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ALAN C. CAMPBELL

March 18, 1988

DIRECT DIAL NO.

857-2788

H. Walker Feaster
Acting Secretary
Federal Communications Commission
1919 M Street, N.W.
Washington, DC 20554

Re: Station WCKY(AM)
Cincinnati, Ohio
BP-860530AJ

RECEIVED
880318

FCC
FEE SECTION

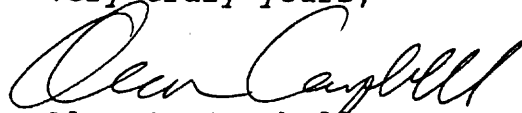
Dear Mr. Feaster:

Transmitted herewith and filed in triplicate on behalf of Pathfinder Communications Corporation is an application for license on FCC Form 302 covering modifications to the facilities of Station WCKY(AM), Cincinnati, Ohio.

A check in the amount of \$700.00 payable to the Federal Communications Commission is enclosed to cover the required filing fee. This application was filed originally on March 7, 1988; however, it was returned because an insufficient payment was tendered at that time.

Should you have any questions concerning this application, please contact the undersigned.

Very truly yours,


Alan C. Campbell

Enclosure

72880307215

3-28-88 ples

United States of America
Federal Communications Commission
Washington, D.C. 20554

Approved by: 01
306: 01
Expires 9-3-87

FEE NO: 08007876

FEE NO: 08007877

FEE TYPE: MAD

FEE AMT: 375.00

ID SEQ: 09

FEE NO: 08007877

FEE AMT: 325.00

ID SEQ: 09

For Commission Use Only

File No.

SECTION I General Data

Legal Name of Applicant

Mailing Address

Pathfinder Communicatins Corporation 219 W. McFarland

City

State

ZIP Code

Telephone No.

Cincinnati,

OH

45202

(Include Area Code)

(513) 241-6565

1. Facilities authorized by construction permit

This application is for:



Commercial



Noncommercial



AM



FM



TV

Call Letters	Community of License	Construction Permit File No.	Modification of Construction Permit File No(s).	Expiration Date of last Construction Permit
WCKY	Cincinnati	BP-860530AJ	--	February 7, 1988

2. Is the station now operating pursuant to automatic program test authority in accordance with Section 73.1620 of the Commission's Rules?



YES



NO

If No, explain.

Station operating pursuant to Section 73.1615(b)(6)

3. Have all the terms, conditions, and obligations set forth in the above described construction permit been fully met?



YES



NO

If No, state exceptions.

4. Apart from changes already reported, has any cause or circumstance arisen since the grant of the underlying construction permit which would cause any statement or representation contained in the construction permit application to be now incorrect?



YES



NO

If Yes, explain.

THE APPLICANT hereby waives any claim to the use of any particular frequency or of the electromagnetic spectrum as against the regulatory power of the United States because of the previous use of the same whether by license or otherwise, and requests an authorization in accordance with this application. (See Section 304 of the Communications Act of 1934, as amended.)
THE APPLICANT acknowledges that all the statements made in this application and attached exhibits are considered material representations, and all exhibits are a material part hereof and are incorporated herein.

CERTIFICATION

I certify that the statements in this application are true, complete and correct to the best of my knowledge and belief, and are made in good faith.

Signed and dated this 7 day of February, 1988.

Pathfinder Communications Corp.

Name of Applicant

Signature

President

Title

WILLFUL FALSE STATEMENTS MADE
ON THIS FORM ARE PUNISHABLE
BY FINE AND IMPRISONMENT U.S.
CODE, TITLE 18, SECTION 1001

Name of Applicant

PATHFINDER COMMUNICATIONS CORP.

PURPOSE OF AUTHORIZATION APPLIED FOR: (check one)

☒ Station LicenseAnswer Items
1-9☐ Direct measurement of power

1, 2, 6, 7, 8 and 10

1. Facilities authorized in construction permit

Call Sign	File No. of Construction Permit	Frequency	Hours of operation	Power in kilowatts	
				Night	Day
WCKY	BP-860530AJ	1530 kHz	Unlimited	50	50

2. Station location

State	City or town
Ohio	Cincinnati

3. Transmitter location

State	County	City or town	State address (or other identification)
Kentucky	Kenton	Villa Hills	1100 Radio Road

4. Main Studio location

State	County	City or town	Number and Street
Ohio	Hamilton	Cincinnati	219 Marland Street

5. Remote control point location (only if authorized)

State	City or town	Street address (or other identification)
Ohio	Cincinnati	219 Marland Street

6. Operating constants:

RF common point or antenna current without modulation for night power in amperes 32.4		RF common point or antenna current without modulation for day power in amperes 30.15	
Actual measured antenna or common point resistance (in ohms) at operating frequency Night 50 Day 55		Actual measured antenna or common point reactance (in ohms) at operating frequency Night 0 Day -124	

Antenna monitor indication for directional operation

Tower	Phase reading in degrees		Antenna base current		Antenna monitor sample current ratio	
	Night	Day	Night A	Day A	Night	Day
1 E	0	- -	14.1	- -	1.00	- -
2 EC	+77	- -	15.45	30.15	.59	1.0
3 WC	-34	- -	9.6	- -	.415	- -
4 W	-49	- -	3.84	- -	.574	- -

Manufacturer and type of antenna monitor:

Potomac Instruments AM-19 (204), SN 1325

7. Description of antenna system

(If directional antenna is used, the information requested below should be given for each element of the array. Use separate sheets if necessary. Height figures should not include obstruction lighting.)

Type radiator	Height in feet of complete radiator above base insulator, or above base if grounded.	Overall height in feet above ground (without obstruction lighting)	If antenna is either top loaded or tionalized, describe fully in Exhibi No. --
Four uniform cross-section guyed steel towers	1, 3, 4 300' 2 350'	1, 3, 4 305' 2 355'	N/A

Excitation

☒ Series☐ Shunt

Geographic coordinate to nearest second. For directional antenna give coordinates of center of array. For single vertical radiator give tower location.

North latitude 39 ° 03 ' 55 "

West longitude 84 ° 36 ' 27 "

If not fully described above, attach as Exhibit No. E further details and dimensions including any other antenna mounted on tower and associated isolation circuits. Also, if necessary for a complete description attach as Exhibit No. a sketch of the details and dimensions of ground system.

8. Antenna resistance measurement

Attach as Exhibit No. E the following:

- | | |
|---|--|
| (a) Qualifications of persons taking measurements. | (d) Manufacturer's name of each calibrated instrument used and manufacturer's rated accuracy. |
| (b) Schematic diagram showing clearly all components of coupling circuits, point of resistance measurements, location of antenna ammeter, connection to and characteristics of all tower lighting isolation circuits, static drains, and any other fixtures, lines, etc. connected to or supported by the antenna, including other antennas, and associated circuits. | (e) Date, accuracy, and by whom each instrument was last calibrated. |
| (c) Full description of method used to make measurements. | (f) Table of complete data taken. |
| | (g) The graph drawn of 10 to 12 readings in a band 50 to 60 kilohertz wide with the operating frequency near the center. |

9. In what respect, if any, does the apparatus constructed differ from that described in the application for construction permit or in the permit?

STL, TSL, antenna side mounted on #3 WC tower with iso-couplers feeding transmission lines across tower base.

10. Give reasons for the change in antenna or common point resistance.

N/A

I certify that I represent the applicant in the capacity indicated below and that I have examined the foregoing statement of technical information and that it is true to the best of my knowledge and belief.

Date February 1, 1988

(202) 296-2722
Telephone No. (Include Area Code)

LOHNES AND CULVER
Frederick D. Veihmeyer
Name (Please Print or Type)

Signature 
(Check appropriate box below)

1156 15th Street, N.W., Suite 606
Address (Include ZIP Code)

Washington, D. C. 20005

☐ Technical Director

☐ Registered Professional Engineer

☐ Chief Operator

☒ Technical Consultant

☐ Other (specify)

ENGINEERING STATEMENT
RE: PROOF OF PERFORMANCE
WCKY 50 kW-U DA-N 1530 kHz
CINCINNATI, OHIO

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Prepared by
Lohnes and Culver Washington, D.C.
October, 1987

FIGURE 7

FIELD STRENGTH GRAPHS

WCKY 50 kW-U, DA-N 1530 kHz

CINCINNATI, OHIO

Lohnes and Culver

Prepared by
September, 1987

Washington, D.C.

