AD-A181 539 ANTENNA LOCATION SURVEY REPORT FOR THE AN/ALQ-156 AND AN/ALQ-162 SYSTEMS(U) BEECH AIRCRAFT CORP WICHITA KS G J MARTIN 29 OCT 84 ER-101E2240 DAAK50-83-C-0056 1/7

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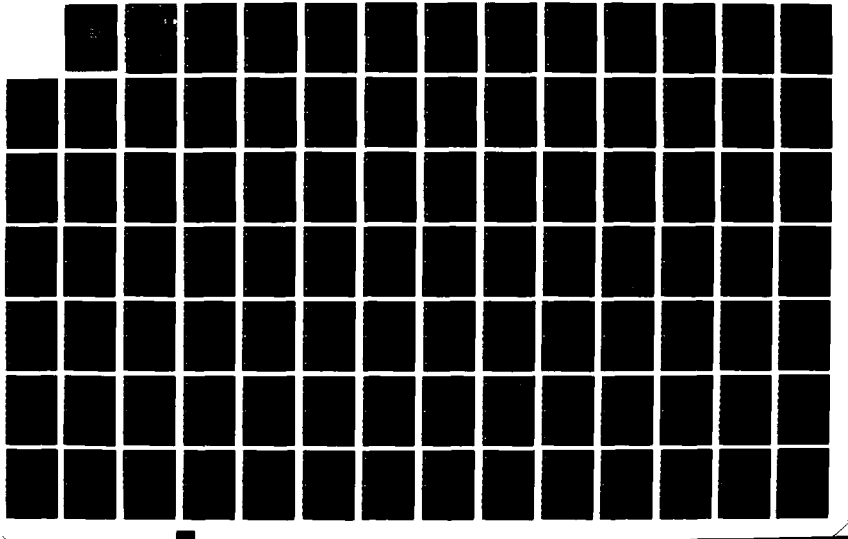

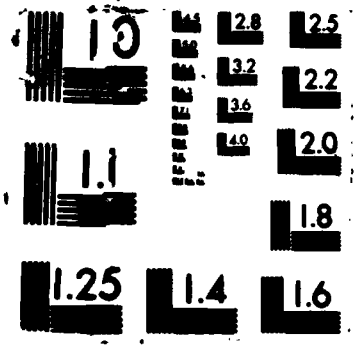
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Beech Aircraft Corporation
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ANTENNA LOCATION SURVEY REPORT FOR THE AN/ALQ-156 and AN/ALQ-162 SYSTEMS

MODEL RC-12D

ENGINEERING REPORT 101E2240

CONTRACT DAAK50-83-C-0056

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1. GENERAL

This report describes tests performed on the antenna portion of the AN/ALQ-156 and AN/ALQ-162 systems for the RC-12D aircraft. These tests were performed at the Ft. Huachuca, Arizona antenna test range beginning May 30, 1984. For specific equipment tested and specific test equipment used, see Appendix 1, Test Plan BS 23885.

2. AN/ALQ-156 ANTENNA TEST

The AN/ALQ-156 antenna configuration consists of four antennas. One pair mounts symmetrically on the nose, with beam center oriented 45° each side, looking forward. The other pair mounts symmetrically near the tail, oriented 45° each side, looking aft. One antenna of each pair was tested, with the other antenna in the pair assumed to be symmetrical.

2.1 Test Data. These antennas were tested at three frequencies, designated as F1, F2 and F3, for elevations of +50° to -50° about the horizon and for 360° in azimuth. Antenna patterns for each test performed are shown in Appendix 2 in rectangular coordinates. Appendix 3 shows this same information in polar coordinates. See Appendix 11 for frequency designations.

2.2 Summary--ALQ-156 System. Data from the individual antenna patterns are summarized in Figures 1 through 9 in antenna gain format. In this format, the x-axis is azimuth with respect to the aircraft nose; the y-axis is elevation above and below the aircraft waterline (horizon, in level flight). These figures are plotted for each frequency, with separate figures for nose and tail coverage. Left-hand antennas only were tested, and the right-hand antennas were assumed to be symmetrical. These symmetrical patterns are merged to show total nose coverage. Where wingtip coverage is of interest, a wingtip pattern is shown in a similar manner. Antenna gain boundary lines are shown for 0 dBI and for 3 dB steps above and below this signal level, and also for -10 dBI. Thus, the area that the antenna will illuminate with a given signal level is determined by a contour line in a manner analogous to reading a contour map of a geographical area.

2.3 Programmed Pattern Analysis. The 20/20 system also printed out programmed pattern analysis (P-PAN) data. This analysis tabulated various data for each pattern. Figure 41 was drawn from this data. It shows the antenna pattern 3 dB and 10 dB beam width for each frequency and each elevation above the horizon. Lower hemisphere data was not complete and is not shown.

2.4 Planar Slot Antenna. An unscheduled test was performed using the planar slot antenna in place of the coffee can antenna for the ALQ-156. This was mounted temporarily at the forward location and data taken in the upper hemisphere only. No significant differences between the two antennas were found. Test data for this antenna is included as Appendix 10.

3. AN/ALQ-162 ANTENNA TEST

The AN/ALQ-162 antenna configuration consists of two antennas. One antenna mounts on the nose, with the beam center oriented at 0° in azimuth and elevation. The other antenna mounts in the horizontal tail bullet, oriented at 0° in elevation and 180° in azimuth.

3.1 Test Data. These antennas were tested at nine frequencies in low, mid, and high bands for elevations of +40° through -40° about the horizon and for 360° in azimuth. Antenna patterns for each test performed are shown in Appendices 4, 5, and 6 in rectangular coordinates. Appendices 7, 8, and 9 show this same information in polar coordinates.

3.2 Summary--ALQ-162 System. Data from the individual antenna patterns is summarized in Figures 10 through 32 in antenna gain format. In this format, the x-axis is azimuth with respect to the aircraft nose; the y-axis is in elevation above and below the aircraft waterline (horizon, in level flight). These figures are plotted for each frequency, with separate figures for nose and tail coverage. Where wingtip coverage is of interest, these figures are included for one wingtip, with the other wingtip assumed to be symmetrical. Antenna gain boundary lines are shown for 0 dBI and for 3 dB steps above and below this signal level, and also for -10 dBI. Thus, the area that the antenna will illuminate with a given signal strength can be determined by a contour line in a manner analogous to reading a contour map of a geographical area. Figures 37 and 38 show peak gain versus frequency for an overall view of performance with respect to frequency.

3.3 Programmed Pattern Analysis. The 20/20 system also printed out programmed pattern analysis (P-PAN) data for each pattern. This analysis tabulated various data about each pattern. Figures 39 and 40 were drawn from this tabulated data. Figure 39 shows antenna pattern 3 dB beam width for each frequency and each elevation above the horizon. Figure 40 shows similar information for the 10 dB beam width. Lower hemisphere information was not complete and is not shown.

4. ISOLATION MEASUREMENTS

Measurements were made to determine the isolation of the ALQ-156 and ALQ-162 antennas to certain other antennas. Results of these tests are described in the following paragraphs.

4.1 Isolation--Aft ALQ-162 and Aft WBDL. Isolation between the aft ALQ-162 and the aft Wide Band Data Link (WBDL) antennas was measured at frequency F11. Measurements were made for various elevation and azimuth settings of the WBDL antenna with the radome removed; they were also made for a setting of 0° elevation to the horizon and 180° from the nose with a production radome installed. See Figure 33 for calibration setup and for isolation measurement setup. In all cases, isolation measured 89 dB or greater. For isolation measurements at the various angles tested, see Table 1.

4.2 Isolation--Forward ALQ-162 and Forward WBDL. Isolation between the forward ALQ-162 and the forward WBDL antennas was measured at frequency F11. Measurements were made for various settings of the WBDL antenna. All measurements were made with a production antenna and radome installed, since the antenna was still accessible for azimuth adjustment with the radome in place. See Figure 34 for calibration setup and isolation measurement setup. This isolation measured 114.7 dB or greater for all cases. For isolation measurements at the various angles tested, see Table 2.

4.3 Isolation--Forward ALQ-162 and Weather Radar. Isolation between the forward ALQ-162 and the weather radar antenna was measured at 9375 MHz. Measurements were made for various azimuth settings of the weather radar antenna with the radome removed for access to the antenna. See Figure 35 for calibration setup and isolation measurement setup. This isolation measured 81.8 dB or greater in all cases. For isolation measurements at the varuous angles, see Table 3.

4.4 Isolation--Aft ALQ-156 and Tail Dipole Antennas. Isolation between the aft left ALQ-156 antenna and the tail dipole antennas was measured at frequency F2. Measurements on the mission dipole antenna were made at the output of the associated cables and hybrid. Isolation was measured at 75.2 dB. For calibration setup and isolation measurement setup, see Figure 36.

5.0 DATA QUALITY

This paragraph discusses the quality of the data taken during testing.

5.1 Pattern Shape. Repeatability within a run was good. The normal procedure for higher frequencies, where problems are more apt to occur, was to run patterns from 0° to 40° in elevation, and then go back and repeat the 0° elevation pattern. These were quite close--within 1 dB or better. This indicates that the pattern shapes would be of good quality.

5.2 Pattern Repeatability. Refer to Figures 37 and 38, the frequency scan data. These figures show data taken at the horizon. Data taken with the aircraft shell upright is overlaid on data taken with the aircraft shell inverted. These vary by an average of less than 3 dB. The maximum deviation is 7 dB. Factors that might affect this are:

a) Day-to-day variation in test equipment and test cables.
b) Position of the aircraft shell on the tower, with respect to alignment for azimuth and elevation.
c) Tower position--in some cases, the antenna under test needed to be offset from the focal point by as much as 4 feet. This was necessary on the tail bullet mounted antenna to prevent turntable motor stall in the wind gusts, and to provide clearance past the arch support legs. The antenna under test stays within the 3 dB point of the receive horn, but azimuth becomes distorted at the wingtips by up to 5 degrees.

6. LOCATION CONSIDERATIONS

Various antenna locations were evaluated in the process of arriving at the locations shown in Appendix 1. These were evaluated with respect to the requirement for simultaneous location on the aircraft of the AN/ALQ-156, AN/ALQ-162 and AN/ALQ-136 systems, as well as possible mission equipment interference.

6.1 Forward Locations. Various locations around the nose were considered, as well as locations outboard on the wing, under the weather radar radome, and in a common housing with the forward WRDL antenna. The locations tested were selected on the basis of the following factors:

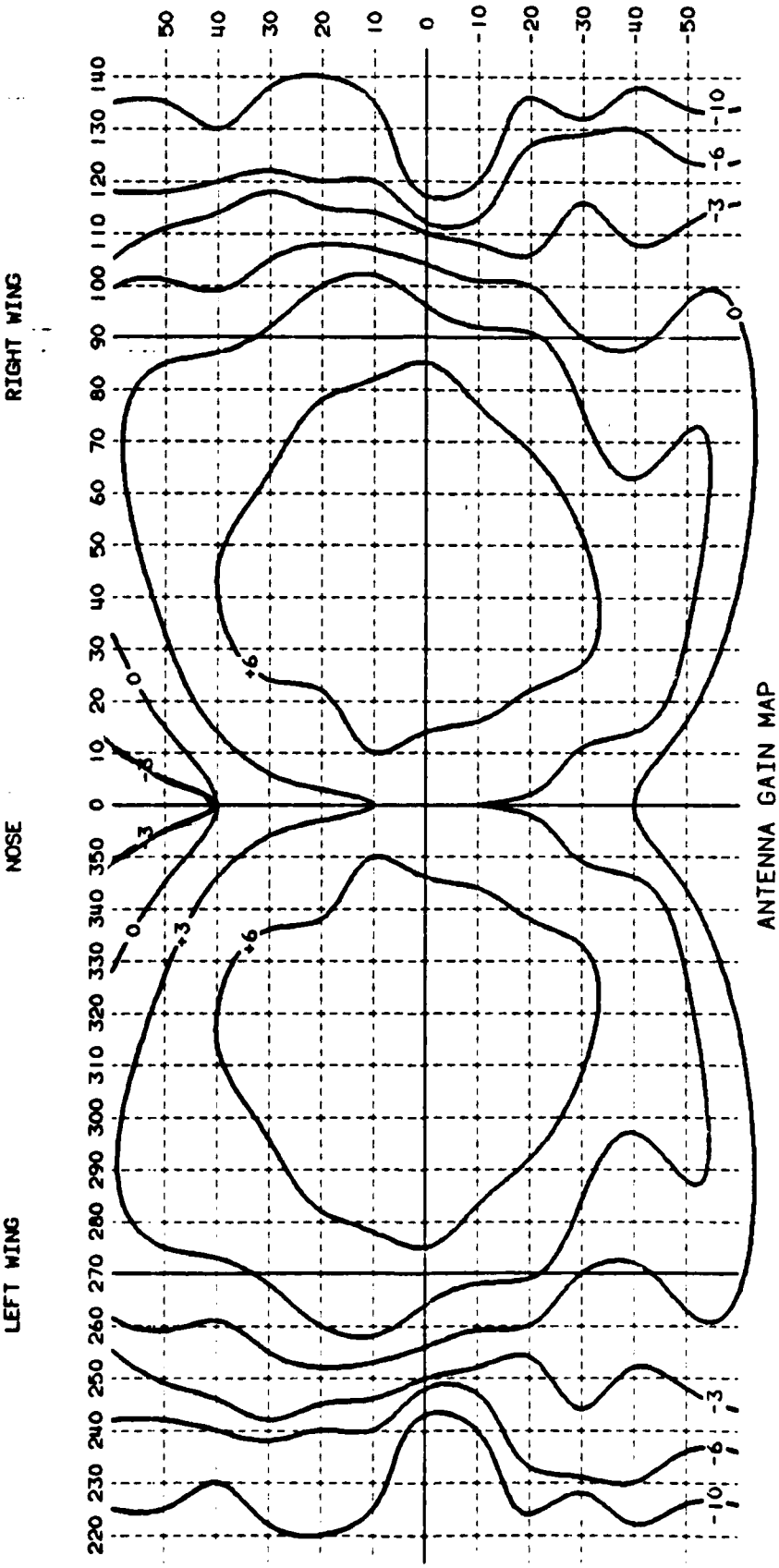
a. Lowest aerodynamic drag
b. Antenna pattern that will clear propeller circle
c. Acceptable antenna purview
d. Ice build-up during icing conditions
e. Vulnerability to damage during take-off and landing
f. Interference with other aircraft systems, including pitot and air conditioning inlet
g. Interference with mission systems
h. Accessibility for routing transmission lines and length of transmission lines

6.2 Aft Location. Various locations around the tail cone, tail stinger, ventral fin, and aft fuselage were considered, as well as the aft tail bullet in the center of the horizontal tail. The locations tested were selected on the basis of the following factors:

a. Lowest aerodynamic drag
b. Acceptable antenna purview
c. Vulnerability to damage during landing and take-off
d. Interference with mission systems
e. Accessibility for routing and length of transmission lines
f. Potential P-static problems for the aircraft

7. CONCLUSION

This report describes in detail the antenna performance for the AN/ALQ-156 and AN/ALQ-162 systems when installed on an RC-12D aircraft. The antenna locations tested and shown in Appendix 1 will permit acceptable system operation for the AN/ALQ-156 and AN/ALQ-162 Systems in conjunction with the mission systems.



ANTENNA GAIN MAP

SYSTEM 2 FWD SECTOR FREQ=F1

FIGURE 1

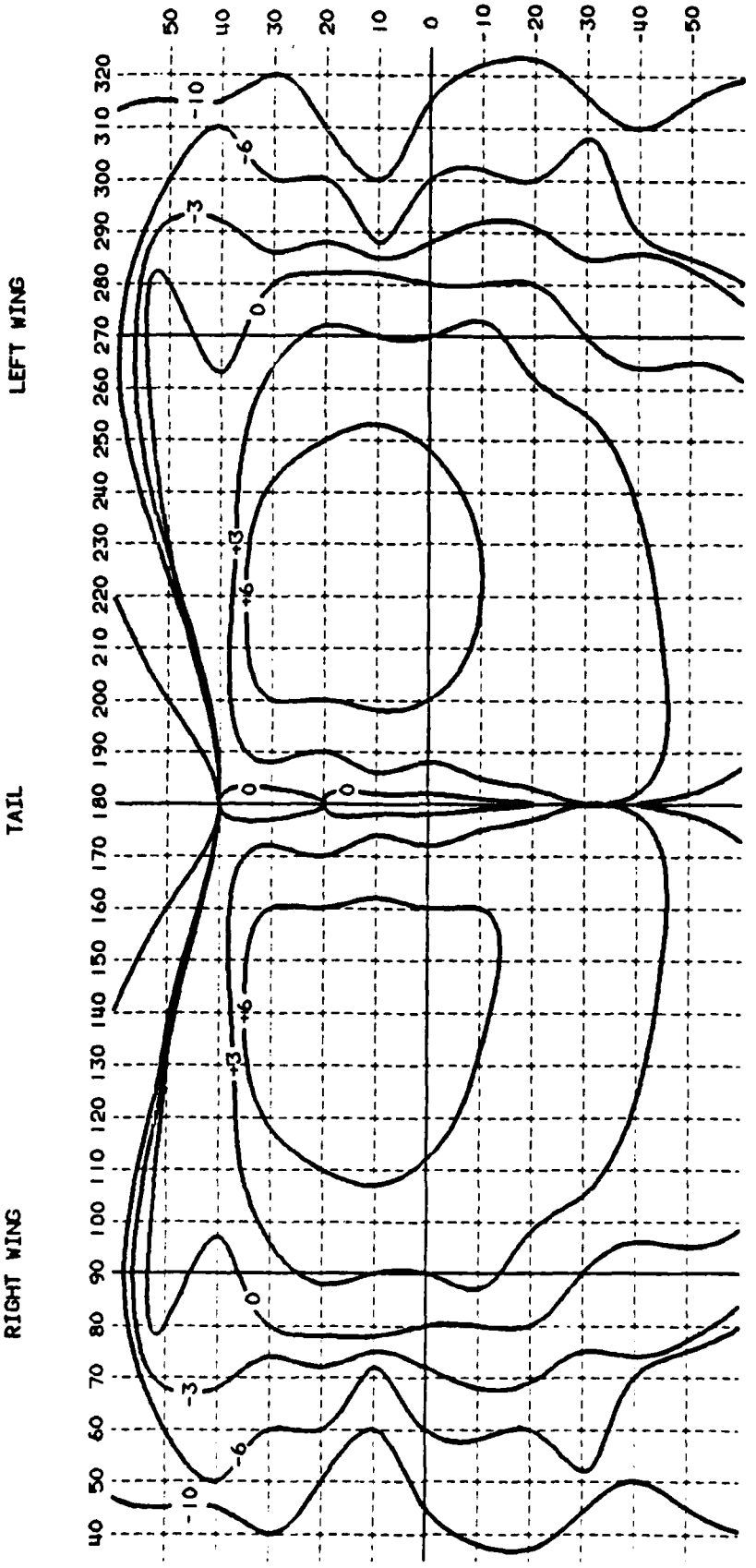
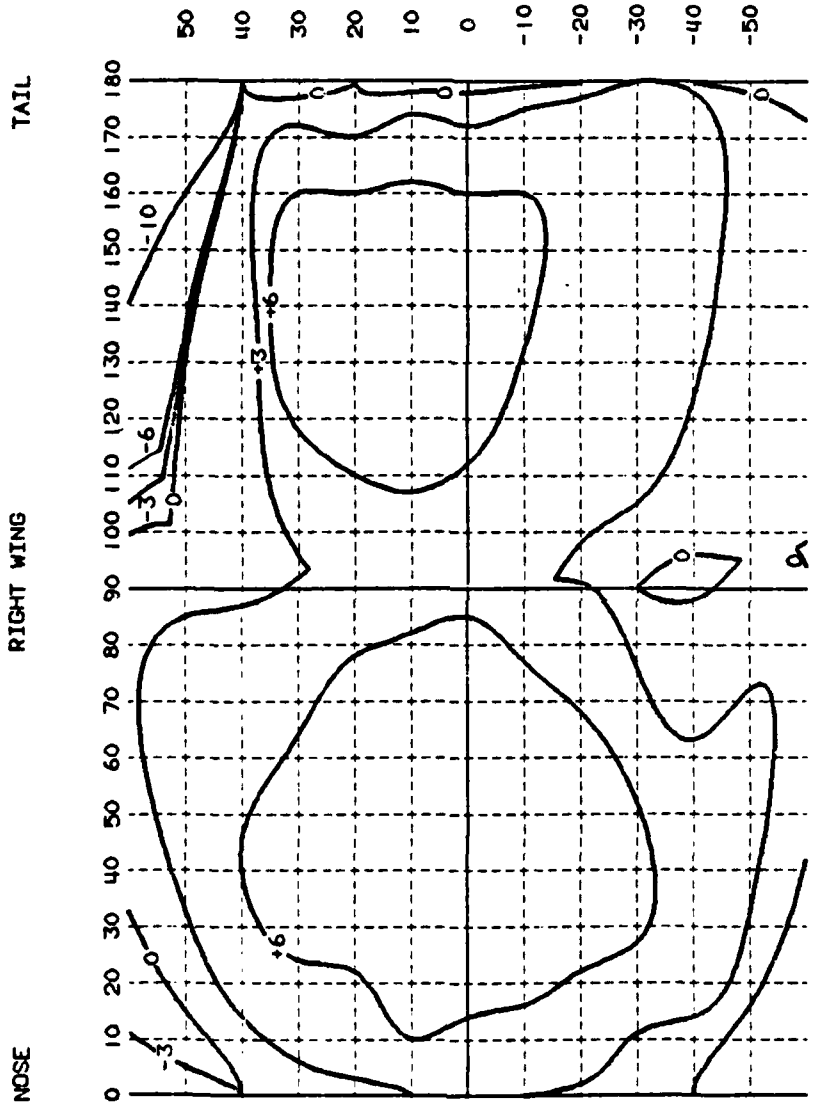
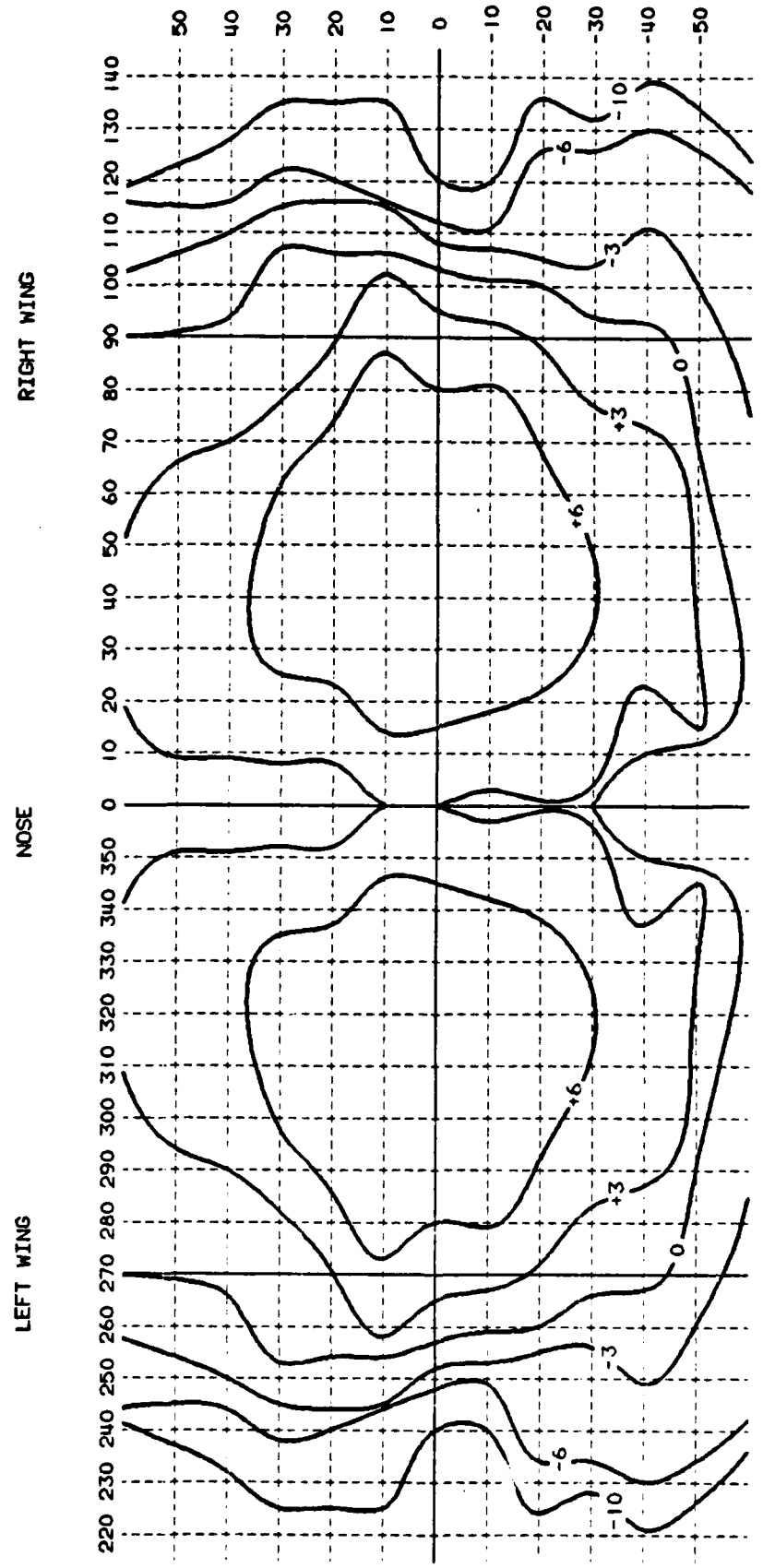

LEFT WING
TAIL
RIGHT WING
50 40 30 20 10 0 -10 -20 -30 -40 -50
320 310 300 290 280 270 260 250 240 230 220 210 200 190 180 170 160 150 140 130 120 110 100 90 80 70 60 50 40
-10
-6
-3
0
+3
+6
ANTENNA GAIN MAP
SYSTEM 2 AFT SECTOR
FREQ - F1

FIGURE 2



SYSTEM 2 WING TIP SECTOR

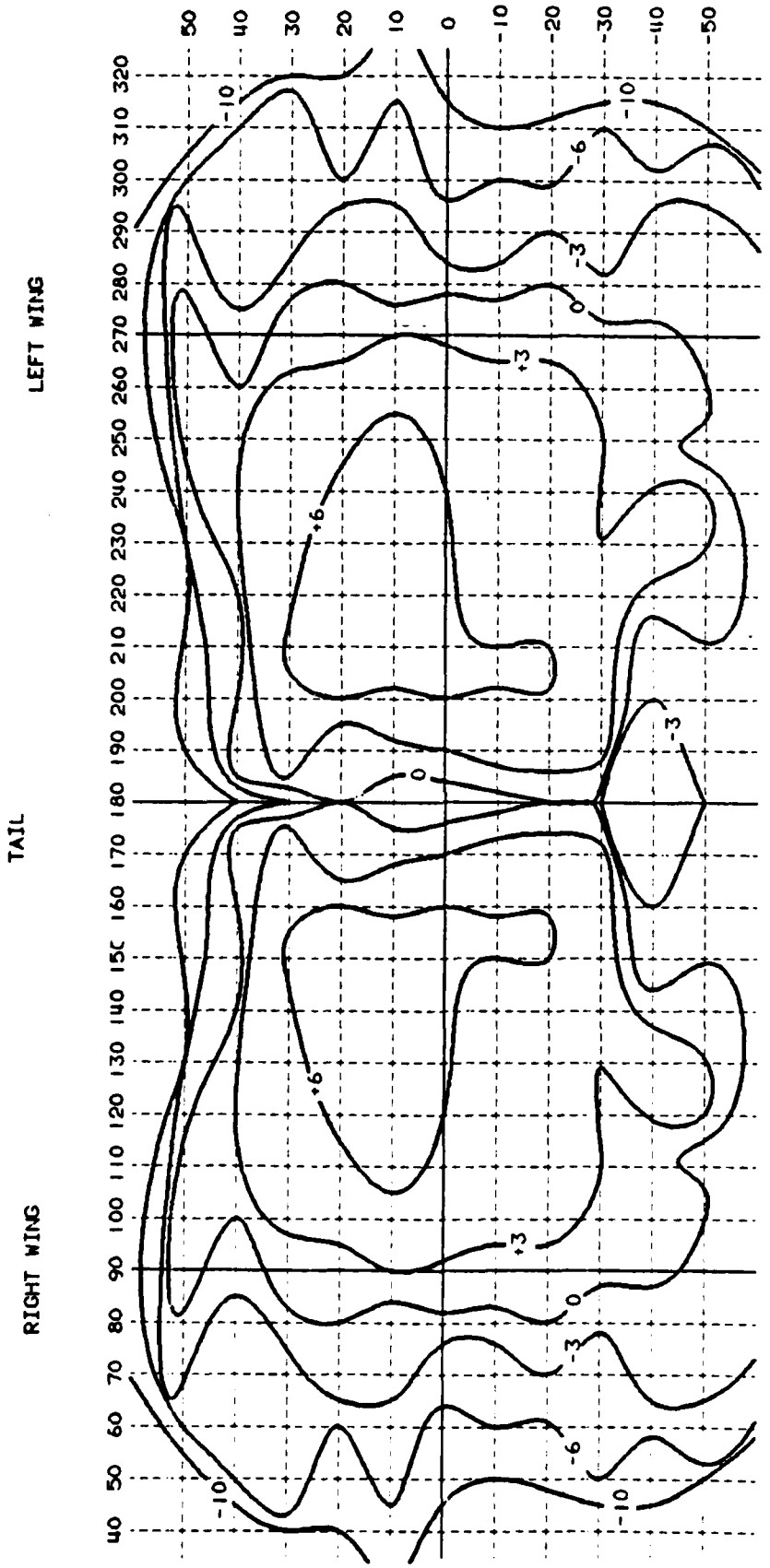
FIGURE 3



ANTENNA GAIN MAP

SYSTEM 2 FWD SECTOR FREQ = F2

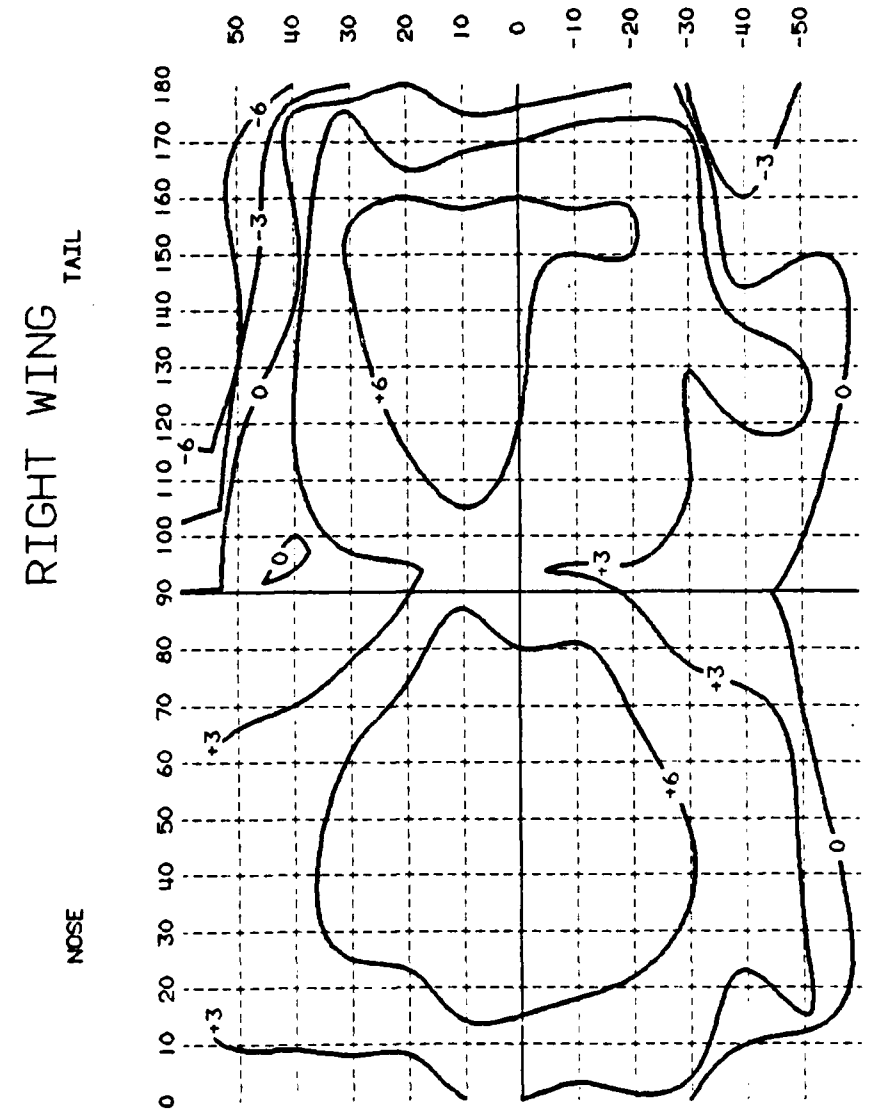
FIGURE 4



ANTENNA GAIN MAP

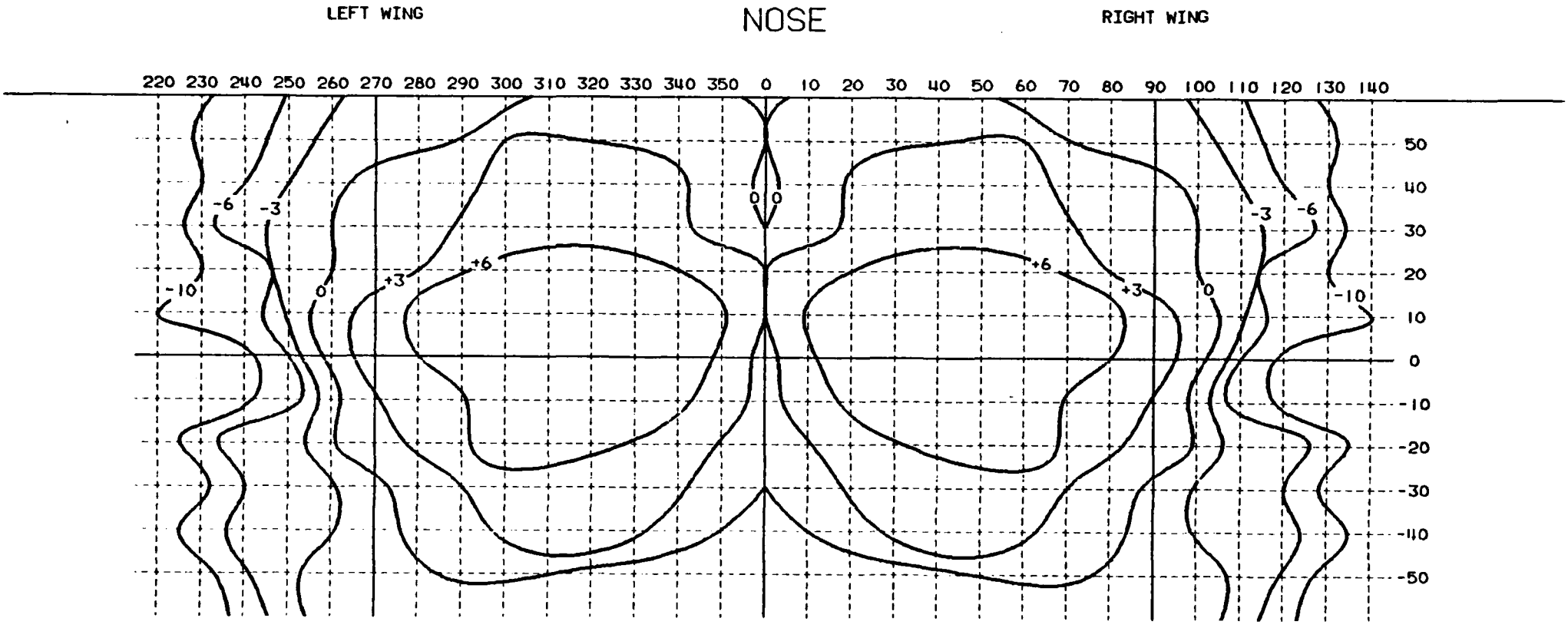
SYSTEM 2 AFT SECTOR

FIGURE 5



SYSTEM 2 WING TIP SECTOR

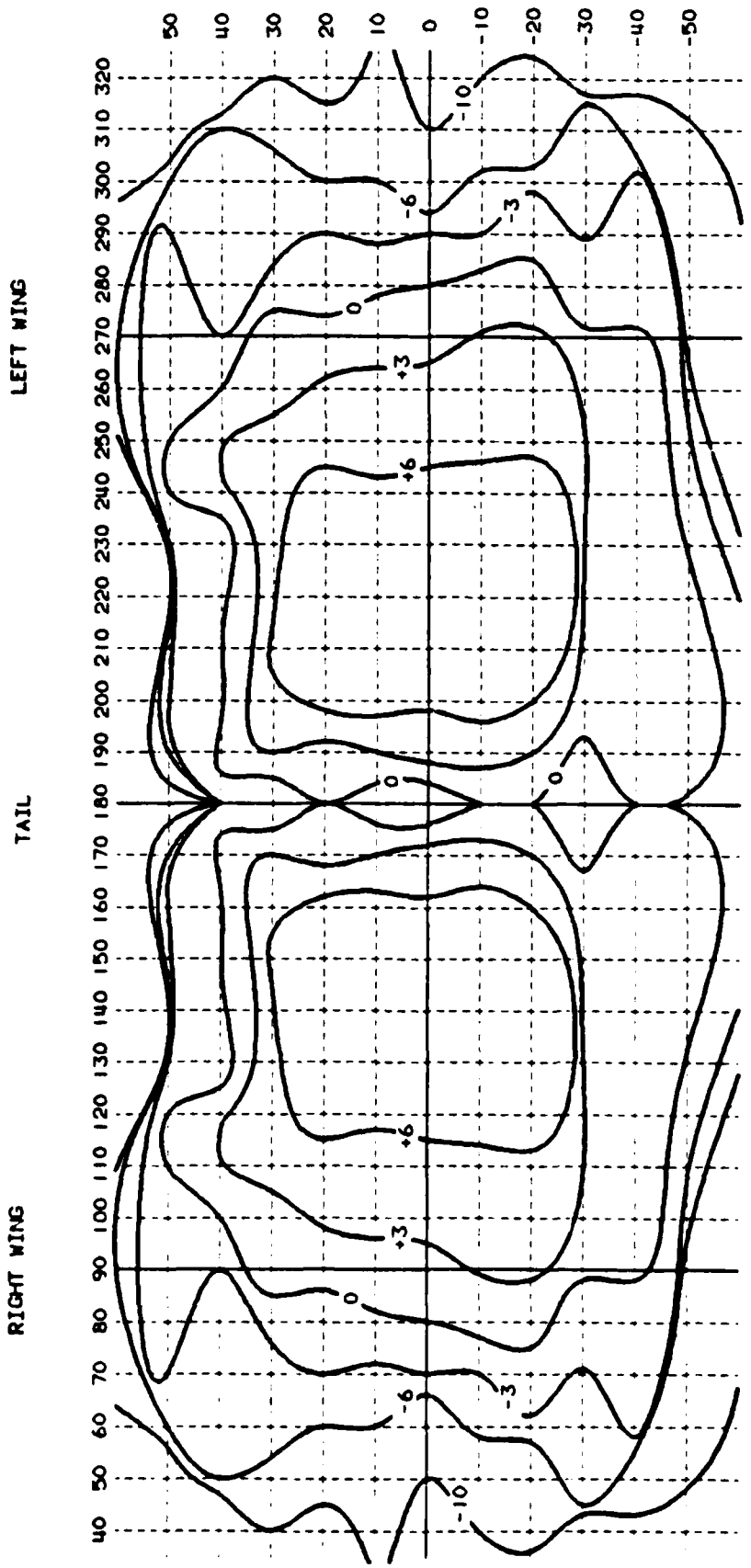
FIGURE 6



ANTENNA GAIN MAP

SYSTEM 2 FWD SECTOR FREQ = F3

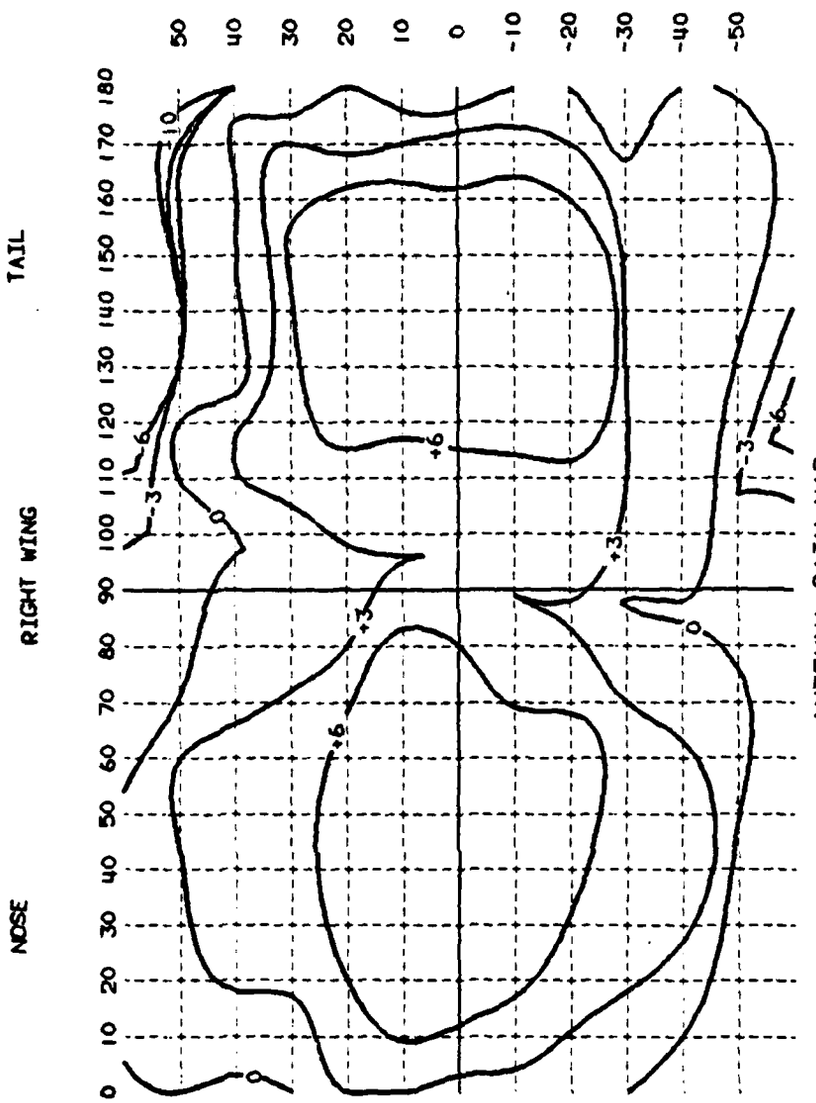
FIGURE 7



ANTENNA GAIN MAP FREQ - F3

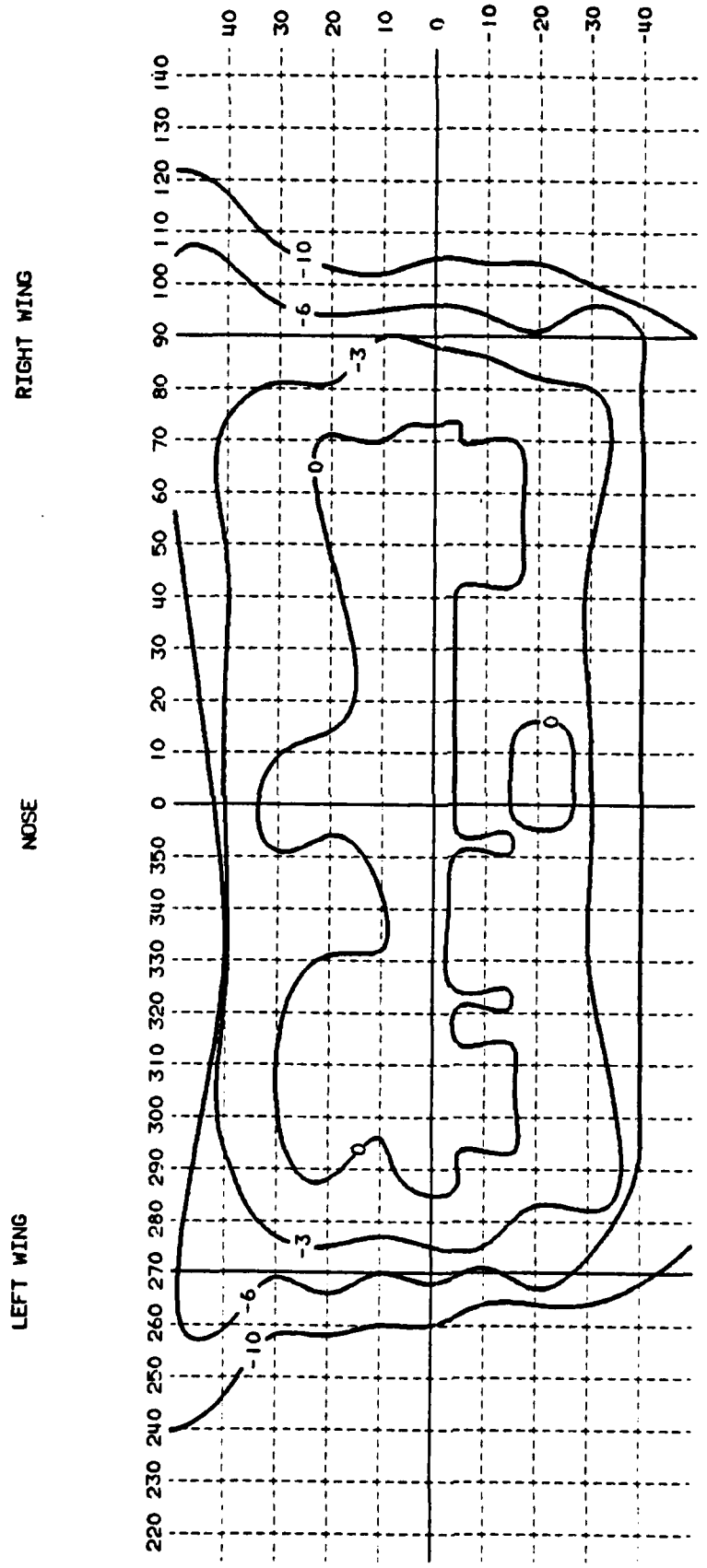
SYSTEM 2 AFT SECTOR

FIGURE 8

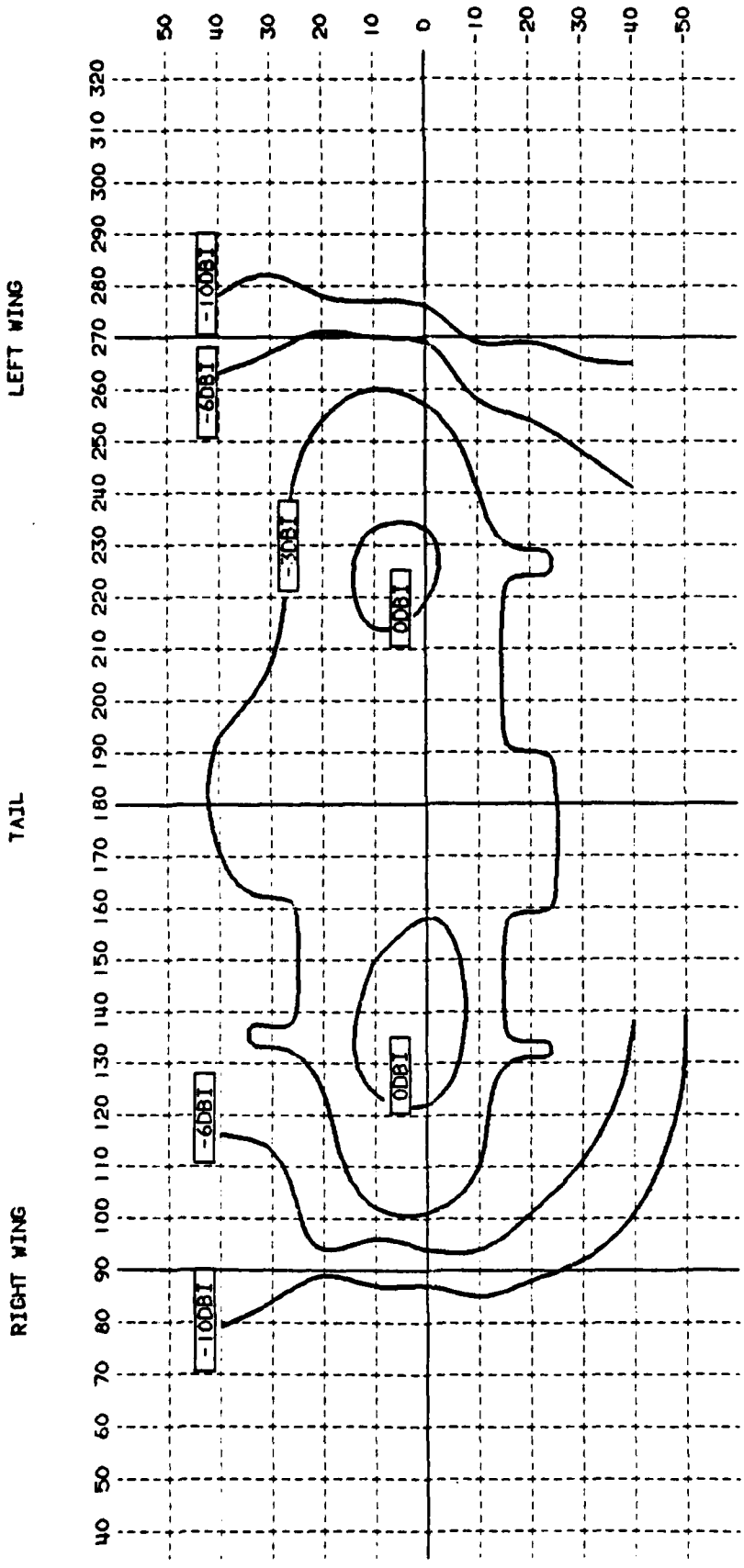


SYSTEM 2 WING TIP SECTOR

FIGURE 9



ANTENNA GAIN MAP
SYSTEM 3 FWD SECTOR
FIGURE 10

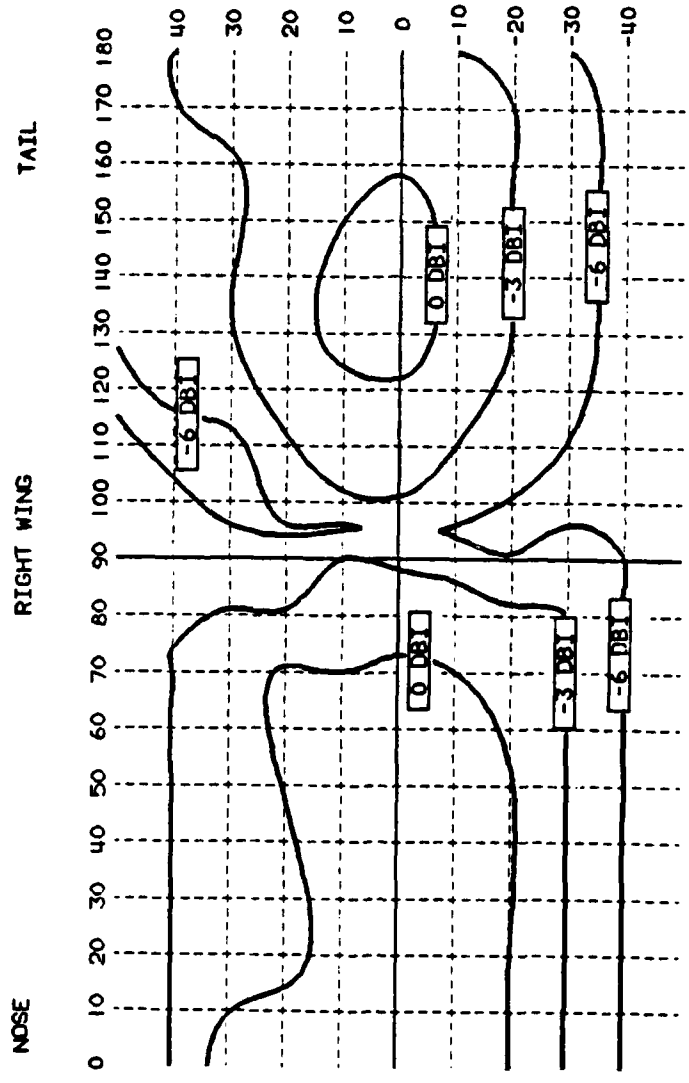


ANTENNA GAIN MAP

SYSTEM 3 AFT SECTOR

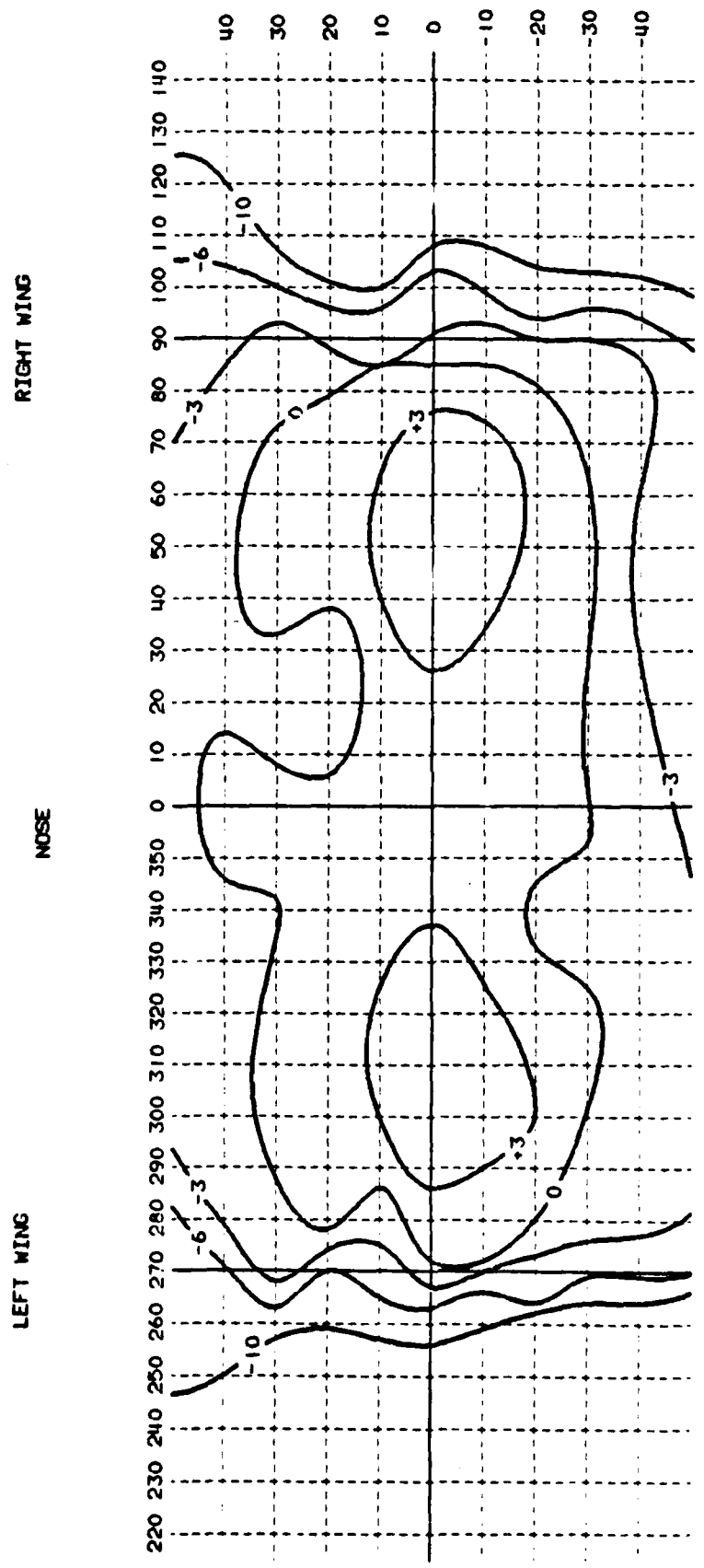
FREQ = F4

FIGURE 11



ANTENNA GAIN MAP
FREQ = F4
SYSTEM 3 WING TIP SECTOR

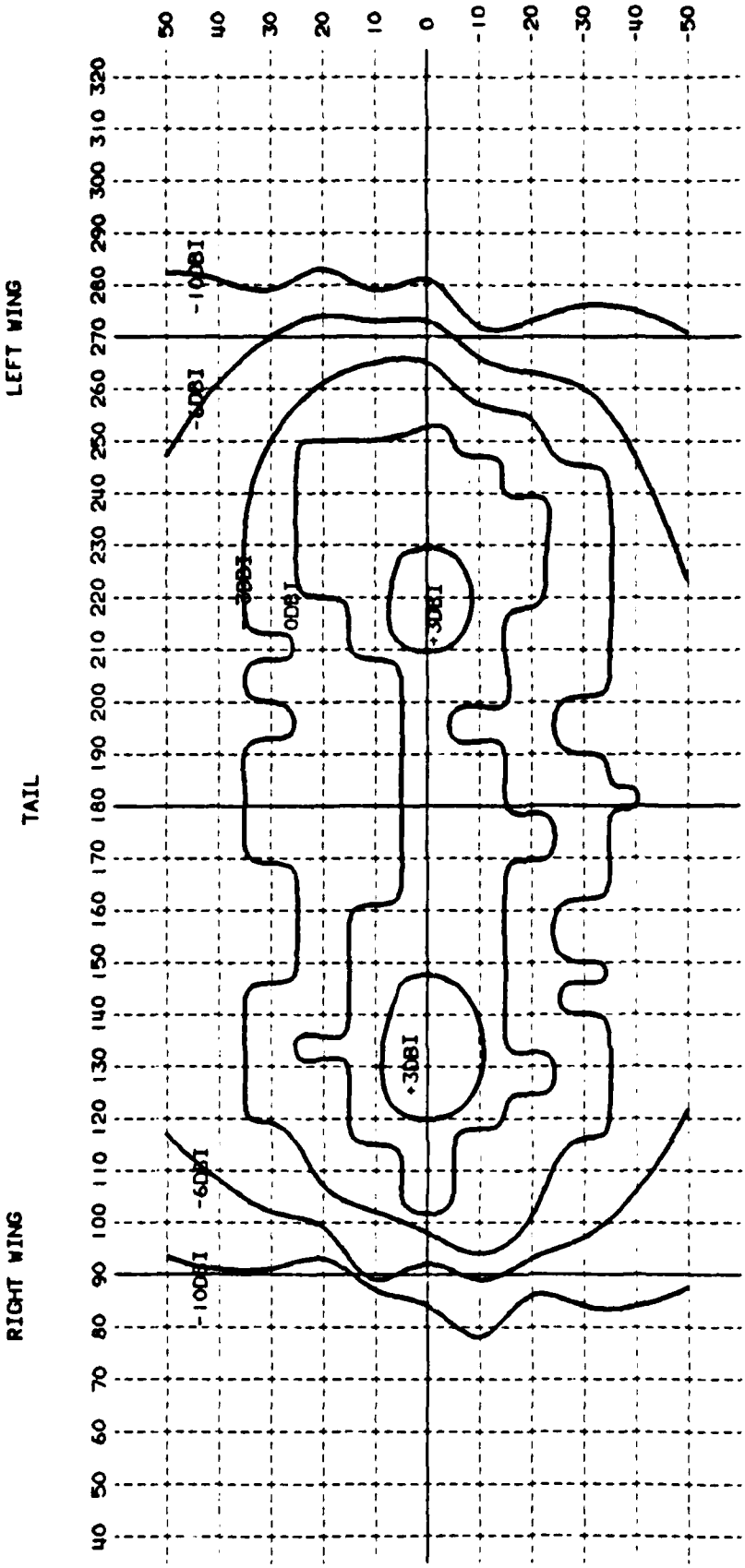
FIGURE 12



ANTENNA GAIN MAP FREQ = F5

SYSTEM 3 FWD SECTOR

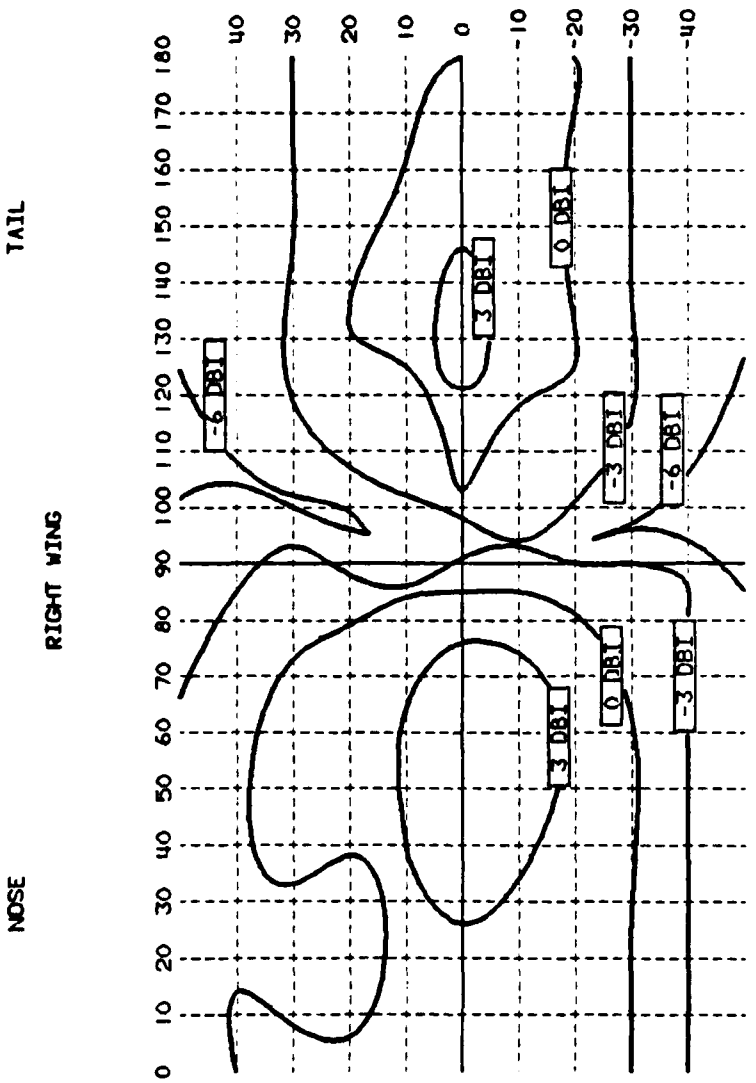
FIGURE 13



ANTENNA GAIN MAP

SYSTEM 3 AFT SECTOR FREQ = F3

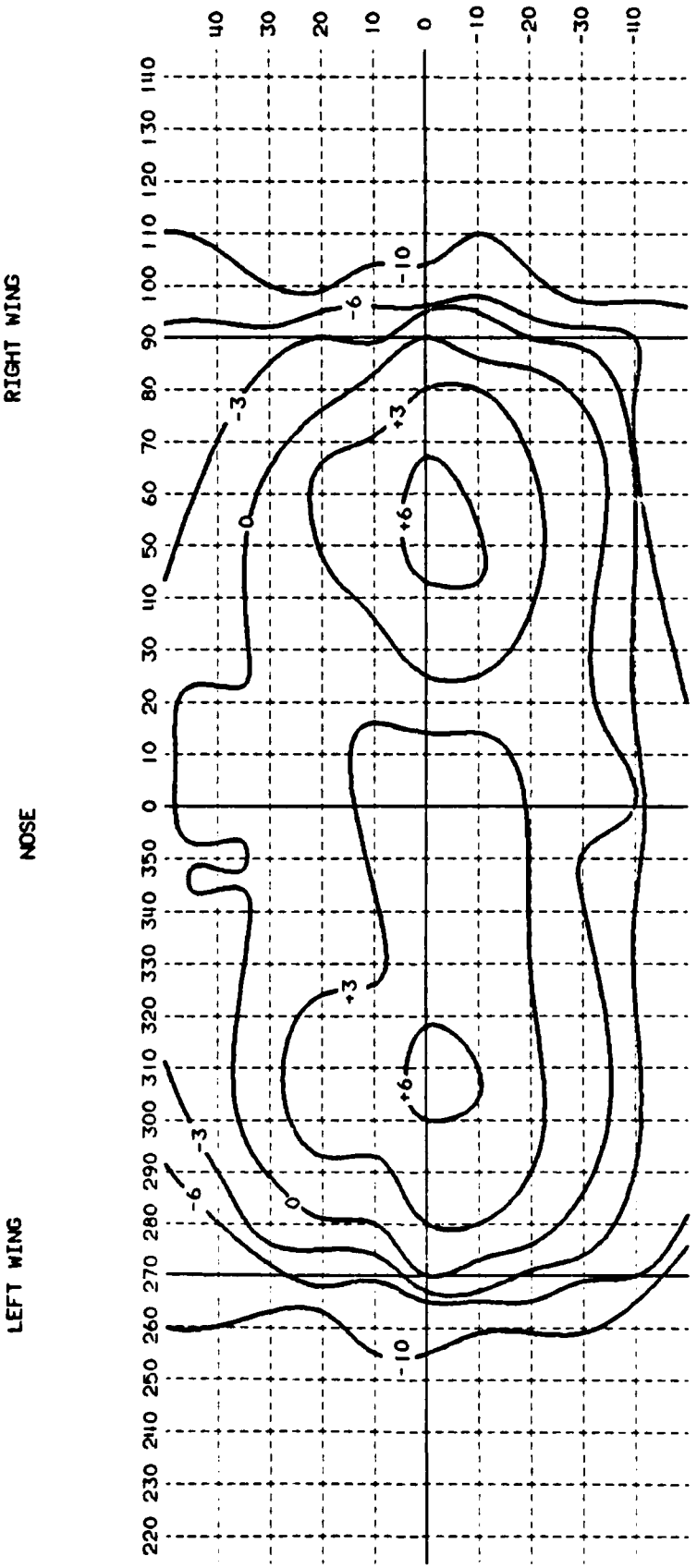
FIGURE 14



ANTENNA GAIN MAP

SYSTEM 3 WING TIP SECTOR FREQ = F5

FIGURE 15



ANTENNA GAIN MAP FREQ = 6

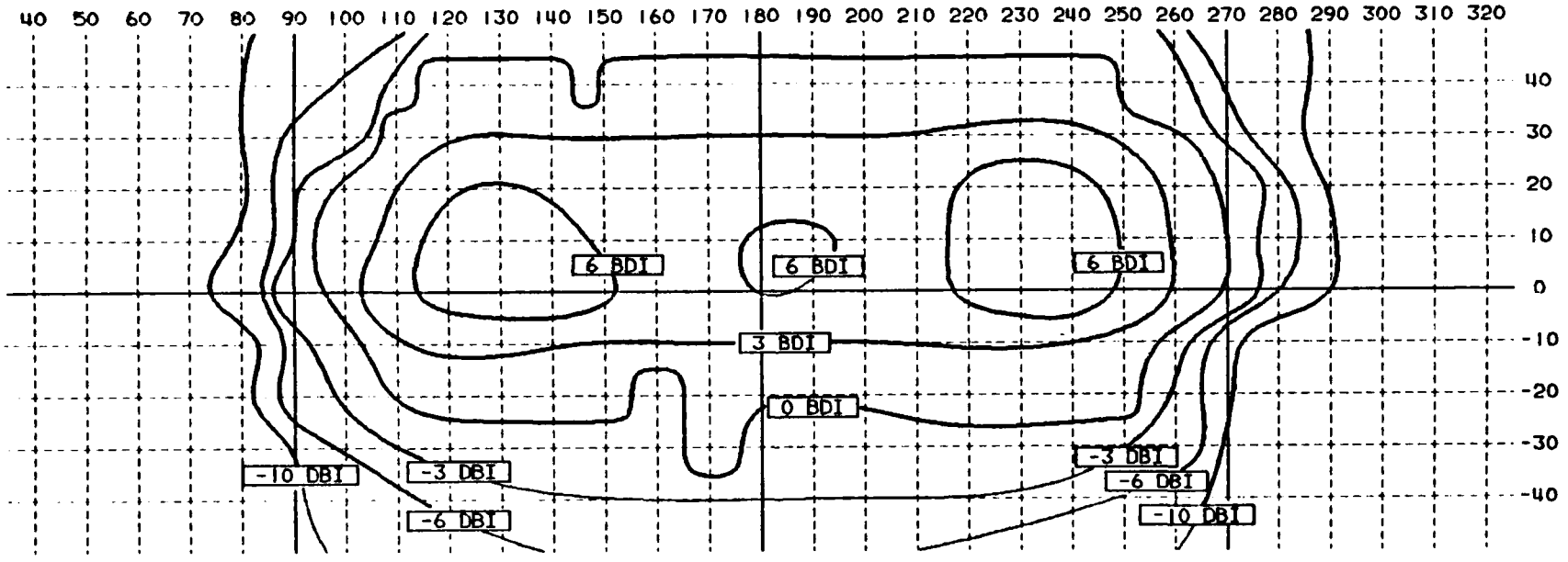
SYSTEM 3 FWD SECTOR

FIGURE 16

RIGHT WING

LEFT WING

TAIL

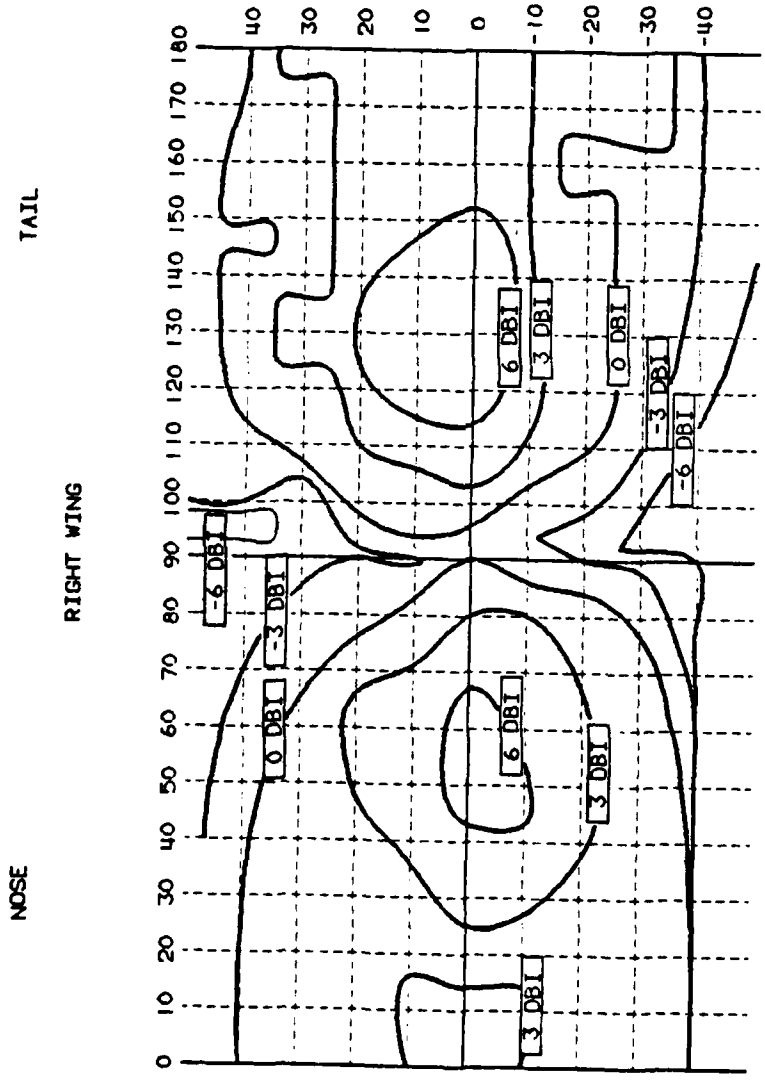


ANTENNA GAIN MAP

FREQ = F6

SYSTEM 3 AFT SECTOR

FIGURE 17

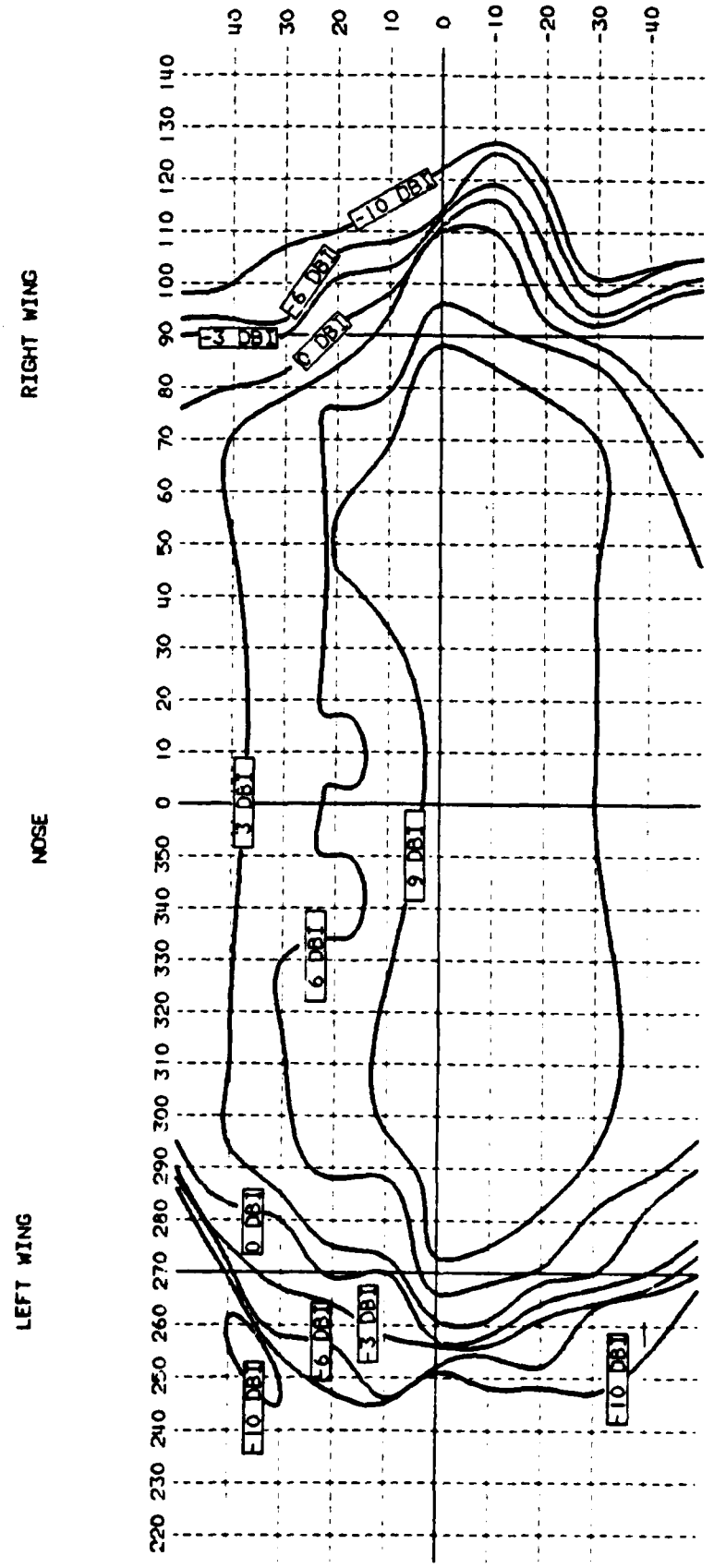


ANTENNA GAIN MAP

FREQ = F6

SYSTEM 3 WING TIP SECTOR

FIGURE 18

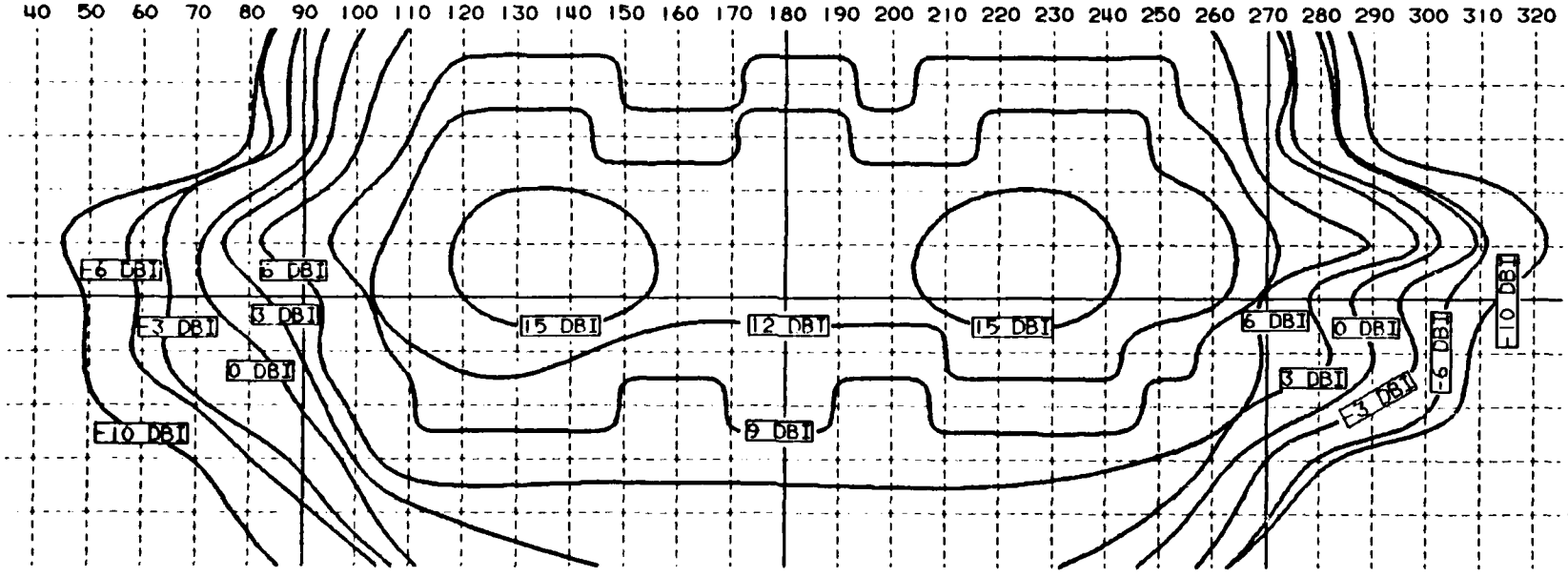


ANTENNA GAIN MAP
SYSTEM 3 FWD SECTOR
FIGURE 19

RIGHT WING

TAIL

LEFT WING

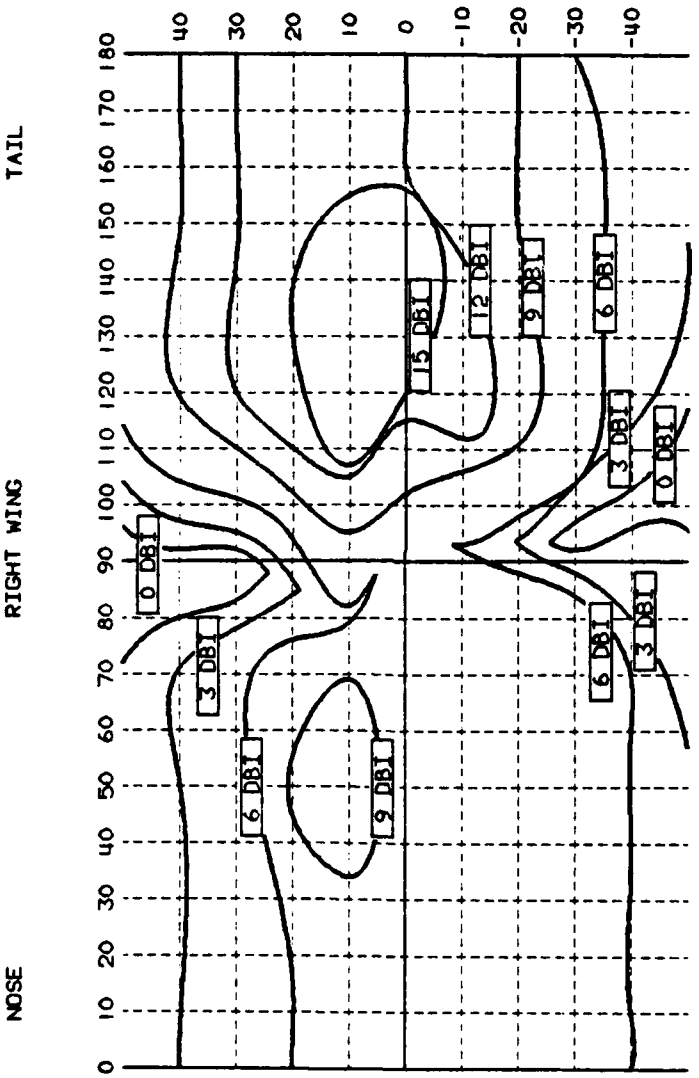


ANTENNA GAIN MAP

FREQ = F7

SYSTEM 3 AFT SECTOR

FIGURE 20



ANTENNA GAIN MAP FREQ = F7

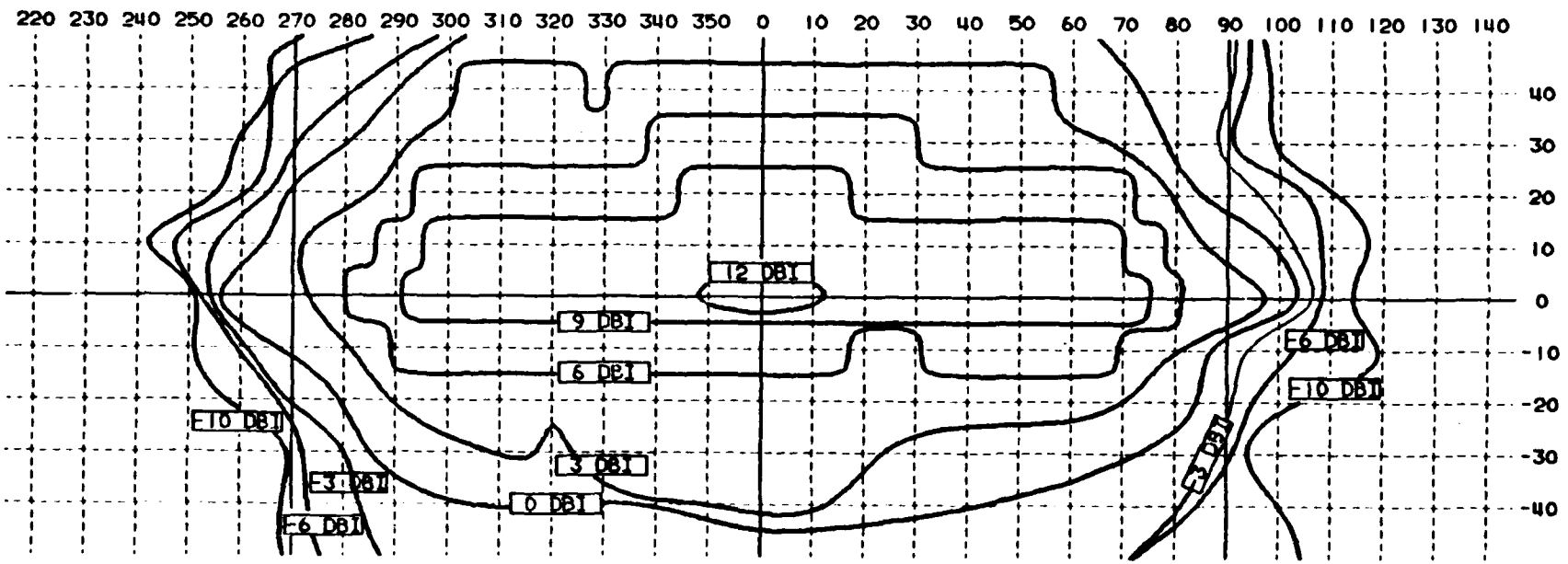
SYSTEM 3 WING TIP SECTOR

FIGURE 21

LEFT WING

RIGHT WING

NOSE

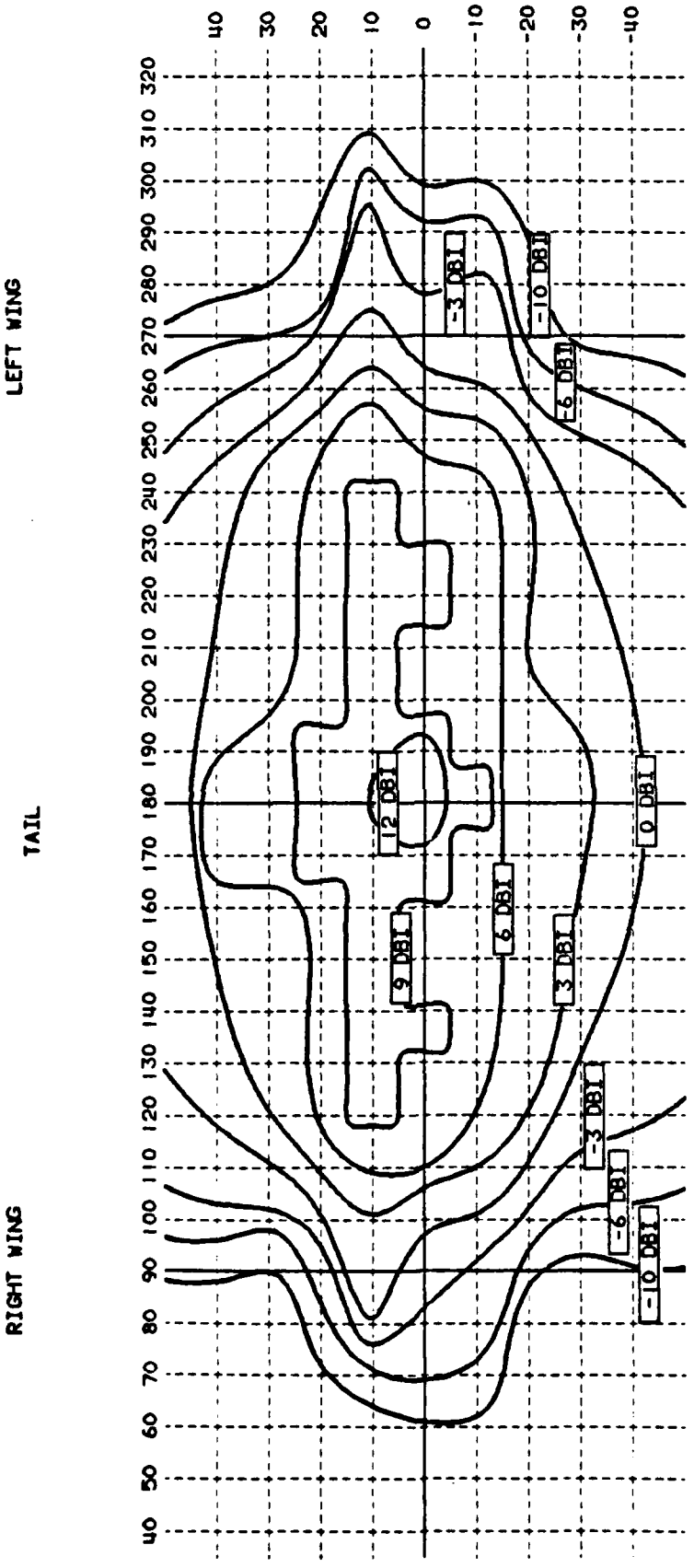


ANTENNA GAIN MAP

SYSTEM 3 FWD

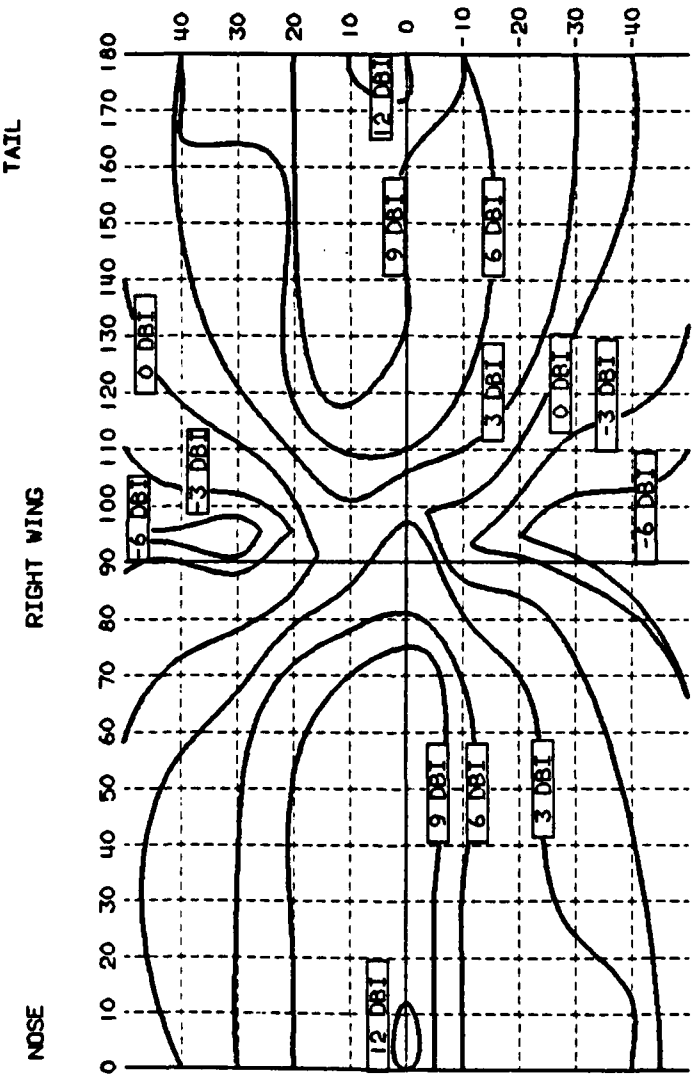
FREQ = F8

FIGURE 22



FREQ = F8

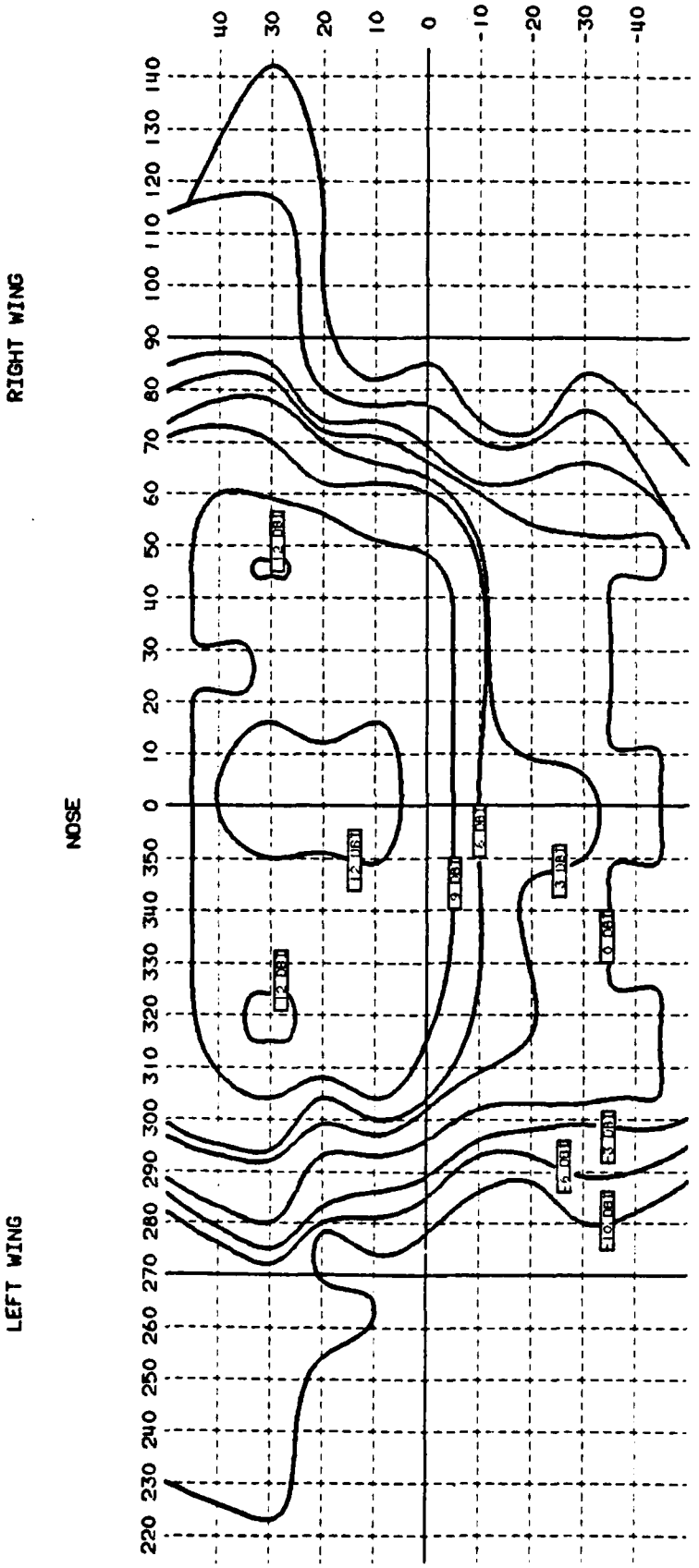
ANTENNA GAIN MAP
SYSTEM 3 AFT SECTOR
FIGURE 23



ANTENNA GAIN MAP FREQ = F8

SYSTEM 3 WING TIP SECTOR

FIGURE 24

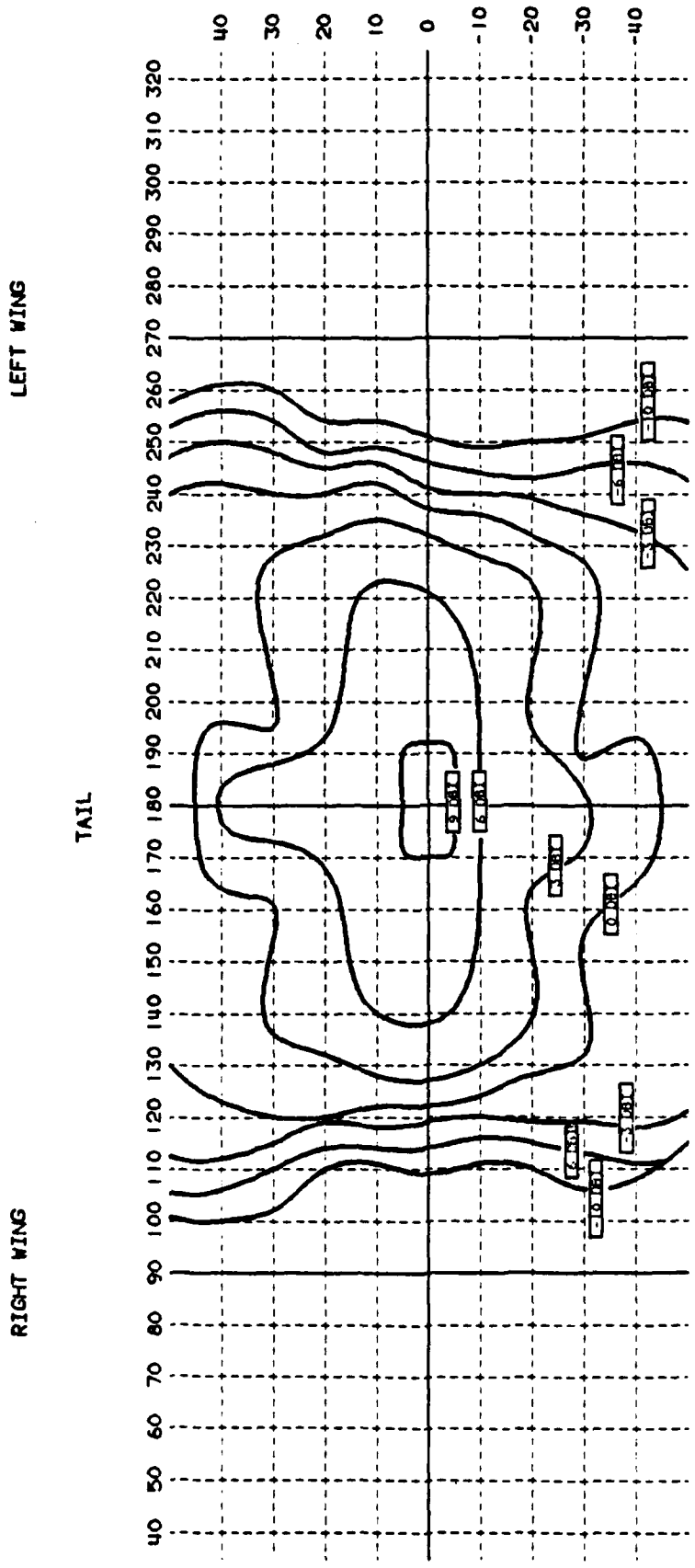


FREQ = F9

ANTENNA GAIN MAP

SYSTEM 3 FWD SECTOR

FIGURE 25



ANTENNA GAIN MAP FREQ = F9

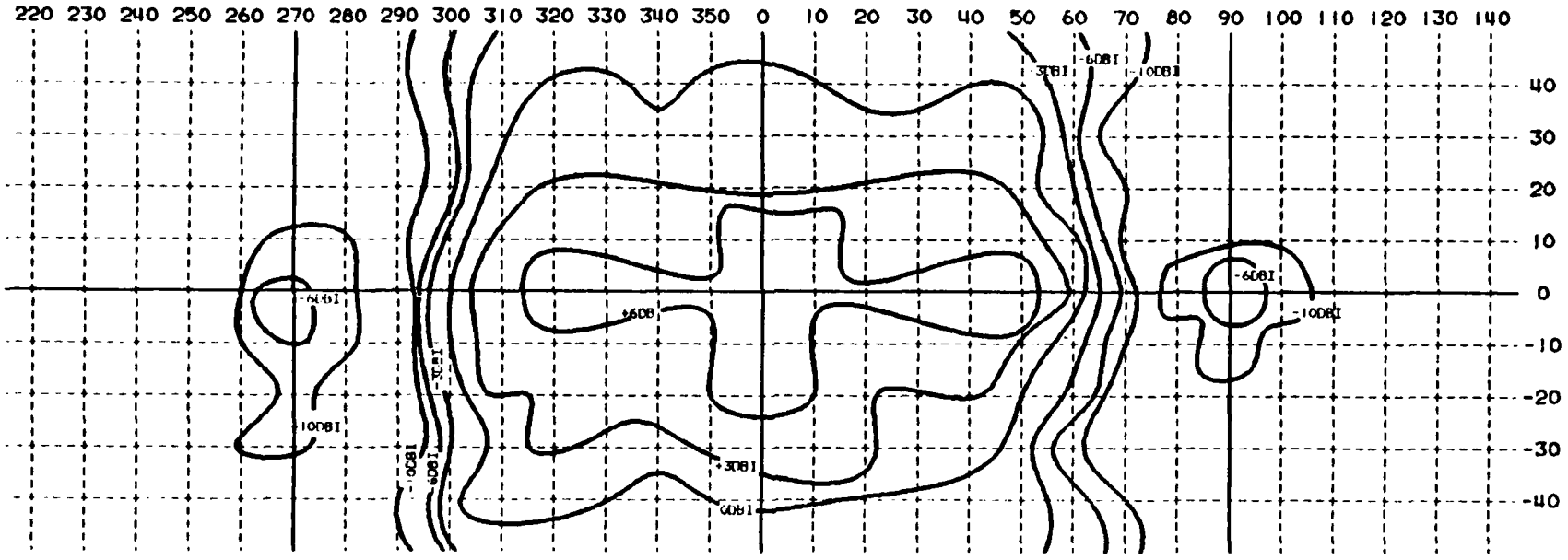
SYSTEM 3 AFT SECTOR

FIGURE 26

LEFT WING

NOSE

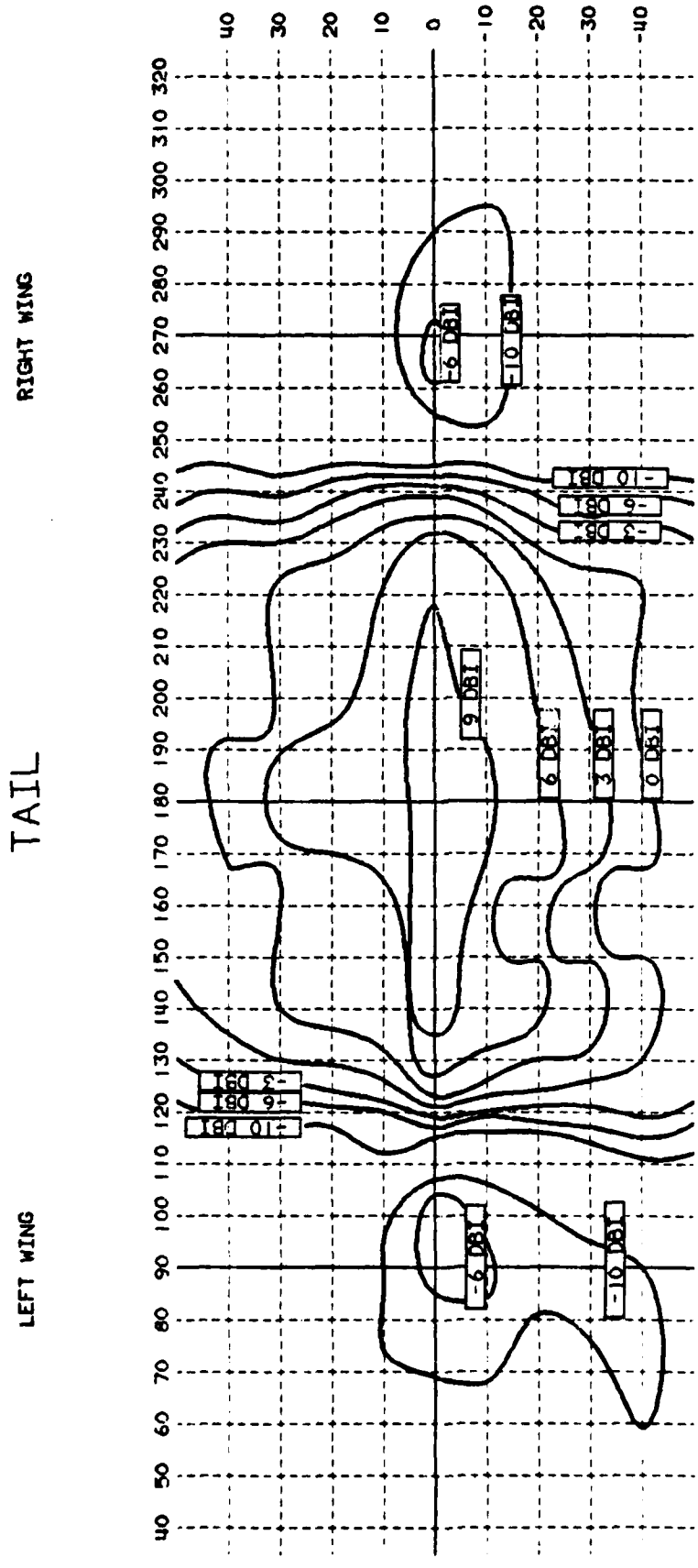
RIGHT WING



ANTENNA GAIN MAP

SYSTEM 3 FWD SECTOR FREQ = F10

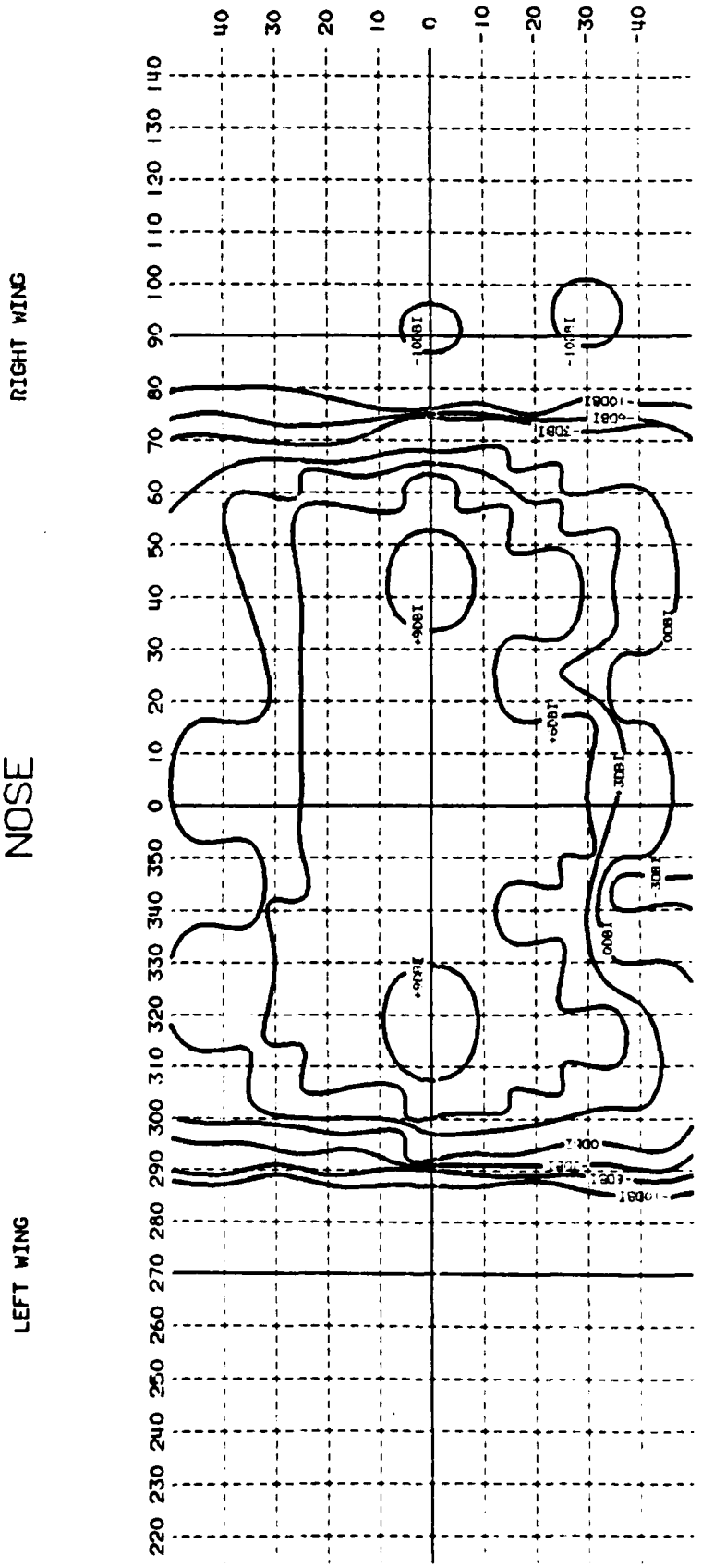
FIGURE 27



ANTENNA GAIN MAP

SYSTEM 3 FWD SECTOR FREQ = F10

FIGURE 28

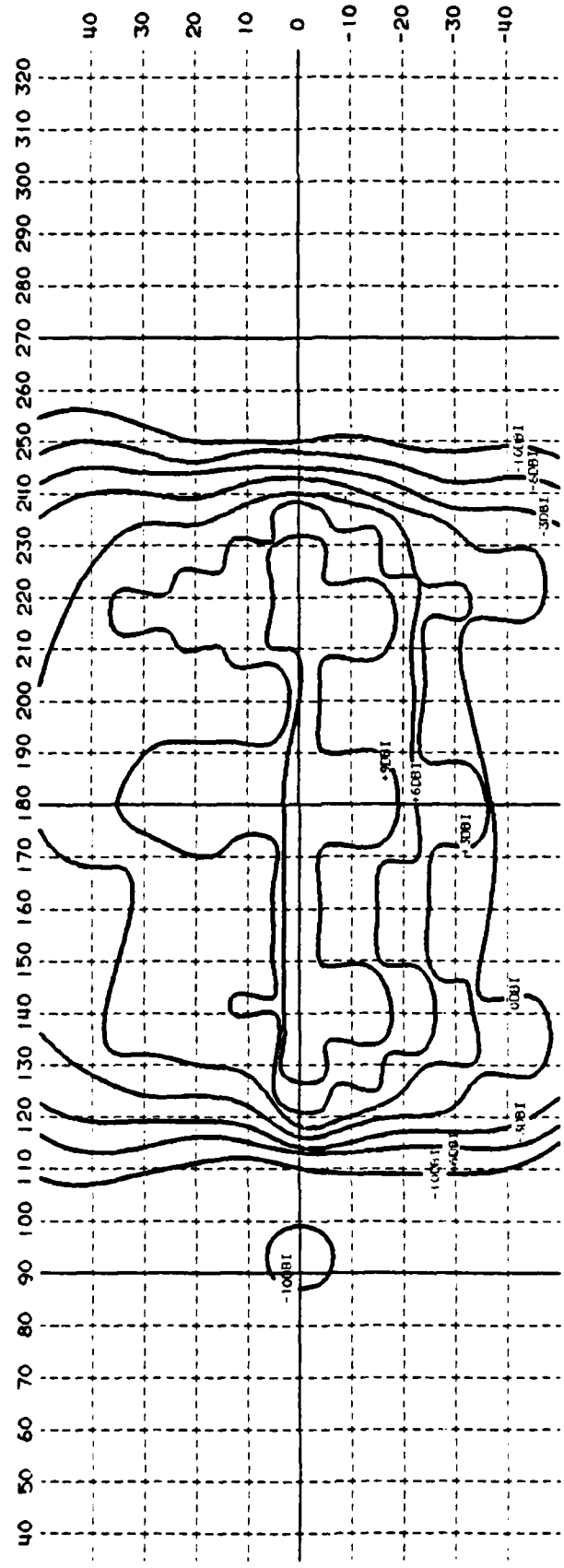


ANTENNA GAIN MAP

SYSTEM 3 FWD SECTOR

FREQ = F11

FIGURE 29

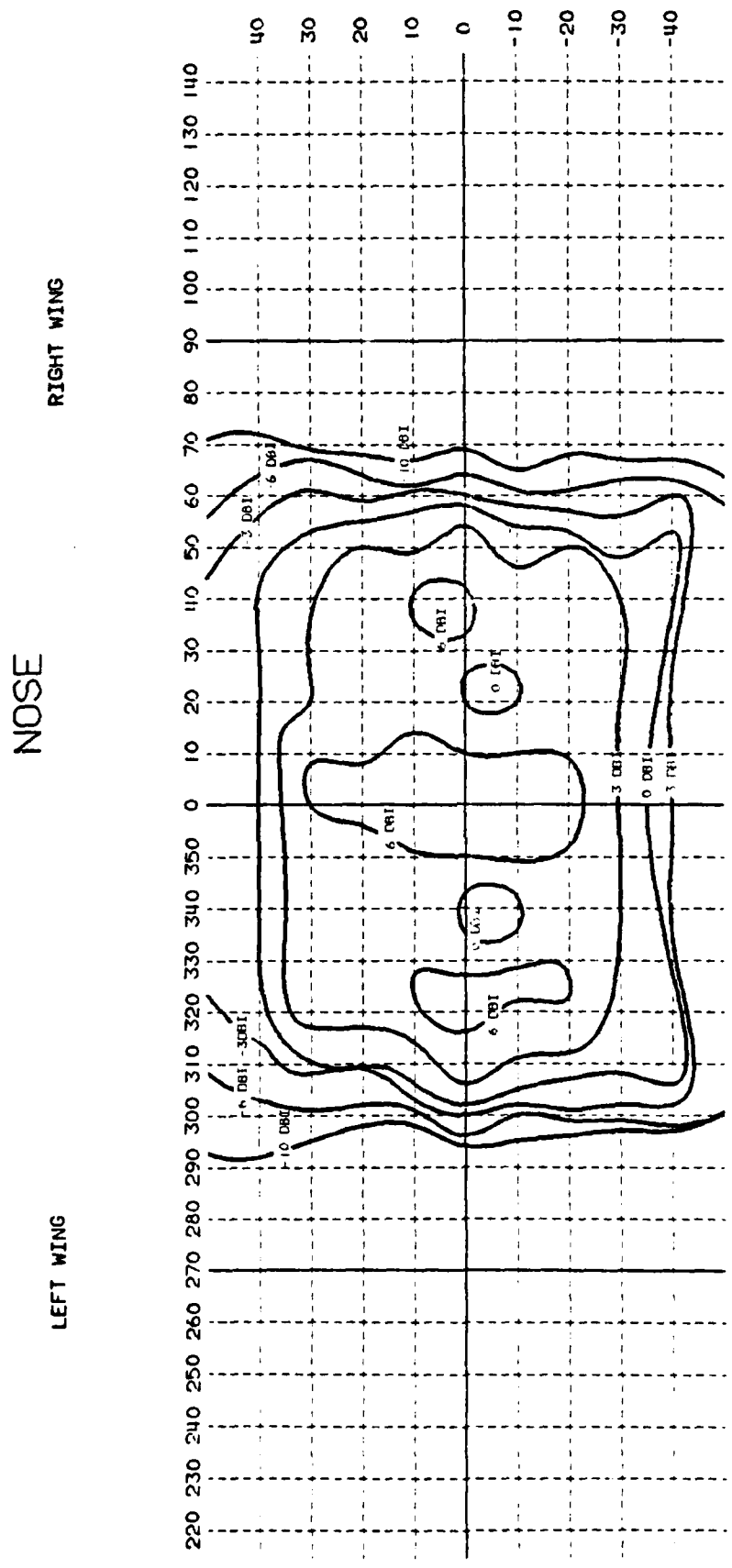


ANTENNA GAIN MAP

SYSTEM 3 AFT SECTOR

FREQ = F11

FIGURE 30



ANTENNA GAIN MAP FREQ = F12

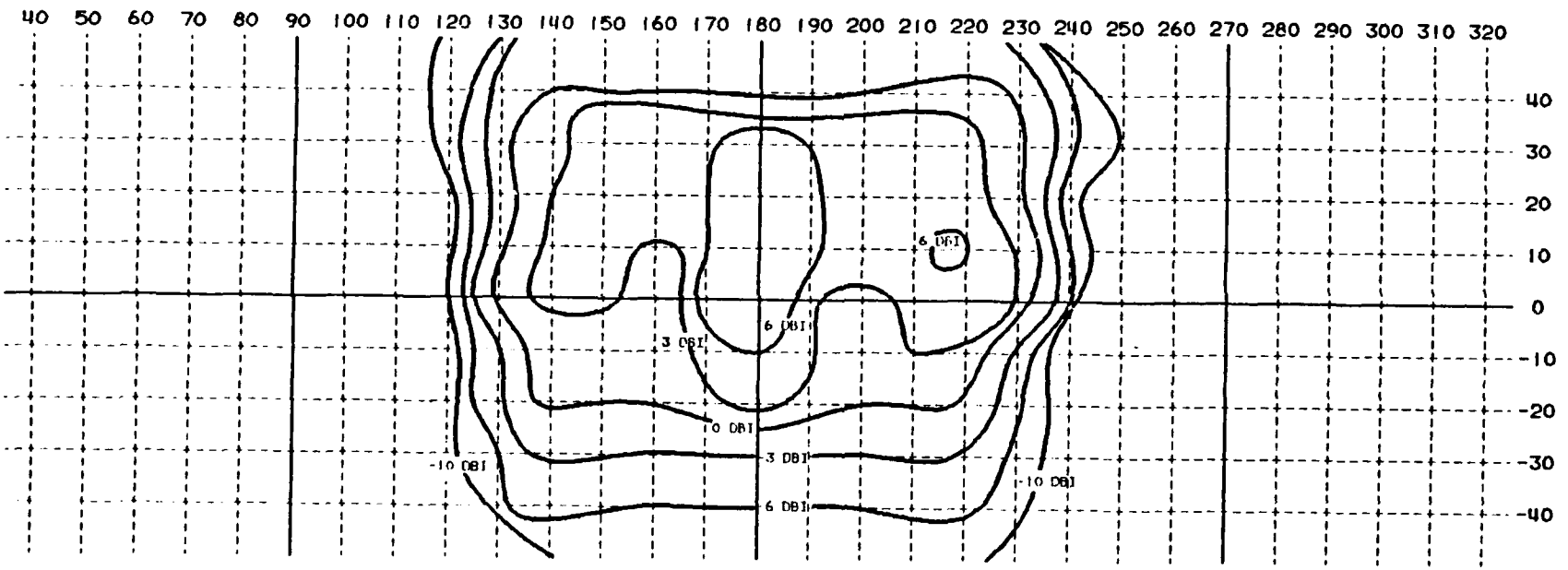
SYSTEM 3 FWD SECTOR

FIGURE 31

RIGHT WING

TAIL

LEFT WING

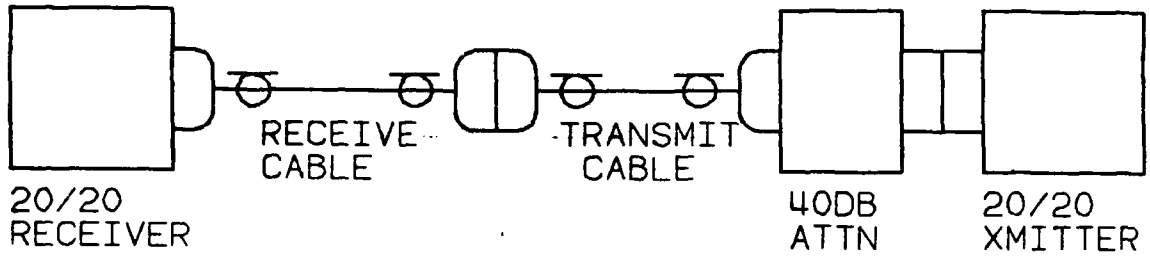


ANTENNA GAIN MAP

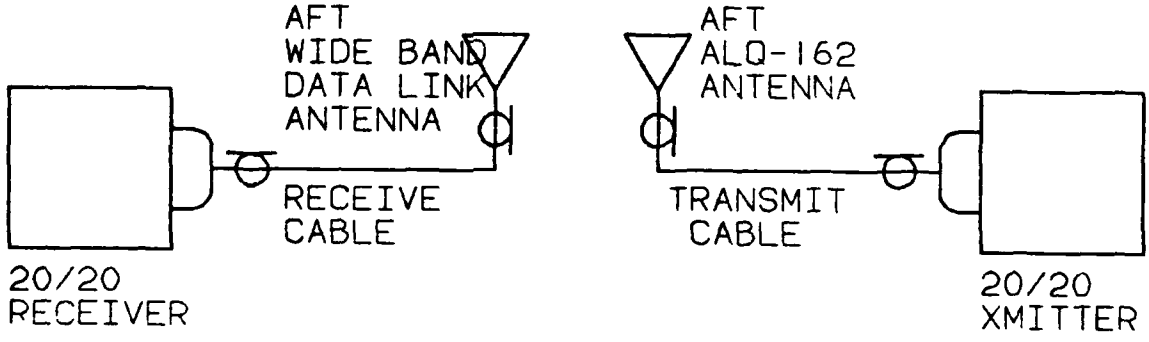
FREQ = F12

SYSTEM 3 AFT SECTOR

FIGURE 32



CALIBRATION SET-UP

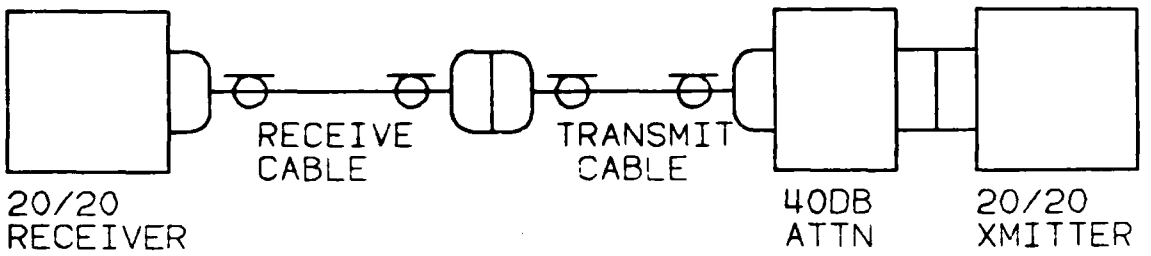


TEST SET-UP

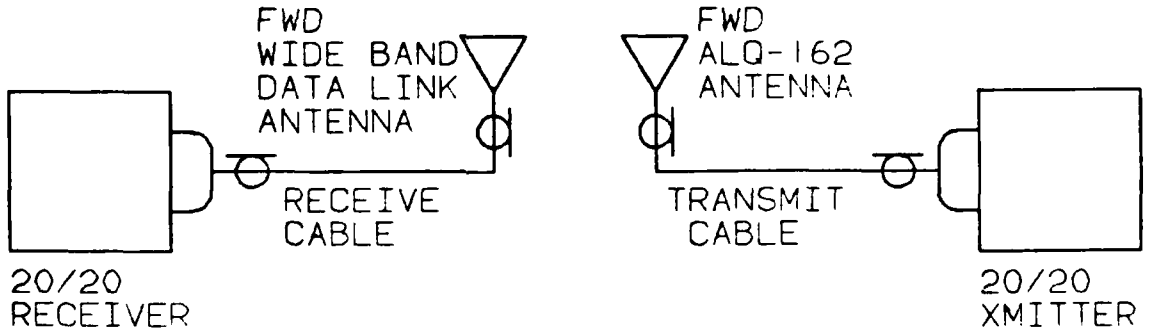
FIGURE 33

CALIBRATION AND TEST SET-UP

AFT ALQ-162 ANTENNA
VS
AFT WIDE BAND DATA LINK ANTENNA



CALIBRATION SET-UP

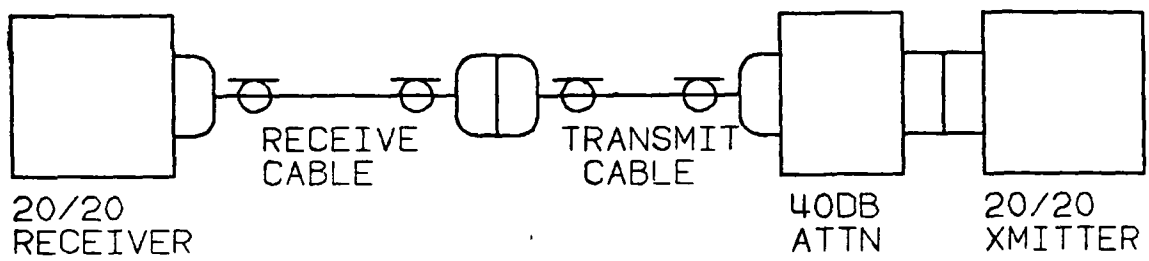


TEST SET-UP

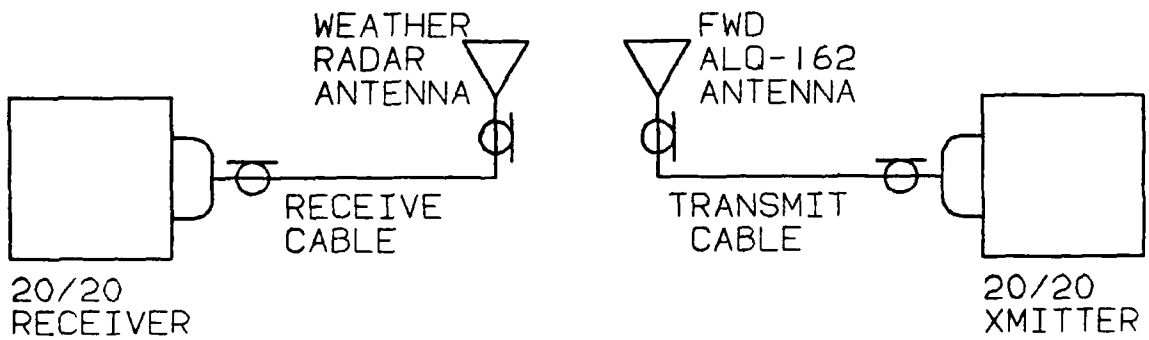
FIGURE 34

CALIBRATION AND TEST SET-UP

FWD ALQ-162 ANTENNA
VS
FWD WIDE BAND DATA LINK ANTENNA



CALIBRATION SET-UP

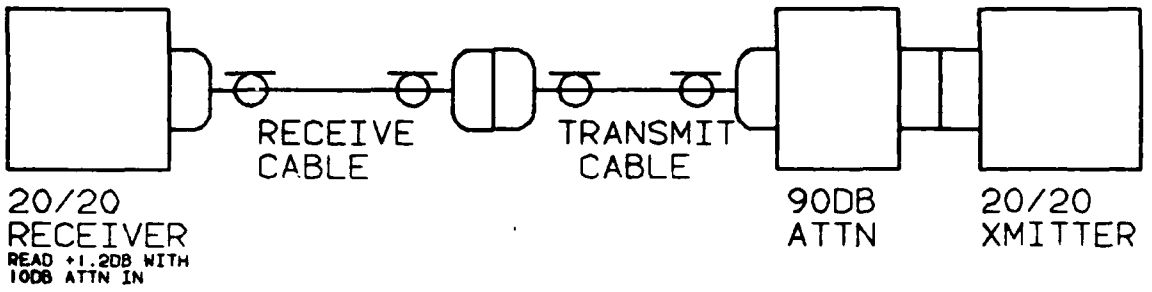


TEST SET-UP

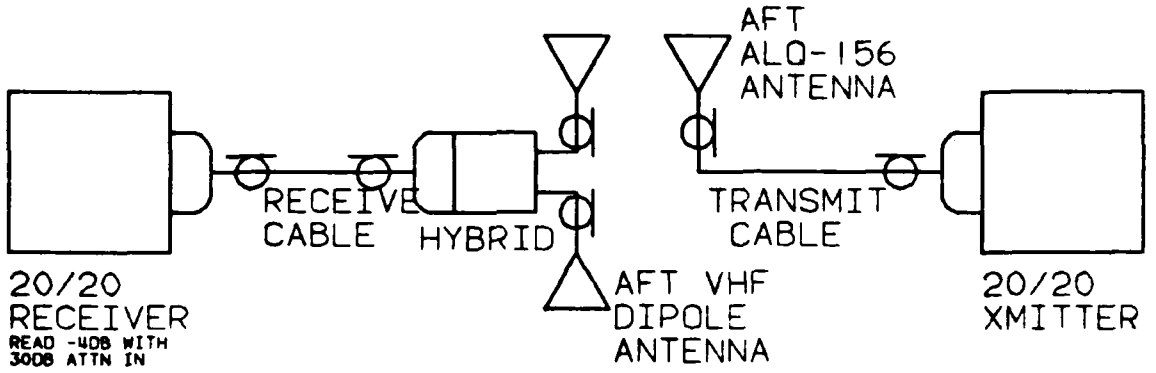
FIGURE 35

CALIBRATION AND TEST SET-UP

FWD ALQ-162 ANTENNA
VS
WEATHER RADAR ANTENNA



CALIBRATION SET-UP



TEST SET-UP

FIGURE 36

CALIBRATION AND TEST SET-UP

AFT ALQ-156 ANTENNA
VS
AFT VHF DIPOLE ANTENNA

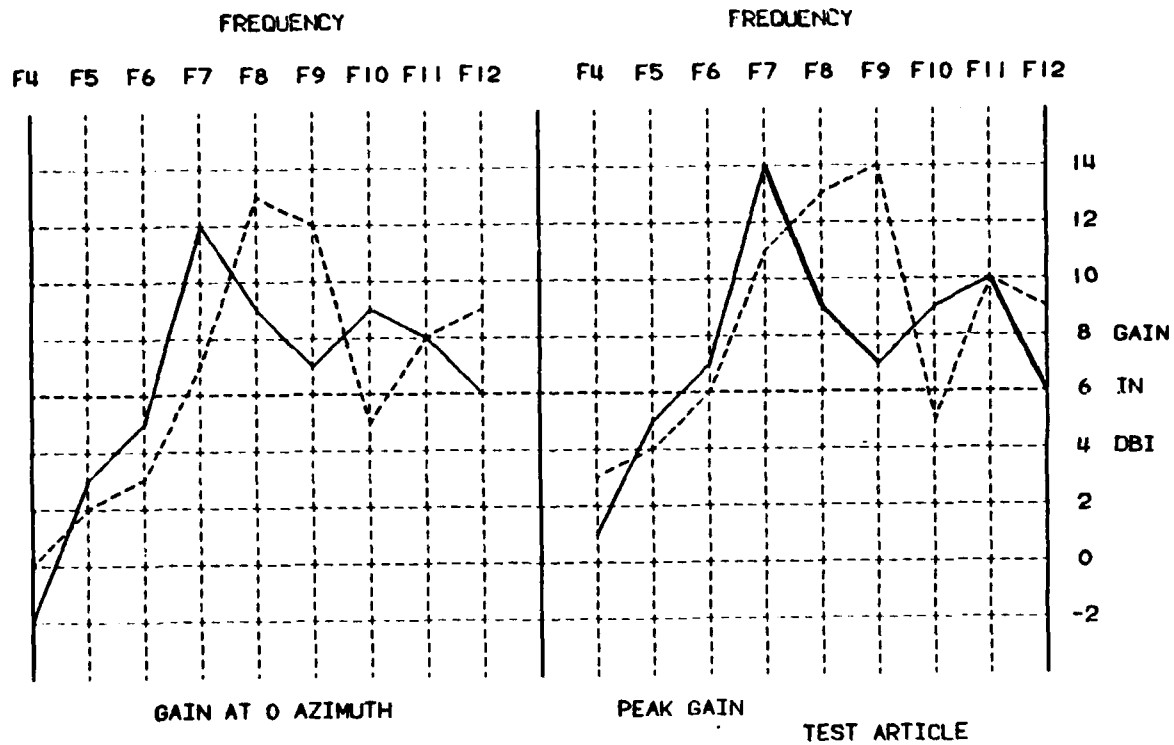
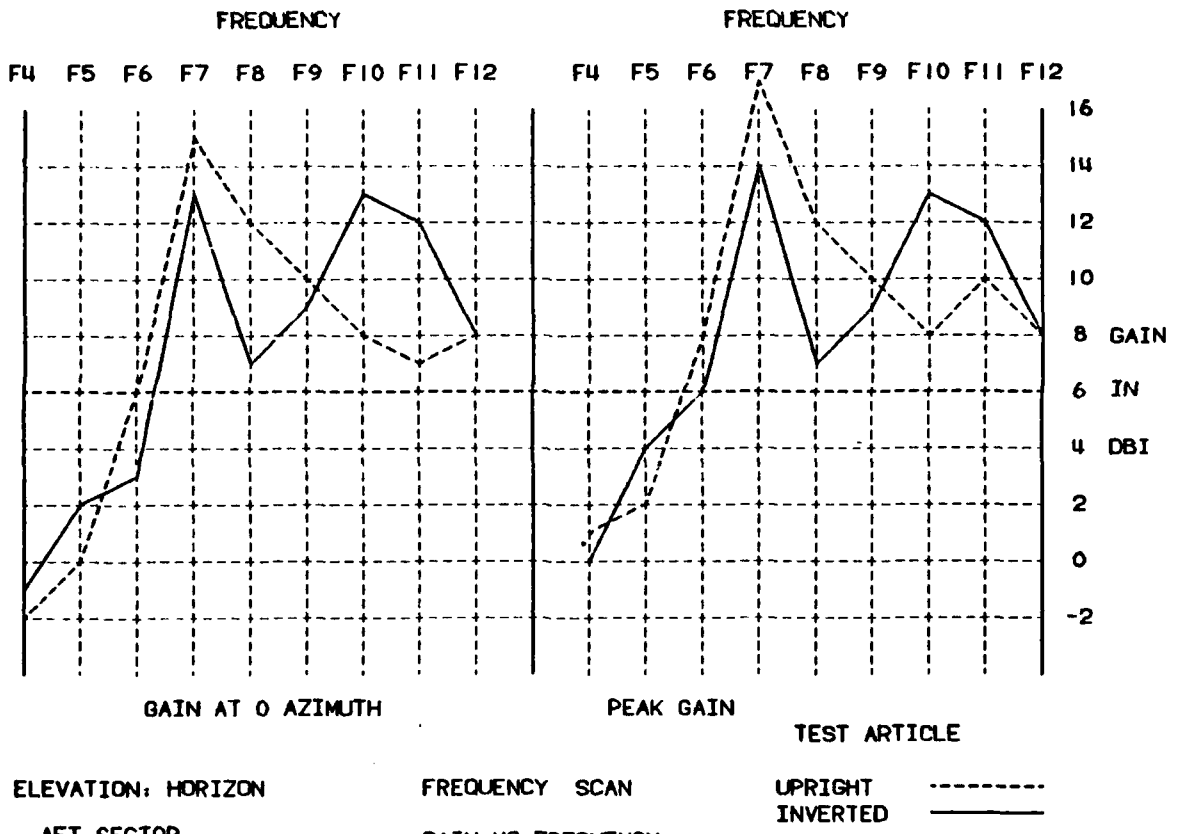

FREQUENCY
F4 F5 F6 F7 F8 F9 F10 F11 F12
FREQUENCY
F4 F5 F6 F7 F8 F9 F10 F11 F12
14
12
10
8 GAIN
6 IN
4 DBI
2
0
-2
GAIN AT 0 AZIMUTH
PEAK GAIN
TEST ARTICLE
UPRIGHT
INVERTED
ELEVATION: HORIZON
FWD SECTOR
FREQUENCY SCAN
GAIN VS FREQUENCY

FIGURE 37



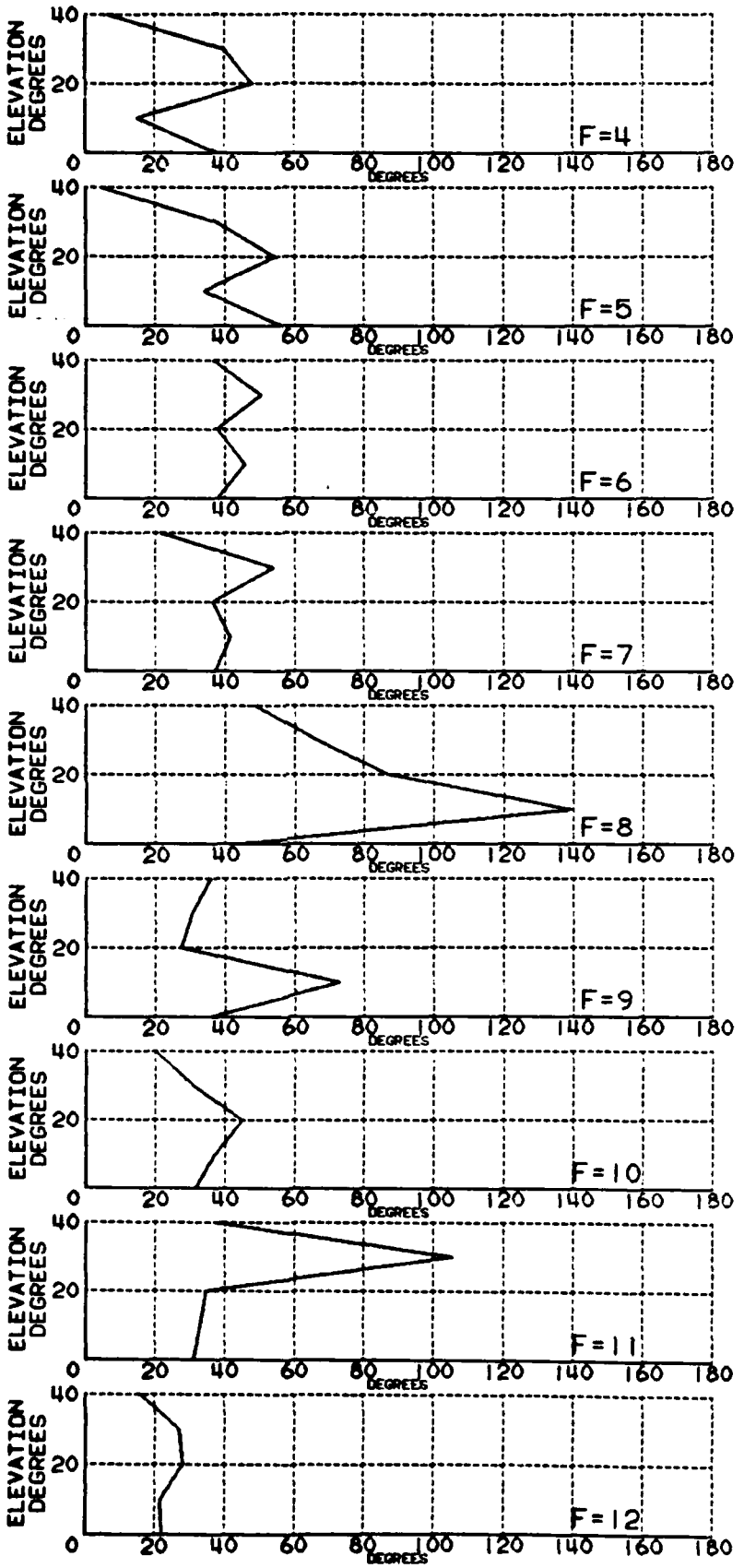
ELEVATION: HORIZON

AFT SECTOR

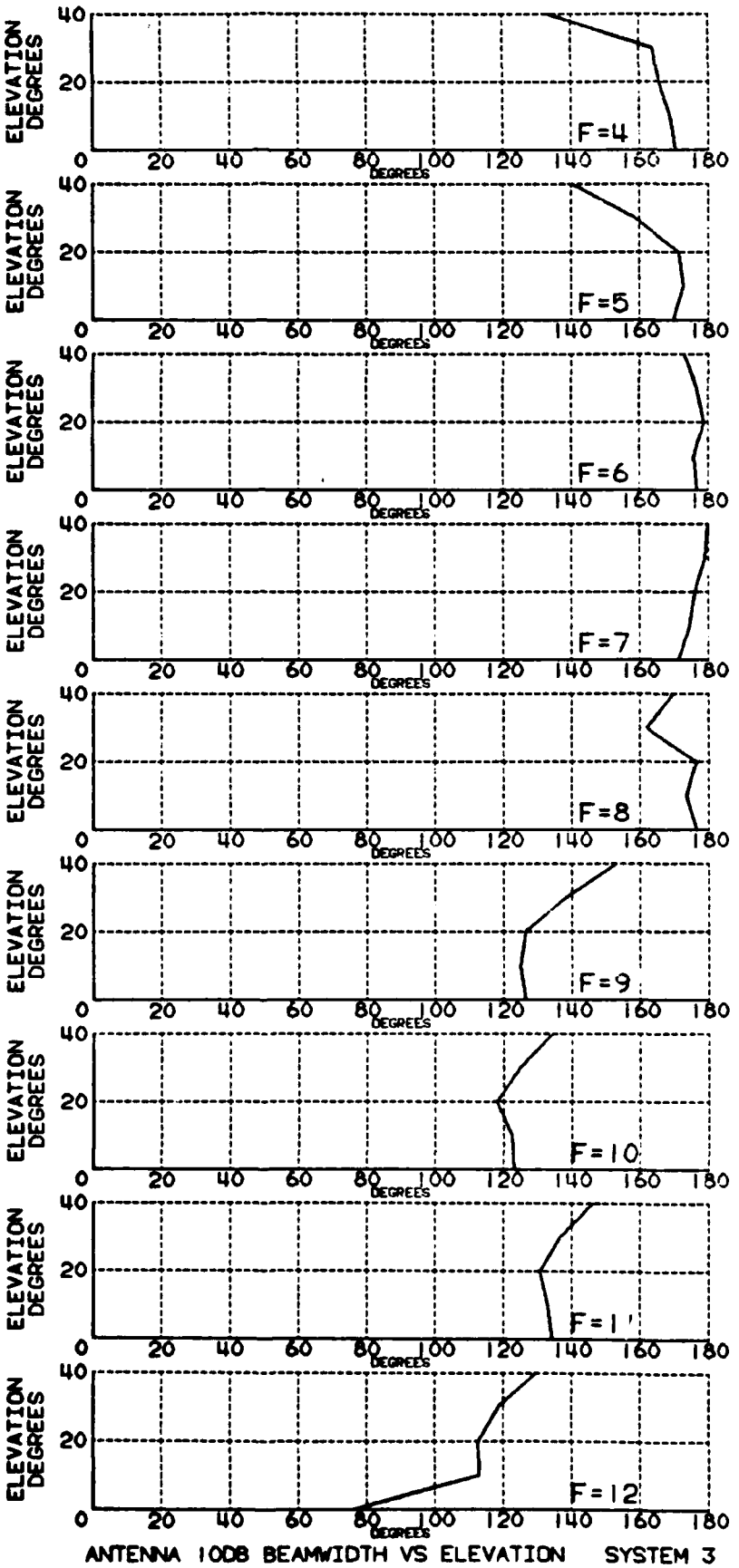
FREQUENCY SCAN

GAIN VS FREQUENCY

FIGURE 38

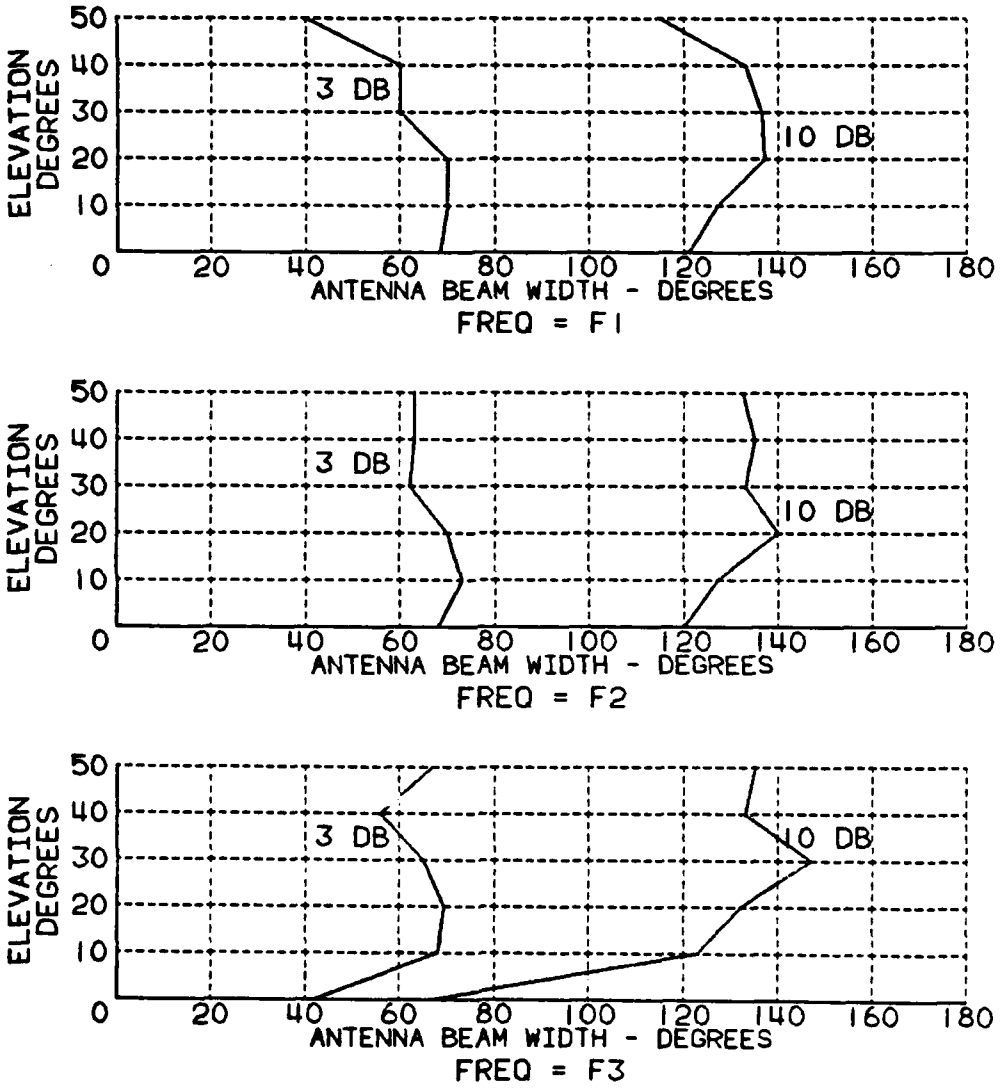


ANTENNA 3DB BEAMWIDTH VS ELEVATION SYSTEM 3
FIGURE 39



ANTENNA 10DB BEAMWIDTH VS ELEVATION SYSTEM 3

FIGURE 40



ANTENNA BEAM WIDTH VS ELEVATION
SYSTEM 2

FIGURE 41

WBDL Antenna Setting		Isolation	
Elev.	Azimuth		
0°	90° Right	103 dB	No Radome
0°	60° Right	97 dB	
0°	30° Right	103 dB	
0°	0°	97 dB	
0°	30° Left	89 dB	
0°	60° Left	92 dB	
0°	90° Left	90 dB	
+10°	0°	97 dB	
+10°	30° Left	98 dB	
+10°	60° Left	90 dB	
+10°	90° Left	98 dB	
-10°	0°	95 dB	No Radome
0°	0°	93 dB	Radome Installed

TABLE 1
ISOLATION MEASUREMENTS--
AFT ALQ-162 vs. AFT WBDL

WBDL Antenna Setting		Isolation in dB
Elev.	Azimuth	
0°	90° Right	109.7
+10°	90° Right	114.7
-10°	90° Right	119.7
+10°	90° Left	114.7
-10°	90° Left	114.7
0°	0°	114.7
-10°	0°	114.7

TABLE 2.
ISOLATION MEASUREMENTS--
FORWARD ALQ-162 vs. FORWARD WBDL
PRODUCTION ANTENNA AND RADOME

Weather Radar Antenna Setting		Isolation in dB
Elev.	Azimuth	
0°	0°	94.9
0°	30° Right	91.8
0°	30° Left	89.8
+15°	0°	95.8
+15°	30° Right	81.8
+15°	30° Left	87.8
-15°	0°	94.8
-15°	30° Right	94.8
-15°	30° Left	89.8

TABLE 3.
ISOLATION MEASUREMENTS—
WEATHER RADAR ANTENNA vs. FORWARD ALQ-162

Beechcraft

Beech Aircraft Corporation

Wichita, Kansas 67201
U. S. A.

CODE IDENT. NO. 70898

TEST PLAN

ALQ-156 AND ALQ-162 ANTENNA TEST FOR THE RC-12D

BEECH SPECIFICATION BS 23885
REVISION B

MODEL A200CT (RC-12D)

CONTRACT NO. DAAK50-83-C-0056
DATA SEQ. NO. A003

Prepared by George J. Martin
George J. Martin

APPROVED
J. C. Wilson, Manager -
Production Aircraft Engineering

DATE April 6, 1984

APPROVED
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Special Military Systems

APPROVED
K. D. Pittman, Sr. Project Engineer
Military Aircraft

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Beechcraft **Engineering Specification**

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1.0 INTRODUCTION

This test plan describes tests to be performed to determine the optimum location for the ALQ-156 and ALQ-162 system antennas on the Beech RC-12D airframe. Tests will be performed at the Fort Huachuca, Arizona Antenna Range under Beech supervision for the cognizant Army agency. The test data shall provide antenna response as described herein.

2.0 TEST EQUIPMENT

2.1 Fort Huachuca-Supplied. The use of the Fort Huachuca Antenna Range includes the following equipment:

a. Scientific-Atlanta 20/20 antenna test system.
b. Cables to carry signals between the test aircraft shell and the 20/20 system.
c. Standard gain horns as required for standardization in L-band and C- through KU-bands.
d. All TWT amplifiers.
e. All antennas mounted on the antenna sled.
f. RC-12D aircraft shell with wingtip pods.

2.2 Beech-Supplied. Beech will supply the following equipment:

a. AS-3554/ALQ-162(V) antennas.
b. ALQ-156 coffee-can antennas.
c. Assorted test cable.
d. Ancillary antennas and radomes as required (see Para. 3.5)
e. Hardware for mounting the antennas to the airframe, such as fasteners, fairings, etc.

3.0 CONFIGURATION

These antennas will be mounted on the aircraft shell as described below. For the ALQ-156 antennas, the left-hand unit only will be tested, and the right-hand unit will be assumed to be symmetrical.

3.1 ALQ-156 Forward Antennas. Two slightly different locations of this antenna may be tested. One is for a 3-piece fairing and the other is for a 1-piece fairing which will be tested only if the 3-piece fairing data is not acceptable.

3.1.1 The 3-piece fairing mounts the ALQ-156 antenna at BL 12.46, FS 31.65, and WL 107.67.

3.1.2 The 1-piece fairing mounts the ALQ-156 antenna at BL 6.47, FS 31.65, and WL 110 to the center of the antenna face.

3.2 ALQ-156 Aft Antennas. Mount the ALQ-156 coffee-can antennas near FS 422, WL 124, and LBL 17 per Figures 2.

3.3 ALQ-162 Forward Antenna. This antenna mounts near FS 27.72, WL 108.6 and BL 0.00 per Figures 1A and 1B.

3.4 ALQ-162 Aft Antenna. Mount the antenna on the aft end of the tail bullet. See Figure 3.

3.5 Ancillary Antennas. The following antennas may interact with the antennas under test.

a. Forward Wide Band Data Link (WBDL). See Figure 1A. An operational antenna and production radome is required.
b. Aft WBDL. See Figure 3. An operational antenna and a production radome is required.
c. Tail boom dipole antenna, with cables and hybrid. See Figure 3.
d. Weather radar antenna.
e. Glideslope antenna.

Antennas c. and e. are to be terminated in their characteristic impedence. Antennas d. and e. mount under the nose radome.

4.0 DATA RECORDING

Data shall be recorded on the 20/20 system as antenna patterns and test data for the antennas under test installed on the aircraft shell. Data shall be referenced to an isotropic antenna. Radiation distribution plots shall be produced as part of the data.

4.1 Elevation Cuts. Record patterns for 10° steps in elevation from -50° to +50° about the horizon as specified in Table 1. Make additional cuts to investigate pattern notches.

4.2 Frequencies. For the ALQ-156, record data at the system operating frequency. For the ALQ-162, record data at the same frequencies used previously on the APR-44 tests. The 20/20 system can record several frequencies simultaneously. Therefore, two additional frequencies in each horn frequency range may be recorded.

5.0 TEST SEQUENCE

Conduct antenna tests per the antenna test matrix, Table 1, and the following paragraphs. For any prominent nulls, investigate by taking elevation cuts 5° each side of the null.

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5.1 Aircraft Shell Inverted. Mount the aircraft shell on the tower in the inverted position. The two forward ALQ-156 locations and the forward ALQ-162 locations all represent less than 2 degrees of beam spread from the antenna sled on the arch. One location of the aircraft shell for all three tests will be acceptable.

5.1.1 Test the forward ALQ-156 antenna for the location described in para. 3.1.1 at the system frequency.

5.1.2 Test the forward ALQ-156 antenna for the location described in para. 3.1.2 at the system frequency if the data from step 5.1.1 is not acceptable.

5.1.3 Test the forward ALQ-162 antenna in three frequency bands.

5.1.4 Omitted.

5.1.5 Test the aft ALQ-156 antenna at the system test frequency.

5.1.6 Measure the coupling between the aft ALQ-156 antenna as a transmitter and the aft VHF dipole as a receiver. Measure received signal at the output of the antenna hybrid. See Figure 4.

5.1.7 Measure the coupling between the tail-boom mounted aft ALQ-162 antenna as a transmitter and the aft WBDL antenna as a receiver. Manually scan the WBDL antenna through ±100° in azimuth and ±10° in elevation to determine maximum coupling. Perform coupling measurement at this setting. See Figure 4.

5.1.8 Repeat paragraph 5.1.7 for the forward ALQ-162 antenna and the forward WBDL antenna.

5.1.9 Measure the coupling between the forward ALQ-162 antenna and the weather radar antenna at 9345 MHz. Manually scan the WBDL antenna through ±60° in azimuth and ±15° in elevation to determine maximum coupling. Perform coupling measurement at this setting. See Figure 4.

5.2 Horizontal Tail Bullet Antenna Test. With the aircraft shell still inverted, mount the ALQ-162 antenna in the tail bullet location. Reposition the aircraft shell to put this antenna in focus. Test the antenna in three frequency bands. Mounting this antenna in focus requires the following considerations. The AUT will be at WL 216. The top of the cabin is WL 146 with the tail over the edge of the tower, one or two additional tower sections (6') will be required. Tower support clearance for the nose will be approximately 37 feet, with approximately 42 1/2 feet required to clear the aircraft nose, with the radome removed. Therefore, a 6 foot offset from focus will be required for the AUT. This will keep the antenna under test fairly well in the 3dB points of the horn on the antenna sled. However, this will induce a hysteresis of ± 4.5° in the angular data recorded.

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5.3 Horizontal Tail Bullet Antenna Test (Upright). Turn the aircraft shell to the upright position. Mount it on the tower to put the ALQ-162 antenna mounted in the horizontal tail bullet in focus. This will require removal of the tower sections added in step 5.2 plus one other section. Test the AUT in three frequency bands.

5.4 Aircraft Shell Upright, Fuselage Focus. Position the aircraft shell, still upright, on the tower to put the nose antennas in focus. This will require adding one tower section.

5.4.1 Test the forward ALQ-156 antenna for the location described in para. 3.1.1 at the test frequency.

5.4.2 Test the forward ALQ-156 antenna for the location described in para. 3.1.2 at the test frequency if the data from step 5.4.1 is not acceptable.

5.4.3 Test the forward ALQ-162 antenna in three frequency bands.

5.4.4 Omitted.

5.4.5 Test the aft ALQ-156 antenna at the system test frequency.

6.0 TEST DATA

At the conclusion, Beech Aircraft Engineering shall be provided with a printout of data in a tabular form, an antenna pattern for all tests performed, and radiation distribution plots marked with a code number representing a log entry that lists the following data:

Frequency code
Elevation cut
Antenna and location
Model designation.

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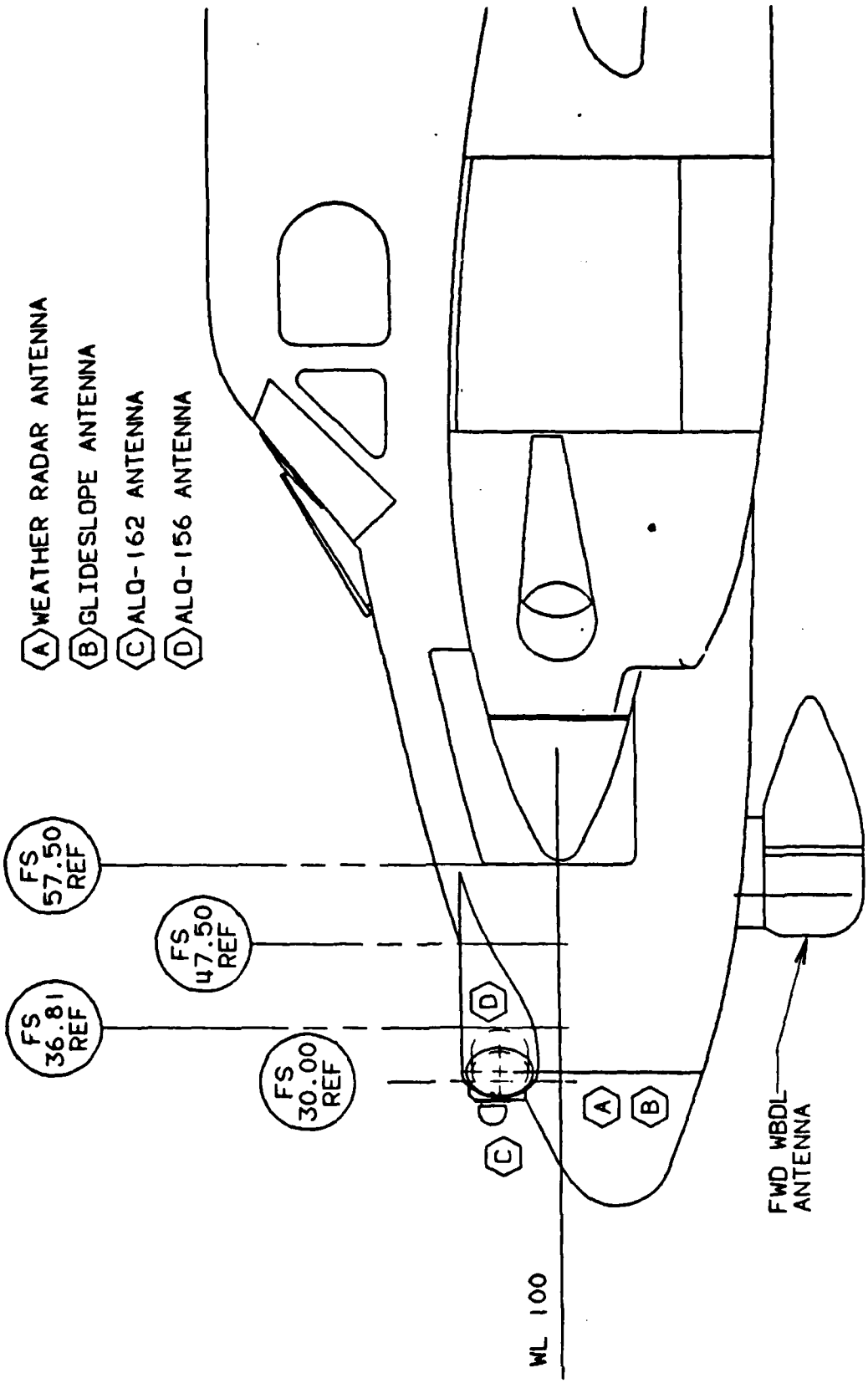

FIGURE 1A
FWD MOUNTED ANTENNAS

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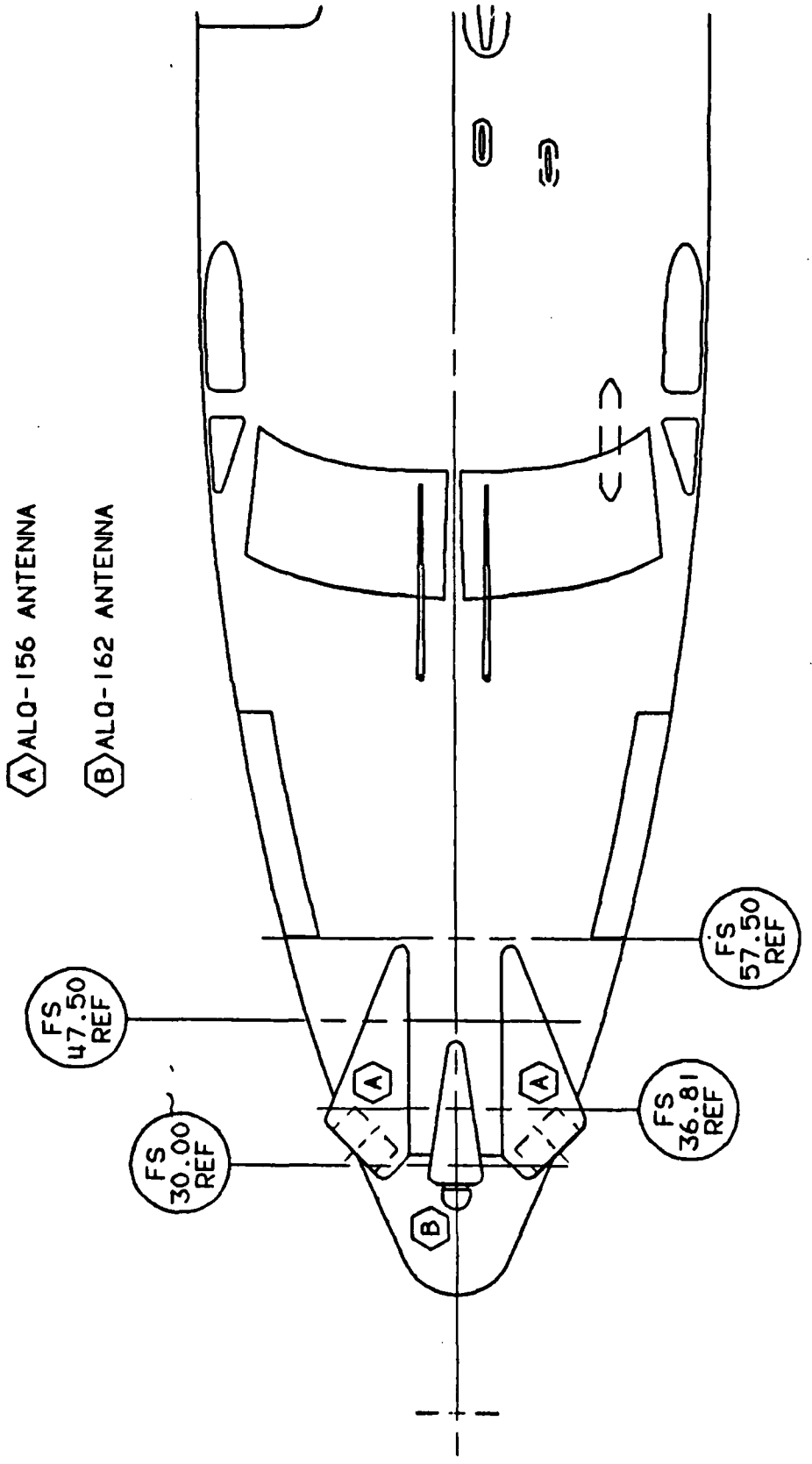


FIGURE 1B
FWD MOUNTED ANTENNAS

"THIS SHEET INTENTIONALLY LEFT BLANK"

Beechcraft **Engineering Specification**

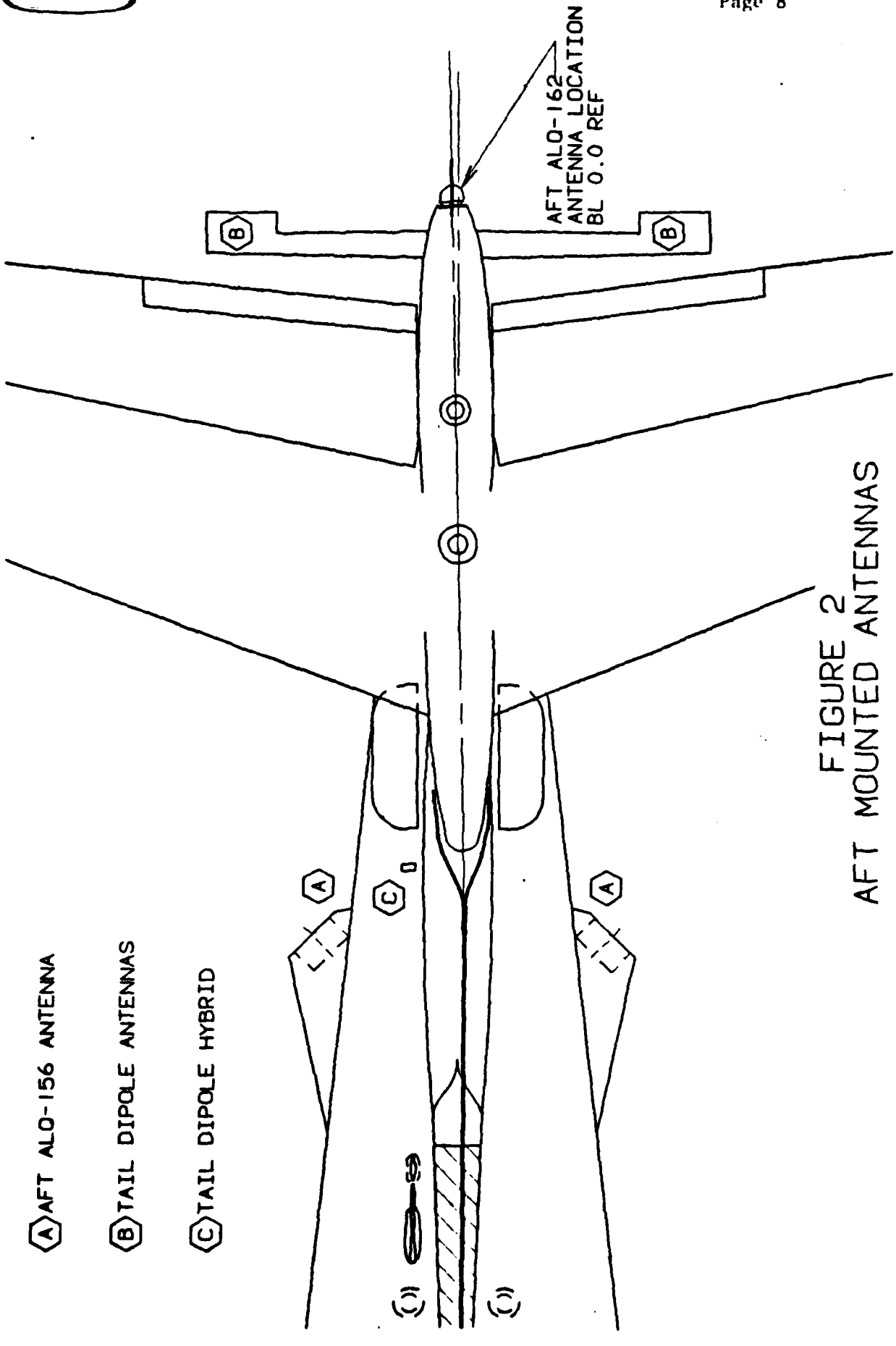
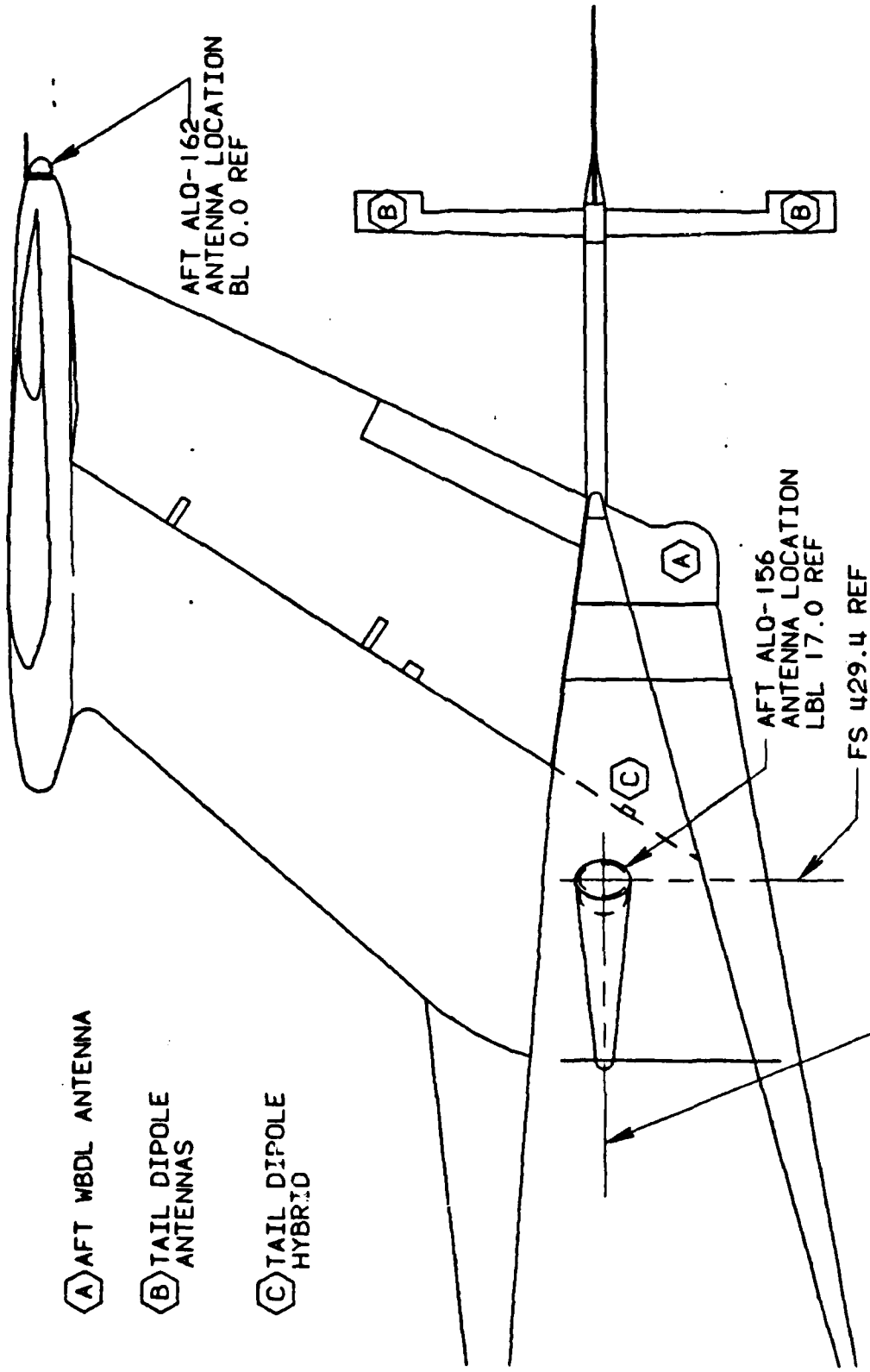
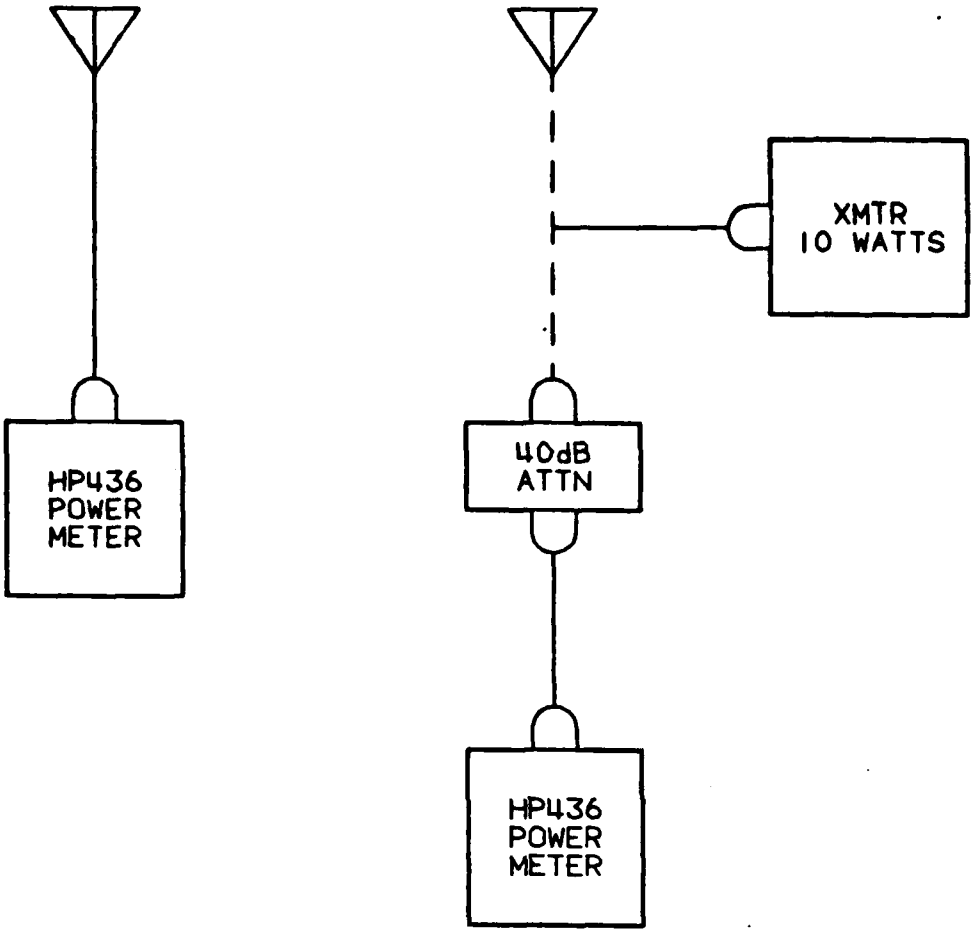


FIGURE 2
AFT MOUNTED ANTENNAS



AFT ALQ-162 ANTENNA-
TAIL BULLET LOCATION
FIGURE 3



1. CONNECT HP436 POWER METER THRU 40dB ATTENUATION TO TRANSMITTER. TRANSMITTED POWER IS NOMINALLY 10 WATTS (+40 dBm). READ TRANSMITTED POWER.

2. CONNECT TRANSMITTER TO TRANSMITTING ANTENNA.

3. CONNECT HP436 POWER METER TO RECEIVING ANTENNA.

4. READ POWER AT RECEIVING ANTENNA.

5. ISOLATION WILL BE POWER TRANSMITTED PLUS RECEIVE CABLE LOSS, LESS RECEIVED POWER AND TRANSMIT CABLE LOSS.

FIGURE 4
ANTENNA ISOLATION
MEASUREMENT

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PARA	A.U.T.	ELEVATION																			
		+50		+40		+30		+20		+10		HOR		-10		-20		-30		-40		-50
5.4.5	ALQ-156 AFT													X		X		X		X		X
5.4.3	ALQ-162 FWD													X		X		X		X		
5.4.2	ALQ-156 FWD													X		X		X		X		X
5.4.1	ALQ-156 FWD													X		X		X		X		X
5.3	ALQ-162 TAIL BULLET													X		X		X		X		
5.2	ALQ-162 TAIL BULLET			X		X		X		X		X										
5.1.9	ISOLATION											X										
5.1.8	ISOLATION											X										
5.1.7	ISOLATION											X										
5.1.6	ISOLATION											X										
5.1.5	ALQ-156 AFT	X		X		X		X		X		X										
5.1.3	ALQ-162 FWD			X		X		X		X		X										
5.1.2	ALQ-156 FWD	X		X		X		X		X		X										
5.1.1	ALQ-156 FWD	X		X		X		X		X		X										
		+50		+40		+30		+20		+10		HOR		-10		-20		-30		-40		-50

TABLE I -- TEST MATRIX

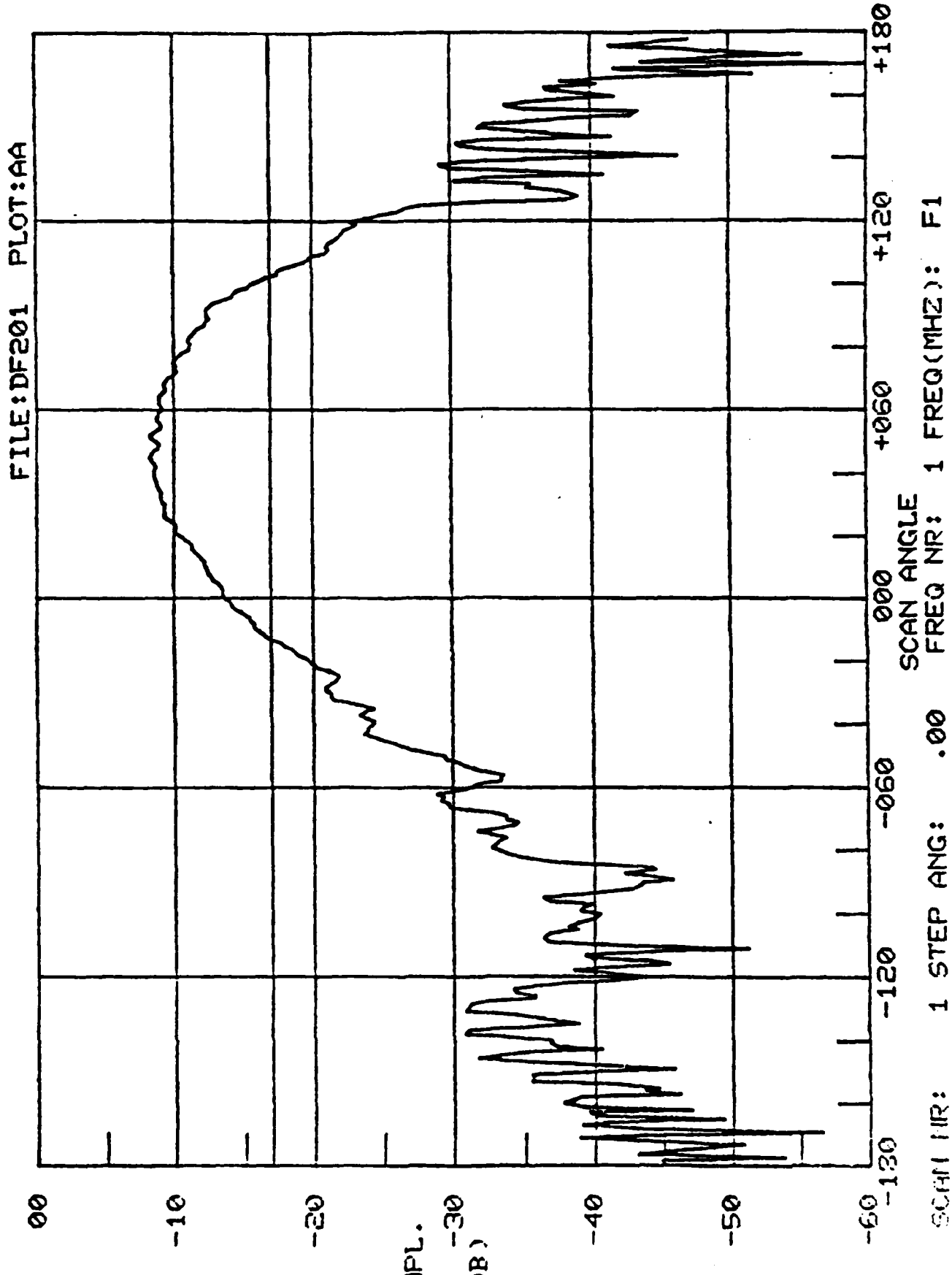
Appendix 2 contains AN/ALQ-156 antenna patterns as recorded by the 20/20 system during test. They are in rectangular plot format. These patterns cover frequencies F1, F2, and F3 and elevations of +50° through -50° for both the forward and aft antennas. They are arranged as follows:

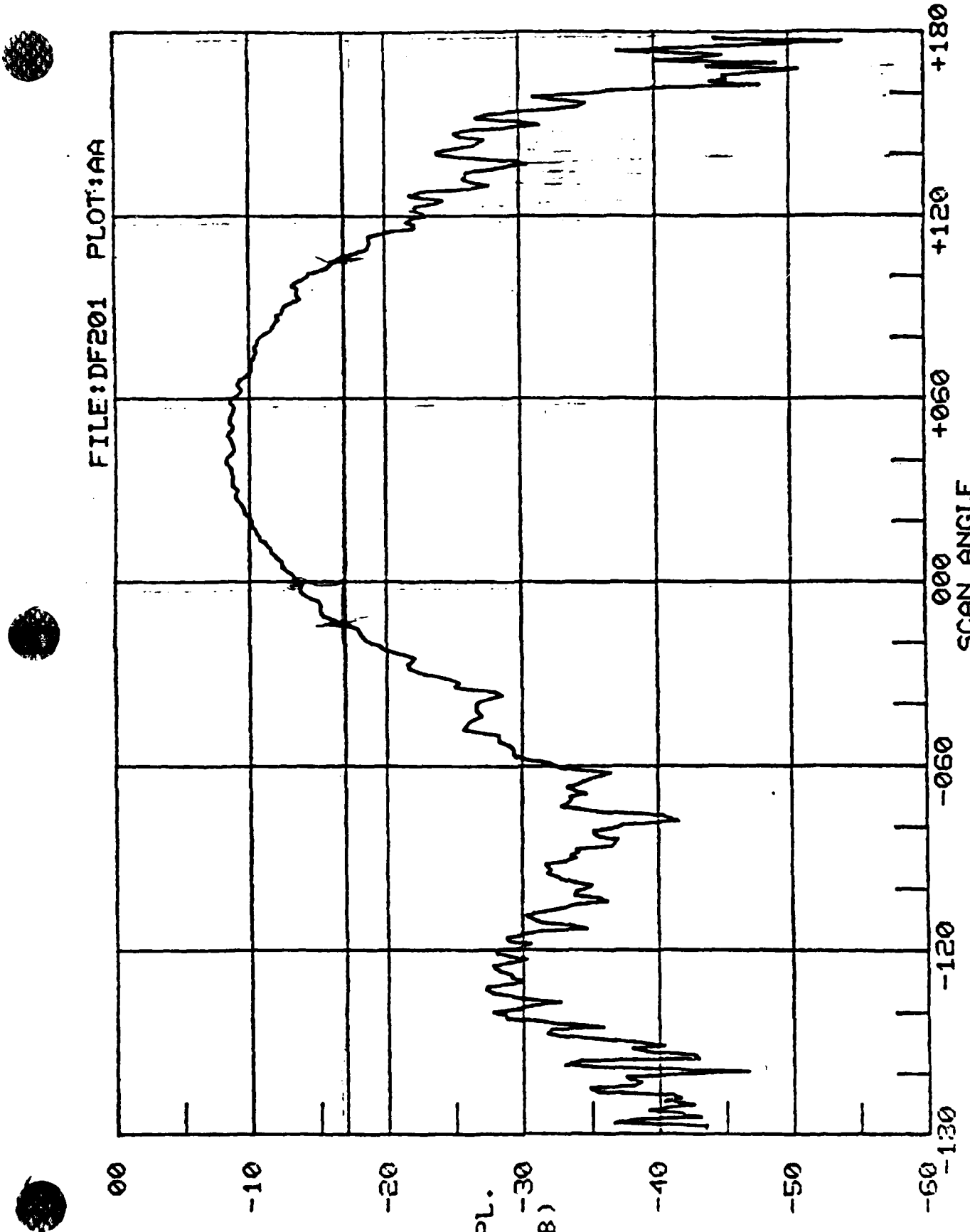
DF201 -- Forward antenna, upper hemisphere

DF225 -- Forward antenna, lower hemisphere

DF210 -- Aft antenna, upper hemisphere

DF224 -- Aft antenna, lower hemisphere.


FILE:DF201 PLOT:AA
00
-10
-20
-30
-40
-50
-60
AMPL.
(DB)
-180
-120
-060
000
+060
+120
+180
SCAN ANGLE
SCAN NR: 1 STEP ANG: .00 FREQ NR: 1 FREQ(MHZ): F1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00
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(DB)
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000
+060
+120
+180
SCAN ANGLE
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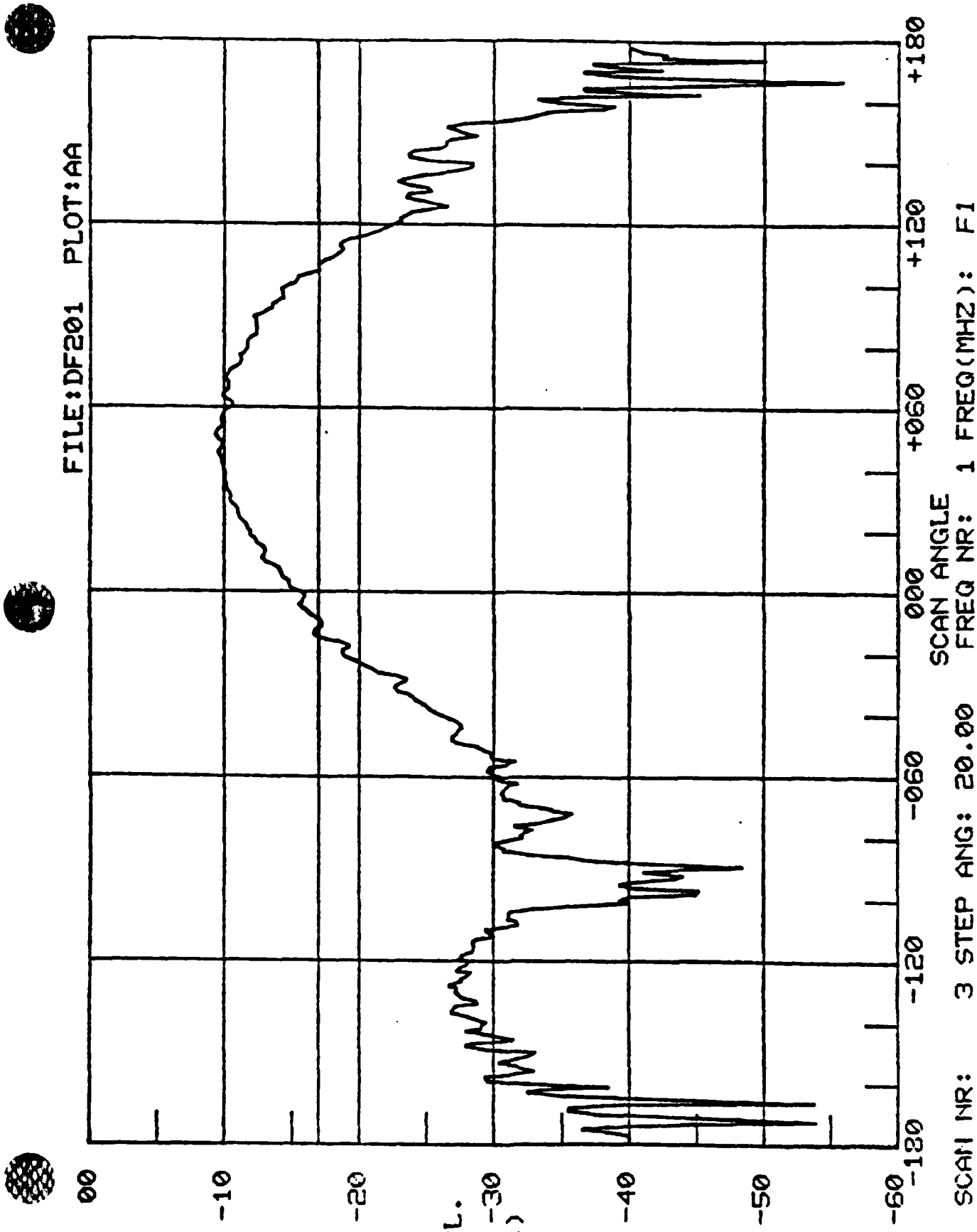
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SCAN ANGLE
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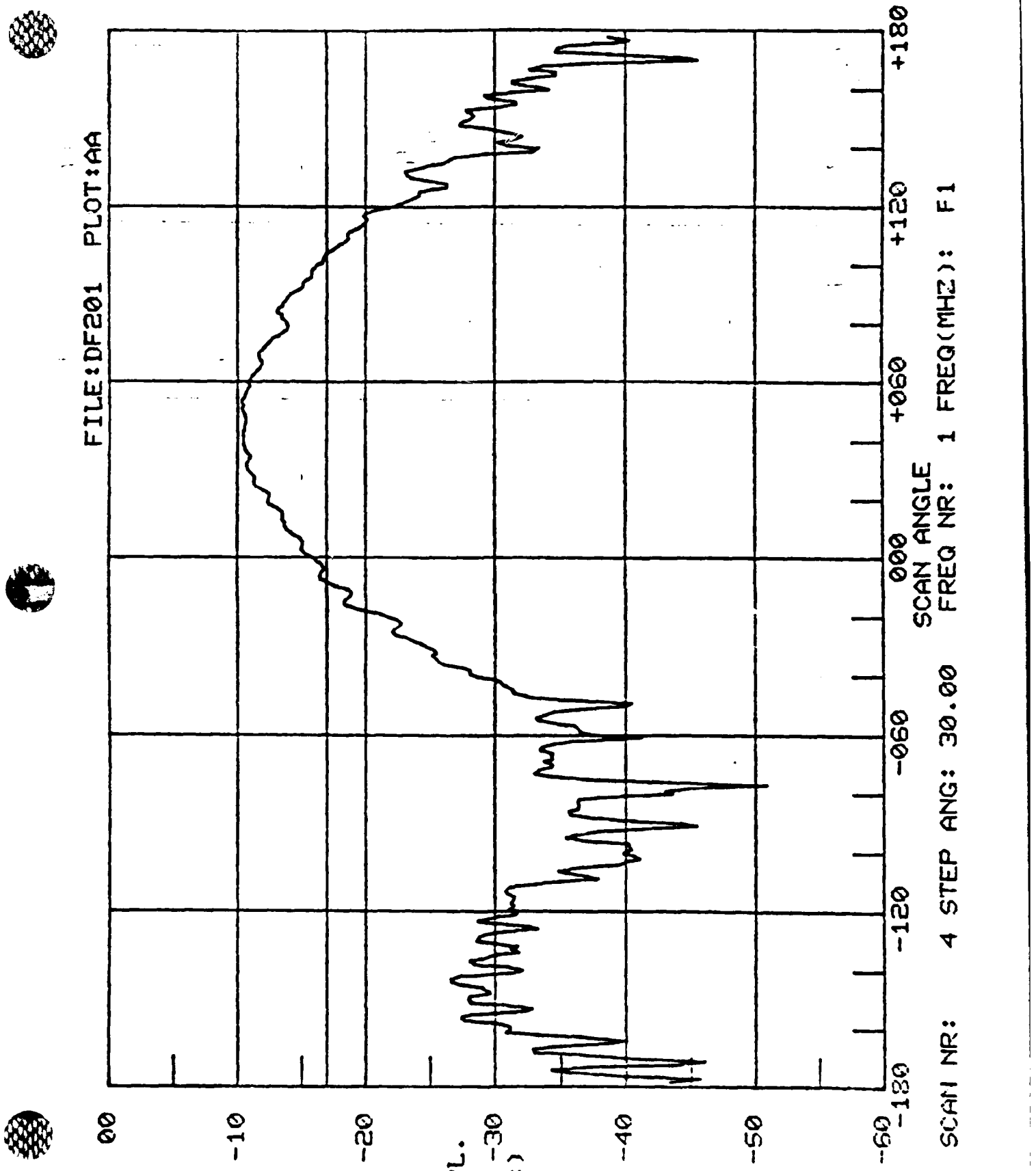
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+180
SCAN ANGLE
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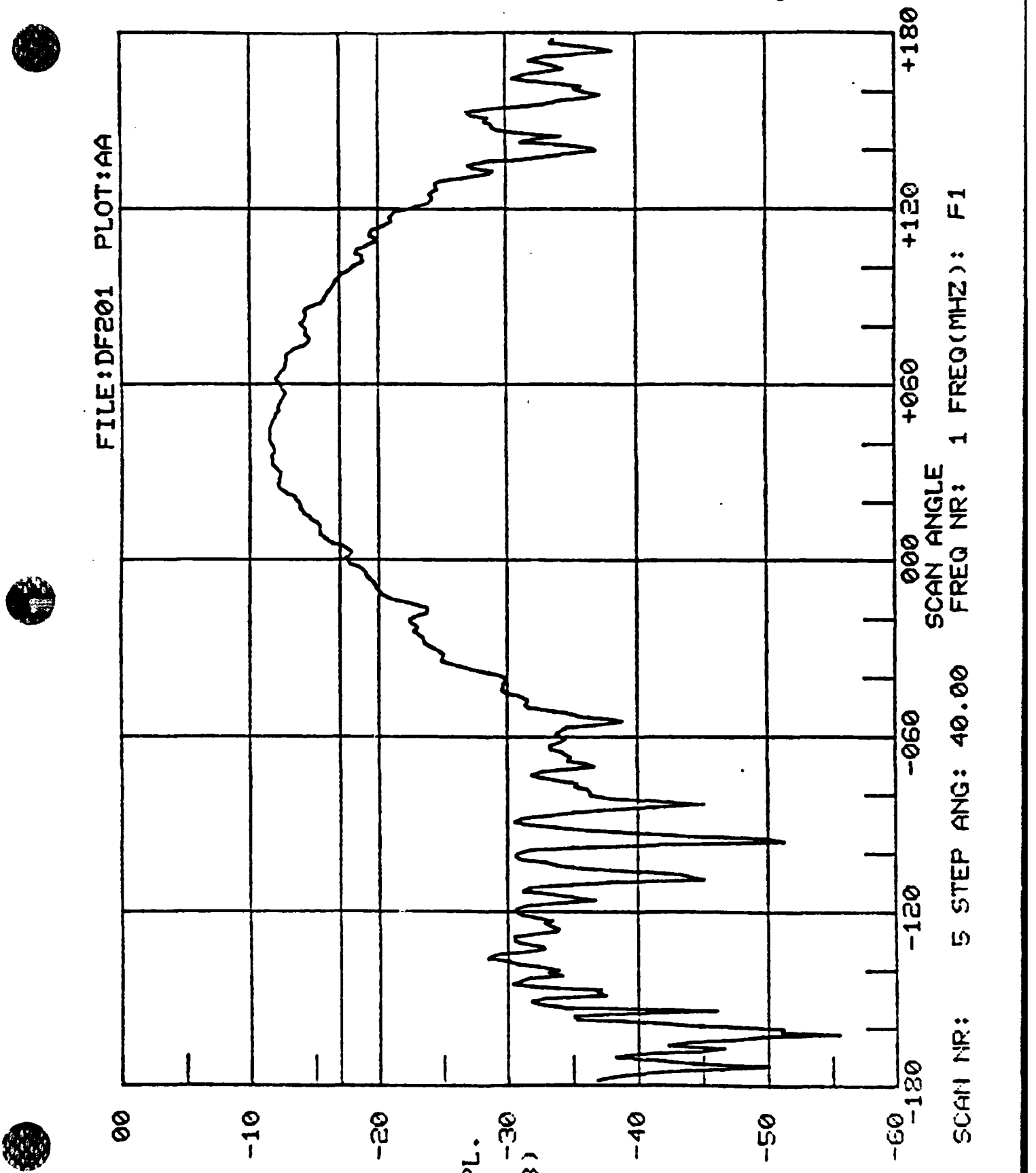
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SCAN ANGLE
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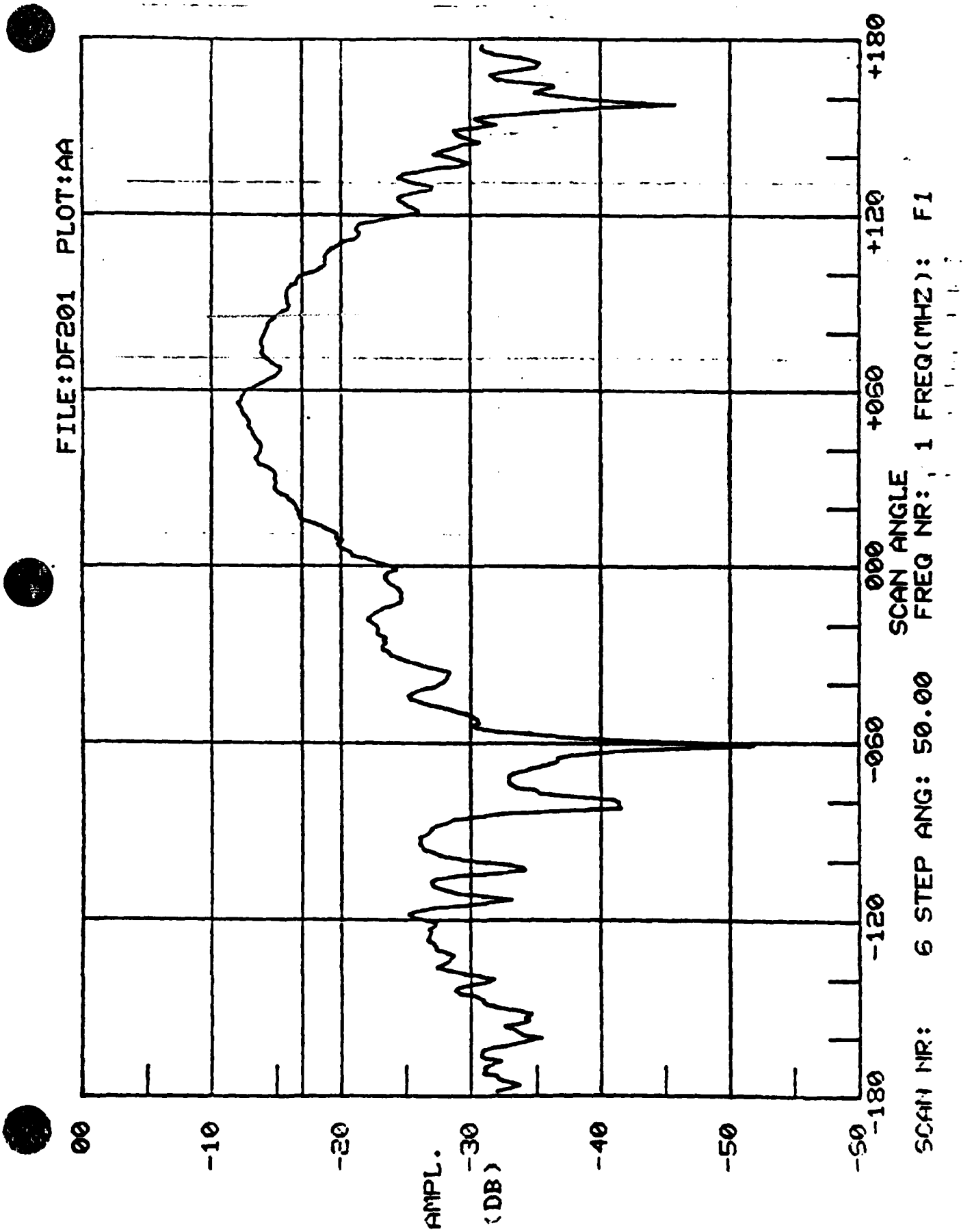
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SCAN ANGLE
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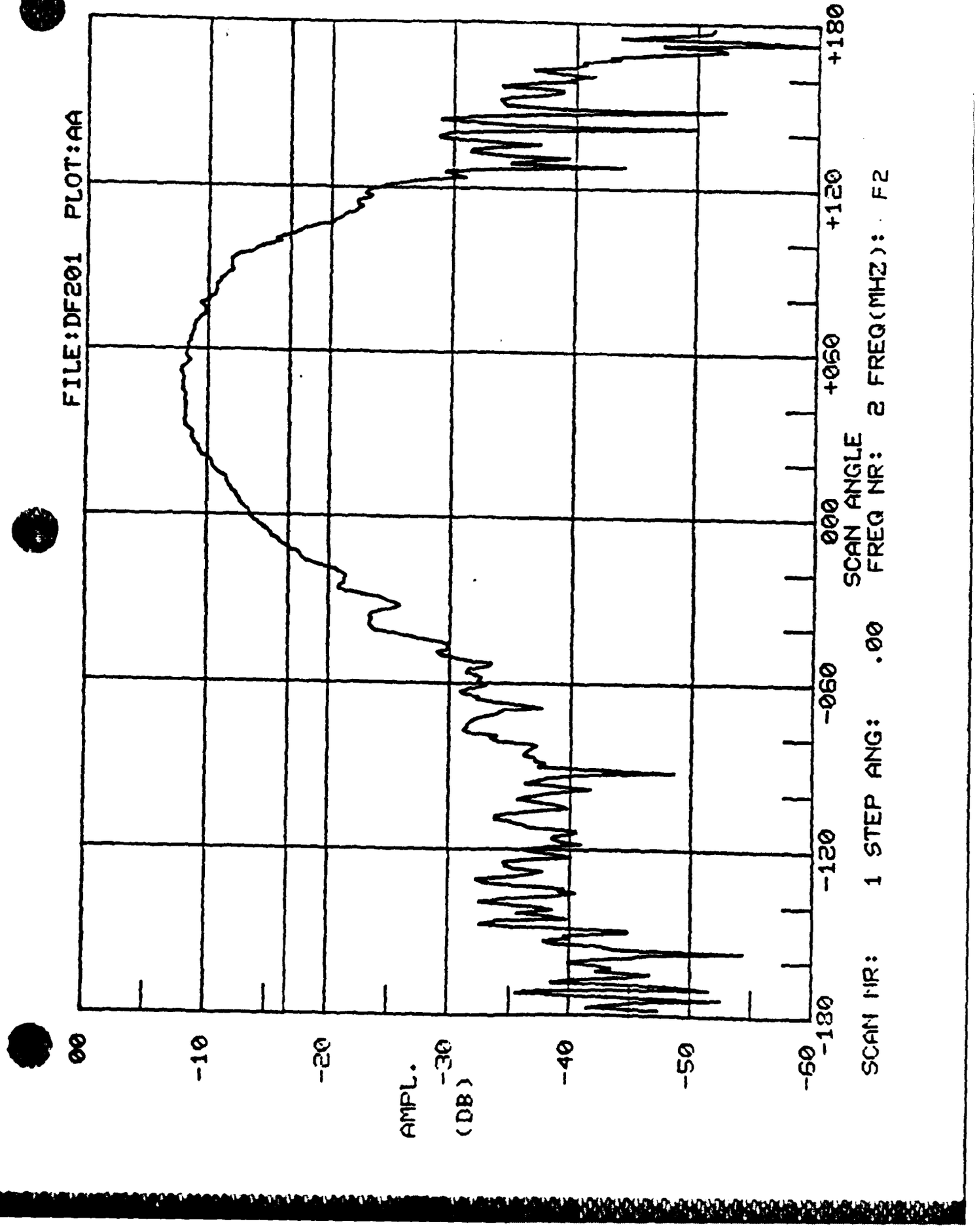
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(DB)
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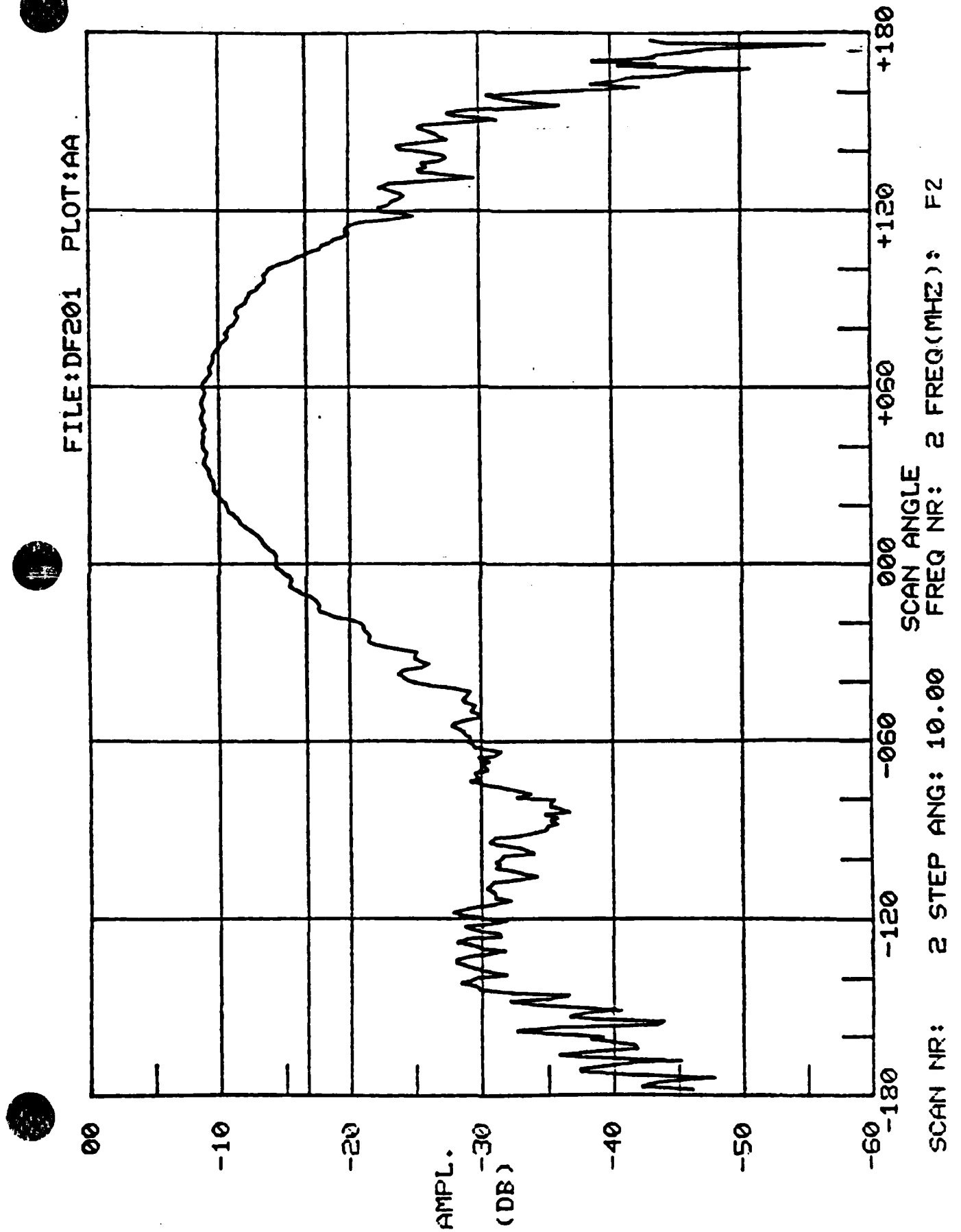
SCAN ANGLE
SCAN NR: 1 STEP ANG: .00 FREQ NR: 2 FREQ(MHZ): F2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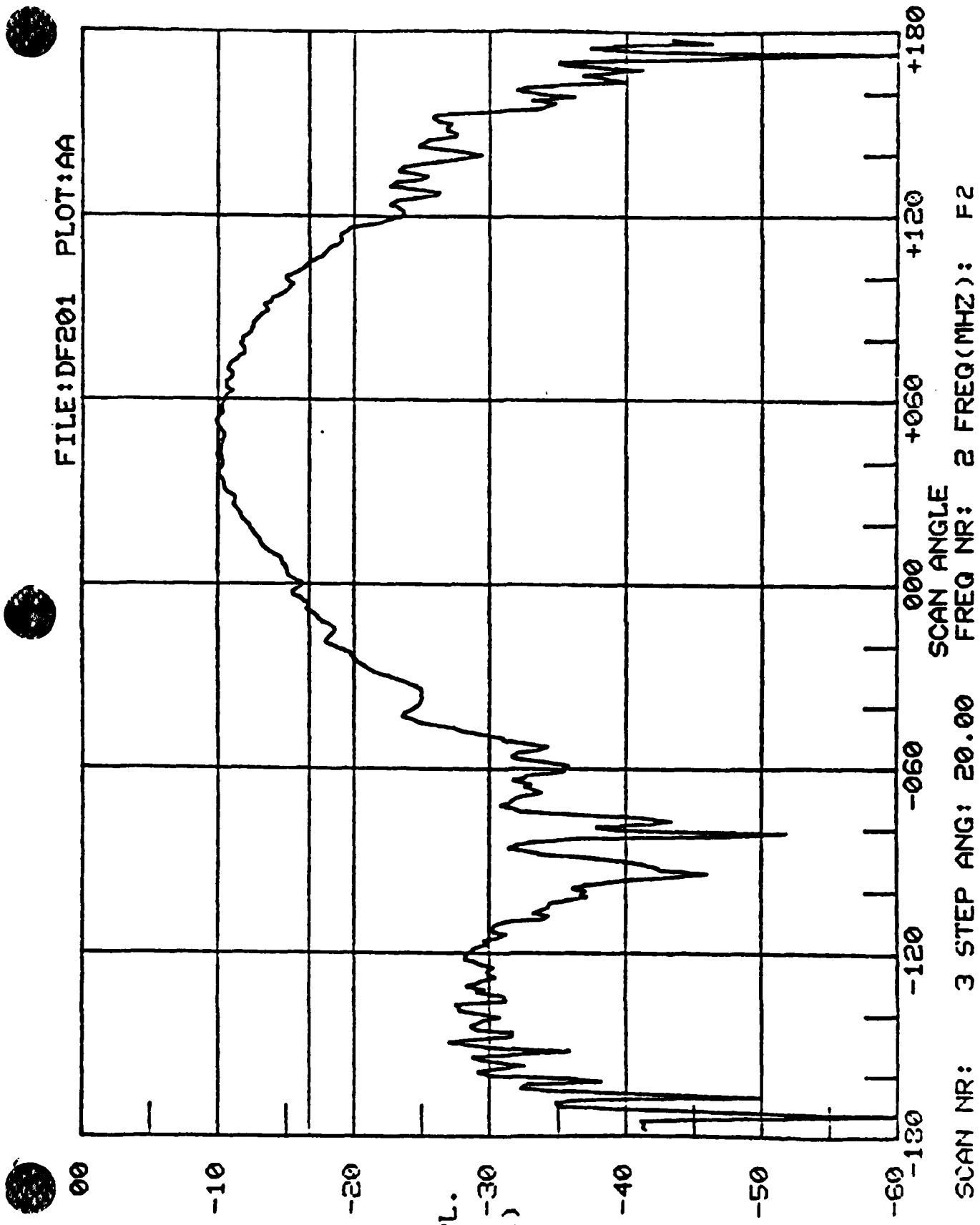
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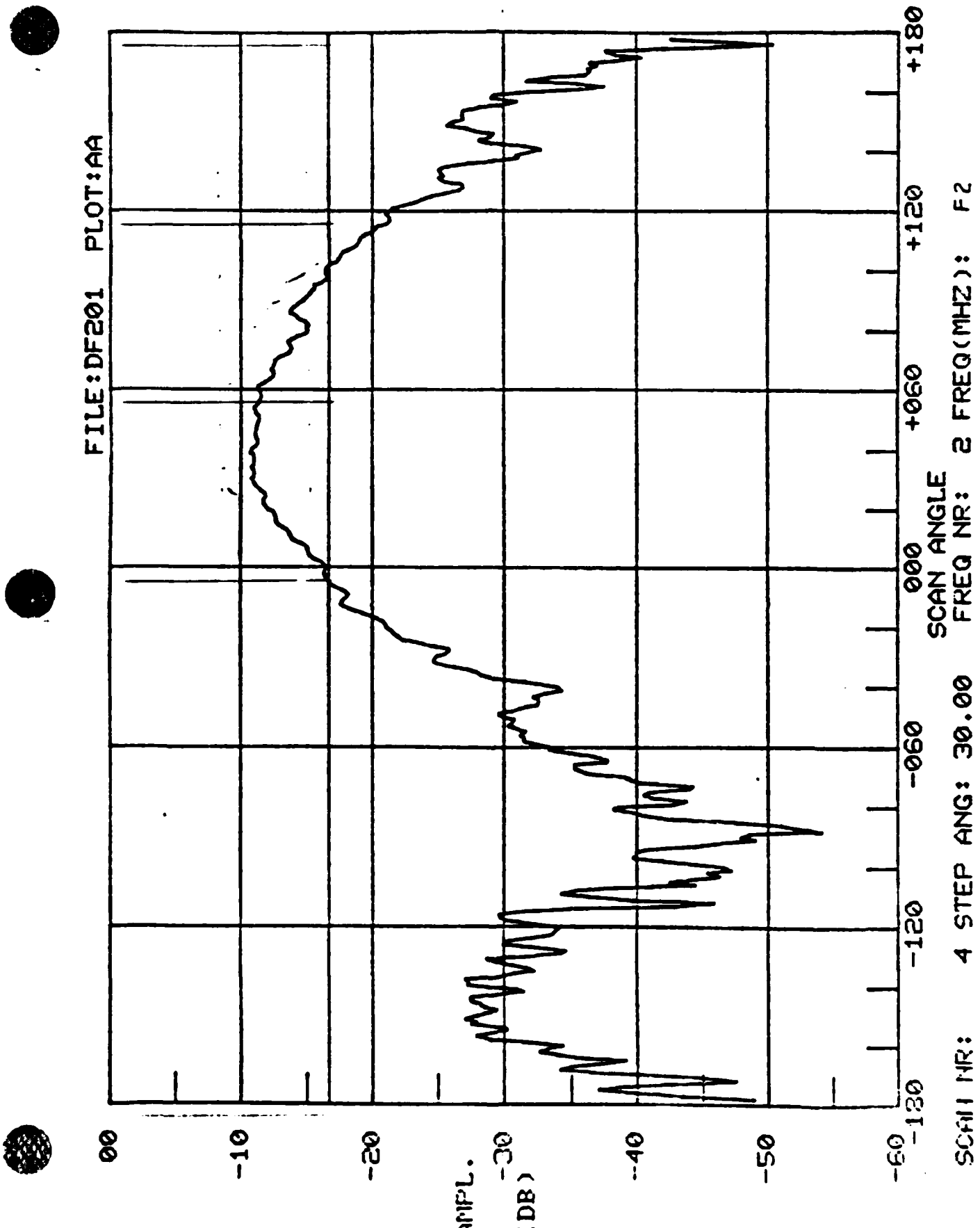
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(DB)
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000
+060
+120
+180
SCAN ANGLE
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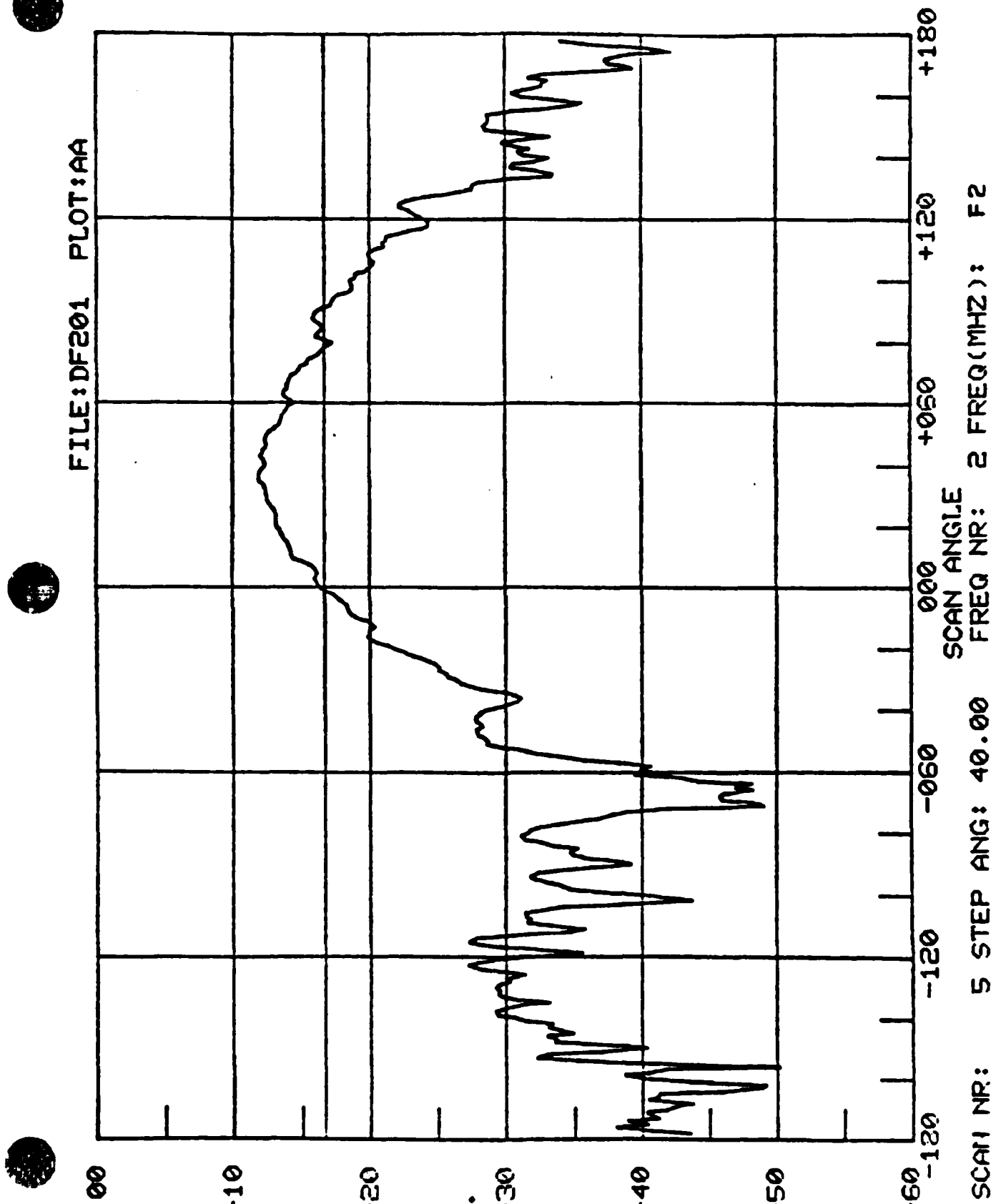
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AMPL.
(DB)
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000
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+120
+180
SCAN ANGLE
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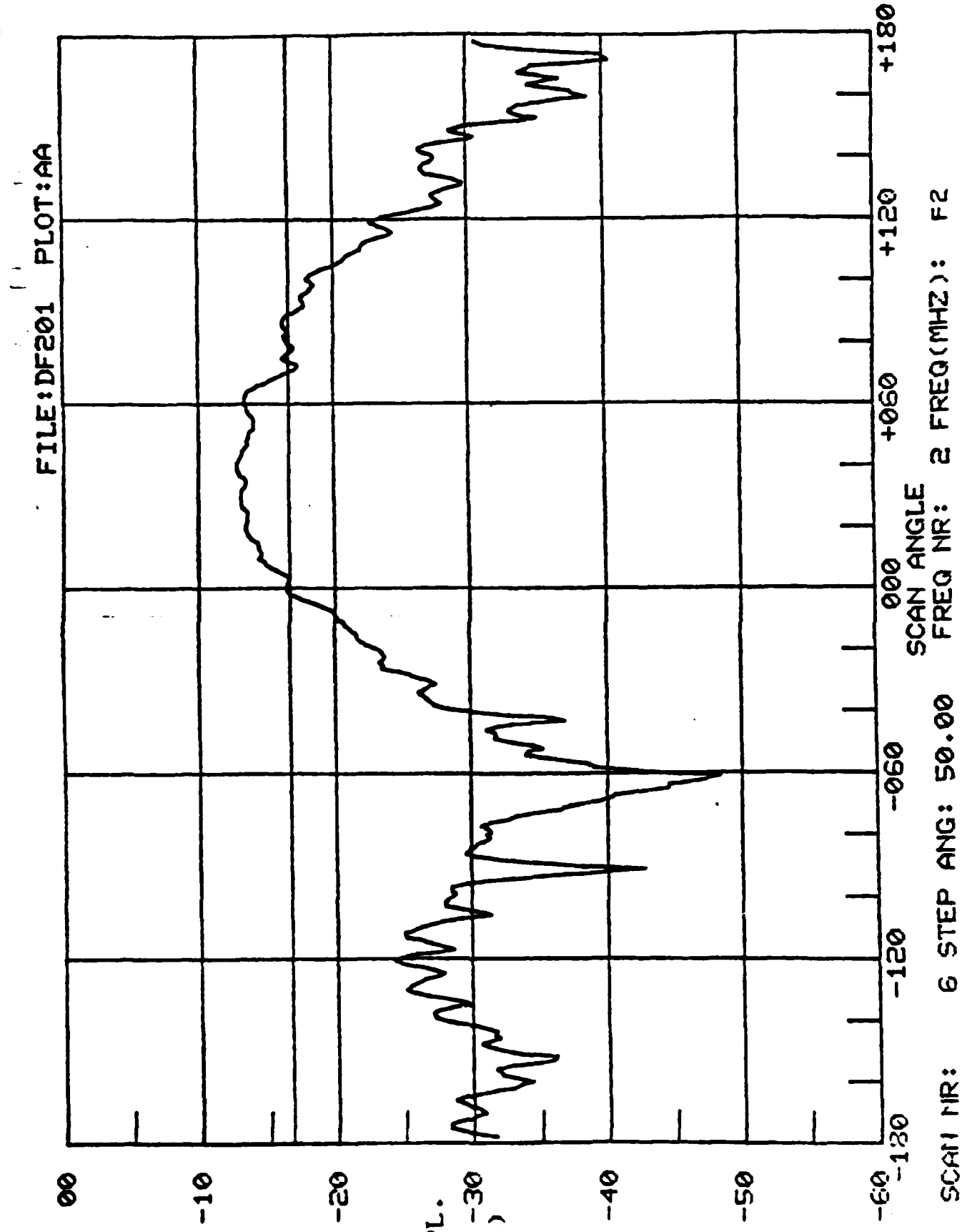
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000
+060
+120
+180
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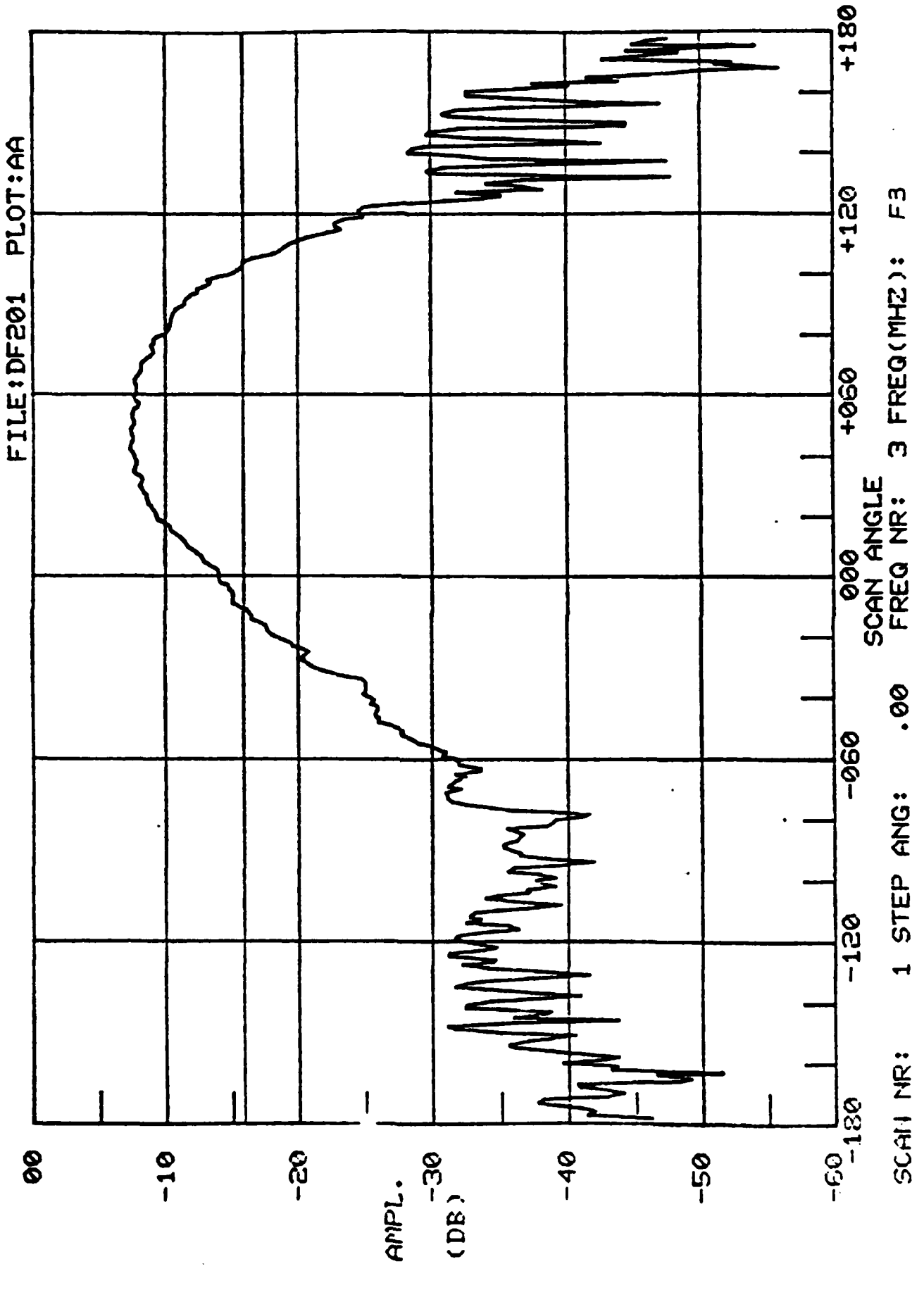
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-60
AMPL.
(DB)
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000
+060
+120
+180
SCAN ANGLE
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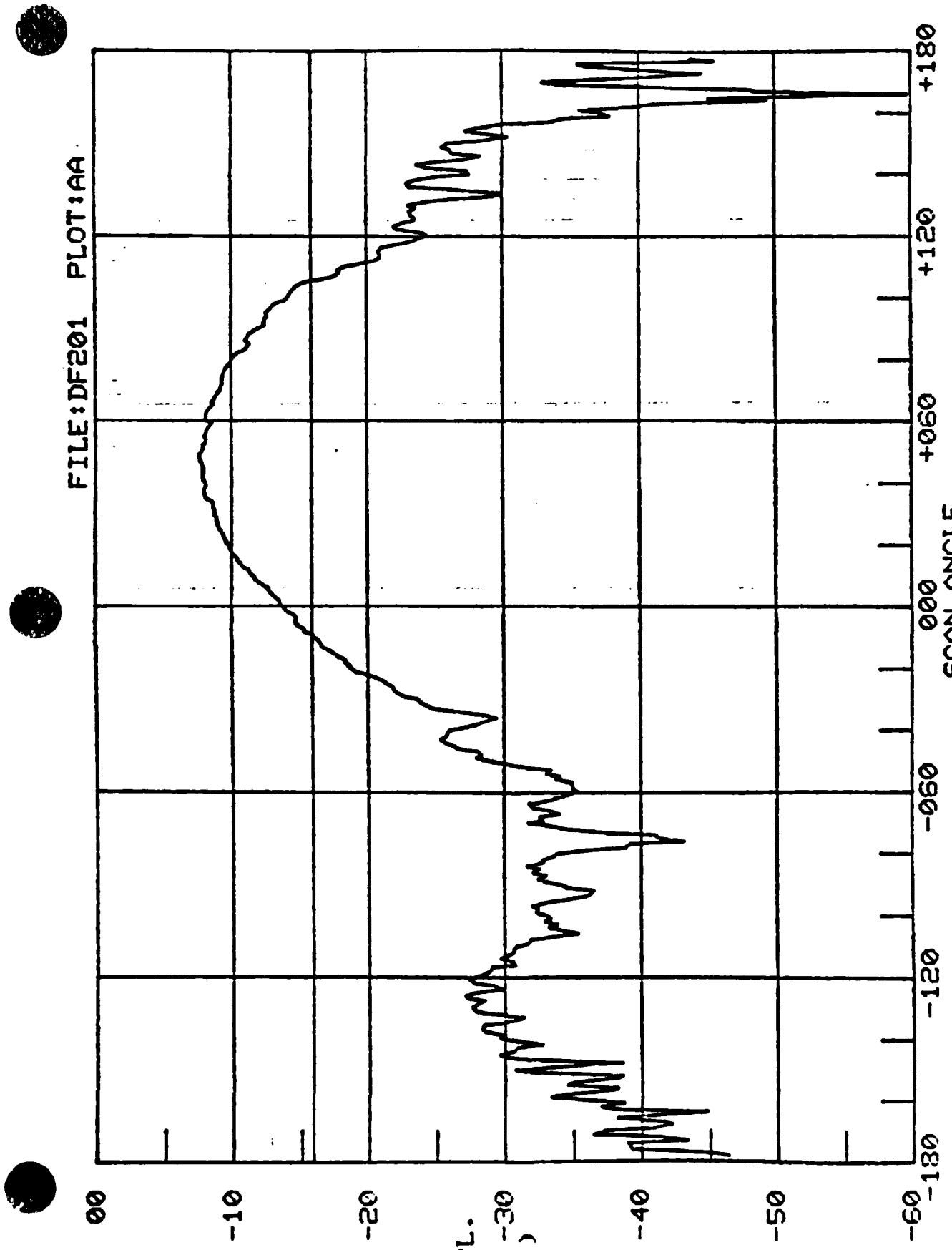
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-60
AMPL.
(DB)
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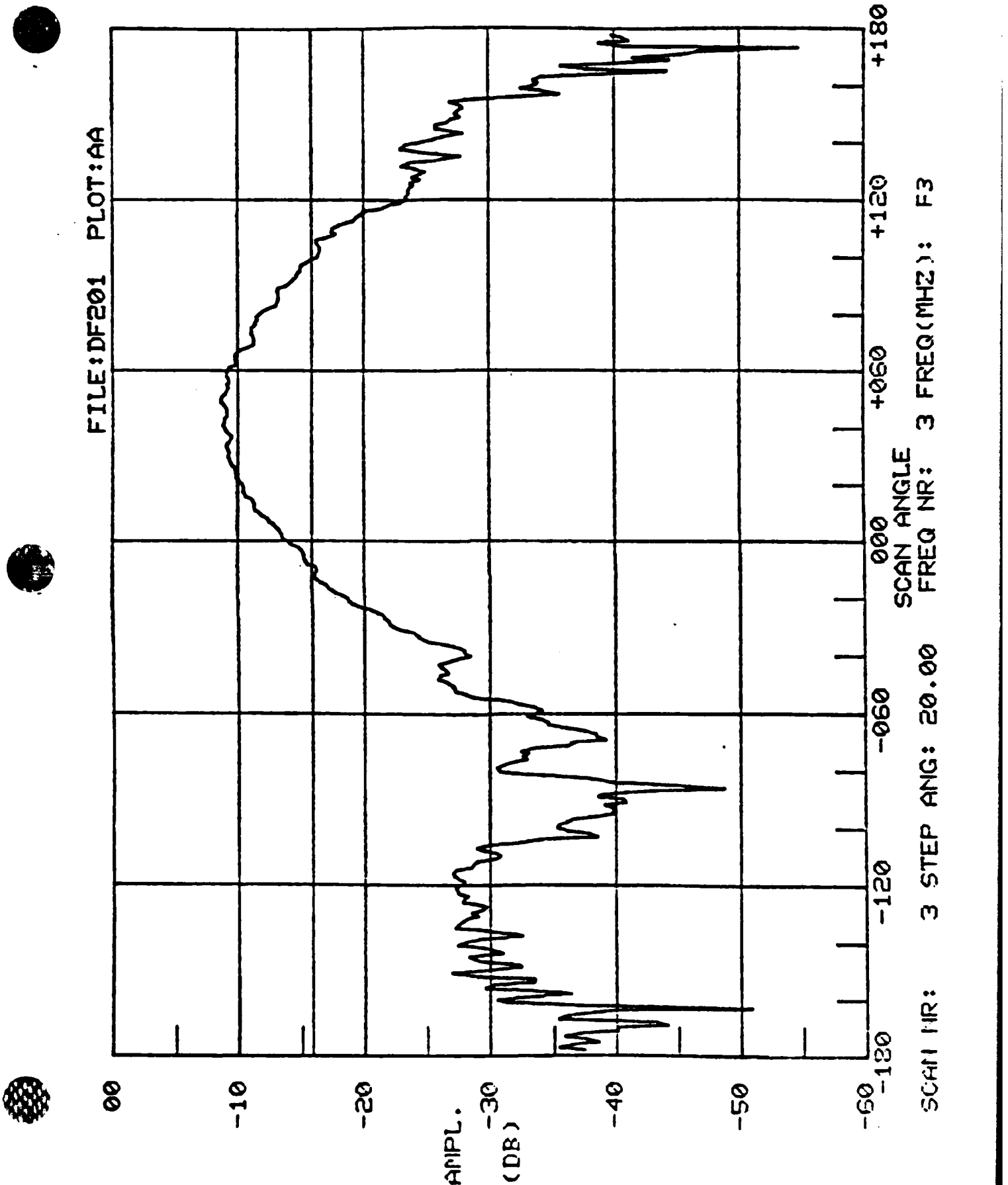
000
+060
+120
+180
SCAN ANGLE
SCAN NR: 2 STEP ANG: 10.00 FREQ NR: 3 FREQ(MHZ): F3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AMPL.
(DB)
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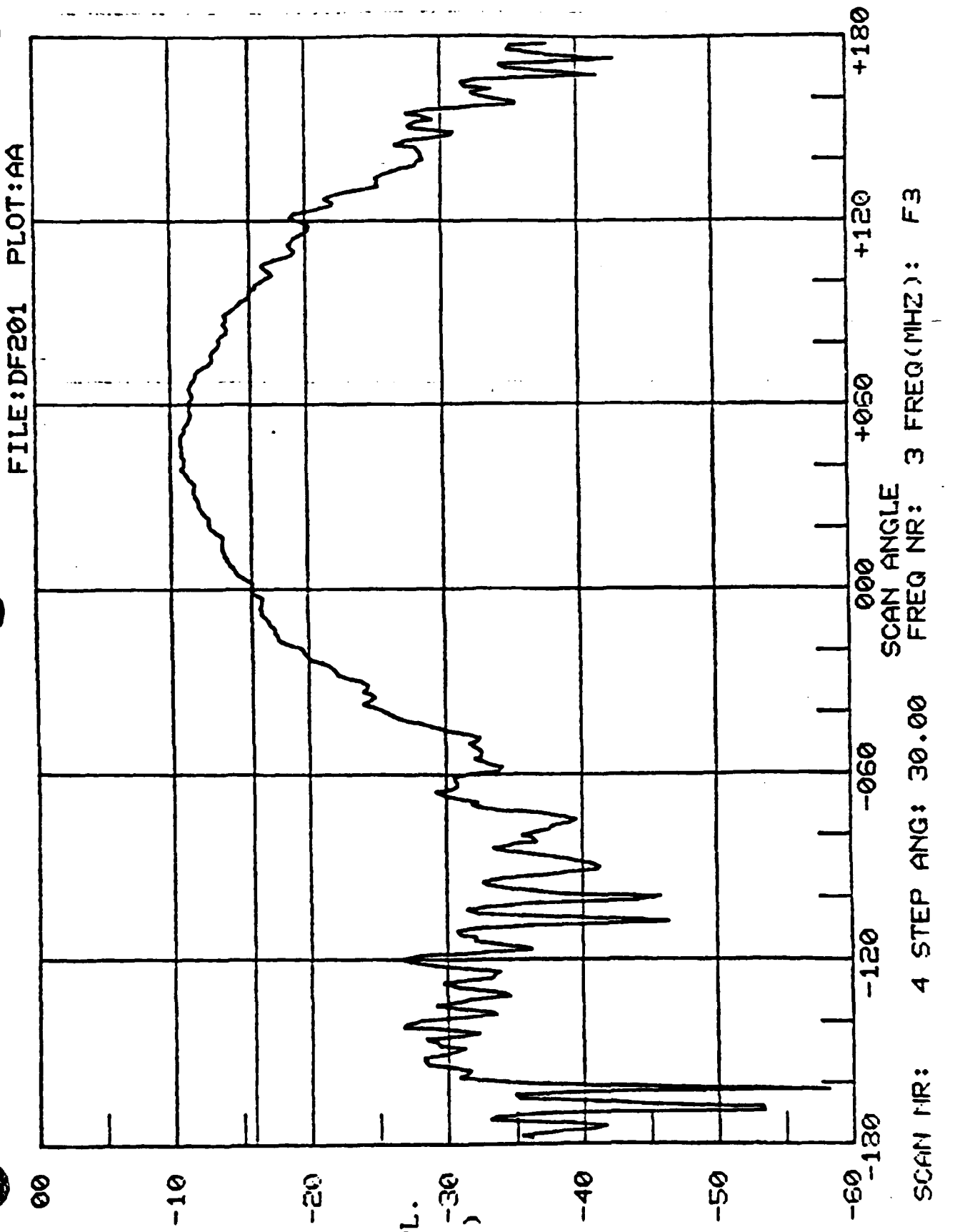
000
+060
+120
+180
SCAN ANGLE
SCAN NR: 3 STEP ANG: 20.00 FREQ NR: 3 FREQ(MHZ): F3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AMPL.
(DB)
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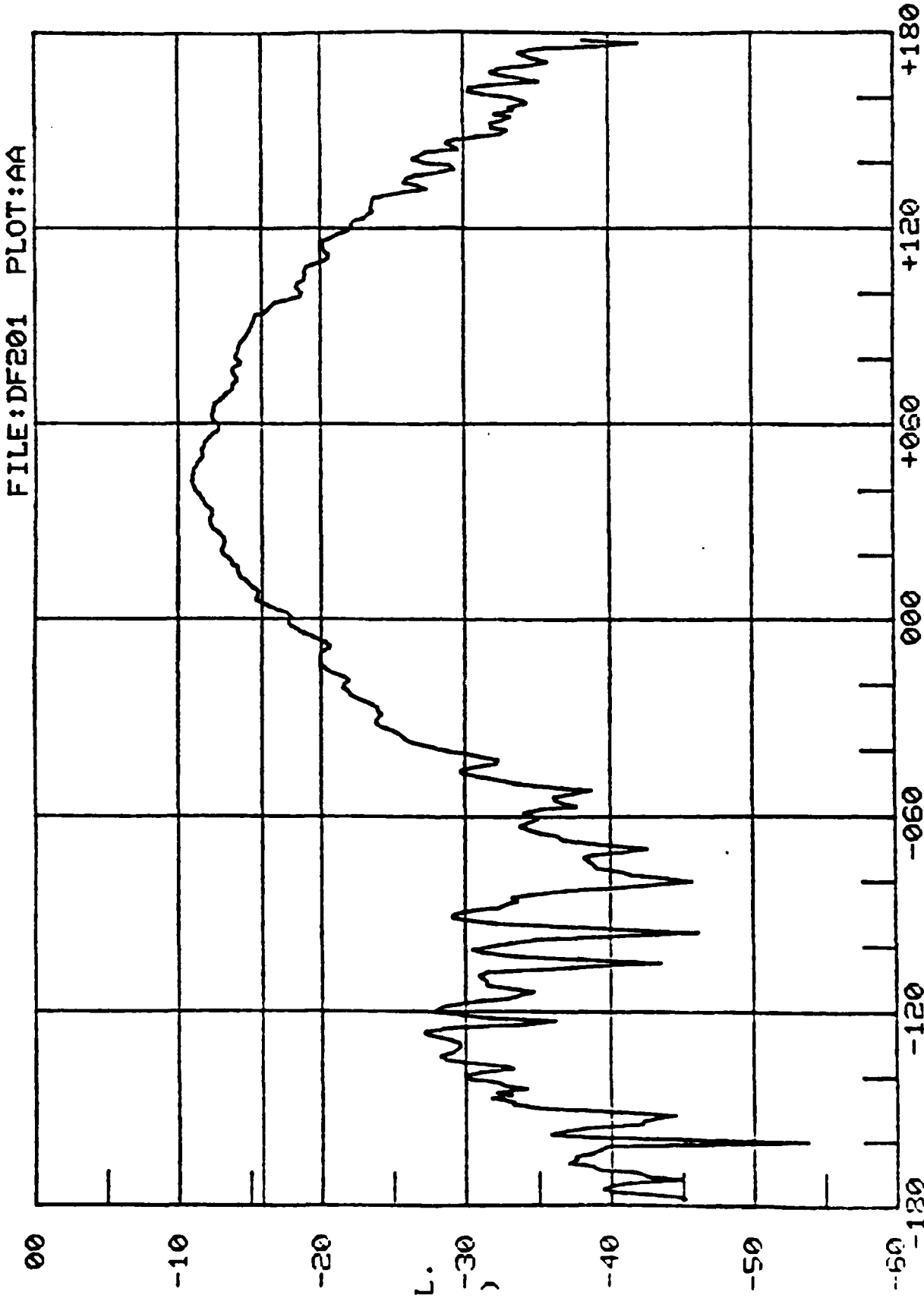
000
+060
+120
+180
SCAN ANGLE
SCAN NR: 4 STEP ANG: 30.00 FREQ NR: 3 FREQ(MHZ): F3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-60
AMPL.
(DB)
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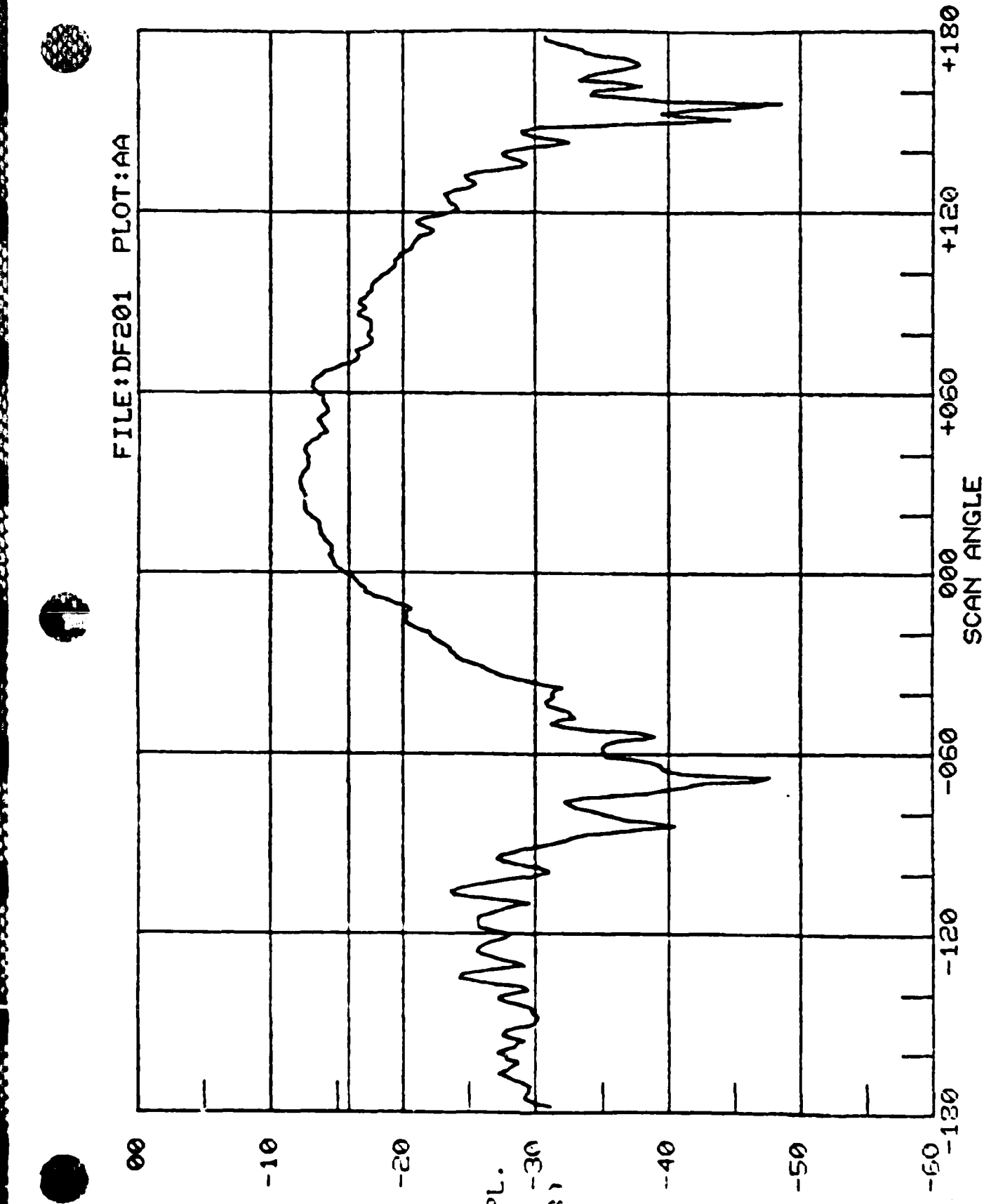
000
+060
+120
+180
SCAN ANGLE
FREQ NR: 3 FREQ(MHZ): F3
SCAN NR: 5 STEP ANG: 40.00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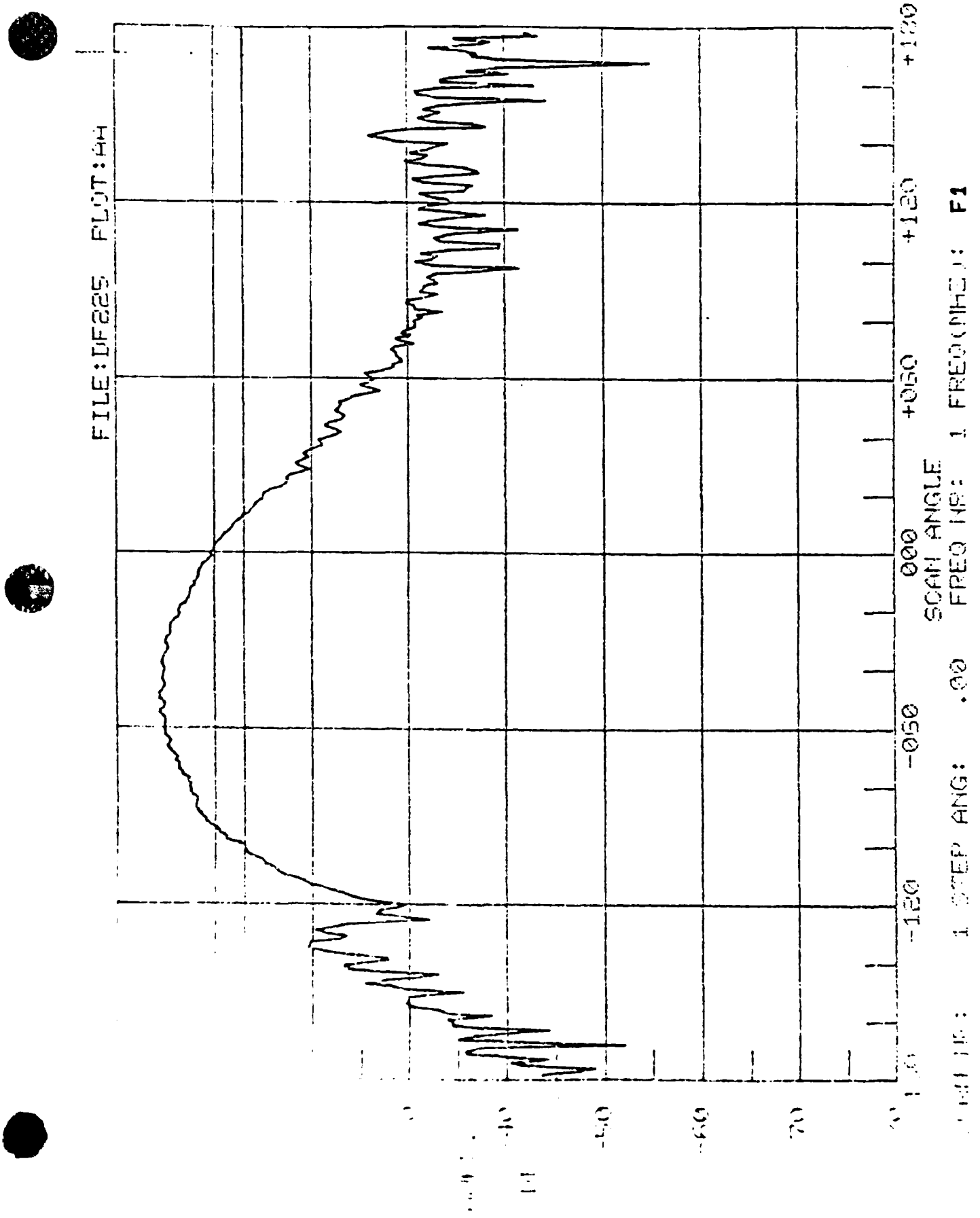
+060
+120
+180
SCAN ANGLE
SCAN DIR: 6 STEP ANG: 50.00 FREQ NR: 3 FREQ(MHZ): F3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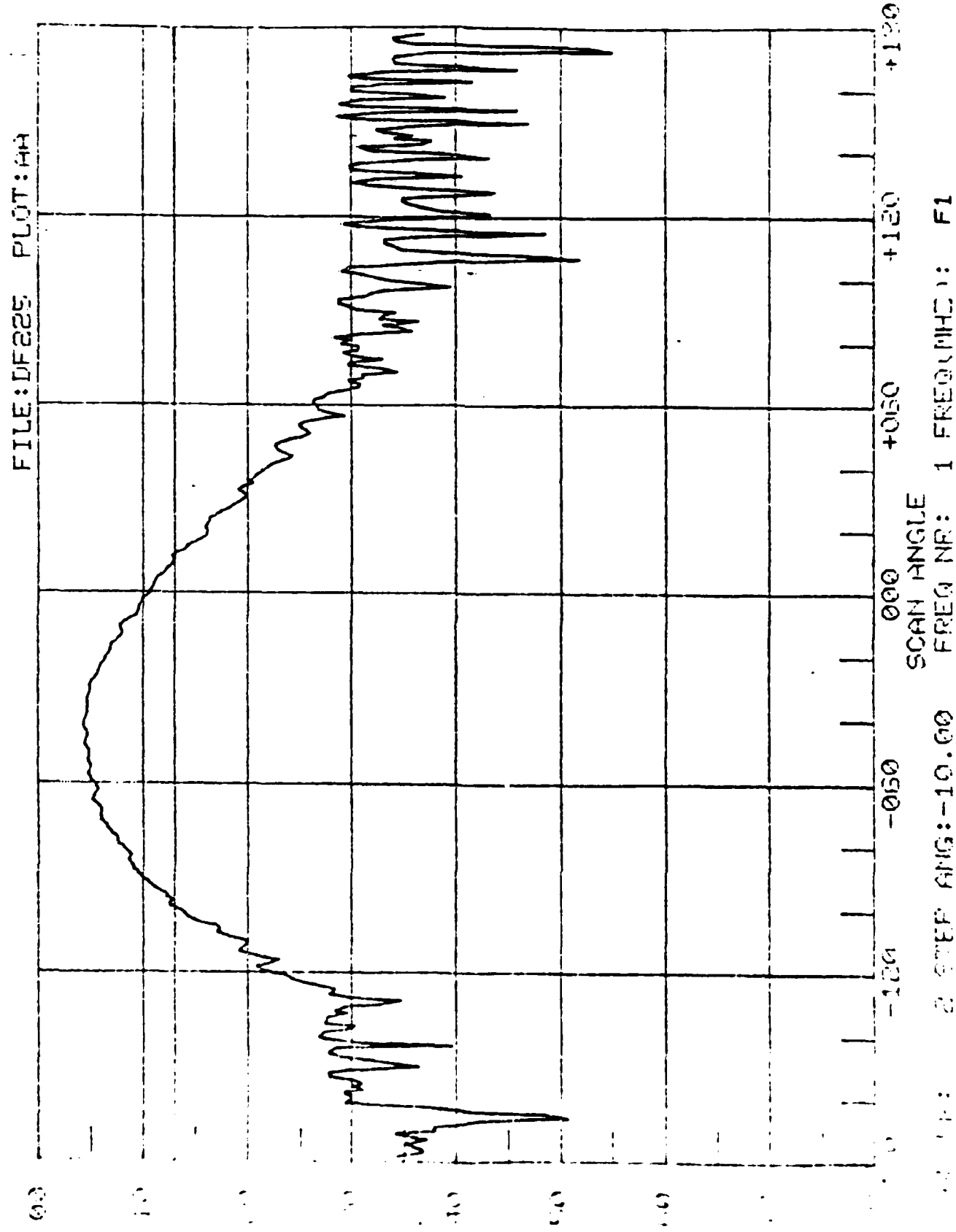
+120
+060
000
-060
-120
SCAN ANGLE
F1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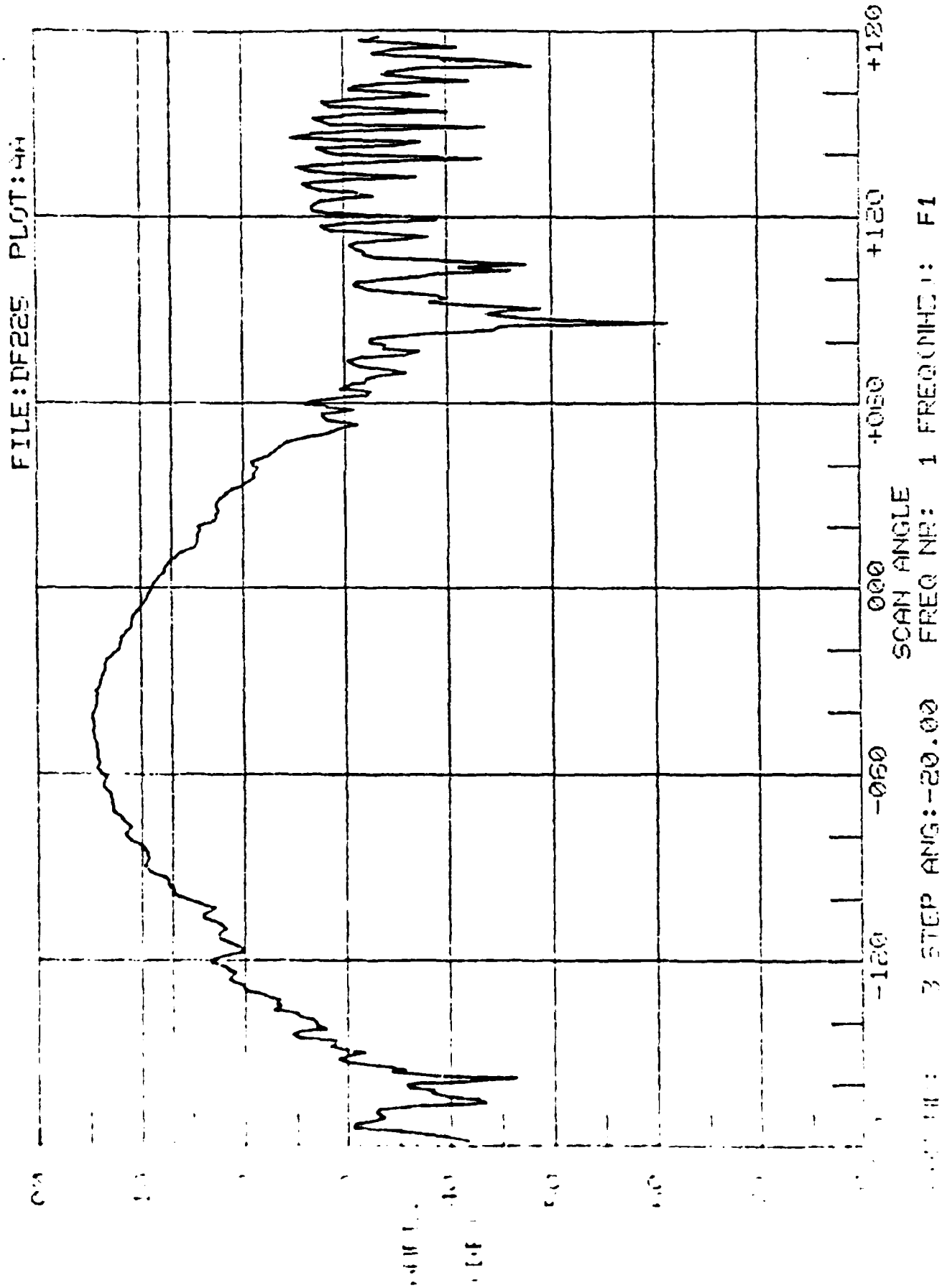
FREQ NR: 1 FREQUENCY: F1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+060
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FREQ NR: 1 FREQ(MHz): F1
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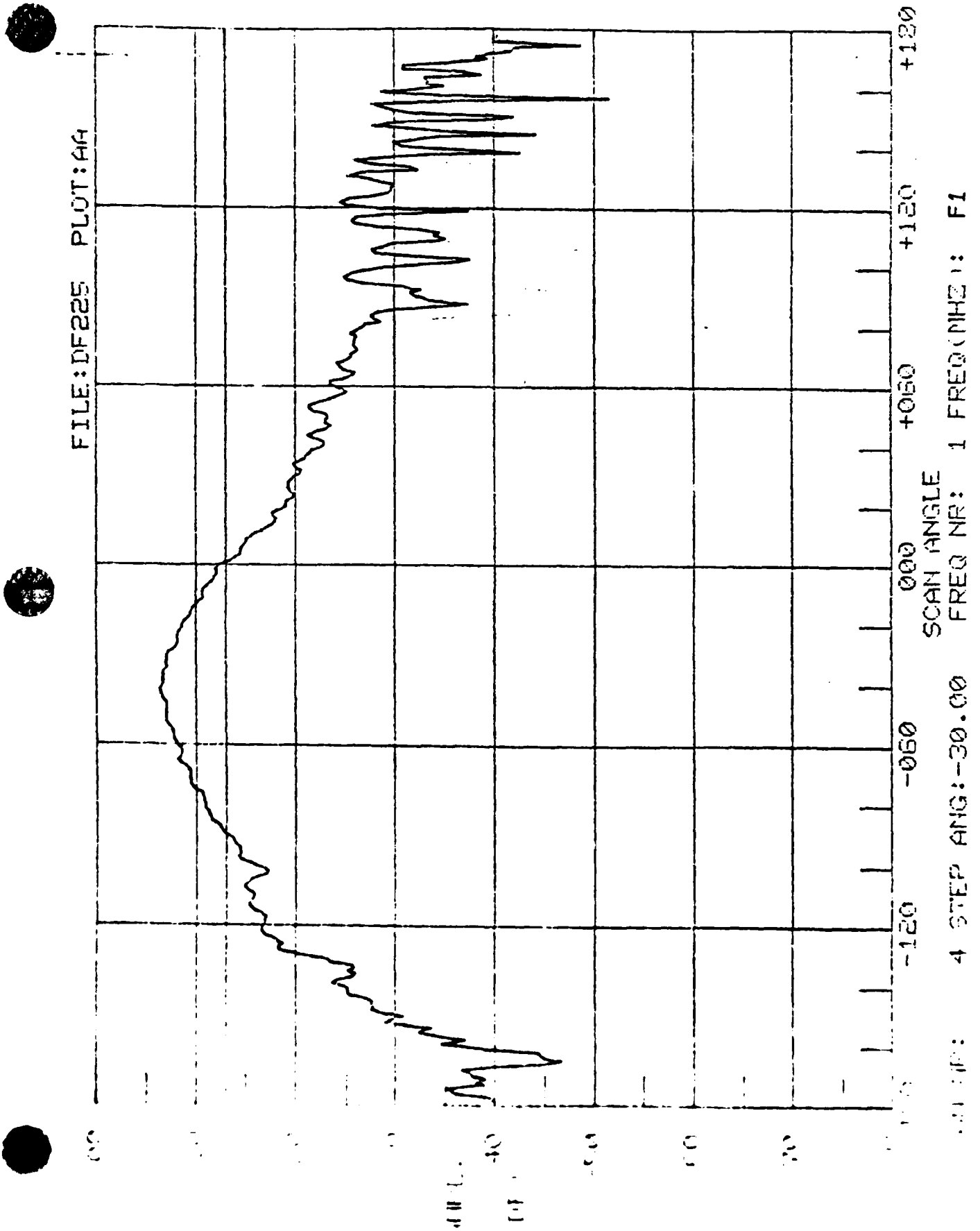
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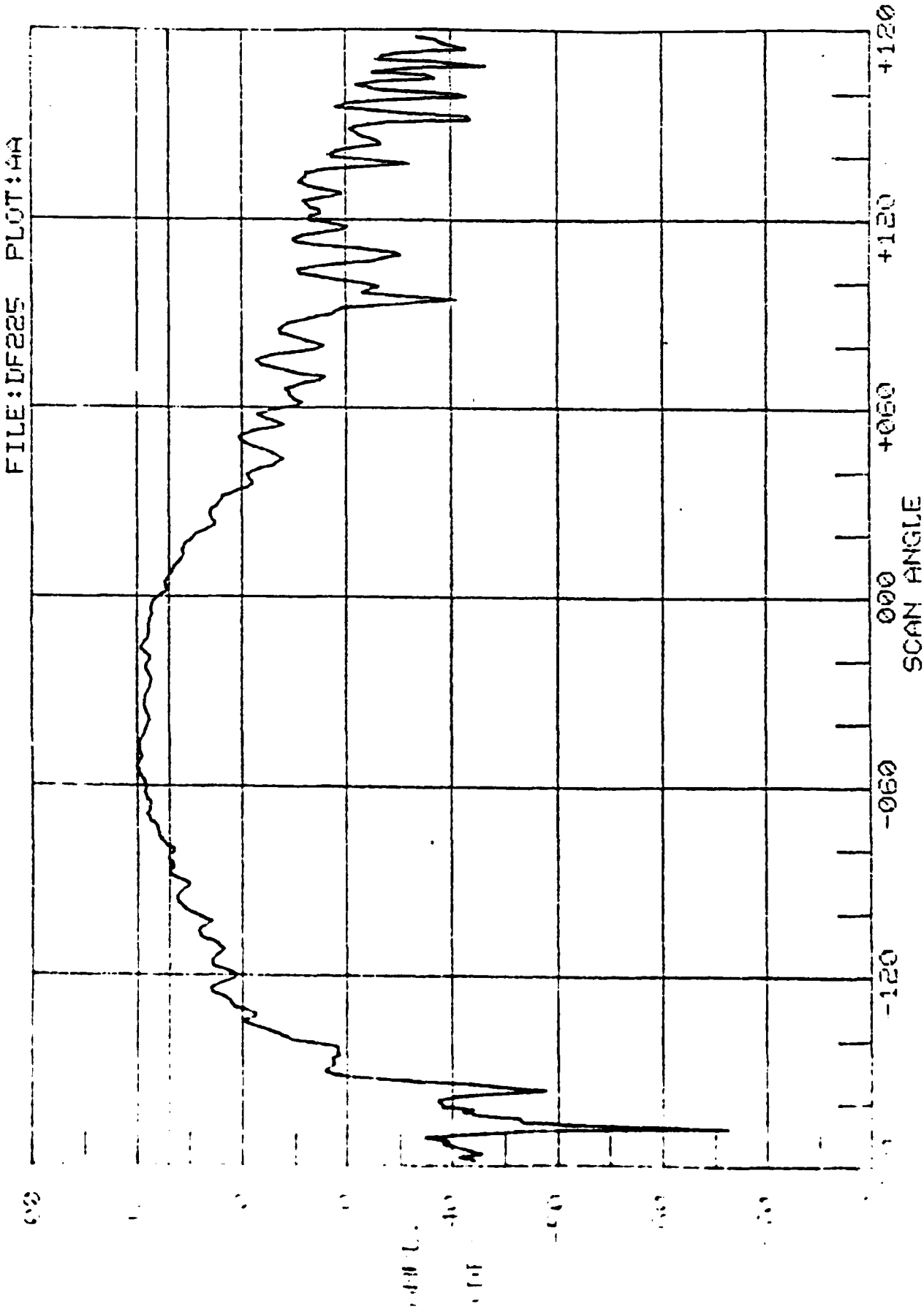
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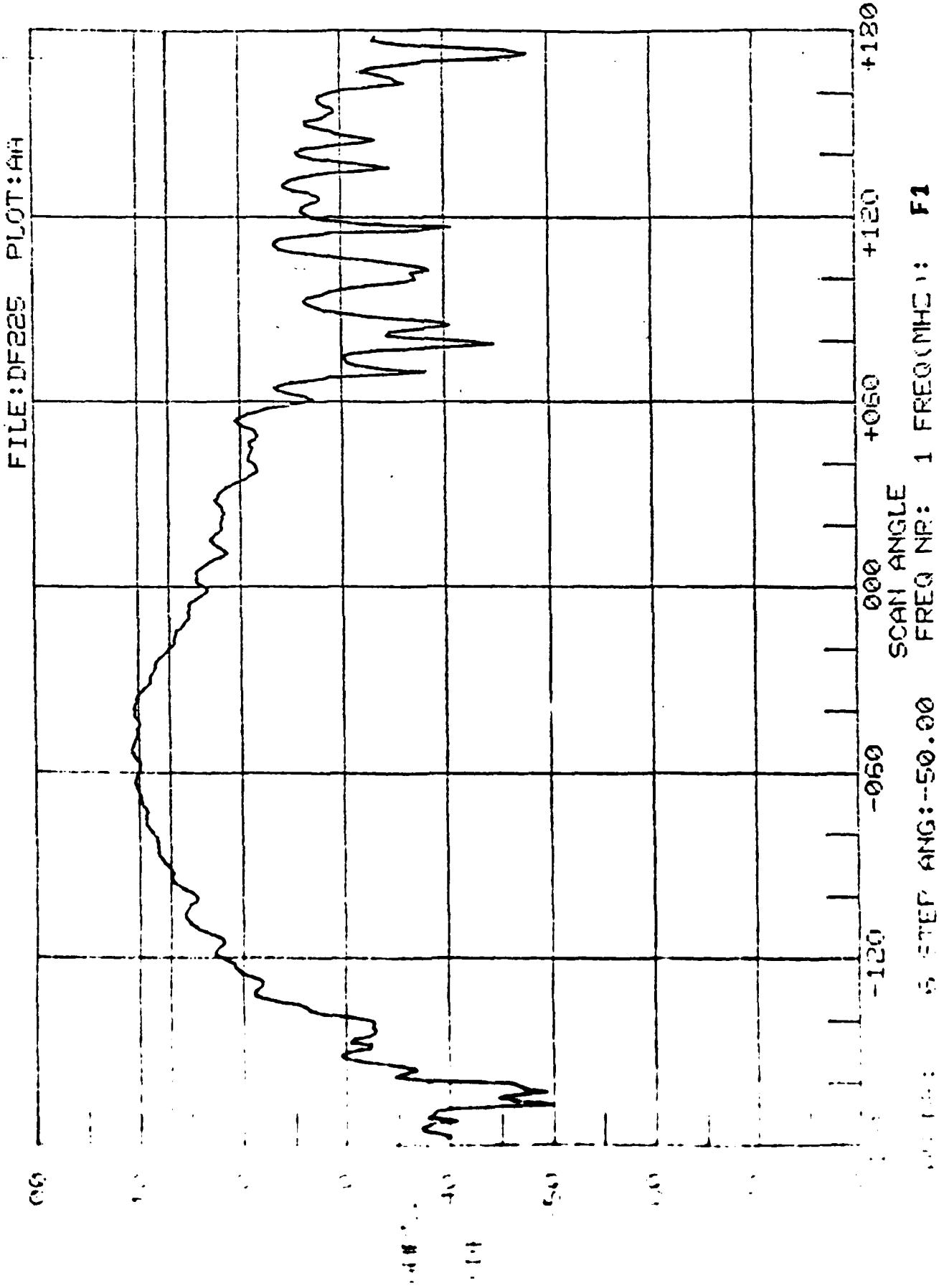
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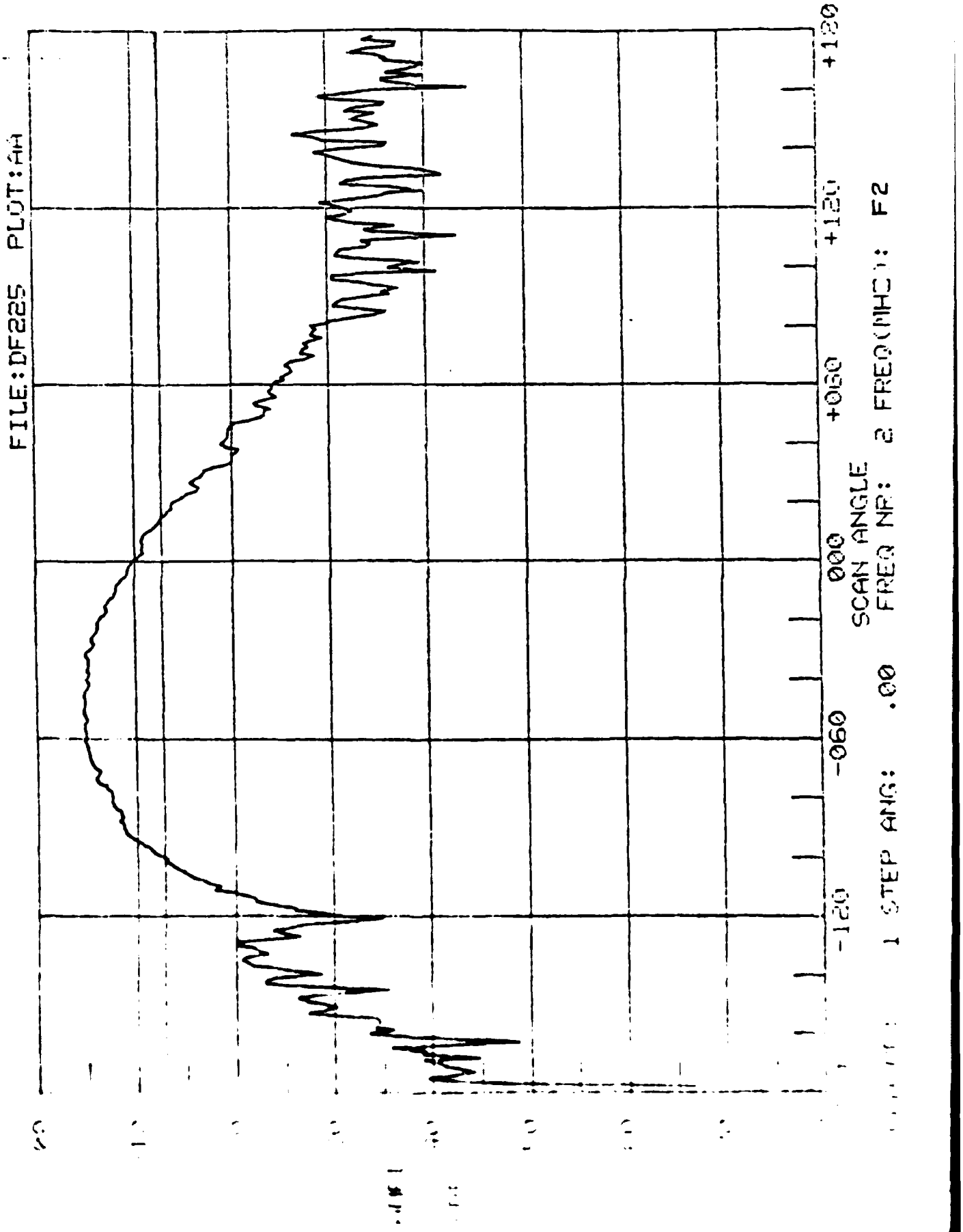
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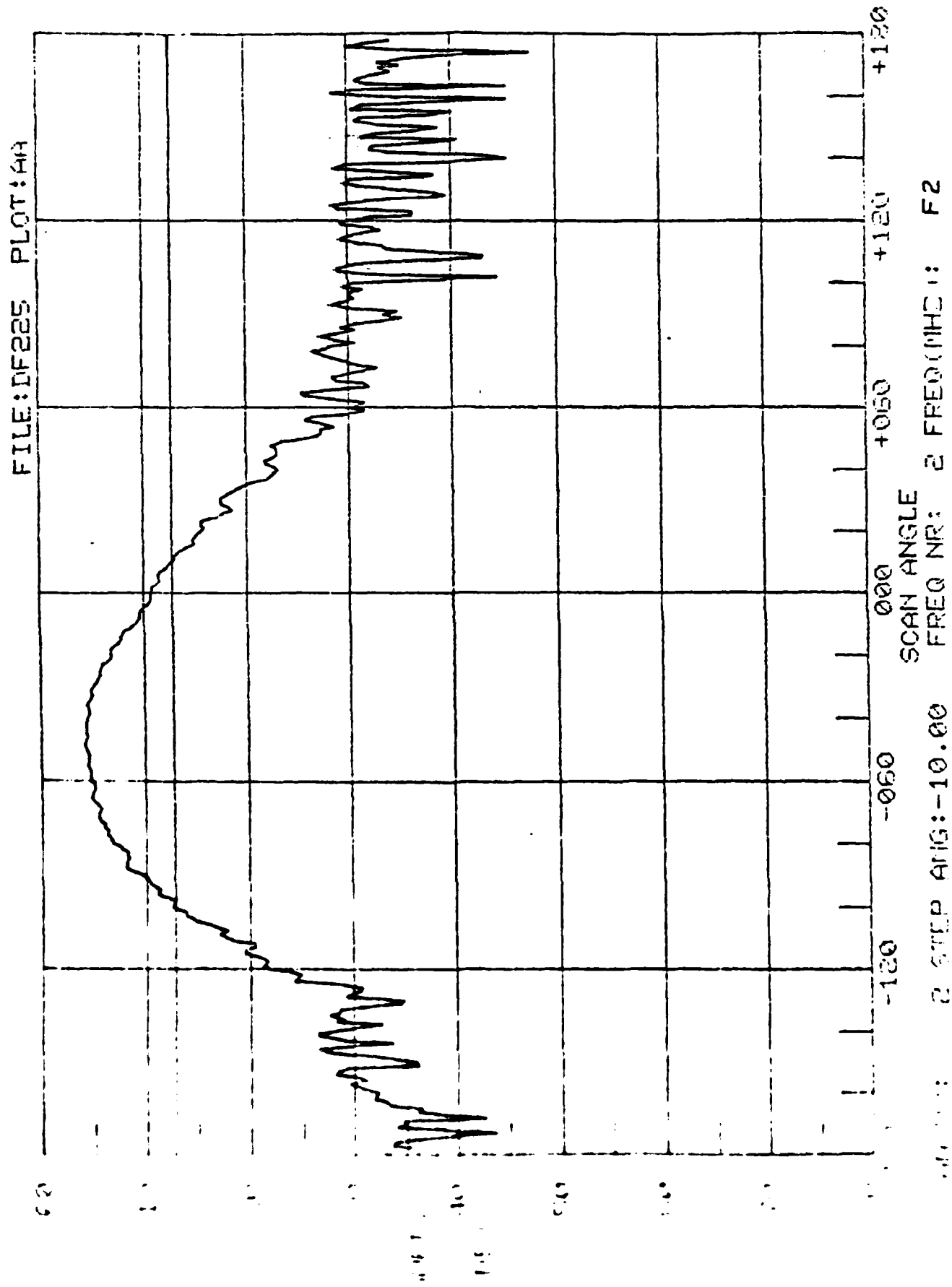
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+120
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000
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SCAN ANGLE
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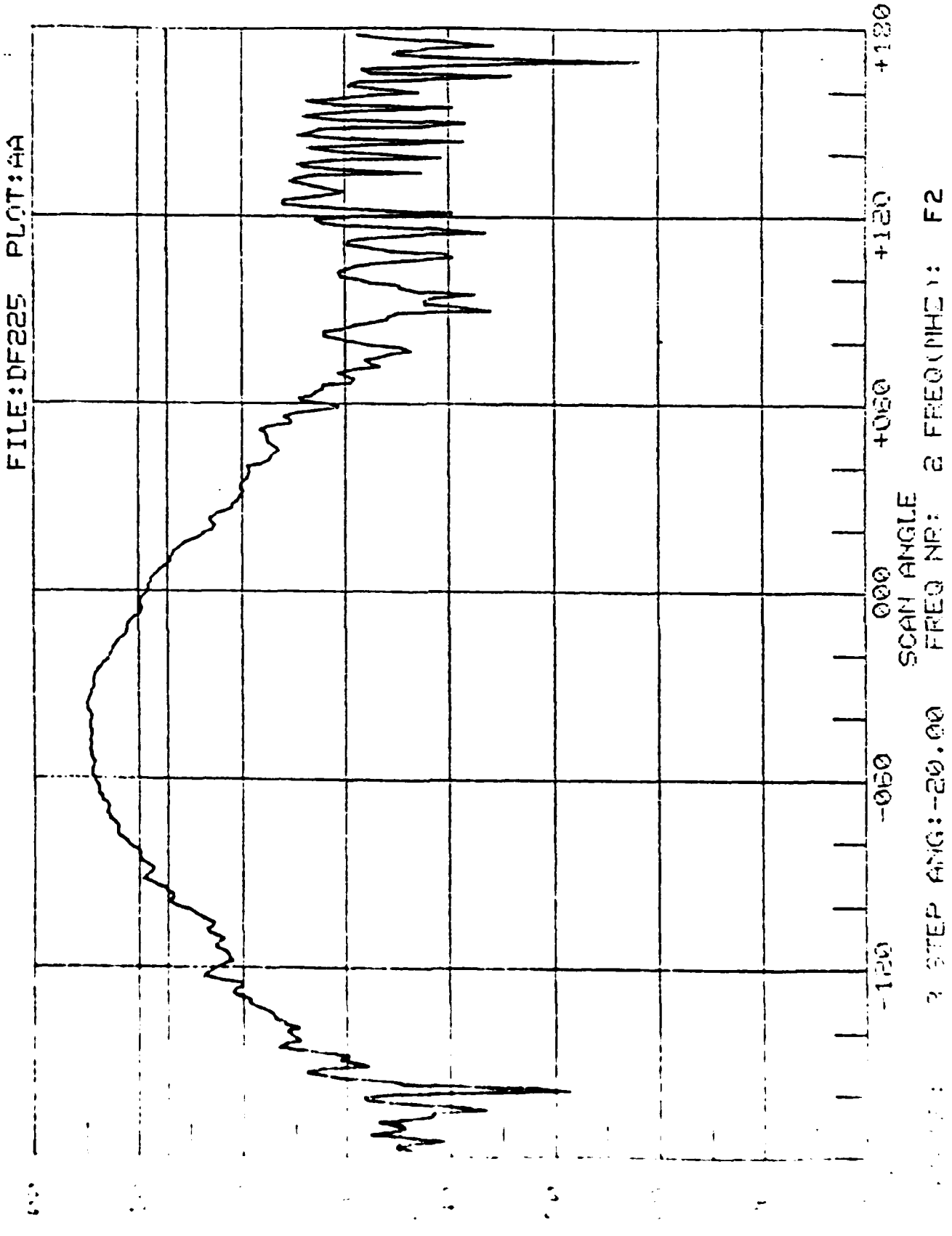
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SCAN ANGLE
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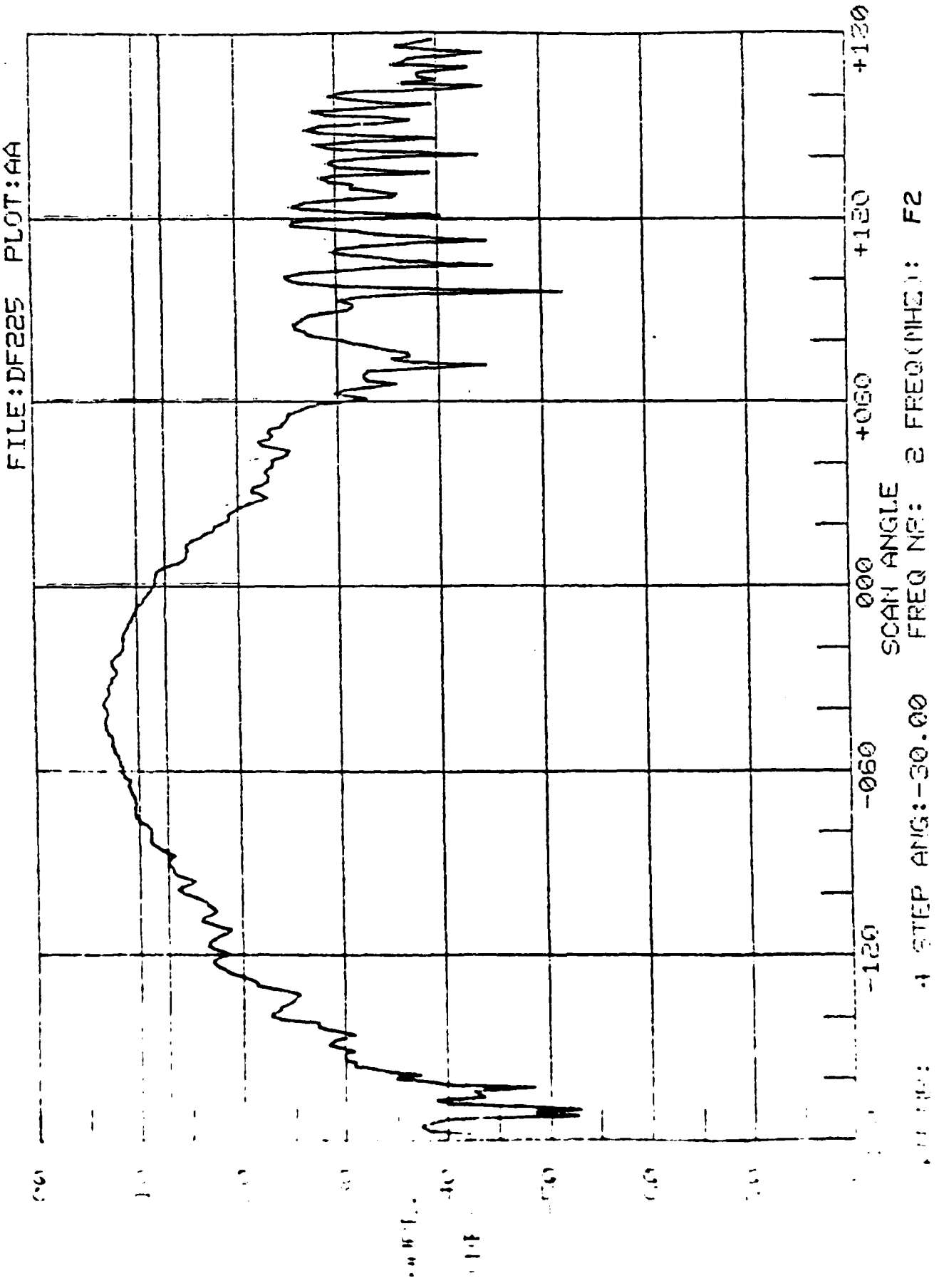
2 STEP ANG:-20.00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+060
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-120
SCAN ANGLE
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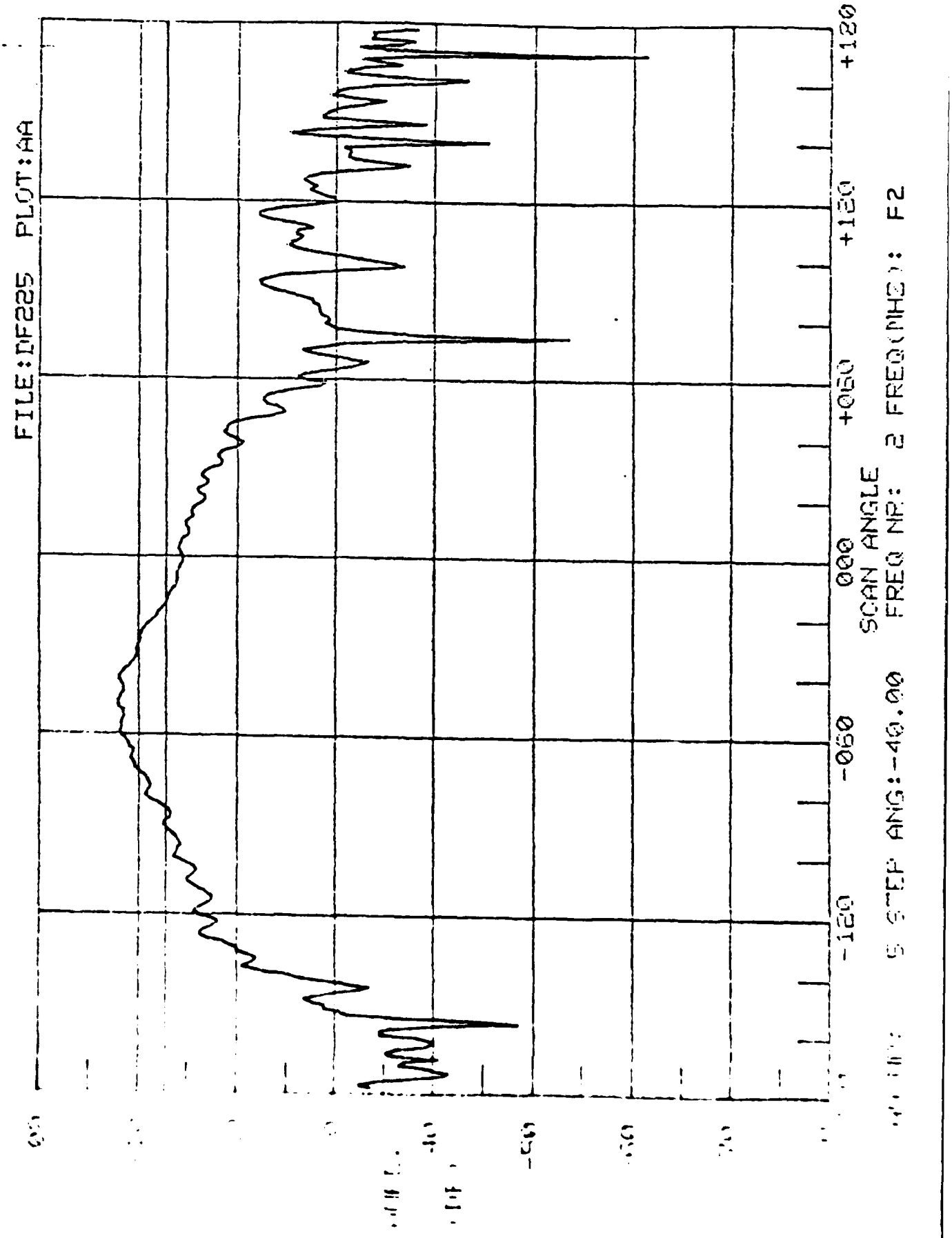
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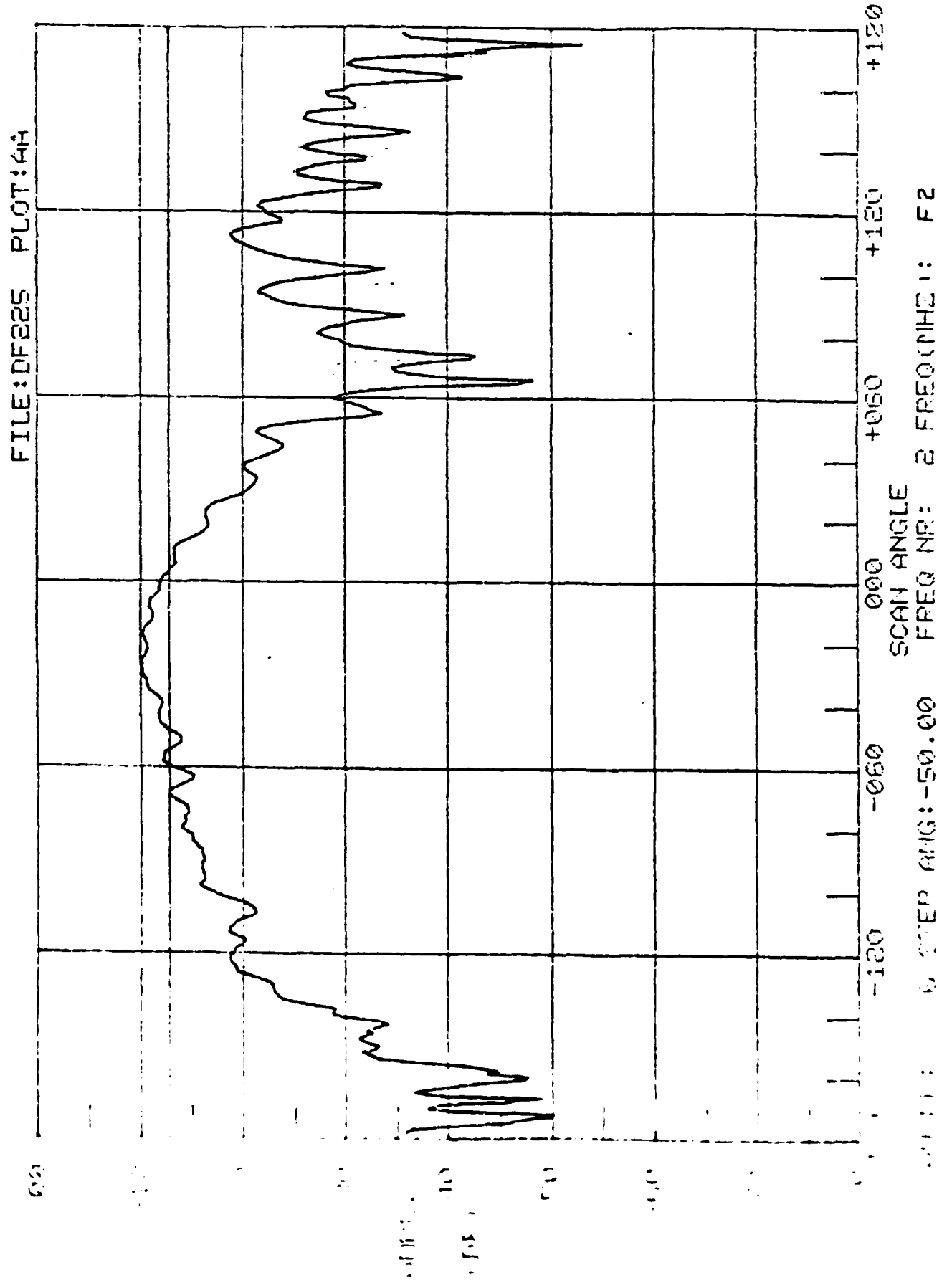
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000
-060
-120
SCAN ANGLE
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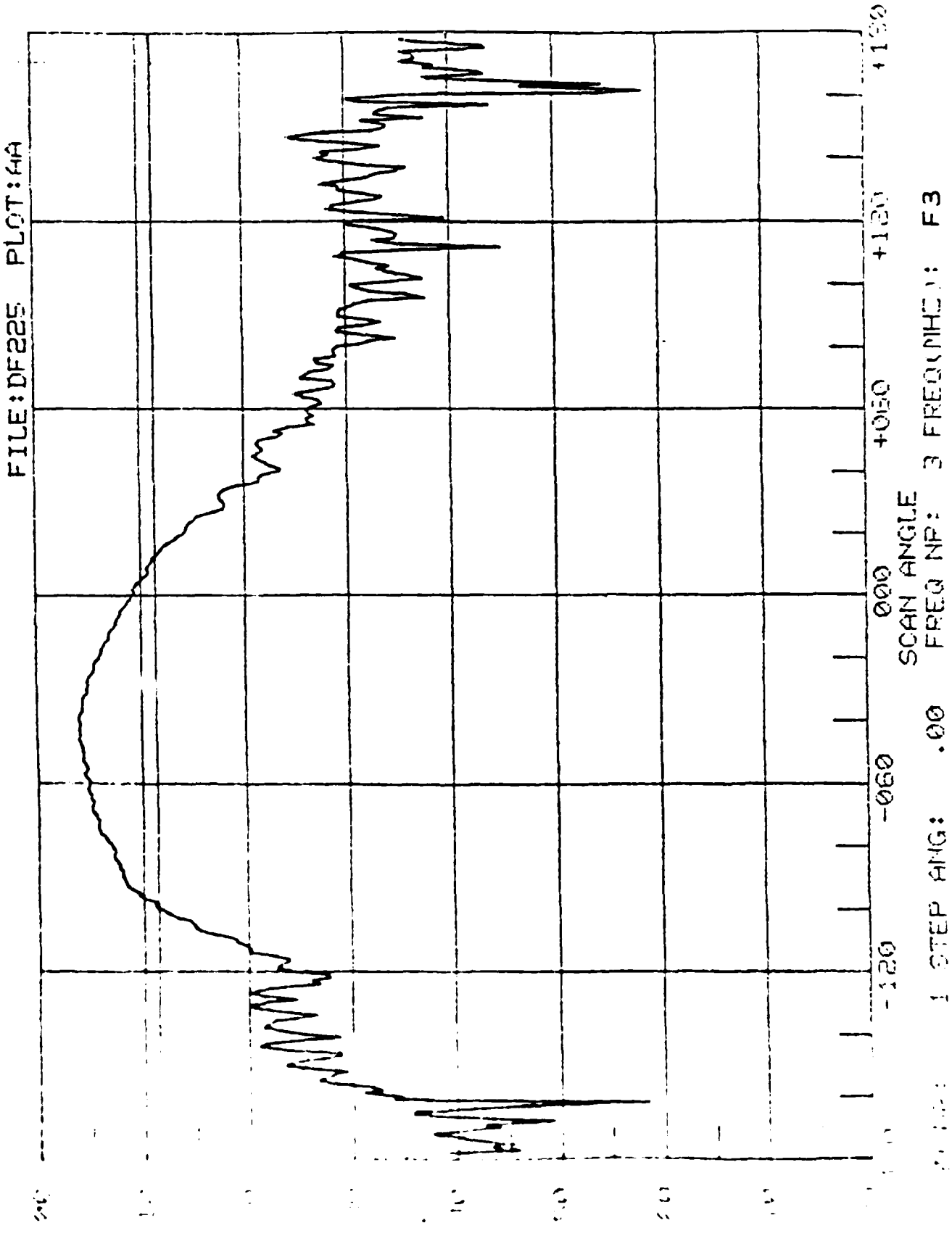
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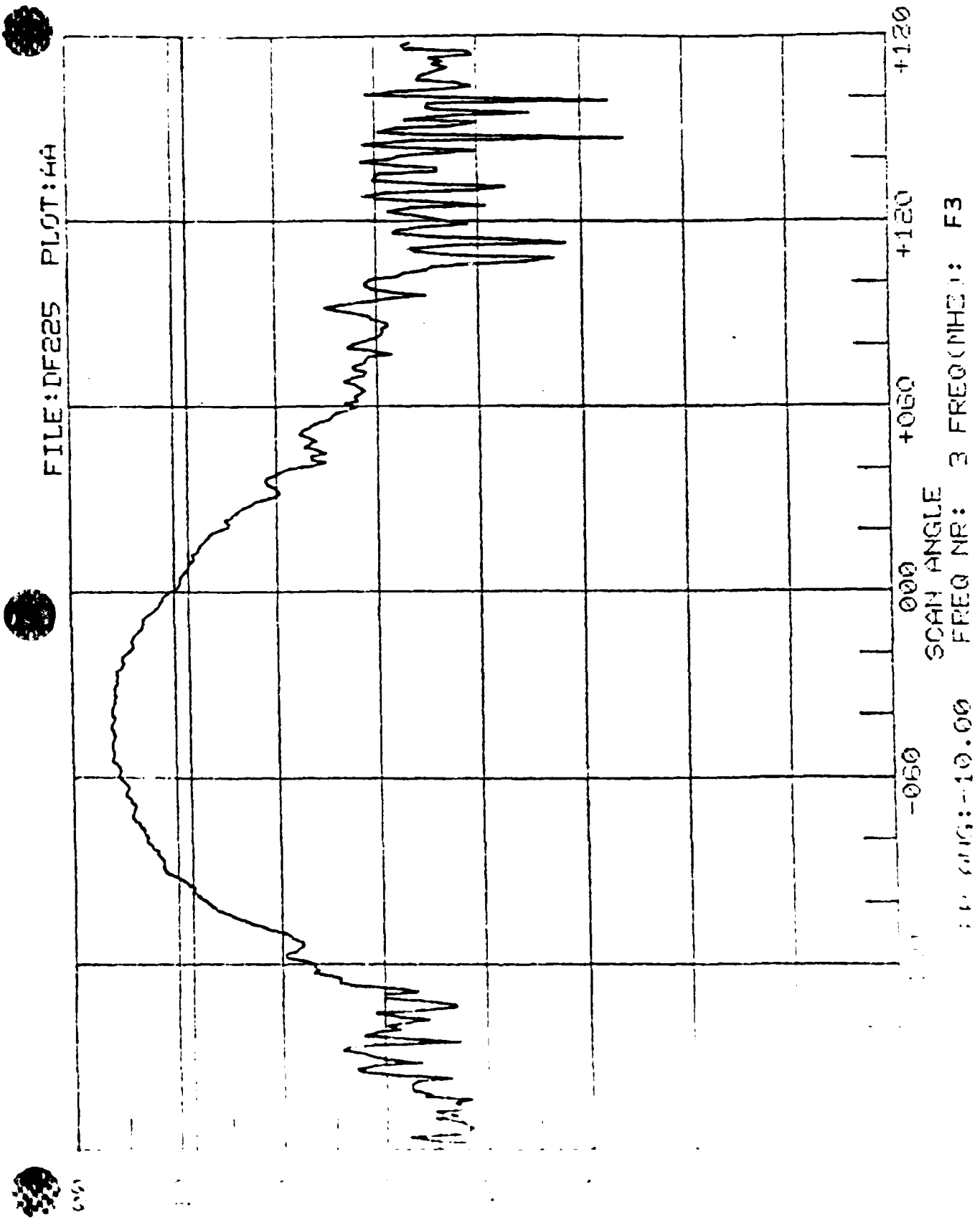
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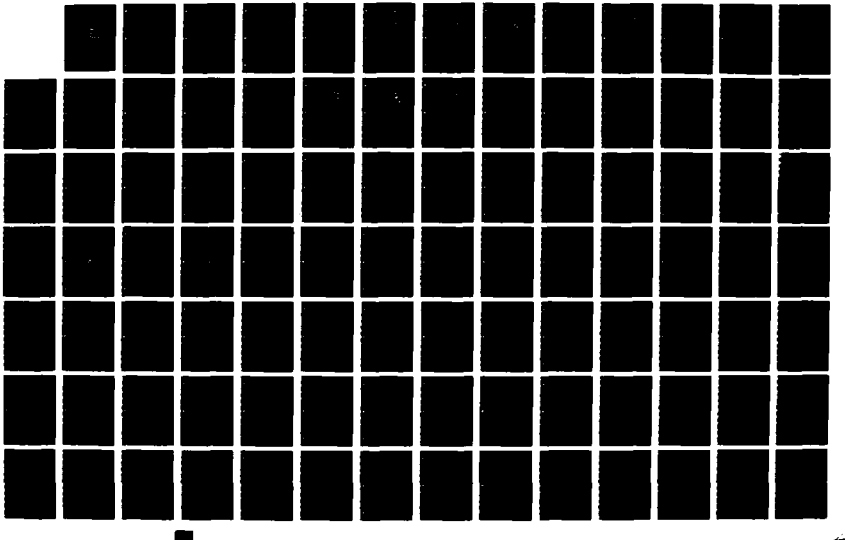
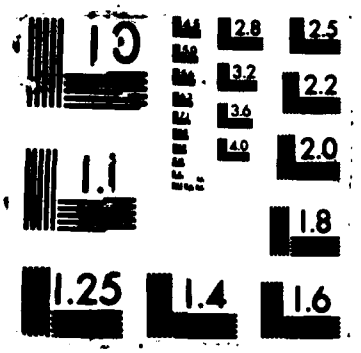
+060
+120
SCAN ANGLE
FREQ NR: 3 FREQ(MHz): F3

