1270-1280

Station	Main Studio	Freq	Power	Date
NEW	Trenton, ON	1270	1 kW/DA-2	3/8/78
CFGT	St. Joseph D'Alma, QU	1270	1 kW/DA-N	6/16/53
CFGT	Alma, QU	1270	10/5 kW/DA-N	10/31/73
CHAT	Medicine Hat, AB	1270	10 kW/DA-N	3/9/62
CHWK	Chilliwack, BC	1270	10 kW/DA-N	4/10/64
CJCB	Sydney, NS	1270	10 kW/DA-N	1/5/62
CKWK	Chilliwack, BC	1270	10 kW/DA-1	6/30/80
NEW	Portland, TN	1270	1 kW/DA-D	8/22/80
KCOK	Tulare, CA	1270	1 kW/DA-N	7/49
KFJZ	Fort Worth, TX	1270	5 kW/DA-1	3/19/76
KGUY	Palm Desert, CA	1270	1 kW/DA-D	4/29/70
KIML	Gillette, WY	1270	1/5 kW/DA-N	1/28/66
KIOX	Bay City, TX	1270	1 kW/DA-N	6/27/69
KNWC	Sioux Falls, SD	1270	1 kW/DA-N	5/27/69
KOTE	Fergus Falls, MN	1270	1/5 kW/DA-2	9/29/64
KSCB	Liberal, KS	1270	0.5/1 kW/DA-N	10/24/58
KWEB	Rochester, MN	1270	1/5 kW/DA-2	9/25/70
NEW	Surfside Beach- Garden City, SC	1270	5 kW/DA-D	3/29/78
WCBC	Cumberland, MD	1270	1/5 kW/DA-2	2/15/78
WCGC	Belmont, NC	1270	0.5/1 kW/DA-N	4/24/56
WCMR	Elkhart, IN	1270	1 kW/DA-2	10/71
WCMR	Elkhart, IN	1270	0.5/5 kW/DA-2	11/28/67
WCMR	Elkhart, IN	1270	5 kW/DA-D	8/28/64
WDVL	Vineland, NJ	1270	0.5 kW/DA-D	5/25/67
WEIC	Charleston, IL	1270	0.5/1 kW/DA-2	5/28/68
WHBF	Rock Island, IL	1270	5 kW/DA-N	4/29/68
WHLD	Niagara Falls, NY	1270	5 kW/DA-D	1/20/50

1270-1280

Station	Main Studio	Freq	Power	Date
WLBR	Lebanon, PA	1270	1/5 kW/DA-2	2/26/60
WLBR	Lebanon, PA	1270	1 kW/DA-N	4/5/49
WLIK	Newport, TN	1270	0.5/5 kW/DA-N	11/2/67
WNOG	Naples, FL	1270	0.5 kW/DA-N	1/29/60
WORX	Madison, IN	1270	1 kW/DA-D	12/17/54
WSPR	Springfield, MA	1270	1/5 kW/DA-2	3/23/59
WTNT	Tallahassee, FL	1270	5 kW/DA-N	5/25/62
WTSN	Dover, NH	1270	5 kW/DA-2	1/13/55
WUOK	Cumberland, MD	1270	1/5 kW/DA-2	4/28/66
WVOY	Charlevoix, MI	1270	5 kW/DA-N	10/1/75
WWCA	Gary, IN	1270	1 kW/DA-2	2/7/49
WXYZ	Detroit, MI	1270	5 kW/DA-N	4/24/58
XERPL	Leon, Guanajuato	1270	0.15/1 kW/DA-D	3/28/69
NEW	High River, AB	1280	10 kW	9/76
CHAM	Hamilton, ON	1280	10 kW/DA-2	1/29/68
CHIQ	Hamilton, ON	1280	10/5 kW/DA-2	5/27/65
CHIQ	Hamilton, ON	1280	5 kW/DA-1	6/28/63
CHQB	Powell River, BC	1280	1 kW/DA-1	4/16/74
CJMS	Montreal, QU	1280	50 kW/DA-2	7/29/70
CJSL	Estevan, Sask.	1280	10 kW/DA-2	1/19/77
CJSL	Esteven, Sask.	1280	1 kW/DA-1	11/11/60
CKCV	Quebec, QU	1280	5/10 kW/DA-2	7/7/60
CKCV	Quebec, QU	1280	50 kW/DA-2	12/27/79
NEW	Powell River, BC	1280	1 kW/DA-1	12/28/67
KBDF	Eugene, OR	1280	1/5 kW/DA-N	6/18/75
KFRN	Long Beach, CA	1280	1 kW/DA-D	8/22/80
KFYV	Arroyo Grande, CA	1280	1 kW/DA-2	5/27/66

1270-1280

Station	Main Studio	Freq	Power	Date
KJOY	Stockton, CA	1280	1 kW/DA-N	10/12/55
KKAL	Arroyo Grande, CA	1280	2.5/5 kW/DA-2	10/26/79
KMAS	Shelton, WA	1280	2.5 kW/DA-D	6/28/78
KNAK	Salt Lake City, UT	1280	0.5/1 kW/DA-N	2/11/49
KTLK	Denver, CO	1280	5 kW/DA-2	5/20/54
KUDY	Spokane, WA	1280	5 kW/DA-D	10/2/59
KVOX	Moorhead, MN	1280	0.5/1 kW/DA-N	1/12/54
WABK	Gardiner, ME	1280	5 kW/DA-N	6/27/69
WADO	New York, NY	1280	5 kW/DA-1	8/22/61
WANS	Anderson, SC	1280	1/5 kW/DA-N	9/25/70
WANS	Anderson, SC	1280	1 kW/DA-N	12/22/50
WEIM	Fitchburg, MA	1280	1/5 kW/DA-2	5/22/56
WEIM	Fitchburg, MA	1280	1 kW/DA-N	10/50
WGBF	Evansville, IN	1280	1/5 kW/DA-N	10/26/79
WGSO	New Orleans, LA	1280	5 kW/DA-2	11/16/79
WGSO	New Orleans, LA	1280	1 KW/DA-1	9/20/61
WHVR	Hanover, PA	1280	5/0.5 kW/DA-2	8/21/57
WHVR	Hanover, PA	1280	0.5/5 kW/DA-2	1/24/49
WIPC	Lake Wales, FL	1280	0.5/1 kW/DA-N	11/16/79
WKST	New Castle, PA	1280	1 kW/DA-N	3/13/48
WMCP	Columbia, TN	1280	0.5/5 kW/DA-2	10/26/79
WMRO	Aurora, IL	1280	0.5/2.5 kW/DA-2	9/12/80
WMRO	Aurora, IL	1280	0.5/1 kW/DA-2	6/18/75
WNAM	Neenah, WI	1280	1/5 kW/DA-2	4/10/61
WNPT	Tuscaloosa, AL	1280	0.5 kW/DA-N	1/12/54
WONW	Defiance, OH	1280	0.5 kW/DA-N	5/18/50
WROC	Rochester, NY	1280	5 kW/DA-N	5/27/69

1270-1280

Station	Main Studio	Freq	Power	Date
WSAT	Salisbury, NC	1280	1 kW/DA-N	3/21/50
WWTC	Minneapolis, MN	1280	5 kW/DA-N	10/66
WYND	Sarasota, FL	1280	0.5 kW/DA-D	5/59

DESCRIPTION SHEET

Directional Antenna System

STATION:	New AM	MAIN STUDIO:	Trenton, Ontario
FREQUENCY:	1270 kHz	POWER:	1 kW
TIME:	Unlimited	CLASS:	III
NOTIFICATION LIST NO. 373		DATE:	March 6, 1978
GEOGRAPHICAL LOCATION:		North Latitude	44° 02' 41"
		West Longitude	77° 34' 47"

ANTENNA SYSTEM:

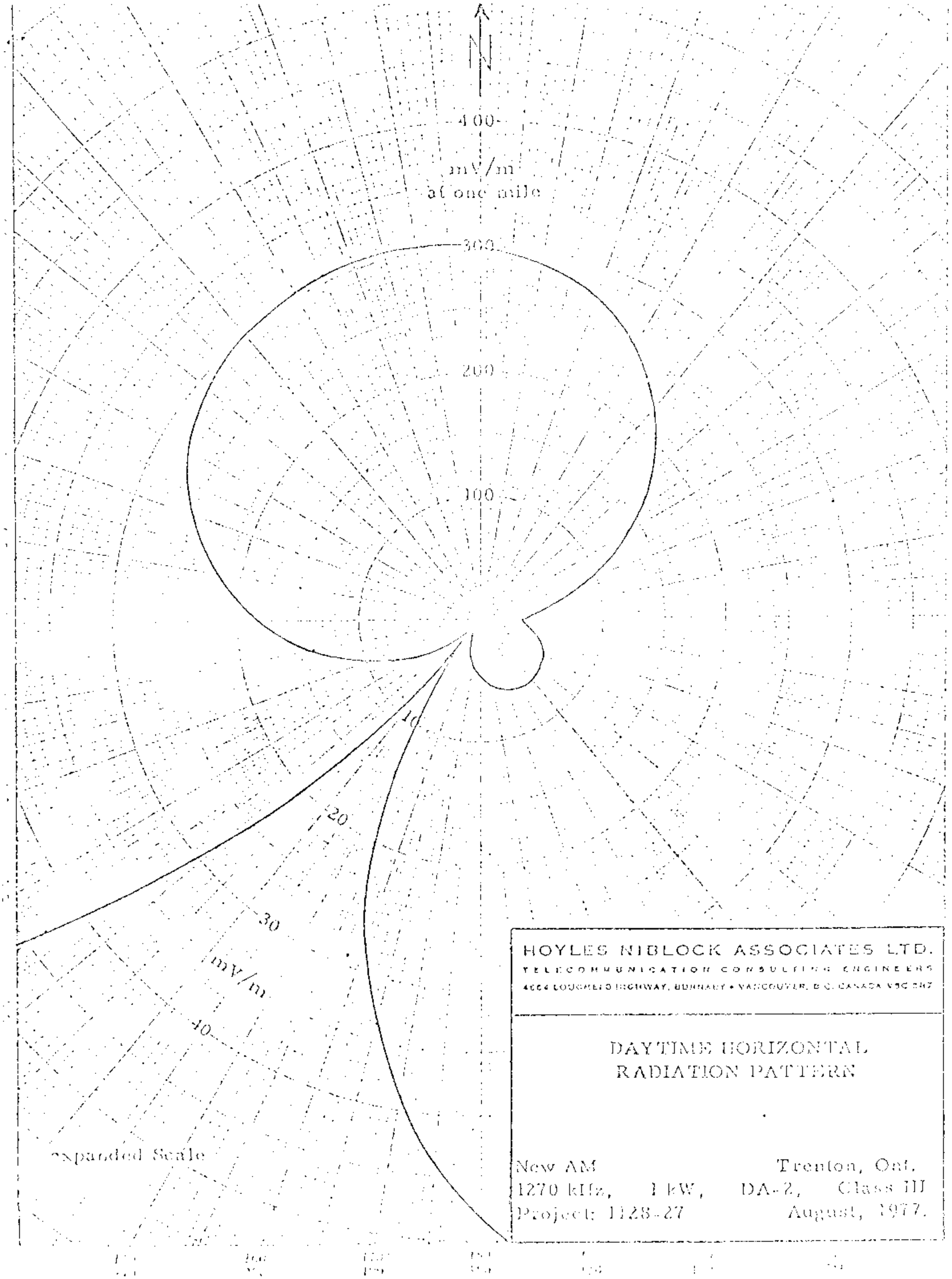
Mode of Operation: DA-2

Elements: Three (3) uniform cross-section, guyed steel towers, base insulated, and series fed.

TOWER		#1	#2	#3
Height above insulators:		194' (90°)	194' (90°)	194' (90°)
Overall height:		199'	199'	199'
Spacing:		Ref.	195' (90.6°)	387.4' (180°)
Orientation:		Ref.	-24.3°	-18°
Current Ratio:	Day	1.0	1.426	0.5
	Night	1.0	1.9	1.0
Phasing:	Day	Ref.	-125°	141°
	Night	Ref.	-169°	41°

GROUND SYSTEM: The ground system shall consist of 120 equally spaced No. 10 bare copper wire extending from each tower base for a distance of 0.4λ with the exception of those joined along the common chords.

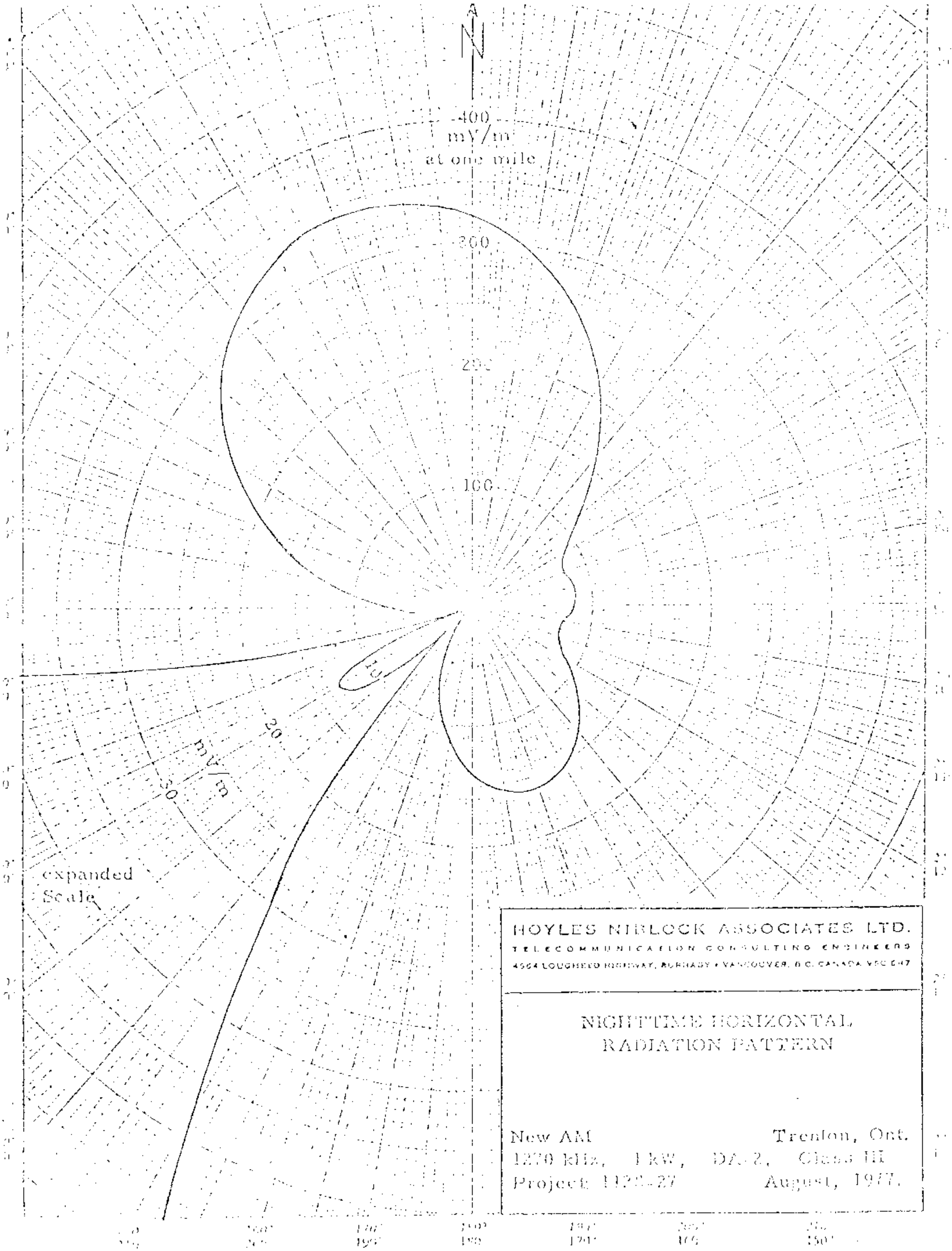
PREDICTED EFFECTIVE FIELD: Day and Night 180 mV/m for 1 kW.

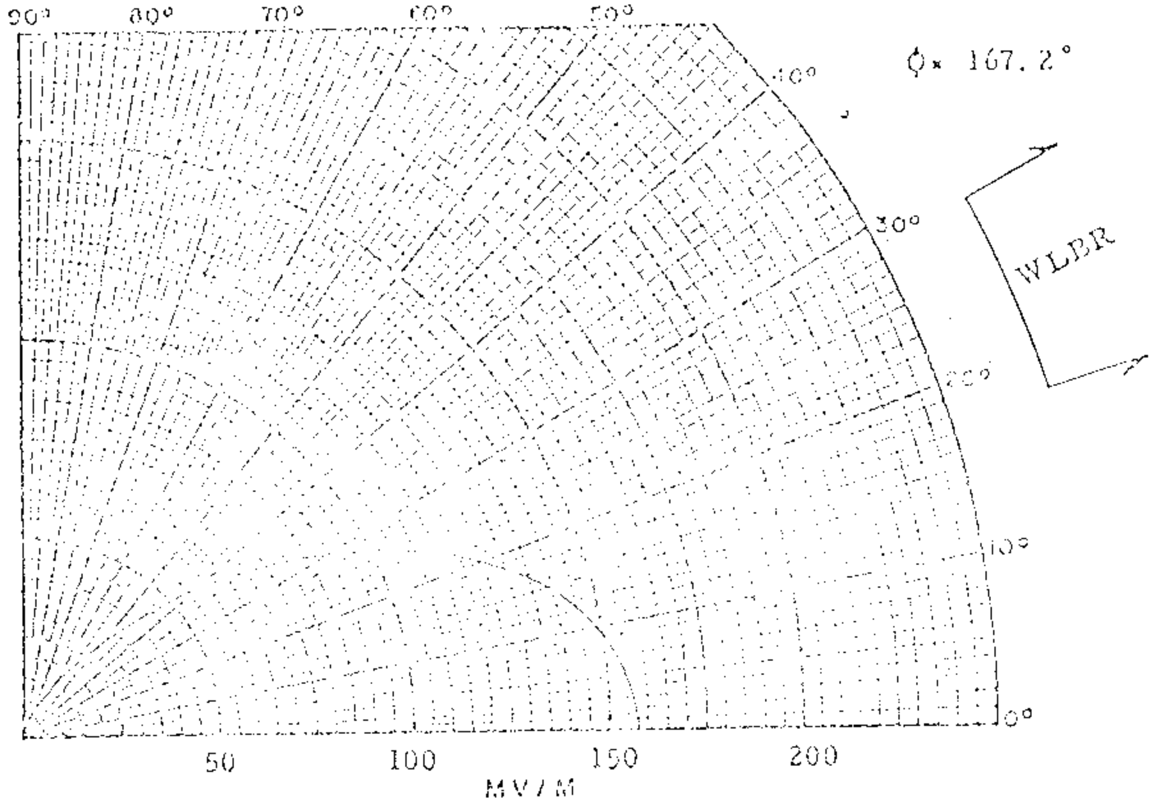


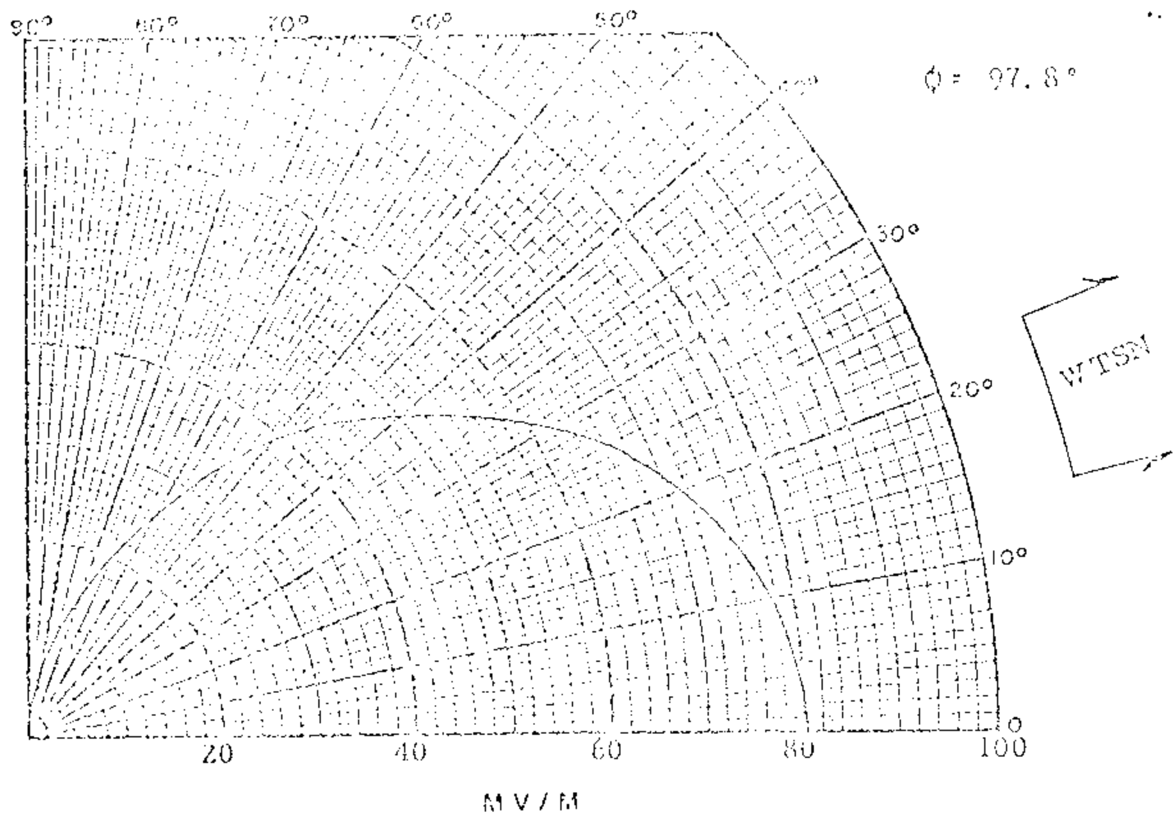
HOYLES NIBLOCK ASSOCIATES LTD.
TELECOMMUNICATION CONSULTING ENGINEERS
4664 LOUGHEED HIGHWAY, BURNABY • VANCOUVER, B.C. CANADA V5C [illegible]

DAYTIME HORIZONTAL
RADIATION PATTERN

New AM Trenton, Ont.
1270 kHz, 1 kW, DA-2, Class III
Project: 1128-27 August, 1977.


N
400
mV/m
at one mile
300
200
100
10
20
30
mV/m
expanded
Scale
HOYLES NIBLOCK ASSOCIATES LTD.
TELECOMMUNICATION CONSULTING ENGINEERS
4564 LOUGHEED HIGHWAY, BURNABY • VANCOUVER, B.C. CANADA
NIGHTTIME HORIZONTAL
RADIATION PATTERN
New AM
Trenton, Ont.
1270 kHz, 1 kW, DA-2, Class III
Project 1122-27
August, 1977.

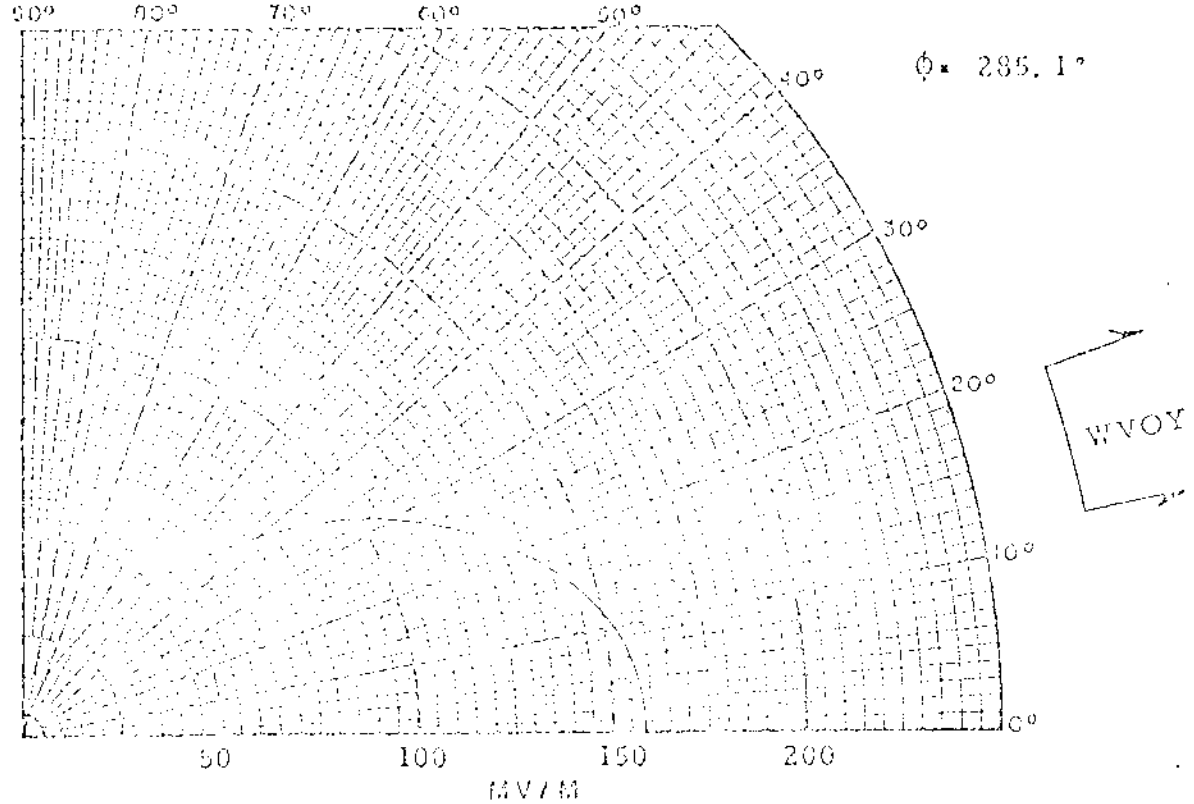


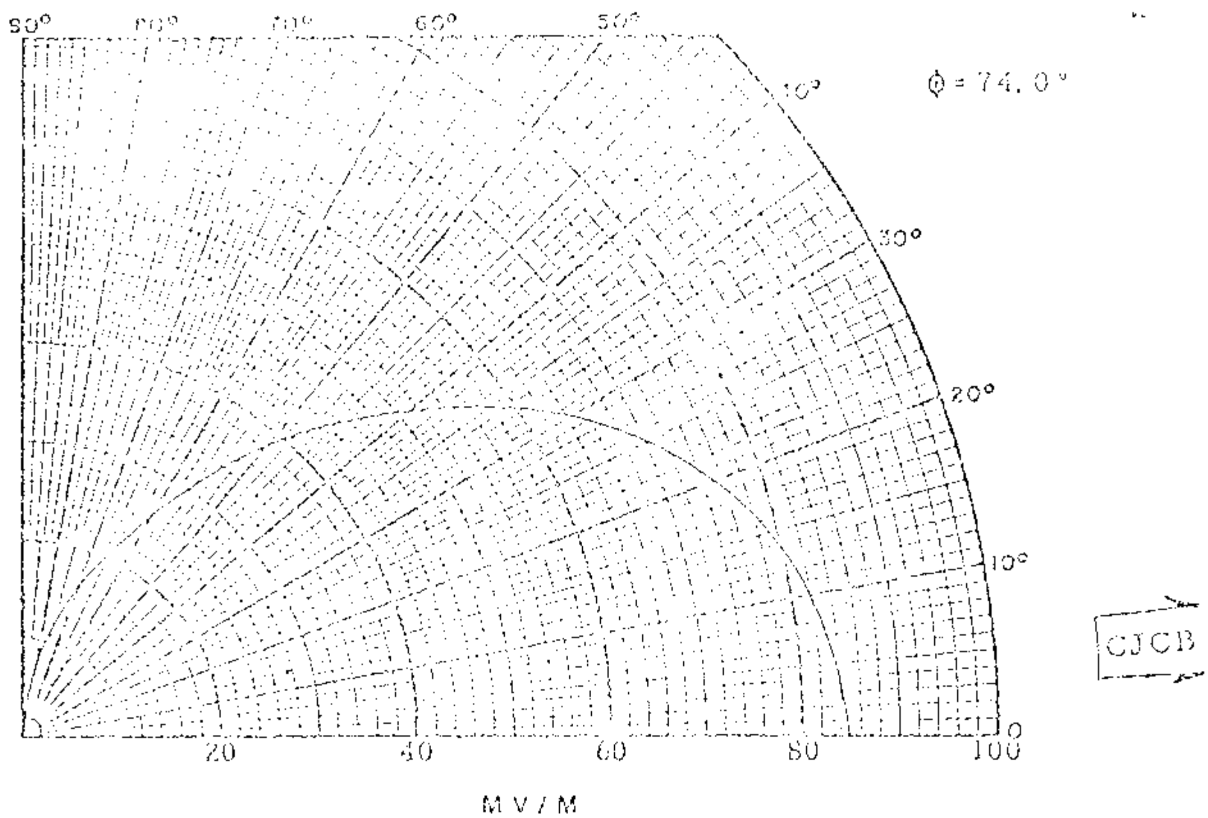


VERTICAL RADIATION PATTERNS

New AM	Trenton, Ont.
1270 kHz, 1 kW, DA-2	Class III
Project 1128-27	August, 1977.

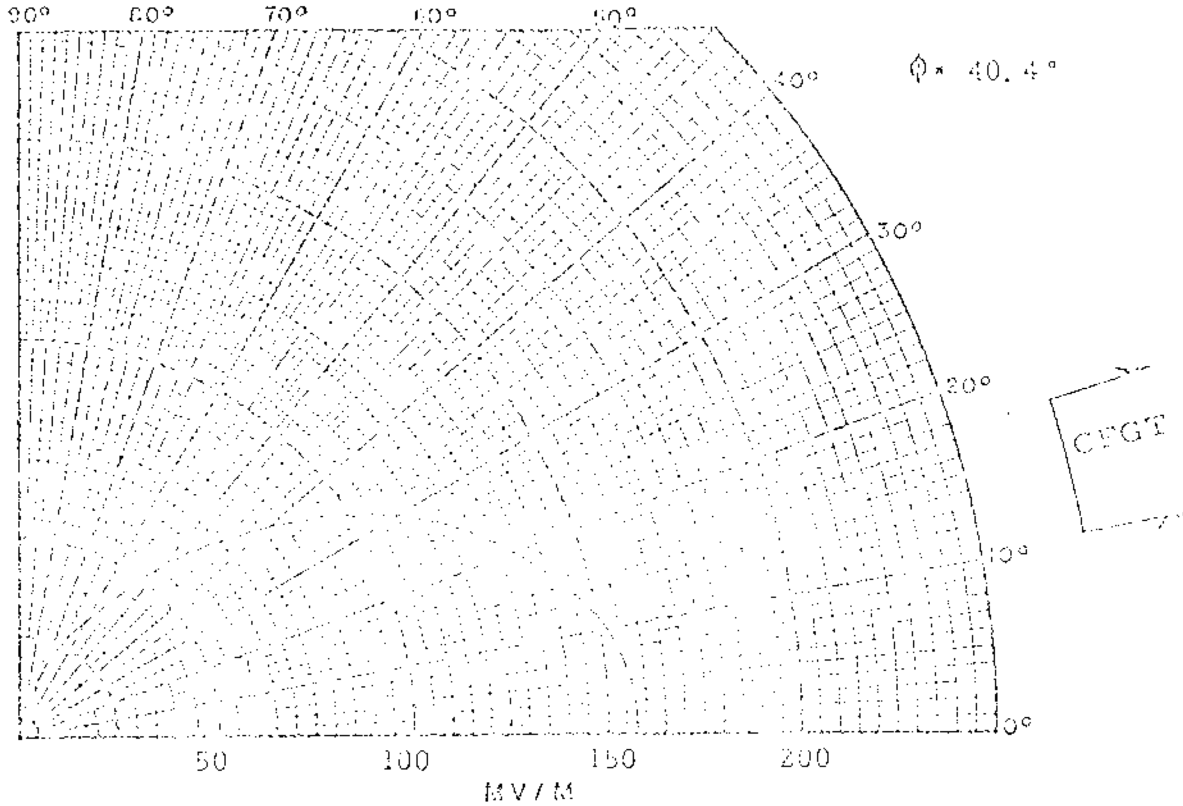
HOYLES NIBLOCK ASSOCIATES LTD. CONSULTING ENGINEERS

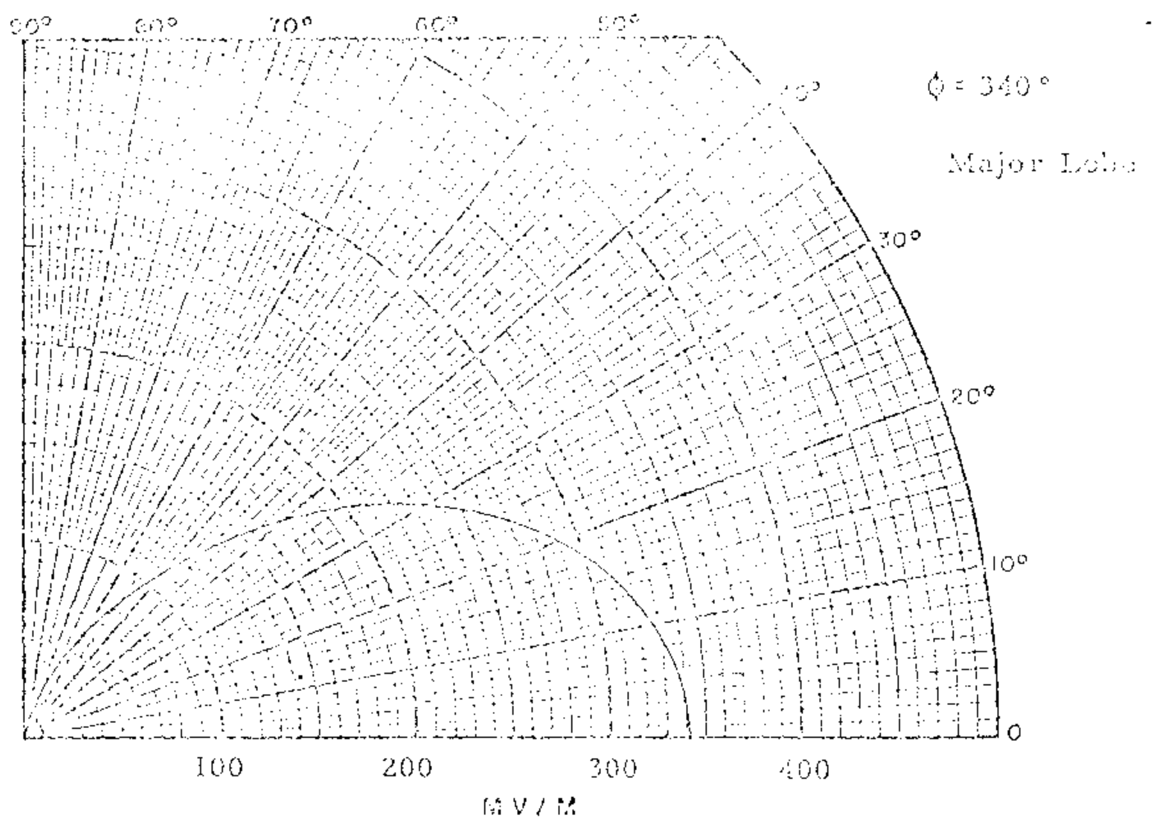




VERTICAL RADIATION PATTERNS

New AM	Trenton, Ont.
1270 kHz, 1 kW, DA-2	Class III
Project 1128-27	August, 1977.



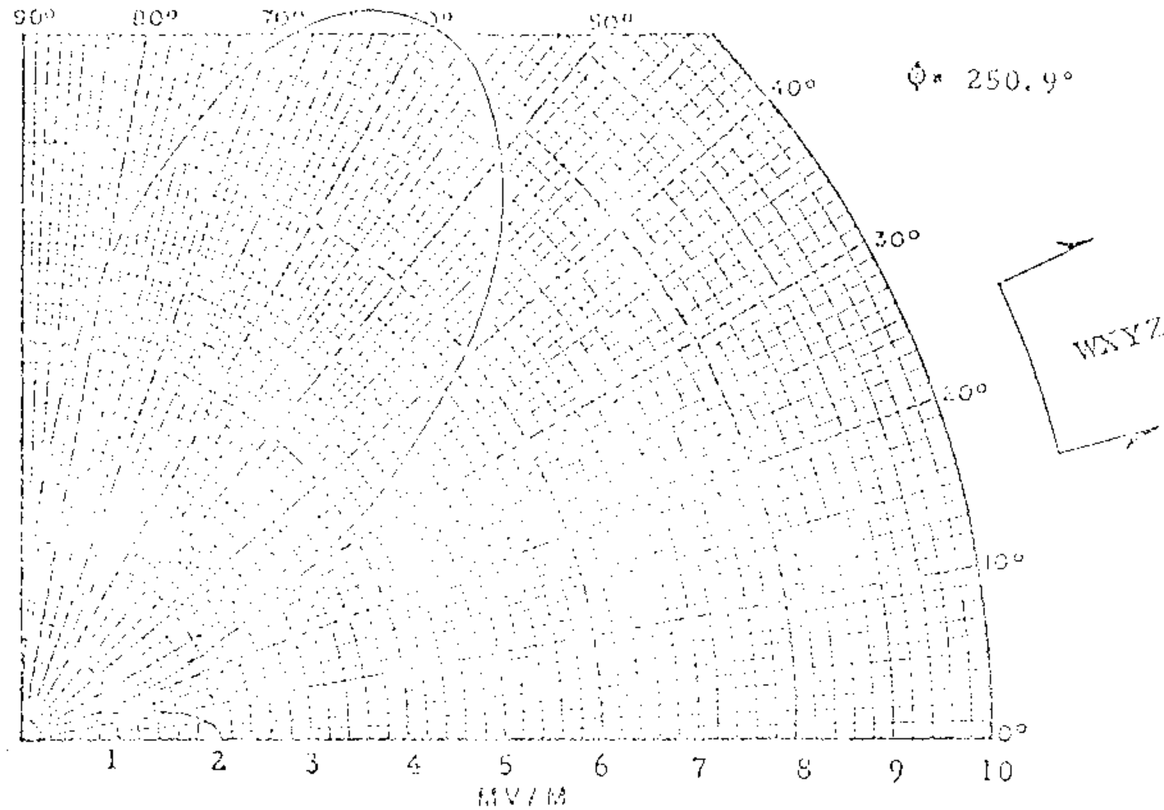


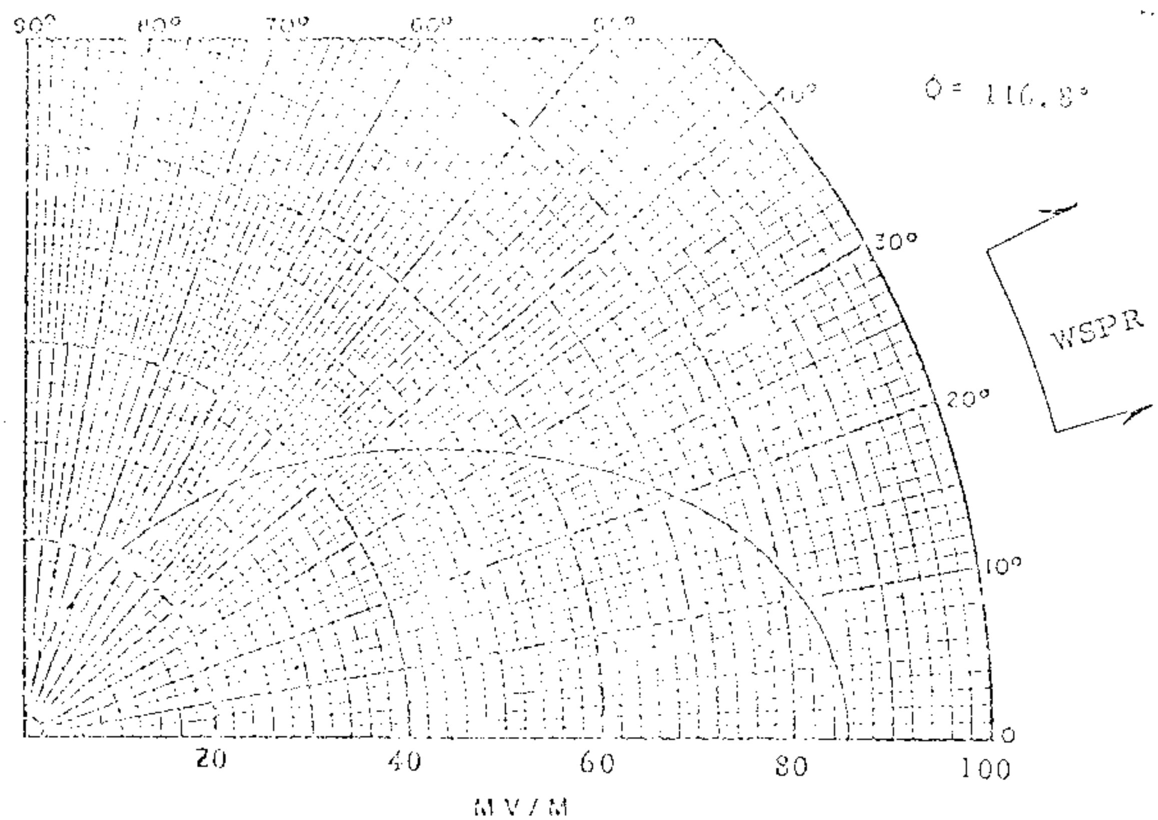
VERTICAL RADIATION PATTERNS

New AM — Trenton, Ont.

1270 kHz, 1 kW, DA-2 — Class III

Project 1128-27 — August, 1977.





VERTICAL RADIATION PATTERNS

New AM
1270 kHz, 1KW, DA-2
Project 1128-27

Trenton, Ontario
Class III,
August 1977

DESCRIPTION SHEET

Directional Antenna System

STATION:	New AM	MAIN STUDIO:	Trenton, Ontario
FREQUENCY:	1270 kHz	POWER:	1 kW
TIME:	Unlimited	CLASS:	III
NOTIFICATION LIST NO.	371	DATE:	March 8, 1978

GEOGRAPHICAL LOCATION: North Latitude 44° 02' 41"
West Longitude 77° 34' 47"

ANTENNA SYSTEM:

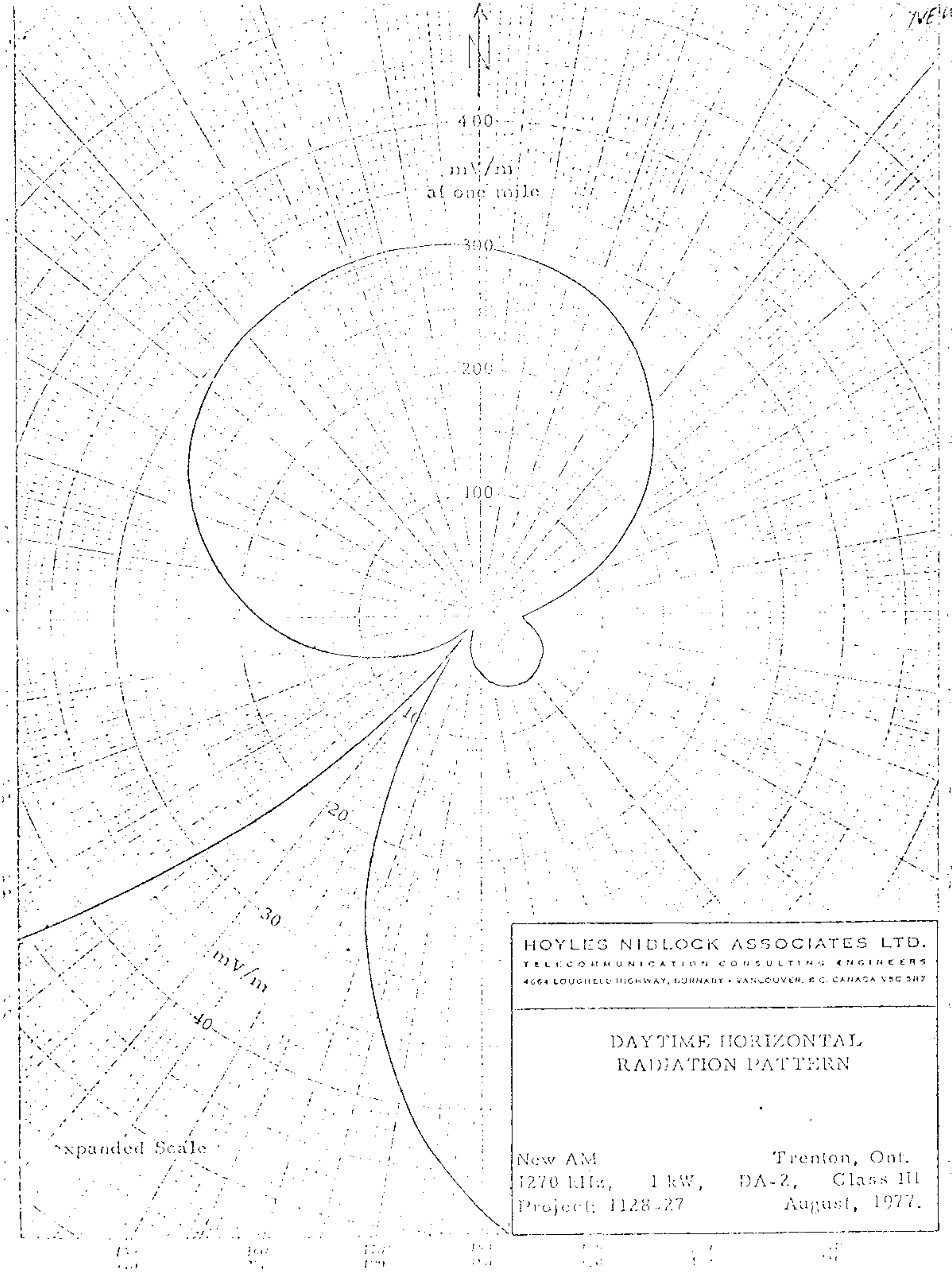
Mode of Operation: DA-2

Elements: Three (3) uniform cross-section, guyed steel towers, base insulated, and series fed.

TOWER		#1	#2	#3
Height above insulators:		194' (90°)	194' (90°)	194' (90°)
Overall height:		199'	199'	199'
Spacing:		Ref.	195' (90.6°)	387.4' (180°)
Orientation:		Ref.	-24.3°	-18°
Current Ratio:	Day	1.0	1.426	0.5
	Night	1.0	1.9	1.0
Phasing:	Day	Ref.	-125°	141°
	Night	Ref.	-169°	41°

GROUND SYSTEM: The ground system shall consist of 120 equally spaced No. 10 bare copper wire extending from each tower base for a distance of 0.4λ with the exception of those joined along the common chords.

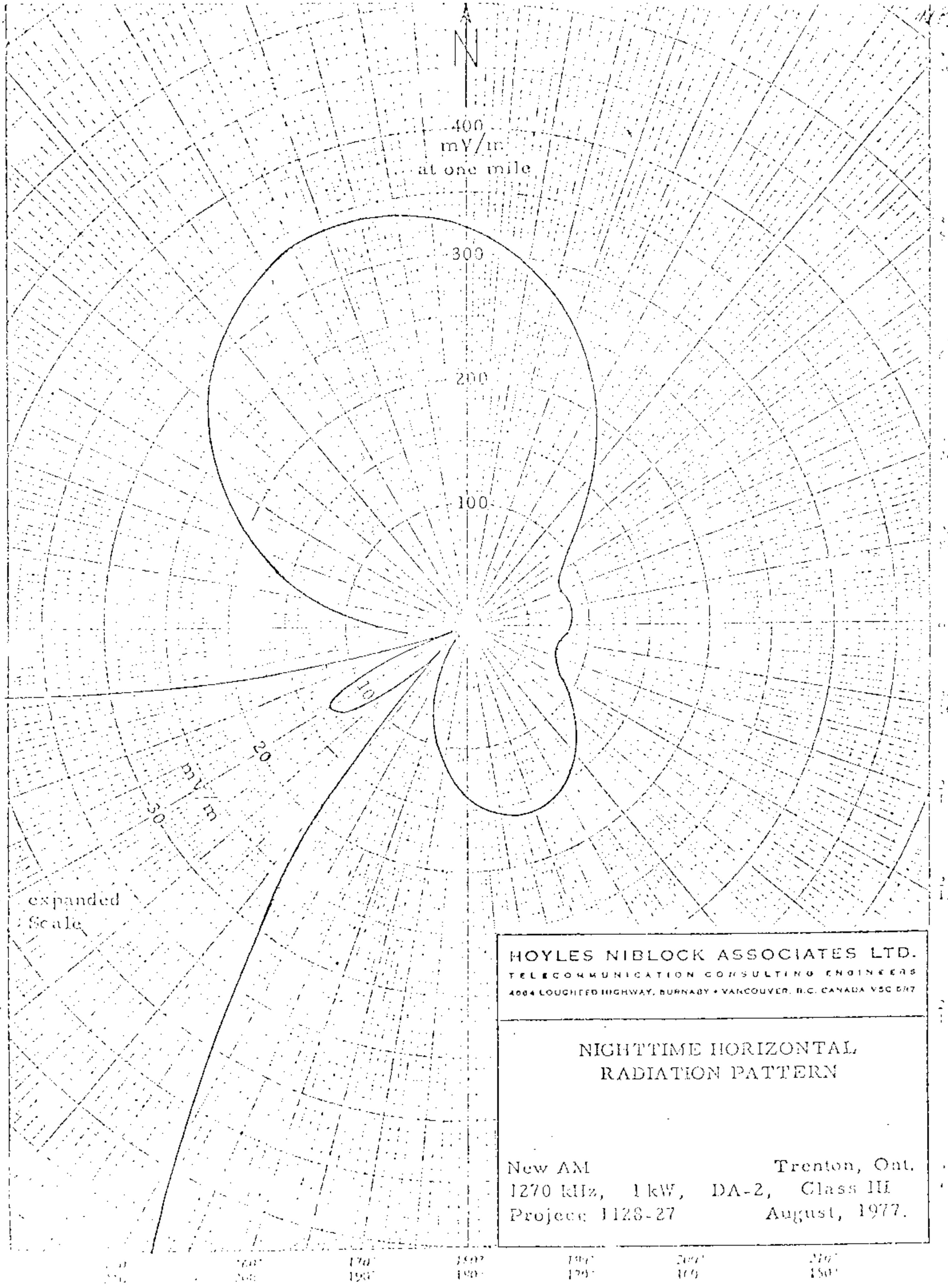
PREDICTED EFFECTIVE FIELD: Day and Night 150 mV/m for 1 kW.



HOYLES NIBLOCK ASSOCIATES LTD.
TELECOMMUNICATION CONSULTING ENGINEERS
4664 LOUGHEED HIGHWAY, BURNABY • VANCOUVER, B.C. CANADA V5C 5R7

DAYTIME HORIZONTAL
RADIATION PATTERN

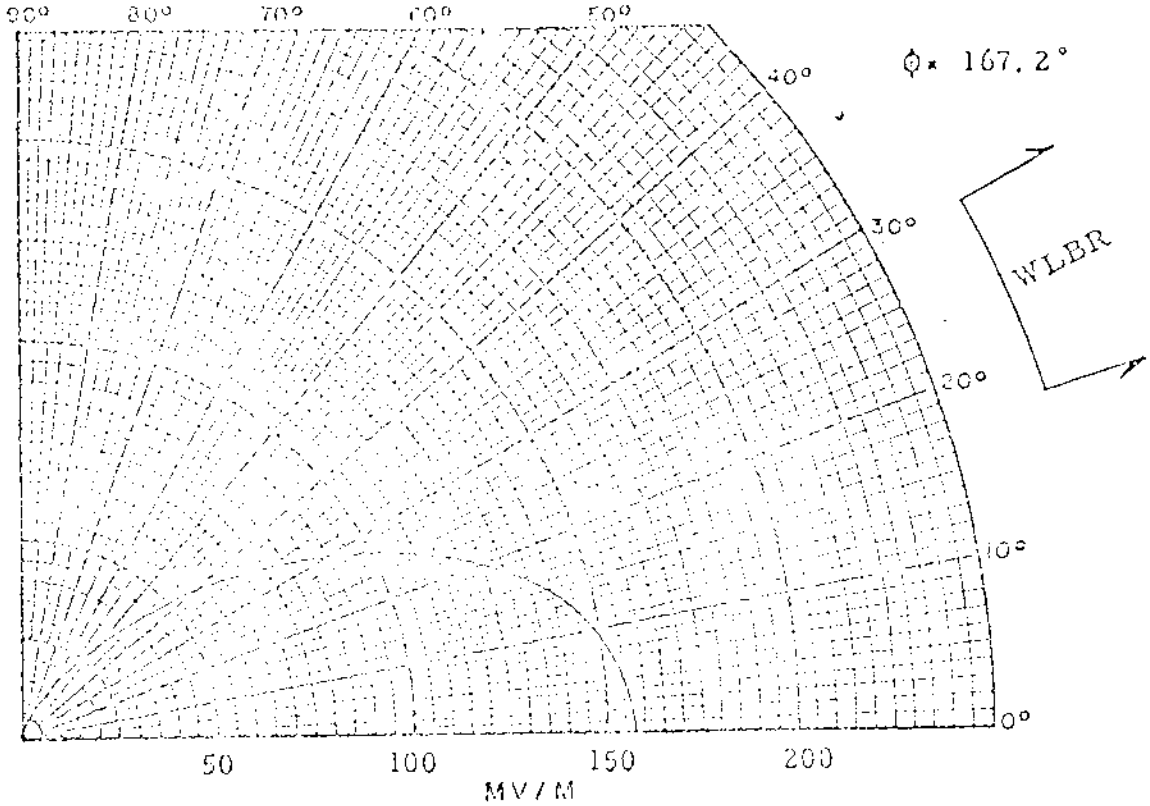
New AM Trenton, Ont.
1270 kHz, 1 kW, DA-2, Class III
Project: 1128-27 August, 1977.

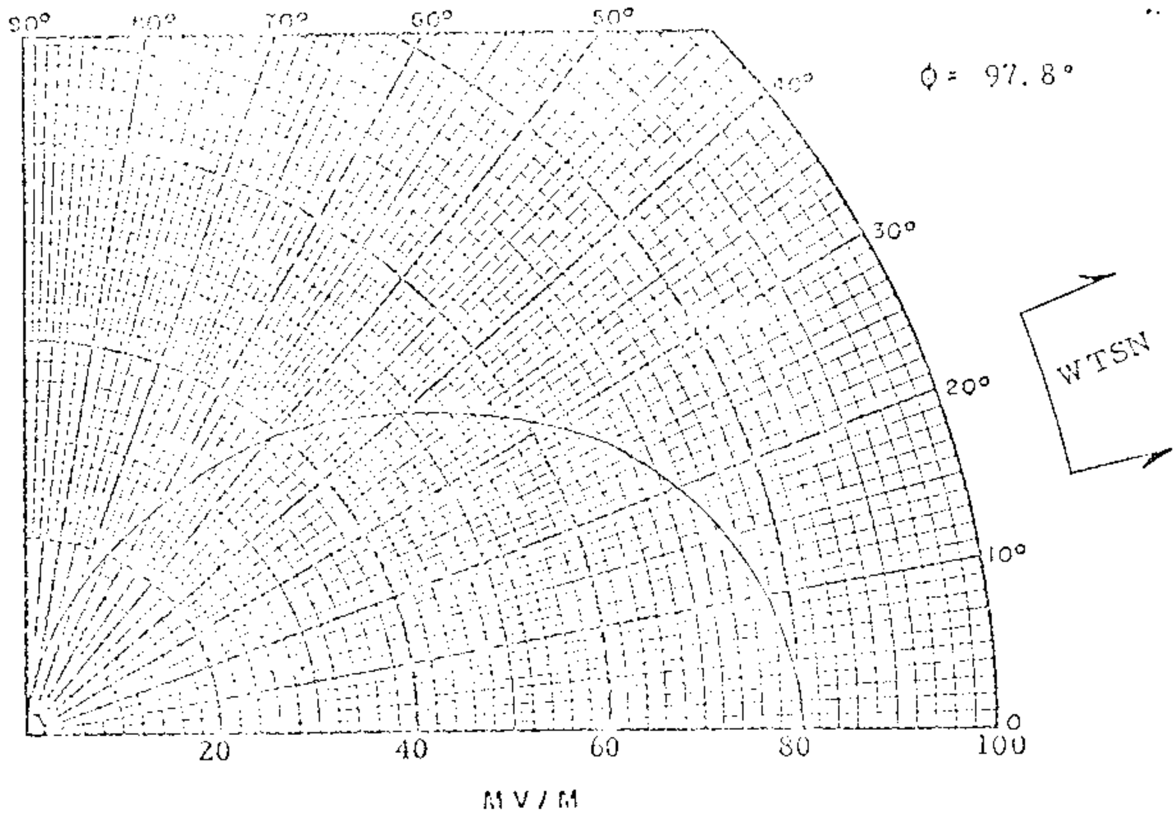


HOYLES NIBLOCK ASSOCIATES LTD.
TELECOMMUNICATION CONSULTING ENGINEERS
4004 LOUGHEED HIGHWAY, BURNABY • VANCOUVER, B.C. CANADA V5C 5R7

NIGHTTIME HORIZONTAL
RADIATION PATTERN

New AM Trenton, Ont.
1270 kHz, 1 kW, DA-2, Class III
Project 1128-27 August, 1977.

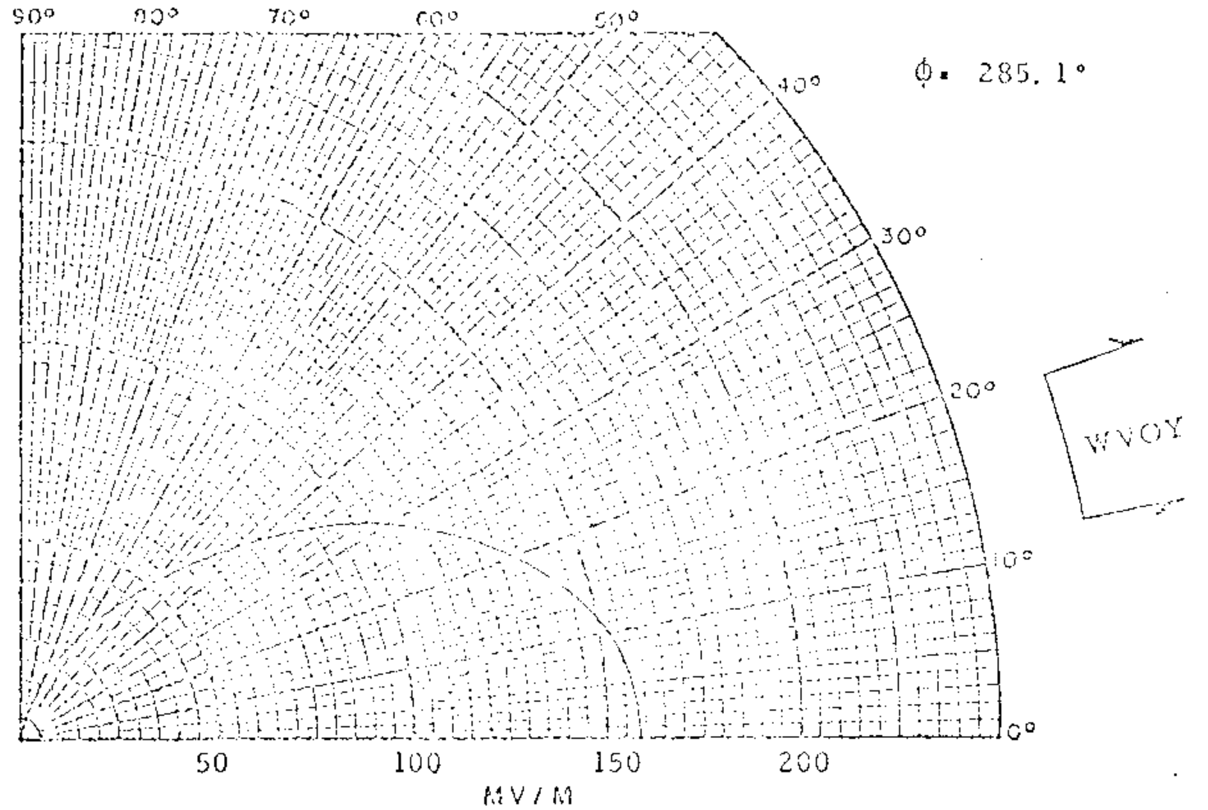


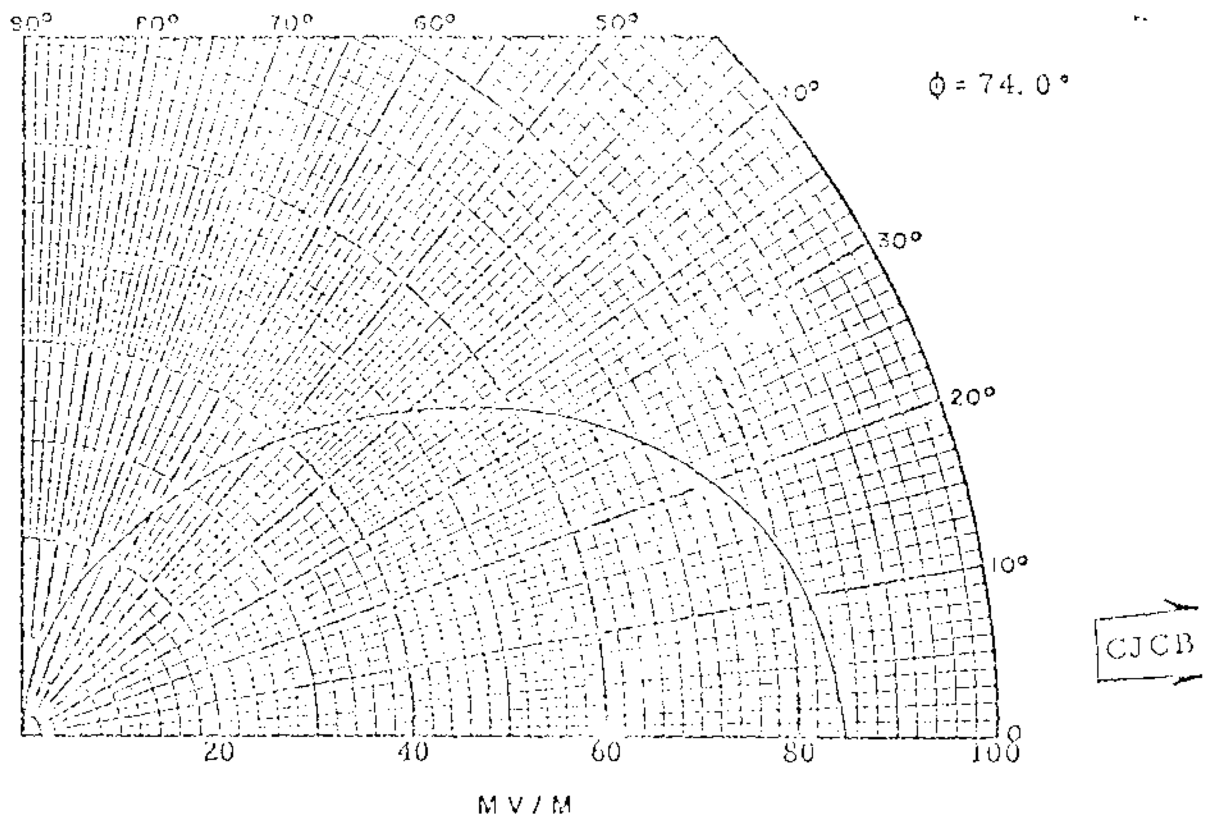


VERTICAL RADIATION PATTERNS

New AM
1270 kHz, 1 kW, DA-2
Project: 1128-27

Trenton, Ont.
Class III
August, 1977.

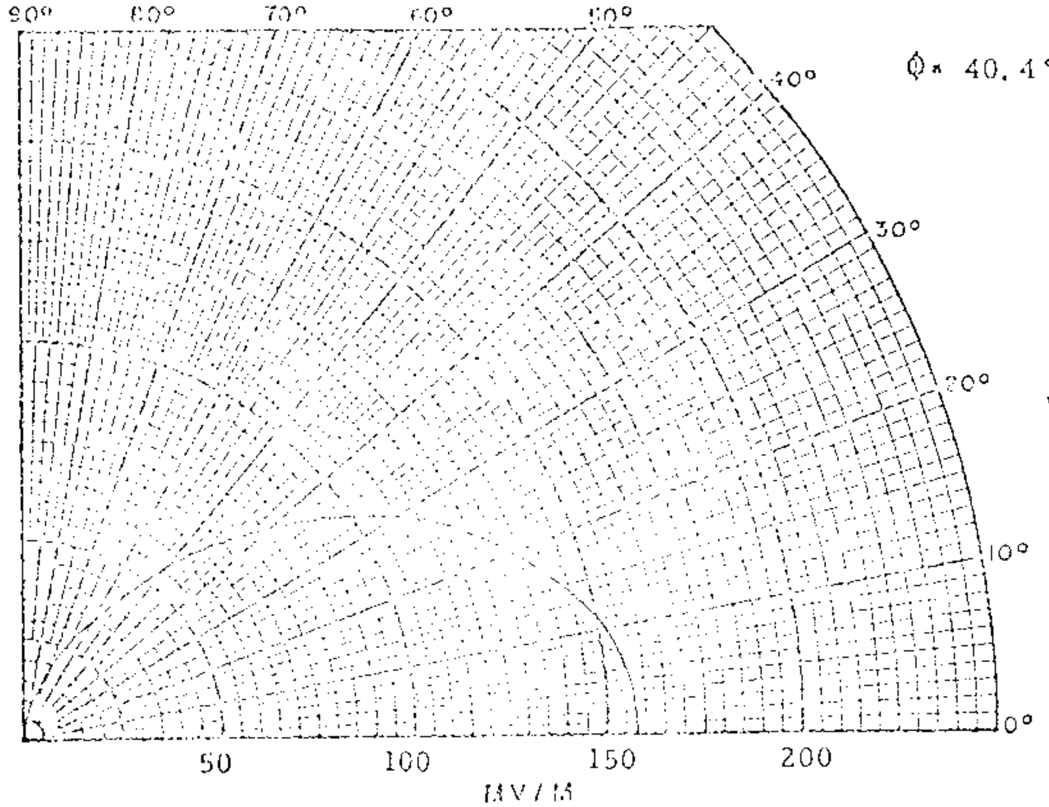


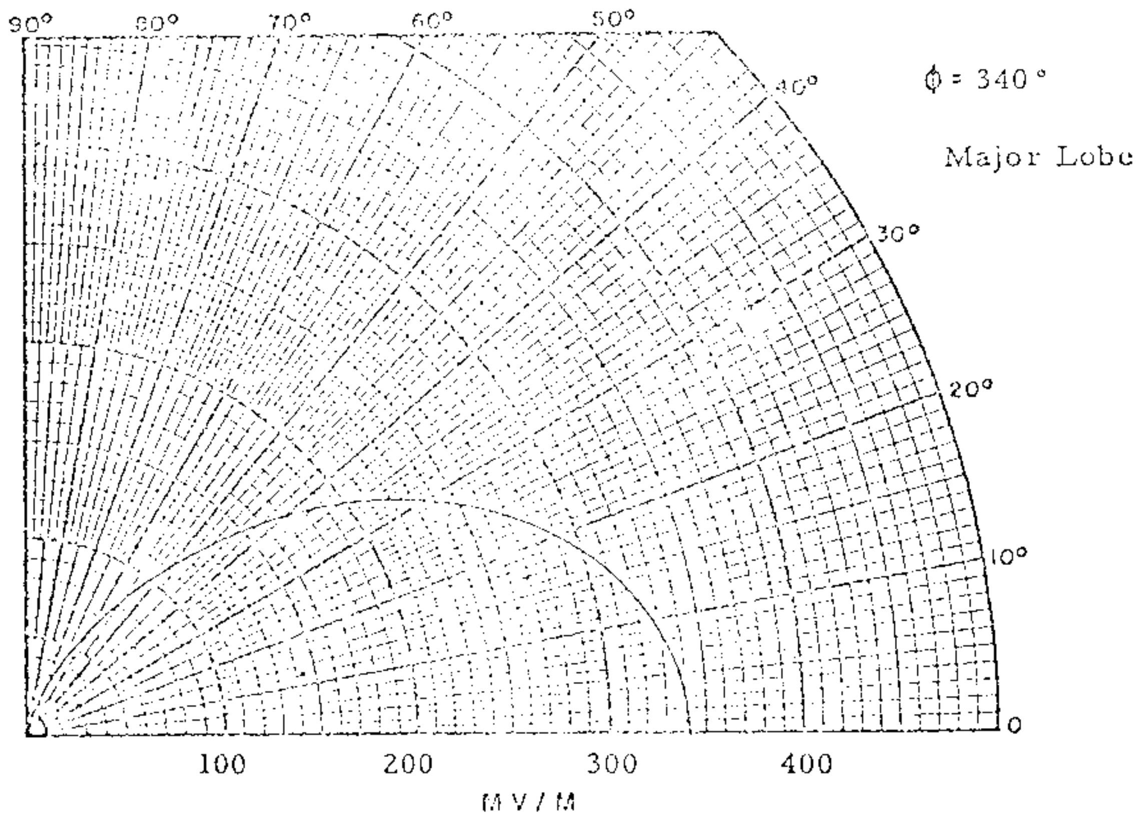


VERTICAL RADIATION PATTERNS

New AM
1270 kHz, 1 kW, DA-2
Project: 1128-27

Trenton, Ont.
Class III
August, 1977.

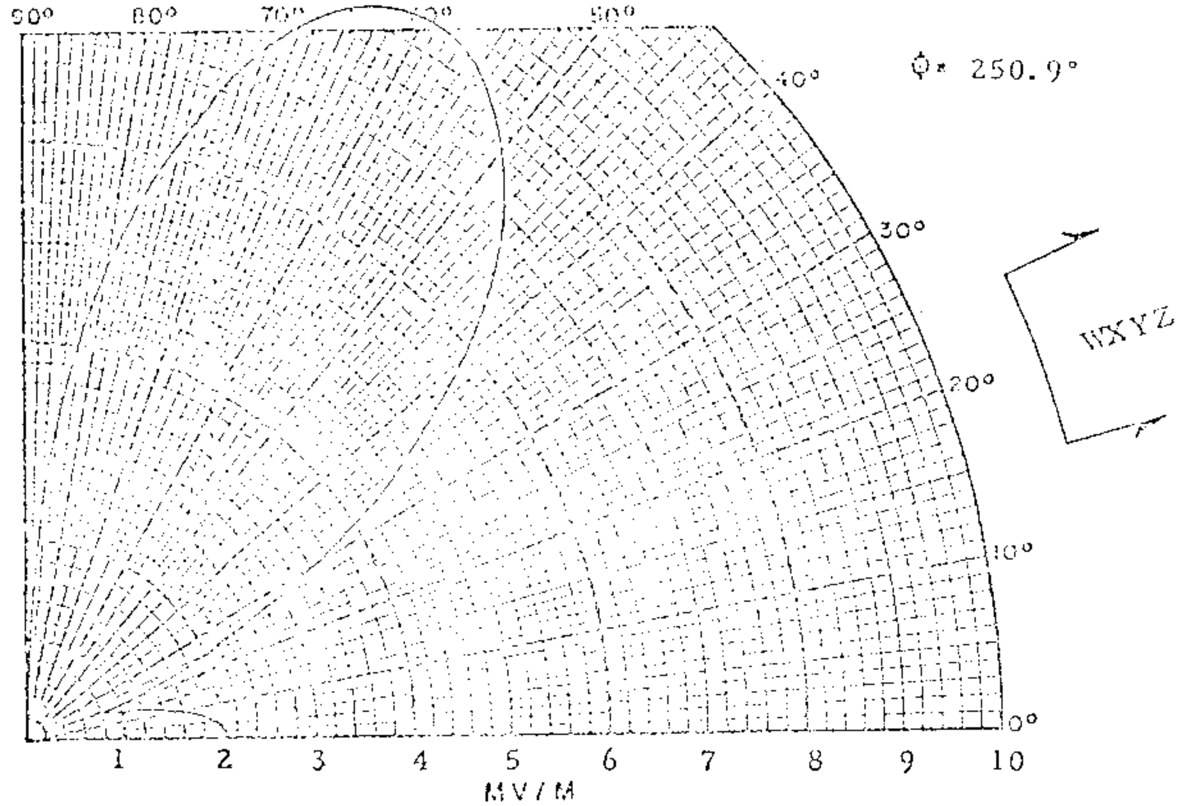


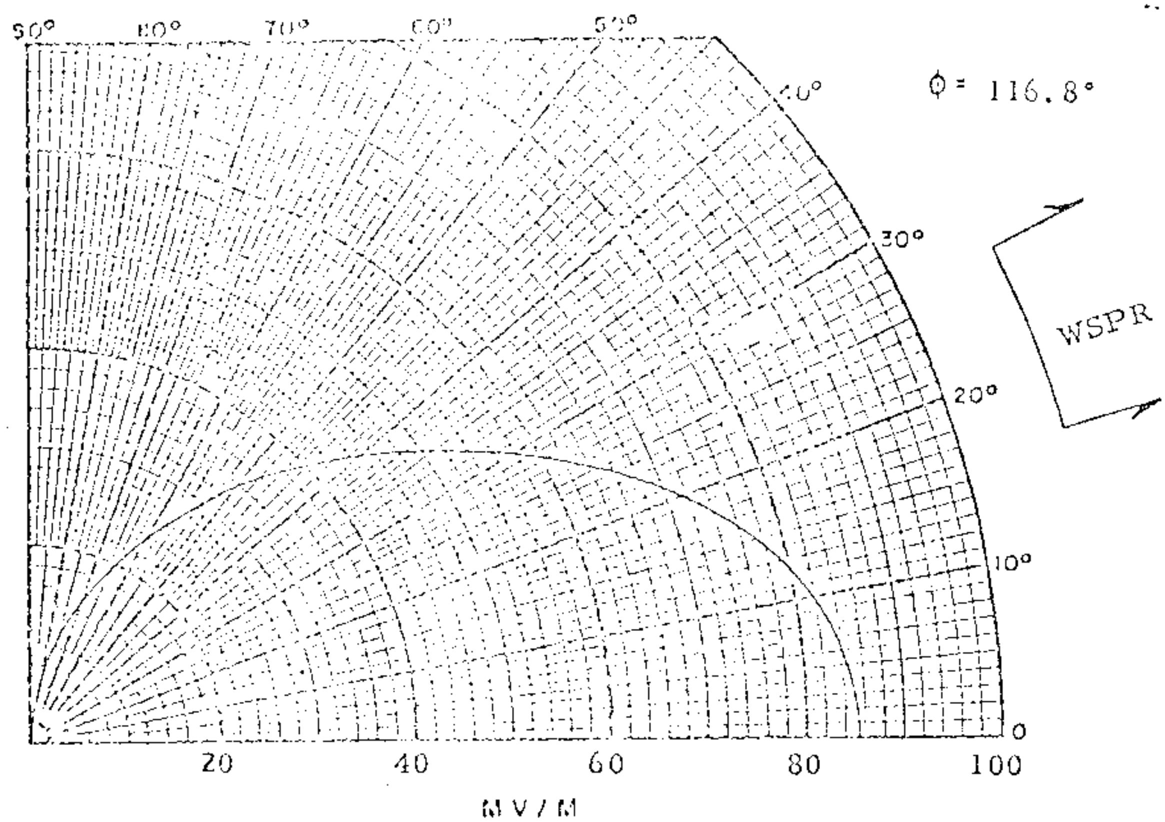


CFGT

VERTICAL RADIATION PATTERNS

New AM — Trenton, Ont.
1270 kHz, 1 kW, DA-2 — Class III
Project: 1128-27 — August, 1977.





VERTICAL RADIATION PATTERNS

New AM	Trenton, Ontario
1270 kHz, 1kW, DA-2	Class III,
Project 1128-27	August 1977

#76

CFGT

1270

DIRECTIONAL ANTENNA DESCRIPTION SHEET

Station: New

Main Studio: St. Joseph D'Alma, Que.

Frequency: 1270 Kc.

Power: 1 Kw. Class: III

Notification List No. 76

Date: June 16, 1953

GEOGRAPHICAL LOCATION OF THE CENTER OF THE ANTENNA SYSTEM: North Latitude: 48° 30' 10"

West Longitude: 71° 30' 40"

Antenna:

Mode of Operation: Directional Nighttime only (DA-N)

Elements: Two square, unfform cross-section, guyed, insulated from ground, series fed, no top loading

TOWER:	#1 (South E.)	#2 (North W.)
HEIGHT ABOVE INSULATORS:	250' (116°)	250' (116°)
SPACING:	194' (90°) between towers	
PHASING:	Current in tower #2 lags that in Tower #1 by 124°	
FIELD RATIO:	1	.88

GROUND SYSTEM:

120 equally spaced radials extending to a maximum distance of 310 feet and bonded together on a line equi-distant from two towers. Radials are No. 10 B & S bare copper wire buried approximately 8 inches.

Predicted effective field: 182 mV/m at 1 mile

ORIENTATION: Line of towers bears 20° west of true north

CFGT

I - DESCRIPTION DU SYSTEME A ANTENNE DIRECTIONNELLE

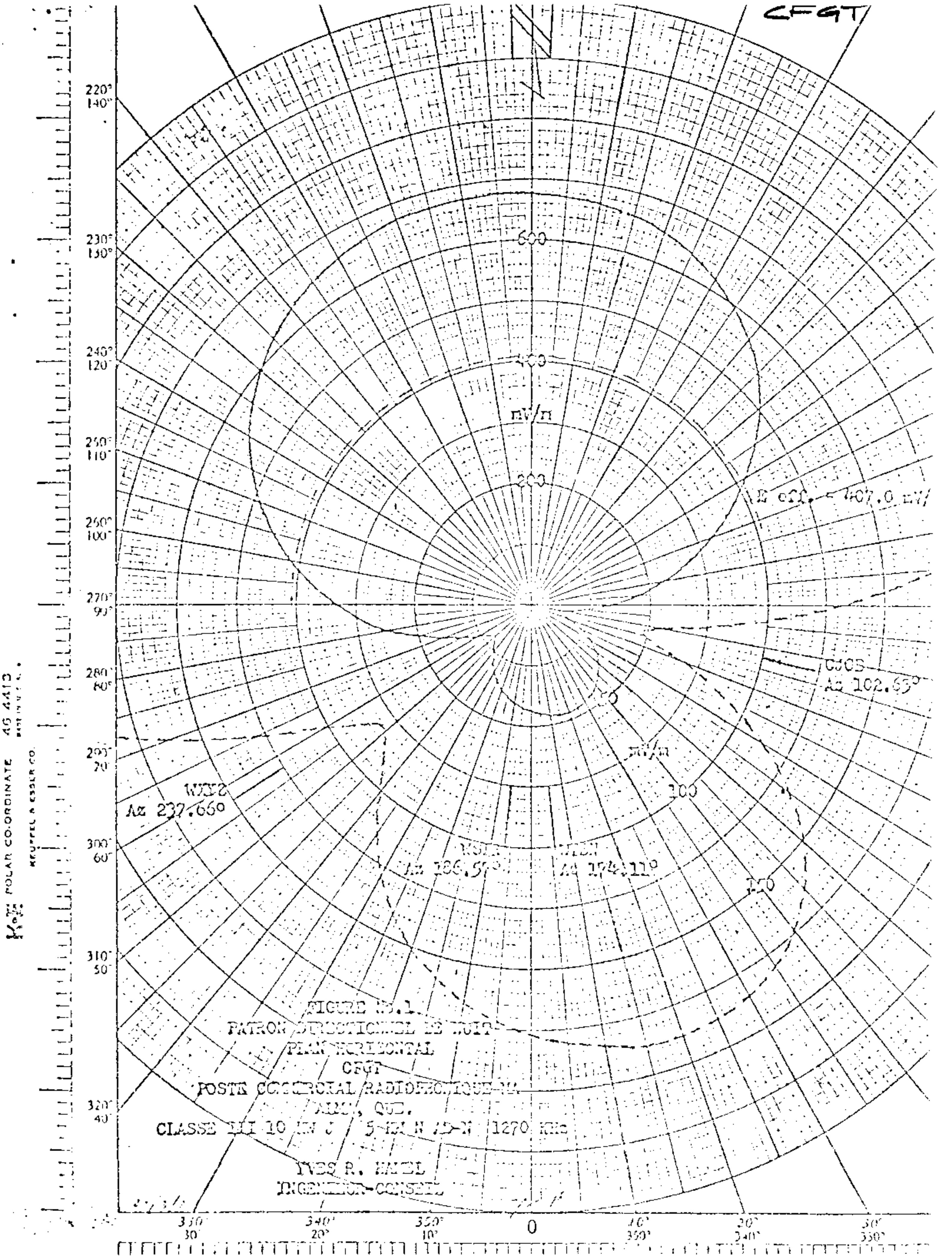
1. LETTRES D'APPEL: CFGT.
2. EMPLACEMENT: Alma, Qué.
3. FREQUENCE: 1270 KHz.
4. PUISSANCE: 10 KW J / 5 KW N.
5. CLASSE: III.
6. NOTIFICATION NO: 316 DATE: le 31 octobre 1973
7. COORDONNEES: Latitude nord: 48° 31' 46"
   Longitude ouest: 7'° 36' 31"
8. SYSTEME D'ANTENNE: a) Fonctionnement: directionnel Ad-N.
   b) Type: trois (3) éléments à section uniforme, haubanés et alimentés en série.
   c) Mise à la terre: 120 fils No.10 par élément, espacés également, d'une longueur équivalente à 0.4 λ, enfouis à environ 8 pouces sous la surface.
9. MATS D'ANTENNE:

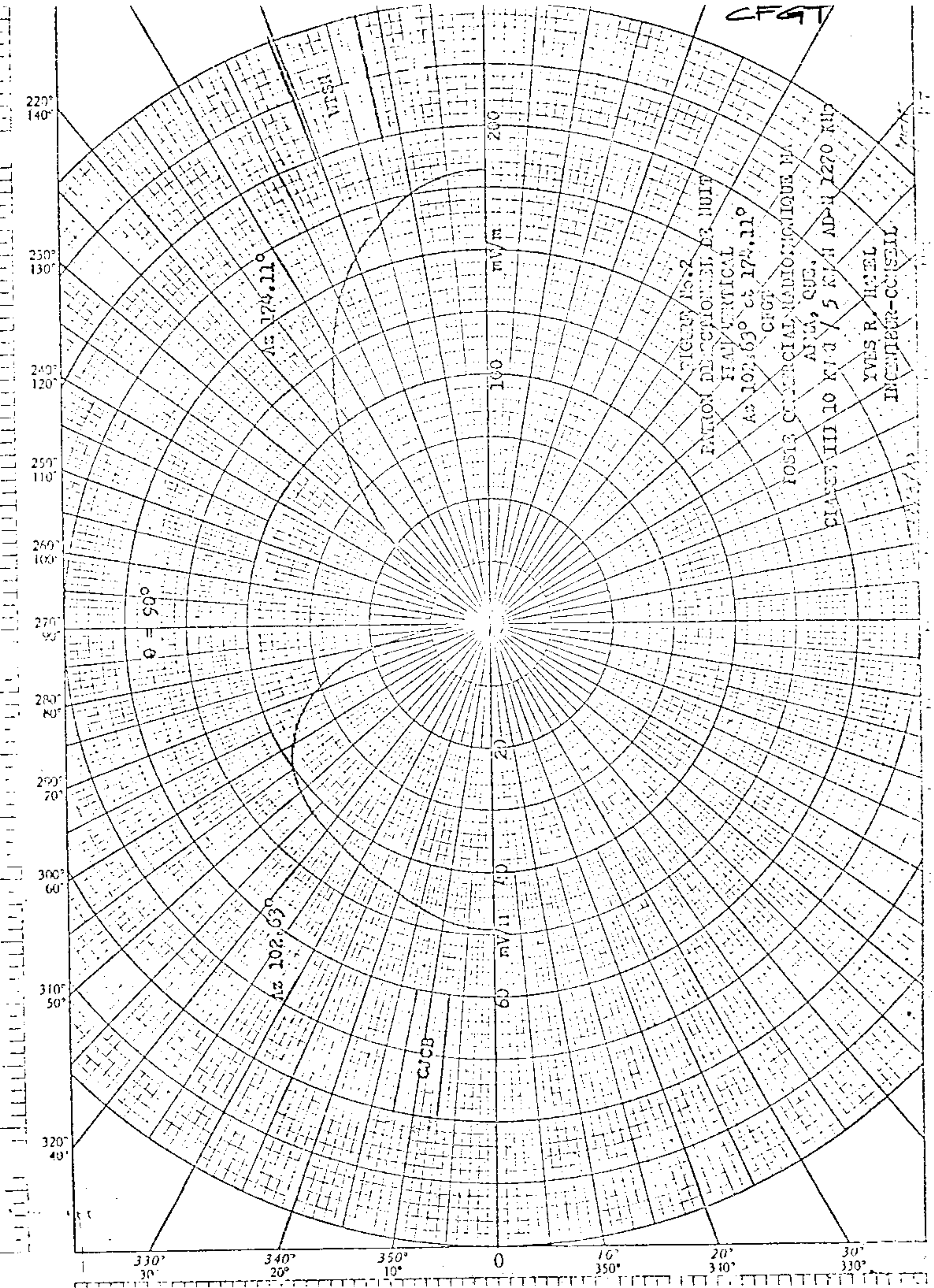
		No.1 Nord-ouest	No.2 Centre	No.3 Sud
Orientation (Az):		Réf.	160°	170°
Hauteur au-dessus de l'isolateur:		250' (116°)	250' (116°)	190' (88°)
Espacement:		Réf.	194' (90°)	302' (140°)
Phasage:	Jour:	0°	-	-
	Nuit:	0°	88°	192°
Rapport d'intensité de champ:	Jour:	1.000	-	-
	Nuit:	0.880	1.000	0.800

10. EFFICACITE PREVUE: a) Jour: 607.2 mV/m à 1 mille pour 10 KW.
    192.0 mV/m à 1 mille pour 1 KW.
    b) Nuit: 407.0 mV/m à 1 mille pour 5 KW.
    182.0 mV/m à 1 mille pour 1 KW.

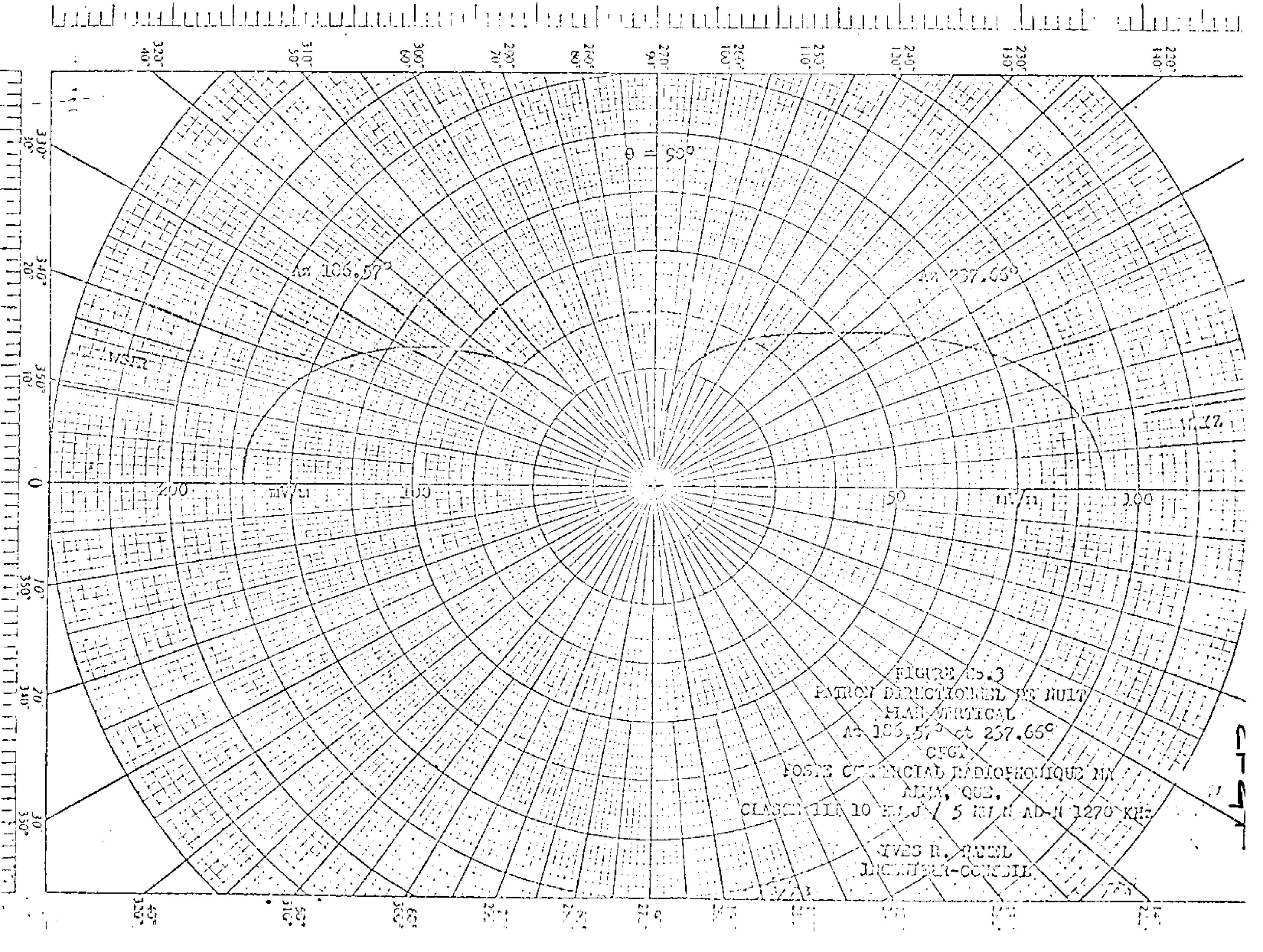
YVES R. HAMEL
INGENIEUR-CONSEIL
3772 AVENUE KENT,
MONTREAL 249, QUE.

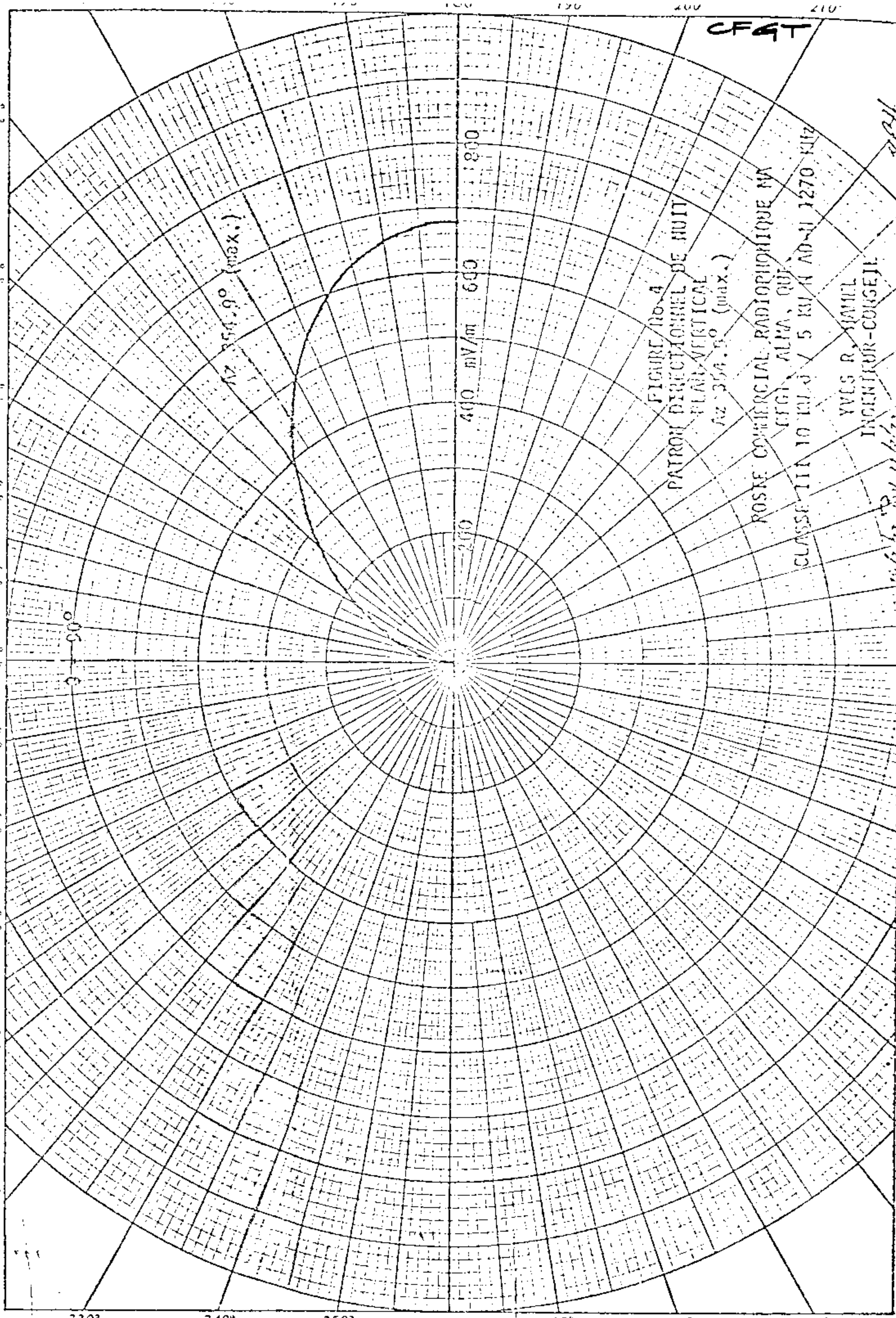
CFGT


600
400
mV/m
200
E eff. = 407.0 mV/
CJCB
Az 102.65°
Az 237.66°
100
mV/m
Az 174.11°
PATRON
PLAN HORIZONTAL
CFGT
POSTE COMMERCIAL
QUE.
CLASSE 10 1270 KHz
YVES R.
POLAR CO-ORDINATE
KEUFFEL & ESSER CO.



CFGT
Az 174.11°
Az 102.63°
CJCB
θ = 90°
mV/m
200
100
20
40
60
YVES R. HAMEL
INGENIEUR-CONSEIL
ALMA, QUE.
PLAN VERTICAL
Az 102.63° et 174.11°

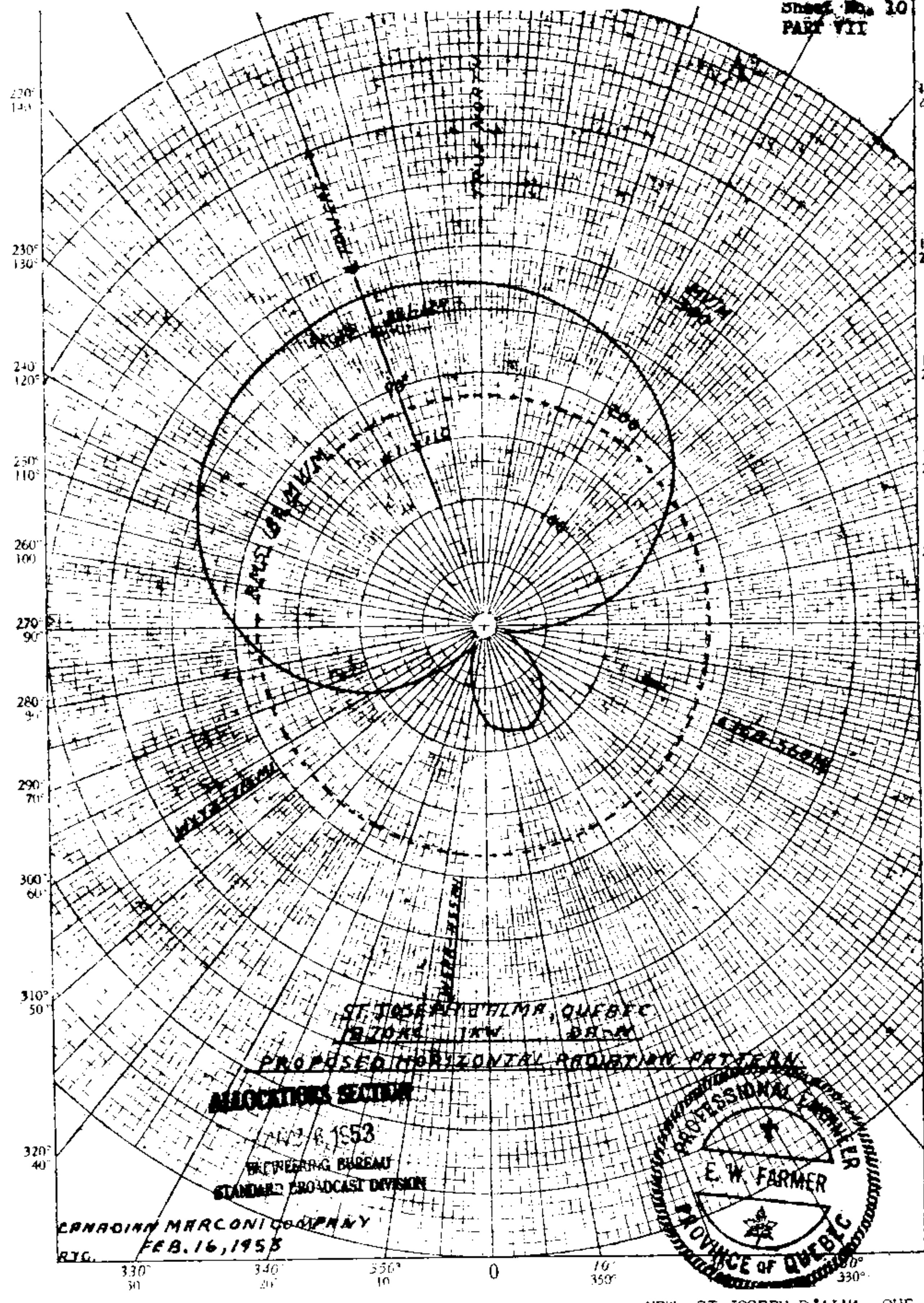

θ = 90°
Az 185.57°
Az 237.65°
200
mV/m
100
50
mV/m
200
FIGURE No.3
PATRON DIRECTIONNEL DE NUIT
PLAN VERTICAL
Az 185.57° et 237.66°
CFGT
ALMA, QUE.
CLASSE III 10 KW J / 5 KW N AD-N 1270 KHz
YVES R.
INGENIEUR-CONSEIL
CFGT


CFGT
FIGURE No. 4
PATRON DIRECTIONNEL DE NUIT
PLAN VERTICAL
Az 354.9° (max.)
POSTE COMMERCIAL RADIOPHONIQUE AM
CFGT ALMA, QUE.
CLASSE III 10 KW J / 5 KW N AD-N 1270 KHz
YVES R. HAMEL
INGENIEUR-CONSEIL
Az 354.9° (max.)
800
600
400 mV/m
200
90°
220° 140°
230° 130°
240° 120°
250° 110°
260° 100°
270° 90°
280° 80°
290° 70°
300° 60°
310° 50°
320° 40°
330°
340°
350°
0
10°
20°
30°
190
200
210°

#16

CFGT
St. Jos. de Alma, Q

PROPOSED NIGHT (8/3/53G) NEW, ST. JOSEPH D'ALMA, QUE. 1 kw, DA-N 1270 kc



NEW, ST. JOSEPH D'ALMA, QUE.

#168

CHAT

Description Sheet
(1-29-64ct)

Station CHAT
Medicine Hat, Alberta

10kw,DA-N,U,Class III
1270 kc

CORRECTED
DIRECTIONAL ANTENNA DESCRIPTION SHEET

Station: CHAT

Main Studio: Medicine Hat, Alberta

Frequency: 1270 kc

Power: 10 kw

Notification List No. 168

Date: March 9, 1962 Class III

GEOGRAPHICAL LOCATION OF THE ANTENNA SYSTEM:

North Latitude: 49° 58' 35"

West Longitude: 110° 36' 45"

ANTENNA CHARACTERISTICS

Authorized for Nighttime operation. (DA-N)
Number of elements: three
Type of elements: Uniform cross-section, guyed steel towers, base insulated for series feed.

Tower:			
Height above insulators:	194'(90°)	194°	194°
Overall height:	199'	199'	199'
Spacing:	194'(90°)	194'(90°)	
Phasing:	0°	-115.8°	-242.3°
Field ratio:	1.0	1.81	1.0

Orientation: Towers on a line bearing 360° true.

Ground system: Consists of 120 radials 0.4 wave length about each tower, buried approximately 10" below grade. Radials bonded to a transverse strap at the common chords between the towers.

Predicted effective field: 590 mv/m for 10 kw omni-directional daytime operation.

579 mv/m for 10 kw directional nighttime operation.

NOTE: Please retain the directional antenna radiation patterns notified for station CHAT in Canadian Change List No. 168, dated March 9, 1962 and attach to this corrected description sheet. This only concerns a change in the geographical coordinates of the antenna system.

Ottawa, November 27, 1963

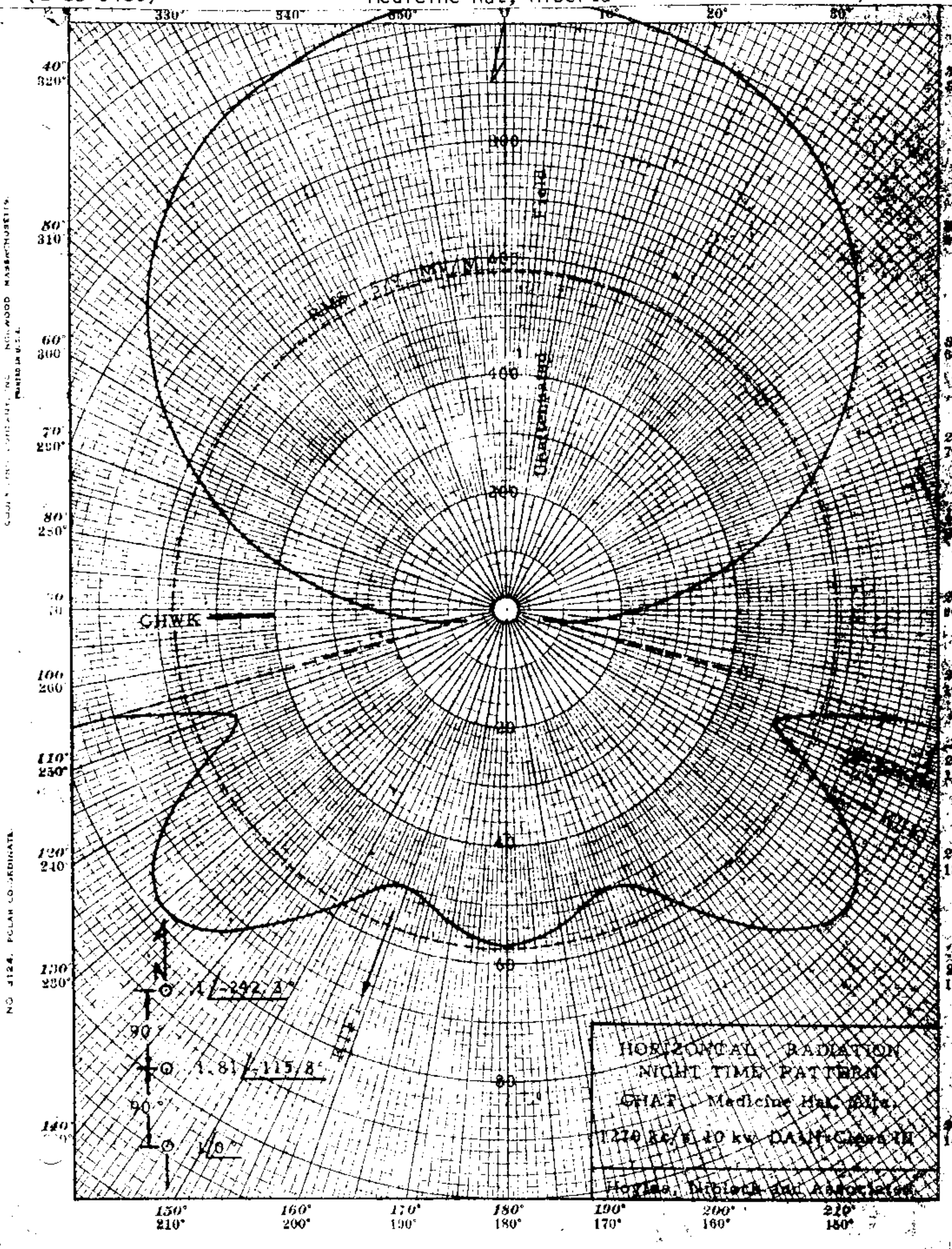
168

CHAT

Proposed Night
(2-28-64ct)

Station CHAT
Medicine Hat, Alberta

10kw,DA-N,U,ClassIII
1270 kc



186
AT #125

CHWK

Description Sheet
(6-28-66ct)

Station CHWK
Chilliwack, B.C.

10kw, DA-N, U, Class III
1270 kc

DIRECTIONAL ANTENNA

DESCRIPTION SHEET

STATION: CHWK

MAIN STUDIO: Chilliwack, B.C.

FREQUENCY: 1270 kcs

POWER: 10 KW

CLASS: III

NOTIFICATION LIST NO: 186

DATE: April 10, 1964

GEOGRAPHICAL LOCATION OF THE ANTENNA SYSTEM:

North Latitude: 49° 12' 05"
West Longitude: 121° 56' 32"

ANTENNA CHARACTERISTICS

Mode of Operation: DA-N
Number of Elements: 2
Type of Elements: guyed uniform cross-section series fed, no top loading.

TOWERS:	N.W. Tower	S.E. Tower
Height above Insulators:	193' (90°)	193' (90°)
Overall Height:	197'	197'
Spacing:	129' (60°)	
Phasing:	-125	0
Ratio:	0.88	1.0

Ground System: 120 radials per tower 0.4 wavelengths long, spaced 3° around tower bases. Radials bonded to common chord.

Predicated Effective Field:
589 mv/m @ 1 mile for 10 KW Day & Night
186 mv/m @ 1 mile for 1 KW

Orientation of Towers: 61° West of North

Note: Please retain antenna radiation patterns notified for CHWK in Canadian Change List No. 125 dated September 24, 1958 and attach to this description sheet. This only concerns a change in the day-time operation.

#125
DESCR. #186

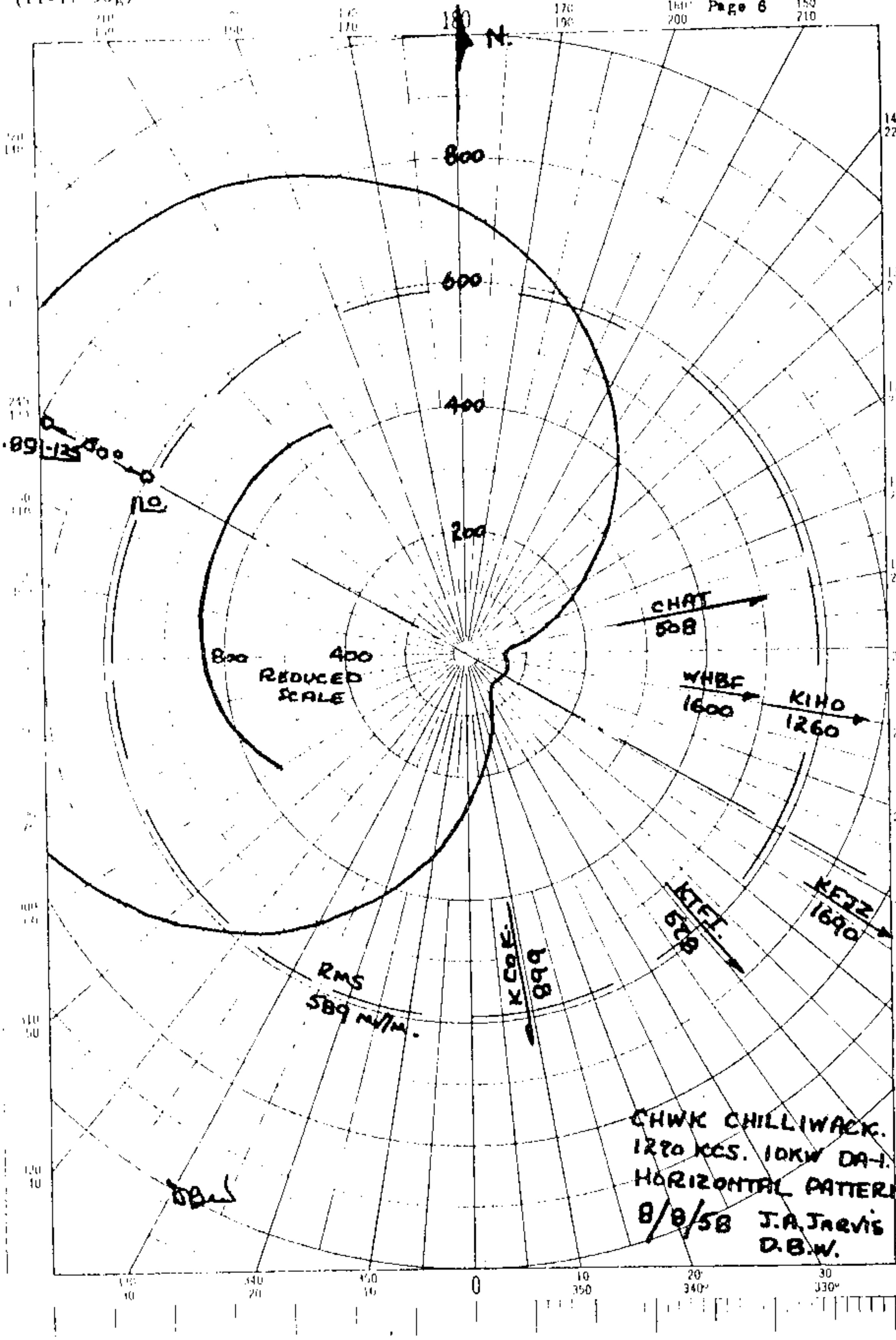
CHWK

PROPOSED DAY & NIGHT
(11-17-58g)

Station CHWK
Chilliwack, British Columbia, Canada

10kw, ~~DA-1~~ DA-N, U

1270 KC



CHWK

PROJECT #6126

DESCRIPTION SHEET - DIRECTIONAL ANTENNA

STATION: CHWK	MAIN STUDIO: Chilliwack, B.C.	
FREQUENCY: 1270 kHz	POWER: 10 kW CLASS: III	
NOTIFICATION LIST NO: 383	DATE: March 28, 1979	
GEOGRAPHICAL LOCATION:	Latitude 49° 08' 54" North Longitude 121° 51' 08" West	

ANTENNA CHARACTERISTICS:

Mode of Operation:	DA-N
Number of Elements:	2 (Two)
Type of Elements:	Guyed steel towers, uniform cross-section, base insulated for series feed

Tower	#1 (South-east)	#2 (North-west)
Height above base insulator:	193' (90°)	193' (90°)
Overall height:	197'	197'
Night Field Ratio:	1.0	.91
Night Phasing:	Ref.	-126°
Spacing:	Ref.	129' (60°)
Orientation:	Ref.	299°

GROUND SYSTEM: 120 equally spaced radials per tower of No. 10 B & S gauge bare soft copper wire, buried approximately 8". Length of radials 310' (0.4 wavelength) with the exception of those joined along the common chords.

PREDICTED EFFECTIVE FIELD:

Nighttime

598 mV/m at 1 mile for 10 kW
189 mV/m at 1 mile for 1 kW

Daytime

600 mV/m at 1 mile for 10 kW
190 mV/m at 1 mile for 1 kW

January 31, 1978
Revised February 20, 1979

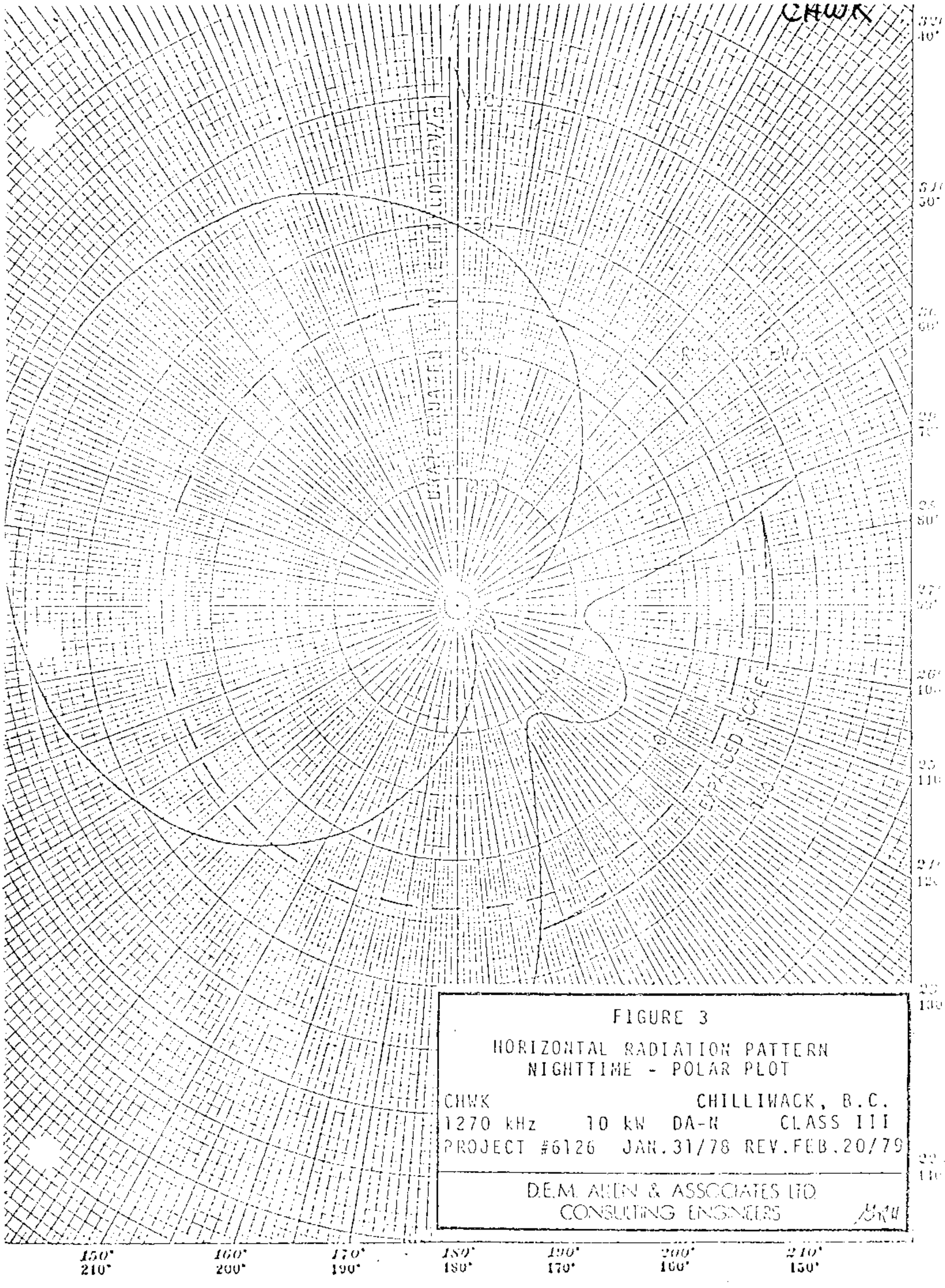


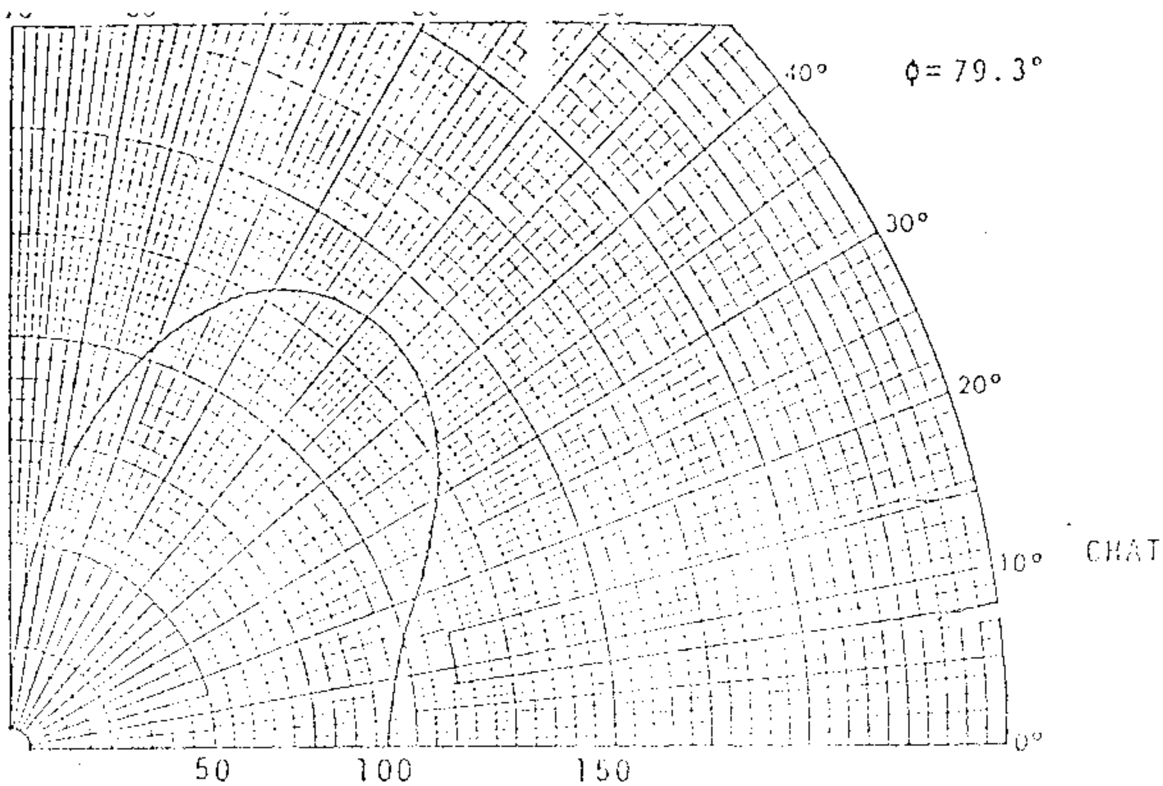
FIGURE 3

HORIZONTAL RADIATION PATTERN
NIGHTTIME - POLAR PLOT

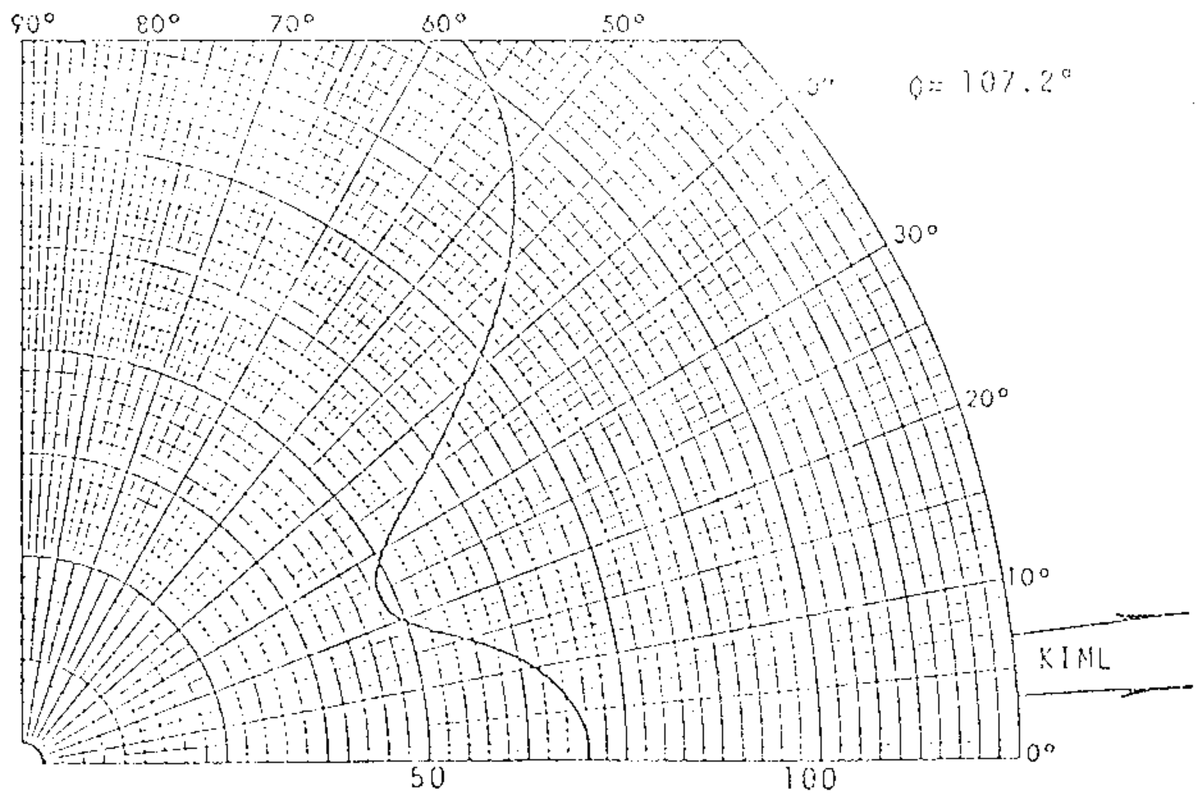
CHWK CHILLIWACK, B.C.
1270 kHz 10 kW DA-N CLASS III
PROJECT #6126 JAN.31/78 REV.FEB.20/79

D.E.M. ALLEN & ASSOCIATES LTD.
CONSULTING ENGINEERS

CHWK



UNATTENUATED (MV/M) 1 MILE FIELD



MV/M

VERTICAL RADIATION PATTERNS

FIGURE 4

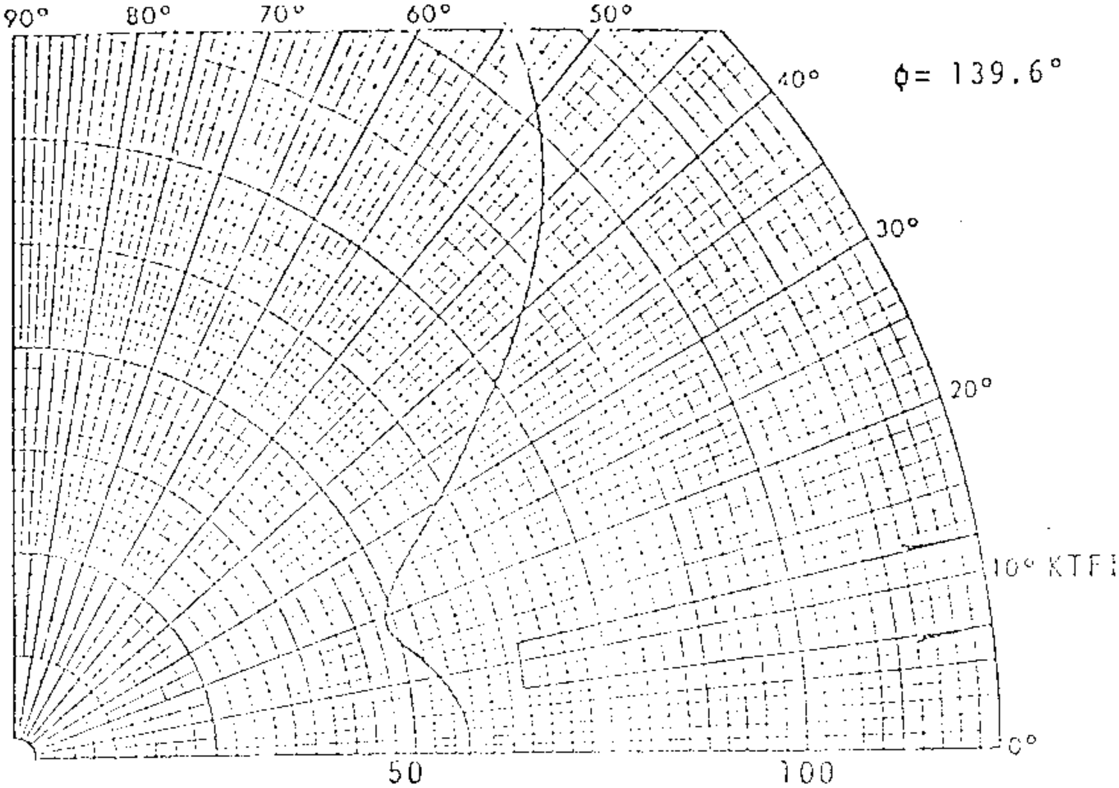
CHWK CHILLIWACK, B.C.

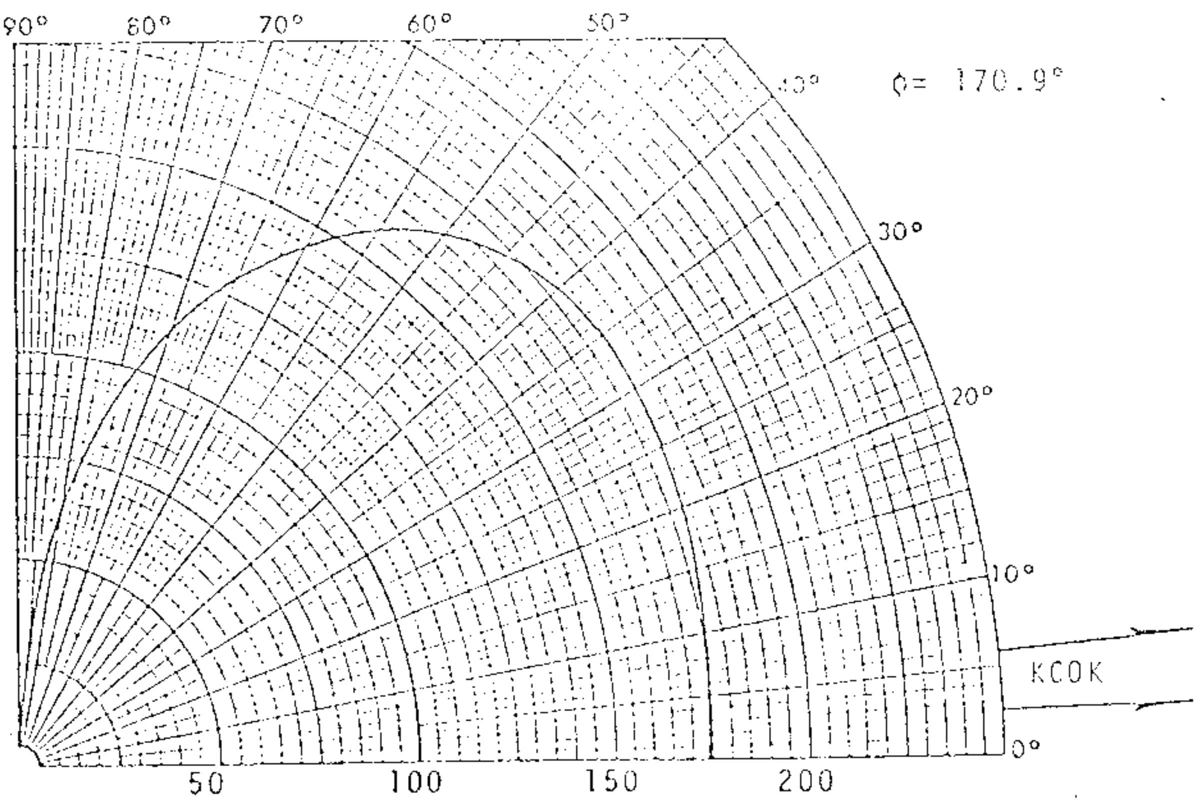
1270 kHz 10 kW DA-N CLASS III

PROJECT #6126 JANUARY 31, 1978, REVISED FEBRUARY 20, 1979

D.E.M. ALLEN & ASSOCIATES LTD., CONSULTING ENGINEERS

CHWK





VERTICAL RADIATION PATTERNS

FIGURE 5

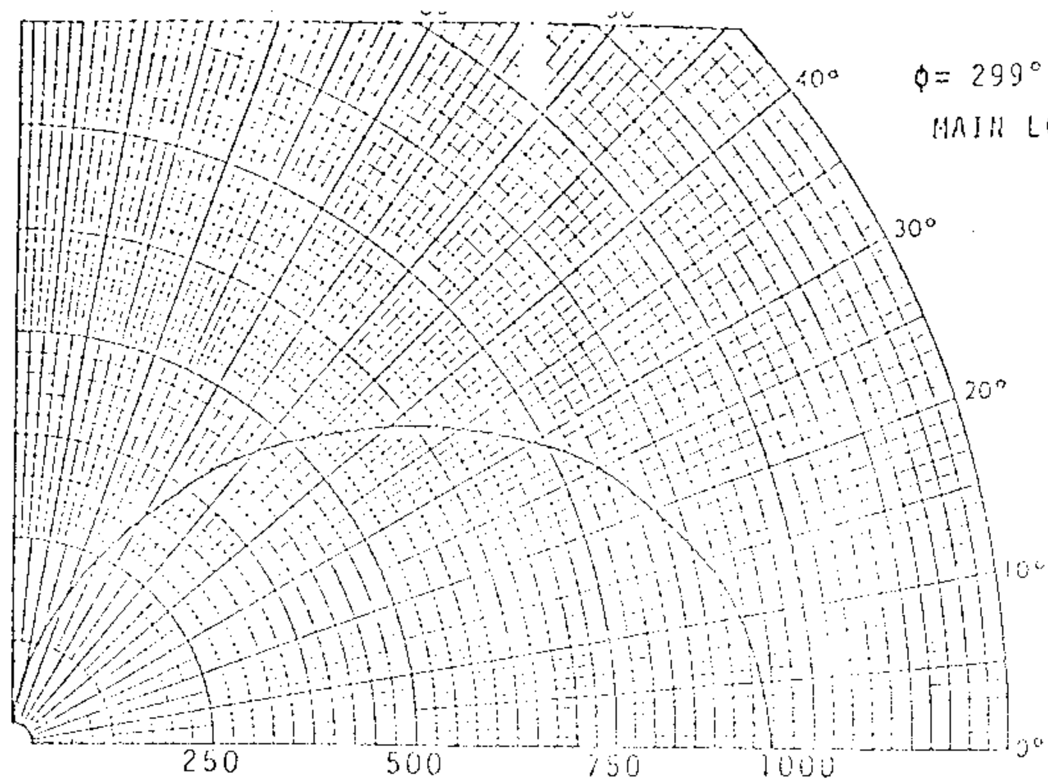
CHWK — CHILLIWACK, B.C.

1270 kHz — 10 kW — DA-N — CLASS III

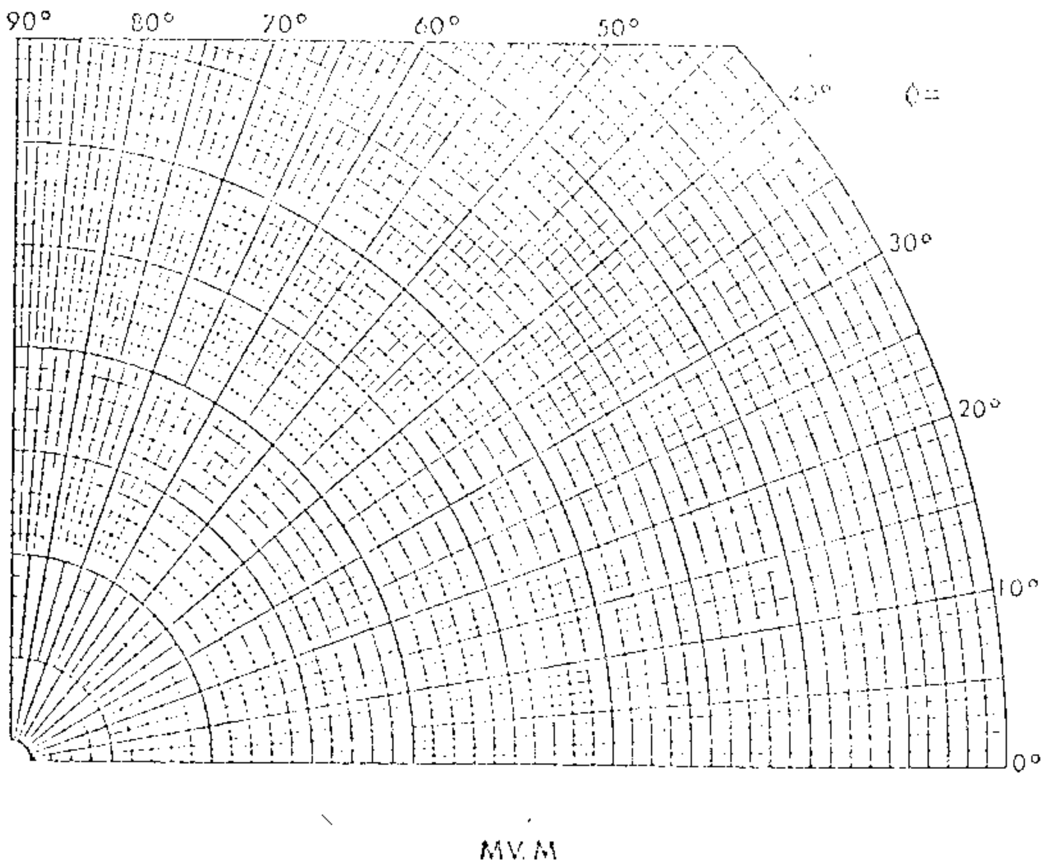
PROJECT #6126 — JANUARY 31, 1978, REVISED FEBRUARY 20, 1979

D.E.M. ALLEN & ASSOCIATES LTD., CONSULTING ENGINEERS

CHWK



UNATTENUATED (MV/M) 1 MILE FIELD



MV/M

VERTICAL RADIATION PATTERNS

FIGURE 6

CHWK
CHILLIWACK, B.C.
1270 kHz 10 kW DA-N CLASS III
PROJECT #6126 JANUARY 31, 1978, REVISED FEBRUARY 20, 1979
D.E.M. ALLEN & ASSOCIATES LTD., CONSULTING ENGINEERS

CJCB 10
1270 kHz

DIRECTIONAL ARRAY - DESCRIPTION SHEET

STATION: CJCB MAIN STUDIO: Sydney, N.S.

FREQUENCY: 1270 Kc/s POWER: 10 Kw CLASS: III

Notification List No.: 166 Date: January 5, 1962

GEOGRAPHICAL LOCATION OF THE ANTENNA SYSTEM:

NORTH LATITUDE: 46° 10' 50"

WEST LONGITUDE: 60° 11' 30"

ANTENNA CHARACTERISTICS:

Mode of operation: Directional night, omnidirectional day (DA-N)

Number of Elements: Two (2)

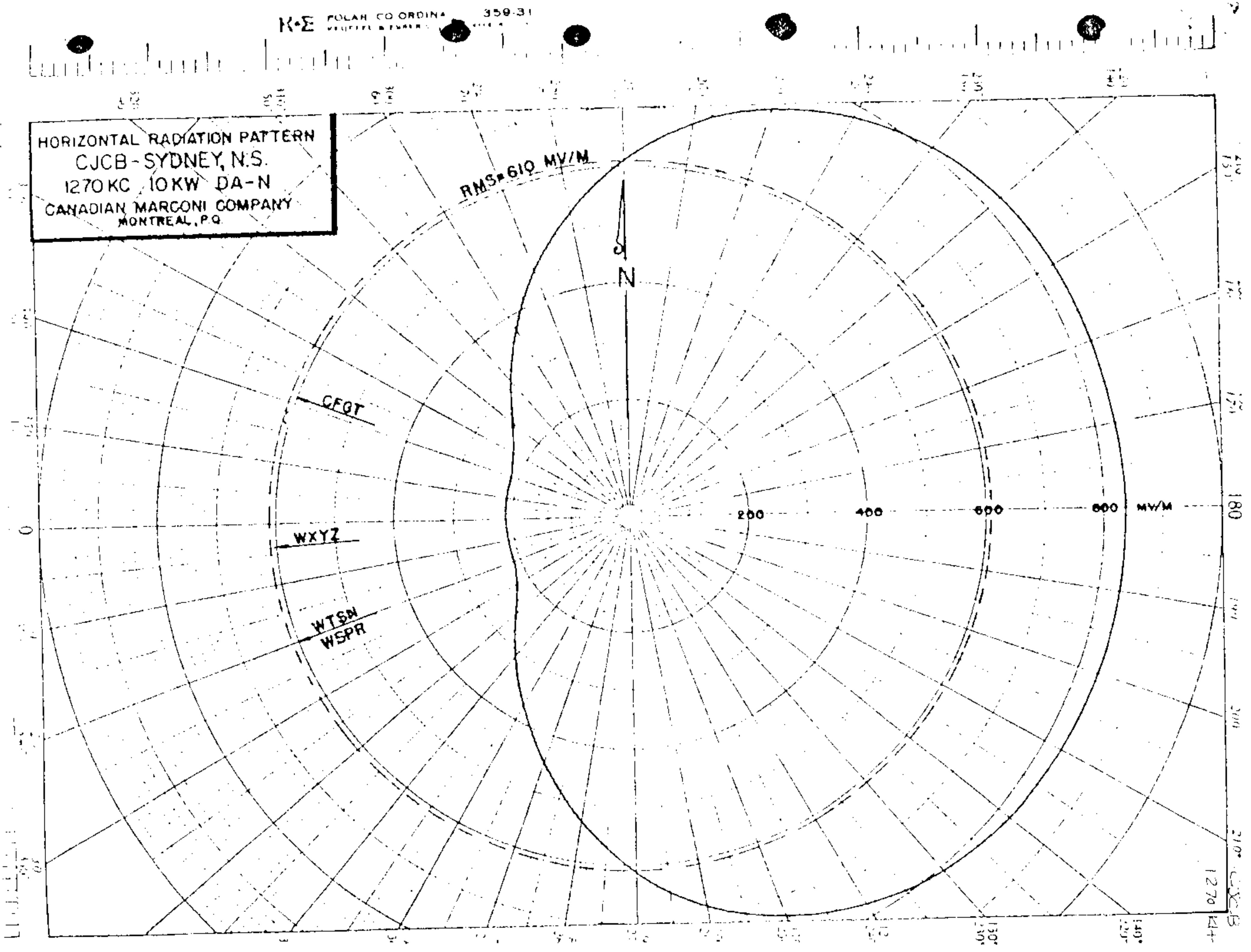
Type of Elements: Square uniform cross-section, guyed, insulated from ground, series fed, no top loading.

TOWER:	#1 (W)	#2 (E)
HEIGHT ABOVE ITS BASE:	200'	200' (93°)
OVERALL HEIGHT:	205'	205'
SPACING:	90° between towers (193.6')	
PHASING:	0	-90°
FIELD RATIO:	1	0.6

ORIENTATION: On a line bearing 90 degrees East of True North (due East)

GROUND SYSTEM: 120 equally spaced radials per mast extending to a maximum distance of 0.4 of a wavelength and bonded together at points equidistant between towers.

PREDICTED EFFECTIVE FIELD: 610 mv/m at 1 mile for 10 Kw radiated or 193 mv/m at 1 mile per Kw radiated day or night



HORIZONTAL RADIATION PATTERN
CJCB - SYDNEY, N.S.
1270 KC 10 KW DA-N
CANADIAN MARCONI COMPANY
MONTREAL, P.Q.
RMS=610 MV/M
N
CFGT
WXYZ
WTSN
WSPR
200
400
600
800
MV/M
180
0
K·E POLAR CO-ORDINA
359-31
CJCB
1270 KH

CJCB

166

Description Sheet (2-28-62ct) | Station CJCB Sydney, N.S. | 10kw, DA-N, U, Class III 1270 kc

DIRECTIONAL ARRAY - DESCRIPTION SHEET

STATION: CJCB | MAIN STUDIO: Sydney, N.S.

FREQUENCY: 1270 Kc/s | POWER: 10 Kw | CLASS: III

Notification List No.: 166 | Date: January 5, 1962

GEOGRAPHICAL LOCATION OF THE ANTENNA SYSTEM:

NORTH LATITUDE: 46° 10' 50"

WEST LONGITUDE: 60° 11' 30"

ANTENNA CHARACTERISTICS:

Mode of operation: Directional night, omnidirectional day (DA-N)

Number of Elements: Two (2)

Type of Elements: Square uniform cross-section, guyed, insulated from ground, series fed, no top loading.

TOWER:	#1 (W)	#2 (E)
HEIGHT ABOVE INSULATOR:	200'	200' (93°)
OVERALL HEIGHT:	205'	205'
SPACING:	90° between towers (193.6')	
PHASING:	0	-90°
FIELD RATIO:	1	0.6

ORIENTATION: On a line bearing 90 degrees East of True North (due East)

GROUND SYSTEM: 120 equally spaced radials per mast extending to a maximum distance of 0.4 of a wavelength and bonded together at points equidistant between towers.

PREDICTED EFFECTIVE FIELD: 610 mv/m at 1 mile for 10 Kw radiated or 193 mv/m at 1 mile per Kw radiated day or night

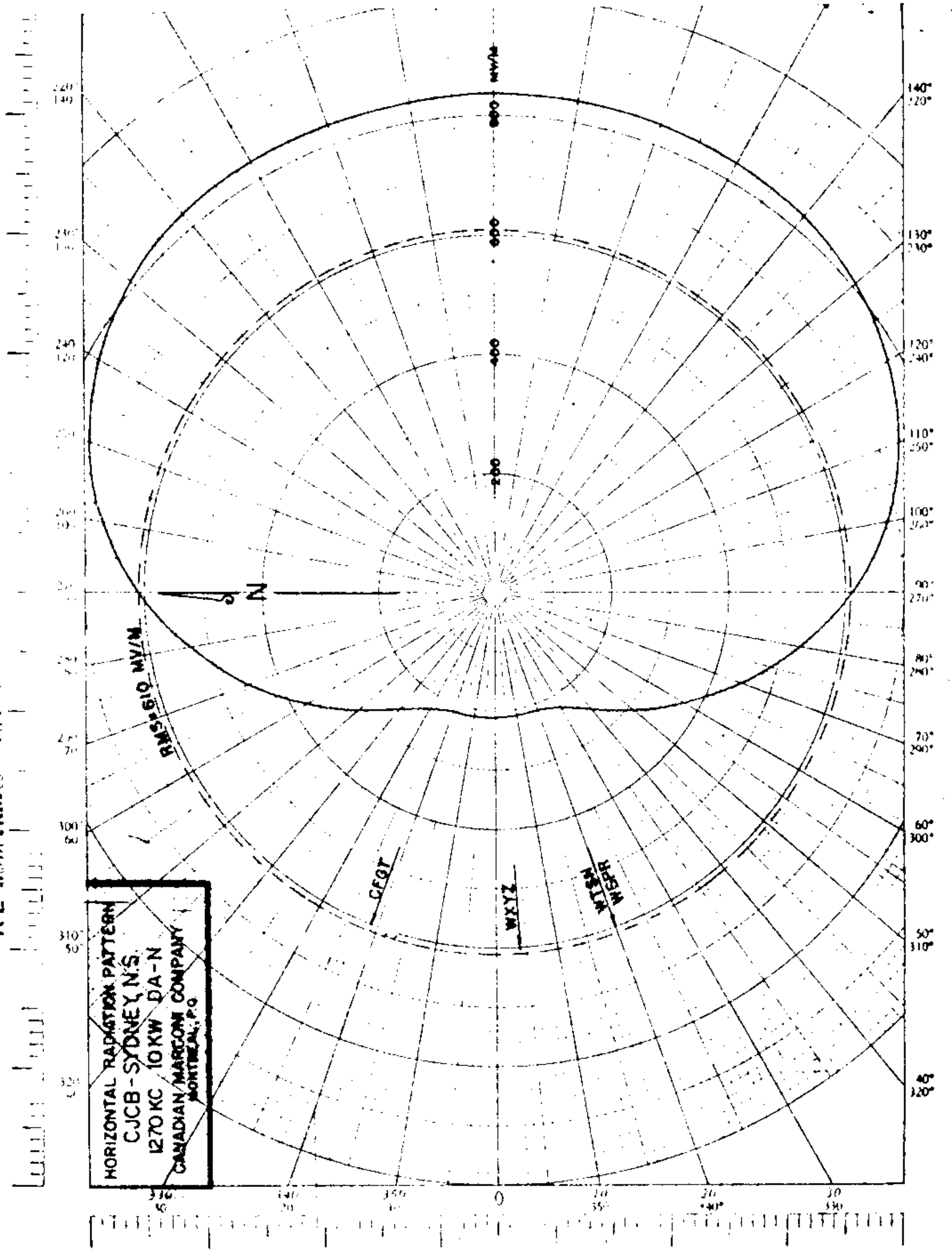
CJCB

#166

Proposed Night
(2-28-62ct)

Station CJCB
Sydney, N.S.

10kw,DA-N,U,Class III
1270 kc



CKWK
1270kHz

SUPPLEMENTAL DIRECTIONAL

ANTENNA DESCRIPTION SHEET

Station: CHWK

Location: Chilliwack, British Columbia

Frequency: 1270 kHz

Power: 10 kW, Class III

Notification List No.: 397

Date: JUN 30 1980

Mode of operation: DA-1

Geographical Location of the Centre of the Antenna System:

North Latitude: 49° 08' 54"

West Longitude: 121° 51' 08"

NOTE: Please retain the description sheet and directional antenna radiation patterns notified for station CHWK in Canadian Change List Number 383 dated March 28, 1979 and attach this supplemental description sheet. This notification is for the purpose of indicating a change in mode of operation from DA-N to DA-1, i.e. the previously notified parameters and directional antenna horizontal radiation pattern will be applicable both day-time and night-time.

1270 kHz
PORTLAND, TENN

DIRECTIONAL ANTENNA DESCRIPTION SHEET

Station: NEW

Main Studio: Portland, Tennessee

Frequency: 1270 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: 36° 36' 11"
West Longitude: 86° 32' 01"

ANTENNA CHARACTERISTICS

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

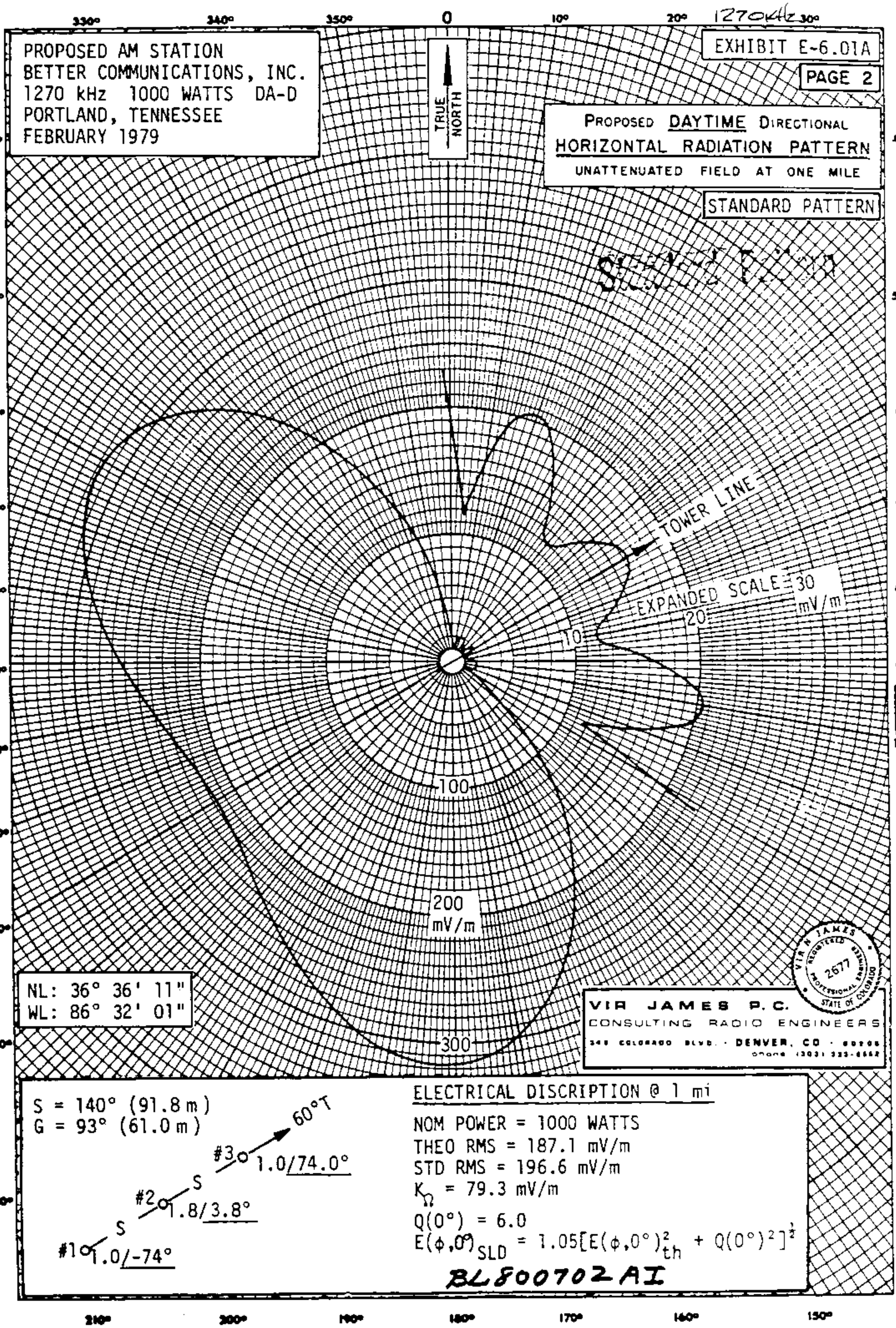
TOWER:	SW(#1)	C(#3)	NE(#3)
HEIGHT ABOVE INSULATORS:	200'	200'	200' (93°)
DAY PHASING:	-74°	+3.8°	+74
DAY FIELD RATIO:	1.0	1.8	1.0

SPACING AND ORIENTATION: Adjacent towers in a row are spaced 301' (140°) on a line bearing 60° true.

GROUND SYSTEM: 120 - 196' equally spaced copper radials plus 120-50' interspaced radials about each tower. Radials are shortened and bonded to transverse straps along intersections between towers.

PREDICTED EFFECTIVE FIELDS AT RATED POWER:

	THEORETICAL RMS	THEORETICAL RSS	STANDARD RMS
Day	187.1 mv/m		196.6 mv/m


1270 kHz
PROPOSED AM STATION
BETTER COMMUNICATIONS, INC.
1270 kHz 1000 WATTS DA-D
PORTLAND, TENNESSEE
FEBRUARY 1979
TRUE NORTH
EXHIBIT E-6.01A
PAGE 2
PROPOSED DAYTIME DIRECTIONAL
HORIZONTAL RADIATION PATTERN
UNATTENUATED FIELD AT ONE MILE
STANDARD PATTERN
TOWER LINE
EXPANDED SCALE
10
20
30 mV/m
100
200 mV/m
300
NL: 36° 36' 11"
WL: 86° 32' 01"
VIR N JAMES REGISTERED PROFESSIONAL ENGINEER 2677 STATE OF COLORADO
VIR JAMES P.C.
CONSULTING RADIO ENGINEERS
DENVER, CO
S = 140° (91.8 m)
G = 93° (61.0 m)
60°T
#3 1.0/74.0°
#2 1.8/3.8°
#1 1.0/-74°
S
ELECTRICAL DISCRIPTION @ 1 mi
NOM POWER = 1000 WATTS
THEO RMS = 187.1 mV/m
STD RMS = 196.6 mV/m
K_Ω = 79.3 mV/m
Q(0°) = 6.0
$E(\phi,0°)_{SLD} = 1.05[E(\phi,0°)^2_{th} + Q(0°)^2]^{\frac{1}{2}}$
BL800702AI
0
10°
20°
30°
40°
50°
60°
70°
80°
90°
100°
110°
120°
130°
140°
150°
160°
170°
180°
190°
200°
210°
220°
230°
240°
250°
260°
270°
280°
290°
300°
310°
320°
330°
340°
350°

KCOK
1270

9/2/486

over

Rec'd 3-1-48

-3-62 granted CP to increase ND day to 5 Kw

6/21/63 granted L. covering incr. in day power

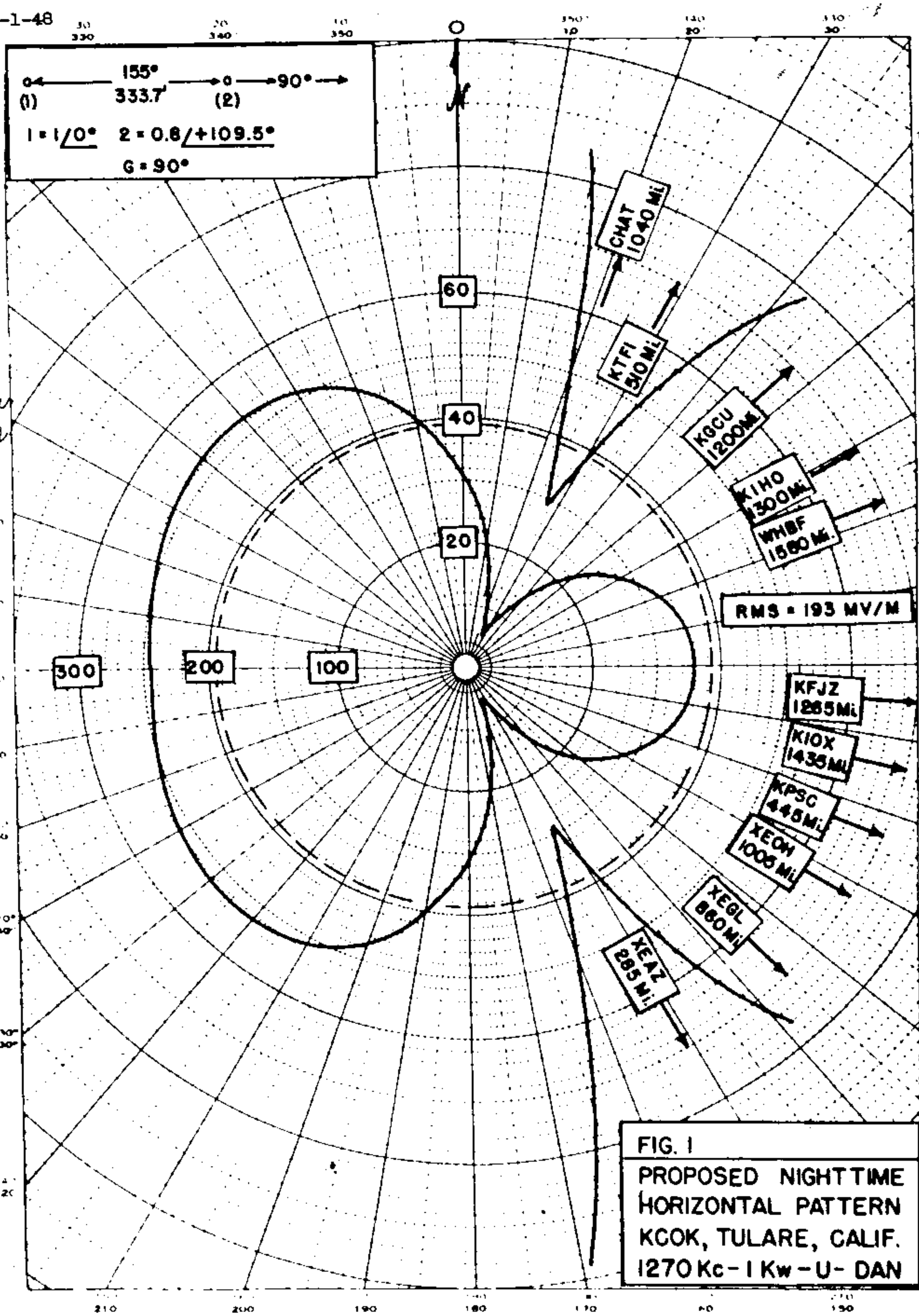


FIG. 1

PROPOSED NIGHTTIME HORIZONTAL PATTERN KCOK, TULARE, CALIF. 1270 Kc - 1 Kw - U - DAN

KCOK

MEASURED NIGHT KCOK, TULARE, CAL. 7-13-49 1kw, DAN 1270 kc

1-3-62 granted cp to increase ND day to 5 KW

6-21-63 granted L covering inc. in day power

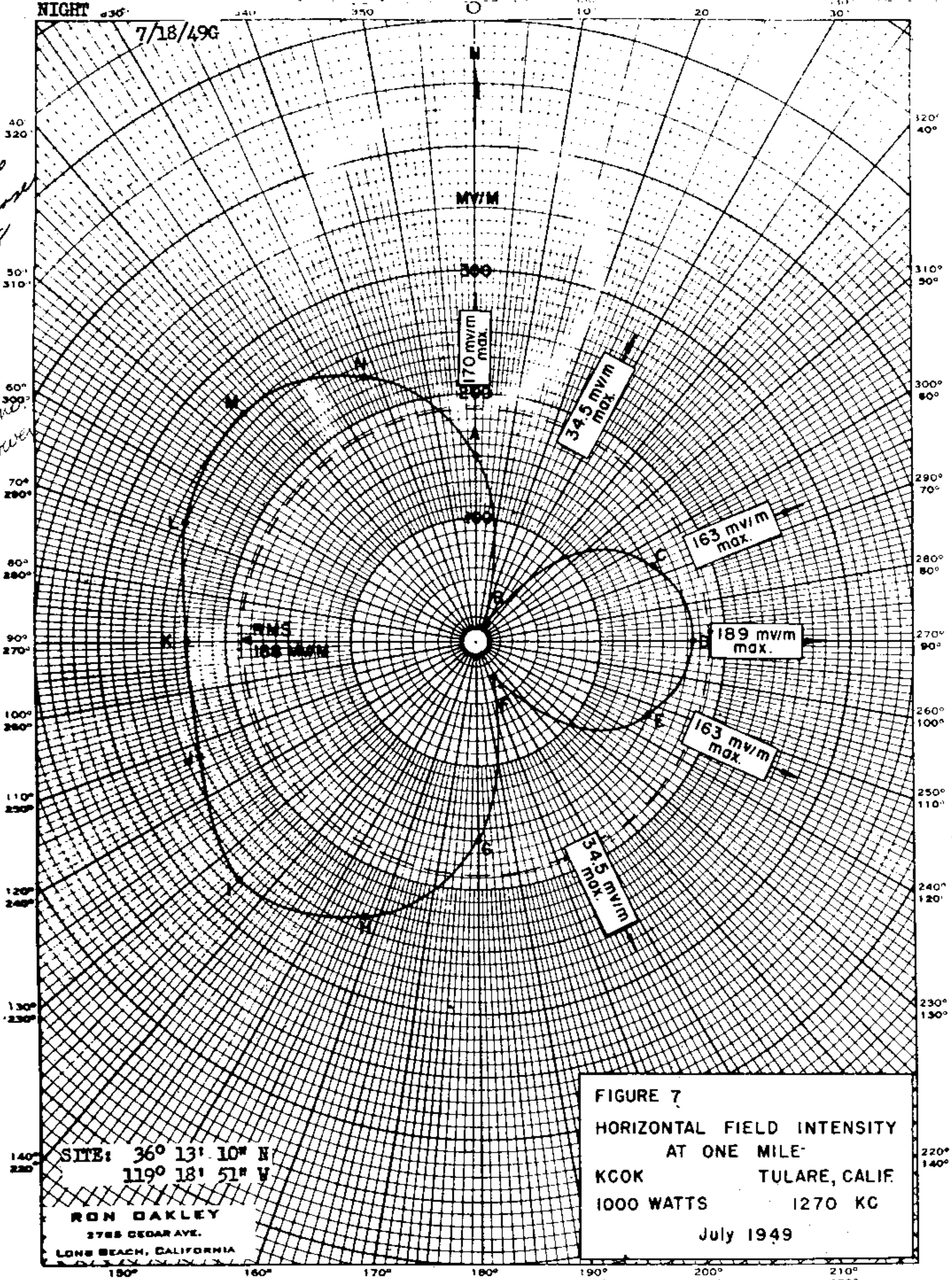


FIGURE 7
HORIZONTAL FIELD INTENSITY AT ONE MILE
KCOK TULARE, CALIF.
1000 WATTS 1270 KC
July 1949

KCOK, Tulare, Cal. 1270 kc

KCOK

MEASURED
DAY (Non-DA)

KCOK, TULARE, CAL.

7-13-49

1kw, DAN

1270 kc

6-21-63
granted lic.
covering increase
in day power

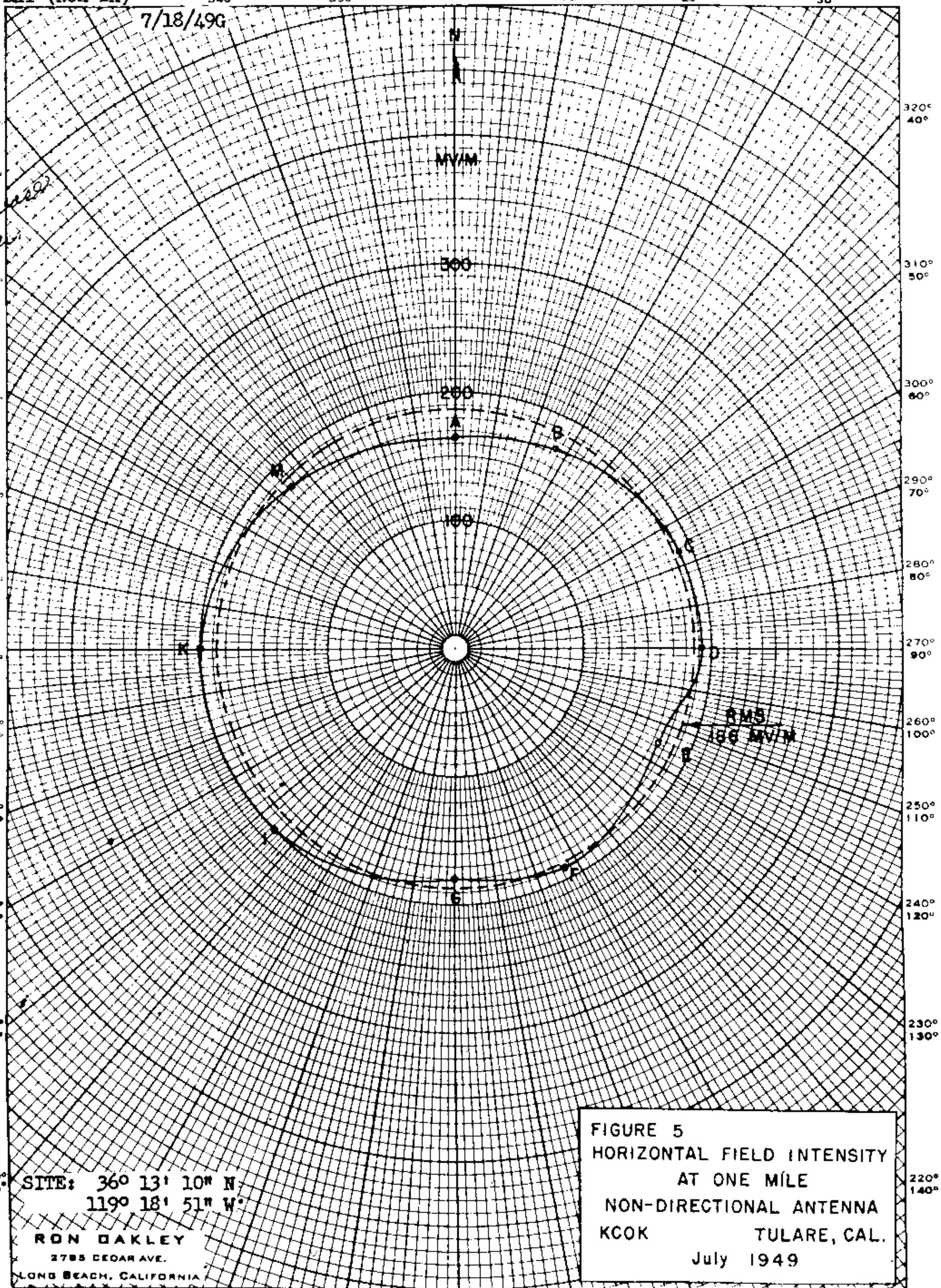


FIGURE 5
HORIZONTAL FIELD INTENSITY
AT ONE MILE
NON-DIRECTIONAL ANTENNA
KCOK TULARE, CAL.
July 1949

KCOK, Tulare, Cal. 1270 kc

KFJZ

DIRECTIONAL ANTENNA DESCRIPTION SHEET

Station: KFJZ

Main Studio: Fort Worth, Texas

Frequency: 1270 kHz

Power: 5 kW

Notification List No. 1676

Date: March 19, 1976

Class: III

GEOGRAPHICAL LOCATION OF THE CENTER OF THE ANTENNA SYSTEM:

North Latitude: 32° 43' 36"

West Longitude: 97° 11' 30"

ANTENNA CHARACTERISTICS

Authorized for Daytime and Nighttime operation. (DA-1)
Number of elements: 6
Type of elements: Series excited, uniform cross-section, guyed, vertical steel towers.