KILOMETERS FROM ANTENNA

10000

9000

8000

7000

6000

5000

4000

3000

2000

1000

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MILLIVOLTS/METER

FIGURE 7B
GROUND WAVE FIELD STRENGTH

STATION WCKY
FREQUENCY 1530 kHz
POWER 50 kW N-DA
DIRECTION N 32° E

RADIATION - 3000 mV/m

2.5 mS/m

1.5 mS/m

KILOMETERS FROM ANTENNA

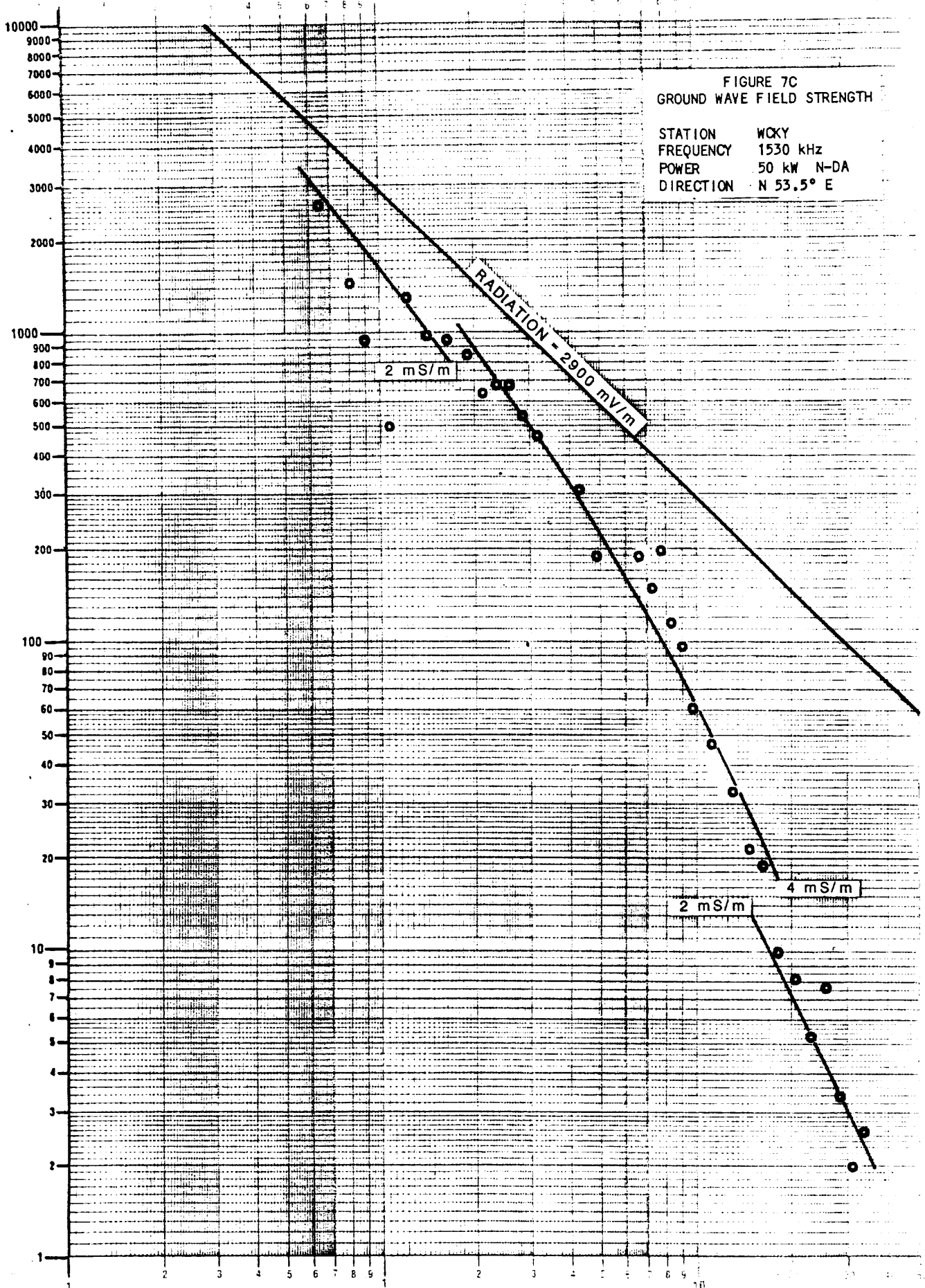
Graphs and graph paper should not be copied. Office copiers introduce geometric distortions which will affect accuracy. Copies for submission to the FCC and station files should only be made after all data have been plotted.

KILOMETERS FROM ANTENNA

FIGURE 7C
GROUND WAVE FIELD STRENGTH

STATION WCKY
FREQUENCY 1530 kHz
POWER 50 kW N-DA
DIRECTION N 53.5° E

MILLIVOLTS/METER



KILOMETERS FROM ANTENNA

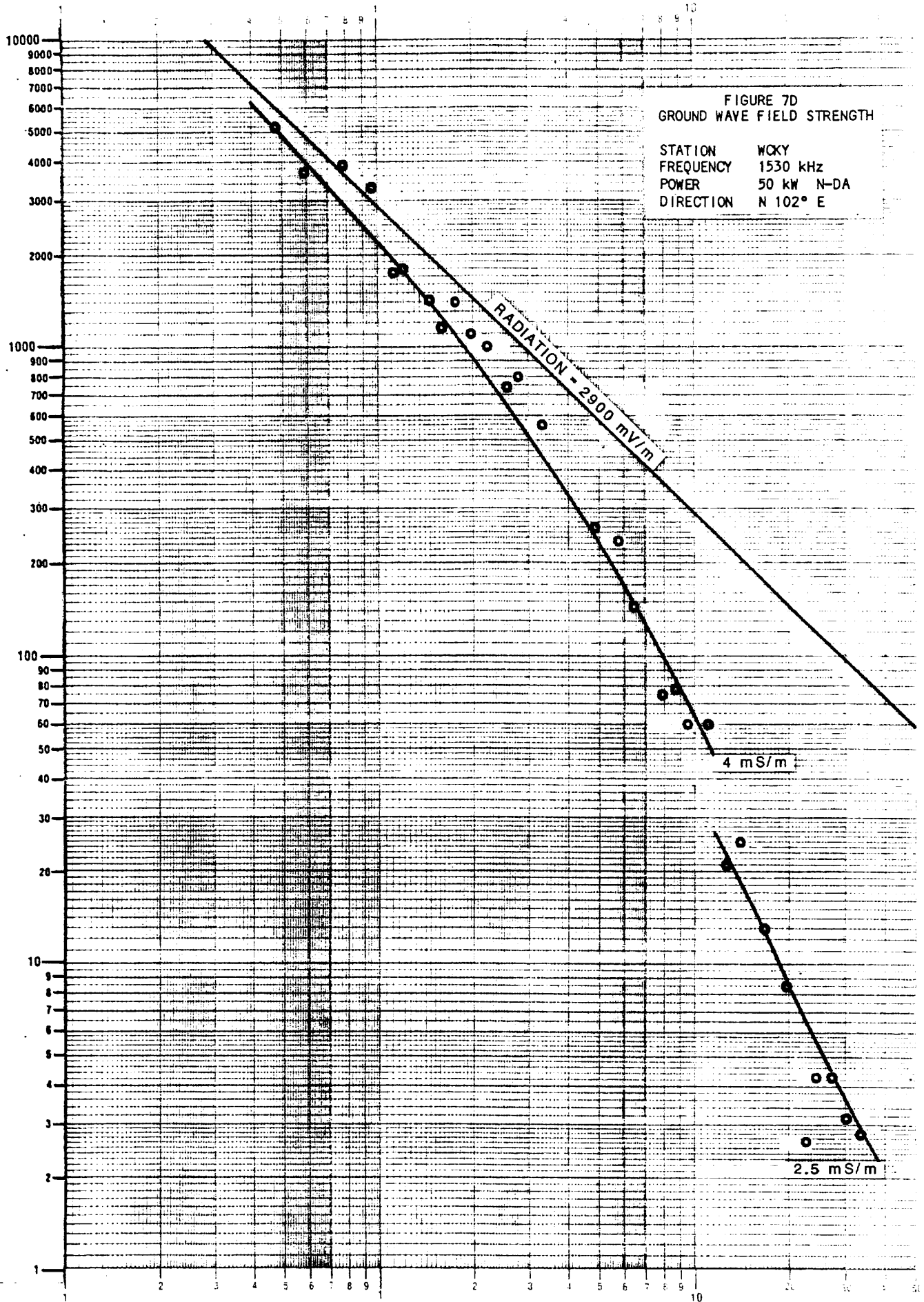
Graphs and graph paper should not be copied. Office copiers introduce geometric distortions which will affect accuracy. Copies for submission to the FCC and station files should only be made after all data have been plotted.