AD-A181 539 ANTENNA LOCATION SURVEY REPORT FOR THE AN/ALQ-156 AND AN/ALQ-162 SYSTEMS(U) BEECH AIRCRAFT CORP WICHITA KS G J MARTIN 29 OCT 84 ER-101E2240 DAAK50-83-C-0056 2/7

UNCLASSIFIED F/G 17/4 NL

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3.2
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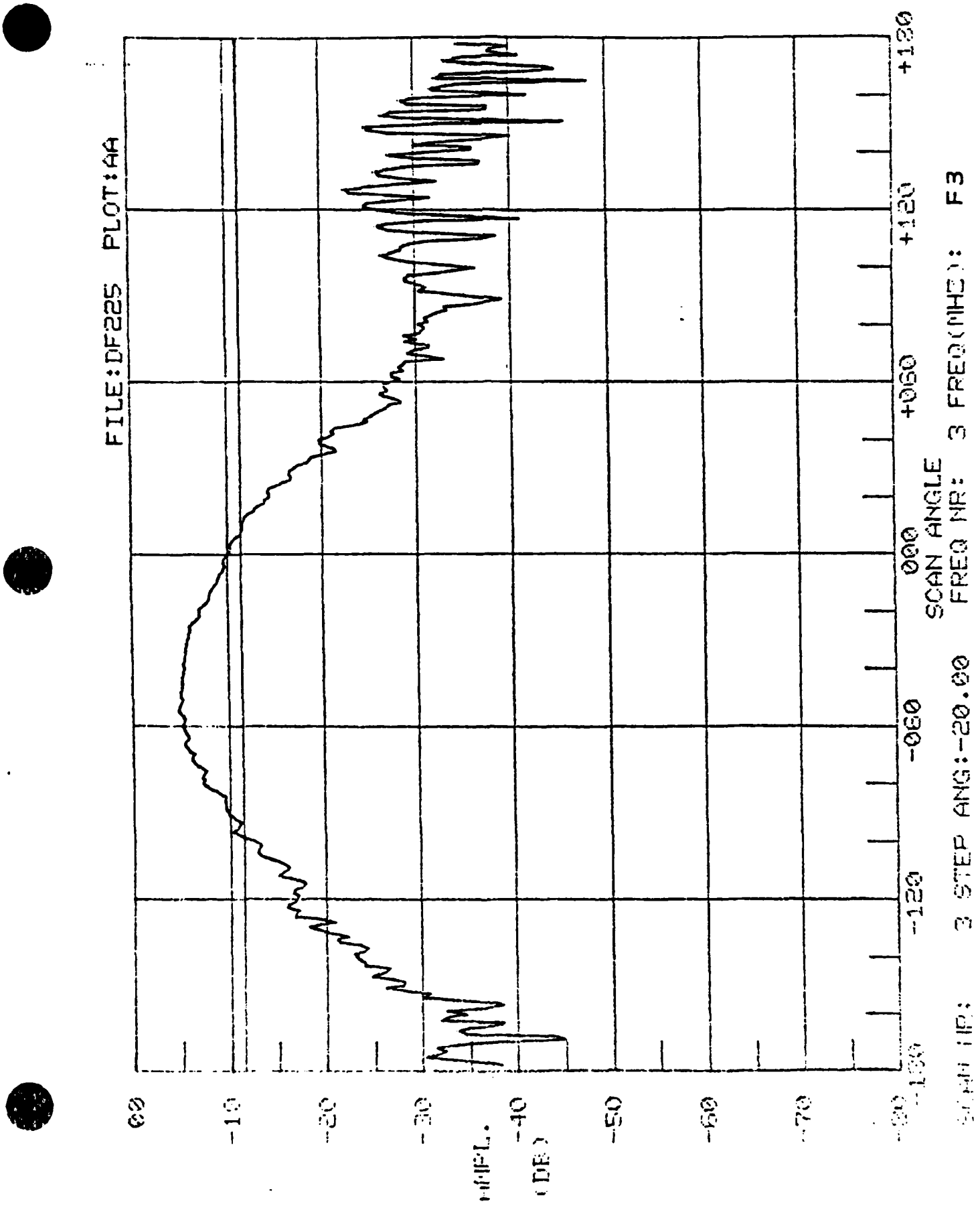
1.6
1.1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000
+060
+120
SCAN ANGLE
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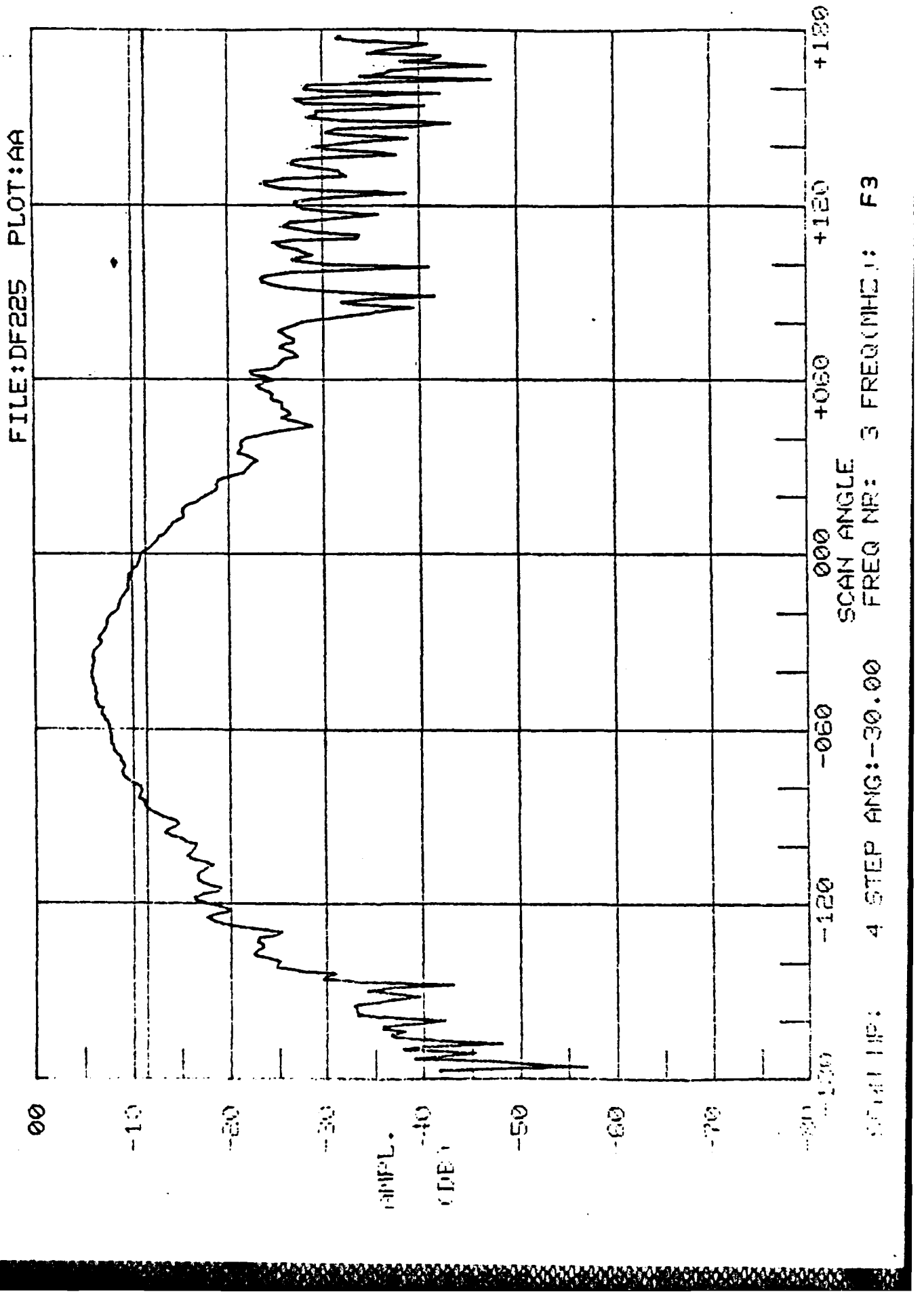
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+060
000
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SCAN ANGLE
FREQ NR: 3 FREQ(MHZ): F3
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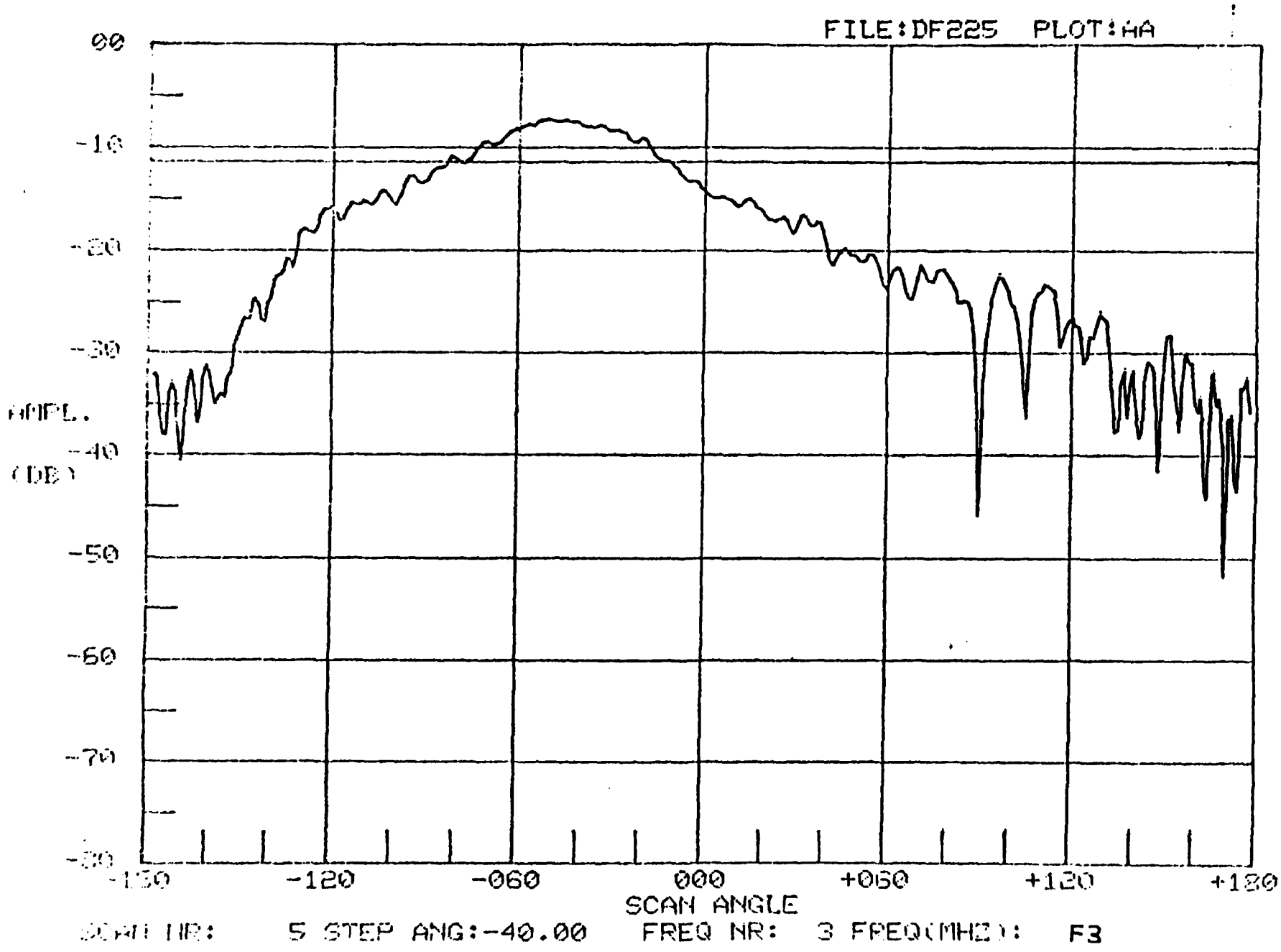
-60
-70
AMPL.
(DB)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(DB)
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-180
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000
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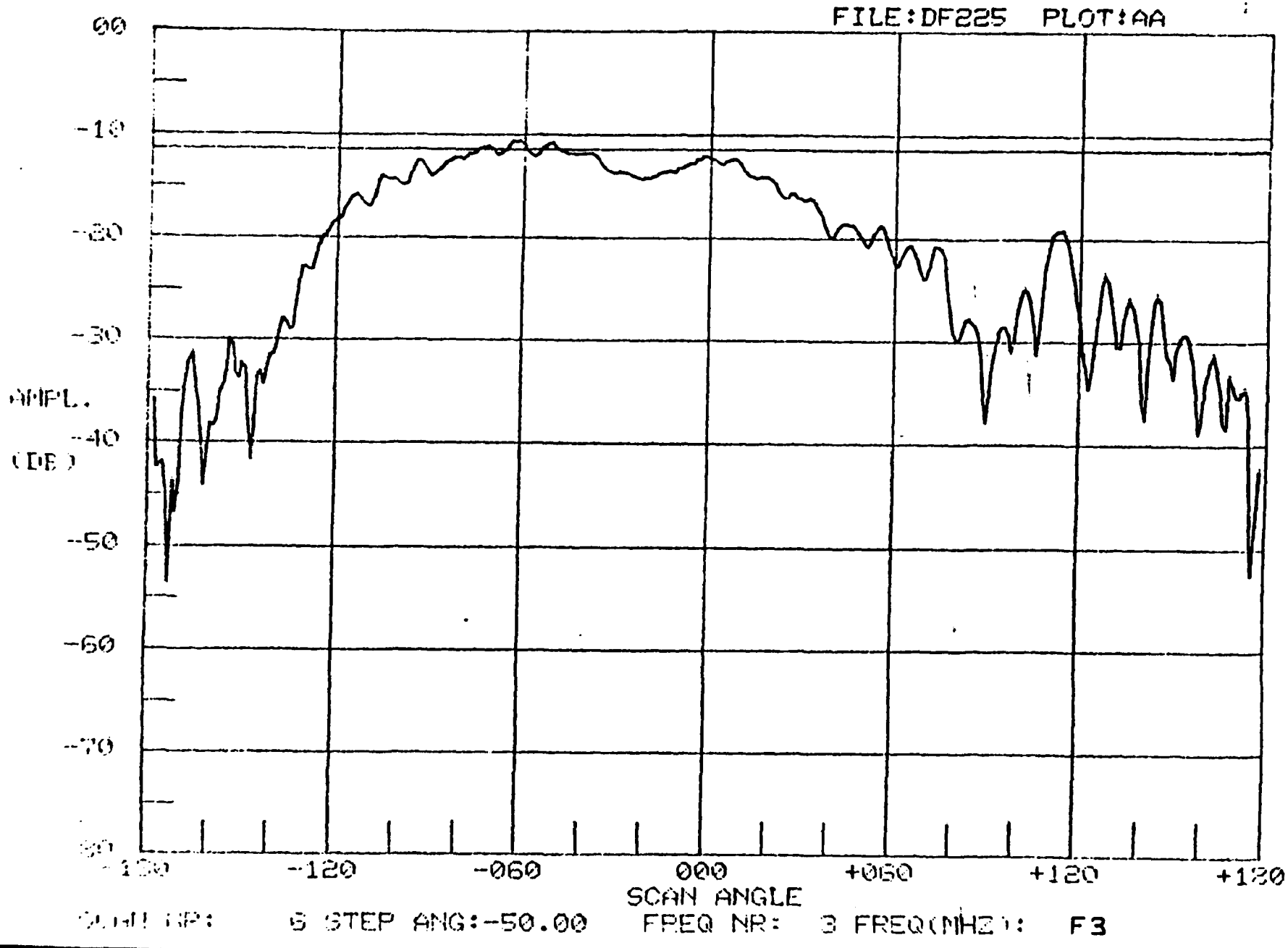
+120
+180
SCAN ANGLE
SCAN NR: 5 STEP ANG:-40.00 FREQ NR: 3 FREQ(MHZ): F3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00
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SCAN ANGLE
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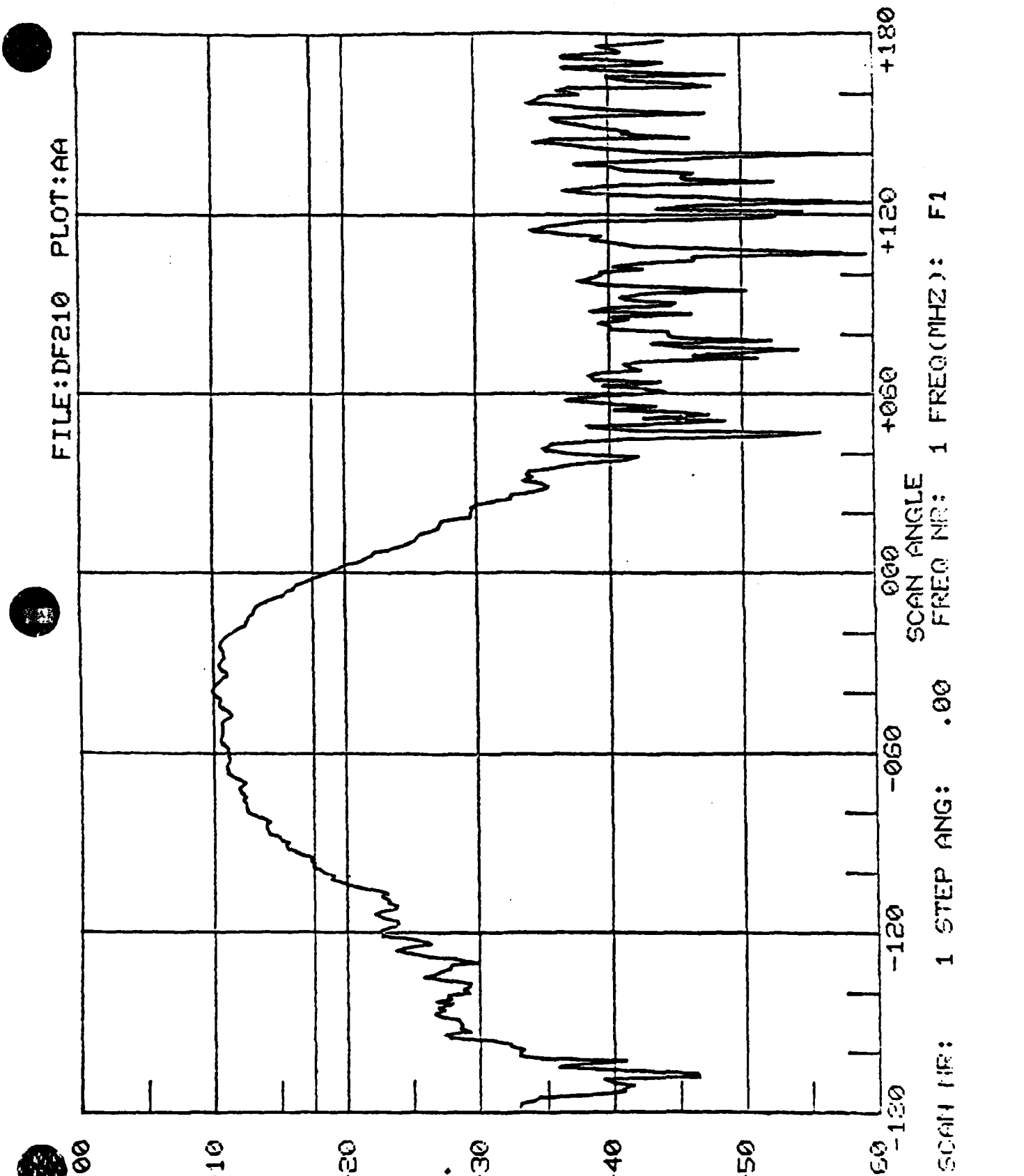
FREQ NR: 3 FREQ(MHZ): F3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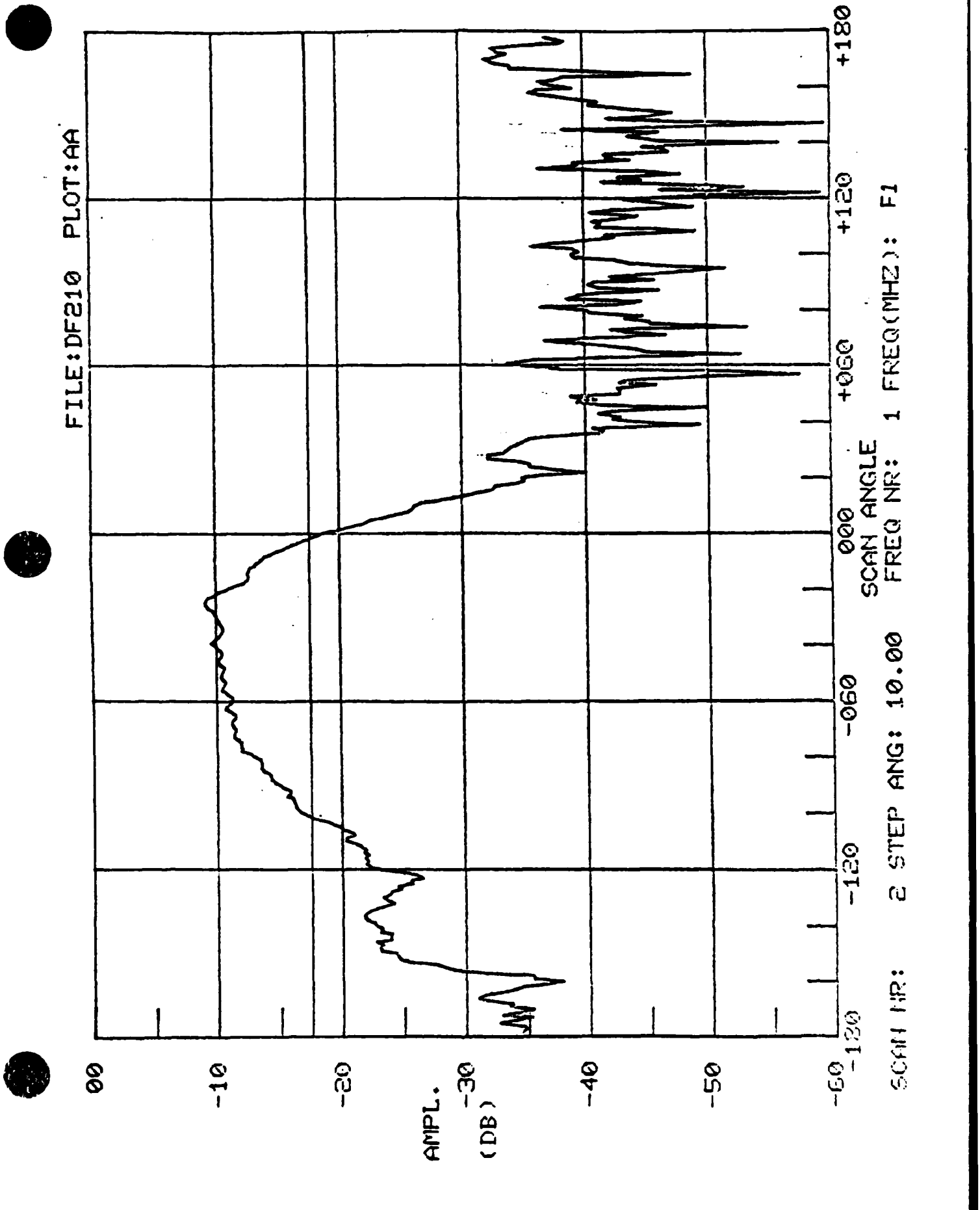
SCAN ANGLE
SCAN NR: 1 STEP ANG: .00 FREQ NR: 1 FREQ(MHZ): F1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SCAN ANGLE
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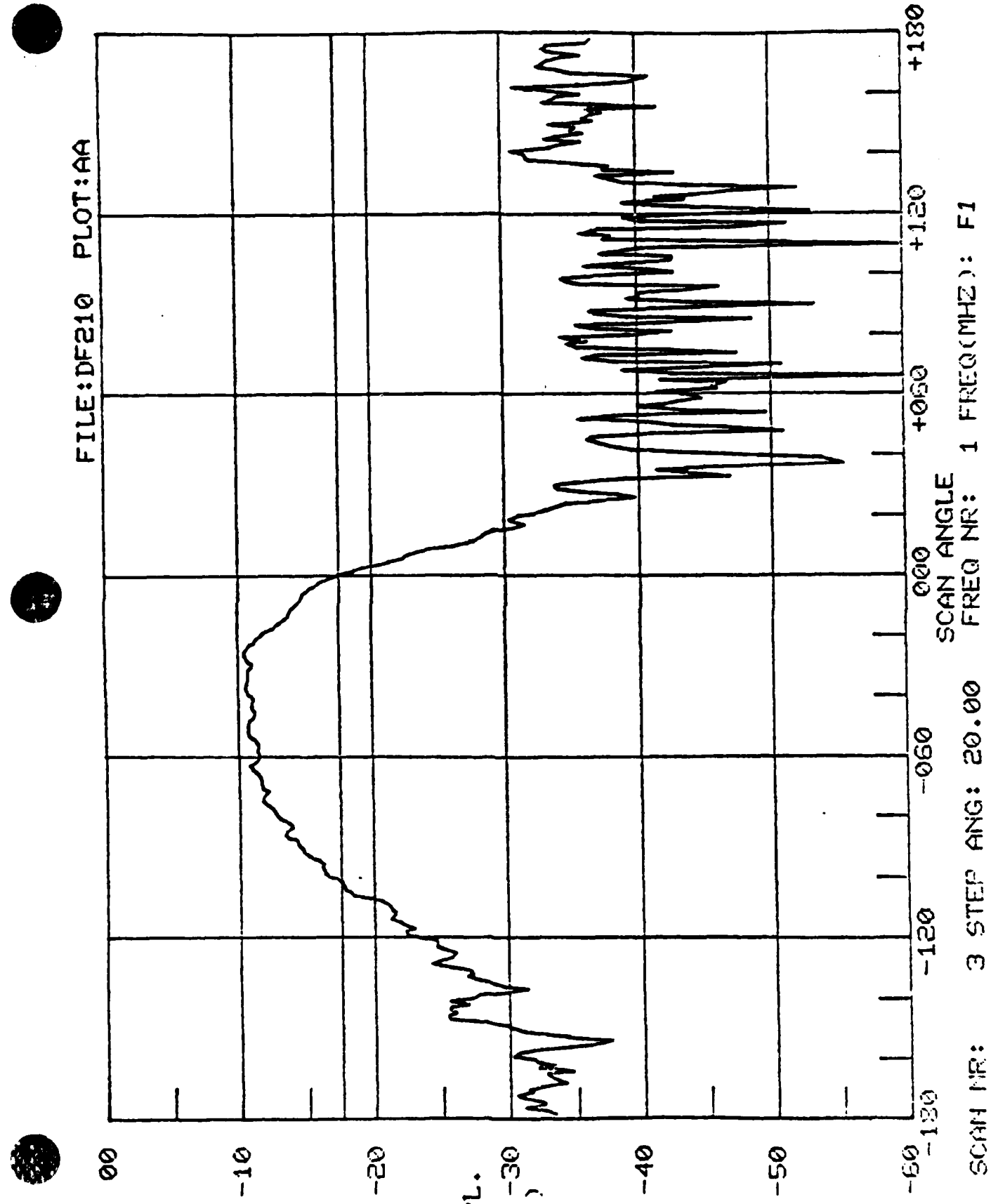
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SCAN ANGLE
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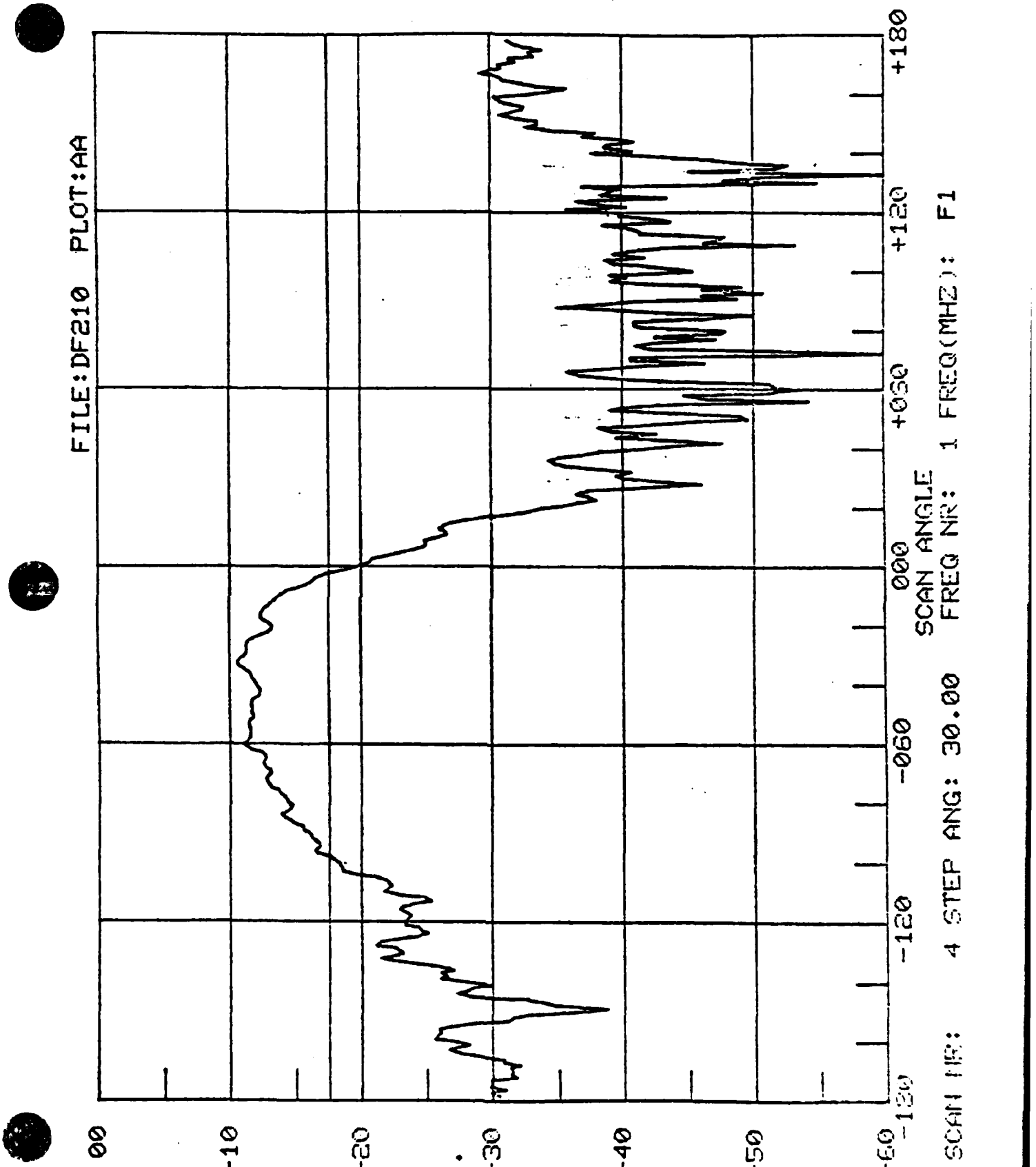
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AMPL.
(DB)
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000
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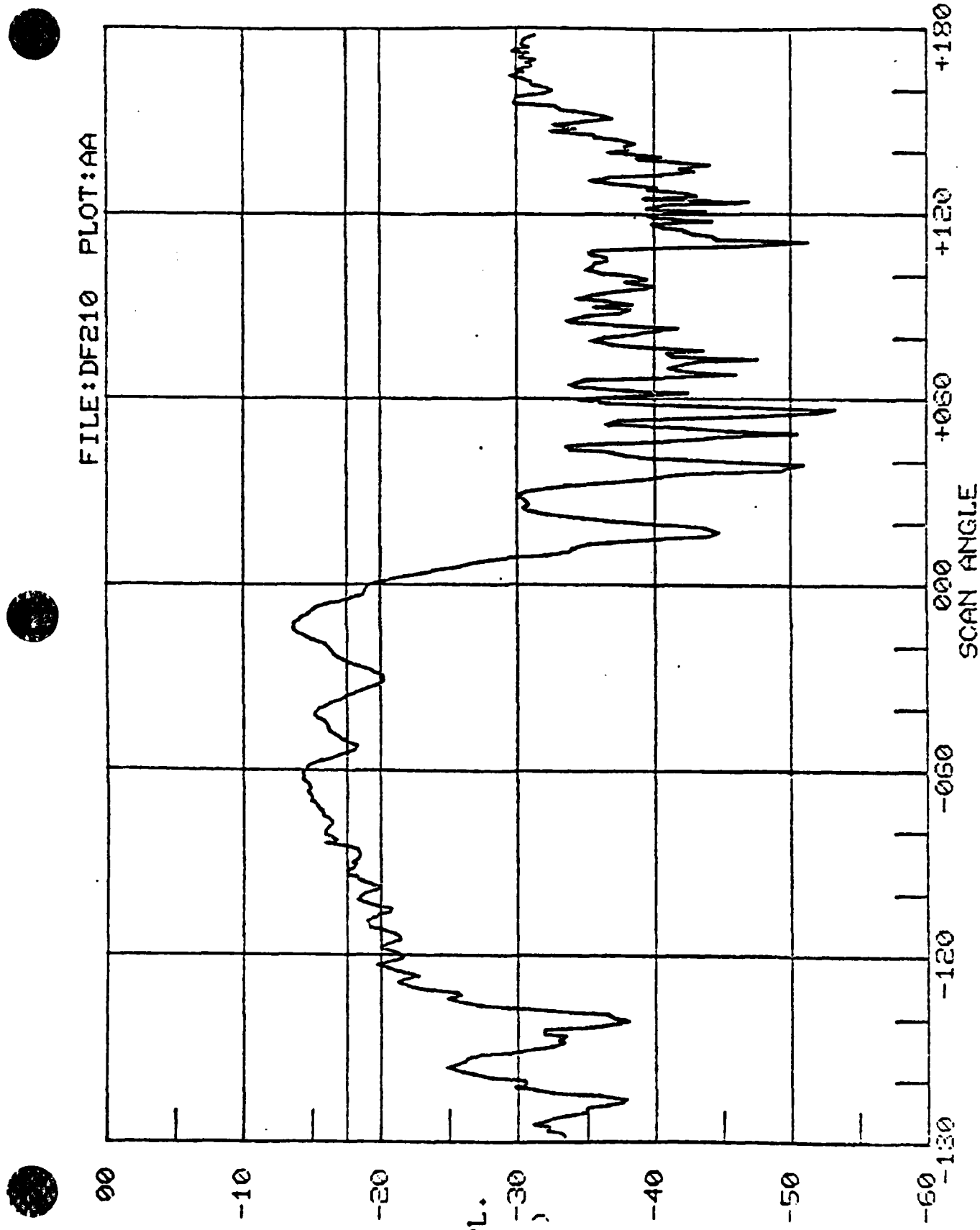
+180
SCAN ANGLE
SCAN NR: 4 STEP ANG: 30.00 FREQ NR: 1 FREQ(MHZ): F1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+120
+180
SCAN ANGLE
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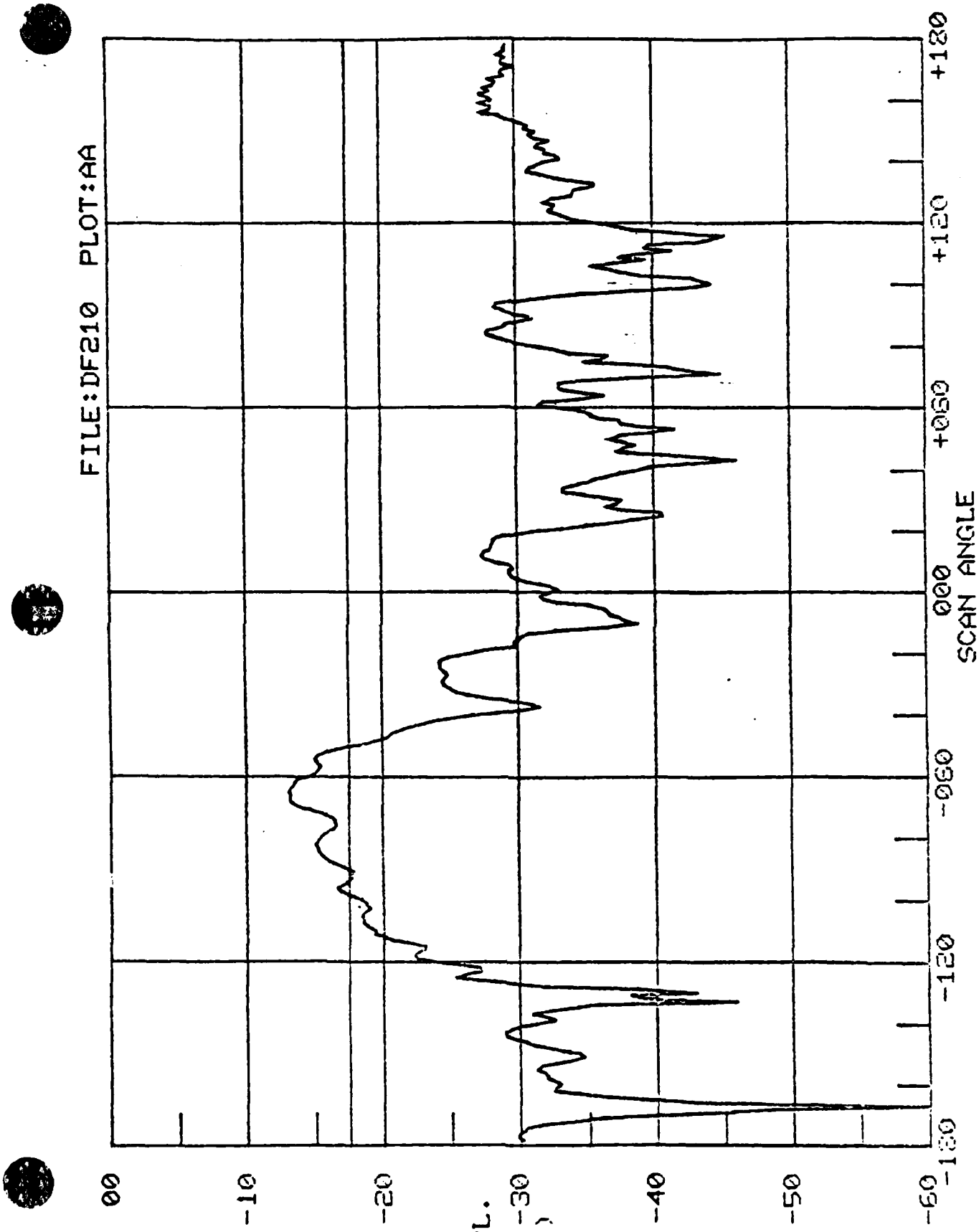
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(DB)
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+060
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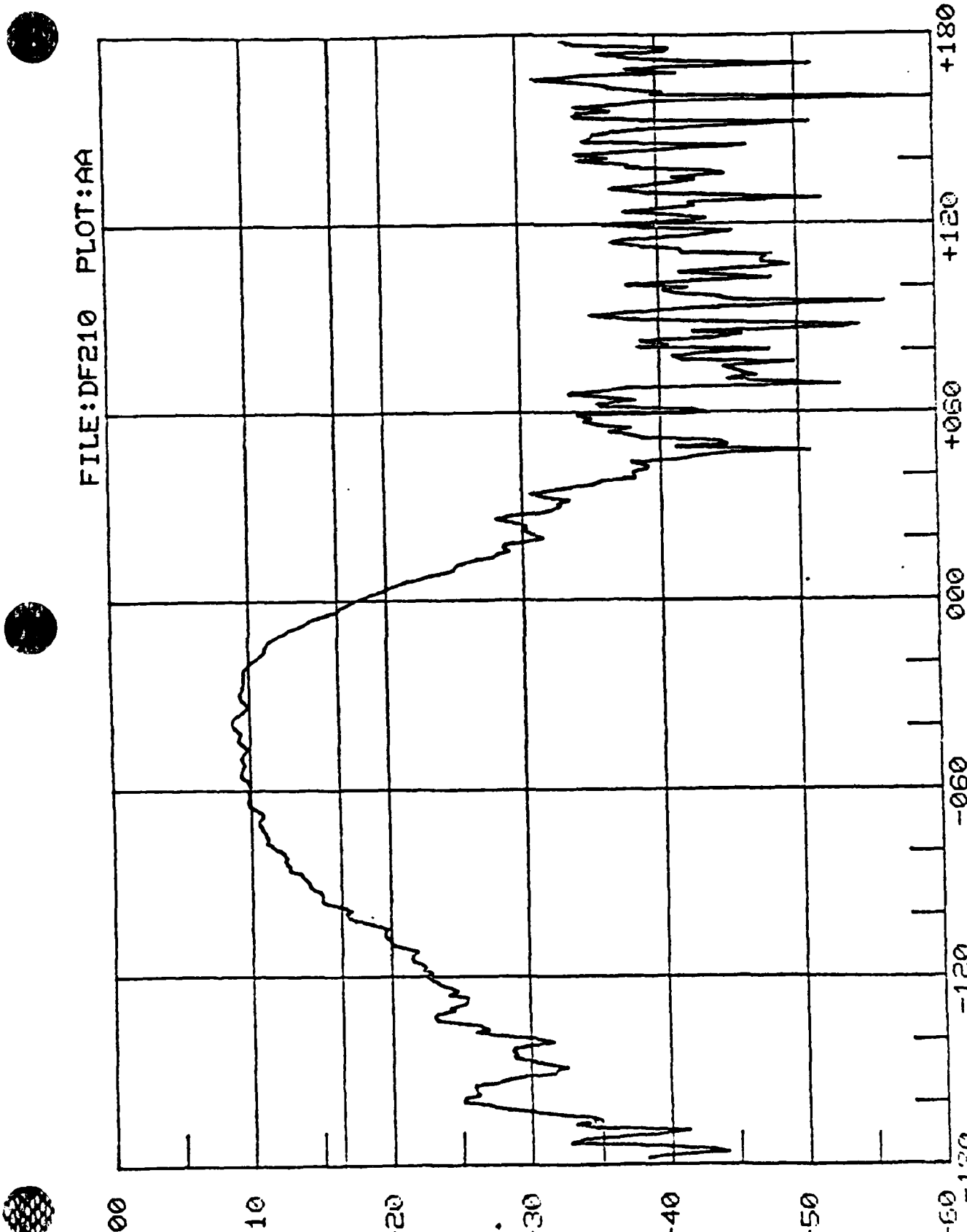
+120
SCAN ANGLE
SCAN NR: 6 STEP ANG: 50.00 FREQ NR: 1 FREQ(MHZ): F1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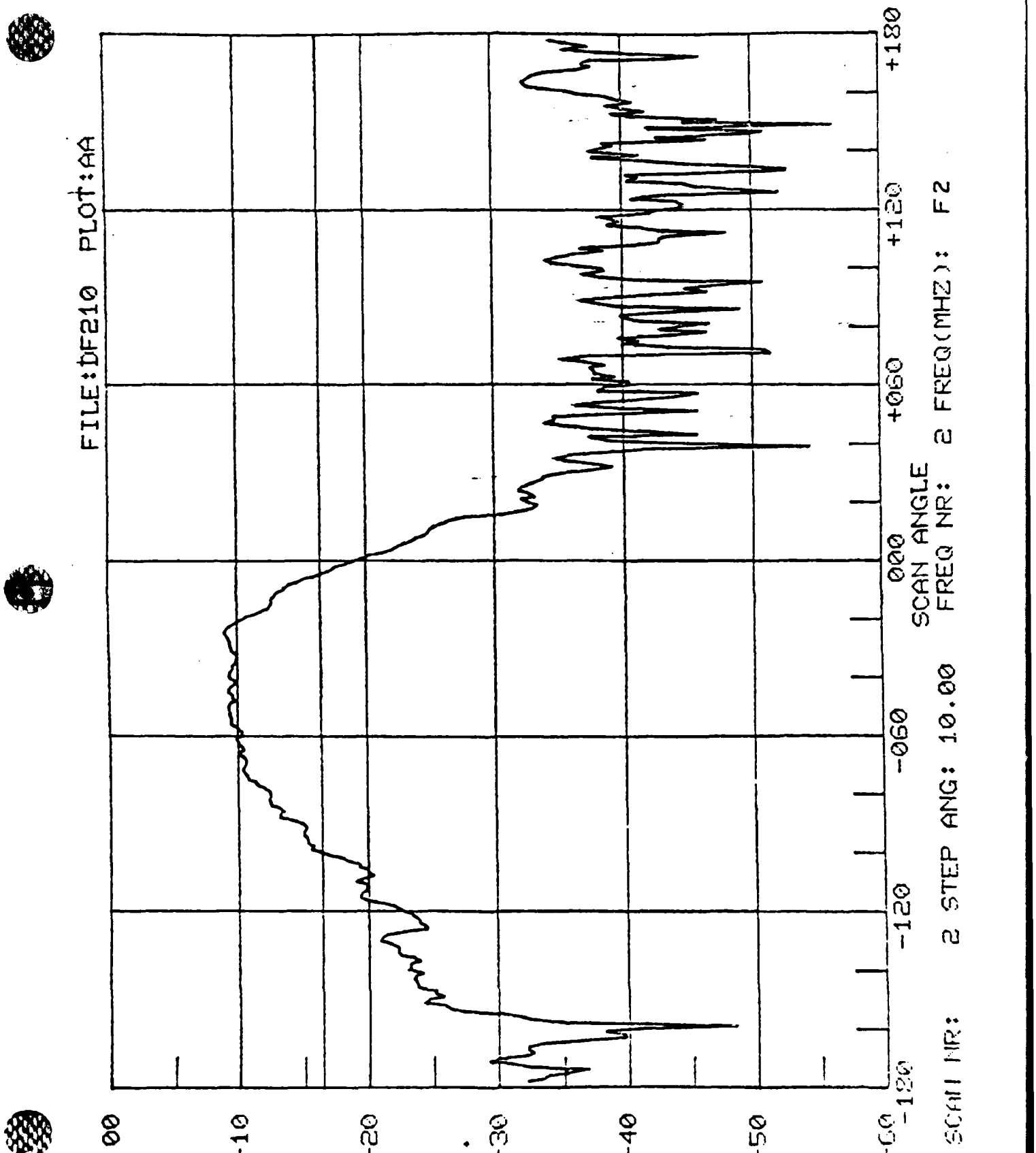
+120
+180
SCAN ANGLE
SCAN NR: 1 STEP ANG: .00 FREQ NR: 2 FREQ(MHZ): F2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AMPL.
(DB)
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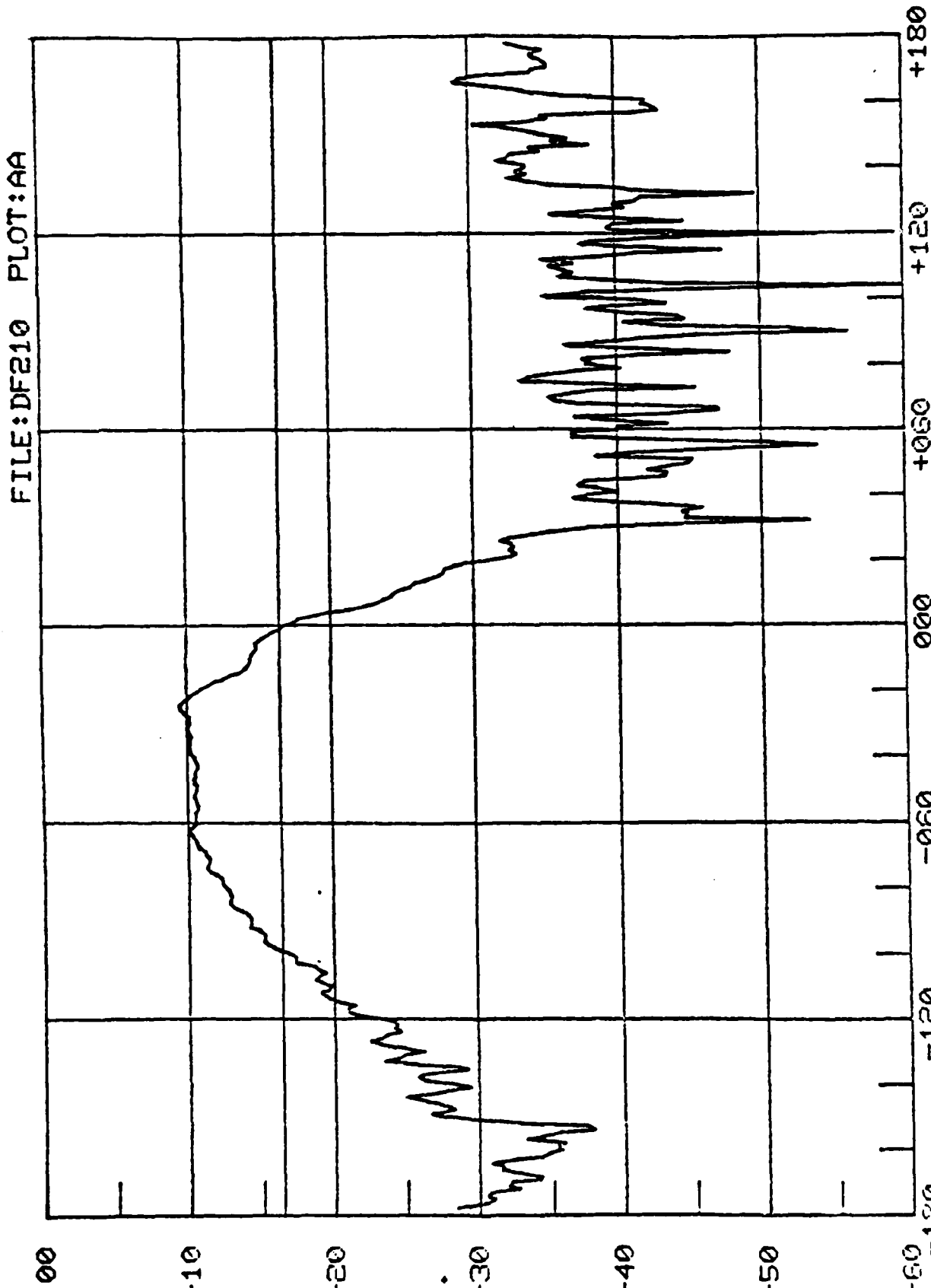
-060
000
+060
+120
+180
SCAN ANGLE
SCAN NR: 2 STEP ANG: 10.00 FREQ NR: 2 FREQ(MHZ): F2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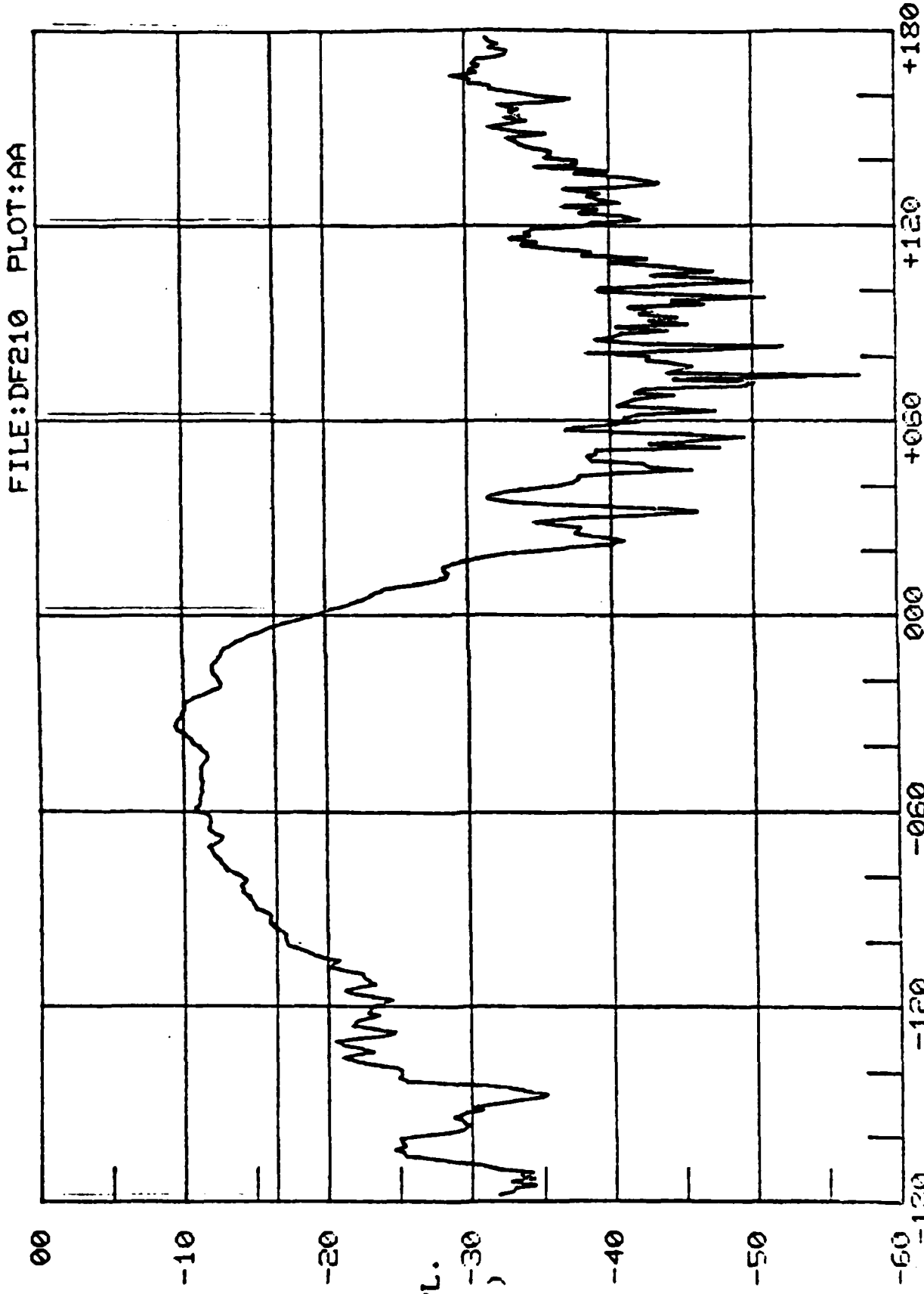
000
+060
+120
+180
SCAN ANGLE
SCAN NR: 3 STEP ANG: 20.00 FREQ NR: 2 FREQ(MHZ): F2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-50
-60
AMPL.
(DB)
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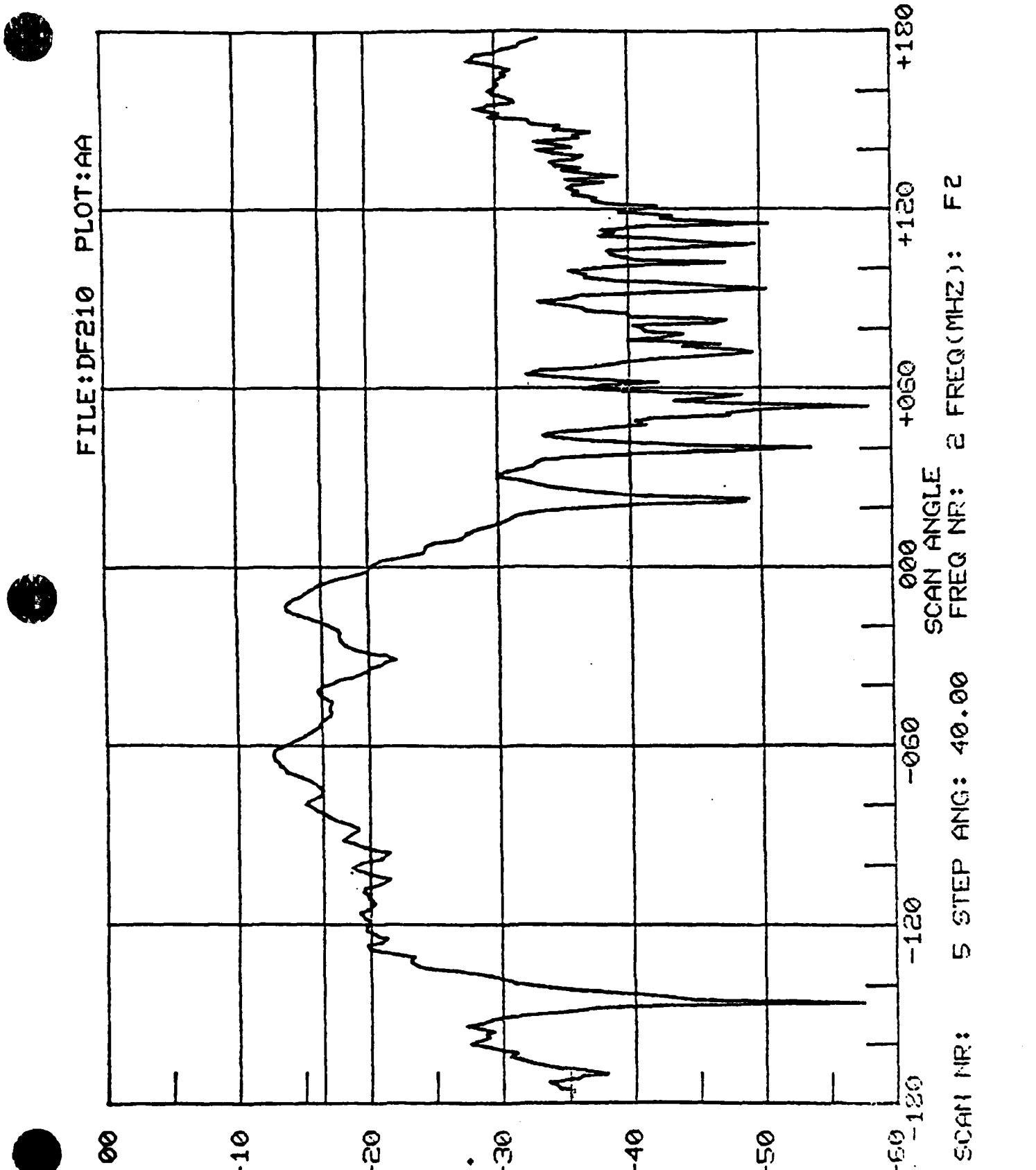
000
+060
+120
+180
SCAN ANGLE
SCAN NR: 4 STEP ANG: 30.00 FREQ NR: 2 FREQ(MHZ): F2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-50
-60
AMPL.
(DB)
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000
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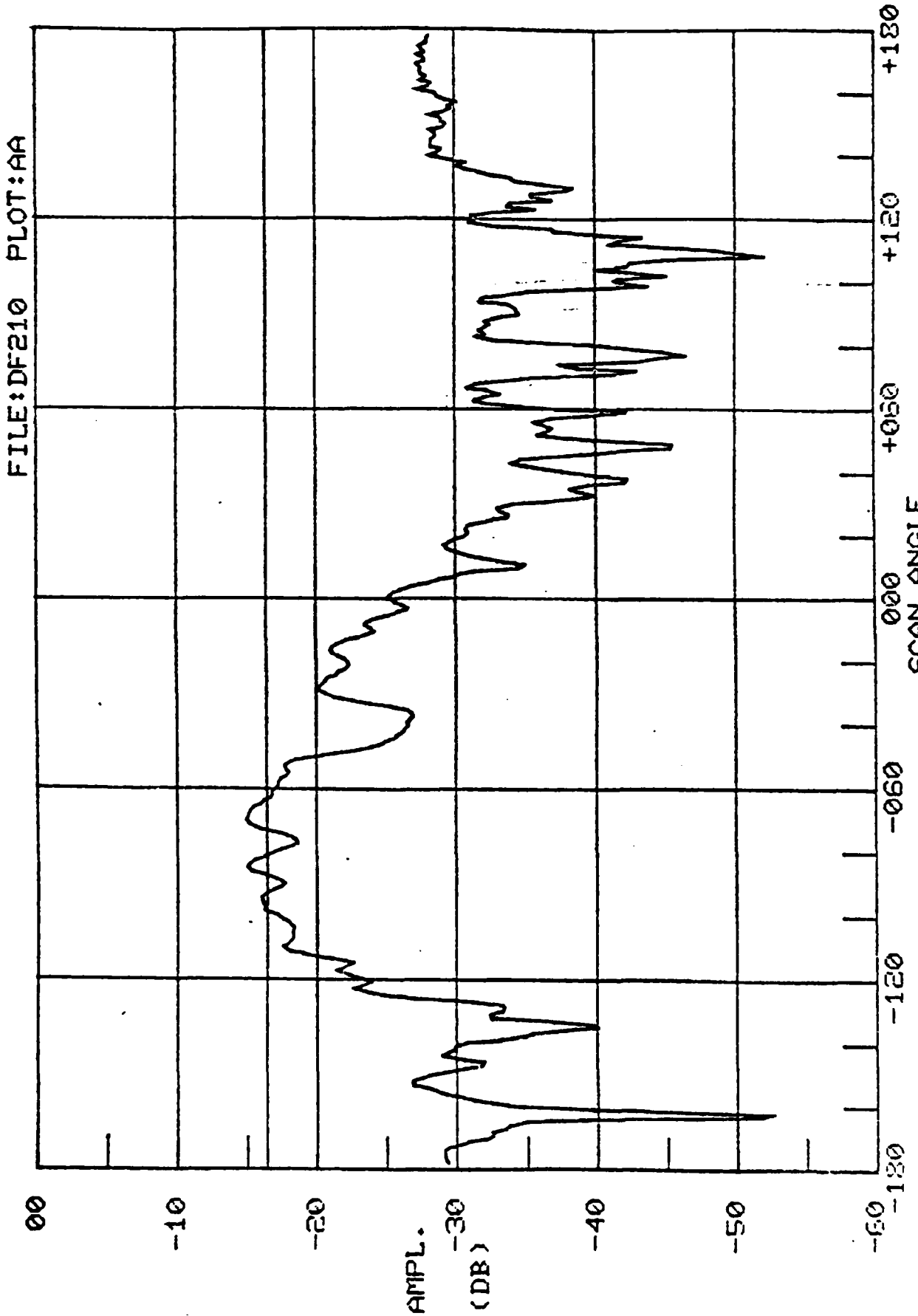
+120
+180
SCAN ANGLE
SCAN NR: 5 STEP ANG: 40.00 FREQ NR: 2 FREQ(MHZ): F2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-60
AMPL.
(DB)
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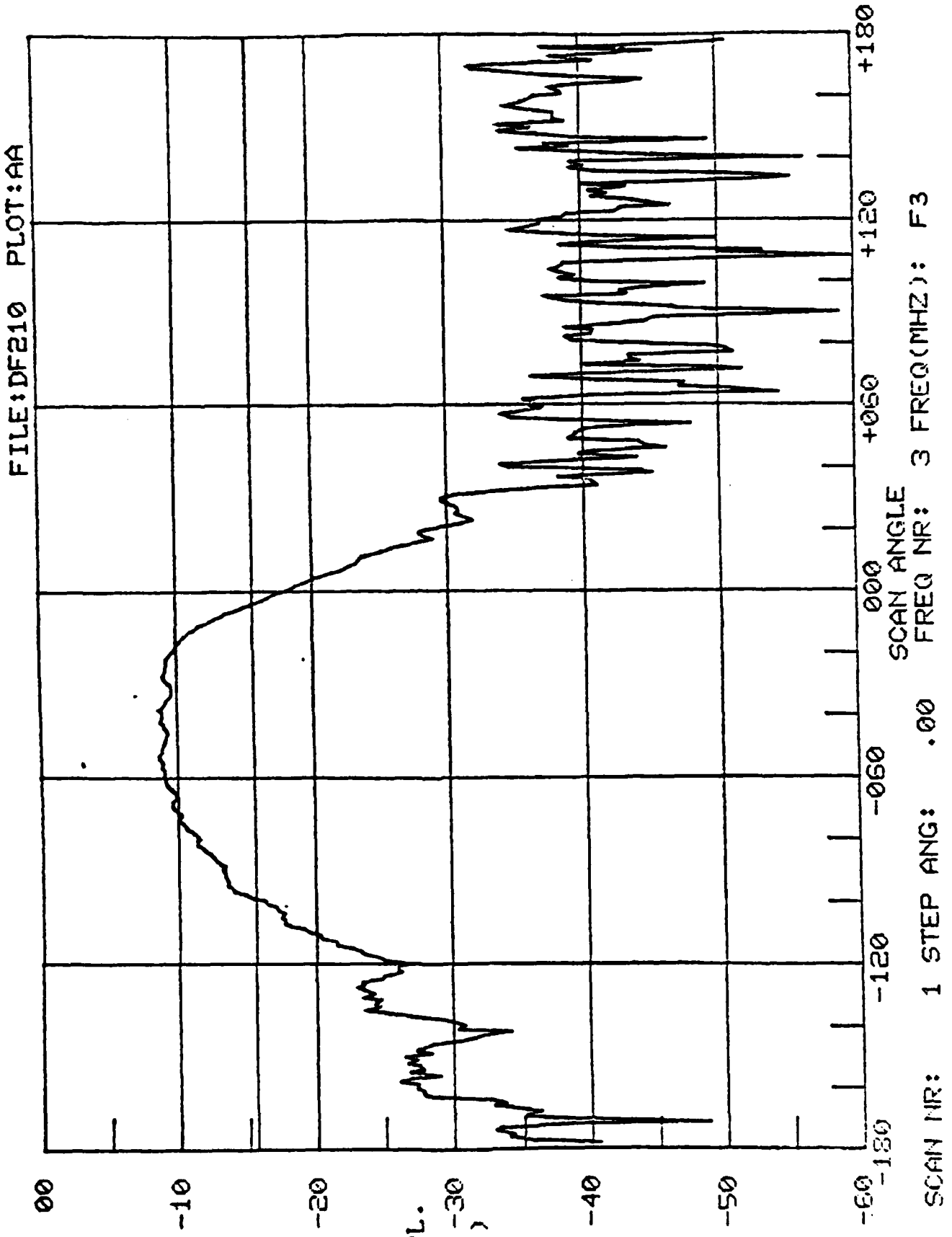
000
+060
+120
+180
SCAN ANGLE
SCAN NR: 6 STEP ANG: 50.00 FREQ NR: 2 FREQ(MHZ): F2


FILE:DF210 PLOT:AA
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-60
AMPL.
(DB)
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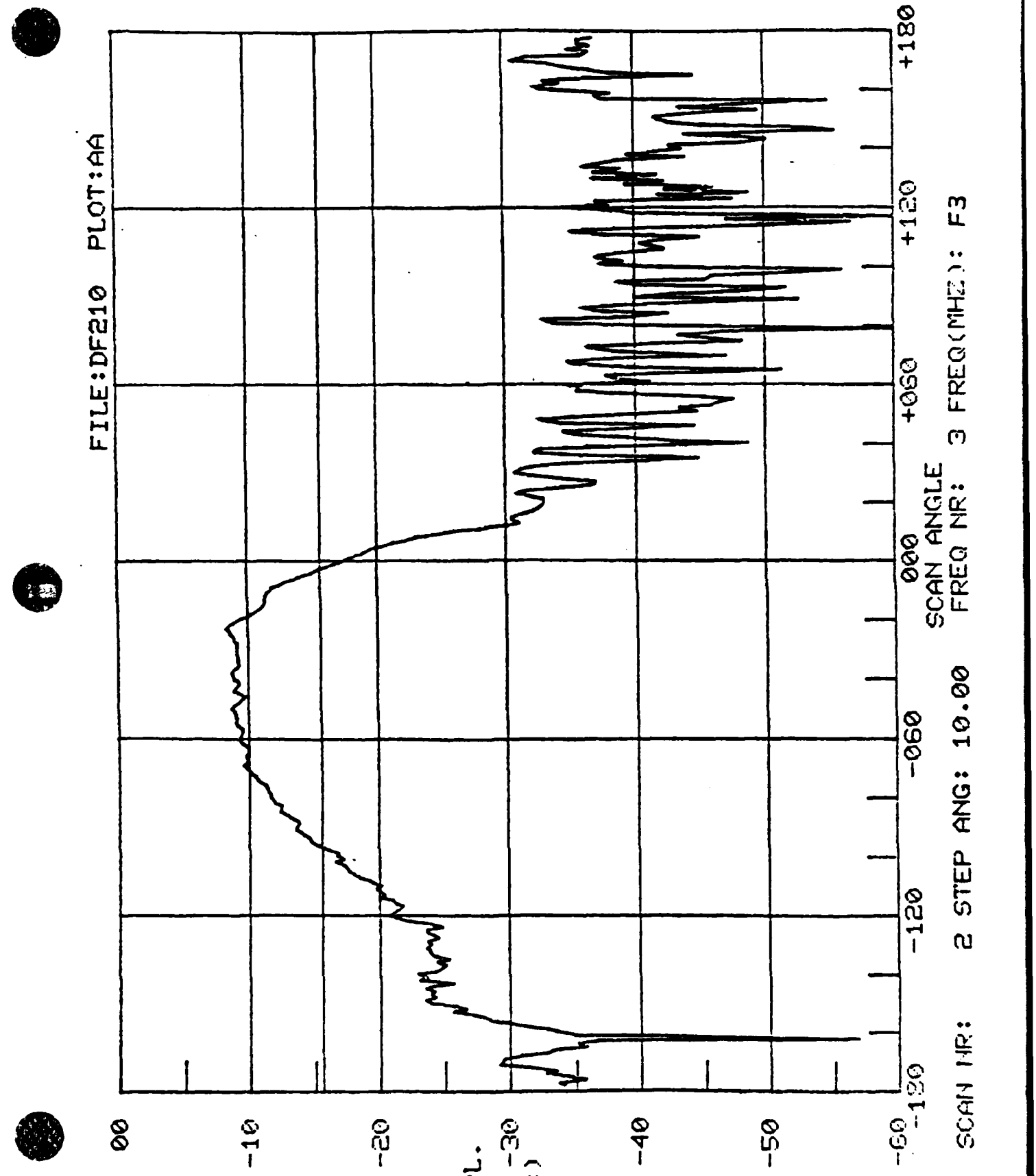
000
+060
+120
+180
SCAN ANGLE
SCAN NR: 1 STEP ANG: .00 FREQ NR: 3 FREQ(MHZ): F3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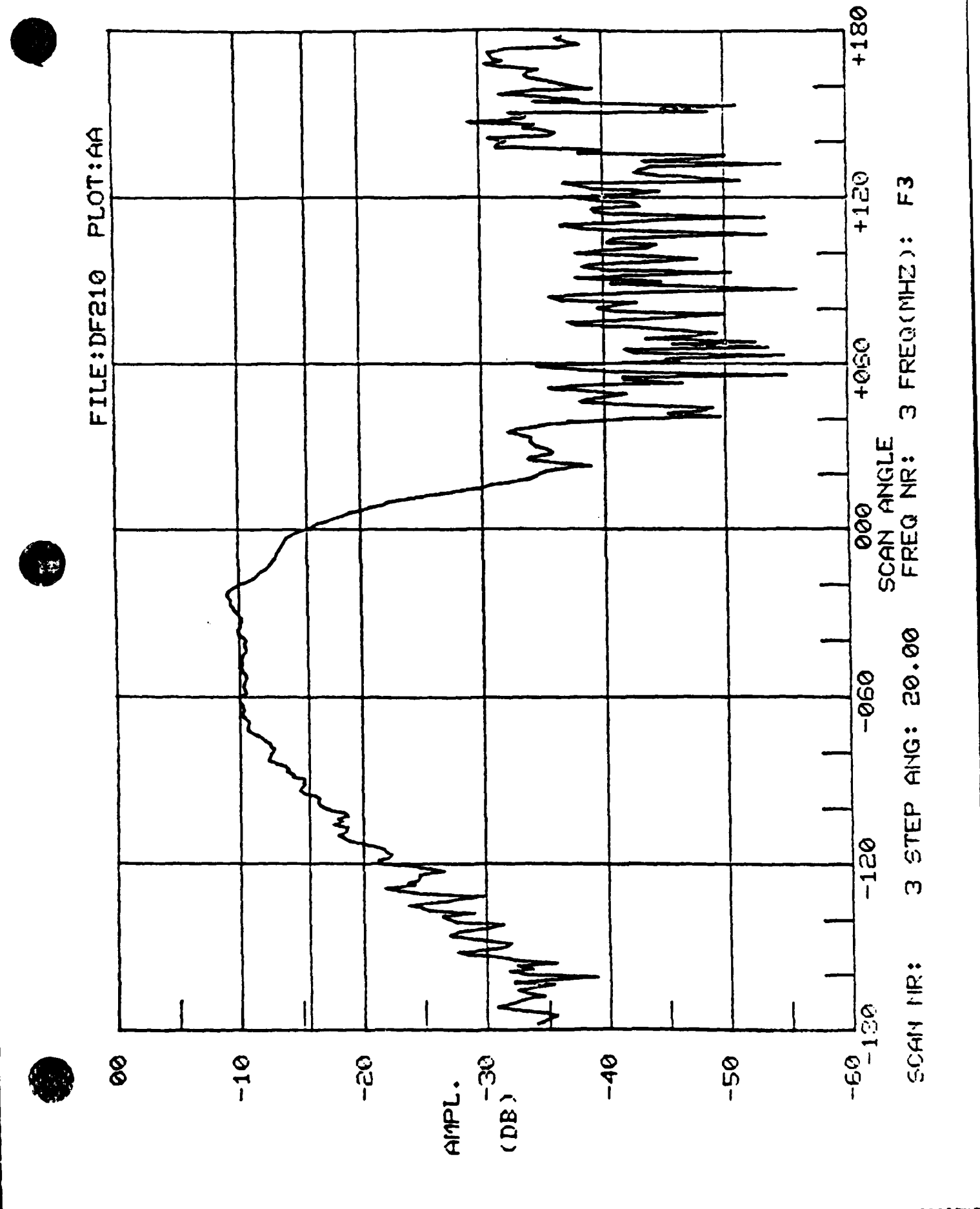
000
+060
+120
+180
SCAN ANGLE
SCAN NR: 2 STEP ANG: 10.00 FREQ NR: 3 FREQ(MHZ): F3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-50
-60
AMPL.
(DB)
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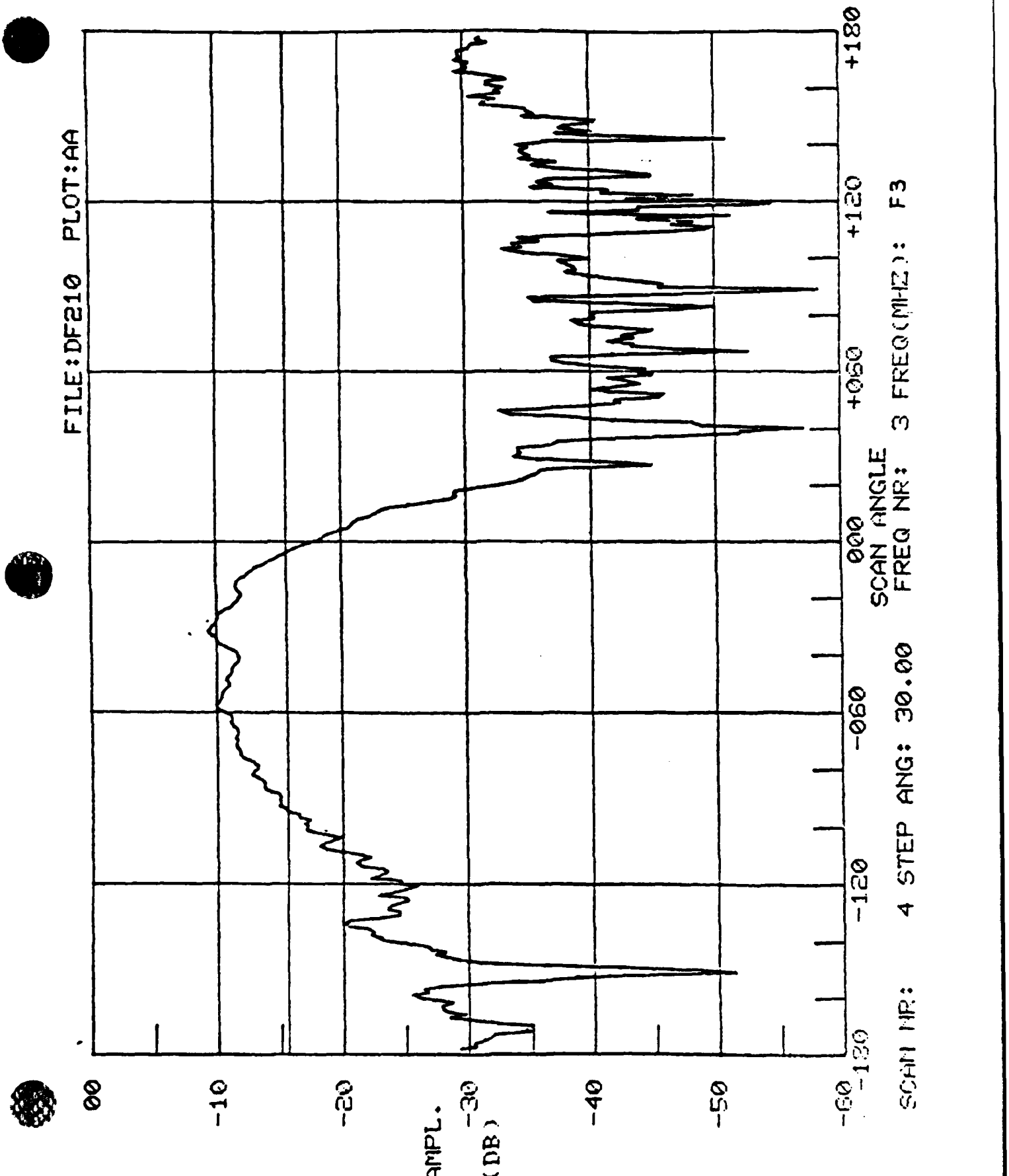
-060
000
+060
+120
+180
SCAN ANGLE
FREQ NR: 3 FREQ(MHZ): F3
SCAN NR: 3 STEP ANG: 20.00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-40
-50
-60
AMPL.
(DB)
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-120
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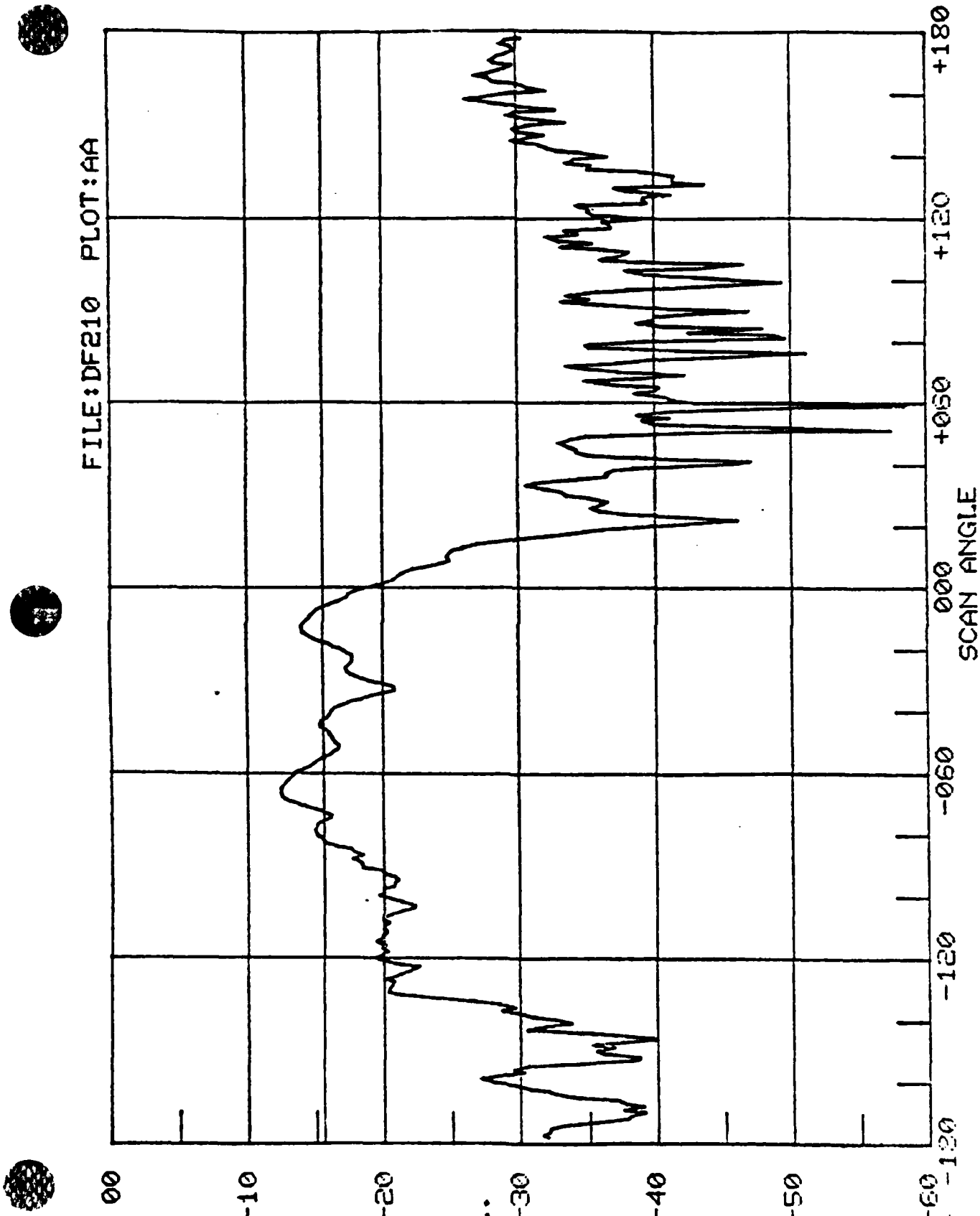
000
+060
+120
+180
SCAN ANGLE
SCAN NR: 4 STEP ANG: 30.00 FREQ NR: 3 FREQ(MHZ): F3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-50
-60
AMPL.
(DB)
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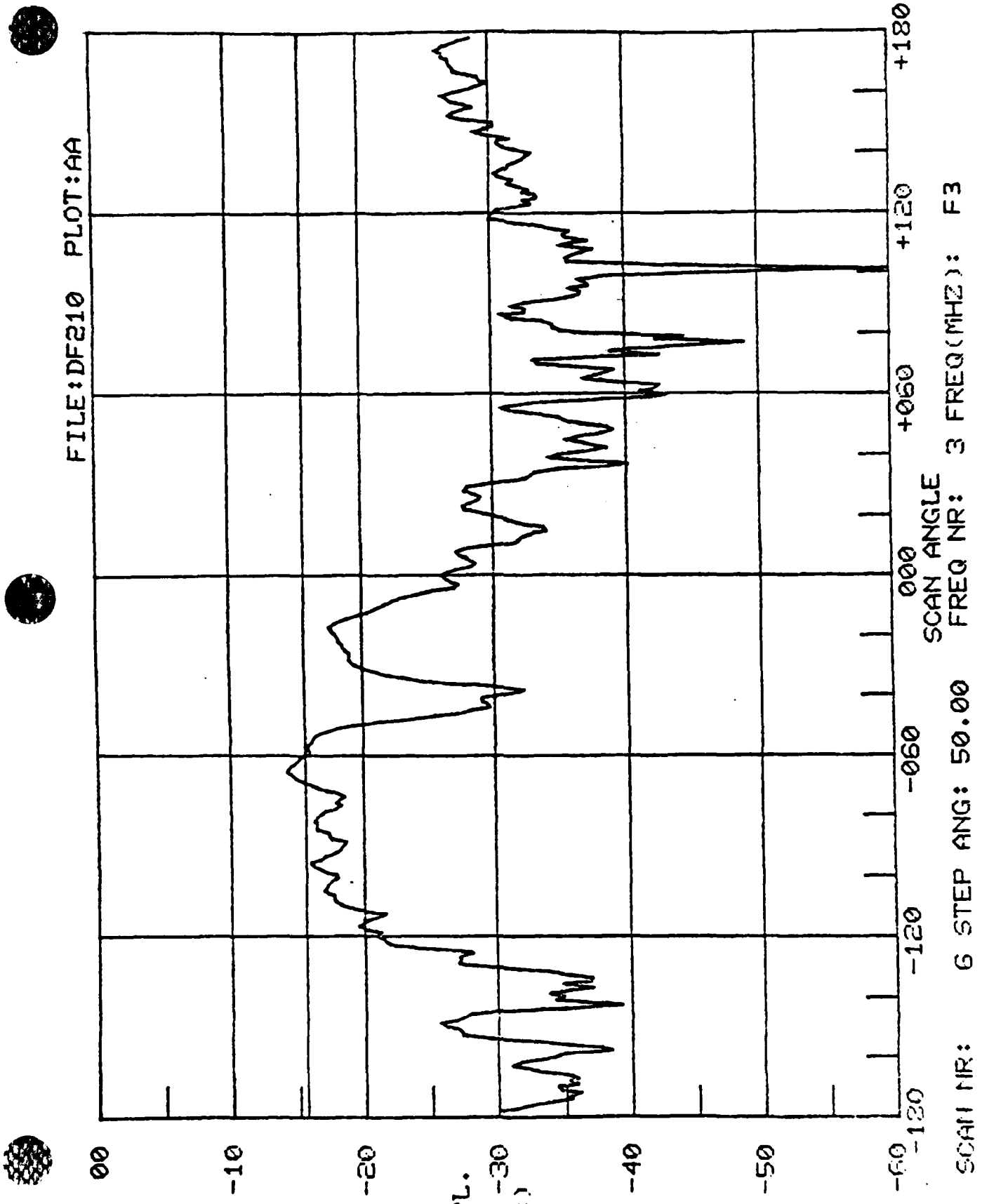
-120
-060
000
+060
+120
+180
SCAN ANGLE
SCAN NR: 5 STEP ANG: 40.00 FREQ NR: 3 FREQ(MHZ): F3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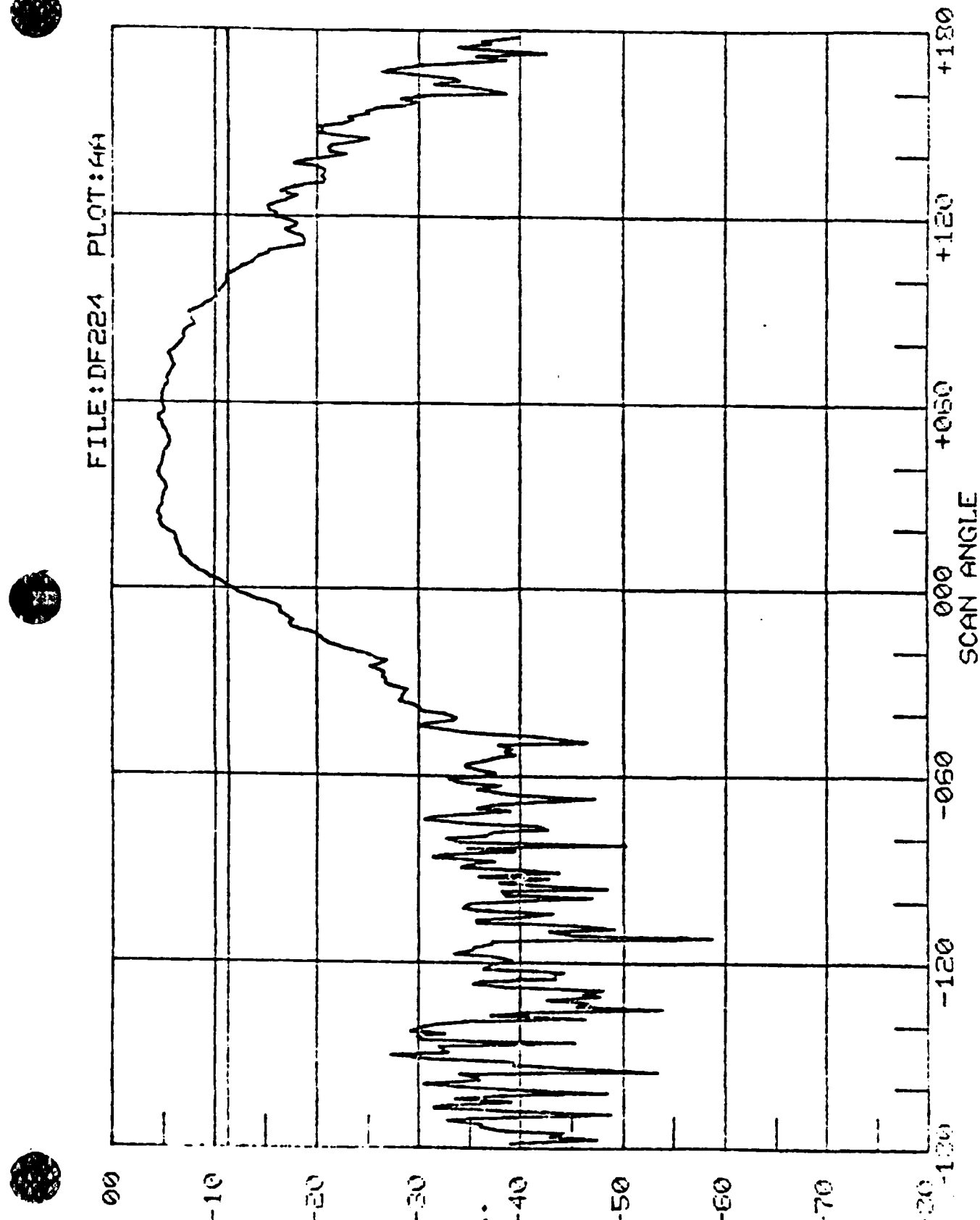
-50
-60
AMPL.
(DB)
-180
-120
-060
000
+060
+120
+180
SCAN ANGLE
SCAN NR:
6 STEP ANG: 50.00
FREQ NR: 3 FREQ(MHZ): F3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-60
-70
AMPL.
(DB)
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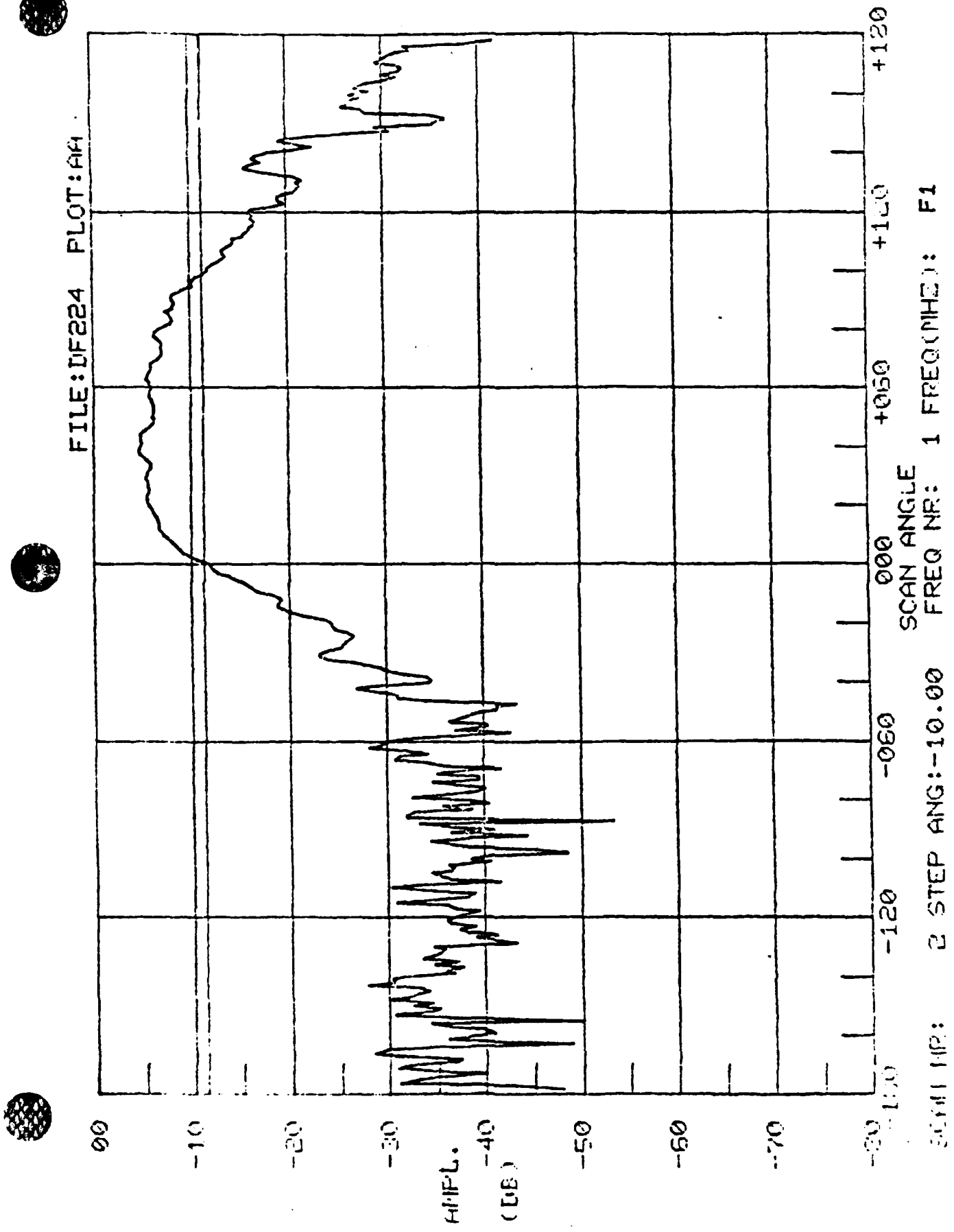
-060
000
+060
+120
+180
SCAN ANGLE
1 STEP ANG: .00 FREQ NR: 1 FREQ(MHZ): F1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(DB)
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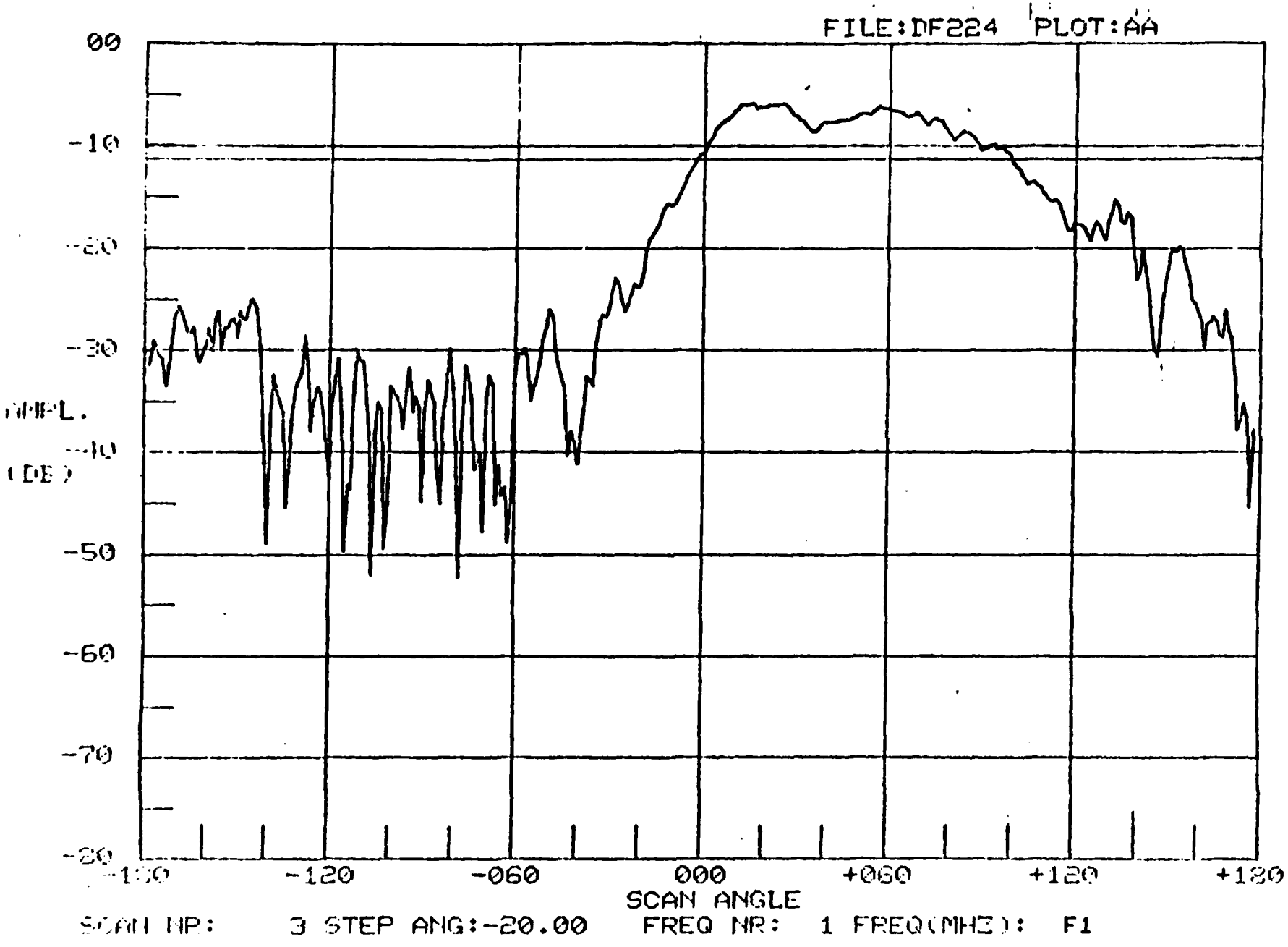
-060
000
+060
+120
SCAN ANGLE
FREQ NR: 1 FREQ(MHZ): F1
2 STEP ANG:-10.00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(DB)
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-60
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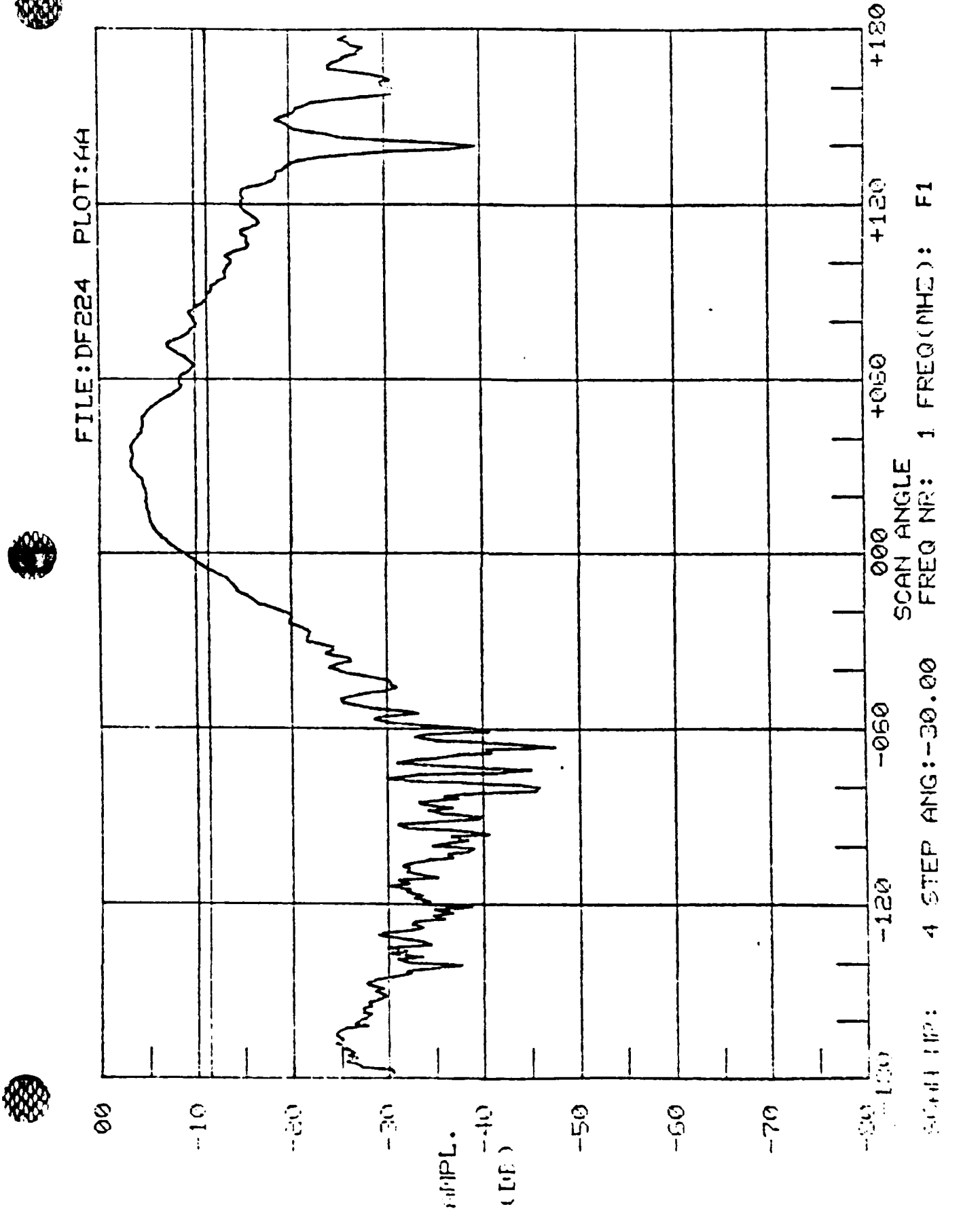
000
+060
+120
+180
SCAN ANGLE
SCAN NR: 3 STEP ANG:-20.00 FREQ NR: 1 FREQ(MHZ): F1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-120
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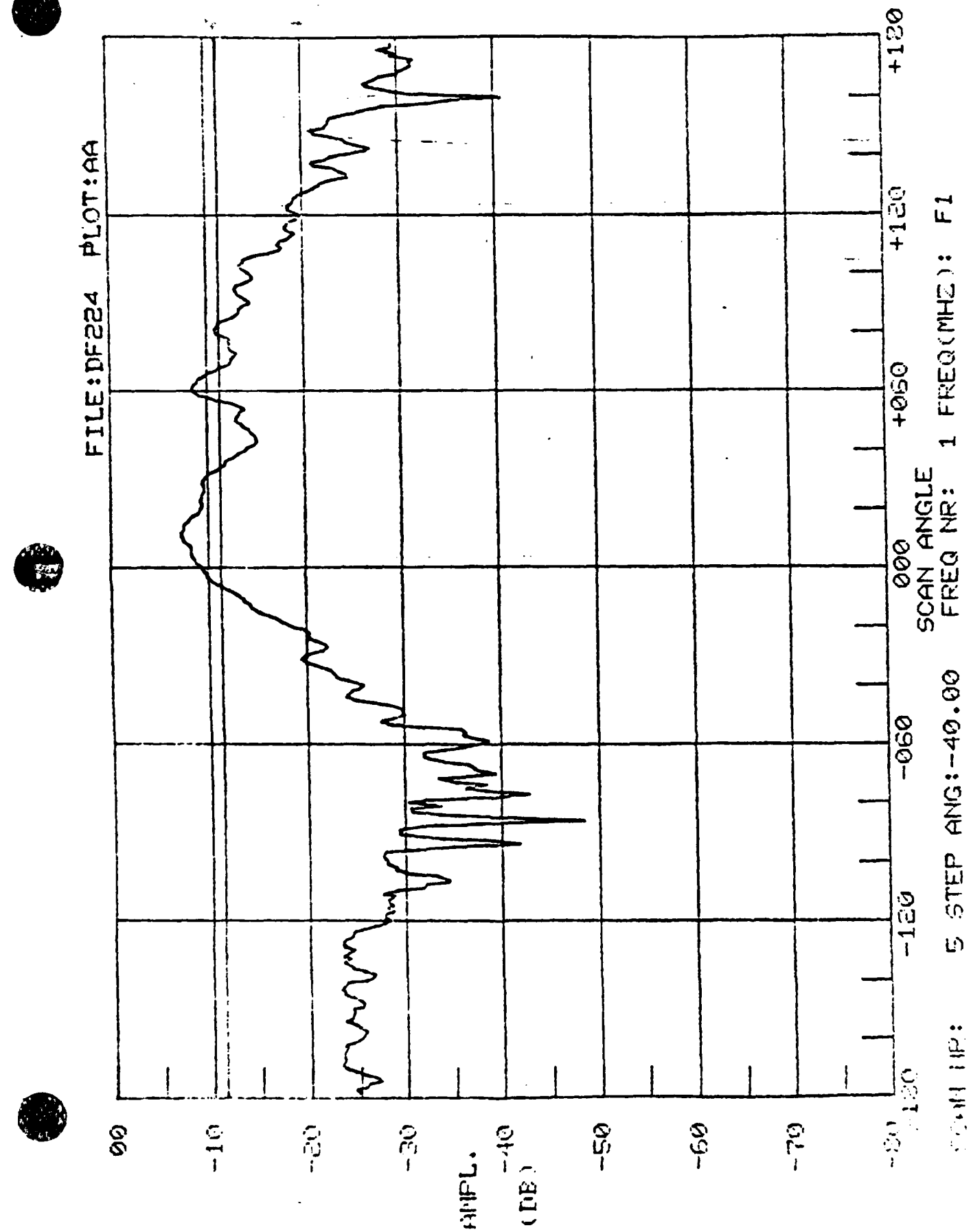
000
+060
+120
+180
SCAN ANGLE
FREQ NR: 1 FREQ(MHZ): F1
4 STEP ANG:-30.00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-50
-60
-70
-80
AMPL.
(DB)
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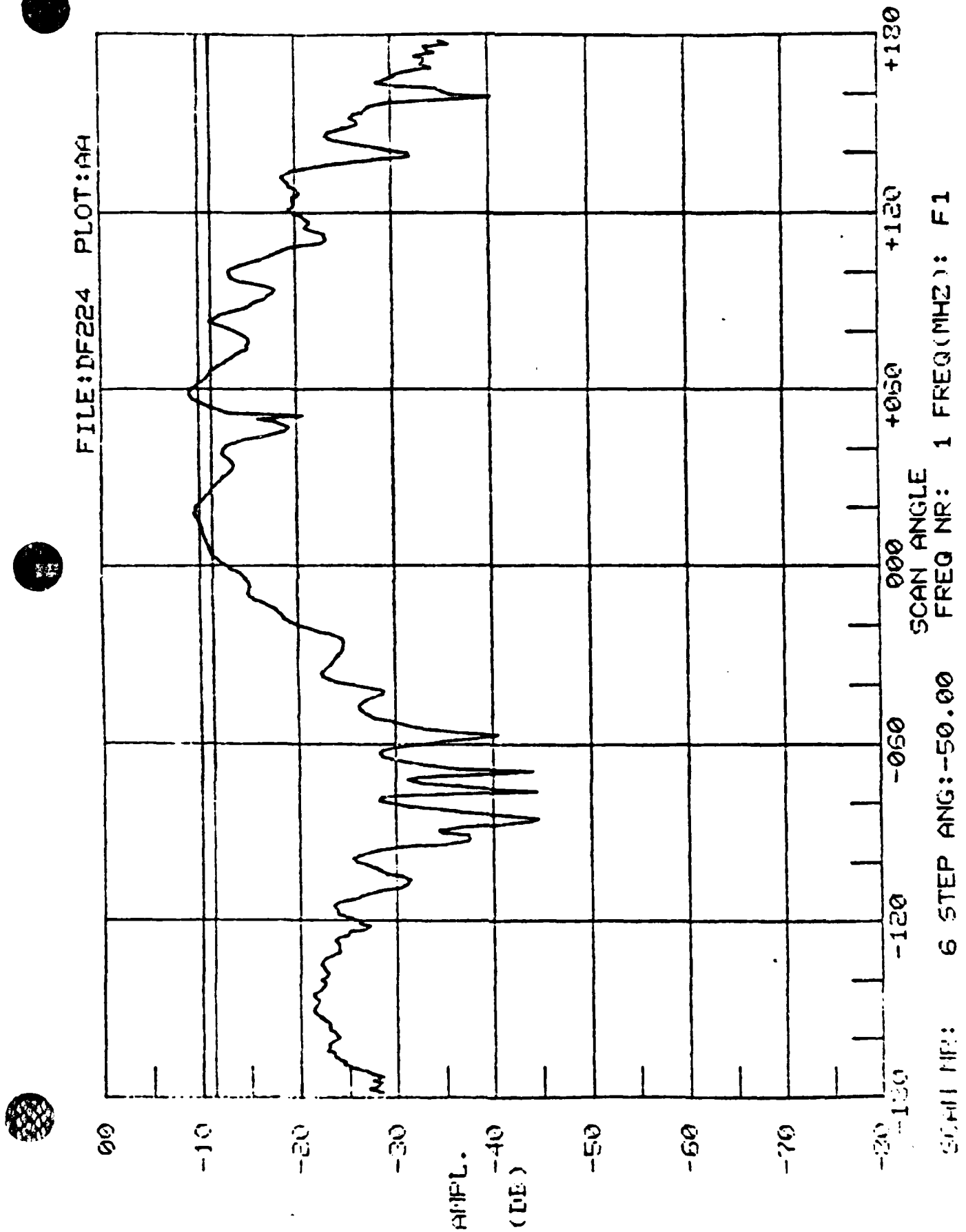
-060
000
+060
+120
SCAN ANGLE
FREQ NR: 1 FREQ(MHZ): F1
5 STEP ANG:-40.00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-50
-60
-70
-80
AMPL.
(DB)
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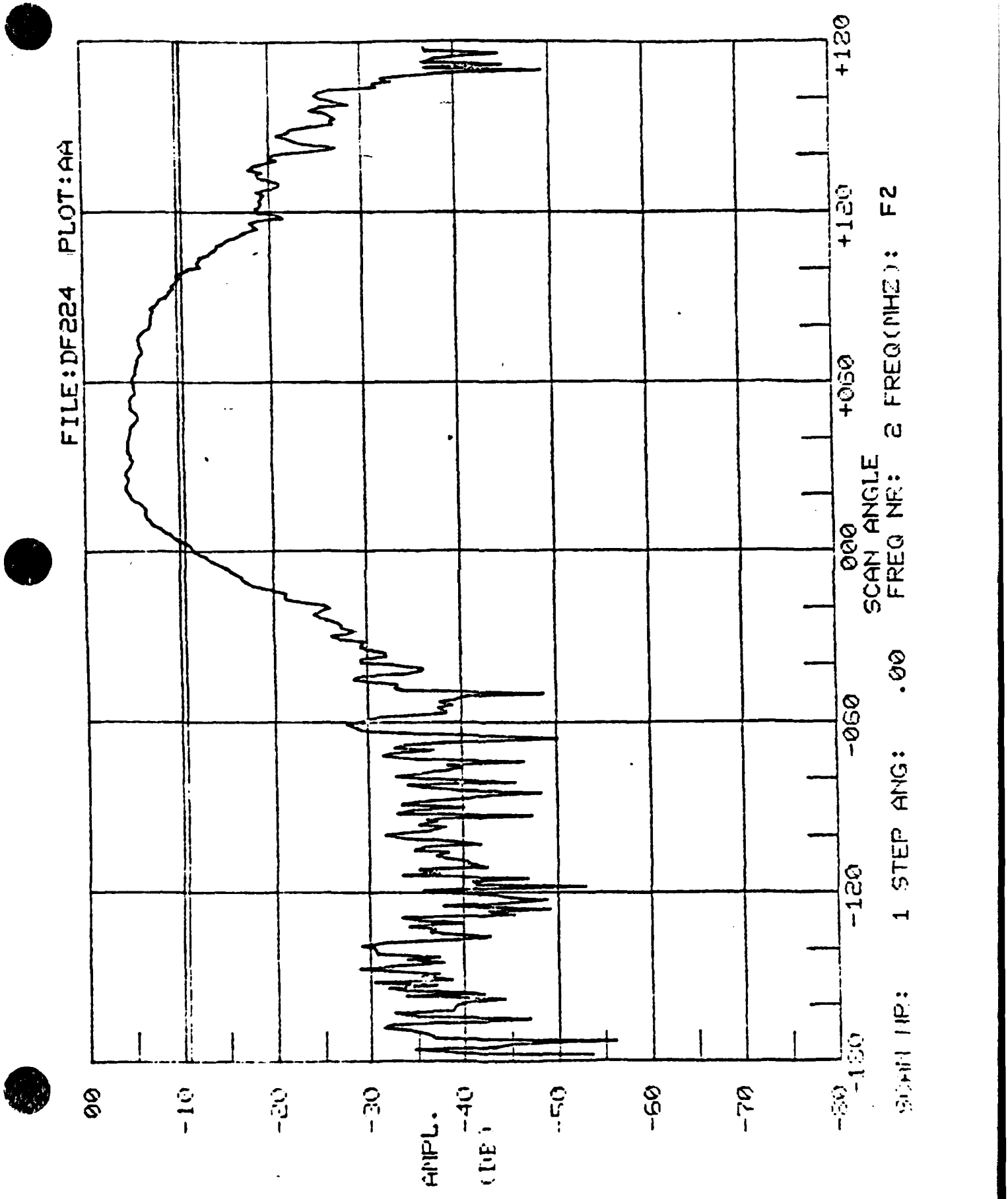
-120
-060
000
+060
+120
+180
SCAN ANGLE
6 STEP ANG:-50.00
FREQ NR: 1 FREQ(MHZ): F1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-40
-50
-60
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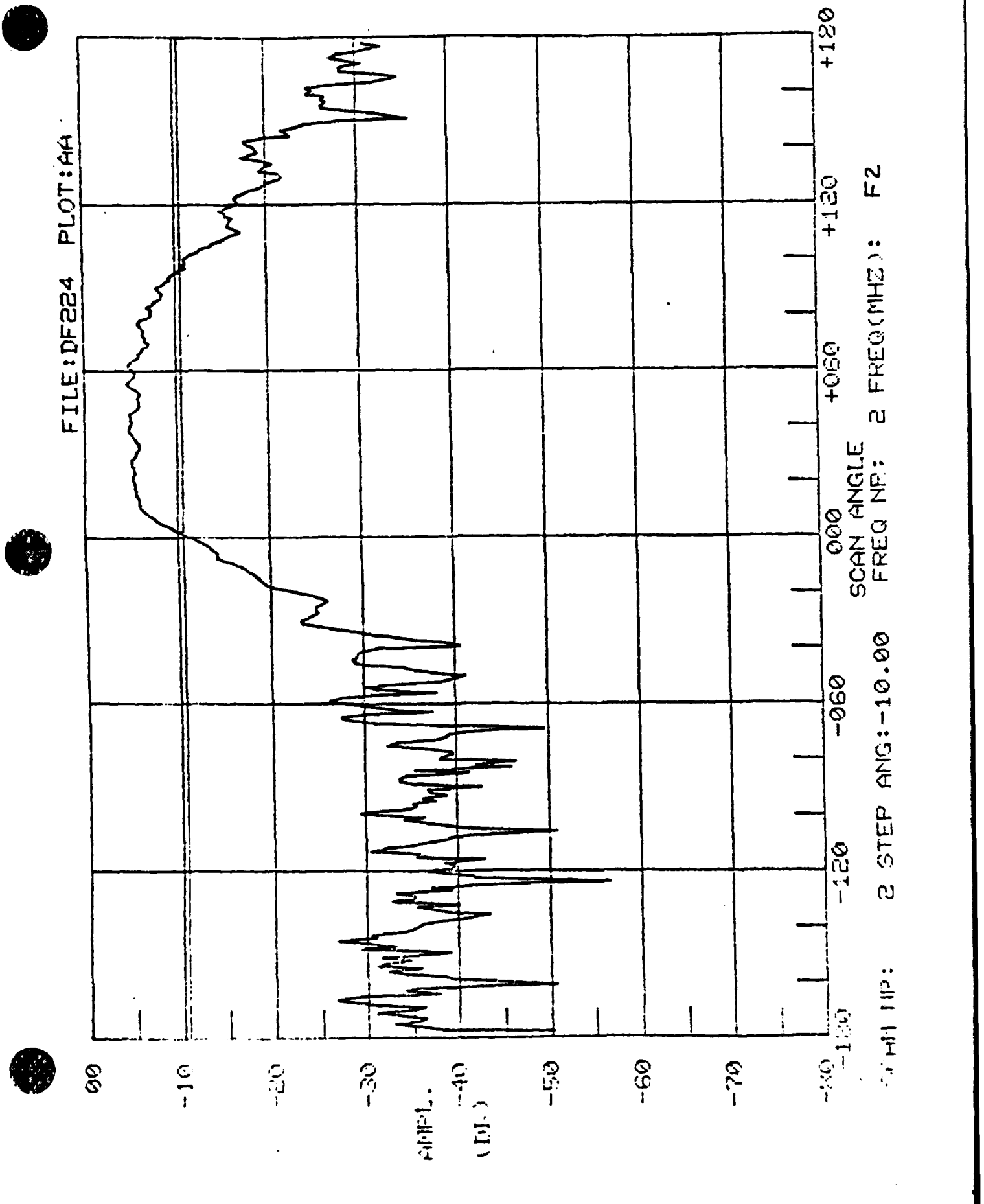
-80
-120
-060
000
+060
+120
SCAN ANGLE
FREQ NR: 2 FREQ(MHZ): F2
1 STEP ANG: .00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-50
-60
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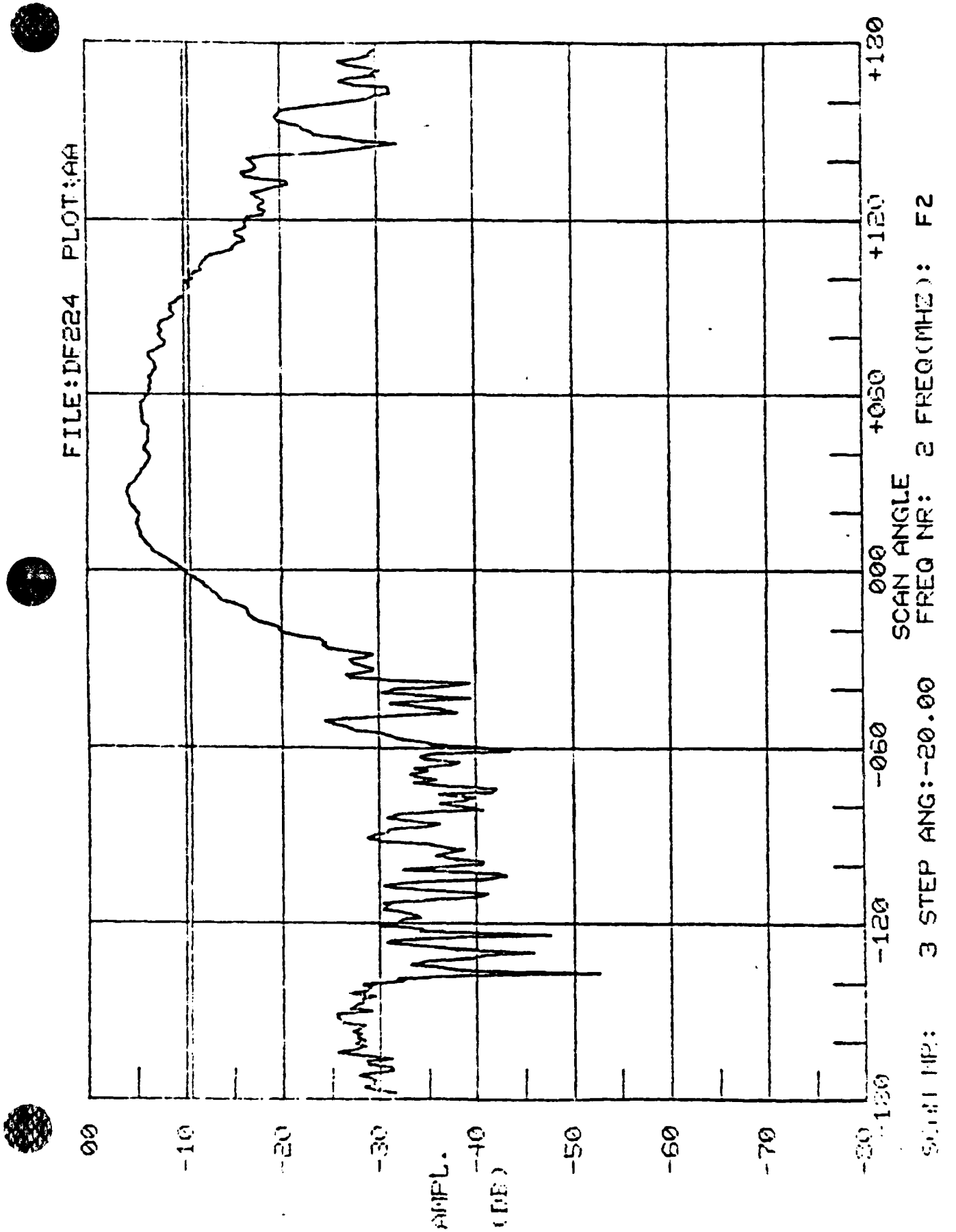
-80
-120
-060
000
+060
+120
+120
SCAN ANGLE
FREQ NP: 2 FREQ(MHZ): F2
2 STEP ANG:-10.00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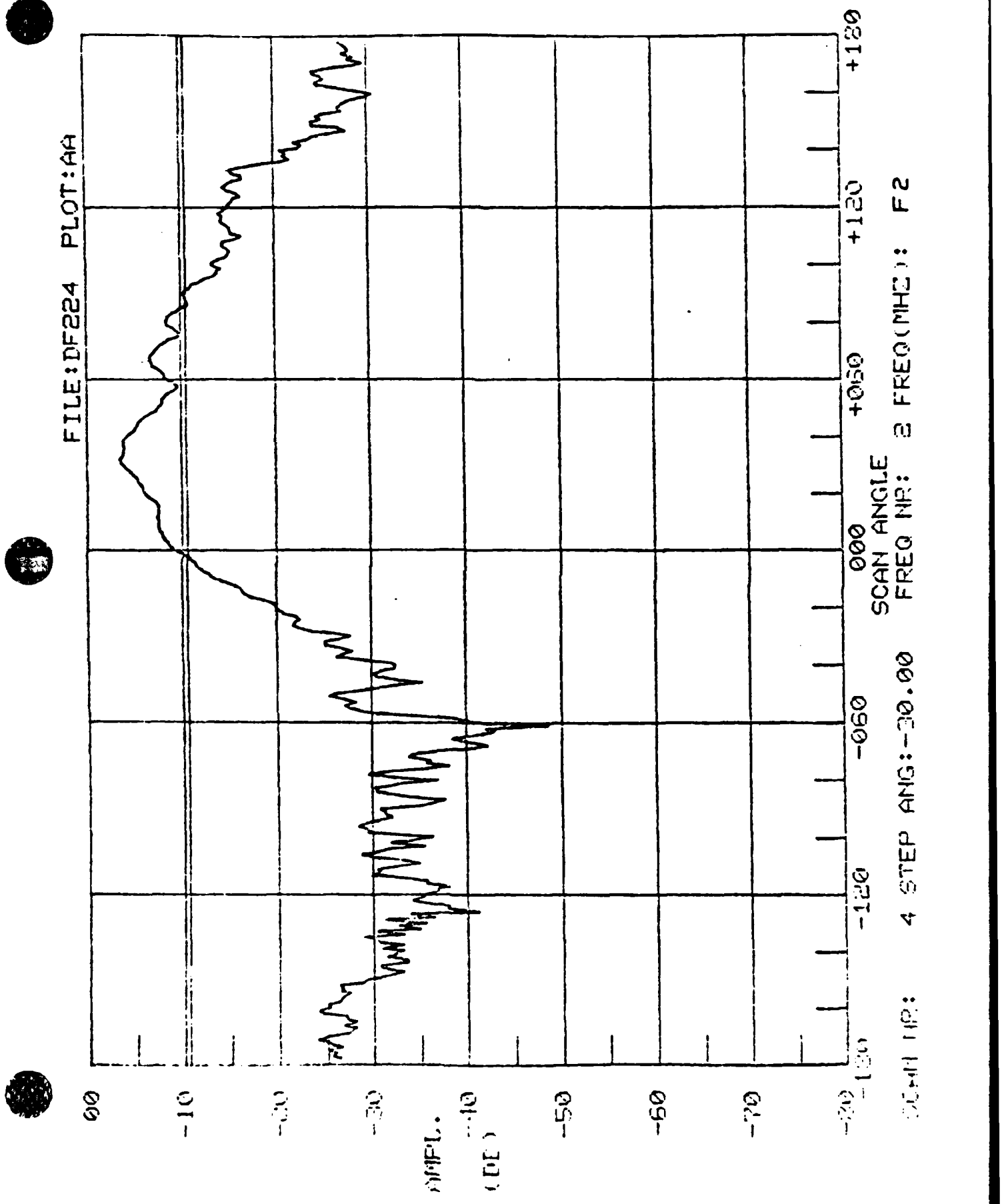
-060
000
+060
+120
SCAN ANGLE
FREQ NR: 2 FREQ(MHZ): F2
3 STEP ANG:-20.00


FILE:DF224 PLOT:AA
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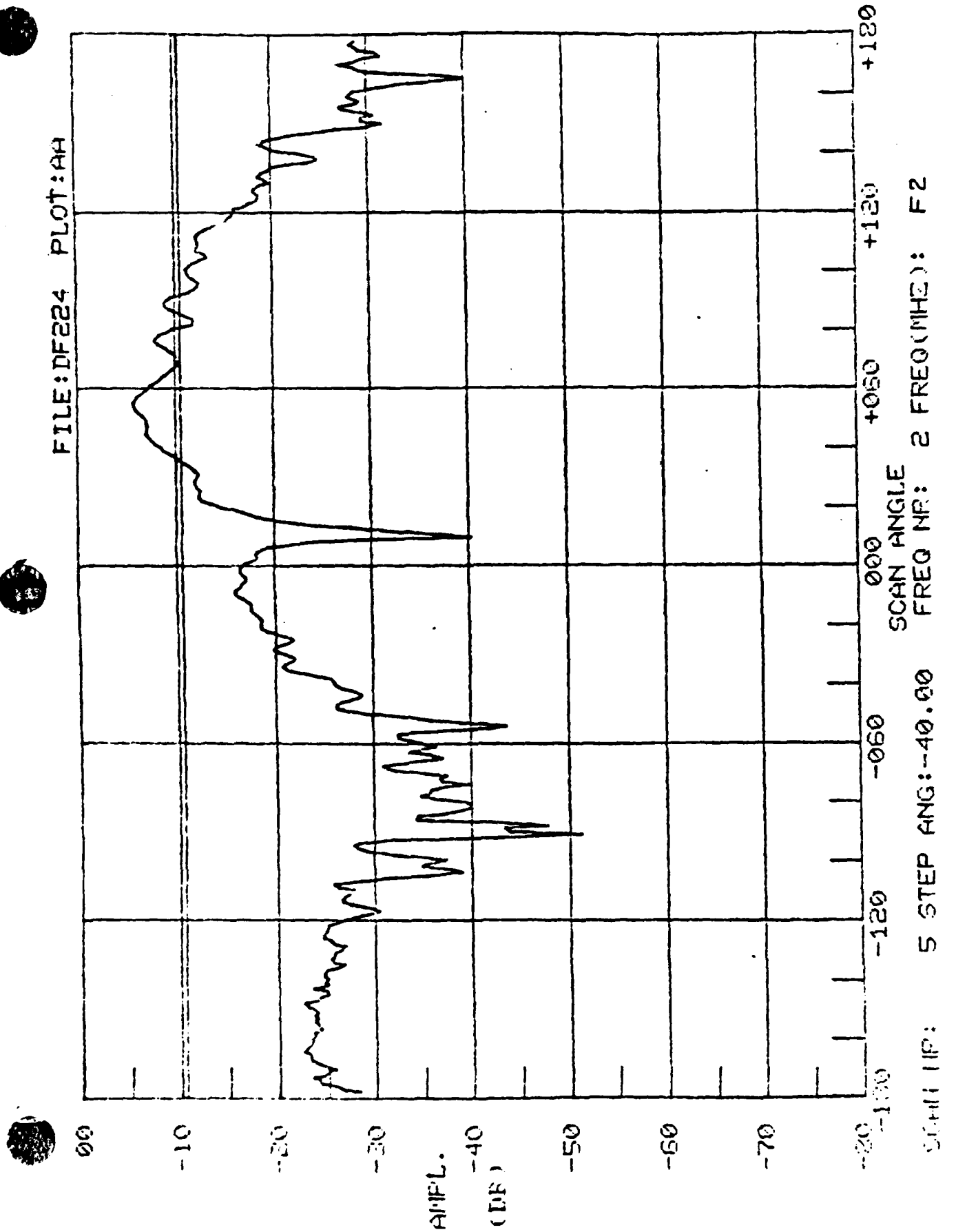
-180
+120
+060
000
-060
-120
SCAN ANGLE
4 STEP ANG:-30.00
FREQ NR: 2 FREQ(MHZ): F2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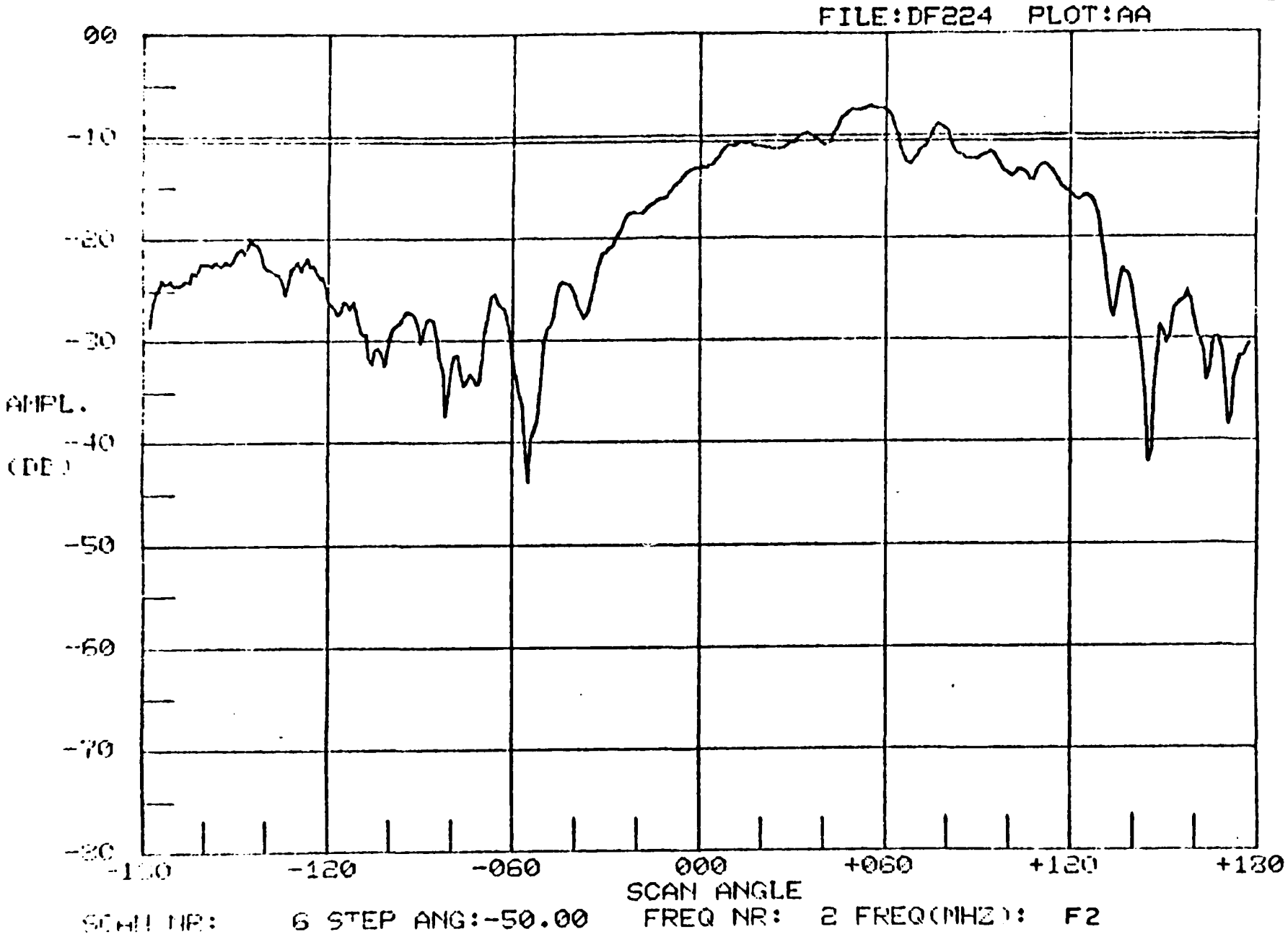
-50
-60
-70
-120
-060
000
+060
+120
SCAN ANGLE
FREQ NR: 2 FREQ(MHZ): F2
5 STEP ANG:-40.00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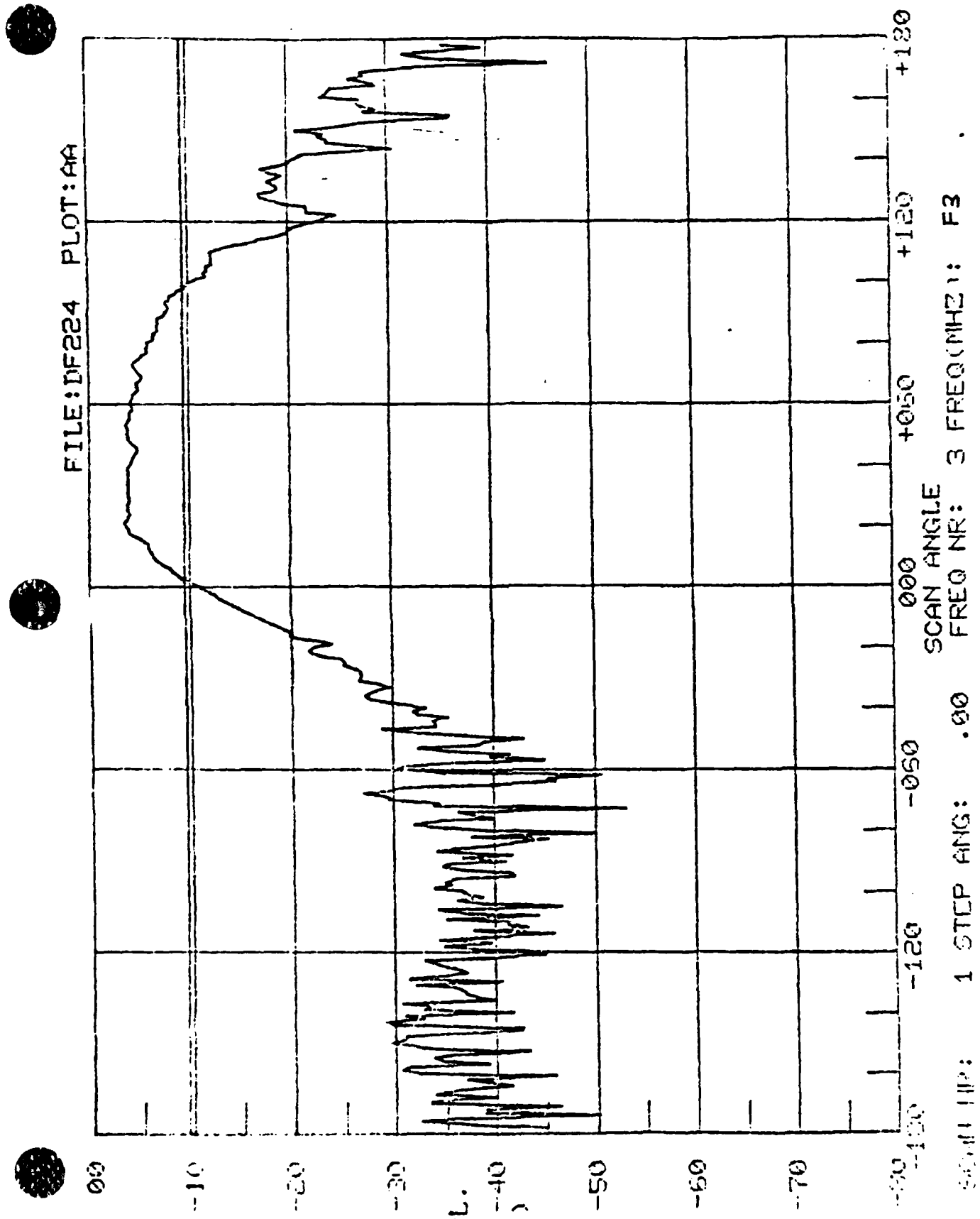
AMPL.
-40
(DB)
-50
-60
-70
-80
-180
-120
-060
000
+060
+120
+180
SCAN ANGLE
SCAN NR: 6 STEP ANG:-50.00 FREQ NR: 2 FREQ(MHZ): F2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-10
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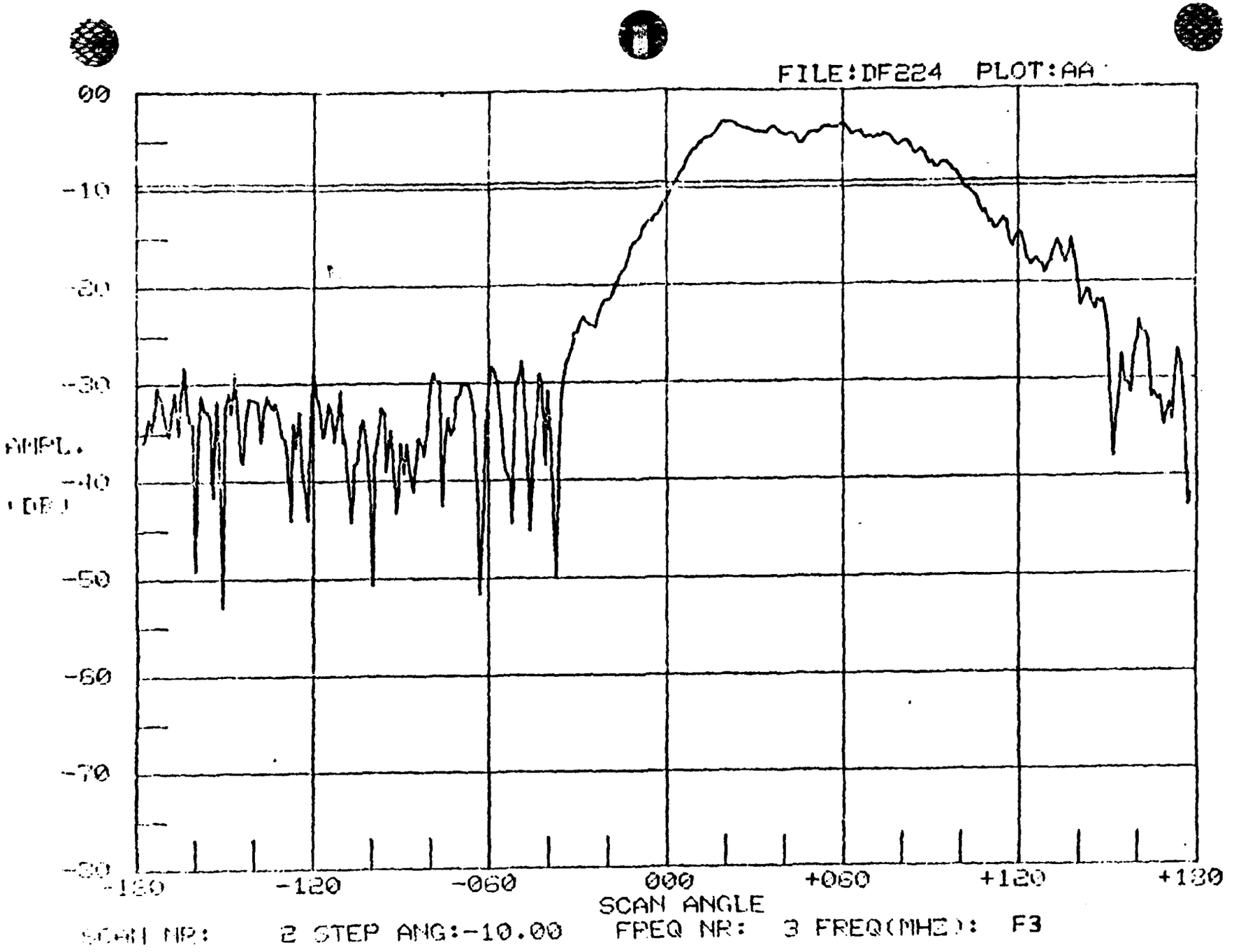
-50
-60
-70
AMPL.
(DB)
-120
-060
000
+060
+120
SCAN ANGLE
FREQ NR: 3 FREQ(MHZ): F3
1 STEP ANG: .90


FILE:DF224 PLOT:AA
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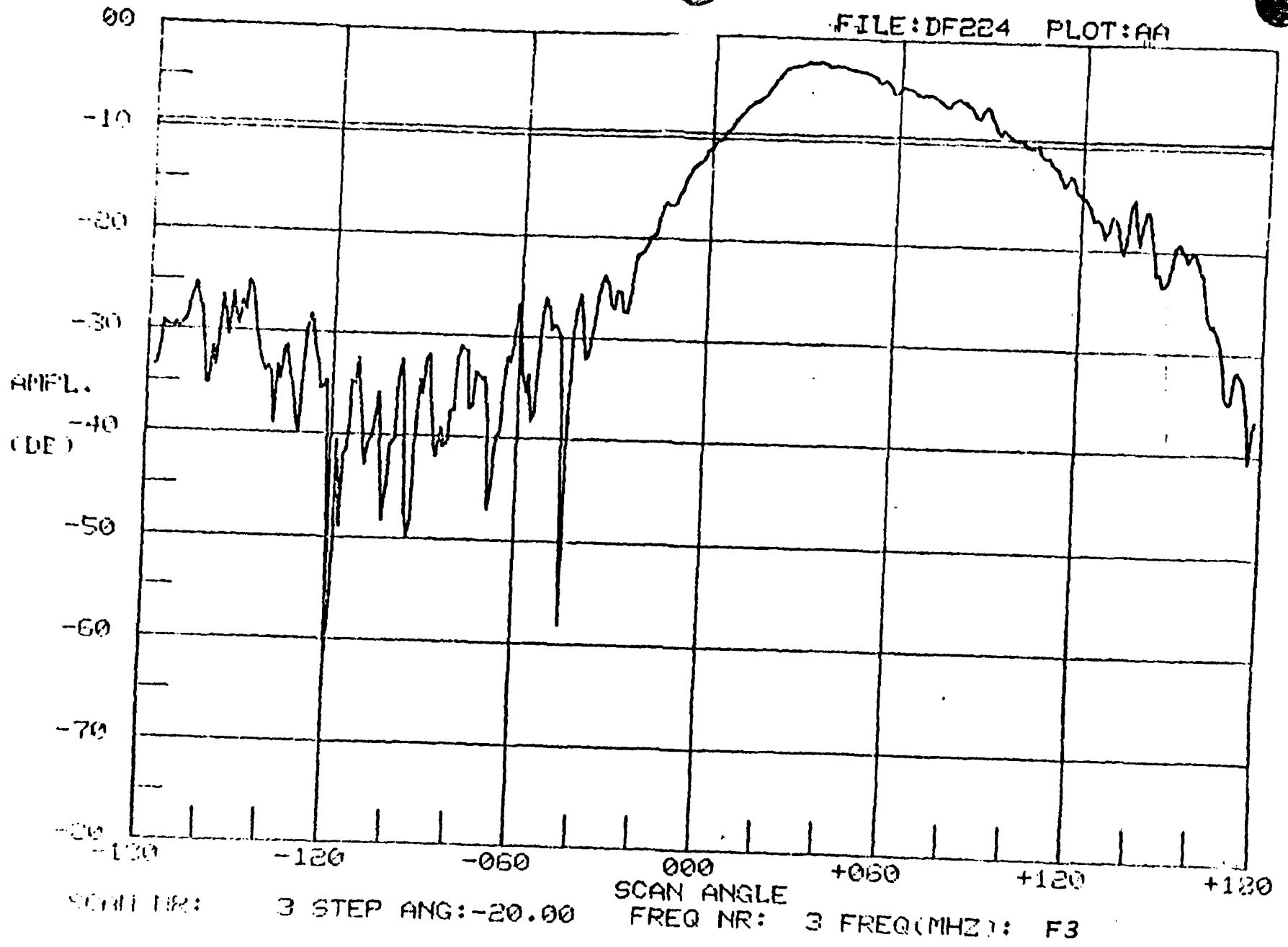
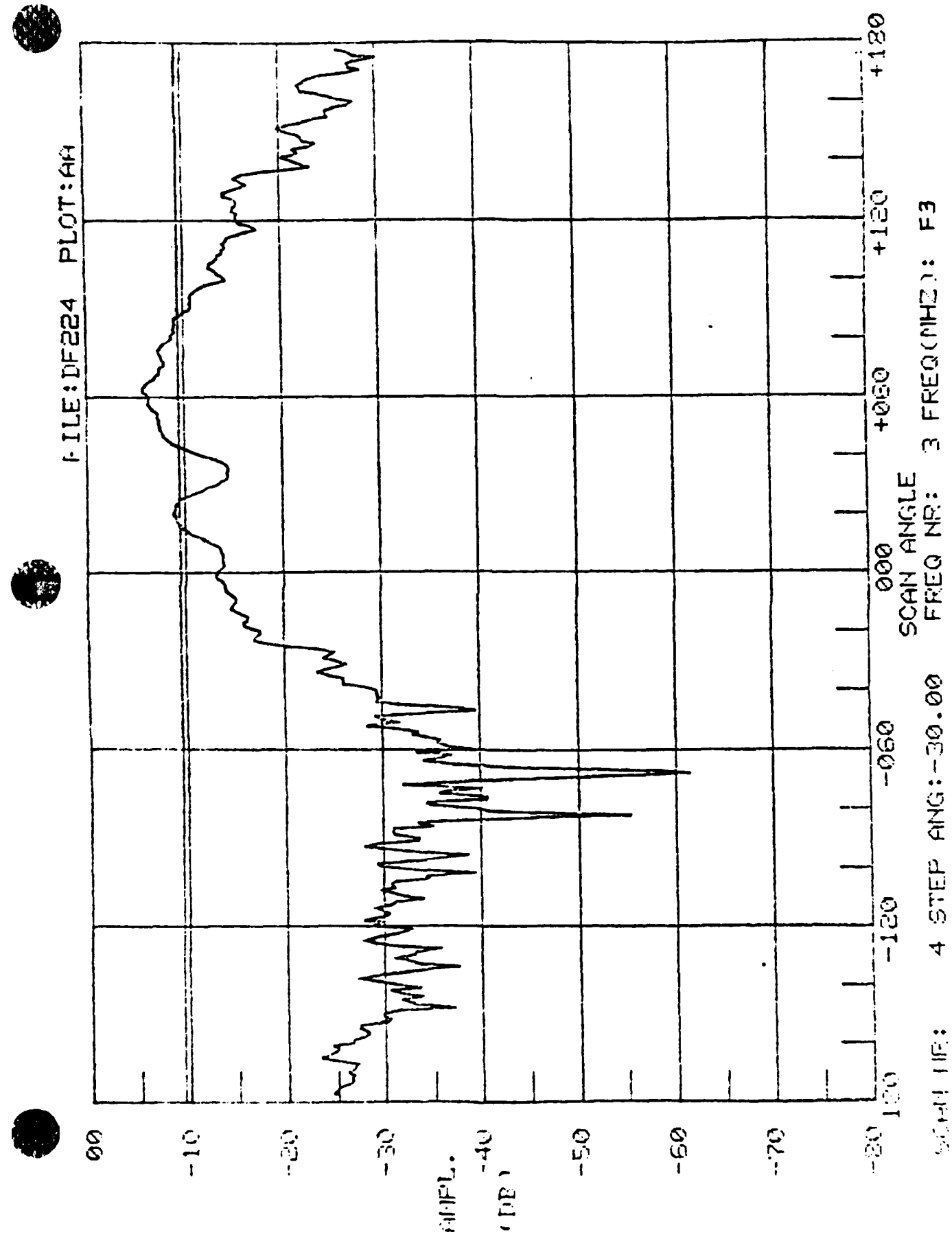
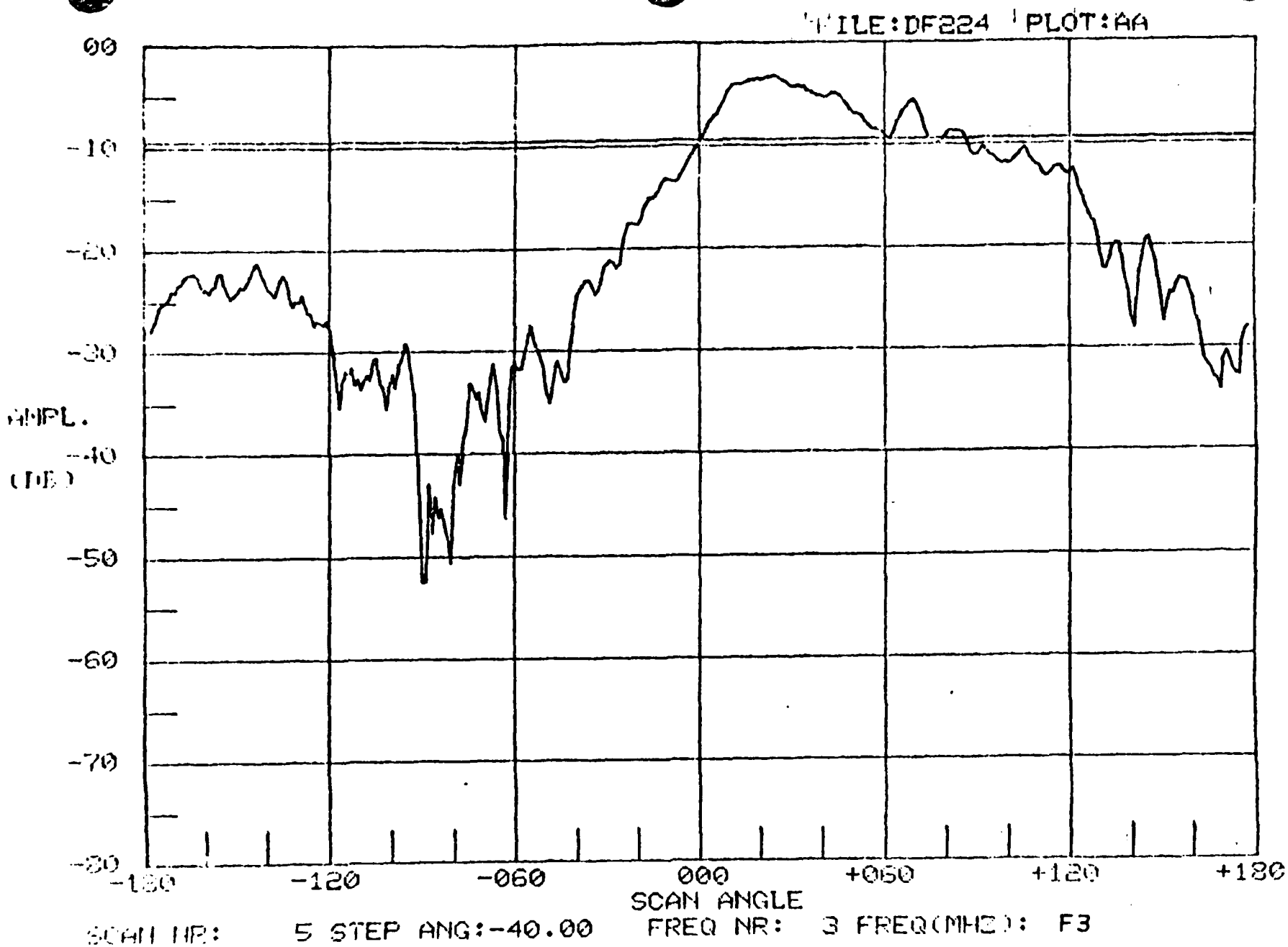
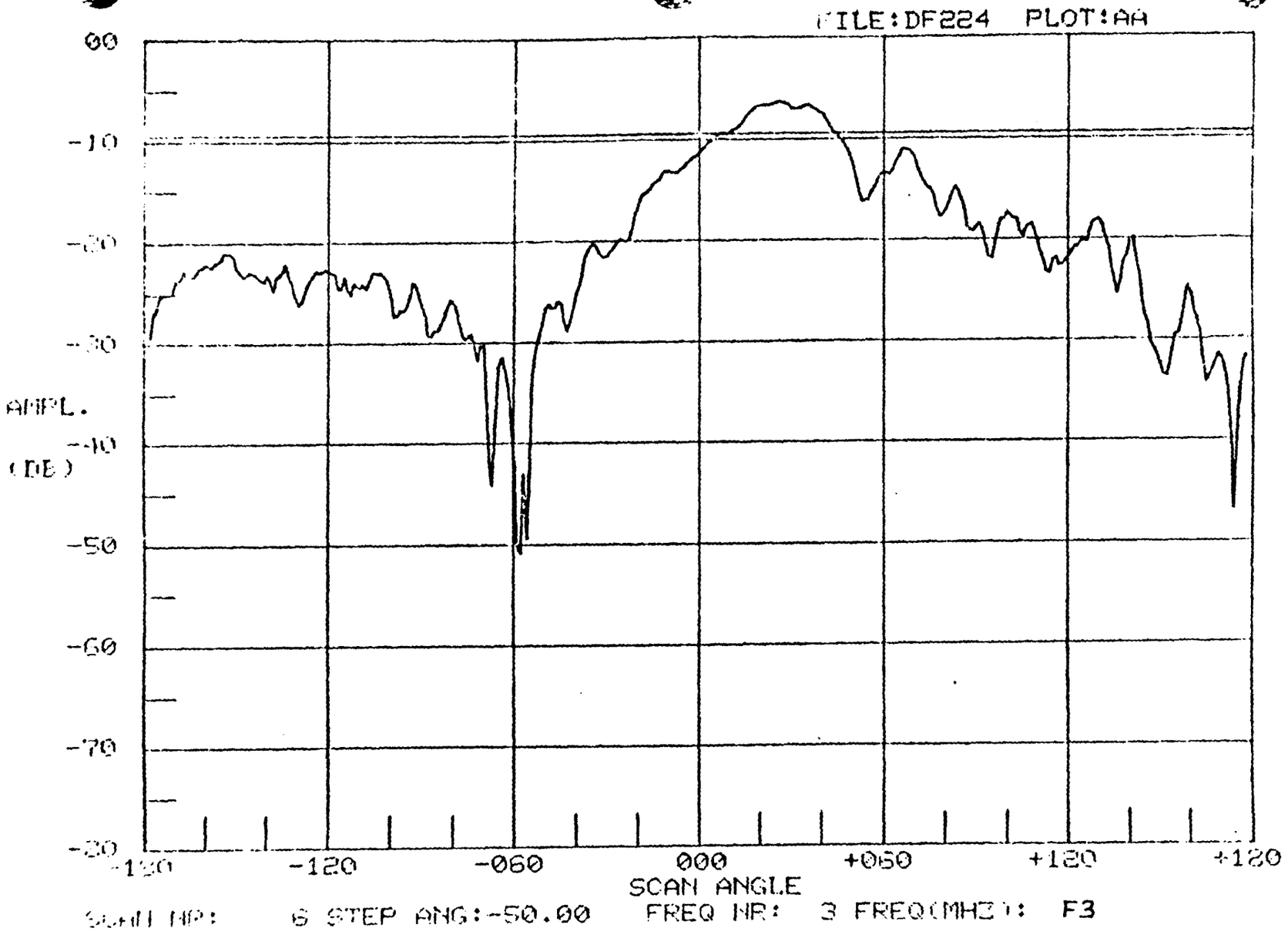
AMPL.
-40
(DB)
-50
-60
-70
-80
-180
-120
-060
000
+060
+120
+180
SCAN ANGLE
SCAN NR: 2 STEP ANG:-10.00 FREQ NR: 3 FREQ(MHZ): F3


FILE:DF224 PLOT:AA
00
-10
-20
-30
AMPL.
(DB)
-40
-50
-60
-70
-120
-060
000
+060
+120
+180
SCAN ANGLE
3 STEP ANG:-20.00
FREQ NR: 3 FREQ(MHZ): F3


FILE:DF224 PLOT:AA
00
-10
-20
-30
-40
-50
-60
-70
-80
-120
000
+060
+120
SCAN ANGLE
FREQ NR: 3 FREQ(MHZ): F3
4 STEP ANG:-30.00


FILE:DF224 PLOT:AA
00
-10
-20
-30
AMPL.
-40
(DB)
-50
-60
-70
-80
-180
-120
-060
000
+060
+120
+180
SCAN ANGLE
SCAN NR: 5 STEP ANG:-40.00 FREQ NR: 3 FREQ(MHZ): F3


FILE:DF224 PLOT:AA
00
-10
-20
-30
AMPL.
-40
(DB)
-50
-60
-70
-80
-180
-120
-060
000
+060
+120
+180
SCAN ANGLE
SCAN NR: 6 STEP ANG:-50.00 FREQ NR: 3 FREQ(MHZ): F3

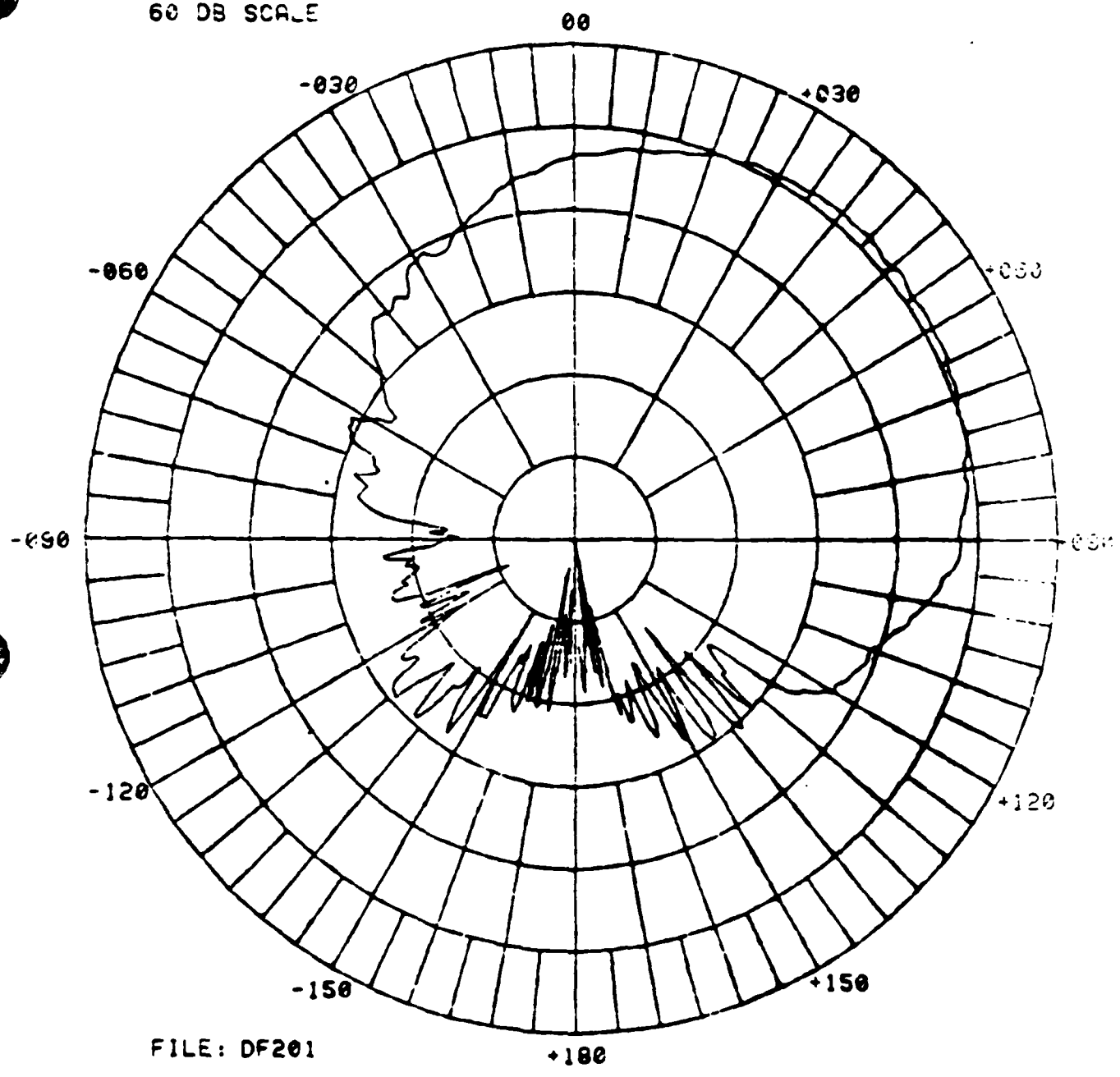
Appendix 3 contains AN/ALQ-156 antenna patterns as recorded by the 20/20 system during test. They are in polar plot format. These patterns cover frequencies F1, F2, and F3 and elevations of +50° through -50° for both the forward and aft antennas. They are arranged as follows:

DF201 — Forward antenna, upper hemisphere

DF225 — Forward antenna, lower hemisphere

DF210 — Aft antenna, upper hemisphere

DF224 — Aft antenna, lower hemisphere.