TOWER:	SW(#4)	NW(#3)	SC(#5)	NC(#2)	SE(#6)	NE(#1)
HEIGHT ABOVE INSULATORS:	All towers 193.7' (90°)					
PHASING:	-177.9°	-16.7°	-3.6°	+157.6°	-161.2°	0°
FIELD RATIO:	0.66	1.32	0.94	1.88	0.5	1.0

SPACING AND ORIENTATION: The towers are located in two parallel rows with 3 towers per row. Adjacent towers in a row are spaced 193.7' (90°) on a line bearing 283° true. End towers forming a side of the parallelogram are spaced 258.3' (120°) on a line bearing 229° true.

GROUND SYSTEM: 120-193.7' equally spaced copper radials plus a 48' square ground screen about each tower. Radials are shortened and bonded to transverse straps along intersections between towers.

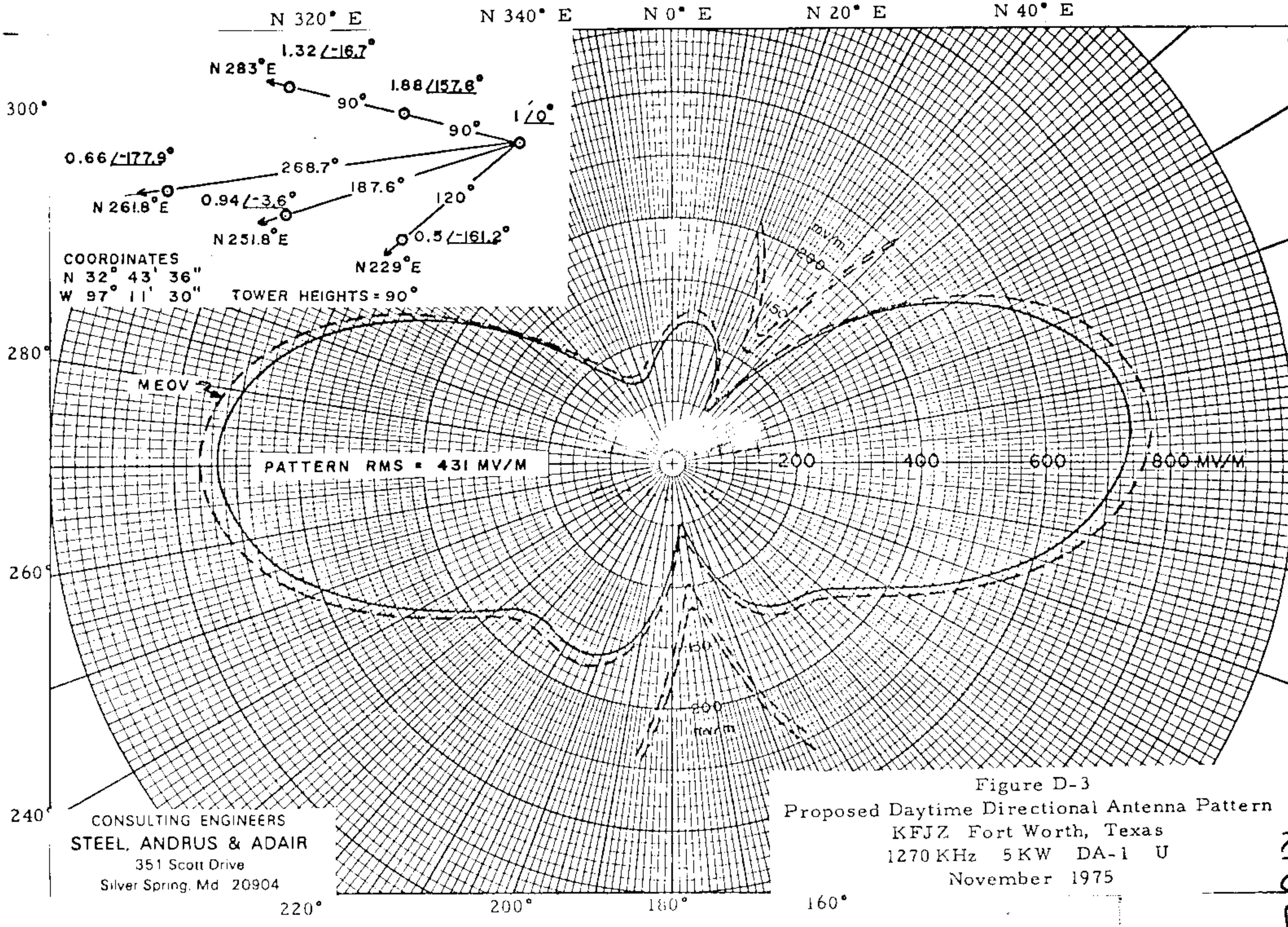
PREDICTED EFFECTIVE FIELDS AT RATED POWER:

	THEORETICAL RMS
Day	431 mv/m
Night 1/	392 mv/m

1/ By adjustment of input power.

Note: This notification concerns changes in directional antenna system and radiation patterns and in the transmitter location.

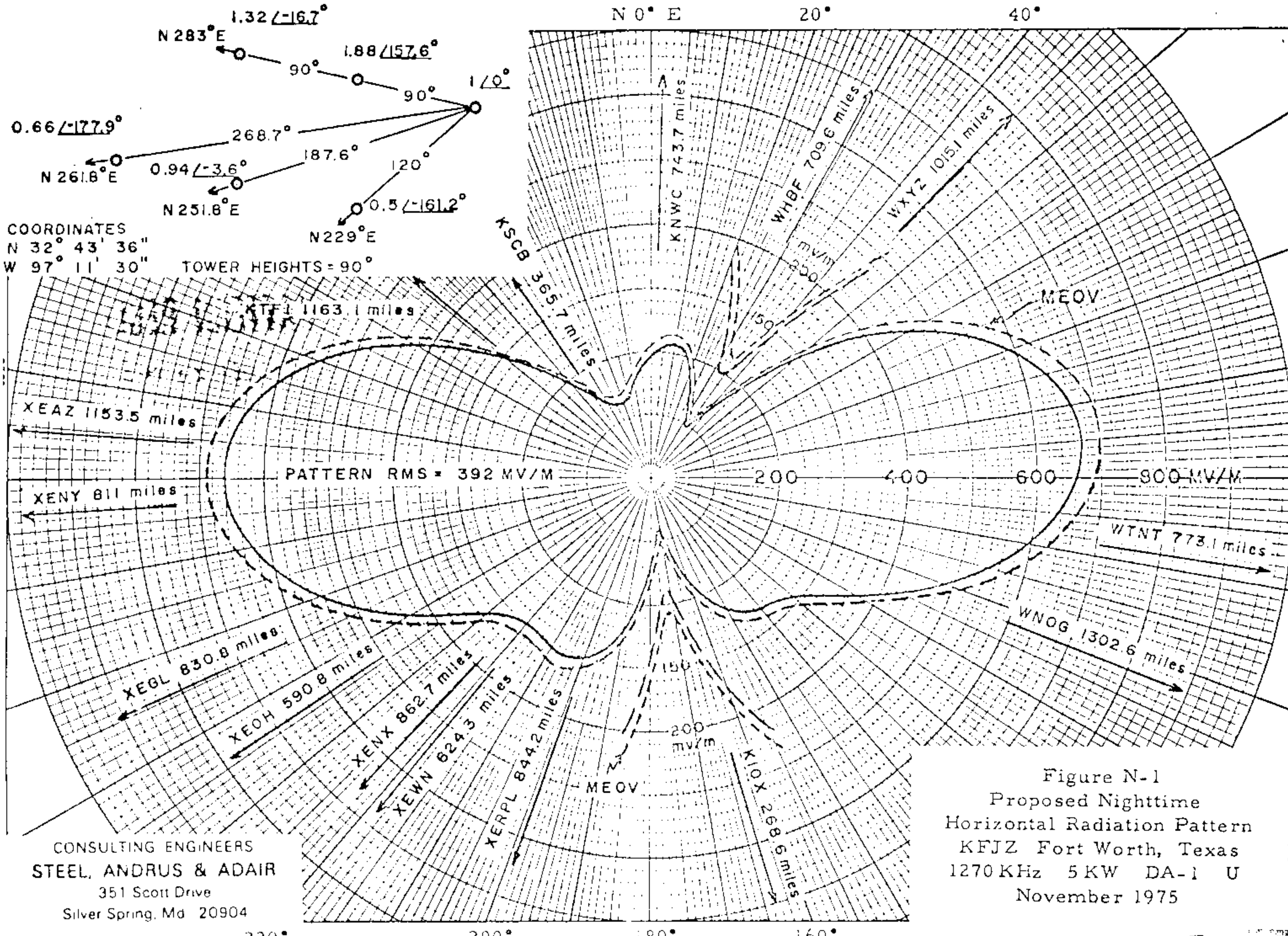
CTR NO 30932A4



CONSULTING ENGINEERS
STEEL, ANDRUS & ADAIR
351 Scott Drive
Silver Spring, Md 20904

Figure D-3
Proposed Daytime Directional Antenna Pattern
KFJZ Fort Worth, Texas
1270 KHz 5 KW DA-1 U
November 1975

KFJZ

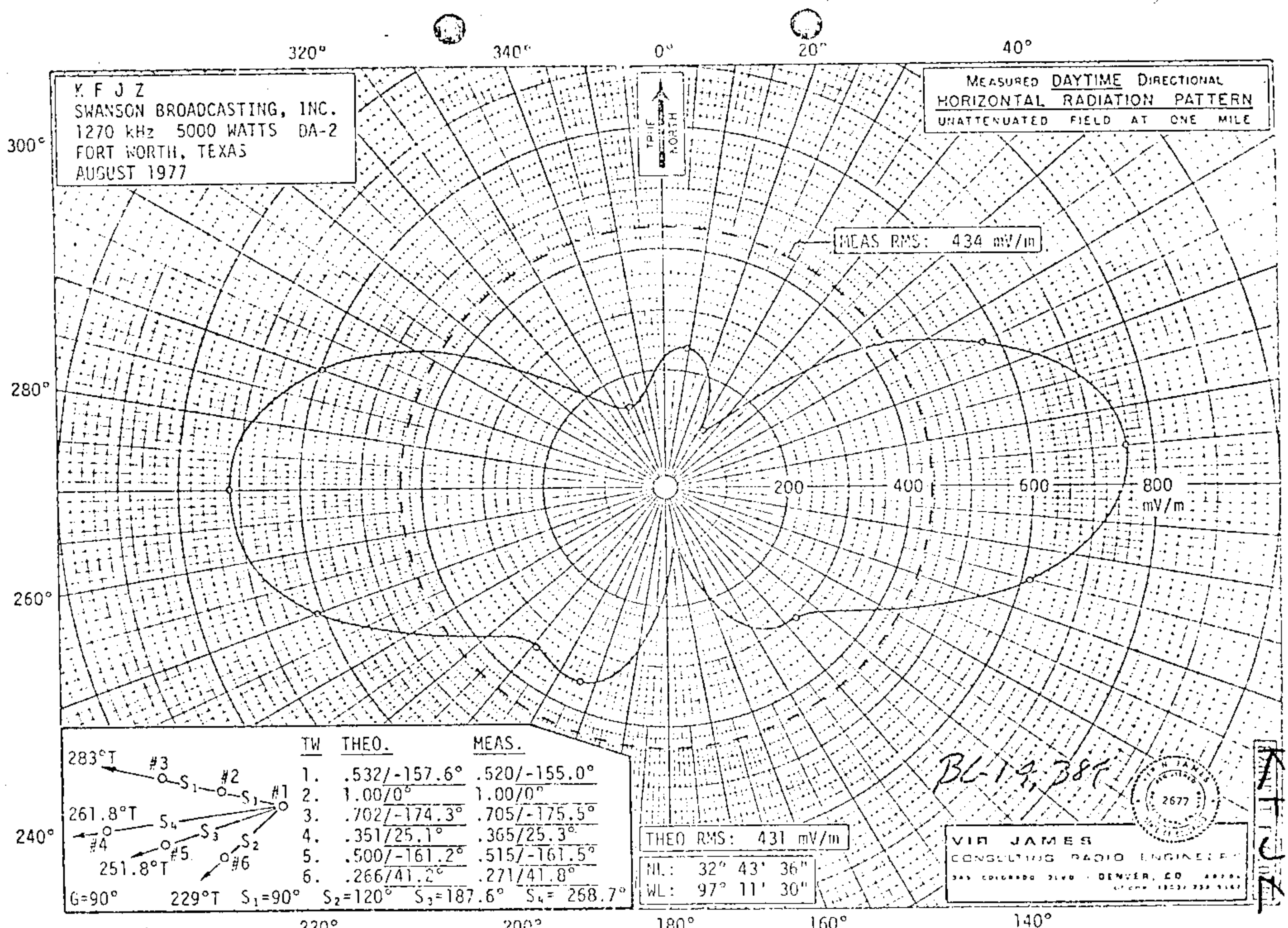


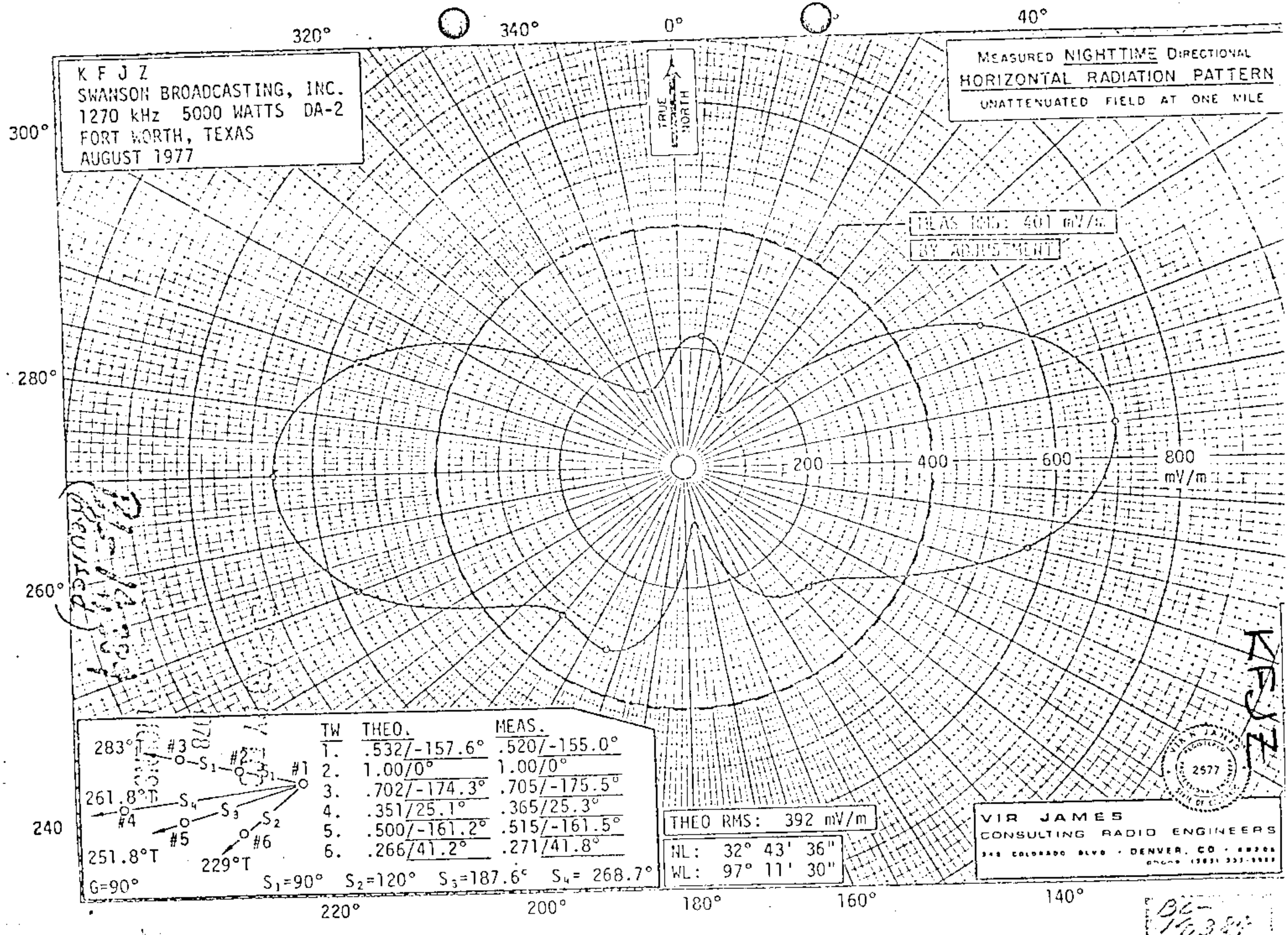
CONSULTING ENGINEERS
STEEL, ANDRUS & ADAIR
351 Scott Drive
Silver Spring, Md 20904

Figure N-1
Proposed Nighttime
Horizontal Radiation Pattern
KFJZ Fort Worth, Texas
1270 KHz 5 KW DA-1 U
November 1975

KFJZ

Tisca


KFJZ
SWANSON BROADCASTING, INC.
1270 kHz 5000 WATTS DA-2
FORT WORTH, TEXAS
AUGUST 1977
MEASURED DAYTIME DIRECTIONAL
HORIZONTAL RADIATION PATTERN
UNATTENUATED FIELD AT ONE MILE
TRUE NORTH
MEAS RMS: 434 mV/m
200
400
600
800
mV/m
0°
20°
40°
140°
160°
180°
200°
220°
240°
260°
280°
300°
320°
340°
283°T
261.8°T
251.8°T
229°T
#1
#2
#3
#4
#5
#6
G=90° S1=90° S2=120° S3=187.6° S4=268.7°
TW THEO. MEAS.
1. .532/-157.6° .520/-155.0°
2. 1.00/0° 1.00/0°
3. .702/-174.3° .705/-175.5°
4. .351/25.1° .365/25.3°
5. .500/-161.2° .515/-161.5°
6. .266/41.2° .271/41.8°
THEO RMS: 431 mV/m
NL: 32° 43' 36"
WL: 97° 11' 30"
VIR JAMES
CONSULTING RADIO ENGINEERS
DENVER, CO
BL-19,384
KFJZ



TW	THEO.	MEAS.
1.	.532/-157.6°	.520/-155.0°
2.	1.00/0°	1.00/0°
3.	.702/-174.3°	.705/-175.5°
4.	.351/25.1°	.365/25.3°
5.	.500/-161.2°	.515/-161.5°
6.	.266/41.2°	.271/41.8°

S_1=90° S_2=120° S_3=187.6° S_4= 268.7°

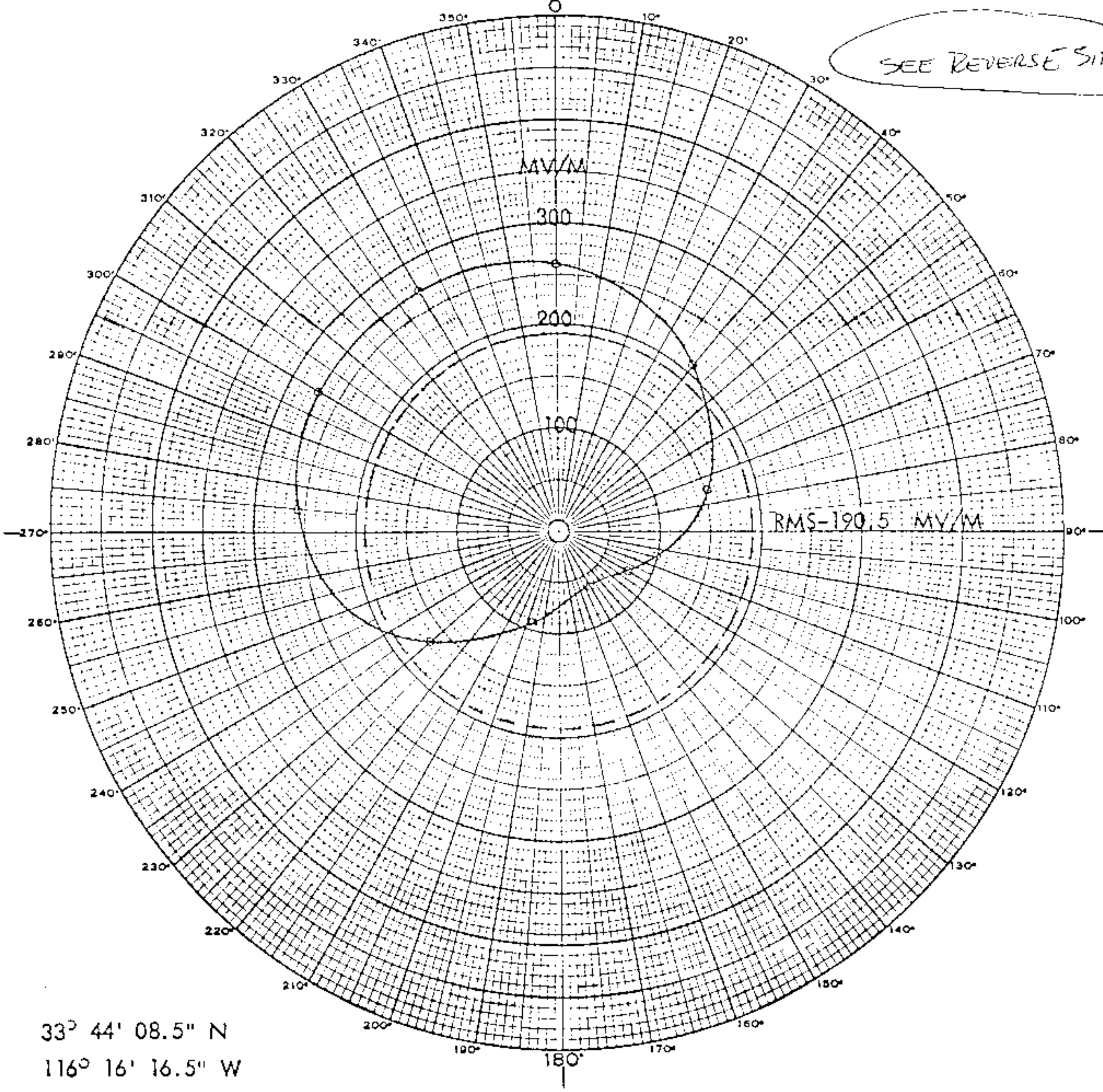
KGUY

Measured Day
(4-29-70ct)

Station KGOL
Palm Desert, California

1270 kc

SEE REVERSE SIDE



33° 44' 08.5" N
116° 16' 16.5" W

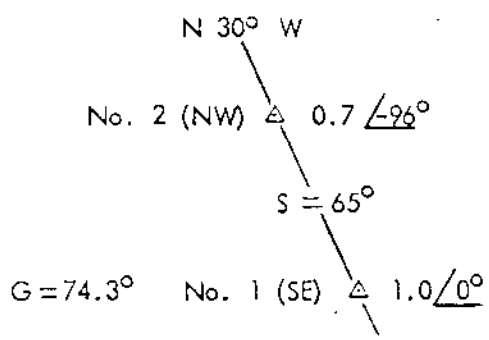


EXHIBIT A - 21

Measured Horizontal Plane Pattern

Directional 1000 W 1270 KHz

KGOL 12-19-69

ROBERT E. BULLOCK CONSULTING ENGINEER

FCC File No.BL-12592
Accepted 4-10-70

Station KGOL
Palm Desert, California

1270 kc

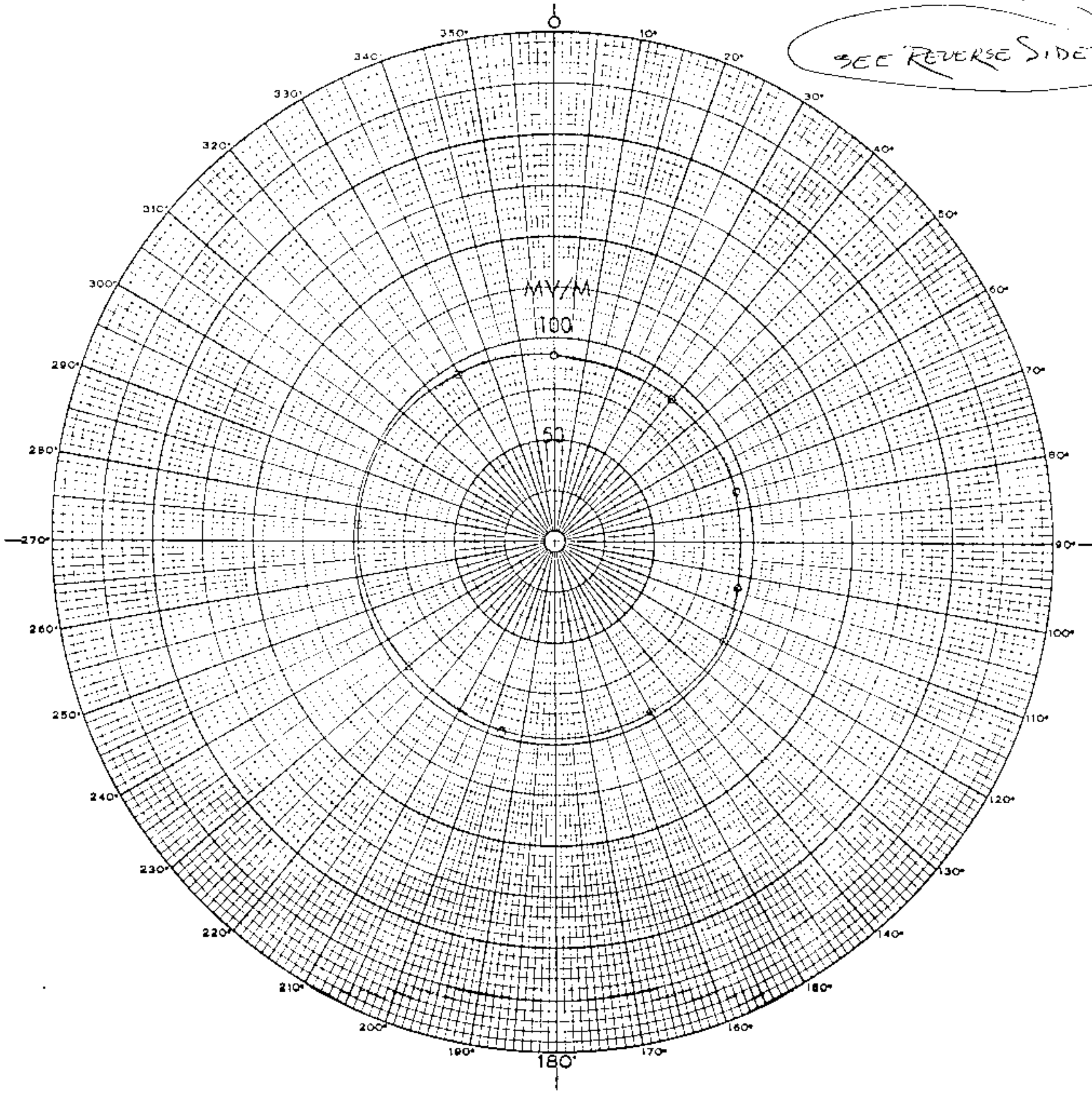
KGUY

Measured Non-DA
(4-29-70ct)

Station KGOL
Palm Desert, California

1kW,DA-D,D
1270 kc

SEE REVERSE SIDE



33° 44' 08.5" N
116° 16' 16.5" W
Tower No. 1 (SE)
G = 74.3°

EXHIBIT A - 20

Measured Horizontal Plane Pattern
Non-Directional 250 W 1270 KHz

KGOL 12-19-69

ROBERT E. BULLOCK CONSULTING ENGINEER

FCC File No.BL-12592
Accepted 4-10-70

Station KGOL
Palm Desert, California

1270 kc

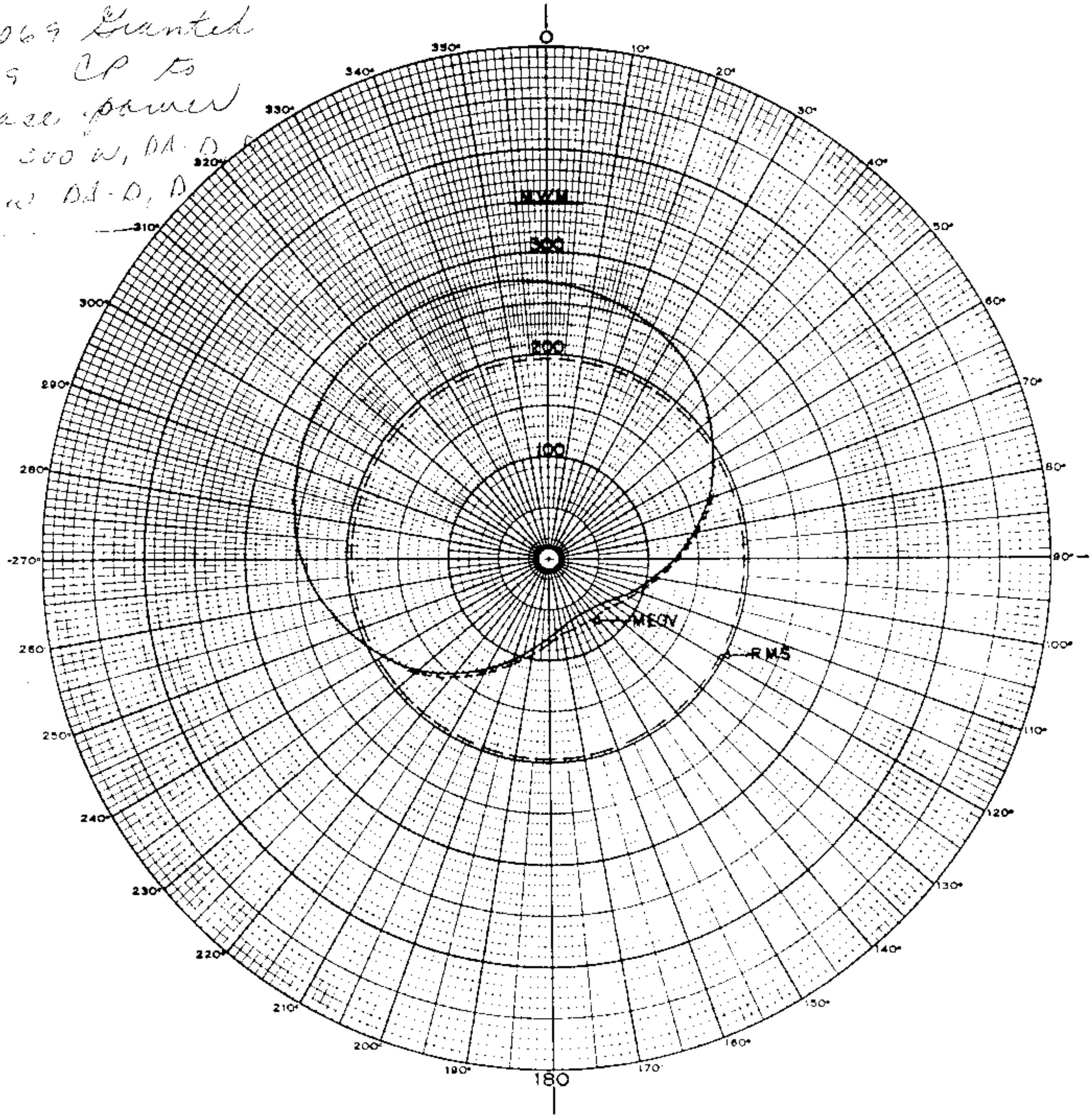
KGUY

Proposed Day
(4-29-68ct)

Station KGOL
Palm Desert, California

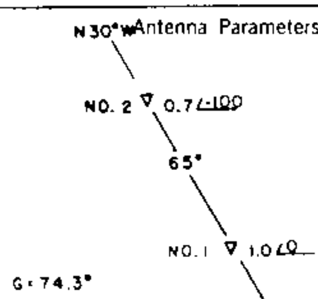
1kw,DA-D,D
1270 kc

BP-18069 Granted 5-4-69 CP to increase power from 500 w, DA-D, D to 1kw DA-D, D



HORIZONTAL RADIATION PATTERN—FIGURE No. 3

Antenna Parameters



Floyd Hall
Radio Engineering
Consultant

Applicant KGOL, Duggay Corp.
Location Palm Desert, Calif.
Freq. 1270 kc/s Power 1.0 kw
Lat. 33° 44' 08.5" Long. 116° 21' 16.5"
Time of operation Daytime
Type of operation DA-D
RMS Field 197.0 mv
Pattern No. 680103
Date 1-19-68

FCC File No. BP-18069
Accepted 4-15-68

Station KGOL
Palm Desert, California

1270 kc

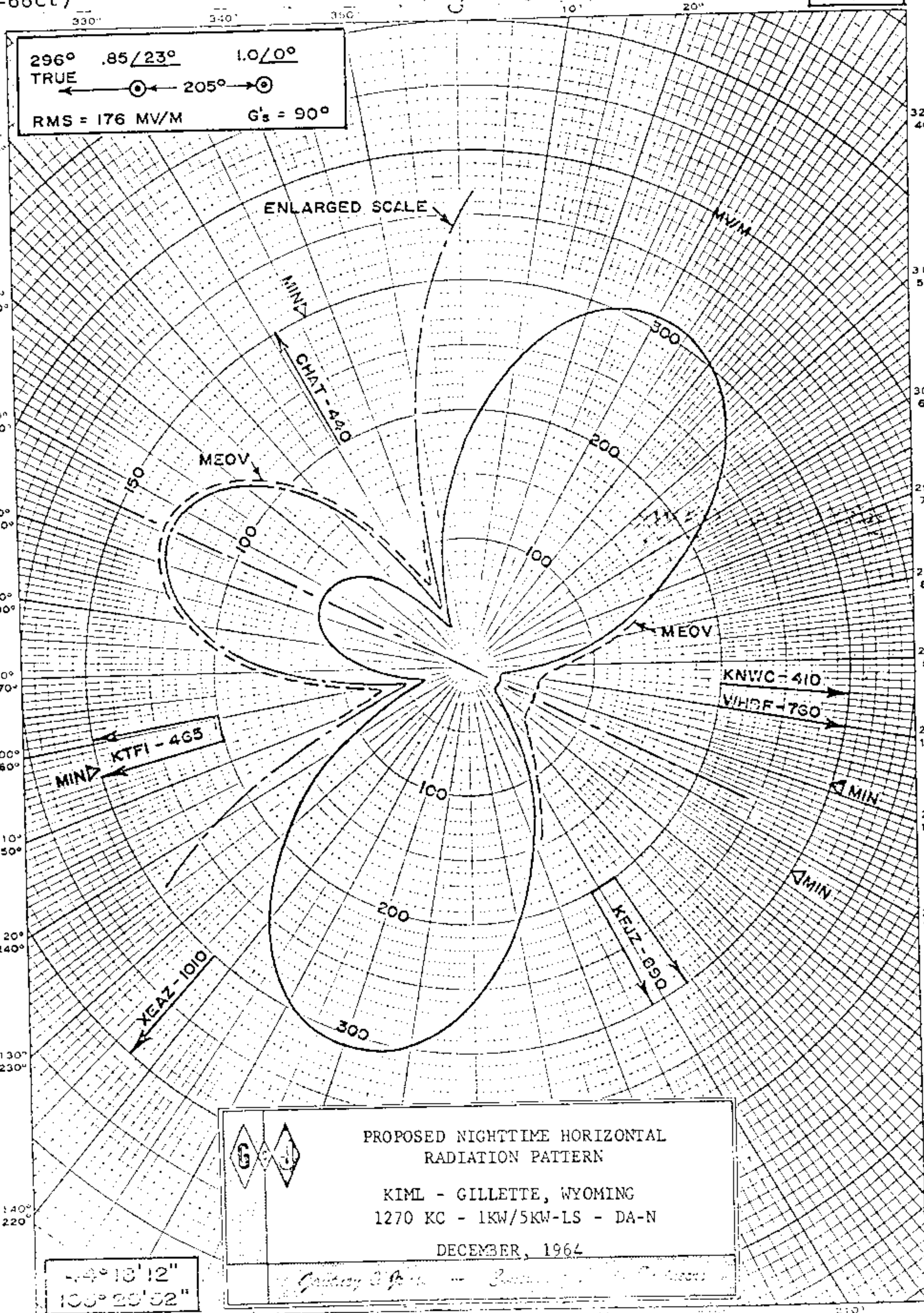
KIML

Proposed Night
(1-28-66ct)

Station KIML
Gillette, Wyoming

1kw,5kw-LS,DA-N,U
1270 kc

3P 16815
CP 8-2-66



FCC File No. BP-16815
Accepted 1-20-66

Station KIML
Gillette, Wyoming

1270 kc

KIML

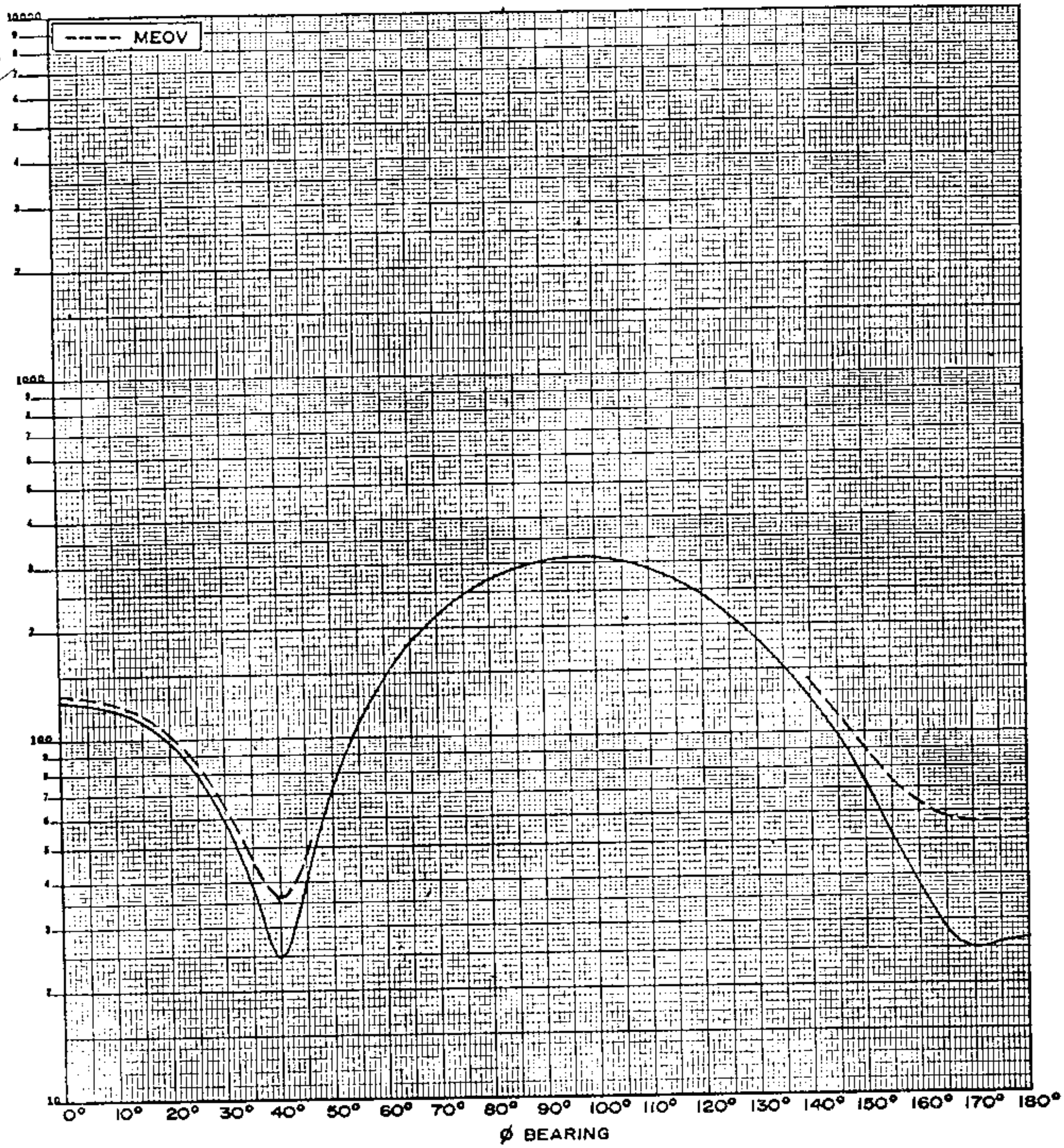
Proposed Night Nulls
(1-28-66ct)

Station KIML
Gillette, Wyoming

1kw,5kw-LS,DA-N,U
1270 kc
PAGE 9

0 ° VERTICAL RADIATION PATTERN

BP 16815
CP 8-2-66



PROPOSED VERTICAL RADIATION PATTERN
KIML - GILLETTE, WYOMING
1270 KC - 1KW/5KW-LS - DA-N

DECEMBER, 1964

Gautney & Jones — Consulting Radio Engineers

FCC File No. BP-16815
Accepted 1-20-66

Station KIML
Gillette, Wyoming

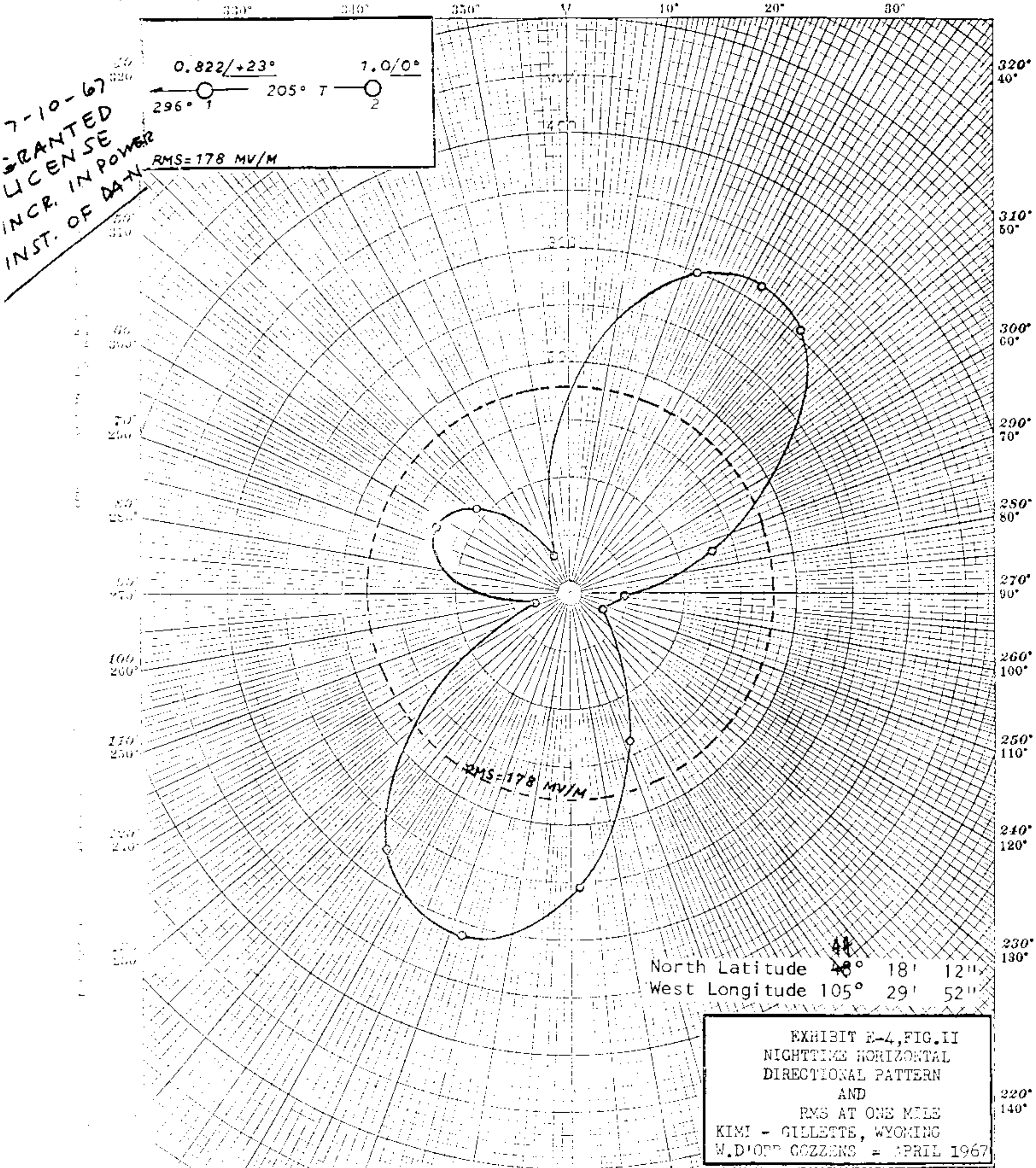
1270 kc

KIML

Measured Night
(6-28-67ct)

Station KIML
Gillette, Wyoming

1kw,5kw-LS,DA-N,U
1270 kc



FCC File No.BL-11656
Accepted 6-14-67

Station KIML
Gillette, Wyoming

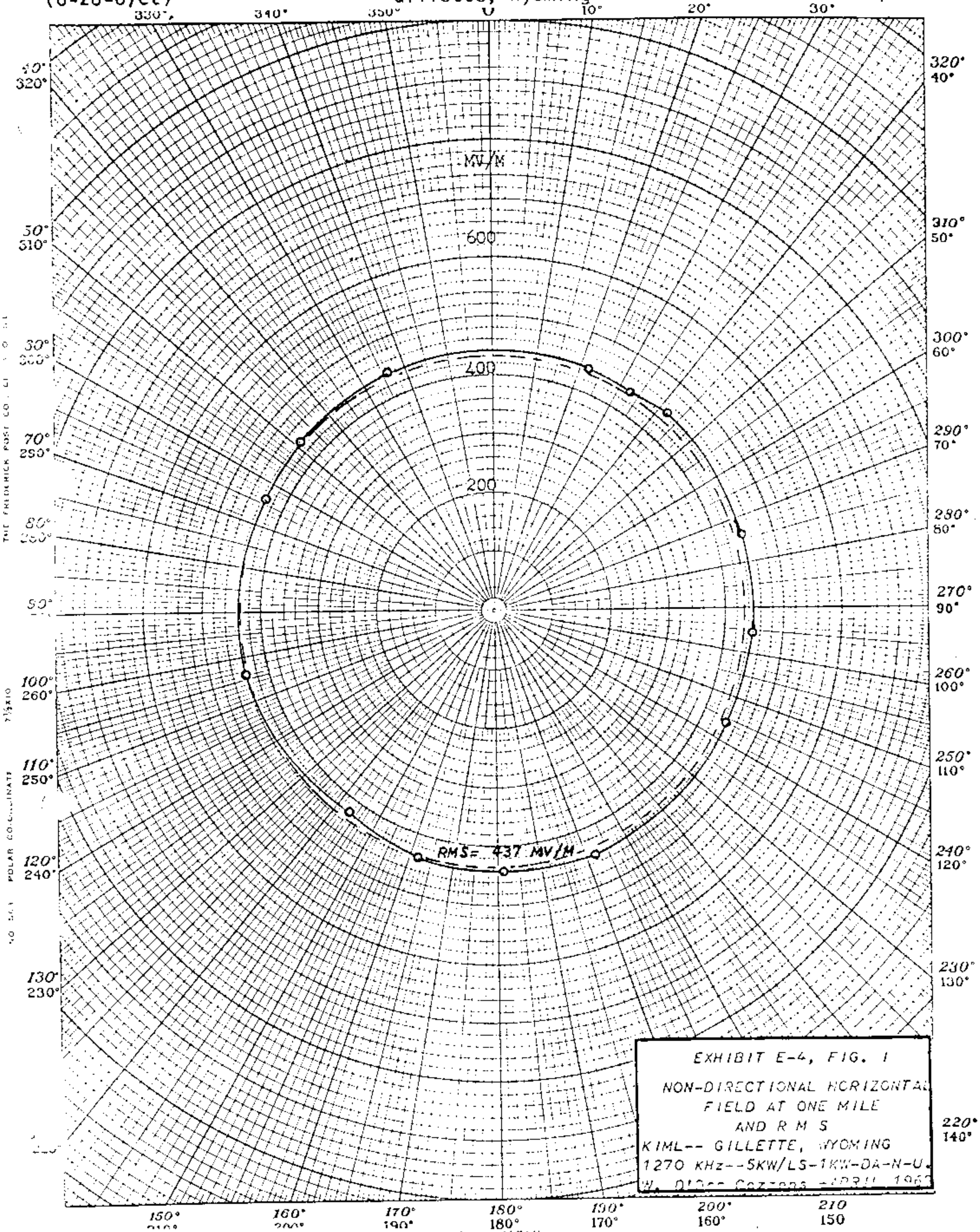
1270 kc

KIML

Measured Non-DA
(6-28-67ct)

Station KIML
Gillette, Wyoming

1kw,5kw-LS,DA-N,U
1270 kc



FCC File No.BL-11656
Accepted 6-14-67

Station KIML
Gillette, Wyoming

1270 kc

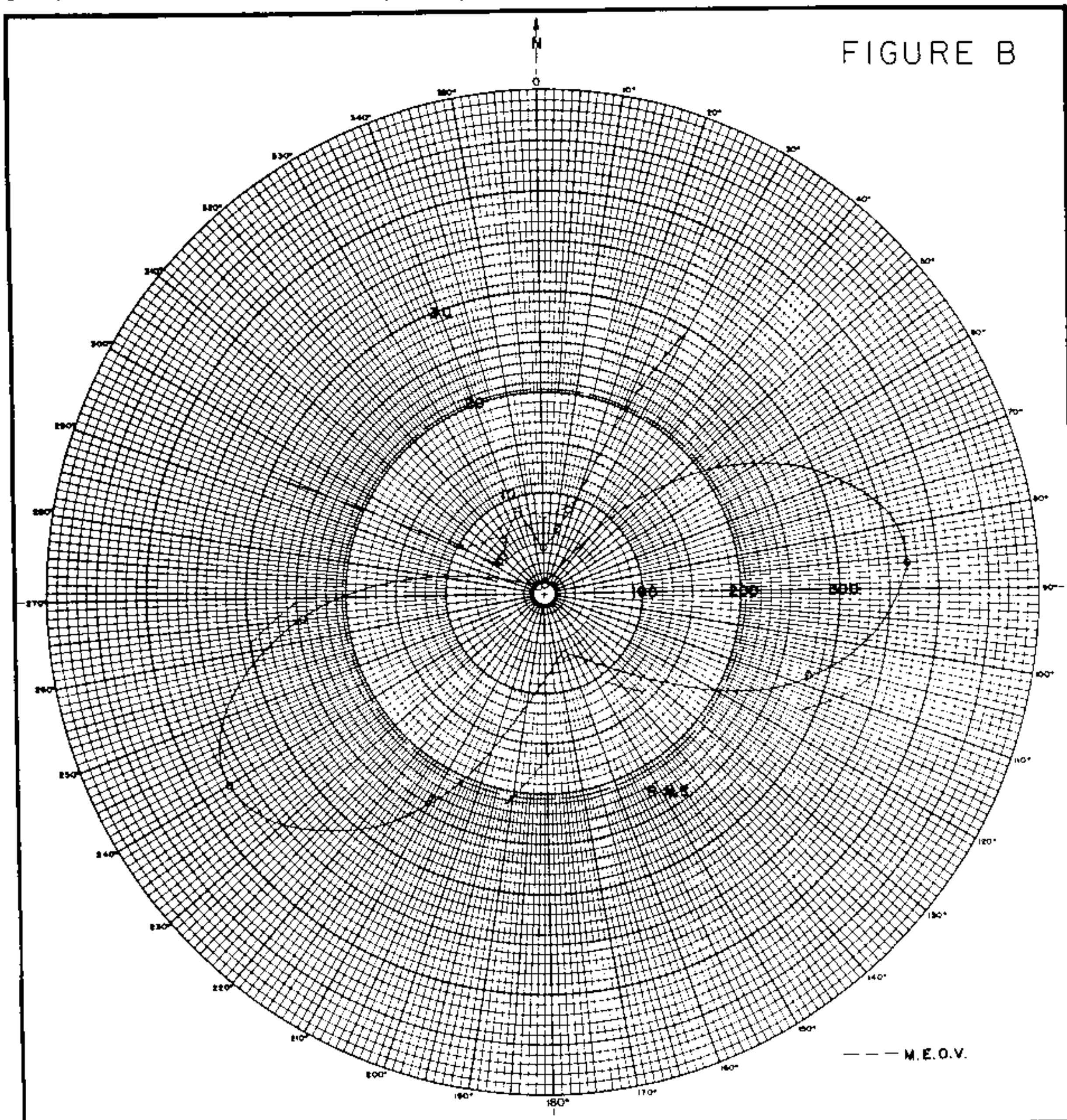
KIOX

Measured Night
(6-27-69ct)

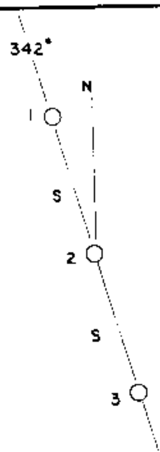
Station KIOX
Bay City, Texas

1kw,DA-N,U
1270 kc

FIGURE B



S= 356' (165°)
G= 250' (116°)
1 = 0.5116 ∠36°
2 = 1.00 ∠0°
3 = 0.6511 ∠-37°



APPLICANT	BAY CITY BROADCASTING CO.
LOCATION	BAY CITY, TEXAS
FREQUENCY	1270 KHZ
POWER	1.0 KW
LATITUDE	28° 59' 51"
LONGITUDE	95° 54' 42"
WHEN USED	NIGHTTIME DA-N
RMS FIELD	204 MV/M
DATE	4/18/69

William B. Carr
CONSULTING ENGINEER
FORT WORTH TEXAS

FCC File No.BZ-7207
Accepted 6-11-69

Station KIOX
Bay City, Texas

1270 kc

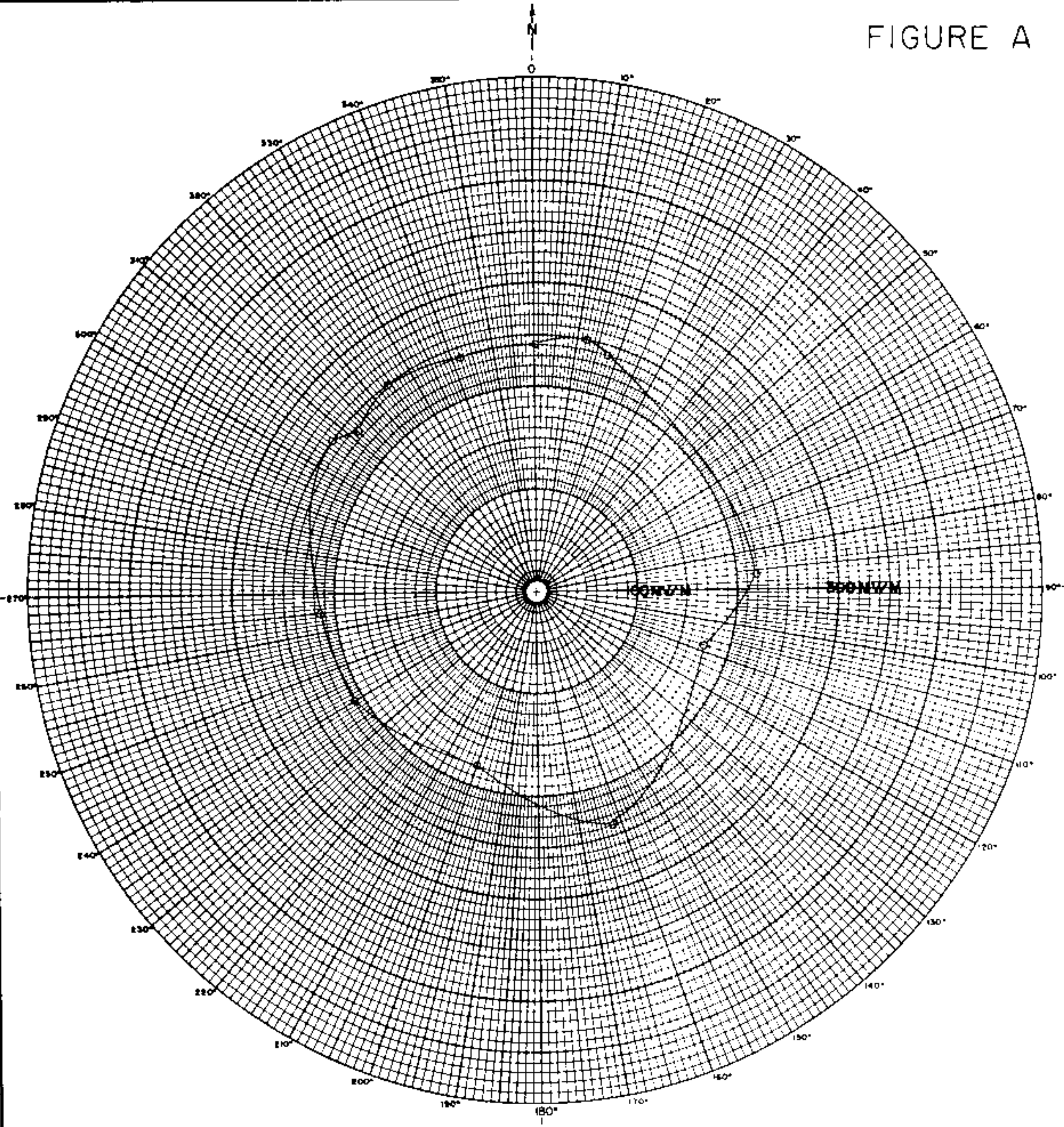
KIOX

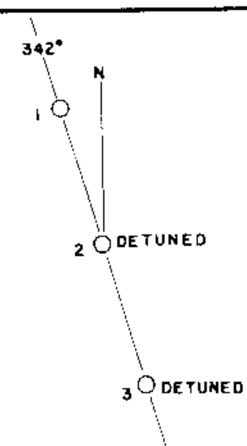
Measured Non-DA
(6-27-69ct)

Station KIOX
Bay City, Texas

1kw,DA-N,U
1270 kc

FIGURE A





APPLICANT	BAY CITY BROADCASTING CO.
LOCATION	BAY CITY, TEXAS
FREQUENCY	1270 KHZ
POWER	1.0 KW
LATITUDE	28° 59' 51"
LONGITUDE	95° 54' 42"
WHEN USED	NON DIRECTIONAL
RMS FIELD	219 MV/M
DATE	4/18/69

William B. Carr
CONSULTING ENGINEER
FORT WORTH, TEXAS

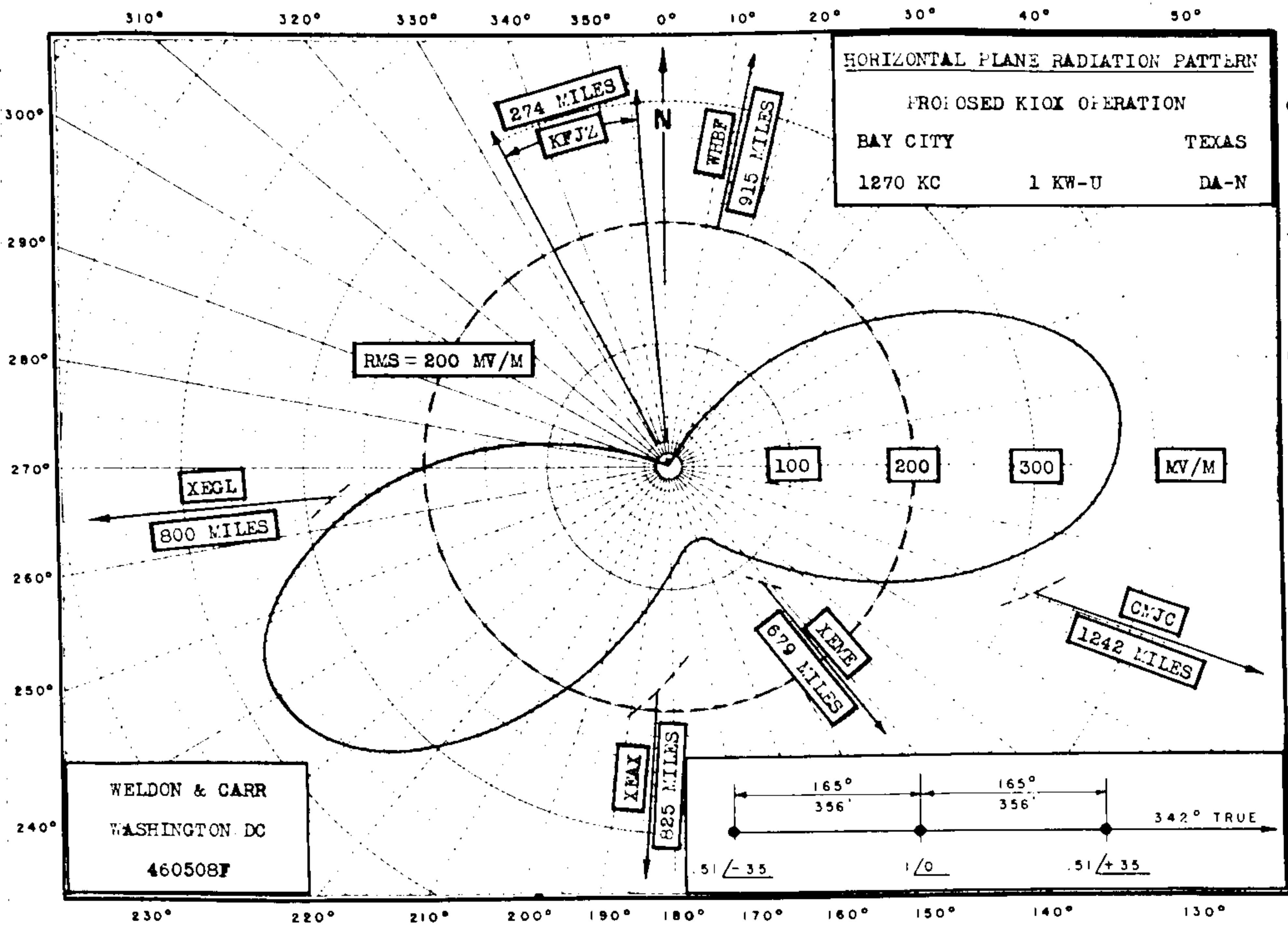
FCC File No.BZ-7207
Accepted 6-11-69

Station KIOX
Bay City, Texas

1270 kc

KIOX 1270

FIGURE 6



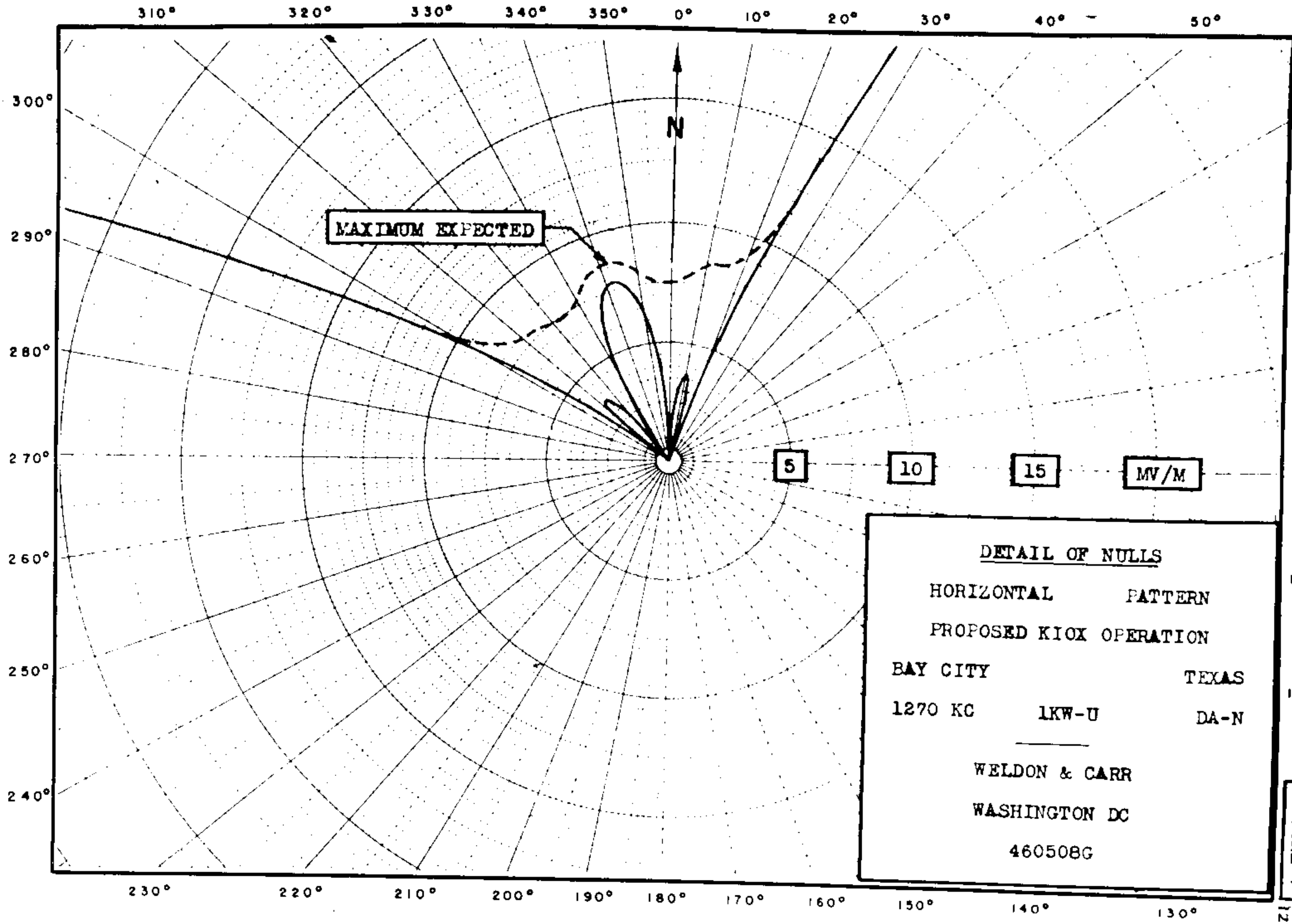


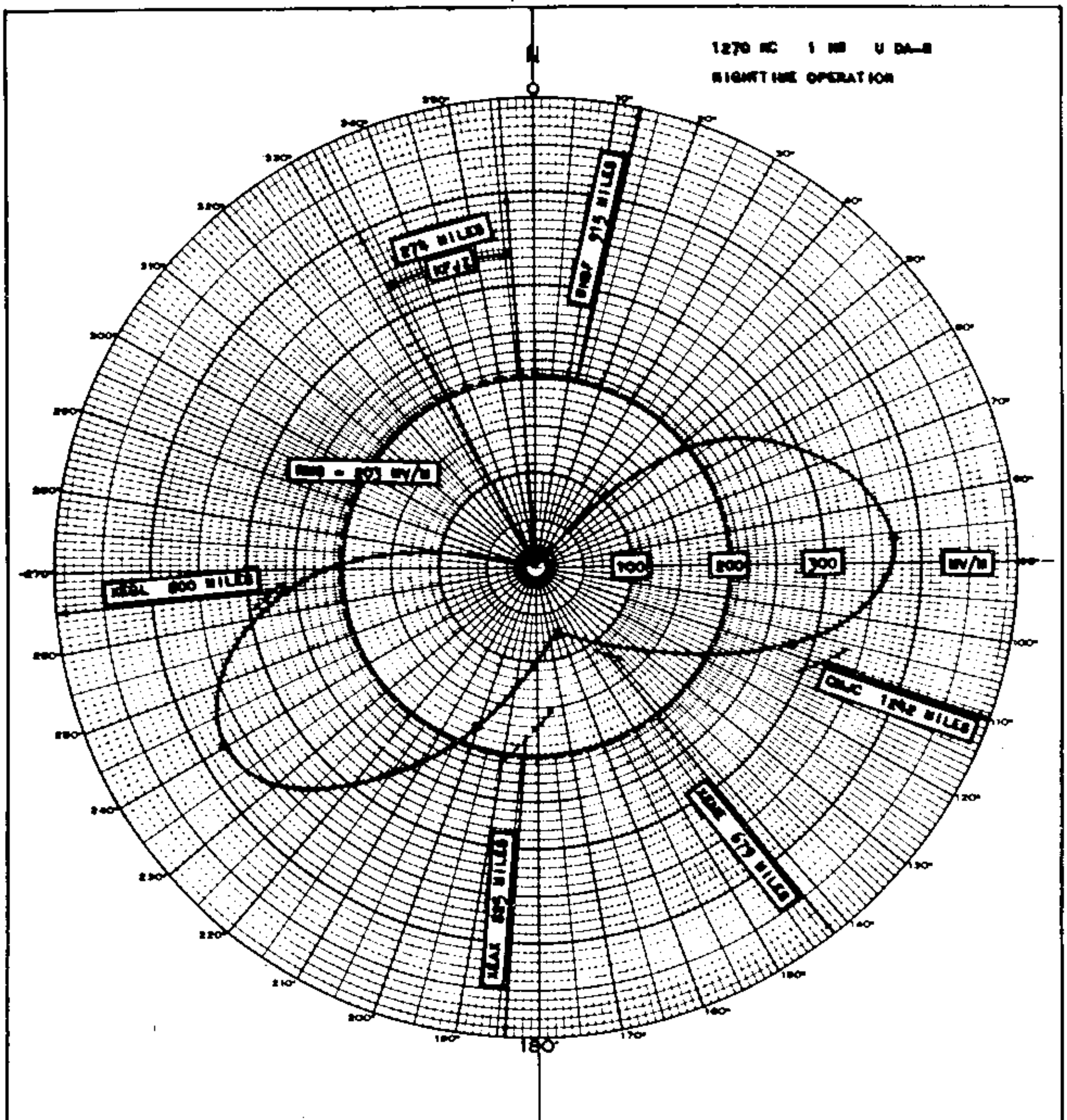
FIGURE 7

KIOX

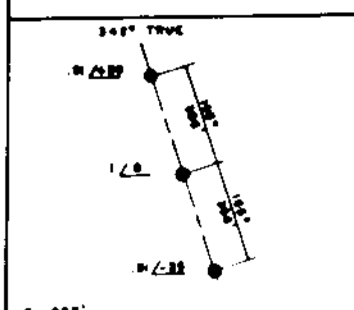
127

KIOX
1270

Rec'd 8-14-47 9/17/48 GO



MEASURED HORIZONTAL PLANE RADIATION PATTERN FOR NIGHTTIME OPERATION



BAY CITY BROADCASTING COMPANY
BAY CITY TEXAS

WELDON & CARR
CONSULTING RADIO ENGINEERS
WASHINGTON DC

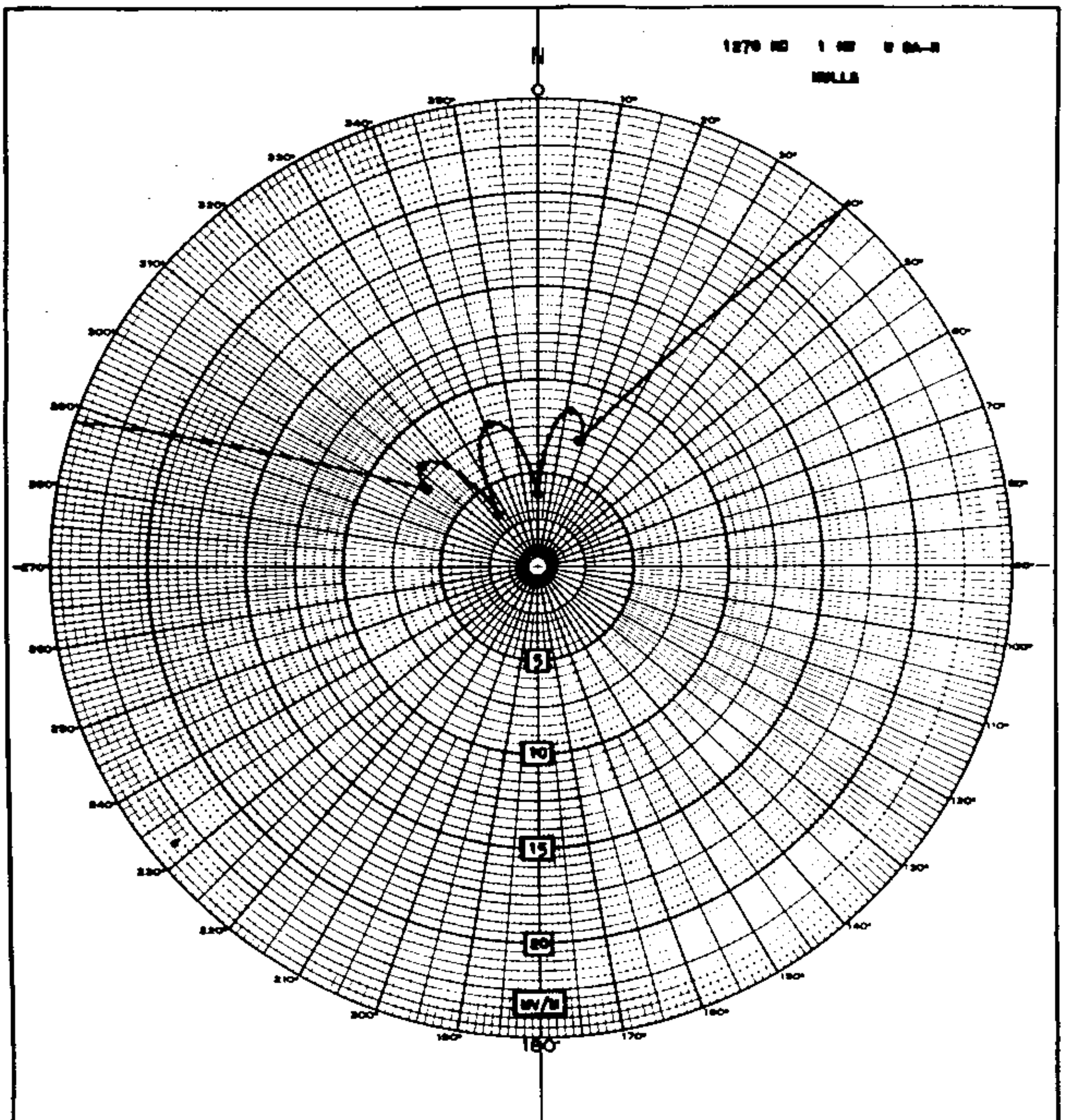
KIOX
BAY CITY TEXAS
1270 KC 1 KW U DA-N

470811U

KIOX
1270

Recd. 8-14-47

9/17/48 60



MEASURED HORIZONTAL PLANE RADIATION PATTERN FOR NIGHTTIME OPERATION

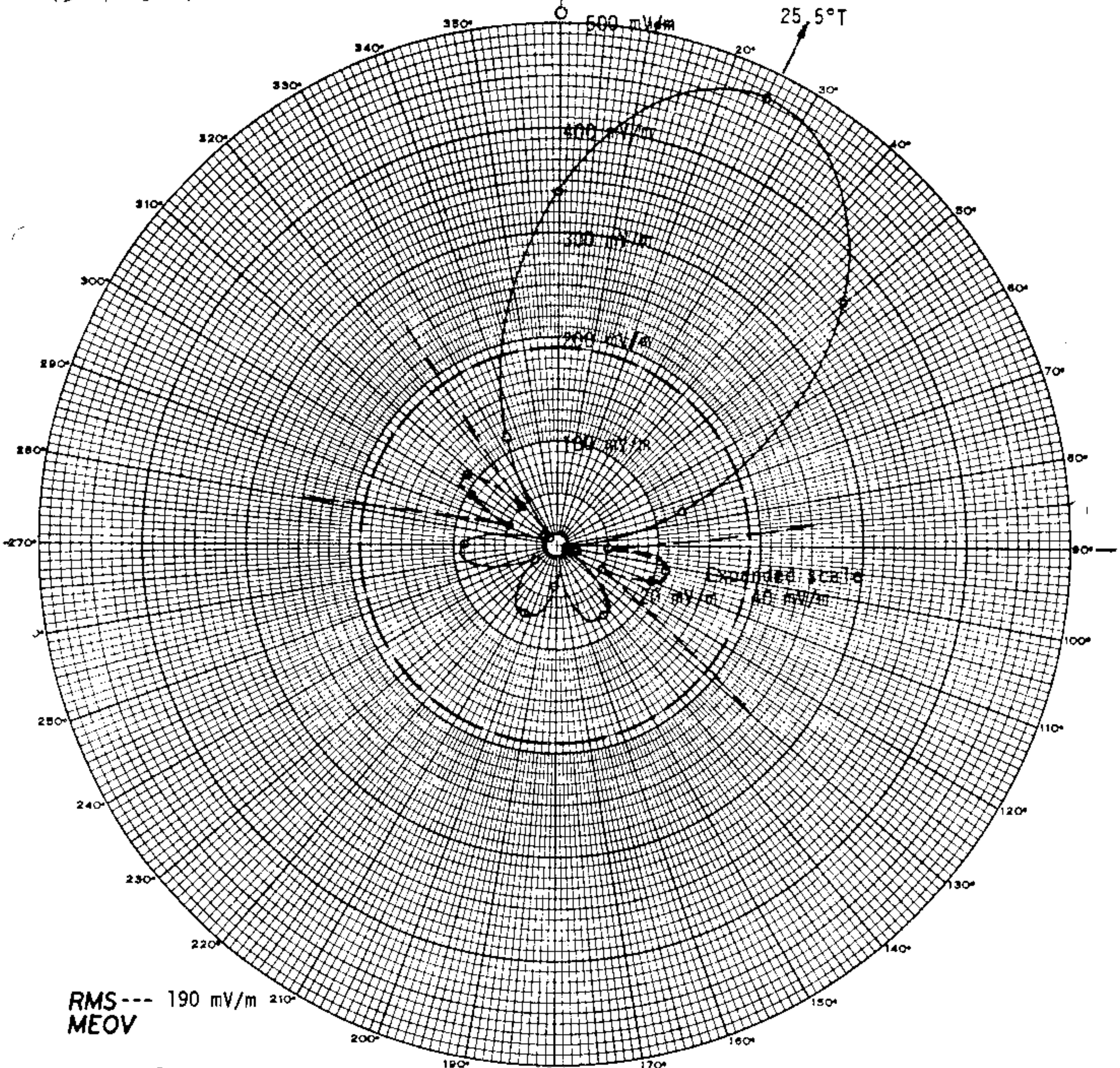
DETAIL IN NULLS	BAY CITY BROADCASTING COMPANY BAY CITY TEXAS WELDON & CARR CONSULTING RADIO ENGINEERS WASHINGTON DC	KIOX BAY CITY TEXAS 1270 KC 1 KW U DA-N 470811T

KNWC

Measured Night
(5-27-69ct)

Station KNWC
Sioux Falls, South Dakota

1kw,DA-N,U
1270 kc



RMS--- 190 mV/m
MEOV

● Symetry value

TOWER PLACEMENT SKETCH
G=203'   s=193.7'   N   1 25.5°T   s   2   s   3   s   4

PATTERN PARAMETERS

TOWER No.	ELECTRICAL HEIGHT θ°	SPACING S°	PHASING ψ°	FIELD RATIO F
1	94.4	90°	-145°	1.09
2	94.4°	90°	+29.5°	1.94
3	94.4°	90°	-173°	2.00
4	94.4°	--	0.0	1.00
5				
6				
7				
8				
9				
10				

DAYTIME OPERATION ☐ NIGHTTIME OPERATION ☒

FIGURE -4

MEASURED NIGHT

DIRECTIONAL

MARCH 1969

$\theta^{\circ}=0$

STATION DATA

CALL	KNWC
FREQ	1270 kHz
POWER	1 kW
TYPE	DA-N
TIME	NIGHT
LAT.	N-43°-29'-10"
LONG.	W-96°-47'-00"

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

FCC File No.BZ-7161
Accepted 5-2-69

Station KNWC
Sioux Falls, South Dakota

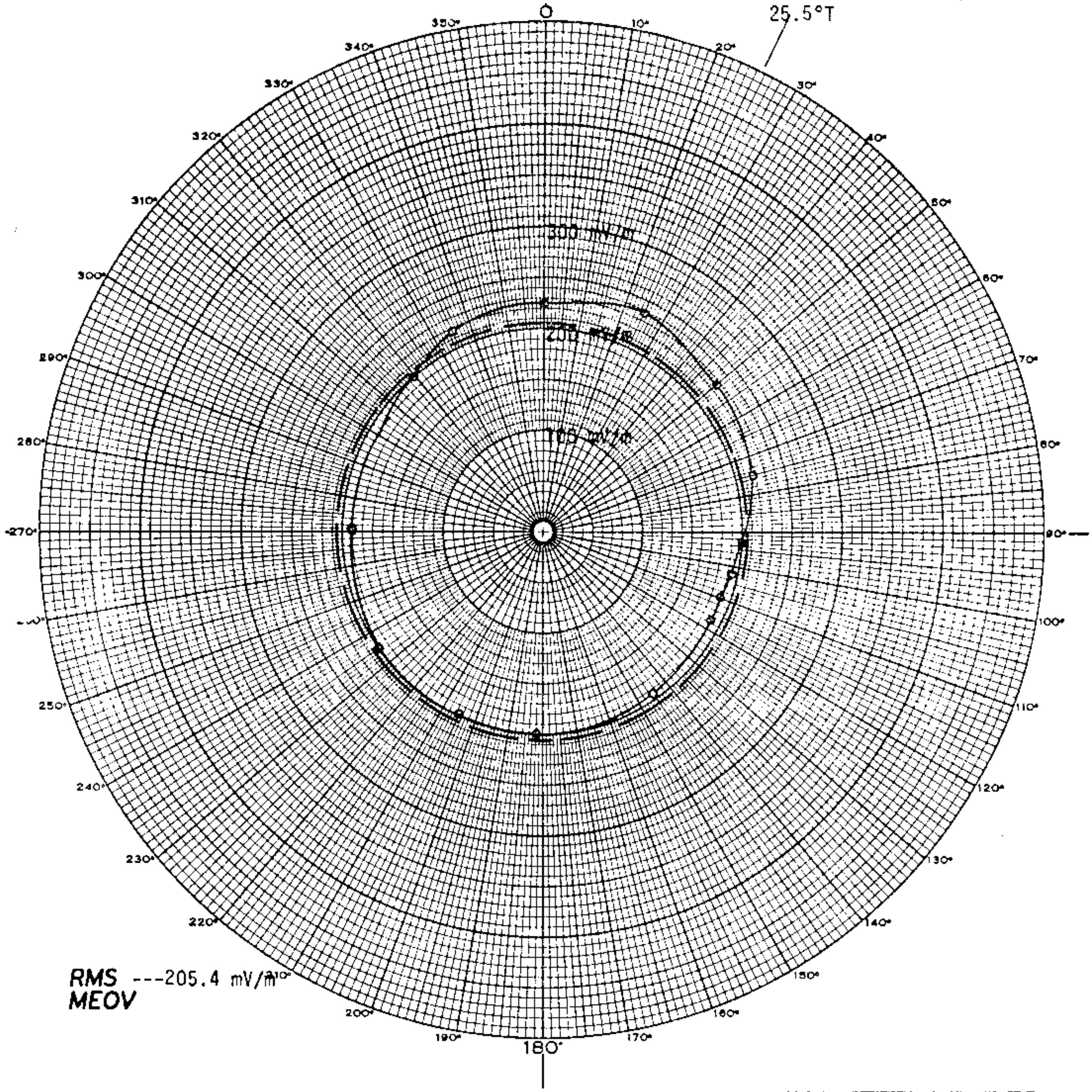
1270 kc

KNWC

Measured Non-DA
(5-27-69ct)

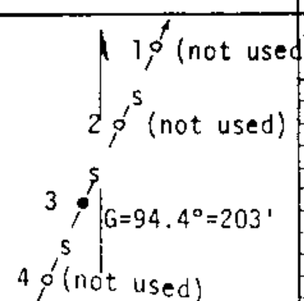
Station KNWC
Sioux Falls, South Dakota

1kw, DA-N, U
1270 kc



RMS ---205.4 mV/m
MEOV

TOWER PLACEMENT SKETCH	PATTERN PARAMETERS	*FIGURE* -3	STATION DATA



TOWER No.	ELECTRICAL HEIGHT G°	SPACING S°	PHASING ψ°	FIELD RATIO F
1				
2				
3	94.4°	--		
4				
5				
6				
7				
8				
9				
10				

DAYTIME OPERATION ■ NIGHTTIME OPERATION

MEASURED DAY

NON-DIRECTIONAL

MARCH 1969

θ^{σ} =0

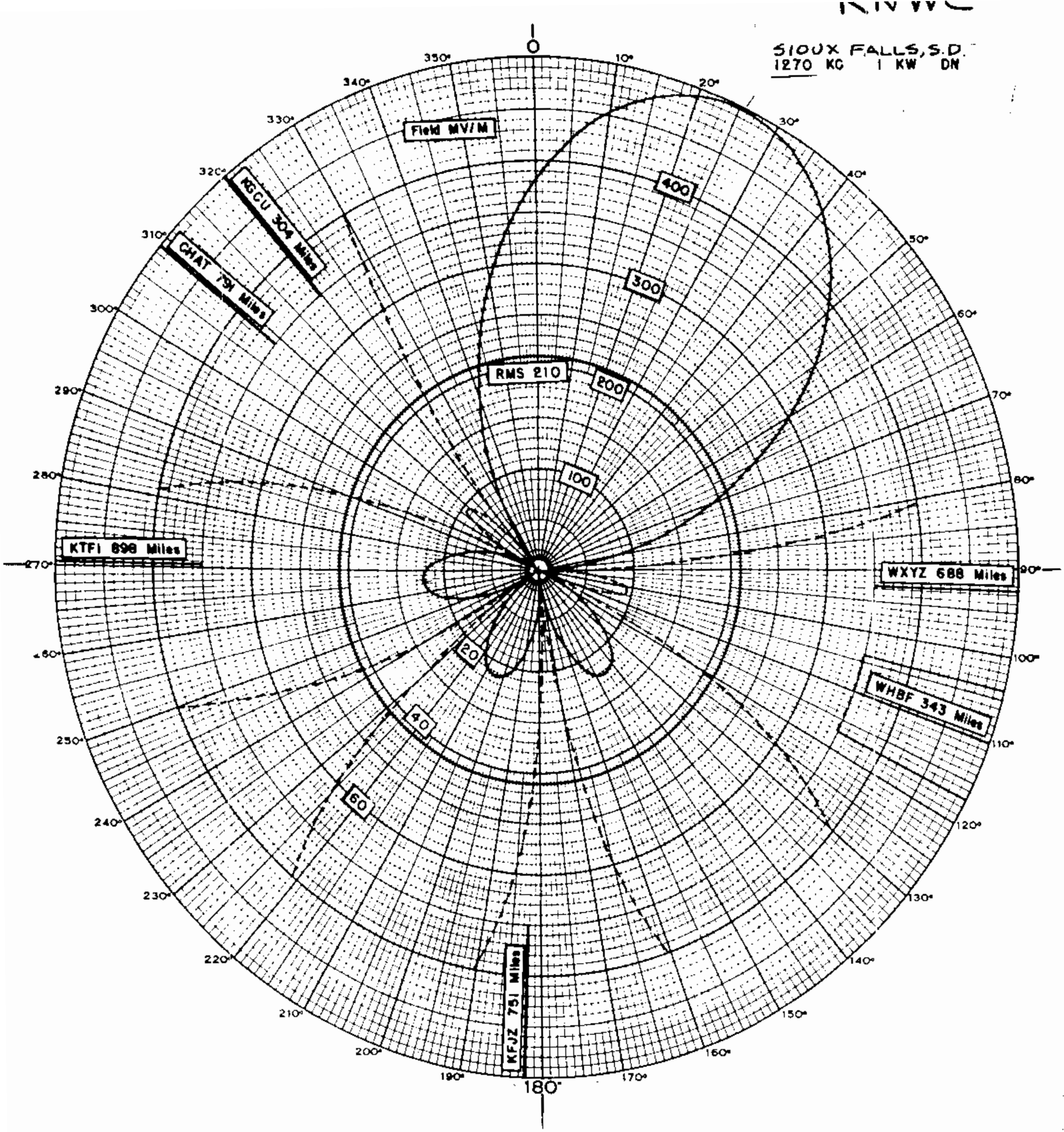
CALL KNWC
FREQ 1270 kHz
POWER 1 kW
TYPE DA-N
TIME DAY
LAT. N-43°-29'-10"
LONG. W-96°-47'-00"

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

FCC File No. BZ-7161
Accepted 5-2-69

Station KNWC
Sioux Falls, South Dakota

1270 kc

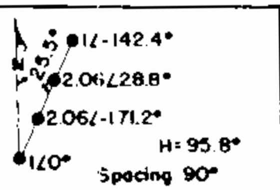


BIG SIOUX BROADCASTING CO.

SIOUX FALLS, S. D.

[redacted] Fig. 1
Series 4703140

1270 KC
1000 WATTS
DAY-NIGHT



PROPOSED

DIRECTIONAL ANTENNA PATTERN

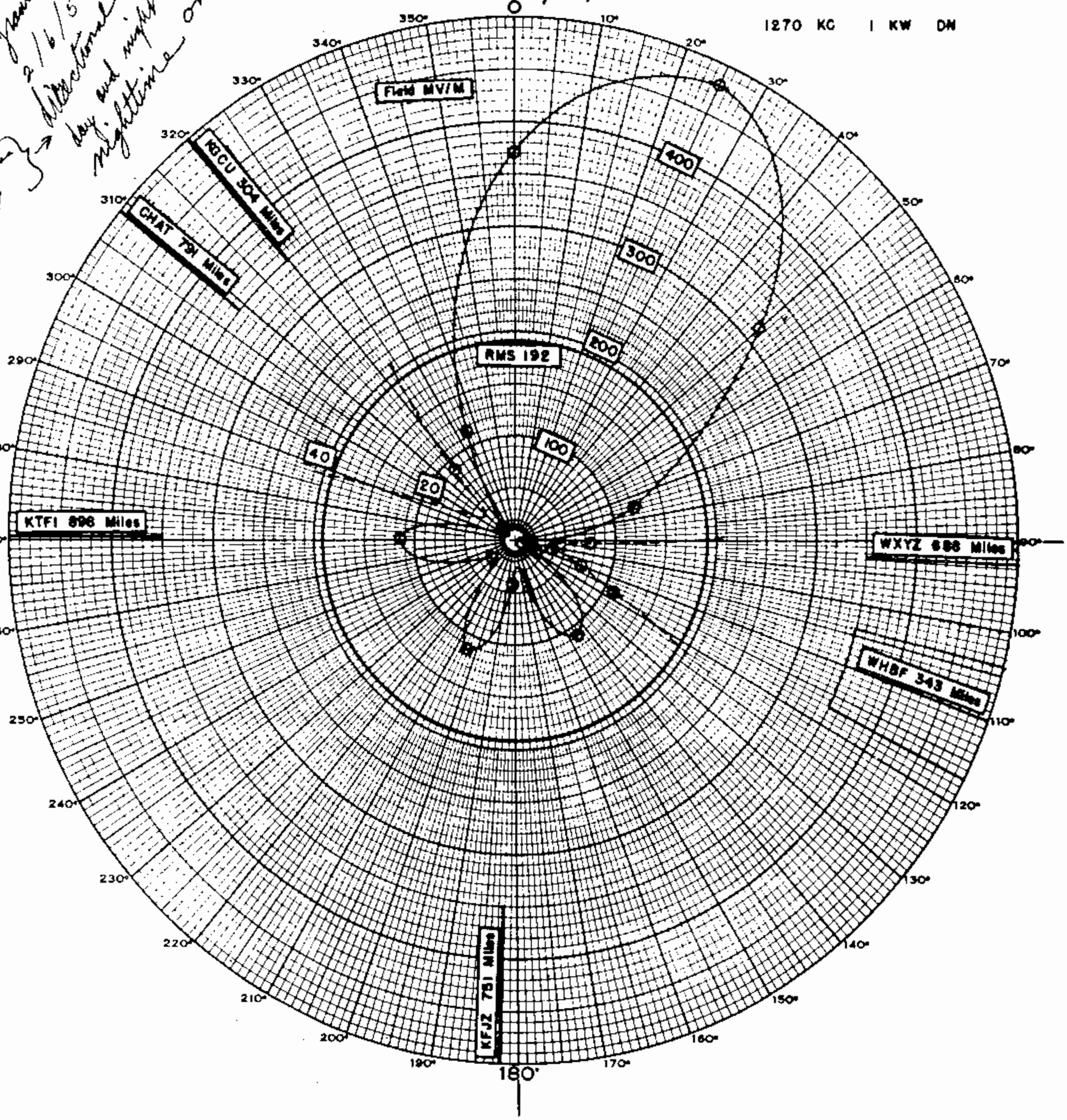
FRANK H. McINTOSH
Consulting Radio Engineer
Washington, D.C.

KNWC

granted change 2/16/57 from directional antenna day and night to DN nighttime only

granted license 6/12/57

9/8/10/486



BIG SIOUX BROADCASTING CO. SIOUX FALLS, S. D. KIHO	Figure 6 Series 480514C 1270 KC 1000 WATTS DAY-NIGHT
MEASURED DIRECTIONAL ANTENNA PATTERN	FRANK H. McINTOSH *Consulting Radio Engineer* Washington, D.C.

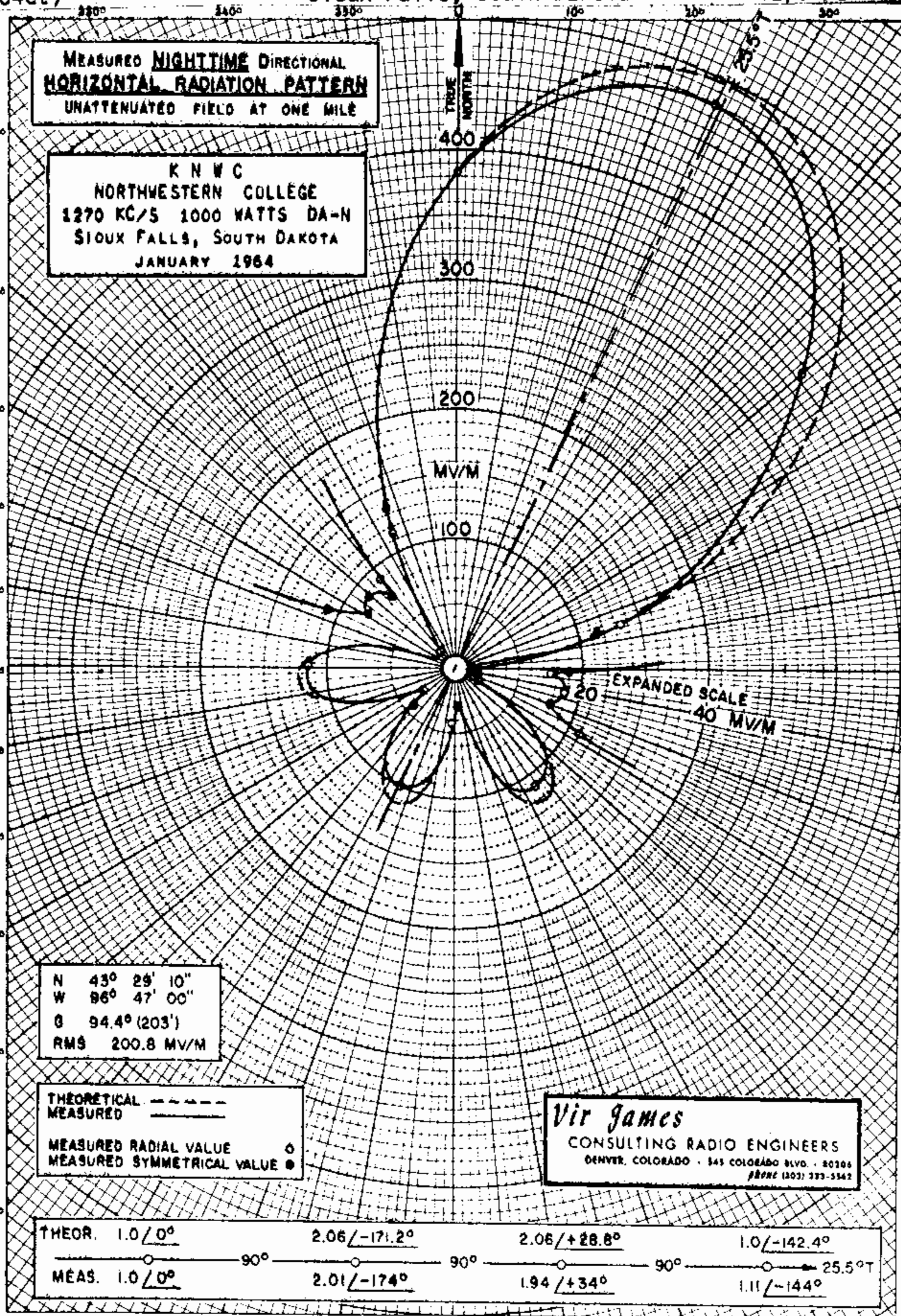
N 25.5°
1∠-142.4°
2.06∠28.8°
2.06∠-171.2°
1∠0°
H= 95.8°
Spacing 90°

KNWC

Measured Night
(6-29-64ct)

Station KNWC
Sioux Falls, South Dakota

1kw,DA-N,U
1270 kc



FCC File No.BZ-5216
Accepted 5-27-64

Station KNWC
Sioux Falls, South Dakota

1270 kc

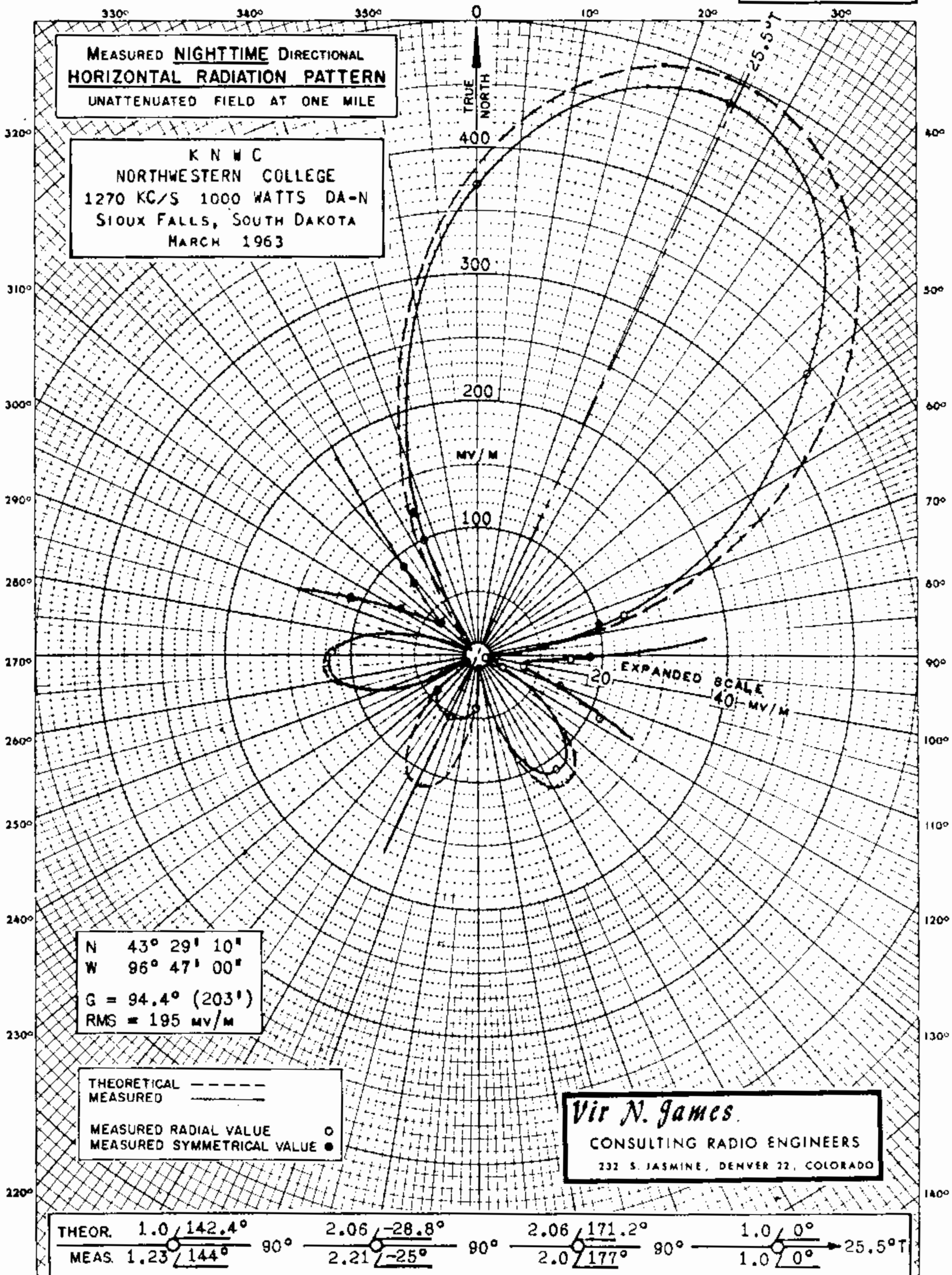
KNWC

Measured Night
(6-28-63ct)

Station KNWC
Sioux Falls, South Dakota

1kw,DA-N,U
1270 kc

EXHIBIT E-8.04A



FCC File No.BZ-4939
Accepted 6-14-63

Station KNWC
Sioux Falls, South Dakota

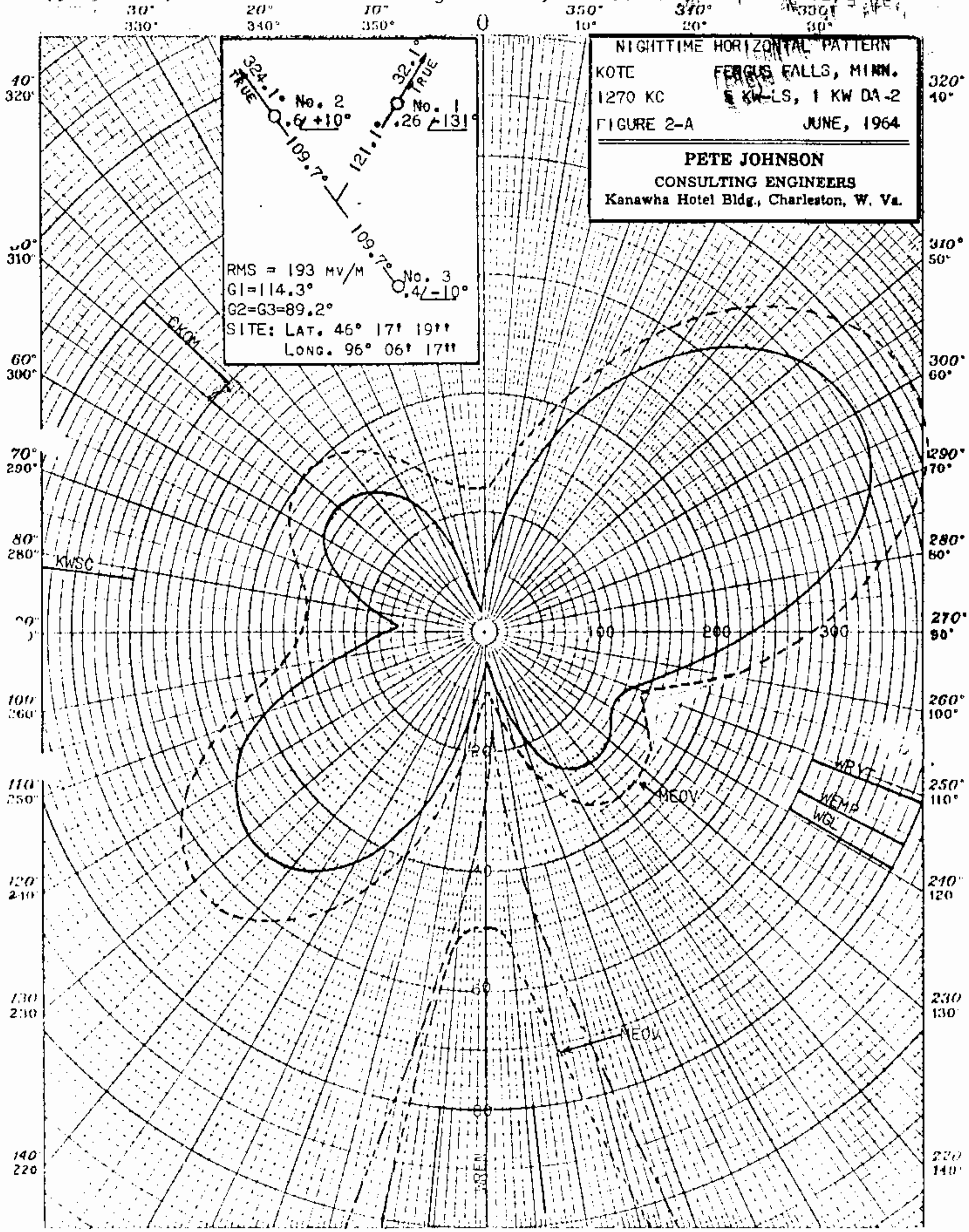
1270 kc

KOTE

Proposed Night
(9-29-64ct)

Station KOTE
Fergus Falls, Minnesota

1kw,5kw-LS,DA-2,U
1270 kc



FCC File No.BP-16083
Accepted 9-16-64 Amended

Station KOTE
Fergus Falls, Minnesota

1270 kc

KSCB

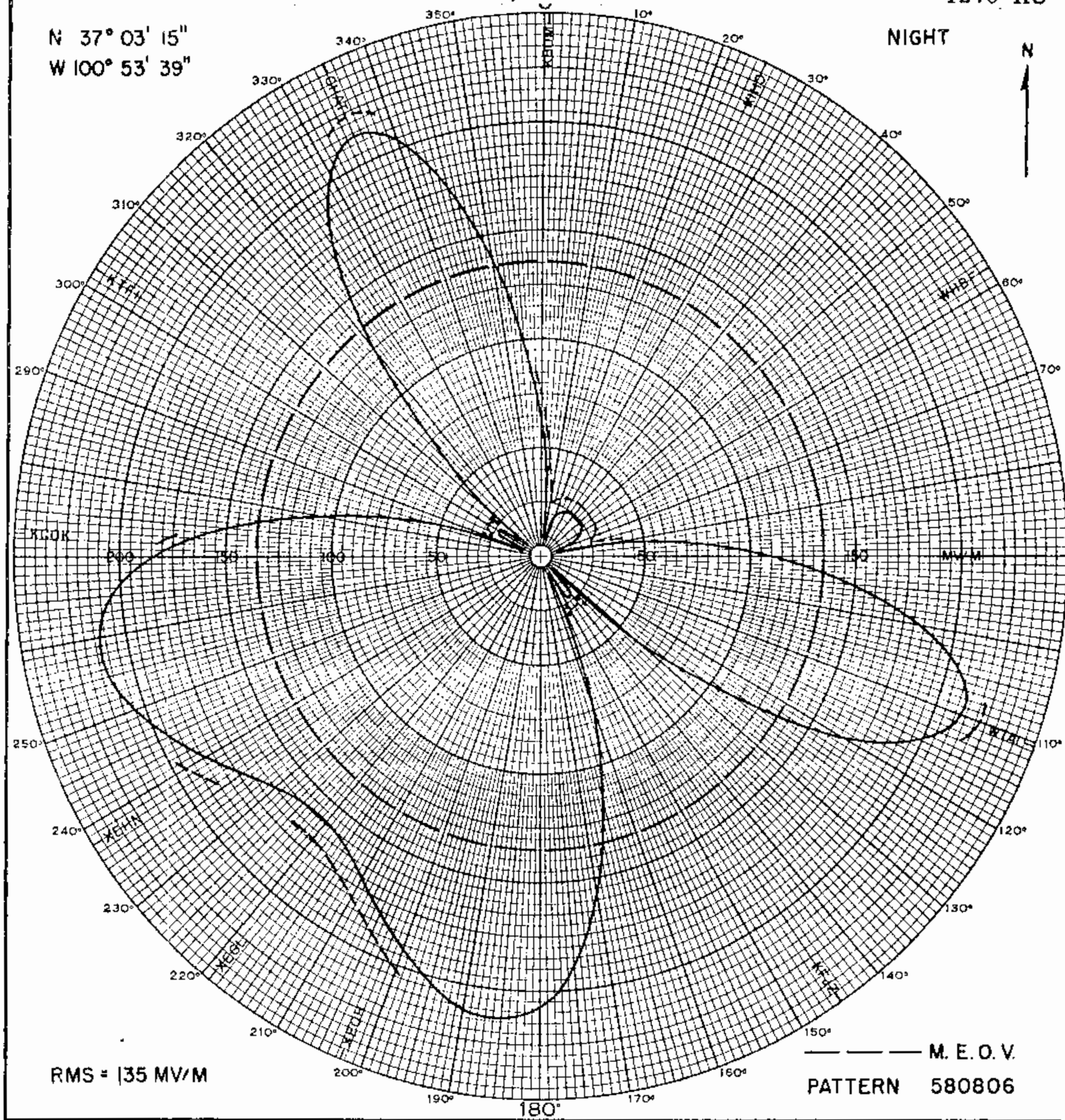
PROPOSED NIGHT
(10-24-58g)

Station KSCB
Liberal, Kansas

500w,1kw-LS, DA-N,U
1270 KC

N 37° 03' 15"
W 100° 53' 39"

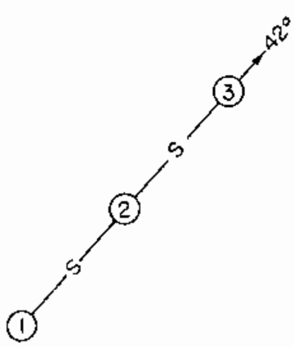
NIGHT



RMS = 135 MV/M

— — — M. E. O. V.

PATTERN 580806



S = 645.6' = 300°
G = 200.0' = 93°

TOWER	FIELD	PHASE
1	1.000	117.00
2	1.611	4.54
3	1.000	-117.00

RADIO STATION KSCB
LIBERAL, KANSAS
1270 KC 0.5 KW 1KW-LS DA-N

A. EARL CULLUM, JR.
CONSULTING ENGINEERS
580806 FIGURE 6A

FCC File No. BP-12,397
Accepted 10-17-58

KSCB
Liberal, Kansas

1270 KC

KSCB

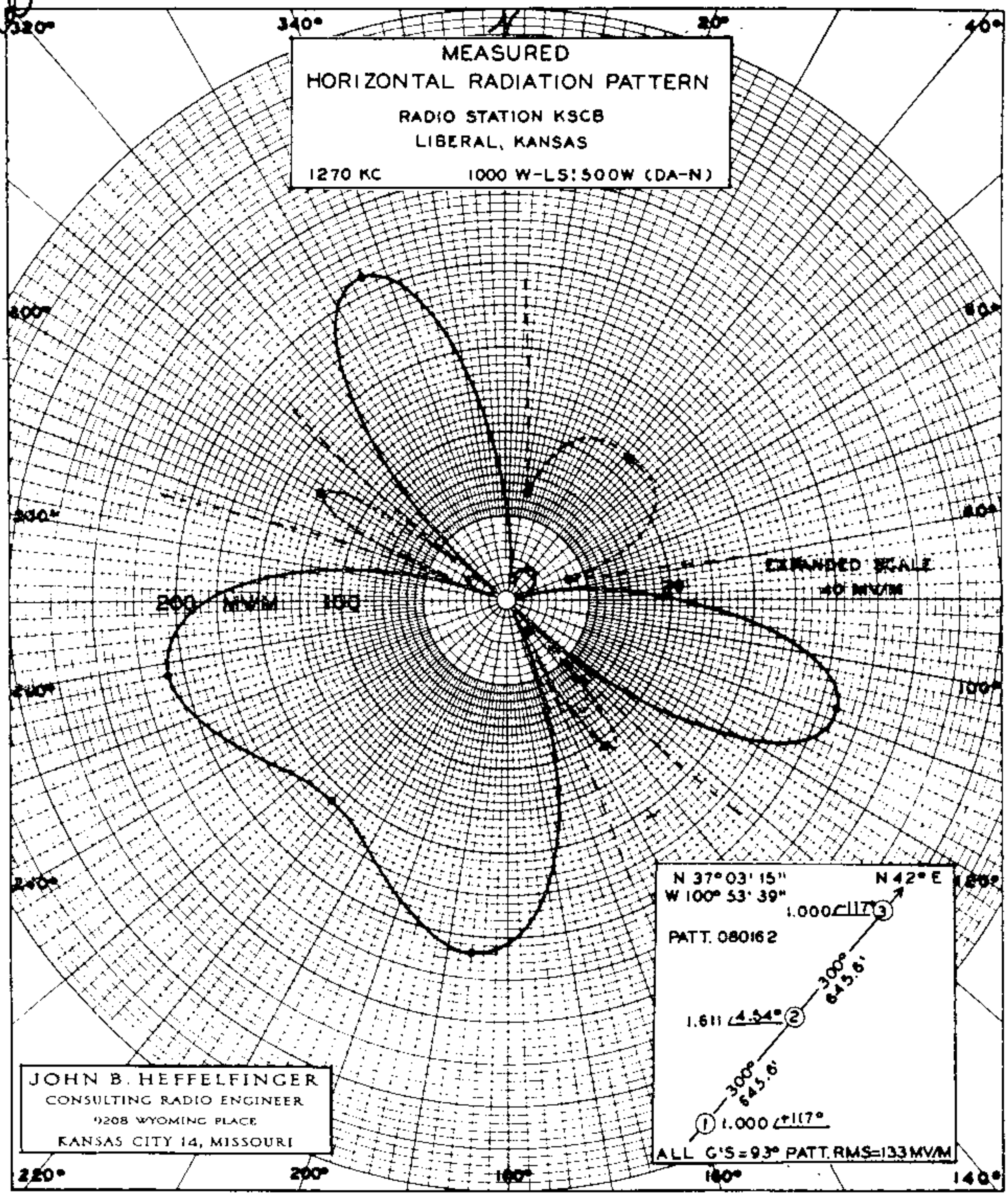
Measured Night (10-26-62ct)

Station KSCB
Liberal, Kansas

500w, 1kw-LS, DA-N, U
1270 kc

43

1-25-63
granted L to change
n hours of op and DA-N



FCC File No. BL-9575
Accepted 10-4-62

Station KSCB
Liberal, Kansas

1270 kc

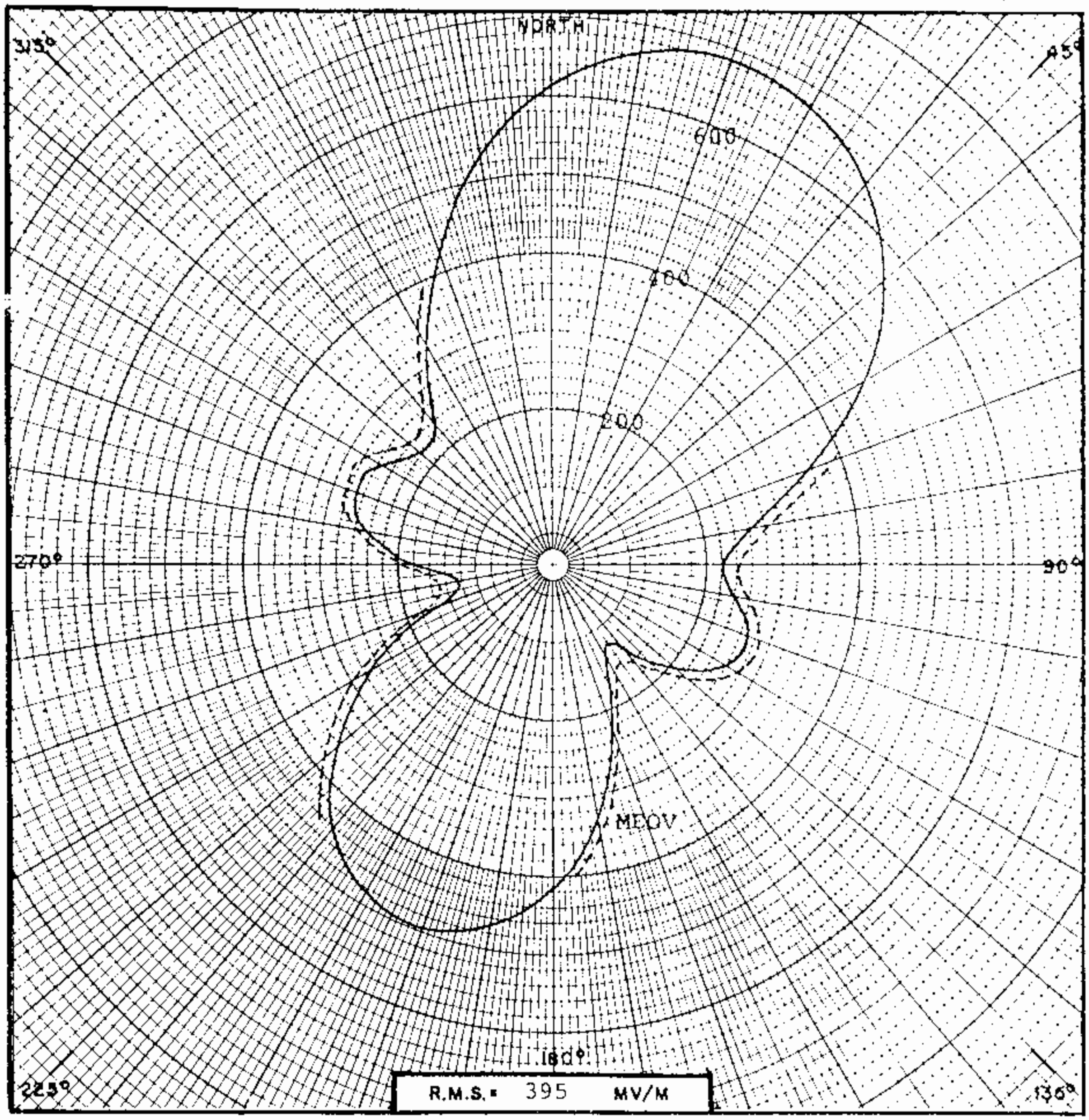
SEE REVERSE SIDE

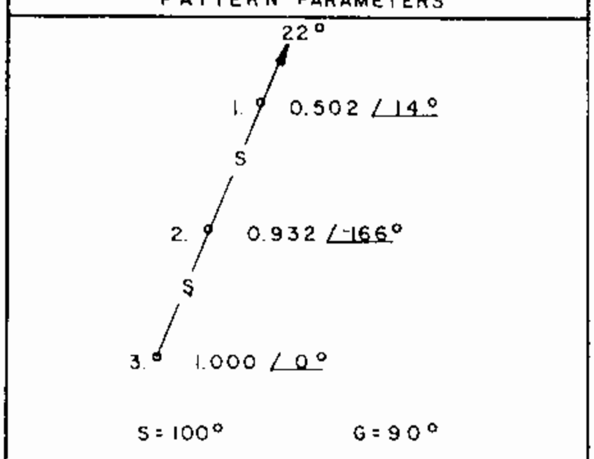
KWEB

Proposed Day
(9-25-70ct)

Station KWEB
Rochester, Minnesota

1kw,5kw-LS,DA-2,U
1270 kc





DIRECTIONAL
RADIATION PATTERN

K W E B

MEASURED [x] PROPOSED

FREQ: 1270 (KHZ) POWER 5.0 (KW) [X] DA-D

N. LAT. 43 58' 48" [ ] DA-N

W. LONG. 92° 26' 51" [ ] N-D

LOCATION: Rochester, Minnesota

DATE: August, 1969

ROBERT A JONES
CONSULTING ENGINEERS
LA GRANGE, ILLINOIS

FCC File No.BP-18836
Accepted 9-2-70

Station KWEB
Rochester, Minnesota

1270 kc

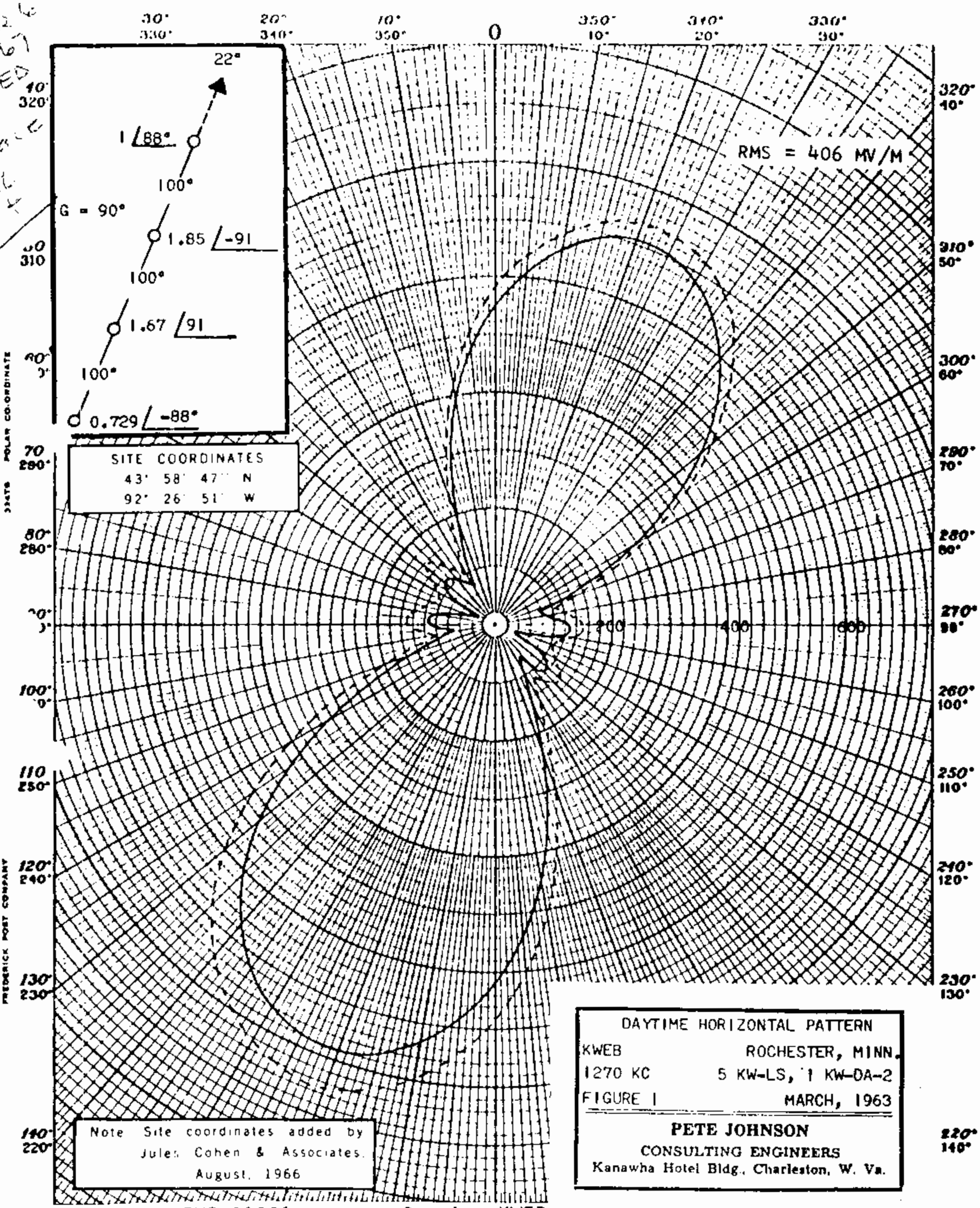
KWEB

Proposed Day
(10-28-66ct)

Station KWEB
Rochester, Minnesota

1kw,5kw-LS,DA-2,U
1270 kc

11-21-67
GRANTED
CP
to replace



FCC File No.BMP-11901
Accepted 10-10-66

Station KWEB
Rochester, Minnesota

1270 kc

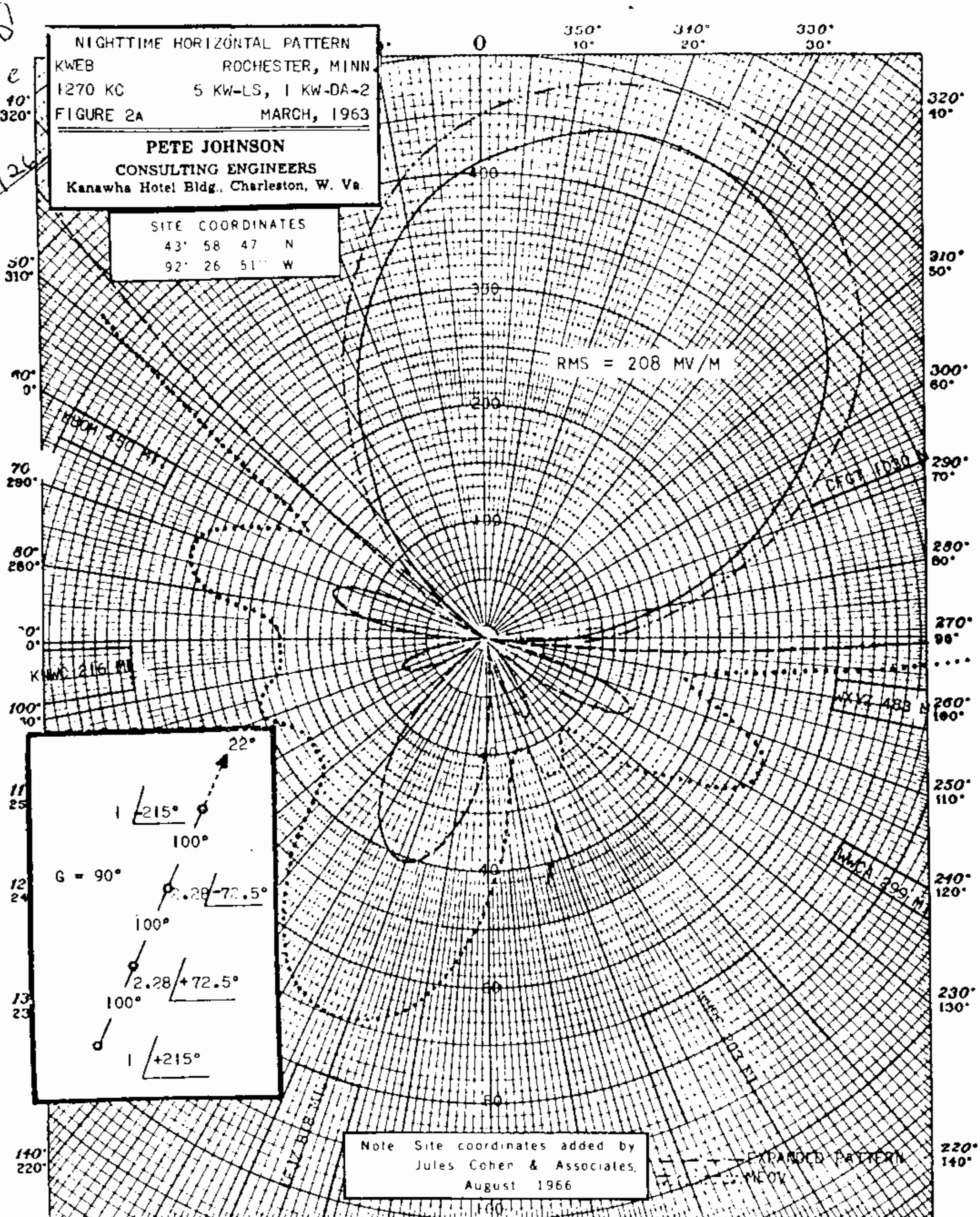
KWEB

Proposed Night
(10-28-66ct)

Station KWEB
Rochester, Minnesota

1kw,5kw-LS,DA-2,U
1270 kc

-21-67
GRANTED
CP
replace
expired
permit
BP-17926



FCC File No.BMP-11901
Accepted 10-10-66

Station KWEB
Rochester, Minnesota

1270 kc

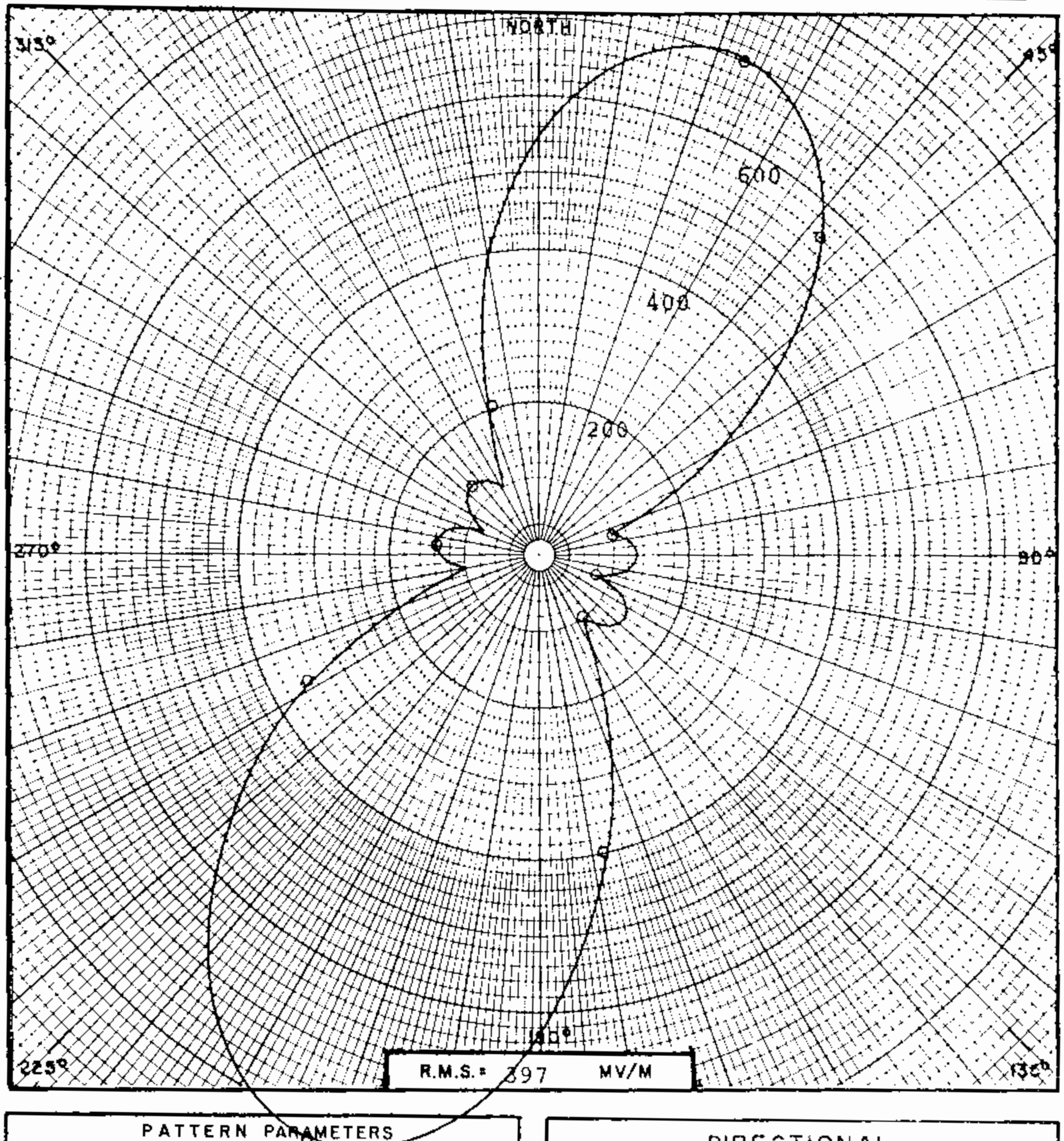
KWEB

Measured Day
(9-26-68ct)

Station KWEB
Rochester, Minnesota

1kw,5kw-LS,DA-2,U
1270 kc

BL-12084
Granted
12-23-68
License
[illegible]
change



PATTERN PARAMETERS

22°T

S = 100°
G = 90°

Tower	Theo.	Meas.
1	1.00/0°	1.00/0°
2	1.85/-179°	2.06/-170
3	1.67/+3°	2.12/+20°
4	0.729/-176°	1.05/-137

S S S

DIRECTIONAL RADIATION PATTERN
NORTH CENTRAL VIDEO, INC.

[x] MEASURED [ ] PROPOSED

FREQ: 1270 (KHZ) POWER 5000 (KW) [x] DA-D
N. LAT. 43 ° 58 ' 48 " [ ] DA-N
W. LONG. 92 ° 26 ' 51 " [ ] N-D

LOCATION: Rochester, Minnesota
DATE: July, 1968

ROBERT A. JONES
CONSULTING ENGINEERS
LA GRANGE, ILLINOIS

FCC File No.BL-12084
Accepted 9-5-68

Station KWEB
Rochester, Minnesota

1270 kc

KWEB

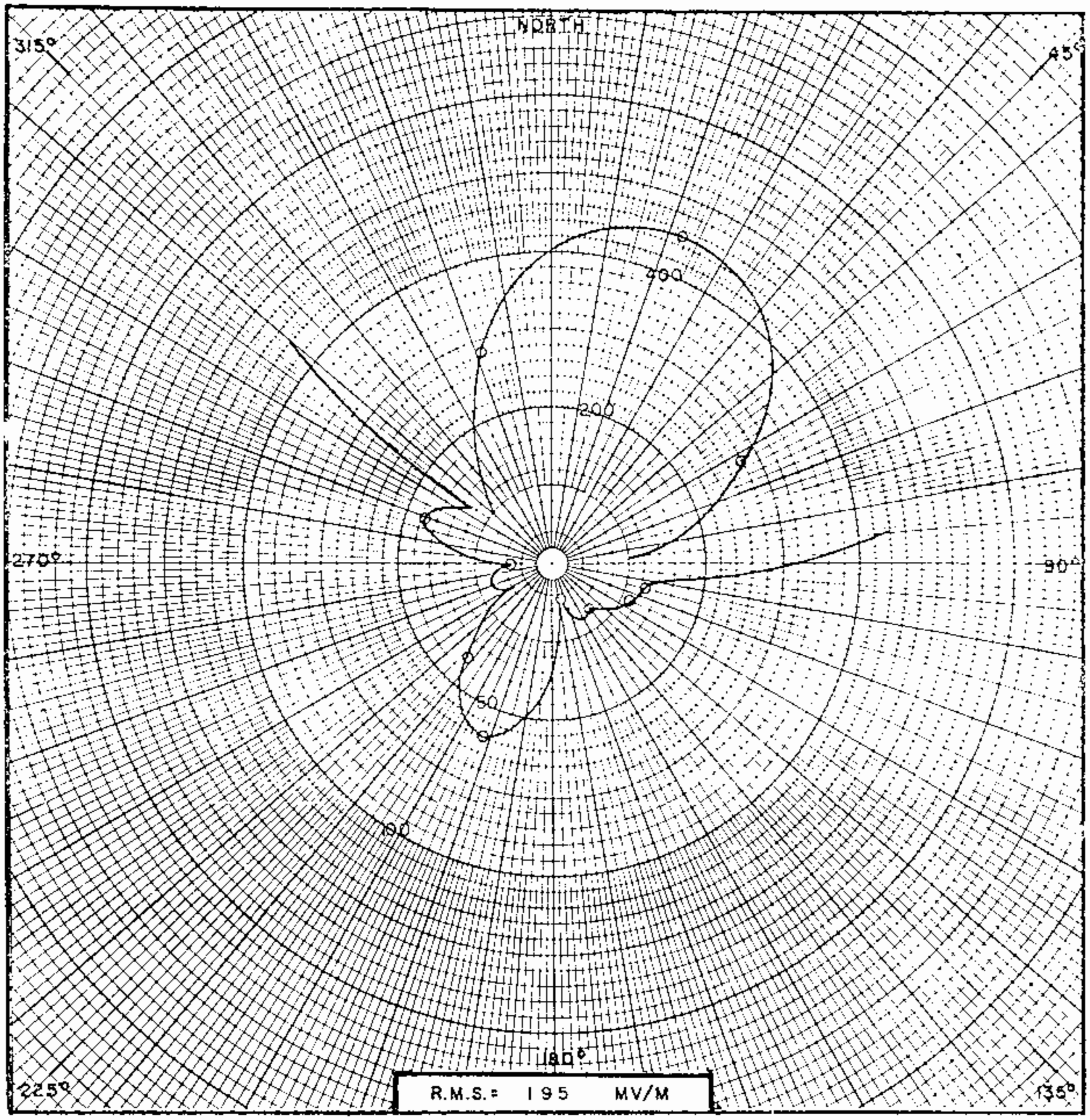
Measured Night
(9-26-62ct)

Station KWEB
Rochester, Minnesota

1kw,5kw-LS,DA-2,U
1270 kc

BL ~~12028~~ -12084

Granted 12-23-68



PATTERN PARAMETERS

S = 100°
G = 90°
22°

	THEO.	MEAS.
1.	1.00 /0°	1.00 /0°
2.	2.28 /+142.5	2.44 /+149
3.	2.28 /−72.5	2.13 /−64.5
4.	1.00 /+70	0.83 /+80

DIRECTIONAL RADIATION PATTERN
NORTH CENTRAL VIDEO, INC.

[X] MEASURED [ ] PROPOSED
FREQ: 1270 (KHZ) POWER 1 (KW) [ ] DA-D
N. LAT. 43° 58' 48" [X] DA-N
W. LONG. 92° 26' 51" [ ] N-D
LOCATION: Rochester, Minnesota
DATE: July, 1968

ROBERT A. JONES
CONSULTING ENGINEERS
LA GRANGE, ILLINOIS

FCC File No.BL-12084
Accepted 9-5-68

Station KWEB
Rochester, Minnesota

1270 kc

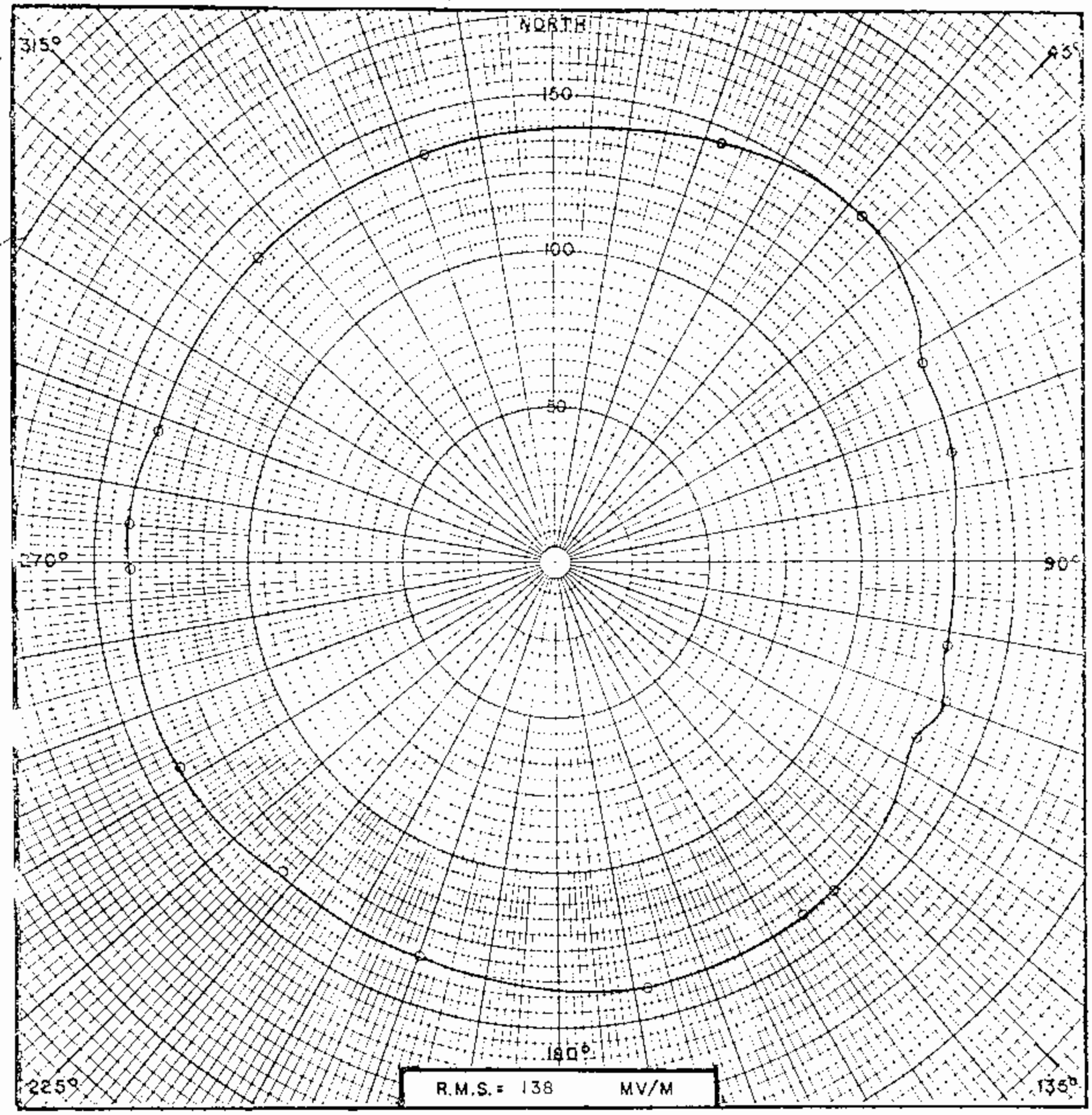
KWEB

Measured Non-DA
(9-26-68ct)

Station KWEB
Rochester, Minnesota

1kw,5kw-LS,DA-2,U
1270 kc

BL-12084
Granted
12-23-68
* license



PATTERN PARAMETERS

DIRECTIONAL
RADIATION PATTERN
NORTH CENTRAL VIDEO, INC.

[X] MEASURED [ ] PROPOSED

FREQ: 1270 (KHZ) POWER 0.5 (KW) [ ] DA-D

N. LAT. 43° 58' 48" [ ] DA-N

W. LONG. 92° 26' 51" [X] N-D

LOCATION: Rochester, Minnesota

DATE: July, 1968

ROBERT A JONES
CONSULTING ENGINEERS
LA GRANGE, ILLINOIS

FCC File No.BL-12084
Accepted 9-5-68

Station KWEB
Rochester, Minnesota

1270 kc

NEW

DIRECTIONAL ANTENNA DESCRIPTION SHEET

Station: (NEW) | Main Studio: Surfside Beach-Garden City, South Carolina

Frequency: 1270 kHz | Power: 5kw Day

Notification List No. 1773 | Date: March 29, 1978 | Class: III

GEOGRAPHICAL LOCATION OF THE CENTER OF THE ANTENNA SYSTEM:

North Latitude: 33° 34' 32"
West Longitude: 79° 02' 29"

ANTENNA CHARACTERISTICS

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

TOWERS:	W (#1)	C (#2)	E (#3)
HEIGHT ABOVE INSULATORS:	180 (83.7°)	291 (135.3°)	180 (83.7°)
DAY PHASING:	+131.9°	+13.8°	-126.1°
DAY FIELD RATIO:	0.601	1.00	0.557

SPACING AND ORIENTATION: With Center #2 tower as reference, the W(#1) tower is spaced 192.1' (89.3) on a line bearing 280.9° true and the E(#3)tower is spaced 190.2' (88.4°) on a line bearing 96.7° true.

GROUND SYSTEM: 120 - 186' to 193.6' equally spaced copper radials a 48' square ground screen about each tower. Radials are shortened and bonded to transverse straps along intersections between towers.

PREDICTED EFFECTIVE FIELDS AT RATED POWER:

	THEORETICAL RMS	THEORETICAL RSS	STANDARD RMS
Day	475.728 mv/m	607.412 mv/m	499.769 mv/m

NEW

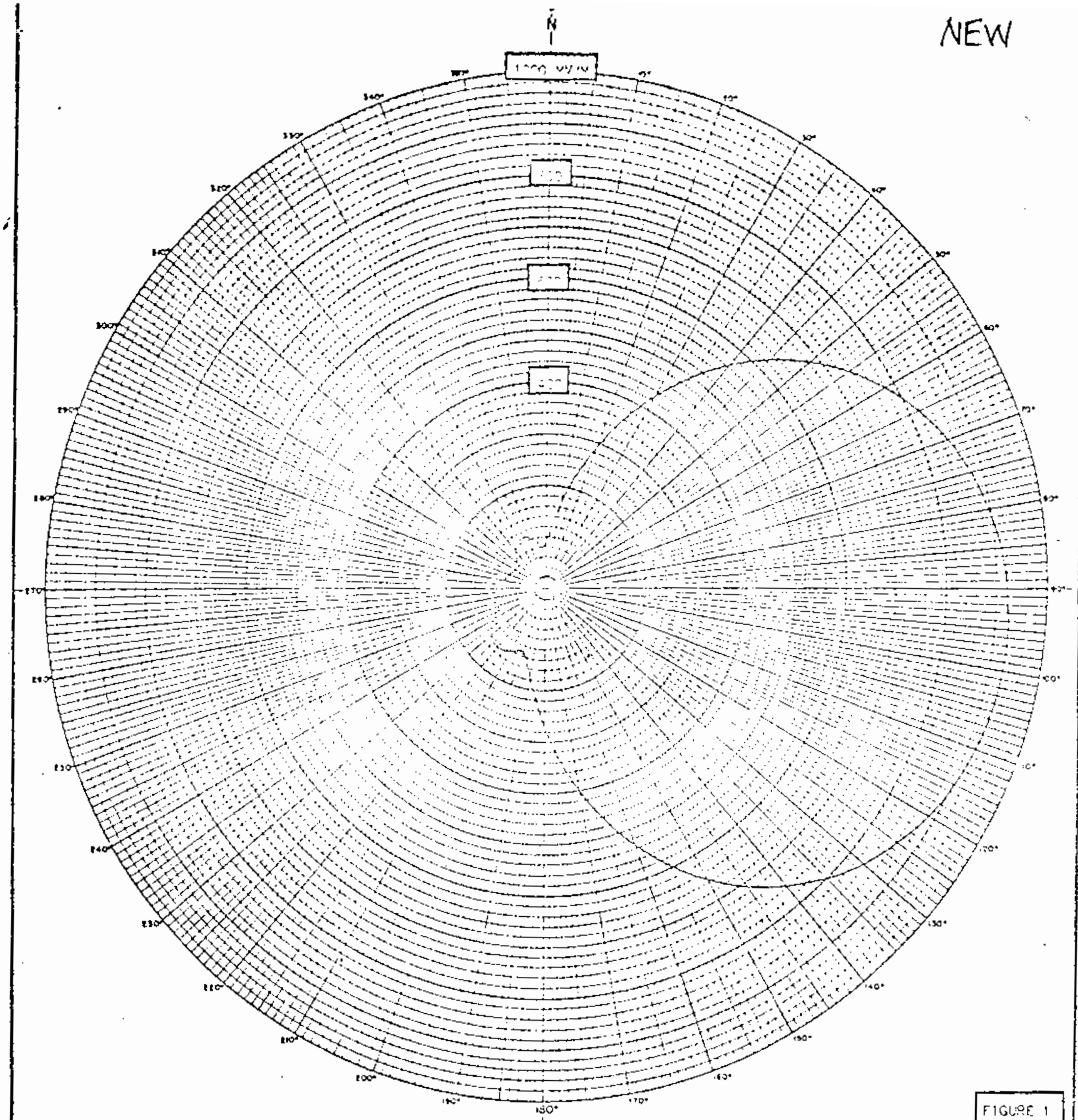


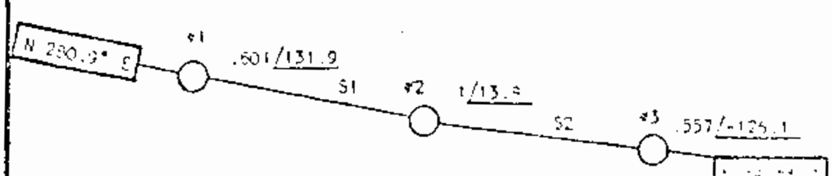
FIGURE 1

HORIZONTAL RADIATION PATTERN

ERSS: 607.412 MV/M
Q: 15.185 MV/M

NORTH

Standard Pattern



G1 = G3 = 83.7°
G2 = 135.3°

S1 = 99.3° = 192.1'
S2 = 93.4° = 190.2'

APPLICANT	LOWER GRAND STRAND BDST. CO.
LOCATION:	SURFSIDE BEACH, GARDEN CITY, S.C.
FREQUENCY:	1270 KC/S
POWER	5 KW. DA-D
LATITUDE:	33 DEG. 34 MIN. 32 SEC.
LONGITUDE:	79 DEG. 02 MIN. 29 SEC.
WHEN USED:	DAYTIME
RMS FIELD:	THEO.: 475.728 MV/M STD.: 499.769 MV/M
DATE:	JANUARY 1976

SILLIMAN, MOFFET & KOWALSKI
CONSULTING RADIO ENGINEERS
711 FOURTEENTH STREET N.W.
WASHINGTON D.C. 20005

DIRECTIONAL ANTENNA DESCRIPTION SHEET

Station: WCBC | Main Studio: Cumberland, Maryland

Frequency: 1270 kHz | Power: 1 kw Night 5kw Day

Notification List No. 1770 | Date: February 15, 1978 Class: III

GEOGRAPHICAL LOCATION OF THE CENTER OF THE ANTENNA SYSTEM:

North latitude: 39° 40' 28"
West longitude: 78° 46' 48"

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:	S(#1)	N(#2)
HEIGHT ABOVE INSULATORS:	190'	190' (88.3°)
NIGHT PHASING	0°	+115.5°
NIGHT FIELD RATIO:	1.0	0.9
DAY PHASING:	0°	+157°
DAY FIELD RATIO:	1.0	2.25

SPACING AND ORIENTATION: Towers are spaced 193.59' (90°) on a line bearing 347° 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.

PREDICTED EFFECTIVE FIELDS AT RATED POWER:

THEORETICAL

RMS

436 mv/m
184 mv/m

Note: Please retain the Daytime directional antenna radiation pattern notified for Station WKYR at Keyser, West Virginia, in United State Change List No. 1032 dated October 16, 1963 and attach to this Revised Description Sheet and Nighttime patterns. This notification concerns only a change in m.e.v.'s of radiation in the nighttime pattern with Daytime operation continued as previously notified.

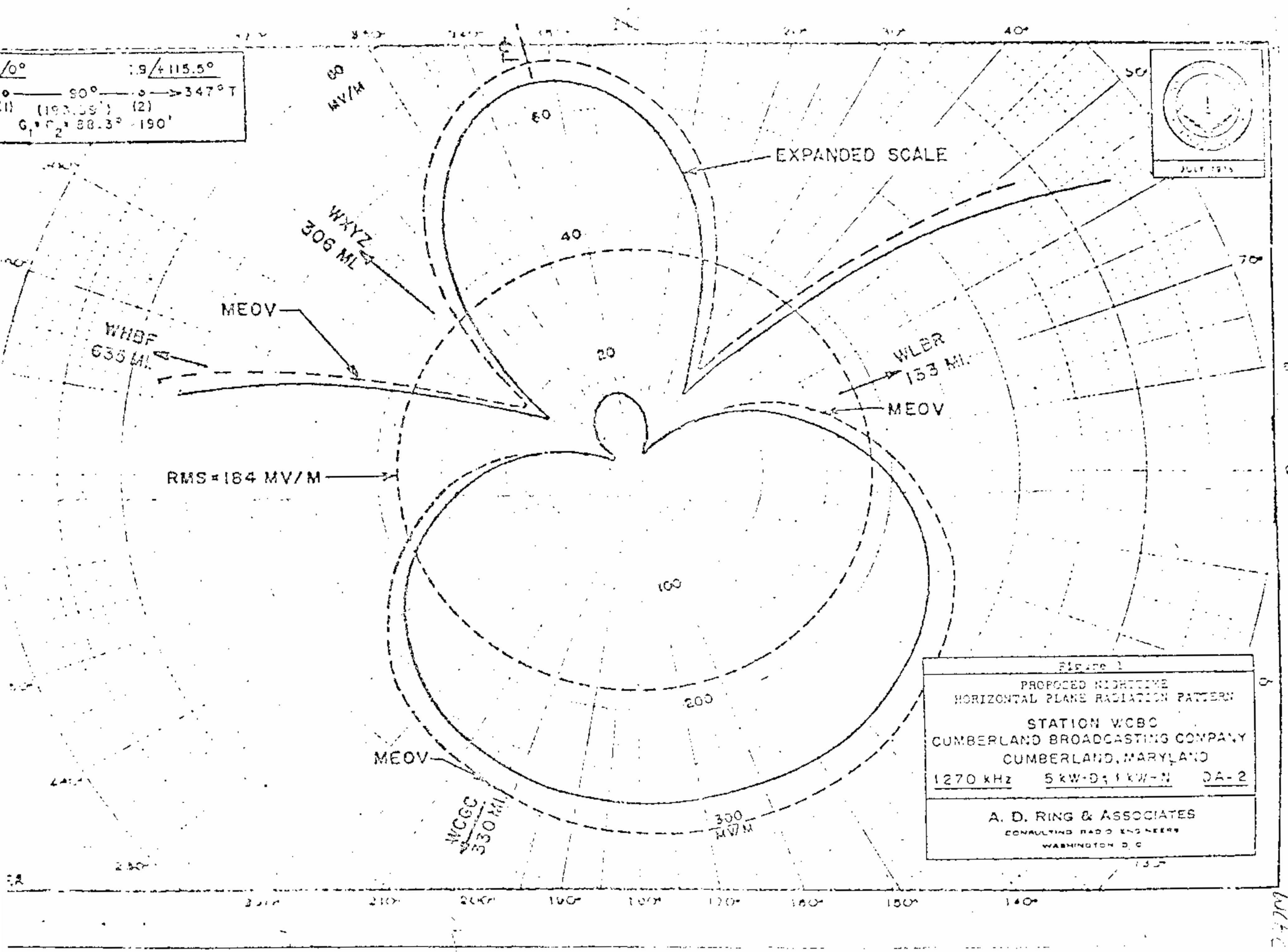


Figure 1
PROPOSED NIGHTTIME
HORIZONTAL PLANE RADIATION PATTERN
STATION WCBC
CUMBERLAND BROADCASTING COMPANY
CUMBERLAND, MARYLAND
1270 kHz
5 kW-D; 1 kW-N
DA-2
A. D. RING & ASSOCIATES
CONSULTING RADIO ENGINEERS
WASHINGTON D.C.
EXPANDED SCALE
WXYZ 306 MI.
WHBF 635 MI.
WLBR 153 MI.
WCGC 330 MI.
MEOV
MEOV
MEOV
RMS = 184 MV/M
60 MV/M
300 MV/M
20
40
60
100
200
1.9/+115.5°
90°
→347° T
(1)
(2)
190'
50
40°
70°
140°
150°
160°
170°
190°
200°
210°
240°
250°

WCGC

PROPOSED NIGHT
(4-24-56G)

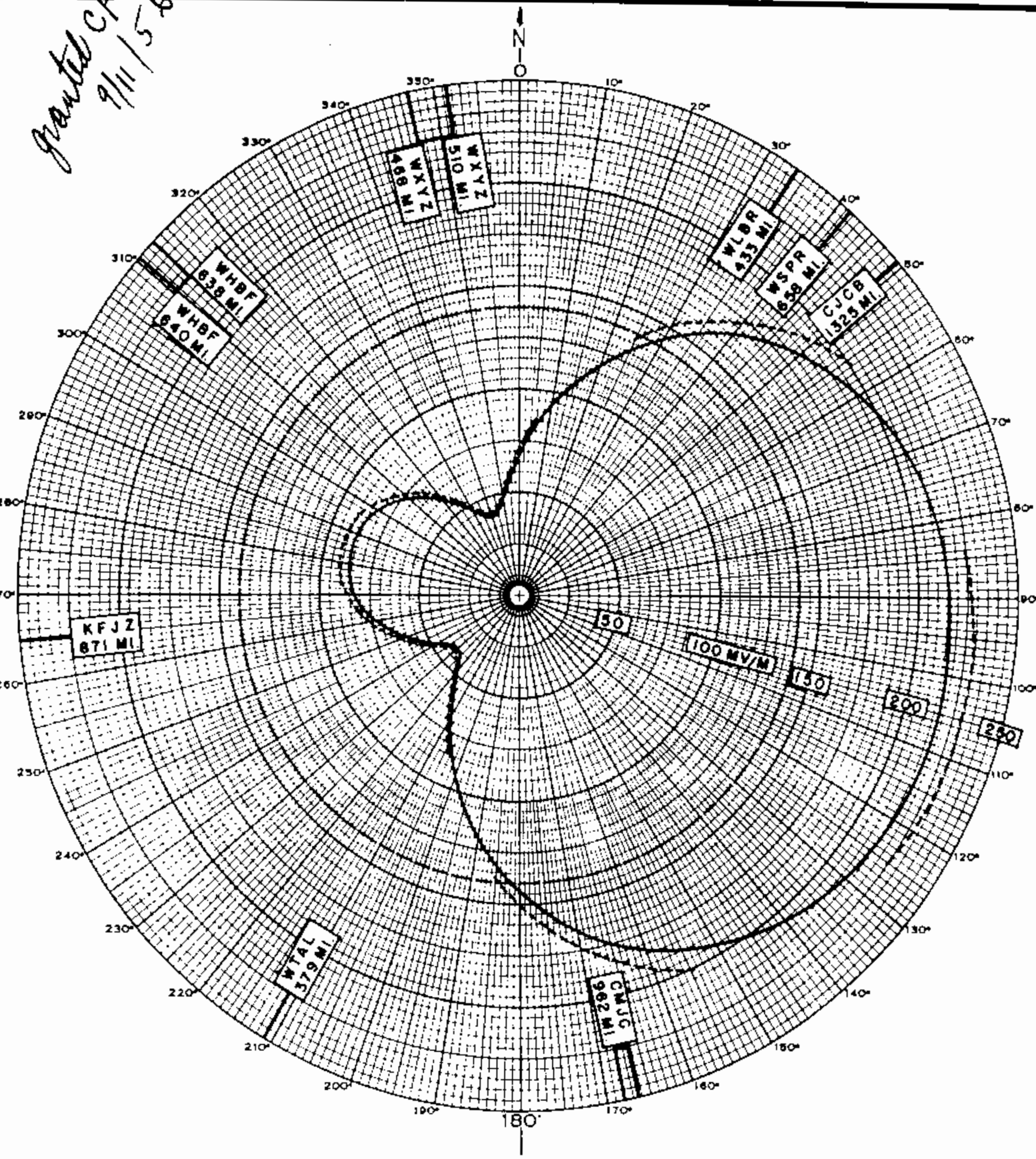
STATION WCGC
BELMONT, NORTH CAROLINA

500W-N, 1KW-D
DA-N, U [over]

1270 KC

R. APP. INCR. DAY PWR TO 5KW-ND 6-3-65

granted CP 9/11/58

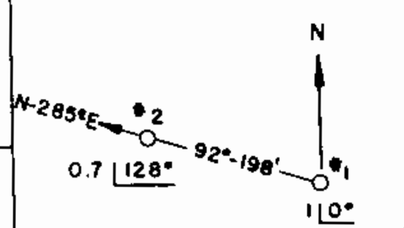


ERMS = 140 MV/M

--- MEOV VALUES

LATITUDE: 35° 15' 05"
LONGITUDE: 81° 03' 09"

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



G = 92.8°

FIGURE 4

NIGHTTIME HORIZONTAL PLANE PATTERN

RADIO STATION WCGC
BELMONT, N.C.