KILOMETERS FROM ANTENNA

FIGURE 7D
GROUND WAVE FIELD STRENGTH

STATION WKY
FREQUENCY 1530 kHz
POWER 50 kW N-DA
DIRECTION N 102° E

MILLIVOLTS/METER



KILOMETERS FROM ANTENNA

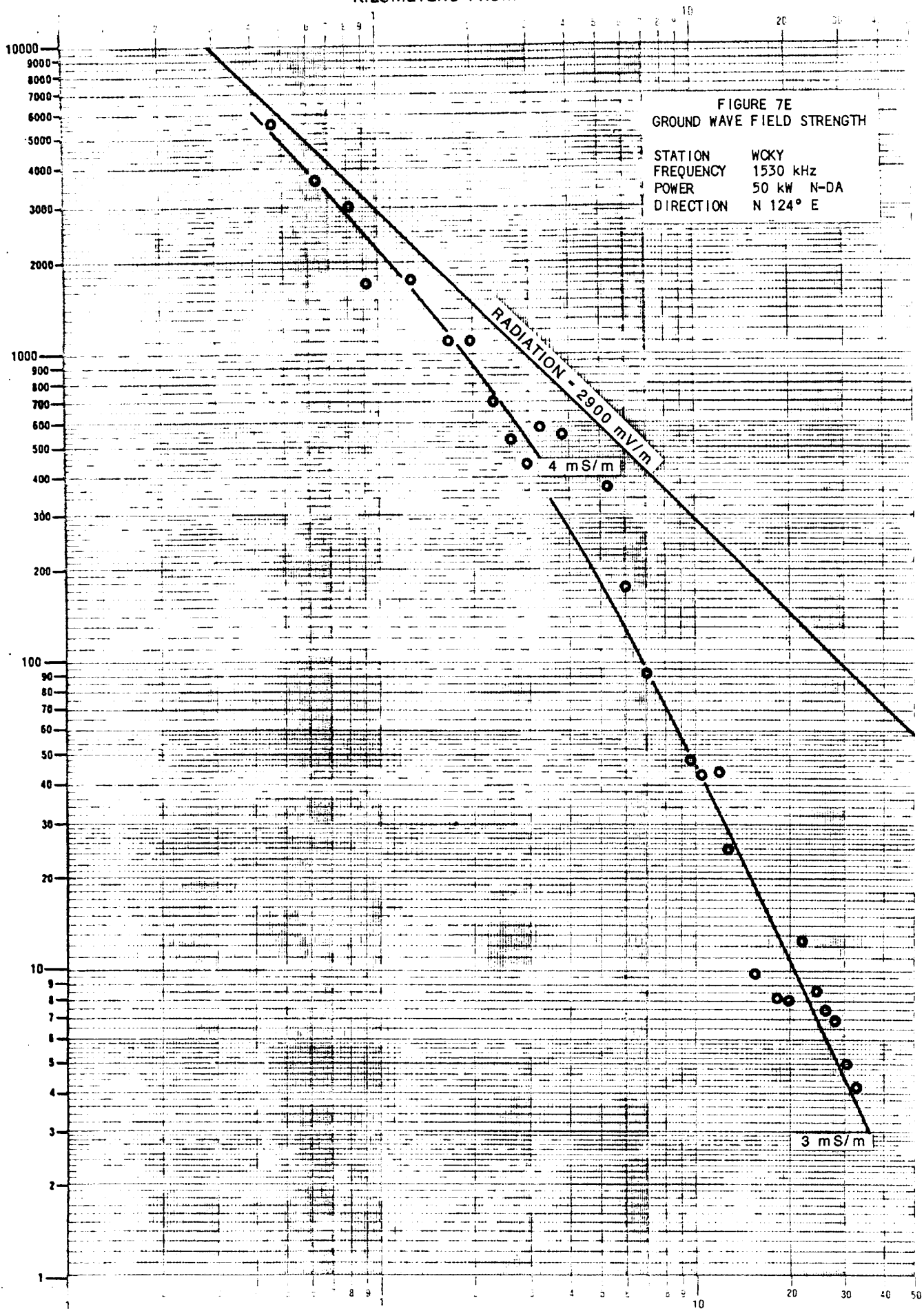
Graphs and graph paper should not be copied.
Office copiers introduce geometric distortions
which will affect accuracy. Copies for sub-
mission to the FCC and station files should
only be made after all data have been plotted.

KILOMETERS FROM ANTENNA

MILLVOLTS/METER

FIGURE 7E
GROUND WAVE FIELD STRENGTH

STATION WCKY
FREQUENCY 1530 kHz
POWER 50 kW N-DA
DIRECTION N 124° E



KILOMETERS FROM ANTENNA

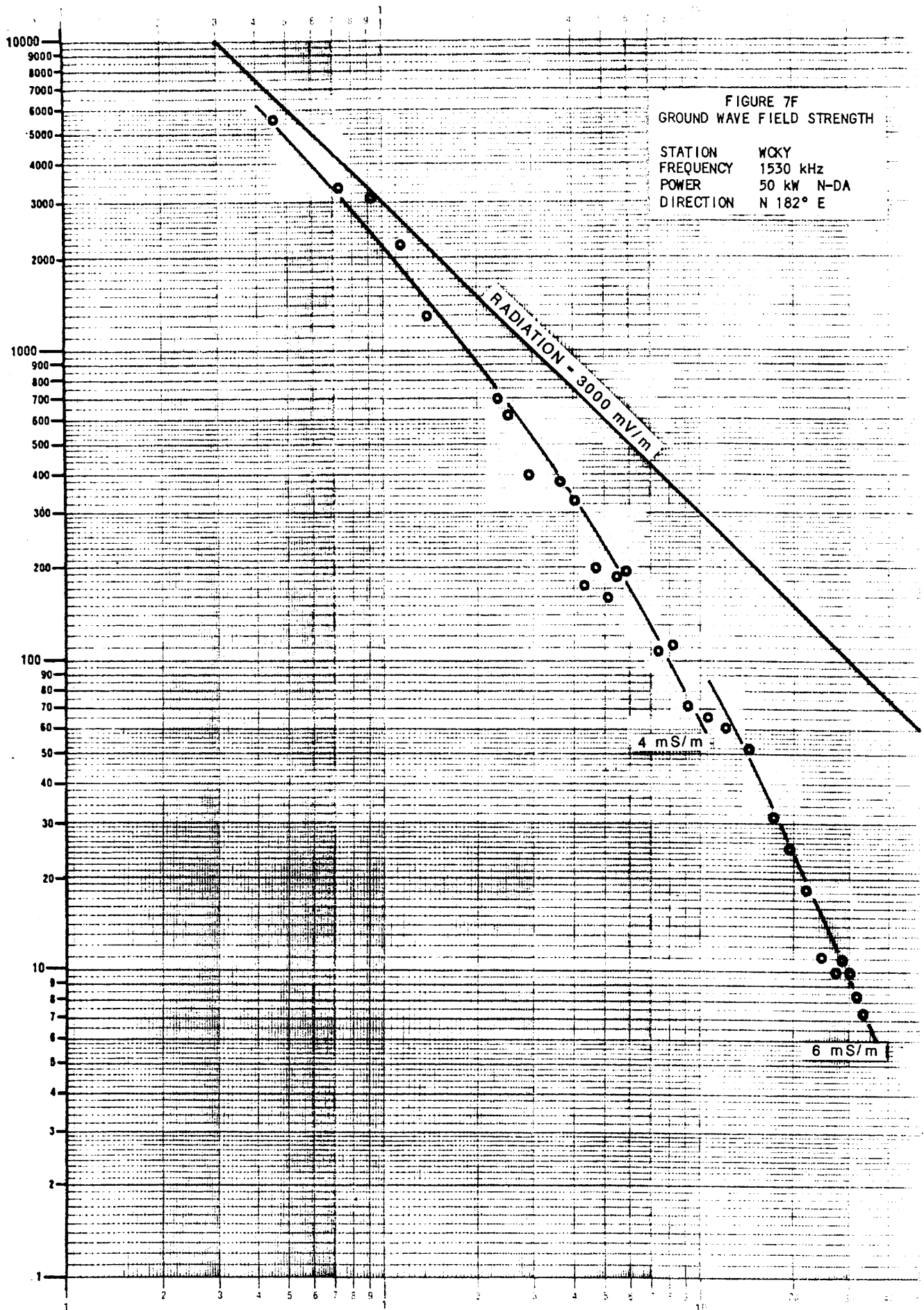
Graphs and graph paper should not be copied. Office copies introduce geometric distortions which will affect accuracy. Copies for submission to the FCC and station files should only be made after all data have been plotted.

