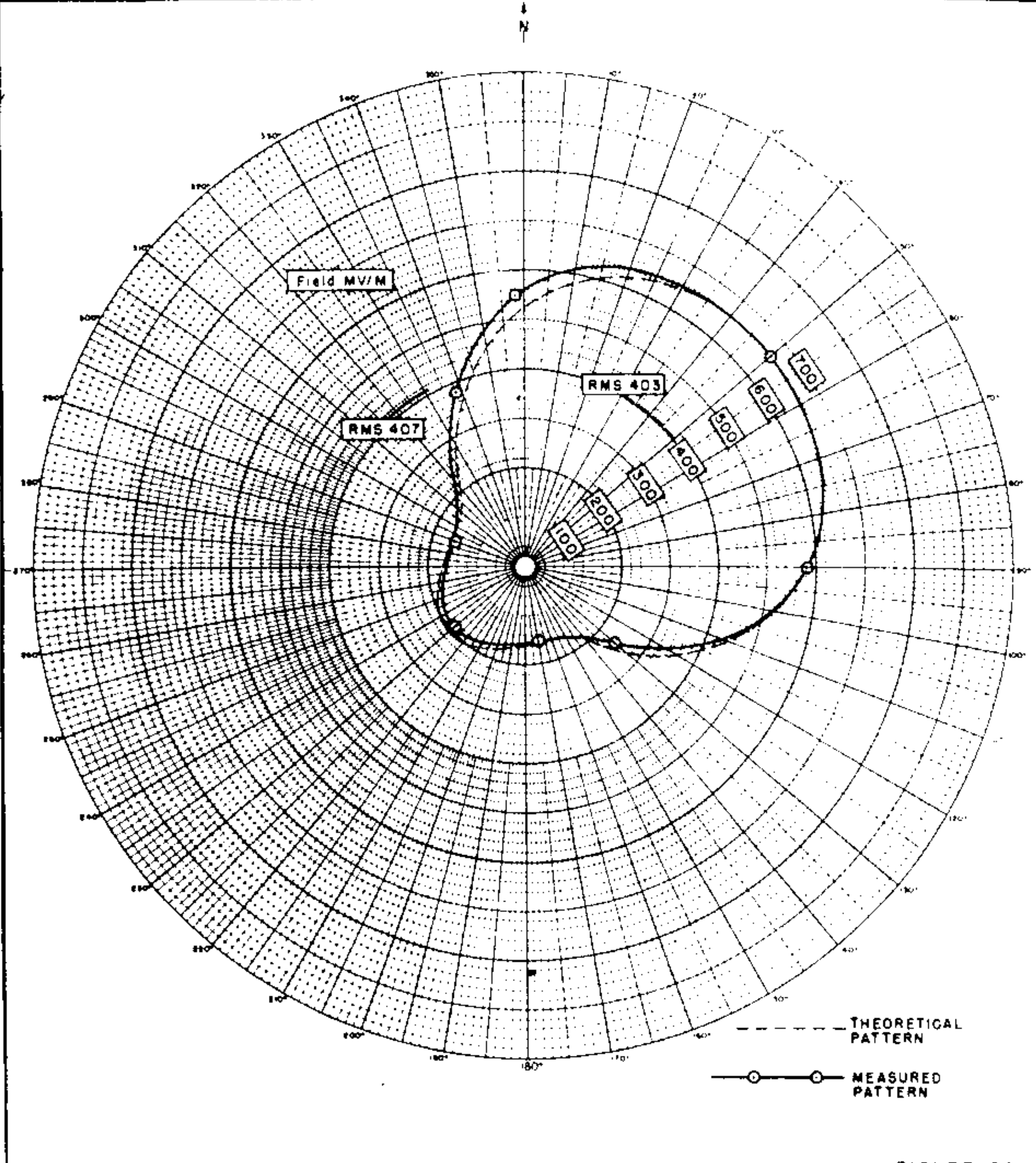
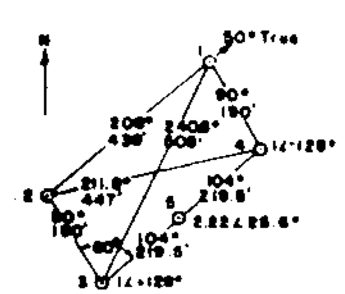


FIGURE 24

DAYTIME ARRAY



LATITUDE 40° 27' 20" North
LONGITUDE 78° 23' 50" West

ANTENNA NUMBER	AZIMUTH DEG	SPACING DEG	PHASING DEG	FIELD RATIO	MV/M FOR 1 KW	HEIGHT DEG
4	SEE DIAGRAM	SEE DIAGRAM	-128	1.0	211	140°
5			+25.6	2.22	211	140°
3			+128	1.0	211	140°
2			—	—	—	140°
1			—	—	—	140°

MEASURED
DAYTIME HORIZONTAL
RADIATION PATTERN
FOR
WFBG
ALTOONA, PENNSYLVANIA
1290 KC 5 KW/1KW DA-2
6009

KEAR AND KENNEDY
CONSULTING ENGINEERS
WASHINGTON, D.C.

FCC File No. BL-8126
Accepted 9-29-60

WFBG
Altoona, Pennsylvania — 1290 KC

WFBG

BL-8126
wanted L for
A 2, change in
xmtr site
increase in power
change in freq.

MEASURED NIGHT (10-18-60g) | Station WFBG, Altoona, Pennsylvania | 1kw,5kw-LS, DA-2,U, 1290 KC

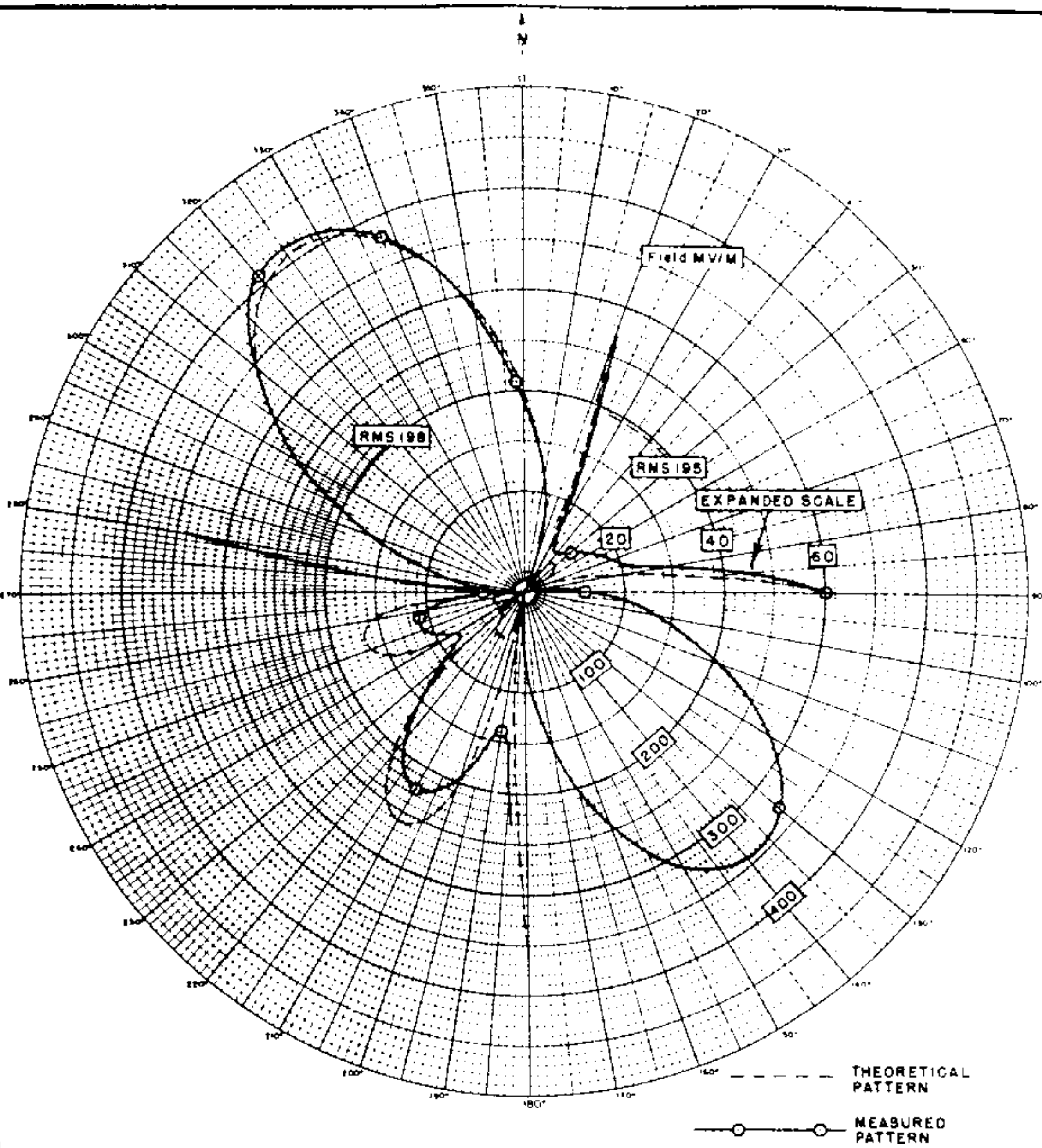
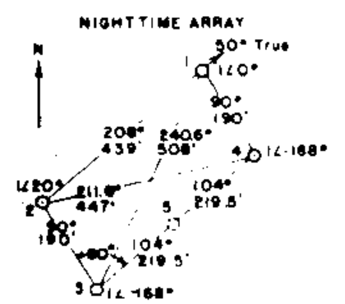


FIGURE 35

NIGHTTIME ARRAY



LATITUDE 40° 27' 20" North
LONGITUDE 78° 23' 50" West

ANTENNA NUMBER	AZIMUTH DEG	SPACING DEG	PHASING DEG	FIELD RATIO	MV/M FOR 1 KW	HEIGHT DEG
1	SEE DIAGRAM	SEE DIAGRAM	0	1	211	140°
2			+20°	1	211	140°
3			-168°	1	211	140°
4			-188°	1	211	140°
5			—	—	—	140°

MEASURED NIGHTTIME HORIZONTAL RADIATION PATTERN FOR

WFBG

ALTOONA, PENNSYLVANIA
1290 KC 5 KW/1 KW DA-2
6009

KEAR AND KENNEDY
CONSULTING ENGINEERS
WASHINGTON, D.C.

FCC File No. BL-8126
Accepted 9-29-60

WFBG
Altoona, Pennsylvania 1290 KC

WFBG

MEASURED NON-DA
(10-18-60g)

Station WFBG 1kw, 5kw-LS, DA-2,U
Altoona, Pennsylvania 1290 KC

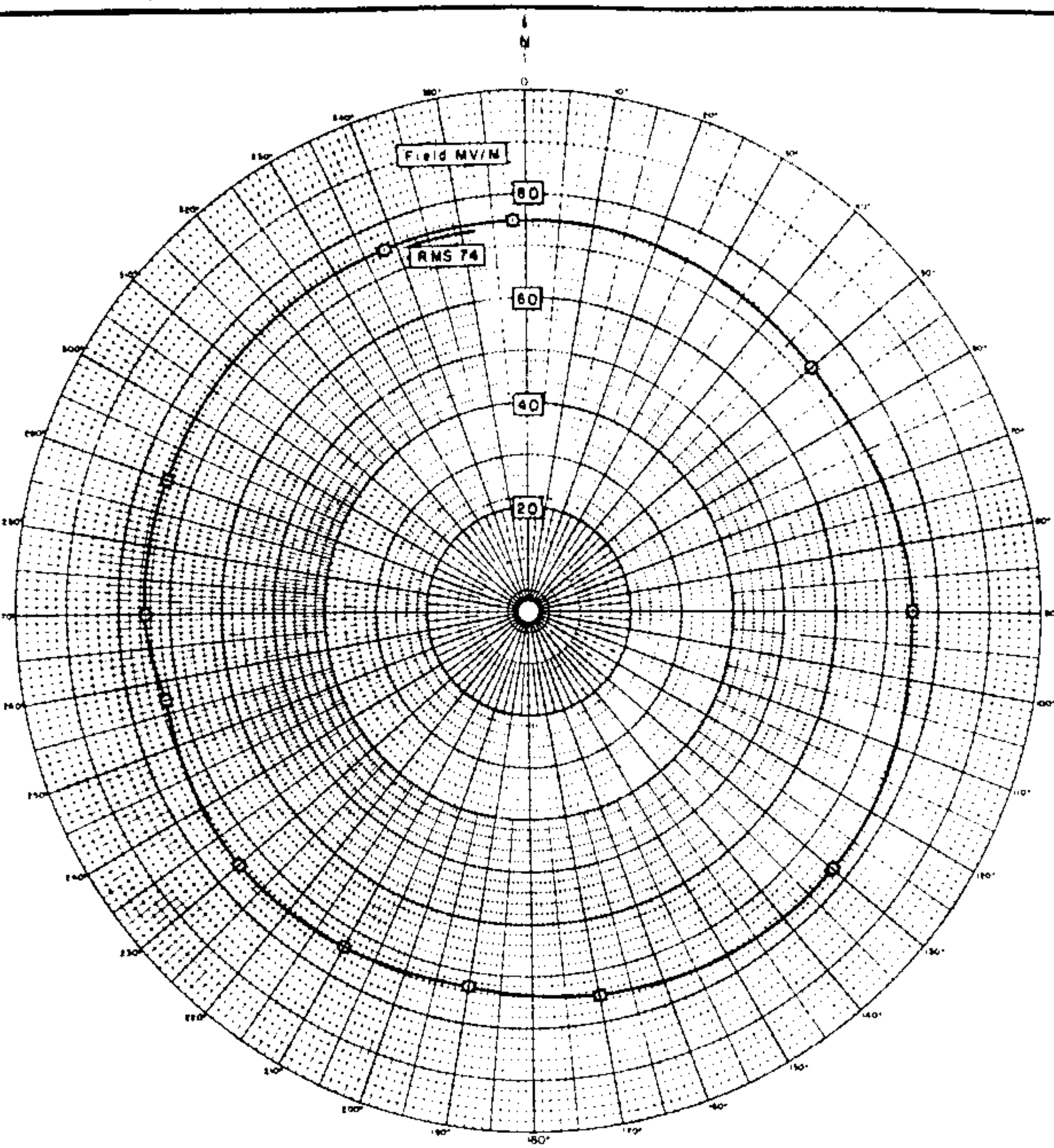


FIGURE 15

NOTE: DATA TAKEN WITH ONLY TOWER NO. 5 ERECTED - OTHER TOWERS INSTALLED LATER.

LATITUDE 40° 27' 20" North
LONGITUDE 78° 23' 50" West

ANTENNA NUMBER	AZIMUTH DEG	SPACING DEG	PHASING DEG	FIELD RATIO	MV M FOR 1 KW	HEIGHT DEG

WFBG

ALTOONA, PENNSYLVANIA

NON-DIRECTIONAL ANTENNA NO. 5 ONLY MEASURED AT 1200 KC 140 WATTS.

600910

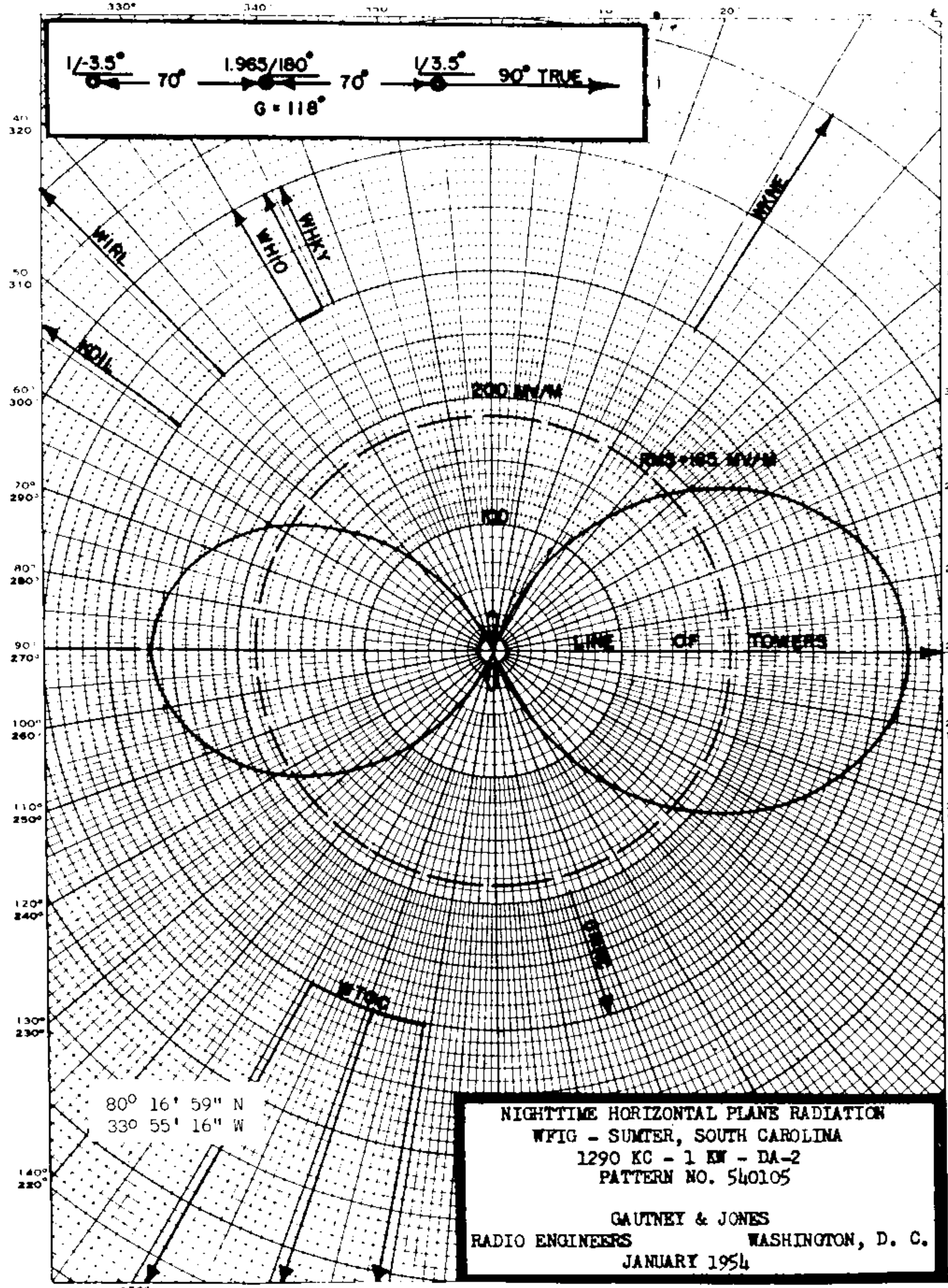
KEAR AND KENNEDY
CONSULTING ENGINEERS
WASHINGTON, D.C.

FCC File No. BL-8126
Accepted 9-29-60

WFBG
Altoona, Pennsylvania 1290 KC

WFIG

PROPOSED WFIG, SUMTER, S. C. 1KW, U, DA-2 1290 kc
NIGHT (2/5/54G)

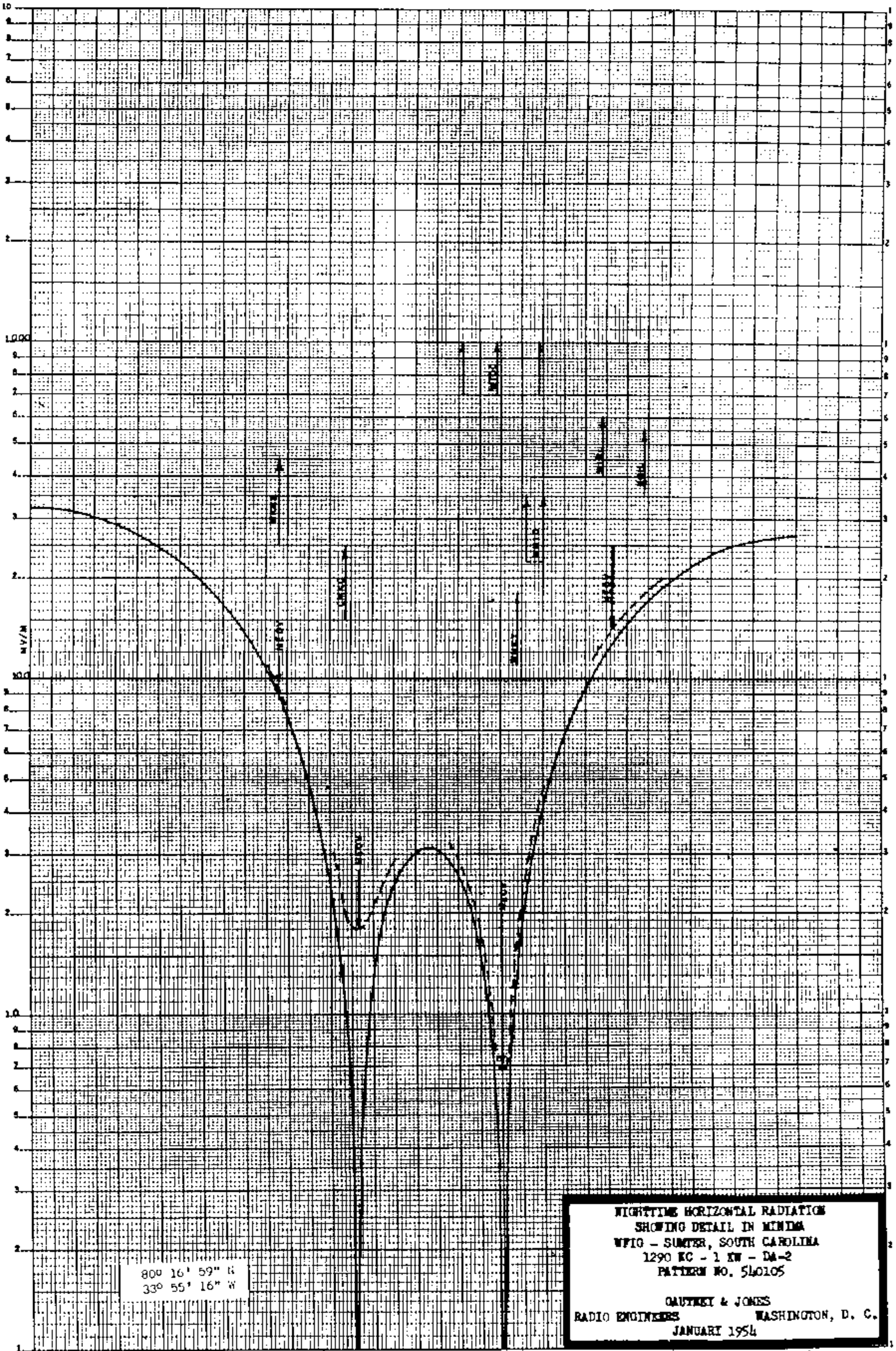


NIGHTTIME HORIZONTAL PLANE RADIATION
WFIG - SUMTER, SOUTH CAROLINA
1290 KC - 1 KW - DA-2
PATTERN NO. 540105

GAUTNEY & JONES
RADIO ENGINEERS WASHINGTON, D. C.
JANUARY 1954

WFIG

PROPOSED NIGHT (2/2/54G) NULLS   WFIG, SUMTER, S. C.   1KW, U, DA-2   1290 kc



NIGHTTIME HORIZONTAL RADIATION
SHOWING DETAIL IN MINIMA
WFIG - SUMTER, SOUTH CAROLINA
1290 KC - 1 KW - DA-2
PATTERN NO. 540105

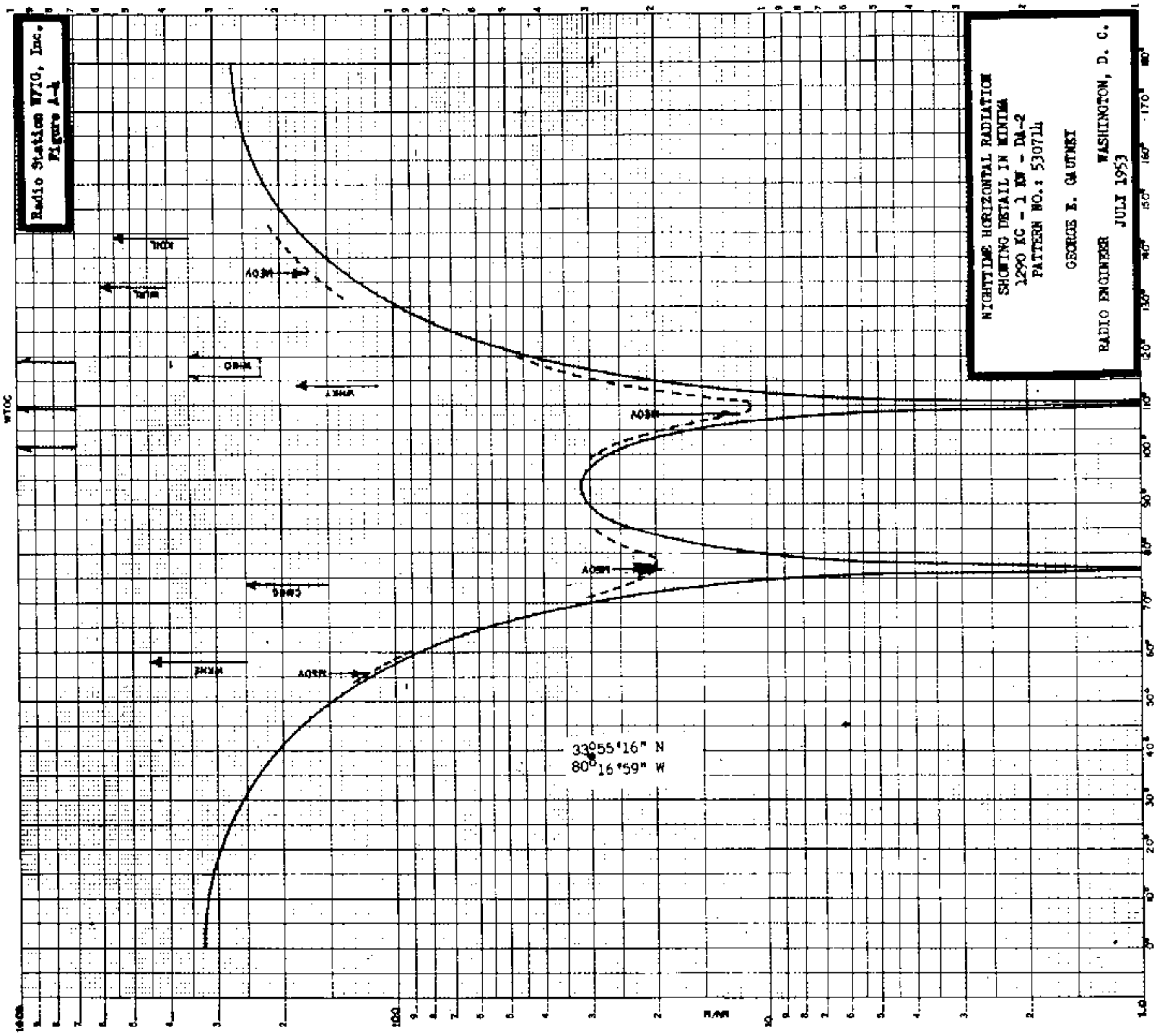
GAUTNEY & JONES
RADIO ENGINEERS   WASHINGTON, D. C.
JANUARY 1954

80° 16' 59" W
33° 55' 16" N

FCC File No. BP-8792 Amended Accepted 1/15/54   WFIG, SUMTER, S. C.   1290 kc

WFIG

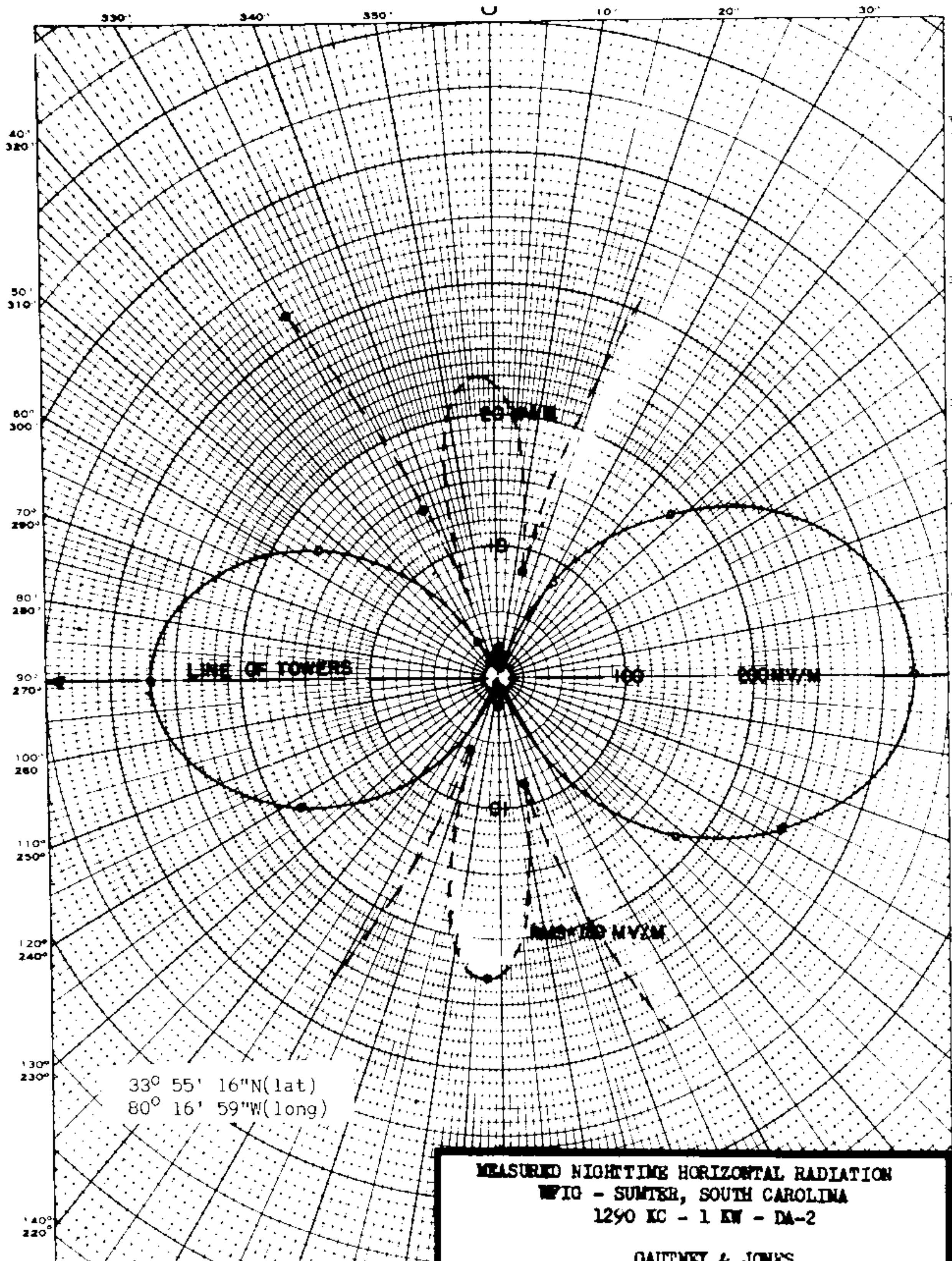
PROPOSED WFIG, SUMTER, N. C. 1KW, U, DA-2 1290 kc
NIGHT (8/3/53G)



FCC File No. BP-8792 Amended Accepted 7/28/53 WFIG, SUMTER, N. C. 1290 kc

WFIG

MEASURED NIGHT (2/4/55G) | STATION WFIG SUMTER, SOUTH CAROLINA | 1 KW DA-2, U | 1290 KC



MEASURED NIGHTTIME HORIZONTAL RADIATION
WFIG - SUMTER, SOUTH CAROLINA
1290 KC - 1 KW - DA-2

RADIO ENGINEERS **GAUTNEY & JONES** **WASHINGTON, D.C.**
November, 1954

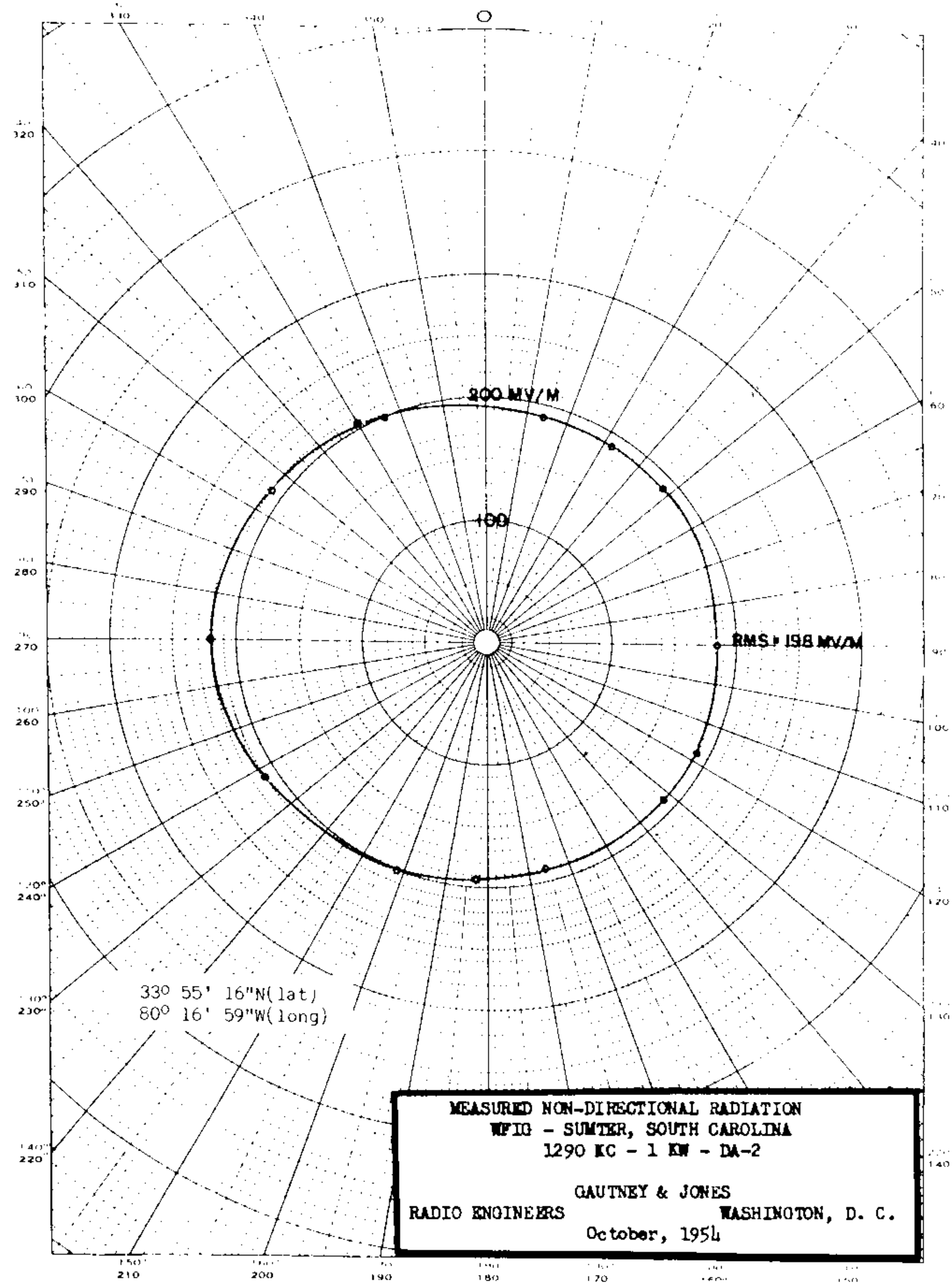
WFIG

MEASURED NON-DIRECTIONAL (2/4/55G)

STATION WFIG
SUMTER, SOUTH CAROLINA

1 KW
DA-2, U

1290 KC



MEASURED NON-DIRECTIONAL RADIATION
WFIG - SUMTER, SOUTH CAROLINA
1290 KC - 1 KW - DA-2

GAUTNEY & JONES
RADIO ENGINEERS WASHINGTON, D. C.
October, 1954

FILE NO. BL-5609 Accepted 12/10/55 WFIG, Sumter, South Carolina 1290 KC

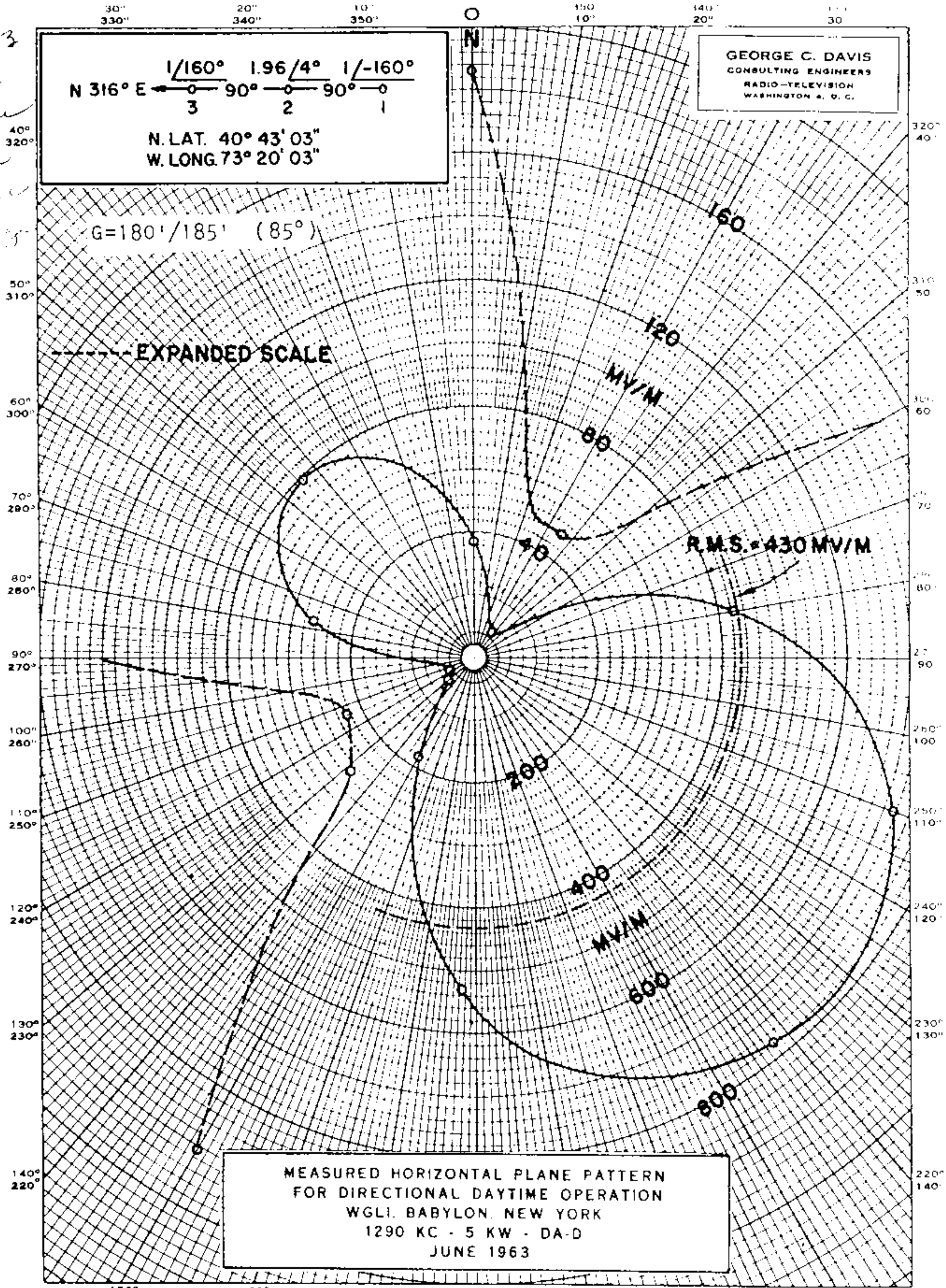
WGLI

Measured Day
(8-23-63ct)