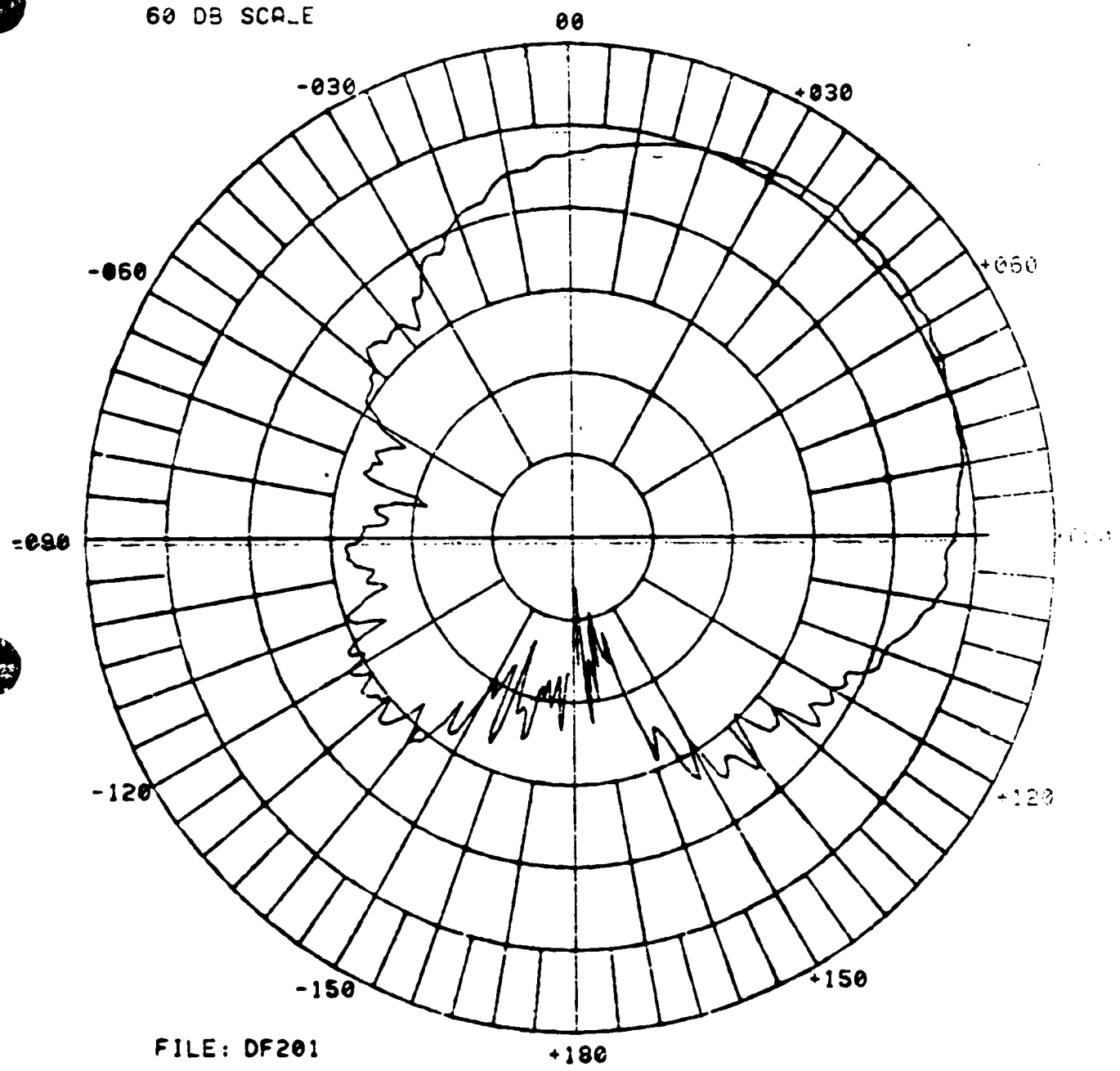
FILE: DF201

SCAN NR: 1 STEP ANGLE: 0.00 PLOT_____ AA

FREQ NR: 1 FREQ(MHZ): F1

CONFIGURATION 1

30 MAY 1984



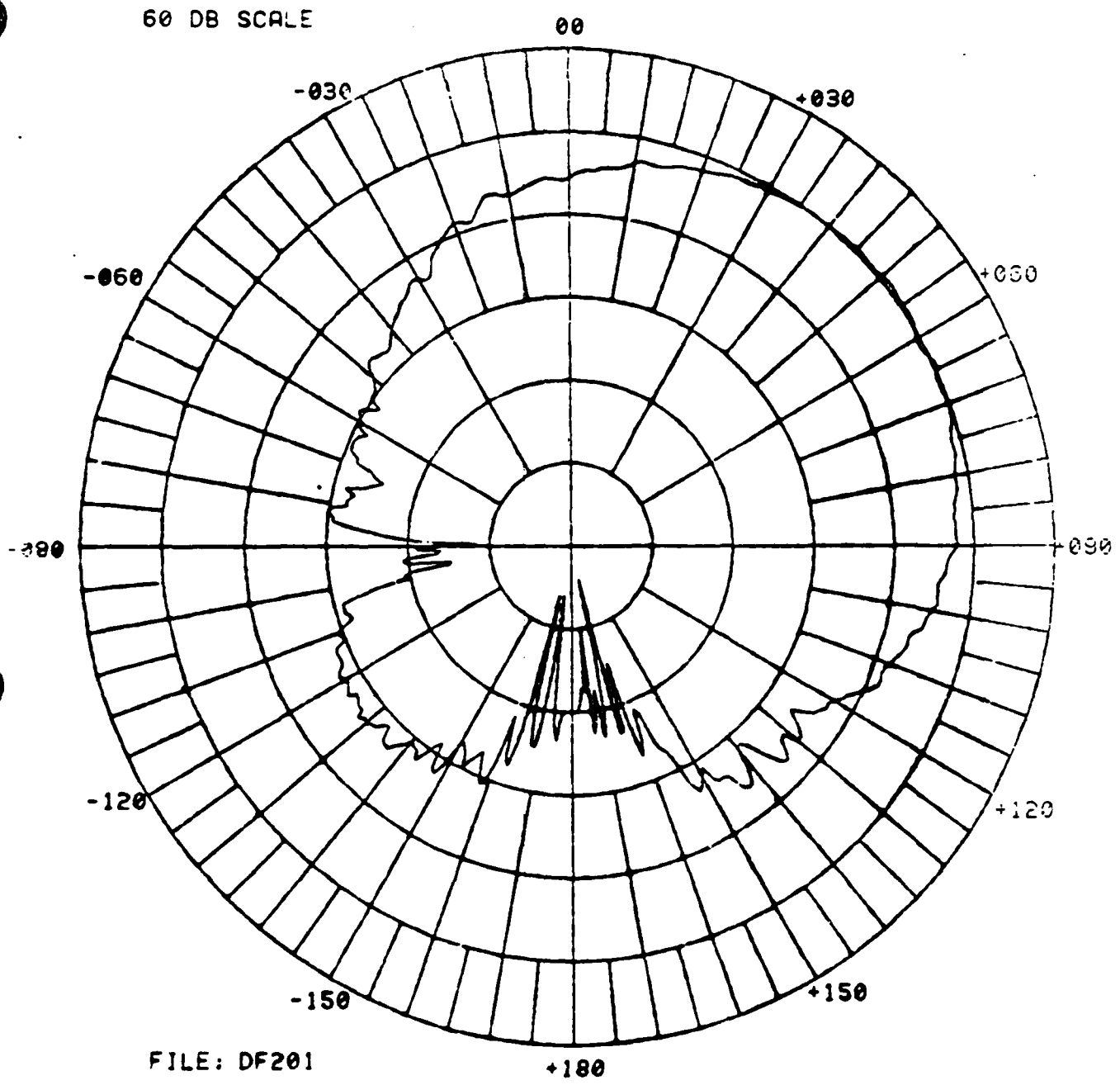
FILE: DF201

SCAN NR: 2 STEP ANGLE: 10.00 PLOT_____ AA

FREQ NR: 1 FREQ(MHZ): F1

CONFIGURATION 1

30 MAY 1984



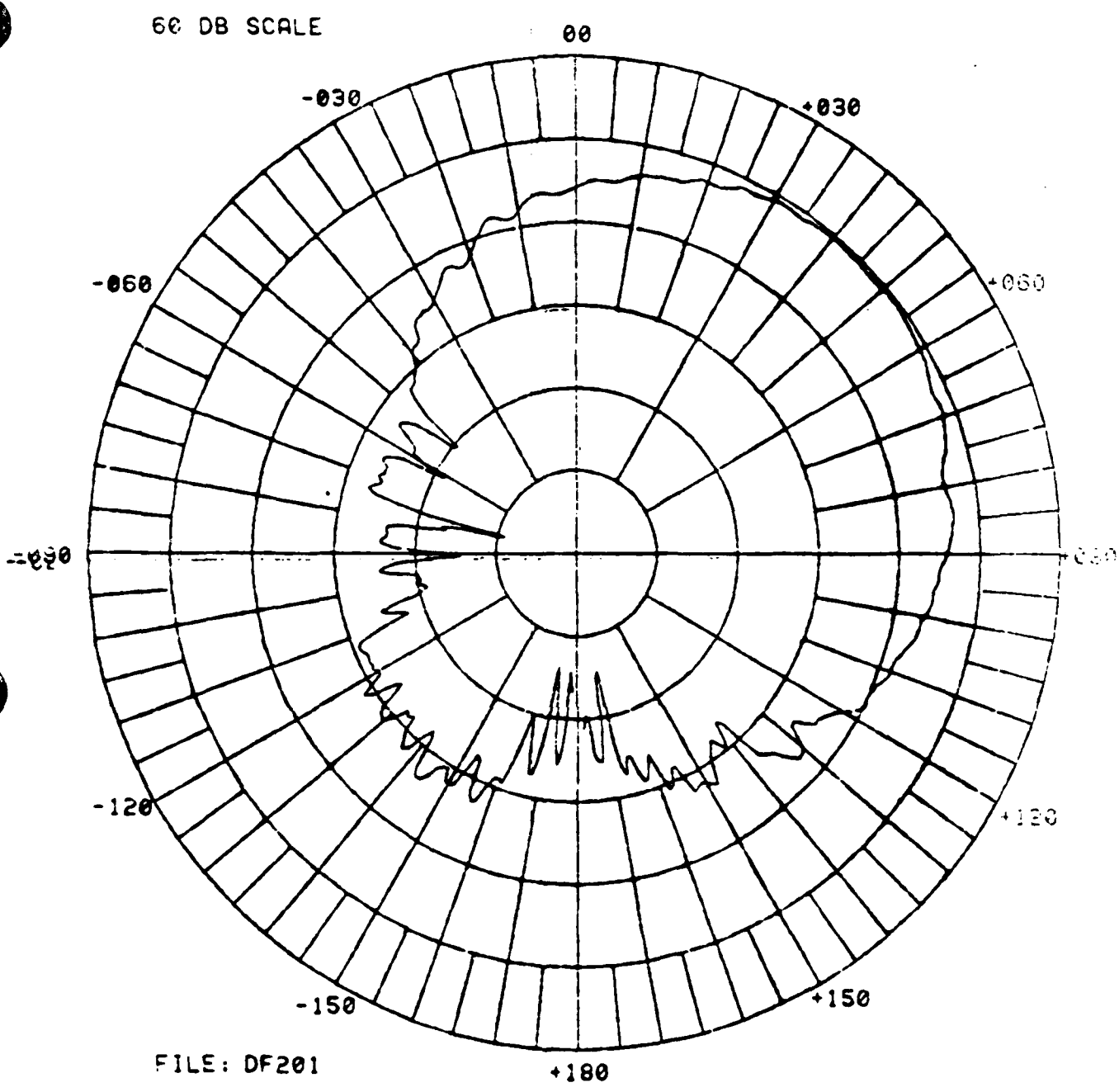
FILE: DF201

SCAN NR: 3 STEP ANGLE: 20.00 PLOT_____ AA

FREQ NR: 1 FREQ(MHZ): F1

CONFIGURATION 1

30 MAY 1984



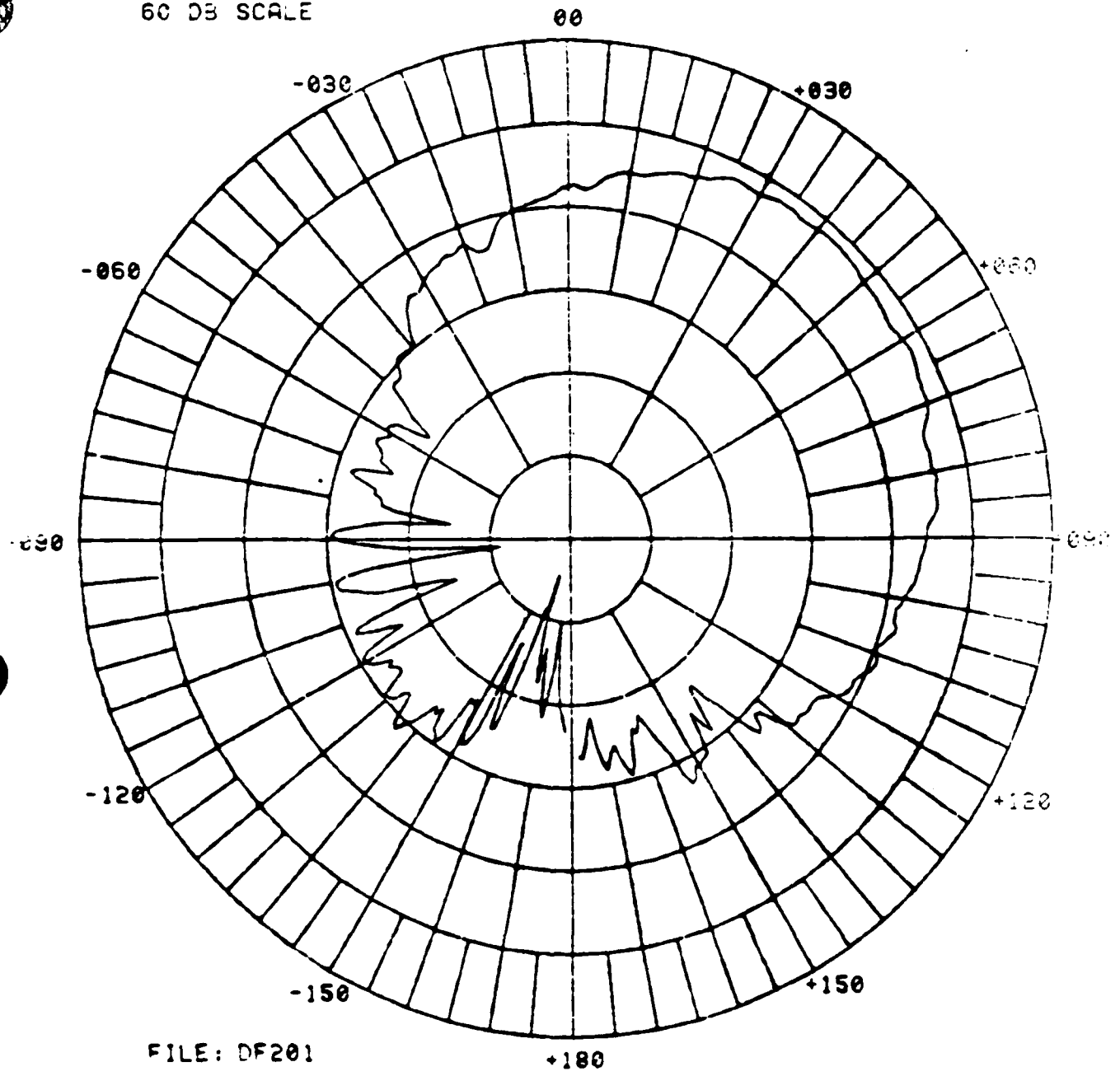
FILE: DF201

SCAN NR: 4 STEP ANGLE: 30.00 PLOT_____ AA

FREQ NR: 1 FREQ(MHZ): F1

CONFIGURATION 1

30 MAY 1984



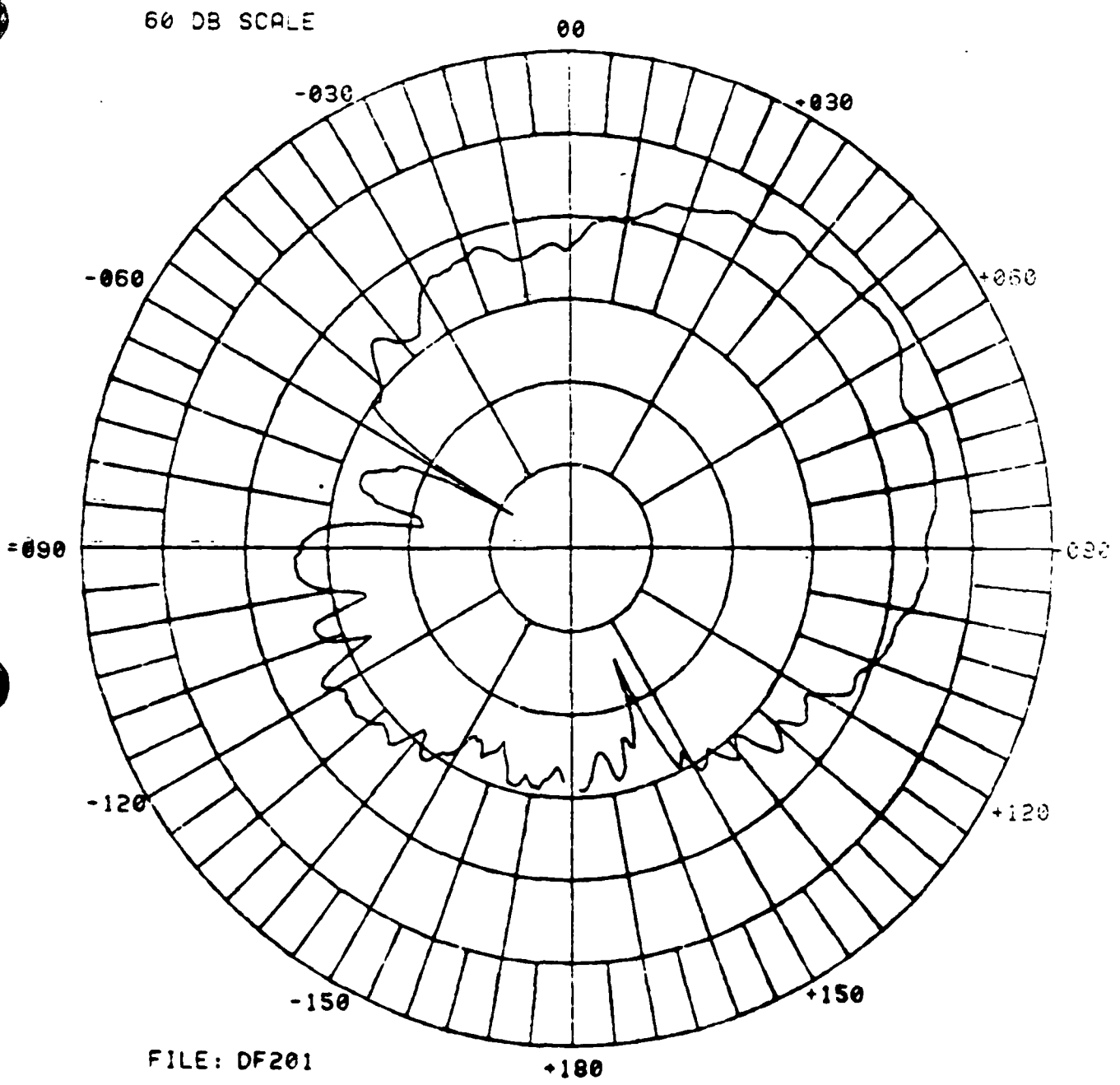
FILE: DF201

SCAN NR: 5 STEP ANGLE: 40.00 PLOT_____ AA

FREQ NR: 1 FREQ(MHZ): F1

CONFIGURATION 1

30 MAY 1984



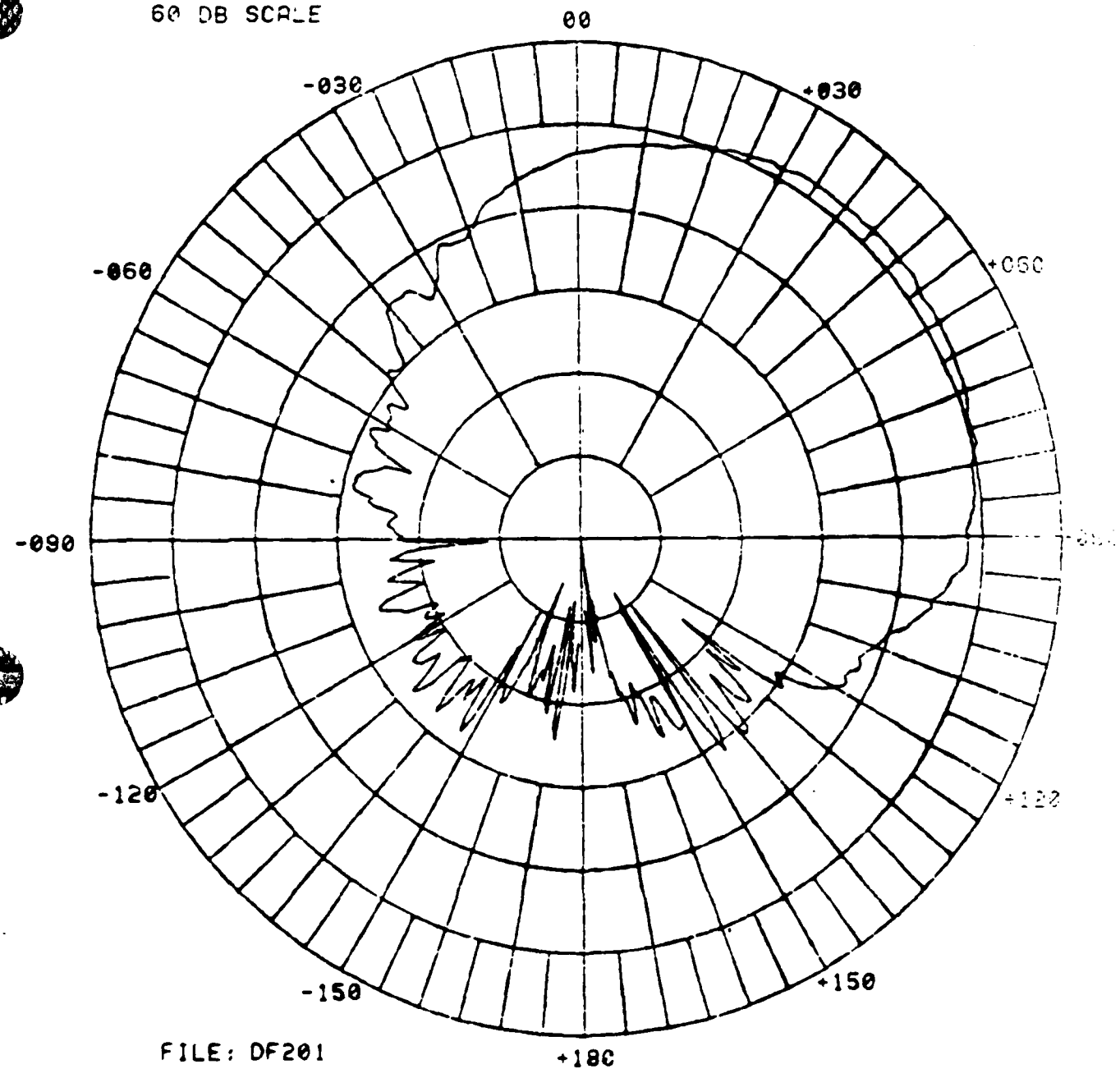
FILE: DF201

SCAN NR: 6 STEP ANGLE: 50.00 PLOT_____ AA

FREQ NR: 1 FREQ(MHZ): F1

CONFIGURATION 1

30 MAY 1984



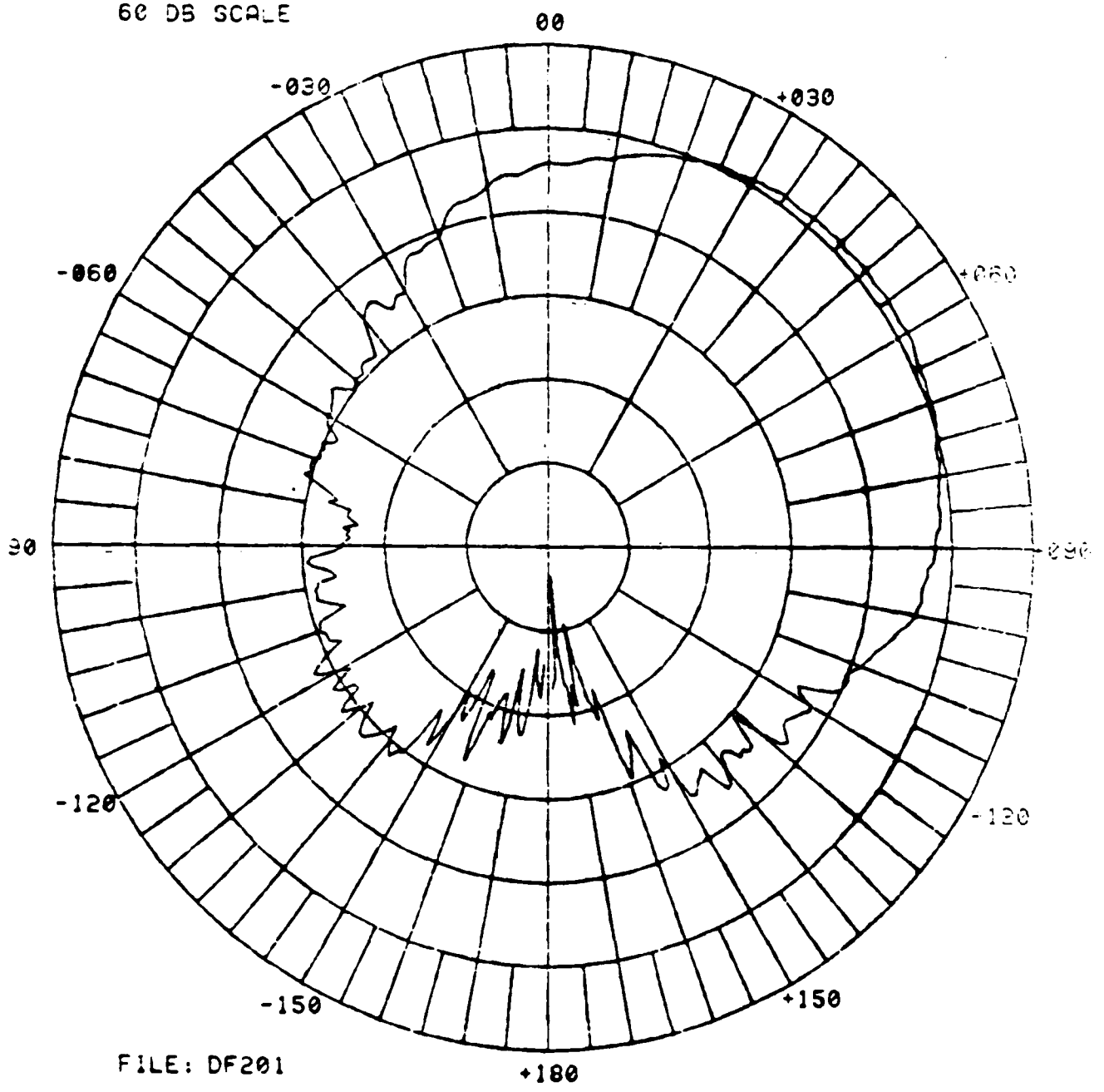
FILE: DF201

SCAN NR: 1 STEP ANGLE: 0.00 PLOT_____ AA

FREQ NR: 2 FREQ(MHZ): F2

CONFIGURATION 1

30 MAY 1984



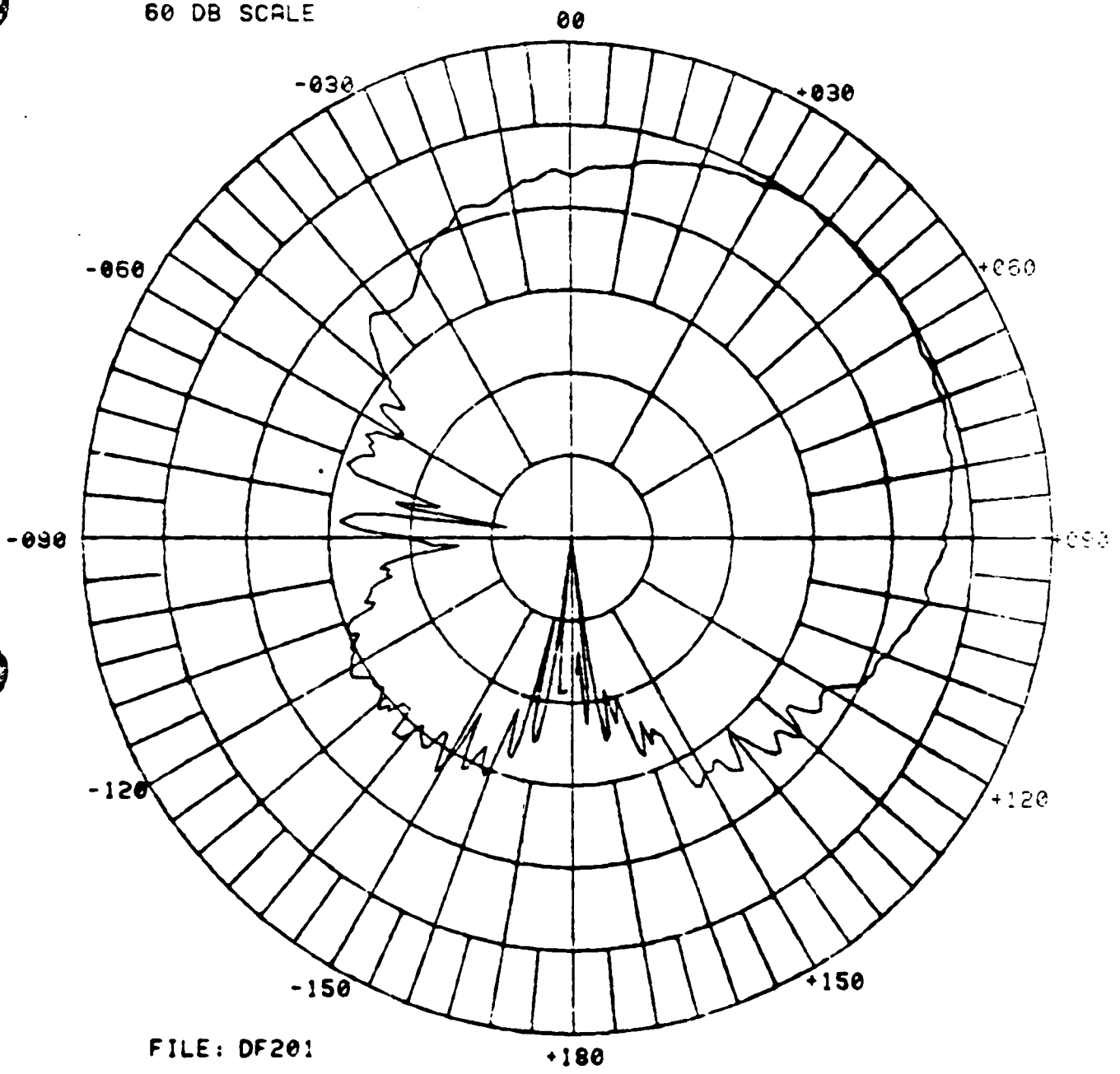
FILE: DF201

SCAN NR: 2 STEP ANGLE: 10.00 PLOT_____ AA

FREQ NR: 2 FREQ(MHZ): F2

CONFIGURATION 1

30 MAY 1994



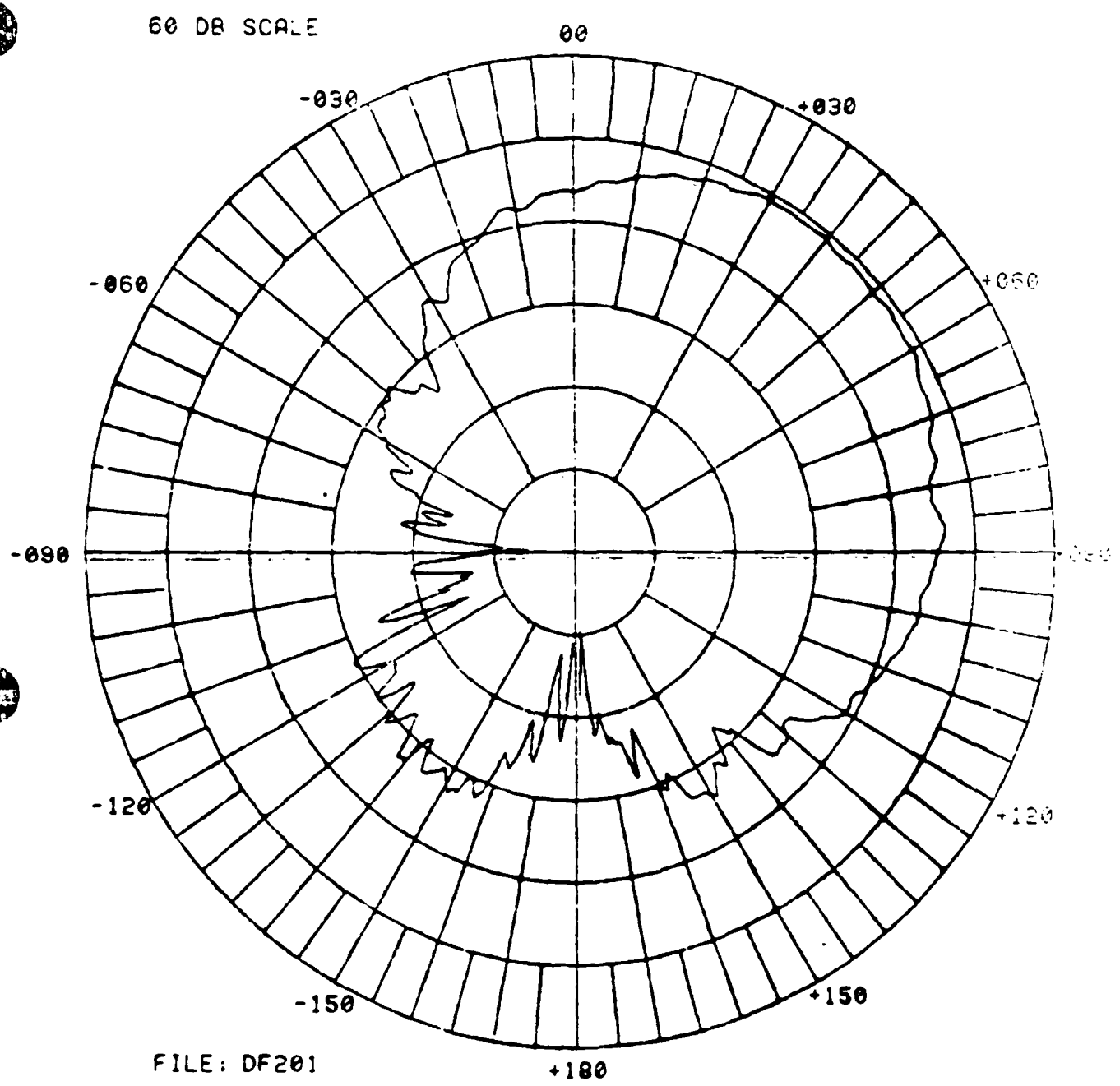
FILE: DF201

SCAN NR: 3 STEP ANGLE: 20.00 PLOT_____ AA

FREQ NR: 2 FREQ(MHZ): F2

CONFIGURATION 1

30 MAY 1984



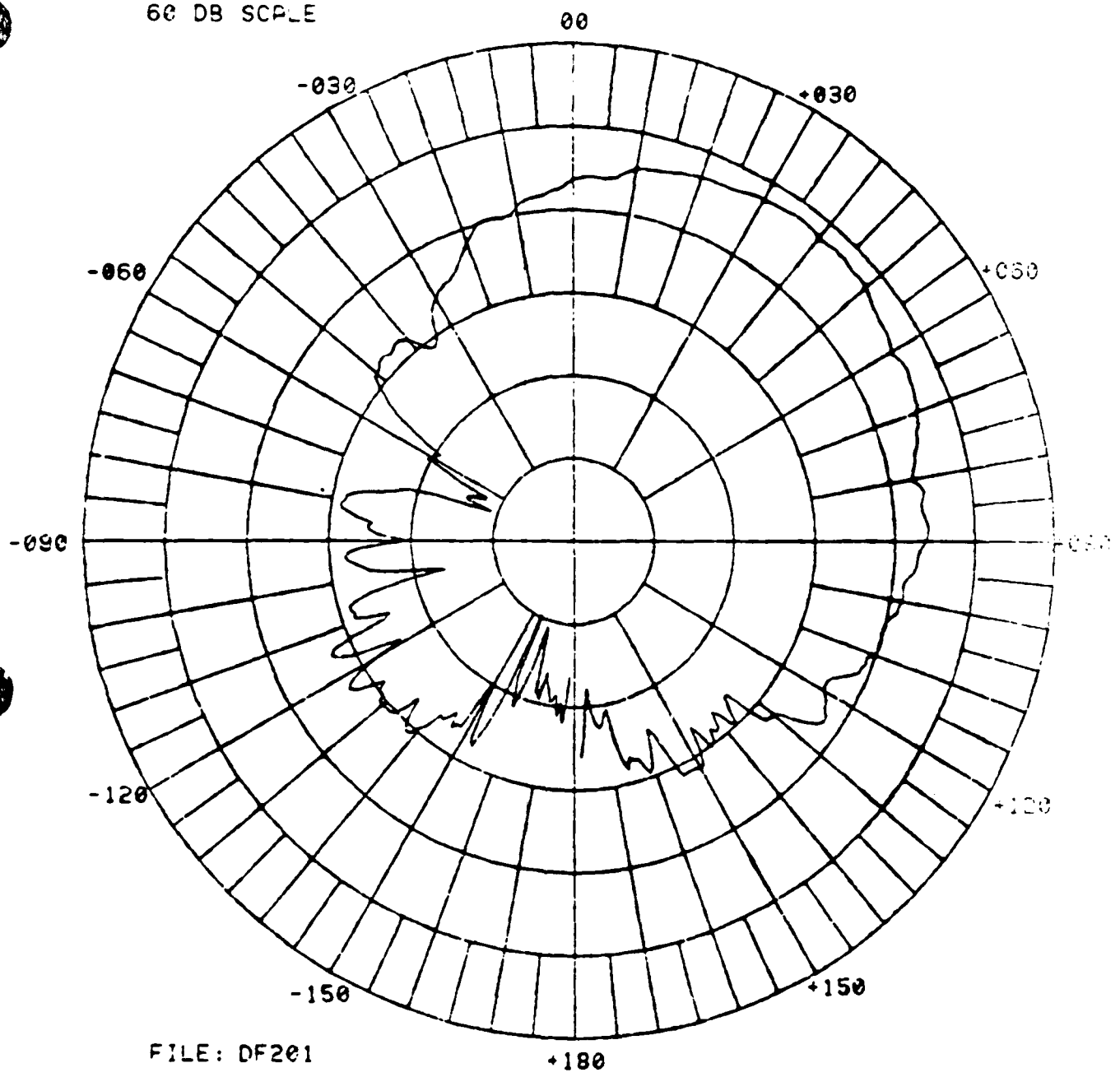
FILE: DF201

SCAN NR: 4 STEP ANGLE: 30.00 PLOT_____ AA

FREQ NR: 2 FREQ(MHZ): FZ

CONFIGURATION 1

30 MAY 1984



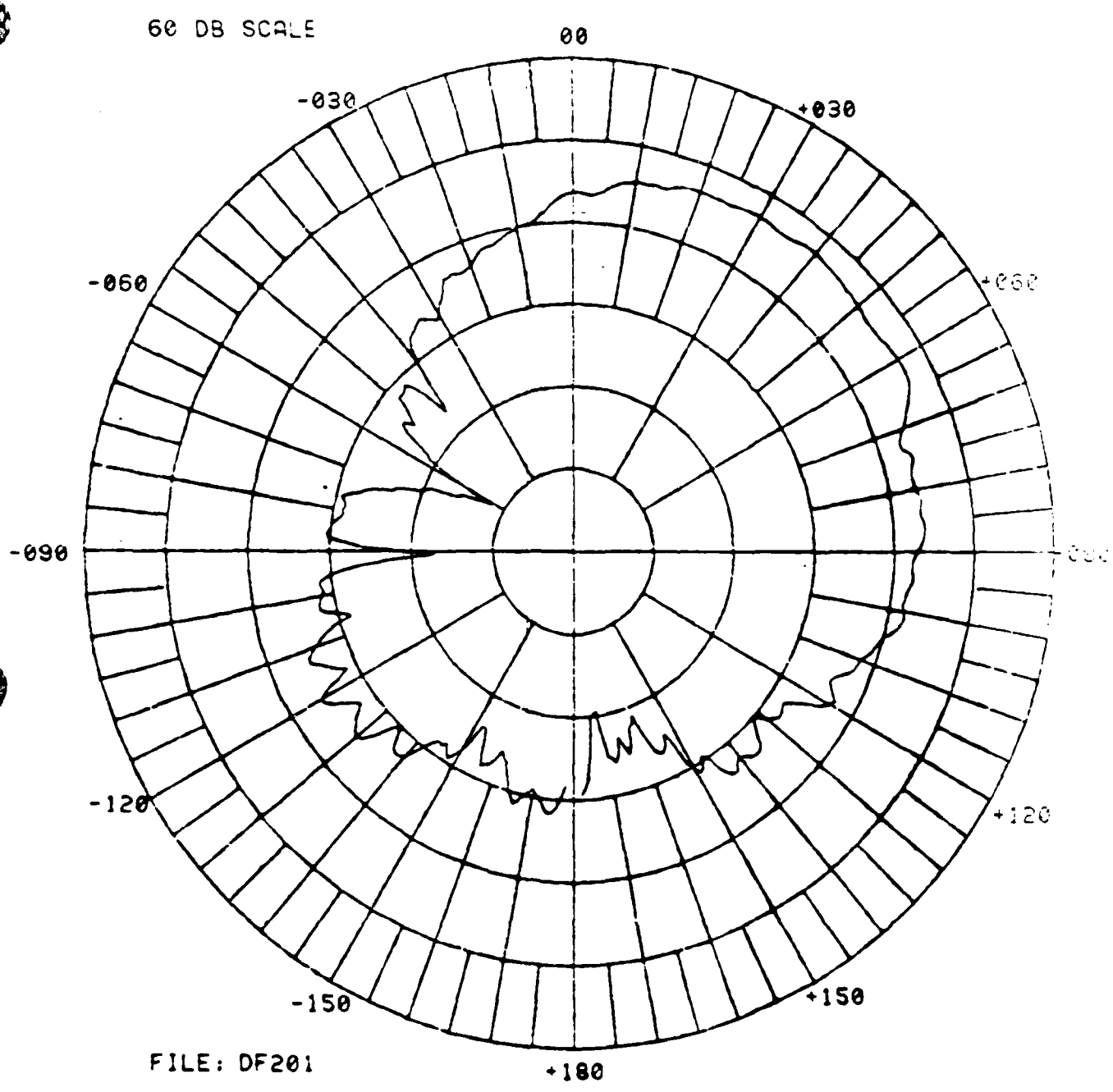
FILE: DF201

SCAN NR: 5 STEP ANGLE: 40.00 PLOT_____ AA

FREQ NR: 2 FREQ(MHZ): F2

CONFIGURATION 1

30 MAY 1984



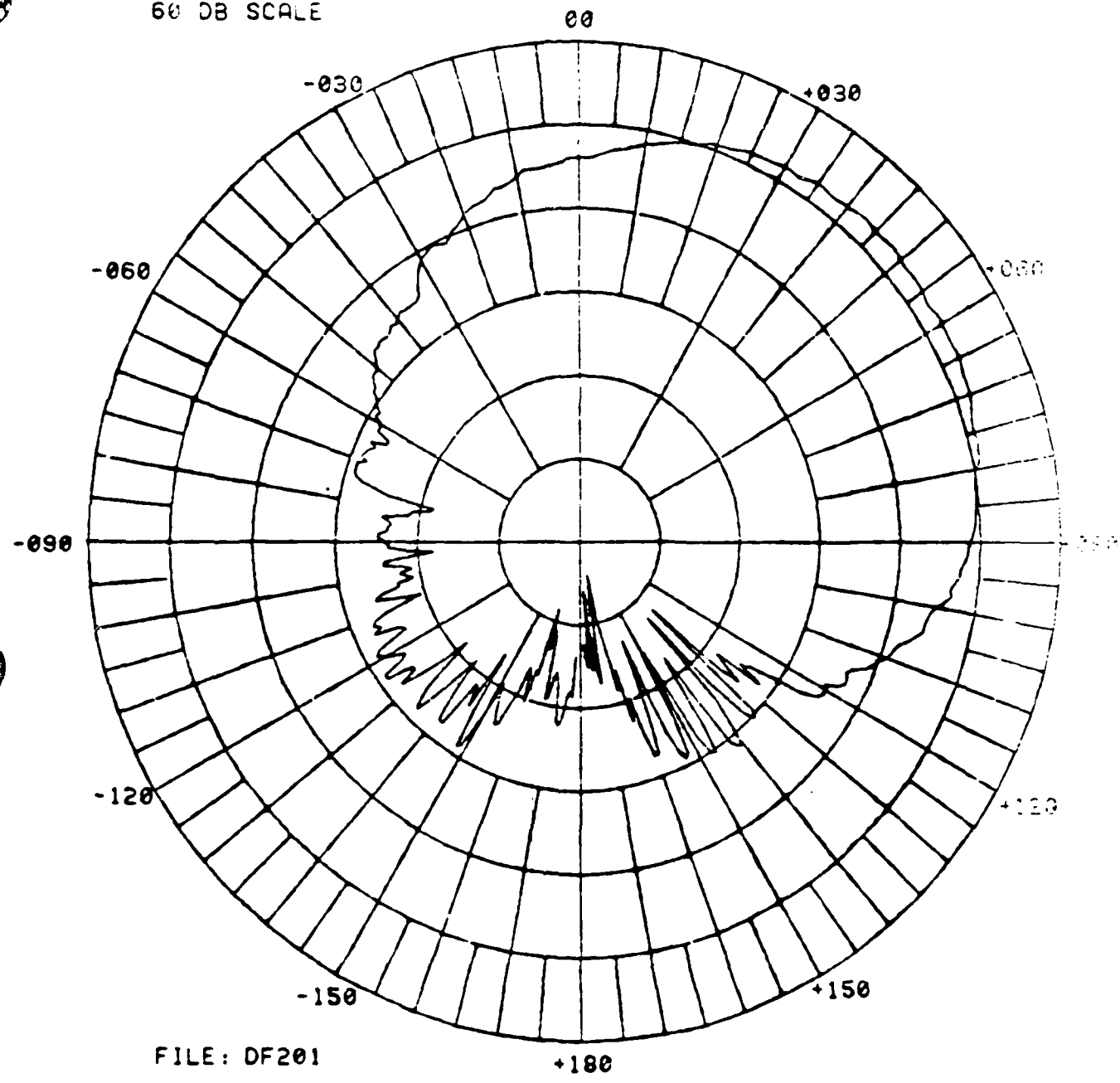
FILE: DF201

SCAN NR: 6 STEP ANGLE: 50.00 PLOT_____ AA

FREQ NR: 2 FREQ(MHZ): F2

CONFIGURATION 1

30 MAY 1984



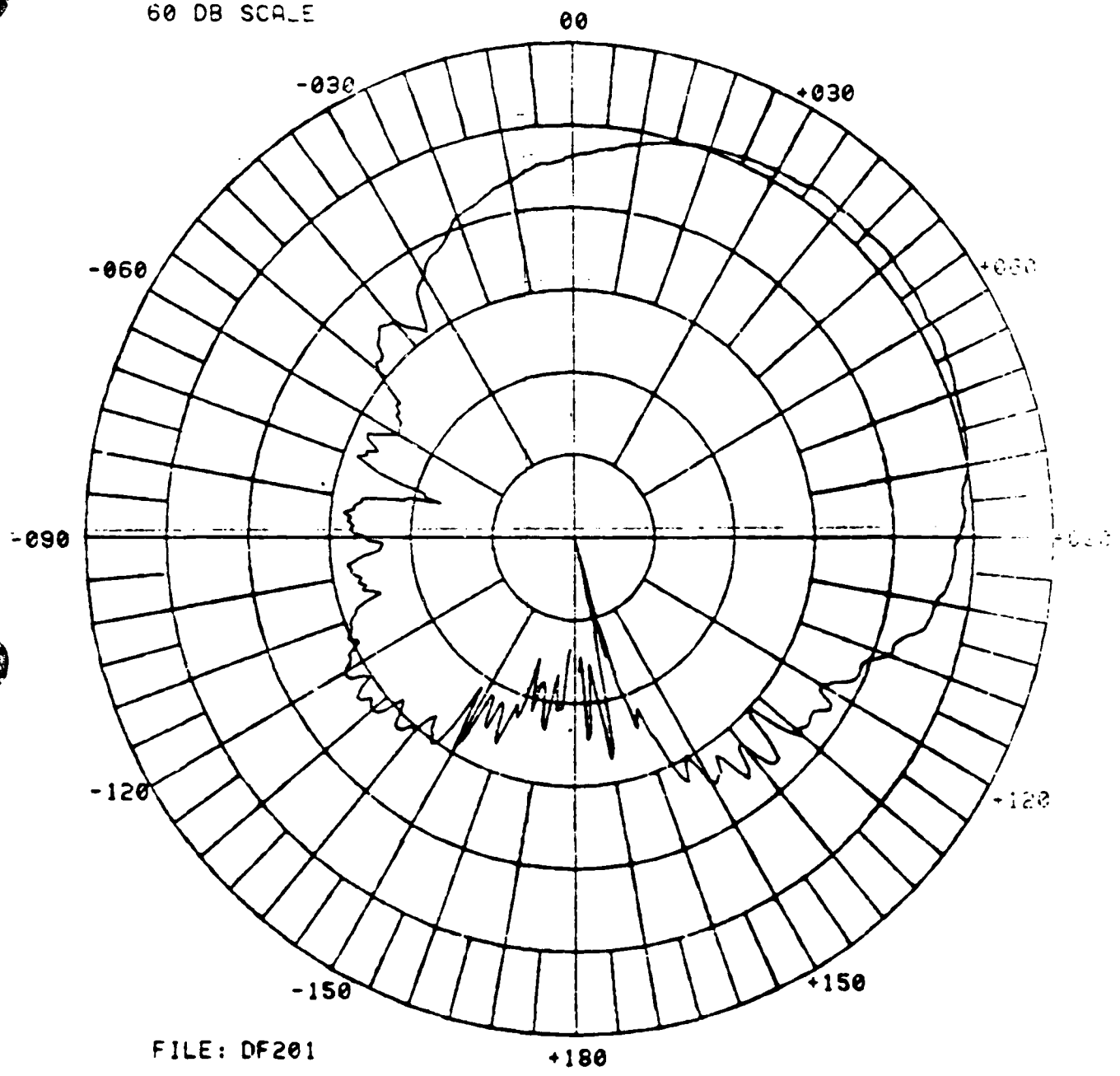
FILE: DF201

SCAN NR: 1 STEP ANGLE: 0.00 PLOT_____ AA

FREQ NR: 3 FREQ(MHZ): F3

CONFIGURATION 1

30 MAY 1984



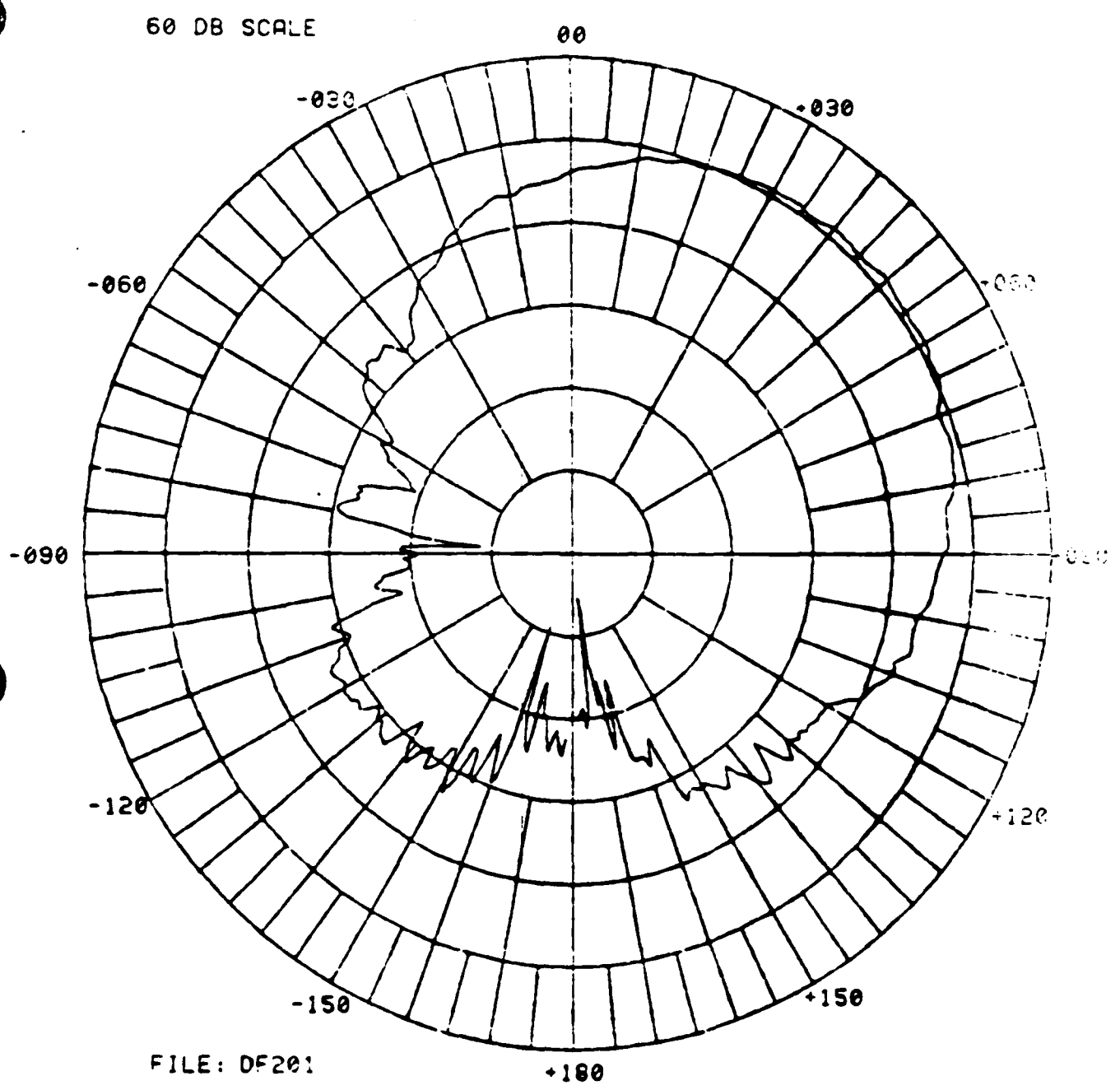
FILE: DF201

SCAN NR: 2 STEP ANGLE: 10.00 PLOT_____ AA

FREQ NR: 3 FREQ(MHZ): F3

CONFIGURATION 1

30 MAY 1984



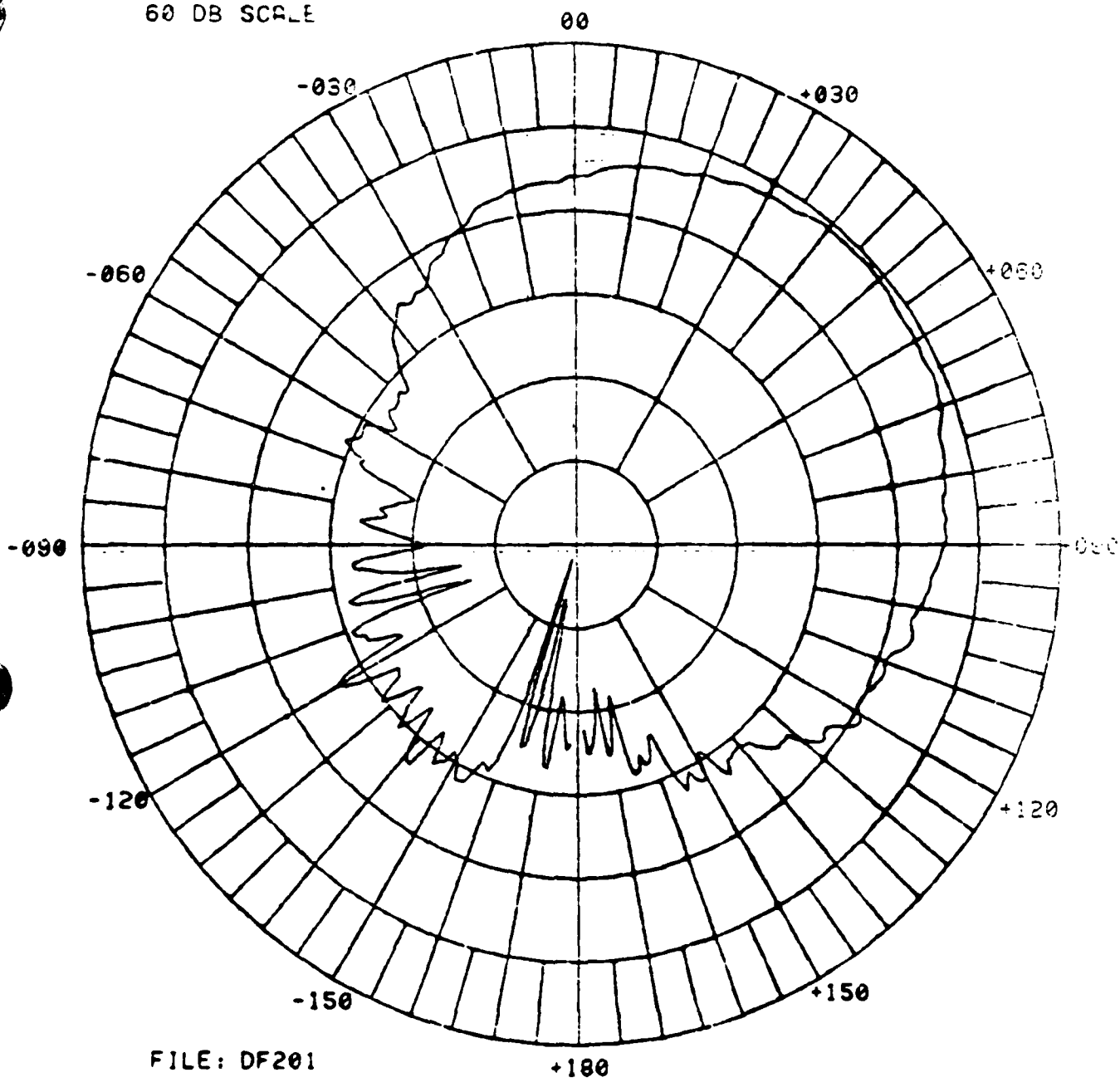
FILE: DF201

SCAN NR: 3 STEP ANGLE: 20.00 PLOT_____ AA

FREQ NR: 3 FREQ(MHZ): F3

CONFIGURATION :

30 MAY 1984



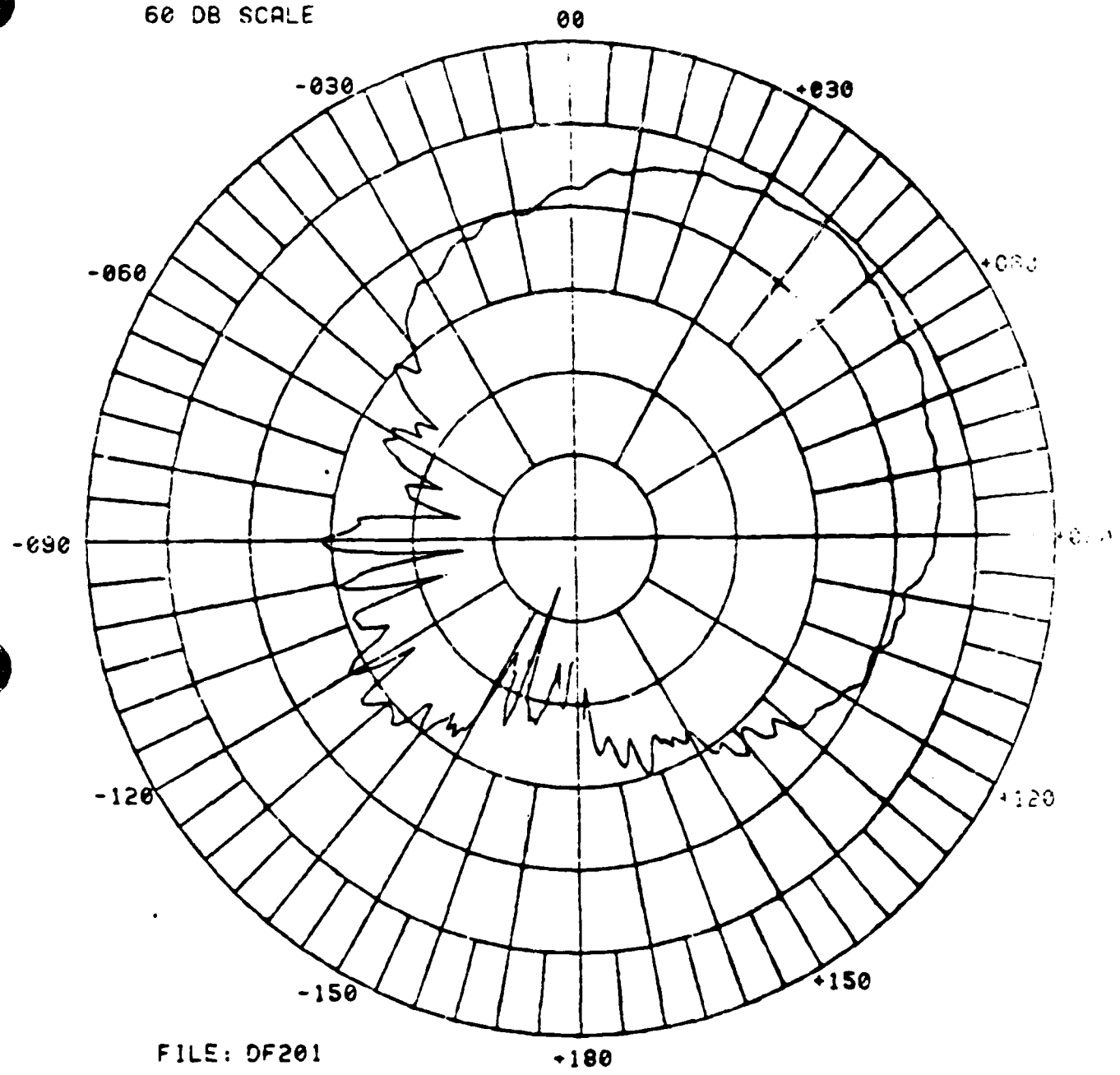
FILE: DF201

SCAN NR: 4 STEP ANGLE: 30.00 PLOT_____ AA

FREQ NR: 3 FREQ(MHZ): F3

CONFIGURATION 1

30 MAY 1984



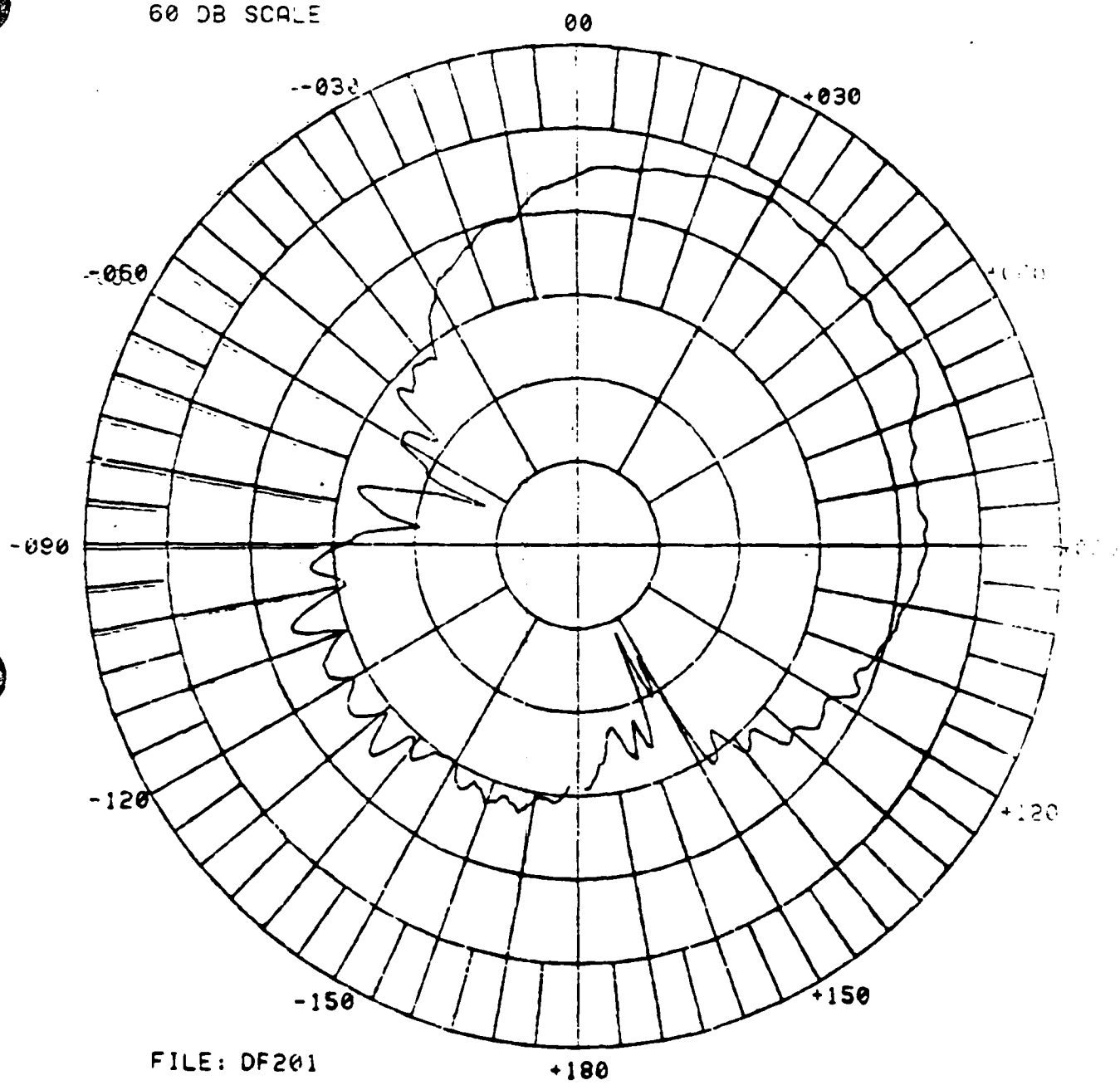
FILE: DF201

SCAN NR: 5 STEP ANGLE: 40.00 PLOT_____ AA

FREQ NR: 3 FREQ(MHZ): F3

CONFIGURATION 1

30 MAY 1984



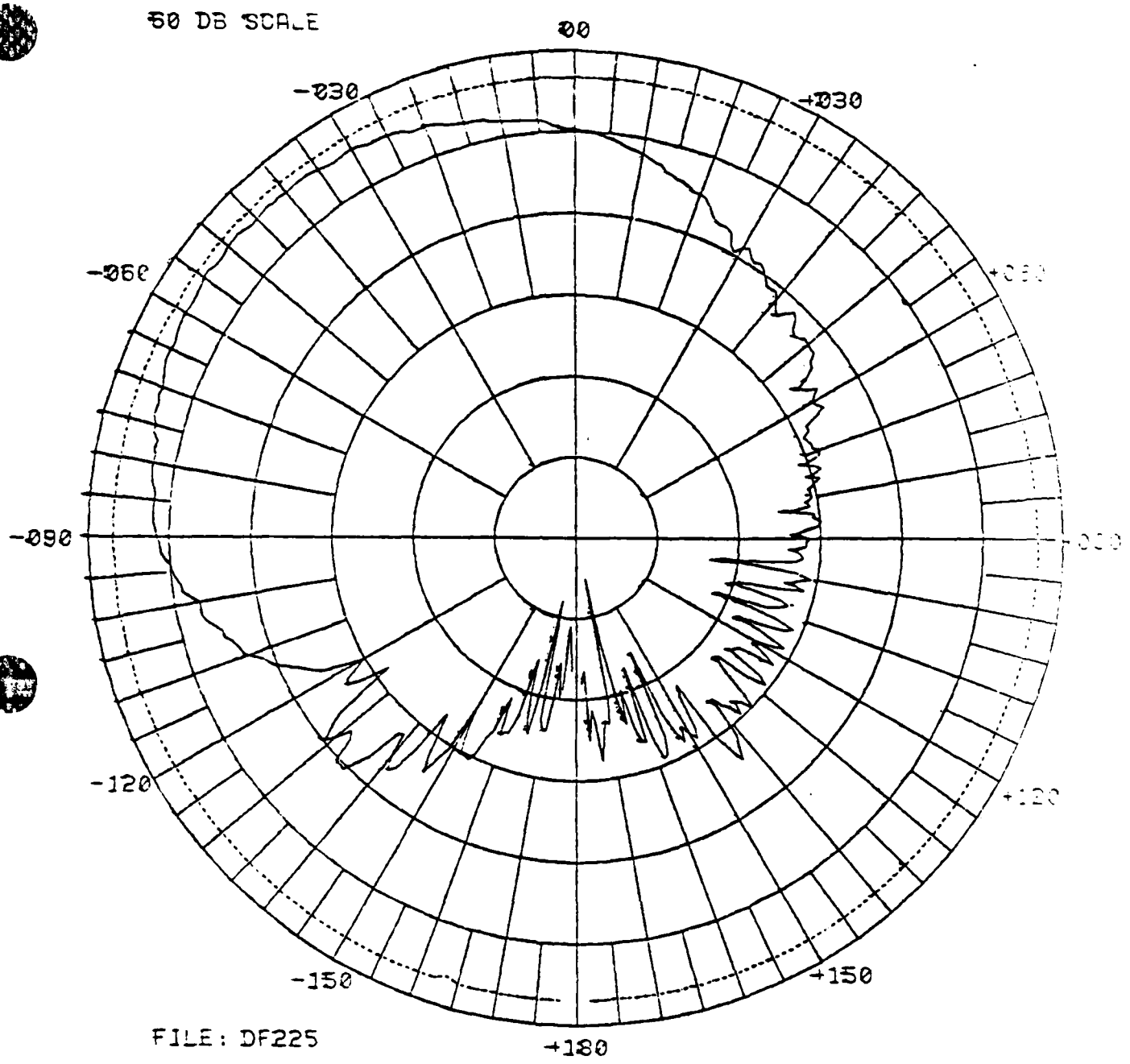
FILE: DF201

SCAN NR: 6 STEP ANGLE: 50.00 PLOT_____ AA

FREQ NR: 3 FREQ(MHZ): F3

CONFIGURATION 1

30 MAY 1984



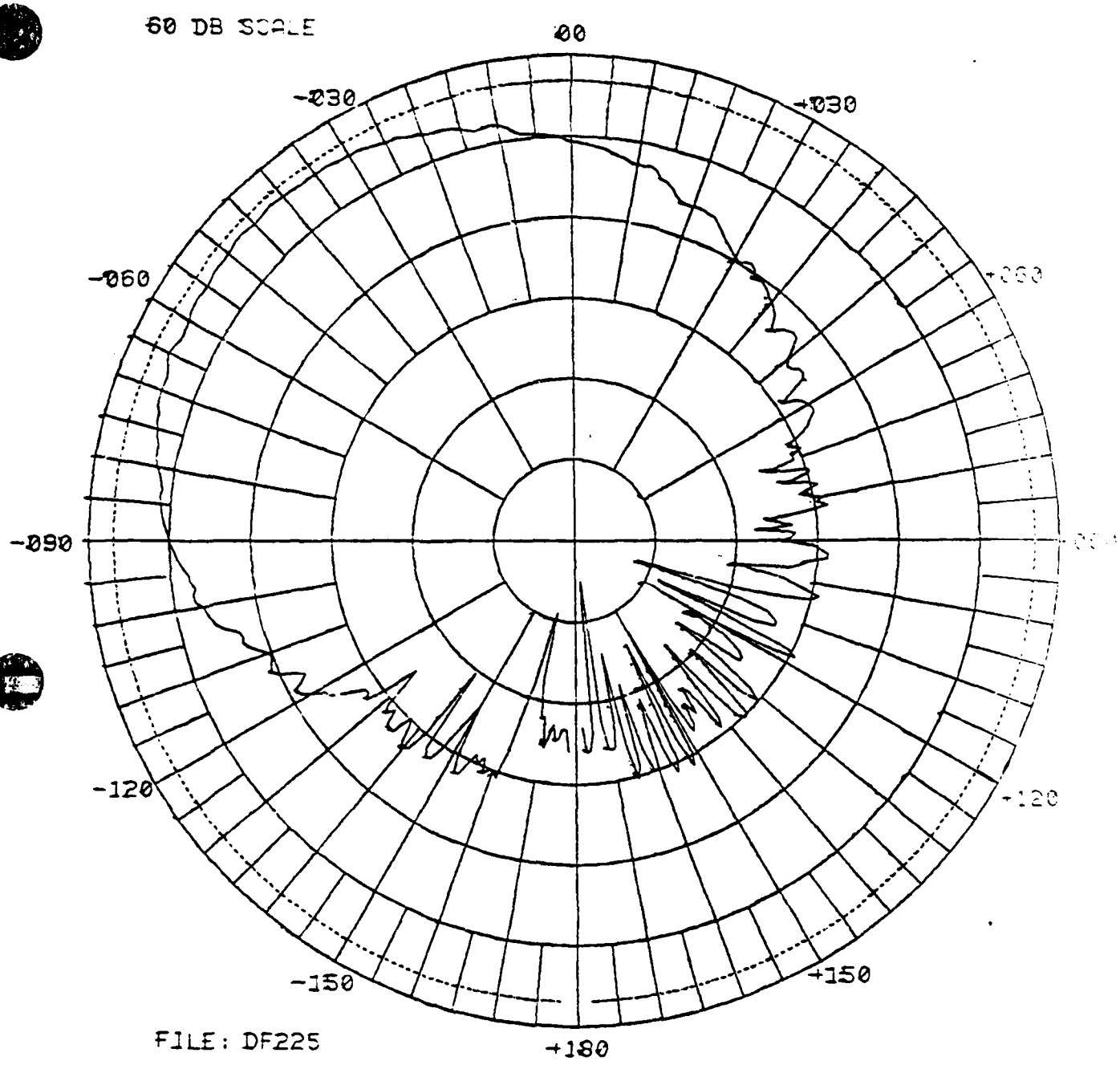
FILE: DF225

SCAN NR: 1 STEP ANGLE: 0.00 PLOT_____ AA

FREQ NR: 1 FREQ(MHZ): F1 PLOT_____ AB

CONFIGURATION 8

5 JUL 1984



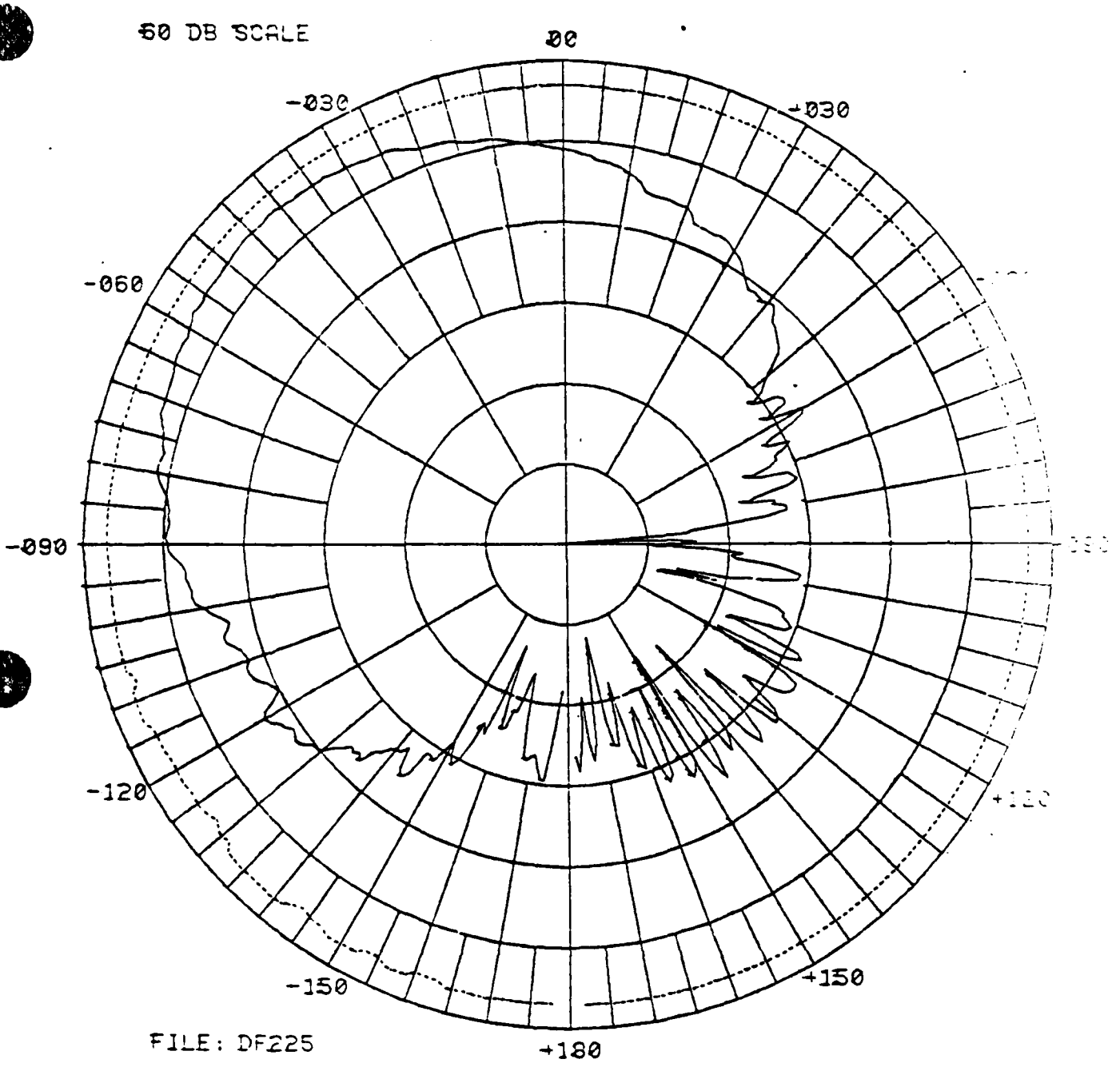
FILE: DF225

SCAN NR: 2 STEP ANGLE: -10.00 PLOT_____ AA

FREQ NR: 1 FREQ(MHZ): F1 PLOT_____ AB

CONFIGURATION 8

5 JUL 1984



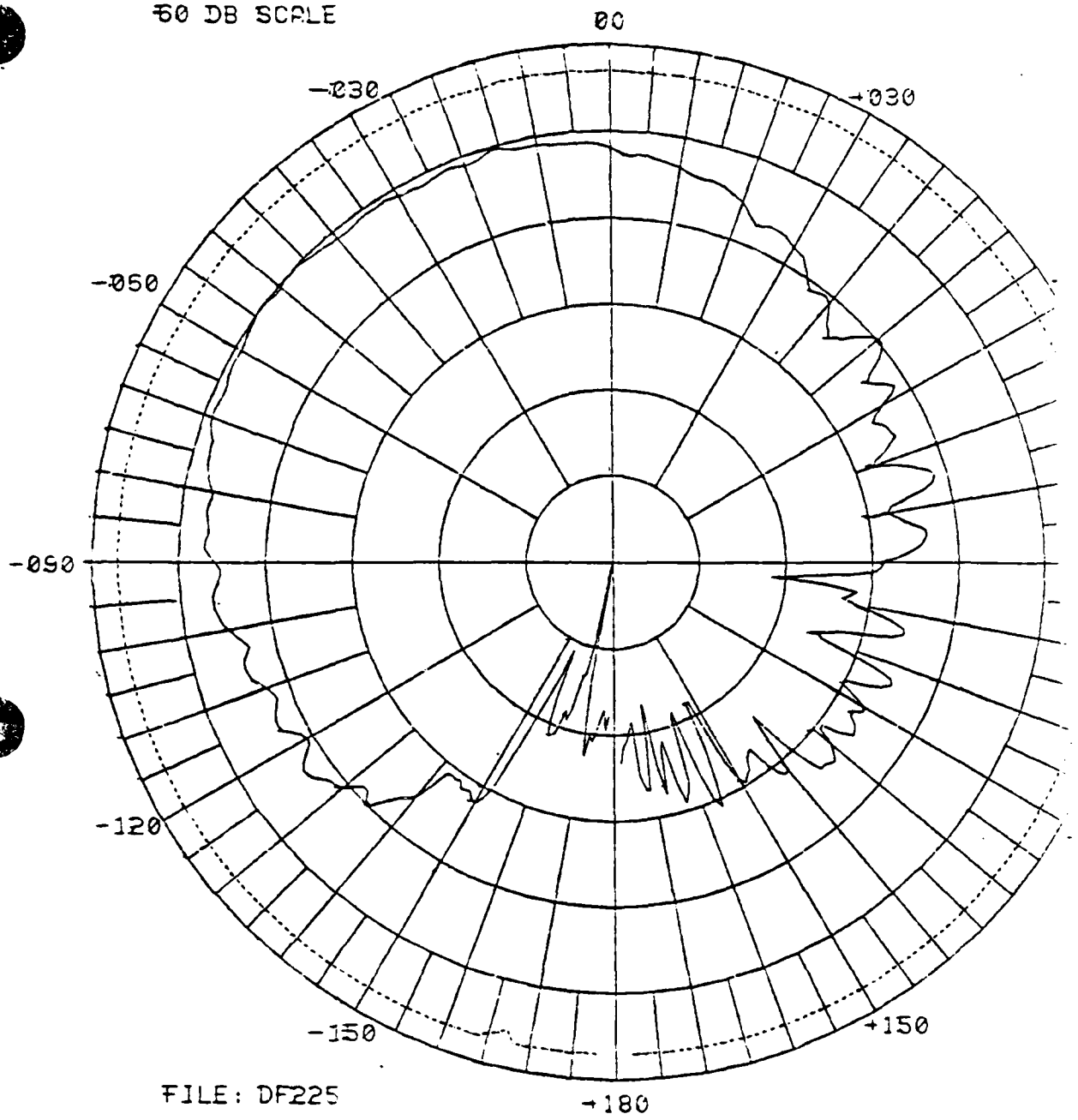
FILE: DF225

SCAN NR: 3 STEP ANGLE: -20.00 PLOT_____ AA

FREQ NR: 1 FREQ(MHZ): F1 PLOT_____ AB

CONFIGURATION 8

5 JUL 1984



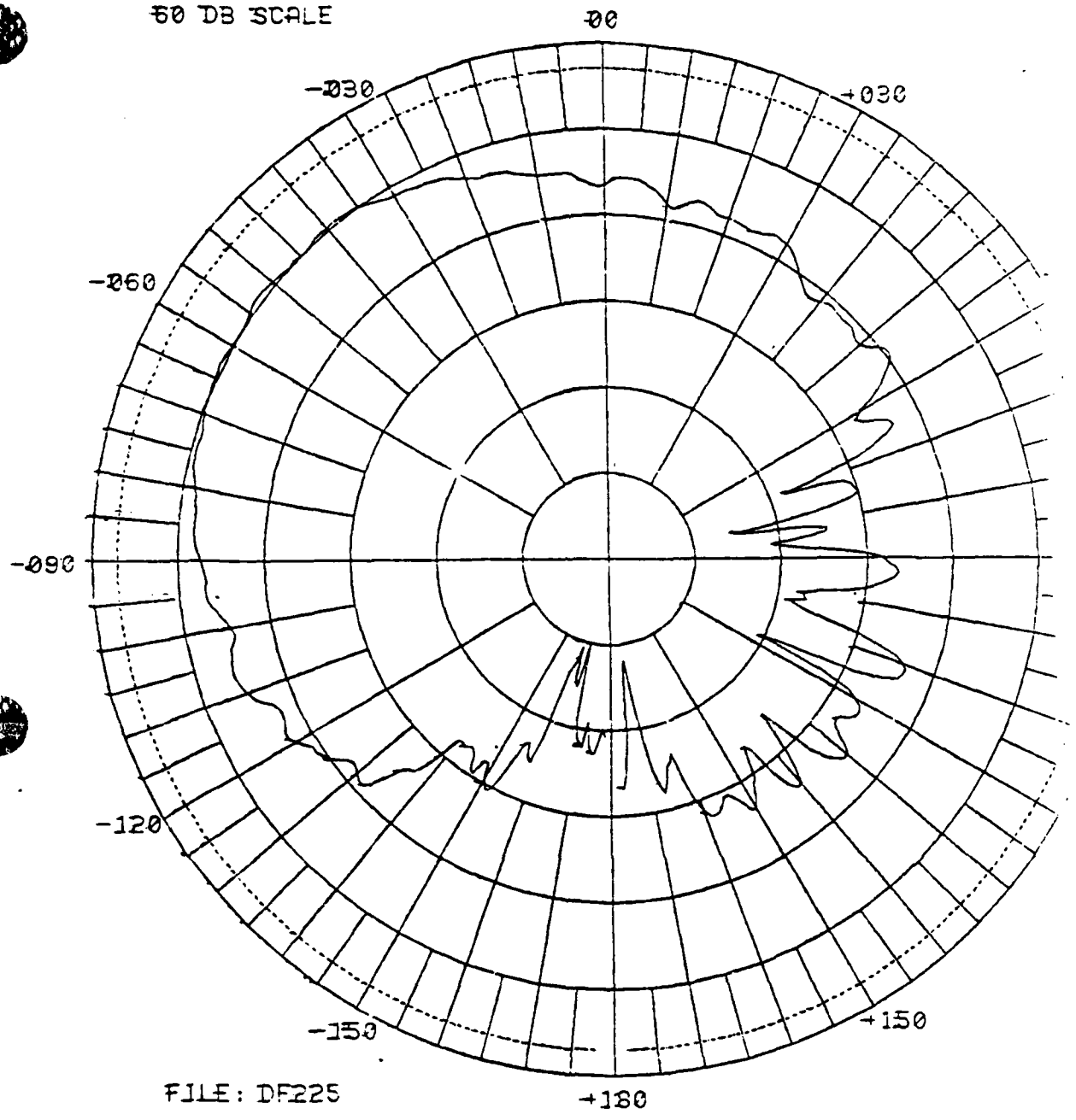
FILE: DF225

SCAN NR: 5 STEP ANGLE: -40.00 PLOT_____ AA

FREQ NR: 1 FREQ(MHZ): F1 PLOT..... AB

CONFIGURATION 8

5 JUL 1984



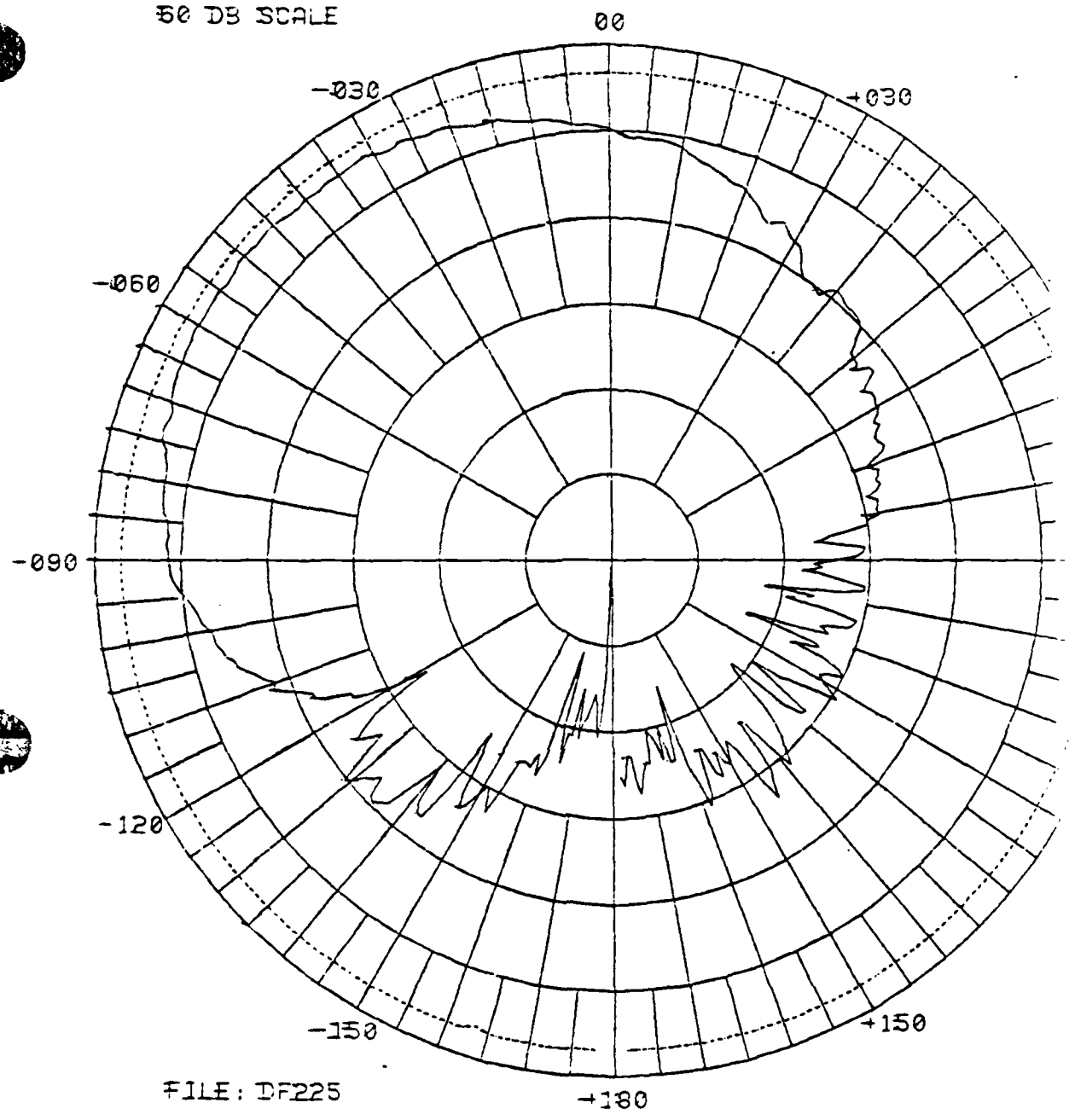
FILE: DF225

SCAN NR: 6 STEP ANGLE: -50.00 PLOT_____ AA

FREQ NR: 1 FREQ(MHZ): F1 PLOT..... AB

CONFIGURATION 8

5 JUL 1984



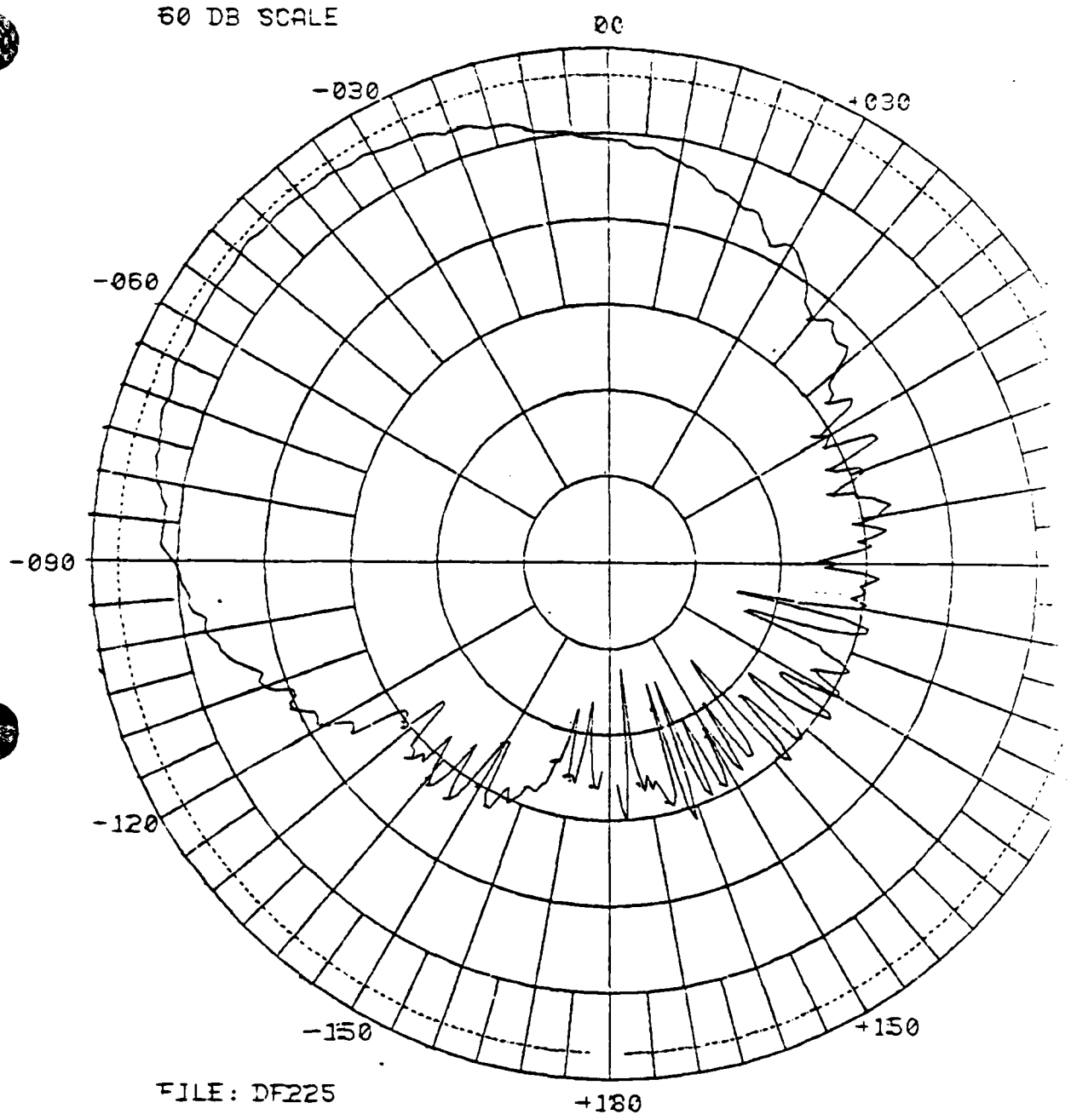
FILE: DF225

SCAN NR: 1 STEP ANGLE: 0.00 PLOT_____ AA

FREQ NR: 2 FREQ.(MHZ): F2 PLOT..... AB

CONFIGURATION 8

5 JUL 1984



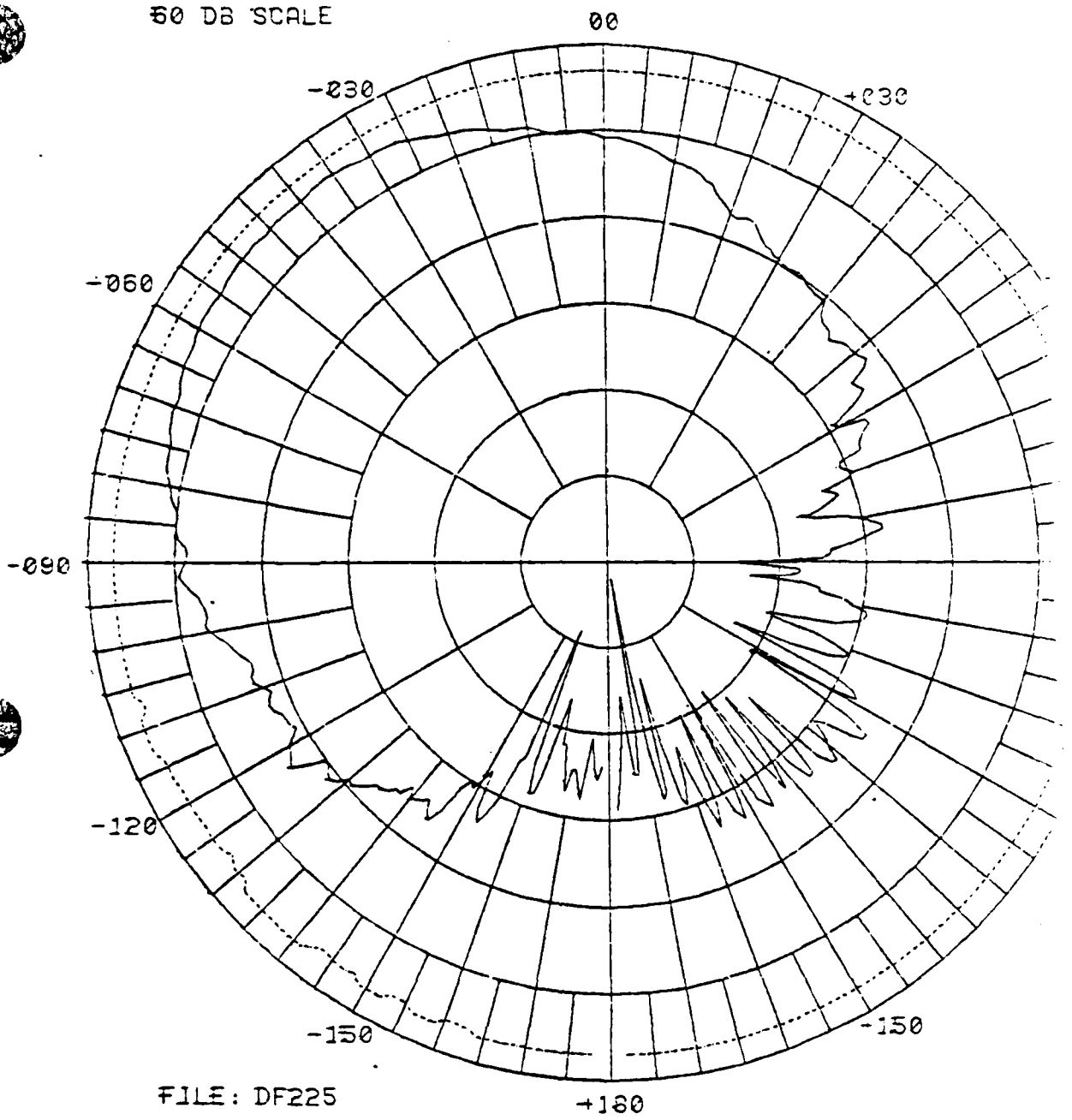
FILE: DF225

SCAN NR: 2 STEP ANGLE: -10.00 PLOT_____ AA

FREQ NR: 2 FREQ(MHZ): F2 PLOT..... AB

CONFIGURATION 8

5 JUL 1984



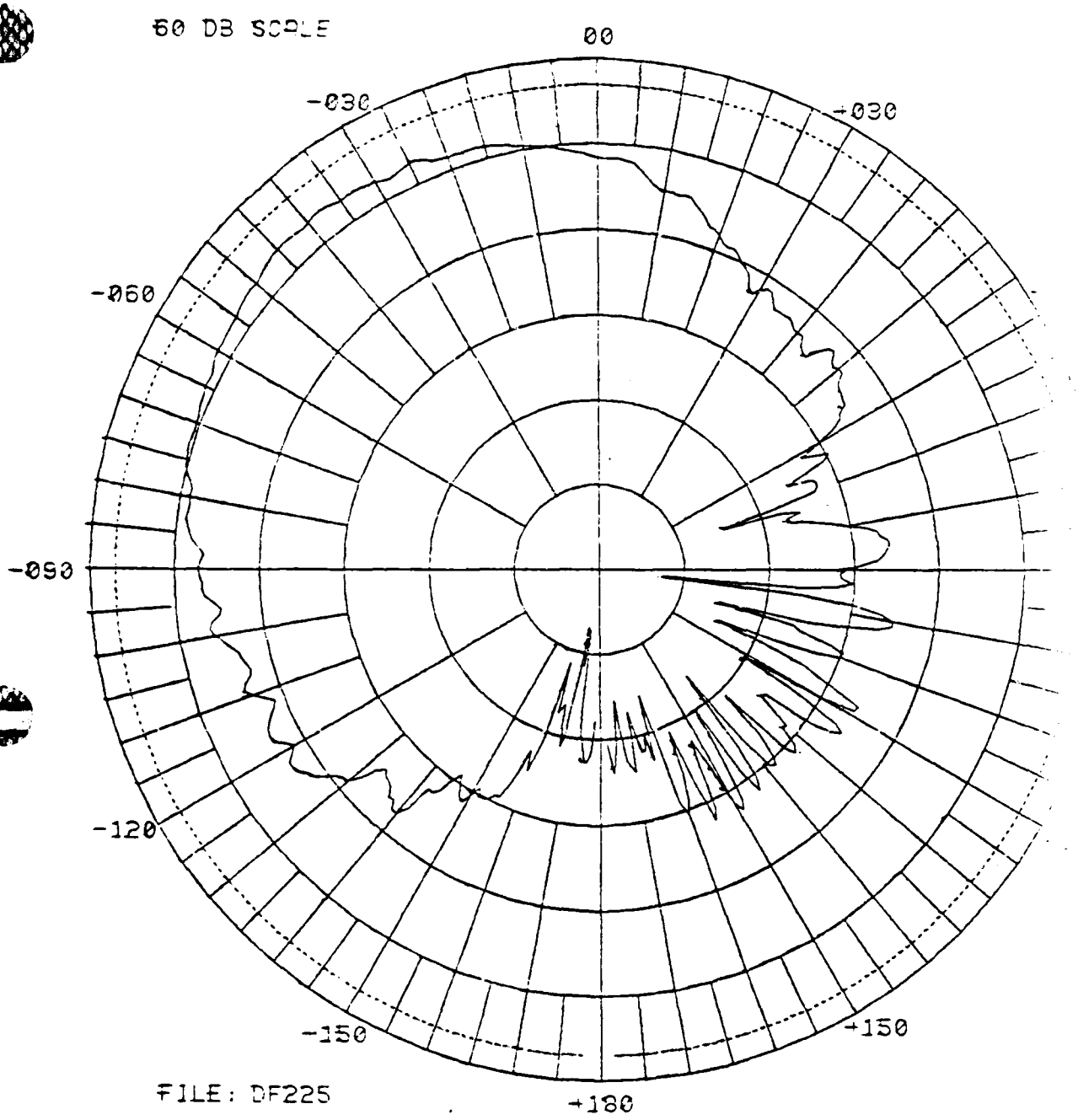
FILE: DF225

SCAN NR: 3 STEP ANGLE: -20.00 PLOT_____ AA

FREQ NR: 2 FREQ(MHZ): F2 PLOT..... AB

CONFIGURATION 8

5 JUL 1984



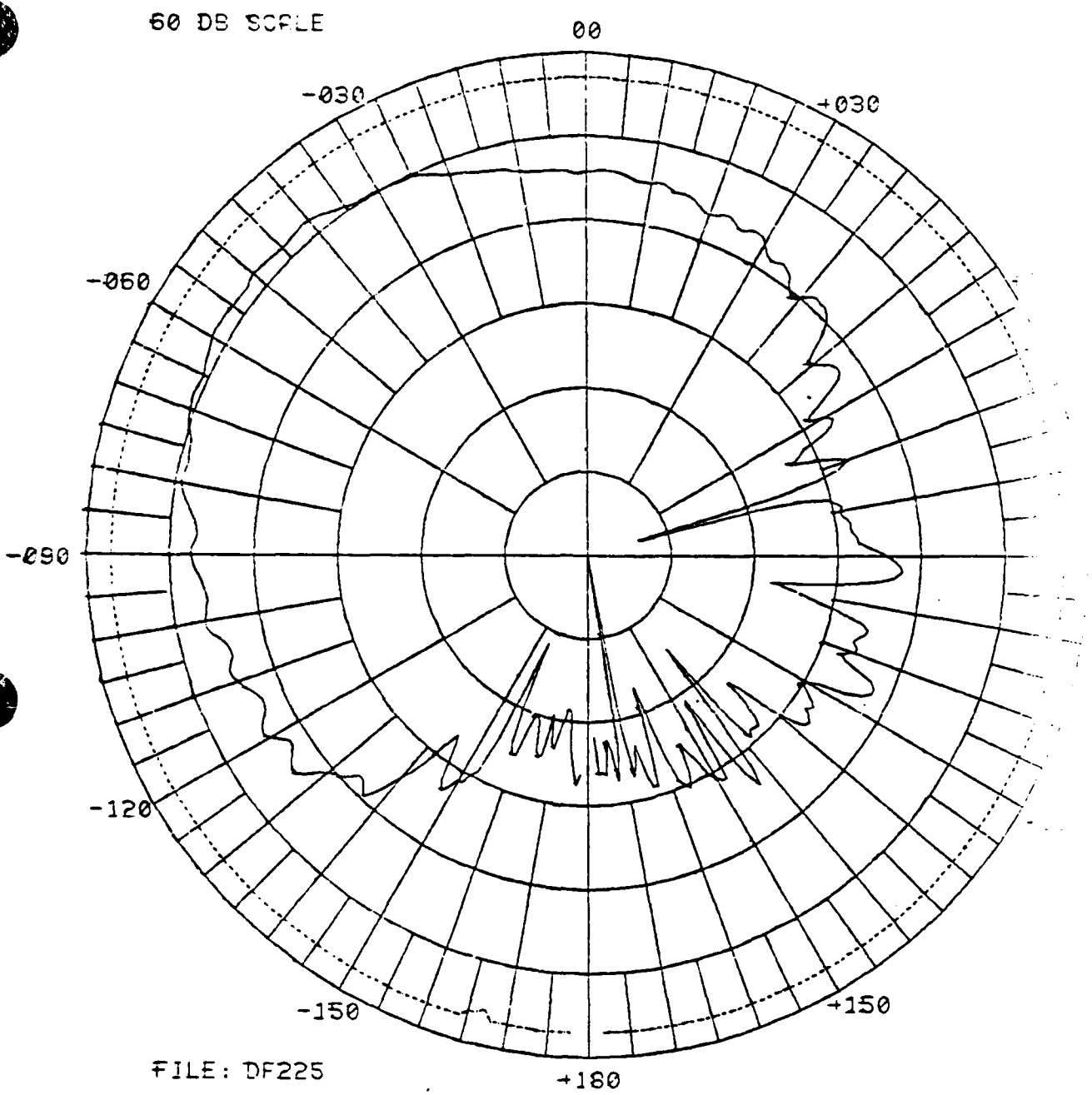
FILE: DF225

SCAN NR: 4 STEP ANGLE: -30.00 PLOT_____ AA

FREQ NR: 2 FREQ(MHZ): F2 PLOT_____ AB

CONFIGURATION 8

5 JUL 1984



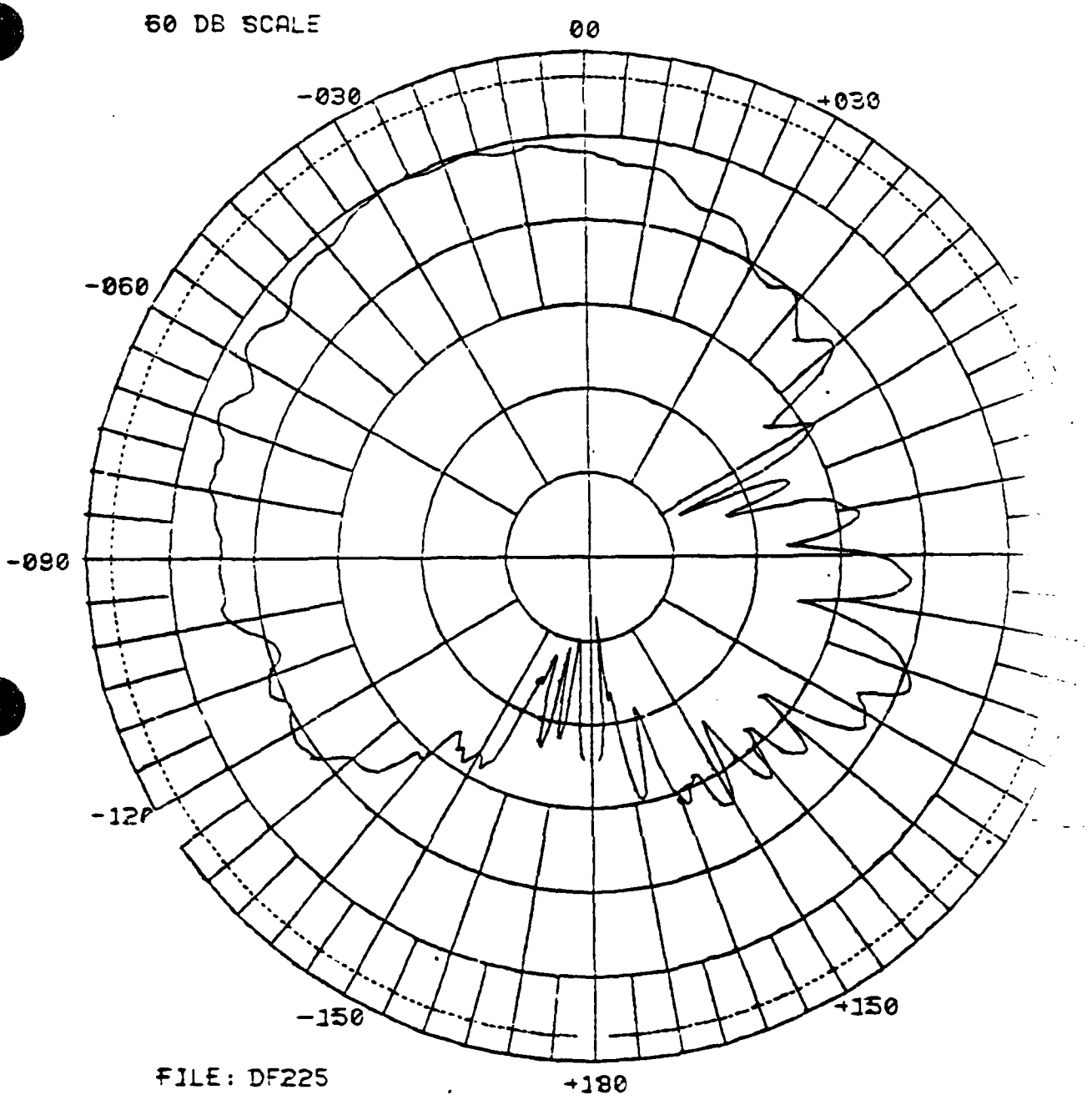
FILE: DF225

SCAN NR: 5 STEP ANGLE: -40.00 PLOT_____ AA

FREQ NR: 2 FREQ(MHZ): F2 PLOT_____ AB

CONFIGURATION 8

5 JUL 1984



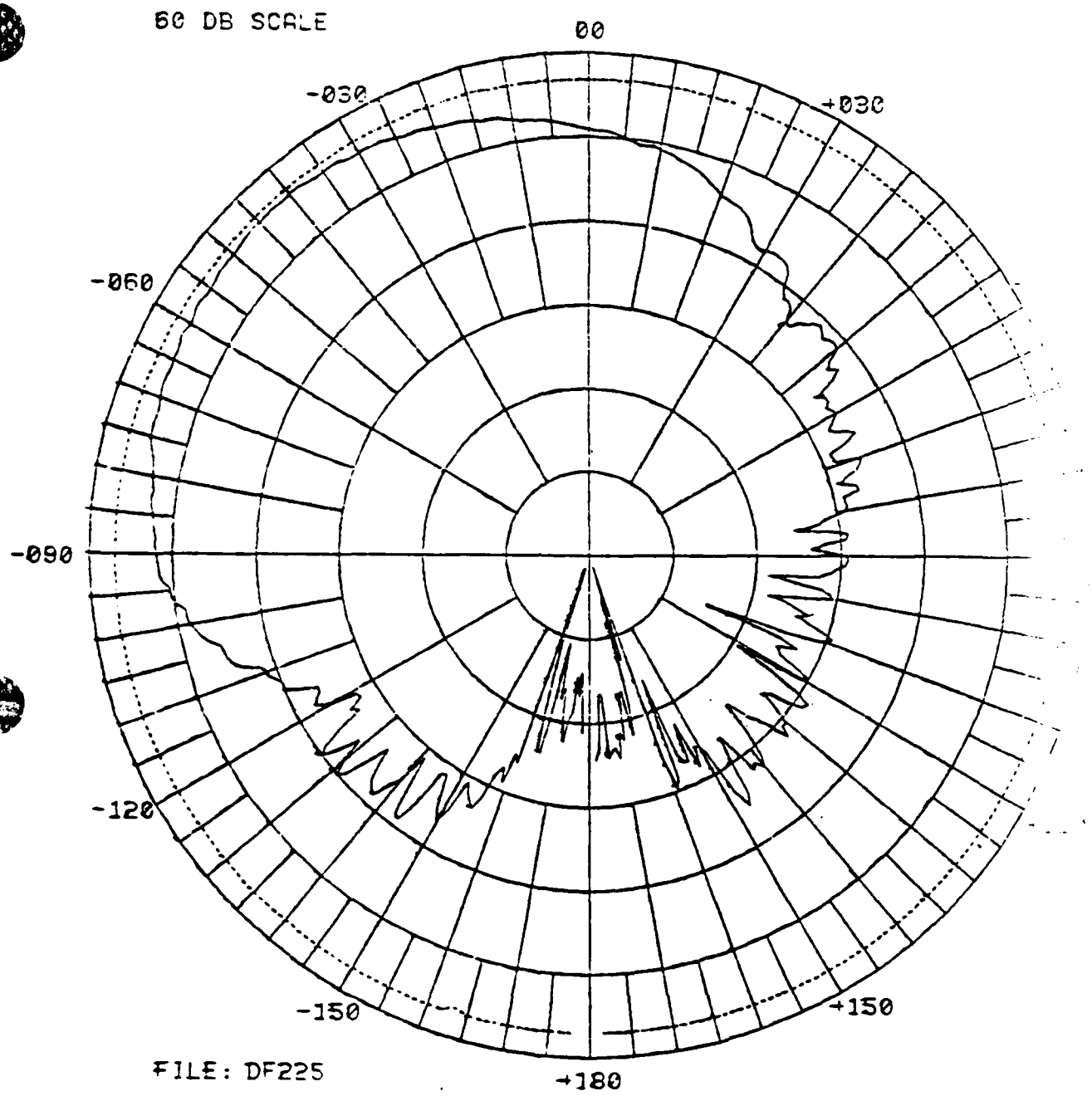
FILE: DF225

SCAN NR: 6 STEP ANGLE: -50.00 PLOT_____ AA

FREQ NR: 2 FREQ(MHZ): F2 PLOT_____ AB

CONFIGURATION 8

5 JUL 1984



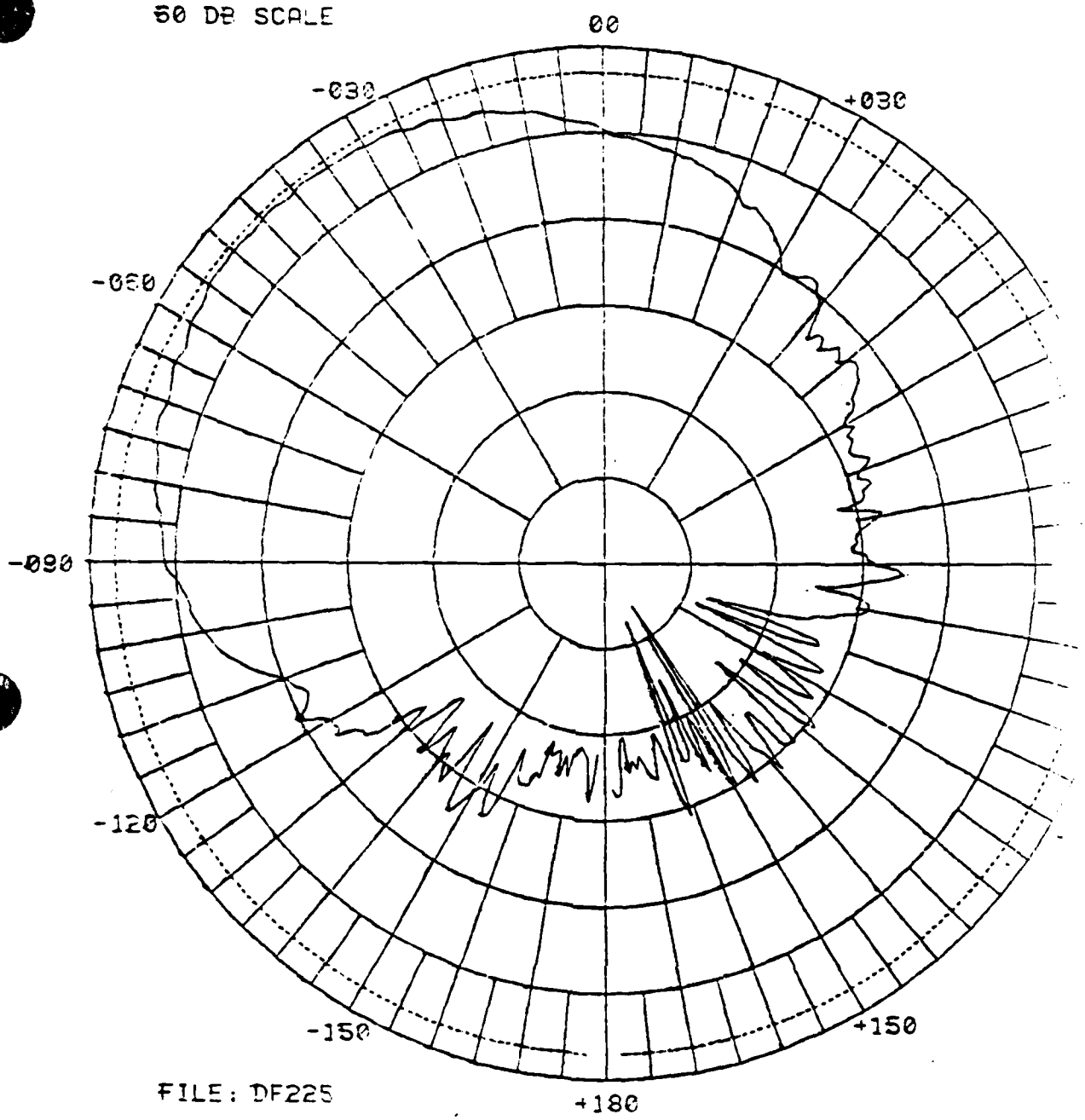
FILE: DF225

SCAN NR: 1 STEP ANGLE: 0.00 PLOT_____ AA

FREQ NR: 3 FREQ(MHZ): F3 PLOT_____ AB

CONFIGURATION 8

5 JUL 1984



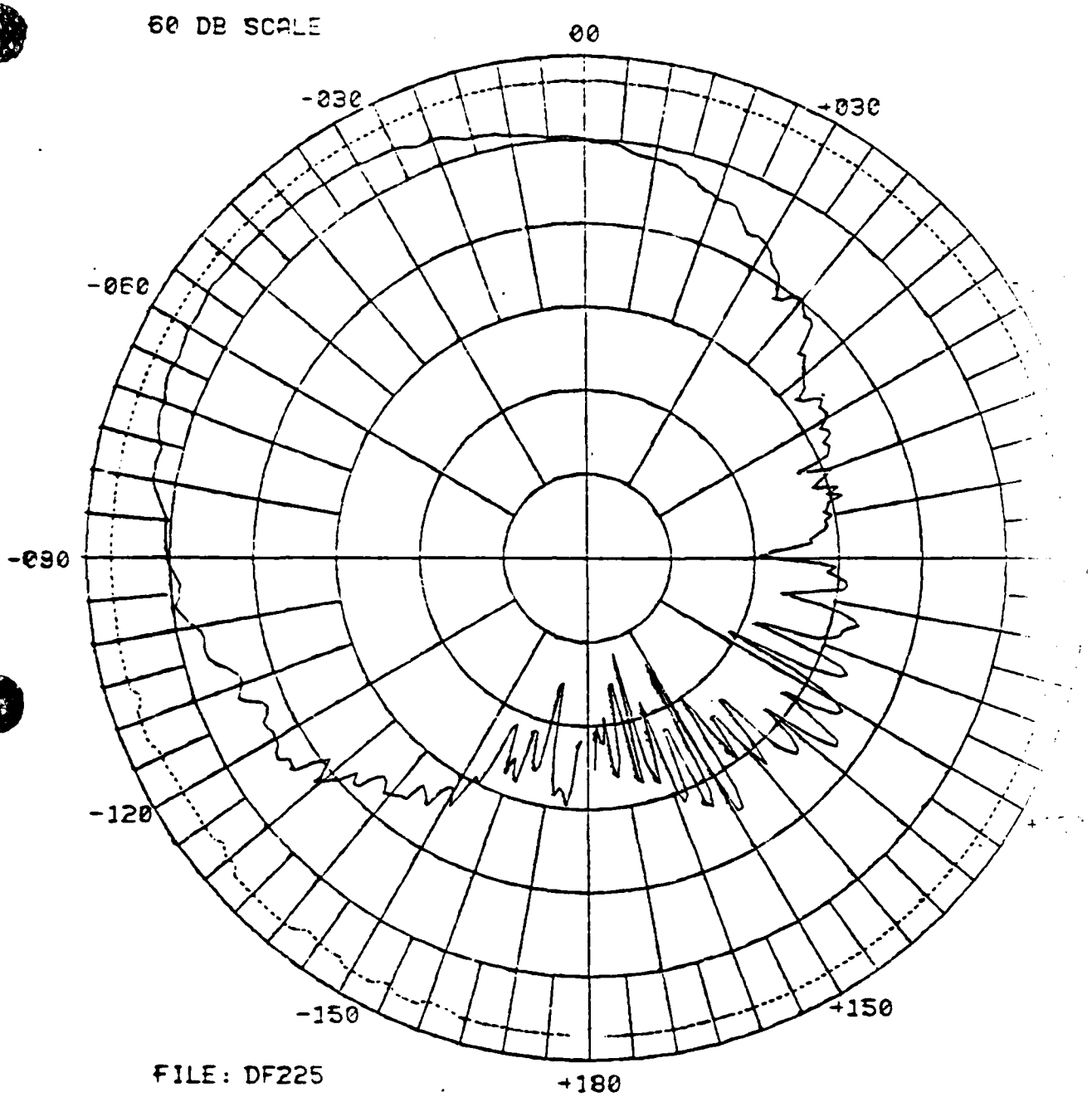
FILE: DF225

SCAN NR: 2 STEP ANGLE: -10.00 PLOT_____ AA

FREQ NR: 3 FREQ(MHZ): F3 PLOT_____ AB

CONFIGURATION 8

5 JUL 1984



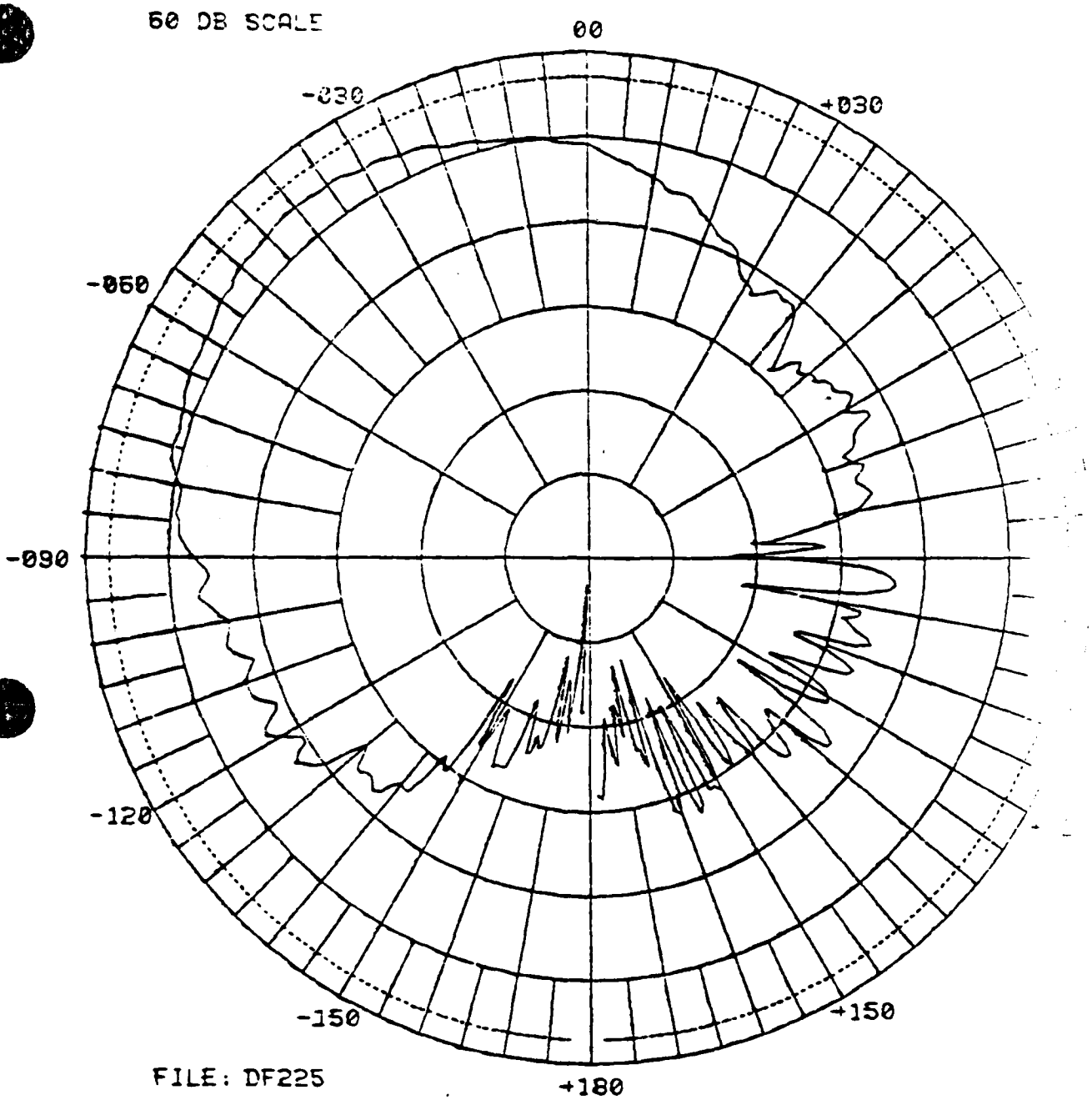
FILE: DF225

SCAN NR: 3 STEP ANGLE: -20.00 PLOT_____ AA

FREQ NR: 3 FREQ(MHZ): F3 PLOT_____ AB

CONFIGURATION 8

5 JUL 1984



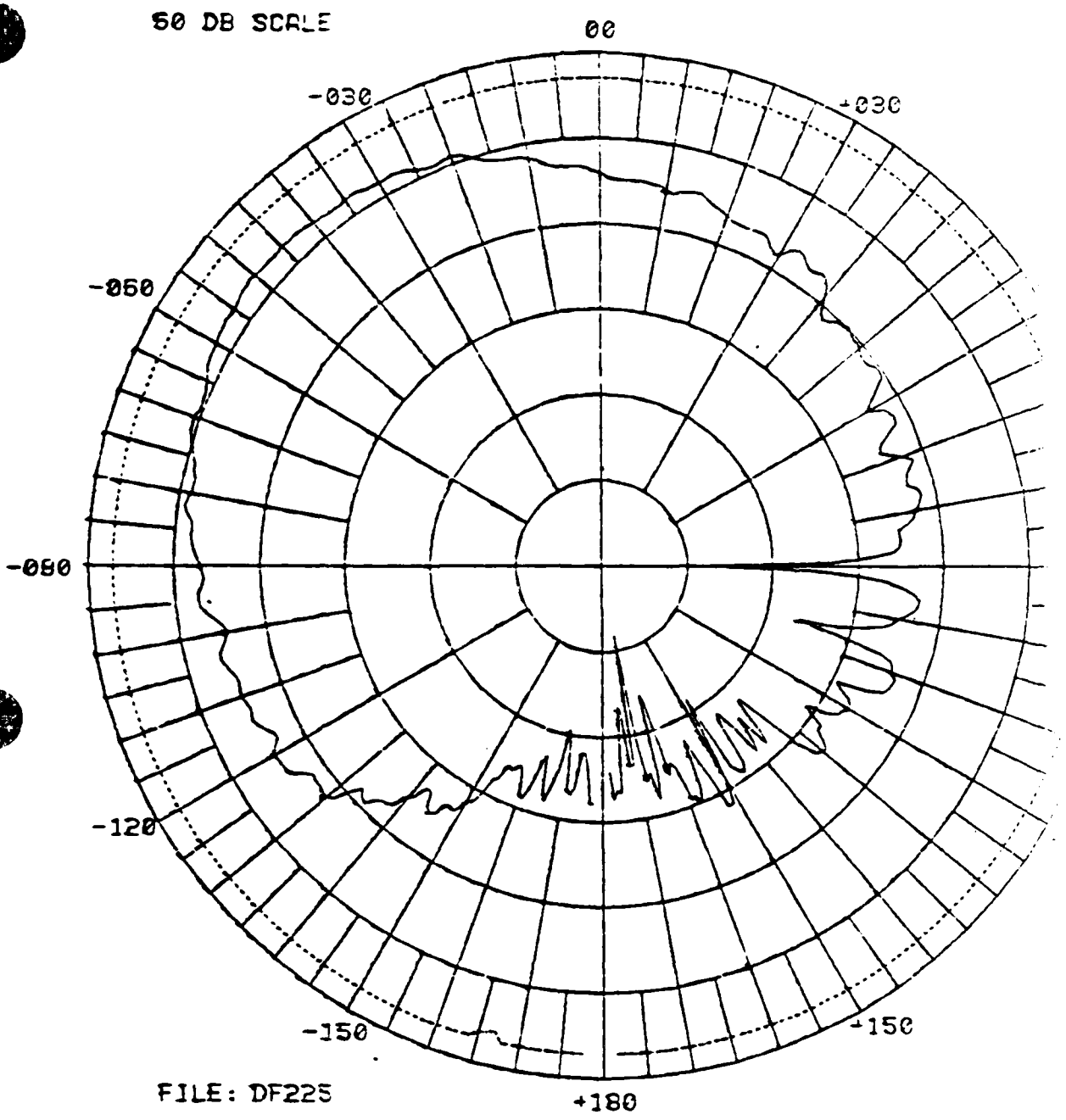
FILE: DF225

SCAN NR: 4 STEP ANGLE: -30.00 PLOT_____ AA

FREQ NR: 3 FREQ(MHZ): F3 PLOT_____ AB

CONFIGURATION 8

5 JUL 1984



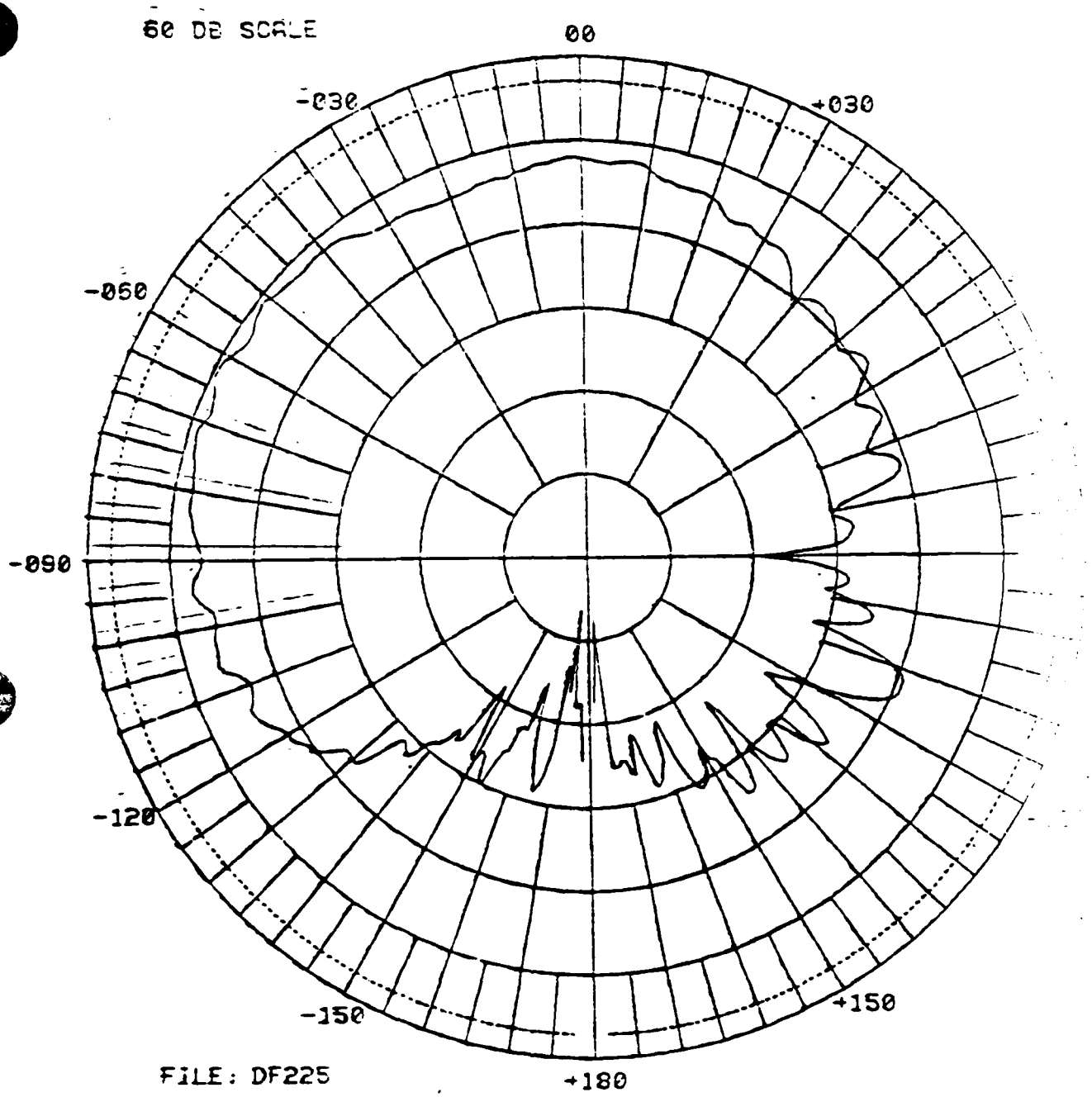
FILE: DF225

SCAN NR: 5 STEP ANGLE: -40.00 PLOT_____ AA

FREQ NR: 3 FREQ(MHZ): F3 PLOT_____ AB

CONFIGURATION 8

5 JUL 1984



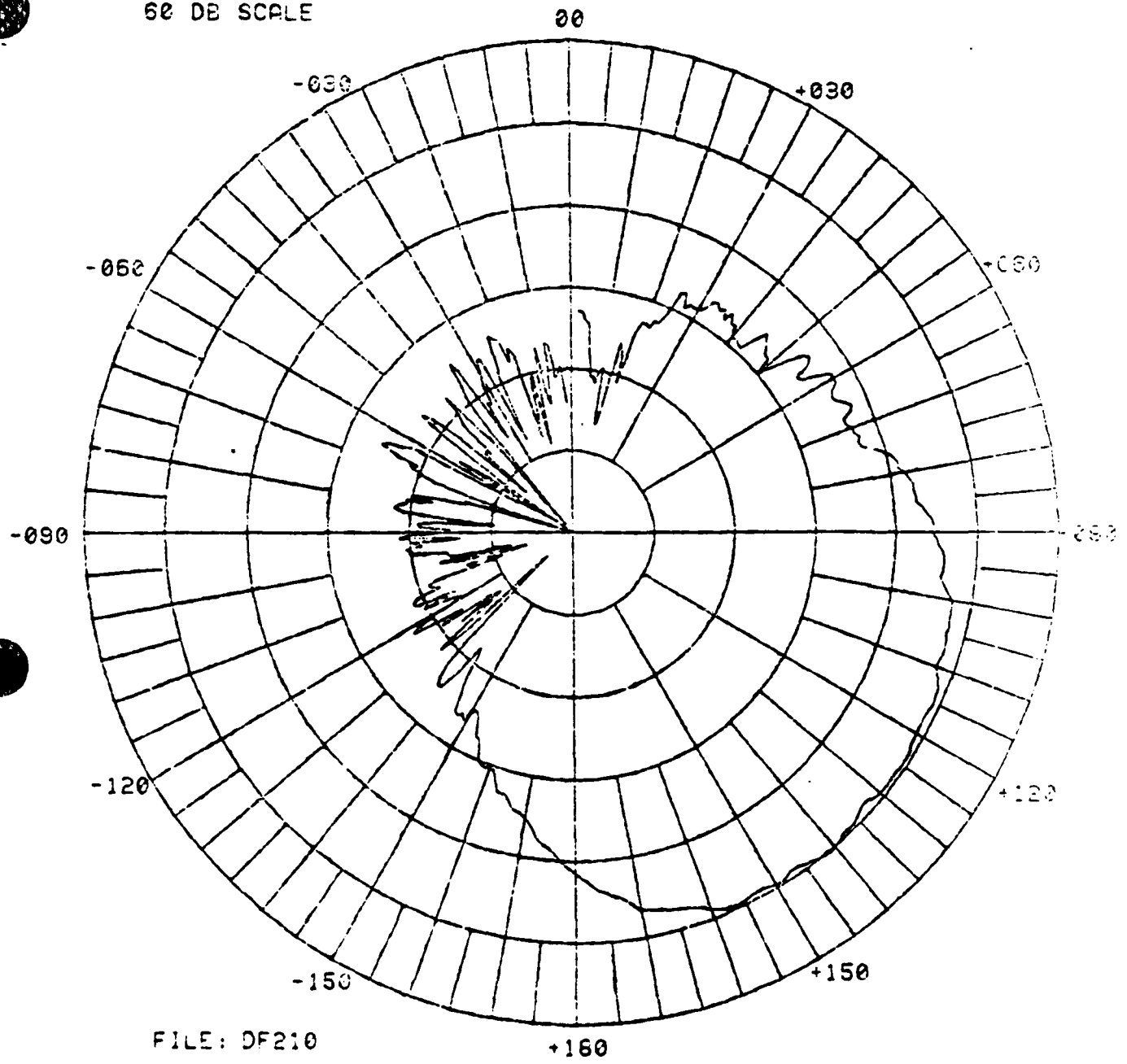
FILE: DF225

SCAN NR: 6 STEP ANGLE: -50.00 PLOT_____ AA

FREQ NR: 3 FREQ(MHZ): F3 PLOT_____ AB

CONFIGURATION 8

5 JUL 1984



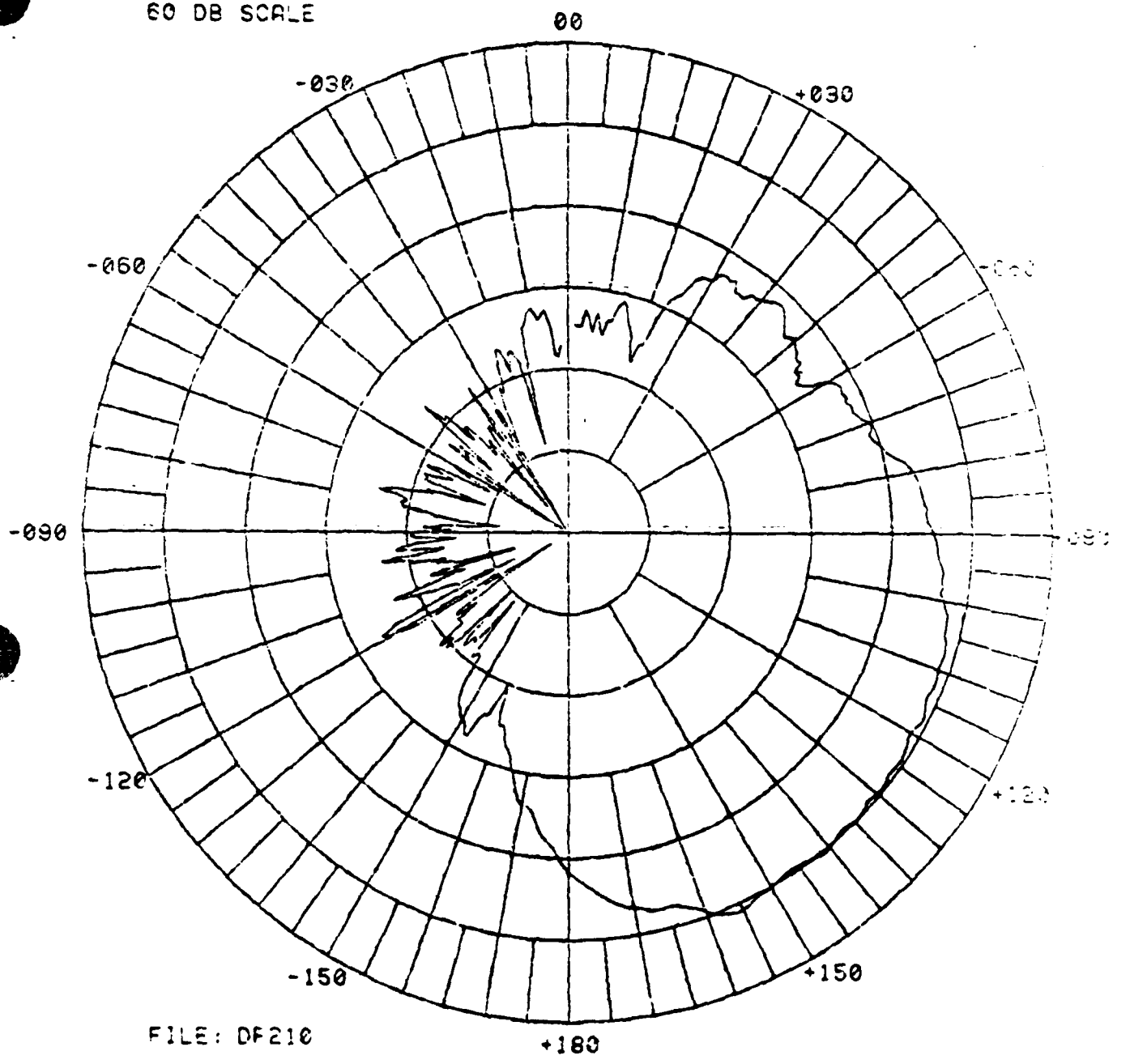
FILE: DF210

SCAN NR: 1 STEP ANGLE: 0.00 PLOT_____ AP

FREQ NR: 1 FREQ(MHZ): F1

CONFIGURATION 4

7 JUN 1984



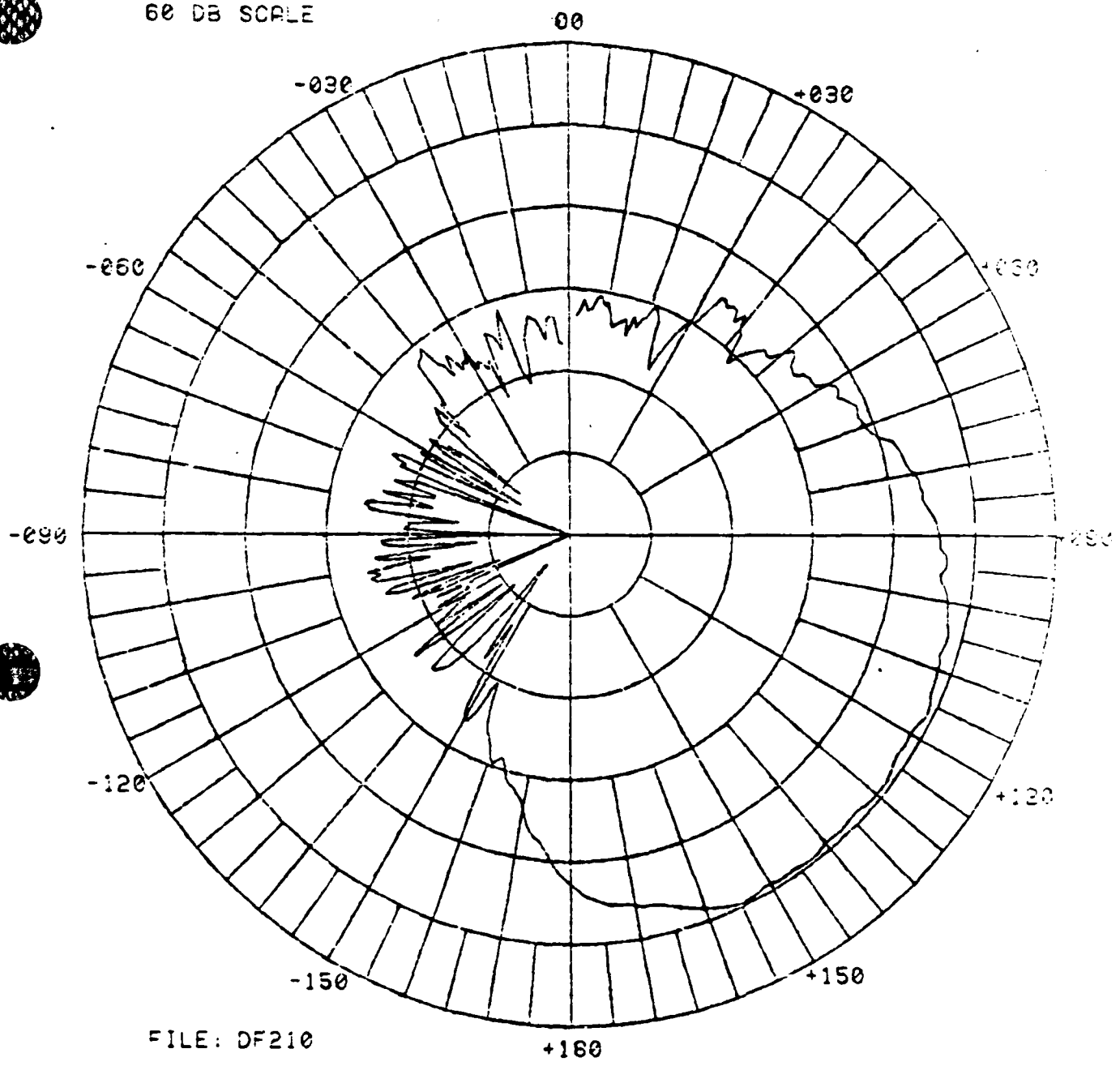
FILE: DF210

SCAN NR: 2 STEP ANGLE: 10.00 PLOT_____ AA

FREQ NR: 1 FREQ(MHZ): F1

CONFIGURATION 4

7 JUN 1984



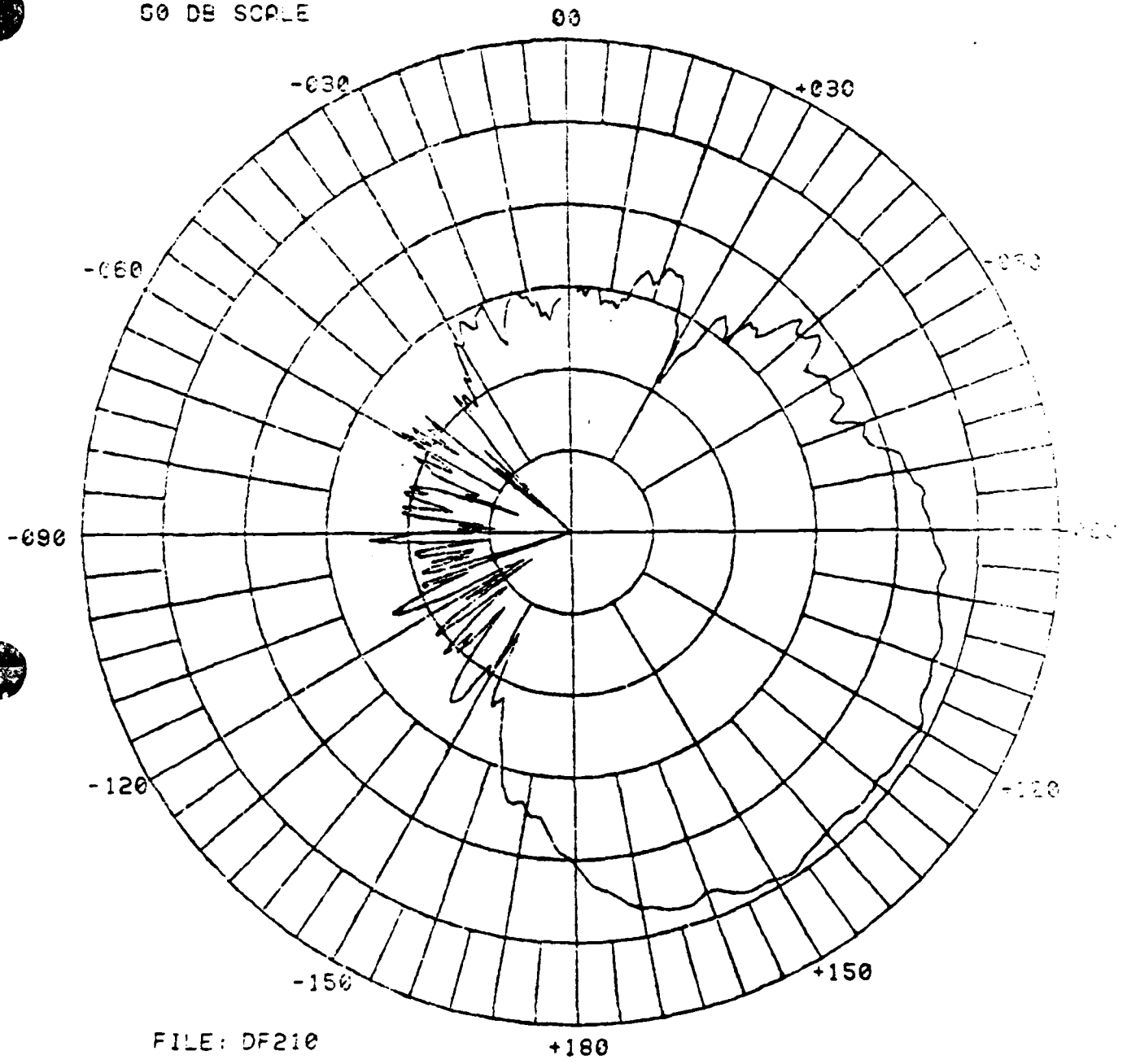
FILE: DF210

SCAN NR: 3 STEP ANGLE: 20.00 PLOT_____ AA

FREQ NR: 1 FREQ(MHZ): F1

CONFIGURATION 4

7 JUN 1984



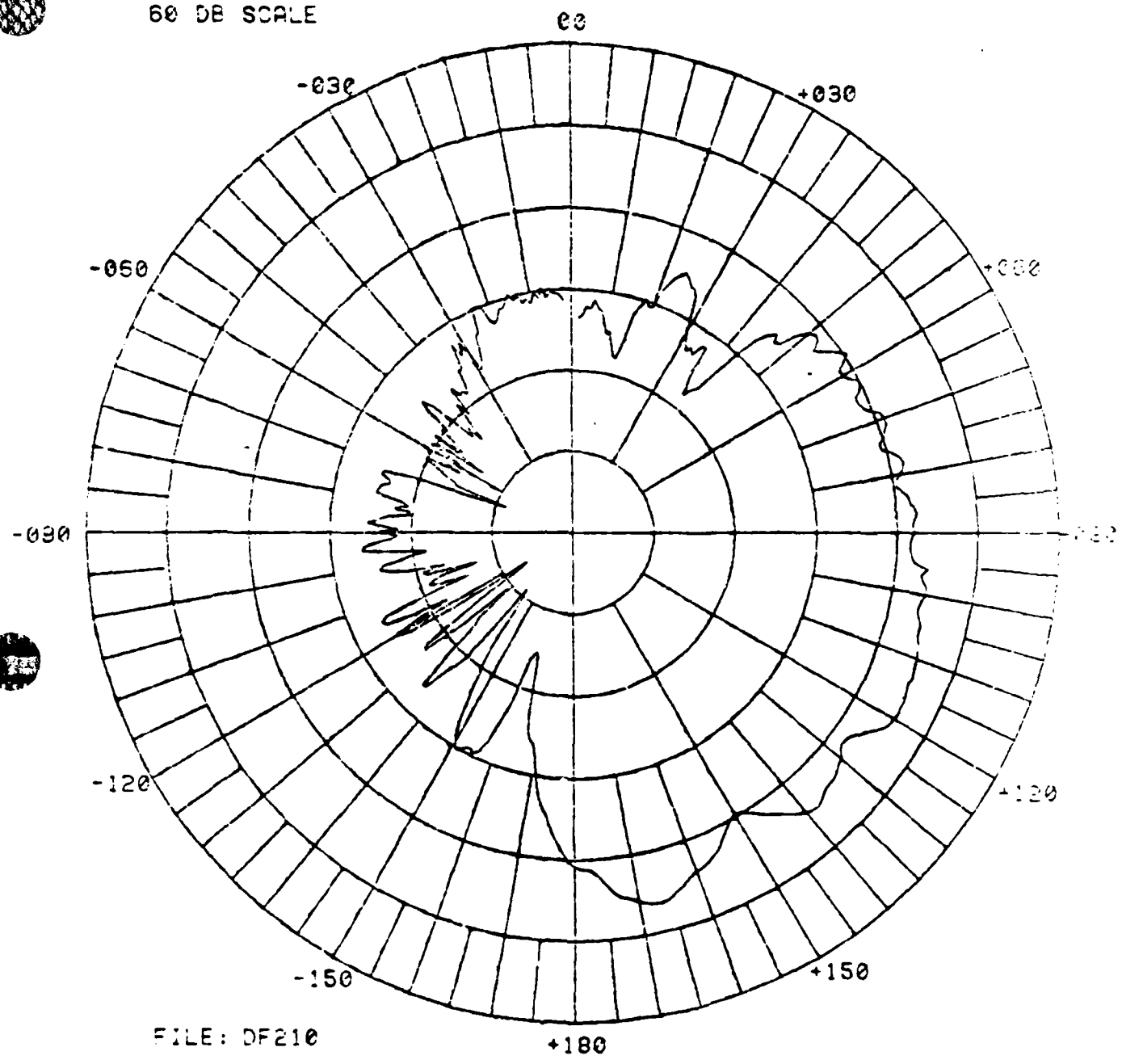
FILE: DF210

SCAN NR: 4 STEP ANGLE: 30.00 PLOT_____ AA

FREQ NR: 1 FREQ(MHZ): F1

CONFIGURATION 4

7 JUN 1984



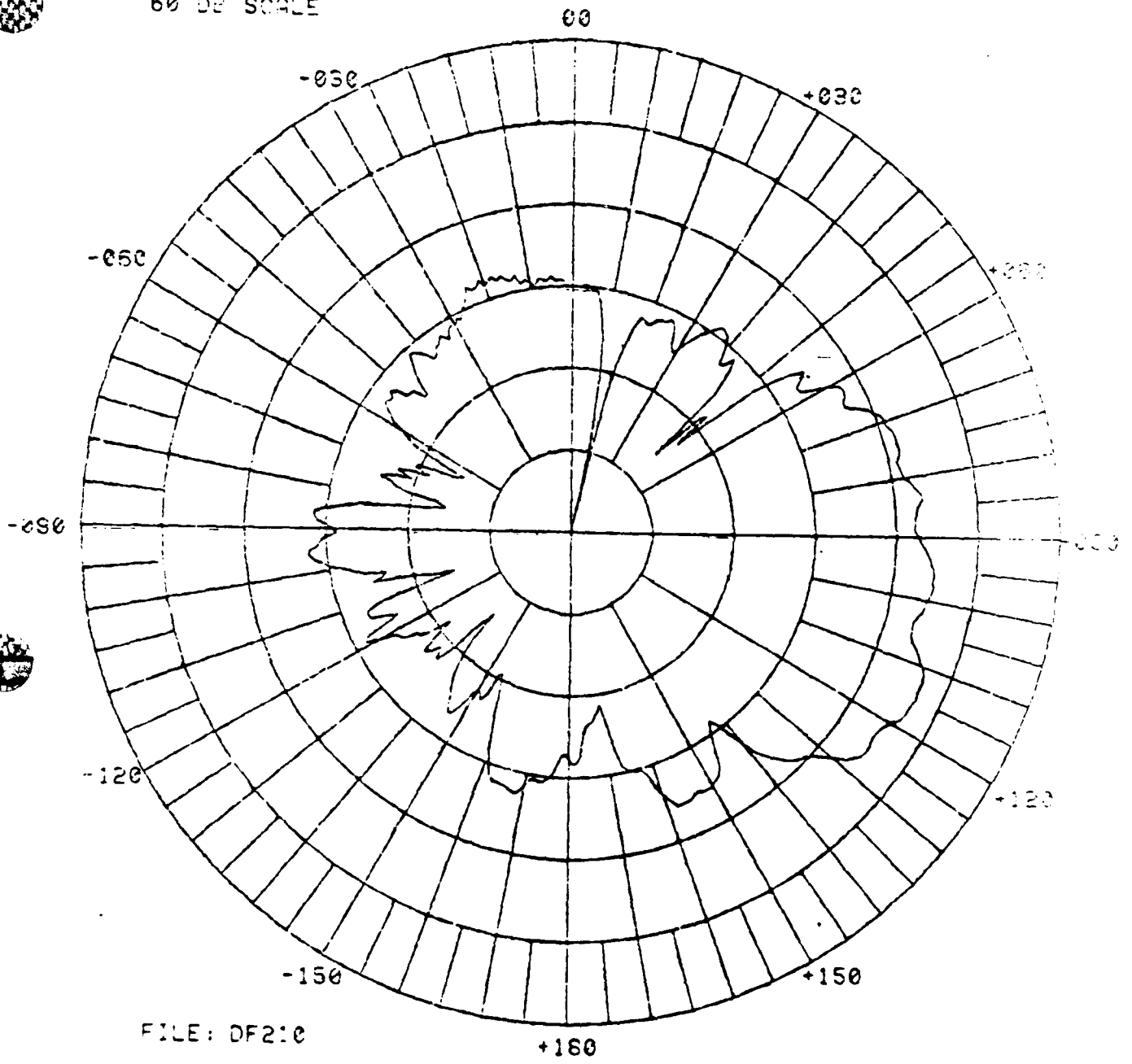
FILE: DF210

SCAN NR: 5 STEP ANGLE: 40.00 PLOT_____ AA

FREQ NR: 1 FREQ(MHZ): F1

CONFIGURATION 4

7 JUN 1984



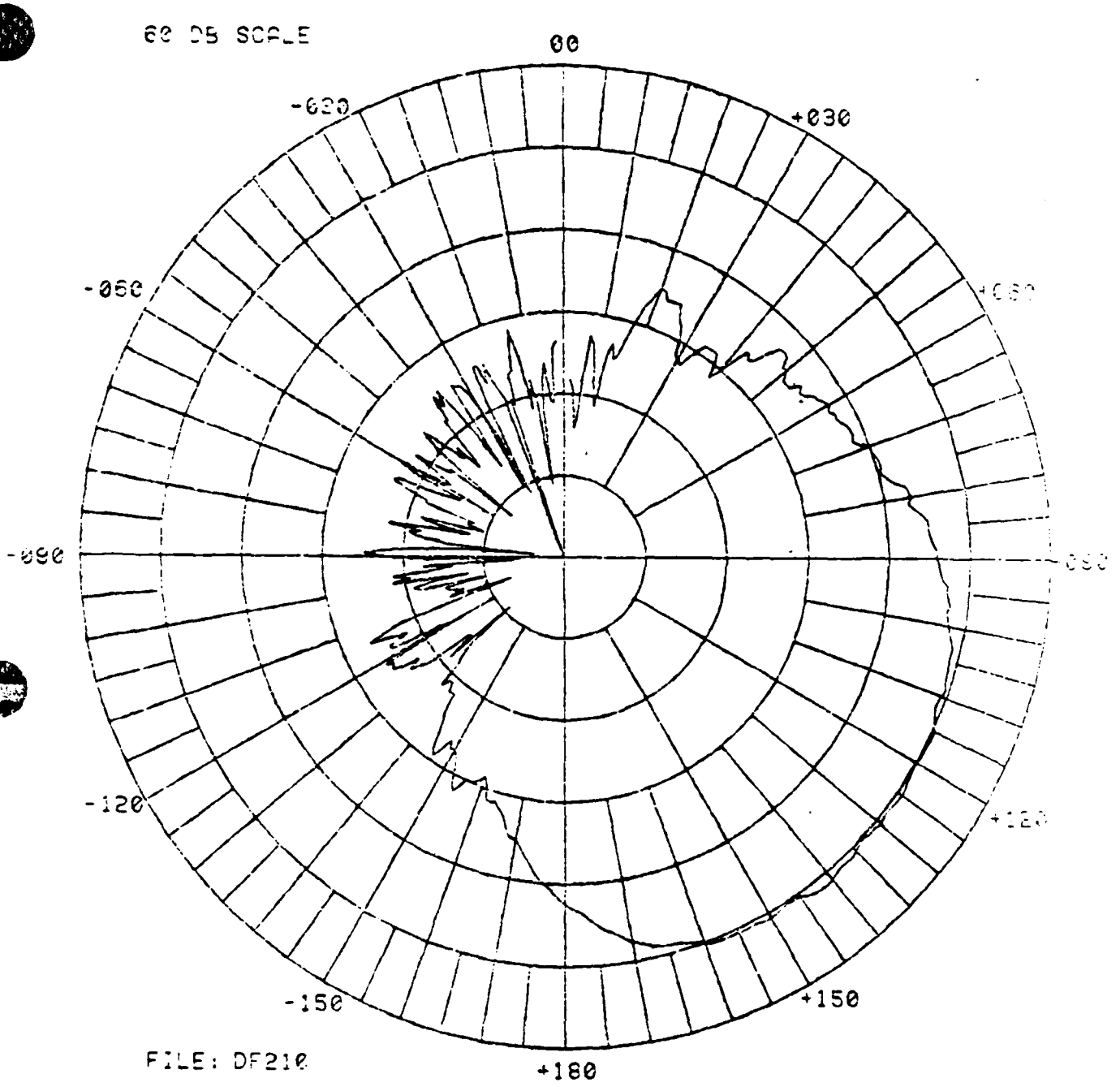
FILE: DF210

SCAN NR: 6 STEP ANGLE: 50.00 PLOT_____ AA

FREQ NR: 1 FREQ(MHZ): F1

CONFIGURATION 4

7 JUN 1994



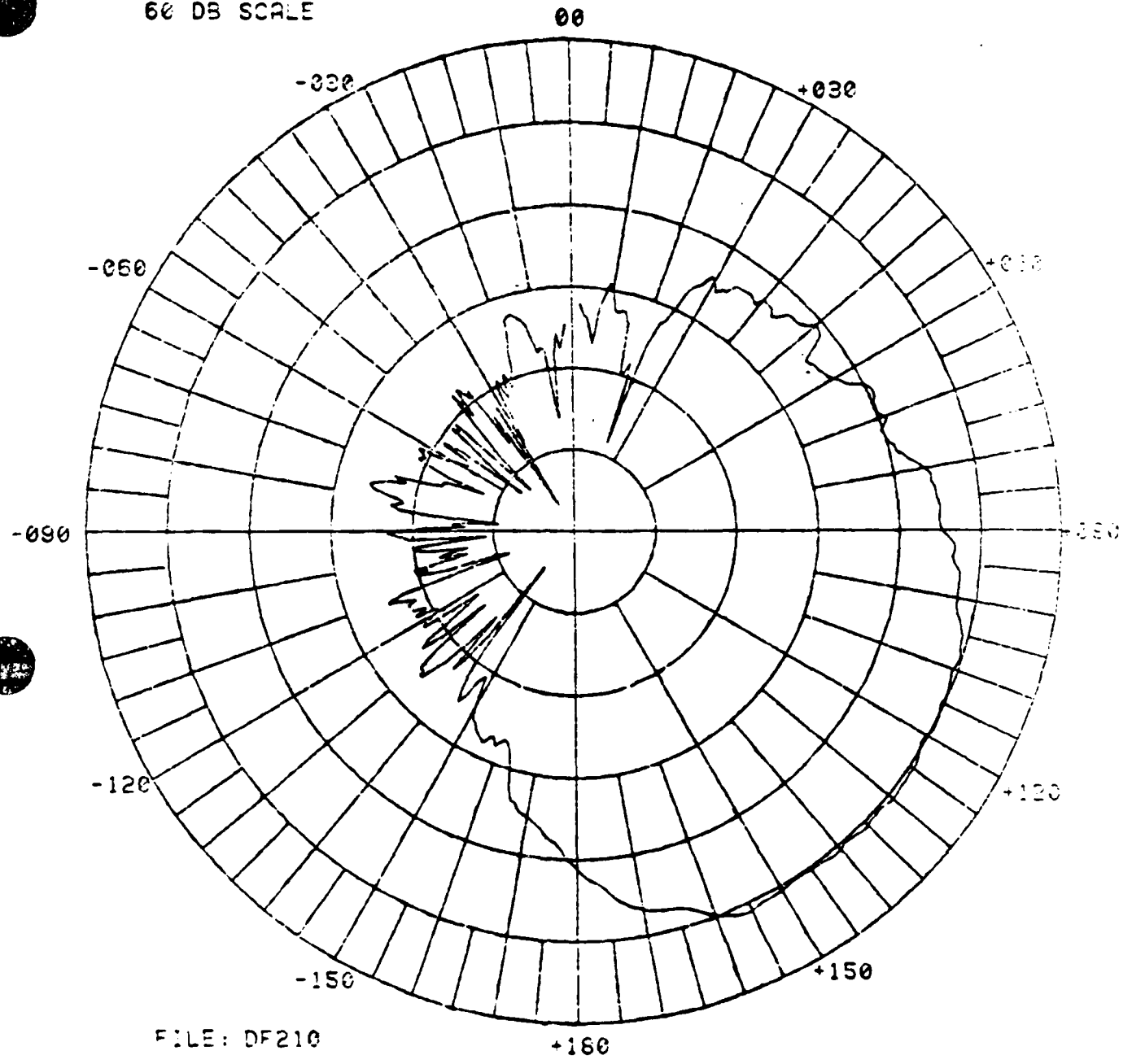
FILE: DF210

SCAN NR: 1 STEP ANGLE: 0.00 PLOT_____ AA

FREQ NR: 2 FREQ(MHZ): F2

CONFIGURATION 4

7 JUN 1984



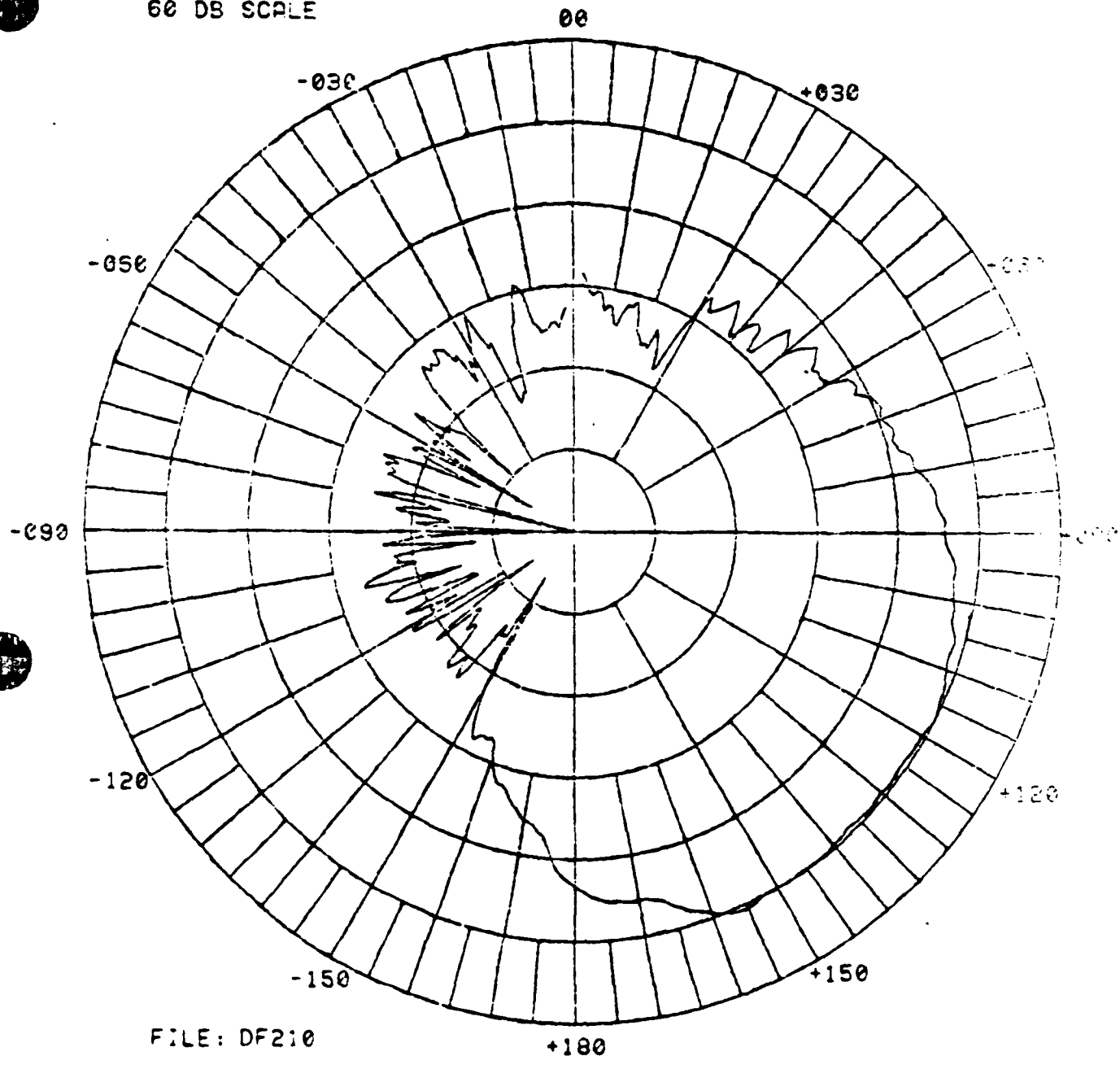
FILE: DF210

SCAN NR: 2 STEP ANGLE: 10.00 PLOT_____ AA

FREQ NR: 2 FREQ(MHZ): F2

CONFIGURATION 4

7 JUN 1984



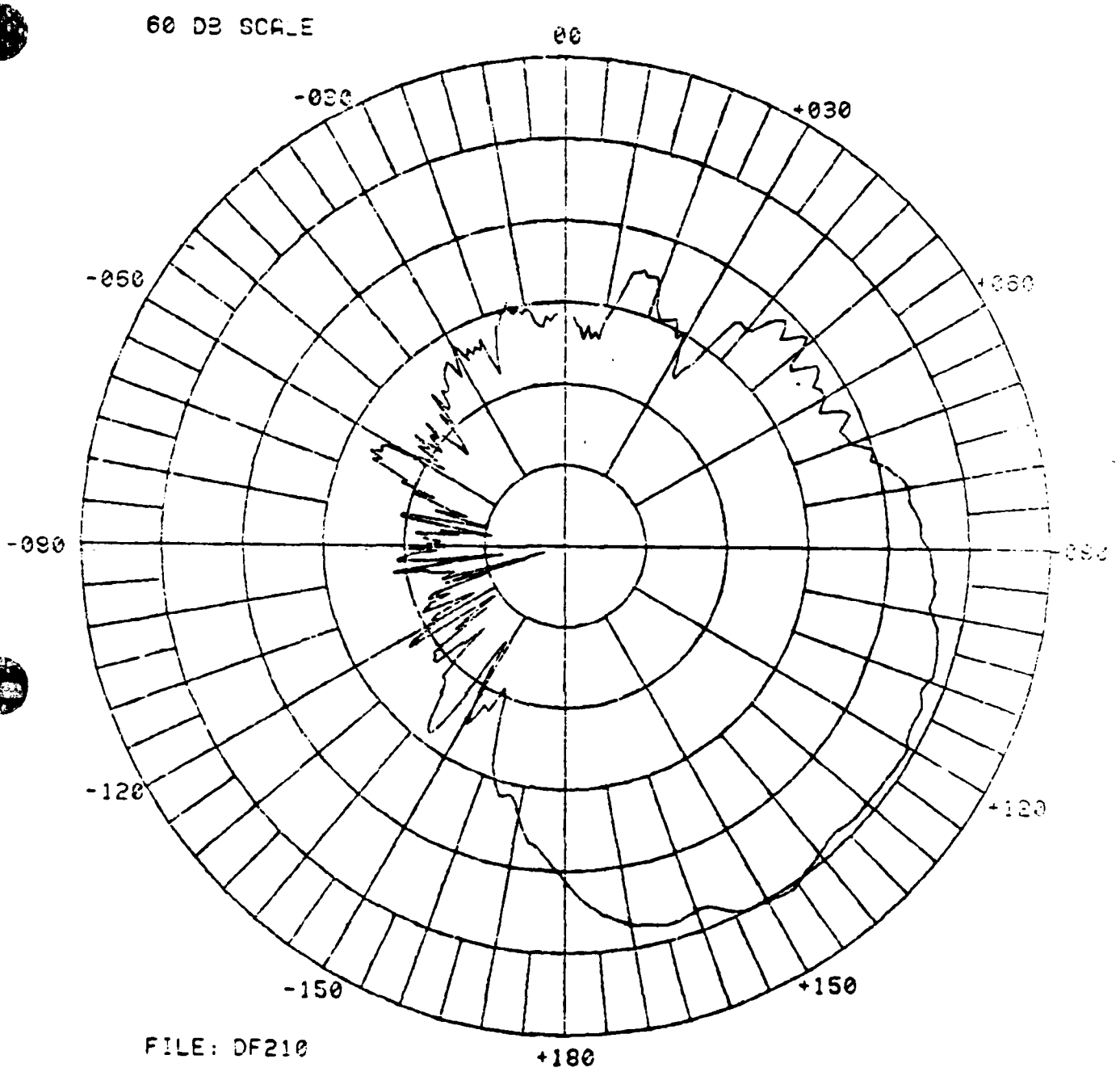
FILE: DF210

SCAN NR: 3 STEP ANGLE: 20.00 PLOT_____ AA

FREQ NR: 2 FREQ(MHZ): F2

CONFIGURATION 4

7 JUN 1984



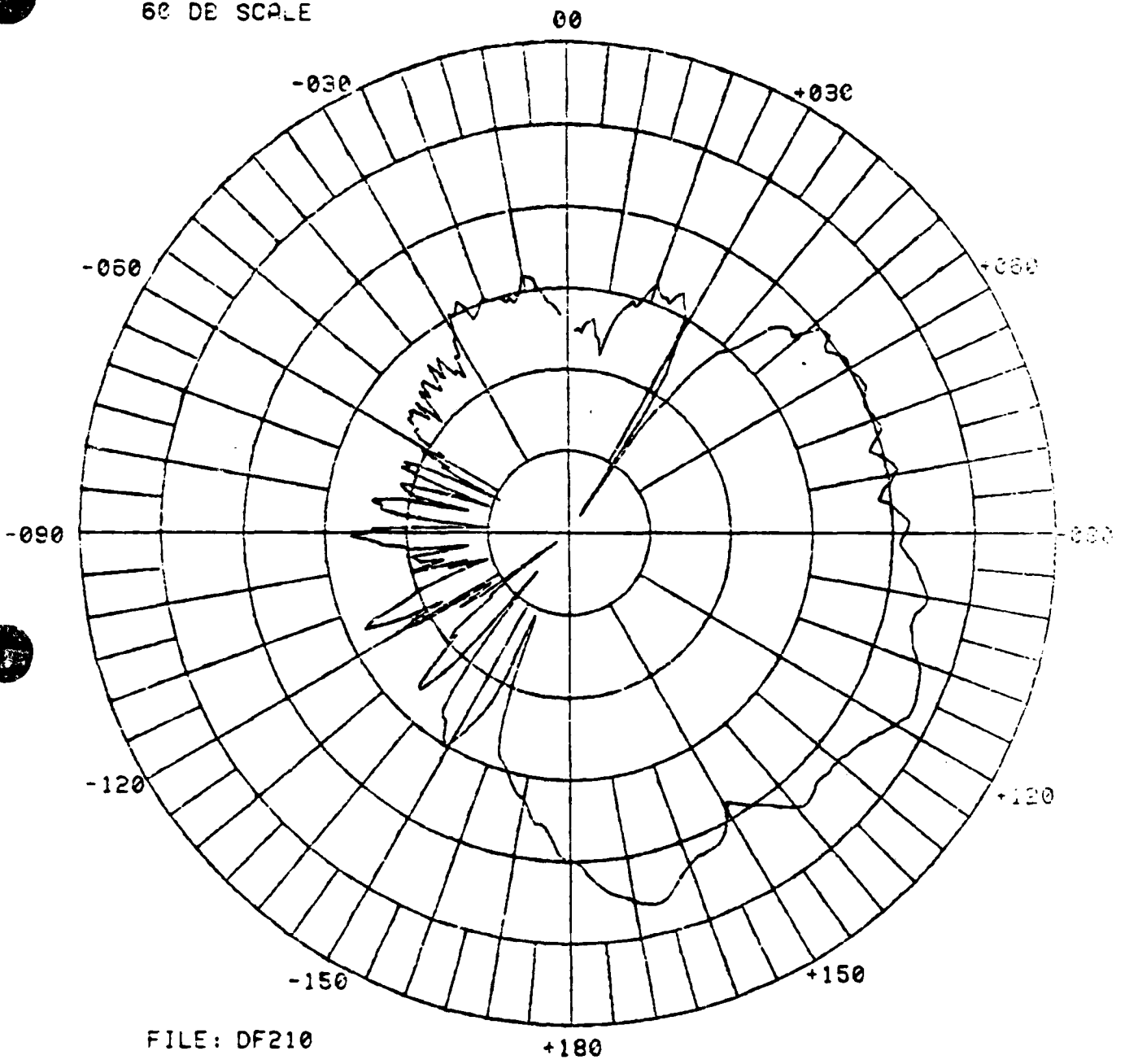
FILE: DF210

SCAN NR: 4 STEP ANGLE: 30.00 PLOT_____ AA

FREQ NR: 2 FREQ(MHZ): F2

CONFIGURATION 4

7 JUN 1989



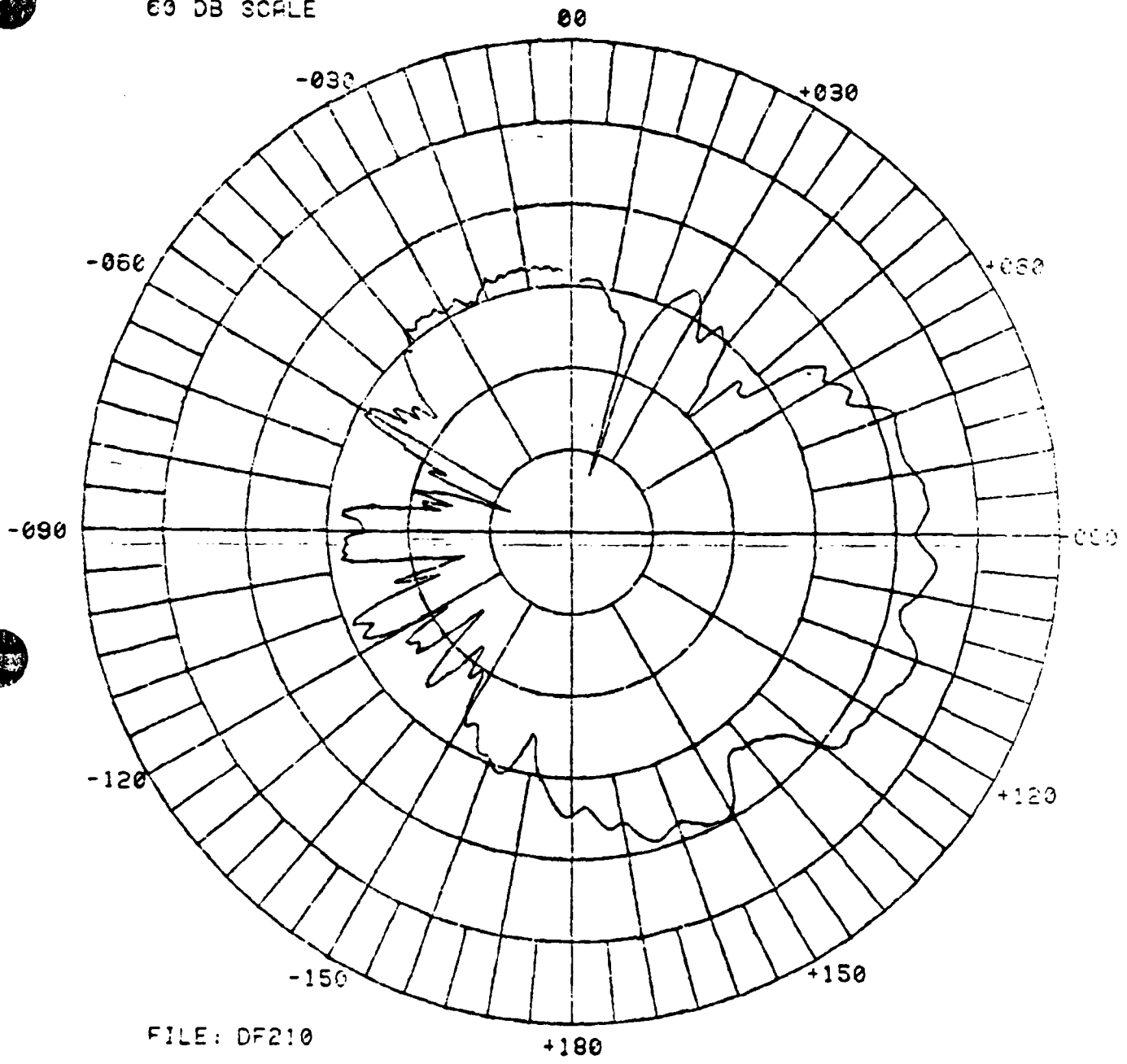
FILE: DF210

SCAN NR: 5 STEP ANGLE: 40.00 PLOT_____ AA

FREQ NR: 2 FREQ(MHZ): F2

CONFIGURATION 4

7 JUN 1984



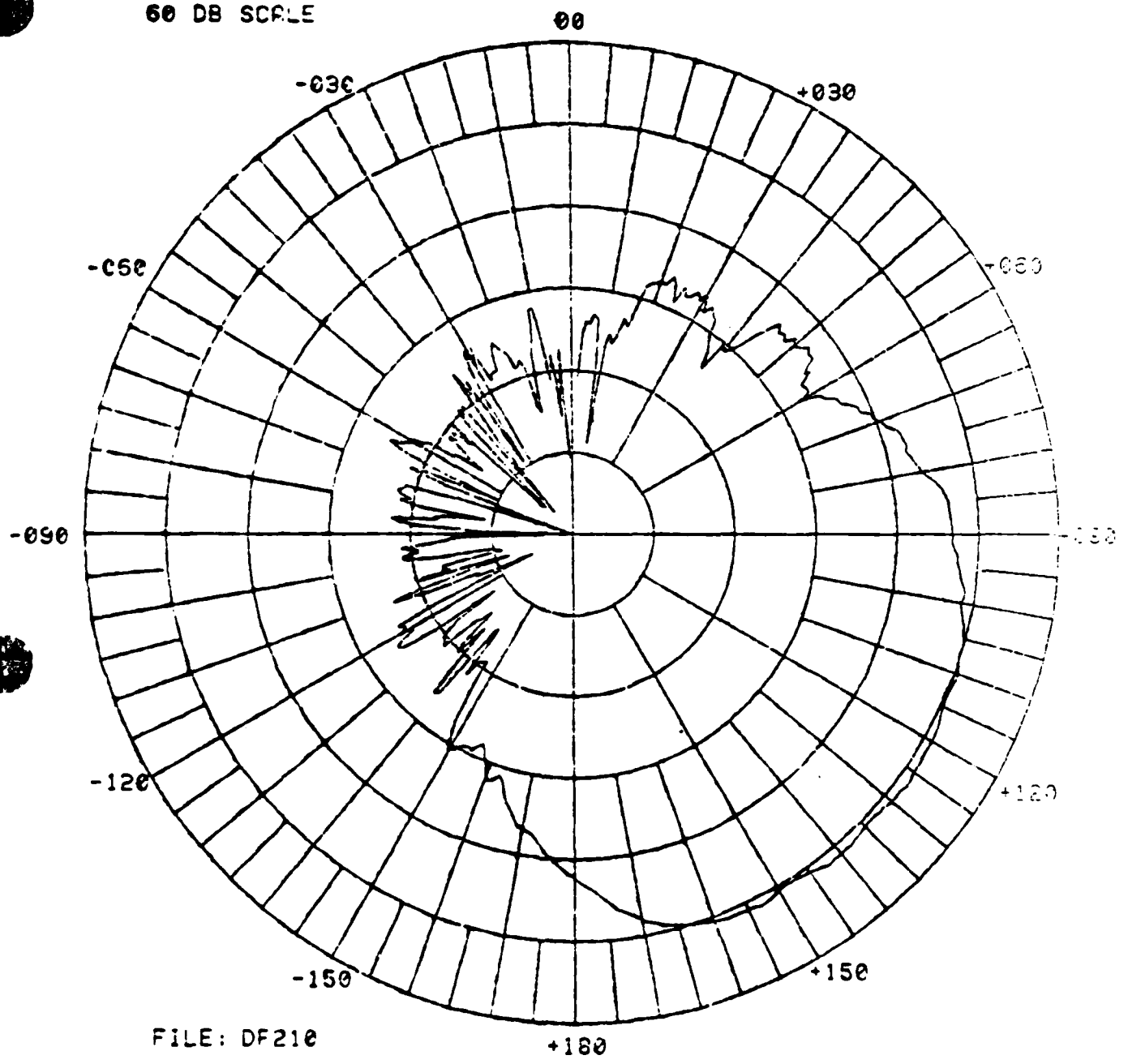
FILE: DF210

SCAN NR: 6 STEP ANGLE: 50.00 PLOT_____ AA

FREQ NR: 2 FREQ(MHZ): F2

CONFIGURATION 4

7 JUN 1984



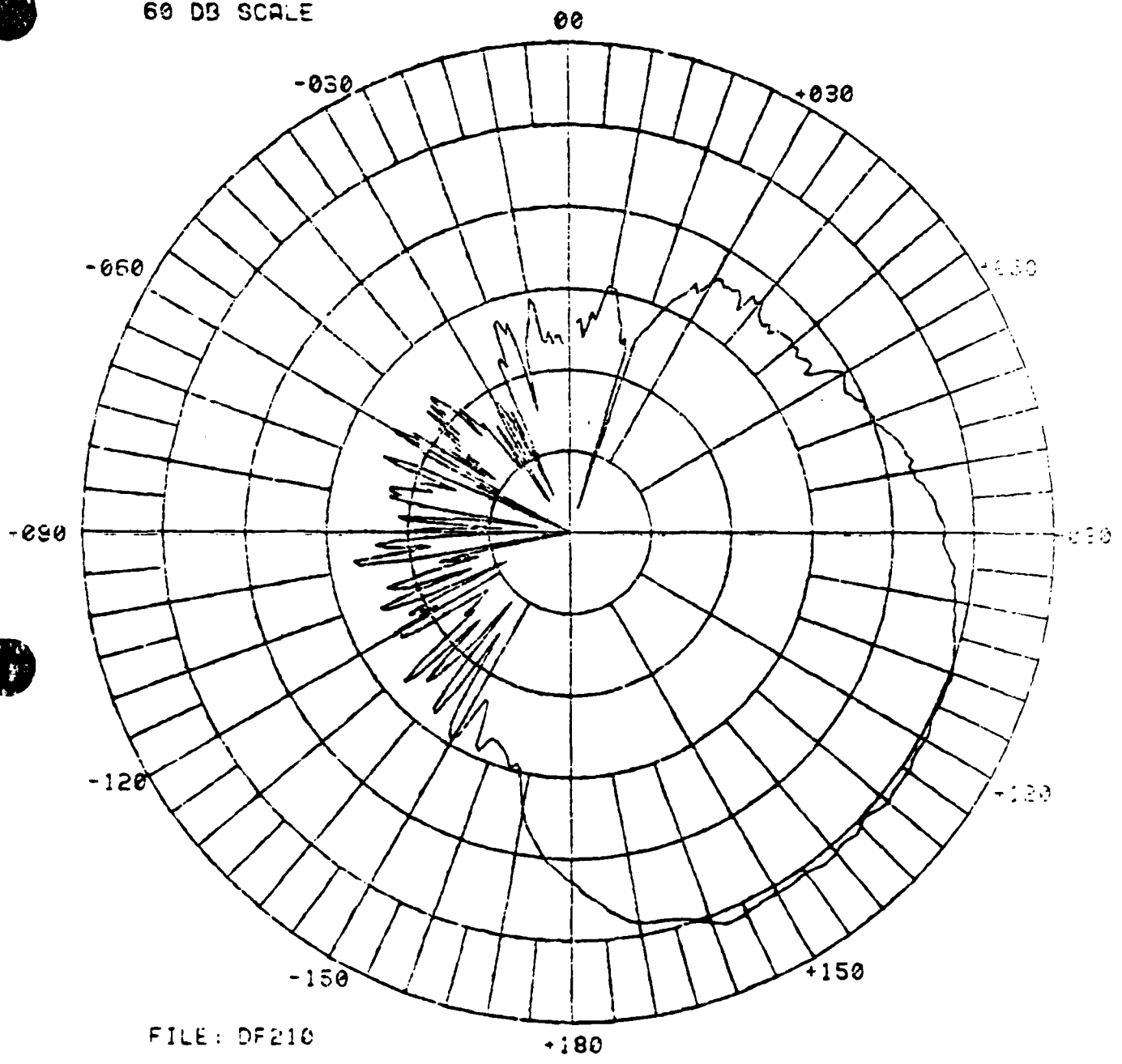
FILE: DF210

SCAN NR: 1 STEP ANGLE: 0.00 PLOT_____ AA

FREQ NR: 3 FREQ(MHZ): F3

CONFIGURATION 4

7 JUN 1984



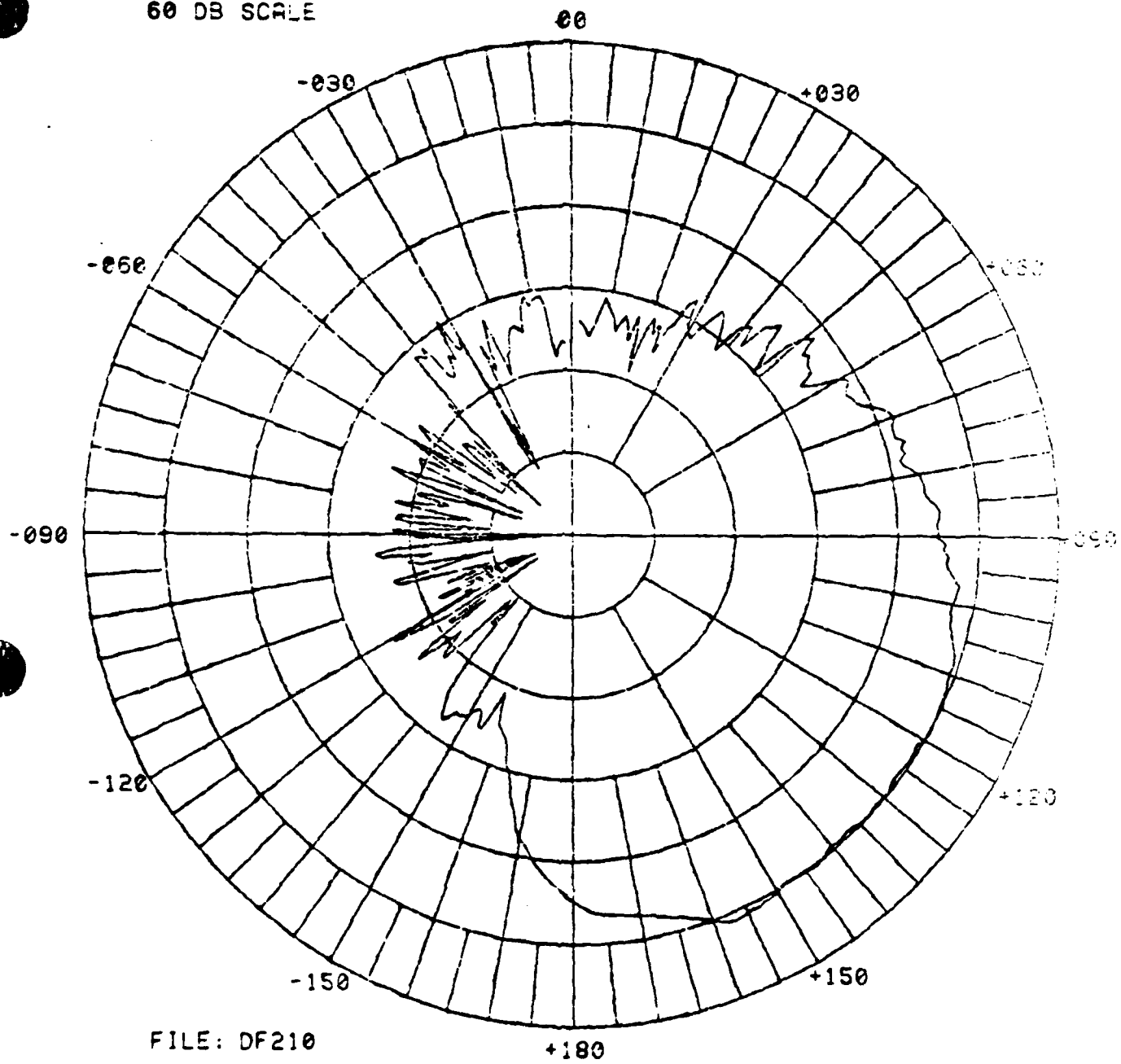
FILE: DF210

SCAN NR: 2 STEP ANGLE: 10.00 PLOT____ AA

FREQ NR: 3 FREQ(MHZ): F3

CONFIGURATION 4

7 JUN 1984



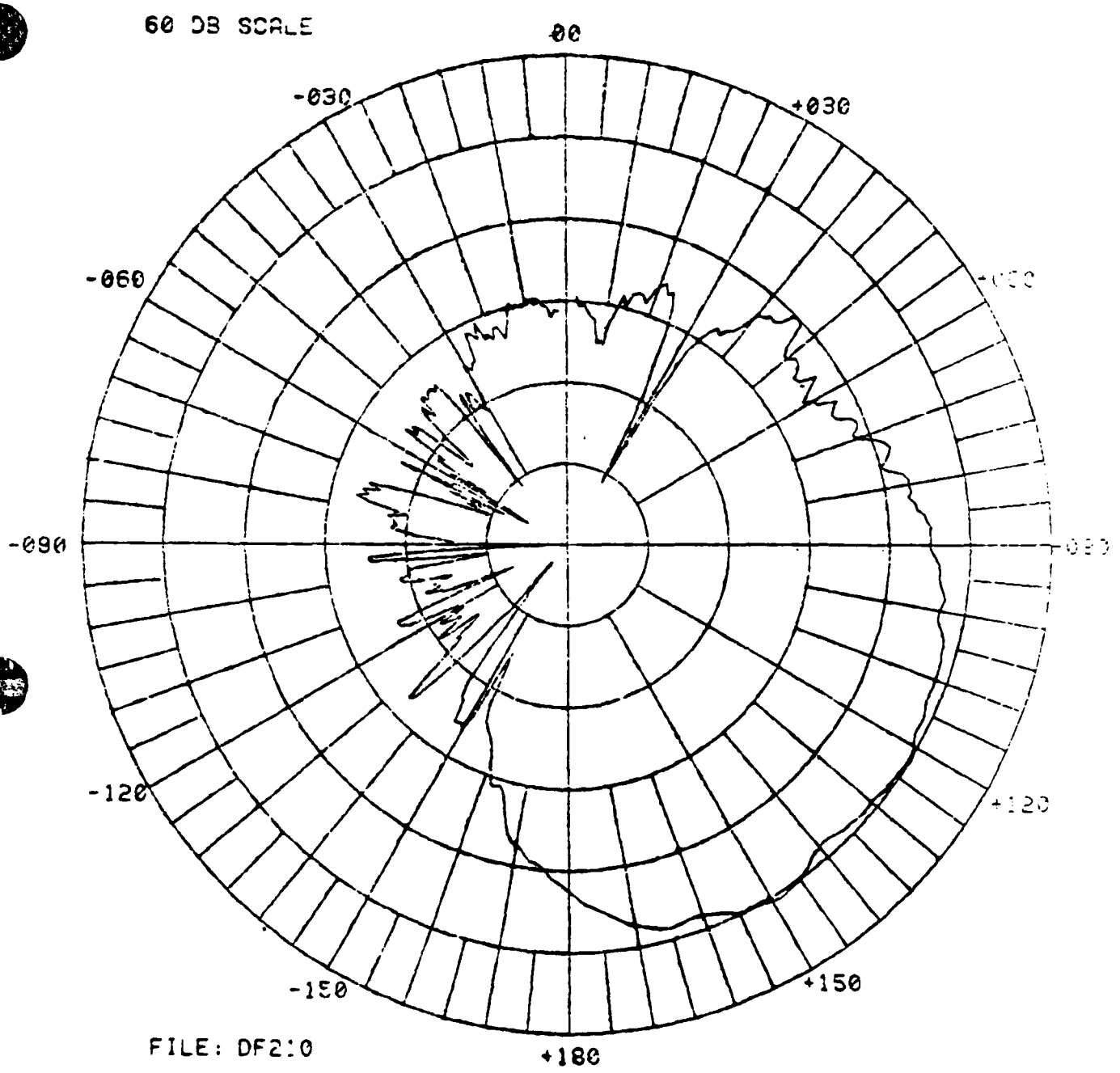
FILE: DF210

SCAN NR: 3 STEP ANGLE: 20.00 PLOT_____ AA

FREQ NR: 3 FREQ(MHZ): F3

CONFIGURATION U

7 JUN 1984



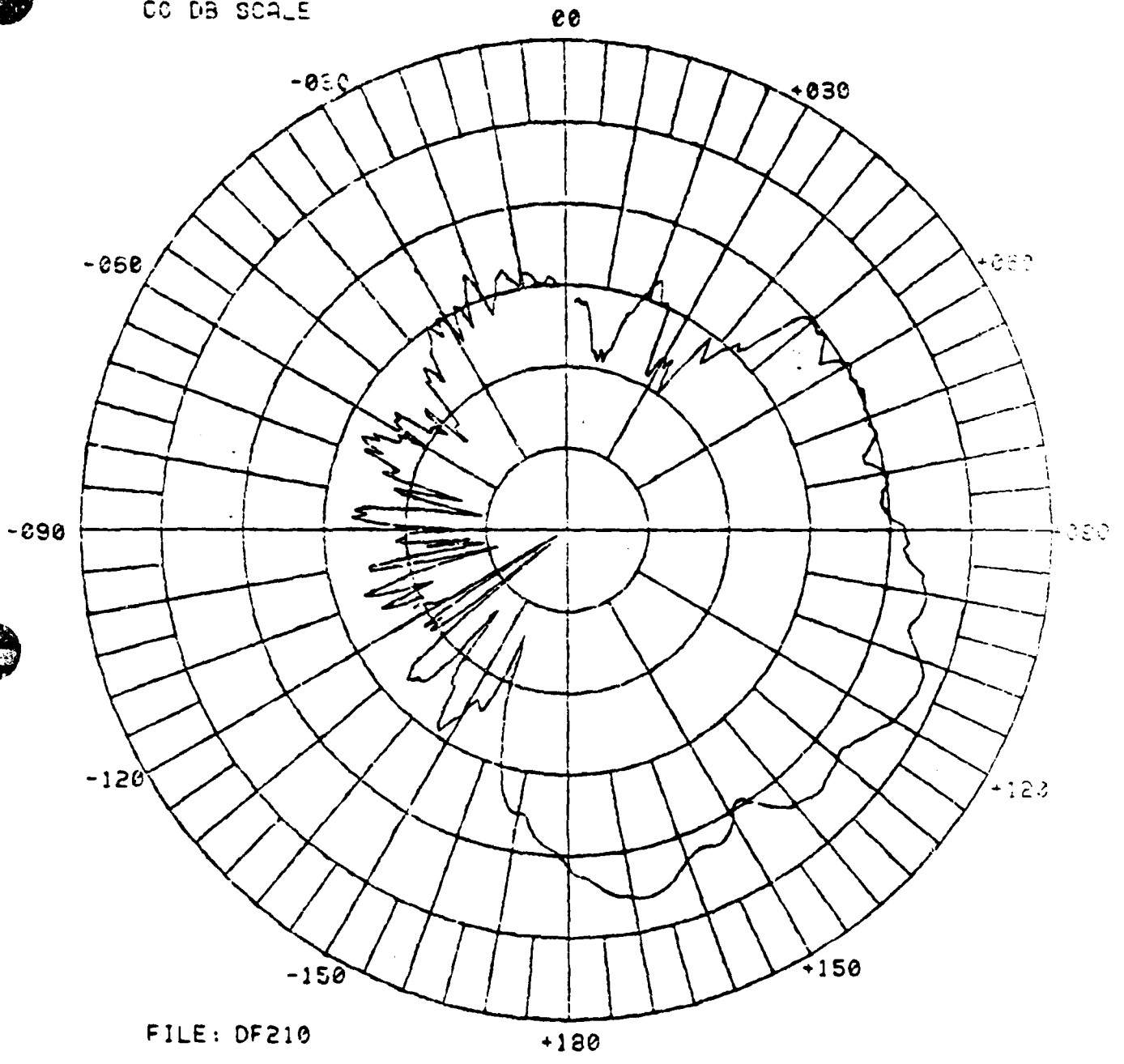
FILE: DF2:0

SCAN NR: 4 STEP ANGLE: 30.00 PLOT_____ AA

FREQ NR: 3 FREQ(MHZ): F3

CONFIGURATION 4

7 JUN 198-



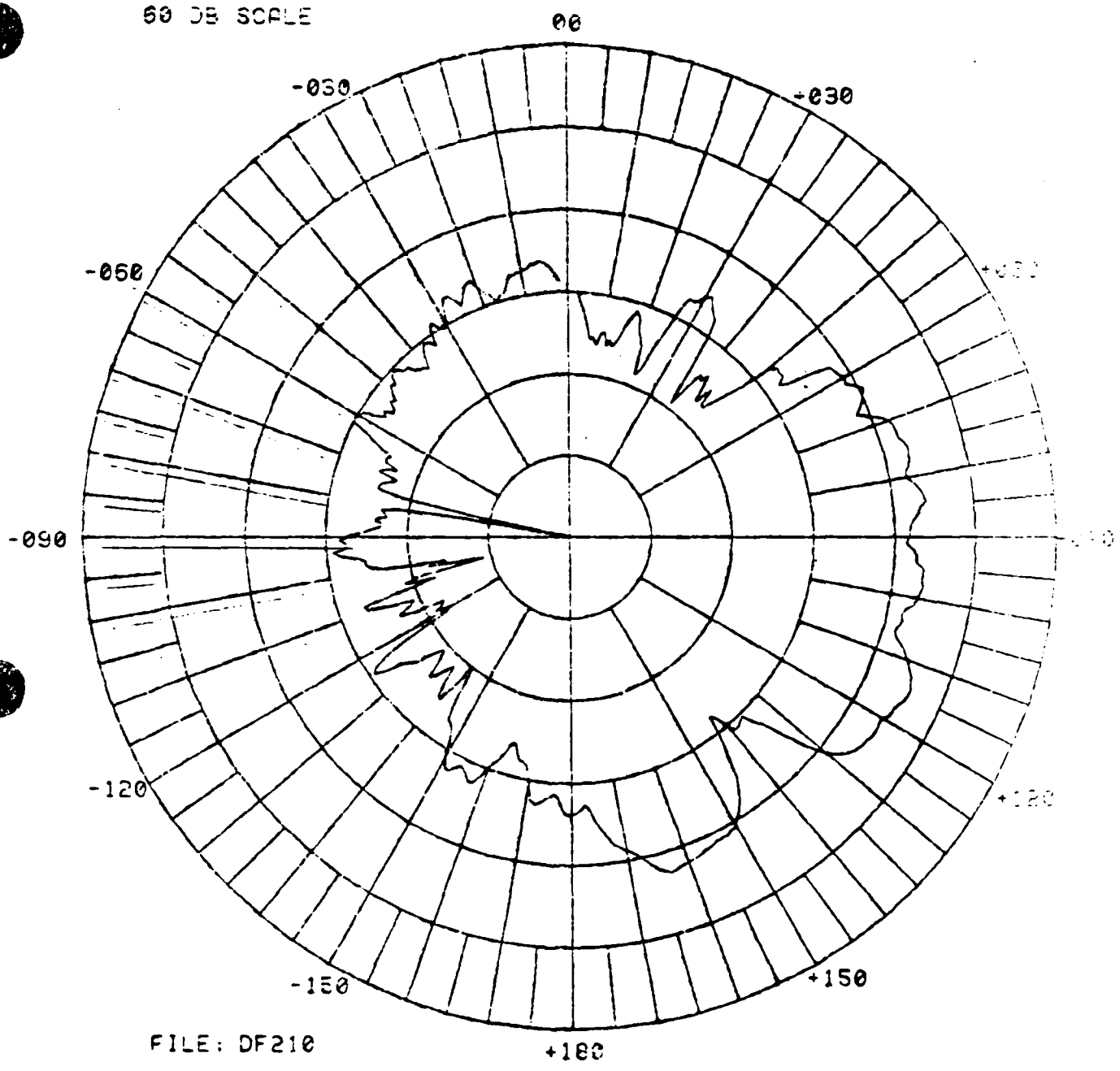
FILE: DF210

SCAN NR: 5 STEP ANGLE: 40.00 PLOT_____ AA

FREQ NR: 3 FREQ(MHZ): F3

CONFIGURATION 4

7 JUN 1984



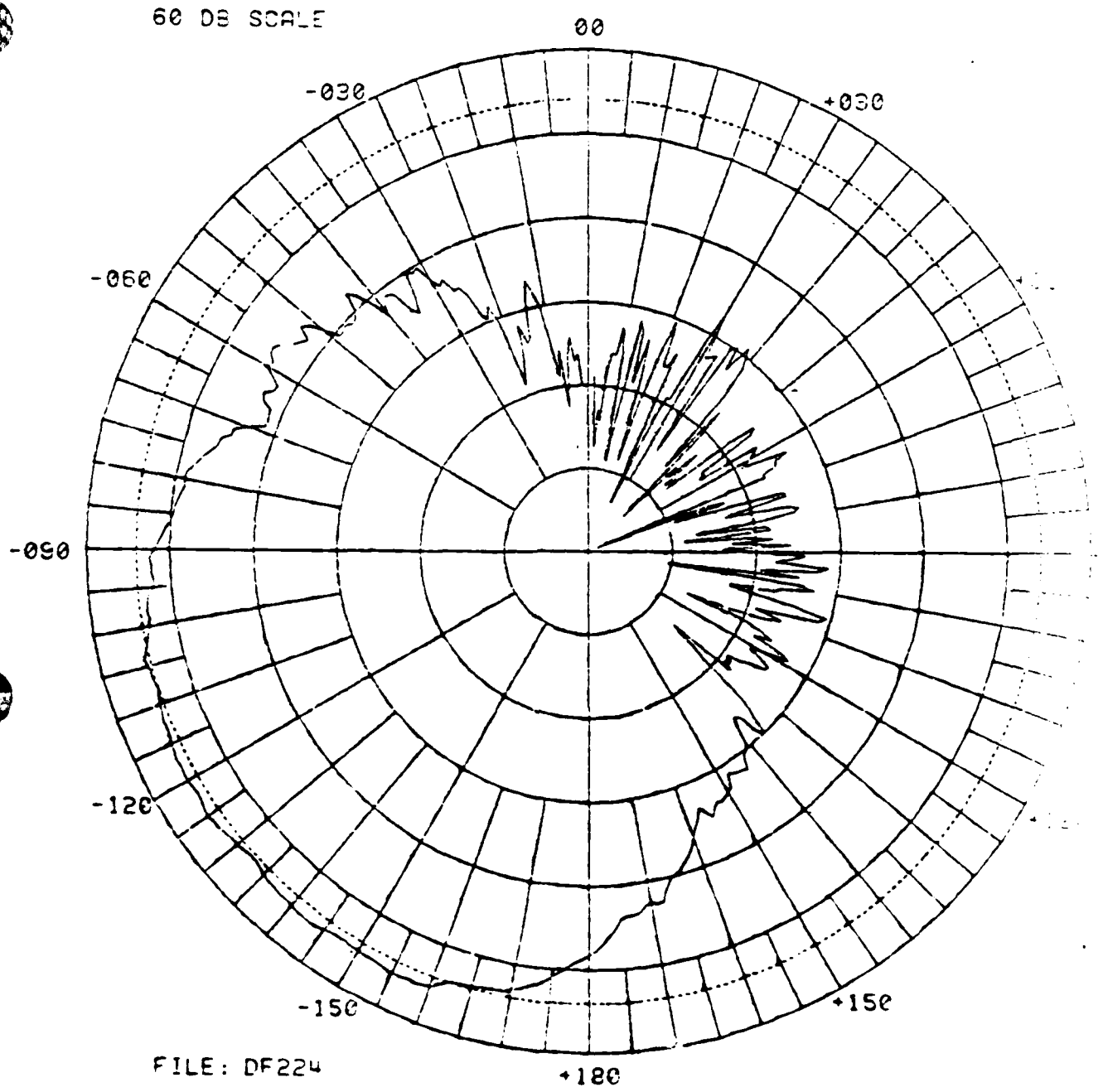
FILE: DF210

SCAN NR: 6 STEP ANGLE: 50.00 PLOT_____ AA

FREQ NR: 3 FREQ(MHZ): F3

CONFIGURATION 4

7 JUN 1984

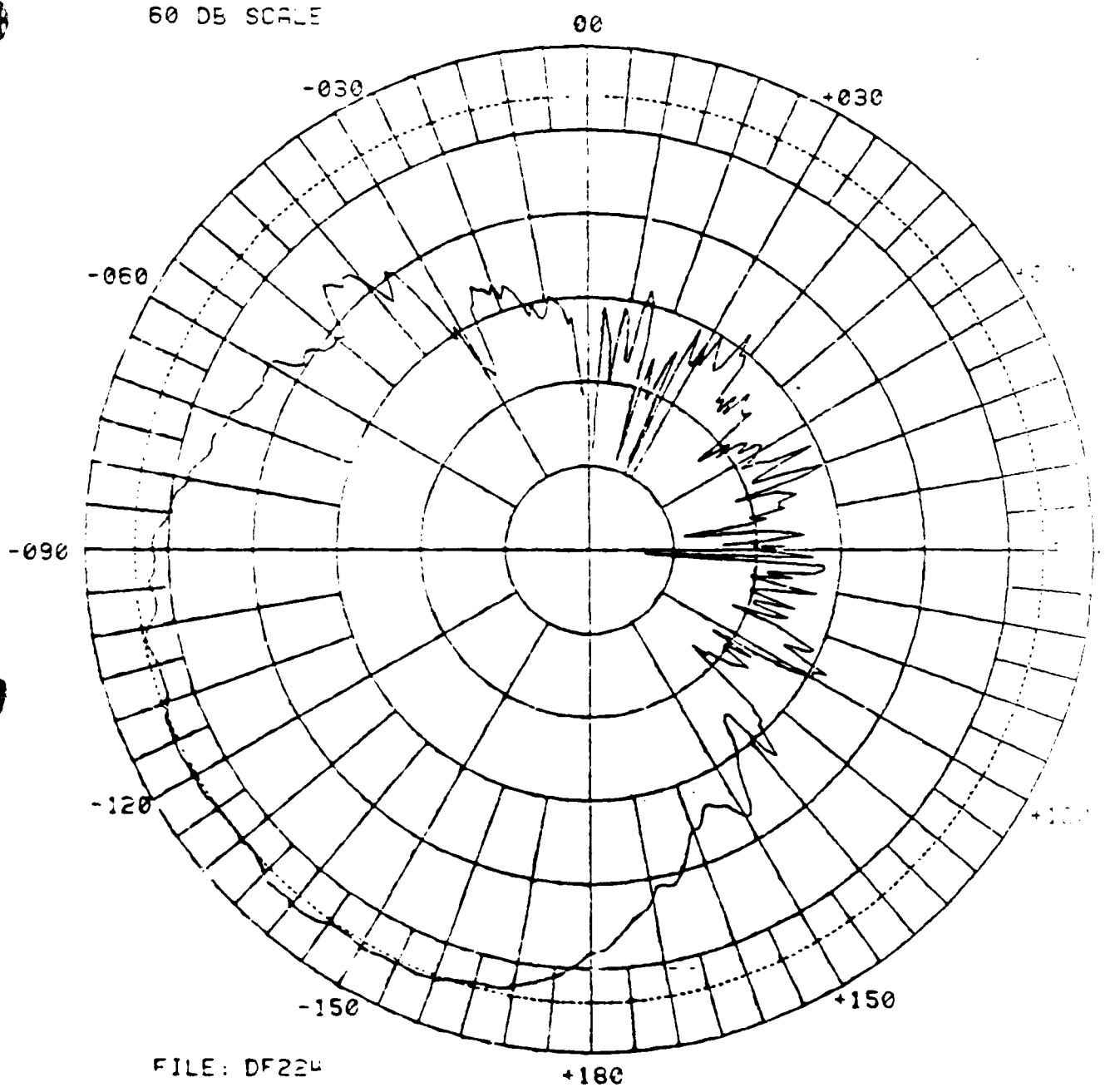


FILE: DF224

SCAN NR: 1 STEP ANGLE: 0.00 PLOT_____ AA

FREQ NR: 1 FREQ(MHZ): F1 PLOT_____ AB

3 JUL 1984 CONF 7



FILE: DF224

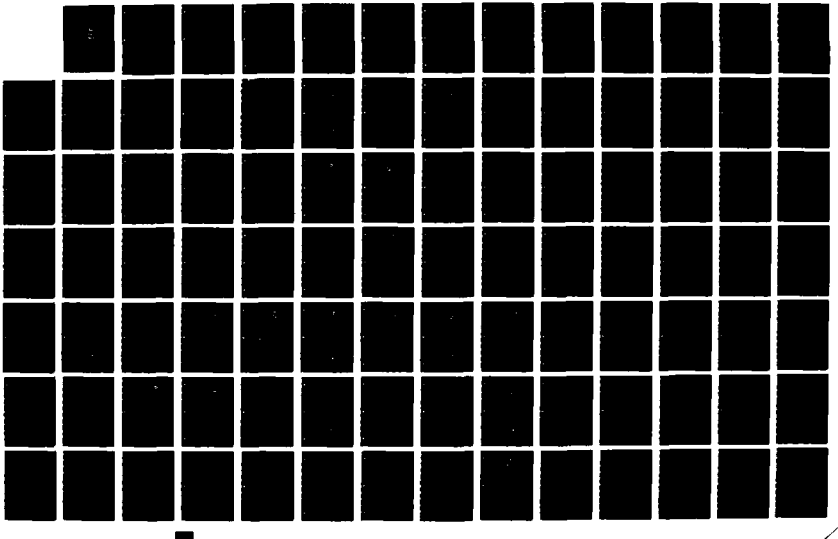
SCAN NR: 2 STEP ANGLE: -10.00 PLOT_____ AA

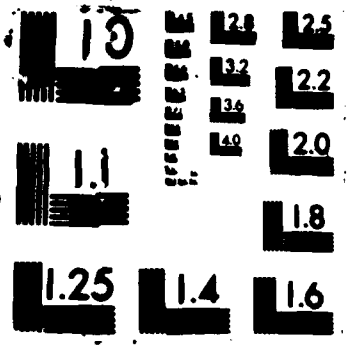
FREQ NR: 1 FREQ(MHZ): F1 PLOT_____ AB

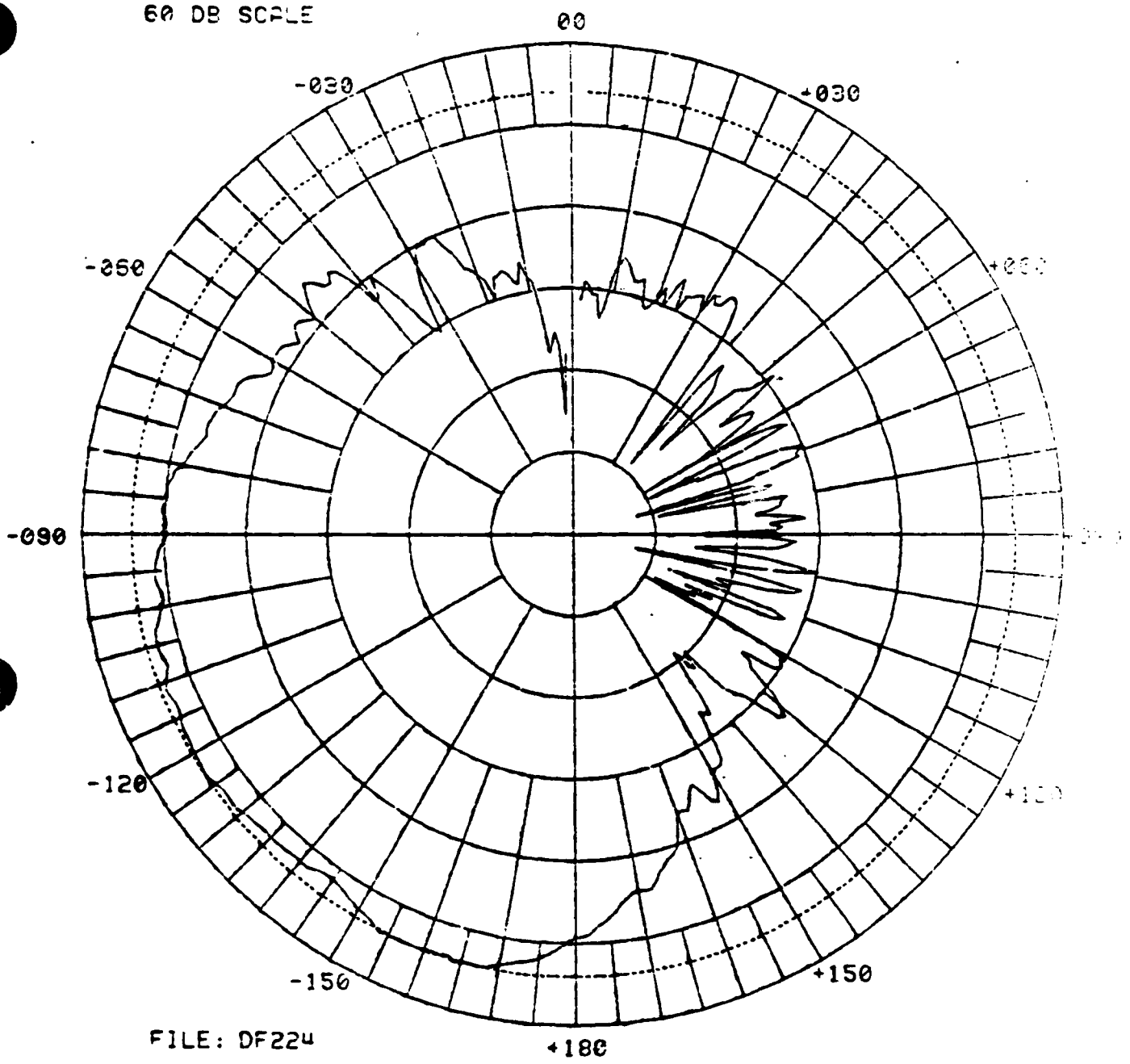
3 JUL 1984 CONF 7

AD-A181 539 ANTENNA LOCATION SURVEY REPORT FOR THE AN/ALQ-156 AND AN/ALQ-162 SYSTEMS(U) BEECH AIRCRAFT CORP WICHITA KS G J MARTIN 29 OCT 84 ER-101E2240 DAAK50-83-C-0056 1/7

UNCLASSIFIED F/G 17/4 NL




1.0
2.8
2.5
3.2
2.2
3.6
4.0
2.0
1.1
1.8
1.25
1.4
1.6

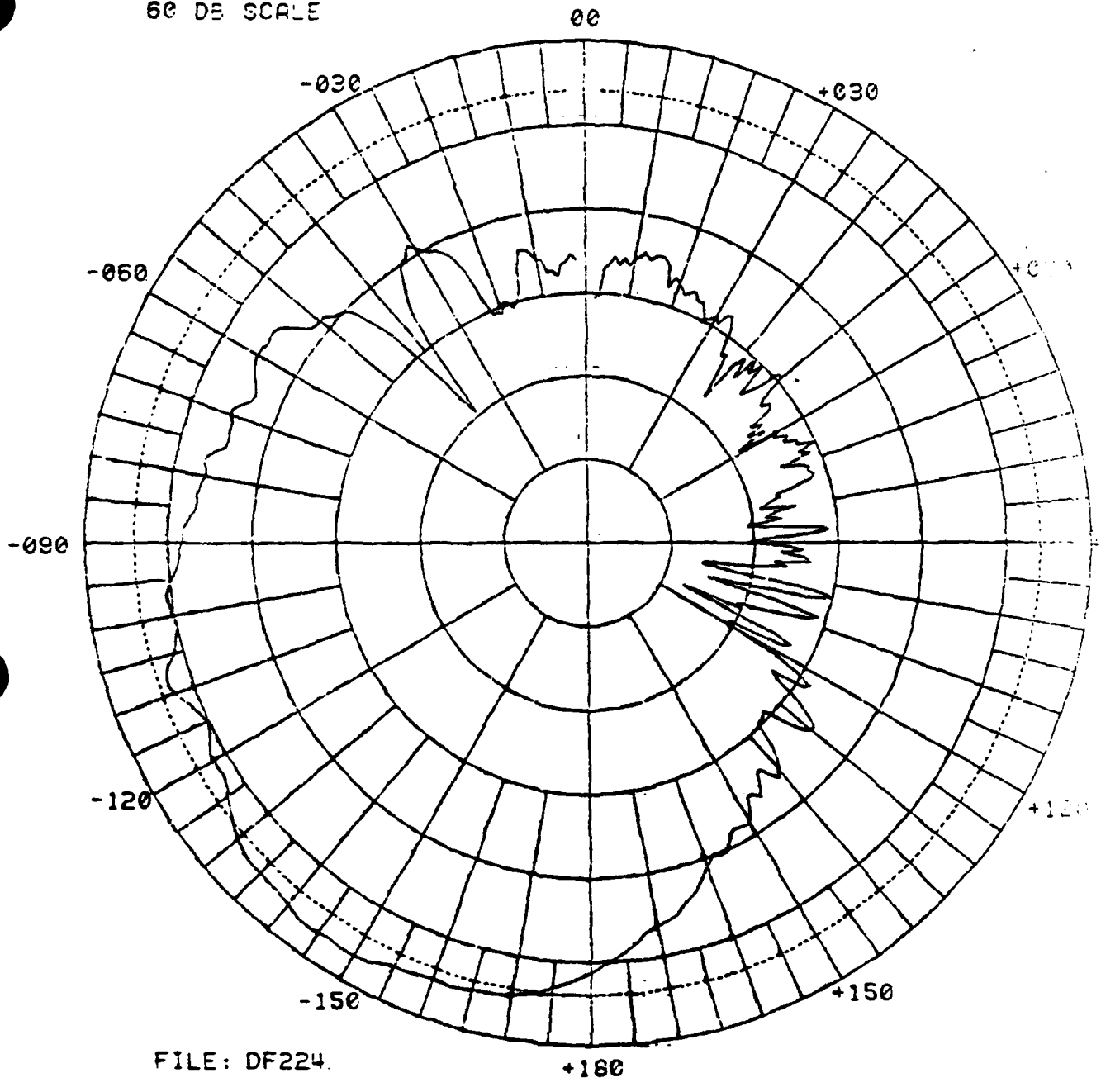


FILE: DF224

SCAN NR: 3 STEP ANGLE: -20.00 PLOT_____ AA

FREQ NR: 1 FREQ(MHZ): F1 PLOT_____ AB

3 JUL 1984 CONF 7

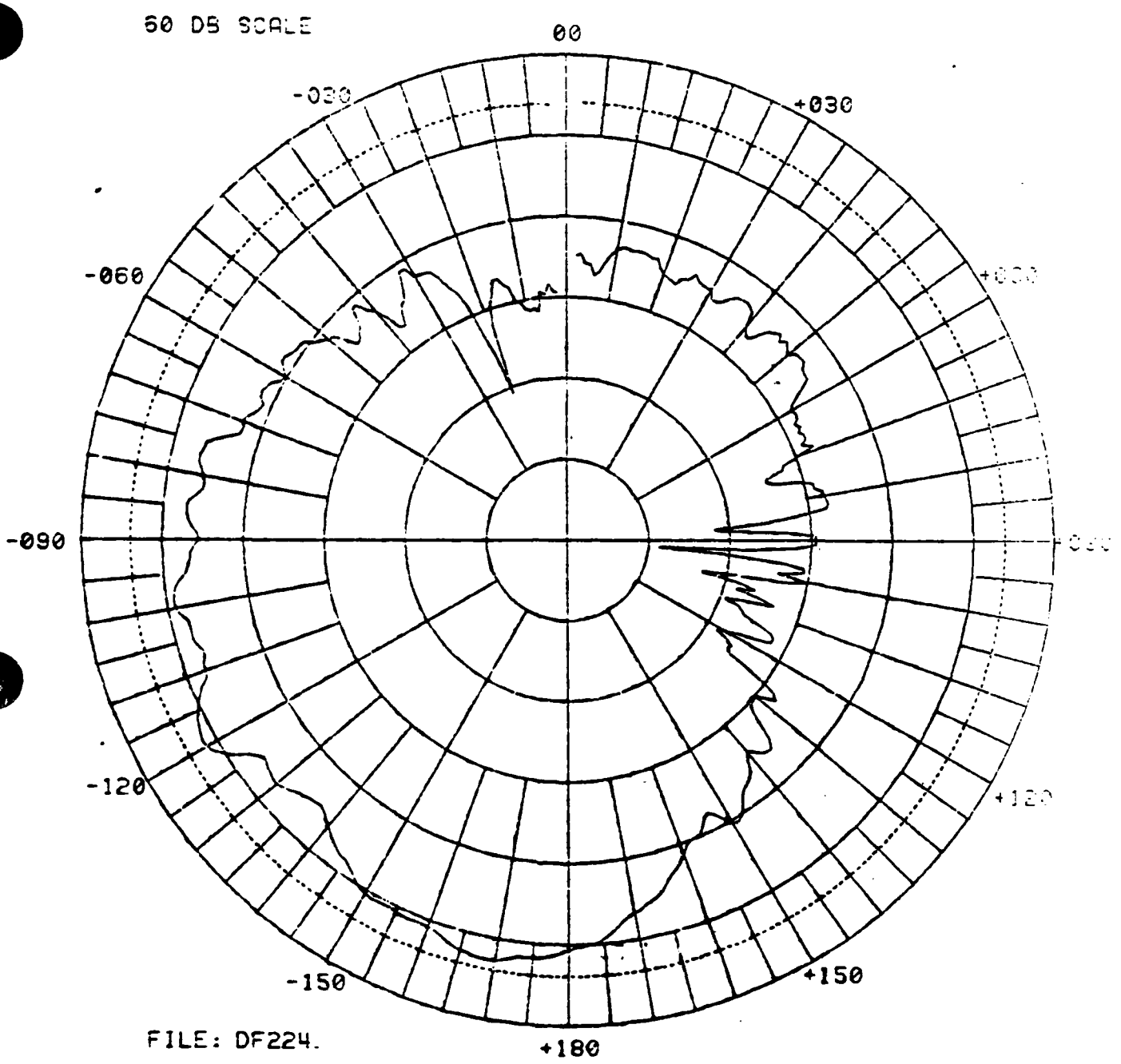


FILE: DF224

SCAN NR: 4 STEP ANGLE: -30.00 PLOT_____ AA

FREQ NR: 1 FREQ(MHZ): F1 PLOT_____ AB

3 JUL 1984 CONF 7

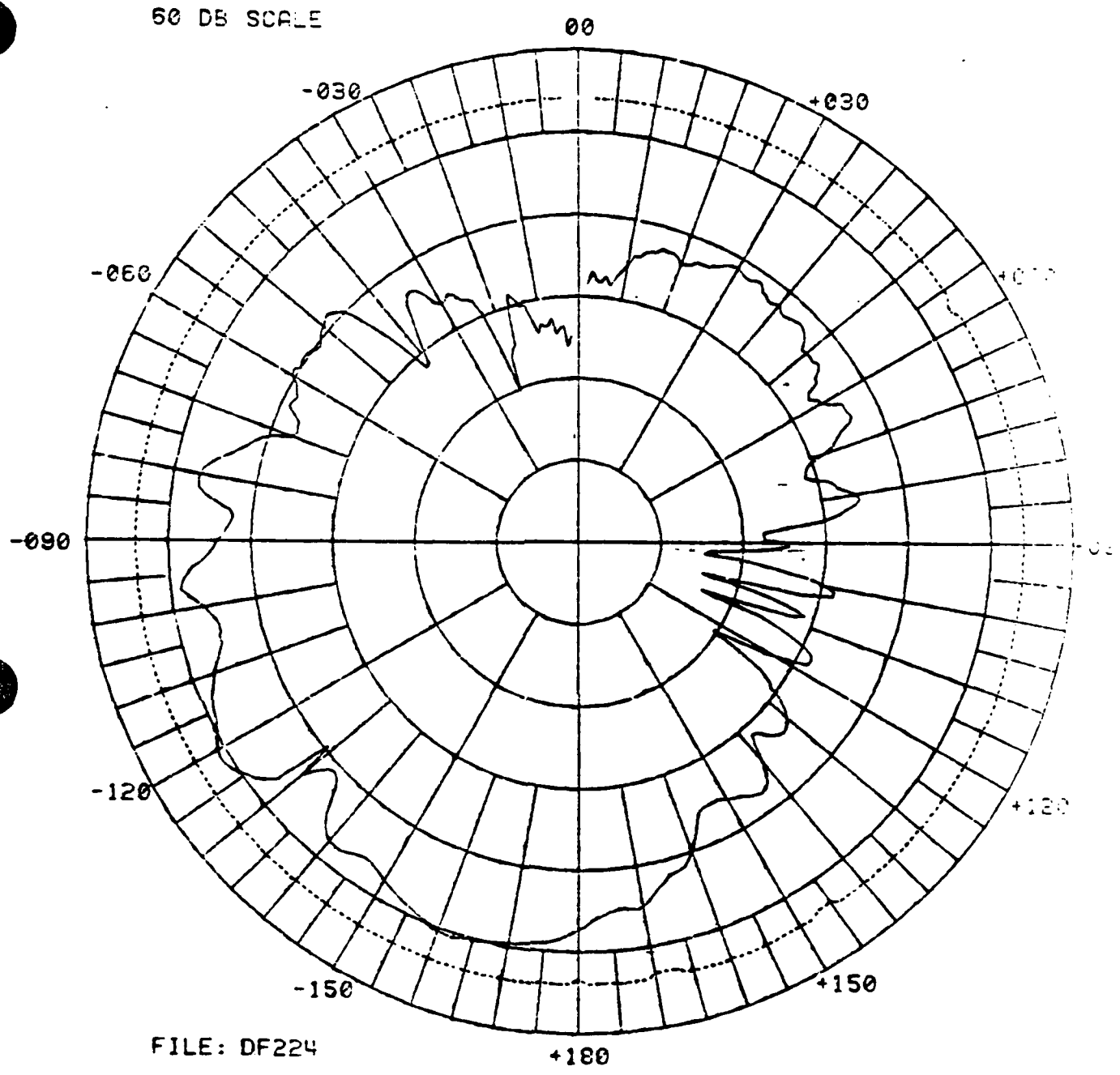


FILE: DF224.

SCAN NR: 5 STEP ANGLE: -40.00 PLOT_____ AA

FREQ NR: 1 FREQ(MHZ): F1 PLOT_____ AB

3 JUL 1984 CONF-7

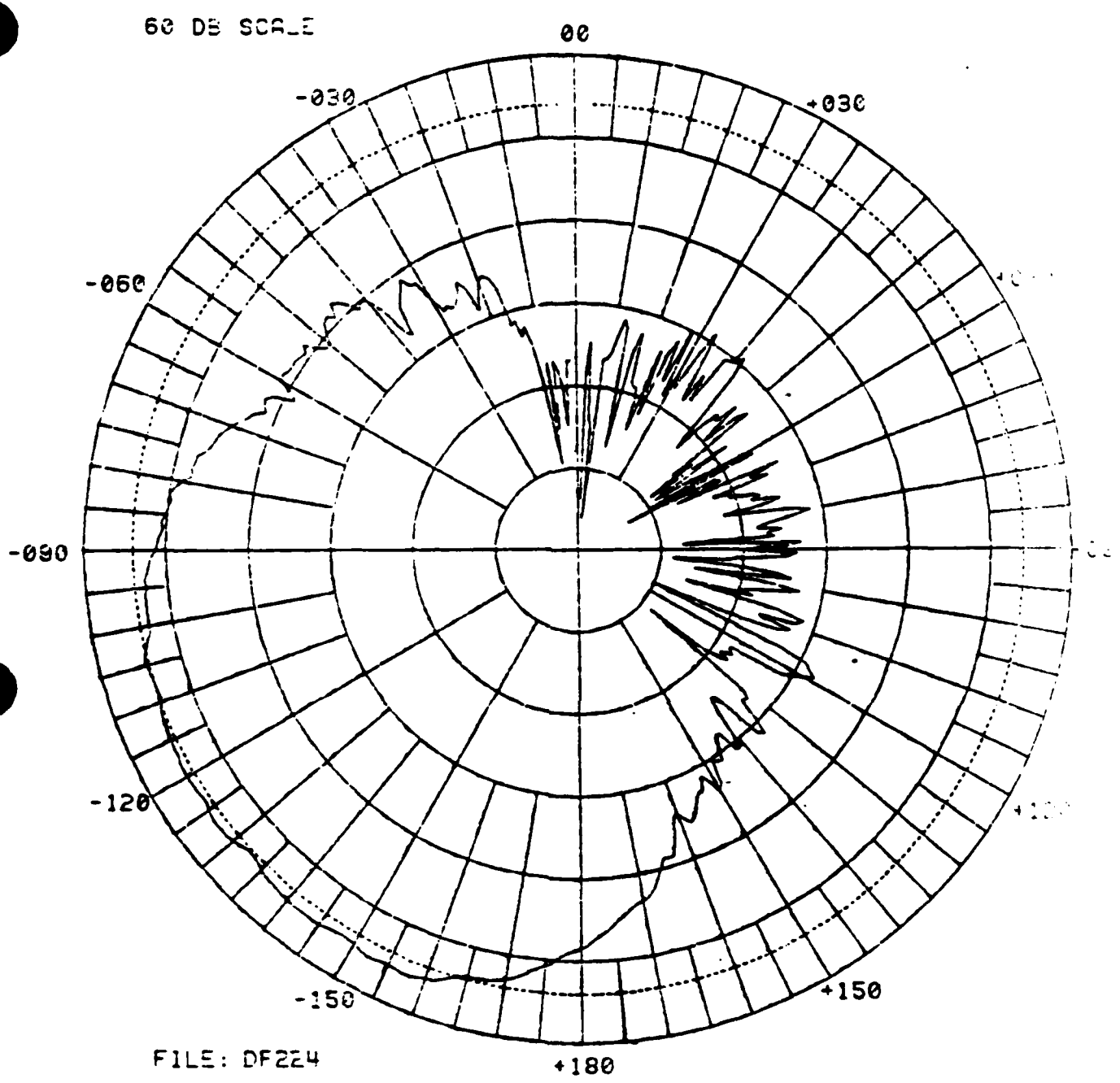


FILE: DF224

SCAN NR: 6 STEP ANGLE: -50.00 PLOT_____ AA

FREQ NR: 1 FREQ(MHZ): F1 PLOT_____ AB

3 JUL 1984 CONF 7

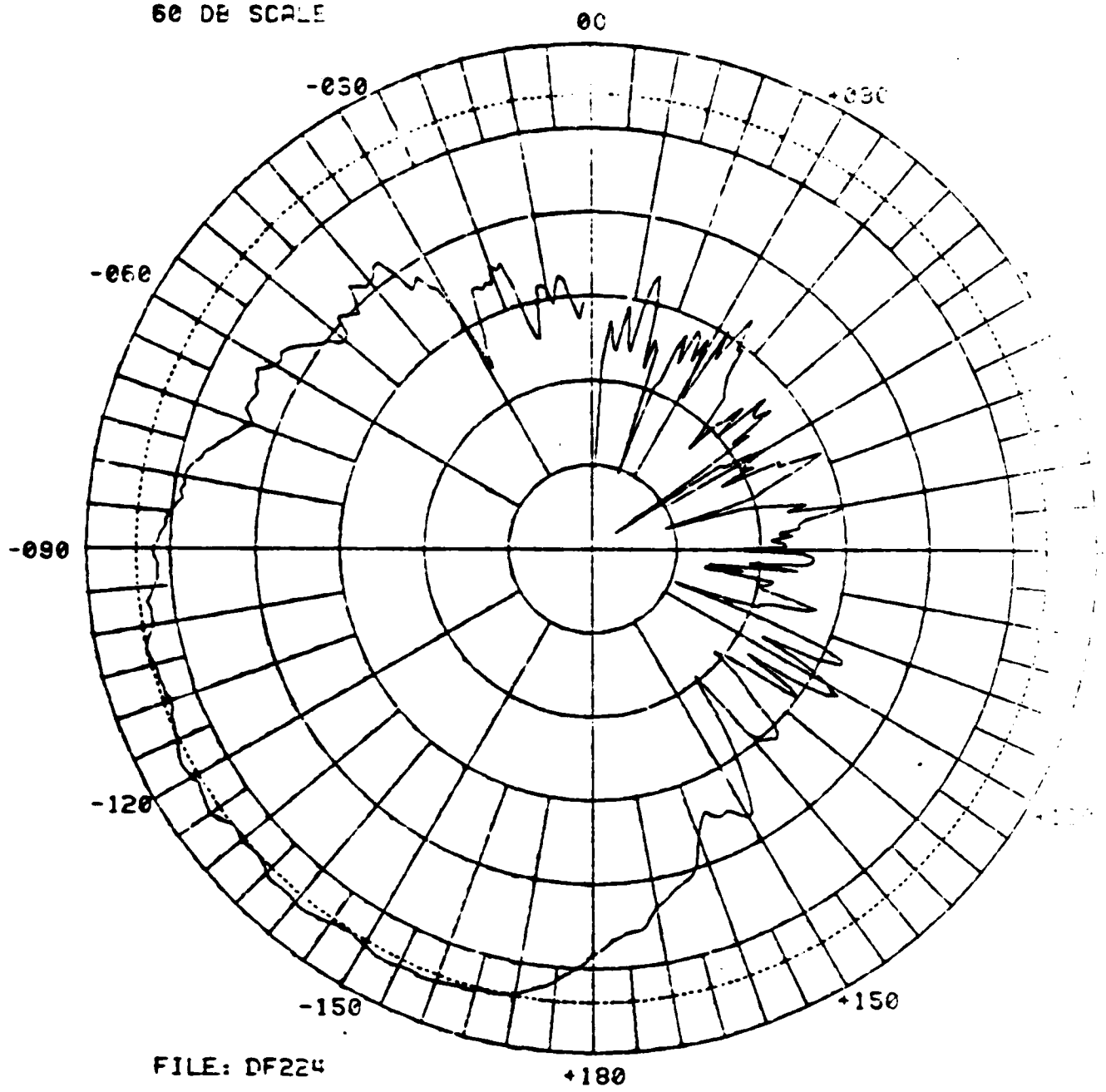


FILE: DF224

SCAN NR: 1 STEP ANGLE: 0.00 PLOT_____ AA

FREQ NR: 2 FREQ(MHZ): F2 PLOT_____ AB

3 JUL 1984 CONF 7

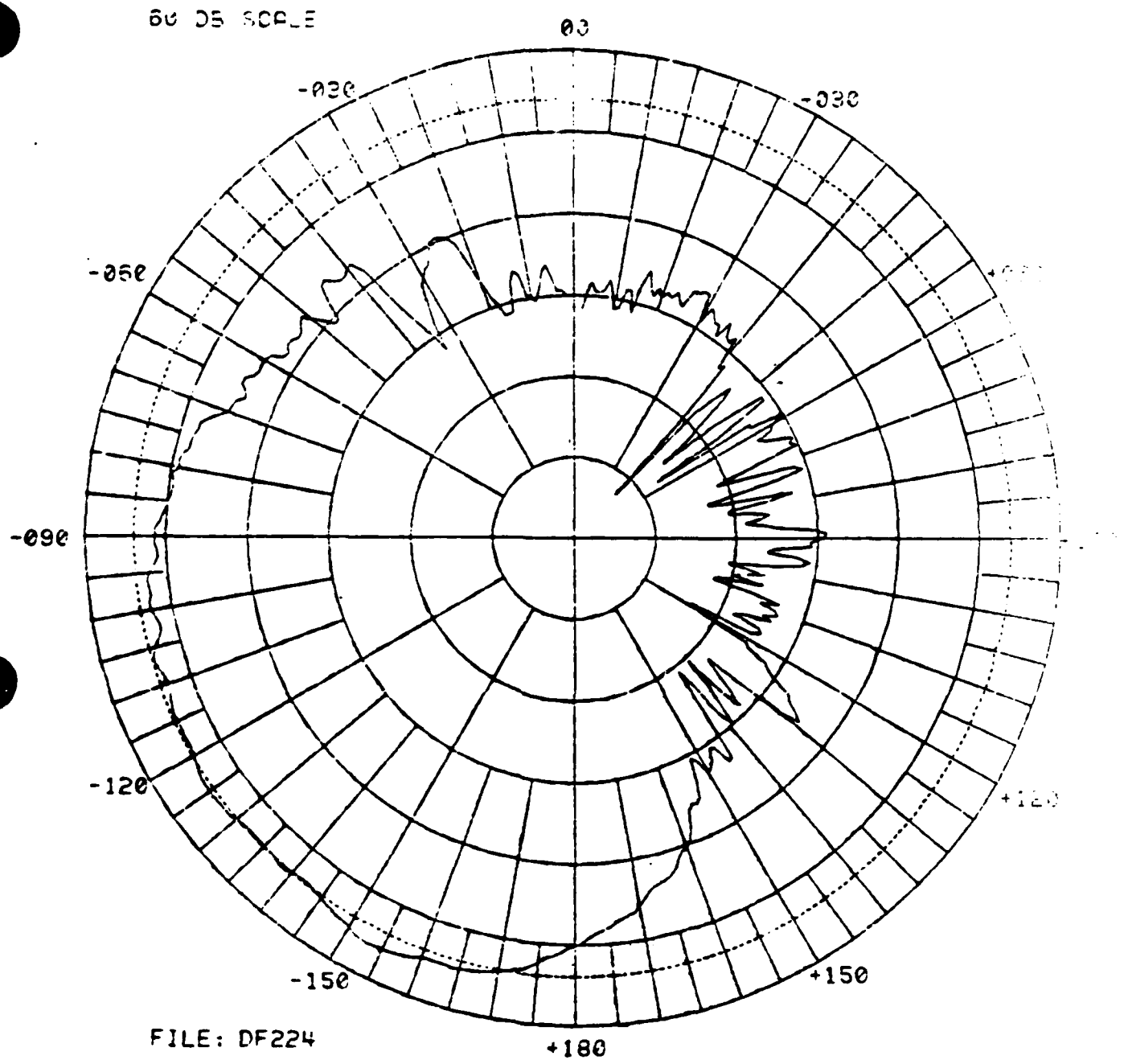


FILE: DF224

SCAN NR: 2 STEP ANGLE: -10.00 PLOT_____ AA

FREQ NR: 2 FREQ(MHZ): F2 PLOT..... AB

3 JUL 1984 CONF 7

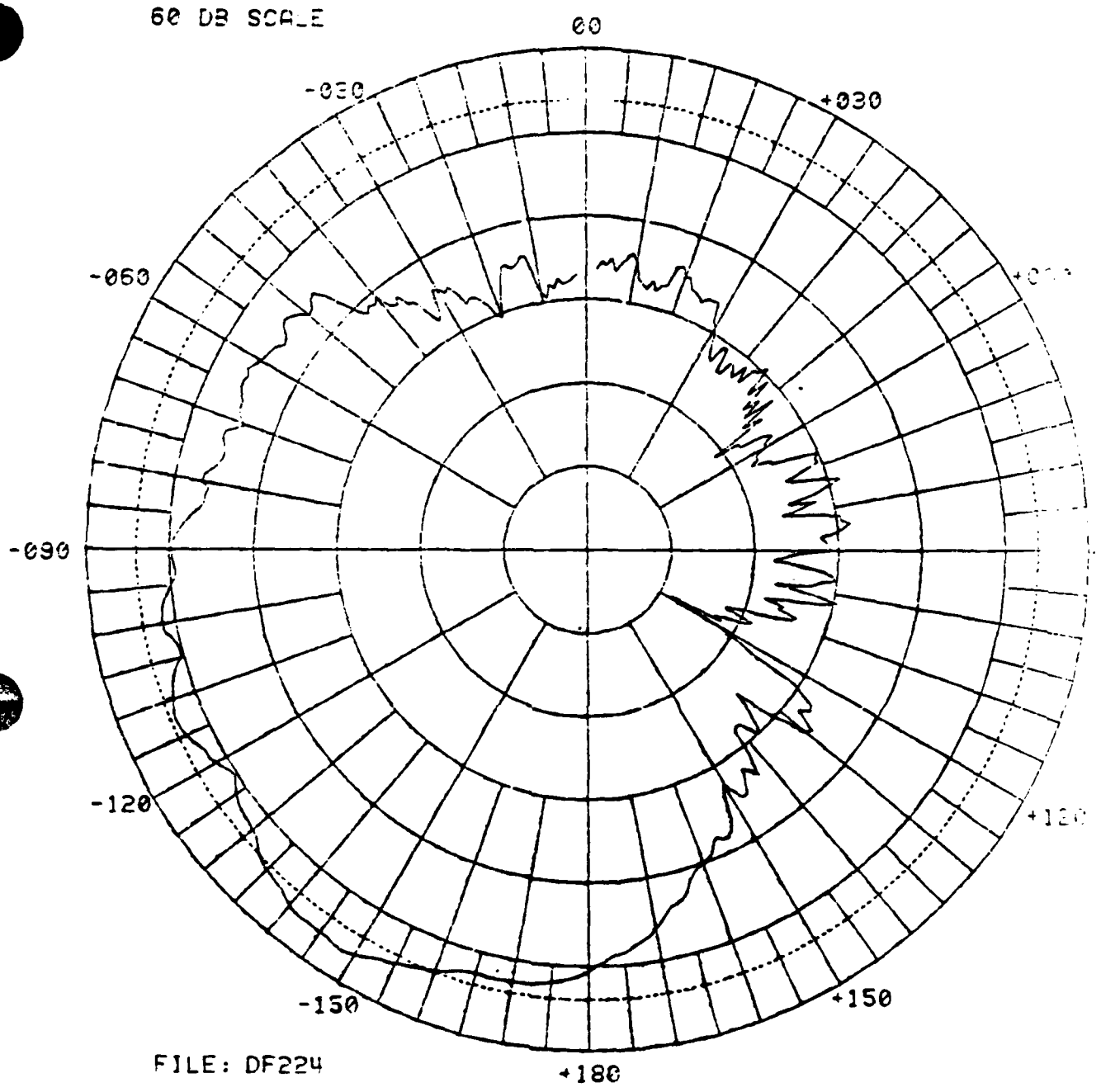


FILE: DF224

SCAN NR: 3 STEP ANGLE: -20.00 PLOT_____ AA

FREQ NR: 2 FREQ(MHZ): F2 PLOT_____ AB

3 JUL 1984 CONF 7

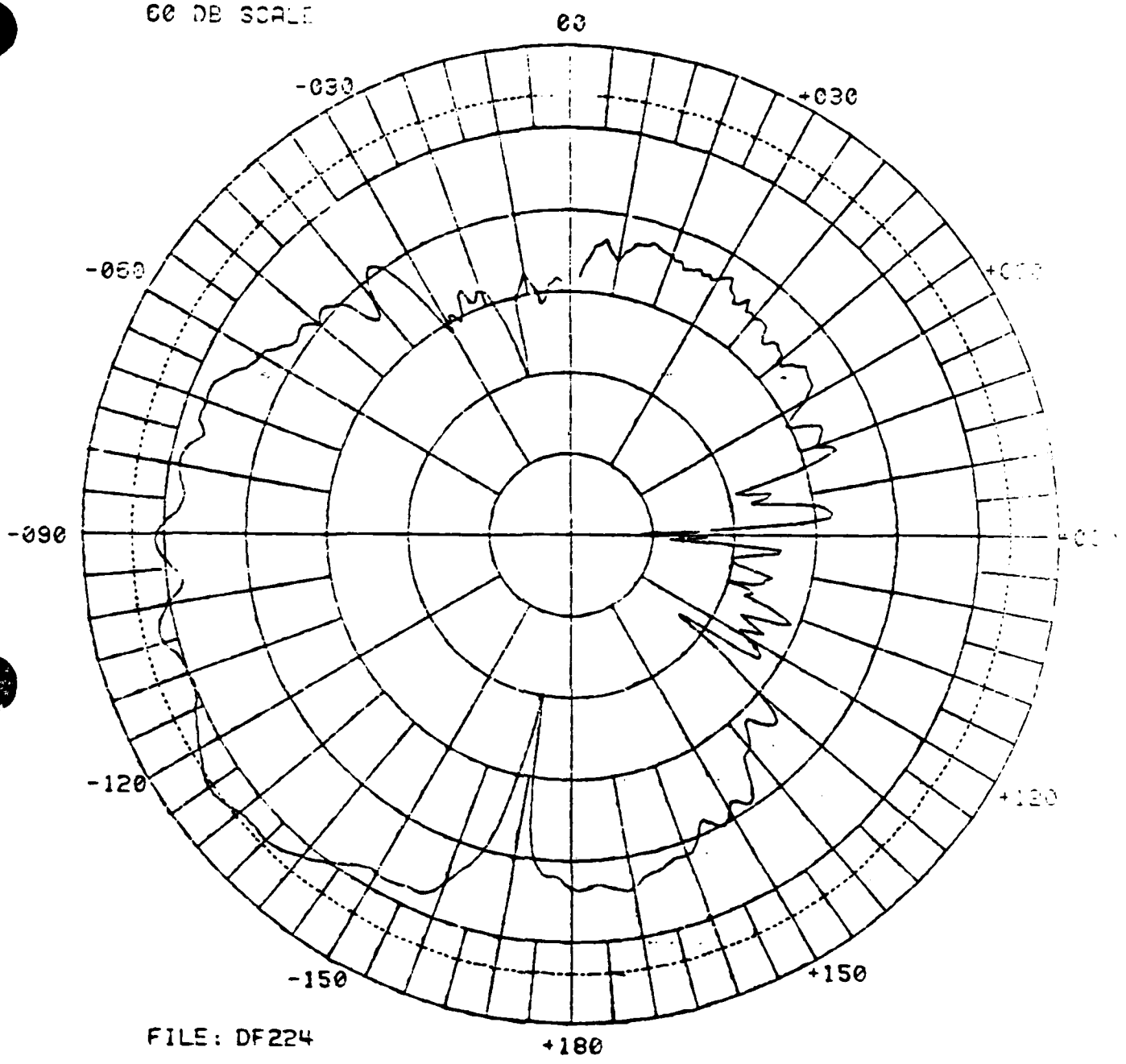


FILE: DF224

SCAN NR: 4 STEP ANGLE: -30.00 PLOT_____ AA

FREQ NR: 2 FREQ(MHZ): F2 PLOT_____ AB

3 JUL 1984 CONF 7

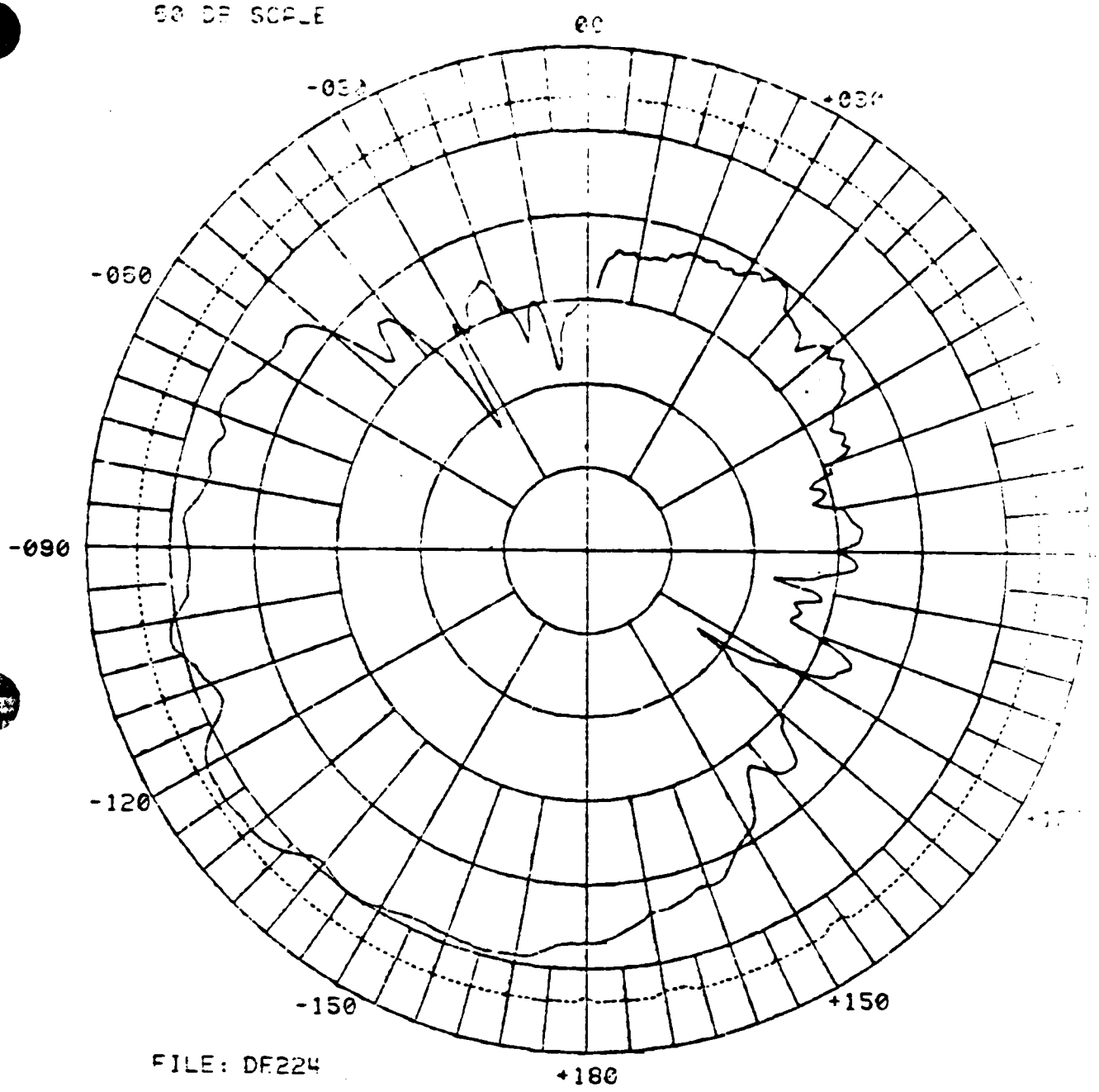


FILE: DF224

SCAN NR: 5 STEP ANGLE: -40.00 PLOT_____ AA

FREQ NR: 2 FREQ(MHZ): F2 PLOT_____ AB

3 JUL 1984 CONF 7

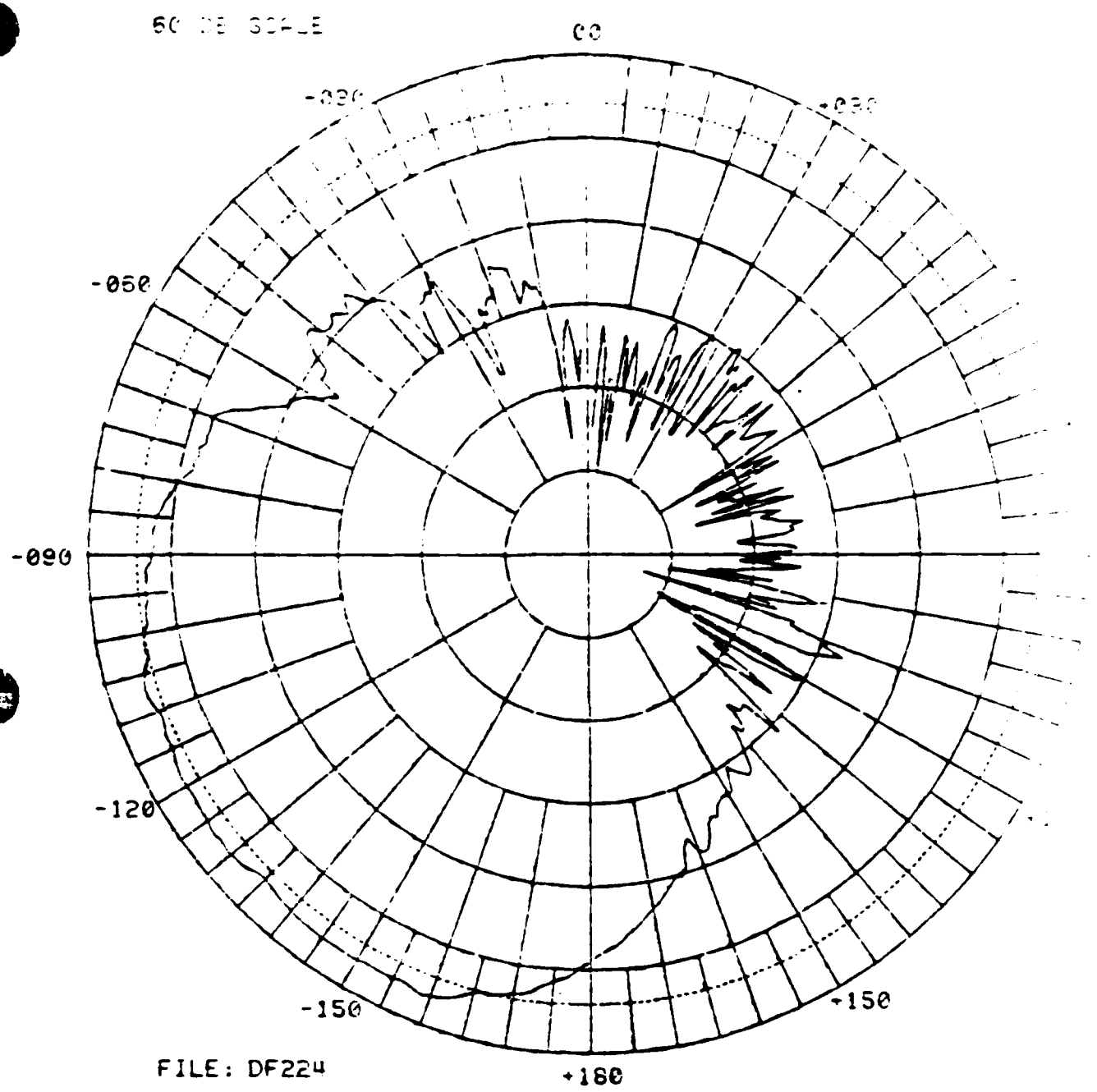


FILE: DF224

SCAN NR: 6 STEP ANGLE: -50.00 PLOT_____ AA

FREQ NR: 2 FREQ(MHZ): F2 PLOT_____ AB

3 JUL 1984 CONF 7

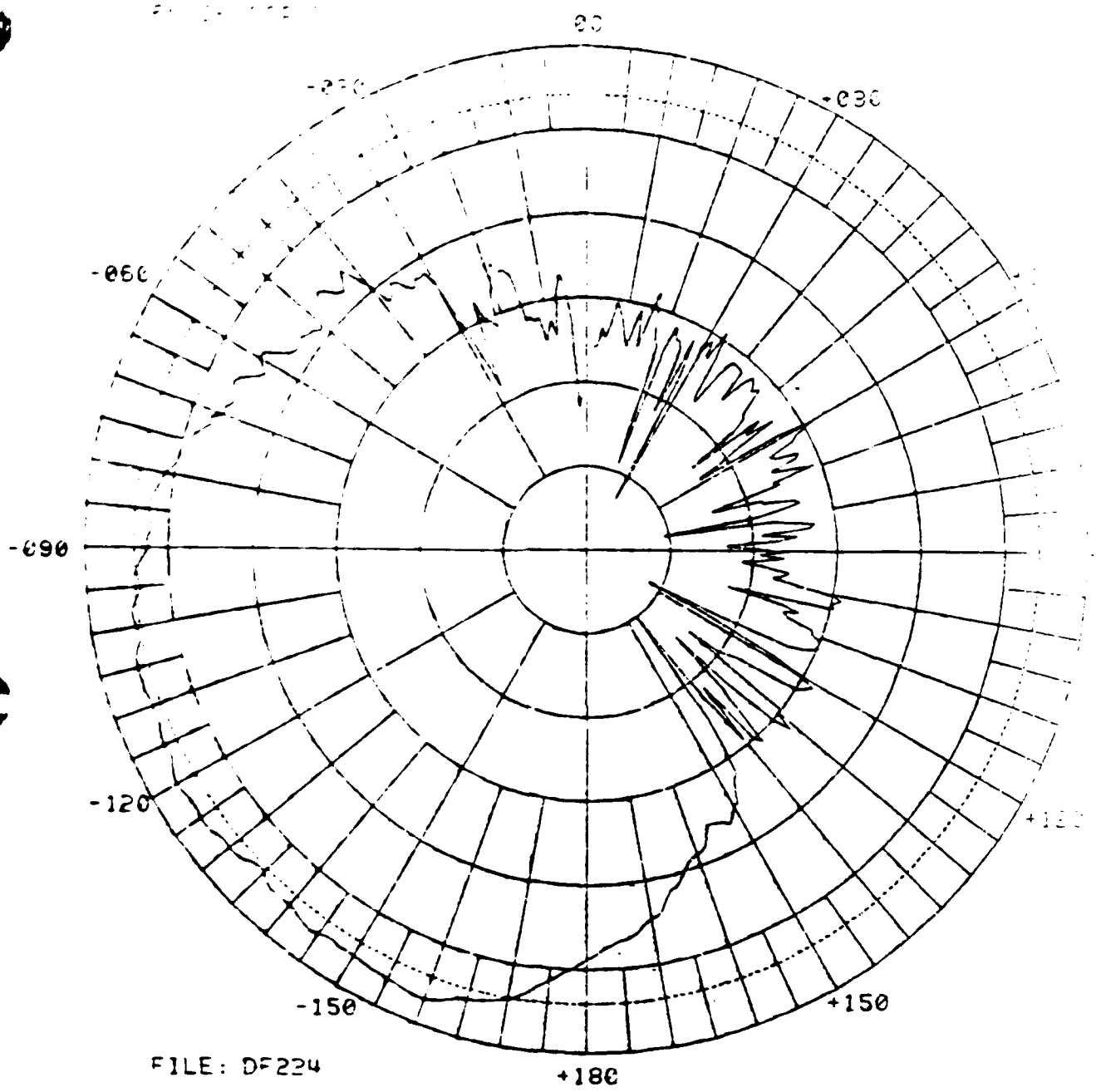


FILE: DF224

SCAN NR: 1 STEP ANGLE: 0.00 PLOT_____ AA

FREQ NR: 3 FREQ(MHZ): F3 PLOT_____ AB

3 JUL 1994 CONF 7

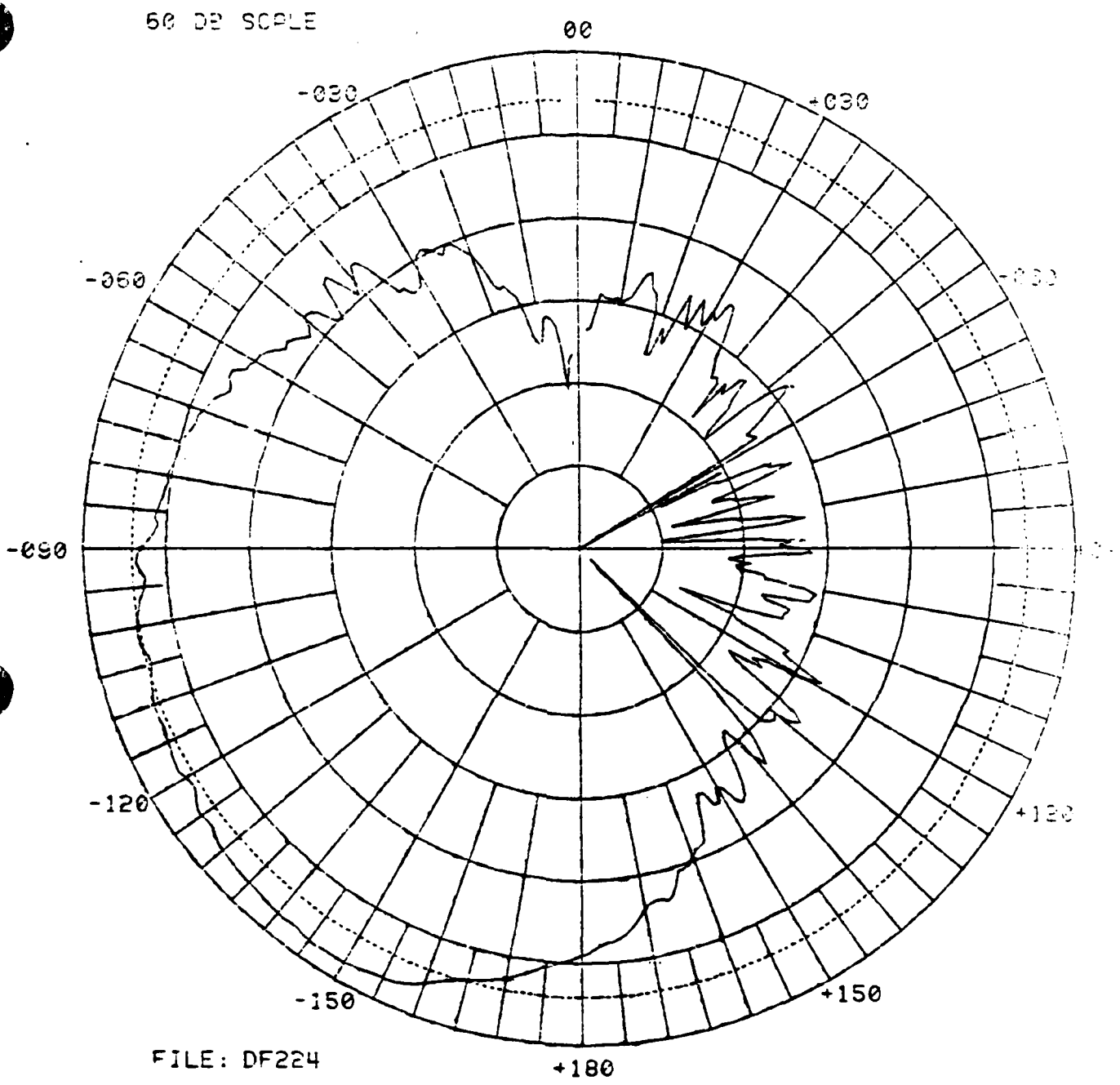


FILE: DF224

SCAN NR: 2 STEP ANGLE: -10.00 PLOT_____ AA

FREQ NR: 3 FREQ(MHZ): F3 PLOT..... AB

3 JUL 1984 CONF 7

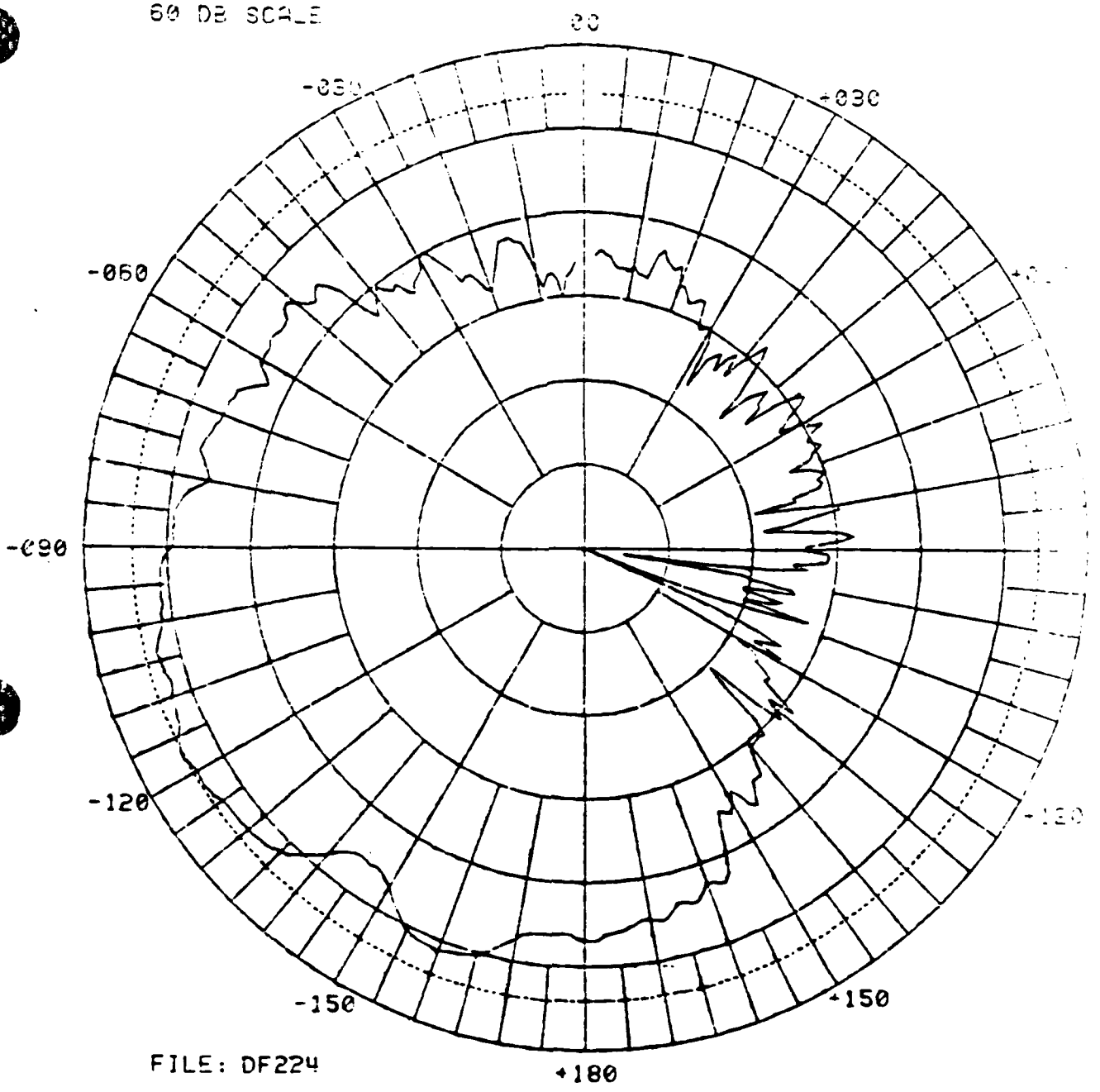


FILE: DF224

SCAN NR: 3 STEP ANGLE: -20.00 PLOT_____ AA

FREQ NR: 3 FREQ(MHZ): F3 PLOT_____ AB

3 JUL 1984 CONF 7

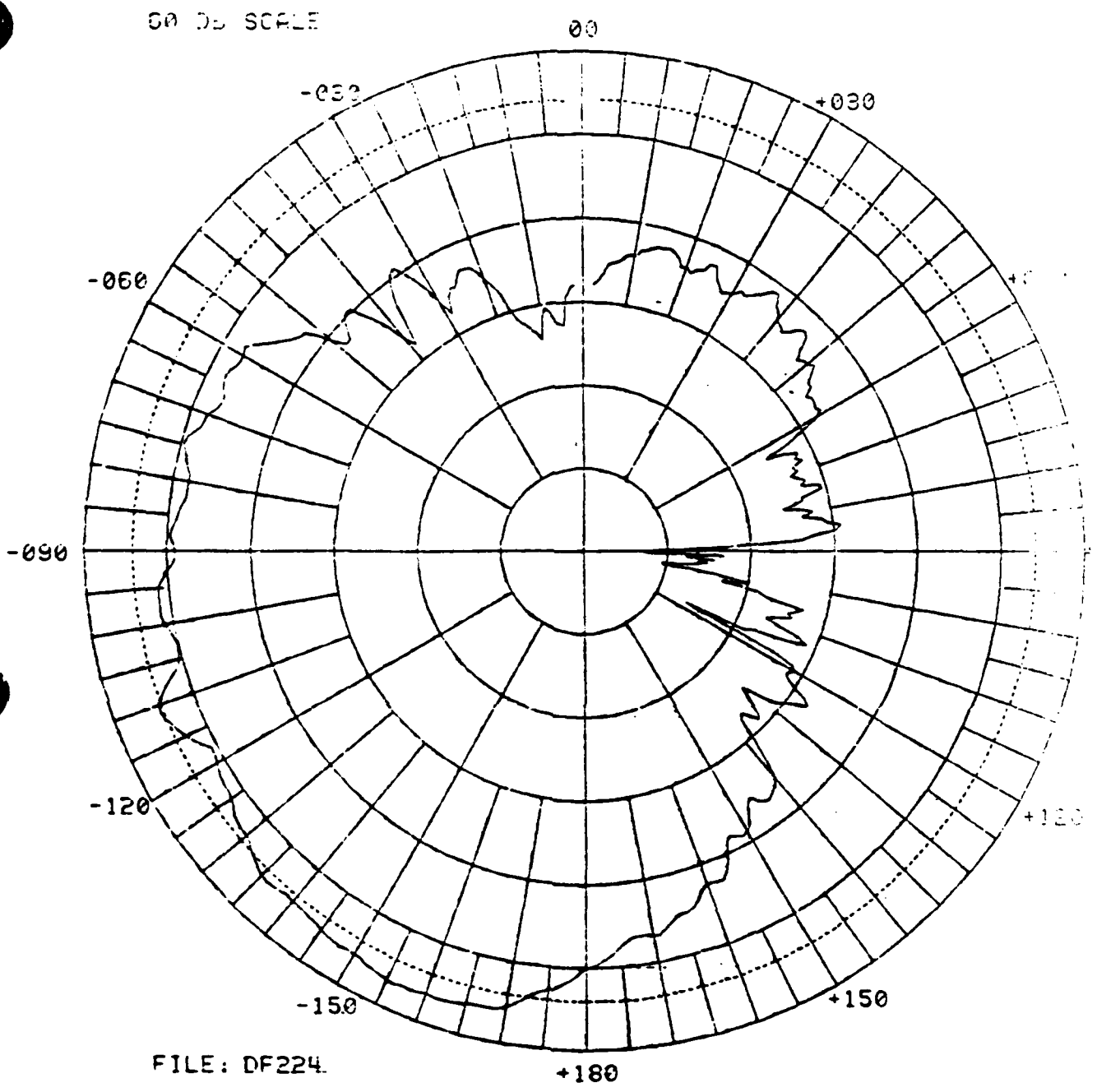


FILE: DF224

SCAN NR: 4 STEP ANGLE: -30.00 PLOT_____ AA

FREQ NR: 3 FREQ(MHZ): F3 PLOT_____ AB

3 JUL 198- CONF 7

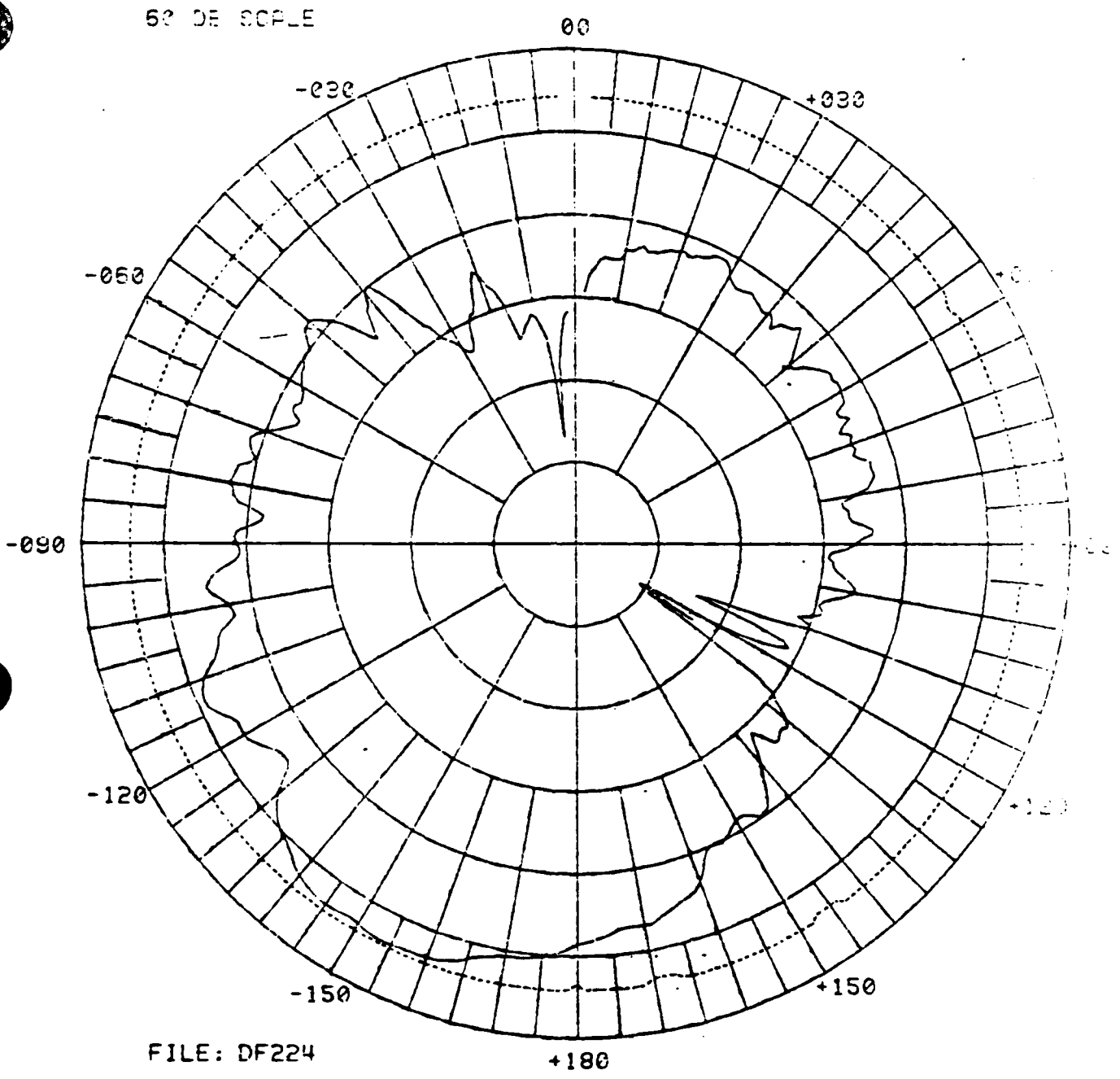


FILE: DF224

SCAN NR: 5 STEP ANGLE: -40.00 PLOT_____ AA

FREQ NR: 3 FREQ(MHZ): F3 PLOT_____ AB

3 JUL 1984 CONF 7



FILE: DF224

SCAN NR: 6 STEP ANGLE: -50.00 PLOT_____ AA

FREQ NR: 3 FREQ(MHZ): F3 PLOT_____ AB

3 JUL 1984 CONF 7

Appendix 4 contains AN/ALQ-162 antenna patterns as recorded by the 20/20 system during test. They are in rectangular plot format. These patterns cover frequencies F4, F5, and F6 and elevations of +40° through -40° for both the forward and aft antennas. They are arranged as follows:

DF202 -- Forward antenna, upper hemisphere

DF203 -- Forward antenna, upper hemisphere horizon

DF226 -- Forward antenna, lower hemisphere

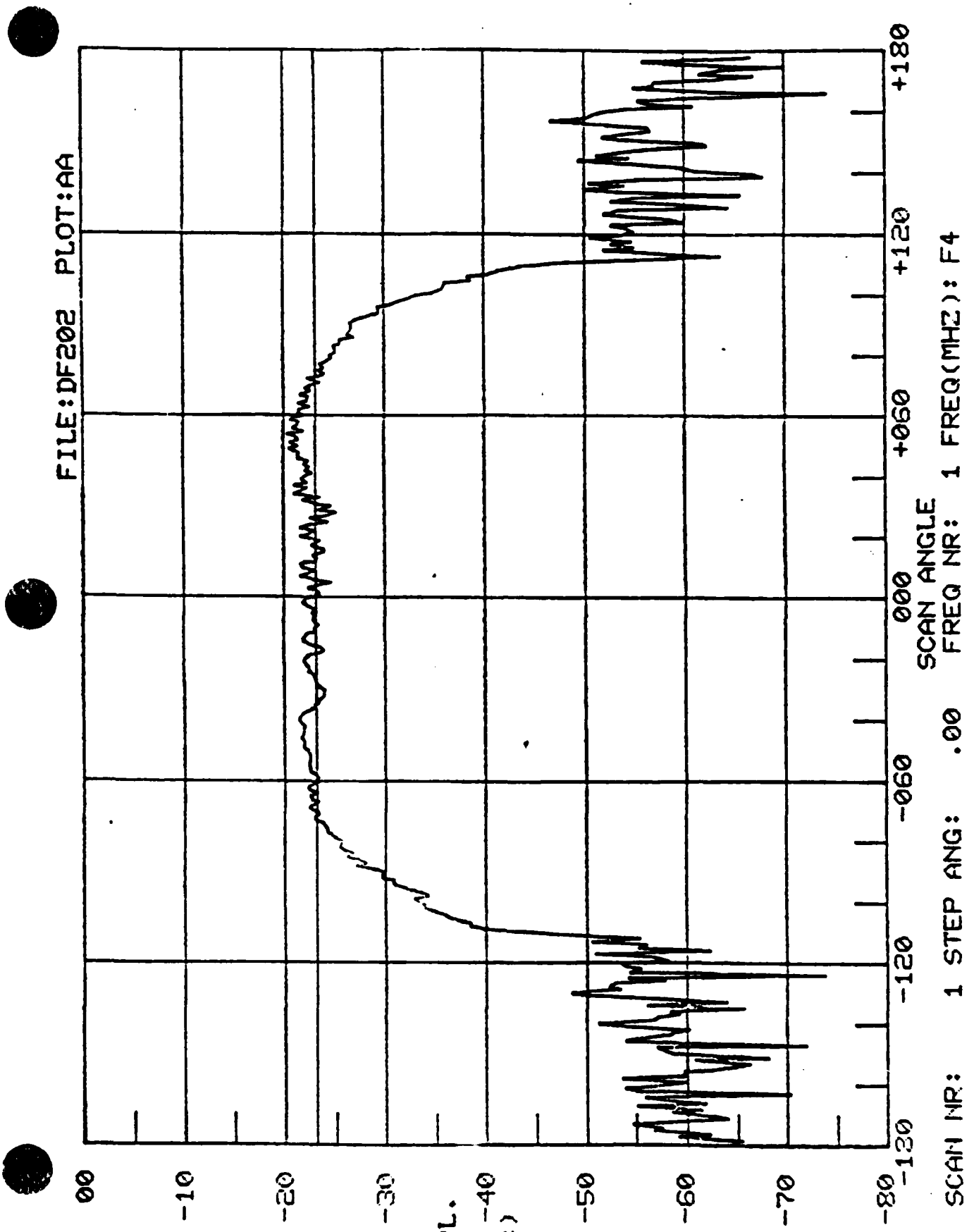
DF227 -- Forward antenna, lower hemisphere horizon

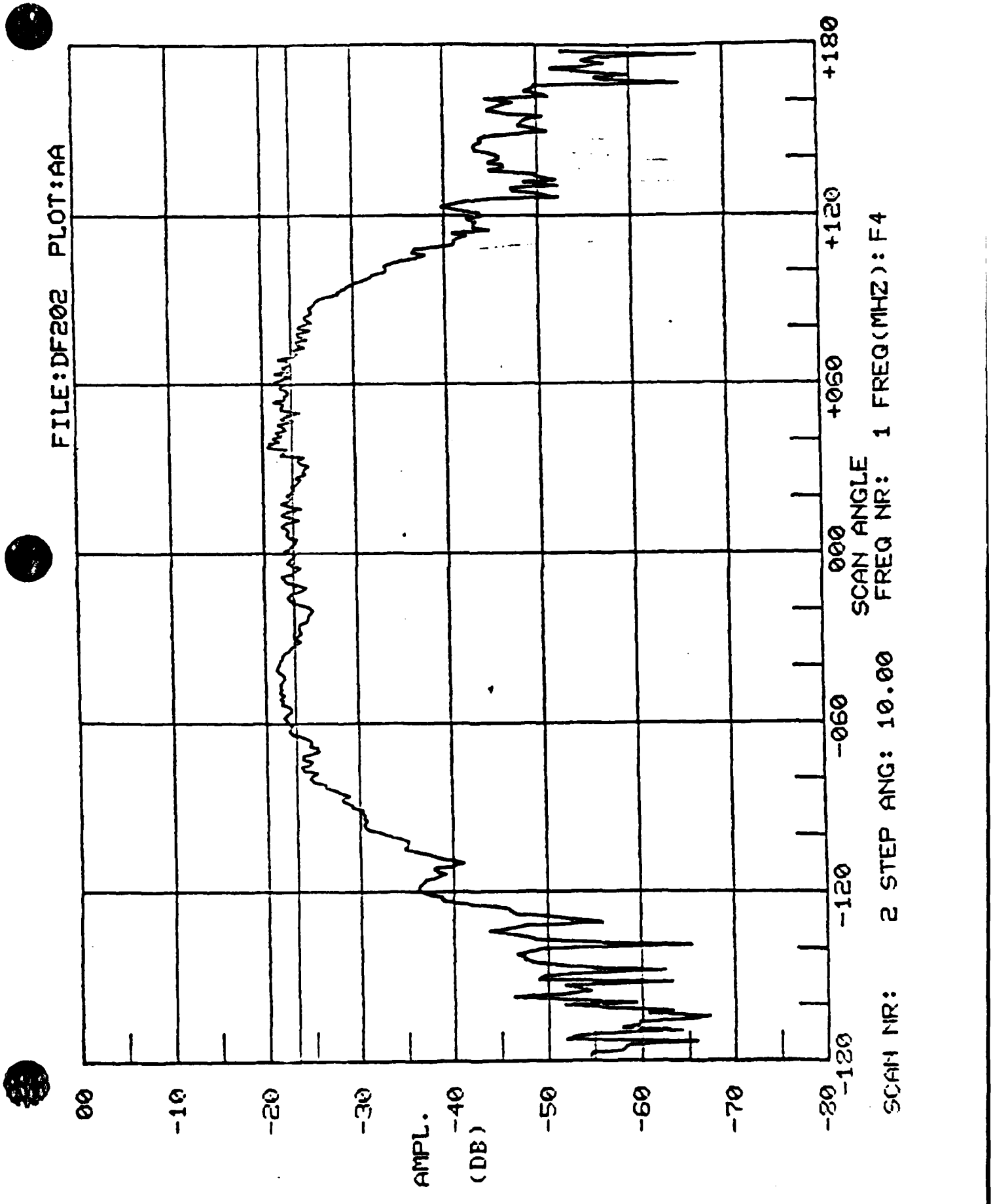
DF241 -- Aft antenna, upper hemisphere

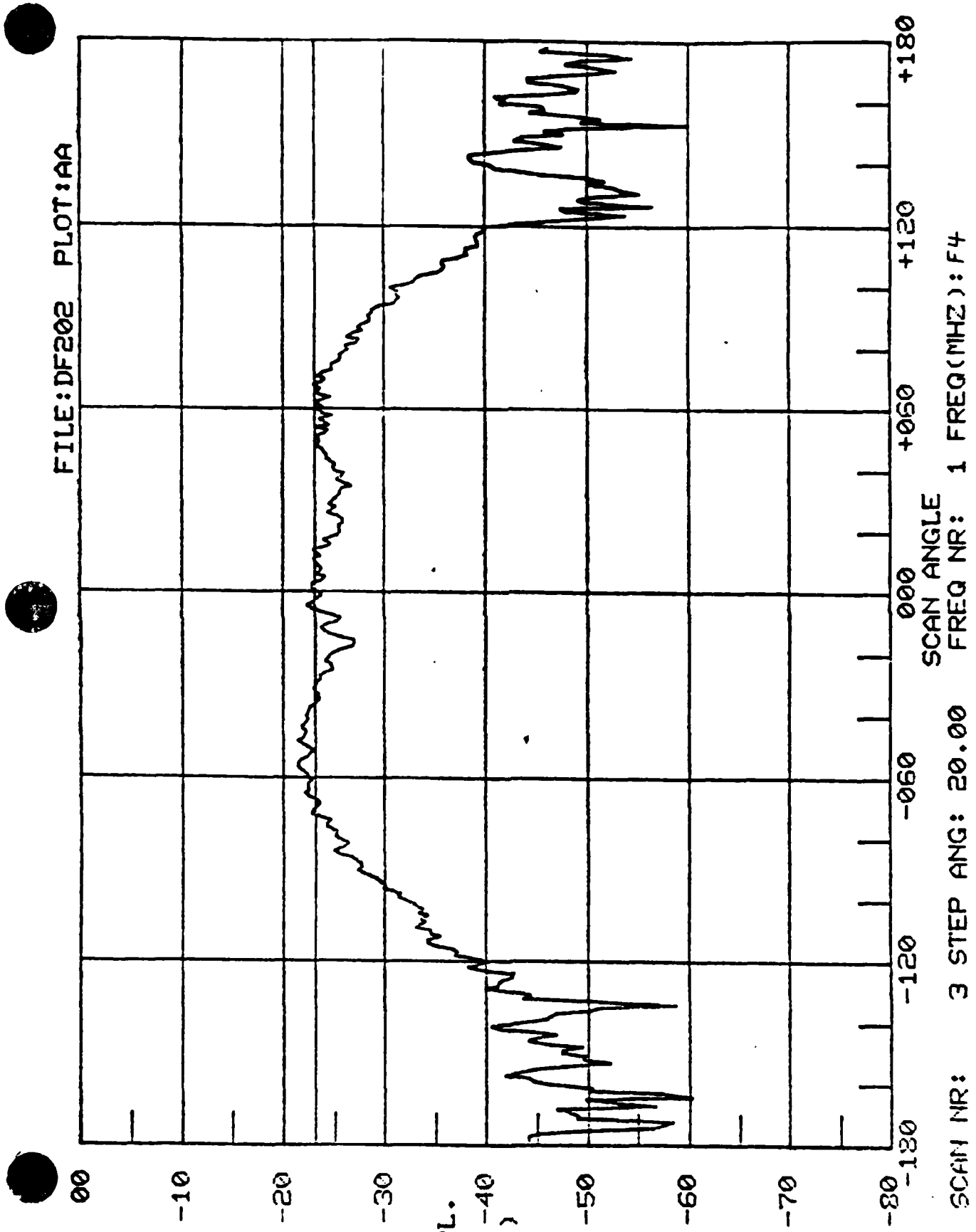
DF242 -- Aft antenna, upper hemisphere horizon

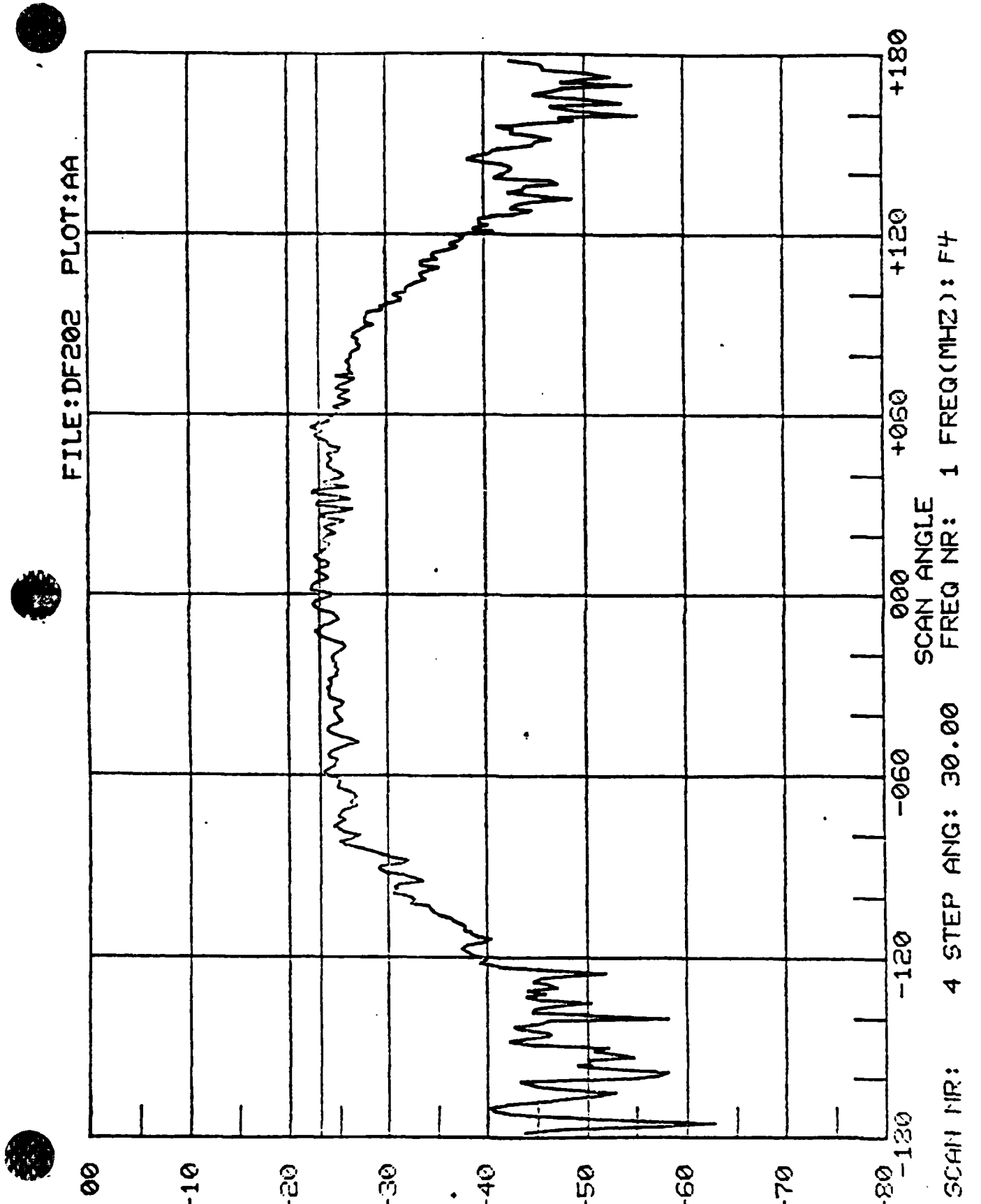
DF222 -- Aft antenna, lower hemisphere

DF223 -- Aft antenna, lower hemisphere horizon.