KILOMETERS FROM ANTENNA

MILLIVOLTS/METER

FIGURE 7F
GROUND WAVE FIELD STRENGTH

STATION WCKY
FREQUENCY 1530 kHz
POWER 50 kW N-DA
DIRECTION N 182° E

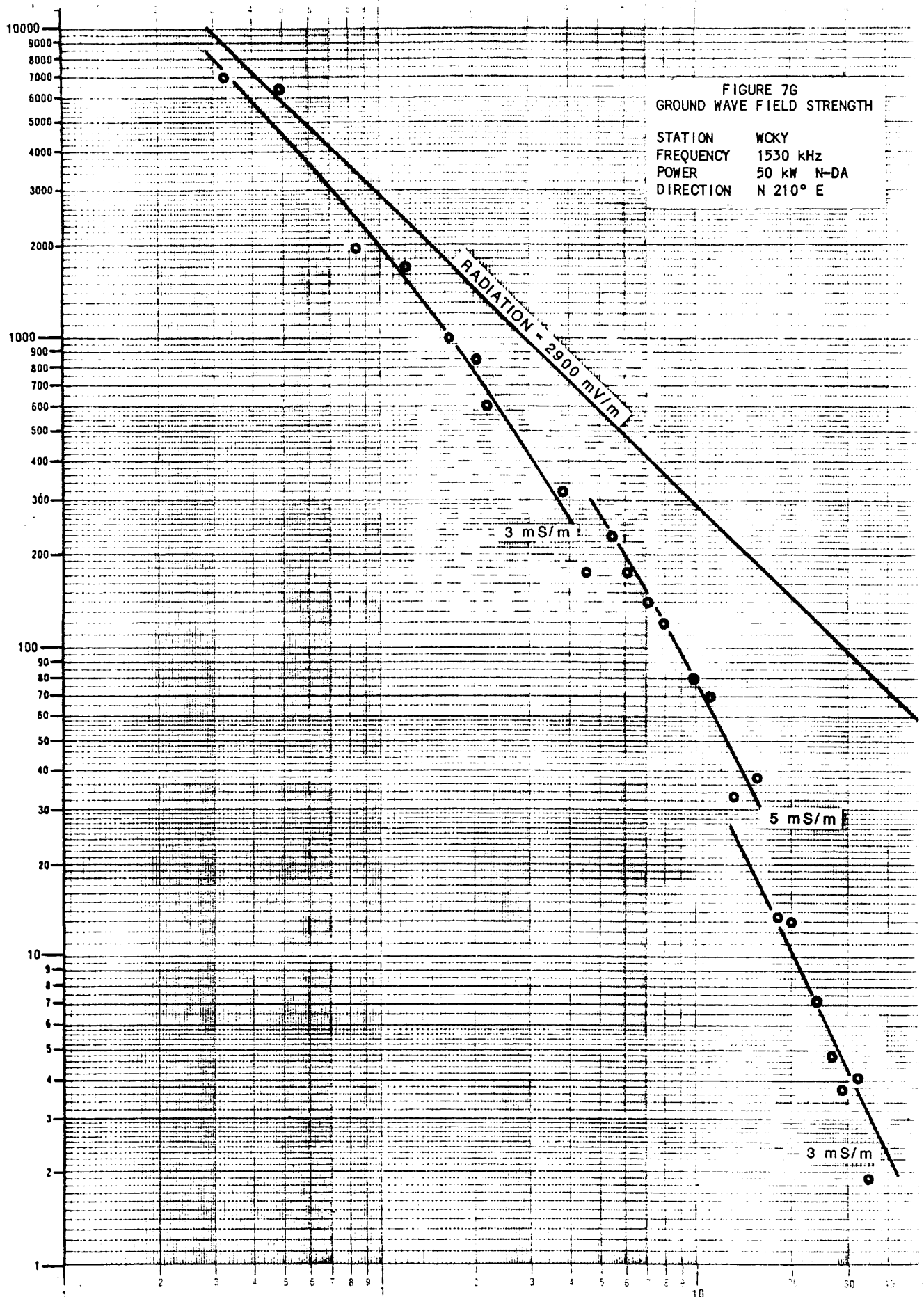


KILOMETERS FROM ANTENNA

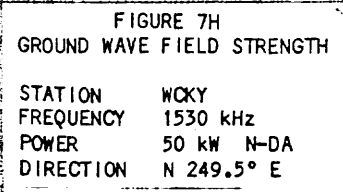
Graphs and graph paper should not be copied. Office copiers introduce geometric distortions which will affect accuracy. Copies for submission to the FCC and station files should only be made after the data have been plotted.

KILOMETERS FROM ANTENNA

MILLIVOLTS/METER



MILLIVOLTS/METER



KILOMETERS FROM ANTENNA

KILOMETERS FROM ANTENNA

MILLIVOLTS/METER

FIGURE 71
GROUND WAVE FIELD STRENGTH

STATION WCKY
FREQUENCY 1530 kHz
POWER 50 kW N-DA
DIRECTION N 270.5° E

RADIATION - 2850 mV/m

3 mS/m

KILOMETERS FROM ANTENNA

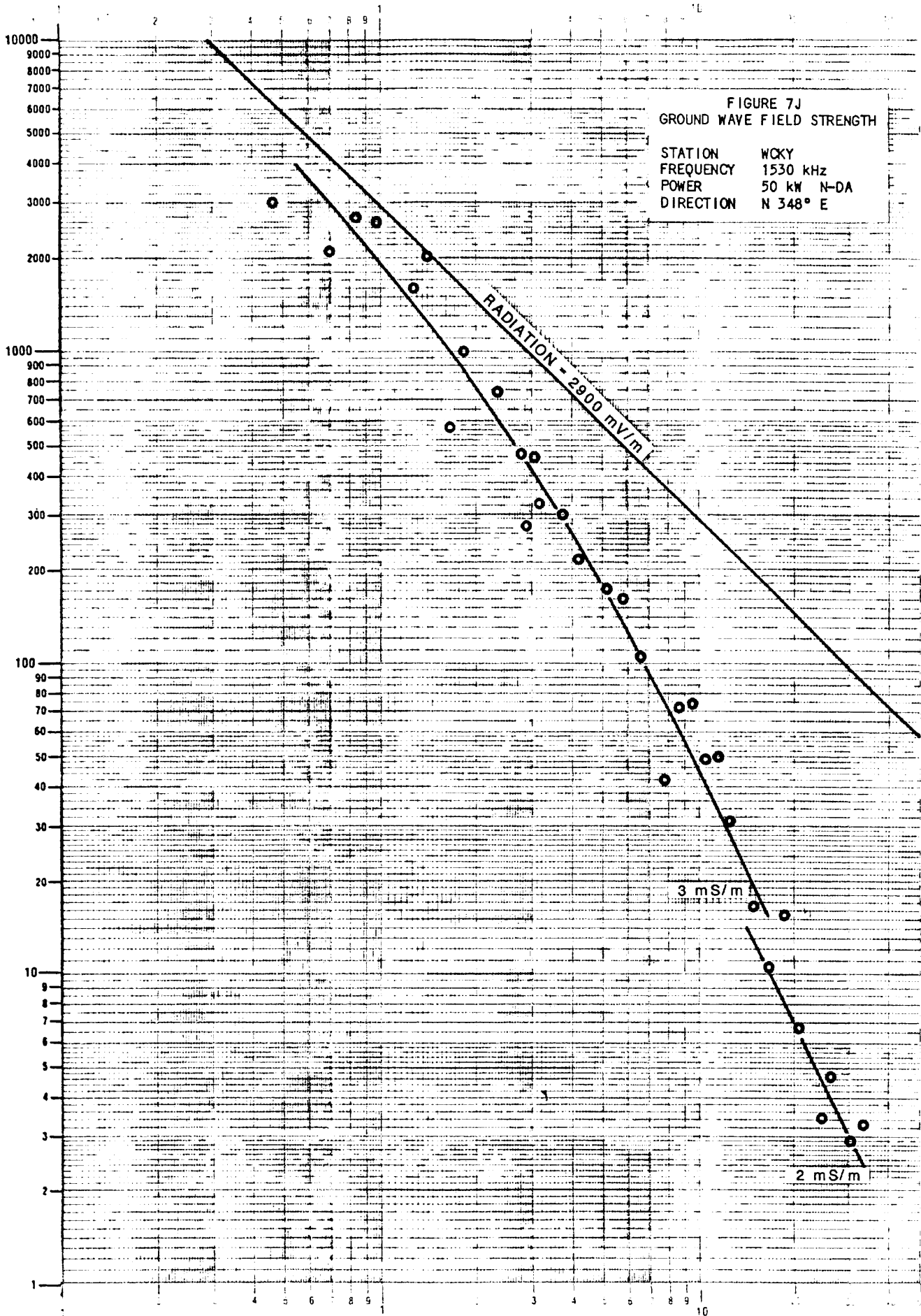
Graphs and graph paper should not be copied.
Other copiers introduce geometric distortions
which will affect accuracy. Copies for sub-
mission to the FCC and station files should
only be made after all data have been plotted.