Station WGLI
Babylon, New York

1kw,5kw-LS,DA-D,D
1290 kc

7-25-63 Granted ... for ... day power ... change ... SH



FCC File No.BL-10176
Accepted 8-2-63

Station WGLI
Babylon, New York

1290 kc

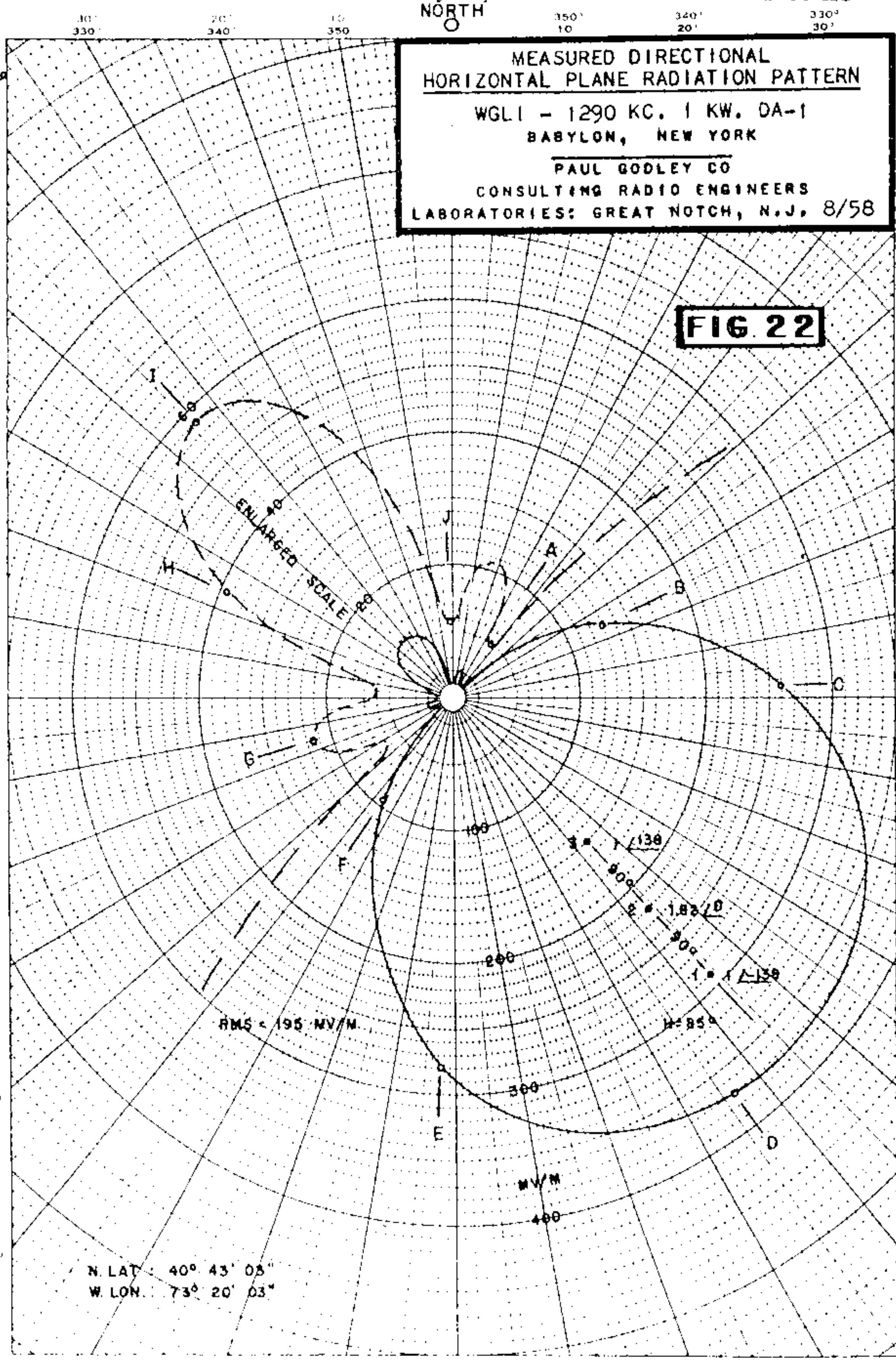
WGLI

MEASURED DAY & NIGHT
(10-24-58g)

Station WGLI
Babylon, New York

1kw, DA-1,U
1290 KC

Granted license 2/6/59 for new station



FCC File No. BL-7226
Accepted 10-14-58

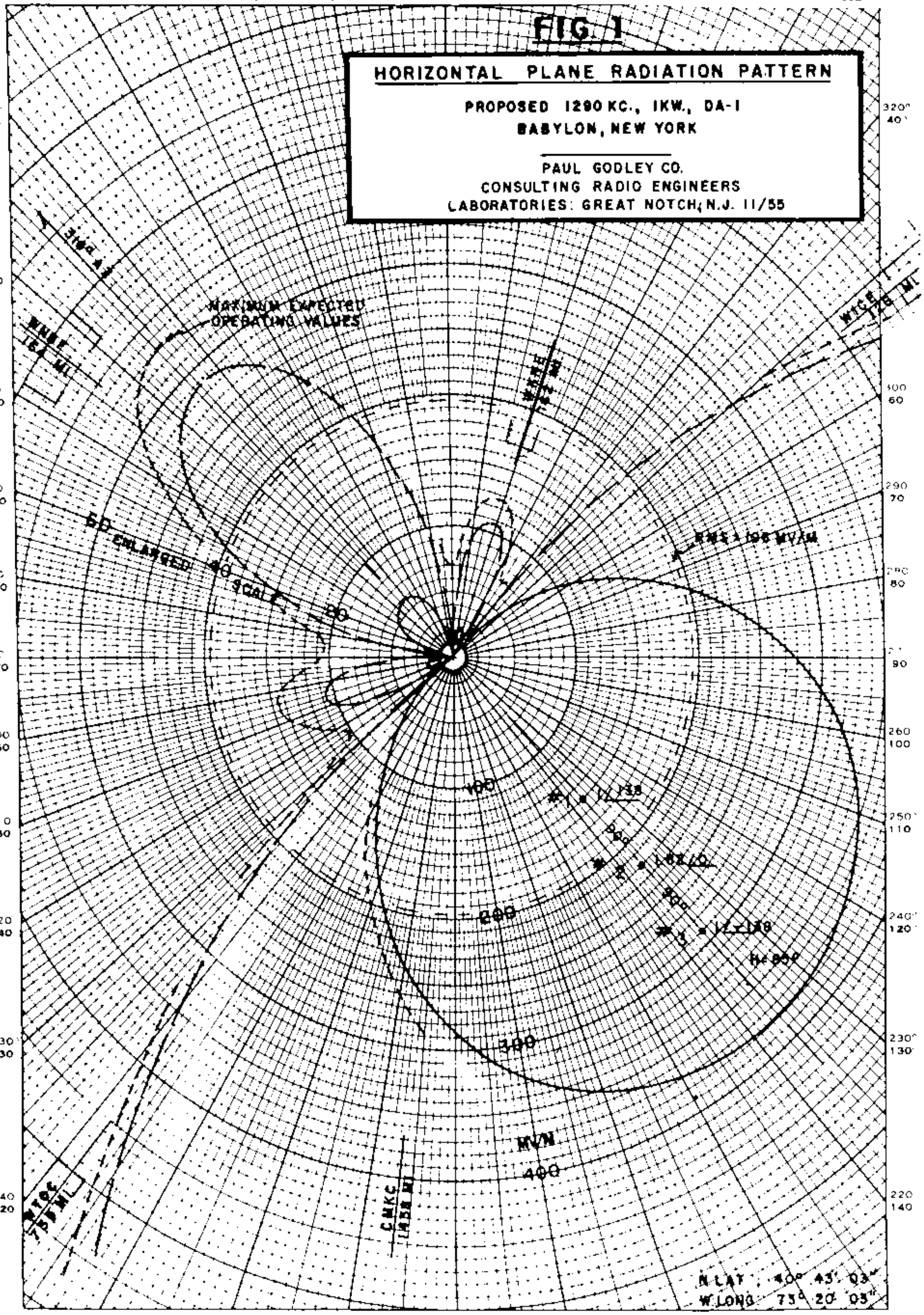
WGLI
Babylon, New York

1290 KC

WGLI

PROPOSED ~~DAY~~ & NIGHT (2-21-56G)   WGLI, INC. BABYLON, NEW YORK   1 KW DA-1   1290 KC

Granted CP (5/7/58) for new station



FILE NO. BP-10,276   ACCEPTED 1-23-56 FCC   WGLI, INC. Babylon, N.Y.   1290 KC

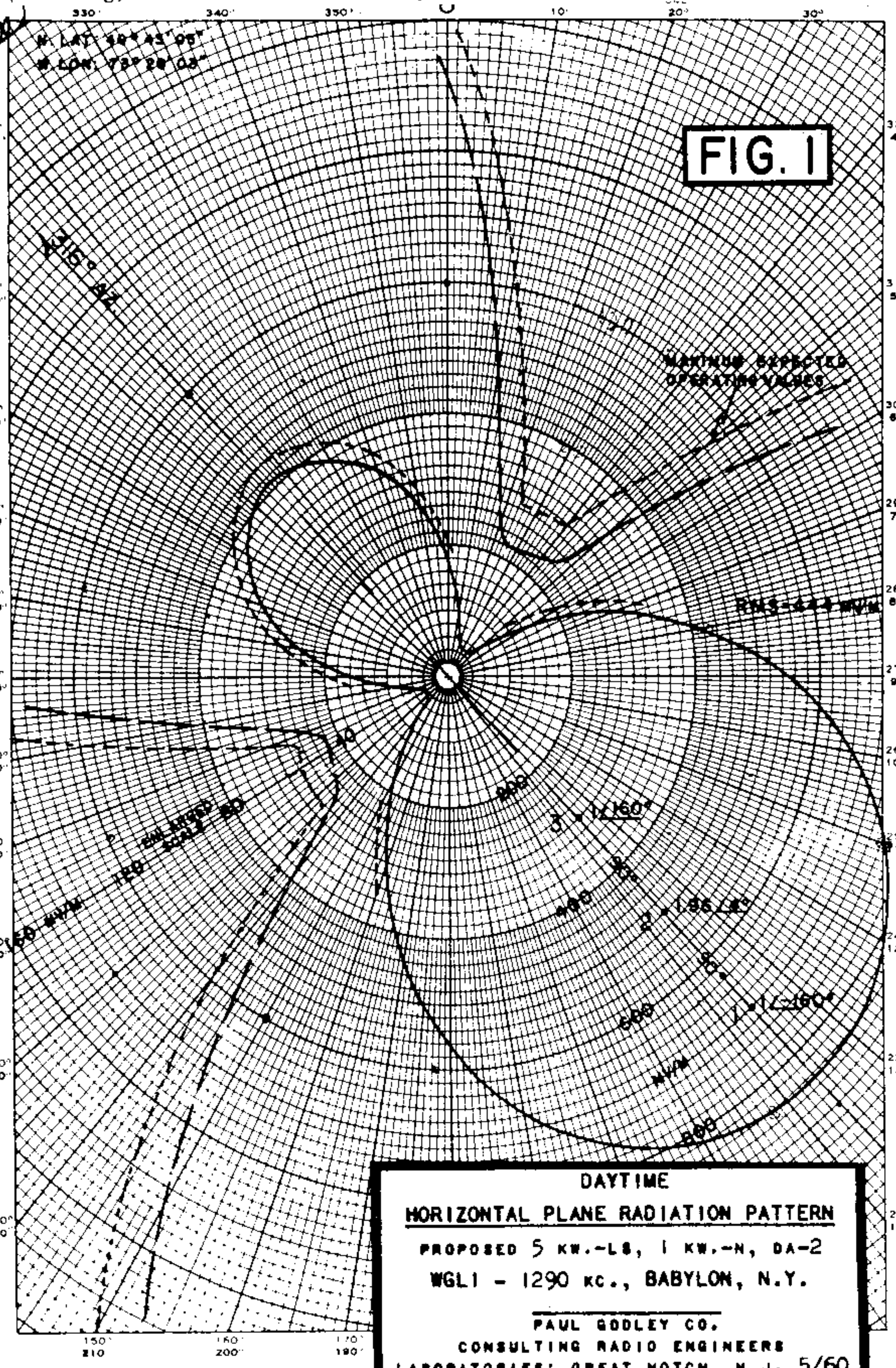
WGLI

PROPOSED DAY
(7-29-60g)

Station WGLI
Babylon, New York

1kw,5kw-LS, DA-2,U
1290 kc

1-31-63
granted CP to increase
day power to 5 kw
DA-2



FCC File No. BP-14196
Accepted 7-14-60

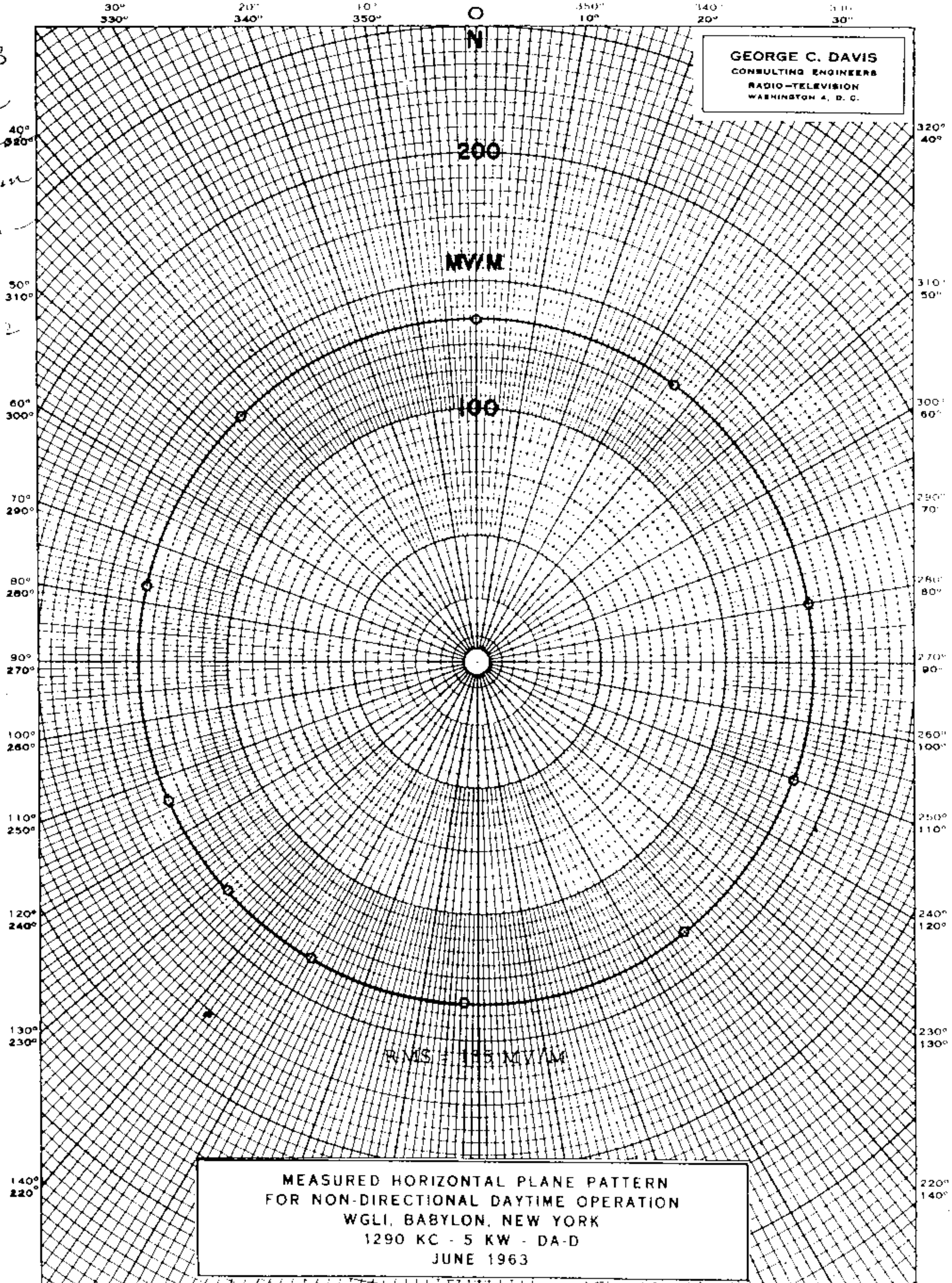
WGLI
Babylon, New York

1290 kc

WGLI

Measured Non-DA (8-23-63ct)	Station WGLI Babylon, New York	1kw,5kw-LS,DA-D,D 1290 kc

9-25-63 [illegible]



MEASURED HORIZONTAL PLANE PATTERN
FOR NON-DIRECTIONAL DAYTIME OPERATION
WGLI, BABYLON, NEW YORK
1290 KC - 5 KW - DA-D
JUNE 1963

FCC File No.BL-10176 Accepted 8-2-63	Station WGLI Babylon, New York	1290 kc

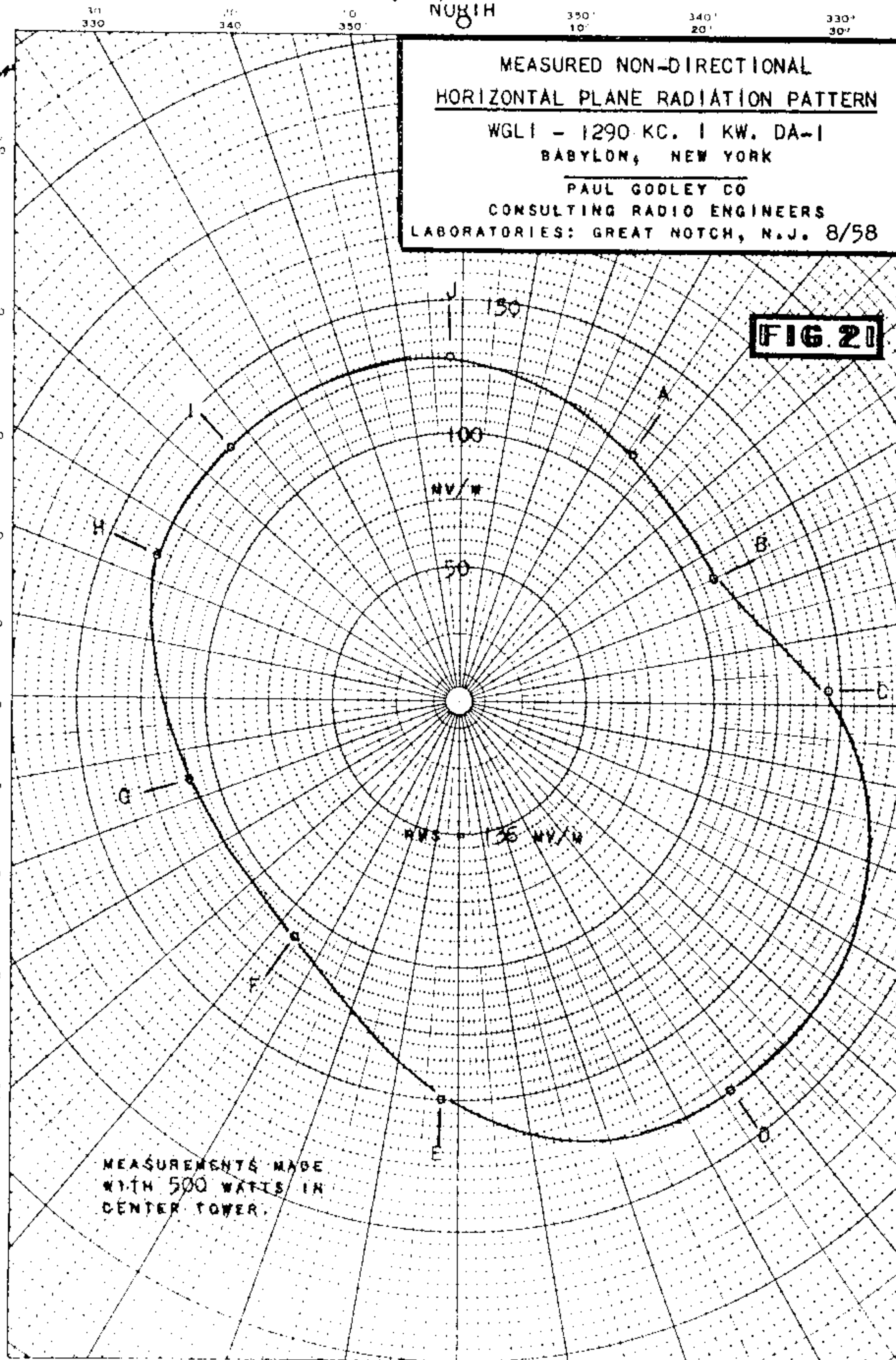
WGLI

Granted license 2/6/59 for new station

MEASURED NON-DA
(10-24-58g)

Station WGLI
Babylon, New York

1kw, DA-1,U
1290 KC



FCC File No. BL-7226
Accepted 10-14-58

WGLI
Babylon, New York

1290 KC

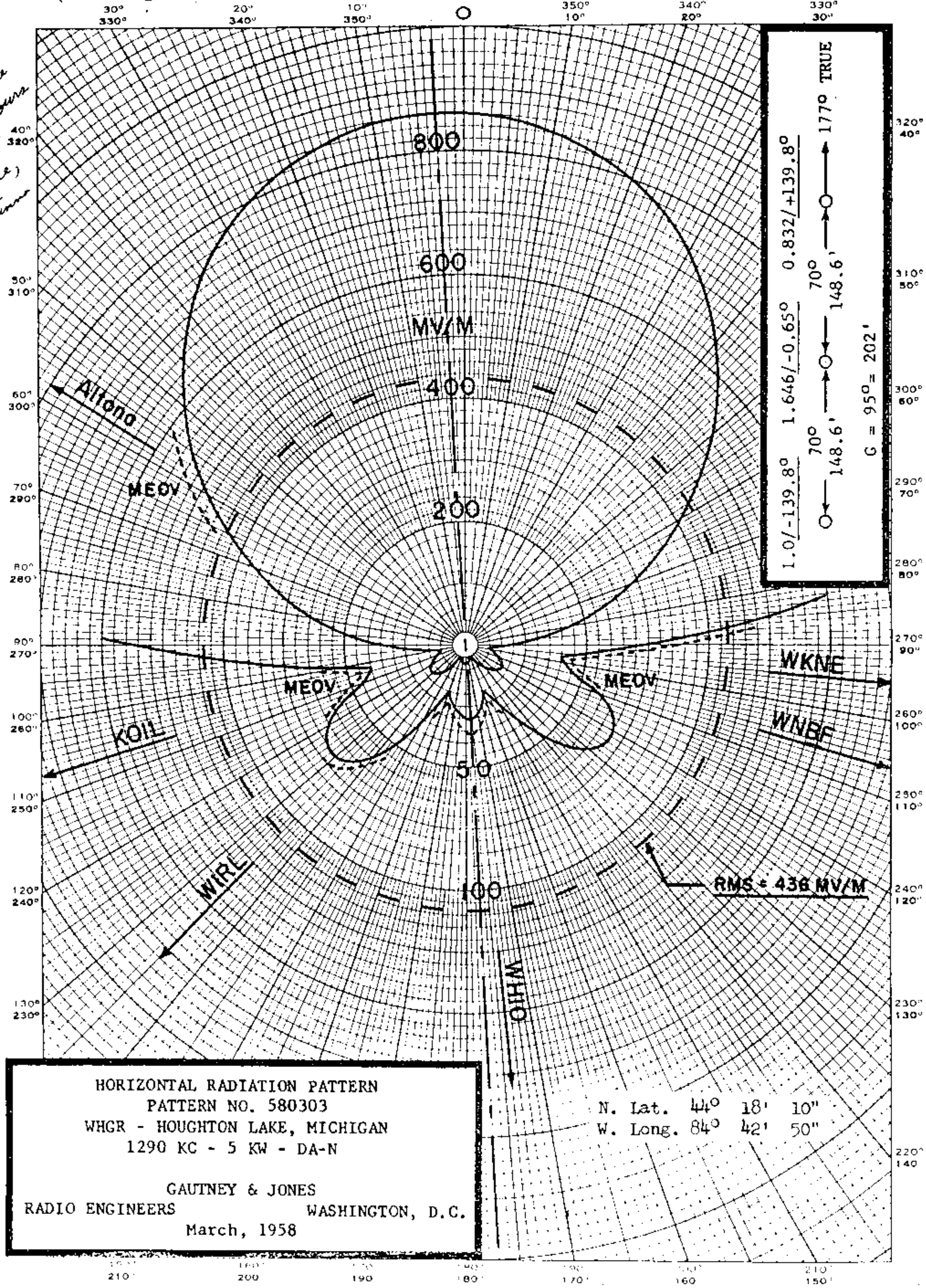
WHGR

PROPOSED NIGHT
(3-26-58g)

Station WHGR
Houghton Lake, Michigan

5kw, DA-N,U.
1290 KC

ented increase 9/58) in hours operation to unlimited time, using DA antenna for nite



FCC File No. BP-11,177
Accepted 3-17-58 (Amended)

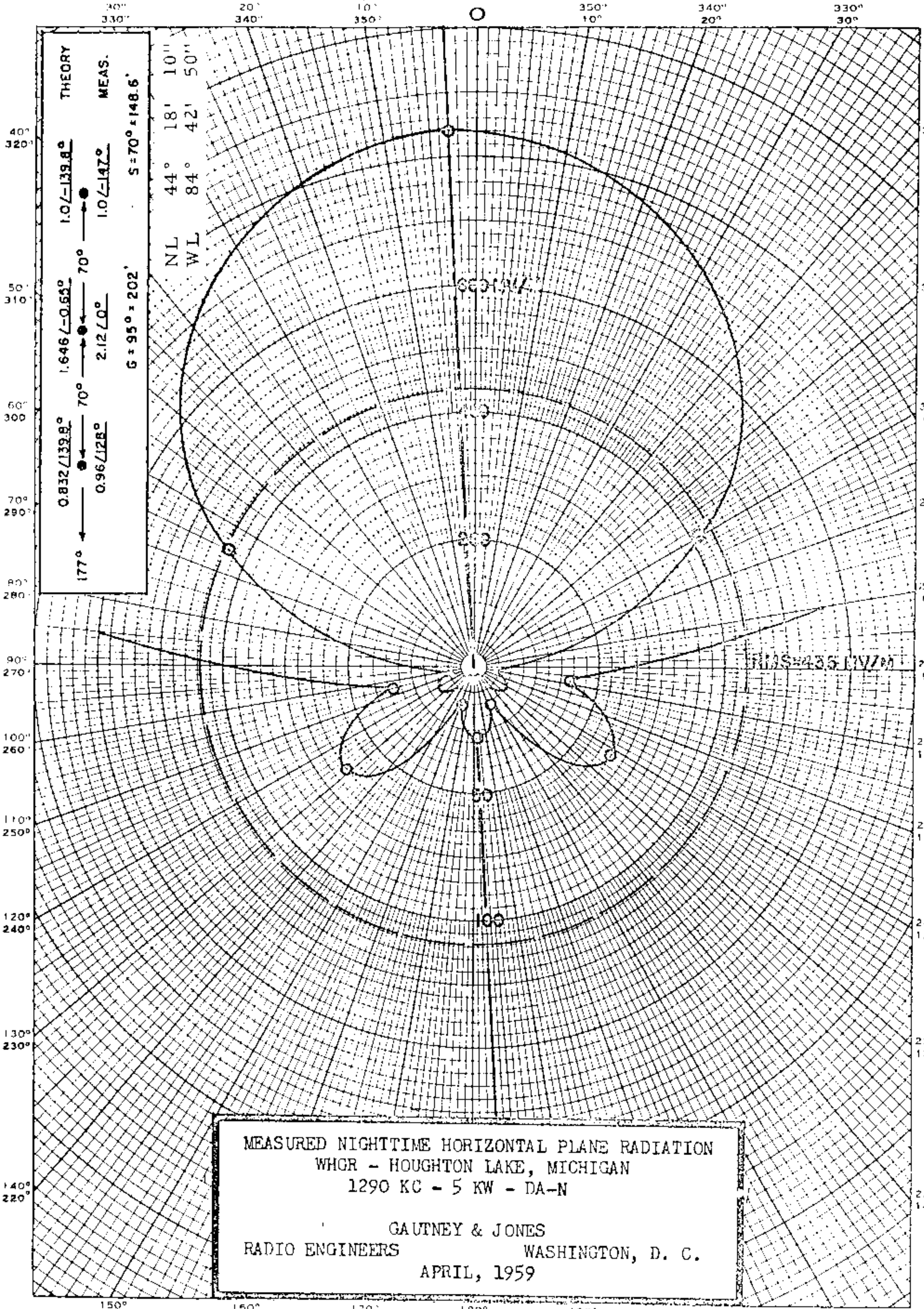
WHGR
Houghton Lake, Michigan

1290 KC

WHGR

MEASURED NIGHT
(9-4-59g)

Station WHGR 5kw, DA-N, U
Houghton Lake, Michigan 1290 KC



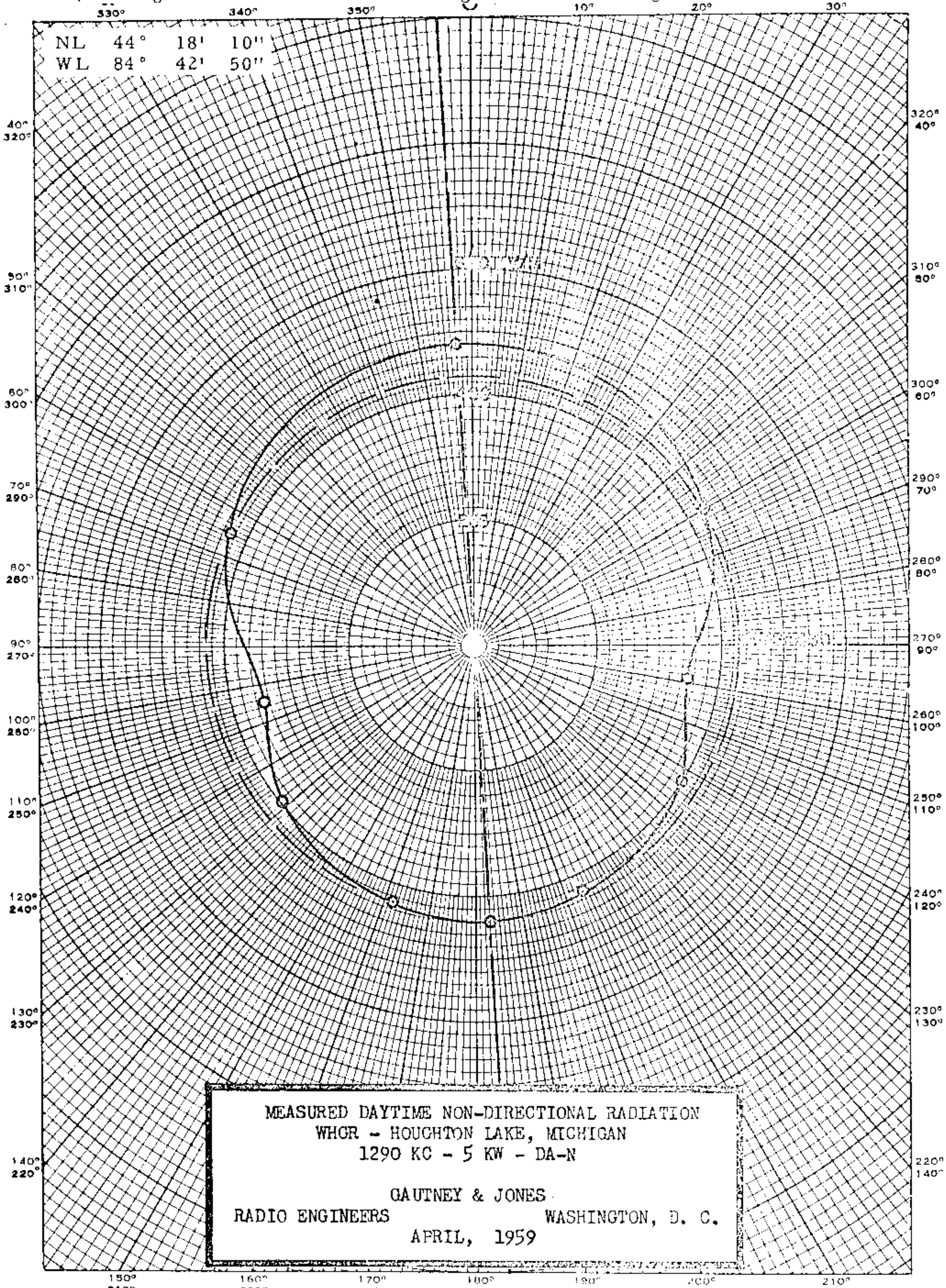
Granted for LAN-6-60

FCC File No. BL-7581
Accepted 8-28-59

WHGR
Houghton Lake, Michigan 1290 KC

MEASURED NON-DA
(9-4-59g)

Station WHGR 5kw, DA-N, U
Houghton Lake, Michigan 1290 KC



FCC File No. BL-7581
Accepted 8-28-59

WHGR
Houghton Lake, Michigan 1290 KC

WHIO

DIRECTIONAL ANTENNA DESCRIPTION SHEET

Station: WHIO	Main Studio: Dayton, Ohio
Frequency: 1290 kHz	Power: 5 kW
Notification List No. 1593	Date: August 14, 1974 — Class: III

GEOGRAPHICAL LOCATION OF THE CENTER OF THE ANTENNA SYSTEM:

North Latitude:	39°	40'	41"
West Longitude:	84°	07'	53"

ANTENNA CHARACTERISTICS

Authorized for Nighttime operation. (DA-N)
Number of elements: 3
Type of elements: Series-excited, self-supporting, tapered, vertical steel towers.

TOWER:	N(#1)	C(#2)	S(#3)
HEIGHT ABOVE INSULATORS:	293'	293'	293' (138°)
PHASING:	-151.6°	0°	+151.6°
FIELD RATIO:	0.902	1.0	0.902

SPACING AND ORIENTATION: Adjacent elements are spaced 190' (90°) on a line bearing 173.75° true.

GROUND SYSTEM: 120-210' equally spaced copper radials plus a 32' square ground screen about each tower.

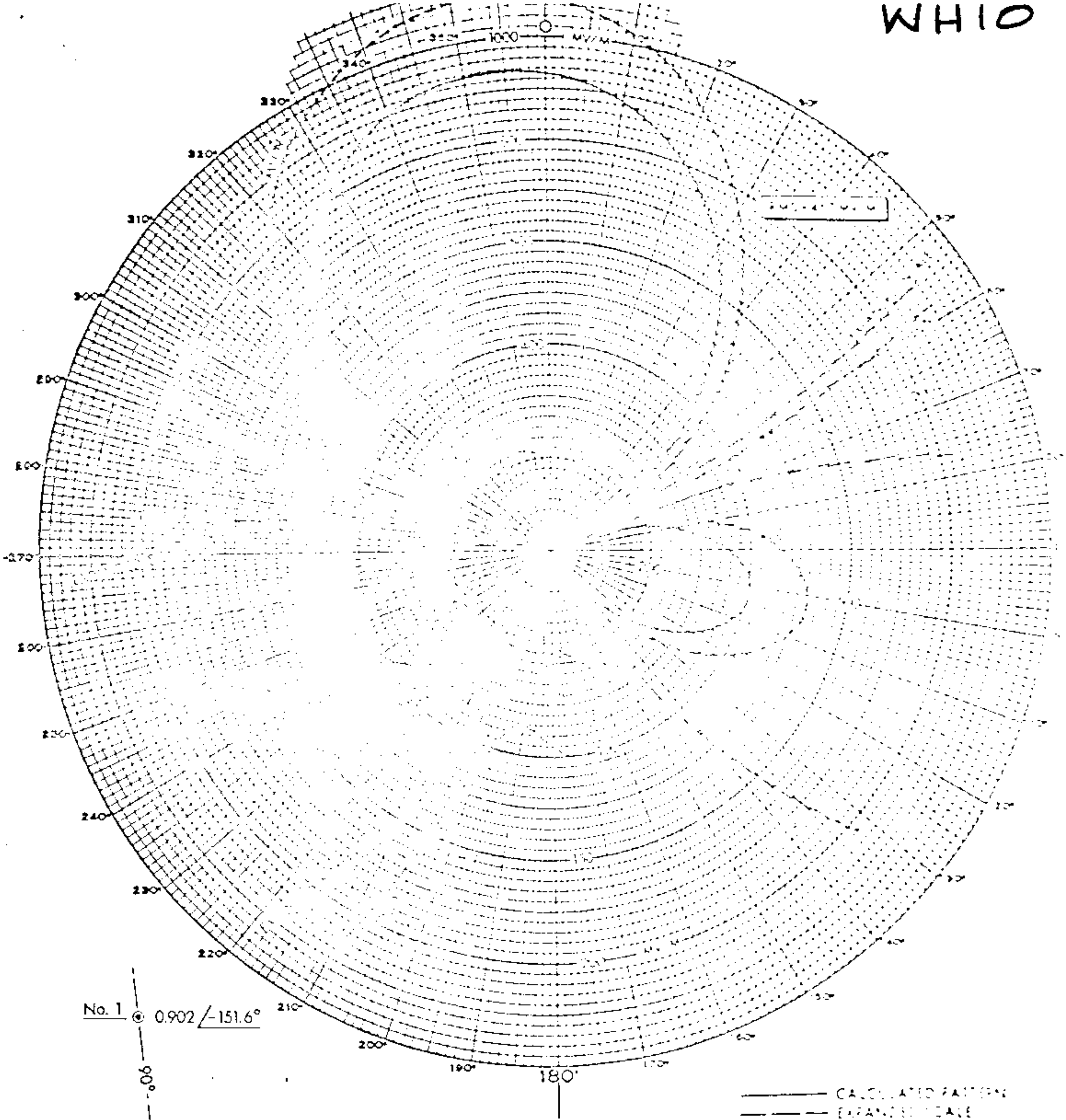
Predicted effective Night Field: 467 mv/m at rated power.