1270 KC 0.5, 1KW-LS, DA-N

WCGC

MEASURED NIGHT
(9/25/57g)

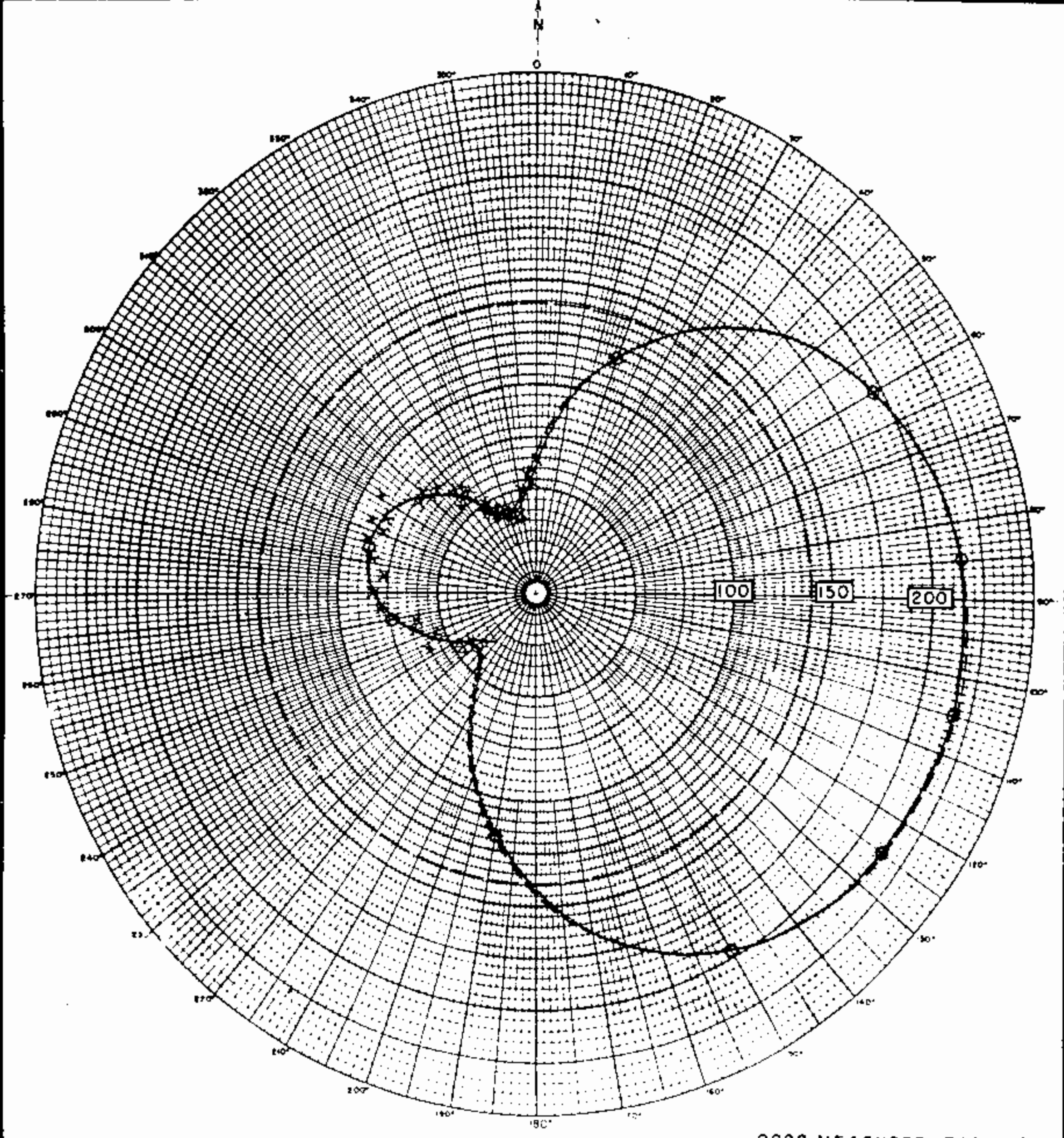
Station WCGC
Belmont, North Carolina

500w, 1kw-LS, DA-N, U
1270 KC

Granted license 11/8/57 for increase in power & DA-N

INCR DAY PWR
6-3-65

DENIED 12-22-65
INCR DAY

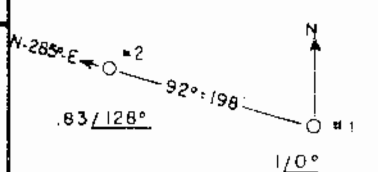


E_{RMS} = 138.7 MV/M

LATITUDE: 35° 15' 05"
LONGITUDE: 81° 03' 26"

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

ANTENNA PARAMETERS



G: 92.8°

FIGURE 19

MEASURED NIGHTTIME
HORIZONTAL POLAR PATTERN

RADIO STATION WCGC
BELMONT, N.C

1270 KC

0.5KW, 1KW-LS, DA-N

FCC File No. BL-6746
Accepted 9/10/57

WCGC
Belmont, North Carolina

1270 KC

WCGC

MEASURED NON-DA (9/25/57g)

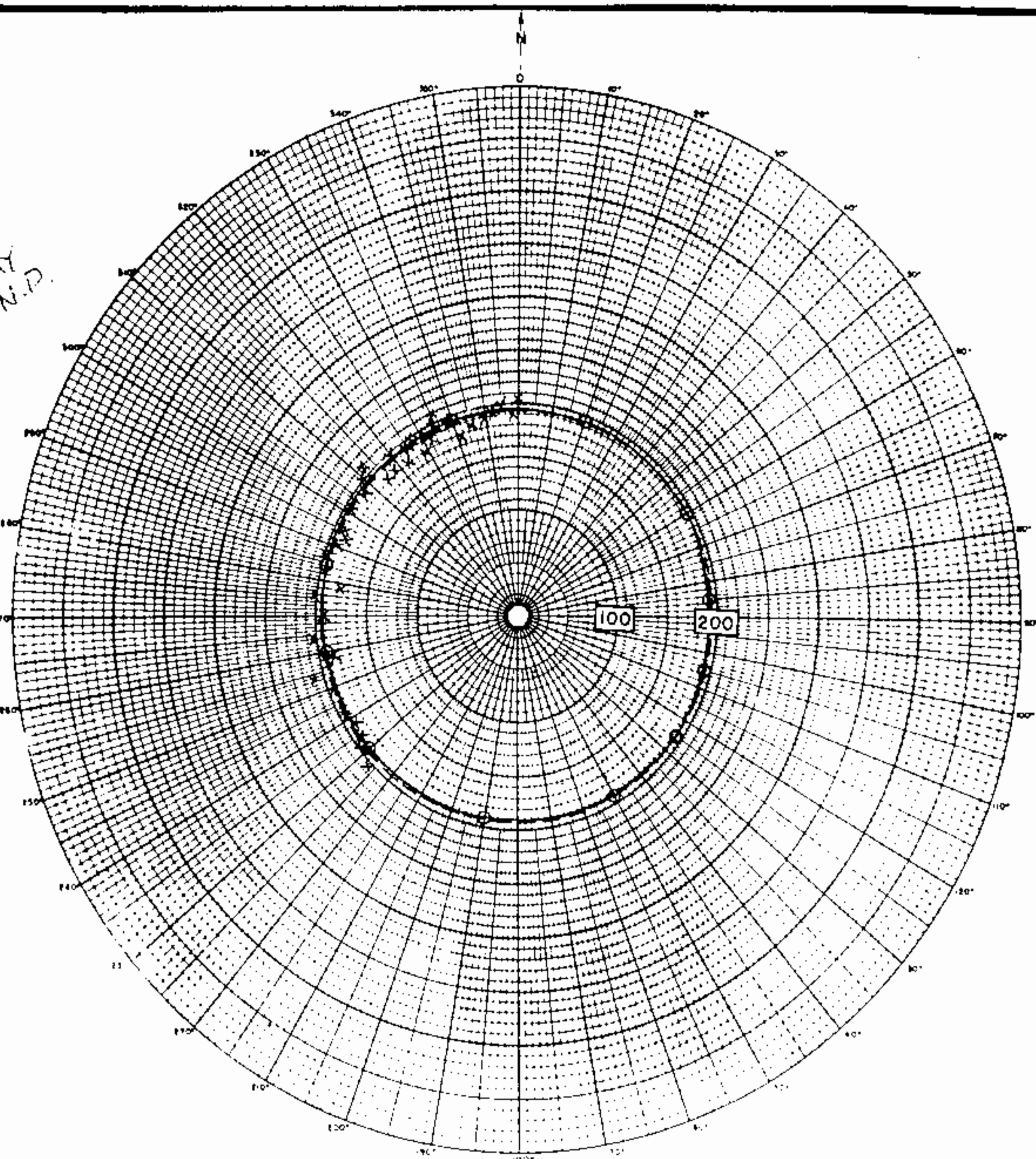
Station WCGC
Belmont, North Carolina

500w, 1kw-LS, DA-N, U
1270 KC

Granted license 11/8/57 for increase in power & DA-N

GR. APP. INCR. DAY PWR. TO 5 KW-N.D. 6-3-65

DENIED 12-22-65 INCR. DAY

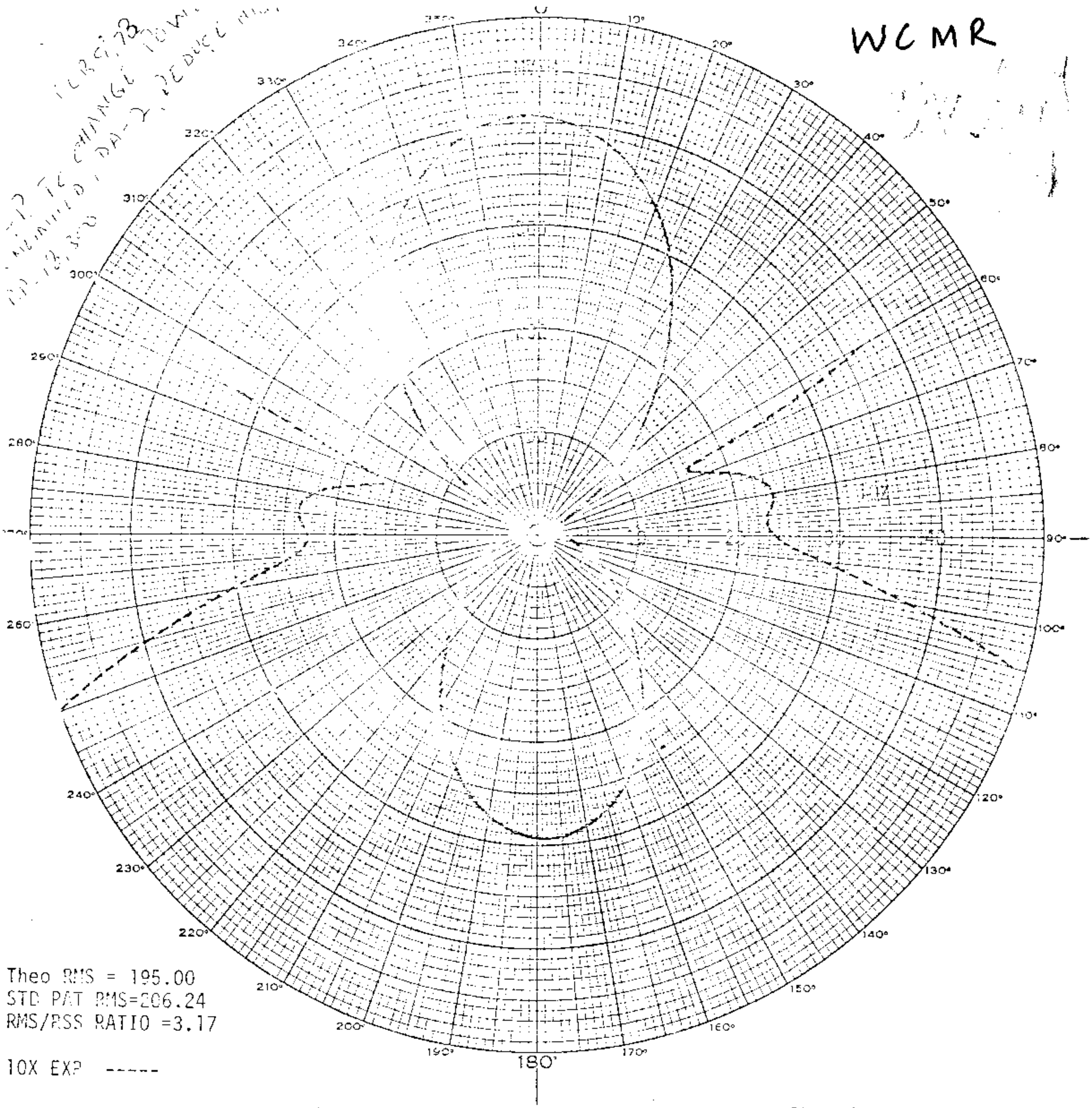


E_{RMS} = 193.5 MV/M

0000 MEASURED RADIALS
XXXX CROSS RADIALS

LATITUDE: 35° 15' 05" LONGITUDE: 81° 03' 26"	ANTENNA PARAMETERS	FIGURE 17 MEASURED NON-DA HORIZONTAL POLAR PATTERN
JOHN H. MULLANEY Consulting Radio Engineers Washington, D. C.	G = 92.8°	RADIO STATION WCGC BELMONT, N.C. 1270 KC 0.5KW, 1KW-LS, DA-N

WCMR



Theo RMS = 195.00
STD PAT RMS=206.24
RMS/RSS RATIO =3.17

10X EXP -----

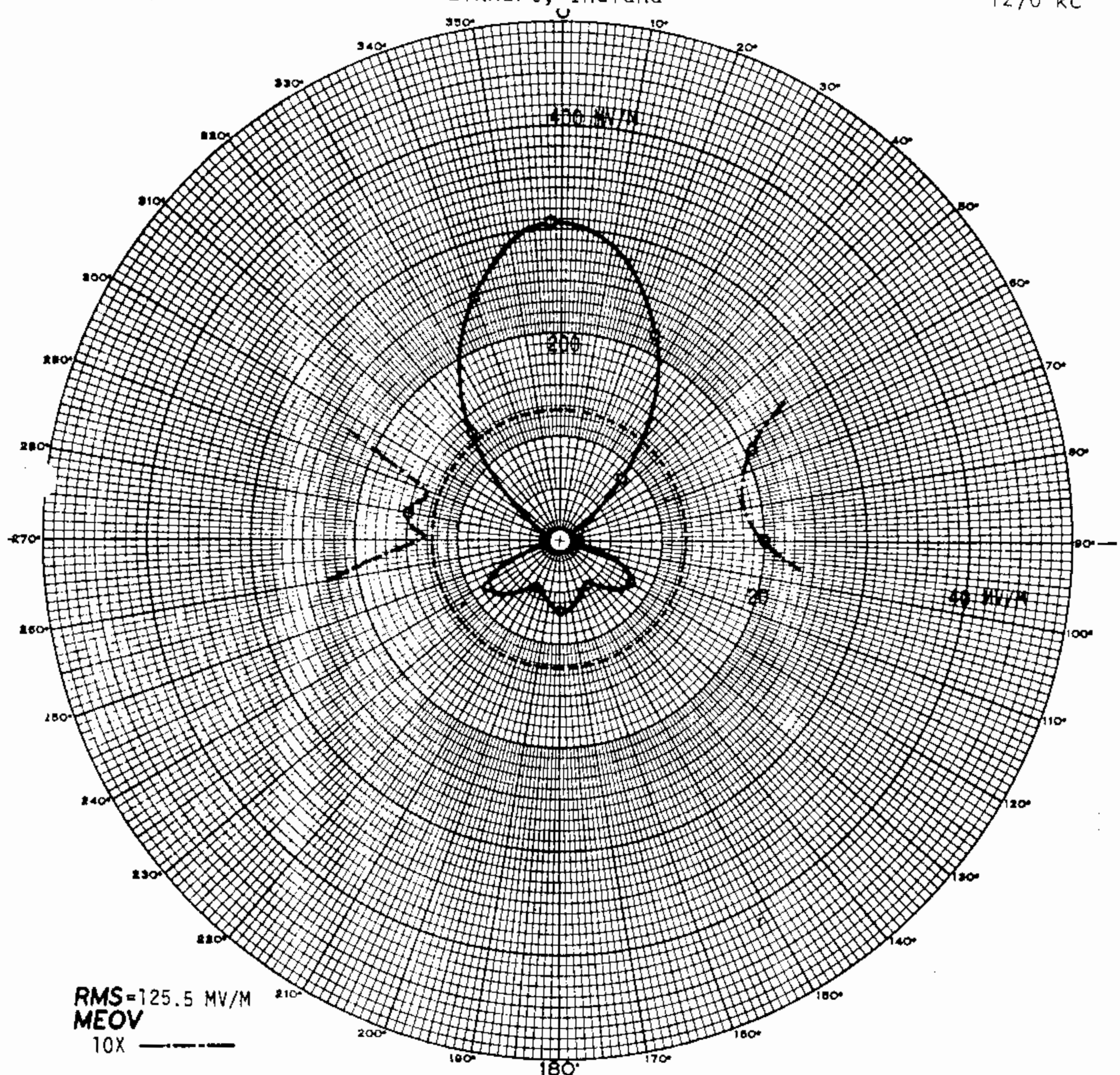
TOWER PLACEMENT SKETCH	PATTERN PARAMETERS					FIGURE 6	STATION DATA
O #1	TOWER NO	ELECTRICAL HEIGHT	SPACING	PHASING	FIELD RATIO	PROPOSED NIGHTTIME DIRECTIONAL PATTERN	CALL WCMR
O #2	1	102.2	REF	0.0	1.00	***	FREQ 1270 KHz
O #3	2	102.2	86	-180	2.06	WCMR	POWER 1.0 KW
O #4	3	102.2	172	[illegible]	1.50	***	TYPE DA-2
	4	102.2	256	158	[illegible]	OCTOBER 1971	TIME NIGHT
	5					***	LAT. [illegible]
	6					STANDARD [illegible]	LONG. [illegible]
							E.H. [illegible] RADIO ENGINEER [illegible]

WCMR

Measured Night
(11-28-67ct)

Station WCMR
Elkhart, Indiana

500w,5kw-LS,DA-2,U
1270 kc



RMS=125.5 MV/M
MEOV
10X

TOWER PLACEMENT SKETCH	PATTERN PARAMETERS	FIGURE 5	STATION DATA
LOT=358°T. No. 1 1.00/0° S No. 2 2.22/-178° S No. 3 2.30/+22.5° S No. 4 1.03/-165° s=86° G's=102.2°		WCMR MEASURED NIGHTTIME ********** SEPTEMBER - 1967 θ^o = 0°	CALL WCMR FREQ 1270 KHz. POWER 0.5 Kw TYPE DA-2 TIME Night LAT. N-41-37-18 LONG. W-85-57-37 E.H.MUNN,JR. RADIO ENGINEER COLDWATER, MICH.

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

DAYTIME OPERATION ☐ NIGHTTIME OPERATION ☒

FCC File No.BL-11801
Accepted 11-2-67

Station WCMR
Elkhart, Indiana

1270 kc

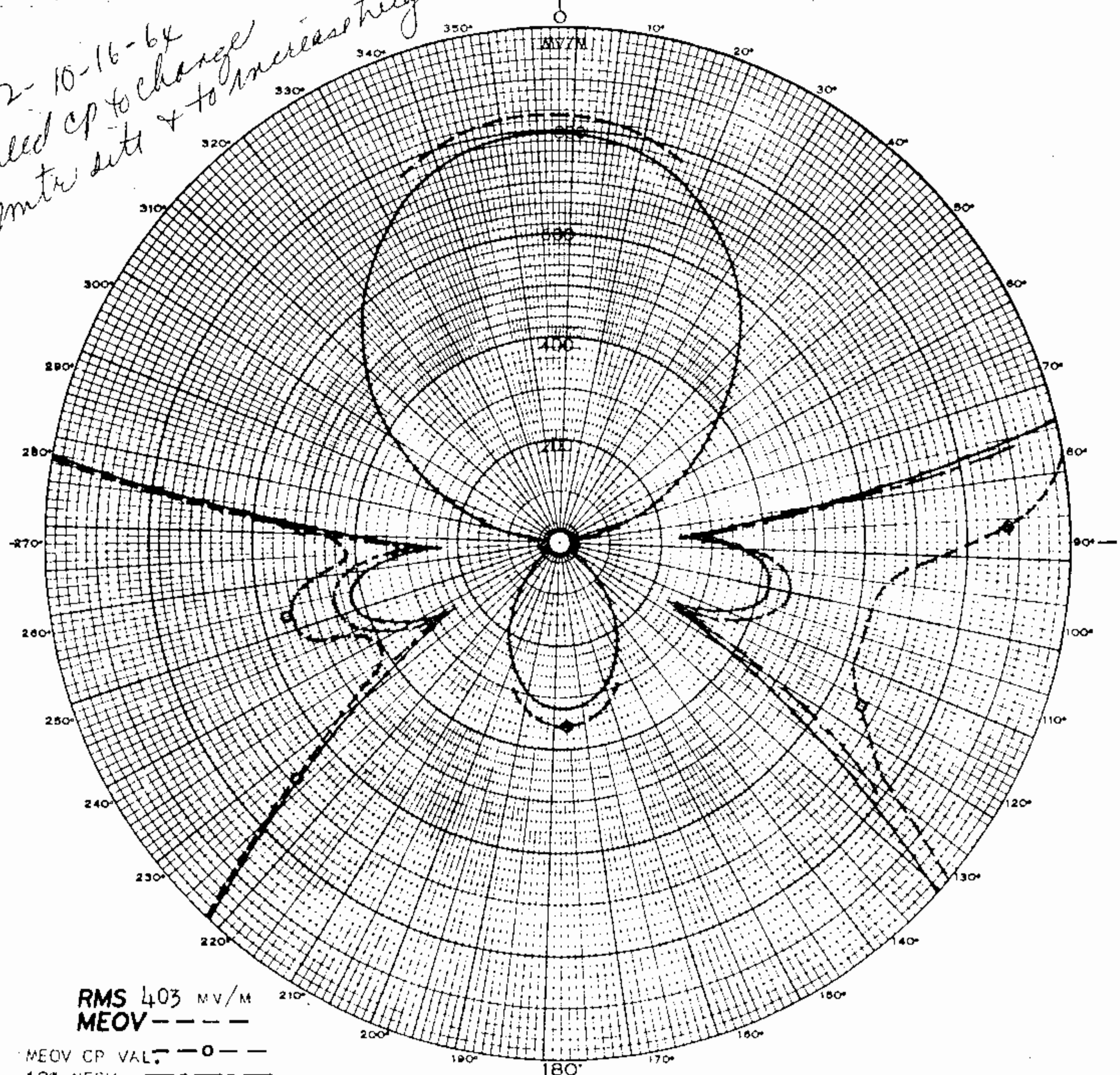
WCMR

Proposed Day
(8-28-64ct)

Station WCMR
Elkhart, Indiana

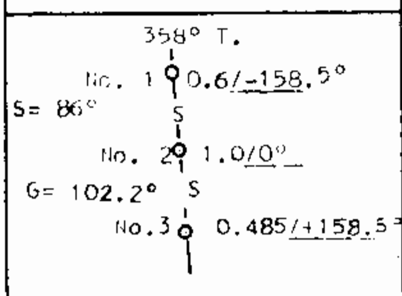
5kw,DA-D,D
1270 kc

#202- 10-16-64
granted cp to change
Xmtr site & to increase height



RMS 403 MV/M
MEOV ― ― ― ―
MEOV CP VAL. ―o― ―
10% MECV
MINOR LOBES

TOWER PLACEMENT SKETCH	PATTERN PARAMETERS	FIGURE 2-A	STATION DATA



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

DAYTIME OPERATION ☒ NIGHTTIME OPERATION ☐

WCMR PROPOSED DAY PATTERN FROM NEW TRANSMITTER SITE

$\theta°$ 0°

CALL WCMR
FREQ 1270 kc/s
POWER 5 KW
TYPE DA
TIME DAY
LAT. N-41-37-18
LONG. W-85-57-37

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

FCC File No.BP-16283
Accepted 8-13-64

Station WCMR
Elkhart, Indiana

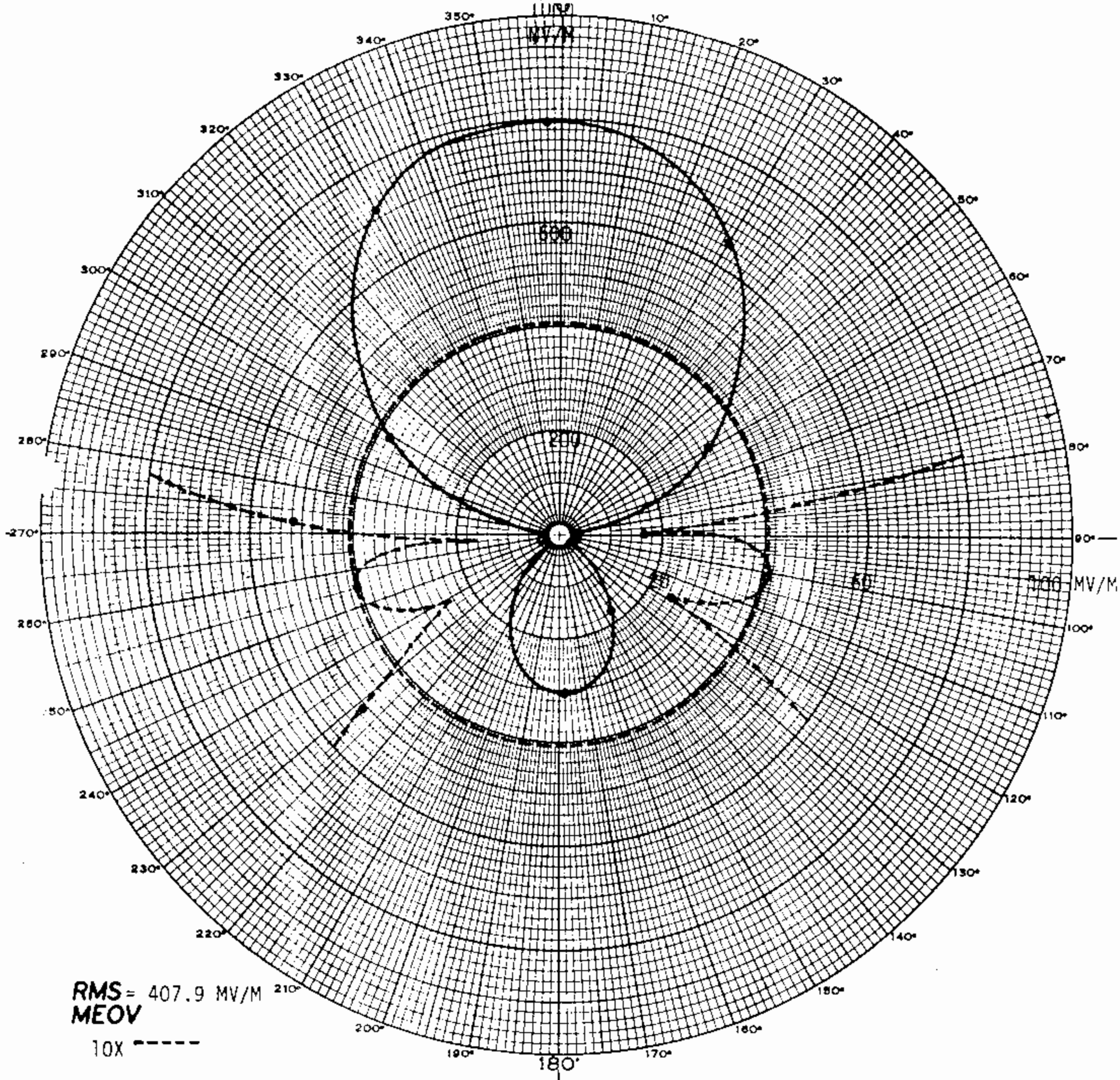
1270 kc

WCMK

Measured Day
(11-28-67ct)

Station WCMR
Elkhart, Indiana

500w, 5kw-LS, DA-2, U
1270 kc



TOWER PLACEMENT SKETCH	PATTERN PARAMETERS					FIGURE 3	STATION DATA
358° T.	TOWER No.	ELECTRICAL HEIGHT G°	SPACING S°	PHASING Ψ°	FIELD RATIO F	WCMR MEASURED DAYTIME	CALL WCMR
No. 1 0.34/-173.5°	1						FREQ 1270 KHz.
S	2						POWER 5 Kw
No. 2 1.0/0°	3					*********	TYPE DA-2
S	4						TIME DAY
No. 3 0.65/+148°	5					SEPTEMBER 1967	LAT. N-41-37-18
	6						LONG. W-85-57-37
	7						E.H.MUNN, JR. RADIO ENGINEER COLDWATER, MICH.
	8						
	9						
G=102.2° s = 86°	10					θ° = 0°	
	DAYTIME OPERATION ■		NIGHTTIME OPERATION ☐				

FCC File No. BL-11801
Accepted 11-2-67

Station WCMR
Elkhart, Indiana

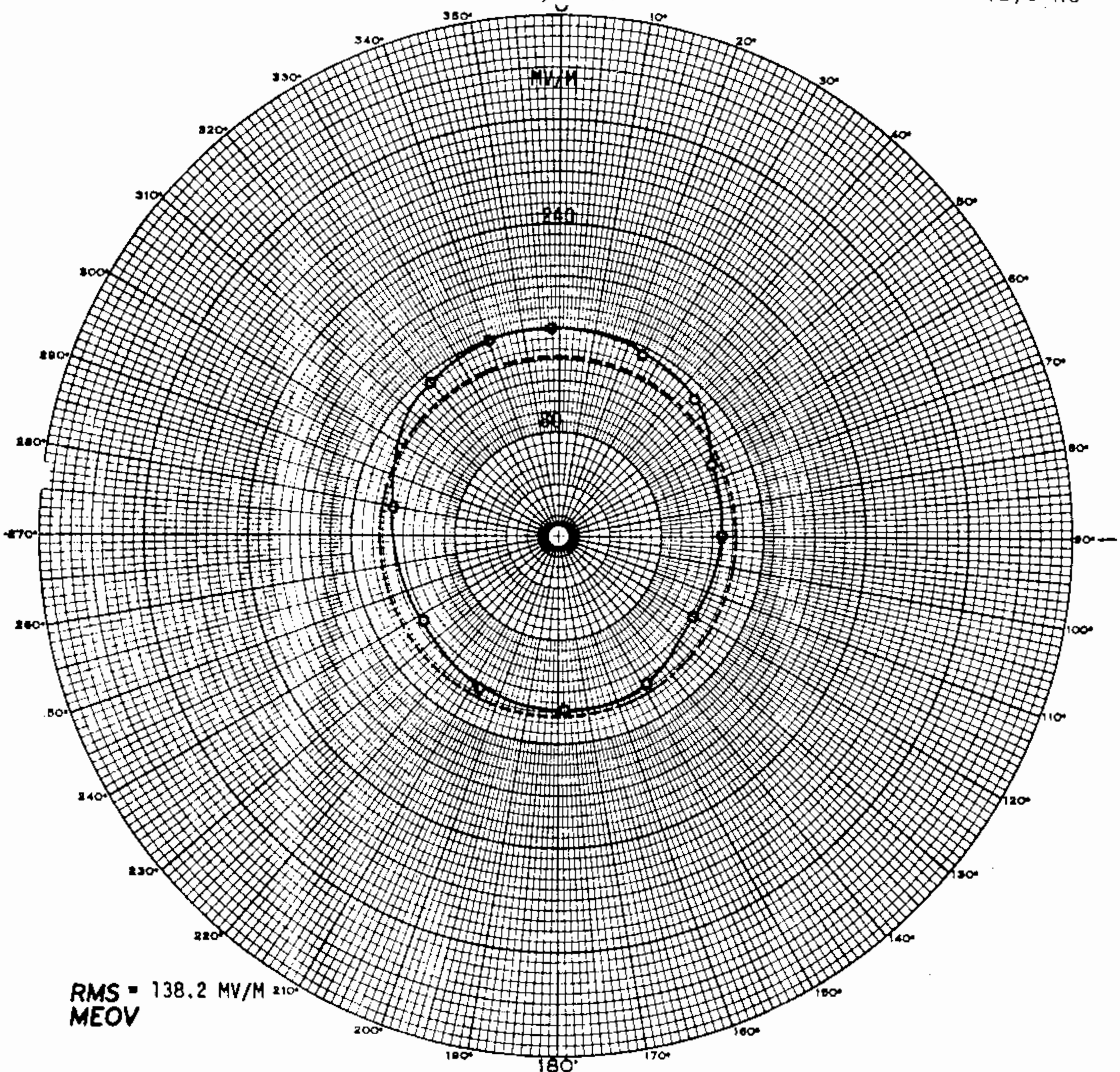
1270 kc

WCMR

Measured Non-DA
(11-28-67ct)

Station WCMR
Elkhart, Indiana

500w,5kw-LS,DA-2,U
1270 kc



TOWER PLACEMENT SKETCH	PATTERN PARAMETERS	FIGURE 6	STATION DATA
358° T. No. 1 NU No. 2 NDA No. 3 NU No. 4 NU G's=102.2° s=86°		WCMR MEASURED NON-DIRECTIONAL (USING NORTH- CENTER TOWER) ************** SEPTEMBER - 1967	CALL WCMR FREQ 1270 KHz. POWER 0.5 Kw TYPE DA-2 TIME *** LAT. N-41-37-18 LONG. W-85-57-37 E.H.MUNN,JR. RADIO ENGINEER COLDWATER, MICH.

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

DAYTIME OPERATION ☐ NIGHTTIME OPERATION ☐ θ°

FCC File No.BL-11801
Accepted 11-2-67

Station WCMR
Elkhart, Indiana

1270 kc

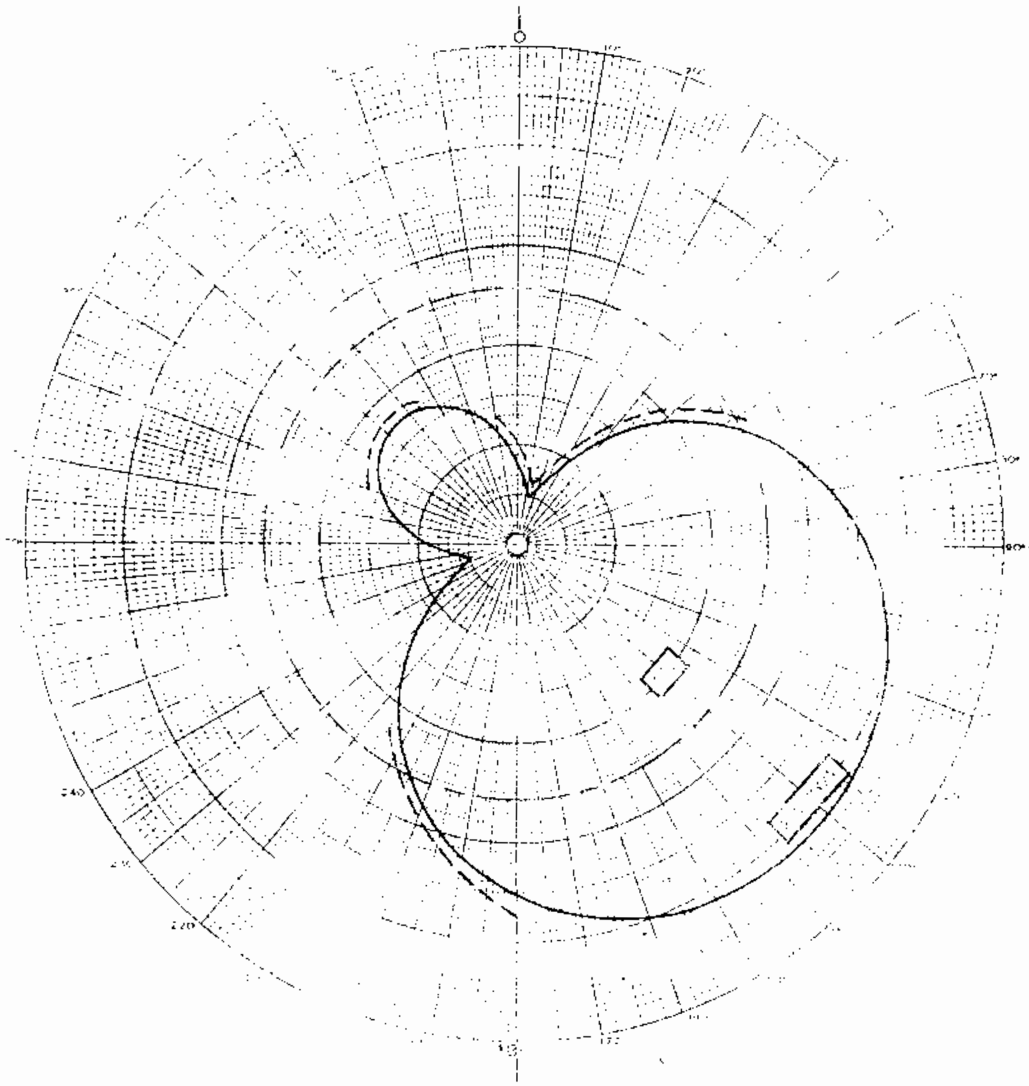
W[illegible]

Proposed Day
(5-25-67ct)

Station WDVL
Vineland, New Jersey

500w,DA-D,D
1270 kc

6-26-67
GRANTED
CP
to change
ANT. System



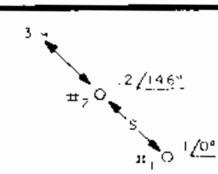
E_{RMS} = 128.5 MV/M

MEOV = - - - - - -

LATITUDE 39° - 29' - 53"
LONGITUDE 75° - 04' - 31"

JOHN H. MULLANEY
AND
ASSOCIATES

ANTENNA PARAMETERS



S = [illegible]
S_1 = 70° = 150'
[illegible] = 105.9° = 225'

FIGURE 1

PROPOSED DAYTIME
DIRECTIONAL PATTERN

RADIO STATION WDVL
VINELAND, NEW JERSEY

1270 KHz 500 W, DA-D

FCC File No.BP-17723
Accepted 5-11-67

Station WDVL
Vineland, New Jersey

1270 kc

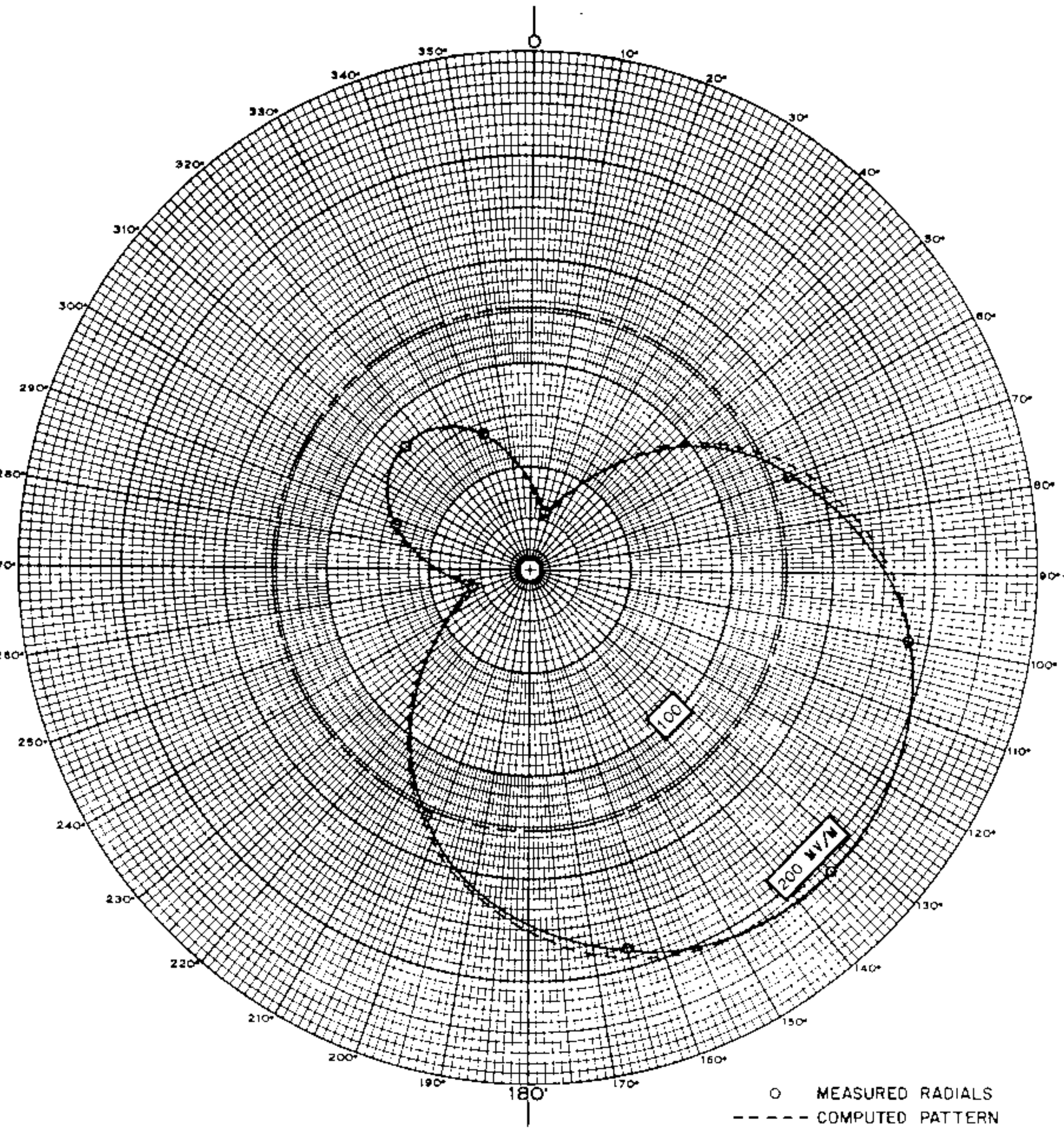
WDVL

Measured Day
(3-28-68ct)

Station WDVL
Vineland, New Jersey

500w, DA-D, D
1270 kc

4-9-68
GRANTED
LICENSE



E_{RMS} = 126.5 MV/M

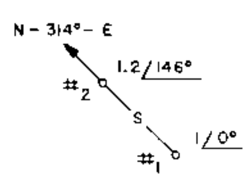
DATE OCTOBER 1967

LATITUDE: 39° 29' 53"

LONGITUDE: 75° 04' 31"

JOHN H. MULLANEY
AND
ASSOCIATES

ANTENNA PARAMETERS



S = 70°
G_1 = 70° = 150'
G_2 = 105.9° = 225'

FIGURE 33

MEASURED DAYTIME
DIRECTIONAL PATTERN

RADIO STATION WDVL
VINELAND, NEW JERSEY

1270 KHz

500 W, DA-D

FCC File No. BL-11912
Accepted 3-25-68

Station WDVL
Vineland, New Jersey

1270 kc

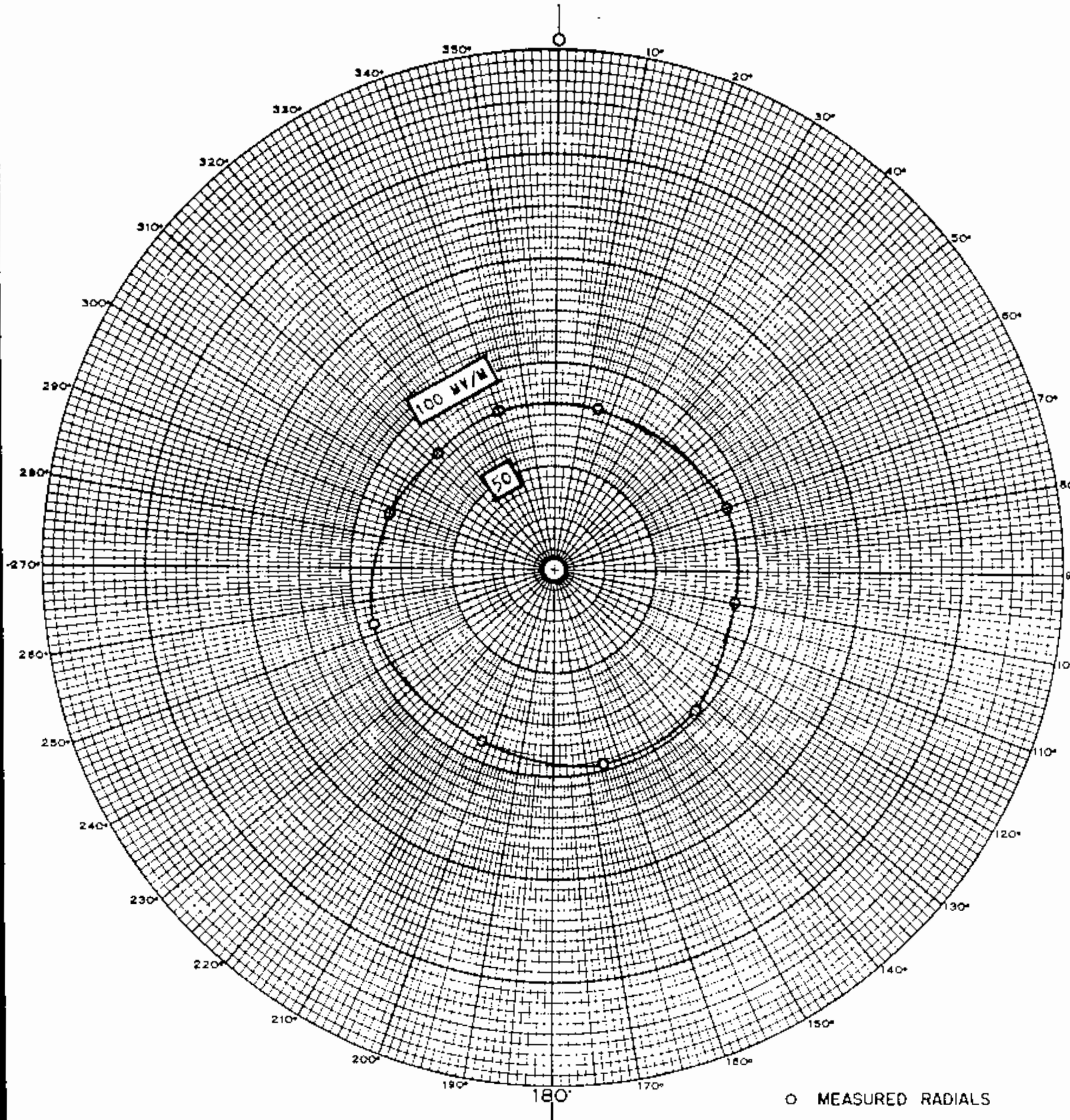
WDVL

Measured Non-DA
(3-28-68ct)

Station WDVL
Vineland, New Jersey

500w,DA-D,D
1270 kc

4-9-68
GRANTED
LICENSE



E_{RMS} = 88.5 MV/M

DATE OCTOBER 1967

LATITUDE: 39° 29' 53" LONGITUDE: 75° 04' 31"	ANTENNA PARAMETERS	FIGURE 32 MEASURED NONDIRECTIONAL HORIZONTAL PATTERN
JOHN H. MULLANEY AND ASSOCIATES	G_2 = 105.9° = 225°	RADIO STATION WDVL VINELAND, NEW JERSEY 1270 KHz 500W, DA-D

FCC File No.BL-11912
Accepted 3-25-68

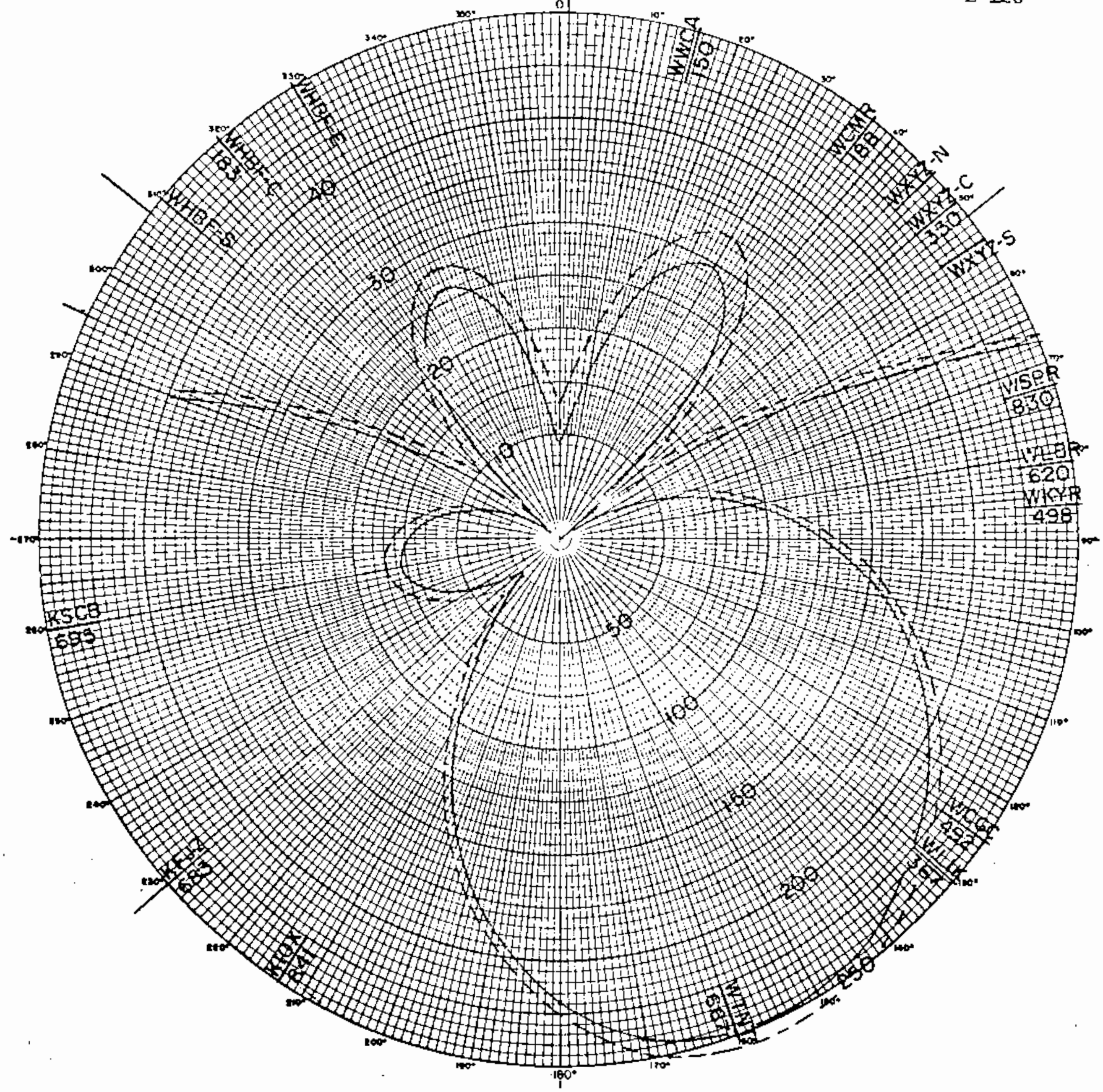
Station WDVL
Vineland, New Jersey

1270 kc

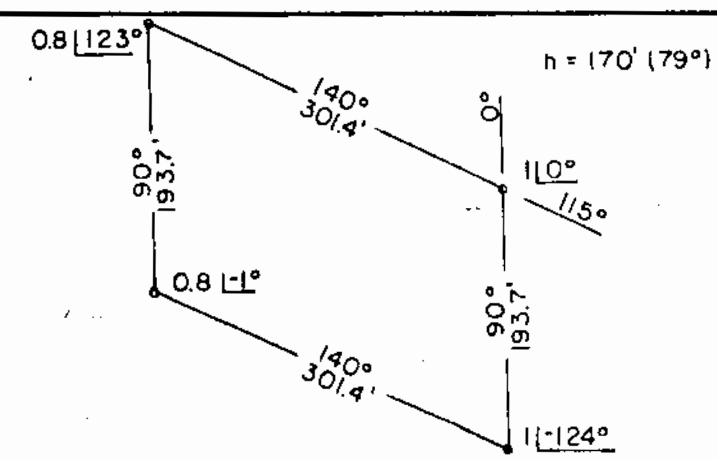
Proposed Night
(5-28-68ct)

Station WEIC
Charleston, Illinois

500w, 1kw-LS, DA-2, U
1270 kc



0° HORIZONTAL RADIATION PATTERN



APPLICANT	WEIC
LOCATION	Charleston, Illinois
FREQUENCY	1270 KC/S
POWER	1 KW-LS, 0.5 KW, DA-2
LATITUDE	39 DEG. 30 MIN. 18 SEC.
LONGITUDE	88 DEG. 12 MIN. 54 SEC.
WHEN USED	Night
R.M.S. FIELD	125 MV/M
DATE	3/20/67

RALPH J. BITZER
CONSULTING RADIO ENGINEERS
ST. LOUIS, MISSOURI

FCC File No. BP-17784
Accepted 5-3-68

Station WEIC
Charleston, Illinois

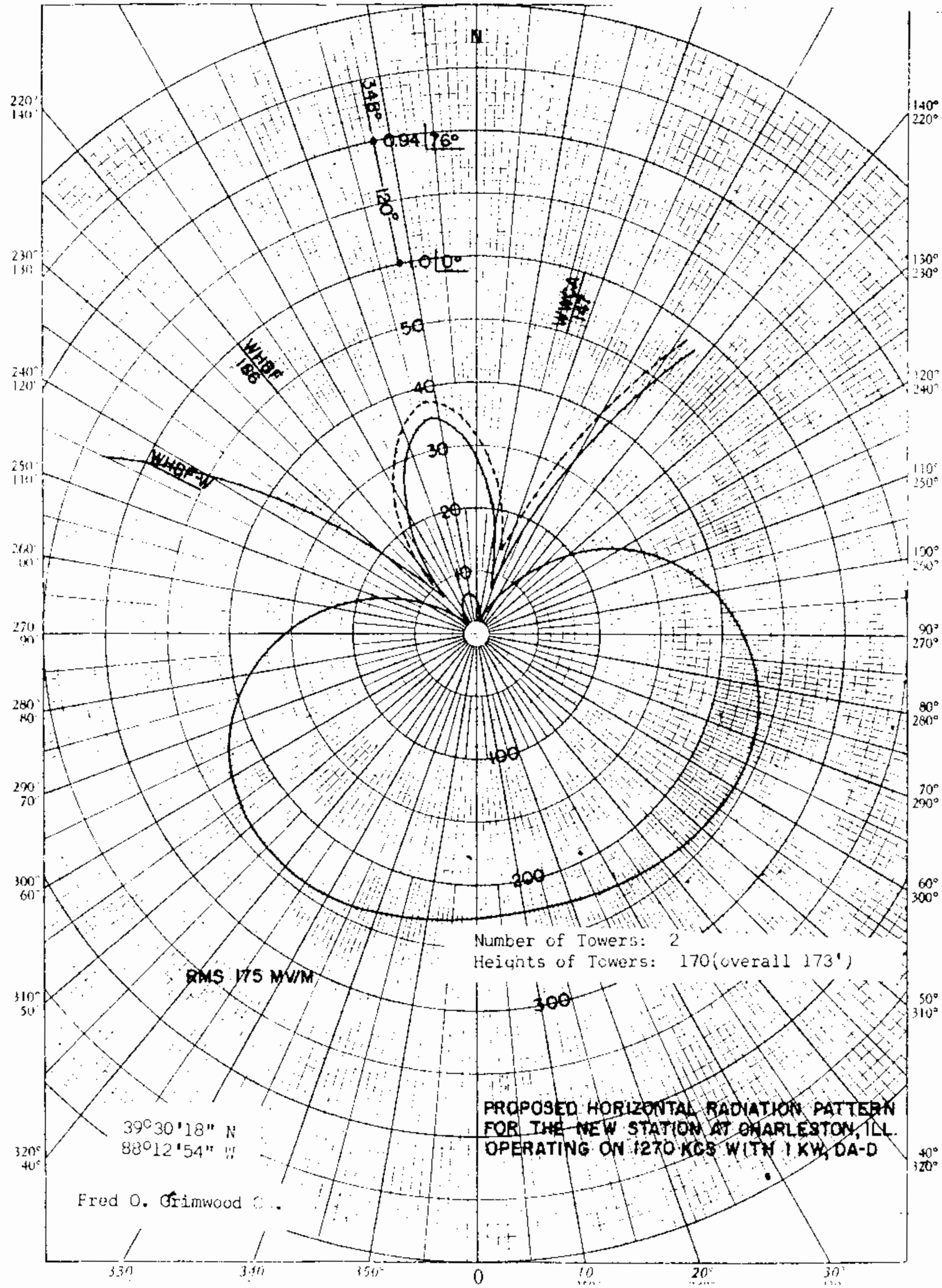
1270 kc

WEIC

Station WEIC

PROPOSED DAY (1/12/54G)

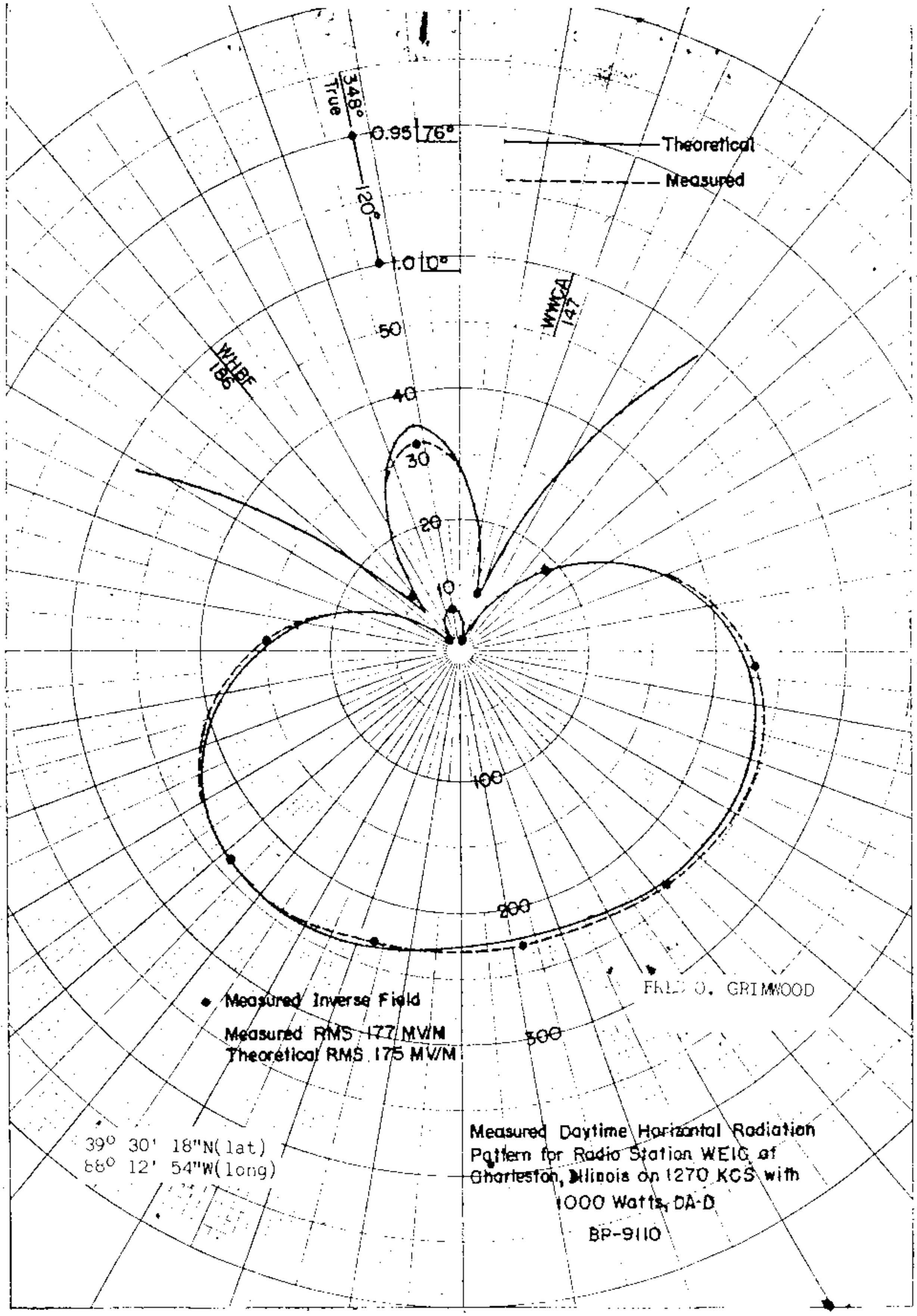
Friendly City Broadcasters Charleston, Ill. 1KW, D, DA-D 1270 kc



FCC File No. BP-9110 Accepted 1/4/54 Friendly City Broadcasters 1270 kc

WEIC

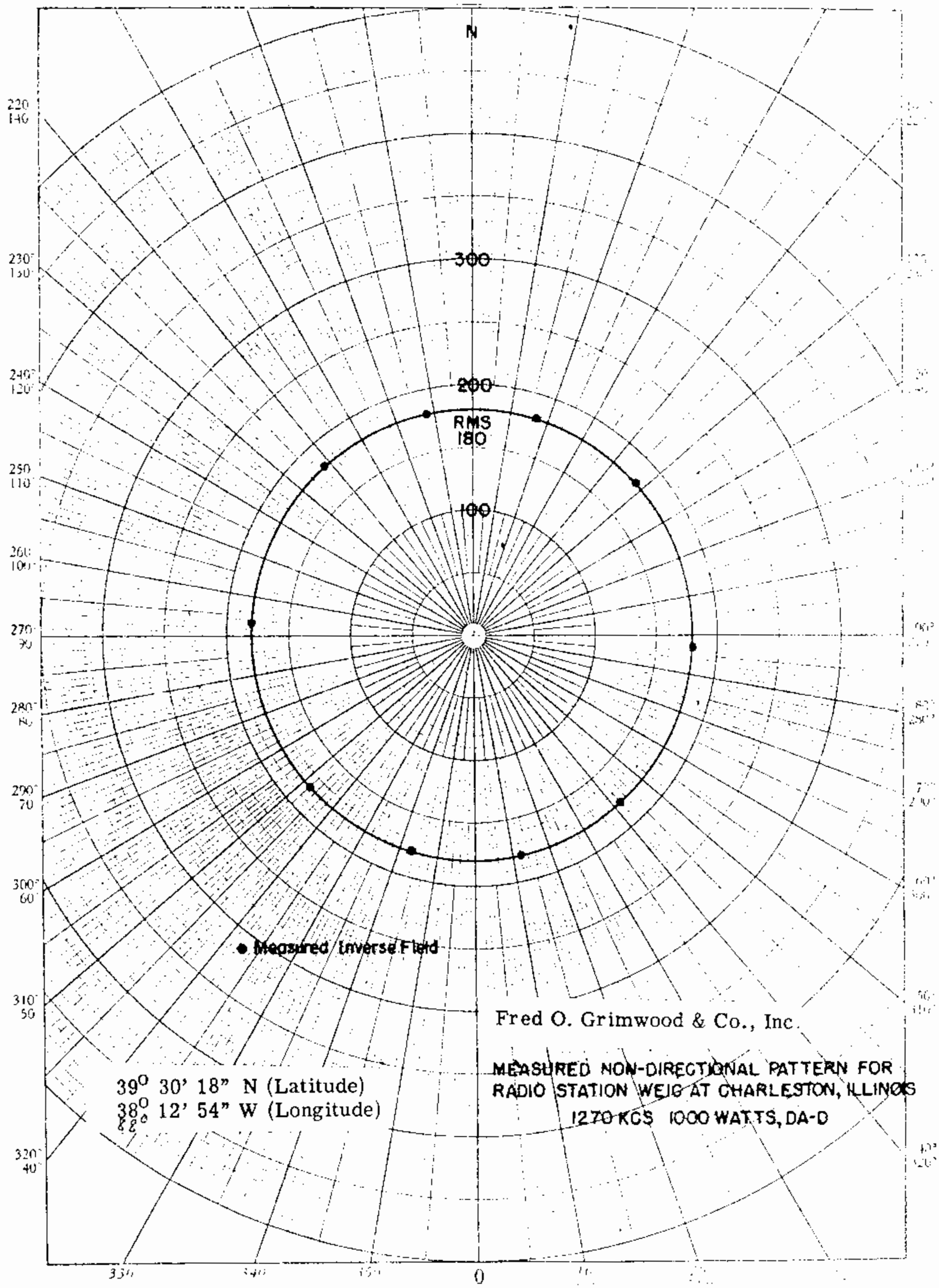
MEASURED DAY (2/4/55G) | STATION WEIC CHARLESTON, ILLINOIS | 1 KW DA-D, D | 1270 KC

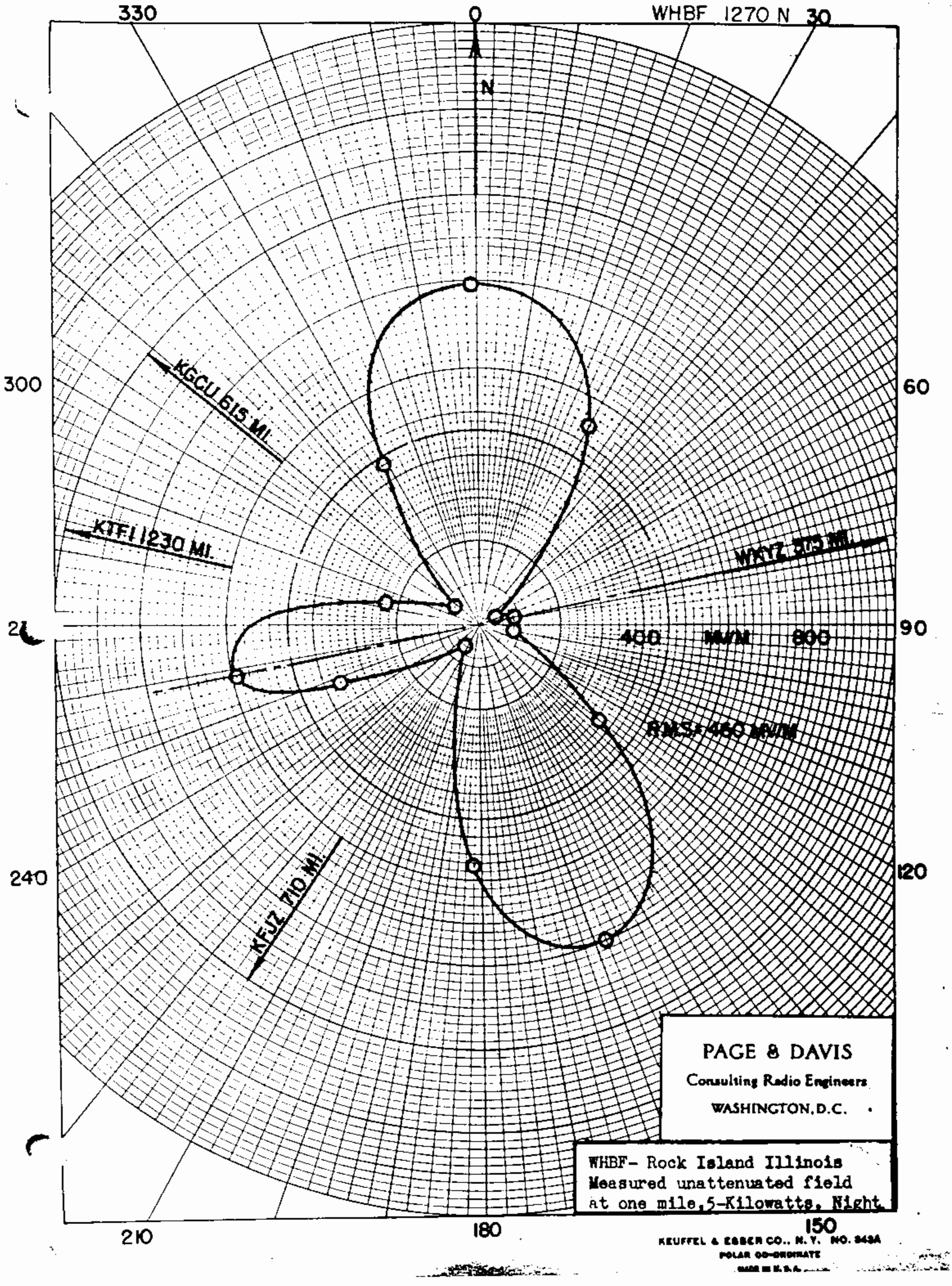


FILE NO. BL-5543 (Amended) | Accepted 1/18/55 Not on public notice | WEIC, Charleston, Illinois 1270 KC

WEIC

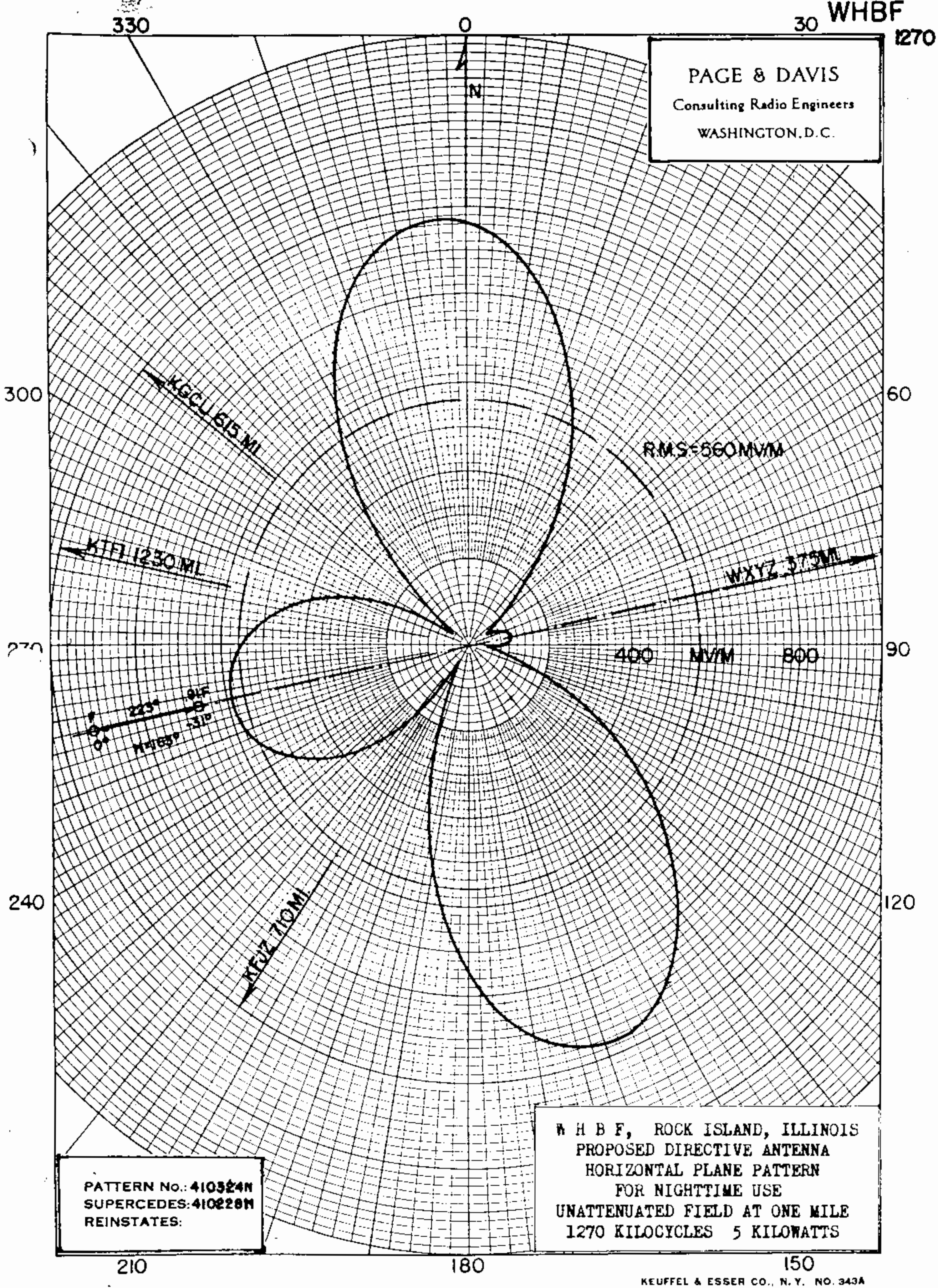
Measured Non-Directional (1-21-55G) | WEIC Charleston, Illinois | 1 KW DA-D | 1270 KC





PAGE & DAVIS
Consulting Radio Engineers
WASHINGTON, D.C.

WHBF- Rock Island Illinois
Measured unattenuated field
at one mile, 5-Kilowatts, Night.

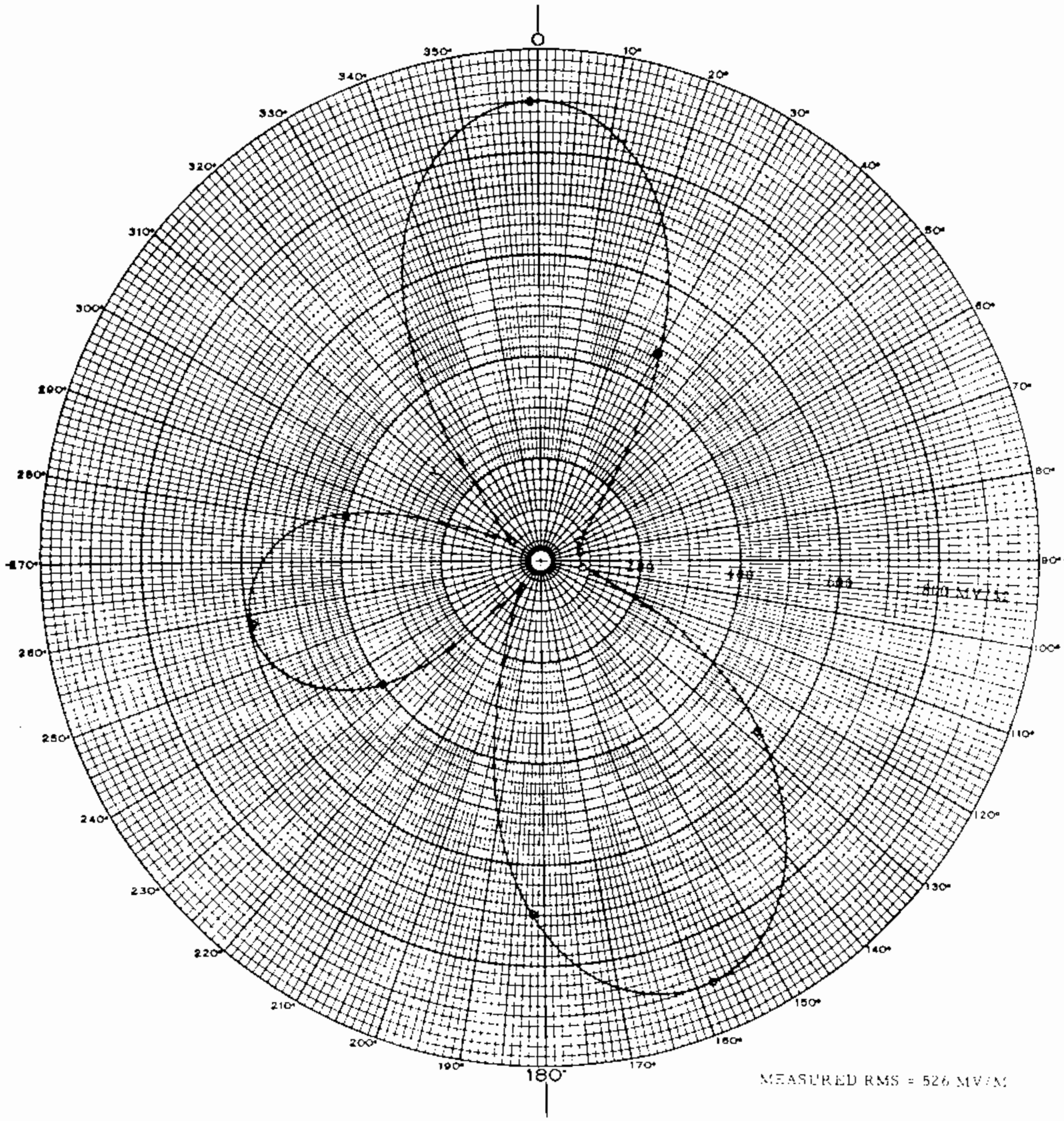

WHBF
1270
330
0
30
N
PAGE & DAVIS
Consulting Radio Engineers
WASHINGTON, D.C.
300
60
KGCU 615 MI.
RMS=560MV/M
KTFI 1230 MI.
WXYZ 375MI.
270
90
400
MV/M
800
223°
0.1F
-31°
0°
240
120
KFVZ 710MI.
W H B F, ROCK ISLAND, ILLINOIS
PROPOSED DIRECTIVE ANTENNA
HORIZONTAL PLANE PATTERN
FOR NIGHTTIME USE
UNATTENUATED FIELD AT ONE MILE
1270 KILOCYCLES 5 KILOWATTS
PATTERN No.: 410524N
SUPERCEDES: 410228N
REINSTATES:
210
180
150
KEUFFEL & ESSER CO., N.Y. NO. 343A

WHBF

Measured Night
(4-29-68ct)

Station WHBF
Rock Island, Illinois

5kw,DA-N,U
1270 kc



MEASURED RMS = 526 MV/M

OPERATING CONSTANTS

G = 350' = 162.5°

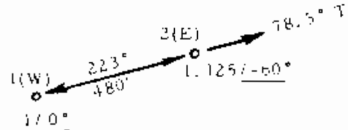


FIGURE F
MEASURED HORIZONTAL PLANE PATTERN
RADIO STATION WHBF
ROCK ISLAND, ILLINOIS
1270KC 5KW DA-N
AUGUST 1967

JOHN CREUTZ
Consulting Engineer

North Latitude 41° 29' 40"
West Longitude 90° 28' 00"

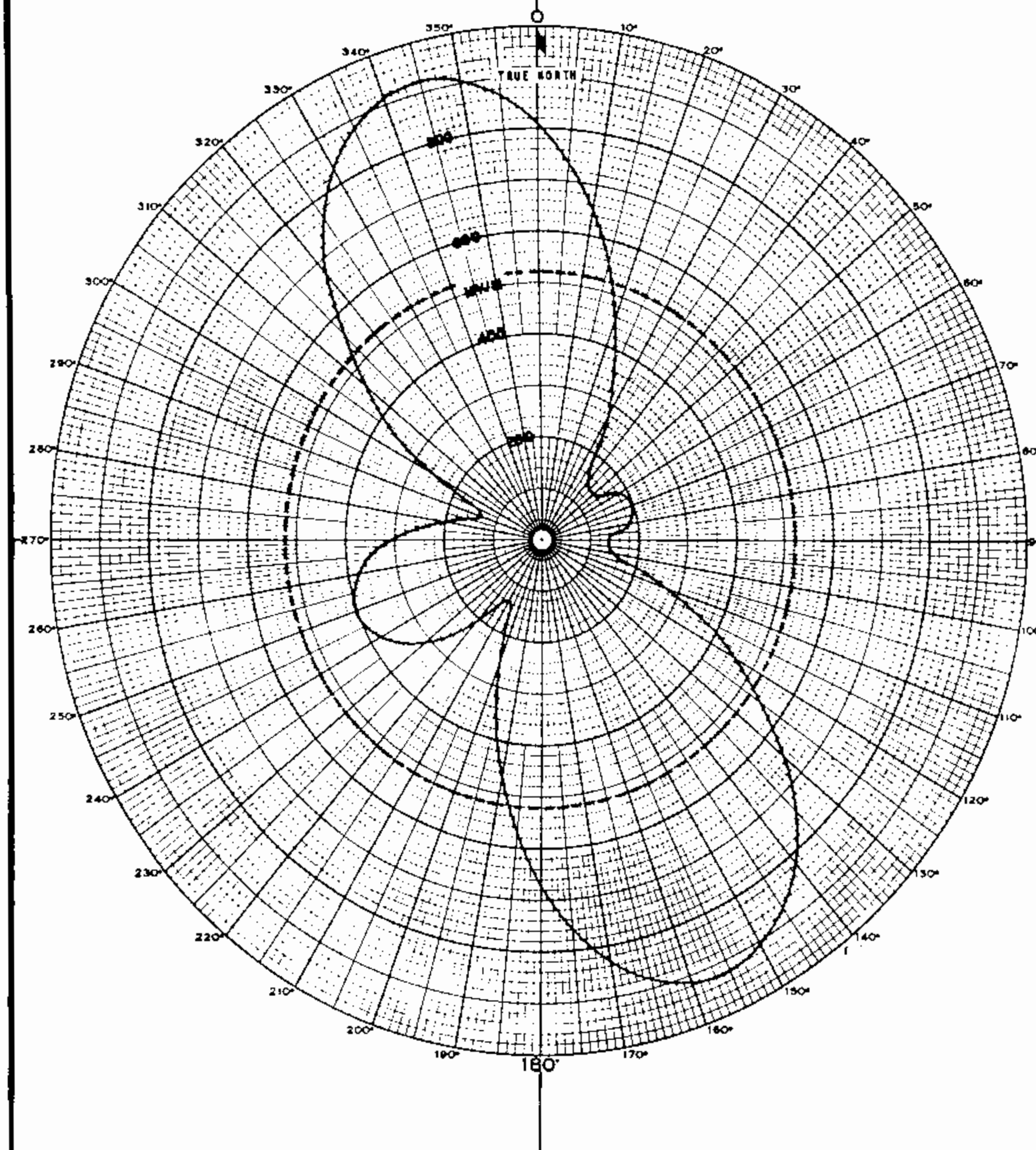
FCC File No.BZ-6786
Accepted 4-11-68

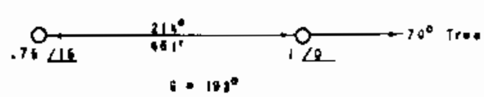
Station WHBF
Rock Island, Illinois

1270 kc

WHLD
1270

JUN 7 1948 G





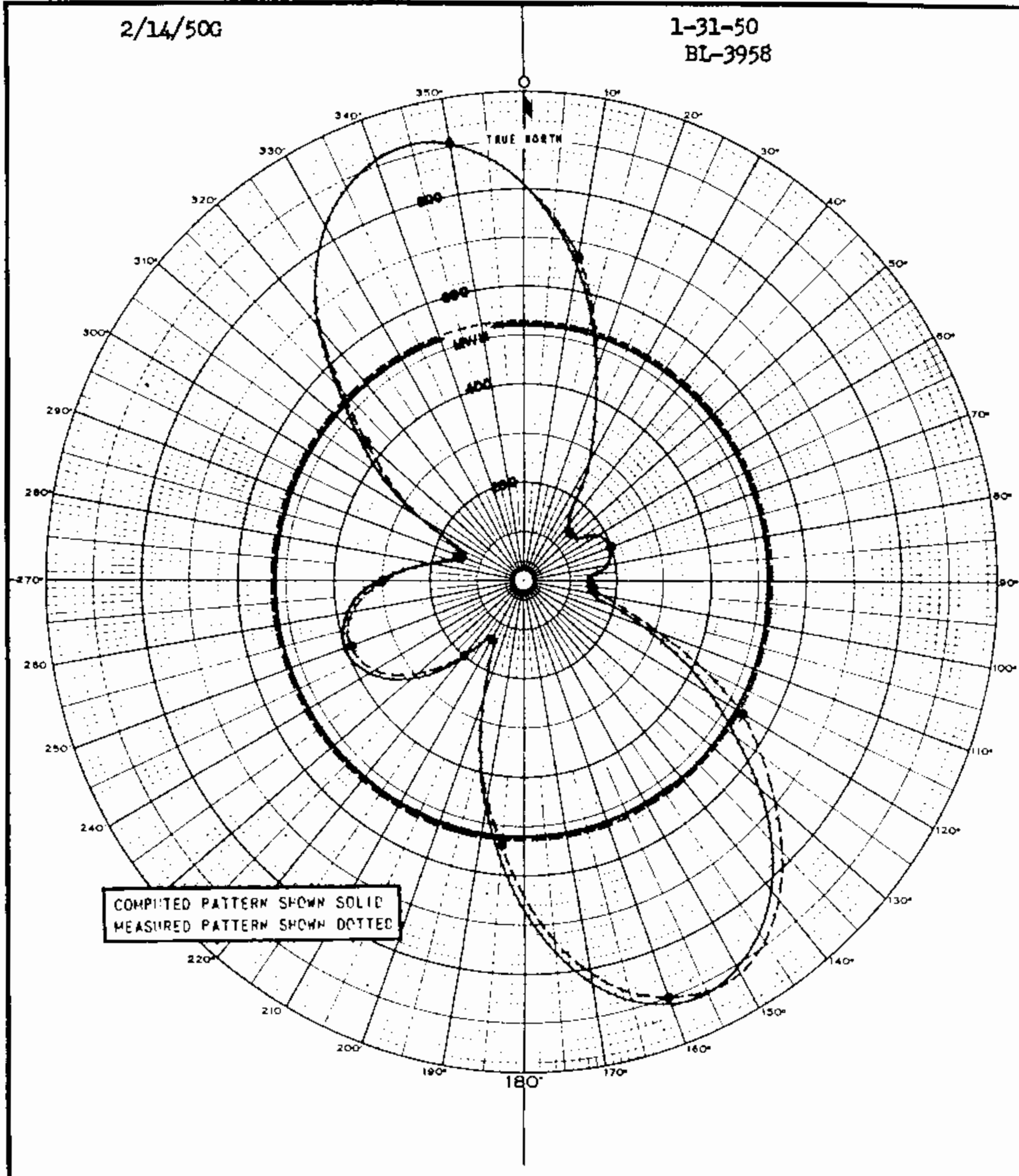
NIAGARA FALLS GAZETTE PUBLISHING CO.
RADIO STATION WHLD
PRESENT: 1290KC - 1 KW - DAYTIME
PROPOSED: 1270KC - 5 KW - DAYTIME
NIAGARA FALLS, NEW YORK

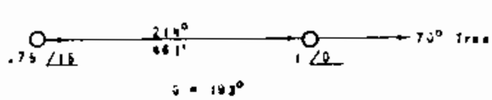
HORIZONTAL RADIATION PATTERN

LAT: 43° 0' 16" LON: 78° 59' 25"	RMS = 520	DATE: FEBRUARY 1948
RUSSELL P. MAY Consulting Radio Engineers Washington 4, D. C.	EXHIBIT NO. 3	

BP-3879 Amendment Recd. 5-11-48

MEASURED DAYTIME | WHLD, NIAGARA FALLS, N. Y. | 5kw, DA, D | 1270 kc





NIAGARA FALLS GAZETTE PUBLISHING CO.
WHLD - 1270 KC - 5 KW - DA - D
NIAGARA FALLS, NEW YORK
COMPUTED AND MEASURED PATTERNS

LAT: 43° 0' 18"
LON: 78° 59' 35"

COMPUTED RMS = 520
MEASURED RMS = 528

DATE: JANUARY 20, 1950

RUSSELL P. MAY
Consulting Radio Engineers
Washington 4, D. C.

EXHIBIT NO. 4

11-21-61
granted CP for
DA-2 operation

PROPOSED DAY
(2-26-60g)

Station WLBR — 1kw, 5kw-LS, DA-2,U
Lebanon, Pennsylvania — 1270 KC

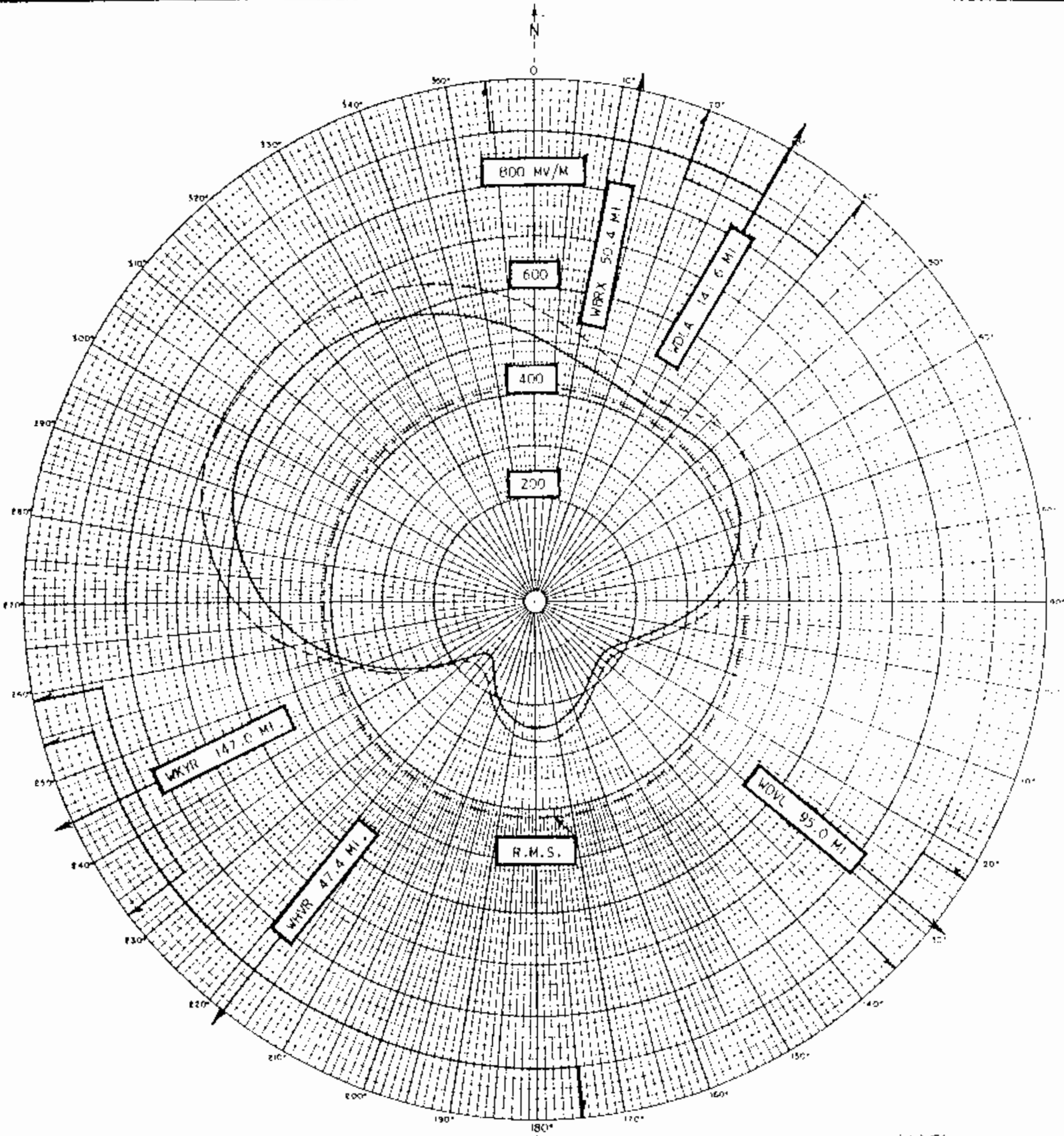
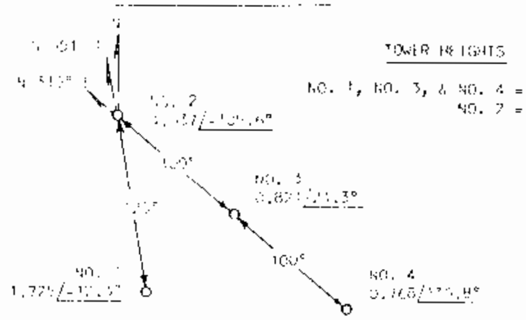


FIGURE 2

HORIZONTAL RADIATION PATTERN

SPACING AND ORIENTATION



TOWER HEIGHTS

NO. 1, NO. 3, & NO. 4 = 102°
NO. 2 = 104°

APPLICANT	LEBANON B/CG. COMPANY (WLBR)
LOCATION	LEBANON, PENNSYLVANIA
FREQUENCY	1,270 KC/S
POWER	5 KW-LS, 1 KW-N (DA-2)
LATITUDE	40 DEG 21 MIN 35 SEC
LONGITUDE	76 DEG 27 MIN 30 SEC
WHEN USED	DAYTIME HOURS
R.M.S. FIELD	[illegible] MV/M
DATE	DECEMBER 1959

SILLIMAN, MOFFET & ROHRER
CONSULTING RADIO ENGINEERS
WASHINGTON, D.C.

FCC File No. BP-13851
Accepted 2-9-60

WLBR
Lebanon, Pennsylvania — 1270 KC

WLBR

Measured Day
(1-30-63ct)

Station WLBR
Lebanon, Pennsylvania

1kw,5kw-LS,DA-2,U
1270 kc

4-22-63
granted license
covering increase in
power, change in DA
& change from
DA-N to DA-2

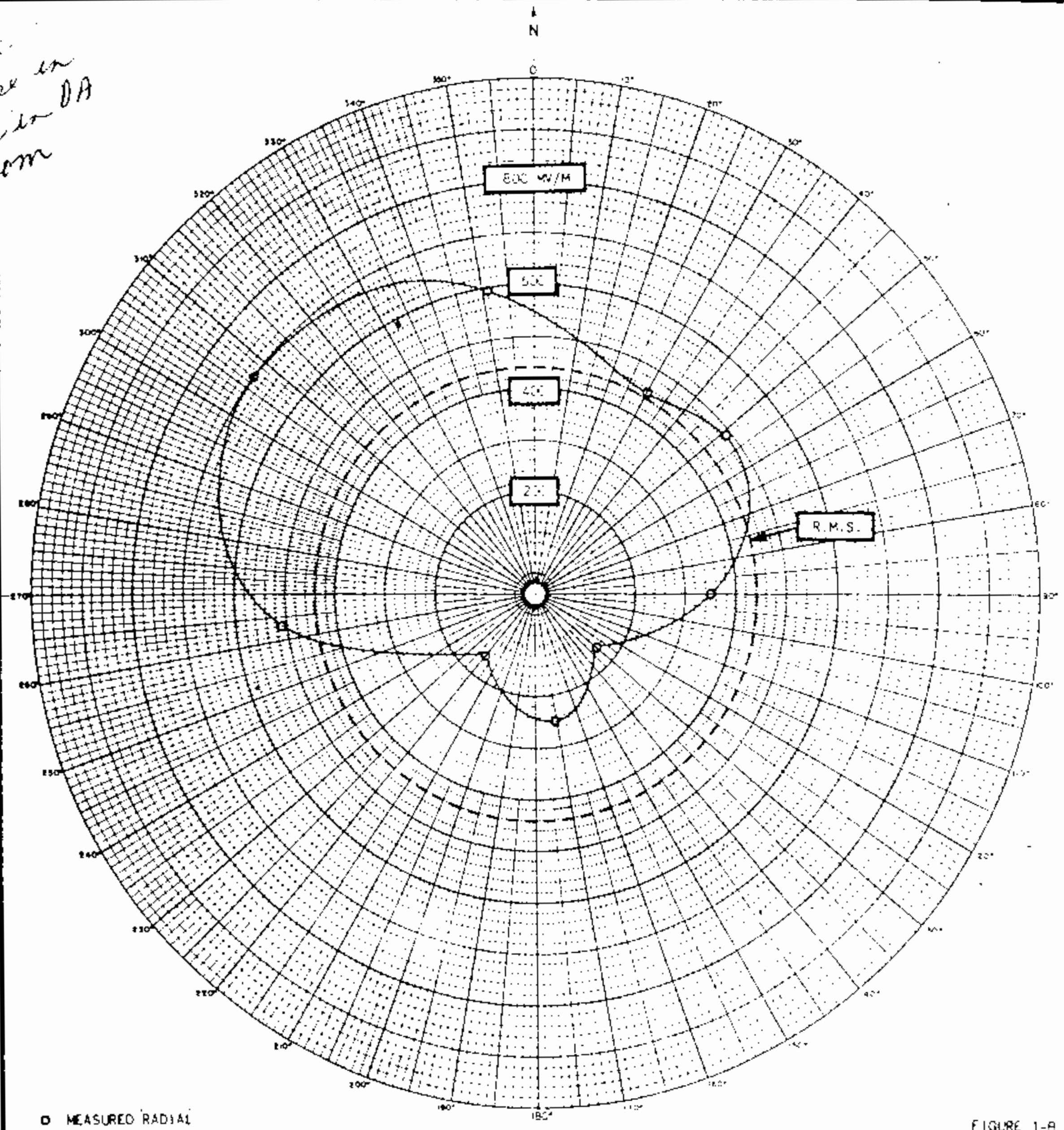
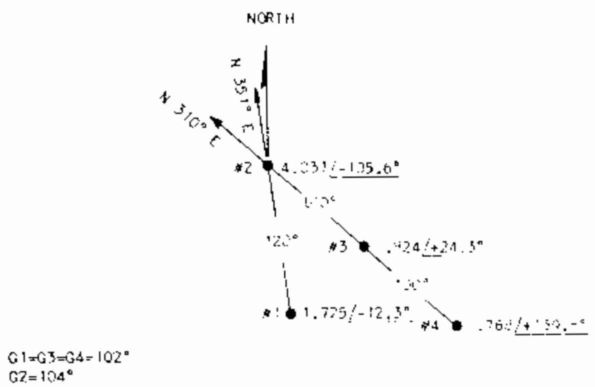


FIGURE 1-B

HORIZONTAL RADIATION PATTERN



APPLICANT	LEBANON BCSTG CO. WLBR
LOCATION	LEBANON, PA.
FREQUENCY	1270 KC/S
POWER	5 KW
LATITUDE	40 DEG 21 MIN 35 SEC
LONGITUDE	[illegible] DEG 22 MIN 30 SEC
WHEN USED	DAYTIME
RMS FIELD	4[illegible] MV/M
DATE	[illegible]EMBER 1962

[illegible]MAN, MOFFET & KOWALSKI
CONSULTING RADIO ENGINEERS
WASHINGTON, D.C.

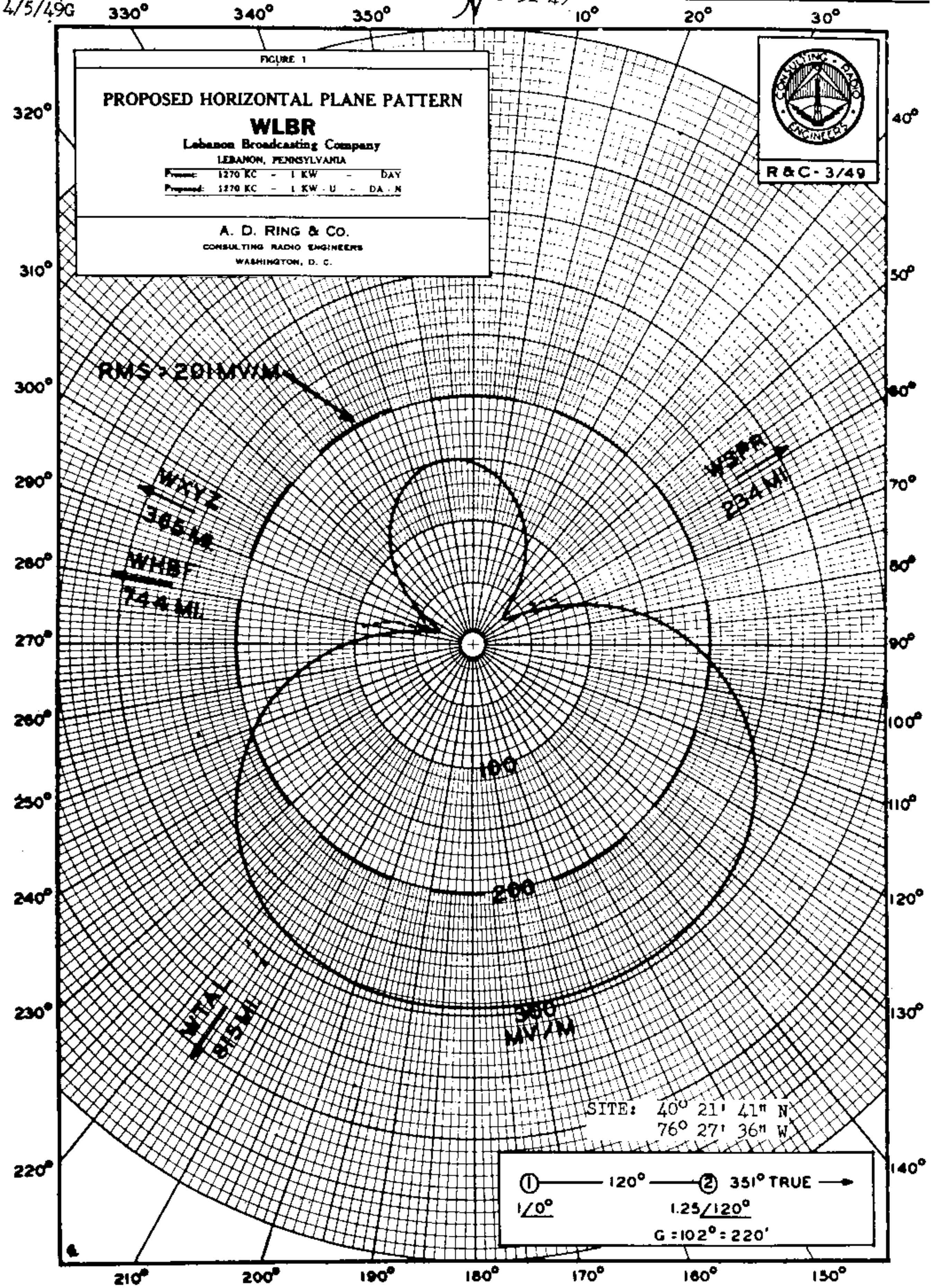
FCC File No.BL-9671
Accepted 1-2-63

Station WLBR
Lebanon, Pennsylvania

1270 kc

WLBK

PROPOSED WLBR, LEBANON, PENNA. 1kw,DAN' WLBR-1270KC
NIGHT
4/5/49G 3-31-49



WLBR, Lebanon, Penna. 1270 kc

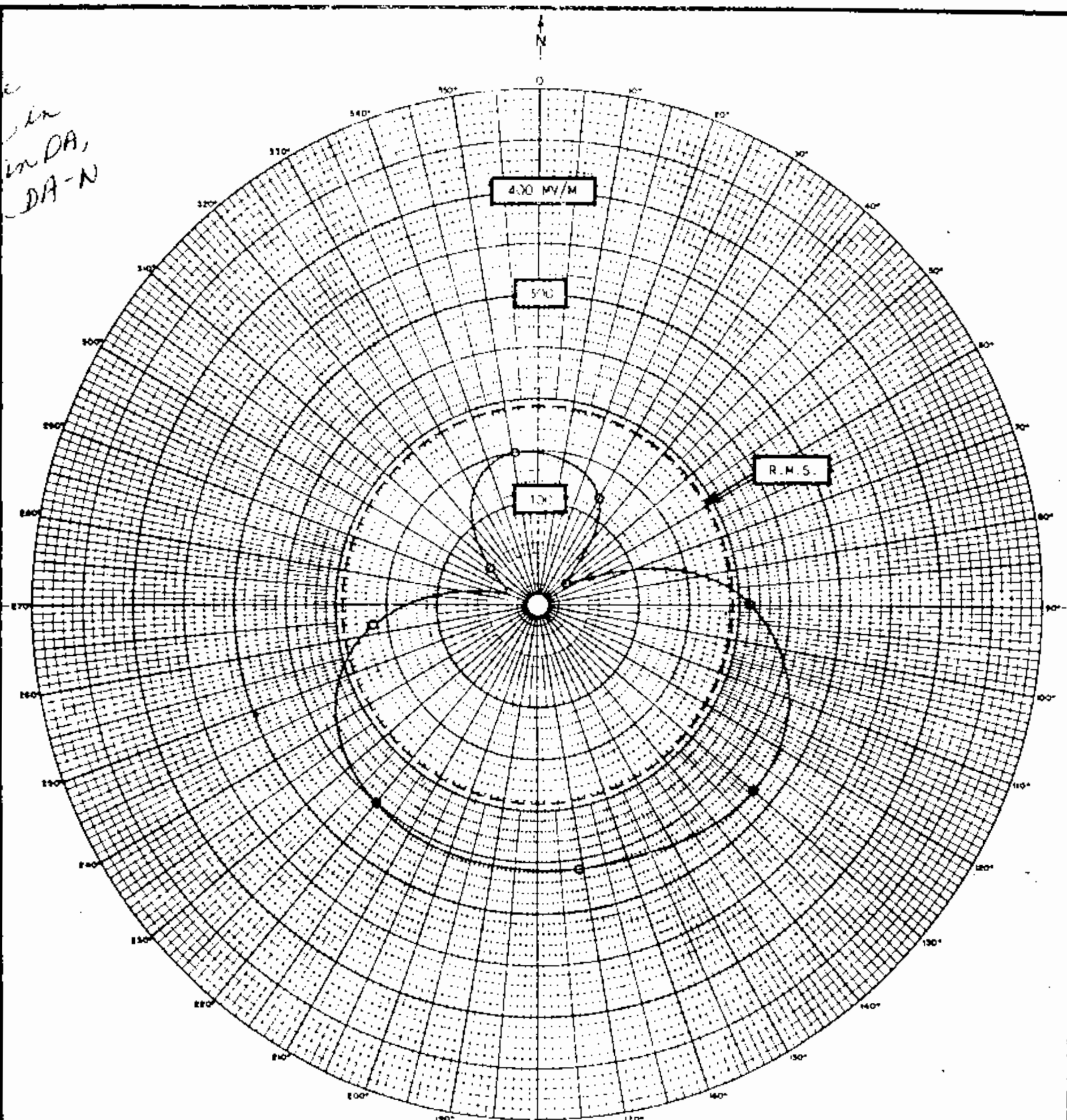
WLBR

Measured Night
(1-30-63ct)

Station WLBR
Lebanon, Pennsylvania

1kw,5kw-LS,DA-2,U
1270 kc

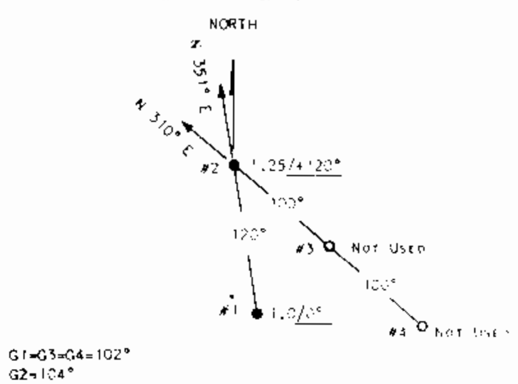
4-22-63
granted license
covering change in
DA, change
from DA-N
to DA-2.



O MEASURED RADIAL

FIGURE 1-A

HORIZONTAL RADIATION PATTERN



APPLICANT	LEBANON BCSTG CO. WLBR
LOCATION	LEBANON, PA.
FREQUENCY	1270 KC/S
POWER	1 KW
LATITUDE	40 DEG 21 MIN 35 SEC.
LONGITUDE	76 DEG 27 MIN 30 SEC
WHEN USED	NIGHTTIME
RMS FIELD	192.9 MV/M
DATE	SEPTEMBER 1962

SILLIMAN, MOFFET & KOWALSKI
CONSULTING RADIO ENGINEERS
WASHINGTON, D.C.

FCC File No.BL-9671
Accepted 1-2-63

Station WLBR
Lebanon, Pennsylvania

1270 kc

WLBR

Measured Non-DA
(1-30-63ct)

Station WLBR
Lebanon, Pennsylvania

1kw,5kw-LS,DA-2,U
1270 kc

4-22-63 granted license increase in power, change in DA, change from DA-N DA-2.

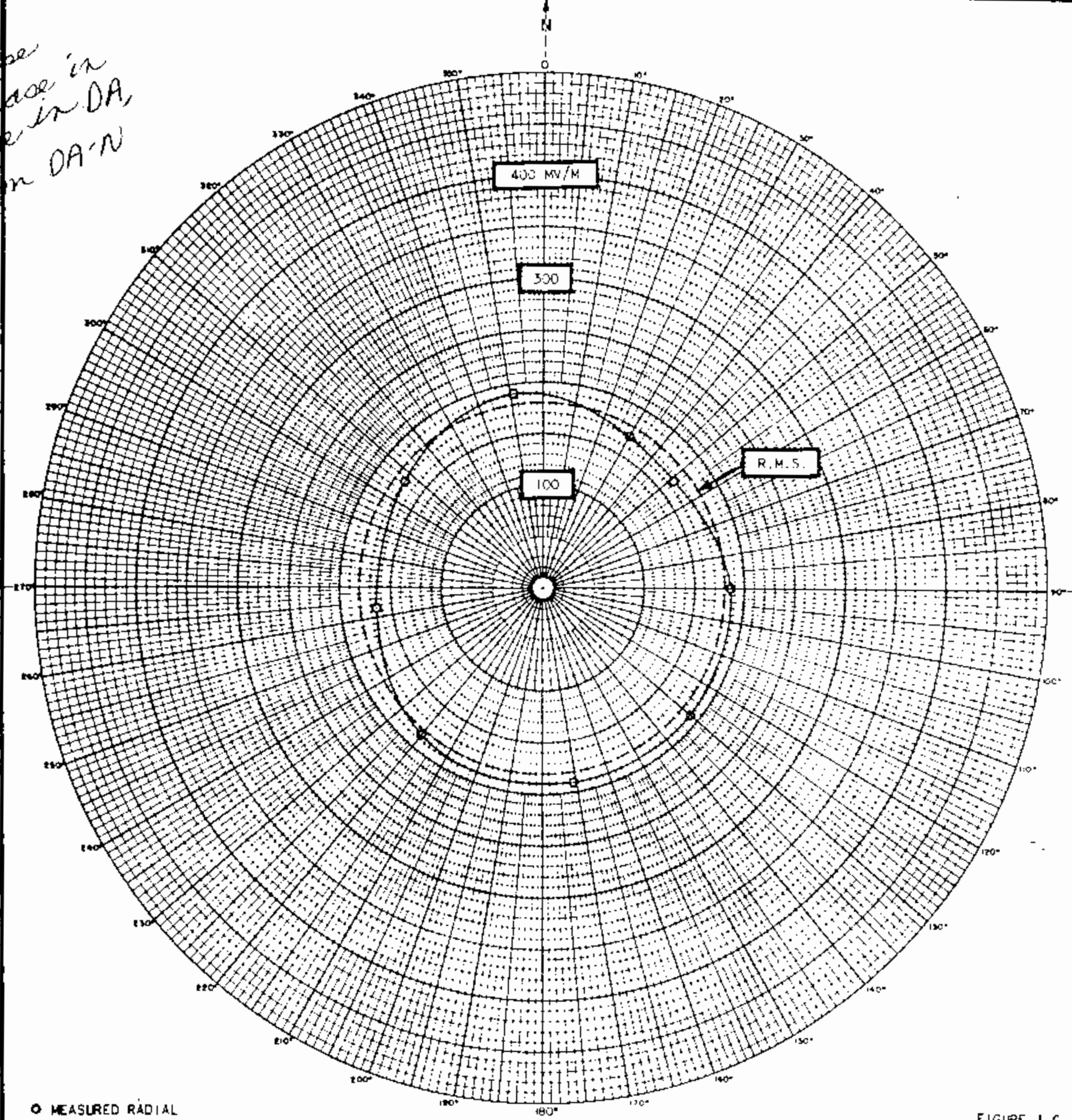


FIGURE 1-C

HORIZONTAL RADIATION PATTERN

NON-DIRECTIONAL SURVEY

APPLICANT	LEBANON BCSTG CO. WLBR
LOCATION	LEBANON, PA.
FREQUENCY	1270 KC/S
POWER	1 KW
LATITUDE	40 DEG 21 MIN 35 SEC.
LONGITUDE	76 DEG 27 MIN. 30 SEC.
WHEN USED	NON-DIRECTIONAL SURVEY ONLY
R.M.S. FIELD	190.1 MV/M
DATE	SEPTEMBER 1962

SILLIMAN, MOFFET & KOWALSKI
CONSULTING RADIO ENGINEERS
WASHINGTON, D.C.

FCC File No.BL-9671
Accepted 1-2-63

WLK
1270 kHz

DIRECTIONAL ANTENNA DESCRIPTION SHEET

Station: WLIK

Main Studio: Newport, Tennessee

Frequency: 1270 kc/s

Power: 0.5kw Night 5kw Day

Notification List No. 1243

Date: November 22, 1967

Class: III

GEOGRAPHICAL LOCATION OF THE CENTER OF THE ANTENNA SYSTEM:

North Latitude: 35° 57' 49"

West Longitude: 83° 12' 31"

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:	#1(W)	#2(C)	#3(E)
HEIGHT ABOVE INSULATORS:	205'	205'	205' (95°)
PHASING:	+164°	+6°	-164°
FIELD RATIO:	1.0	1.72	1.0

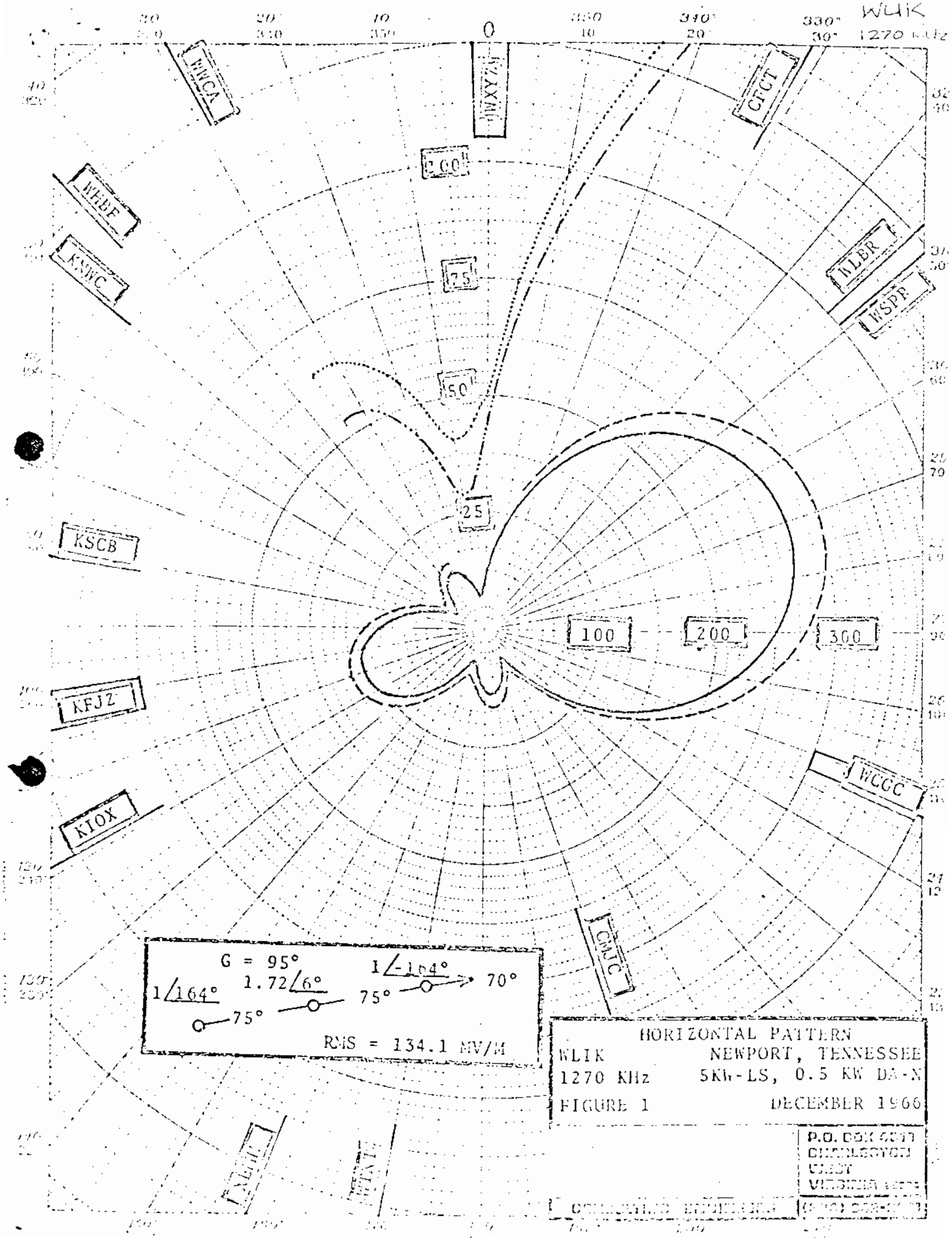
SPACING AND ORIENTATION: Adjacent elements are spaced 161.5' (75°) on a line bearing 70° true.

GROUND SYSTEM: 120-194' 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 systems are bonded together.

Predicted effective Night Field: 134.1 mv/m at rated power.

Predicted effective Day Field: (omnidirectional) 428 mv/m at rated power.

CTR NO 30465

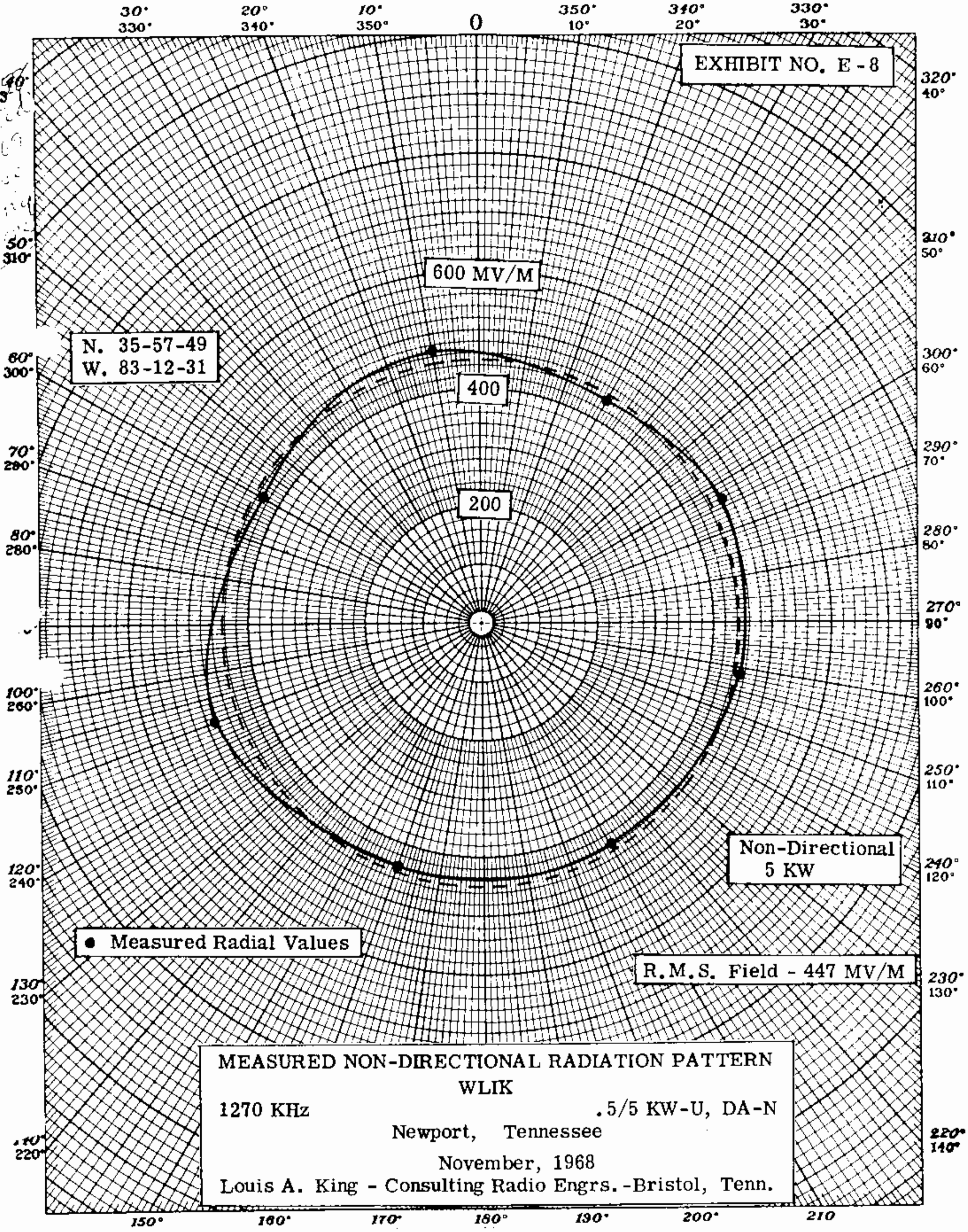

WLIK
1270 KHz
WWCA
WXYZ
CFCT
WHBF
KNWC
WLBR
WSPR
KSCB
KFJZ
KIOX
WCGC
CMJC
100
75
50
25
100
200
300
G = 95°
1∠164°
1.72∠6°
1∠-164°
75°
75°
70°
RMS = 134.1 MV/M
HORIZONTAL PATTERN
WLIK
NEWPORT, TENNESSEE
1270 KHz
5KW-LS, 0.5 KW DA-N
FIGURE 1
DECEMBER 1966
P.O. BOX

WLIK

Measured Non-DA
(7-28-69ct)

Station WLIK
Newport, Tennessee

5oow,5kw-LS,DA-N,U
1270 kc



FCC File No.BL-12258
Accepted 2-4-69

Station WLIK
Newport, Tennessee

1270 kc

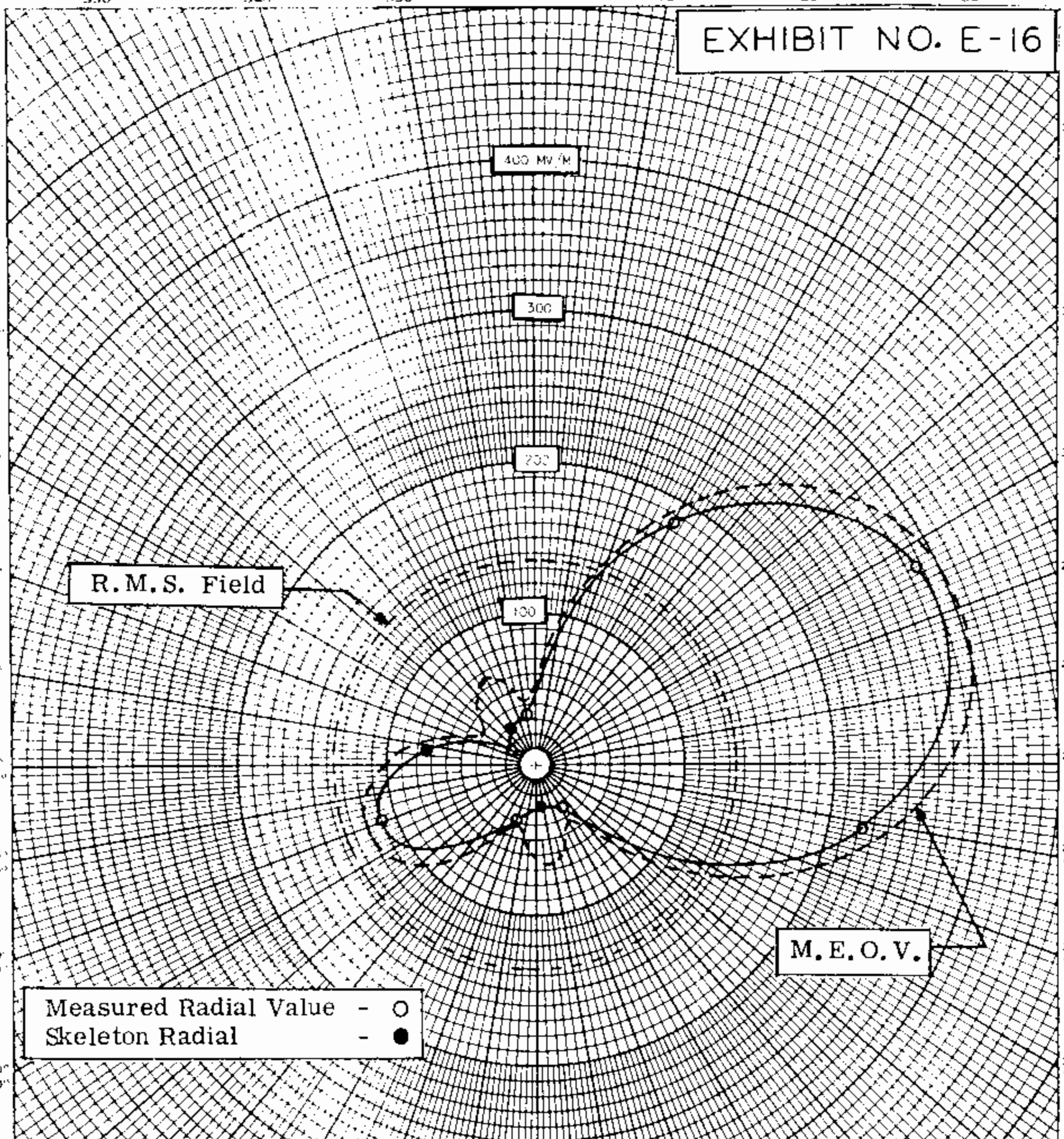
WLIK

Measured Night
(7-28-69ct)

Station WLIK
Newport, Tennessee

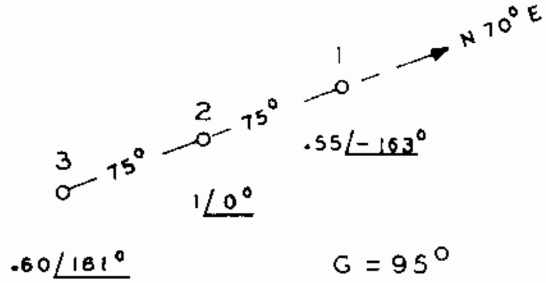
500w,5kw-LS,DA-N,U
1270 kc

BL-12258
Granted
-30-69



HORIZONTAL RADIATION PATTERN

SPACING AND ORIENTATION



WLIK
1270 KHZ .5/5 KW-U, DA-N
NEWPORT, TENN.

N. LAT. 35 - 57 - 49 DEC. 1968
W. LONG. 83 - 12 - 31

R.M.S. FIELD - 135.8 MV/M

LOUIS A KING
CONSULTING RADIO ENRS. BRISTOL, TN.

FCC File No.BL-12258
Accepted 2-4-69

Station WLIK
Newport, Tennessee

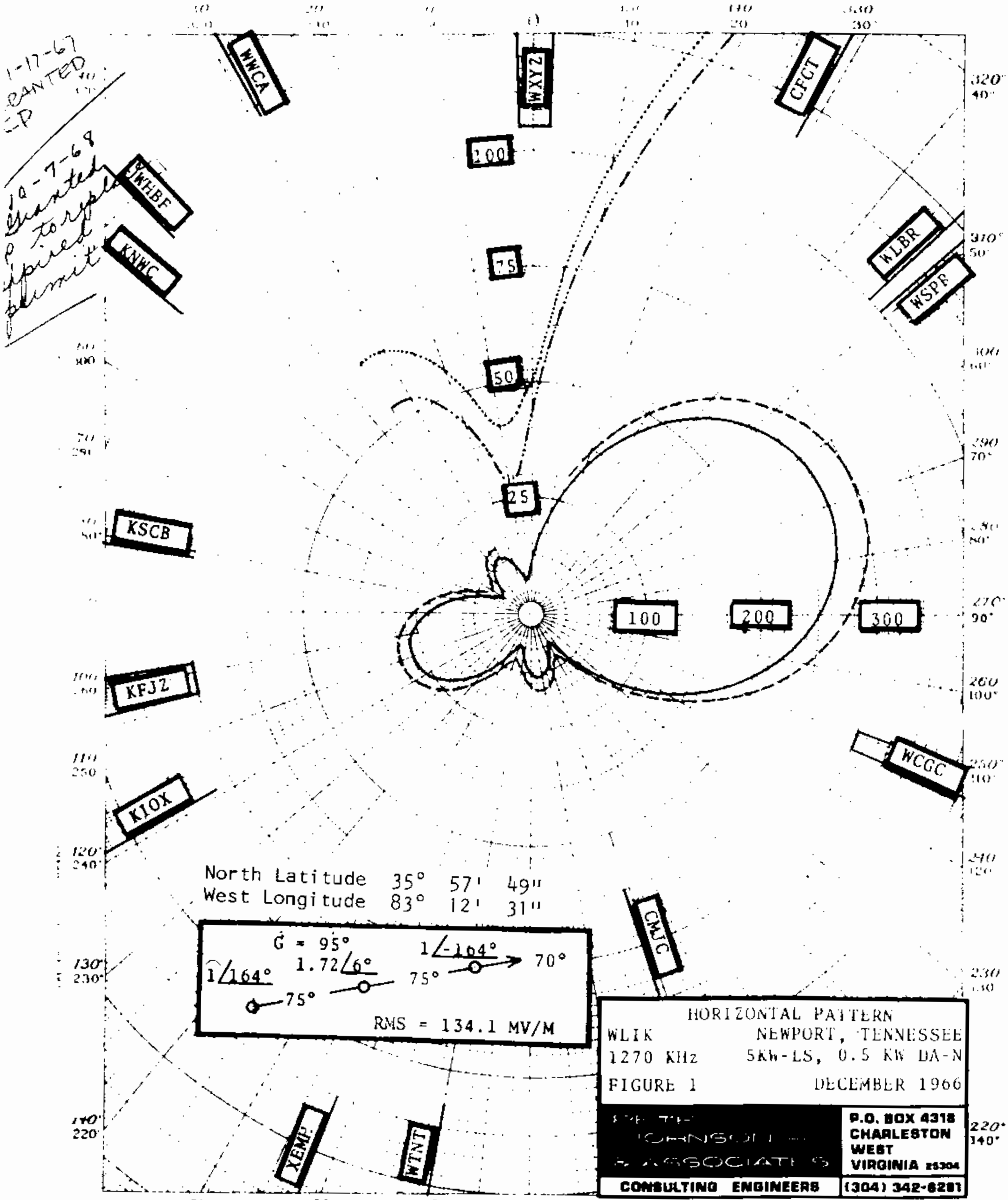
1270 kc

WLIK

Proposed ~~Day~~ Night
(4-28-67ct)

Station WLIK
Newport, Tennessee

500w,5kw-LS,DA-N,U
1270 kc



FCC File No.BP-17594
Accepted 3-29-67

Station WLIK
Newport, Tennessee

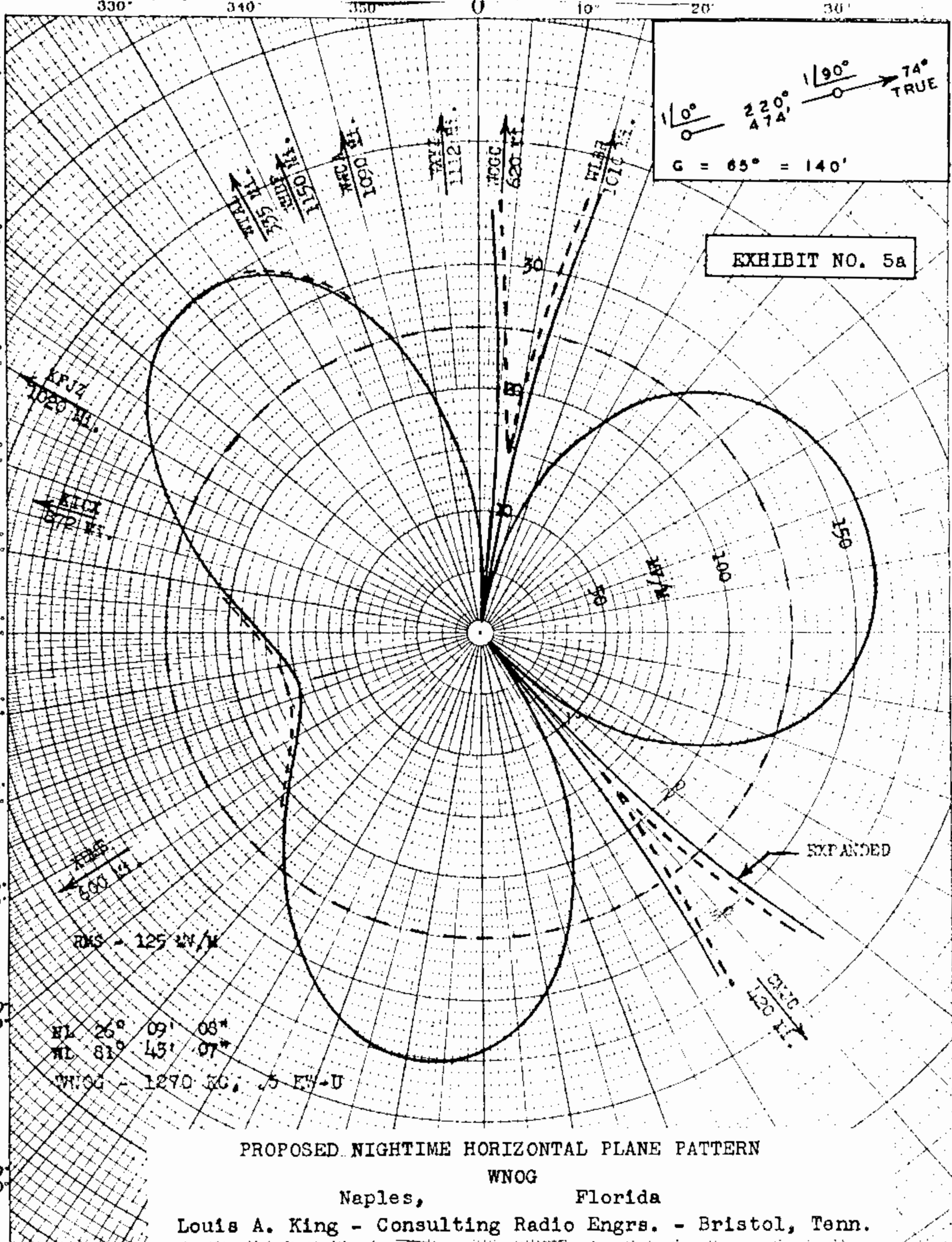
1270 kc

WNOG

PROPOSED NIGHT
(1-29-60g)

Station WNOG
Naples, Florida

500w, DA-N,U
1270 KC



FCC File No. BP-13698
Accepted 12-15-59

WNOG
Naples, Florida

1270 KC

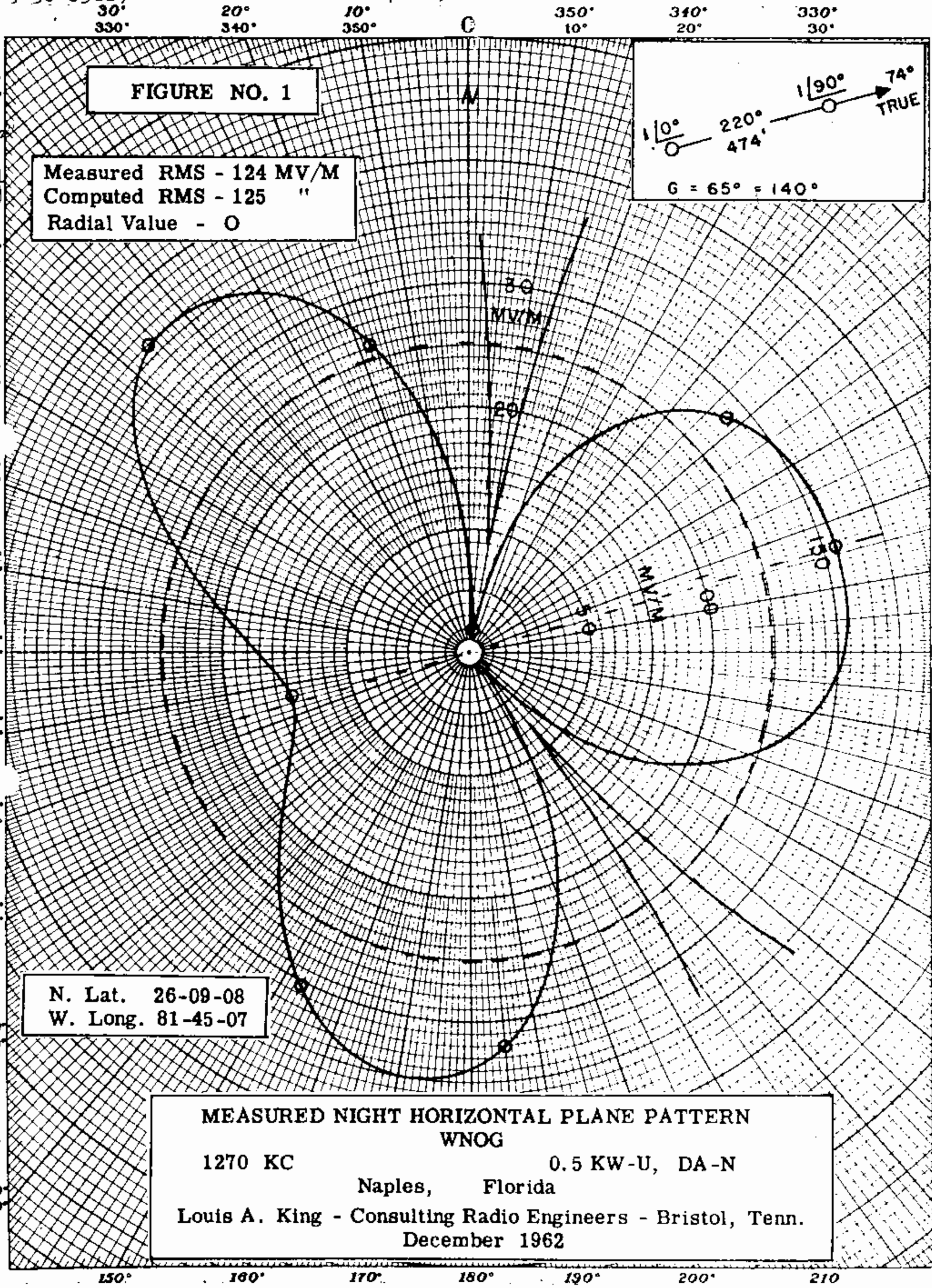
WNOG

Measured Night
(3-30-63ct)

Station WNOG
Naples, Florida

500w,DA-N,U
1270 kc

1-23-63 ...nted licen... ...using ... hrs. and installation of DA-N



FCC File No,BL-9822
Accepted 3-21-63

Station WNOG
Naples, Florida

1270 kc

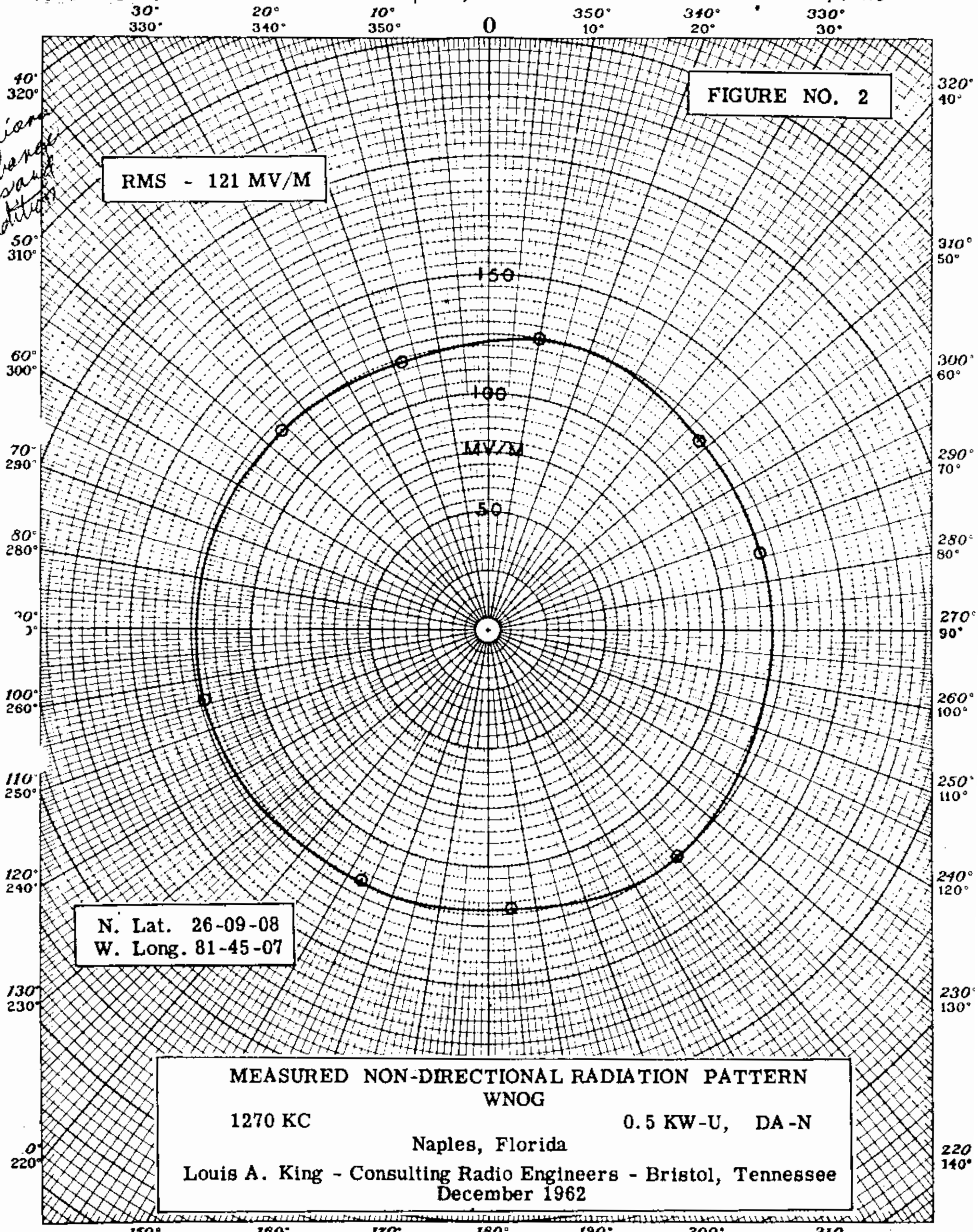
WNOG

Measured Non-DA
(3-30-63ct)

Station WNOG
Naples, Florida

500w,DA-N,U
1270 kc

4-23-63
Fluctuations [illegible] changes caused by sand in DA-N radiation



FCC File No.BL-9822
Accepted 3-21-63

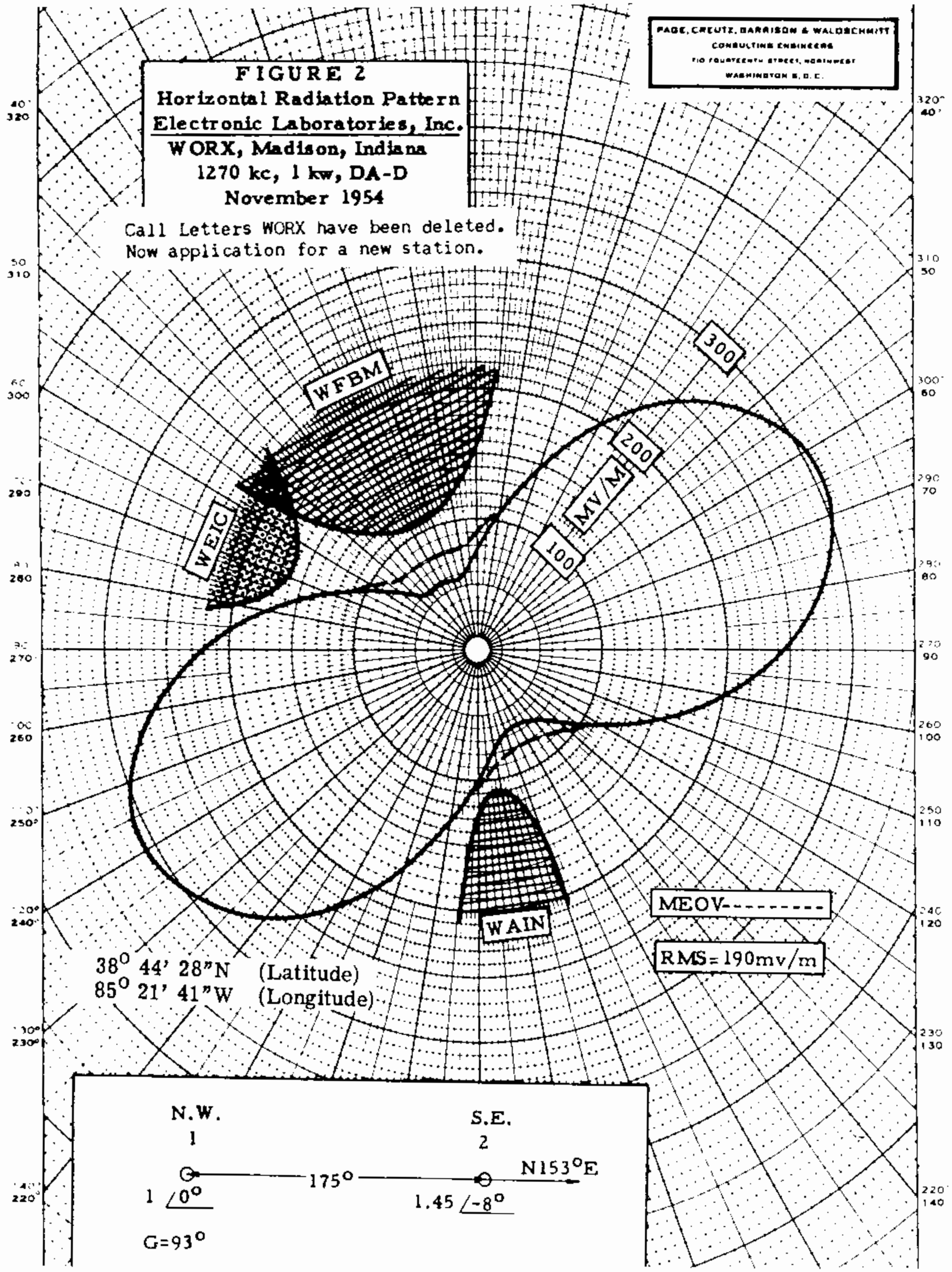
Station WNOG
Naples, Florida

1270 kc

WORX

Station WORX

PROPOSED DAY (12/17/54G) | ELECTRONIC LABORATORIES, INC. MADISON, INDIANA | 1 KW DA-D | 1270 KC



FILE NO. BMP-6560 Accepted 12/6/54 Electronic Laboratories, Inc. MADISON, INDIANA 1270 KC

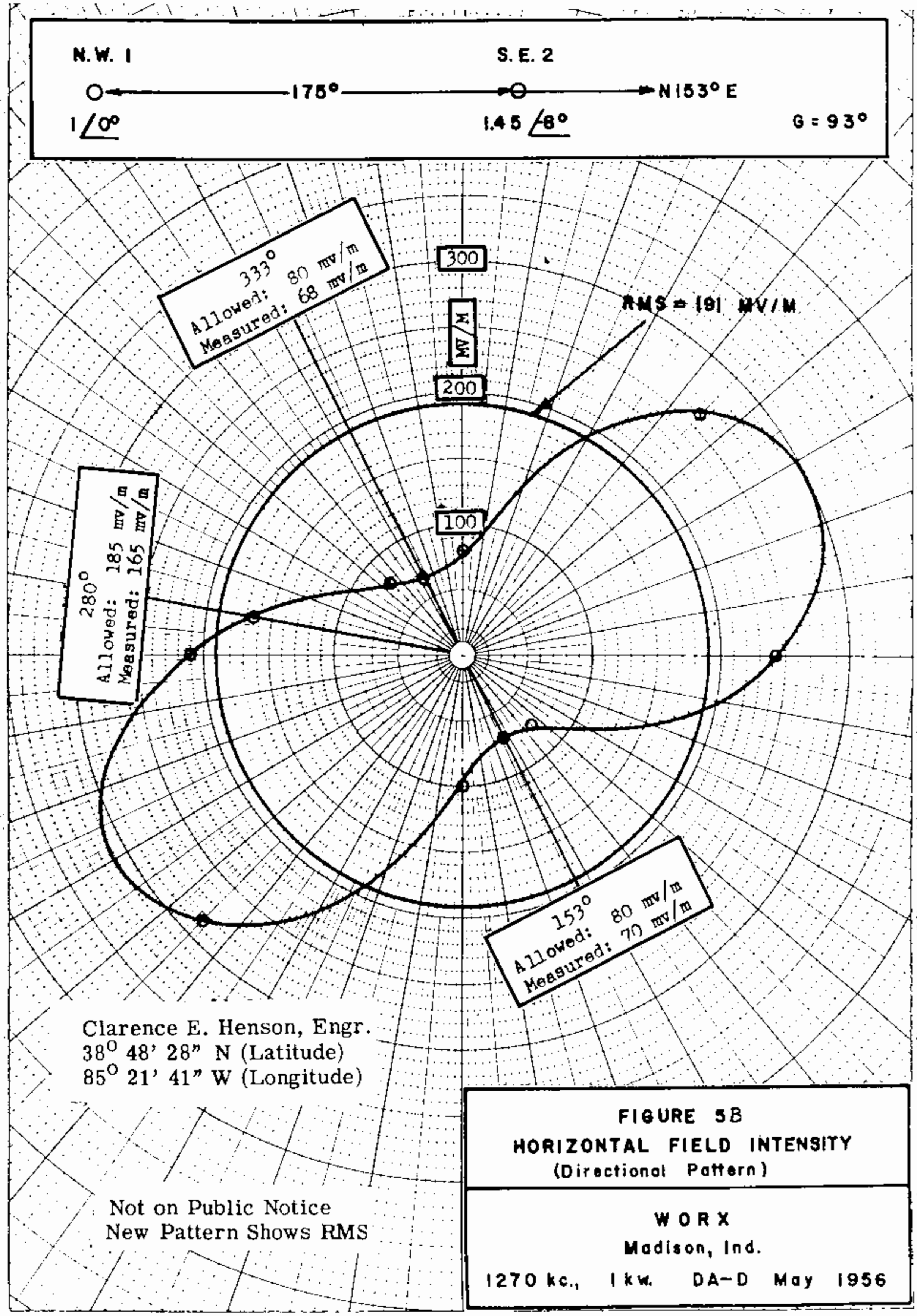
WORX

MEASURED
DAY (5/22/56g)

STATION WORX
MADISON, INDIANA

1 KW
DA-D,D

1270 KC



Clarence E. Henson, Engr.
38° 48' 28" N (Latitude)
85° 21' 41" W (Longitude)

Not on Public Notice
New Pattern Shows RMS

FIGURE 5B
HORIZONTAL FIELD INTENSITY
(Directional Pattern)

WORX
Madison, Ind.
1270 kc., 1 kw. DA-D May 1956

FCC File No. BL-6088 Accepted 5-17-56

WORX, Madison, Indiana 1270 KC

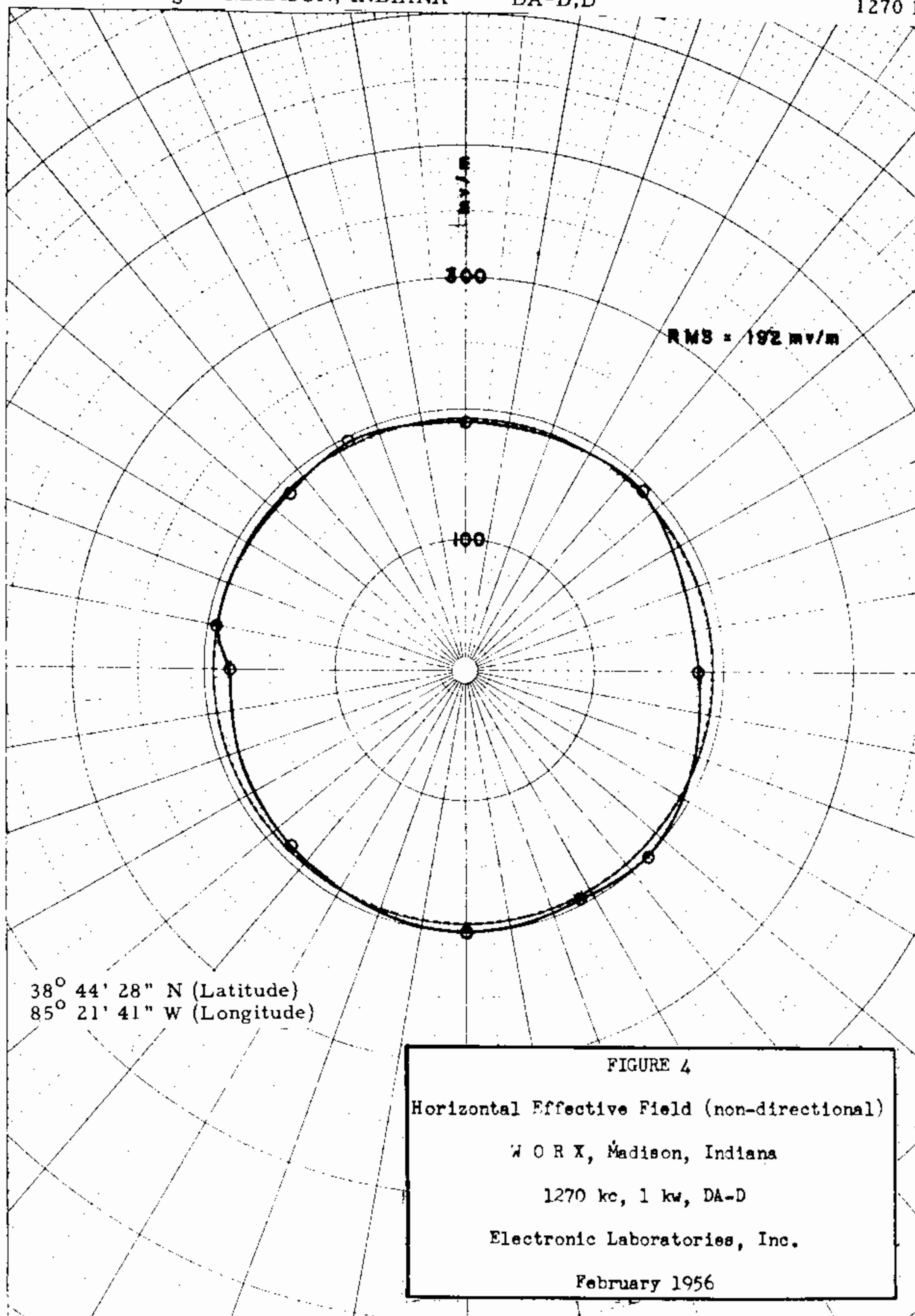
WORX

MEASURED NON DIRECTIONAL 3-20-56g

STATION WORX MADISON, INDIANA

1 KW DA-D,D

1270 KC



38° 44' 28" N (Latitude)
85° 21' 41" W (Longitude)

FIGURE 4

Horizontal Effective Field (non-directional)

W O R X, Madison, Indiana

1270 kc, 1 kw, DA-D

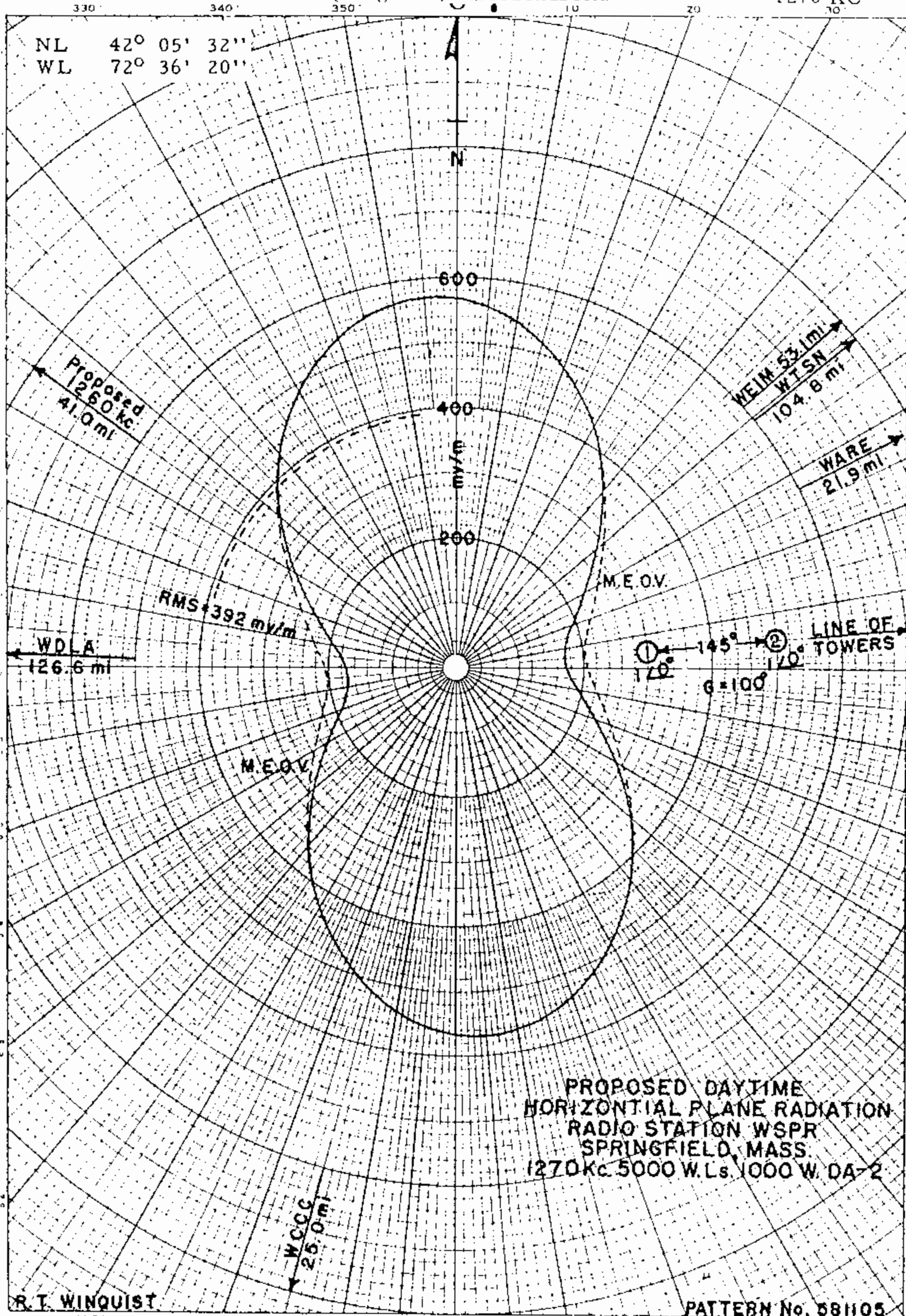
Electronic Laboratories, Inc.

February 1956

WSPR

PROPOSED DAY
(3-23-59g)

Station WSPR 1kw, 5kw-LS, DA-2,U
Springfield, Massachusetts 1270 KC



granted CP for increase in daytime power and install DA-2

FCC File No. BP-12757
Accepted 2-10-59

WSPR
Springfield, Massachusetts 1270 KC

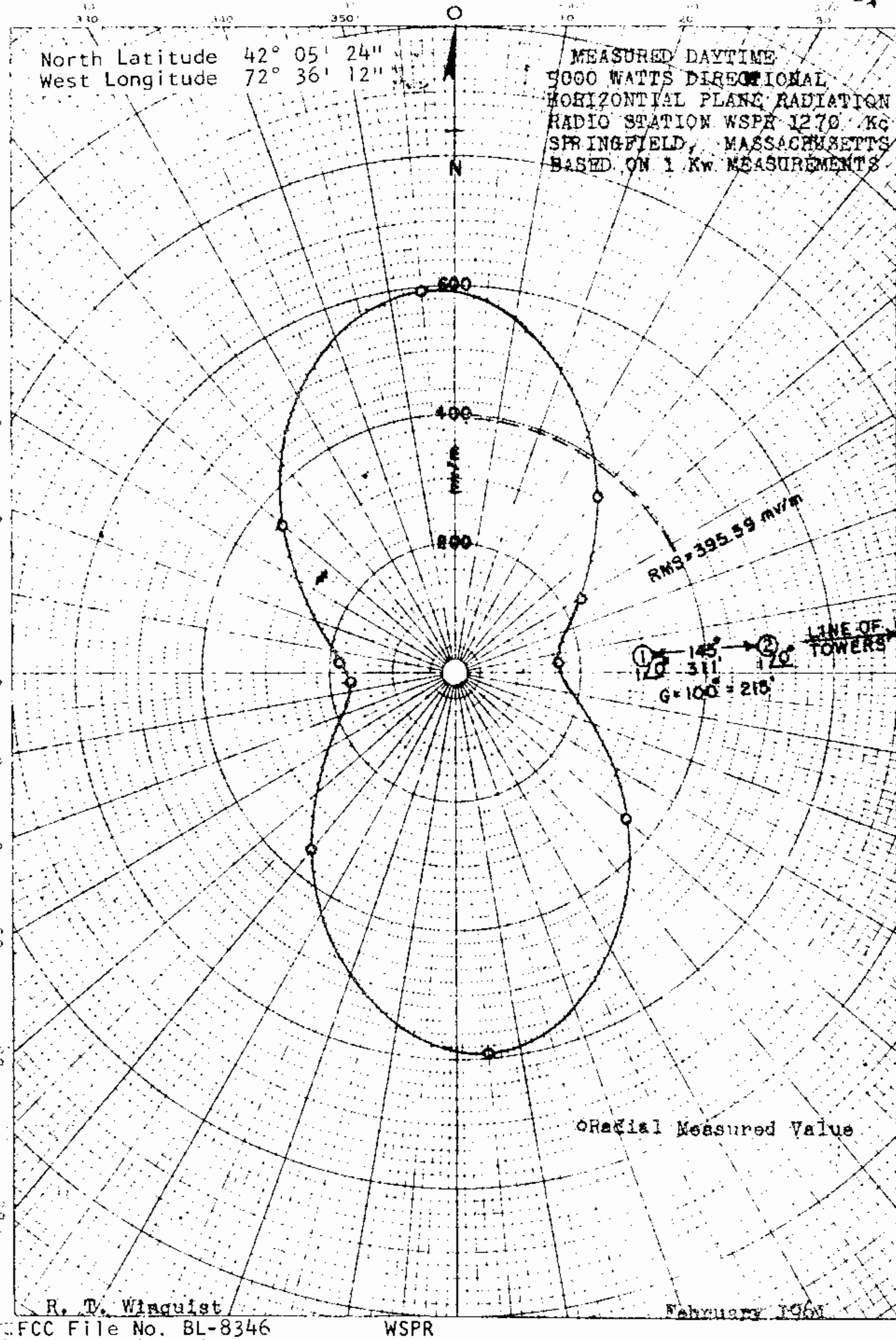
WSPR

MEASURED DAY
(7-26-61ct)

Station WSPR 1kw,5kw-LS,DA-2,U
Springfield, Massachusetts 1270 KC.

D3

1-20-61
ruled L for
A-2 operation
with 5kw Day



FCC File No. BL-8346
Accepted 6-19-61

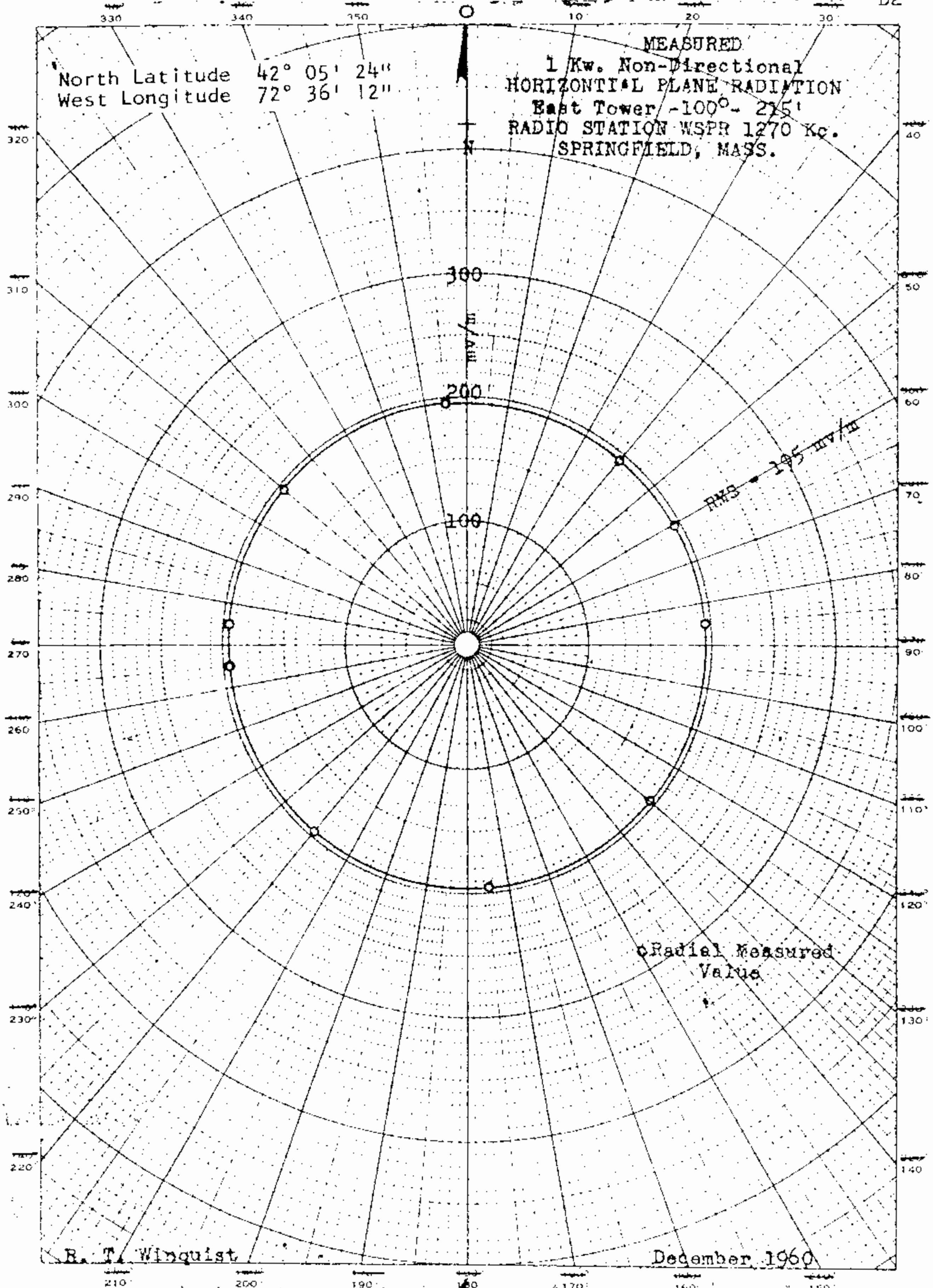
WSPR
Springfield, Massachusetts 1270 KC

WSPR

MEASURED NON-DA
(7-26-61ct)

Station WSPR 1kw,5kw-LS,DA-2,U
Springfield, Massachusetts 1270 KC

D2



FCC File No. BL-8346
Accepted 6-19-61

WSPR
Springfield, Massachusetts 1270 KC

WSPR

PROPOSED DAY & NIGHT Station WSPR 1kw, DA-1,U
Springfield, Massachusetts 1270 KC

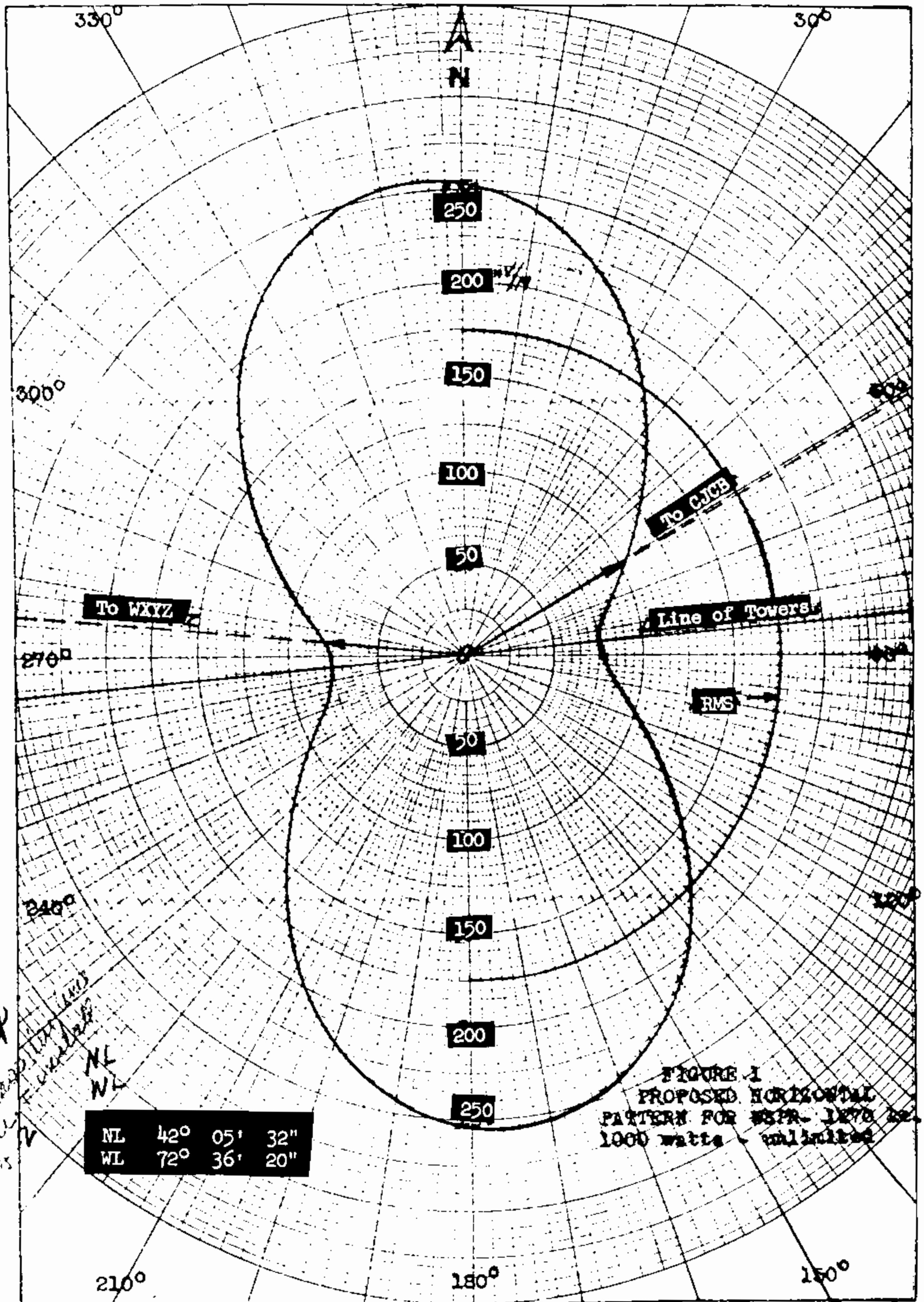


FIGURE 1
PROPOSED HORIZONTAL PATTERN FOR WSPR- 1270 kc.
1000 watts - unlimited

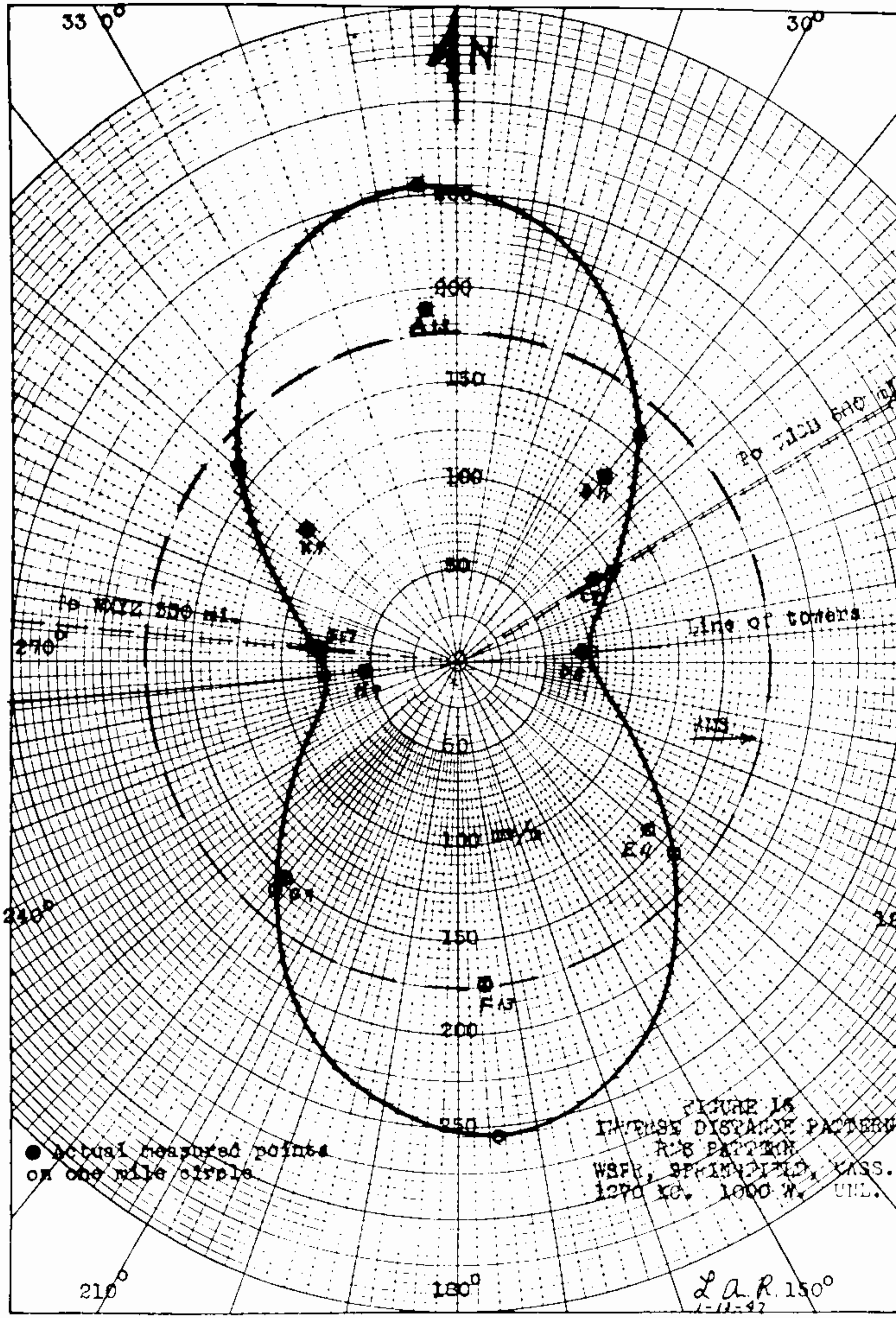


FIGURE 16
INVERSE DISTANCE PATTERN
R.S PATTERN
WSPR, SPRINGFIELD, MASS.
1270 KC. 1000 W. UNL.