FILE:DF202 PLOT:AA
00
-10
-20
-30
-40
-50
-60
-70
-80
AMPL.
(DB)
-180
-120
-060
000
+060
+120
+180
SCAN ANGLE
SCAN NR: 1 STEP ANG: .00 FREQ NR: 1 FREQ(MHZ): F4


FILE:DF202 PLOT:AA
00
-10
-20
-30
-40
-50
-60
-70
-80
AMPL.
(DB)
-180
-120
-060
000
+060
+120
+180
SCAN ANGLE
FREQ NR: 1 FREQ(MHZ): F4
SCAN NR: 2 STEP ANG: 10.00


FILE:DF202 PLOT:AA
00
-10
-20
-30
-40
-50
-60
-70
-80
AMPL.
(DB)
-180
-120
-060
000
+060
+120
+180
SCAN ANGLE
SCAN NR: 3 STEP ANG: 20.00 FREQ NR: 1 FREQ(MHZ):F4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(DB)
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000
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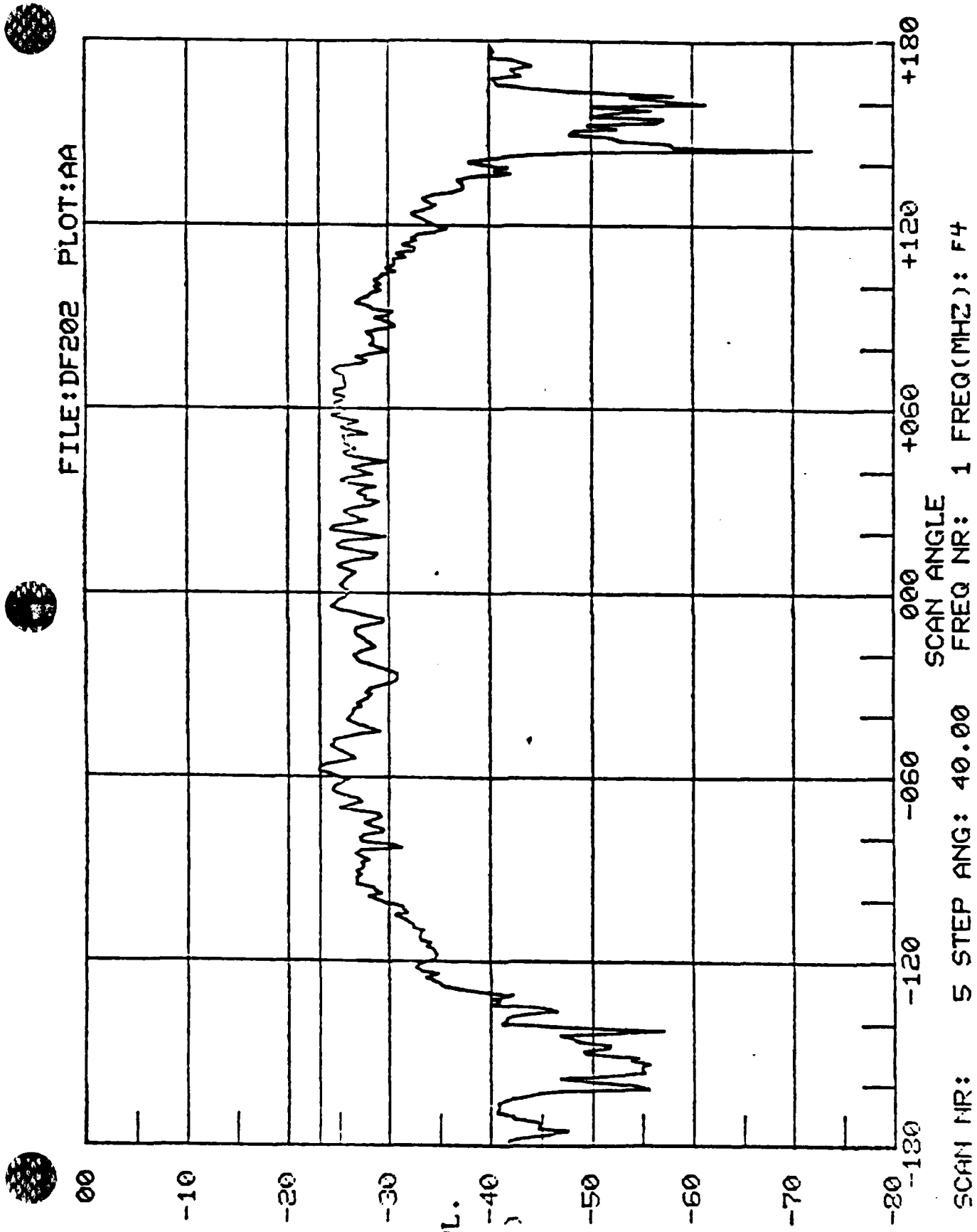
SCAN ANGLE
SCAN NR: 4 STEP ANG: 30.00 FREQ NR: 1 FREQ(MHZ): F4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SCAN ANGLE
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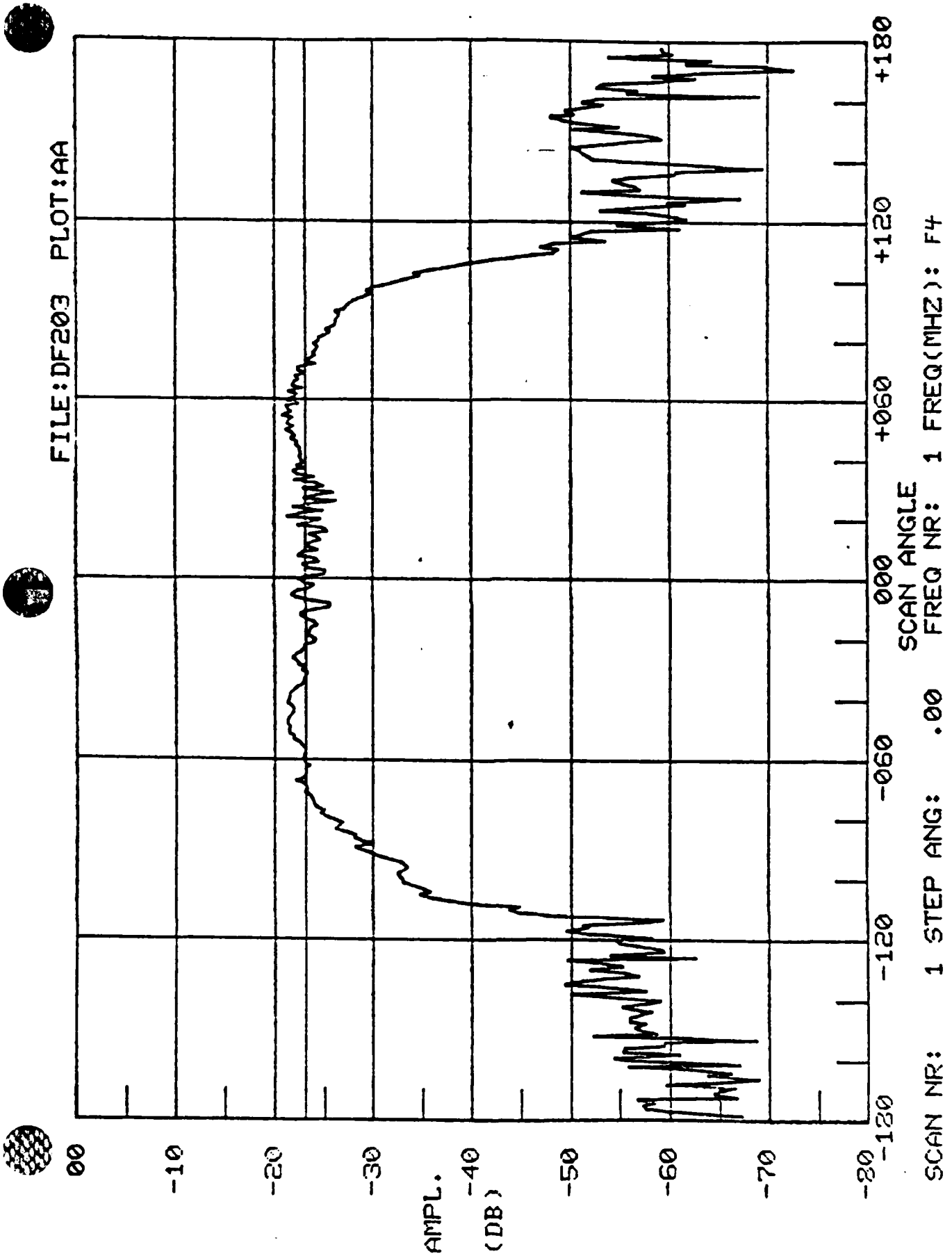
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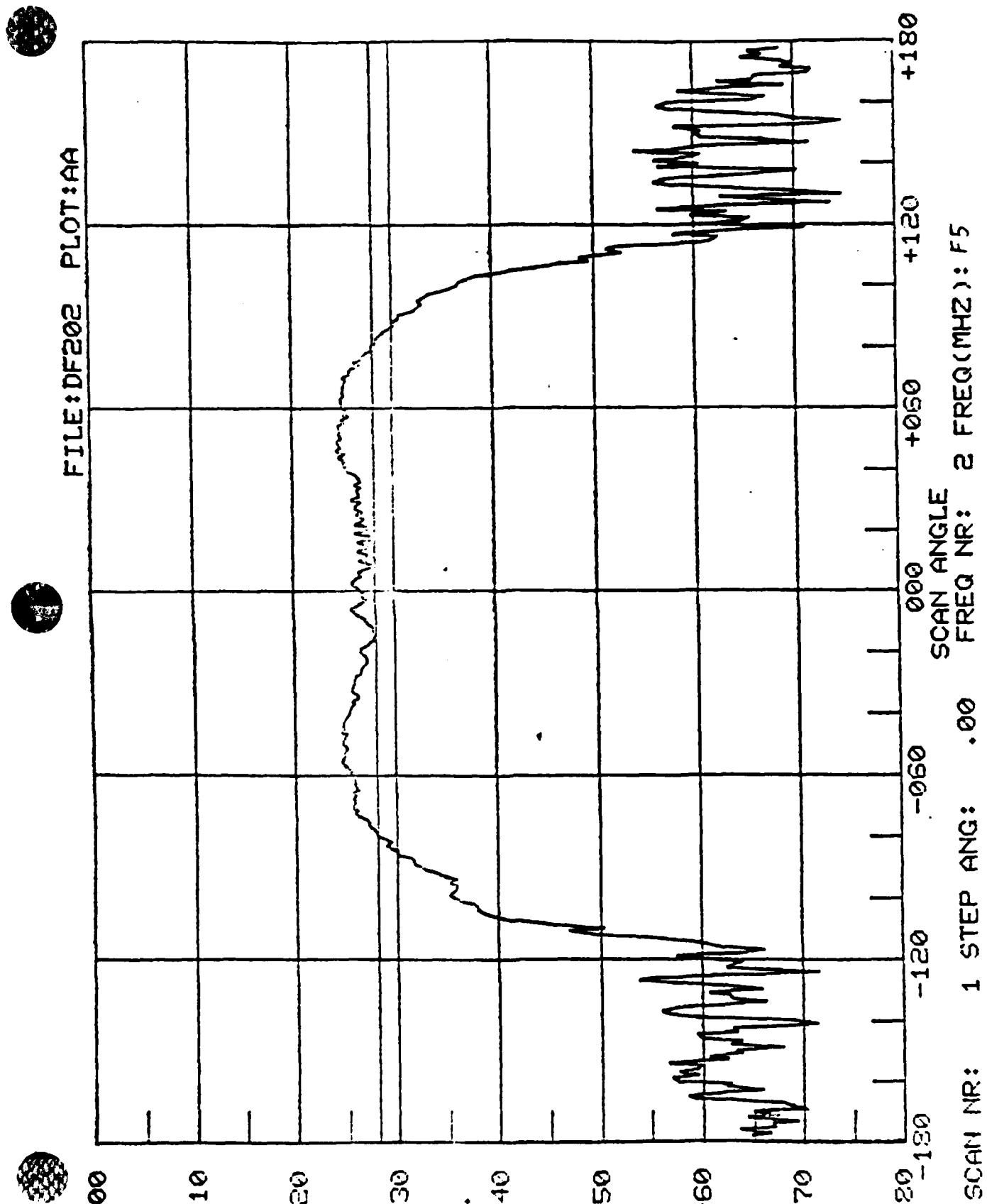
SCAN ANGLE
SCAN NR: 1 STEP ANG: .00 FREQ NR: 1 FREQ(MHZ): F4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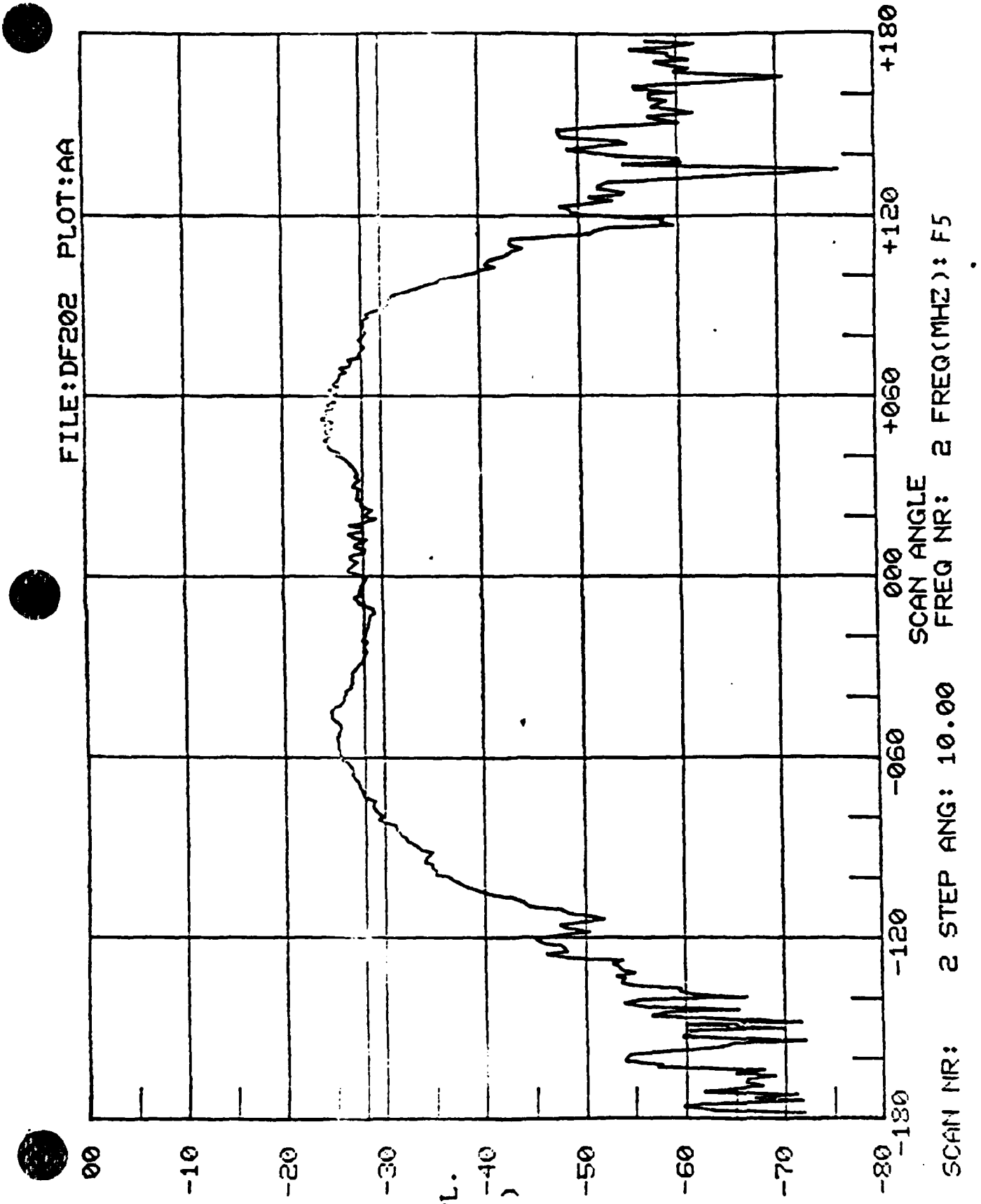
SCAN ANGLE
SCAN NR: 1 STEP ANG: .00 FREQ NR: 2 FREQ(MHZ): F5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(DB)
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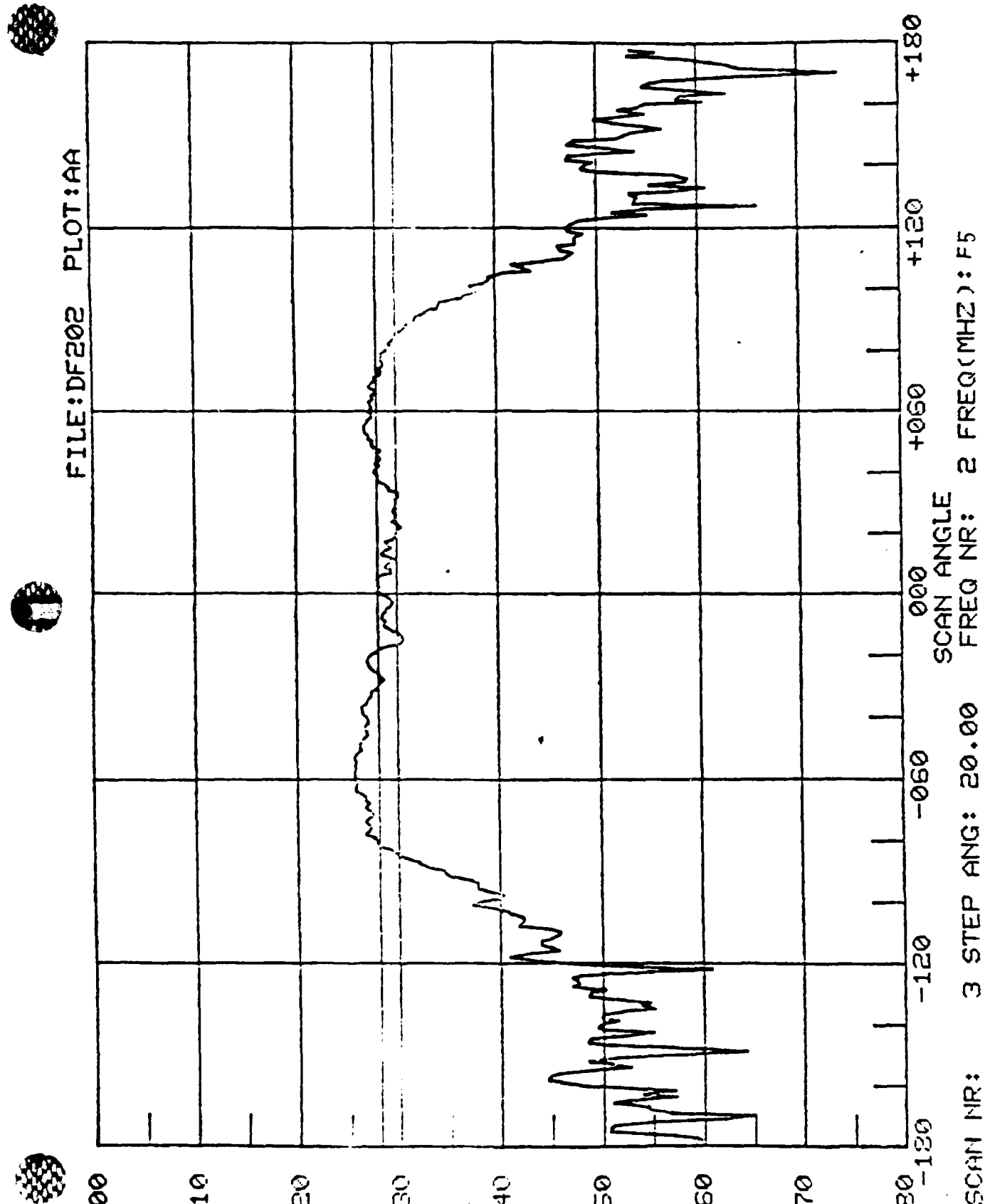
+180
SCAN ANGLE
SCAN NR: 2 STEP ANG: 10.00 FREQ NR: 2 FREQ(MHZ): F5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SCAN ANGLE
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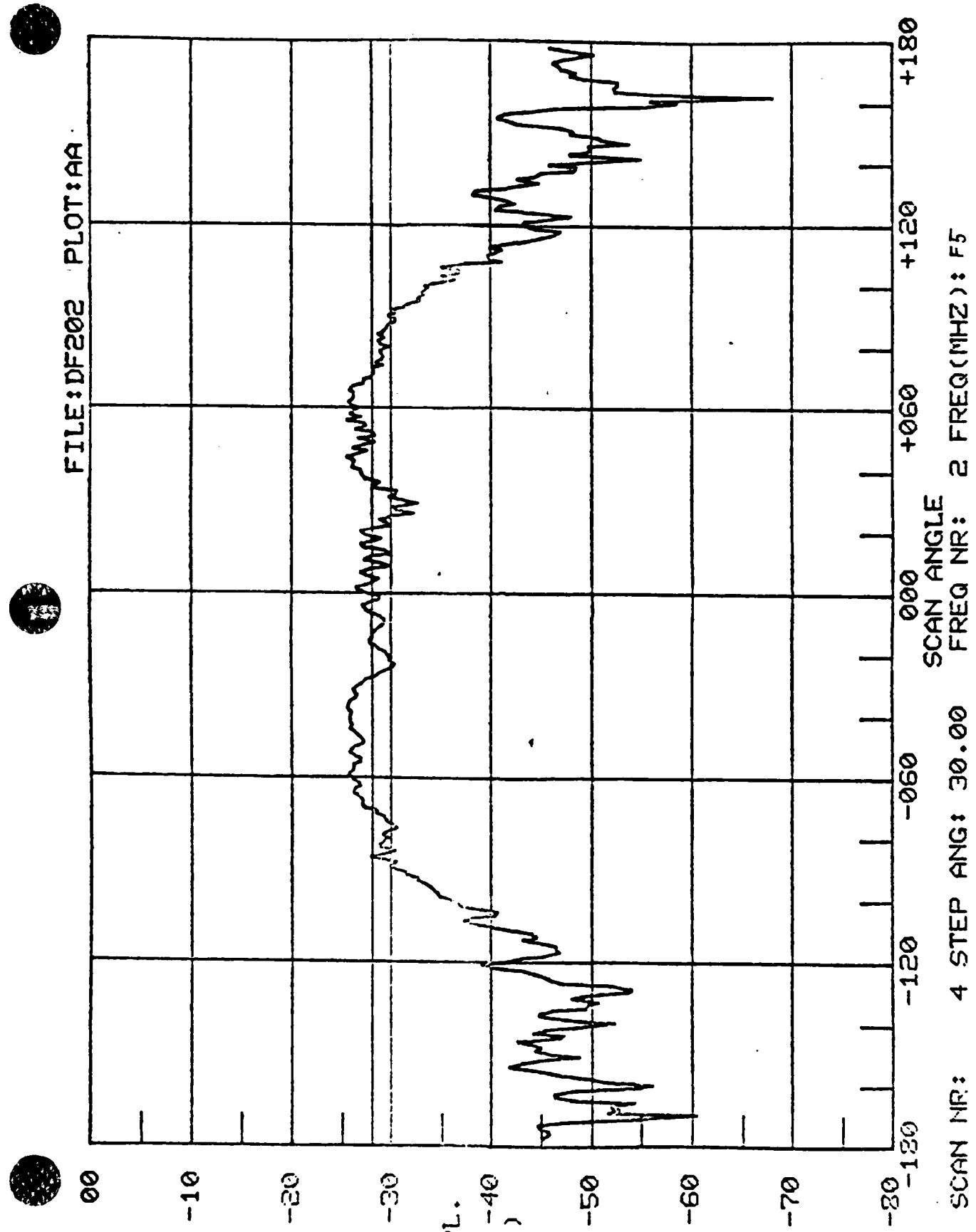
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AMPL.
(DB)
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000
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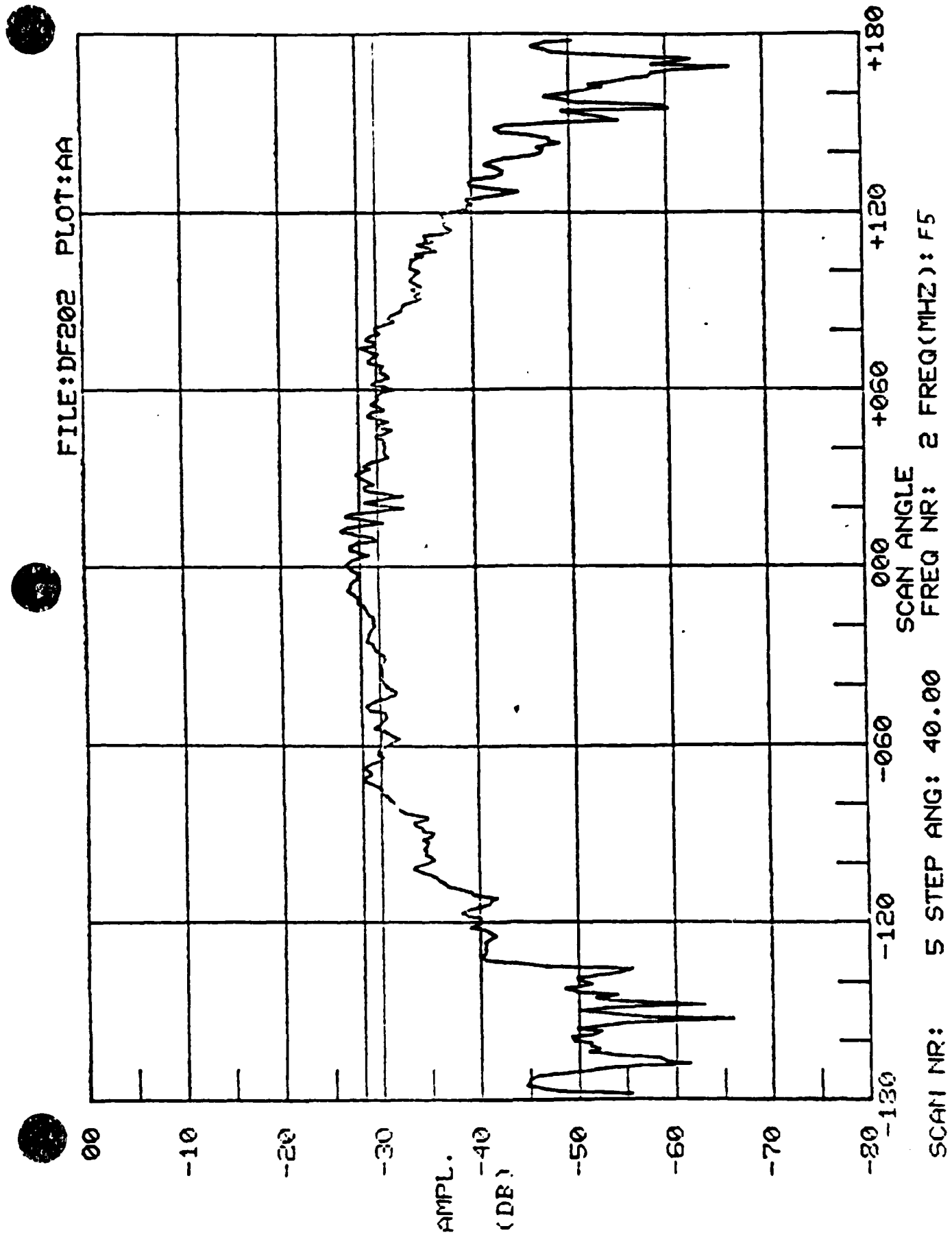
+120
+180
SCAN ANGLE
SCAN NR: 4 STEP ANG: 30.00 FREQ NR: 2 FREQ(MHZ): F5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AMPL.
(DB)
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000
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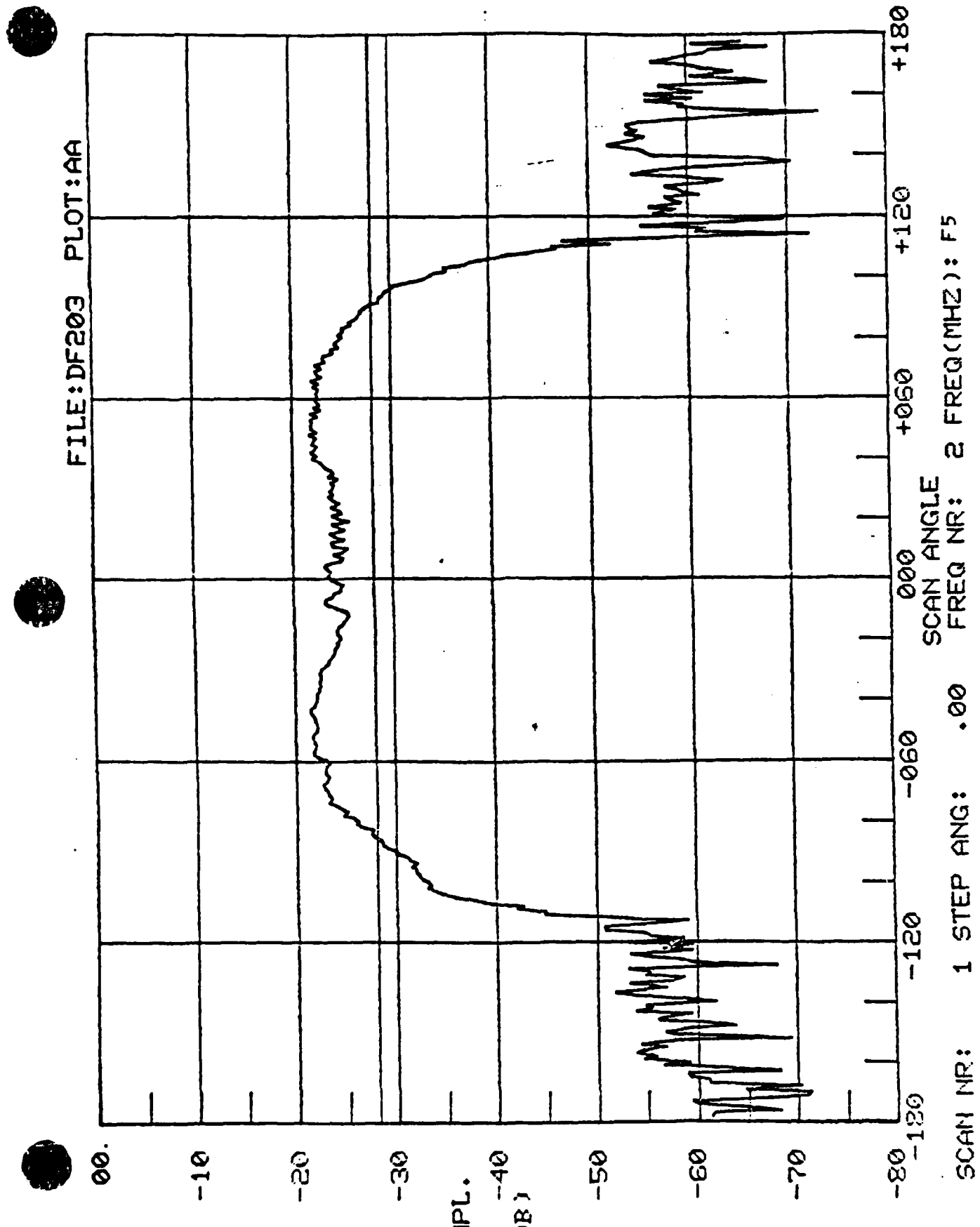
+180
SCAN ANGLE
SCAN NR: 5 STEP ANG: 40.00 FREQ NR: 2 FREQ(MHZ): F5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AMPL.
(DB)
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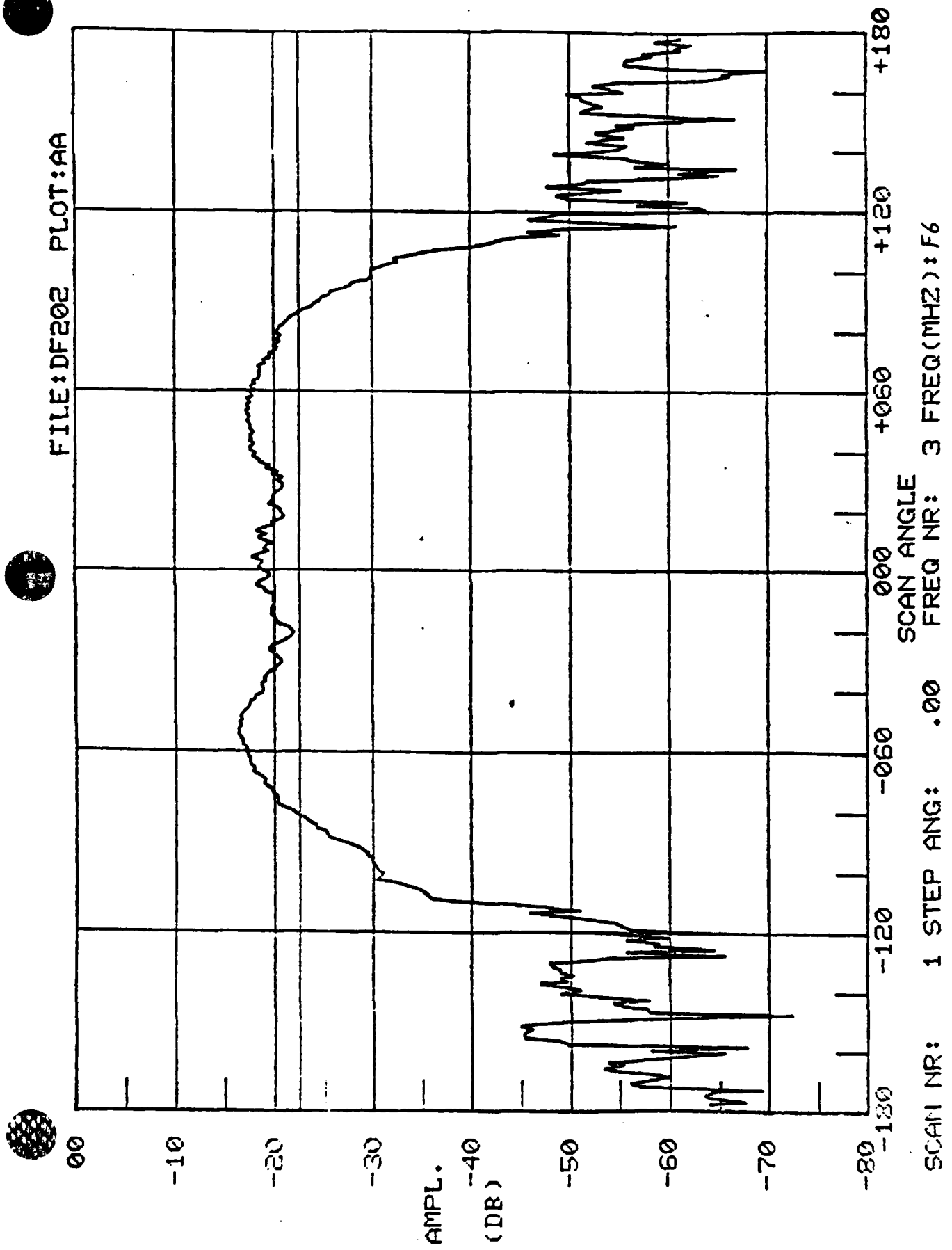
000
+060
+120
+180
SCAN ANGLE
SCAN NR: 1 STEP ANG: .00 FREQ NR: 2 FREQ(MHZ): F5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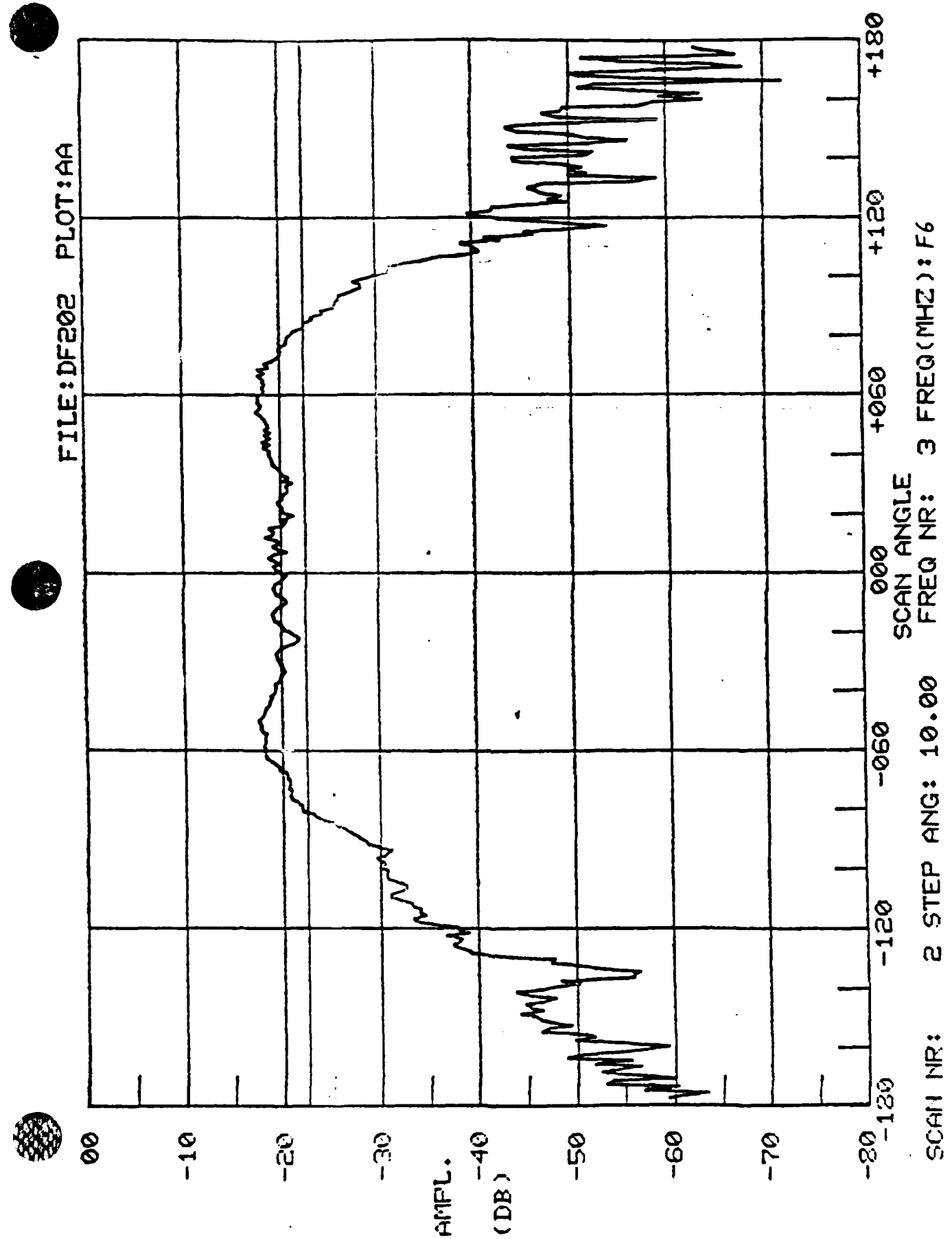
-180
-120
-060
000
+060
+120
+180
SCAN ANGLE
SCAN NR: 1 STEP ANG: .00 FREQ NR: 3 FREQ(MHZ): F6


FILE:DF202 PLOT:AA
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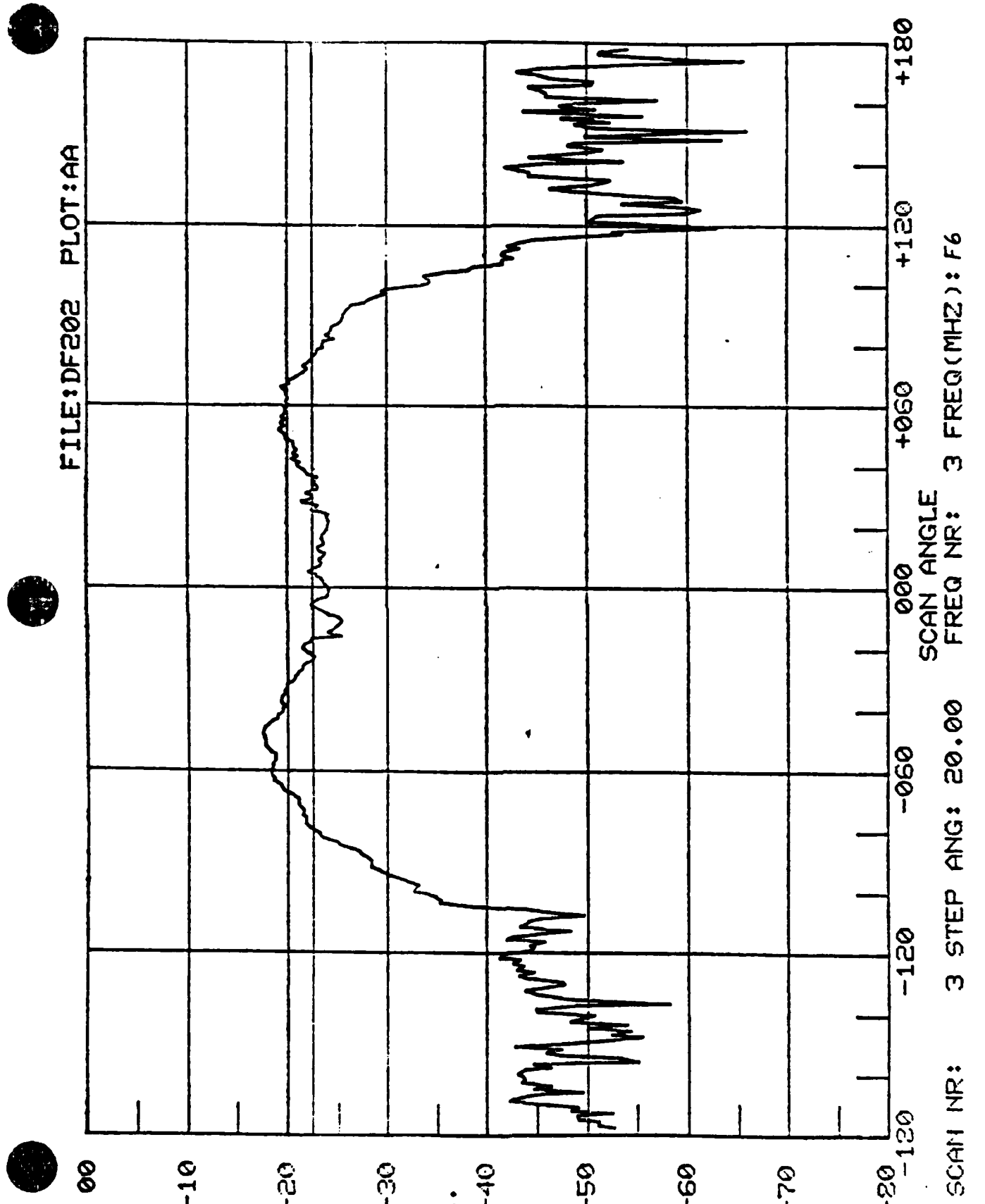
000
+060
+120
+180
AMPL. (DB)
SCAN ANGLE
SCAN NR: 2 STEP ANG: 10.00 FREQ NR: 3 FREQ(MHZ): F6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(DB)
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000
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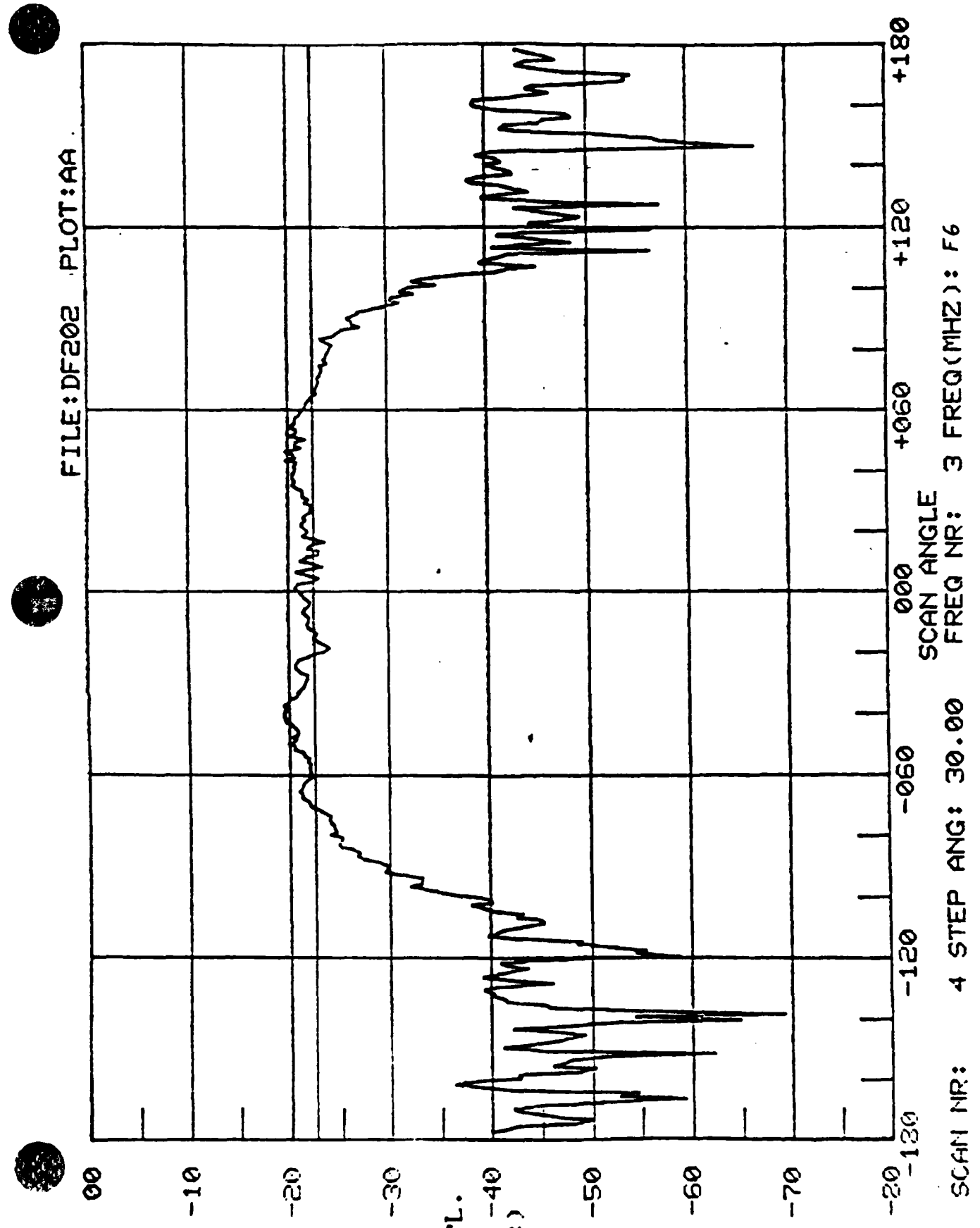
+180
SCAN ANGLE
SCAN NR: 3 STEP ANG: 20.00 FREQ NR: 3 FREQ(MHZ): F6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AMPL.
(DB)
-180
-120
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000
+060
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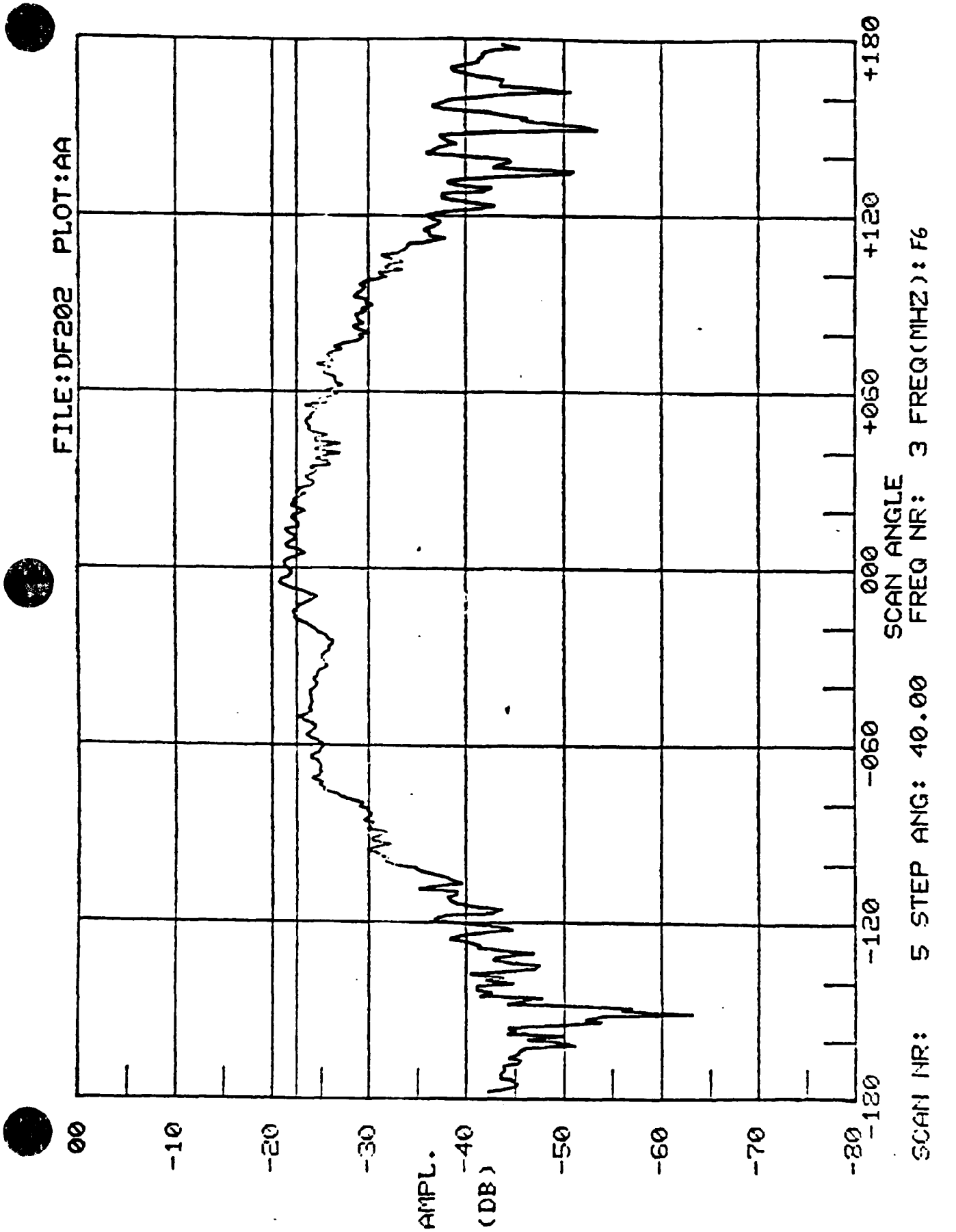
+180
SCAN ANGLE
SCAN NR: 4 STEP ANG: 30.00 FREQ NR: 3 FREQ(MHZ): F6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-80
AMPL.
(DB)
-180
-120
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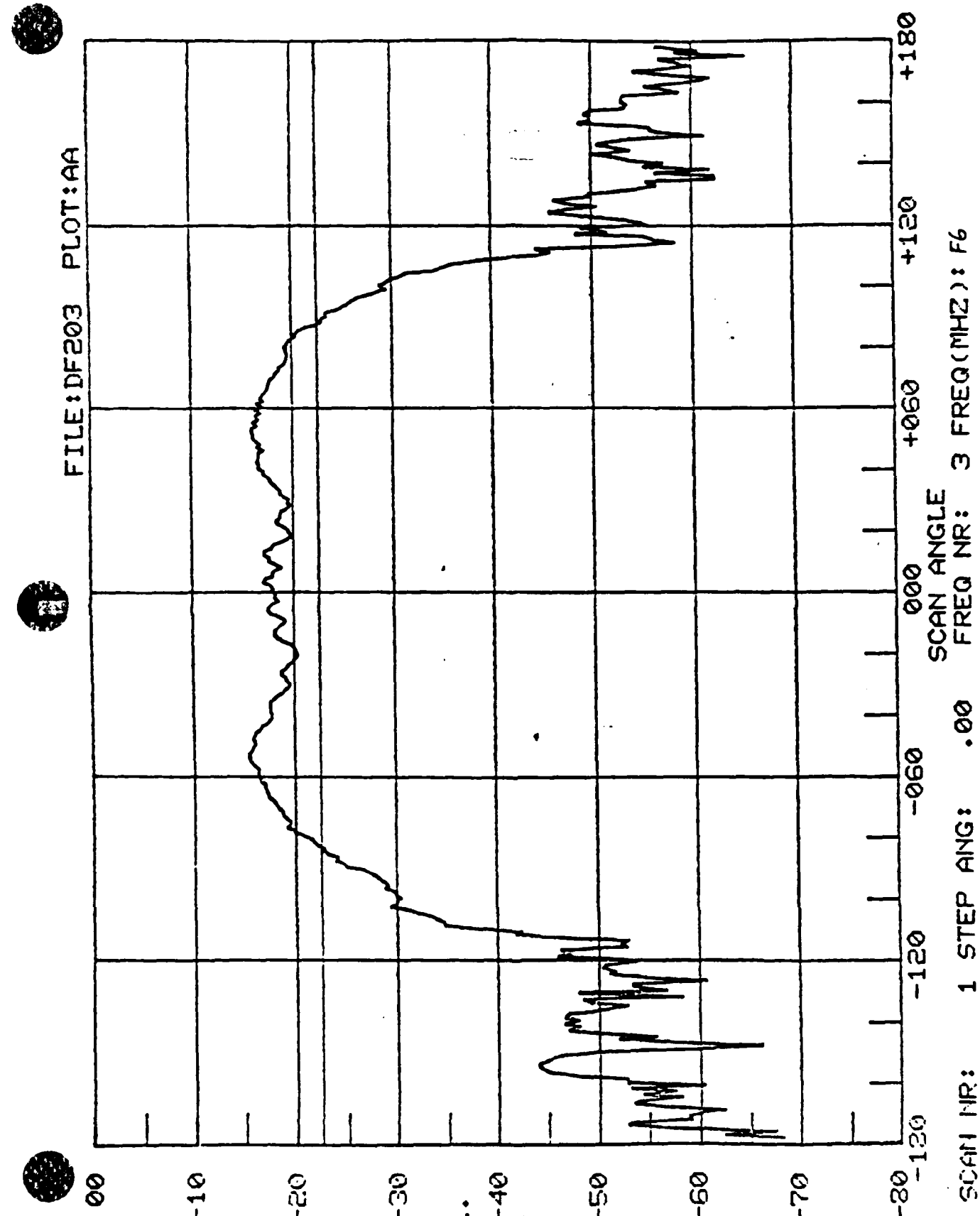
000
+060
+120
+180
SCAN ANGLE
SCAN NR: 5 STEP ANG: 40.00 FREQ NR: 3 FREQ(MHZ): F6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AMPL.
(DB)
-180
-120
-060
000
+060
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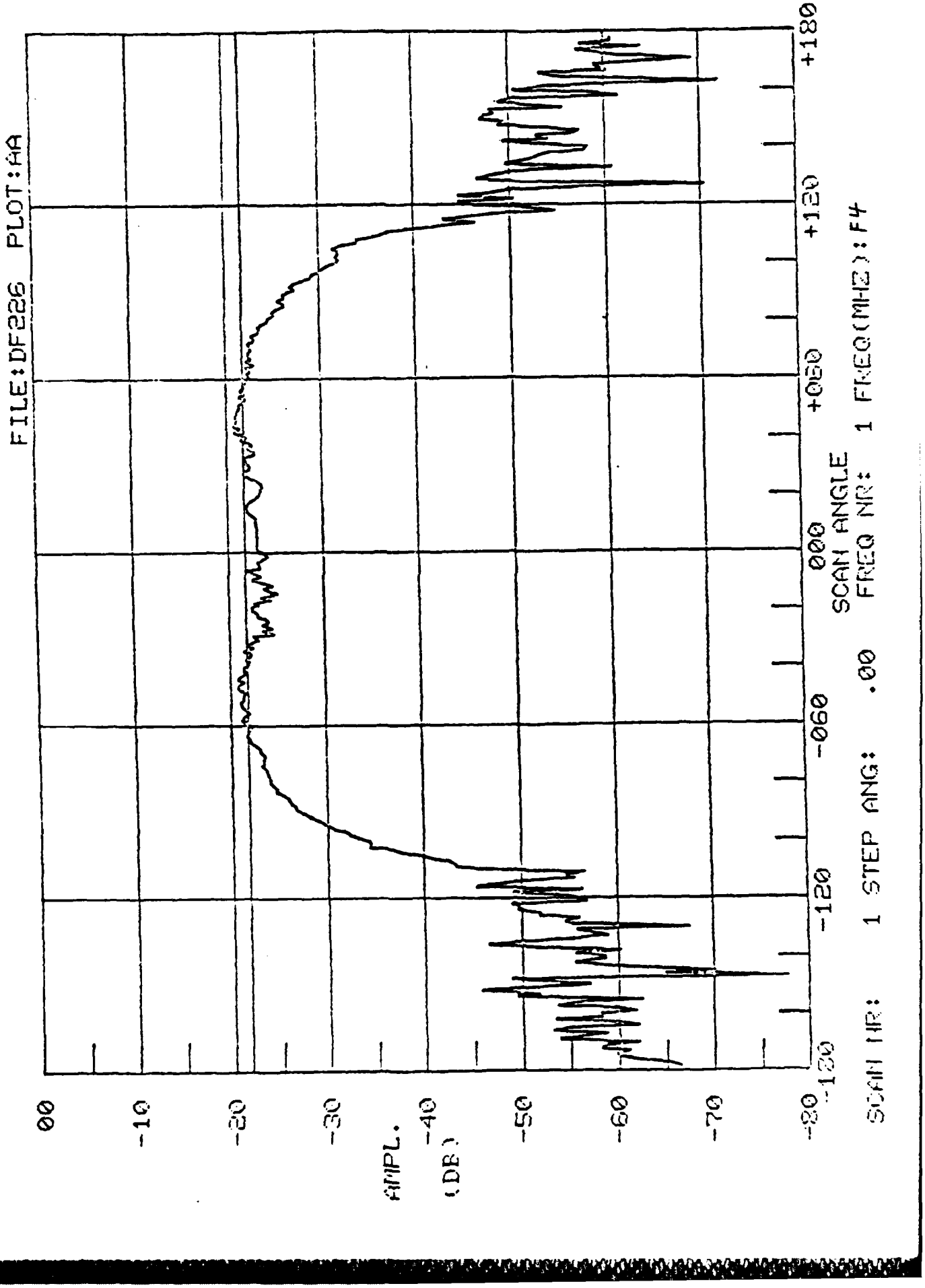
+180
SCAN ANGLE
SCAN NR: 1 STEP ANG: .00 FREQ NR: 3 FREQ(MHZ): F6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AMPL.
(DB)
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-120
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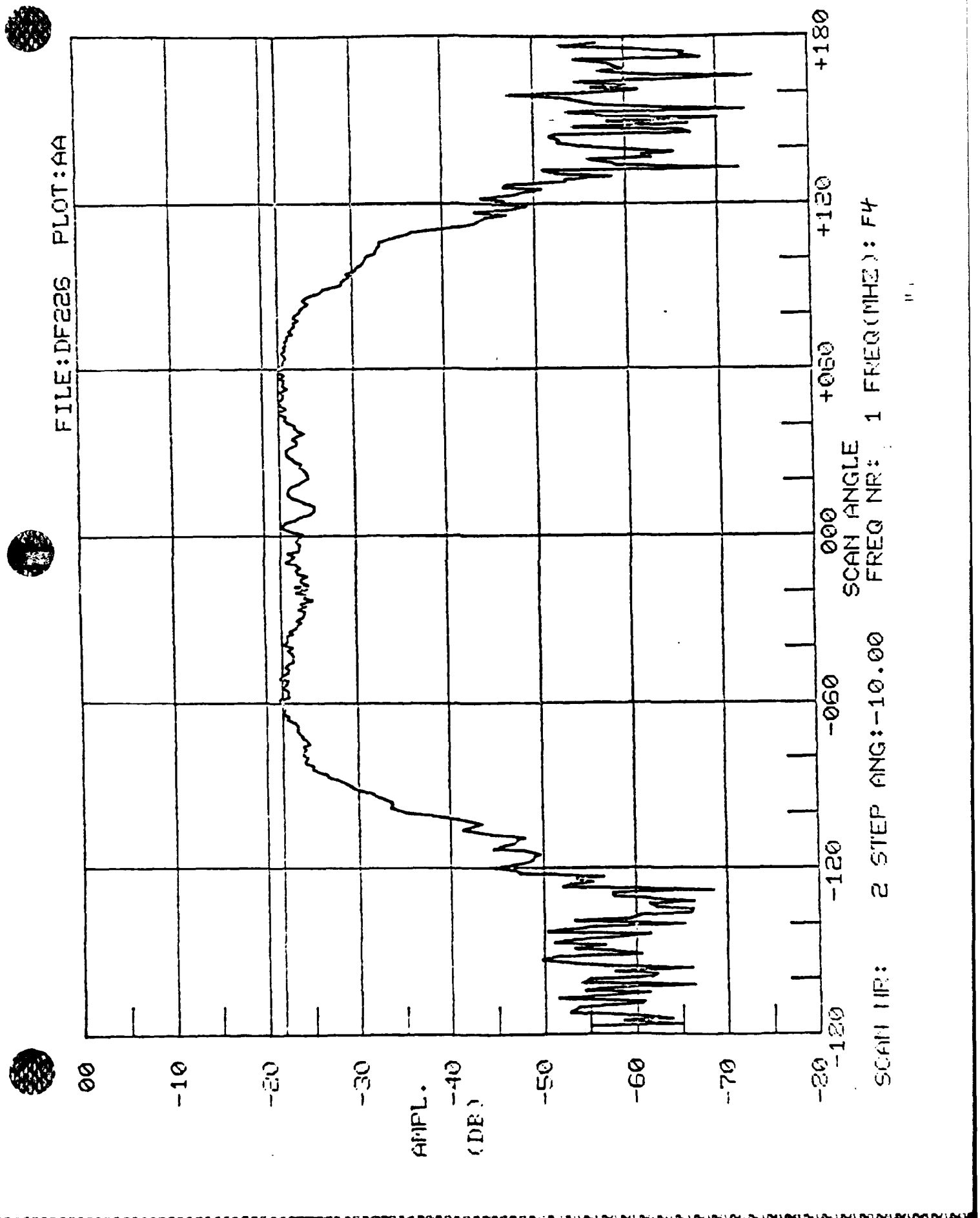
000
+060
+120
+180
SCAN ANGLE
SCAN NR: 1 STEP ANG: .00 FREQ NR: 1 FREQ(MHZ):F4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00
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-80
AMPL.
(DB)
-120
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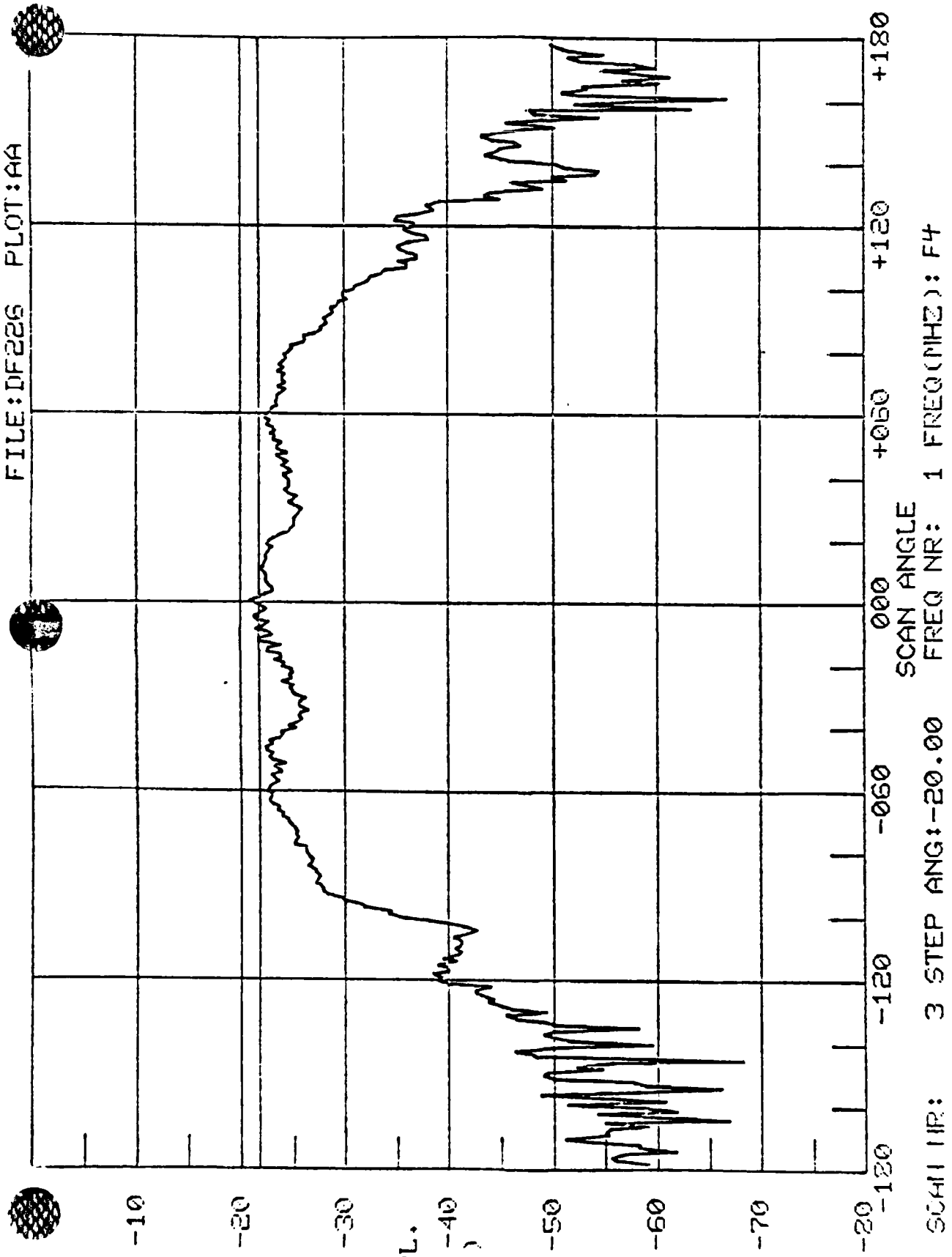
000
+060
+120
+180
SCAN ANGLE
SCAN NR: 2 STEP ANG:-10.00 FREQ NR: 1 FREQ(MHZ): F4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-60
-70
-120
AMPL.
(DB)
SCAN IR: 3 STEP ANG:-20.00
-120
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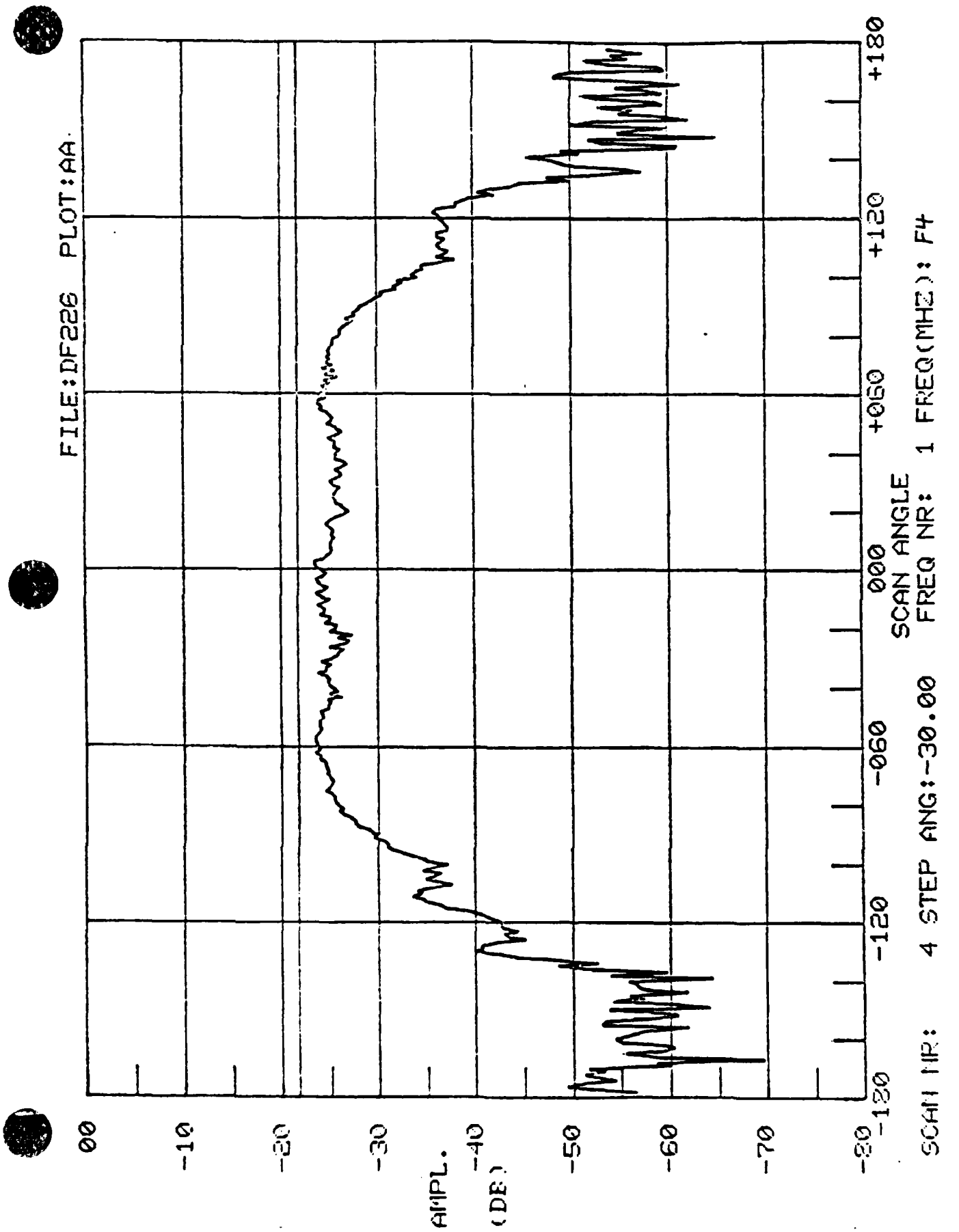
000
+060
+120
+180
SCAN ANGLE
FREQ NR: 1 FREQ(MHZ): F4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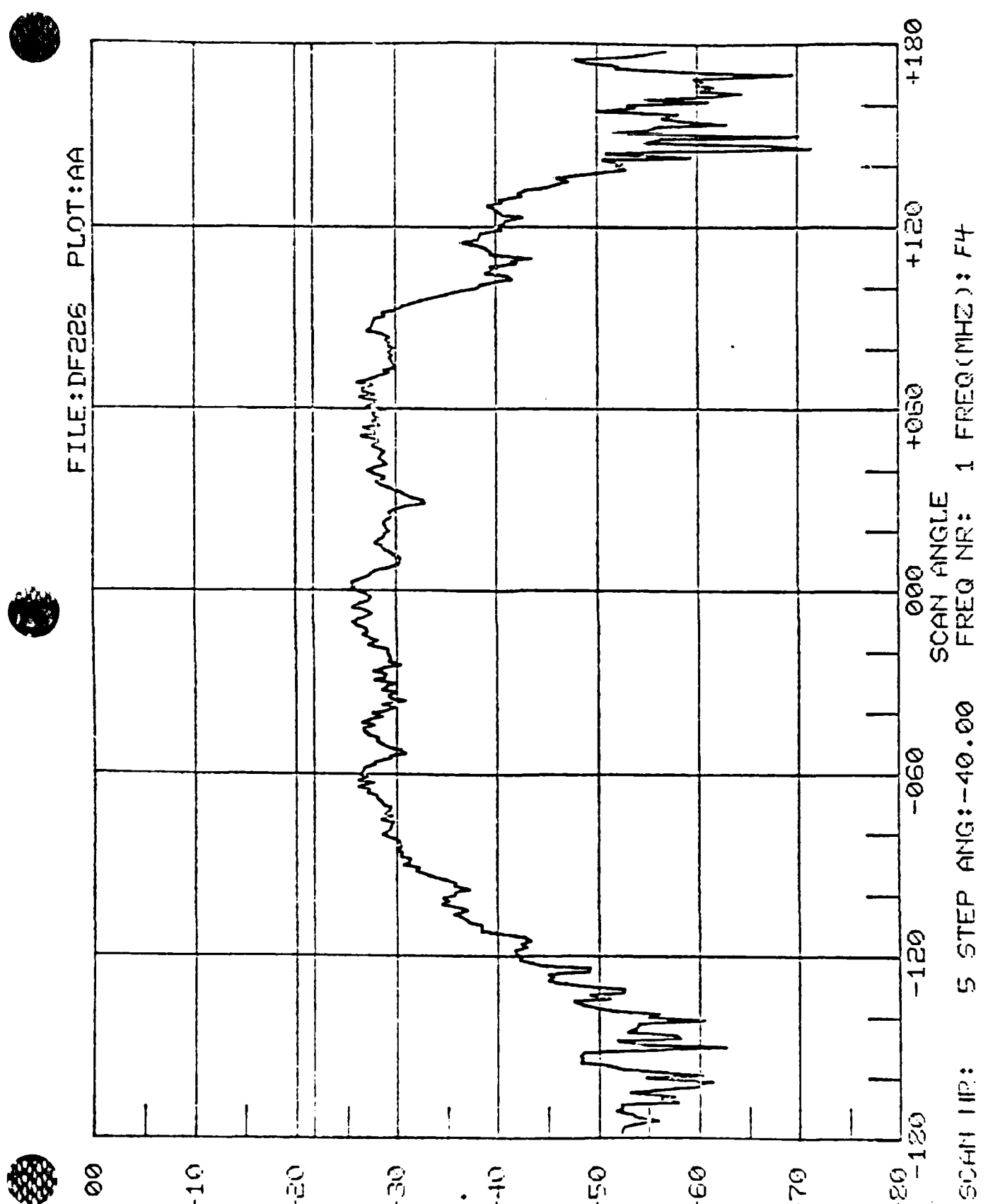
-70
-80
AMPL.
(DB)
-120
-060
000
+060
+120
+180
SCAN ANGLE
SCAN NR: 4 STEP ANG:-30.00 FREQ NR: 1 FREQ(MHZ): F4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AMPL.
(DB)
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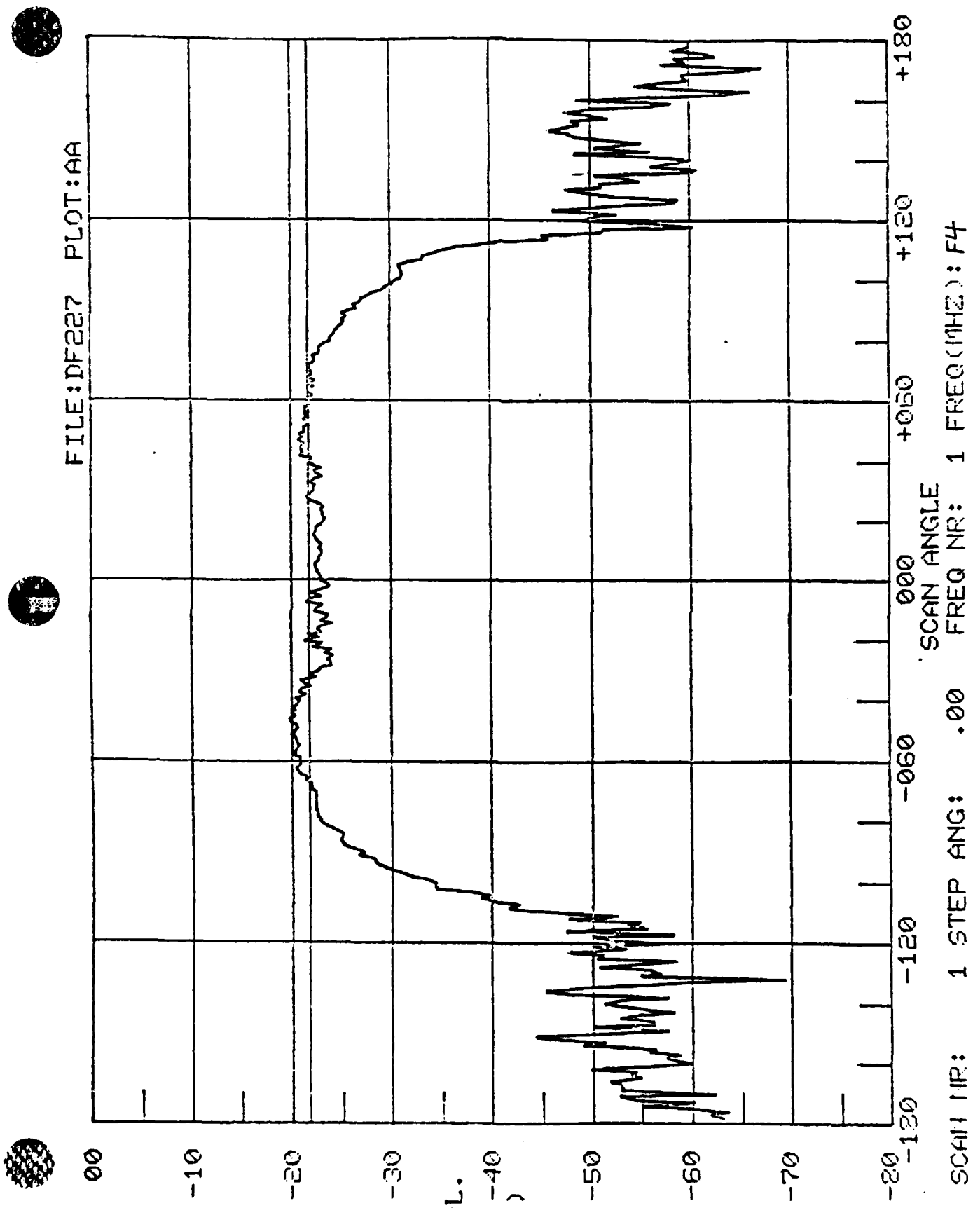
000
+060
+120
+180
SCAN ANGLE
SCAN UP: 5 STEP ANG:-40.00 FREQ NR: 1 FREQ(MHZ): F4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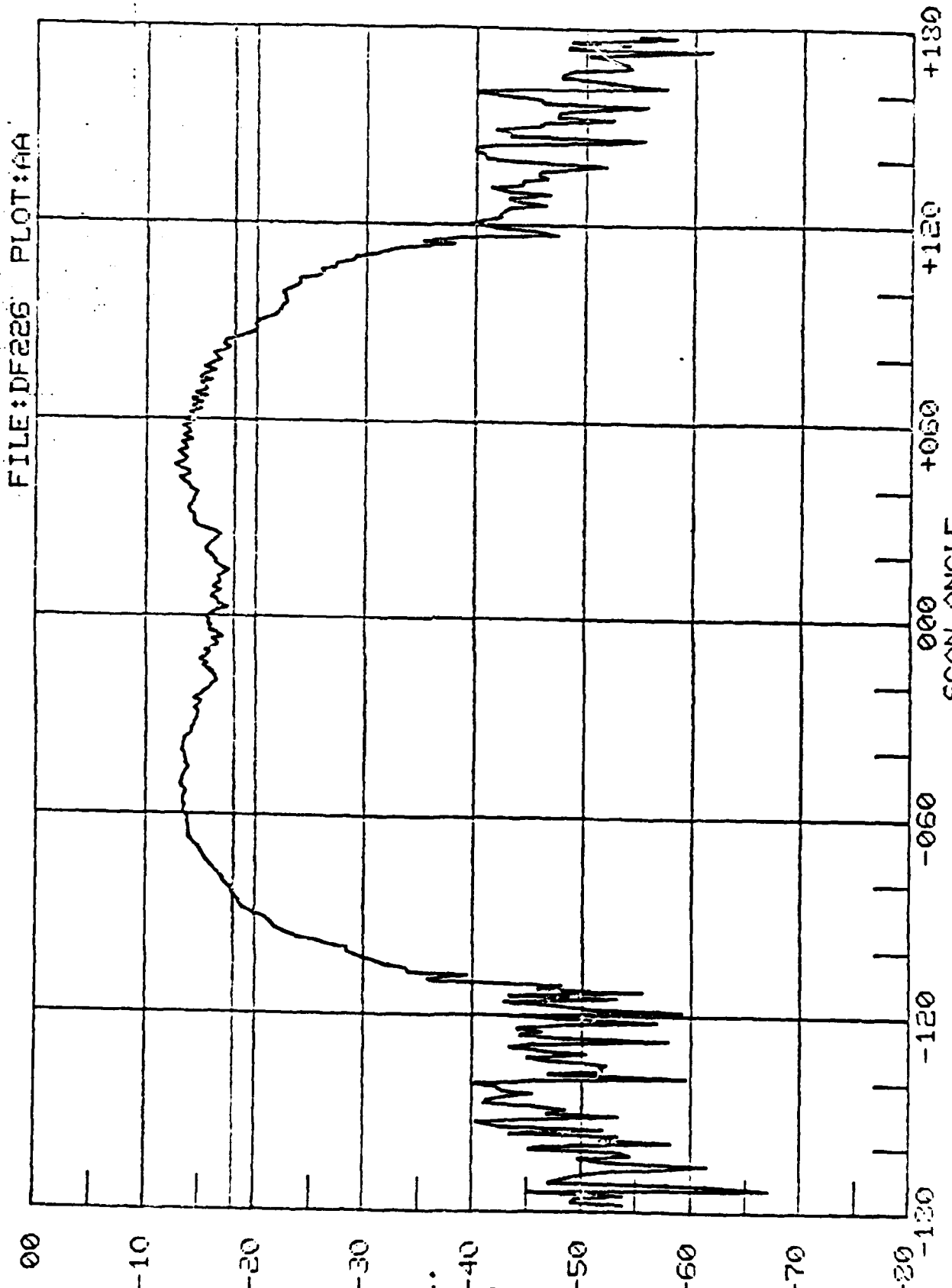
+060
+120
+180
SCAN ANGLE
SCAN NR: 1 STEP ANG: .00 FREQ NR: 1 FREQ(MHZ): F4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(DB)
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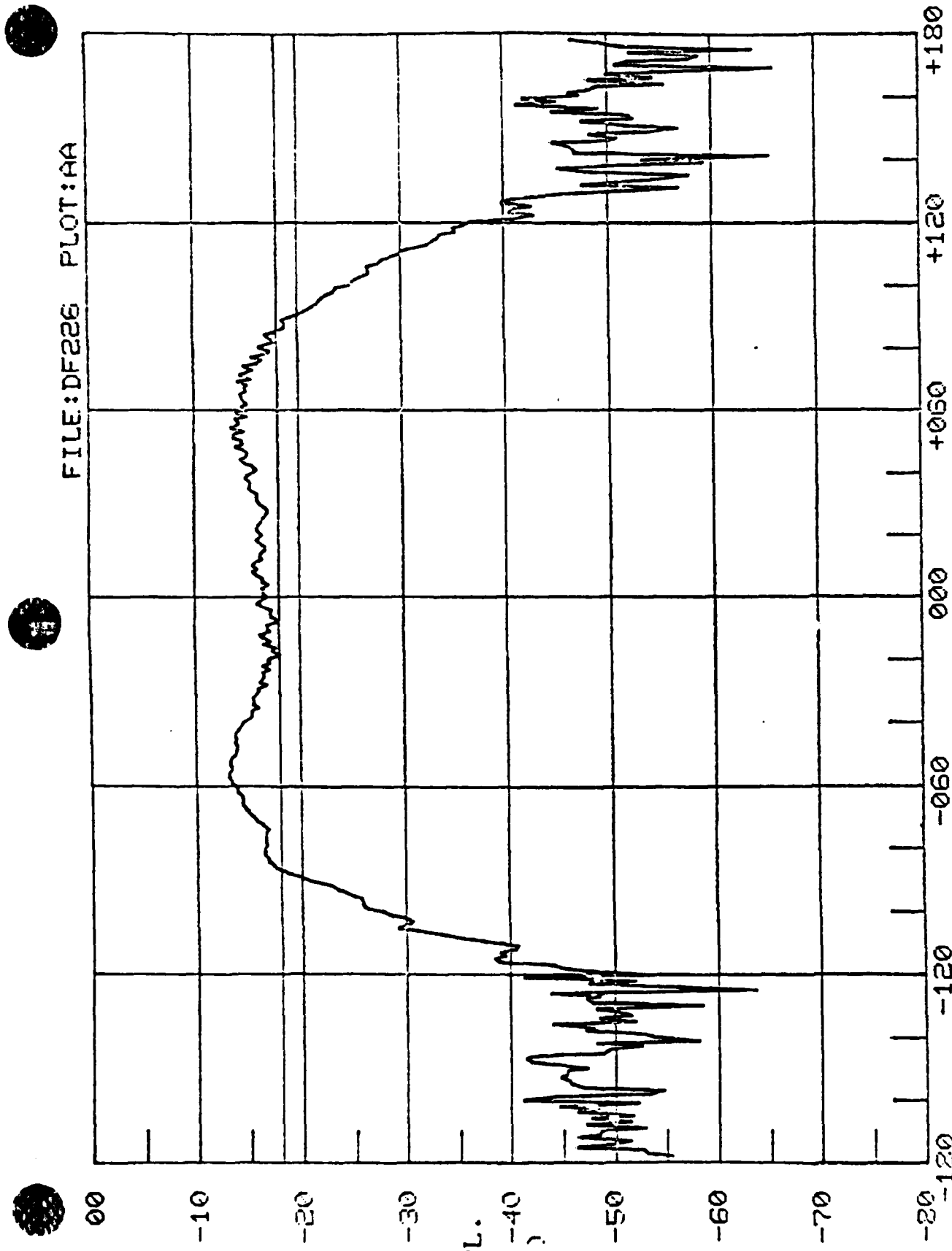
+060
+120
+180
SCAN ANGLE
SCAN LIM: 1 STEP ANGS: .00 FIXED ANG: 2 FREQ(MHZ): F5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AMPL.
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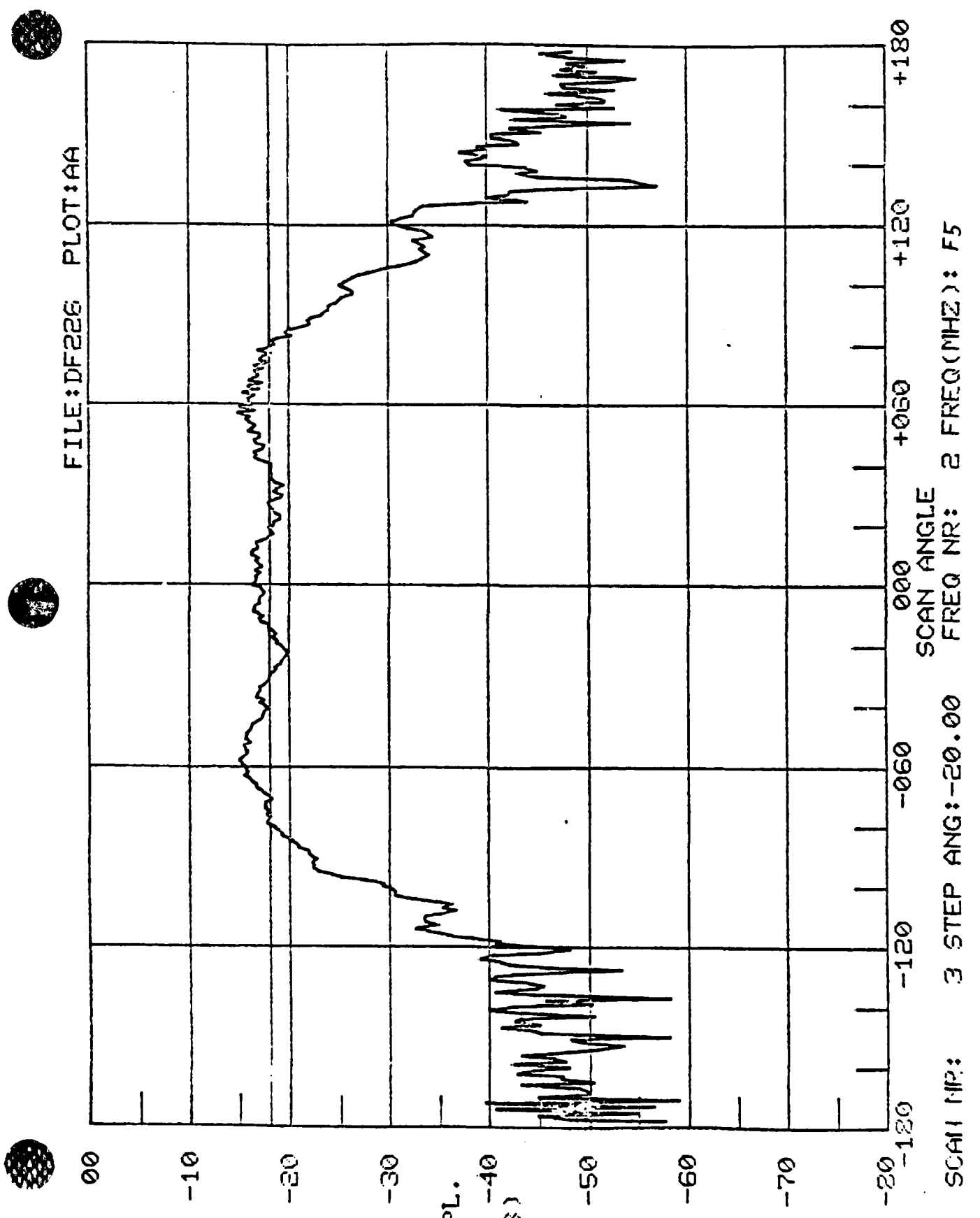
+060
+120
+180
SCAN ANGLE
SCAN NR: 2 STEP ANG:-10.00 FREQ NR: 2 FREQ(MHZ): F5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(DB)
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-120
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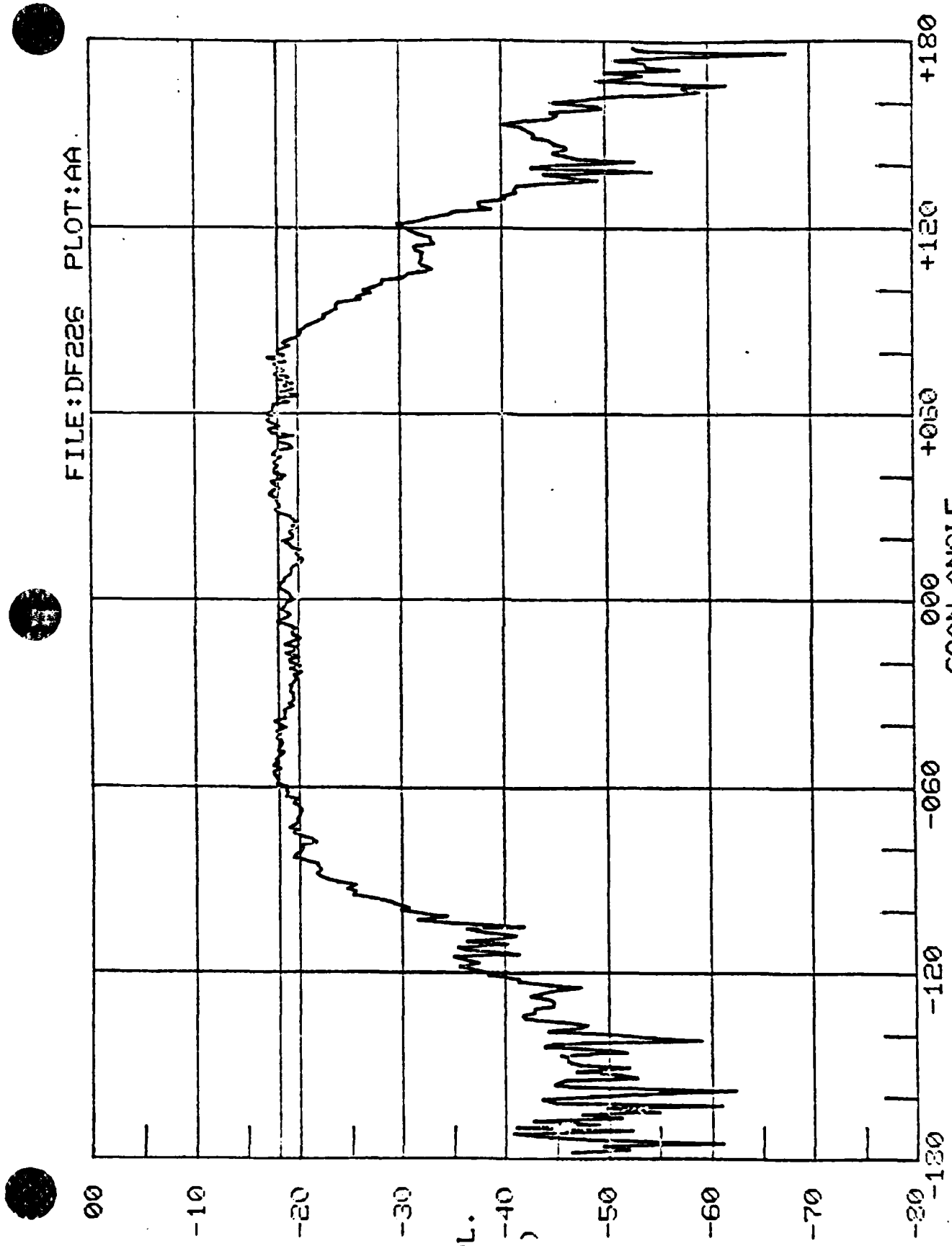
000
+060
+120
+180
SCAN ANGLE
SCAN NR: 3 STEP ANG:-20.00 FREQ NR: 2 FREQ(MHZ): F5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-80
AMPL.
(DB)
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-120
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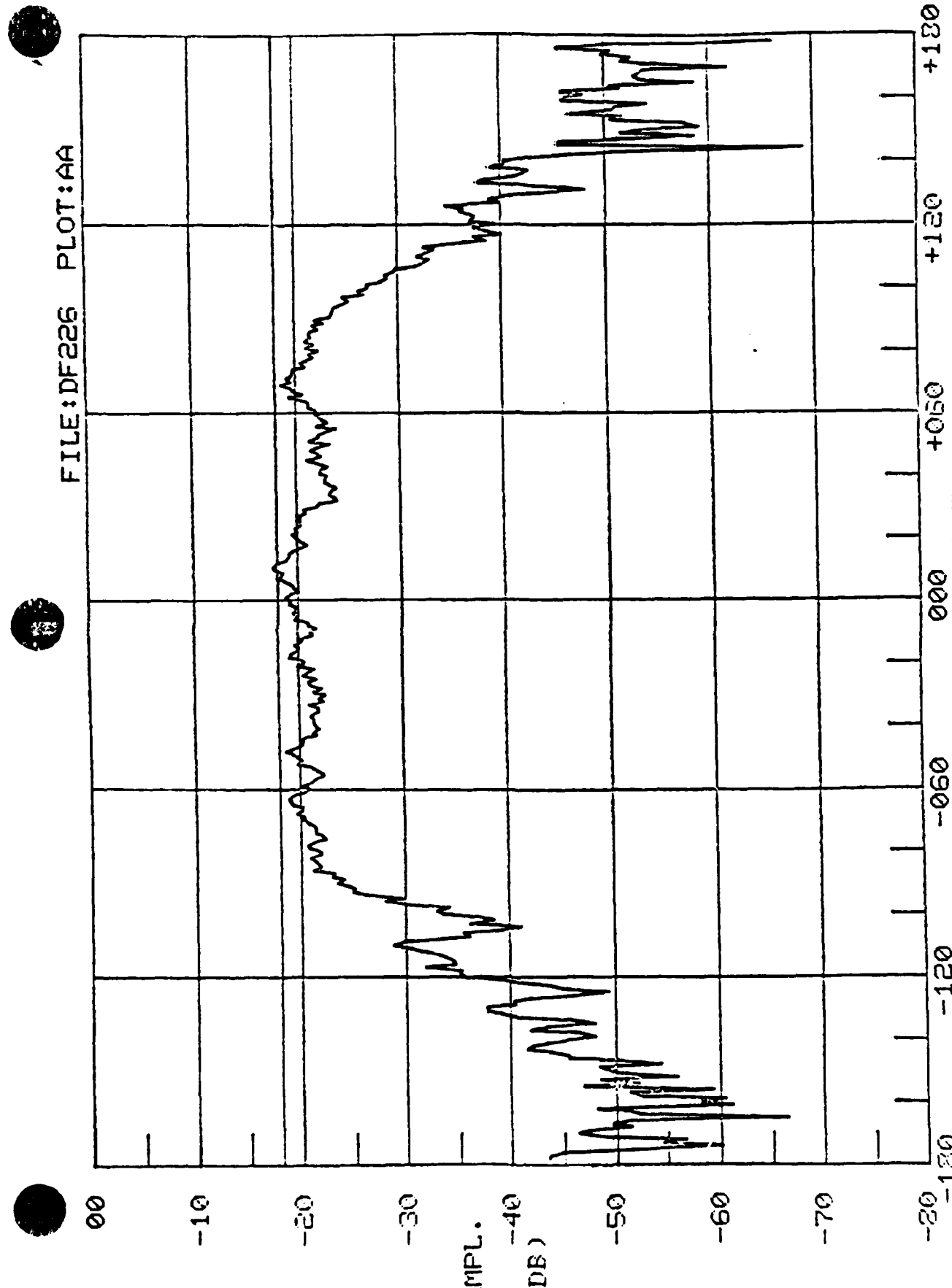
000
+060
+120
+180
SCAN ANGLE
SCAN NR: 4 STEP ANG:-30.00 FREQ NR: 2 FREQ(MHZ): F5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AMPL.
(DB)
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-120
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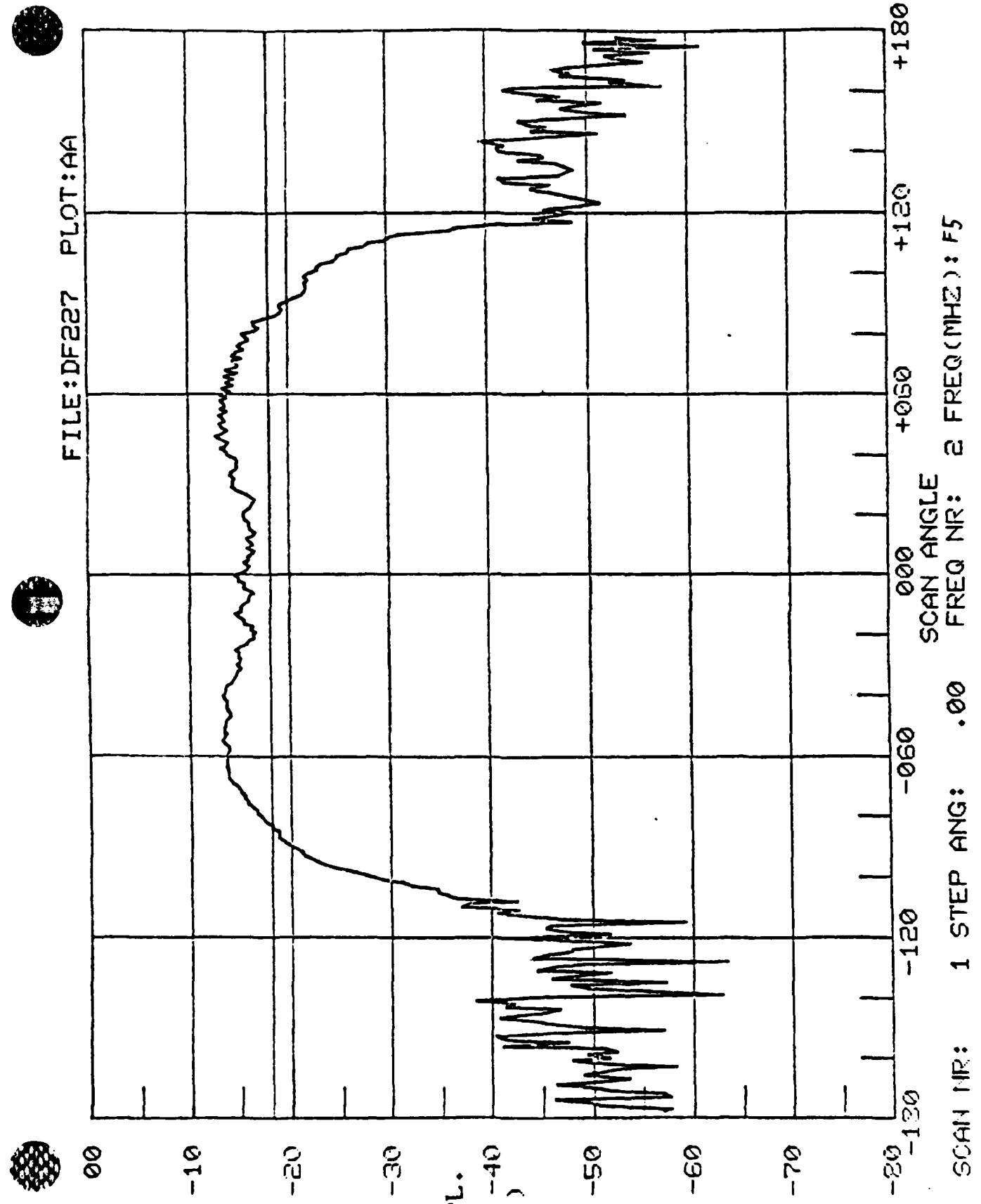
000
+060
+120
+180
SCAN ANGLE
SCAN NR: 5 STEP ANG:-40.00 FREQ NR: 2 FREQ(MHZ): F5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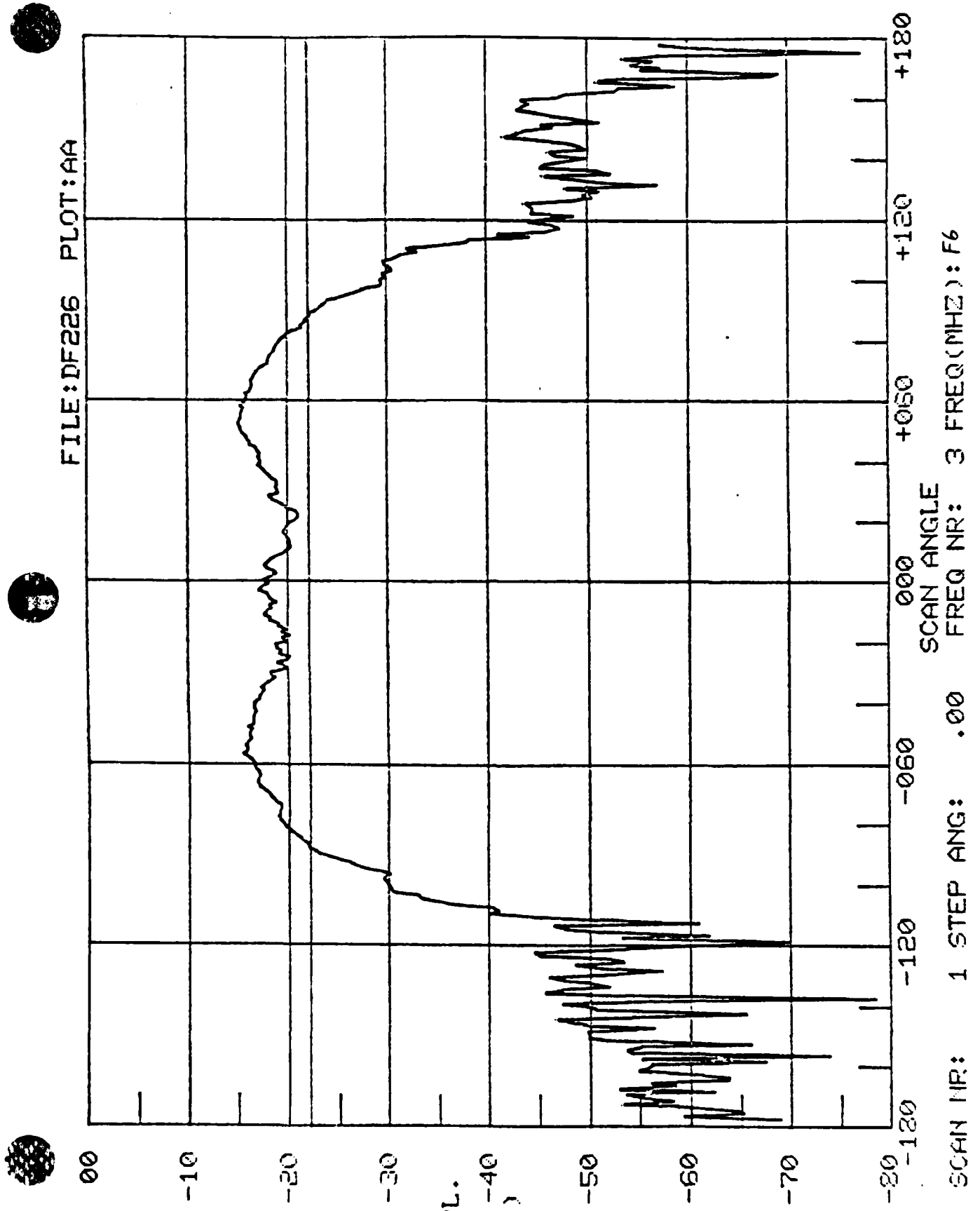
000
+060
+120
+180
SCAN ANGLE
SCAN NR: 1 STEP ANG: .00 FREQ NR: 2 FREQ(MHZ): F5


FILE:DF226 PLOT:AA
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-50
-60
-70
-80
AMPL.
(DB)
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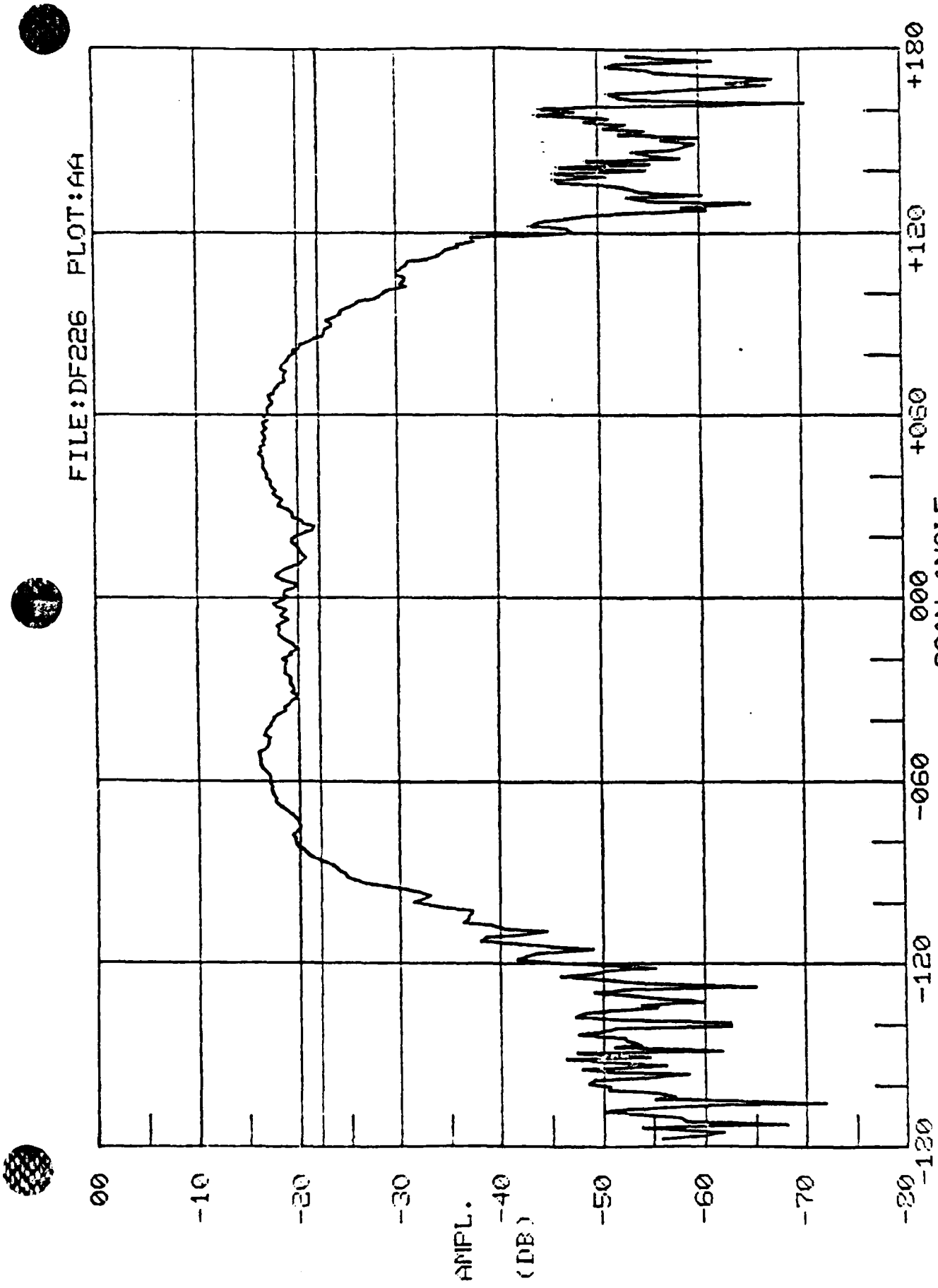
000
+060
+120
+180
SCAN ANGLE
SCAN NR: 1 STEP ANG: .00 FREQ NR: 3 FREQ(MHZ): F6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-70
-80
-180
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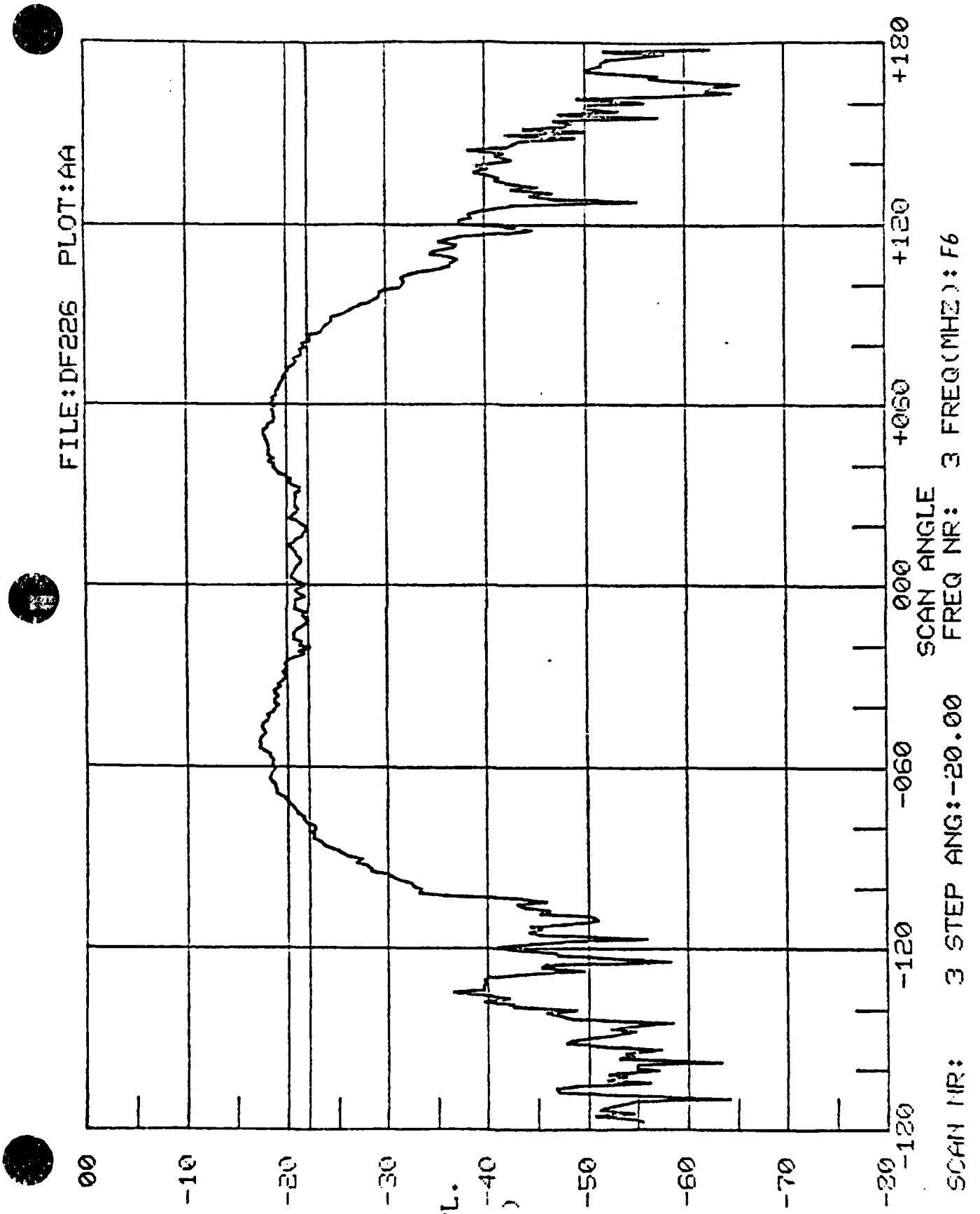
000
+060
+120
+180
SCAN ANGLE
SCAN NR: 2 STEP ANG:-10.00 FREQ NR: 3 FREQ(MHZ): F6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AMPL.
(DB)
-120
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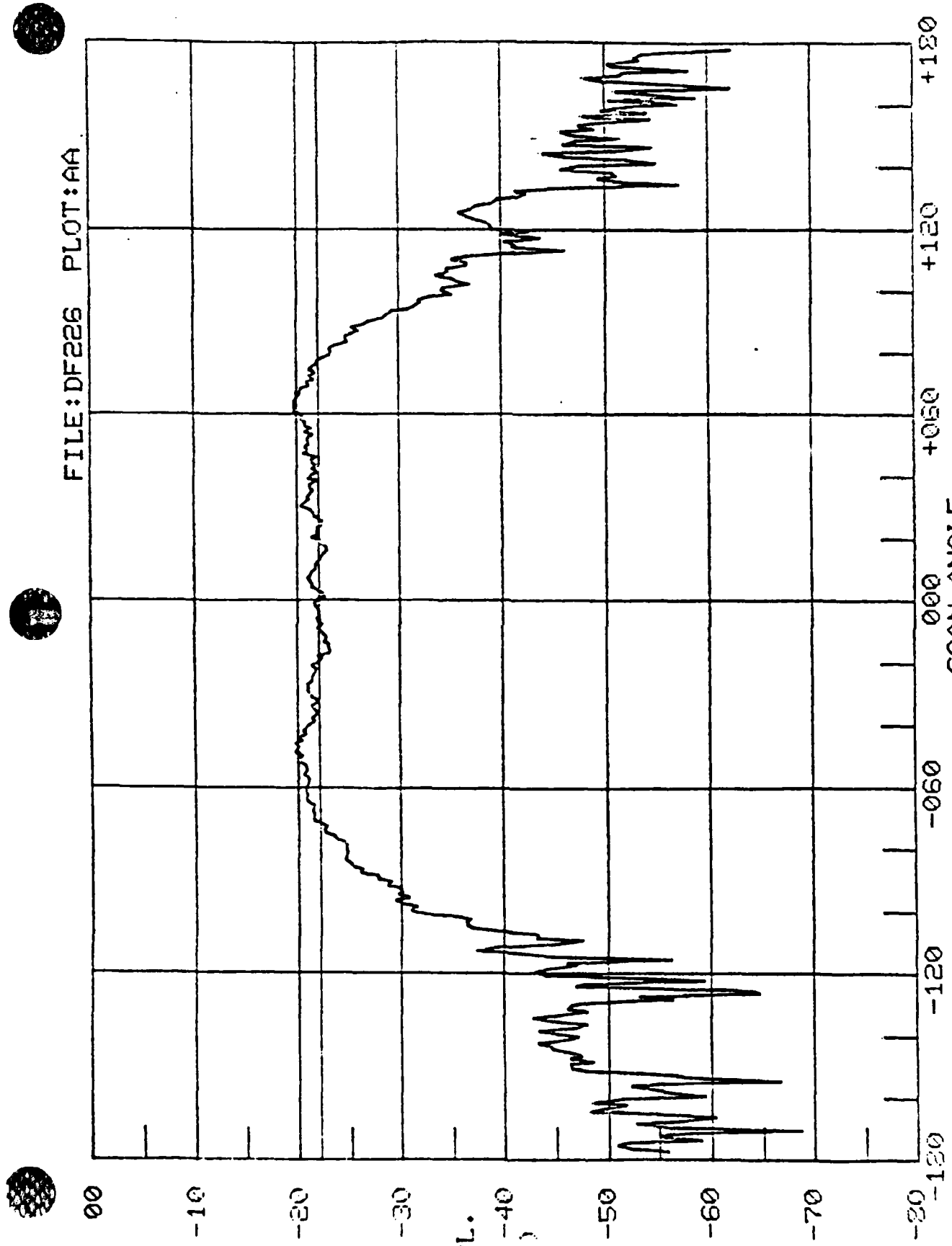
000
+060
+120
+180
SCAN ANGLE
SCAN NR: 3 STEP ANG:-20.00 FREQ NR: 3 FREQ(MHZ): F6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-60
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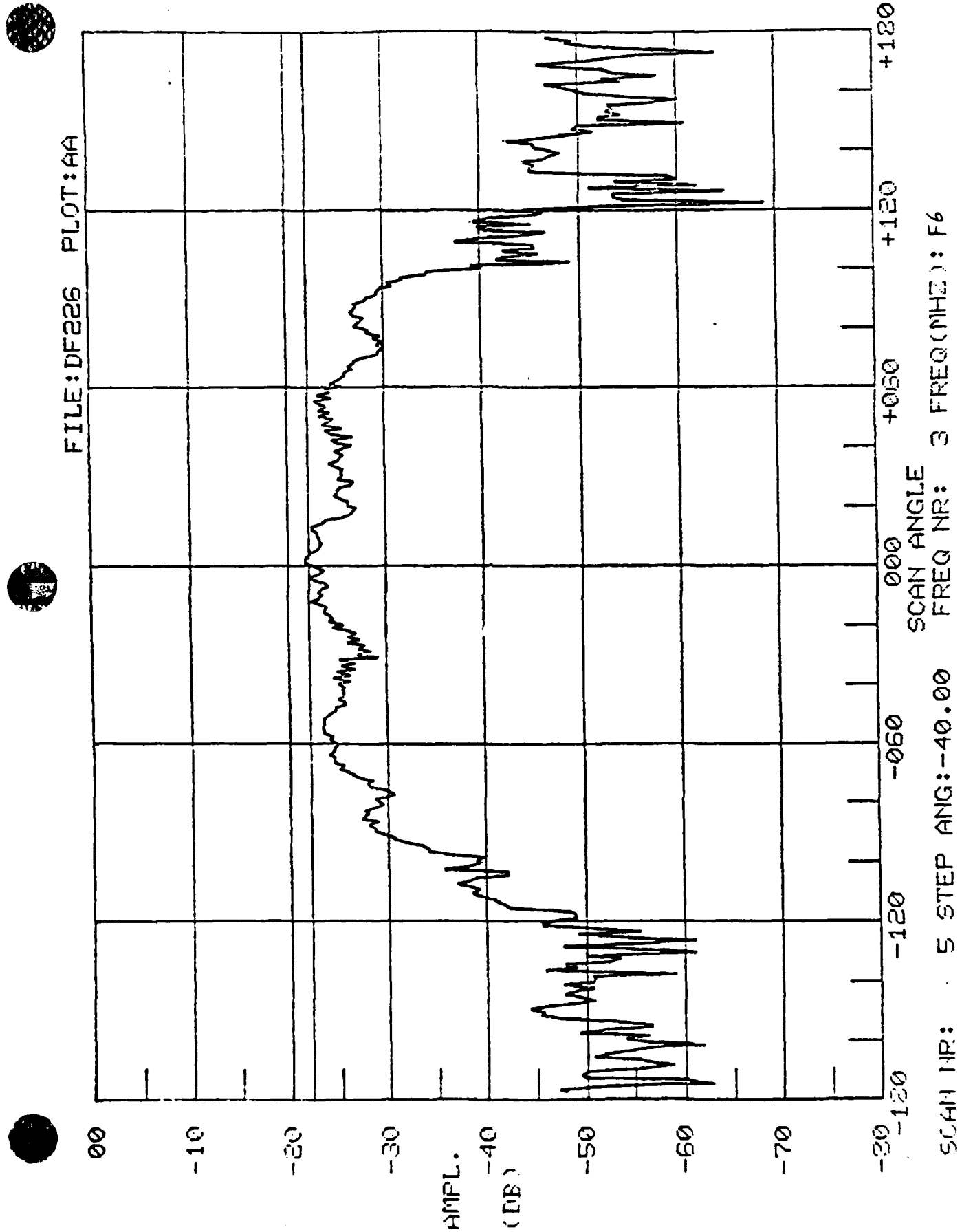
-80
AMPL.
(DB)
-180
-120
-060
000
+060
+120
+180
SCAN ANGLE
SCAN NR: 4 STEP ANG:-30.00 FREQ NR: 3 FREQ(MHZ): F6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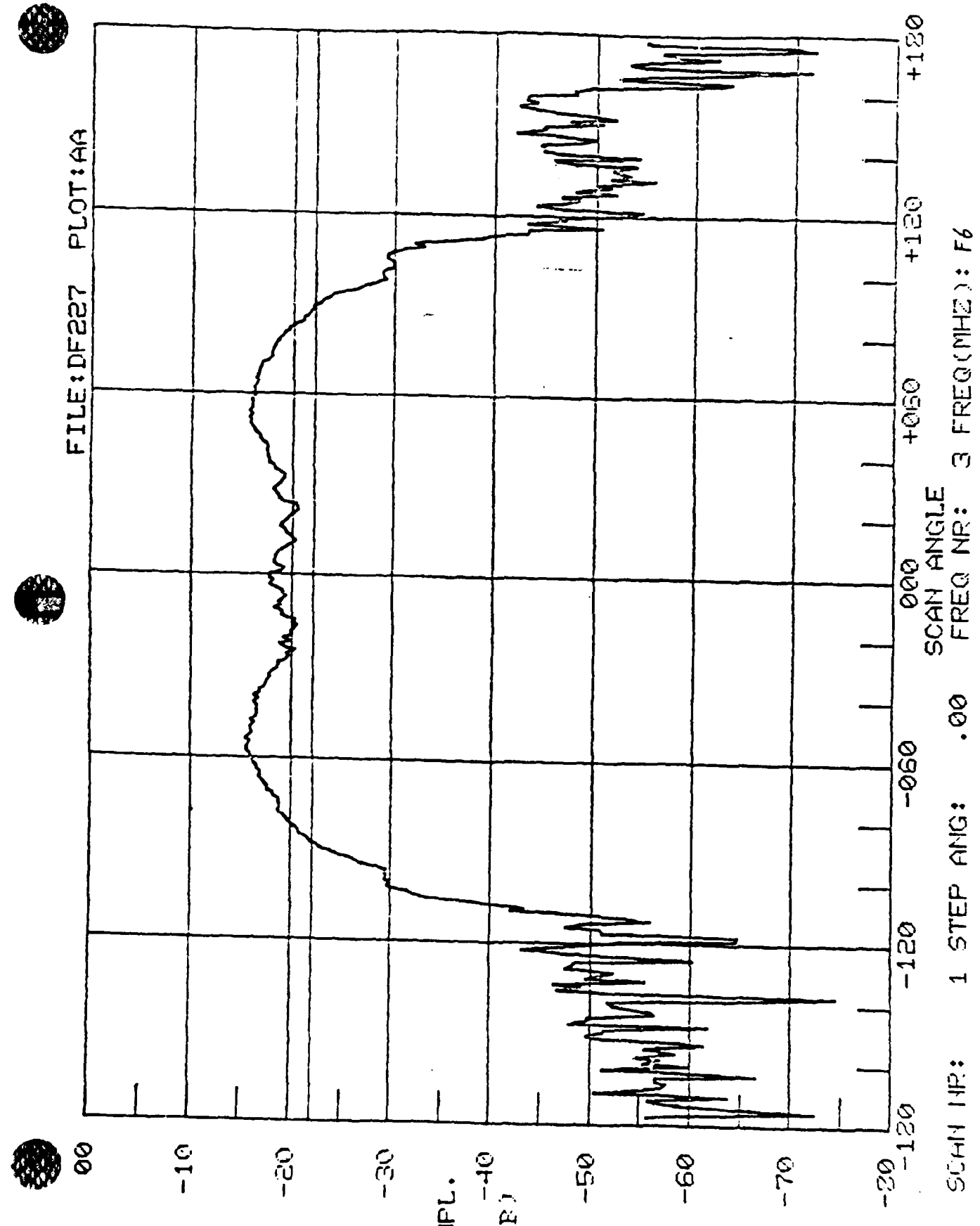
AMPL.
(DB)
-120
-060
000
+060
+120
+120
SCAN ANGLE
SCAN NR: 5 STEP ANG:-40.00 FREQ NR: 3 FREQ(MHZ): F6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-10
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(DB)
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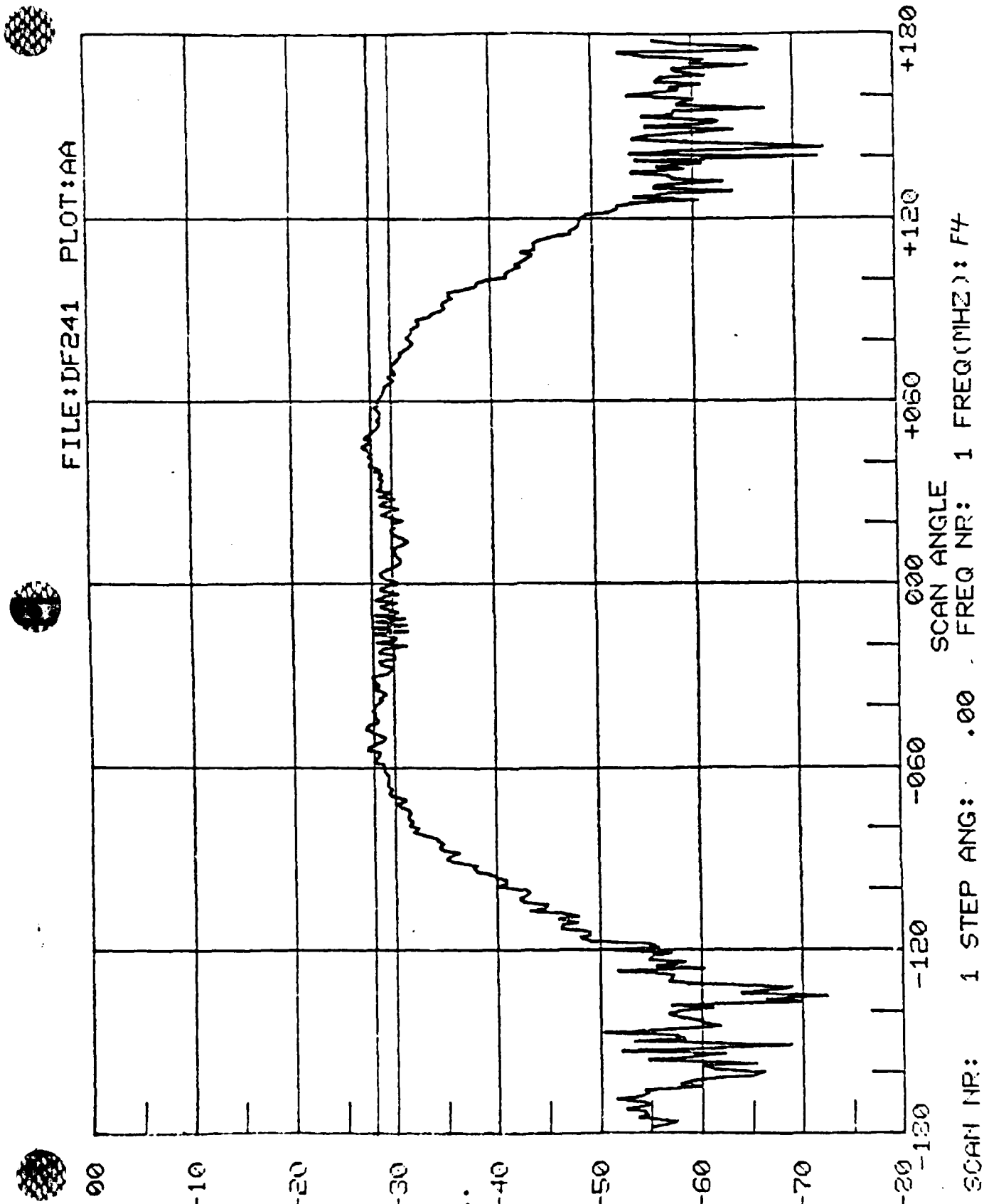
+060
+120
SCAN ANGLE
SCAN NR: 1 STEP ANG: .00 FREQ NR: 3 FREQ(MHZ): F6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(DB)
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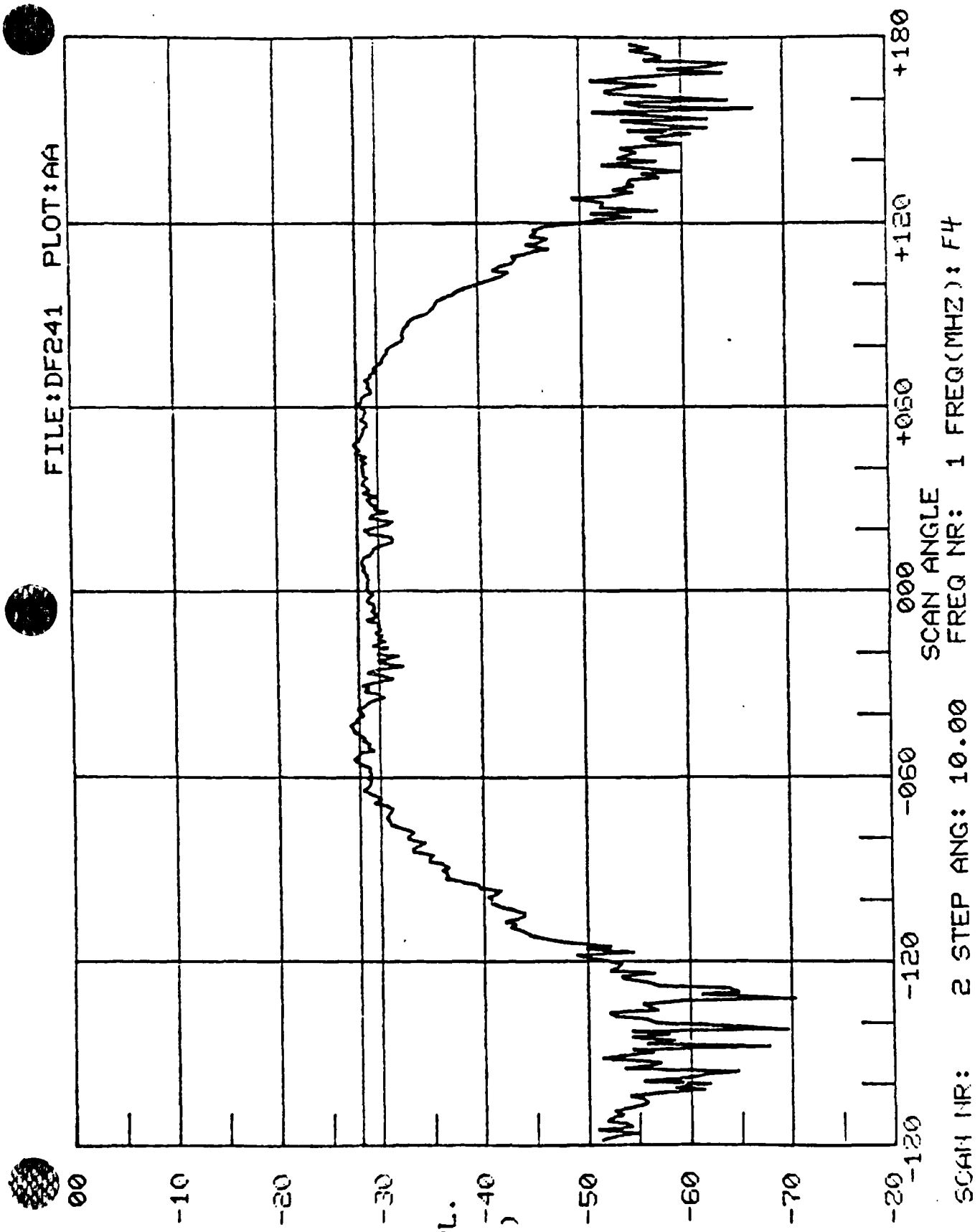
+120
+180
SCAN ANGLE
SCAN NR: 1 STEP ANG: .00 FREQ NR: 1 FREQ(MHZ): F4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AMPL.
(DB)
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-120
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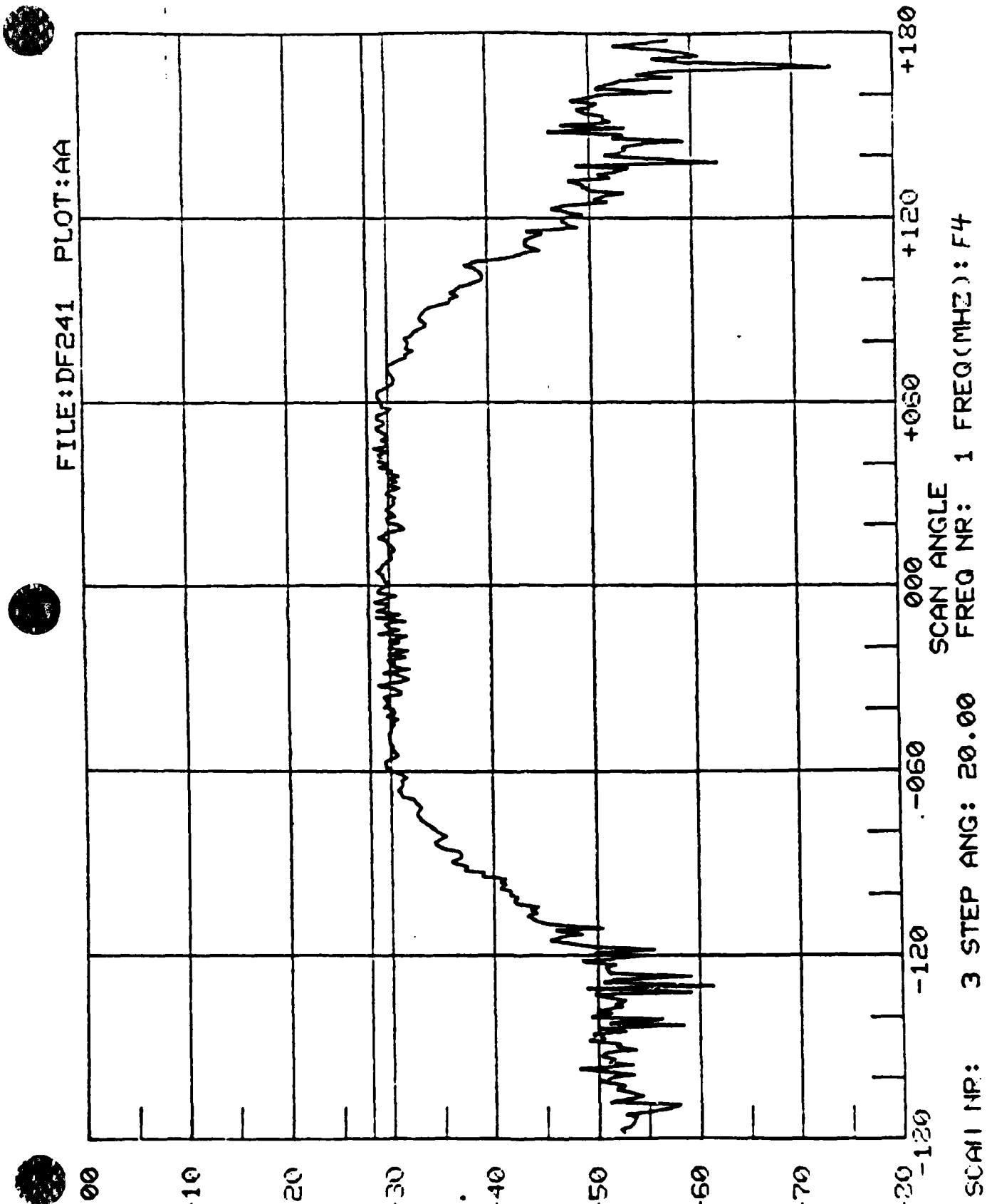
000
+060
+120
+180
SCAN ANGLE
SCAN NR: 2 STEP ANG: 10.00 FREQ NR: 1 FREQ(MHZ): F4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AMPL.
(DB)
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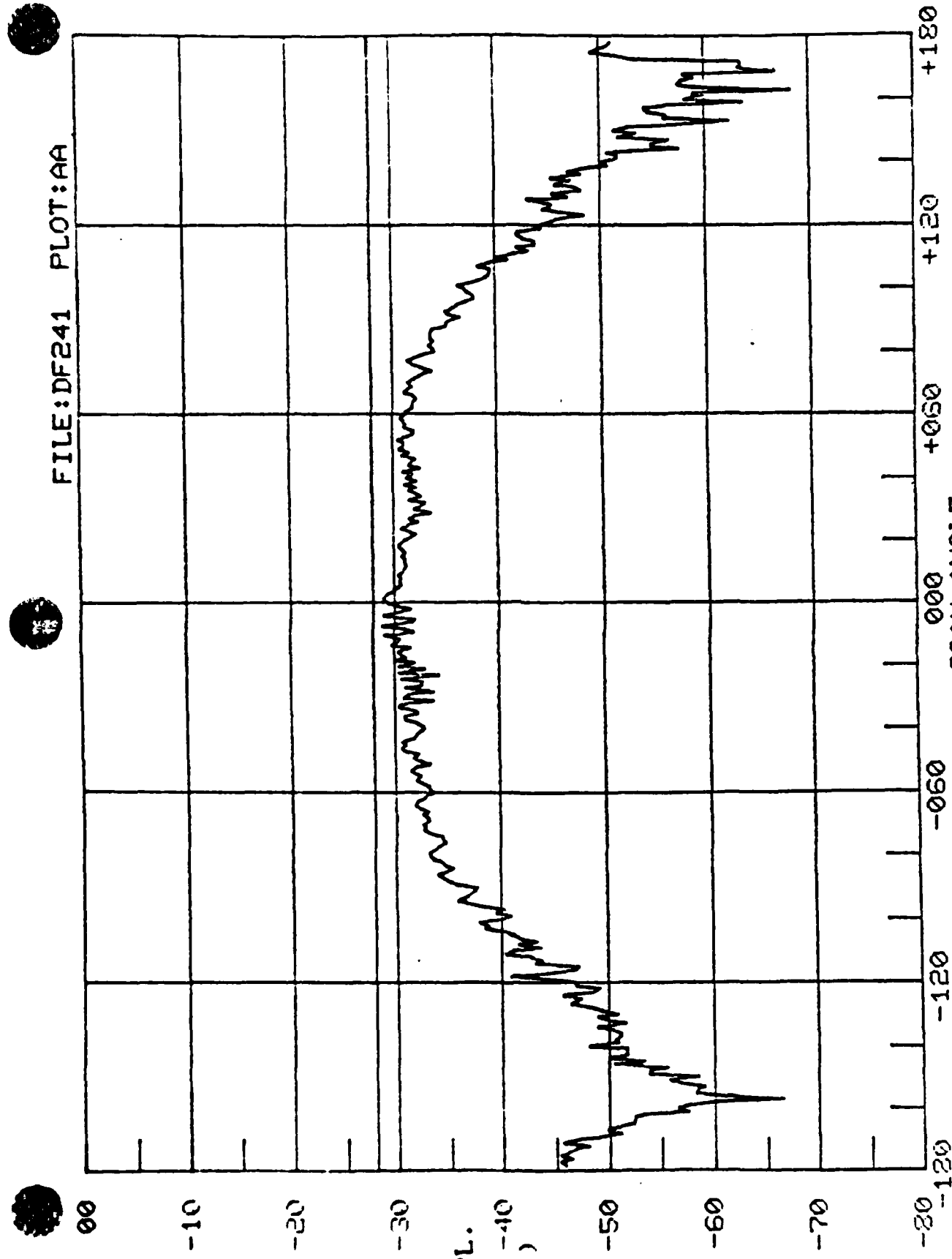
000
+060
+120
+180
SCAN ANGLE
SCAN NR: 3 STEP ANG: 20.00 FREQ NR: 1 FREQ(MHZ): F4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AMPL.
(DB)
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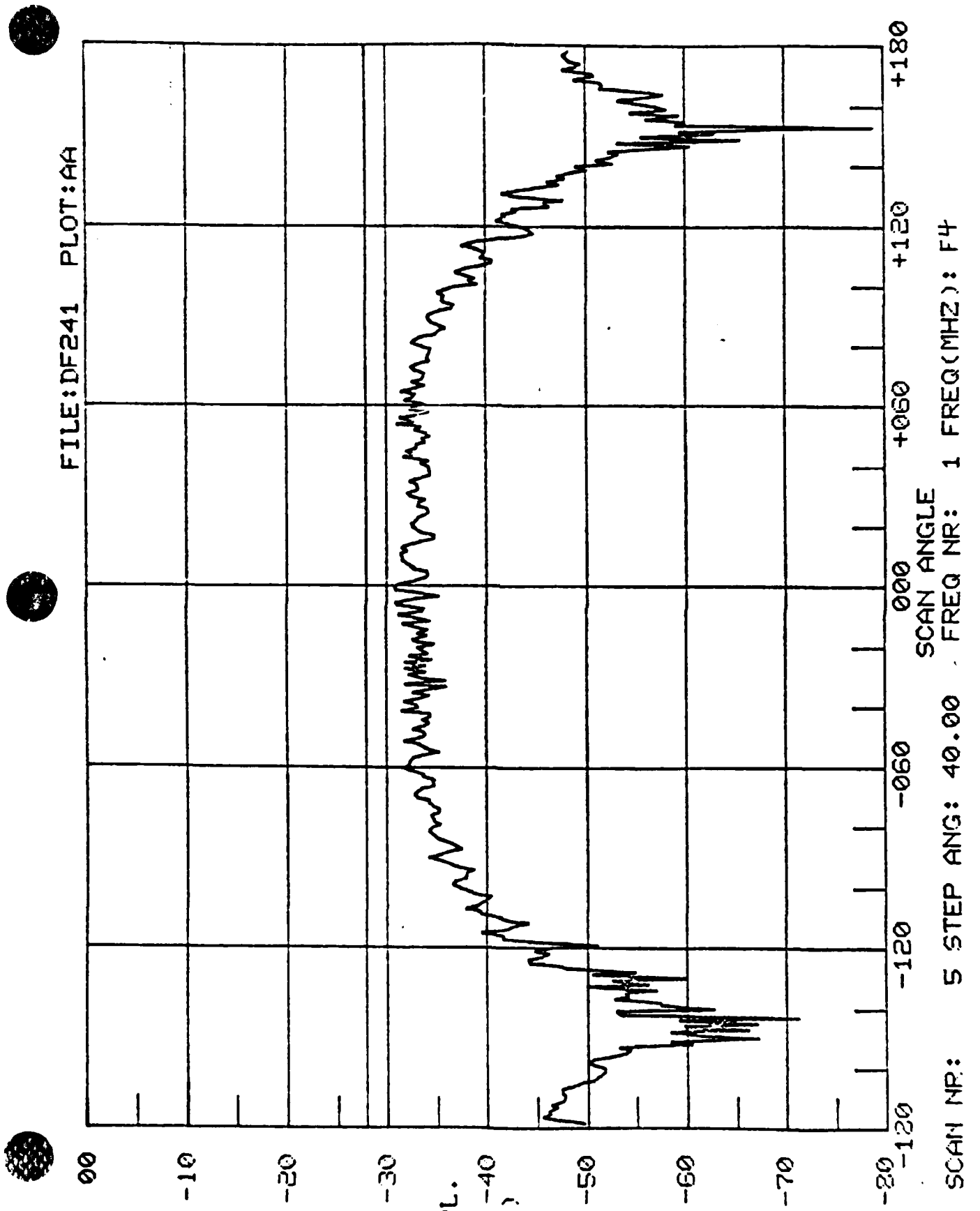
000
+060
+120
+180
SCAN ANGLE
SCAN NR: 4 STEP ANG: 30.00 FREQ NR: 1 FREQ(MHZ): F4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-80
AMPL.
(DB)
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-120
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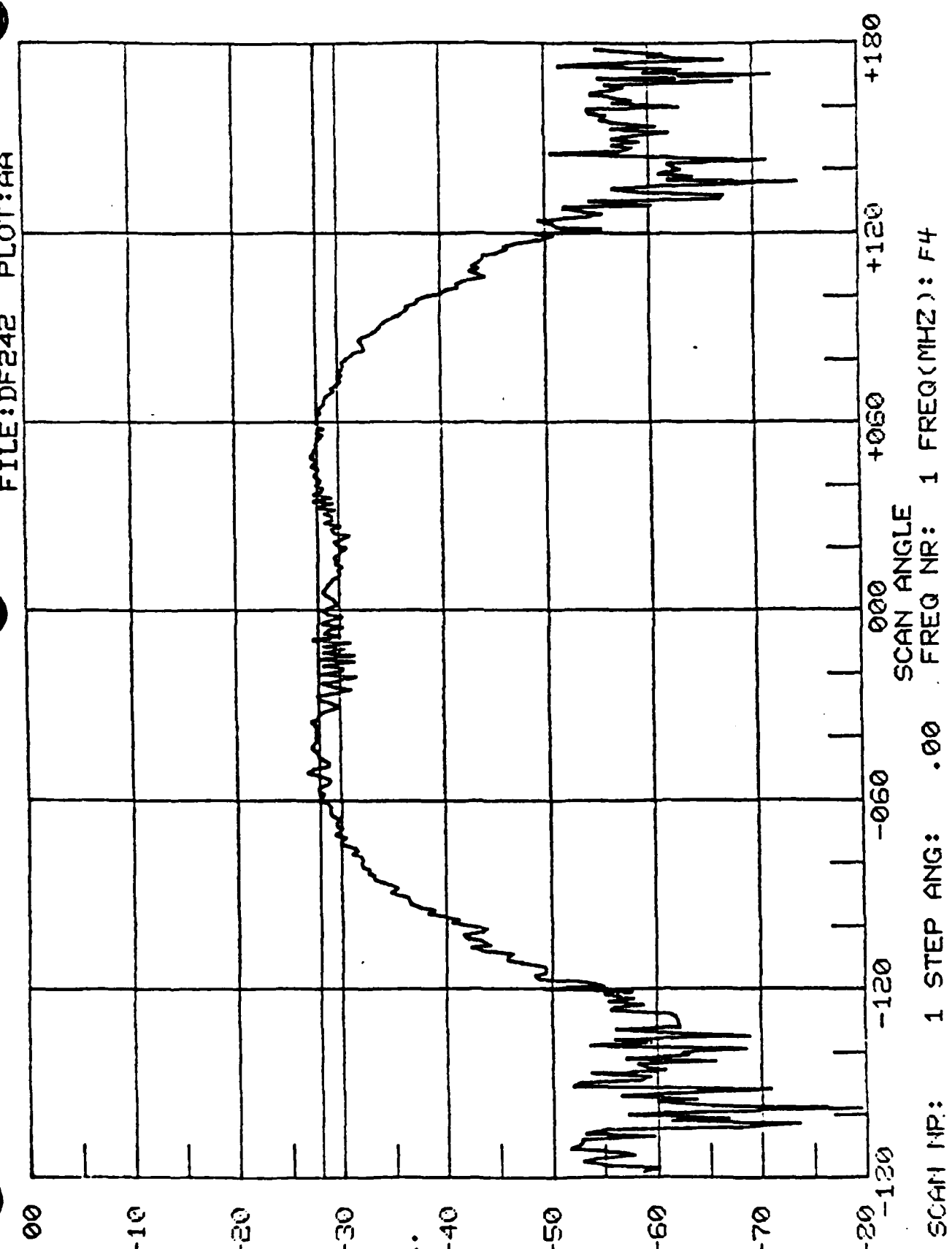
000
+060
+120
+180
SCAN ANGLE
SCAN NR: 5 STEP ANG: 40.00 FREQ NR: 1 FREQ(MHZ): F4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AMPL. (DB)
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-40
-50
-60
-70
-120
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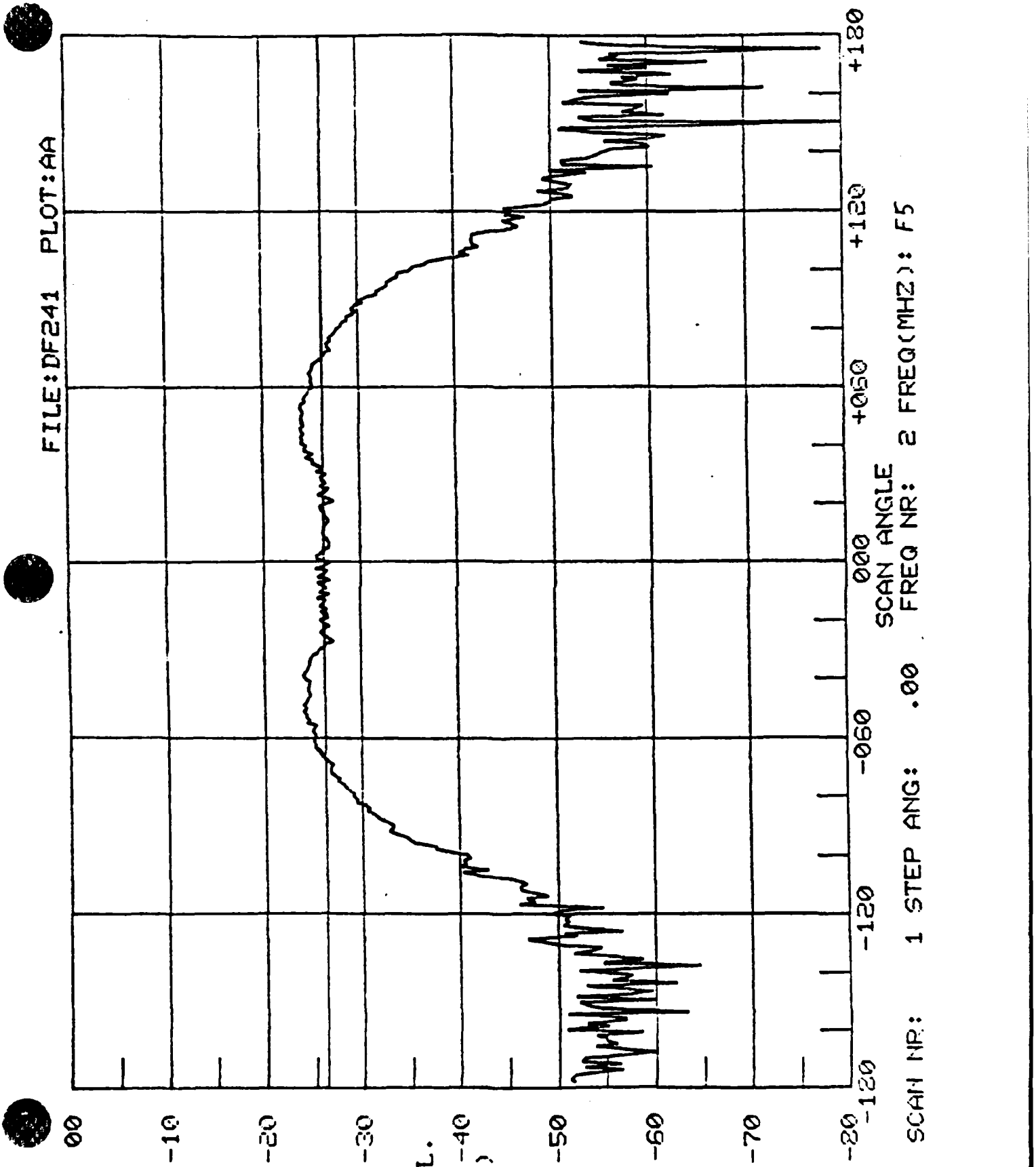
-120
-060
000
+060
+120
+180
SCAN ANGLE
SCAN NR: 1 STEP ANG: .00 FREQ NR: 1 FREQ(MHZ): F4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-50
-60
-70
-80
AMPL.
(DB)
-120
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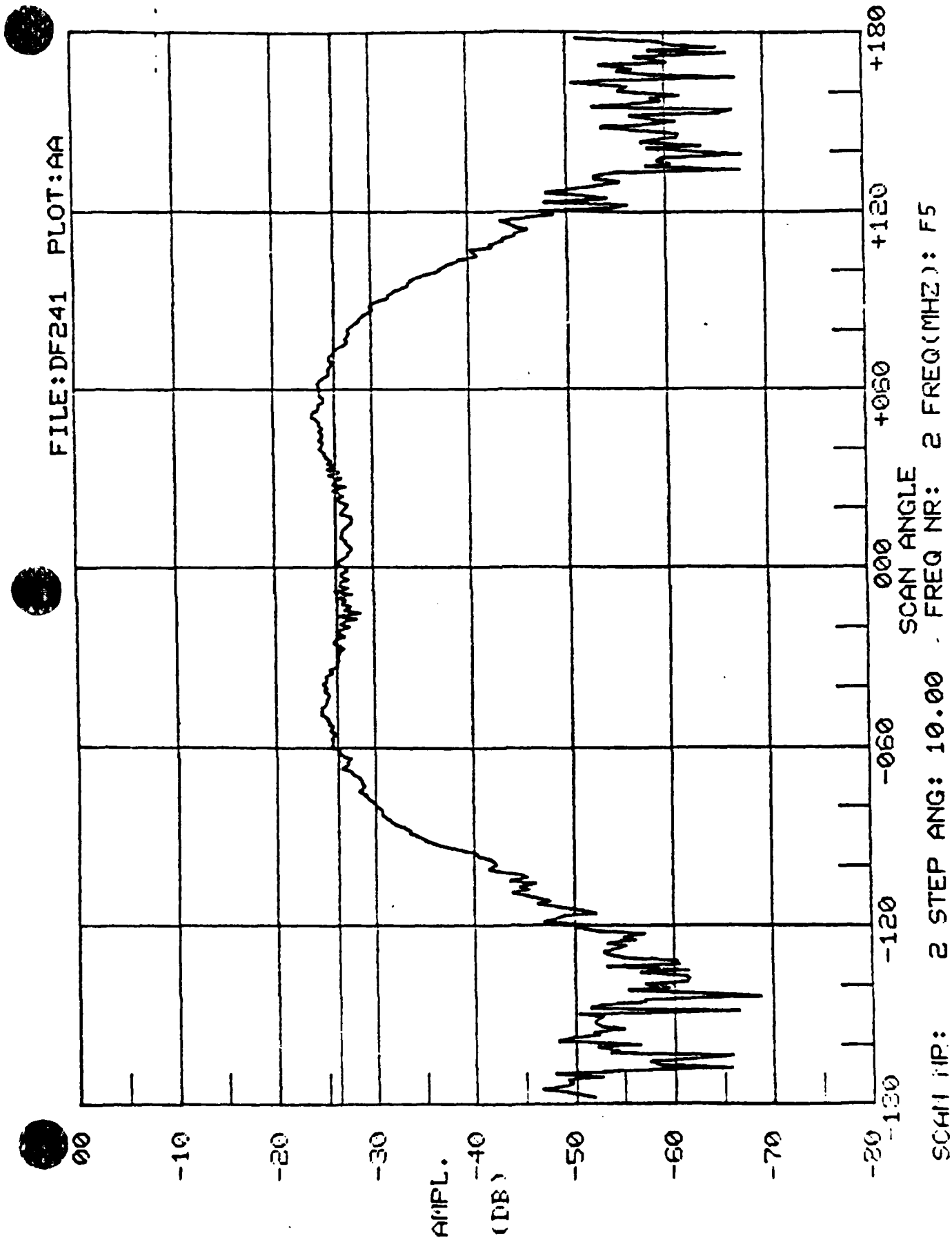
000
+060
+120
+180
SCAN ANGLE
SCAN NR: 1 STEP ANG: .00 FREQ NR: 2 FREQ(MHZ): F5


FILE:DF241 PLOT:AA
00
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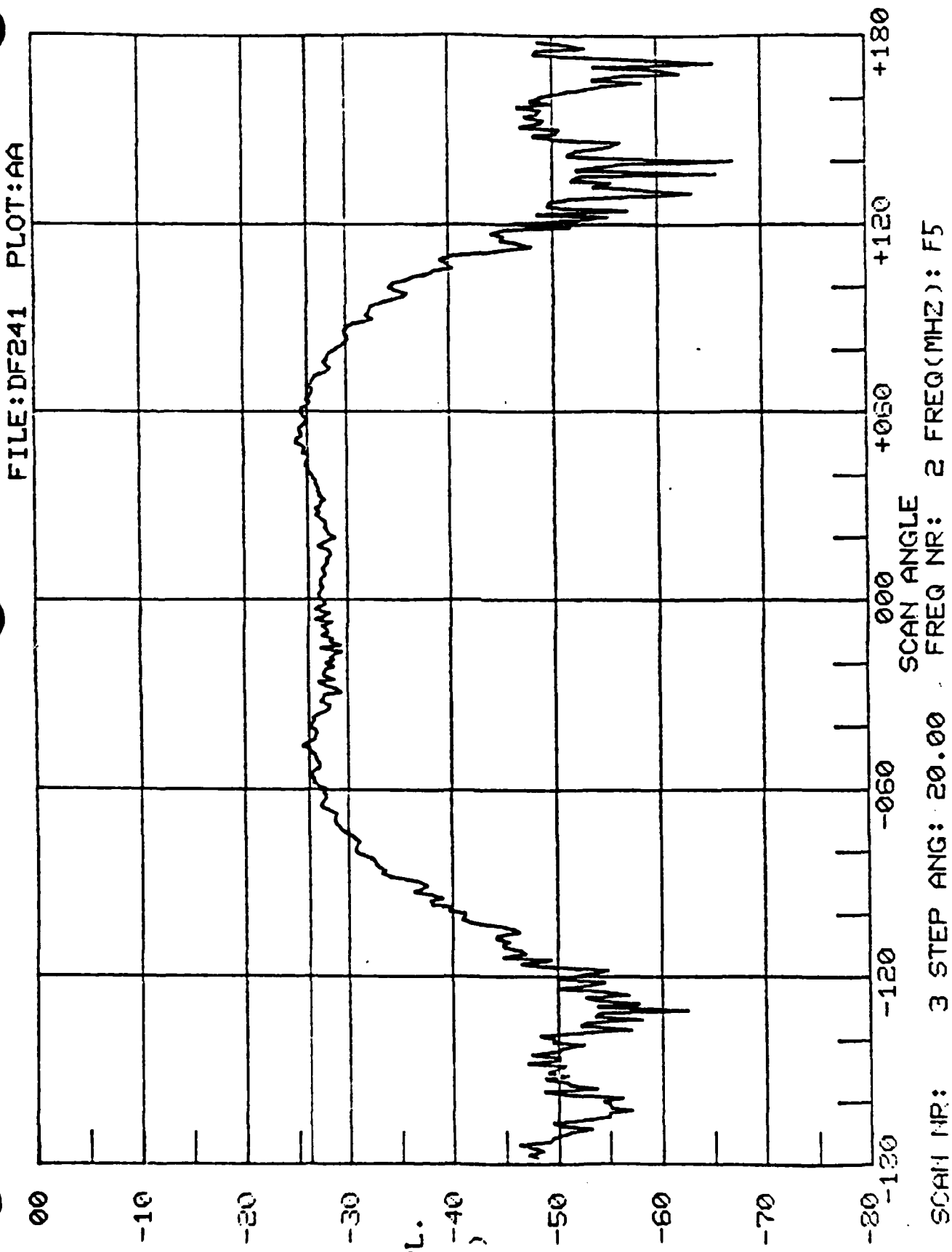
-40
-50
-60
-70
-80
AMPL.
(DB)
-180
-120
-060
000
+060
+120
+180
SCAN ANGLE
SCAN BP: 2 STEP ANG: 10.00 FREQ NR: 2 FREQ(MHZ): F5


FILE:DF241 PLOT:AA
00
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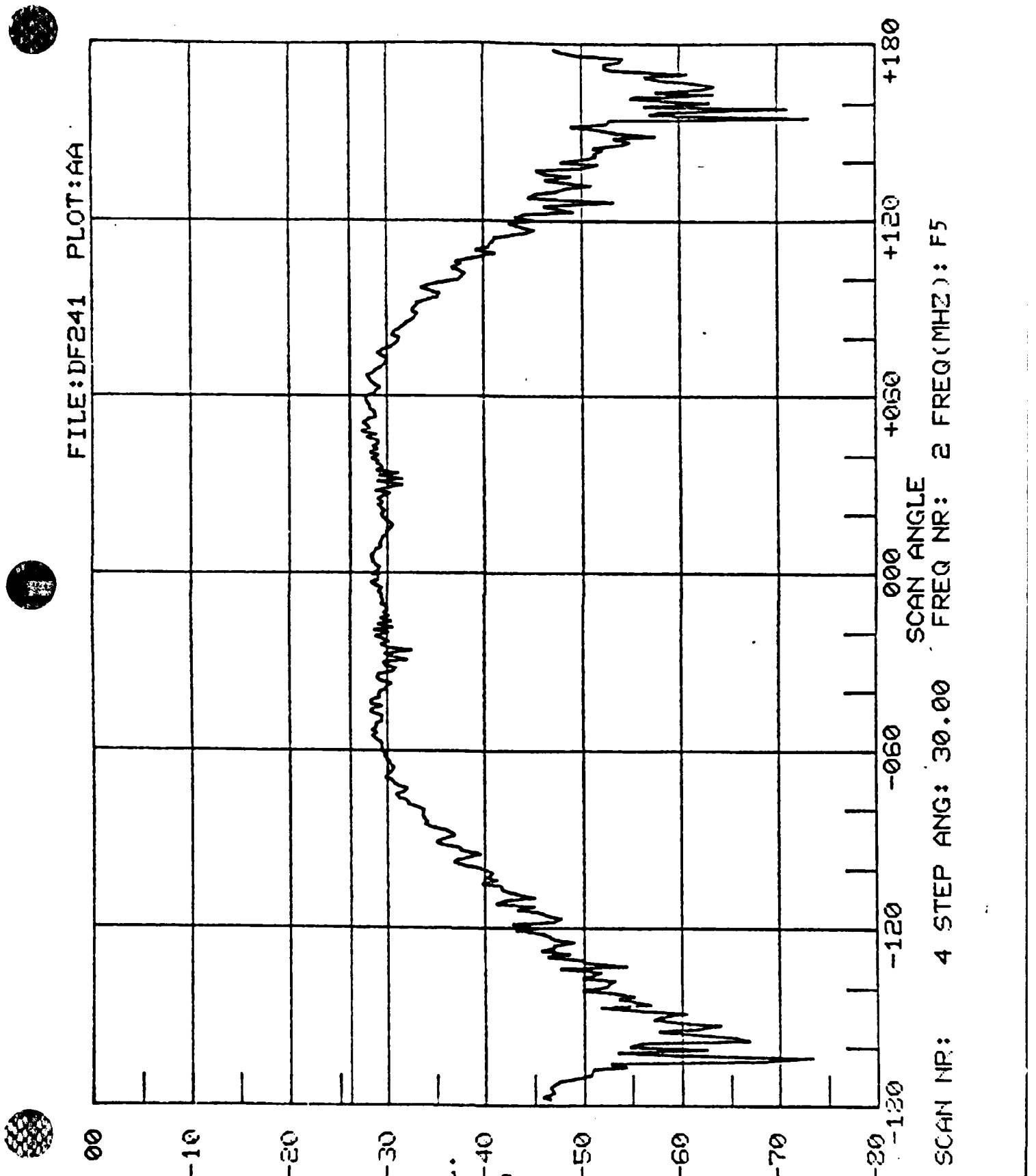
-60
-70
-80
AMPL.
(DB)
-180
-120
-060
000
+060
+120
+180
SCAN ANGLE
SCAN NR: 3 STEP ANG: 20.00 FREQ NR: 2 FREQ(MHZ): F5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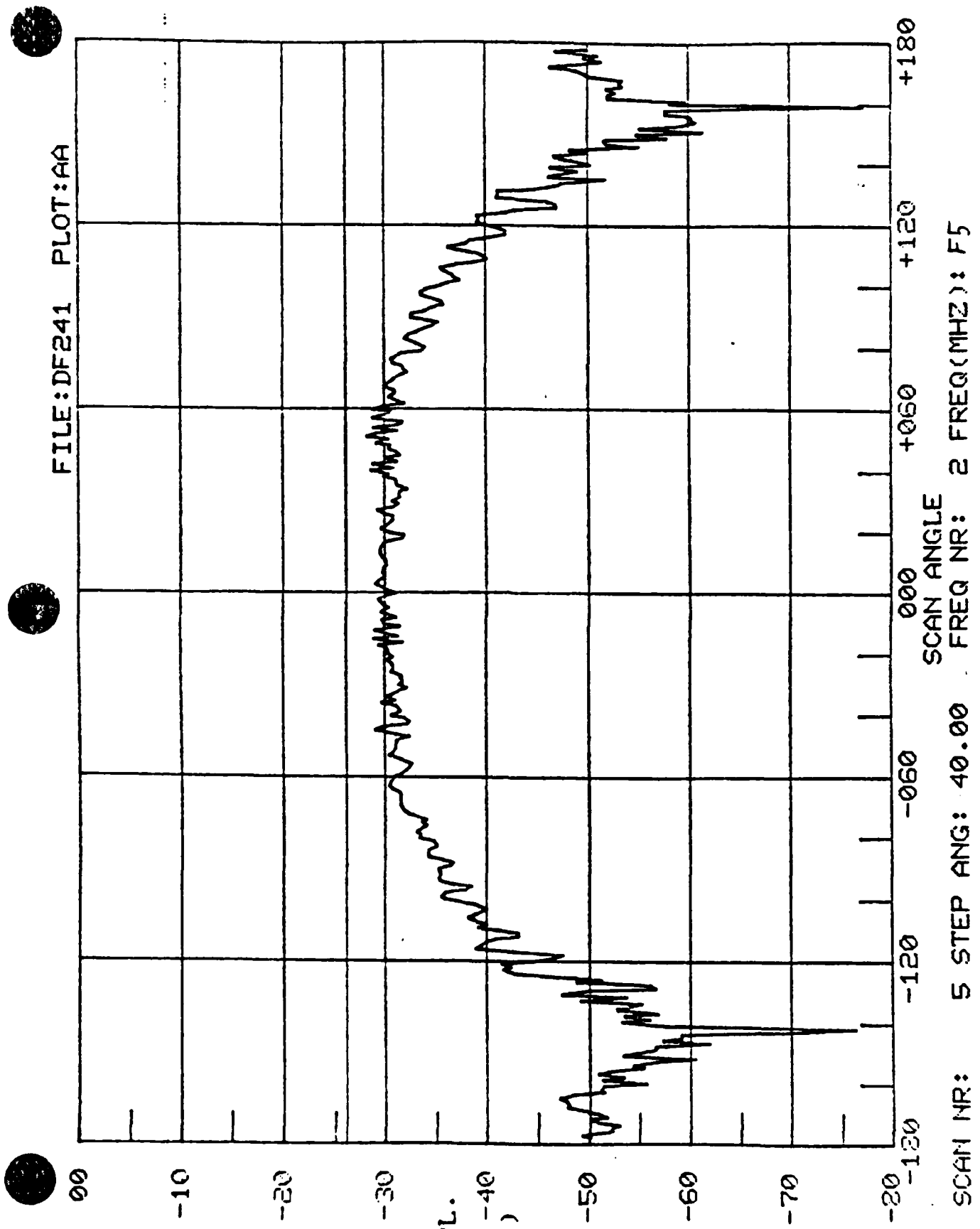
-60
-70
-80
AMPL.
(DB)
-120
-060
000
+060
+120
+180
SCAN ANGLE
SCAN NR: 4 STEP ANG: 30.00 FREQ NR: 2 FREQ(MHZ): F5


FILE:DF241 PLOT:AA
AMPL. (DB)
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-10
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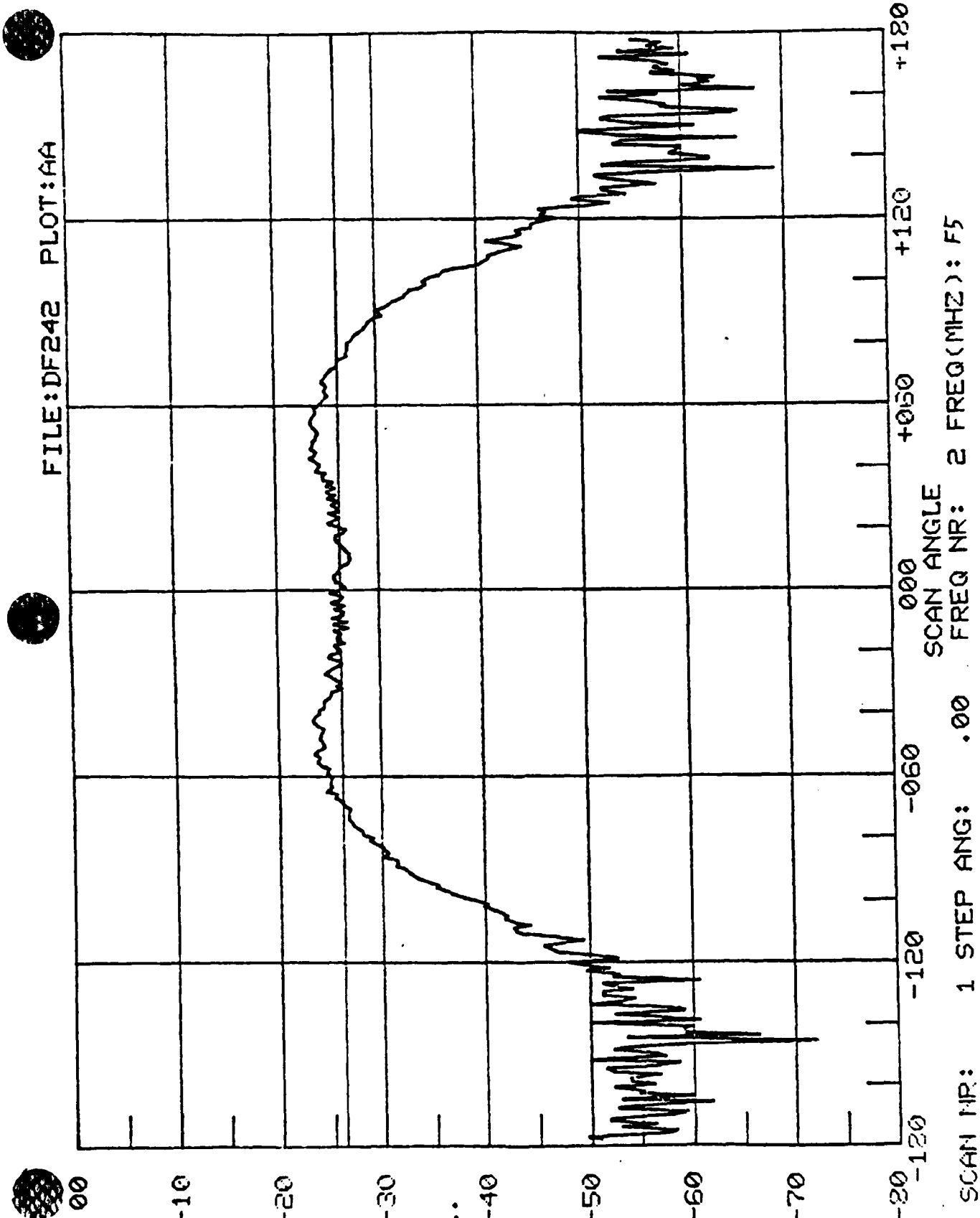
-30
-40
-50
-60
-70
-80
-120
-060
000
+060
+120
+180
SCAN ANGLE
SCAN NR: 5 STEP ANG: 40.00 FREQ NR: 2 FREQ(MHZ): F5


FILE:DF242 PLOT:AA
00
-10
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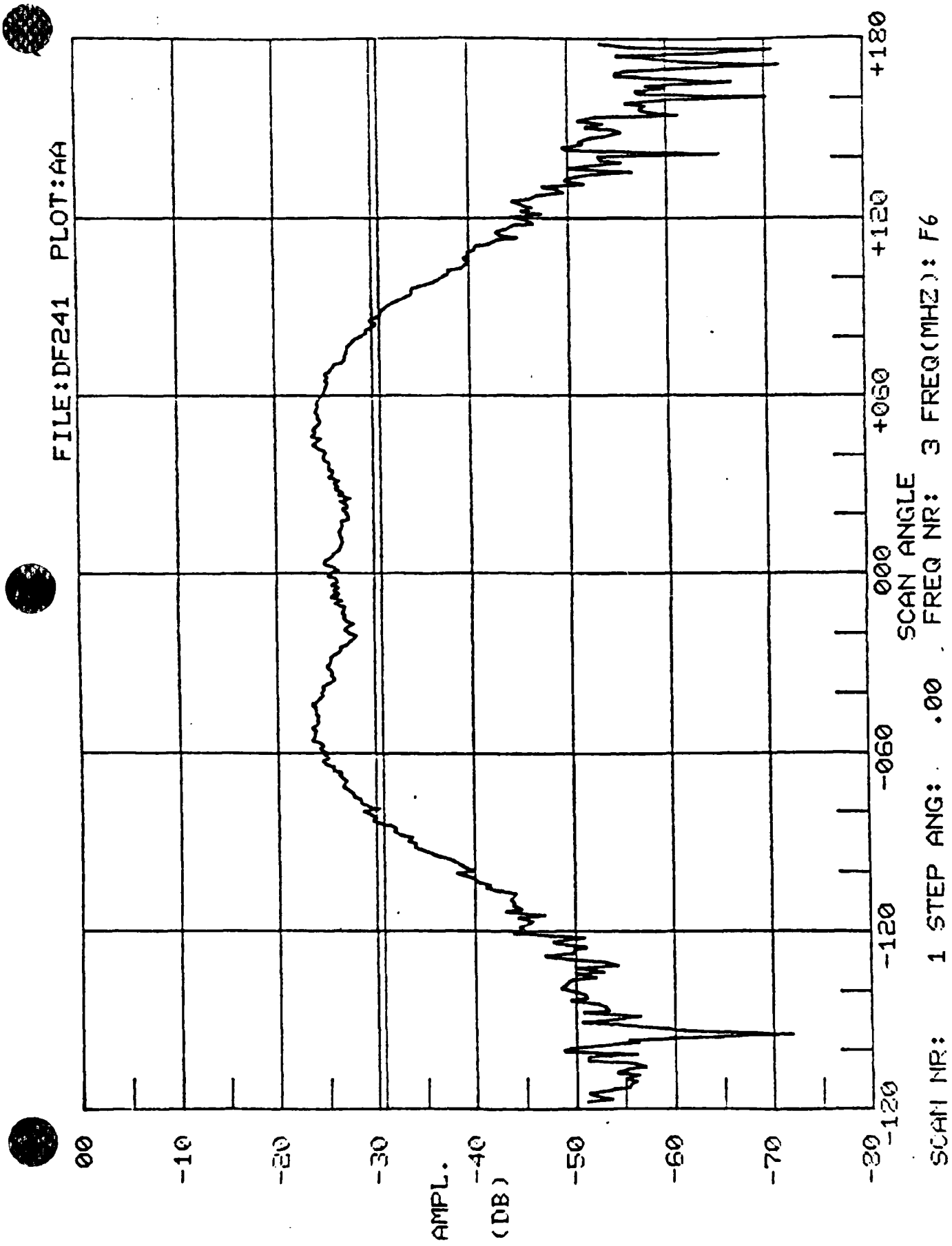
-30
-40
-50
-60
-70
-80
AMPL.
(DB)
-120
-060
000
+060
+120
+180
SCAN ANGLE
SCAN NR: 1 STEP ANG: .00 FREQ NR: 2 FREQ(MHZ): F5


FILE:DF241 PLOT:AA
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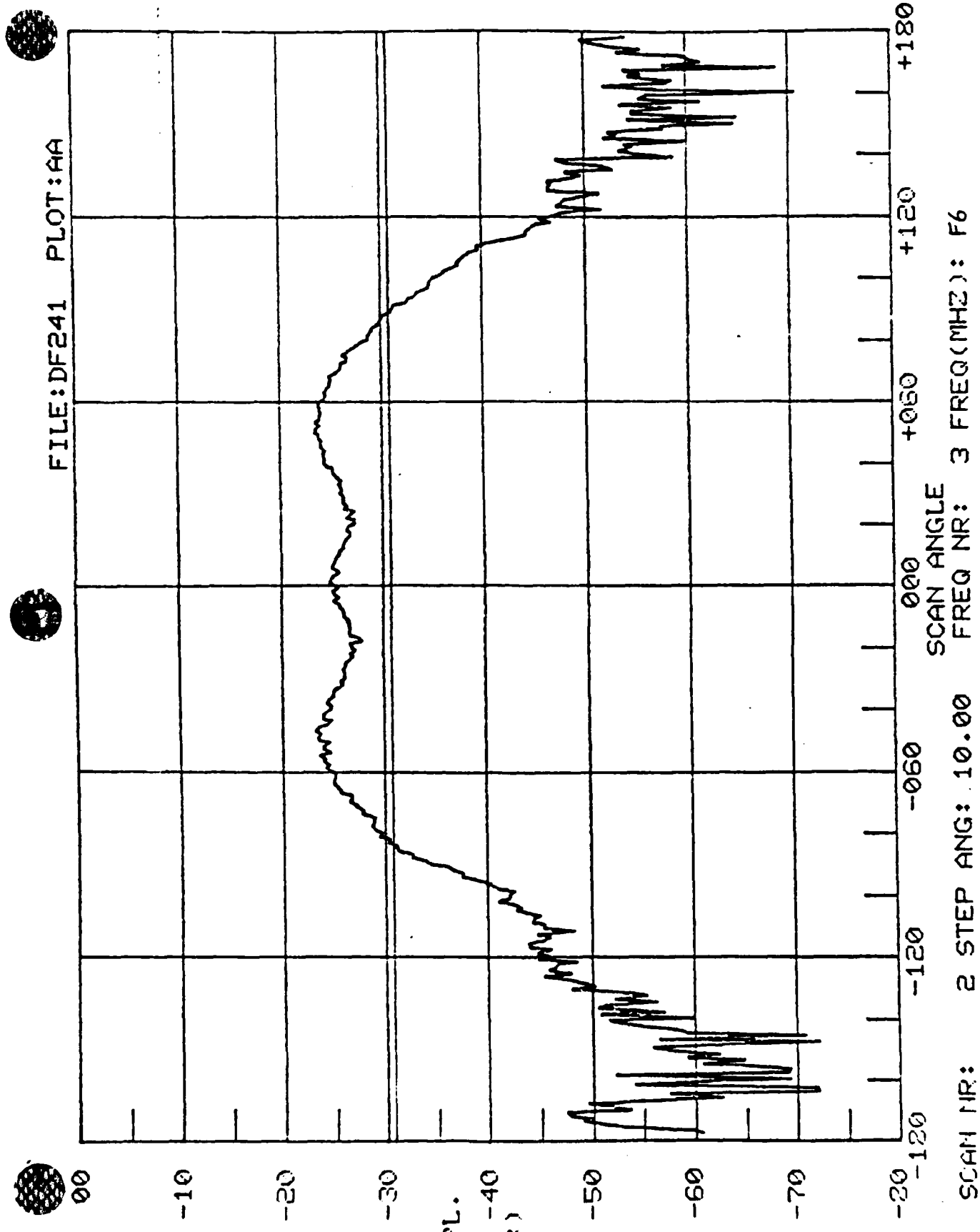
-30
-40
-50
-60
-70
-80
AMPL.
(DB)
-120
-060
000
+060
+120
+180
SCAN ANGLE
SCAN NR: 1 STEP ANG: .00 FREQ NR: 3 FREQ(MHZ): F6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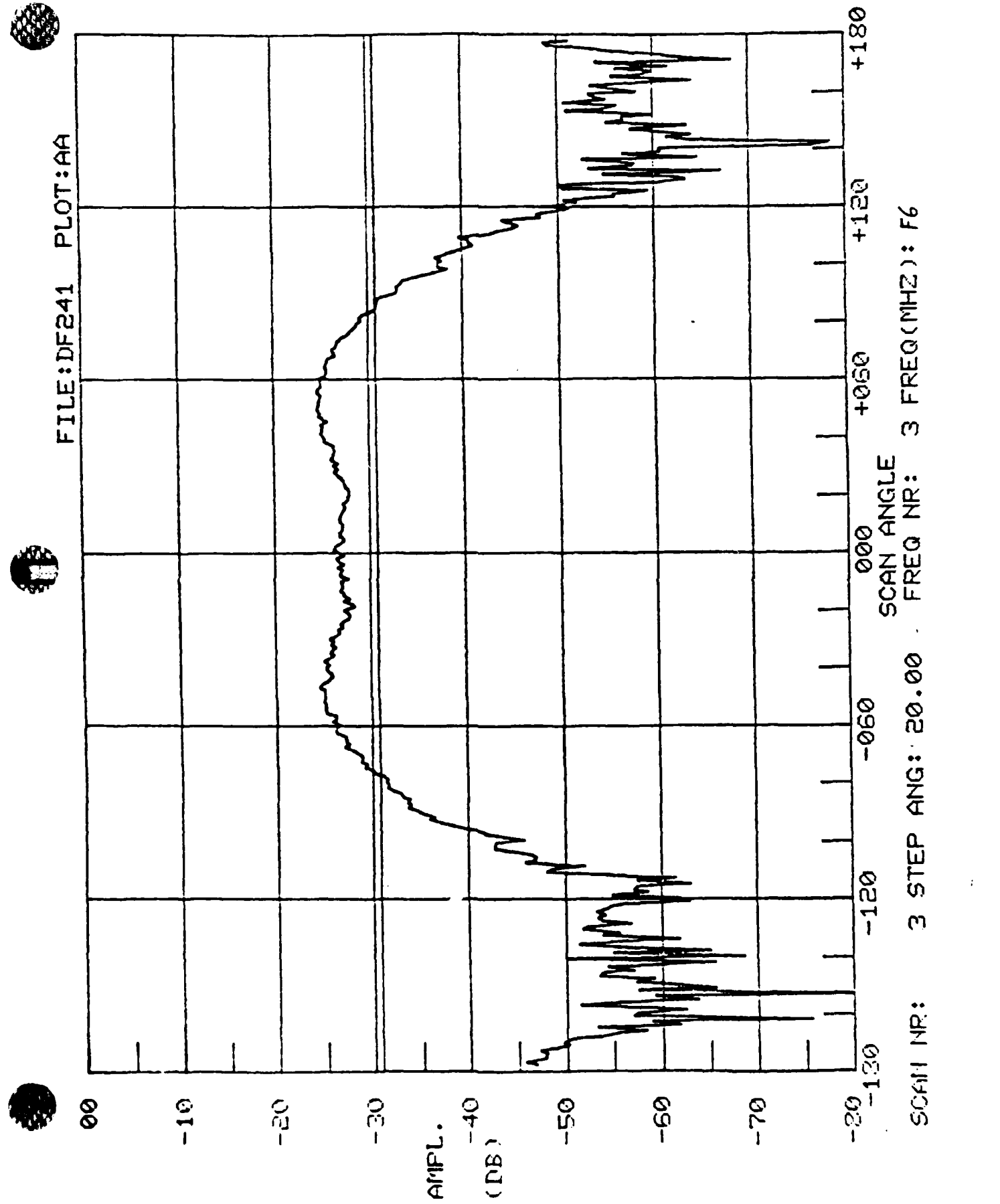
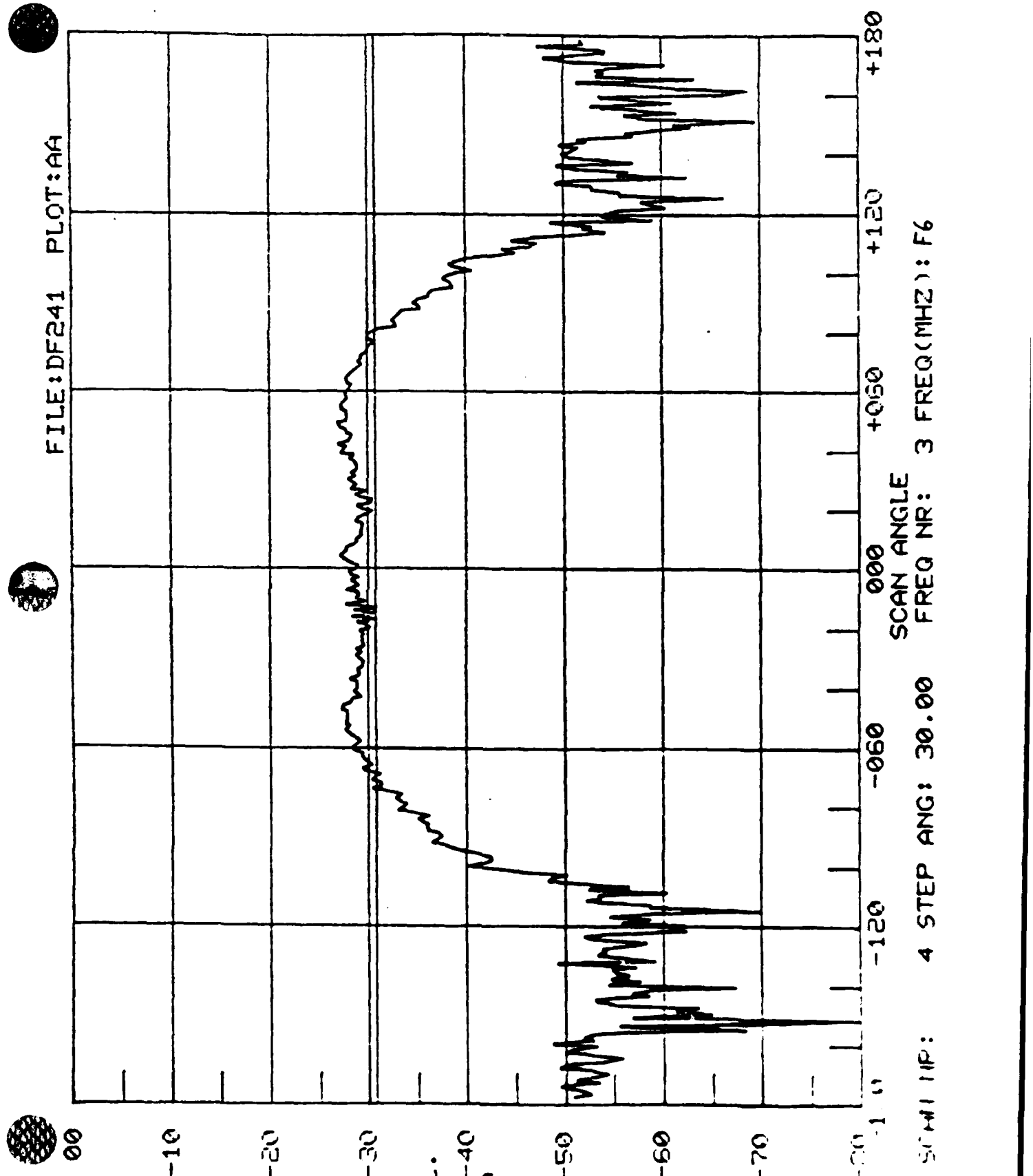
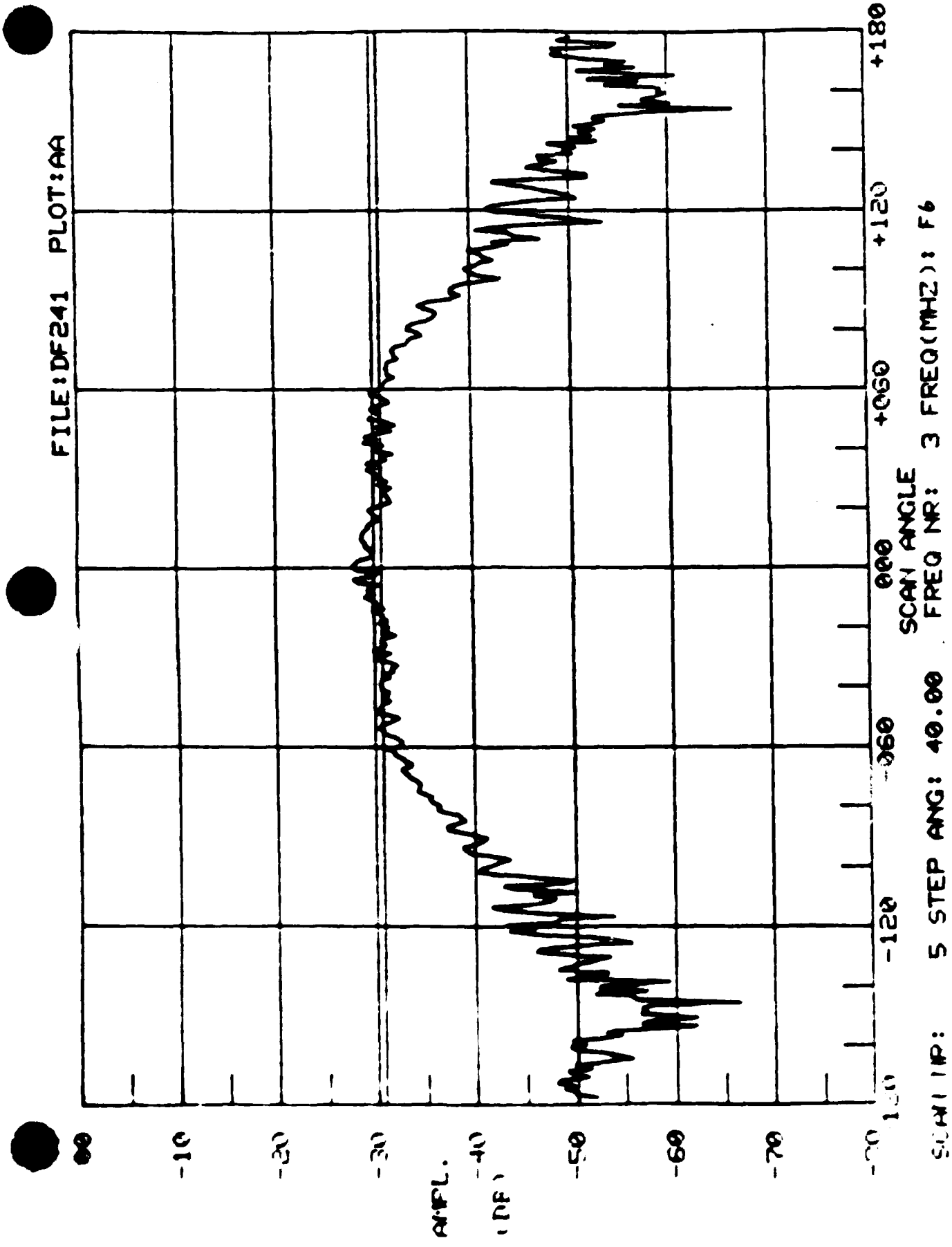
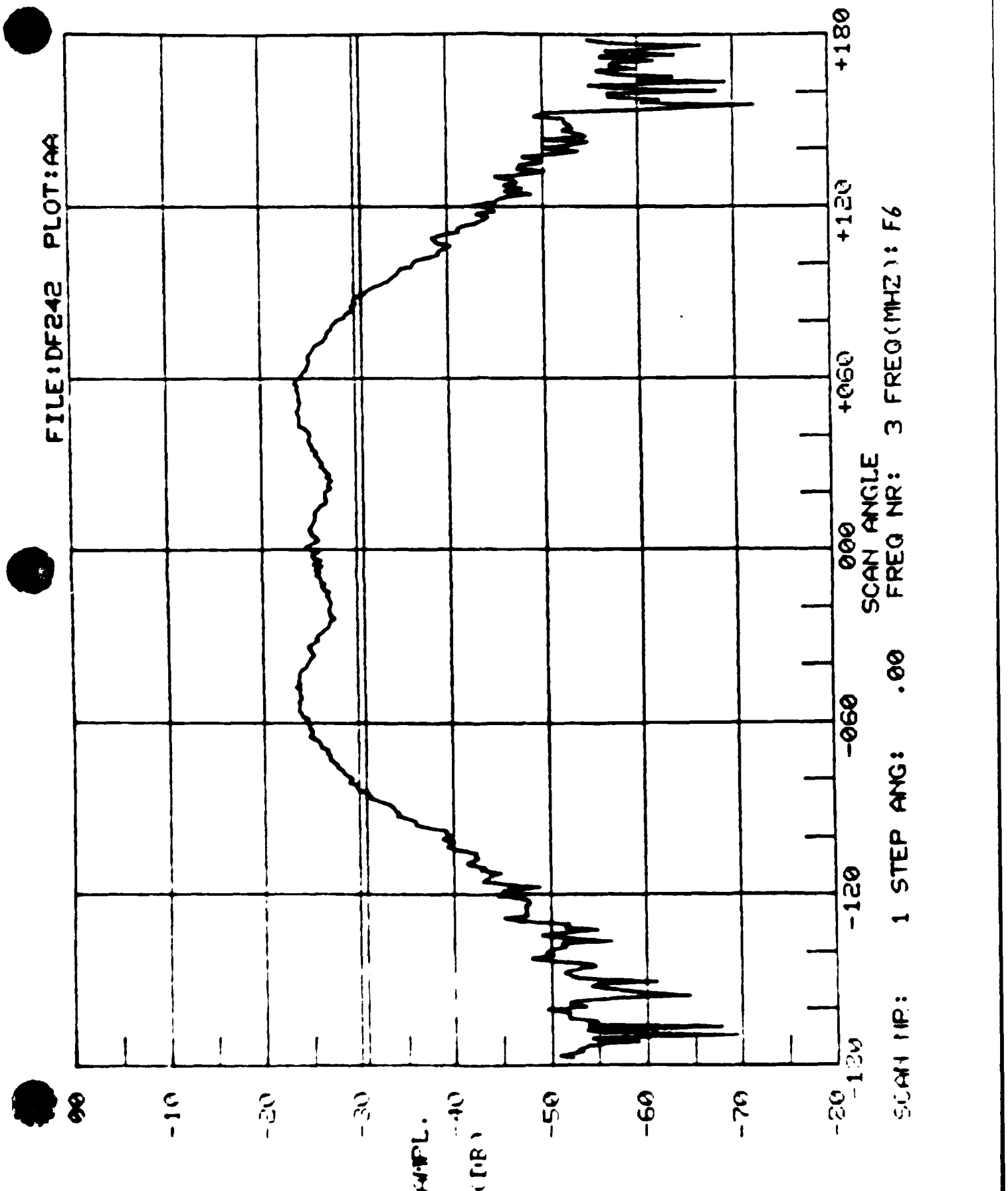
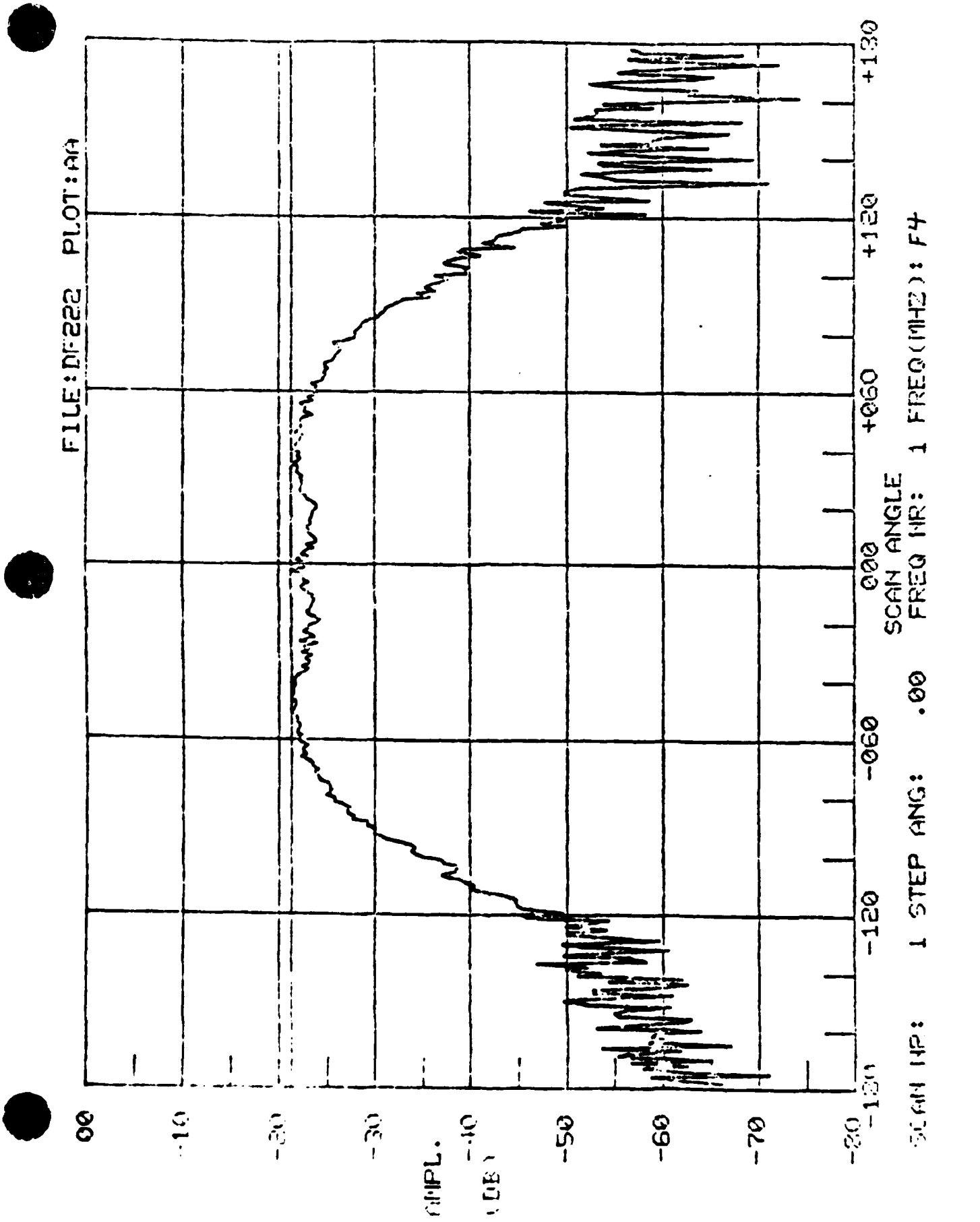
-40
-50
-60
-70
-80
AMPL.
(DB)
-180
-120
-060
000
+060
+120
+180
SCAN ANGLE
SCAN NR: 2 STEP ANG: 10.00 FREQ NR: 3 FREQ(MHZ): F6


FILE:DF241 PLOT:AA
AMPL. (DB)
00
-10
-20
-30
-40
-50
-60
-70
-80
-180
-120
-060
000
+060
+120
+180
SCAN ANGLE
SCAN NR: 3 STEP ANG: 20.00 FREQ NR: 3 FREQ(MHZ): F6


FILE:DF241 PLOT:AA
AMPL. (DB)
00
-10
-20
-30
-40
-50
-60
-70
-120
-060
000
+060
+120
+180
SCAN ANGLE
FREQ NR: 3 FREQ(MHZ): F6
4 STEP ANG: 30.00


FILE:DF241 PLOT:AA
-10
-20
-30
-40
-50
-60
-70
-180
-120
-060
000
+060
+120
+180
SCAN ANGLE
FREQ NR: 3 FREQ(MHZ): F6
SCAN WIDTH: 5 STEP ANG: 40.00


FILE:DF242 PLOT:AA
-10
-20
-30
-40
-50
-60
-70
-120
-060
000
+060
+120
+180
SCAN ANGLE
SCAN HP: 1 STEP ANG: .00 FREQ NR: 3 FREQ(MHZ): F6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-20
-30
-40
-50
-60
-70
-80
AMPL.
(DB)
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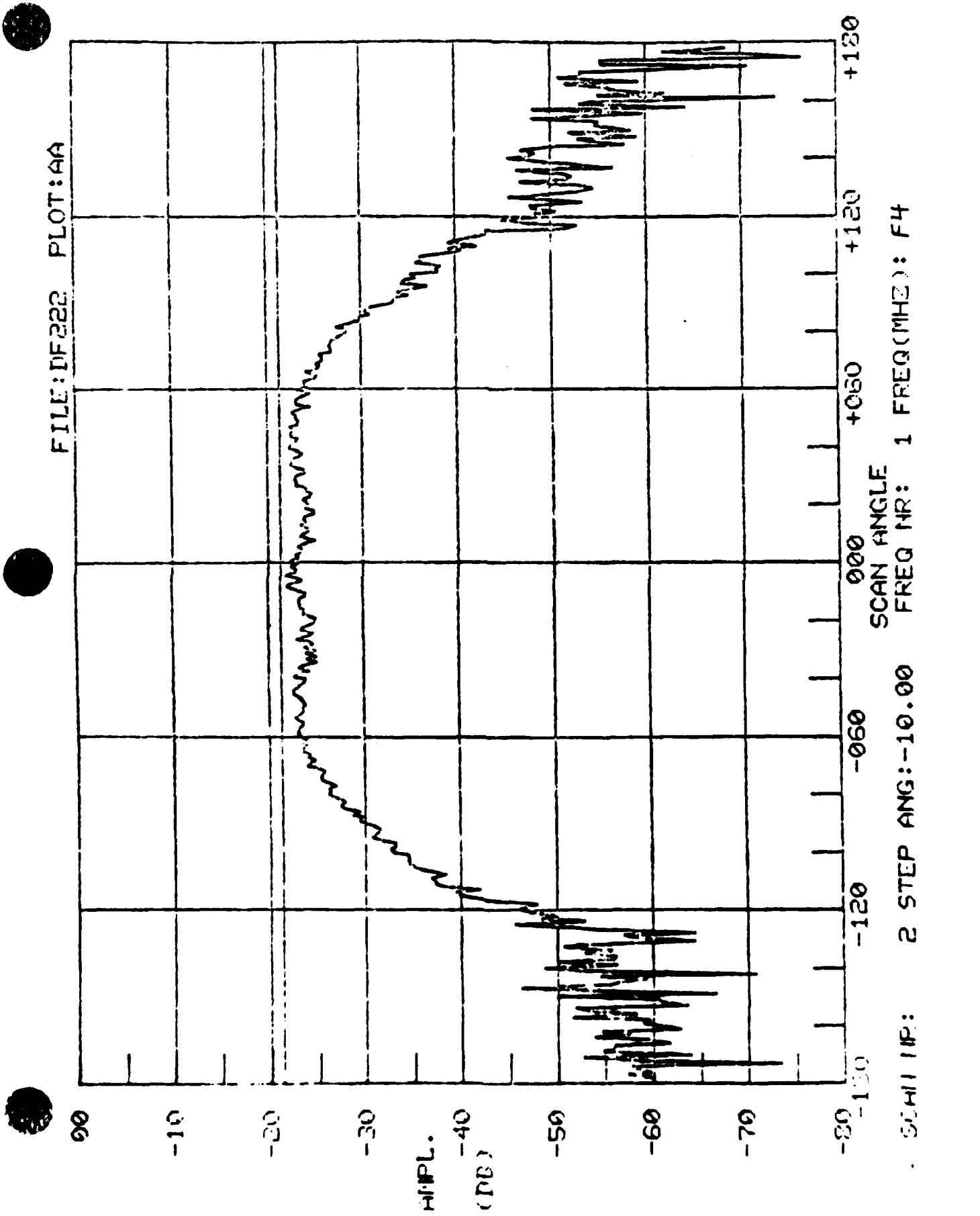
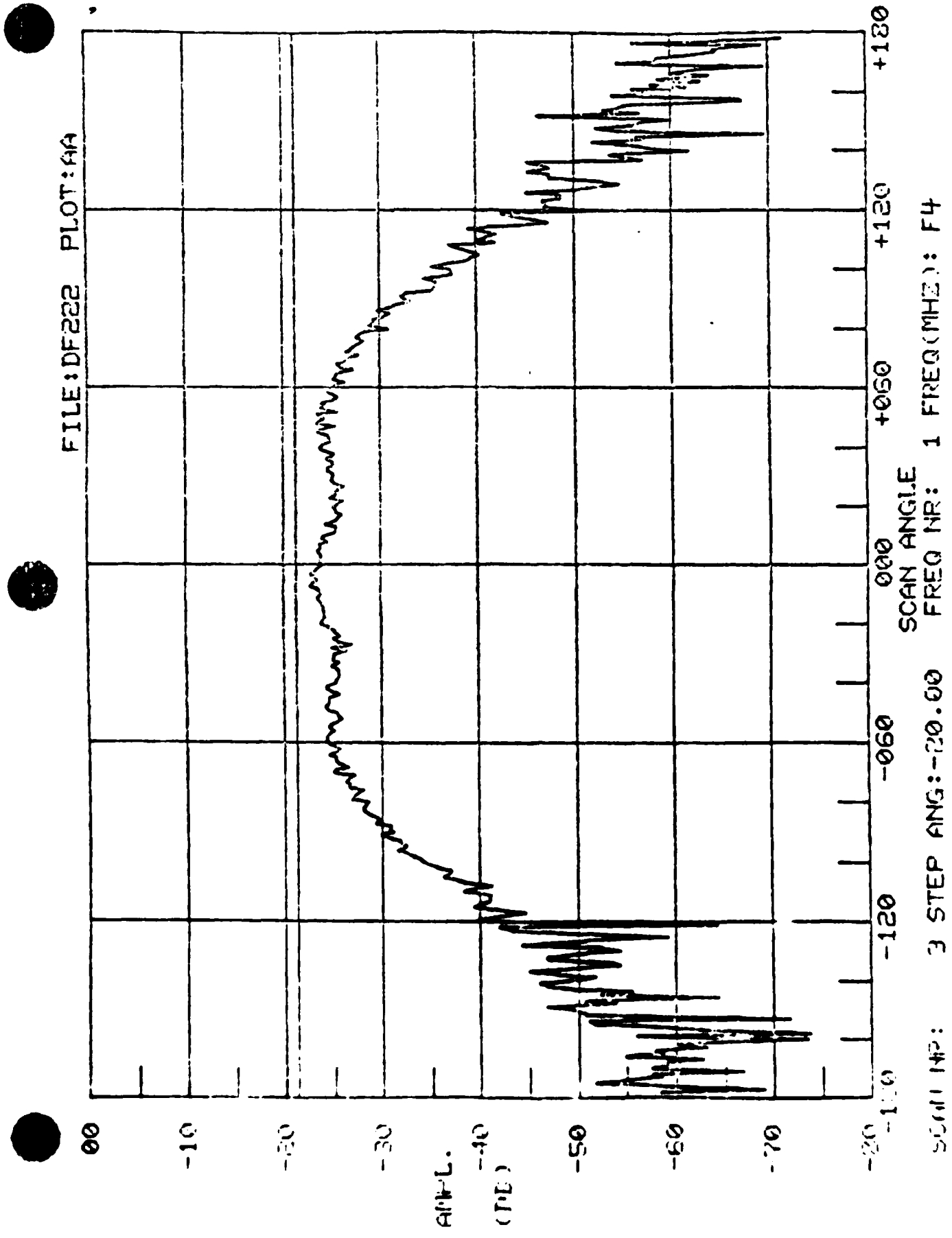
-060
000
+060
+120
+130
SCAN ANGLE
1 STEP ANG: .00 FREQ HR: 1 FREQ(MHZ): F4


FILE:DF222 PLOT:AA
AMPL. (DB)
00
-10
-20
-30
-40
-50
-60
-70
-80
-120
-060
000
+060
+120
+180
SCAN ANGLE
FREQ NR: 1 FREQ(MHZ): F4
2 STEP ANG:-10.00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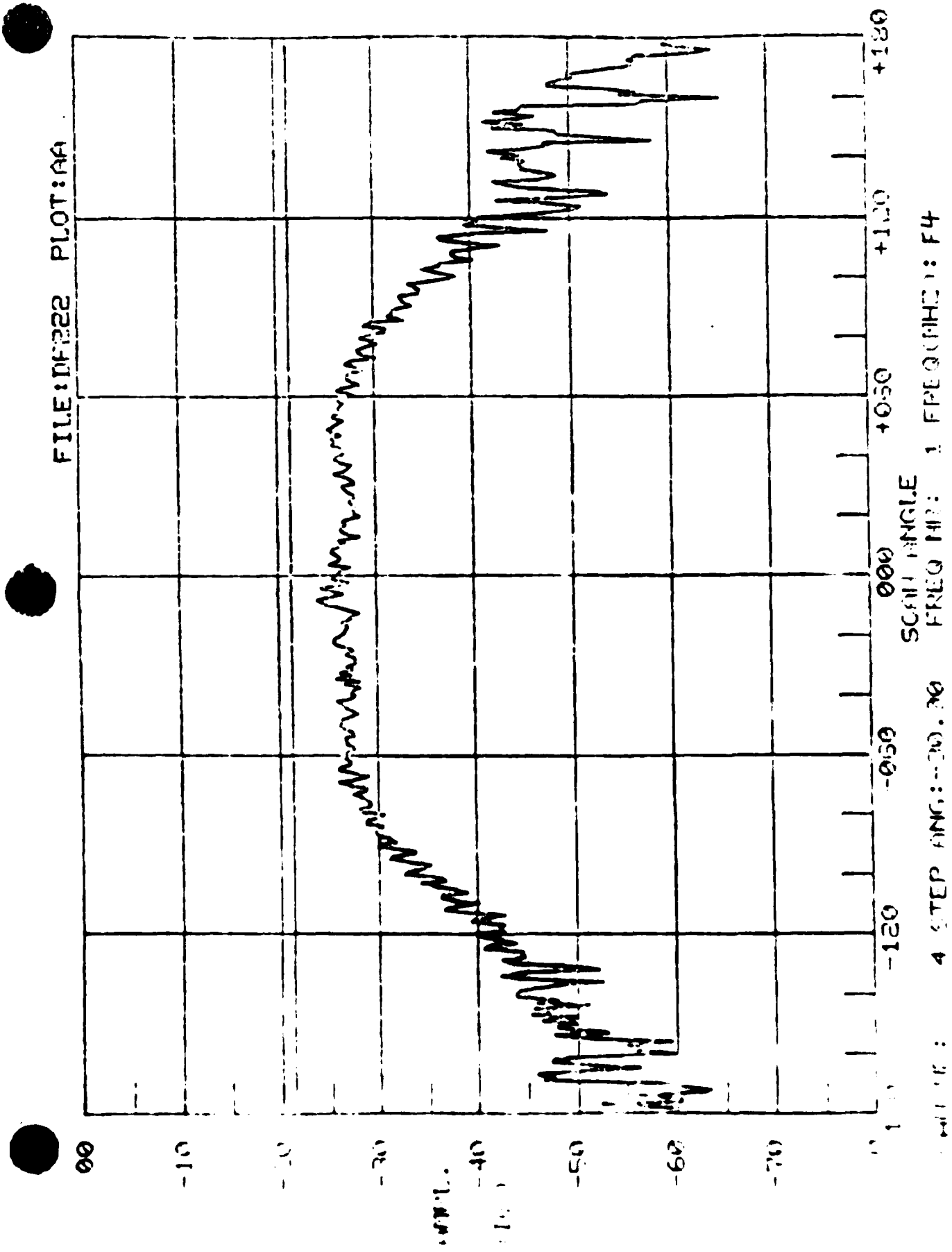
-10
-20
-30
-40
-50
-60
-70
-80
AMPL.
(DB)
-180
-120
-060
000
+060
+120
+180
SCAN ANGLE
FREQ NR: 1 FREQ(MHZ): F4
3 STEP ANG:-20.00


FILE:M222 PLOT:A4
+120
+060
000
-060
-120
SCAN ANGLE
FREQ MHz : 1 FREQUENCY : F4
00
-10
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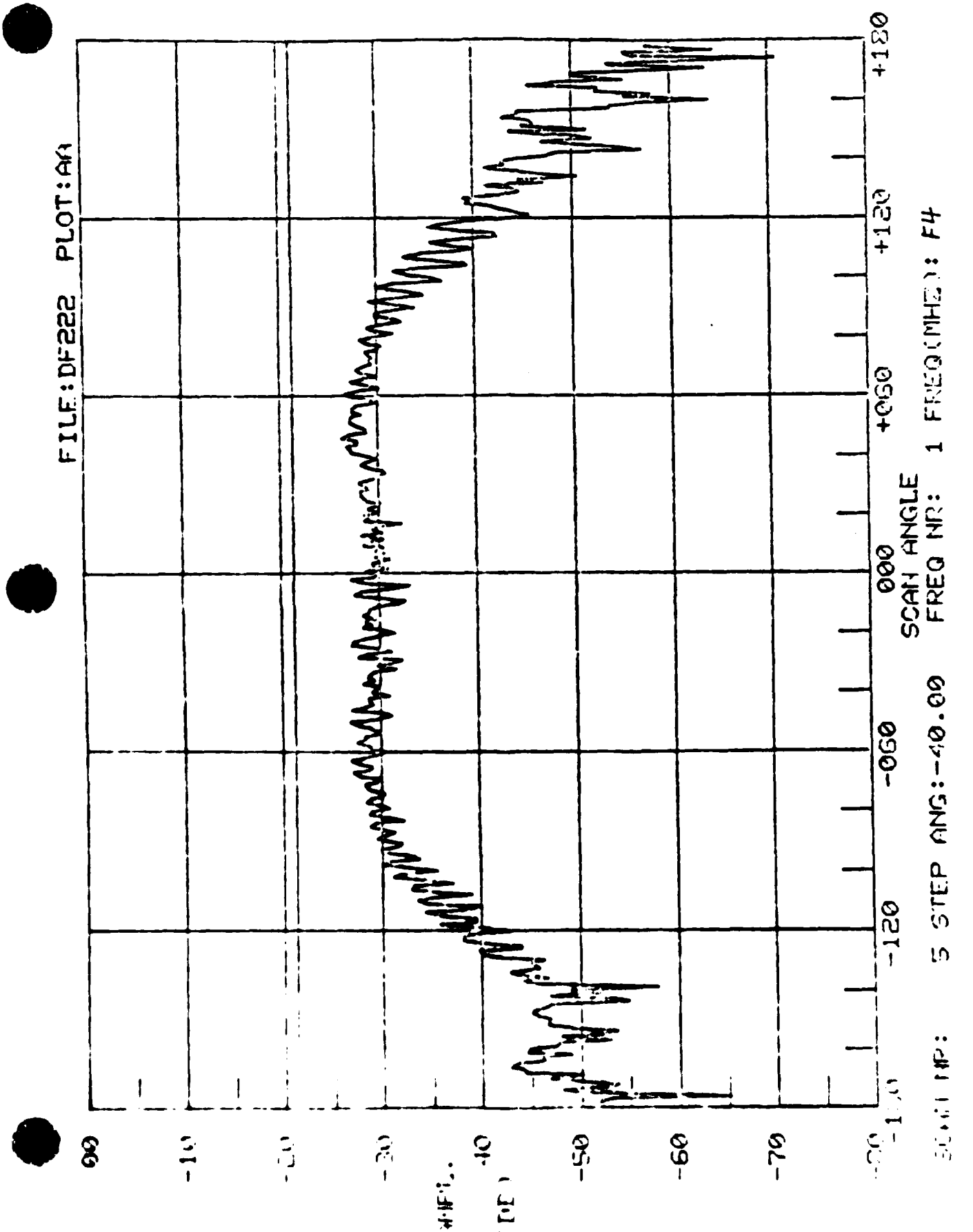
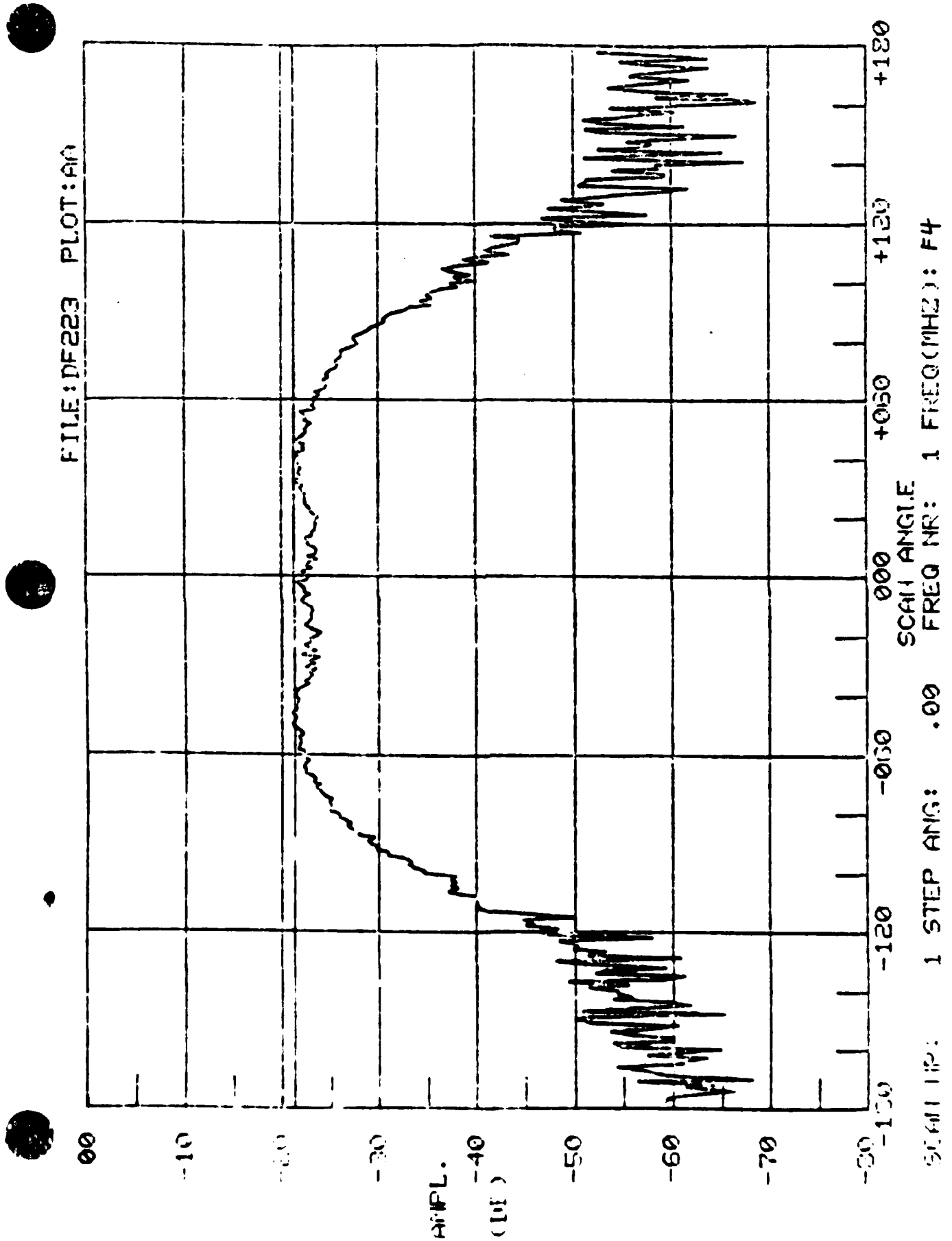
-50
-60
-70