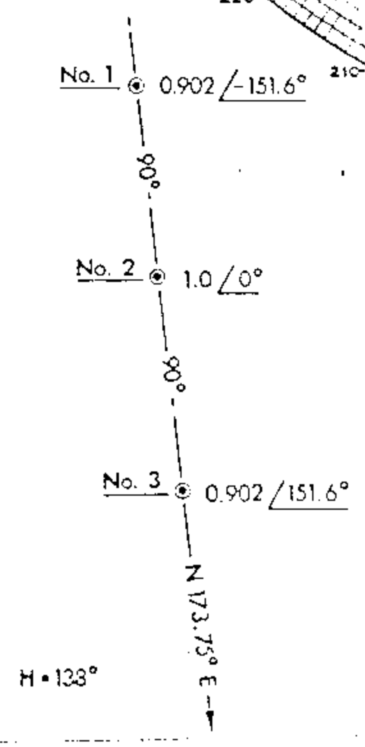
Predicted effective Day Field: (omnidirectional) 471 mv/m at rated power.

Note: This notification concerns only changes to add mecv's of radiation to the directional antenna pattern and reduction of the nighttime predicted effective field from 463 mv/m.

CTR NO 3095A4

WHIO





NORTH LATITUDE 39° 40' 41"
WEST LONGITUDE 84° 07' 53"

AMENDED FIGURE 1
NIGHTTIME HORIZONTAL PLANE
RADIATION PATTERNS
WHIO 5KW-U, DA-N [illegible] KHz
DAYTON, OHIO

Prepared by
Lohnes and Culver Washington, D.C.
April, 1973

WHIO

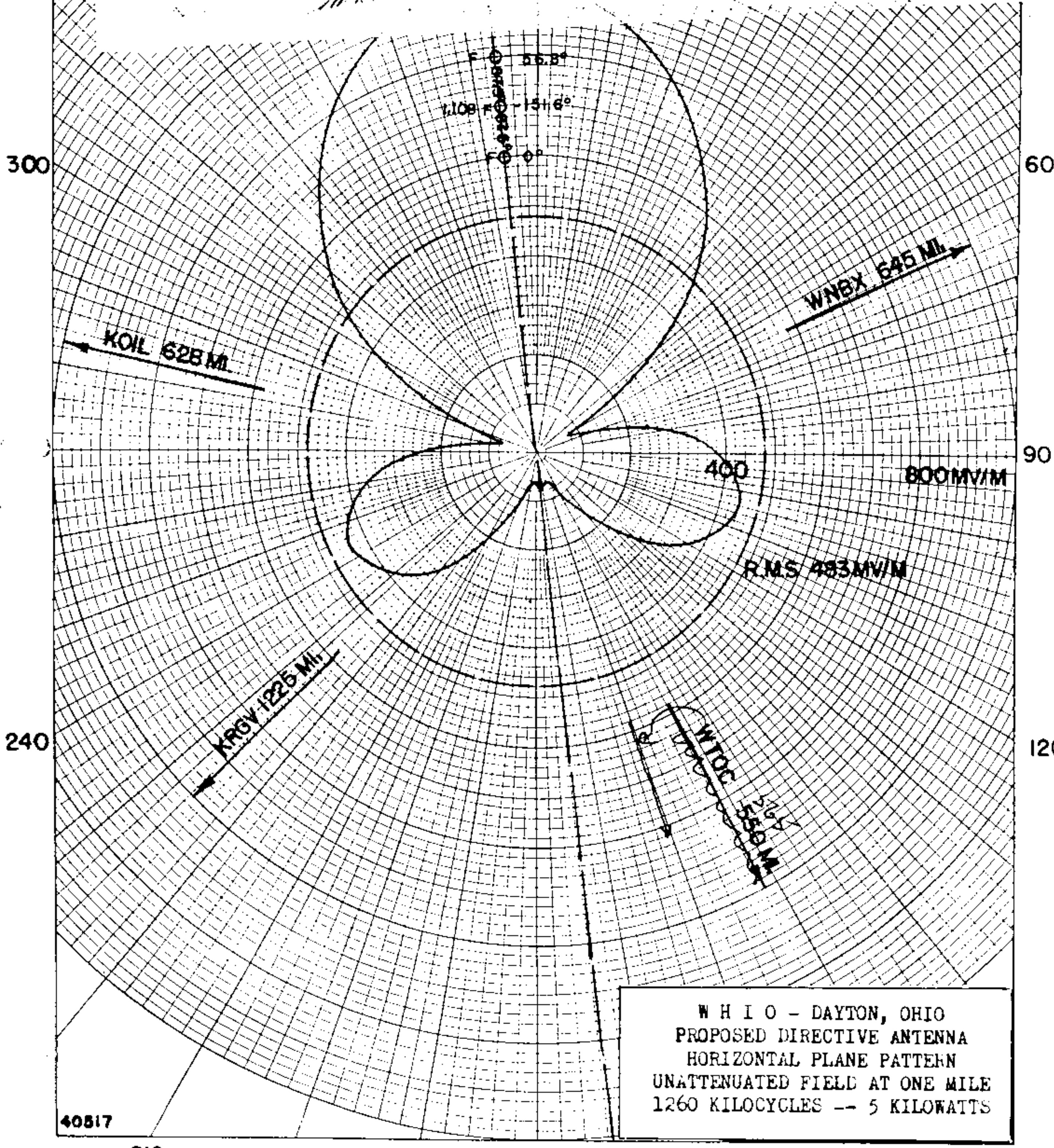
PAGE & DAVIS

proof of performance

fields	WTOC	40 mv/m
	KRGV	275 "
	KOIL	60 "
	WKNE	70 "
	max	970 "

PAGE & DAVIS
Consulting Radio Engineers
460 mv/m

WHIO 1290



W H I O - DAYTON, OHIO
PROPOSED DIRECTIVE ANTENNA
HORIZONTAL PLANE PATTERN
UNATTENUATED FIELD AT ONE MILE
1260 KILOCYCLES -- 5 KILOWATTS

KEUFFEL & ESSER CO., N. Y. NO. 343A
POLAR CO-ORDINATE
MADE IN U. S. A.

WHIO

MEASURED NON - DA
(8/19/57g)

Station WHIO
Dayton, Ohio

5kw, DA-N,U
1290 KC

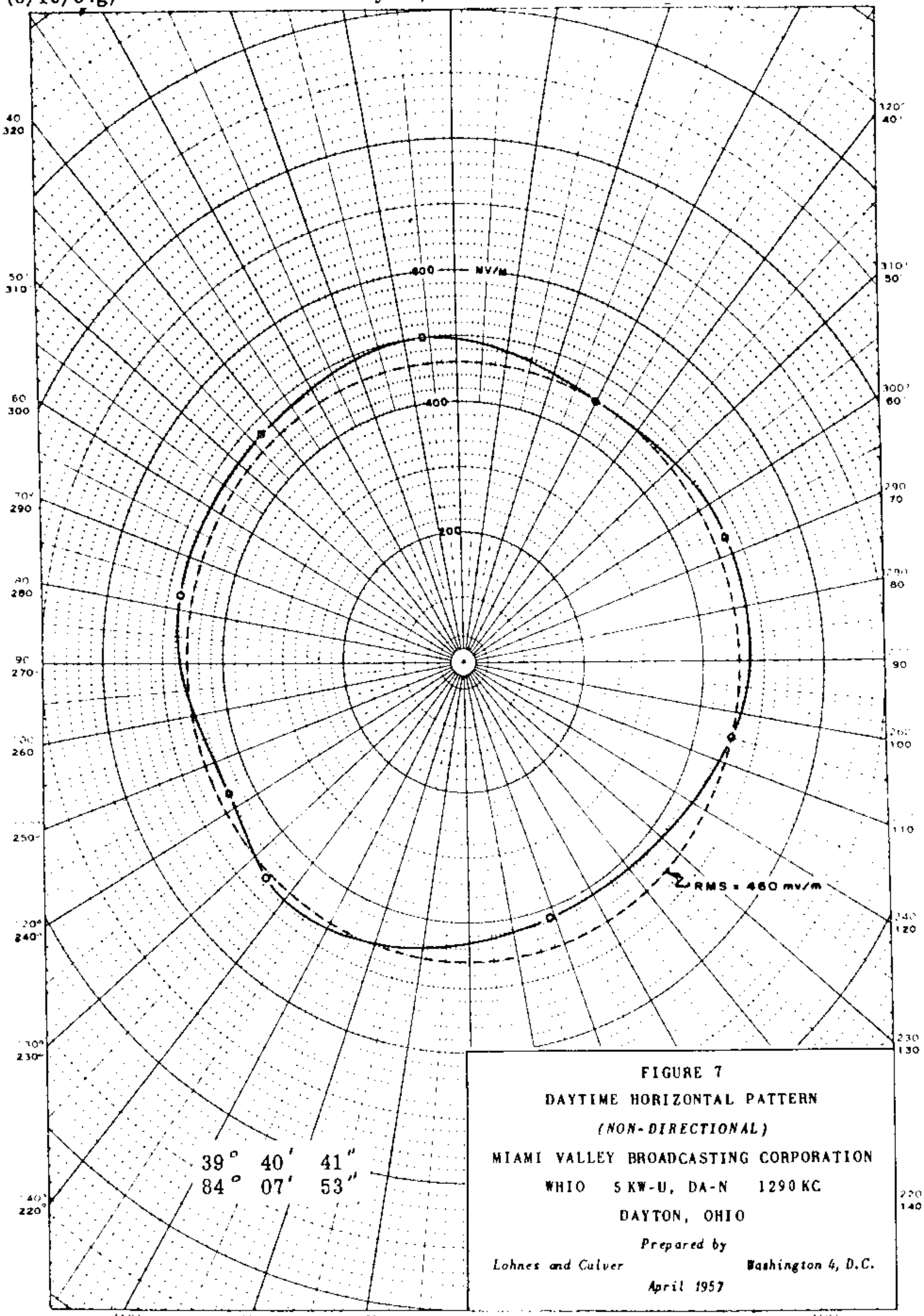


FIGURE 7
DAYTIME HORIZONTAL PATTERN
(NON-DIRECTIONAL)
MIAMI VALLEY BROADCASTING CORPORATION
WHIO 5 KW-U, DA-N 1290 KC
DAYTON, OHIO
Prepared by
Lohnes and Culver *Washington 4, D.C.*
April 1957

FCC File No. BZ-3889
Accepted 8/9/57

WHIO
Dayton, Ohio

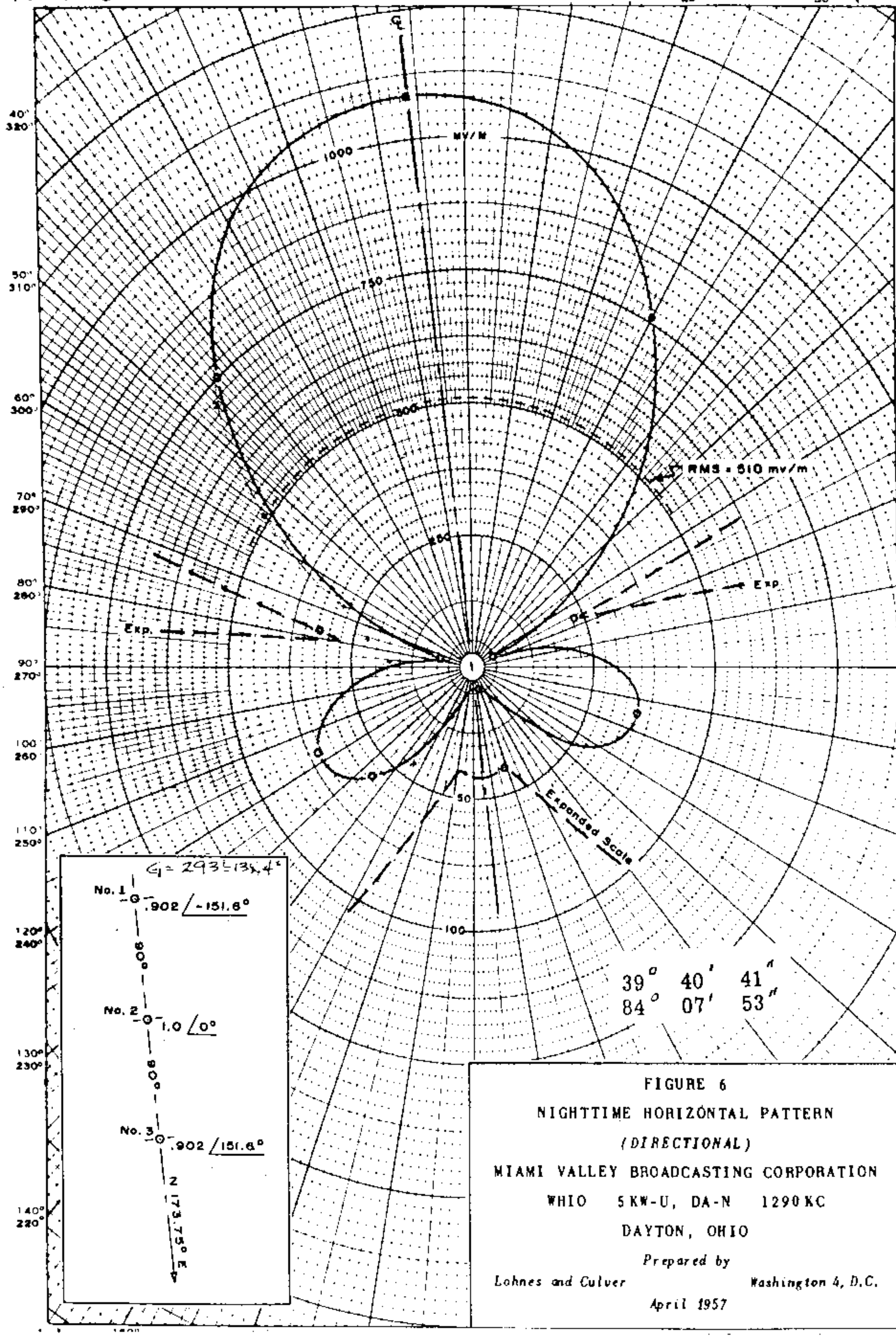
1290 KC

WHIO

MEASURED NIGHT
(8/19/57g)

Station WHIO
Dayton, Ohio

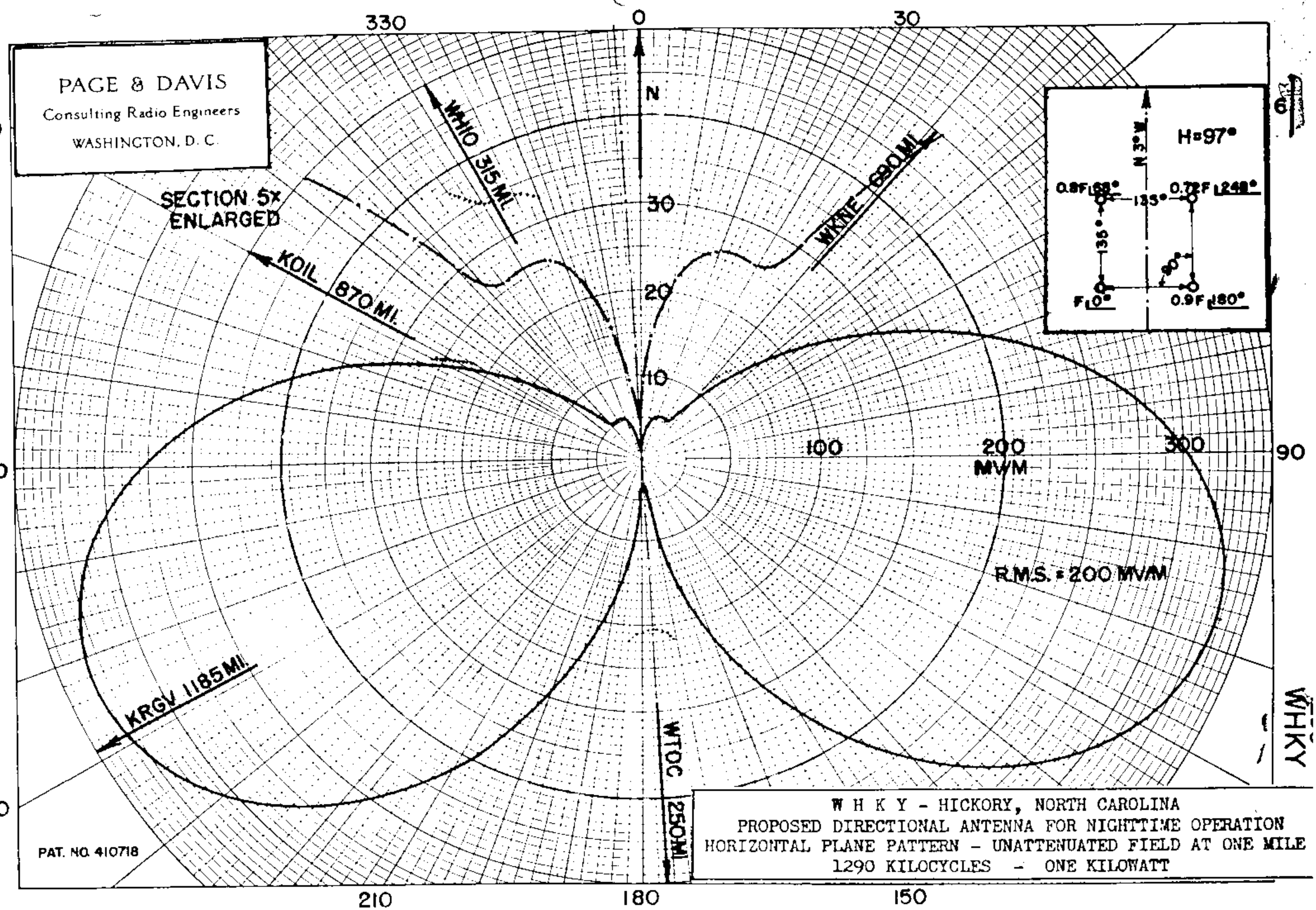
5kw, DA-N,U
1290 KC



FCC File No. BZ-3889
Accepted 8/9/57

WHIO
Dayton, Ohio

1290 KC



WHKY

W H K Y - HICKORY, NORTH CAROLINA
PROPOSED DIRECTIONAL ANTENNA FOR NIGHTTIME OPERATION
HORIZONTAL PLANE PATTERN - UNATTENUATED FIELD AT ONE MILE
1290 KILOCYCLES - ONE KILOWATT

WHKY - 1290KC

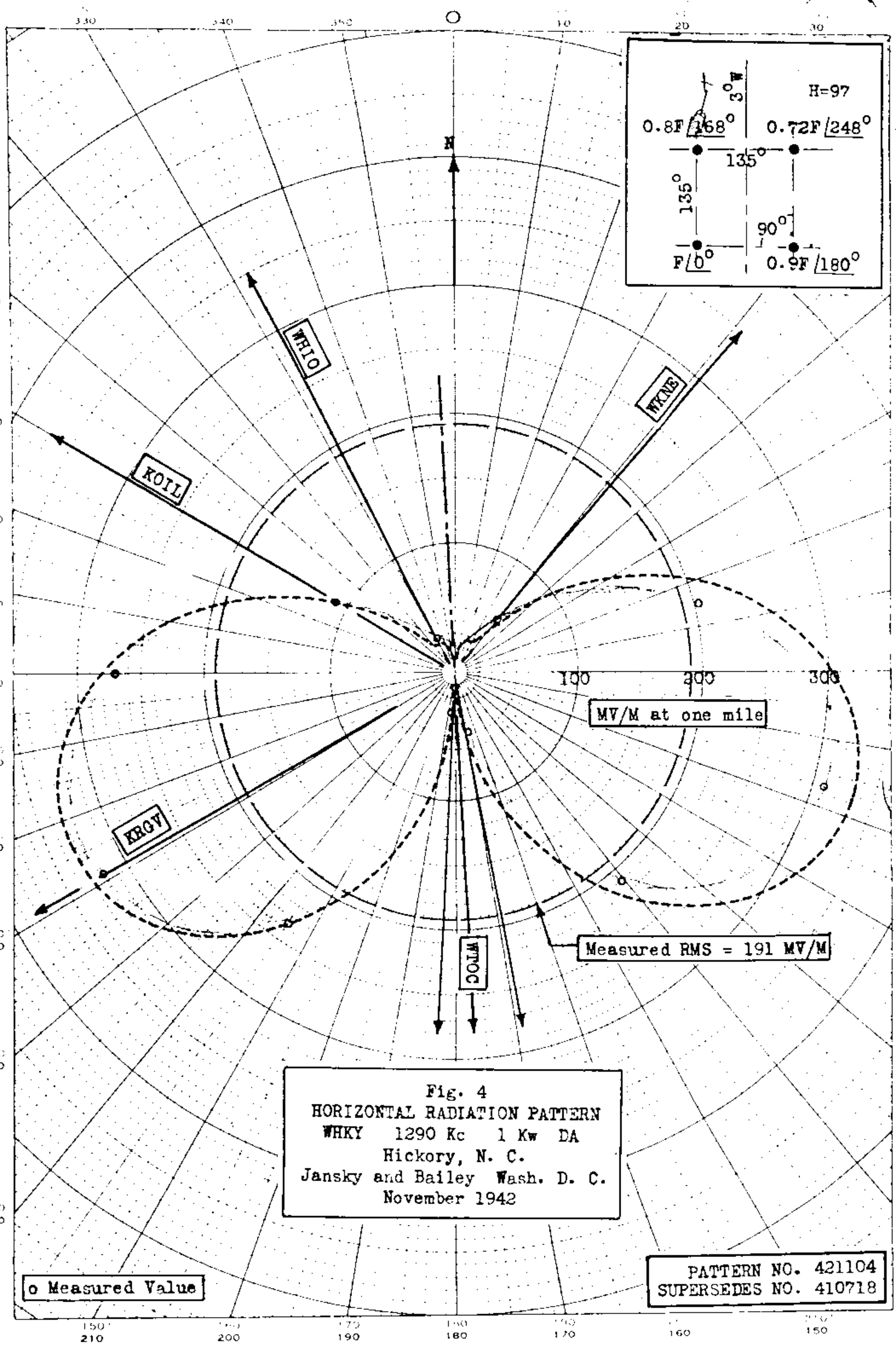
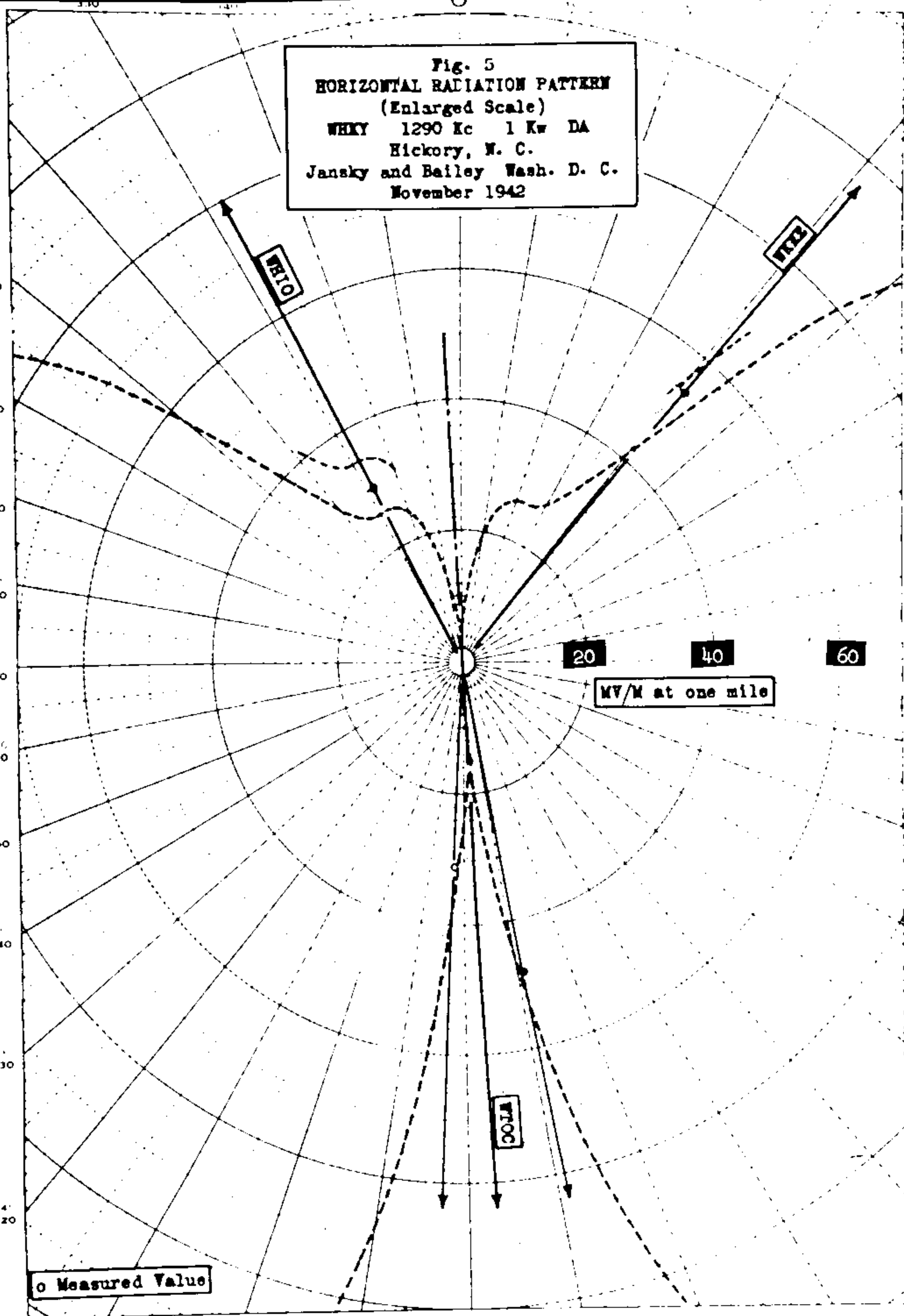


Fig. 4
HORIZONTAL RADIATION PATTERN
WHKY 1290 Kc 1 Kw DA
Hickory, N. C.
Jansky and Bailey Wash. D. C.
November 1942

MEASURED NIGHT NULLS   Station WHKY   1kw,5kw-LS, DA-N,U
Hickory, North Carolina   1290 KC

WHKY
1290



6-20

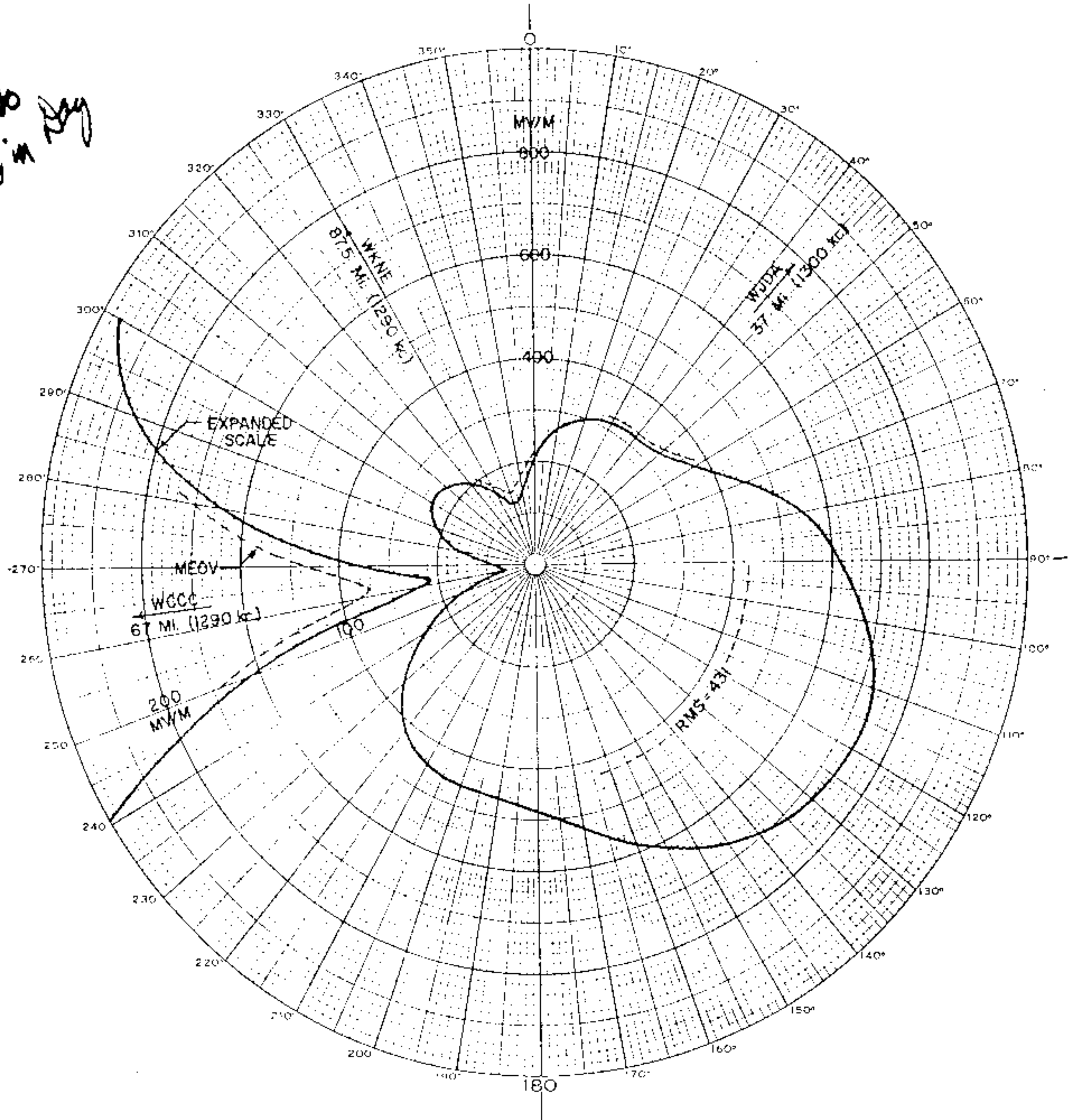
WICE

PROPOSED DAY
(2-26-60g)

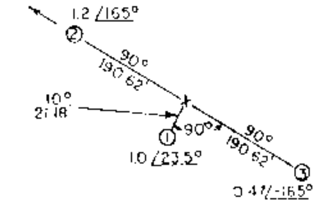
Station WICE
Providence, Rhode Island

1kw,5kw-LS, DA-2,U
1290 KC

8-10-61 granted CP to [illegible] changes in Day DA pattern



TOWER PLACEMENT SKETCH



PATTERN PARAMETERS

Tower No.	Electrical Height $G°$	True Tower Orientation $\Phi°$	Spacing $S°$	Phasing $\psi°$	Horizontal Field mv/m E	Field Ratio F	Elev Angle $\theta°$	Elevation RMS Field mv/m E_θ
1	140	210	10	23.5	418	1.00	0	431
2	90	300	90	165	502	1.20	10	
3	90	120	90	-165	196	0.47	20	
4							30	
5							40	
6							50	
7							60	
8							70	
9							80	
10							E_r*	mv/m
							P_r*	kw

Daytime operation ☒ Nighttime operation ☐

STATION DATA

CALL	WICE
FREQUENCY	1290 kc
POWER	1N/5D kw
TIME OF OPERATION	U
TYPE OF OPERATION	DA-2
DAYTIME TOWERS	3
NIGHTTIME TOWERS	3
No. RADIALS PER TOWER	120
LENGTH OF RADIALS	90 - 190 ft
GROUND	Counterpoise 50'
LAT.	41° 51' 21"
LONG.	71° 26' 41"
SUPERSEDES	
PATTERN No.	600104

CARL E. SMITH
CONSULTING RADIO ENGINEERS

FIG. 4
PROPOSED HORIZONTAL DAYTIME PATTERN
Providence Radio Inc.
Providence Rhode Island

FCC File No. BP-13838
Accepted 2-4-60

WICE
Providence, Rhode Island

1290 KC

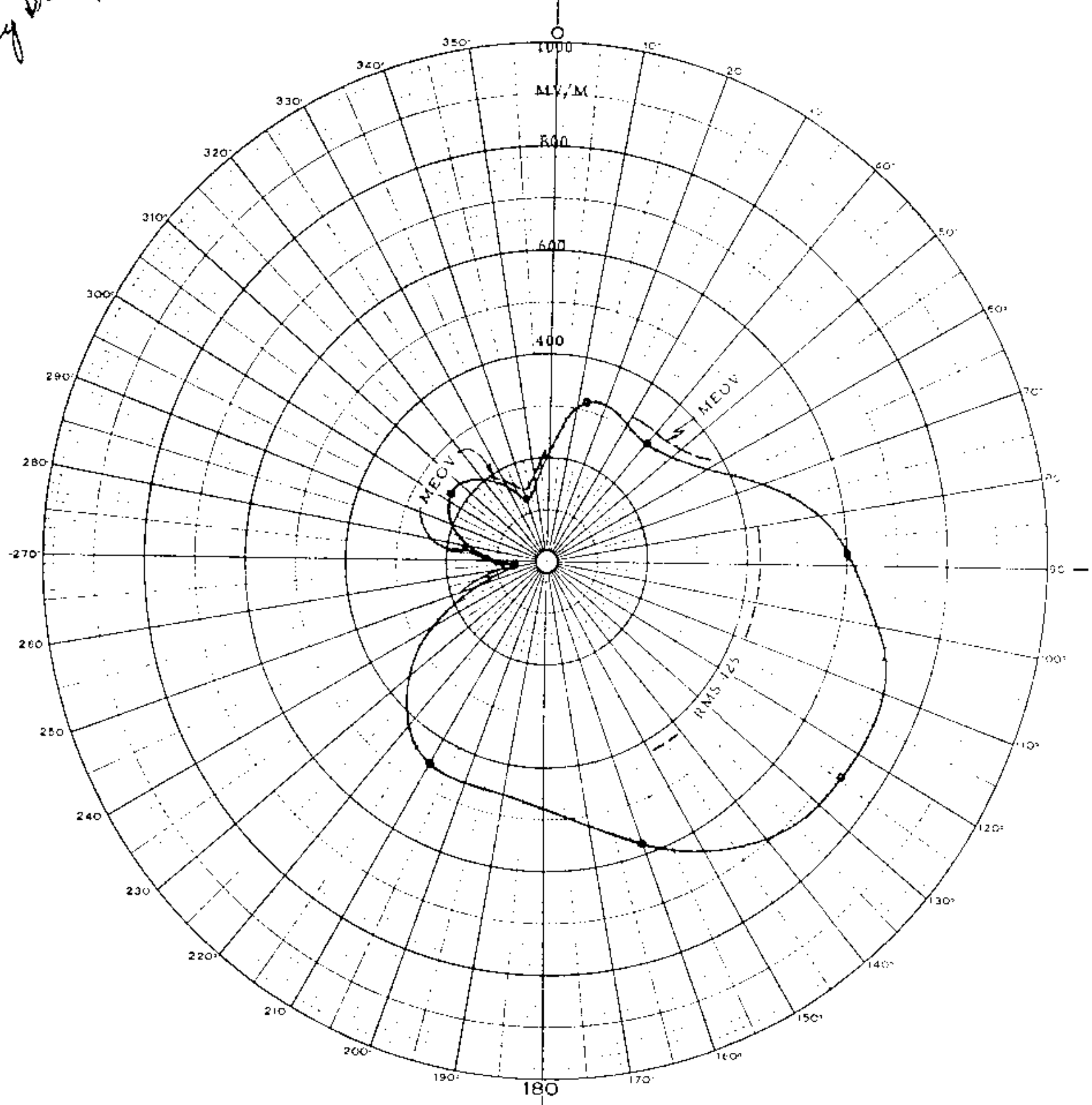
WICE

BL 9098 - granted L for change in day DA-Ap. 5-17-62

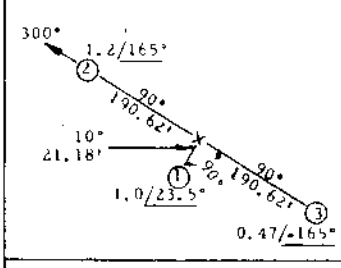
Measured Day
(5-25-62ct)

Station WICE
Providence, Rhode Island

1kw,5kw-LS,DA-2,U
1290 kc



TOWER PLACEMENT SKETCH



PATTERN PARAMETERS

TOWER No	ELECTRICAL HEIGHT G°	TRUE TOWER ORIENTATION Ø°	SPACING S°	PHASING ψ°	HORIZONTAL FIELD E	FIELD RATIO F
1	140	210	10			1.00
2	90	300	90			1.20
3	90	120	90			0.47
4						
5						
6						
7						
8						
9						
10						

ELEV ANGLE θ°	ELEVATION RMS FIELD $E_θ$
0	425
10	
20	
30	
40	
50	
60	
70	
80	

DAYTIME OPERATION [X] NIGHTTIME OPERATION [ ]

STATION DATA

CALL	WICE
FREQUENCY	1290 kc
POWER	1N/5D kw
TIME OF OPERATION	U
TYPE OF OPERATION	DA-2
DAYTIME TOWERS	3
NIGHTTIME TOWERS	3
NO RADIALS PER TOWER	120
LENGTH OF RADIALS	90' 190'
GROUND	Counterpoise 50'
LAT	41° 51' 21"
LONG	71° 26' 41"
SUPERSEDES	
PATTERN NO	611221