KILOMETERS FROM ANTENNA

FIGURE 7J
GROUND WAVE FIELD STRENGTH

STATION WCKY
FREQUENCY 1530 kHz
POWER 50 kW N-DA
DIRECTION N 348° E

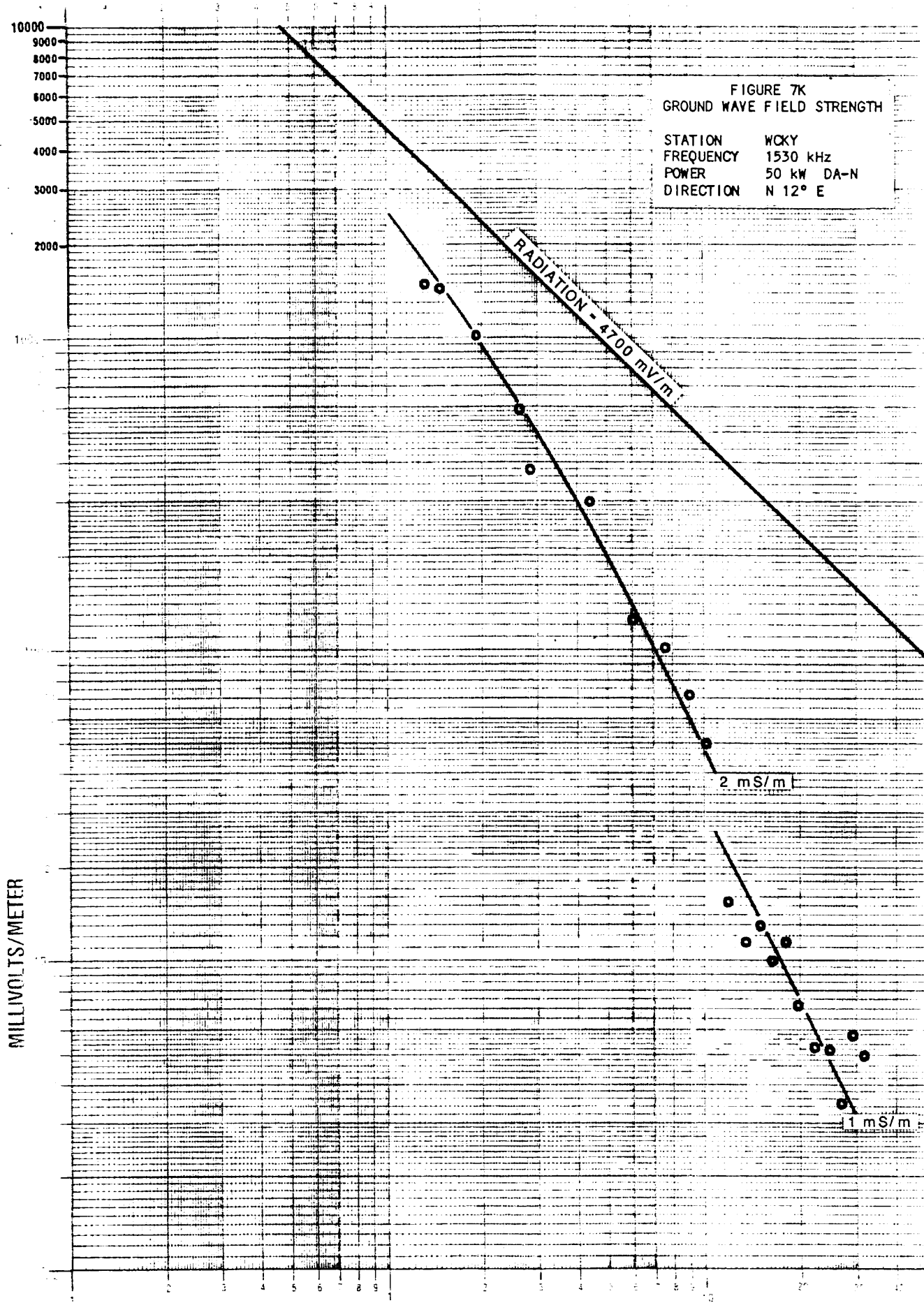
MILLIVOLTS/METER



KILOMETERS FROM ANTENNA

Graphs and charts should not be copied. Office copies include geometric distortions which will affect accuracy. Copies for submission to the FCC and Station files should only be made after all data have been plotted.

KILOMETERS FROM ANTENNA



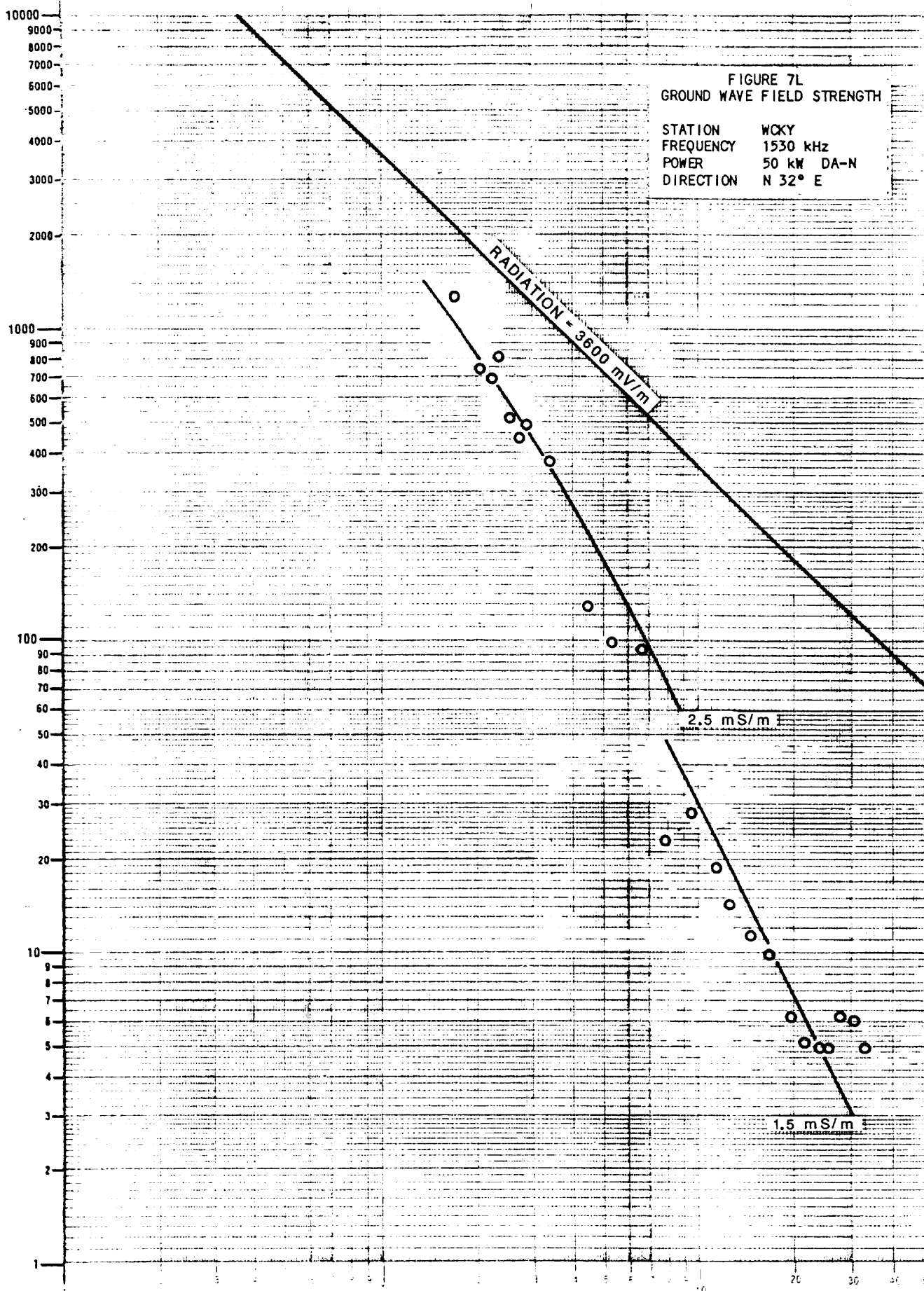
Graphs and plain paper should not be copied. Office copies introduce geometric distortions which will affect accuracy. Copies for submission to the FCC and station files should only be made after all data have been plotted.