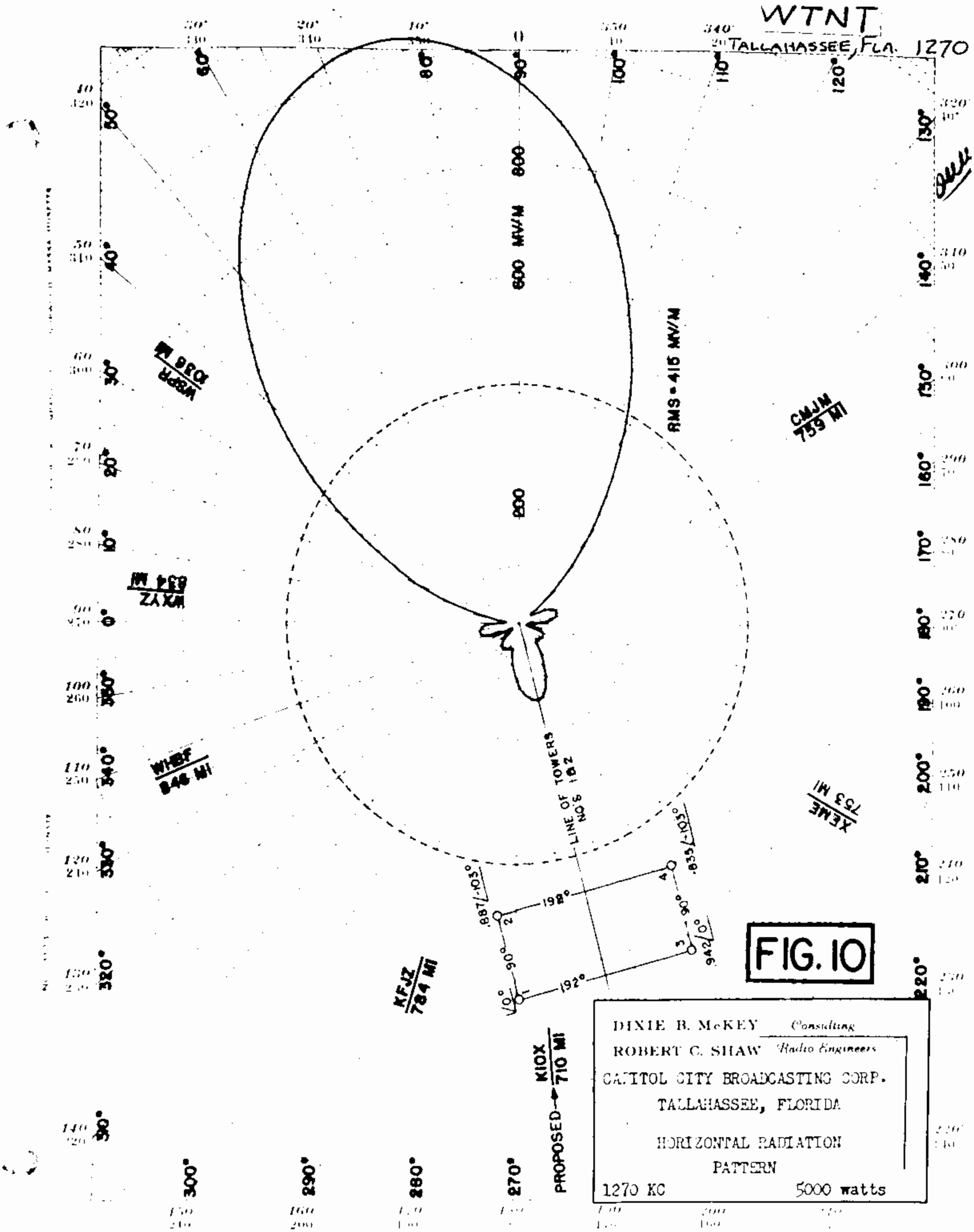

WTNT
TALLAHASSEE, FLA. 1270
800
600 MV/M
200
RMS = 415 MV/M
WSPR 1038 MI
WXYZ 834 MI
WHBF 846 MI
CMJM 759 MI
XEME 753 MI
KFJZ 784 MI
PROPOSED → KIOX 710 MI
LINE OF TOWERS NO'S 1 & 2
.887/-103°
.835/-103°
.942/0°
/0°
198°
192°
90°
DIXIE B. McKEY Consulting
ROBERT C. SHAW Radio Engineers
CAPITOL CITY BROADCASTING CORP.
TALLAHASSEE, FLORIDA
HORIZONTAL RADIATION PATTERN
1270 KC 5000 watts

FIG. 10

WINI

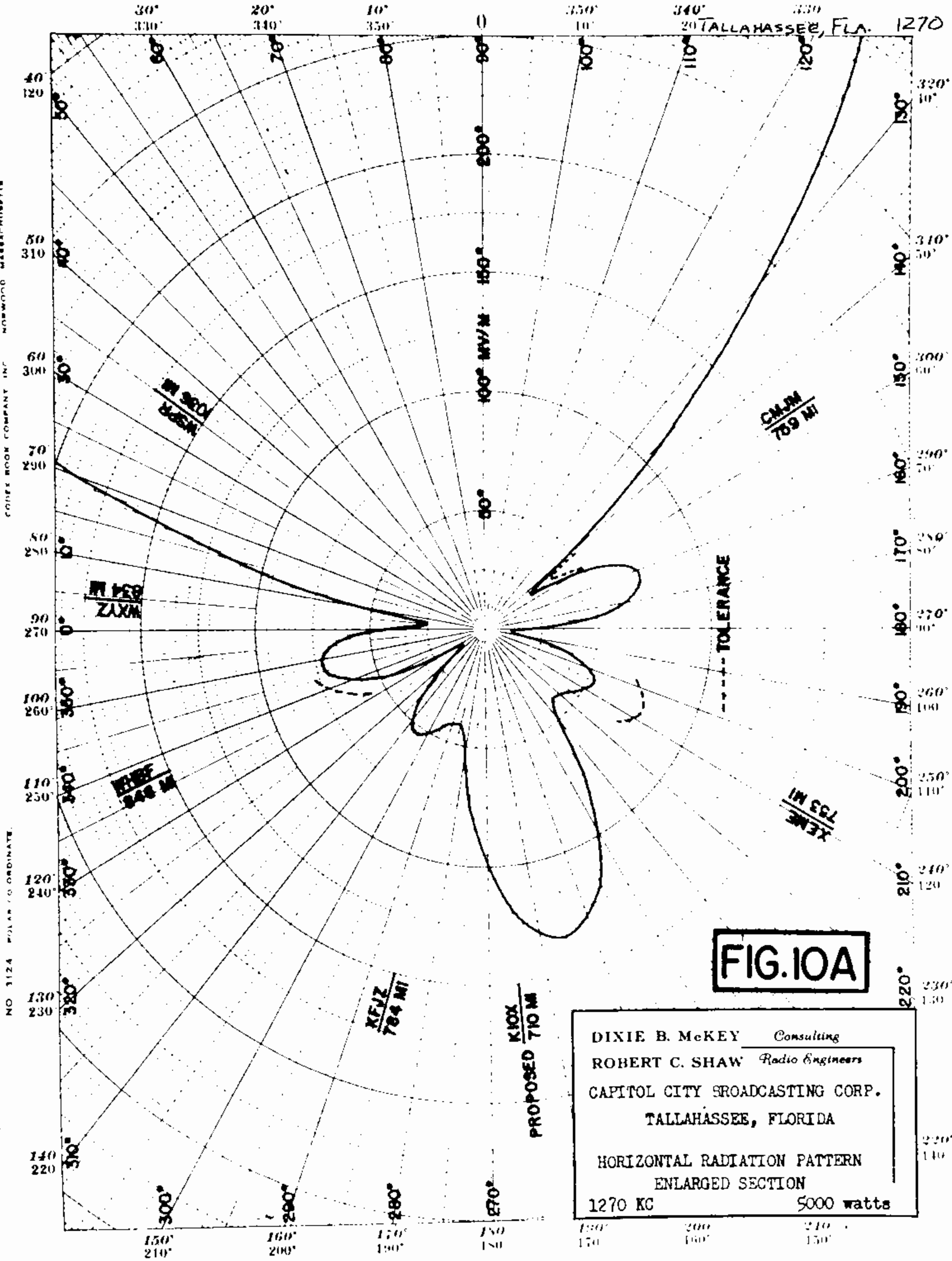


FIG.10A

DIXIE B. McKEY Consulting
ROBERT C. SHAW Radio Engineers
CAPITOL CITY BROADCASTING CORP.
TALLAHASSEE, FLORIDA

HORIZONTAL RADIATION PATTERN
ENLARGED SECTION
1270 KC 5000 watts

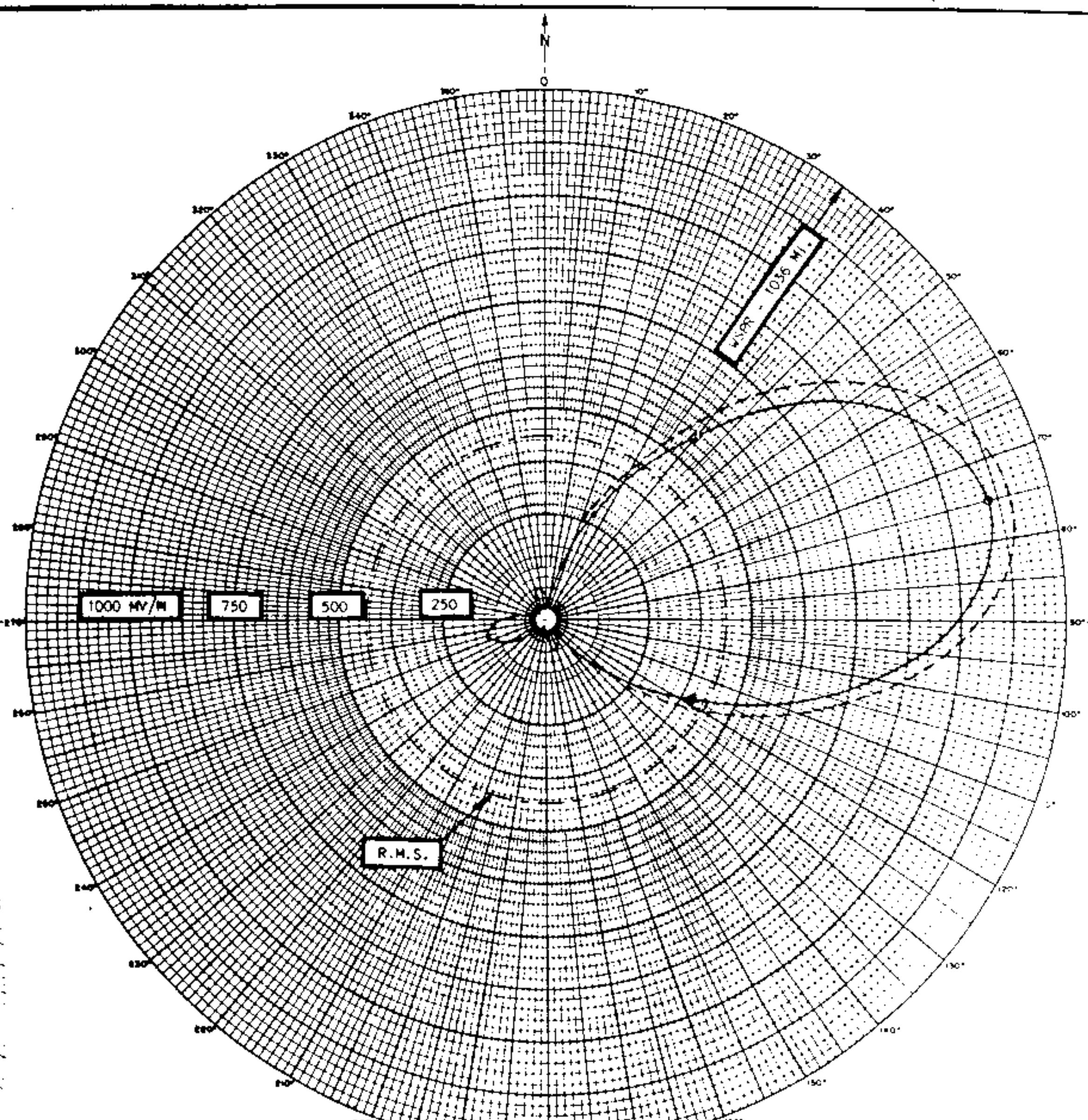
WTNT

-10-62
inted L for
xmtr site.

Measured Night
(5-25-62ct)

Station WTAL
Tallahassee, Florida

5kw, DA-N, U
1270 kc



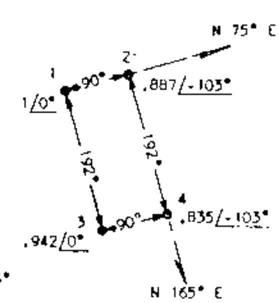
o MEASURED RADIAL VALUES

— — — MAXIMUM EXPECTED OPERATING VALUES

FIGURE 3-A

HORIZONTAL RADIATION PATTERN

SPACING AND ORIENTATION



G (ALL TOWERS) = 93°

APPLICANT	WTAL, INC.
LOCATION	TALLAHASSEE, FLA. (WTAL)
FREQUENCY	1270 KC/S
POWER	5 KW-U-DA-N
LATITUDE	30 DEG 25 MIN 34 SEC
LONGITUDE	84 DEG 15 MIN 46 SEC
WHEN USED	NIGHT
R M S FIELD	433 MV/M
DATE	FEBRUARY 1962

SILLIMAN, MOFFET & KOWALSKI
CONSULTING RADIO ENGINEERS
WASHINGTON, D.C.

FCC File No.BL-9274
Accepted 5-16-62

Station WTAL
Tallahassee, Florida

1270 kc

WTNT.

Measured Night Nulls
(5-25-62ct)

Station WTAL
Tallahassee, Florida

5kw,DA-N,U
1270 kc

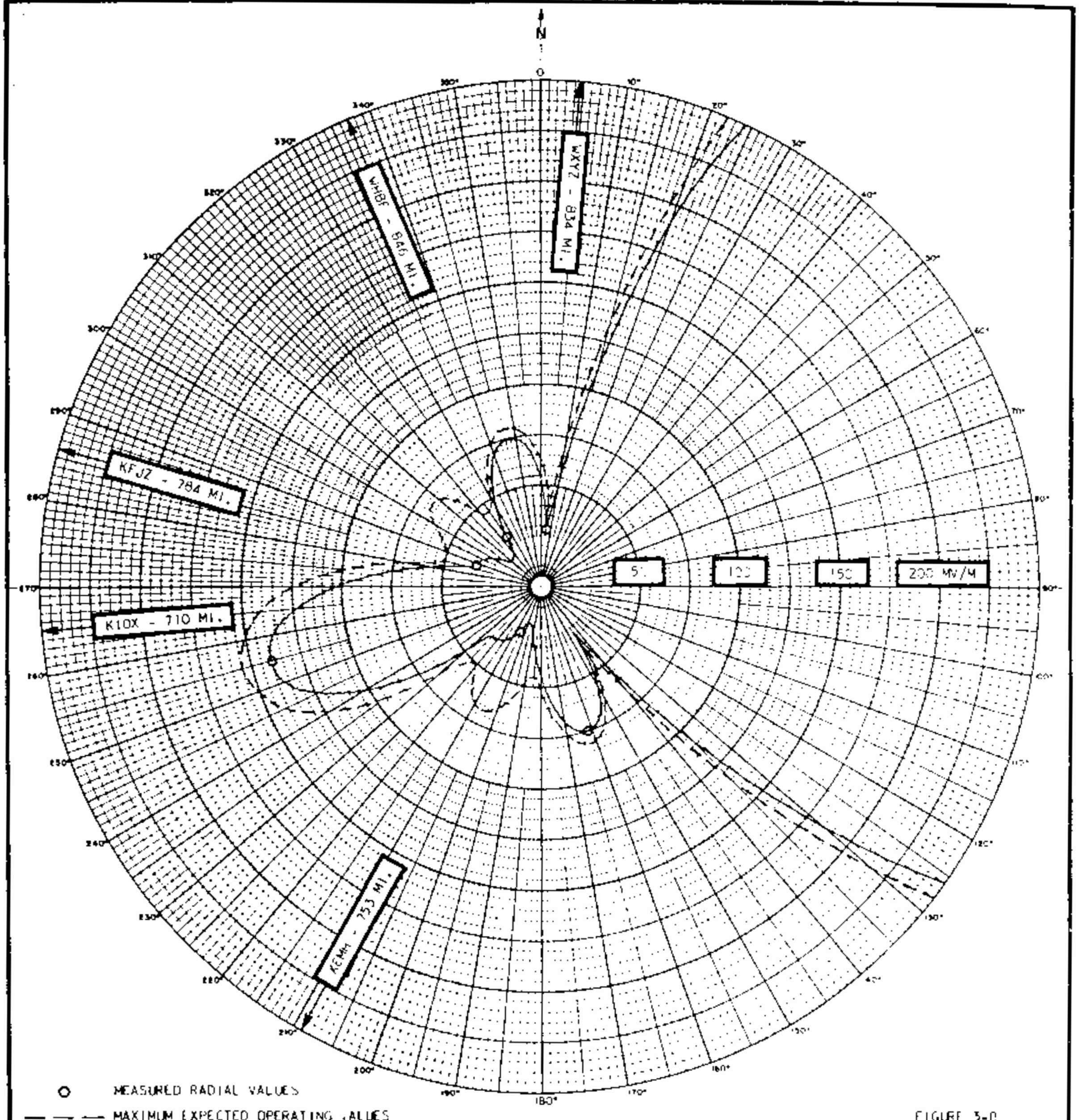


FIGURE 3-D

HORIZONTAL RADIATION PATTERN

EXPANDED VIEW

APPLICANT	WTAL, INC.
LOCATION	TALLAHASSEE, FLA. (WTAL)
FREQUENCY	1270 KC/S
POWER	5 KW-U-DA-N
LATITUDE	30 DEG 25 MIN 38 SEC.
LONGITUDE	84 DEG 19 MIN 46 SEC.
WHEN USED	NIGHT
RMS FIELD	433 MV/M
DATE	FEBRUARY 1962

SILLIMAN, MOFFET & KOWALSKI
CONSULTING RADIO ENGINEERS
WASHINGTON, D.C.

FCC File No.BL-9274
Accepted 5-16-62

Station WTAL
Tallahassee, Florida

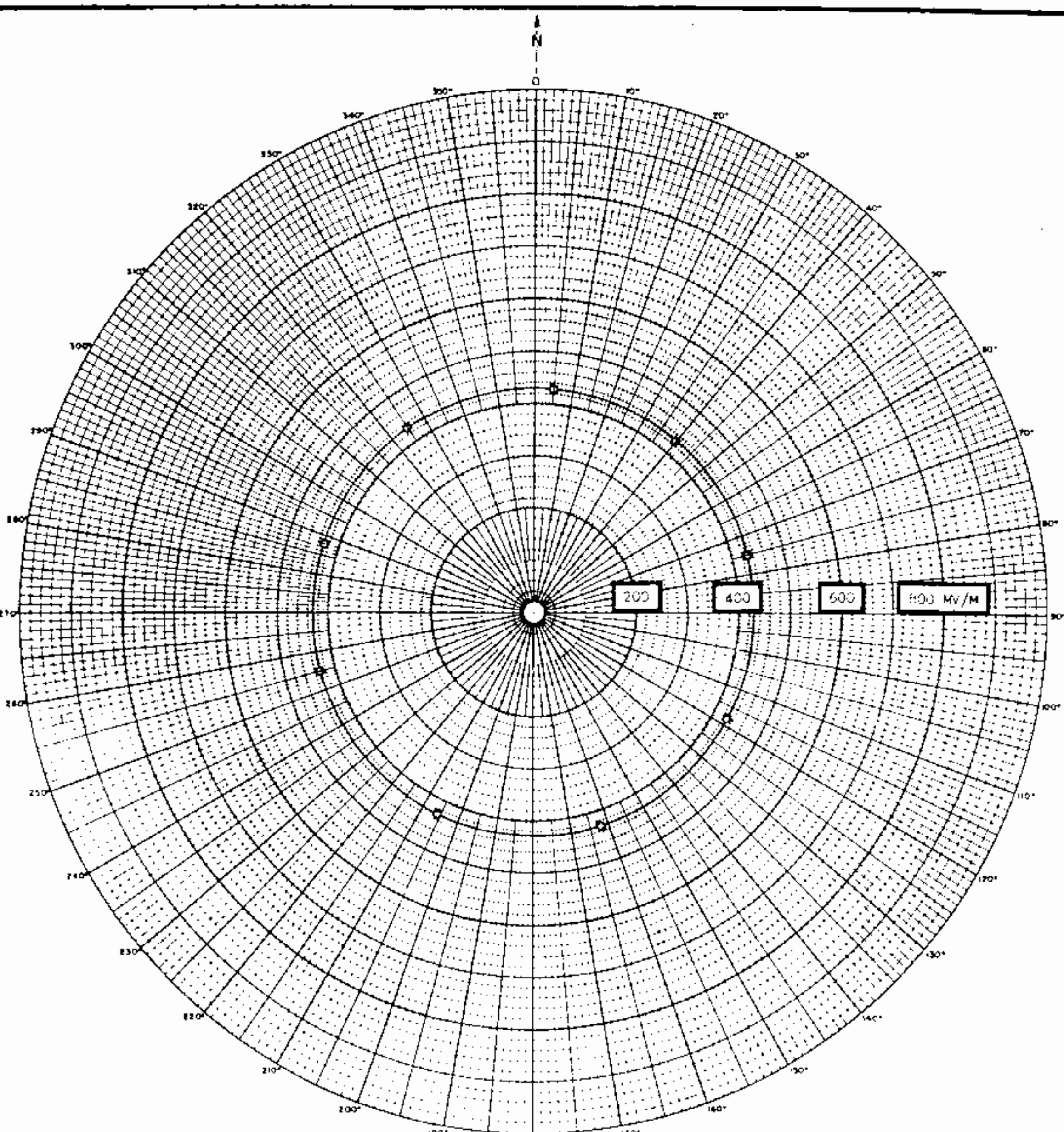
1270 kc

WTNT

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

Station WTAL
Tallahassee, Florida

5kw,DA-N,U
1270 kc



o MEASURED RADIAL ALL

FIGURE 3-C

HORIZONTAL RADIATION PATTERN

NON - DIRECTIONAL SURVEY

APPLICANT	WTAL, INC.
LOCATION	TALLAHASSEE, FLA. (WTAL)
FREQUENCY	1270 KC/S
POWER	5 KW-U-DA-N
LATITUDE	30 DEG 25 MIN. 38 SEC
LONGITUDE	84 DEG 19 MIN. 46 SEC.
WHEN USED	DAYTIME
R M S FIELD	430 MV/M
DATE	FEBRUARY 1962

SILLIMAN, MOFFET & KOWALSKI
CONSULTING RADIO ENGINEERS
WASHINGTON, D.C.

NOTE: No. 2 TOWER USED FOR DAYTIME NON-DIRECTIONAL OPERATION

FCC File No.BL-9274
Accepted 5-16-62

Station WTAL
Tallahassee, Florida

1270 kc

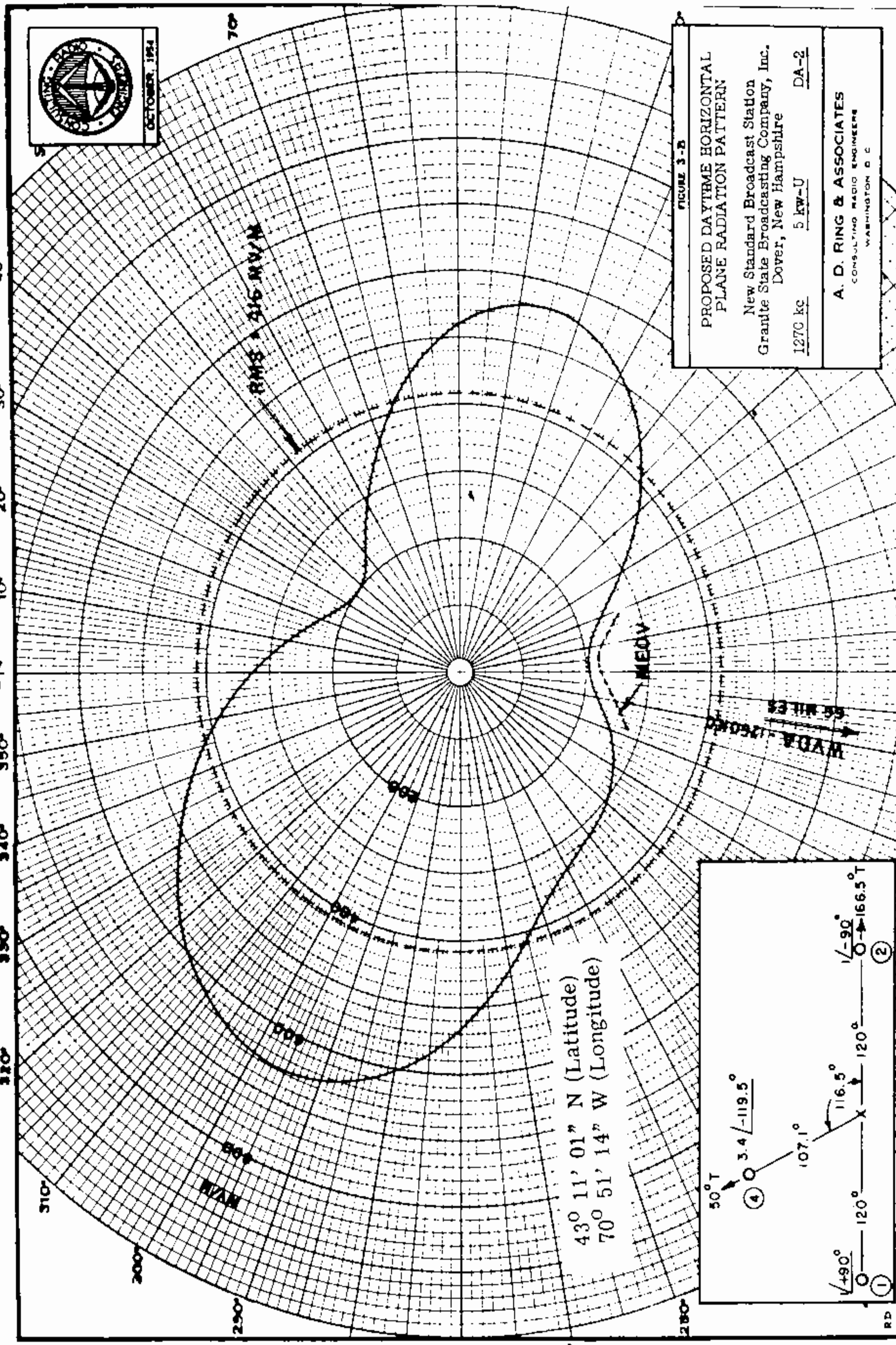
Dover N.H
WTSN

PROPOSED DAY
(1-13-55G)

Granite State Broadcasting Co., Inc., Dover, N.H.

5 KW
DA-2, U

1270 KC



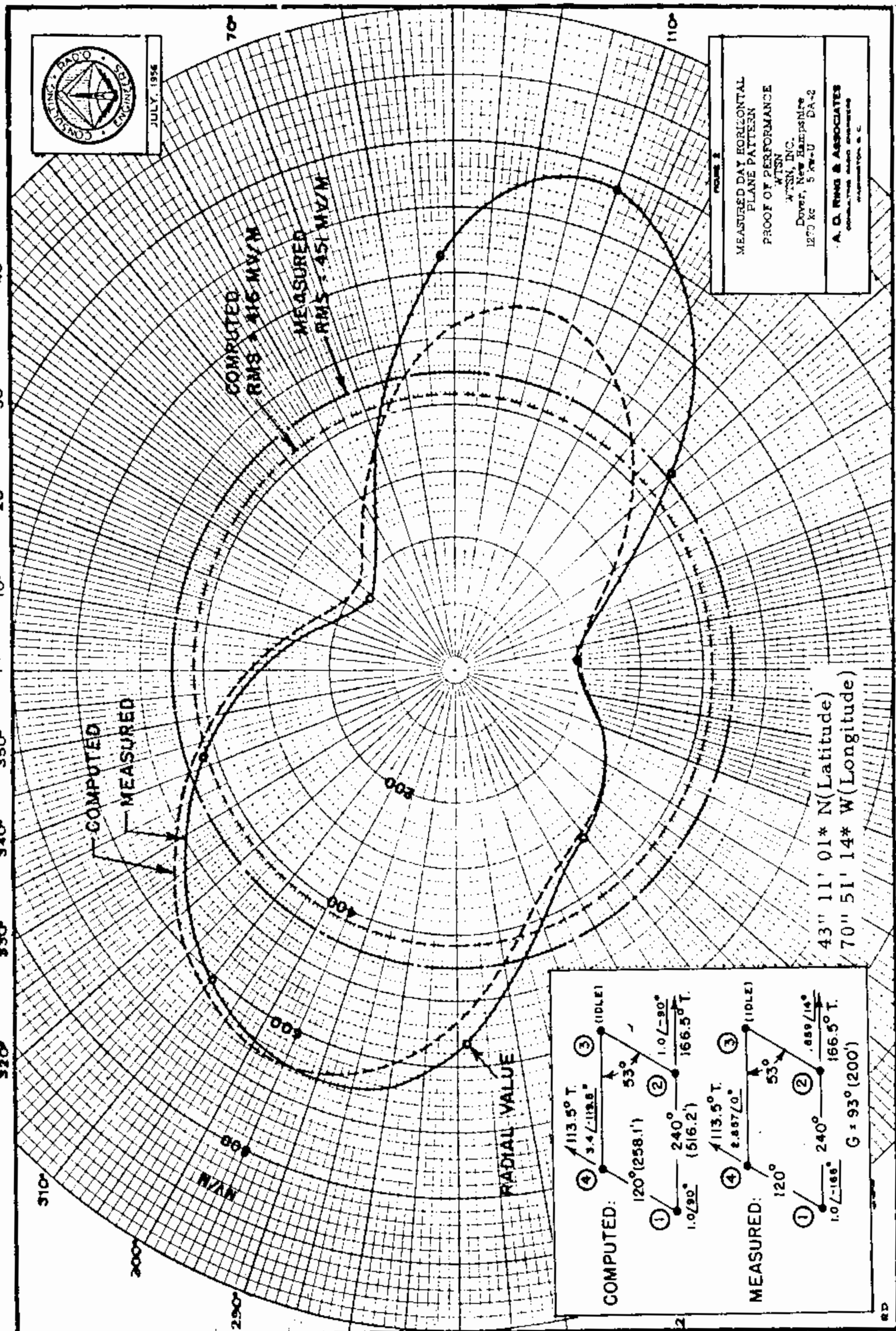
FCC File No. BP-9417 (Amended) Accepted 12-16-54

Granite State Broadcasting Co., Inc., Dover, N. H.

1270 KC

WTSN

MEASURED DAY(9-14-56g) | Station W T S N Dover, New Hampshire | 5 KW, DA-2 | 1270 KC

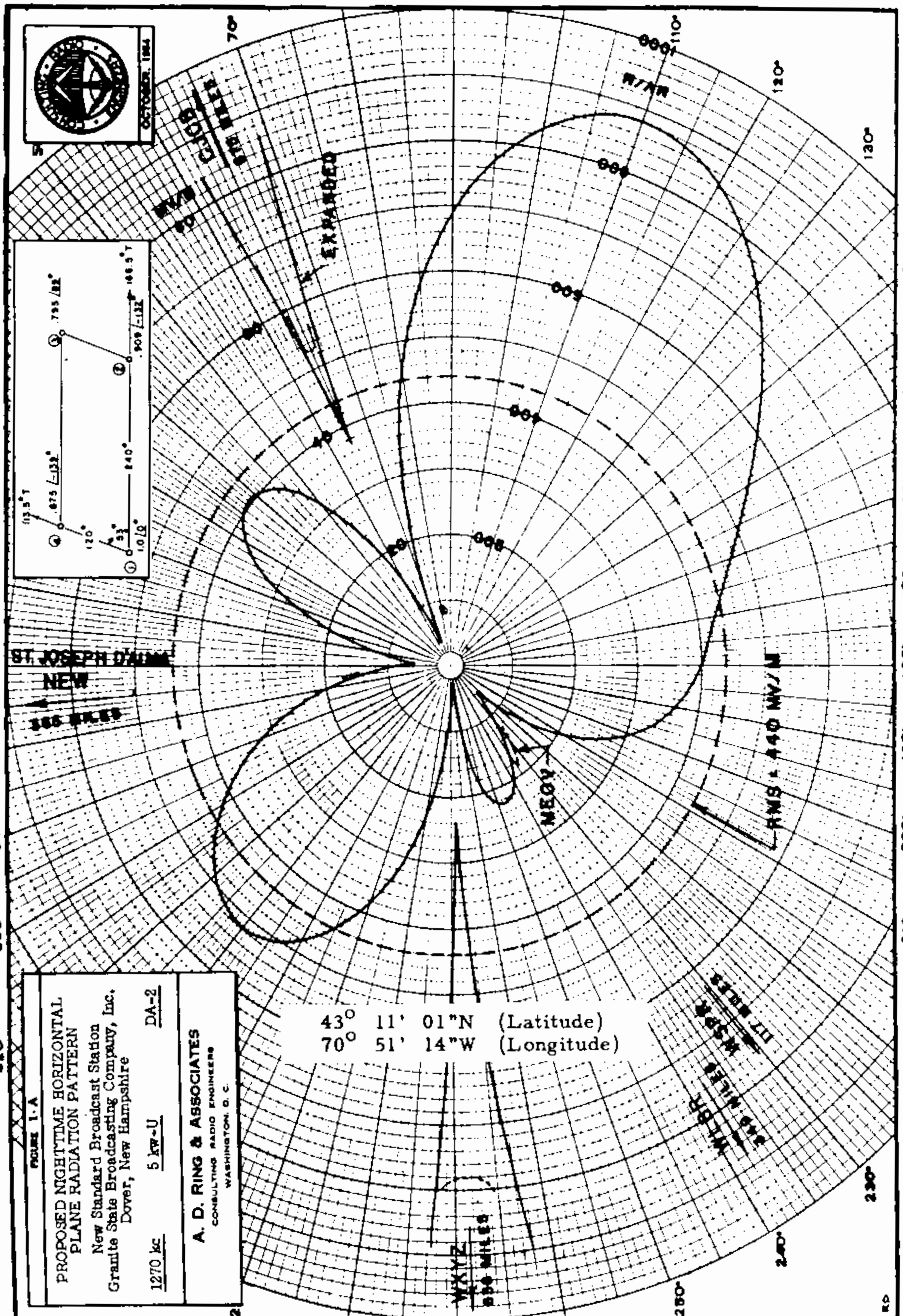


A. D. RING & CO - 1/52 - 1000

FCC File BL-6294 | Accepted 9-6-56 | Station WTSN Dover, New Hampshire | 1270KC

WTSN

Proposed Night (11/18/54G) | Granite State Broadcasting Co., Inc. Dover, New Hampshire | 5 KW DA-2 L | 1270 KC



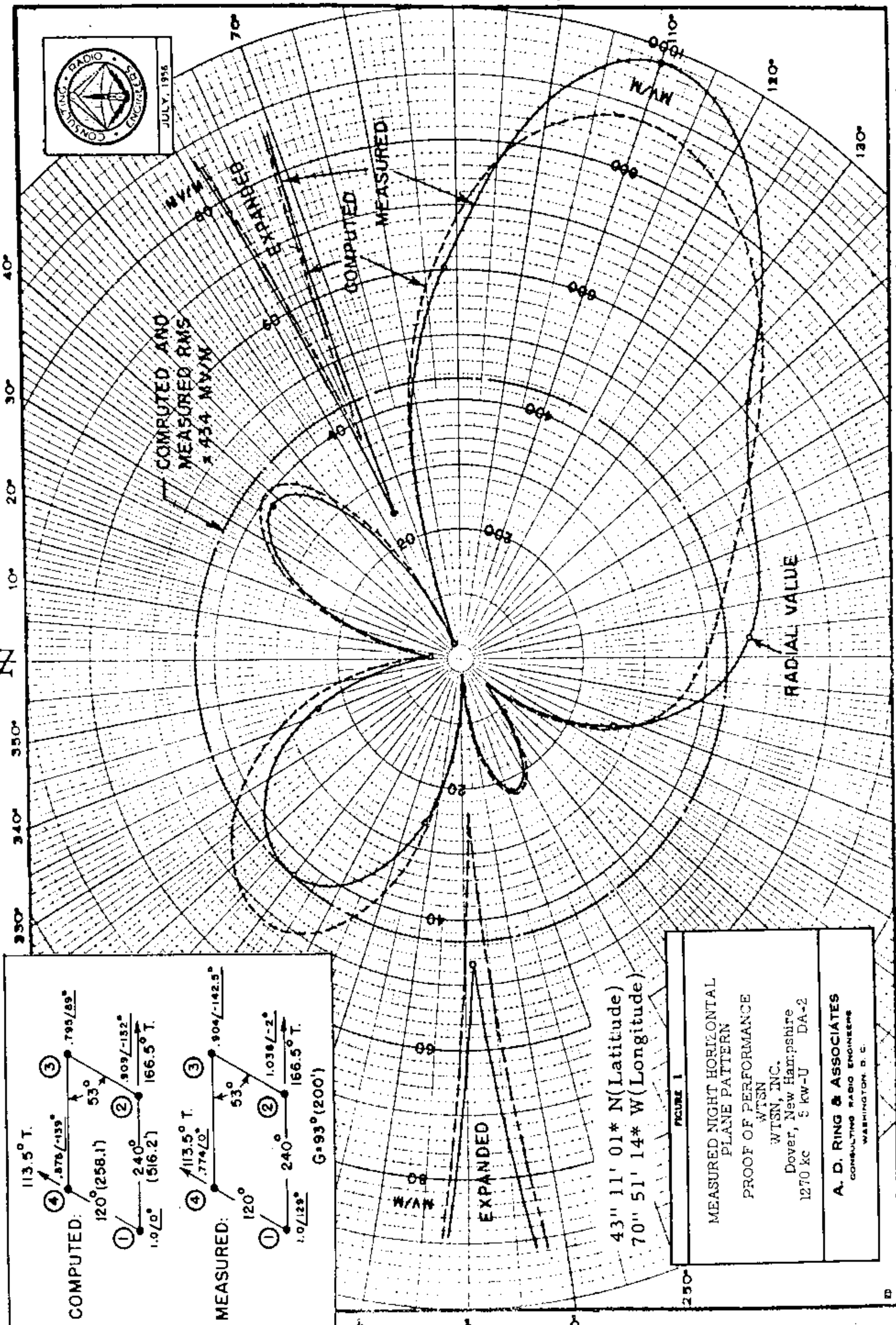
File No. BP-9417 (Amended) Accepted 10/22/54 Granite State Broadcasting Co., Inc., Dover, N. H. 1270 KC

WTSN

MEASURED NIGHT (9-14-56g)

Station W T S N 5 KW, DA-2
Dover, New Hampshire

1270 KC



10.75 mV/m

FCC File
BL-6294

Accepted 9-6-56

Station WTSN
Dover, New Hampshire

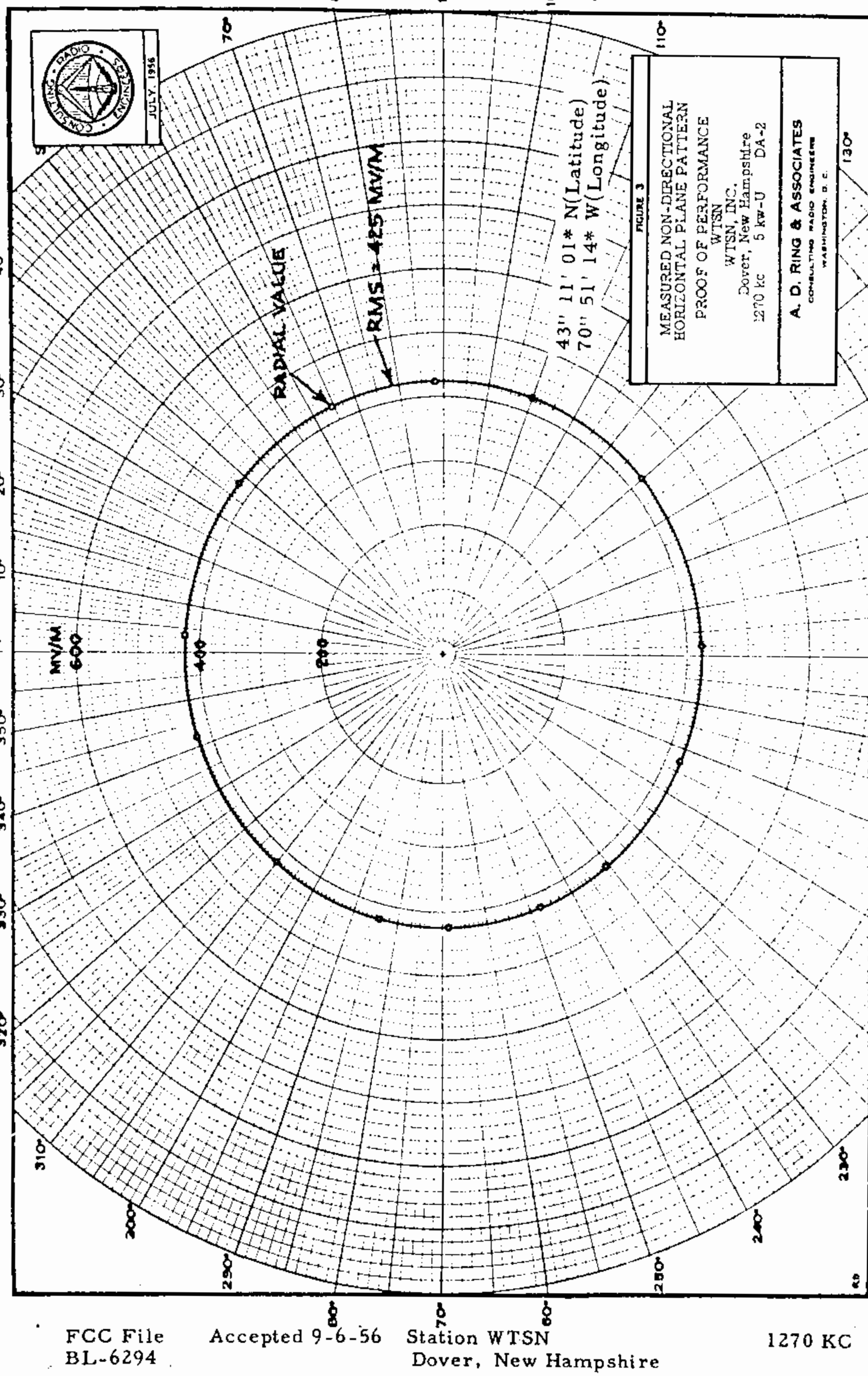
1270 KC

WTSN

MEASURED NON-DA (9-14-56g)

Station W T S N 5 KW, DA-2
Dover, New Hampshire

1270 KC



FCC File
BL-6294

Accepted 9-6-56

Station WTSN
Dover, New Hampshire

1270 KC

Measured Day
(4-28-66ct)

Station WKYR
Cumberland, Maryland

1kw,5kw-LS,DA-2,U
1270 kc

BL 11252
LIC 8-11-66

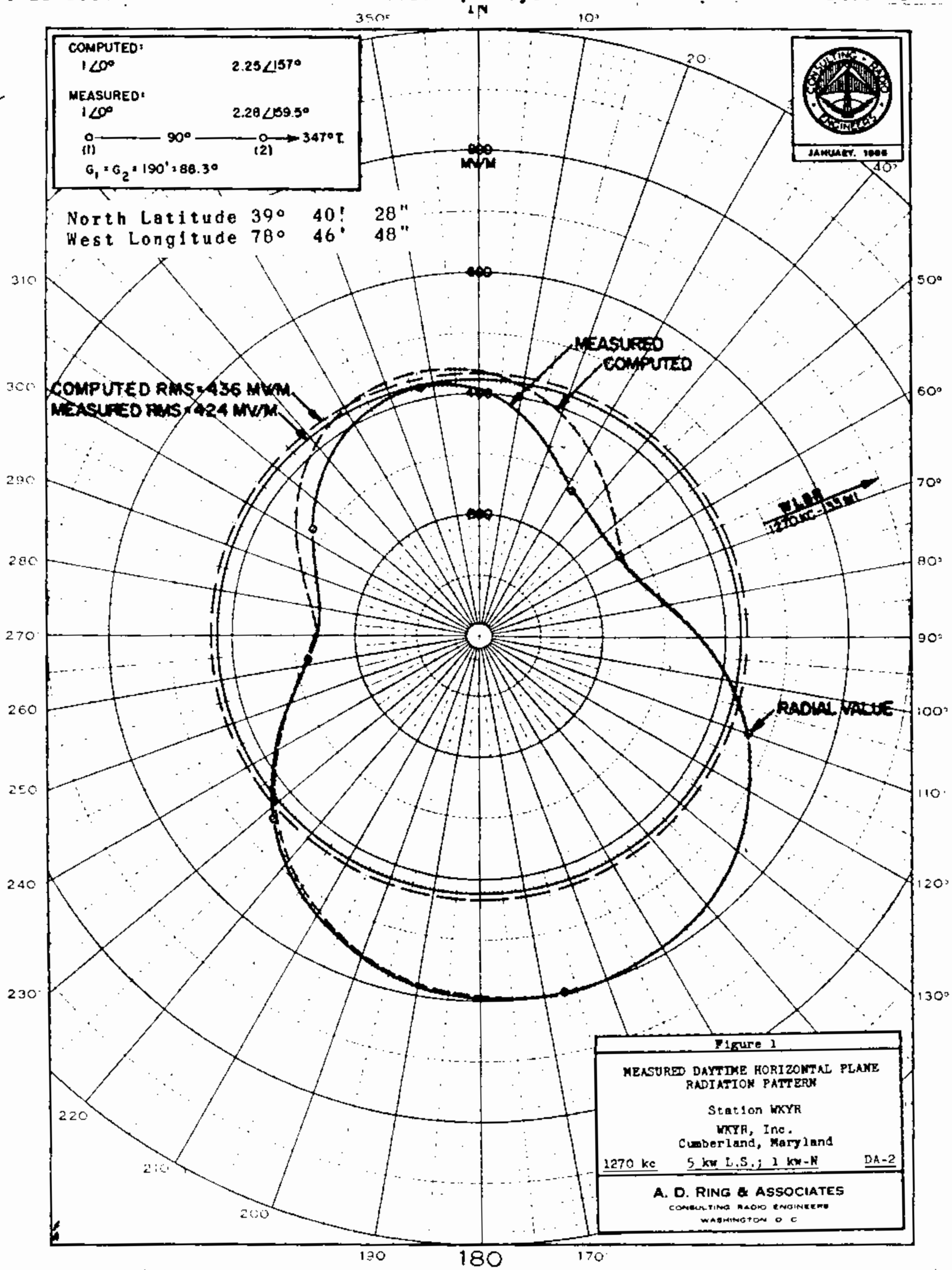


Figure 1

MEASURED DAYTIME HORIZONTAL PLANE RADIATION PATTERN

Station WKYR

WKYR, Inc.
Cumberland, Maryland

1270 kc 5 kw L.S.; 1 kw-N DA-2

A. D. RING & ASSOCIATES
CONSULTING RADIO ENGINEERS
WASHINGTON D. C.

FCC File No.BL-11252
Accepted 4-18-66

Station WKYR
Cumberland, Maryland

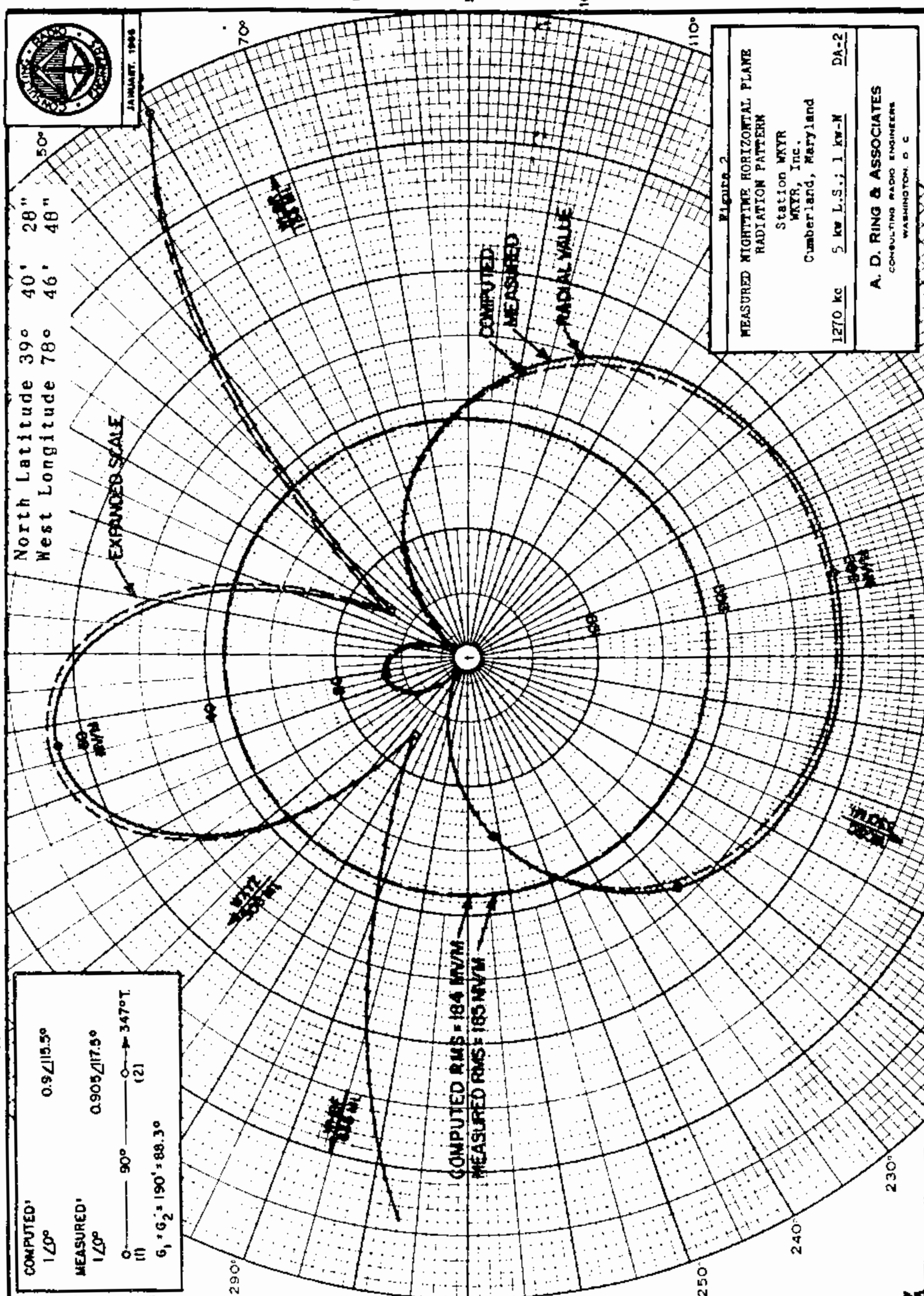
1270 kc

Measured Night
(4-28-66ct)

Station WKYR
Cumberland, Maryland

1kw,5kw-LS,DA-2,U
1270 kc

BL 11252
-108-11-66



FCC File No.BL-11252
Accepted 4-18-66

Station WKYR
Cumberland, Maryland

1270 kc

PROPOSED DAY
(5-8-61g)

Station WKYR
Cumberland, Maryland

1kw,5kw-LS, DA-2,U
1270 KC

BL 11252
LIC 8-11-66

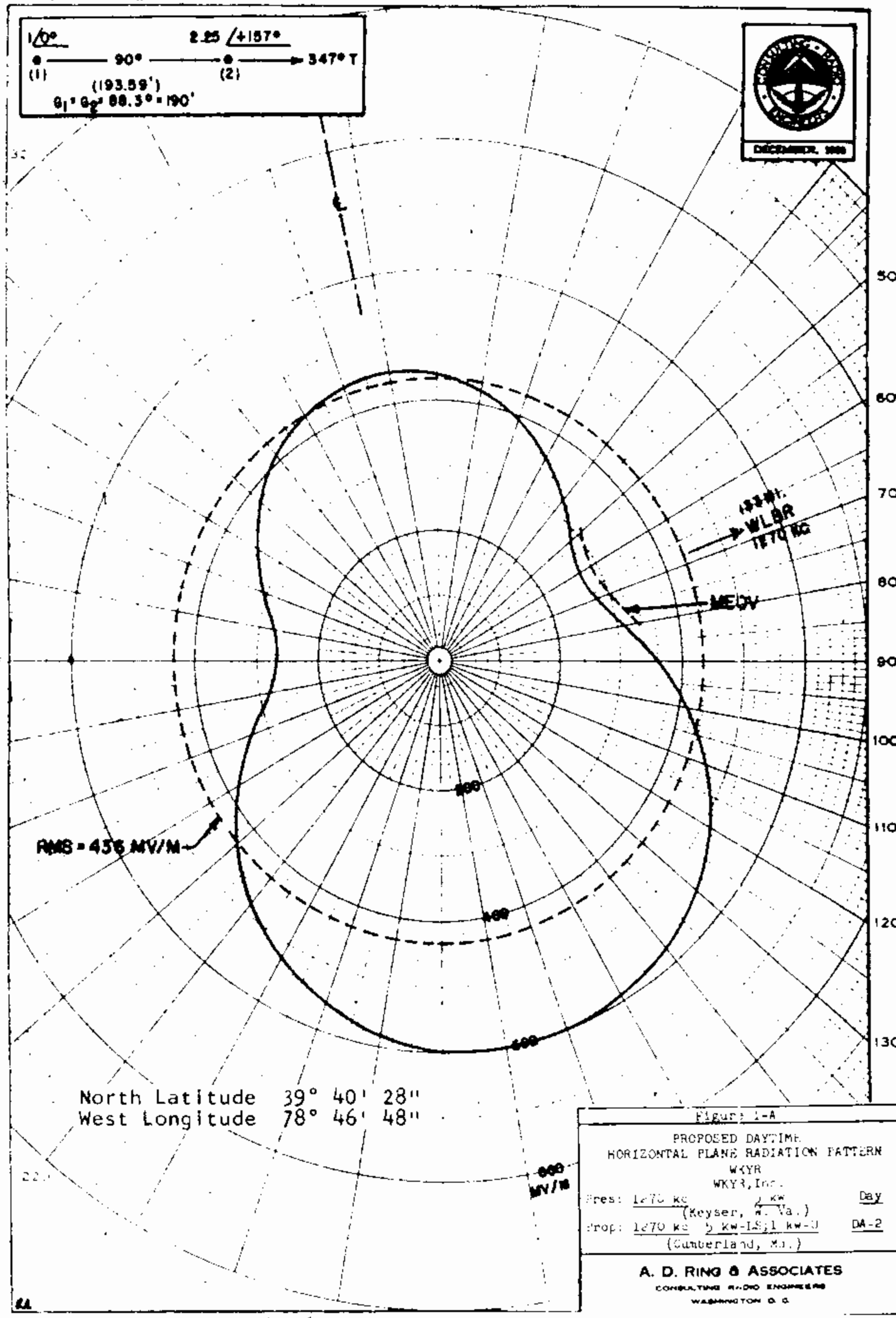


Figure 1-A

PROPOSED DAYTIME
HORIZONTAL PLANE RADIATION PATTERN
WKYR
WKYR, Inc.

Pres: 1270 kc 1 kw Day (Keyser, W. Va.)
Prop: 1270 kc 5 kw-LS;1 kw-U DA-2 (Cumberland, Md.)

A. D. RING & ASSOCIATES
CONSULTING RADIO ENGINEERS
WASHINGTON D. C.

FCC File No. BP-14726
Accepted 4-13-61

WKYR
Cumberland, Maryland

1270 KC

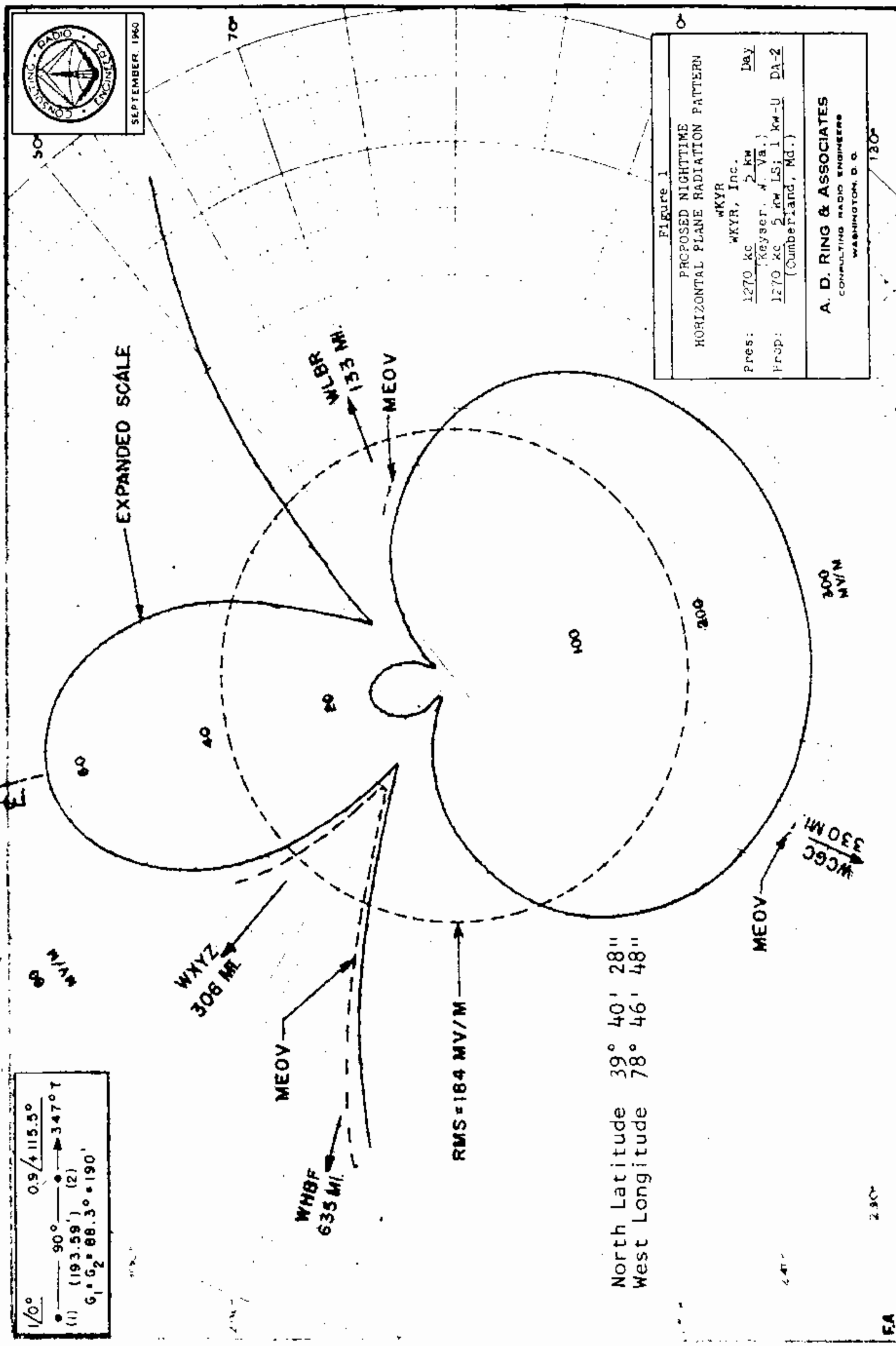
A. D. RING & ASSOCIATES - 10/60 - M

PROPOSED NIGHT
(5-8-61g)

Station WKYR
Cumberland, Maryland

1kw,5kw-LS, DA-2,U
1270 KC

BL 11252
LIC 8-11-66



FCC File No. BP-14726
Accepted 4-13-61

WKYR
Cumberland, Maryland

1270 KC

IWCK

Measured Non-DA
(4-28-66ct)

Station WKYR
Cumberland, Maryland

1kw,5kw-LS,DA-2,U
1270 kc

BL 11252
LIC 8-11-66

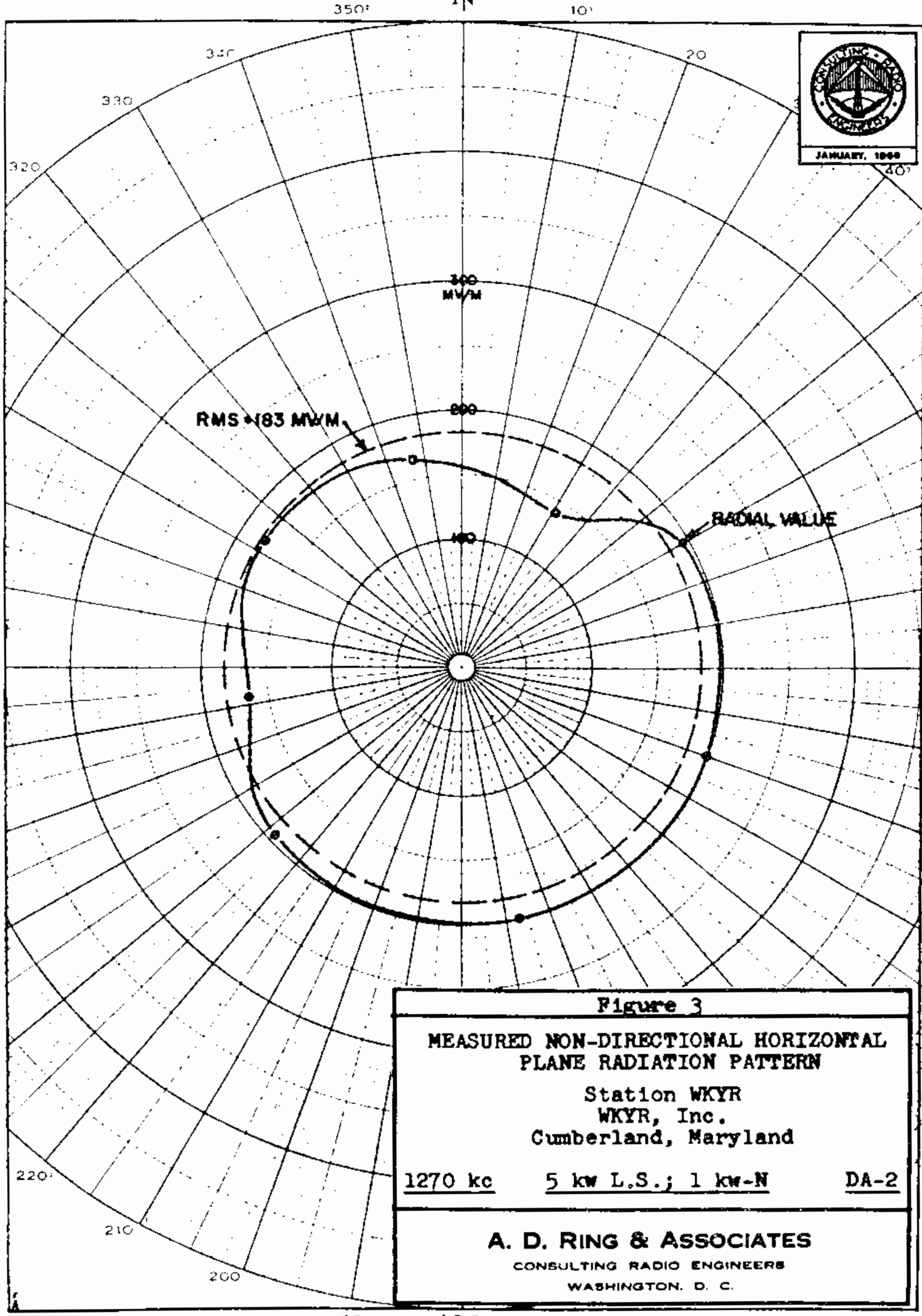


Figure 3

MEASURED NON-DIRECTIONAL HORIZONTAL PLANE RADIATION PATTERN

Station WKYR
WKYR, Inc.
Cumberland, Maryland

1270 kc — 5 kw L.S.; 1 kw-N — DA-2

A. D. RING & ASSOCIATES
CONSULTING RADIO ENGINEERS
WASHINGTON, D. C.

WVOY

DIRECTIONAL ANTENNA DESCRIPTION SHEET

Station: WVOY

Main Studio: Charlevoix, Michigan

Frequency: 1270 kHz

Power: 5 kW

Notification List No. 1652

Date: October 1, 1975

Class: III

GEOGRAPHICAL LOCATION OF THE CENTER OF THE ANTENNA SYSTEM:

North Latitude: 45° 16' 22"
West Longitude: 85° 15' 08"

ANTENNA CHARACTERISTICS

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

TOWER:	N(#1)	C(#2)	S(#3)	
HEIGHT ABOVE INSULATORS:	158'	158'	158'	(73.4°)
PHASING:	0°	+145.369°	+289°	
FIELD RATIO:	1.00	1.92	1.00	

SPACING AND ORIENTATION: Adjacent elements are spaced 129.1' (60°) on a line bearing 174° true.

GROUND SYSTEM: 120-193.7' equally spaced copper radials about each tower. Radials are shortened and bonded to transverse straps along intersections between towers.

PREDICTED EFFECTIVE FIELDS AT RATED POWER:

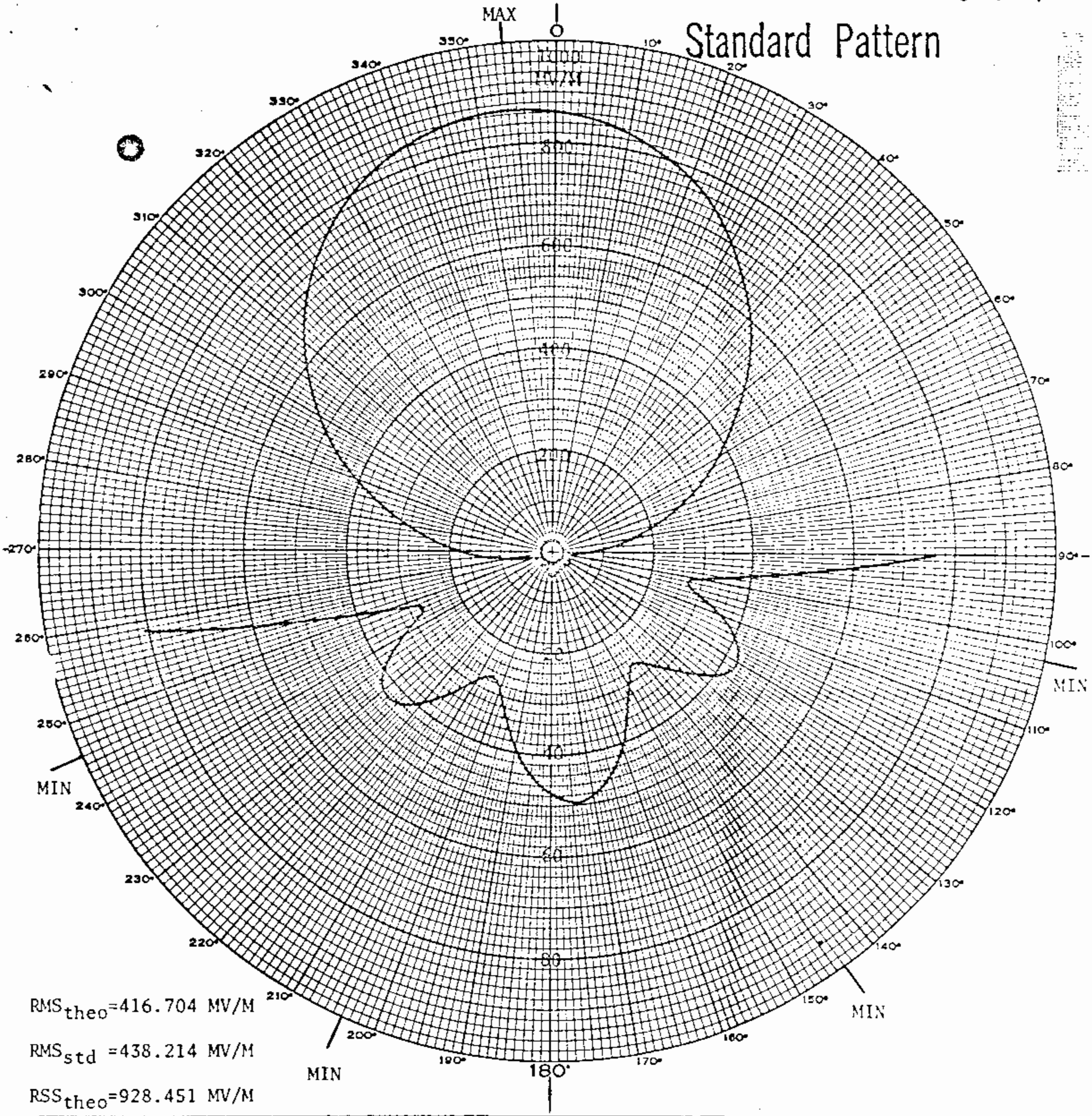
	THEORETICAL		STANDARD
	RMS	RSS	RMS
Day	402 mv/m	-	-
Night	416.704 mv/m	928.451 mv/m	438.214 mv/m

Note: This notification concerns a change to add new Nighttime operation. Existing Daytime antenna radiation and ground system are corrected.

CTR NO 30382A3

WVOY

Standard Pattern



RMS_{theo}=416.704 MV/M

RMS_{std} =438.214 MV/M

RSS_{theo}=928.451 MV/M

TOWER PLACEMENT SKETCH

G's = 73.4°

#1 1.0/0°

60°

(NDA) #2 1.92/145.369°

60°

#3 1.0/289°

174° T.

PATTERN PARAMETERS

TOWER No.	ELECTRICAL HEIGHT G°	SPACING S°	PHASING Ψ°	FIELD RATIO F
1				
2				
3				
4				
5				
6				

DAYTIME OPERATION ☐ NIGHTTIME OPERATION ☒

FIGURE 4

PROPOSED NIGHTTIME PATTERN

CHARLEVOIX, MICH.

$\theta°$ = 0

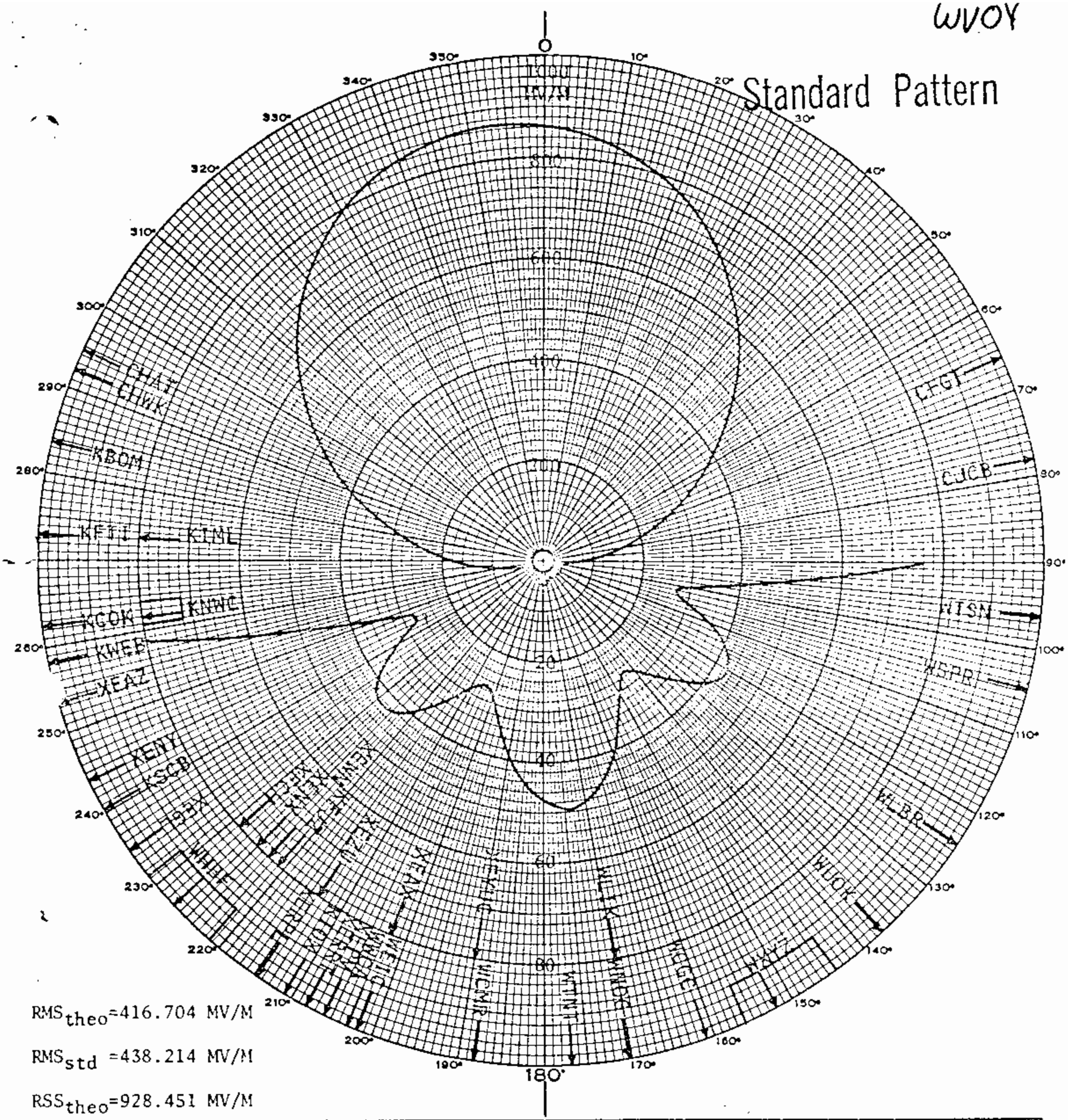
STATION DATA

CALL	WVOY
FREQ	1270 KHz
POWER	5.0 Kw
TYPE	DA-N
TIME	NIGHTTIME
LAT.	N45-16-22
LONG.	W85-15-08

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

WVOY

Standard Pattern



RMS$_{theo}$=416.704 MV/M

RMS$_{std}$ =438.214 MV/M

RSS$_{theo}$=928.451 MV/M

TOWER PLACEMENT SKETCH

G's = 73.4°

#1 1.0/0°

60°

(NDA)#2 1.92/145.369°

60°

#3 1.0/289°

174° T.

PATTERN PARAMETERS

TOWER No.	ELECTRICAL HEIGHT θ°	SPACING S°	PHASING ψ°	FIELD RATIO F
1				
2				
3				
4				
5				
6				

DAYTIME OPERATION ☐ NIGHTTIME OPERATION ☒

FIGURE 5A

PROPOSED
NIGHTTIME
PATTERN

CHARLEVOIX, MICH.

θ° = 0

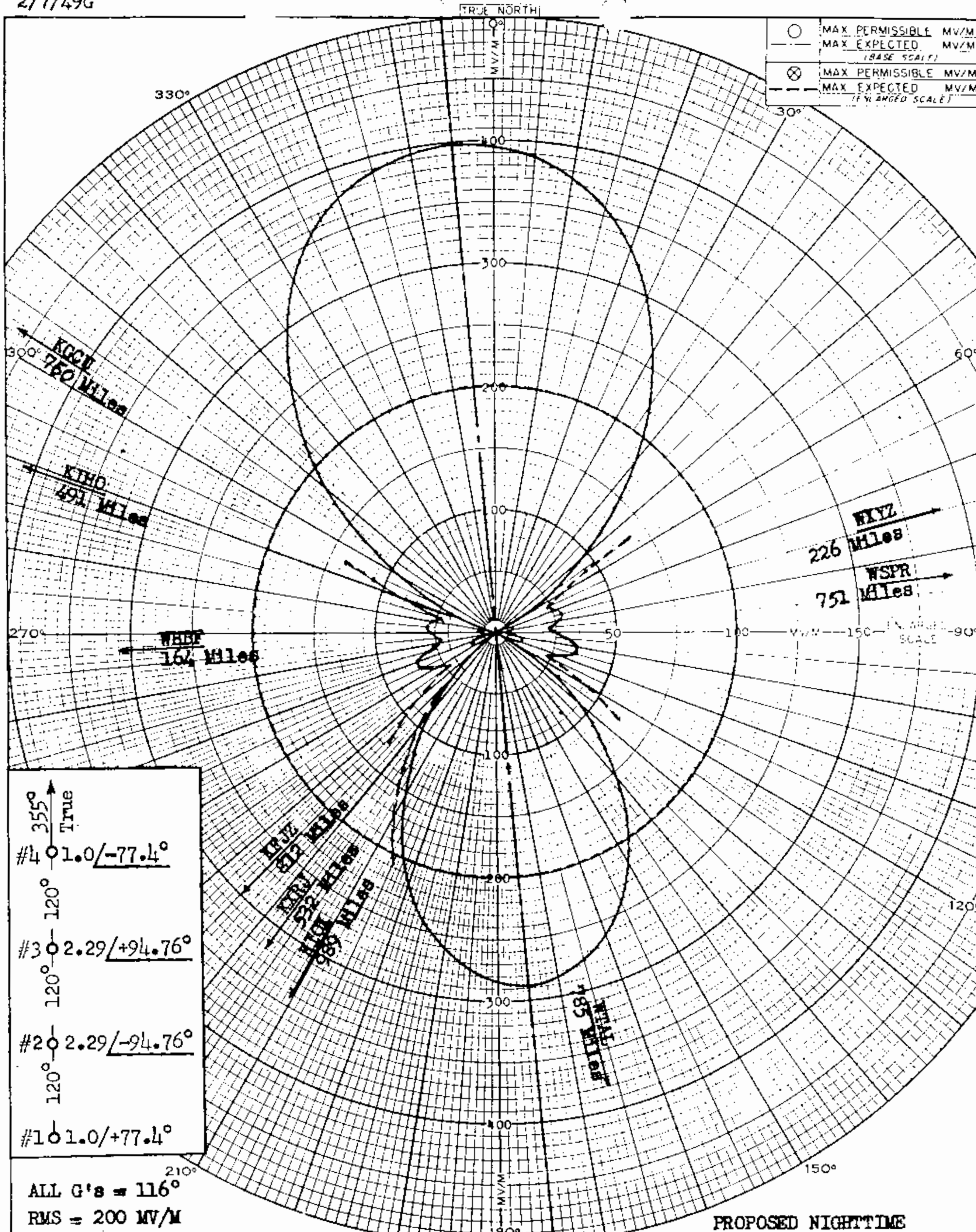
STATION DATA

CALL	WVOY
FREQ	1270 KHz
POWER	5.0 Kw
TYPE	DA-N
TIME	NIGHTTIME
LAT.	N45-16-22
LONG.	W85-15-08

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

WWCA
GARY, IND.

PROPOSED DAY+ NEW, GARY, IND. 12-2-48 1kw, DA2 1270 kc
NIGHT 2/7/49G CORRECTED EXHIBIT NO. I-C-1



COMMERCIAL RADIO EQUIPMENT CO.
RADIO ENGINEERING CONSULTANTS
KANSAS CITY WASHINGTON, D.C. HOLLYWOOD

PATTERN H118N11
FOR Gary, Indiana
POWER 1000 Watts FREQ 1270 Kcs.
DATE JULY 26, 1948

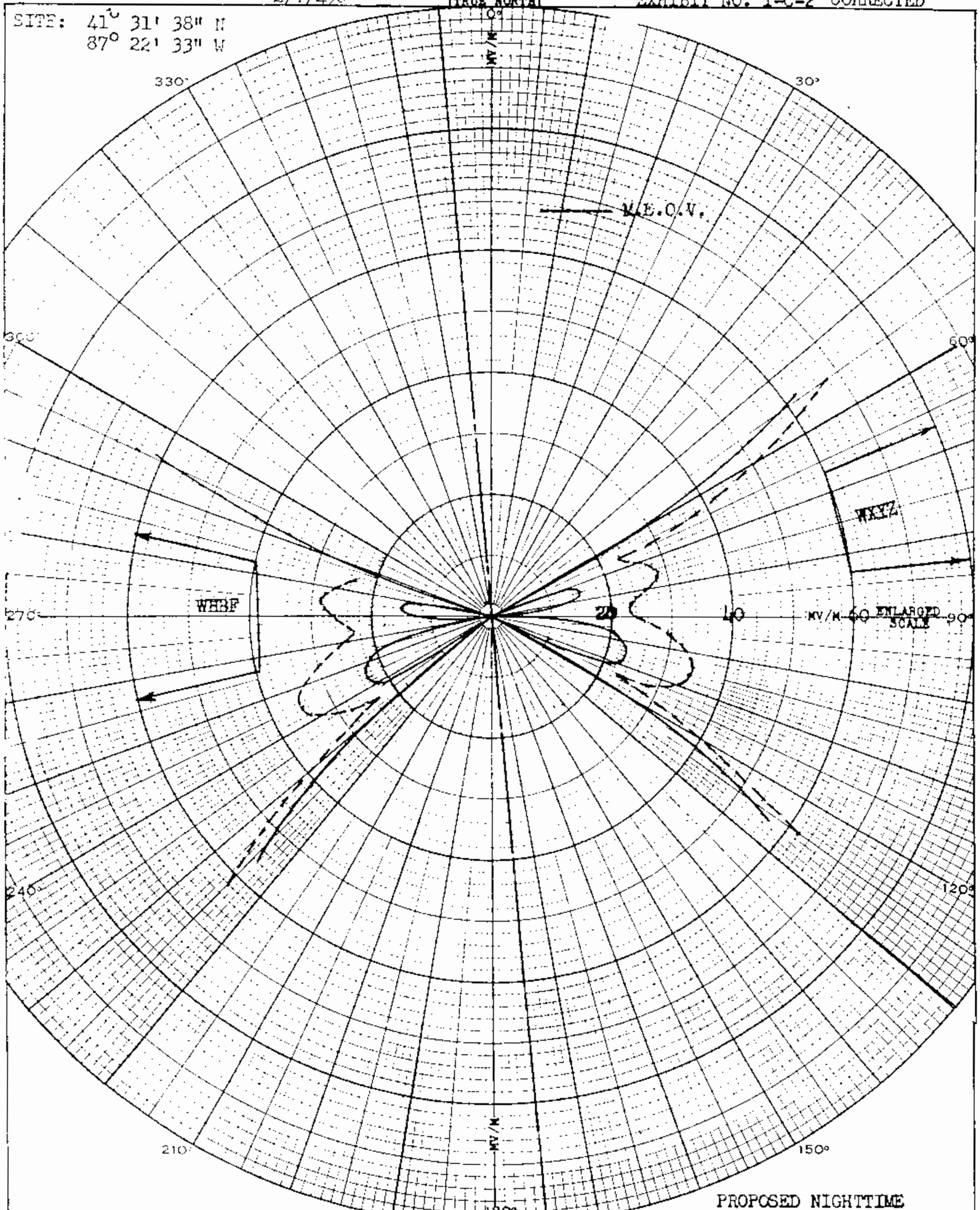
WWCA
GARY, IND.

PROPOSED DAY + NEW, GARY, IND. 2/7/490 — 12-2-48 — 1kw, DA2 — 1270 kc

NIGHT NULLS

EXHIBIT NO. I-C-2 CORRECTED

SITE: 41° 31' 38" N
87° 22' 33" W



PROPOSED NIGHTTIME

COMMERCIAL RADIO EQUIPMENT CO.

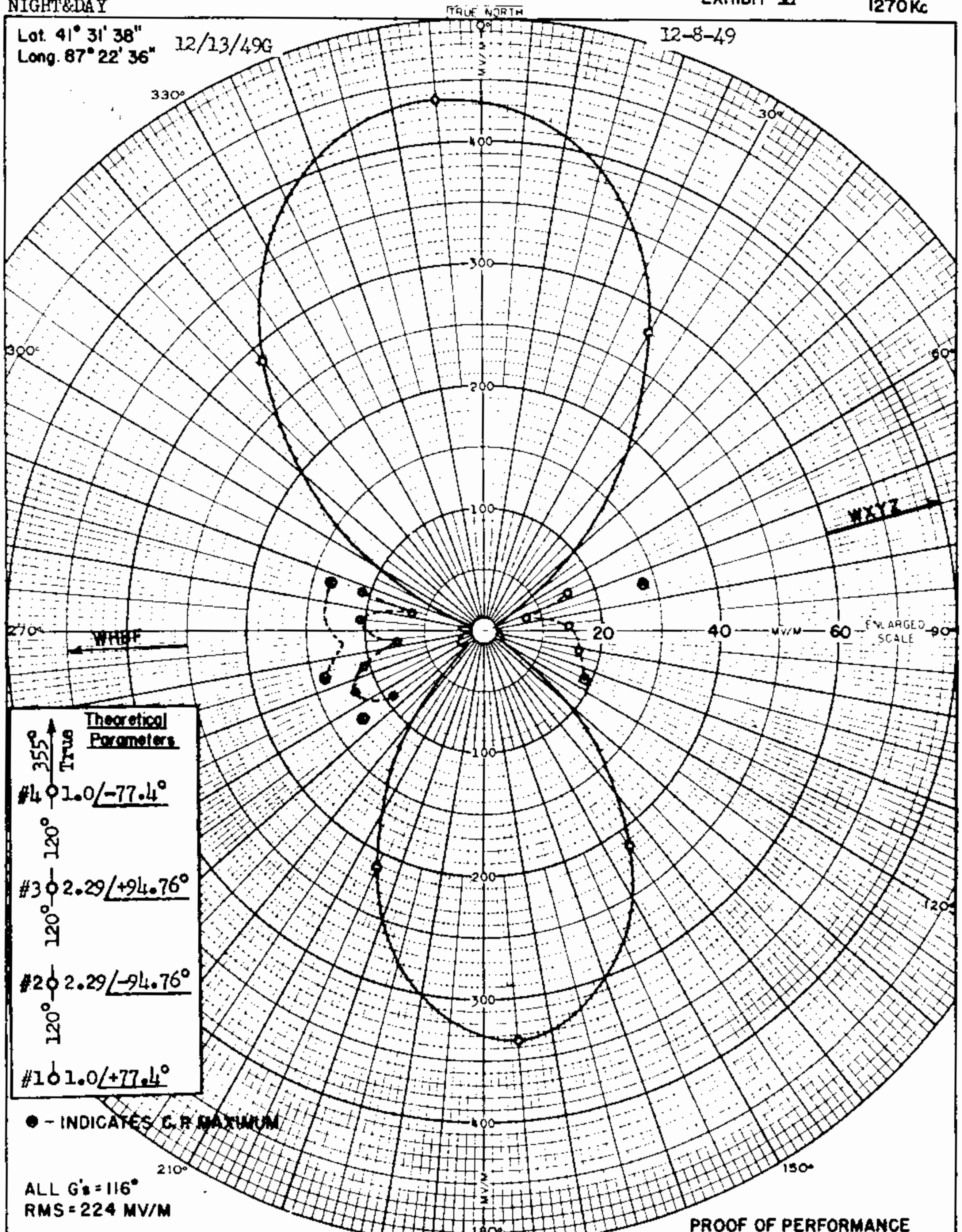
RADIO ENGINEERING CONSULTANTS

KANSAS CITY — WASHINGTON, D.C. — HOLLYWOOD

PATTERN: H118N11 Page 2
FOR: GARY, INDIANA
POWER: 1000 WATTS FREQ: 1270 KC
DATE: JULY 26, 1948

WWCA

MEASURED NIGHT&DAY   WWCA, GARY, IND.   1kw; DA-1   EXHIBIT VI   WWCA 1270Kc



PROOF OF PERFORMANCE

COMMERCIAL RADIO EQUIPMENT CO.

RADIO ENGINEERING CONSULTANTS

KANSAS CITY   WASHINGTON, D. C.

PATTERN HII8DNIIP (DA-I)

FOR WWCA, GARY, INDIANA

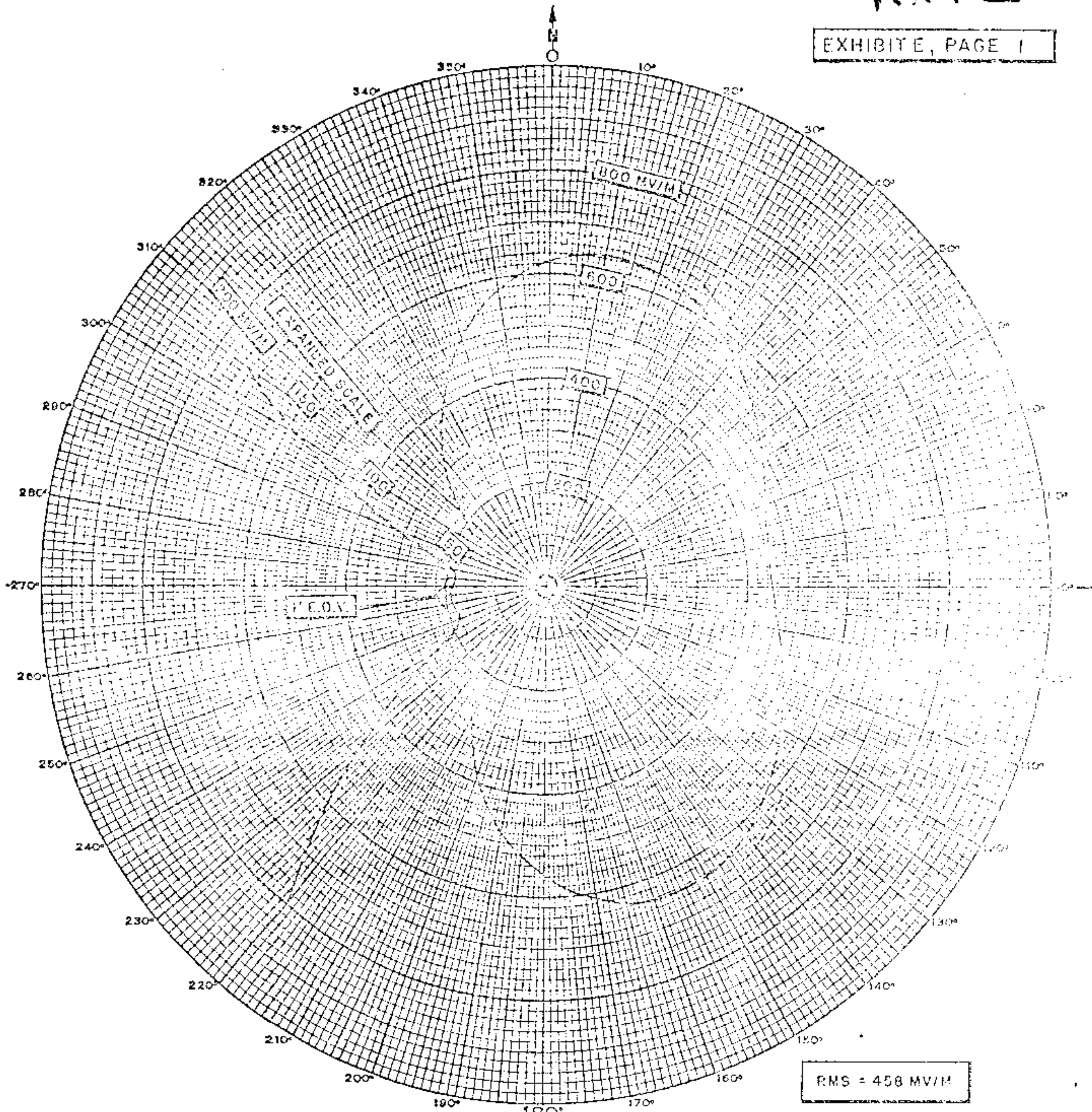
POWER 1 KW   FREQ 1270 KC

DATE DEC. 3, 1949   BY EFL

WWCA, Gary, Ind. 1270 kc

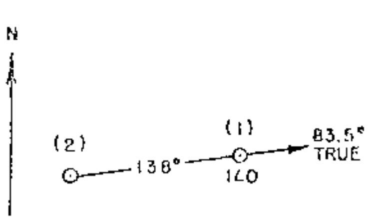
WXYZ

EXHIBIT E, PAGE 1



RMS = 458 MV/M

180°



LATITUDE 42° 27' 58" NORTH
LONGITUDE 83° 15' 00" WEST

ANTENNA NUMBER	AZIMUTH DEG	SPACING DEG	PHASING DEG	FIELD RATIO	MV/M FOR 1 KW	HEIGHT DEG
1	SEE DIAGRAM	SEE DIAGRAM	0	1.0	225	165
2			45	.87	225	165

CALCULATED NIGHTTIME HORIZONTAL PLANE PATTERN PROPOSED
WXYZ
DETROIT, MICHIGAN
1270 KHZ 5 KW U, DA-N
71011

AMERICAN BROADCASTING COMPANY
ENGINEERING DEPARTMENT

WXYZ

PROPOSED NIGHT (4-24-58g)

Station WXYZ 5kw, DA-N,U
Detroit, Michigan 1270 KC

Granted CP 11/5/58 to move studio + transmitter location

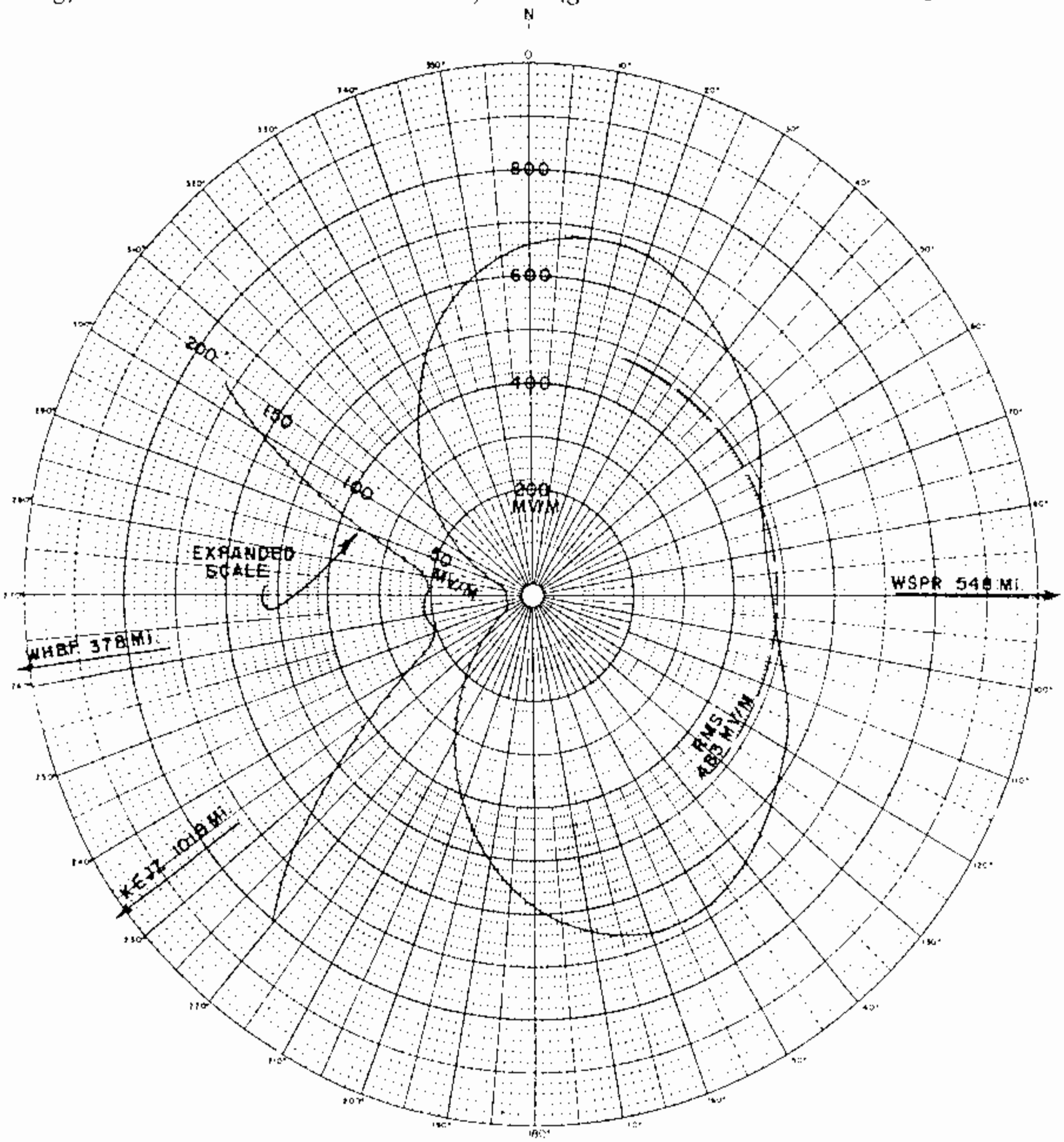
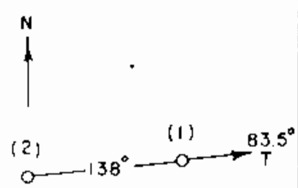


EXHIBIT E

AMERICAN BROADCASTING COMPANY
ENGINEERING DEPARTMENT



LATITUDE 42° 27' 58"
LONGITUDE 83° 15' 00"

ANTENNA NUMBER	AZIMUTH DEG	SPACING DEG	PHASING DEG	FIELD RATIO	MV/M FOR 1 KW	HEIGHT DEG
1	SEE DIAGRAM	SEE DIAGRAM	0°	1.0	225.5	165°
2			45°	0.87	225.5	165°

CALCULATED NIGHTTIME HORIZONTAL PLANE PATTERN FOR PROPOSED WXYZ
DETROIT, MICHIGAN
1270 KC 5 KW U, DA-N
570806

KEAR AND KENNEDY
CONSULTING ENGINEERS
WASHINGTON, D.C.

FCC File No. BP-11,913
Accepted 4-7-58

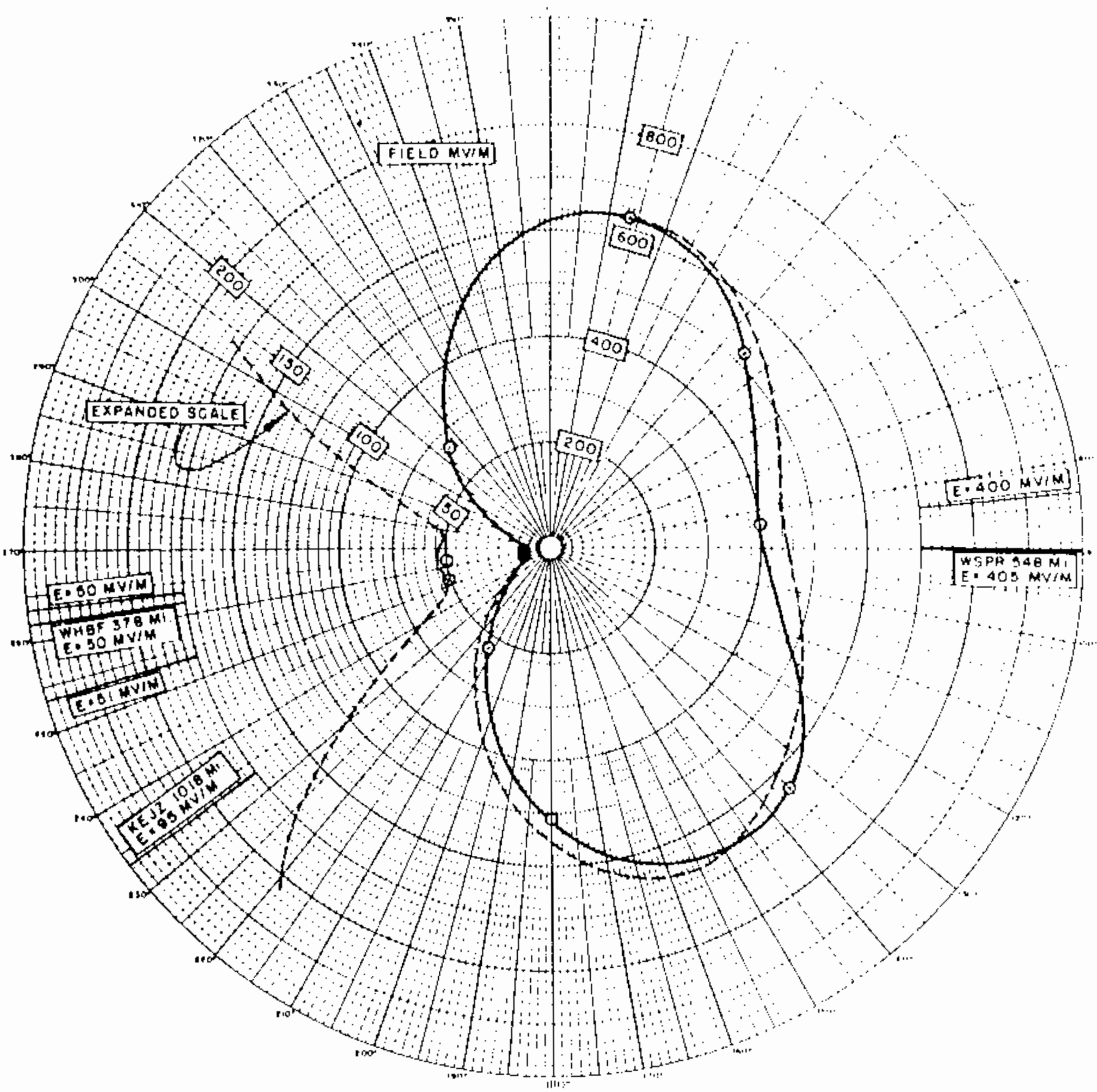
WXYZ
Detroit, Michigan 1270 KC

WXYZ

MEASURED NIGHT
(12-21-59g)

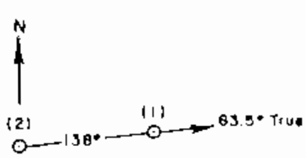
Station WXYZ
Detroit, Michigan

5kw, DA-N, U
1270 KC



RMS - C.P VALUE - 458 MV/M ---------- THEORETICAL
RMS - MEASURED VALUE - 444 MV/M ——o—— MEASURED

EXHIBIT K



LATITUDE 42° 27' 58" North
LONGITUDE 83° 15' 00" West

ANTENNA NUMBER	AZIMUTH DEG	SPACING DEG	PHASING DEG	FIELD RATIO	MV/M FOR 1 KW	HEIGHT DEG
1	SEE DIAGRAM	SEE DIAGRAM	0°	1.0	199	165°
2			44°	1.090	199	165°

MEASURED NIGHTTIME HORIZONTAL PLANE PATTERN FOR
WXYZ
DETROIT, MICHIGAN
1270 KC 5 KW U, DA-N
590916

AMERICAN BROADCASTING COMPANY
ENGINEERING DEPARTMENT

FCC File No. BL-7688
Accepted 11-17-59

WXYZ
Detroit, Michigan

1270 KC

WXYZ

MEASURED NON-DA
(12-21-59g)

Station WXYZ
Detroit, Michigan

5kw, DA-N, U
1270 KC

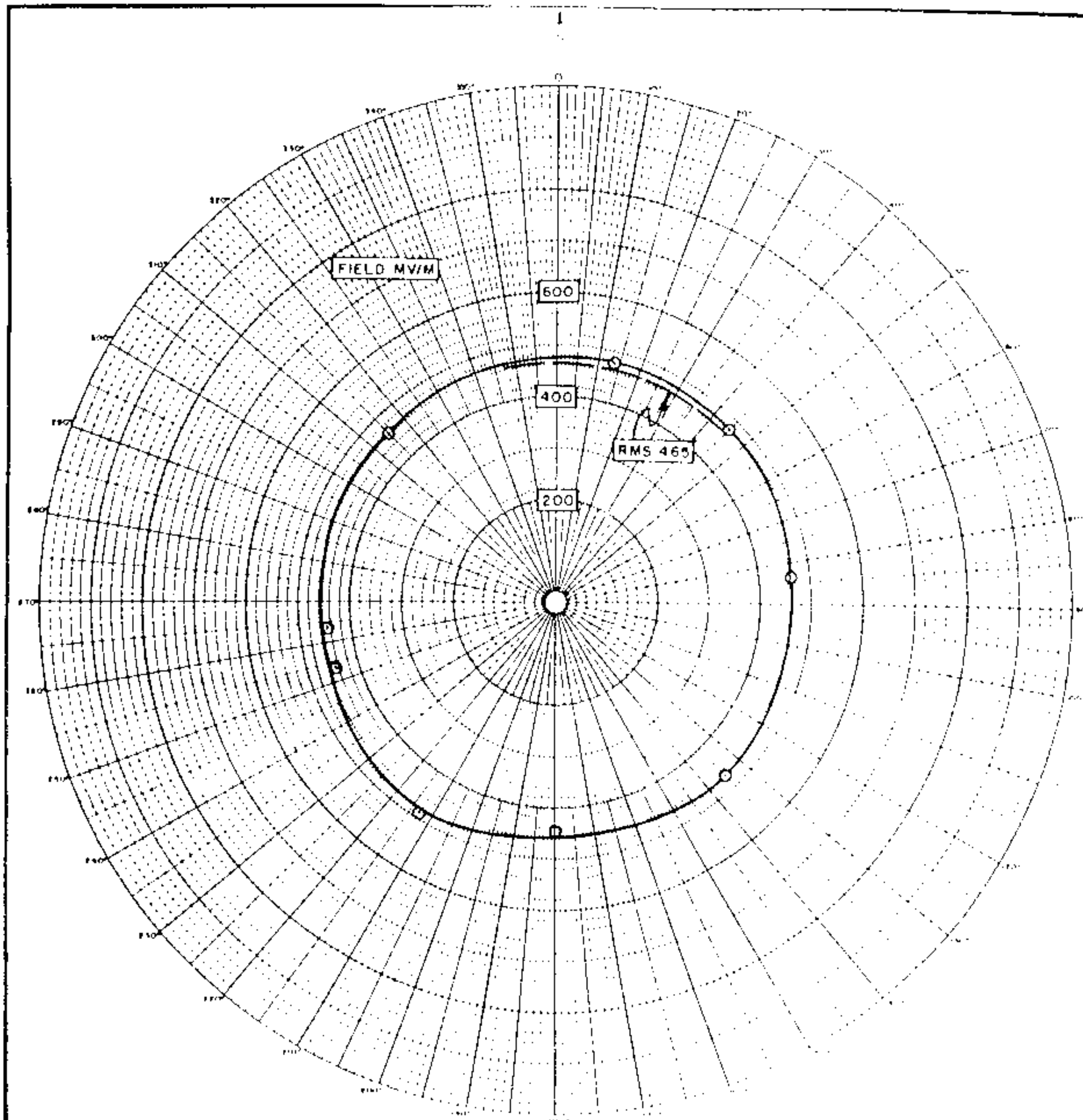


EXHIBIT J

TOWER NO 2 EXCITED

TV & NO. 1 TOWERS ISOLATED FOR NON DIRECTIONAL OPERATION.

[illegible] 42° 27' 58" North
[illegible] 83° 15' 00" West

MEASURED DAYTIME HORIZONTAL PLANE PATTERN
FOR
WXYZ
DETROIT, MICHIGAN
1270 KC 5 KW U, DA-N
590916

AMERICAN BROADCASTING COMPANY
ENGINEERING DEPARTMENT

FCC File No. BL-7688
Accepted 11-17-59

WXYZ
Detroit, Michigan

1270 KC

XERPL

Description Sheet
(3-28-69ct)

Station XERPL
Leon, Guanajuato

150w,1kw-LS,DA-D,U,Class III
1270 kc

DIRECTIONAL ANTENNA DESCRIPTION SHEET

Station: XERPL

Main Studio: Leon, Guanajuato

Frequency: 1270 kc/s

Power: 0.15 kw Night 1 kw Day

Notification List No. 253

Date: February 17, 1969

Class: III-D
IV-N

GEOGRAPHICAL LOCATION OF THE
CENTER OF THE ANTENNA SYSTEM:

North Latitude: 21 ° 06 ' 43 "
West Longitude: 101 ° 40 ' 28 "

ANTENNA CHARACTERISTICS

Authorized for Daytime operation. (DA-D)
Number of elements: 2
Type of elements: Guyed, vertical steel towers.

TOWER:	North	South
HEIGHT ABOVE INSULATORS:	90°	90°
PHASING:	0°	+80°
FIELD RATIO:	1	1

SPACING AND
ORIENTATION: Elements are spaced 129.27' (60°) on a line bearing 180° true.

GROUND SYSTEM: 120-193.74' equally spaced copper radials about each tower. Radials are shortened and bonded to a transverse strap along intersections between towers.

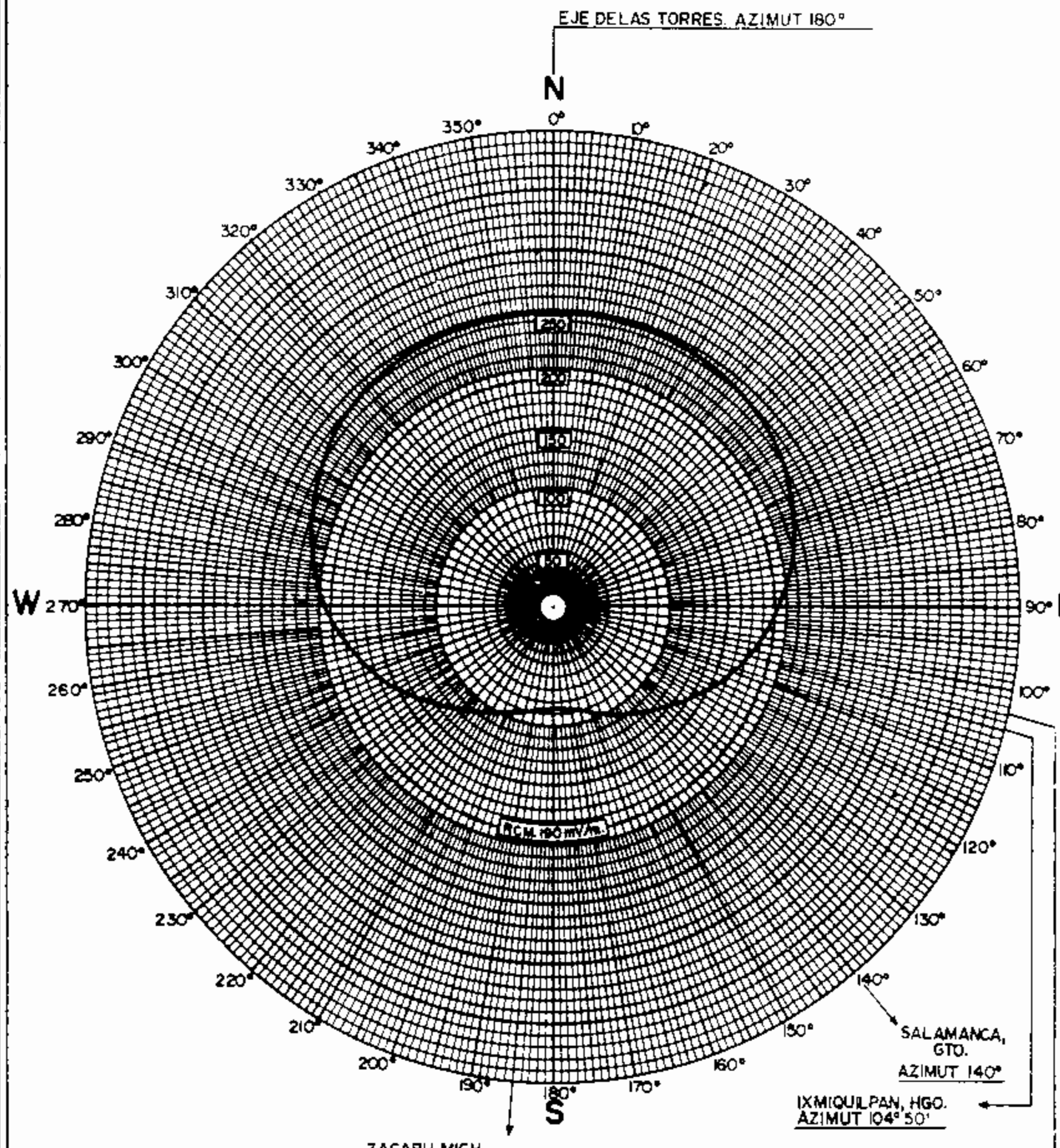
Predicted effective Day Field: 190 mv/m at rated power.

XERPL

Proposed Day
(3-28-69ct)

Station XERPL
Leon, Guanajuato

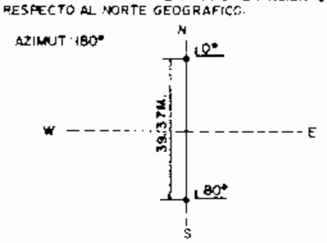
150w,1kw-LS,DA-D,U,Class III
1270 kc



OPERACION DIURNA

PATRON DE RADIACION HORIZONTAL CALCULADO EN mV/m. A 1609M

ESQUEMA DE LAS TORRES Y SU ORIENTACION CON RESPECTO AL NORTE GEOGRAFICO.



XERPL

LEON, GTO.

FRECUENCIA:
1270 KCS.
1 KW. AD-D.
0.15 KW. N-ND.

DISEÑO:
ALBERTO PEREZ ALFARO.
JAIME ROBLEDO ROMERO.

DIBUJO:
L.E.O.

DIRECTIONAL ANTENNA DESCRIPTION SHEET

Station: XERPL	Main Studio: Leon, Gto.
Frequency: 1270 kHz	Power: 0.15kw Night 5kw Day
Notification List No. 283	Date March 8, 1978 Class: III-D IV-N

GEOGRAPHICAL LOCATION OF THE CENTER OF THE ANTENNA SYSTEM:

North Latitude: 21° 06' 43"
West Longitude: 101° 40' 28"

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:	N(#1)	S(#2)	
HEIGHT ABOVE INSULATORS:	193.8°	193.8°	(90°)
PHASING:	0°	+135°	
FIELD RATIO:	1	1	

SPACING AND ORIENTATION: Towers are spaced 60° on a line bearing 180° true.

GROUND SYSTEM: 120 - 144' 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
RMS Day 350.16 mv/m

XERPL

DESCRIPCION DEL SISTEMA RADIADOR DIRECCIONAL

1 LISTA DE CAMBIOS 223
2 FECHA 15 de MARZO de 1978.
3 FRECUENCIA 1270 KHz.
4 DISTINTIVO XERPL
5. POBLACION LEON, GTO.
6 UBICACION LN 21°06'13", LW 101°40'28"
7 POTENCIA 5 KW. AD-D 150 W. N.
8 CLASE III D III N

CARACTERISTICAS TECNICAS DEL RADIADOR

9 TIEMPO DE OPERACION DIURNO
10 SISTEMA RADIADOR AD-D
11 NUMERO DE ELEMENTOS DOS

TIPO DE ELEMENTOS RADIADORES

12 TIPO DE ALIMENTACION SERIE
13 SECCION TRANSVERSAL FORMA TRIANGULAR DIMENSIONES VER ANEXO
14 TIPO DE ELEMENTO RADIADOR VERTICAL
15 TIPO DE SOPORTE CON RETENIDAS TIPO DE RETENES CABLE DE ACERO DE Ø 9.5 mm.
16. LONGITUD DE TOPETE CAPACITIVO NO HAY.
17 PERDIDAS DE IMPEDANCIA EN LA BASE EN SERIE $R_{b1}R_{b2}$= 50 OHMS.
18 NUMERO DE ELEMENTOS 1 2 Z_{01}= 50.9 + j 97.
19 ALTURA SOBRE EL AISLADOR 59.06 m. 59.06 m. Z_{02}= 45.46 + j 41.55.
20 DEFASAMIENTO 0° 135°
21 RELACION DE CORRIENTES 1 1
22 DESCRIPCION DE LA ORIENTACION DEL SISTEMA RADIADOR EL EJE DE LAS TORRES SE ENCUENTRA A 180° DE AZIMUTH CON RESPECTO DEL EJE GEOGRAFICO, LA SEPARACION ENTRE LAS TORRES ES DE 60°, LA FASE DE LAS CORRIENTES ES DE 135°, Y SU RELACION ES LA UNIDAD.

SISTEMA DE TIERRA

23 NUMERO DE RADIALES POR ELEMENTO 120
24 LONGITUD DE LOS RADIALES 59.05 mts.
25. TIPO DEL RADIAL ALAMBRE DE COBRE No. 8.

RADIACION DEL SISTEMA

26 INTENSIDAD DE CAMPO EFECTIVO TEORICO (OMNIDIRECCIONAL) DE LA POTENCIA RADIADA (RCM) 350.16 mv/m.
27 INTENSIDAD DE CAMPO EFECTIVO TEORICO A 1609 mts POR KW DE POTENCIA RADIADA 192.1 mv/m.
28. NOTA PATRON NUEVO, SUSTITUIRA AL ACTUAL AUTORIZADO.

PATRON DE RADIACION HORIZONTAL TABULADO

XERPL
1270 KHz.

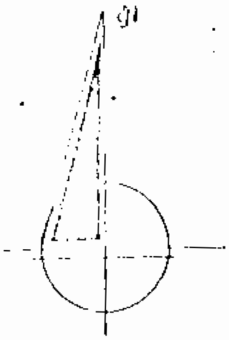
5 KW. AD-D.
150 W. N.

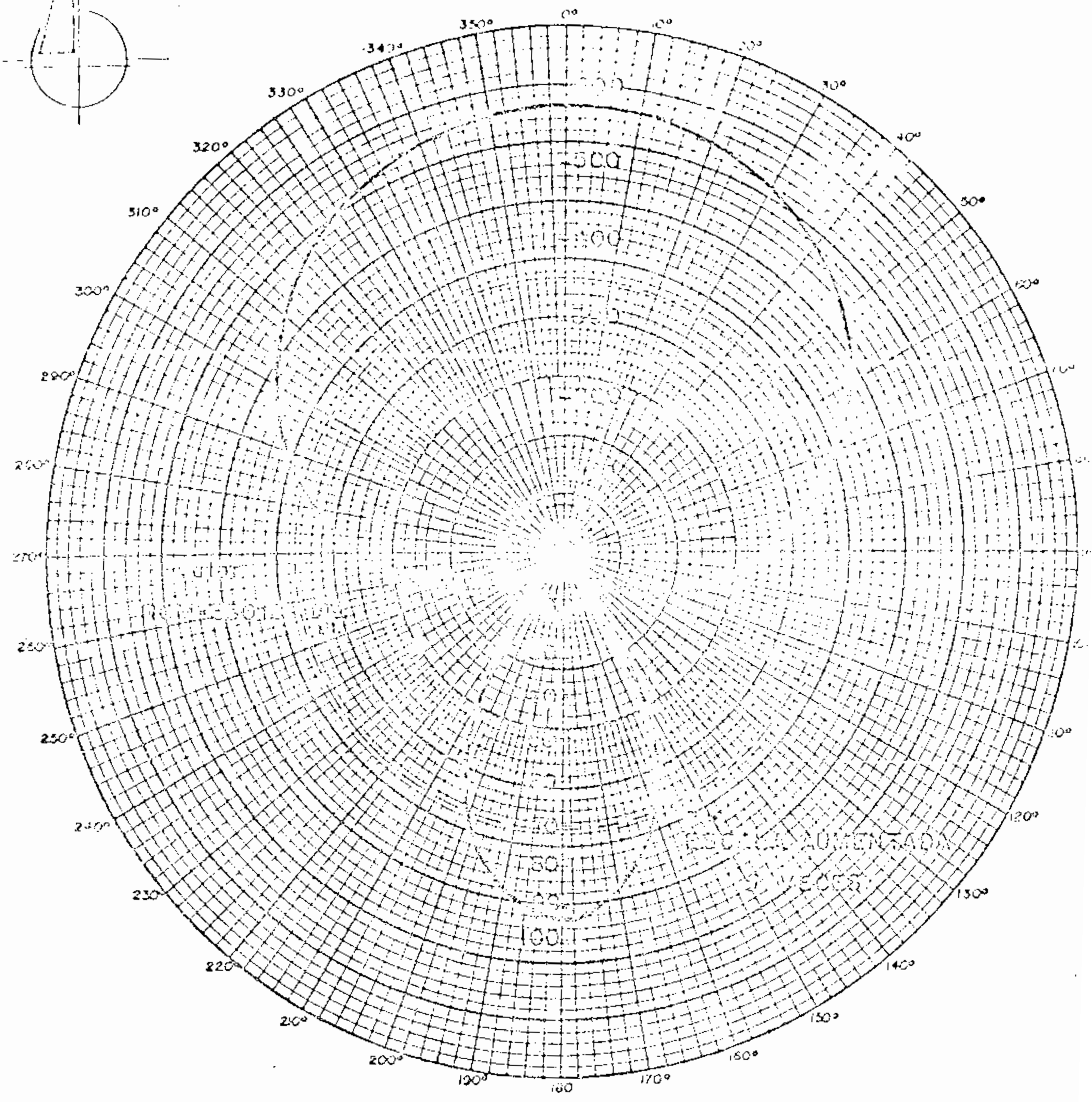
LEON, GTO.

$$E_0 = 2E_1 \cos\left[\frac{S}{2}\cos(180-\phi) + \frac{\Psi}{2}\right]$$

$E_1 = 359.69$ mv/m.
$S = 60°$
$\Psi = 135°$

AZIMUT	A	B	C	D	F	E (mV./m)
$\phi°$	$\cos(120-\phi)$	$\frac{S}{2}A$	$B+\frac{\Psi}{2}$	$\cos C$	2D	$\vert 359.69 \cdot F \vert$
0	– 1.0000	– 30.0000	37.5000	0.7934	1.5867	570.7225
10	– 0.9848	– 29.5442	37.9558	0.7885	1.5770	567.2209
20	– 0.9397	– 28.1908	39.3092	0.7737	1.5475	556.6118
30	– 0.8660	– 25.9808	41.5192	0.7487	1.4975	538.6237
40	– 0.7660	– 22.9813	44.5187	0.7130	1.4260	512.9338
50	– 0.6428	– 19.2836	48.2164	0.6663	1.3326	[illegible]
60	– 0.5000	– 15.0000	52.5000	0.6088	1.2175	437.9308
70	– 0.3420	– 10.2606	57.2394	0.5411	1.0823	389.2782
80	– 0.1736	– 5.2094	62.2906	0.4650	0.9300	334.5031
90	0.0000	0.0000	67.5000	0.3827	0.7654	275.2948
100	0.1736	5.2094	72.7094	0.2972	0.5944	213.8123
110	0.3420	10.2606	77.7606	0.2120	0.4240	152.50[illegible]
120	0.5000	15.0000	82.5000	0.1305	0.2611	93.8979
130	0.6428	19.2836	86.7836	0.0561	0.1122	40.3621
140	0.7660	22.9813	90.4813	– 0.0084	– 0.0168	6.0433
150	0.8660	25.9808	93.4808	– 0.0607	– 0.1214	43.6760
160	0.9397	28.1908	95.6908	– 0.0992	– 0.1983	71.3334
170	0.9848	29.5442	97.0442	– 0.1226	– 0.2453	88.2216
180	1.0000	30.0000	97.5000	– 0.1305	– 0.2610	93.8979
190	0.9848	29.5442	97.0442	– 0.1226	– 0.2453	88.2216
200	0.9397	28.1908	95.6908	– 0.0992	– 0.1983	71.3334
210	0.8660	25.9808	93.4808	– 0.0607	– 0.1214	43.6760
220	0.7660	22.9813	90.4813	– 0.0084	– 0.0168	6.0433
230	0.6428	19.2836	86.7836	0.0561	0.1122	40.3621
240	0.5000	15.0000	82.5000	0.1305	0.2611	93.8979
250	0.3420	10.2606	77.7606	0.2120	0.4240	152.5083
260	0.1736	5.2094	72.7094	0.2972	0.5944	213.8123
270	0.0000	0.0000	67.5000	0.3827	0.7654	275.2948
280	– 0.1736	– 5.2094	62.2906	0.4650	0.9300	334.5031
290	– 0.3420	– 10.2606	57.2394	0.5411	1.0823	389.2782
300	– 0.5000	– 15.0000	52.5000	0.6088	1.2175	437.9308
310	– 0.6428	– 19.2836	48.2164	0.6663	1.3326	[illegible]
320	– 0.7660	– 22.9813	44.5187	0.7130	1.4260	[illegible]
330	– 0.8660	– 25.9808	41.5192	0.7487	1.4975	[illegible]
340	– 0.9397	– 28.1908	39.3092	0.7737	1.5475	556.6118
350	– 0.9848	– 29.5442	37.9558	0.7885	1.5770	567.2209

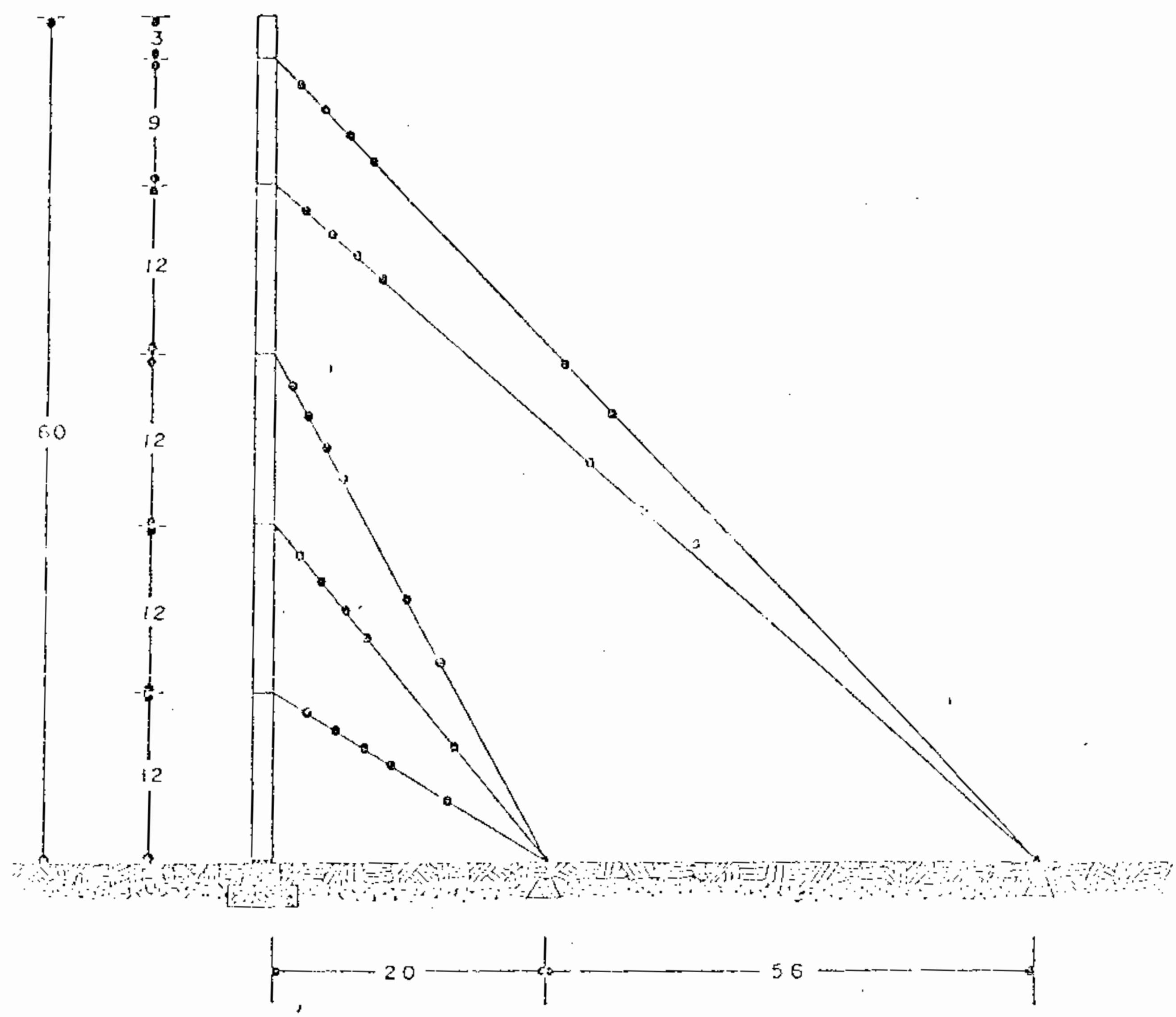




PATRON DE RADIACION HORIZONTAL CALCULADO EN mv/mts. A 1609 mts.

ESQUEMA DE LAS TORRES Y SU ORIENTACION CON RESPECTO AL NORTE ASTRONOMICO N 1 180° S = 60° Ψ = 1 H 35 2	XERPL 1270 KHZ	LN 21° 06' 43" LW 101° 40' 28" Ing Antonio de Avila S. No 7

DETALLE DE LA TORRE Y RETENIDAS.

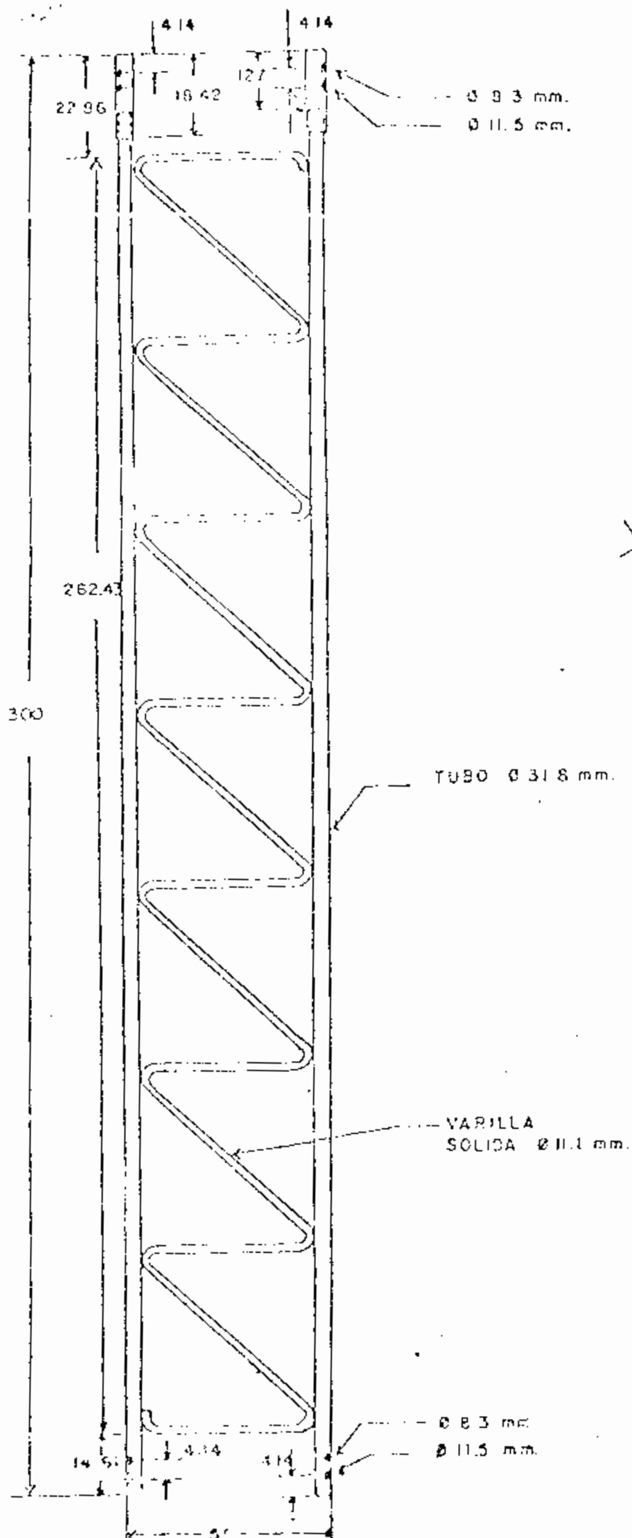


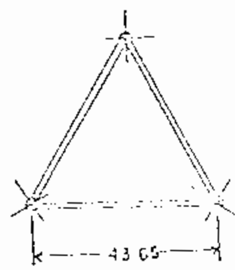
ESCALA 1:50.

XERPL 1270 KHZ. LEON, GTO.

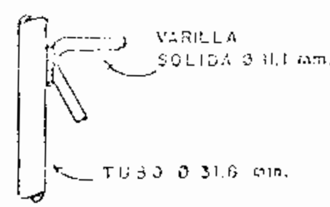
SECCION TRIANGULAR

VISTA FRONTAL





DETALLE



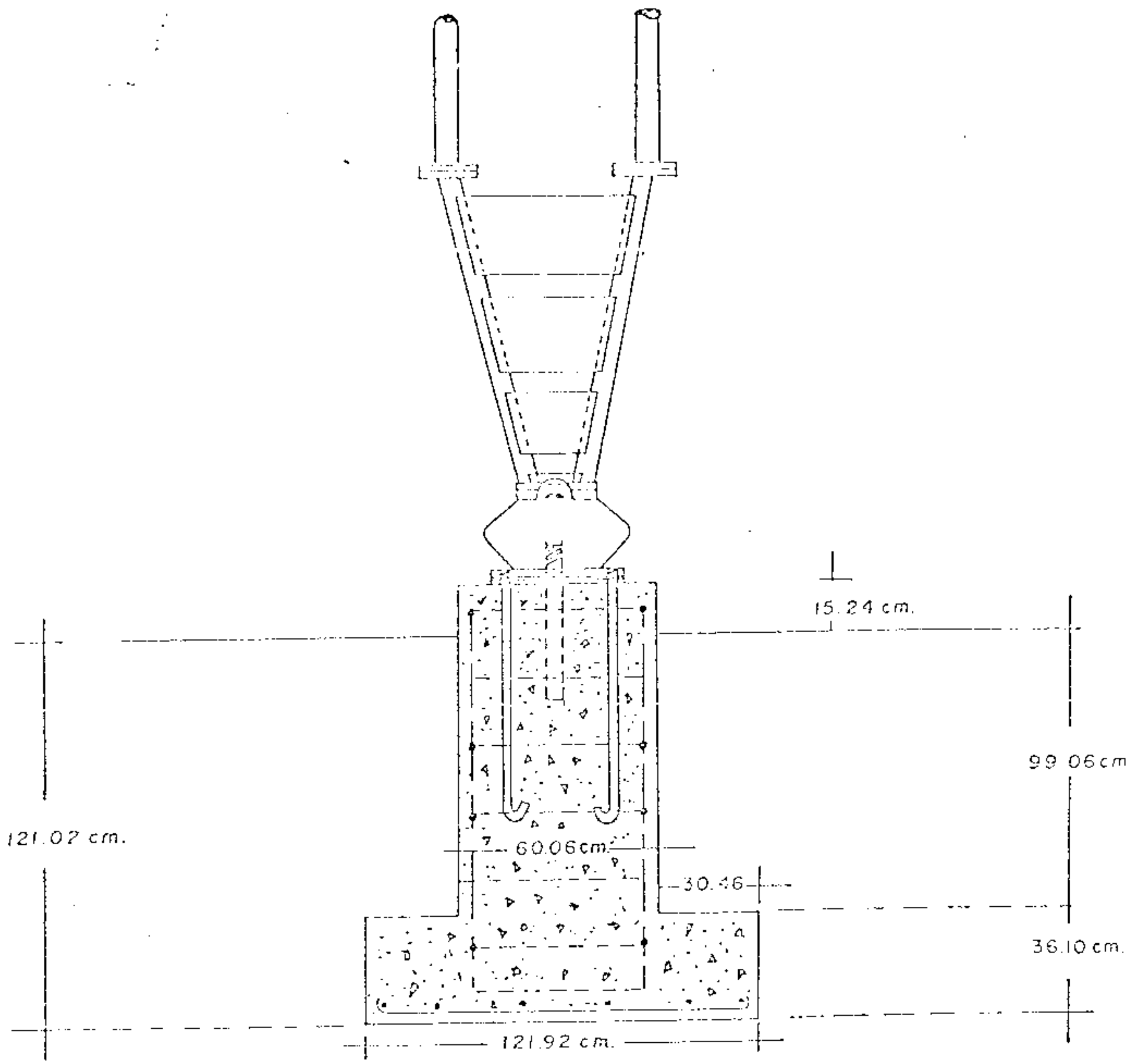
ACOTACIONES EN CM

XERPL 1270KHz.

LEON, GTO.

MARZO 1978

XF 81

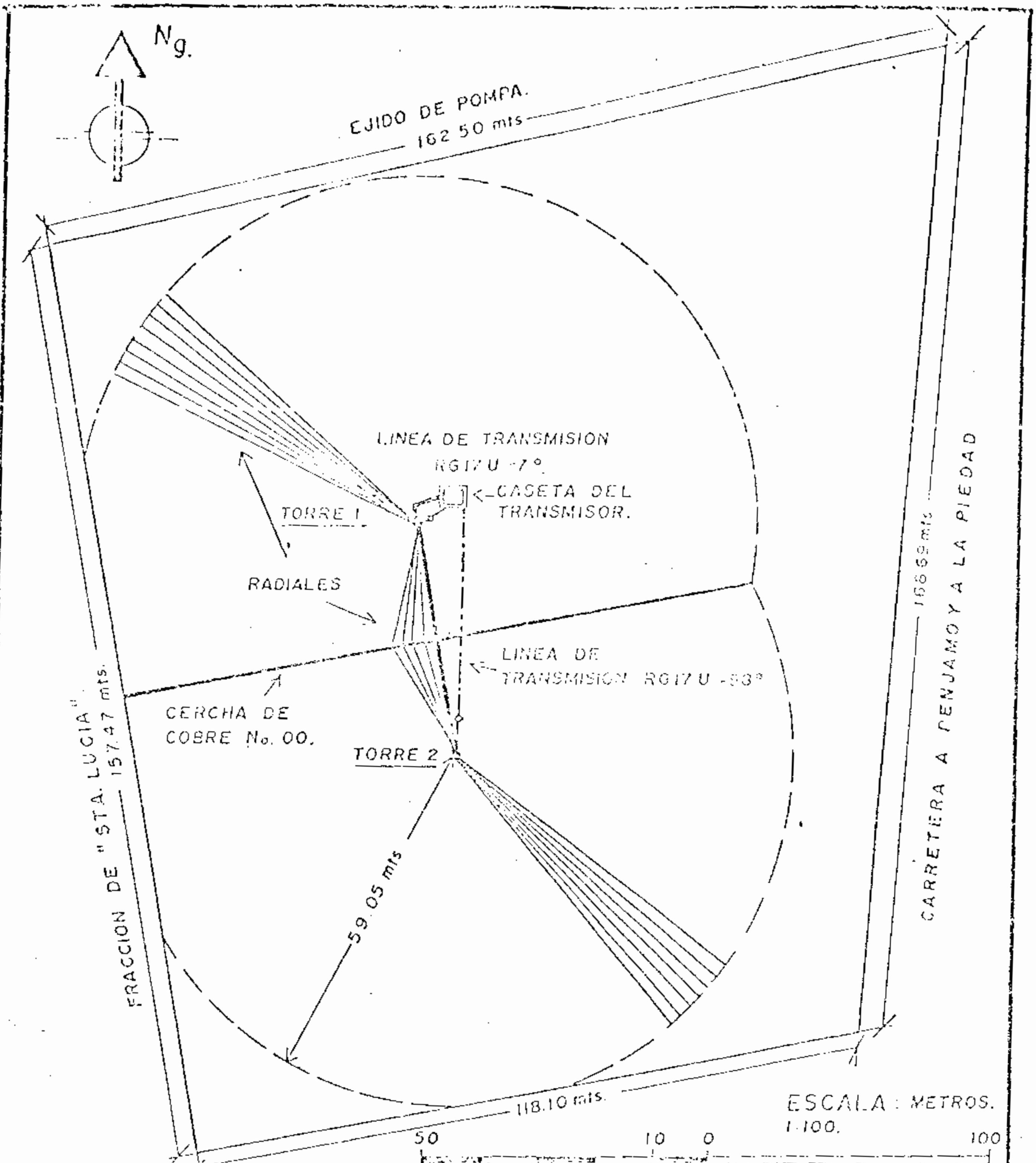


DETALLE DE AISLADOR Y BASE.

ESCALA 1:20.

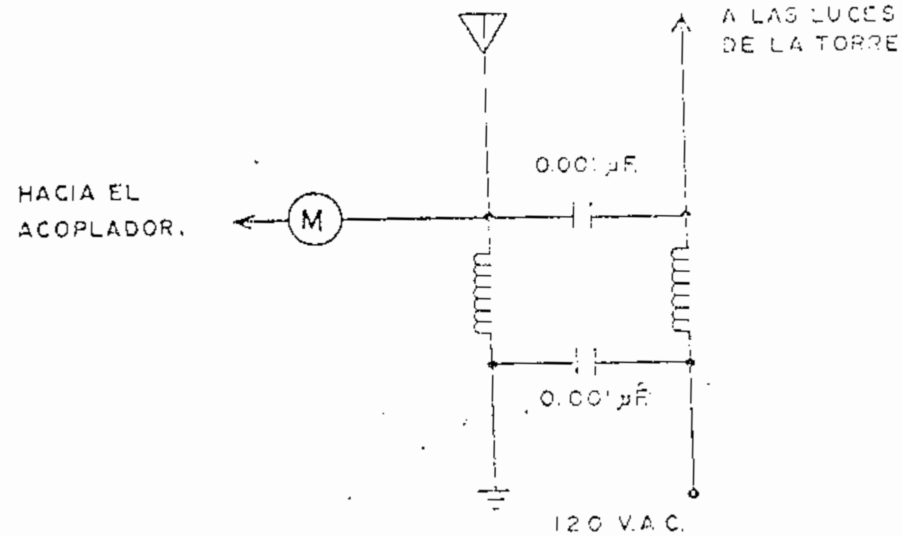
XERTL 1270 KHZ. LEON, GTO.

MARZO 1978.



SISTEMA DE TIERRA.

DESCRIPCION DEL MATERIAL	DISTINTIVO DE LLAMADA	FRECUENCIA
120 RADIALES POR TORRE IGUALMENTE ESPACIADAS PARTIENDO DE LA BASE DE CADA TORRE 59.05 mts. DE LONGITUD DE ALAMBRE No 8 ENTERRADOS A 30 cm. DE PROFUNDIDAD.	XERPL COORDENADAS GEOGRAFICAS LN 21° 06' 43" LW 101° 40' 28"	1270 KHZ PERITO EN TELECOMUNICACIONES Ing. ANTONIO DE AVILA S. No 7. FECHA marzo / 1978.



SISTEMA DE ALIMENTACION DE 120 V.A.C.
PARA EL ALUMBRADO DE LA TORRE.

XERPL 1270 KHZ.

LEON. GTO.

MARZO 1978.

REVISO

ANTENNA DESCRIPTION SHEET

DIRECTIONAL DA-2

FREQUENCY:	1280 kc/s
CALL:	
LOCATION:	High River, Alberta.
POWER:	10,000 watts
CLASS:	III
TIME:	Unlimited

GEOGRAPHICAL COORDINATES: Lat 50°29'12", Lon 113°51'04"

NOTIFICATION REFERENCE: Notification List No. 361 DATE: January 19, 1977

ARRAY CHARACTERISTICS: Four elements, guyed, uniform cross section, base insulated, series feed. Height 192 feet, 90 degrees. No top loading.

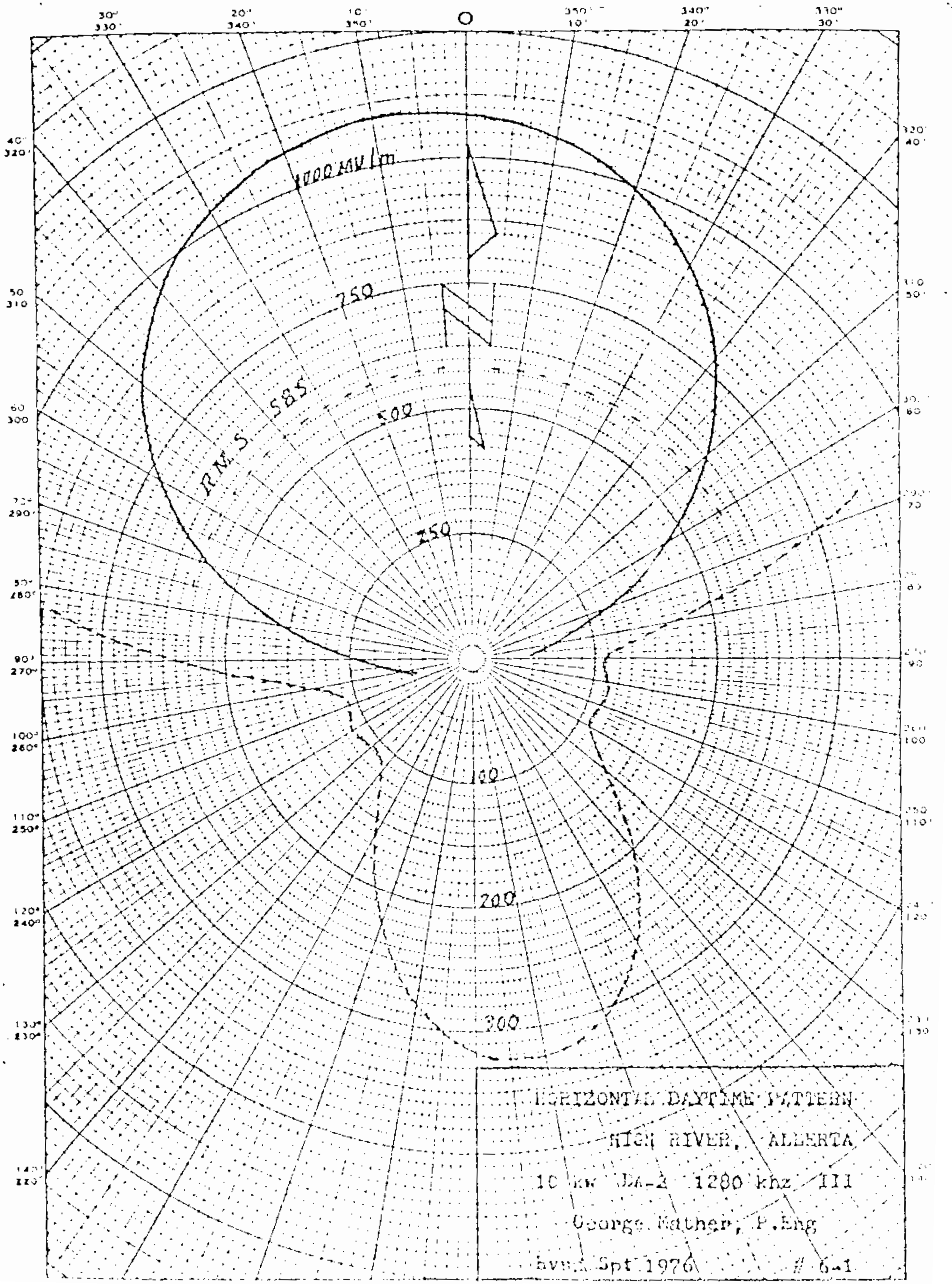
ELEMENT		ONE	TWO	THREE	FOUR
bearing		ref	352°	352°	352°
spacing		ref	100° 213.6'	200° 427.2'	300° 640.8'
Day	R	1.00	1.92	1.00	
	ø	00°	-132°	+76°	
Night	R	1.03	2.06	1.46	0.33
	ø	00°	-136°	+88°	-48°

Ground System: 120 radials per tower, #10 AWG bare, soft copper wire, spaced uniformly, depth 8 in approximately. Radials bonded along lines between towers and bonded to soft copper straps at tower bases. Maximum radial length 308 feet.