FIG. 7.12

MEASURED DAYTIME DIRECTIONAL HORIZONTAL PATTERN

Providence Radio Inc.
Providence, Rhode Island

CARL E. SMITH
CONSULTING RADIO ENGINEERS

FCC File No. BL-9098
Accepted

Station WICE
Providence, Rhode Island
1290 kc

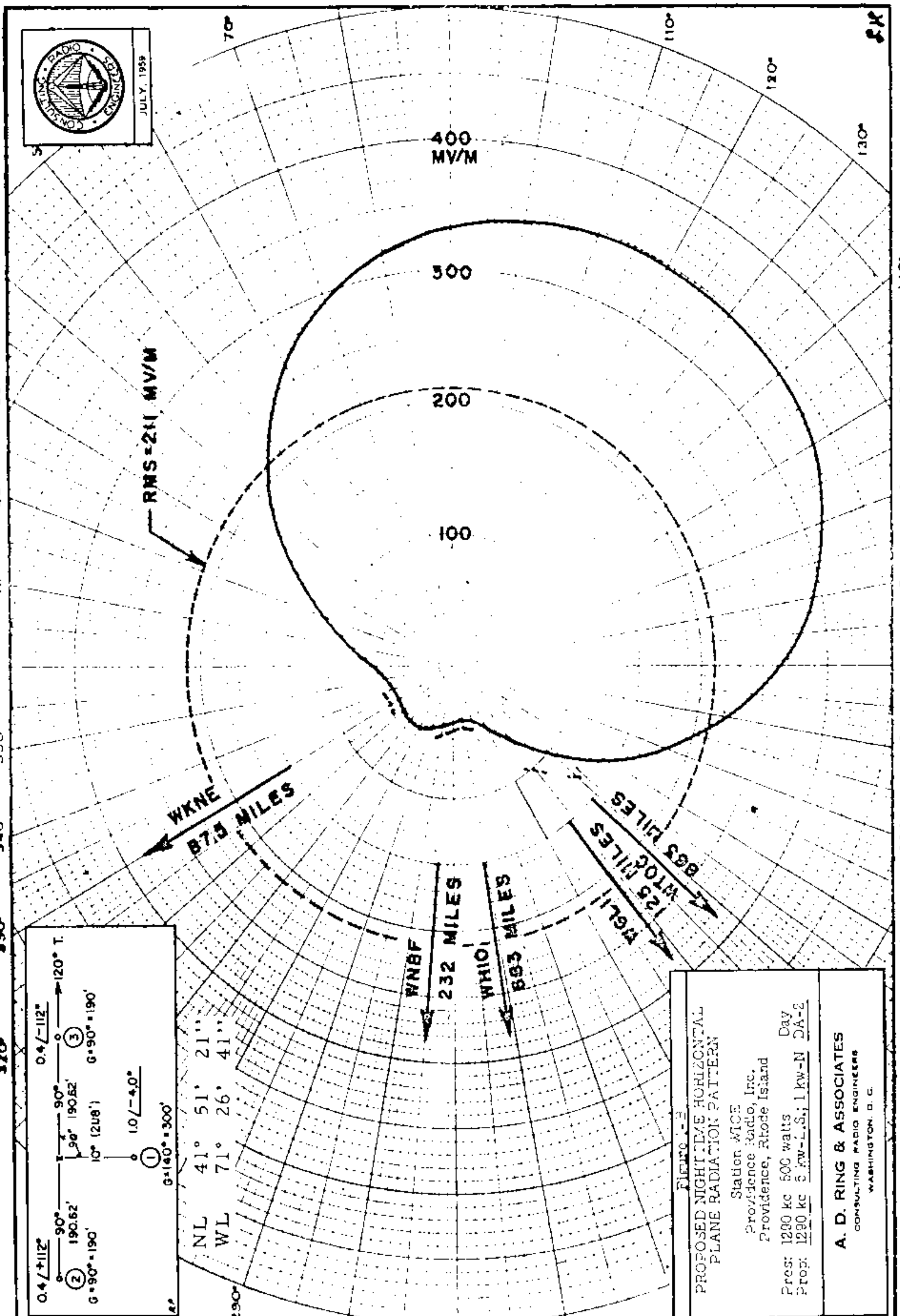
WICE

Granted M.C. to make changes in antenna system 8-12-59

PROPOSED NIGHT
(9-4-59g)

Station WICE
Providence, Rhode Island

1kw,5kw-LS,DA-2,U
1290 KC



A. D. RING & CO - 1/52 - 1000

FCC File No. BMP-8586
Accepted 8-13-59

WICE
Providence, Rhode Island

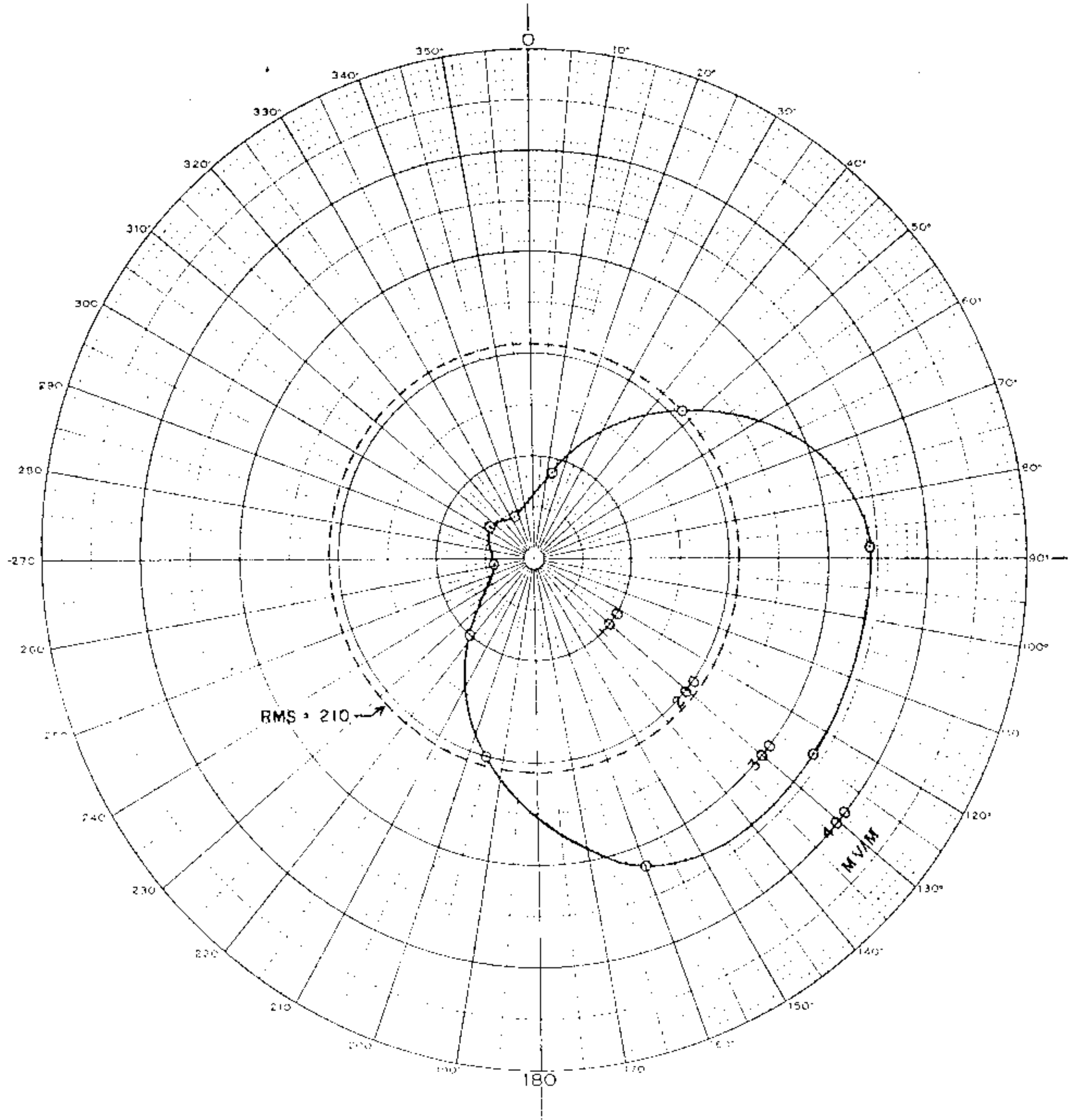
1290 KC

WICE

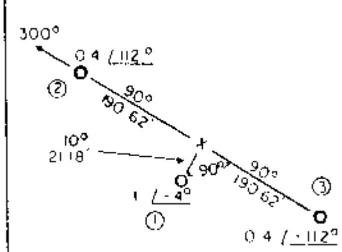
MEASURED NIGHT (11-16-59g)

Station WICE 1kw,5kw-LS, DA-2,U
Providence, Rhode Island 1290 KC

granted 5-20-60 for change of facilities and install DA



TOWER PLACEMENT SKETCH



PATTERN PARAMETERS

Tower No.	G°	φ°	S°	ψ°	Field Ratio
1	140	210	10	-4	1.0
2	90	300	90	112	0.4
3	90	120	90	-112	0.4

Elev. Angle θ°	Elevation RMS Field E_θ
0	210

STATION DATA

CALL	WICE
FREQUENCY	1290 kc
POWER	1N / 5D-LS kw
TIME OF OPERATION	U
TYPE OF OPERATION	DA-2
DAYTIME TOWERS	3
NIGHTTIME TOWERS	3
NO. RADIALS PER TOWER	120
LENGTH OF RADIALS	90 ' 190 '
GROUND	Counterpoise 50'
LAT	41° 21' 51"
LONG	71° 26' 41"
SUPERSEDES	
PATTERN No.	590722

FIG. 7.12

CARL E. SMITH
CONSULTING RADIO ENGINEERS

Measured Horizontal Nighttime Pattern
Providence Radio Inc.
Providence Rhode Island

FCC File No. BL-7614
Accepted 10-2-59

WICE
Providence, Rhode Island

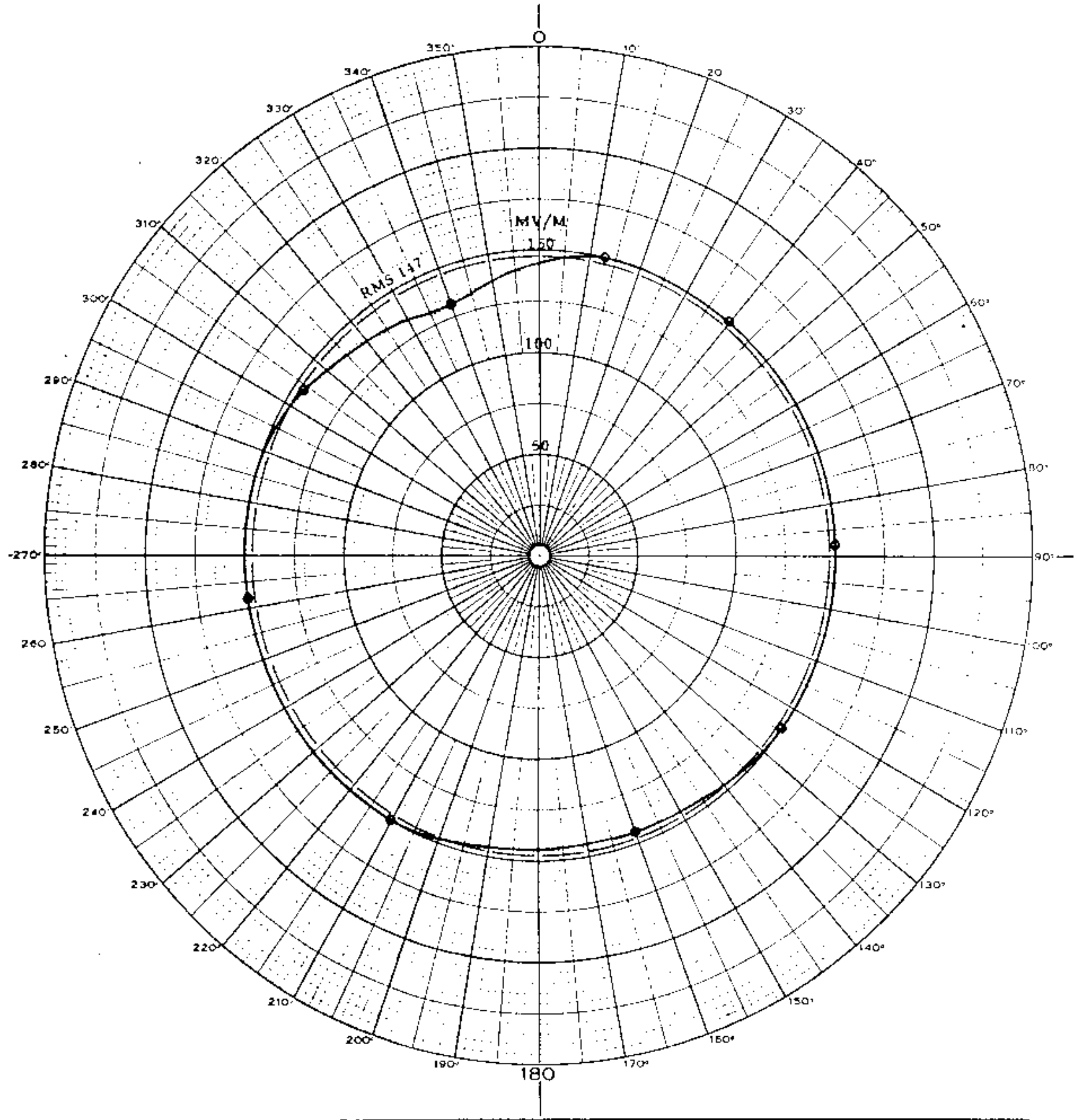
1290 KC

WICE

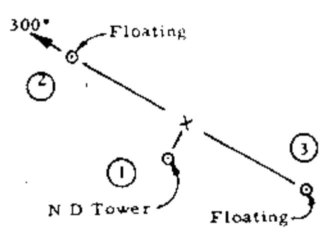
Measured Non-DA
(5-25-62ct)

Station WICE
Providence, Rhode Island

1kw,5kw-LS,DA-2,U
1290 kc



TOWER PLACEMENT SKETCH



PATTERN PARAMETERS

TOWER No	ELECTRICAL HEIGHT $G°$	TRUE TOWER ORIENTATION $\phi°$	SPACING $S°$	PHASING $\psi°$	HORIZONTAL FIELD E	FIELD RATIO F	ELEV ANGLE $\theta°$	ELEVATION RMS FIELD E_θ
1	140	210	10			1.0	0	147
2	90	300	90			0.0	10	
3	90	120	90			0.0	20	
4							30	
5							40	
6							50	
7							60	
8							70	
9							80	
10								

DAYTIME OPERATION ☐ NIGHTTIME OPERATION ☐

STATION DATA

CALL	WICE
FREQUENCY	1290 kc
POWER	0.5 kw
TIME OF OPERATION	U
TYPE OF OPERATION	DA-2
DAYTIME TOWERS	3
NIGHTTIME TOWERS	3
No. RADIALS PER TOWER	120
LENGTH OF RADIALS	90° 190 ft
GROUND	Counterpoise 50'
LAT.	41° 51' 21"
LONG.	71° 26' 41"
SUPERSEDES	
PATTERN No.	611217

CARL E. SMITH
CONSULTING RADIO ENGINEERS

FIG. 6.10
MEASURED NON-DIRECTIONAL PATTERN
Providence Radio Inc.
Providence, Rhode Island

FCC File No.BL-9098
Accepted

Station WICE
Providence, Rhode Island
1290 kc

WIRK

DIRECTIONAL ANTENNA DESCRIPTION SHEET

Station: WIRK

Main Studio: West Palm Beach, Florida

Frequency: 1290 kHz

Power: 1 kW Night 5 kW Day

Notification List No. 1652

Date: October 1, 1975 Class: III

GEOGRAPHICAL LOCATION OF THE CENTER OF THE ANTENNA SYSTEM:

North Latitude: 26° 37' 55"
West Longitude: 80° 07' 07"

ANTENNA CHARACTERISTICS

Authorized for Nighttime operation. (DA-N)
Number of elements: 3
Type of elements: Series-excited, uniform cross-section, guyed, vertical steel towers.

TOWER:	SW(#3)	C(#2)	NE(#1)	
HEIGHT ABOVE INSULATORS:	200'	200'	200'	(94.5°)
NIGHT PHASING:	+163.7°	0°	-154.8°	
NIGHT FIELD RATIO:	0.636	1	0.650	

SPACING AND ORIENTATION: Adjacent elements are spaced 190'(90°) on a line bearing 247° true.

GROUND SYSTEM: 120-210' equally spaced copper radials plus a 32' square ground screen about each tower. Radials are shortened and bonded to transverse straps along intersections between towers.

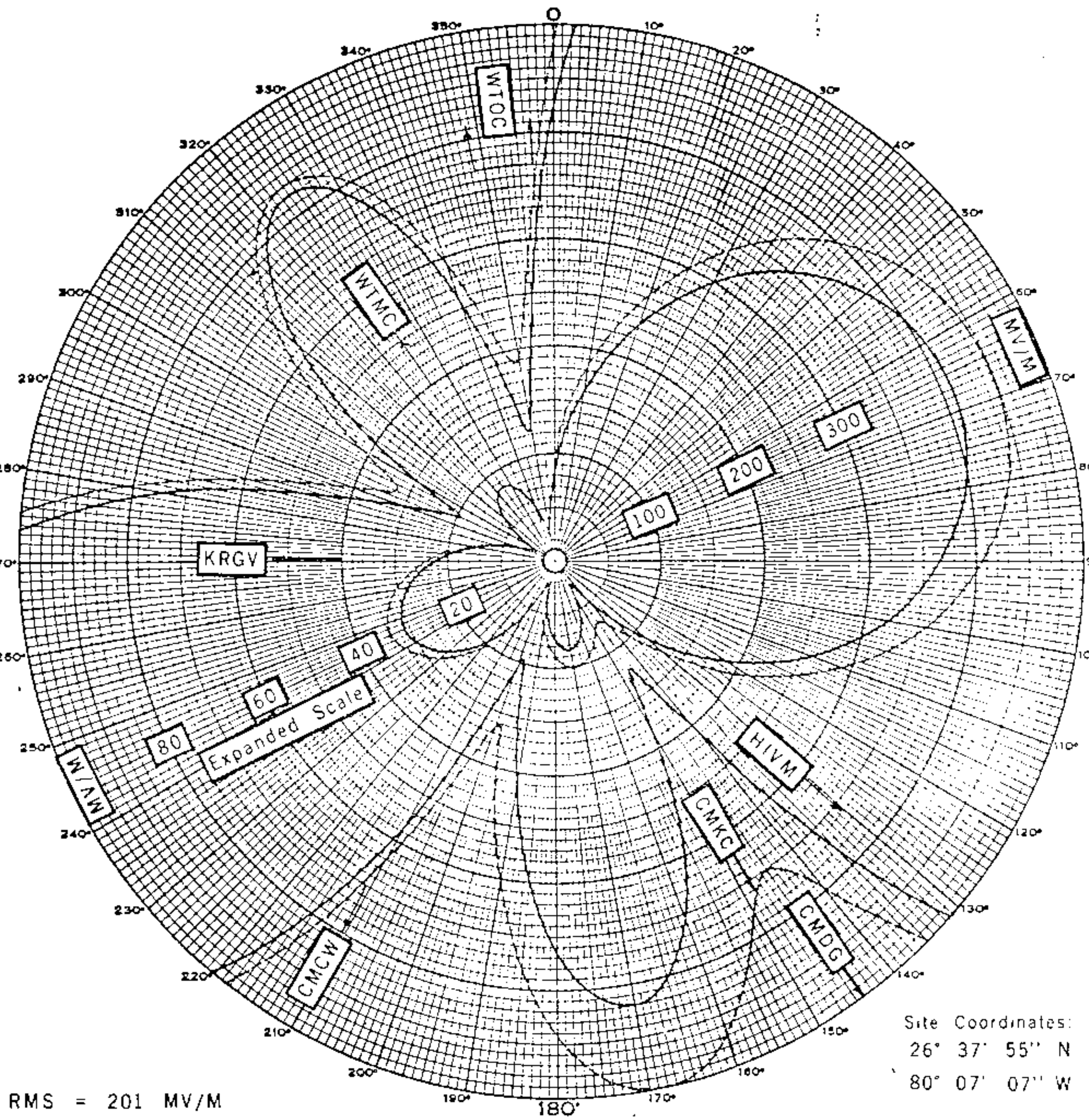
Predicted effective Night Field: 201 mv/m at rated power.

Predicted effective Day Field: (omnidirectional) 429 mv/m at rated power.

Note: Please retain the Nighttime vertical angle directional antenna radiation patterns from 35° through 60° inclusive notified for Station WIRK in United States Change List Number 1588 dated July 10, 1974, and attach to this Revised Description Sheet and Nighttime patterns. This notification concerns only changes in the meovs of radiation in the Nighttime pattern with Daytime operation continued as previously notified.

CTR NO 30385A4

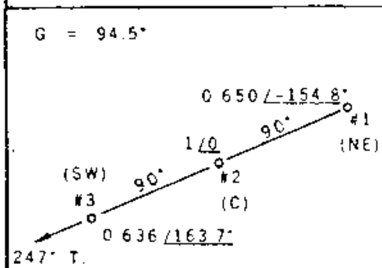
MARCH 1975



Site Coordinates:
26° 37' 55'' N
80° 07' 07'' W

RMS = 201 MV/M

HORIZONTAL PLANE RADIATION PATTERN



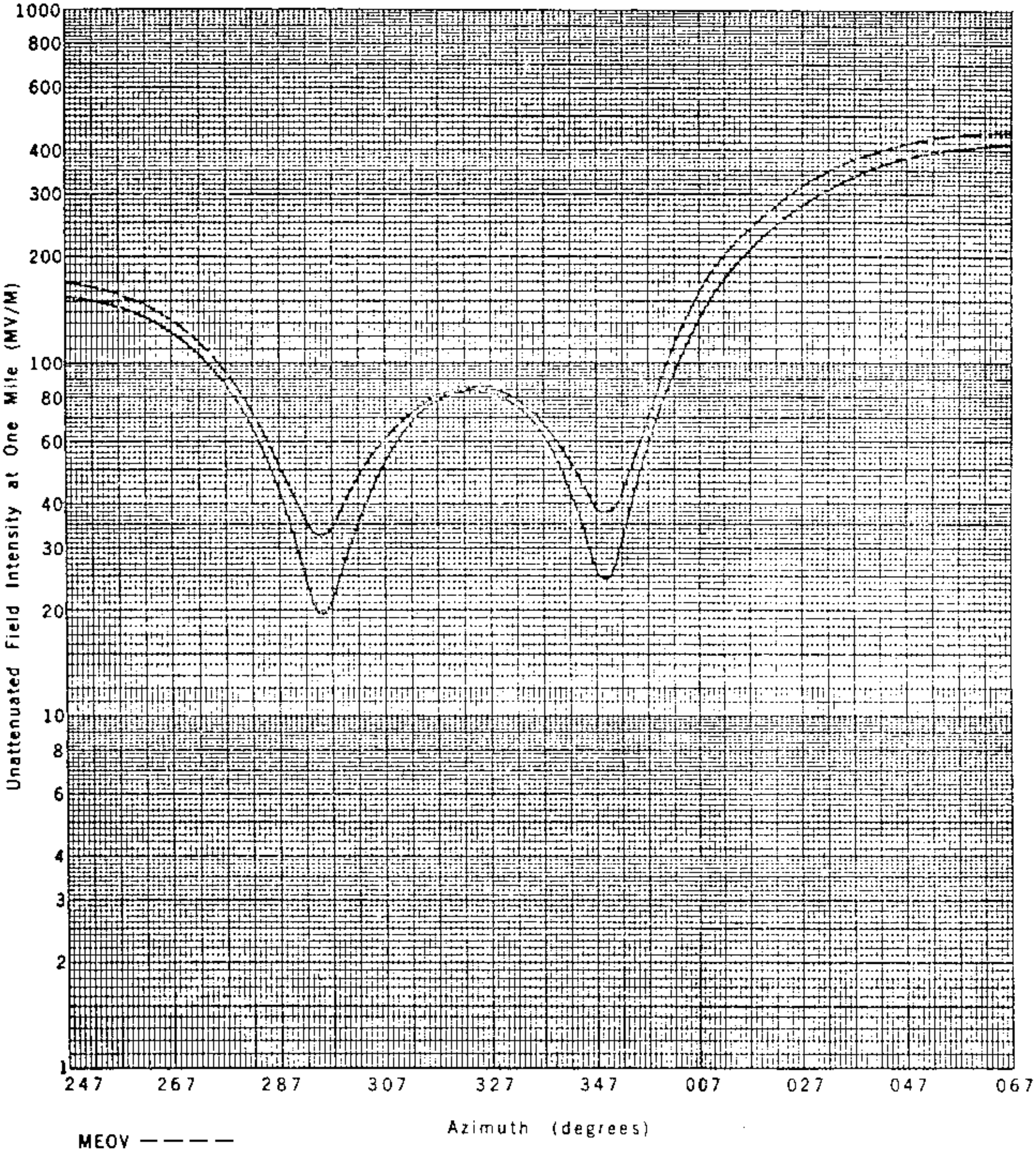
KEN-SELL, INCORPORATED
WEST PALM BEACH, FLORIDA

Jules Cohen & Associates
Consulting Electronics Engineers

RADIO STATION WIRK
1290 KHZ
1 KW, 5 KW-LS U DA-N

Pattern No. 730530
Amended

MARCH 1975



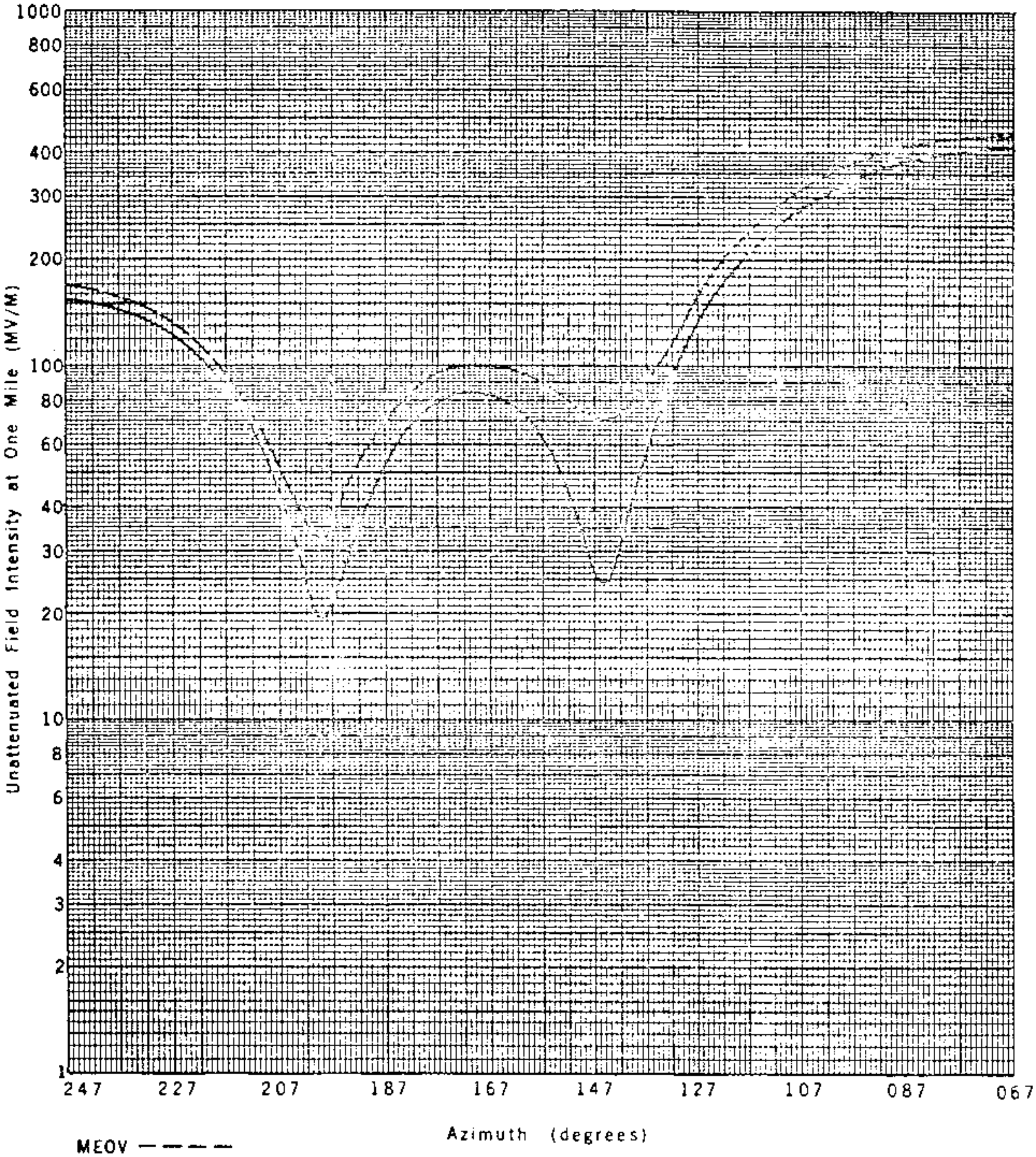
PROPOSED NIGHTTIME RADIATION PATTERN
AT VERTICAL ANGLE OF 0 DEGREES

KEN-SELL, INCORPORATED
RADIO STATION WIRK WEST PALM BEACH, FLORIDA
1290 KHZ 1 KW, 5 KW-LS U DA-N

Jules Cohen & Associates Consulting Electronics Engineers

WIKK

MARCH 1975



PROPOSED NIGHTTIME RADIATION PATTERN
AT VERTICAL ANGLE OF 0 DEGREES

KEN-SELL, INCORPORATED
RADIO STATION WIRK WEST PALM BEACH, FLORIDA
1290 KHZ 1 KW, 5 KW-LS U DA-N

Jules Cohen & Associates Consulting Electronics Engineers

WIRK

DIRECTIONAL ANTENNA DESCRIPTION SHEET

Station: WIRK

Main Studio: West Palm Beach, Florida

Frequency: 1290 kHz

Power: 1 kW Night 5 kW Day

Notification List No. 1652

Date: October 1, 1975

Class: III

GEOGRAPHICAL LOCATION OF THE CENTER OF THE ANTENNA SYSTEM:

North Latitude: 26° 37' 55"
West Longitude: 80° 07' 07"

ANTENNA CHARACTERISTICS

Authorized for Nighttime operation. (DA-N)
Number of elements: 3
Type of elements: Series-excited, uniform cross-section, guyed, vertical steel towers.

TOWER:	SW(#3)	C(#2)	NE(#1)	
HEIGHT ABOVE INSULATORS:	200'	200'	200'	(94.5°)
NIGHT PHASING:	+163.7°	0°	-154.8°	
NIGHT FIELD RATIO:	0.636	1	0.650	

SPACING AND ORIENTATION: Adjacent elements are spaced 190' (90°) on a line bearing 247° true.

GROUND SYSTEM: 120-210' equally spaced copper radials plus a 32' square ground screen about each tower. Radials are shortened and bonded to transverse straps along intersections between towers.

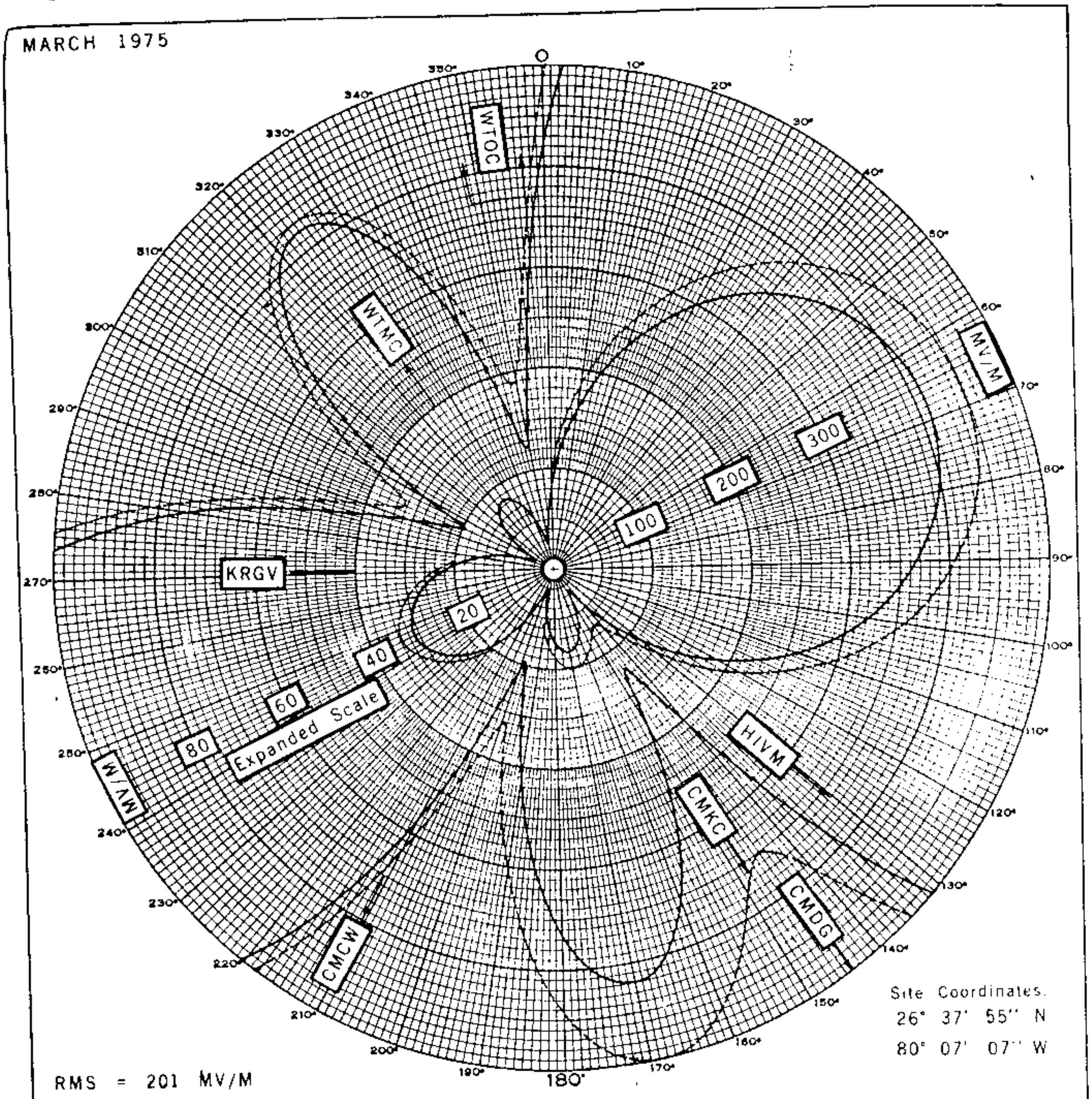
Predicted effective Night Field: 201 mv/m at rated power.

Predicted effective Day Field: (omnidirectional) 429 mv/m at rated power.

Note: Please retain the Nighttime vertical angle directional antenna radiation patterns from 35° through 60° inclusive notified for Station WIRK in United States Change List Number 1588 dated July 10, 1974, and attach to this Revised Description Sheet and Nighttime patterns. This notification concerns only changes in the meovs of radiation in the Nighttime pattern with Daytime operation continued as previously notified.

CTR NO 30385A4

Theo.



HORIZONTAL PLANE RADIATION PATTERN

G = 94.5°

0.650 /-154.8° #1 (NE)
1/0 #2 (C)
90° 90°
(SW) #3 0.636 /163.7°
247° T

KEN-SELL, INCORPORATED
WEST PALM BEACH, FLORIDA

Jules Cohen & Associates
Consulting Electronics Engineers

RADIO STATION WIRK
1290 KHZ
1 KW. 5 KW LS U DA N
Pattern No 730530
Amended

WIRK

DIRECTIONAL ANTENNA DESCRIPTION SHEET

Station: WIRK   Main Studio: West Palm Beach, Florida

Frequency: 1290 kHz   Power: 1 kW Night 5 kW Day

Notification List No. 1588   Date: July 10, 1974   Class: III

GEOGRAPHICAL LOCATION OF THE CENTER OF THE ANTENNA SYSTEM:
North Latitude: 26° 37' 55"
West Longitude: 80° 07' 07"

ANTENNA CHARACTERISTICS

Authorized for Nighttime operation. (DA-N)
Number of elements: 3
Type of elements: Series-excited, uniform cross-section, guyed, vertical steel towers.

TOWER:	SW(#3)	C(#2)	NE(#1)
HEIGHT ABOVE INSULATORS:	200'	200'	200' (94.5°)
PHASING:	+163.7°	0°	-154.8°
FIELD RATIO:	0.636	1	0.650

SPACING AND ORIENTATION: Adjacent elements are spaced 190' (90°) on a line bearing 247° true.

GROUND SYSTEM: 120-210' equally spaced copper radials plus a 32' square ground screen about each tower. Radials are shortened and bonded to transverse straps along intersections between towers.

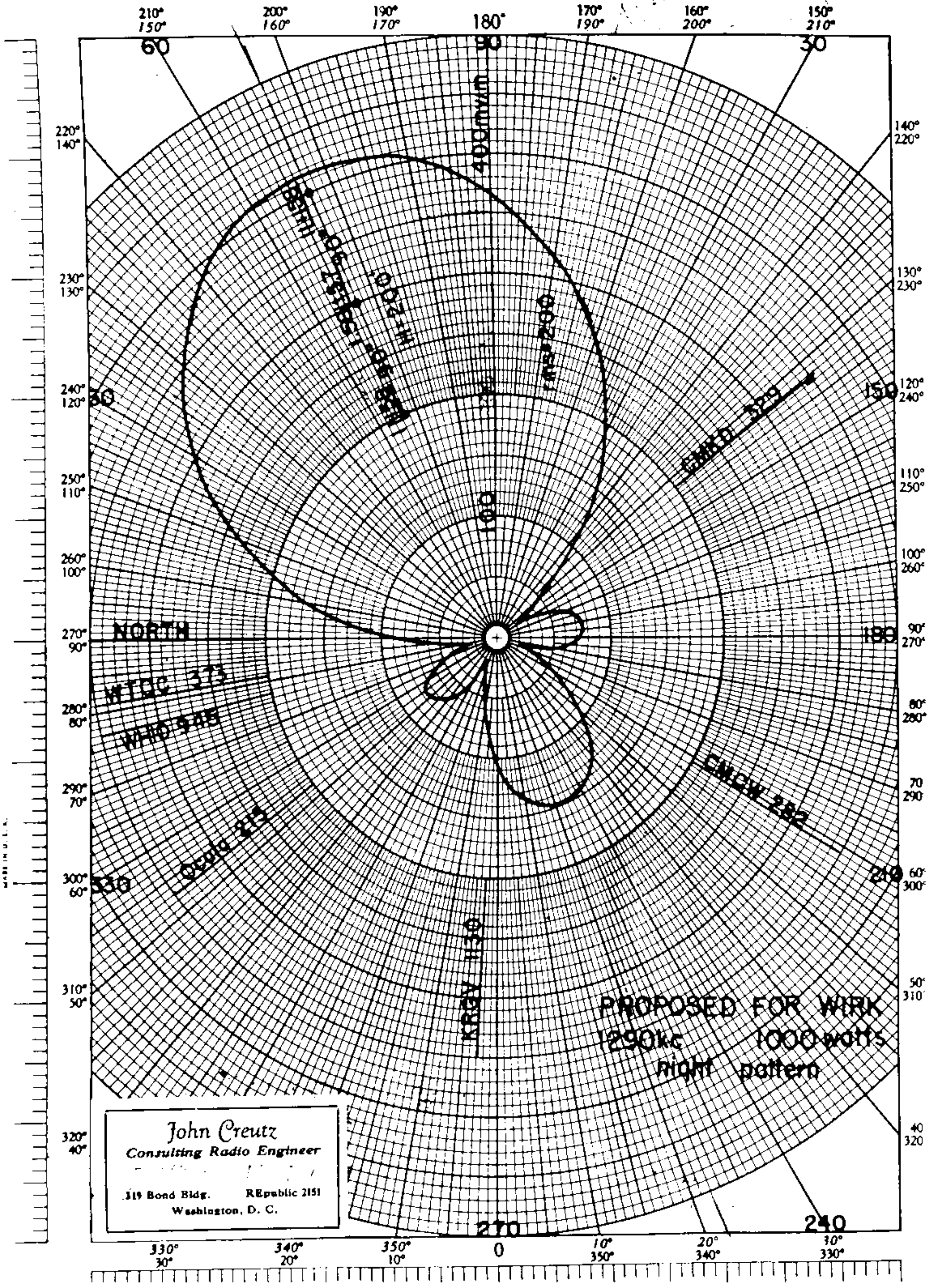
Predicted effective Night Field: 201 mv/m at rated power.