KILOMETERS FROM ANTENNA

FIGURE 7L
GROUND WAVE FIELD STRENGTH

STATION WCKY
FREQUENCY 1530 kHz
POWER 50 kW DA-N
DIRECTION N 32° E

MILLIVOLTS/METER



KILOMETERS FROM ANTENNA

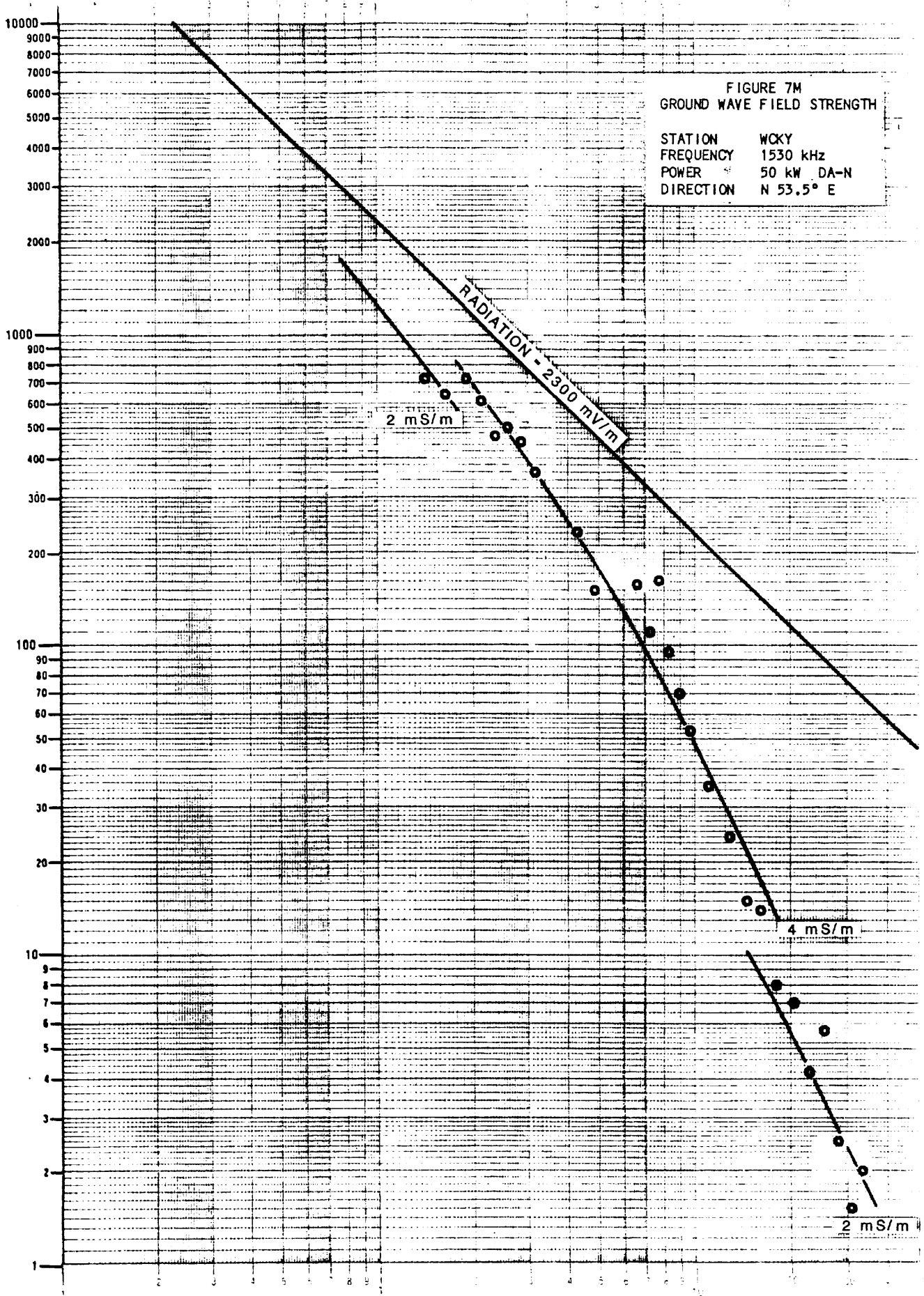
NOTE: The data points shown in this figure were obtained from a field strength measurement made on the ground wave field strength of the station WCKY, 1530 kHz, 50 kW, N 32° E, at the time of the measurement. The data points shown in this figure are not necessarily representative of the ground wave field strength of the station at other times.

KILOMETERS FROM ANTENNA

FIGURE 7M
GROUND WAVE FIELD STRENGTH

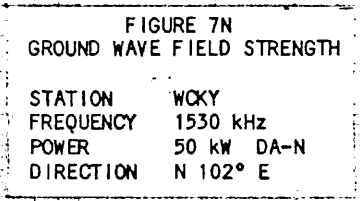
STATION WCKY
FREQUENCY 1530 kHz
POWER 50 kW DA-N
DIRECTION N 53.5° E