FILE:DF222 PLOT:A4
-120
000
+060
+120
+180
SCAN ANGLE
FREQ NR: 1 FREQ(MHZ): F4
5 STEP ANG:-40.00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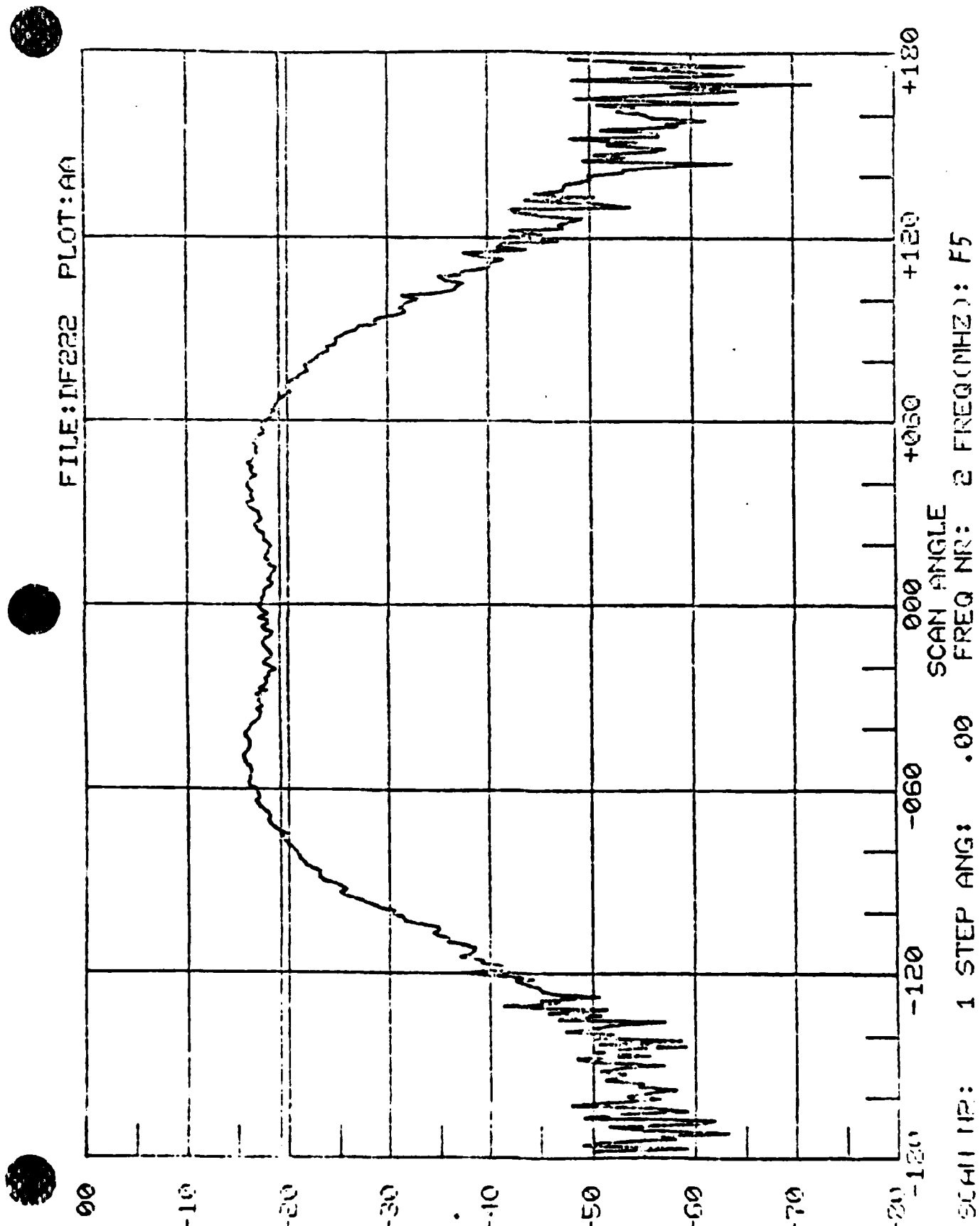
00
-10
-30
-40
-50
-60
-70
AMPL.
(dB)
-120
-060
000
+060
+120
SCAN ANGLE
1 STEP ANG: .00 FREQ NR: 1 FREQ(MHz): F4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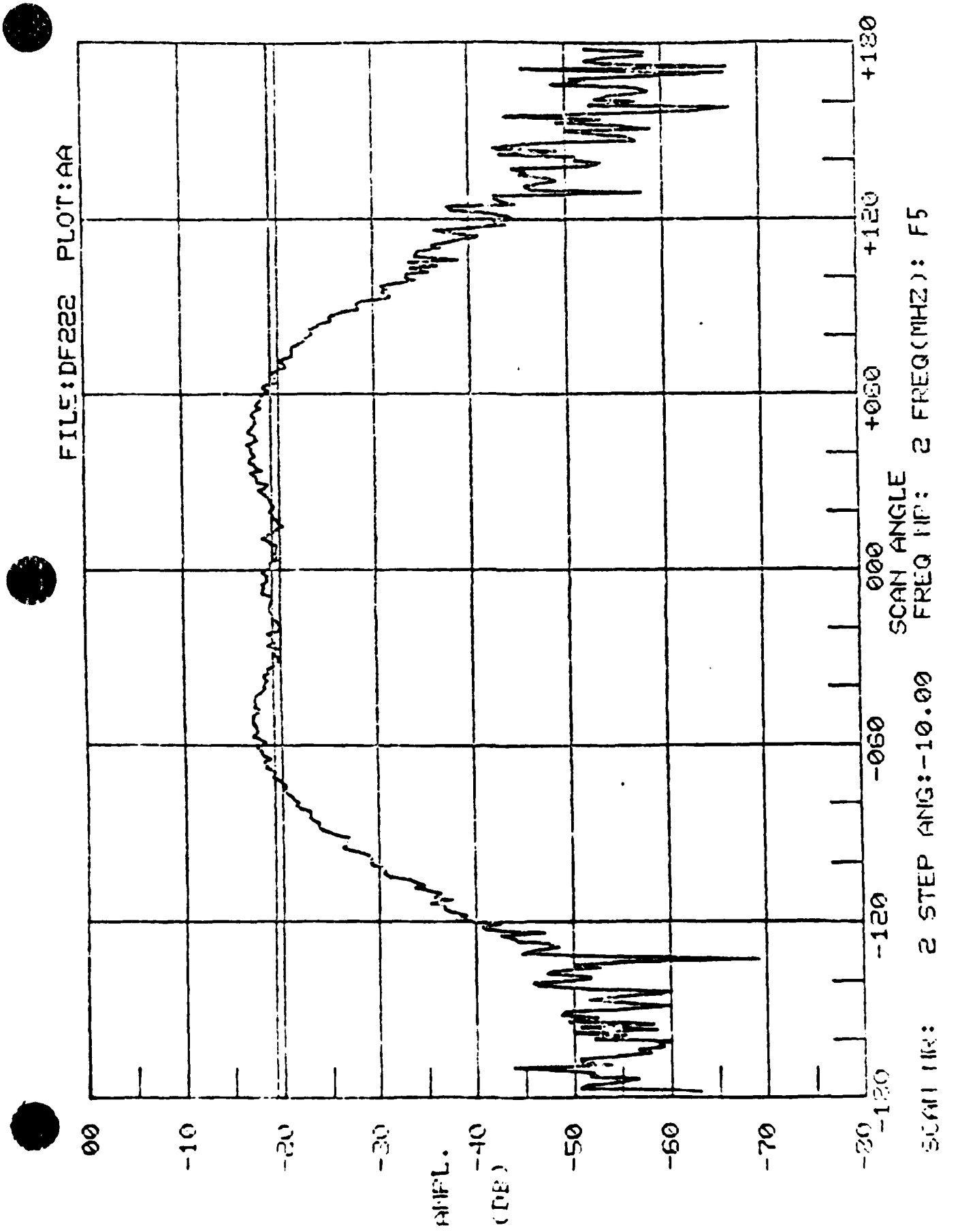
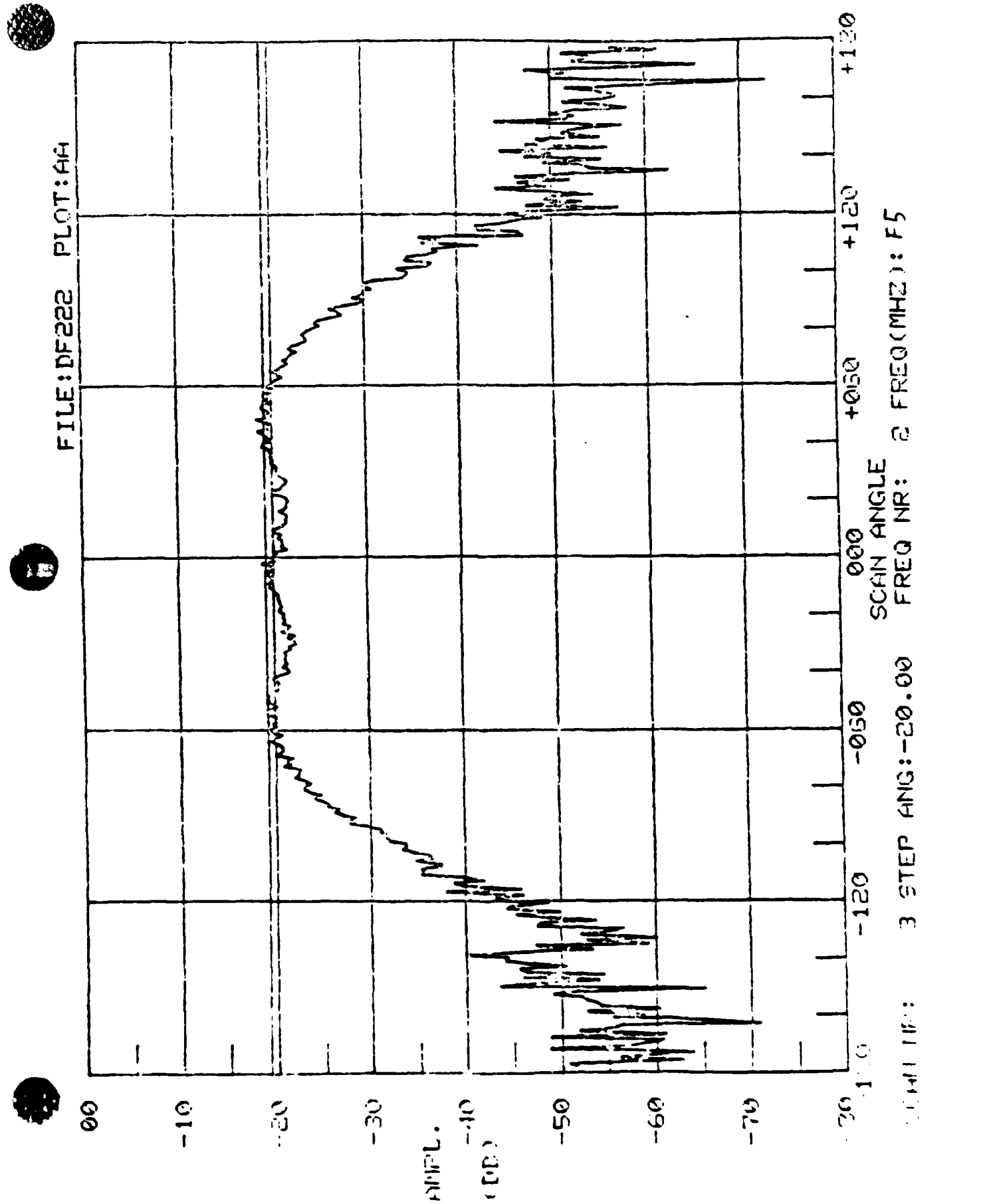
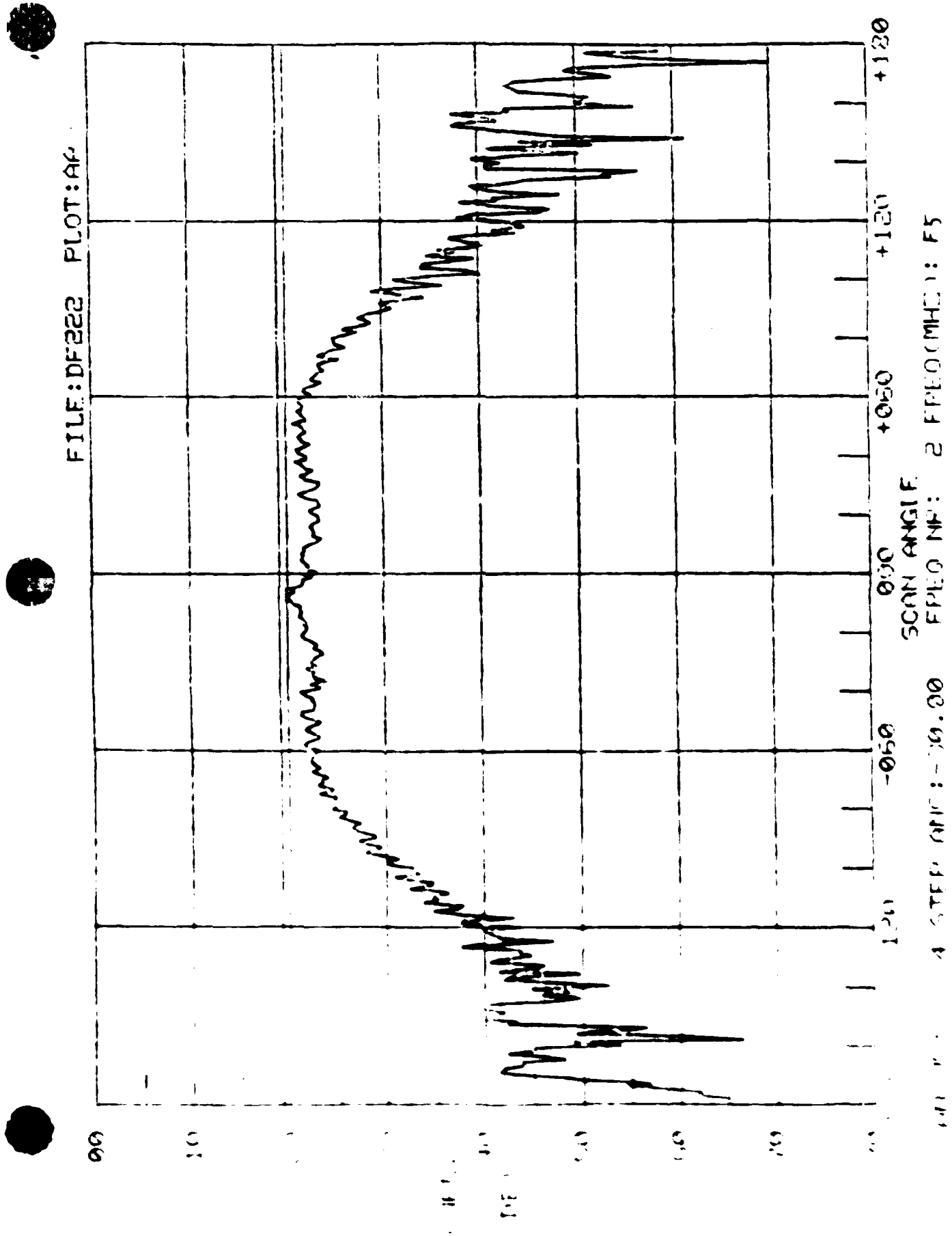
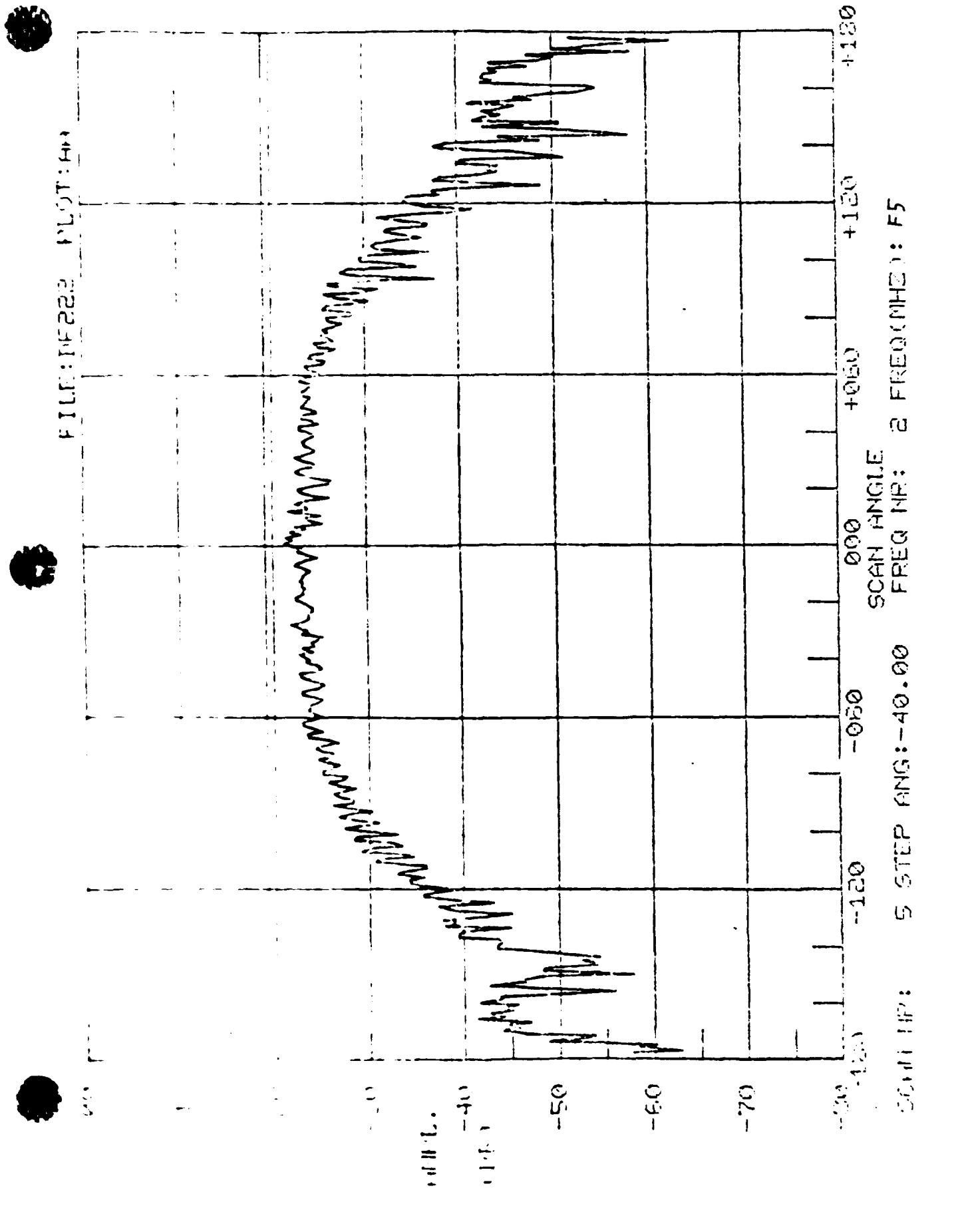
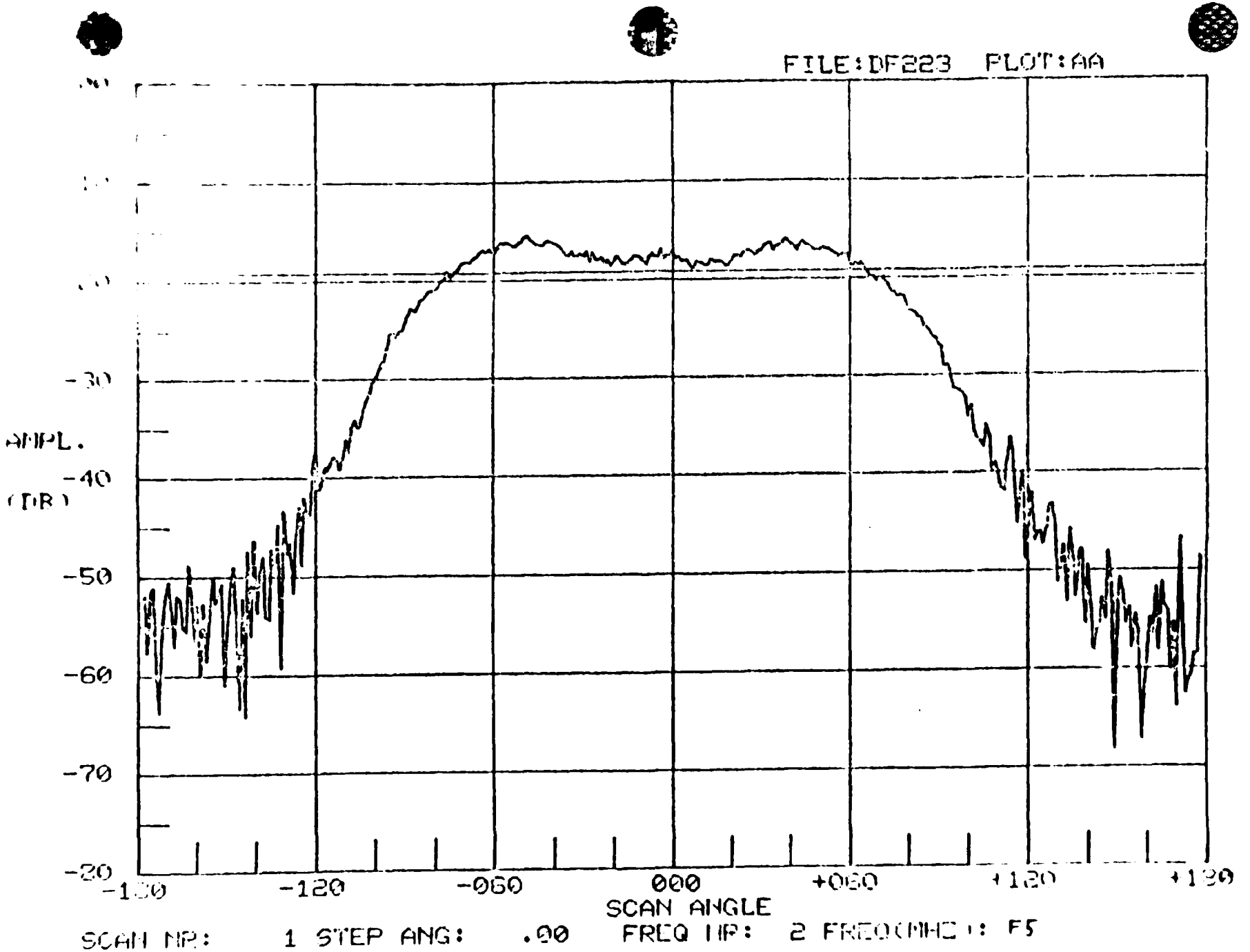
00
-10
-20
-30
AMPL.
(DB)
-40
-50
-60
-70
-80
-120
-060
000
+060
+120
+180
SCAN ANGLE
SCAN NR: 1 STEP ANG: .00 FREQ NR: 2 FREQ(MHZ): F5

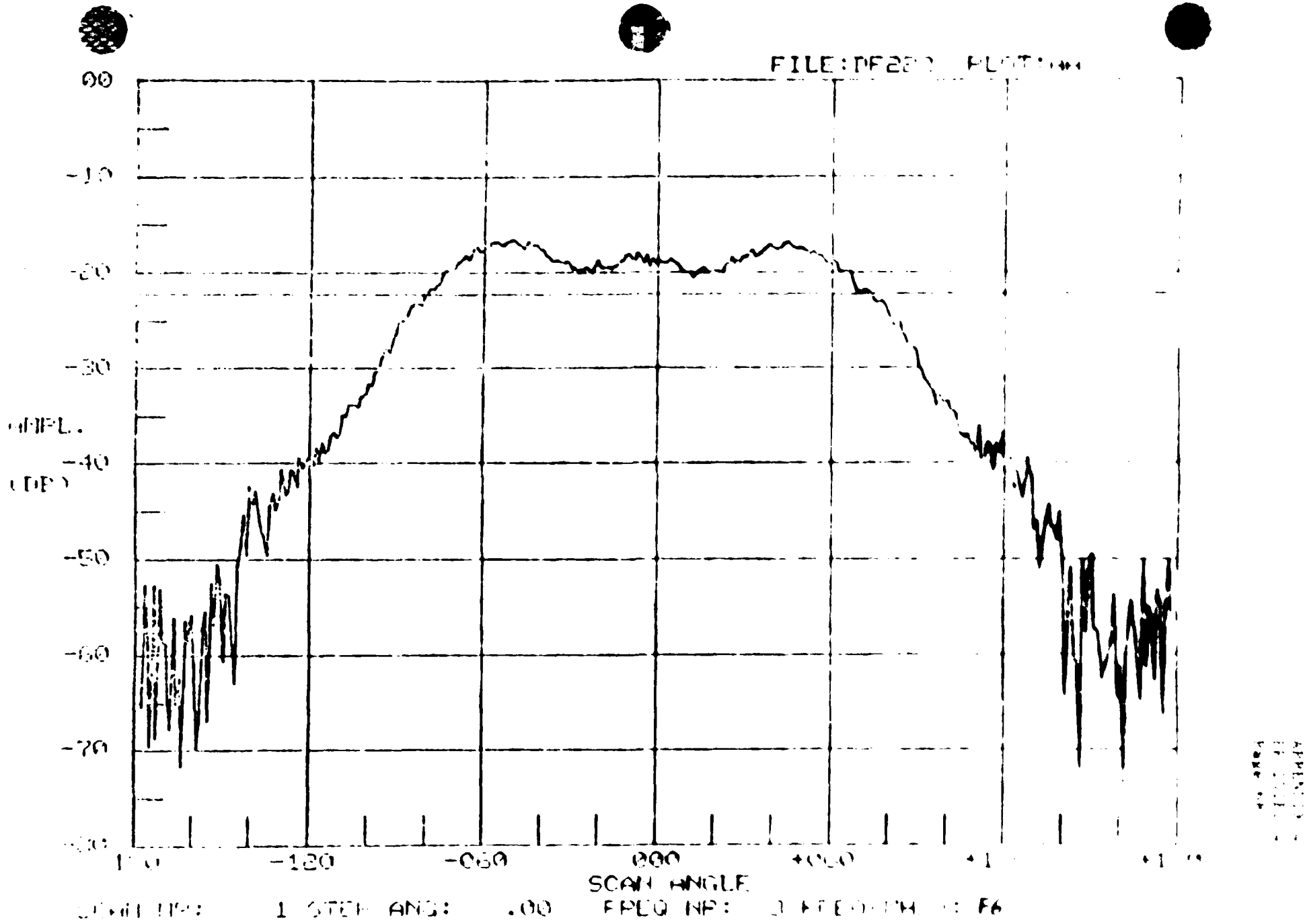

FILE:DF222 PLOT:AA
00
-10
-20
-30
-40
-50
-60
-70
-80
-120
-060
000
+060
+120
+180
SCAN ANGLE
FREQ MP: 2 FREQ(MHZ): F5
SCAN MP: 2 STEP ANG:-10.00

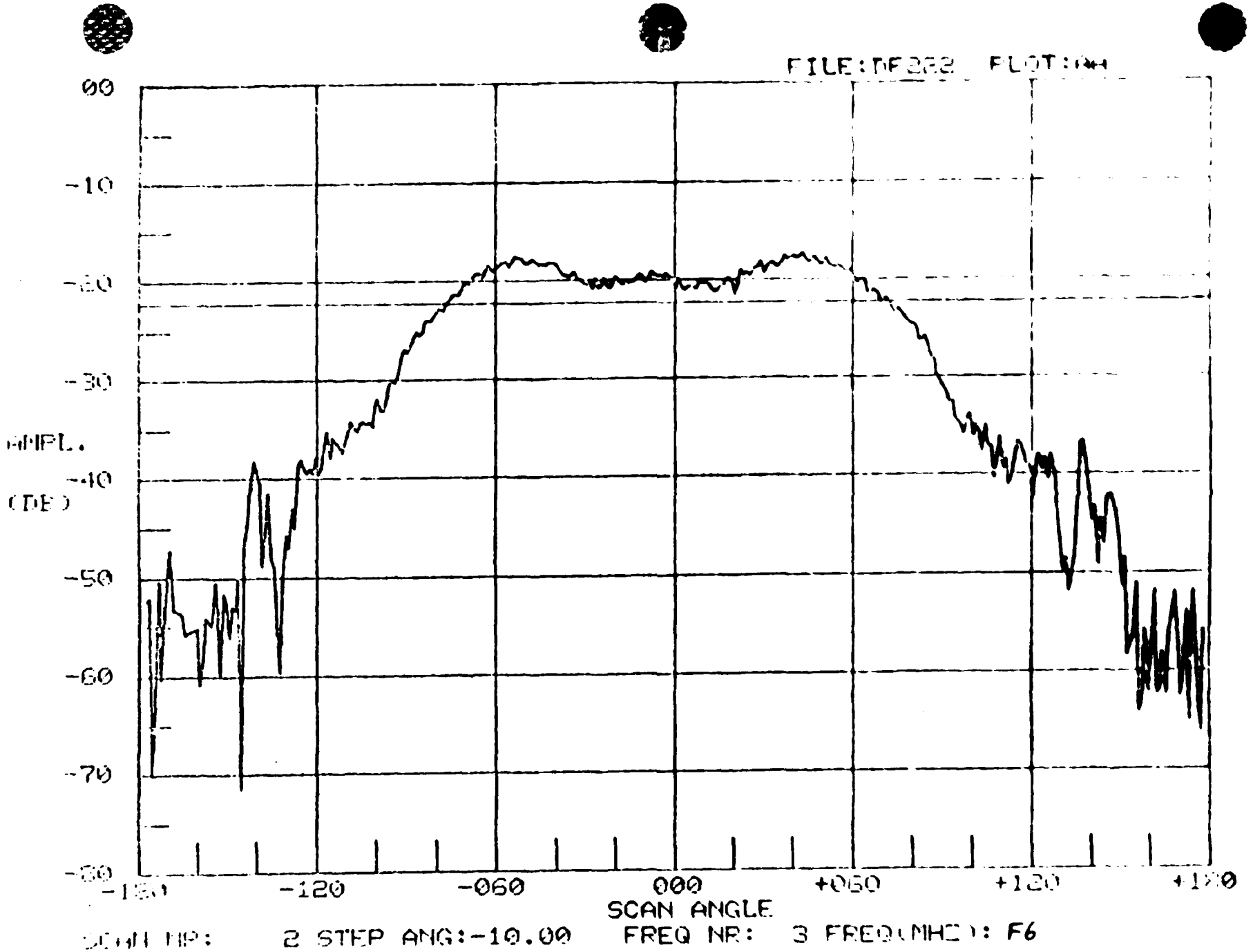

FILE:DF222 PLOT:AH
00
-10
-30
-50
-60
-70
-120
000
+050
+120
+120
SCAN ANGLE
FREQ NR: 2 FREQ(MHZ): F5
3 STEP ANG:-20.00


FILE:DF222 PLOT:AP
+120
+060
000
-060
SCAN ANGLE


FILE:HF222 PLOT:40
-40
-50
-60
-70
-120
-060
000
+060
+120
+180
SCAN ANGLE
FREQ NR: 2 FREQ(MHZ): F5
5 STEP ANG:-40.00


FILE:DF223 PLOT:AA
-30
AMPL.
-40
(DB)
-50
-60
-70
-20
-120
-060
000
+060
+120
SCAN ANGLE
SCAN NR: 1 STEP ANG: .00 FREQ NR: 2 FREQ(MHZ): F5


FILE:DF23
00
-10
-20
-30
-40
-50
-60
-70
-120
SCAN ANGLE
SCAN UP:
1 STEP ANG:
.00
FREQ MP:


FILE:DF282 PLOT:CM1
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-10
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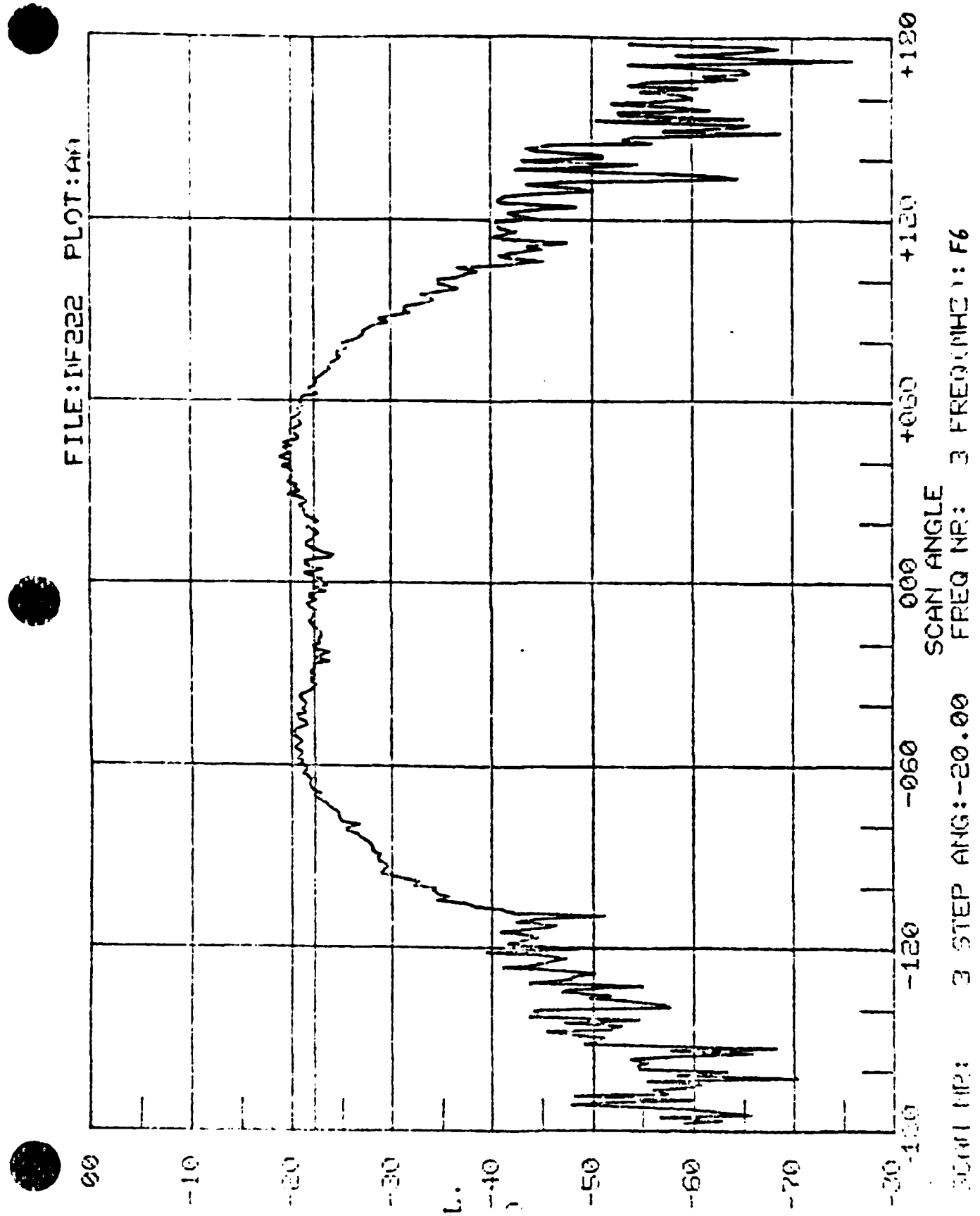
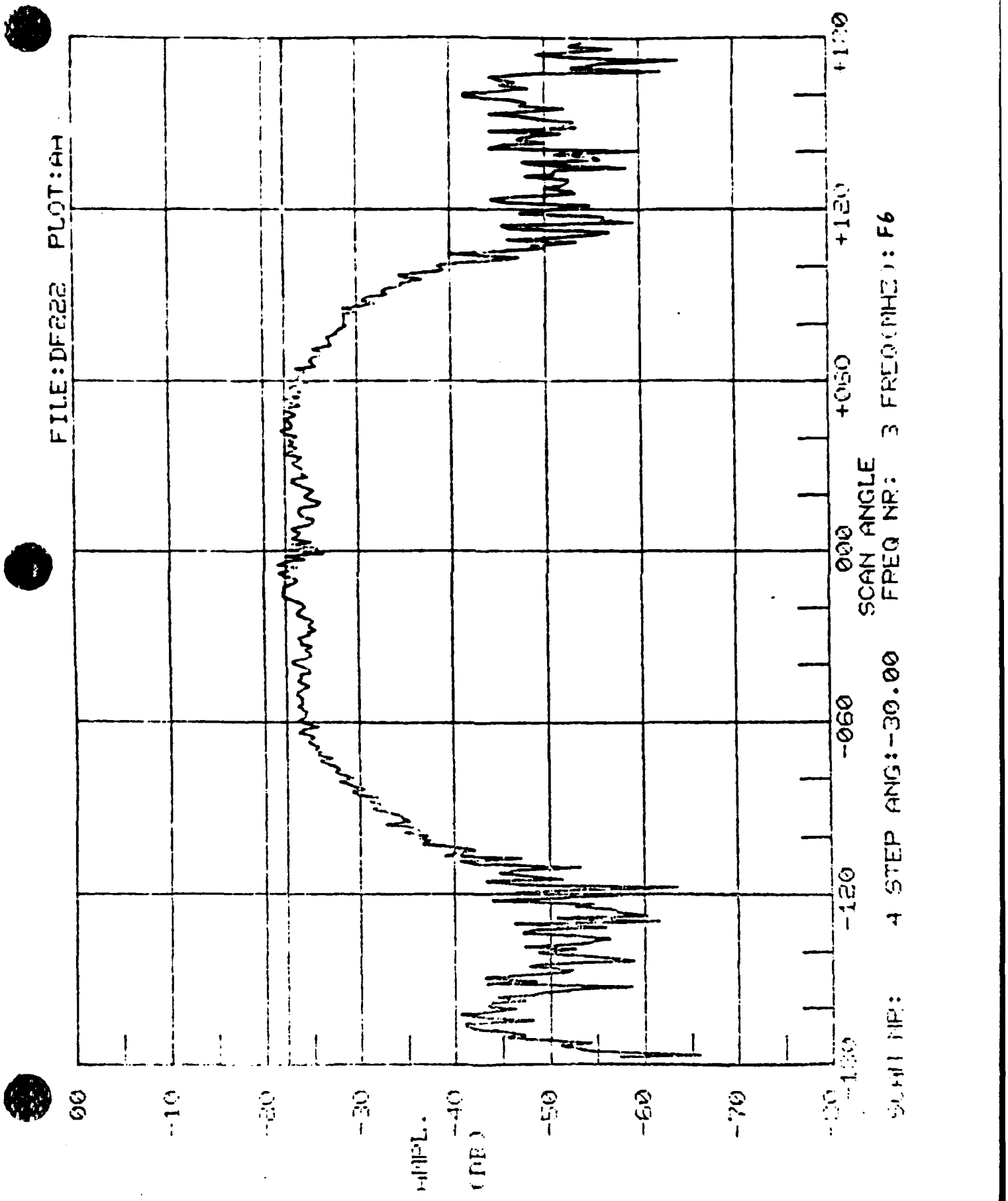
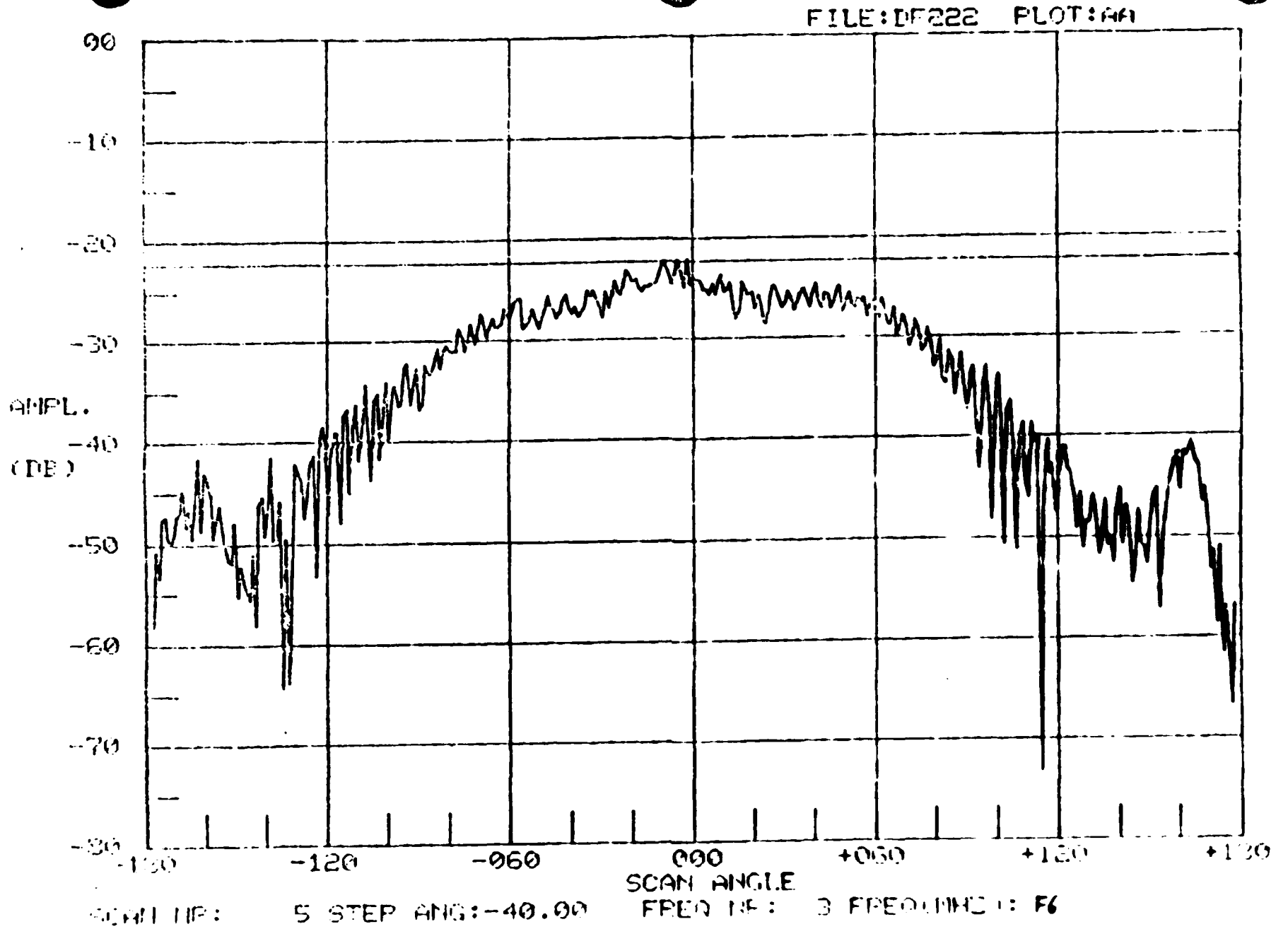
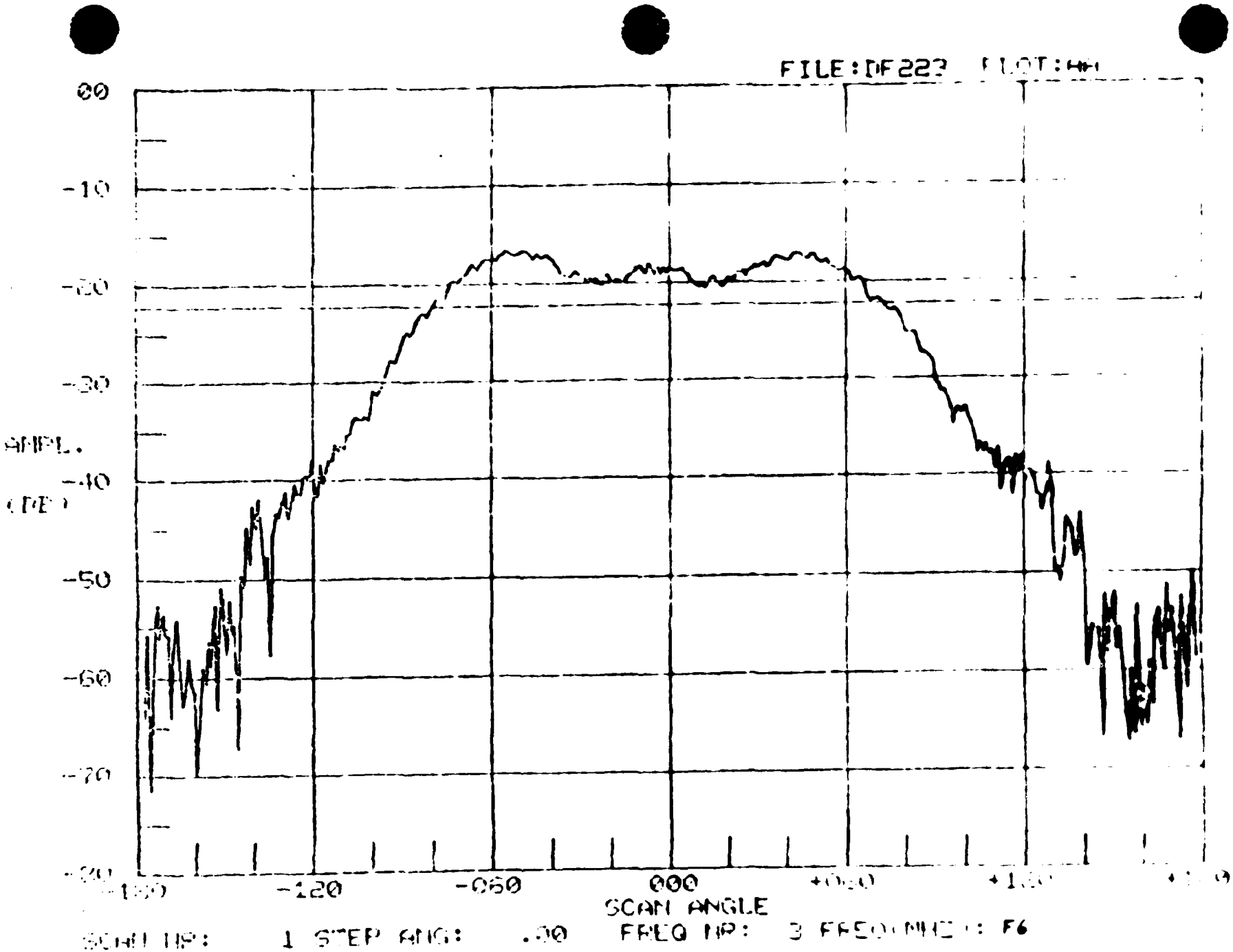
-30
AMPL.
-40
(DB)
-50
-60
-70
-80
-180
-120
-060
000
+060
+120
+180
SCAN ANGLE
SCAN NR: 2 STEP ANG:-10.00 FREQ NR: 3 FREQ(MHZ): F6


FILE:NF222 PLOT:AM
-10
-20
-30
-40
-50
-60
-70
AMPL.
(DB)
-120
-060
000
+060
+120
SCAN ANGLE
FREQ NR: 3 FREQ(MHZ): F6
3 STEP ANG:-20.00


FILE:DF222 PLOT:AH
SCAN ANGLE
FREQ NR: 3 FREQ(MHZ): F6
4 STEP ANG:-30.00
-120
-060
000
+060
+120
-10
-20
-30
-40
-50
-60
-70


FILE:DF222 PLOT:AA
00
-10
-20
-30
AMPL.
(DB)
-40
-50
-60
-70
-120
-060
000
+060
SCAN ANGLE
5 STEP ANG:-40.00


FILE:DF223
00
-10
-20
-30
AMPL.
(DB)
-40
-50
-60
-70
-120
-060
000
SCAN ANGLE

Appendix 5 contains AN/ALQ-162 antenna patterns as recorded by the 20/20 system during test. They are in rectangular plot format. These patterns cover frequencies F7, F8, and F9 and elevations of +40° through -40° for both the forward and aft antennas. They are arranged as follows:

DF205 -- Forward antenna, upper hemisphere

DF206 -- Forward antenna, upper hemisphere horizon

DF228 -- Forward antenna, lower hemisphere

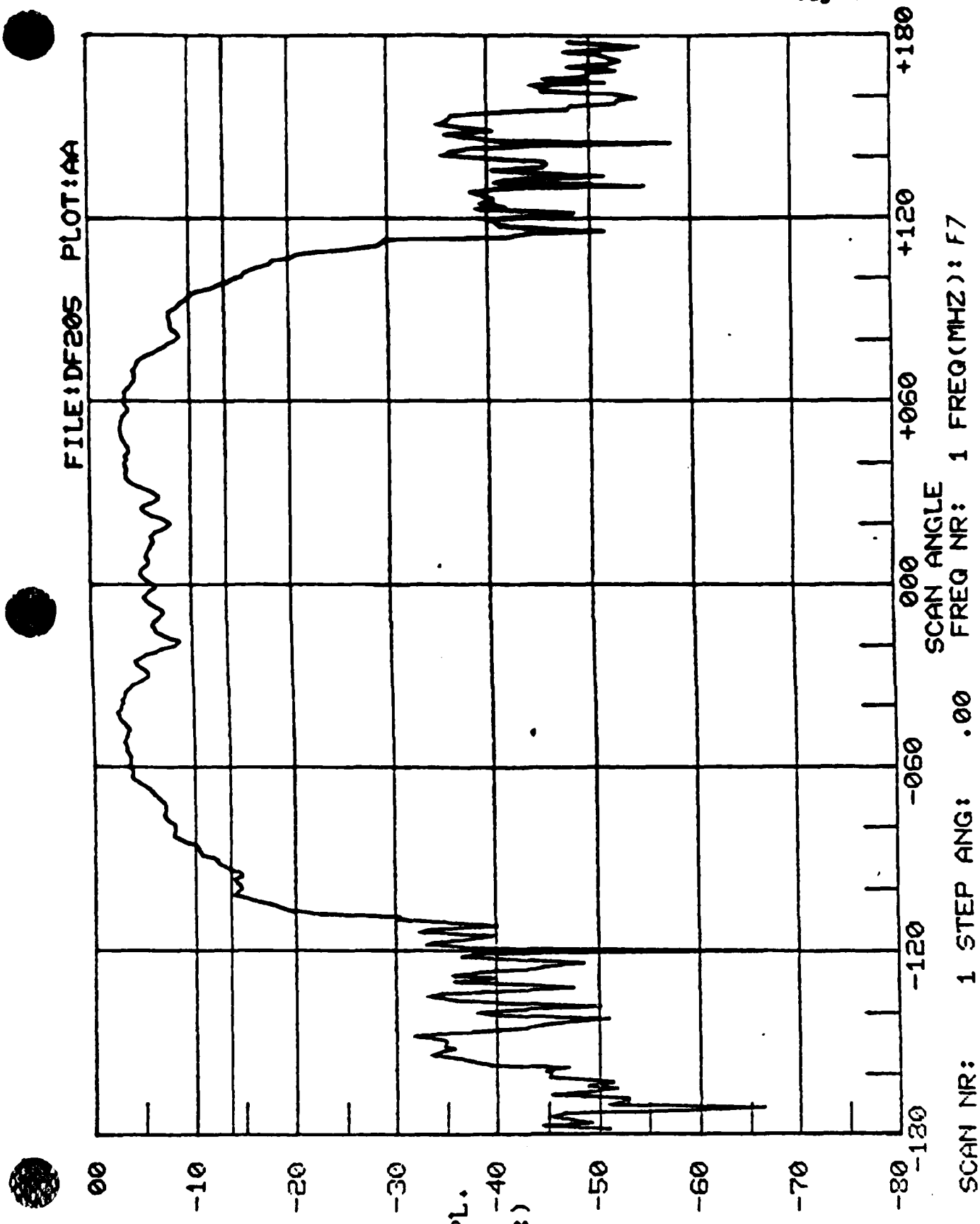
DF229 -- Forward antenna, lower hemisphere horizon

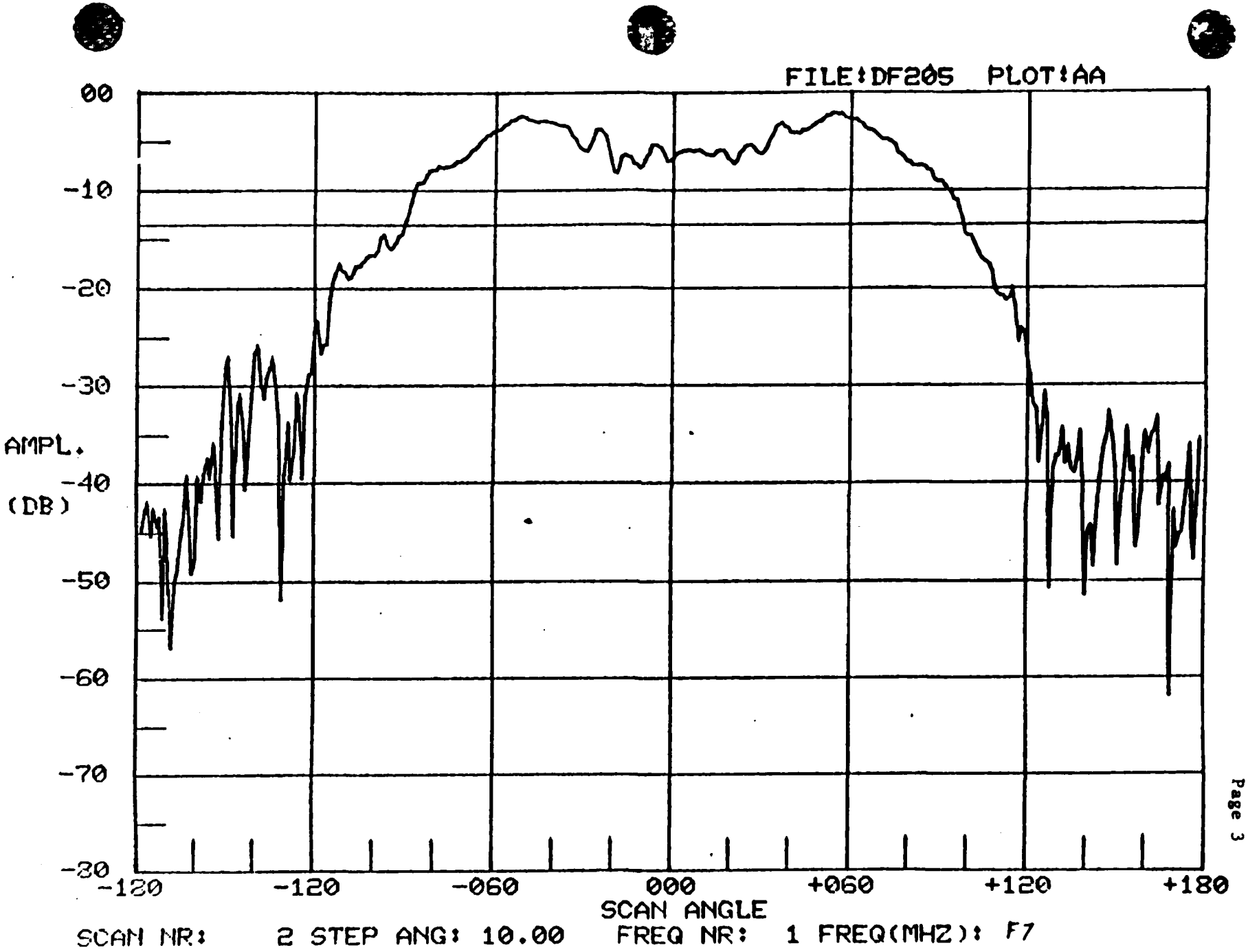
DF239 -- Aft antenna, upper hemisphere

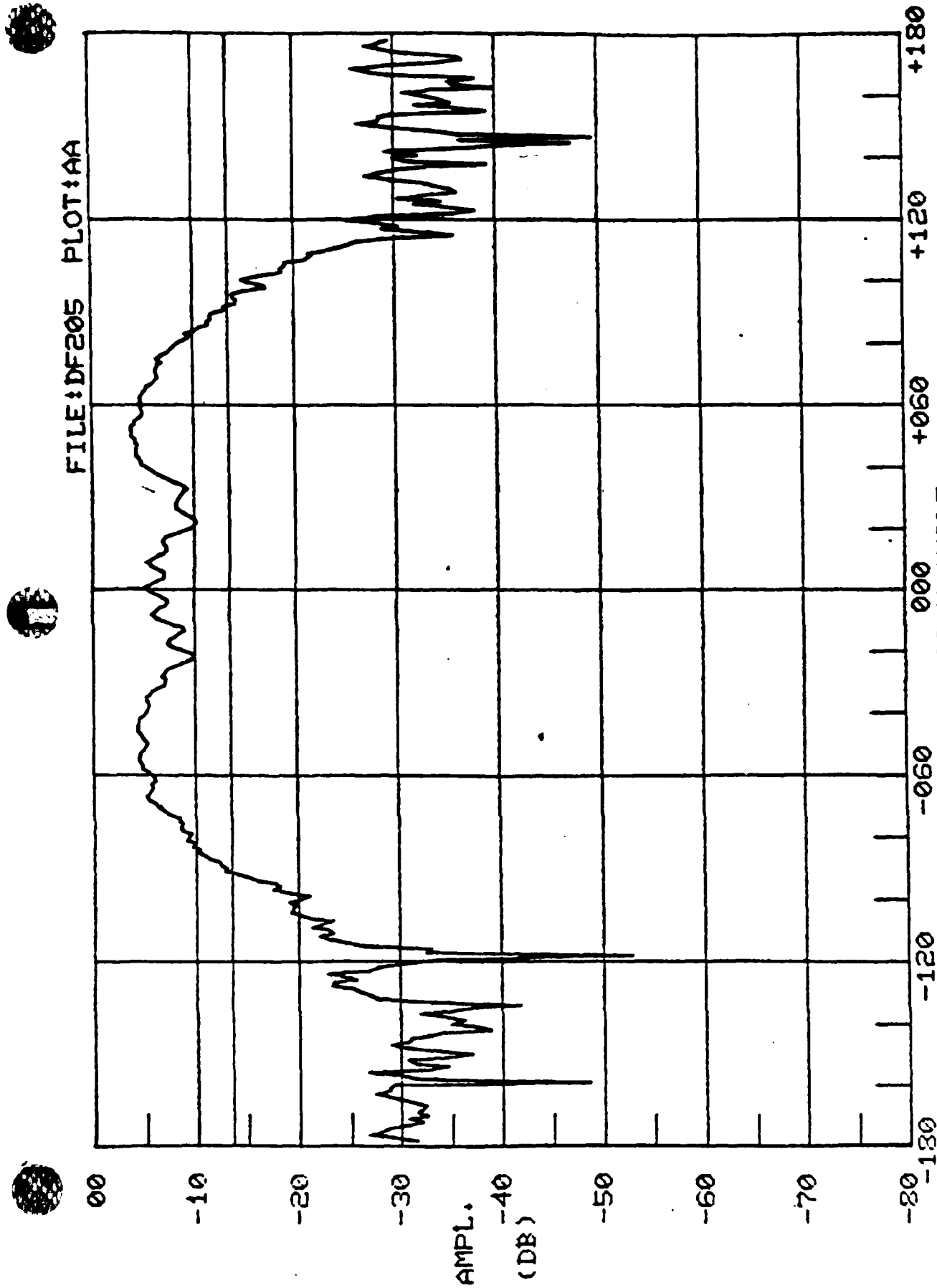
DF240 -- Aft antenna, upper hemisphere horizon

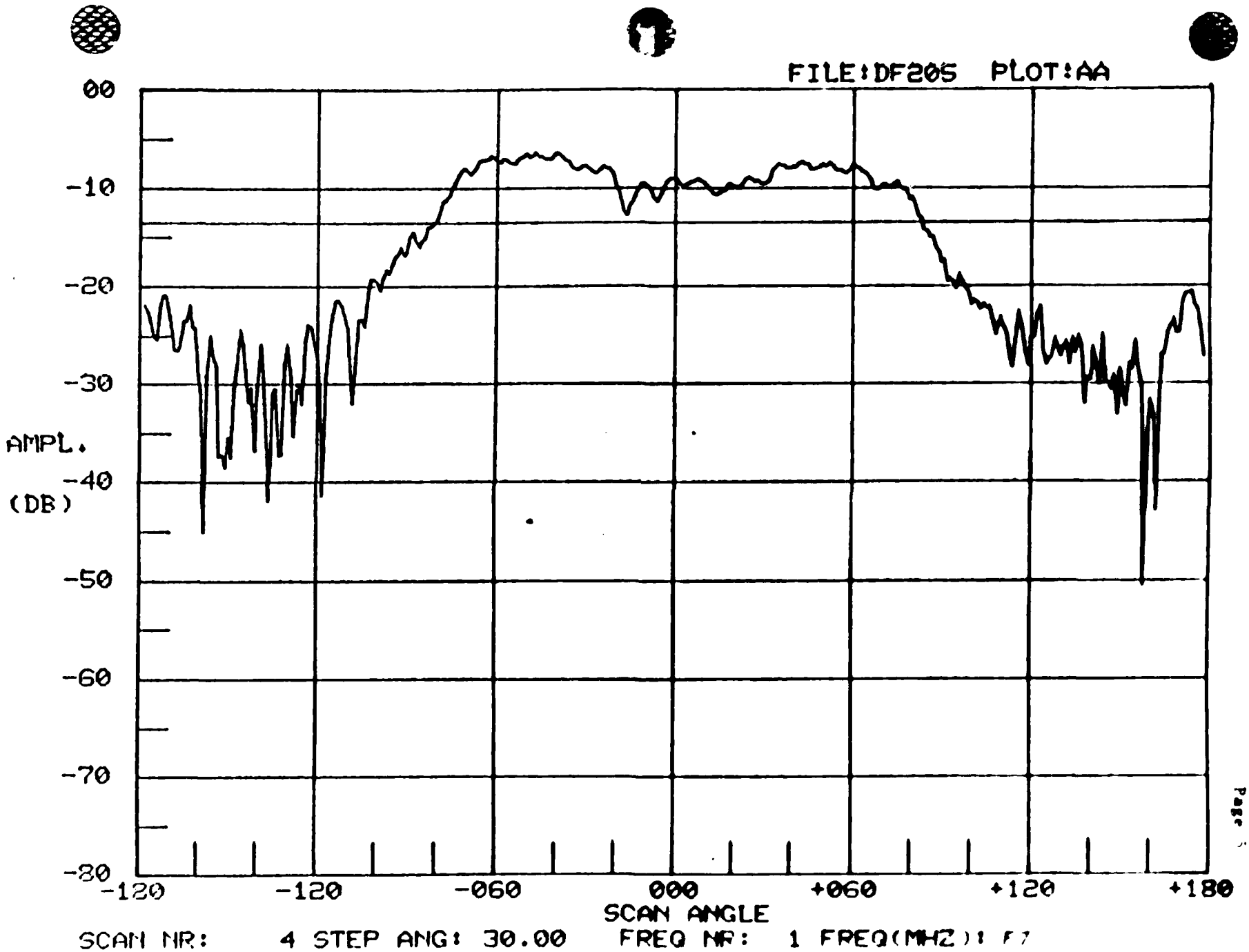
DF236 -- Aft antenna, lower hemisphere

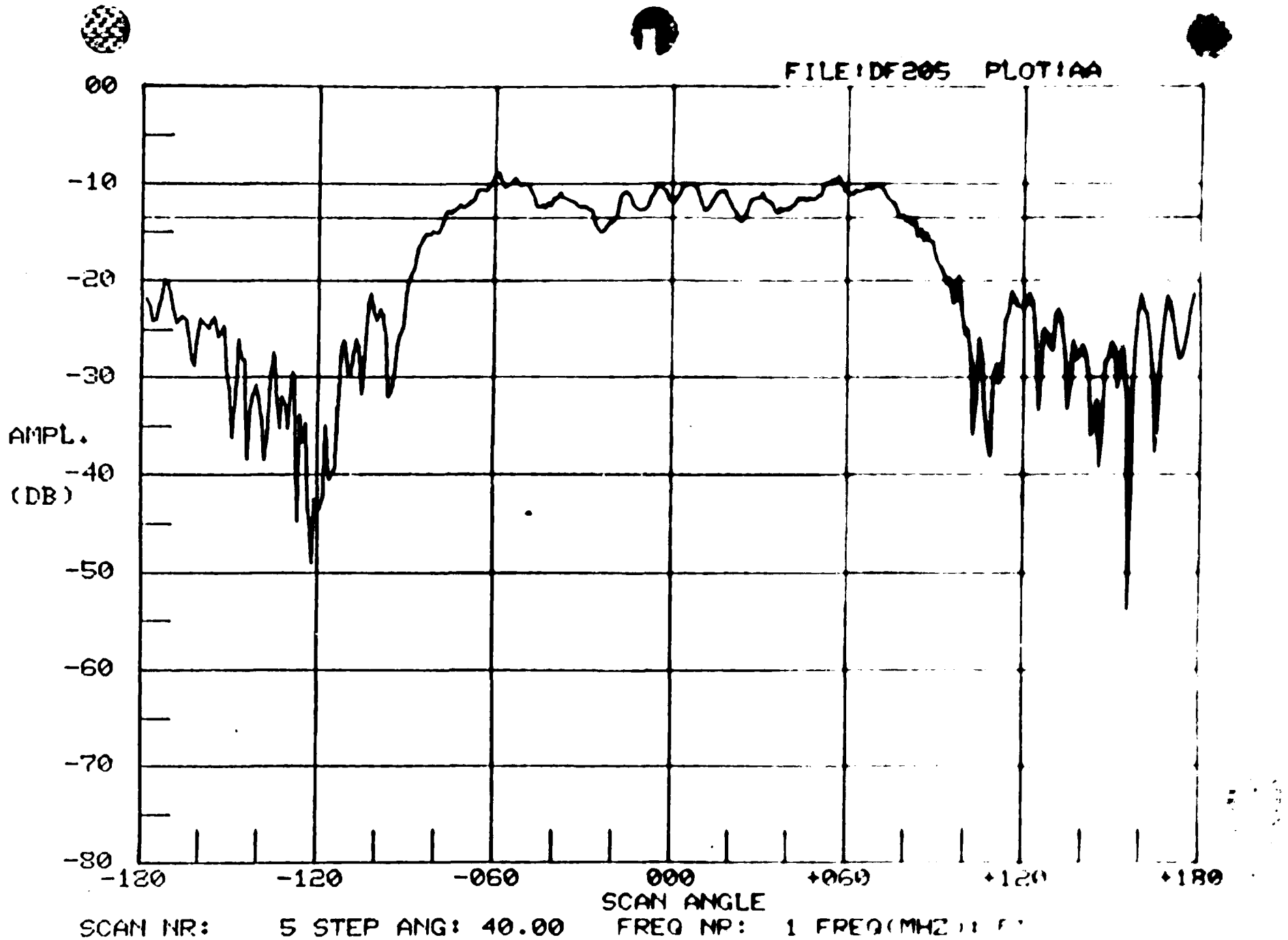
DF237 -- Aft antenna, lower hemisphere horizon.

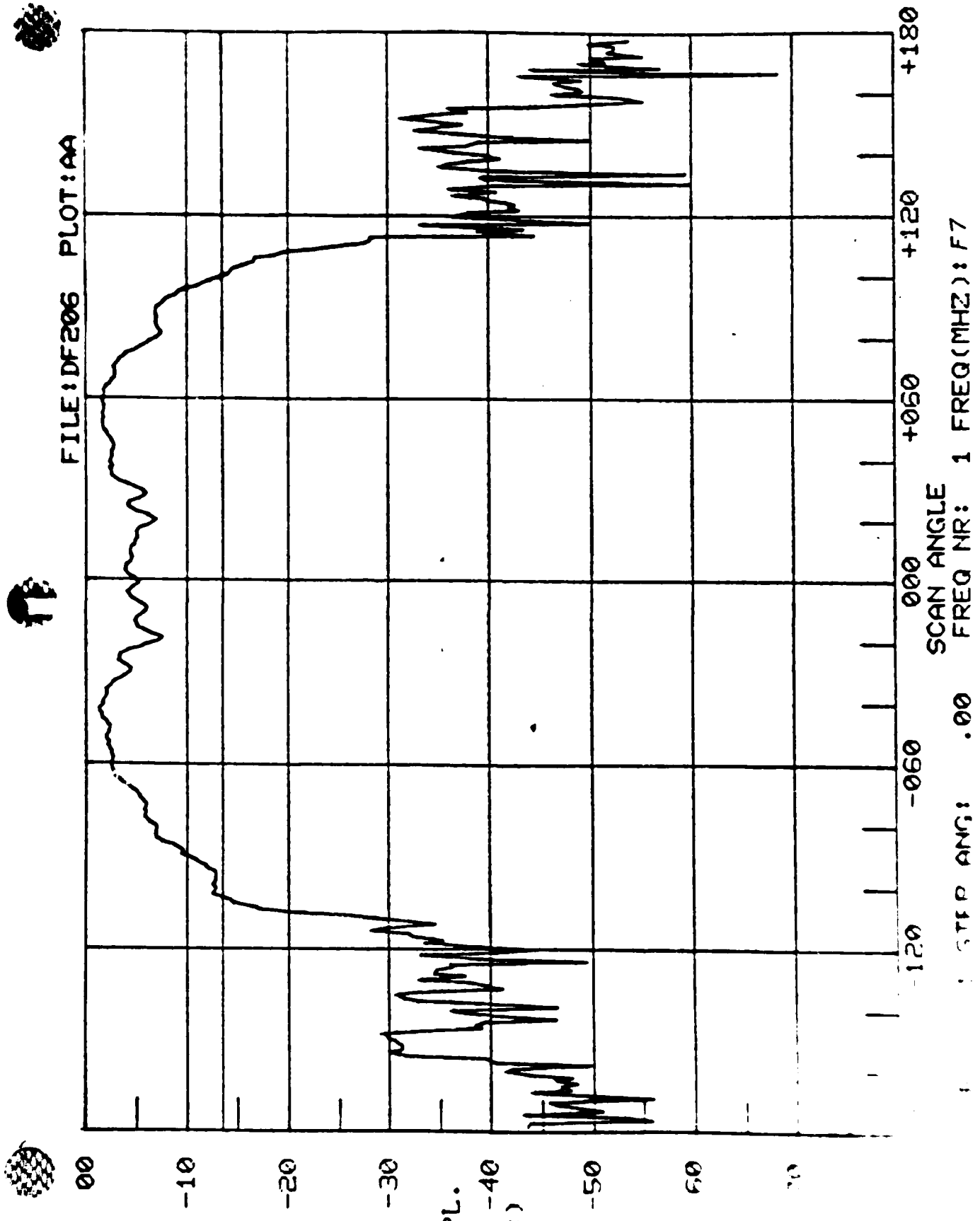

FILE:DF205 PLOT:AA
00
-10
-20
-30
-40
-50
-60
-70
-80
AMPL.
(DB)
-180
-120
-060
000
+060
+120
+180
SCAN ANGLE
SCAN NR: 1 STEP ANG: .00 FREQ NR: 1 FREQ(MHZ): F7


FILE:DF205 PLOT:AA
00
-10
-20
-30
AMPL.
-40
(DB)
-50
-60
-70
-80
-120
-120
-060
000
+060
+120
+180
SCAN ANGLE
SCAN NR: 2 STEP ANG: 10.00 FREQ NR: 1 FREQ(MHZ): F7


FILE:DF205 PLOT:AA
00
-10
-20
-30
-40
-50
-60
-70
-80
AMPL.
(DB)
-180
-120
-060
000
+060
+120
+180
SCAN ANGLE
SCAN NR: 3 STEP ANG: 20.00 FREQ NR: 1 FREQ(MHZ): F7

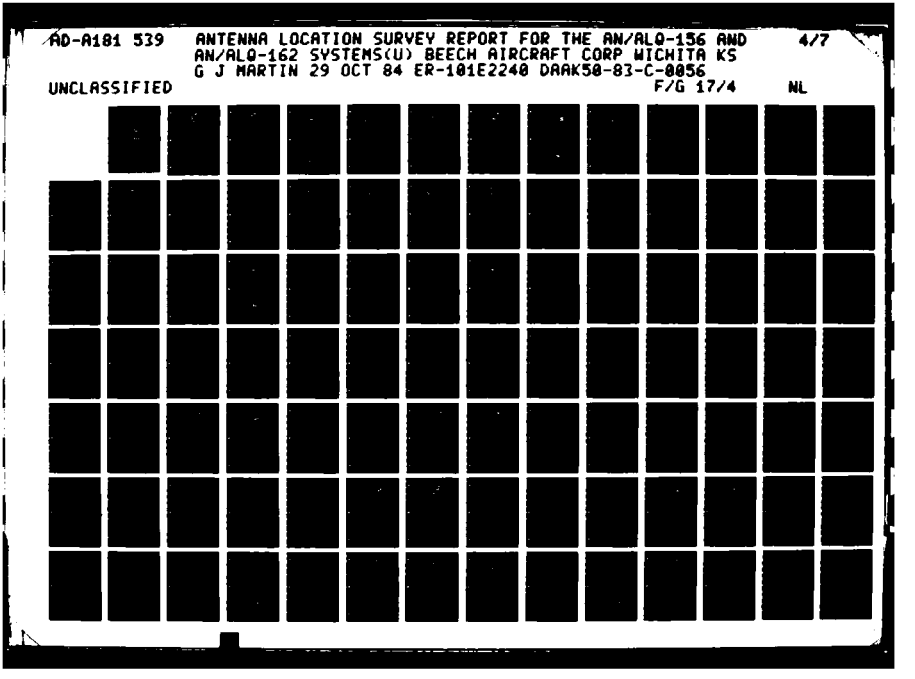

FILE:DF205 PLOT:AA
00
-10
-20
-30
AMPL.
-40
(DB)
-50
-60
-70
-80
-120
-120
-060
000
+060
+120
+180
SCAN ANGLE
SCAN NR: 4 STEP ANG: 30.00 FREQ NR: 1 FREQ(MHZ):

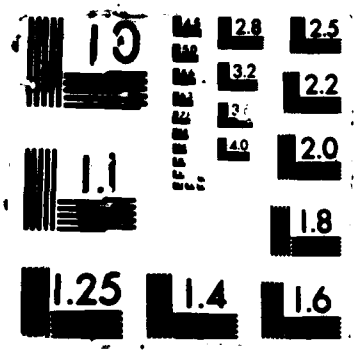

FILE:DF205 PLOT:AA
00
-10
-20
-30
AMPL.
-40
(DB)
-50
-60
-70
-80
-120
-120
-060
000
+060
+120
+180
SCAN ANGLE
SCAN NR: 5 STEP ANG: 40.00 FREQ NR: 1 FREQ(MHZ)

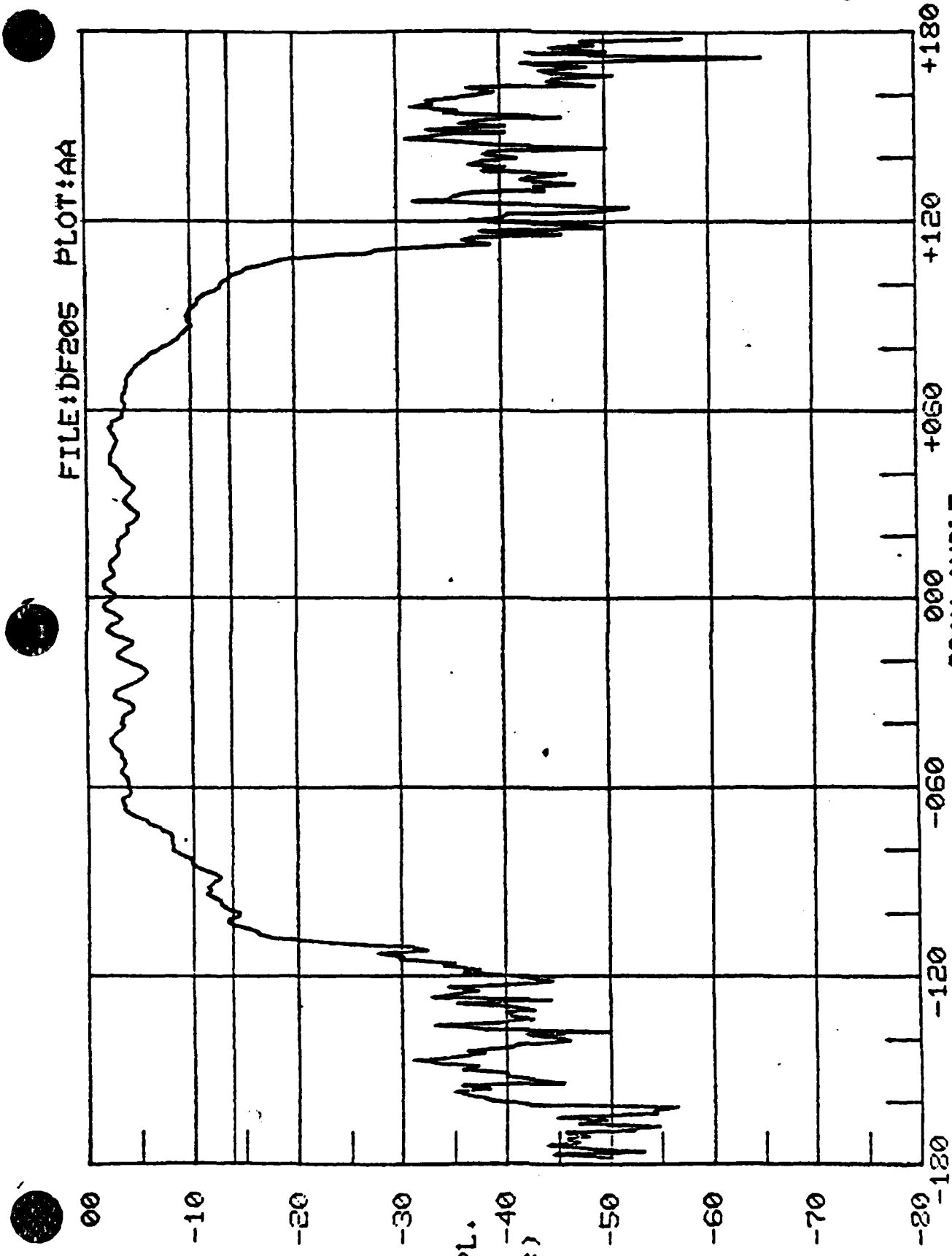

FILE:DF206 PLOT:AA
AMPL. (DB)
00
-10
-20
-30
-40
-50
-60
-120
000
+060
+120
+180
SCAN ANGLE
FREQ NR: 1 FREQ(MHZ): F7
.00

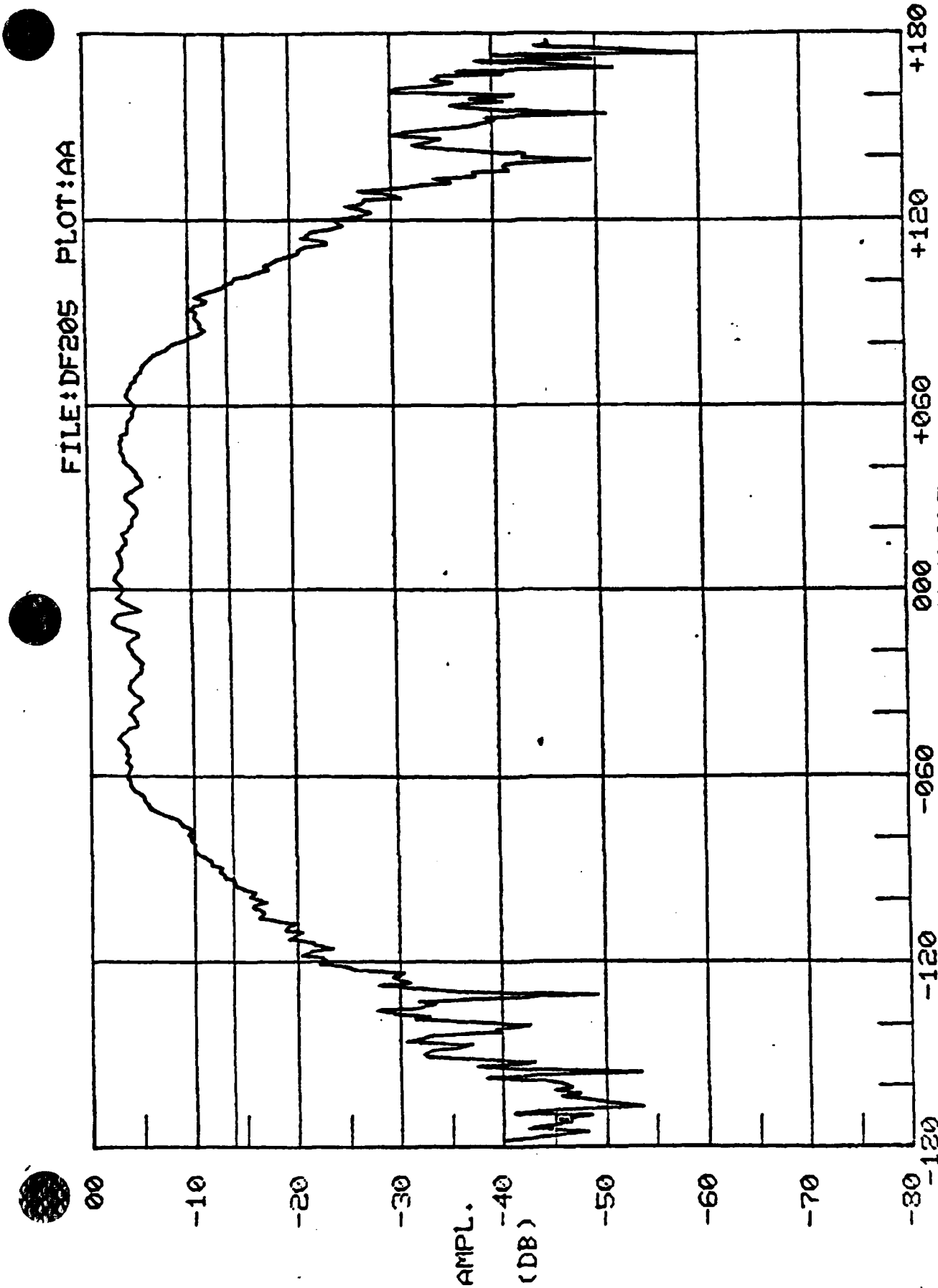
AD-A181 539 ANTENNA LOCATION SURVEY REPORT FOR THE AN/ALQ-156 AND AN/ALQ-162 SYSTEMS(U) BEECH AIRCRAFT CORP WICHITA KS G J MARTIN 29 OCT 84 ER-101E2240 DAAK50-83-C-0056 4/7

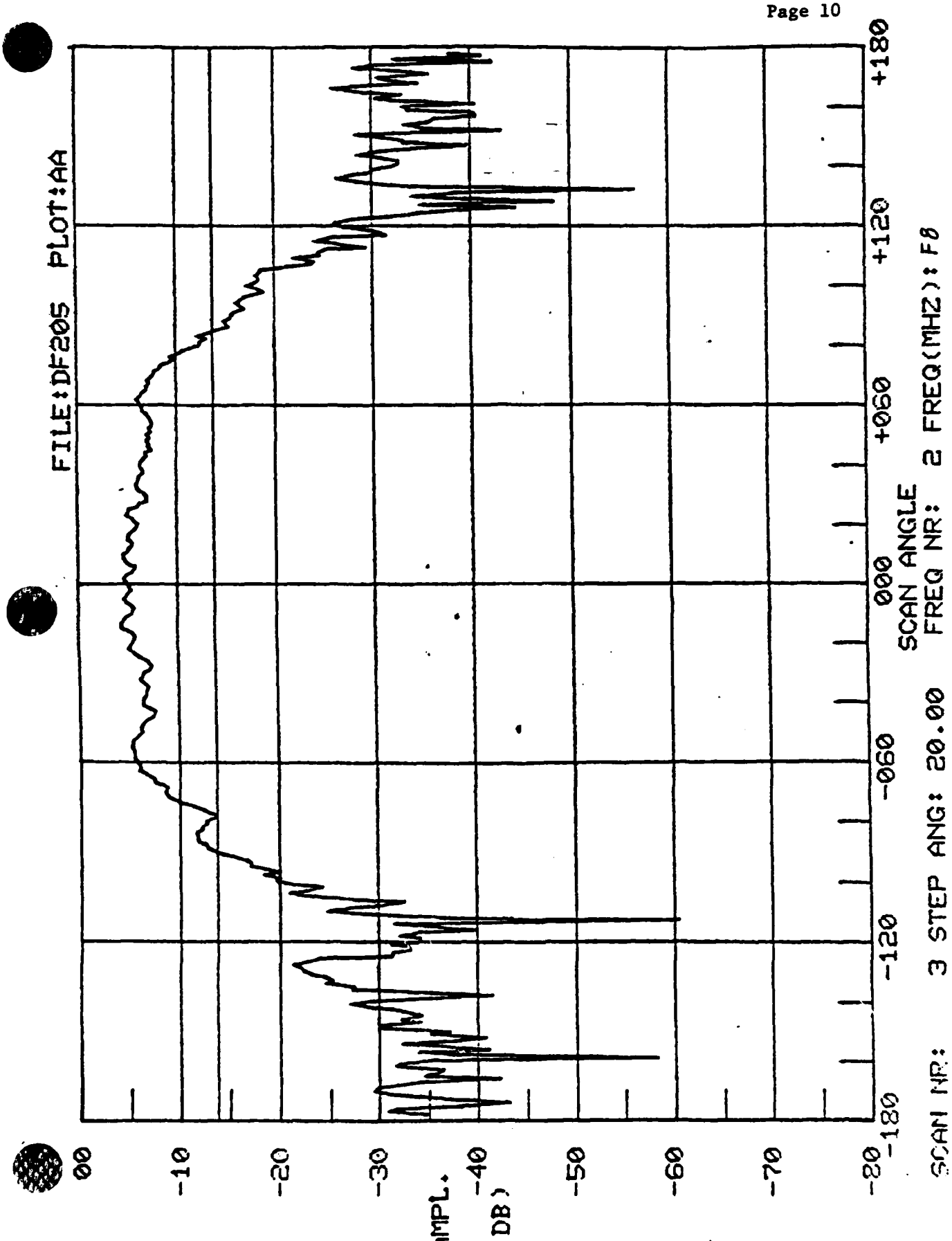
UNCLASSIFIED F/G 17/4 NL

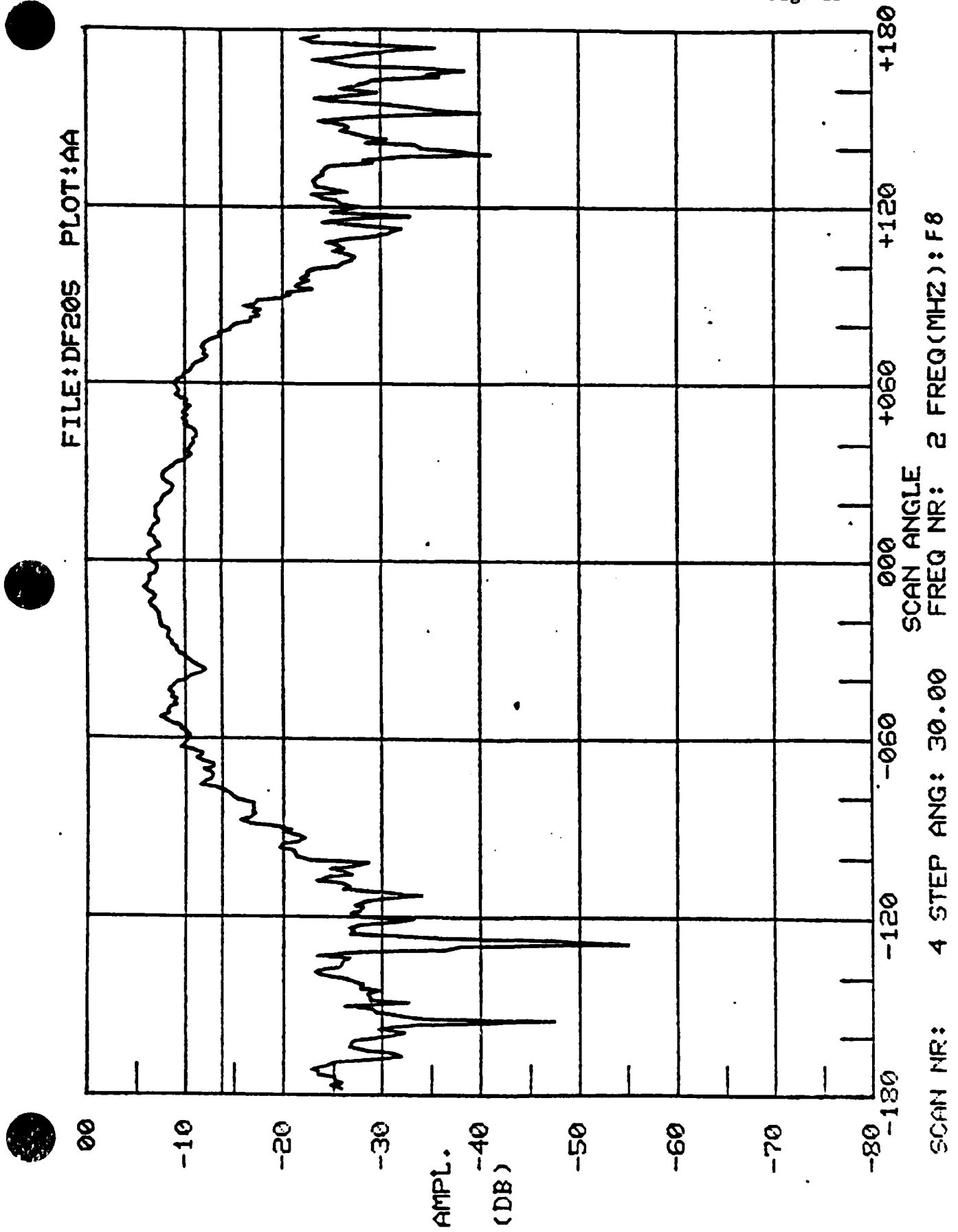


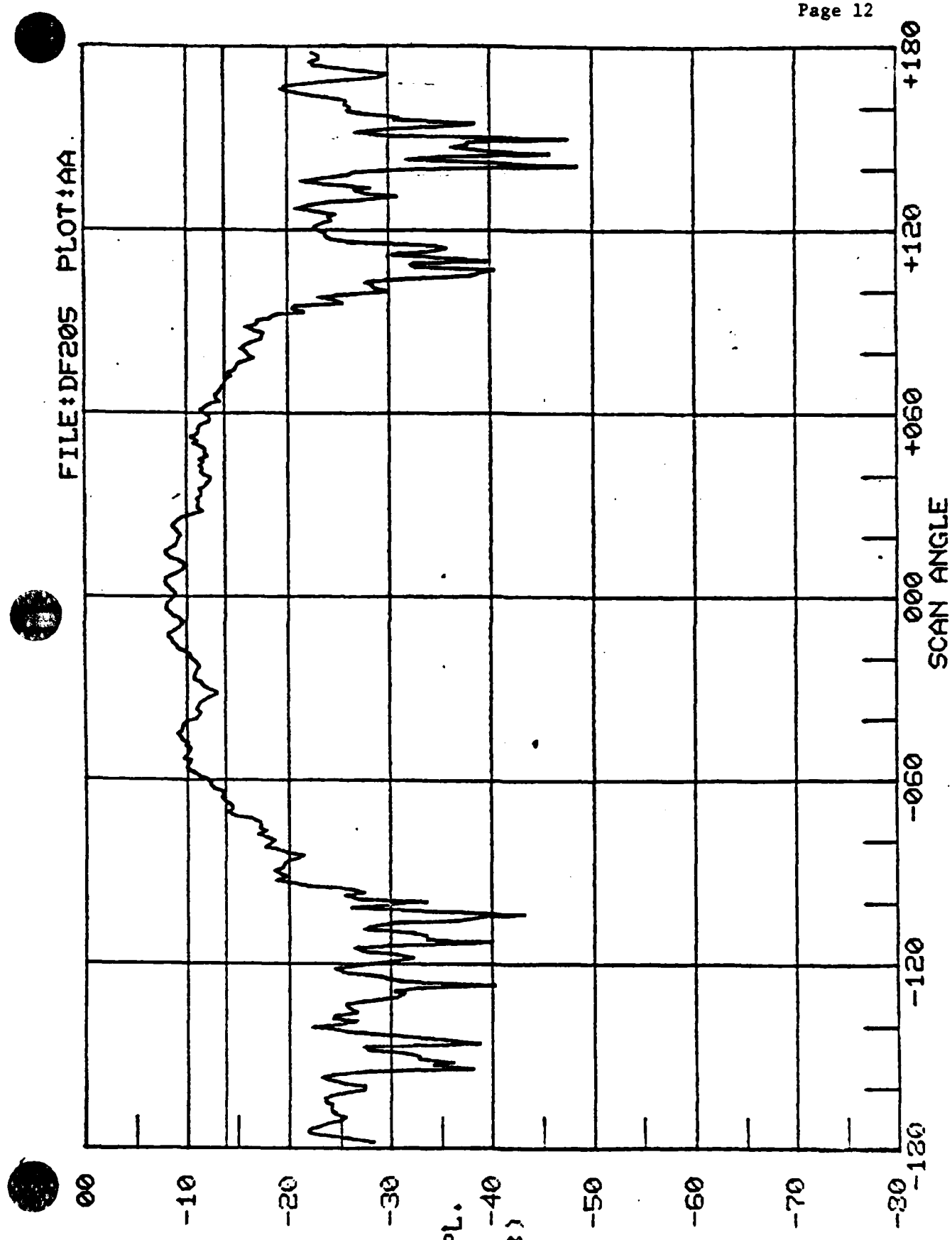

2.8
2.5
3.2
2.2
2.0
1.8
1.25
1.4
1.6

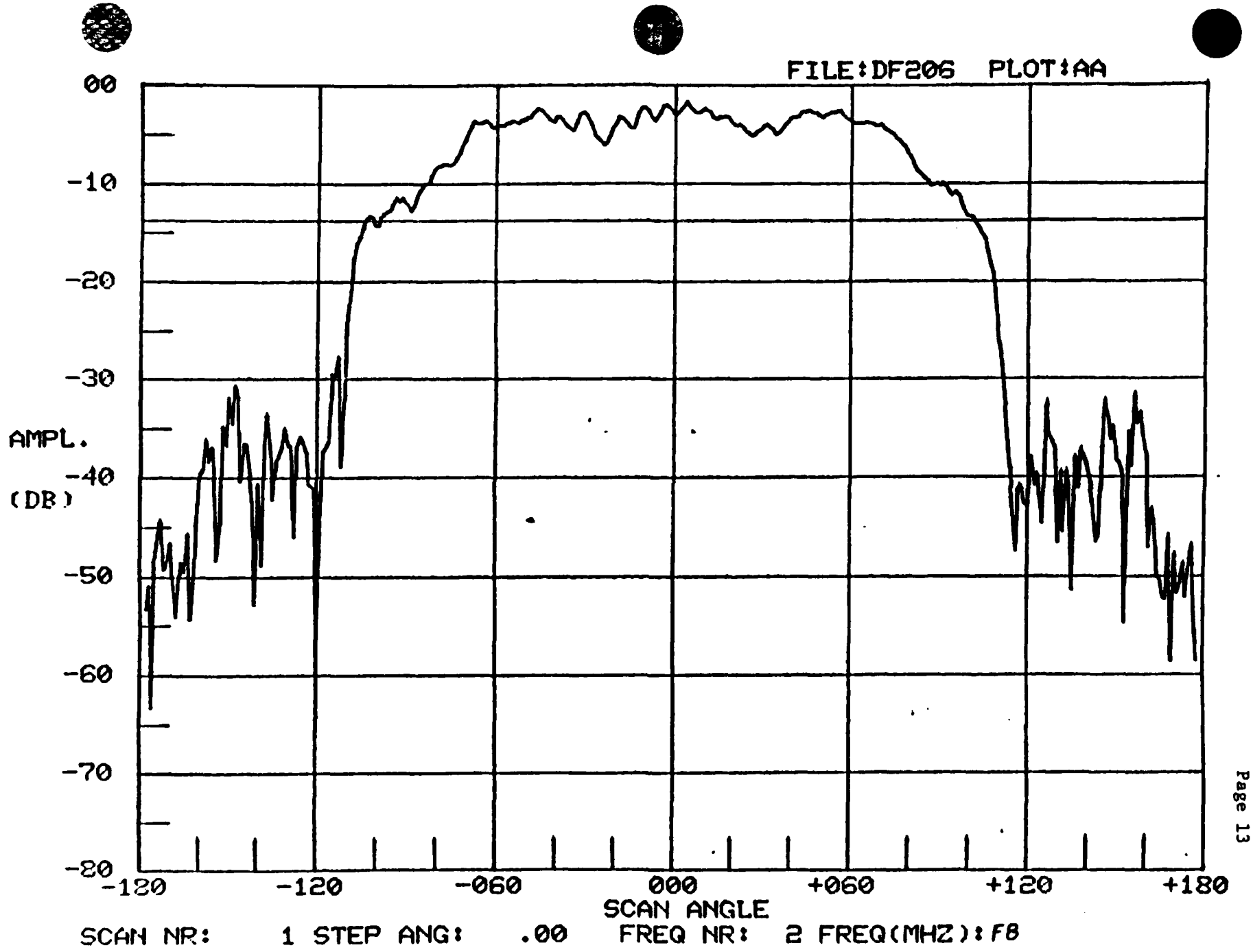

FILE:DF20S PLOT:AA
00
-10
-20
-30
-40
-50
-60
-70
-80
AMPL.
(DB)
-180
-120
-060
000
+060
+120
+180
SCAN ANGLE
SCAN NR: 1 STEP ANG: .00 FREQ NR: 2 FREQ(MHZ): F8


FILE:DF205 PLOT:AA
00
-10
-20
-30
-40
-50
-60
-70
-80
AMPL.
(DB)
-180
-120
-060
000
+060
+120
+180
SCAN ANGLE
SCAN NR: 2 STEP ANG: 10.00 FREQ NR: 2 FREQ(MHZ):F0


FILE:DF205 PLOT:AA
00
-10
-20
-30
-40
-50
-60
-70
-80
AMPL.
(DB)
-180
-120
-060
000
+060
+120
+180
SCAN ANGLE
SCAN NR:
3 STEP ANG: 20.00
FREQ NR: 2 FREQ(MHZ): F8


FILE:DF20S PLOT:AA
00
-10
-20
-30
-40
-50
-60
-70
-80
AMPL.
(DB)
-180
-120
-060
000
+060
+120
+180
SCAN ANGLE
SCAN NR: 4 STEP ANG: 30.00 FREQ NR: 2 FREQ(MHZ): F8


FILE:DF20S PLOT:AA
00
-10
-20
-30
-40
-50
-60
-70
-80
AMPL.
(DB)
-120
-060
000
+060
+120
+180
SCAN ANGLE
SCAN NR: 5 STEP ANG: 40.00 FREQ NR: 2 FREQ(MHZ): F8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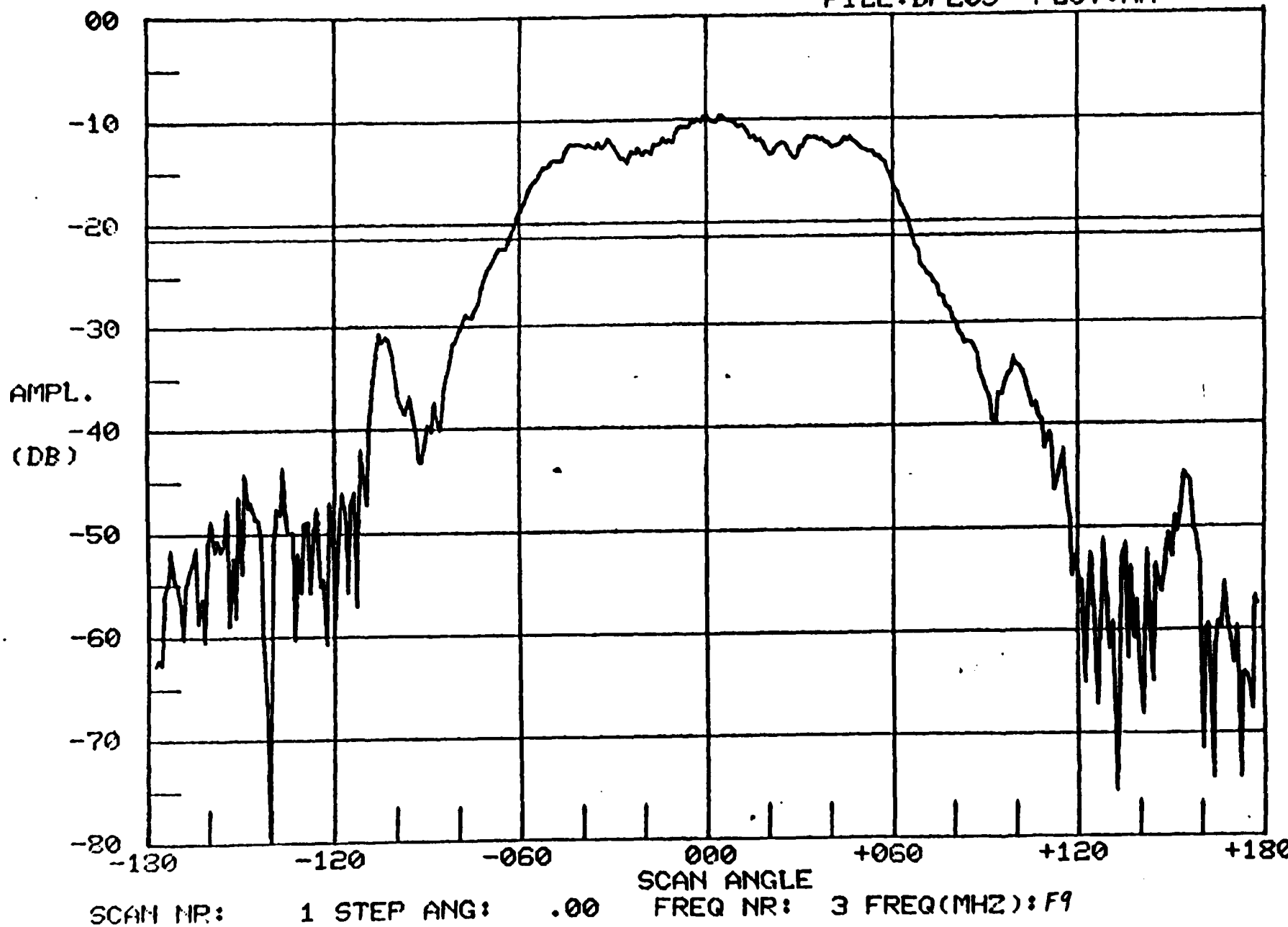
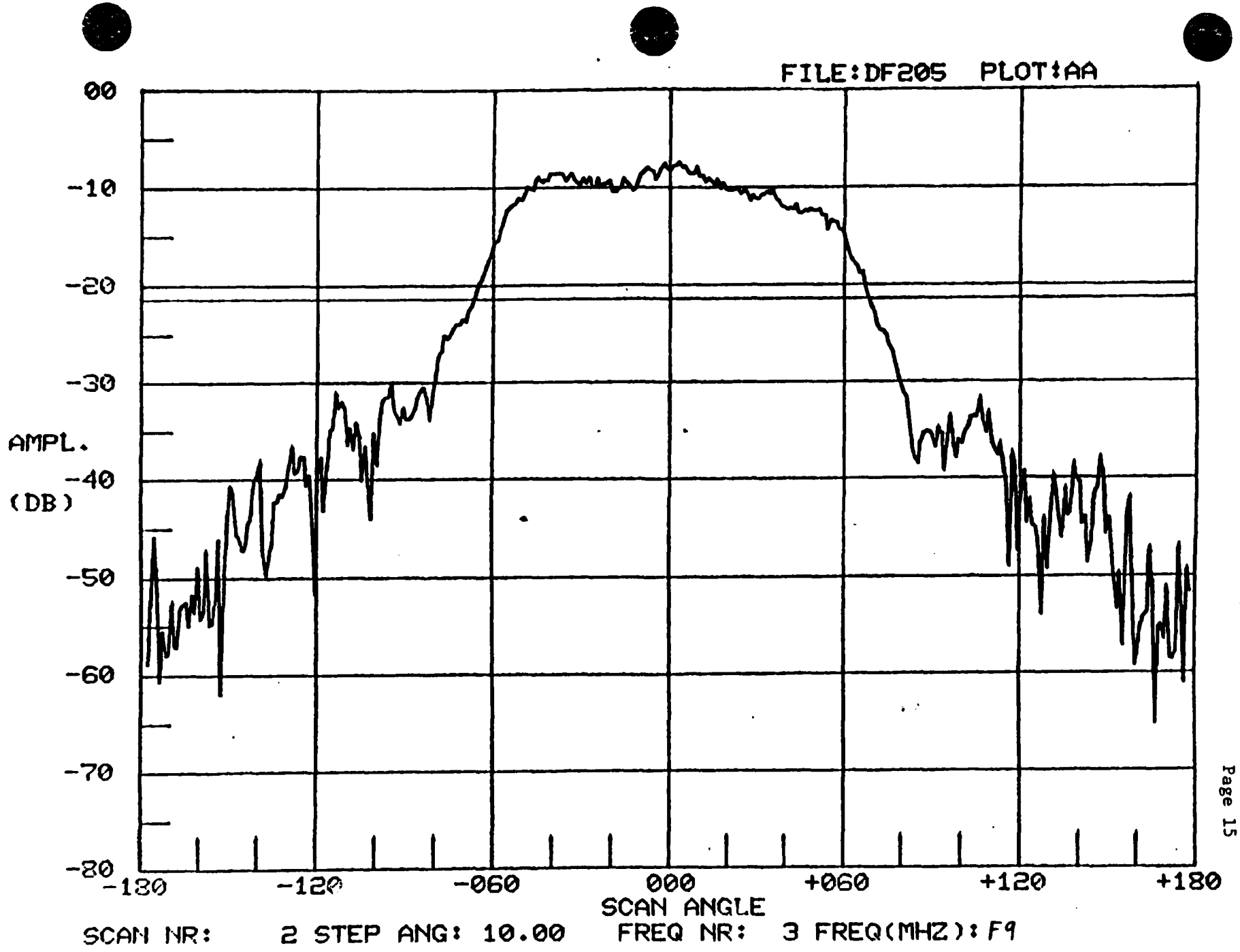
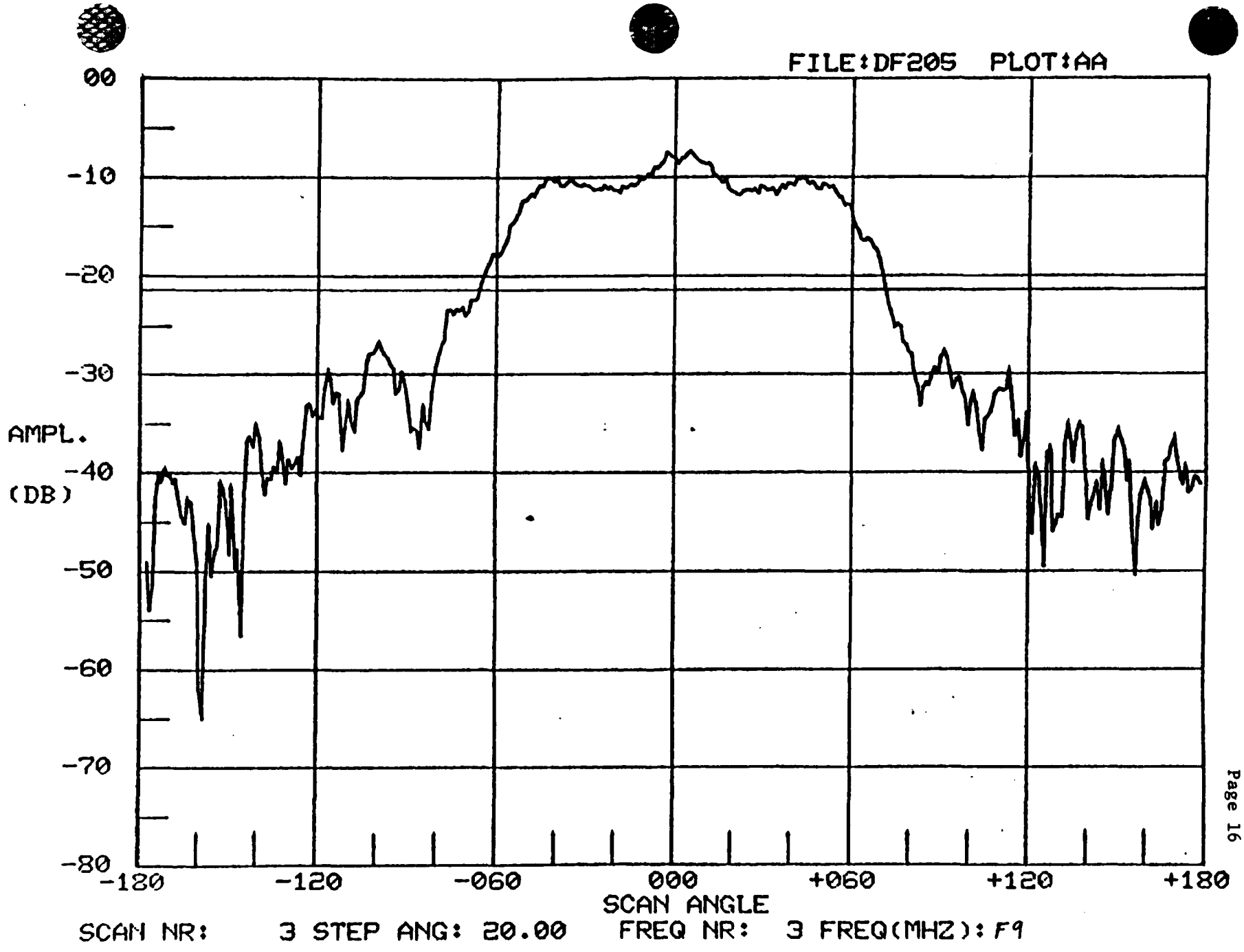
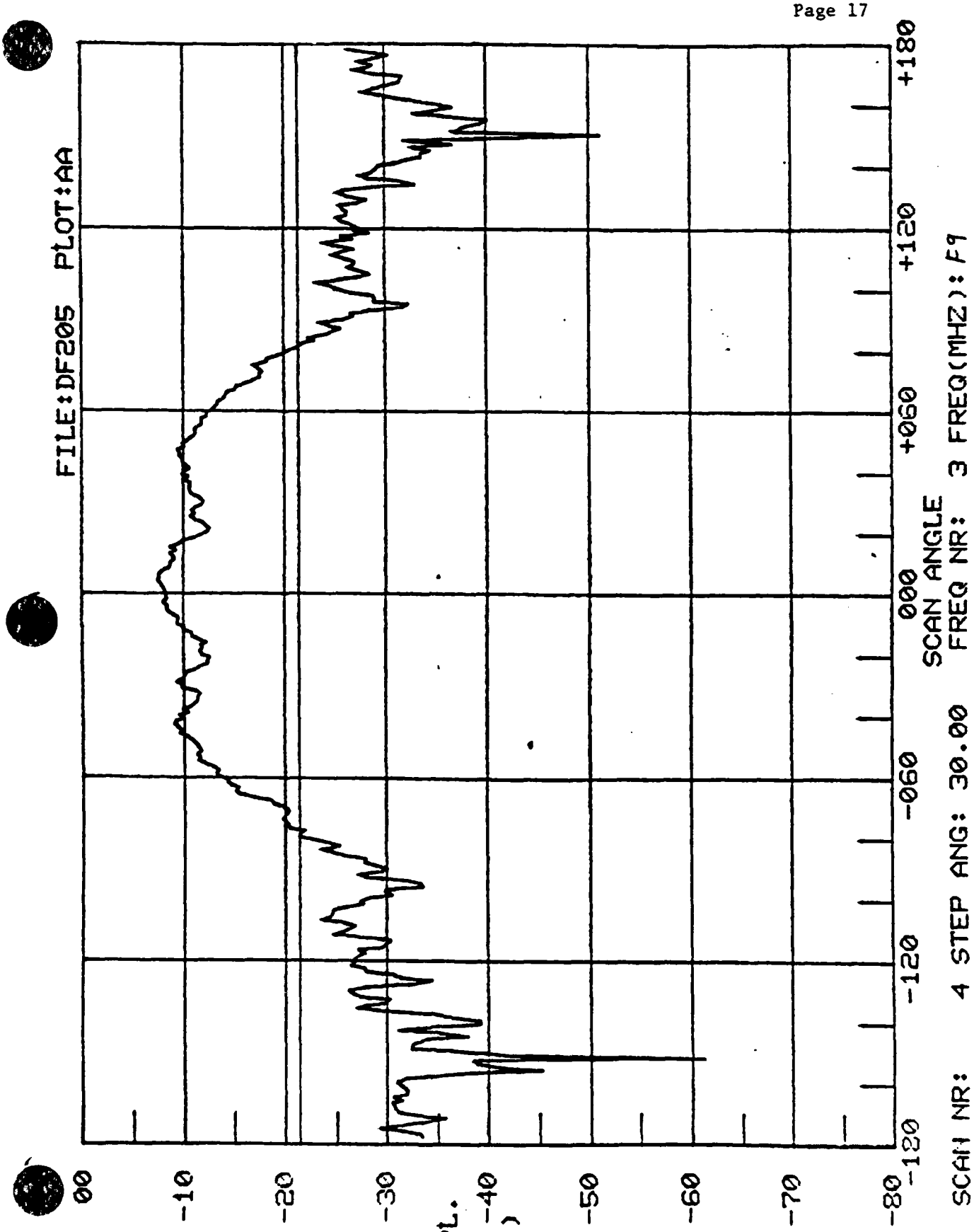
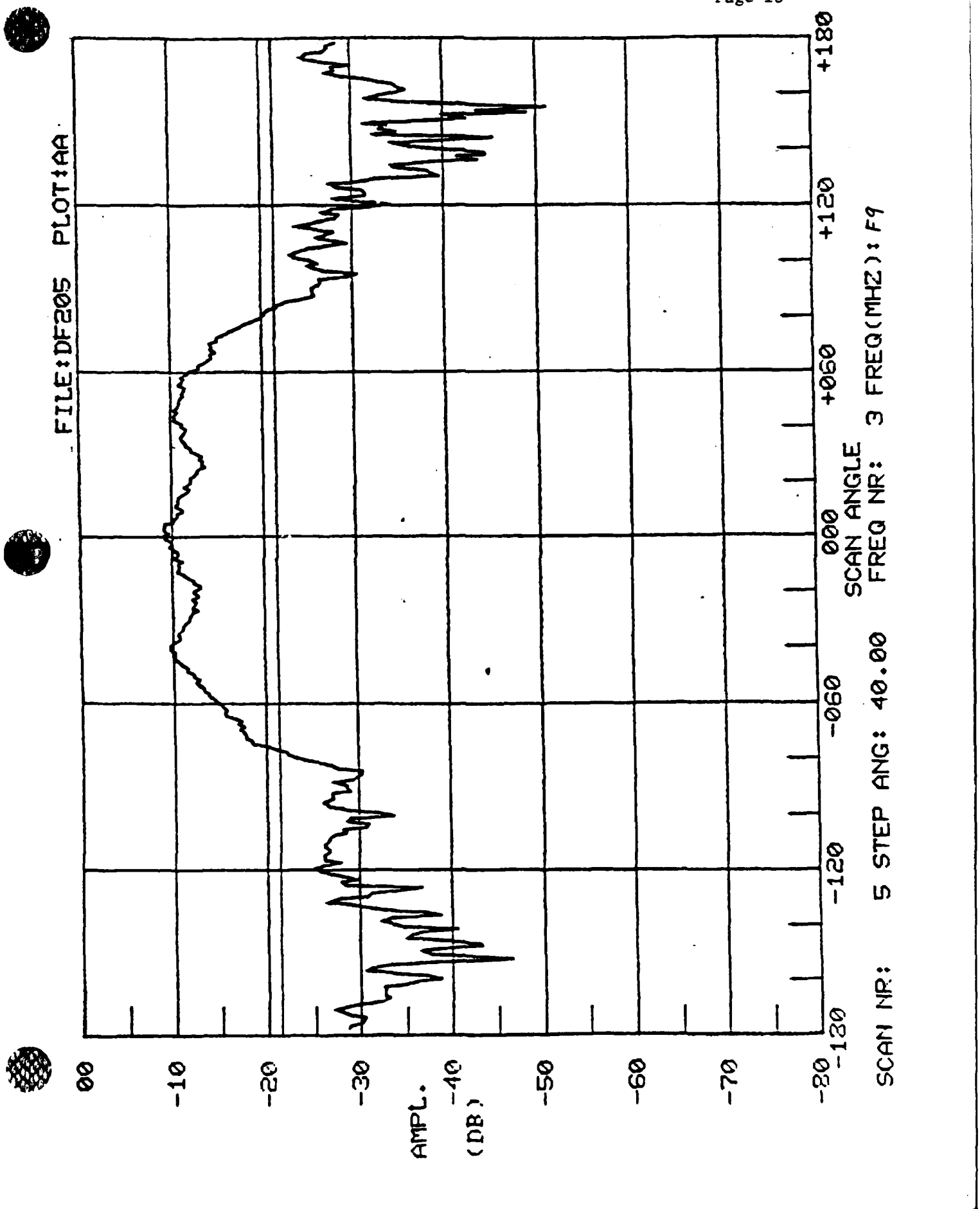
00
-10
-20
-30
AMPL.
-40
(DB)
-50
-60
-70
-80
-180
-120
-060
000
+060
+120
+180
SCAN ANGLE
SCAN NR: 1 STEP ANG: .00 FREQ NR: 2 FREQ(MHZ):F8

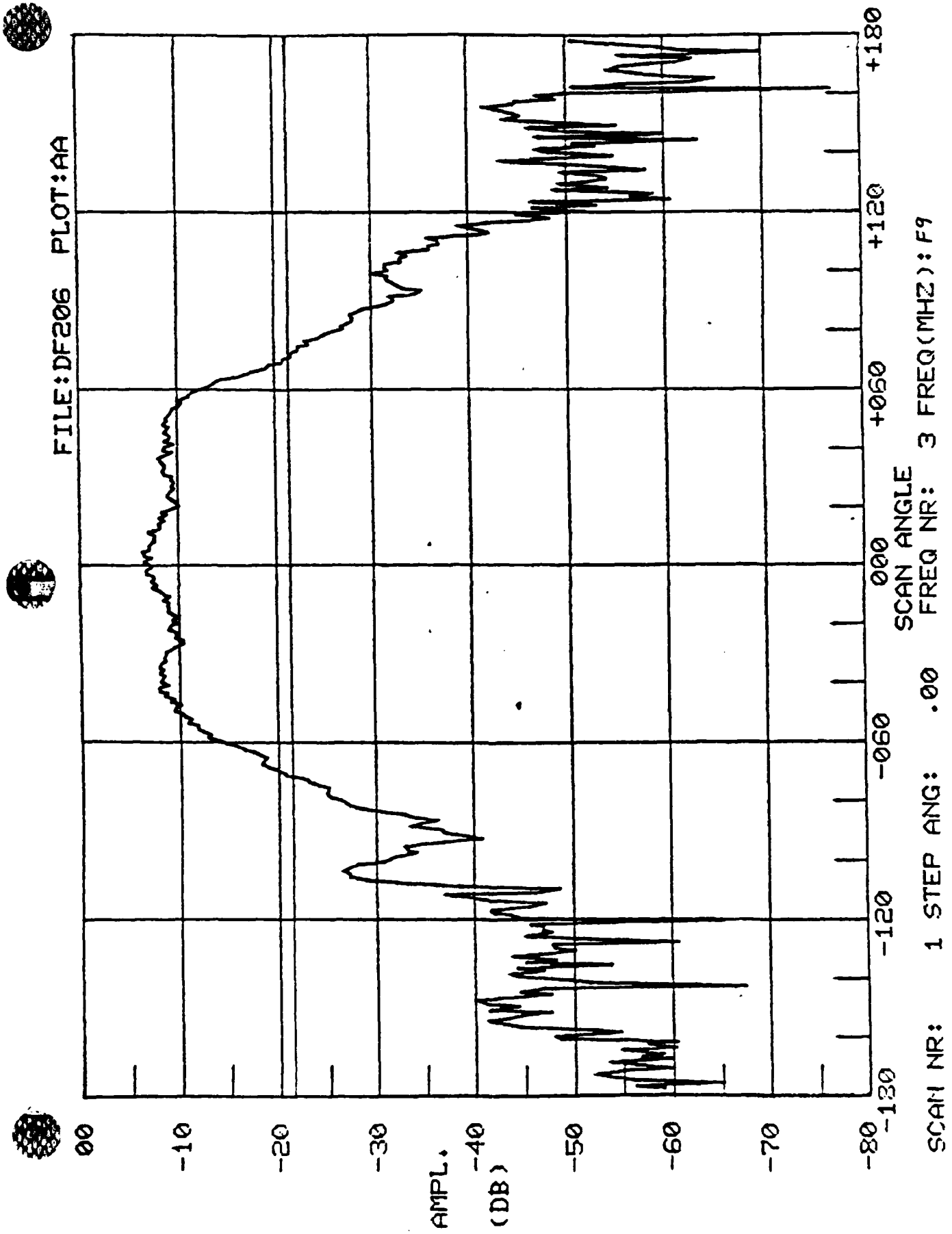

FILE:DF205 PLOT:AA
00
-10
-20
-30
AMPL.
-40
(DB)
-50
-60
-70
-80
-180
-120
-060
000
+060
+120
+180
SCAN ANGLE
SCAN NR: 1 STEP ANG: .00 FREQ NR: 3 FREQ(MHZ): F9

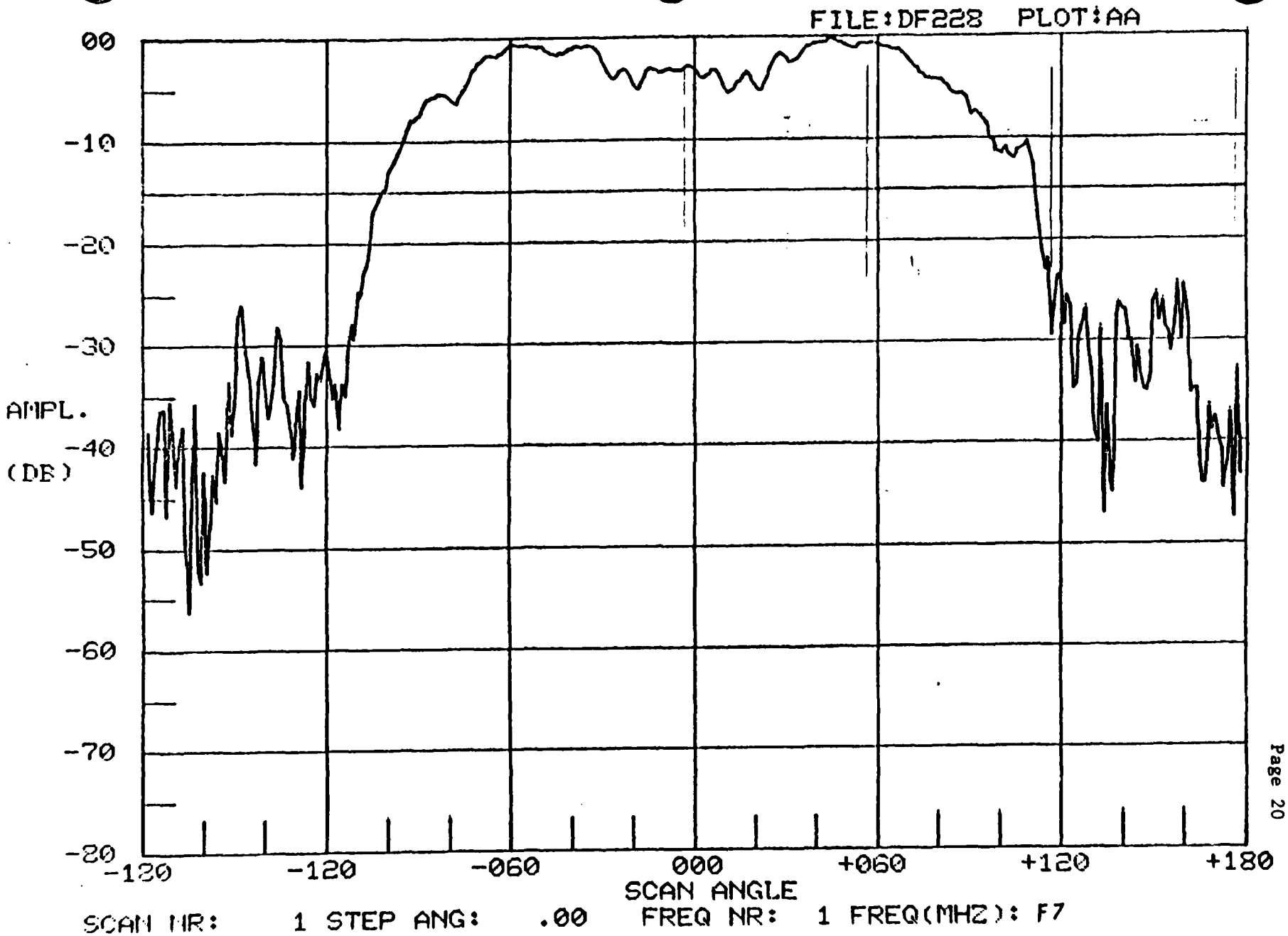

FILE:DF205 PLOT:AA
00
-10
-20
-30
AMPL.
-40
(DB)
-50
-60
-70
-80
-180
-120
-060
000
+060
+120
+180
SCAN ANGLE
SCAN NR: 2 STEP ANG: 10.00 FREQ NR: 3 FREQ(MHZ): F9

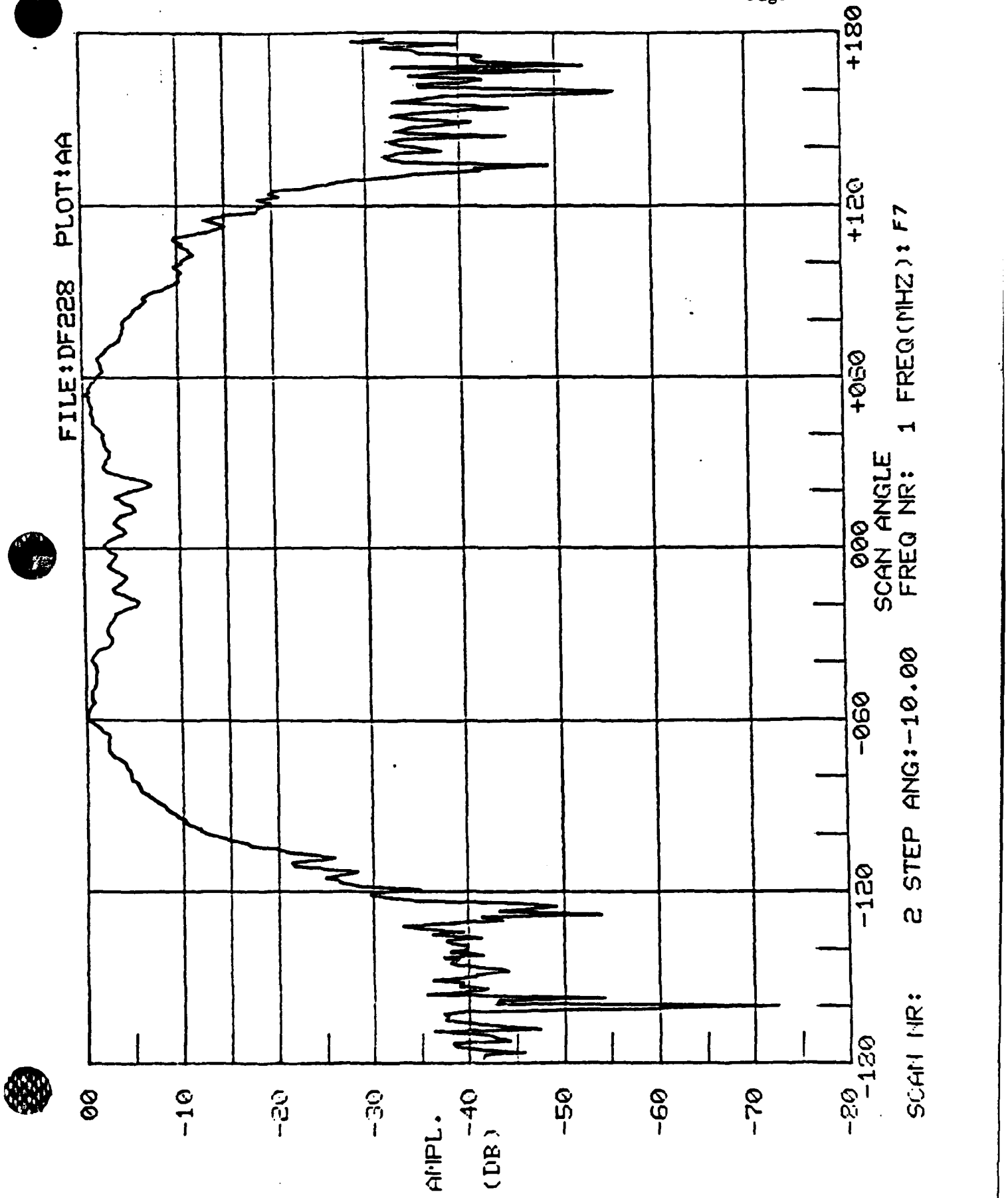

FILE:DF205 PLOT:AA
00
-10
-20
-30
AMPL.
-40
(DB)
-50
-60
-70
-80
-180
-120
-060
000
+060
+120
+180
SCAN ANGLE
SCAN NR: 3 STEP ANG: 20.00 FREQ NR: 3 FREQ(MHZ): F9

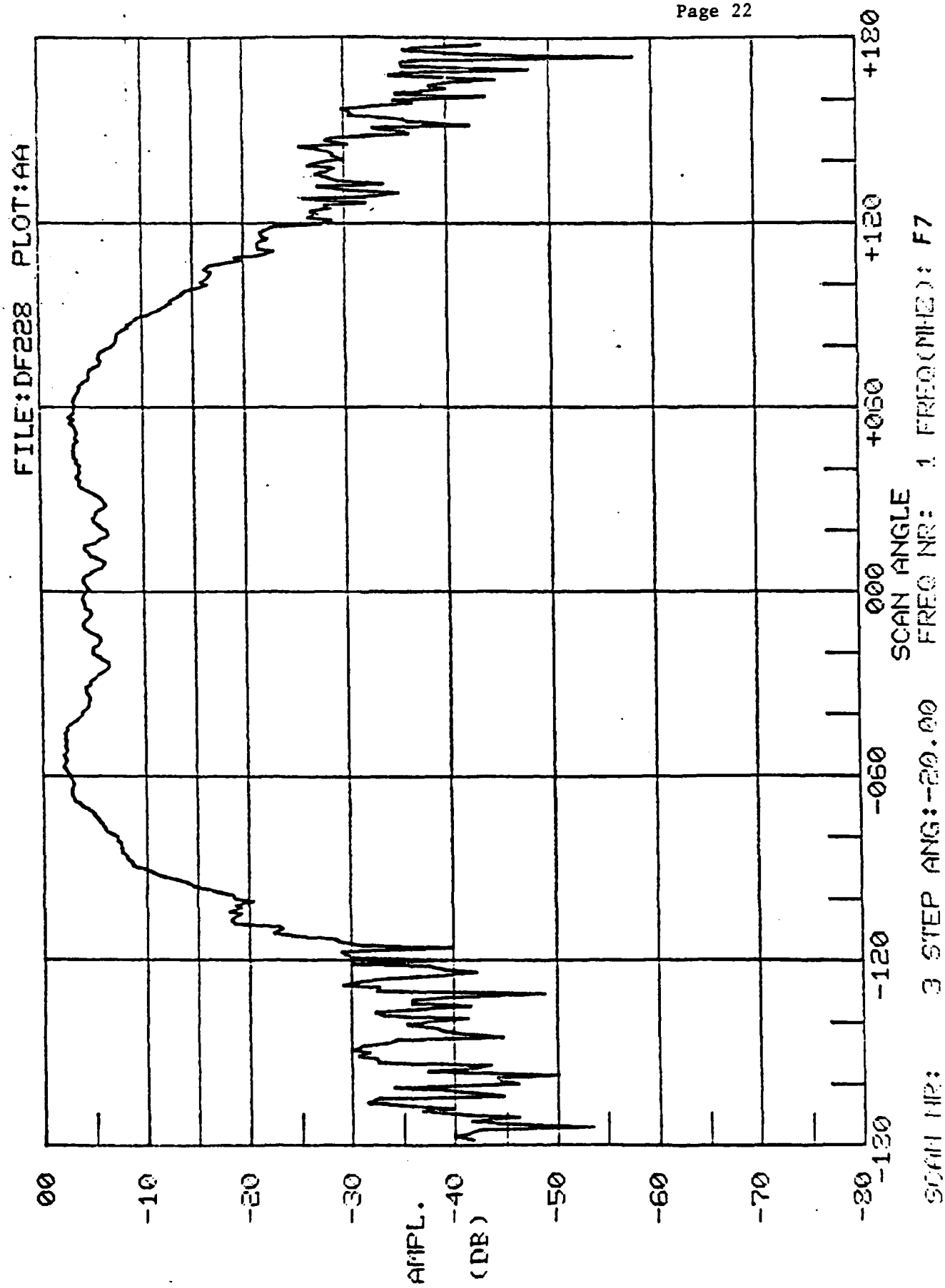

FILE:DF205 PLOT:AA
00
-10
-20
-30
-40
-50
-60
-70
-80
AMPL.
(DB)
-120
-060
000
+060
+120
+180
SCAN ANGLE
SCAN NR: 4 STEP ANG: 30.00 FREQ NR: 3 FREQ(MHZ): F9

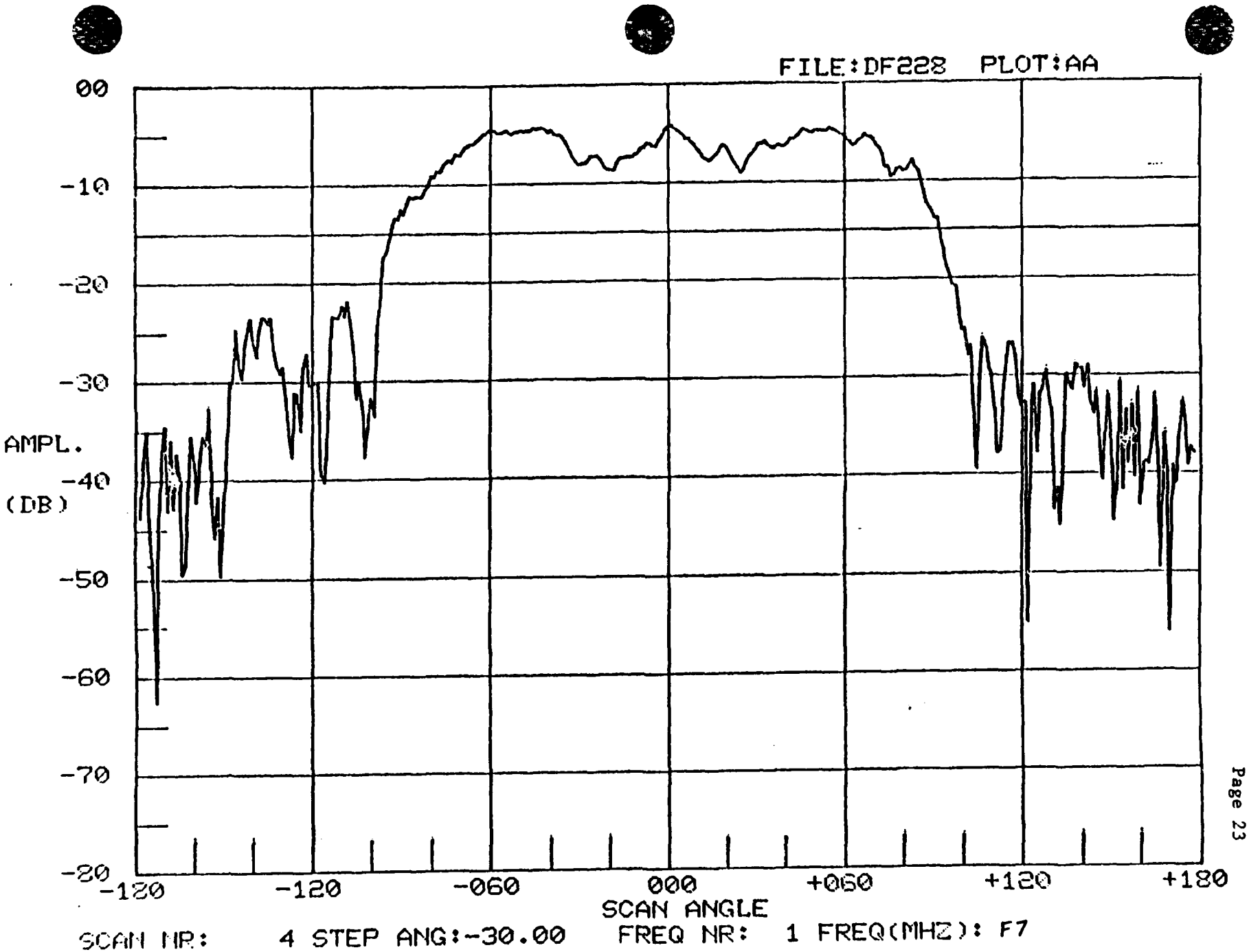

FILE:DF205 PLOT:AA
AMPL. (DB)
00
-10
-20
-30
-40
-50
-60
-70
-80
-120
000
+060
+120
+180
SCAN ANGLE
FREQ NR: 3 FREQ(MHZ): F9
SCAN NR: 5 STEP ANG: 40.00

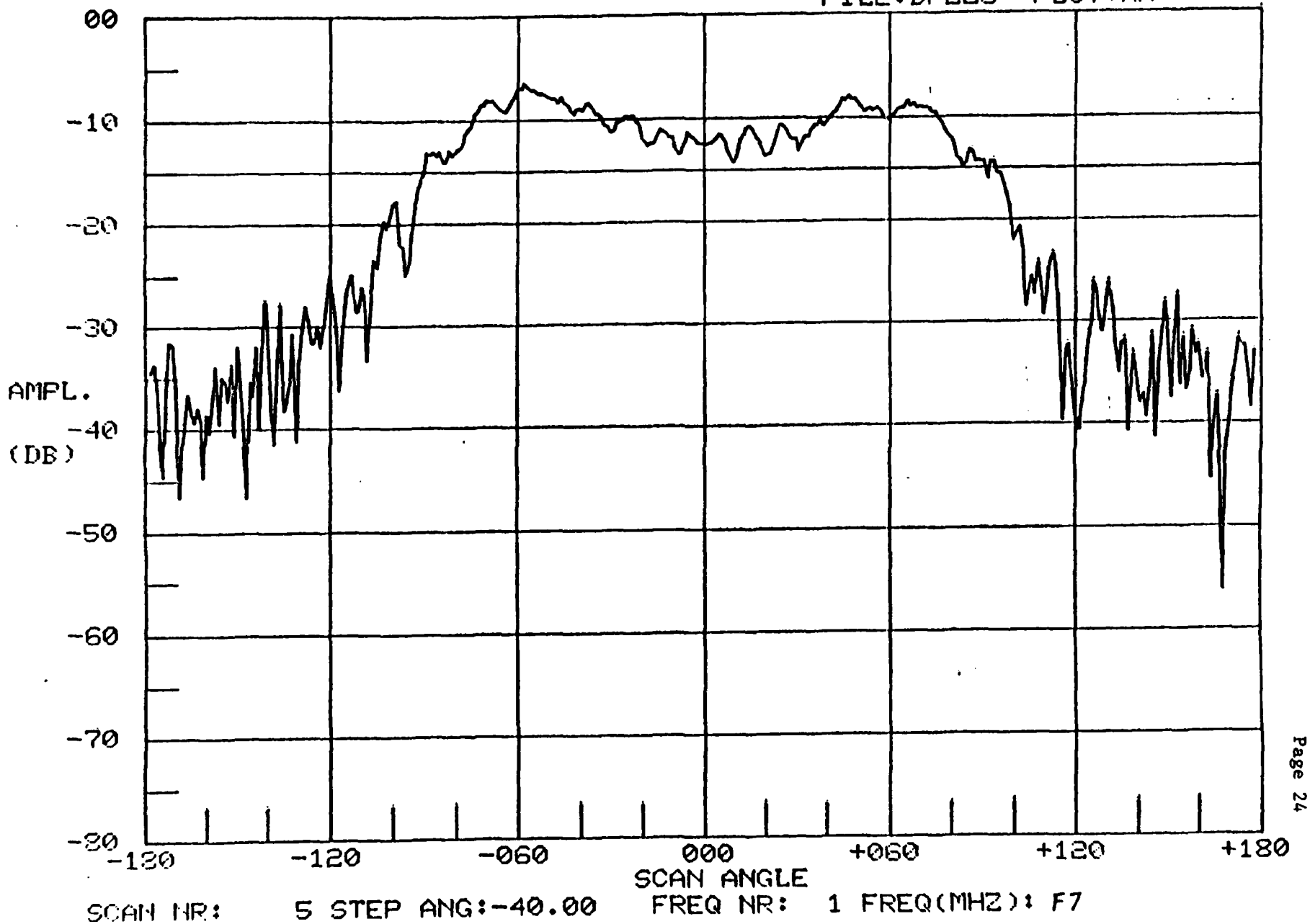

FILE:DF206 PLOT:AA
00
-10
-20
-30
-40
-50
-60
-70
-80
AMPL.
(DB)
-130
-120
-060
000
+060
+120
+180
SCAN ANGLE
SCAN NR: 1 STEP ANG: .00 FREQ NR: 3 FREQ(MHZ): F9

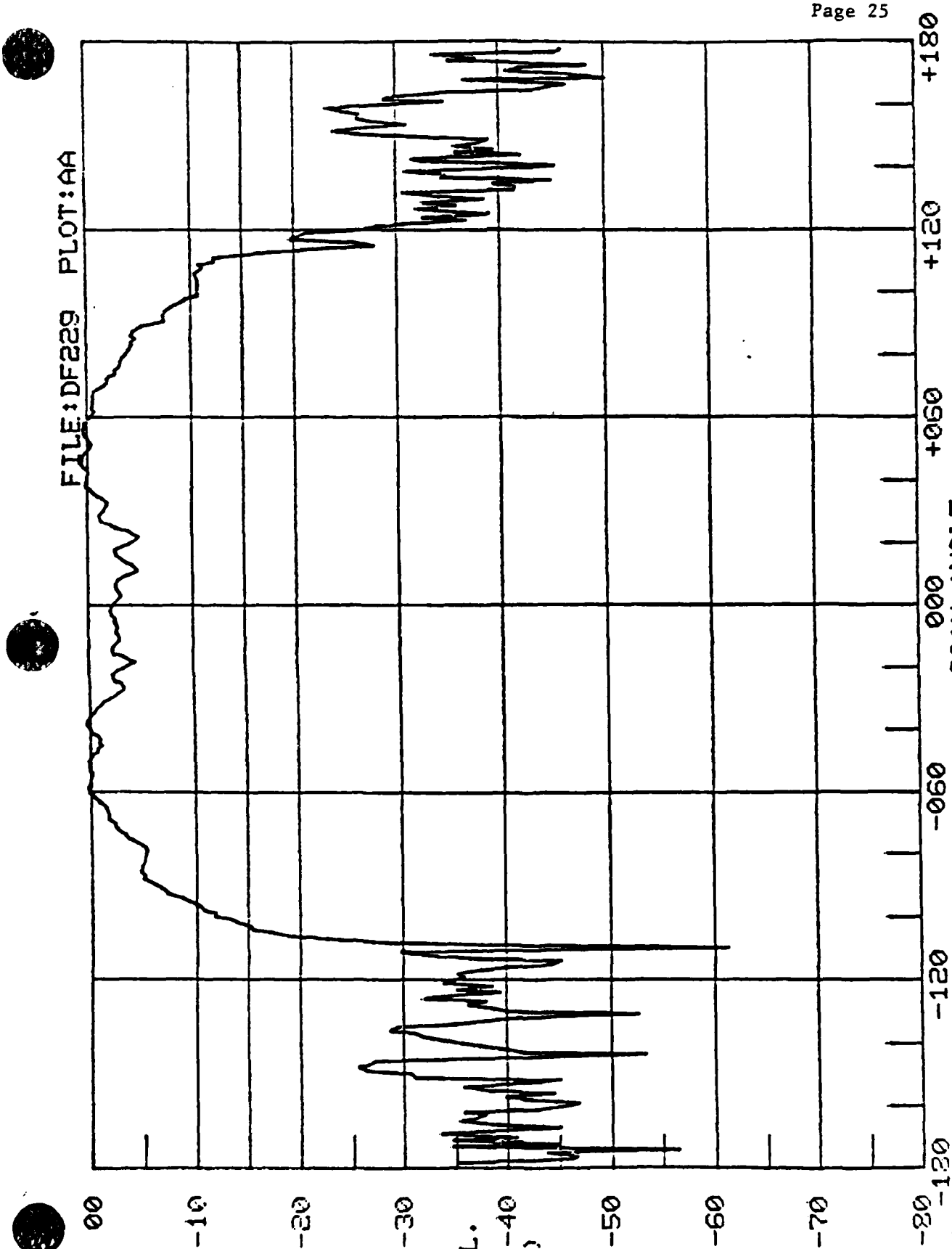

FILE:DF228 PLOT:AA
00
-10
-20
-30
AMPL.
-40
(DB)
-50
-60
-70
-80
-180
-120
-060
000
+060
+120
+180
SCAN ANGLE
SCAN NR: 1 STEP ANG: .00 FREQ NR: 1 FREQ(MHZ): F7

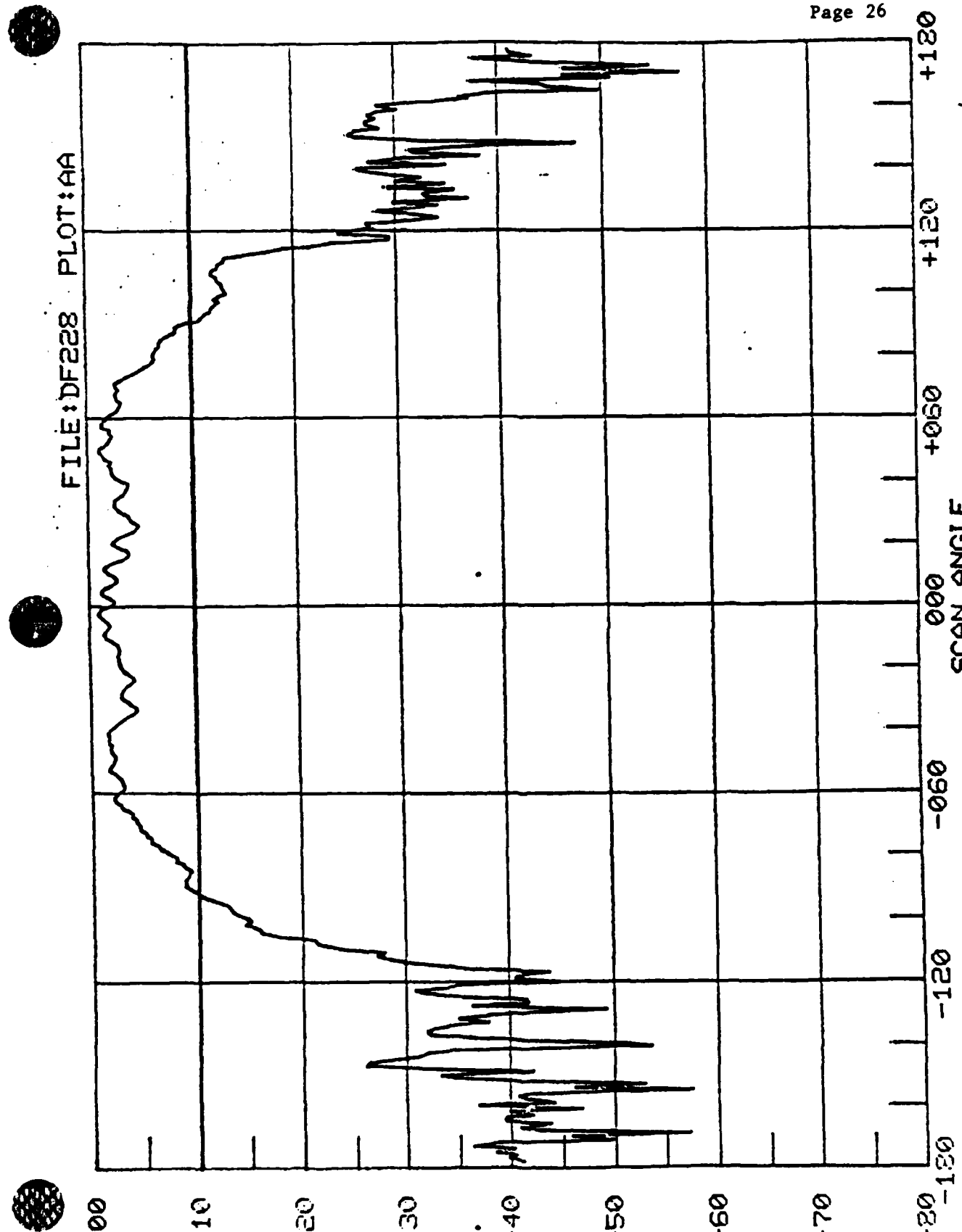

FILE:DF228 PLOT:AA
00
-10
-20
-30
-40
-50
-60
-70
-80
AMPL.
(DB)
-180
-120
-060
000
+060
+120
+180
SCAN ANGLE
SCAN NR: 2 STEP ANG:-10.00 FREQ NR: 1 FREQ(MHZ): F7

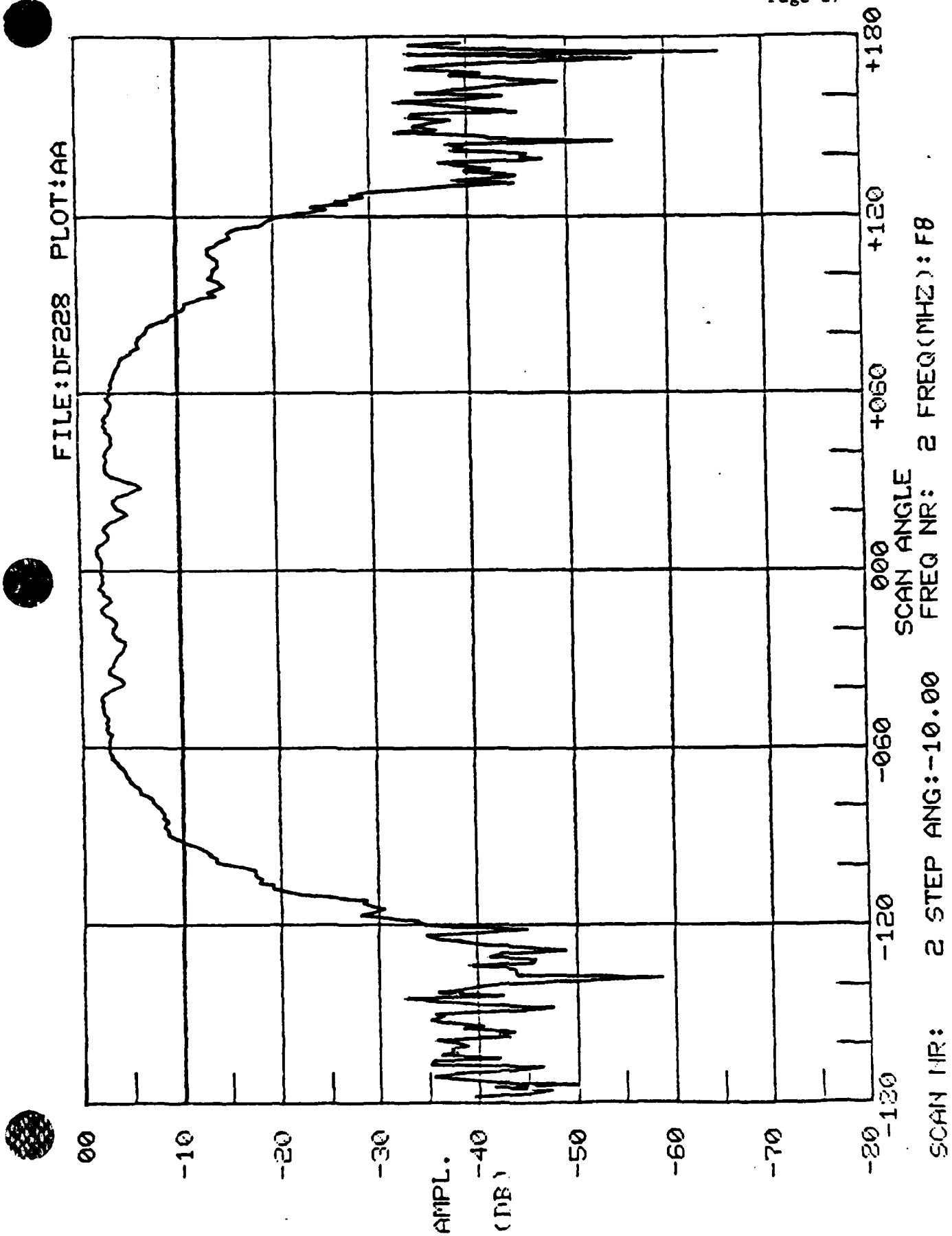

FILE:DF228 PLOT:AA
00
-10
-20
-30
-40
-50
-60
-70
-80
AMPL.
(DB)
-120
-060
000
+060
+120
+180
SCAN ANGLE
SCAN NR: 3 STEP ANG:-20.00 FREQ NR: 1 FREQ(MHZ): F7

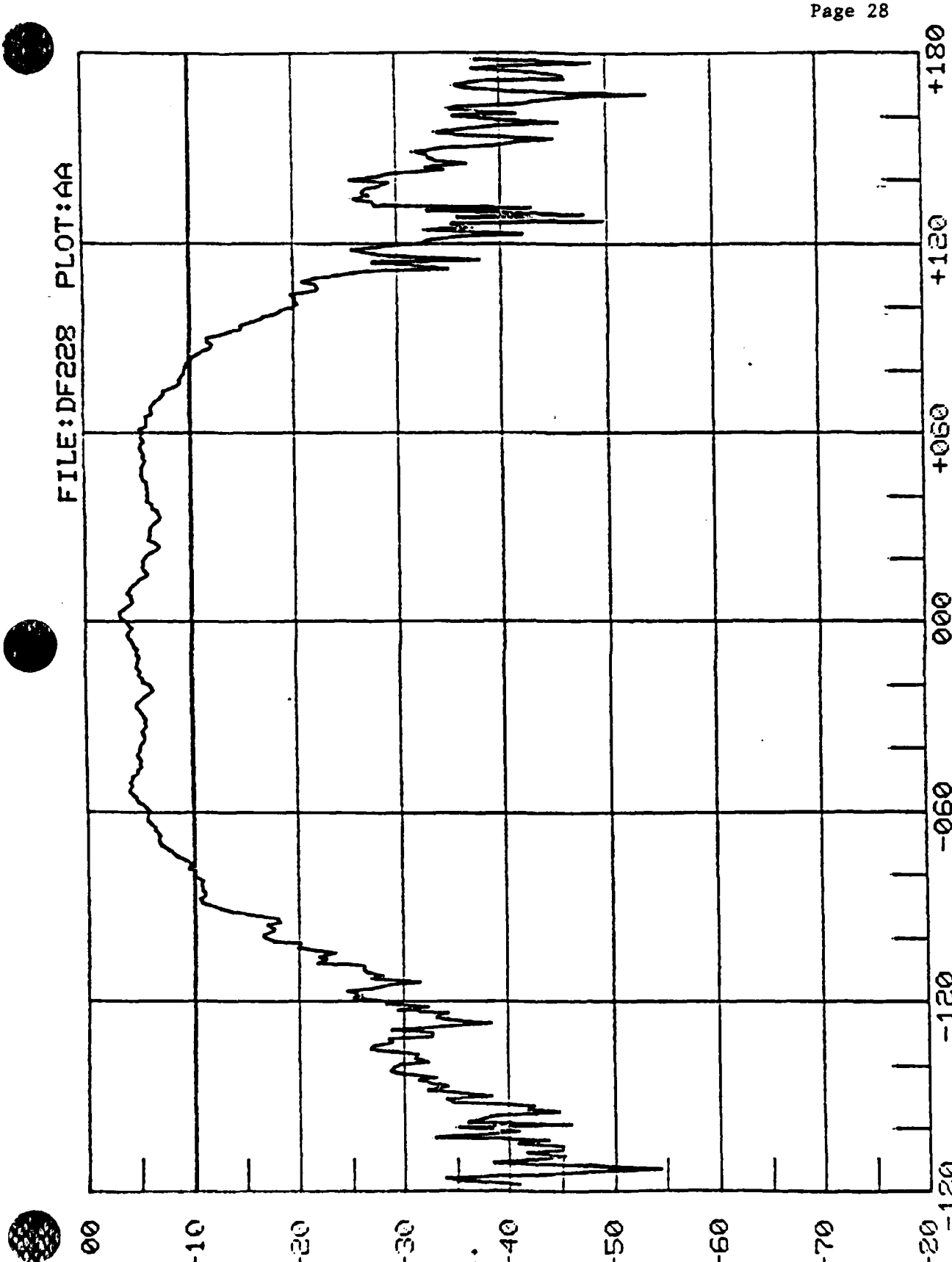

FILE:DF228 PLOT:AA
00
-10
-20
-30
AMPL.
-40
(DB)
-50
-60
-70
-80
-180
-120
-060
000
+060
+120
+180
SCAN ANGLE
SCAN NR: 4 STEP ANG:-30.00 FREQ NR: 1 FREQ(MHZ): F7

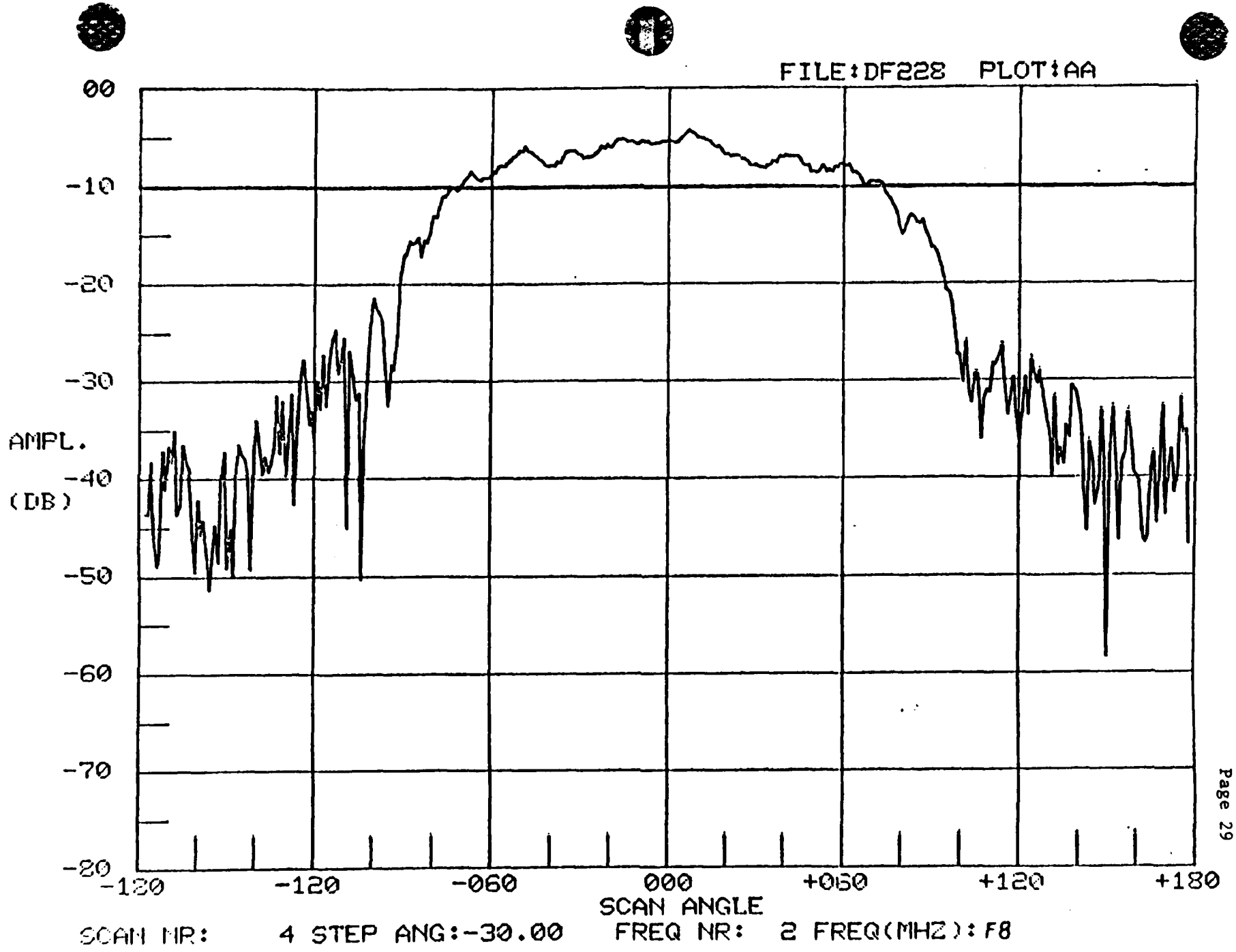

FILE:DF228 PLOT:AA
00
-10
-20
-30
AMPL.
-40
(DB)
-50
-60
-70
-80
-180
-120
-060
000
+060
+120
+180
SCAN ANGLE
SCAN NR: 5 STEP ANG:-40.00 FREQ NR: 1 FREQ(MHZ): F7


FILE:DF229 PLOT:AA
00
-10
-20
-30
-40
-50
-60
-70
-80
AMPL.
(DB)
-180
-120
-060
000
+060
+120
+180
SCAN ANGLE
SCAN NR: 1 STEP ANG: .00 FREQ NR: 1 FREQ(MHZ): F7


FILE:DF228 PLOT:AA
00
-10
-20
-30
-40
-50
-60
-70
-80
AMPL.
(DB)
-120
-060
000
+060
+120
SCAN ANGLE
SCAN NR: 1 STEP ANG: .00 FREQ NR: 2 FREQ(MHZ): F8


FILE:DF228 PLOT:AA
00
-10
-20
-30
-40
-50
-60
-70
-80
AMPL.
(DB)
-180
-120
-060
000
+060
+120
+180
SCAN ANGLE
SCAN NR: 2 STEP ANG:-10.00 FREQ NR: 2 FREQ(MHZ): F8


FILE:DF228 PLOT:AA
00
-10
-20
-30
-40
-50
-60
-70
-80
AMPL.
(DB)
-180
-120
-060
000
+060
+120
+180
SCAN ANGLE
SCAN NR: 3 STEP ANG:-20.00 FREQ NR: 2 FREQ(MHZ): F8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SCAN ANGLE
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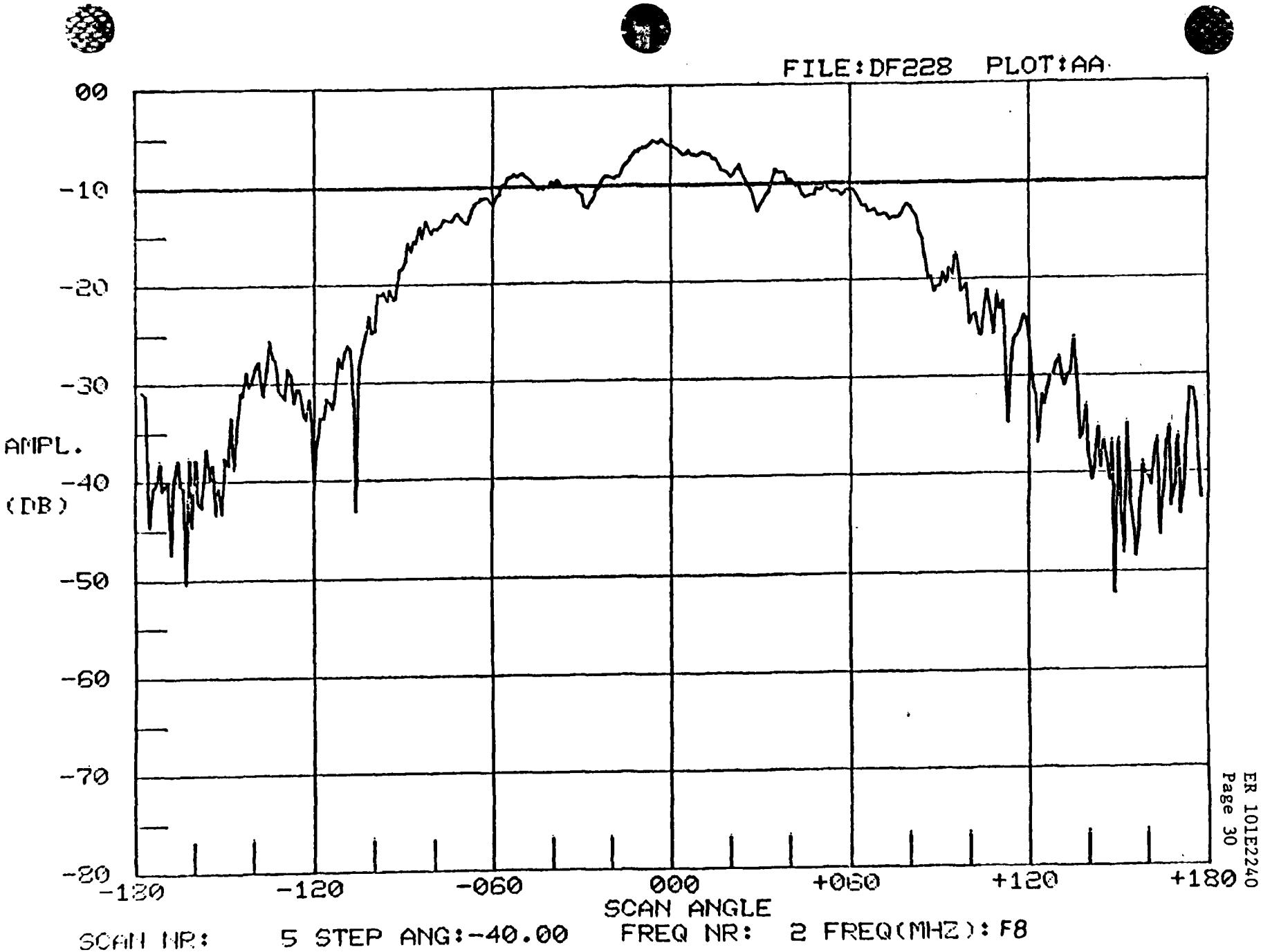
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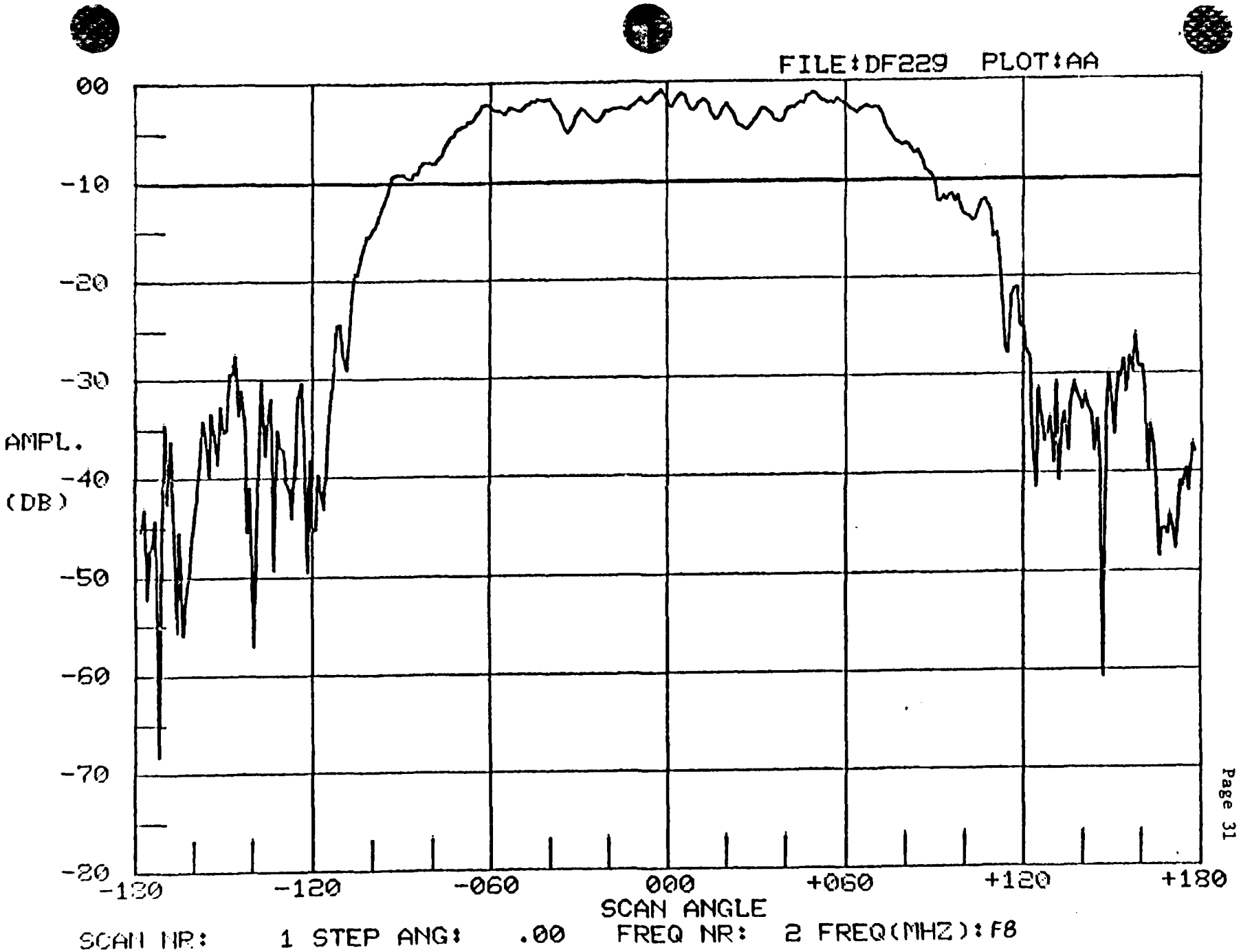
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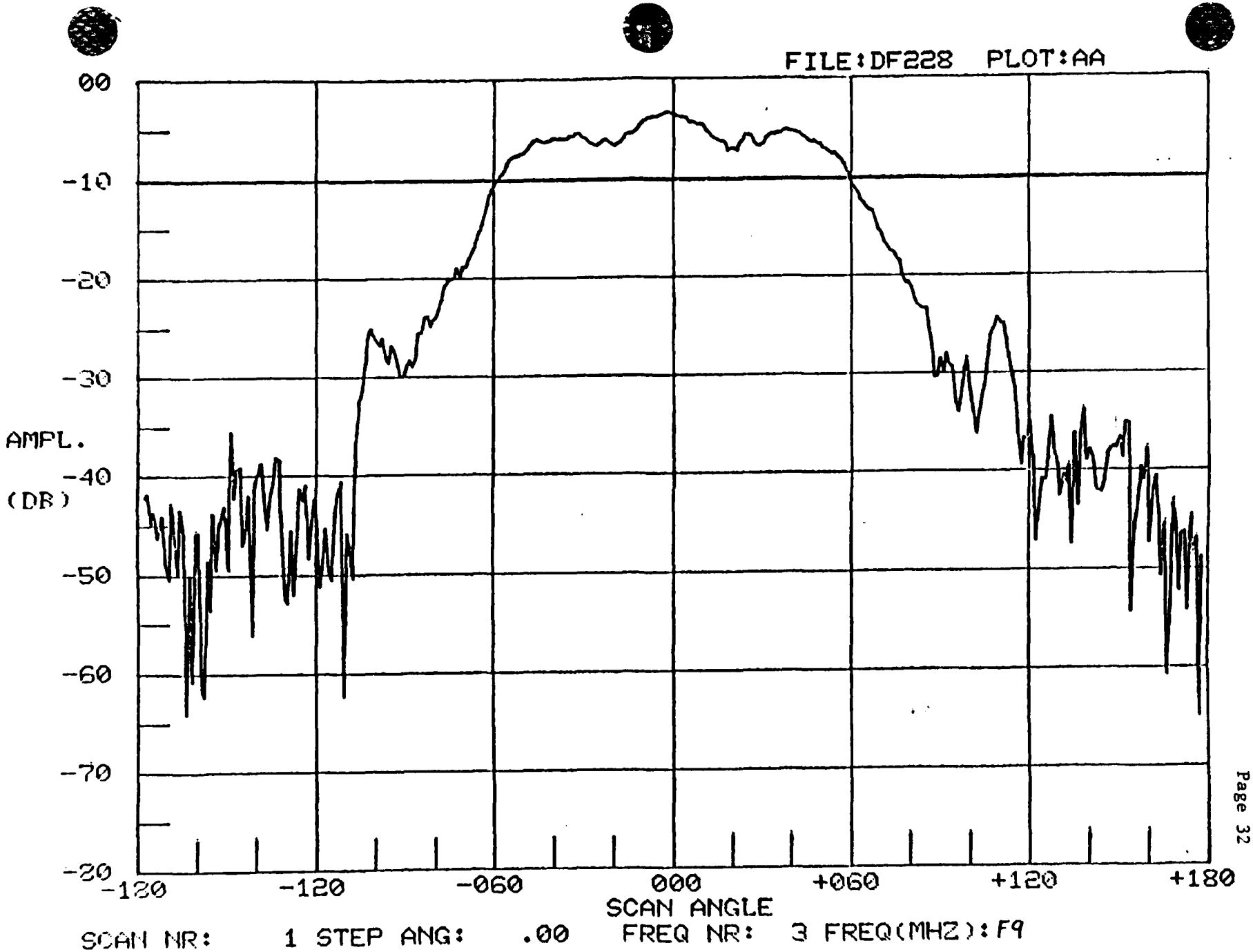
SCAN ANGLE
SCAN NR: 1 STEP ANG: .00 FREQ NR: 2 FREQ(MHZ):F8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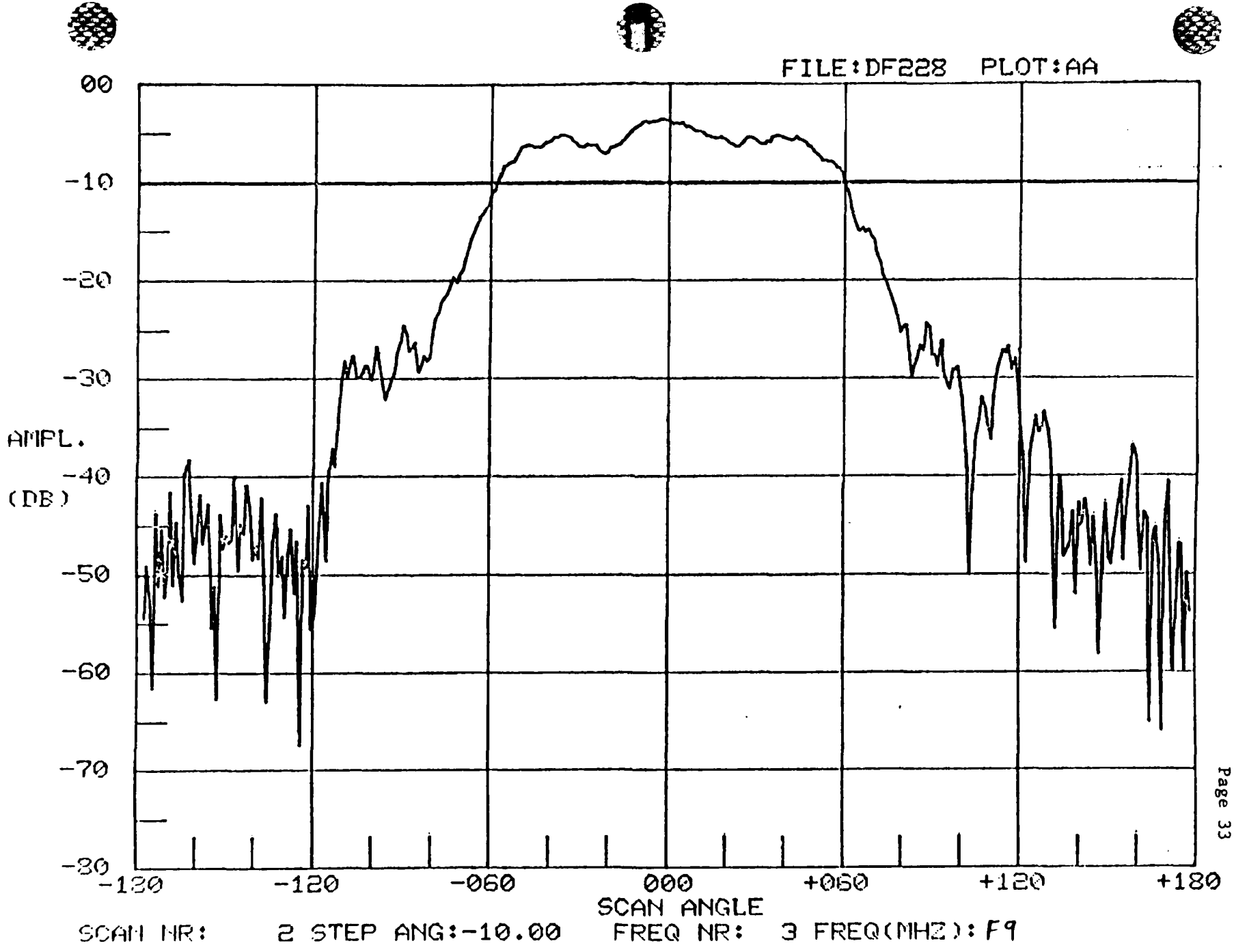
SCAN ANGLE
SCAN NR: 1 STEP ANG: .00 FREQ NR: 3 FREQ(MHZ):F9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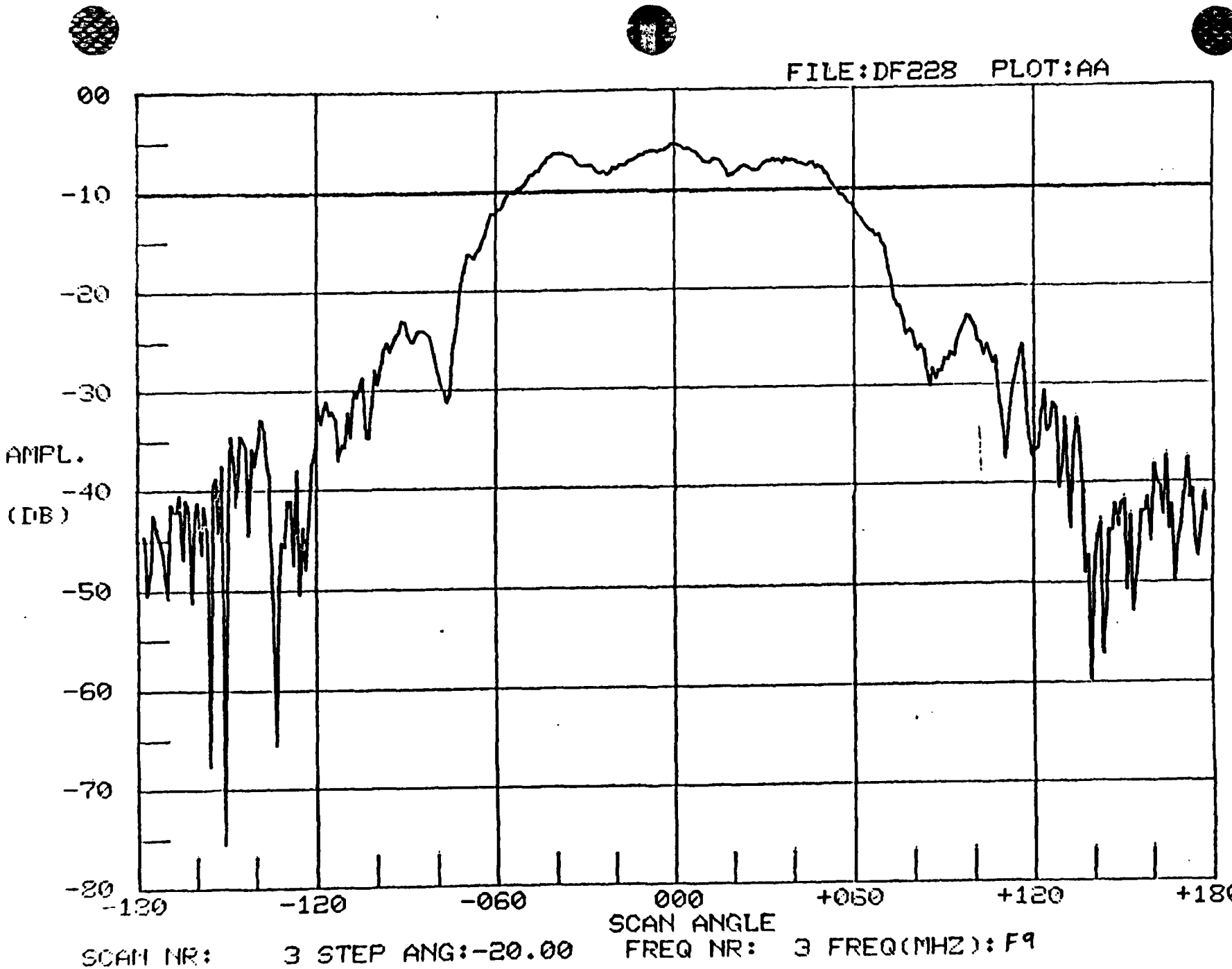
SCAN ANGLE
SCAN NR: 2 STEP ANG:-10.00 FREQ NR: 3 FREQ(MHZ): F9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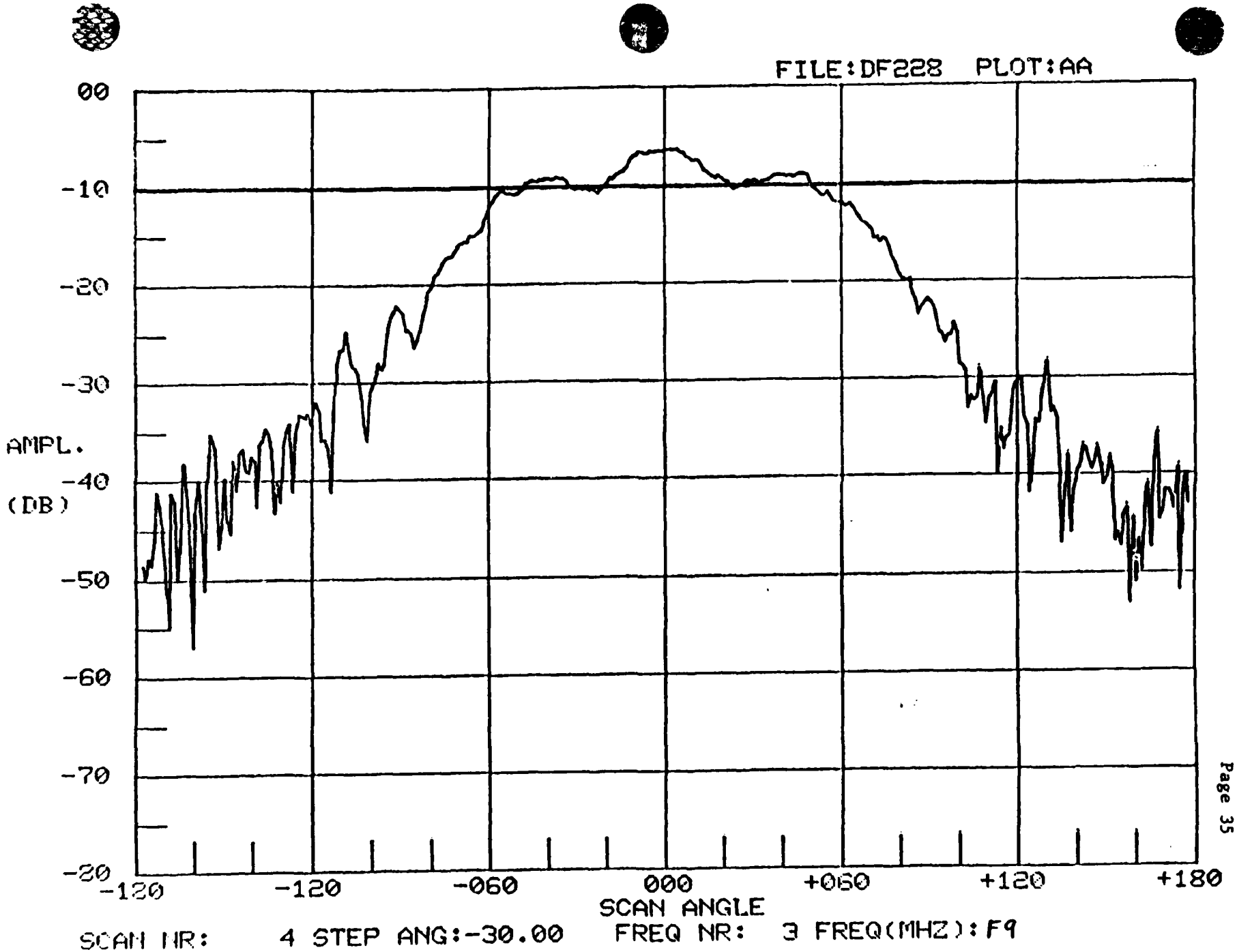
+180
SCAN ANGLE
SCAN NR: 3 STEP ANG:-20.00 FREQ NR: 3 FREQ(MHZ): F9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-70
-20
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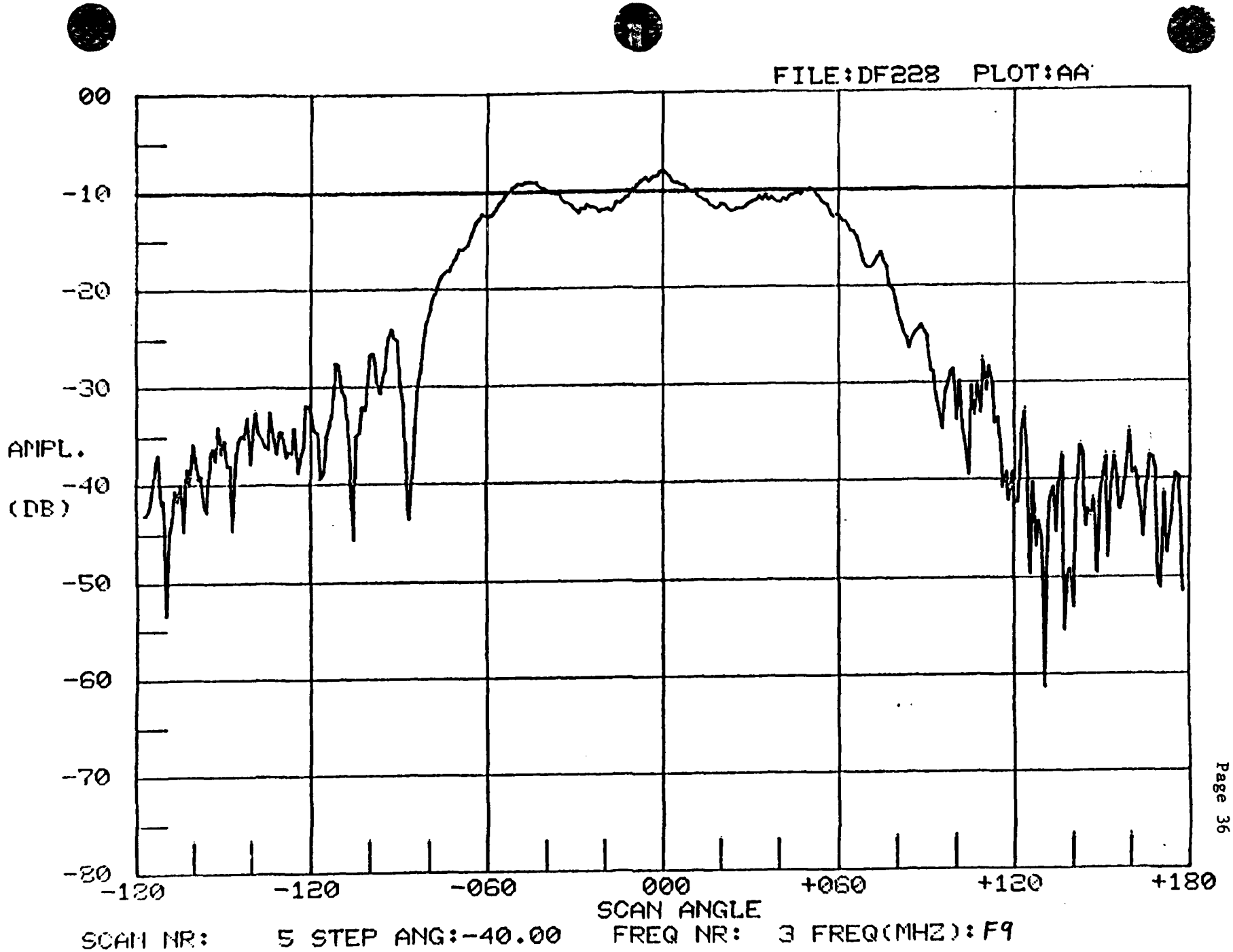
000
+060
+120
+180
SCAN ANGLE
SCAN NR: 4 STEP ANG:-30.00 FREQ NR: 3 FREQ(MHZ):F9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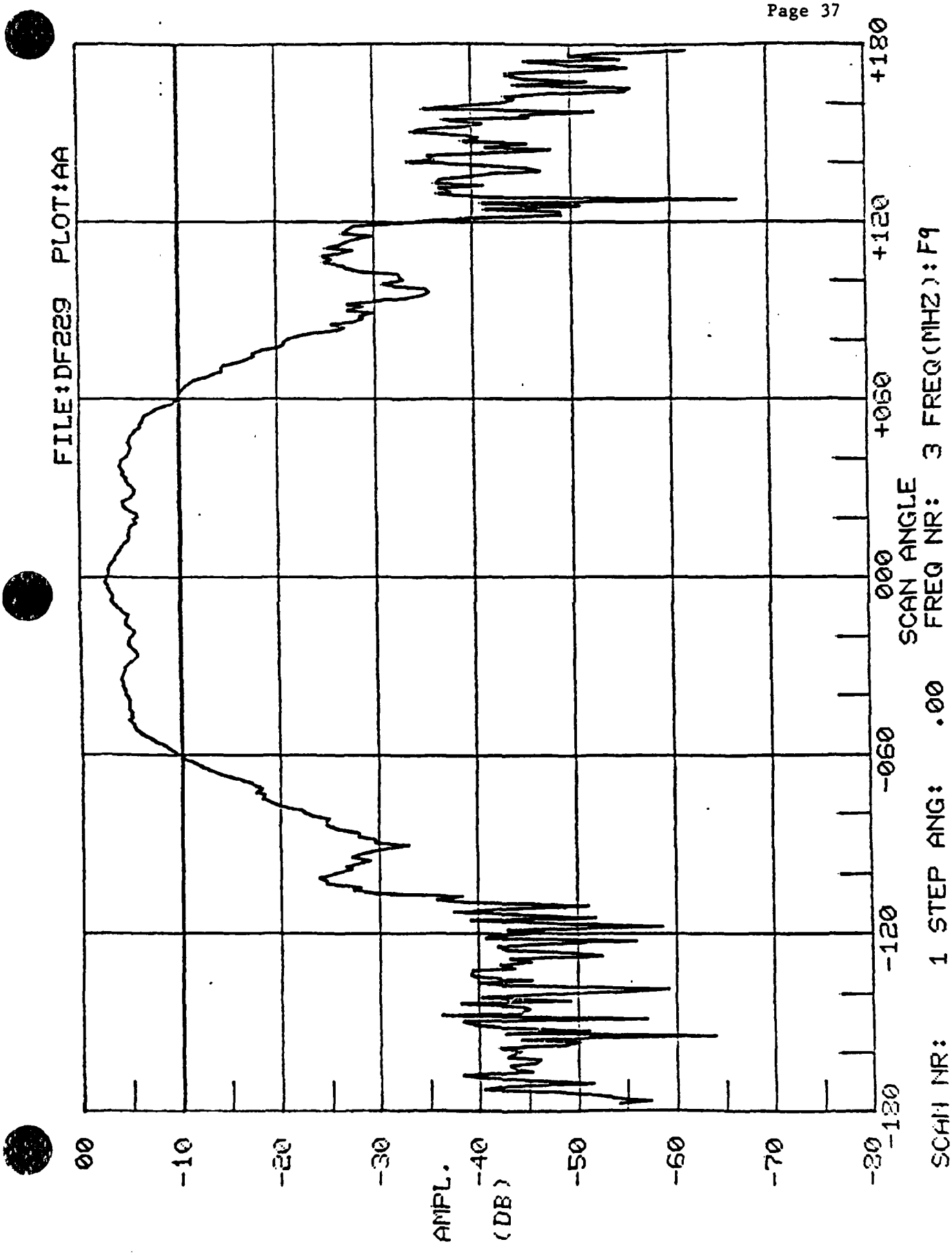
+180
SCAN ANGLE
SCAN NR: 5 STEP ANG:-40.00 FREQ NR: 3 FREQ(MHZ):F9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AMPL.
(DB)
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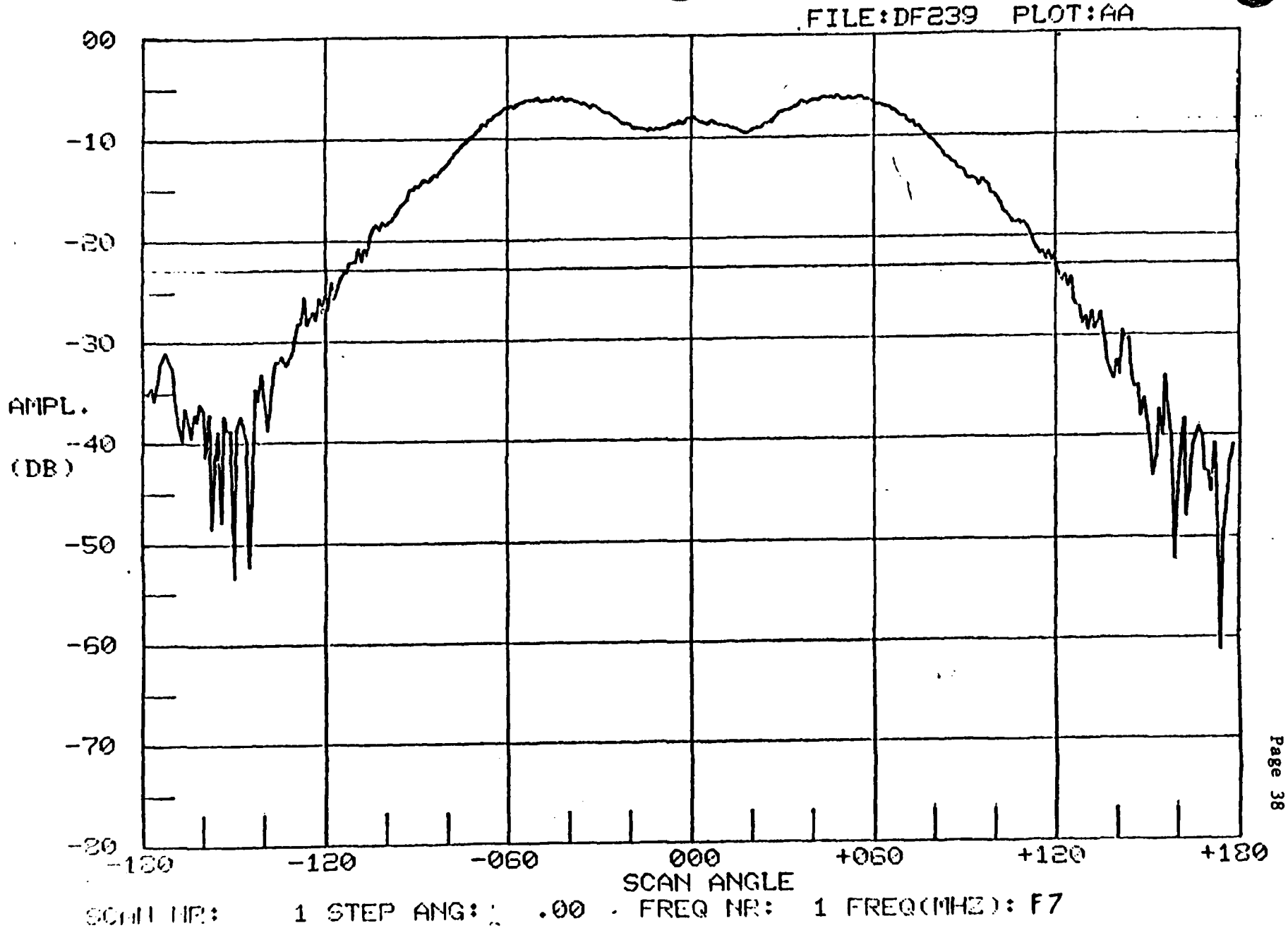
000
+060
+120
+180
SCAN ANGLE
SCAN NR: 1 STEP ANG: .00 FREQ NR: 3 FREQ(MHZ): F9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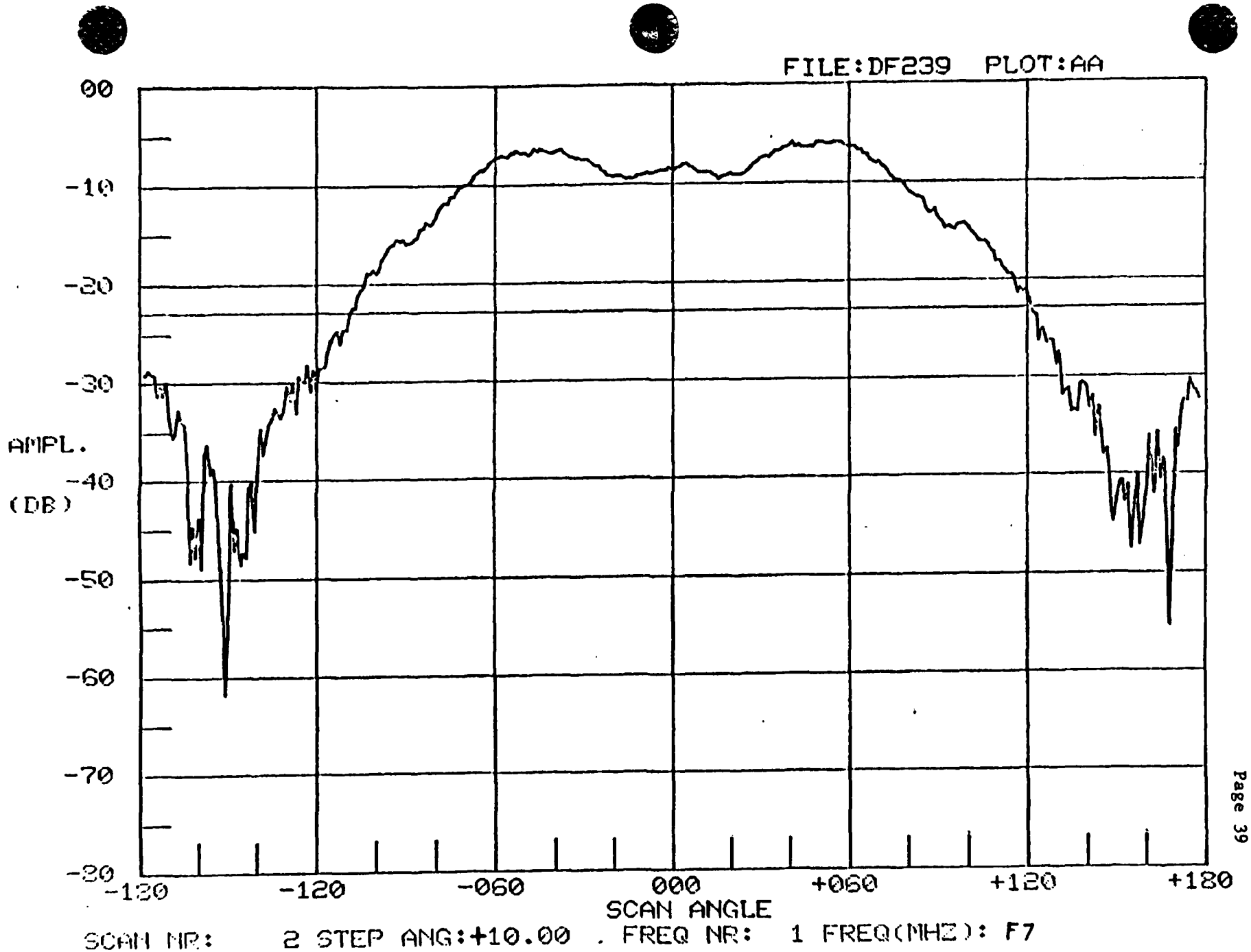
000
+060
+120
+180
SCAN ANGLE
SCAN NR: 1 STEP ANG: .00 FREQ NR: 1 FREQ(MHZ): F7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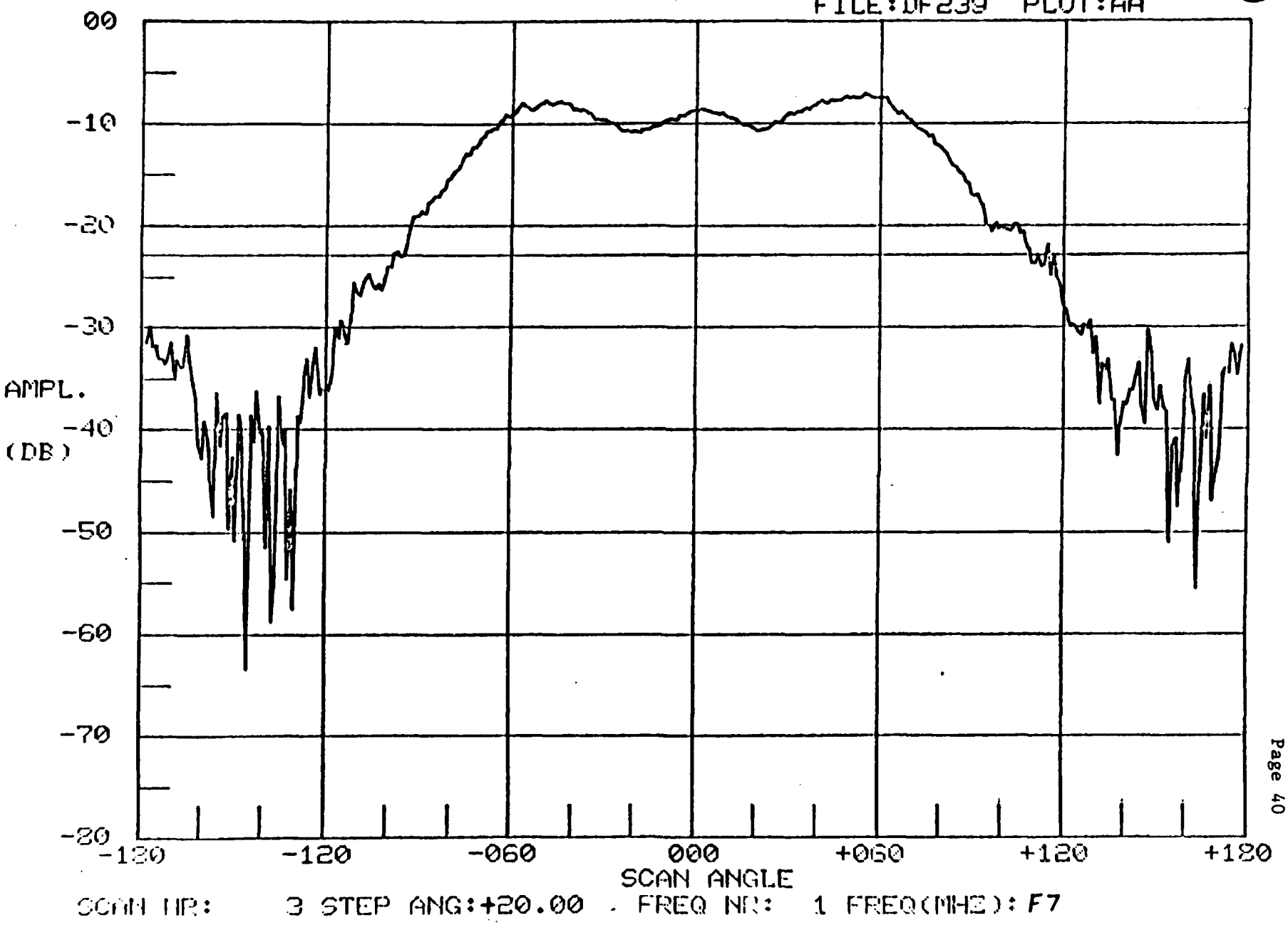
000
+060
+120
+180
SCAN ANGLE
SCAN NR: 2 STEP ANG:+10.00 . FREQ NR: 1 FREQ(MHZ): F7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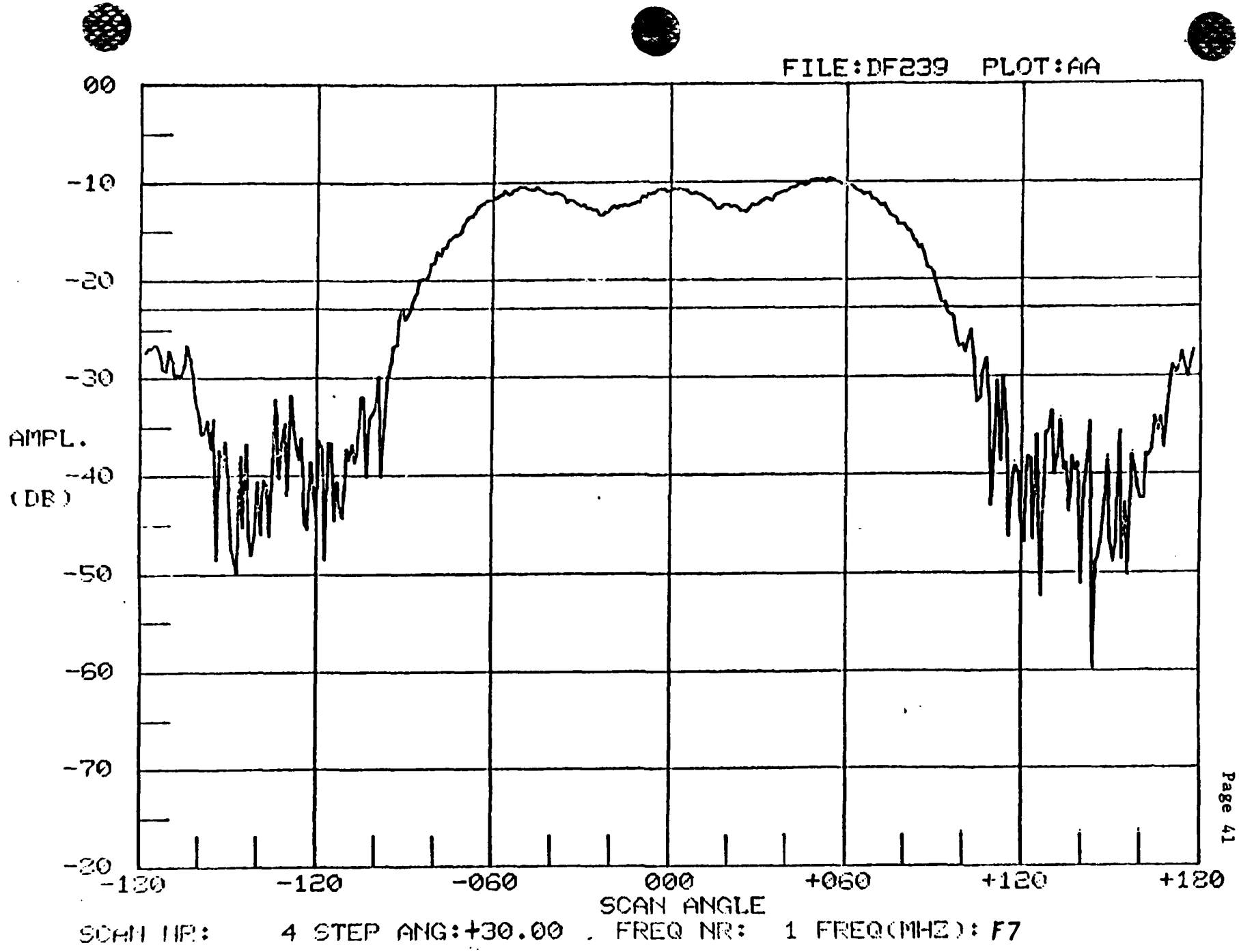
000
+060
+120
+180
SCAN ANGLE
SCAN NR: 3 STEP ANG:+20.00 FREQ NR: 1 FREQ(MHZ): F7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AMPL.
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(DB)
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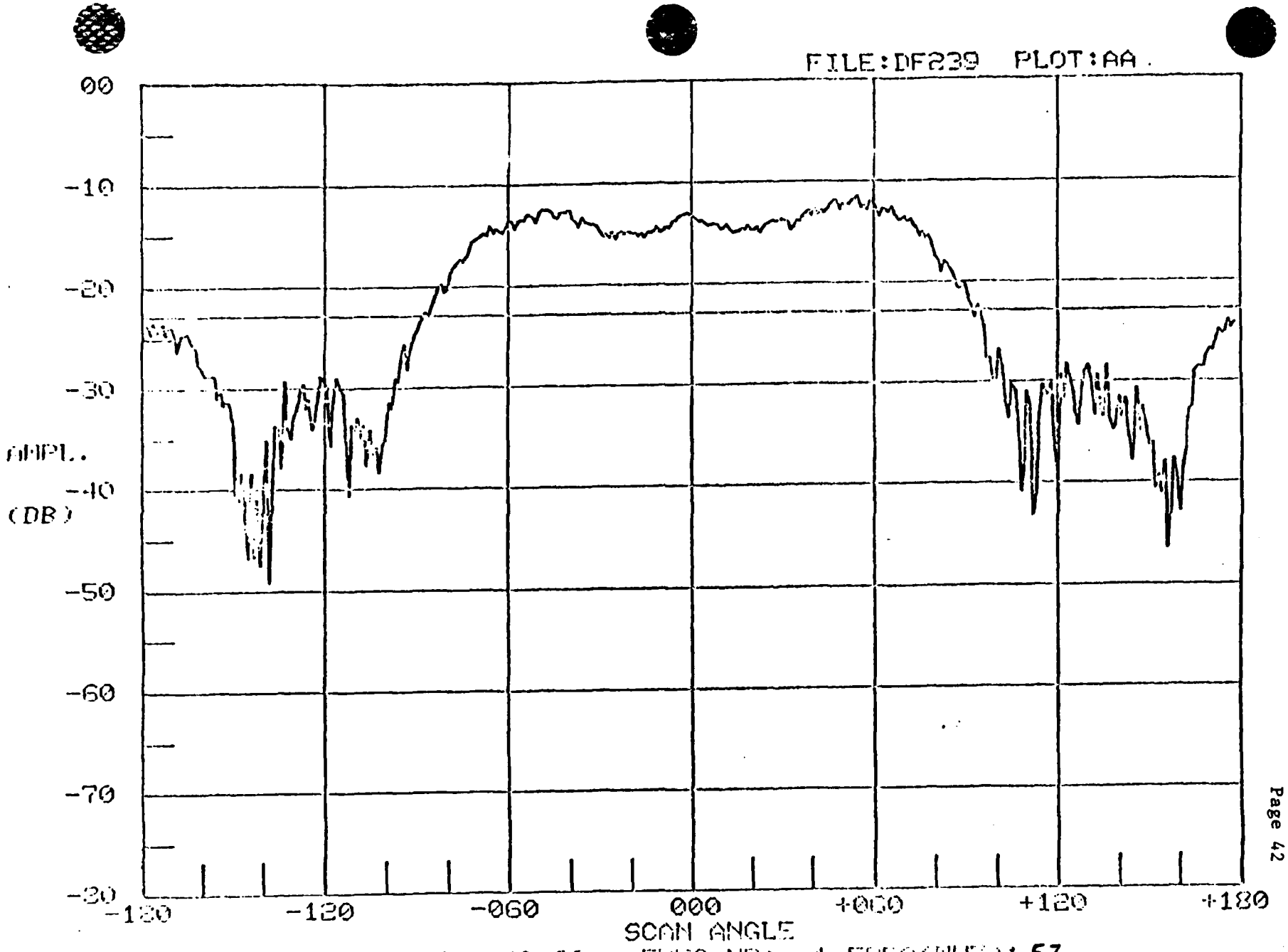
-80
-180
-120
-060
000
+060
+120
+180
SCAN ANGLE
SCAN NR: 4 STEP ANG:+30.00 FREQ NR: 1 FREQ(MHZ): F7