Predicted effective Day Field: (omnidirectional) 429 mv/m at rated power.

Note: This notification concerns only changes in the Nighttime operation of the station with Daytime operation continued as previously notified.

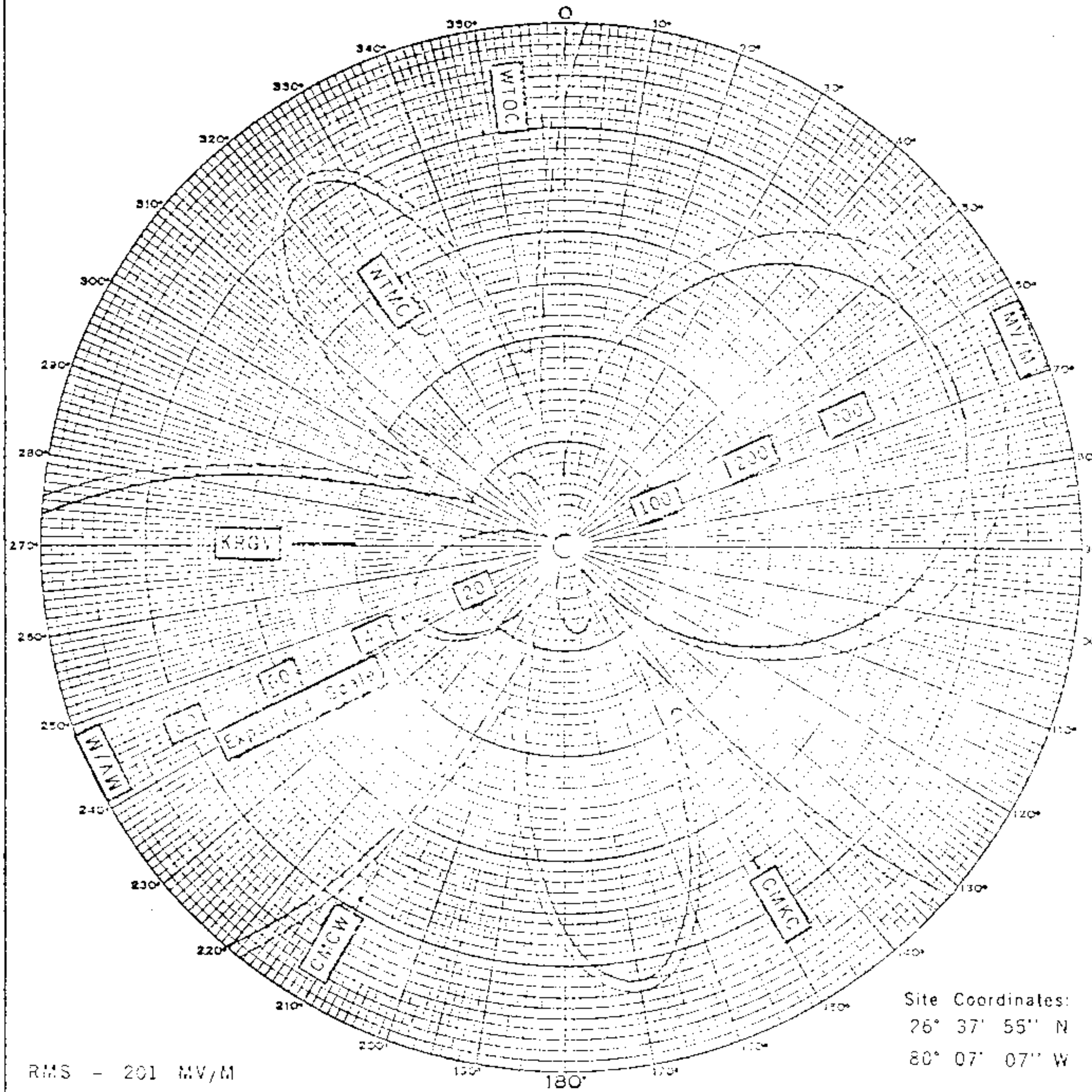
CTR NO 30385A3

WIRK 1290 KC.



400mv/m
100
NORTH
WTOC 373
WHO 948
CMKD 329
CMCW 282
KRGV 150
PROPOSED FOR WIRK
1290kc 1000 watts
night pattern
John Creutz
Consulting Radio Engineer
319 Bond Bldg. REpublic 2151
Washington, D. C.

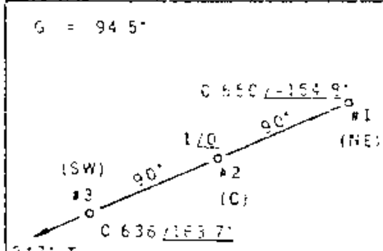
APRIL 1974



Site Coordinates:
26° 37' 55" N
80° 07' 07" W

RMS - 201 MV/M

HORIZONTAL PLANE RADIATION PATTERN



KEN-SELL, INCORPORATED
WEST PALM BEACH, FLORIDA

Jules Cohen & Associates
Consulting Electronics Engineers

RADIO STATION WIRK
1290 KHZ
1 KW, 5 KW-LS U DA-N

Pattern No 730530
Amended

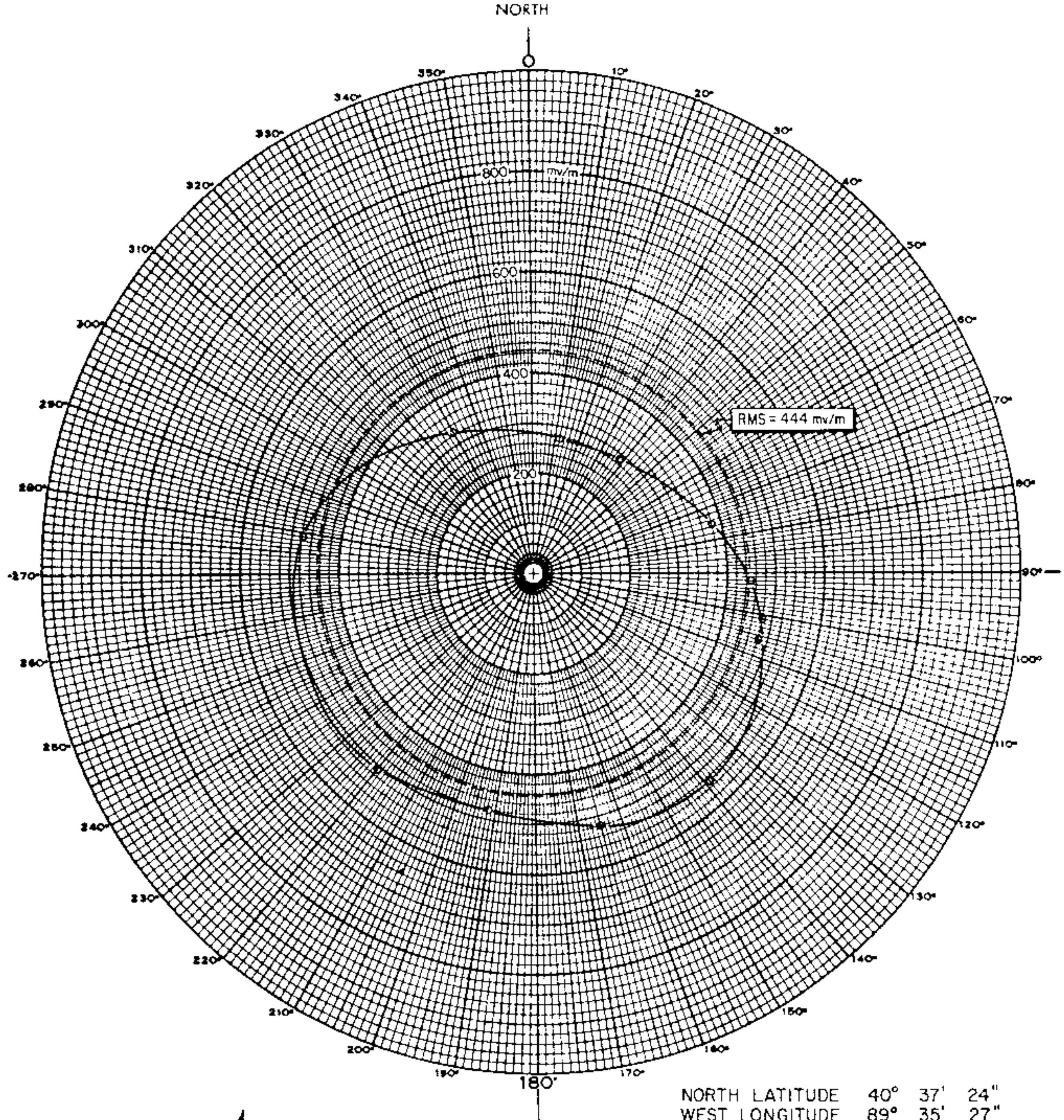
BL 12476
GR. (2-13-70) Lic. covering CP for changes

WIRL

Measured Day
(2-28-70ct)

Station WIRL
Peoria, Illinois

5kw,DA-2,U
1290 kc



NORTH LATITUDE 40° 37' 24"
WEST LONGITUDE 89° 35' 27"

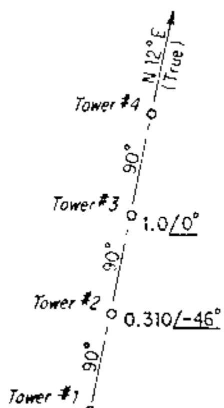


FIGURE 8
MEASURED RADIATION PATTERN
DAYTIME DIRECTIONAL ANTENNA
MID AMERICA MEDIA, INC.
WIRL 5 KW-U, DA-2 1290 KC
PEORIA, ILLINOIS

Prepared by
Lohnes and Culver Washington, D. C.
June, 1969

FCC File No.BL-12476
Accepted 2-2-70

Station WIRL
Peoria, Illinois

1290 kc

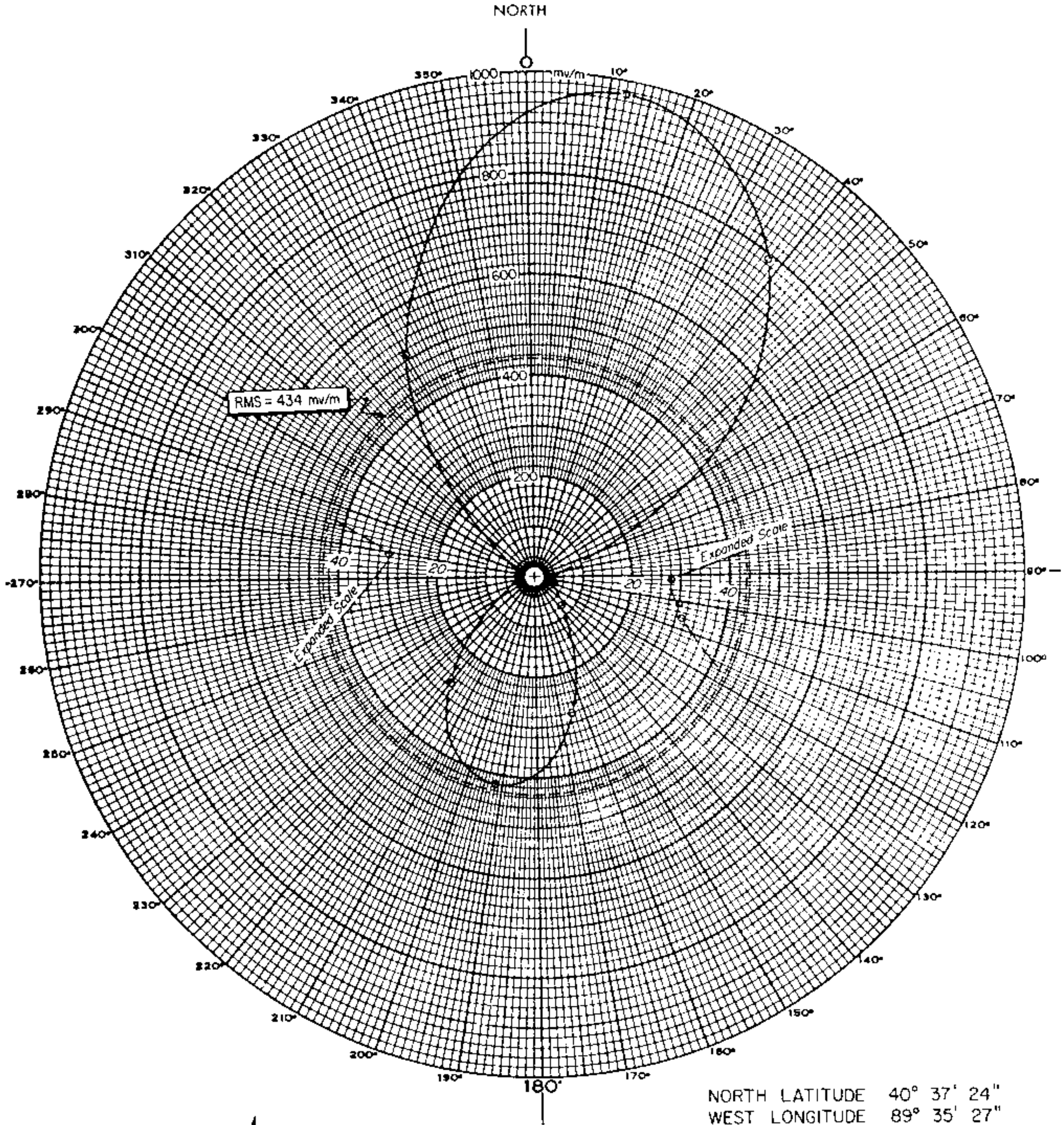
BL-12476
GR (2-13-70) Lic. Covering CP for changes

WIRL

Measured Night
(2-28-70ct)

Station WIRL
Peoria, Illinois

5kw,DA-2,U
1290 kc



NORTH LATITUDE 40° 37' 24"
WEST LONGITUDE 89° 35' 27"

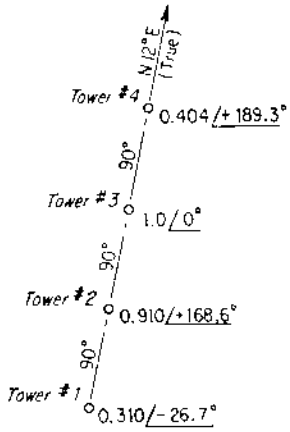


FIGURE 9
MEASURED RADIATION PATTERN
NIGHTTIME DIRECTIONAL ANTENNA
MID AMERICA MEDIA, INC.
WIRL 5 KW-U, DA-2 1290 KC
PEORIA, ILLINOIS

Prepared by
Lohnes and Culver Washington, D. C.
June, 1969

FCC File No. BL-12476
Accepted 2-2-70

Station WIRL
Peoria, Illinois

1290 kc

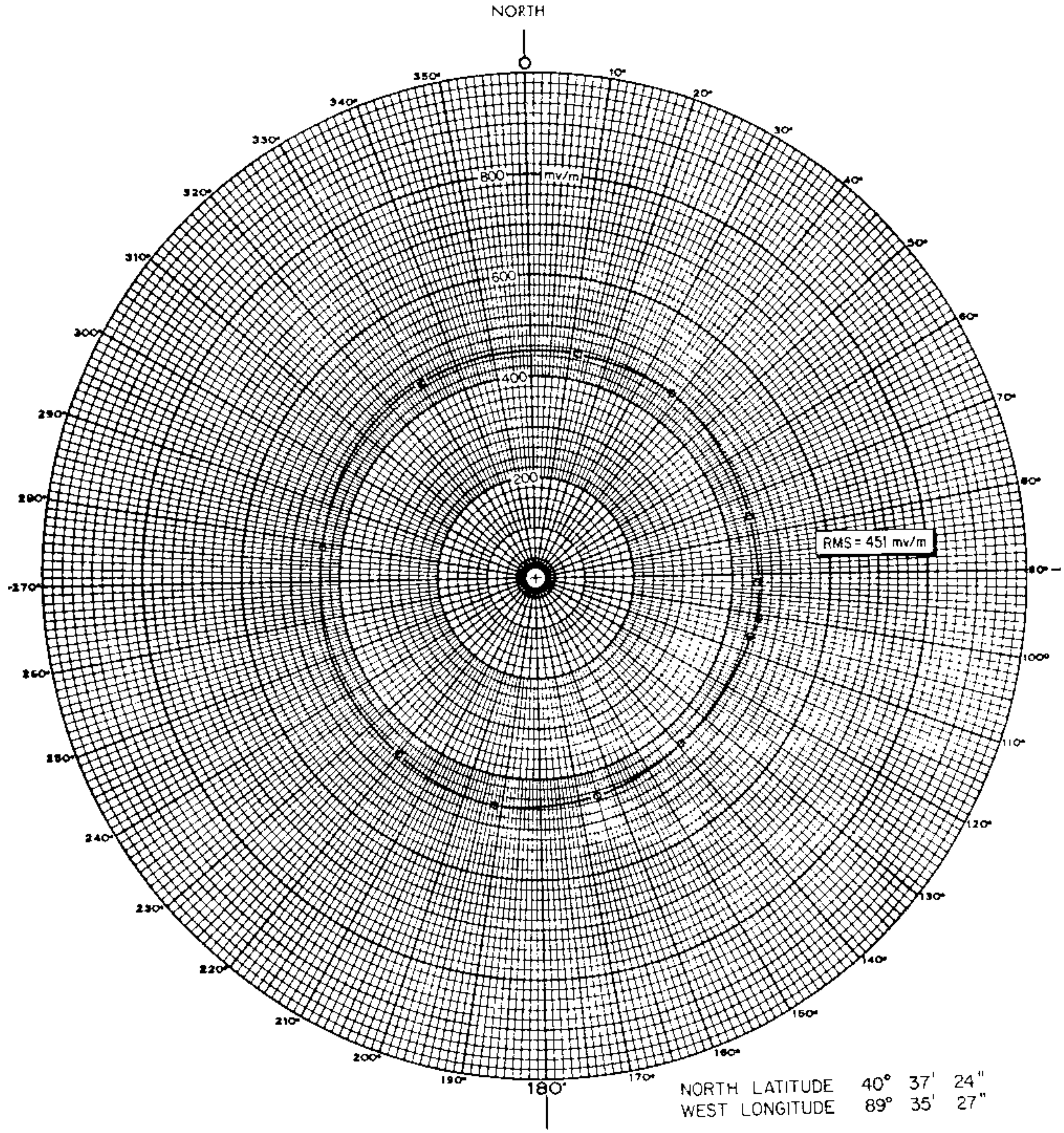
BL 12416
GR. (2-13-70) Lic. Covering CP for changes

WIRL

Measured Non-DA
(2-28-70ct)

Station WIRL
Peoria, Illinois

5kw, DA-2, U
1290 kc



NORTH LATITUDE 40° 37' 24"
WEST LONGITUDE 89° 35' 27"

FIGURE 7
NONDIRECTIONAL RADIATION PATTERN
NO. 3 (NORTH-CENTER) TOWER
MID AMERICA MEDIA, INC.
WIRL 5 KW-U, DA-2 1290 KC
PEORIA, ILLINOIS

Prepared by
Lohnes and Culver Washington, D. C.
June, 1969

FCC File No. BL-12476
Accepted 2-2-70

Station WIRL
Peoria, Illinois
1290 kc

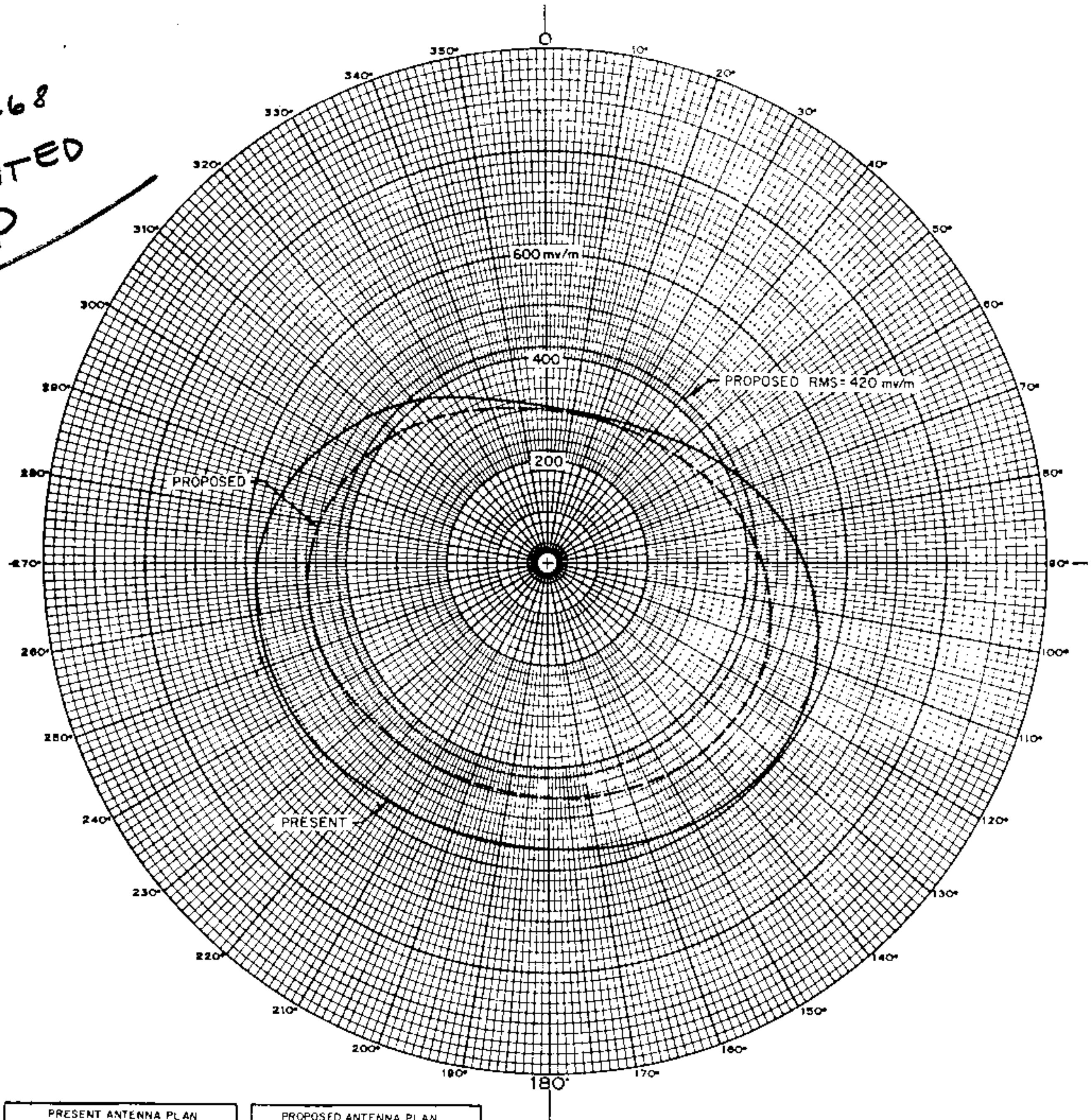
WIRL

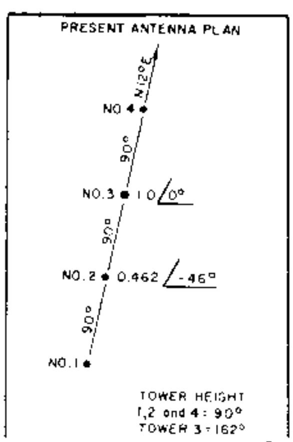
Proposed Day
(7-29-68ct)

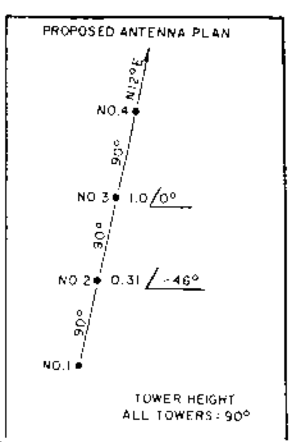
Station WIRL
Peoria, Illinois

5kw,DA-2,U
1290 kc

7-25-68
GRANTED
CP







North Latitude 40° 37' 24"
West Longitude 89° 35' 27"

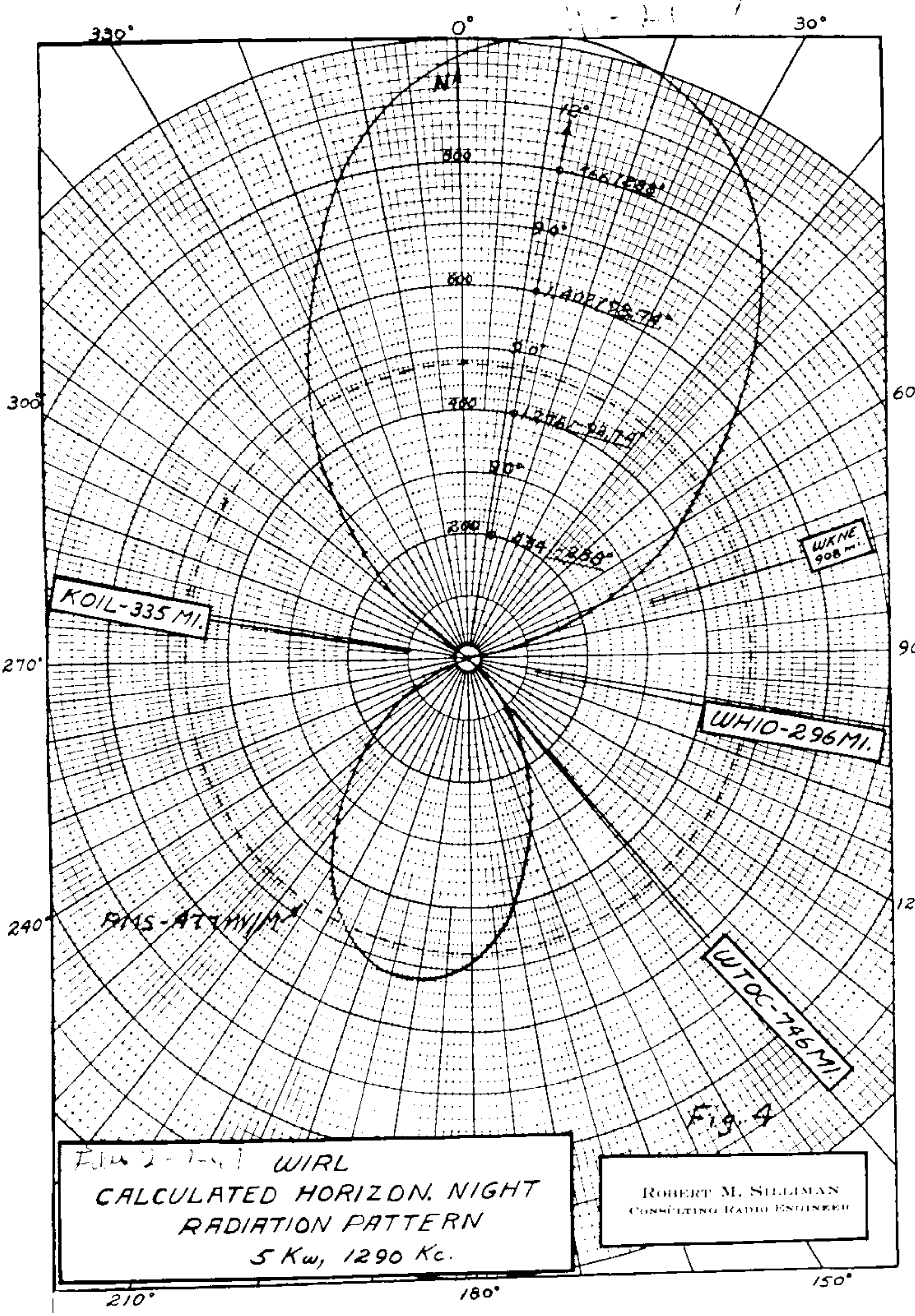
FIGURE 1
DAYTIME HORIZONTAL PLANE RADIATION PATTERN
WIRL 5 KW, DA-2 1290 KC
PEORIA, ILLINOIS

Prepared by
Lohnes and Culver Washington, D. C.
May, 1968

FCC File No. BP-18245
Accepted 7-15-68

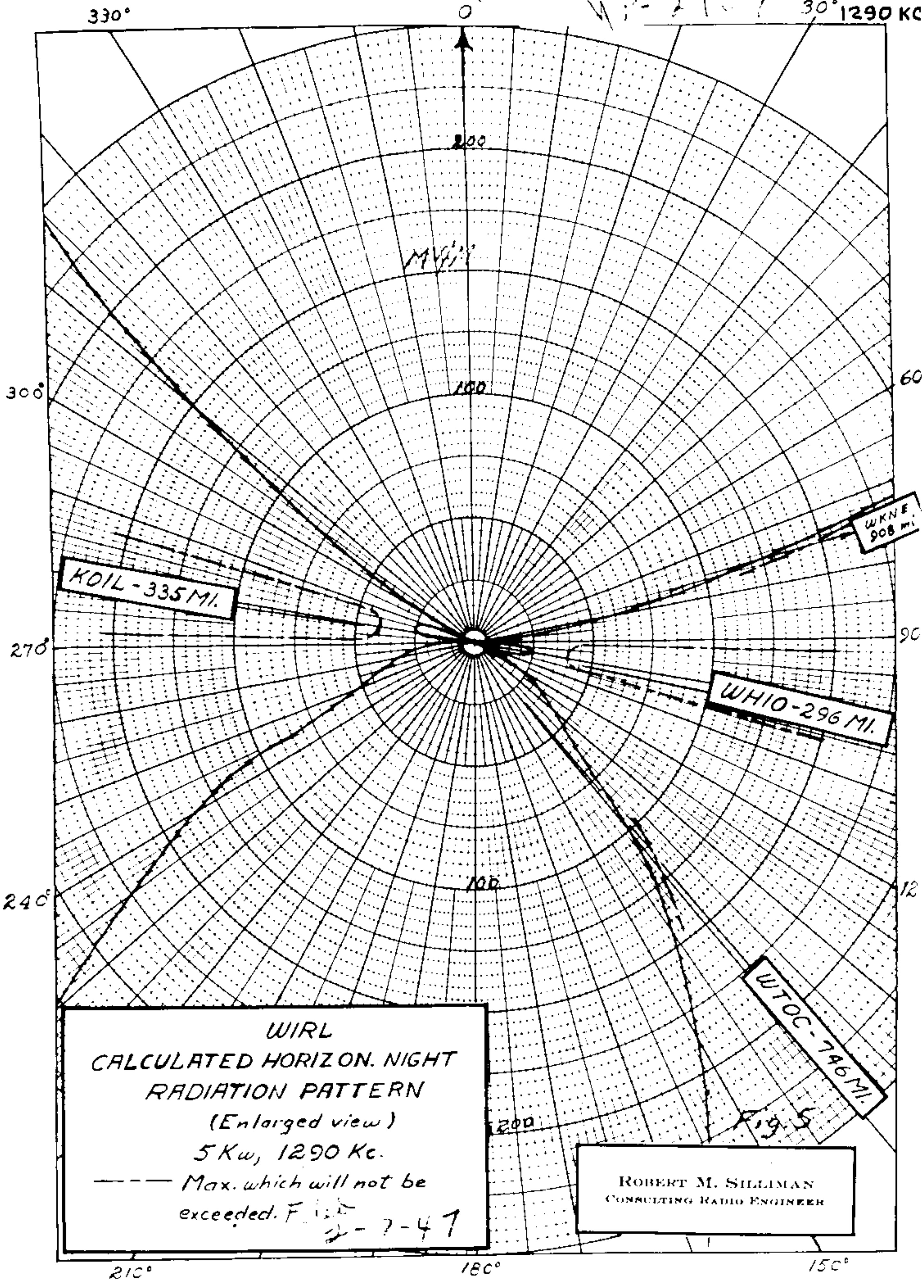
Station WIRL
Peoria, Illinois

1290 kc


0°
30°
330°
N
12°
800
1661 [ ] 238°
9.0°
600
1,402 [ ] 28.78°
9.0°
400
1,276 [ ] 24.74°
9.0°
200
434 288°
300°
60°
KOIL-335 MI.
WKNE 908 mi.
270°
90°
WHIO-296 MI.
240°
RMS-474 MV/M.
120°
WTOC-746 MI.
Fig. 4
WIRL
CALCULATED HORIZON. NIGHT
RADIATION PATTERN
5 Kw, 1290 Kc.
ROBERT M. SILLIMAN
CONSULTING RADIO ENGINEER
210°
180°
150°

23

WIRL
1290 KC



KEENE, NEW HAMPSHIRE WKNE

DIRECTIONAL ANTENNA DESCRIPTION SHEET

Station: WKNE

Main Studio: Keene, New Hampshire

Frequency: 1290 kHz

Power: 5 kw

Notification List No. 1448

Date: October 28, 1971

Class: III

GEOGRAPHICAL LOCATION OF THE CENTER OF THE ANTENNA SYSTEM:

North Latitude: 42° 56' 56"
West Longitude: 72° 18' 22"

ANTENNA CHARACTERISTICS

Authorized for Daytime and Nighttime operation. (DA-1)
Number of elements: 2
Type of elements: Series-excited, uniform cross-section, guyed vertical steel towers.

TOWER:	SW(#2)	NE(#1)	
HEIGHT ABOVE INSULATORS:	206'	206'	(97°)
PHASING:	+120.8°	0°	
FIELD RATIO:	1.0	0.81	

SPACING AND ORIENTATION: Elements are spaced 195' (92.2°) on a line bearing 206° true.

GROUND SYSTEM: 120 - 200' equally spaced copper radials about each tower. Radials are shortened and bonded to a transverse strap along intersections between towers.

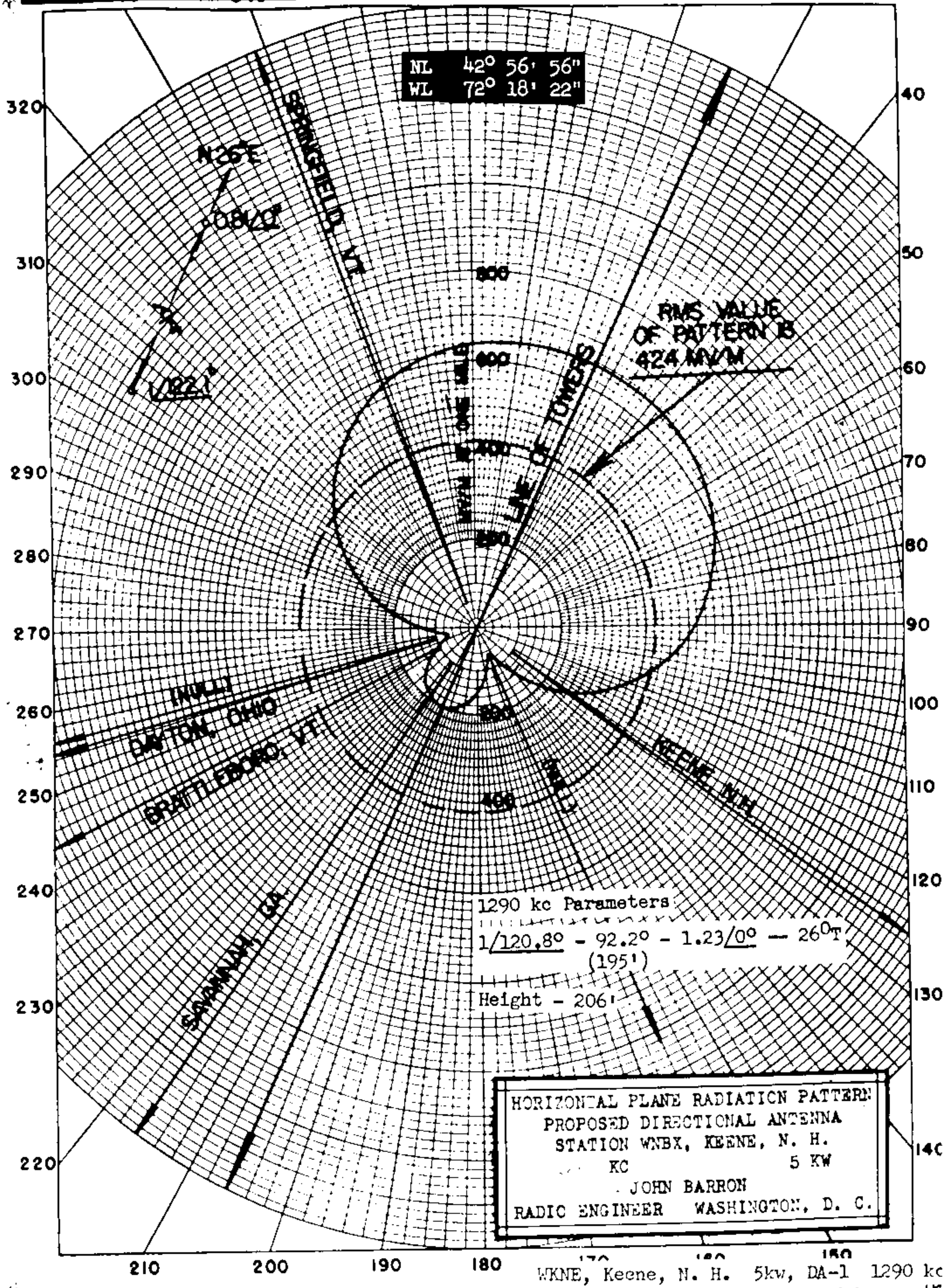
Predicted effective Field: 420 mv/m at rated power.

Note: This notification concerns only changes in the field ratios and to add meovs of radiation in the directional antenna radiation pattern.