MILLIVOLTS/METER



KILOMETERS FROM ANTENNA

10



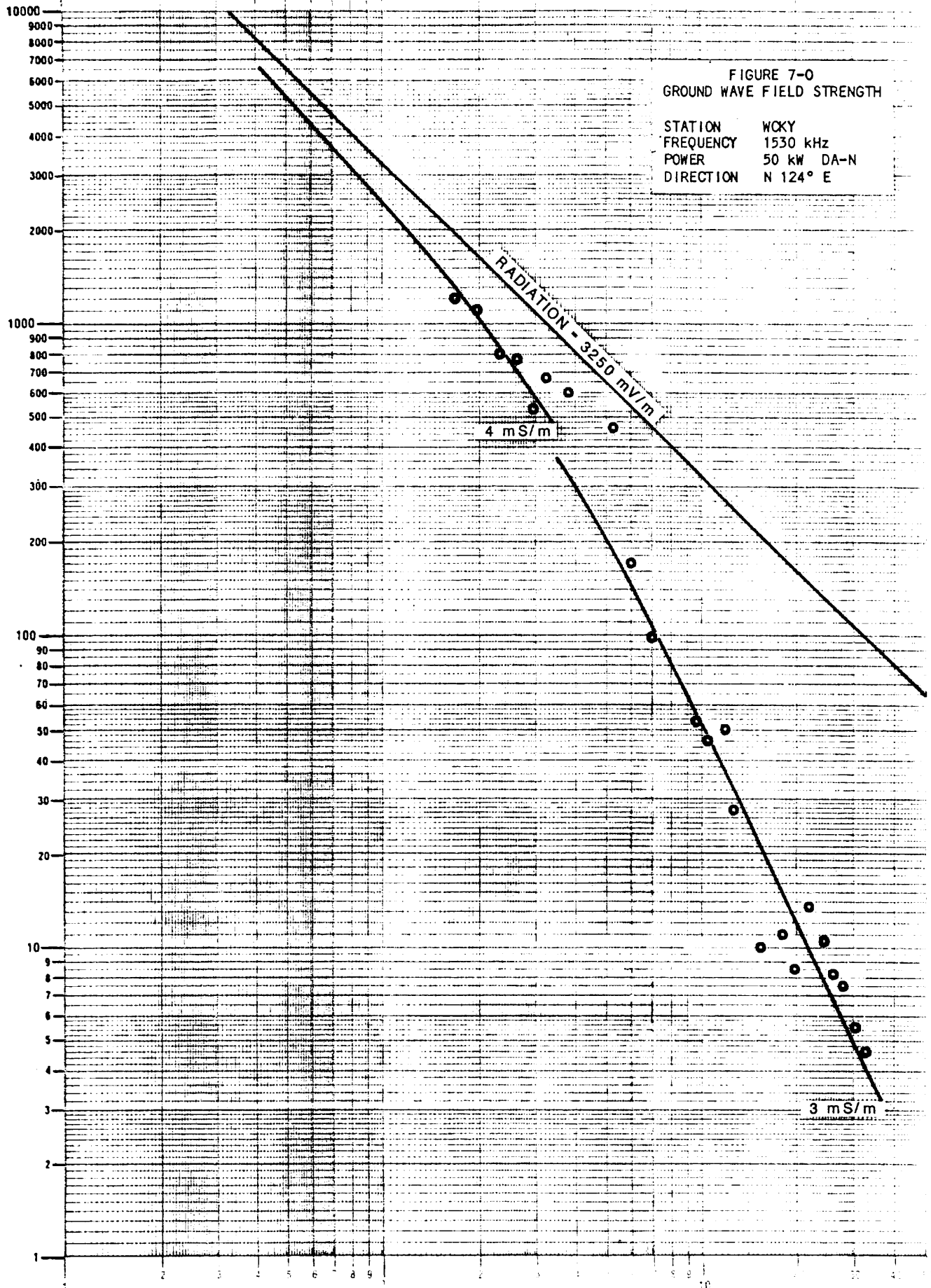
KILOMETERS FROM ANTENNA

KILOMETERS FROM ANTENNA

FIGURE 7-0
GROUND WAVE FIELD STRENGTH

STATION WCKY
FREQUENCY 1530 kHz
POWER 50 kW DA-N
DIRECTION N 124° E

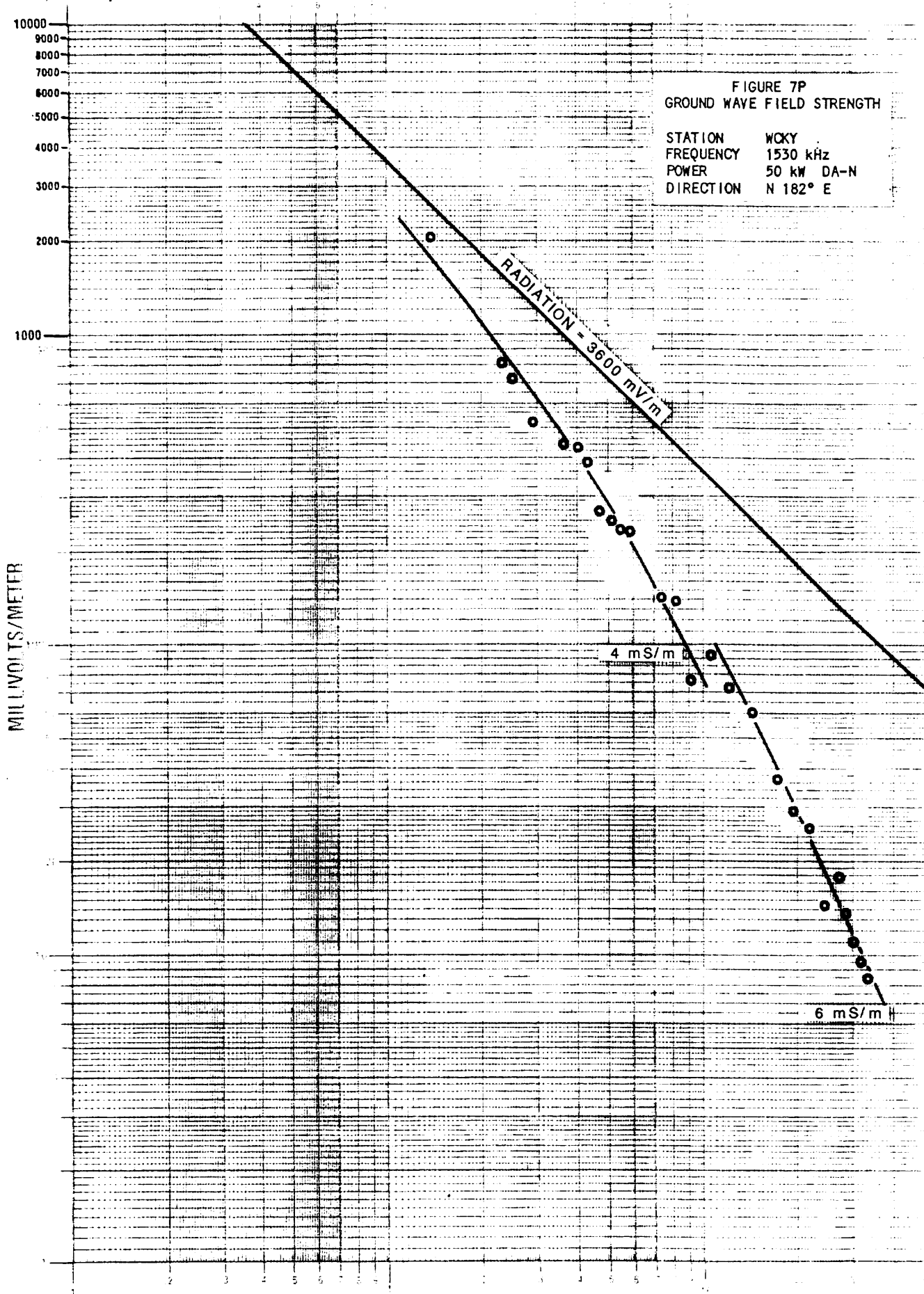
MILLIVOLTS/METER



KILOMETERS FROM ANTENNA

Graphs and graph paper should not be copied. Office copiers introduce geometric distortions which will affect accuracy. Copies for submission to the FCC and station files should only be made after all data have been plotted.

KILOMETERS FROM ANTENNA



Graphs and graph paper should not be copied. Office copies introduce geometric distortion which will affect accuracy. Copies for submission to the FCC and station files should only be made after all data have been plotted.

KILOMETERS FROM ANTENNA

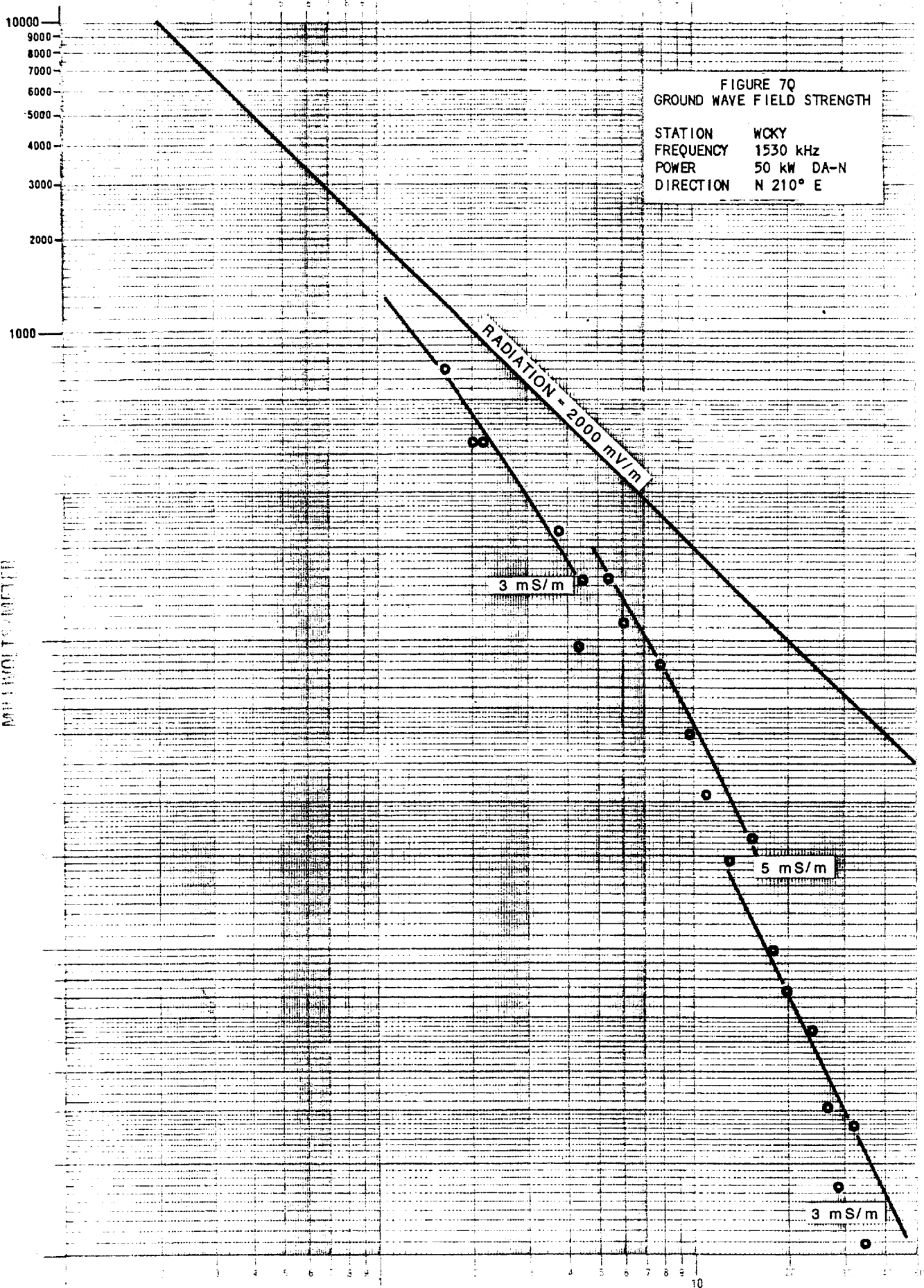


FIGURE 7Q
GROUND WAVE FIELD STRENGTH

STATION WCKY
FREQUENCY 1530 kHz
POWER 50 kW DA-N
DIRECTION N 210° E

KILOMETERS FROM ANTENNA

1. The ground wave field strength is plotted in millivolts per meter (mV/m) on the y-axis and in kilometers on the x-axis. The radiation line is plotted in millivolts per meter (mV/m) on the y-axis and in kilometers on the x-axis. The data points are plotted in millivolts per meter (mV/m) on the y-axis and in kilometers on the x-axis. The standard deviation of the measurements is plotted in millivolts per meter (mV/m) on the y-axis and in kilometers on the x-axis.