FILE:DF239 PLOT:AA .
00
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AMPL.
-40
(DB)
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-80
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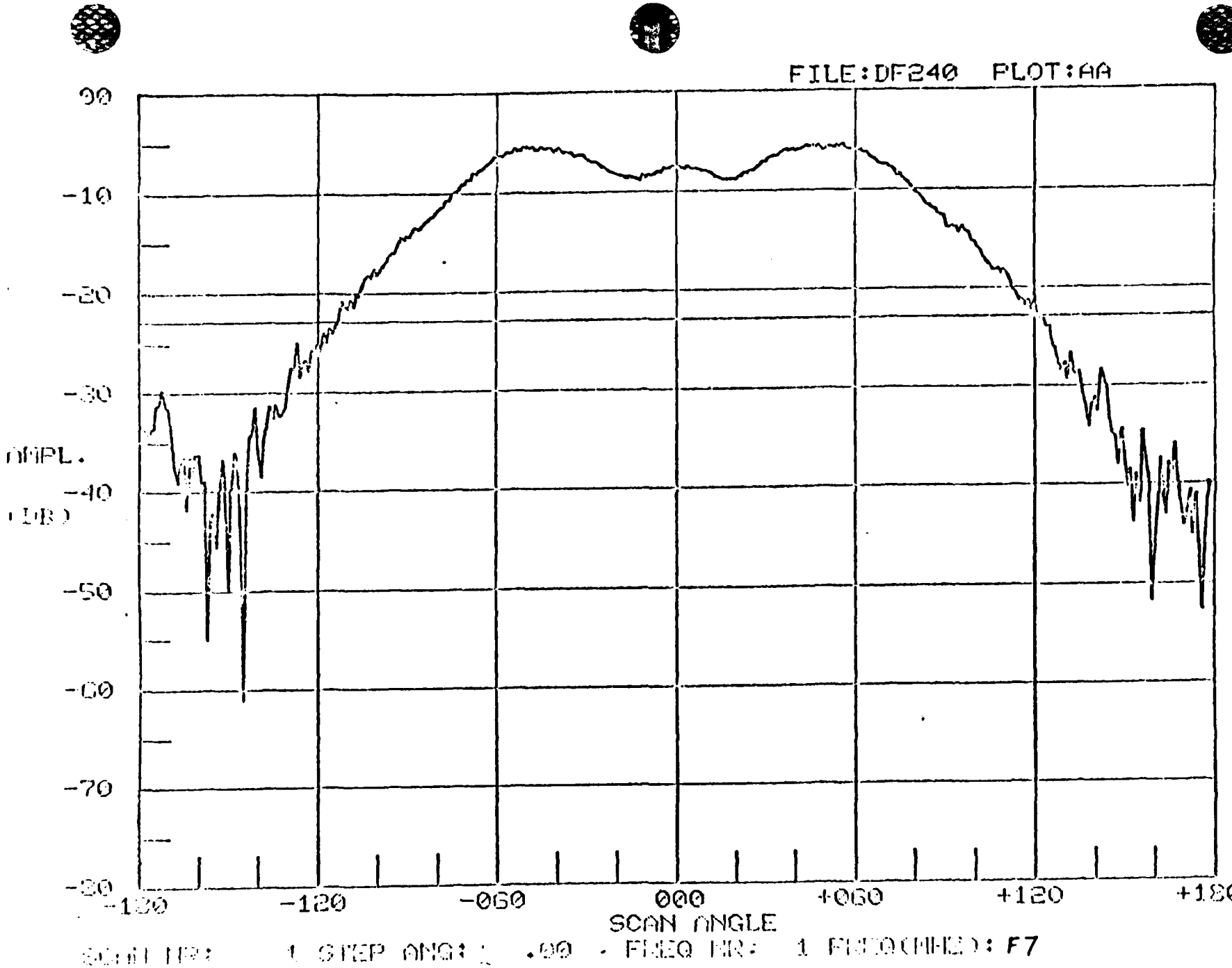
-060
000
+060
+120
+180
SCAN ANGLE
SCAN NR: % STEP ANG:+40.00 . FREQ NR: 1 FREQ(MHZ): F7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000
+060
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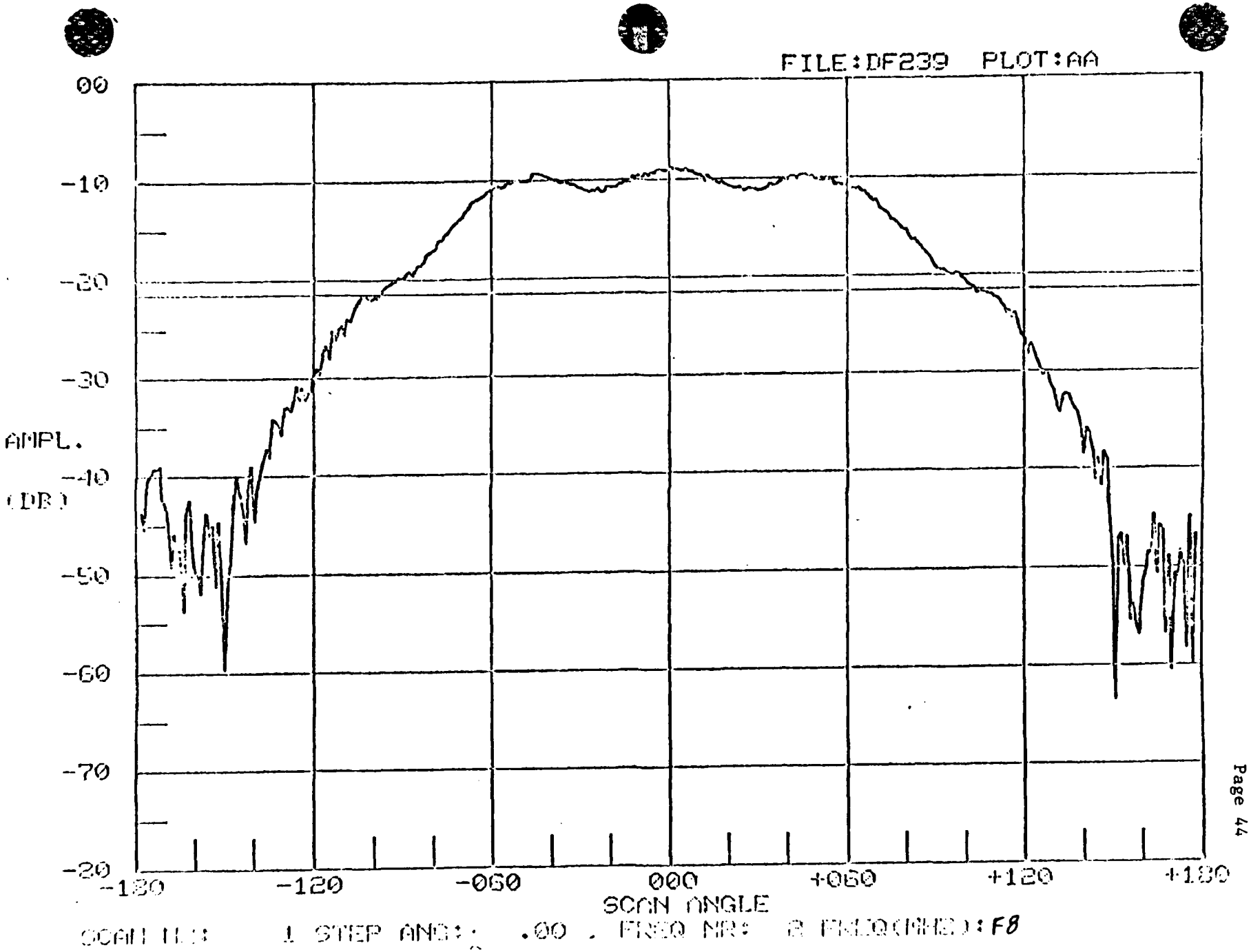
+180
SCAN ANGLE
SCAN NR: 1 STEP ANG: .00 FREQ NR: 1 FREQ(MHZ): F7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(DB)
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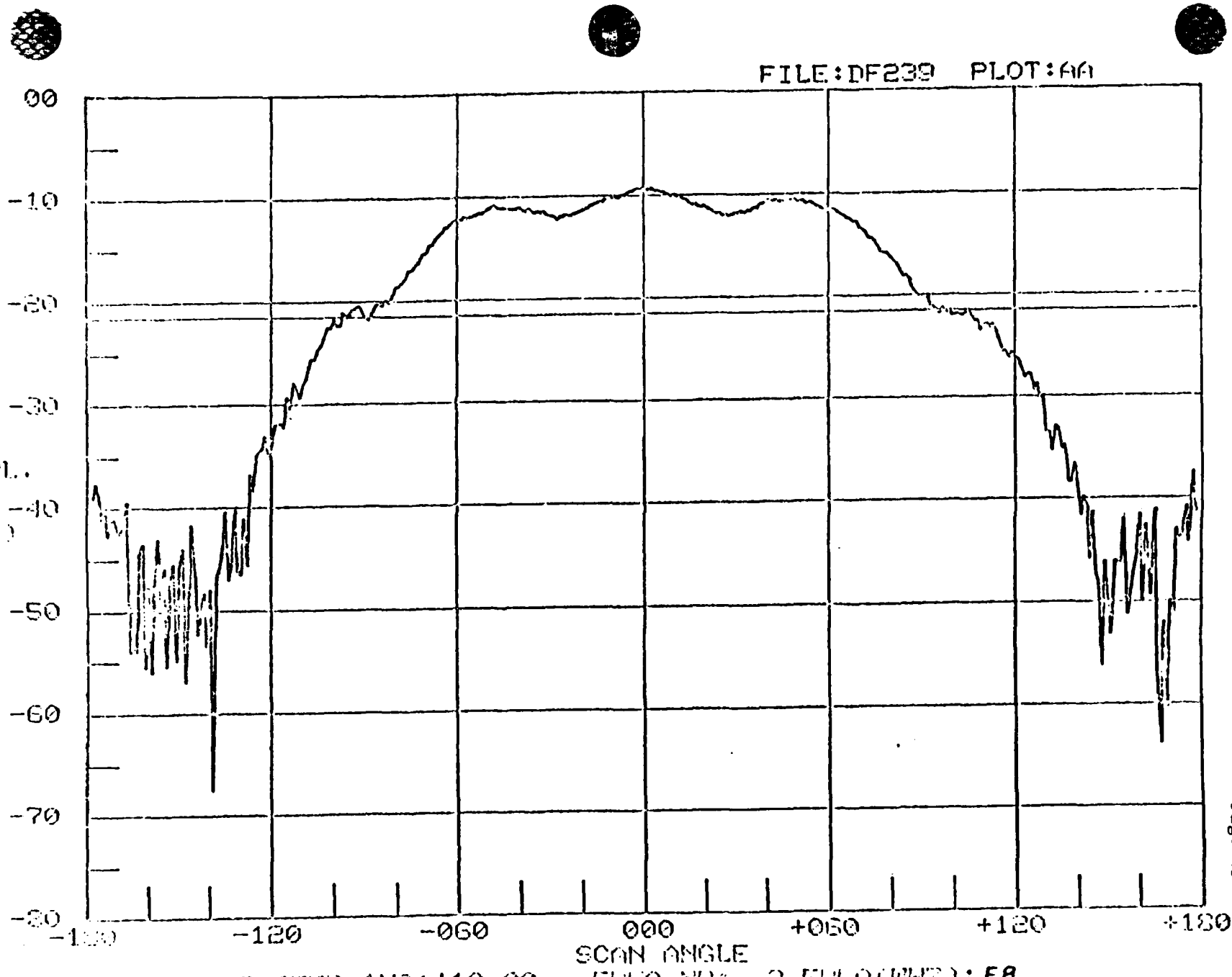
000
+060
+120
+180
SCAN ANGLE
SCAN TILT: 1 STEP ANG: .00 FREQ NR: 2 FREQ(MHZ): F8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-060
000
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+120
+180
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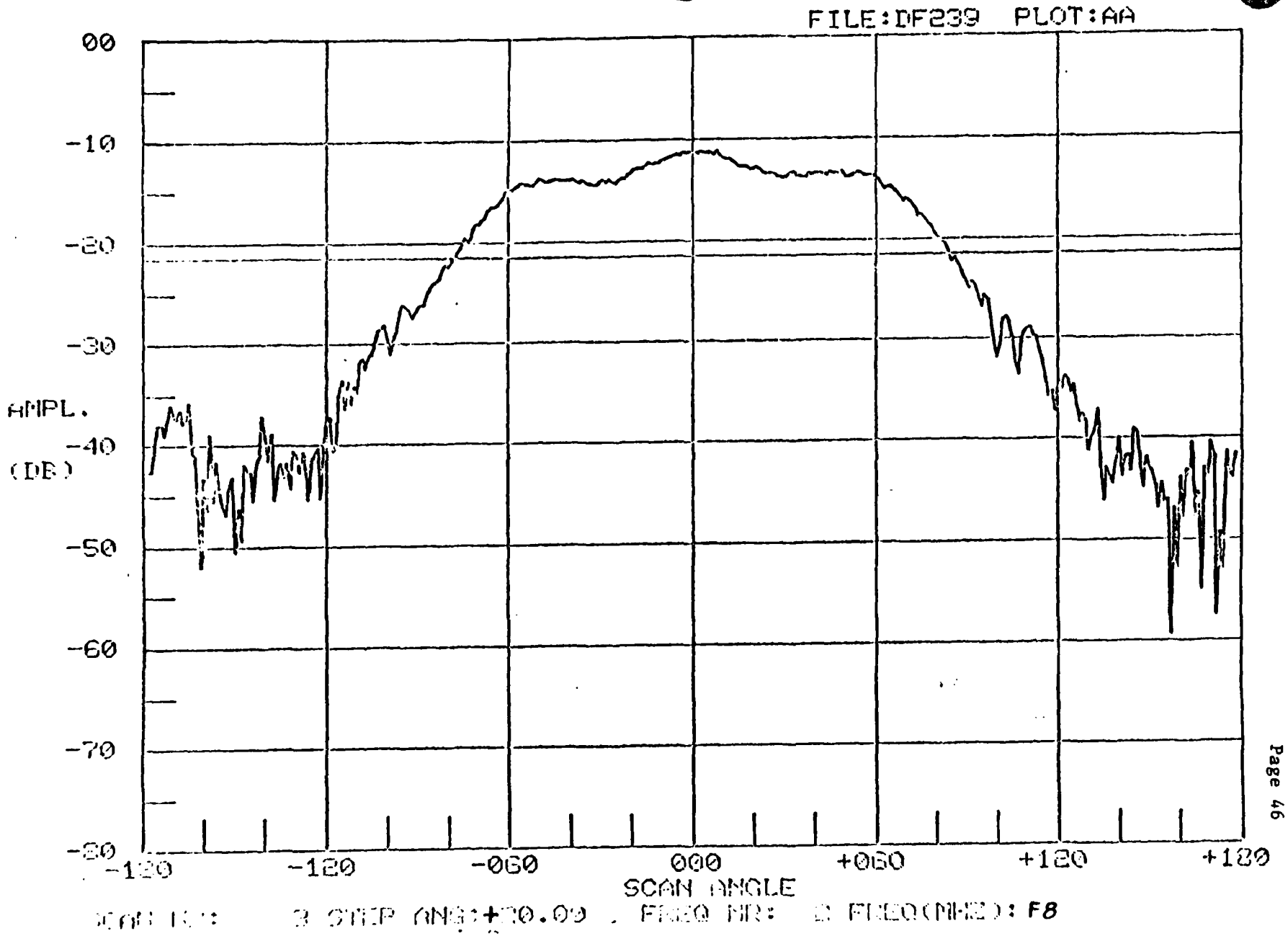
STEP ANG:+10.00
FREQ MHZ):F8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(DB)
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-60
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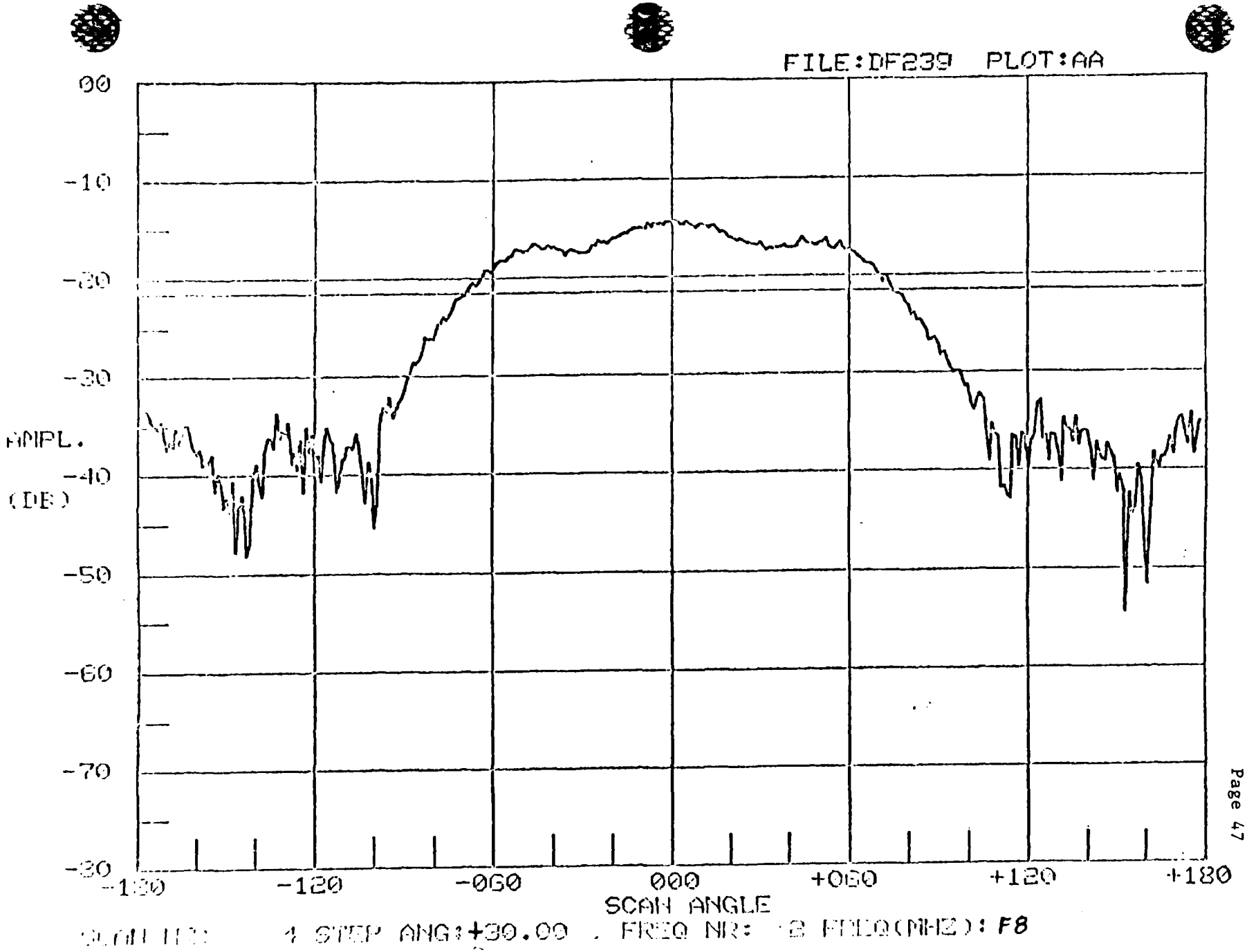
-060
000
+060
+120
+180
SCAN ANGLE
STEP ANG:+00.09
FREQ(MHZ): F8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(DB)
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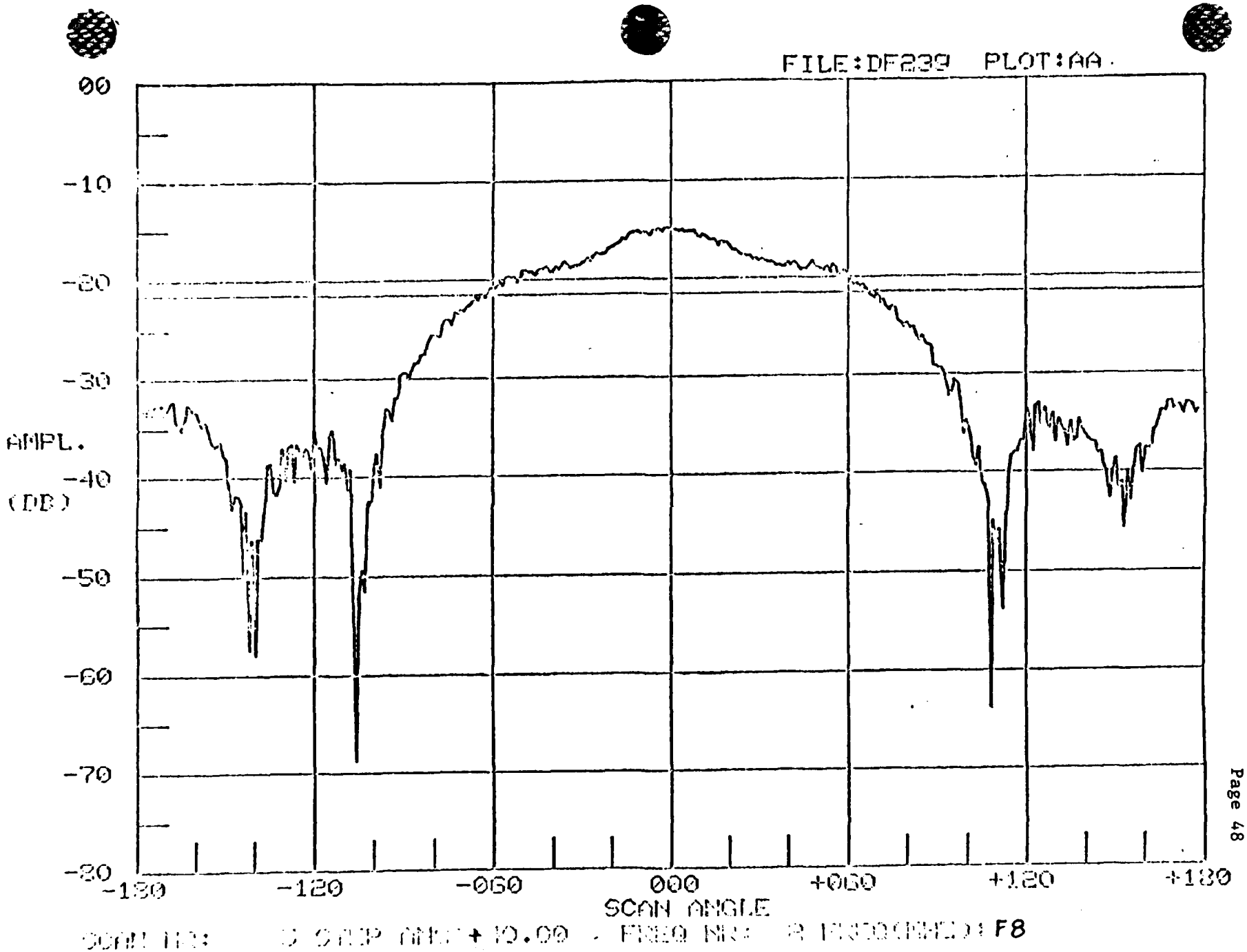
000
+060
+120
+180
SCAN ANGLE
STEP ANG:+30.00
FREQ NR:
FREQ(MHZ): F8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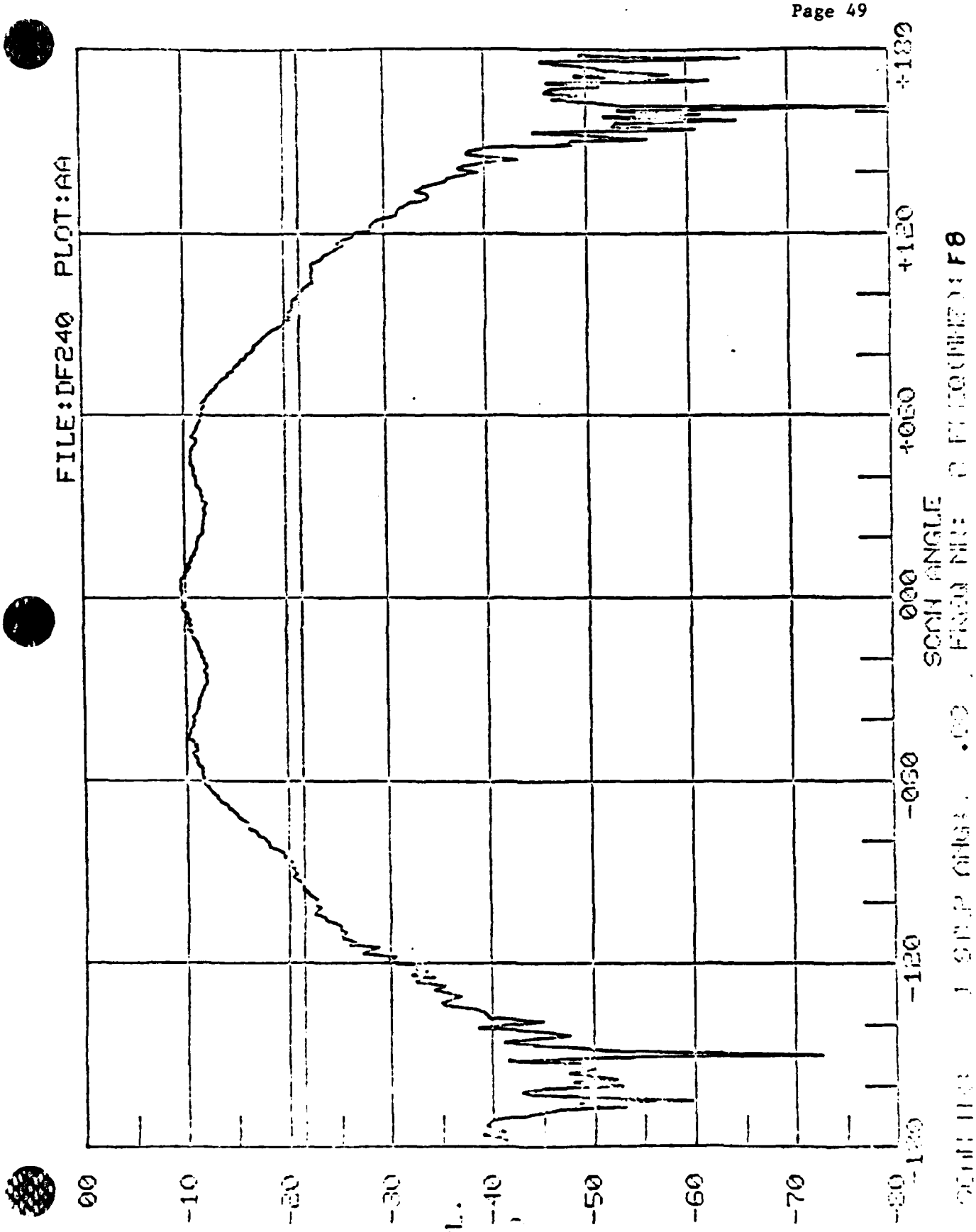
+180
SCAN ANGLE
F8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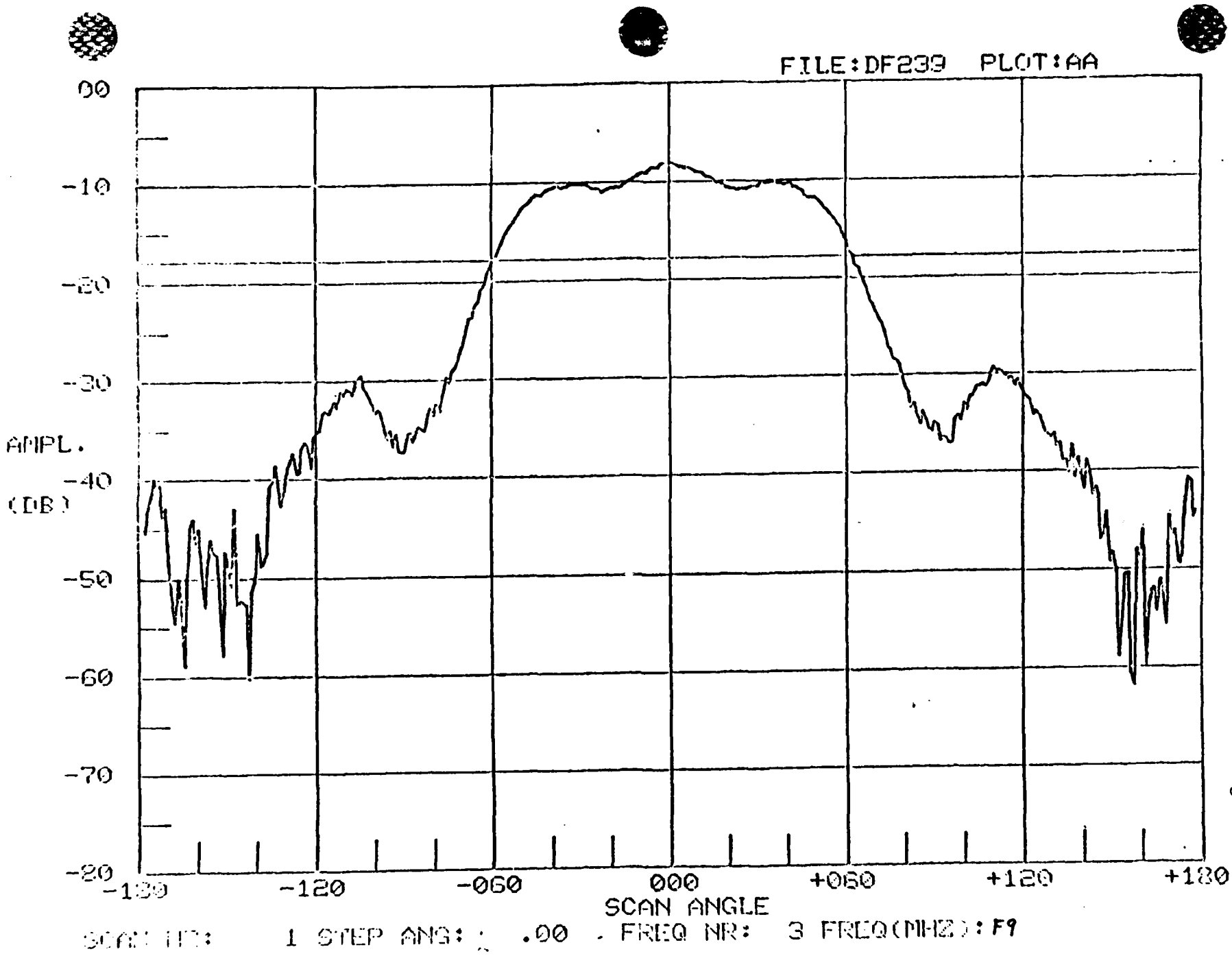
-180
SCAN ANGLE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(DB)
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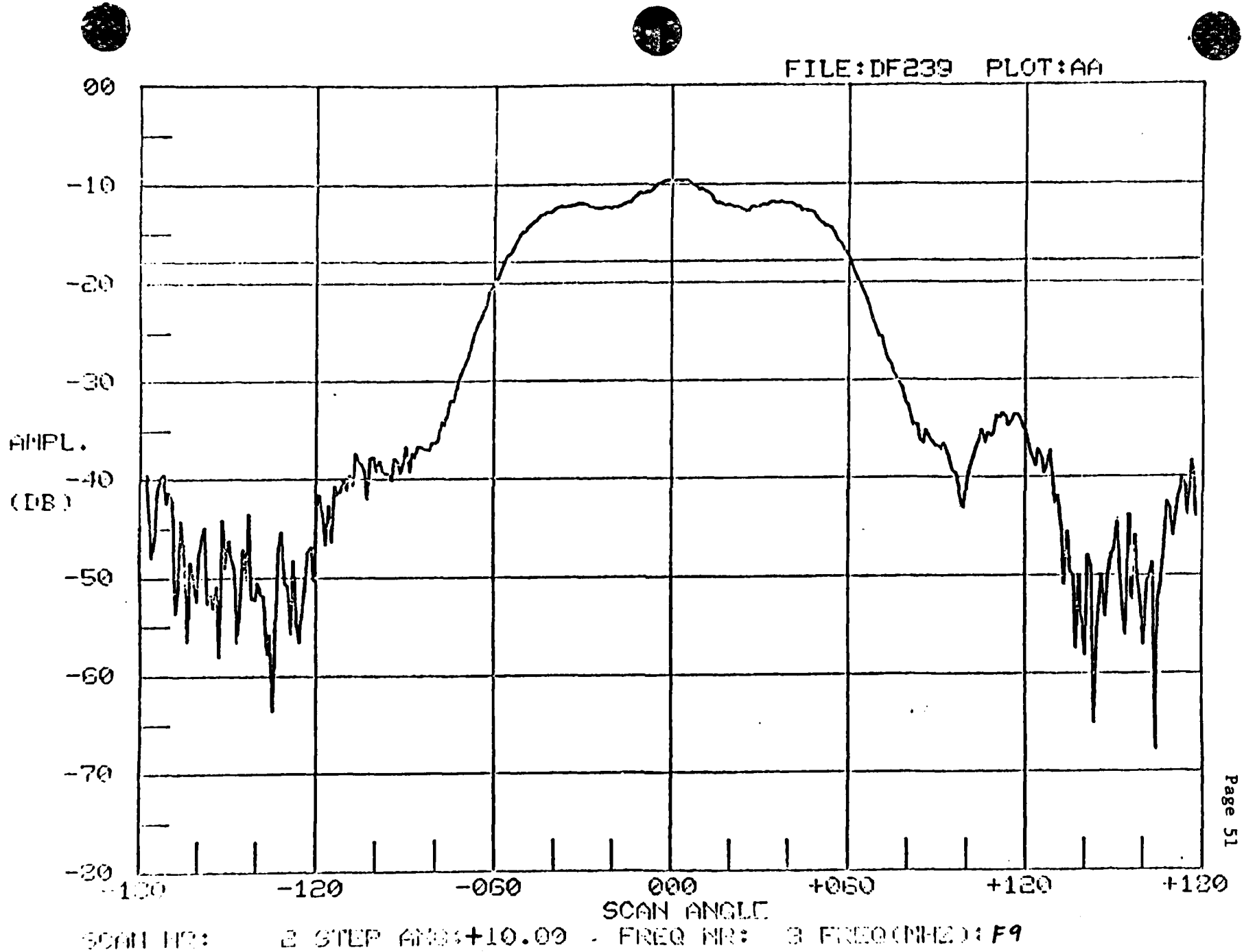
000
+060
+120
+180
SCAN ANGLE
1 STEP ANG: .00
FREQ NR: 3 FREQ(MHZ): F9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(DB)
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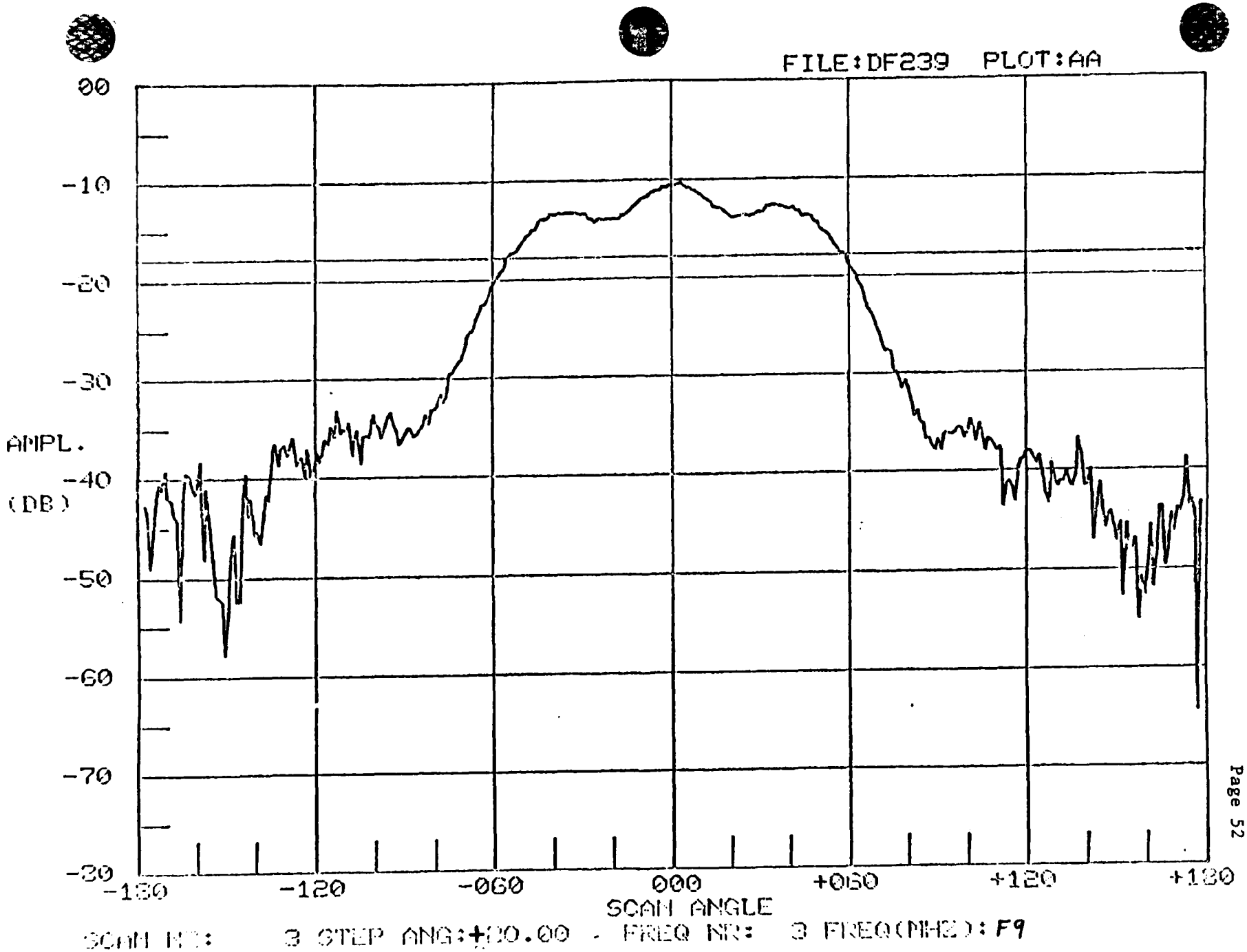
+060
+120
+180
SCAN ANGLE
SCAN NR: 2 STEP ANG:+10.00 FREQ NR: 3 FREQ(MHZ): F9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+120
+180
SCAN ANGLE
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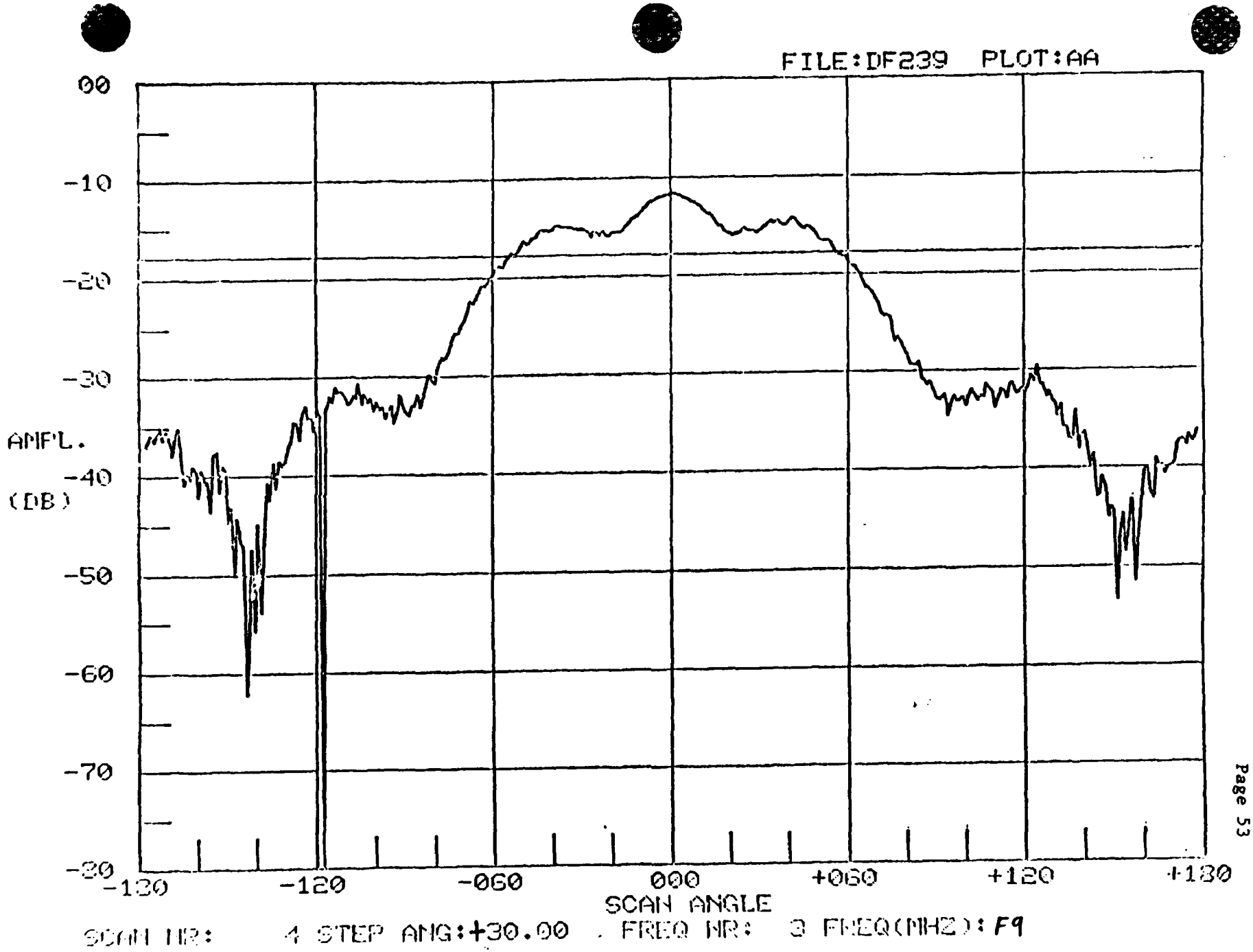
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-80
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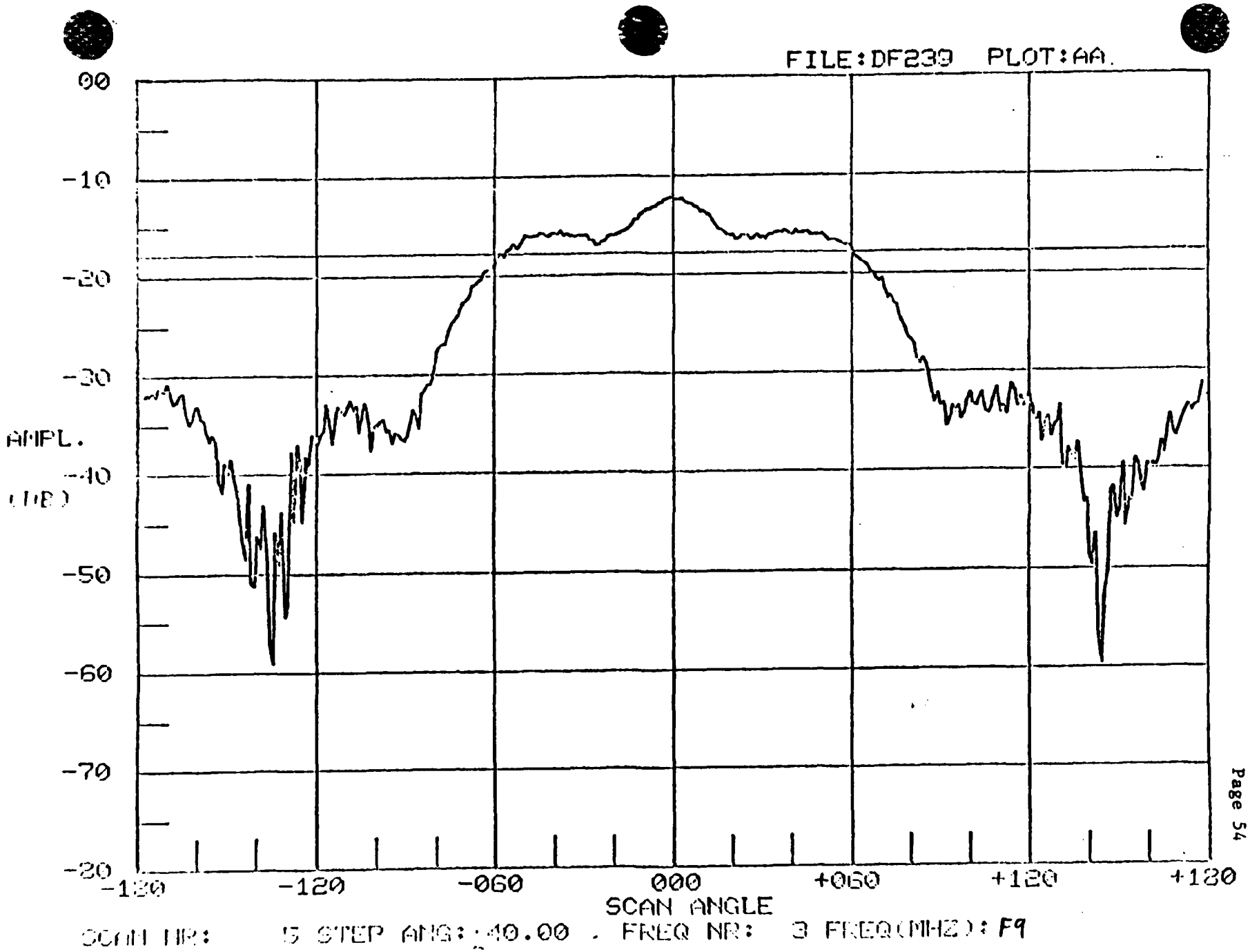
+060
+120
+180
SCAN ANGLE
SCAN NR: 4 STEP ANG:+30.00 FREQ NR: 3 FREQ(MHZ):F9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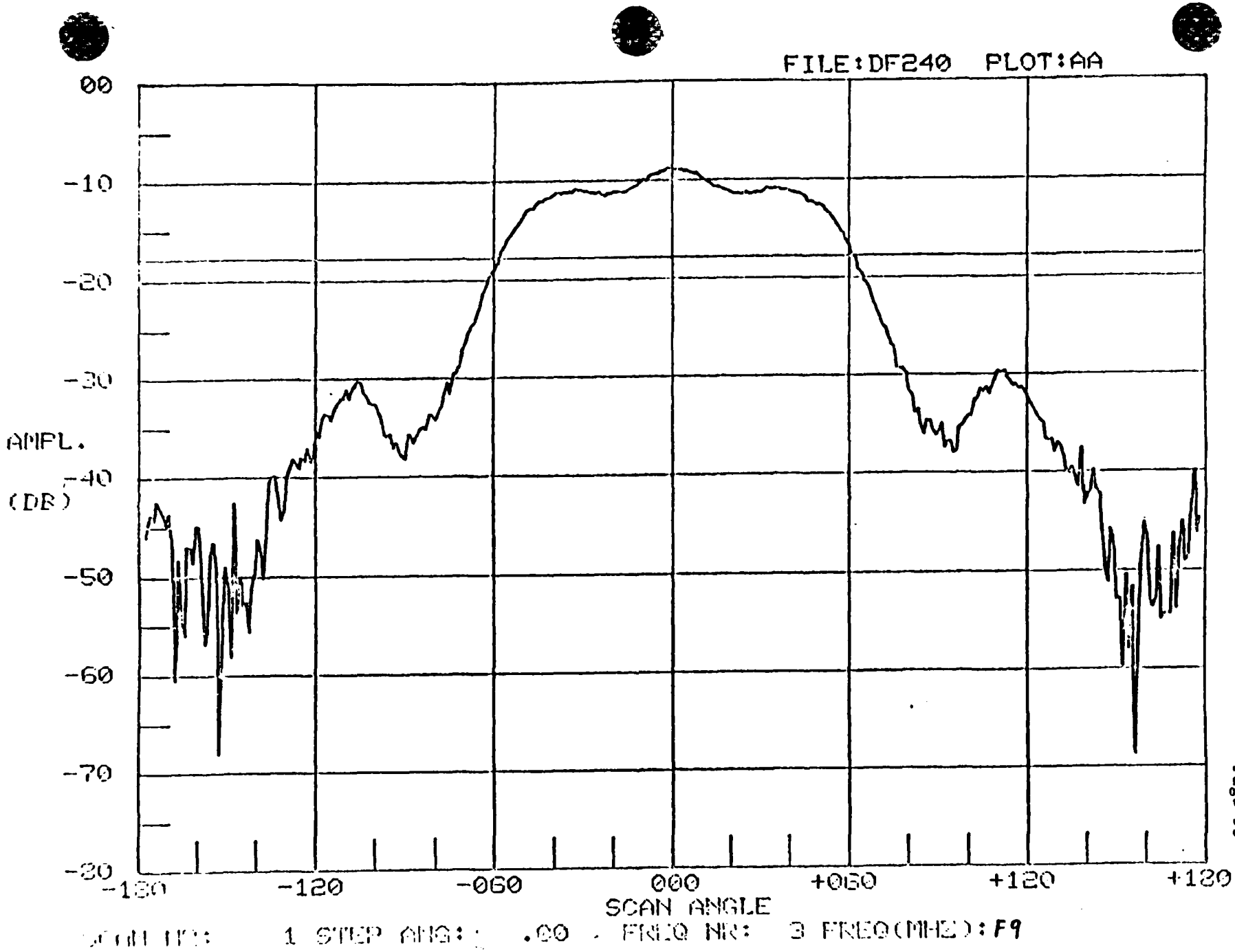
+120
+180
SCAN ANGLE
SCAN NR: 5 STEP ANG: 40.00 . FREQ NR: 3 FREQ(MHZ): F9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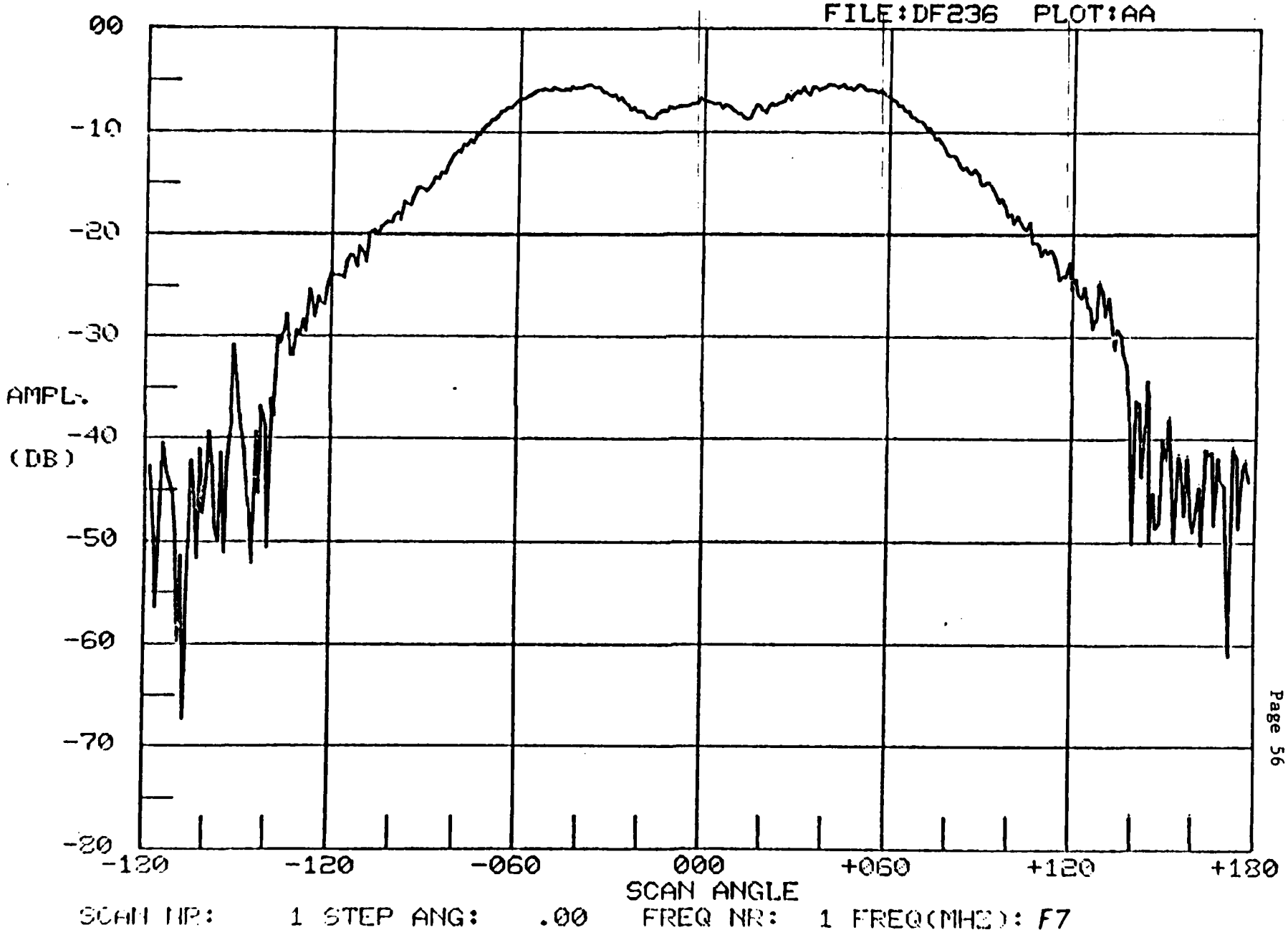
000
+060
+120
+180
SCAN ANGLE
1 STEP ANG: .00 FREQ NR: 3 FREQ(MHZ): F9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(DB)
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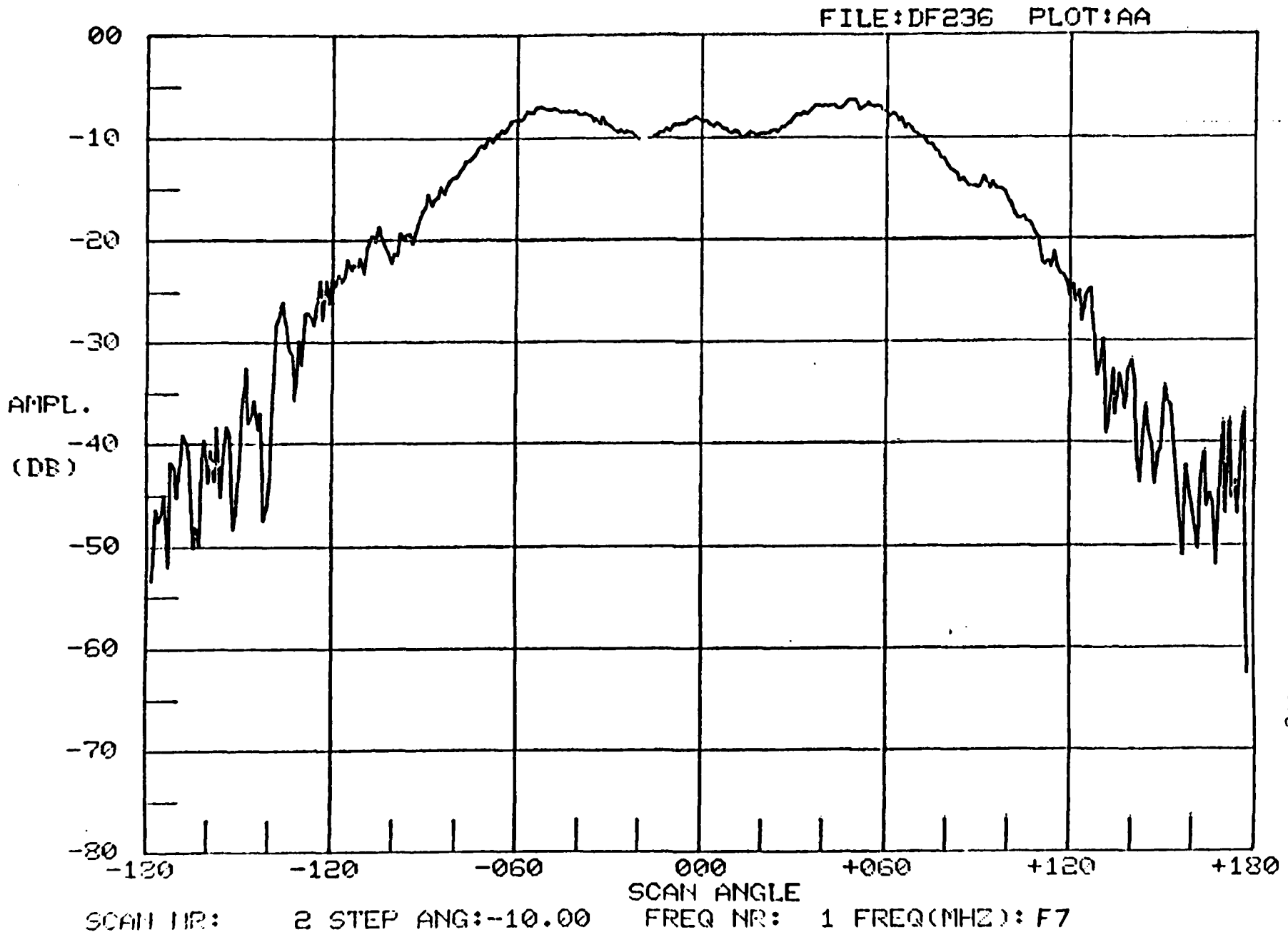
000
+060
+120
+180
SCAN ANGLE
SCAN NR: 1 STEP ANG: .00 FREQ NR: 1 FREQ(MHZ): F7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(DB)
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000
+060
+120
+180
SCAN ANGLE
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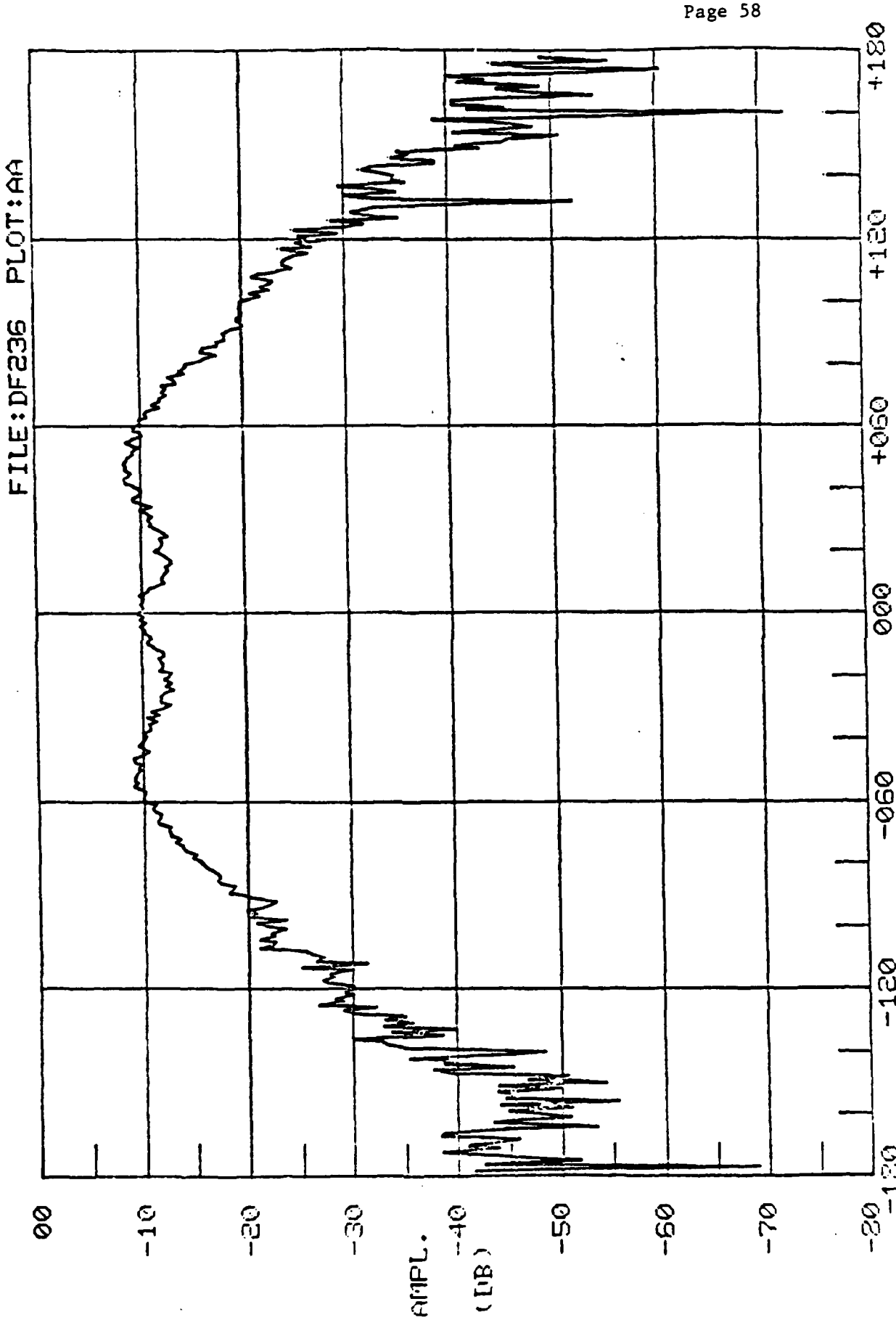
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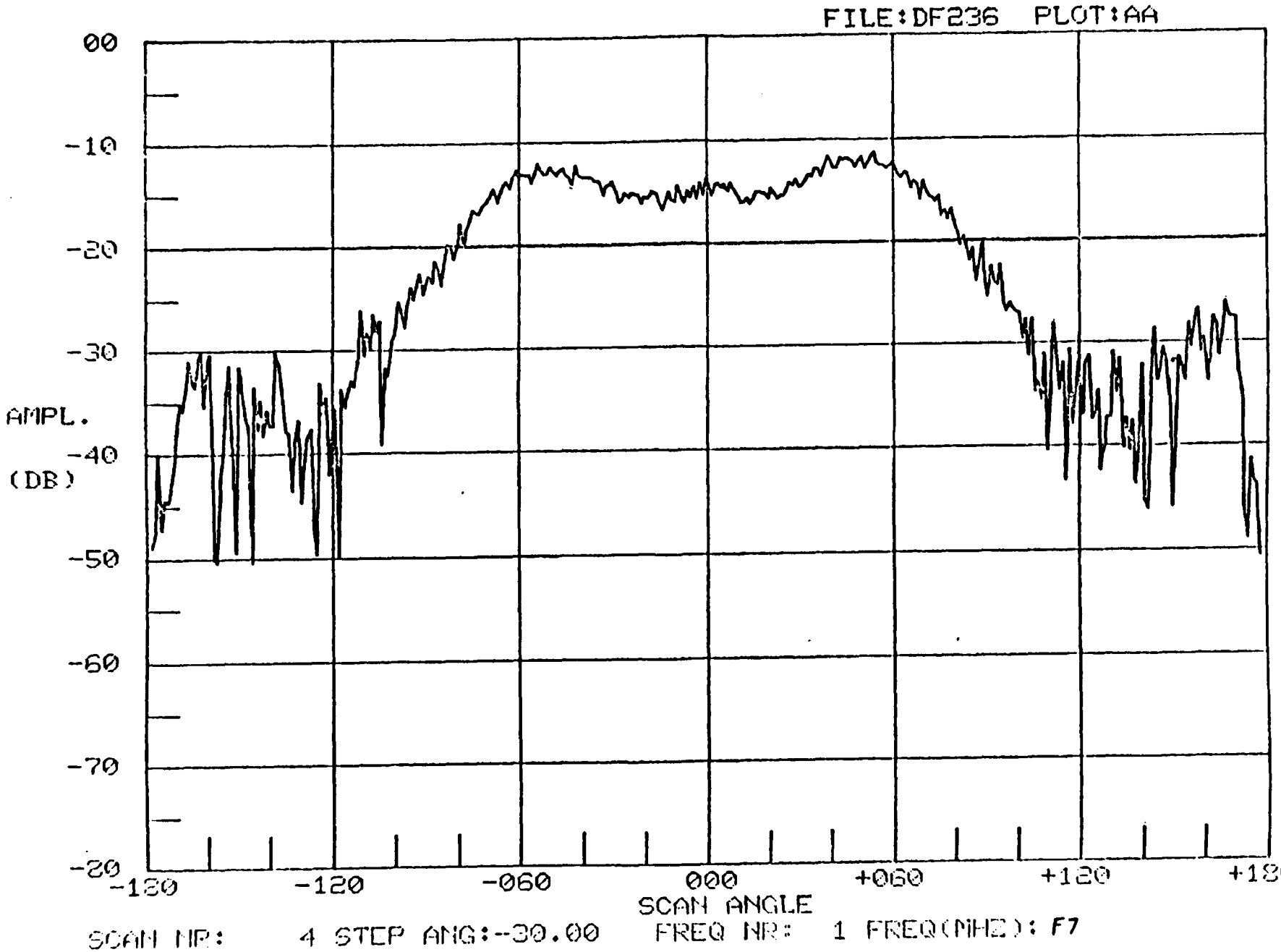
+060
+120
+180
SCAN ANGLE
SCAN TYP: 3 STEP ANG:-20.00 FREQ NR: 1 FREQ(MHZ): F7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AMPL.
-40
(DB)
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-80
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-120
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000
+060
+120
+180
SCAN ANGLE
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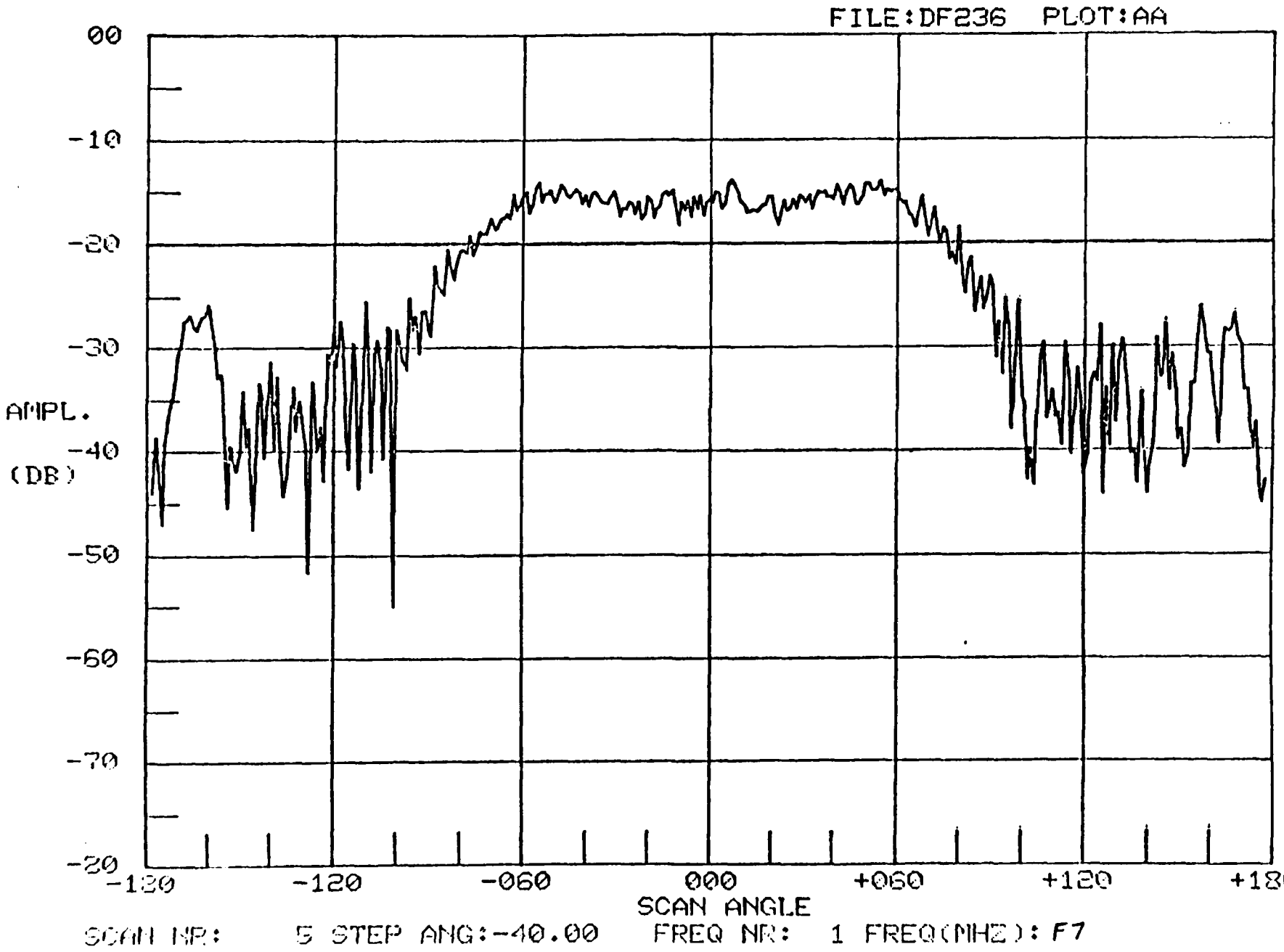
FILE:DF236 PLOT:AA
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AMPL.
(DB)
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-20
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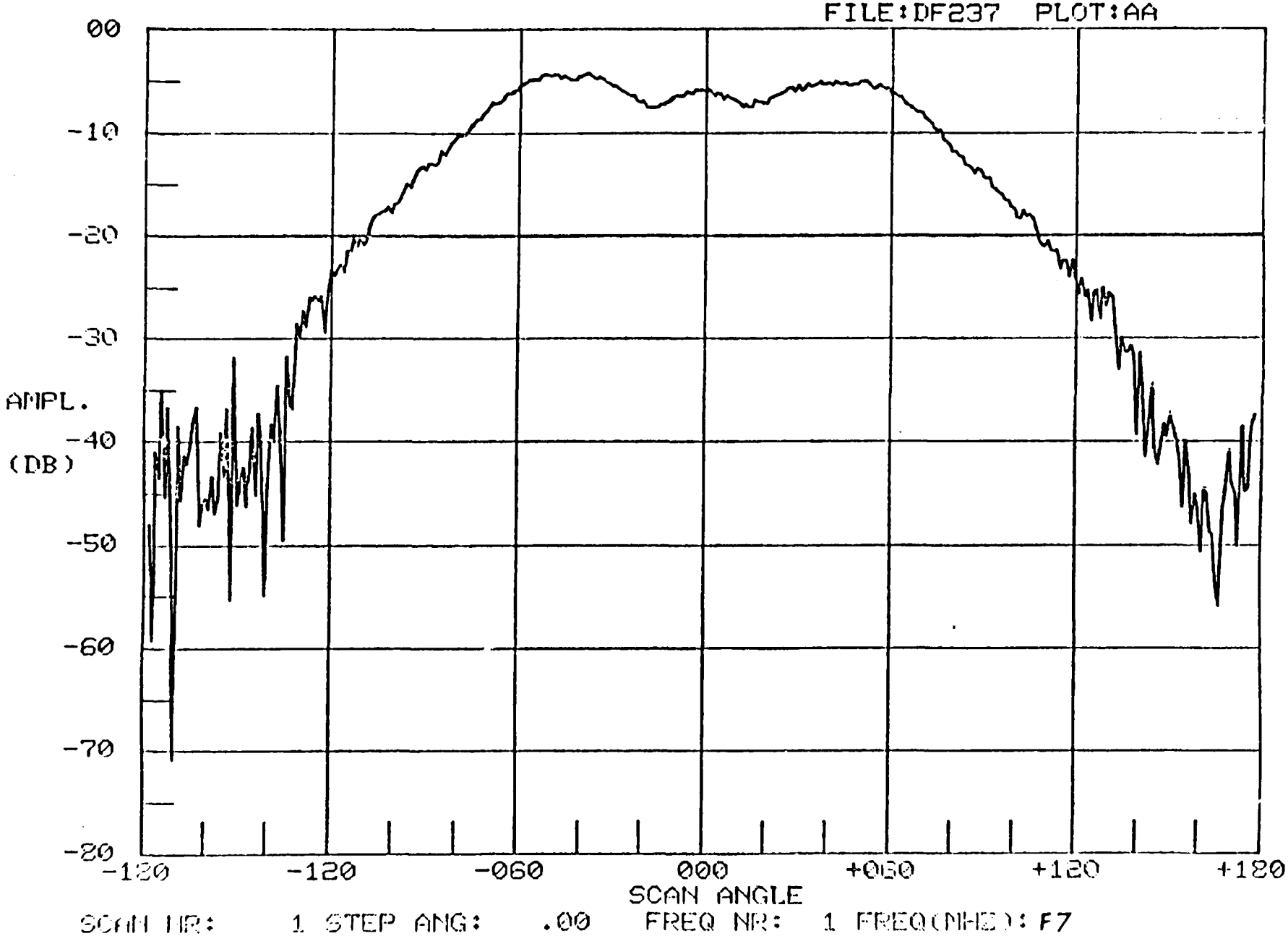
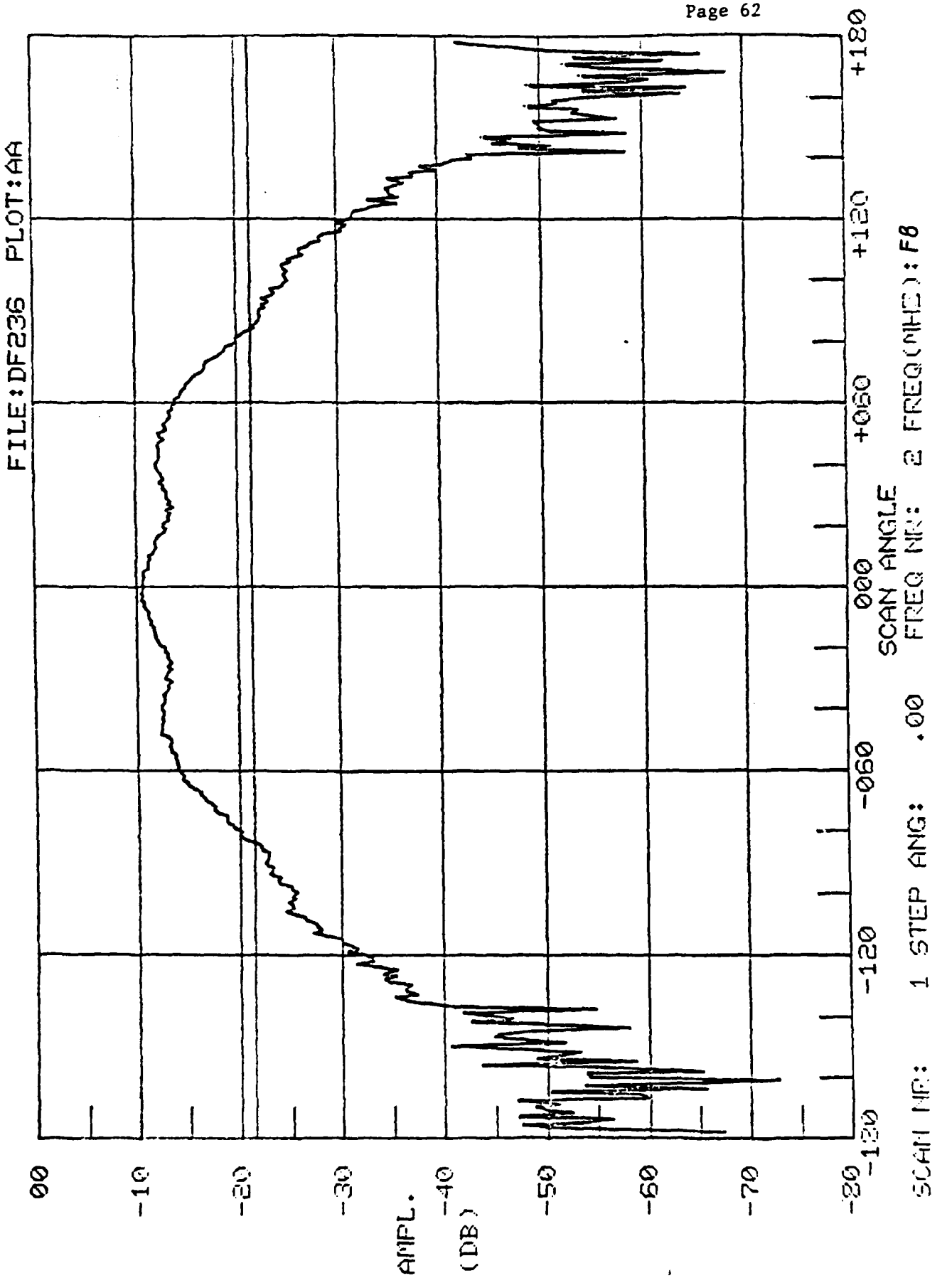
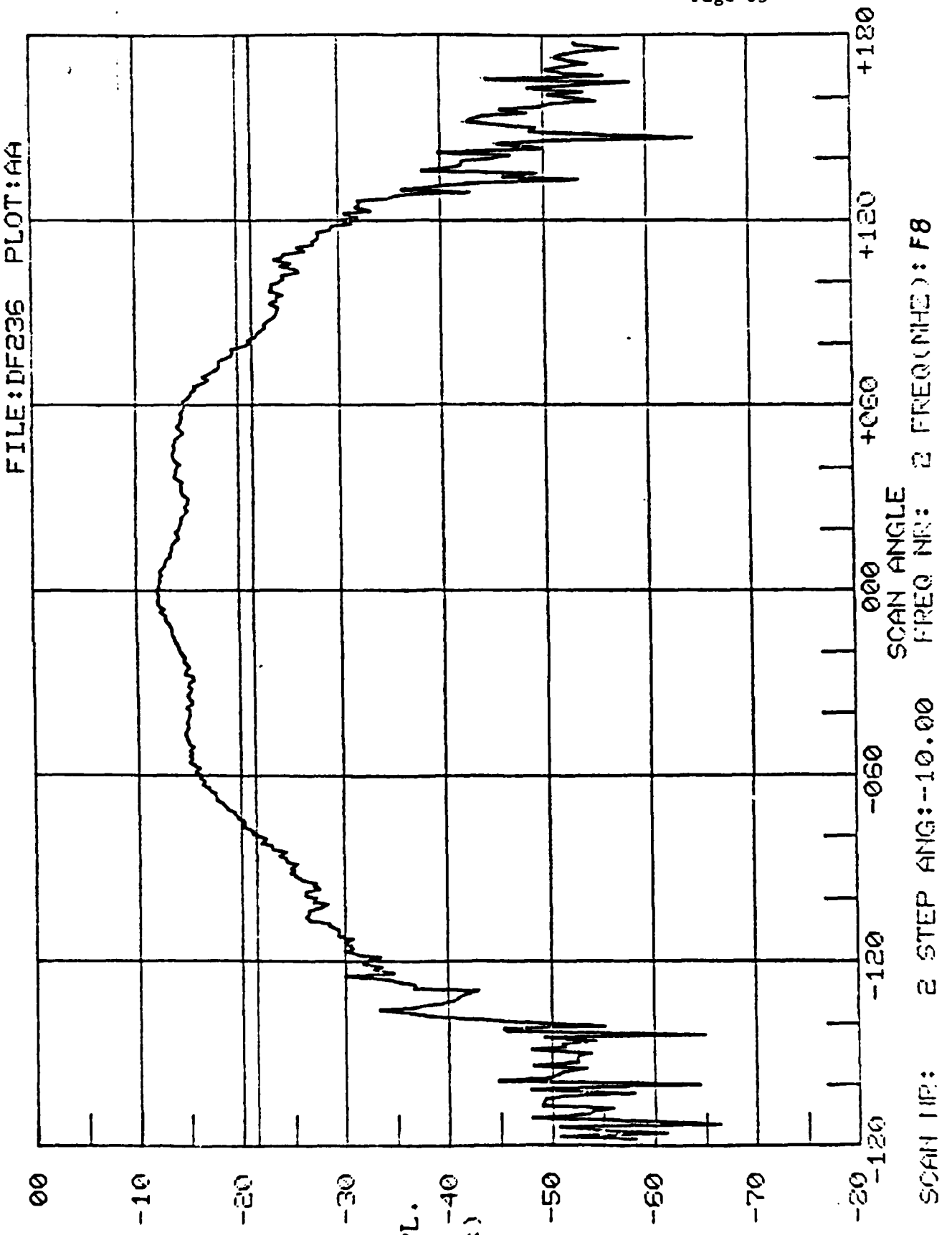
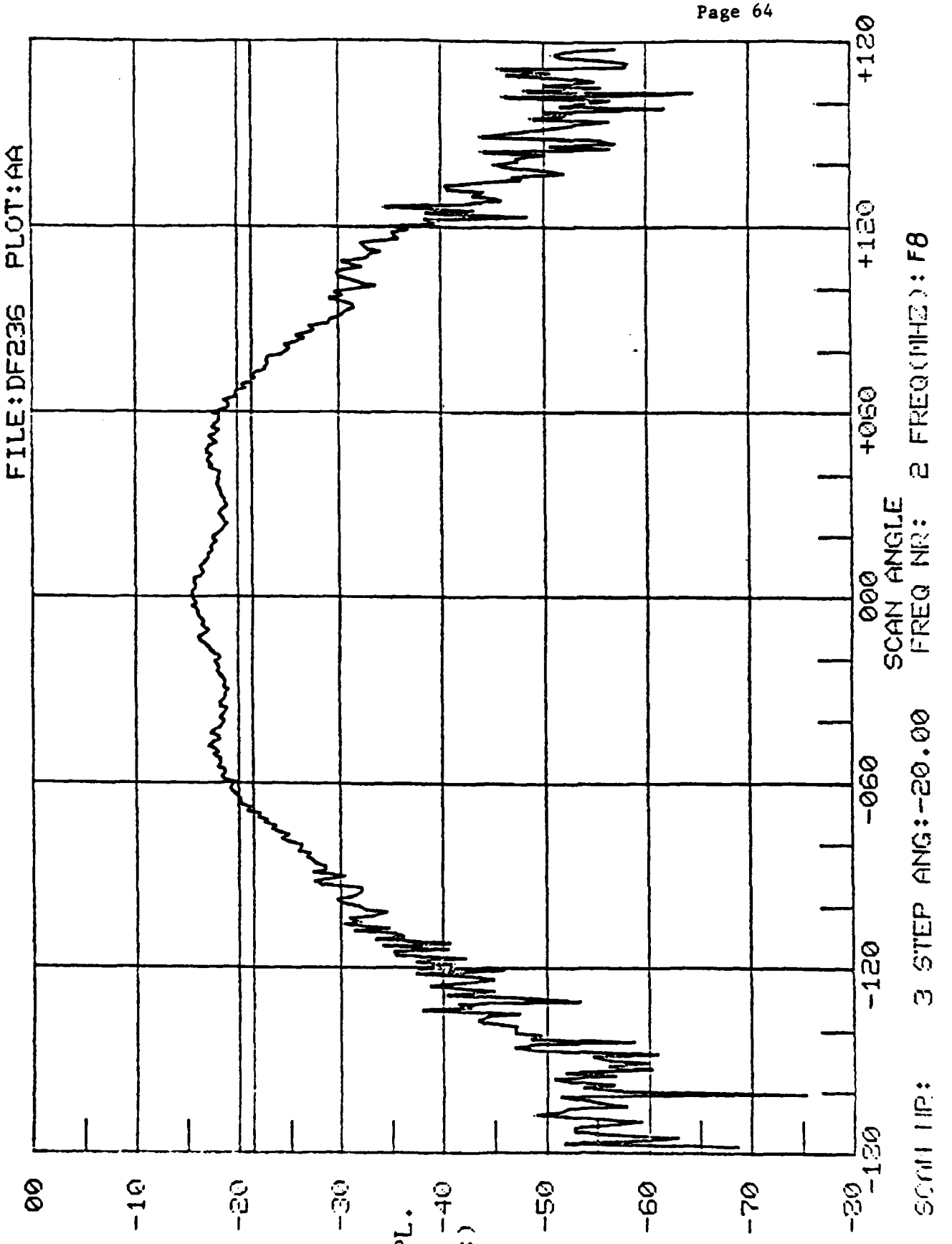
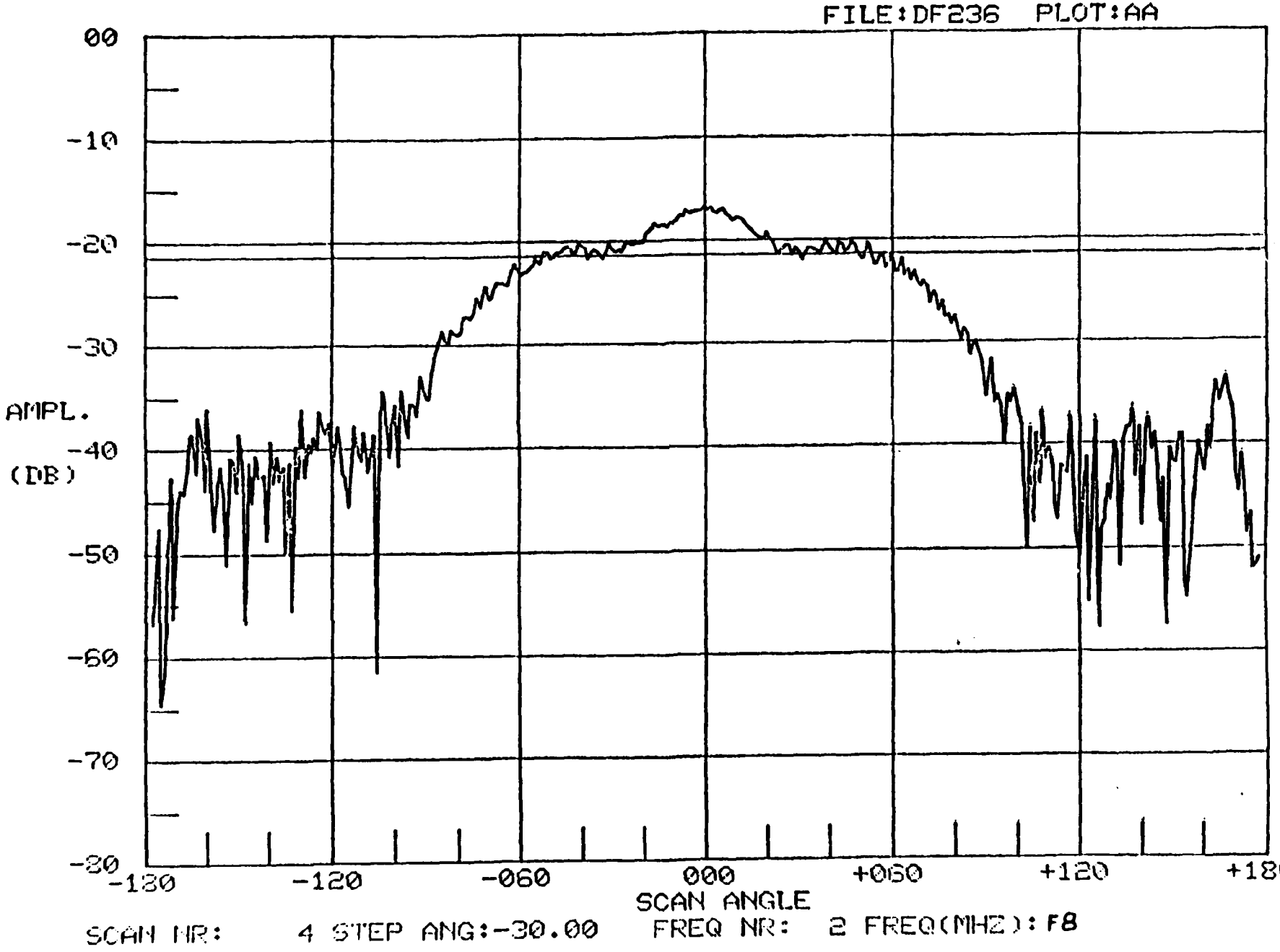
-120
-060
000
+060
+120
+180
SCAN ANGLE
SCAN NR: 5 STEP ANG:-40.00 FREQ NR: 1 FREQ(MHZ): F7

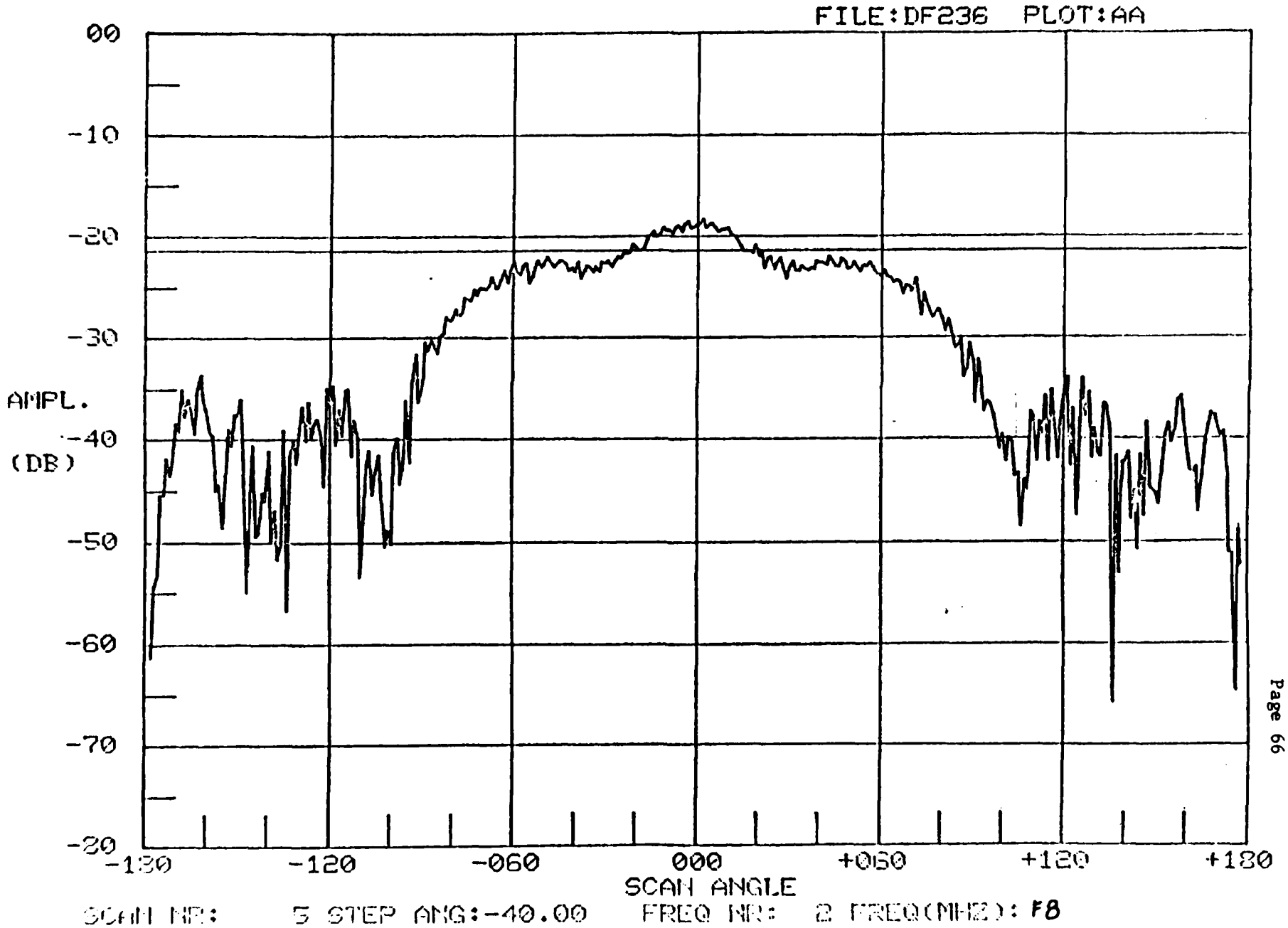

FILE:DF237 PLOT:AA
00
-10
-20
-30
AMPL.
-40
(DB)
-50
-60
-70
-80
-180
-120
-060
000
+060
+120
+180
SCAN ANGLE
SCAN NR: 1 STEP ANG: .00 FREQ NR: 1 FREQ(MHZ): F7

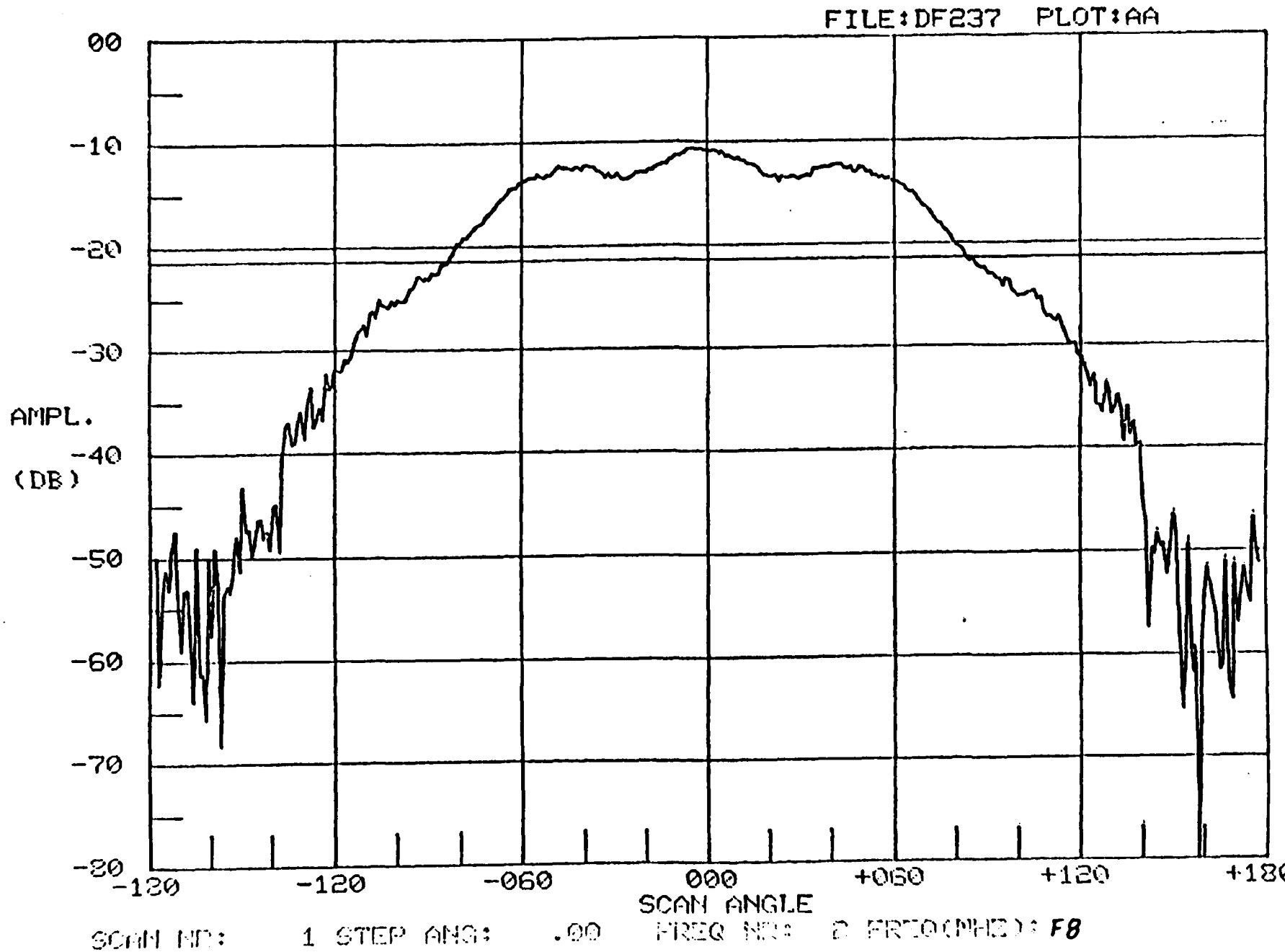

FILE:DF236 PLOT:AA
00
-10
-20
-30
-40
-50
-60
-70
-80
AMPL.
(DB)
-180
-120
-060
000
+060
+120
+180
SCAN ANGLE
SCAN MP: 1 STEP ANG: .00 FREQ NR: 2 FREQ(MHZ): F8

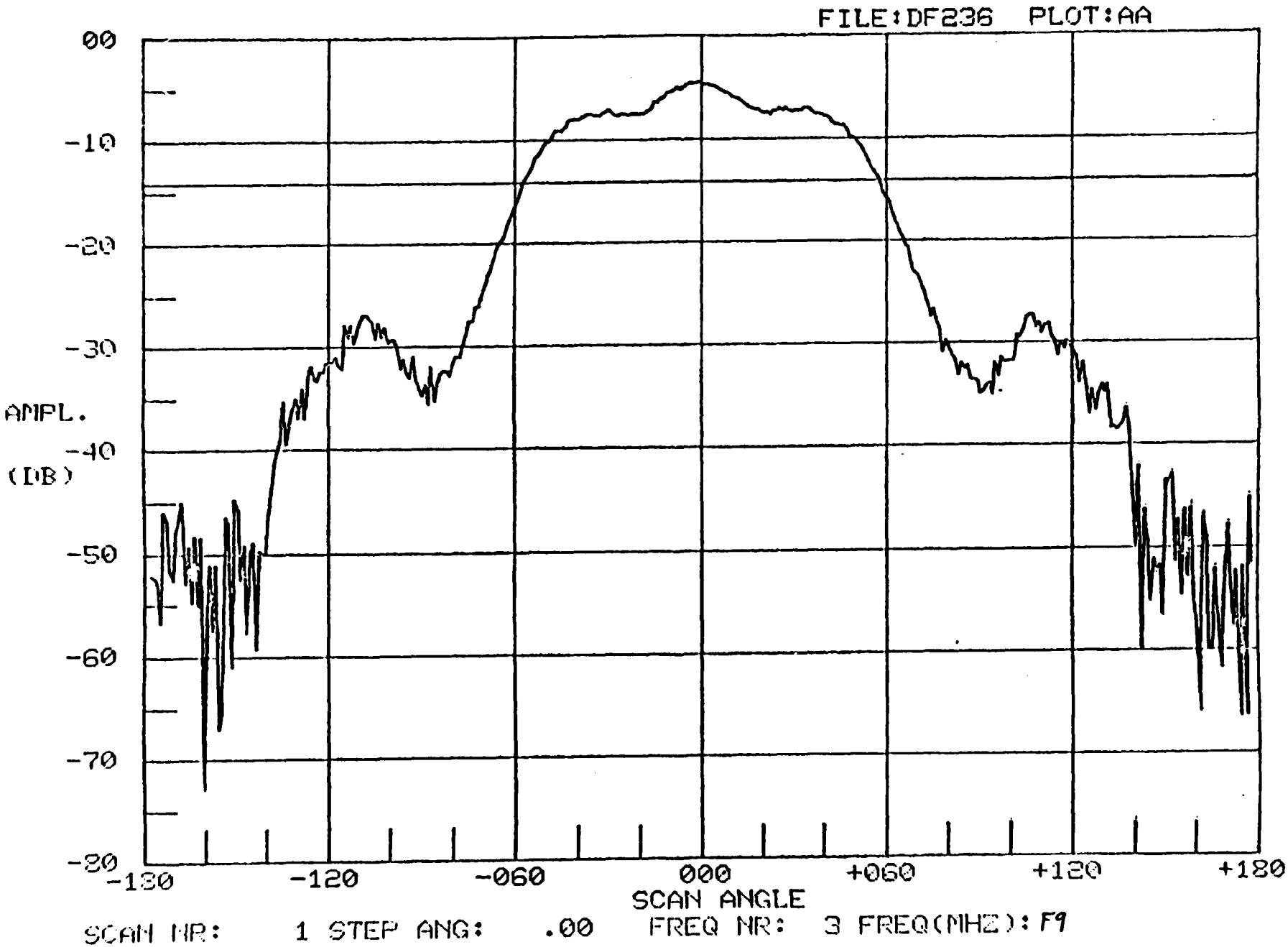

FILE:DF236 PLOT:A4
AMPL. (DB)
0
-10
-20
-30
-40
-50
-60
-70
-80
-120
-060
000
+060
+120
SCAN ANGLE
SCAN INC: 2 STEP ANG:-10.00 FREQ NR: 2 FREQ(MHZ): F8

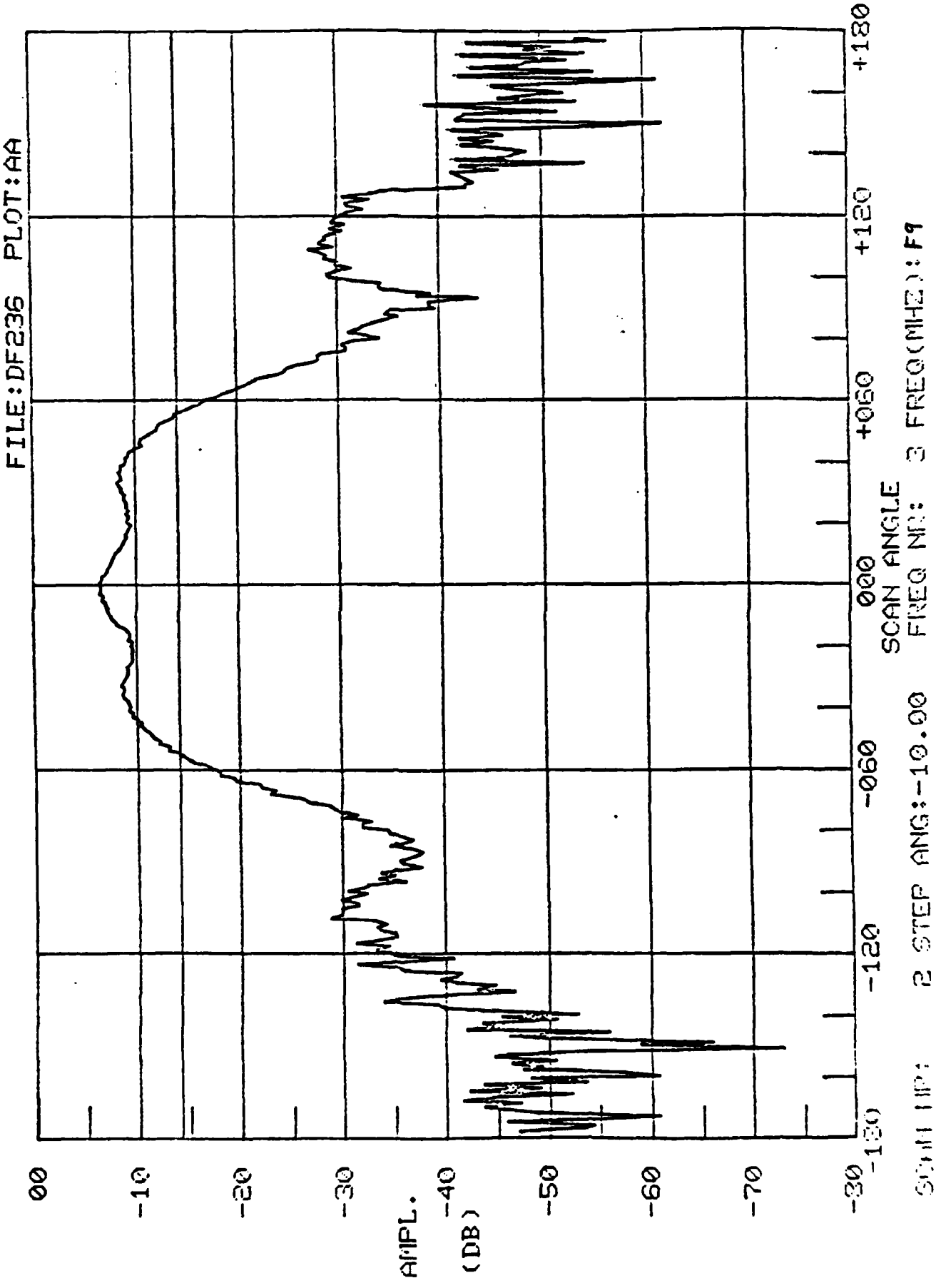

FILE:DF236 PLOT:AA
AMPL. (DB)
0
-10
-20
-30
-40
-50
-60
-70
-80
-120
-060
000
+060
+120
SCAN ANGLE
FREQ NR: 2 FREQ(MHZ): F8
SCAN UP: 3 STEP ANG:-20.00

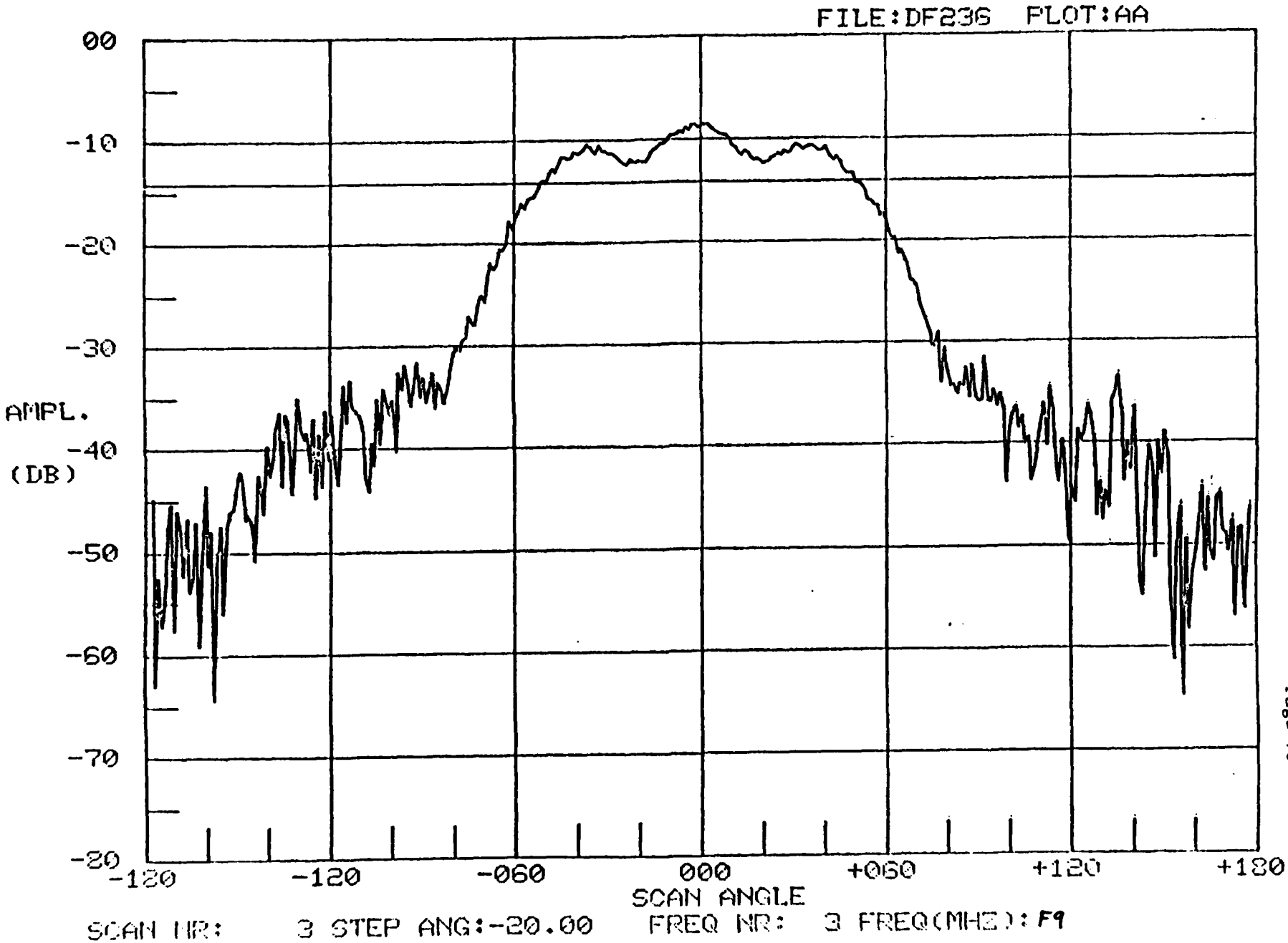

FILE:DF236 PLOT:AA
00
-10
-20
-30
AMPL.
(DB)
-40
-50
-60
-70
-80
-180
-120
-060
000
+060
+120
+180
SCAN ANGLE
SCAN NR: 4 STEP ANG:-30.00 FREQ NR: 2 FREQ(MHZ): F8

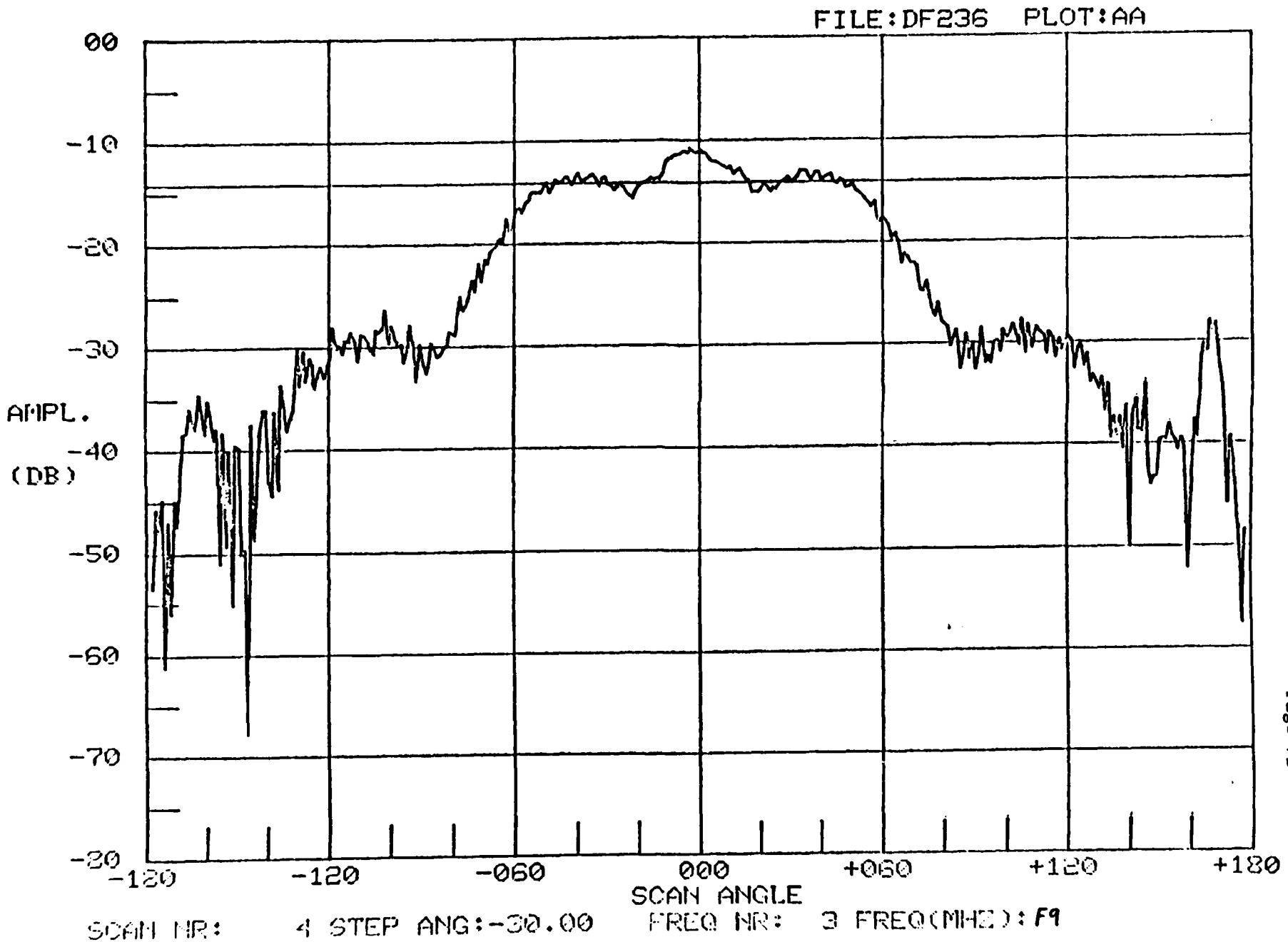

FILE:DF236 PLOT:AA
00
-10
-20
-30
AMPL.
(DB)
-40
-50
-60
-70
-80
-180
-120
-060
000
+060
+120
+180
SCAN ANGLE
SCAN NR: 5 STEP ANG:-40.00 FREQ NR: 2 FREQ(MHZ): F8

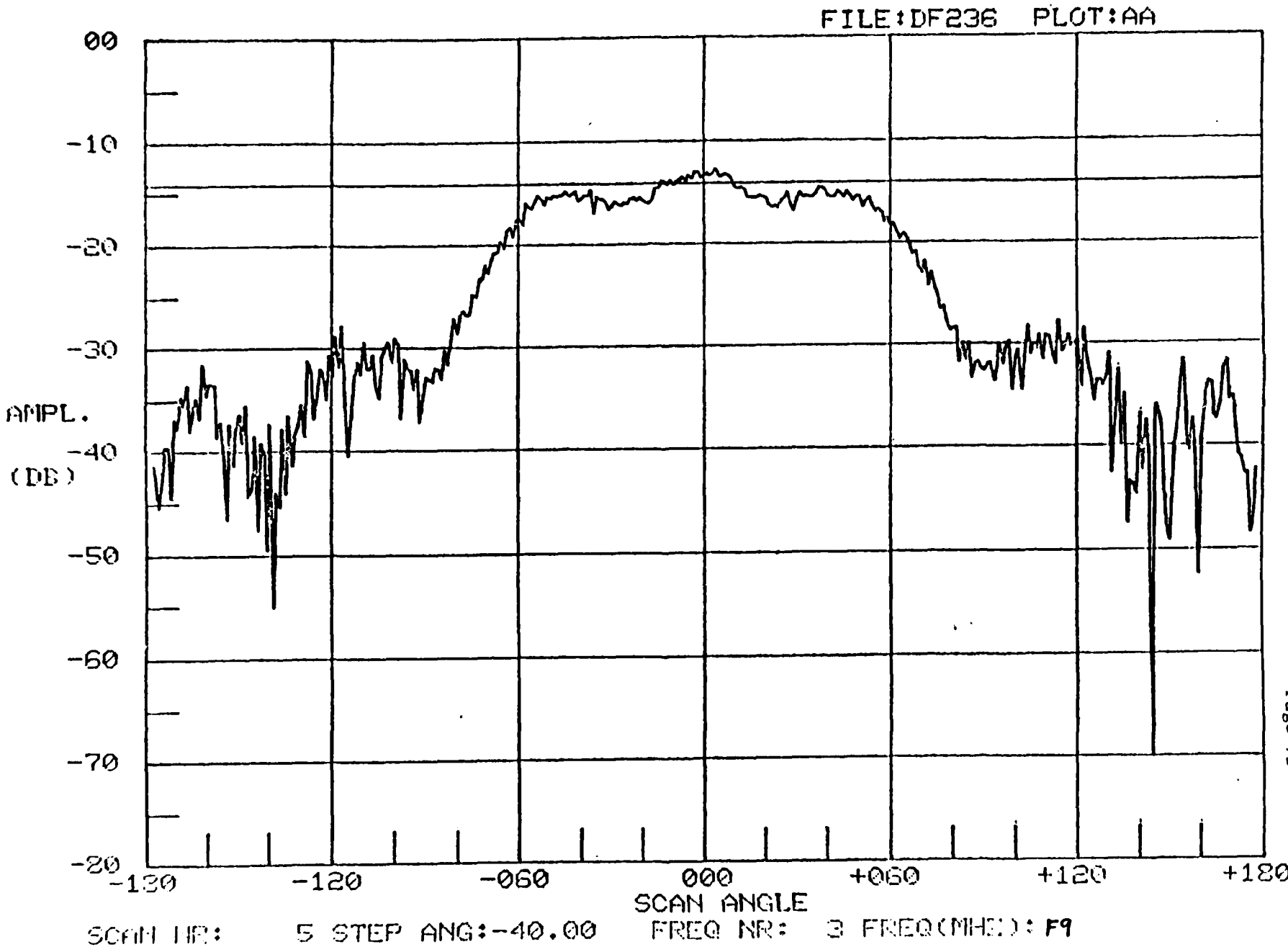

FILE:DF237 PLOT:AA
00
-10
-20
-30
AMPL.
-40
(DB)
-50
-60
-70
-80
-180
-120
-060
000
+060
+120
+180
SCAN ANGLE
SCAN NO: 1 STEP ANG: .00 FREQ NO: 2 FREQ(MHZ): F8

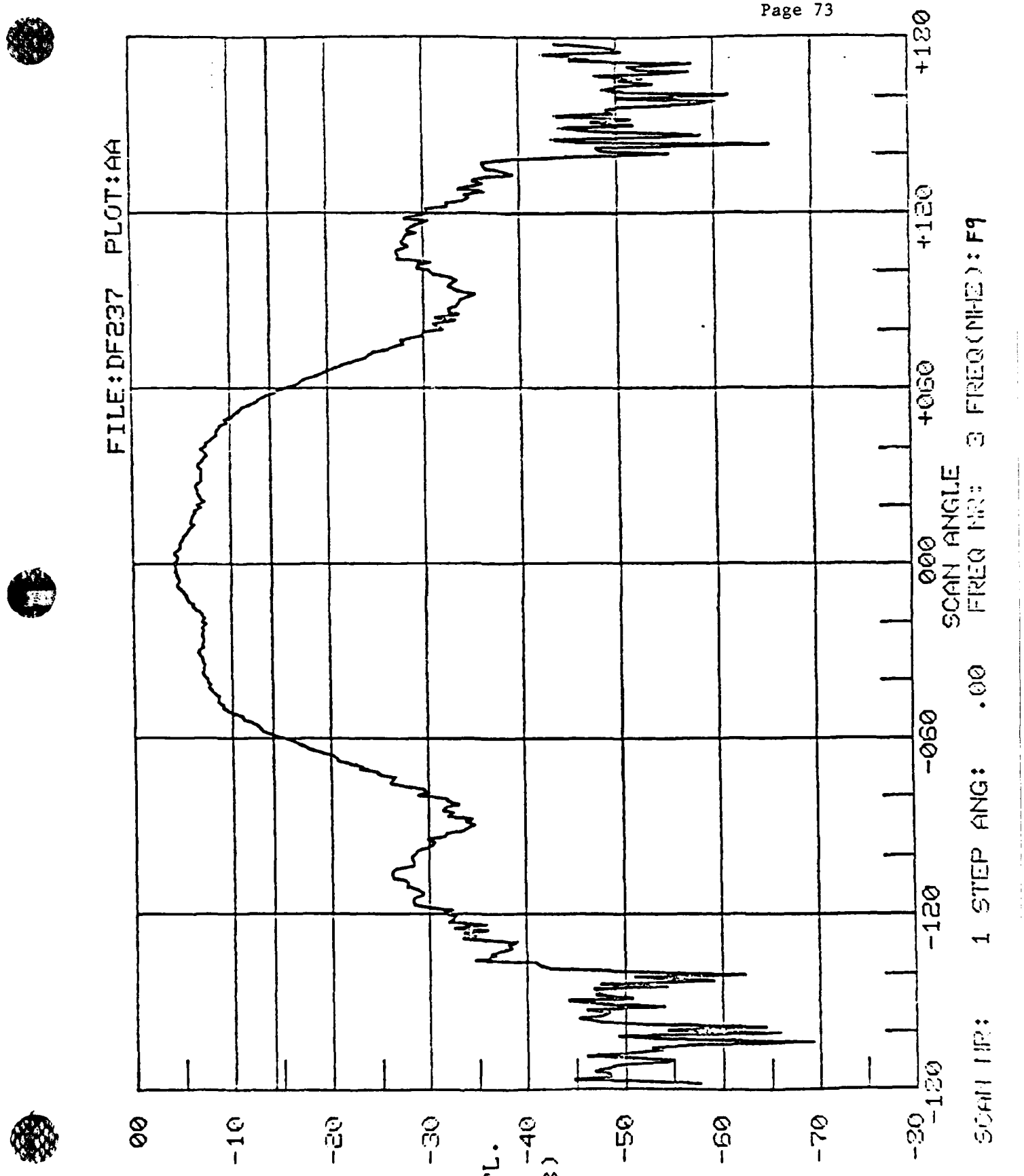

FILE:DF236 PLOT:AA
00
-10
-20
-30
AMPL.
-40
(DB)
-50
-60
-70
-80
-180
-120
-060
000
+060
+120
+180
SCAN ANGLE
SCAN NR: 1 STEP ANG: .00 FREQ NR: 3 FREQ(MHZ): F9


FILE:DF236 PLOT:AA
00
-10
-20
-30
-40
-50
-60
-70
-80
AMPL.
(DB)
-180
-120
-060
000
+060
+120
+180
SCAN ANGLE
FREQ NR: 3 FREQ(MHZ): F9
2 STEP ANG:-10.00


FILE:DF236 PLOT:AA
00
-10
-20
-30
AMPL.
(DB)
-40
-50
-60
-70
-80
-180
-120
-060
000
+060
+120
+180
SCAN ANGLE
SCAN NR: 3 STEP ANG:-20.00 FREQ NR: 3 FREQ(MHZ): F9


FILE:DF236 PLOT:AA
00
-10
-20
-30
AMPL.
(DB)
-40
-50
-60
-70
-80
-180
-120
-060
000
+060
+120
+180
SCAN ANGLE
SCAN NR: 4 STEP ANG:-30.00 FREQ NR: 3 FREQ(MHZ):F9


FILE:DF236 PLOT:AA
00
-10
-20
-30
AMPL.
(DB)
-40
-50
-60
-70
-80
-180
-120
-060
000
+060
+120
+180
SCAN ANGLE
SCAN NR: 5 STEP ANG:-40.00 FREQ NR: 3 FREQ(MHz): F9


FILE:DF237 PLOT:AA
00
-10
-20
-30
-40
-50
-60
-70
-80
AMPL.
(DB)
-120
-060
000
+060
+120
+120
SCAN ANGLE
SCAN UP: 1 STEP ANG: .00 FREQ MHz 3 FREQ(MHz): F9

Appendix 6 contains AN/ALQ-162 antenna patterns as recorded by the 20/20 system during test. They are in rectangular plot format. These patterns cover frequencies F10, F11, and F12 and elevations of +40° through -40° for both the forward and aft antennas. They are arranged as follows:

DF207 -- Forward antenna, upper hemisphere

DF208 -- Forward antenna, upper hemisphere horizon

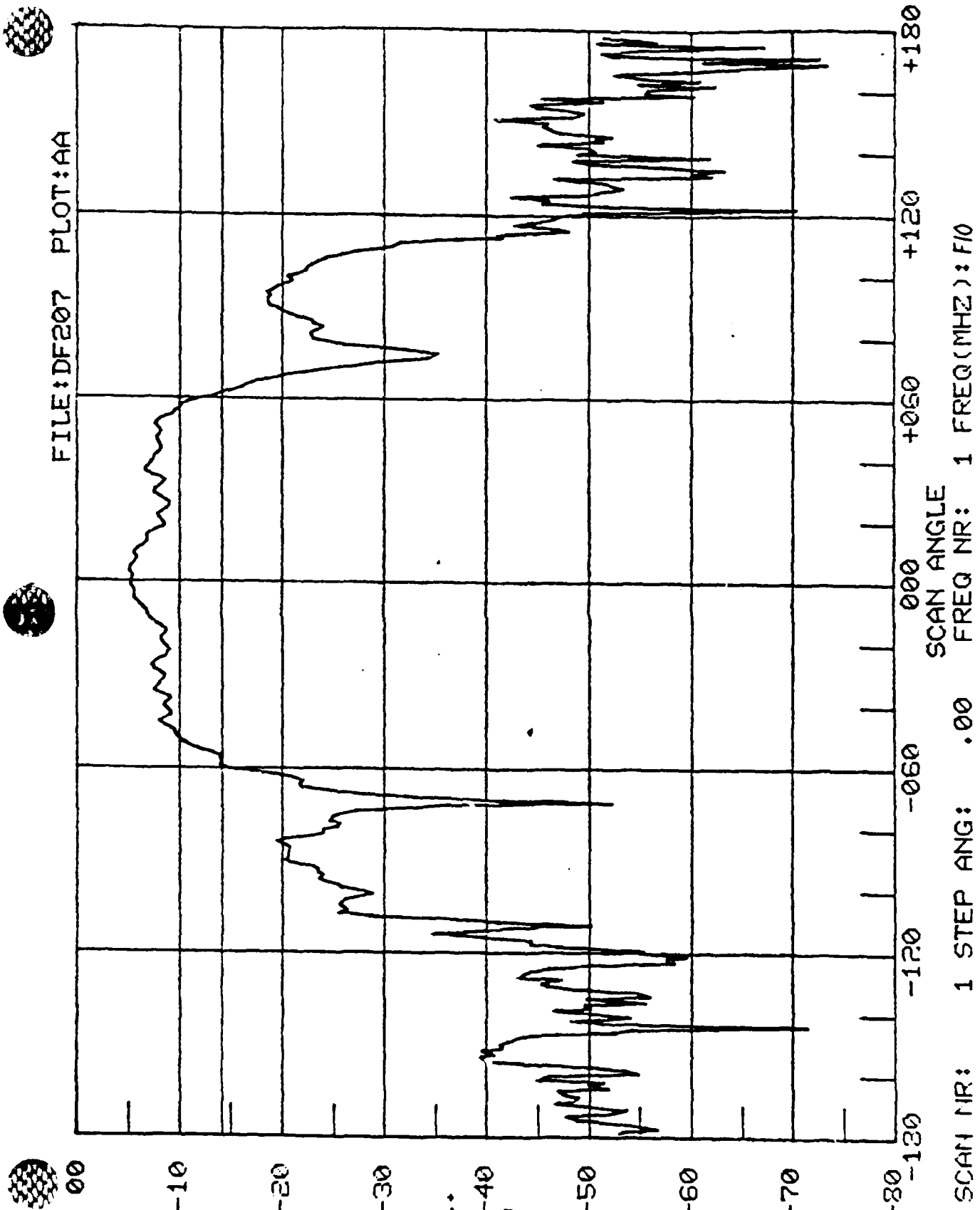
DF230 thru DF233 -- Forward antenna, lower hemisphere

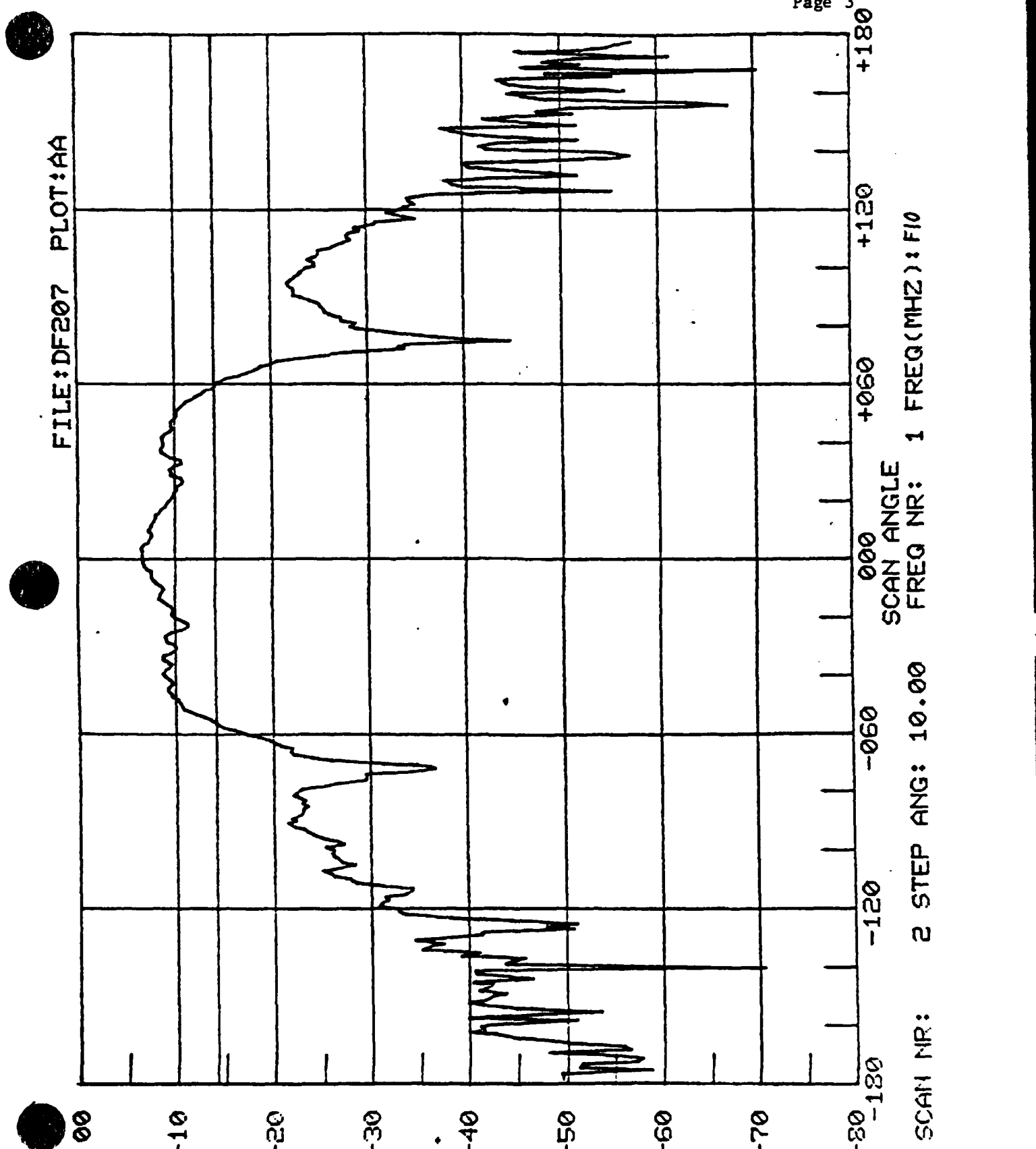
DF216 -- Aft antenna, upper hemisphere

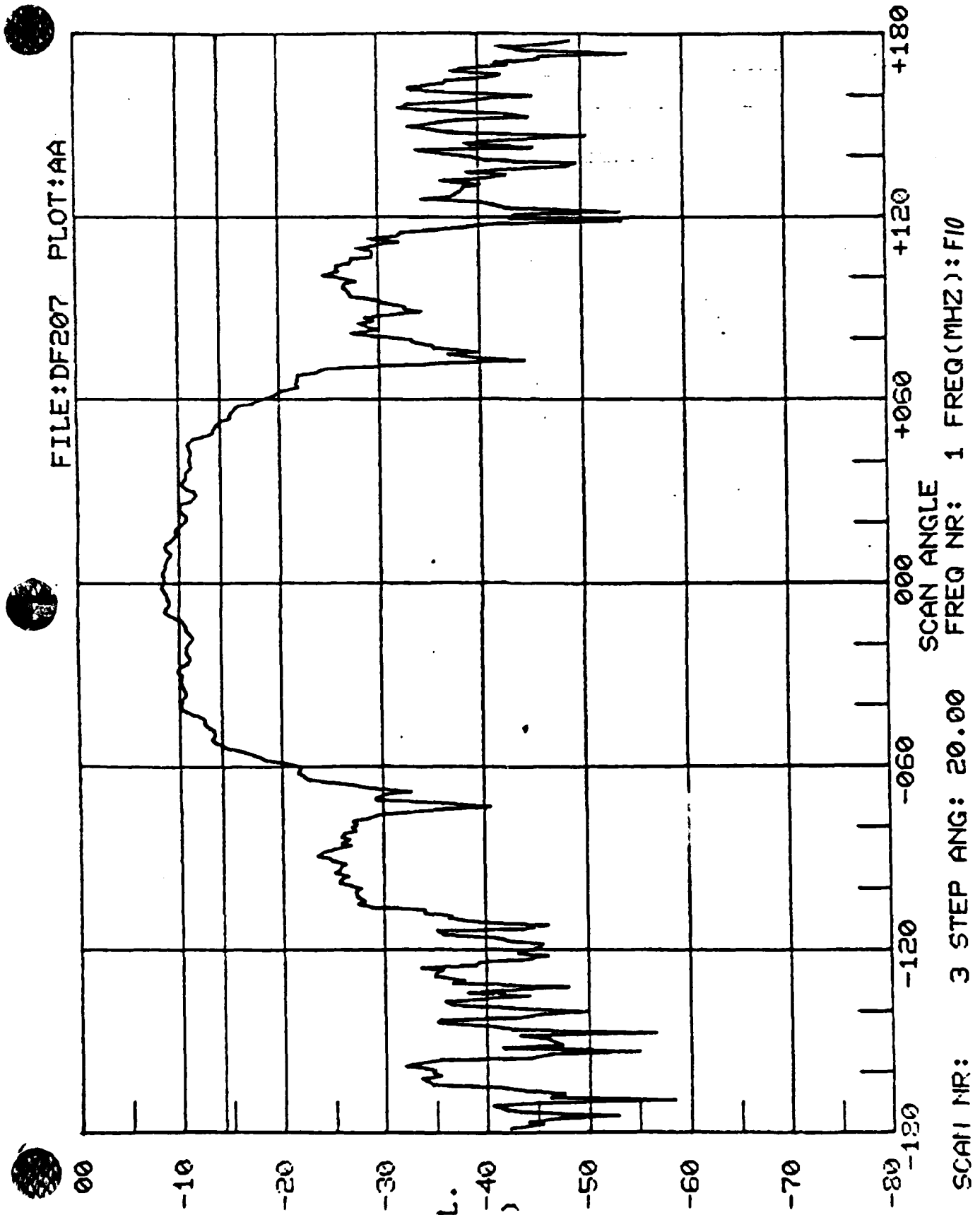
DF217 -- Aft antenna, upper hemisphere horizon

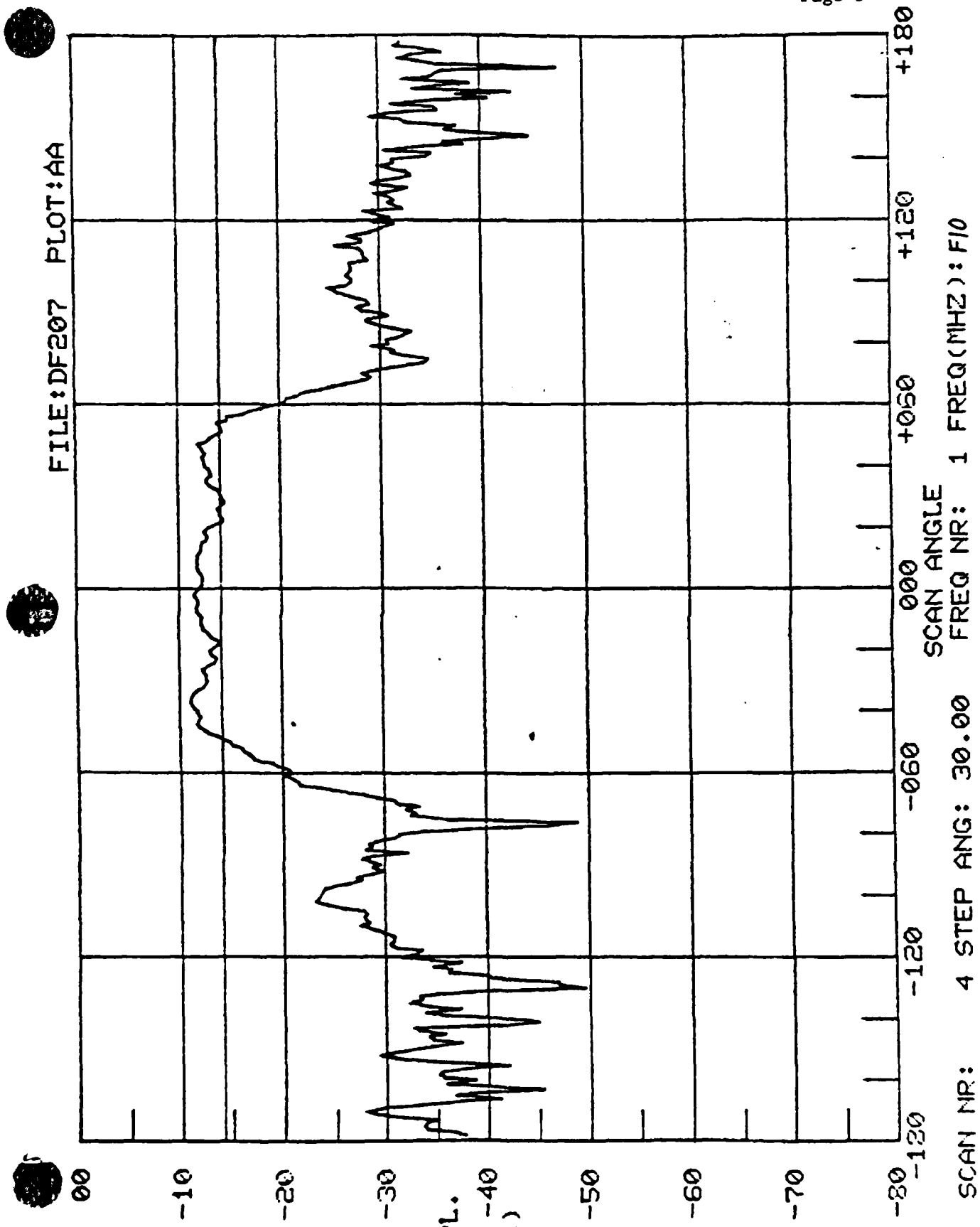
DF234 -- Aft antenna, lower hemisphere

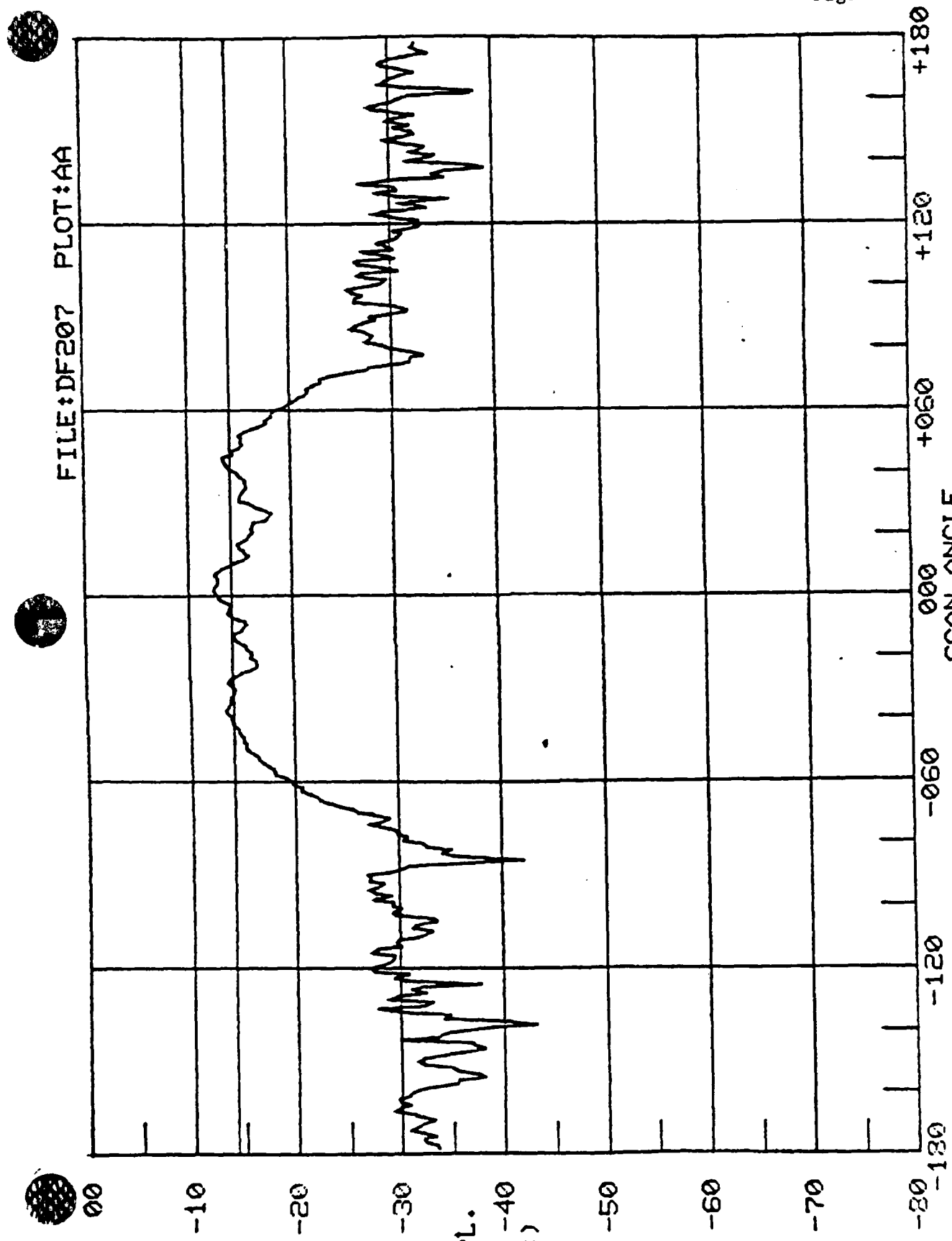
DF235 -- Aft antenna, lower hemisphere horizon.

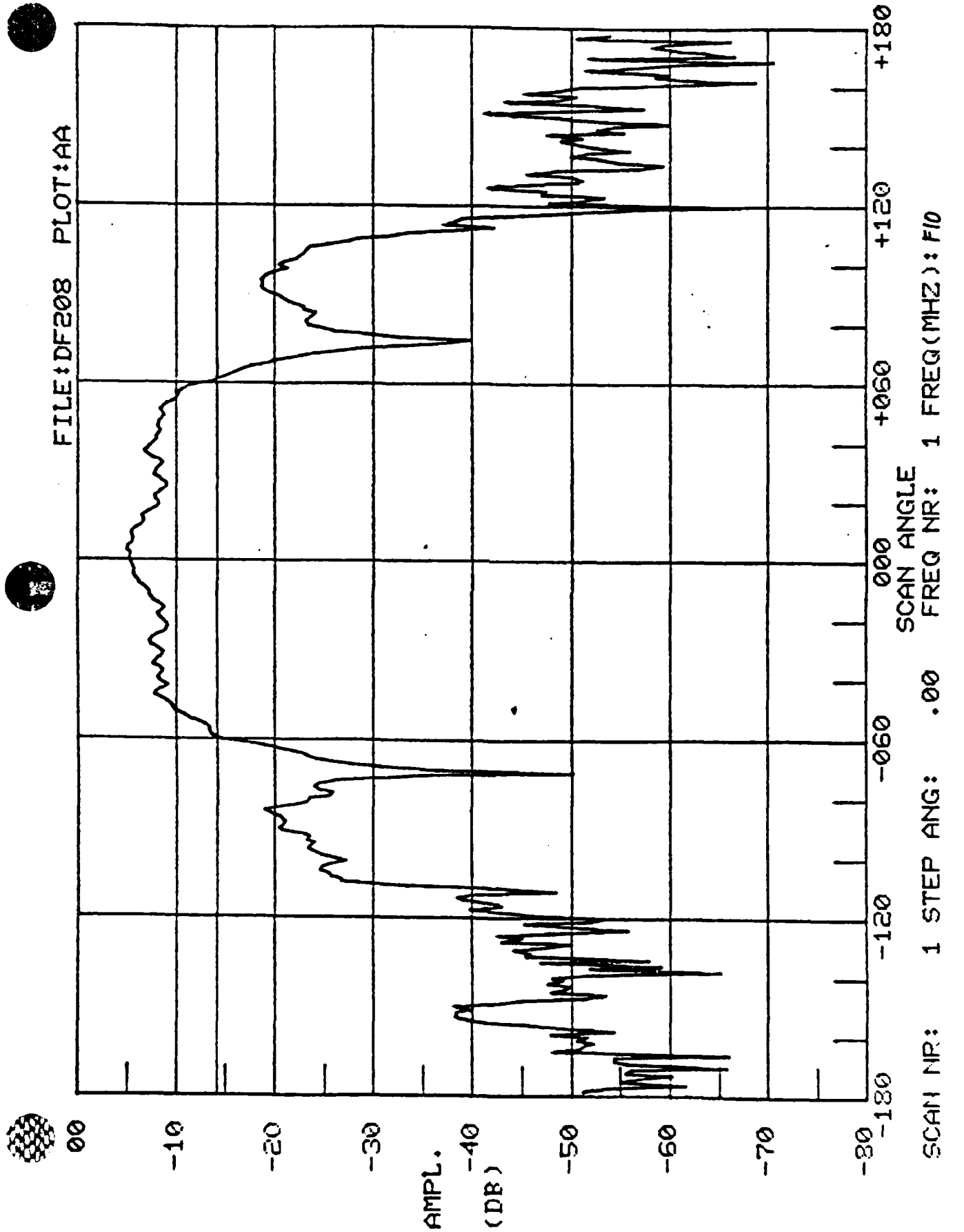

FILE:DF207 PLOT:AA
AMPL. (DB)
00
-10
-20
-30
-40
-50
-60
-70
-80
-180
-120
-060
000
+060
+120
+180
SCAN ANGLE
SCAN NR: 1 STEP ANG: .00 FREQ NR: 1 FREQ(MHZ): F/0

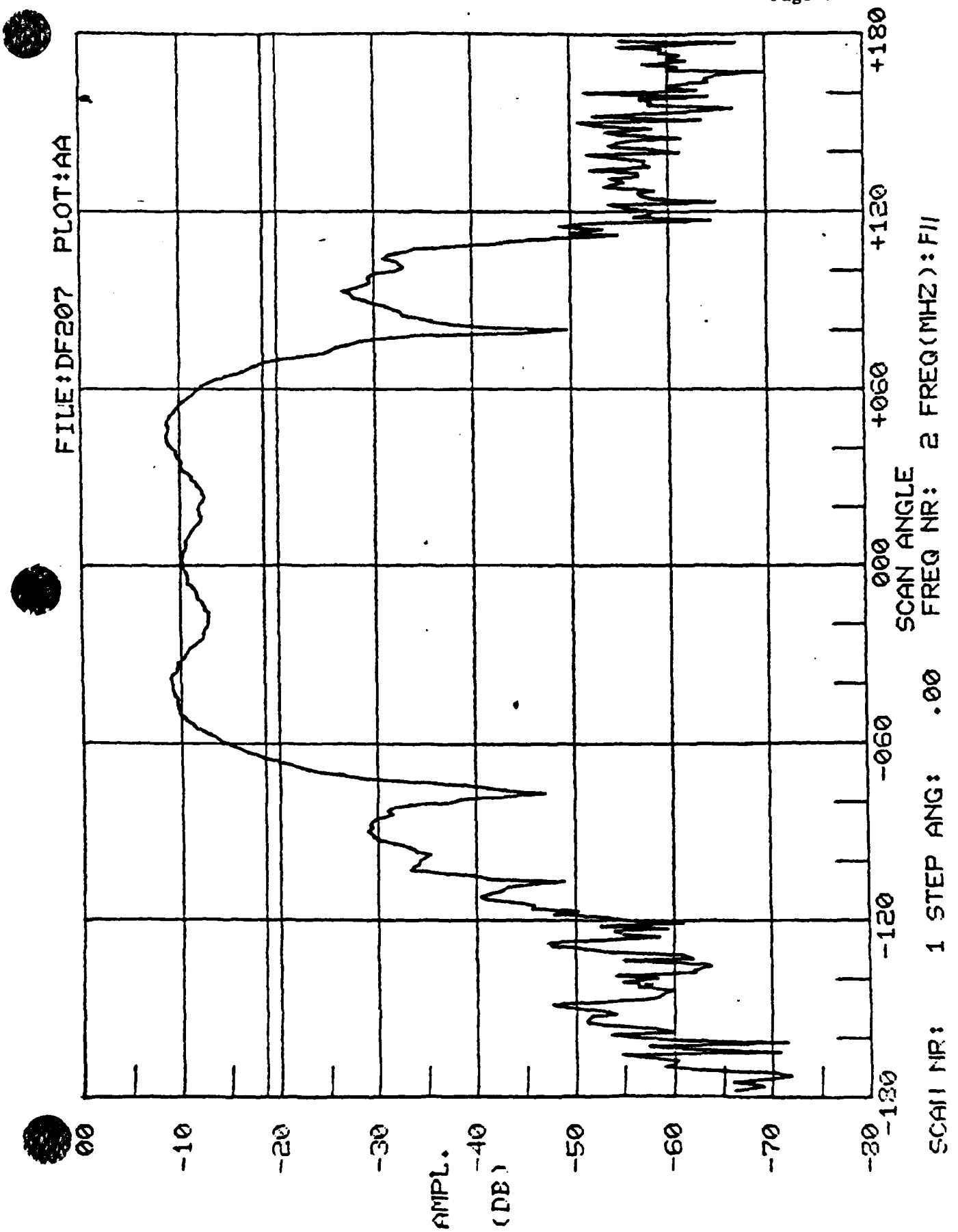

FILE:DF207 PLOT:AA
00
-10
-20
-30
-40
-50
-60
-70
-80
AMPL.
(DB)
-180
-120
-060
000
+060
+120
+180
SCAN ANGLE
SCAN NR: 2 STEP ANG: 10.00 FREQ NR: 1 FREQ(MHZ): F10

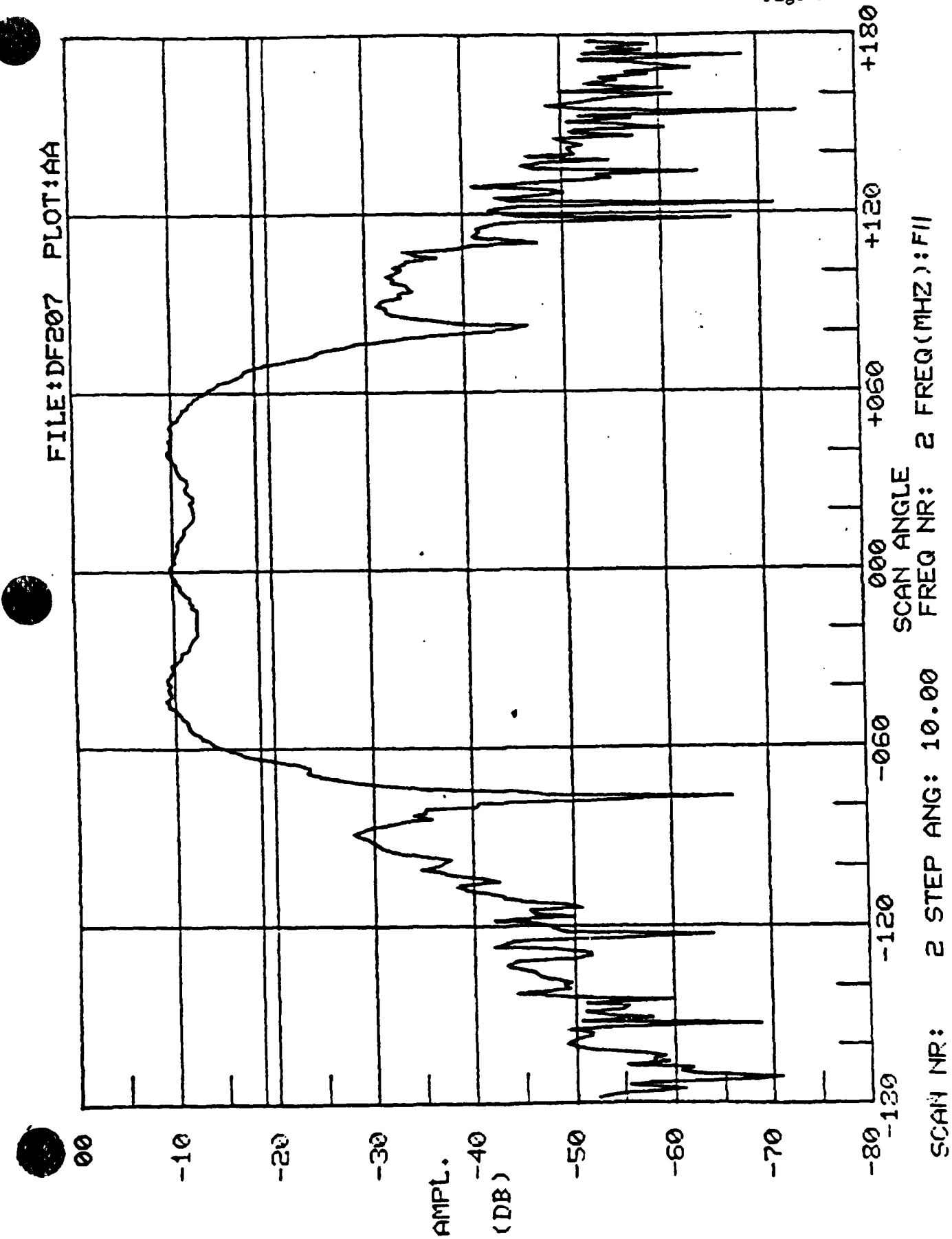

FILE:DF207 PLOT:AA
00
-10
-20
-30
-40
-50
-60
-70
-80
-180
-120
-060
000
+060
+120
+180
AMPL. (DB)
SCAN ANGLE
SCAN NR: 3 STEP ANG: 20.00 FREQ NR: 1 FREQ(MHZ):F10

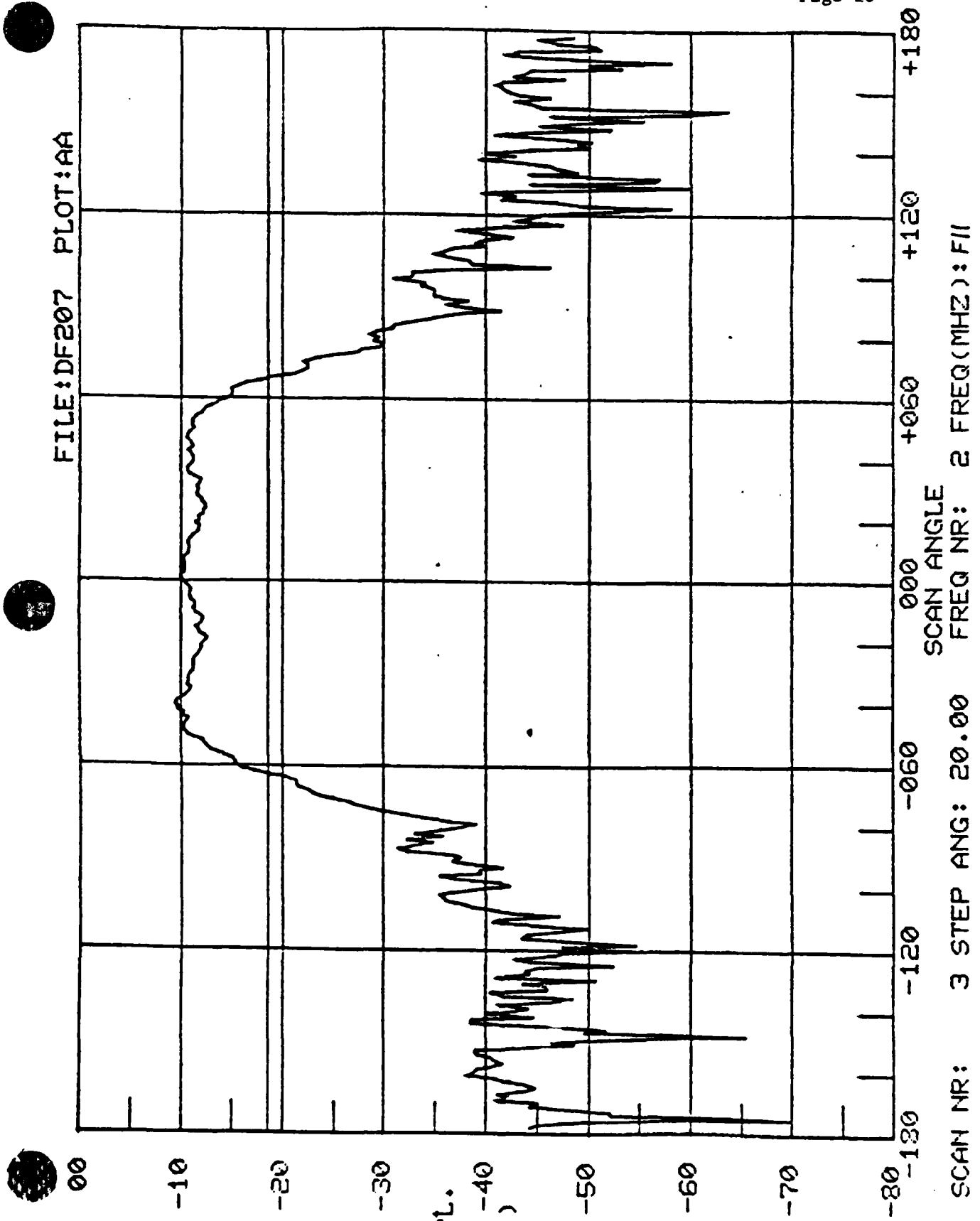

FILE:DF207 PLOT:AA
00
-10
-20
-30
-40
-50
-60
-70
-80
AMPL.
(DB)
-180
-120
-060
000
+060
+120
+180
SCAN ANGLE
SCAN NR: 4 STEP ANG: 30.00 FREQ NR: 1 FREQ(MHZ):F10

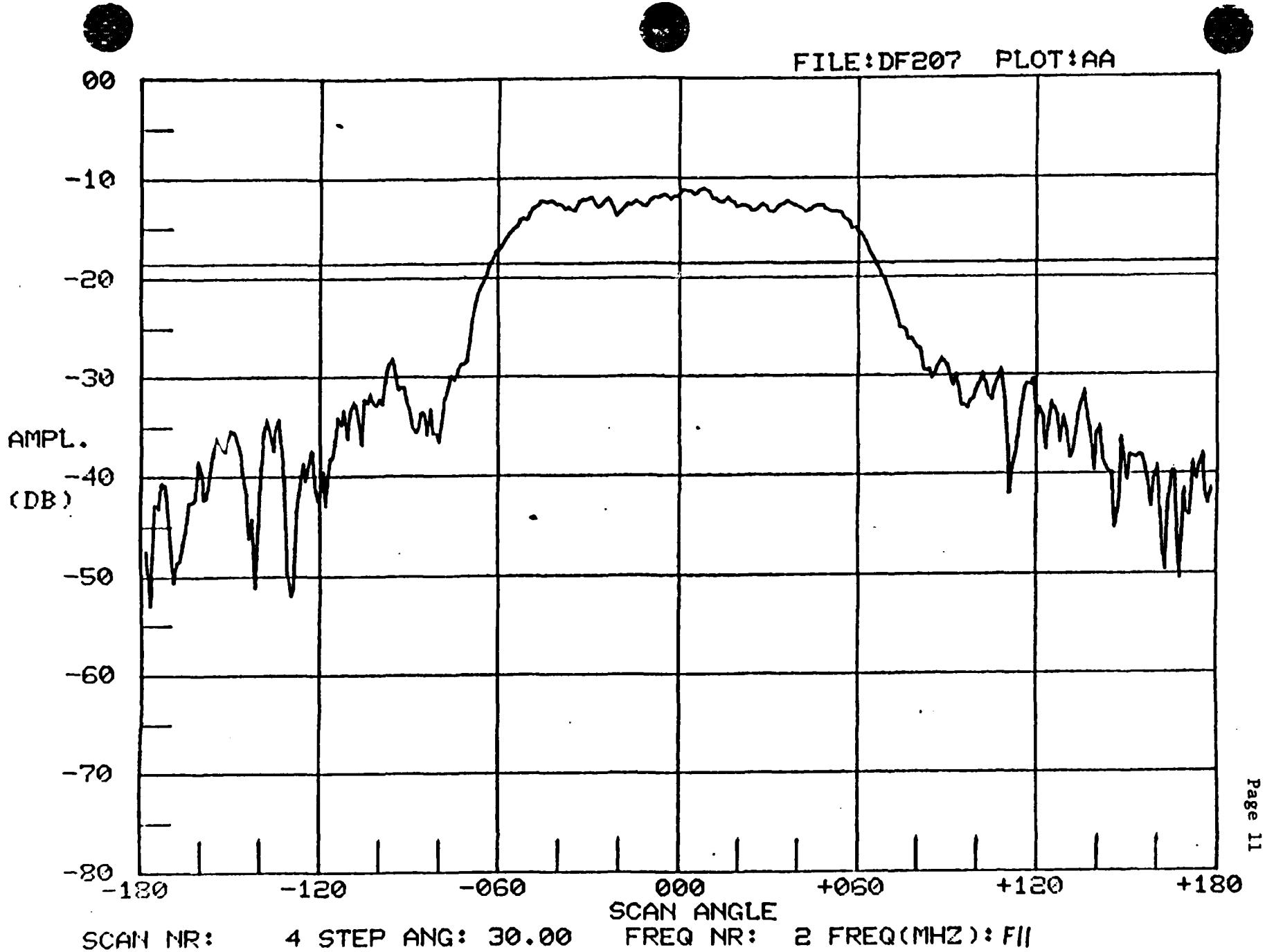

FILE:DF207 PLOT:AA
AMPL. (DB)
00
-10
-20
-30
-40
-50
-60
-70
-80
-130
-120
-060
000
+060
+120
+180
SCAN ANGLE
SCAN NR: 5 STEP ANG: 40.00 FREQ NR: 1 FREQ(MHZ):F10

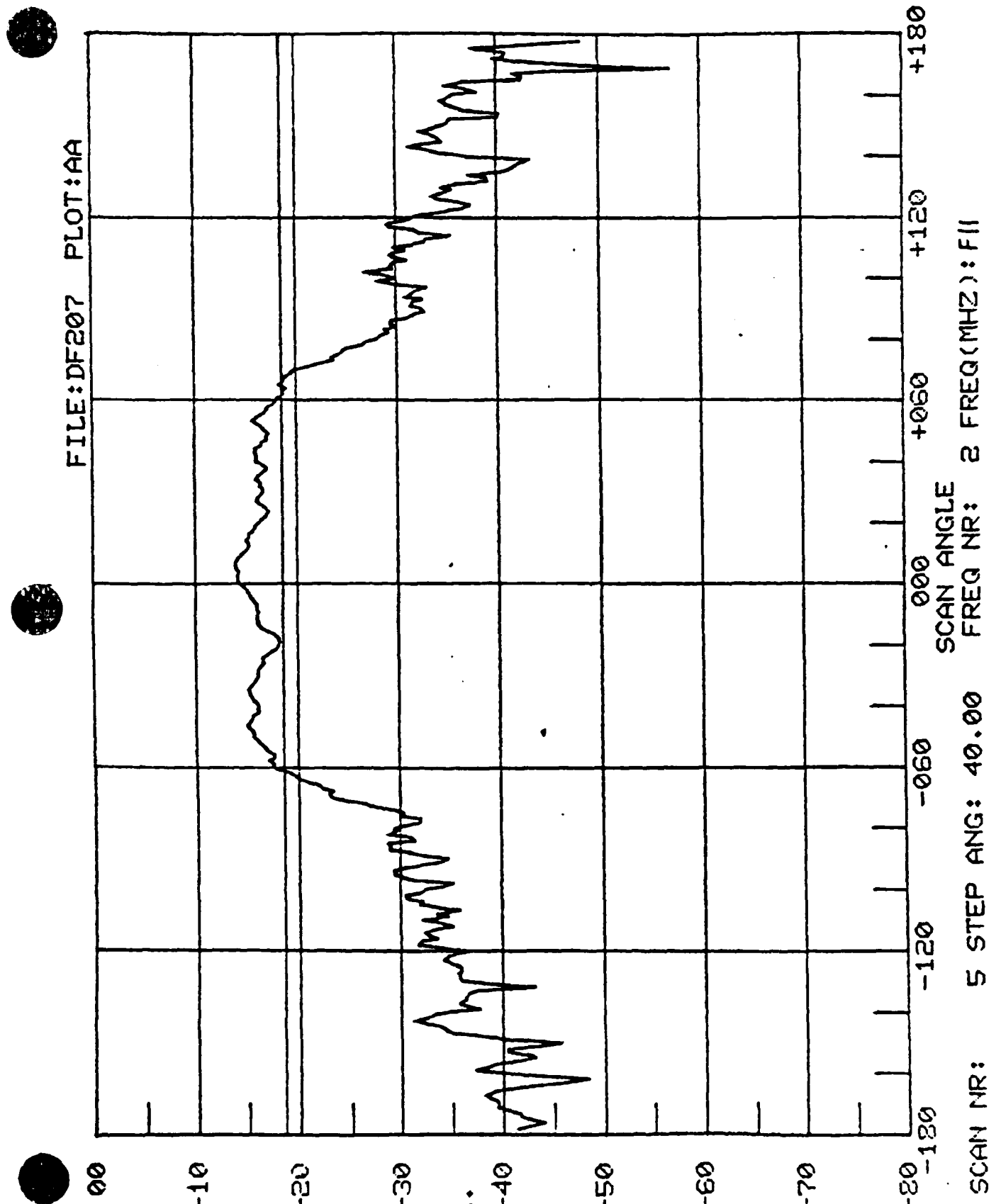

FILE:DF208 PLOT:AA
00
-10
-20
-30
-40
-50
-60
-70
-80
AMPL.
(DB)
-180
-120
-060
000
+060
+120
+180
SCAN ANGLE
SCAN NR: 1 STEP ANG: .00 FREQ NR: 1 FREQ(MHZ): F10

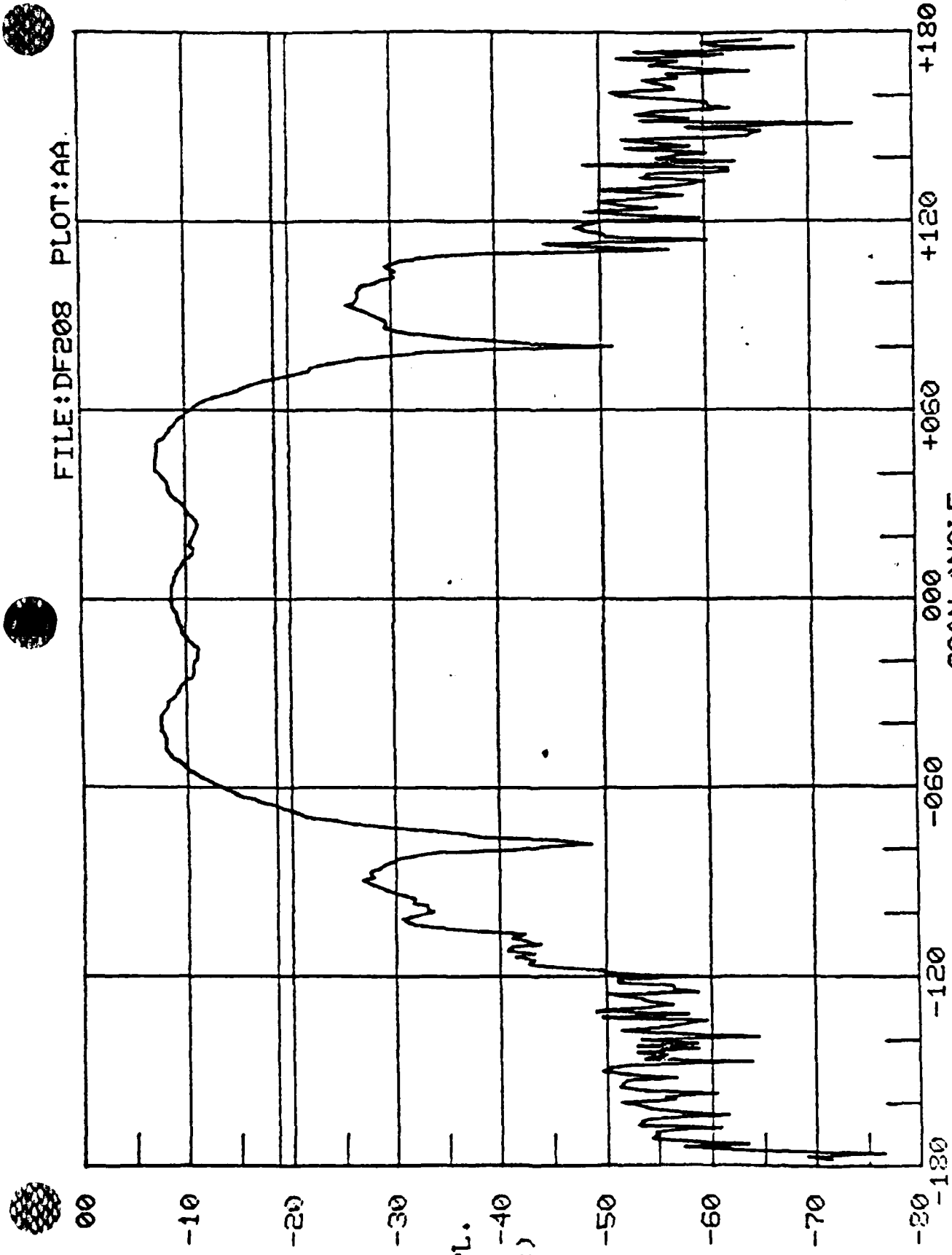

FILE:DF207 PLOT:AA
AMPL. (DB)
00
-10
-20
-30
-40
-50
-60
-70
-80
-180
-120
-060
000
+060
+120
+180
SCAN ANGLE
SCAN NR: 1 STEP ANG: .00 FREQ NR: 2 FREQ(MHZ):FI

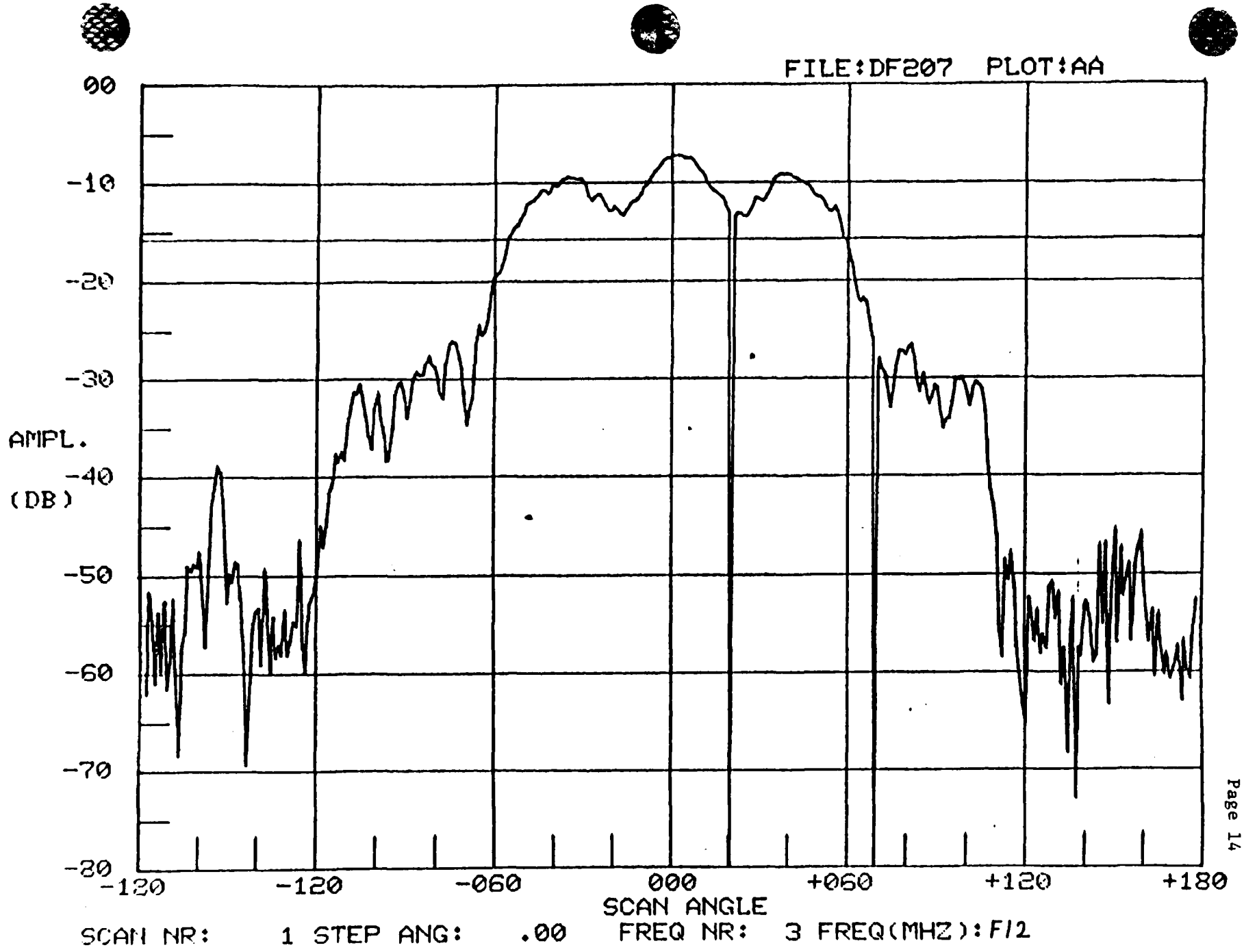

FILE:DF207 PLOT:AA
00
-10
-20
-30
-40
-50
-60
-70
-80
AMPL.
(DB)
-180
-120
-060
000
+060
+120
+180
SCAN ANGLE
SCAN NR: 2 STEP ANG: 10.00 FREQ NR: 2 FREQ(MHZ):F11

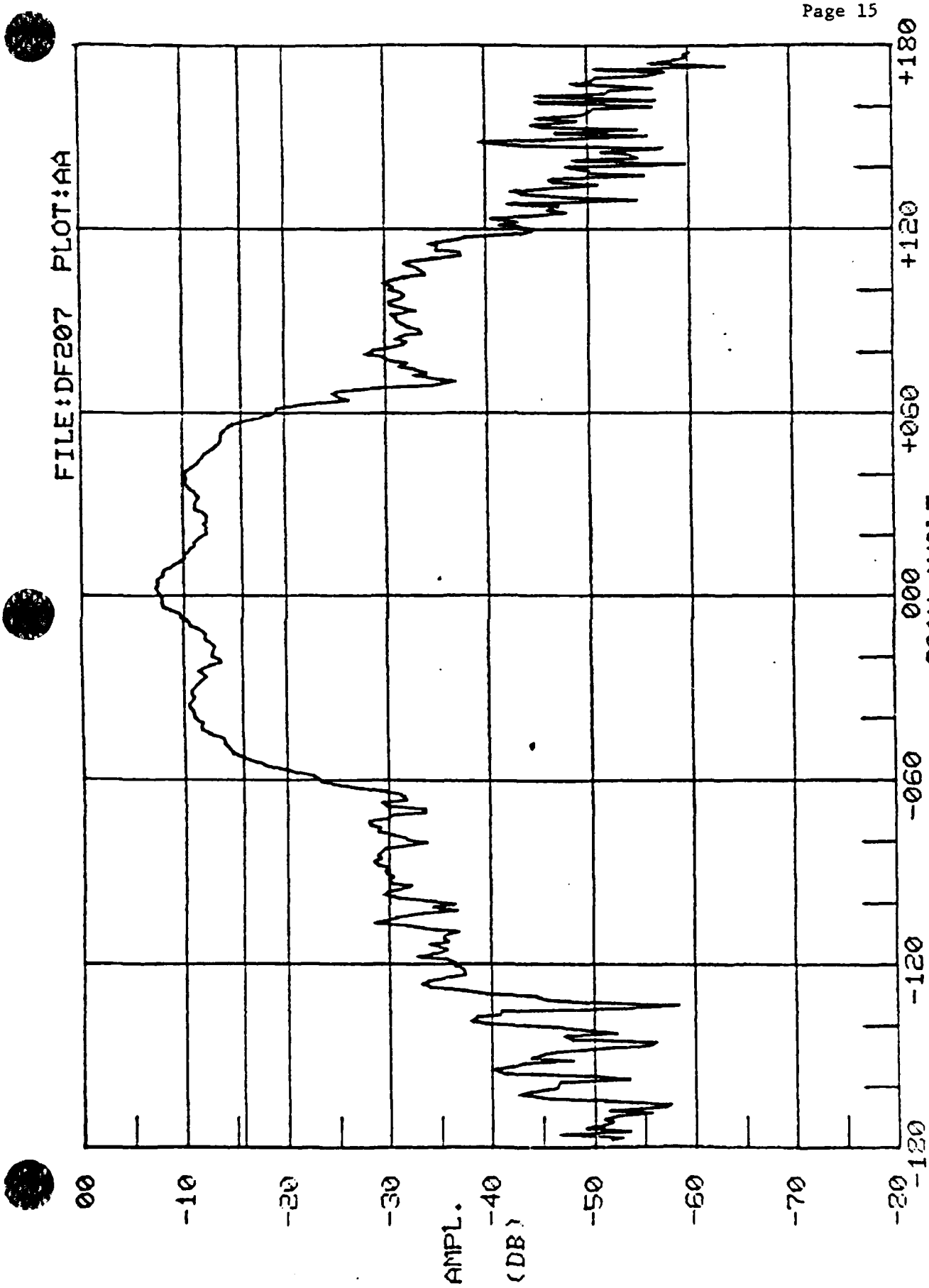

FILE:DF207 PLOT:AA
AMPL. (DB)
00
-10
-20
-30
-40
-50
-60
-70
-80
-180
-120
-060
000
+060
+120
+180
SCAN ANGLE
SCAN NR: 3 STEP ANG: 20.00 FREQ NR: 2 FREQ(MHZ):FII

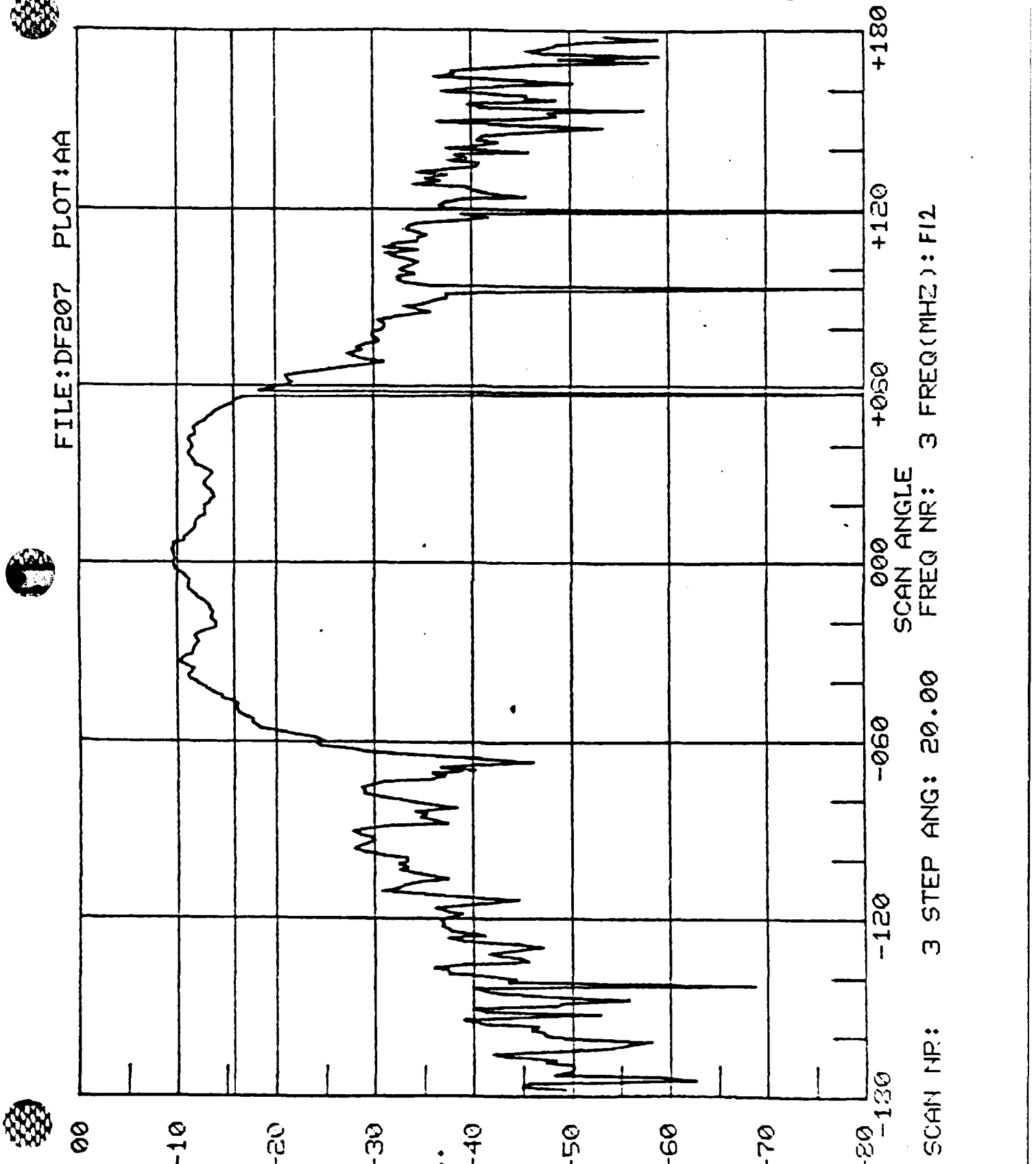

FILE:DF207 PLOT:AA
00
-10
-20
-30
AMPL.
-40
(DB)
-50
-60
-70
-80
-180
-120
-060
000
+060
+120
+180
SCAN ANGLE
SCAN NR: 4 STEP ANG: 30.00 FREQ NR: 2 FREQ(MHZ): F11

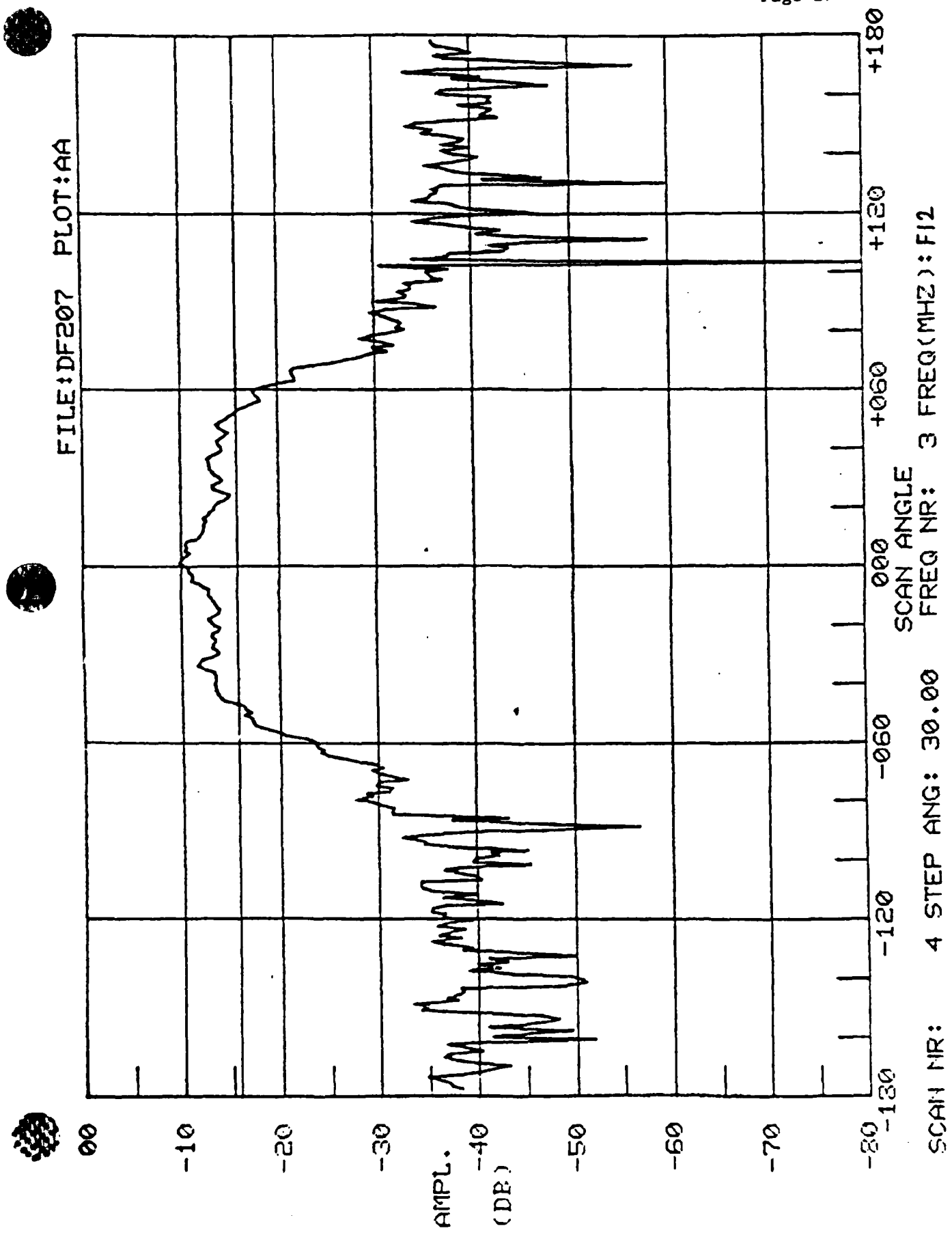

FILE:DF207 PLOT:AA
00
-10
-20
-30
-40
-50
-60
-70
-80
AMPL.
(DB)
-180
-120
-060
000
+060
+120
+180
SCAN ANGLE
SCAN NR: 5 STEP ANG: 40.00 FREQ NR: 2 FREQ(MHZ): FII

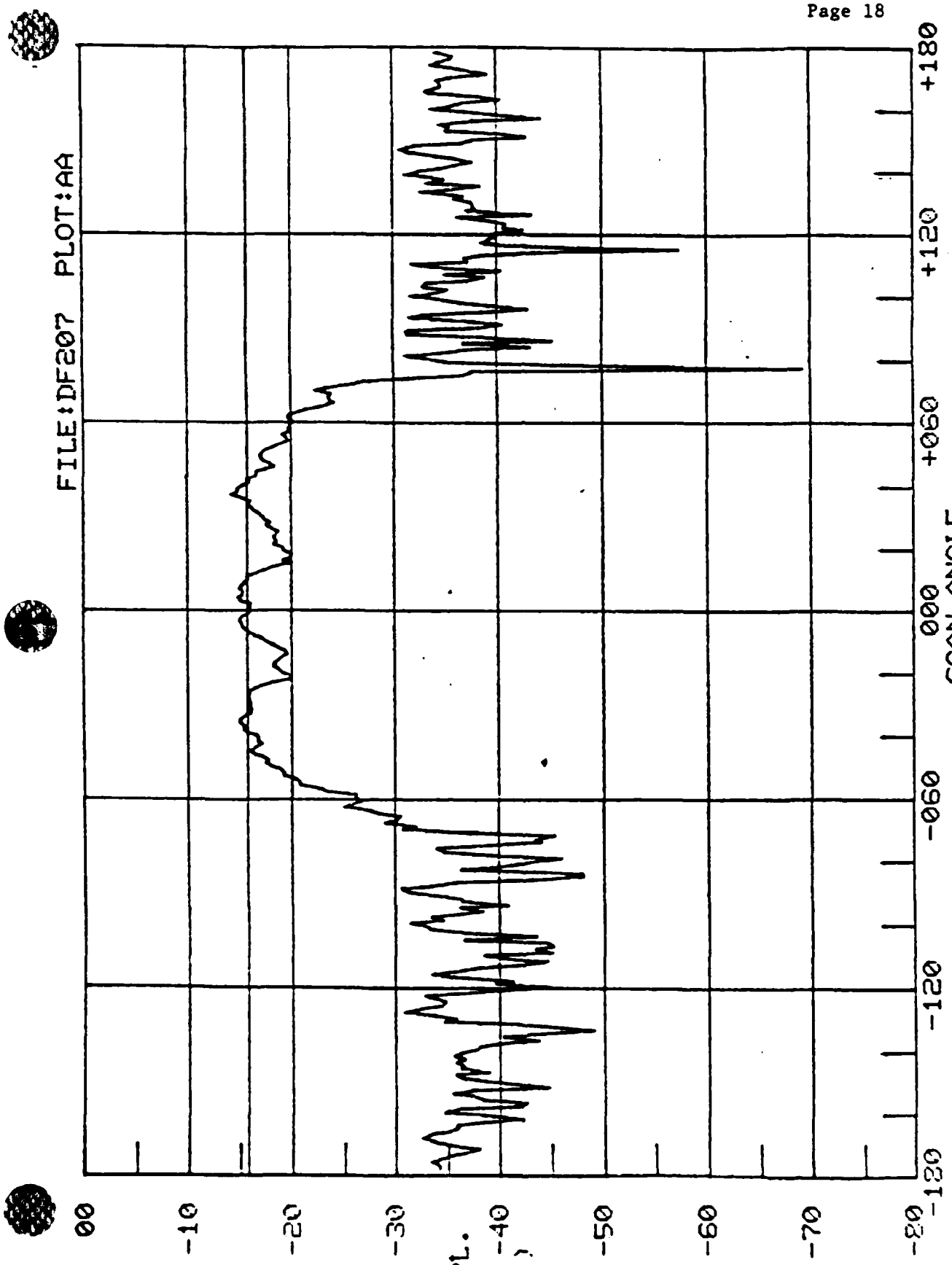

FILE:DF208 PLOT:AA
00
-10
-20
-30
-40
-50
-60
-70
-80
AMPL.
(DB)
-180
-120
-060
000
+060
+120
+180
SCAN ANGLE
SCAN NR: 1 STEP ANG: .00 FREQ NR: 2 FREQ(MHZ): FI

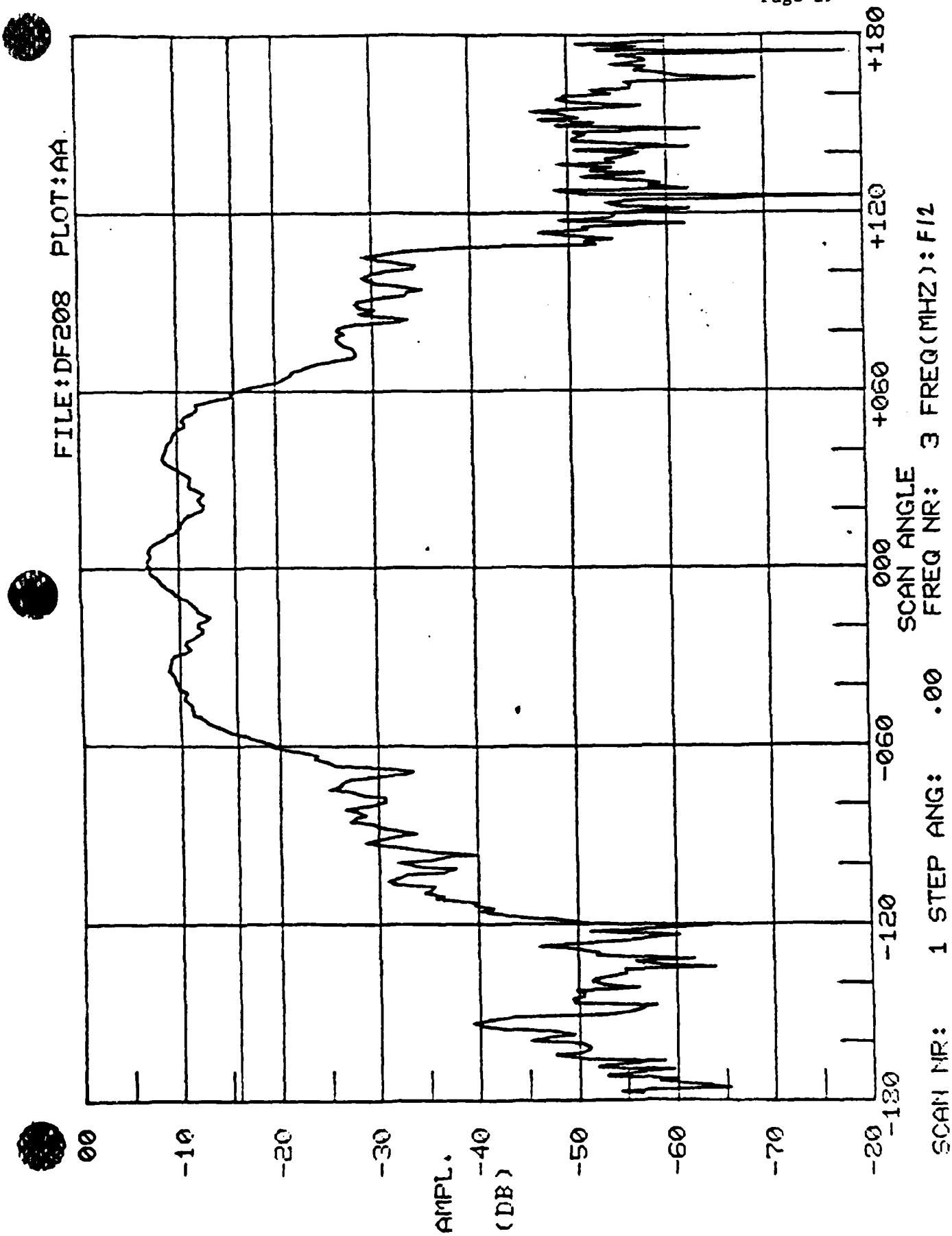

FILE:DF207 PLOT:AA
00
-10
-20
-30
AMPL.
-40
(DB)
-50
-60
-70
-20
-120
-120
-060
000
+060
+120
+180
SCAN ANGLE
SCAN NR: 1 STEP ANG: .00 FREQ NR: 3 FREQ(MHZ):F/2

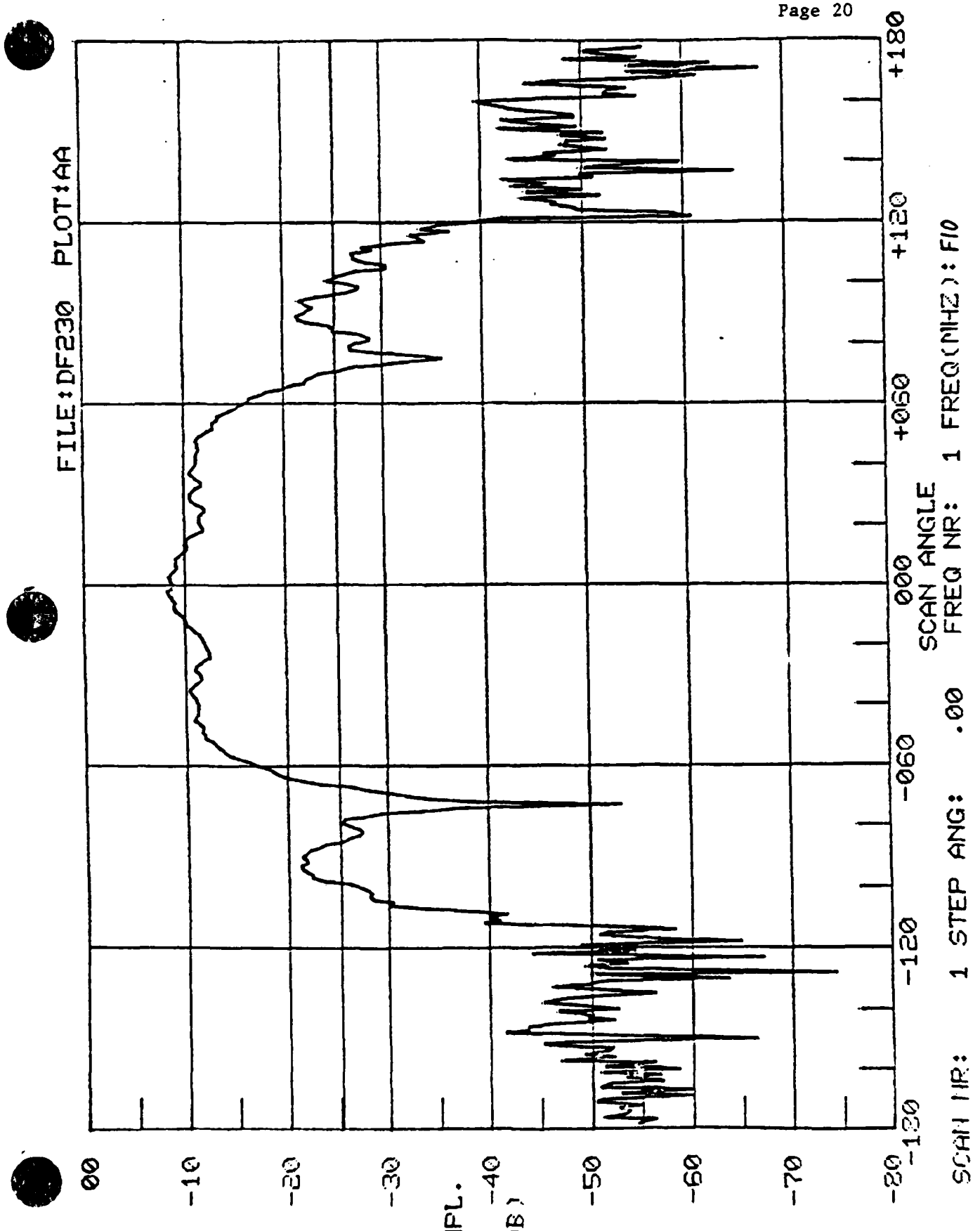

FILE:DF207 PLOT:AA
00
-10
-20
-30
-40
-50
-60
-70
-80
AMPL.
(DB)
-180
-120
-060
000
+060
+120
+180
SCAN ANGLE
SCAN NR: 2 STEP ANG: 10.00 FREQ NR: 3 FREQ(MHZ): F12


FILE:DF207 PLOT:AA
00
-10
-20
-30
-40
-50
-60
-70
-80
AMPL.
(DB)
-180
-120
-060
000
+060
+120
+180
SCAN ANGLE
SCAN NR: 3 STEP ANG: 20.00 FREQ NR: 3 FREQ(MHZ): F12


FILE:DF207 PLOT:AA
00
-10
-20
-30
-40
-50
-60
-70
-80
AMPL.
(DB)
-130
-120
-060
000
+060
+120
+180
SCAN ANGLE
SCAN NR: 4 STEP ANG: 30.00 FREQ NR: 3 FREQ(MHZ): F12


FILE:DF207 PLOT:AA
00
-10
-20
-30
-40
-50
-60
-70
-80
AMPL.
(DB)
-120
-060
000
+060
+120
+180
SCAN ANGLE
SCAN NR: 5 STEP ANG: 40.00 FREQ NR: 3 FREQ(MHZ):F12


FILE:DF208 PLOT:AA
00
-10
-20
-30
-40
-50
-60
-70
-80
AMPL.
(DB)
-180
-120
-060
000
+060
+120
+180
SCAN ANGLE
SCAN NR: 1 STEP ANG: .00 FREQ NR: 3 FREQ(MHZ):F/2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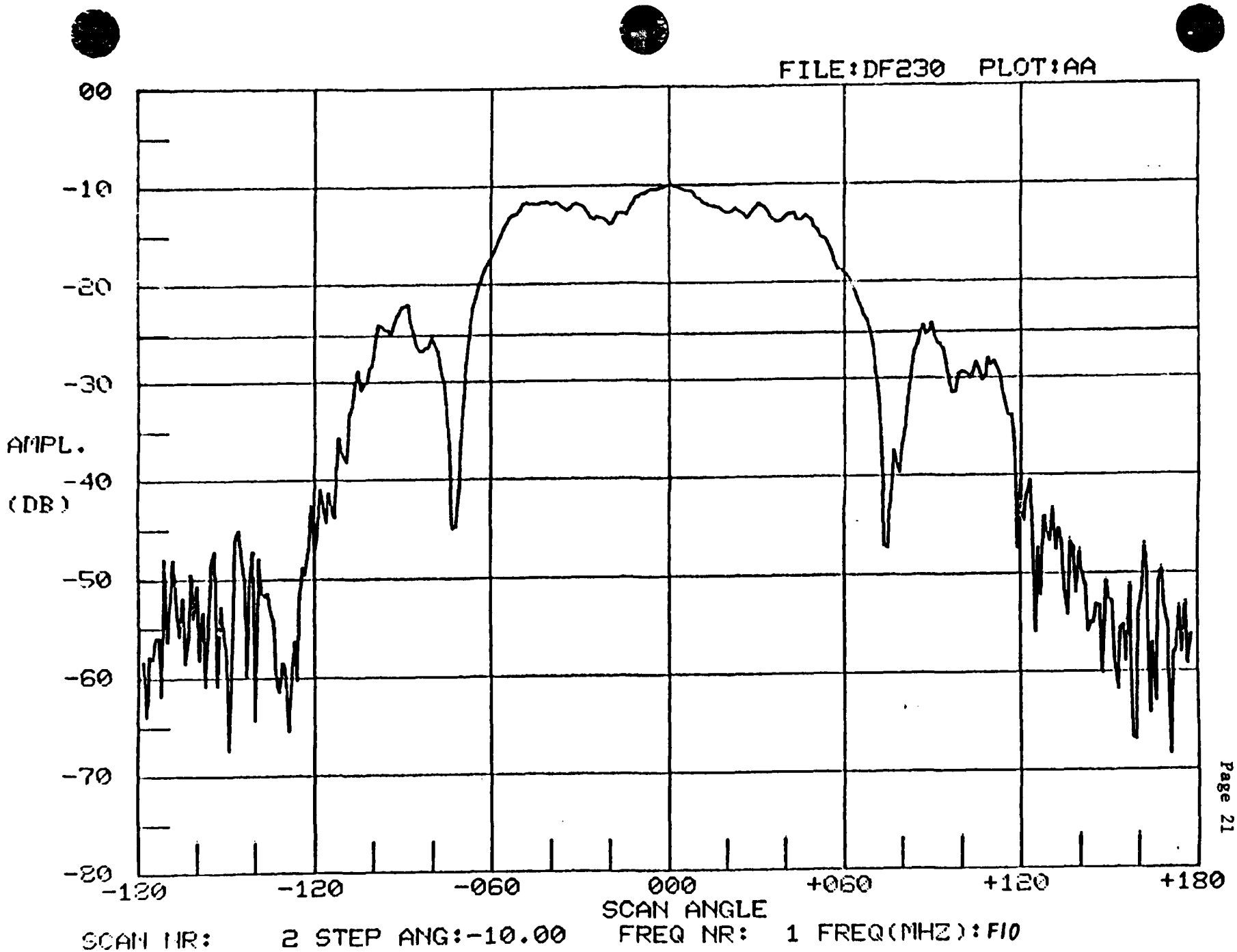
SCAN NR: 1 STEP ANG: .00 FREQ NR: 1 FREQ(MHZ): F10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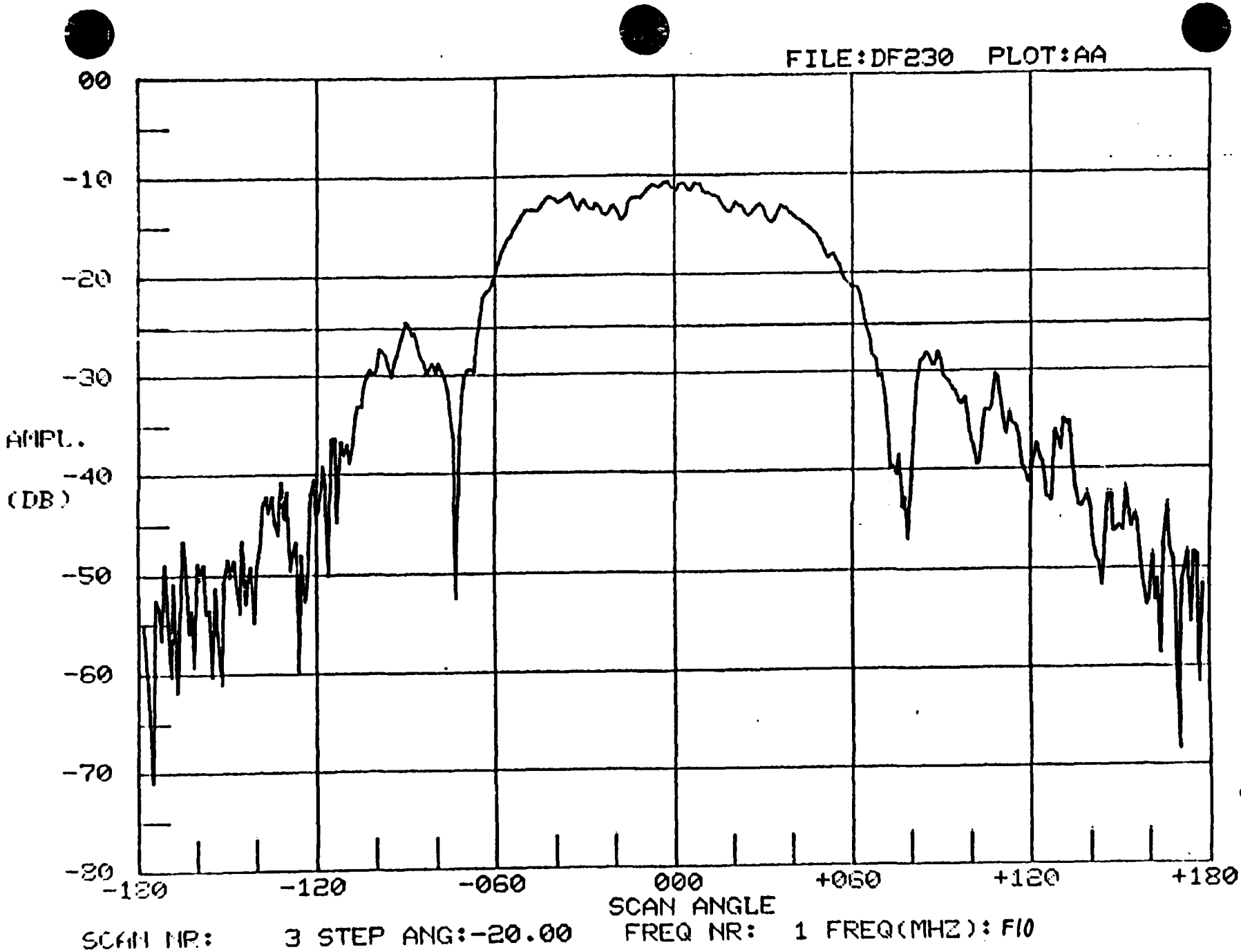
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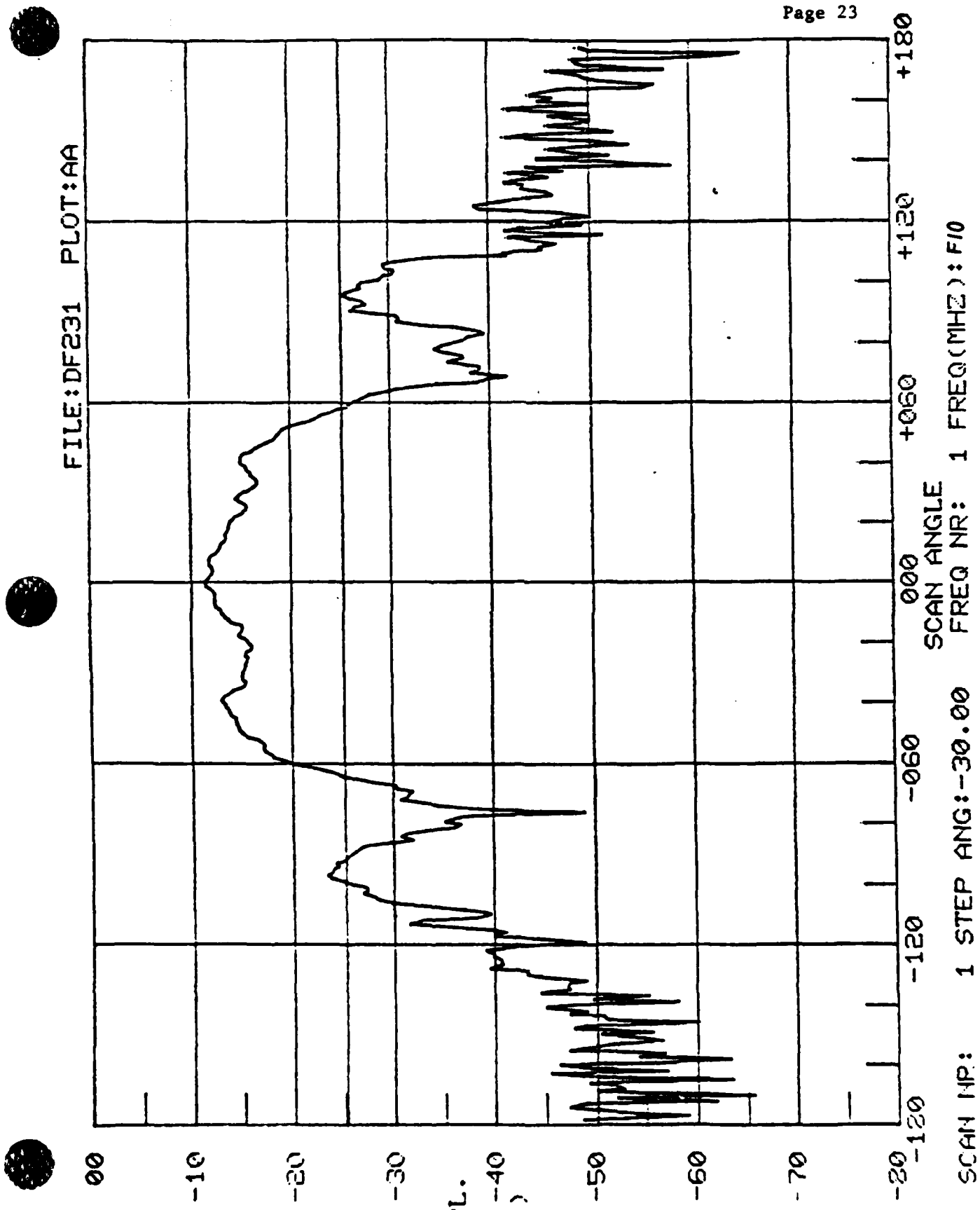
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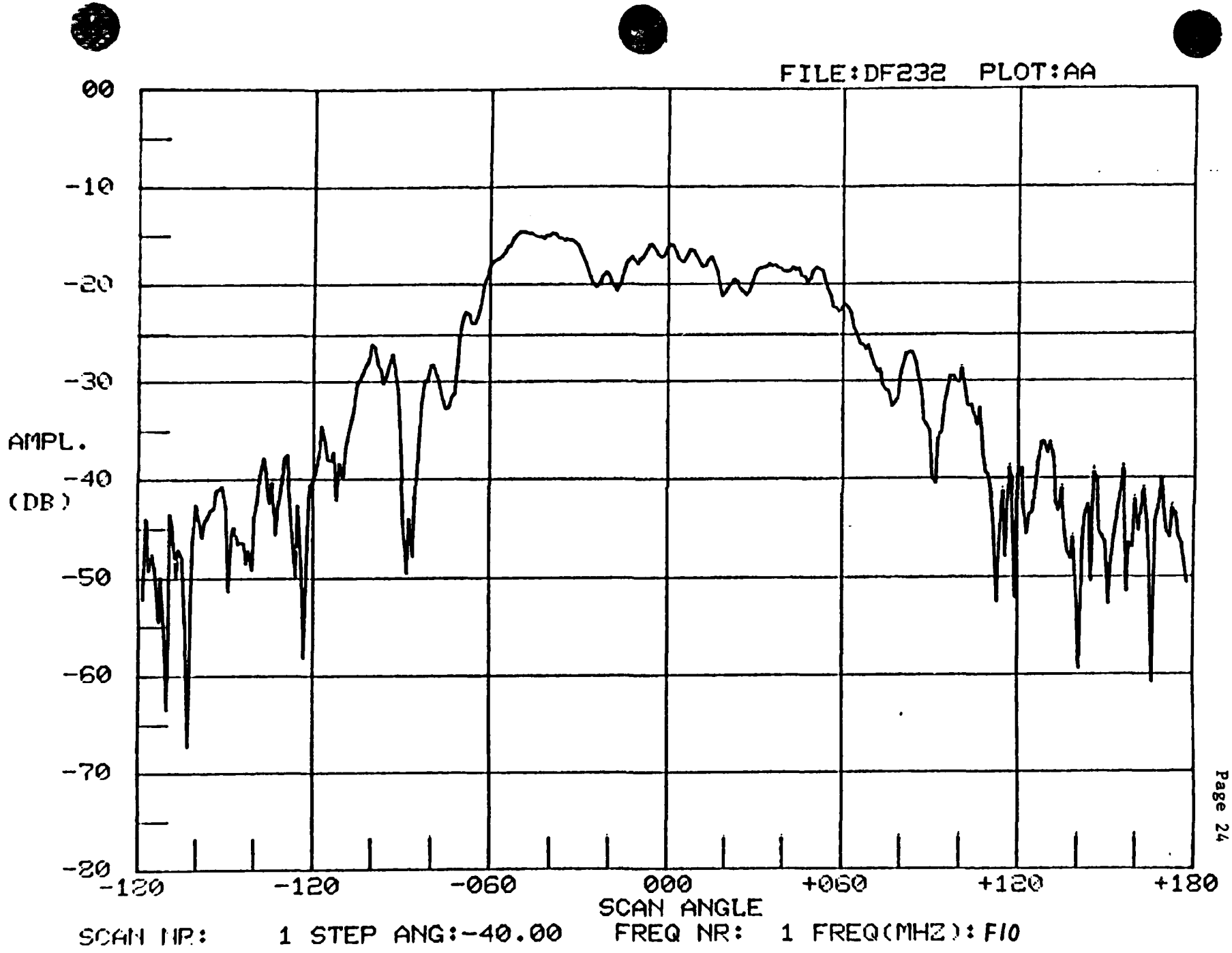
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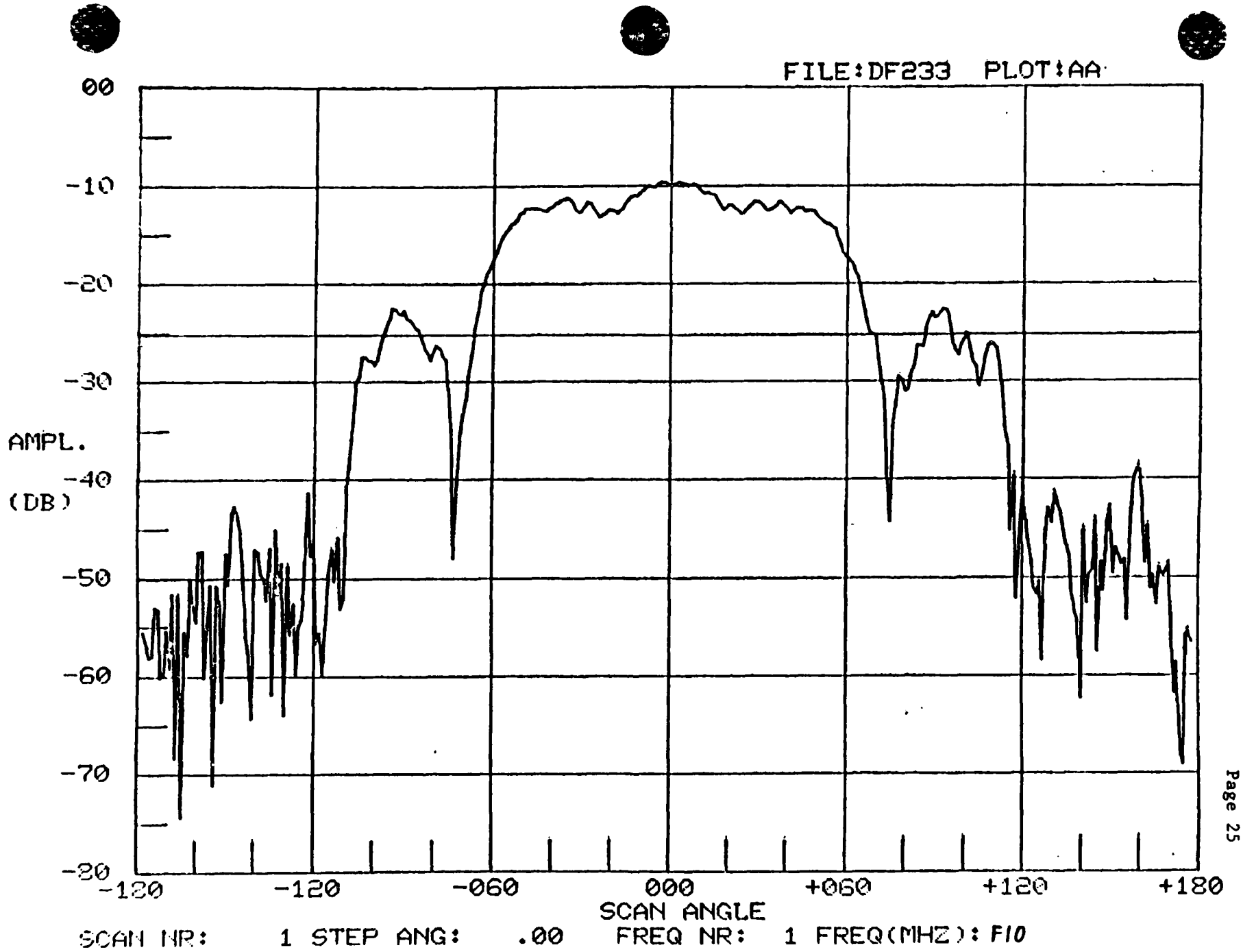
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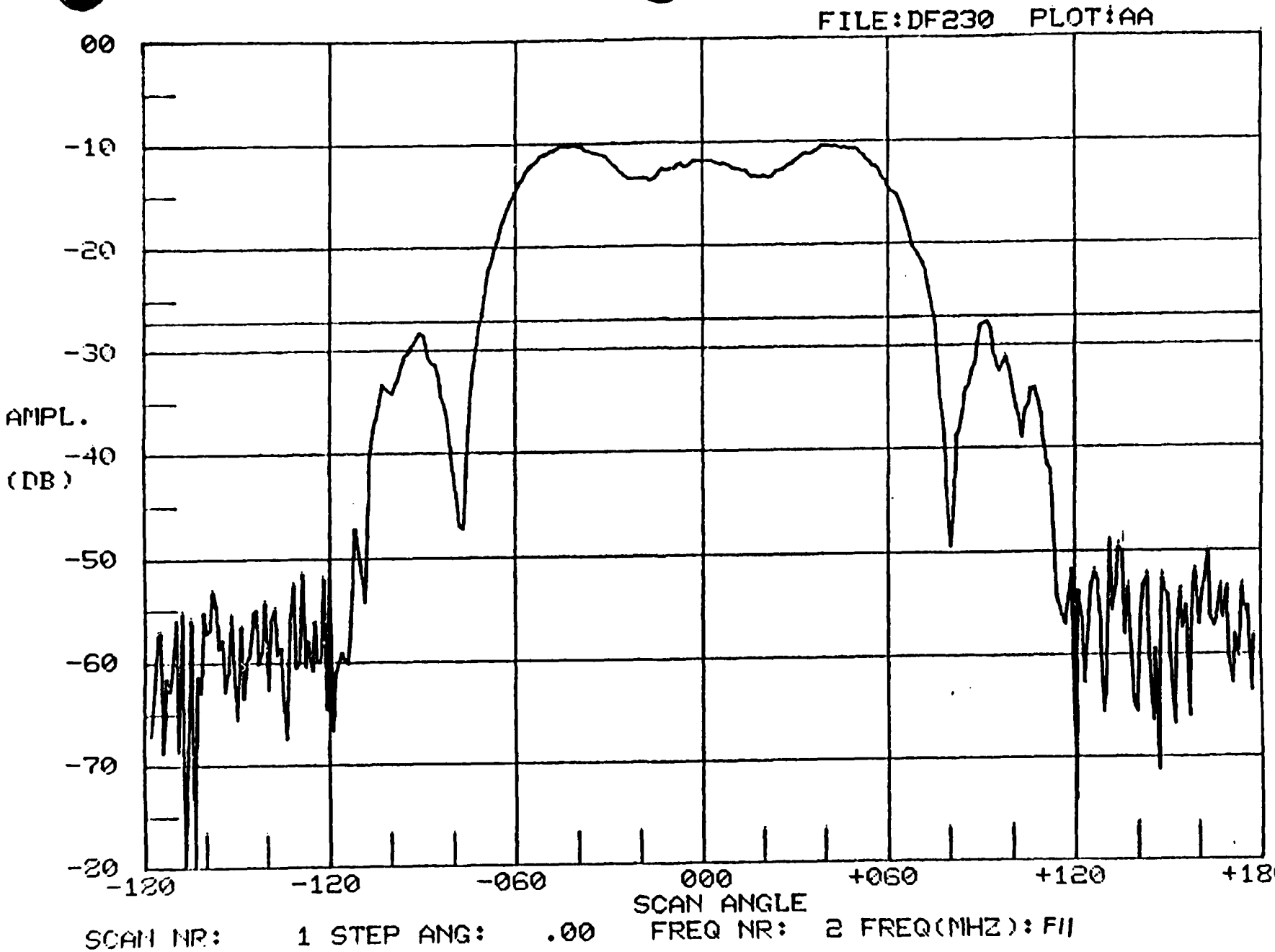
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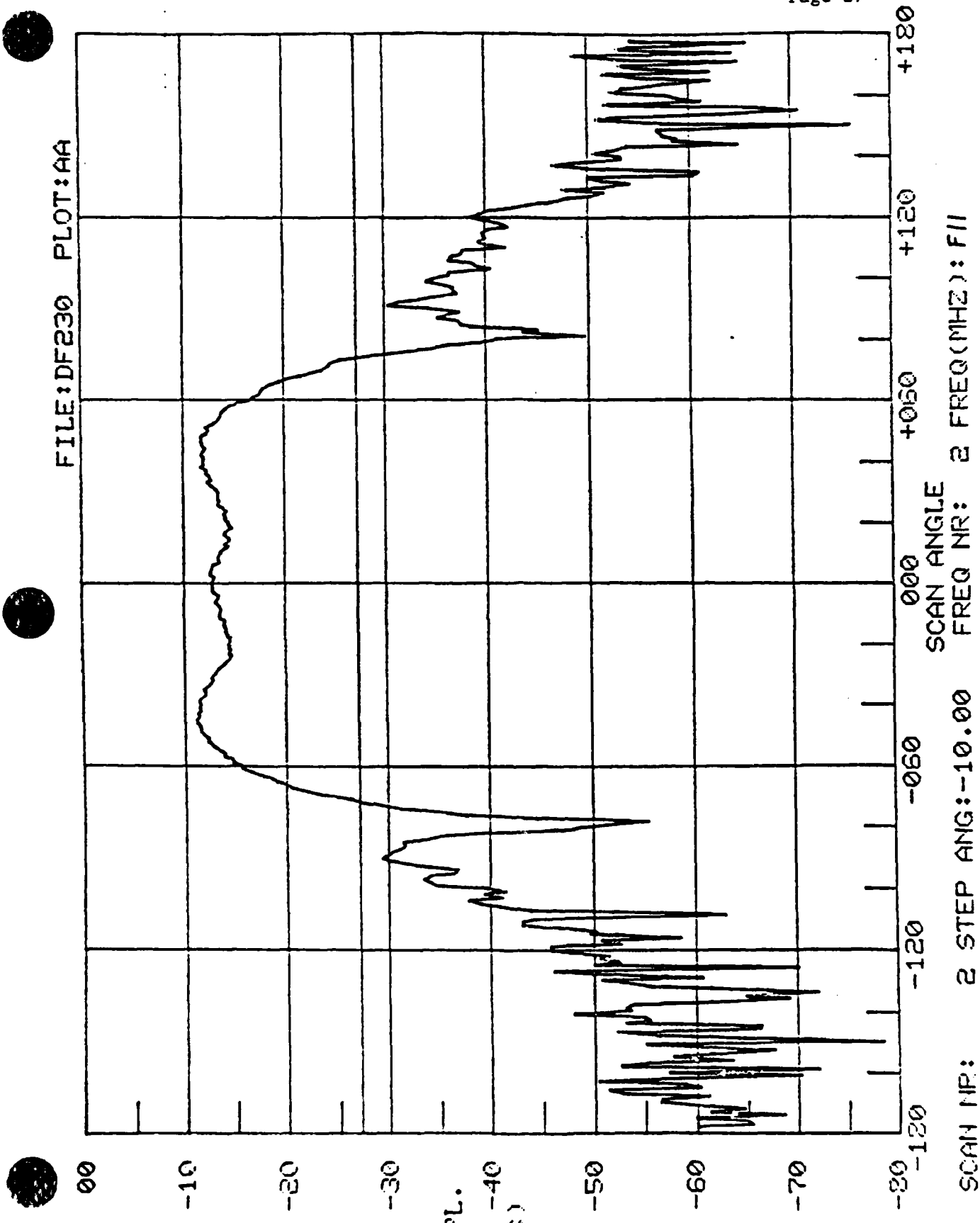
SCAN ANGLE
SCAN NR: 1 STEP ANG: .00 FREQ NR: 2 FREQ(MHZ): F11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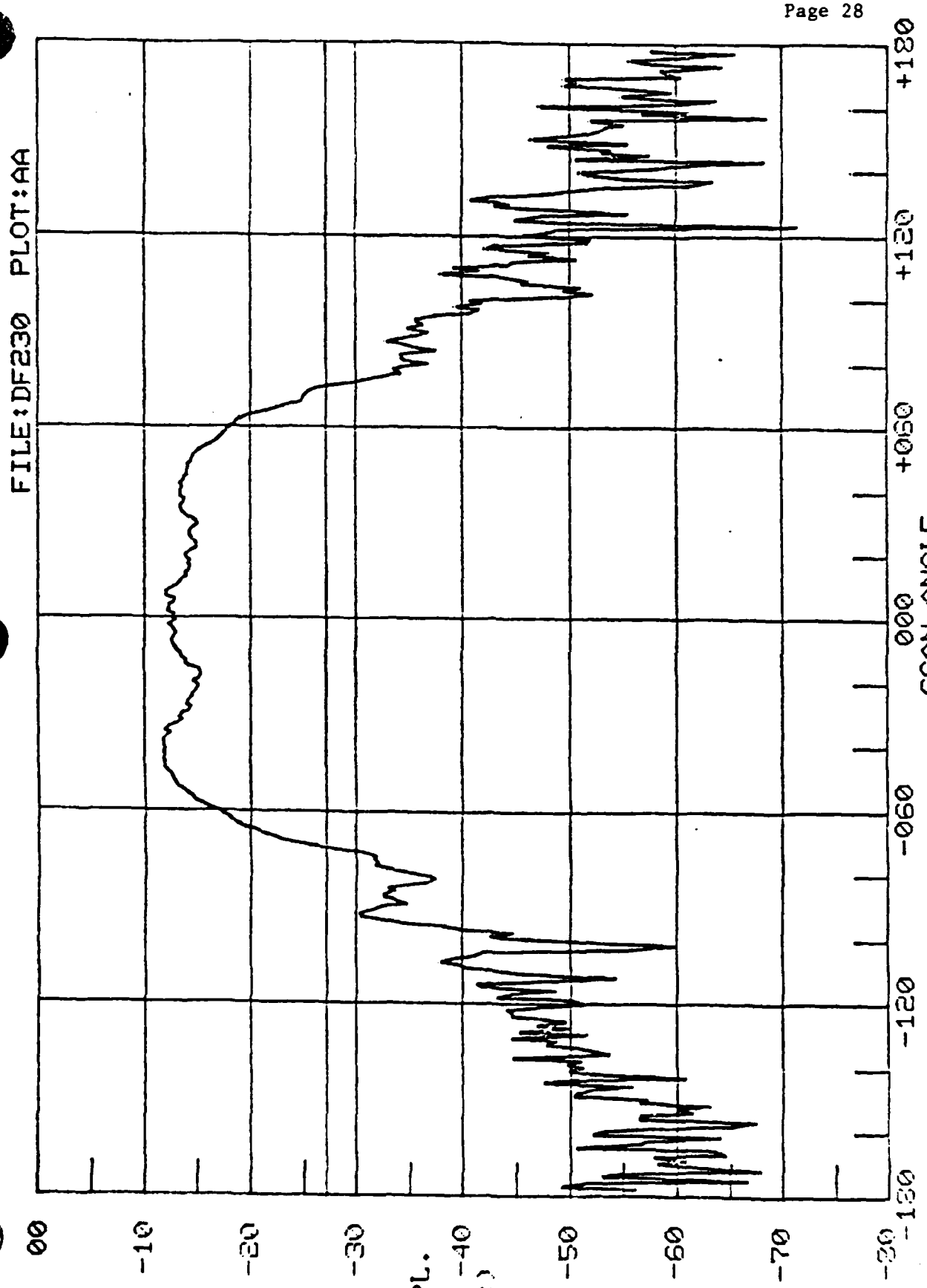
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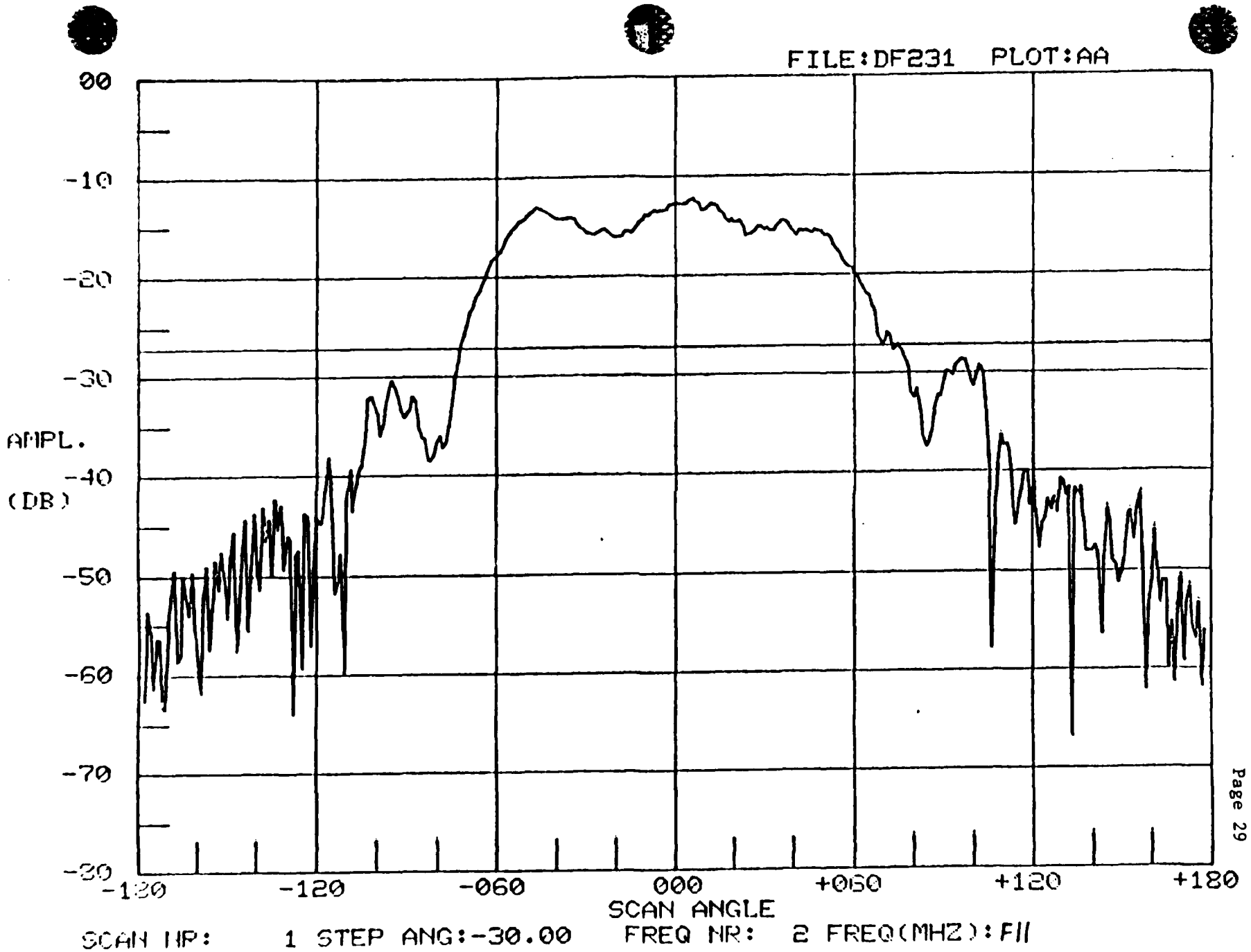
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+180
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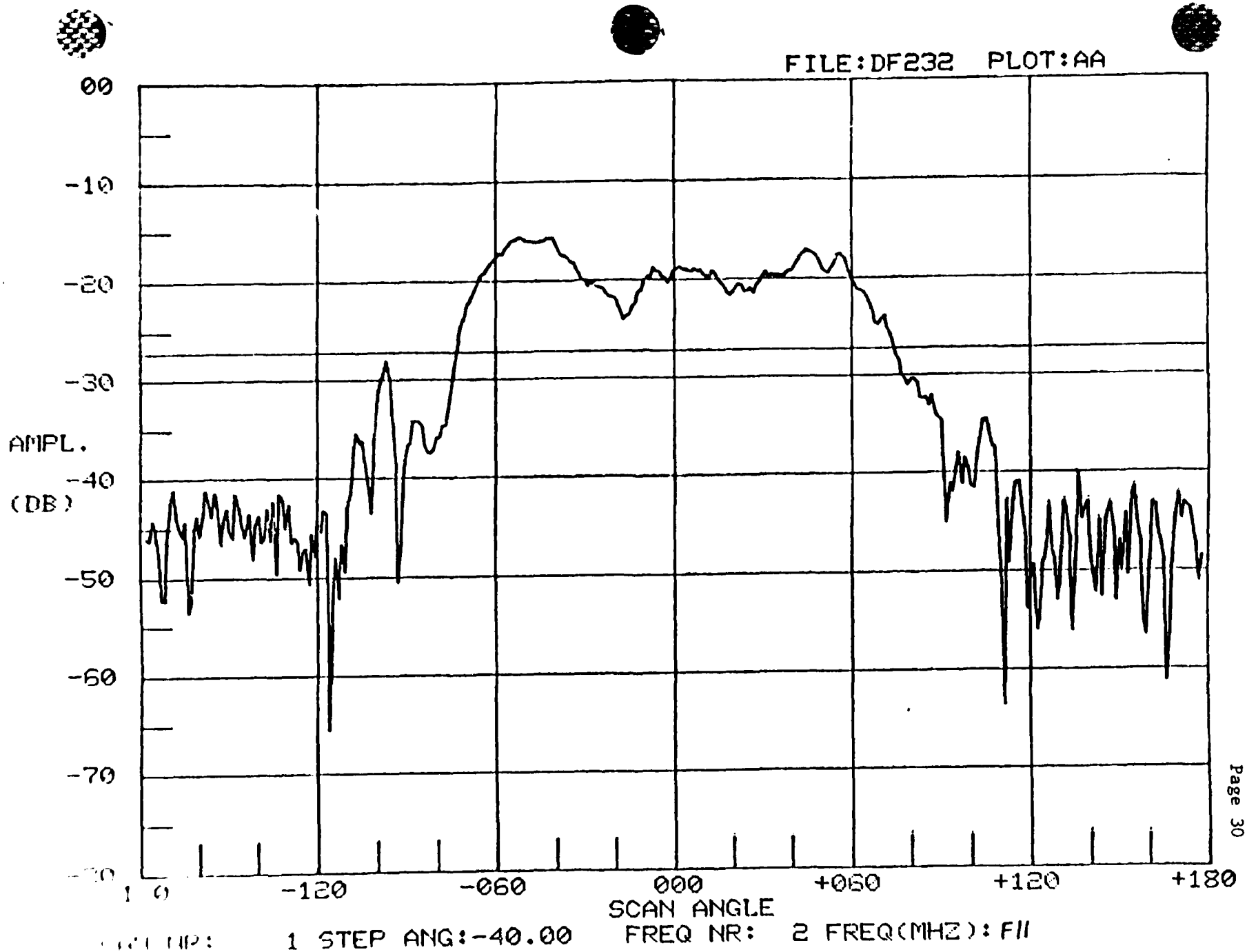
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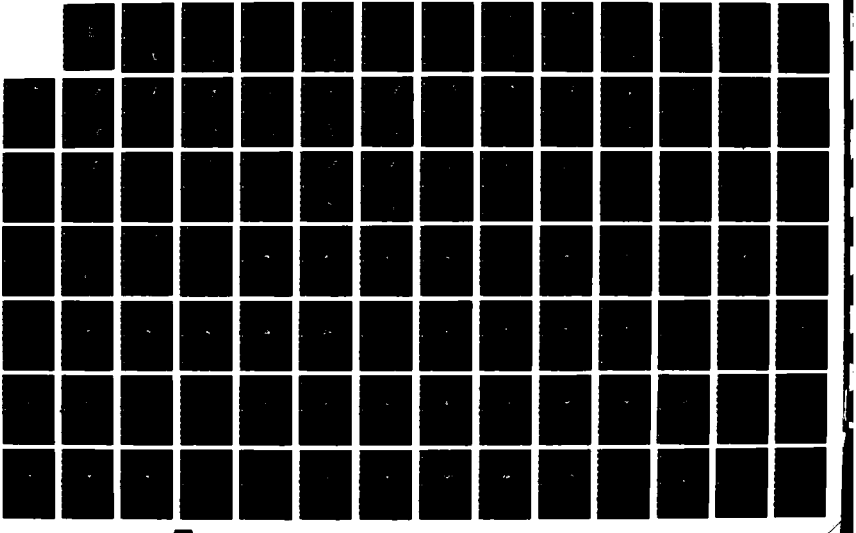
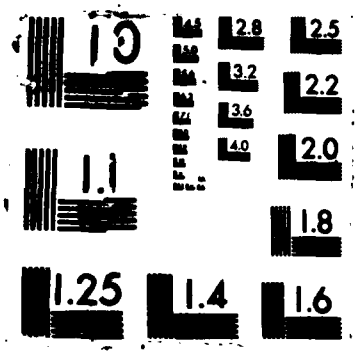
+120
+180
SCAN ANGLE
1 STEP ANG:-40.00
FREQ NR: 2 FREQ(MHZ): F11

AD-A181 539 ANTENNA LOCATION SURVEY REPORT FOR THE AN/ALQ-156 AND AN/ALQ-162 SYSTEMS(U) BEECH AIRCRAFT CORP WICHITA KS G J MARTIN 29 OCT 84 ER-101E2240 DAAK50-83-C-0056 5/7