CTR NO 30366A3

PROPOSED DAY & NIGHT   Station WKNE   5kw, DA-1,U
Keene, New Hampshire   1290 KC

WKNE



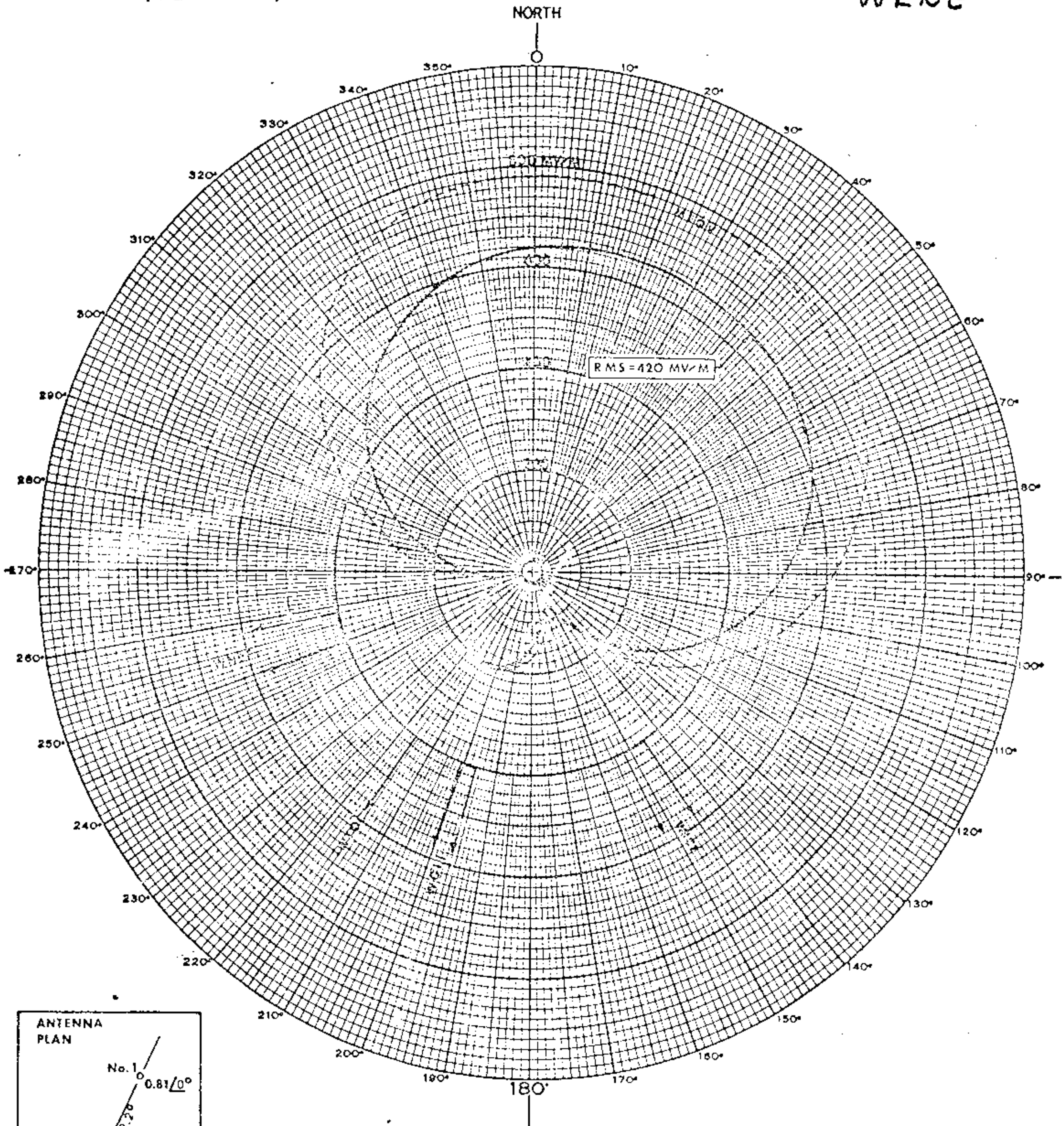
WKNE, Keene, N. H. 5kw, DA-1 1290 kc

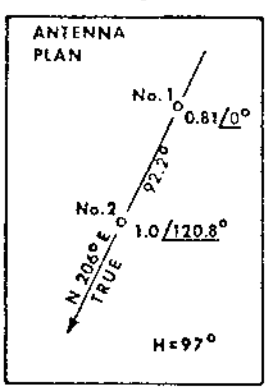
FIG. 1   WNBX 5 KW   12/8/39

17

KEENE, NEW HAMPSHIRE

WKNE





NORTH	LATITUDE	42°	56'	56"
WEST	LONGITUDE	72°	18'	22"

FIGURE 2
HORIZONTAL PLANE RADIATION PATTERN
WKNE 5 KW DA-1 1290 KC
KEENE, NEW HAMPSHIRE

Prepared by
Lohnes and Culver Washington, D. C.

WNBF

23354

DIRECTIONAL ANTENNA DESCRIPTION SHEET
September 7, 1955

Station: WNBF

Main Studio: Binghamton, New York

Frequency: 1290kc

Power: 5kw

Notification List No. 21

Date: Sept. 4, 1941 Class: III-A

GEOGRAPHICAL LOCATION OF THE CENTER OF THE ANTENNA SYSTEM:

North Latitude: 42° 03' 31"
West Longitude: 75° 57' 14"

ANTENNA CHARACTERISTICS

Authorized for Nighttime operation. (DA-N)
Number of elements: 3
Type of elements: Series-excited, uniform cross-section, guyed, vertical steel towers.

TOWER:	Northwest #2	Center #0	Southeast #1
HEIGHT ABOVE INSULATORS:	205'	205'	205'(97°)
PHASING:	-141.9°	0°	+141.9°
FIELD RATIO:	0.645	1.0	0.645

SPACING AND ORIENTATION: Adjacent elements are spaced 254'(120°) on a line bearing 161° true.

GROUND SYSTEM: 120-190' equally spaced copper radials about each tower. Radials are shortened and bonded to transverse straps along intersections between towers.

Predicted effective Night Field: 492 mv/m at rated power.

Daytime omnidirectional operation: Uniform cross-section guyed vertical radiator, 781' in height above insulators, located at north latitude 42° 03' 33.5" west longitude 75° 57' 06". Tower is sectionalized and excited as a Franklin type antenna. Ground system consists of 120-290' equally spaced radials.

Predicted effective Day Field: (omnidirectional) 725 mv/m at rated power.

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*Note: Please retain the Nighttime directional antenna radiation pattern notified for station WNBF in U.S. Change List No. 21, dated Sept. 4, 1941, and attach to this Description Sheet. This notification concerns only a change in the Daytime omnidirection antenna system of the station with Nighttime operation continued as previously notified.

WNBF
129

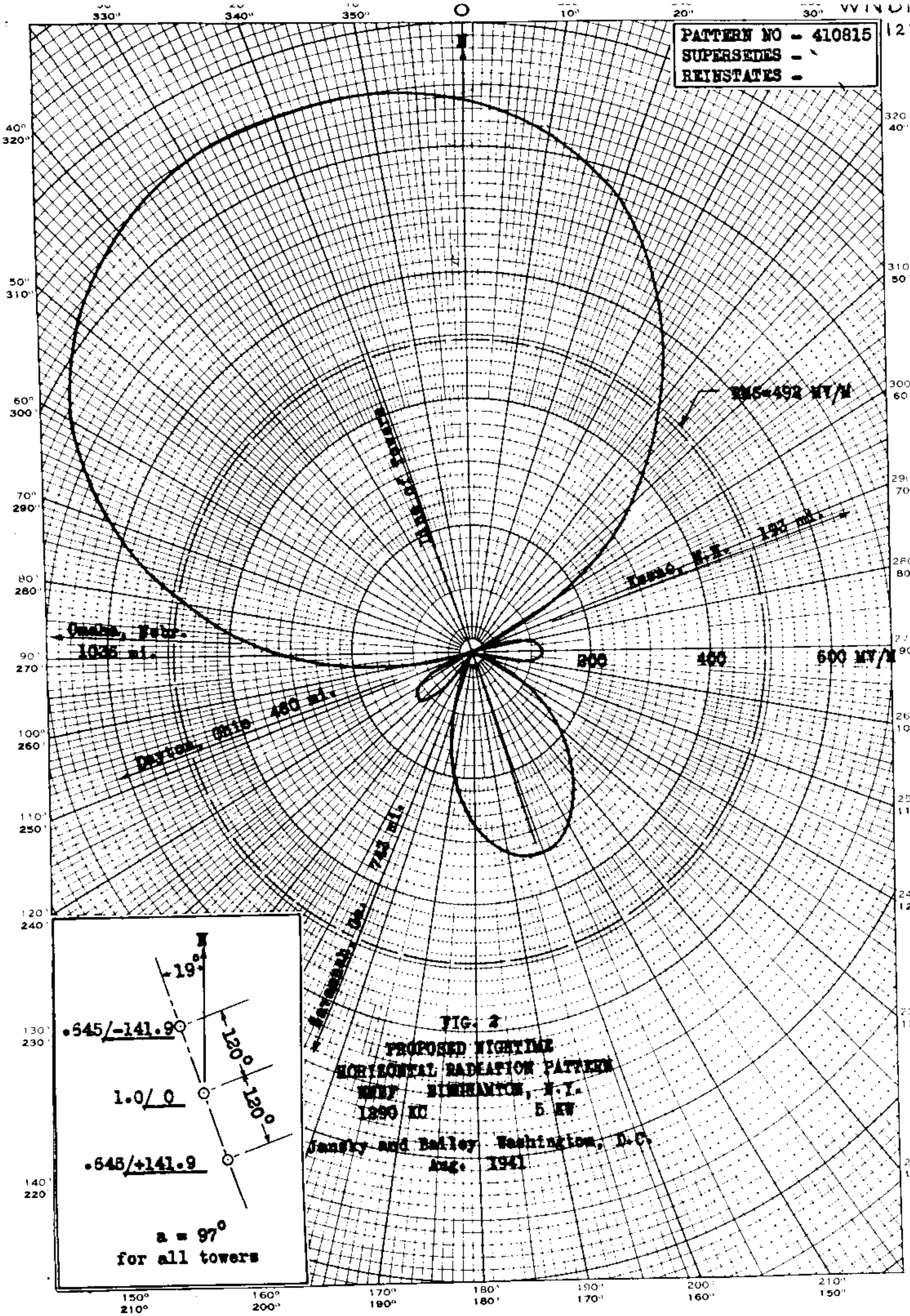


FIG. 2
PROPOSED NIGHTTIME
HORIZONTAL RADIATION PATTERN
WNBF BINGHAMTON, N.Y.
1290 KC 5 KW

Jansky and Bailey Washington, D.C.
Aug. 1941

WNBF

MEASURED NIGHT 10/6/55G

STATION WNBF
BINGHAMTON, N.Y.

5 KW
DA-N, U

1290 KC

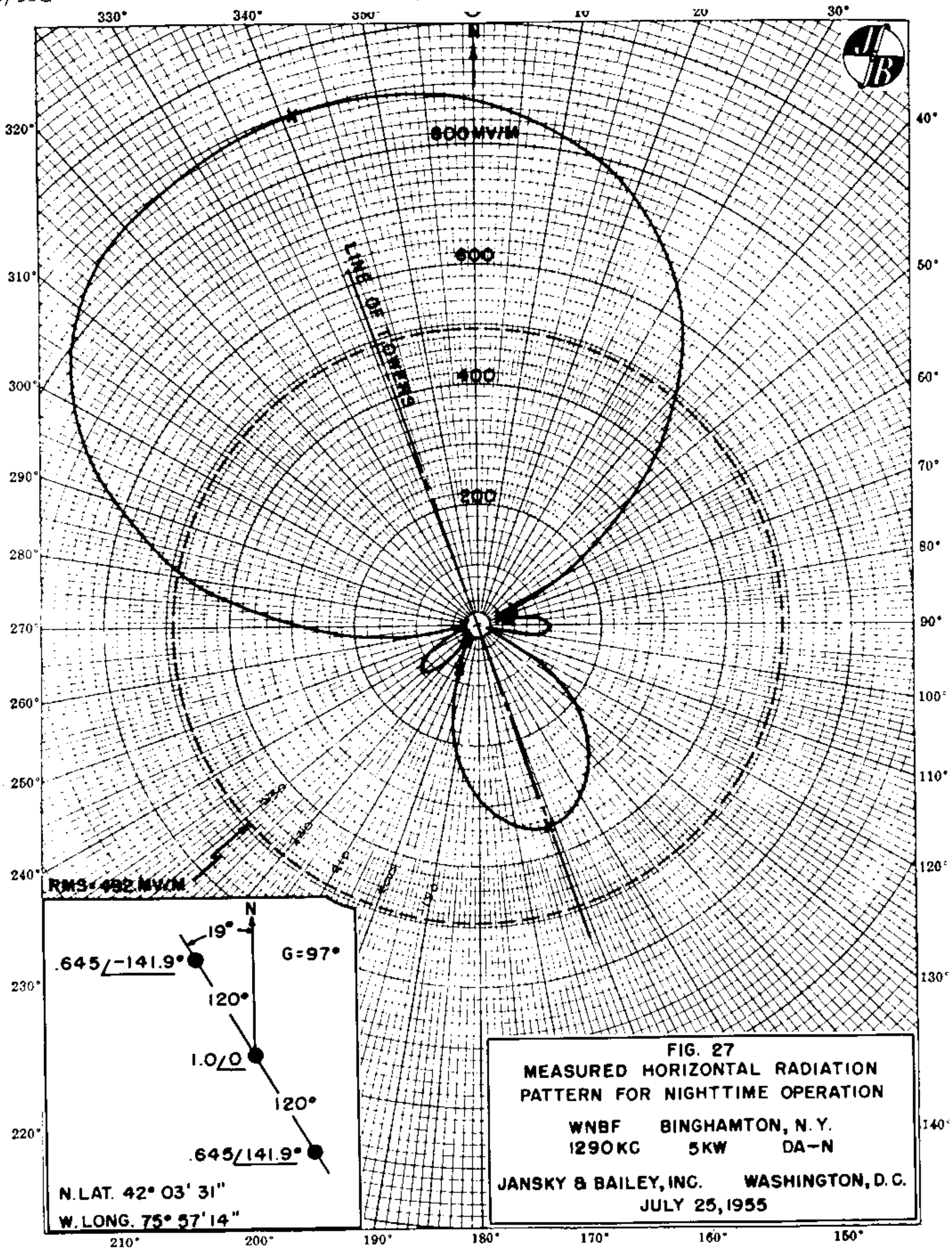


FIG. 27
MEASURED HORIZONTAL RADIATION PATTERN FOR NIGHTTIME OPERATION
WNBF BINGHAMTON, N.Y.
1290 KC 5 KW DA-N
JANSKY & BAILEY, INC. WASHINGTON, D.C.
JULY 25, 1955

WNBF

MEASURED NIGHT NULLS 10/6/55G

STATION WNBF BINGHAMTON, N.Y.

5 KW DA-N, U

1290 KC

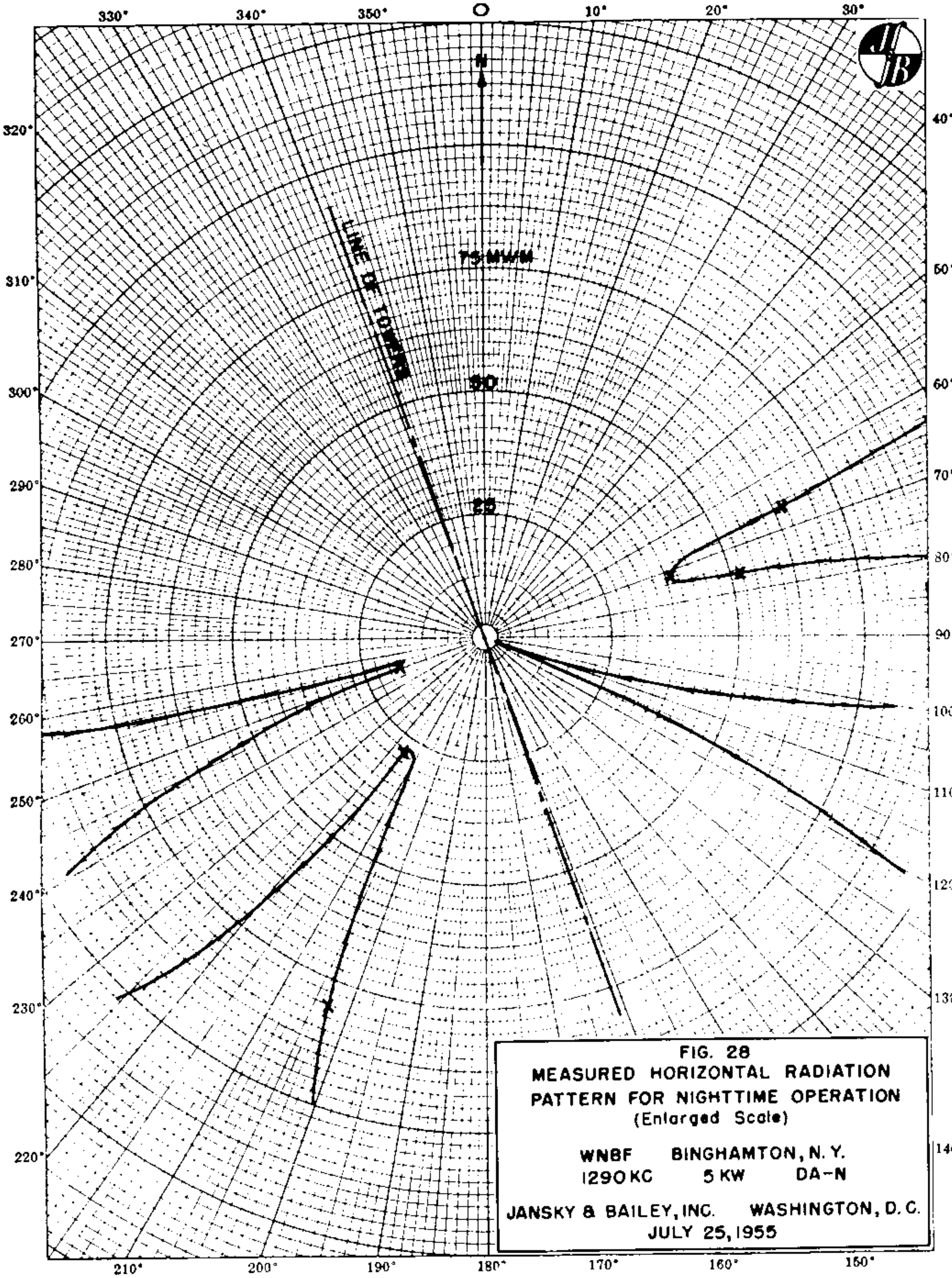


FIG. 28
MEASURED HORIZONTAL RADIATION PATTERN FOR NIGHTTIME OPERATION
(Enlarged Scale)

WNBF BINGHAMTON, N.Y.
1290 KC 5 KW DA-N

JANSKY & BAILEY, INC. WASHINGTON, D.C.
JULY 25, 1955

WNBF

MEASURED DAY
10/6/55G

STATION WNBF
BINGHAMTON, N.Y.

5 KW
DA-N, U

1290 KC

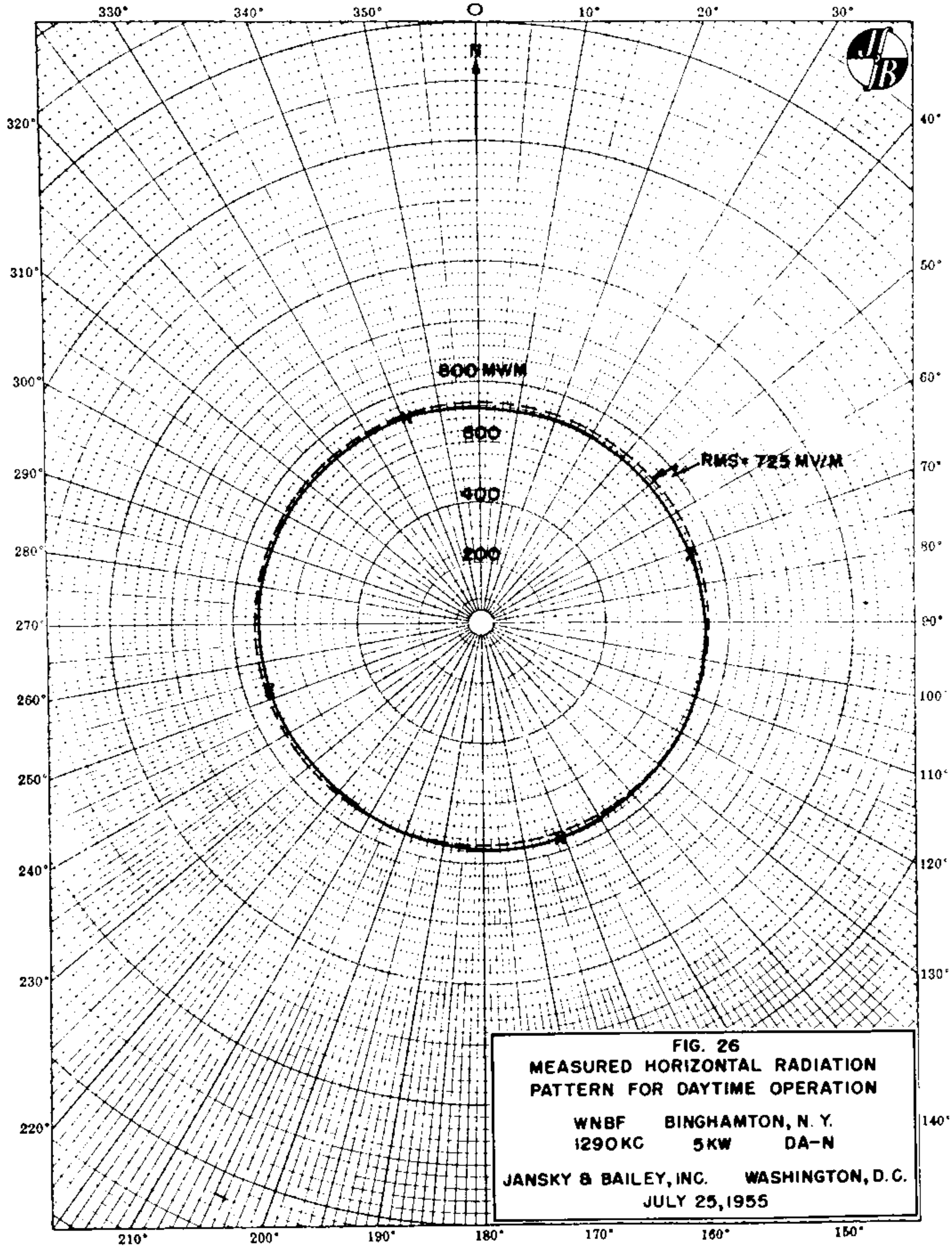


FIG. 26
MEASURED HORIZONTAL RADIATION
PATTERN FOR DAYTIME OPERATION

WNBF BINGHAMTON, N.Y.
1290 KC 5 KW DA-N

JANSKY & BAILEY, INC. WASHINGTON, D.C.
JULY 25, 1955

File No. BL-5845 Accepted 9/16/55 WNBF, BINGHAMTON, N.Y. 1290 KC

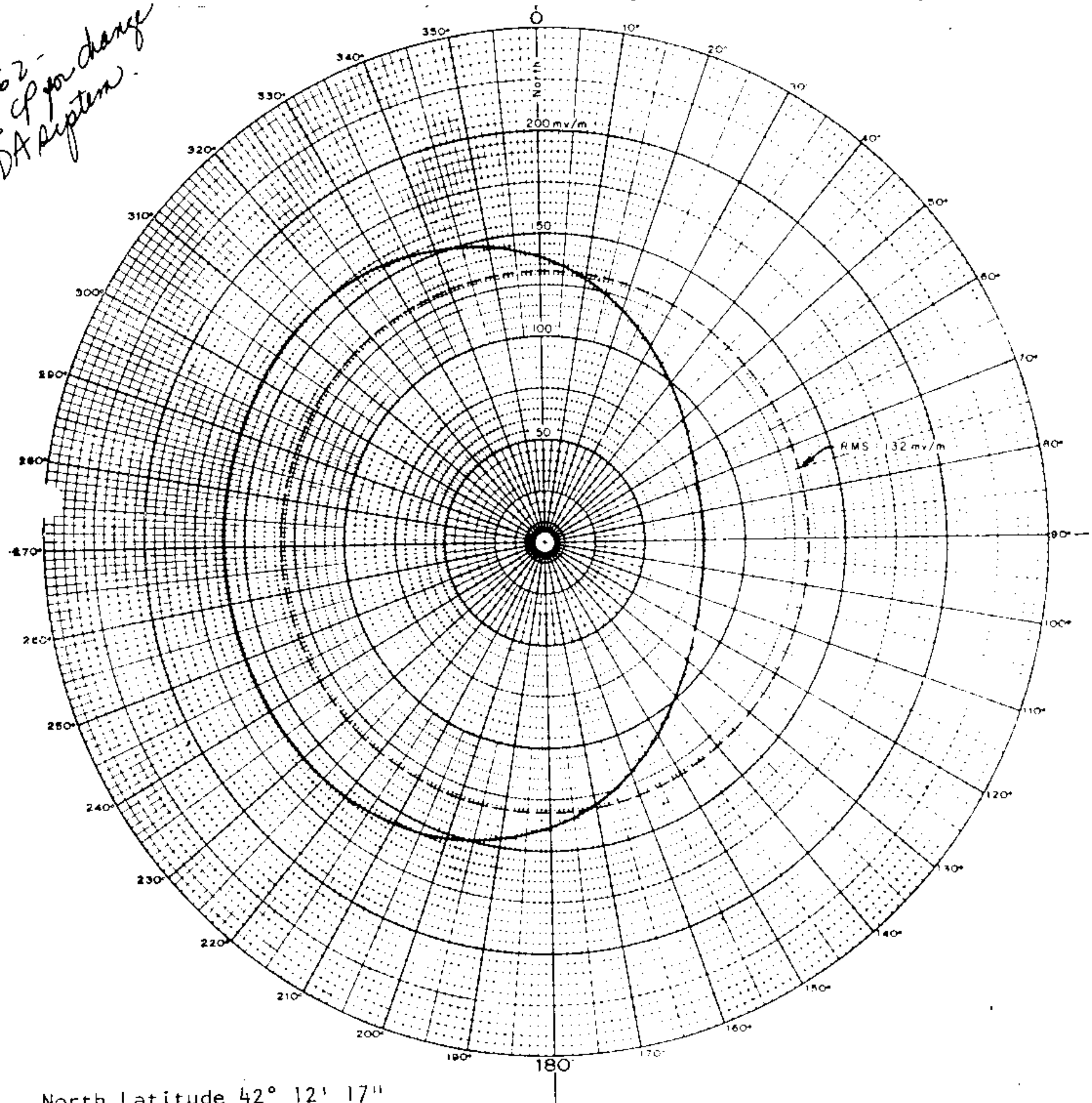
WNRS

PROPOSED DAY
(8-22-61ct)

Station WOIA
Saline, Michigan

500w, DA-D, D
1290 KC

3-15-62 - autod CP for change day DA system.



North Latitude 42° 12' 17"
West Longitude 83° 47' 19"

ANTENNA PLAN		
No 1	No 2	N90°E
1∠0°	80°	0.4∠70°
		h: 80°

FIGURE 1
HORIZONTAL RADIATION PATTERN
WOIA 500 W-D, DA 1290 KC
SALINE, MICHIGAN
Prepared by
Lohnes and Culver *Washington 4, D.C.*
1290 KC *June 1961*

FCC File No. BP-14958
Accepted 7-31-61

Station WOIA
Saline, Michigan

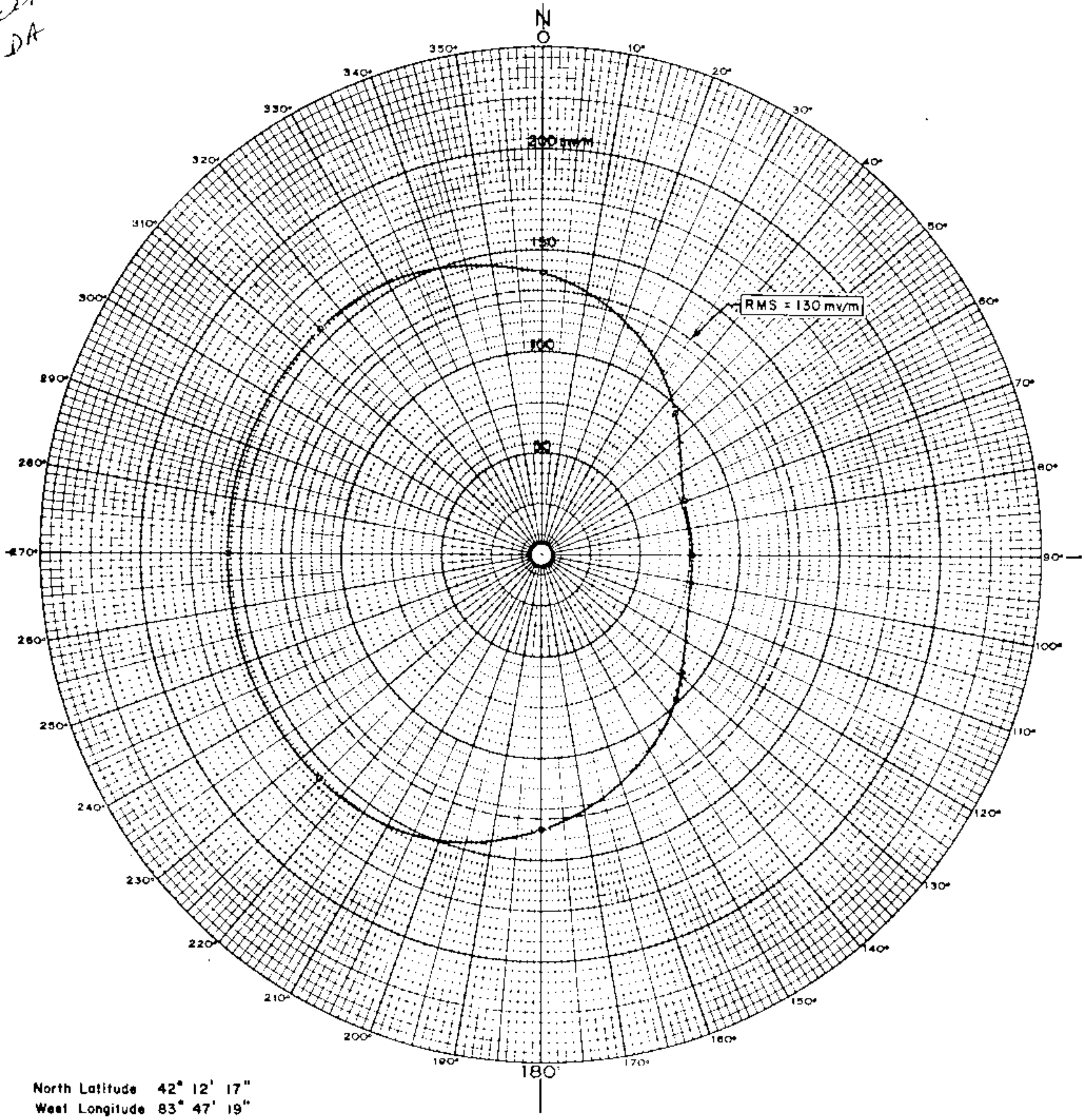
WNRS

Measured Day
(7-27-62ct)

Station WOIA
Saline, Michigan

500w,DA-D,D
1290 kc

1-20-63
granted license
to change DA



North Latitude 42° 12' 17"
West Longitude 83° 47' 19"

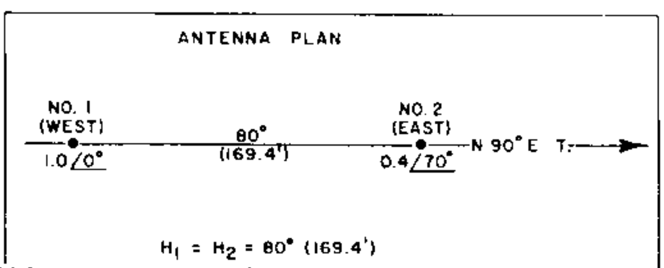


FIGURE 7
DA-DAY RADIATION PATTERN
LESTER BROADCASTING CORPORATION
WOIA 0.5 KW DA-D 1290 KC
SALINE, MICHIGAN

Prepared by
Lohnes and Culver *Washington 4, D.C.*
May 1962

FCC File No. BL-9384
Accepted 6-19-62

Station WOIA
Saline, Michigan

1290 kc

WNRS

Measured Non-DA
(7-27-62ct)

Station WOIA
Saline, Michigan

500w,DA-D,D
1290 kc

11-21-63

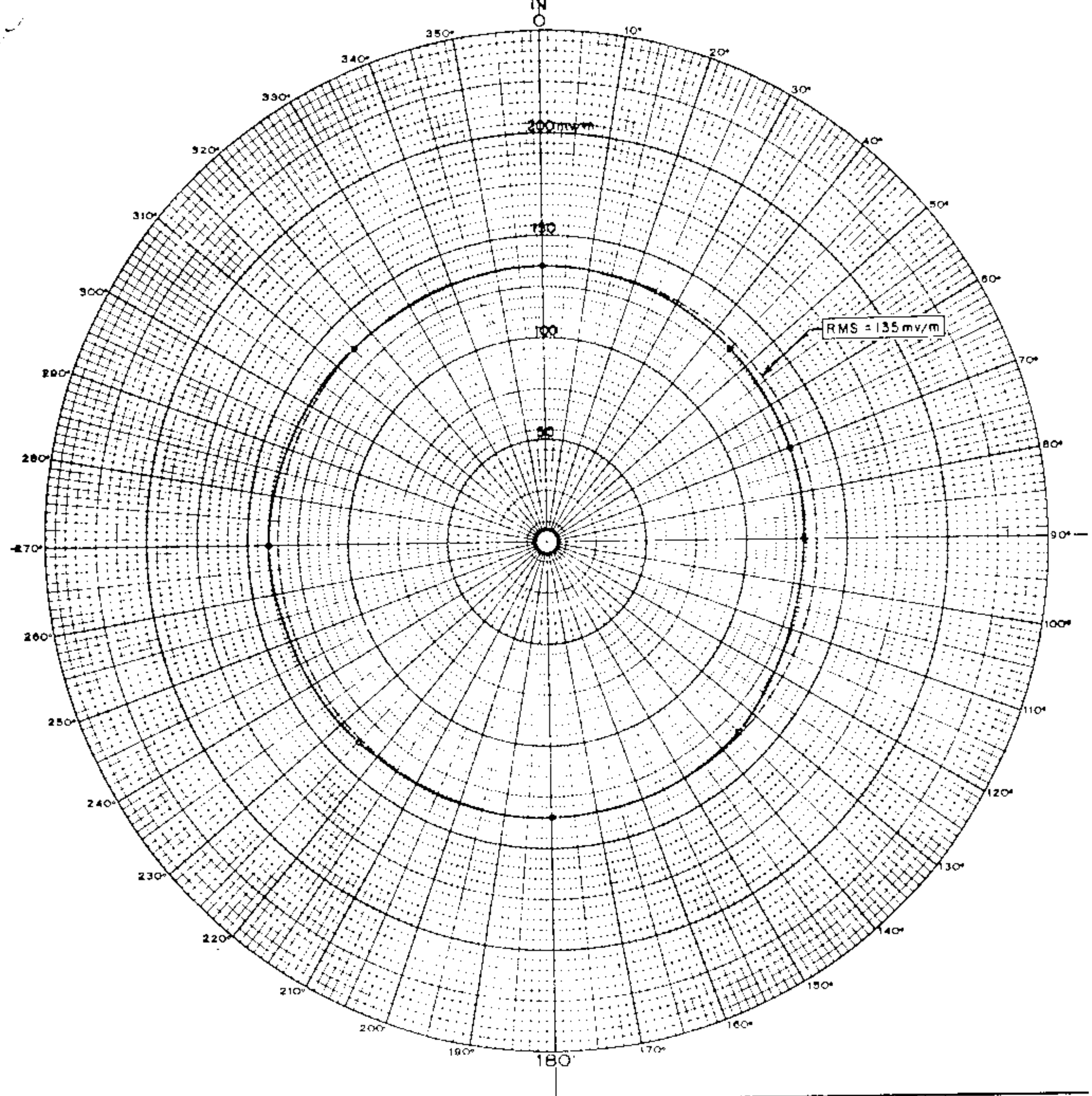


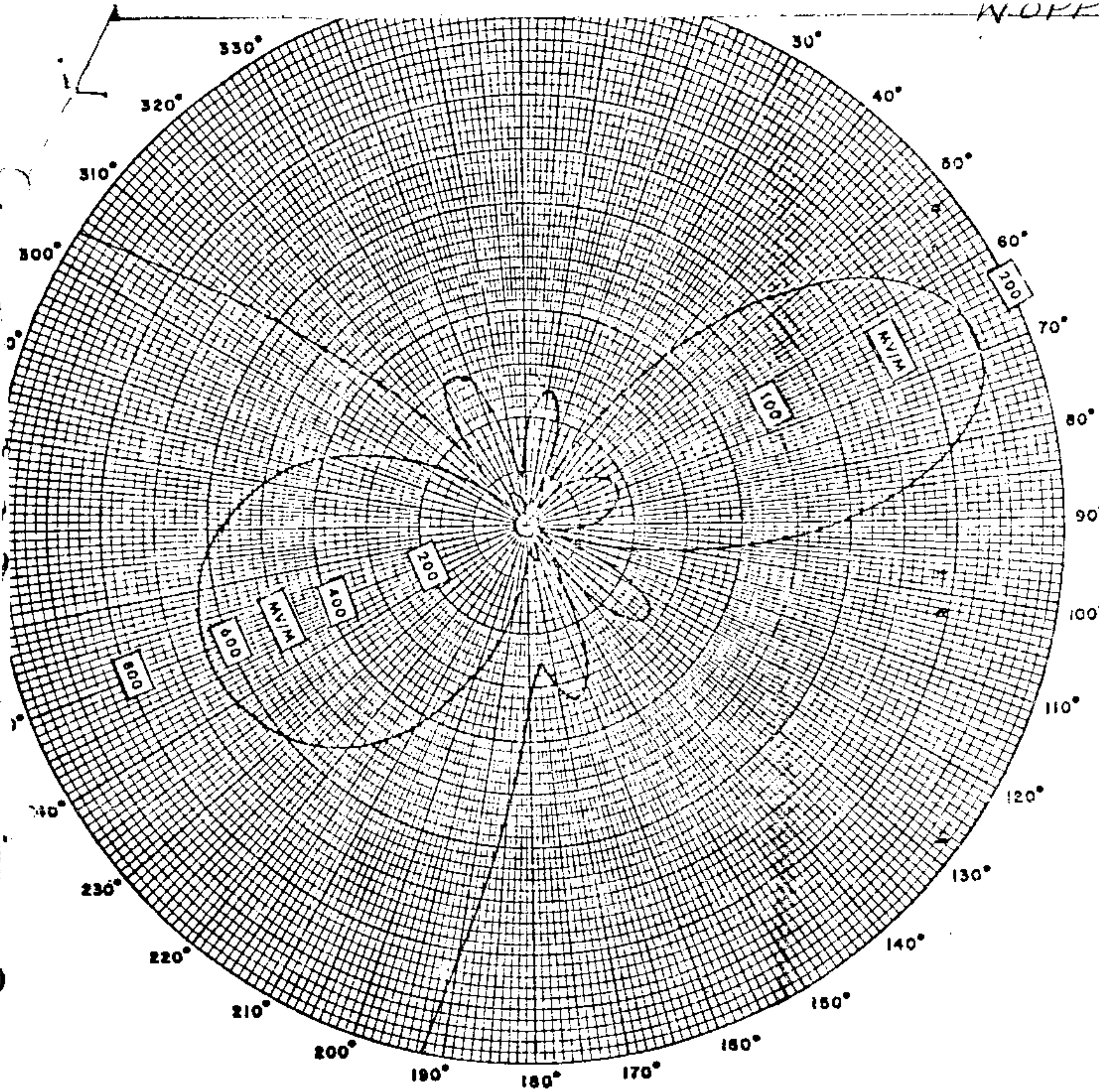
FIGURE 6
TOWER NO. 2
NON-DA RADIATION PATTERN
LESTER BROADCASTING CORPORATION
WOIA 0.5 KW 1290 KC
SALINE, MICHIGAN
Prepared by
Lohnes and Culver Washington 6, D.C.
May 1962