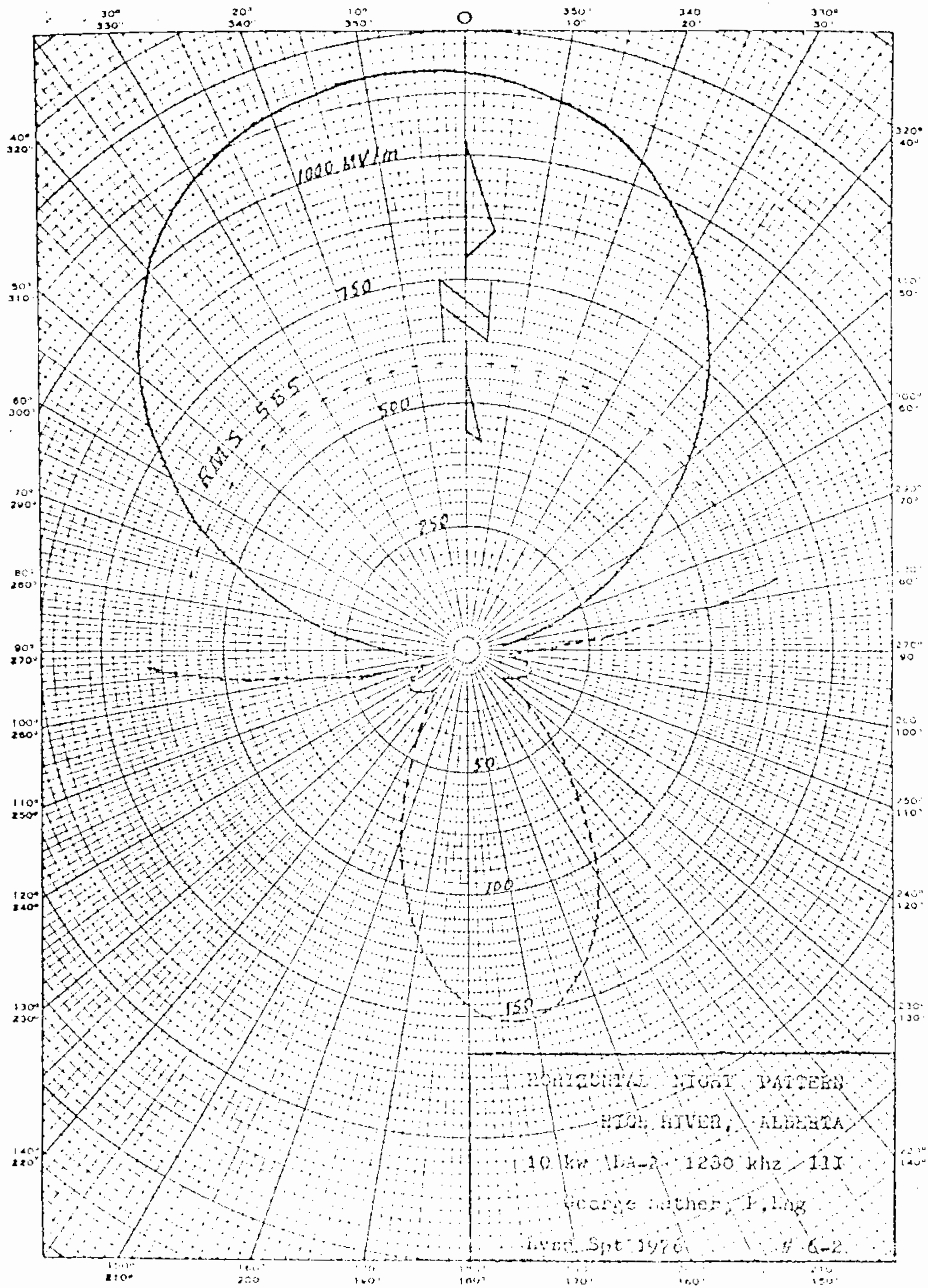
Predicted RMS: 585 mv/m at 1 mile for 10 kw

185 mv/m at 1 mile for 1 kw

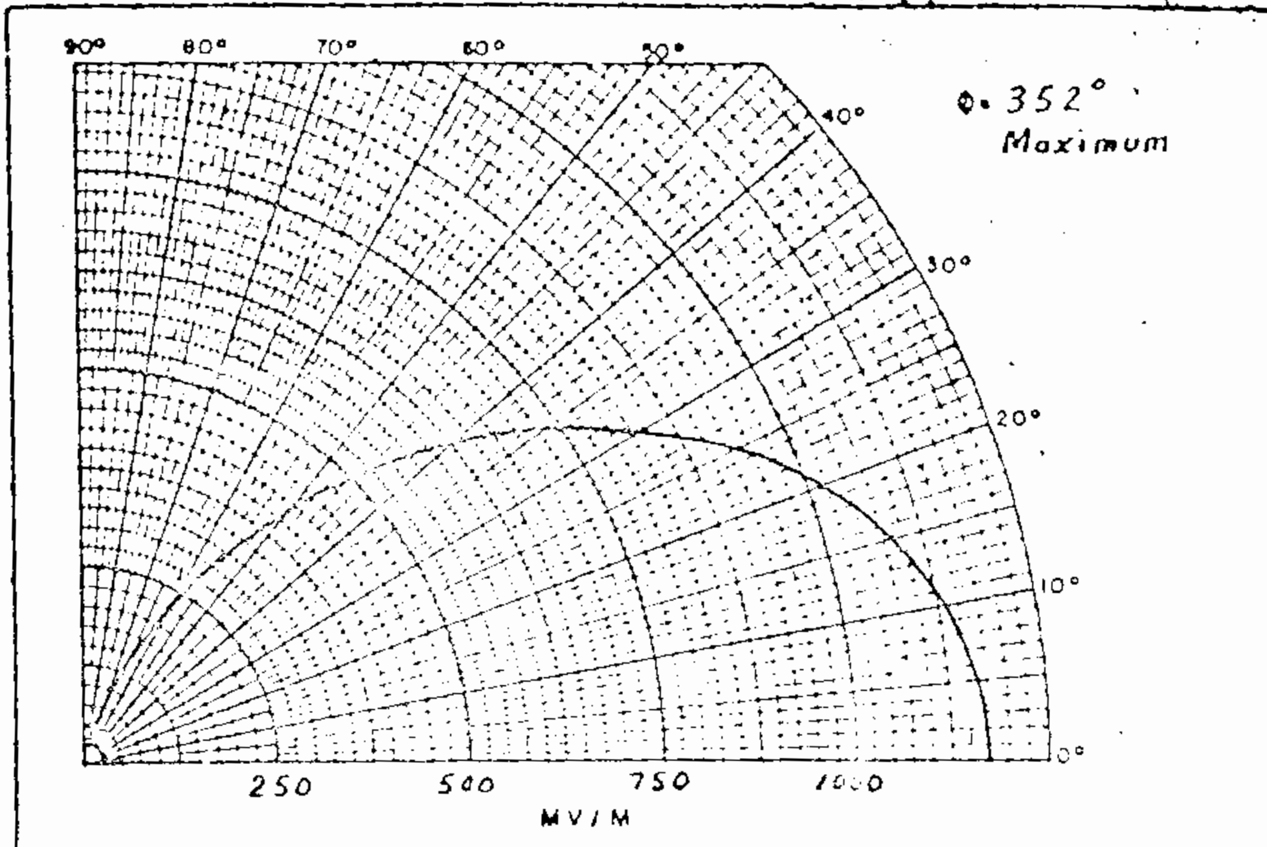
Rvsd Spt 1976

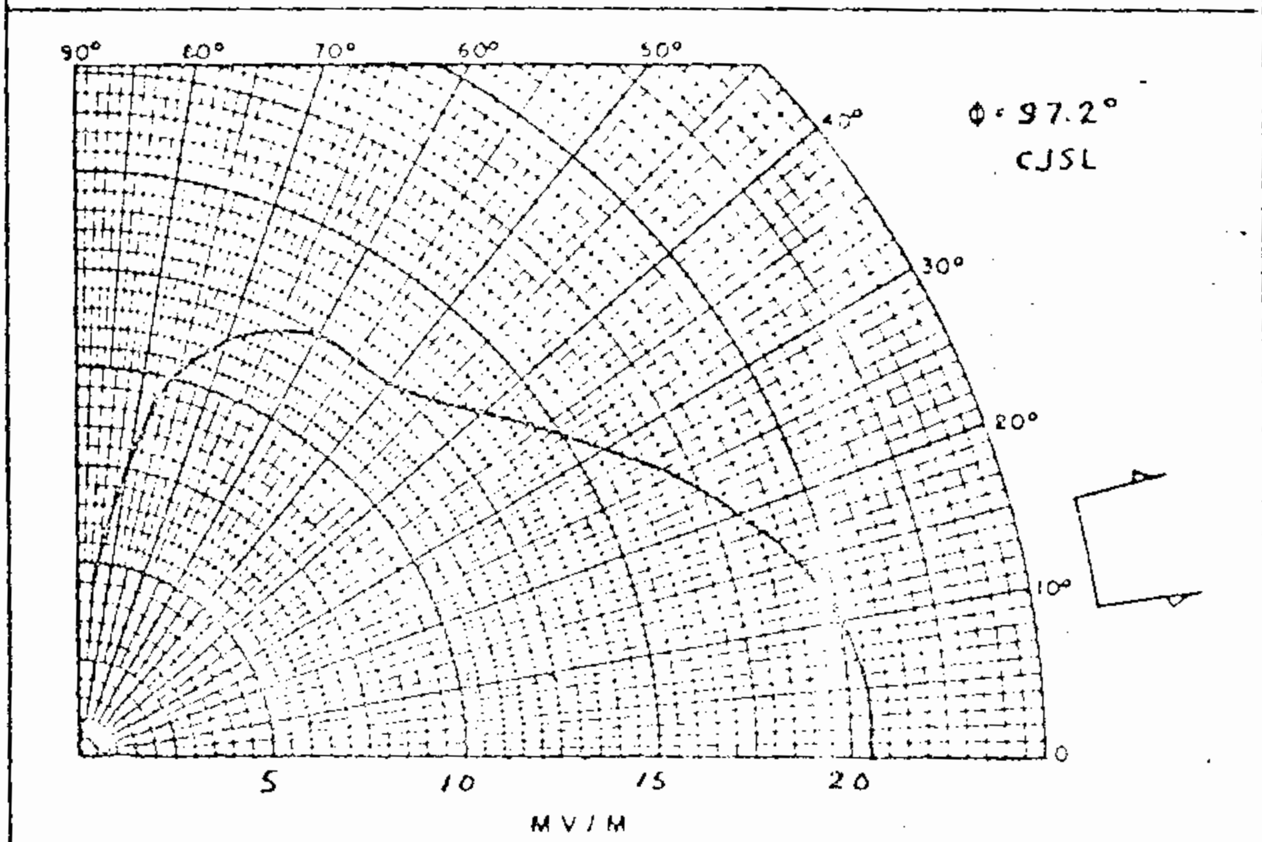


NO. 340-P DIETZGEN CO.
POLAR CO-ORDINATE



1000 MV/m
750
500
250
50
100
155
RMS 555
HORIZONTAL NIGHT PATTERN
HIGH RIVER, ALBERTA
10 kw DA-2 1230 khz III
Spt 1976
6-2



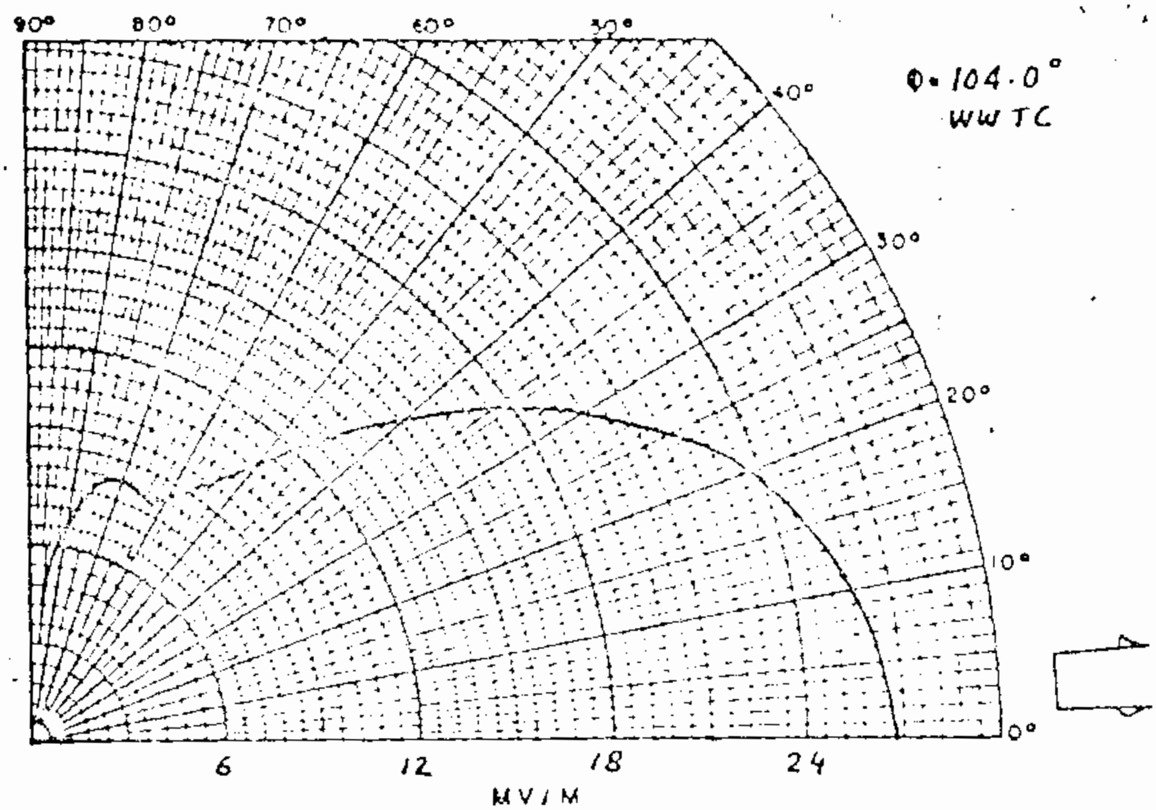


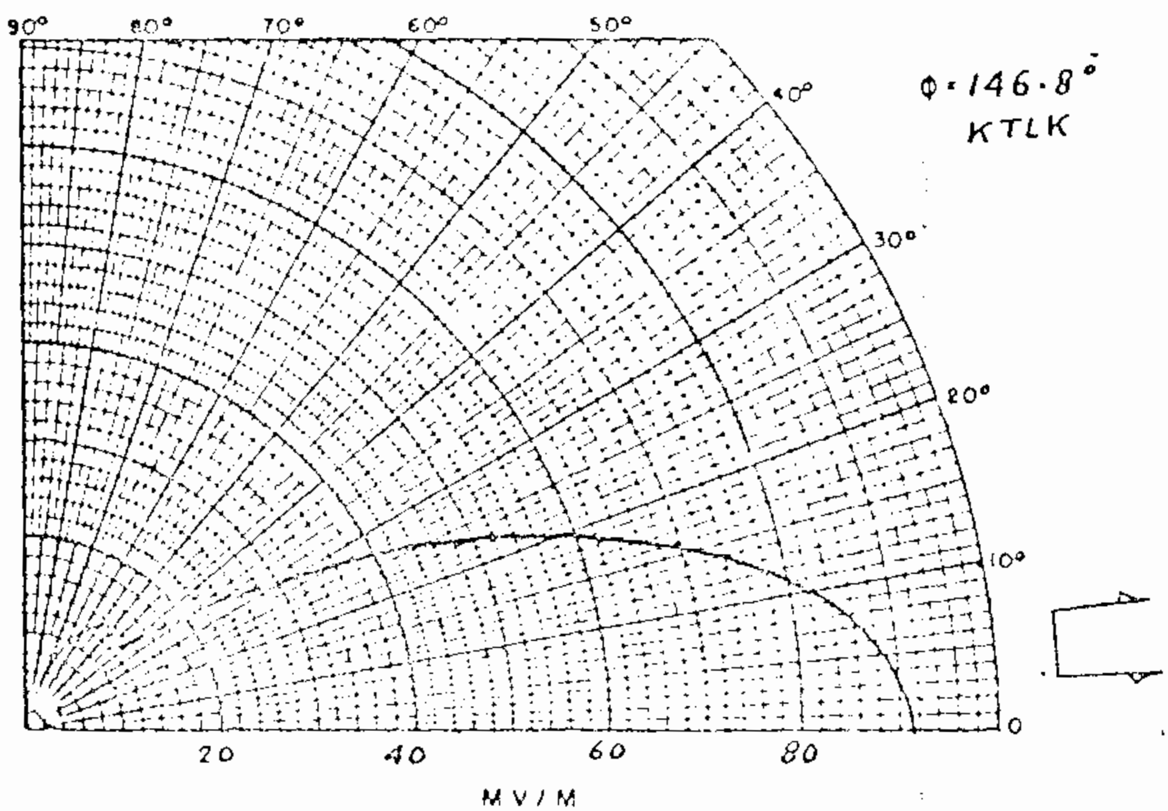
VERTICAL RADIATION PATTERNS

HIGH RIVER, ALBERTA
10 kw DA-2 1260 khz III
George Mather, P.Eng

Rvsd Spt 1976

7-1



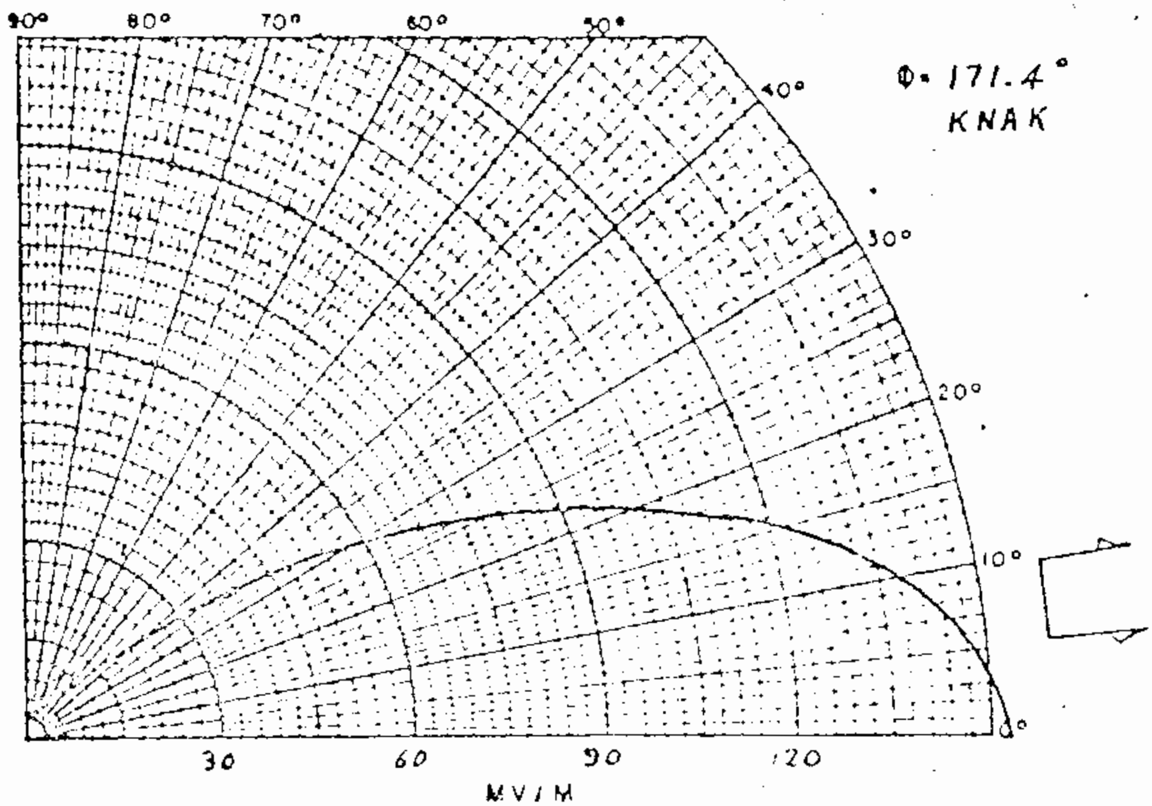


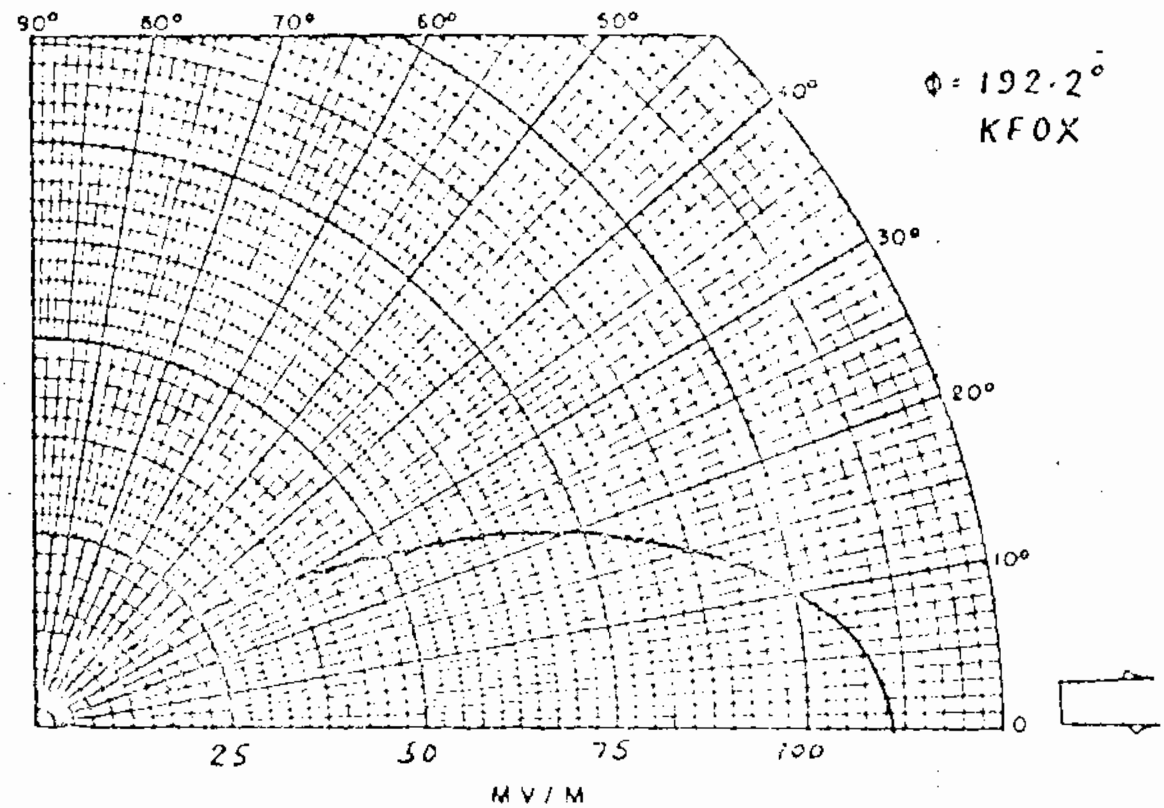
VERTICAL RADIATION PATTERNS

HIGH RIVER, ALBERTA
10 kw DA-2 1280 KHz III
George Mather, P.Eng

Rvsd Spt 1976

7-2



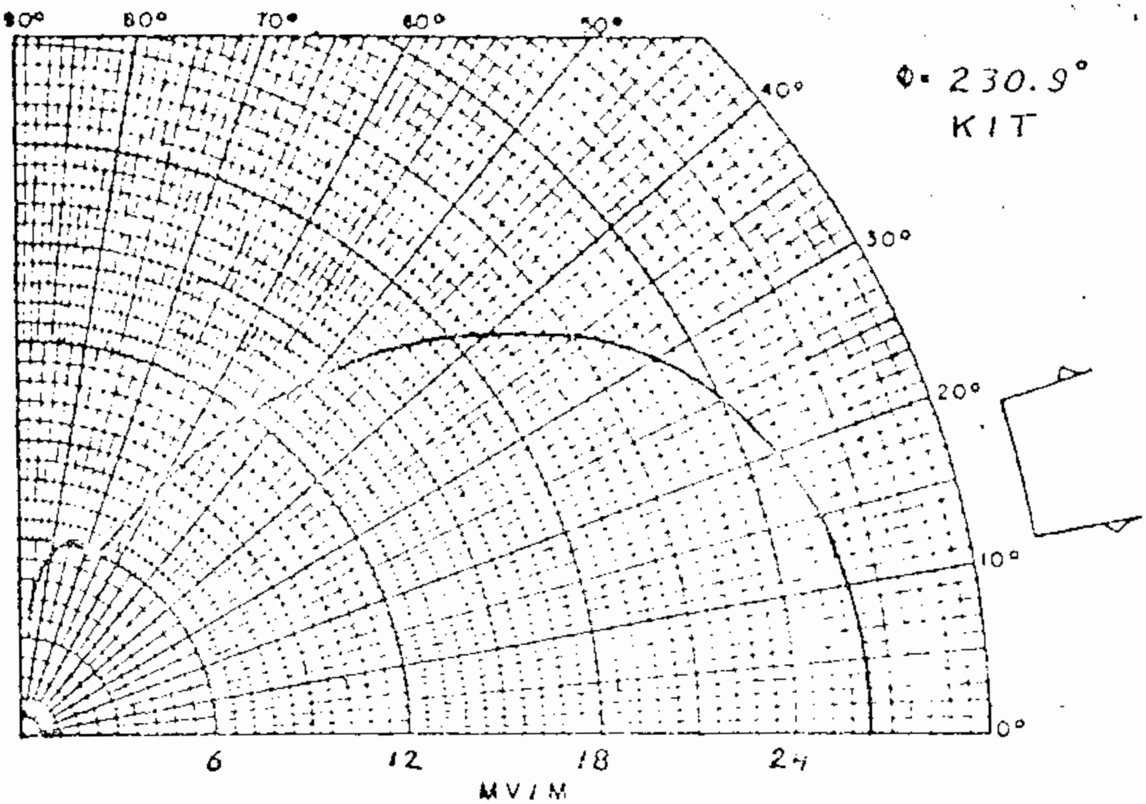


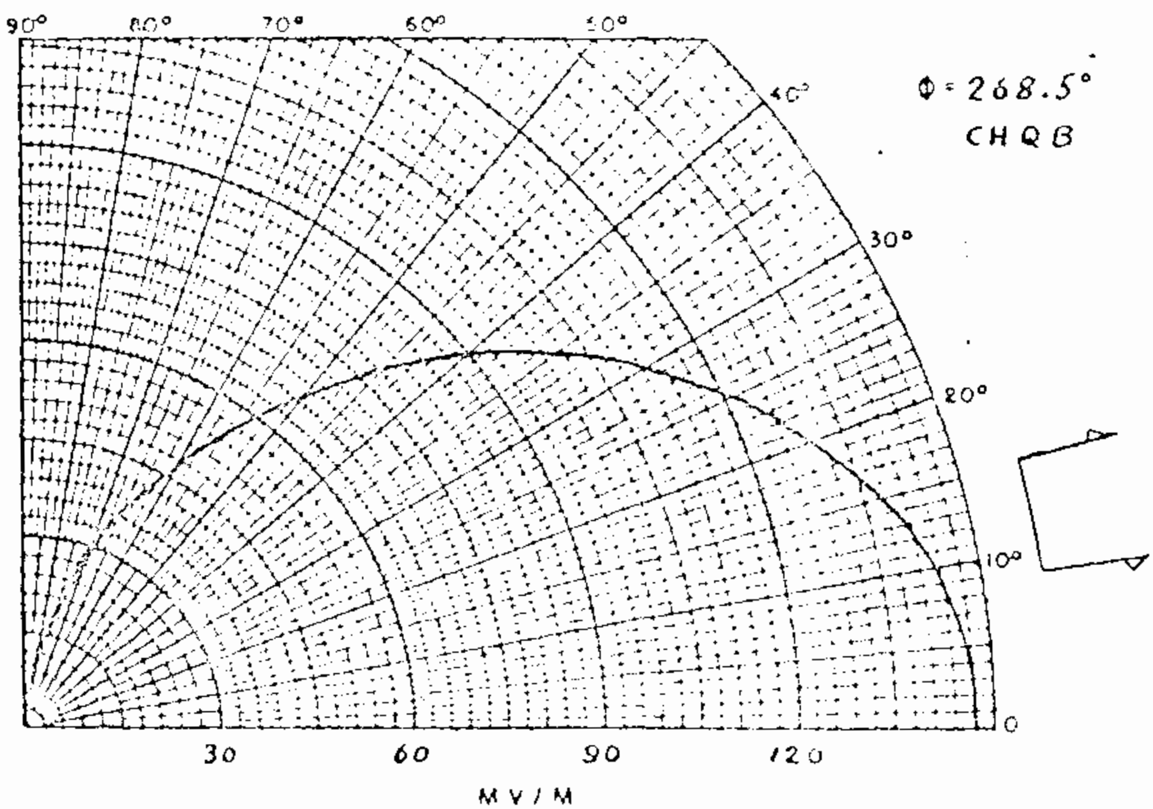
VERTICAL RADIATION PATTERNS

HIGH RIVER, ALBERTA
10 kw DA-2 1280 khz III
George Mather, P.Eng

Rvsd Spt 1976

7-3





VERTICAL RADIATION PATTERNS

HIGH RIVER, ALBERTA
10 kw DA-2 [illegible] Khz III
George Mather, P.Eng

Rvsd Spt 1976

7-4

POLAR CO-ORDINATE

CHAM

415

IFRB Serial No. 1,2,2,8,9

FORM FOR THE APPLICATION OF ARTICLE 4 OF THE AGREEMENT

CHARACTERISTICS OF A REGION 2 BROADCASTING STATION IN THE BAND 535 - 1605 kHz

PART I GENERAL INFORMATION

CALL LETTER CHANGE

(01) Administration: CANADA | Sheet No. 415 | Date 821130

Assigned frequency (kHz)		(02)	1,2,8,0
Transmitting station	Name of the station	(03)	H,A,M,I,L,T,O,N ON
	Call sign	(04)	C,H,A,M
	Additional Identification	(05)	
	Station class	(06)	
	Operational Status	(07)	
Country		(08)	CAN
Geographical coordinates of the transmitting station		(09)	W N

(11) a) New assignment [ ] b) Modification of characteristic of an assignment recorded in the plan [X] c) Cancellation of an assignment [ ]

(12) Modification under Section 4.2.14 Call sign Yes [X] No [ ]

(13) Date of bringing into service or cessation of operation: Year Month Day

STATION PARAMETERS	DAYTIME OPERATION	NIGHT-TIME OPERATION
Station power (kW)	(21)	(31)
r.m.s. value of radiation for station power (mV/m at 1 km)	(25)	(35)
Antenna type	(26)	(36)
Simple vertical antenna electrical height (degrees)	(27)	(37)

(44) Remarks

COORDINATION UNDER ARTICLE 4:

COUNTRY	USA							
IN PROGRESS								
ACCEPTANCE OBTAINED								

CHAM

Description Sheet
(1-29-68ct)

Station CHAM
Hamilton, Ontario

10kw,DA 2,U,Class III
1280 kc

TABLE 1

ANTENNA DESCRIPTION SHEET

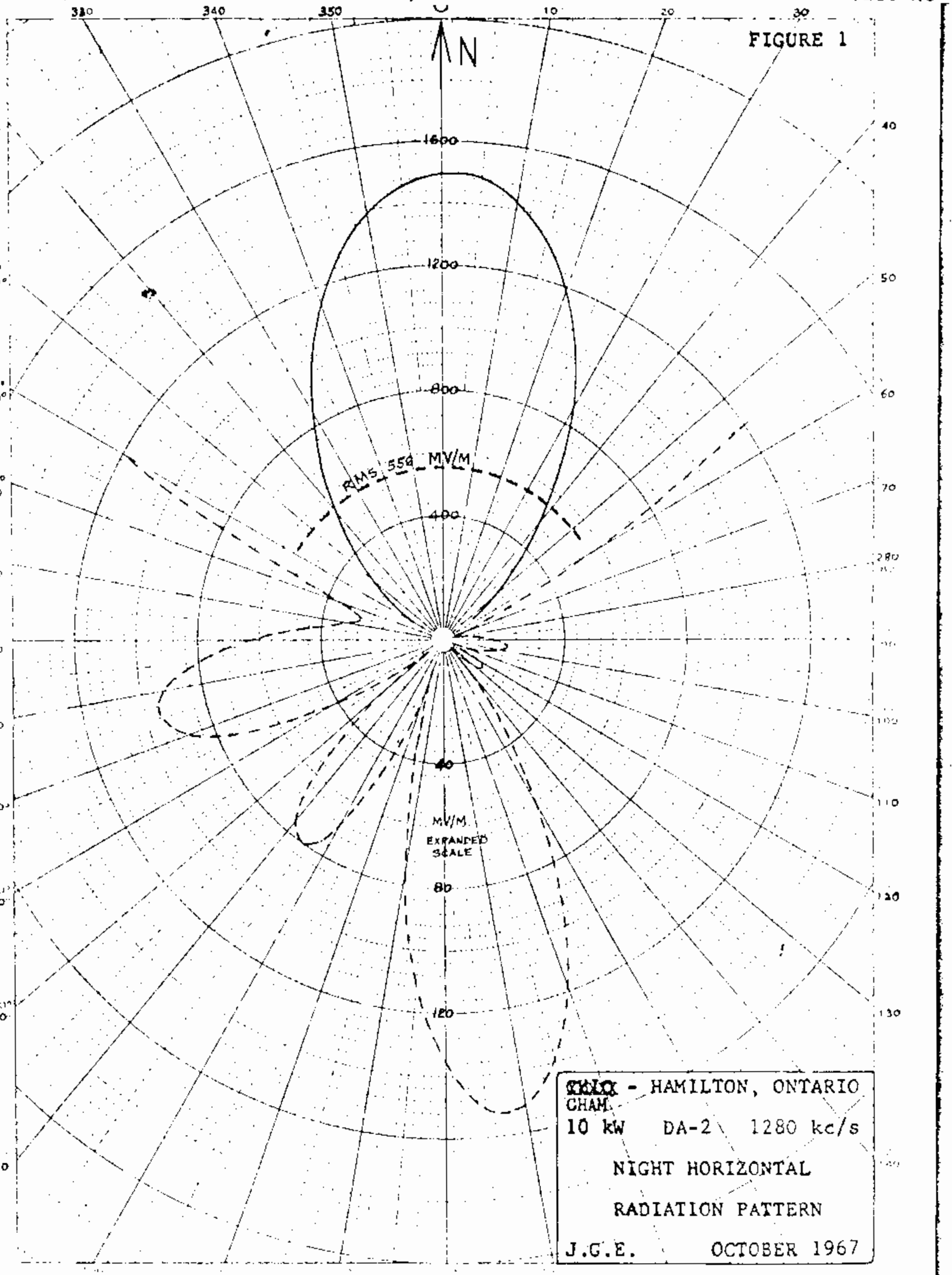
STATION CALL:	~~XXXXQ~~ CHAM
MAIN STUDIO:	HAMILTON, ONTARIO
FREQUENCY:	1280 kc/s
POWER:	10 kW
CLASS:	III
MODE:	DA-2
TIME:	UNLIMITED
NOTIFICATION LIST NO.:	.236... DATE: December 20, 1967
GEOGRAPHICAL LOCATION:	Latitude: 43° 10' 59" North Longitude: 79° 51' 19" West
ARRAY CHARACTERISTICS:	Six vertical, guyed steel towers of uniform cross section. Base insulated and series fed; no top loading.

TOWER:	#1 S.E.	#2 S.W.	#3 C.W.	#4 N.W.	#5 N.E.	#6 C.E.
HEIGHT:	173'	173'	173'	173'	173'	173'(81°)
SPACING:	reference	419' 196°	560' 262°	727' 340°	385' 180°	192.5' 90°
BEARING:	reference	285°	300°	309°	335°	335°
DAY RATIO:	0.28	1.10	0.90	0.28	1.10	0.90
DAY PHASE:	35°	38°	-56°	-35°	-38°	56°
NIGHT RATIO:	1.0	1.0	1.84	1.0	1.0	1.84
NIGHT PHASE:	0°	-18°	-156°	66°	84°	-138°

GROUND SYSTEM:	120 equally spaced #10 AWG bare copper radial wires per tower buried approximately 8" deep. Bonded to common chords. Maximum length 308'(0.40λ).
PREDICTED EFFICIENCY:	176 mV/m per kW at one mile 556 mV/m for 10 kW

CHAM

Proposed Night (1-29-68ct) | Station CHAM Hamilton, Ontario | 10kw,DA-2,U,Class III 1280 kc



#198

CHIQ

Description Sheet (5-27-65ct) | Station CHIQ Hamilton, Ontario | 5kw,10kw-LS,DA-2,U,Class III 1280 kc

ANTENNA DESCRIPTION SHEET

DIRECTIONAL DA-2

STATION CALL:	C H I Q
MAIN STUDIO:	Hamilton, Ontario.
FREQUENCY:	1280 kc/s
POWER:	Day 10 kw - 5 kw Night
CLASS:	III
TIME:	Unlimited

NOTIFICATION REFERENCE: #198 Dated: April 5, 1965.

GEOGRAPHICAL LOCATION: N. 43°10'59", W. 79°51'19"

ANTENNA CHARACTERISTICS: Six elements, guyed, uniform cross section, base insulated, series feed. No top loading. Height 173 feet or 81 degrees.

tower	Azm	Space	Day ratio	Day phase	Night ratio	Night phase
1	ref	ref	0.28	+35°	1.0	00°
2	285°	196° 419'	1.10	+38°	1.0	-09°
3	300°	262° 560'	0.90	-56°	1.8	-144°
4	309°	340° 727'	0.28	-35°	1.0	+81°
5	335°	180° 385'	1.10	-38°	1.0	+90°
6	335°	90° 192½'	0.90	+56°	1.8	-135°

GROUND SYSTEM: 120 radials per tower, #10 AWG bare, soft copper wire, uniformly spaced, depth approximately 8 in. Radials bonded along line between towers and bonded to soft copper strap at tower base. Maximum radial length 308 feet.

PREDICATED R.M.S.:
176 mv/m at 1 mile for 1 kw
394 mv/m at 1 mile for 5 kw
556 mv/m at 1 mile for 10 kw

NOTE: Please attach the night-time radiation patterns notified for CHIQ Hamilton, Ontario in Canadian Change List No. 177 dated May 7, 1963 to this revised description sheet and day-time patterns

CHIQ

198

Proposed Day
(5-27-65ct)

Station CHIQ
Hamilton, Ontario

5kw,10kw-LS,DA-2,U,Class III
1280 kc

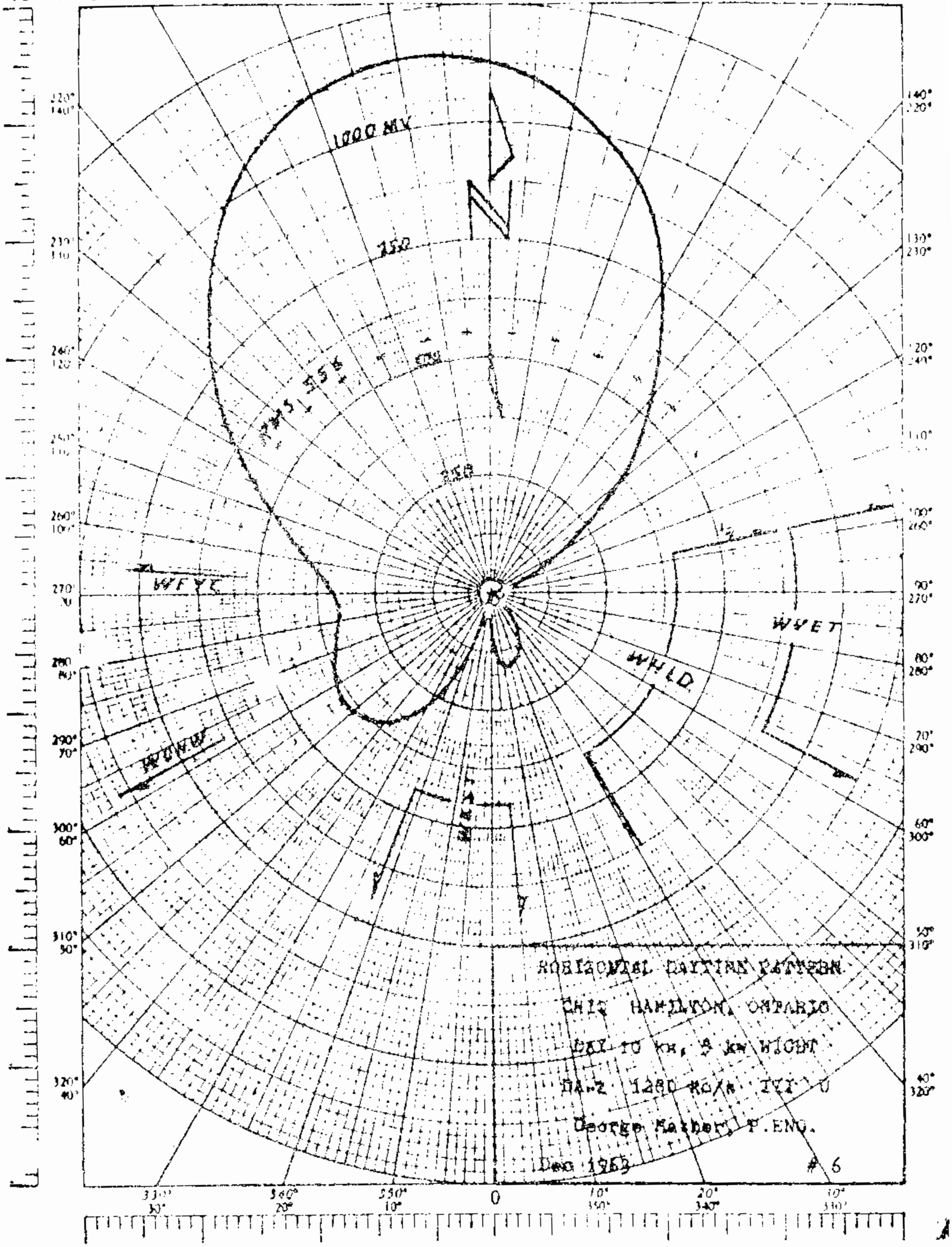


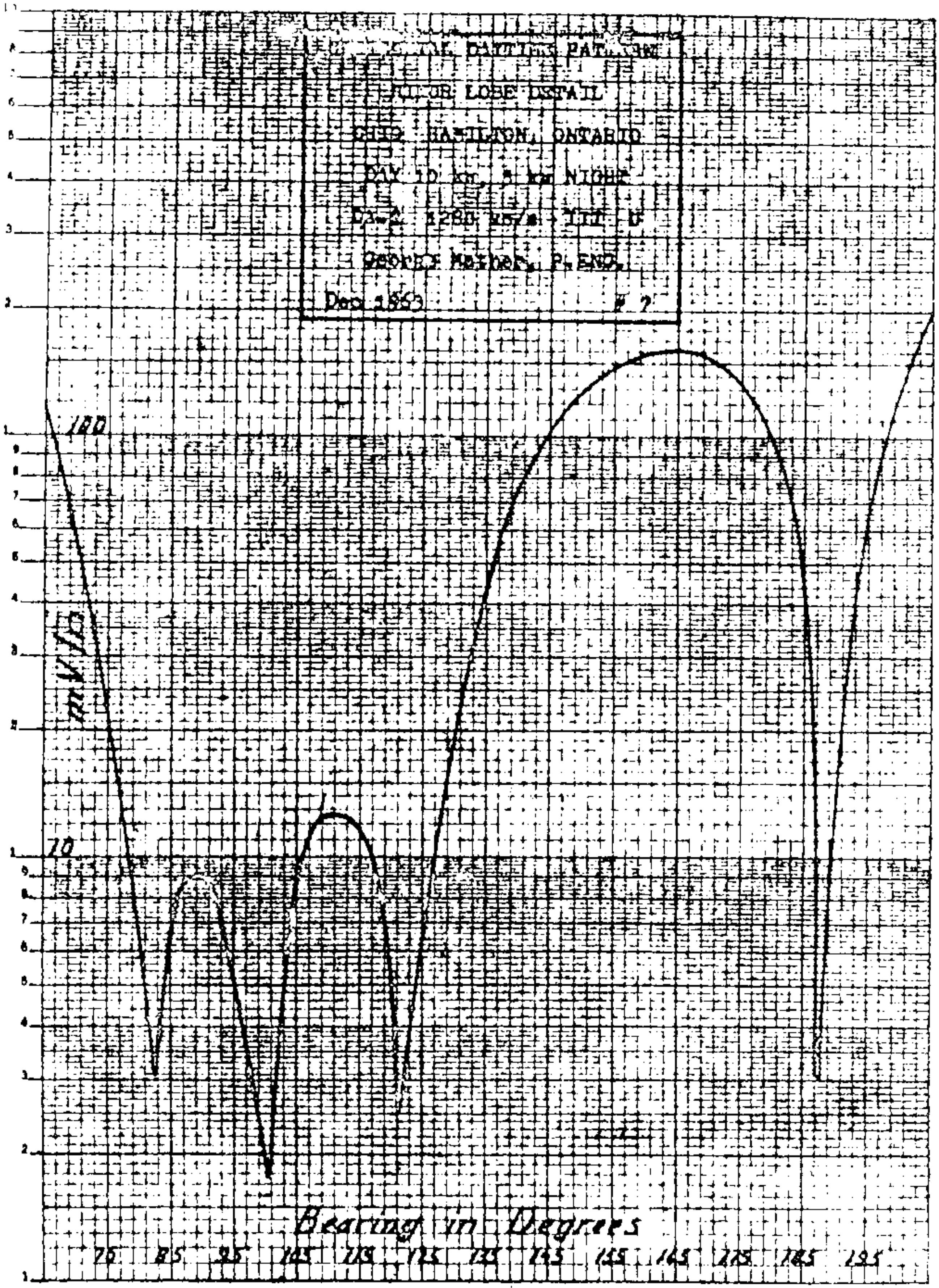
Fig8

CHIQ

Proposed Day Nulls
(5-27-65ct)

Station CHIQ
Hamilton, Ontario

5kw,10kw-LS,DA-2,U,Class III
1280 kc



#7

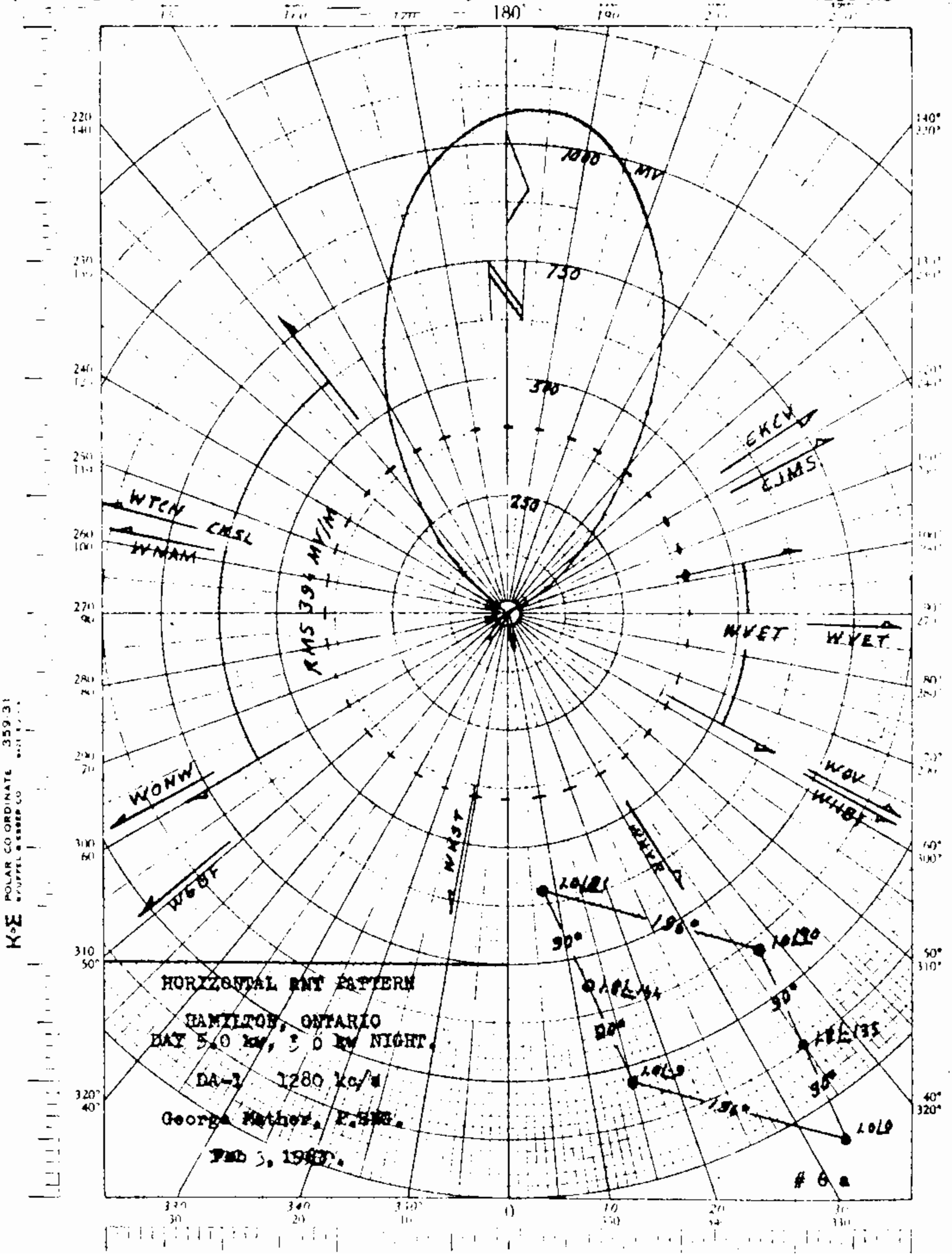
#177

CHIQ

Proposed ~~Day &~~ Night
(6-28-63ct)

Station CHIQ
Hamilton, Ontario

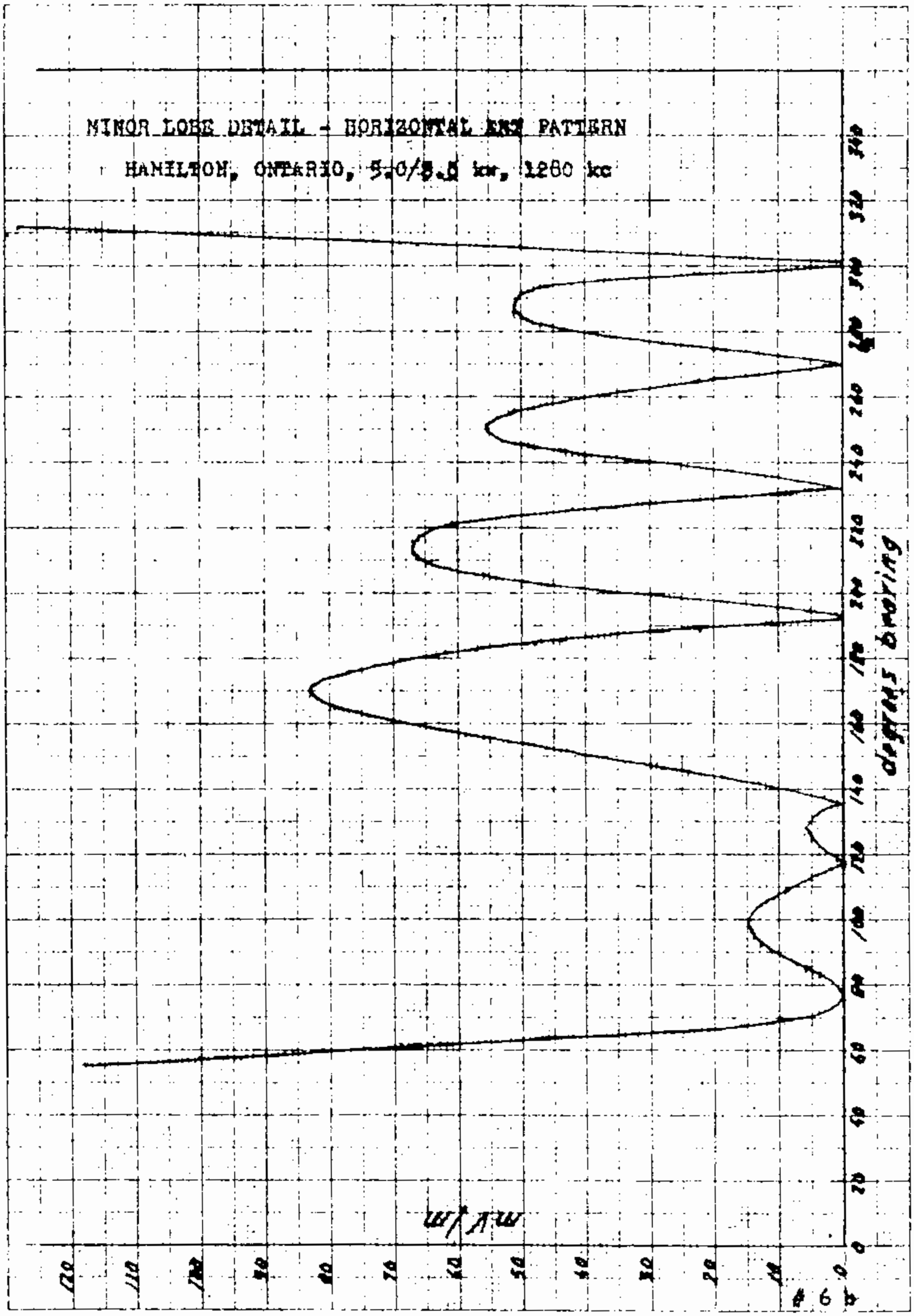
5kw,DA-1,U,Class III
1280 kc



177

CHIQ

Proposed ~~Day~~ & Night Nulls   Station CHIQ   5kw,DA-1,U,Class III
(6-28-63ct)   Hamilton, Ontario   1280 kc



CHQB

SUPPLEMENTAL DIRECTIONAL

ANTENNA DESCRIPTION SHEET

Station: CHQB | Main Studio: Powell River, B.C.

Frequency: 1280 KHz | Power: 1 Kw, Class III

Notification List No: 322 | Date: April 16, 1974

Geographical Location of the Center of the Antenna System:

North Latitude: 49° 48' 10"
West Longitude: 124° 36' 10"

Mode of Operation - DA-1

Note: Please retain the description sheet and directional antenna radiation patterns notified for station CHQB in Canadian Change List Number 211 dated May 18, 1966 and attach to this supplemental description sheet. This notification is for the purpose of indicating only a correction in the geographical coordinates.

Description Sheet
(7-29-70ct)

Station CJMS
Montreal, Quebec

CJMS
50kw,DA-2,U,Class III
1280 kc

DIRECTIONAL ANTENNA DESCRIPTION

STATION: CJMS

MAIN STUDIO: Montreal, Quebec

POWER: 50 Kw

FREQUENCY: 1280 kHz CLASS 111

NOTIFICATION LIST NO.: 268

DATE: April 10, 1970.

GEOGRAPHICAL LOCATION: North Latitude 45° 19' 31"
West Longitude 73° 32' 55"

ANTENNA CHARACTERISTICS

MODE OF OPERATION: DA-2

ANTENNA CHARACTERISTICS: Sevel elements, guyed uniform cross section, base insulated, series fed, no top loading.

TOWER:	1(S)	2	3	4	5	6(N)	7(W)
HEIGHT ABOVE INSULATORS:	208' (97.3°)						
OVERALL HEIGHT:	213'			213'			
FIELD RATIO NIGHT:	1.0	2.982	4.498	3.842	1.898	0.440	
PHASING NIGHT:	0.0°	-154.2°	53.3°	-97.6°	114.6°	-24.0°	
FIELD RATIO DAY:		1.000	1.601	1.463			0.714
PHASING DAY:		0.0°	-179.7°	19.3°			-132.6°
SPACING:	360.0°	270.0°	180.0°	90.0°	0.0°	90.0°	80.0°
ORIENTATION:	164.0°	164.0°	164.0°	164.0°	0.0°	344.0°	290.0°

GROUND SYSTEM: 120 radials per tower with 120 stub radials each 50' long of #10 AWG bare soft copper wire buried approximately 8". Radials joined along line between towers and bonded to soft copper strap at tower base. The tower bases are connected together with 2" x 1/16" copper strap. Average length of radials 308'.

PREDICTED EFFECTIVE FIELD: Night 1344 mv/m for 50 kw
Day 1505 mv/m for 50 kw

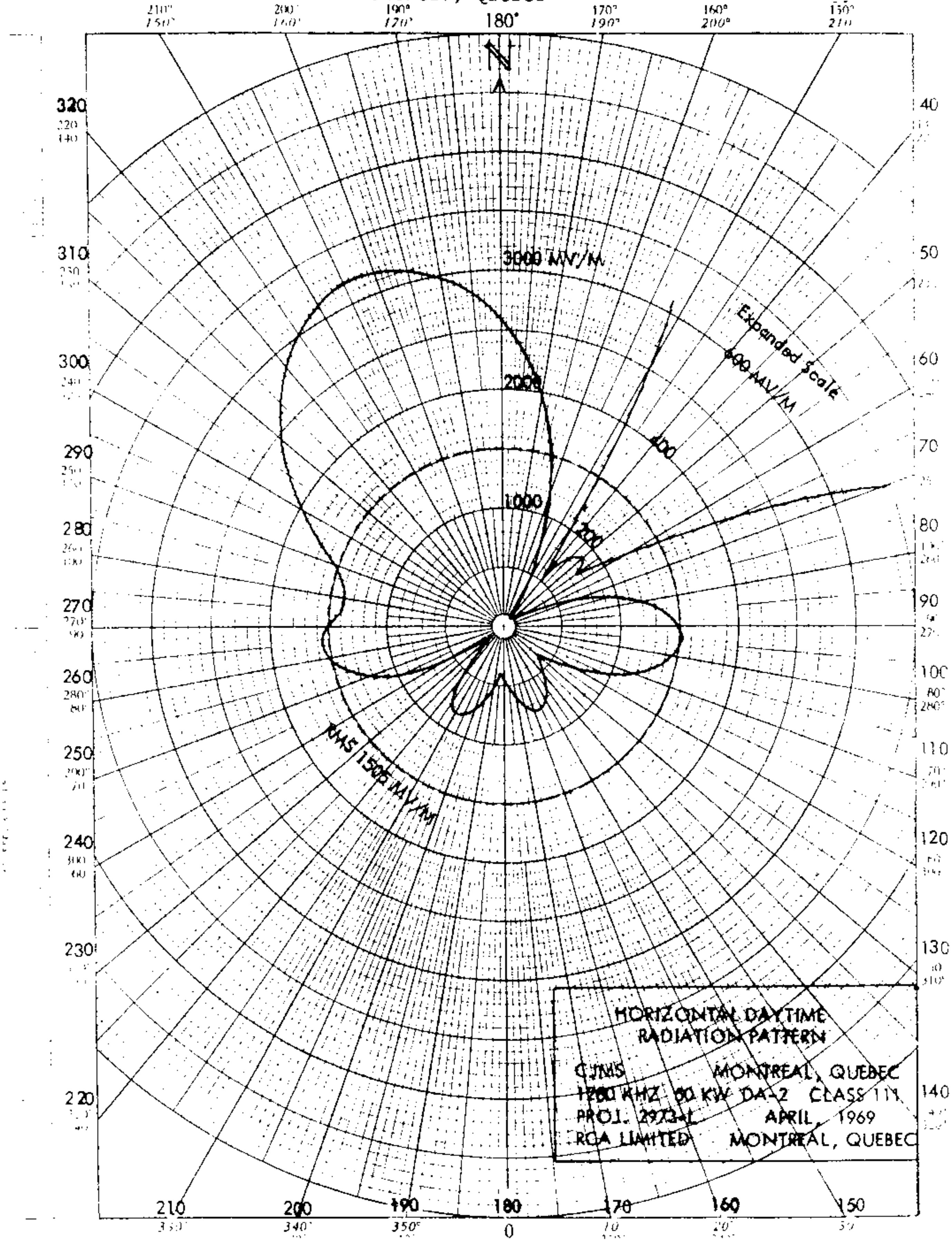
Note: To this description sheet and day-time radiation pattern attach the night-time pattern previously distributed relative to list no. 177.

CJMS

Proposed Day
(7-29-70ct)

Station CJMS
Montreal, Quebec

50kw,DA-2,U,Class III
1280 kc



#177

CJMS

Description Sheet
(3-26-65ct)

Station CJMS
Montreal, Quebec

50kw,DA-2,U,Class III
1280 kc

C O R R E C T E D

ANTENNA DESCRIPTION SHEET
DIRECTIONAL DA-2

Station Call	CJMS
Main Studio	Montreal, Quebec
Frequency	1280 Kc/s
Power	Day 50 Kw: Night 50 KW
Class	III
Time	Unlimited
Notification Reference : 177	Dated May 7, 1963.
Geograpnic Location	Latitude: 45° 19' 31" Longitude: 73 32' 55"
Antenna Characteristics	Six elements, guyed uniform cross section, base insulated, series feed, no top loading. Height 208' or 97.3°.

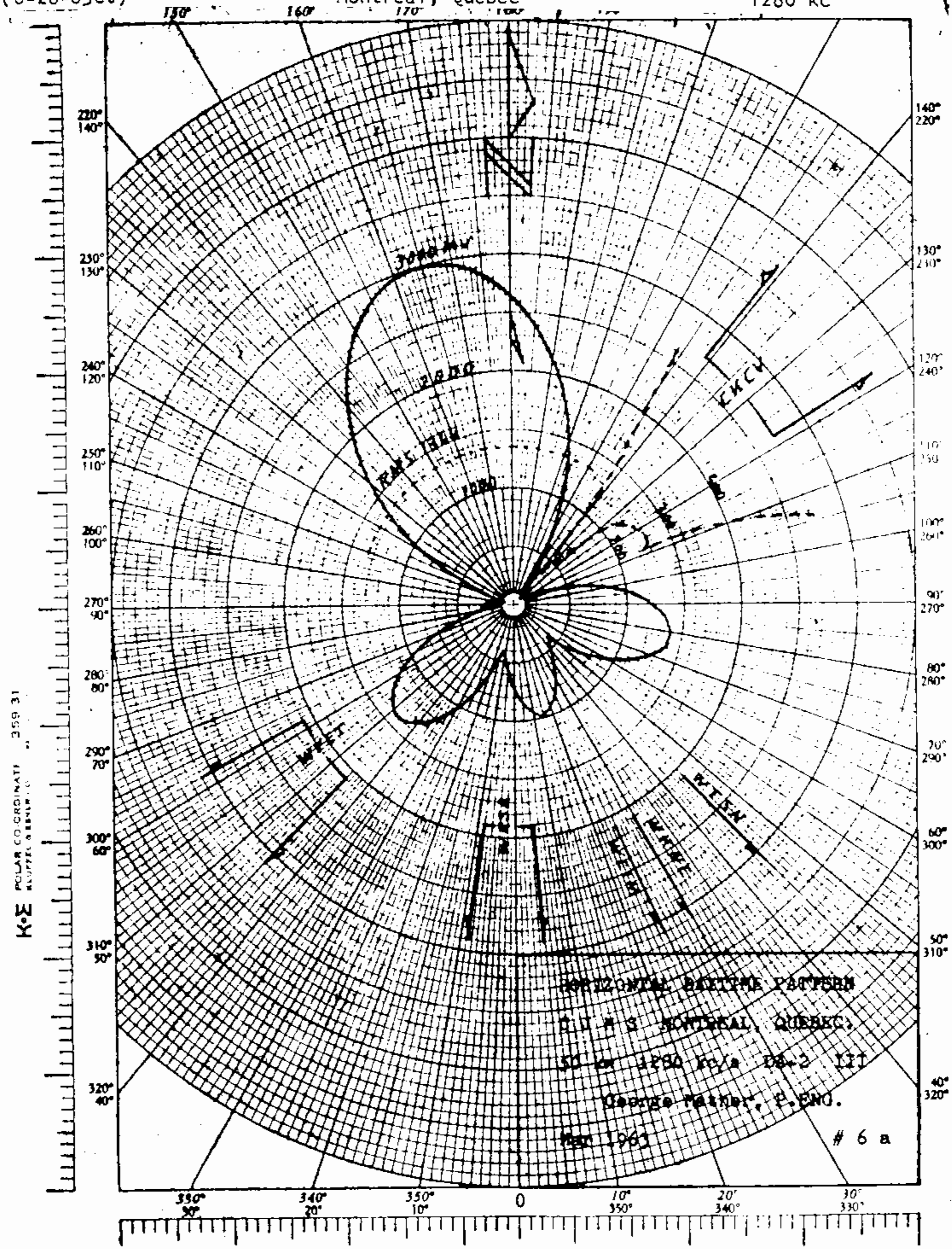
Tower	Day Ratio	Day Phase	Night Ratio	Night Phase
1	-	-	1.000	00.0°
2	1.000	00.0°	2.982	-154.2°
3	1.601	-179.7°	4.498	53.3°
4	1.463	19.3°	3.842	-97.6°
5	0.684	-160.0°	1.898	114.6°
6	-	-	0.440	-24.0°

Orientation	Elements on a line bearing 344°
Spacing	Adjacent elements 192 feet (90°)
Ground System	120 radials per tower with 120 stub radials each 50' long of No. 10 AWG bare soft copper wire, buried 8 inches. Radials joined along line between towers and bonded to soft copper strap at tower base. The tower bases are connected together with 2" x 1/16" copper strap. Average length of radials 308 feet.
Predicted RMS	1344 mv/m at 1 mile for 50 kw 190 mv/m at 1 mile for 1 kw

This notification concerns only a correction in tower height and ground system from previous notification. **Please retain radiation patterns and attach to this Description Sheet.**

177 CJms

Proposed Day (6-28-63ct) | Station CJMS Montreal, Quebec | 50kw,DA-2,U,ClassIII 1280 kc



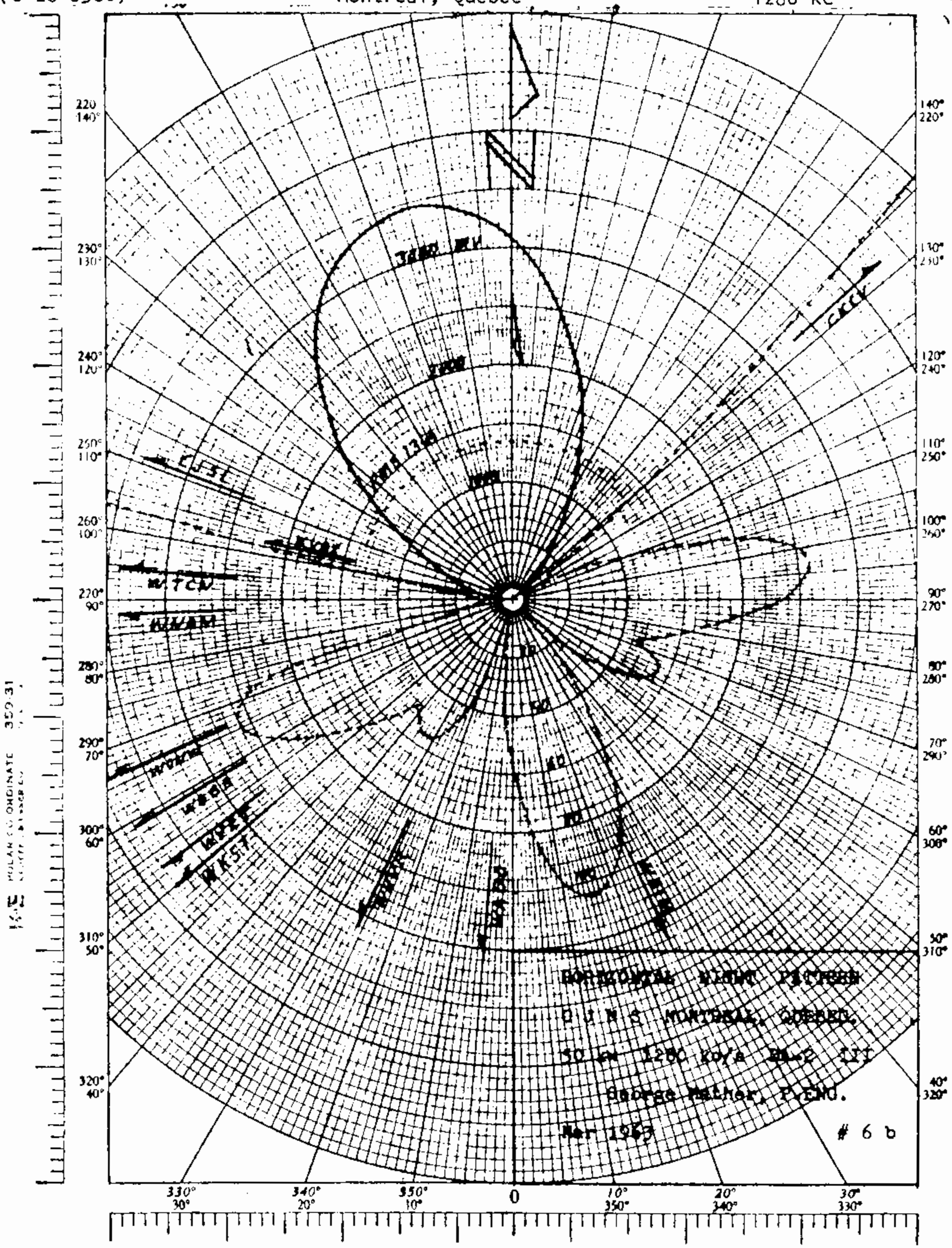
(7

CJMS

Proposed Night
(6-28-63ct)

Station CJMS
Montreal, Quebec

50kw,DA-2,U,ClassIII
1280 kc



CJSL

PROJECT #4206

DESCRIPTION SHEET - DIRECTIONAL ANTENNA

STATION: CJSL | STATION LOCATION: Estevan, Sask.

FREQUENCY: 1280 kHz | POWER: 10 kW

NOTIFICATION LIST: No. 361 | DATE: January 19, 1977

GEOGRAPHICAL LOCATION: Latitude 49° 03' 26" North
Longitude 102° 55' 20" West

ANTENNA CHARACTERISTICS:

Mode of Operation: DA-2
Number of Elements: 3 (Three)
Type of Elements: Guyed steel towers, uniform cross-section, base insulated for series feed

Tower:	#1 (North)	#2 (Center)	#3 (South)
Height above base insulator:	173'(81°)	173'(81°)	173'(81°)
Overall Height:	178'	178'	178'
Field Ratio:			
Nighttime	1.0	1.73	.91
Daytime	1.0	0.9	unused
Phasing:			
Nighttime	0°	+130.5°	-94°
Daytime	0°	+130°	unused
Spacing:	Reference	171'(80°)	363'(170°)
Orientation:	Reference	185°	188°

Ground System: 120 equally spaced radials of No. 10 B & S gauge bare soft copper wire extend from the base of each tower for a distance of 308 feet (0.4 wavelength at 1280 kHz) with the exception of those joined along the common chords as well as a number of radials from the Number 3 (South) Tower where the western boundary limits their length. To make up for these shortened radials, radials in other directions are lengthened, resulting in an overall area equivalent to that of a standard ground system. The radials are buried approximately 8 inches.

Predicted Effective Fields:

Daytime	Nighttime
603 mV/m at 1 mile for 10 kW	630 mV/m at 1 mile for 10 kW
190 mV/m at 1 mile for 1 kW	199 mV/m at 1 mile for 1 kW

August 9, 1976
Revised November 18, 1976
Revised December 22, 1976

CJSL

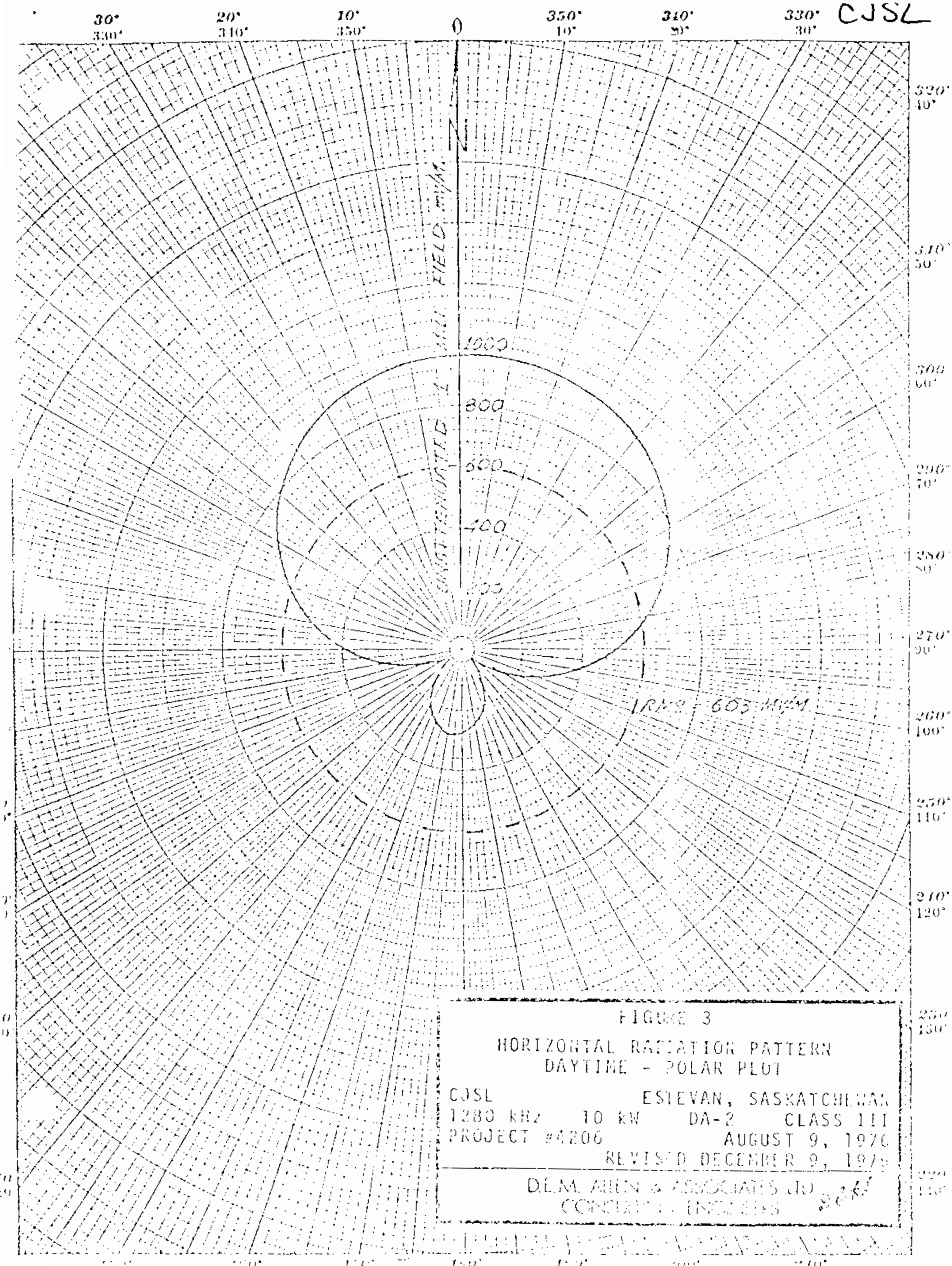


FIGURE 3

HORIZONTAL RADIATION PATTERN
DAYTIME - POLAR PLOT

CJSL ESTEVAN, SASKATCHEWAN
1280 kHz 10 KW DA-2 CLASS III
PROJECT #4206 AUGUST 9, 1976
REVISED DECEMBER 9, 1976

D.E.M. ALLEN & ASSOCIATES LTD.
CONSULTING ENGINEERS

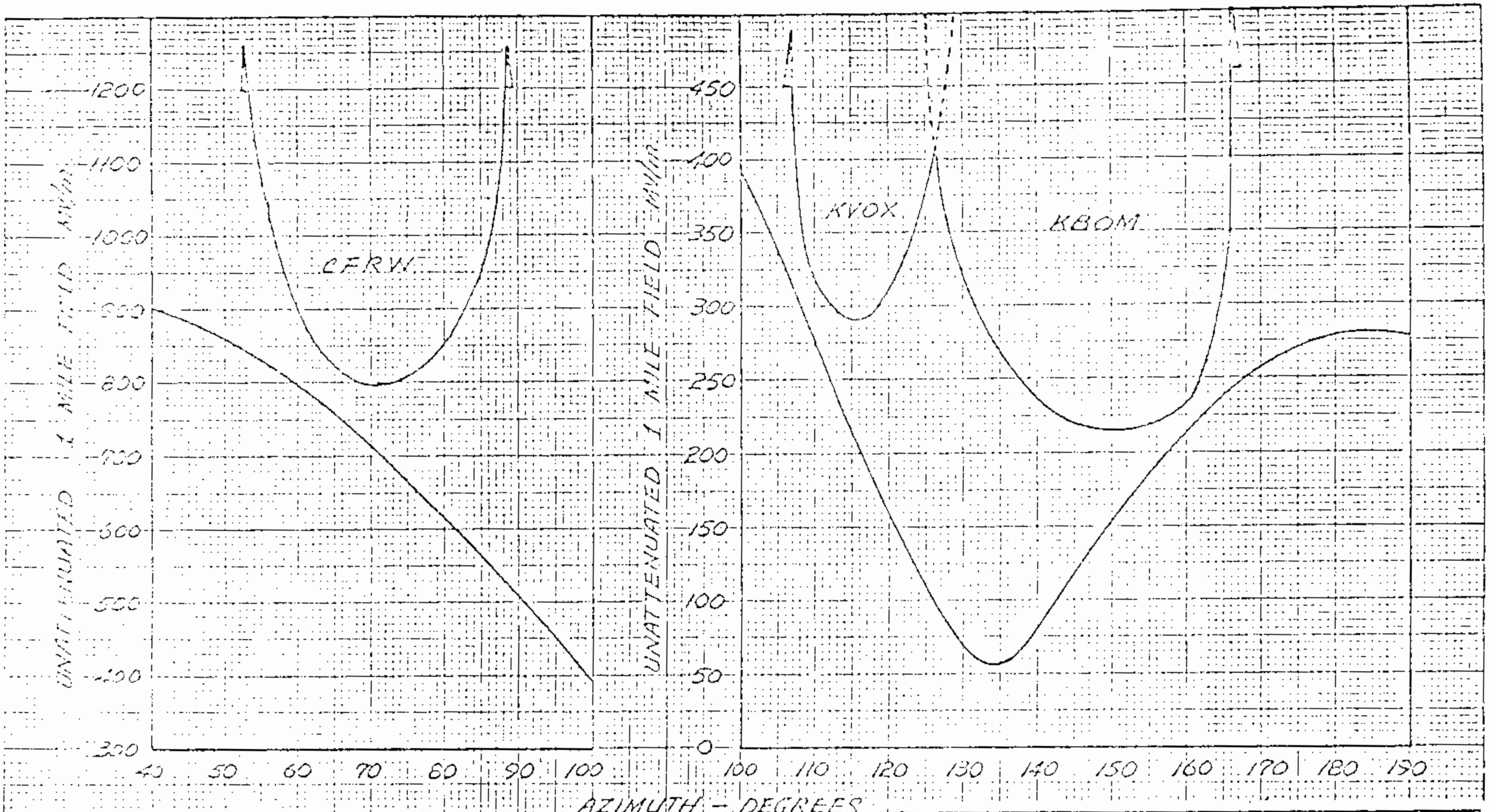


FIGURE 4

HORIZONTAL RADIATION PATTERN
DAYTIME - EXPANDED SCALE

CJSL			ESTEVAN, SASK.
1280 kHz	10 kW	DA-2	CLASS III
PROJECT #4206			AUGUST 9, 1976

D.E.M. ALLEN & ASSOCIATES LTD
CONSULTING ENGINEERS
D.e.K.L.

CJSL

CJSL

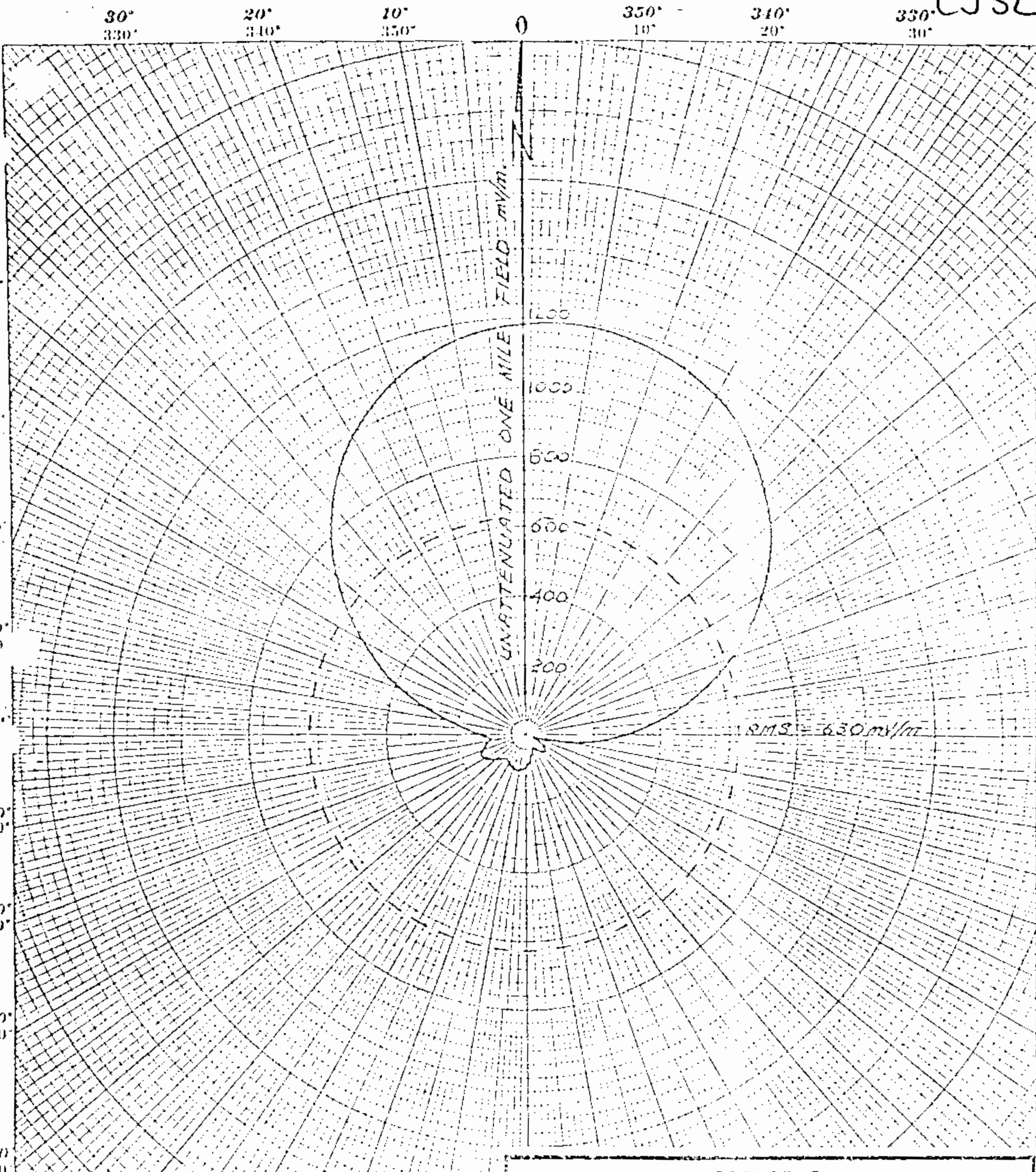


FIGURE 5

HORIZONTAL RADIATION PATTERN
NIGHTTIME - POLAR PLOT

CJSL ESTEVAN, SASK.
1280 khz 10 KW DA-2 CLASS III
PROJECT #4206 AUGUST 9, 1976
REVISED DECEMBER 22, 1976

D.E.M. ALLEN & ASSOCIATES LTD.
CONSULTING ENGINEERS

CJSL

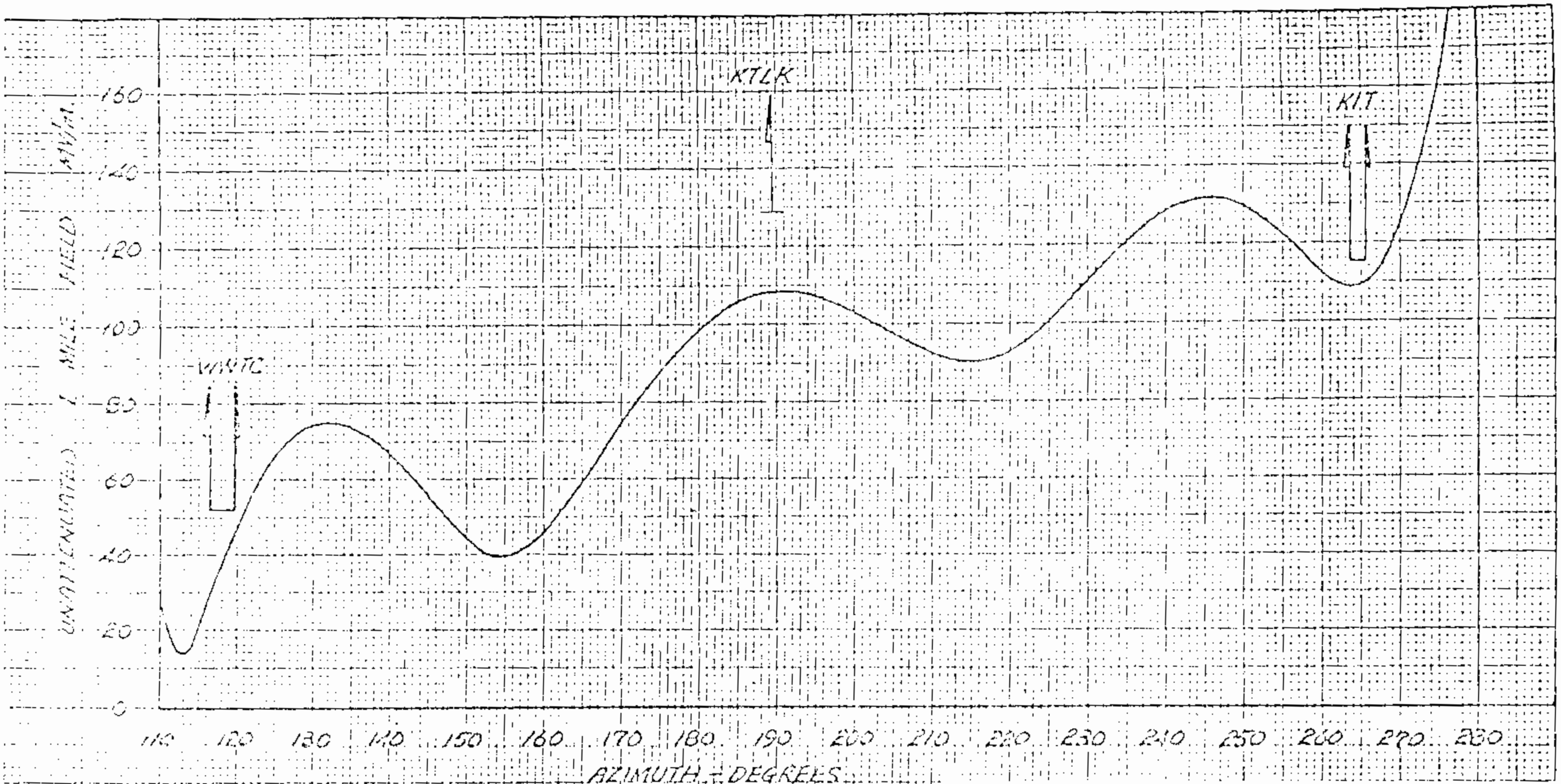


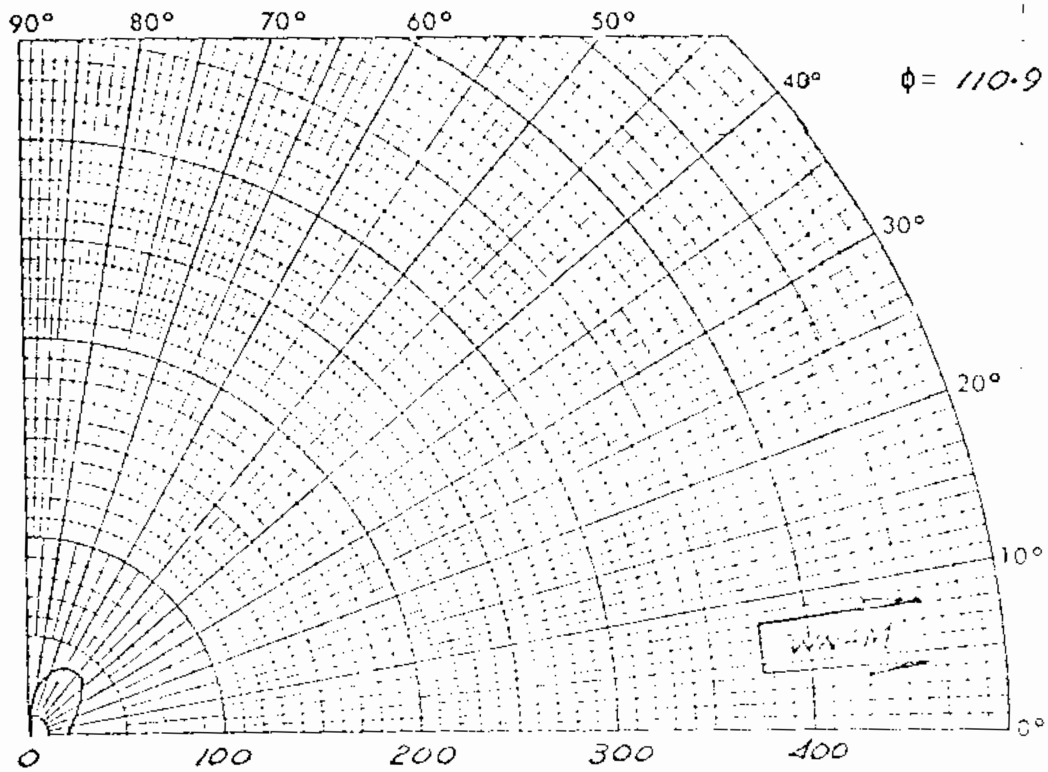
FIGURE 6

HORIZONTAL RADIATION PATTERN
NIGHTTIME - EXPANDED SCALE

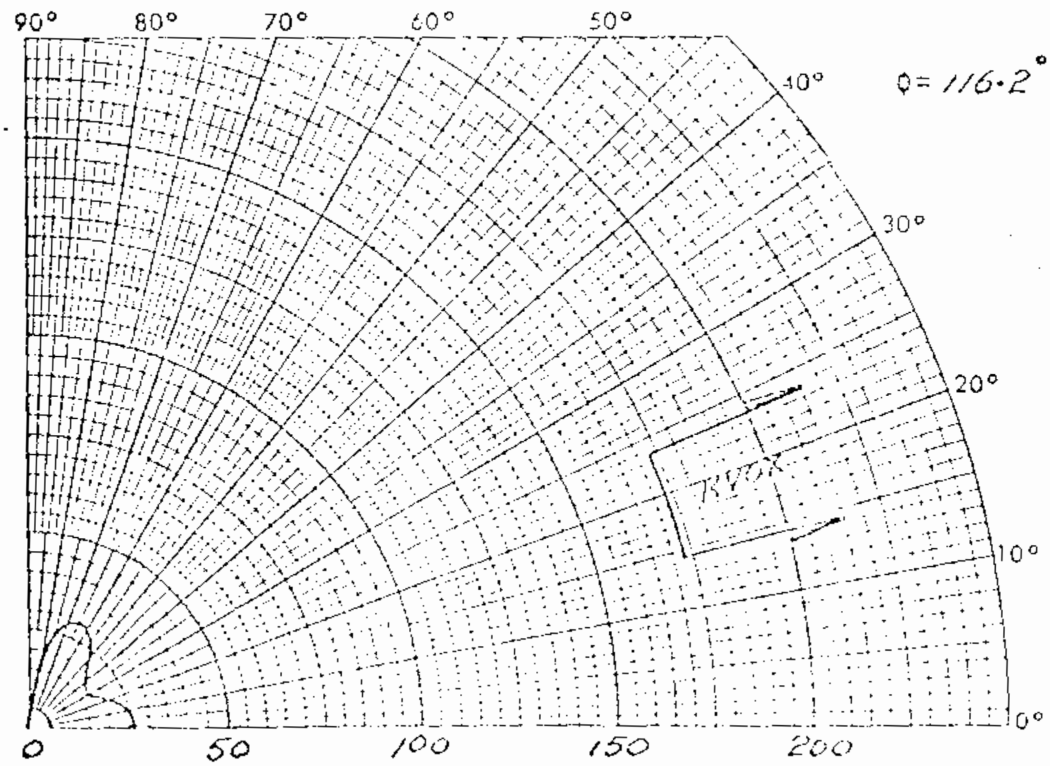
CJSL ESTEVAN, SASK.
1280 kHz 10 kW DA-2 CLASS III
PROJECT #4206 AUGUST 9, 1976
REVISED DECEMBER 22, 1976

D.E.M. ALLEN & ASSOCIATES LTD.
CONSULTING ENGINEERS

CJSL



UNATTENUATED (MV/M) 1 MILE FIELD



UNATTENUATED (MV/M) 1 MILE FIELD

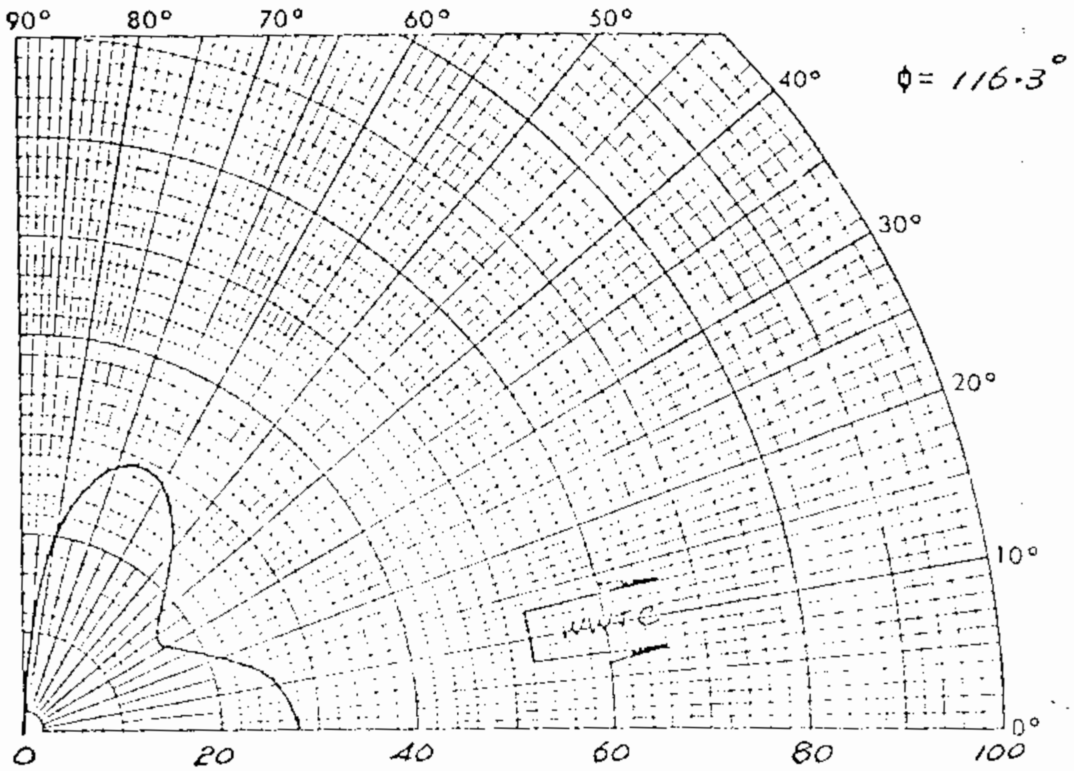
VERTICAL RADIATION PATTERNS

FIGURE 7

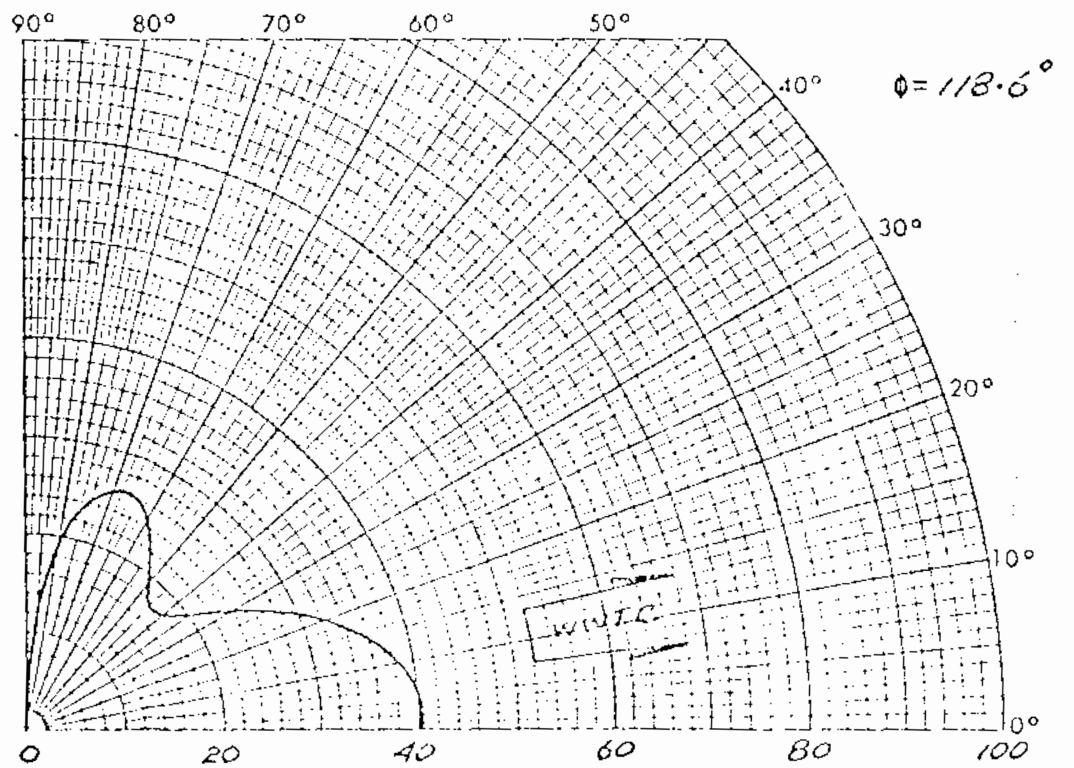
CJSL ESTEVAN, SASKATCHEWAN
1280 kHz 10 kW DA-2 CLASS III
PROJECT #4206 AUGUST 9, 1976 REVISED DECEMBER 22, 1976

D.E.M. ALLEN & ASSOCIATES LTD., CONSULTING ENGINEERS

CJSL



UNATTENUATED (MVM) 1 MILE FIELD



UNATTENUATED (MVM) 1 MILE FIELD

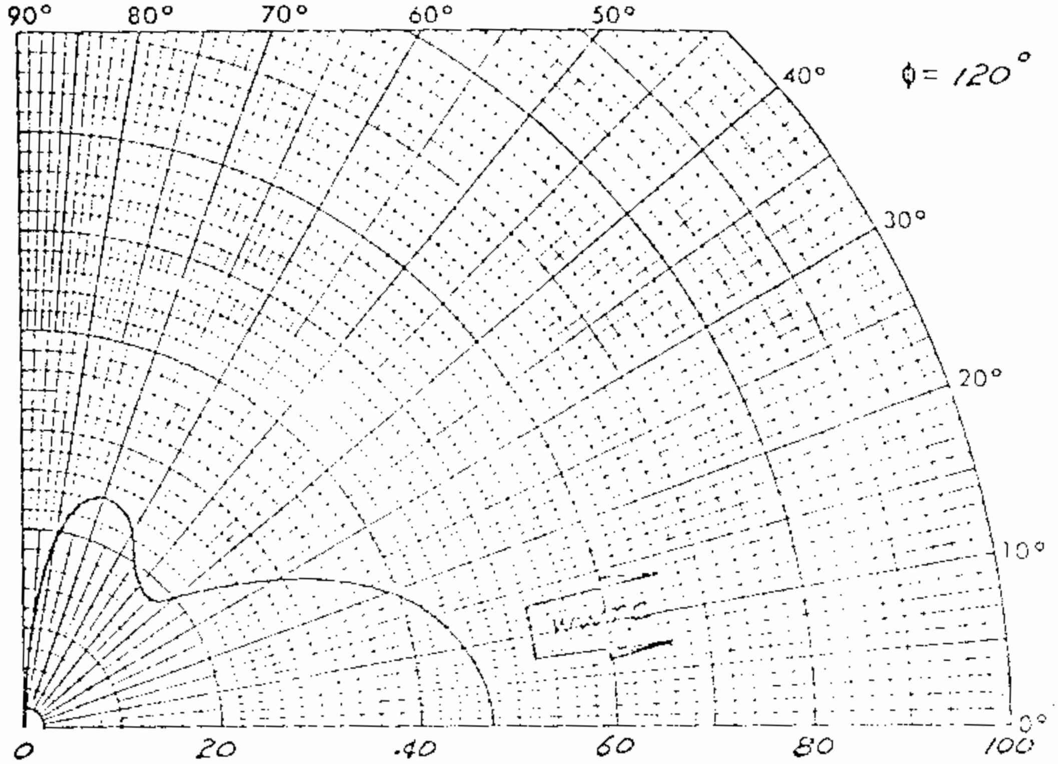
VERTICAL RADIATION PATTERNS

FIGURE 6

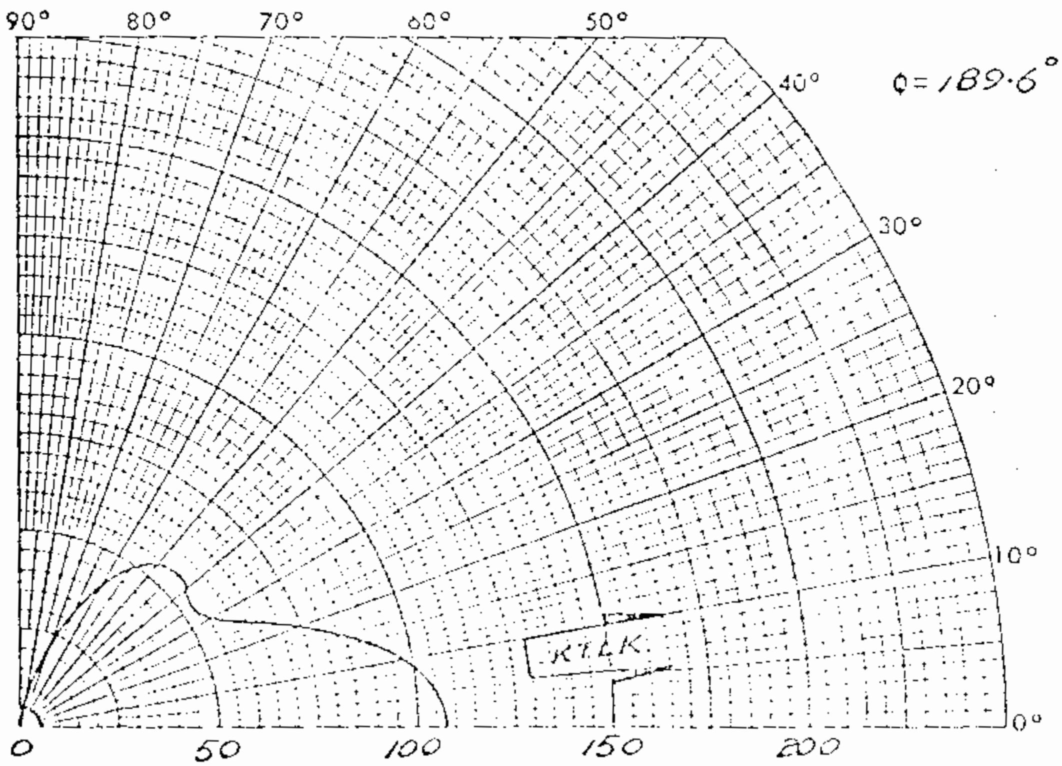
CJSL			ESTEVAN, SASKATCHEWAN
1280 kHz	10 kW	DA-2	CLASS III
PROJECT #4206	AUGUST 9, 1976		REVISED DECEMBER 22, 1976

D.E.M. ALLEN & ASSOCIATES LTD., CONSULTING ENGINEERS

CJSL



UNATTENUATED (MV M) 1 MILE FIELD



UNATTENUATED (MV M) 1 MILE FIELD

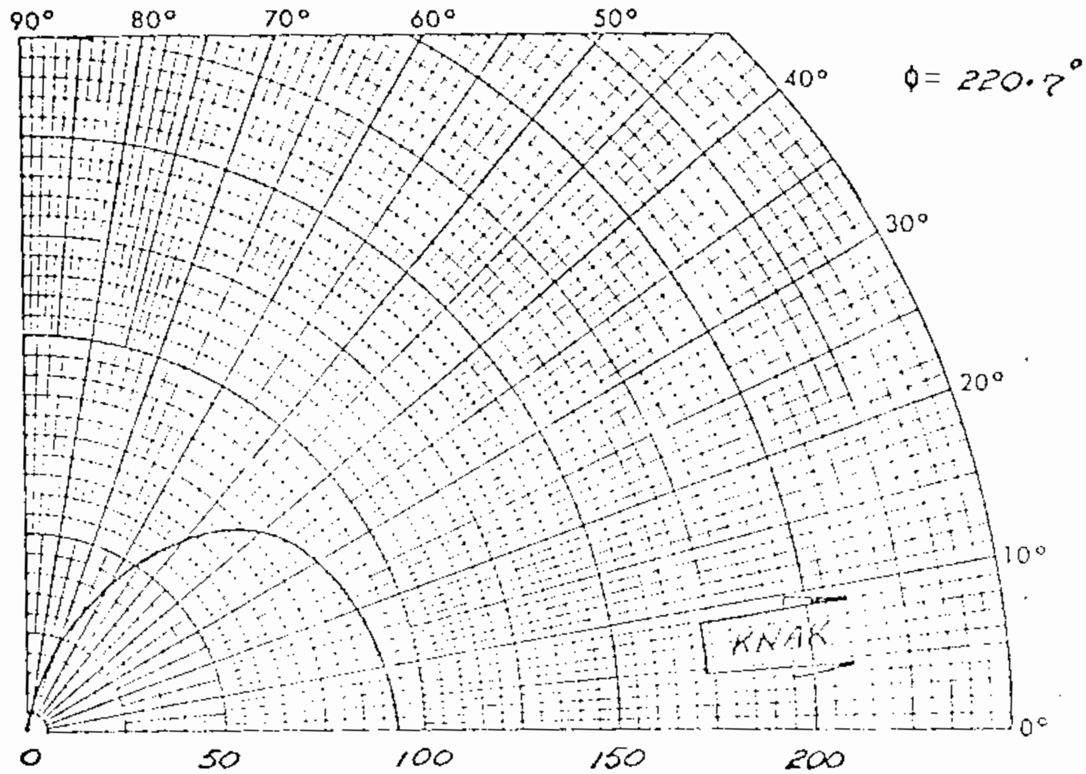
VERTICAL RADIATION PATTERNS

FIGURE 9

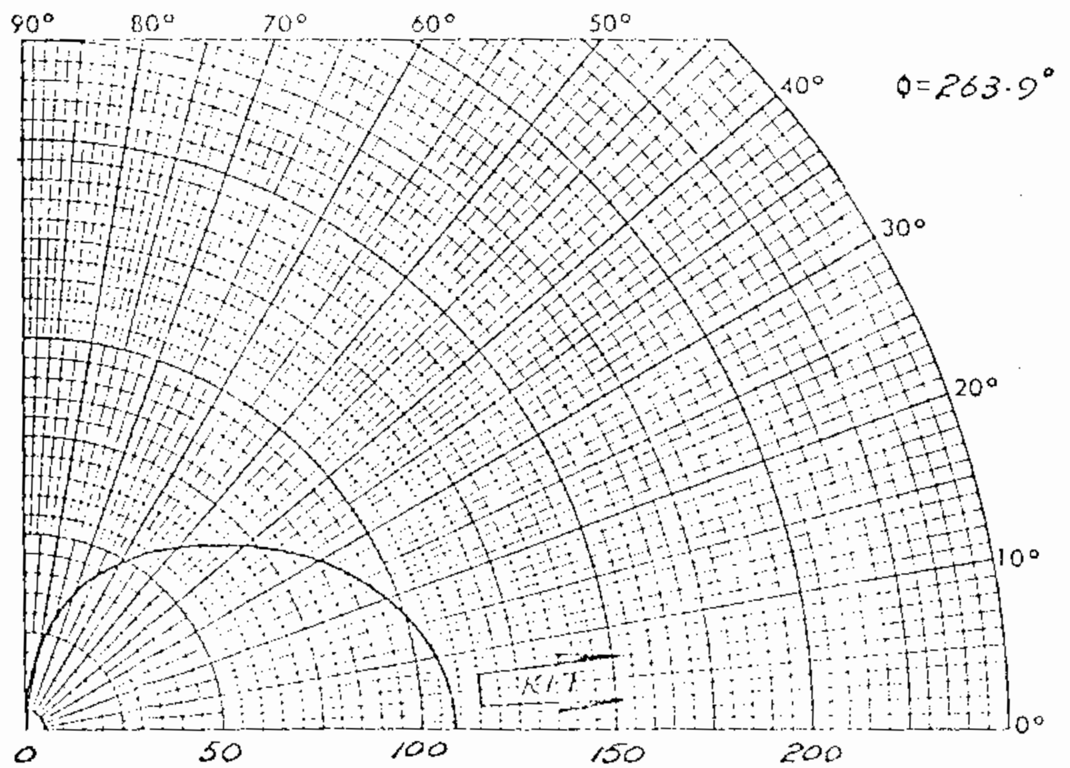
CJSL			ESTEVAN, SASKATCHEWAN
1280	10 kW	DA-2	CLASS III
PROJECT #1206	AUGUST 9, 1976		REVISED DECEMBER 22, 1976

D.E.M. ALLEN & ASSOCIATES LTD., CONSULTING ENGINEERS

CJSL



UNATTENUATED (MV/M) 1 MILE FIELD



UNATTENUATED (MV/M) 1 MILE FIELD

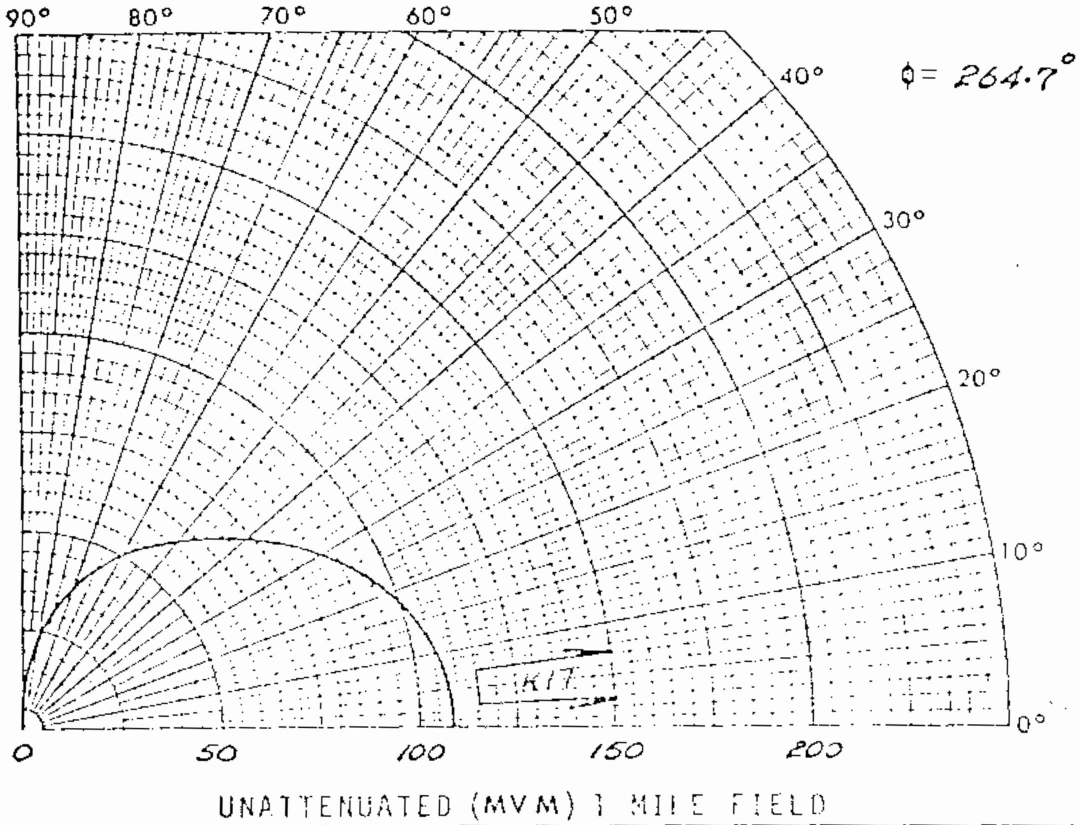
VERTICAL RADIATION PATTERNS

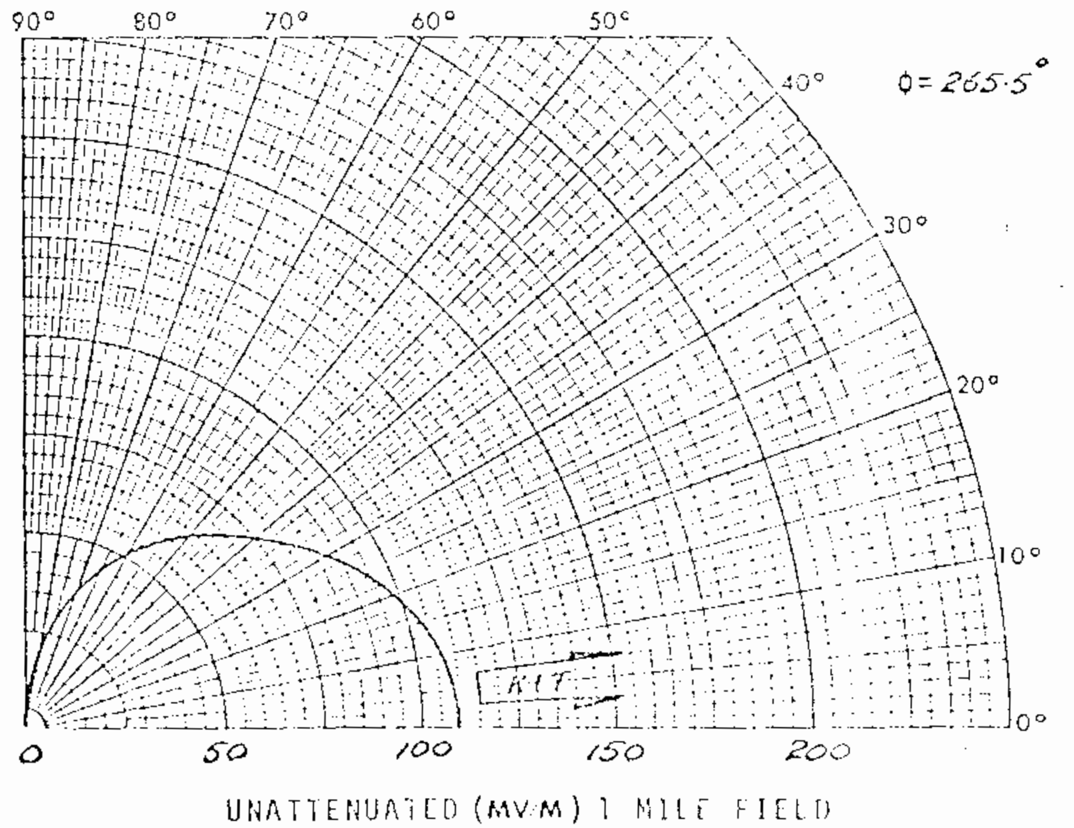
FIGURE 10

CJSL			ESTEVAN, SASKATCHEWAN
1280 kHz	10 kW	DA-2	CLASS III
PROJECT #4206	AUGUST 9, 1976	REVISED DECEMBER 22, 1976	

D.E.M. ALLEN & ASSOCIATES LTD., CONSULTING ENGINEERS

CJSL





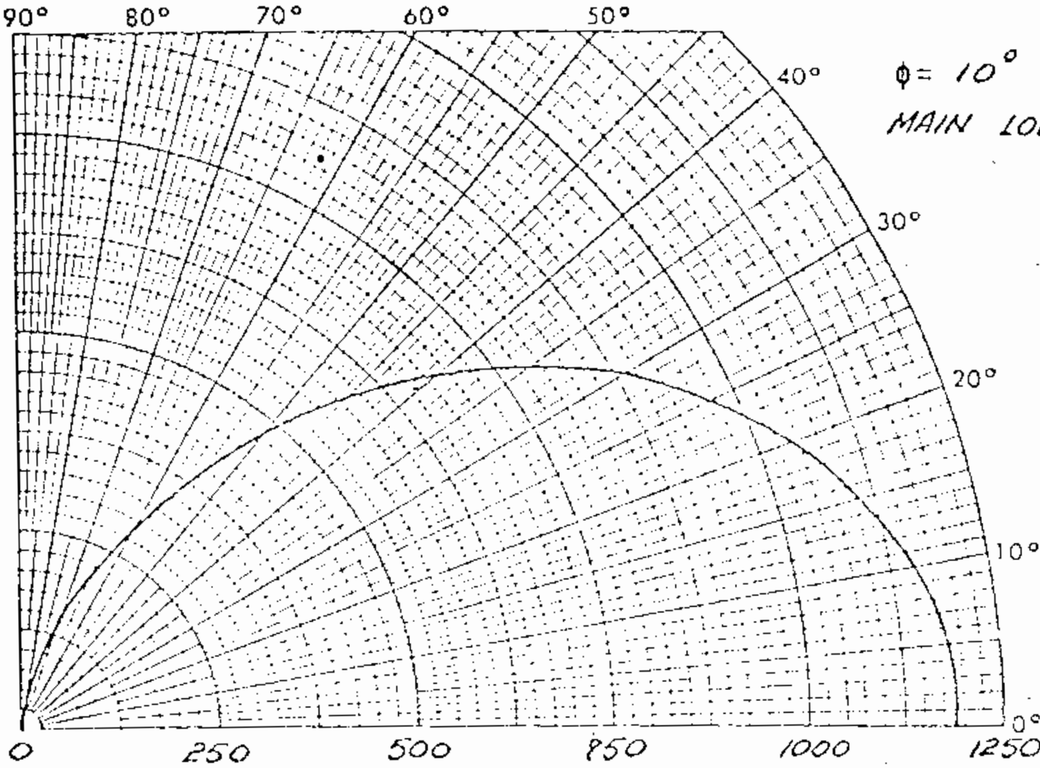
VERTICAL RADIATION PATTERNS

FIGURE 10A

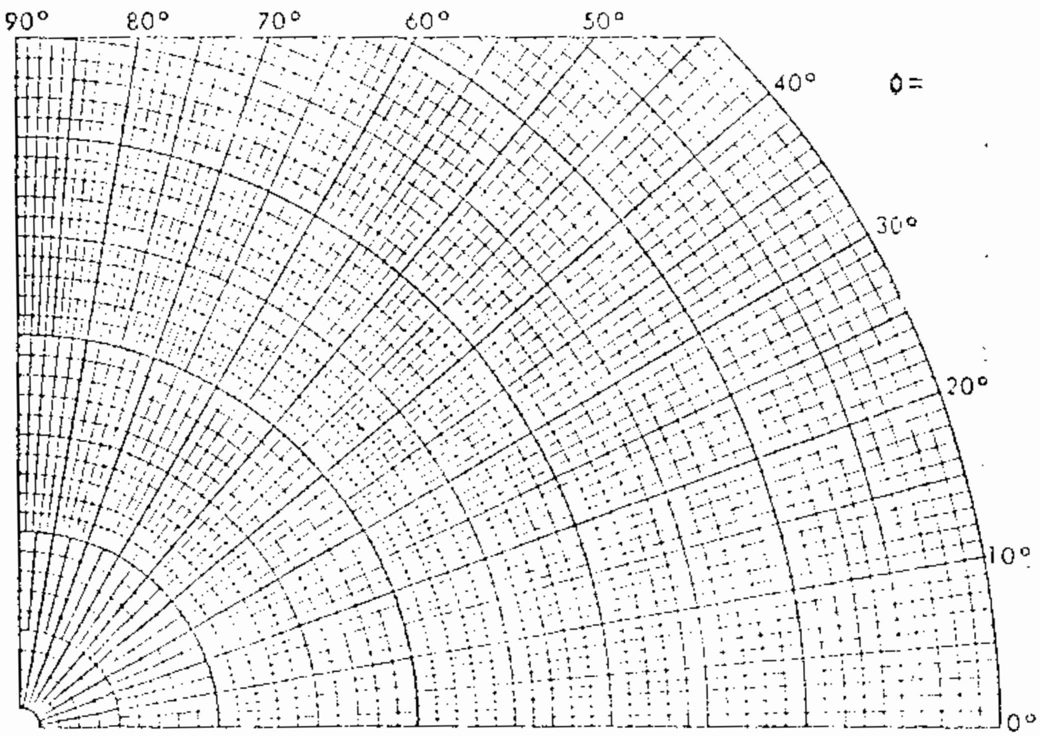
CJSL — ESTEVAN, SASKATCHEWAN
1280 kHz — 10 kW — DA-2 — CLASS III
PROJECT #4206 — AUGUST 9, 1976 — REVISED DECEMBER 22, 1976

D.E.M. ALLEN & ASSOCIATES LTD., CONSULTING ENGINEERS

CJSL



UNATTENUATED (MVM) 1 MILE FIELD



UNATTENUATED (MV/M) 1 MILE FIELD

VERTICAL RADIATION PATTERNS

FIGURE 10B

CJSL — ESTEVAN, SASKATCHEWAN

1280 kHz — 10 kW — DA-2 — CLASS III

PROJECT #4206 — AUGUST 9, 1976 — REVISED DECEMBER 22, 1976

D.E.M. ALLEN & ASSOCIATES LTD., CONSULTING ENGINEERS

#152 CJSL

DESCRIPTION SHEET (11-11-60g) | New Station Estavan, Saskatchewan, Canada | 1kw, DA-1, U, Class III 1280 KC

ANTENNA DESCRIPTION SHEET

DIRECTIONAL DA-1

STATION CALL:	
MAIN STUDIO:	Estevan, Saskatchewan.
FREQUENCY:	1280 kc/s
POWER:	1000 watts
CLASS:	III
TIME:	Unlimited
NOTIFICATION REFERENCE:	152 Dated: October 26, 1960.
GEOGRAPHICAL LOCATION:	Lat. 49°03'26" North Lon. 102°55'20" West
ARRAY CHARACTERISTICS:	Two elements, guyed, uniform cross section, base insulated, series feed.

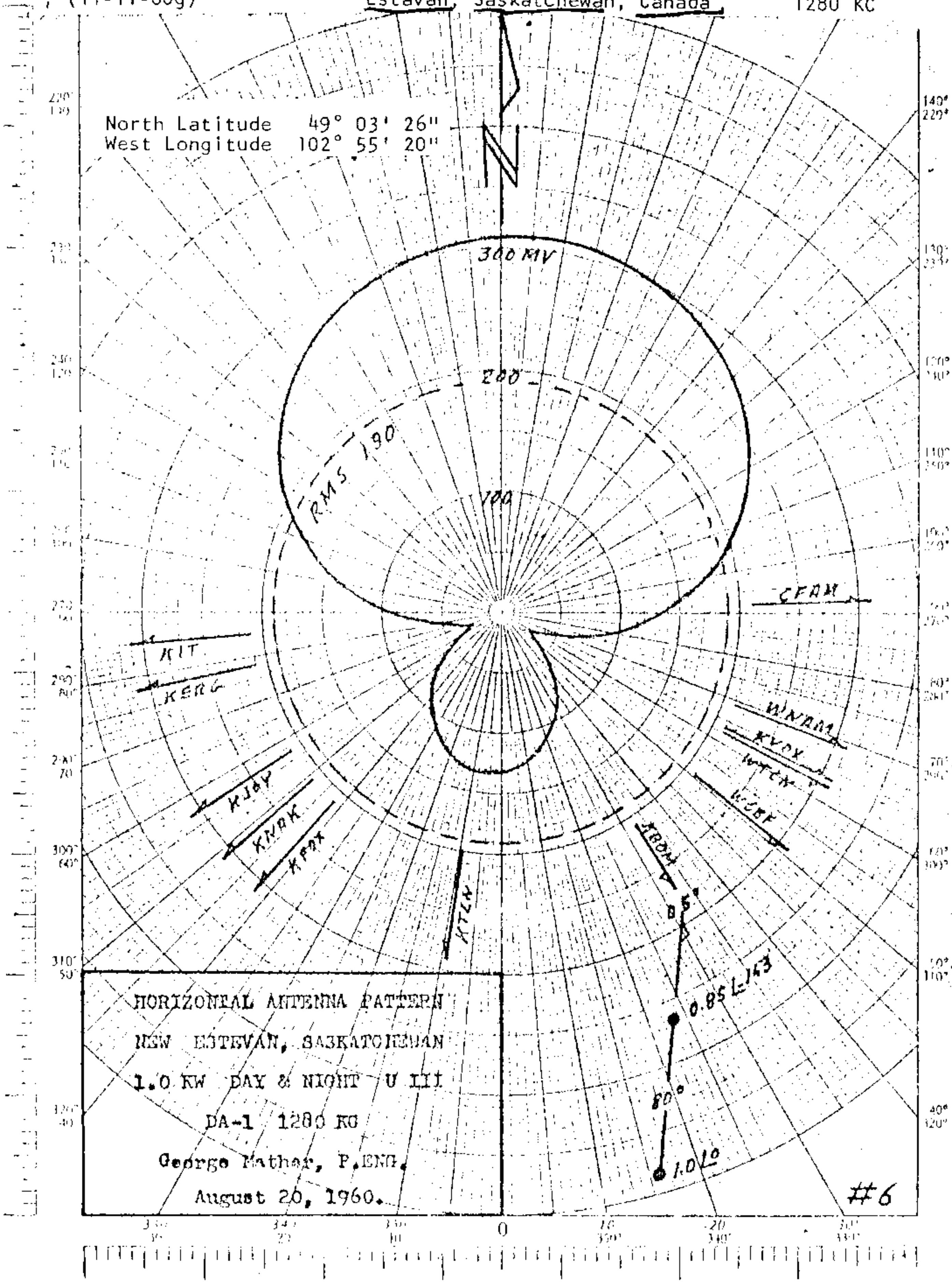
ELEMENT	SOUTH	NORTH
Height	173' 81°	173' 81°
Spacing	ref.	171' 80°
Bearing	ref.	05°
Field ratio	1.00	0.85
Field phase	00°	-143°
Ground system	120 radials per tower, #10 AWG bare, soft copper wire, uniformly spaced, depth approximately 8 inches. Radials joined along line between towers and bonded to soft copper strap at tower bases. Maximum radial length 307 feet.	
Predicted R.M.S.	190 mv/m at 1 mile for 1 kw	

GM 20/8/60 # 5

#152

CJSL

PROPOSED DAY & NIGHT (11-11-60g) New Station Estavan, Saskatchewan, Canada 1kw,DA-1,U,Class III 1280 KC



HORIZONTAL ANTENNA PATTERN

NEW ESTEVAN, SASKATCHEWAN

1.0 KW DAY & NIGHT U III

DA-1 1280 KC

George Mather, P.ENG.

August 20, 1960.

1A8

CKCV

DESCRIPTION SHEET
(7-7-60g)

Station CKCV 5kw,10kw-LS, DA-2,U, Class III
Quebec, Quebec, Canada 1280 KC

DESCRIPTION SHEET

DIRECTIONAL ANTENNA SYSTEM

STATION:	CKCV	MAIN STUDIO:	QUEBEC, QUE.
POWER:	10 KWD/5 KWN	FREQUENCY:	1280 KC/S
		CLASS:	III

NOTIFICATION LIST NO.: 148 June 6, 1960

GEOGRAPHIC LOCATION OF
MID-POINT OF ANTENNA SYSTEM: NORTH LAT. 46° 45' 06"
WEST LONG. 71° 10' 54"

ANTENNA:
MODE OF OPERATION: DA-2
Three elements, uniform, cross-section, guyed, steel towers, base insulated, series feed.

TOWER:	EAST	SOUTH	WEST
HEIGHT ABOVE INSULATORS:	187 ft.	187 ft.	187 ft.
HEIGHT, DEGREES:	87.5°	87.5°	87.5°
SPACING:	East and South Towers: 192' (90°) East and West Towers: 576' (270°)		
PHASING (DAYTIME):	-93.5°	0°	Not used
FIELD RATIO (DAYTIME):	1.0	0.725	Not used
PHASING (NIGHTTIME):	0°	+107°	+95°
FIELD RATIO (NIGHTTIME):	1.0	0.94	0.25

GROUND SYSTEM: 120 equiangular radials extending from the base of each tower to a minimum distance of 200' (.26 wavelength) with the exception of those radials joined along a common chord. Total area covered by radial greater and same area required by a standard .4 wavelength ground system.

PREDICTED EFFECTIVE FIELD:
600 mv/m at 1 mile for 10 KW.
425 mv/m at 1 mile for 5 KW.
190 mv/m at 1 mile for 1 KW.

ORIENTATION: The East and South towers are on a line bearing 212.5 degrees east of true north, and are spaced 192 ft. (90°), the east and west towers are on a line bearing 292.5 degrees east of true north and are spaced 57 ft. (270°).

NOTICE: PLEASE RETAIN AUTHORIZED NIGHTTIME PATTERN. THIS SHEET ONLY PERTAINS TO A CHANGE IN DAYTIME PATTERN AND POWER.

21/4/6. AF5

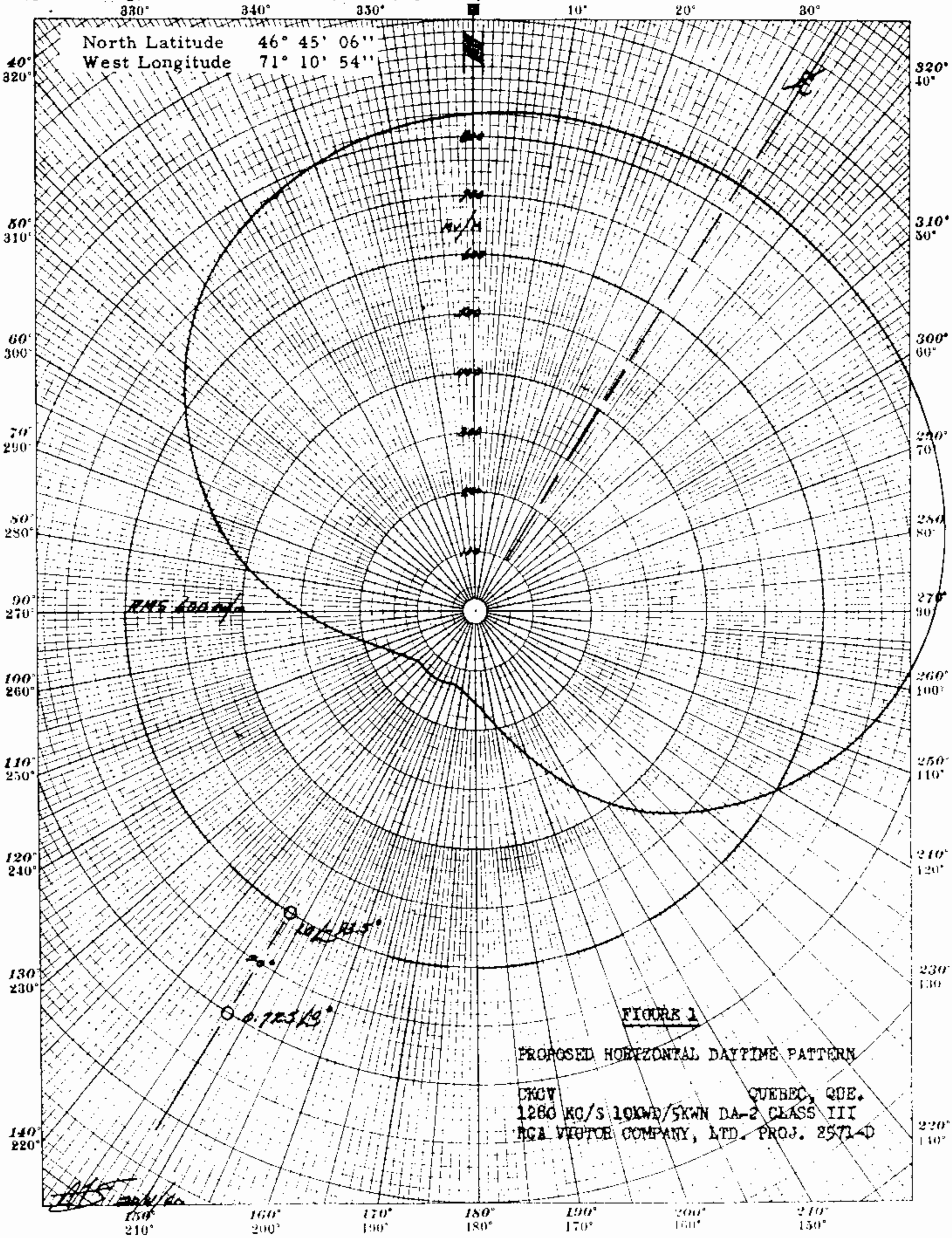
#148

CKCV

PROPOSED DAY
(7-7-60g)

Station CKCV
Quebec, Quebec, Canada

5kw,10kw-LS,DA-2,U,Class III
1280 KC



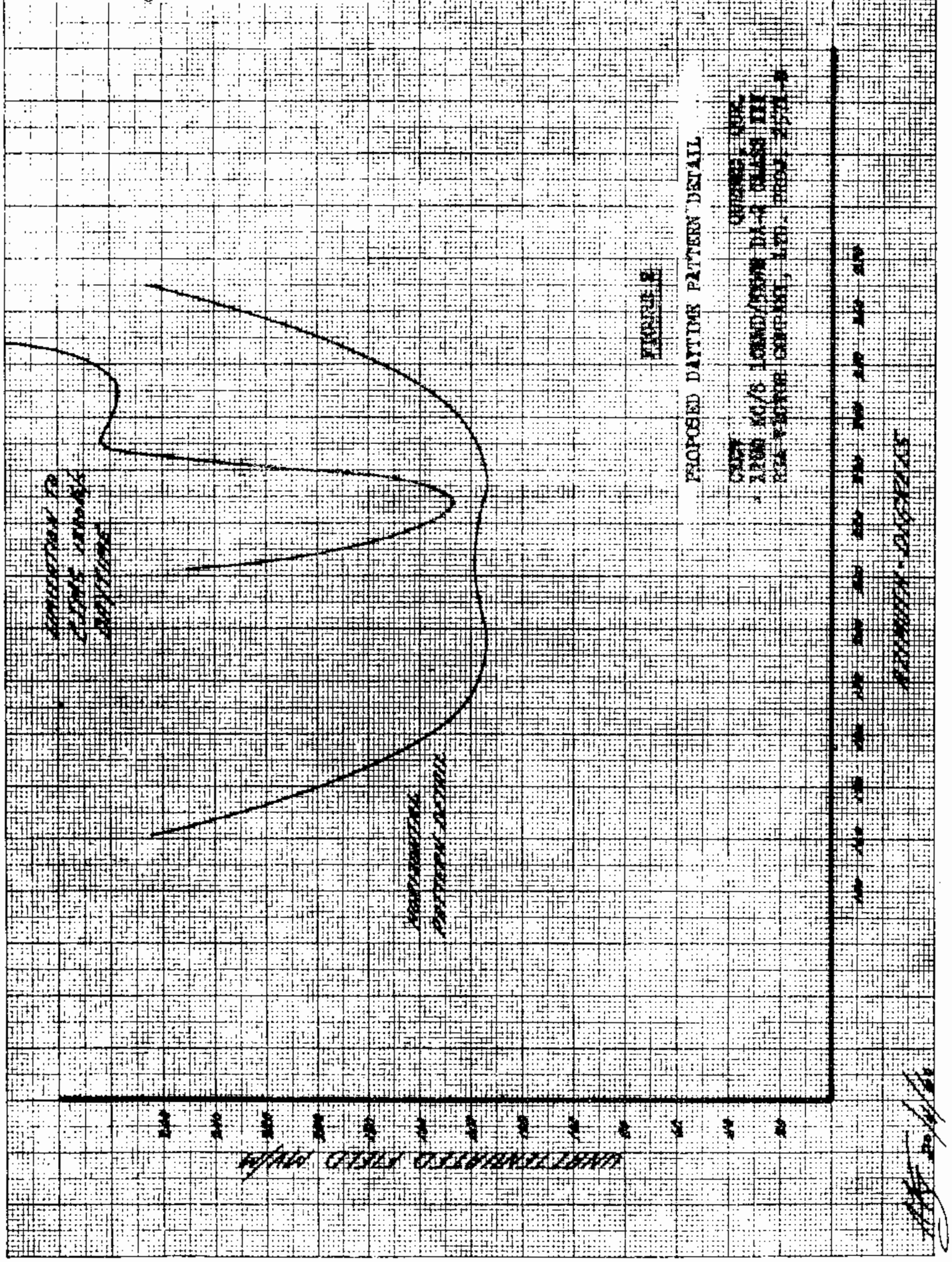
#148

CKCV

PROPOSED DAY NULLS (7-7-60g)

Station CKCV 5kw,10kw-LS,DA-2,U,Class III
Quebec, Quebec, Canada 1280 KC

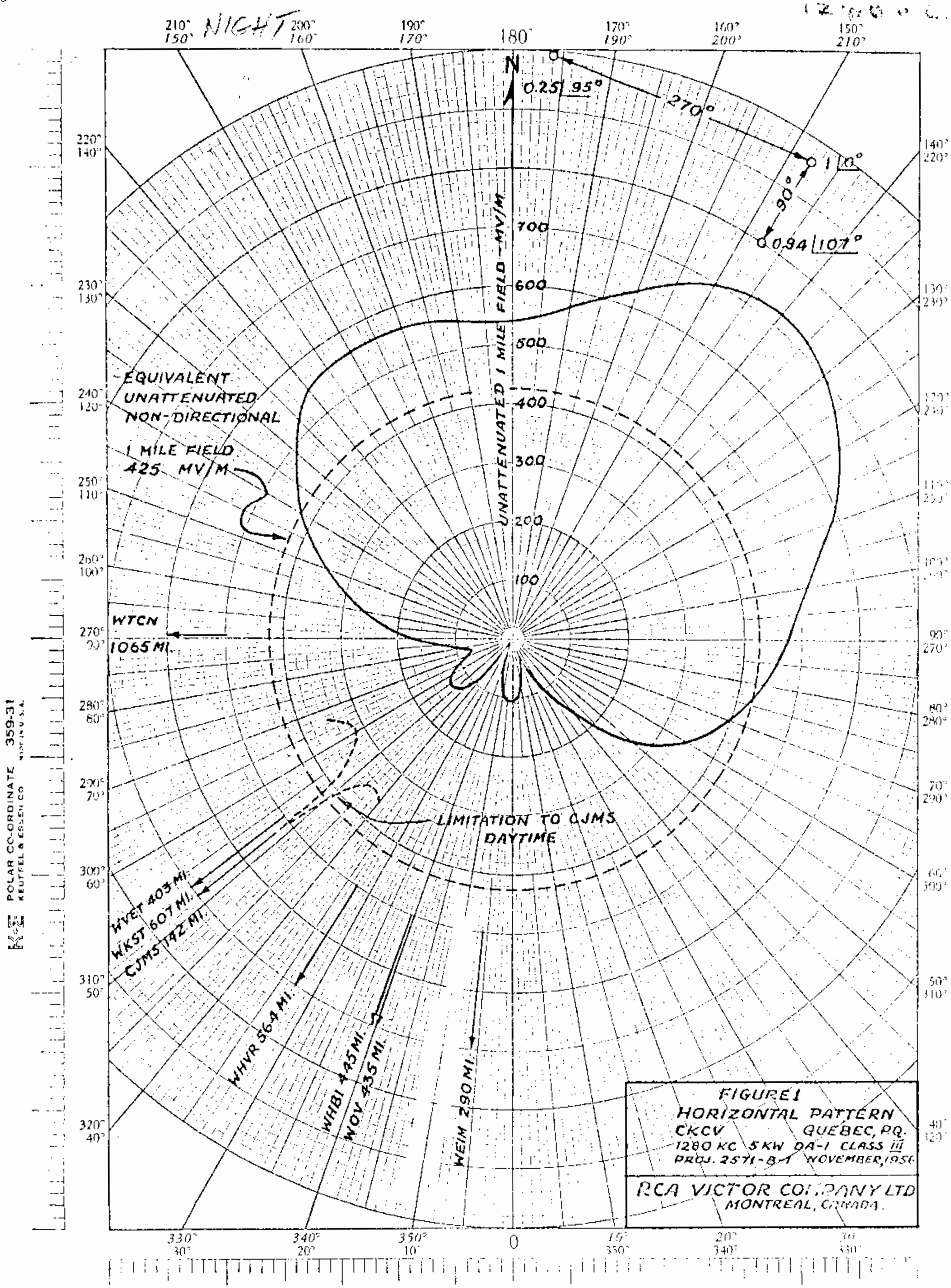
North Latitude 46° 45' 06''
West Longitude 71° 10' 54''



K+E 10 X 10 TO THE CM. 359-14 KEUFFEL & ESSER CO.

148

CKCV



NIGHT
180°
N
0.25 |95°
270°
1 |0°
90°
0.94 |107°
UNATTENUATED 1 MILE FIELD — MV/M
700
600
500
400
300
200
100
EQUIVALENT UNATTENUATED NON-DIRECTIONAL 1 MILE FIELD 425 MV/M
WTCN 1065 MI.
LIMITATION TO CJMS DAYTIME
WYET 403 MI.
WKST 607 MI.
CJMS 142 MI.
WHVR 564 MI.
WHBI 445 MI.
WOV 435 MI.
WEIM 290 MI.
FIGURE 1
HORIZONTAL PATTERN
CKCV QUEBEC, P.Q.
1280 KC 5 KW DA-1 CLASS III
PROJ. 2571-B-1 NOVEMBER, 1956
RCA VICTOR COMPANY LTD
MONTREAL, CANADA.
K&E POLAR CO-ORDINATE 359-31
KEUFFEL & ESSER CO.

CKCV

DESCRIPTION DE L'ANTENNE DIRECTIONNELLE

STATION:	CKCV	STUDIO PRINCIPAL:	Québec, Qué.
FREQUENCE:	1280kHz	PUISSANCE:	50kw
TEMPS:	non-limité	CLASSE:	III
LISTE D'AVIS NO:	393	DATE:	27 décembre 1979

COORDONNEES GEOGRAPHIQUES: 46° 45' 15" latitude nord
71° 22' 14" longitude ouest

CARACTERISTIQUES D'ANTENNE

SYSTEME D'ANTENNE: 6 pilônes, haubanés, isolés à la base de coupe uniforme, alimentés en série, pas de charge au sommet.

MODE D'OPERATION: AD-2

TOUR:	No.1	No.2	No.3	No.4	No.5	No.6
Hauteur au-dessus de l'isolateur:	186' 87°	186' 87°	186' 87°	186' 87°	186' 87°	186' 87°
Hauteur hors-tout:	190'	190'	190'	190'	190°	190°
Espacement:	0°	90'	180°	100°	155.745°	232.900°
Orientation:	0°	65°	65°	355°	27.839°	41.313°
Rapport de champ (jour):	1.0	1.947	1.0	--	--	--
Phase de jour:	0°	-100.5°	-206°	--	--	--
Rapport de champ (nuit):	1.0	1.894	1.0	1.0	1.894	1.0
Phase de nuit:	0°	-117.205°	125.59°	-98.62°	144.175°	26.97°

Système de mise à la terre: 120 fils no. 10 espacés équiangulairement enfouis environ 20cm sous la surface d'une longueur équivalente à 0.4λ ou surface équivalente avec courroie d'interconnexion à la bissectrice.

INTENSITE DE CHAMP PREVU:

Jour: 1350mV/m à 1 mille pour 50kw
190.9mV/m à 1 mille pour 1kw

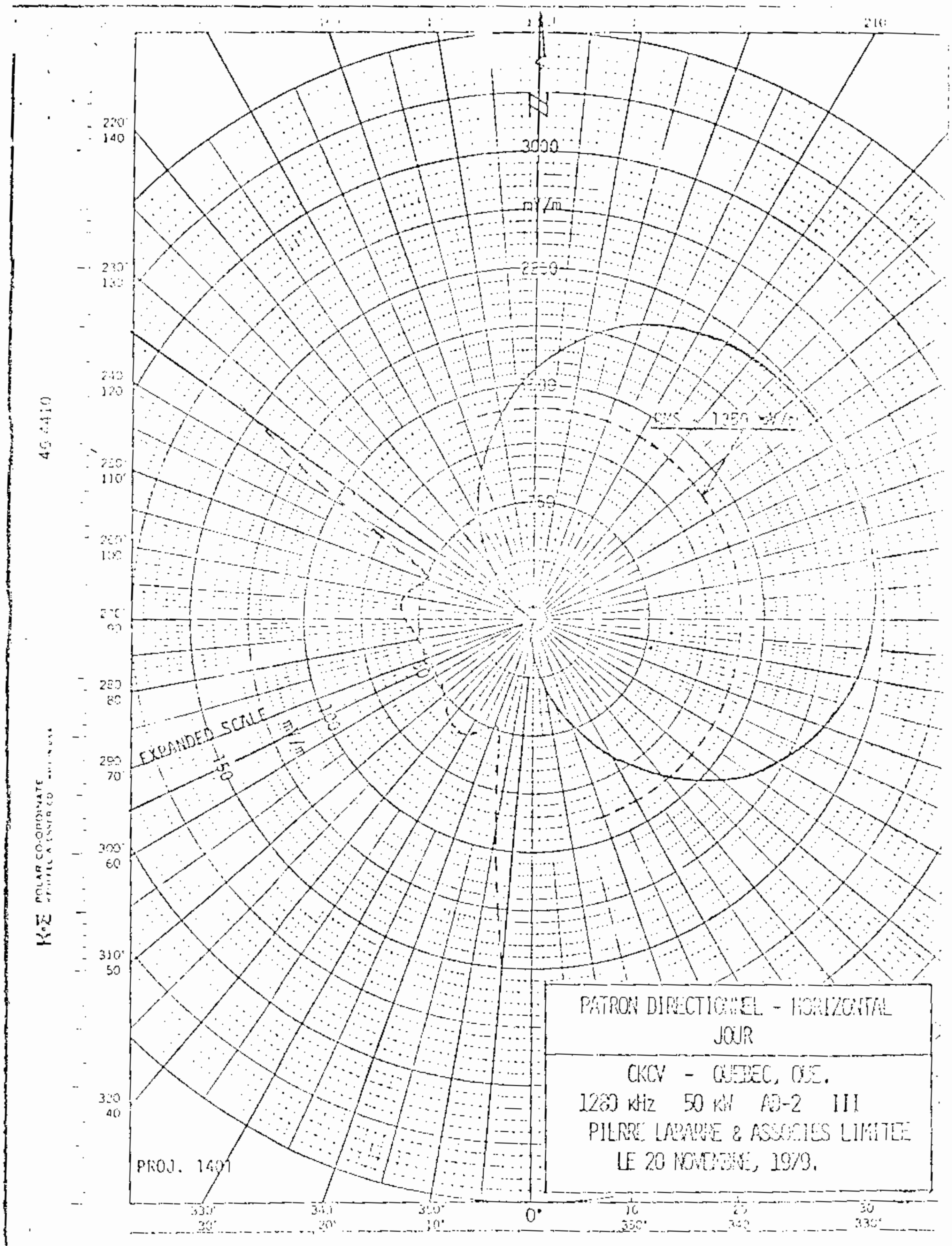
Nuit: 1340mV/m à 1 mille pour 50kw
189.5mV/m à 1 mille pour 1kw

PIERRE LABARRE & ASSOCIES LTEE
St-Lambert, Qué., Canada

20 novembre 1979

projet 1401

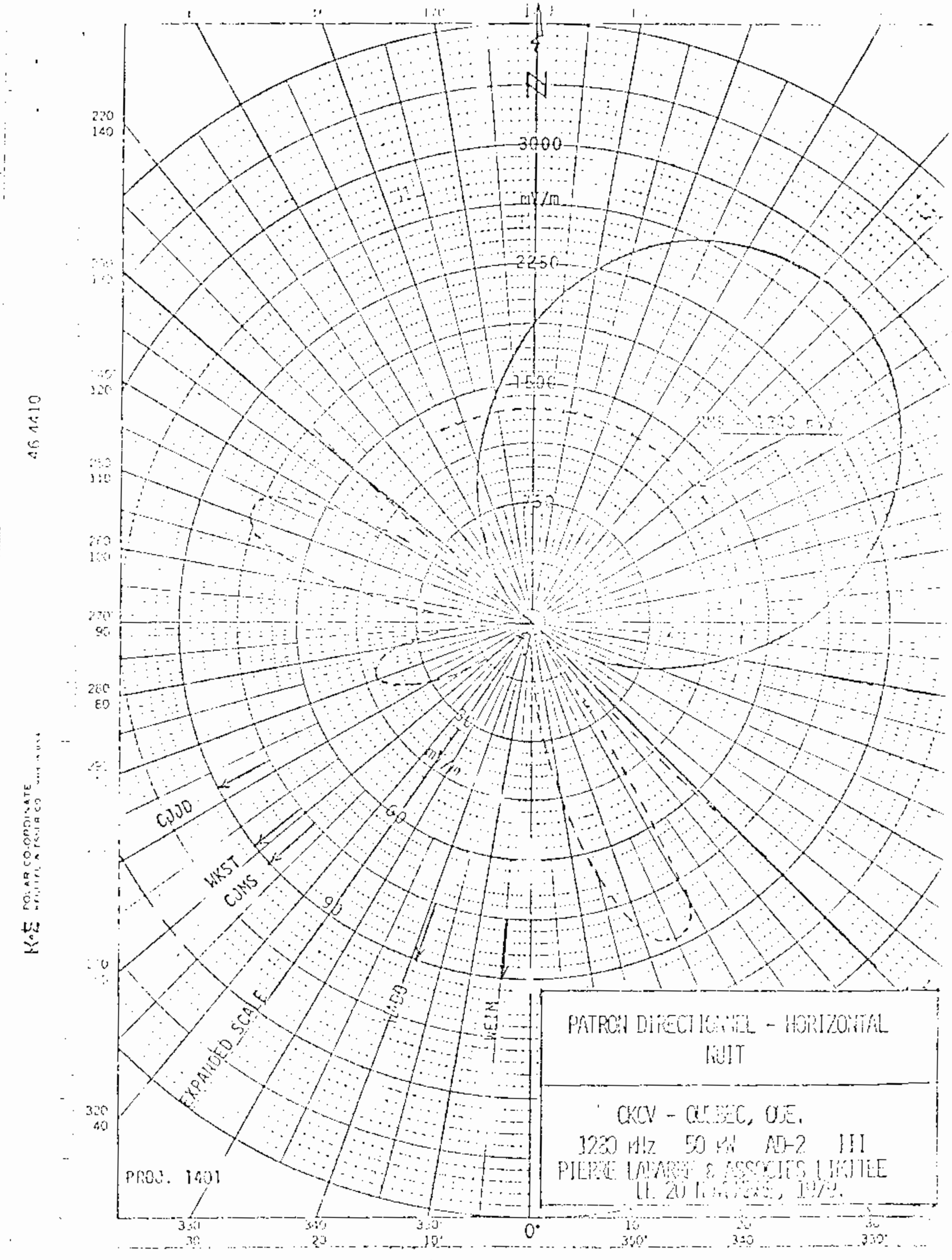
CKCV



PATRON DIRECTIONNEL - HORIZONTAL
JOUR

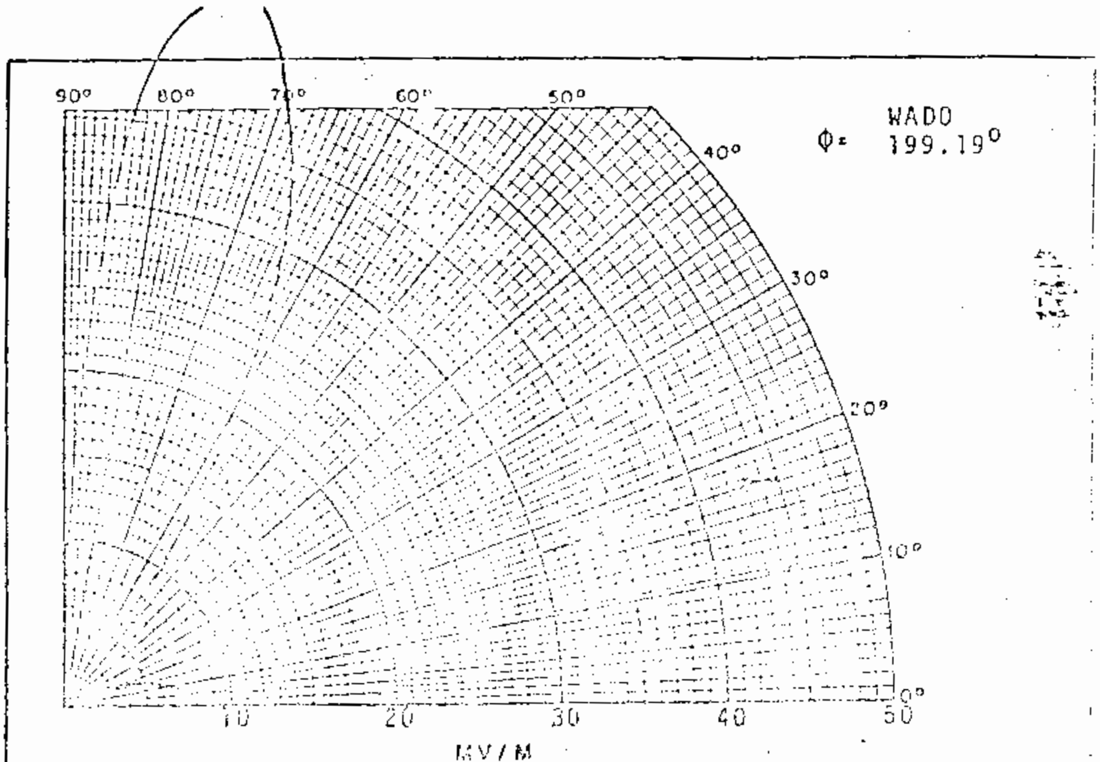
CKCV - QUEBEC, QUE.
1280 kHz 50 kW AD-2 III
PIERRE LABARRE & ASSOCIES LIMITEE
LE 20 NOVEMBRE, 1979.

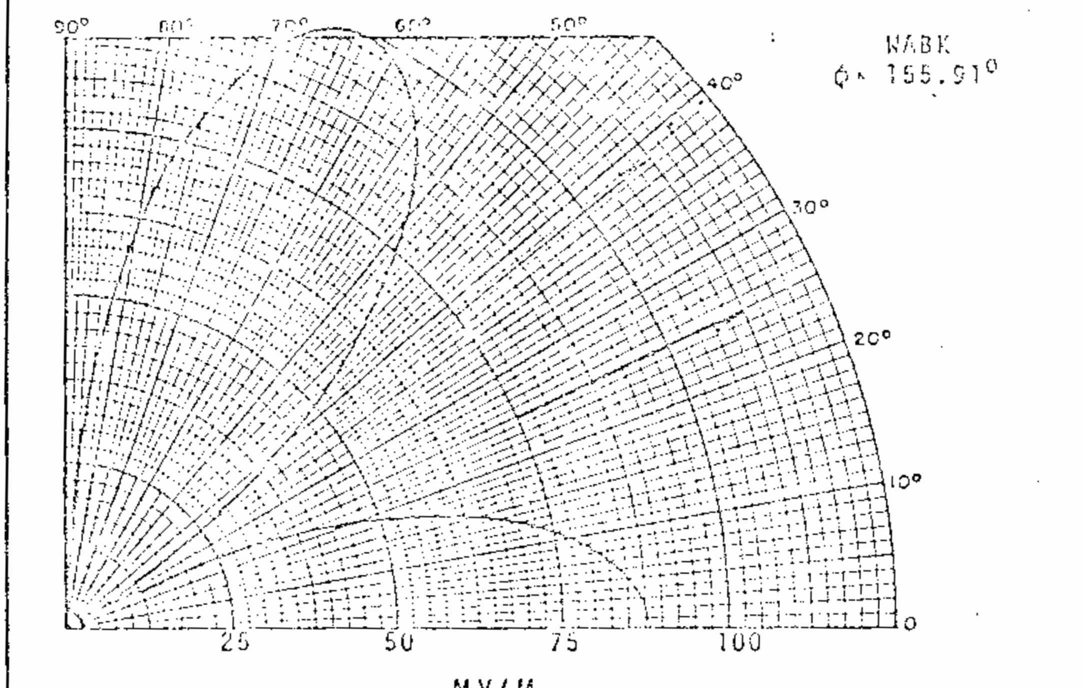
CKCV



3000
mV/m
2250
1500
750
CJJD
WKST
CJMS
60
90
EXPANDED SCALE
PROJ. 1401
0°
PATRON DIRECTIONNEL - HORIZONTAL
NUIT
CKCV - QUEBEC, QUE.
1280 kHz 50 kW AD-2 III
PIERRE LABARRE & ASSOCIES LIMITEE

CKCV



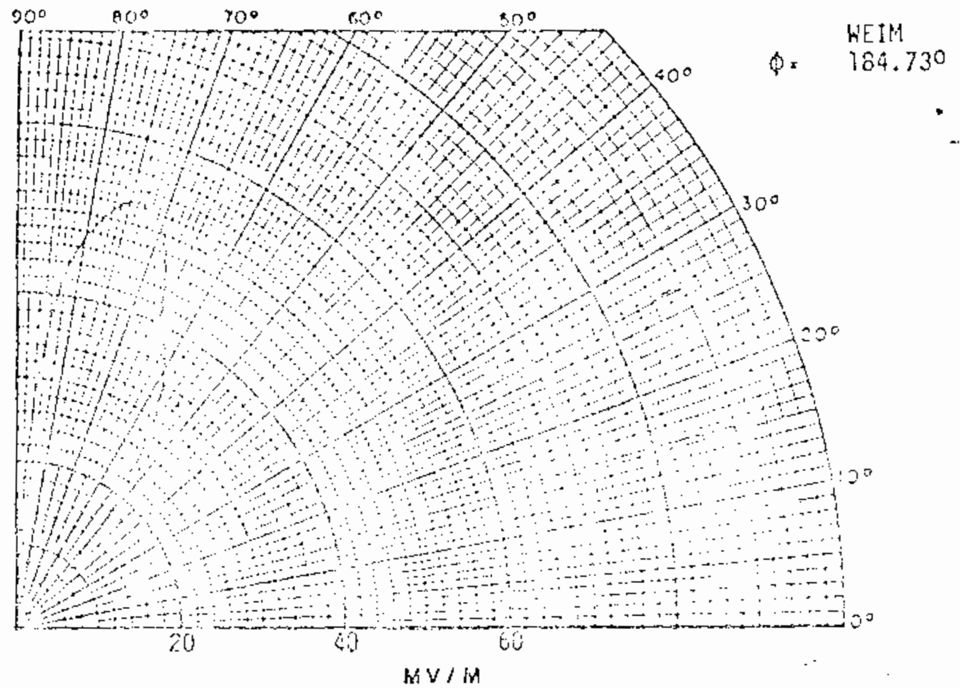


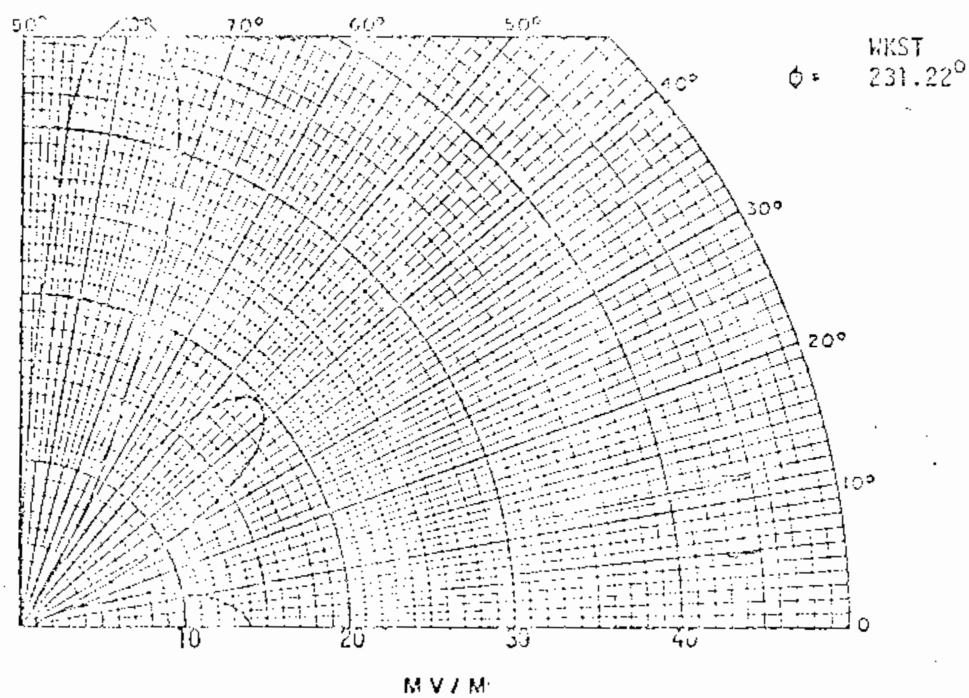
VERTICAL RADIATION PATTERNS

PROJ. 1401

CKCV - QUEBEC, QUE.
1280 kHz 50 kW AD-2 III
PIERRE LABARRE & ASSOCIES LIMITEE
LE 20 NOVEMBRE, 1979.

CKCV





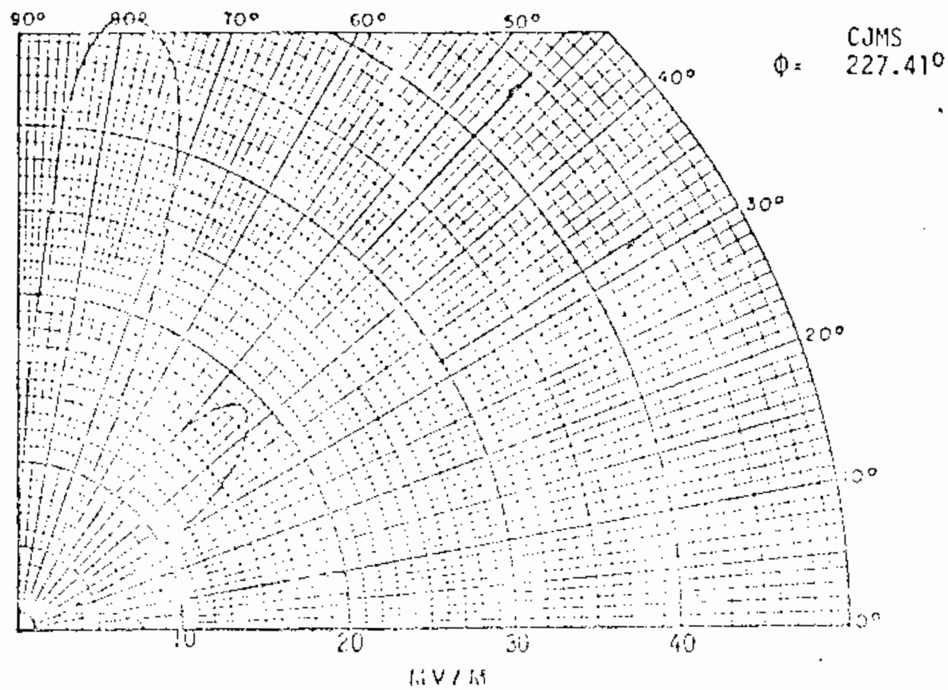
VERTICAL RADIATION PATTERNS

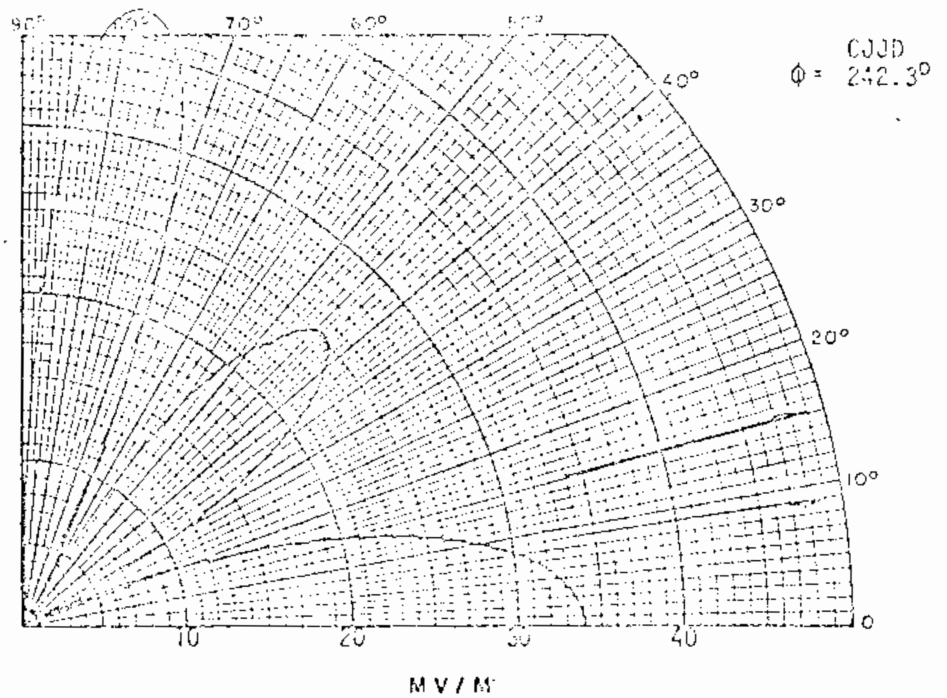
PROJ. 1401

CKCV - QUEBEC, QUE.
1280 kHz 50 kW AD-2 III

PIERRE LABARRE & ASSOCIES LTEE
LE 20 NOVEMBRE, 1979

CKCV





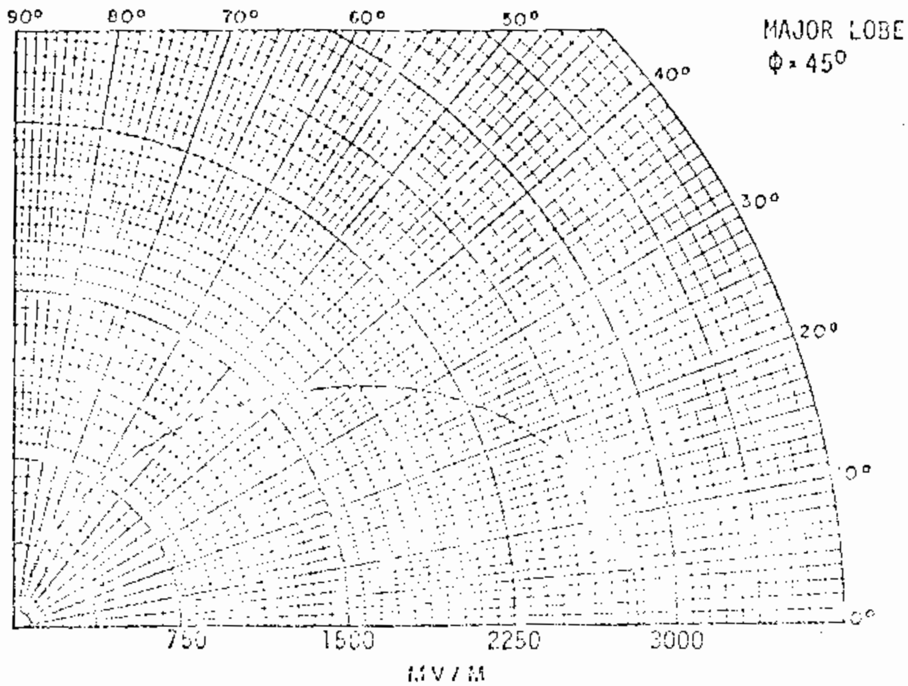
VERTICAL RADIATION PATTERNS

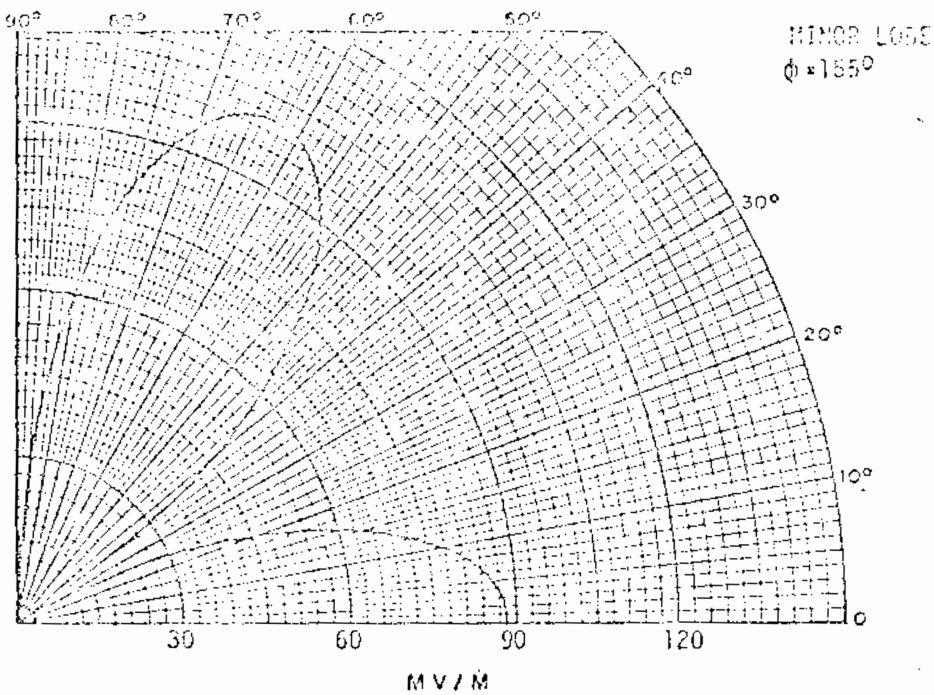
PROJ. 1401

CKCV - QUEBEC, QUE.
1280 kHz 50 kW AD-2 III

PIERRE LABARRE & ASSOCIES LIMITEE
LE 20 NOVEMBRE, 1979.

CKCV





VERTICAL RADIATION PATTERNS

PROJ. 1401

CKCV - QUEBEC, QUE.
1280 kHz 50 kW AD-2 III

PIERRE LABARRE & ASSOCIES LIMITEE
LE 20 NOVEMBRE, 1979

DESCRIPTION SHEET

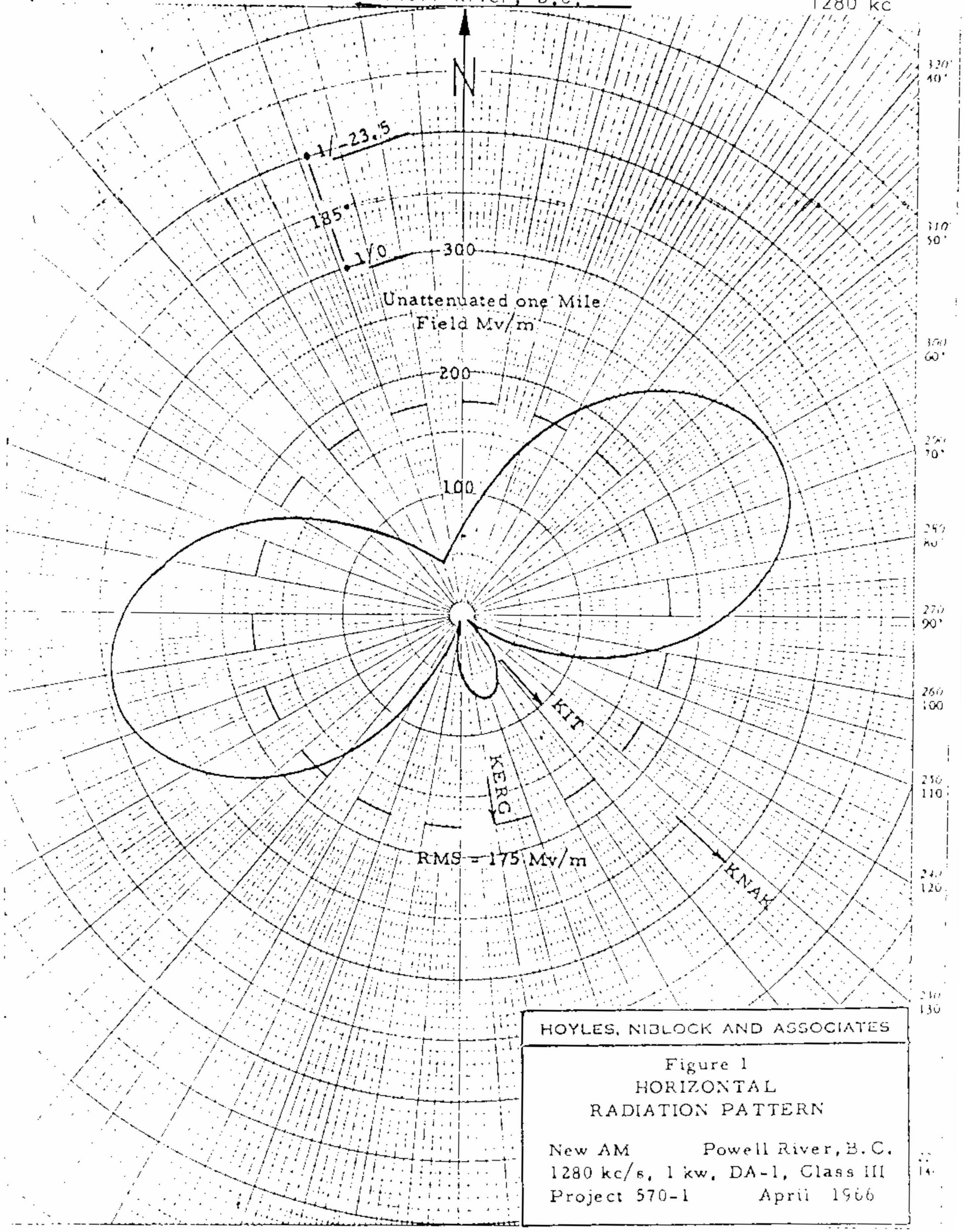
Directional Antenna System

Station:	Main Studio: Powell River, B.C.	
Frequency: 1280 kc/s	Power: 1 kw	
Time: Unlimited	Class: III	
Notification List No.: 211	Date: May 18, 1966	
Geographic Location -	49° 47' 51" North Latitude 124° 36' 15" West Longitude	
ANTENNA SYSTEM:	Mode of Operation - DA-1	
	Elements - Two uniform cross-section, guyed, steel towers, base insulated and series fed.	
TOWERS:	North (No. 2)	South (No. 1)
HEIGHT OVER INSULATORS:	128' (60°)	128' (60°)
OVERALL HEIGHT:	133'	133'
SPACING:	395'(185°)	
PHASING:	-23.5°	0°
CURRENT:	1.0	1.0
ORIENTATION:	341° True	Ref.
GROUND SYSTEM:	The ground system shall consist of 120, 0.4 λ copper radials about each tower buried as practical considering ground characteristics. The radials will be shorter where the ground system is joined by a common bord between the two towers.	
PREDICTED FIELD:	175 Mv/m for 1 kw	

Proposed Day & Night
(12-28-67ct)

New Station
Powell River, B.C.

1kw, DA-1, U, Class III
1280 kc



HOYLES, NIBLOCK AND ASSOCIATES

Figure 1
HORIZONTAL
RADIATION PATTERN

New AM Powell River, B.C.
1280 kc/s, 1 kw, DA-1, Class III
Project 570-1 April 1966

KBDF

DIRECTIONAL ANTENNA DESCRIPTION SHEET

Station: KBDF — Main Studio: Eugene, Oregon

Frequency: 1280 kHz — Power: 1 kW Night 5 kW Day

Notification List No. 1637 — Date: June 18, 1975 — Class: III

GEOGRAPHICAL LOCATION OF THE CENTER OF THE ANTENNA SYSTEM:
North Latitude: 44° 04' 47"
West Longitude: 123° 04' 12"

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(#3)	S(#1)	E(#2)
HEIGHT ABOVE INSULATORS:	190'	190'	190' (90°)
PHASING:	-115.5°	0°	+112.5°
FIELD RATIO:	0.538	1	0.538

SPACING AND ORIENTATION: From south reference tower #1; tower #2 is spaced 234.8' (110°) on a line bearing 87.4° true, and tower #3 is spaced 256' (120°) on a line bearing 272.4° true.