UNCLASSIFIED F/G 17/4 NL

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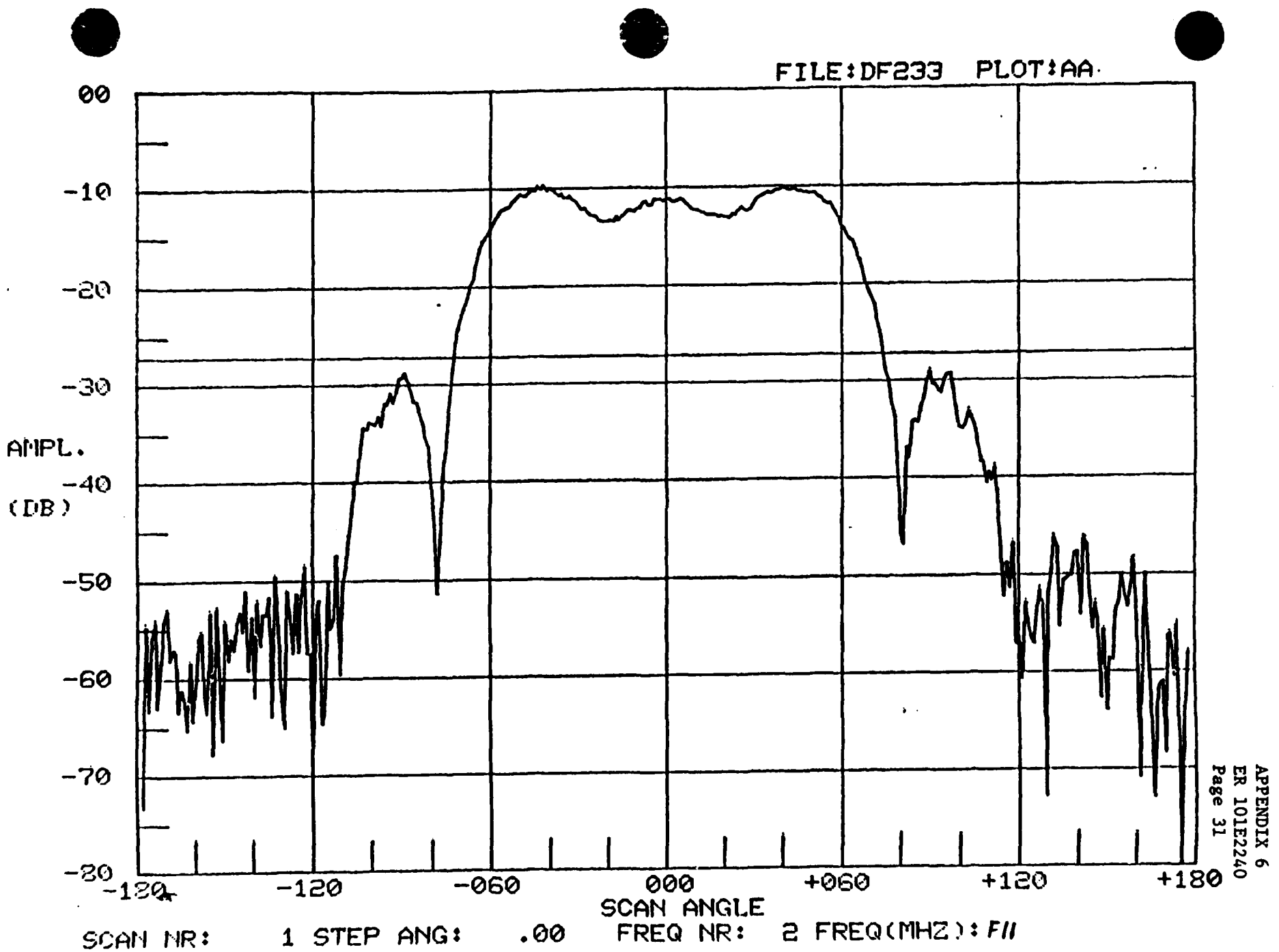
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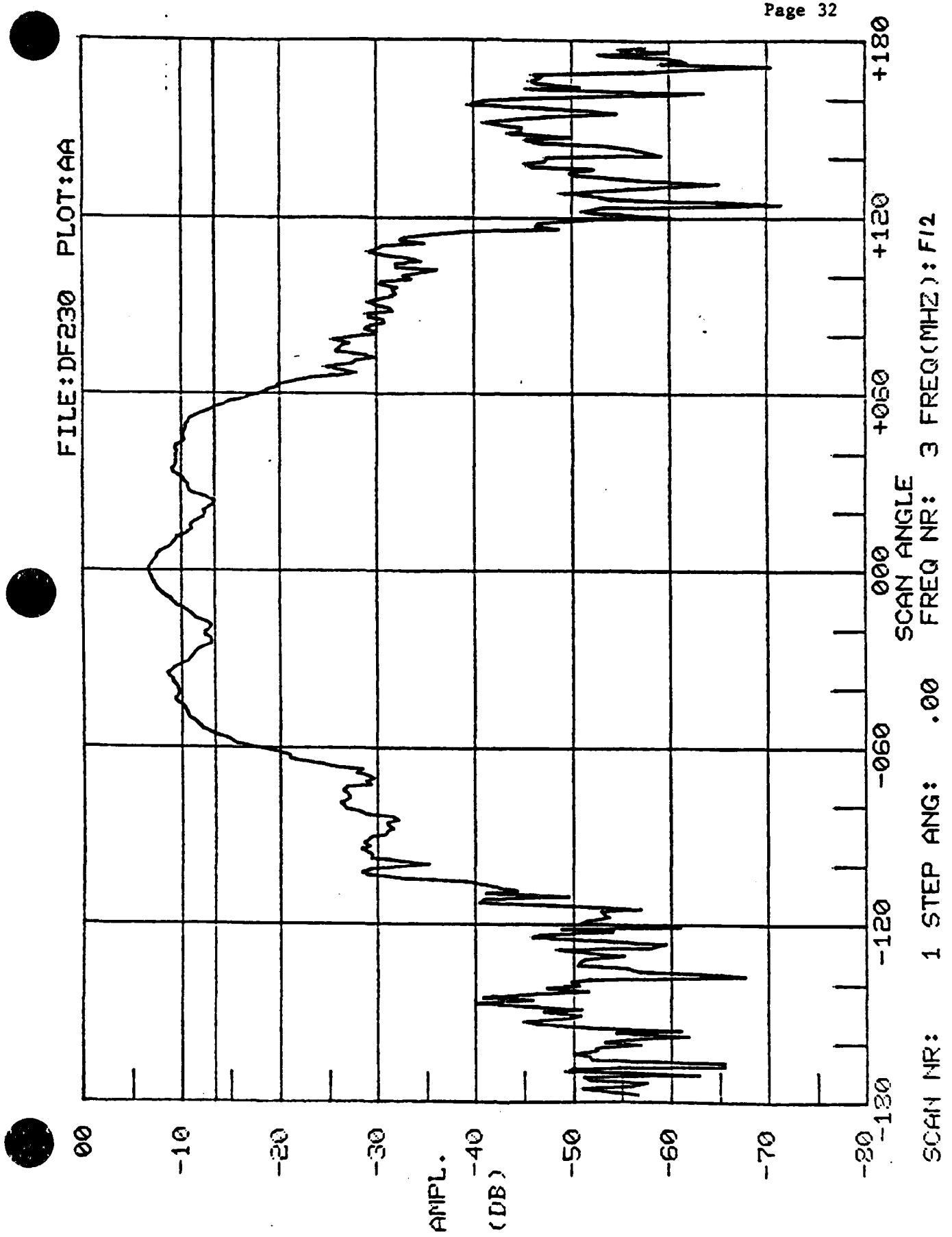
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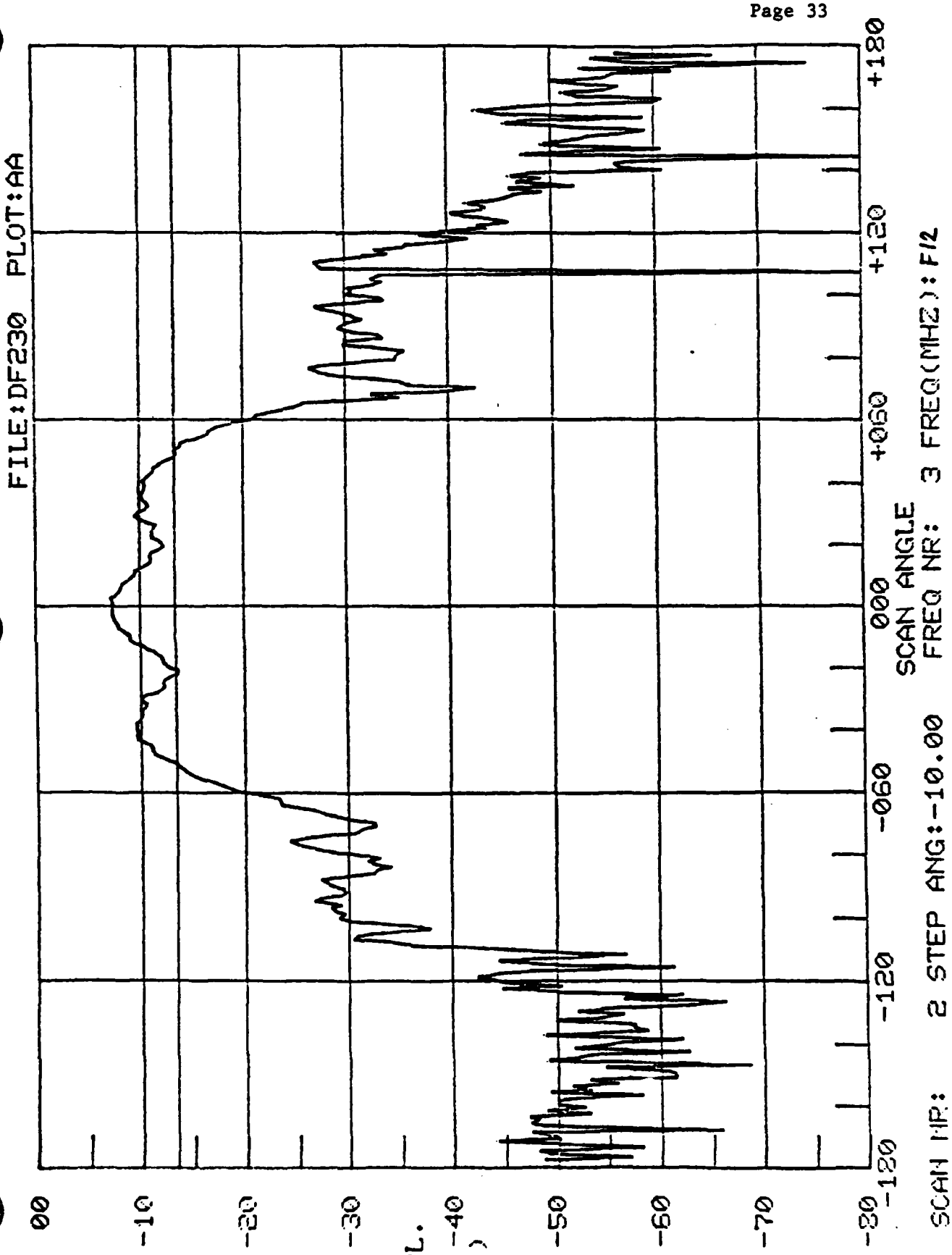
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SCAN ANGLE
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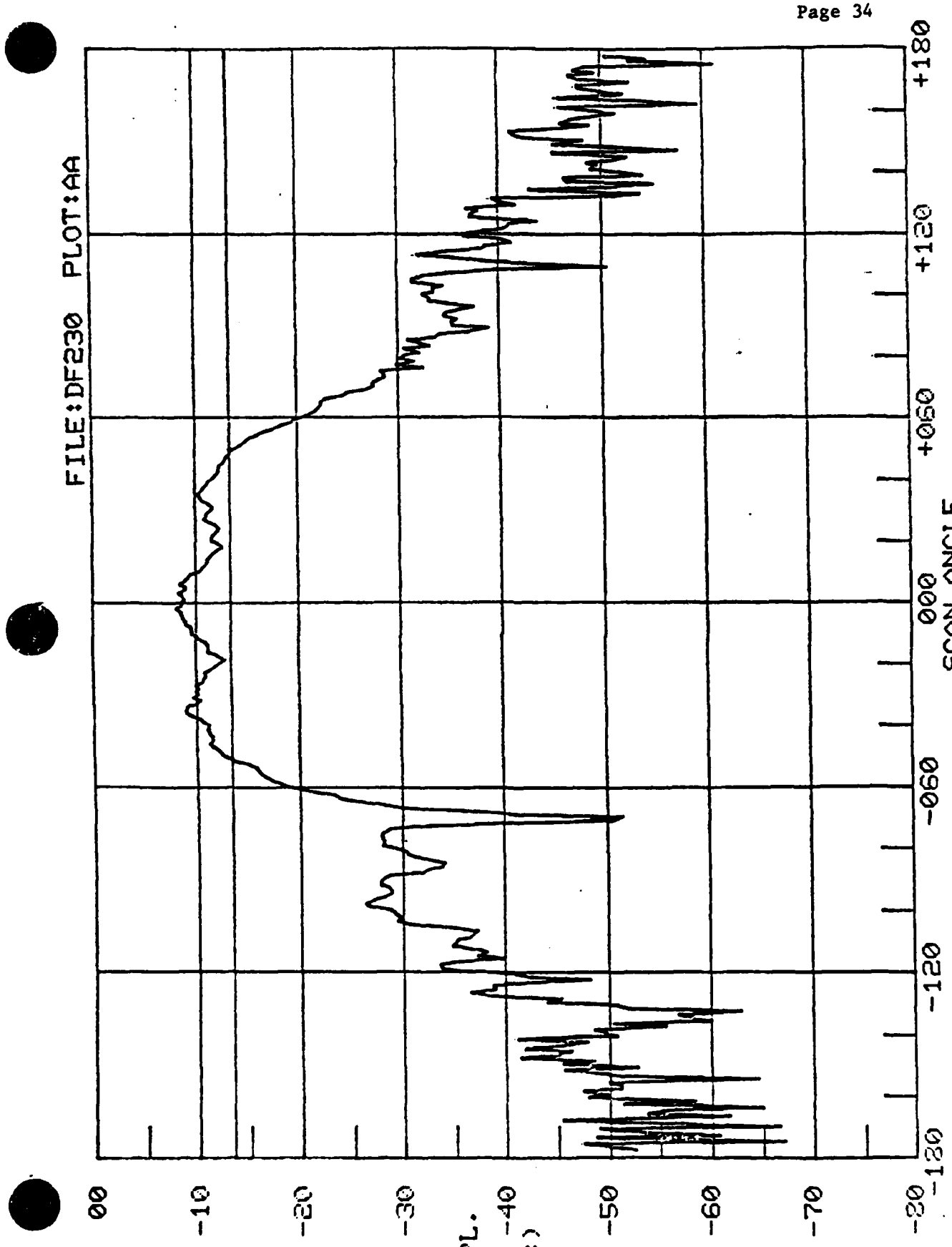
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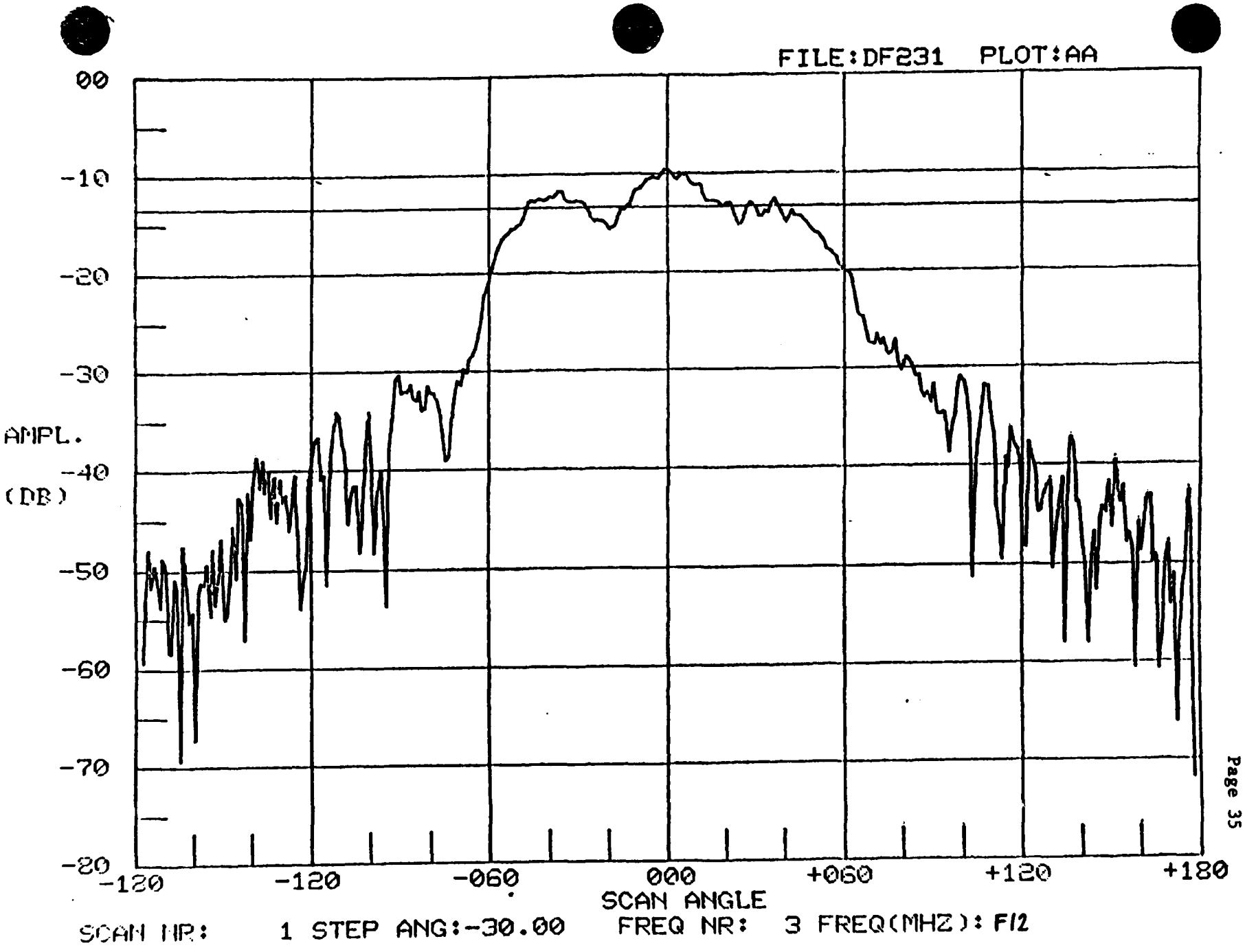
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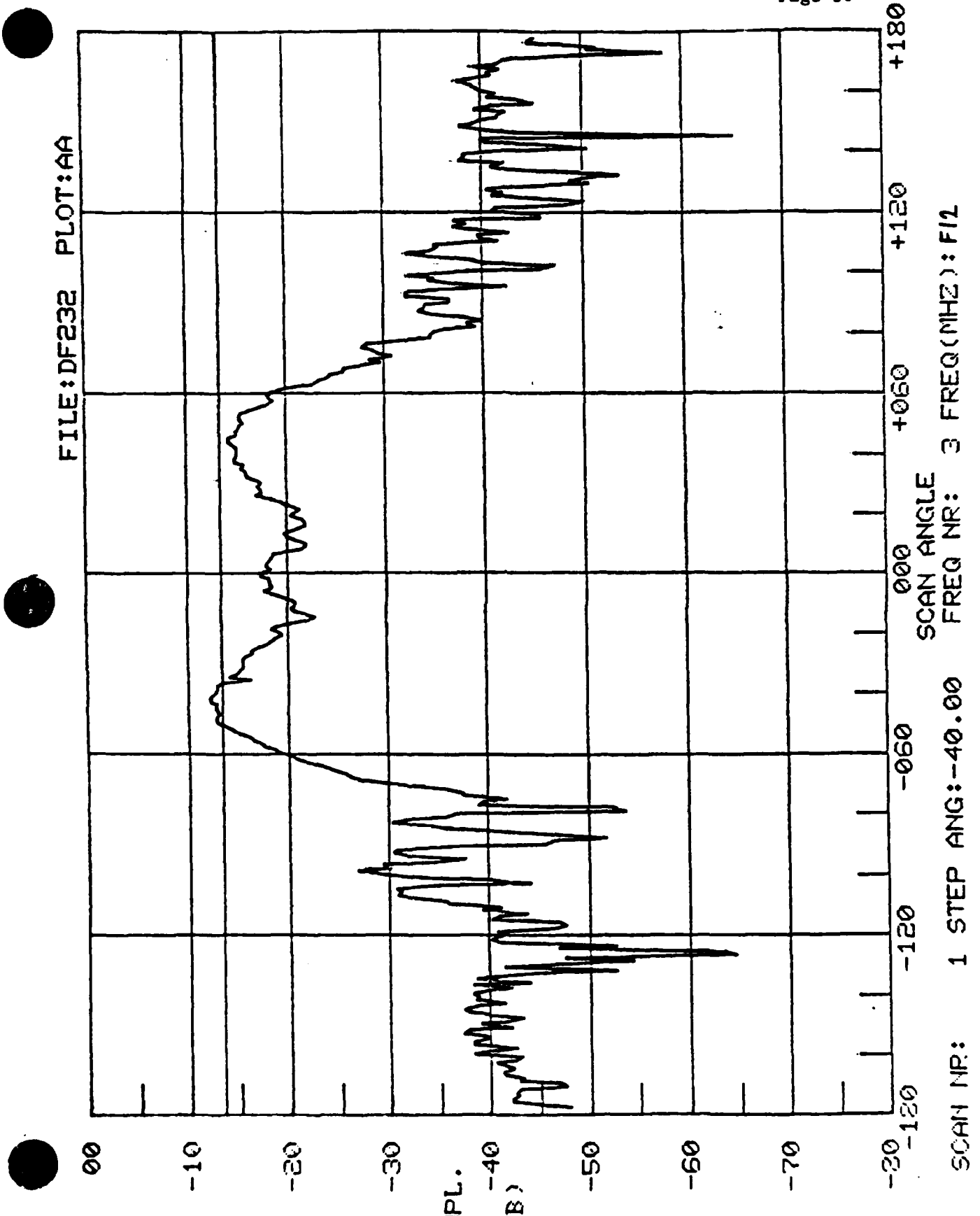
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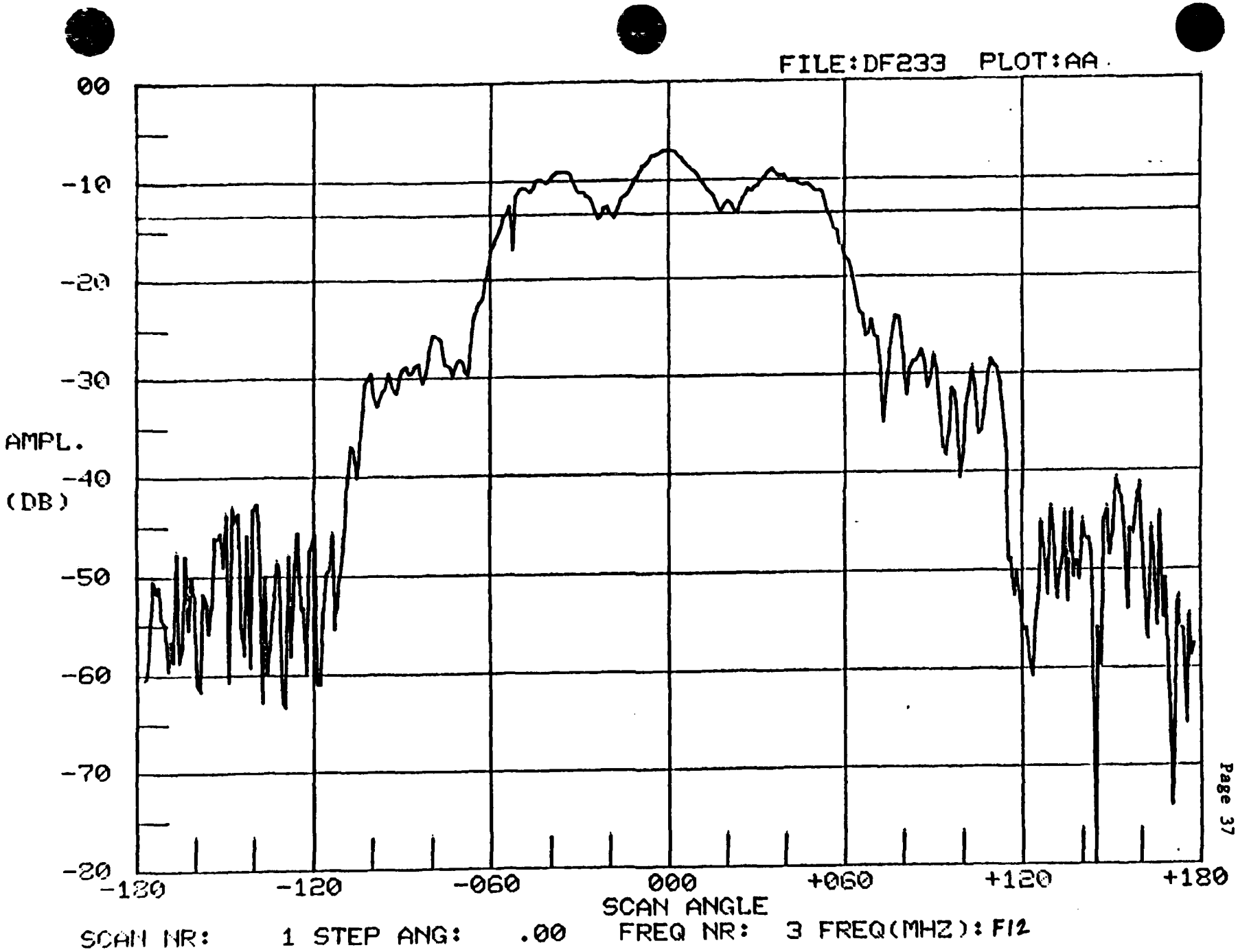
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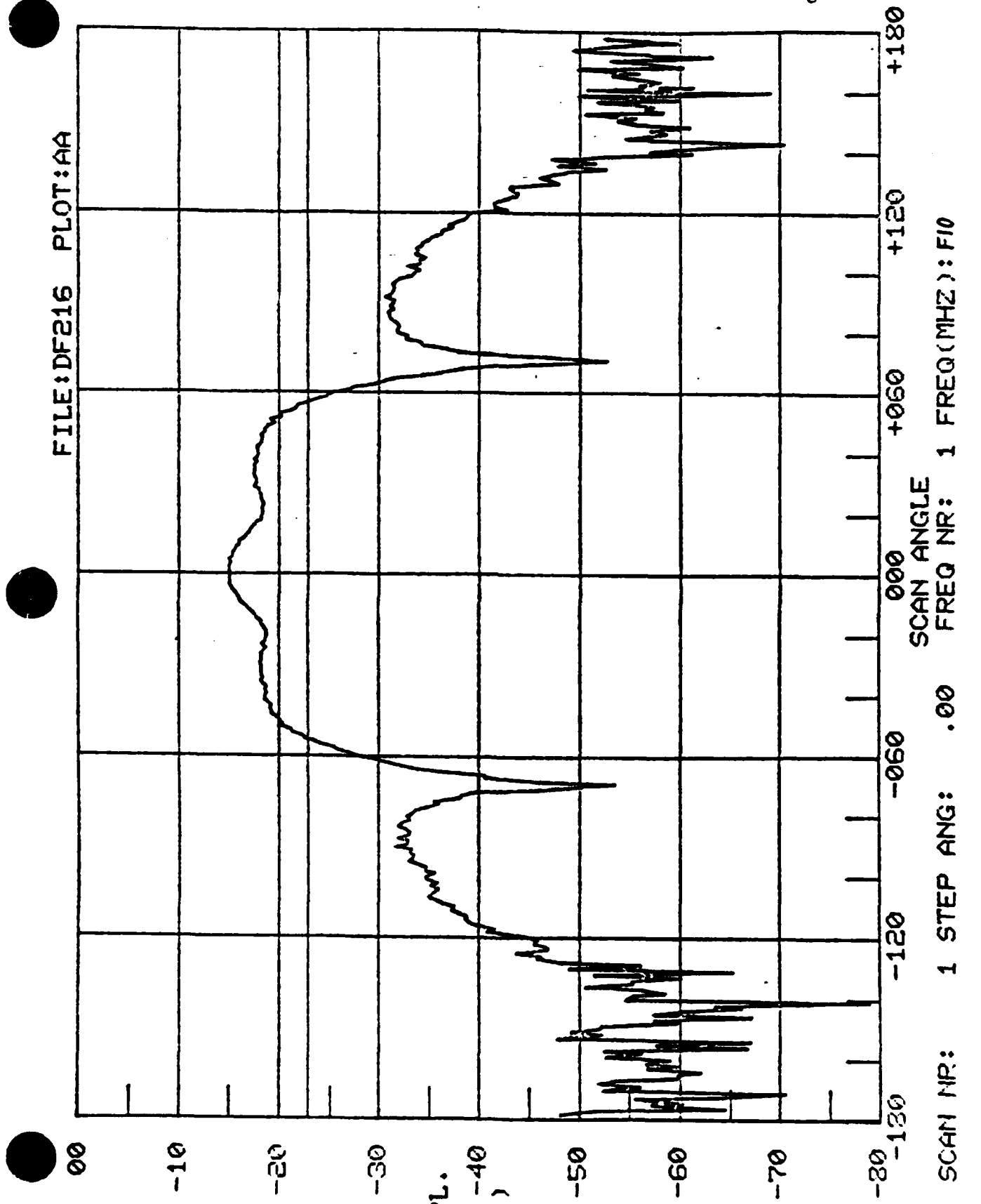
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SCAN ANGLE
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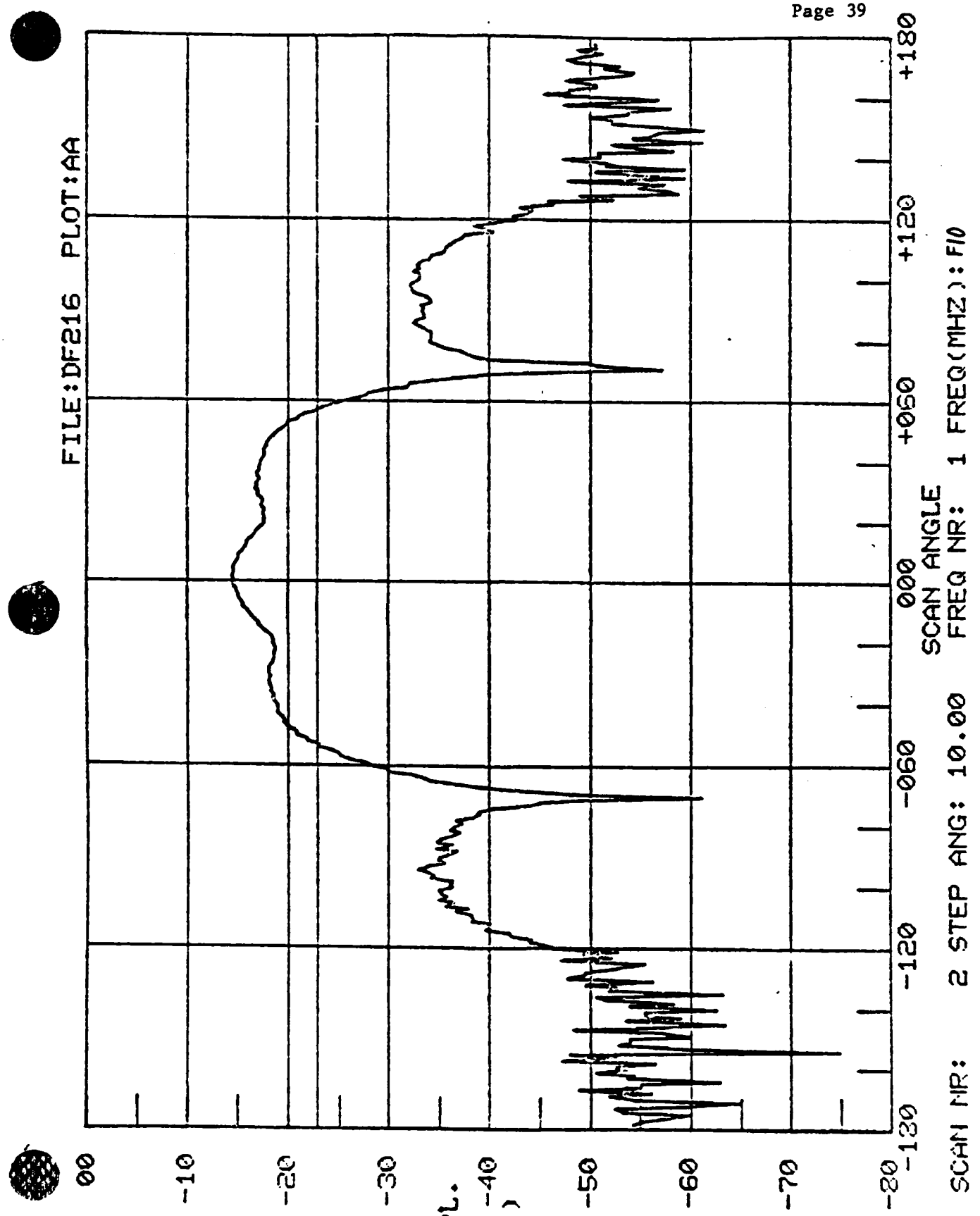
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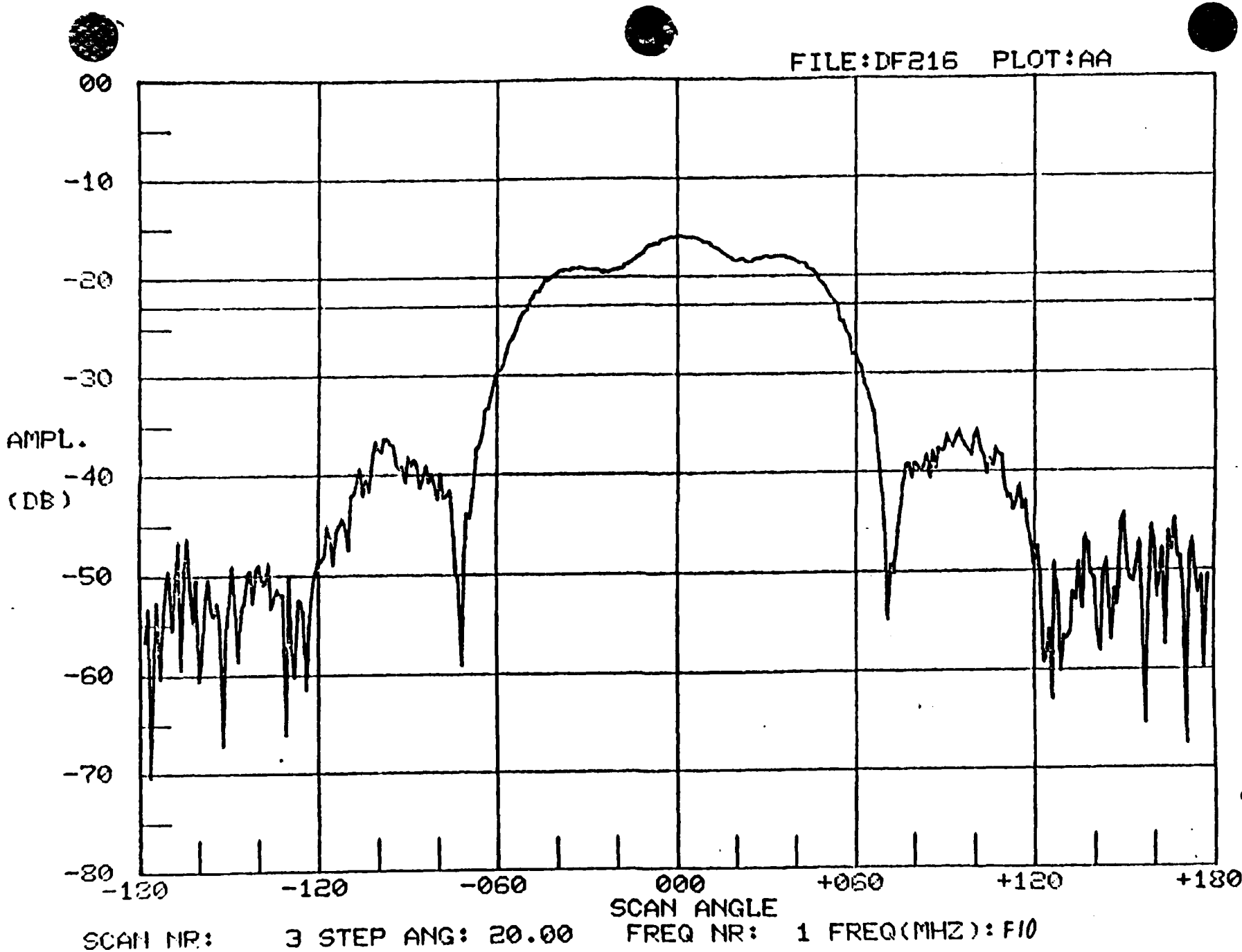
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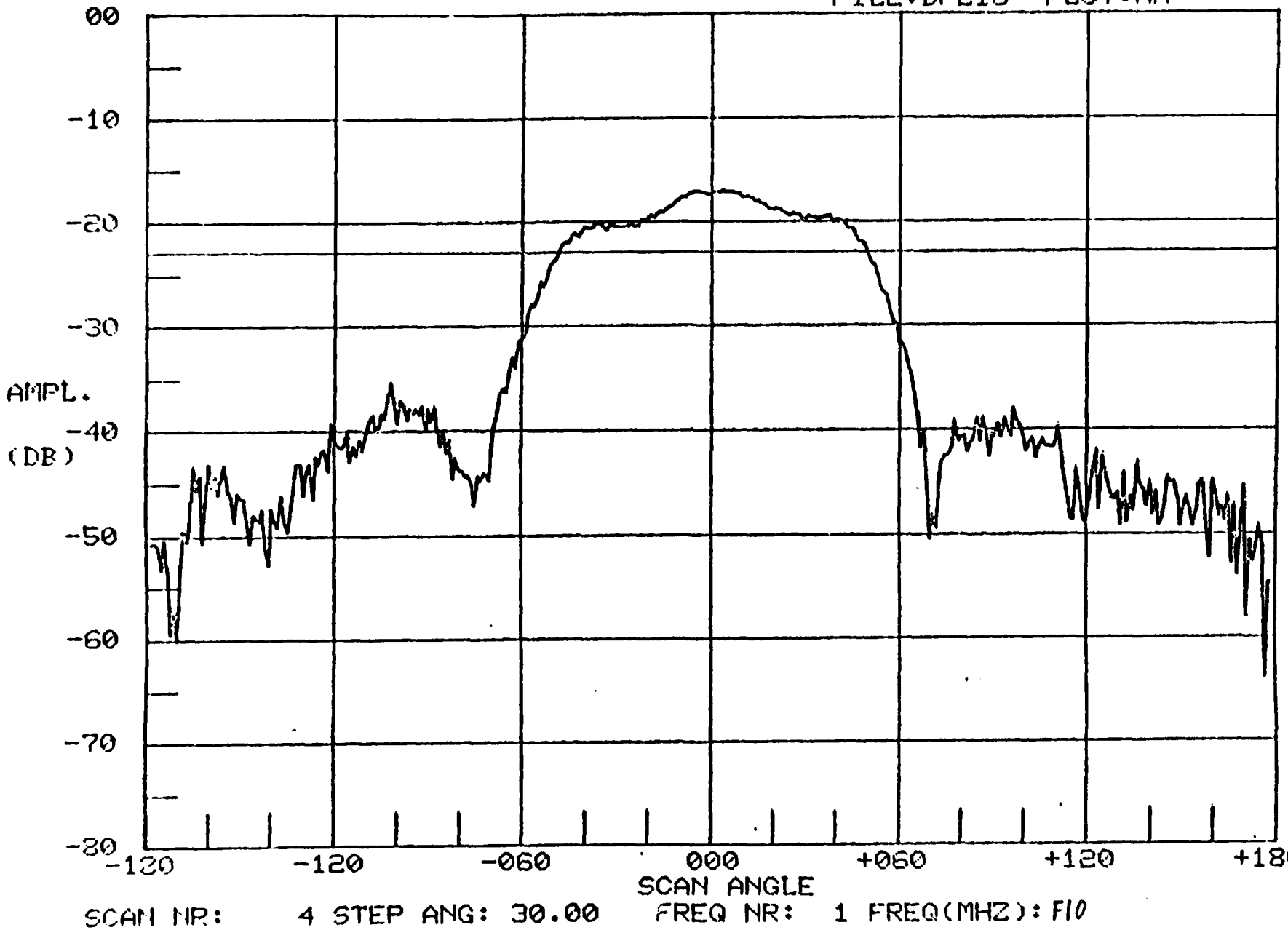
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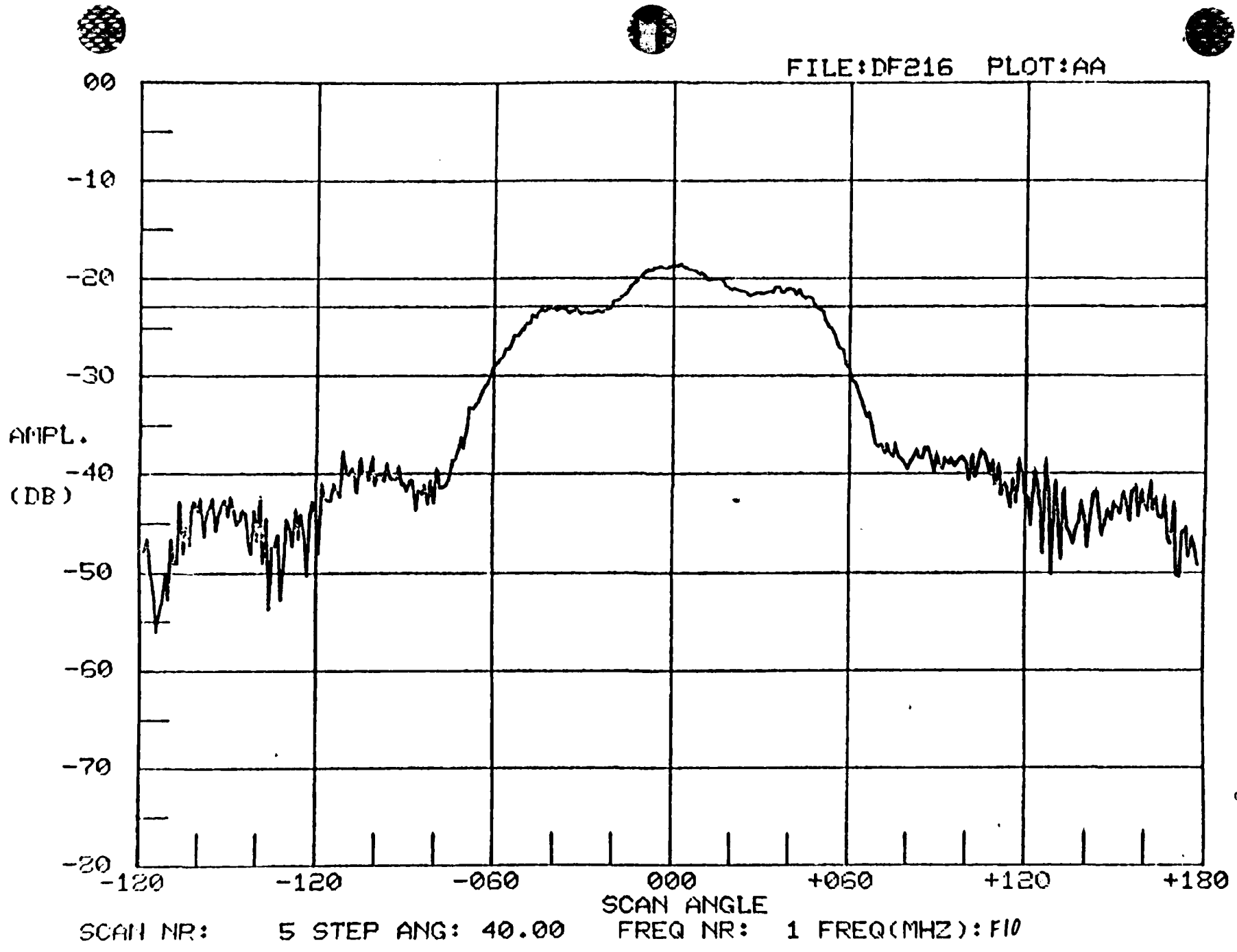
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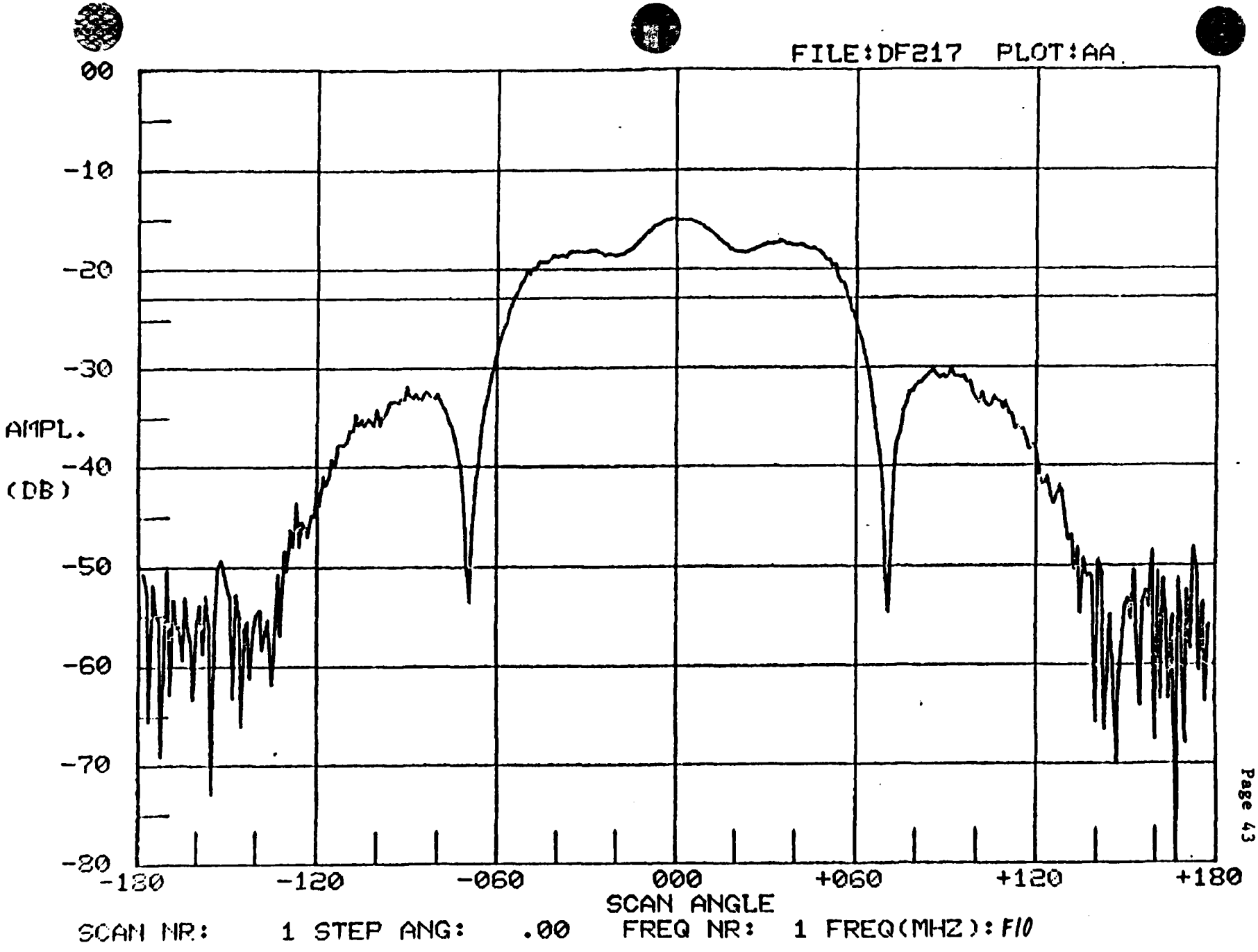
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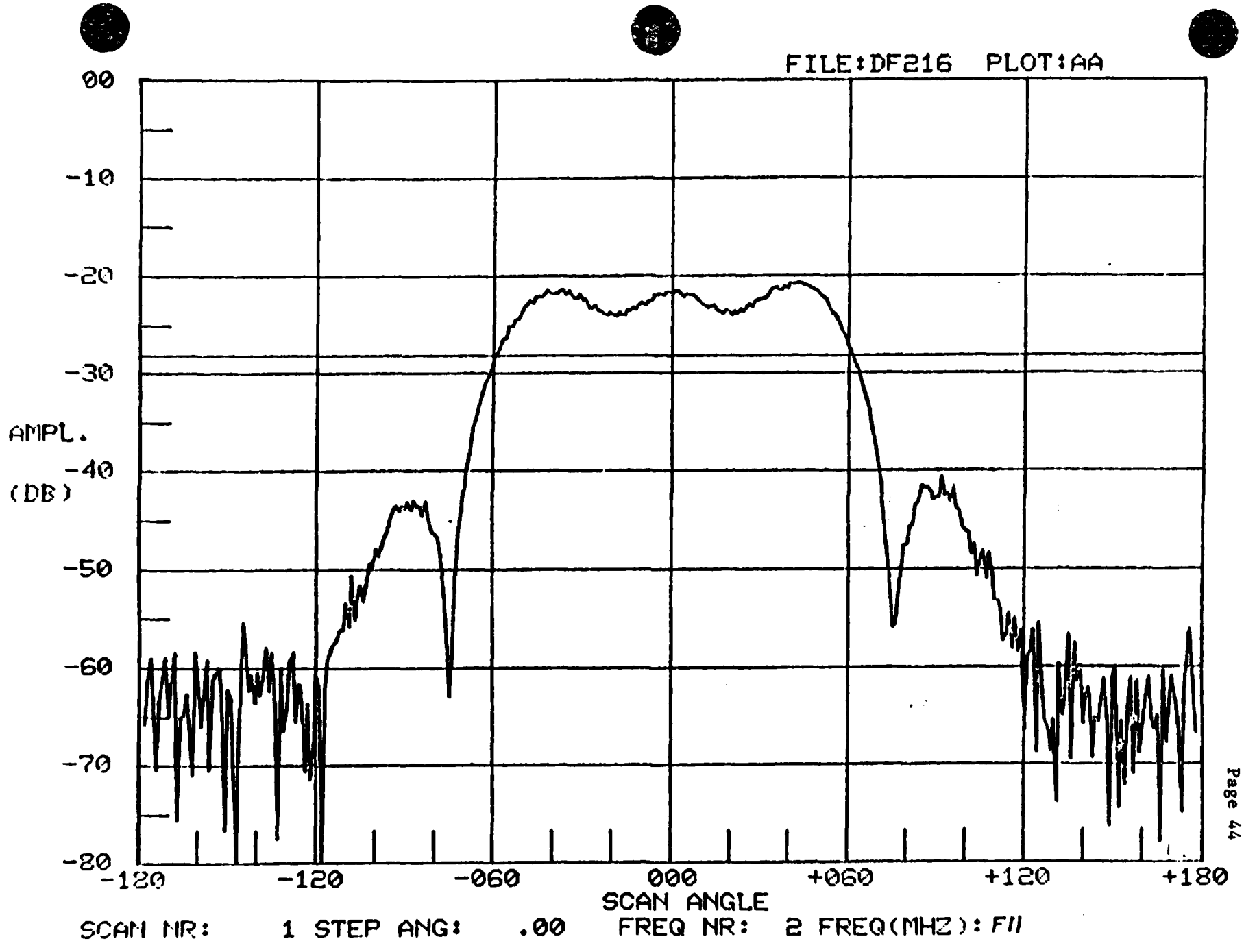
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SCAN ANGLE
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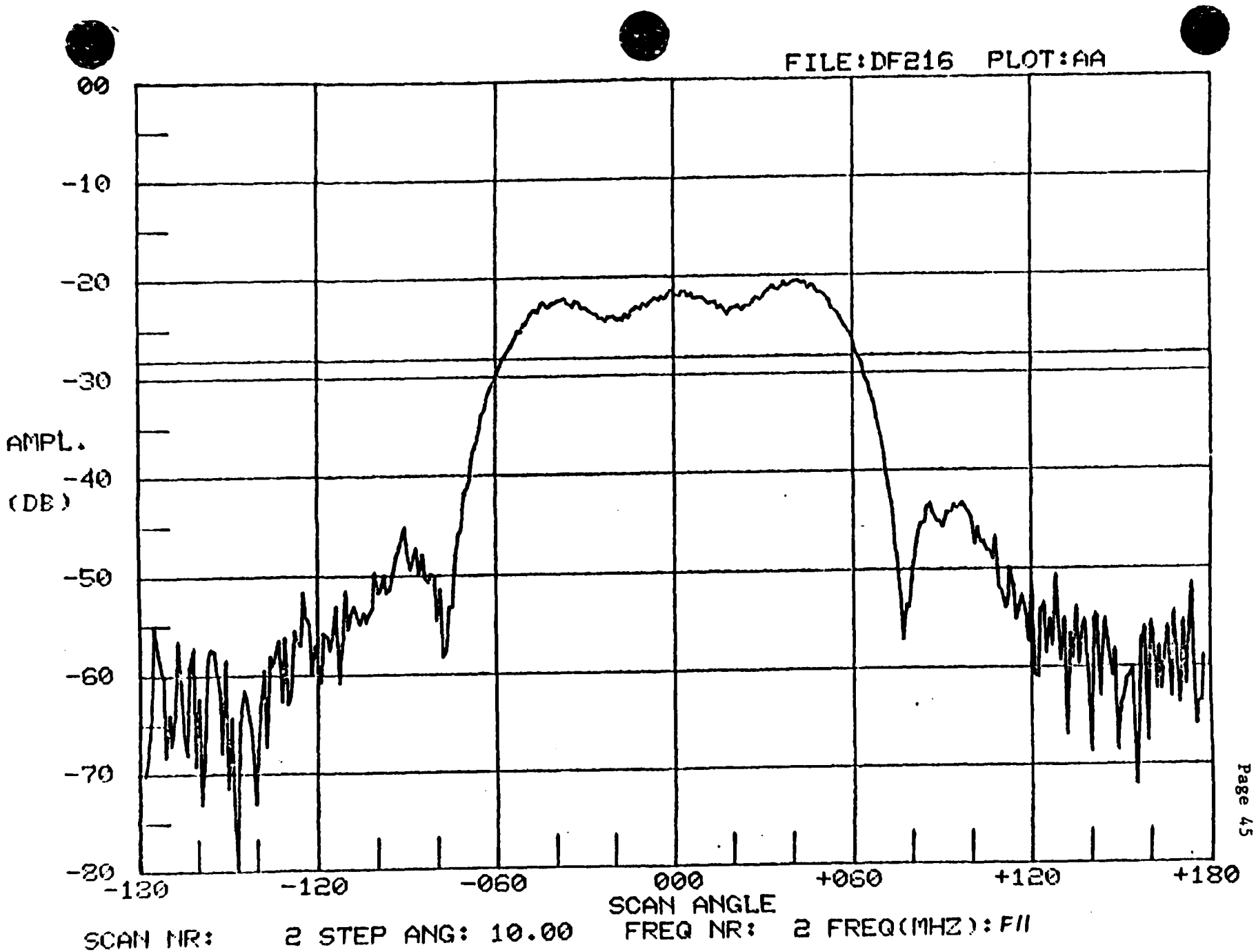
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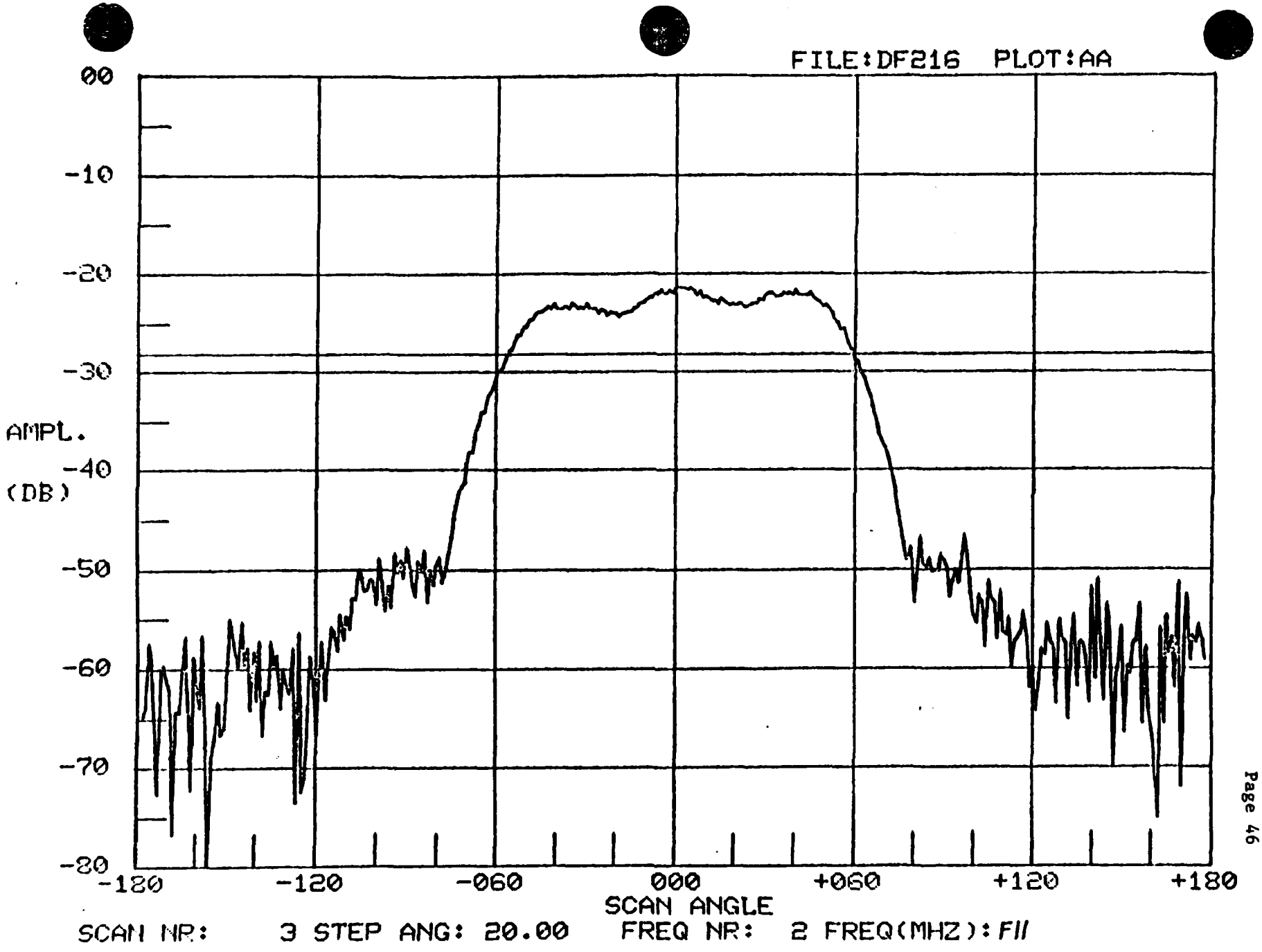
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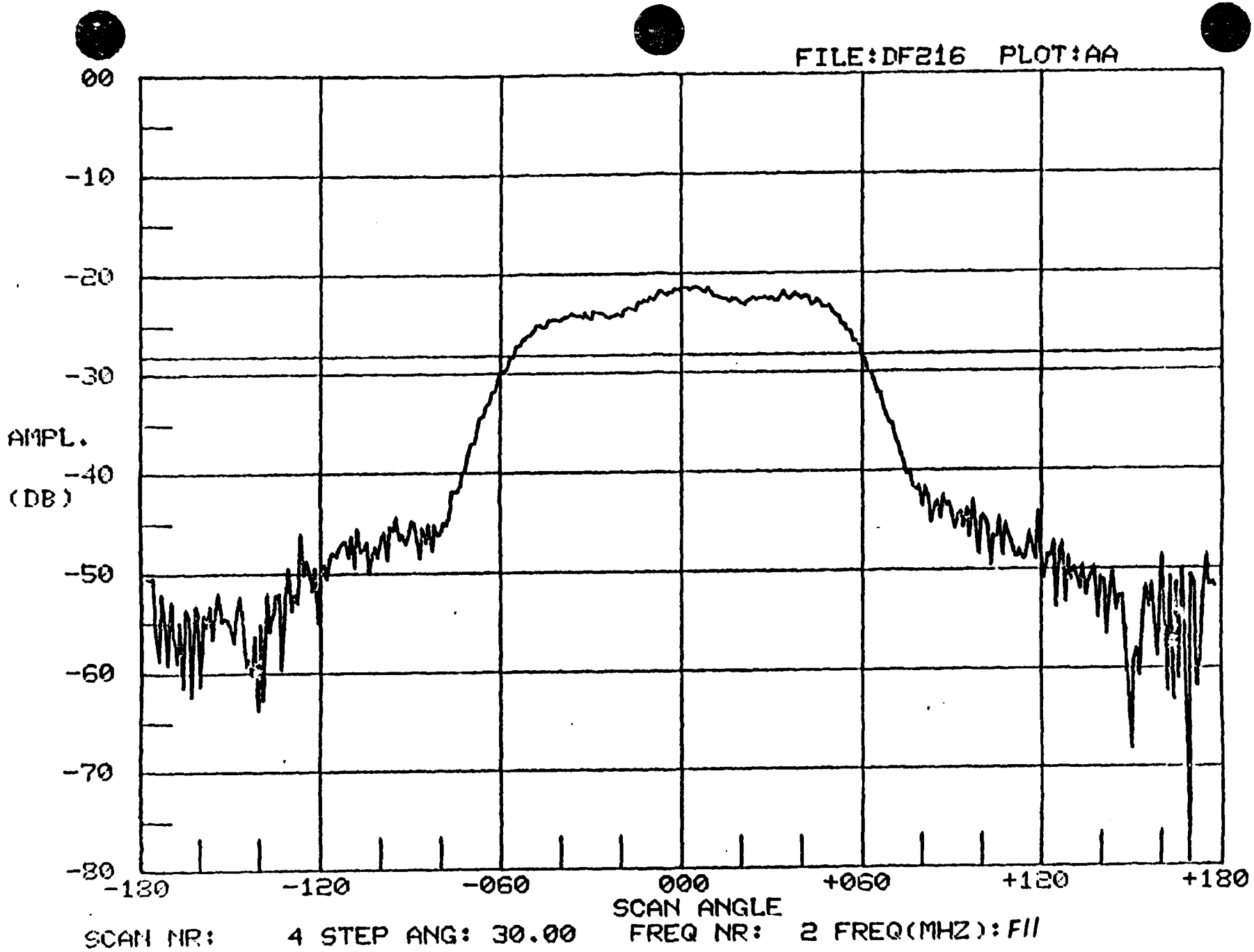
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SCAN ANGLE
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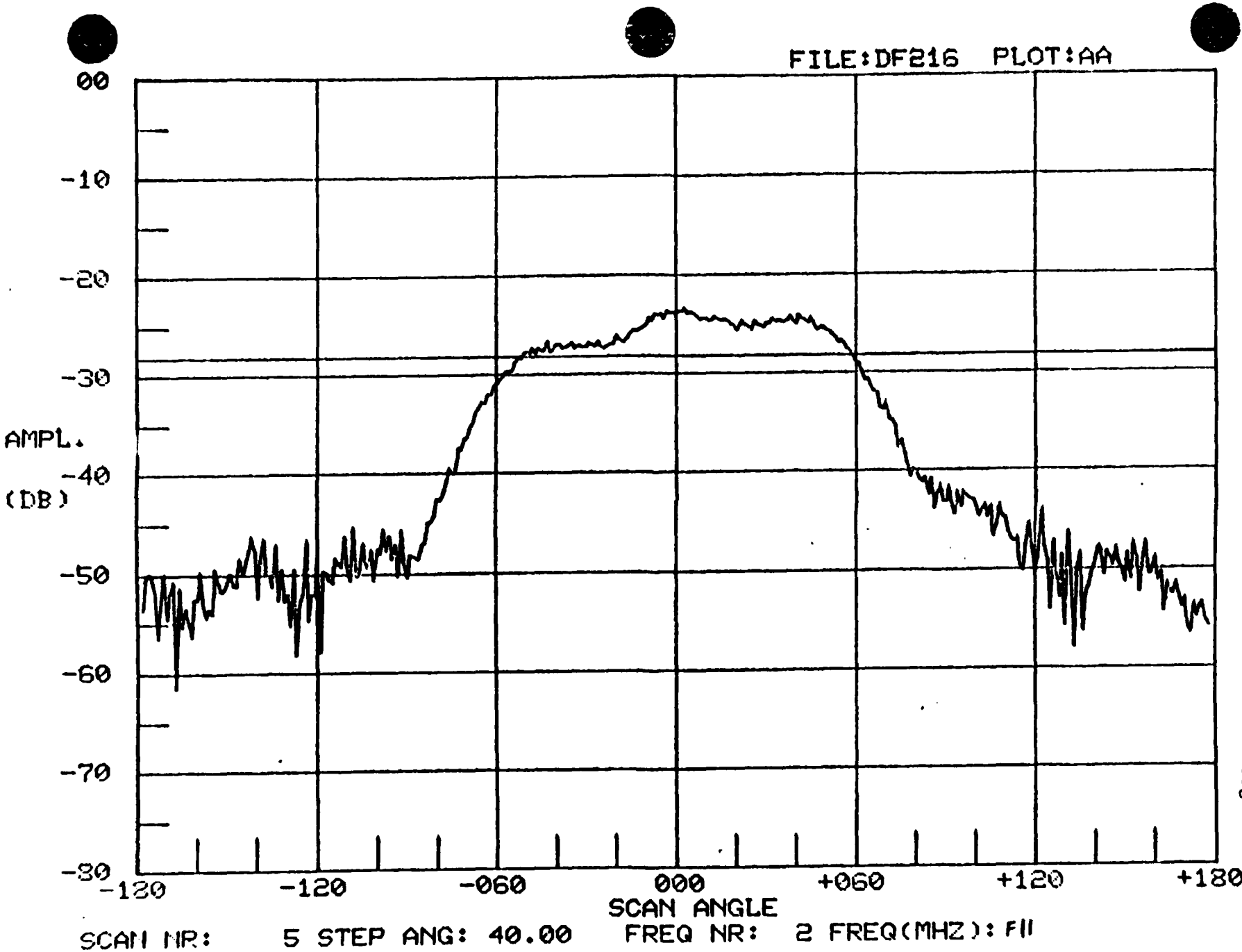
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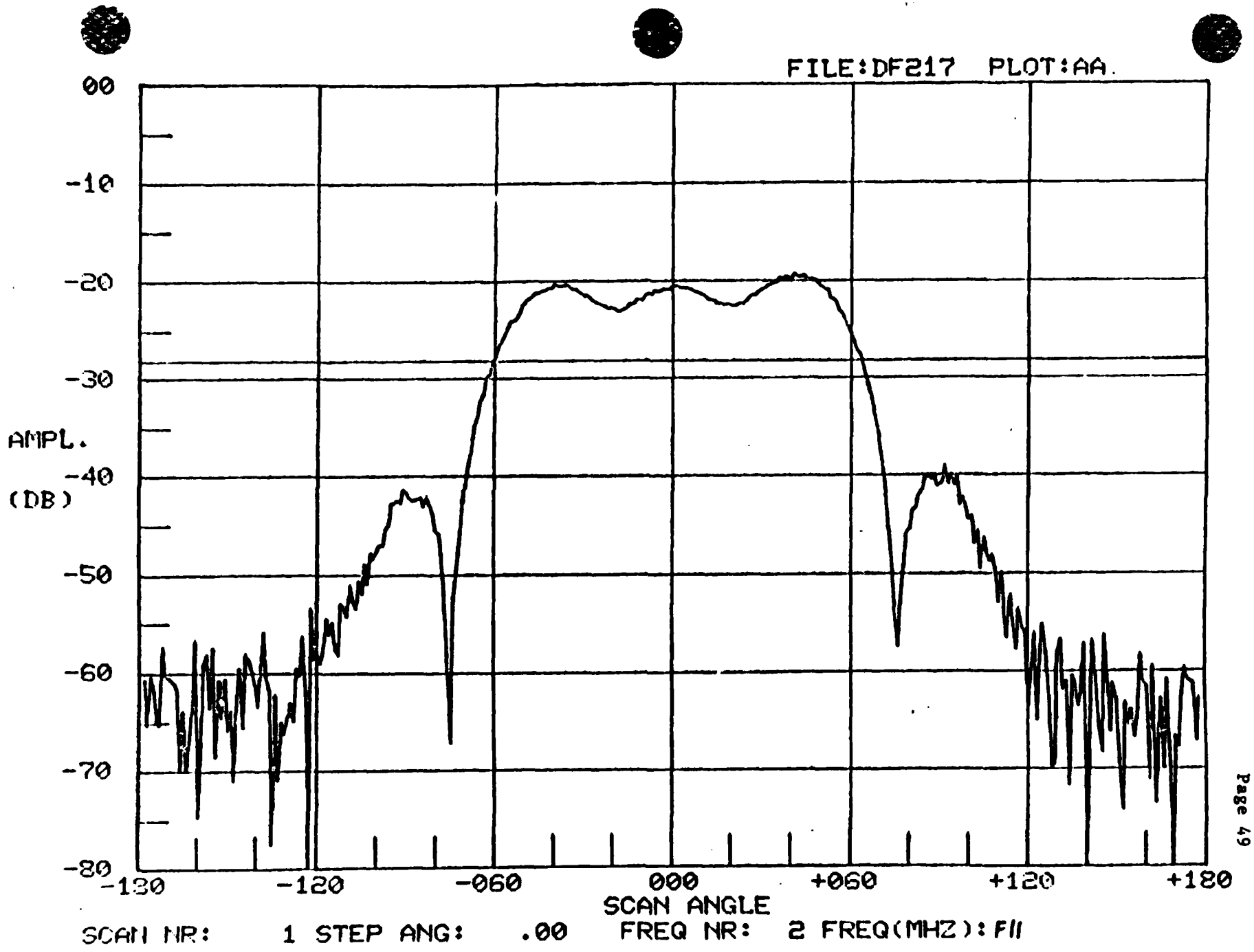
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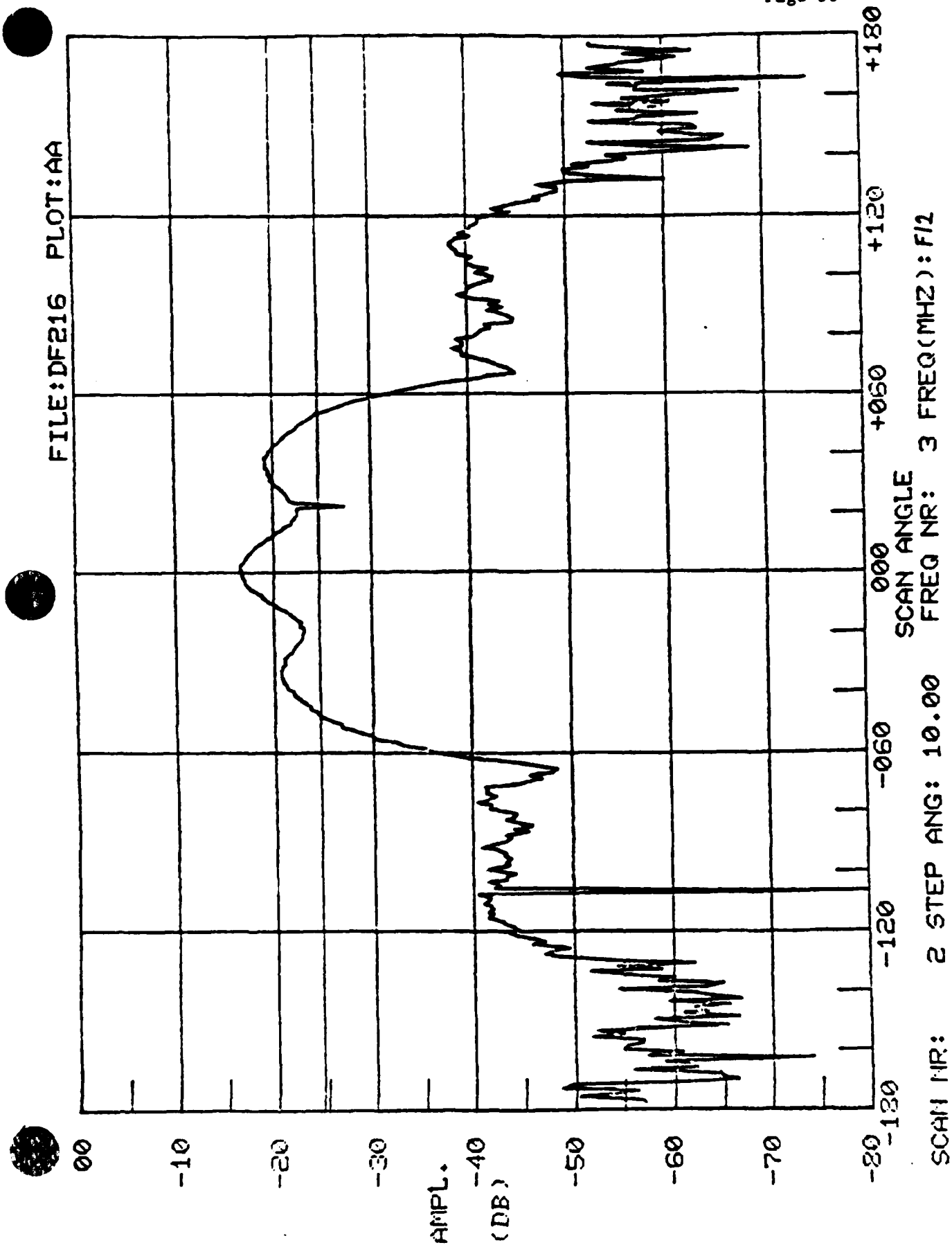
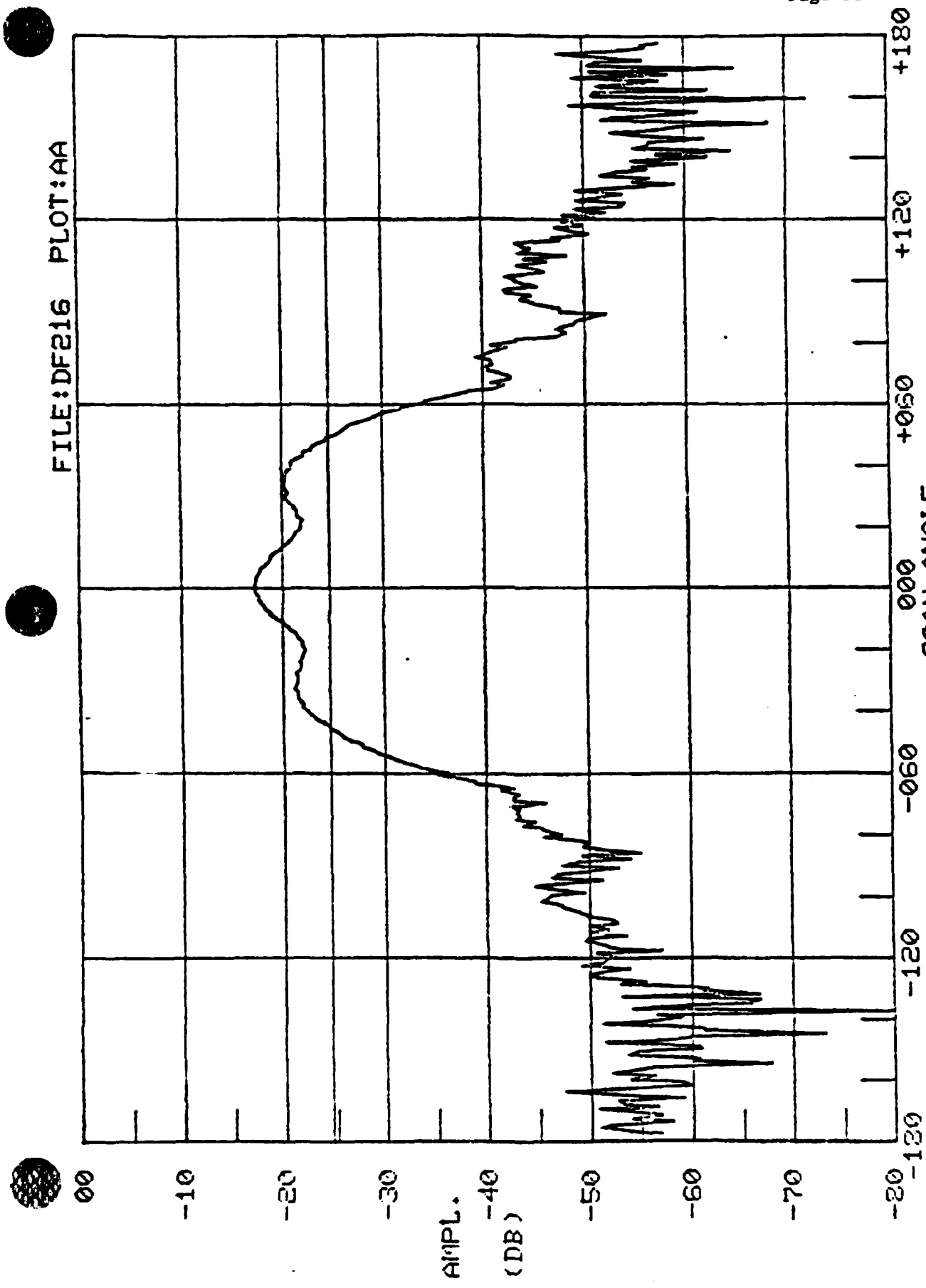
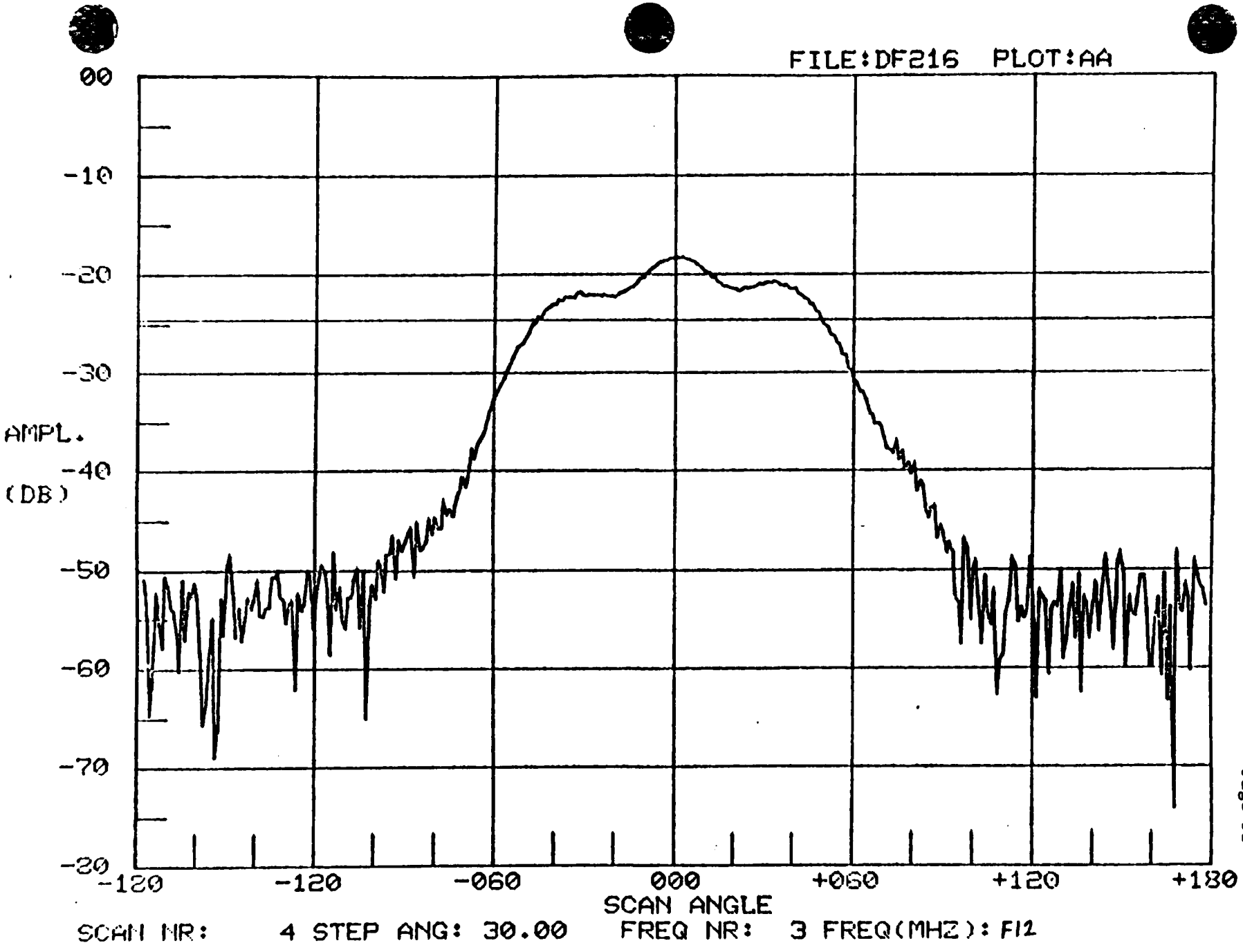
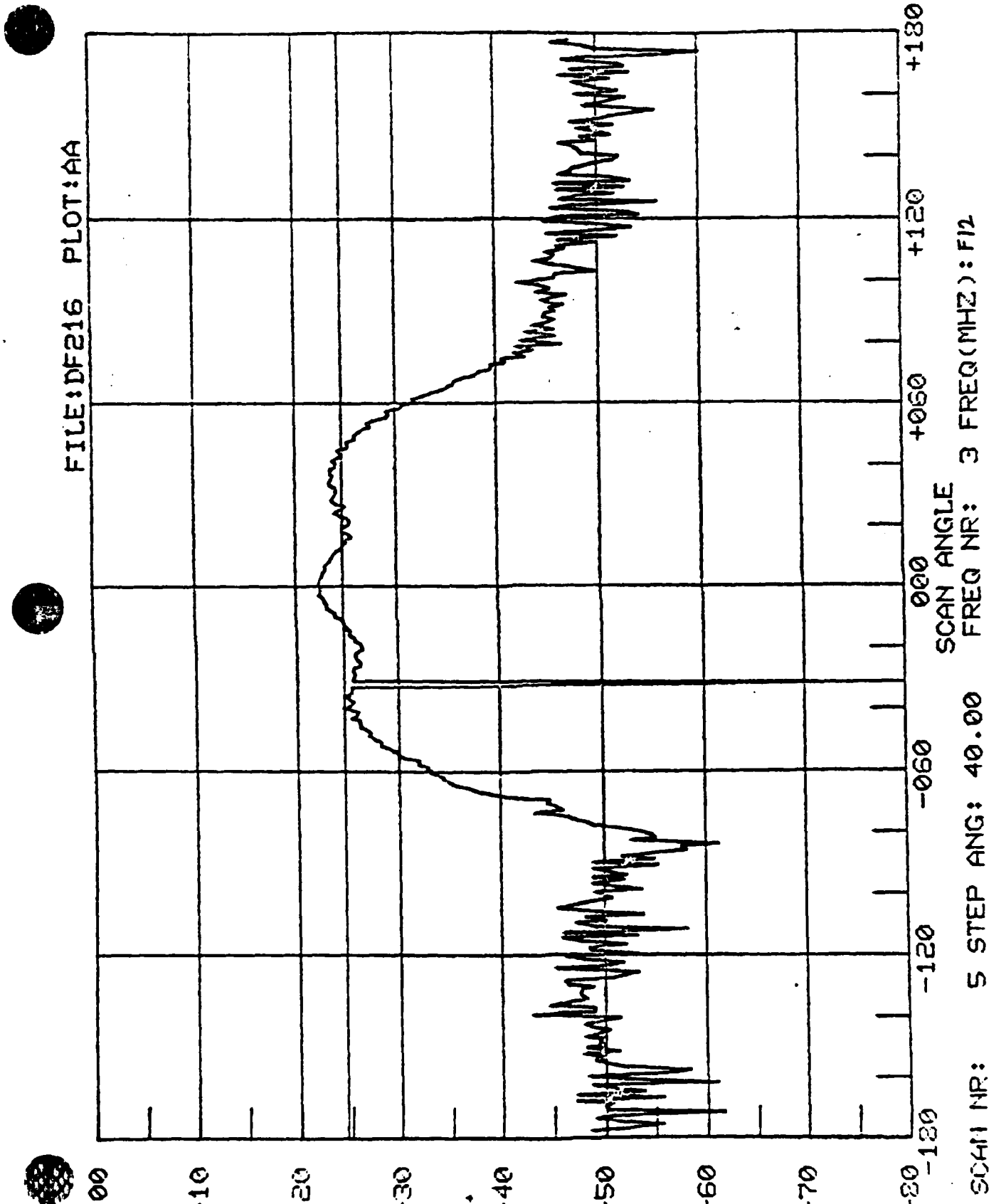
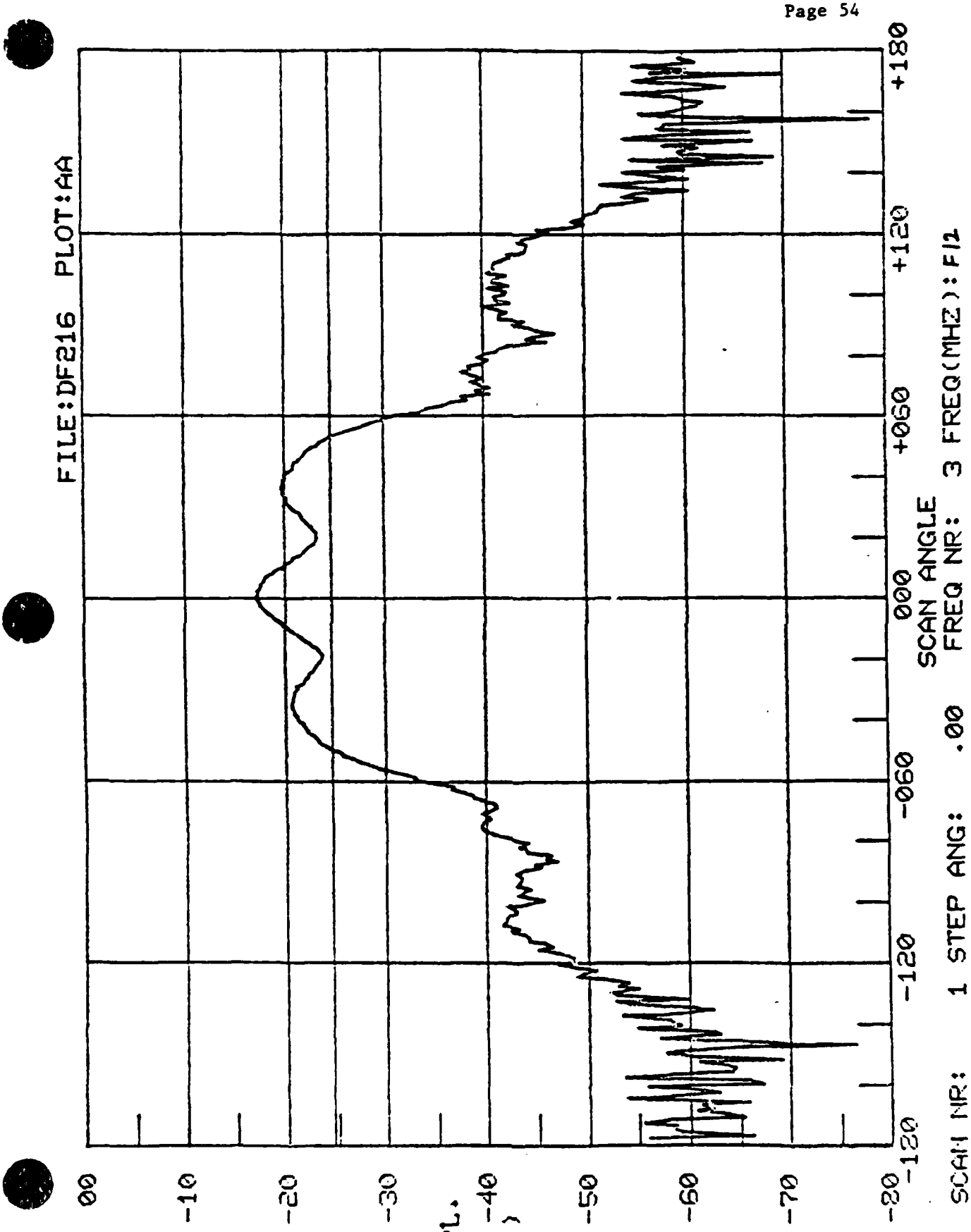
SCAN ANGLE
SCAN NR: 1 STEP ANG: .00 FREQ NR: 2 FREQ(MHZ): F11

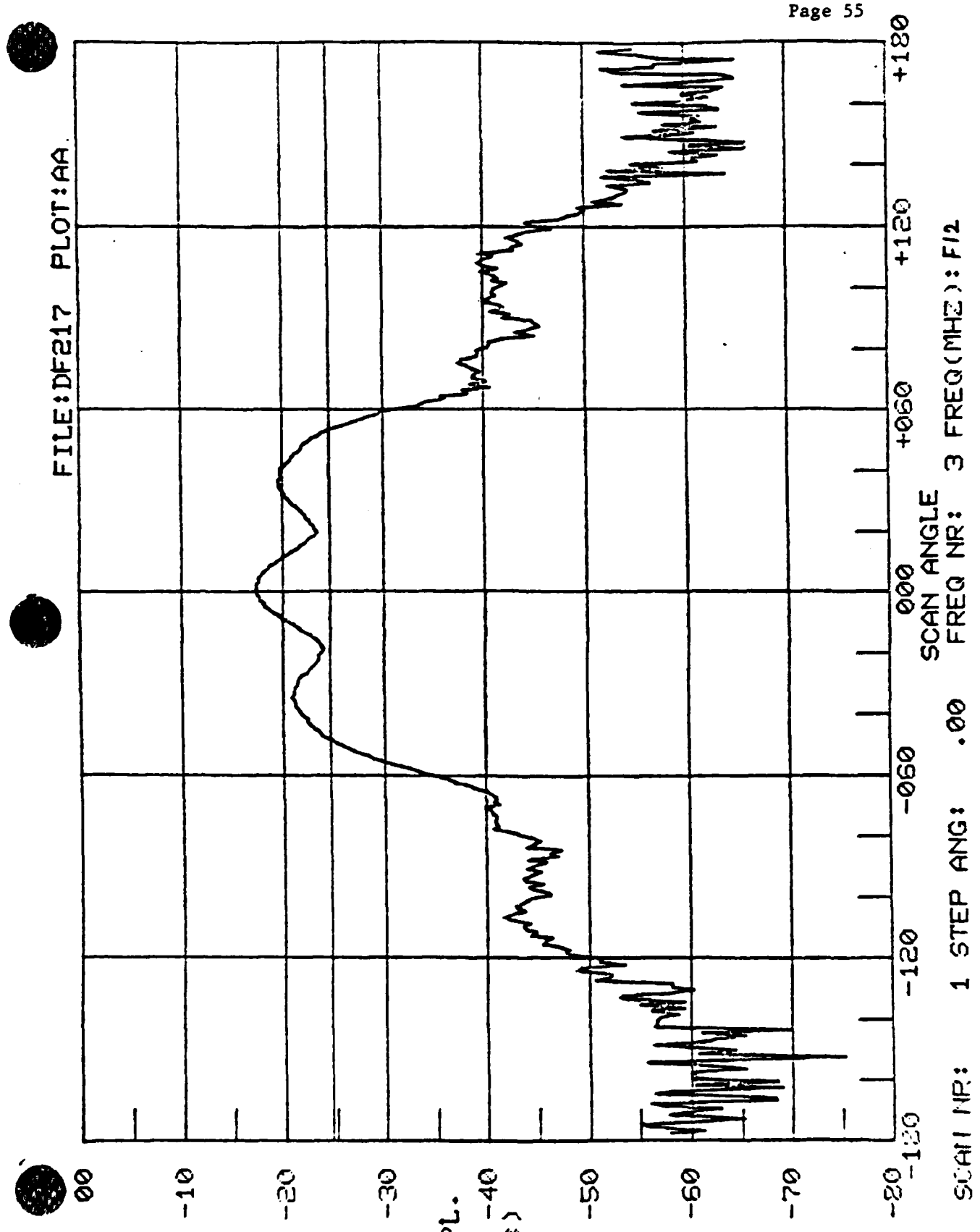

FILE:DF216 PLOT:AA
00
-10
-20
-30
-40
-50
-60
-70
-80
AMPL.
(DB)
-180
-120
-060
000
+060
+120
+180
SCAN ANGLE
SCAN NR: 2 STEP ANG: 10.00 FREQ NR: 3 FREQ(MHZ): F12

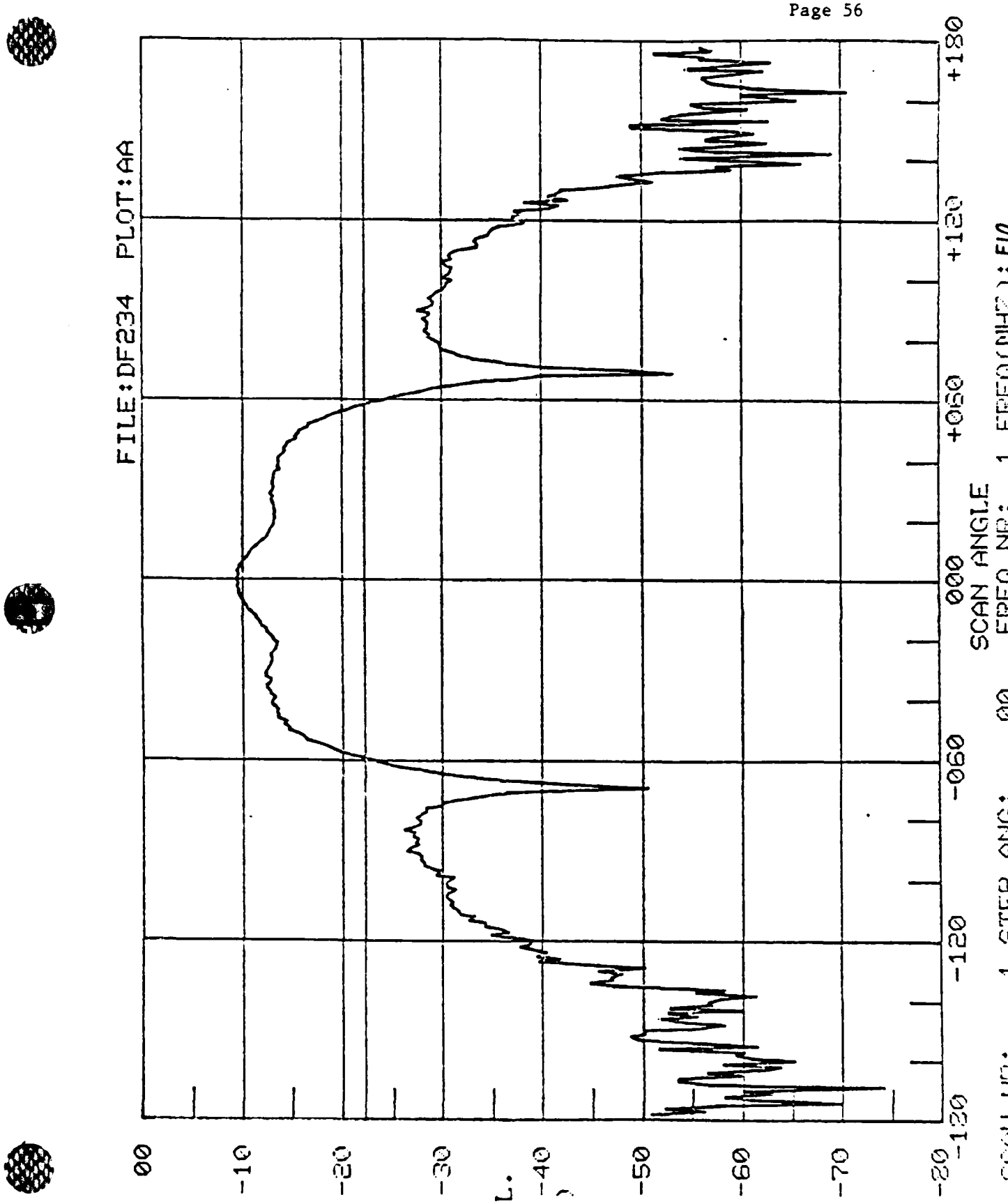

FILE:DF216 PLOT:AA
00
-10
-20
-30
-40
-50
-60
-70
-80
AMPL.
(DB)
-180
-120
-060
000
+060
+120
+180
SCAN ANGLE
SCAN NR: 3 STEP ANG: 20.00 FREQ NR: 3 FREQ(MHZ): F12

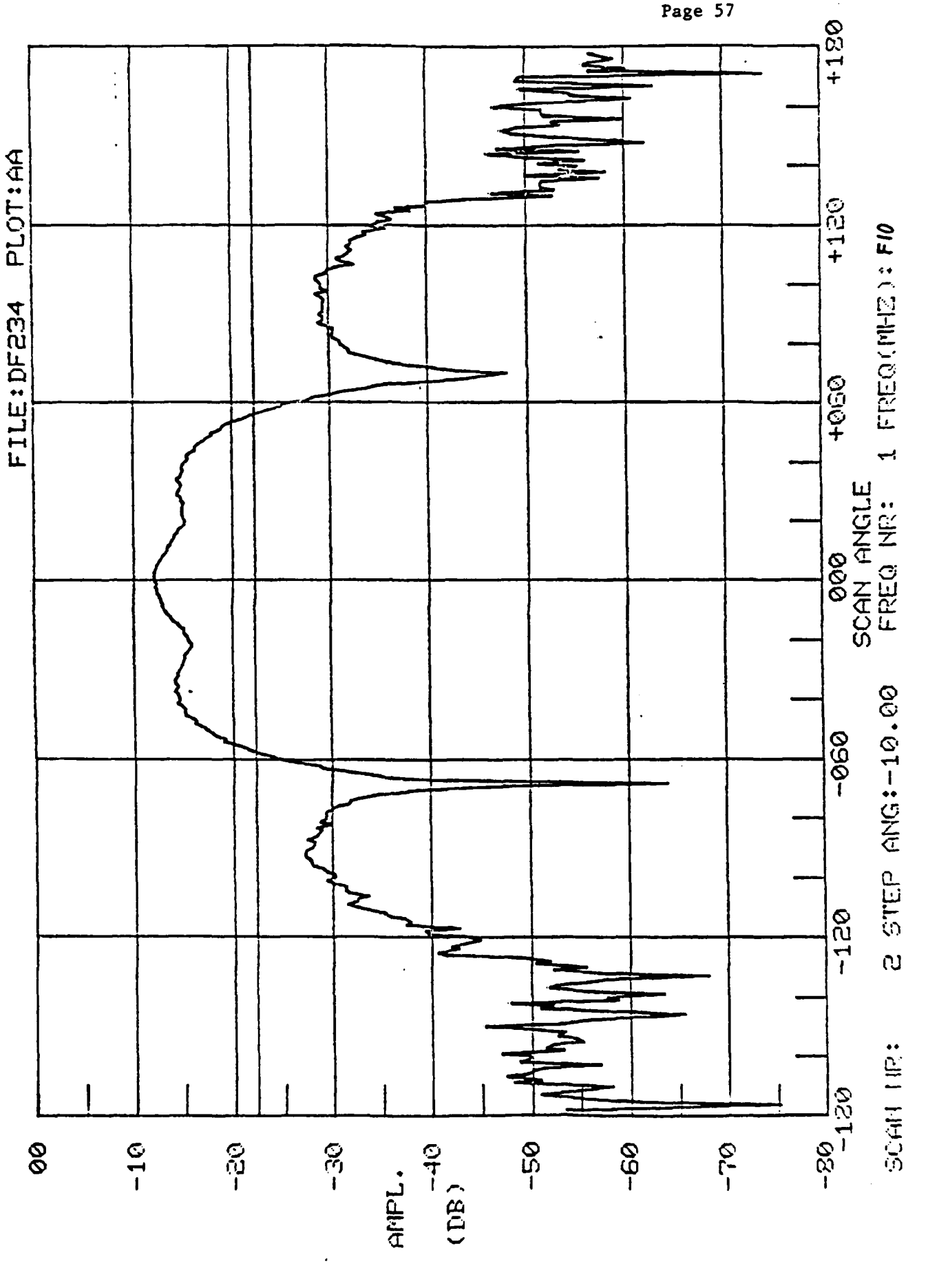

FILE:DF216 PLOT:AA
00
-10
-20
-30
AMPL.
-40
(DB)
-50
-60
-70
-20
-120
-120
-060
000
+060
+120
+180
SCAN ANGLE
SCAN NR: 4 STEP ANG: 30.00 FREQ NR: 3 FREQ(MHZ): F12

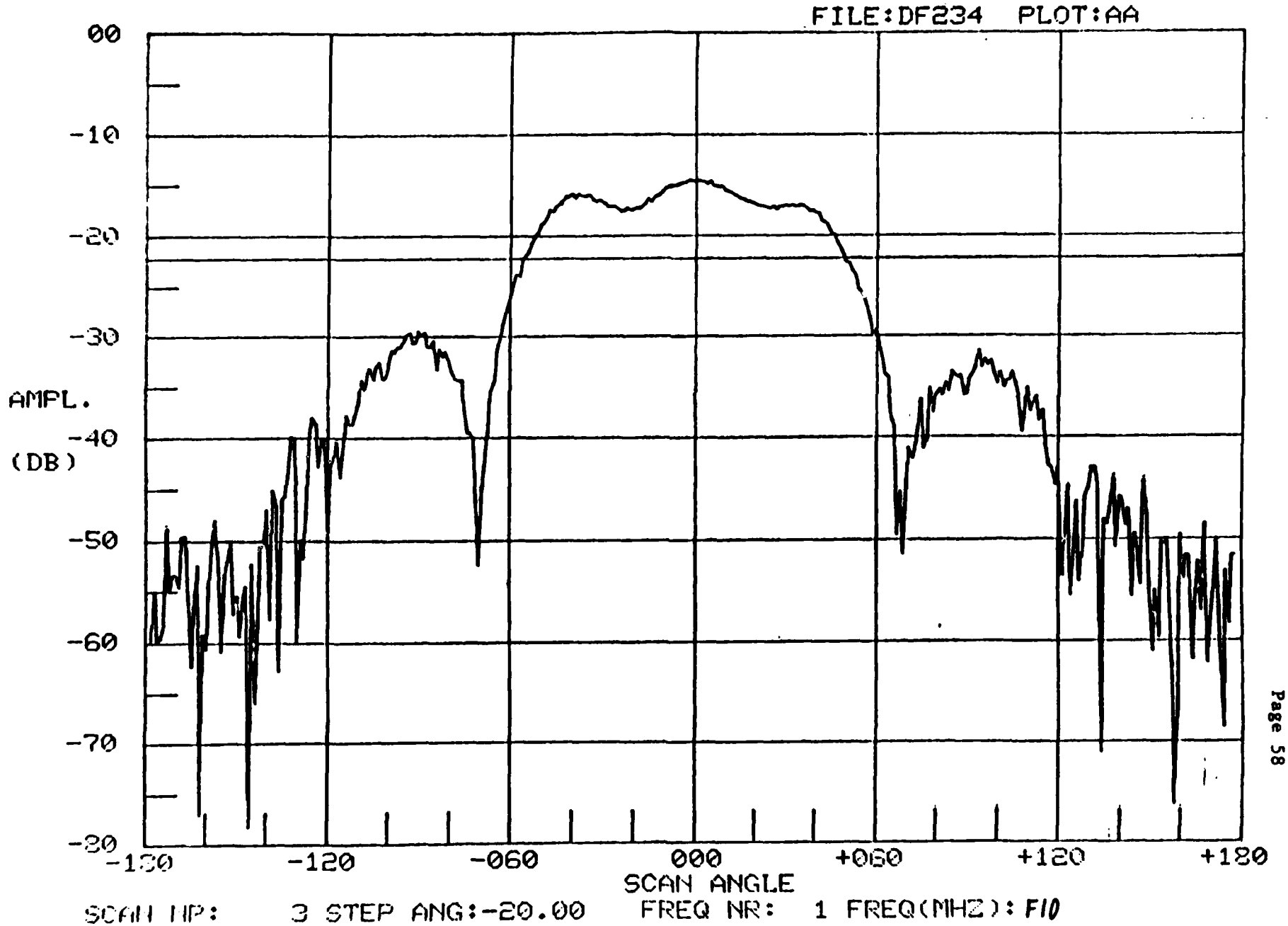

FILE:DF216 PLOT:AA
00
-10
-20
-30
-40
-50
-60
-70
-80
AMPL.
(DB)
-180
-120
-060
000
+060
+120
+180
SCAN ANGLE
SCAN NR: 5 STEP ANG: 40.00 FREQ NR: 3 FREQ(MHZ): F12

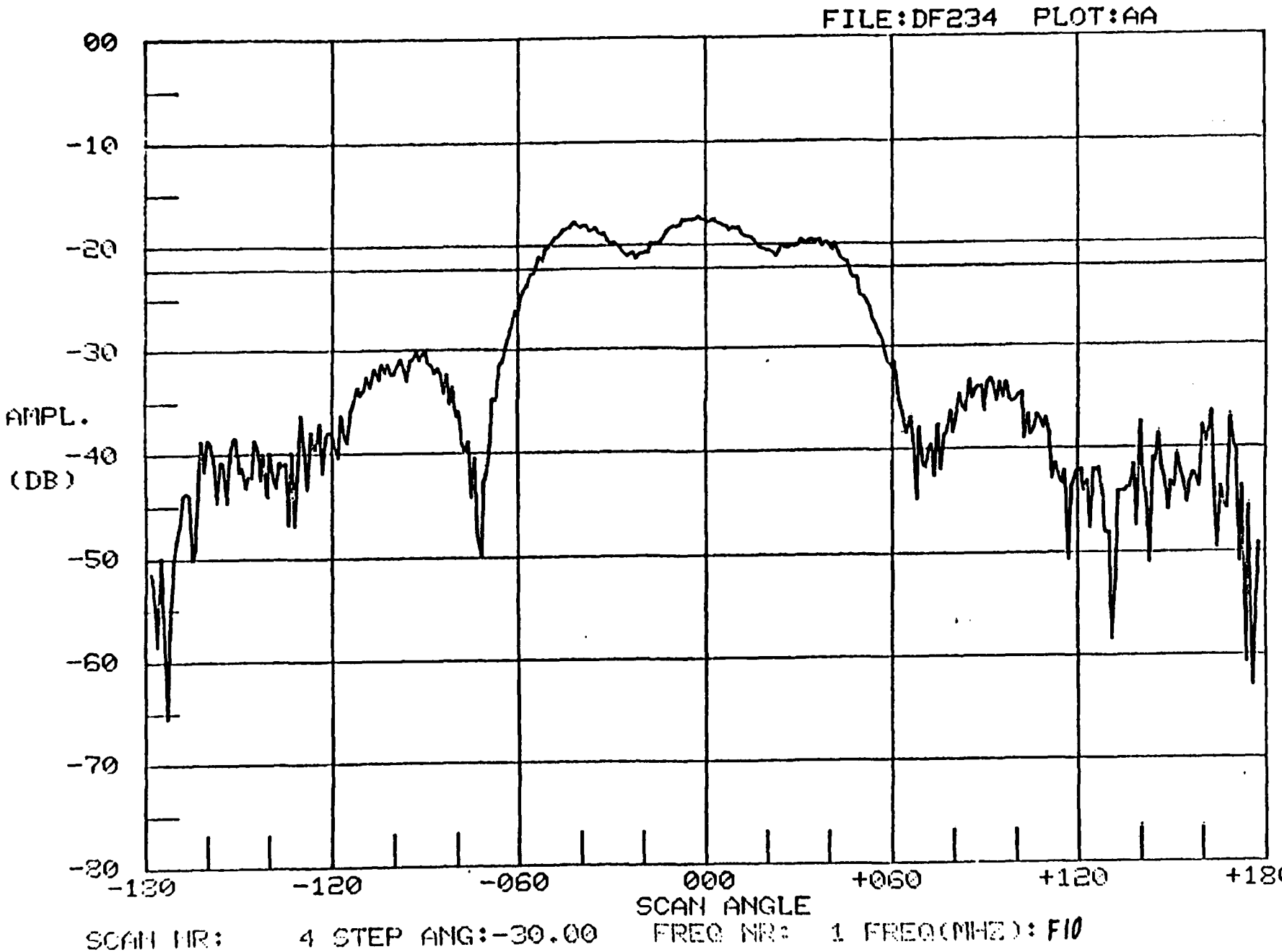

FILE:DF216 PLOT:AA
00
-10
-20
-30
-40
-50
-60
-70
-80
AMPL.
(DB)
-180
-120
-060
000
+060
+120
+180
SCAN ANGLE
SCAN NR: 1 STEP ANG: .00 FREQ NR: 3 FREQ(MHZ): F12

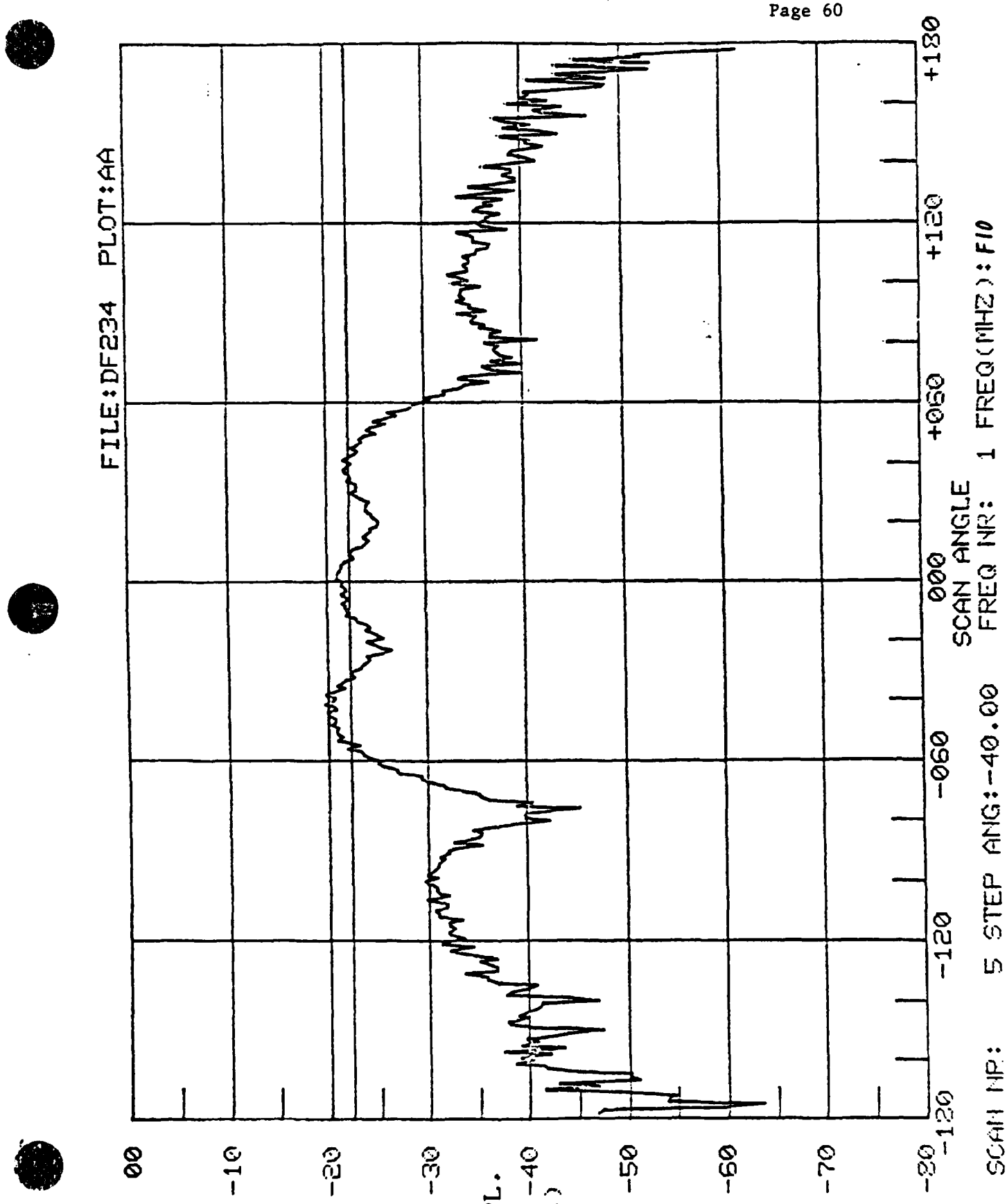

FILE:DF217 PLOT:AA
00
-10
-20
-30
-40
-50
-60
-70
-80
AMPL.
(DB)
-180
-120
-060
000
+060
+120
+180
SCAN ANGLE
SCAN NR: 1 STEP ANG: .00 FREQ NR: 3 FREQ(MHZ): F12

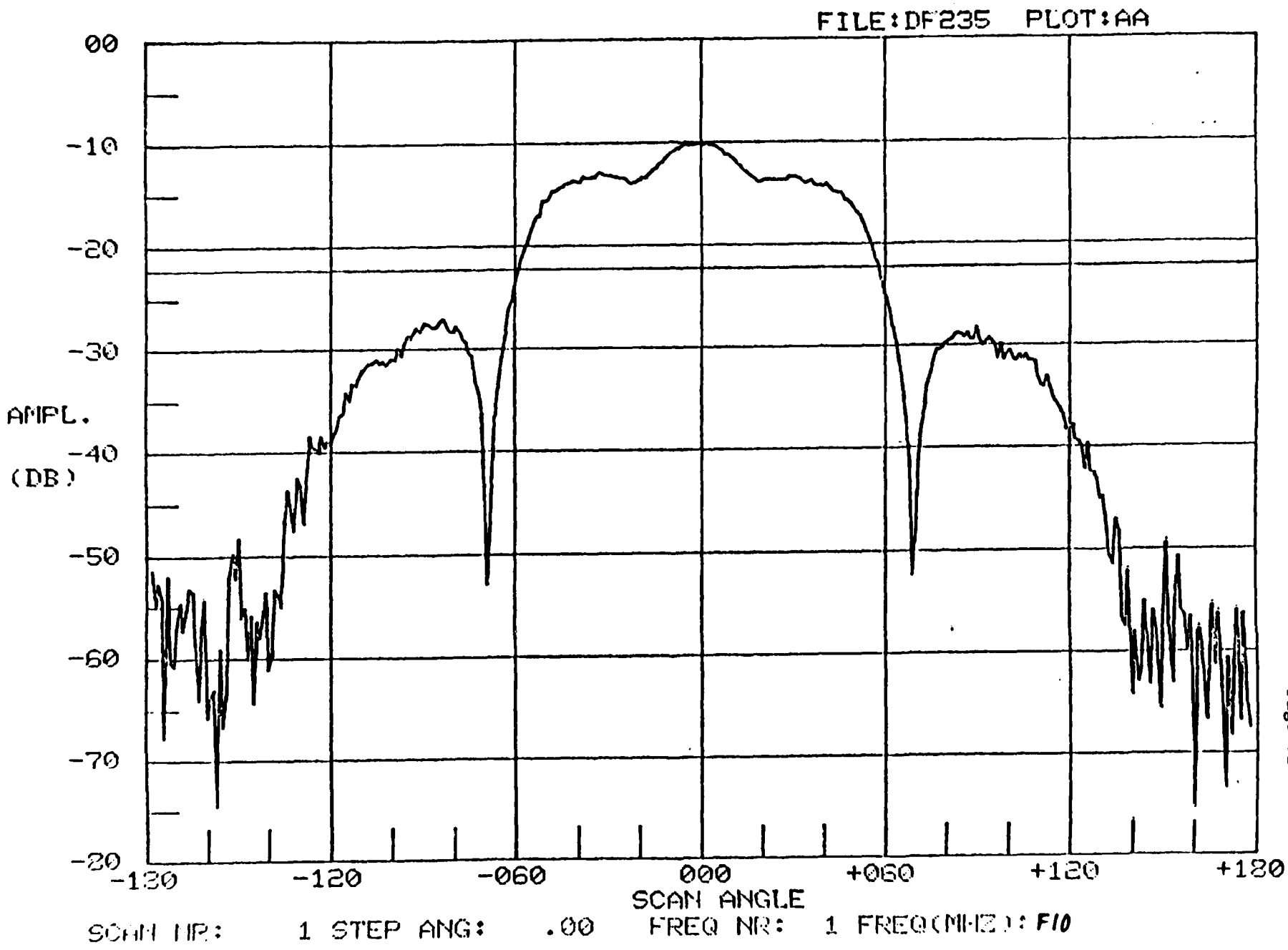

FILE:DF234 PLOT:AA
00
-10
-20
-30
-40
-50
-60
-70
-80
AMPL.
(DB)
-180
-120
-060
000
+060
+120
+180
SCAN ANGLE
SCAN NR: 1 STEP ANG: .00 FREQ NR: 1 FREQ(MHZ): F10

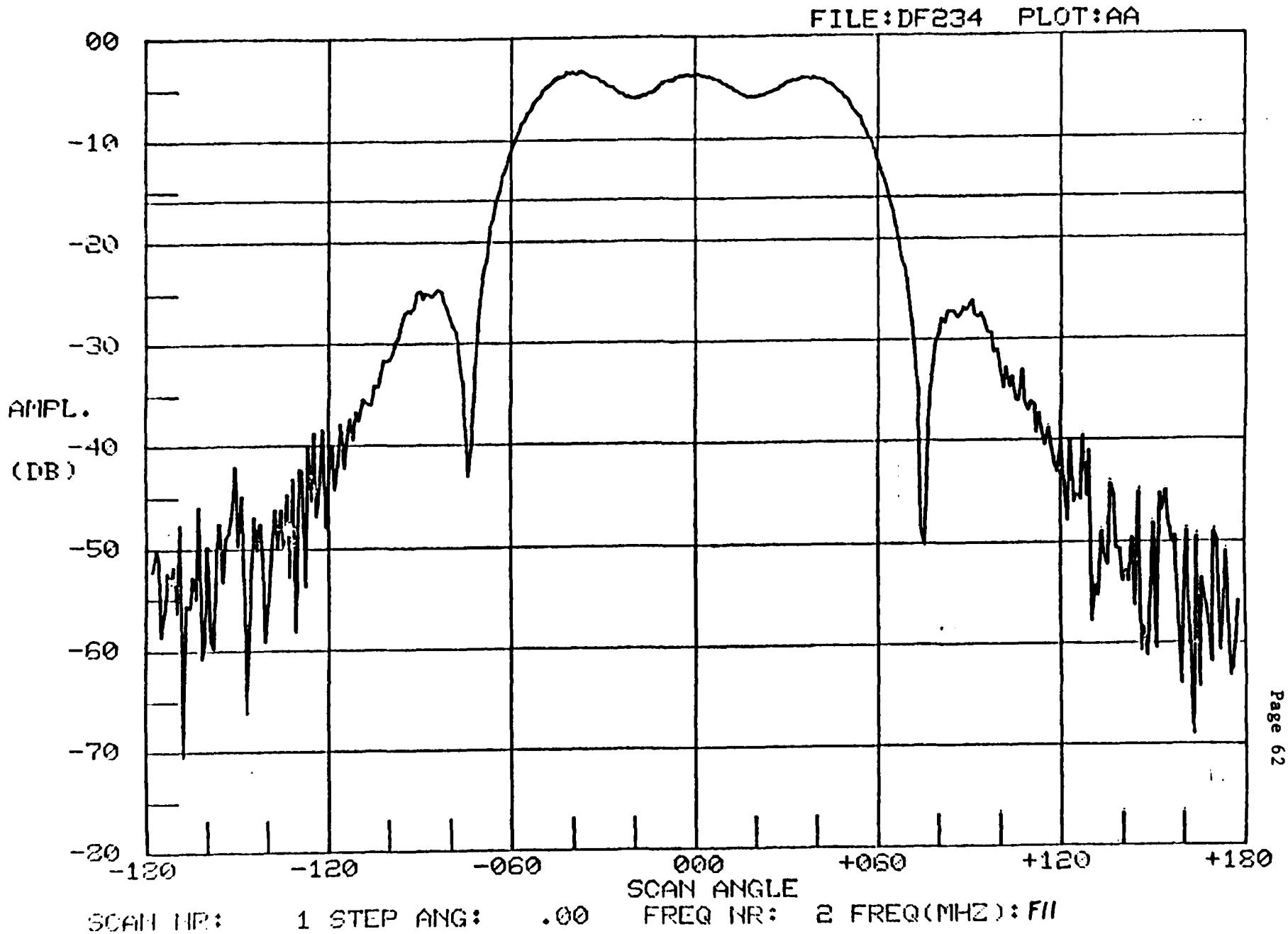

FILE:DF234 PLOT:AA
00
-10
-20
-30
-40
-50
-60
-70
-80
AMPL.
(DB)
-120
-060
000
+060
+120
+180
SCAN ANGLE
SCAN TYP: 2 STEP ANG:-10.00 FREQ NR: 1 FREQ(MHZ): F10

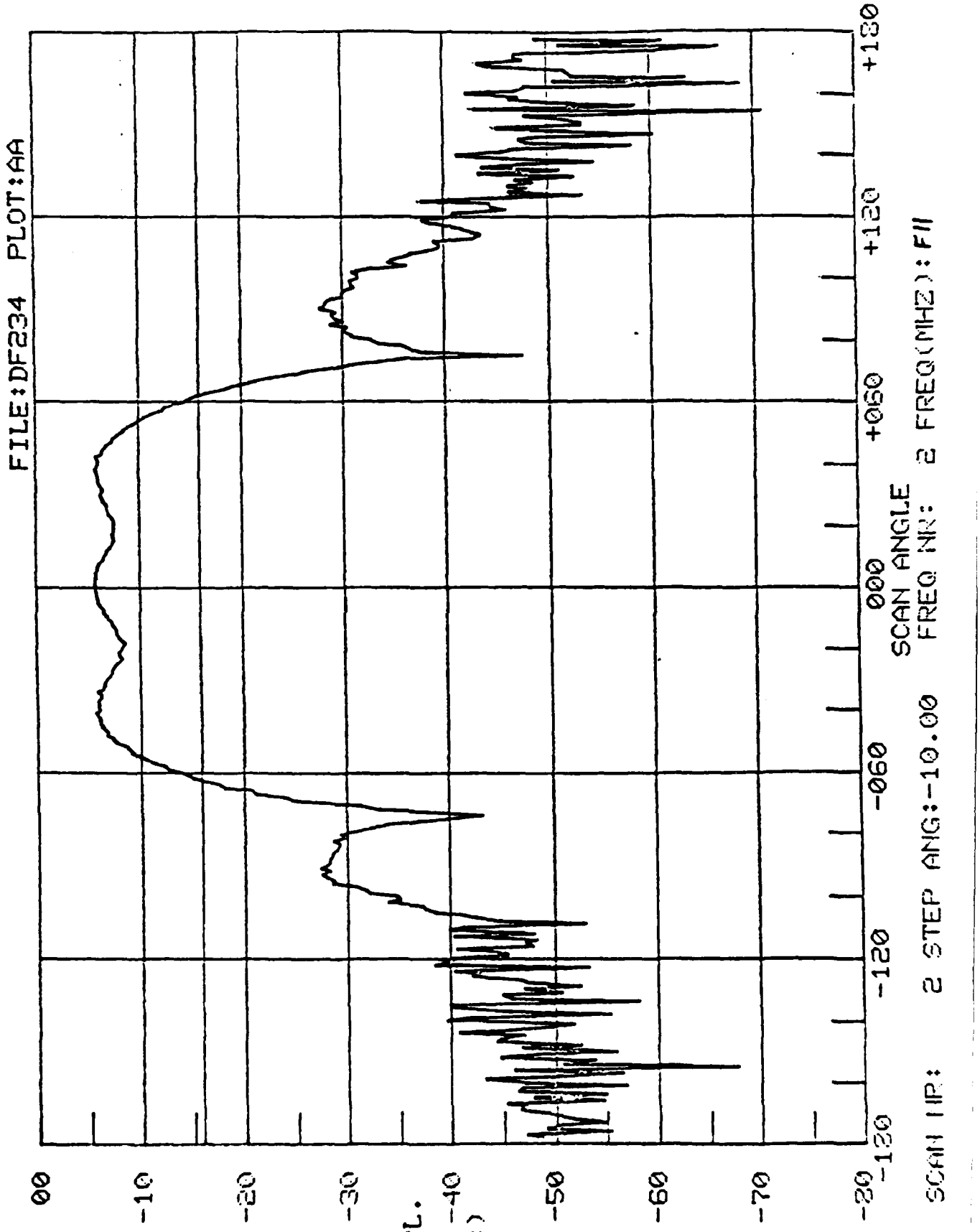

FILE:DF234 PLOT:AA
00
-10
-20
-30
AMPL.
-40
(DB)
-50
-60
-70
-80
-180
-120
-060
000
+060
+120
+180
SCAN ANGLE
SCAN TP: 3 STEP ANG:-20.00 FREQ NR: 1 FREQ(MHZ): F10

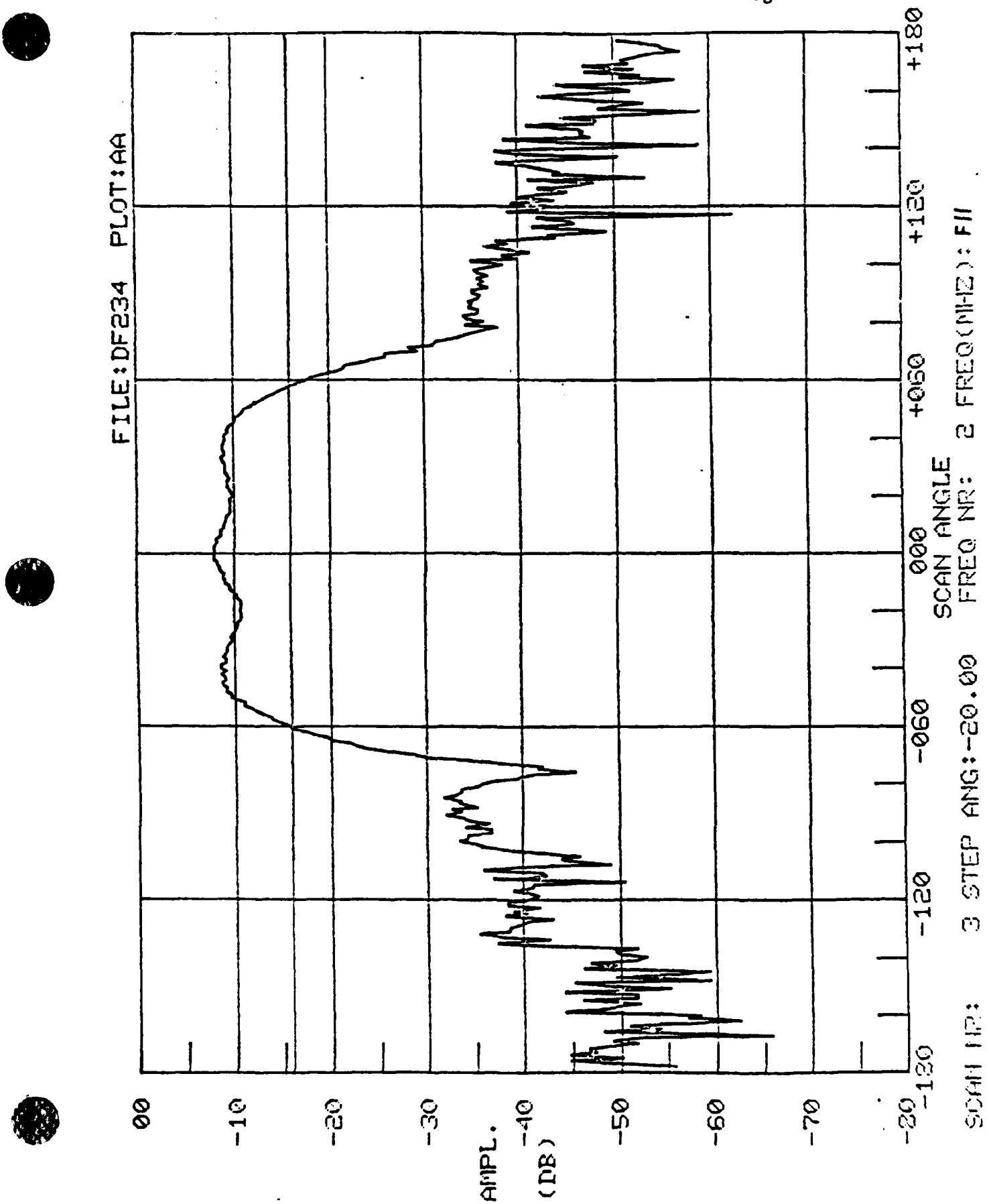

FILE:DF234 PLOT:AA
00
-10
-20
-30
AMPL.
(DB)
-40
-50
-60
-70
-80
-180
-120
-060
000
+060
+120
+180
SCAN ANGLE
SCAN NR: 4 STEP ANG:-30.00 FREQ NR: 1 FREQ(MHZ): F10

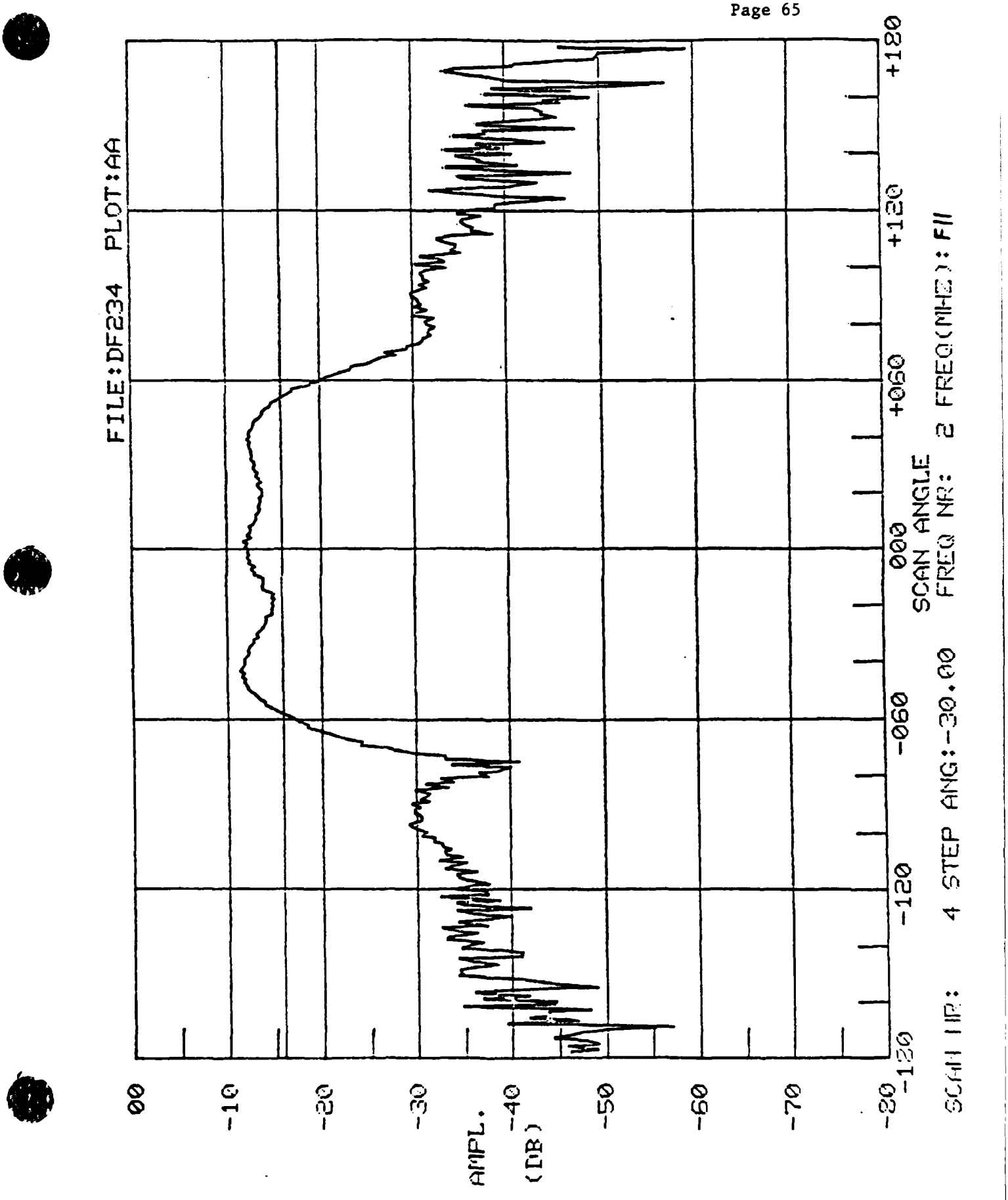

FILE:DF234 PLOT:AA
00
-10
-20
-30
-40
-50
-60
-70
-80
AMPL.
(DB)
-120
-060
000
+060
+120
+180
SCAN ANGLE
SCAN NR: 5 STEP ANG:-40.00 FREQ NR: 1 FREQ(MHZ):F10

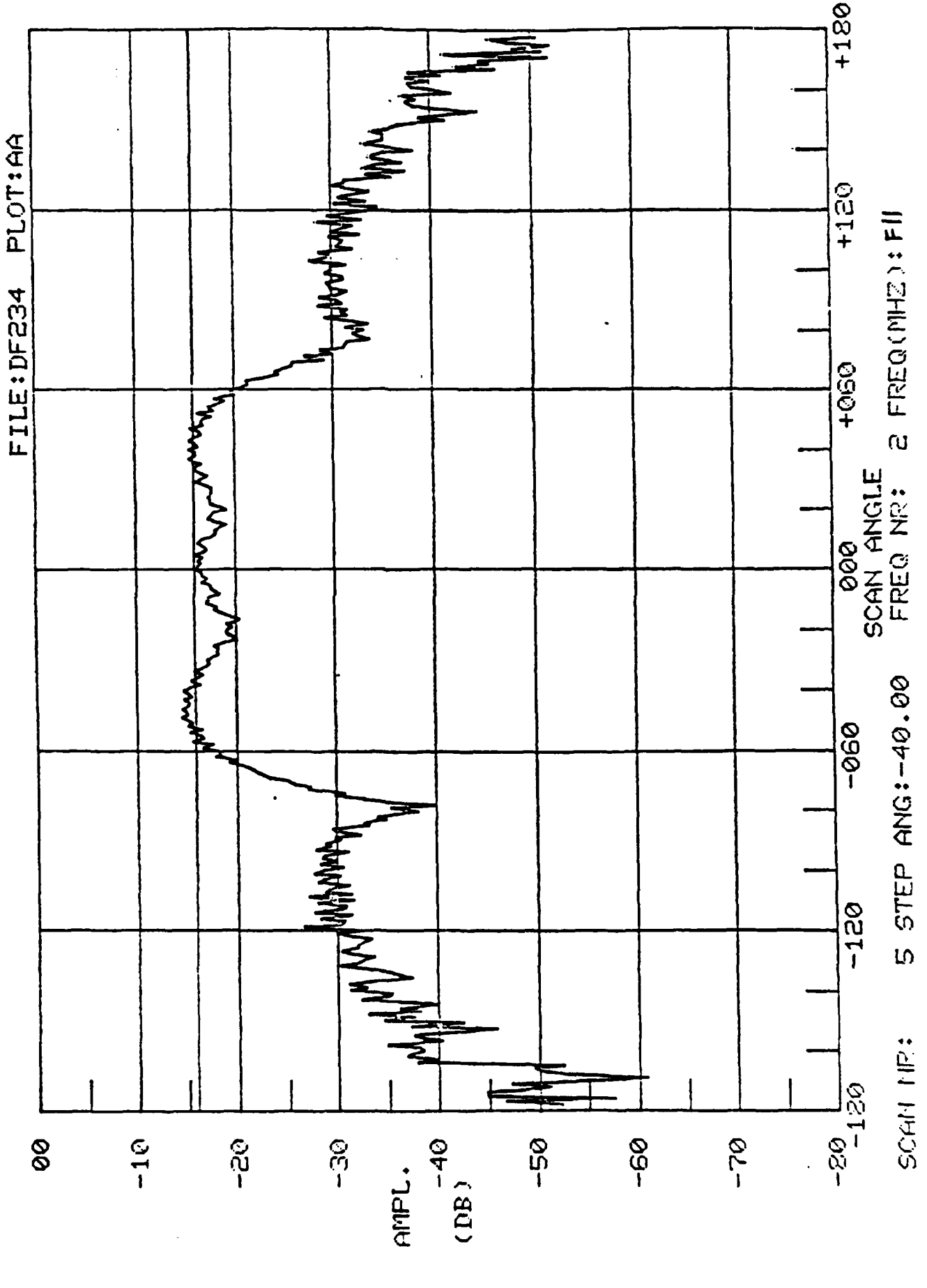

FILE:DF235 PLOT:AA
00
-10
-20
-30
AMPL.
(DB)
-40
-50
-60
-70
-20
-180
-120
-060
000
+060
+120
+180
SCAN ANGLE
SCAN NR: 1 STEP ANG: .00 FREQ NR: 1 FREQ(MHZ): F10

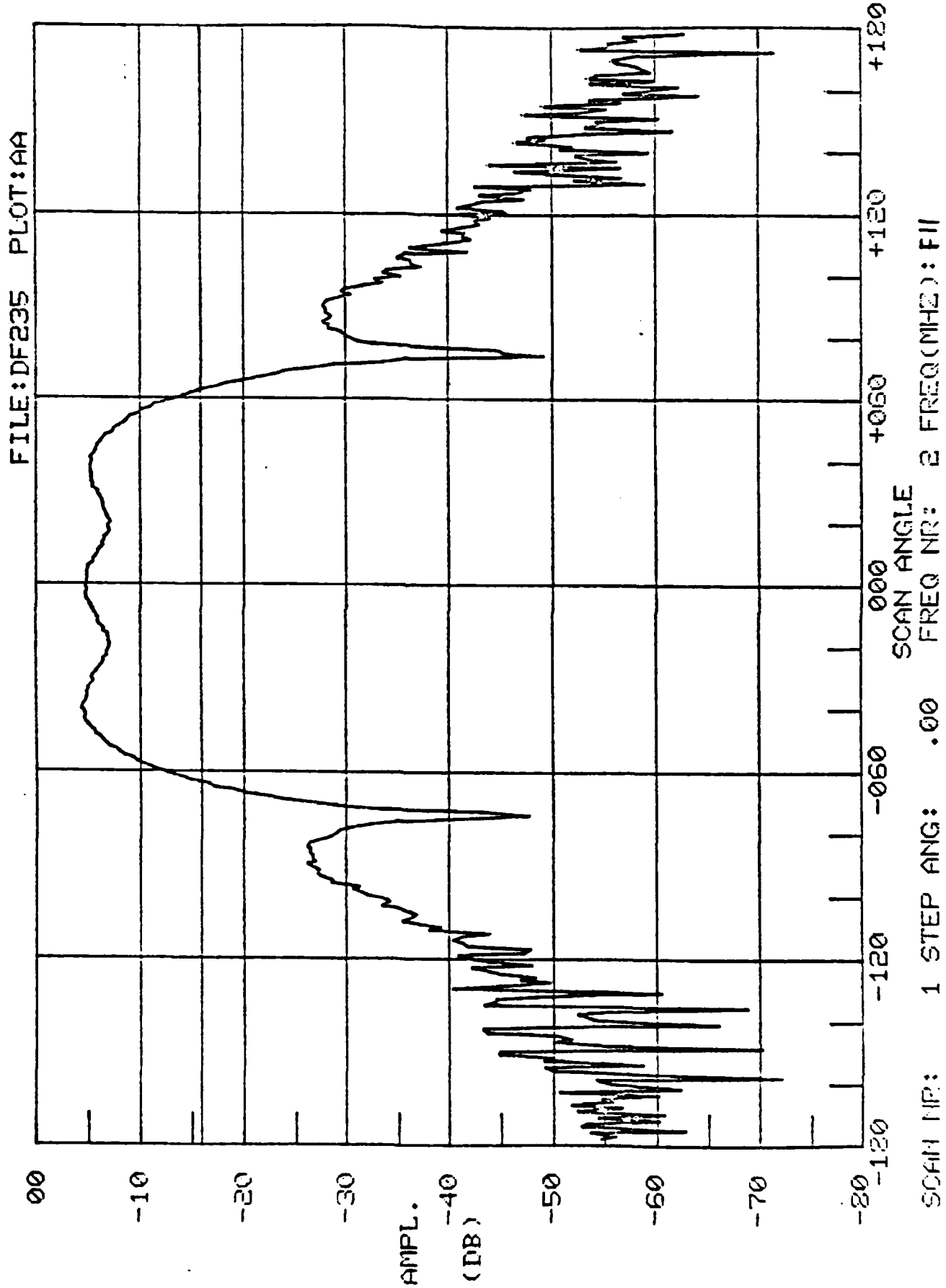

FILE:DF234 PLOT:AA
00
-10
-20
-30
AMPL.
-40
(DB)
-50
-60
-70
-80
-180
-120
-060
000
+060
+120
+180
SCAN ANGLE
SCAN NR: 1 STEP ANG: .00 FREQ NR: 2 FREQ(MHZ): F11

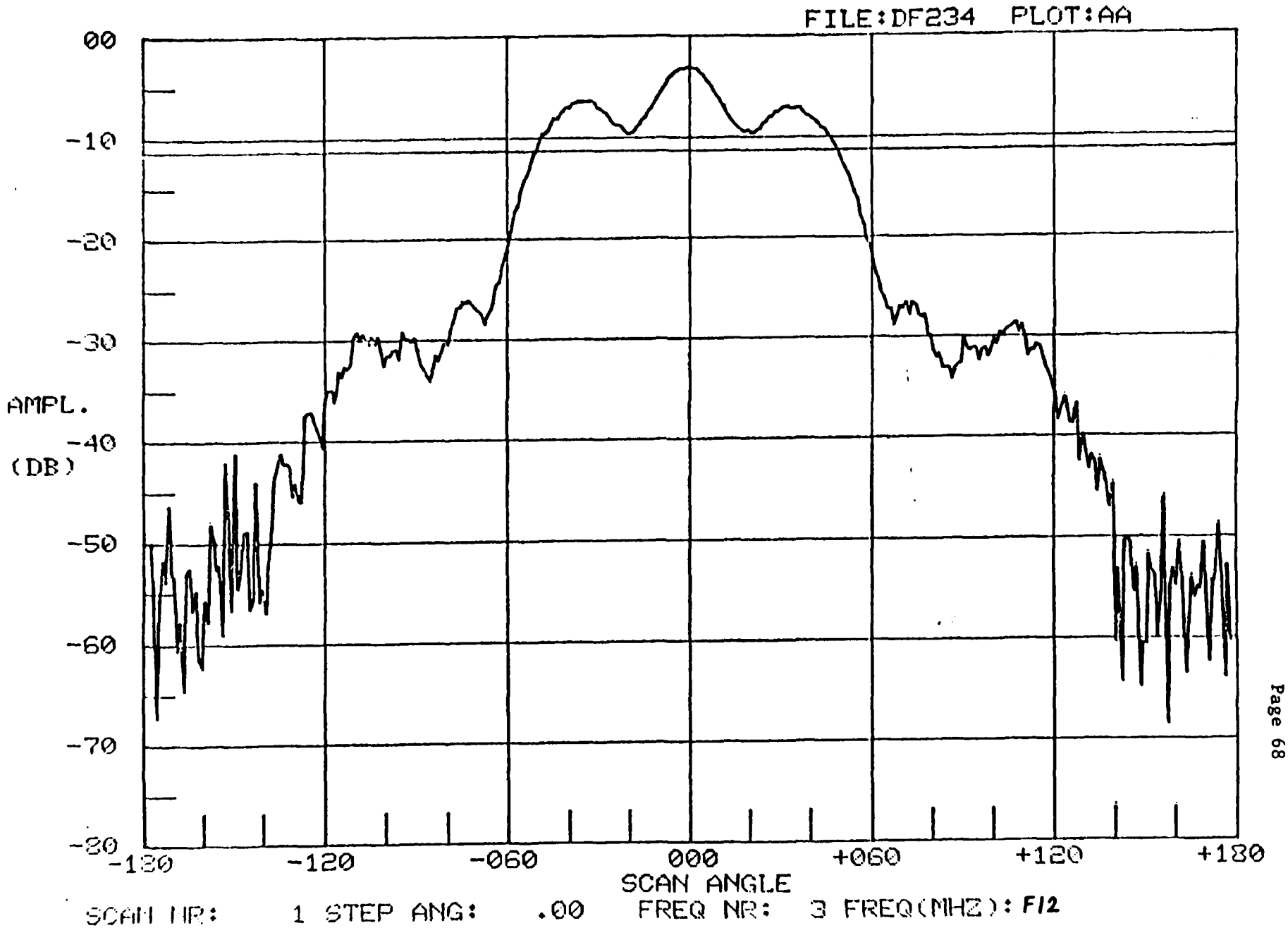

FILE:DF234 PLOT:AA
00
-10
-20
-30
-40
-50
-60
-70
-80
AMPL.
(DB)
-180
-120
-060
000
+060
+120
+180
SCAN ANGLE
SCAN LIM: 2 STEP ANG:-10.00 FREQ NR: 2 FREQ(MHZ): F11

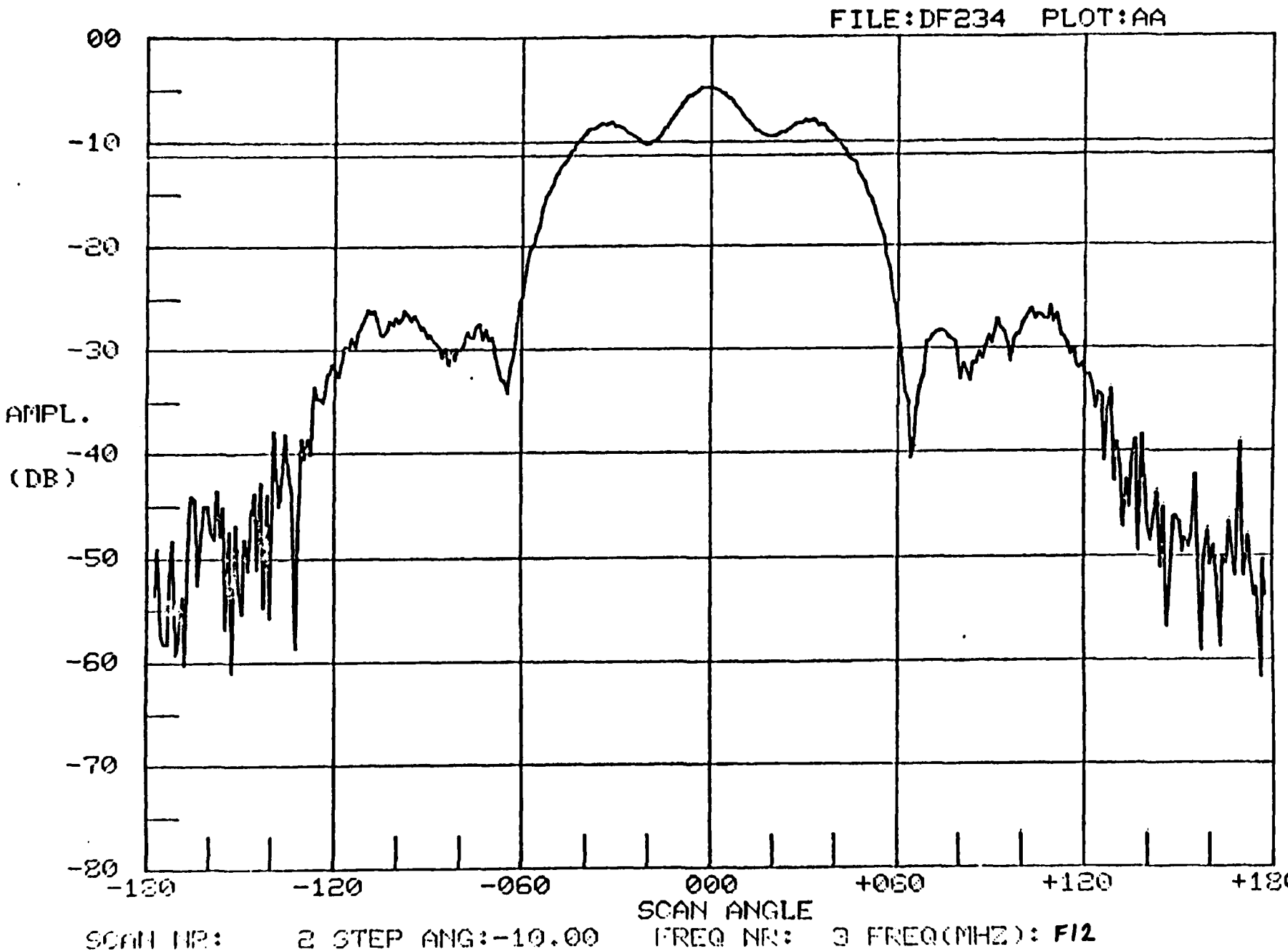

FILE:DF234 PLOT:AA
00
-10
-20
-30
-40
-50
-60
-70
-80
AMPL.
(DB)
-180
-120
-060
000
+060
+120
+180
SCAN ANGLE
SCAN LIM: 3 STEP ANG:-20.00 FREQ NR: 2 FREQ(MHZ): F11

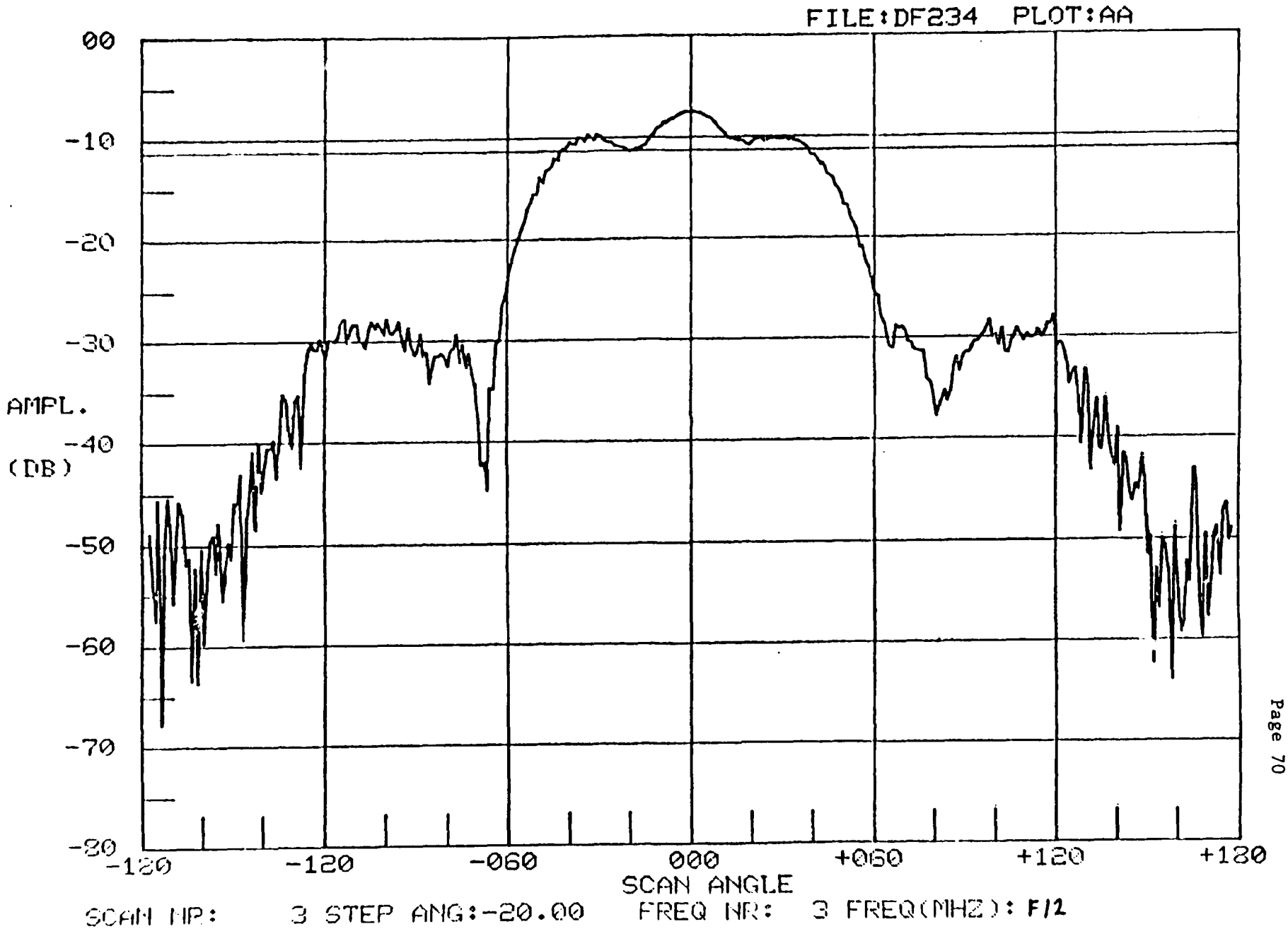

FILE:DF234 PLOT:AA
00
-10
-20
-30
-40
-50
-60
-70
-80
AMPL.
(DB)
-120
-060
000
+060
+120
SCAN ANGLE
SCAN TYP: 4 STEP ANG:-30.00 FREQ NR: 2 FREQ(MHZ): FII

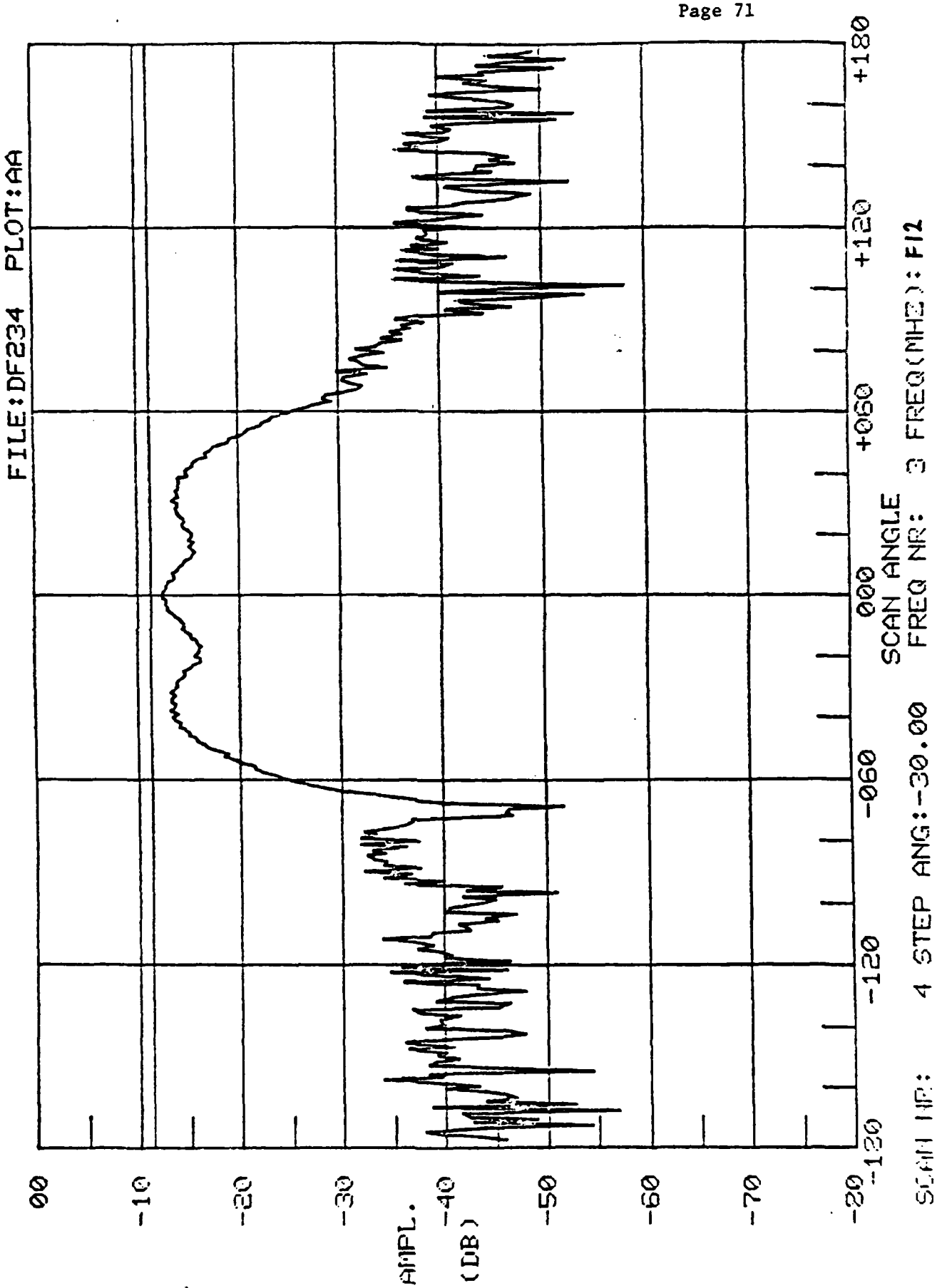

FILE:DF234 PLOT:AA
00
-10
-20
-30
-40
-50
-60
-70
-80
AMPL.
(DB)
-180
-120
-060
000
+060
+120
+180
SCAN ANGLE
SCAN TYP: 5 STEP ANG:-40.00 FREQ NR: 2 FREQ(MHZ): F11

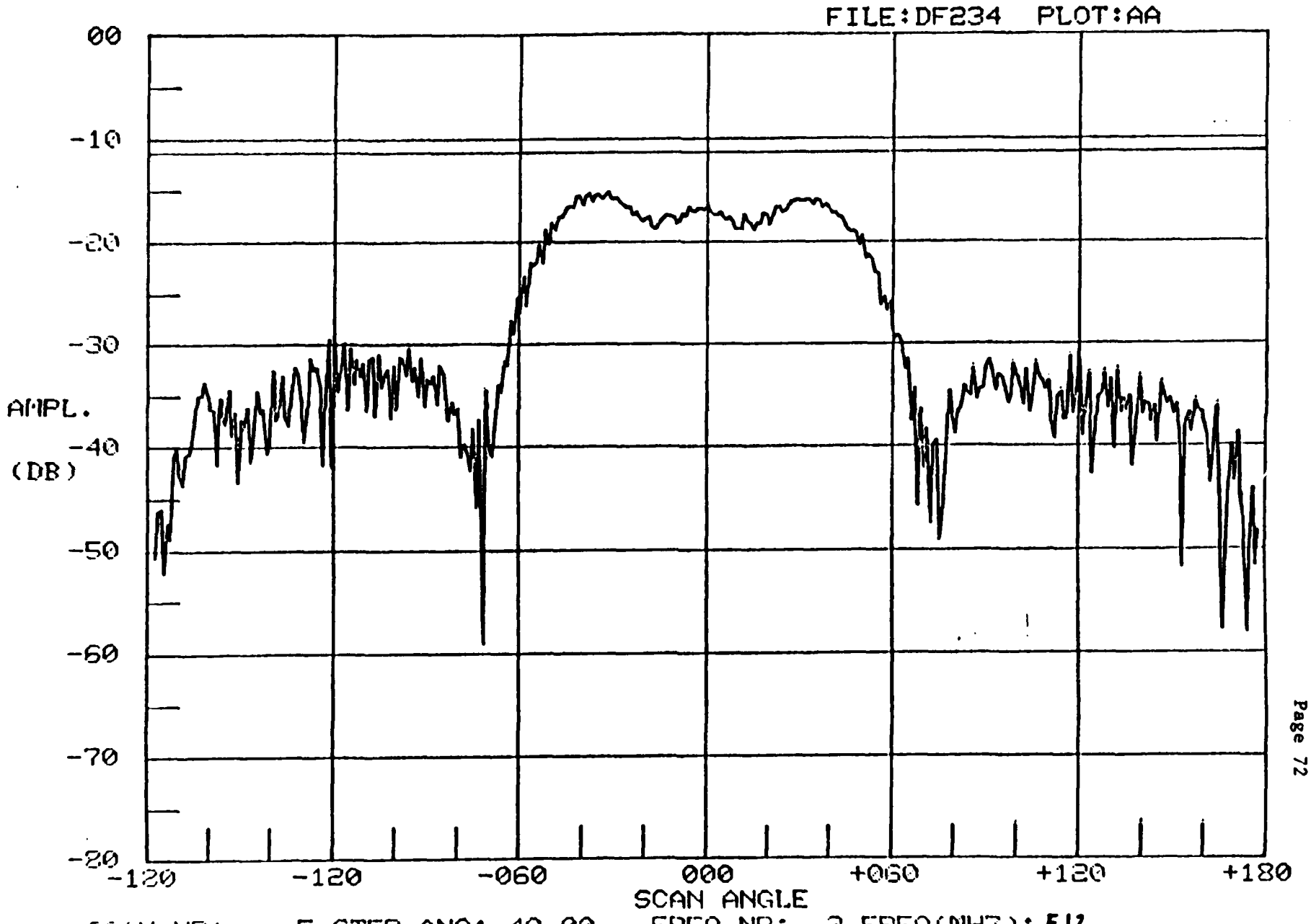

FILE:DF235 PLOT:AA
00
-10
-20
-30
-40
-50
-60
-70
-80
AMPL.
(DB)
-120
-060
000
+060
+120
SCAN ANGLE
SCAN NR: 1 STEP ANG: .00 FREQ NR: 2 FREQ(MHZ): FII

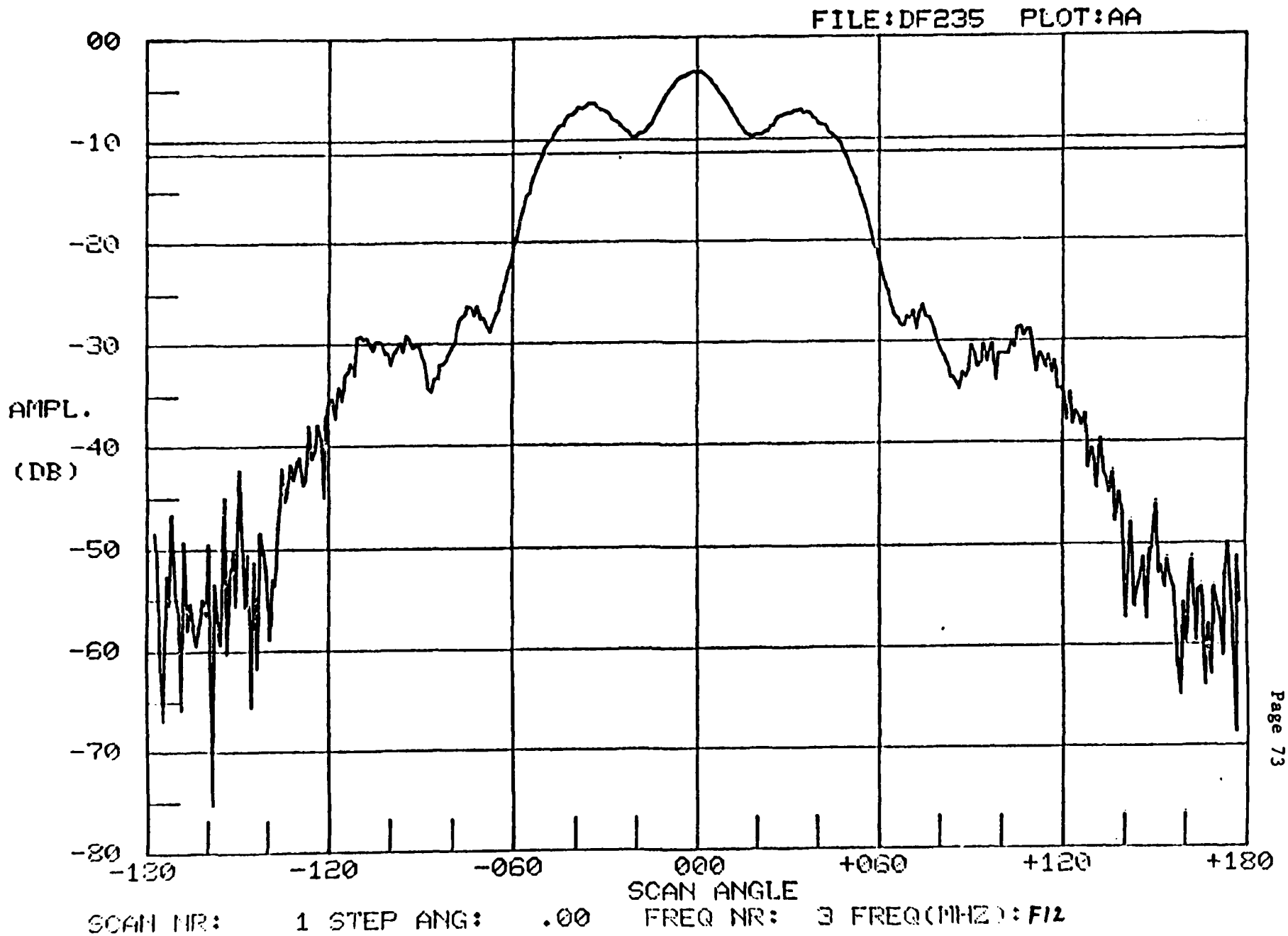

FILE:DF234 PLOT:AA
00
-10
-20
-30
AMPL.
(DB)
-40
-50
-60
-70
-80
-180
-120
-060
000
+060
+120
+180
SCAN ANGLE
SCAN NR: 1 STEP ANG: .00 FREQ NR: 3 FREQ(MHZ): F12


FILE:DF234 PLOT:AA
00
-10
-20
-30
AMPL.
-40
(DB)
-50
-60
-70
-80
-180
-120
-060
000
+060
+120
+180
SCAN ANGLE
SCAN NR: 2 STEP ANG:-10.00 FREQ NR: 3 FREQ(MHZ): F12


FILE:DF234 PLOT:AA
00
-10
-20
-30
AMPL.
(DB)
-40
-50
-60
-70
-80
-180
-120
-060
000
+060
+120
+180
SCAN ANGLE
SCAN NR: 3 STEP ANG:-20.00 FREQ NR: 3 FREQ(MHZ): F12


FILE:DF234 PLOT:AA
00
-10
-20
-30
-40
-50
-60
-70
-80
AMPL.
(DB)
-180
-120
-060
000
+060
+120
+180
SCAN ANGLE
FREQ NR: 3 FREQ(MHZ): F12
SCAN NR: 4 STEP ANG:-30.00


FILE:DF234 PLOT:AA
00
-10
-20
-30
AMPL.
(DB)
-40
-50
-60
-70
-80
-120
-120
-060
000
+060
+120
+180
SCAN ANGLE
SCAN NR: 5 STEP ANG:-40.00 FREQ NR: 3 FREQ(MHZ): F12


FILE:DF235 PLOT:AA
00
-10
-20
-30
AMPL.
-40
(DB)
-50
-60
-70
-80
-180
-120
-060
000
+060
+120
+180
SCAN ANGLE
SCAN NR: 1 STEP ANG: .00 FREQ NR: 3 FREQ(MHZ): F12

Appendix 7 contains AN/ALQ-162 antenna patterns as recorded by the 20/20 system during test. They are in polar plot format. These patterns cover frequencies F4, F5, and F6 and elevations of +40° through -40° for both the forward and aft antennas. They are arranged as follows:

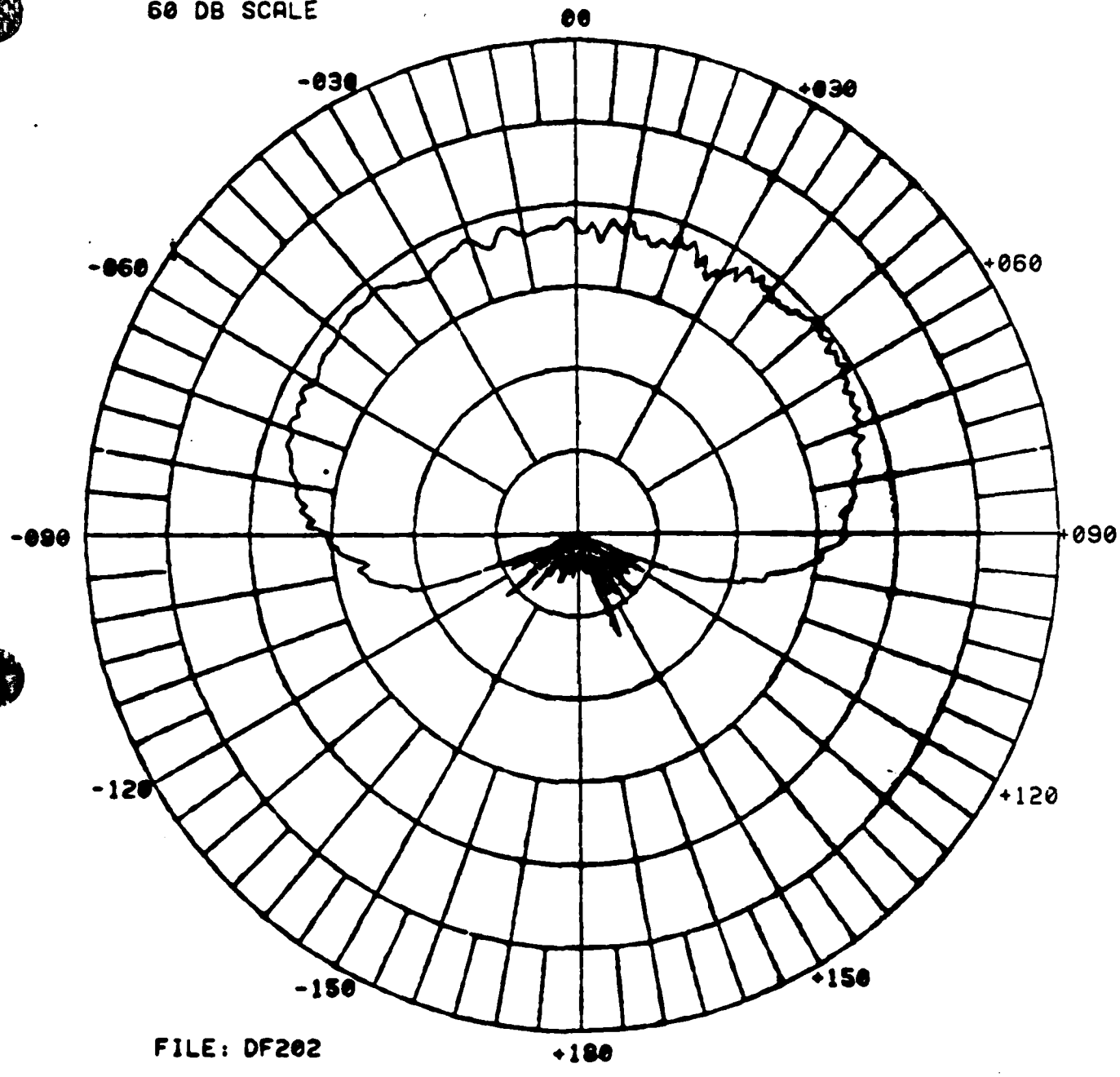
DF202 -- Forward antenna, upper hemisphere

DF203 -- Forward antenna, upper hemisphere horizon

DF241 -- Aft antenna, upper hemisphere.

DF222 -- Aft antenna, lower hemisphere

60 DB SCALE



FILE: DF202

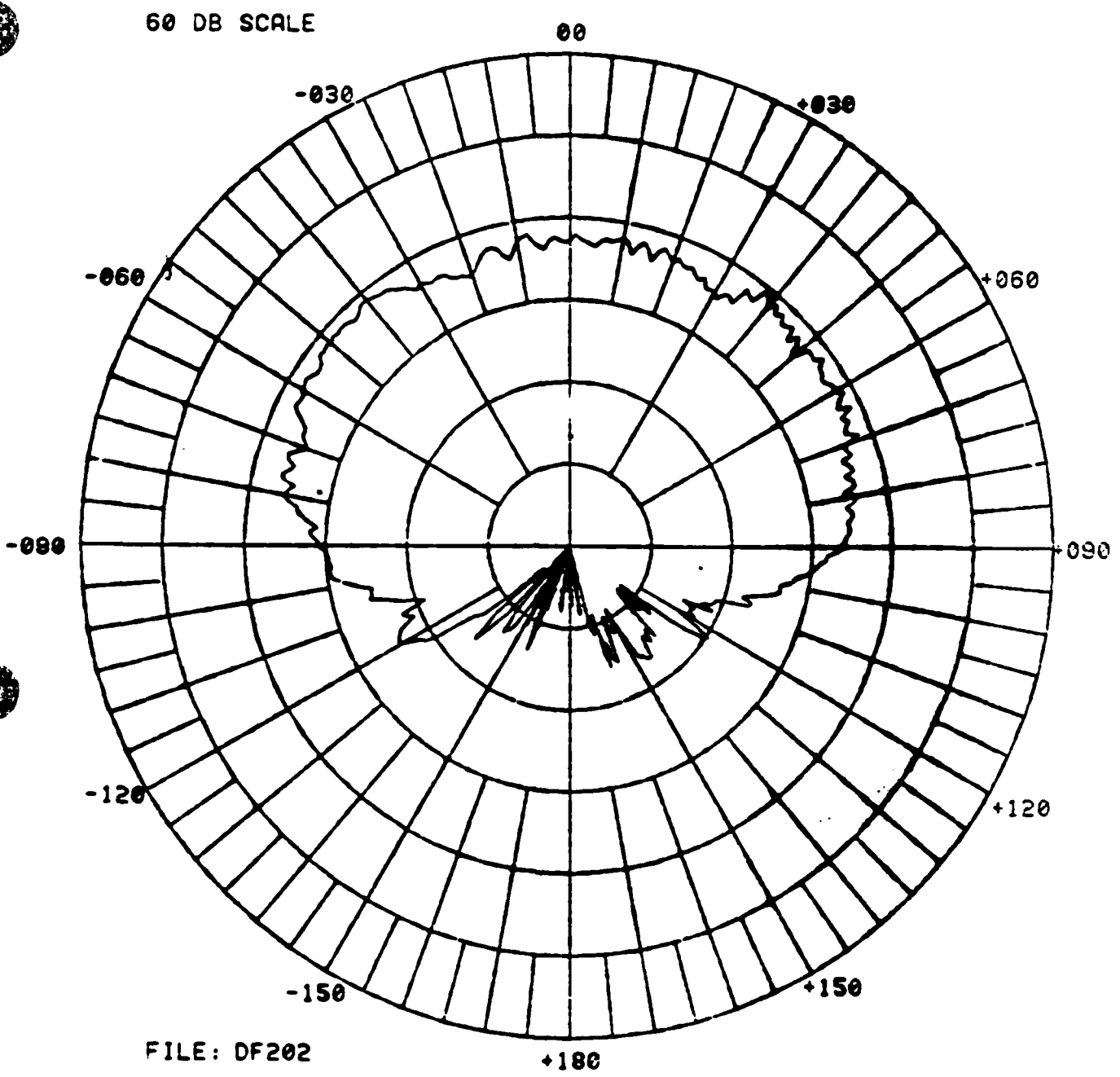
SCAN NR: 1 STEP ANGLE: 0.00 PLOT_____ AA

FREQ NR: 1 FREQ(MHZ): F4

CONFIGURATION 2

31 MAY 1984

60 DB SCALE



FILE: DF202

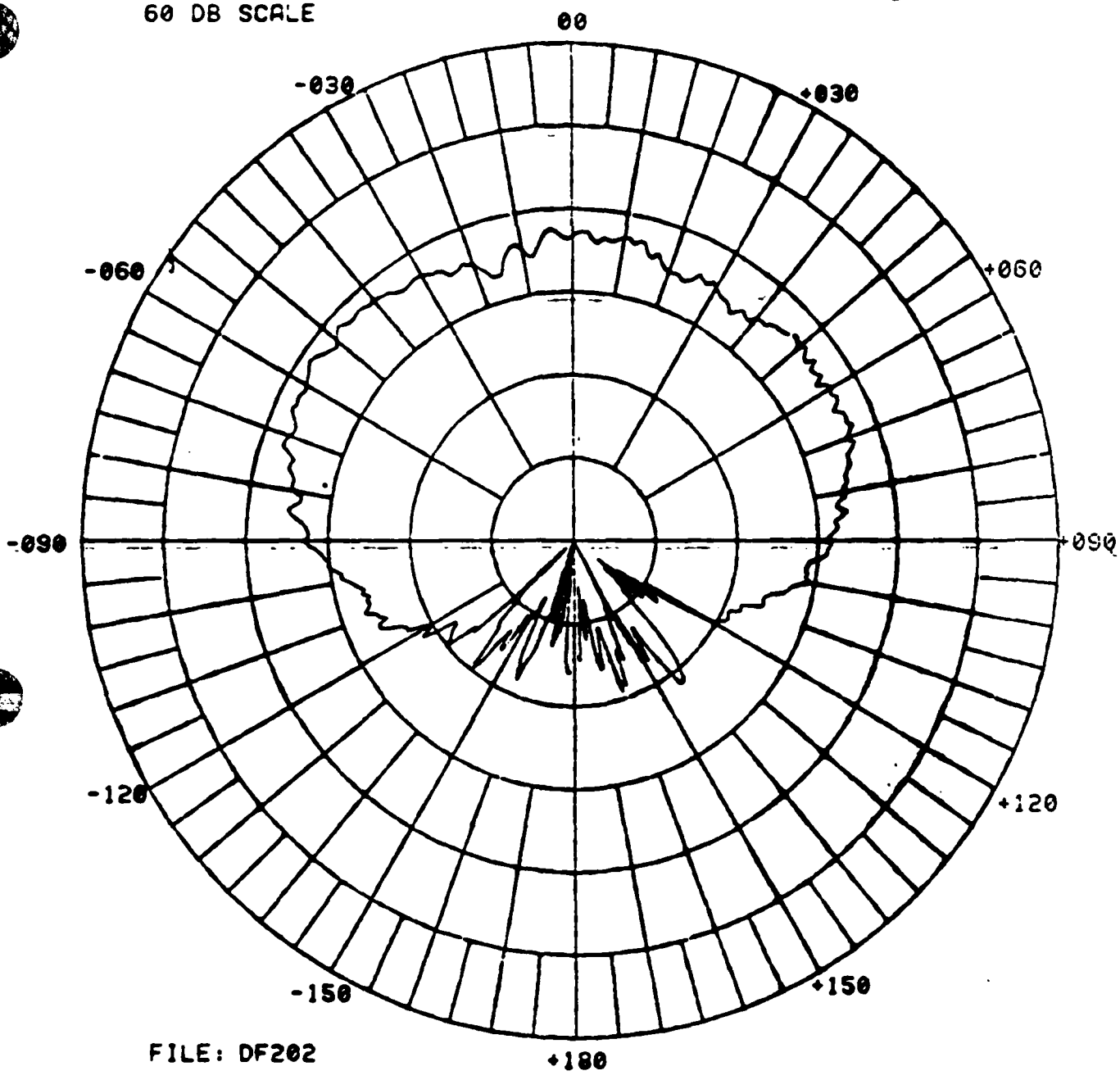
SCAN NR: 2 STEP ANGLE: 10.00 PLOT_____ AA

FREQ NR: 1 FREQ(MHZ): F4

CONFIGURATION 2

31 MAY 1984

60 DB SCALE



FILE: DF202

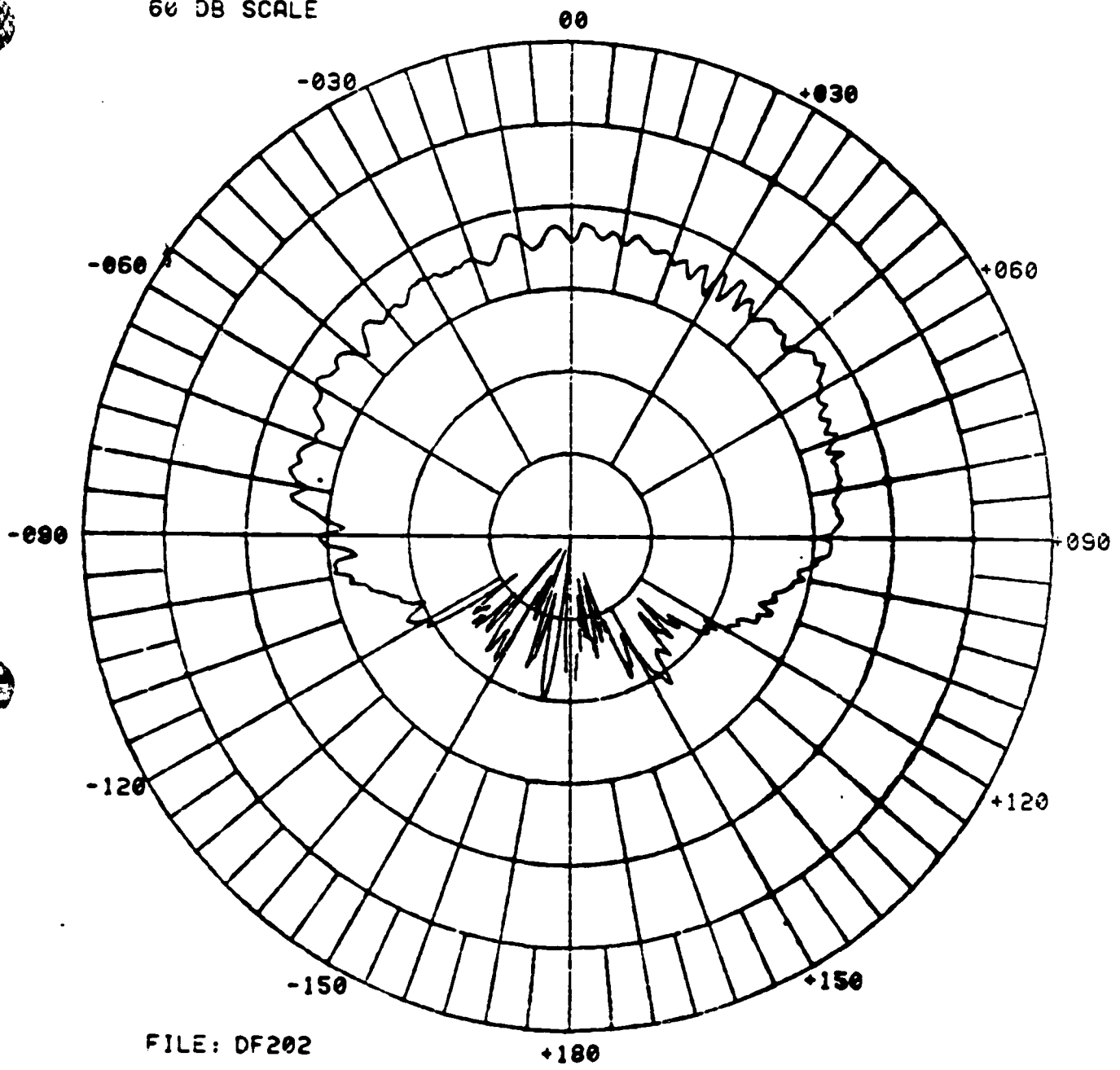
SCAN NR: 3 STEP ANGLE: 20.00 PLOT_____ AA

FREQ NR: 1 FREQ(MHZ): F4

CONFIGURATION 2

31 MAY 1984

60 DB SCALE



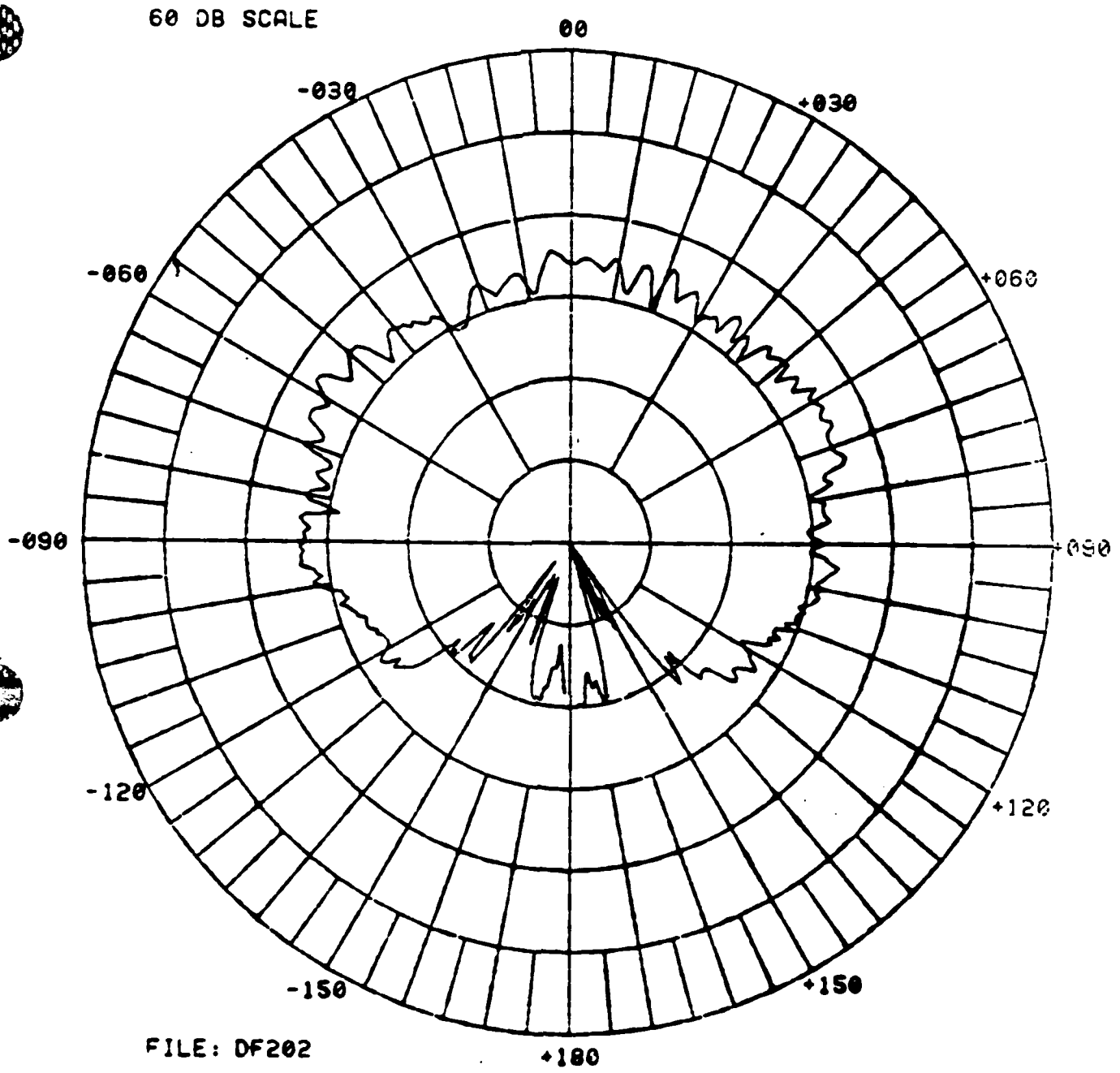
FILE: DF202

SCAN NR: 4 STEP ANGLE: 30.00 PLOT_____ AA

FREQ NR: 1 FREQ(MHZ): F4

CONFIGURATION 2

31 MAY 1984



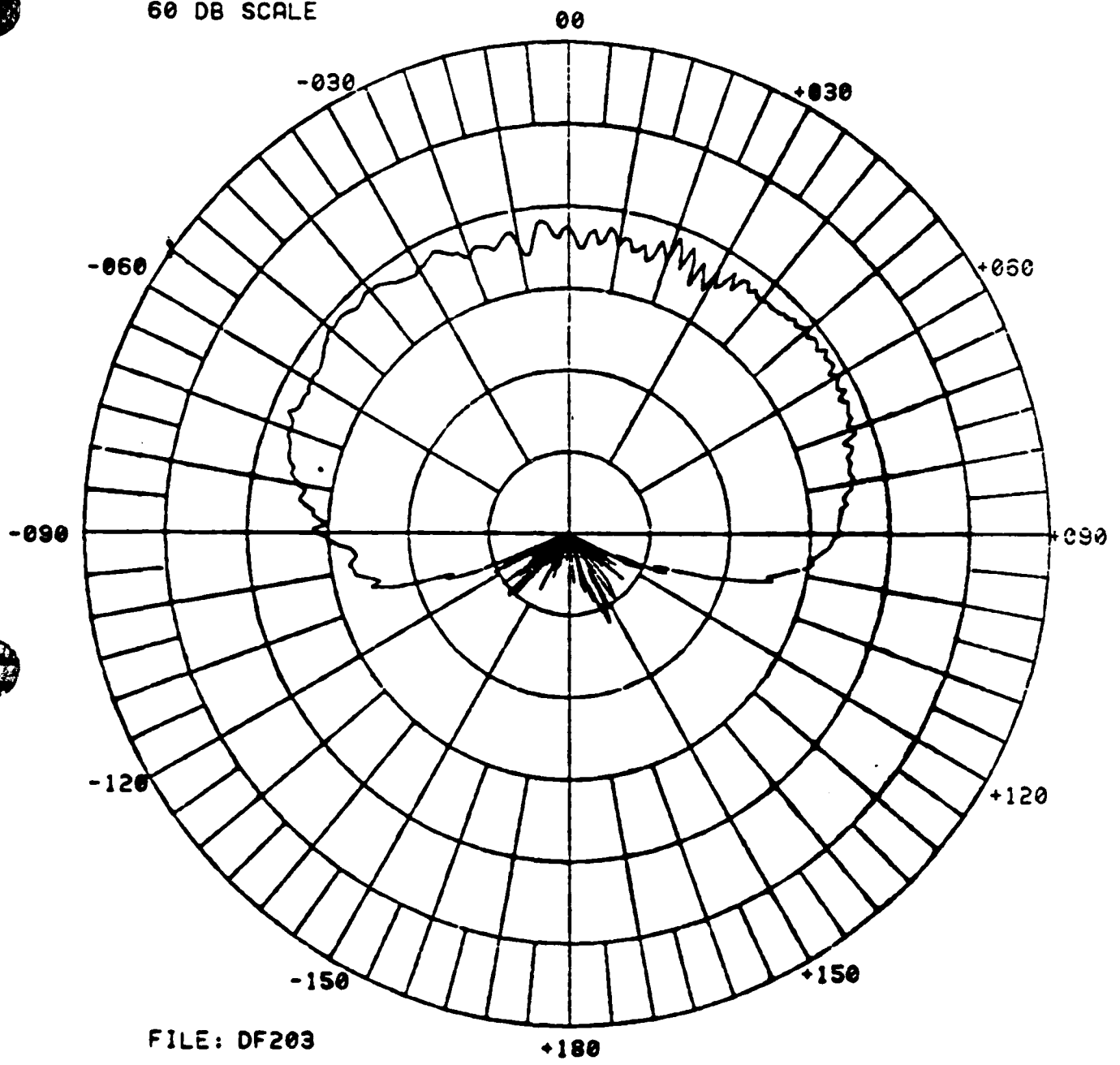
FILE: DF202

SCAN NR: 5 STEP ANGLE: 40.00 PLOT_____ AA

FREQ NR: 1 FREQ(MHZ): F4

CONFIGURATION 2

31 MAY 1984



FILE: DF203

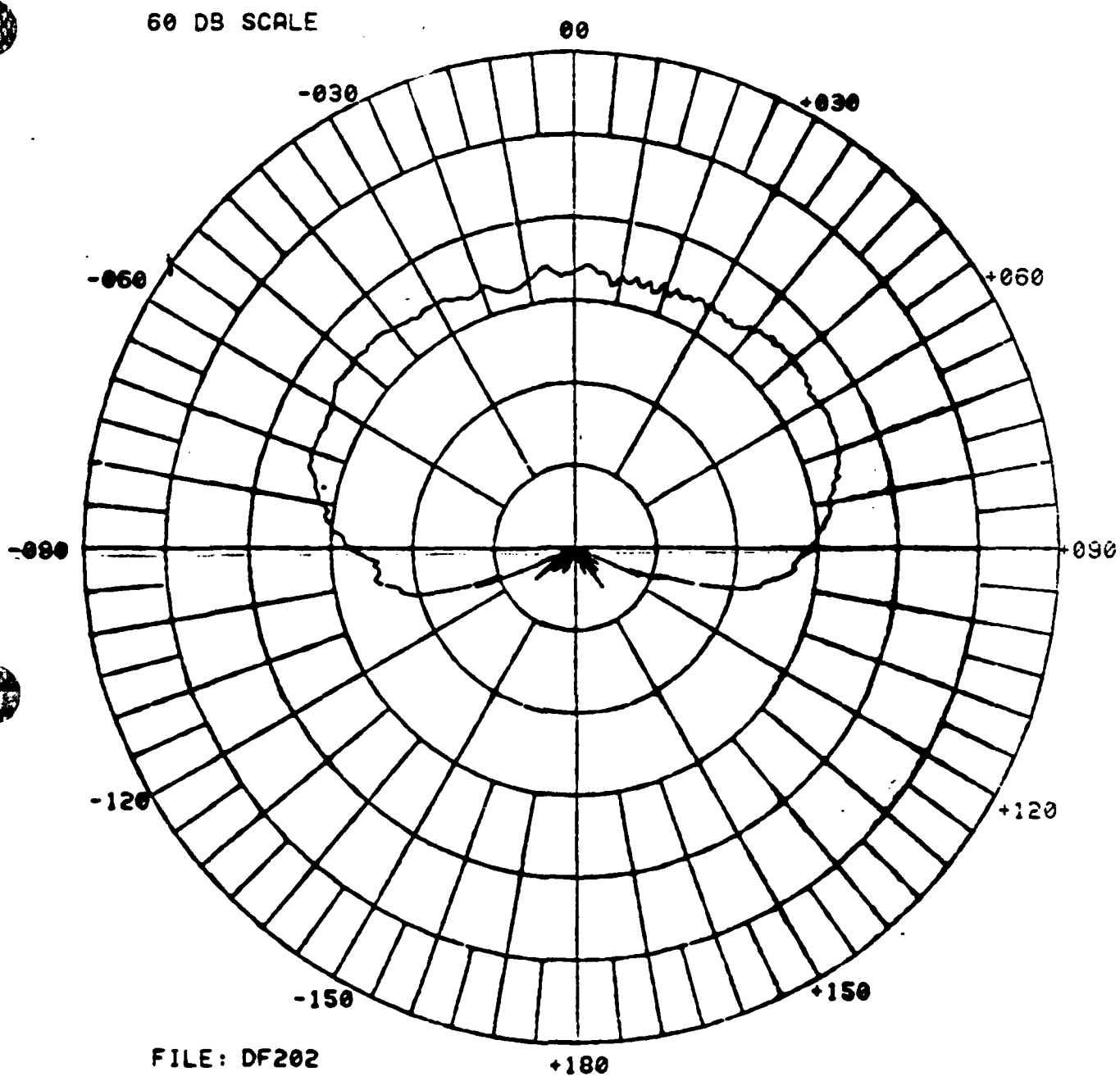
SCAN NR: 1 STEP ANGLE: 0.00 PLOT_____ AA

FREQ NR: 1 FREQ(MHZ): F4

CONFIGURATION 2

31 MAY 1984

60 DB SCALE



FILE: DF202

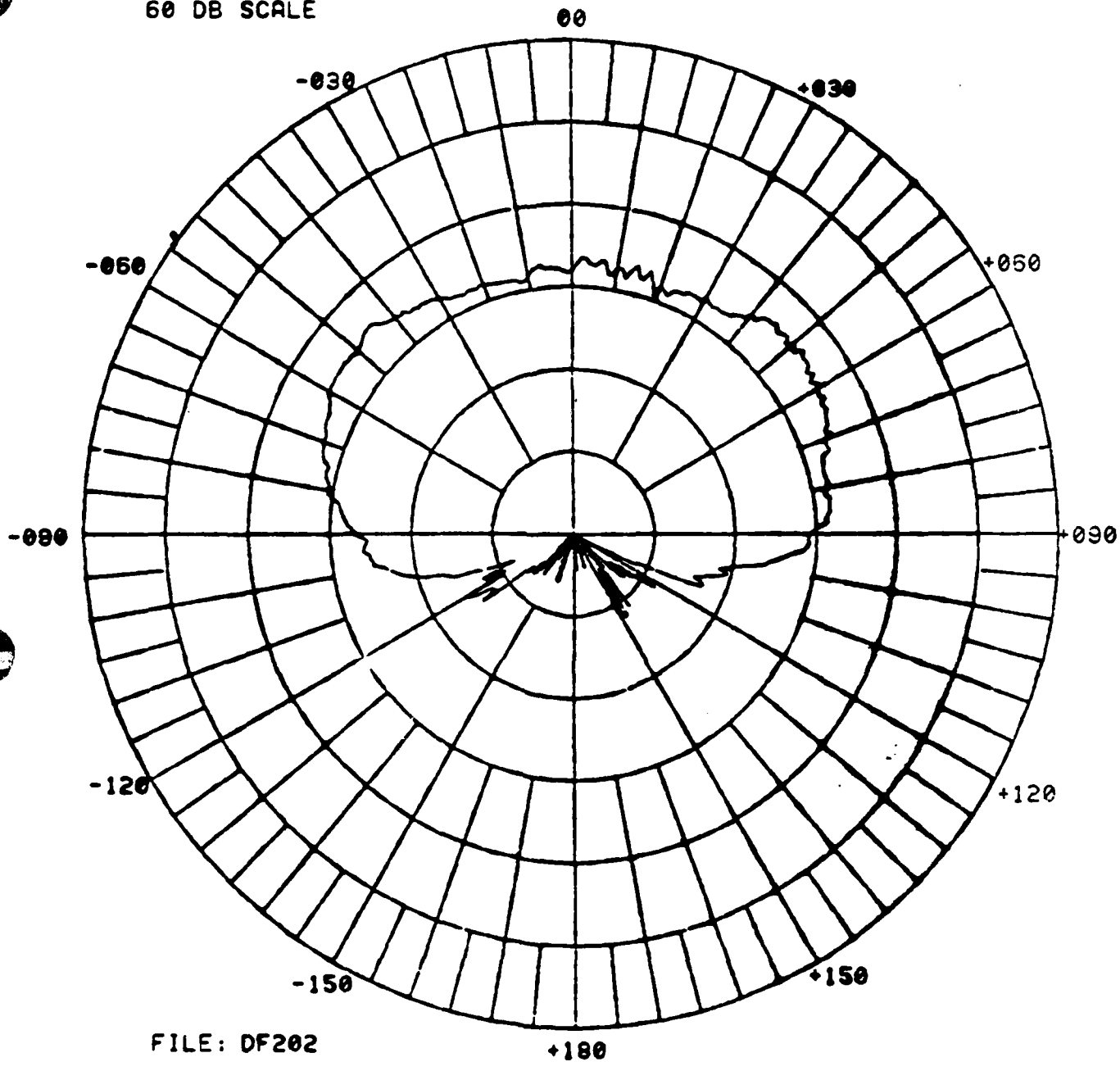
SCAN NR: 1 STEP ANGLE: 0.00 PLOT_____ AA

FREQ NR: 2 FREQ(MHZ): F5

CONFIGURATION 2

31 MAY 1984

60 DB SCALE



FILE: DF202

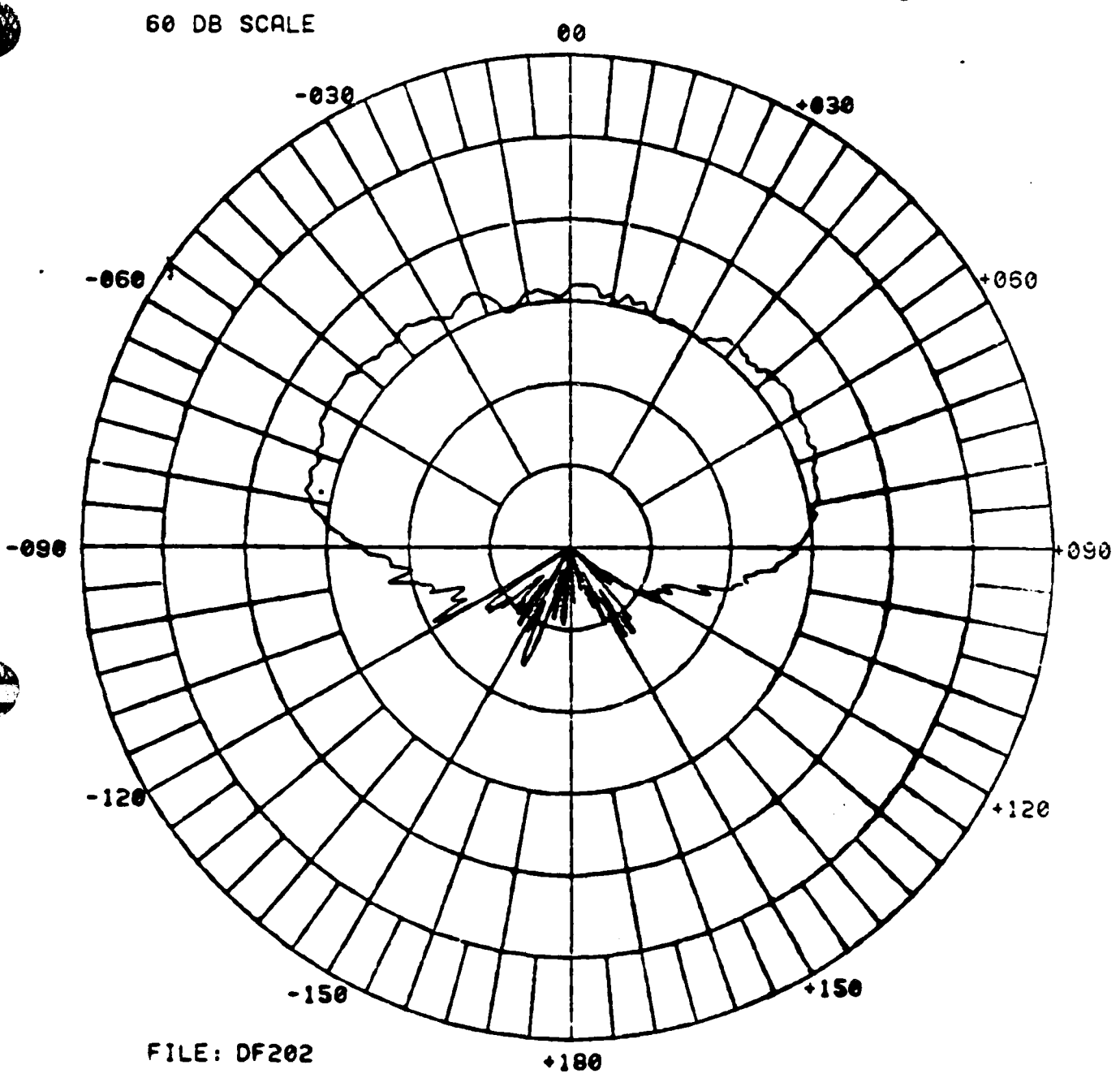
SCAN NR: 2 STEP ANGLE: 10.00 PLOT____ AA

FREQ NR: 2 FREQ(MHZ): F5

CONFIGURATION 2

31 MAY 1984

60 DB SCALE



FILE: DF202

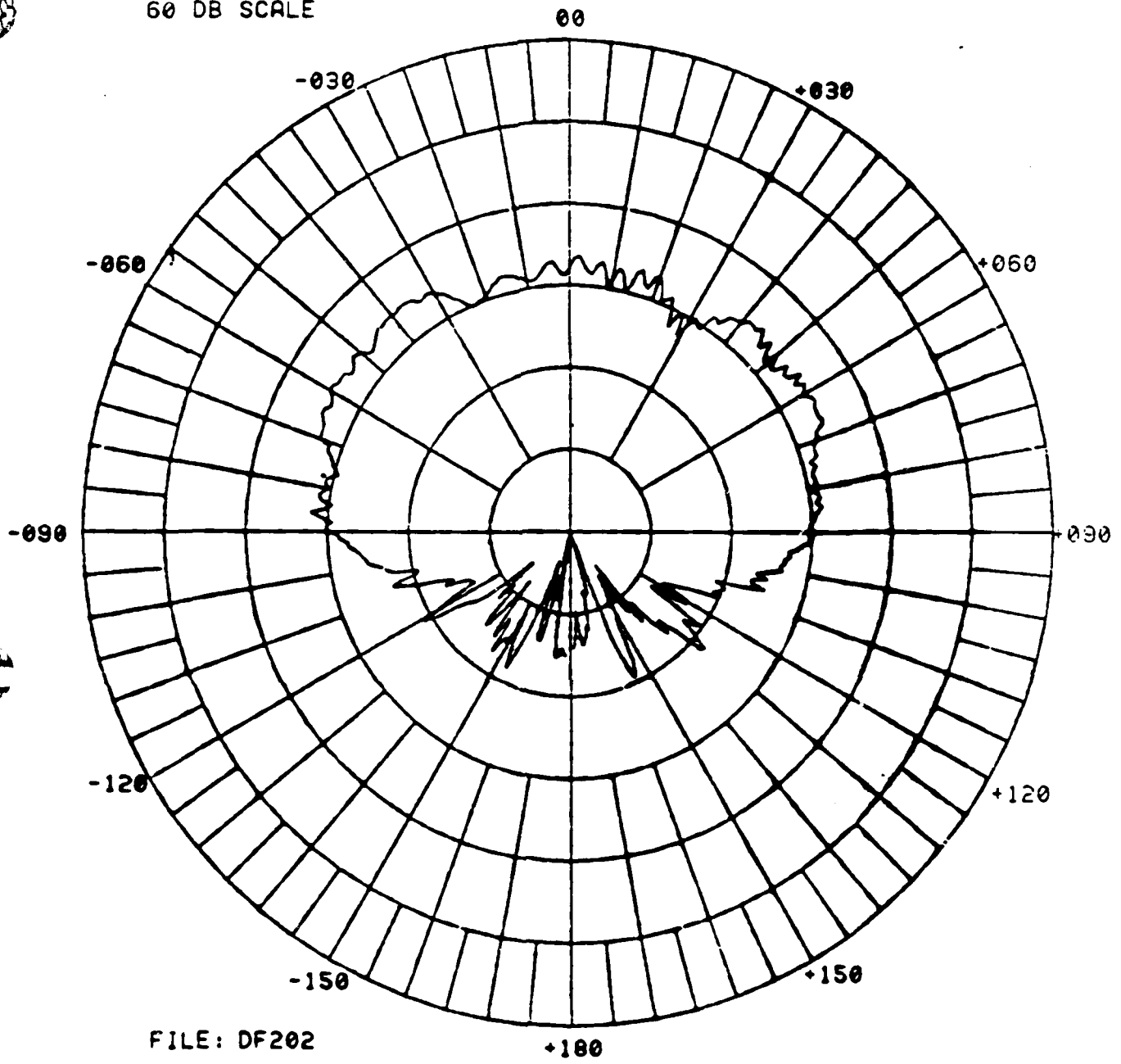
SCAN NR: 3 STEP ANGLE: 20.00 PLOT_____ AA

FREQ NR: 2 FREQ(MHZ): F5

CONFIGURATION 2

31 MAY 1984

60 DB SCALE



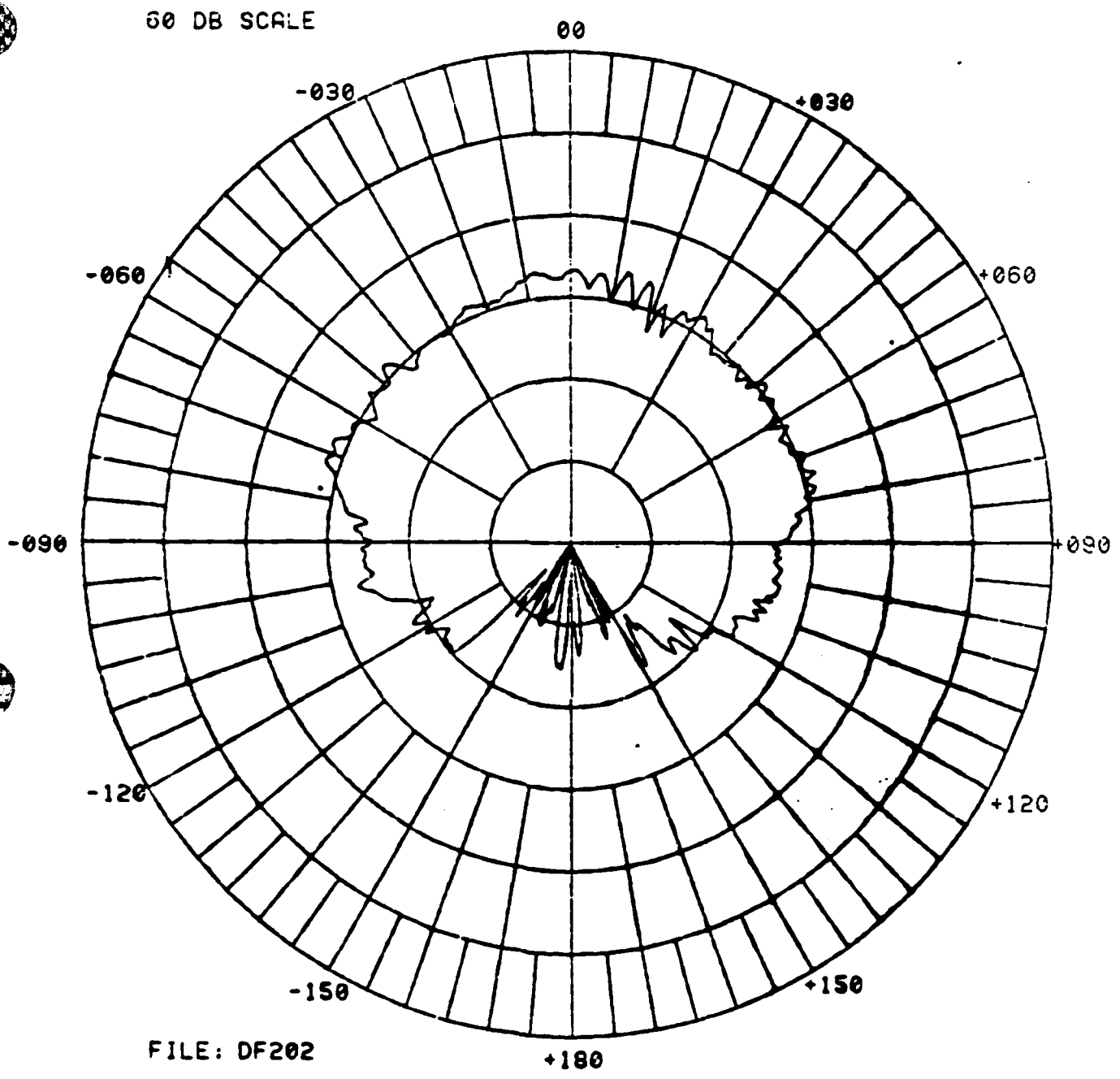
FILE: DF202

SCAN NR: 4 STEP ANGLE: 30.00 PLOT_____ AA

FREQ NR: 2 FREQ(MHZ): F5

CONFIGURATION 2

31 MAY 1984



FILE: DF202

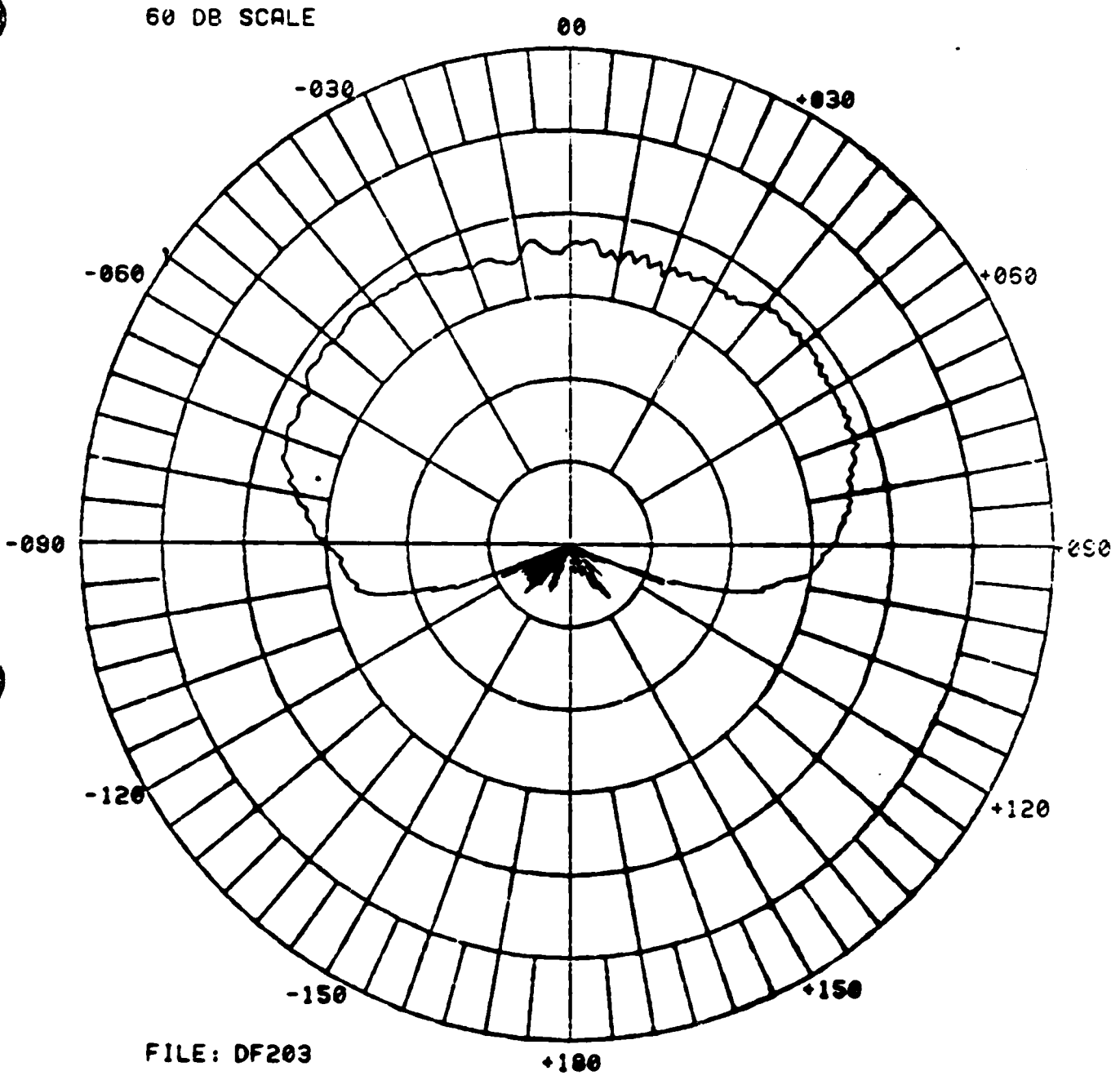
SCAN NR: 5 STEP ANGLE: 40.00 PLOT_____ AA

FREQ NR: 2 FREQ(MHZ): F5

CONFIGURATION 2

31 MAY 1984

60 DB SCALE



FILE: DF203

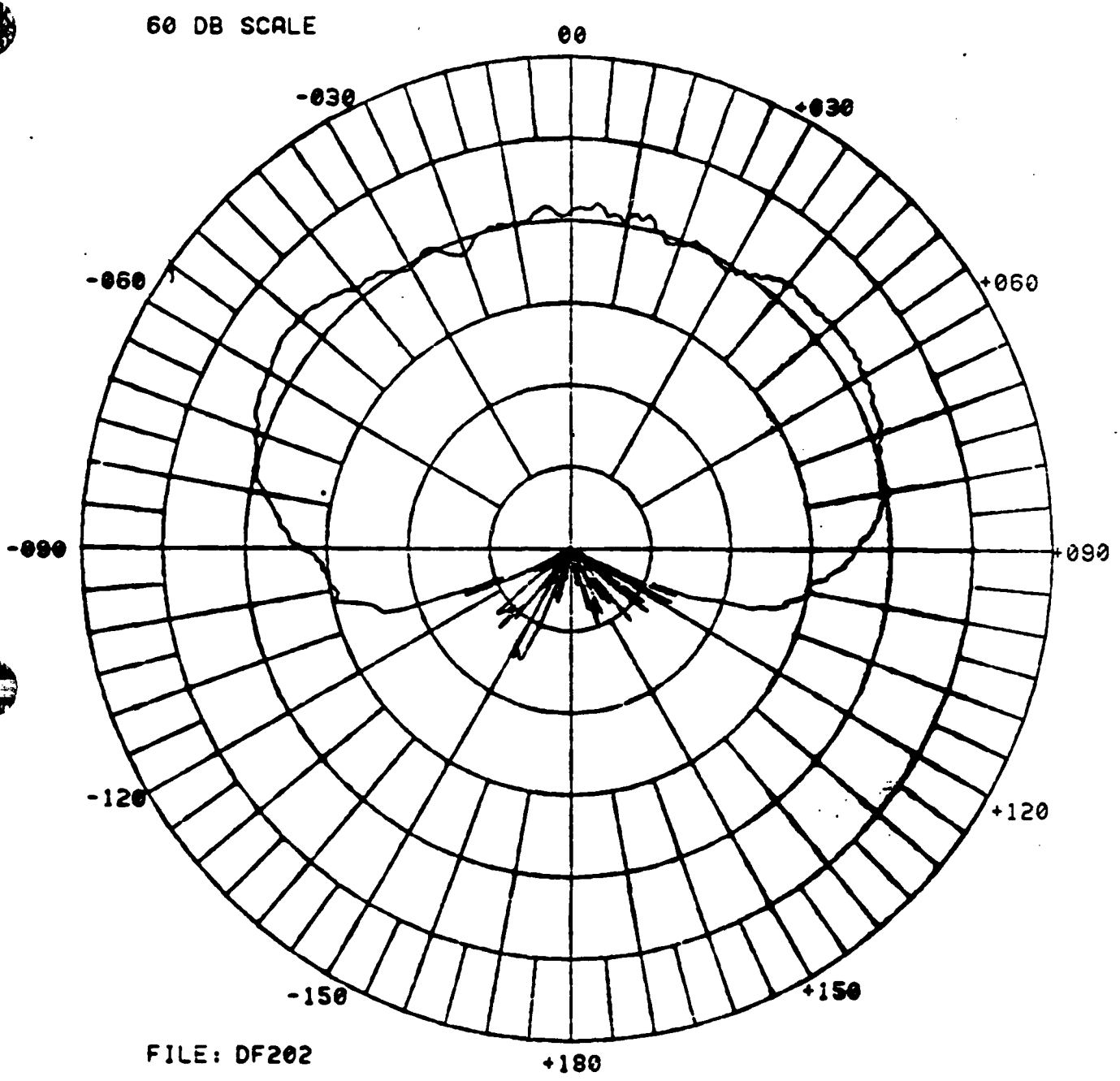
SCAN NR: 1 STEP ANGLE: 0.00 PLOT_____ AA

FREQ NR: 2 FREQ(MHZ): F5

CONFIGURATION 2

31 MAY 1984

60 DB SCALE



FILE: DF202

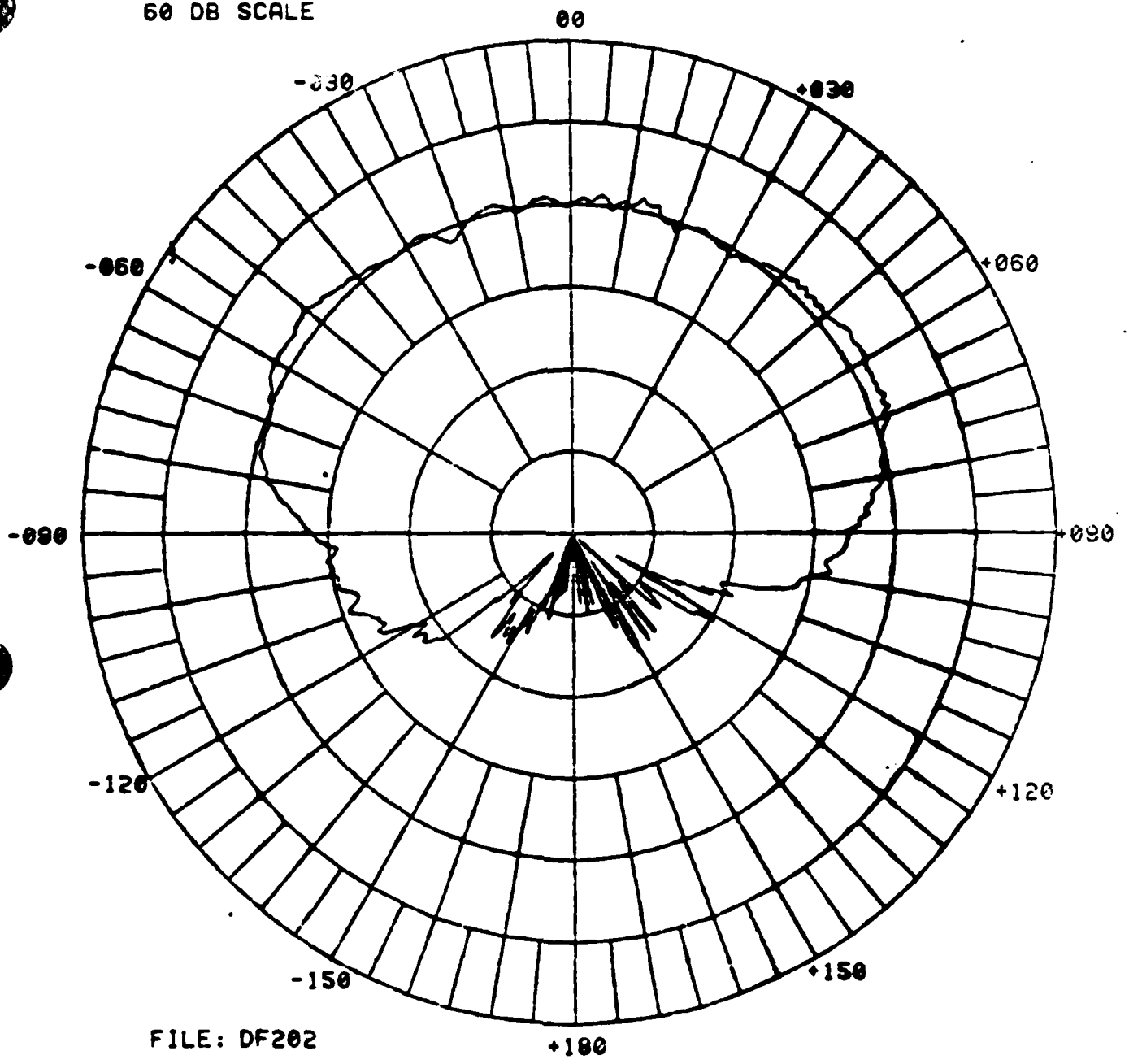
SCAN NR: 1 STEP ANGLE: 0.00 PLOT_____ AA

FREQ NR: 3 FREQ(MHZ): F6

CONFIGURATION 2

31 MAY 1984

60 DB SCALE



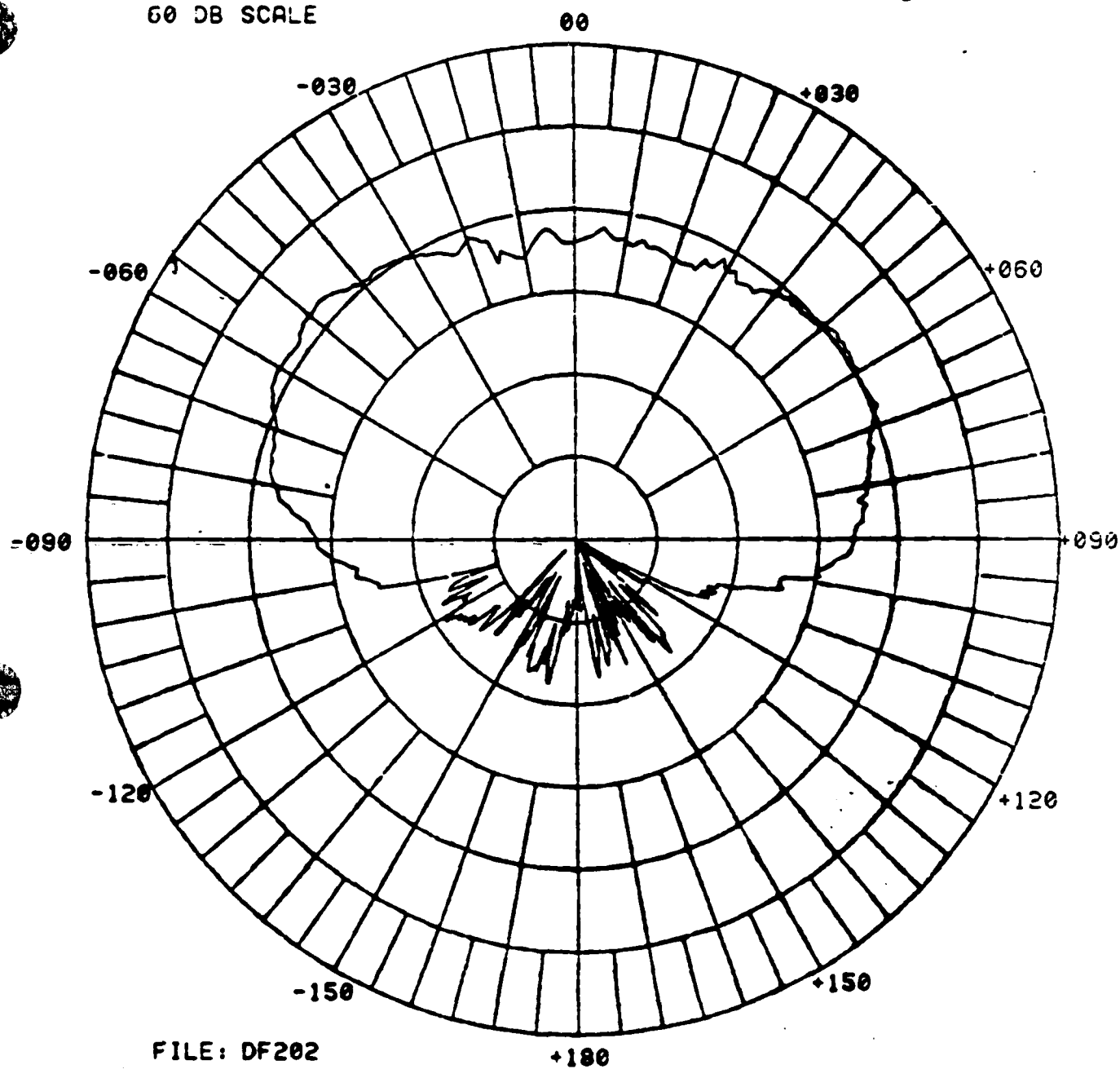
FILE: DF202

SCAN NR: 2 STEP ANGLE: 10.00 PLOT_____ AA

FREQ NR: 3 FREQ(MHZ): F6

CONFIGURATION 2

31 MAY 1984



FILE: DF202

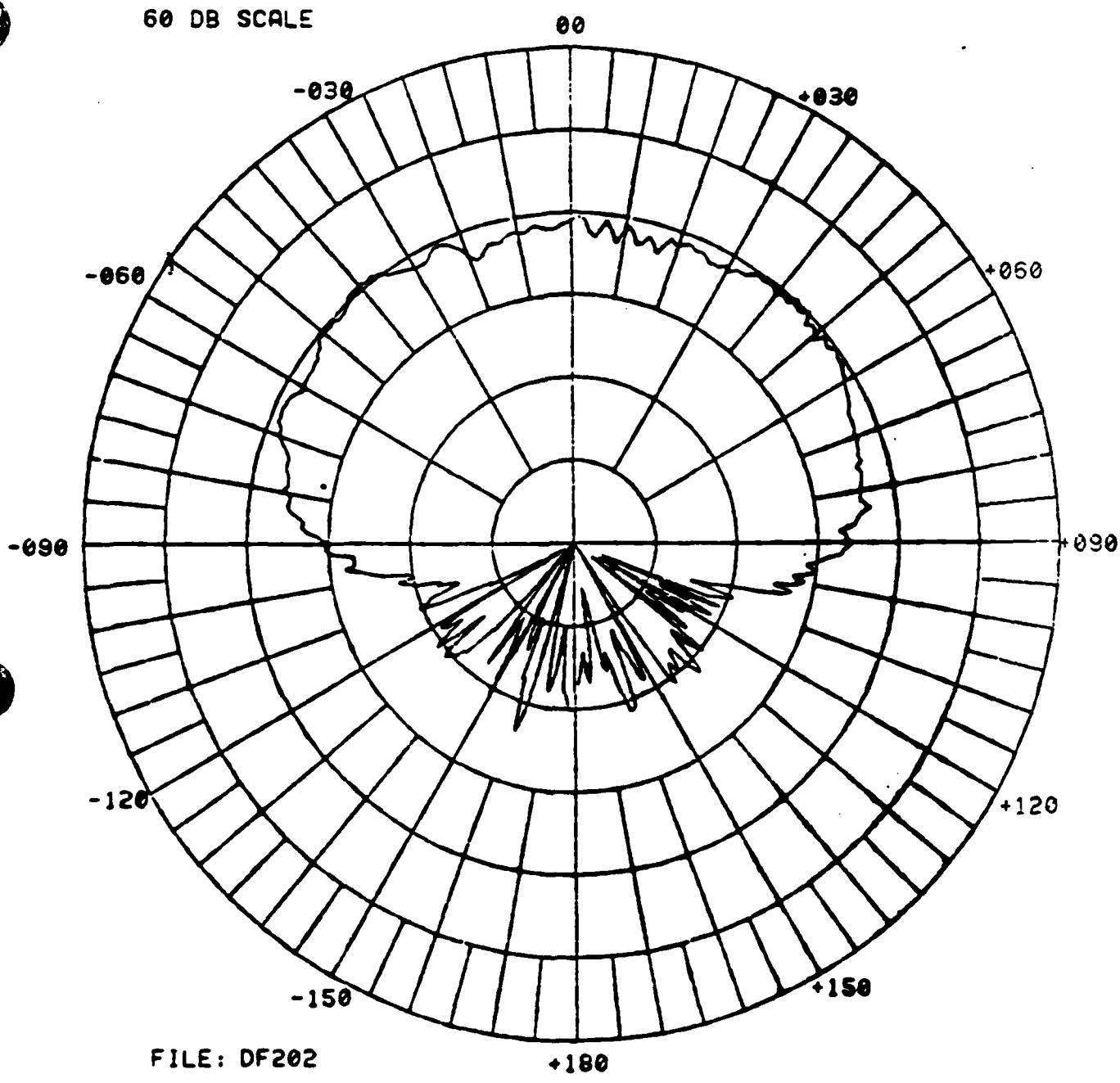
SCAN NR: 3 STEP ANGLE: 20.00 PLOT_____ AA

FREQ NR: 3 FREQ(MHZ): F6

CONFIGURATION 2

31 MAY 1984

60 DB SCALE



FILE: DF202

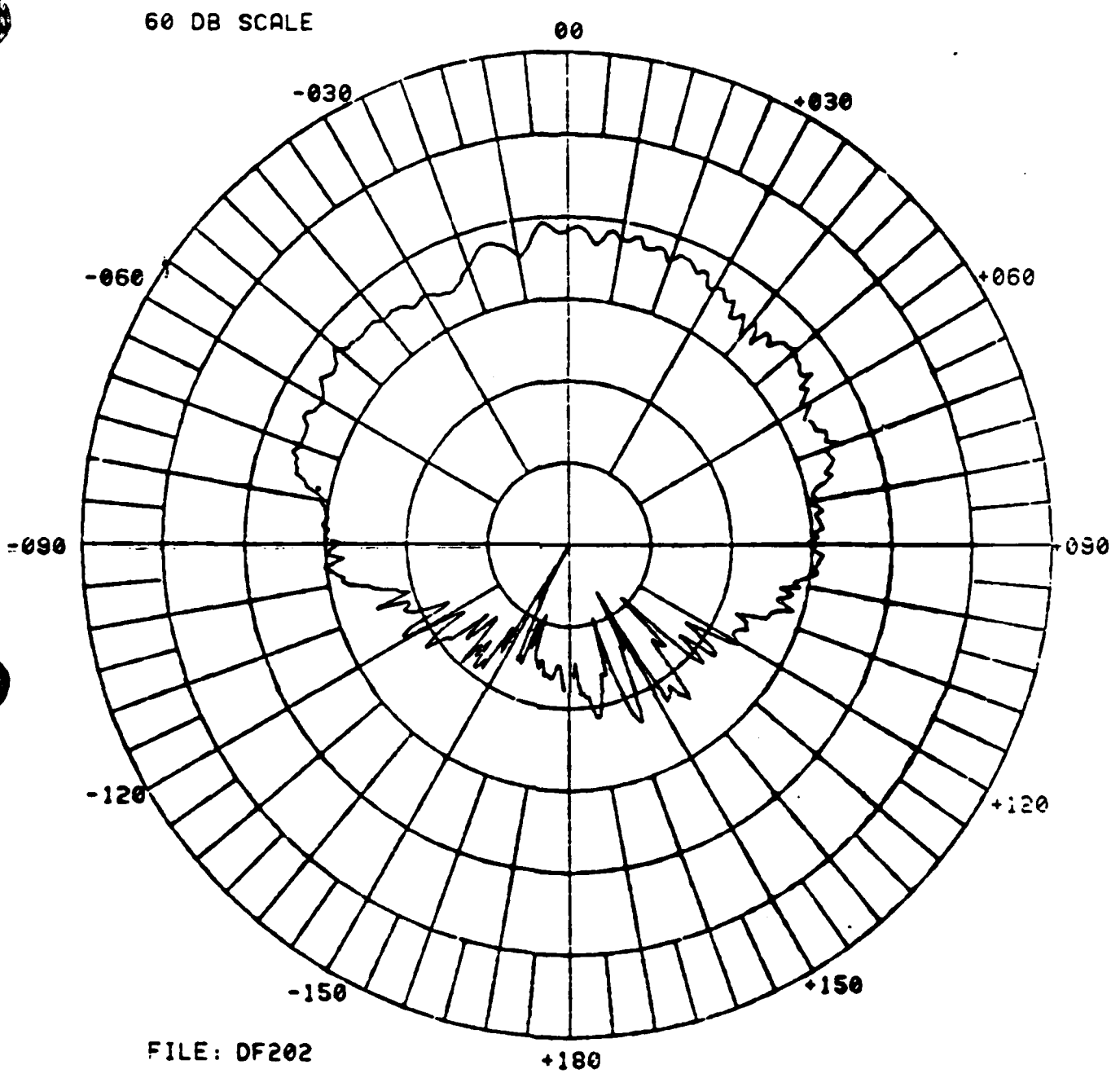
SCAN NR: 4 STEP ANGLE: 30.00 PLOT____ RA

FREQ NR: 3 FREQ(MHZ): F6

CONFIGURATION 2

31 MAY 1984

60 DB SCALE



FILE: DF202

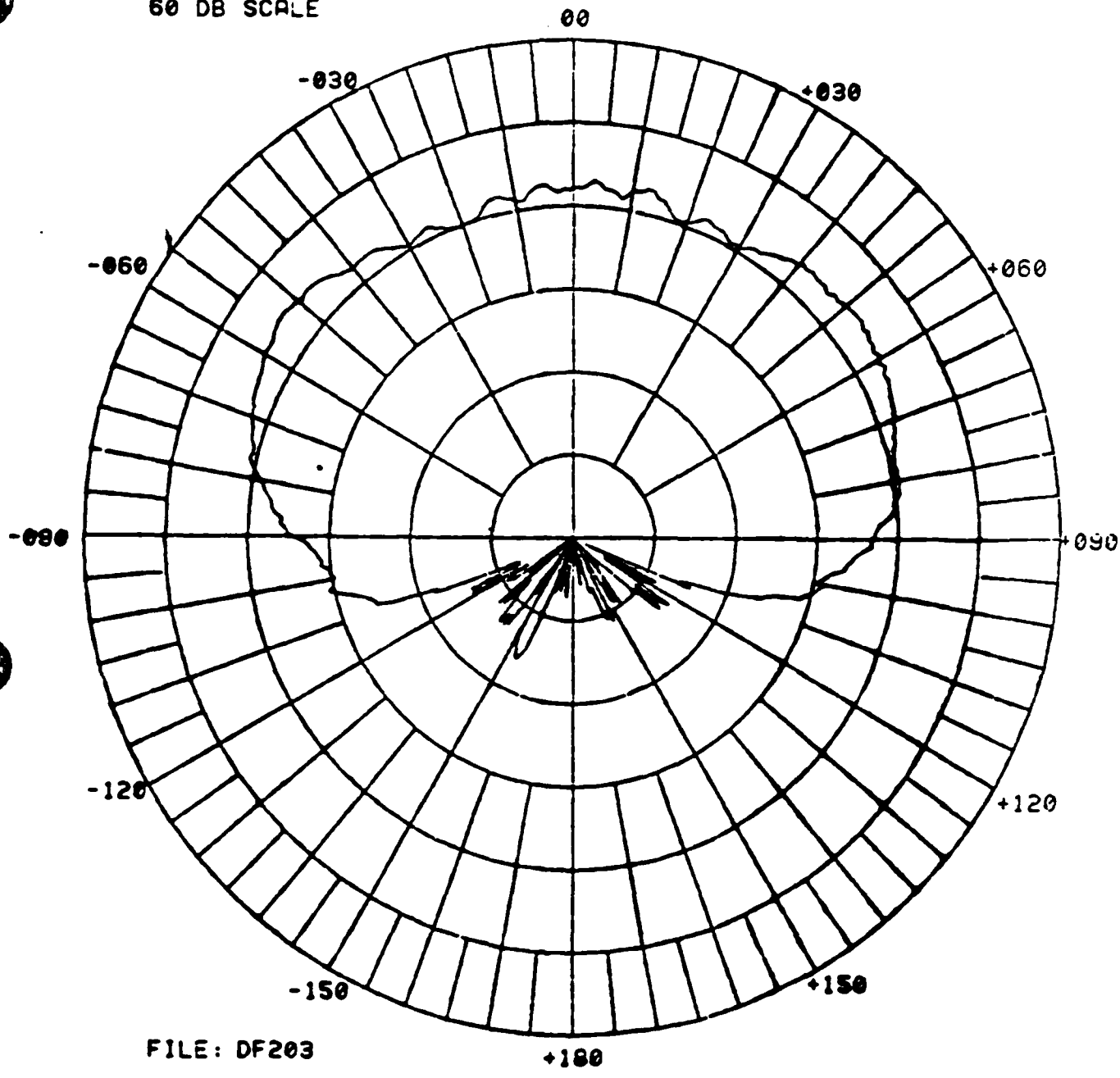
SCAN NR: 5 STEP ANGLE: 40.00 PLOT_____ AA

FREQ NR: 3 FREQ(MHZ): F6

CONFIGURATION 2

31 MAY 1984

60 DB SCALE



FILE: DF203

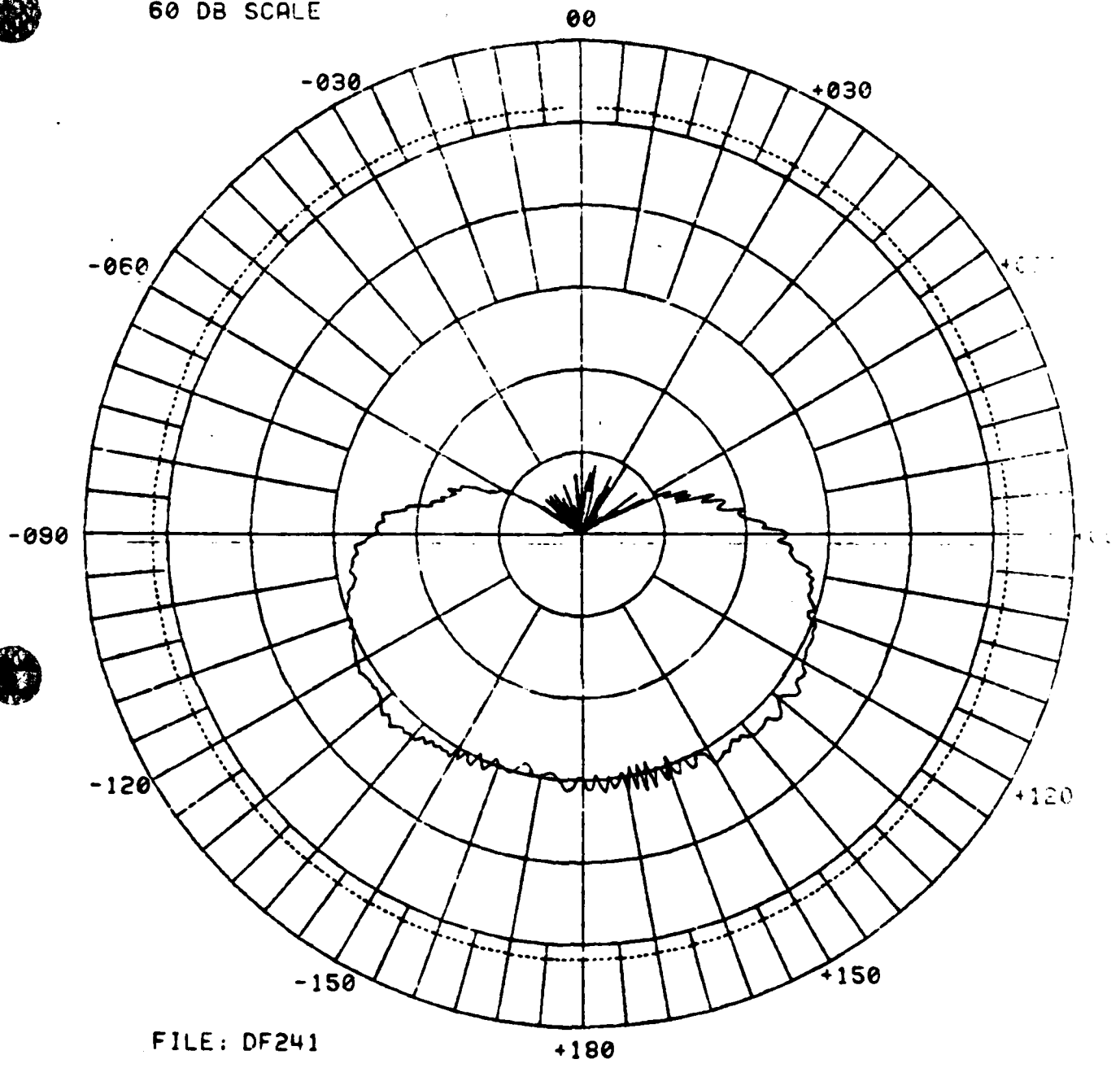
SCAN NR: 1 STEP ANGLE: 0.00 PLOT____ AA

FREQ NR: 3 FREQ(MHZ): F6

CONFIGURATION 2

31 MAY 1984

60 DB SCALE



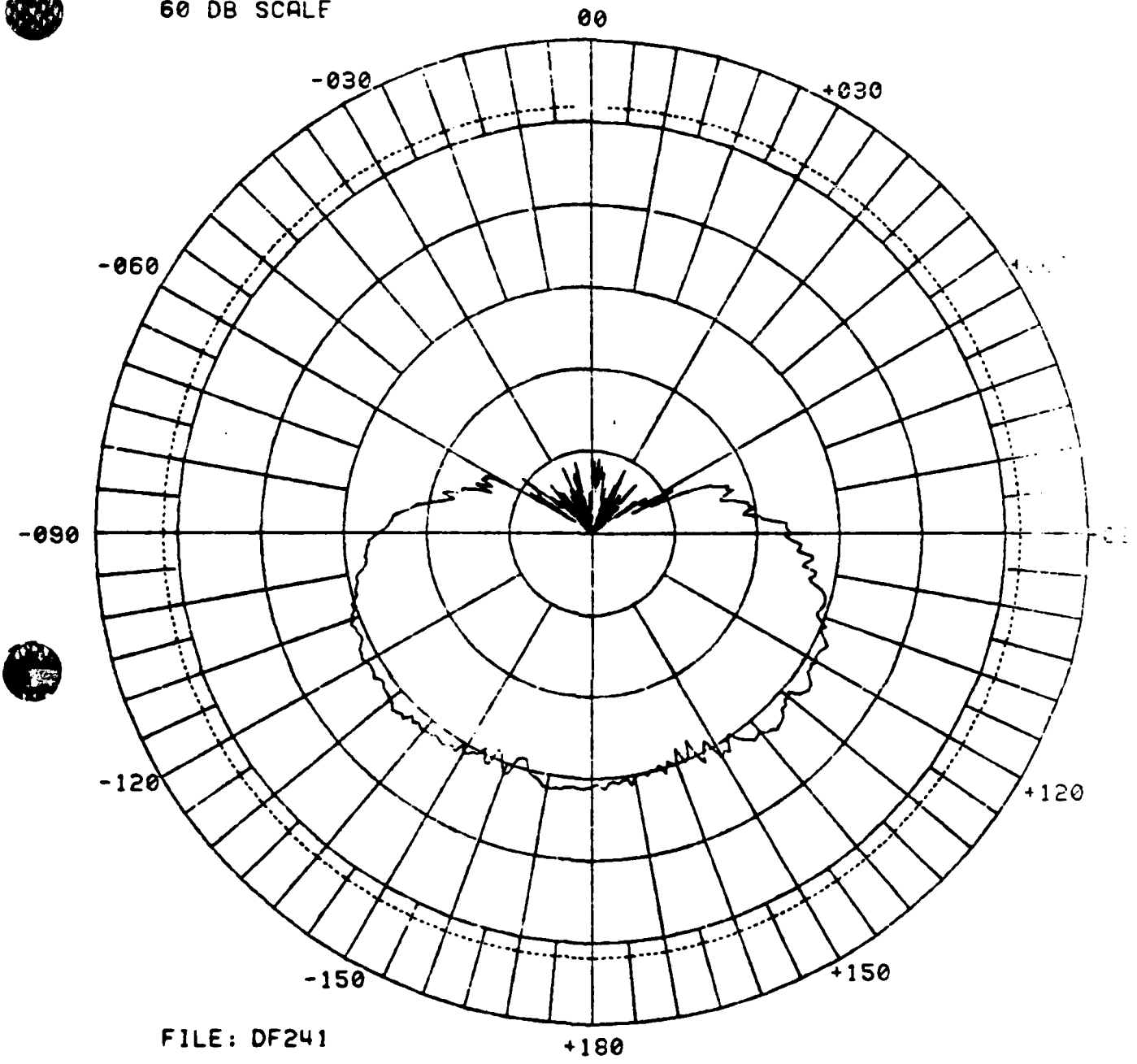
FILE: DF241

SCAN NR: 1 STEP ANGLE: 0.00 PLOT_____ AA

FREQ NR: 1 FREQ(MHZ): F4 PLOT..... AB

CONFIGURATION 5

60 DB SCALE



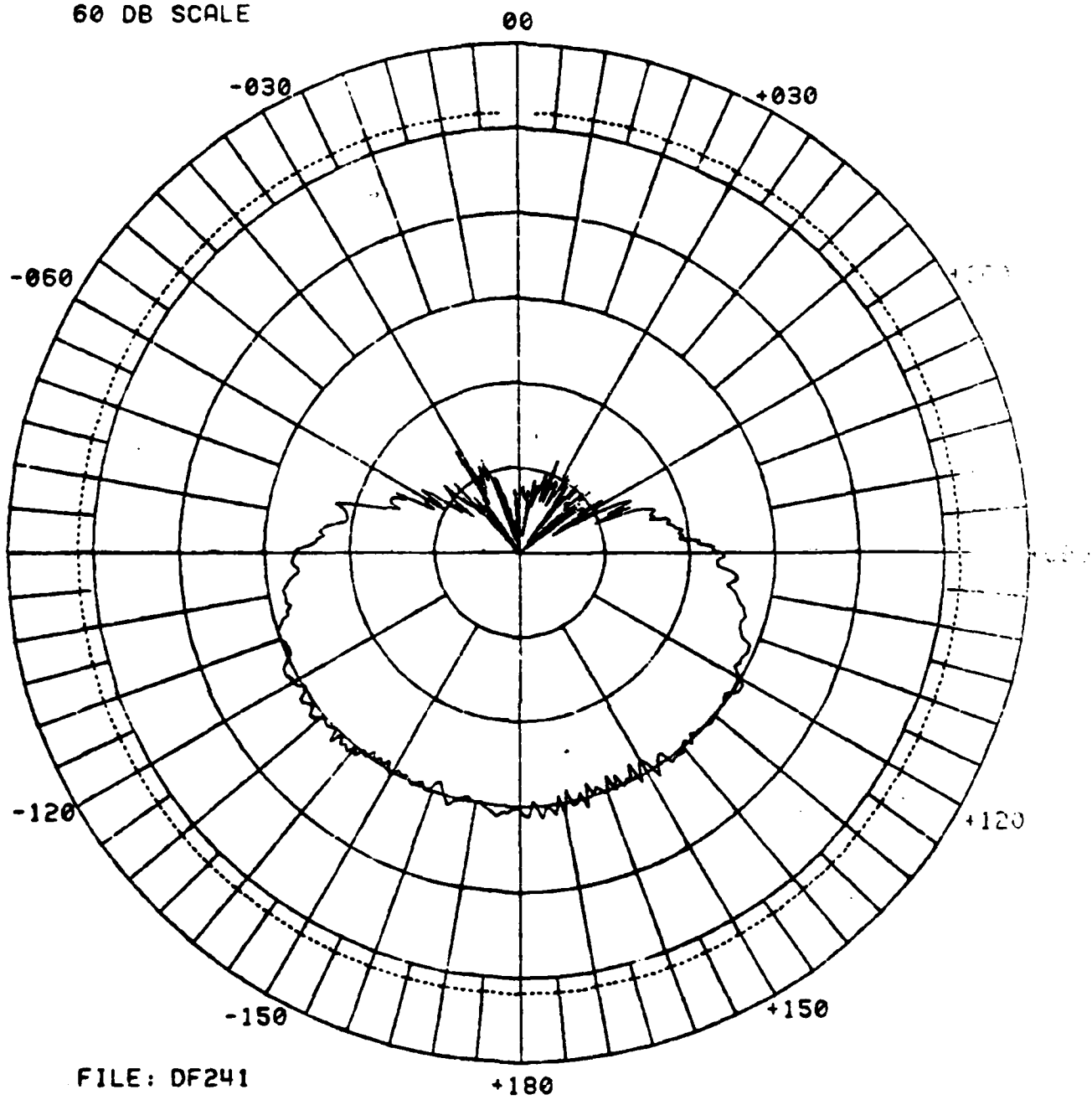
FILE: DF241

SCAN NR: 2 STEP ANGLE: 10.00 PLOT_____ AA

FREQ NR: 1 FREQ(MHZ): F4 PLOT..... AB

CONFIGURATION 5

60 DB SCALE



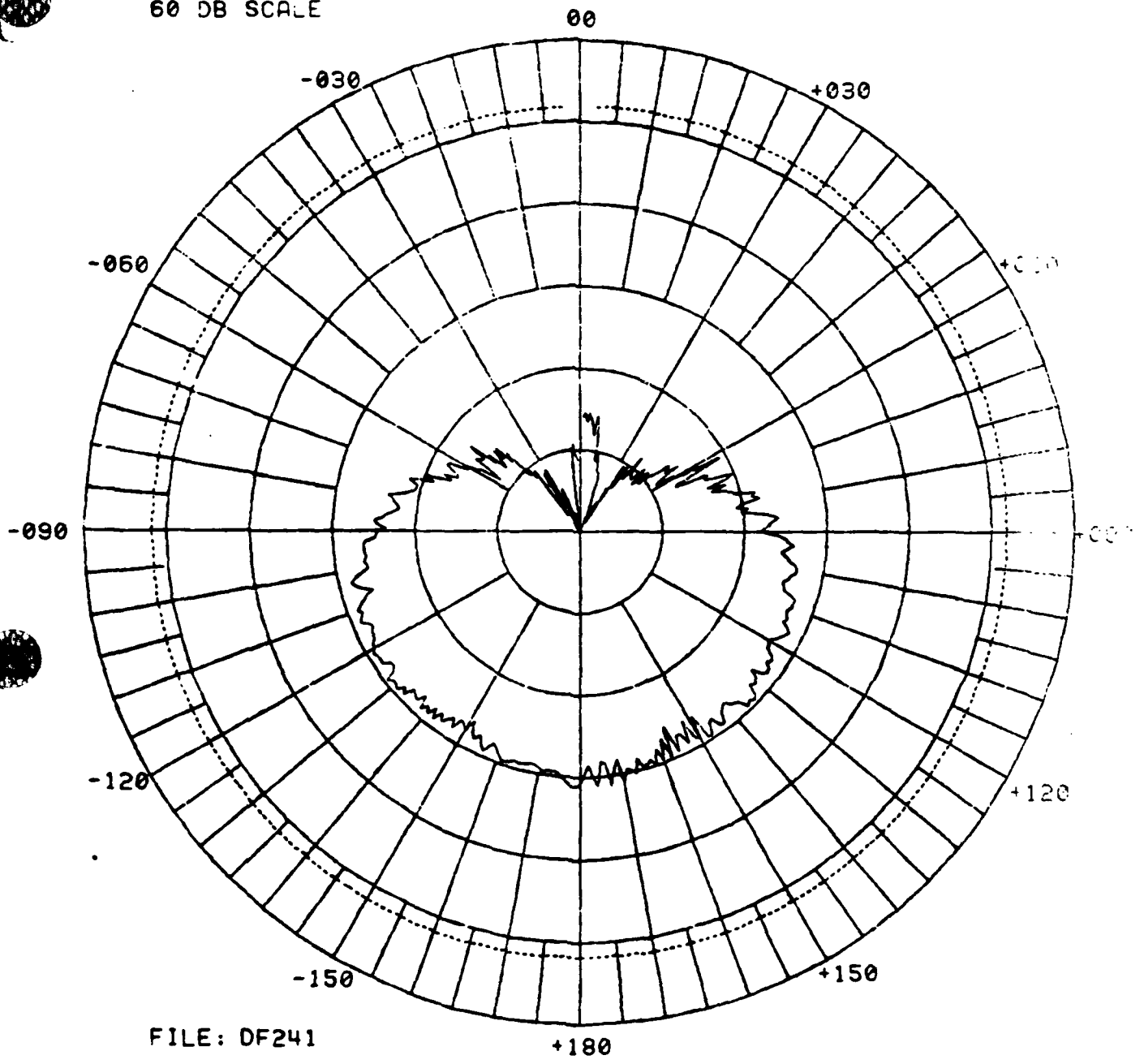
FILE: DF241

SCAN NR: 3 STEP ANGLE: 20.00 PLOT_____ AA

FREQ NR: 1 FREQ(MHZ): F4 PLOT_____ AB

CONFIGURATION 5

60 DB SCALE



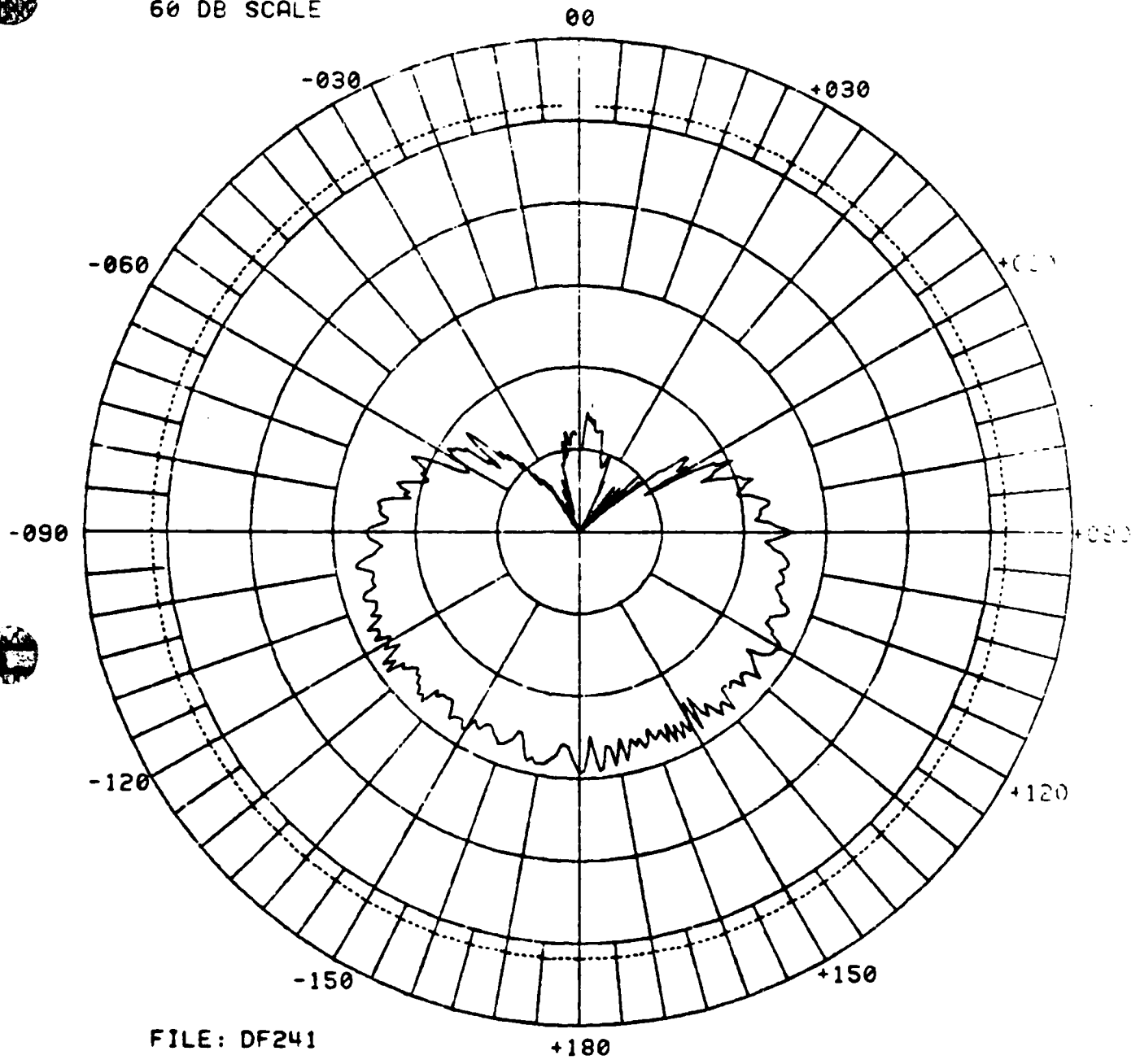
FILE: DF241

SCAN NR: 4 STEP ANGLE: 30.00 PLOT_____ AA

FREQ NR: 1 FREQ(MHZ): F4 PLOT..... AB

CONFIGURATION 5

60 DB SCALE



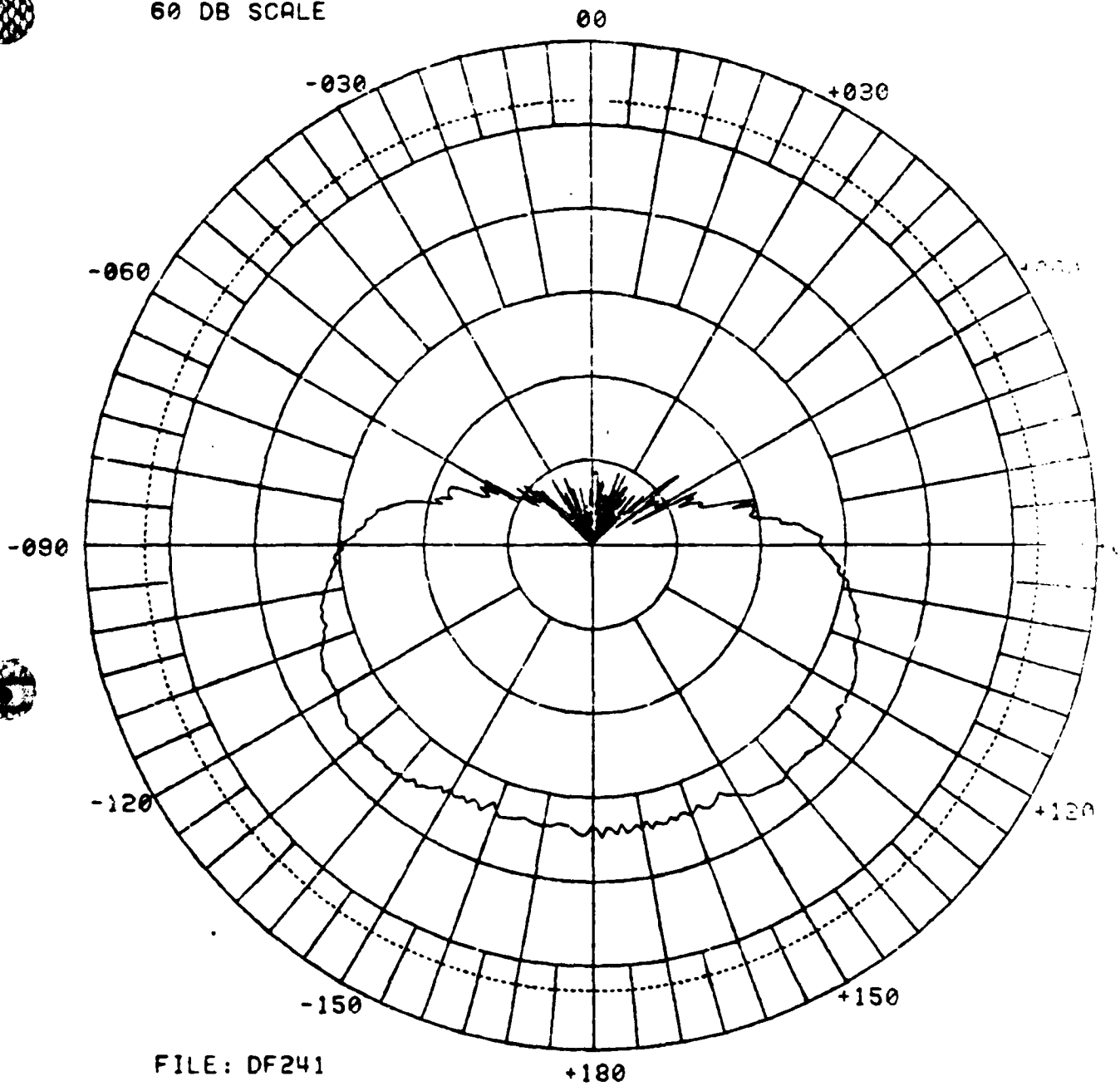
FILE: DF241

SCAN NR: 5 STEP ANGLE: 40.00 PLOT_____ AA

FREQ NR: 1 FREQ(MHZ): F4 PLOT..... AB

CONFIGURATION 5

60 DB SCALE



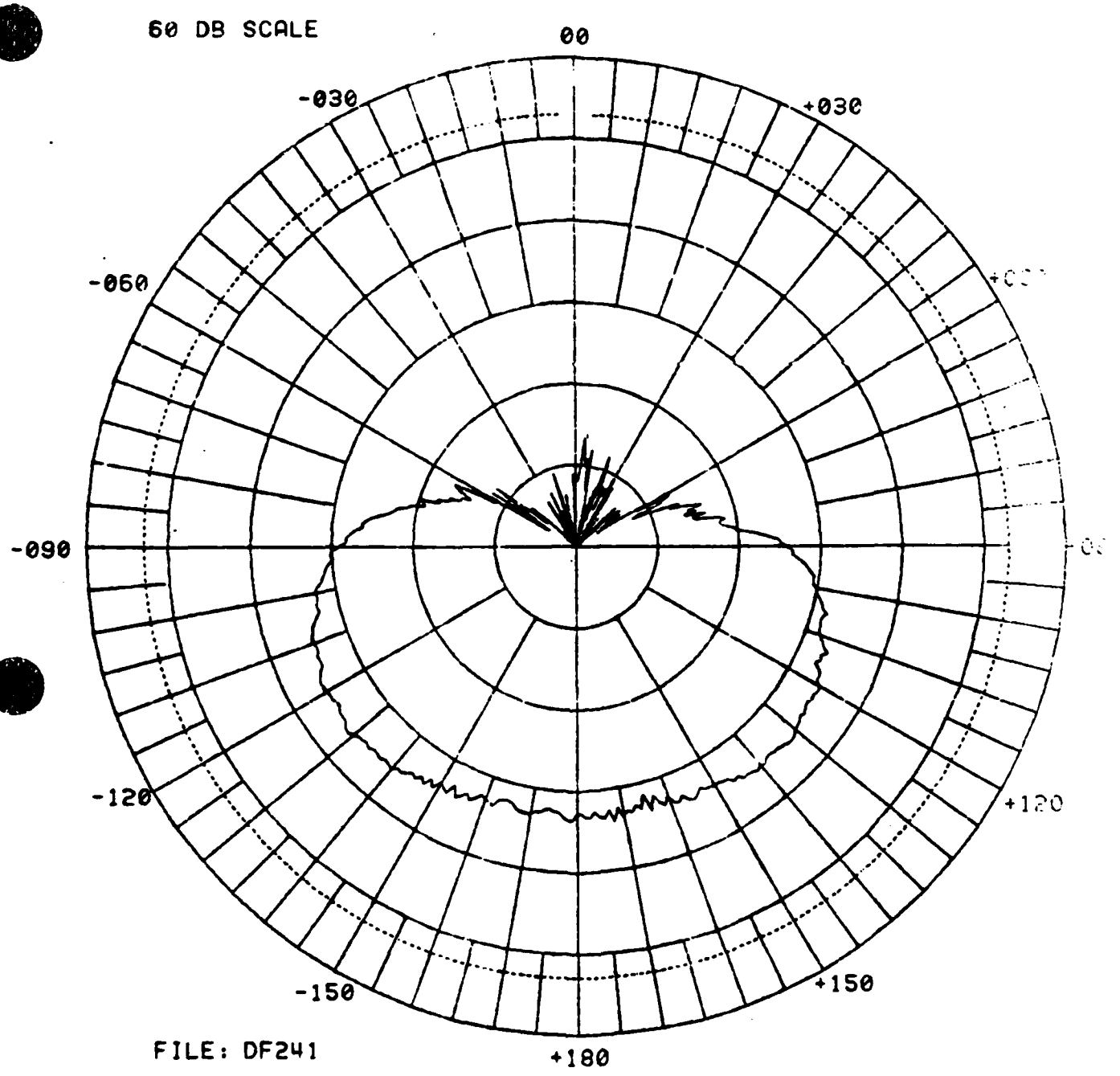
FILE: DF241

SCAN NR: 1 STEP ANGLE: 0.00 PLOT_____ AA

FREQ NR: 2 FREQ(MHZ): F5 PLOT..... AB

CONFIGURATION 5

60 DB SCALE



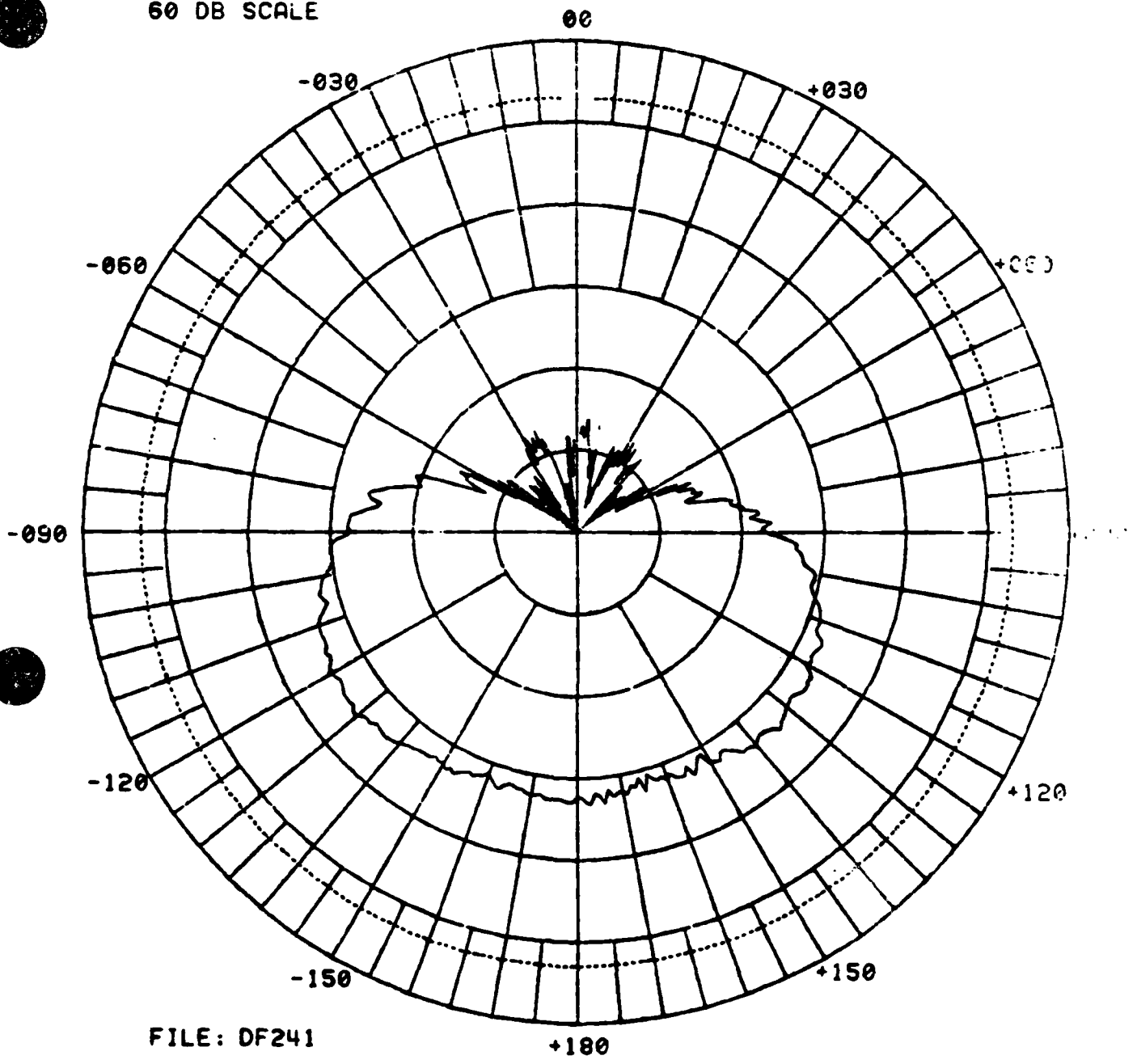
FILE: DF241

SCAN NR: 2 STEP ANGLE: 10.00 PLOT_____ AA

FREQ NR: 2 FREQ(MHZ): F5 PLOT_____ AB

CONFIGURATION 5

60 DB SCALE



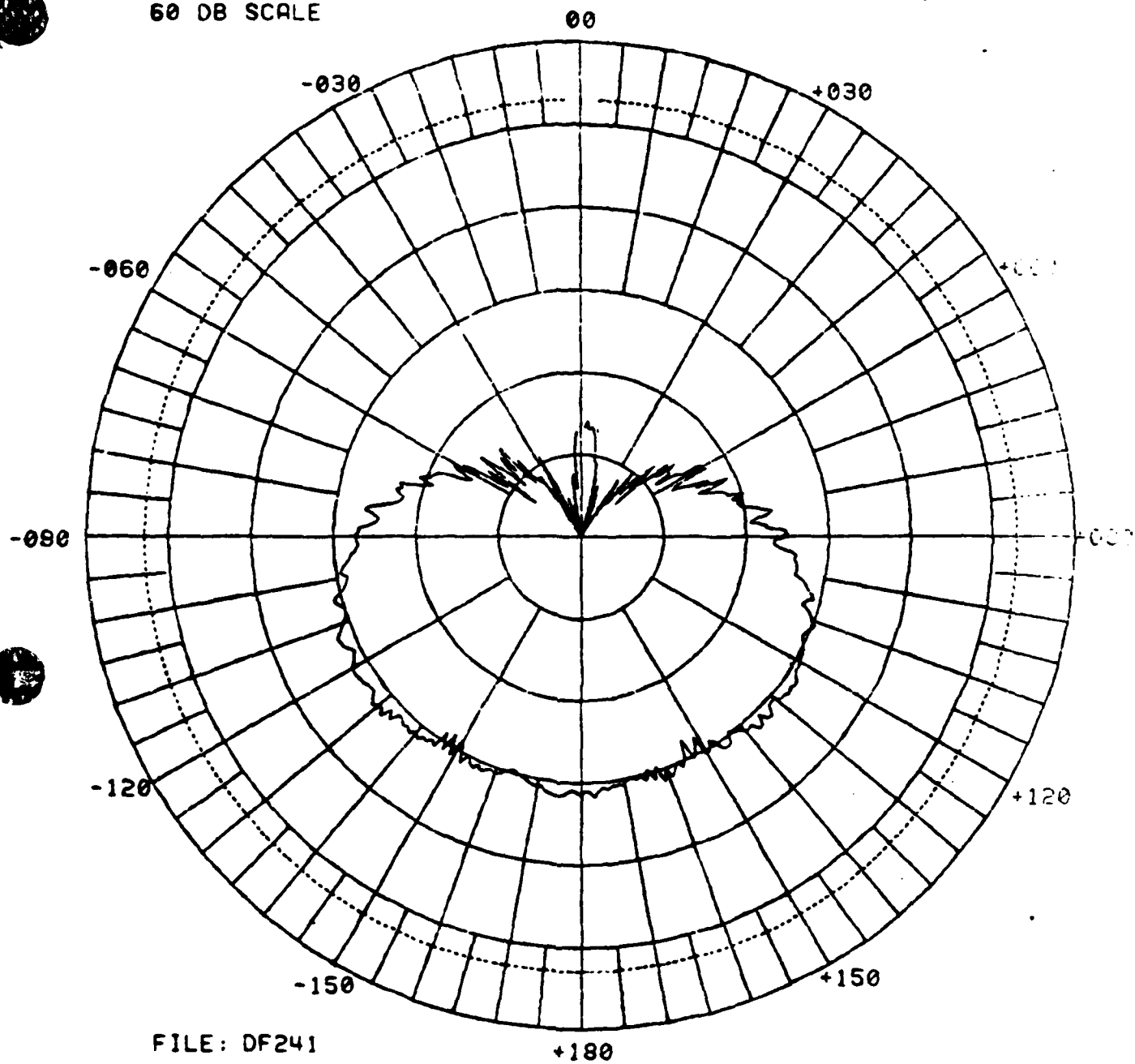
FILE: DF241

SCAN NR: 3 STEP ANGLE: 20.00 PLOT_____ AA

FREQ NR: 2 FREQ(MHZ): F5 PLOT..... AB

CONFIGURATION 5

60 DB SCALE



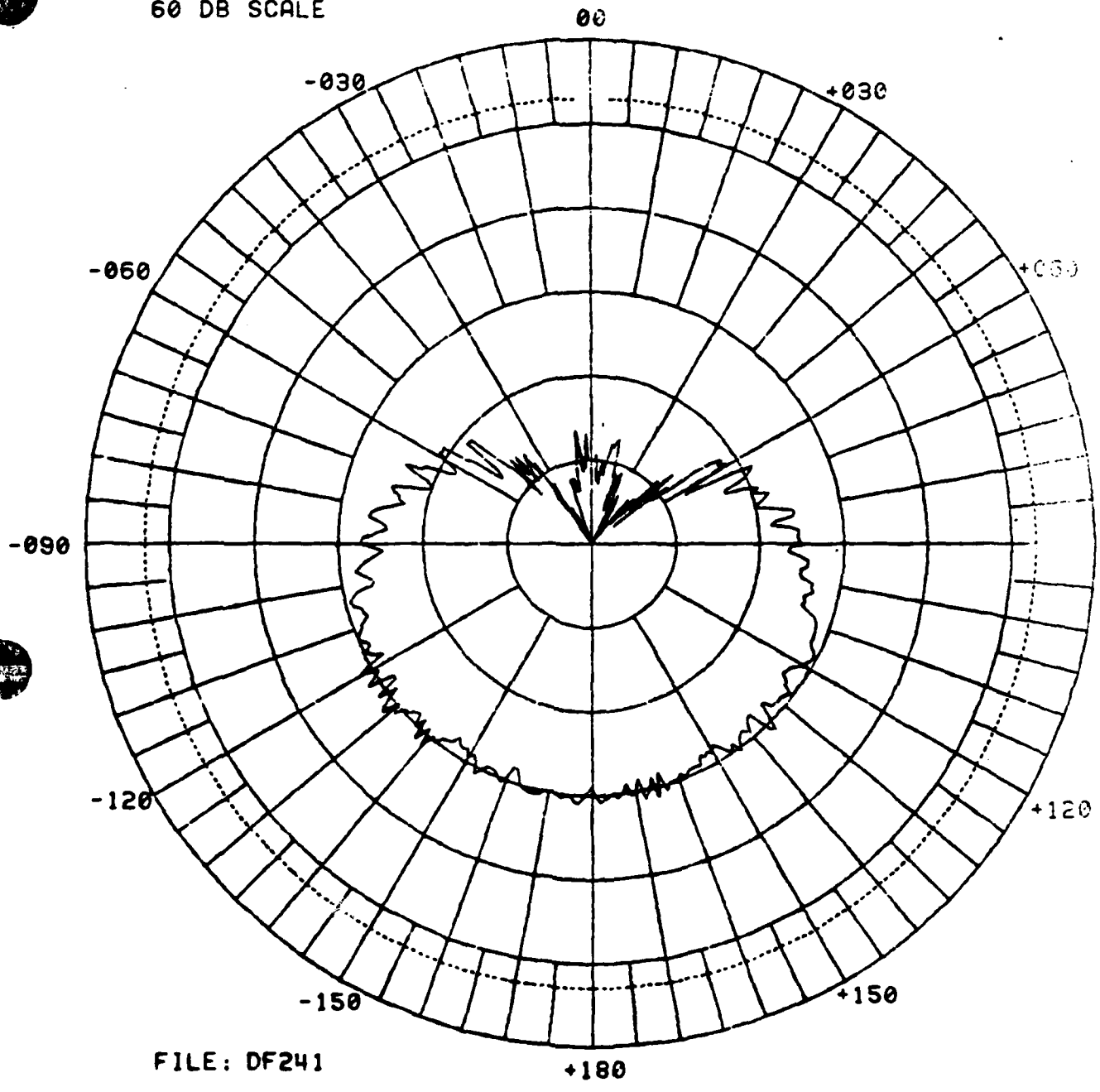
FILE: DF241

SCAN NR: 4 STEP ANGLE: 30.00 PLOT_____ AA

FREQ NR: 2 FREQ(MHZ): F5 PLOT..... AB

CONFIGURATION 5

60 DB SCALE



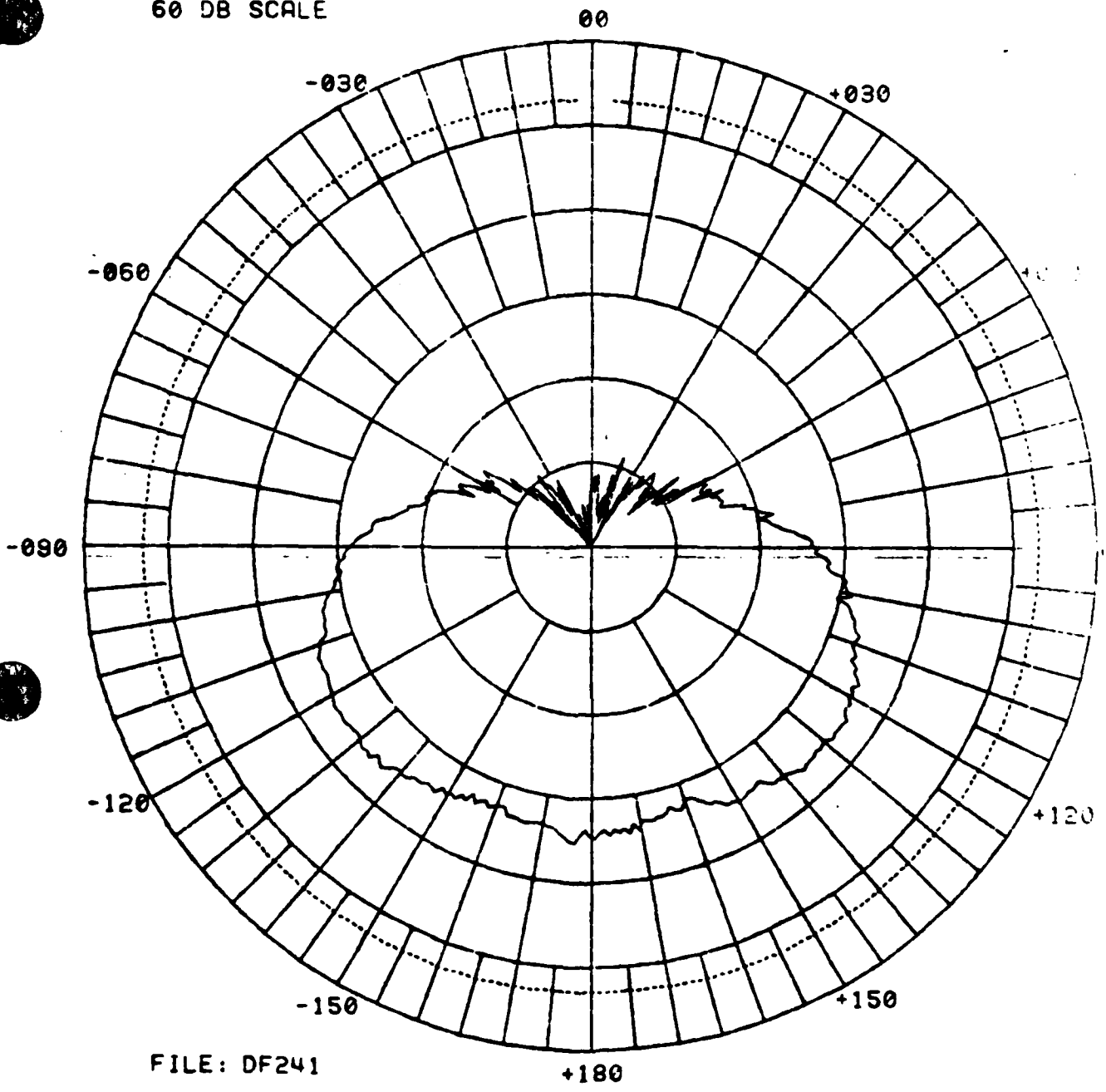
FILE: DF241

SCAN NR: 5 STEP ANGLE: 40.00 PLOT_____ AA

FREQ NR: 2 FREQ(MHZ): F5 PLOT..... AB

CONFIGURATION 5

60 DB SCALE



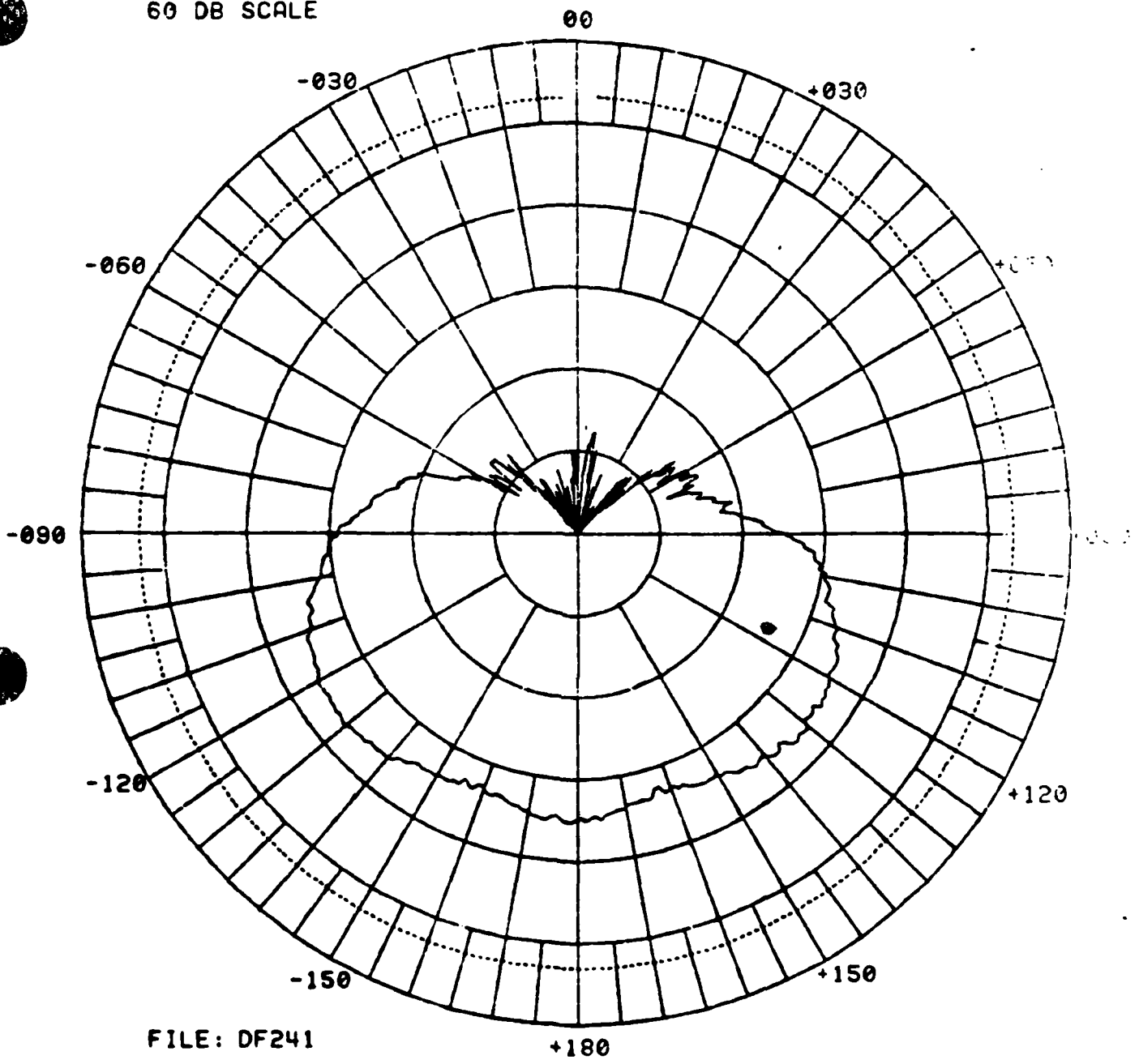
FILE: DF241

SCAN NR: 1 STEP ANGLE: 0.00 PLOT_____ AA

FREQ NR: 3 FREQ(MHZ): F6 PLOT..... AB

CONFIGURATION 5

60 DB SCALE



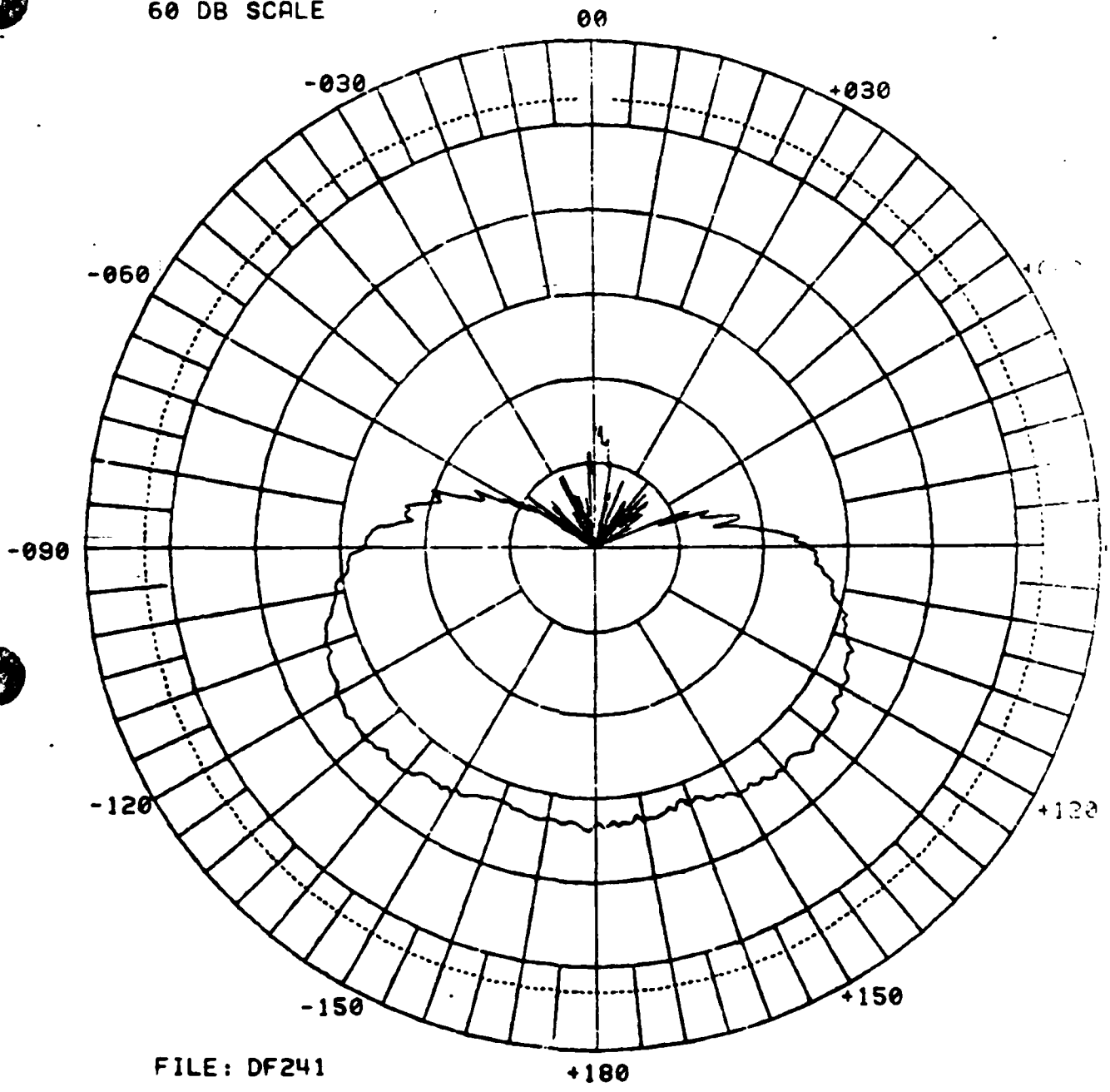
FILE: DF241

SCAN NR: 2 STEP ANGLE: 10.00 PLOT_____ AA

FREQ NR: 3 FREQ(MHZ): F6 PLOT_____ AB

CONFIGURATION 5

60 DB SCALE



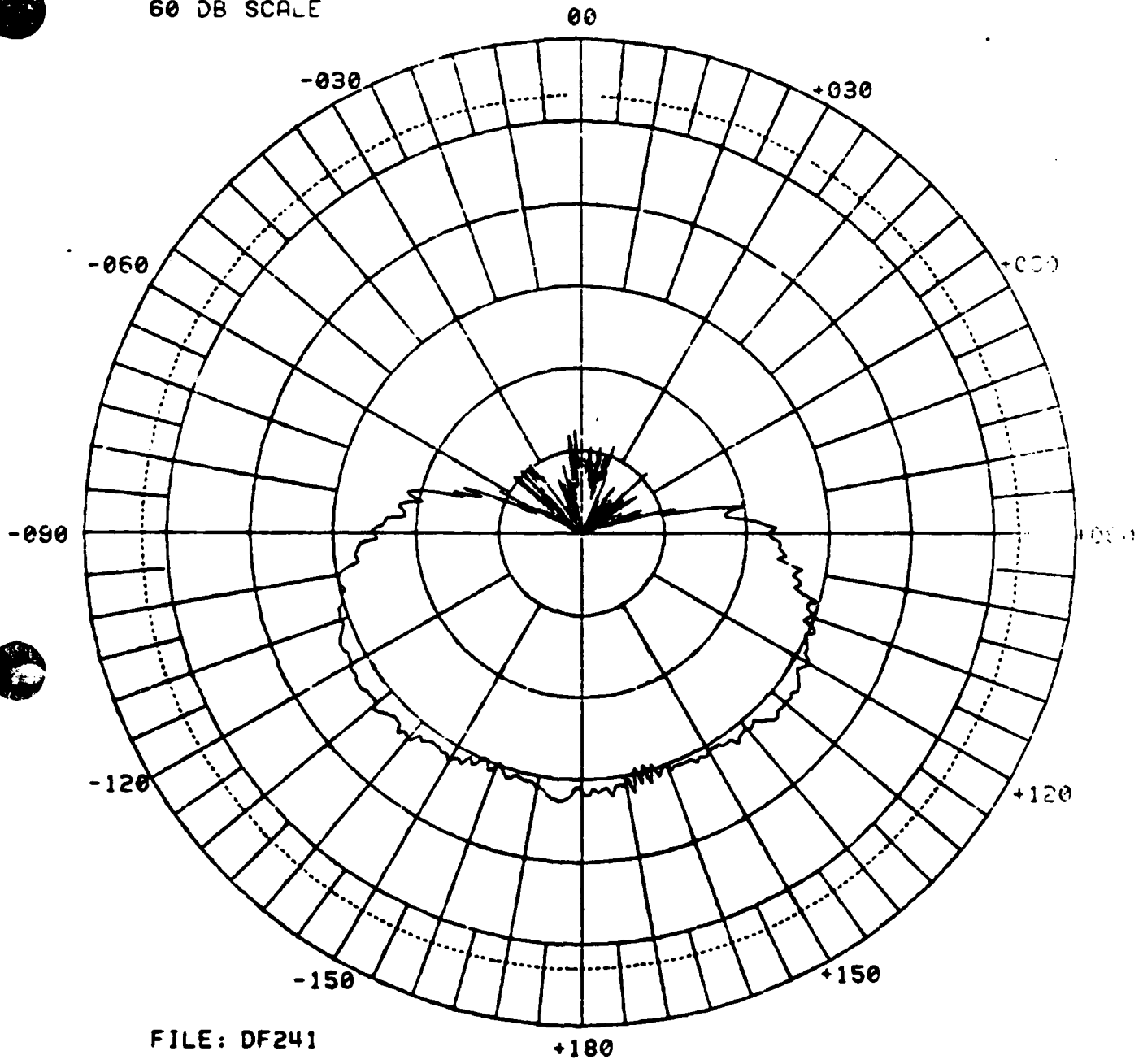
FILE: DF241

SCAN NR: 3 STEP ANGLE: 20.00 PLOT_____ AA

FREQ NR: 3 FREQ(MHZ): F6 PLOT..... AB

CONFIGURATION 5

60 DB SCALE



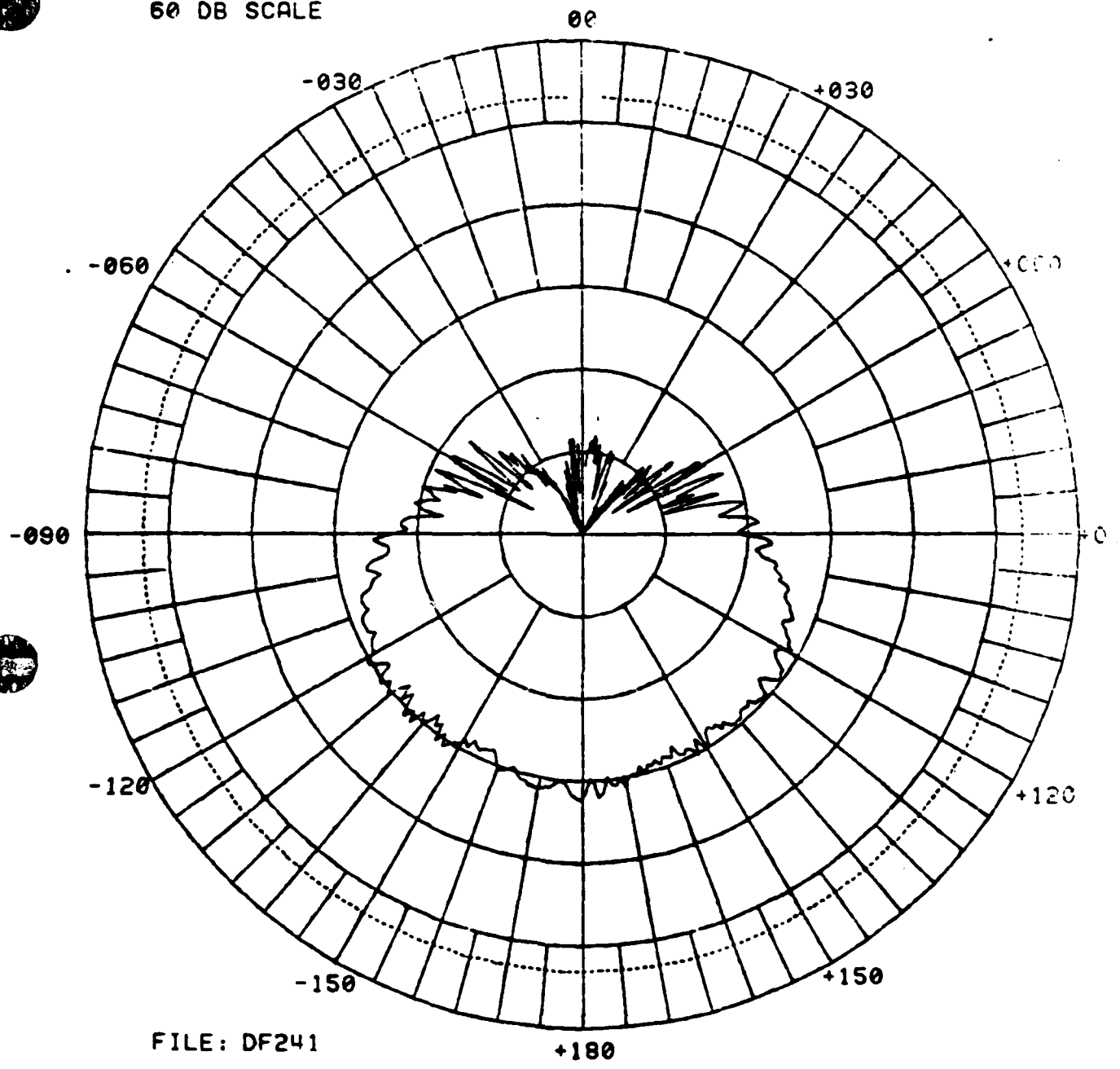
FILE: DF241

SCAN NR: 4 STEP ANGLE: 30.00 PLOT_____ AA

FREQ NR: 3 FREQ(MHZ): F6 PLOT..... AB

CONFIGURATION 5

60 DB SCALE



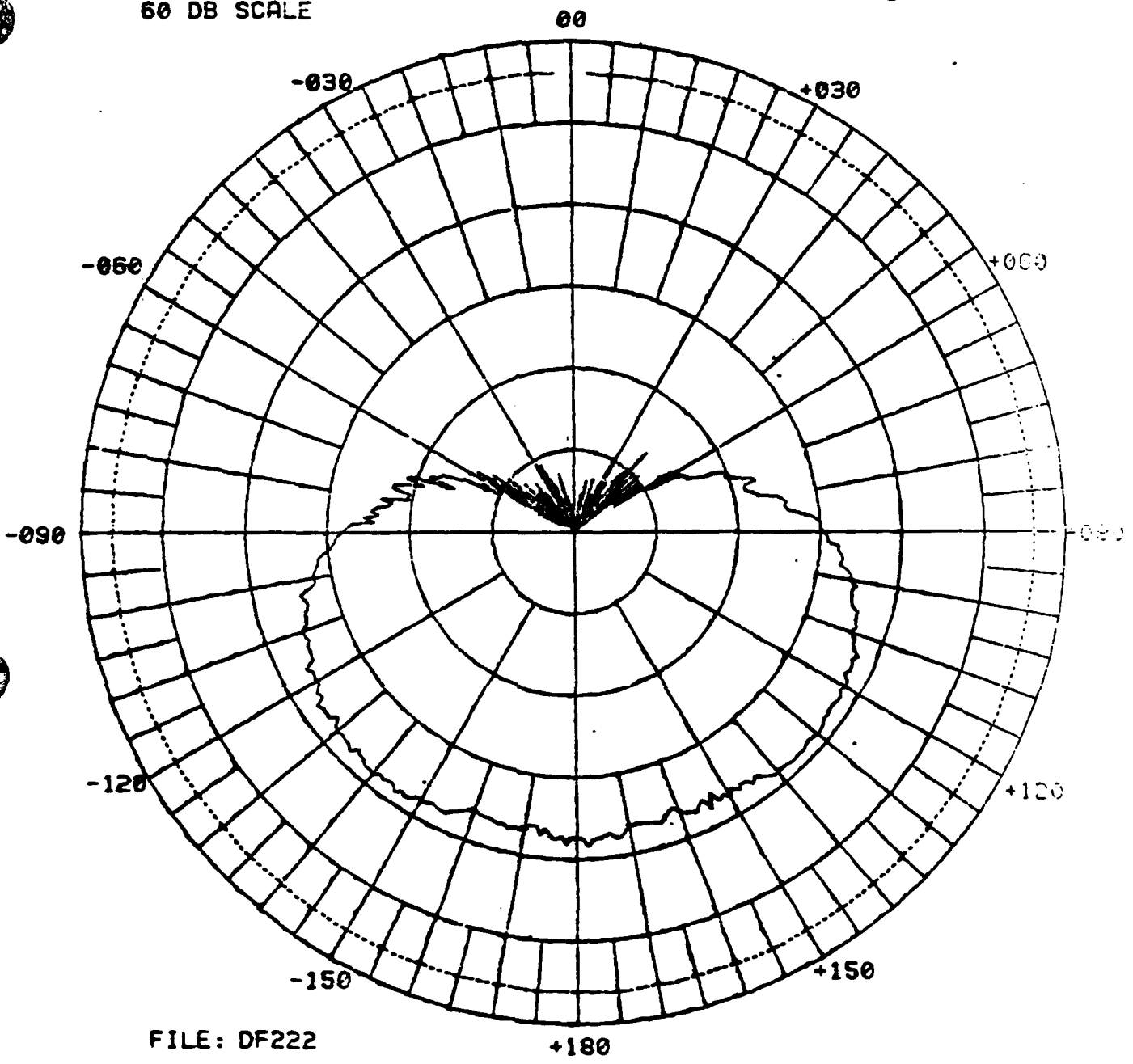
FILE: DF241

SCAN NR: 5 STEP ANGLE: 40.00 PLOT_____ AA

FREQ NR: 3 FREQ(MHZ): F6 PLOT..... AB

CONFIGURATION 5

60 DB SCALE



FILE: DF222

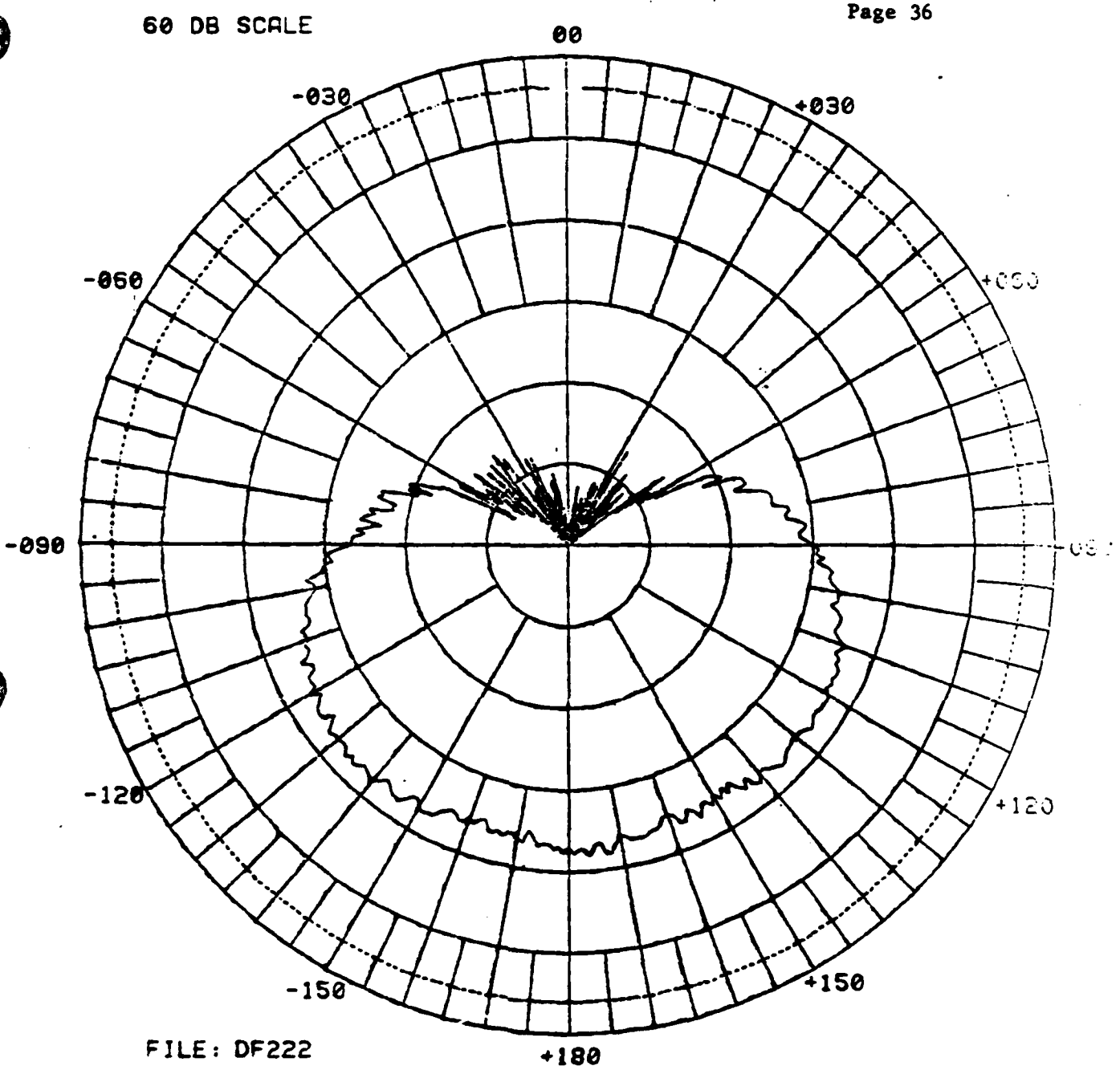
SCAN NR: 1 STEP ANGLE: 0.00 PLOT_____ AA