FCC File No. BL-9384
Accepted 6-19-62

Station WOIA
Saline, Michigan

1290 kc

W.OPP



N. LAT.	31°	17'	27"
W. LONG.	86°	13'	51.4"
RMS STD.	294.19		mv/m
RMS Th	280		mv/m
RSS Th	405.649		

ANTENNA NO.	1	2	3	4
FIELD	.4379	.9283	1	.5530
PHASE	-46.94	-204.67	0	-149.69
SPACING	229.29	115.311	0	115.101
ORIENTATION	69.217°	68.3143	0	247.122
HEIGHT	90	90	90	90

DAYTIME STANDARD HORIZONTAL PATTERN
NEW AM - OPP, ALABAMA
1290 kHz - 0.5 kW/2.5 kW - DA-2

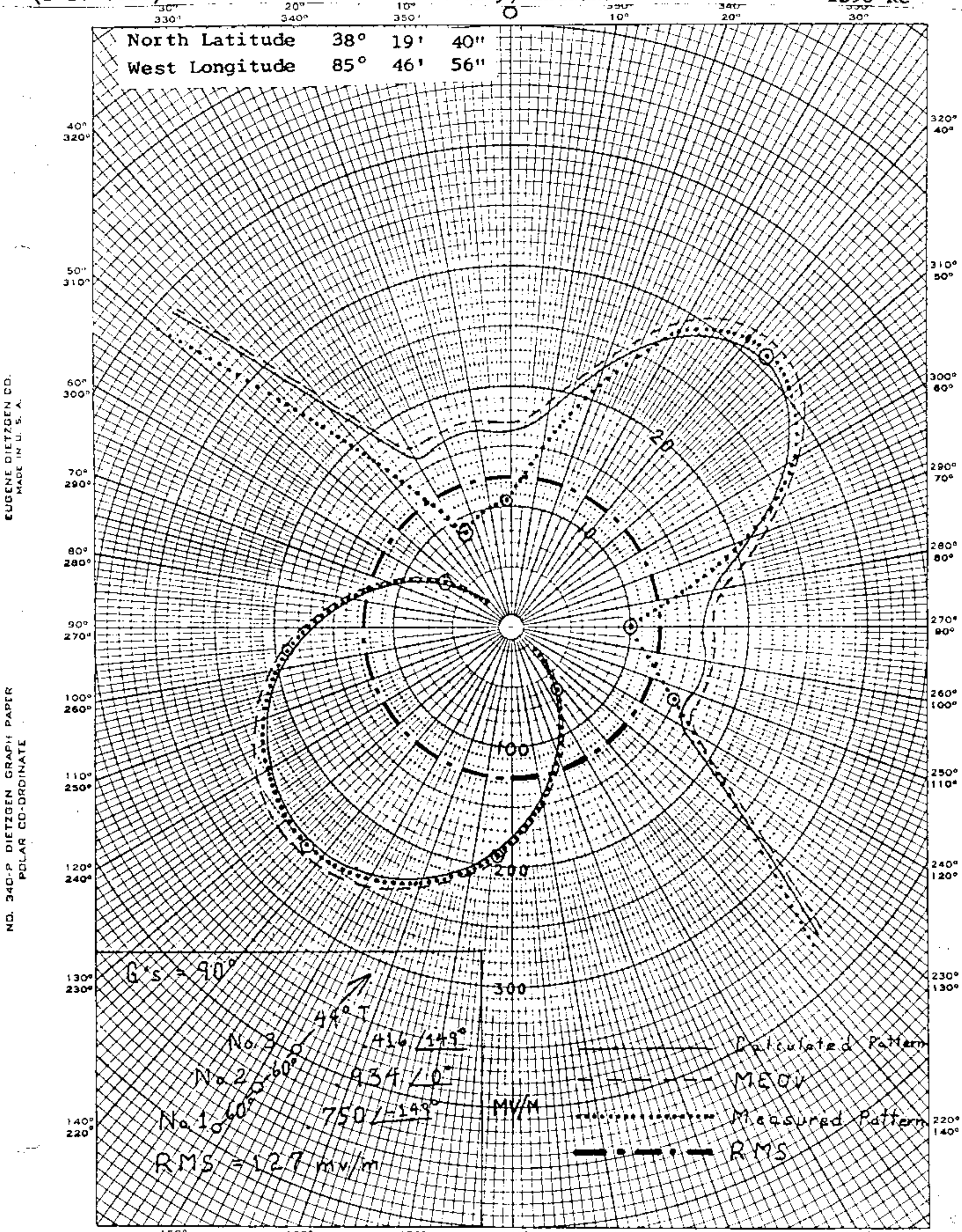
NOVEMBER, 1978

CARL T. JONES ASSOCIATES—CONSULTING ENGINEERS

Measured Day
(5-27-66ct)

Station WREY (SEE UNDER NEW ALBANY)
New Albany, Indiana

WREY
500w,DA-D,D
1290 kc



FCC File No. BL-11269
Accepted 5-3-66

Station WREY
New Albany, Indiana

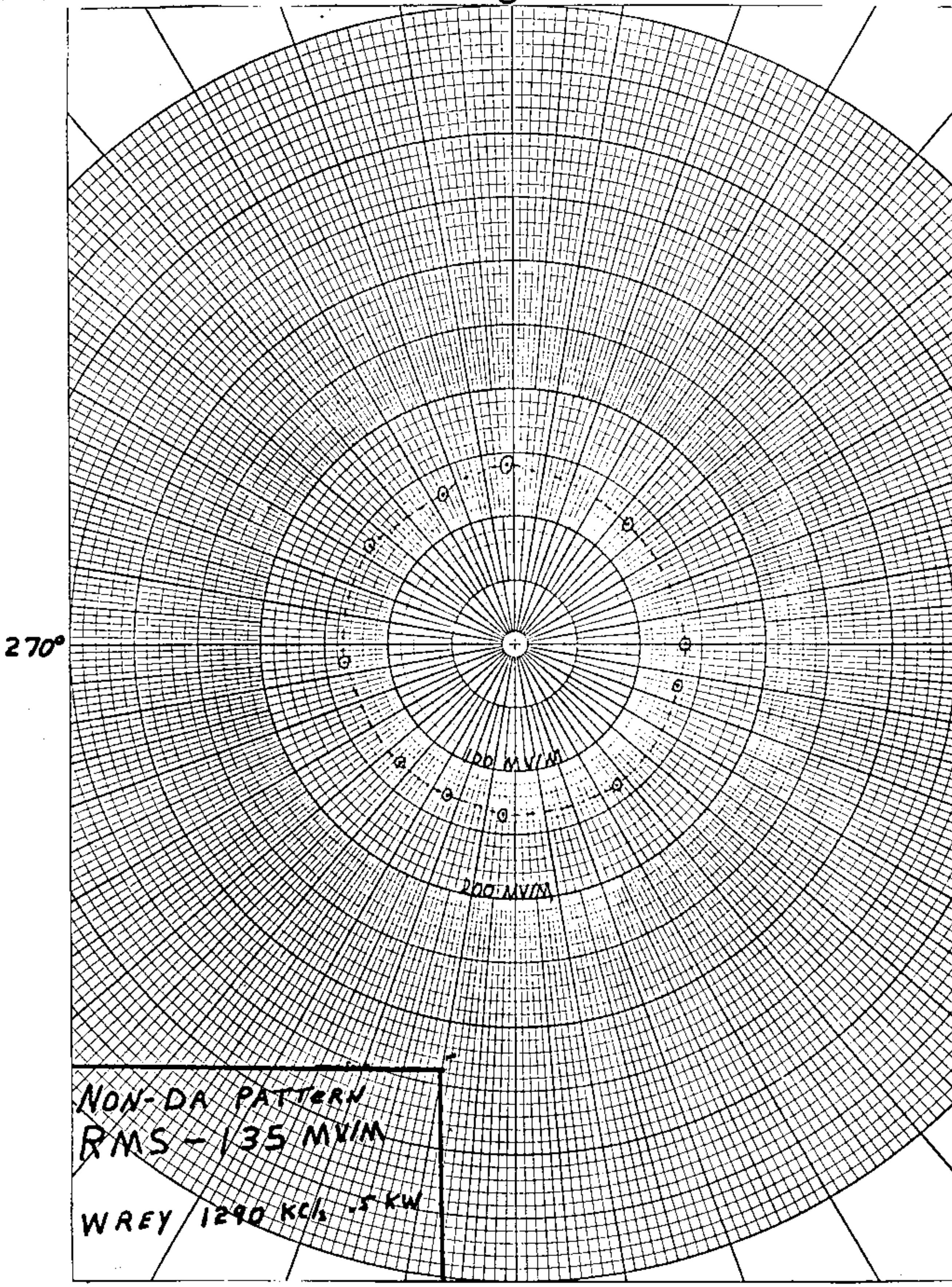
1290 kc

WREY

Measured Non-DA
(5-27-66ct)

Station WREY
New Albany, Indiana

500w, DA-D, D
1290 kc



FCC File No. BL-11269
Accepted 5-3-66

Station WREY
New Albany, Indiana

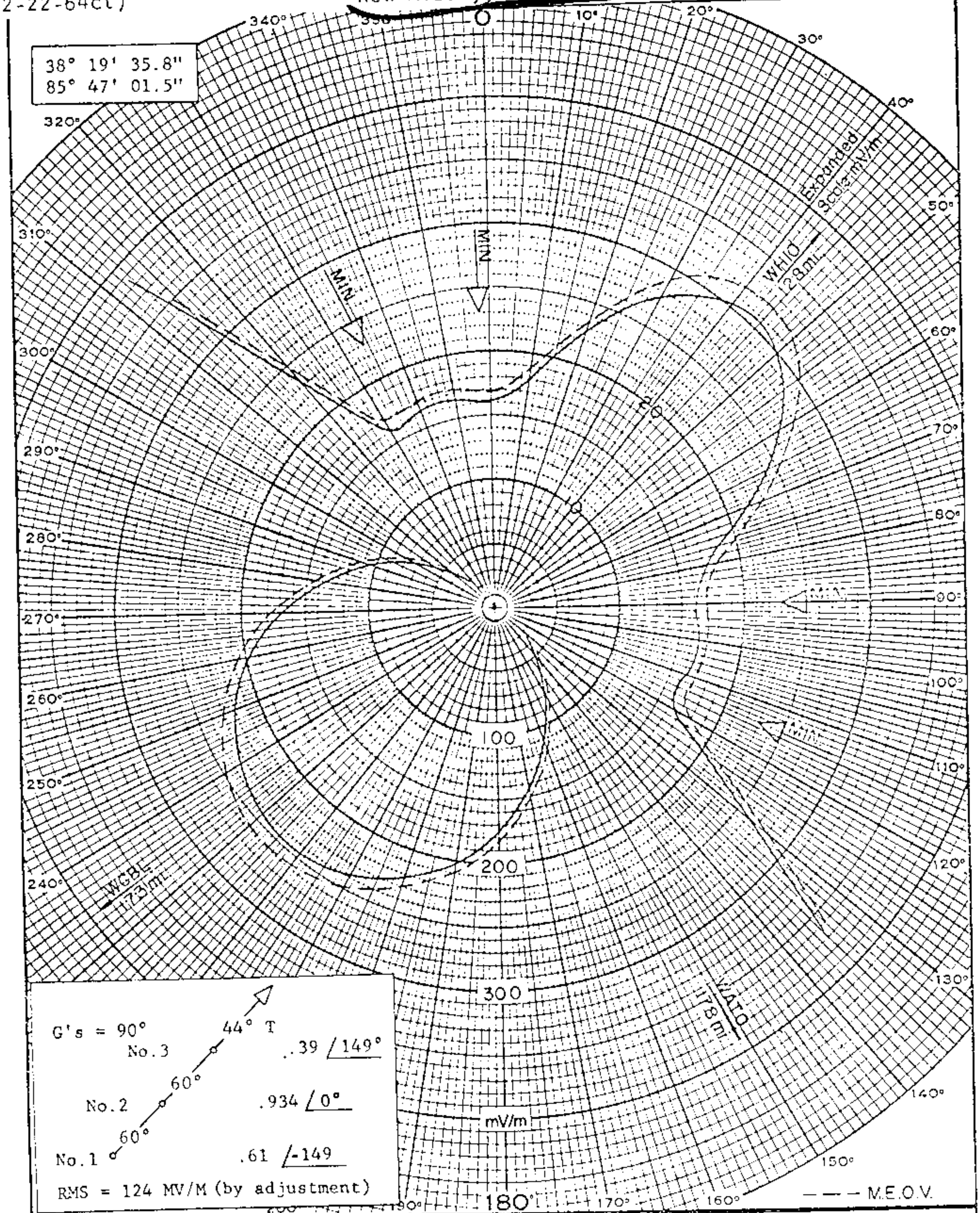
1290 kc

SEE WIREY

Proposed Day
(12-22-64ct)

New; M.R. Lankford B/cg Co.   500w,DA-D,D
New Albany, Indiana   1290 kc

FR. APP
5-19-65



COMMERCIAL RADIO EQUIPMENT CO.
Radio Engineering Consultants

WASHINGTON, D. C.

(11-64)

15055 17

PROPOSED HORIZONTAL
RADIATION PATTERN
NEW ALBANY, INDIANA
1290 KC, 500 W-D, DA-D

FCC File No. BP-15106
Accepted 12-3-64 Amended

New; M.R. Lankford B/cg Co.
New Albany, Indiana

1290 kc

WRRA

DIRECTIONAL ANTENNA DESCRIPTION SHEET

Station: WRRA

Main Studio: Frederiksted, St. Croix, Virgin Islands

Frequency: 1290 kHz

Power: 0.5 kW

Notification List No. 1606

Date: November 13, 1974

Class: III

GEOGRAPHICAL LOCATION OF THE CENTER OF THE ANTENNA SYSTEM:

North Latitude: 17° 44' 00"
West Longitude: 64° 52' 14"

ANTENNA CHARACTERISTICS

Authorized for Daytime operation. (DA-D) STANDARD PATTERN
Number of elements: 2
Type of elements: Series-excited, uniform cross-section, guyed, vertical steel towers.

TOWER:	W(#2)	E(#1)
HEIGHT ABOVE INSULATORS:	182'	182' (85.9°)
PHASING:	+100.7°	0°
FIELD RATIO:	0.455	1.000

SPACING AND ORIENTATION: Elements are spaced 170.49' (80.5°) on a line bearing 270° true.

GROUND SYSTEM: 120-191' equally spaced copper radials about each tower. Radials are shortened and bonded to a transverse strap along intersections between towers.

PREDICTED EFFECTIVE FIELDS AT RATED POWER:

THEORETICAL		STANDARD
RMS	RSS	RMS
135.7.mv/m	141.4 mv/m	142.6 mv/m

Note: This notification concerns a change in frequency of the proposed operation from 1090 kHz.

COHEN AND DIPPELL
RECEIVED
MAY 15 1975
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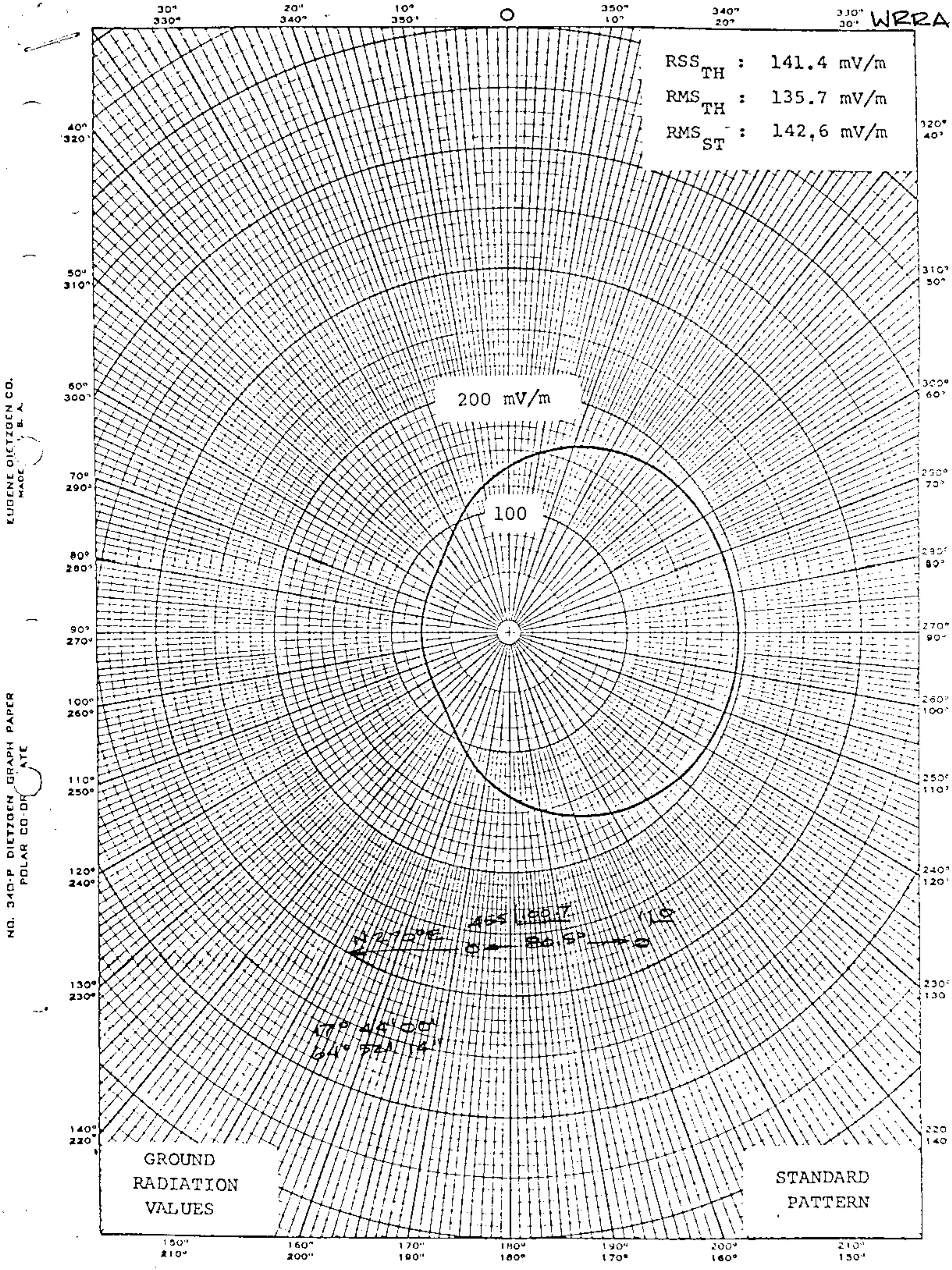
WRRA


RSS$_{TH}$: 141.4 mV/m
RMS$_{TH}$: 135.7 mV/m
RMS$_{ST}$: 142.6 mV/m
200 mV/m
100
47° 46' 00"
64° 52' 14"
GROUND
RADIATION
VALUES
STANDARD
PATTERN
NO. 340-P DIETZGEN GRAPH PAPER
POLAR CO-ORDINATE
EUGENE DIETZGEN CO.
MADE IN U. S. A.

WTMC

DIRECTIONAL ANTENNA DESCRIPTION SHEET

Station : WTMC   Main Studio: Ocala, Florida

Frequency : 1290   Power : 1N Night 5 kW Day ___

Notification : 1781   Date : Oct. 19, 1979   Class: III

GEOGRAPHICAL LOCATION OF THE
CENTER OF THE ANTENNA SYSTEM: North Latitude: 29 11 51
West Longitude: 82 10 57

Predicted daytime effective field (omnidirectional) at rated power 46.5 mv/m.

ANTENNA CHARACTERISTICS

Authorized for Nighttime operation. (DA-N)
Number of elements: 3
Type of elements : Series excited, uniform cross-section, guyed, vertical steel towers.

TOWER :	W(#1)	C(#2)	E(3)			
HEIGHT ABOVE INSULATORS :	203.3'	285.9' (135°)	203.3'(96°)			
PHASING :	0°	+174.27°	-1.08°			
FIELD RATIO :	1.0	1.764	-1.08°			

SPACING AND ORIENTATION : The towers in a row are spaced 191' (90°) on a line bearing 82° true.

GROUND SYSTEM : 120 - 191' equally spaced copper radials plus 120 - 50' interspaced radials about each tower. Radials are shortened and bonded to a transverse strap along intersections between towers.

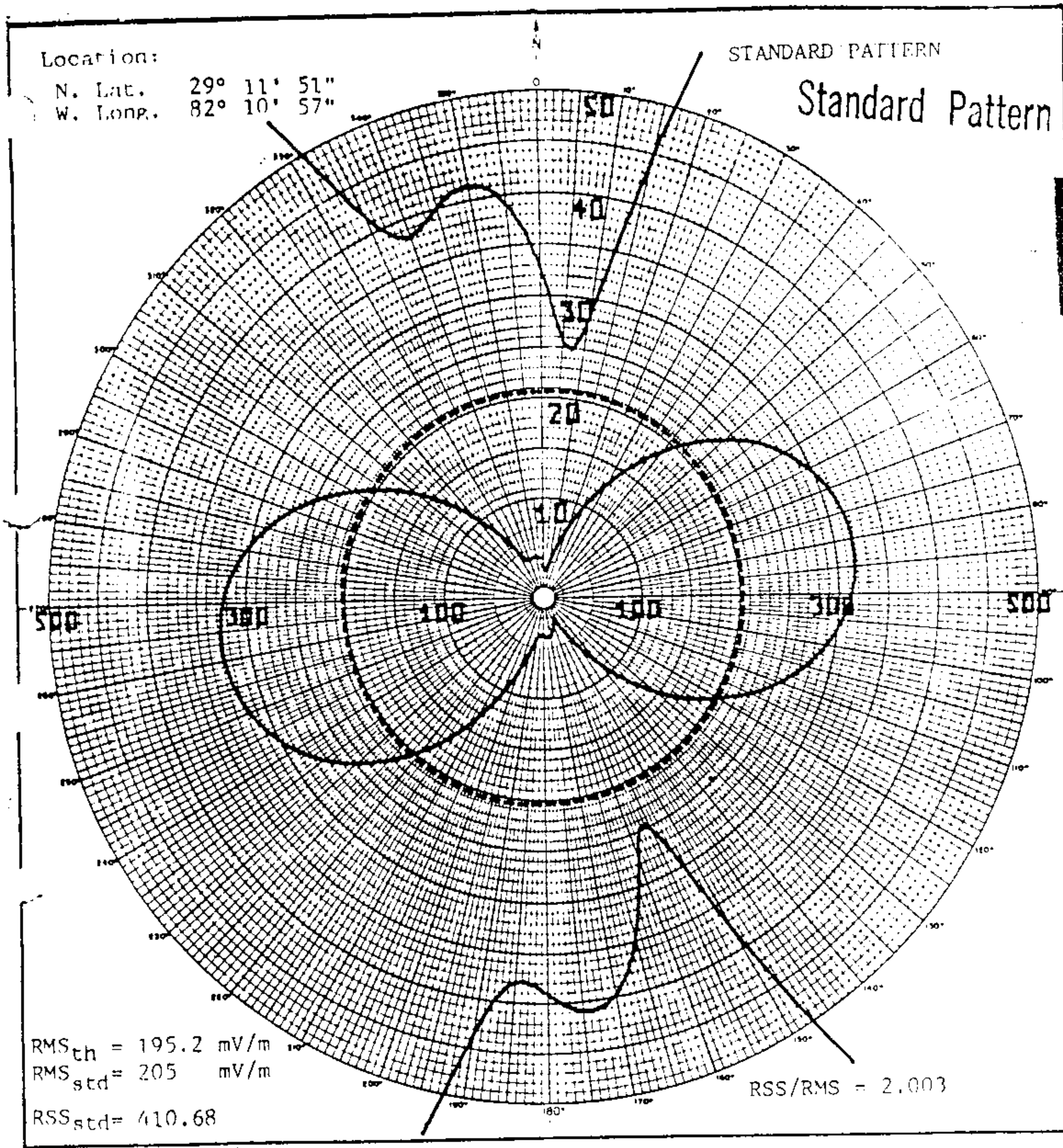
WTMC

PREDICTED EFFECTIVE FIELDS AT RATED POWER:

	THEORETICAL		STANDARD
	RMS	RSS	RMS
Day			
Night	195.2 mv/m	391.128 mv.m	205 mv/m

Note:

WTMC



TOWER #	HEIGHT DEGREES	FIELD RATIO	SPACING DEGREES	BEARING DEGREES	PHASING DEGREES
1	96.00	1.000	0.000	0.000	0.000
2	135.00	1.764	90.000	82.000	174.270
3	96.00	0.898	180.000	82.000	-1.080

FIGURE 2
THETA = 0°
RADIO STATION WTMC
OCALA, FLORIDA
1290KHz 5-1KW DA-N

JOHN H. MULLANEY
CONSULTING
RADIO ENGINEERS, INC.
POTOMAC, MARYLAND

WTMC

DIRECTIONAL ANTENNA DESCRIPTION SHEET

Station: W T M C Main Studio: Ocala, Florida

Frequency: 1290 kc Power: 1 kw

Notification List No. 225 Date: May 2, 1947 Class III-B

GEOGRAPHICAL LOCATION
OF ANTENNA: North Latitude: 29° 12' 05"

West Longitude: 82° 10' 50"

ANTENNA CHARACTERISTICS:

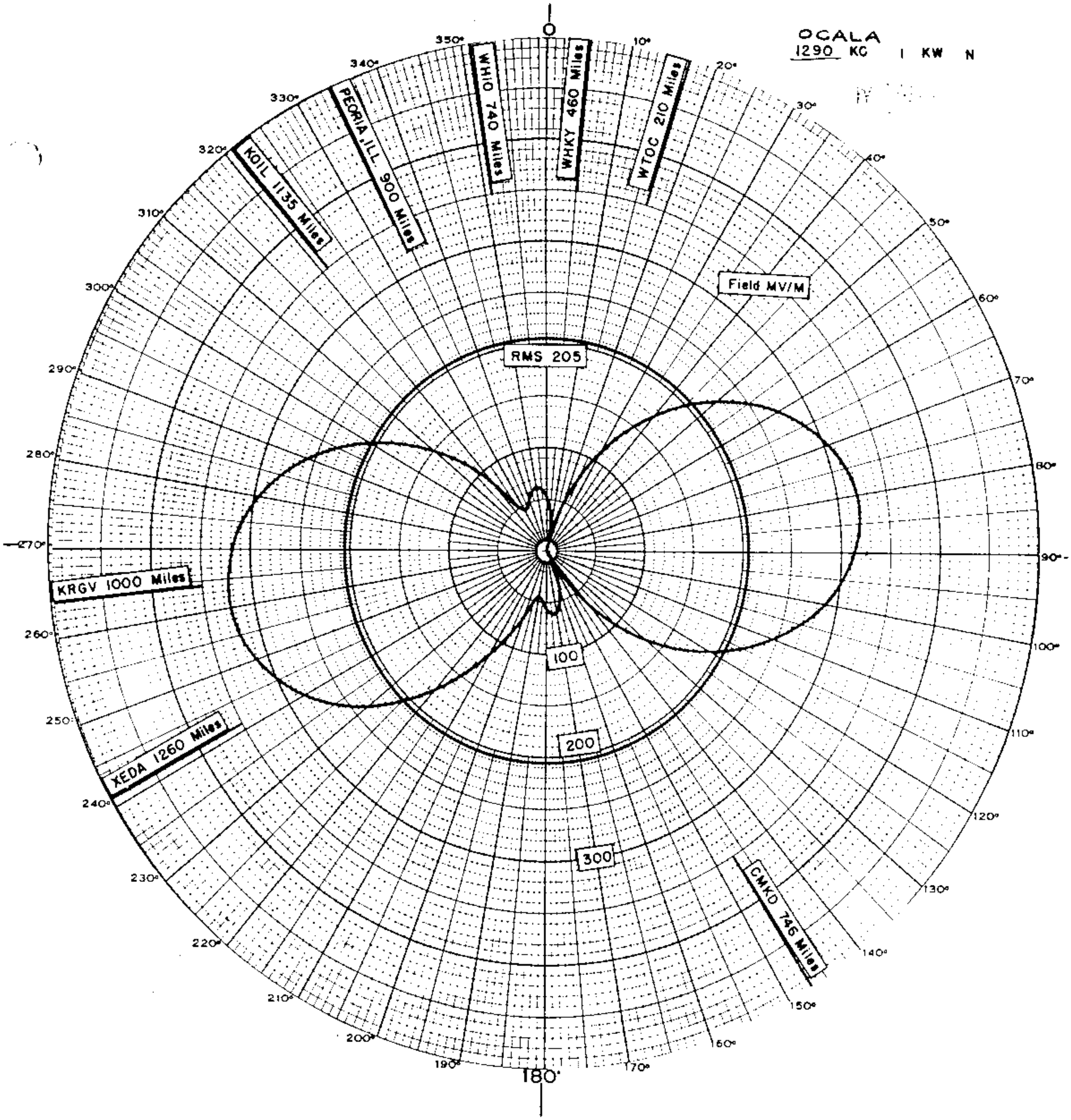
Authorized for Nighttime operation (DA-N)
Number of elements: Three (3)
Type of elements: Series-fed uniform cross-section, guyed, vertical steel towers

TOWER:	WEST	CENTER	EAST
HEIGHT ABOVE INSULATORS:	203'	203'	203' (96°)
SPACING:	190.7' or 90° between adjacent towers		
PHASING:	0°	+176°	0°
FIELD RATIO:	1.0	1.52	0.8

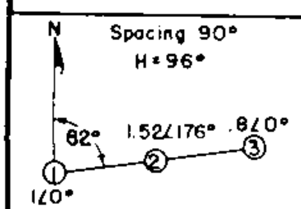
GROUND SYSTEM: 120 - 191' equally spaced radials plus 120 - 50' interspaced radials about each tower base. Radials shortened and bonded by transverse bonding strap along intersections between towers.

ORIENTATION: Elements on a line bearing 82° true, using the West tower as a reference.

Predicted effective Field: 205 mv/m (at rated power)



OCALA BROADCASTING CO. INC. OCALA, FLORIDA	Exhibit E1 Series 4608010
	1290 KC 1000 WATTS NIGHT



PROPOSED

DIRECTIONAL ANTENNA PATTERN

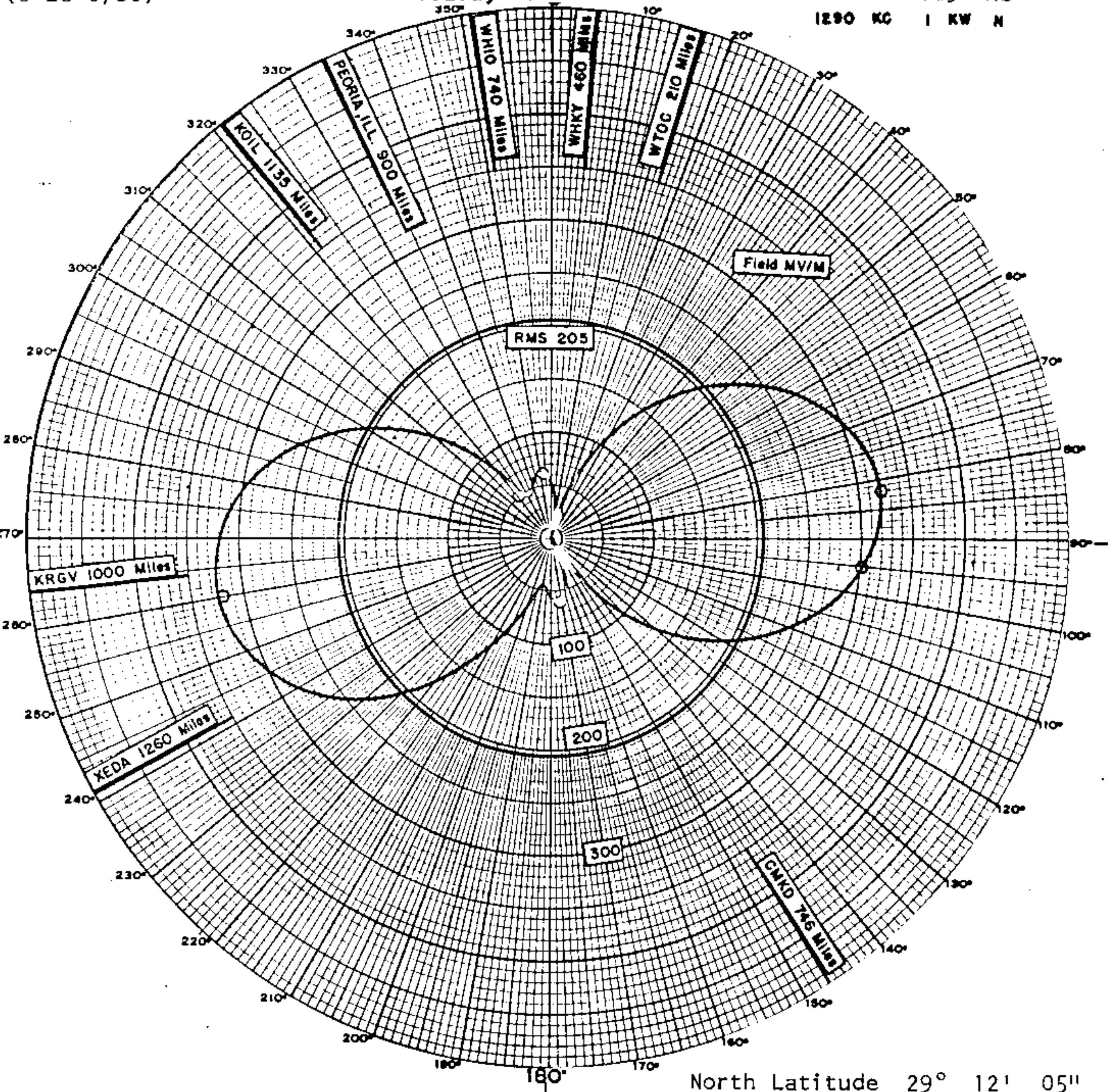
FRANK H. McINTOSH
Consulting Radio Engineer
Washington, D.C.