GROUND SYSTEM: 120-200' equally spaced copper radials plus a 40' square ground screen about each tower. Radials are shortened and bonded to transverse straps along intersections between towers.

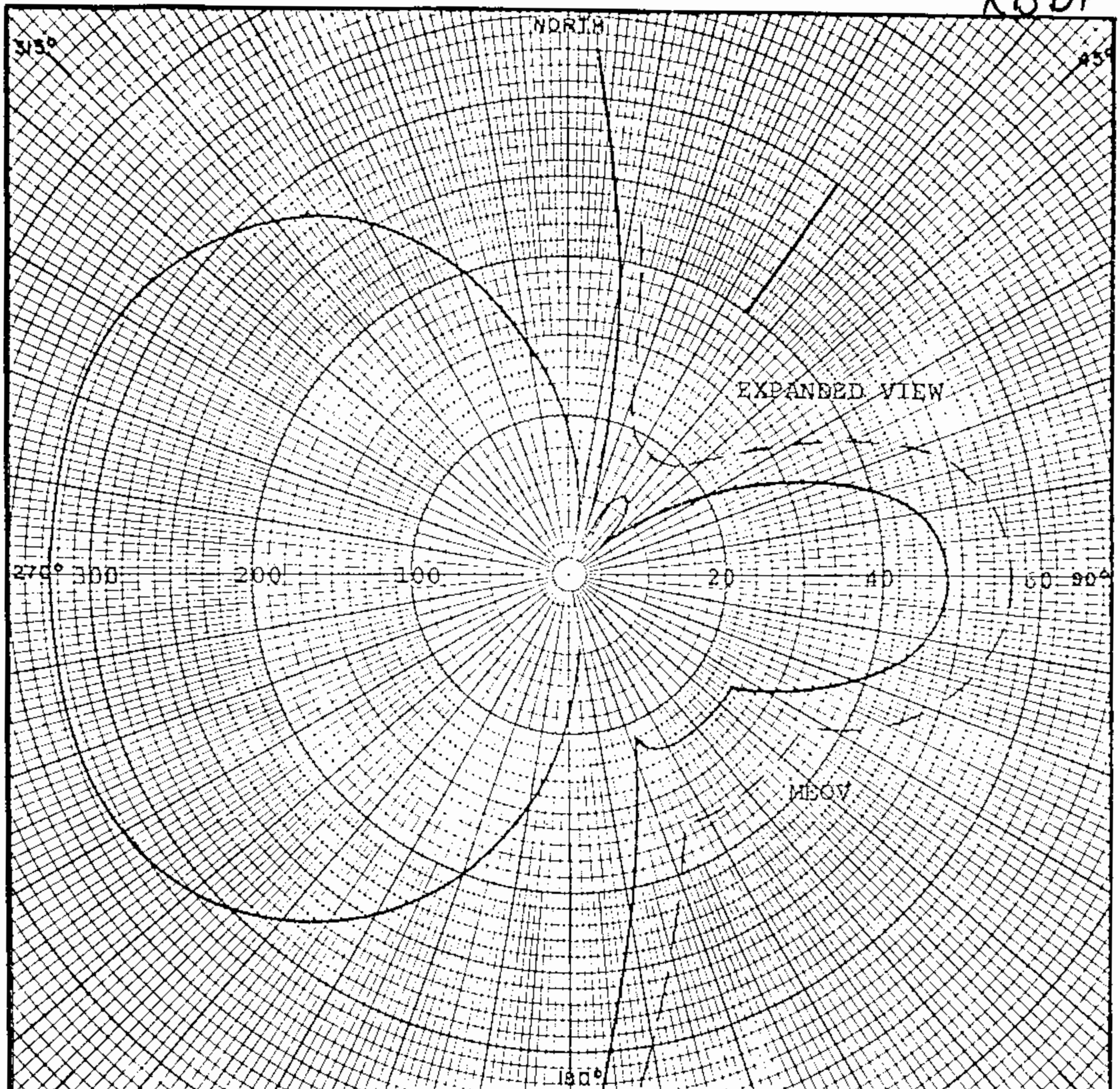
Predicted effective Night Field: 190 mv/m at rated power.

Predicted effective Day Field: (omnidirectional) 425 mv/m at rated power.

Note: This notification conerns changes in meovs of radiation in the Nighttime directional antenna radiation pattern and corrections to antenna height and daytime antenna radiation.

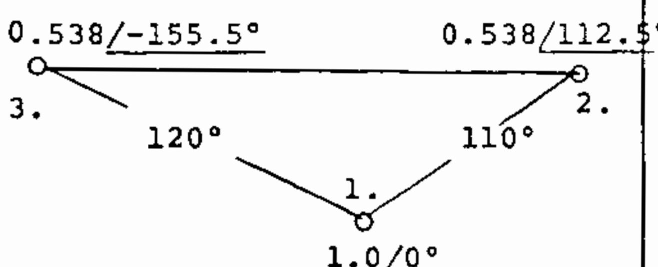
CTR NO 30938A4

KBDF



R.M.S. = 190 MV/M

PATTERN PARAMETERS



G = 90°.

DIRECTIONAL
RADIATION PATTERN
MATTCO, INC.

☐ MEASURED	☒ PROPOSED	
FREQ. 1280 (KHZ)	POWER 1.0 (KW)	☐ DA-D
N. LAT. 44° 04' 47"		☒ DA-N
W. LONG. 123 04' 12"		☐ N-D

LOCATION: Eugene, Oregon

DATE: November, 1974

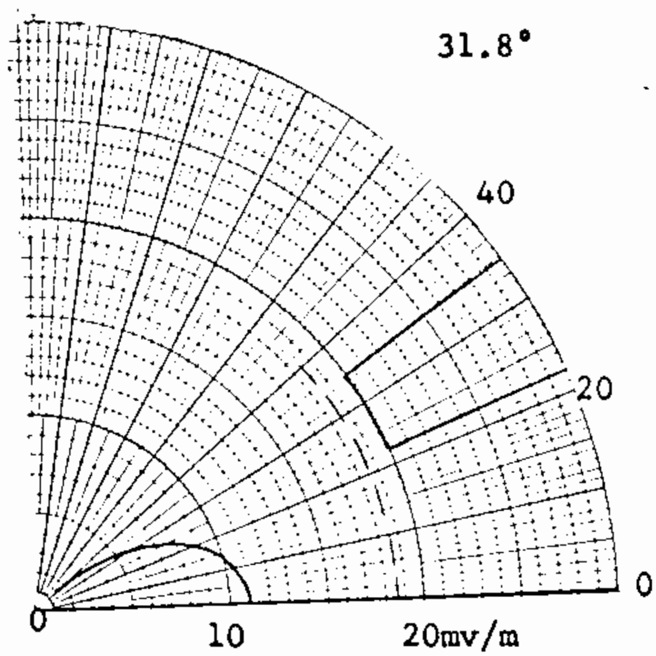
ROBERT A. JONES
CONSULTING ENGINEERS
LA GRANGE, ILLINOIS

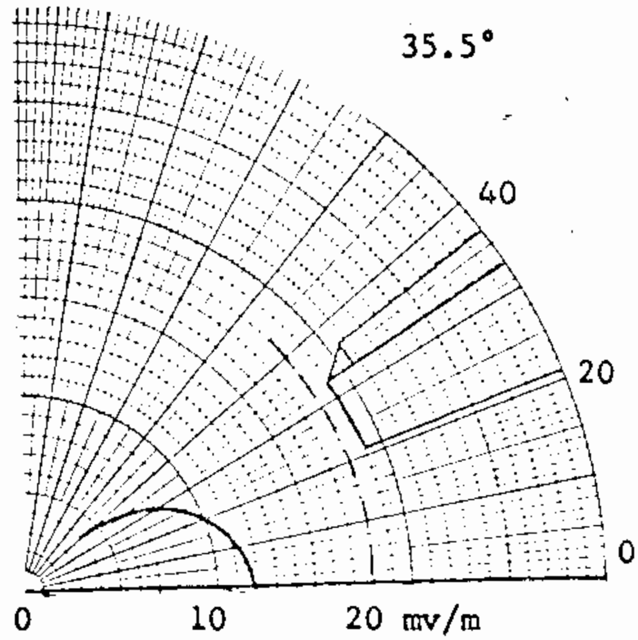
FIGURE 2

KBDF

ROBERT A. JONES
CONSULTING ENGINEERS
LA GRANGE, ILLINOIS

VERTICAL SECTIONS TOWARD K I T





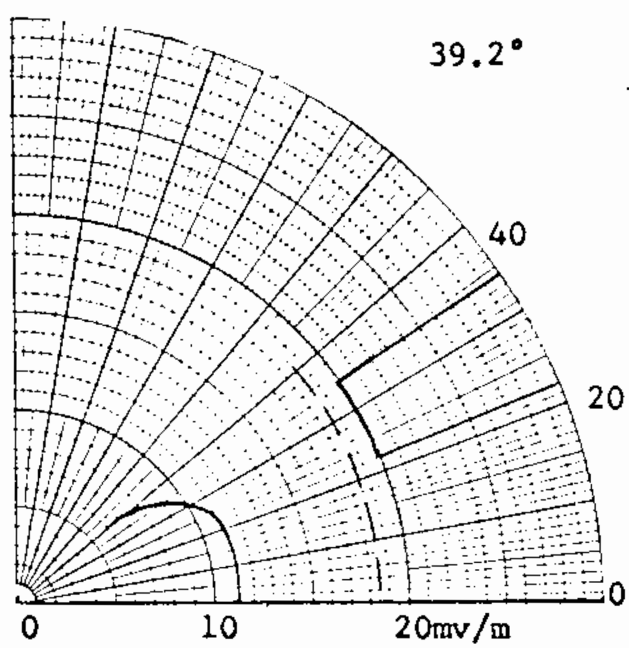
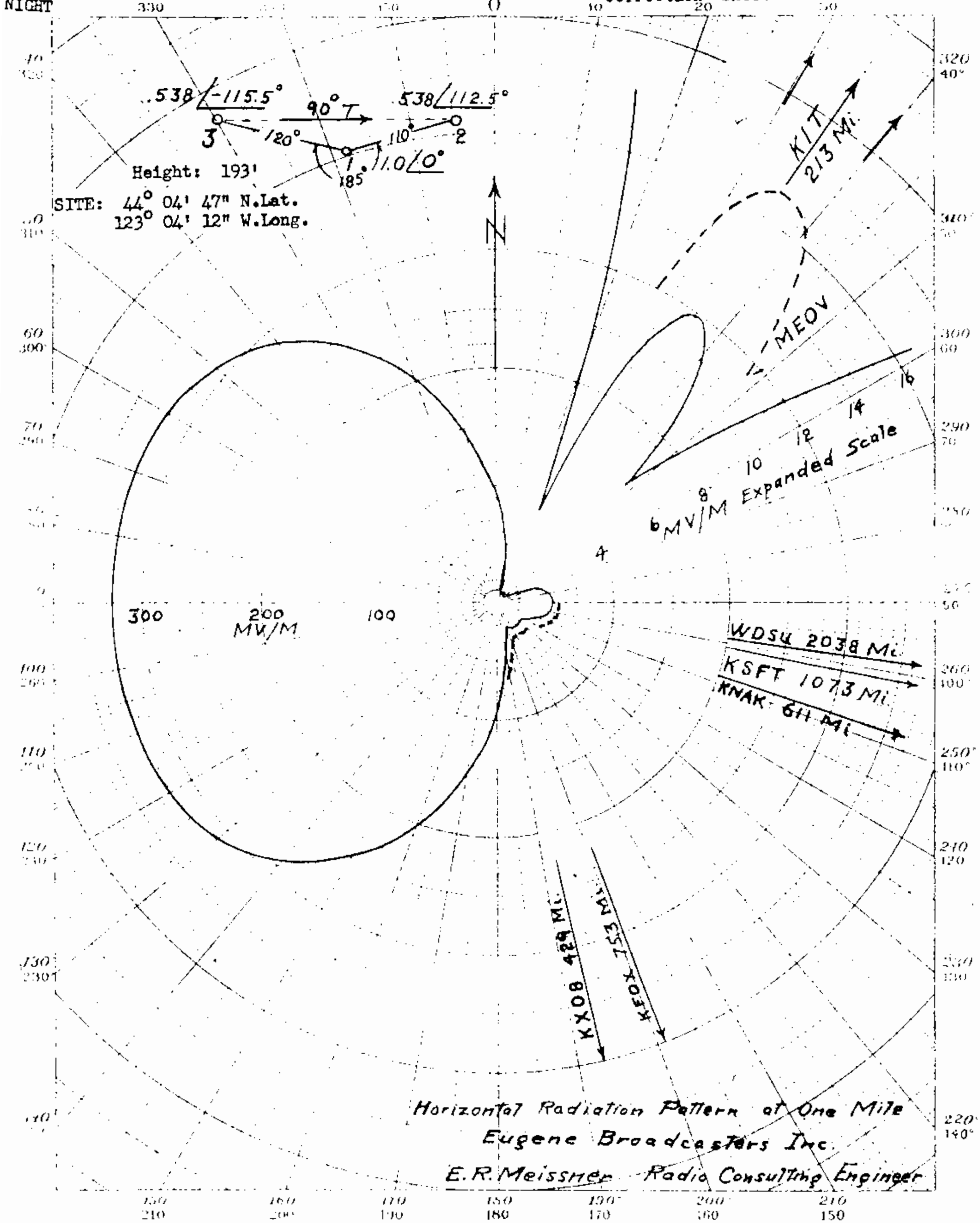


FIGURE 4

KBDF

PROPOSED NIGHT 76 NEW EUGENE ORE 11/5/48G 1kw, DAN *Engineering Exhibit* Correction Sheet H-11a 1280 kc

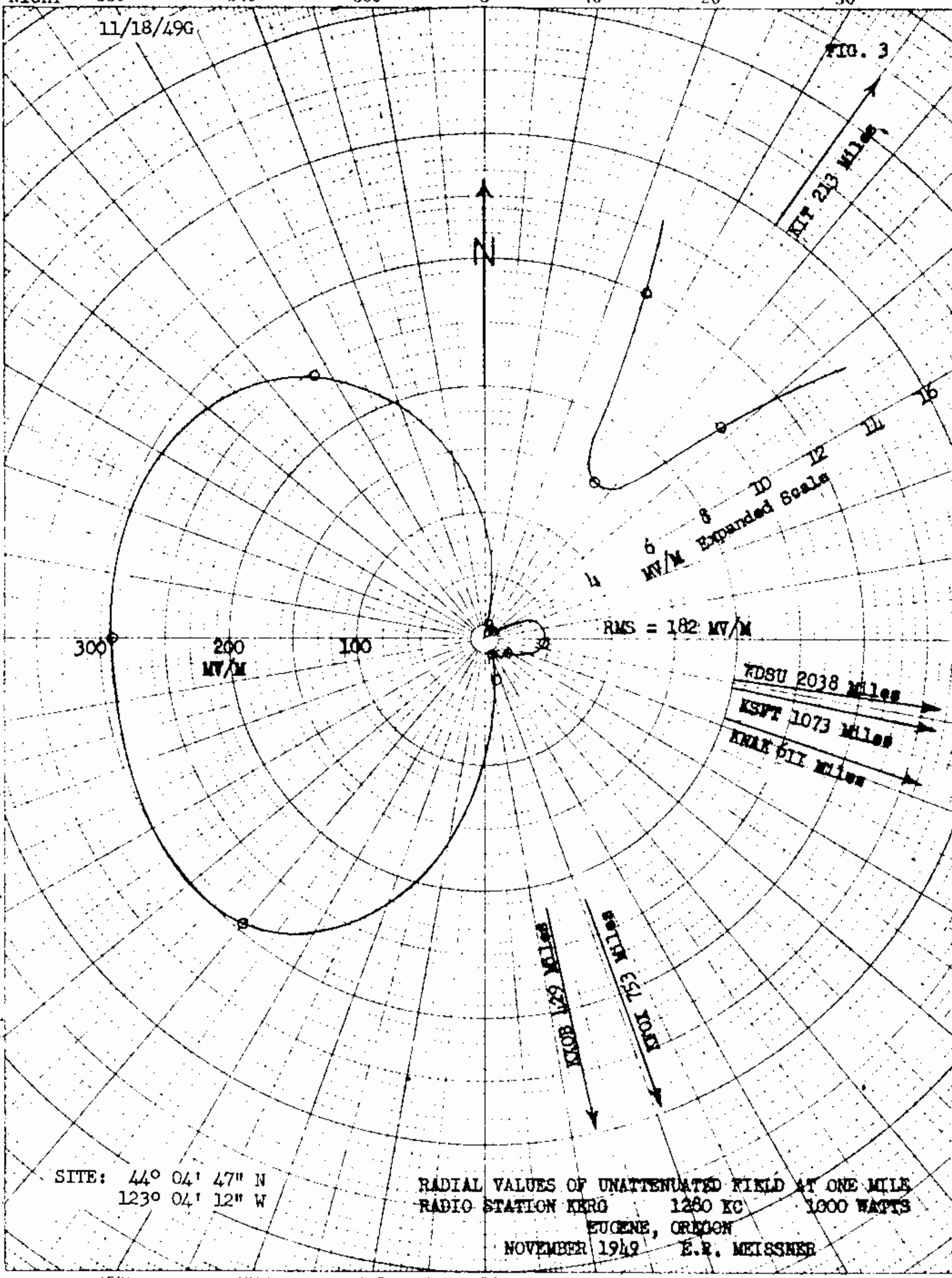


Amendment Recd 10-27-48 BP-4259

Eugene, Ore. 1280 kc

KBDF

MEASURED KERG, EUGENE, OREGON 11-15-49 1kw, DAN 1280 kc
NIGHT



KERG, Eugene, Ore. 1280 kc

KBDF

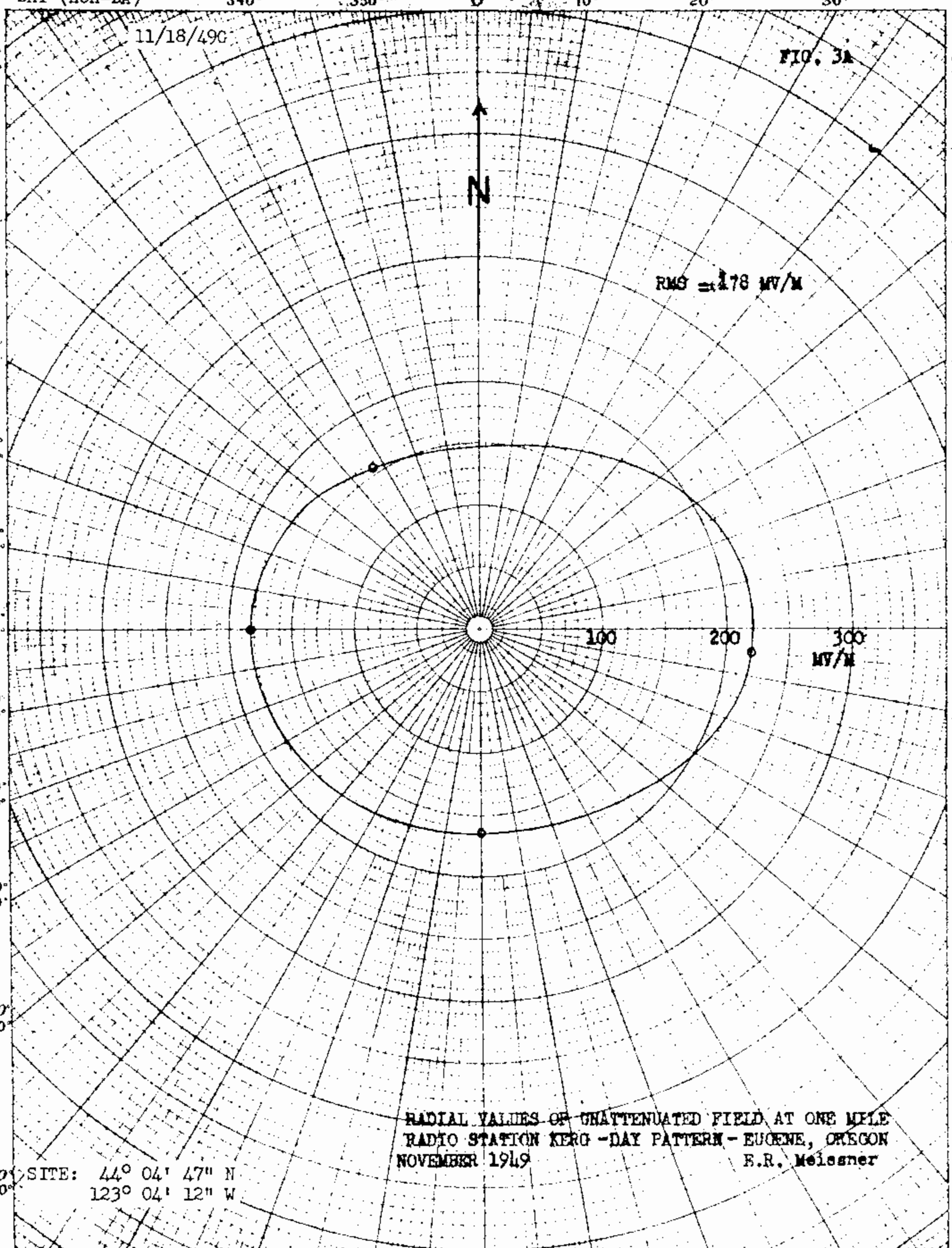
MEASURED
DAY (non-DA)

KERG, EUGENE, OREGON

11-15-49

1kw, DAN

1280 kc



KERG, Eugene, Ore. 1280 kc

KFKN
1280 kHz

DIRECTIONAL ANTENNA DESCRIPTION SHEET

Station: KFRN	Main Studio: Long Beach, California
Frequency: 1280 kHz	Power: 1kw Night 1kw Day
Notirication List No. 1788	Date: August 22, 1980 Class: III
GEOGRAPHICAL LOCATION OF THE CENTER OF THE ANTENNA SYSTEM:	North Latitude: 33° 47' 54" West Longitude: 118° 14' 47"

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:	W(#1)	E(#2)
HEIGHT ABOVE INSULATORS:	294' (137.7°)	192' (89.9°)
DAY PHASING:	0°	-77.1°
DAY FIELD RATIO:	1.0	0.4

SPACING AND ORIENTATION: Towers in a row are spaced 341' (159.7°) on a line bearing 65° true.

GROUND SYSTEM: 120 - 200' equally spaced copper radials plus 120-100' interspaced radials about each tower. Radials are shortened and bonded to a transverse strap along the intersection between towers.

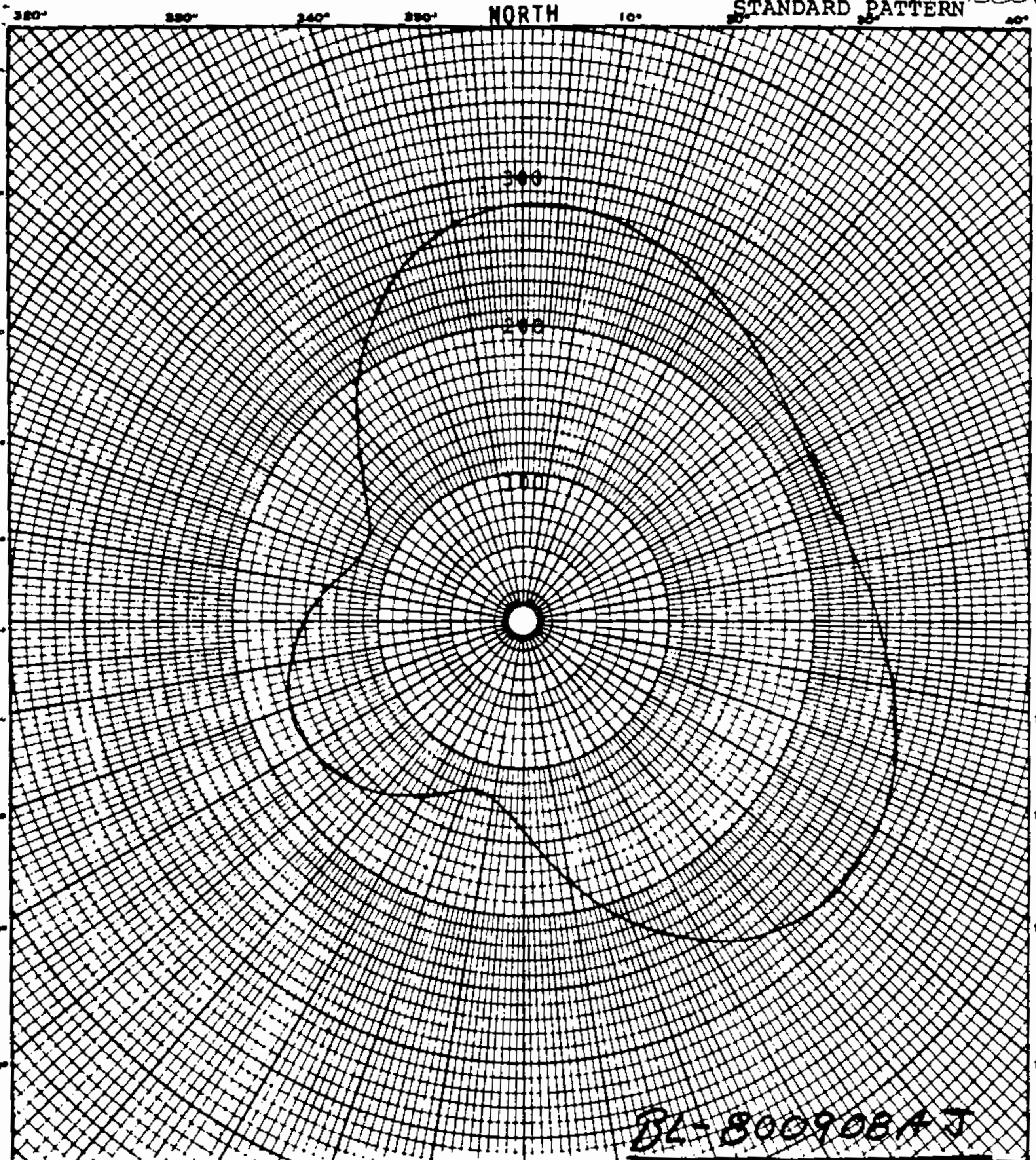
PREDICTED EFFECTIVE FIELDS AT RATED POWER:

	Theoretical RMS	Theoretical RSS	Standard RMS
Day 1/	204.29 mv/m		214.6 mv/m
Night	175 mv/m		

Note: This notification ocncerns only a change in the Daytime operation of the station with Nighttime operation continued as previously notified.

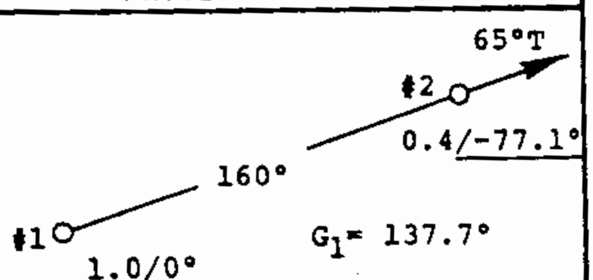
KFRN
1280KHz

STANDARD PATTERN



R.M.S. (THEO) 204.29 MV/M R.M.S. (STND) 214.5 MV/M R.S.S. 246.5 MV/M

PATTERN PARAMETERS



G_1 = 137.7°

G_2 = 90.2°

RADIO STATION KFRN

☐ MEASURED ☒ PROPOSED

FREQ: 1280 (KHZ) POWER 1.0 (KW) ☒ DA-D

N. LAT. 33° 47' 54" ☐ DA-N

W. LONG. 118° 14' 47" ☐ N-D

LOCATION: Long Beach, California

DATE: July 1979

ROBERT A. JONES
CONSULTING ENGINEERS
LA GRANGE, ILLINOIS

KFYV

Measured Day
(5-27-66ct)

Station KOAG
Arroyo Grande, California

1kw,DA-2,U
1280 kc

1C 6-17-66
BP-17462
2-1-67
appl. accepted
for CP to
increase power
to D+N

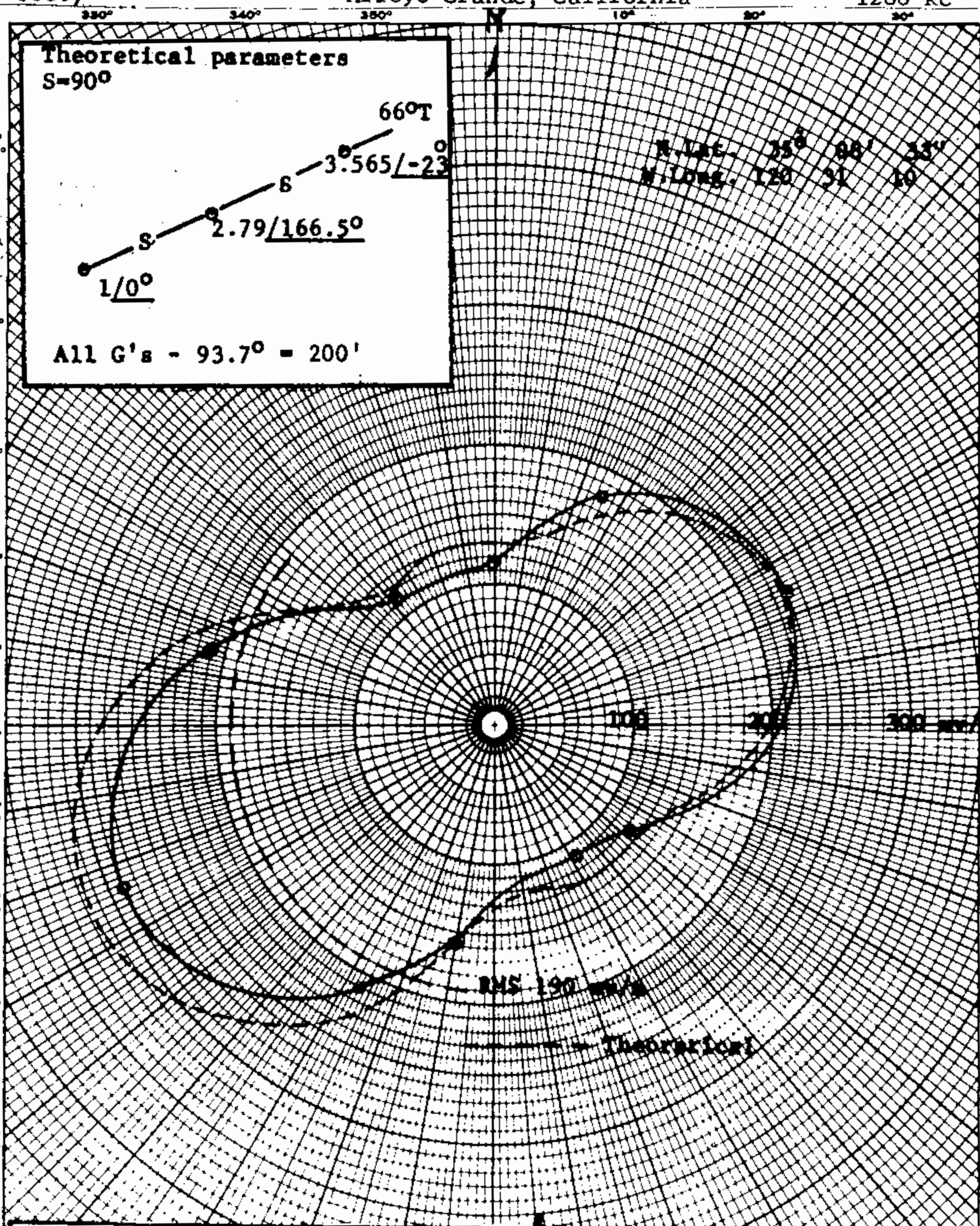


Fig. 1

MEASURED DAYTIME HORIZONTAL RADIATION
KOAG 1.0 KW 1280 KC
ARROYO GRANDE, CALIFORNIA

A.E.Towne Associates Inc.,Engineering Consultants,SanFrancisco,Calif.

FCC File No. BL-11251
Accepted 2-27-66

Station KOAG
Arroyo Grande, California

1280 kc

KFYV

Measured Night (5-27-66ct) | Station KOAG Arroyo Grande, California | 1kw, DA-2, U 1280 kc

LIC 6-17-66
BP-17462 2-1-67
appl. accepted to change C.P. to DA-2 to DA-N
BL-11747 1-6-67
GRANTED LICENSED From DA-2 To DA-N

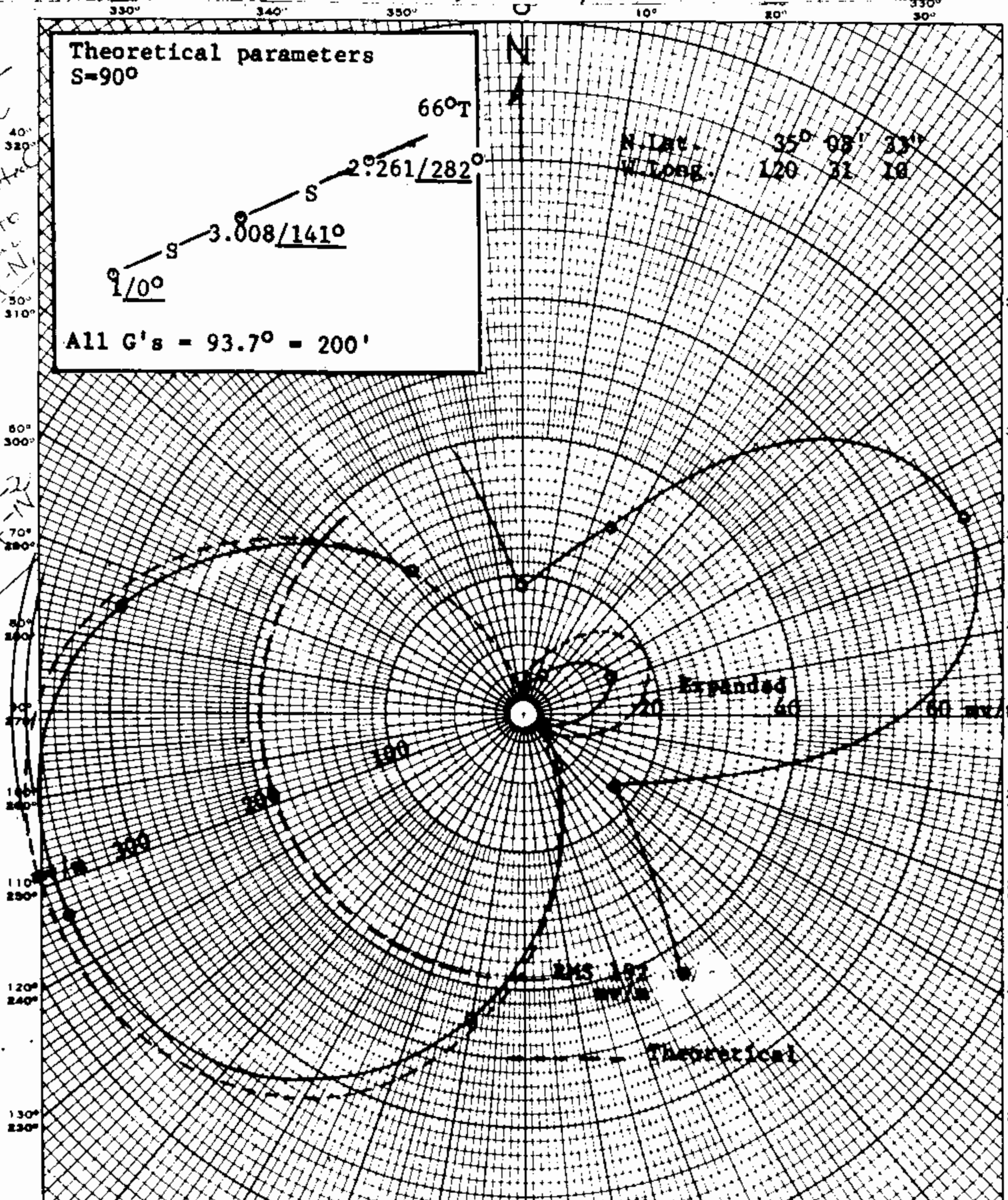


Fig. 2

MEASURED NIGHTTIME HORIZONTAL RADIATION
KOAG 1.0 KW 1280 KC
ARROYO GRANDE, CALIFORNIA

A.E.Towne Associates Inc., Engineering Consultants, SanFrancisco, Calif.

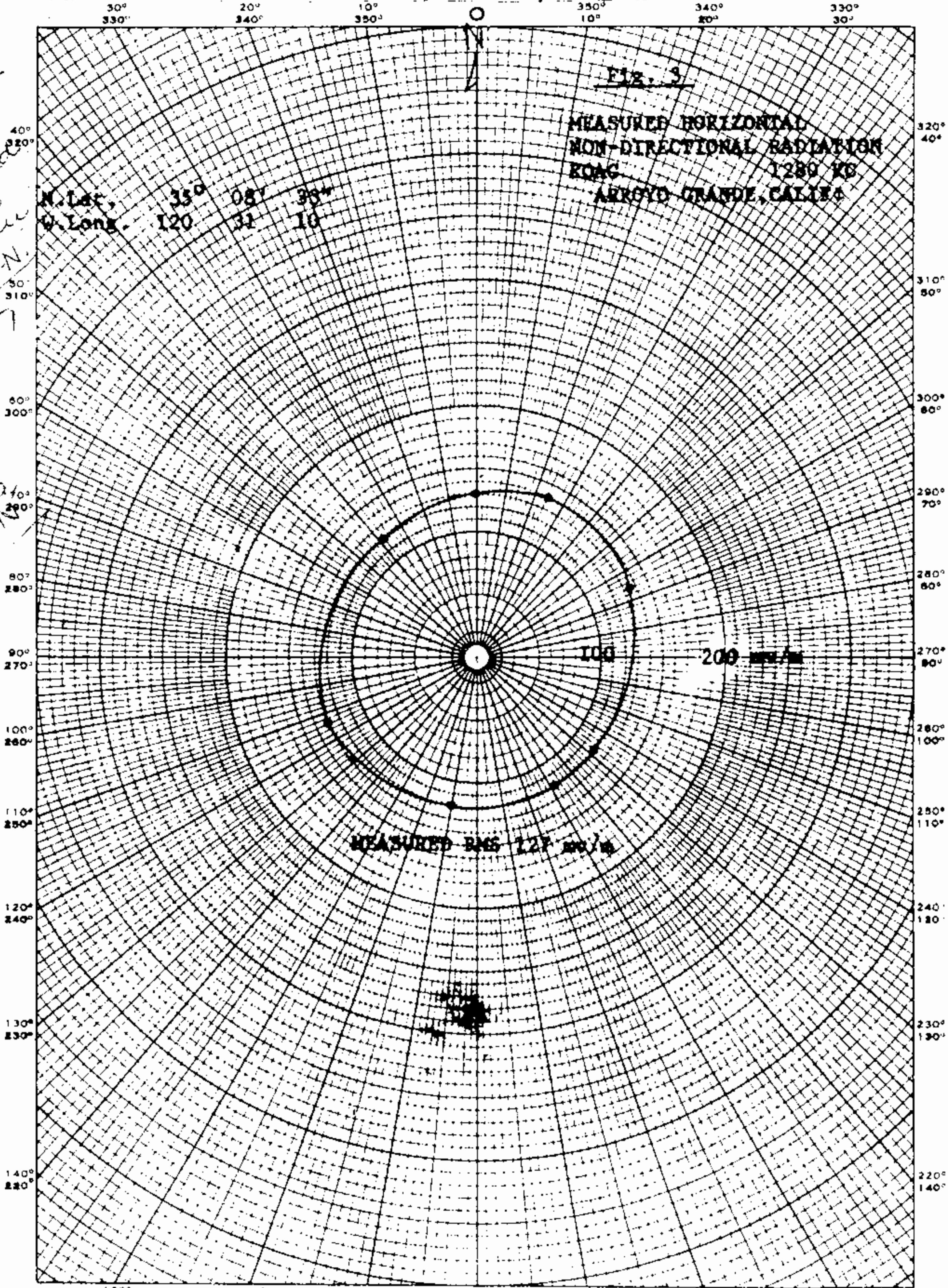
FCC File No. BL-11251 | Station KOAG
Accepted 4-27-66 | Arroyo Grande, California | 1280 kc

KFYV

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

Station KOAG
Arroyo Grande, California

1280 kc



BL-11747

FCC File No. BL-11251
Accepted 4-27-66

Station KOAG
Arroyo Grande, California

1280 kc

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

Station WREY
New Albany, Indiana

1290 kc

A. D. RING & ASSOCIATES · 10/60 · M

Proposed Day
(9-29-64ct)

CI1747
11-6-67
GRANTED
LICENSE
FROM DA-2
TO DA-N

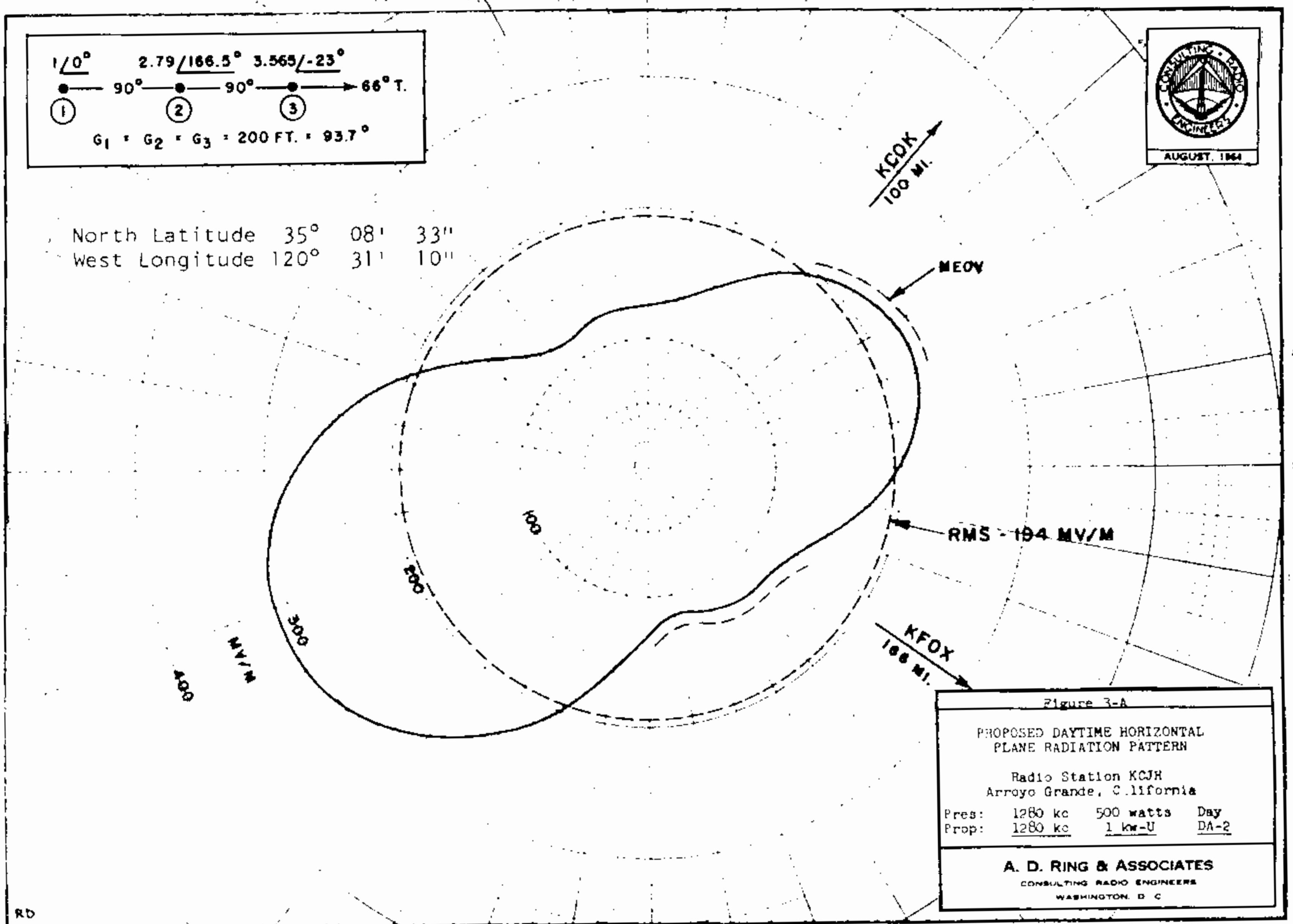
Station KCJH
Arroyo Grande, California

1kw,DA-2,U
1280 kc

P 7-9-65
1 kw,DA-2,U
CHG. LOC.

KCJH - 1280 KC - DAY

KFYV



FCC File No.BP-16337
Accepted

Station KCJH
Arroyo Grande, California

1280 kc

KCJH - 1280 KC

KFYV

CP 7-9-65
1KW, DA-2, U
CHG. LOC.

Appl. acceptance for CP to change from DA-2 to DA-N

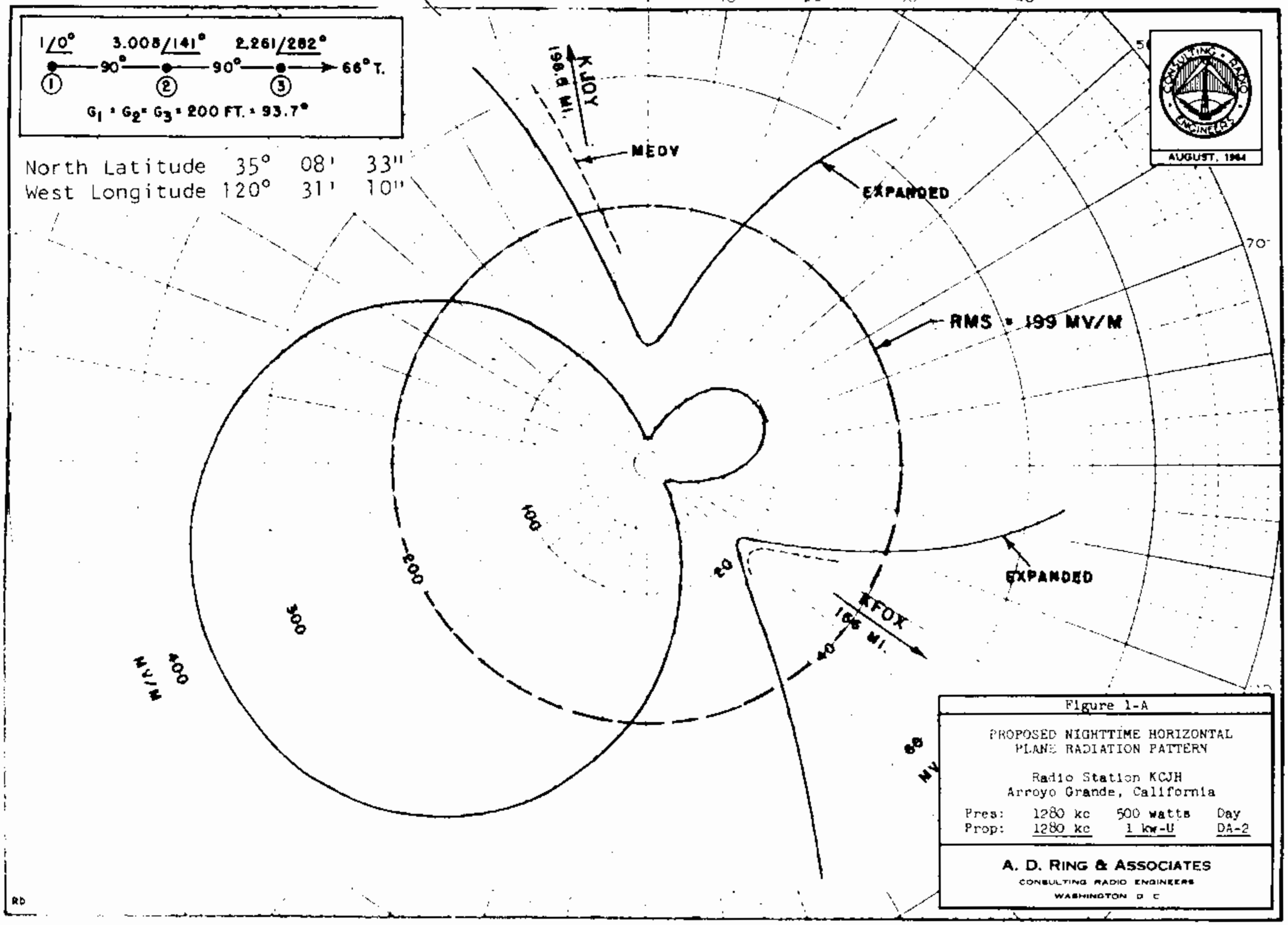
BL-11747
11-6-67
GRANTED
LICENSE
FROM DA-2
TO DA-N

A. D. RING

Proposed Night
(9-29-64ct)

Station KCJH
Arroyo Grande, California

1kw, DA-2, U
1280 kc



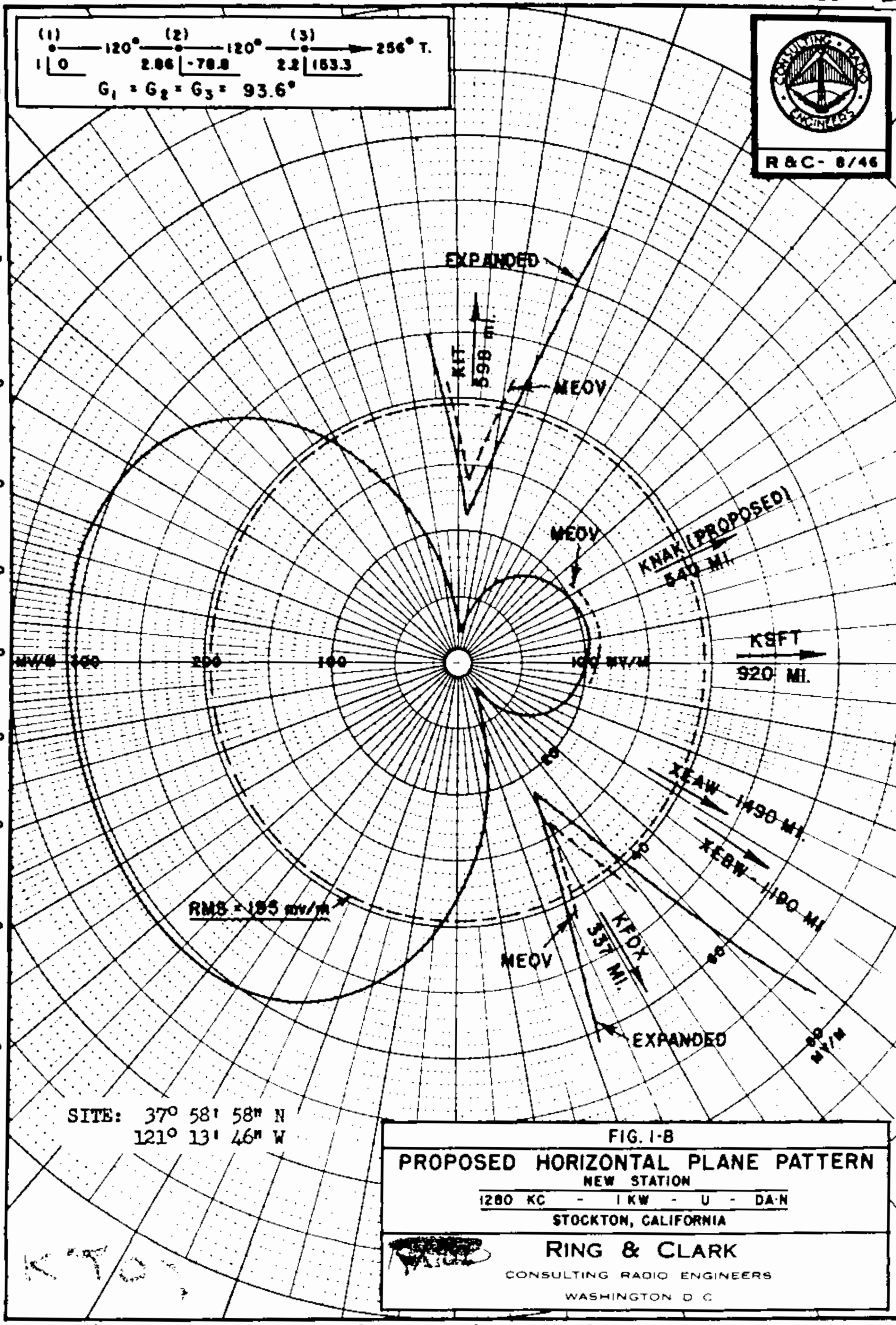
FCC File No. BP-16337
Accepted

Station KCJH
Arroyo Grande, California

1280 kc

KJOY

PROPOSED NIGHT — Station KJOY — 1kw, DA-N,U
Stockton, California — 1280 KC



SITE: 37° 58' 58" N
121° 13' 46" W

FIG. 1-8
PROPOSED HORIZONTAL PLANE PATTERN
NEW STATION
1280 KC - 1 KW - U - DA-N
STOCKTON, CALIFORNIA

RING & CLARK
CONSULTING RADIO ENGINEERS
WASHINGTON D. C.

KXOB, Stockton, Cal. 1280

KJOY

WAC 364

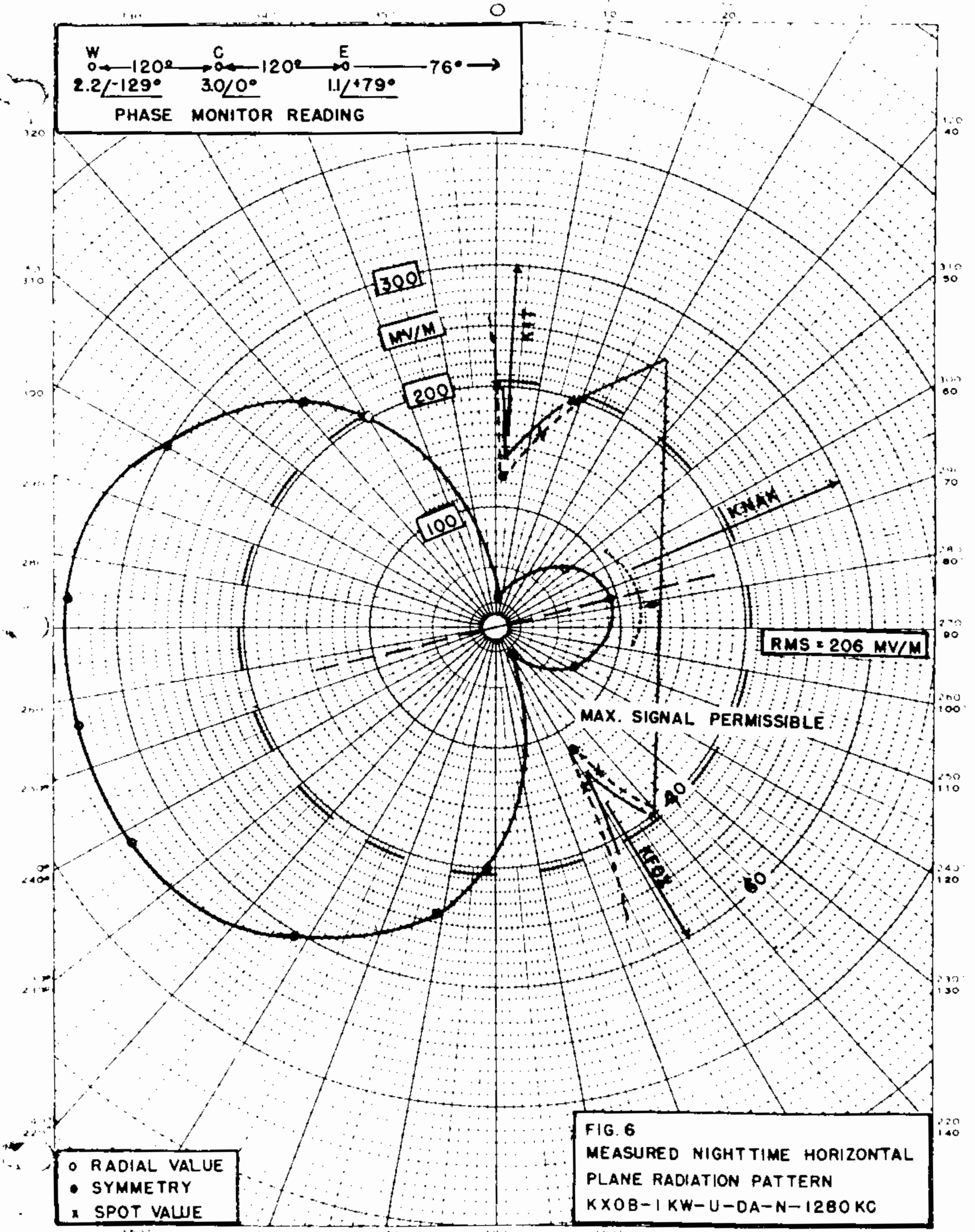
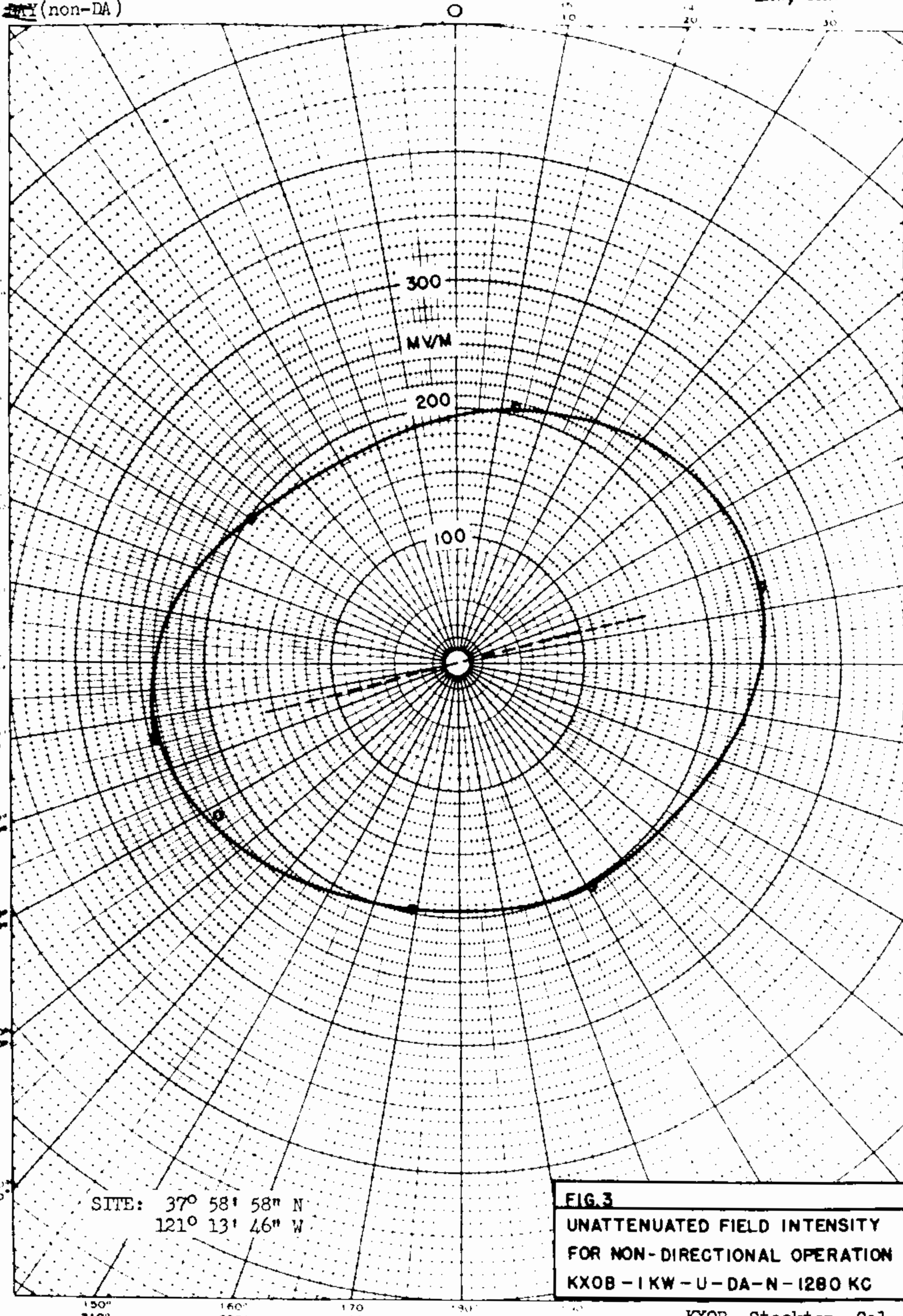


FIG. 6
MEASURED NIGHTTIME HORIZONTAL
PLANE RADIATION PATTERN
KXOB-1KW-U-DA-N-1280KC

KJOY

MEASURED KXOB, STOCKTON, CAL. 1kw, DAN 1280 kc

~~DAY~~ (non-DA)



SITE: 37° 58' 58" N
121° 13' 46" W

FIG. 3

UNATTENUATED FIELD INTENSITY
FOR NON-DIRECTIONAL OPERATION
KXOB - 1 KW - U - DA - N - 1280 KC

KXOB, Stockton, Cal. 1280

KKAL

DIRECTIONAL ANTENNA DESCRIPTION SHEET

Station : KKAL Main Studio: Arroyo Grande, California

Frequency : 1280 KHz Power : 2.5 kW Night 5 kW Day

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

GEOGRAPHICAL LOCATION OF THE CENTER OF THE ANTENNA SYSTEM: North Latitude: 35° 08' 33"
West Longitude: 120° 31' 10"

ANTENNA CHARACTERISTICS

Authorized for Daytime and Nighttime operation.(DA-2)
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 :	200'	200'	200'(93.)			
NIGHT PHASING :	-138.4°	0°	142°			
NIGHT FIELD RATIO:	0.49	1.0	0.5			
DAY PHASING :	-100°	0°	100°			
DAY FIELD RATIO :	0.4	1.0	0.4			

SPACING AND ORIENTATION: The towers in a row are spaced 192.7' (90°) on a line bearing 66° true.

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

PREDICTED EFFECTIVE FIELDS AT RATED POWER:

	THEORETICAL RMS		THEORETICAL RSS		STANDARD RMS	
Day	442.84	mV/m	449.65	mV/m	465.2	mV/m
Night	327.72	mV/m	464.09	mV/m	344.32	mV/m

Note:

KKAL

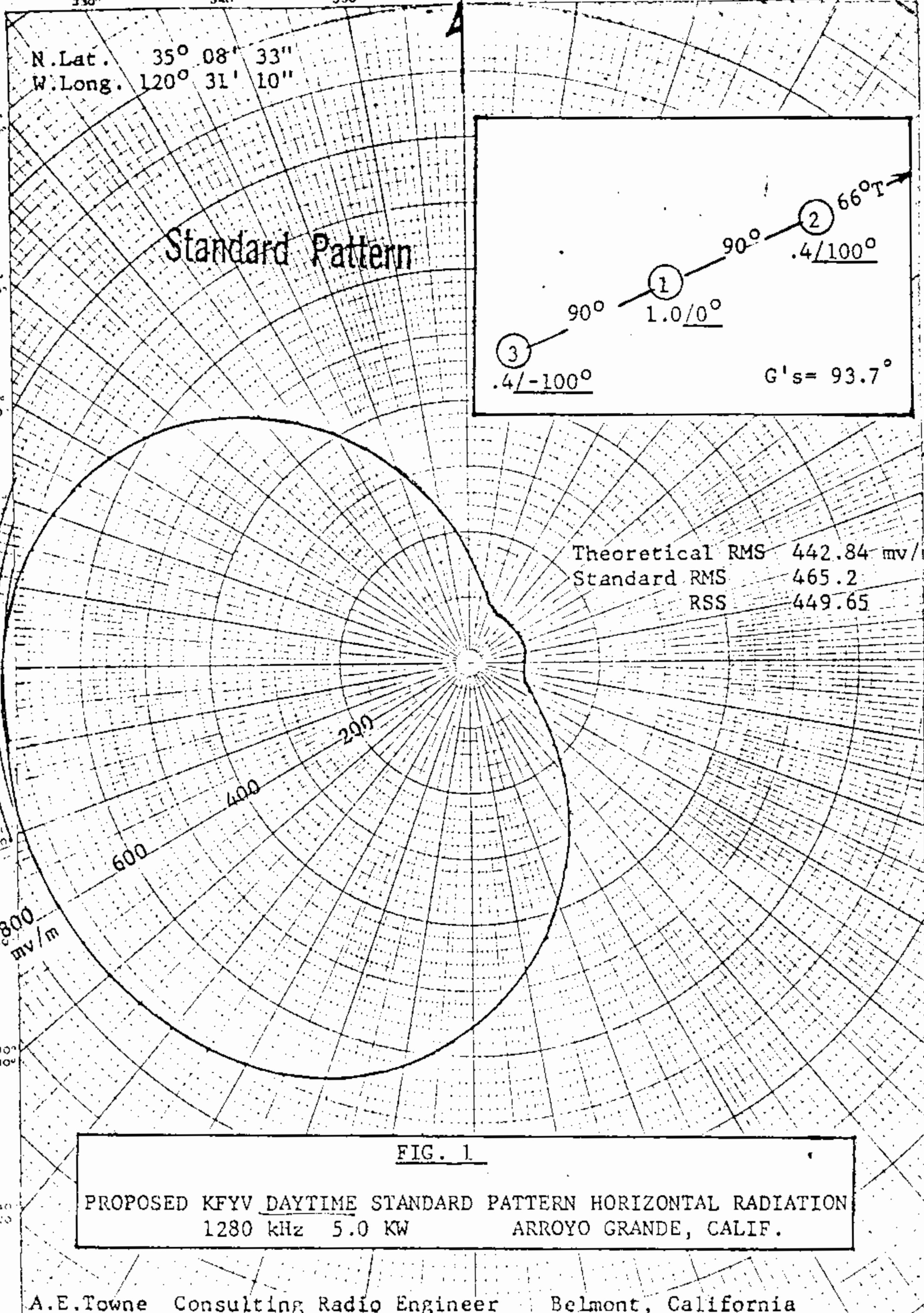
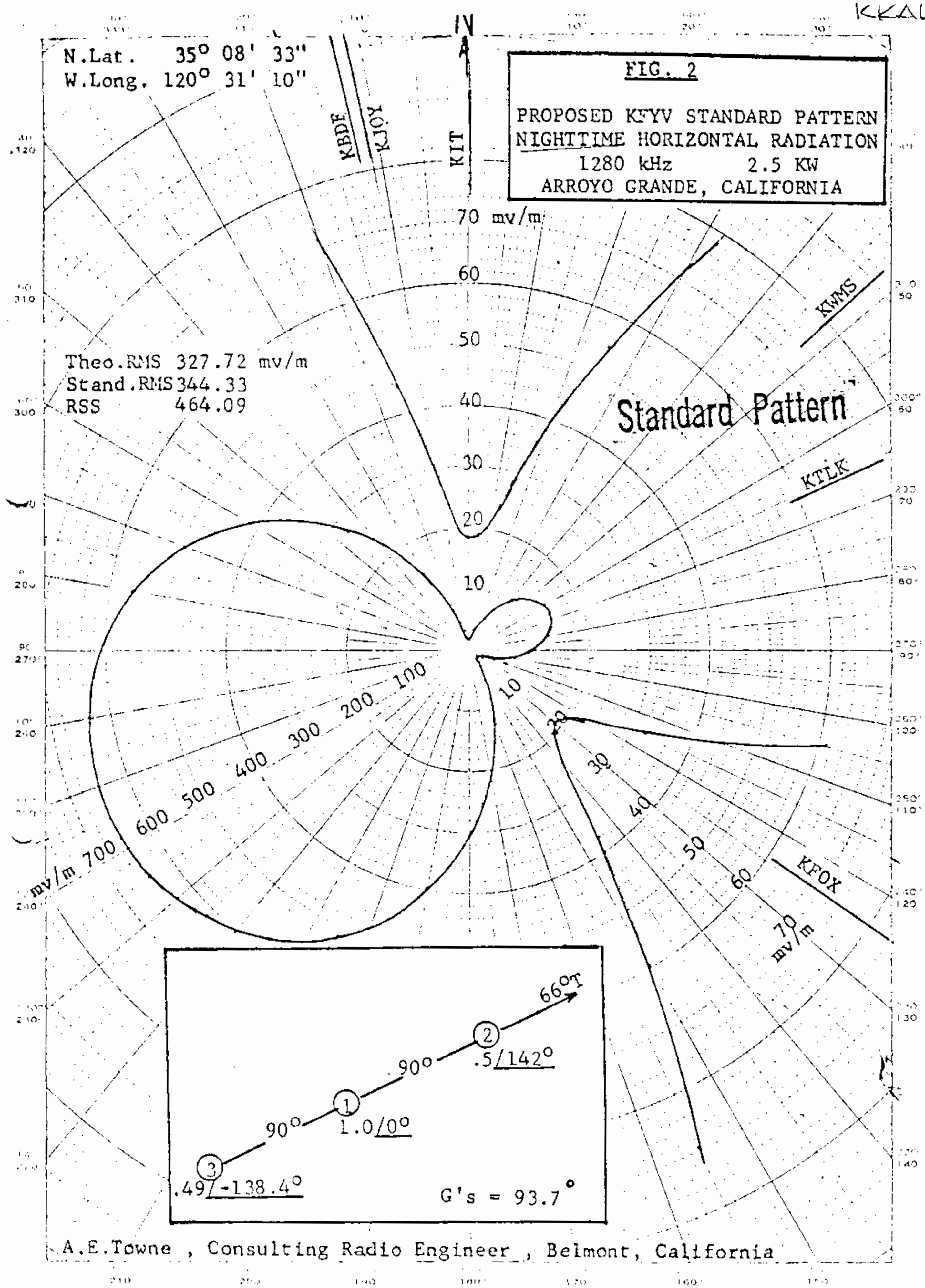


FIG. 1

PROPOSED KFYV DAYTIME STANDARD PATTERN HORIZONTAL RADIATION
1280 kHz 5.0 KW ARROYO GRANDE, CALIF.

A.E.Towne Consulting Radio Engineer Belmont, California

KKAL


N.Lat. 35° 08' 33"
W.Long. 120° 31' 10"
KBDE
KJOY
KIT
N
FIG. 2
PROPOSED KFYV STANDARD PATTERN
NIGHTTIME HORIZONTAL RADIATION
1280 kHz 2.5 KW
ARROYO GRANDE, CALIFORNIA
70 mv/m
60
50
40
30
20
10
KWMS
Standard Pattern
KTLK
Theo.RMS 327.72 mv/m
Stand.RMS 344.33
RSS 464.09
100
200
300
400
500
600
mv/m 700
10
20
30
40
50
60
70 mv/m
KFOX
66°T
2
.5/142°
90°
1
1.0/0°
90°
3
.49/-138.4°
G's = 93.7°
A.E.Towne, Consulting Radio Engineer, Belmont, California

KMAS

DIRECTIONAL ANTENNA DESCRIPTION SHEET

Station : KMAS

Main Studio : Shelton, Washington

Frequency : 1280 kHz

Power: 2.5 kW Day

Notification List No. 1776

Date: June 28, 1978

Class: III

GEORGRAPHICAL LOCATION OF THE CENTER OF THE ANTENNA SYSTEM:

North Latitude: 47° 13' 17"
West Longitude: 123° 04' 46"

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:	W(#1)	E(#2)
HEIGHT ABOVE INSULATORS:	200'	200' (93.70)
PHASING:	0°	$+6^{\circ}$
FIELD RATIO:	1	1

SPACING AND ORIENTATION: Adjacent towers are spaced 281.53' (131.9°) on a line bearing 280° true.

GROUND SYSTEM: 120-165' to 220' 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:

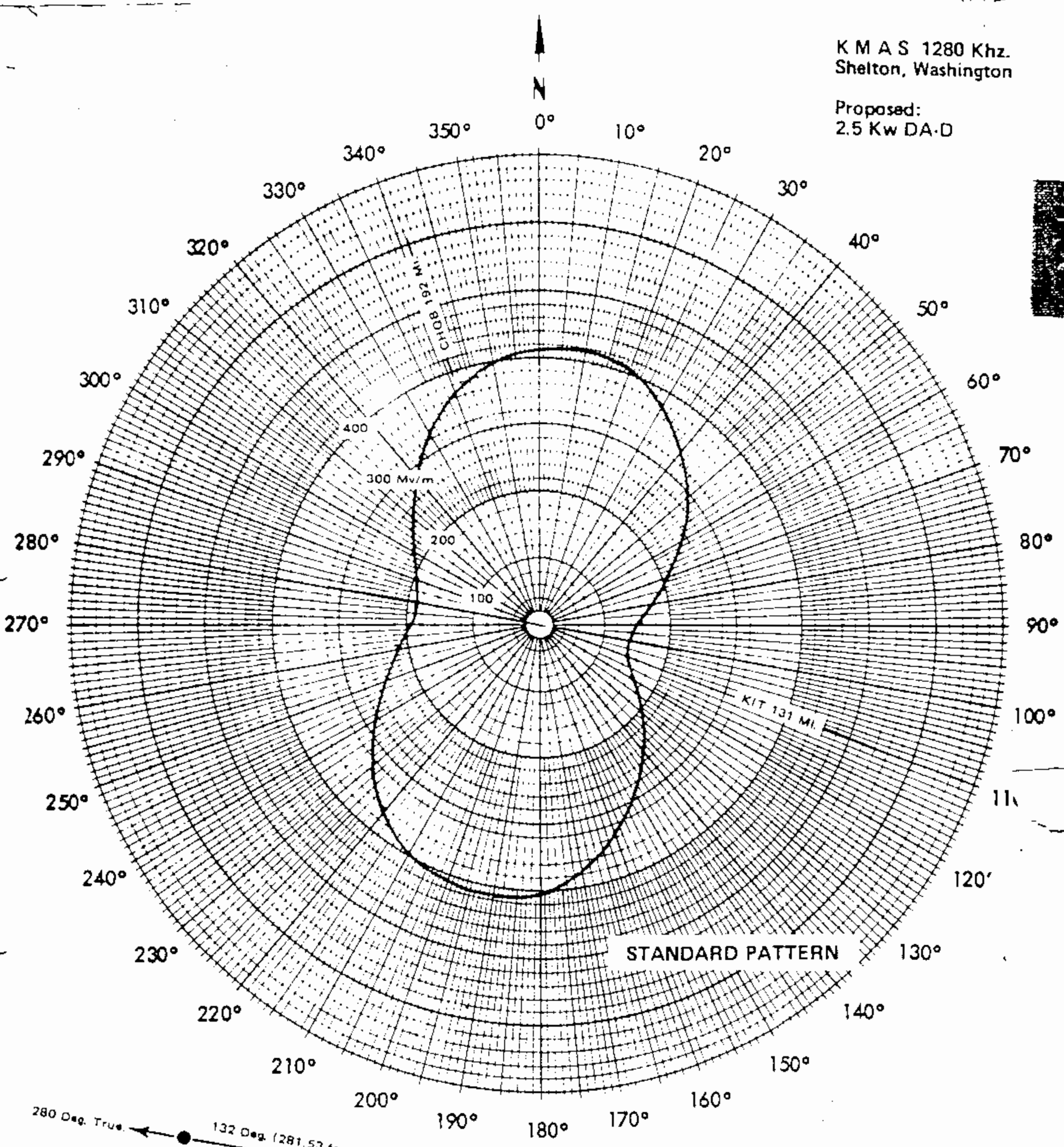
	THEORETICAL		STANDARD
	RMS	RSS	RMS
DAY	288.8 mV/m	281.5 mV/m	303.4 mV/m

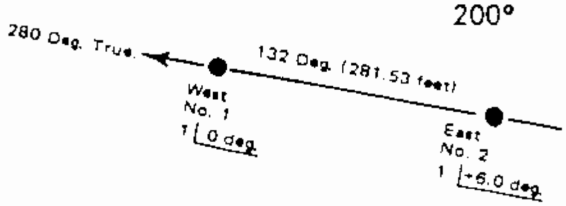
This notification concerns an increase in daytime power and a change from non directional to directional operation daytime.

KMAS

K M A S 1280 Khz.
Shelton, Washington

Proposed:
2.5 Kw DA-D





PROPOSED STANDARD PATTERN FOR

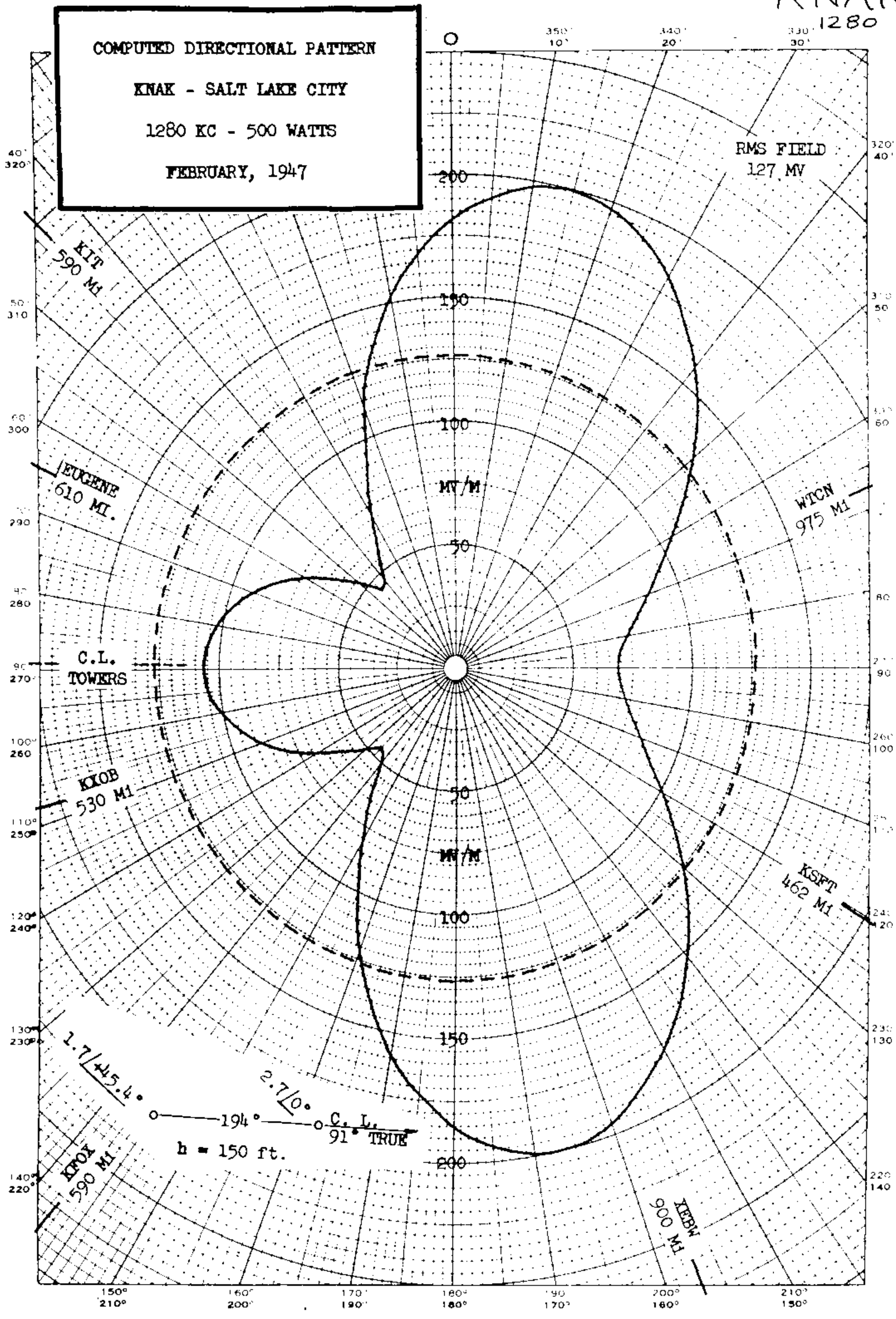
Tower Heights	=G 200 feet (93.77 Deg.)
No. 1 tower field in array	= 199.07 Mv/m
RSS VALUE	= 281.5 Mv/m
RMS (Theo.)	=288.8 Mv/m
RMS (Std. Pattern)	=303.4 Mv/m

CONSULTING ENGINEER ■ KENNETH WILLIAMS, Jr. PE
ELECTRICAL • AM/FM BROADCAST • TELEVISION
321 SOUTH 11Th. St. • TACOMA, WASHINGTON 98402

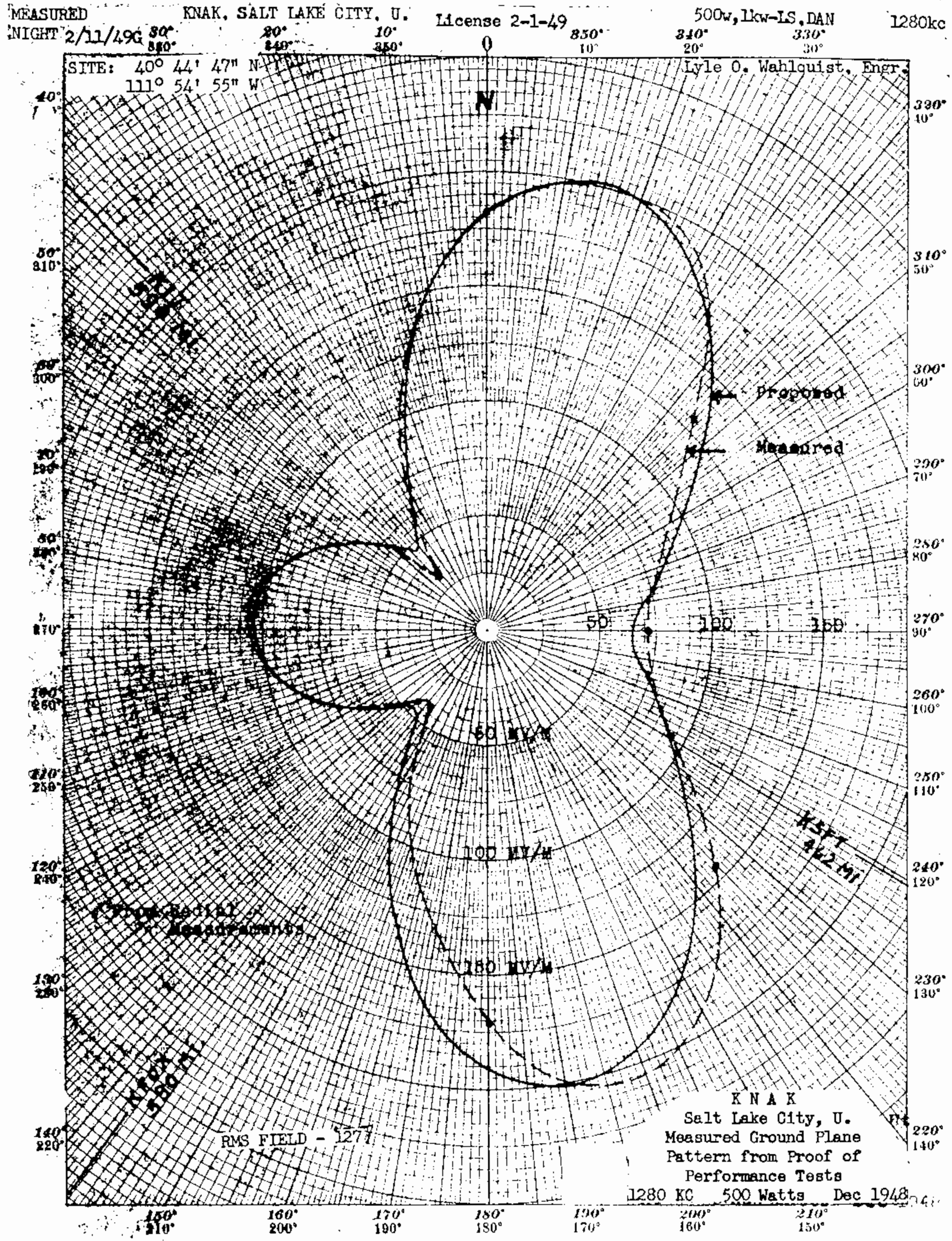
EXHIBIT No. 7

APPLICATION FOR CONSTRUCTION PERMIT TO INCREASE POWER
Station K M A S 1280 Khz. • Shelton, Washington

KNAK
1280


COMPUTED DIRECTIONAL PATTERN
KNAK - SALT LAKE CITY
1280 KC - 500 WATTS
FEBRUARY, 1947
RMS FIELD
127 MV
MV/M
MV/M
KIT
590 Mi
EUGENE
610 MI.
C.L.
TOWERS
KXOB
530 Mi
WTCN
975 Mi
KSFT
462 Mi
KFOX
590 Mi
KEBW
900 Mi
1.7/45.4°
2.7/0°
194°
C. L.
91° TRUE
h = 150 ft.
200
150
100
50
50
100
150
200

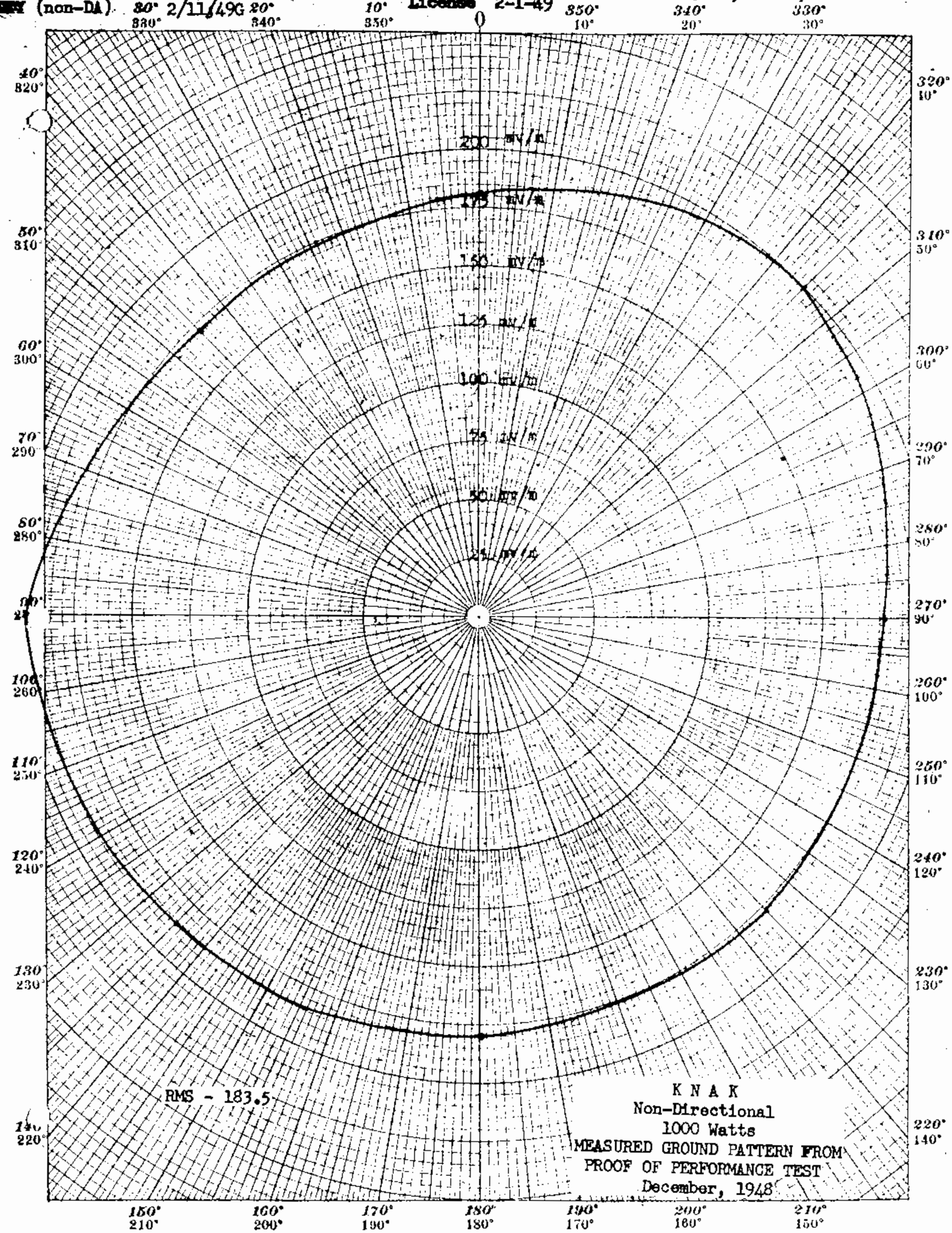
KNAK


MEASURED
NIGHT 2/11/49G
KNAK, SALT LAKE CITY, U.
License 2-1-49
500w, 1kw-LS, DAN
1280kc
SITE: 40° 44' 47" N
111° 54' 55" W
Lyle O. Wahlquist, Engr.
N
Proposed
Measured
50
100
150
50 MV/M
100 MV/M
150 MV/M
KSFT
442 MI
From Radial Measurements
RMS FIELD - 1277
K N A K
Salt Lake City, U.
Measured Ground Plane
Pattern from Proof of
Performance Tests
1280 KC 500 Watts Dec 1948

granted license 1/23/51
to increase daytime ND power to 5 KW.

KNAK

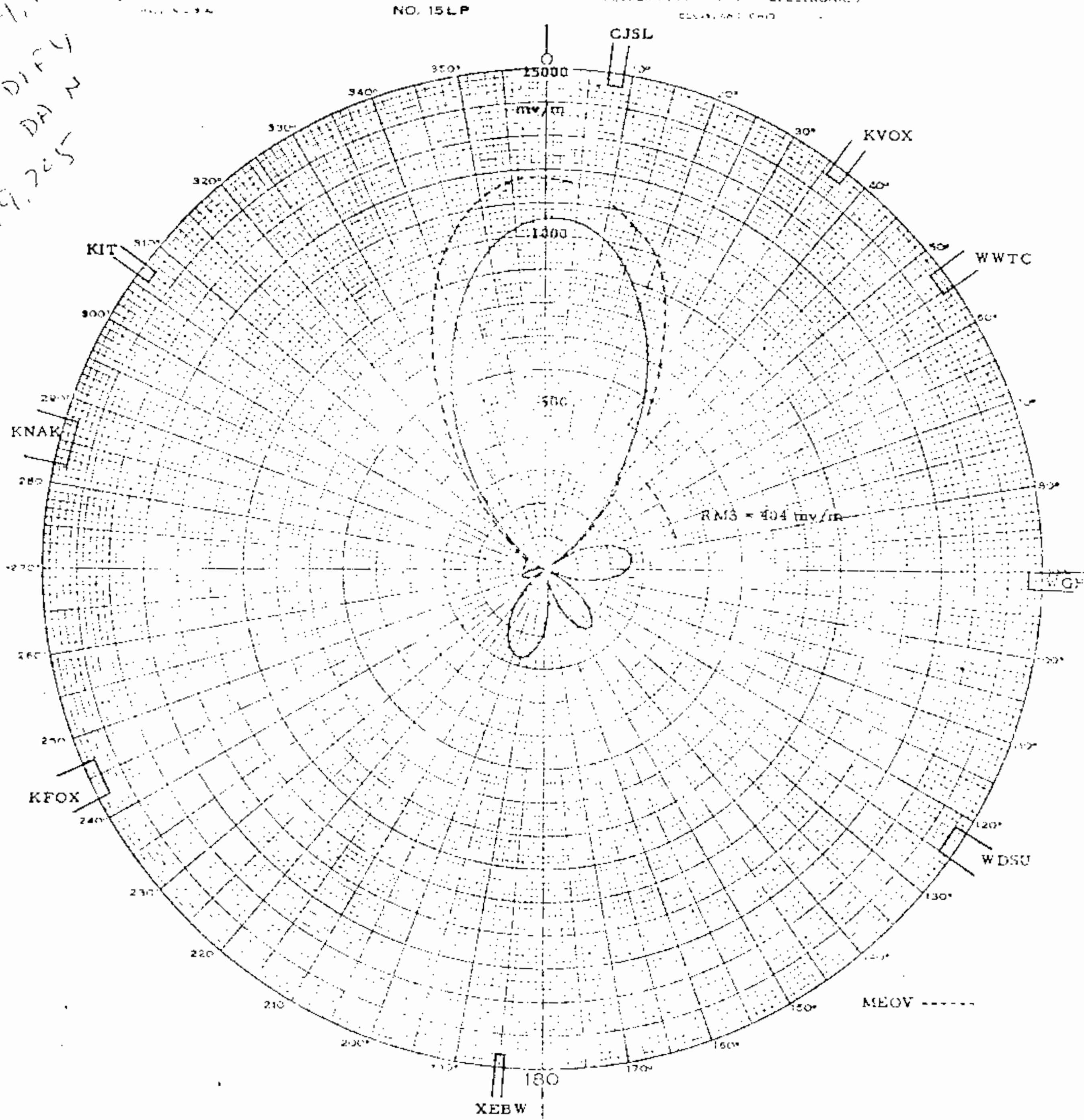
MEASURED (non-DA) 2/11/49G KNAK, SALT LAKE CITY, U. License 2-1-49 500w,1kw-LS,DAN 1280 kc



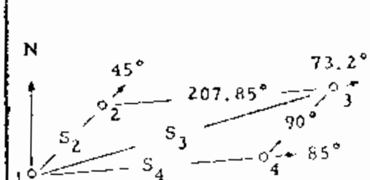
KTLK

11/8/73
CP To modify
MLCVS DA-N
BP-19,255

NO. 15LP



TOWER PLACEMENT SKETCH



PATTERN PARAMETERS

Tower No.	Electrical Height	True Tower Orientation	Spacing	Phasing	Horizontal Field	Field Ratio	Elev. Angle	Elevation RMS Field
1	90	0	0	0		1.0	0	404
2	90	45.0	90.0	-132.5		0.974	10	
3	90	73.2	282.8	132.5		0.92	20	
4	90	85.0	207.85	0		0.945	30	
5							40	
6							50	
7							60	
8							70	
9							80	
10								
						x		5000

STATION DATA

Call	KTLK
Frequency	1280
Power	5000
Time of operation	U
Type of operation	DA-2
	4
	4
	120
	5000
	0.0029
Lat.	39 36 05
	104 58 49
	710513
	710504

Carl E. Smith

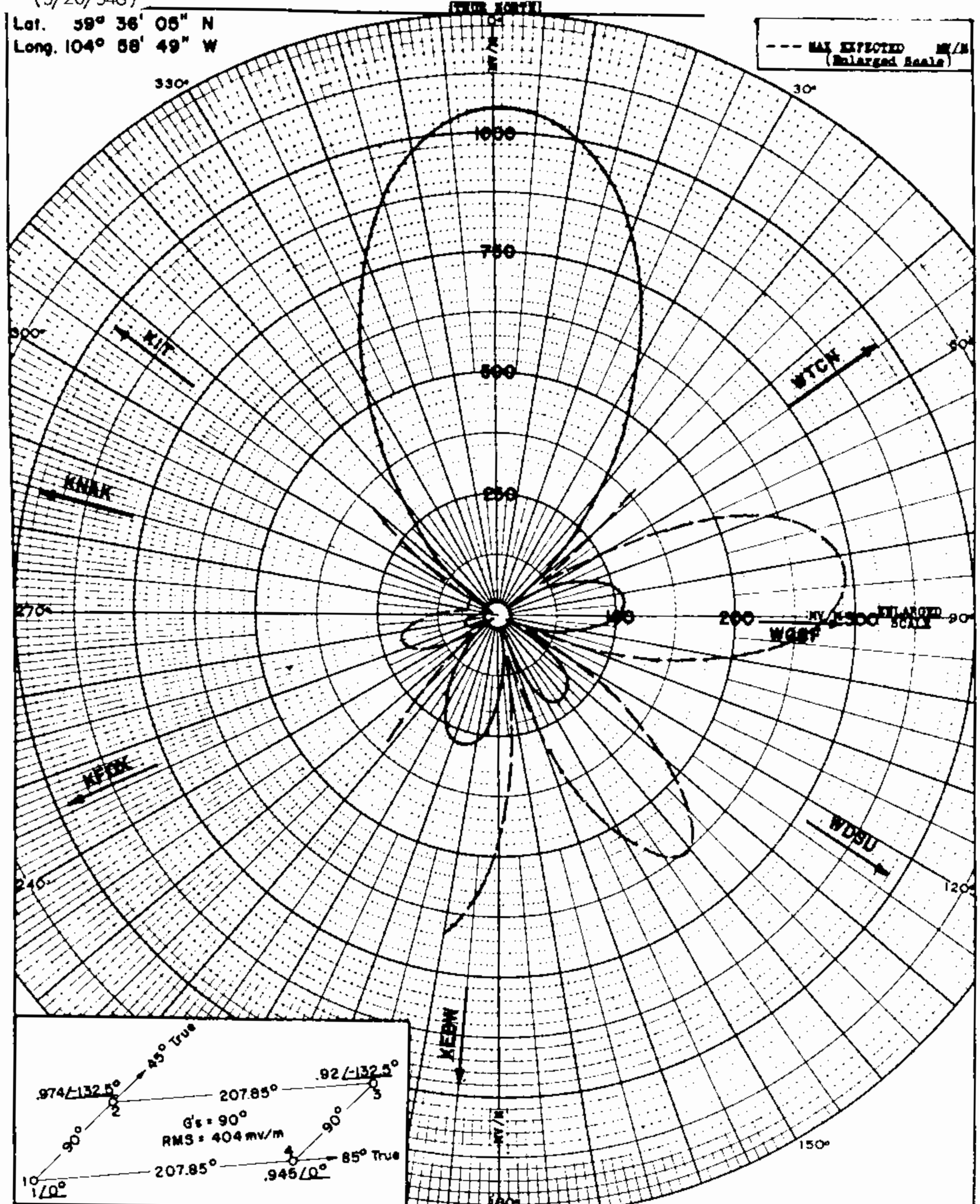
FIG. 3.1A
Nighttime Horizontal Pattern

Radio Station KTLK
Denver, Colorado

1280 kHz 5 kw DA-2 U

KTLK

PROPOSED KTLN, Denver, Colo. 5KW, U, DA-2 1280 kc
NIGHT (5/20/54G)

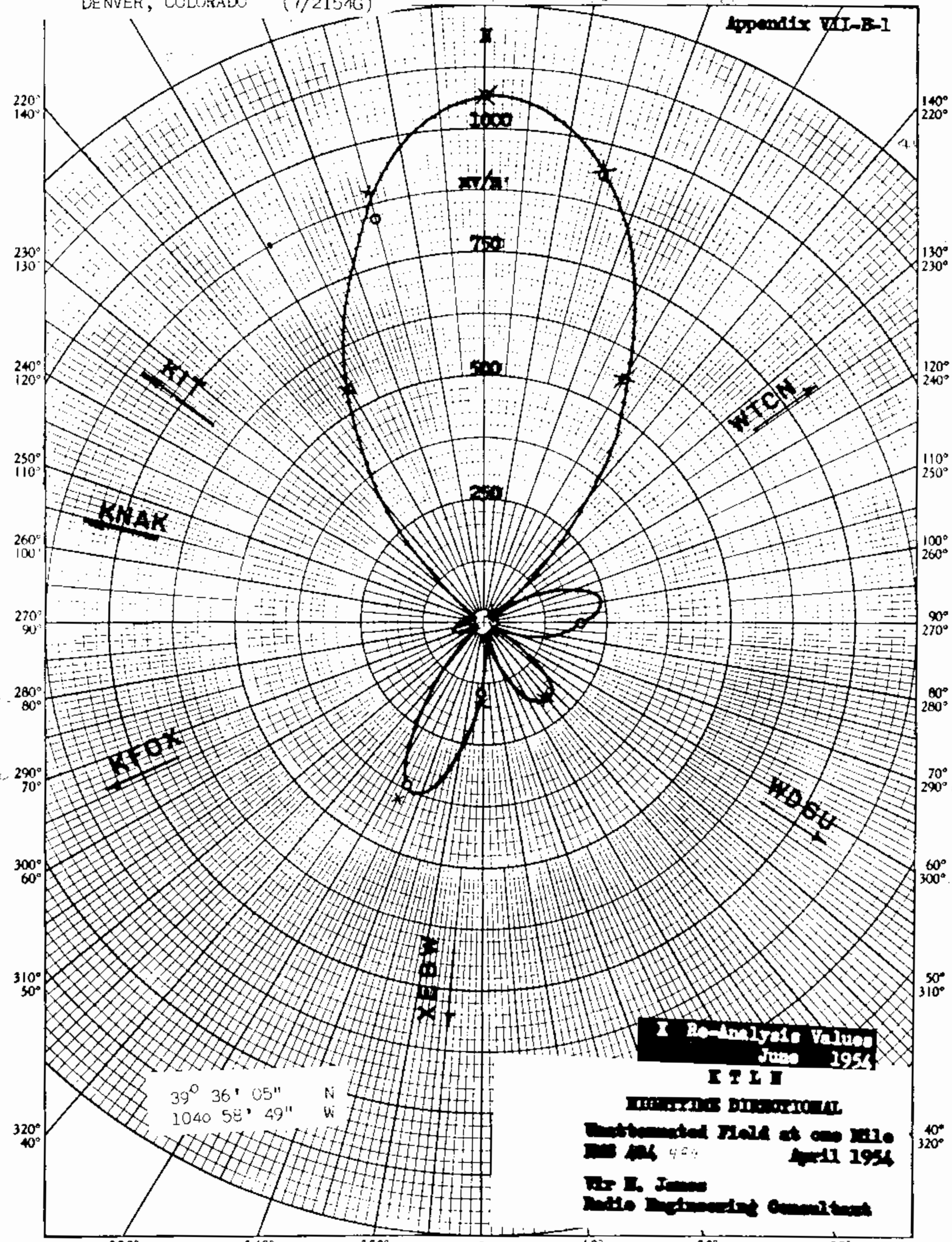


Vir N. James
RADIO ENGINEERING CONSULTANT

PATTERN THEORETICAL NIGHTTIME
FOR: KTLN, DENVER, COLORADO
POWER: 5 KW, DA-2 FREQ: 1280 KC

KTLK

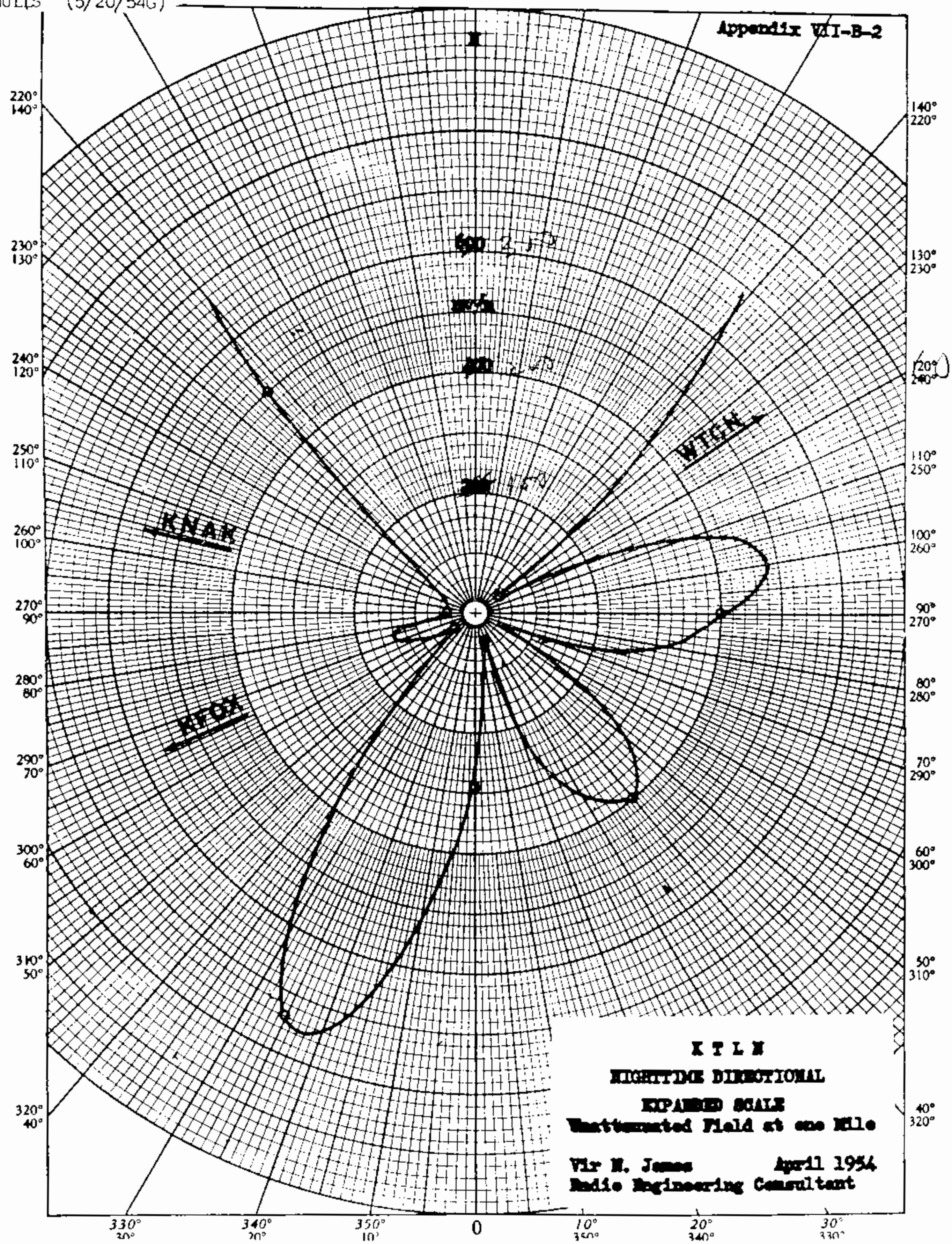
MEASURED NIGHT   KTLN DENVER, COLORADO   (7/2154G)   5KW UDA--2   1280kc



FCC FILE No. BL--5304 (Amended) Accepted 7-3-54   1280kc

KTLK

MEASURED NIGHT NULLS (5/20/54G) KTLN, Denver, Colo. 5KW, U, DA-2 1280 kc

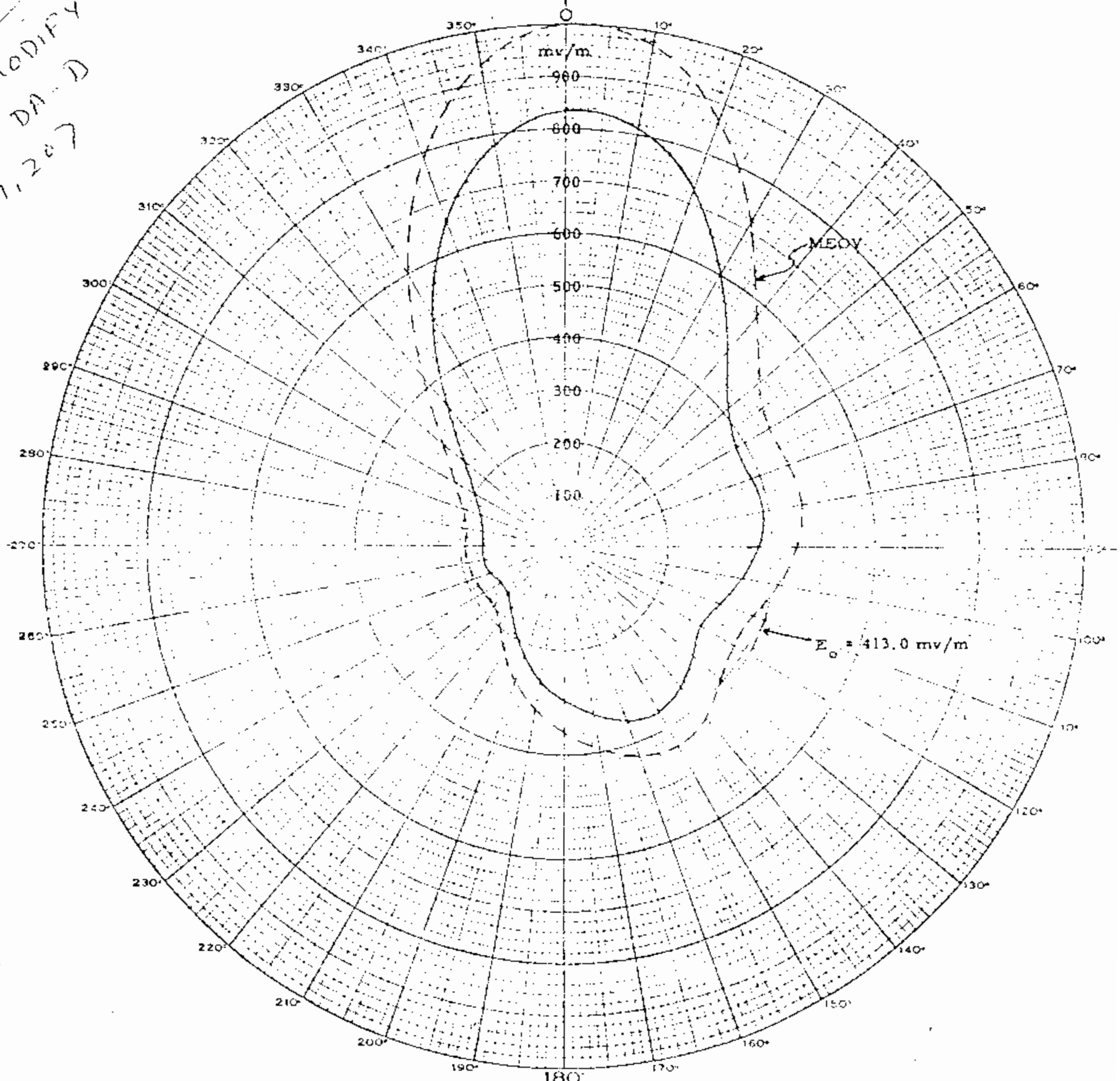


FCC File No. BL-5304 Accepted 5/13/54 KTLN, Denver, Colo. 1280 kc

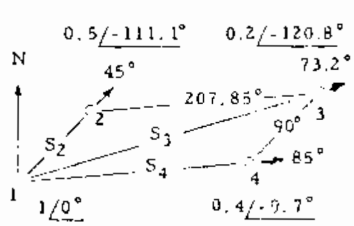
FEB 9 '73
C.P. TO MODIFY
MEOVS DA-D
BP-19,207

POLAR CO-ORDINATE NO. 10LP CLEVELAND INSTITUTE OF ELECTRONICS CLEVELAND, OHIO

KTLK



TOWER PLACEMENT SKETCH	PATTERN PARAMETERS	STATION DATA



TOWER	ELECTRICAL HEIGHT	TRUE TOWER ORIENTATION	SPACING	PHASING	HORIZONTAL FIELD	FIELD RATIO	ELEV. ANGLE	ELEVATION RMS FIELD
1	90.0	0.0	0.0	0.0		1.00		413.0
2	90.0	45.0	90.0	-111.1		0.50		
3	90.0	73.2	282.8	-120.8		0.20		
4	90.0	85.0	207.85	-9.7		0.40		
5								
6								
7								
8								
9								

CALL	KTLK
FREQUENCY	1280
POWER	5000
MODE OF OPERATION	DA-2
TYPE OF OPERATION	U
NO. OF TOWERS	4
[illegible]	4
[illegible]	120
[illegible]	200
[illegible]	None
[illegible]	39 36 05
[illegible]	104 58 49
[illegible]	540513
[illegible]	710513

Carl E. Smith

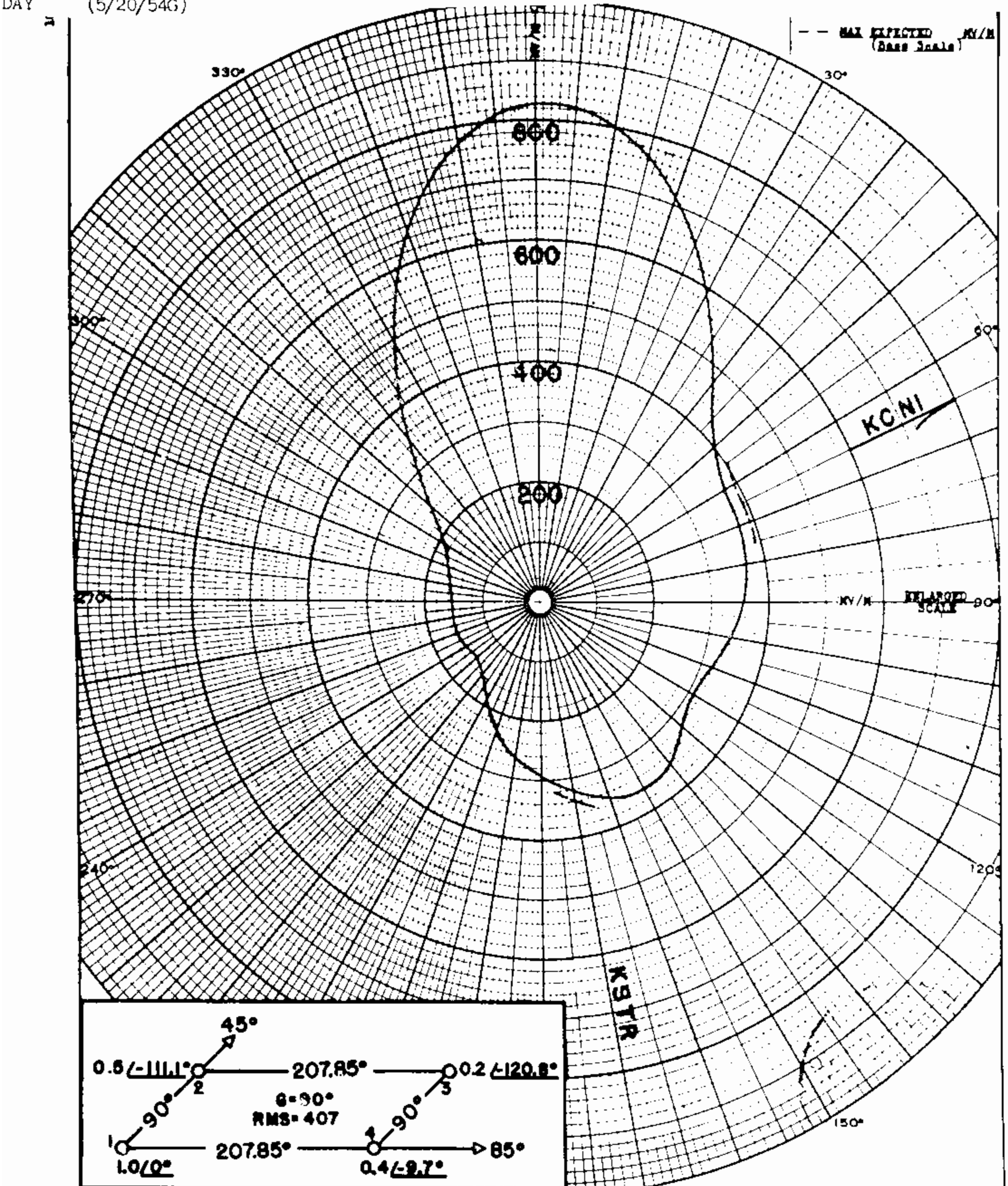
FIG. 2.1

KTLK DAYTIME DIRECTIONAL
ANTENNA HORIZONTAL PATTERN

Radio Station KTLK
Denver, Colorado
1280 kHz 5 kw DA-2 U

KTLK

PROPOSED KTIN, Denver, Colo. 5KW, U, DA-2 1280 kc
DAY (5/20/54G)



Vir N. James

RADIO ENGINEERING CONSULTANT

PATTERN: THEORETICAL DAYTIME
FOR: KTLN, DENVER, COLORADO
POWER: 5KW DA-2 FREQ: 1280KC

KTLK

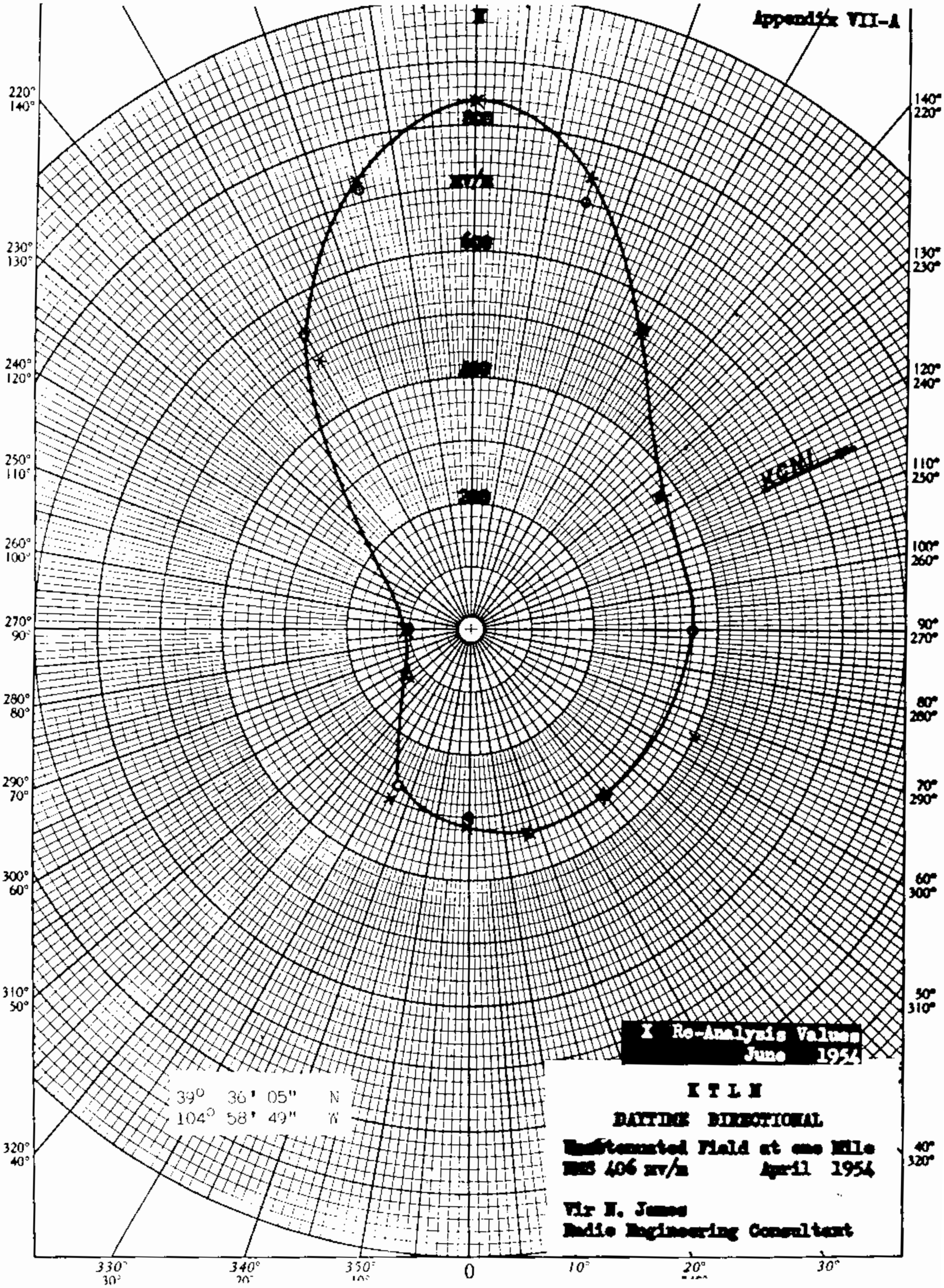
MEASURED
DAY (7/21/54G)

KTLN
DENVER, COLORADO

5KW DA-2,U

1280kc

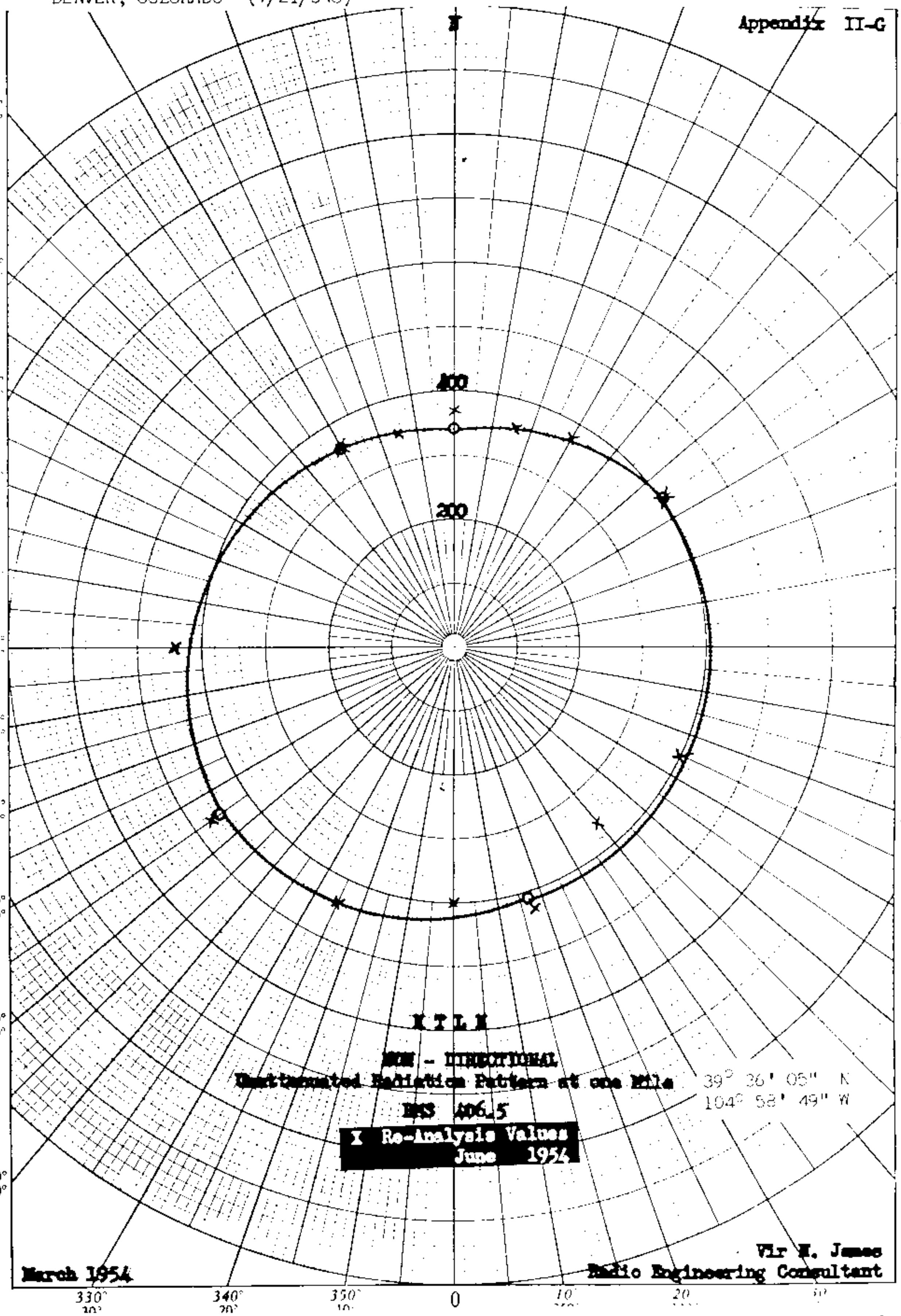
Appendix VII-A



FCC FILE No. BL-5304 (Amended) Date Accepted 7-13-54 1280kc

KTLK

MEASURED NON-DA KTLN DENVER, COLORADO (7/21/54G) 5KW DA--2,U 1280kc



FCC FILE NO. BL-5304 (Amended) Date Accepted 7-13-54 1280kc

SPOKANE, WASH

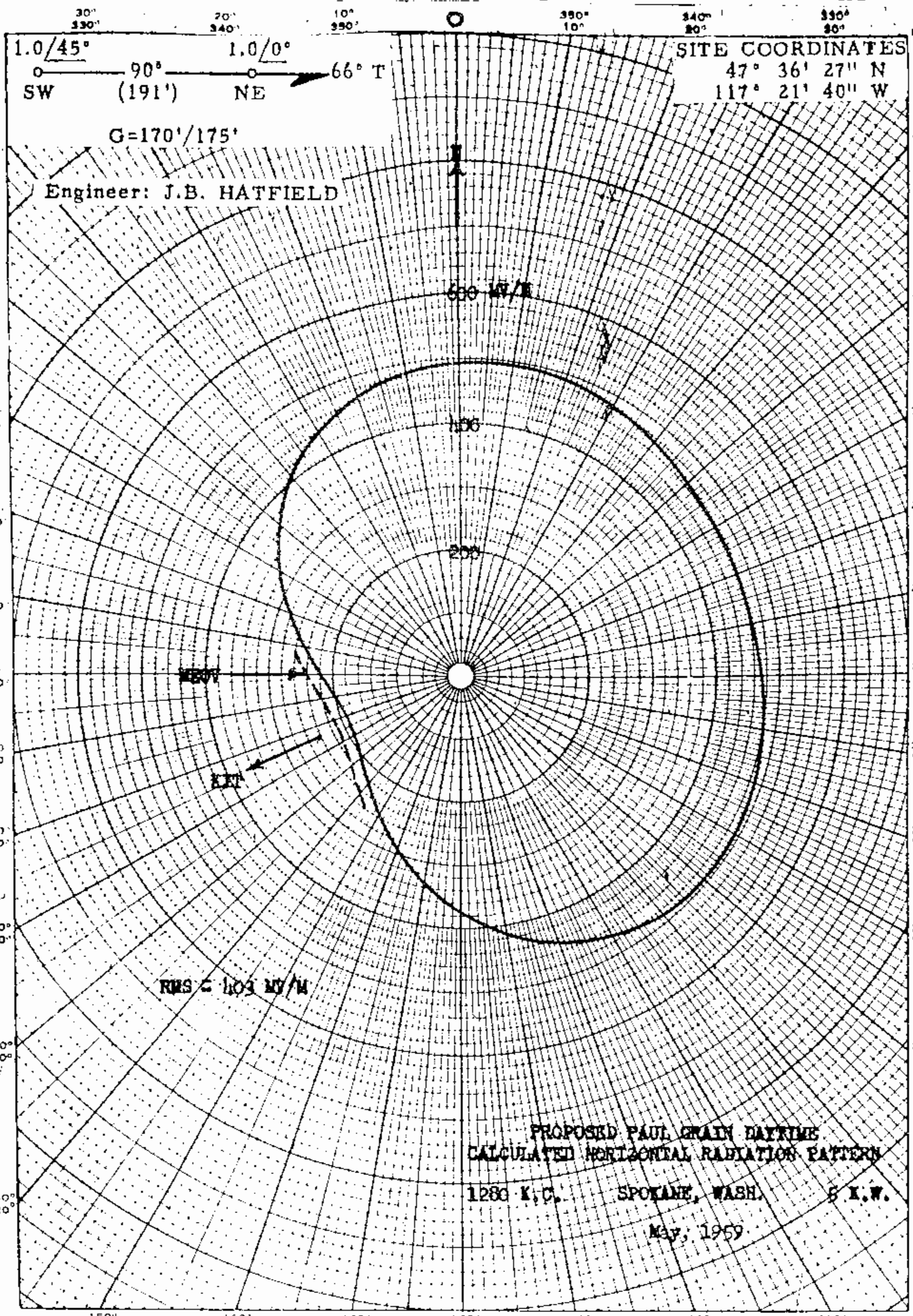
KUDY

PROPOSED DAY
(10-2-59g)

New; Paul Crain
Spokane, Washington

5kw, DA-D,D
1280 KC

1-19-61 granted CP for station



FCC File No. BP-13391
Accepted 9-16-59

Paul Crain
Spokane, Washington

1280 KC

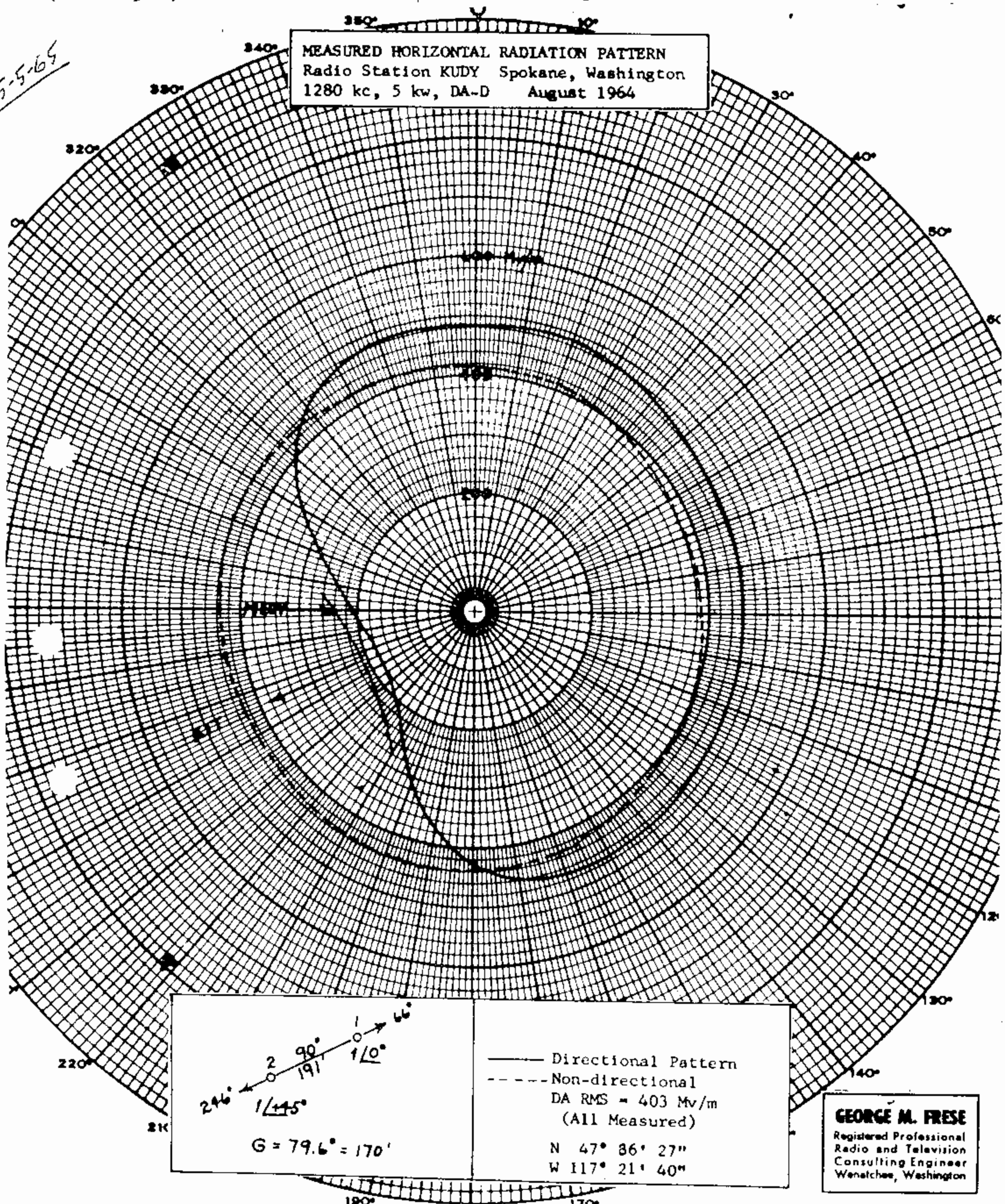
KUDY

Measured Day
(4-28-65ct)

Station KUDY
Spokane, Washington

5kw,DA-D,D
1280 kc

10. 5-5-65



FCC File No. BL-10848
Accepted 4-7-65

Station KUDY
Spokane, Washington

1280 kc

PROPOSED KVOX, MOOREHEAD, MINNESOTA 500W,1KW-LS, U, DA-N 1280 kc
NIGHT (1/12/54G)

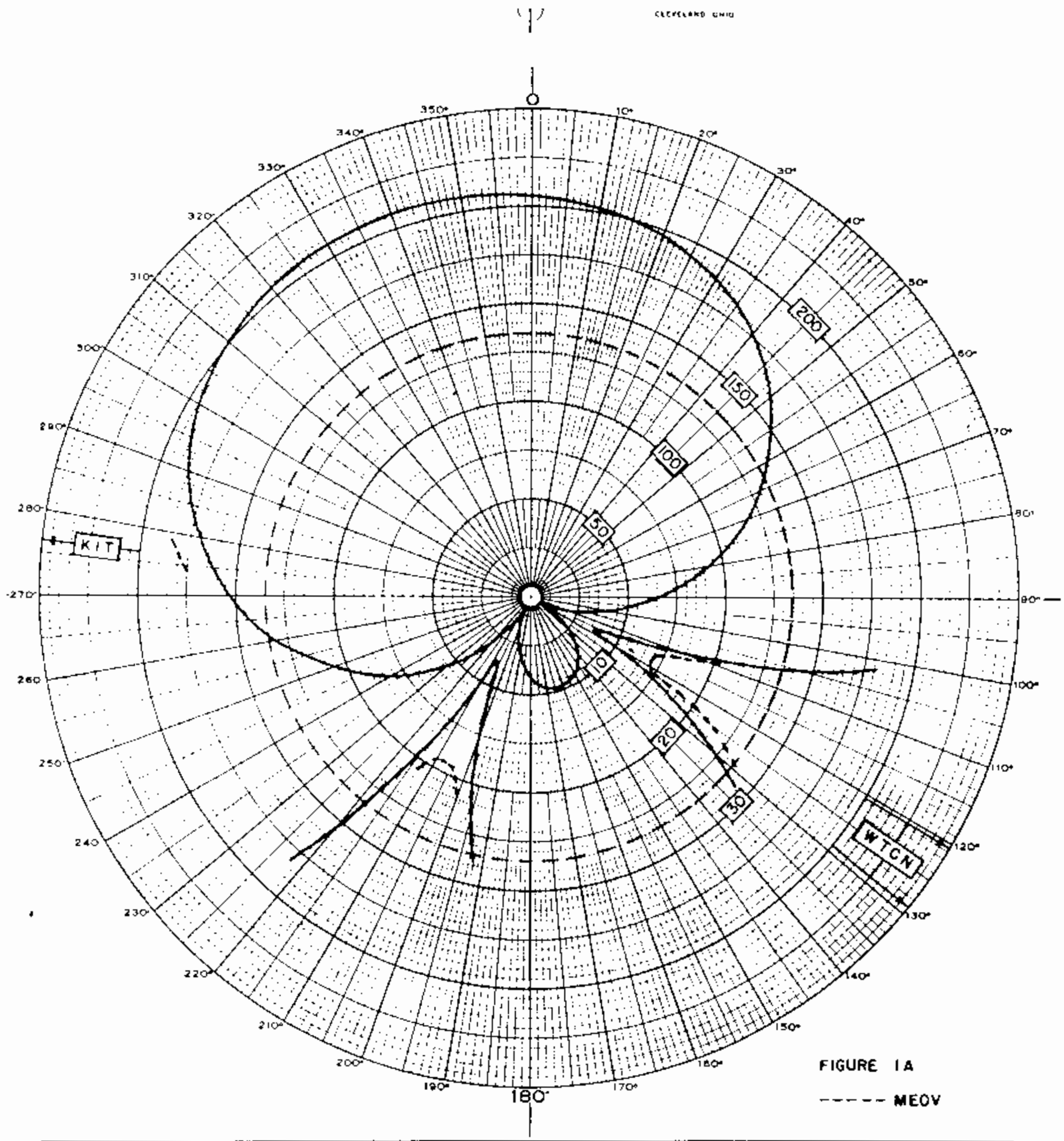
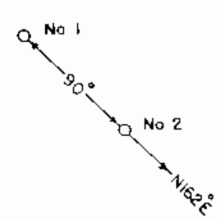


FIGURE 1A

------ MEOV

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	95	—	—	0	103.24	1.00	0	134.5
2	95	162	90	*116.36	110.47	1.07	10	
3							20	
4							30	
5							40	
6							50	
7							60	
8							70	
9							80	
10							E_1 = mv/m	
							P_1 = kw	

DAYTIME OPERATION [ ] NIGHTTIME OPERATION [x]

STATION DATA

CALL	KVOX
FREQUENCY	1280 kc
POWER	0.5kw, 1.0kw-LS
TIME OF OPERATION	U
TYPE OF OPERATION	DA-N
DAYTIME TOWERS	1
NIGHTTIME TOWERS	2
No RADIALS PER TOWER	120
LENGTH OF RADIALS	90° 192"
GROUND SCREEN DIMENSION	
LAT.	46° 49' 02"
LONG.	96° 45' 48"
SUPERSEDES	
PATTERN No	531027

KVOX BROADCASTING COMPANY
Moorhead, Minnesota
11/6/53

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

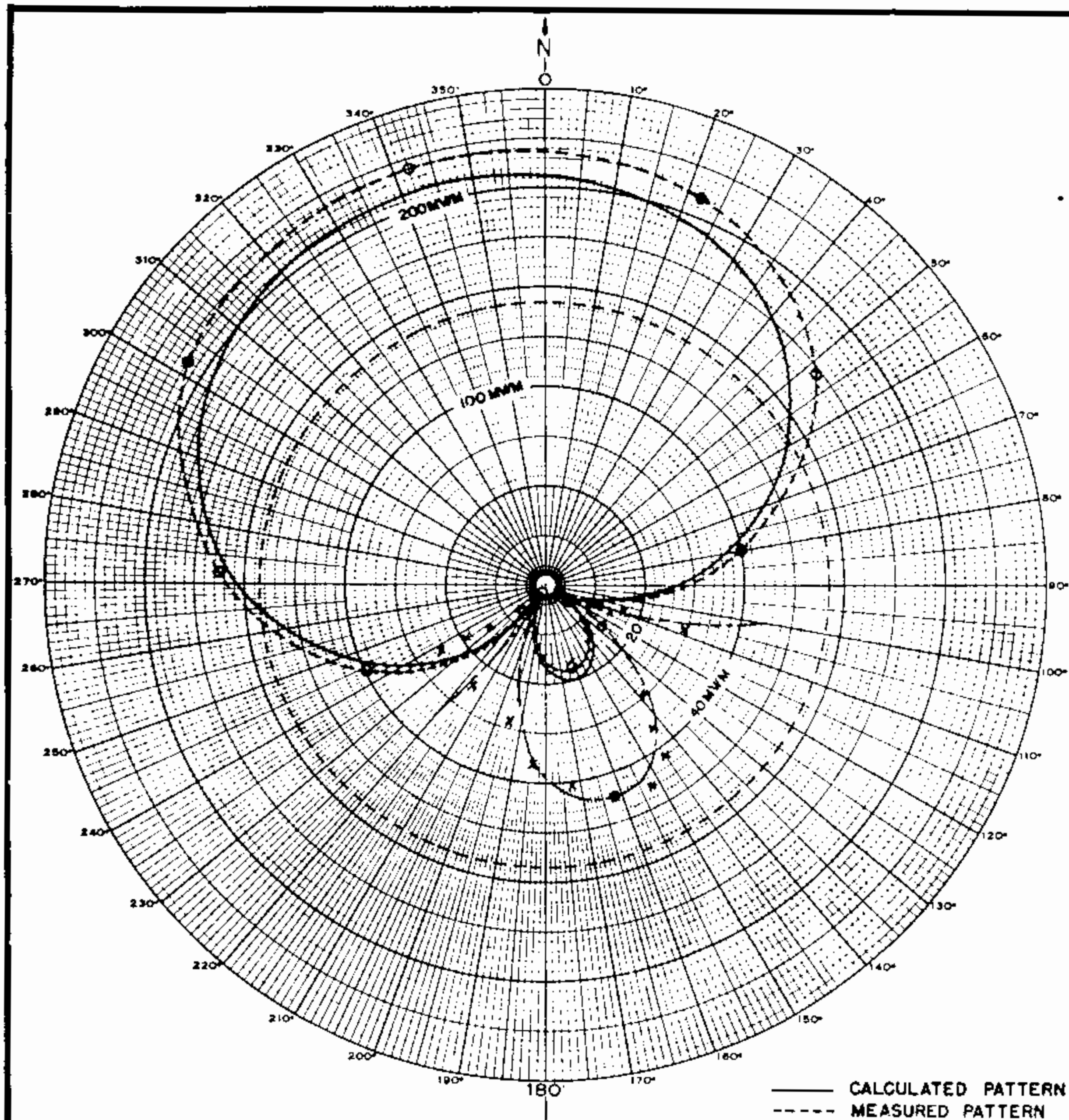
KVOX

MEASURED
NIGHT (9/15/54G)

KVOX
MOREHEAD, MINNESOTA

DA-N UNLIMITED
500W, 1KW-LS

1280 KC

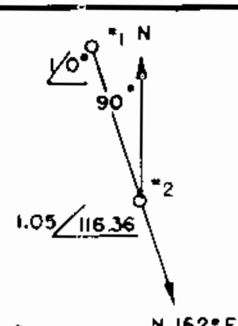


E_{RMS} = 142.5 MV/M

—— CALCULATED PATTERN
- - - - MEASURED PATTERN
x x x CROSS RADIALS
o o o RADIALS
—— - —— EXPANDED (MEASURED)

LATITUDE: 46° 49' 02"
LONGITUDE: 96° 45' 48"

JOHN H. MULLANEY
Consulting Radio Engineer
Washington, D. C.



G = 95°

FIGURE 33

MEASURED NIGHTTIME DIRECTIONAL HORIZONTAL PATTERN

RADIO STATION KVOX

MOORHEAD, MINN.

1280 KC   0.5, 1.0 KW-LS, DA-N,U

FCC FILE NO. BL-5423   DATE ACCEPTED 9-10-54   1280 KC

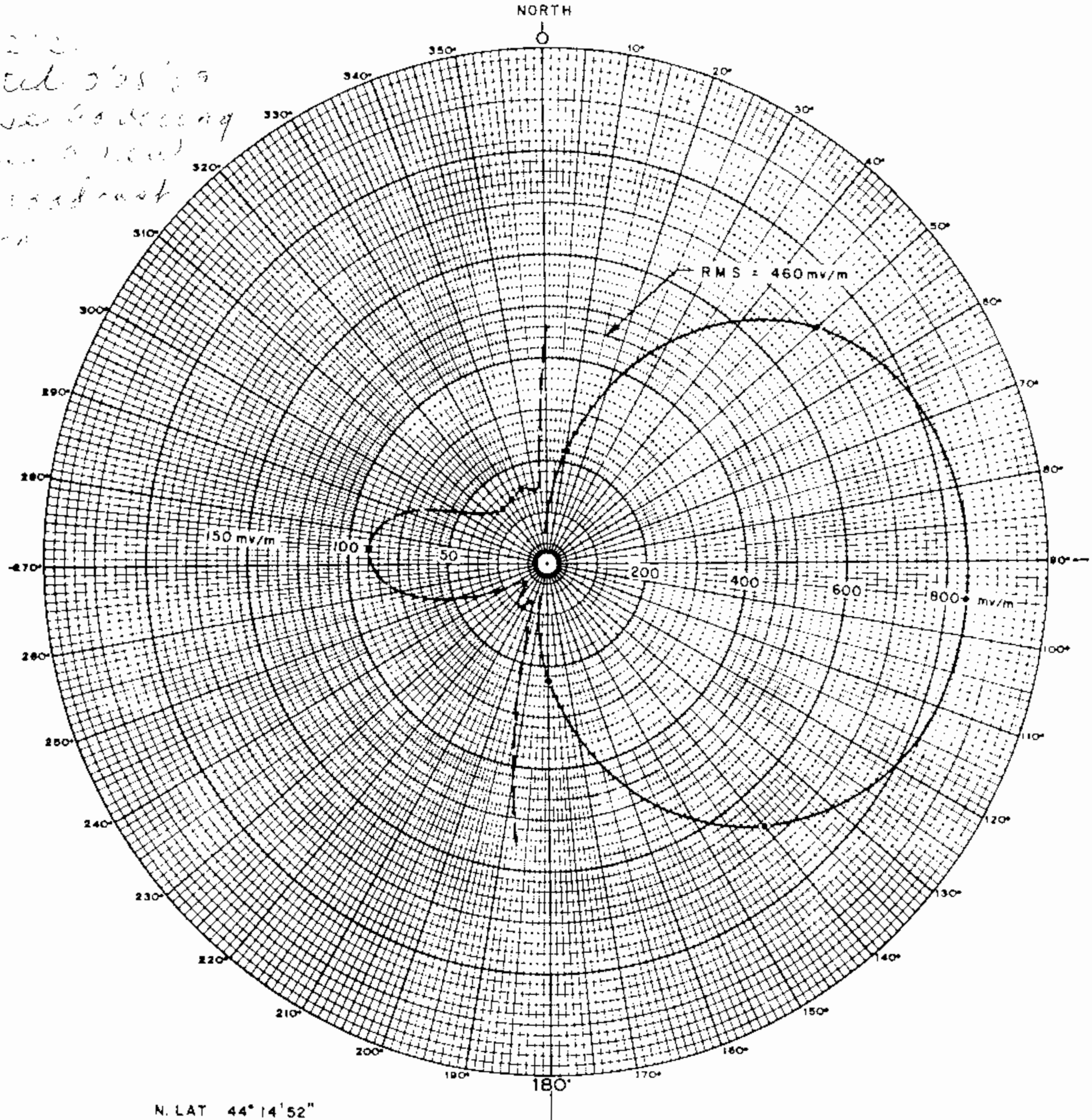
WABK

Measured Night
(6-27-69ct)

Station WABK
Gardiner, Maine

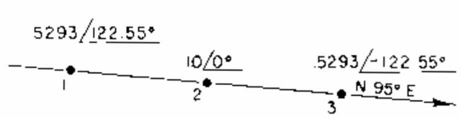
5kw, DA-N, U
1280 kc

[illegible]
Granted [illegible]
license covering
[illegible]
AM broadcast
station



N. LAT 44° 14' 52"
W. LONG. 69° 48' 51"

ANTENNA PLAN



HEIGHT = 213.56 FT (100°)

FIGURE 7
HORIZONTAL RADIATION PATTERN
(DA-NIGHTTIME)
ABENAKI COMPANY
WABK 1280 KC 5 KW-U, DA-N
GARDINER, MAINE

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

FCC File No. BL-12121
Accepted

Station WABK
Gardiner, Maine

1280 kc

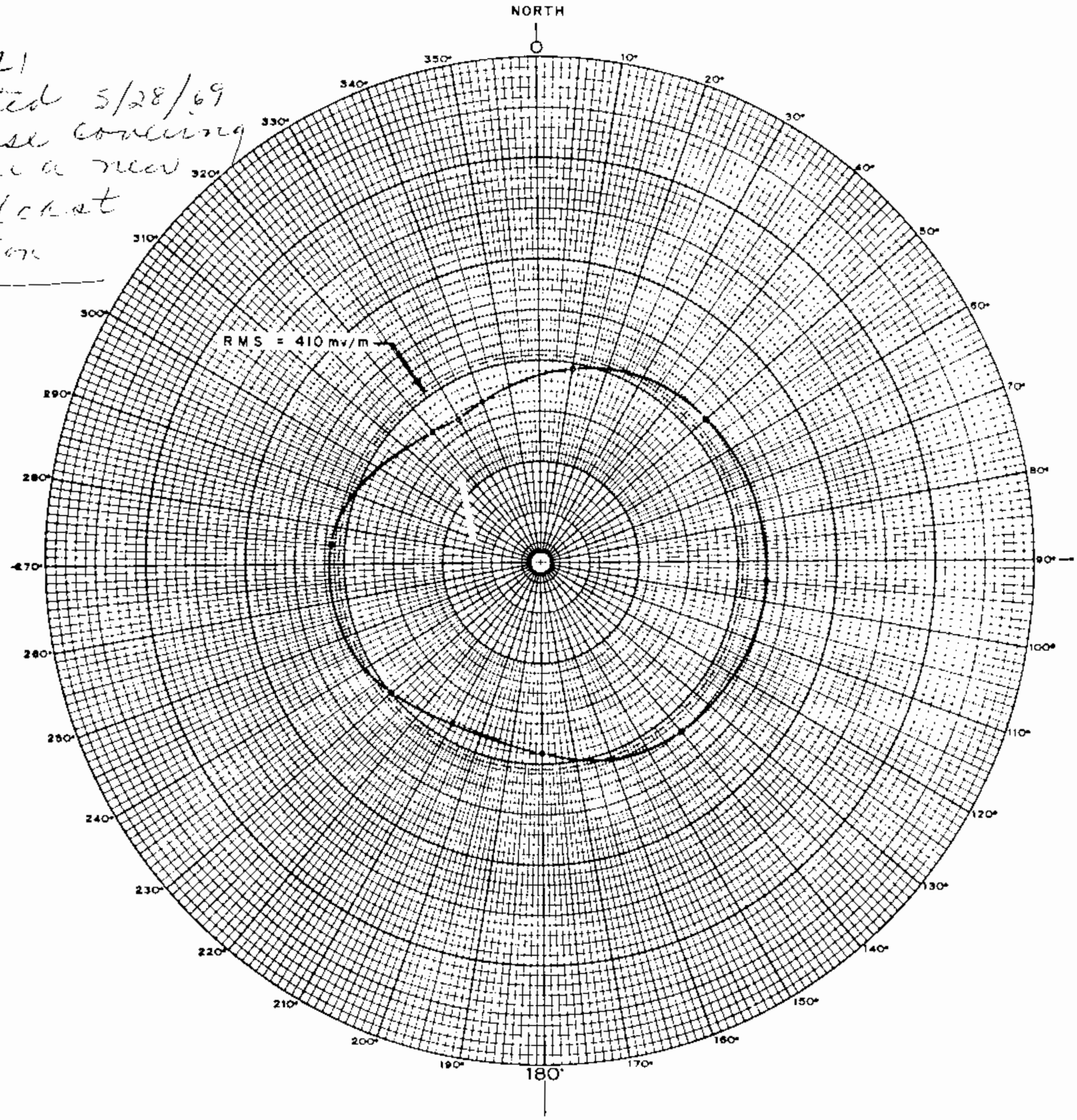
WABK

Measured Non-DA
(6-27-69ct)

Station WABK
Gardiner, Maine

5kw,DA-N,U
1280 kc

BL-12121
Granted 5/28/69
license covering
CP for a new
broadcast
station



N. LAT. 44° 14' 52"
W. LONG. 69° 48' 51"

FIGURE 6
NON-DA RADIATION PATTERN
(CENTER TOWER)
ABENAKI COMPANY
WABK 1280 KC 5 KW-U, DA-N
GARDINER, MAINE

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

FCC File No.BL-12121
Accepted

Station WABK
Gardiner, Maine

1280 kc

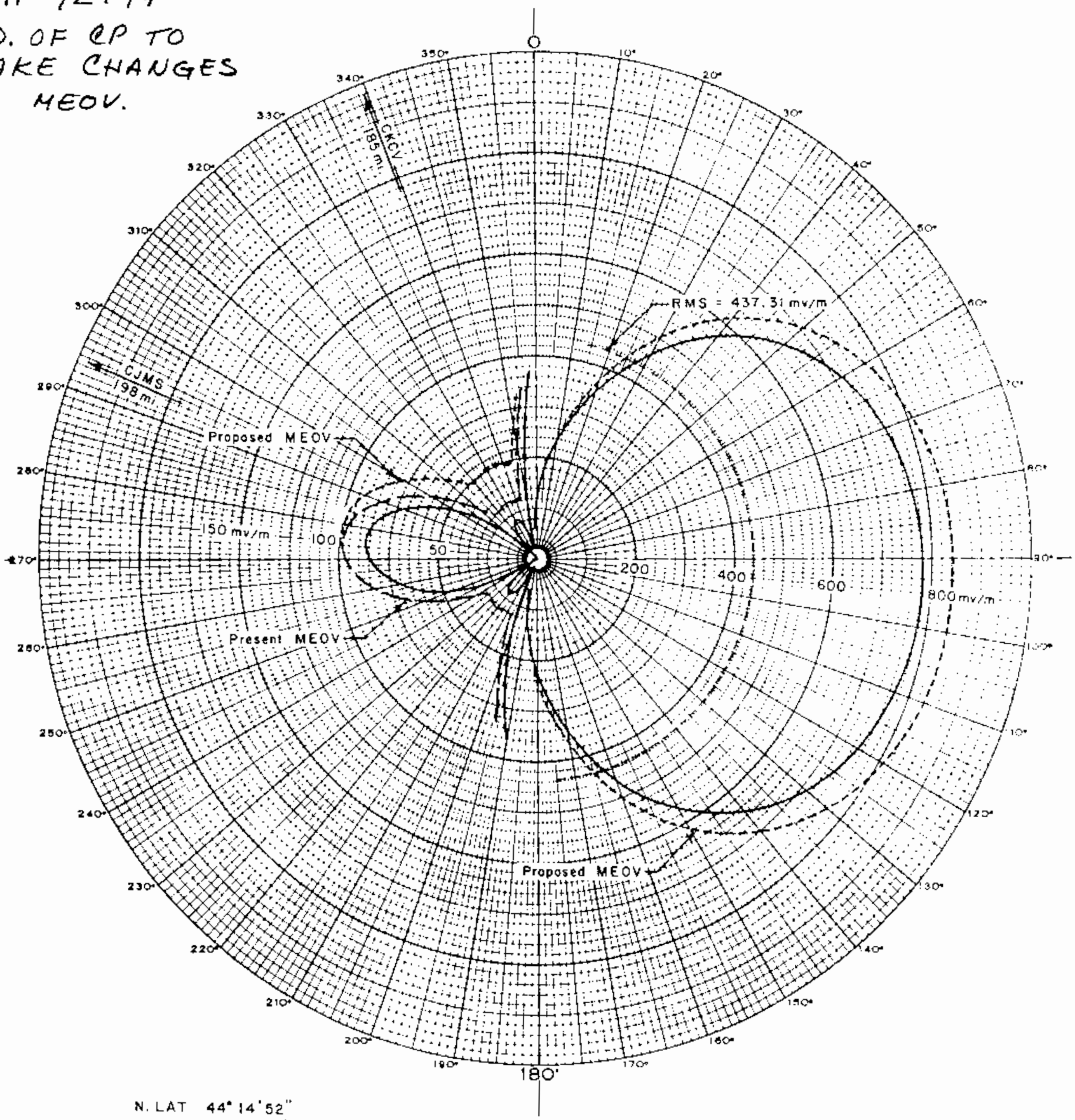
WABK

Proposed Night
(9-26-68ct)

Station WABK
Gardiner, Maine

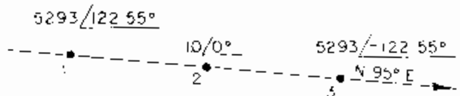
5kw,DA-N,U
1280 kc

BMP-12494
MOD. OF CP TO
MAKE CHANGES
IN MEOV.



N. LAT 44° 14' 52"
W. LONG. 69° 48' 51"

ANTENNA PLAN



HEIGHT = 213.56 FT (100°)

FIGURE 2
NIGHTTIME HORIZONTAL PLANE RADIATION PATTERN
ABENAKI COMPANY
WABK 1280 KC 5 KW-U, DA-N
GARDINER, MAINE

Prepared by

Lohnes and Culver

Washington, D. C.

August, 1968

FCC File No. BMP-12494
Accepted 9-13-68

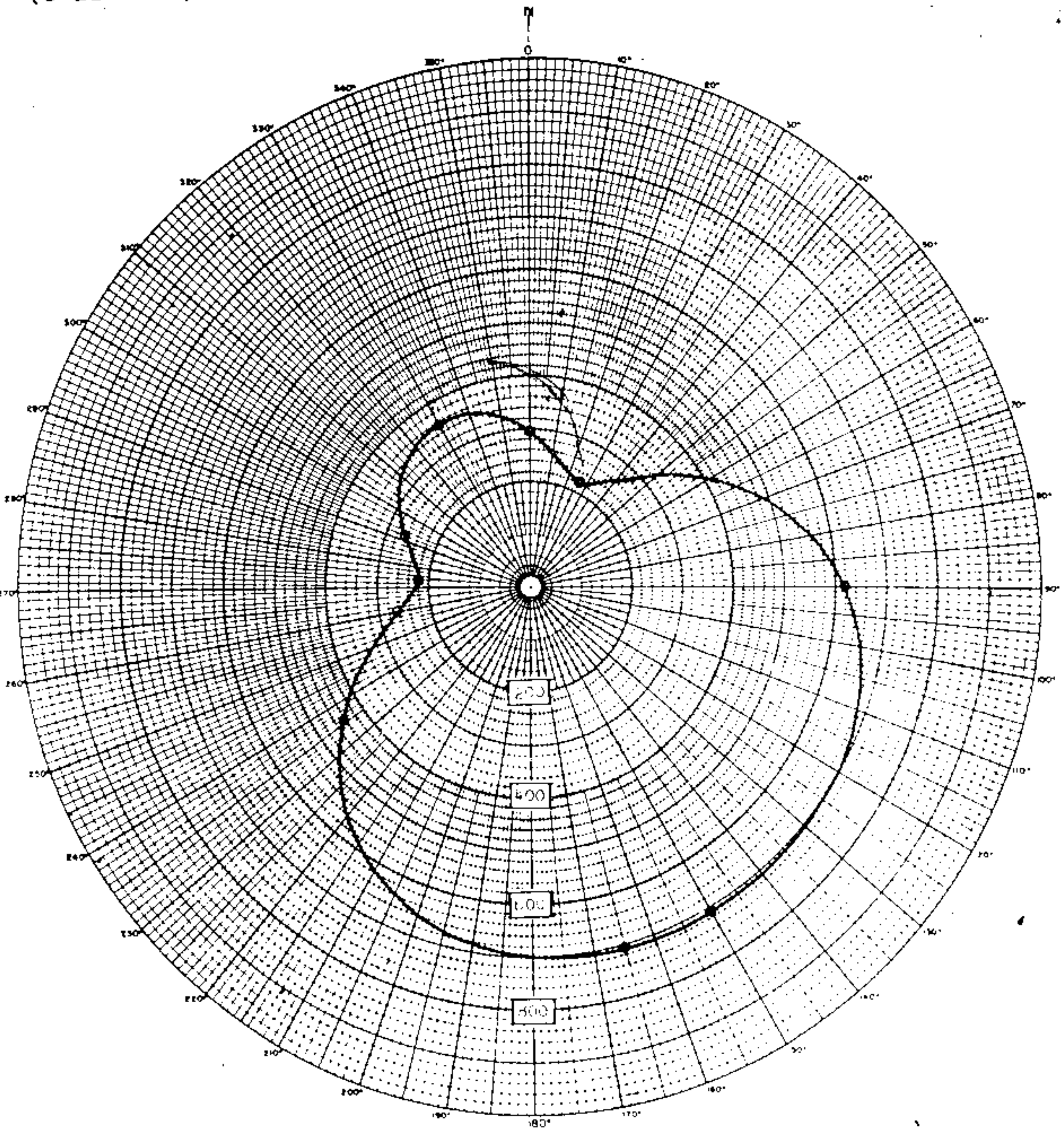
Station WABK
Gardiner, Maine

1280 kc

2.5 WADO

MEASURED DAY & NIGHT (8-22-61ct) WADO New York, New York over 5kw, DA-1,U 1280 KC

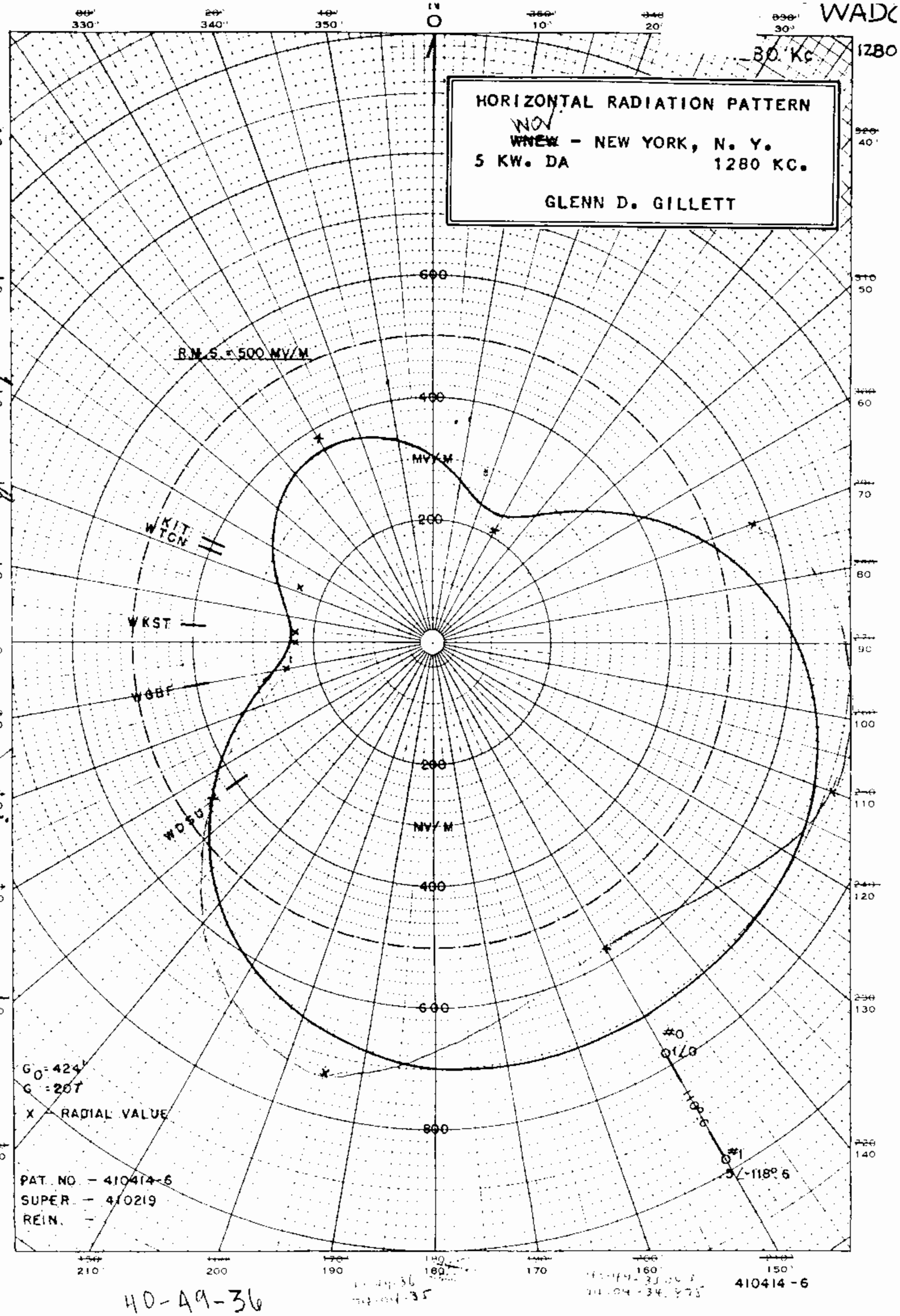
1-3-62 noted mod. to change from [illegible] with WHBI)



E_{RMS} = 499 MV/M

LATITUDE: 40° 49' 36" LONGITUDE: 74° 04' 35"	**ANTENNA PARAMETERS** G_1 - 105.5° = 423 feet G_2 - 96.0° 1 O 1.0/0° S = 110.5° or 236' 0.528/-119.2° 2 O	610516 FIGURE 3 MEASURED HORIZONTAL RADIATION RADIO STATION WADO NEW YORK, NEW YORK 1280 KC 5000 DA-1
CHARLES E. BRENNAN CONSULTING RADIO ENGINEERS MILWAUKEE, WISCONSIN		

FCC File No. BZ-4459 Accepted 8-1-61 WADO New York, New York 1280 KC

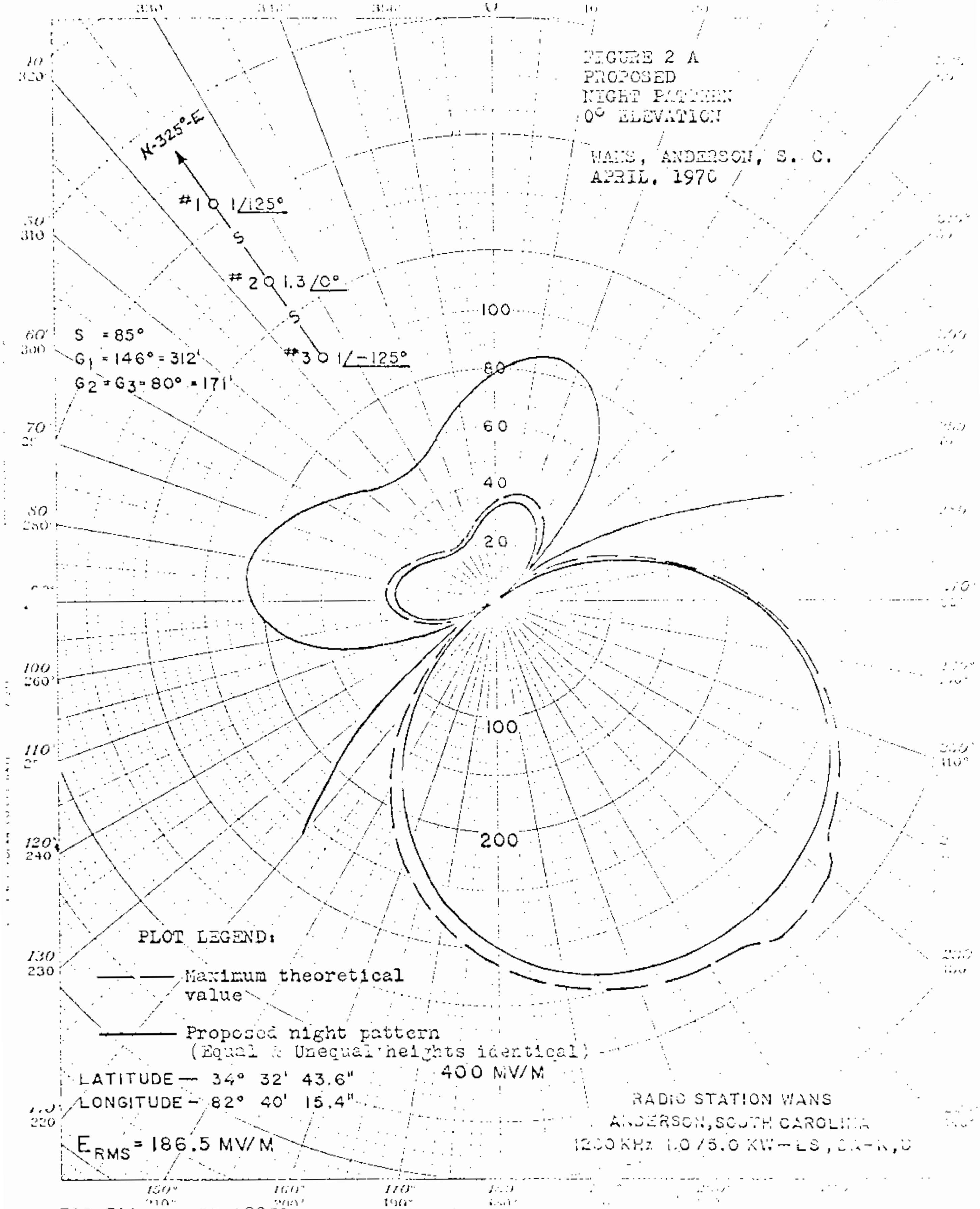


HORIZONTAL RADIATION PATTERN
WOV
~~WNEW~~ - NEW YORK, N. Y.
5 KW. DA
1280 KC.
GLENN D. GILLETT
WADO
1280
30 Kc
R.M.S. = 500 MV/M
MV/M
WKIT
WTCN
WKST
WGBF
WDSU
#0
1∠0
#1
.5∠-118°.6
118°.6
G_0 = 424'
G = 207
X - RADIAL VALUE
PAT. NO. - 410414-6
SUPER. - 410219
REIN. -
410414-6
40-A9-36

Proposed Night
(9-25-70ct)

Station WANS
Anderson, South Carolina

WANS
1kw,5kw-LS,DA-N,U
1280 kc



FCC File No.BP-18852
Accepted 9-10-70

Station WANS
Anderson, South Carolina

1280 kc

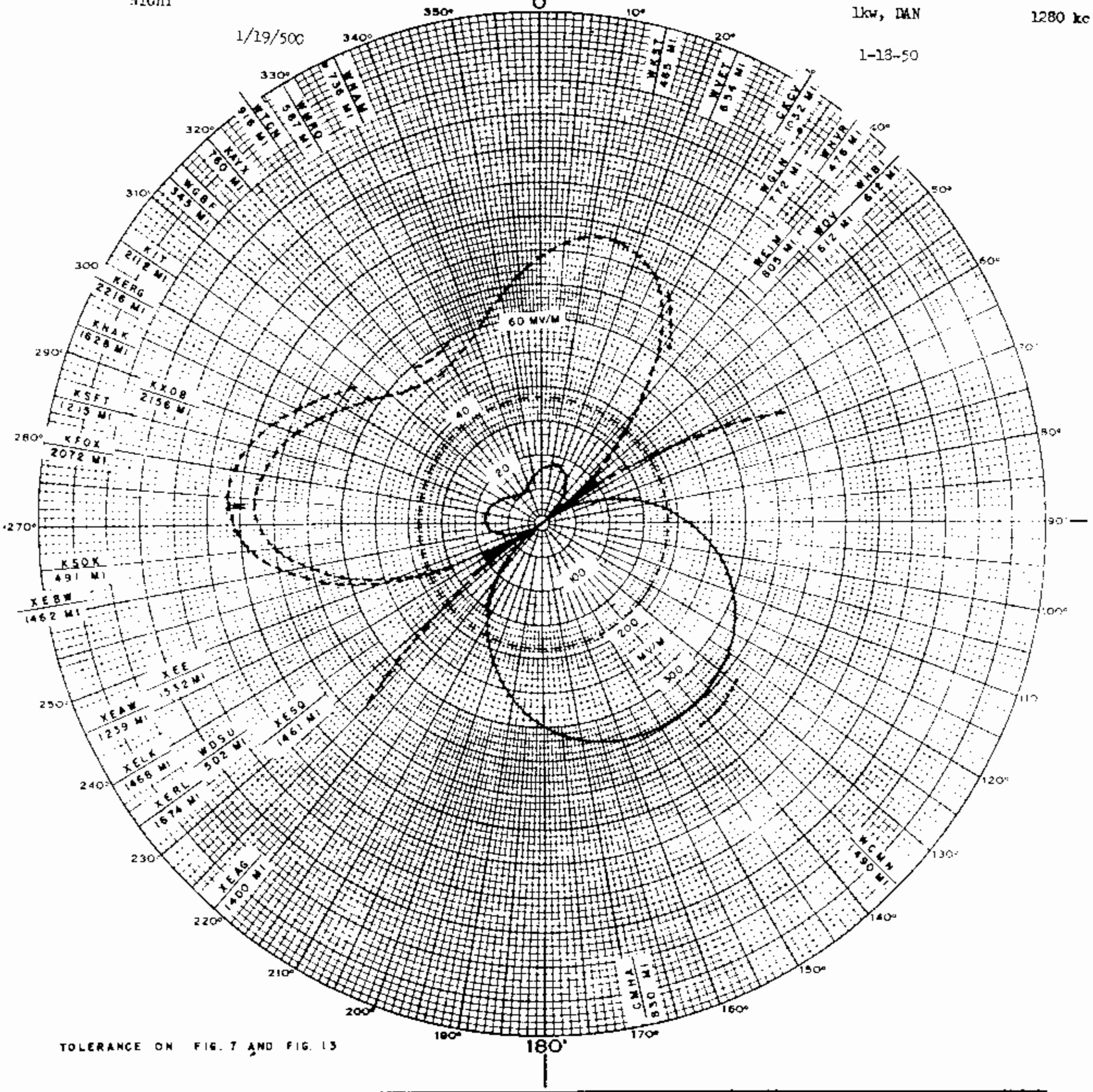
WANS

PROPOSED
NIGHT

WANS, ANDERSON, S. C.