KILOMETERS FROM ANTENNA

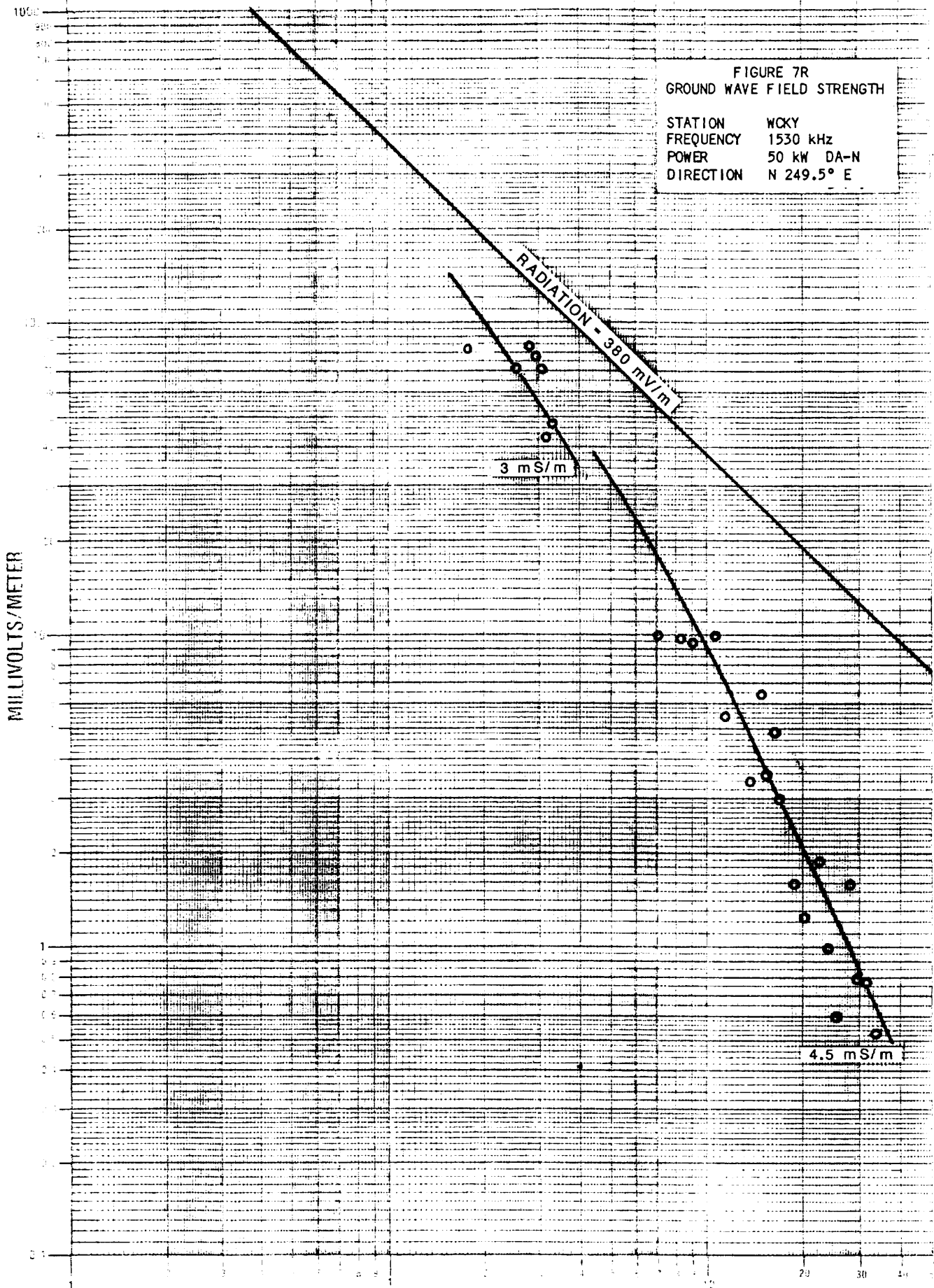


FIGURE 7R
GROUND WAVE FIELD STRENGTH

STATION WCKY
FREQUENCY 1530 kHz
POWER 50 kW DA-N
DIRECTION N 249.5° E

MILLIVOLTS/METER

KILOMETERS FROM ANTENNA

Graphs and plots made should be checked for errors. Online copies introduced geometric errors which will affect accuracy. Topographic information to the FCC and other agencies should only be made after all data have been printed.

KILOMETERS FROM ANTENNA

FIGURE 7S
GROUND WAVE FIELD STRENGTH

STATION WCKY
FREQUENCY 1530 kHz
POWER 50 kW DA-N
DIRECTION N 270.5° E

MILLIVOLTS/METER

RADIATION = 400 mV/m

3 mS/m

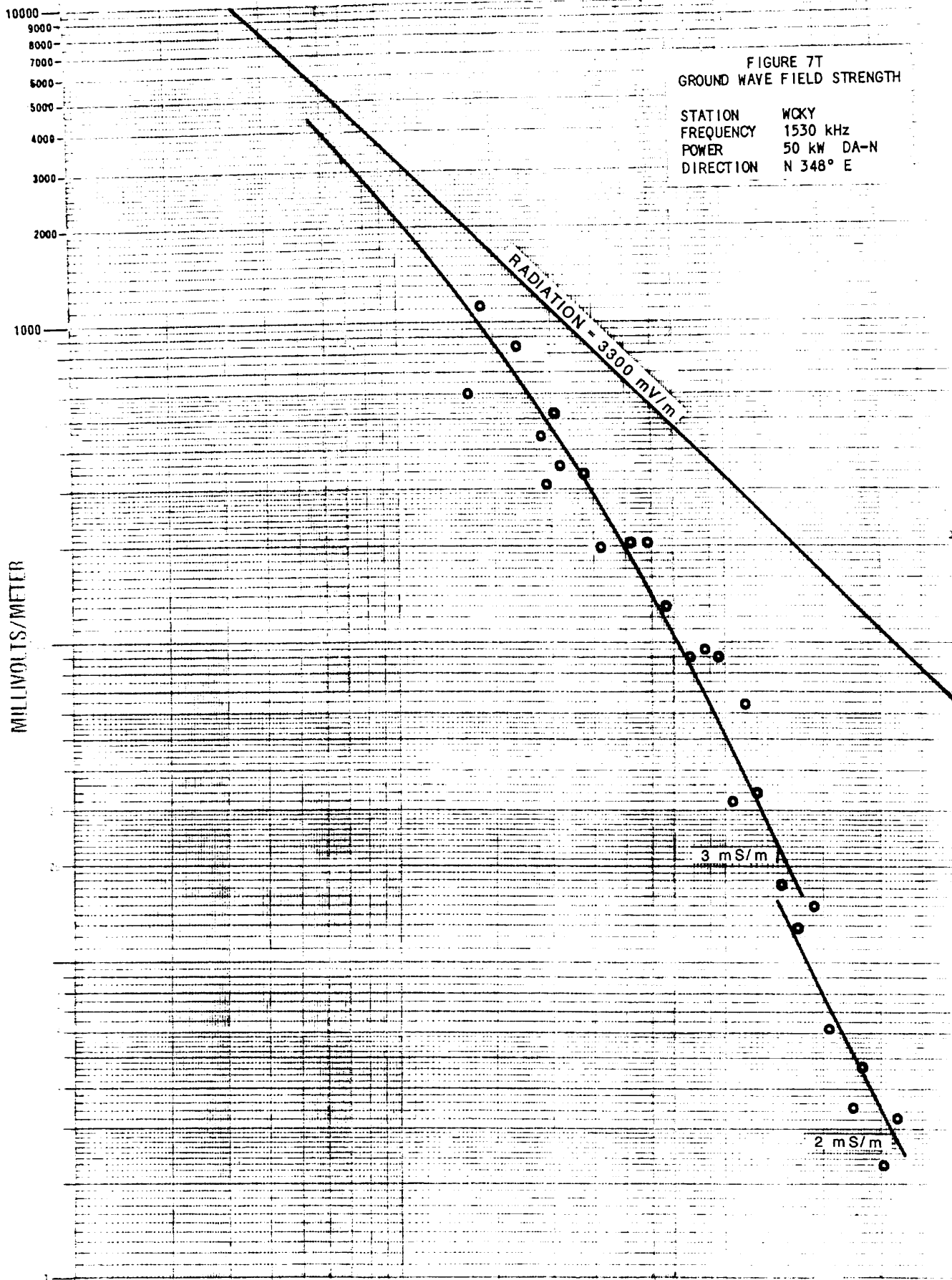
KILOMETERS FROM ANTENNA

Ground wave field strength is not to be confused with power density or energy density, which will attenuate rapidly with distance from the antenna. Power density is measured in mW/m² and energy density in J/m³. Ground wave field strength is measured in mV/m and is the only one of these quantities that can be directly measured.

KILOMETER FROM ANTENNA

FIGURE 7T
GROUND WAVE FIELD STRENGTH

STATION WCKY
FREQUENCY 1530 kHz
POWER 50 kW DA-N
DIRECTION N 348° E



KILOMETERS FROM ANTENNA

Graphs and charts showing the relationship between ground wave field strength and distance from the antenna. The y-axis is labeled 'MILLIVOLTS/METER' and the x-axis is labeled 'KILOMETERS FROM ANTENNA'. The graph shows a general downward trend, indicating that the field strength decreases as the distance from the antenna increases. The data points are represented by open circles, and a solid line is drawn through them, labeled 'RADIATION = 3300 mV/m'. Two additional lines are shown at the bottom right, labeled '3 mS/m' and '2 mS/m'.