WTMC

Measured Night
(8-28-67ct)

Station WTMC
Ocala, Florida

1kw, 5kw-LS, DA-N, U
1290 kc



North Latitude 29° 12' 05"
West Longitude 82° 10' 50"

G=96°
S=90°

1 0° =#1

1.52 176° =#2

0.8 0° =#3

1 2 3 → N082°E

FIGURE-28

MEASURED NIGHT POLAR PATTERN
WTMC, OCALA, FLA. 1290 kc/s.
1 kw. D.A.N. June 14, 1967

AMBROSE W. KRAMER
CONSULTING RADIO ENGINEER

FCC File No. BZ-6511
Accepted 8-21-67

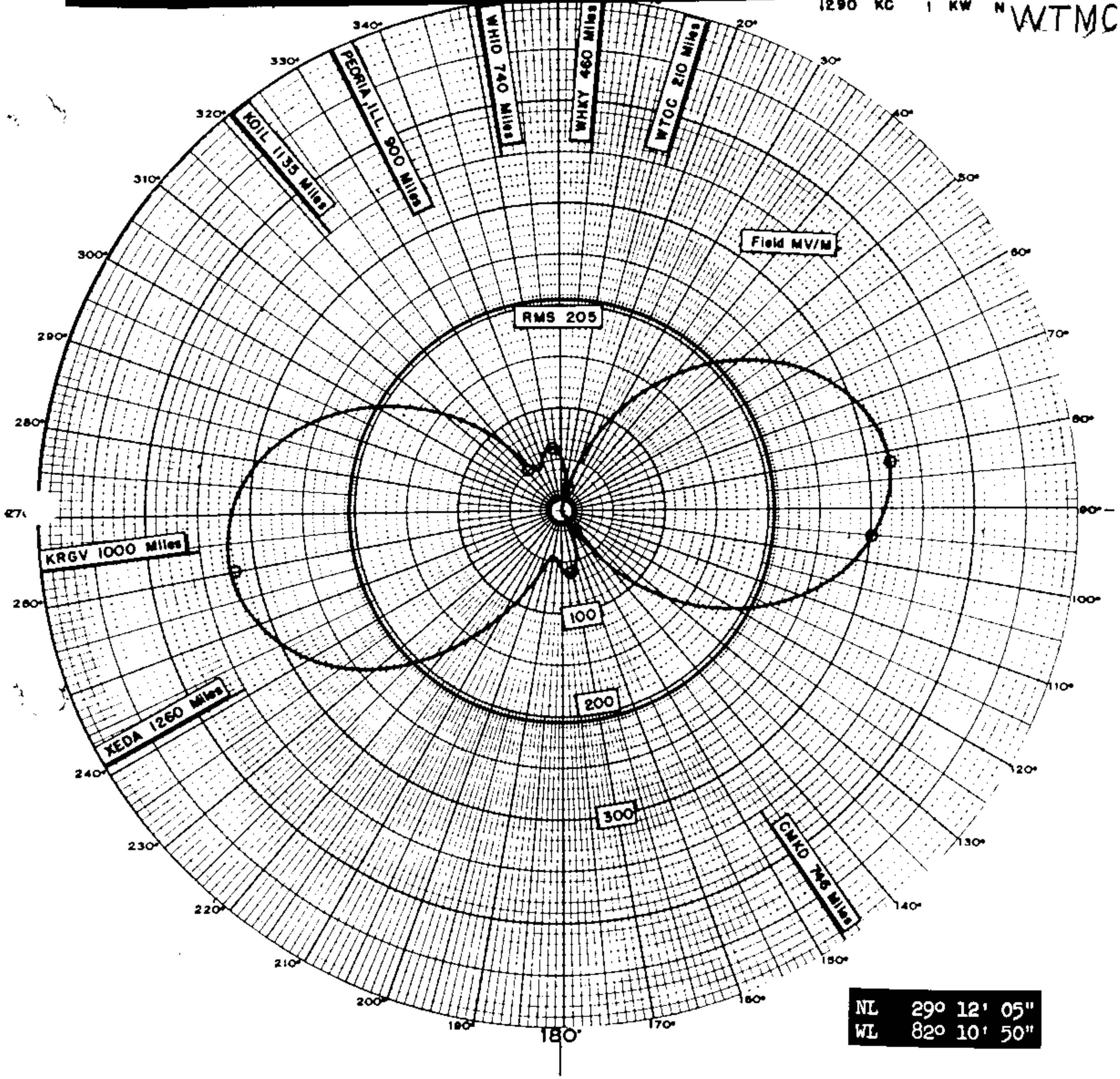
Station WTMC
Ocala, Florida

1290 kc

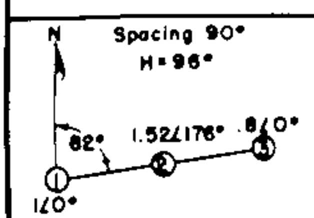
MEASURED NIGHT

Station WTMC 1kw,5kw-LS, DA-N,U
Ocala, Florida 1290 KC

1290 KC 1 KW N WTMC

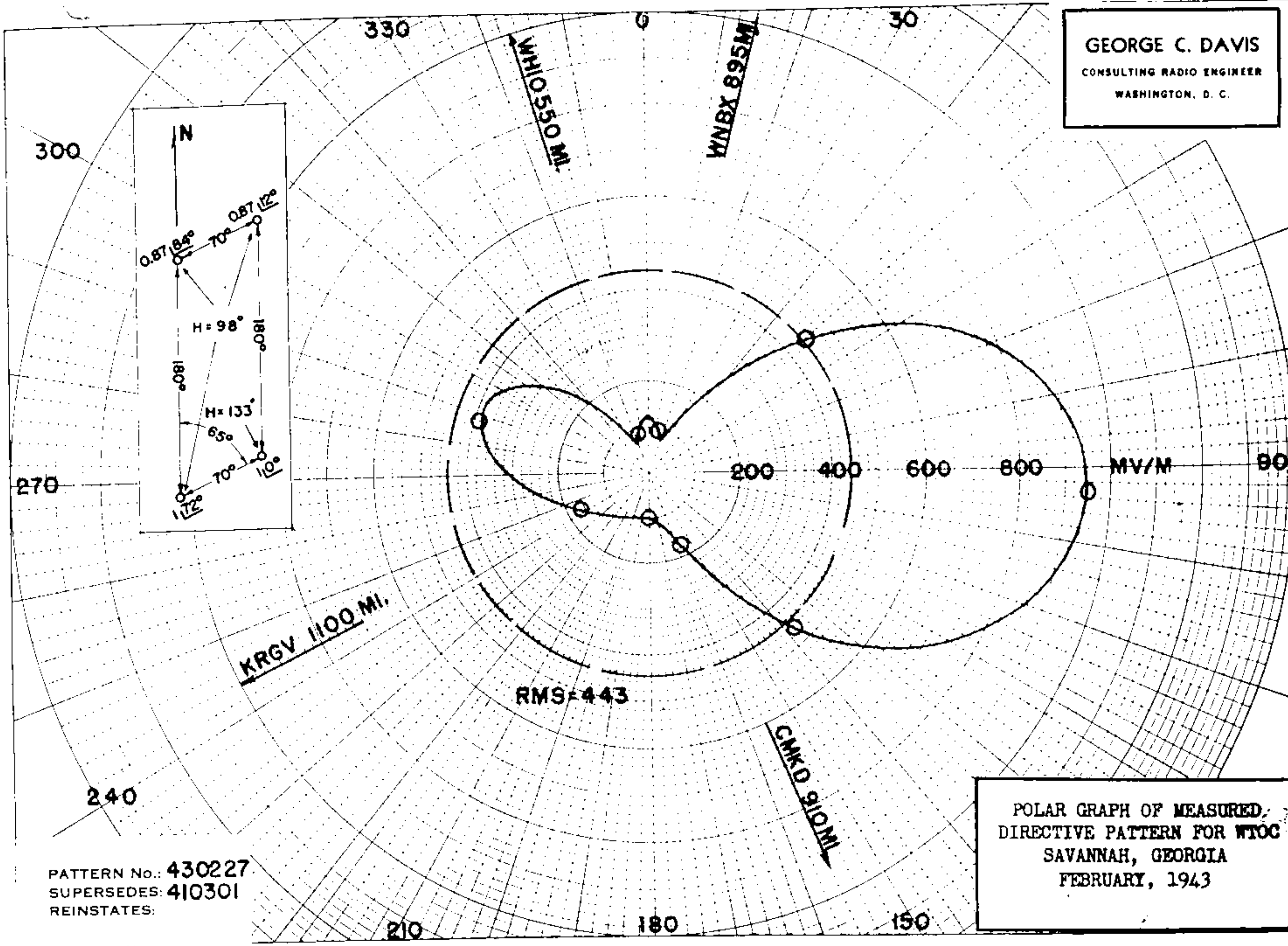


OCALA BROADCASTING CO. INC. OCALA, FLORIDA	Figure 8 Series 471114C
	1290 KC 1000 WATTS NIGHT
MEASURED DIRECTIONAL ANTENNA PATTERN	FRANK H. McINTOSH *Consulting Radio Engineer* Washington, D.C.



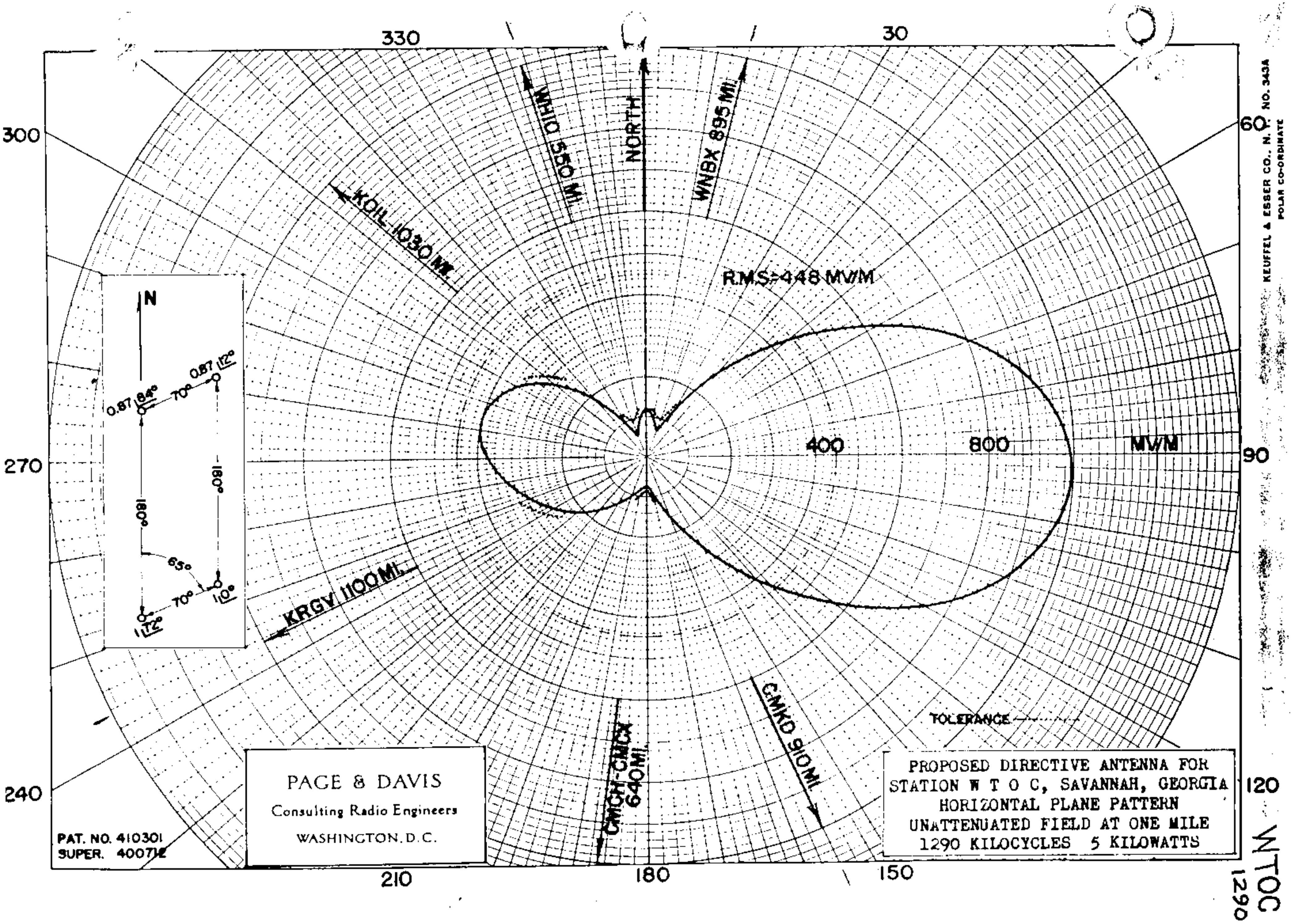
WTOC 1290 KC

GEORGE C. DAVIS
CONSULTING RADIO ENGINEER
WASHINGTON, D. C.



POLAR GRAPH OF MEASURED,
DIRECTIVE PATTERN FOR WTOC
SAVANNAH, GEORGIA
FEBRUARY, 1943

PATTERN No.: 430227
SUPERSEDES: 410301
REINSTATES:



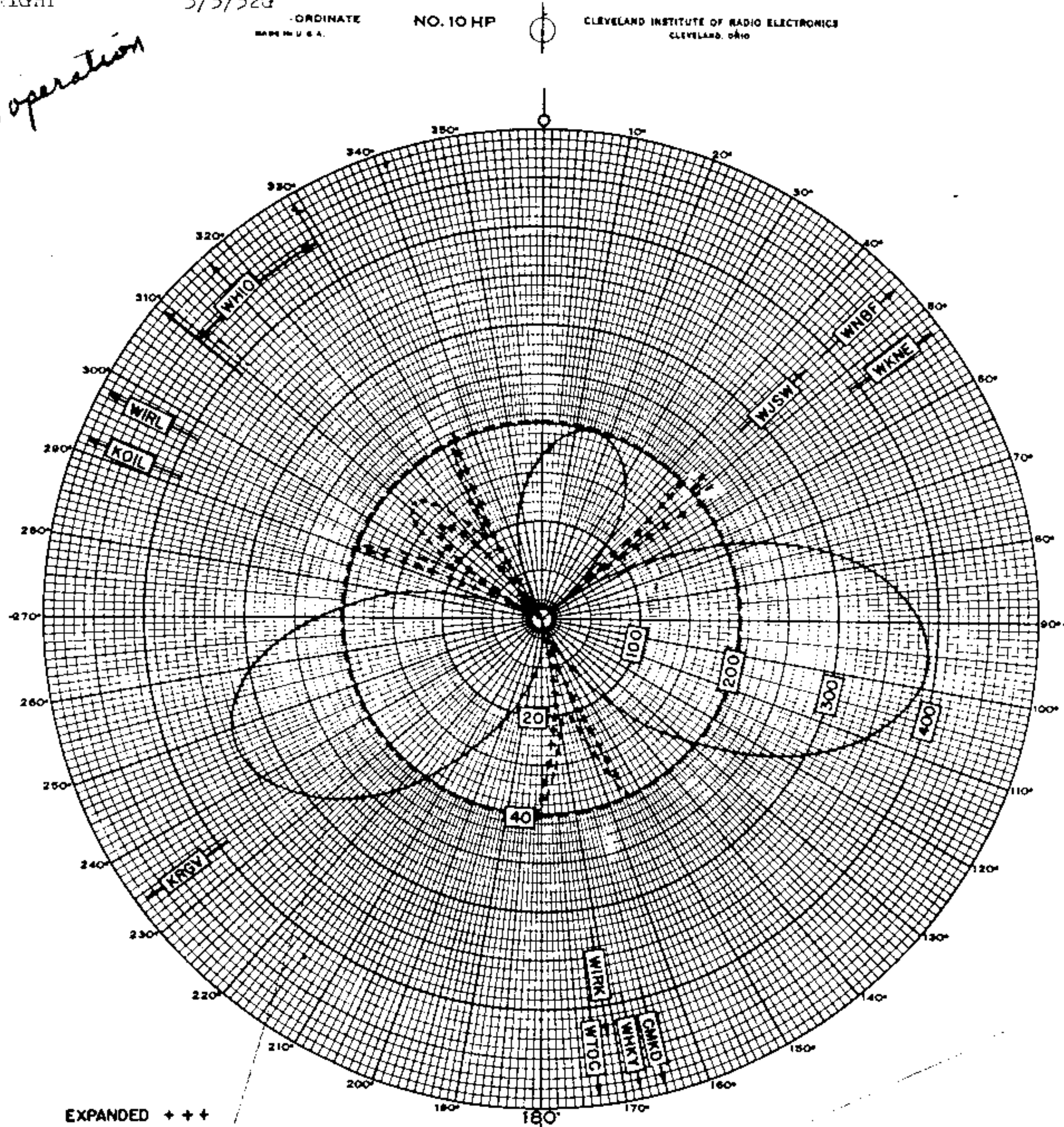
WTOC
1290
PROPOSED DIRECTIVE ANTENNA FOR
STATION W T O C, SAVANNAH, GEORGIA
HORIZONTAL PLANE PATTERN
UNATTENUATED FIELD AT ONE MILE
1290 KILOCYCLES 5 KILOWATTS
PAGE & DAVIS
Consulting Radio Engineers
WASHINGTON, D.C.
PAT. NO. 410301
SUPER. 400712
KEUFFEL & ESSER CO., N.Y. NO. 343A
POLAR CO-ORDINATE
NORTH
WHIO 550 MI.
WNBX 895 MI.
KOIL 1030 MI.
KRGV 1100 MI.
CMCH-CMCX 640 MI.
CMKD 910 MI.
R.M.S.=448 MV/M
400
800
MV/M
TOLERANCE
330
30
300
60
270
90
240
120
210
180
150
N
0.87 84°
0.87 12°
70°
180°
65°
1 12°
1 0°

WVOW

PROPOSED NIGHT — WVOW, LOGAN, W. VA. 3/5/52G — 1 KW, 5KW-LS, U, DA-N — 1290 KC

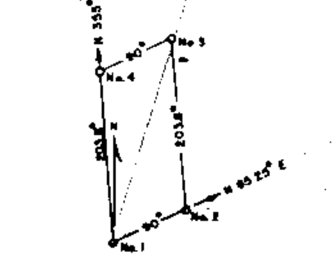
5-24-61 granted CP to change to DA-N operation

-19-61 granted ... for ... operation



EXPANDED + + +
MEOV - - -

TOWER PLACEMENT SKETCH



PATTERN PARAMETERS

TOWER No.	ELECTRICAL HEIGHT	TRUE TOWER ORIENTATION	SPACING	PHASING	HORIZONTAL FIELD	FIELD RATIO	ELEV. ANGLE	ELEVATION RMS FIELD
1	96			0		1	0	202
2	96			-164.76		1	10	
3	96			-101.60		1	20	
4	96			63.16		1	30	
5							40	
6							50	
7							60	
8							70	
9							80	
10							E_r =	

DAYTIME OPERATION ☐ NIGHTTIME OPERATION ☒

STATION DATA

CALL	WVOW
FREQUENCY	1290
POWER	1 - 5 LS
TIME OF OPERATION	U
TYPE OF OPERATION	DA-1
DAYTIME TOWERS	4
NIGHTTIME TOWERS	4
No. RADIALS PER TOWER	120
LENGTH OF RADIALS	180 ° 382 ft
GROUND SCREEN DIMENSION	60' Rad
LAT.	37 ° 51 ' 28 "
LONG.	81 ° 58 ' 16 "
SUPERSEDES	480108
PATTERN No.	520126

Figure 1A

LOGAN BROADCASTING CORP.
Logan, W. Va.

1/26/52

GEORGE P. ADAIR
Radio Engineering Consultants
WASHINGTON, D. C.

APPL RECD 2/28/52 ACC 3/4/52 BMP-5829 — WVOW, LOGAN, W. VA. — 1290 KC

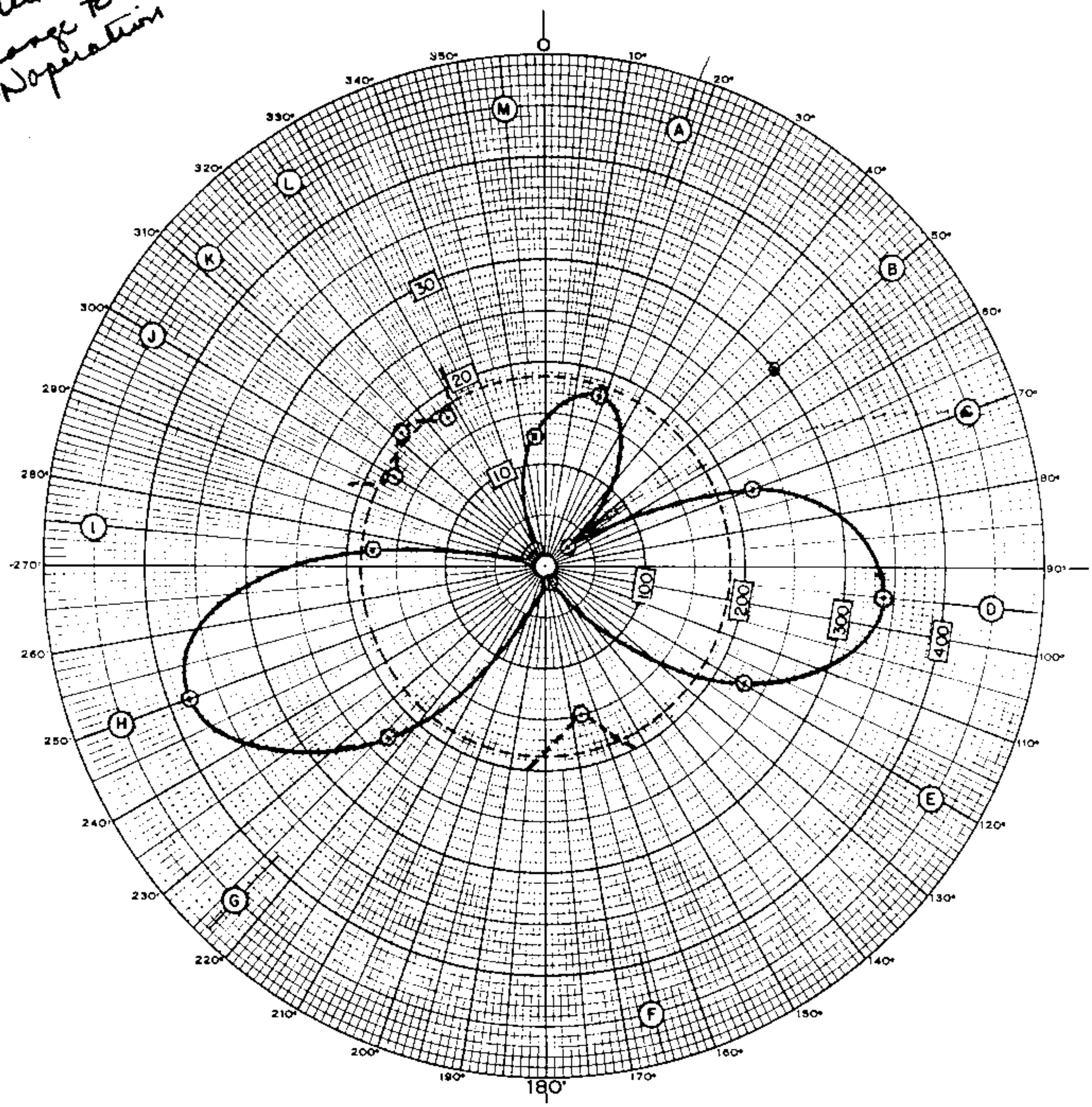
$$E = 276 f(\theta) \left\{ \sqrt{1+\cos(90 \cos A \cos V - 164.76)} \sqrt{1+\cos[203.8 \cos(A+70.25)\cos V + 63.16]} \right\}$$

WVOW

MEASURED NIGHT — WVOW, LOGAN, W. VA. 7/2/52G — 1 KW, 5KW-LS, U, DA-N — 1290 KC

5-24-61 granted CP to change to DA-N operation

application to change to DAN



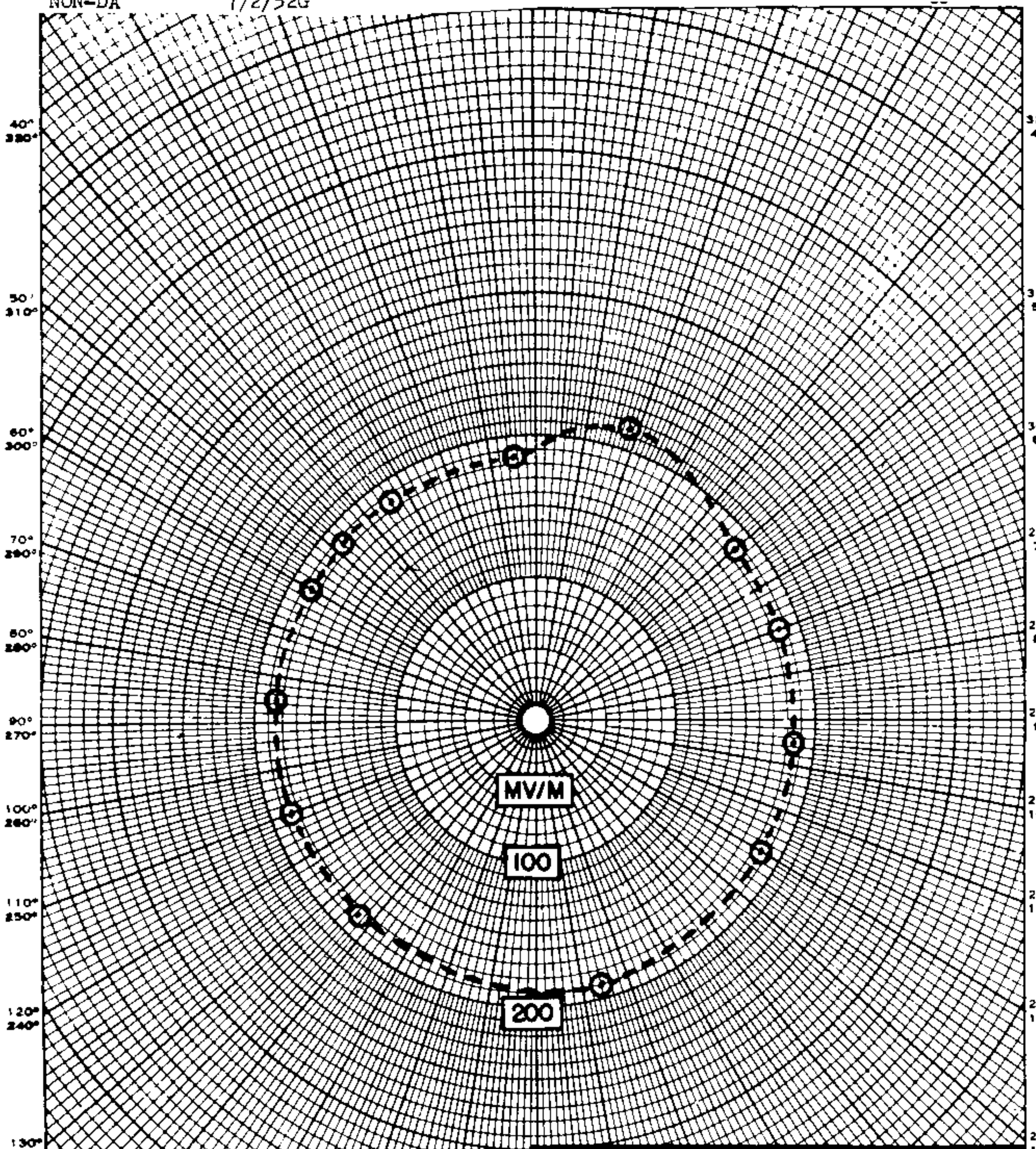
NIGHT HORIZONTAL PATTERN 1 KW BASED ON MEASURMENTS FIG. 1A	WVOW LOGAN, W. VA. 1290 KC—1-5 KW-LS—DA-1 3/6/52 GEORGE P. ADAIR *Radio Engineering Consultants* WASHINGTON, D. C.

RECD FCC 3/13/52 ACC 6/16/52 BL-4719 WVOW, LOGAN, W. VA. 1290 KC

WVOW

MEASURED NON-DA | WVOW, LOGAN, W. VA. 7/2/52G | 1 KW, 5KW-LS, U, DA-N | 1290 KC

application to change to DA-N



NON-DIRECTIONAL PATTERN
ELEMENT No. 3
1 Kw.

LOGAN BROADCASTING CORP.
Logan, W. Va.

Figure 1 E 3/6/52 *Page*

GEORGE P. ADAIR
Radio Engineering Consultants
WASHINGTON, D. C.

140° 220° 220° 140°

150° 160° 170° 180° 190° 200° 210°

REC'D FCC 3/13/52 ACC 6/16/52 BL-4719 WVOW, LOGAN, W. VA. 1290 KC

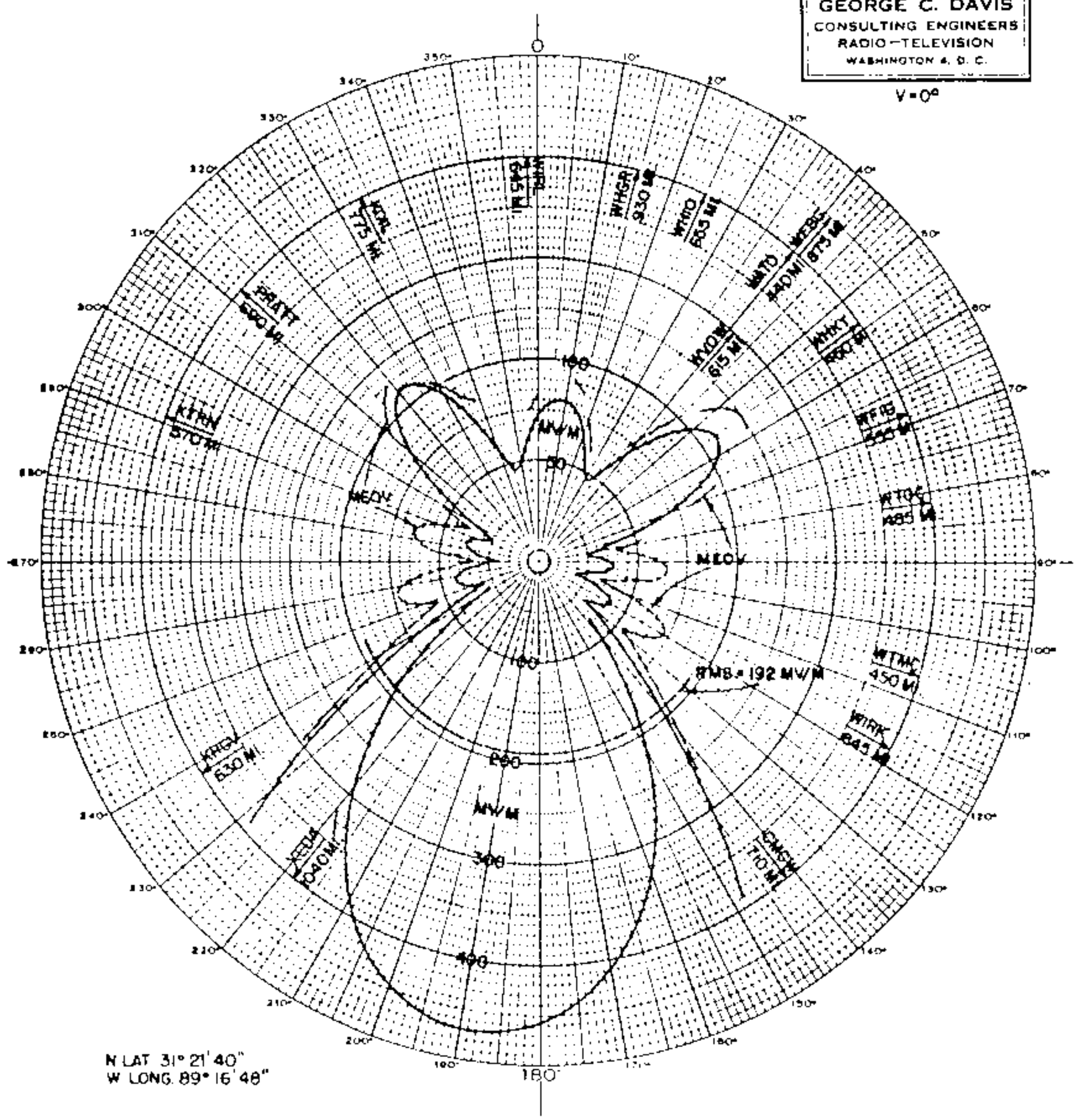
Proposed Night
(11-29-63ct)

Station WXXX
Hattiesburg, Mississippi

1kw,5kw-LS,DA-2,U
1290 kc

GEORGE C. DAVIS
CONSULTING ENGINEERS
RADIO—TELEVISION
WASHINGTON 4, D. C.

V=0°



N LAT 31° 21' 40"
W LONG. 89° 16' 48"

N 08.5° E

1.0/-34° 1.586/+157.38 1.545/+151° 1.226/-155.67° 0.5584/+34°

120° 120° 120° 120°

S = 120° = 253' H = 94.6° = 200°

COMPUTED RADIATION PATTERN
UNATTENUATED FIELD AT ONE MILE
FOR PROPOSED NIGHTTIME OPERATION AT
WXXX, HATTIESBURG, MISSISSIPPI
1290 KC 1 KW DA N
SEPTEMBER 1963

FCC File No. BP-15,408
Accepted 11-12-63 Amended

Station WXXX
Hattiesburg, Mississippi

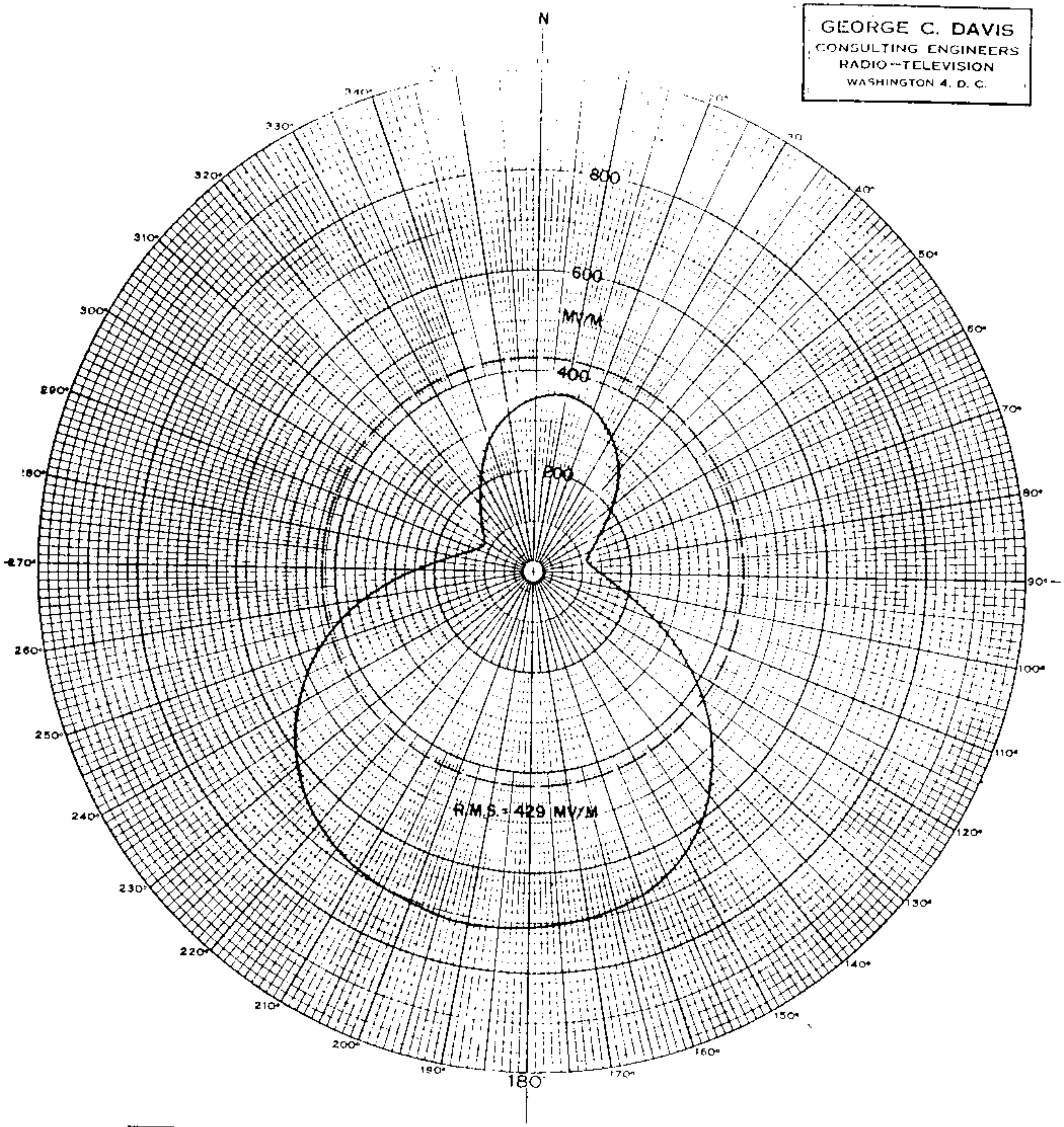
1290 kc

Proposed Day
(4-27-62ct)

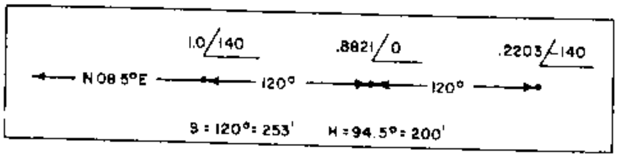
Station WXXX
Hattiesburg, Mississippi

1kw,5kw-LS,DA-2,U
1290 kc

GEORGE C. DAVIS
CONSULTING ENGINEERS
RADIO—TELEVISION
WASHINGTON 4, D. C.



NORTH LATITUDE: 31° 21' 40"
WEST LONGITUDE: 89° 16' 48"



COMPUTED HORIZONTAL
PLANE RADIATION PATTERN
FOR PROPOSED DAYTIME OPERATION
AT HATTIESBURG, MISSISSIPPI
1290 KC 1/5 KW DA - 2
MAY 1961

FCC File No.BP-15408
Accepted 4-10-62

Station WXXX
Hattiesburg, Mississippi

1290 kc

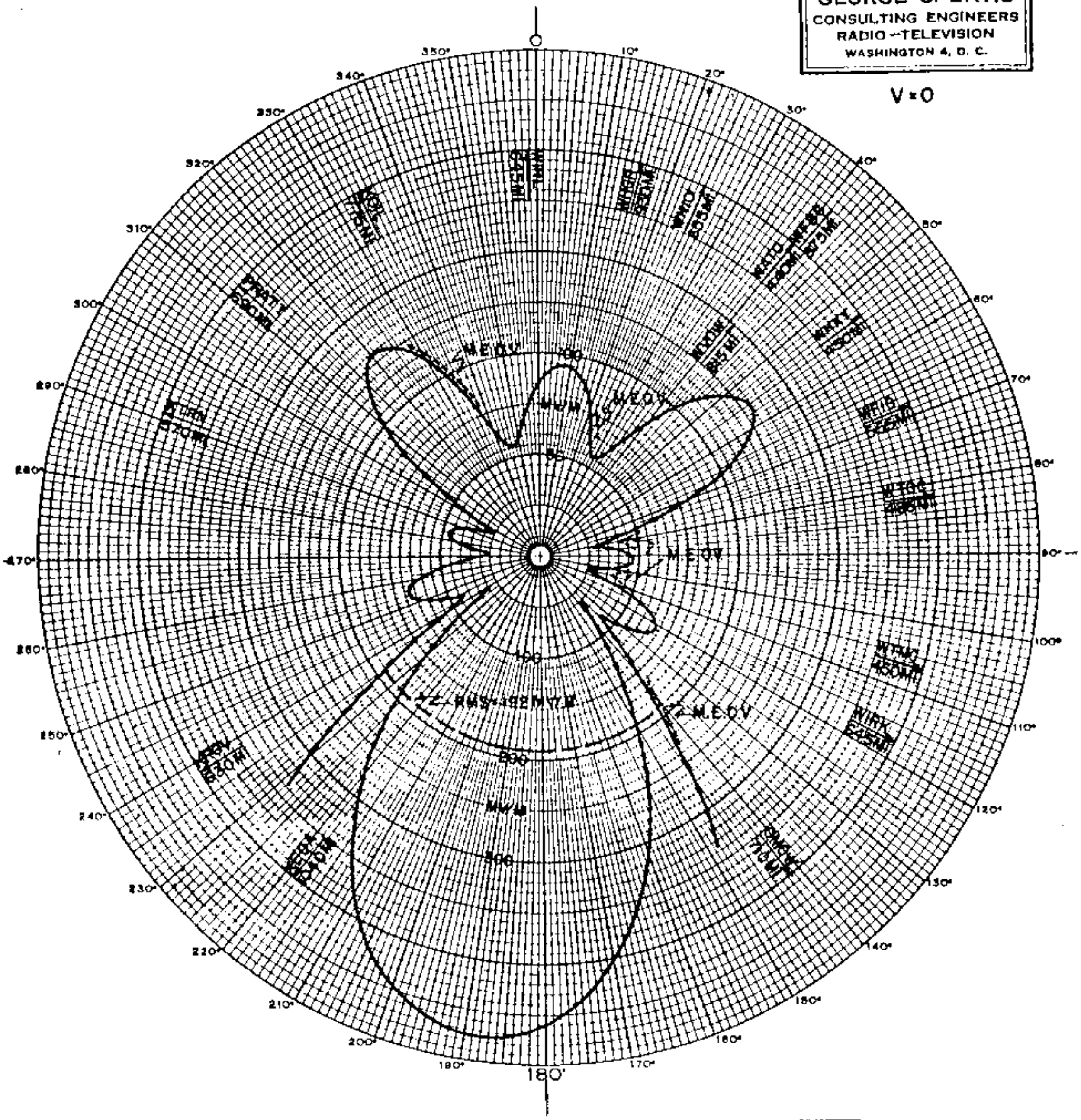
Proposed Night
(4-27-62ct)

Station WXXX
Hattiesburg, Mississippi

1kw,5kw-LS,DA-2,U
1290 kc

GEORGE C. DAVIS
CONSULTING ENGINEERS
RADIO—TELEVISION
WASHINGTON 4, D. C.

V=0



1.0 /-30   1.467 /160.51   1.379 /+1.54   1.138 /-158.74   .5584 /+30

N 065° E — 120° — 120° — 120° — 120°

S = 120° = 253'   H = 94.5° = 200'

COMPUTED HORIZONTAL
PLANE RADIATION PATTERN
FOR PROPOSED NIGHTTIME OPERATION AT
WXXX, HATTIESBURG, MISSISSIPPI
1290 KC 1 KW - DA - N
DECEMBER 1960

PAGE 17

NORTH LATITUDE 31° 21' 40"
WEST LONGITUDE 89° 16' 48"

FCC File No.BP-15408
Accepted 4-10-62

Station WXXX
Hattiesburg, Mississippi

1290 kc