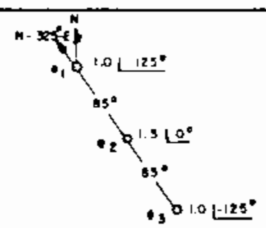
1kw, DAN

1280 kc



TOLERANCE ON FIG. 7 AND FIG. 13

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	325	85	125		1.0	0	185.2
2	80	325	85	0		1.3	10	
3	80	325	85	-125		1.0	20	
4							30	
5							40	
6							50	
7							60	
8							70	
9							80	
10							E_r = mv/m	
DAYTIME OPERATION ☐				NIGHTTIME OPERATION ☒			P_r = kw	

STATION DATA

CALL	WANS
FREQUENCY	1280 kc
POWER	1 kw
TIME OF OPERATION	U
TYPE OF OPERATION	DA - N
DAYTIME TOWERS	1
NIGHTTIME TOWERS	1, 2, 3
No RADIALS PER TOWER	120
LENGTH OF RADIALS	80° - 171 ft
GROUND SCREEN DIMENSION	48' SQ
LAT	34° 32' 43.6"
LONG	82° 40' 15.4"
SUPERSEDES	
PATTERN No.	491215

FIG. 12

Consulting Radio Engineers

DIXIE B. McKEY & ASSOCIATES

RADIO STATION WANS
ANDERSON, S.C.

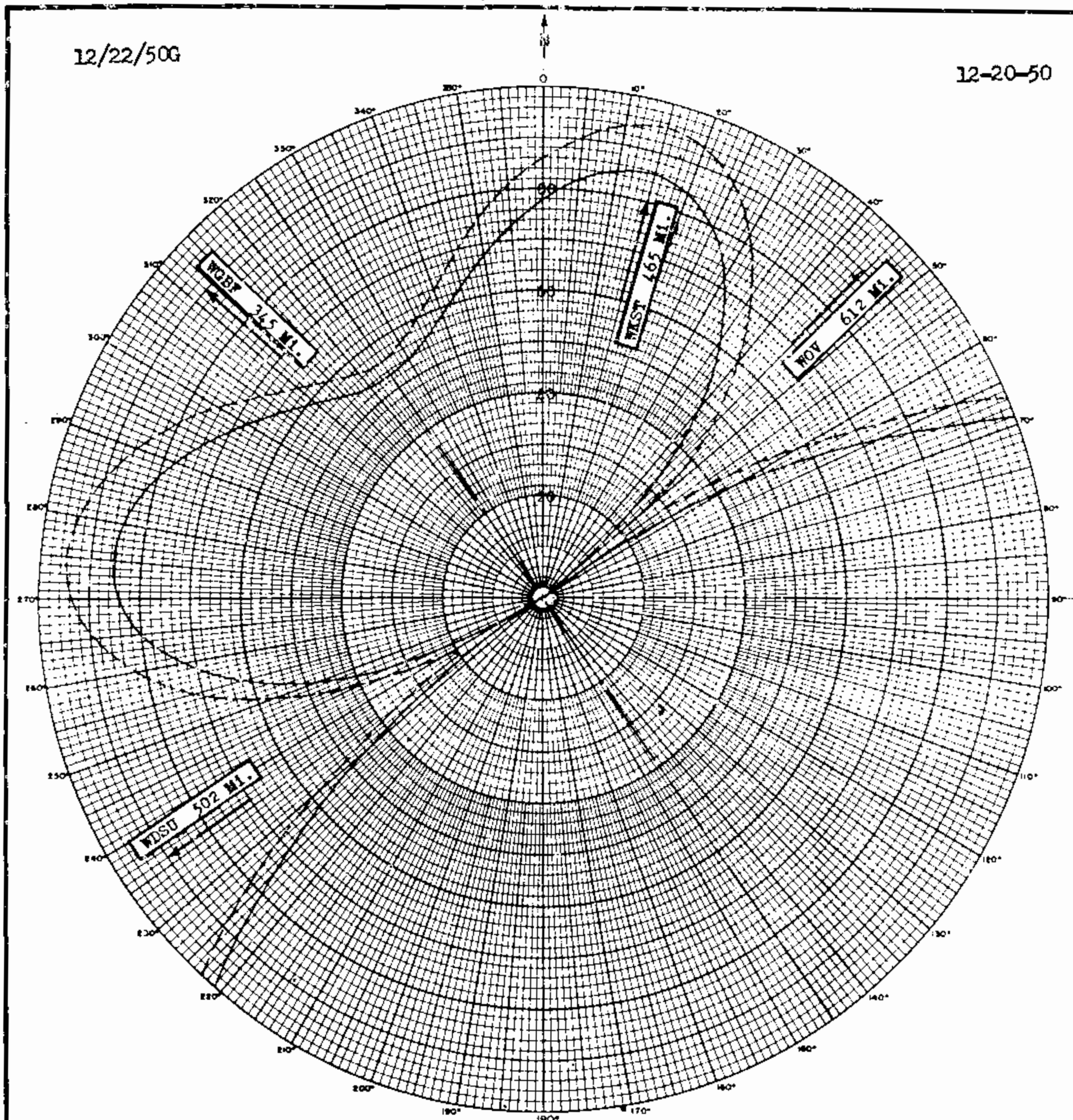
NIGHT HORIZONTAL RADIATION PATTERN

1280 KC 1 KW - U DA-N

WANS, Anderson, S. C. 1280 kc

WANS

PROPOSED NIGHT NULLS   WANS, ANDERSON, S. C.   1kw, DA-N   1280 kc



— — — — MAXIMUM EXPECTED OPERATING VALUES

WANS

HORIZONTAL RADIATION PATTERN

FREQUENCY:	1280 KC
ASSIGNMENT:	1 Kw.-U(DA-N)
LONGITUDE:	82 DEG. 40 MIN. 15.4 SEC.
LATITUDE:	34 DEG. 32 MIN. 43.6 SEC.
WHEN USED:	Nighttime
R.M.S. FIELD:	185.2 MV/M
DATE:	December 19, 1950

	NORTH		SOUTH			
ANTENNA	NO. 1	NO. 2	NO. 3	NO. 4	NO. 5	NO. 6
PHASE DEG.	125°	0°	-125°			
HEIGHT DEG.	80°	80°	80°			
FIELD RATIO	1.0	1.3	1.0			
NON-DA ANT	*					
	ORIENTATION 325° True			SPACING 85°		

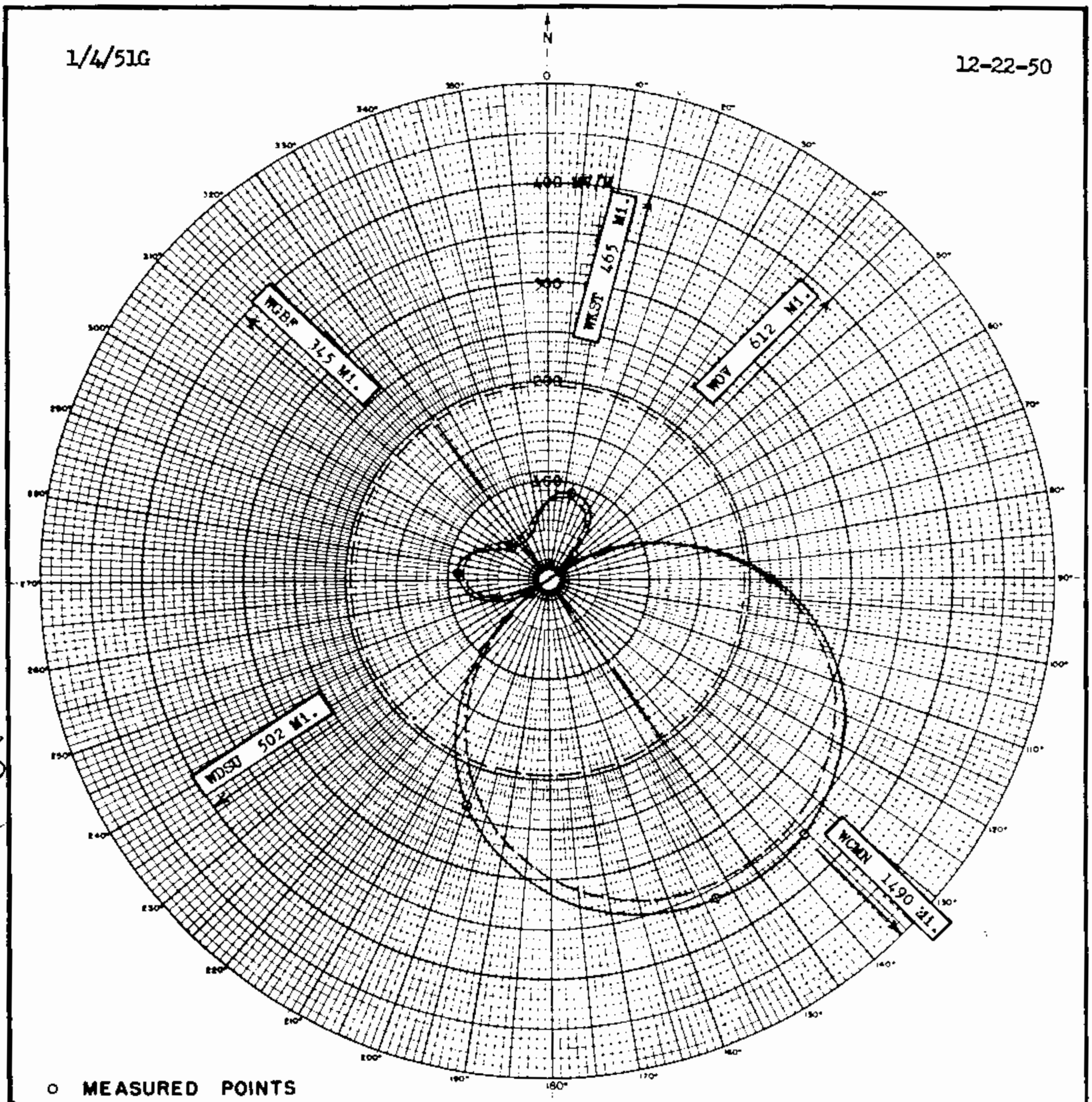
ROBERT M. SILLIMAN

CONSULTING RADIO ENGINEERS

WASHINGTON, D. C.

WANS

MEASURED NIGHT | WANS, ANDERSON, S. C. | 1kw, DA-N | 1280 kc



3-28-62
granted CP
increase
day ND
power to
5 KW.

3-1-63
granted
license
covering
increase
in daytime
power

WANS

HORIZONTAL RADIATION PATTERN

MEASURED ——— CALCULATED - - - -

	NORTH		SOUTH			
ANTENNA	NO. 1	NO. 2	NO. 3	NO. 4	NO. 5	NO. 6
PHASE DEG.	125°	0°	-125°			
HEIGHT DEG.	80°	80°	80°			
FIELD RATIO	1.0	1.3	1.0			
NON-DA ANT.	*					
	ORIENTATION 325° True			SPACING 85°		

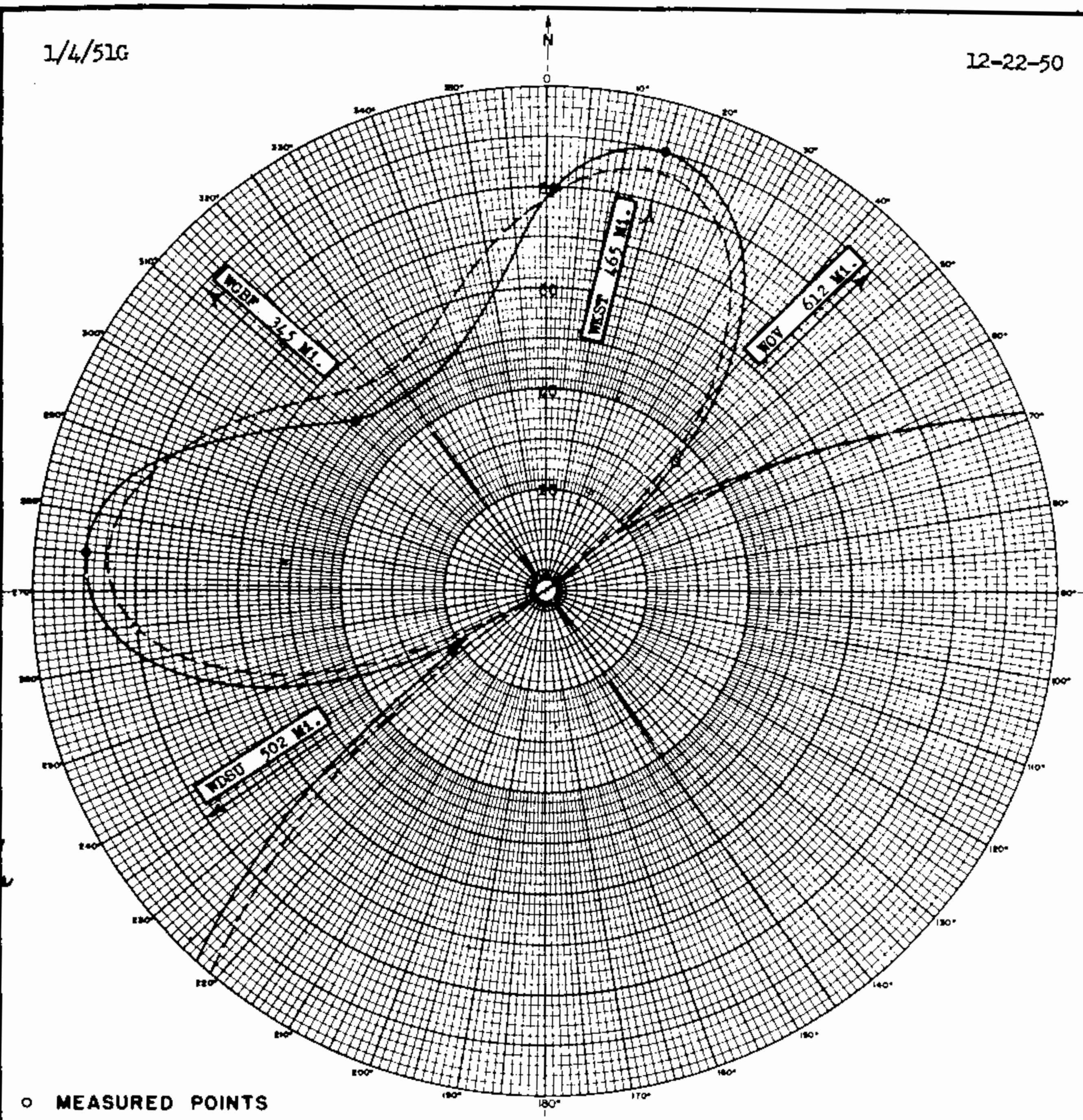
FREQUENCY	1280 KC
ASSIGNMENT	1 Kw.-U(DA-N)
LONGITUDE	82 DEG 40 MIN 15.4 SEC.
LATITUDE	34 DEG 32 MIN 43.6 SEC.
WHEN USED	Nightime
R.M.S. FIELD	195 MV/M (Measured)
DATE	December 1950

ROBERT M. SILLIMAN
CONSULTING RADIO ENGINEERS
WASHINGTON, D. C.

WANS, Anderson, S. C. 1280 kc

WANS

MEASURED NIGHT NULLS — WANS, ANDERSON, S. C. — 1kw, DA-N — 1280 kc



3-1-63 granted license covering increase in daytime power.

WANS

ENLARGED VIEW
HORIZONTAL RADIATION PATTERN

MEASURED ——— CALCULATED - - - -

	NORTH		SOUTH			
ANTENNA	NO. 1	NO. 2	NO. 3	NO. 4	NO. 5	NO. 6
PHASE DEG.	125°	0°	-125°			
HEIGHT DEG.	80°	80°	80°			
FIELD RATIO	1.0	1.3	1.0			
NON-DA ANT.	•					
	ORIENTATION 325° True			SPACING 85°		

FREQUENCY:	1280 KC
ASSIGNMENT:	1 Kw.-U(DA-N)
LONGITUDE:	82 DEG. 40 MIN. 15.4 SEC.
LATITUDE:	34 DEG. 32 MIN. 43.6 SEC.
WHEN USED:	Nighttime
R.M.S. FIELD:	195 MV/M
DATE:	December 1950

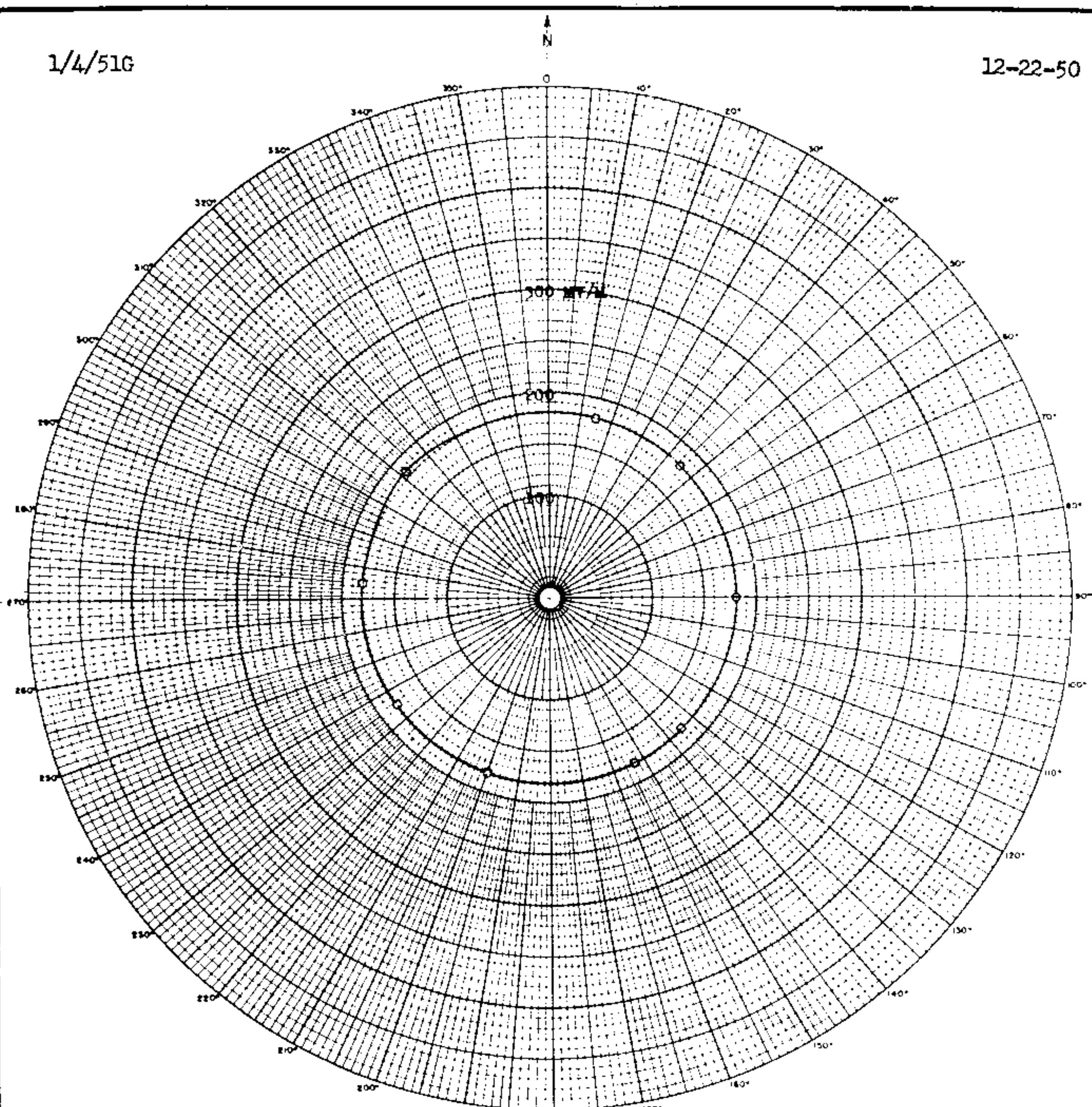
ROBERT M. SILLIMAN
CONSULTING RADIO ENGINEERS
WASHINGTON, D. C.

WANS

MEASURED
DAY (NON-DA)

WANS, ANDERSON, S. C.   1kw, DA-N   1280 kc

ND/ pattern to file



o MEASURED POINTS

WANS

HORIZONTAL RADIATION PATTERN

NON-DIRECTIONAL OPERATION

ANTENNA	NO. 1	NO. 2	NO. 3	NO. 4	NO. 5	NO. 6
PHASE DEG						
HEIGHT DEG						
FIELD RATIO						
NON-DA ANT.	*					

FREQUENCY	1280 KC
ASSIGNMENT	1 Kw.-U(DA-N)
LONGITUDE	82 DEG. 40 MIN 15.4 SEC.
LATITUDE	34 DEG. 32 MIN. 43.6 SEC.
WHEN USED	Daytime
RMS FIELD	181 MV/M
DATE	December 1950

ROBERT M. SILLIMAN
CONSULTING RADIO ENGINEERS
WASHINGTON, D. C.

WANS, Anderson, S. C. 1280 kc

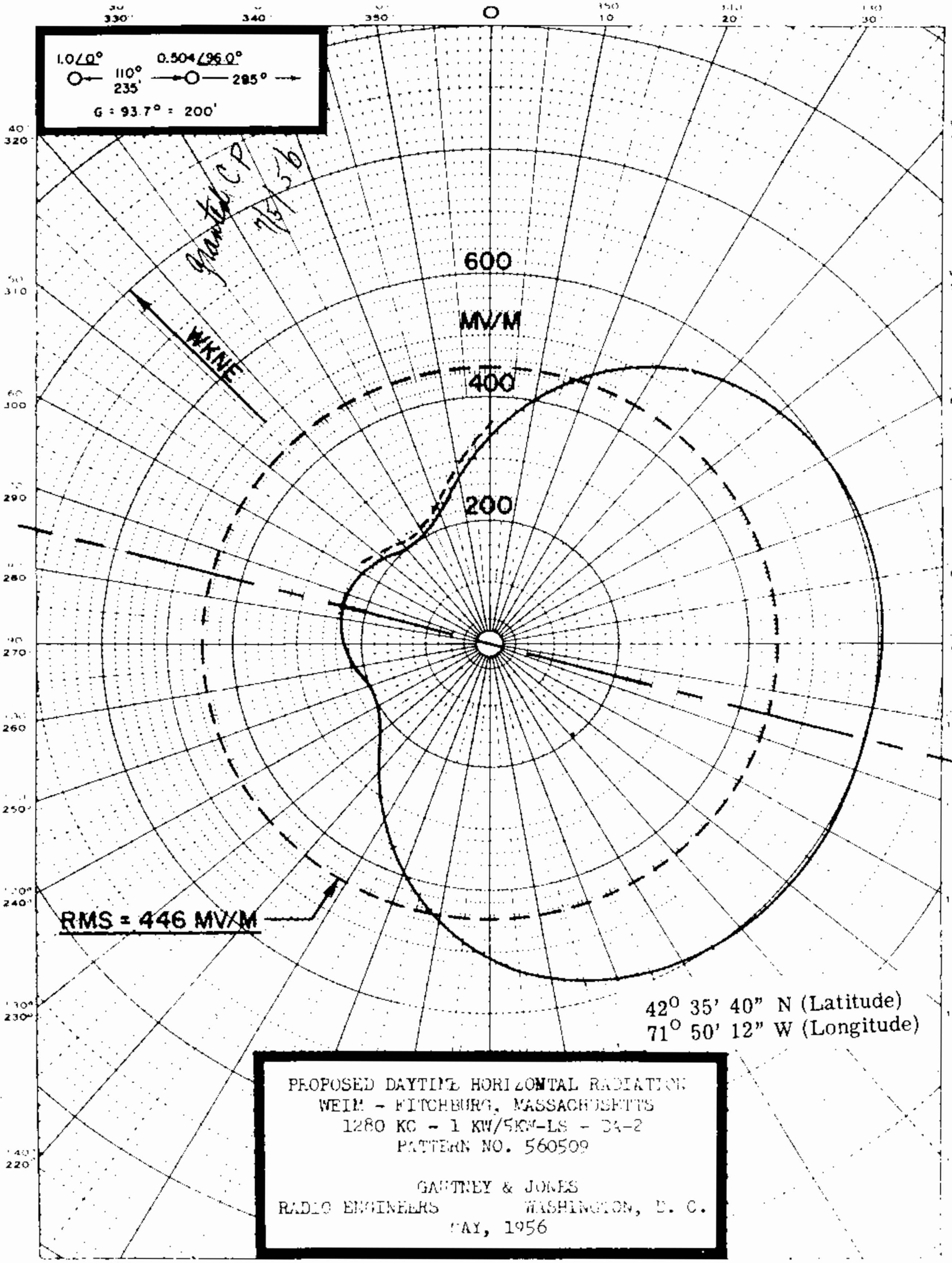
PROPOSED
DAY (5/22/56g)

STATION WEIM
FITCHBURG, MASS.

1 KW, 5 KW
DA- 2, U

1280 KC

WE, M

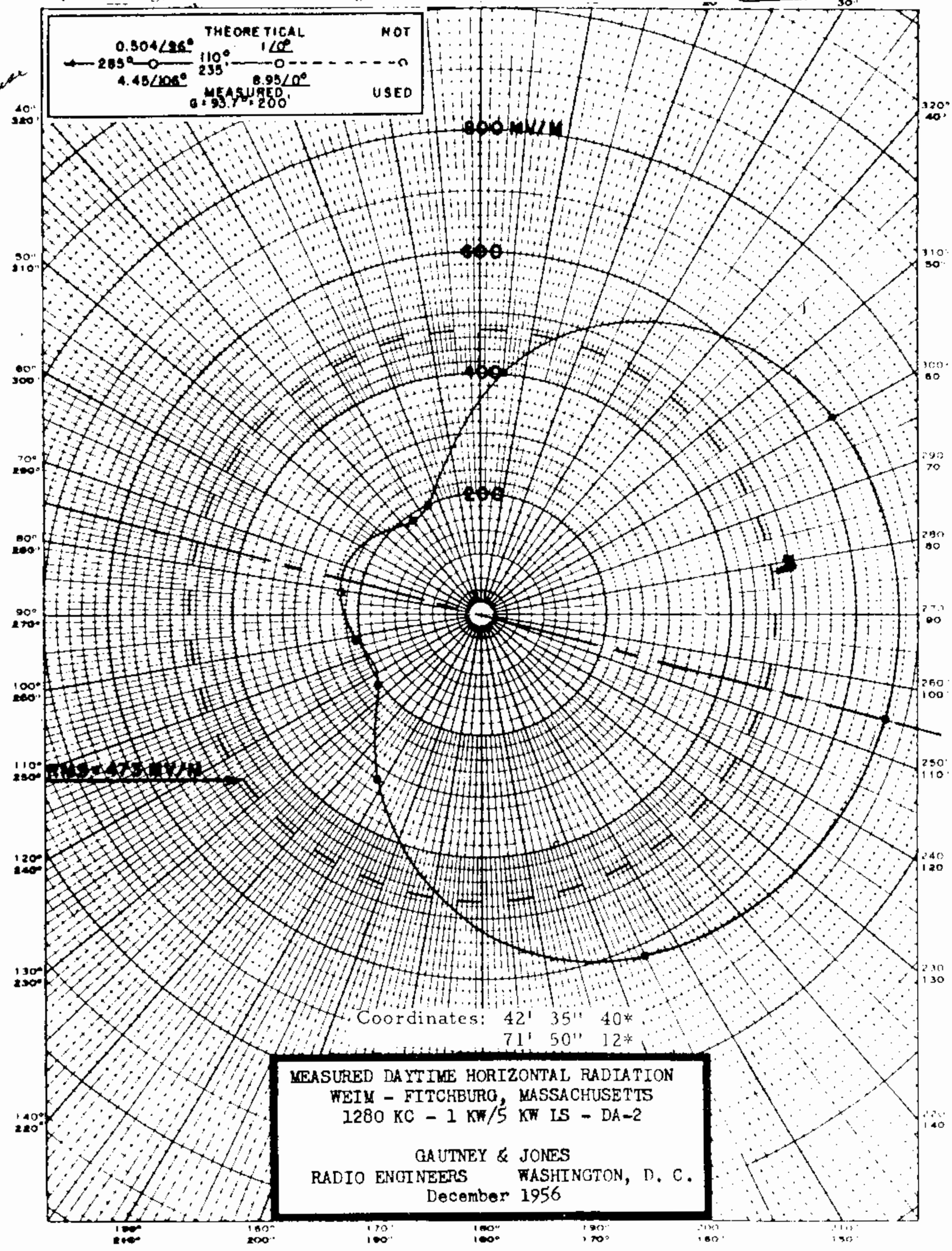


FCC File No. BP-10,467 Accepted 5-21-56 WEIM, Fitchburg, Mass. 1280 KC

WEIM

MEASURED DAY (1-29-57g) Station W E I M Fitchburg, Mass. 1 KW-D, 5KW-N DA-2, U 1280 K C

ranted license
4/1/57



FCC File No. BL-6476 Accepted 1-10-57 Station W E I M Fitchburg, Mass. 1280 K C

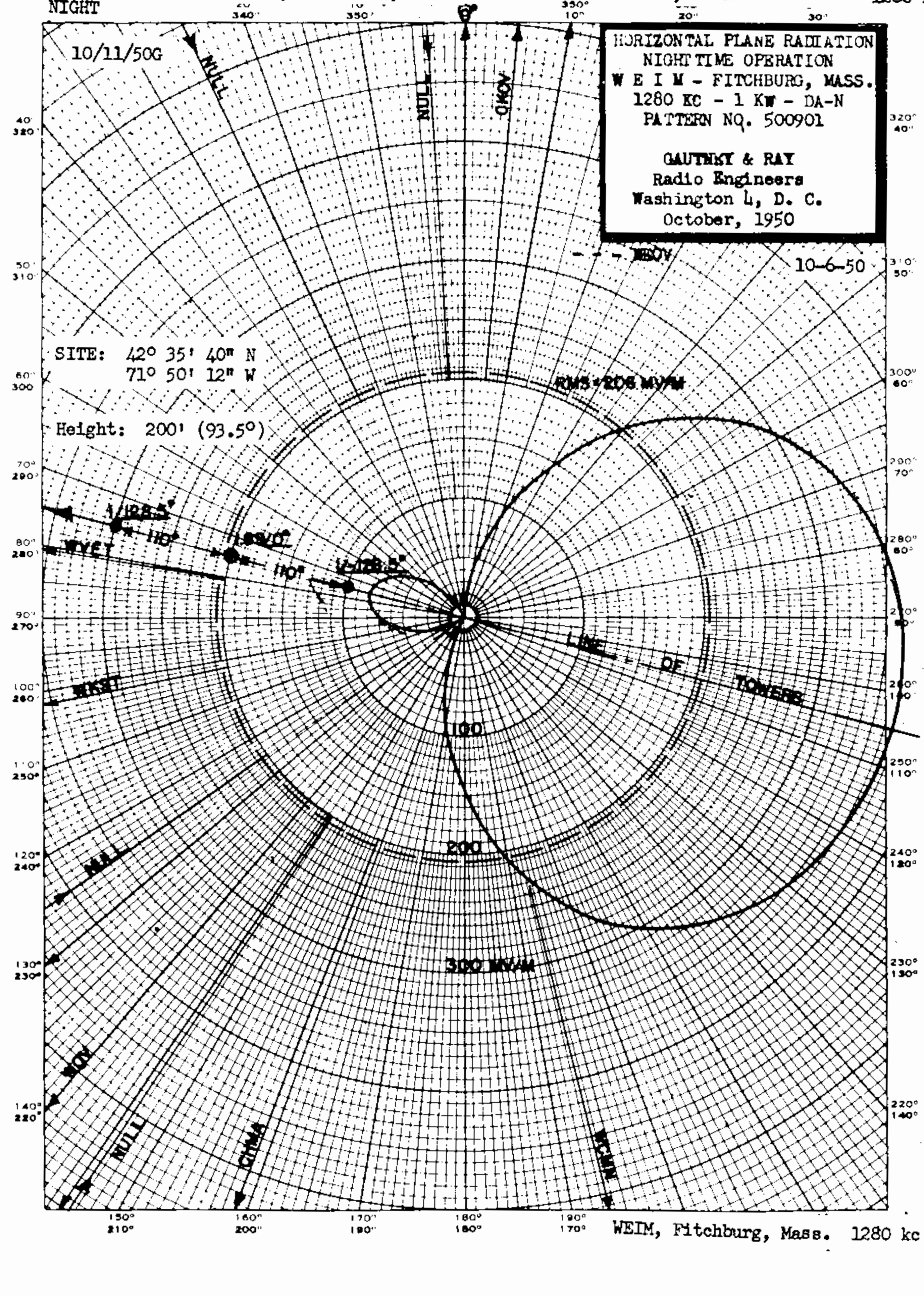
WEIM

PROPOSED
NIGHT

WEIM, FITCHBURG, MASS.

1kw, DA-N

1280 kc



WEIM, Fitchburg, Mass. 1280 kc

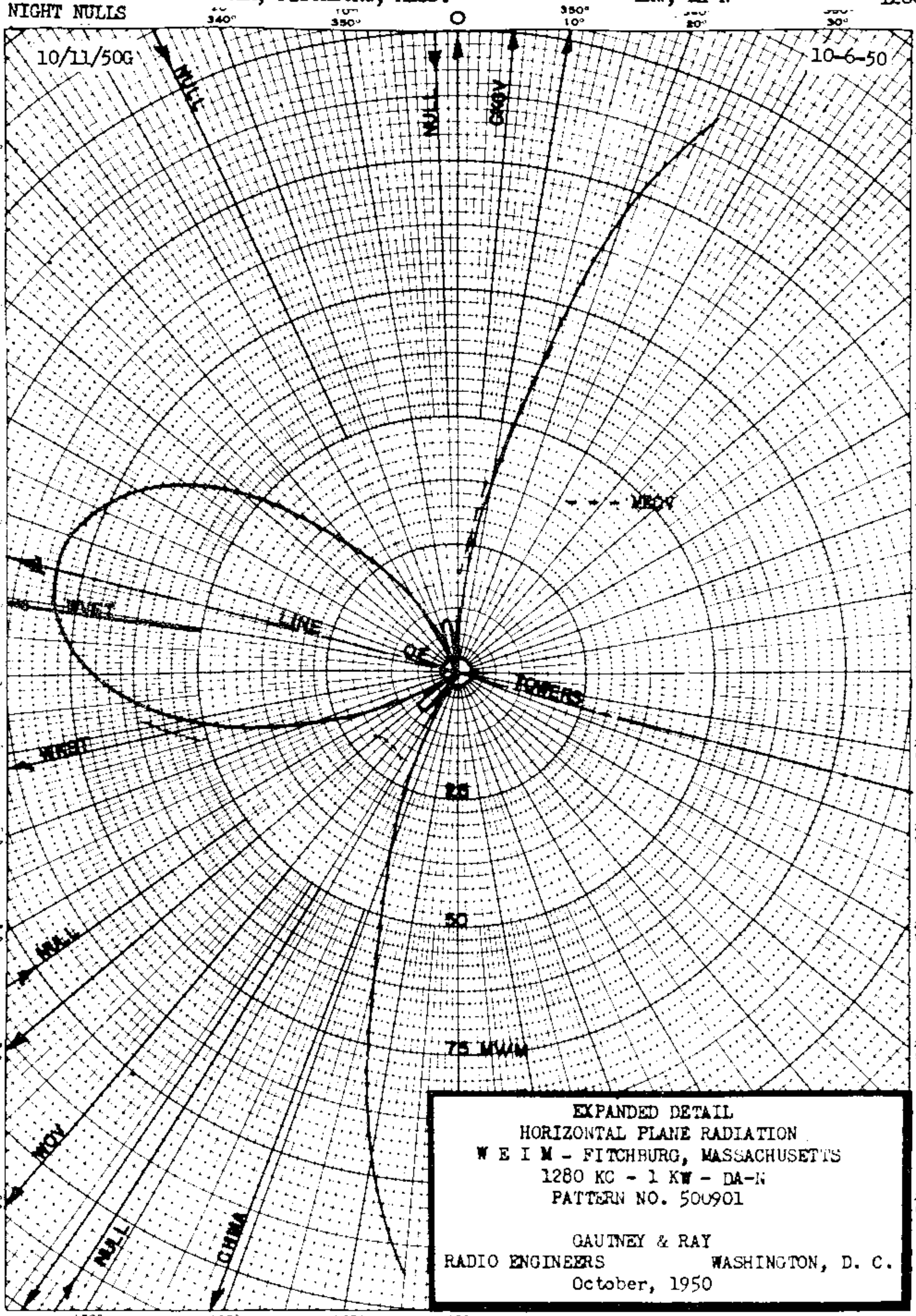
WEIM

PROPOSED
NIGHT NULLS

WEIM, FITCHBURG, MASS.

1kw, DA-N

1280 kc



EXPANDED DETAIL
HORIZONTAL PLANE RADIATION
W E I M - FITCHBURG, MASSACHUSETTS
1280 KC - 1 KW - DA-N
PATTERN NO. 500901

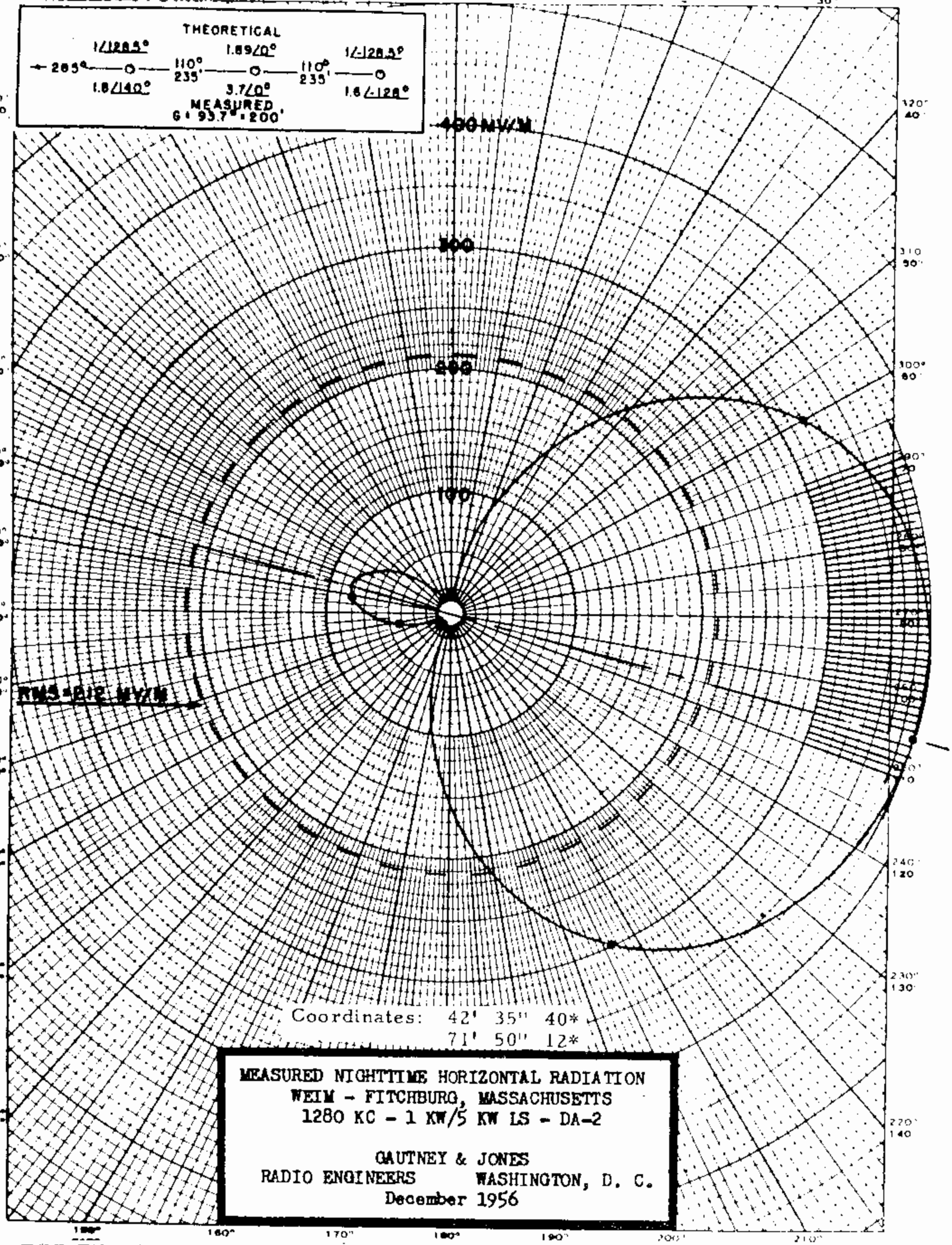
GAUTNEY & RAY
RADIO ENGINEERS WASHINGTON, D. C.
October, 1950

WEIM, Fitchburg, Mass. 1280 kc

WEIM
1280 KC

MEASURED NIGHT Station W E I M 1 KW-N, 5 KW-D
(1-29-57g) Fitchburg, Mass. DA-2, U 1280 K C

granted license
4/1/57



Coordinates: 42' 35" 40*
71' 50" 12*

MEASURED NIGHTTIME HORIZONTAL RADIATION
WEIM - FITCHBURG, MASSACHUSETTS
1280 KC - 1 KW/5 KW LS - DA-2

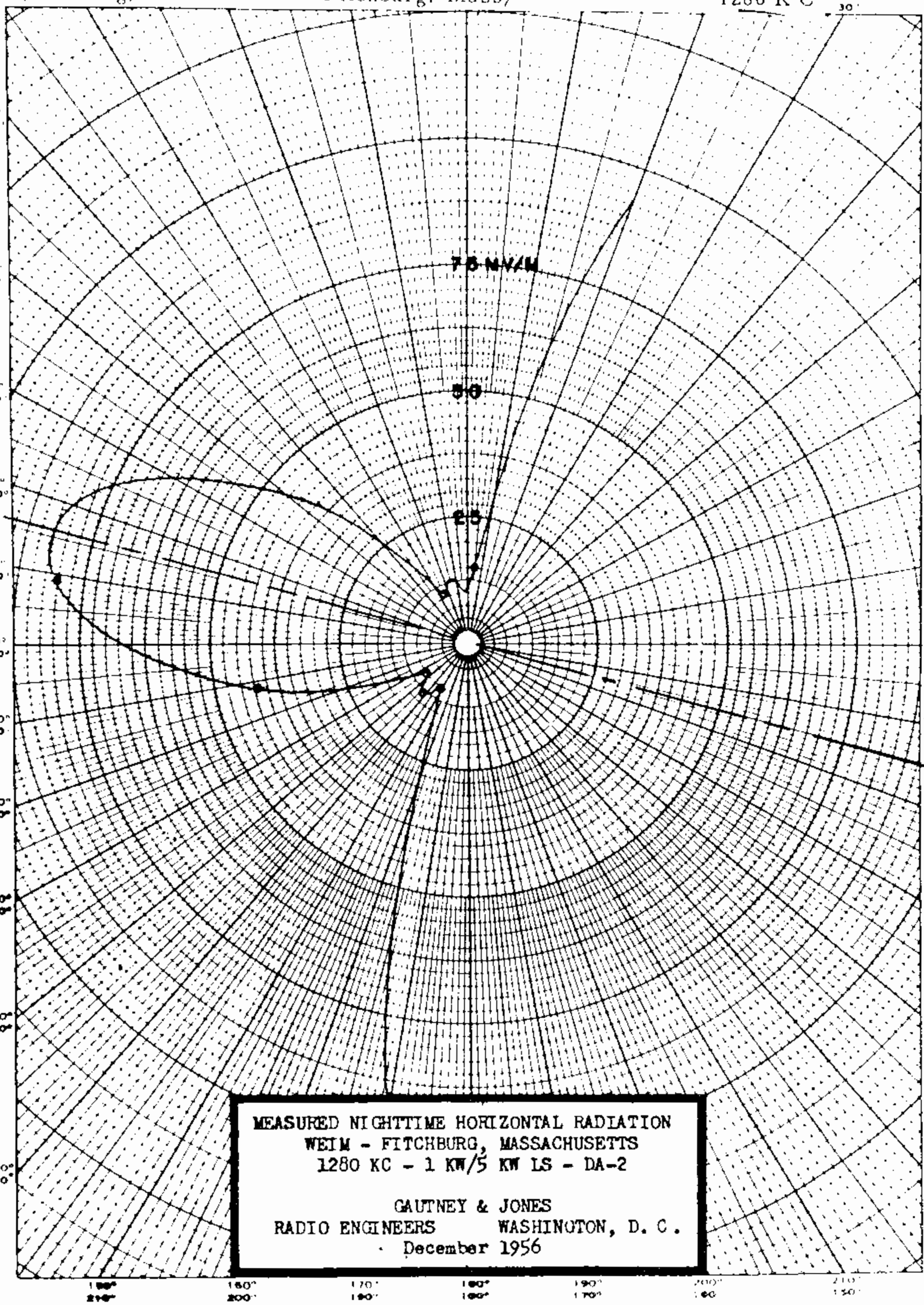
GAUTNEY & JONES
RADIO ENGINEERS WASHINGTON, D. C.
December 1956

FCC File No. BL-6476
Accepted 1-10-57
WEIM
Fitchburg, Mass. 1280 K C

WEIM
1280 KC

MEASURED NIGHT NULL Station W E I M 1KW-N, 5KW-D, DA-2, U
(1-29-57g) Fitchburg, Mass/ 1280 K C

granted license
4/1/57



FCC File No. Accepted 1-10-57 Station WEIM
BL-6476 Fitchburg, Mass. 1280 KC

WGBF

SUPPLEMENTAL AND CORRECTED
DIRECTIONAL ANTENNA DESCRIPTION SHEET
Issued: ______________ 19__

Station : WGBF Main Studio: Evansville, Indiana

Frequency : 1280 KHz Power : 1 kW Night 5 kW Day

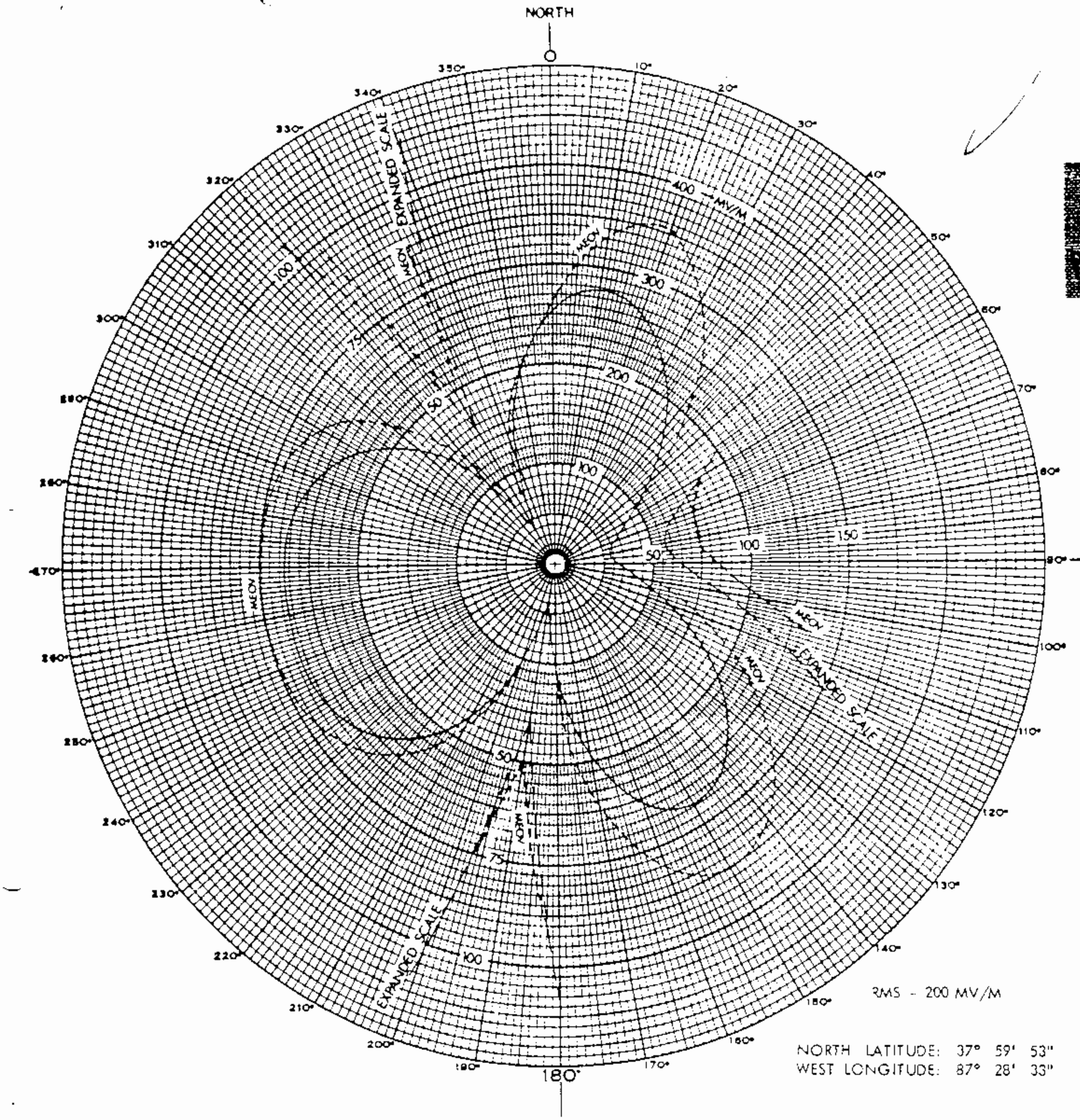
Notification: 1782 Date : October 26, 1979 Class: III

GEOGRAPHICAL LOCATION OF THE
CENTER OF THE ANTENNA SYSTEM: North Latitude: 37 ° 59 ' 53 "
West Longitude: 87 ° 28 ' 33 "

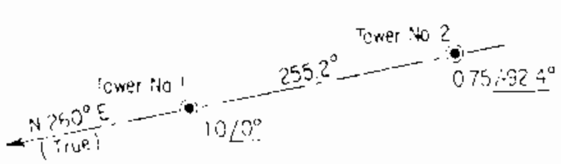
Predicted effective Day Field: (omnidirectional) 204 mV/m at rated power.
Predicted effective Night Field: 200 mV/m at rated power.

Note: The purposes of this notification is to provcide changes in MEOV's

KGBF



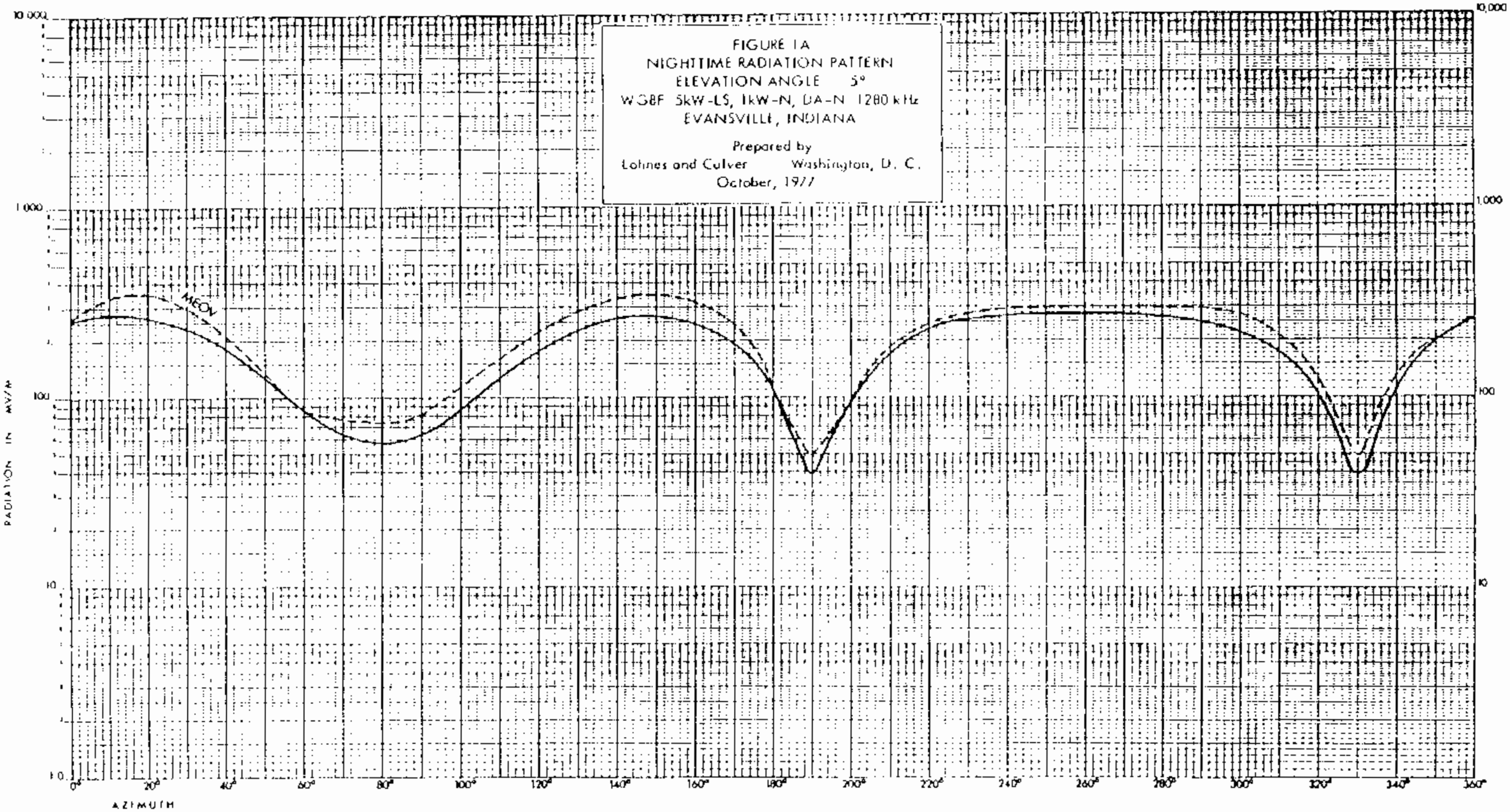
NORTH LATITUDE: 37° 59' 53"
WEST LONGITUDE: 87° 28' 33"



H = 123°

FIGURE 1
NIGHTTIME HORIZONTAL PLANE
RADIATION PATTERN
WGBF 5kW-LS, 1kW-N, DA-N 1280 kHz
EVANSVILLE, INDIANA

Prepared by
Lohnes and Culver Washington, D. C.
October, 1977



ELEVATION ANGLE - 5°

KGBF

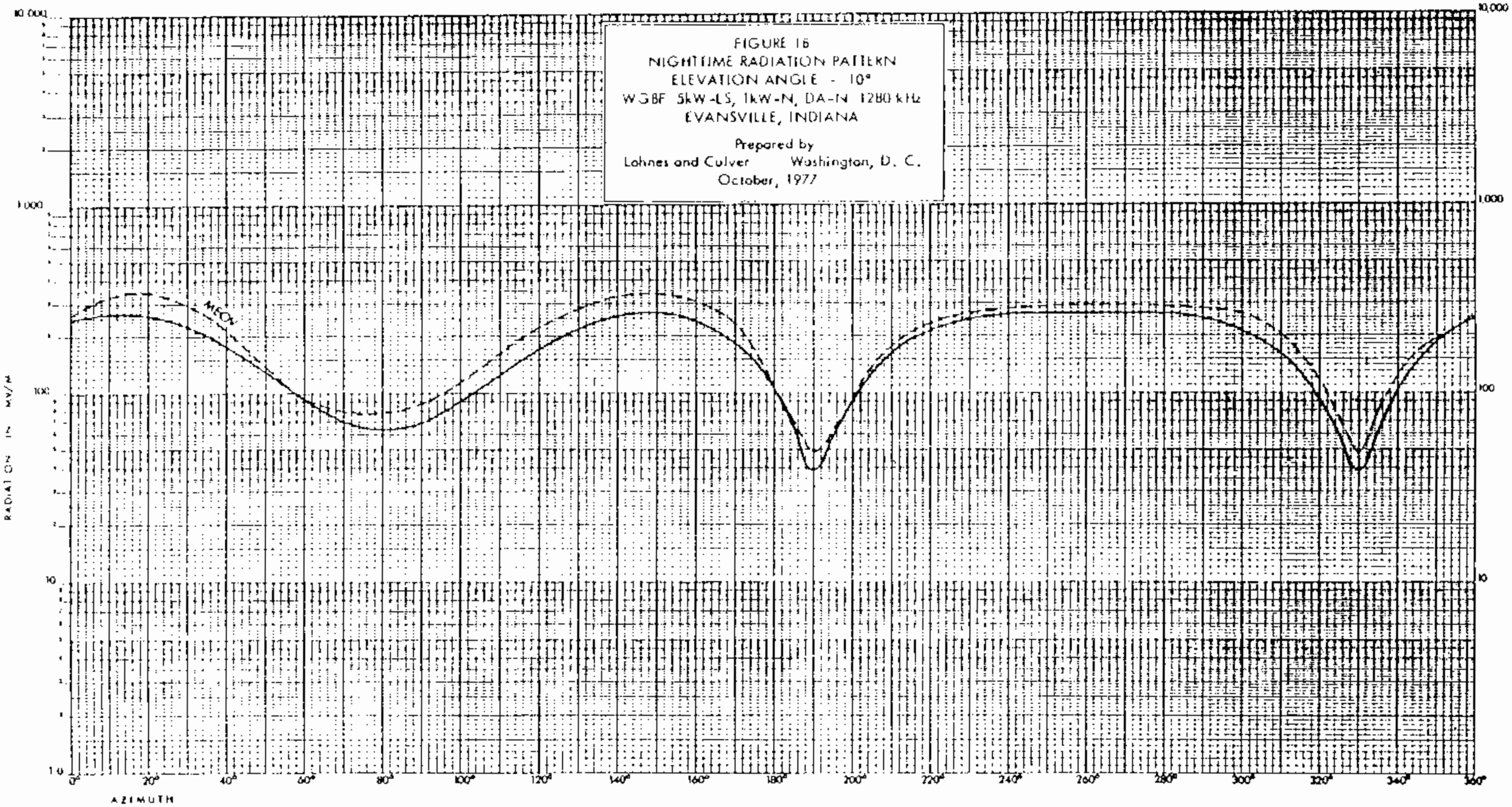
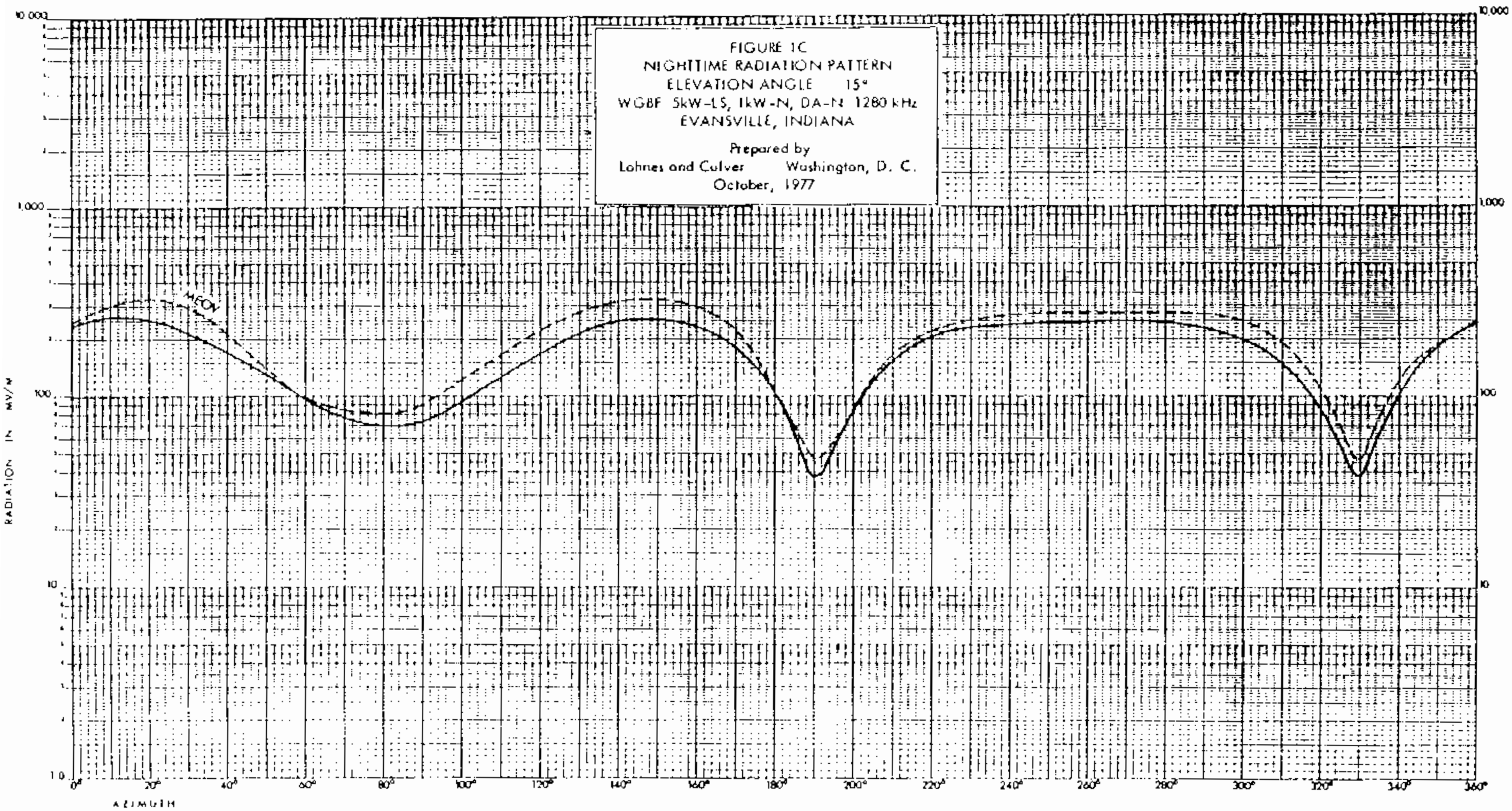


FIGURE 16
NIGHTTIME RADIATION PATTERN
ELEVATION ANGLE - 10°
WGBF 5kW-LS, 1kW-N, DA-N 1280 kHz
EVANSVILLE, INDIANA

Prepared by
Lohnes and Culver Washington, D. C.
October, 1977

ELEVATION ANGLE - 10°

KGBF



ELEVATION ANGLE = 15°

KGBF

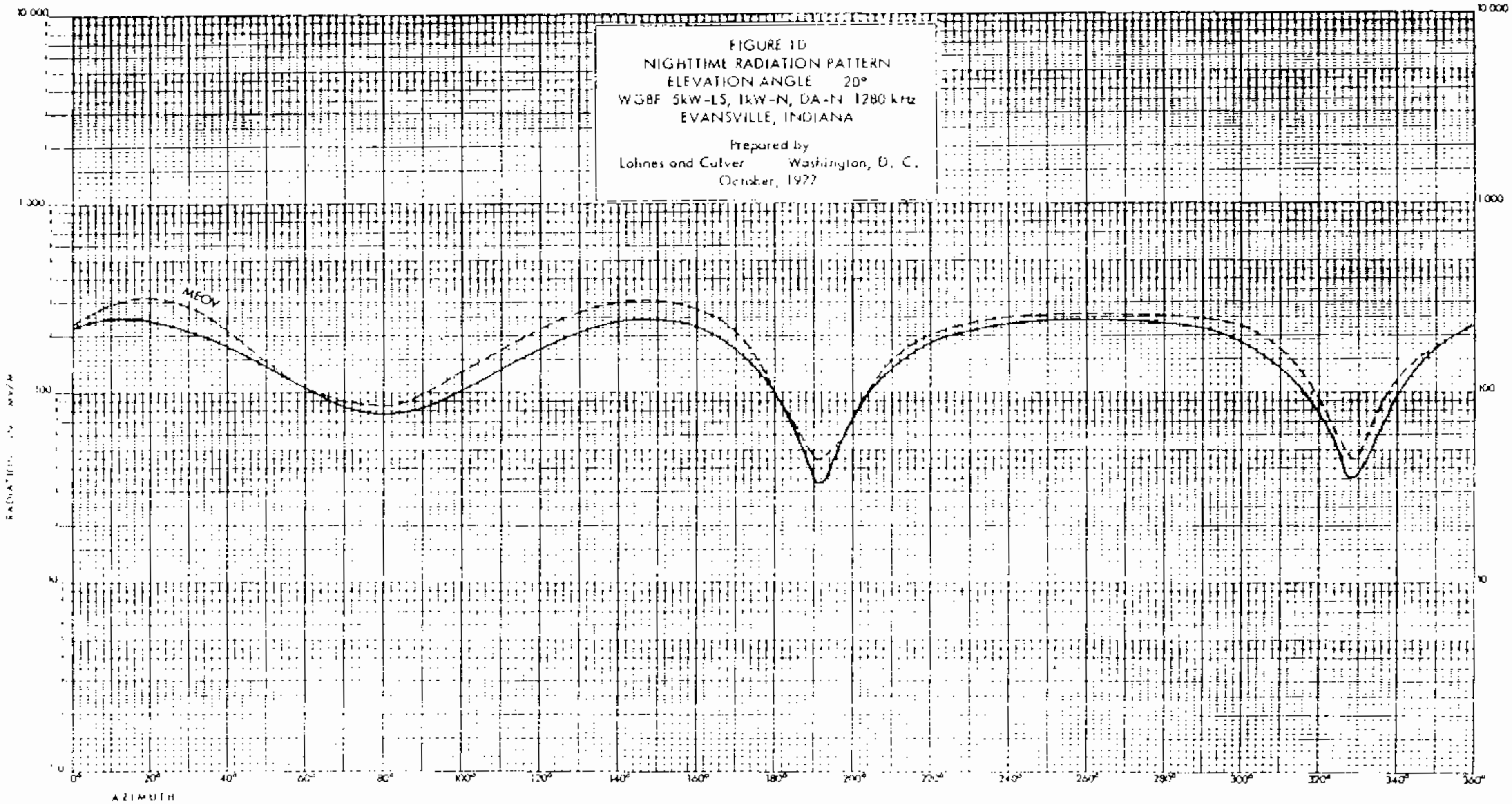
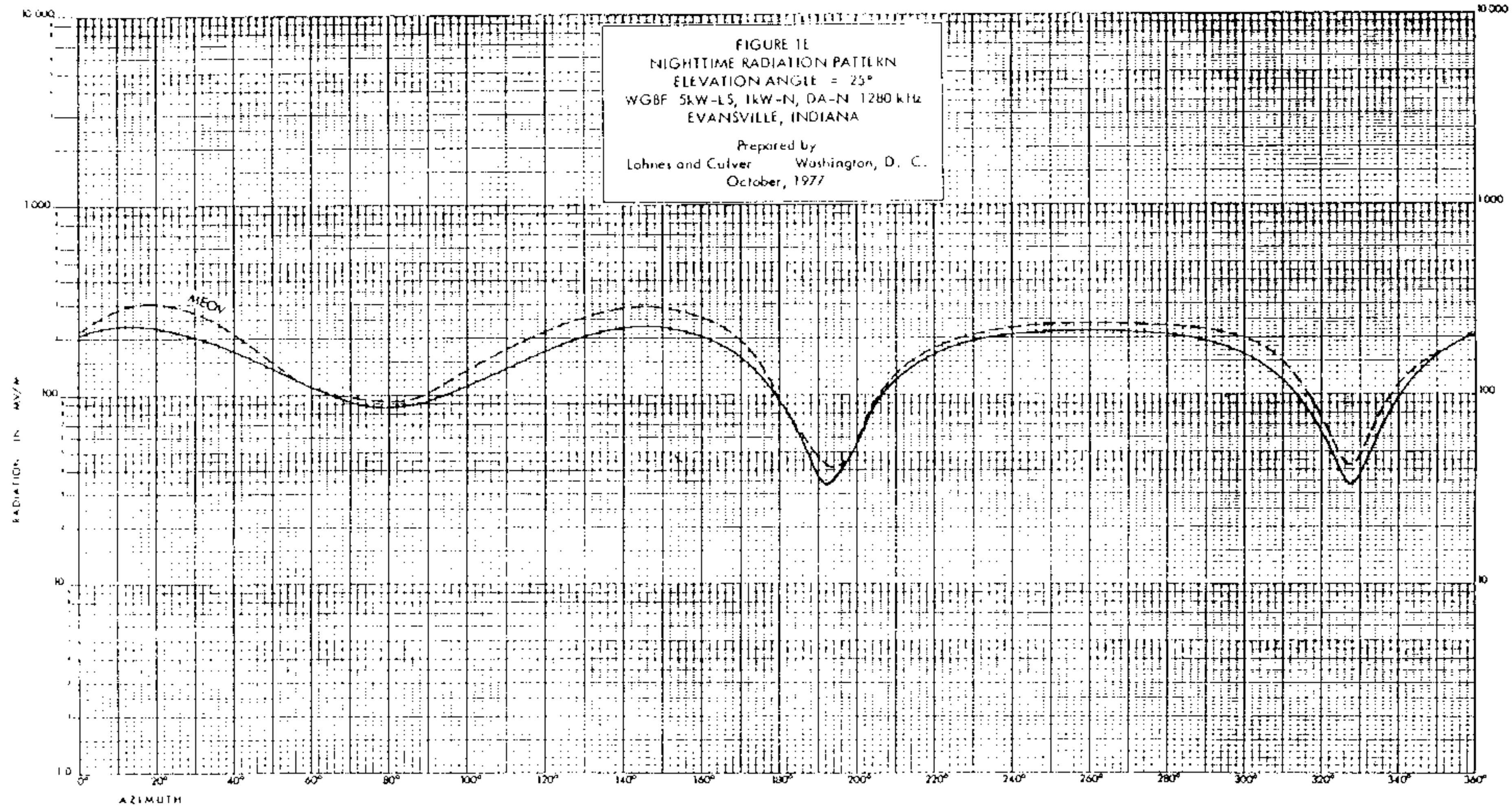


FIGURE 1D
NIGHTTIME RADIATION PATTERN
ELEVATION ANGLE 20°
WGBF 5kW-LS, 1kW-N, DA-N 1280 kHz
EVANSVILLE, INDIANA

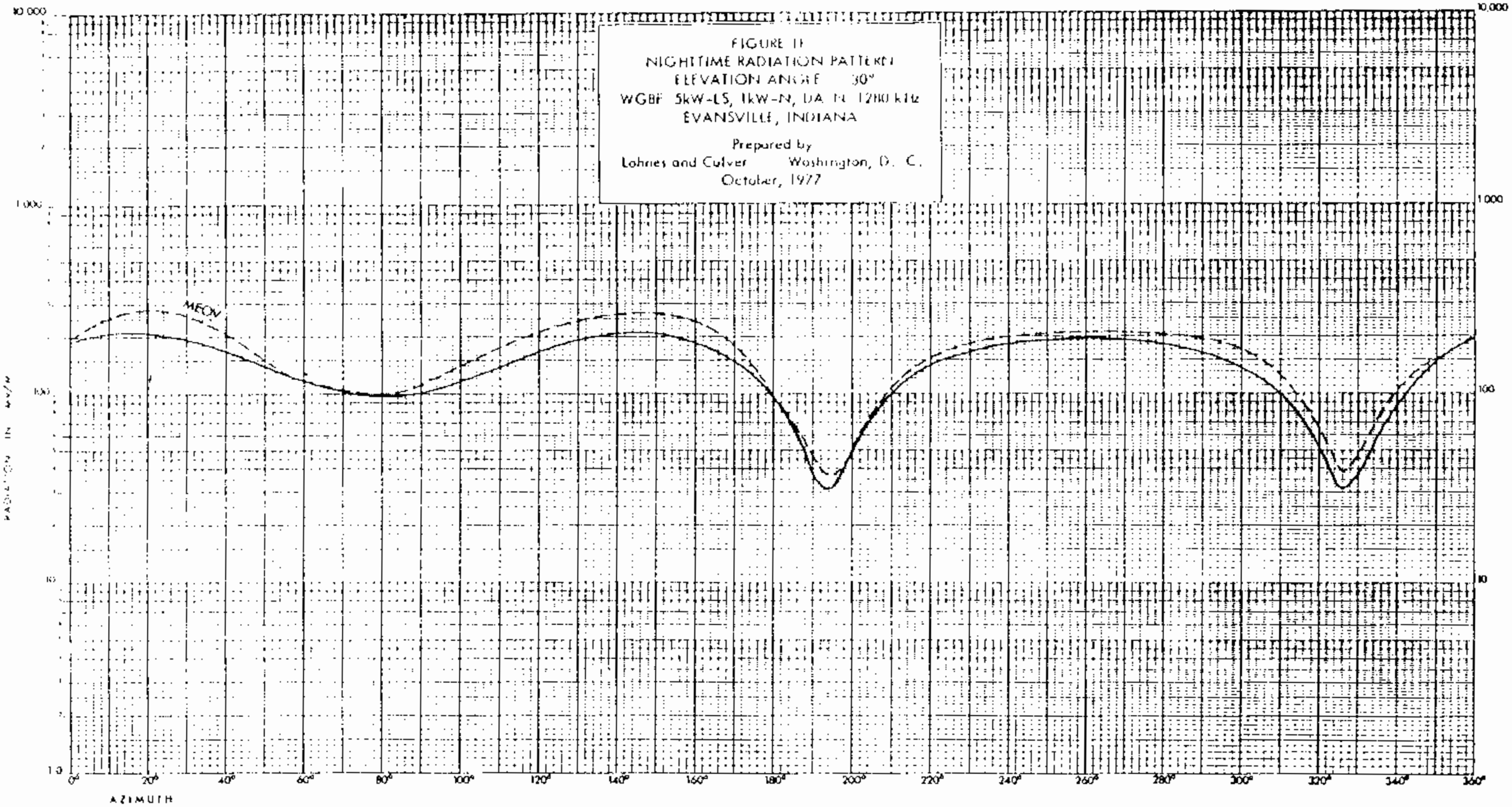
Prepared by
Lohnes and Culver Washington, D. C.
October, 1977

ELEVATION ANGLE 20°



ELEVATION ANGLE - 25°

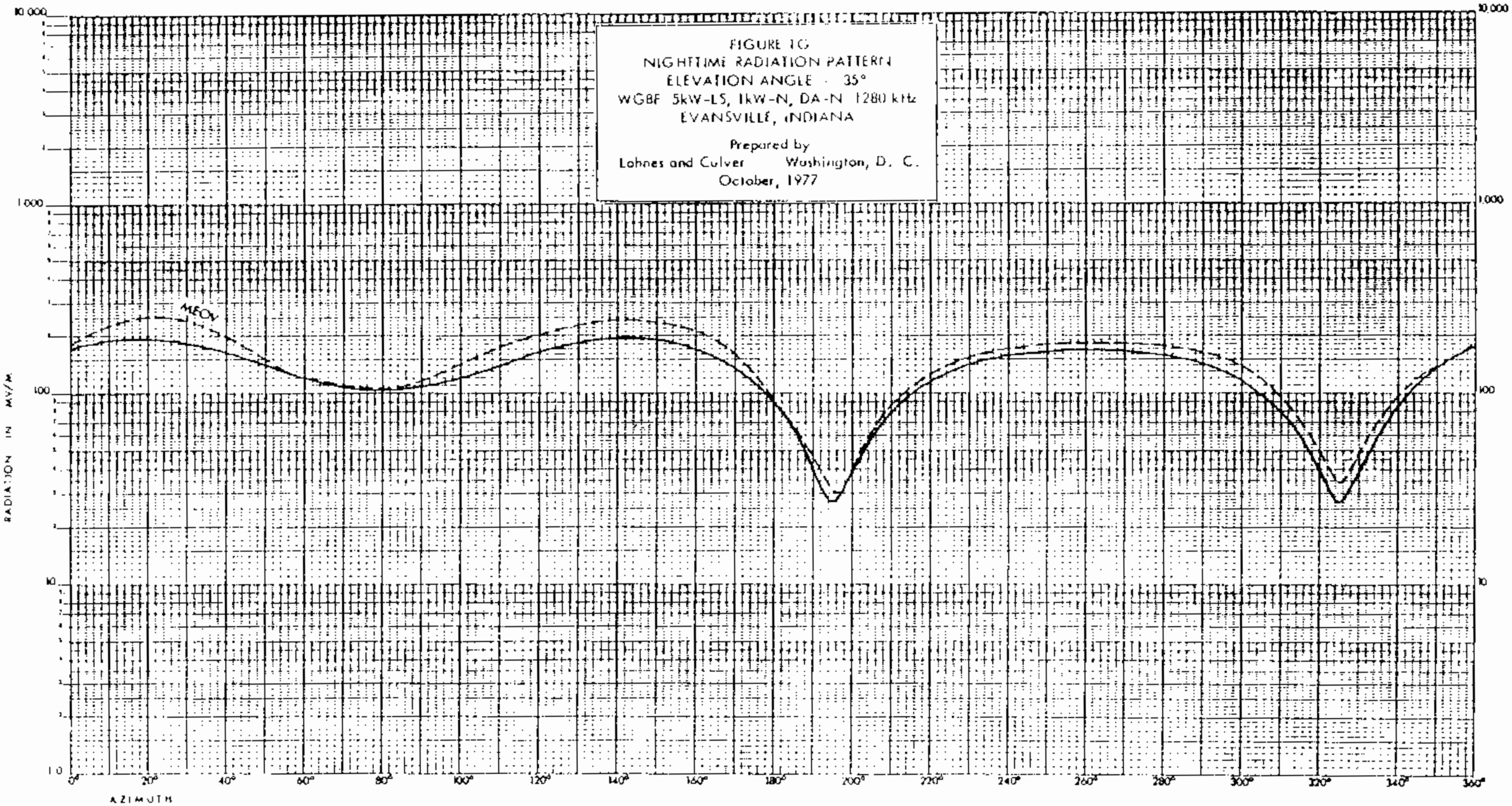
KGBF



ELEVATION ANGLE - 30°

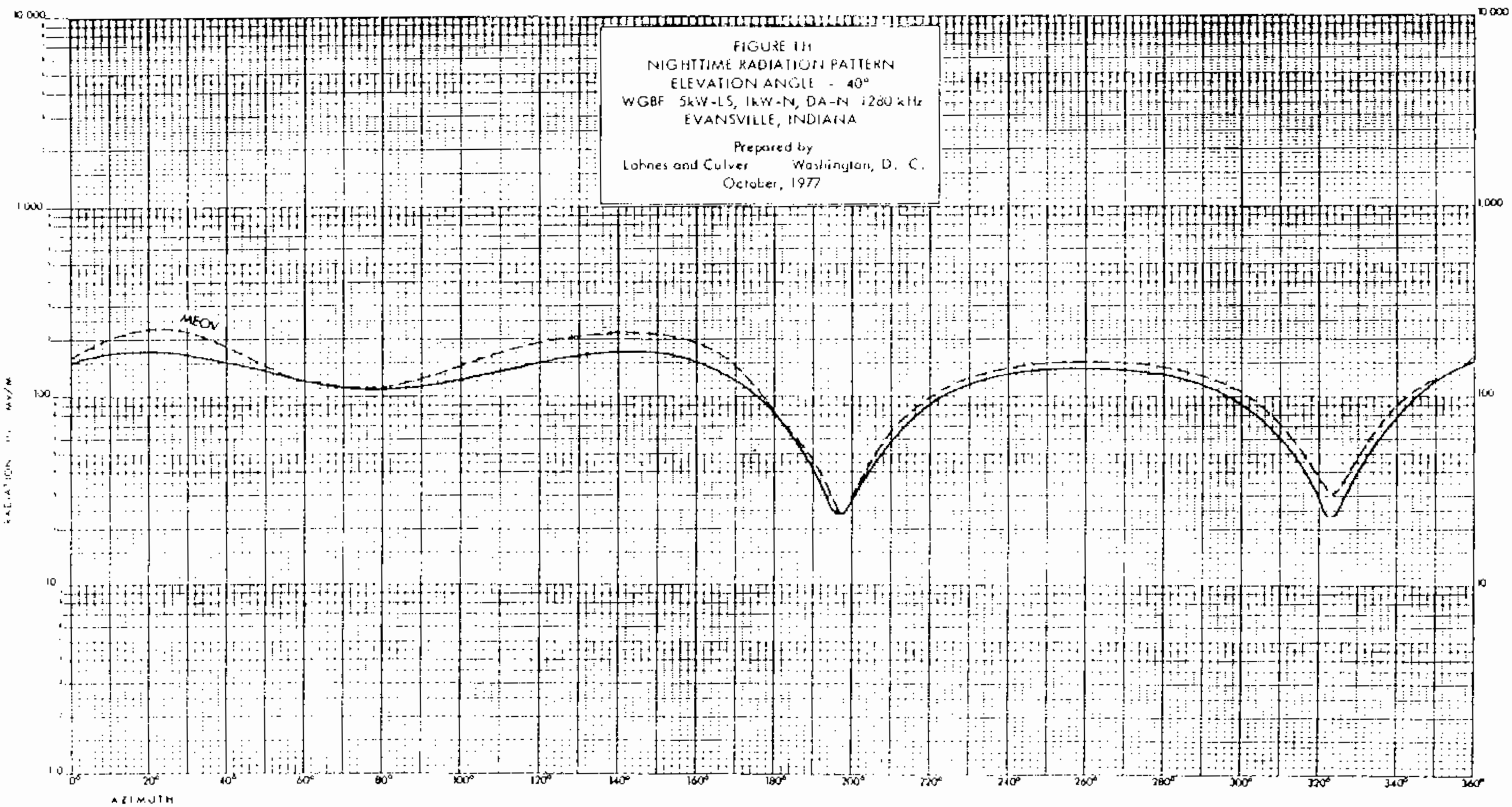
See 124° @

KGBF



ELEVATION ANGLE - 35°

KGBF



ELEVATION ANGLE - 40°

KGBF

KGBF

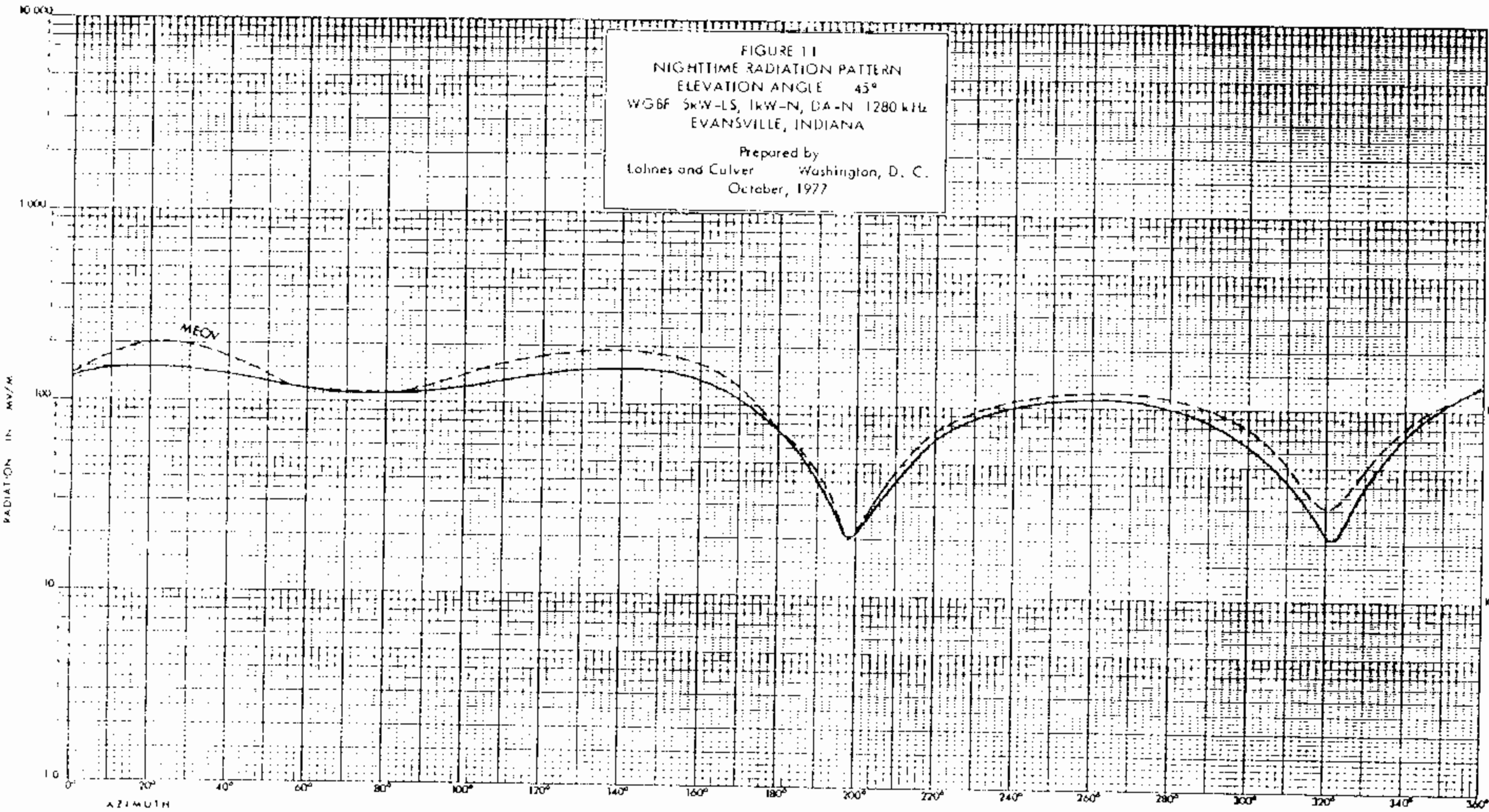
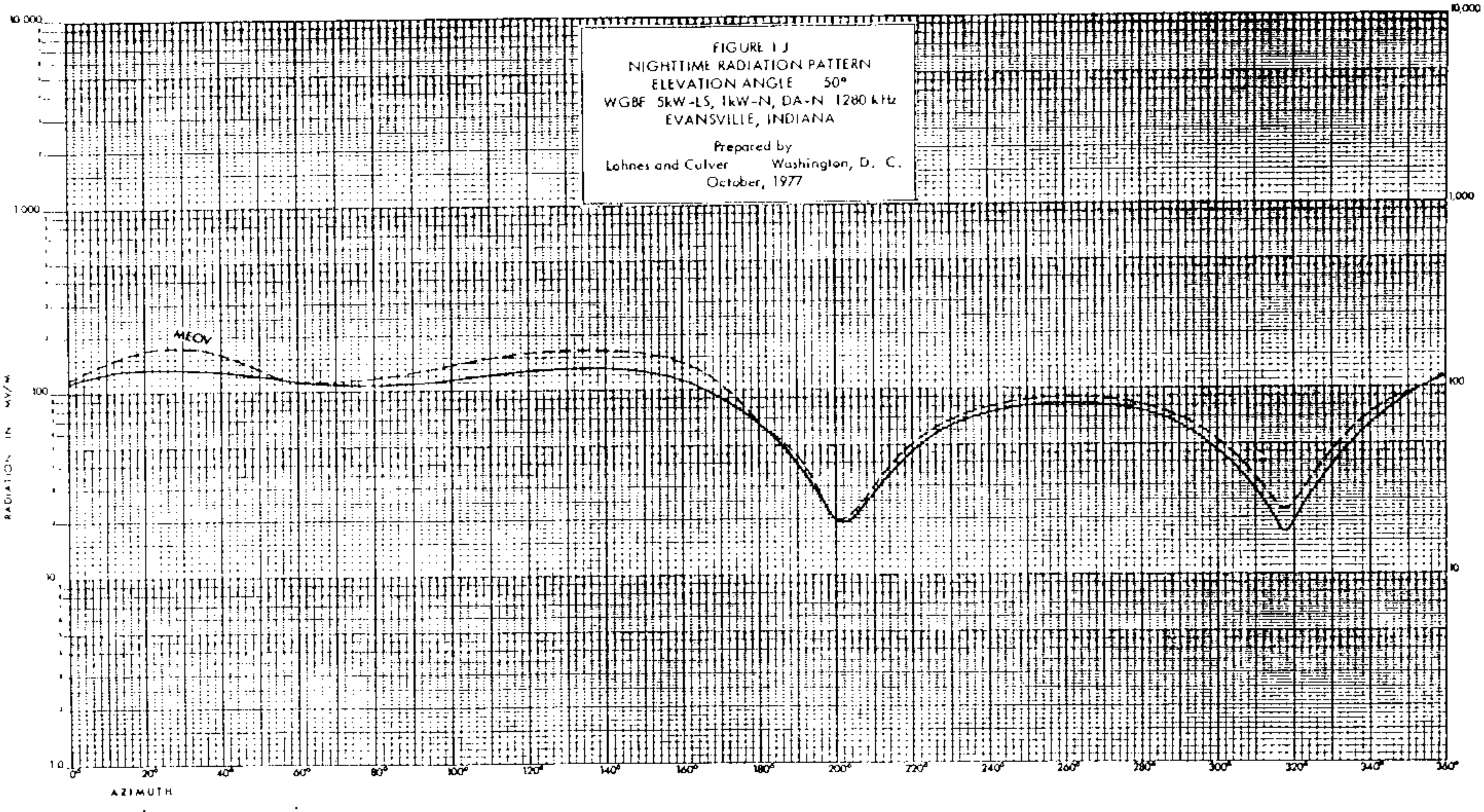


FIGURE 11
NIGHTTIME RADIATION PATTERN
ELEVATION ANGLE 45°
WGBF 5kW-LS, 1kW-N, DA-N 1280 kHz
EVANSVILLE, INDIANA

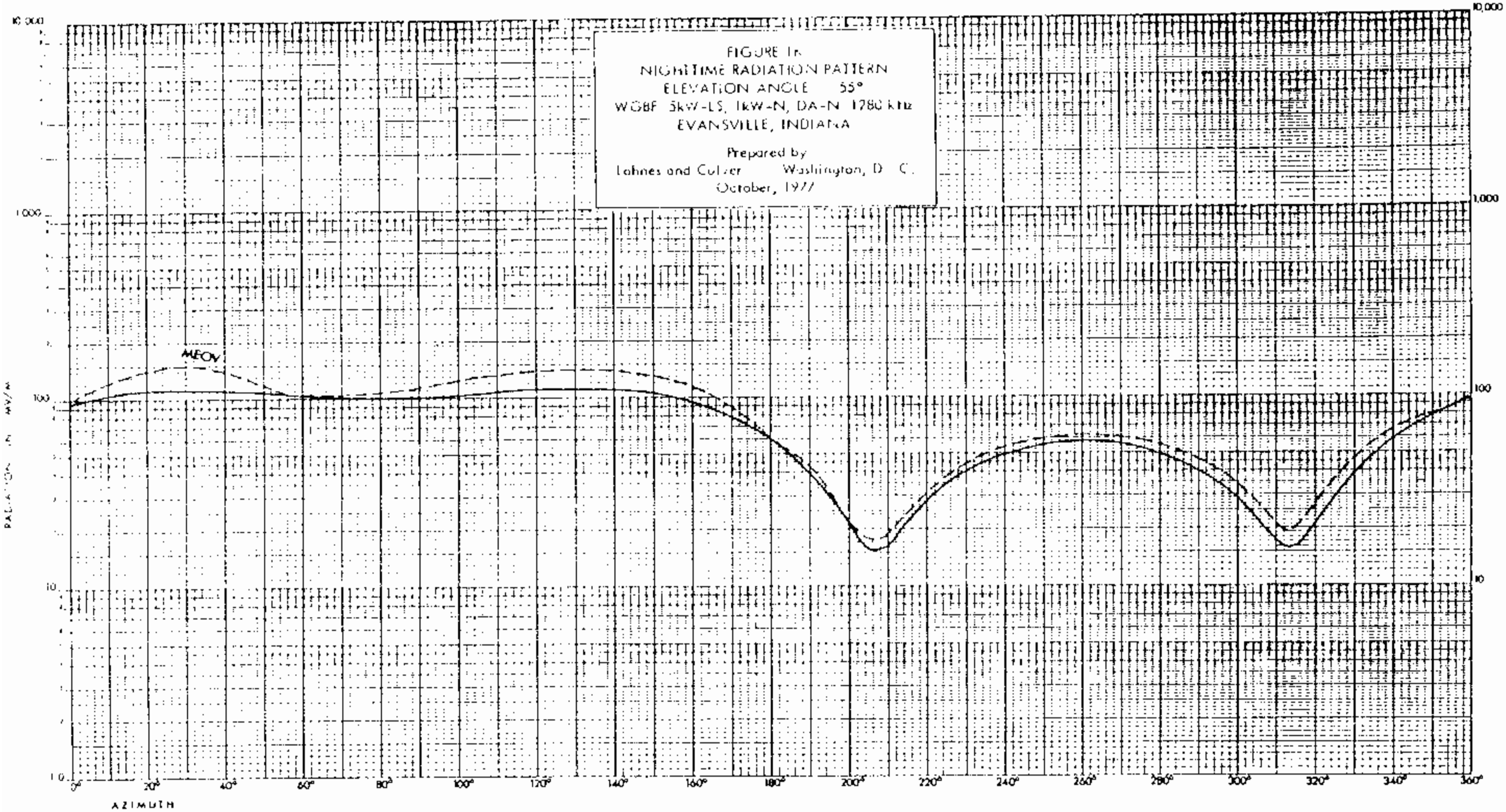
Prepared by
Lohnes and Culver Washington, D. C.
October, 1977

ELEVATION ANGLE - 45°



ELEVATION ANGLE = 50°

KGBF



ELEVATION ANGLE - 55°

KGBF

KGBF

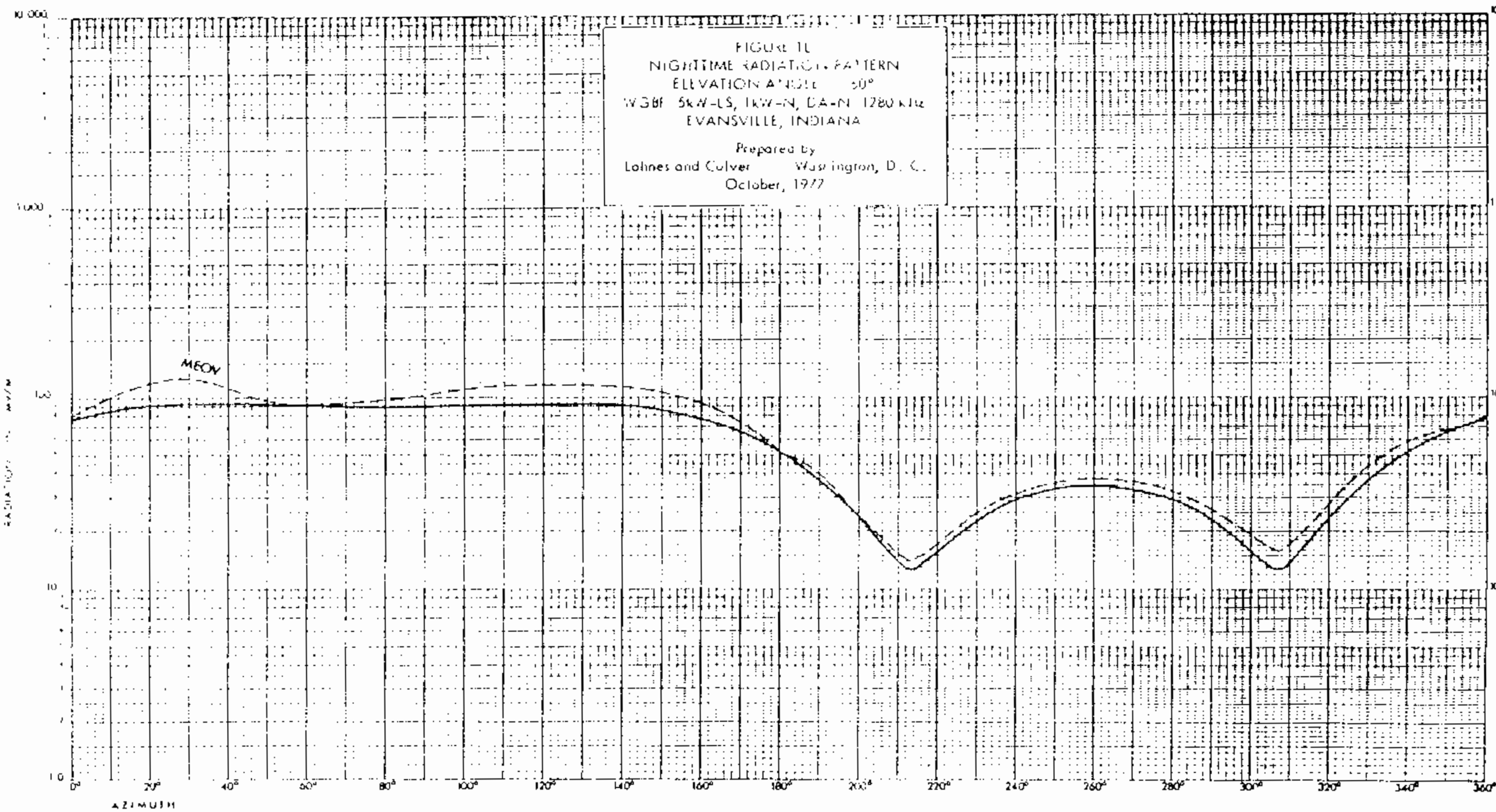


FIGURE 1L
NIGHTTIME RADIATION PATTERN
ELEVATION ANGLE 60°
WGBF 5kW-LS, 1kW-N, DA-N 1280 kHz
EVANSVILLE, INDIANA

Prepared by
Lohnes and Culver Washington, D. C.
October, 1977

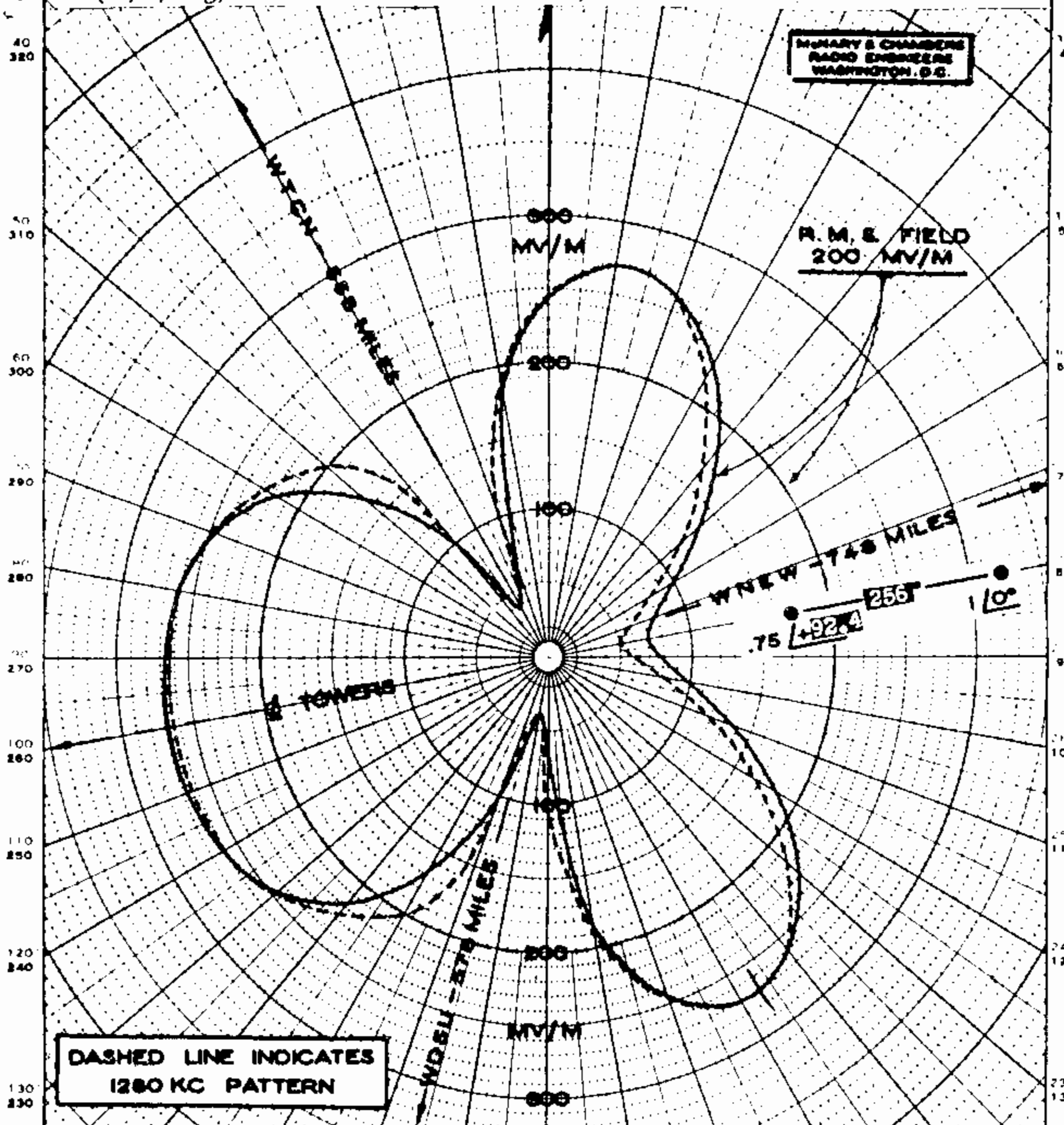
ELEVATION ANGLE - 60°

WGBF

PROPOSED NIGHT
(2/7/57g)

Station WGBF
Evansville, Indiana

1KW,5KW-LS,DA-N,U
1280KC



— W G B F —
EVANSVILLE, INDIANA
COMPUTED HORIZONTAL PLANE PATTERN
1280 ~~1250~~ KC — 1 KW
JANUARY 1940

FCC File No.
BP-1031

WGBF
Evansville, Indiana

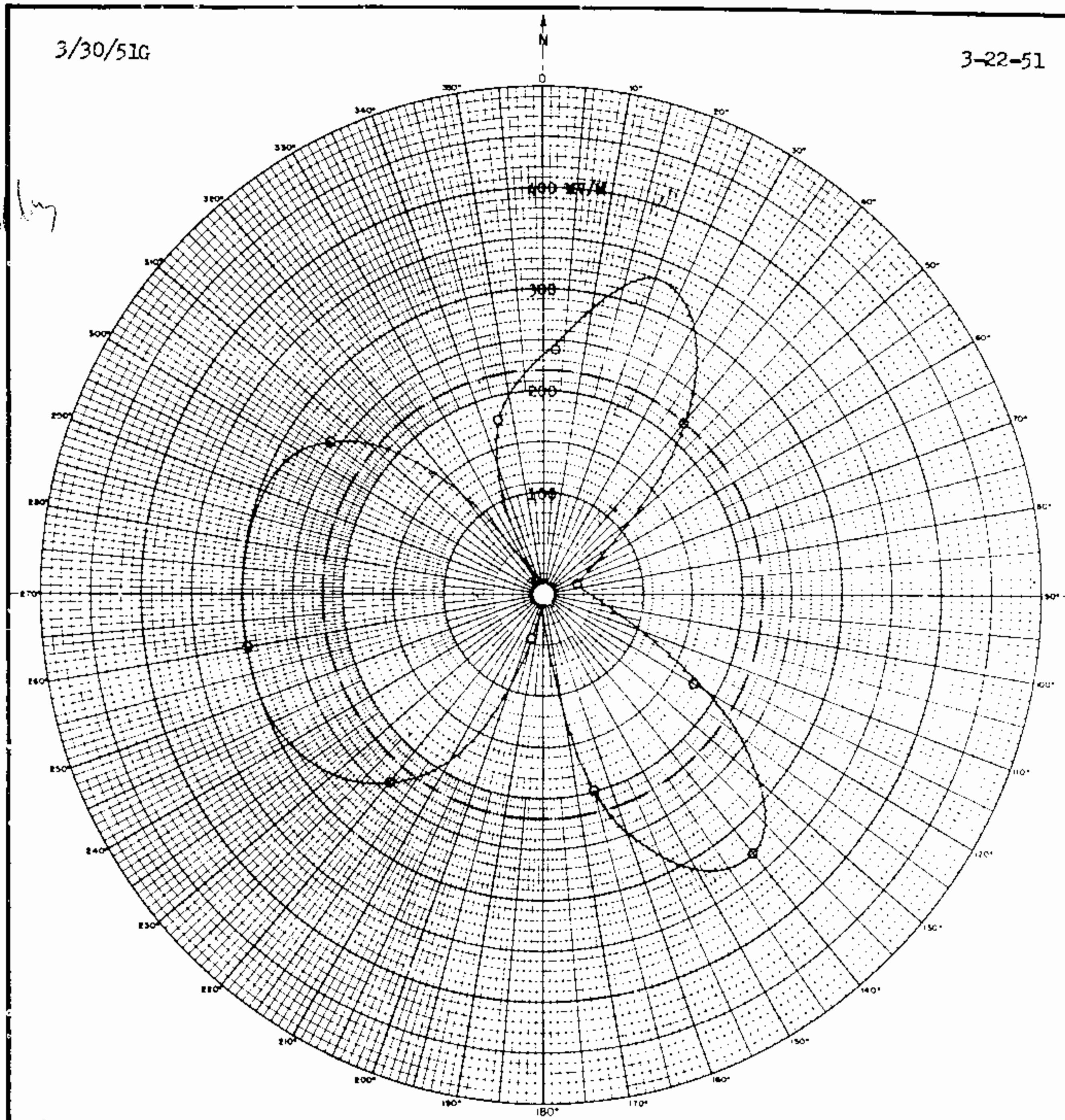
1280KC

WGBF

MEASURED NIGHT WGBF, EVANSVILLE, IND. 1kw, 5kw-LS, DA-N 1280 kc

3/30/51G

3-22-51



O MEASURED POINTS

WGBF

HORIZONTAL RADIATION PATTERN

MEASURED

	WEST	EAST				
ANTENNA	NO. 1	NO. 2	NO. 3	NO. 4	NO. 5	NO. 6
PHASE DEG	95°	0°				
HEIGHT DEG	123°	123°				
FIELD RATIO	.75	1.0				
NON-DA ANT.	*					
	ORIENTATION 260° True		SPACING 256°			

FREQUENCY 1280 KC

ASSIGNMENT 5 Kw.-LS, 1 Kw.-N (DA-N)

LONGITUDE 87 DEG 28 MIN 33 SEC

LATITUDE 37 DEG 59 MIN 53 SEC

WHEN USED Nighttime

RMS FIELD 220 MV/M (Measured)

DATE January 1951

ROBERT M. SILLIMAN

CONSULTING RADIO ENGINEERS

WASHINGTON, D.C.

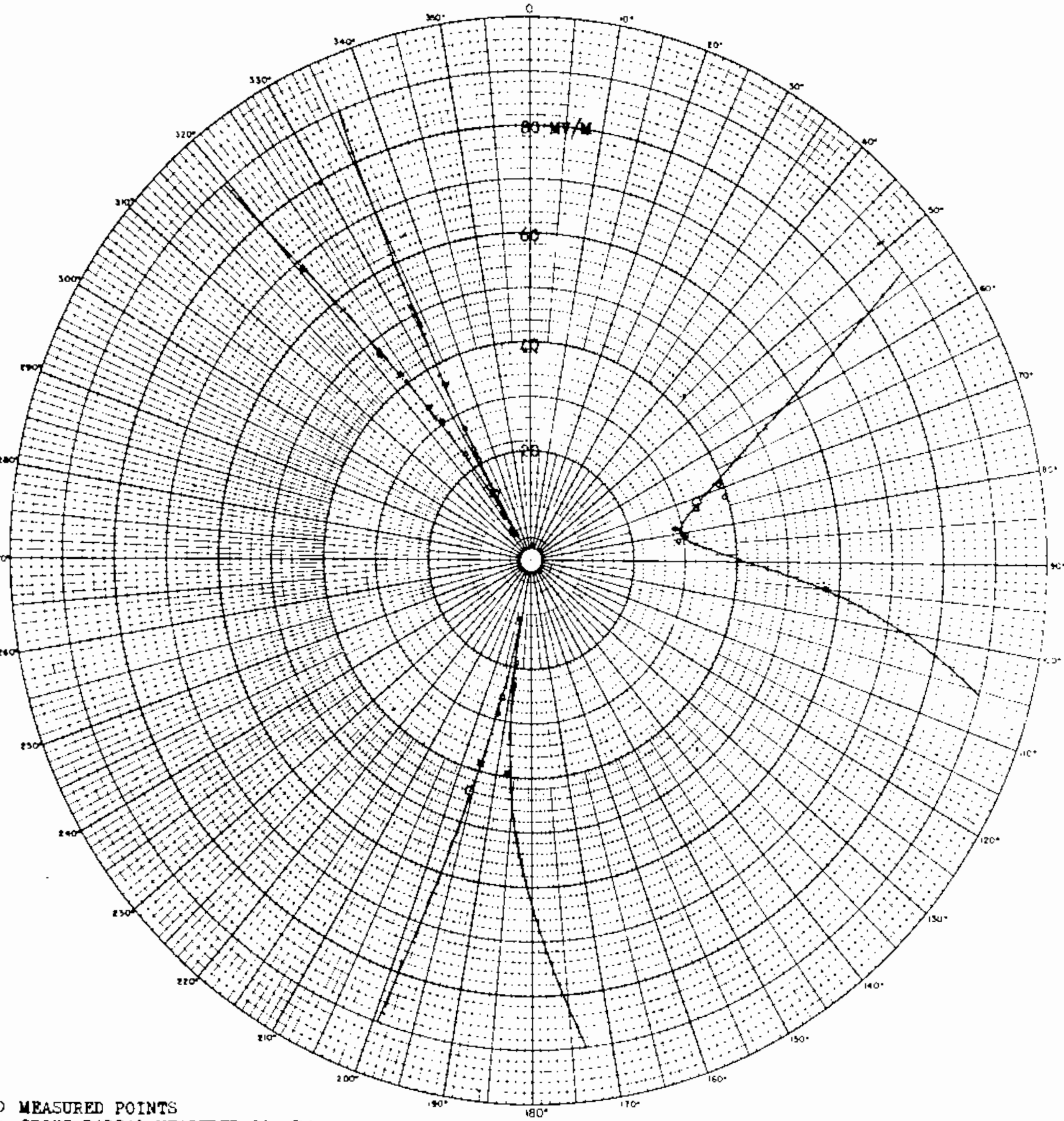
BL

WGBF, Evansville, Ind. 1280 kc

WGBF

MEASURED NIGHT NULLS WGBF, EVANSVILLE, IND. 1kw, 5kw-LS, DA-N 1280 kc

3/30/51G 3-22-51



o MEASURED POINTS
° CROSS RADIAL MEASURED POINTS

WGBF

HORIZONTAL RADIATION PATTERN

ENLARGED VIEW

	WEST	EAST				
ANTENNA	NO. 1	NO. 2	NO. 3	NO. 4	NO. 5	NO. 6
PHASE DEG	95°	0°				
HEIGHT DEG	123°	123°				
FIELD RATIO	.75	1.0				
NON-DA ANT	*					

ORIENTATION 260° True SPACING 256°

FREQUENCY: 1280 KC.
ASSIGNMENT: 5 Kw.-LS, 1 Kw.-N (DA-N)
LONGITUDE: 87 DEG. 28 MIN. 33 SEC.
LATITUDE: 37 DEG. 59 MIN. 53 SEC.
WHEN USED: Nighttime
R.M.S. FIELD: 220 MV/M (Measured)
DATE: January 1951

ROBERT M. SILLIMAN
CONSULTING RADIO ENGINEERS
WASHINGTON, D. C.

WGBF

MEASURED NIGHT
(1-10-58g)

Station WGBF
Evansville, Indiana

1kw,5kw-LS, DA-N,U
1280 KC

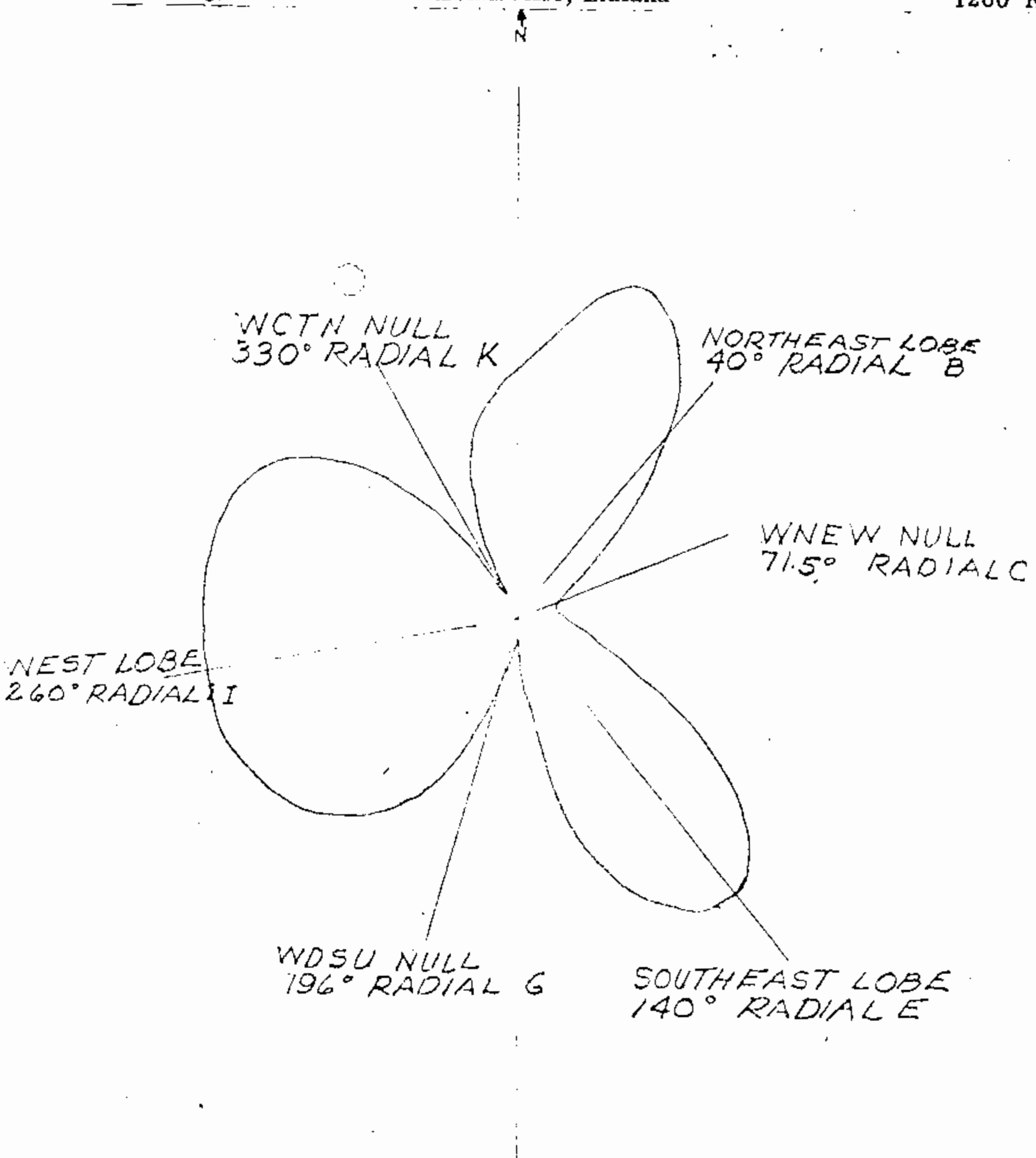


FIGURE 5

WGBF

HORIZONTAL RADIATION PATTERN

NL 37° 59' 53"
WL 87° 28' 33"

Station Engineer: Erwin P. Schoeny

FCC File No. BZ-3954
Accepted 12-26-57

WGBF
Evansville, Indiana

1280 KC

WGSO
1280kHz

DIRECTIONAL ANTENNA DESCRIPTION SHEET

Station: WGSO

Main Studio: New Orleans, Louisiana

Frequency: 1280 kHz

Power: 5kw Night 5kw Day

Notification List No. 1785

Date: November 16, 1979 Class: III

GEOGRAPHICAL LOCATION OF THE CENTER OF THE ANTENNA SYSTEM:

North Latitude: 29° 52' 47"
West Longitude: 89° 52' 54"

ANTENNA CHARACTERISTICS

Authorized for Daytime and Nighttime operation (DA-2)
Number of elements: 4
Type of elements: Series excited, uniform cross-section, guyed, vertical steel towers.

TOWER:	W(#1)	E(#2)	NW(#3)	NE(#4)
HEIGHT ABOVE INSULATORS:	220'	220'	220'	220' (103°)
NIGHT PHASING:	30°	-30°	32°	——
NIGHT FIELD RATIO:	1.0	0.6	1.28	——
DAY PHASING:	65°	0°	70°	-127°
DAY FIELD RATIO:	0.4	1.0	0.35	0.45

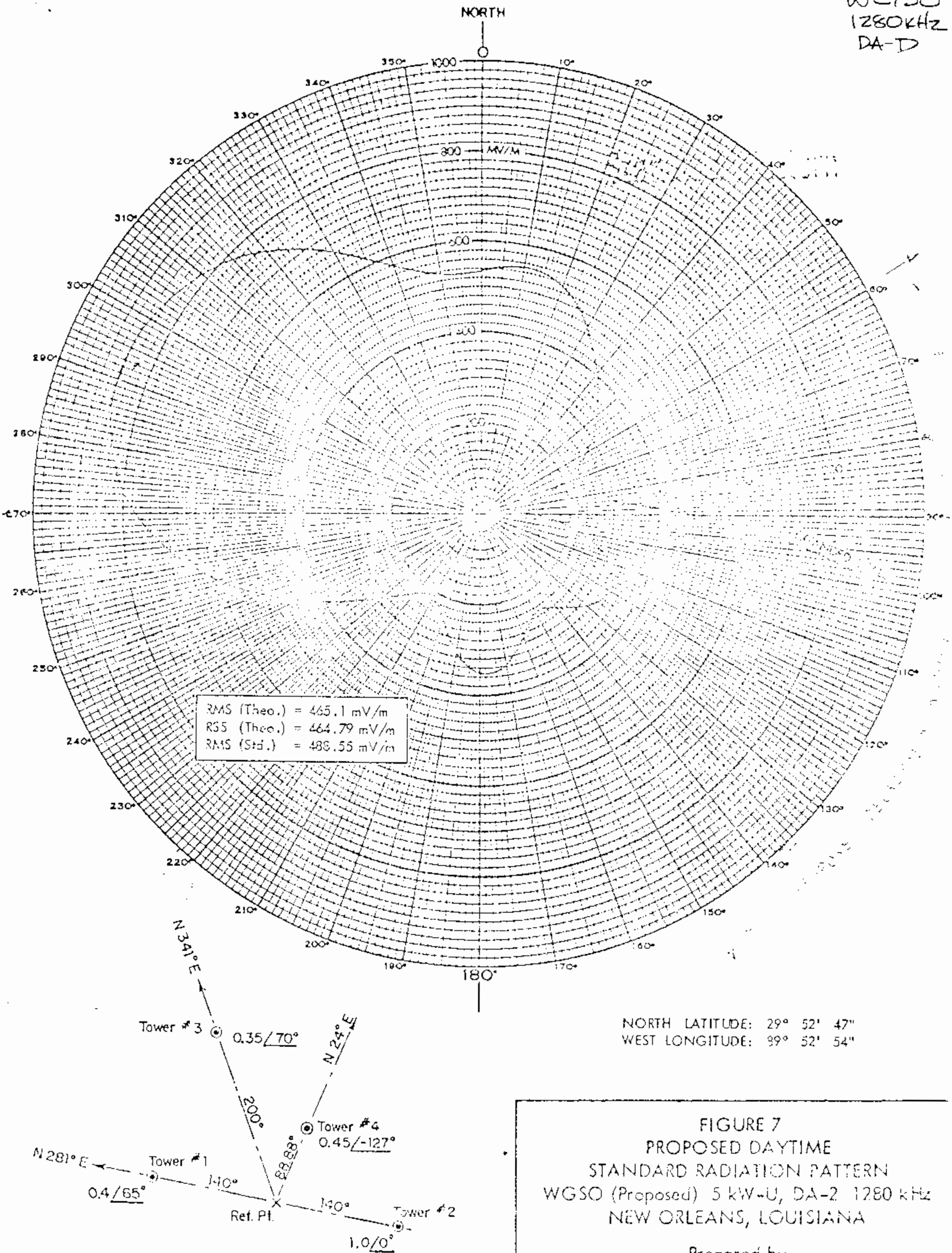
SPACING AND ORIENTATION: Towers W(#1) and E(#2) spaced 597.6 (280°) apart at a bearing N 281° E. Tower NW(#3) spaced 426.9' (200°) from the mid-point of towers #1 and #2 at a bearing of N 341° E, Tower #4 located at the mid-point between towers #2 and #3.

GROUND SYSTEM: 120 - 225' 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. Centers of system are bonded together.

PREDICTED EFFECTIVE FIELDS AT RATED POWER:

	THEORETICAL RMS	THEORETICAL RSS	STANDARD RMS
Day	465.1 mv/m	464.79 mv/m	488.55 mv/m
Night	428		449.40 mv/m

WGSO
1280 KHz
DA-D

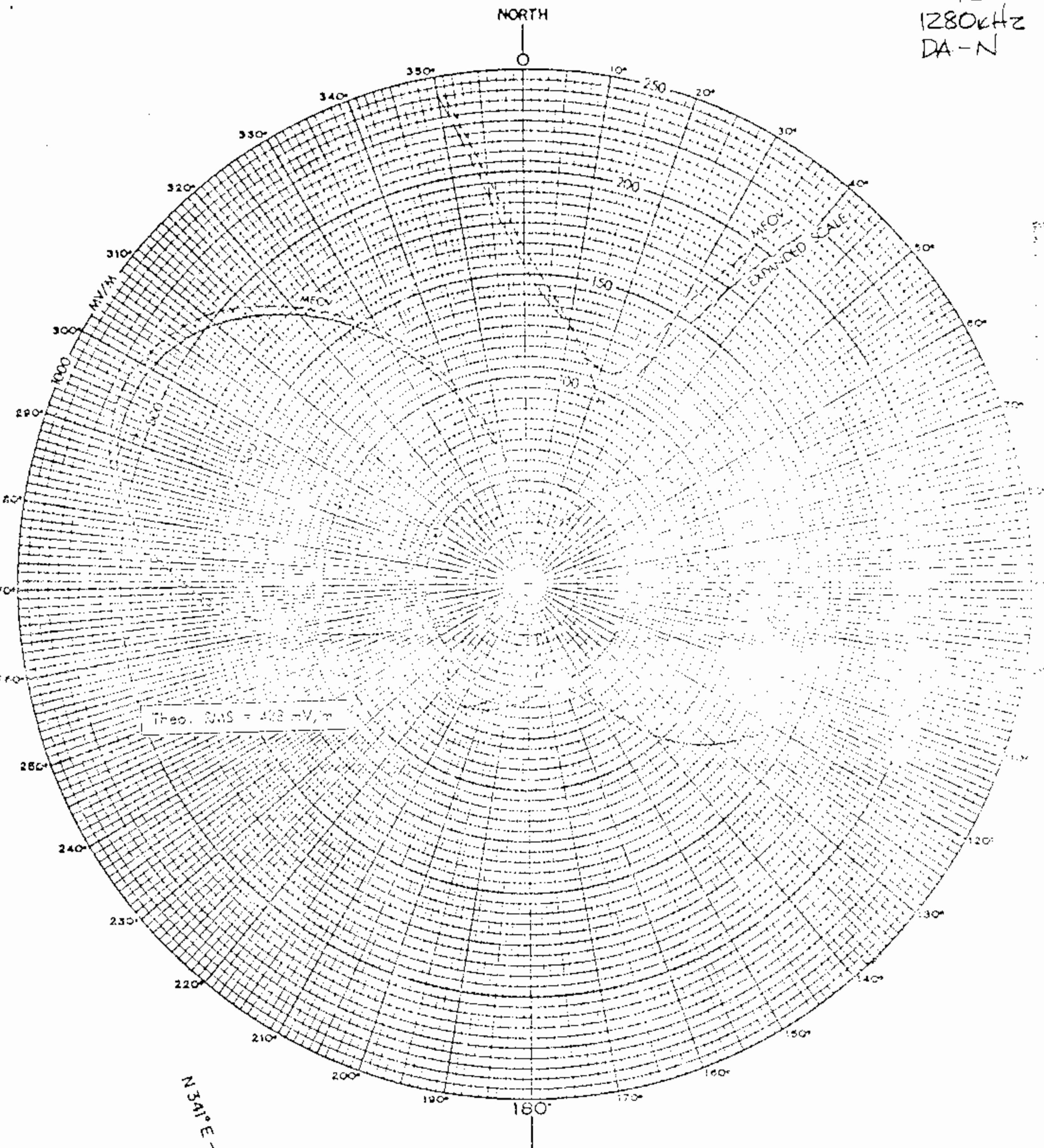


NORTH LATITUDE: 29° 52' 47"
WEST LONGITUDE: 89° 52' 54"

FIGURE 7
PROPOSED DAYTIME
STANDARD RADIATION PATTERN
WGSO (Proposed) 5 kW-U, DA-2 1280 kHz
NEW ORLEANS, LOUISIANA

Prepared by
Lohnes and Culver Washington, D. C.

WGSO
1280 kHz
DA-N



NORTH LATITUDE: 29° 52' 47"
WEST LONGITUDE: 39° 52' 54"

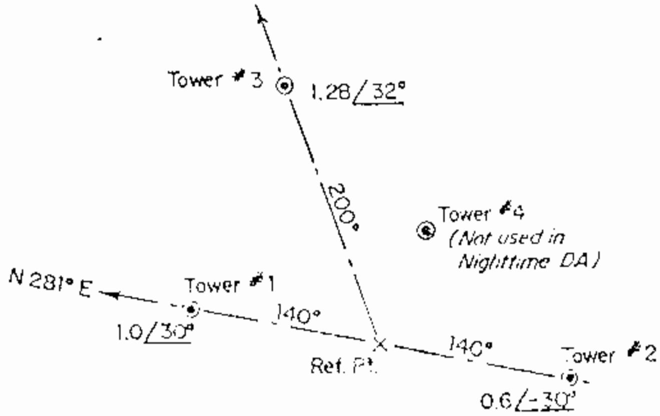


FIGURE 9
PROPOSED NIGHTTIME
RADIATION PATTERN
WGSO (Proposed) 5 kW-U, DA-2 1280 kHz
NEW ORLEANS, LOUISIANA

Prepared by
Lohnes and Culver Washington, D. C.
February, 1979

WGSO

MEASURED NON-DA
(9-20-61ct)

Station WDSU
New Orleans, Louisiana

5kw,DA-1,U
1280 kc

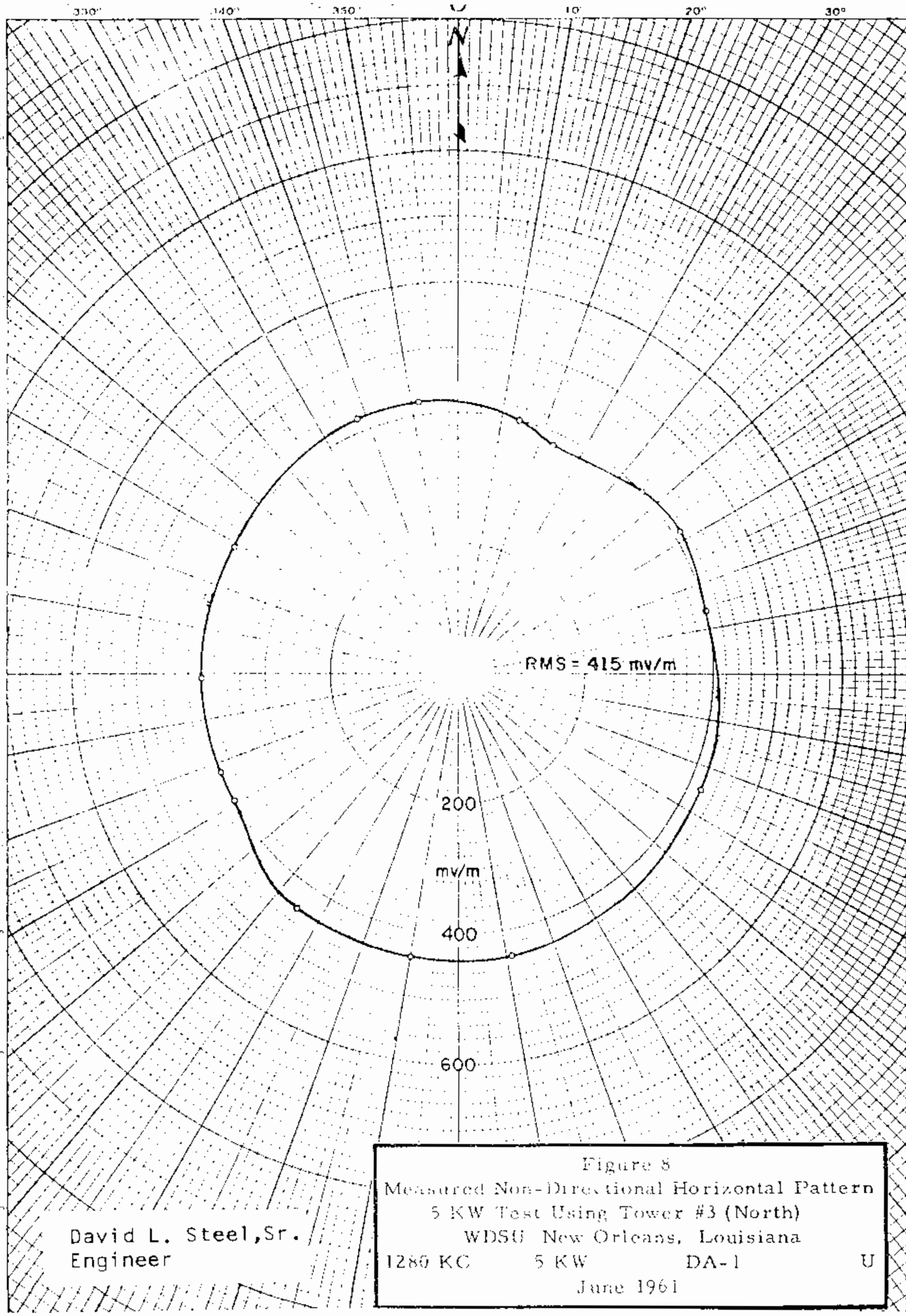


Figure 8
Measured Non-Directional Horizontal Pattern
5 KW Test Using Tower #3 (North)
WDSU New Orleans, Louisiana
1280 KC 5 KW DA-1 U
June 1961

David L. Steel,Sr.
Engineer

FCC File No.BL-8690
Accepted 8-30-61

Station WDSU
New Orleans, Louisiana

1280 kc

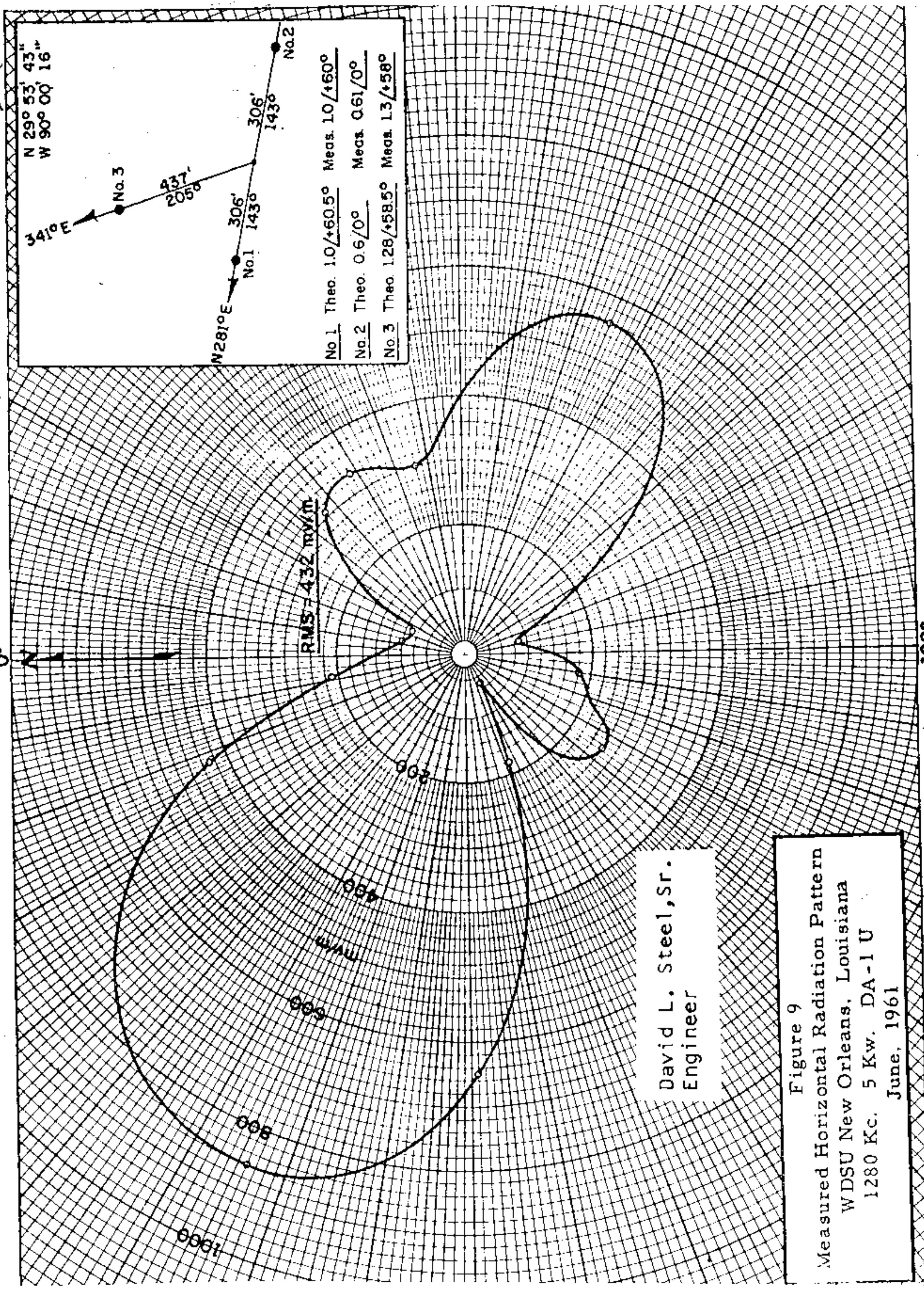
WGSO

MEASURED DAY & NIGHT
(9-20-61ct)

Station WDSU
New Orleans, Louisiana

5kw,DA-1,U
1280 kc

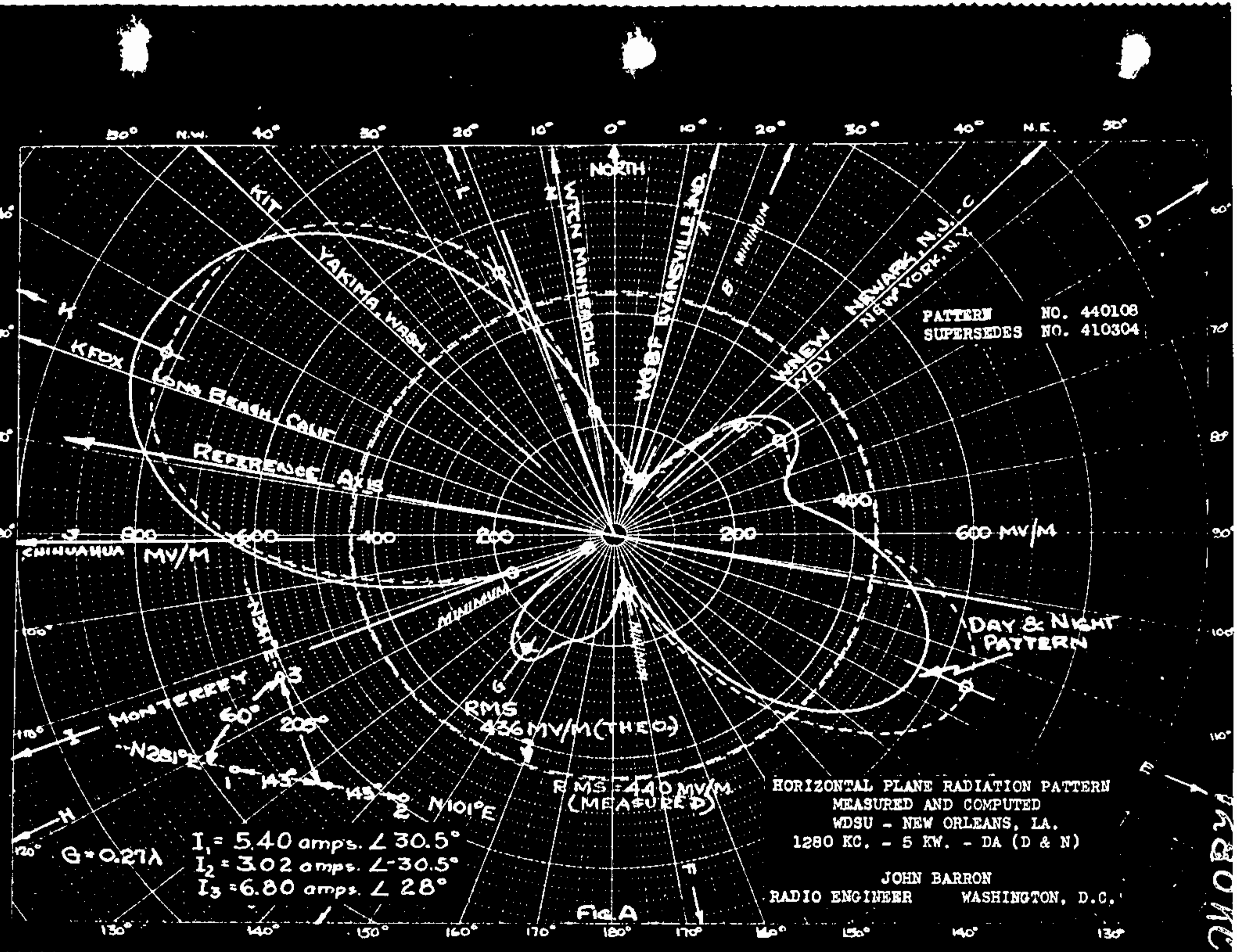
11-6-61
granted L.
& change in
ant. location



FCC File No.BL-8690
Accepted 8-30-61

Station WDSU
New Orleans, Louisiana

1280 kc



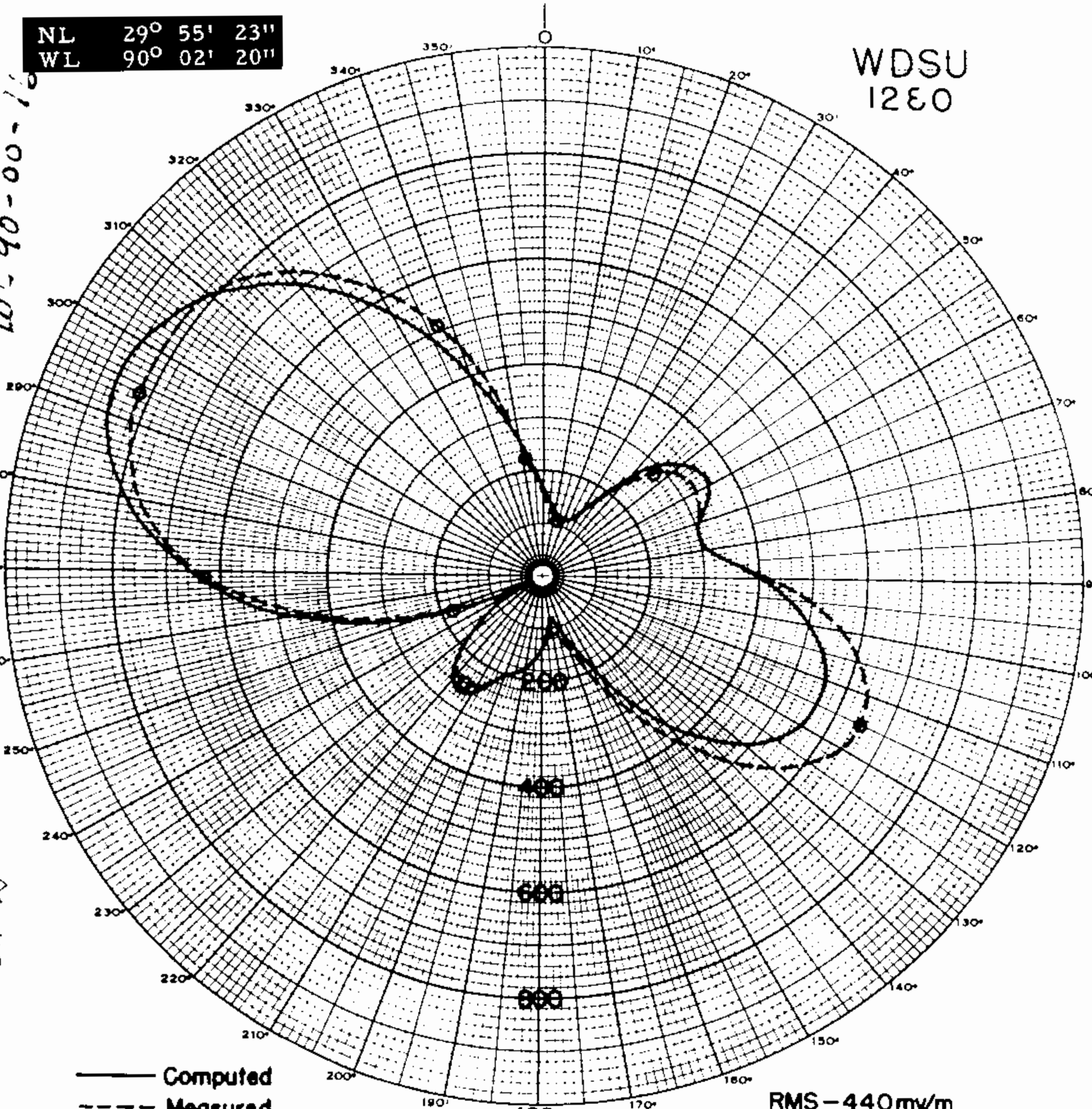
WDSU 5Kw. 1280 KC

PROPOSED & MEASURED DAY & NIGHT | Station WDSU New Orleans, Louisiana | 5kw, 1280 KC

WGSO

NL 29° 55' 23"
WL 90° 02' 20"

NL 29-53-43
W. 90-00-16



—— Computed
- - - - Measured

RMS – 440mv/m

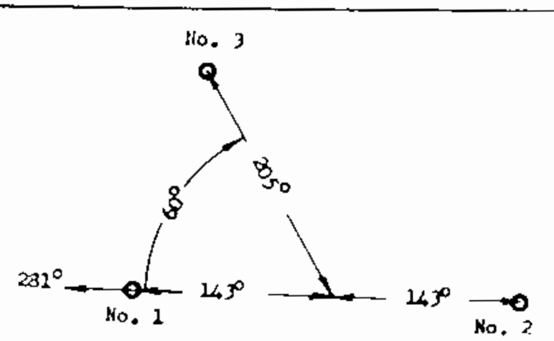


FIGURE 1
HORIZONTAL PLANE RADIATION PATTERN
WDSU 1280 kc 5 kw DA-1
New Orleans, La.

E. C. PAGE
Consulting Radio Engineers
Washington, DC

Lat. ~~29° 55' 23"~~ 29° 53' 43"
Long. ~~90° 02' 20"~~ 90° 00' 16"

VRE February 21, 1952

WDSU

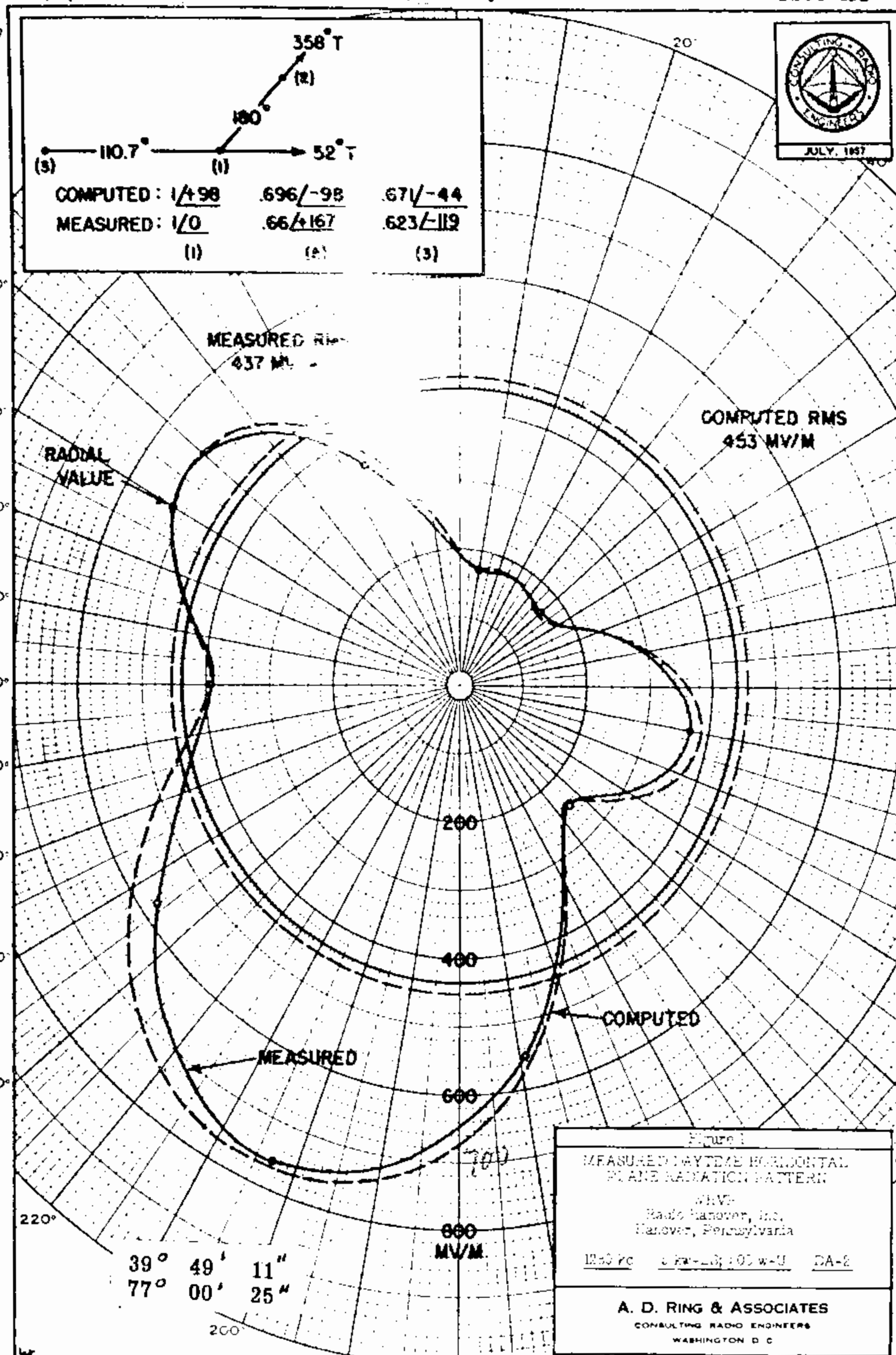
WHVR

MEASURED DAY
(8/29/57g)

Station WHVR
Hanover, Pennsylvania

500w,5kw-LS, DA-2,U
1280 KC

Licensed 9/20/57 for change from DA-N to DA-2



A. D. RING & ASSOCIATES - 1/54 - M

FCC File No. BL-6723
Accepted 8/21/57

WHVR
Hanover, Pennsylvania

1280 KC

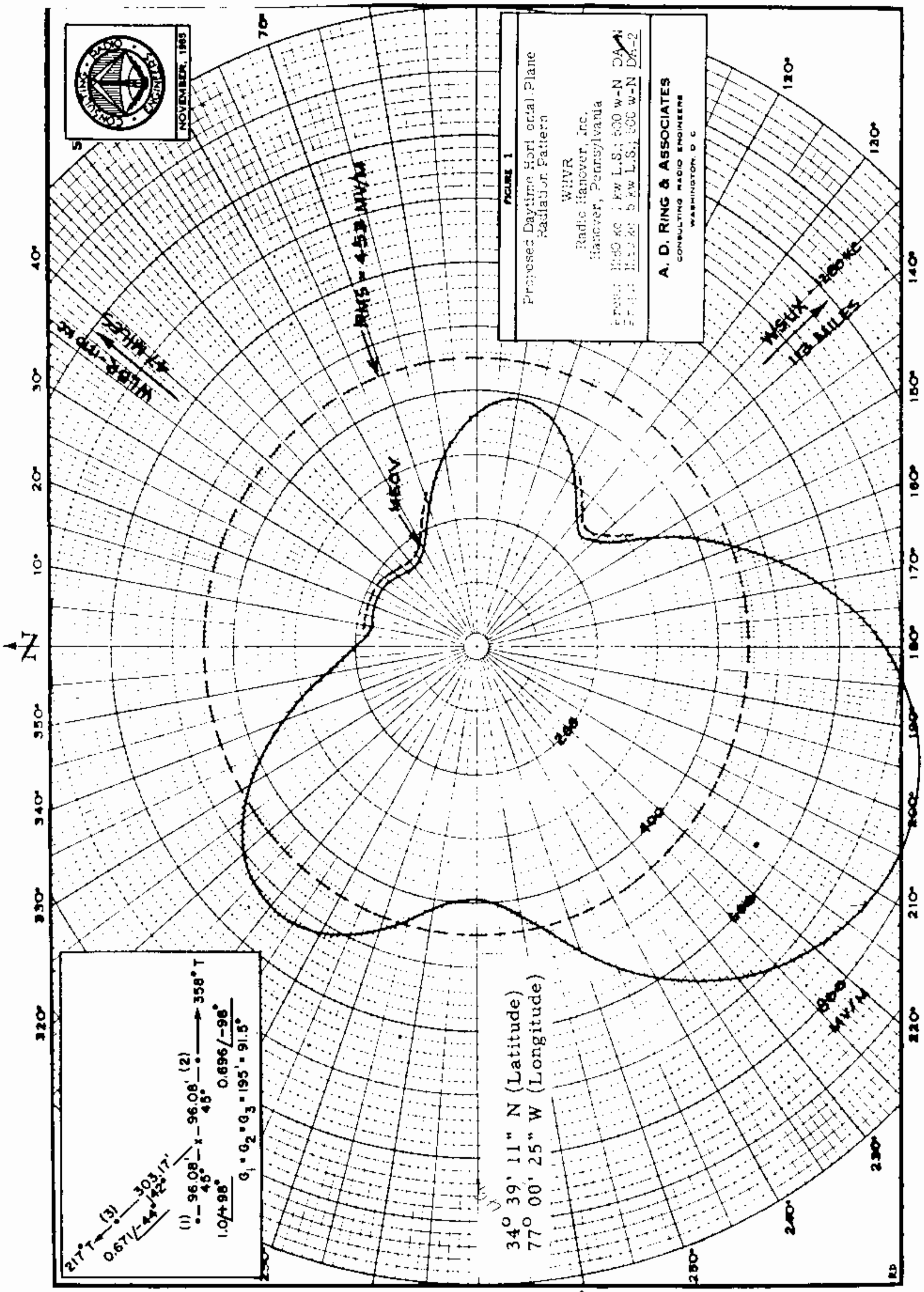
WHVR

PROPOSED
DAY (2/21/56G)

STATION WHVR
HANOVER, PA.

0.5, 5KW-LS
DA-2, U

1280 KC



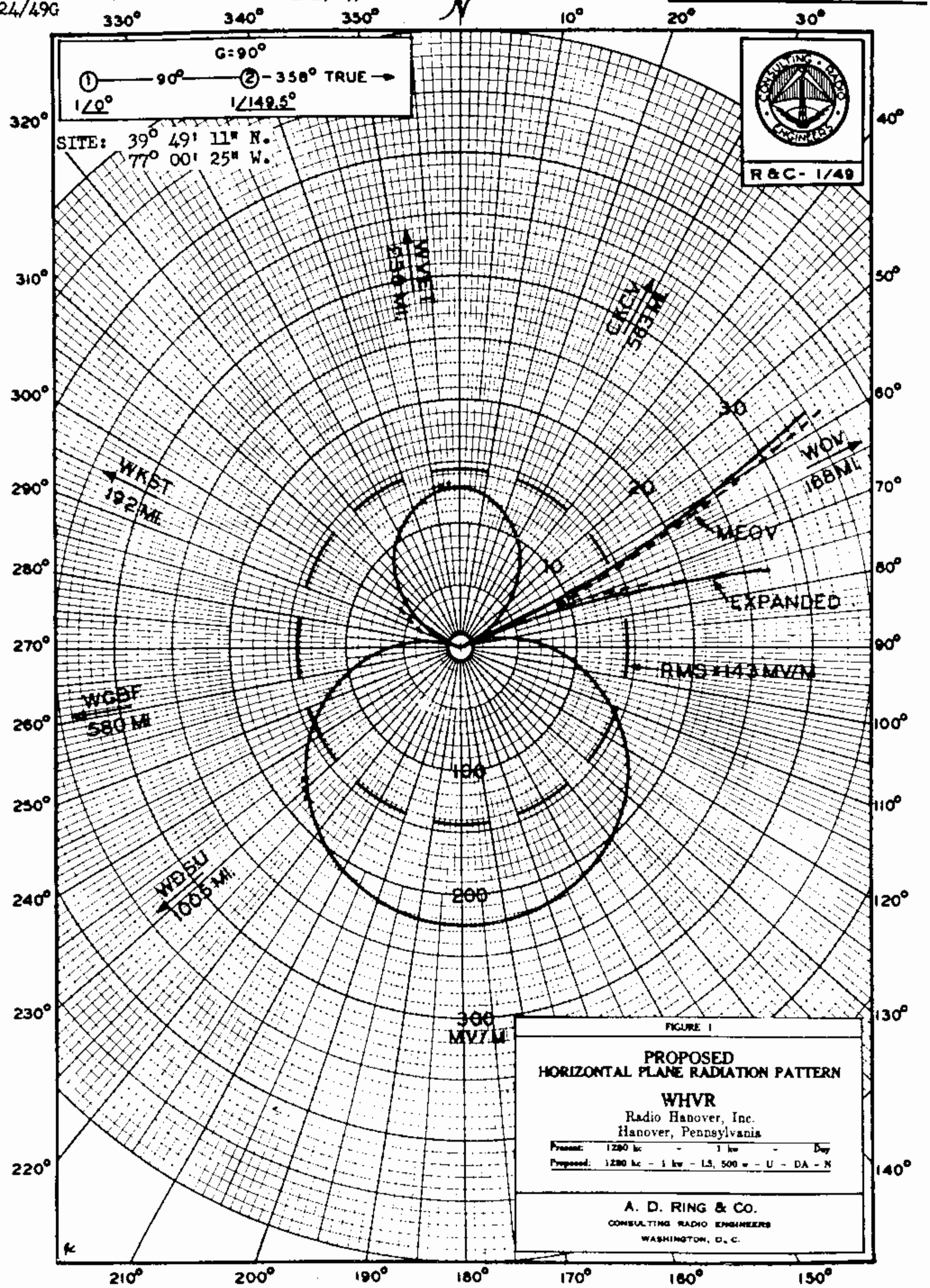
FCC File No. BP-10,212 Accepted 1-25-56 WHVR, Hanover, Pa. 1280 KC

WHVR

.5-5 LS DA-2

PROPOSED WHVR, HANOVER, PENNA. ~~500w,1kw-LS,DAN~~ **WHVR-1280KC**

NIGHT 1/24/49G 1-19-49



WHVR

.5-5LS DA-2

MEASURED NIGHT WHVR, HANOVER, PA. ~~500w, 1kw-LS, DAN~~ 1280 kc

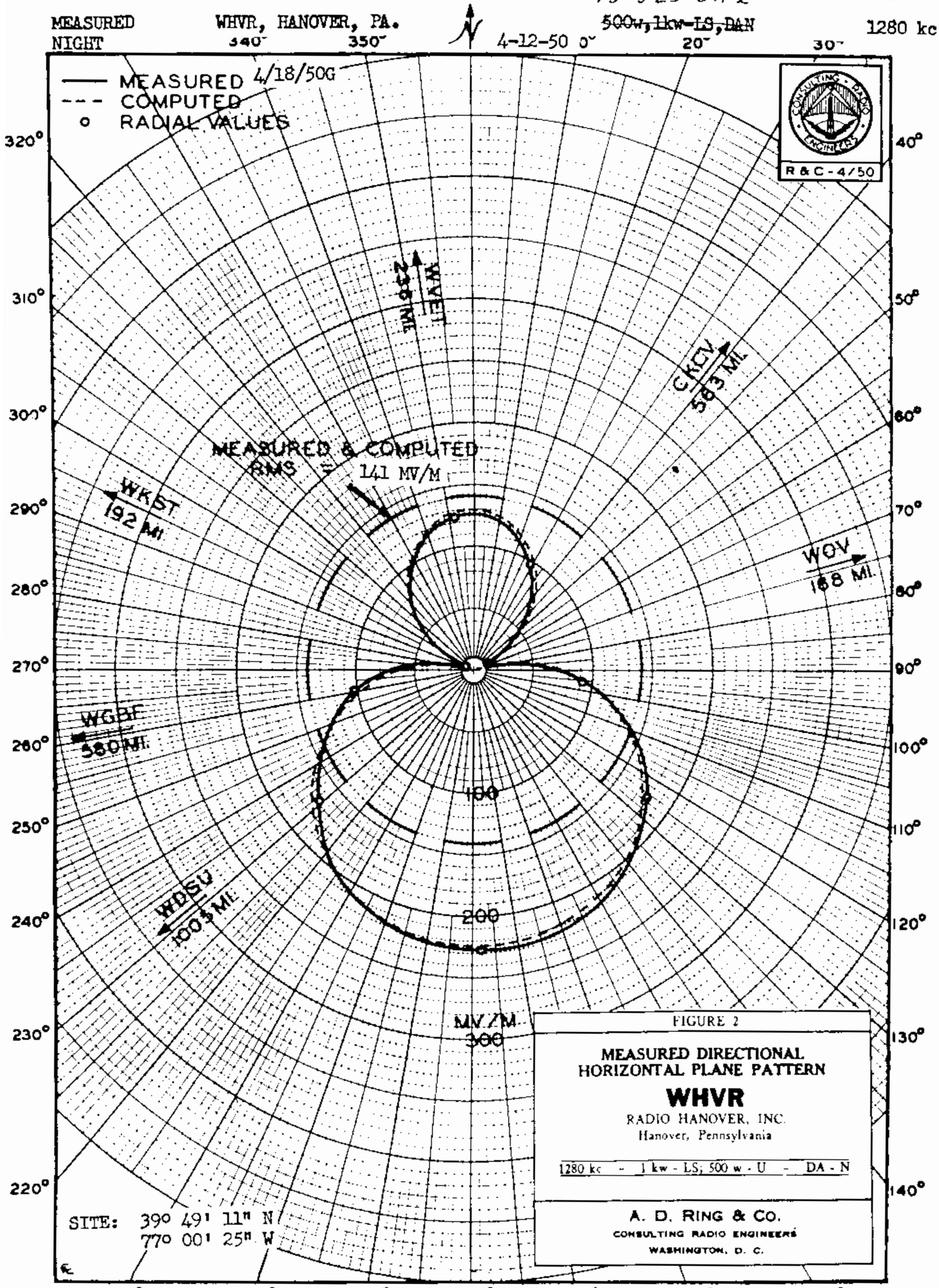


FIGURE 2

MEASURED DIRECTIONAL HORIZONTAL PLANE PATTERN

WHVR

RADIO HANOVER, INC.
Hanover, Pennsylvania

1280 kc - 1 kw - LS; 500 w - U - DA - N

A. D. RING & CO.
CONSULTING RADIO ENGINEERS
WASHINGTON, D. C.

SITE: 39° 49' 11" N
77° 00' 25" W

WHVR, Hanover, Pa. 1280 kc

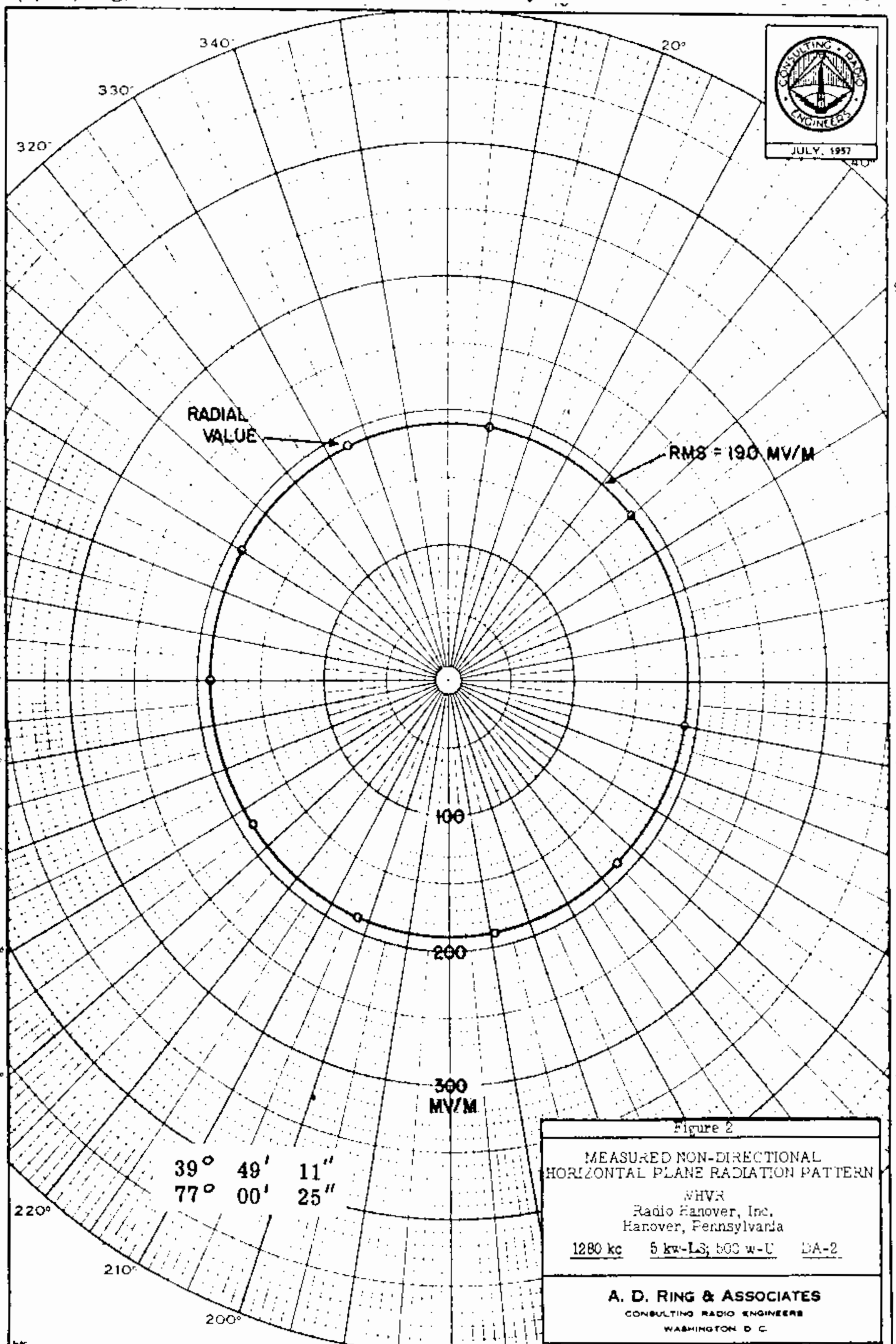
WHVR

MEASURED NON - DA (8/29/57g)

Station WHVR
Hanover, Pennsylvania

500w,5kw-LS, DA-2,U
1280 KC

Licensed 9/20/57 for change from DA-N to DA-2



A. D. RING & ASSOCIATES - 1/54 - M

FCC File No. BL-6723
Accepted 8/21/57

WHVR
Hanover, Pennsylvania

1280 KC

WIPC
1280 kHz

DIRECTIONAL ANTENNA DESCRIPTION SHEET

Station: WIPC

Main Studio: Lake Wales, Florida

Frequency: 1280 kHz

Power: 0.5kw Night 1 kw Day

Notification List No. 1785

Date: November 16, 1979

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

Daytime		Nighttime	
North Latitude:	27° 55' 34"	North Latitude:	27° 55' 30"
West Longitude:	81° 36' 04"	West Longitude:	81° 36' 16"

ANTENNA CHARACTERISTICS

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

TOWER:	SW (#1)	NE (#2)
HEIGHT ABOVE INSULATORS:	205'	205' (96°)
NIGHT PHASING:	0°	-137.6°
NIGHT FIELD RATIO:	1.0	0.6

SPACING AND ORIENTATION: Adjacent towers are spaced 128' (60°) on a line bearing 70° true.

GROUND SYSTEM: 120 - 175' equally spaced copper radials about each tower. Radials are shortened and bonded to a transverse strap along intersections between towers. Centers of system are bonded together.

DAYTIME ANTENNA CHARACTERISTICS

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

HEIGHT ABOVE INSULATORS: 205'

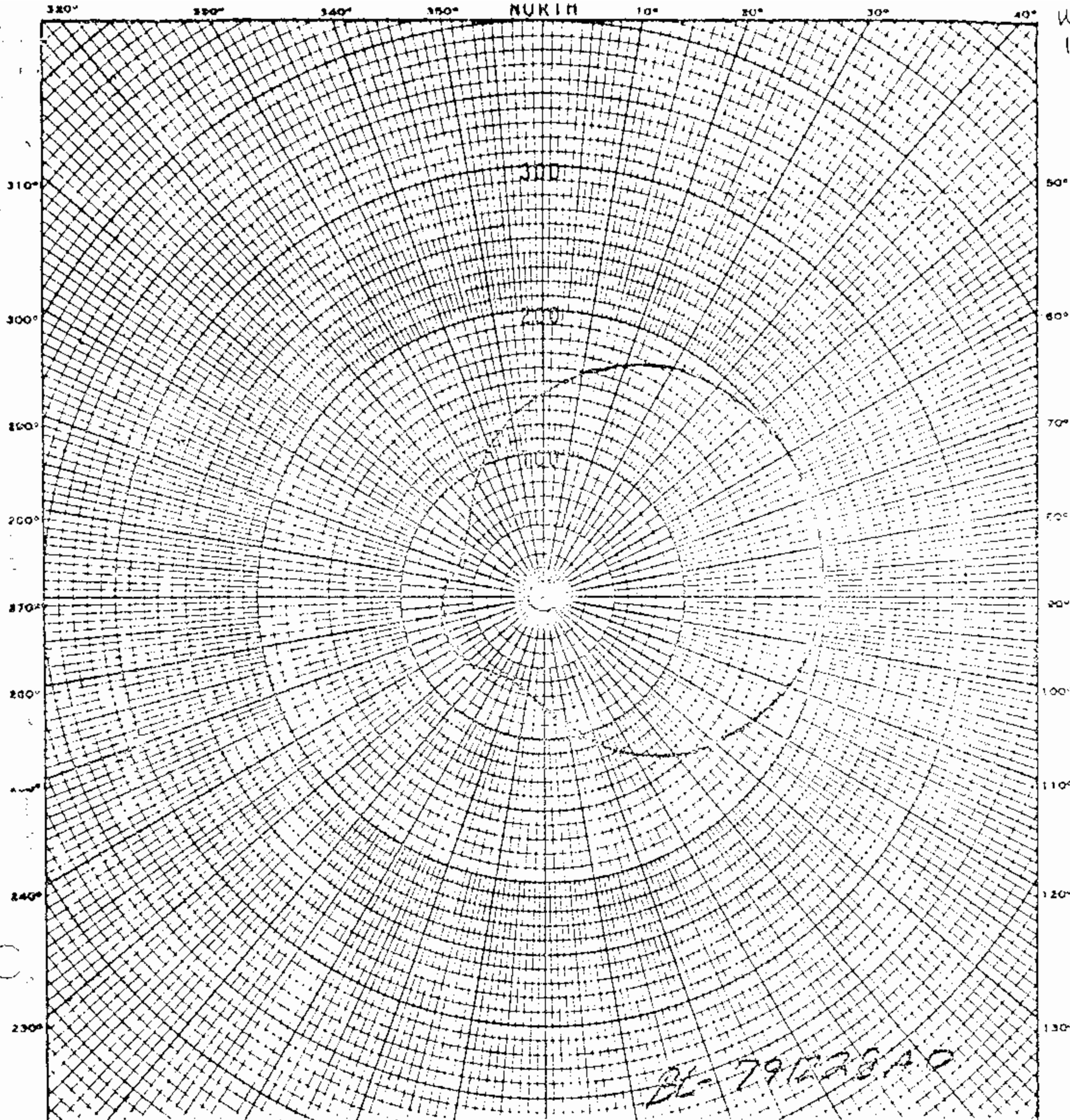
GROUND SYSTEM: 120 - 192' equally spaced copper radials about each tower.

WIPC
1280kHz

PREDICTED EFFECTIVE FIELDS AT RATED POWER:

	THEORETICAL		STANDARD
	RMS	RSS	RMS
Day	193 mv/m		
Night	126.8 mv/m	182.3 mv/m	133.3 mv/m

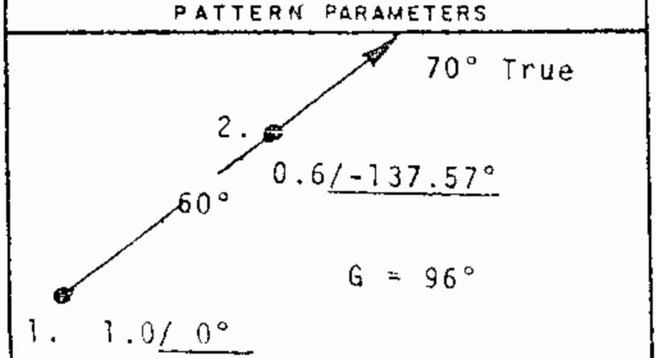
WIPC
1280KH
DA-N



R.M.S. (THEO) 126.8 MV/M   R.M.S. (STND) 133.1 MV/M   R.S.S. 182.3 MV/M

220° 210° 200° 190° 180° 170° 160° 150° 140°

PATTERN PARAMETERS



RADIO STATION W I P C

☐ MEASURED   ☒ PROPOSED

FREQ. 1280 (KHZ) POWER 0.5 (KW) ☐ DA-D
N. LAT. 27 ° 55 ' 30 " ☒ DA-N
W. LONG. 81 ° 36 ' ~~18~~ 16 " ☐ N-D

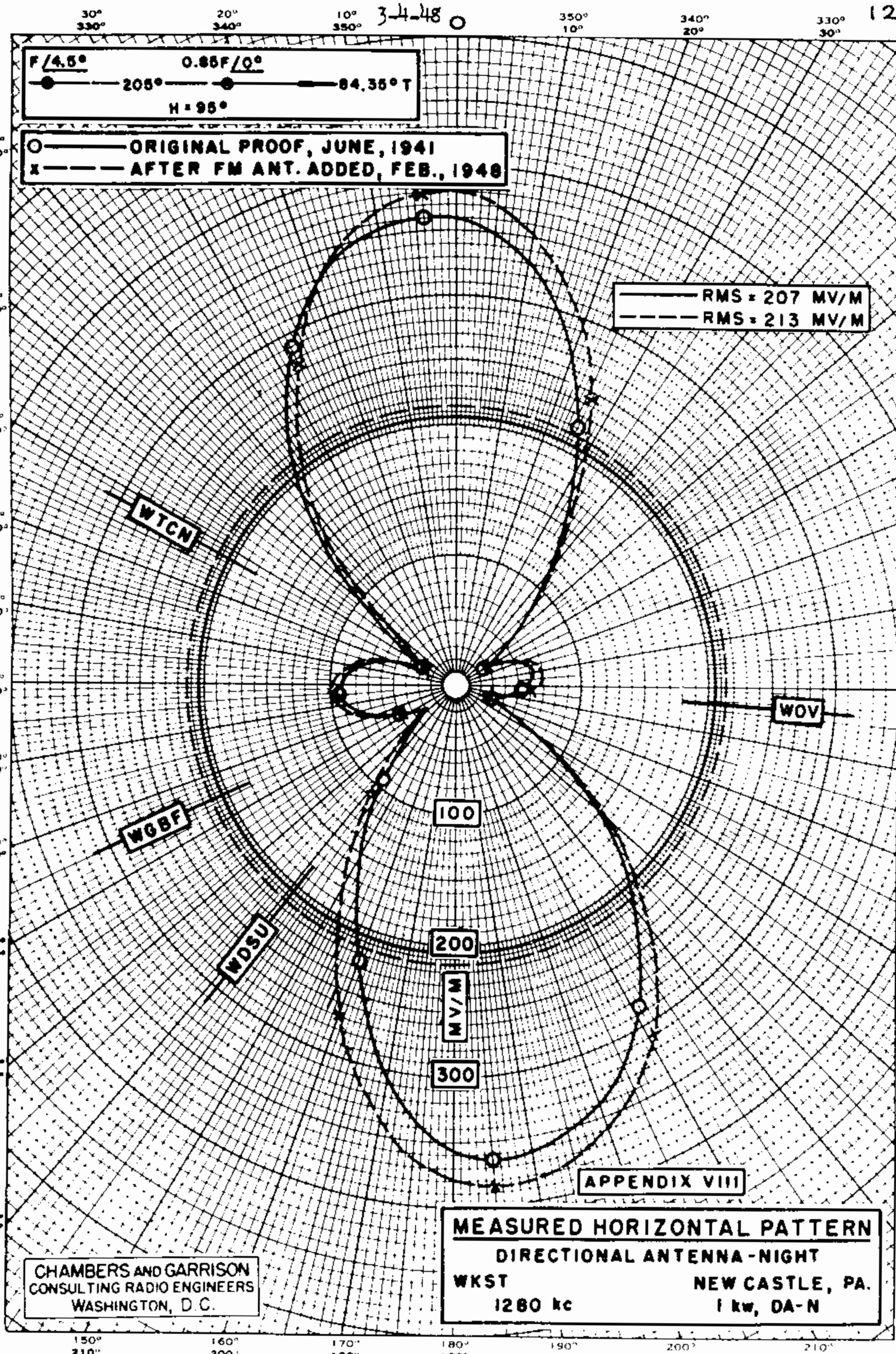
LOCATION: Lake Wales, Florida

DATE: October, 1978

ROBERT A. JONES
CONSULTING ENGINEERS
LA GRANGE, ILLINOIS

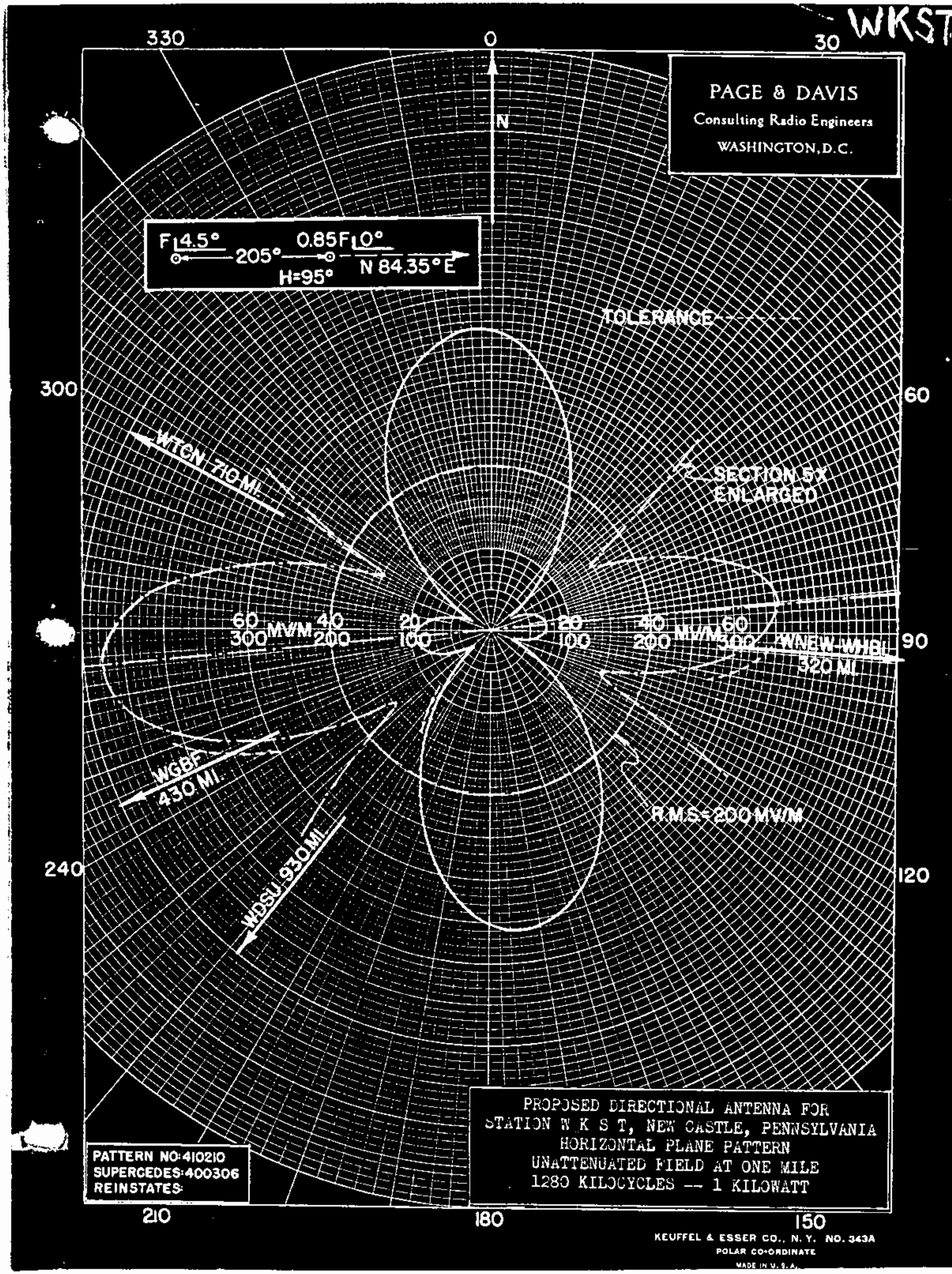
WKST
1280

3-4-48



MEASURED HORIZONTAL PATTERN
DIRECTIONAL ANTENNA-NIGHT
WKST NEW CASTLE, PA.
1280 kc 1 kw, DA-N

License---- 3-4-48


WKST
PAGE & DAVIS
Consulting Radio Engineers
WASHINGTON, D.C.
F∠4.5°
205°
0.85F∠0°
H=95°
N 84.35° E
N
TOLERANCE
SECTION 5X ENLARGED
WTCN 710 MI.
WNEW-WHBI 320 MI.
WGBF 430 MI.
WDSU 930 MI.
R.M.S.=200 MV/M
60 300 MV/M 40 200 20 100
20 100 40 200 MV/M 60 300
0
30
60
90
120
150
180
210
240
300
330
PATTERN NO: 410210
SUPERCEDES: 400306
REINSTATES:
PROPOSED DIRECTIONAL ANTENNA FOR
STATION W K S T, NEW CASTLE, PENNSYLVANIA
HORIZONTAL PLANE PATTERN
UNATTENUATED FIELD AT ONE MILE
1280 KILOCYCLES -- 1 KILOWATT
KEUFFEL & ESSER CO., N. Y. NO. 343A
POLAR CO-ORDINATE
MADE IN U. S. A.

WMCP

DIRECTIONAL ANTENNA DESCRIPTION SHEET

Station : WMCP   Main Studio: Columbia, Tennessee

Frequency : 1280 KHz   Power: .5 kW Night 5 kW Day

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

GEOGRAPHICAL LOCATION OF THE CENTER OF THE ANTENNA SYSTEM:

North Latitude: 35° 35' 42"
West Longitude: 87° 00' 40"

ANTENNA CHARACTERISTICS

Authorized for Daytime and Nighttime operation. (DA-2)
Number of elements: 4
Type of elements: Series excited, uniform cross-section, guyed, vertical steel towers.

TOWER :	W(#1)	CW(#2)	CE(#3)	E(#4)		
HEIGHT ABOVE INSULATORS :	197'	197'	197'	197'(92.3')		
NIGHT PHASING :	0°	188.5°	-3.4°	149.2°		
NIGHT FIELD RATIO:	1.00	3.06	3.06	1.78		
DAY PHASING :	0°	182.2°	-41.0°	124.0°		
DAY FIELD RATIO :	1.0	1.49	1.84	0.87		

SPACING AND ORIENTATION: Four towers in a row are spaced 192.1' (90°) on a line bearing 94.5° true.

GROUND SYSTEM: 120 - 96' to 192 equally spaced copper radials plus a 24x24' square ground screen about each tower. Radials are shortened and bonded to transverse straps along intersections between towers.

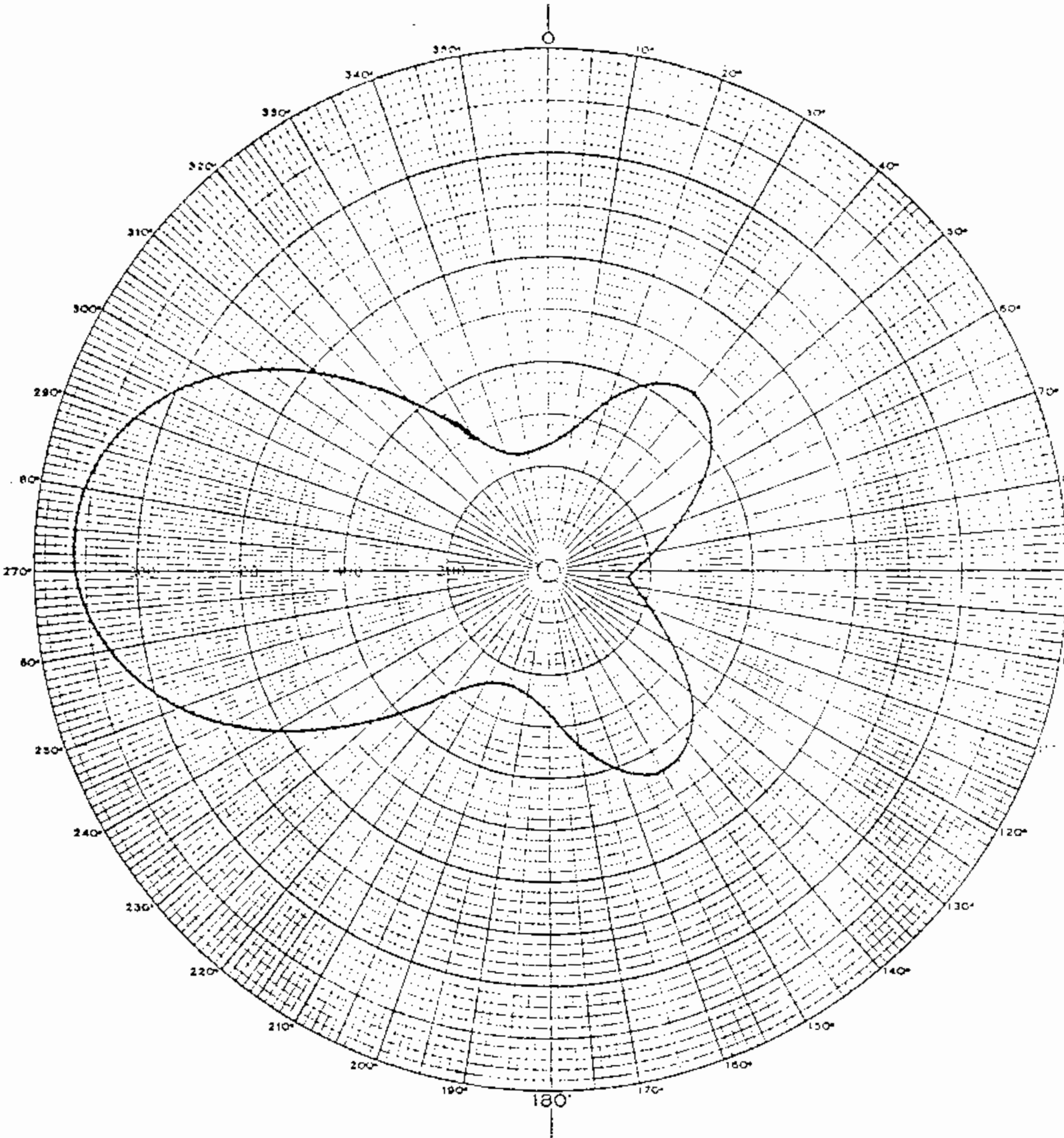
PREDICTED EFFECTIVE FIELDS AT RATED POWER:

	THEORETICAL RMS	THEORETICAL RSS	STANDARD RMS
Day	448.5 mV/m	mV/m	471.6 mV/m
Night	144.4 mV/m	mV/m	151.9 mV/m

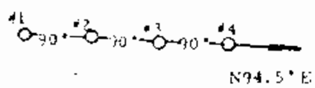
Note:

WMCP

POLAR CO-ORDINATE NO. [illegible] CLEVELAND INSTITUTE OF [illegible]IO ELECTRONICS
CLEVELAND, OHIO



TOWER PLACEMENT SKETCH



PATTERN PARAMETERS

TOWER	ELECTRICAL HEIGHT	TRUE TOWER ORIENTATION	SPACING	PHASING	HORIZONTAL FIELD	FIELD RATIO
1	92.3	0.0	0	0.0		1.00
2	92.3	94.5	90	182.2		1.49
3	92.3	94.5	180	-41.0		1.34
4	92.3	94.5	270	124.0		0.37
5						
6						
7						
8						
9						
10						

STATION DATA

CALL	WMCP
FREQUENCY	1260 KC
POWER	5.0 KW
TIME OF OPERATION	Daytime
TYPE OF OPERATION	Directional
DAYTIME TOWERS	1-4
NIGHTTIME TOWERS	1-4
NO. RADIALS PER TOWER	120
LENGTH OF RADIALS	90° - 132°
GROUND SCREEN DIMENSION	24' x 24'
LAT	35° 37' 08"
LONG	86° 54' 52"
SUPERSEDES	
PATTERN NO.	760621

CLAUDE M. GRAY
CONSULTING RADIO ENGINEER
BIRMINGHAM, ALA.

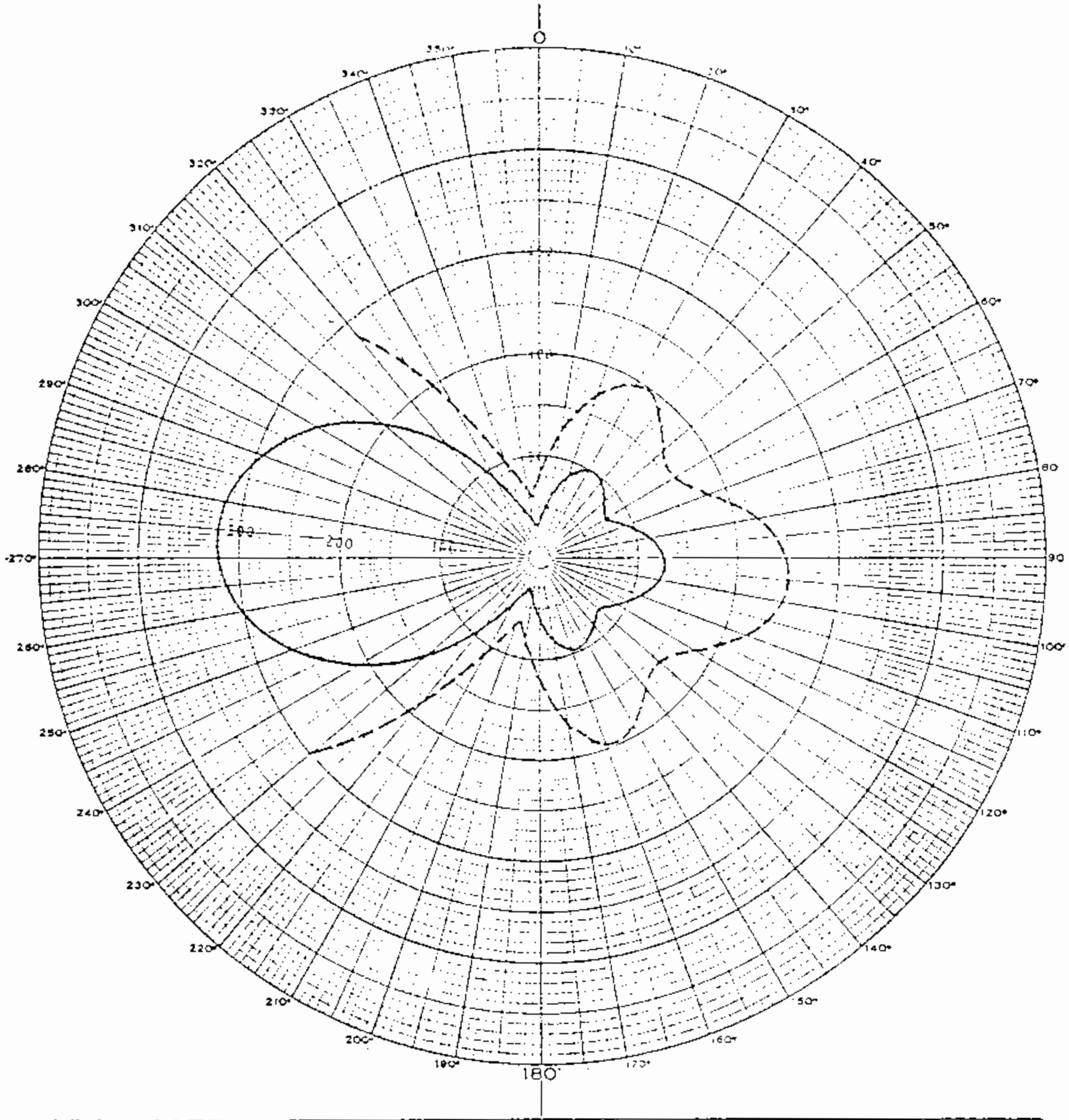
D A Y T I M E
PROPOSED HORIZONTAL RADIATION PATTERN

W M C P COLUMBIA, TENNESSEE

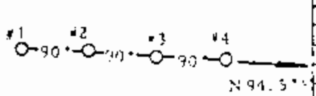
0.5 KW, 5 KW-LS, DA-2 1260 KC

EXHIBIT
I-A-3

WMCP



TOWER PLACEMENT SKETCH	PATTERN PARAMETERS	STATION DATA



Tower No.	Electrical Height G°	Tele Tower Orientation	Spacing S°	Phasing ψ°	Horizontal Field E	Field Ratio F	Elev. Angle θ°	Elevation RMS Field E_θ
1	92.3	90	90	90		1.00	0	
2	92.3	94.5	90	188.5		3.06	10	
3	92.3	94.5	180	-3.4		3.36	20	
4	92.3	94.5	270	149.2		1.78	30	
5							40	
6							50	
7							60	
8							70	
9							80	
10							90	

CALL	WMCP
FREQUENCY	1280 KC
POWER	0.5 KW
TIME OF OPERATION	Nighttime
TYPE OF OPERATION	Directional
DAYTIME TOWERS	1 - 4
NIGHTTIME TOWERS	1 - 4
NO. RADIALS PER TOWER	12
LENGTH OF RADIALS	90° 172 ft
GROUND SCREEN DIMENSION	24 x 24
LAT.	35° 07' 03"
LONG.	86° 58' 52"
SUPERSEDES	
PATTERN No.	760622

CLAUDE M. GRAY
CONSULTING RADIO ENGINEER
BIRMINGHAM, ALA.

N I G H T T I M E
PROPOSED HORIZONTAL RADIATION PATTERN
W M C P COLUMBIA, TENNESSEE
0.5 KW, 5 KW-LS, DA-2 1280 KC

EXHIBIT
1-A-5

WMKC
1280kHz

DIRECTIONAL ANTENNA DESCRIPTION SHEET

Station: WMRO

Main Studio: Aurora, Illinois

Frequency: 1280 kHz

Power: 0.5kw Night 2.5kw Day

Notification List No. 1789

Date: September 12, 1980 Class: III

GEOGRAPHICAL LOCATION OF THE CENTER OF THE ANTENNA SYSTEM:

North Latitude: 41° 46' 10"
West Longitude: 88° 14' 44"

ANTENNA CHARACTERISTICS

Authorized for Daytime and Nighttime operation (DA-2)
Number of elements: 8
Type of elements: Series excited, uniform cross-section, guyed, shunt excited, self supporting, tapered, vertical steel towers.

TOWER:	SE(#1)	EC(#2)	NE(#3)	SW(#4)	WC(#5)	NW(#6)	SC(#7)	EC(#8)
HEIGHT ABOVE INSULATORS:	192'	192'	192'	192'	192'	192'	192'	192'(90°)
NIGHT PHASING:	+170.9°	—	—	—	—	—	+23°	-230°
NIGHT FIELD RATIO:	0.3336	—	—	—	—	—	0.234	0.264
DAY PHASING:	-147°	0	147°	-105°	42°	-171°	—	—
DAY FIELD RATIO:	0.883	1.0	0.496	0.397	0.450	0.223	—	—

SPACING AND ORIENTATION:

DAYTIME: With Tower #1 as reference tower #2 is spaced 90° on a line bearing 38° true; tower #3 is spaced 180° on a line bearing 38° true; tower #4 is spaced 240° on a line bearing 253° true; tower #5 is spaced 174.10° on a line bearing 270.24° true; and tower #6 is spaced 138.66° on a line bearing 301.22° true.

NIGHTTIME: Adjacent elements are spaced 192.1' (90°) on a line bearing 60° true.

GROUND SYSTEM: 120-192' 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.

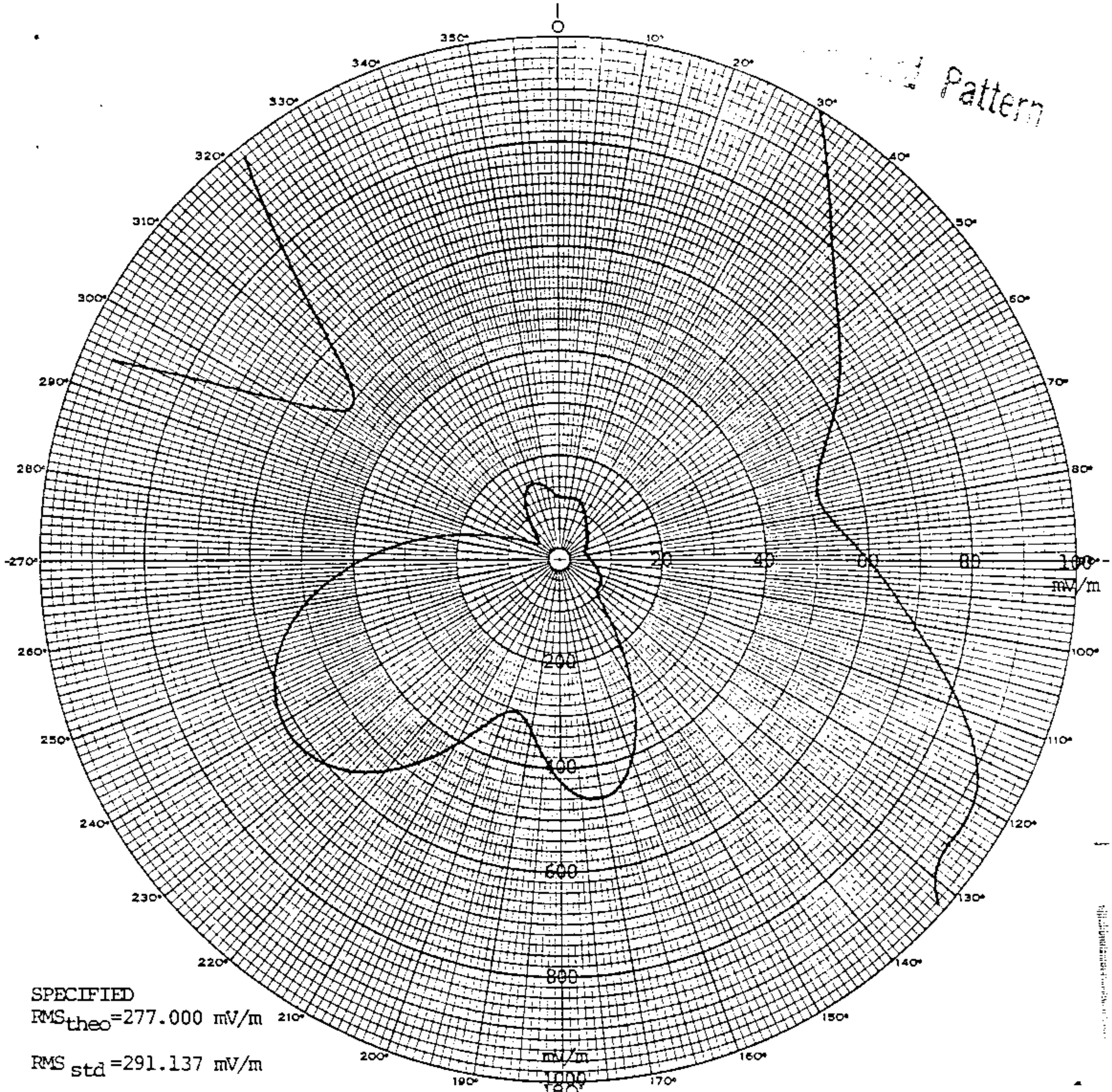
WMKC
1280 kHz

PREDICTED EFFECTIVE FIELDS AT RATED POWER:

	THEORETICAL RMS	THEORETICAL RSS	STANDARD RMS
Day	277.000 mv/m	491.857 mv/m	291.137 mv/m
Night	134.4 mv/m		

Note: Please retain the Nighttime directional antenna radiation pattern notified for Station WMRO in United States Change List Number 1637 dated June 18, 1975 and attach to this Revised Description Sheet and Daytime pattern. This notification concerns only a change in the Daytime operation of the station with Nighttime operation continued as previously notified.

WMRO
1280 kHz



SPECIFIED

RMS_{theo}=277.000 mV/m

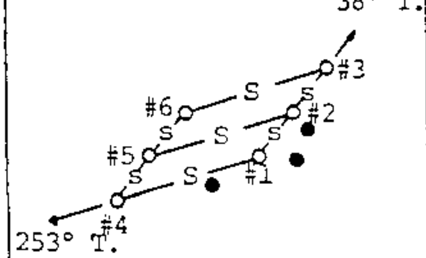
RMS_{std}=291.137 mV/m

RSS_{theo}=491.857 mV/m

10X EXPANSION

TOWER PLACEMENT SKETCH

● = Unused Towers



PATTERN PARAMETERS

TOWER No	ELECTRICAL HEIGHT $G°$	SPACING $S°$	PHASING $\psi°$	FIELD RATIO F
1	90°		-147°	0.883
2	90°		0°	1.000
3	90°		+147°	0.496
4	90°		-105°	0.397
5	90°		+42°	0.450
6	90°		-171°	0.223

DAYTIME OPERATION ☒ NIGHTTIME OPERATION ☐

FIGURE 2

PROPOSED
HORIZONTAL
PLANE
DAYTIME
STANDARD
PATTERN

AURORA, ILLINOIS

$\theta° = 0$

STATION DATA

CALL	WMRO
FREQ	1280 kHz
POWER	2.5 kW
TYPE	DA-2
TIME	UNLIMITED
LAT.	N 41°46'10"
LONG.	W 88°14'44"

E. HAROLD MUNN, JR.
& ASSOCIATES, INC.
COLDWATER, MICH.

WMRO

DIRECTIONAL ANTENNA DESCRIPTION SHEET

Station: WMRO   Main Studio: Aurora, Illinois

Frequency: 1280 kHz   Power: 0.5 kW Night   1 kW Day

Notification List No. 1637   Date: June 18, 1975   Class: III

GEOGRAPHICAL LOCATION OF THE CENTER OF THE ANTENNA SYSTEM: North Latitude: 41° 46' 10"
West Longitude: 88° 14' 44"

ANTENNA CHARACTERISTICS

Authorized for Daytime and Nighttime operation. (DA-2)
Number of elements: 3
Type of elements: Series-excited, uniform cross-section, guyed, vertical steel towers.

TOWER:	SW(#1)	C(#2)	NE(#3)
HEIGHT ABOVE INSULATORS:	192'	192'	192' (90°)
NIGHT PHASING:	+23.0°	+170.9°	-23.0
NIGHT FIELD RATIO:	0.234	0.3336	0.264
DAY PHASING:	---	-90.0°	0°
DAY FIELD RATIO:	---	0.39	0.61

SPACING AND ORIENTATION: Adjacent elements are spaced 192.1' (90°) on a line bearing 60.5° true.

GROUND SYSTEM: 120-192' equally spaced copper radials plus a 48' square ground screen about each tower. Radials are shortened and bonded to transverse straps along intersections between towers.

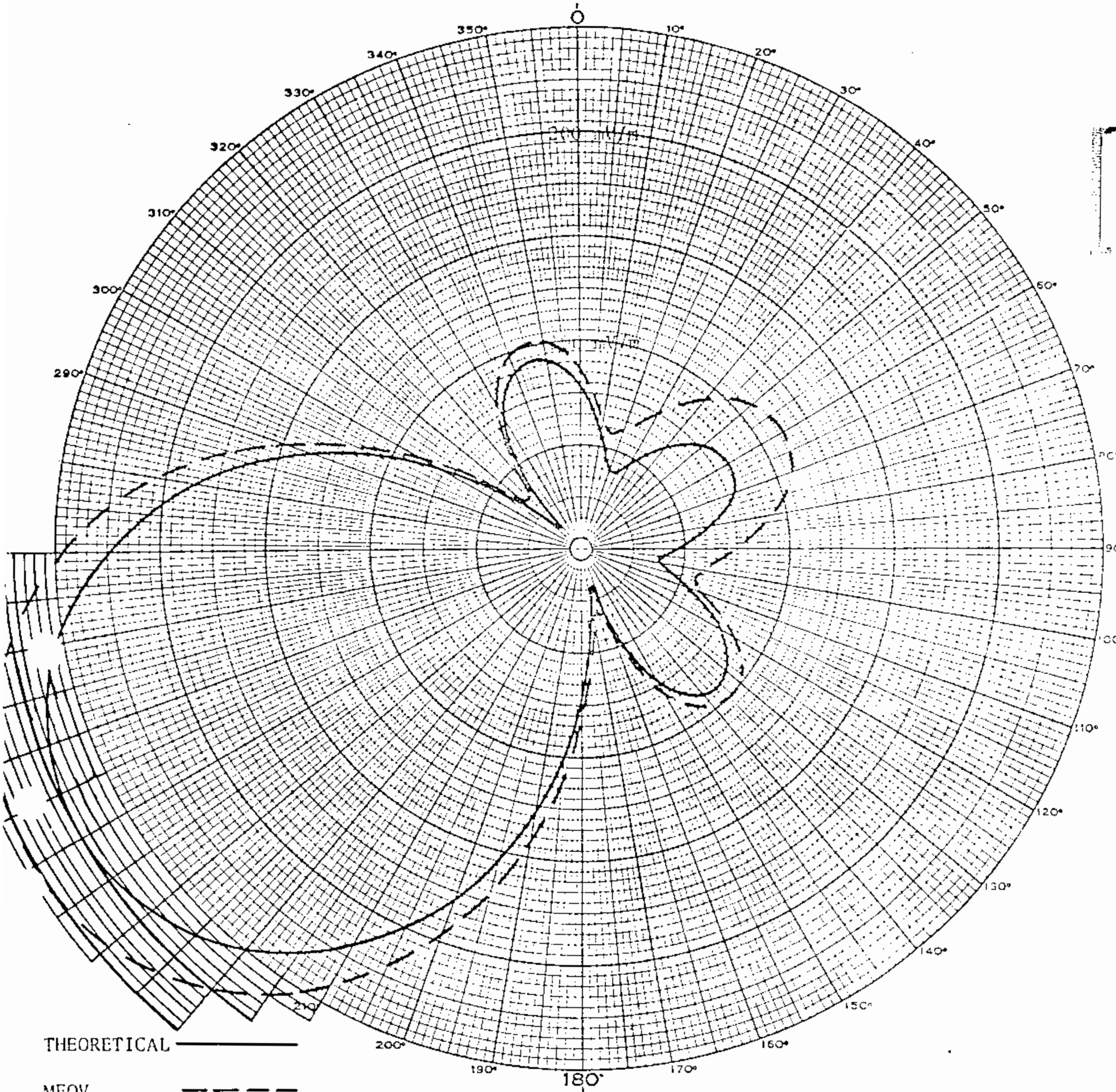
Predicted effective Night Field: 134.4 mv/m at rated power.

Predicted effective Day Field: 190.4 mv/m at rated power.

Note: Please retain the Daytime directional antenna radiation pattern notified for Station WMRO in United States Change List Number 821, dated July 29, 1959, and attach to this Revised Description Sheet and Nighttime patterns. This notification concerns only a change in meovs of radiation in the Nighttime directional antenna radiation pattern with Daytime operation continued as previously notified.

CTR NO 30935A4

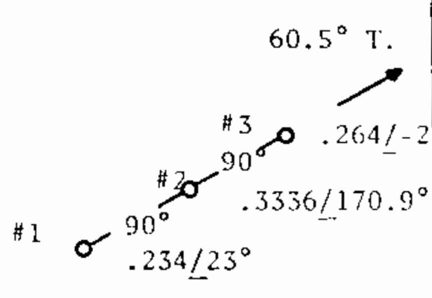
WMKO



THEORETICAL ————

MEOV — — — —

TOWER PLACEMENT SKETCH	PATTERN PARAMETERS	FIGURE 2	STATION DATA



TOWER No.	ELECTRICAL HEIGHT G°	SPACING S°	PHASING ψ°	FIELD RATIO F
1				
2				
3				
4				
5				
6				

DAYTIME OPERATION [ ] NIGHTTIME OPERATION [X]

WMRO
PROPOSED
MEOV

$\theta^{\circ} = 0$

CALL WMRO
FREQ 1280 kHz
POWER 0.5 kW
TYPE DA-2
TIME NIGHT
LAT. 41°46'10"
LONG. 88°14'44"

E. HAROLD MUNN, JR
& ASSOCIATES, INC.
COLDWATER, MICH.

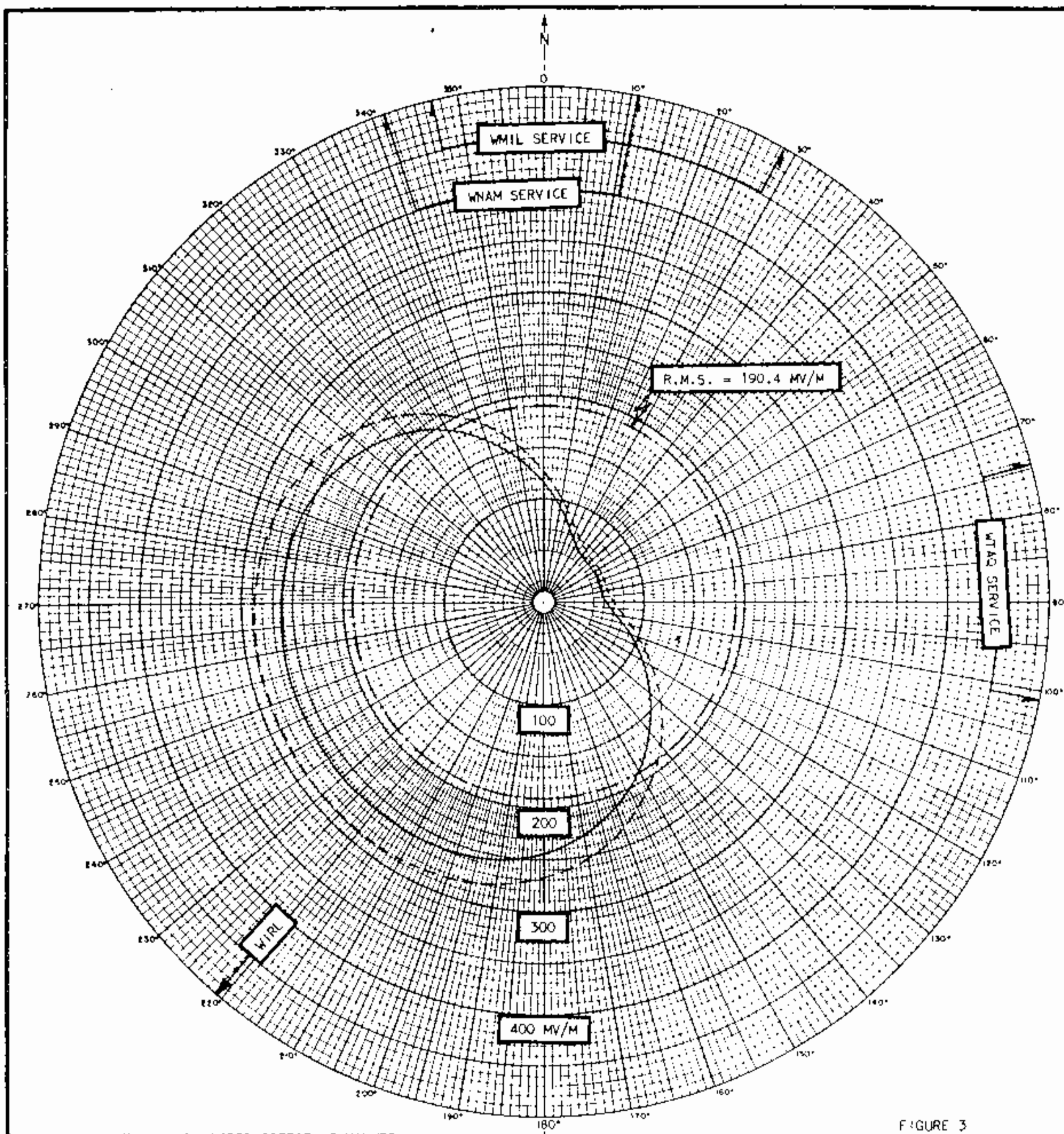
WMRO

granted CP Modulated DA-2 7-29-59

PROPOSED DAY
(8-18-58g)

Station WMRO
Aurora, Illinois

500w,1kw-LS, DA-2,U
1280 KC

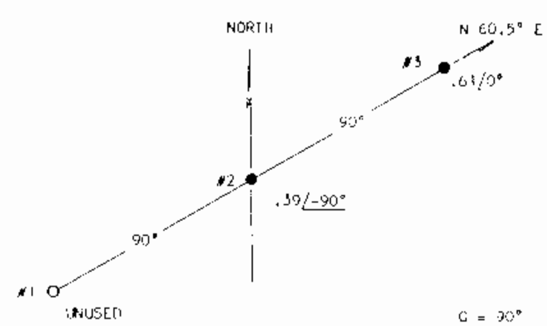


— — — MAXIMUM EXPECTED OPERATING VALUES

FIGURE 3
PATTERN 5805010

HORIZONTAL RADIATION PATTERN

SPACING AND ORIENTATION



APPLICANT	W M R O
LOCATION	AURORA, ILLINOIS
FREQUENCY	1280 KC/S
POWER	1 KW-LS; 0.5 KW-N (DA-2)
LATITUDE	41 DEG 46 MIN 10 SEC.
LONGITUDE	88 DEG 14 MIN 44 SEC
WHEN USED	DAYTIME
RMS FIELD	190.4 MV/M (CALCULATED)
DATE	MAY 1958

ROBERT M. SILLIMAN & ASSOCIATES
CONSULTING RADIO ENGINEERS
WASHINGTON, D.C.

FCC File No. BP-12140
Accepted 8-8-58

WMRO
Aurora, Illinois

1280 KC

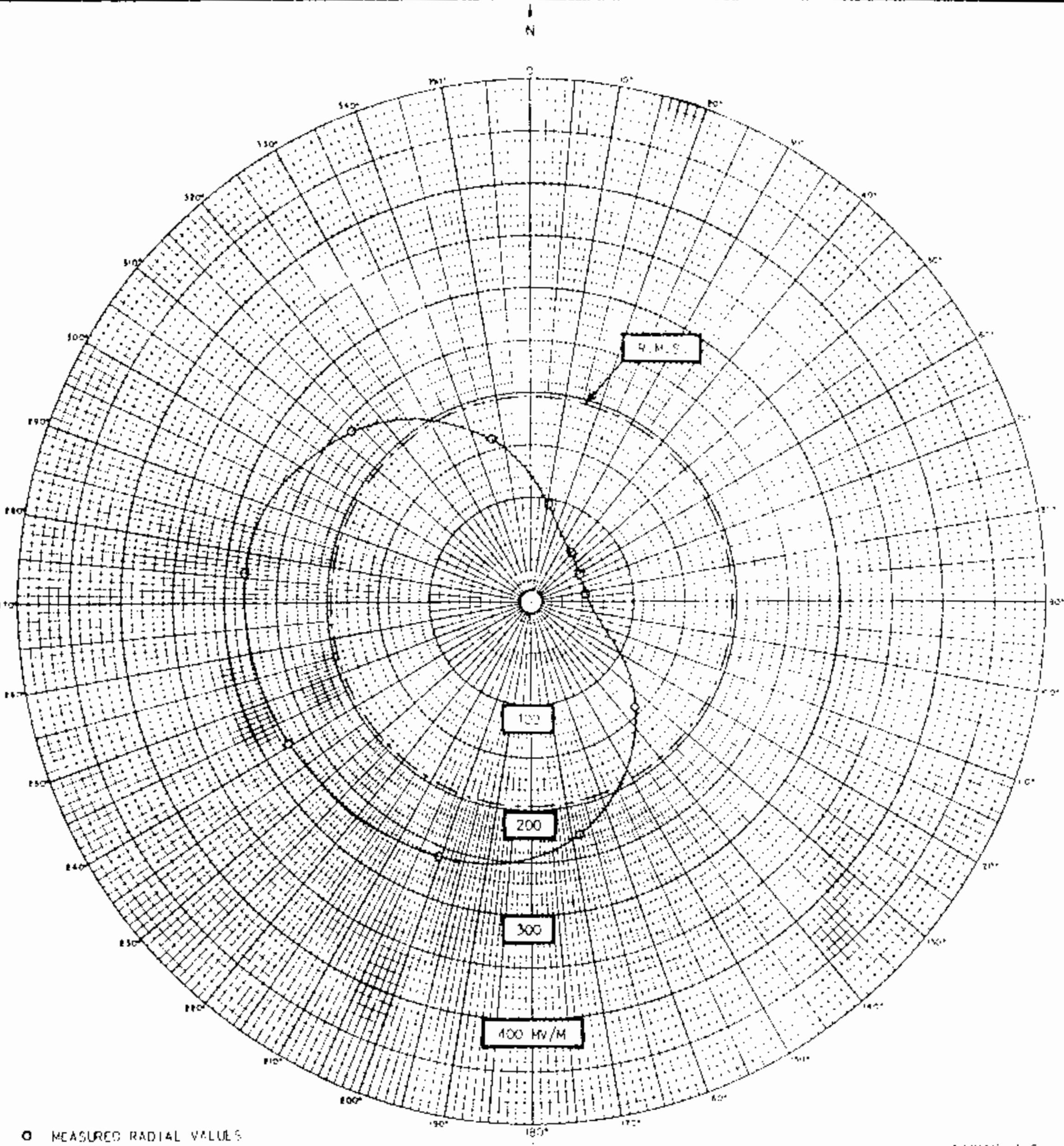
WMKO

MEASURED DAY
(4-22-60g)

Station WMRO
Aurora, Illinois

500w, 1kw-LS, DA-2,U
1280 KC

GRANTED
LICENSE
8-5-60

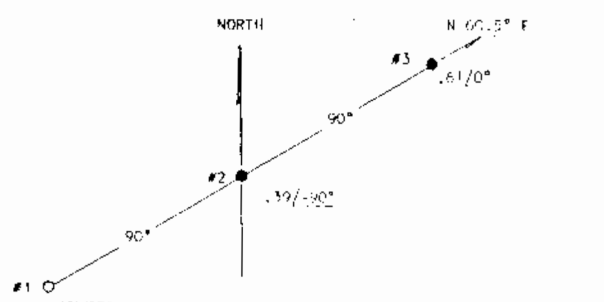


O MEASURED RADIAL VALUES

FIGURE 1-C

HORIZONTAL RADIATION PATTERN

SPACING AND ORIENTATION



APPLICANT	WMRO
LOCATION	AURORA, ILLINOIS
FREQUENCY	1280 KC/S
POWER	1 KW-LS; 0.5 KW-N (DA-2)
LATITUDE	41 DEG 4[illegible] MIN 1[illegible] SEC
LONGITUDE	88 DEG 1[illegible] MIN 44 SEC
WHEN USED	DAYTIME
RMS FIELD	[illegible] MV/M
DATE	FEBRUARY [illegible]

SILLIMAN, MOFFET & ROHRER
CONSULTING RADIO ENGINEERS
WASHINGTON D.C.

WNAM

PROPOSED DAY
(4-10-61g)

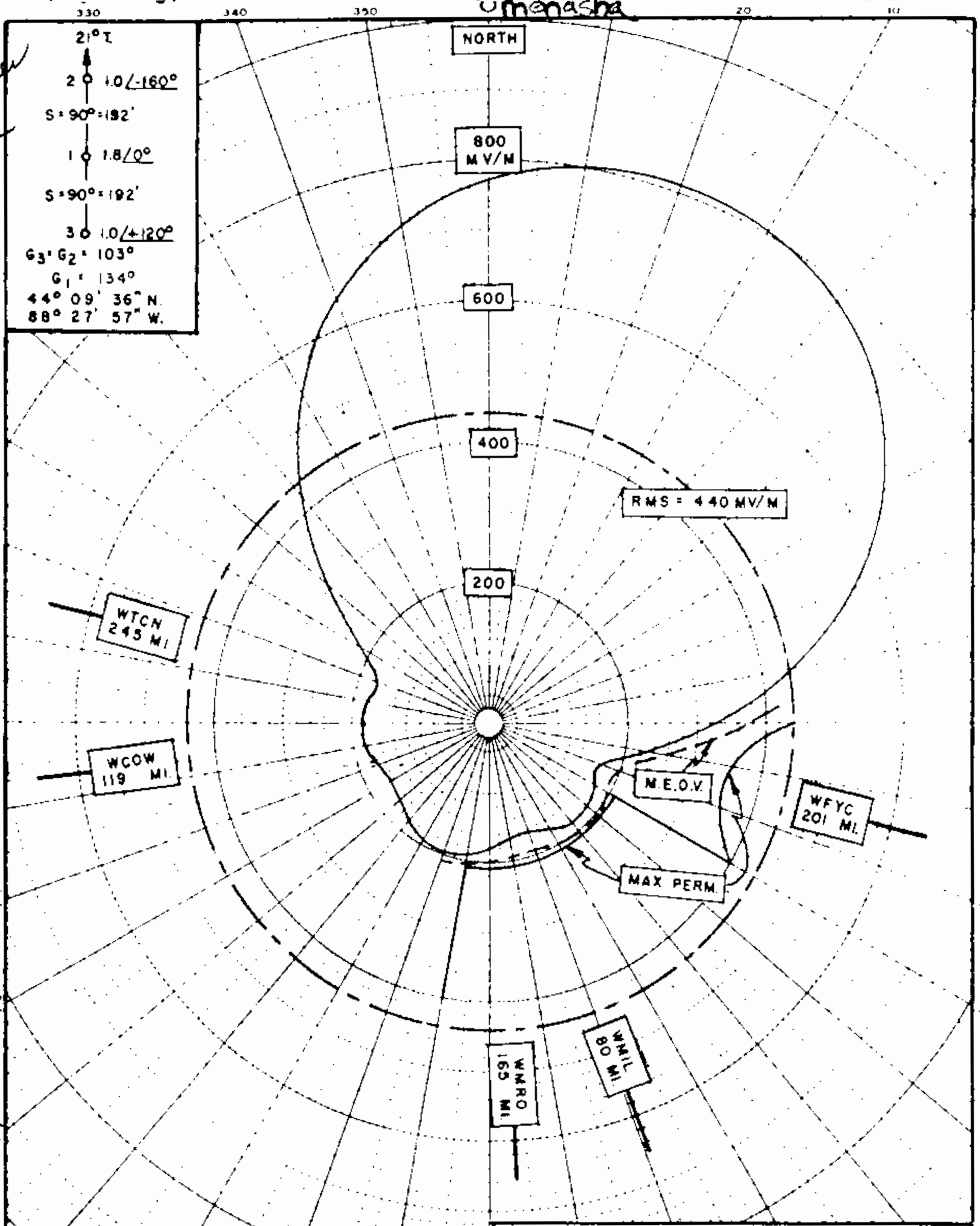
over

Station WNAM
Neenah, Wisconsin
Menasha

1kw, 5kw-LS, DA-2,U
1280 KC

C

3-1-62 granted cp to increase day power to 5 kw & DA-2



PROPOSED HORIZONTAL PLANE PATTERN
DAYTIME
WNAM EXIST. 1280 KC, 1 KW-U-DA-N
WNAM PROP. 1280 KC, 5 KW-LS, 1KW-U-DA-2
NEENAH WISCONSIN
SEPTEMBER, 1960

WALTER F. KEAN
CONSULTING RADIO ENGINEERS
NINETEEN EAST QUINCY STREET
RIVERSIDE ILLINOIS

FCC File No. BP-14652
Accepted 3-6-61

Station WNAM
Neenah, Wisconsin

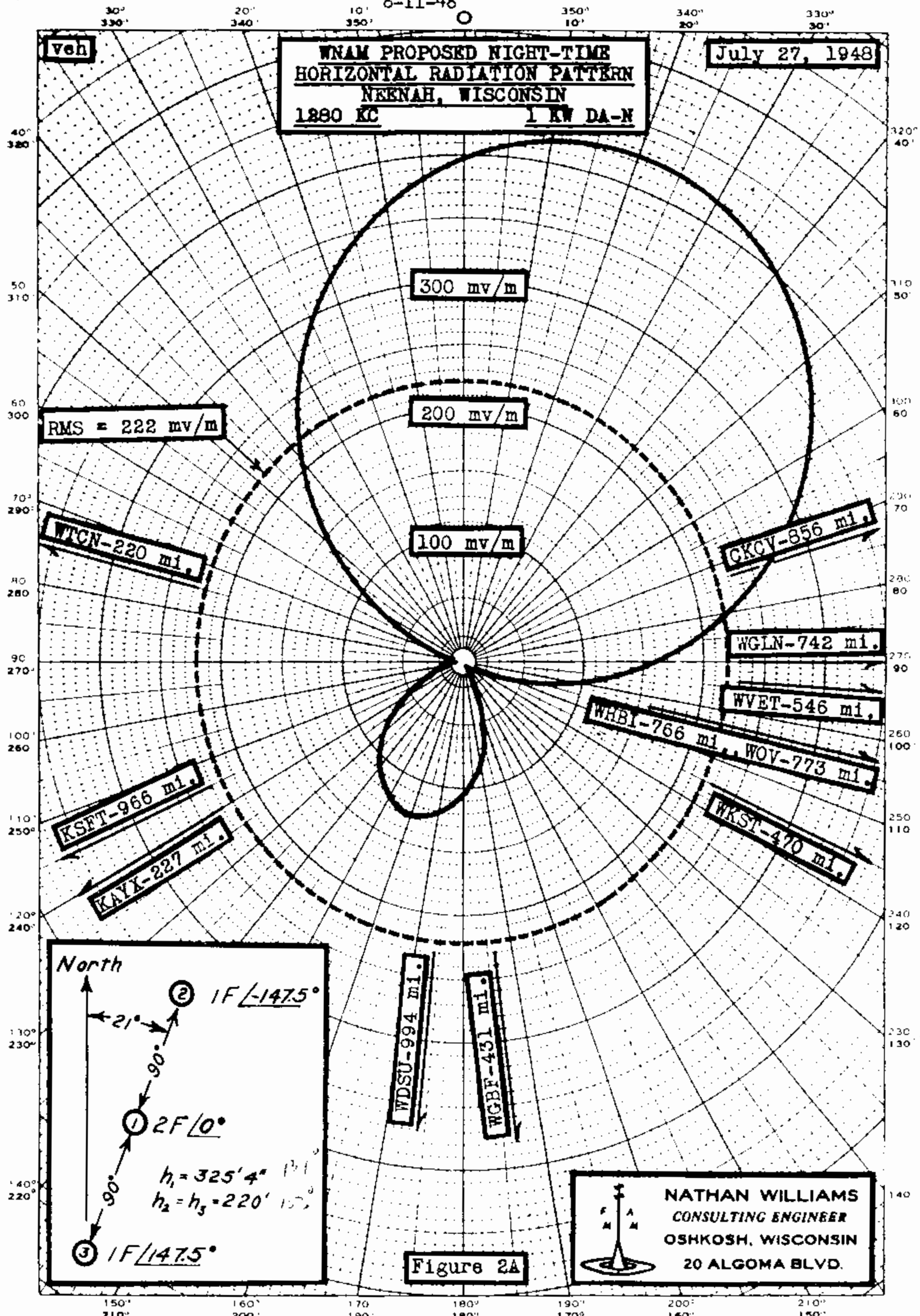
1280 KC

Neenah-Menasha, Wis.

WNAM
1280

AUG 12 1948 G

8-11-48



8-11-48

WNAM

PROPOSED
NIGHT
NULLS

1/5/49 G

WNAM. NEENAH, Menasha WISC.

1kw, DAN

1280 kc

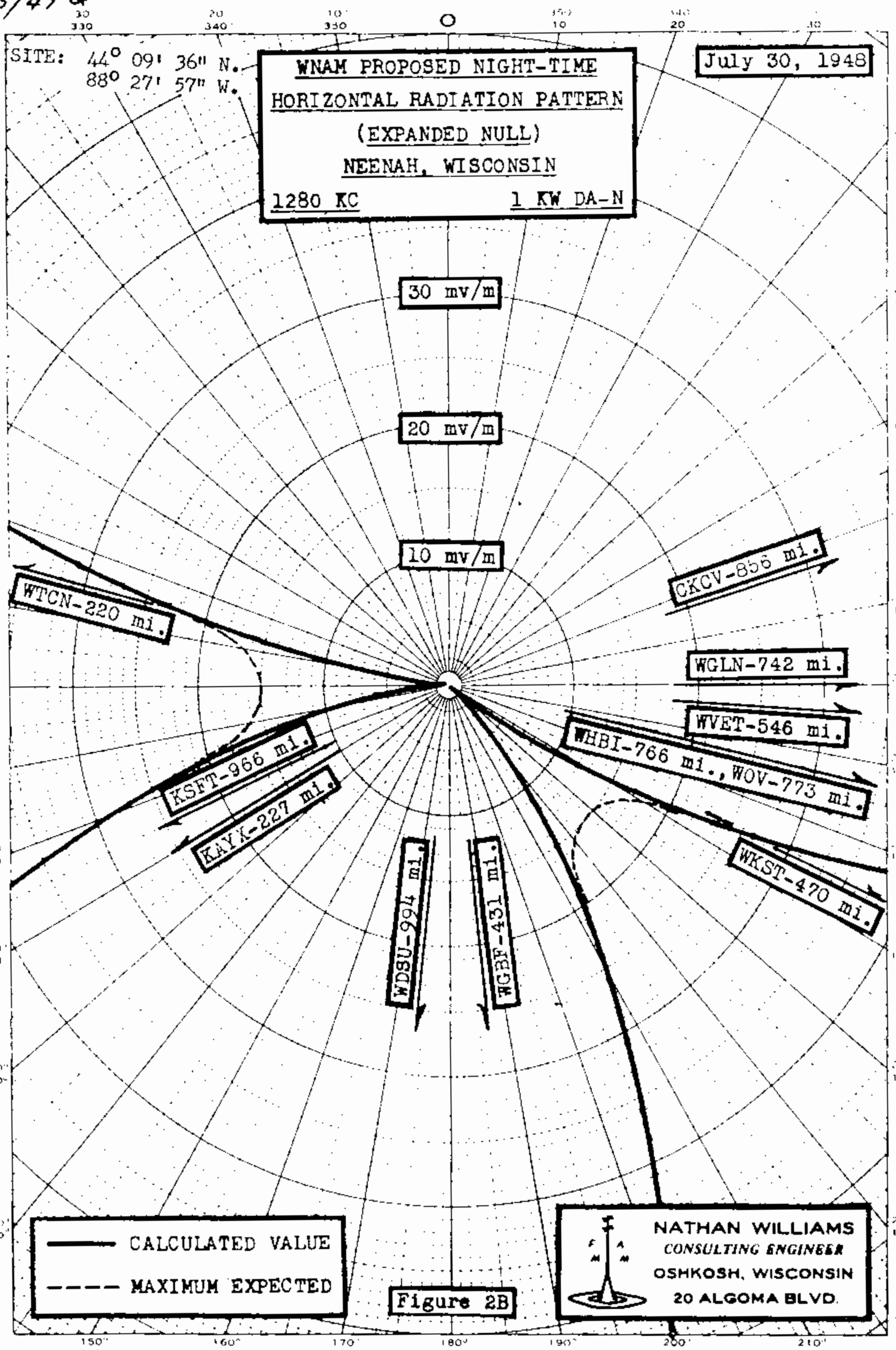
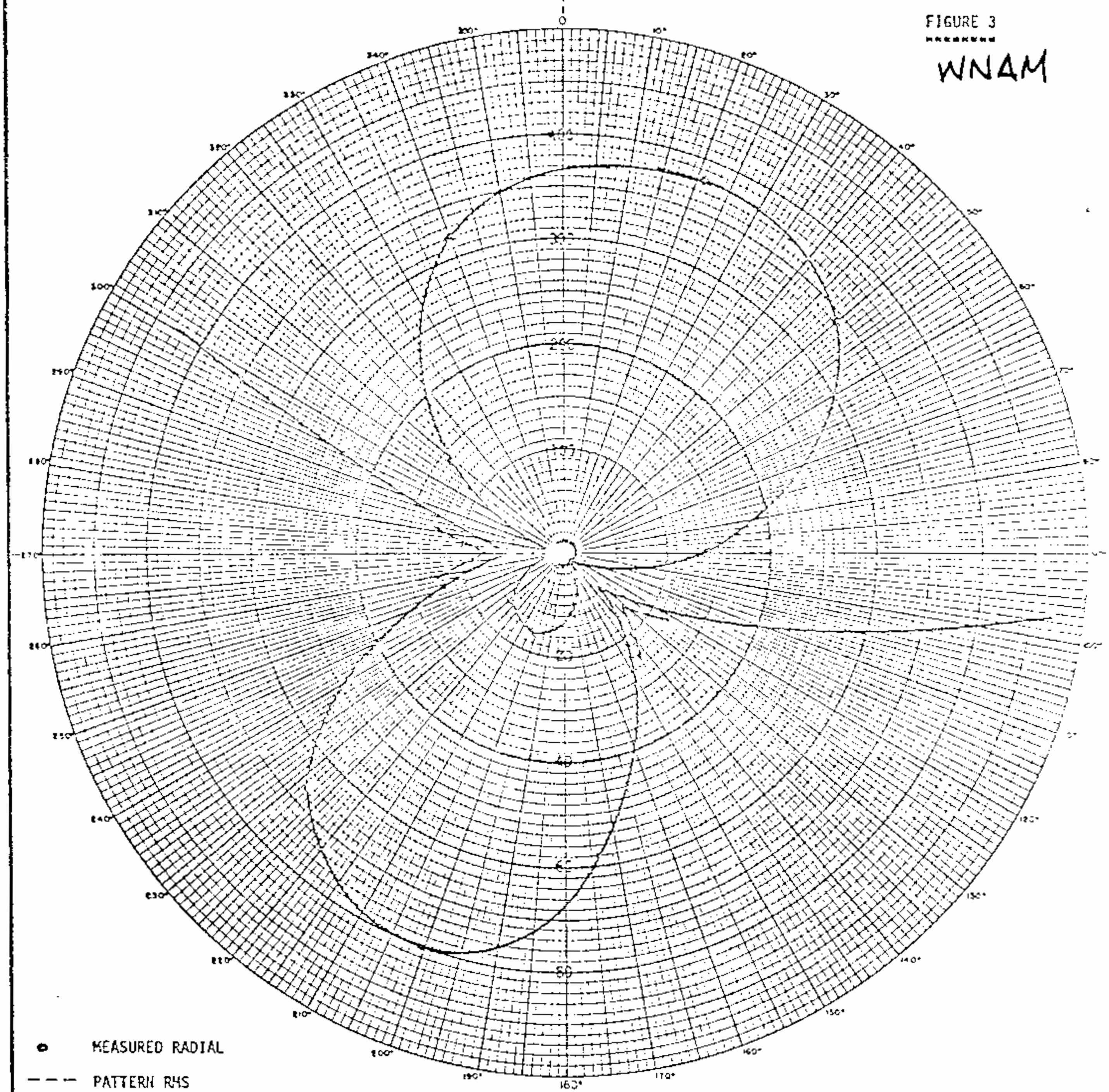


Figure 2B

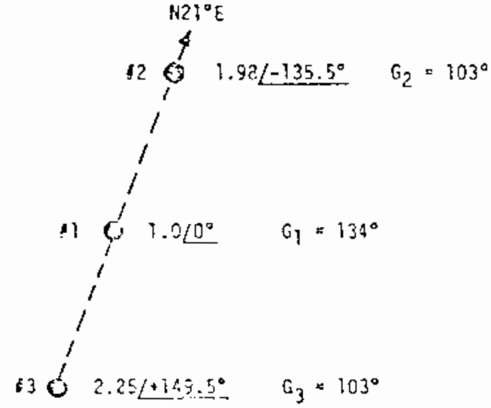
WNAM, NEENAH, WISC. 1280kc

FIGURE 3

WNAM



HORIZONTAL RADIATION PATTERN



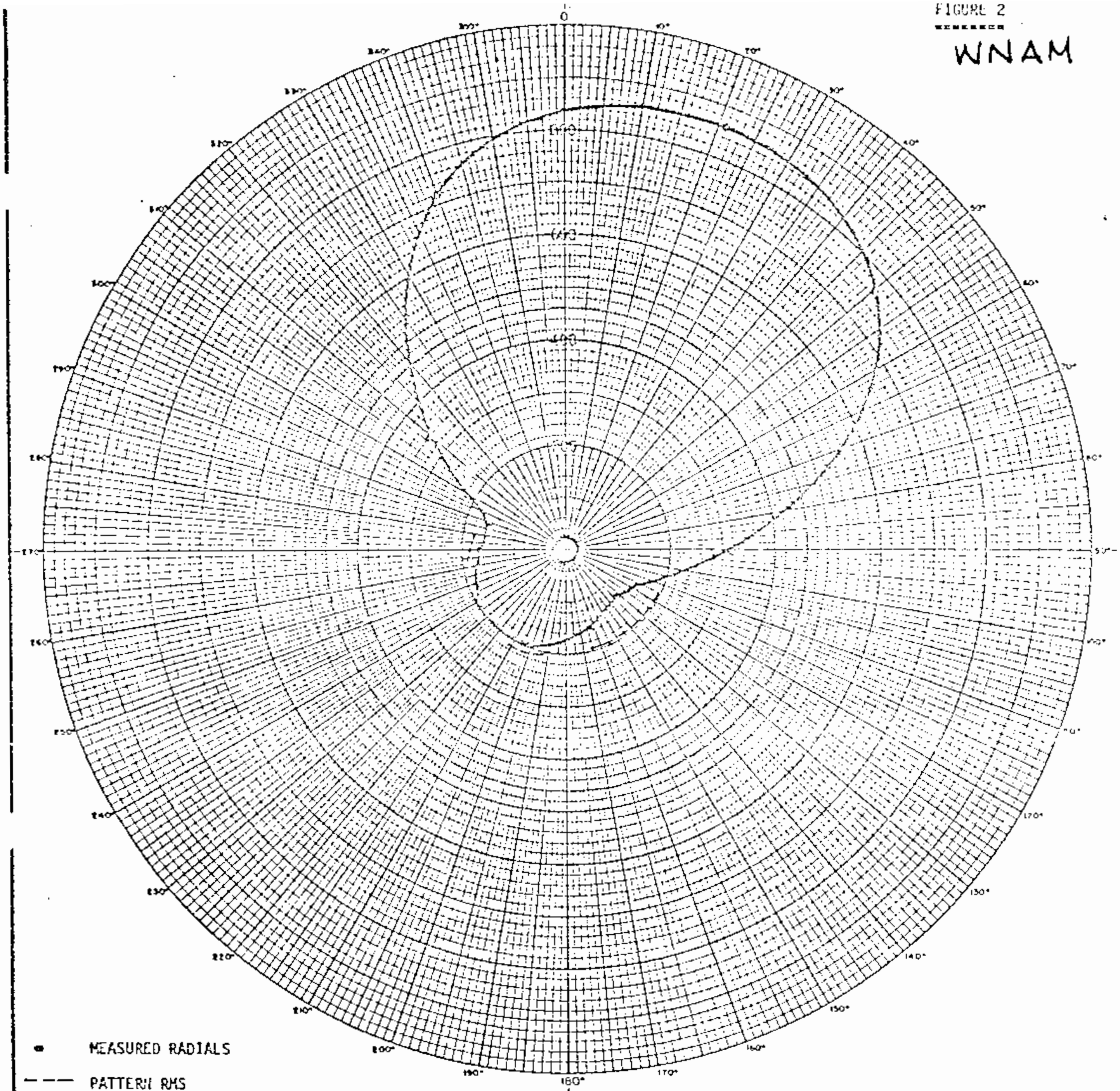
measured antenna parameters

APPLICANT	WNAM
LOCATION	NEENAH, WISCONSIN
FREQUENCY	1280 KC/S
POWER	(5 KW DAY) DA-2 1 KW NITE
LATITUDE	44 DEG 9 MIN 35 SEC
LONGITUDE	88 DEG 27 MIN 57 SEC
WHEN USED	NIGHT DIRECTIONAL
RMS FIELD	200 mV/m
DATE	June, 1974

RALPH E. EVANS ASSOCIATES
Consulting Radio Engineers
3500 North Sherman Boulevard
Milwaukee, Wisconsin 53215
Telephone 442-4710 (Area Code 414)

FIGURE 2

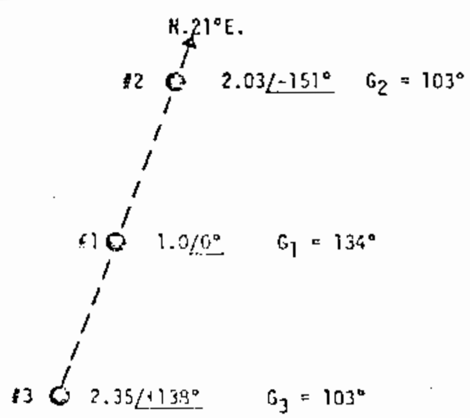
WNAM



• MEASURED RADIALS

--- PATTERN RMS

HORIZONTAL RADIATION PATTERN



measured antenna parameters

APPLICANT	WNAM
LOCATION	NEENAH, WISCONSIN
FREQUENCY	1280 KC/S
POWER	5 KW DAY DA-2 (1 KW Nite)
LATITUDE	44 DEG 9 MIN. 36 SEC.
LONGITUDE	88 DEG 27 MIN 57 SEC.
WHEN USED	DAY DIRECTIONAL
R M S FIELD	462 mv/m
DATE	JUNE, 1974

RALPH E. EVANS ASSOCIATES

Consulting Radio Engineers

3500 North Sherman Boulevard

Milwaukee, Wisconsin 53216

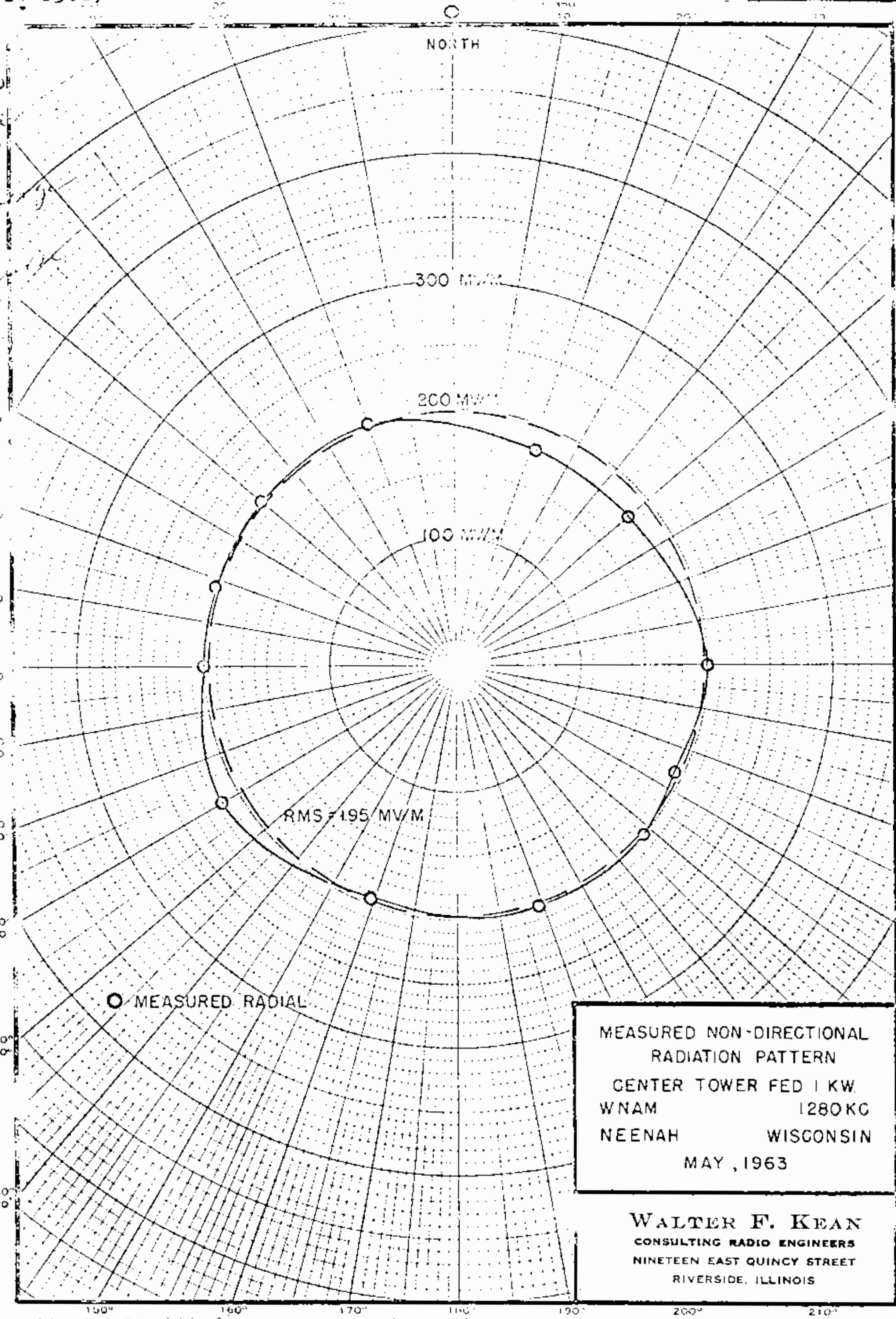
Telephone 442-4210 (Area Code 414)

WNAM

Measured Non-DA
(7-24-63ct)

Station WNAM
Neenah-Menasha, Wisconsin

1kw,5kw-LS,DA-2,U
1280 kc



FCC File No.BL-10126
Accepted 7-8-63

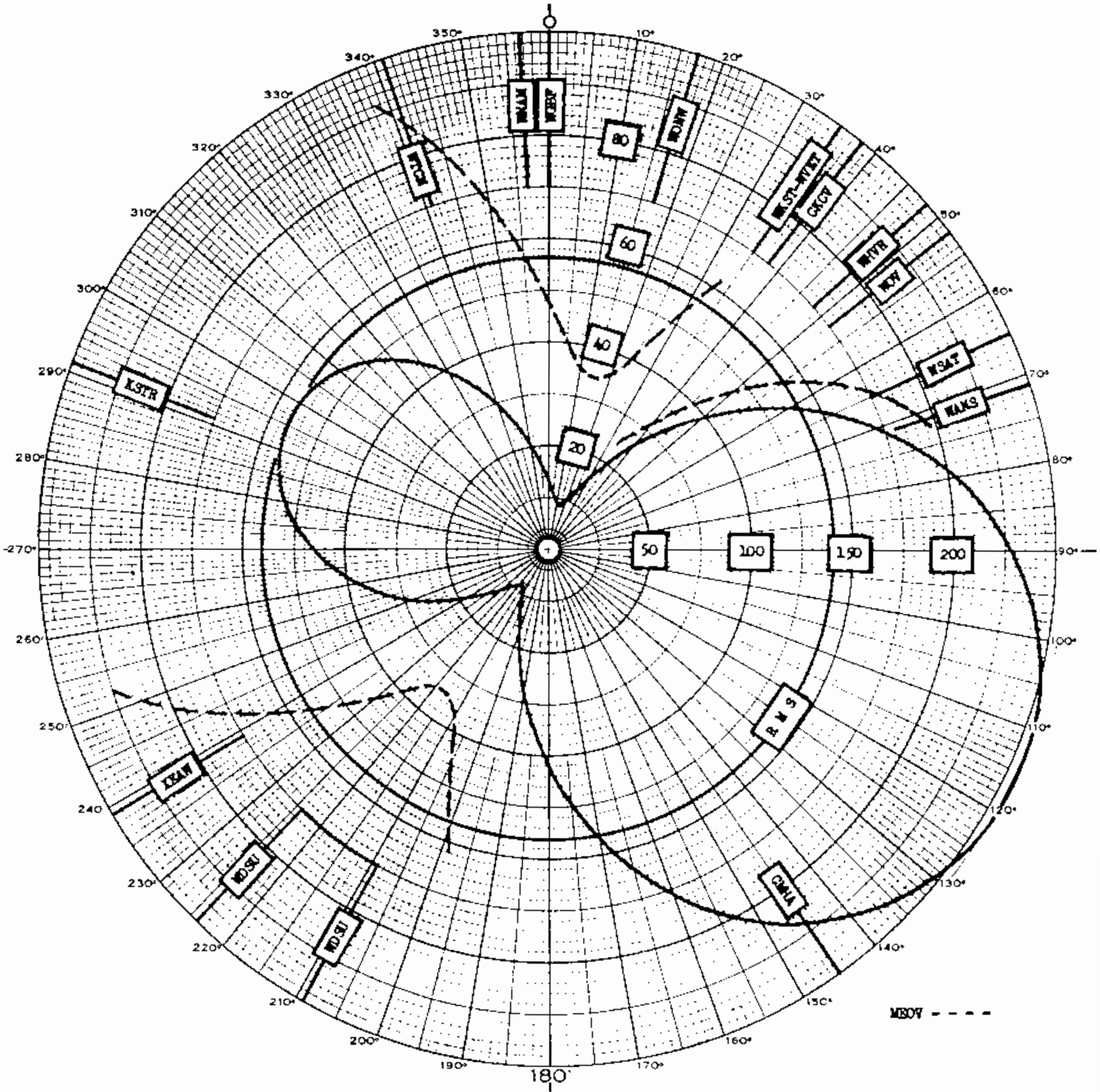
Station WNAM
Neenah-Menasha, Wisconsin

1280 kc

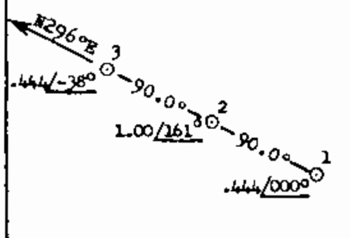
WNPT

POLAR CO-ORDINATE NO. 10 HP
MADE IN U.S.A.

PROPOSED WNPT, TUSCALOOSA, ALABAMA 500W, U, DA-N 1280 kc
NIGHT (1/12/54G)



TOWER PLACEMENT SKETCH



PATTERN PARAMETERS

TOWER No.	ELECTRICAL HEIGHT $G°$	TRUE TOWER ORIENTATION $\theta°$	SPACING $S°$	PHASING $\psi°$	HORIZONTAL FIELD mv/m E	FIELD RATIO F	ELEV. ANGLE $\theta°$	ELEVATION RMS FIELD mv/m E_θ
1	94	000	000	000		.444	0	
2	94	296	090	161		1.00	10	
3	94	296	180	-38		.444	20	
4							30	
5							40	
6							50	
7							60	
8							70	
9							80	
10							RMS 141 mv/m	
DAYTIME OPERATION ☐				NIGHTTIME OPERATION ☒			P_t = 0.5 kw	

STATION DATA

CALL	WNPT
FREQUENCY	1280 kc
POWER	0.5 kw
TIME OF OPERATION	Night
TYPE OF OPERATION	DA
DAYTIME TOWER	2
NIGHTTIME TOWERS	1-2-3
No RADIALS PER TOWER	120
LENGTH OF RADIALS	96 - 200 ft
GROUND SCREEN DIMENSION	24x24'
LAT.	33° 13' 07"
LONG	87° 34' 05"
SUPERSEDES	521202A
PATTERN No	531112A

CLAUDE M. GRAY
Consulting Radio Engineer
BIRMINGHAM, ALA

EXHIBIT
1-A-7

PROPOSED HORIZONTAL RADIATION PATTERN
WEST ALABAMA BROADCASTING COMPANY
TUSCALOOSA, ALABAMA

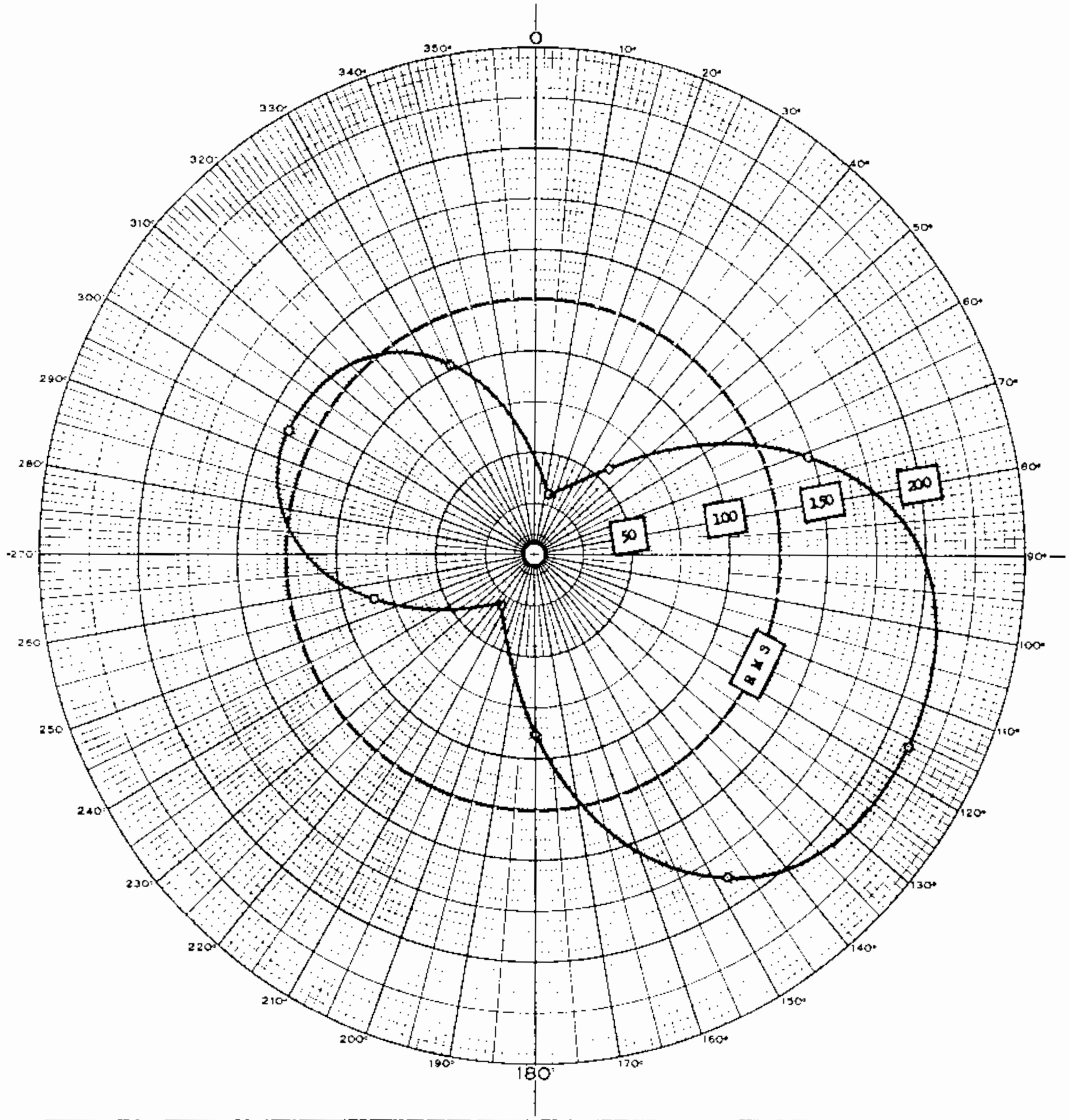
WNPT

MEASURED NIGHT (3/22/55G)

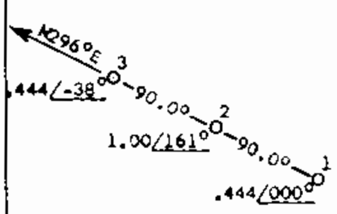
STATION WNPT
TUSCALOOSA, ALABAMA

500W, 1KW-LS
DA-N, U

1280 KC



TOWER PLACEMENT SKETCH



PATTERN PARAMETERS

TOWER No	ELECTRICAL HEIGHT G°	TRUE TOWER ORIENTATION ϕ°	SPACING S°	PHASING ψ°	HORIZONTAL FIELD mv/m E	FIELD RATIO F	ELEV ANGLE θ°	ELEVATION RMS FIELD mv/m E_θ
1	94	000	000	000		.444	0	
2	94	296	090	161		1.00	10	
3	94	296	180	-38		.444	20	
4							30	
5							40	
6							50	
7							60	
8							70	
9							80	
10							RMS 126 mv/m	
DAYTIME OPERATION ☐				NIGHTTIME OPERATION ☒			P_o = 0.5 kw	

STATION DATA

CALL	WNPT
FREQUENCY	1280 kc
POWER	0.5 kw
TIME OF OPERATION	Night
TYPE OF OPERATION	DA
DAYTIME TOWERS	2
NIGHTTIME TOWERS	1-2-3
No RADIALS PER TOWER	120
LENGTH OF RADIALS	96 - 200 ft
GROUND SCREEN DIMENSION	24x24'
LAT	33° 13' 07"
LONG.	87° 34' 05"
SUPERSEDES	
PATTERN No.	550116A

CLAUDE M. GRAY
Consulting Radio Engineer
BIRMINGHAM, ALA

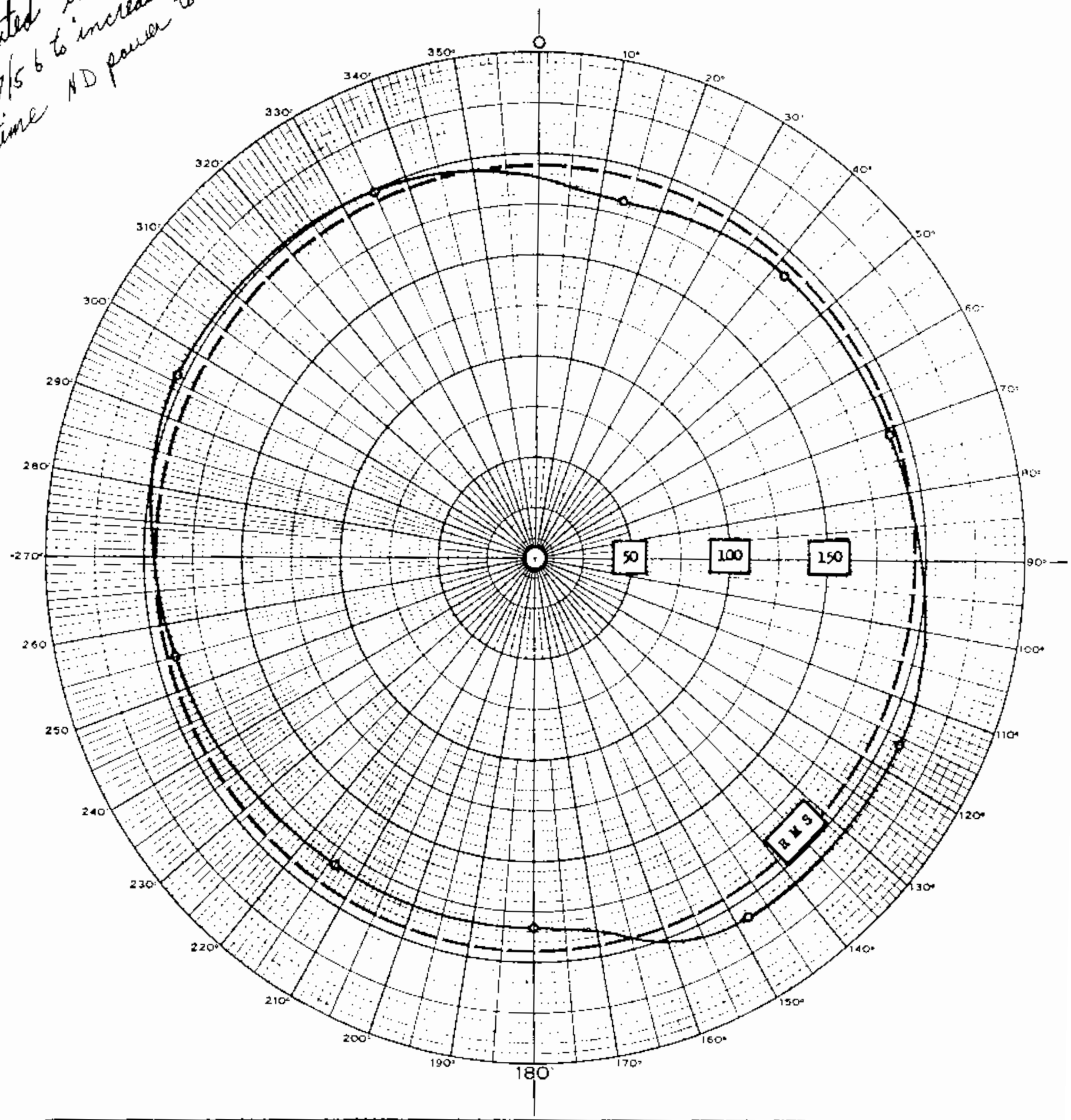
EXHIBIT
550116A

MEASURED HORIZONTAL RADIATION PATTERN
WEST ALABAMA BROADCASTING COMPANY
TUSCALOOSA, ALABAMA

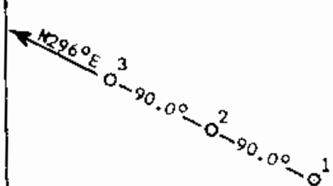
WNPT

MEASURED NON-DIRECTIONAL (3/22/55G) STATION WNPT TUSCALOOSA, ALABAMA 500W, 1KW-LS DA-N, U 1280 KC

granted license 12/17/56 to increase daytime ND power to 5KW



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							0	
2	94	000	000	000			0	
3							20	
4							30	
5							40	
6							50	
7							60	
8							70	
9							80	
10							RMS 194 mv/m	

DAYTIME OPERATION ☒ NIGHTTIME OPERATION ☐ P_r = 1.0 kw

STATION DATA

CALL	W N P T
FREQUENCY	1280 kc
POWER	1.0 kw
TIME OF OPERATION	Day
TYPE OF OPERATION	ND
DAYTIME TOWER	2
NIGHTTIME TOWERS	1-2-3
No. RADIALS PER TOWER	120
LENGTH OF RADIALS	96 - 200 ft
GROUND SCREEN DIMENSION	24 x 24'
LAT	33° 13' 07"
LONG	87° 34' 05"
SUPERSEDES	
PATTERN No	550117A

CLAUDE M. GRAY
Consulting Radio Engineer
BIRMINGHAM, ALA

EXHIBIT
550117A

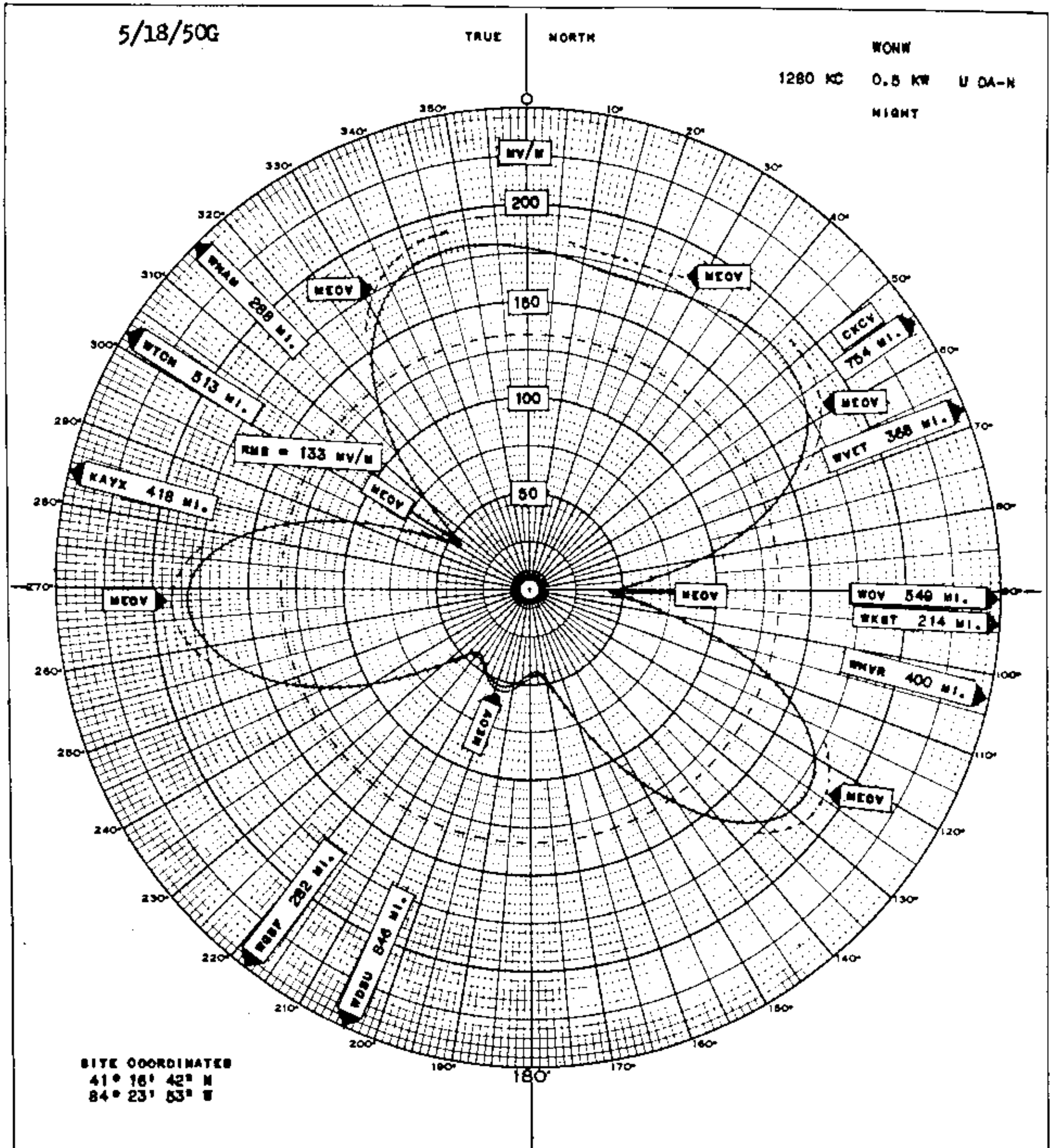
MEASURED HORIZONTAL RADIATION PATTERN
WEST ALABAMA BROADCASTING COMPANY
TUSCALOOSA, ALABAMA

WONW

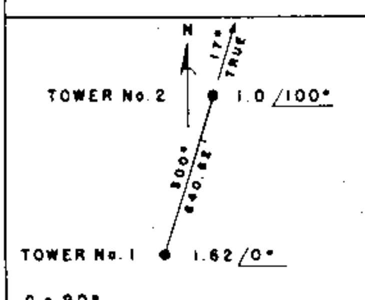
PROPOSED NIGHT | WONW, DEFIANCE, OHIO | 5-16-50 | 500w, DAN | 1280 kc

FIGURE 10

5/18/50G



CALCULATED NIGHTTIME HORIZONTAL PLANE RADIATION PATTERN



DEFIANCE BRYAN PAULDING BROADCASTING CO
WONW DEFIANCE OHIO

WELDON & CARR
CONSULTING RADIO ENGINEERS
WASHINGTON D.C. DALLAS TEXAS

PROPOSED WONW OPERATION

1280 KC 0.5 KW U DA-N

W 500317 A

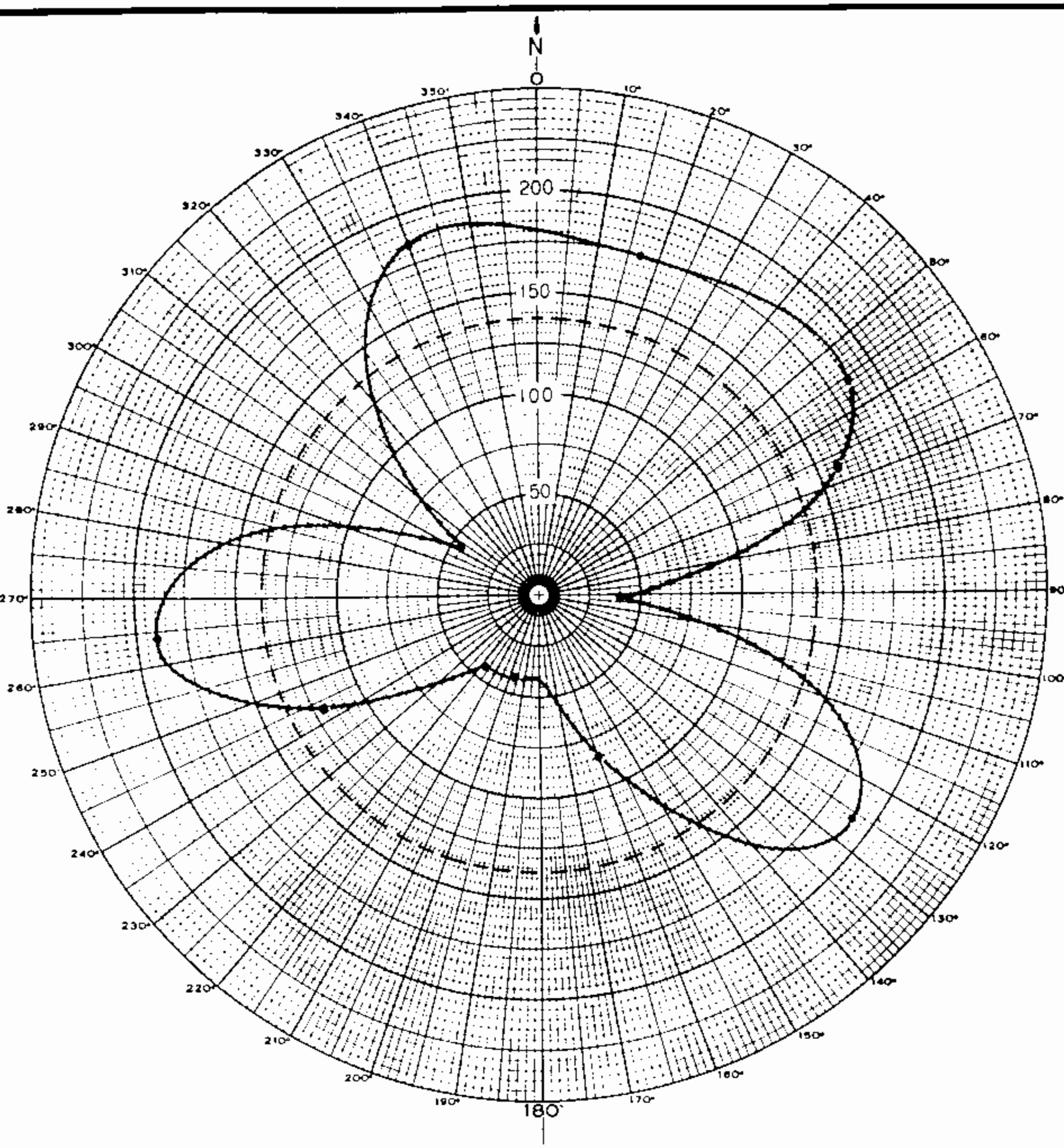
WONW, Defiance, Ohio 1280 kc

MEASURED
NIGHT
9/11/51G

WONW, DEFIANCE, OHIO

500w, U, DA-N

1280 kc



RMS 137 MV/M

PATTERN NO. 51070IP
LATITUDE: 41° 16' 40"
LONGITUDE: 84° 23' 53"

HAROLD B. ROTHROCK
CONSULTING RADIO ENGINEER
CITIZENS NATIONAL BANK BUILDING
BEDFORD, INDIANA

Exhibit No. 1C

RADIO STATION WONW
DEFIANCE-BRYAN-PAULDING BCG. CO.
DEFIANCE, OHIO

1280kc - 500w - DA-N

MEASURED DIRECTIONAL PATTERN
NIGHTTIME

granted CP to increase day ND power to 1 KW 7-20-60

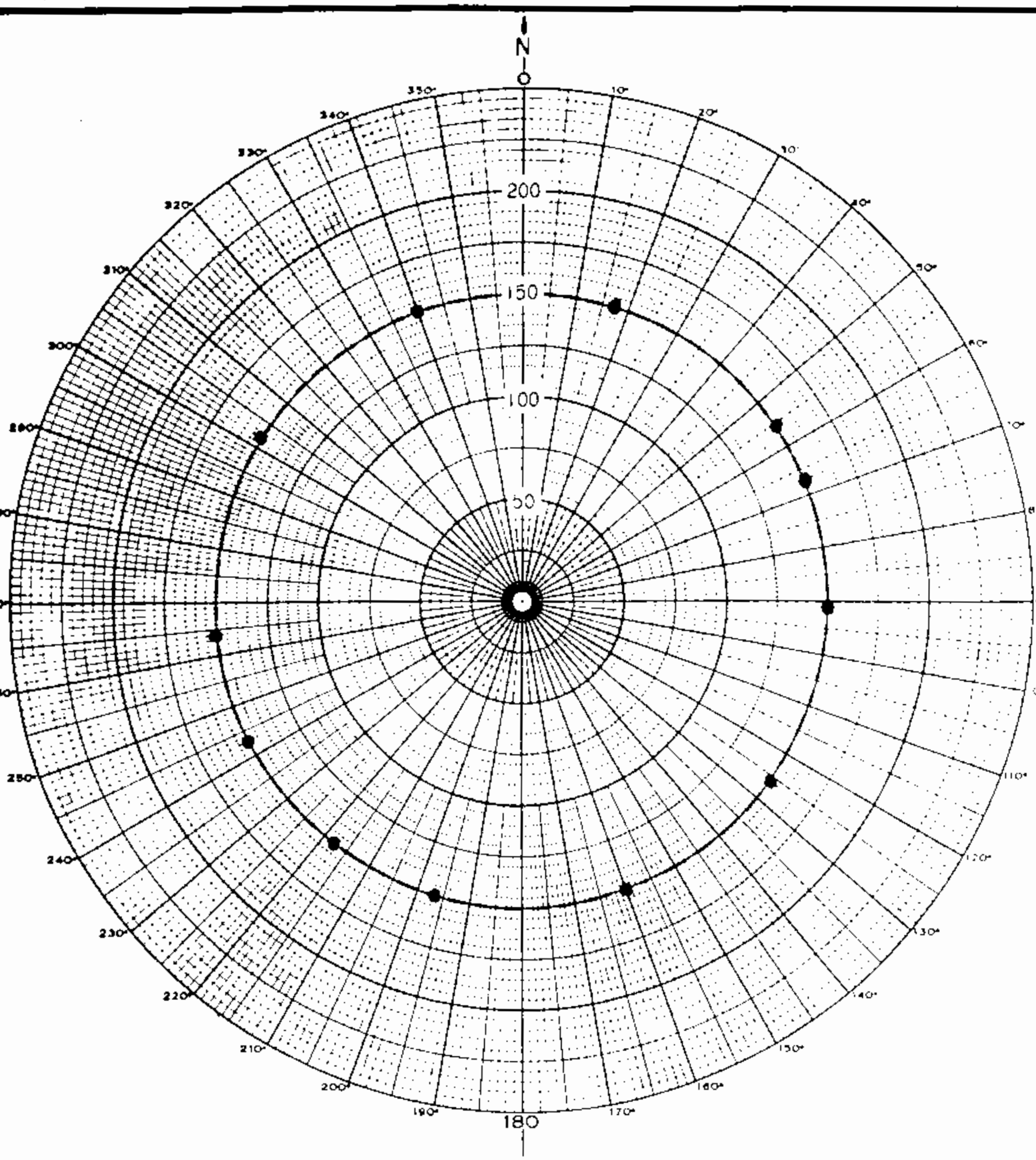
WONW

MEASURED
NON-DA
9/18/51G

WONW, DEFIANCE, OHIO

500w, U, DA-N

1280 KC



RMS = 150 MV/M

PATTERN NO. 51070INDP
LATITUDE: 41° 16' 40"
LONGITUDE: 84° 23' 53"

HAROLD B. ROTHROCK
CONSULTING RADIO ENGINEER
CITIZENS NATIONAL BANK BUILDING
BEDFORD, INDIANA

Exhibit No. 9

RADIO STATION WONW
DEFIANCE-BRYAN-PAULDING BCS. CO.
DEFIANCE, OHIO

1280kc - 500w - DA-N

MEASURED NON-DIRECTIONAL PATTERN

Granted CP to increase day ND power to 1 kw 1-20-63

Granted CP for increase in ND power to 1 kw - 1-23-61

WONW, DEFIANCE, OHIO

1280 KC

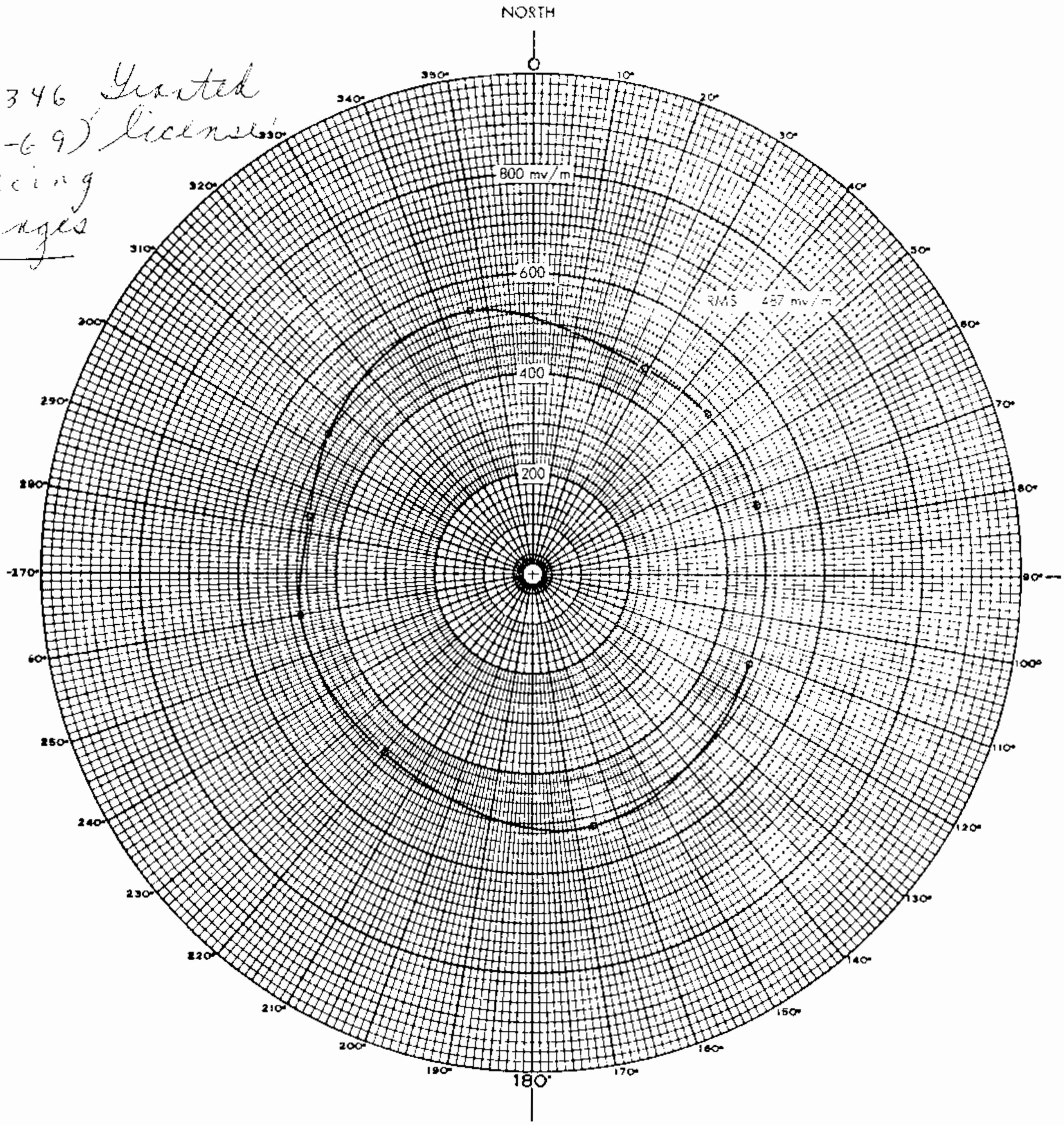
WROC

Measured Non-DA
(5-27-69ct)

Station WROC
Rochester, New York

5kw,DA-N,U
1280 kc

BL-12346 Granted license
(6-30-69) covering
changes



NORTH LATITUDE 43° 05' 54"
WEST LONGITUDE 77° 35' 00"

FIGURE 6
RADIATION PATTERN
(Non-Directional)
RUST CRAFT BROADCASTING OF NEW YORK, INC.
WROC 1280 KC 5 KW-U, DA-N
ROCHESTER, NEW YORK

Prepared by
Lohnes and Culver Washington, D.C.

FCC File No.BL-12346
Accepted 5-13-69

Station WROC
Rochester, New York

1280 kc

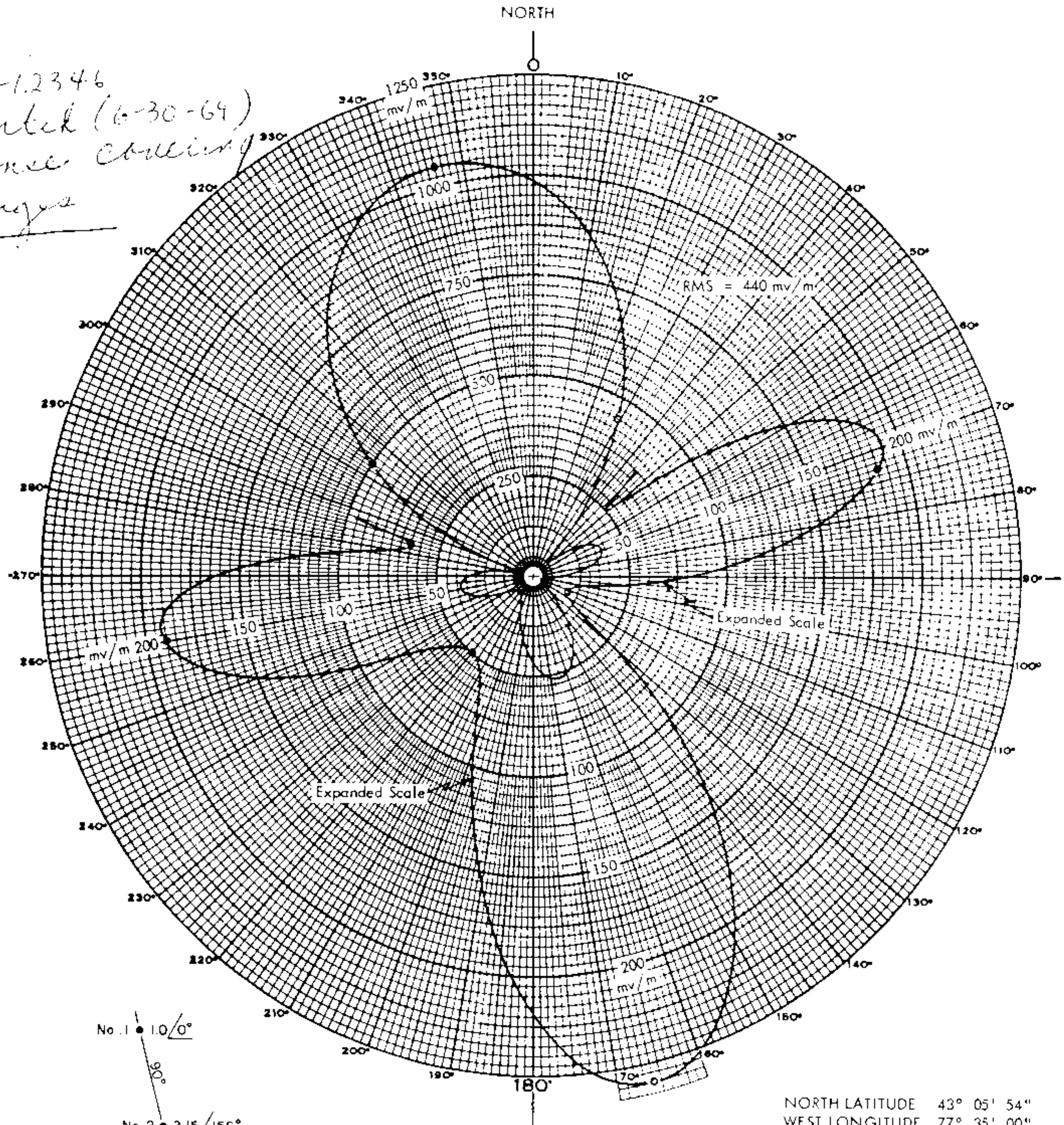
WROC

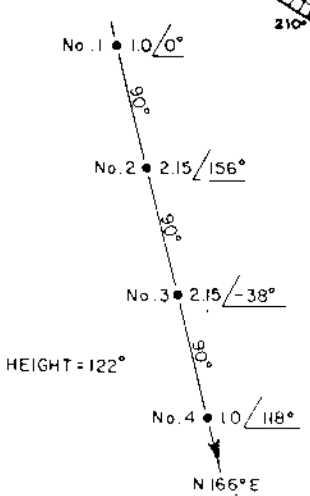
Measured Night
(5-27-69ct)

Station WROC
Rochester, New York

5kw,DA-N,U
1280 kc

BL-12346
Granted (6-30-69)
License Covering
Changes





NORTH LATITUDE 43° 05' 54"
WEST LONGITUDE 77° 35' 00"

FIGURE 7
RADIATION PATTERN
(Nighttime Directional)
RUST CRAFT BROADCASTING OF NEW YORK, INC.
WROC 1280 KC 5 KW-U, DA-N
ROCHESTER, NEW YORK

Prepared by
Lohnes and Culver Washington, D.C.

FCC File No.BL-12346
Accepted 5-13-69

Station WROC
Rochester, New York

1280 kc

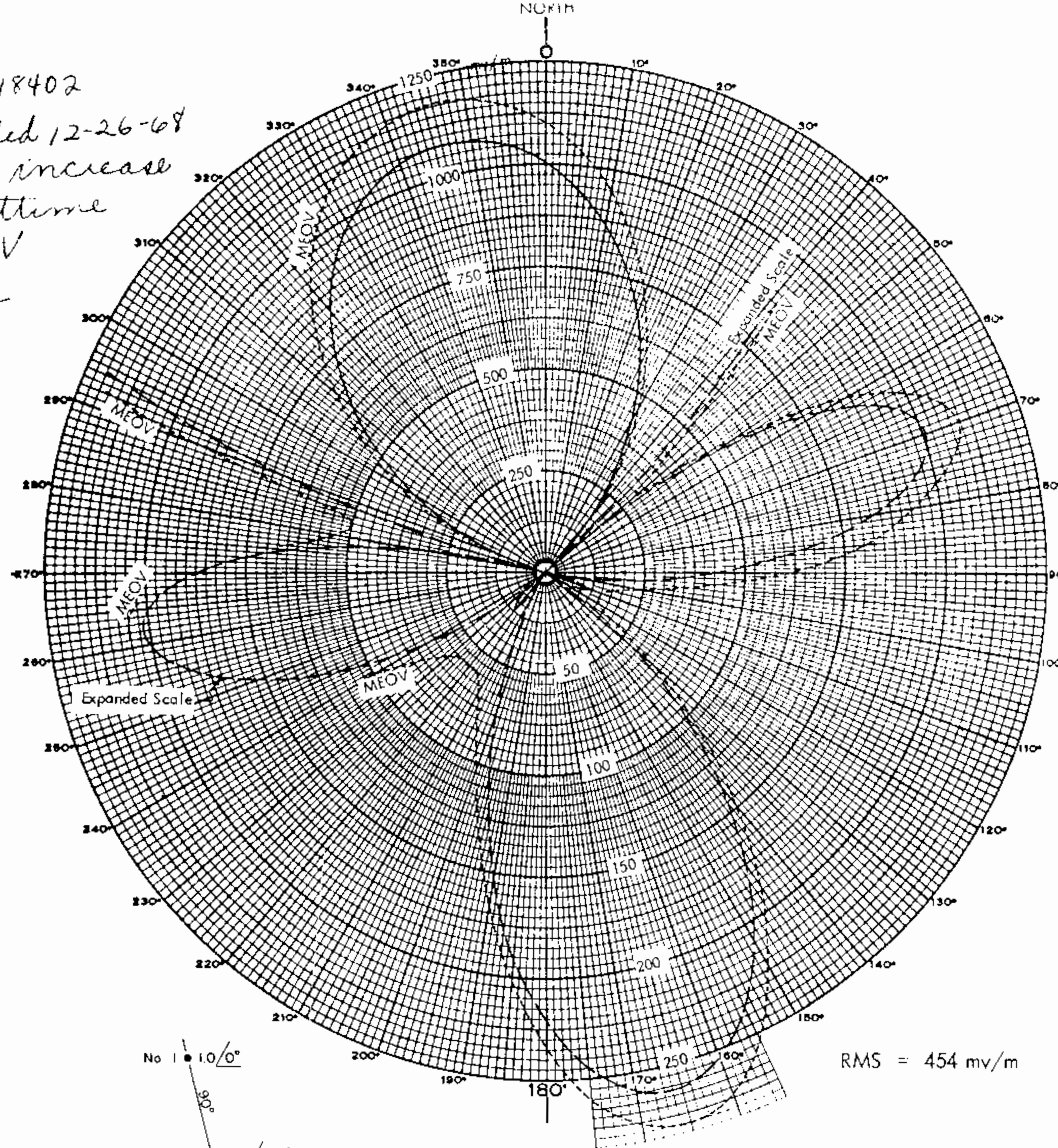
WROC

Proposed Night
(12-27-68ct)

Station WROC
Rochester, New York

5kw,DA-N,U
1280 kc

BP-18402
Granted 12-26-68
CP to increase
nighttime
MEOV



RMS = 454 mv/m

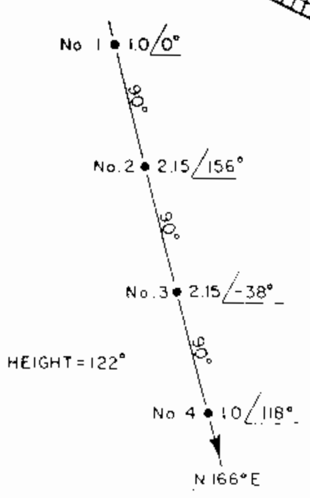


FIGURE 2
HORIZONTAL PLANE NIGHTTIME
RADIATION PATTERN
WROC 5 KW, DA-N 1280 KC
ROCHESTER, NEW YORK

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

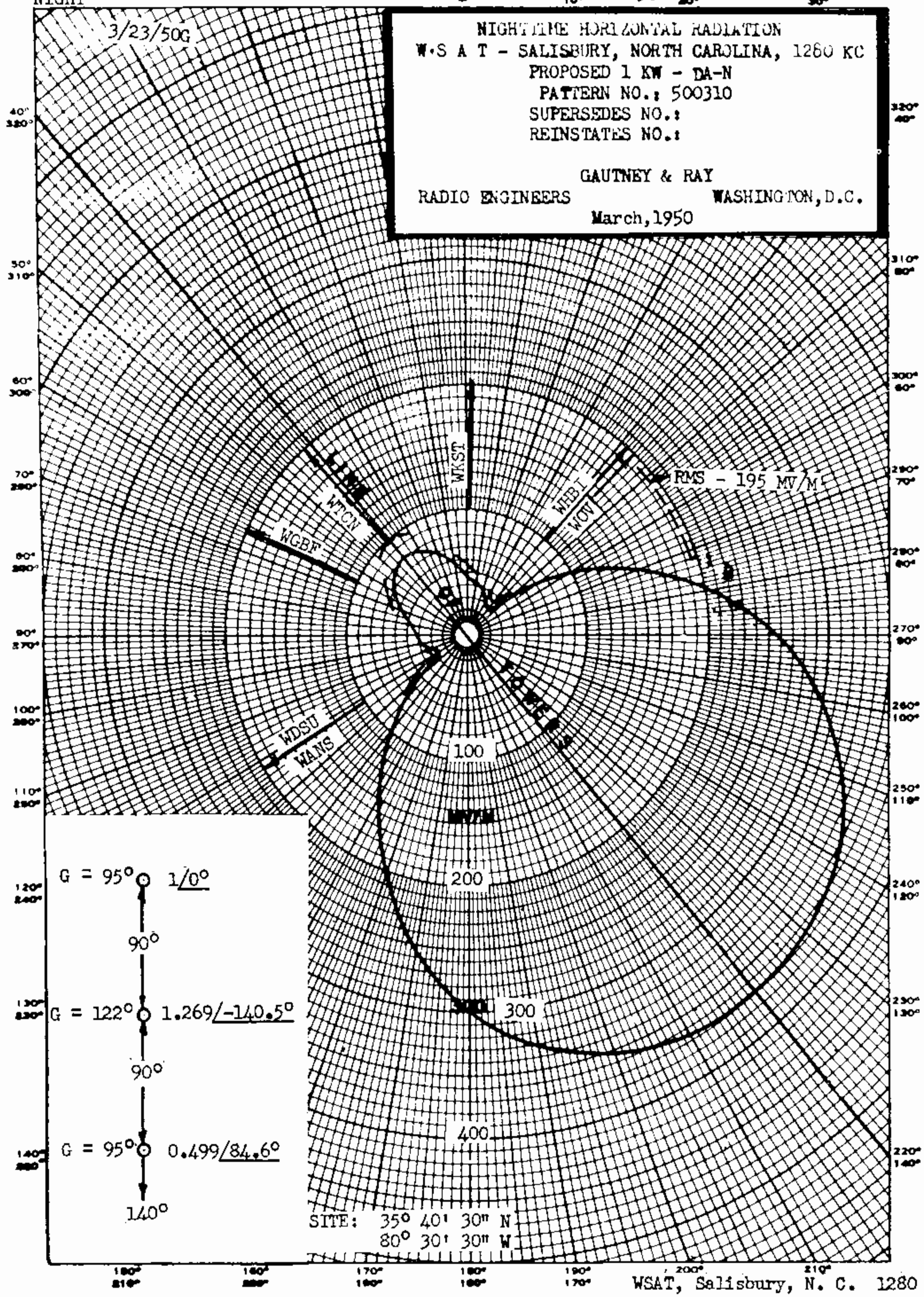
FCC File No.BP-18402
Accepted 12-17-68

Station WROC
Rochester, New York

1280 kc

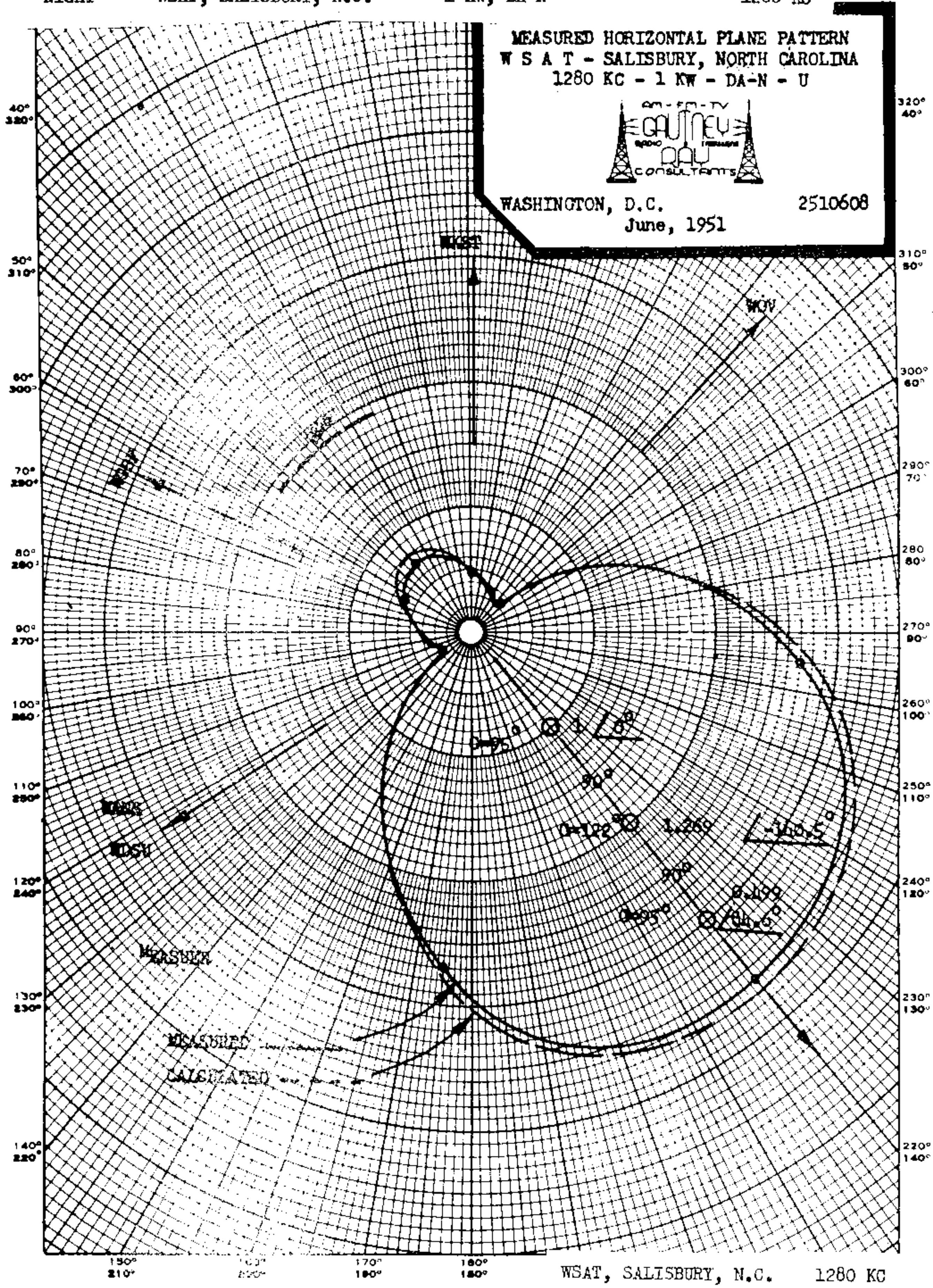
WSAT

PROPOSED NIGHT — WSAT, SALISBURY, N. C. — 3-21-50 — 1kw, DAN — 1280 kc



WSAT

MEASURED
NIGHT WSAT, SALISBURY, N.C. 1 KW, DA-N 1280 KC



WSAT, SALISBURY, N.C. 1280 KC

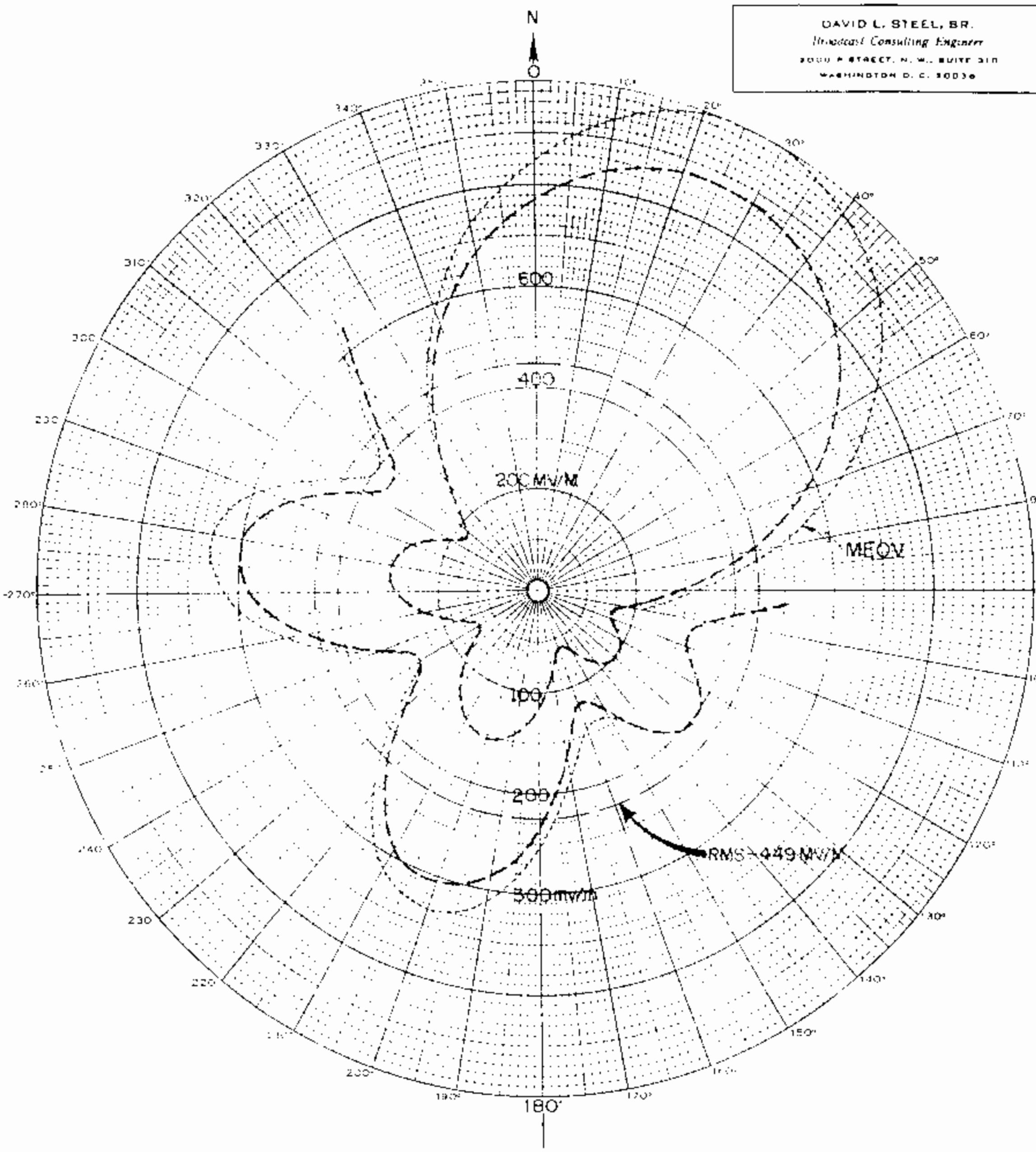
Proposed Night
(12-29-66ct)

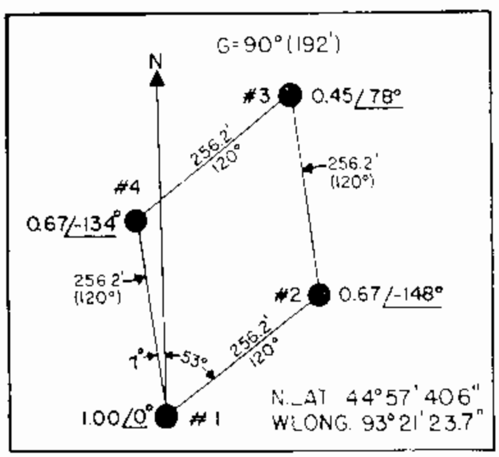
Station WWTC
Minneapolis, Minnesota

5kw,DA-N,U
1280 kc

12-12-66
GRANTED
MODIFICATION
OF CP TO
MAKE CHANGES
N NIGHT, MEOV'S

DAVID L. STEEL, SR.
Broadcast Consulting Engineer
2000 P STREET, N. W., SUITE 310
WASHINGTON D. C. 20036





[illegible]
CALCULATED NIGHT HORIZONTAL RADIATION PATTERN
WWTC MINNEAPOLIS MINNESOTA
1280 KC 5 KW DA-N ND-D
OCTOBER 196[illegible]

FCC File No.BMP-11940
Accepted 12-8-66

Station WWTC
Minneapolis, Minnesota

1280 kc

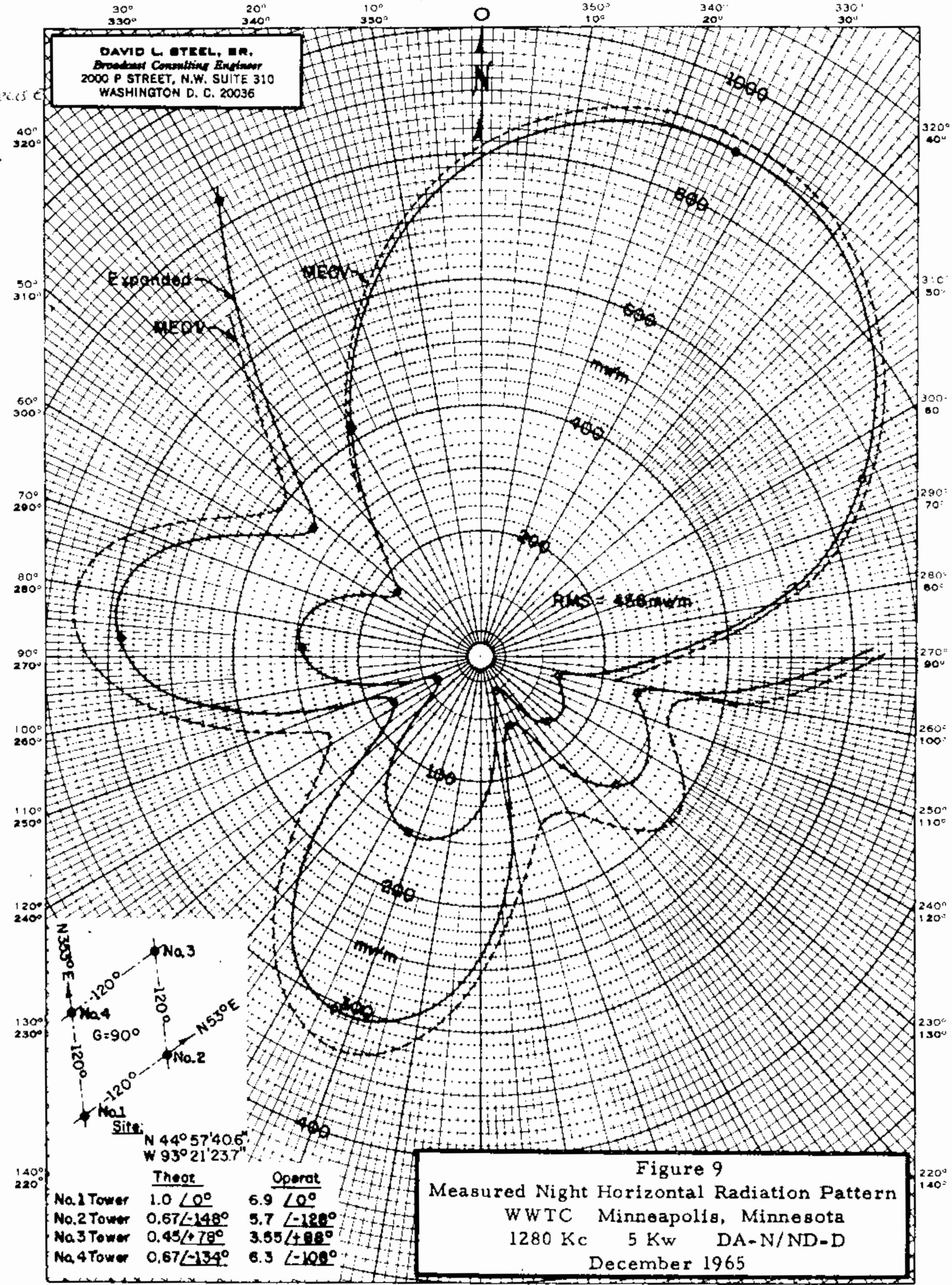
WWTC

Measured Night
(3-30-66CT)

Station WWTC
Minneapolis, Minnesota

5kw,DA-N,U
1280 kc

Granted License 3-8-67
re. change in DA pattern



	Theor	Operat
No.1 Tower	1.0 /0°	6.9 /0°
No.2 Tower	0.67/-148°	5.7 /-128°
No.3 Tower	0.45/+78°	3.55/+88°
No.4 Tower	0.67/-134°	6.3 /-108°

Figure 9
Measured Night Horizontal Radiation Pattern
WWTC Minneapolis, Minnesota
1280 Kc 5 Kw DA-N/ND-D
December 1965

FCC File No.BL-11222
Accepted 3-14-66

Station WWTC
Minneapolis, Minnesota

1280 kc

WWTC

Measured Non-DA
(3-30-66CT)

Station WWTC
Minneapolis, Minnesota

5kw,DA-N,U
1280 kc

racted Lic.
3-8-67
ov. change
DA pattern

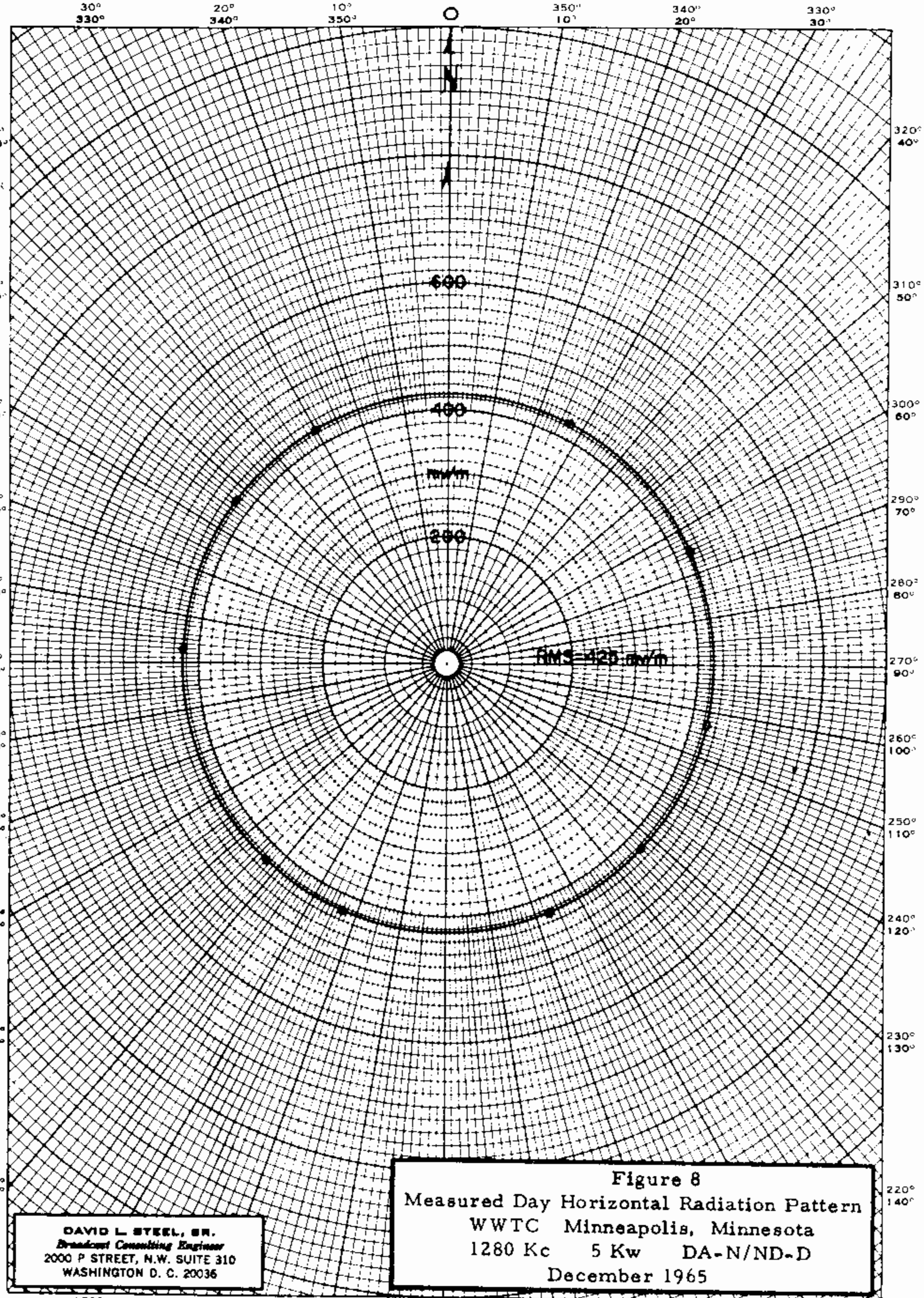


Figure 8
Measured Day Horizontal Radiation Pattern
WWTC Minneapolis, Minnesota
1280 Kc 5 Kw DA-N/ND-D
December 1965

FCC File No.BL-11222
Accepted 3-14-66

Station WWTC
Minneapolis, Minnesota

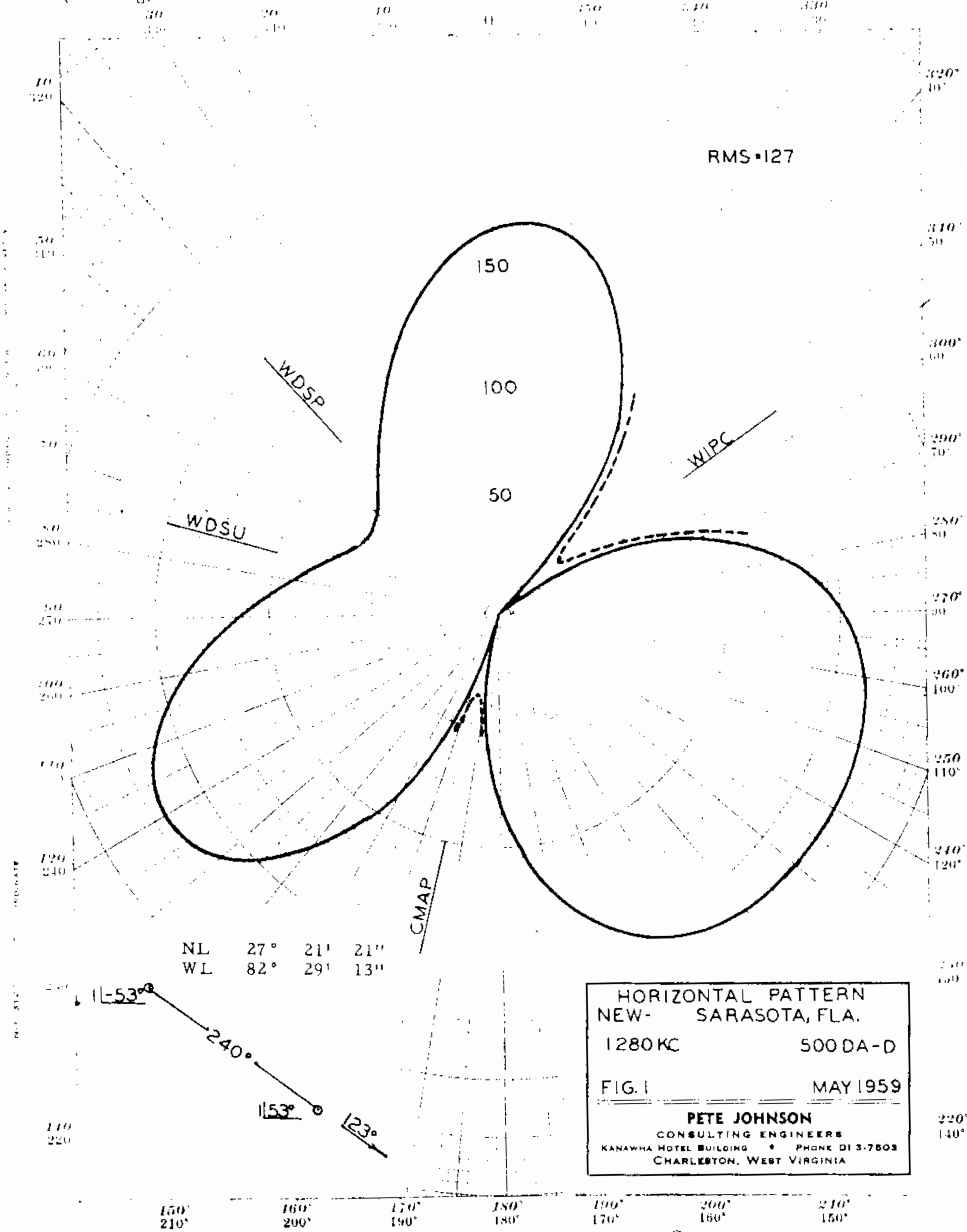
1280 kc

WYND

PROPOSED DAY
(7-8-59g)

New; Gulf Coast B/C Co.
Sarasota, Florida

500w, DA-D, D
1280 KC



granted CP 6-24-59

FCC File No. BP-11446
Accepted 5-18-59 (Amended)

Gulf Coast Broadcasting Company
Sarasota, Florida

1280 KC

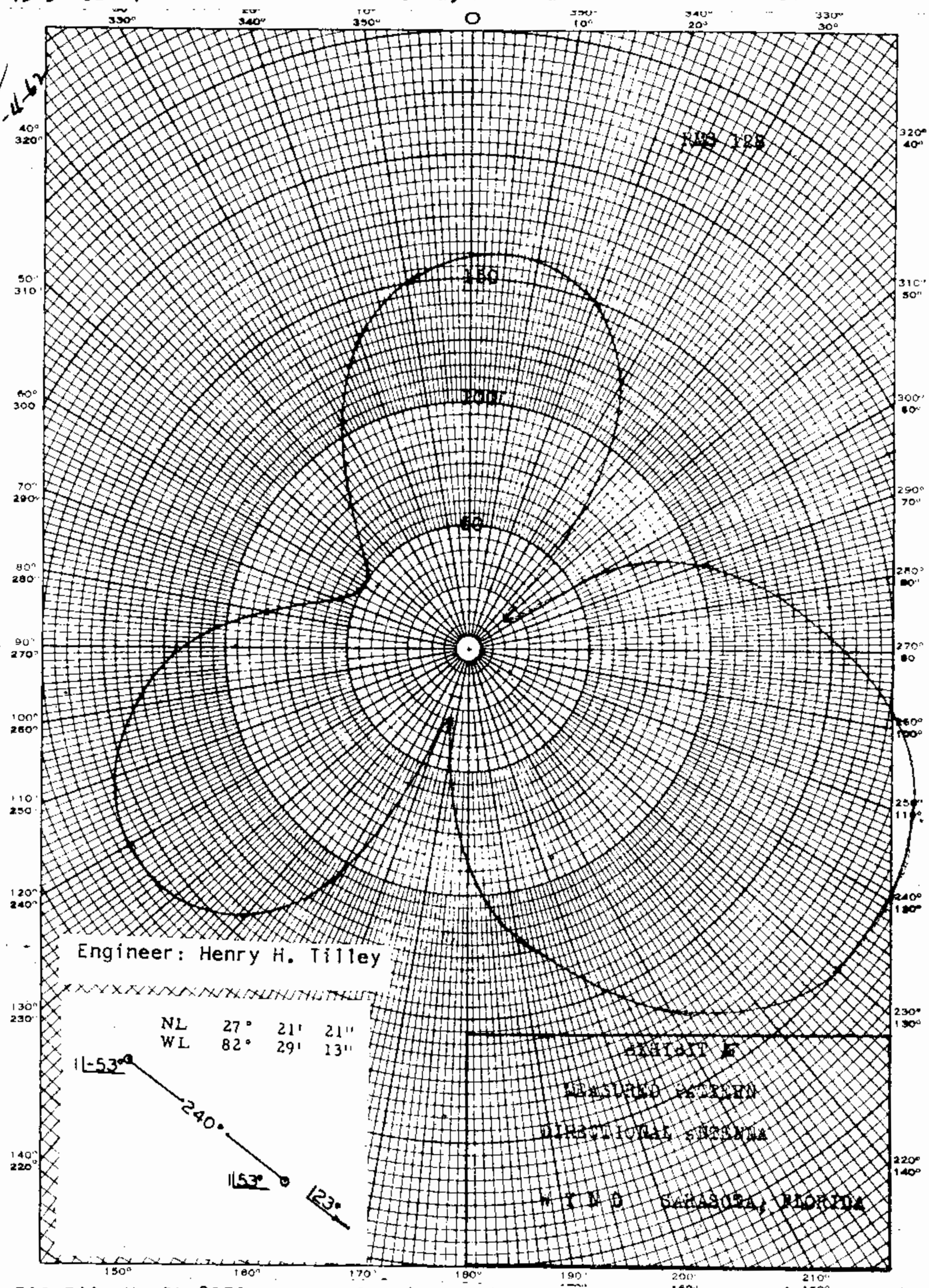
WYND

Measured Day
(3-30-62ct)

Station WYND
Sarasota, Florida

500w,DA-D,D
1280 kc

BL-8959 — granted L for New station 5-11-62



FCC File No.BL-8959
Accepted 3-13-62

Station WYND
Sarasota, Florida

1280 kc

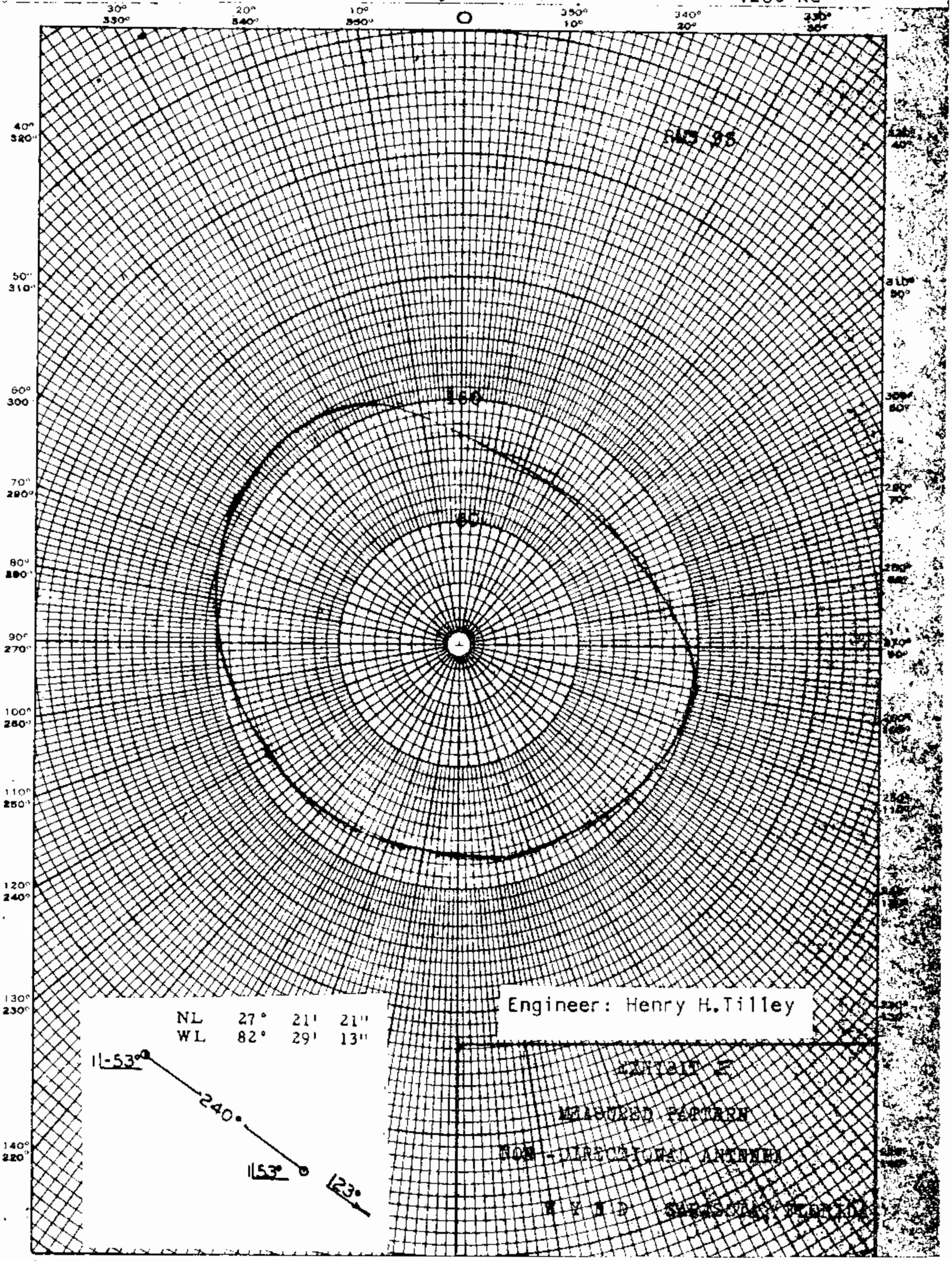
3-31-62 —
Does not appear to be correct

WYND

Measured Non-DA
(3-30-62ct)

Station WYND
Sarasota, Florida

500w,DA-D,D
1280 kc



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Station WYND
Sarasota, Florida

1280 kc