FREQ NR: 1 FREQ(MHZ): F4 PLOT_____ AB

CONFIGURATION 6

2 JUL 1984

60 DB SCALE



FILE: DF222

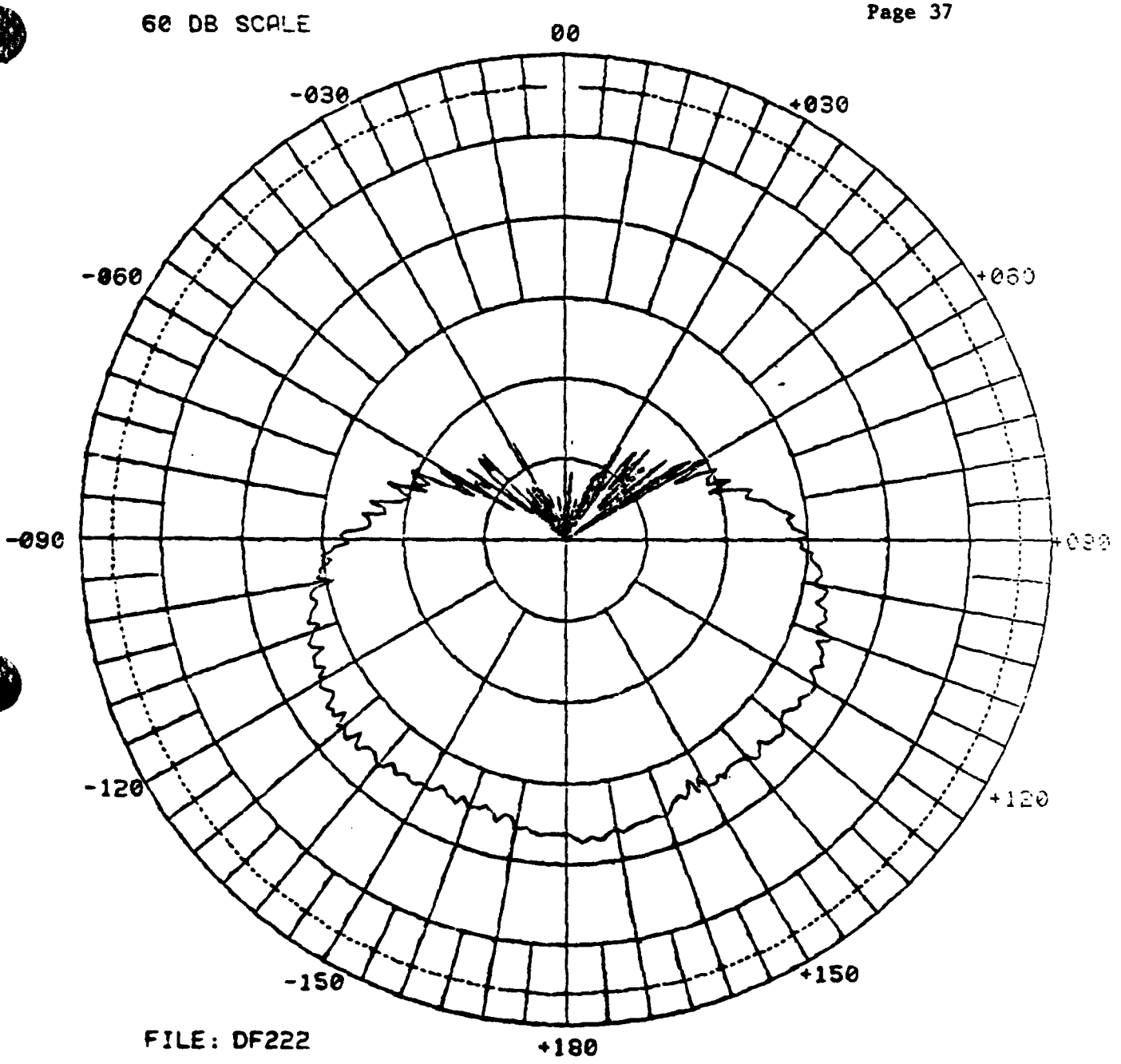
SCAN NR: 2 STEP ANGLE: -10.00 PLOT_____ AA

FREQ NR: 1 FREQ(MHZ): F4 PLOT_____ AB

CONFIGURATION 6

2 JUL 1984

60 DB SCALE



FILE: DF222

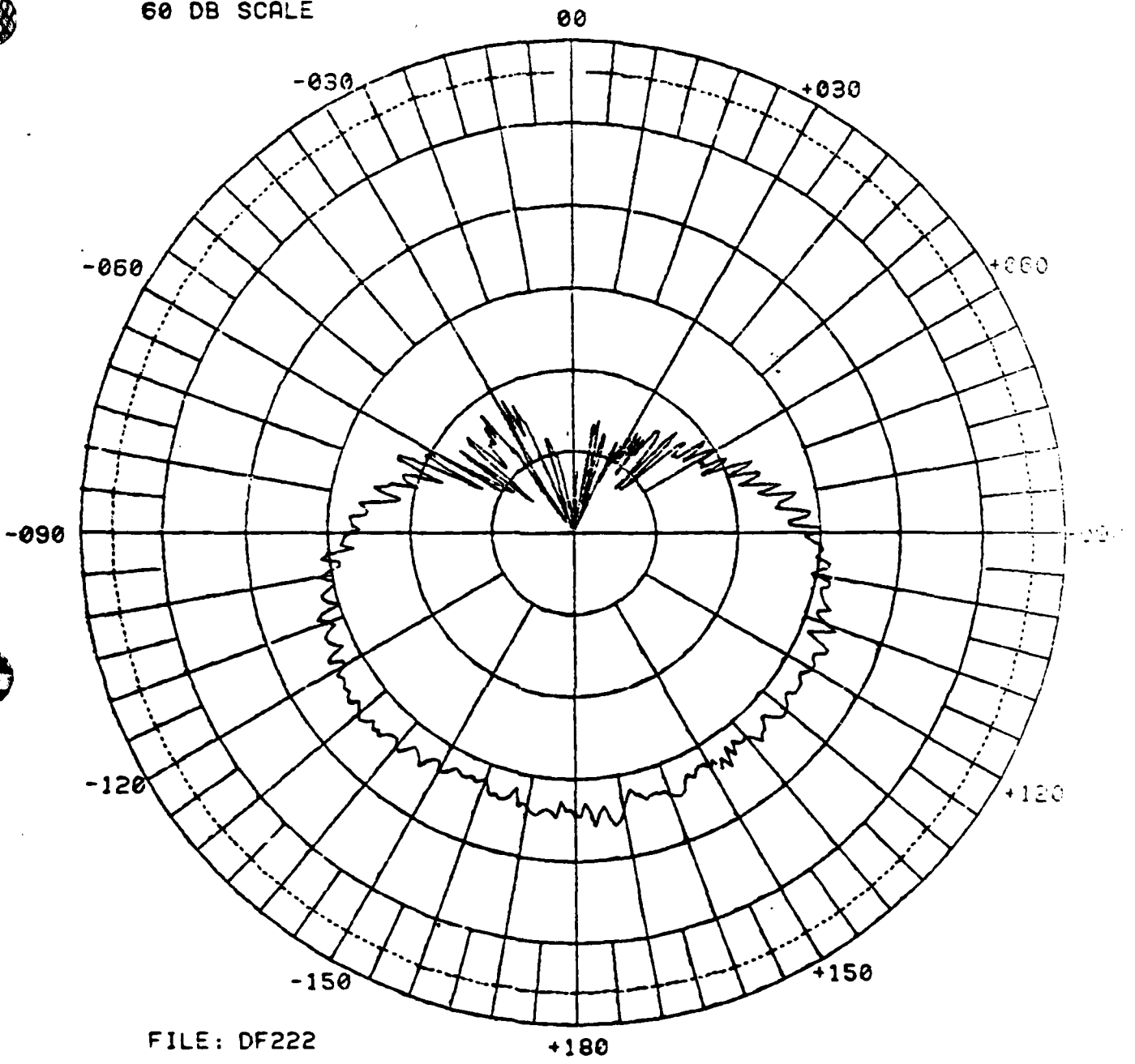
SCAN NR: 3 STEP ANGLE: -20.00 PLOT_____ AA

FREQ NR: 1 FREQ(MHZ): F4 PLOT_____ AB

CONFIGURATION 6

2 JUL 1984

60 DB SCALE



FILE: DF222

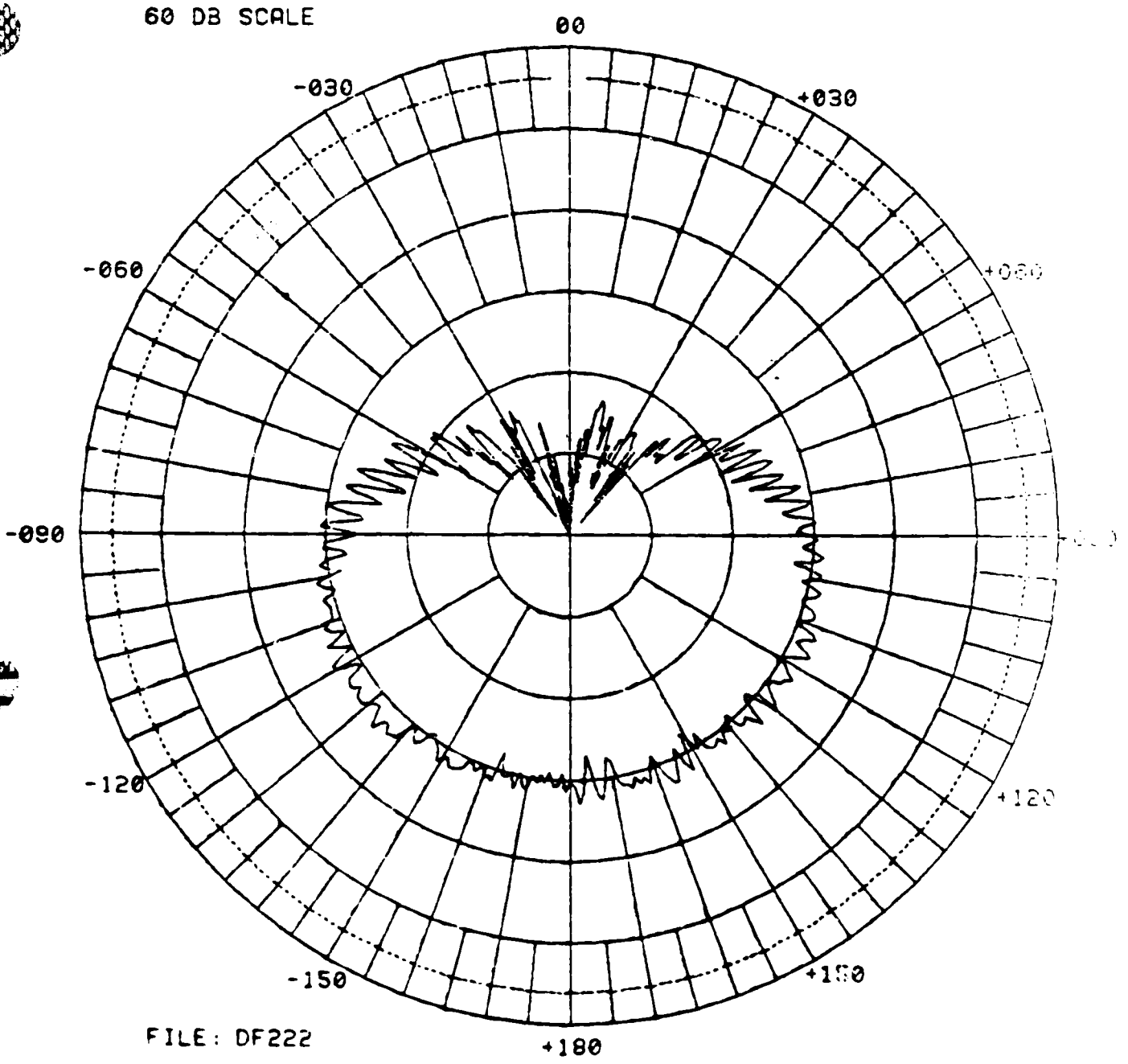
SCAN NR: 4 STEP ANGLE: -30.00 PLOT_____ AA

FREQ NR: 1 FREQ(MHZ): F4 PLOT_____ AB

CONFIGURATION 6

2 JUL 1984

60 DB SCALE



FILE: DF222

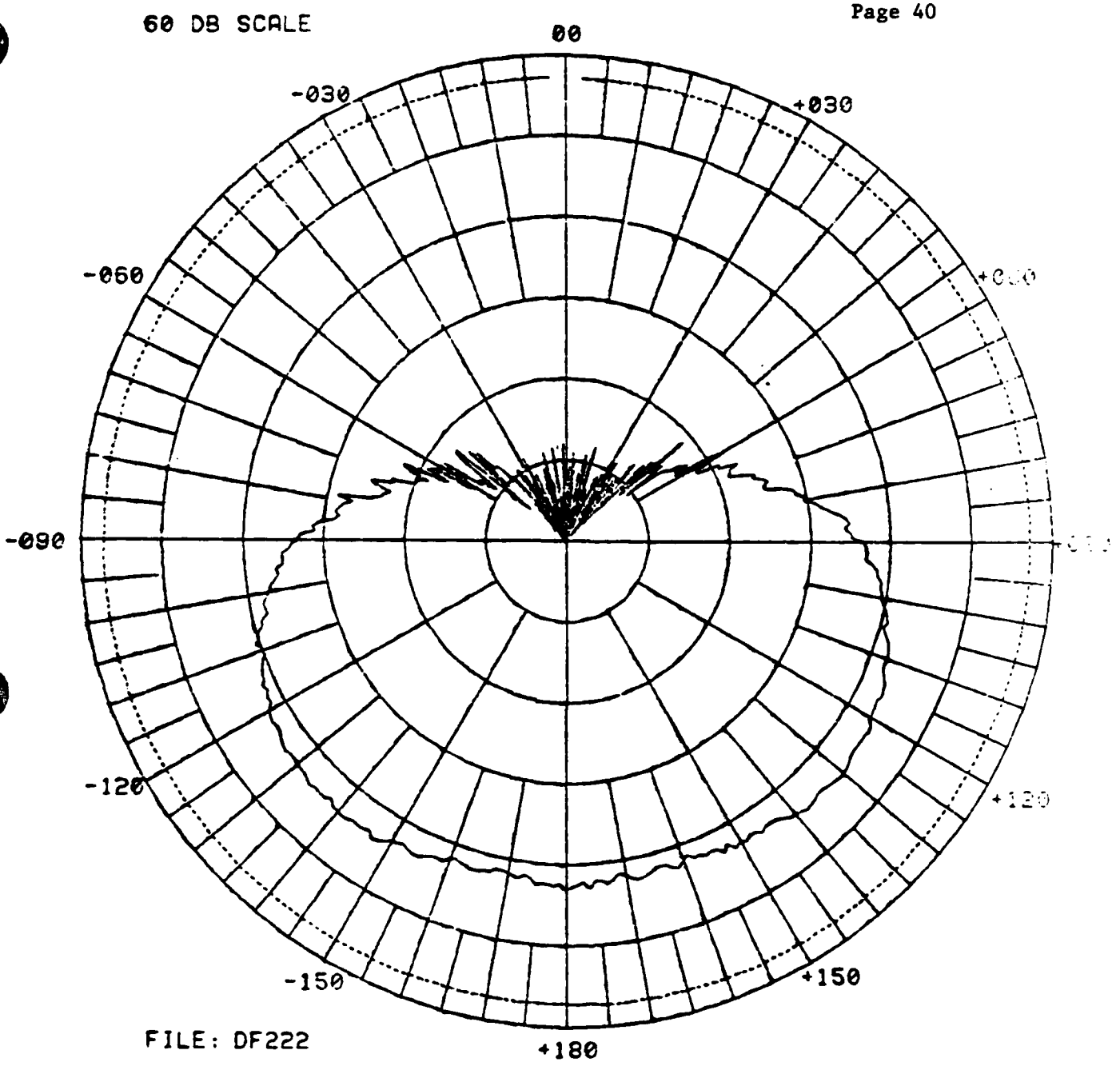
SCAN NR: 5 STEP ANGLE: -40.00 PLOT_____ AA

FREQ NR: 1 FREQ(MHZ): F4 PLOT_____ AB

CONFIGURATION 6

2 JUL 1984

60 DB SCALE



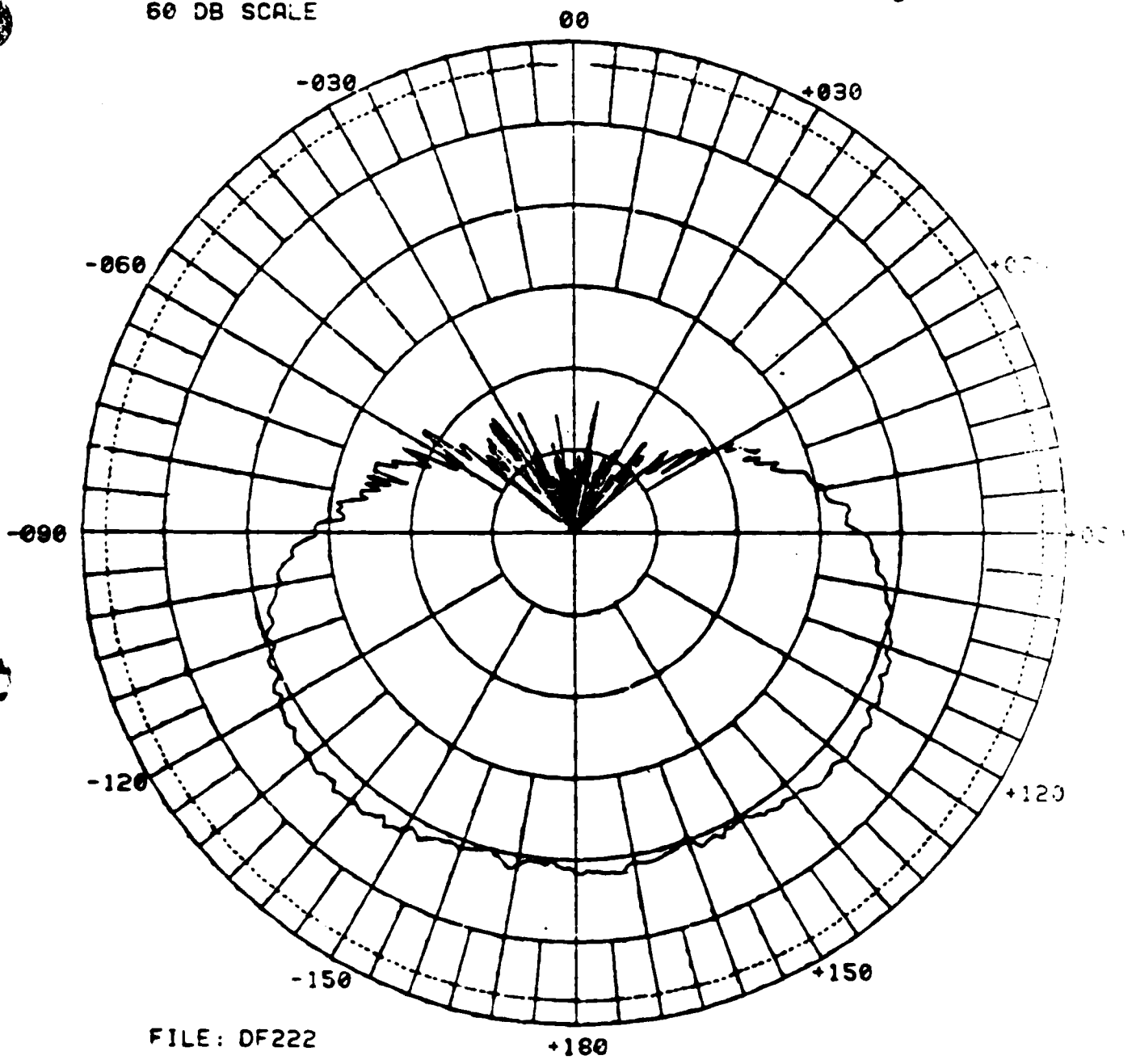
FILE: DF222

SCAN NR: 1 STEP ANGLE: 0.00 PLOT_____ AA

FREQ NR: 2 FREQ(MHZ): F5 PLOT_____ AB

CONFIGURATION 6

2 JUL 1984



FILE: DF222

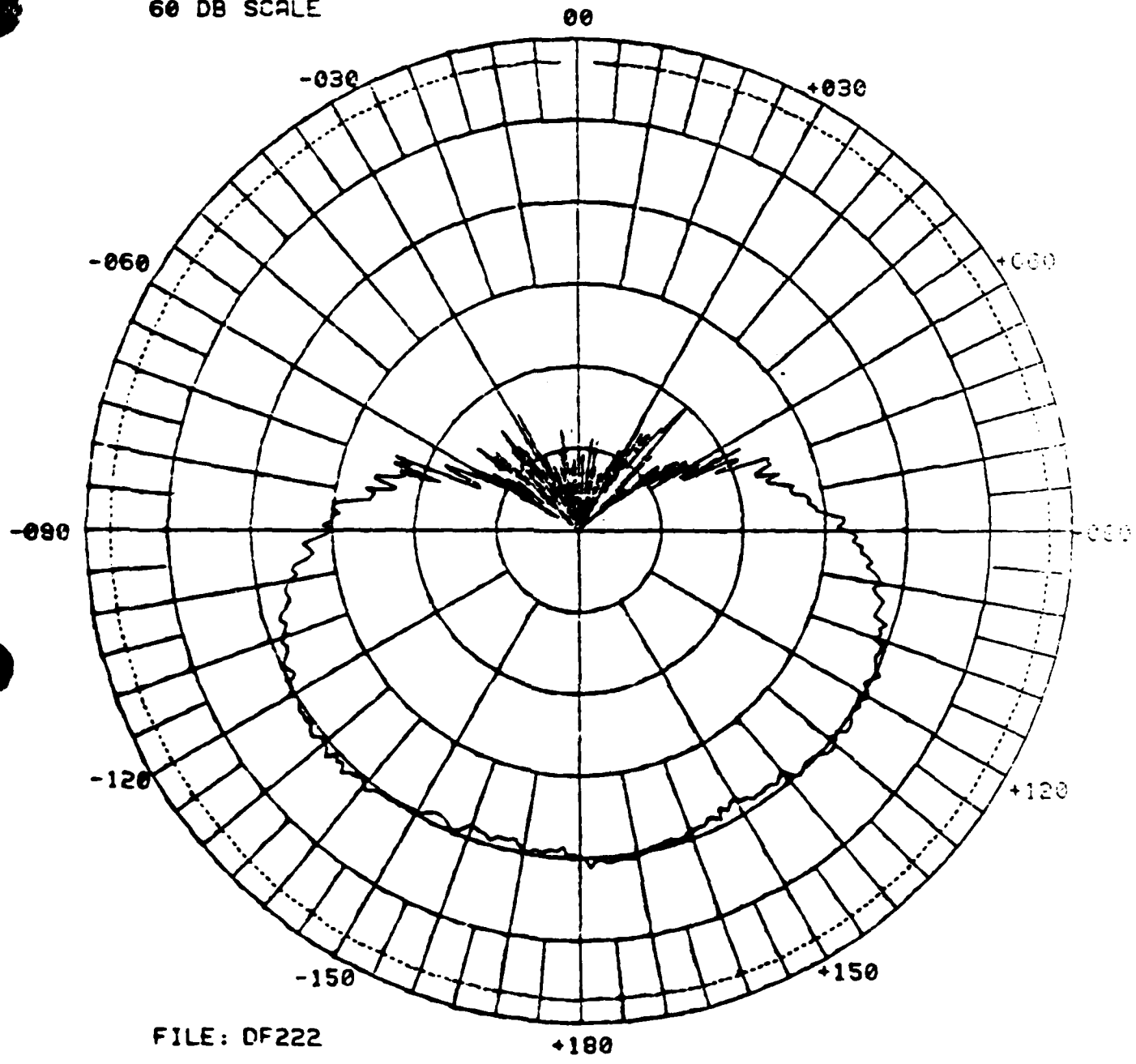
SCAN NR: 2 STEP ANGLE: -10.00 PLOT_____ AA

FREQ NR: 2 FREQ(MHZ): F5 PLOT_____ AB

CONFIGURATION 6

2 JUL 1984

60 DB SCALE



FILE: DF222

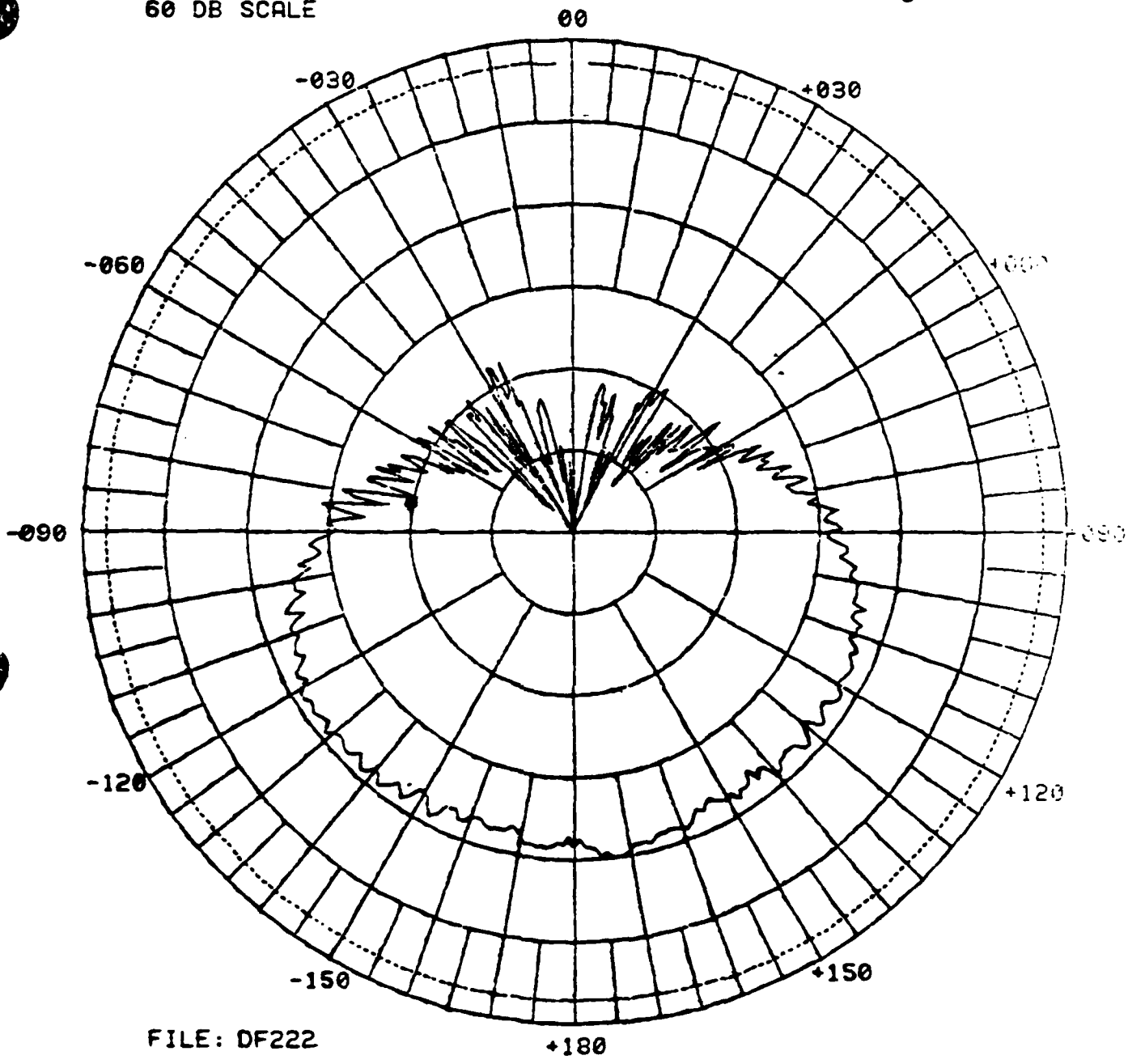
SCAN NR: 3 STEP ANGLE: -20.00 PLOT_____ AA

FREQ NR: 2 FREQ(MHZ): F5 PLOT_____ AB

CONFIGURATION 6

2 JUL 1984

60 DB SCALE



FILE: DF222

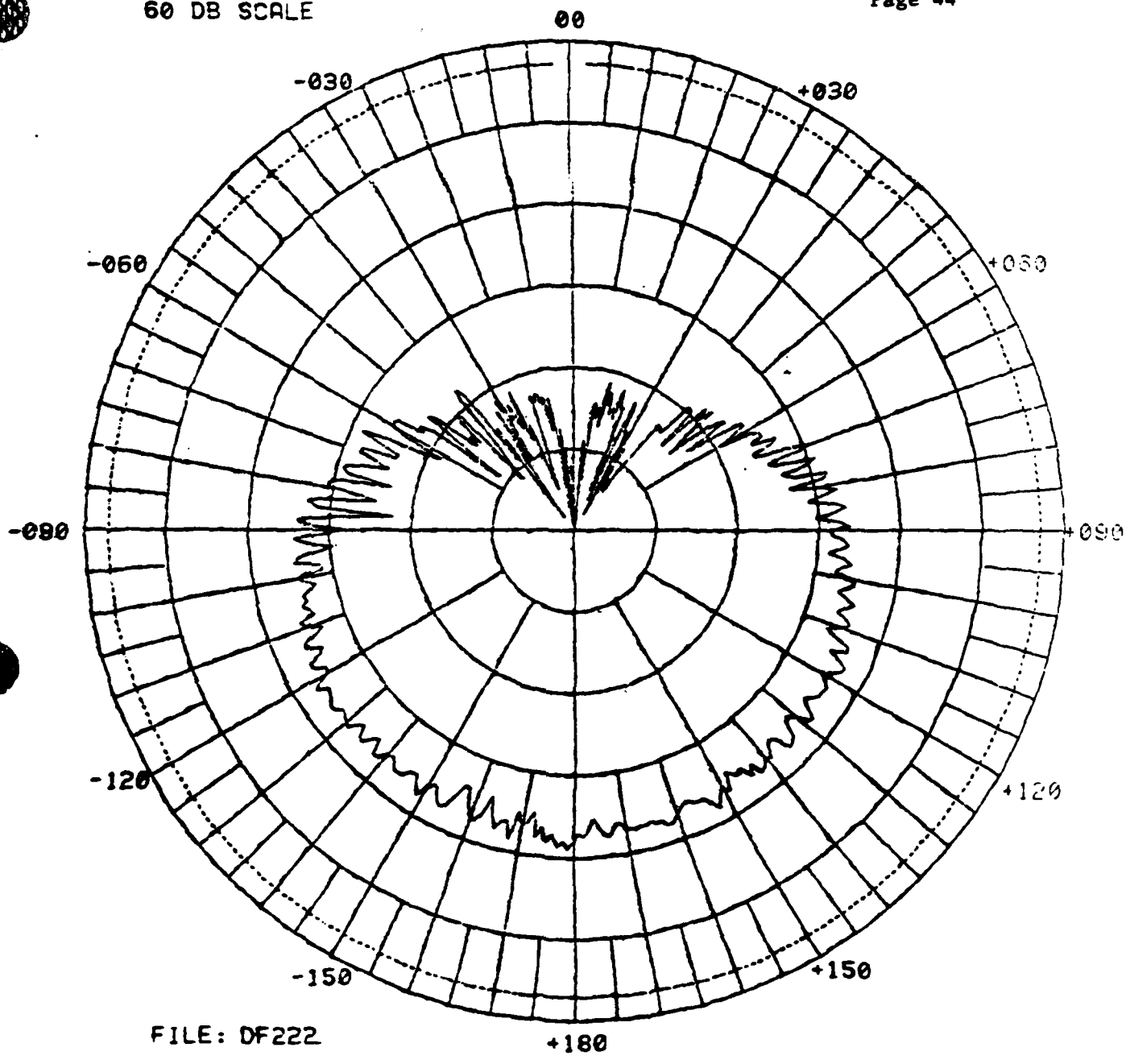
SCAN NR: 4 STEP ANGLE: -30.00 PLOT_____ AA

FREQ NR: 2 FREQ(MHZ): F5 PLOT_____ AB

CONFIGURATION 6

2 JUL 1984

60 DB SCALE



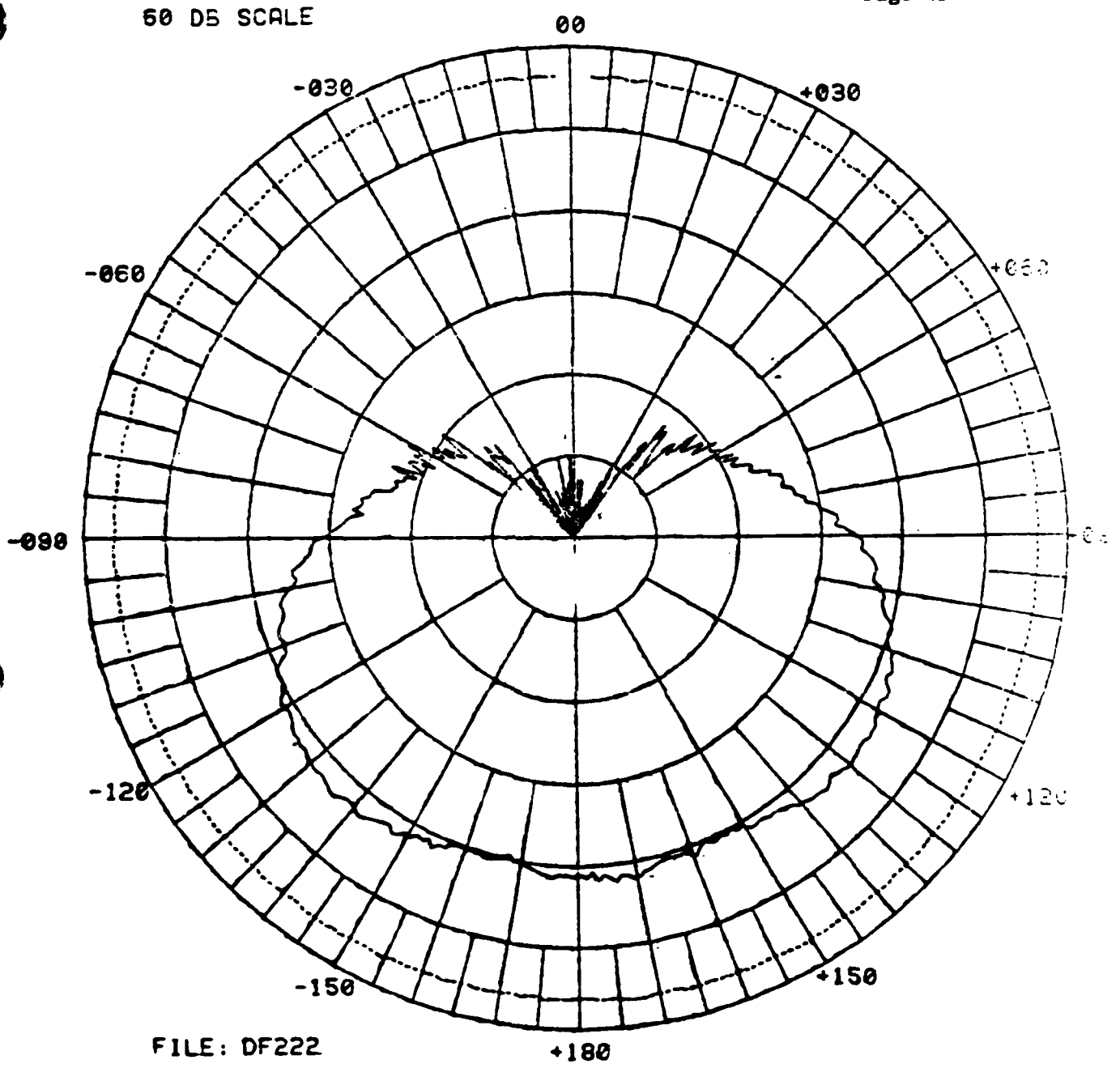
FILE: DF222

SCAN NR: 5 STEP ANGLE: -40.00 PLOT_____ AA

FREQ NR: 2 FREQ(MHZ): F5 PLOT_____ AB

CONFIGURATION 5

2 JUL 1984



FILE: DF222

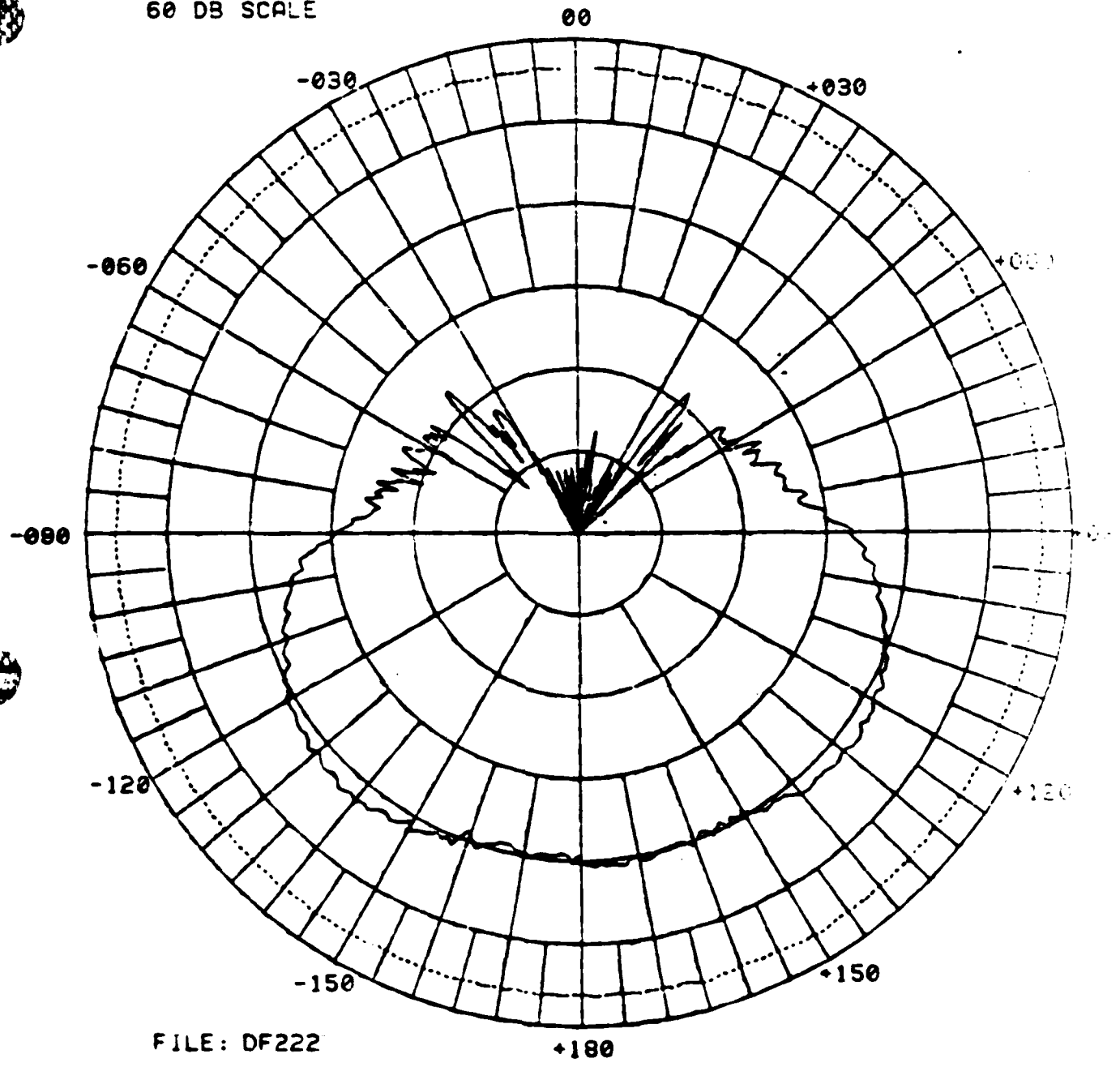
SCAN NR: 1 STEP ANGLE: 0.00 PLOT_____ AA

FREQ NR: 3 FREQ(MHZ): F6 PLOT_____ AB

CONFIGURATION 6

2 JUL 1984

60 DB SCALE



FILE: DF222

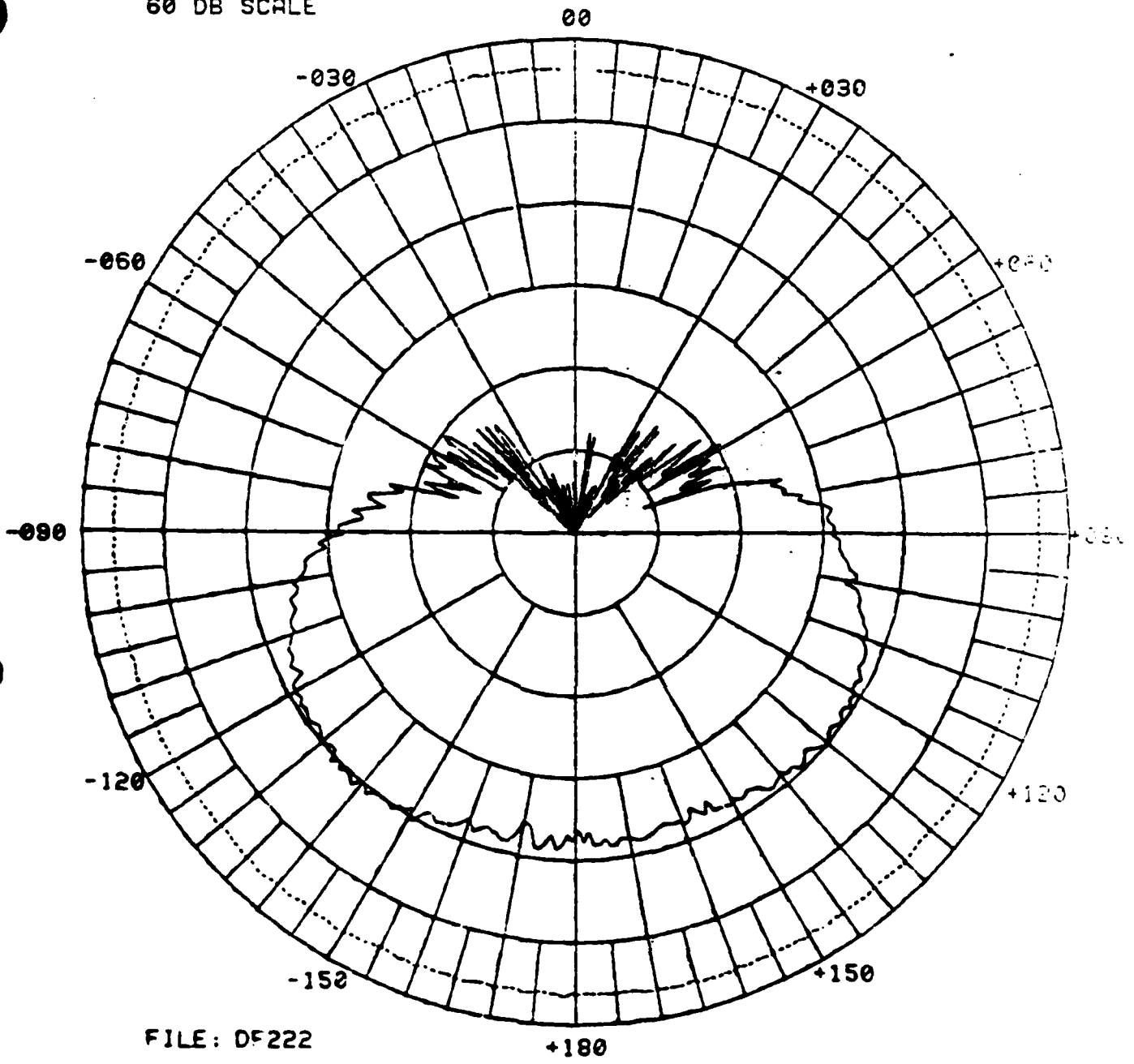
SCAN NR: 2 STEP ANGLE: -10.00 PLOT_____ AA

FREQ NR: 3 FREQ(MHZ): F6 PLOT_____ AB

CONFIGURATION 6

2 JUL 1984

60 DB SCALE



FILE: DF222

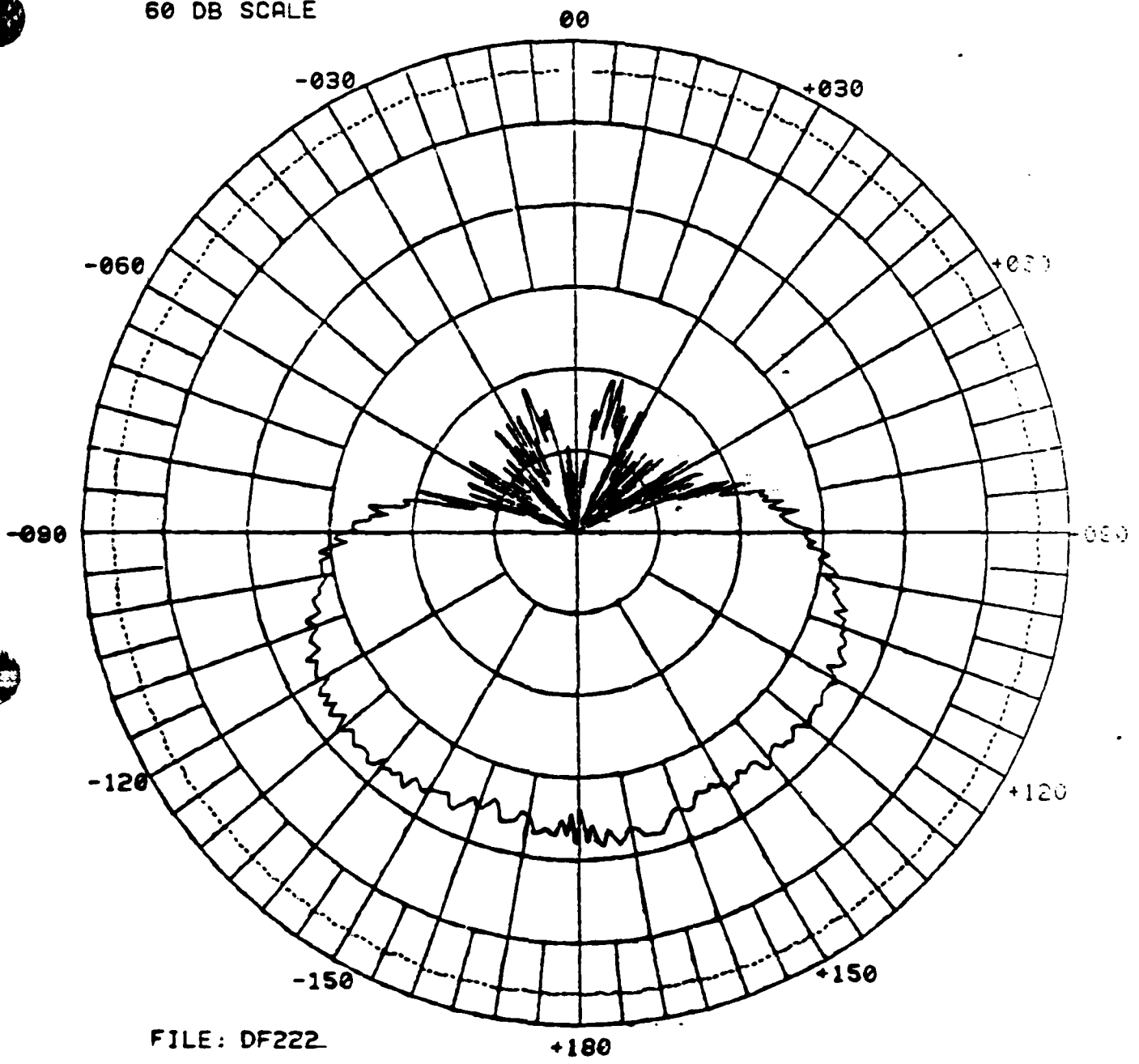
SCAN NR: 3 STEP ANGLE: -20.00 PLOT_____ AA

FREQ NR: 3 FREQ(MHZ): F6 PLOT_____ AB

CONFIGURATION 6

2 JUL 1984

60 DB SCALE



FILE: DF222

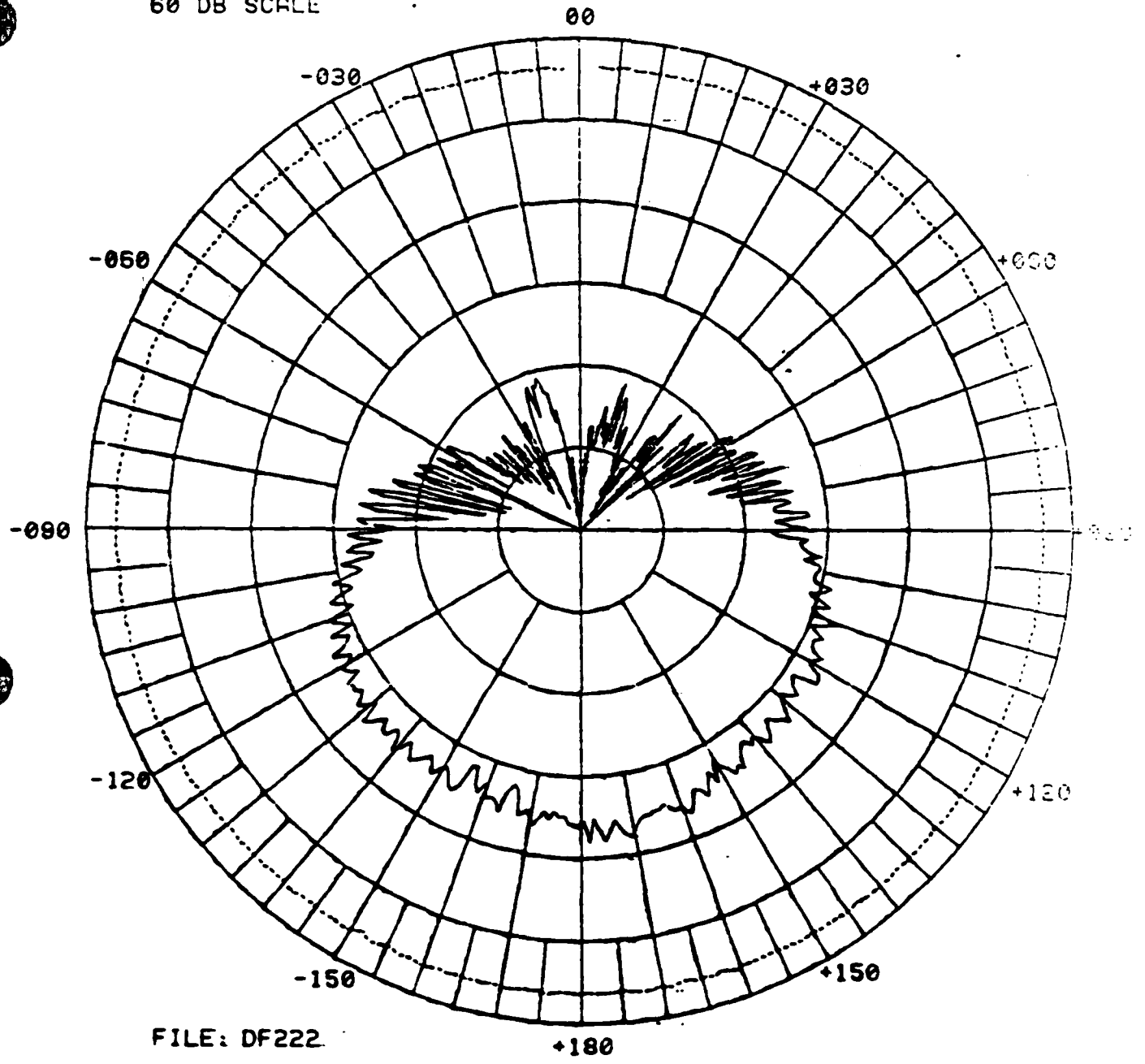
SCAN NR: 4 STEP ANGLE: -30.00 PLOT_____ AA

FREQ NR: 3 FREQ(MHZ): F6 PLOT_____ AB

CONFIGURATION 6

2 JUL 1984

60 DB SCALE



FILE: DF222

SCAN NR: 5 STEP ANGLE: -40.00 PLOT_____ AA

FREQ NR: 3 FREQ(MHZ): F6 PLOT_____ AB

CONFIGURATION 6

2 JUL 1984

Appendix 8 contains AN/ALQ-162 antenna patterns as recorded by the 20/20 system during test. They are in polar plot format. These patterns cover frequencies F7, F8, and F9 and elevations of +40° through -40° for both the forward and aft antennas. They are arranged as follows:

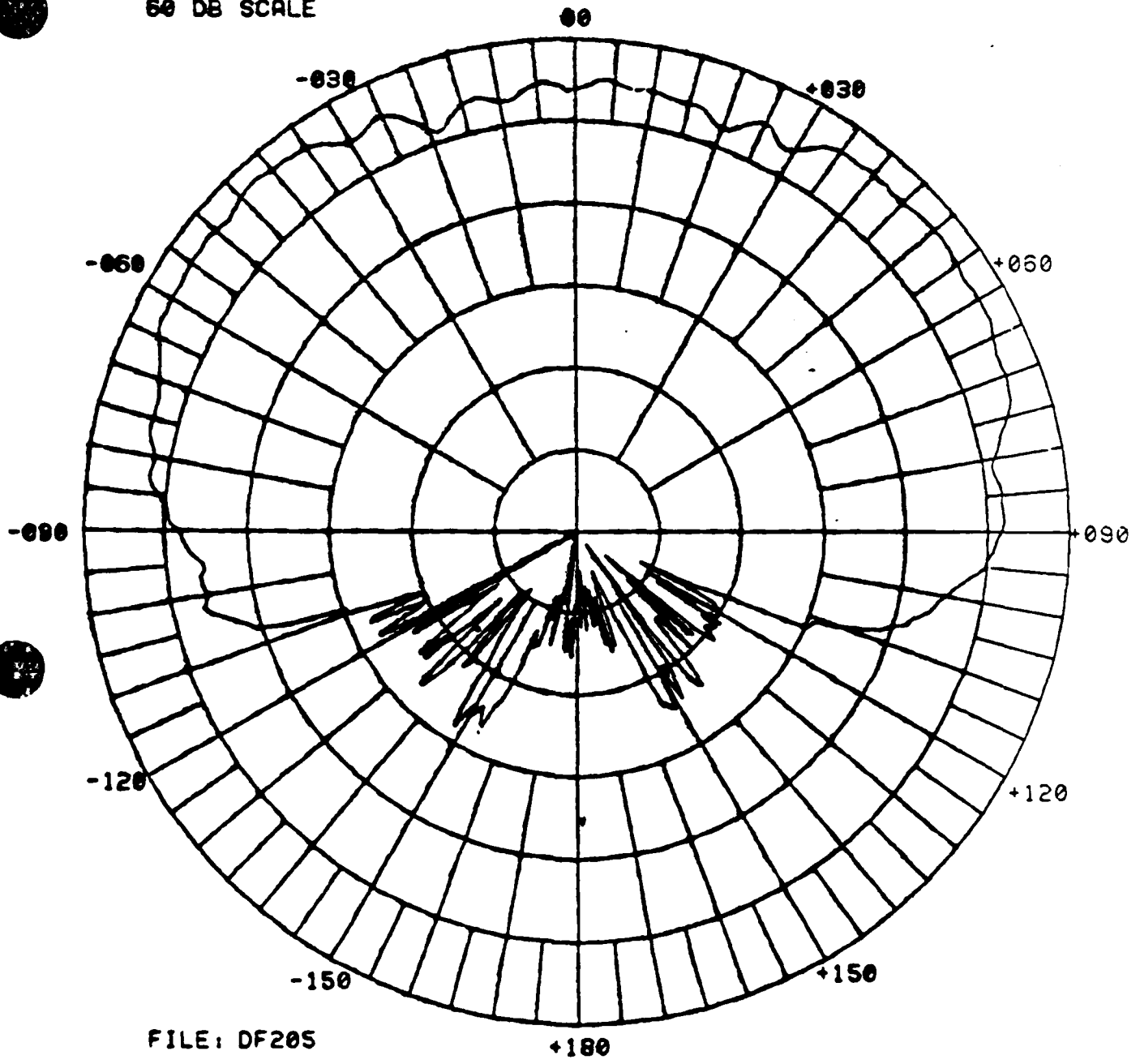
DF205 -- Forward antenna, upper hemisphere

DF206 -- Forward antenna, upper hemisphere horizon

DF239 -- Aft antenna, upper hemisphere

DF236 -- Aft antenna, lower hemisphere.

60 DB SCALE



FILE: DF205

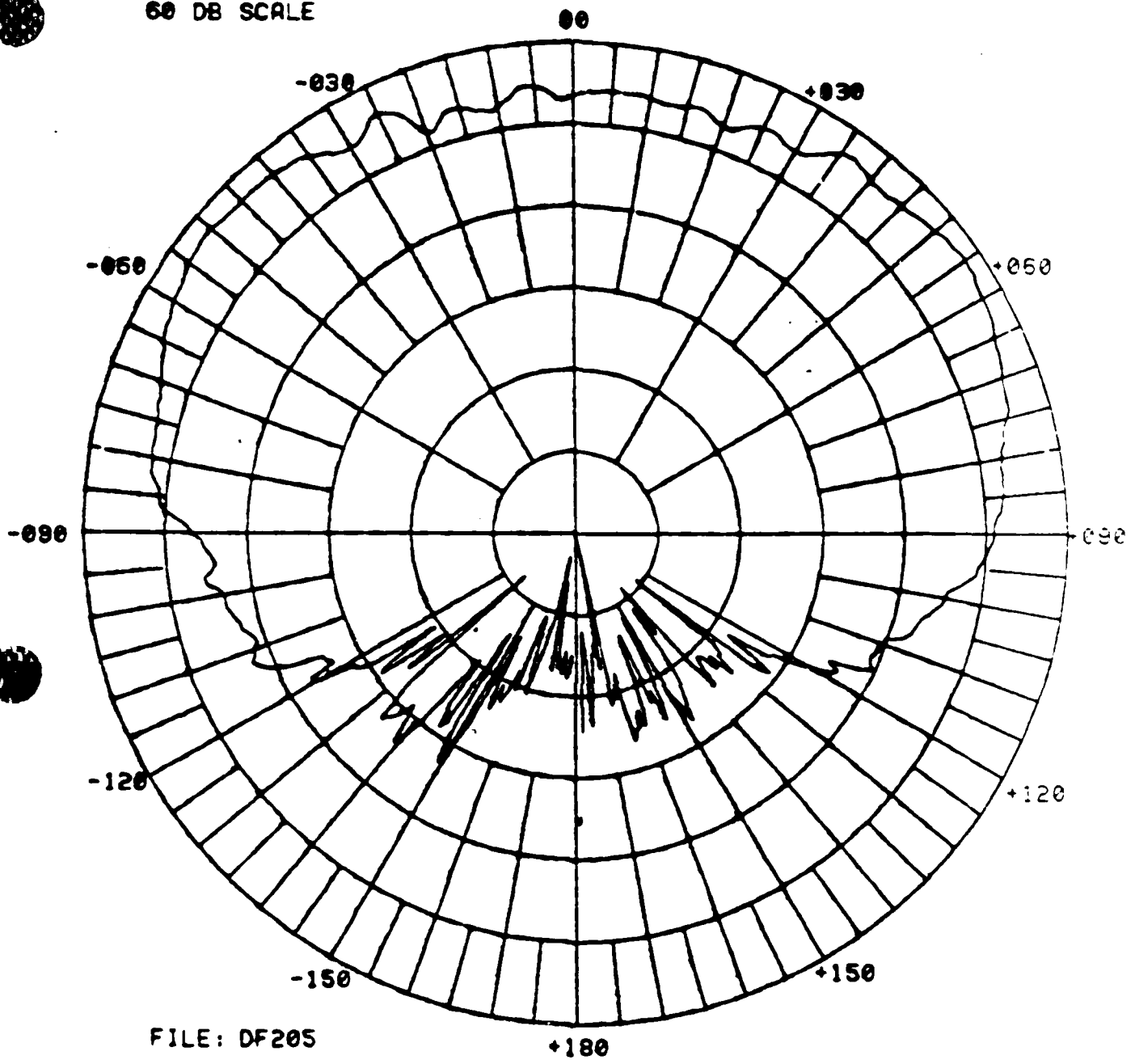
SCAN NR: 1 STEP ANGLE: 0.00 PLOT_____ AA

FREQ NR: 1 FREQ(MHZ): F7

CONFIGURATION 2

1 JUN 1984

60 DB SCALE



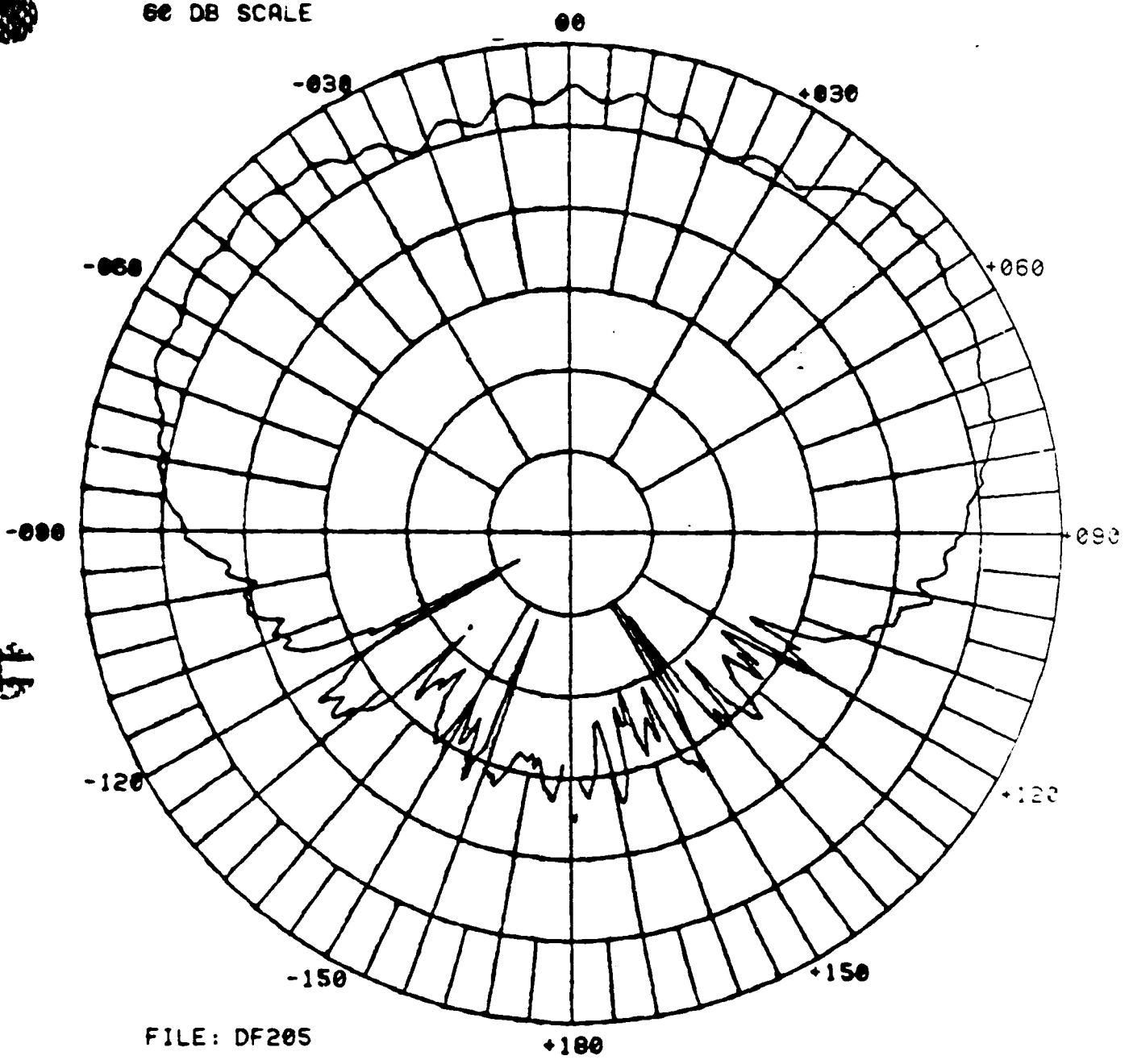
FILE: DF205

SCAN NR: 2 STEP ANGLE: 10.00 PLOT_____ AA

FREQ NR: 1 FREQ(MHZ): F7

CONFIGURATION 2

1 JUN 1984



FILE: DF205

SCAN NR: 3 STEP ANGLE: 20.00 PLOT_____ AZ

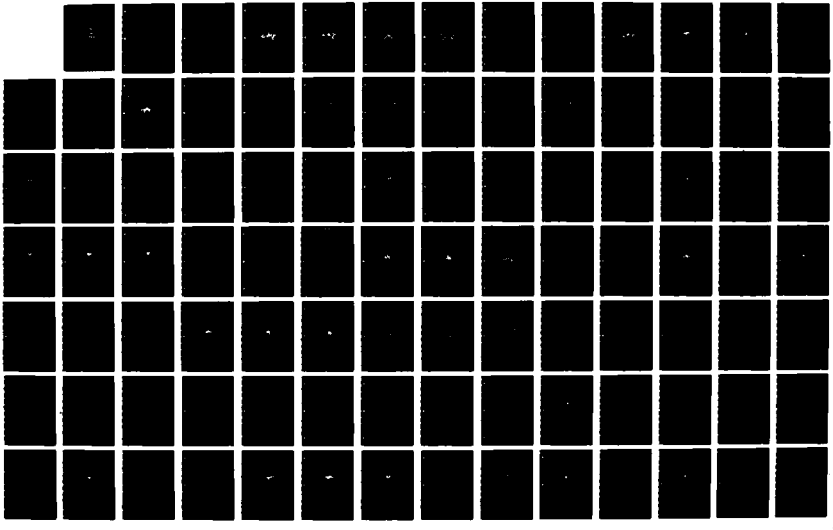
FREQ NR: 1 FREQ(MHZ): F7

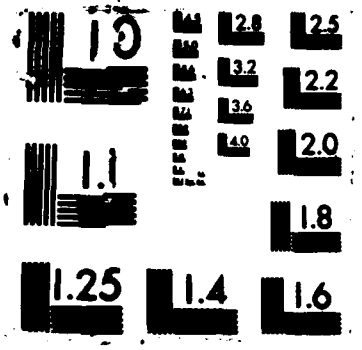
CONFIGURATION 2

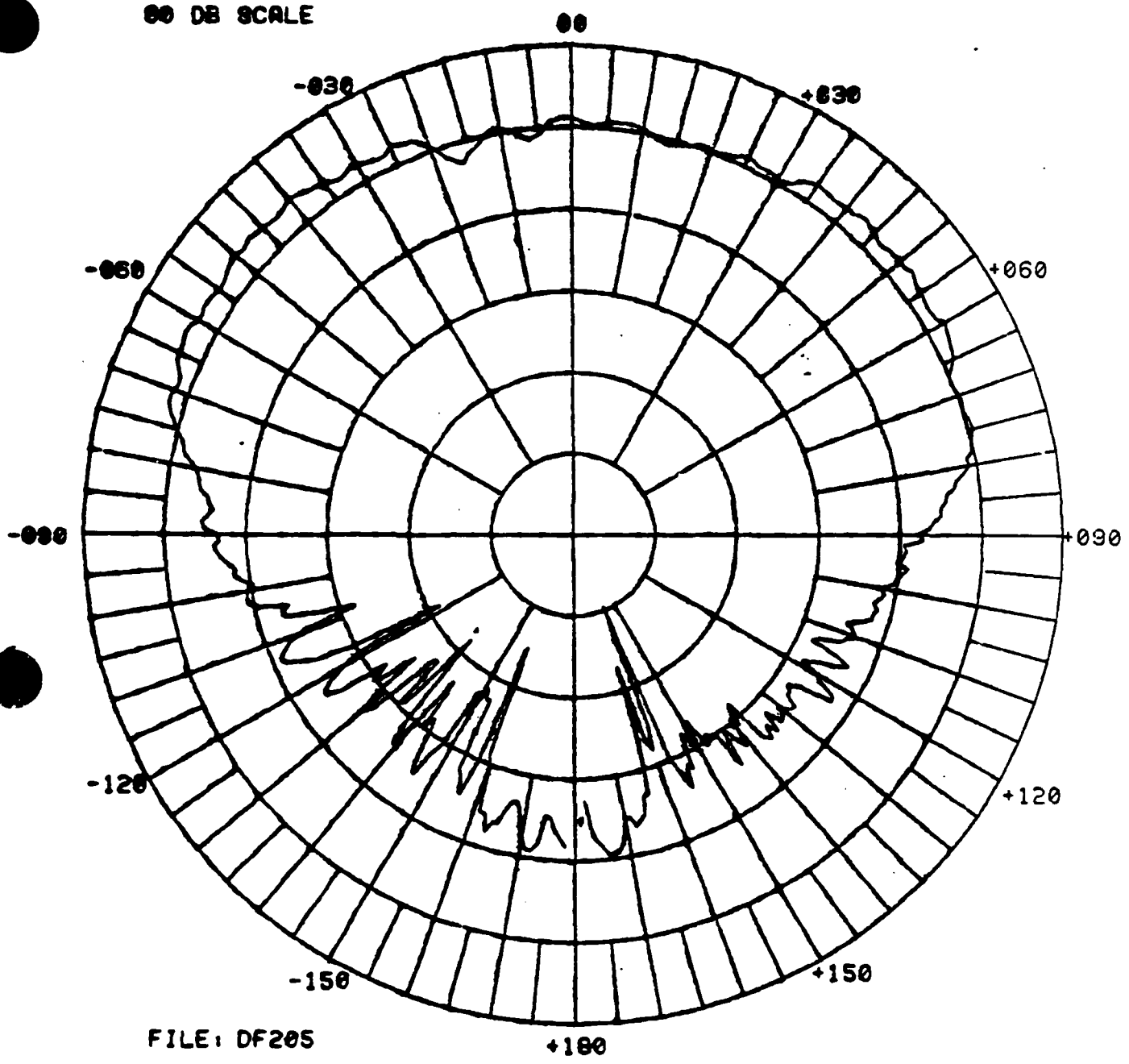
1 JUN 1984

AD-A181 539 ANTENNA LOCATION SURVEY REPORT FOR THE AN/ALQ-156 AND AN/ALQ-162 SYSTEMS(U) BEECH AIRCRAFT CORP WICHITA KS G J MARTIN 29 OCT 84 ER-101E2240 DAAK50-83-C-0056 6/7

UNCLASSIFIED F/G 17/4 NL




1.0
2.8
2.5
3.2
2.2
3.6
4.0
2.0
1.1
1.8
1.25
1.4
1.6



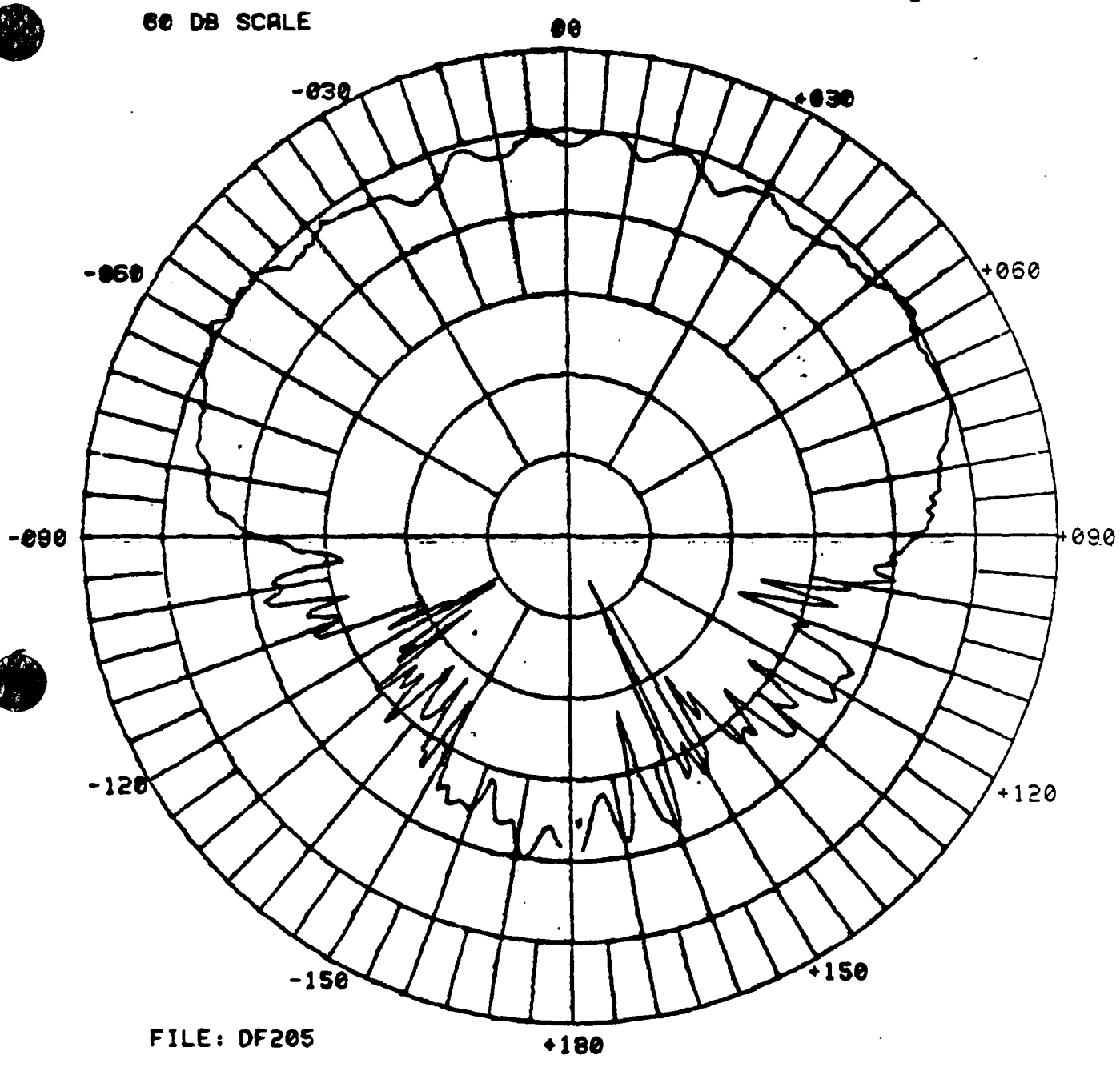
FILE: DF205

SCAN NR: 4 STEP ANGLE: 30.00 PLOT_____ AA

FREQ NR: 1 FREQ(MHZ): F7

CONFIGURATION 2

1 JUN 1984



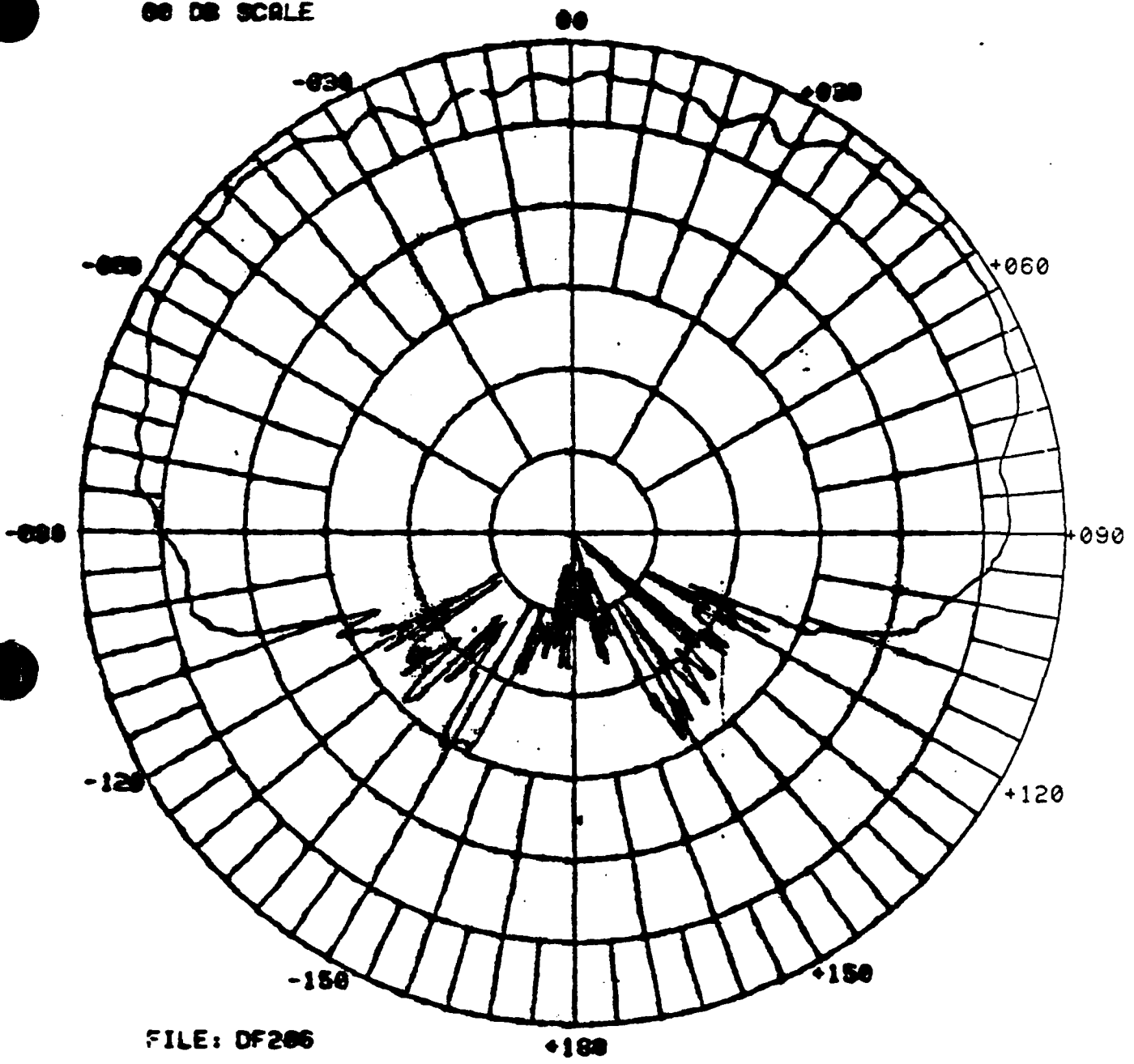
FILE: DF205

SCAN NR: 5 STEP ANGLE: 40.00 PLOT_____ AA

FREQ NR: 1 FREQ(MHZ): F7

CONFIGURATION 2

1 JUN 1984



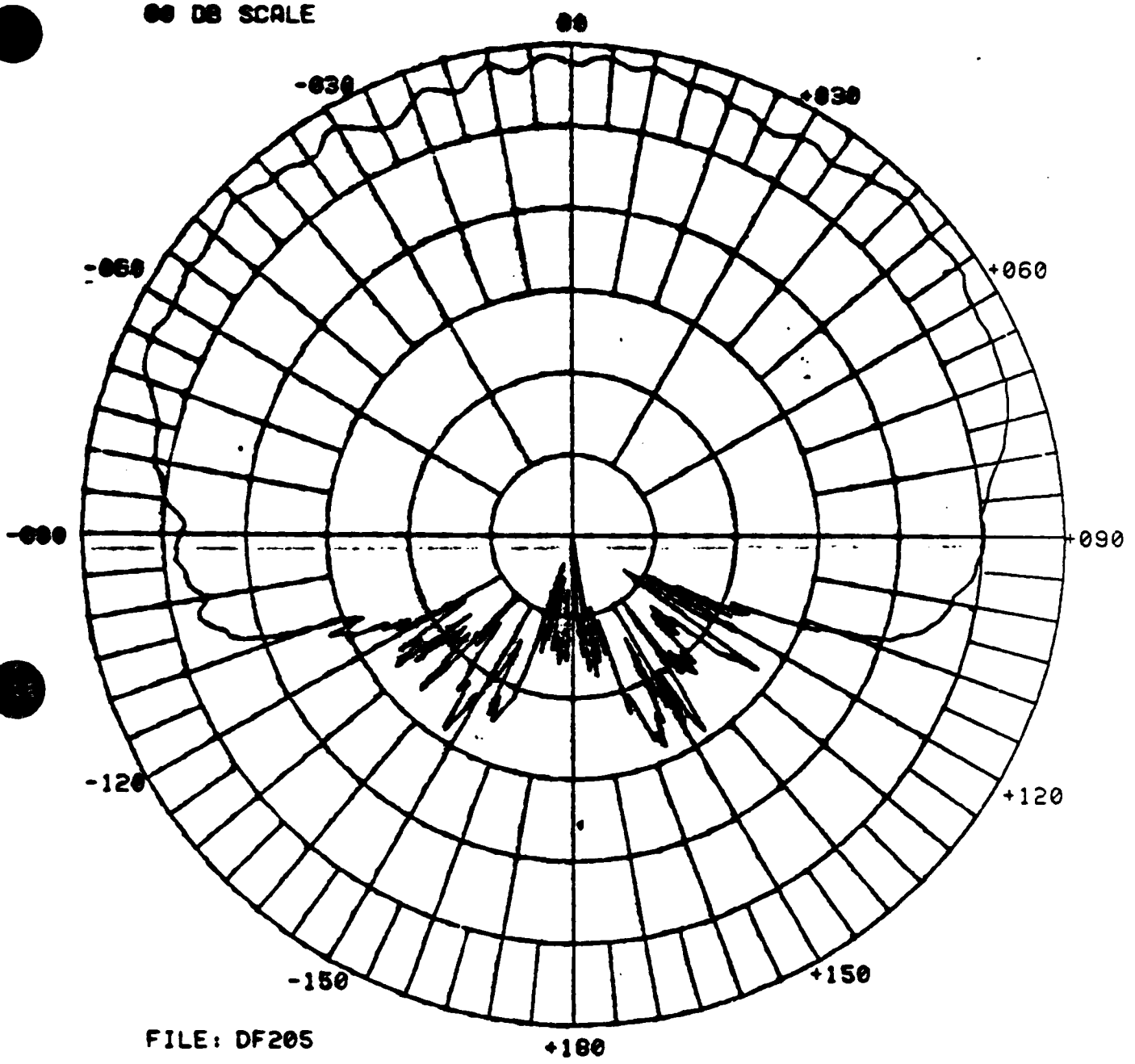
FILE: DF206

SCAN NR: 1 STEP ANGLE: 0.00 PLOT_____ AA

FREQ NR: 1 FREQ(MHZ): F7

CONFIGURATION 2

1 JUN 1984



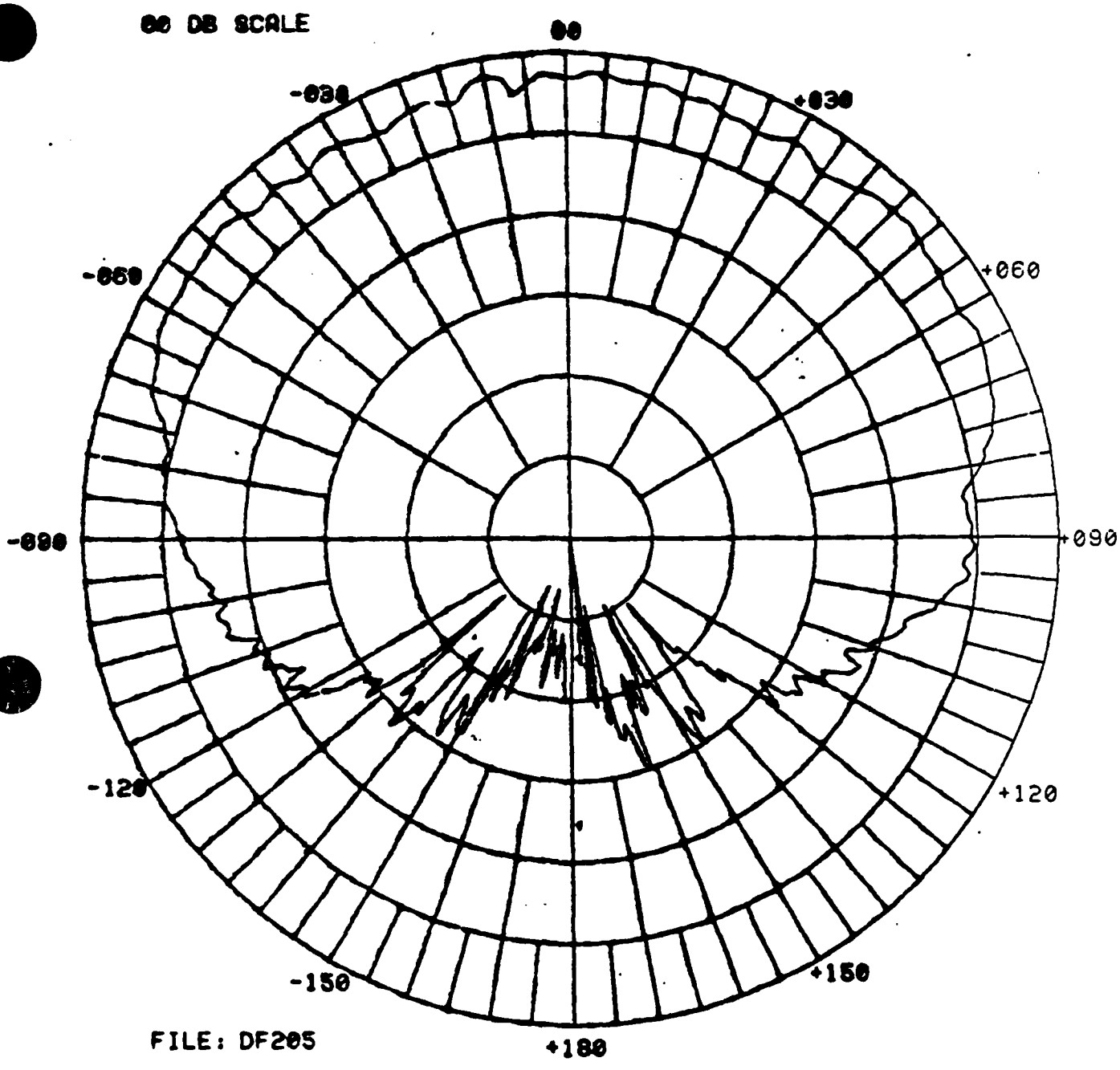
FILE: DF205

SCAN NR: 1 STEP ANGLE: 0.00 PLOT_____ AA

FREQ NR: 2 FREQ(MHZ): F8

CONFIGURATION 2

1 JUN 1984



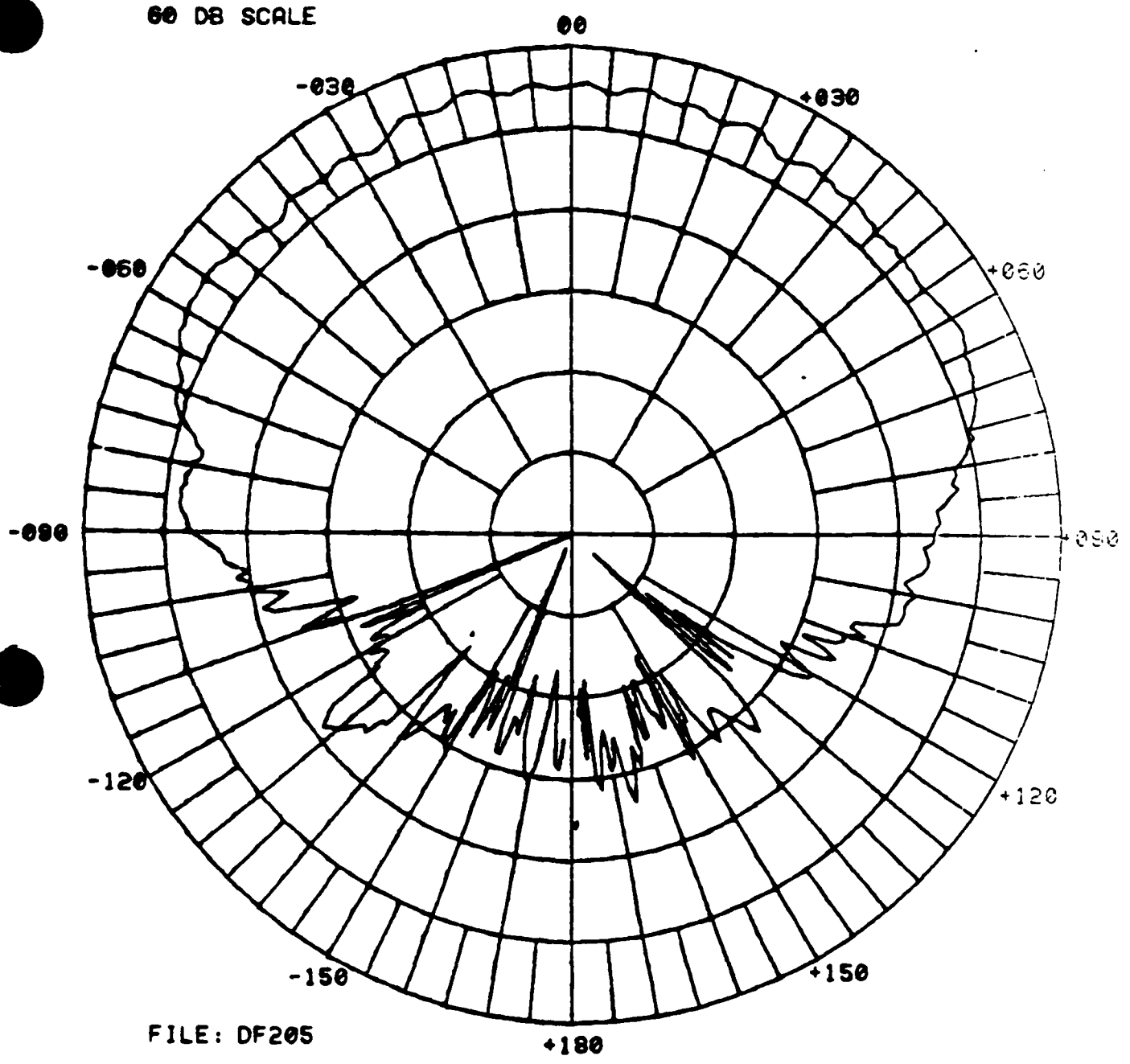
FILE: DF205

SCAN NR: 2 STEP ANGLE: 10.00 PLOT_____ AA

FREQ NR: 2 FREQ(MHZ): F8

CONFIGURATION 2

1 JUN 1984



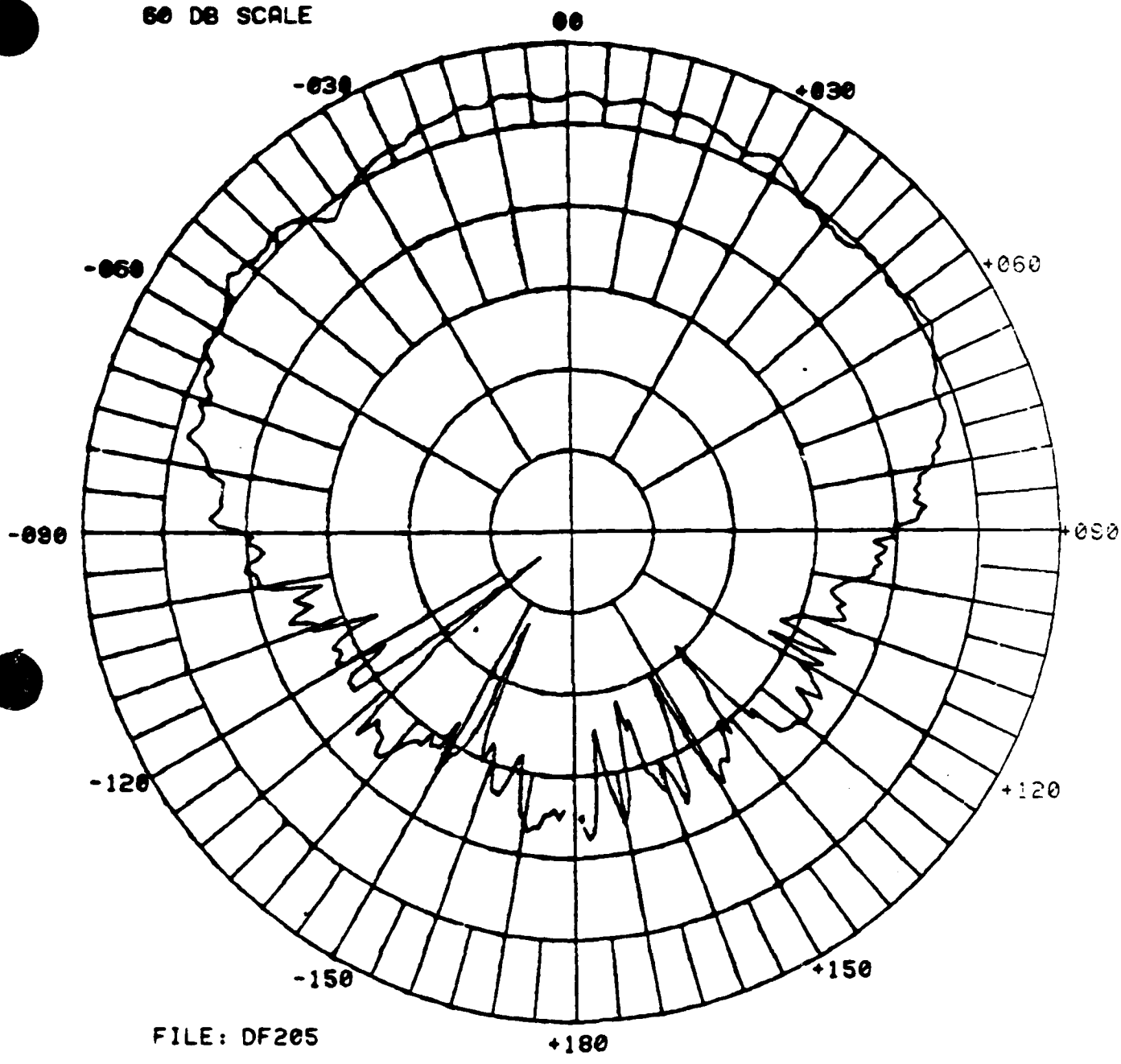
FILE: DF205

SCAN NR: 3 STEP ANGLE: 20.00 PLOT_____ AA

FREQ NR: 2 FREQ(MHZ): F8

CONFIGURATION 2

1 JUN 1984



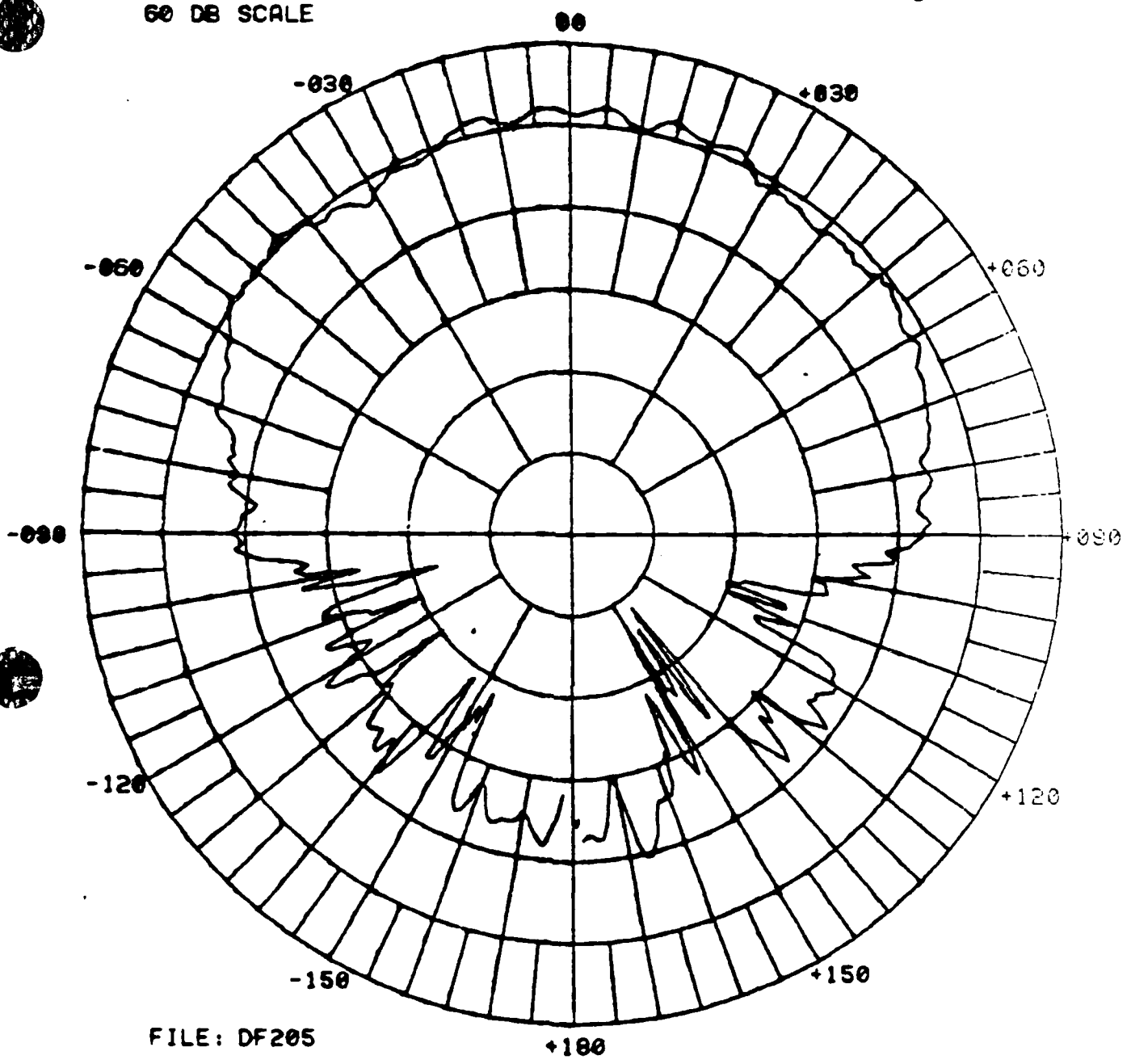
FILE: DF205

SCAN NR: 4 STEP ANGLE: 30.00 PLOT_____ AA

FREQ NR: 2 FREQ(MHZ): F8

CONFIGURATION 2

1 JUN 1984



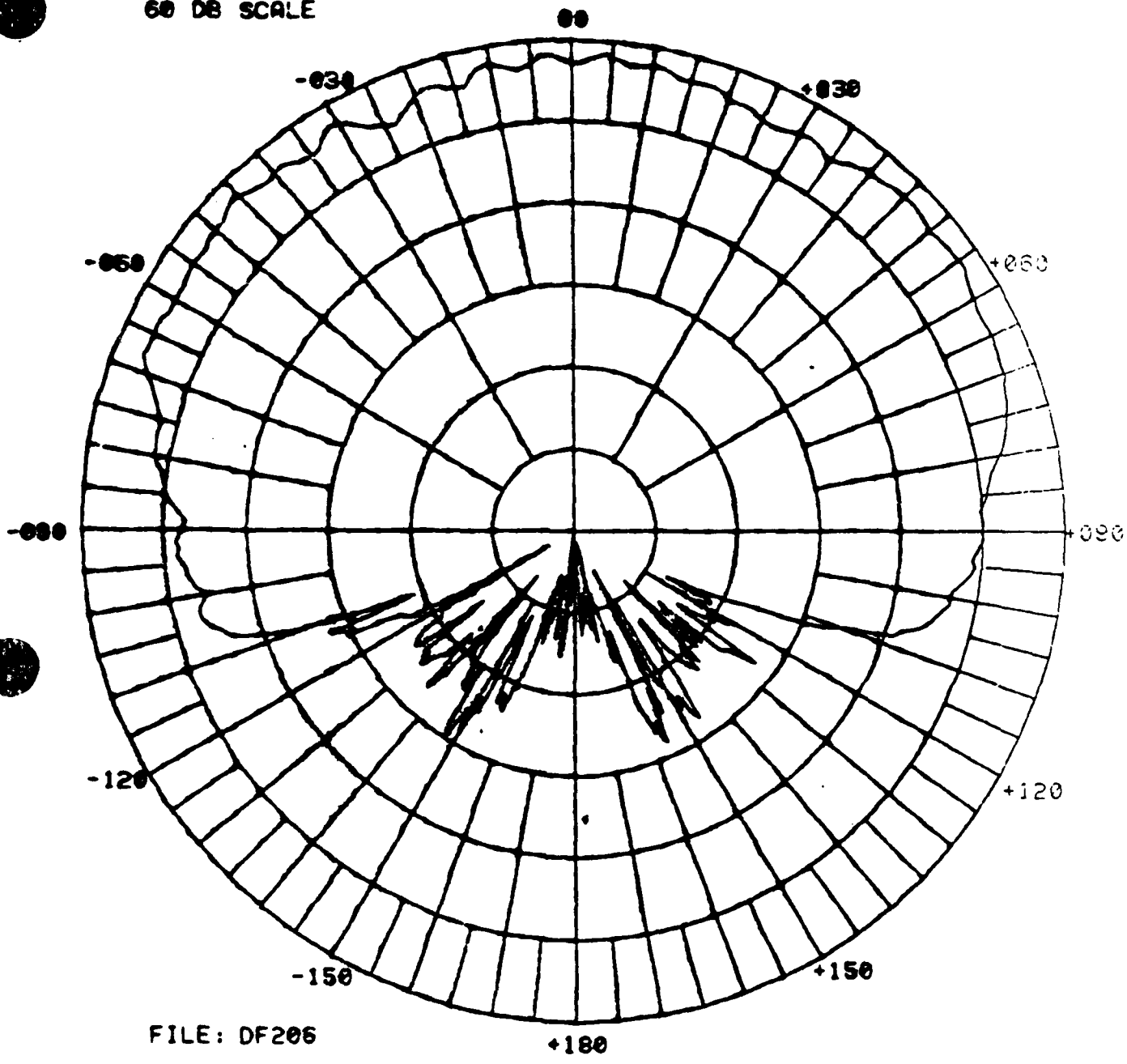
FILE: DF205

SCAN NR: 5 STEP ANGLE: 40.00 PLOT_____ AA

FREQ NR: 2 FREQ(MHZ): F8

CONFIGURATION 2

1 JUN 1984



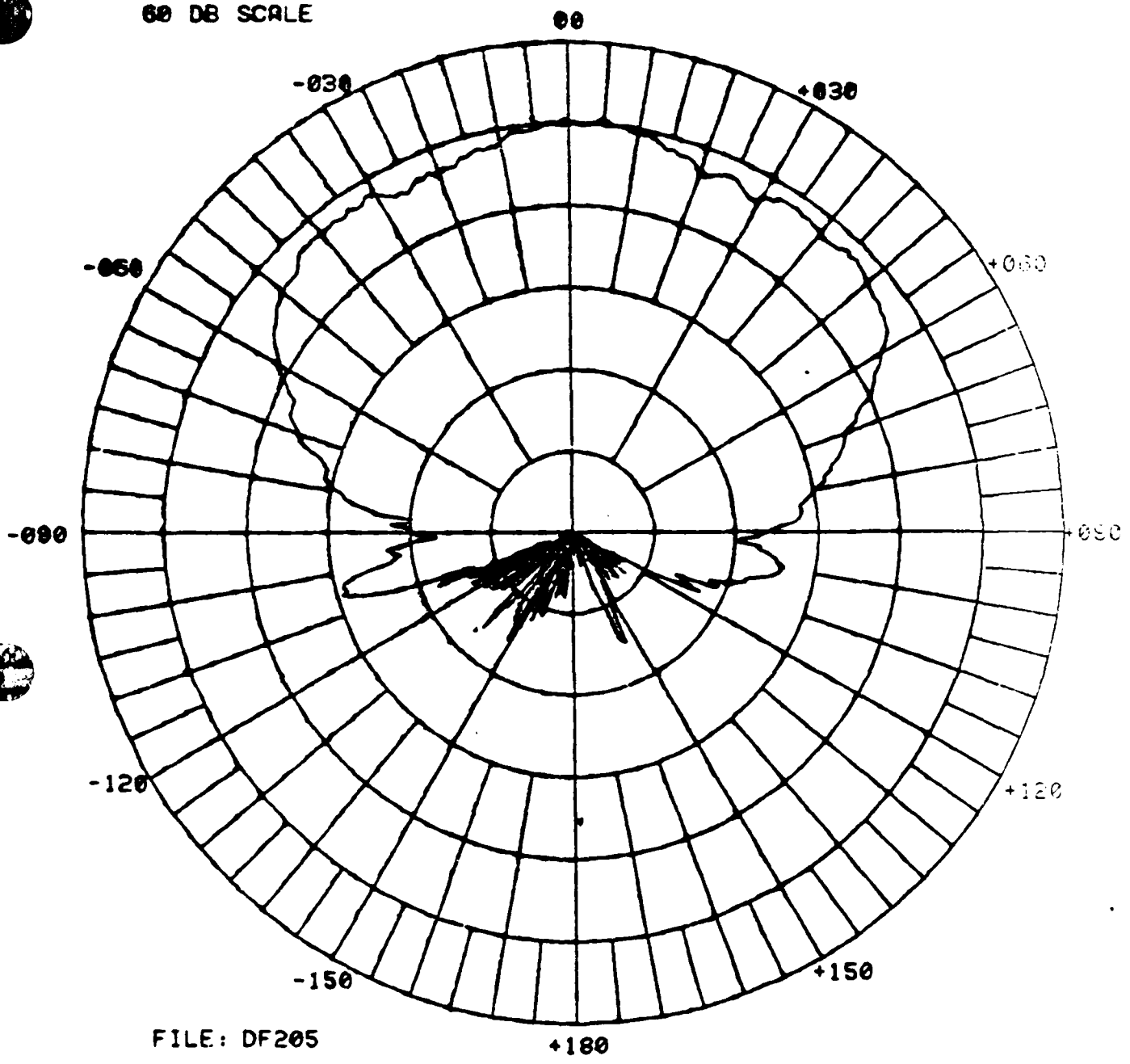
FILE: DF206

SCAN NR: 1 STEP ANGLE: 0.00 PLOT_____ AA

FREQ NR: 2 FREQ(MHZ): F8

CONFIGURATION 2

1 JUN 1984



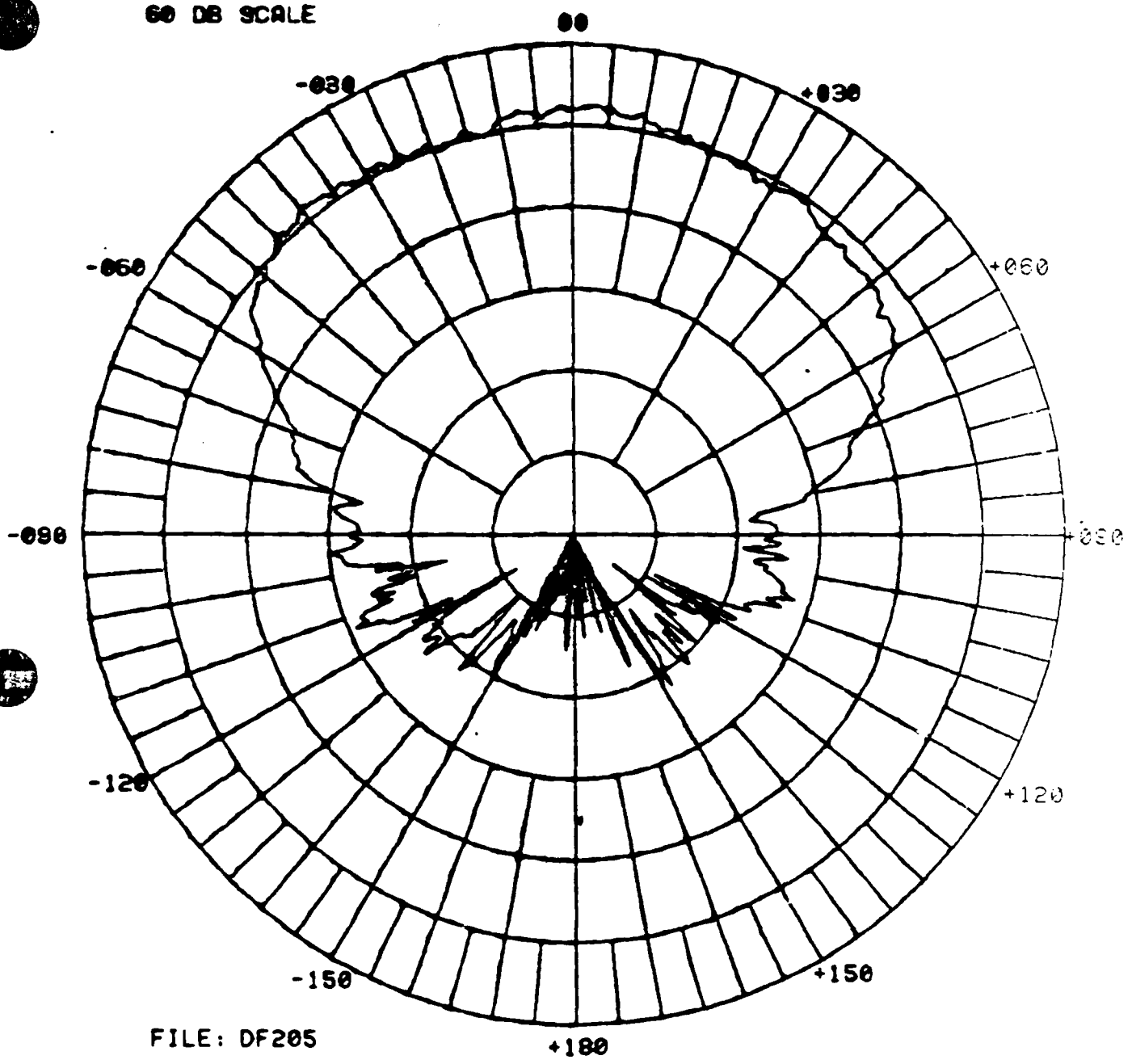
FILE: DF205

SCAN NR: 1 STEP ANGLE: 0.00 PLOT_____ AA

FREQ NR: 3 FREQ(MHZ): F9

CONFIGURATION 2

1 JUN 1984



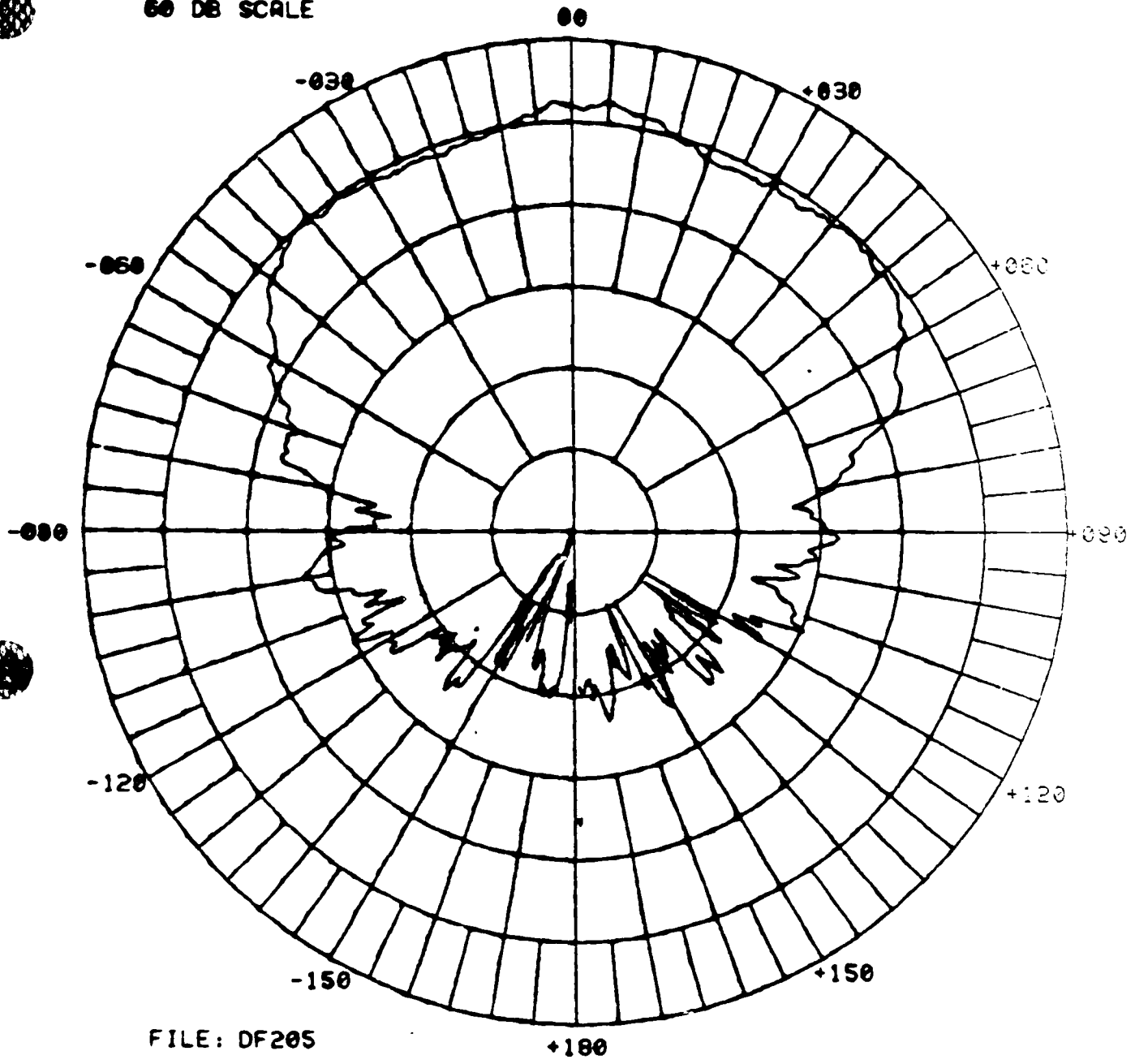
FILE: DF205

SCAN NR: 2 STEP ANGLE: 10.00 PLOT_____ AA

FREQ NR: 3 FREQ(MHZ): F9

CONFIGURATION 2

1 JUN 1984



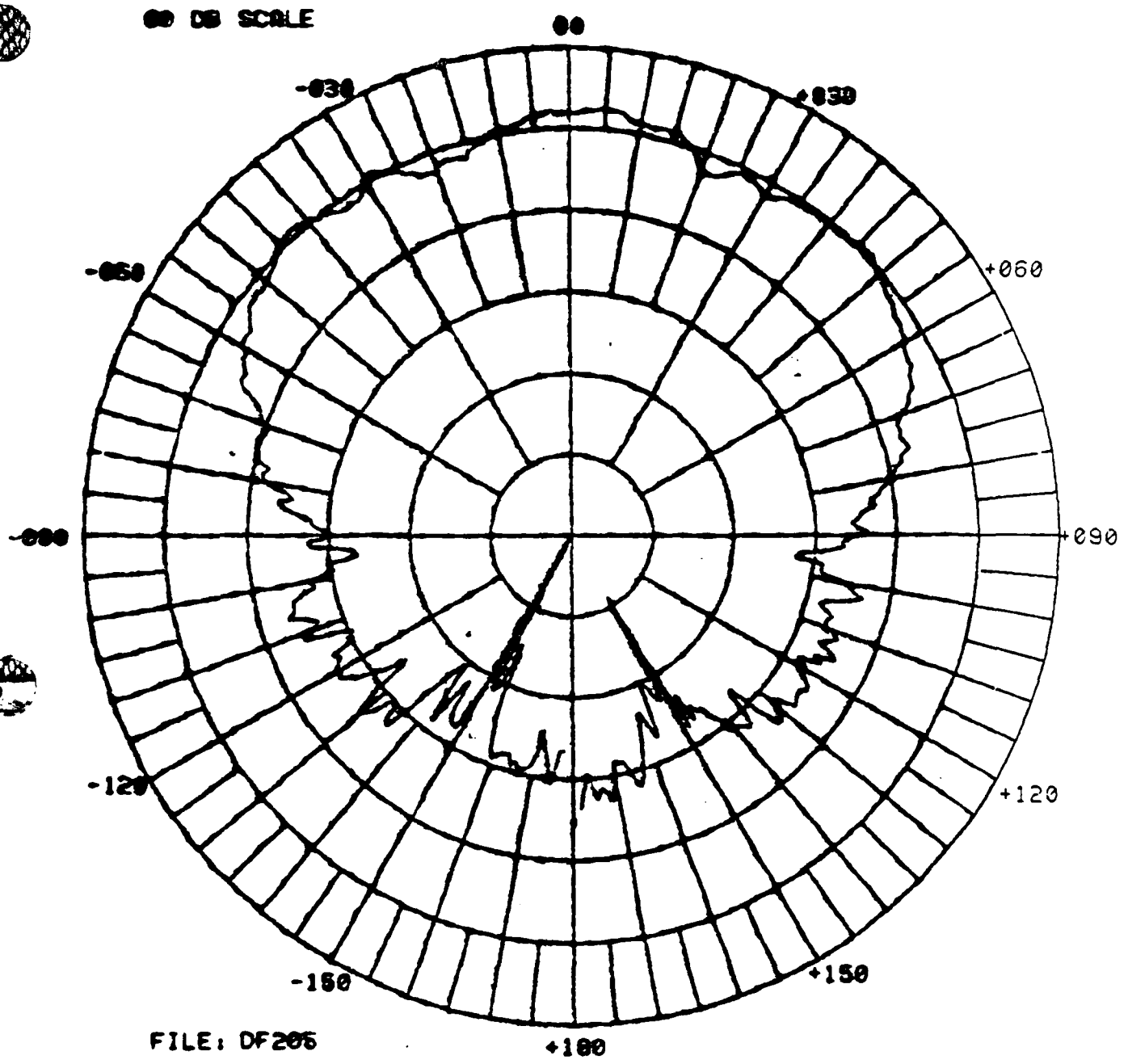
FILE: DF205

SCAN NR: 3 STEP ANGLE: 20.00 PLOT_____ AA

FREQ NR: 3 FREQ(MHZ): F9

CONFIGURATION 2

1 JUN 1984



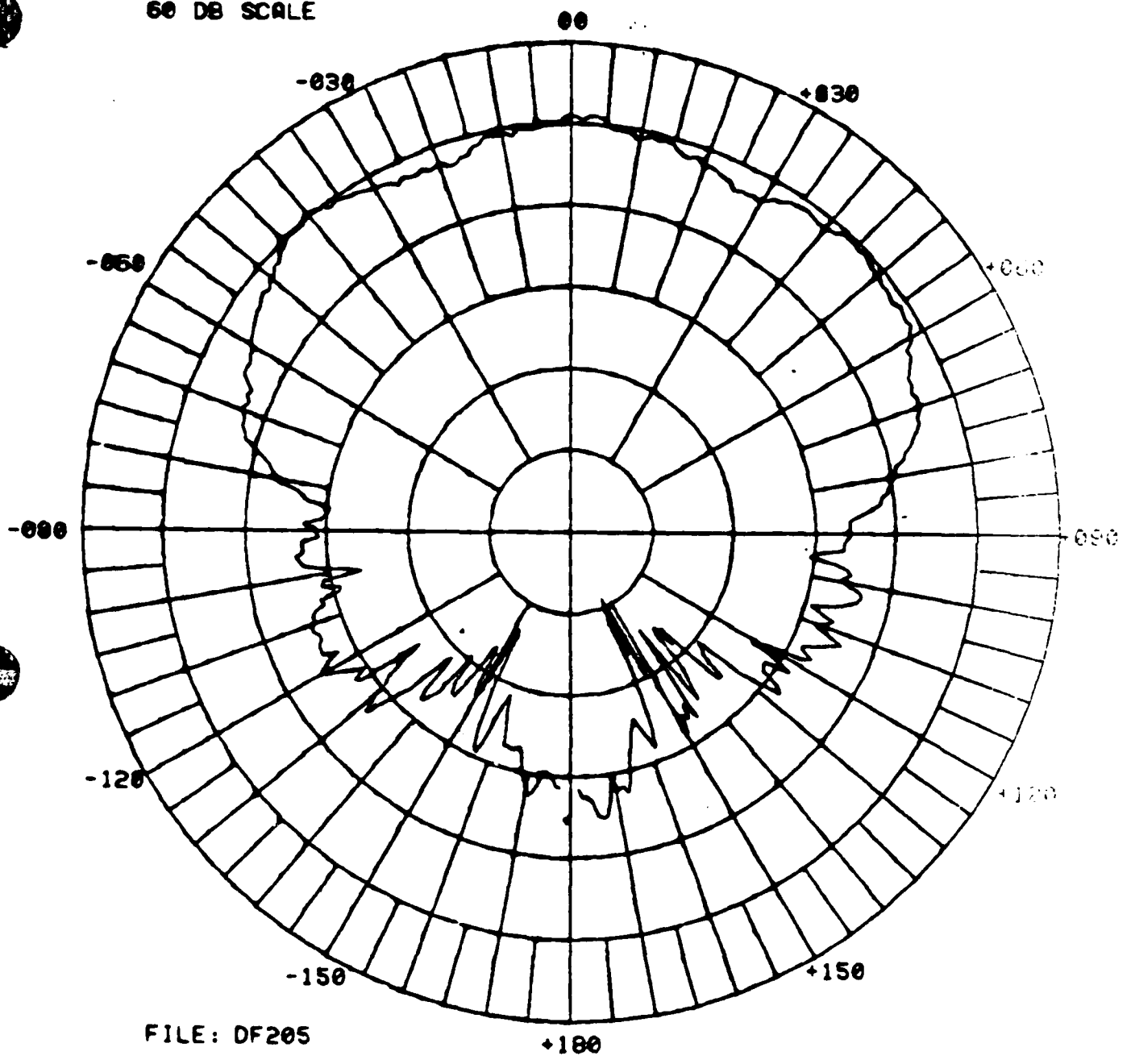
FILE: DF205

SCAN NR: 4 STEP ANGLE: 30.00 PLOT_____ AA

FREQ NR: 3 FREQ(MHZ): F9

CONFIGURATION 2

1 JUN 1984



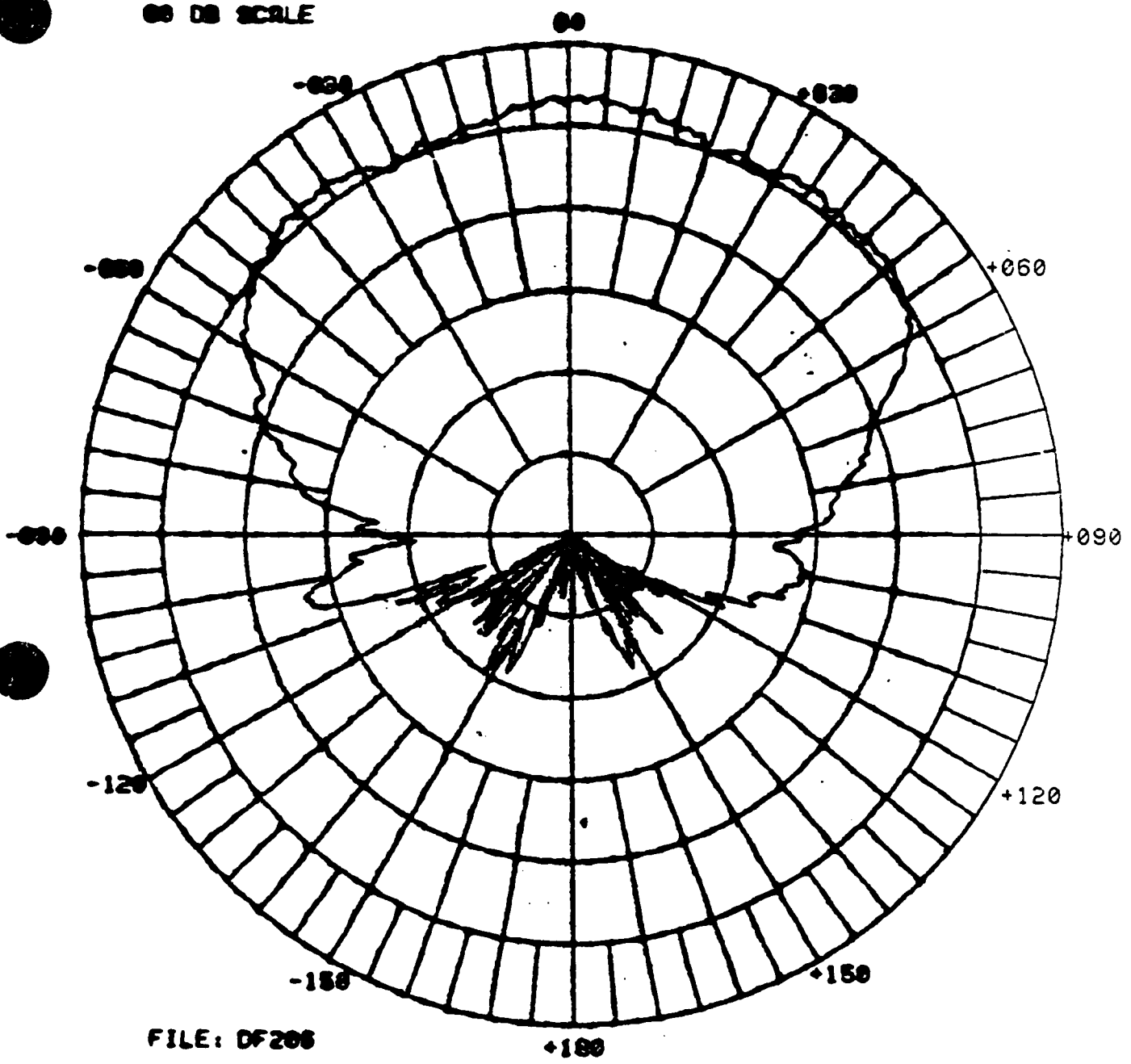
FILE: DF205

SCAN NR: 5 STEP ANGLE: 40.00 PLOT_____ AA

FREQ NR: 3 FREQ(MHZ): F9

CONFIGURATION 2

1 JUN 1884



FILE: DF206

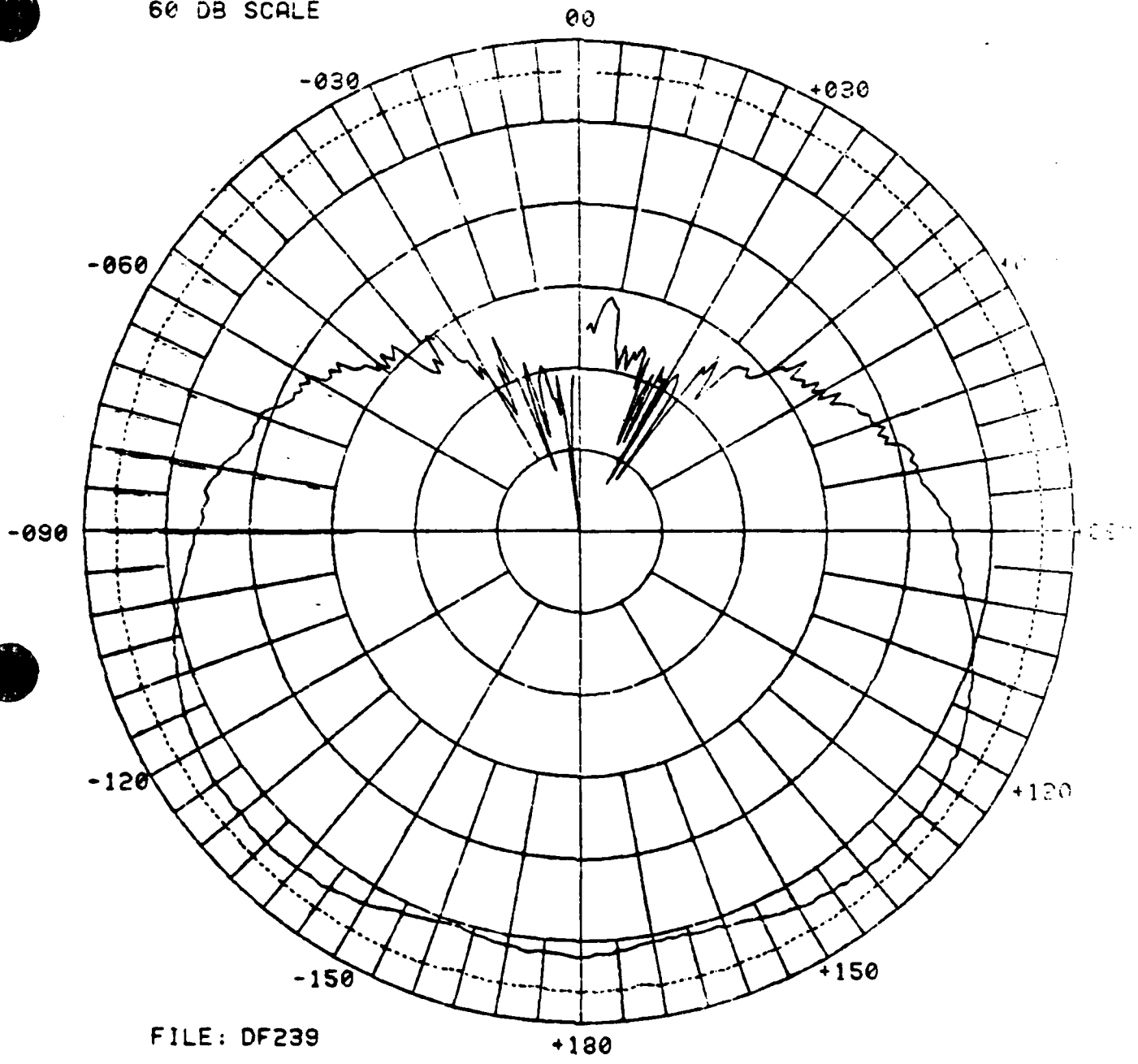
SCAN NR: 1 STEP ANGLE: 0.00 PLOT_____ AA

FREQ NR: 3 FREQ(MHZ): F9

CONFIGURATION 2

1 JUN 1984

60 DB SCALE



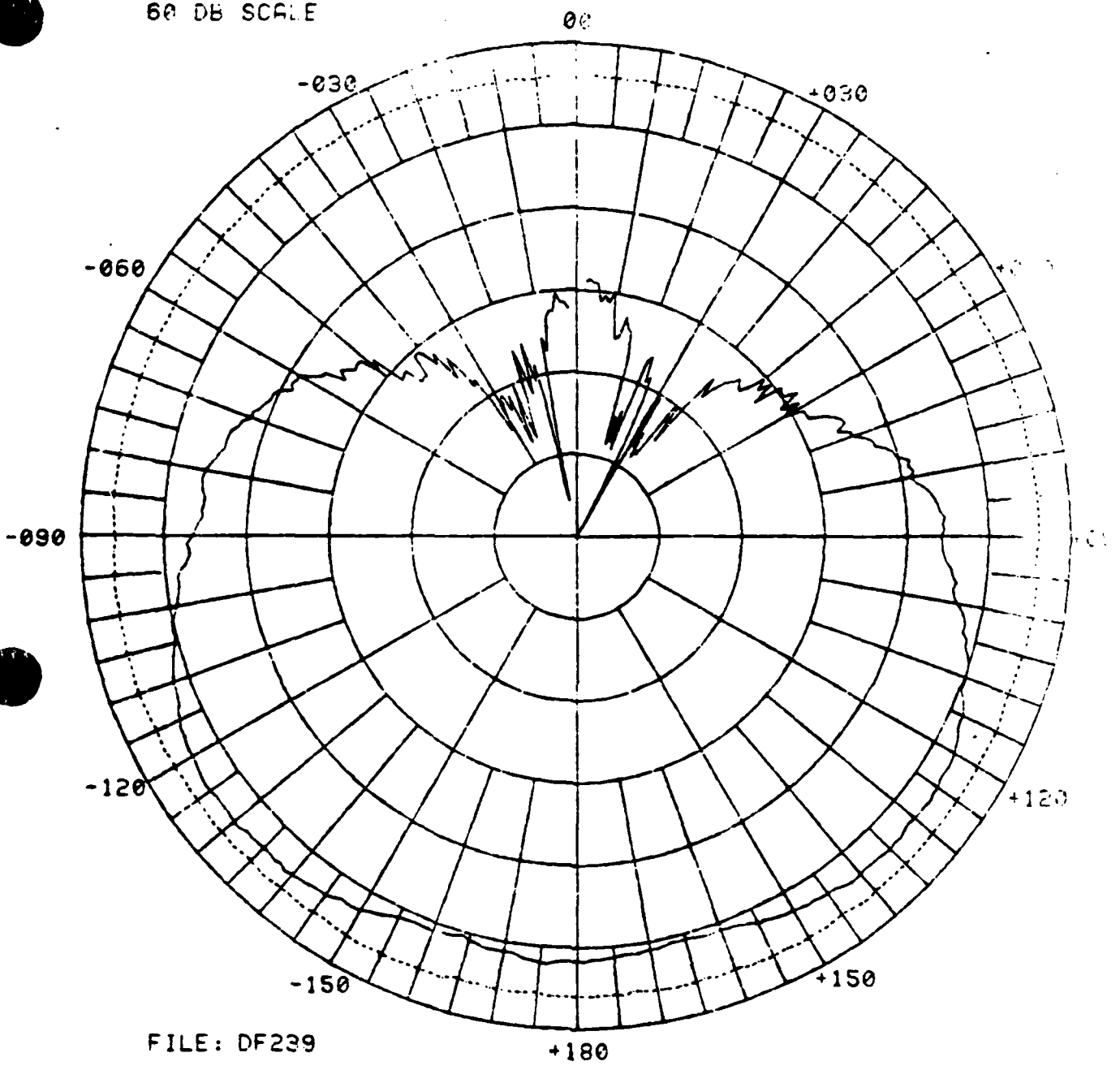
FILE: DF239

SCAN NR: 1 STEP ANGLE: 0.00 PLOT_____ AA

FREQ NR: 1 FREQ(MHZ): F7 PLOT..... AB

CONFIGURATION 5

12 JULY 1984



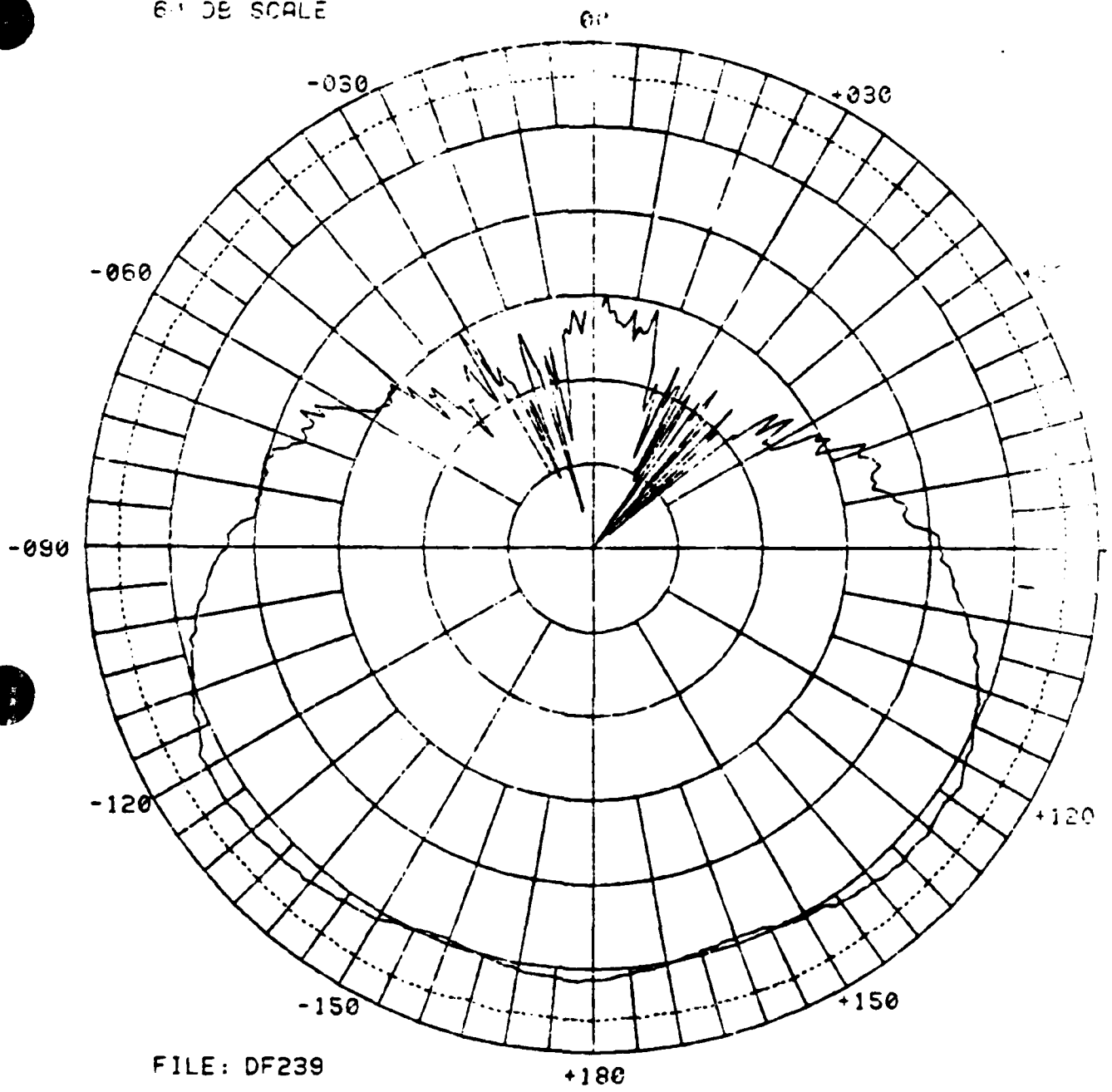
FILE: DF239

SCAN NR: 2 STEP ANGLE: +10.00 PLOT_____ AA

FREQ NR: 1 FREQ(MHZ): F7 PLOT..... AB

CONFIGURATION 5

12 JULY 1984



FILE: DF239

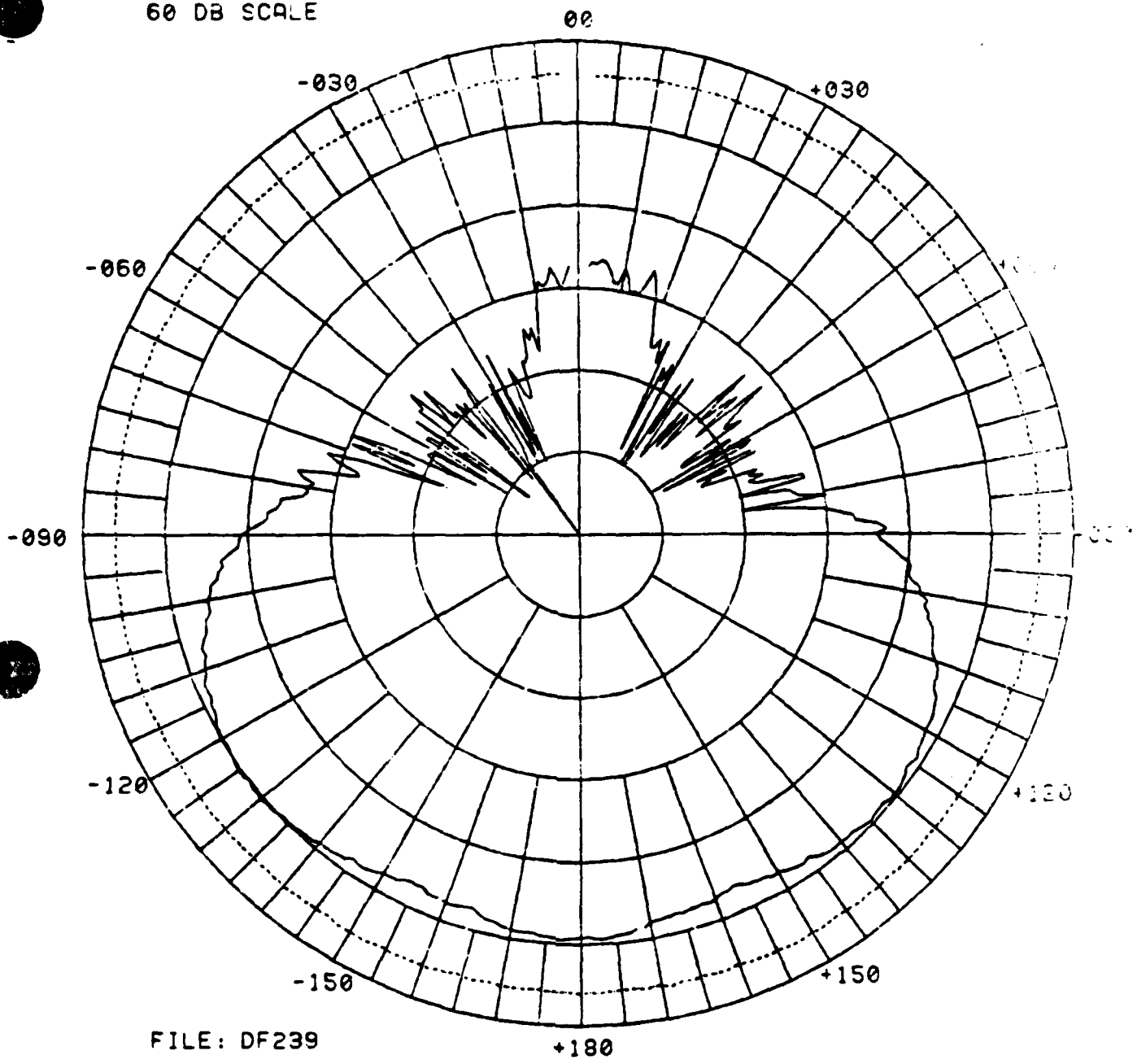
SCAN NR: 3 STEP ANGLE: +20.00 PLOT_____ AA

FREQ NR: 1 FREQ(MHZ): F7 PLOT..... AB

CONFIGURATION 5

12 JULY 1984

60 DB SCALE



FILE: DF239

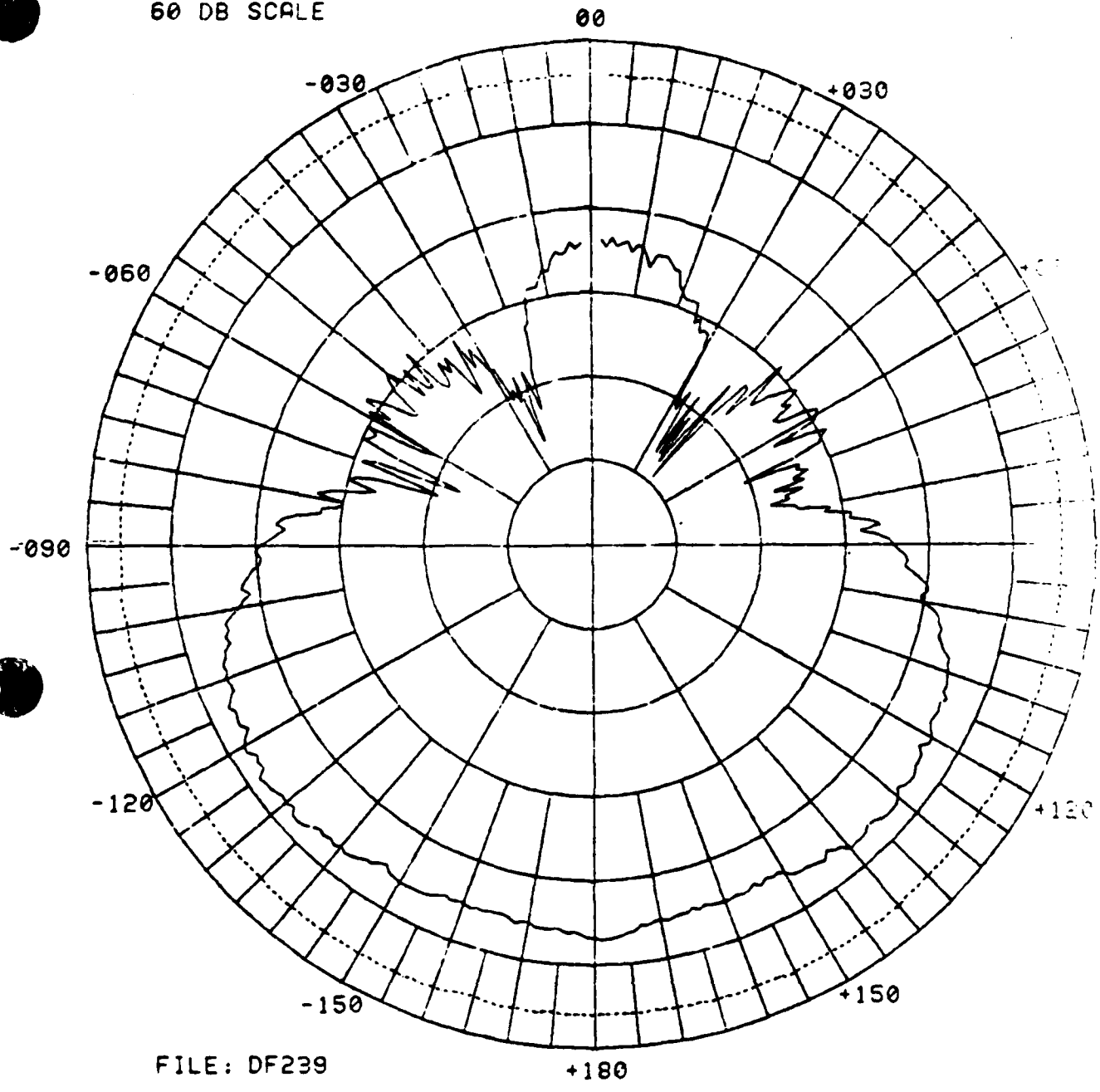
SCAN NR: 4 STEP ANGLE: +30.00 PLOT_____ AA

FREQ NR: 1 FREQ(MHZ): F7 PLOT..... AB

CONFIGURATION 5

12 JULY 1984

60 DB SCALE



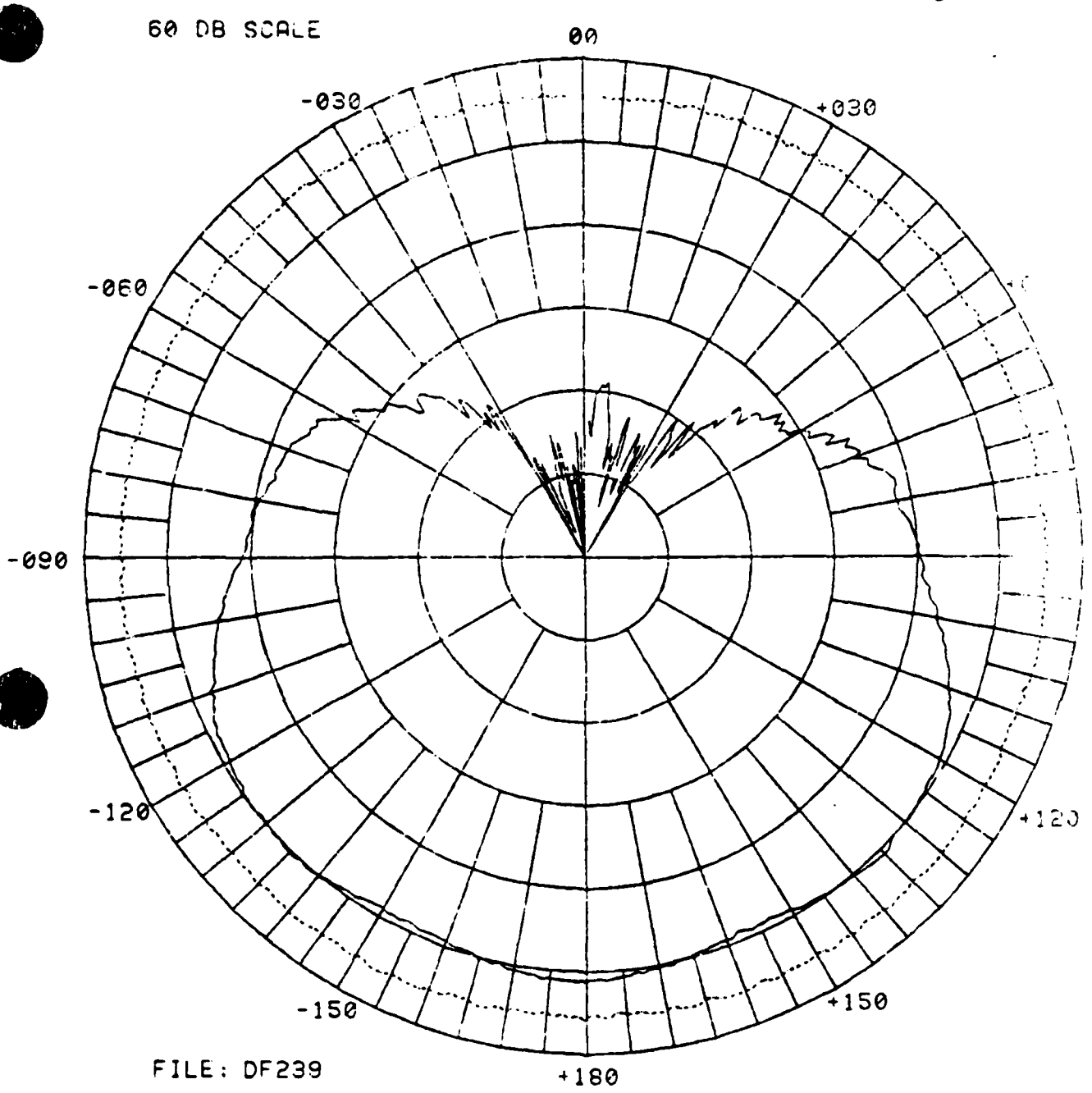
FILE: DF239

SCAN NR: 5 STEP ANGLE: 40.00 PLOT_____ AA

FREQ NR: 1 FREQ(MHZ): F7 PLOT..... AB

CONFIGURATION 5

12 JULY 1984



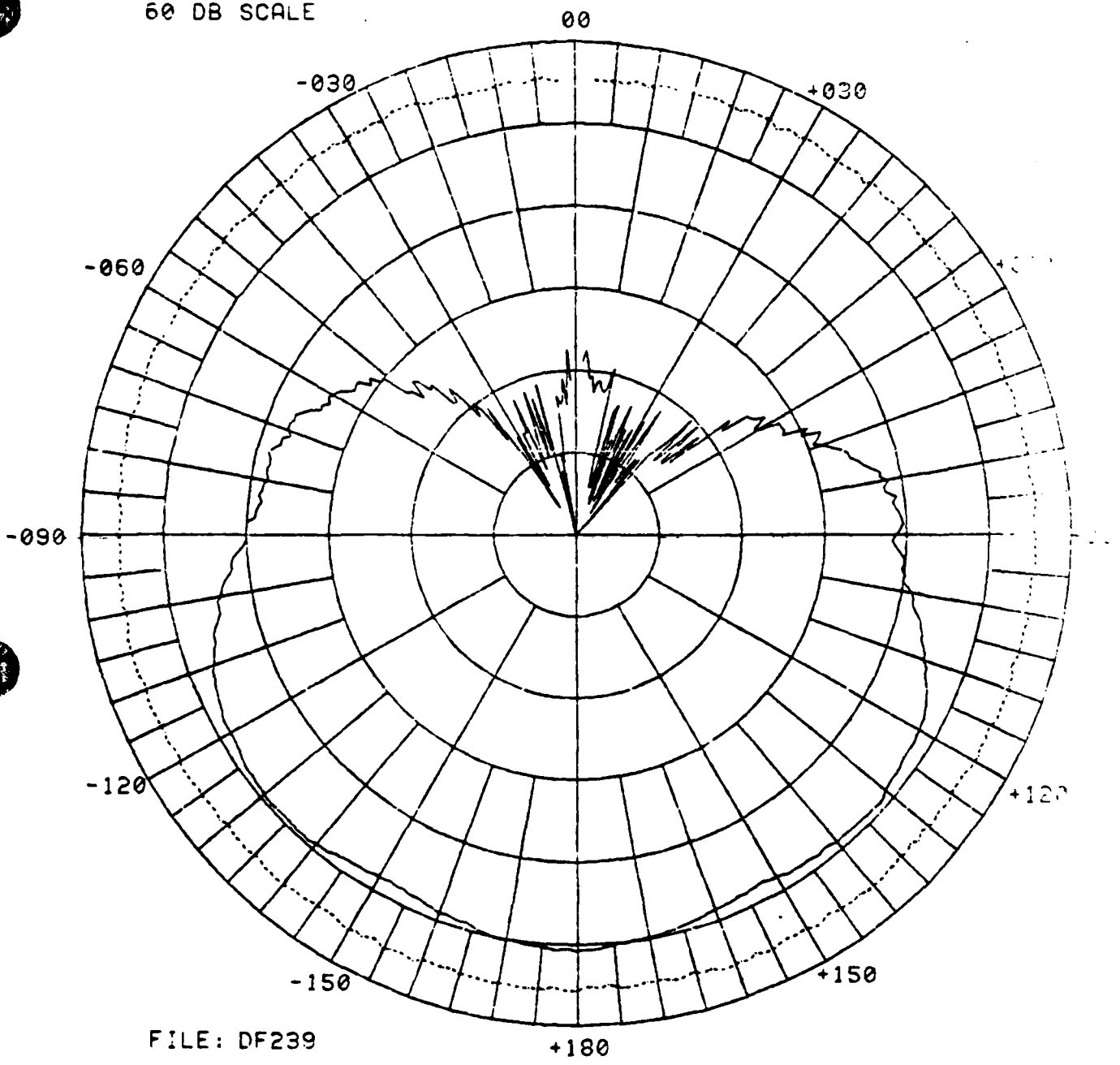
FILE: DF239

SCAN NR: 1 STEP ANGLE: 0.00 PLOT_____ AA

FREQ NR: 2 FREQ(MHZ): F8 PLOT..... AB

CONFIGURATION 5

12 JULY 1984



FILE: DF239

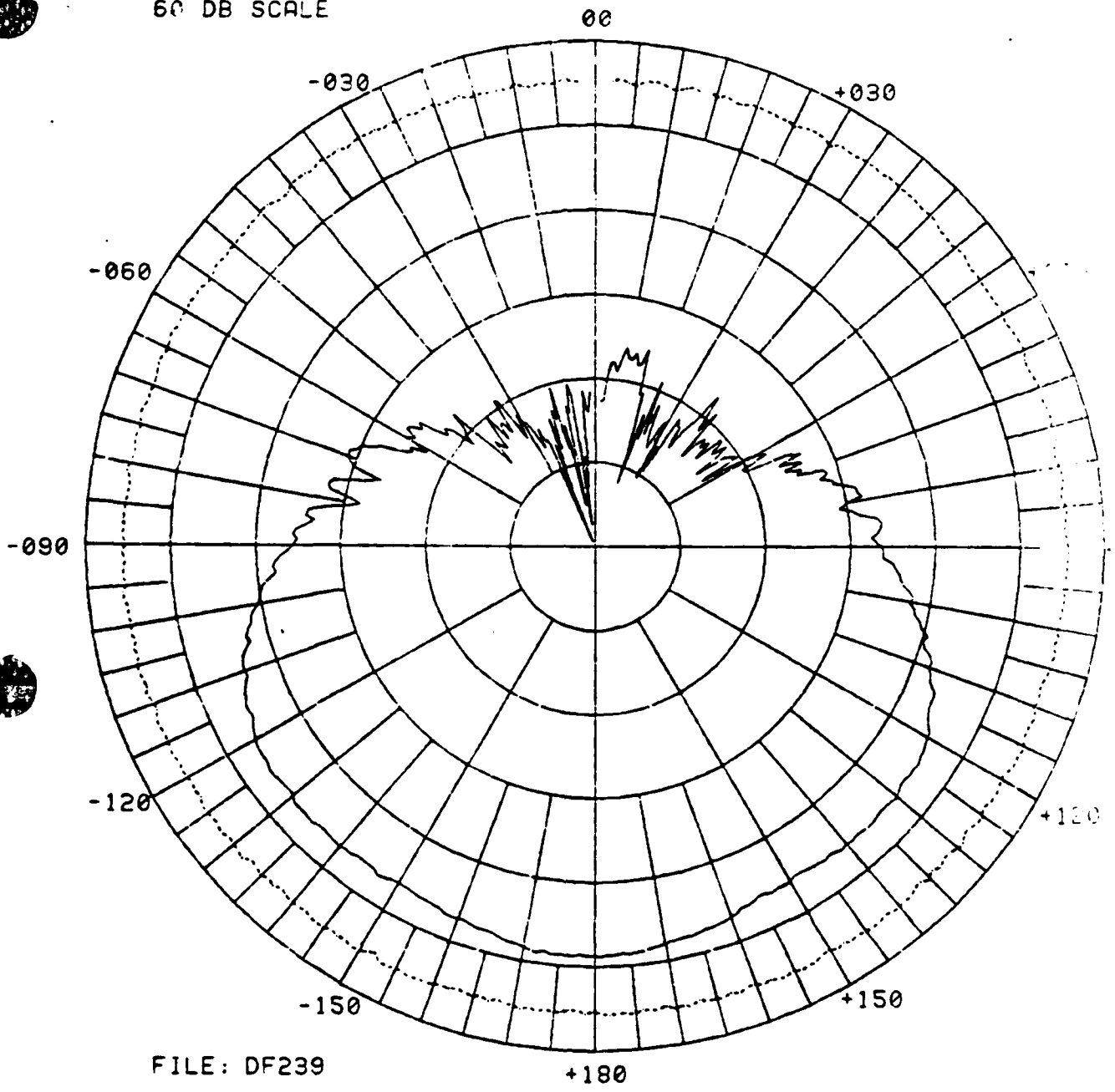
SCAN NR: 2 STEP ANGLE: +10.00 PLOT_____ AA

FREQ NR: 2 FREQ(MHZ): F8 PLOT..... AB

CONFIGURATION 5

12 JULY 1984

60 DB SCALE



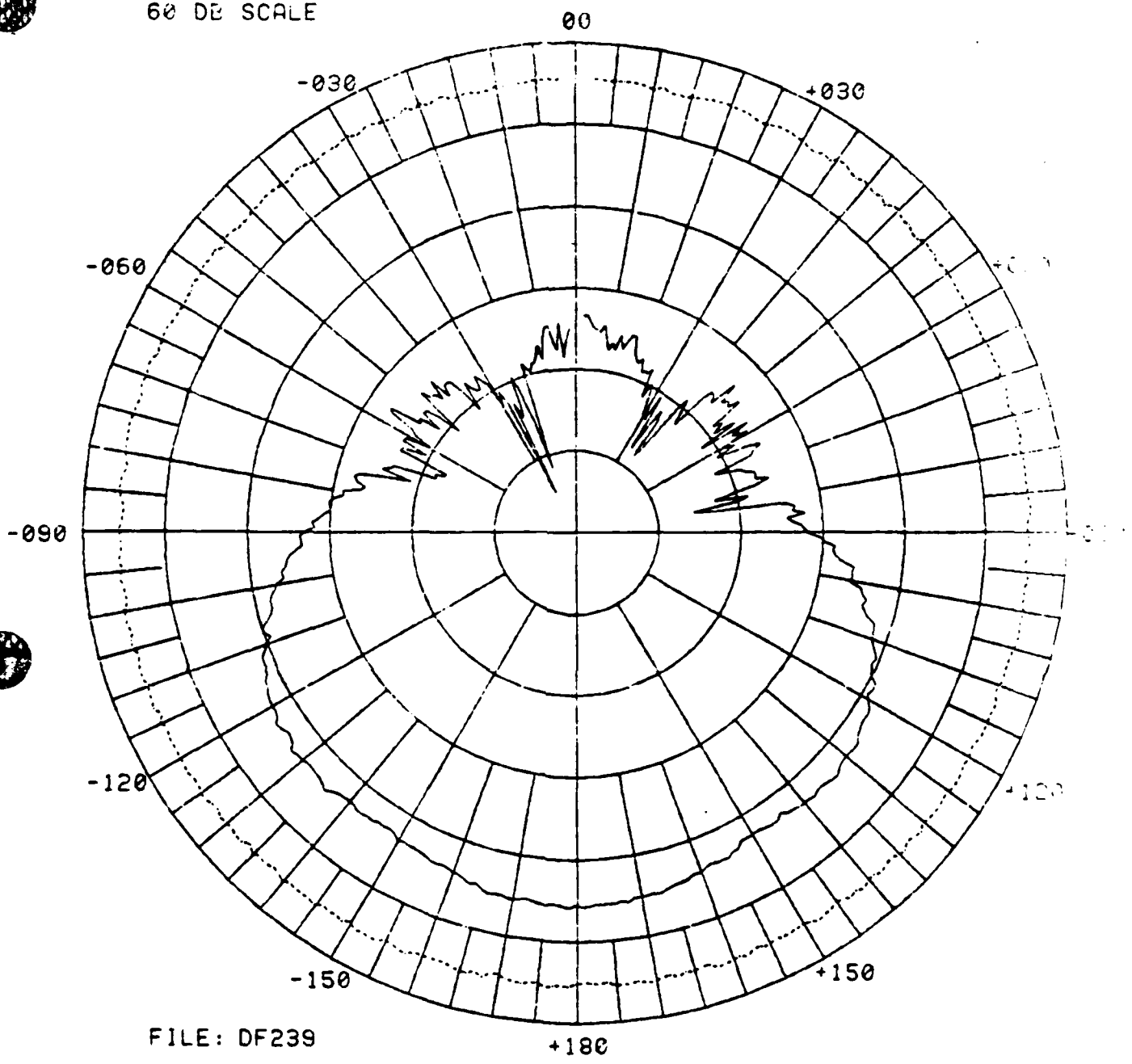
FILE: DF239

SCAN NR: 3 STEP ANGLE: 120.00 PLOT_____ AA

FREQ NR: 2 FREQ(MHZ): F8 PLOT..... AB

CONFIGURATION 5

12 JULY 1984



FILE: DF239

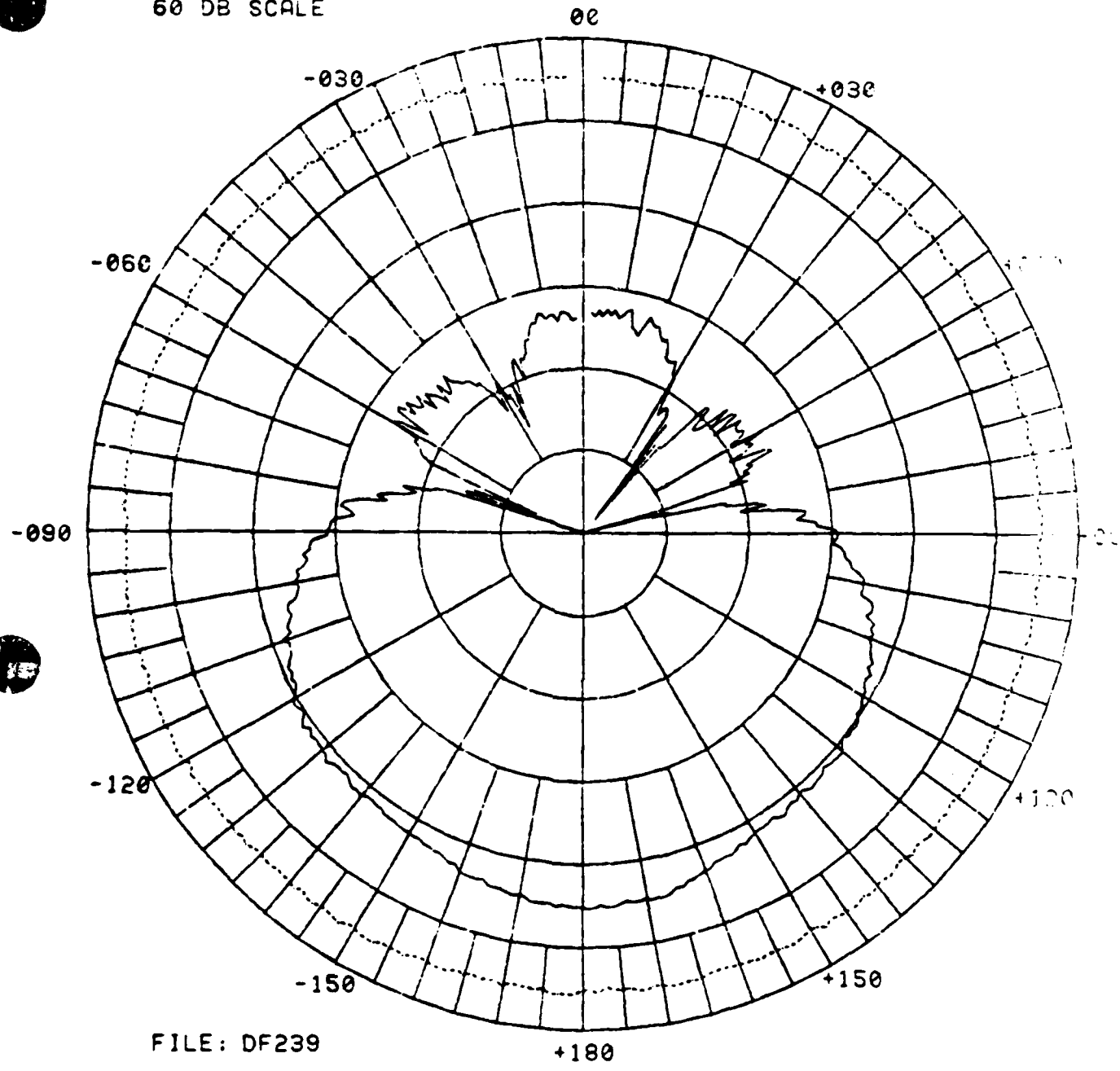
SCAN NR: 4 STEP ANGLE: +30.00 PLOT_____ AA

FREQ NR: 2 FREQ(MHZ): F8 PLOT..... AB

CONFIGURATION 5

12 JULY 1984

60 DB SCALE



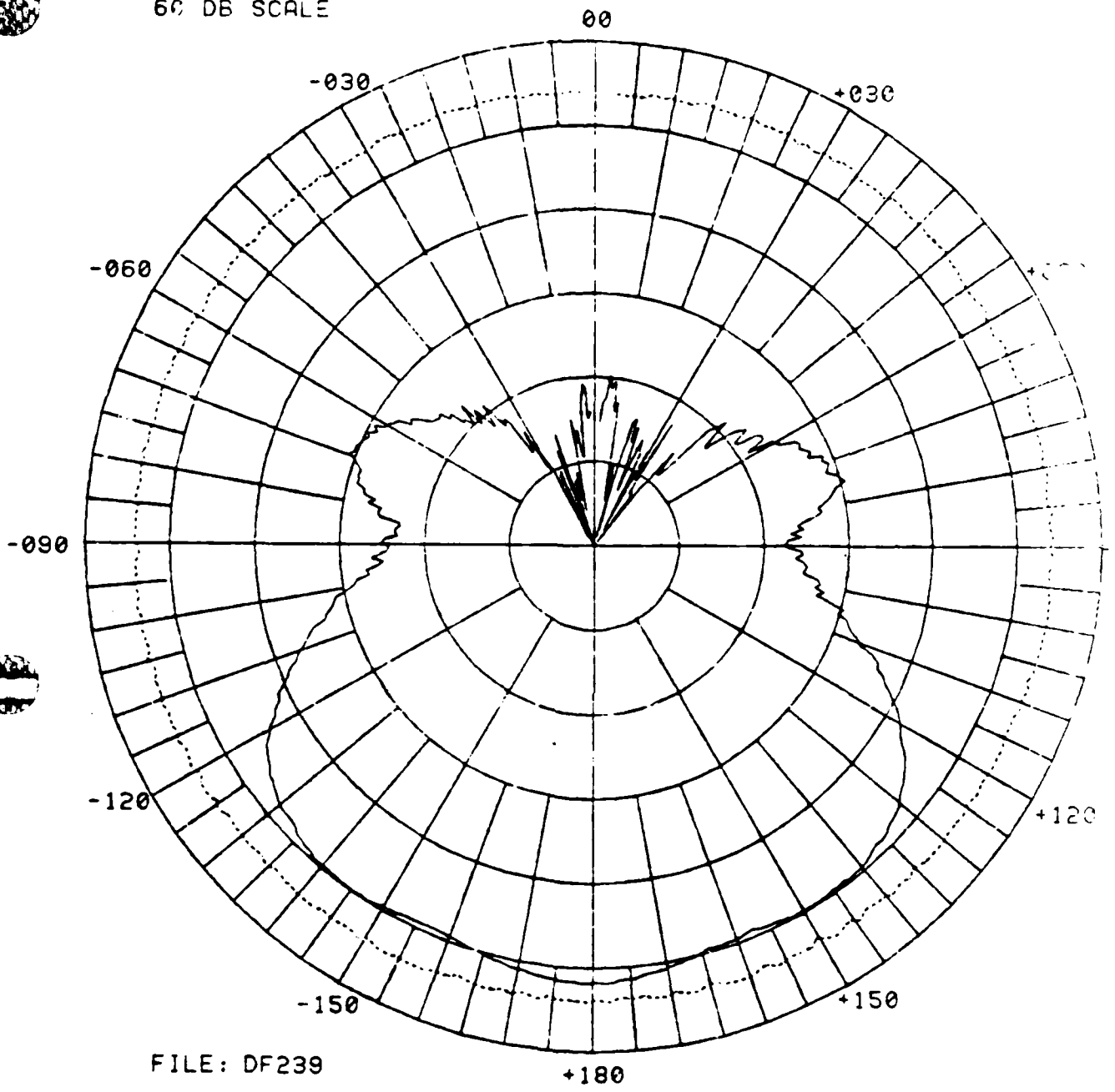
FILE: DF239

SCAN NR: 5 STEP ANGLE: 40.0¢ PLOT_____ AA

FREQ NR: 2 FREQ(MHZ): F8 PLOT..... AB

CONFIGURATION 5

12 JULY 1984



FILE: DF239

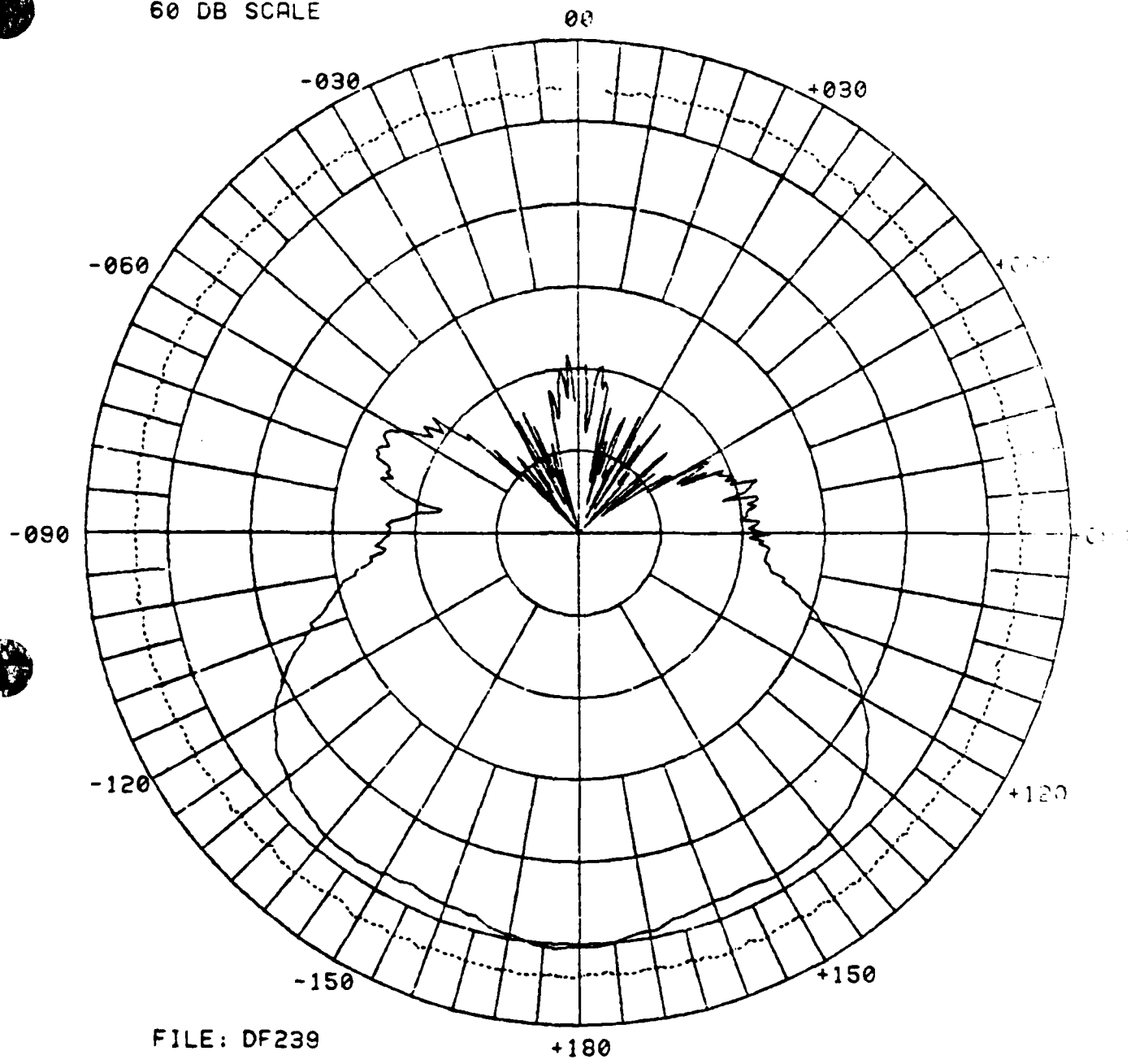
SCAN NR: 1 STEP ANGLE: 0.00 PLOT____ AA

FREQ NR: 3 FREQ(MHZ): F9 PLOT..... AB

CONFIGURATION 5

12 JULY 1984

60 DB SCALE



FILE: DF239

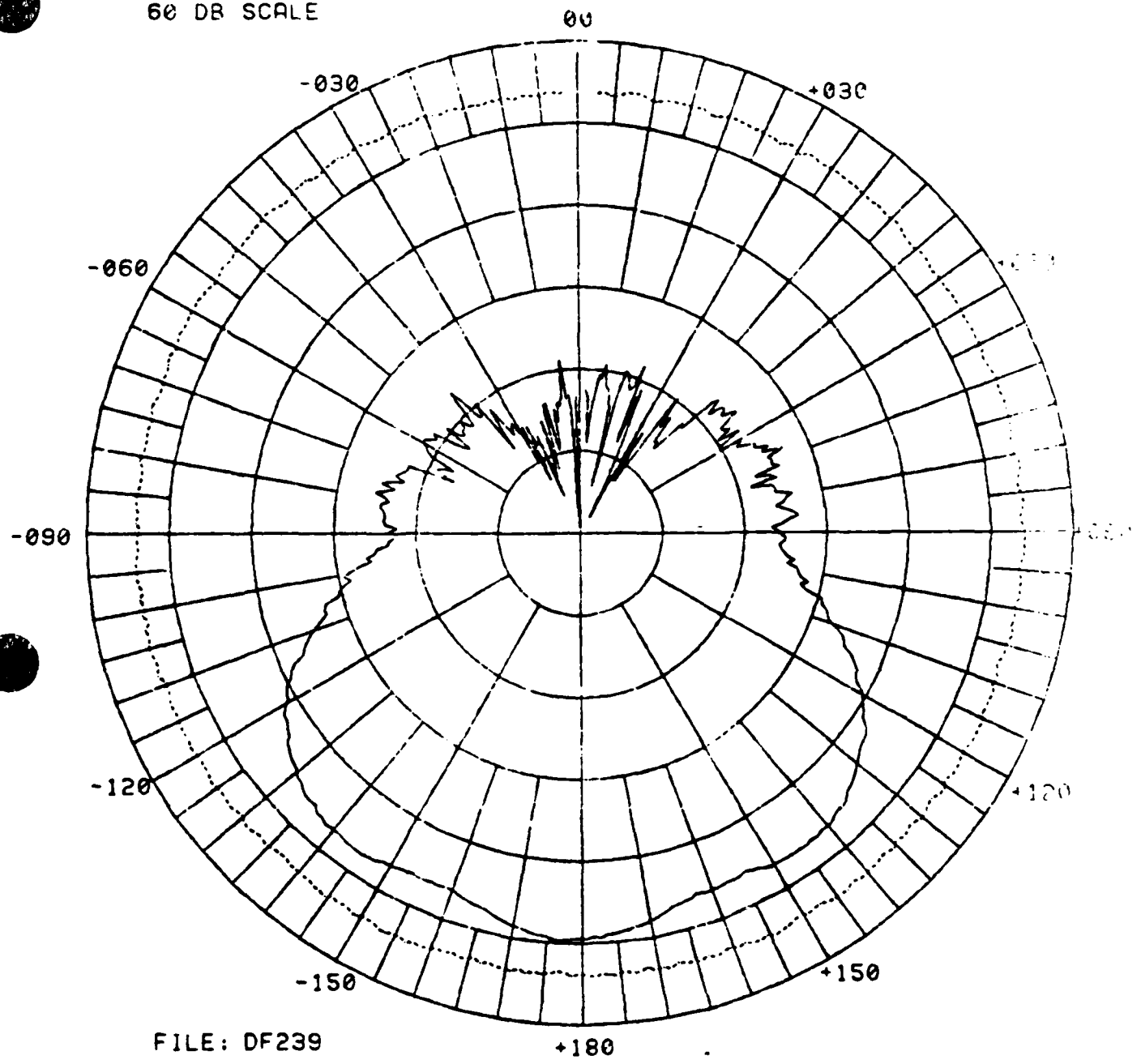
SCAN NR: 2 STEP ANGLE: +10.00 PLOT_____ AA

FREQ NR: 3 FREQ(MHZ): F9 PLOT..... AB

CONFIGURATION 5

12 JULY 1984

60 DB SCALE



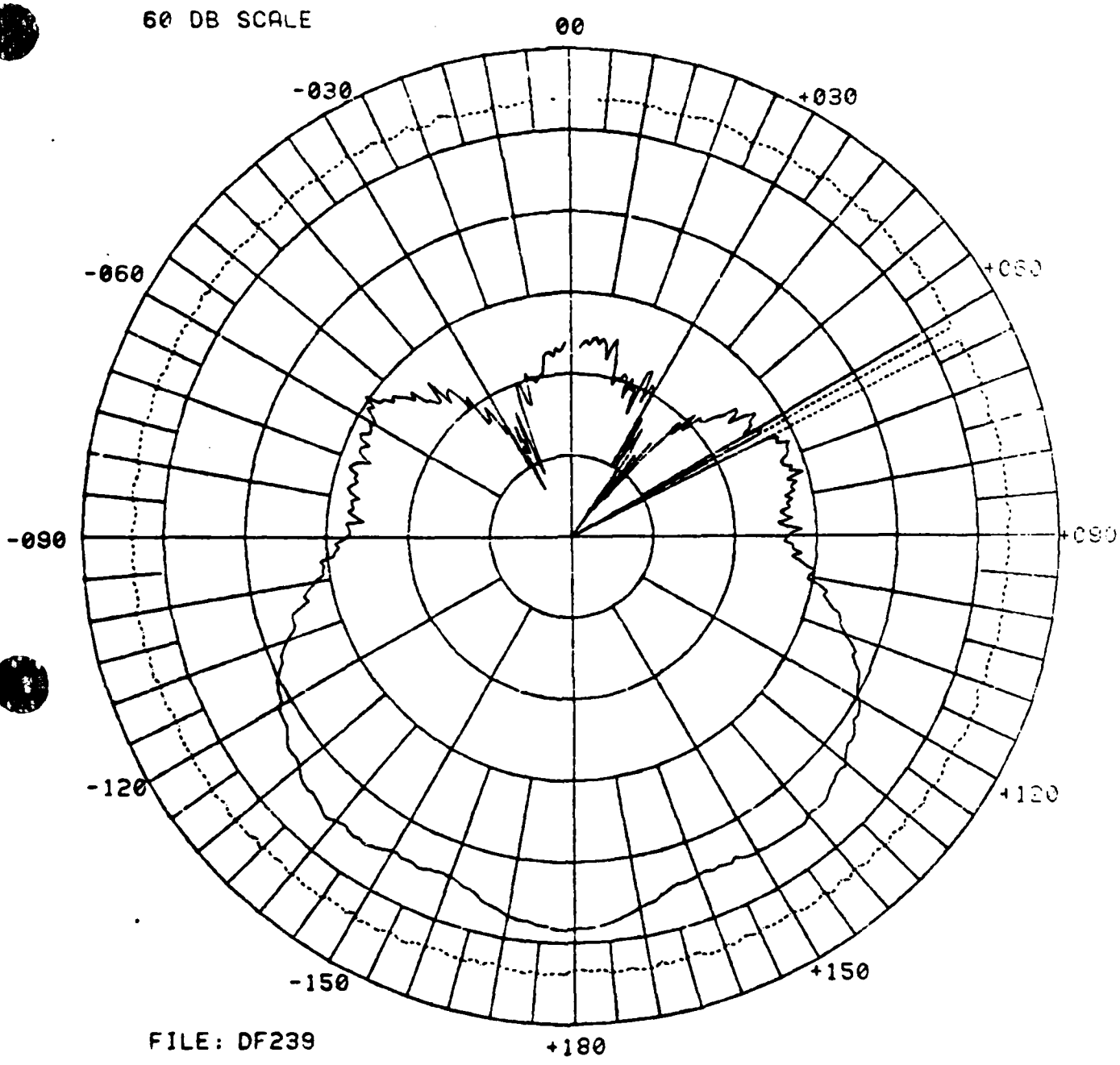
FILE: DF239

SCAN NR: 3 STEP ANGLE: +20.00 PLOT_____ AA

FREQ NR: 3 FREQ(MHZ): F9 PLOT..... AB

CONFIGURATION 5

12 JULY 1984



FILE: DF239

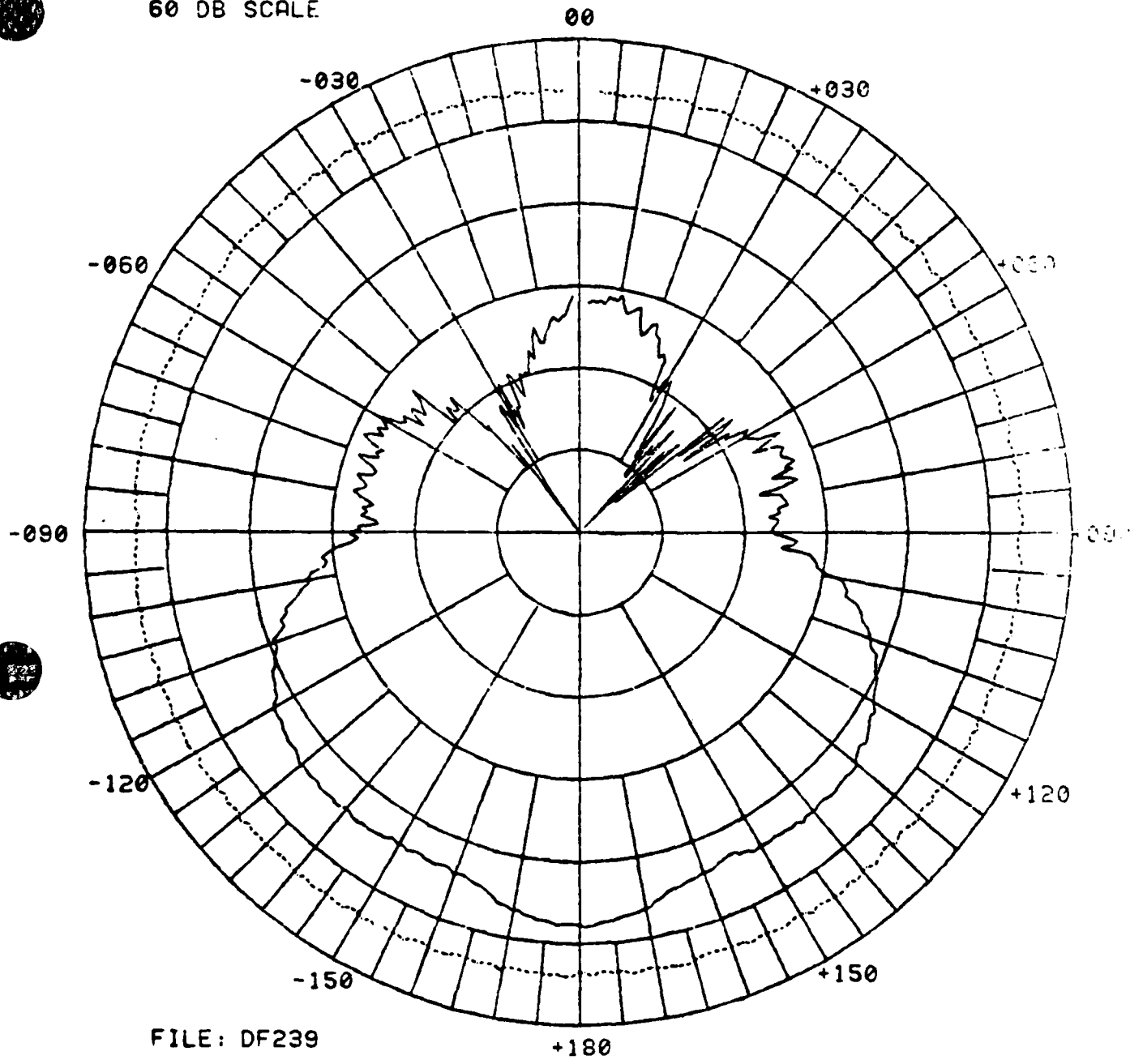
SCAN NR: 4 STEP ANGLE: +30.00 PLOT_____ AA

FREQ NR: 3 FREQ(MHZ): F9 PLOT..... AB

CONFIGURATION 5

12 JULY 1984

60 DB SCALE



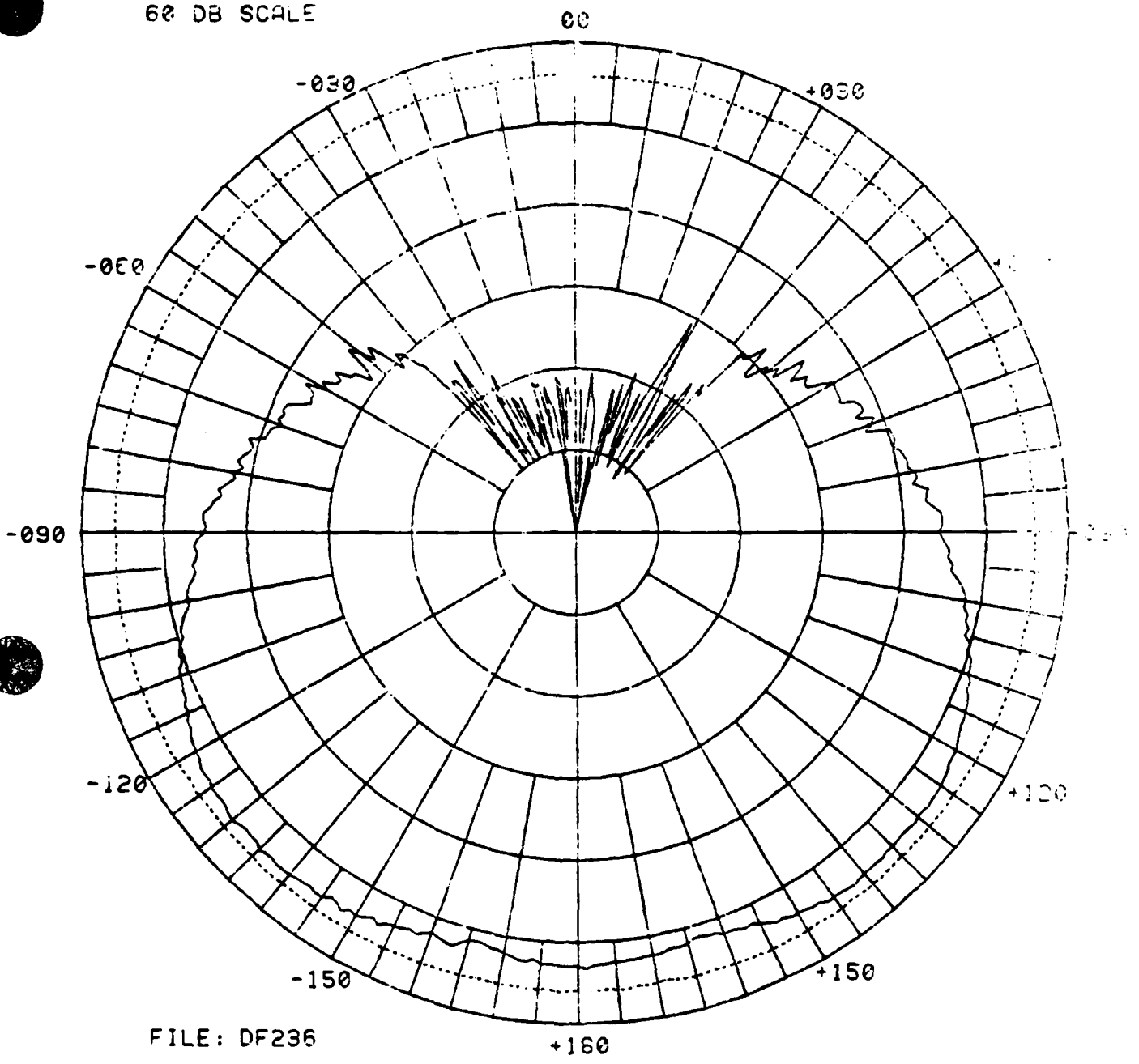
FILE: DF239

SCAN NR: 5 STEP ANGLE: 40.00 PLOT_____ AA

FREQ NR: 3 FREQ(MHZ): F9 PLOT..... AB

CONFIGURATION 5

12 JULY 1984



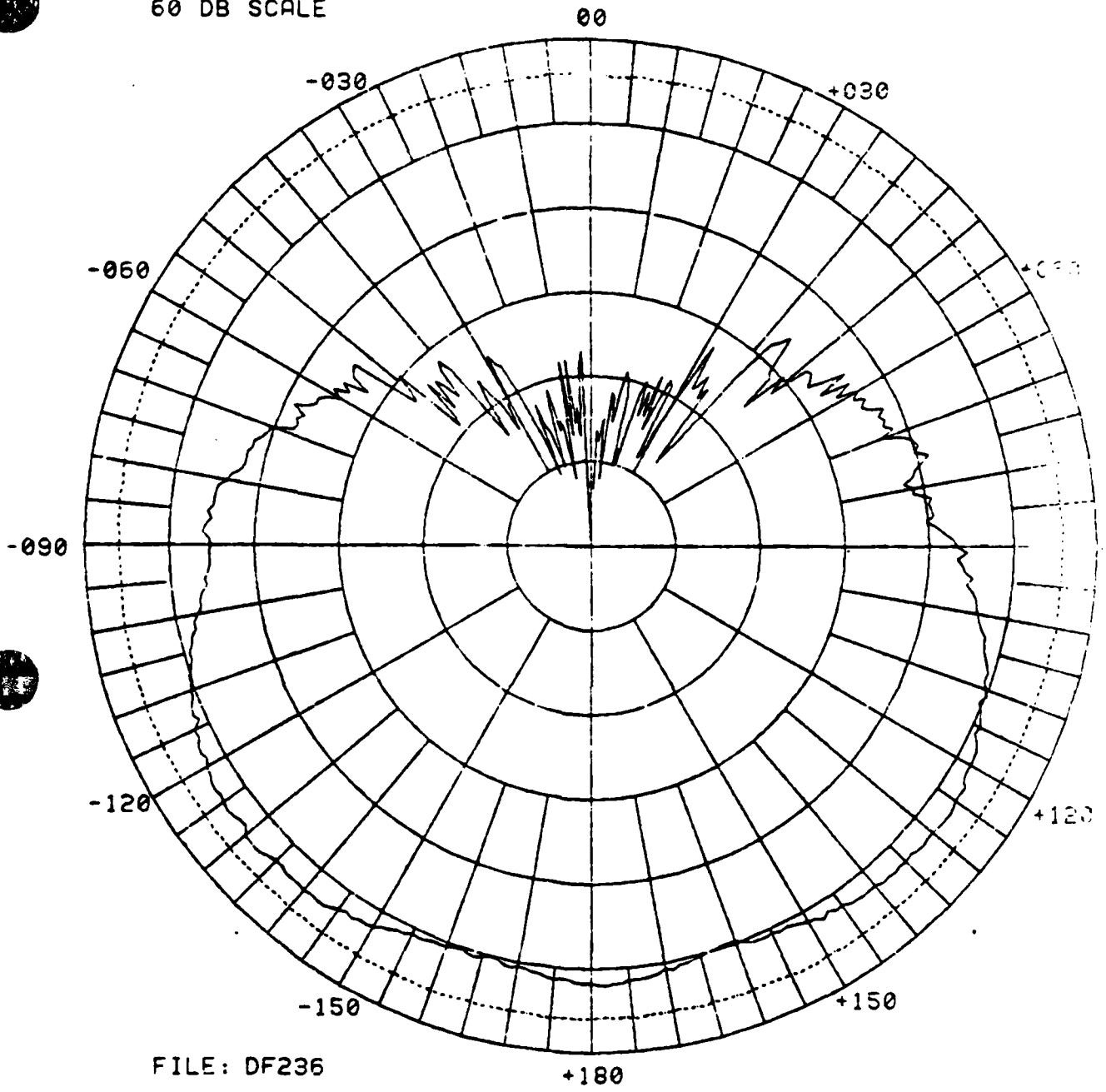
FILE: DF236

SCAN NR: 1 STEP ANGLE: 0.00 PLOT_____ AA

FREQ NR: 1 FREQ(MHZ): F7 PLOT..... AB

CONFIGURATION 6

60 DB SCALE

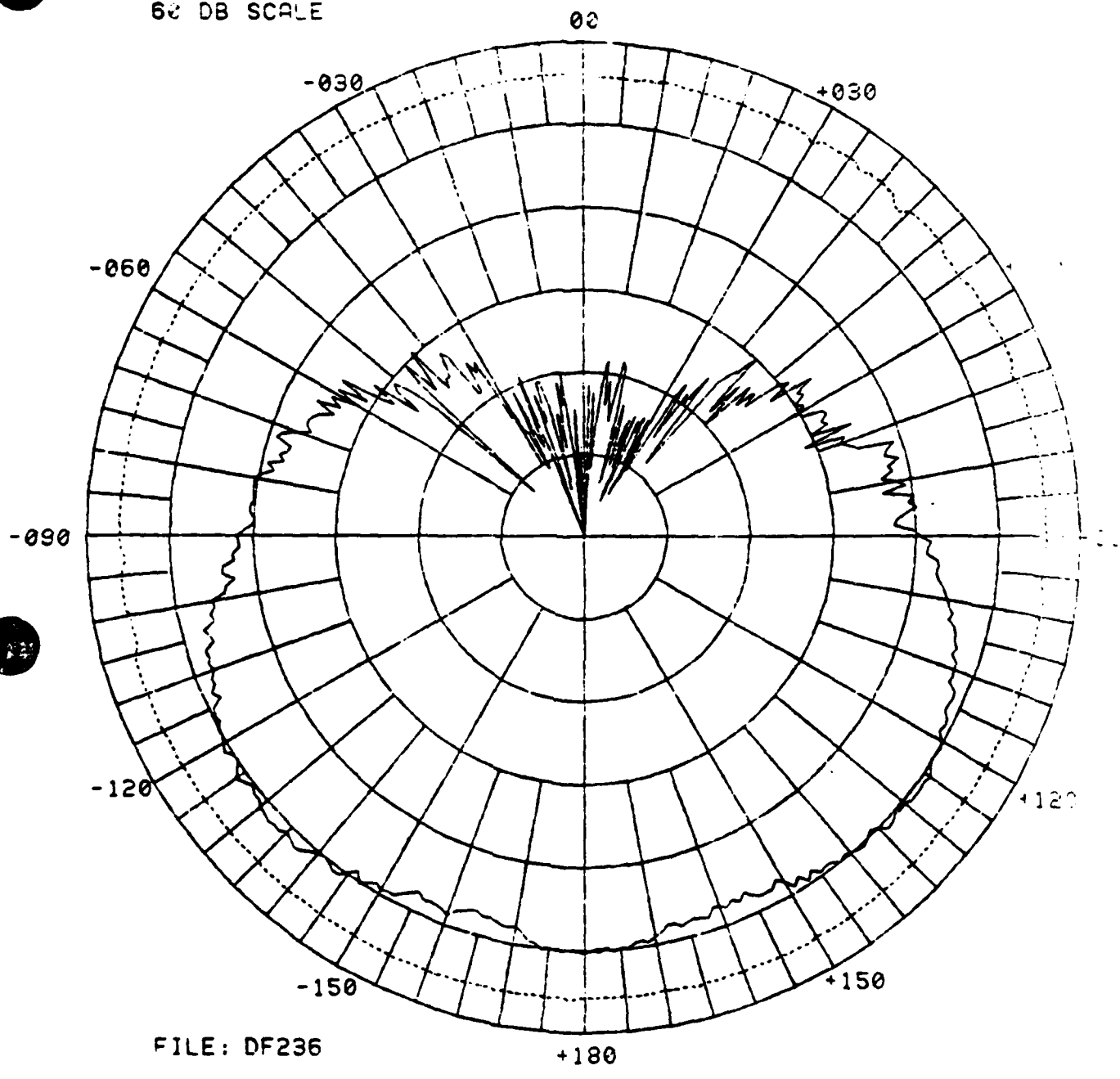


FILE: DF236

SCAN NR: 2 STEP ANGLE: -10.00 PLOT_____ AA

FREQ NR: 1 FREQ(MHZ): F7 PLOT..... AB

CONFIGURATION 6



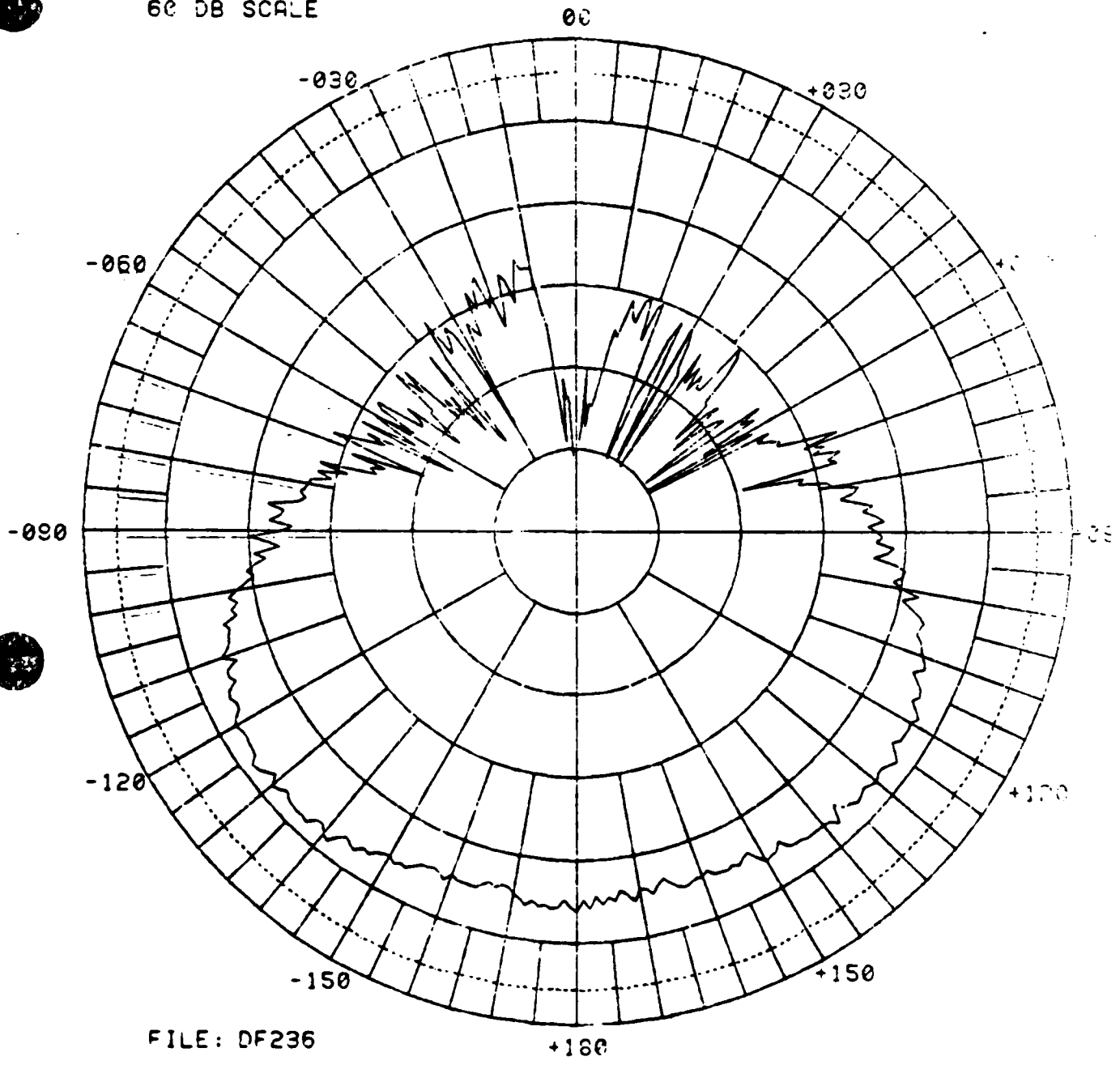
FILE: DF236

SCAN NR: 3 STEP ANGLE: -20.00 PLOT_____ AA

FREQ NR: 1 FREQ(MHZ): F7 PLOT..... AB

CONFIGURATION 6

60 DB SCALE



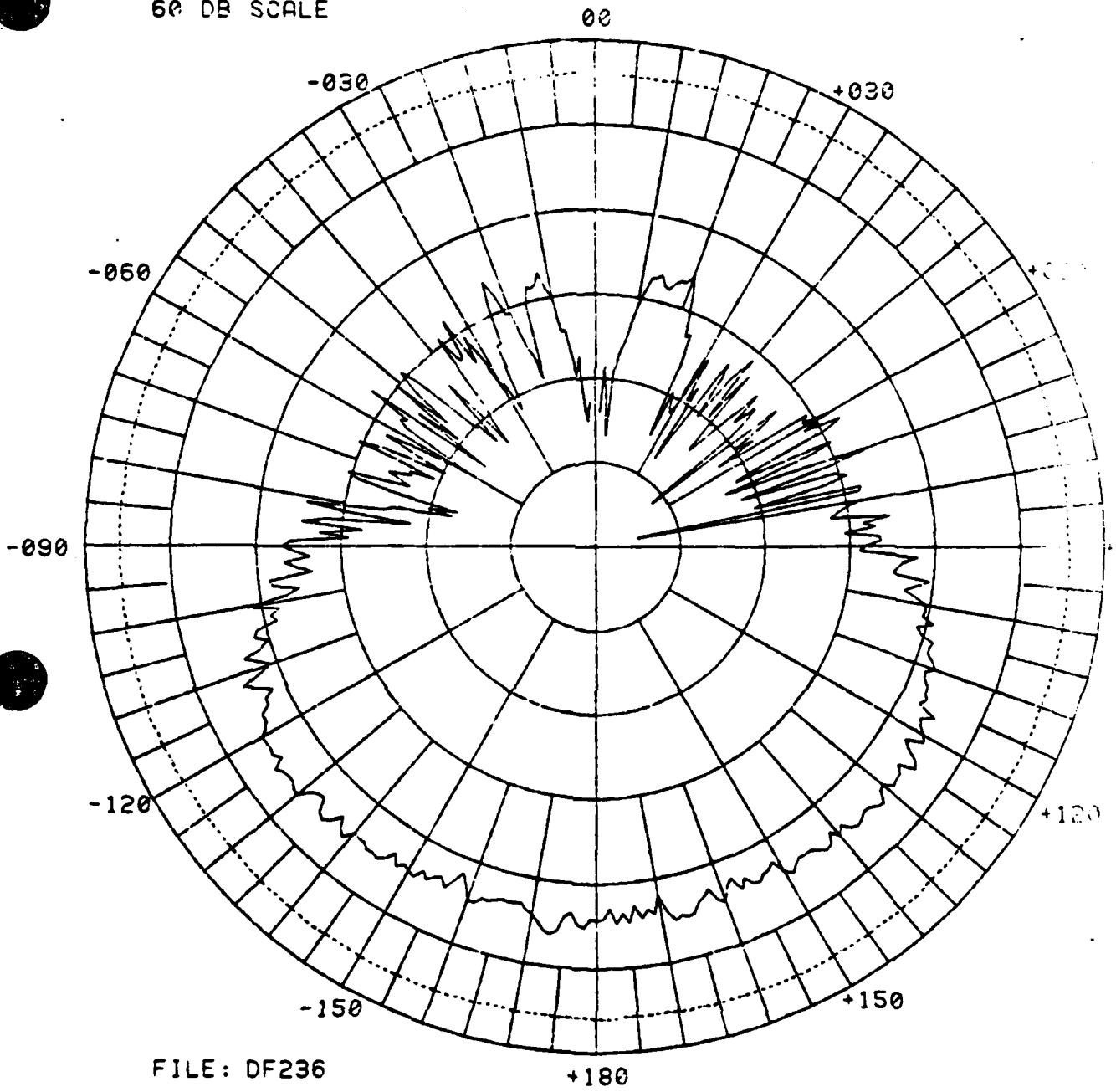
FILE: DF236

SCAN NR: 4 STEP ANGLE: -30.00 PLOT_____ AA

FREQ NR: 1 FREQ(MHZ): F7 PLOT..... AB

CONFIGURATION 6

60 DB SCALE



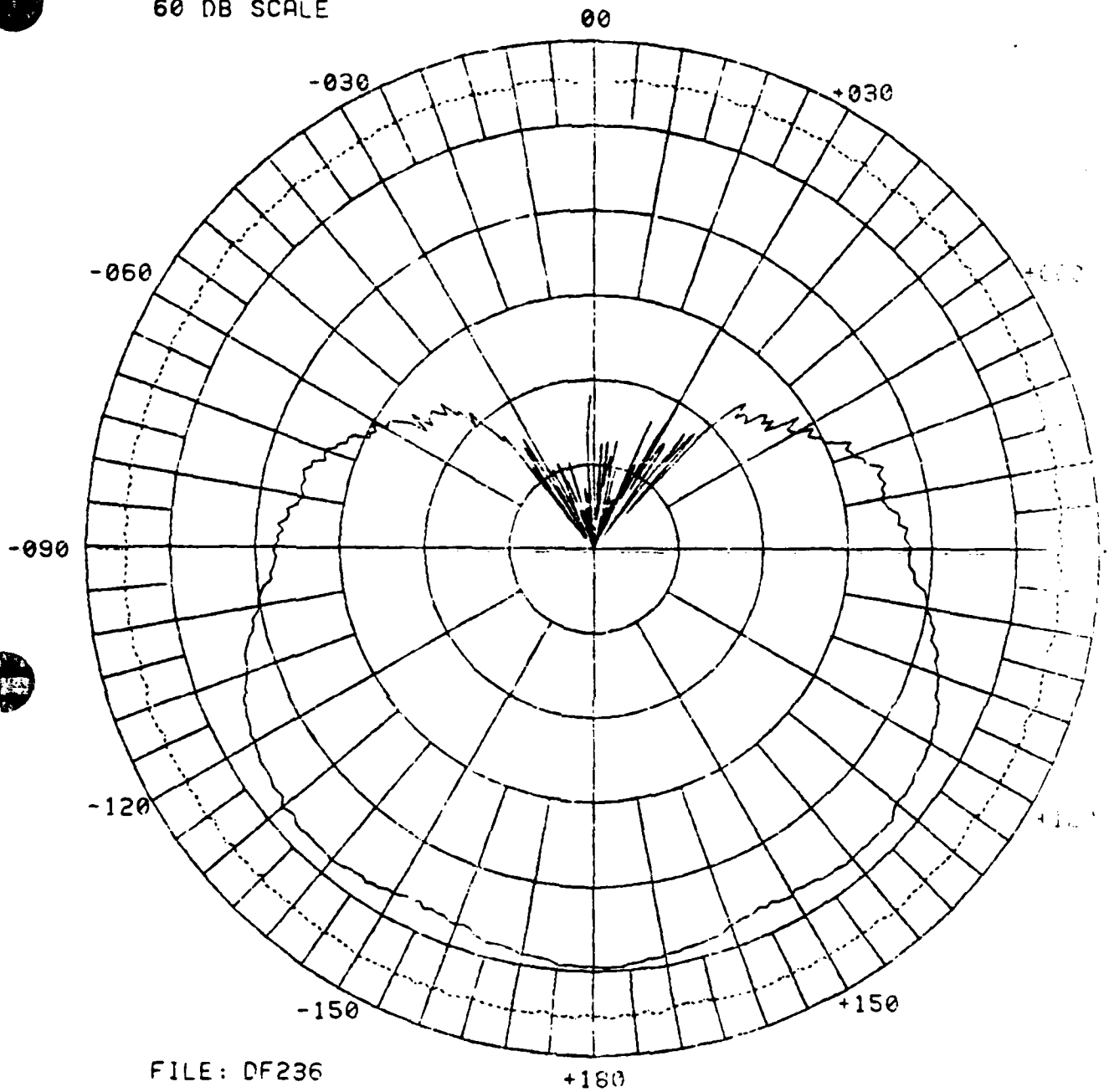
FILE: DF236

SCAN NR: 5 STEP ANGLE: -40.00 PLOT_____ AA

FREQ NR: 1 FREQ(MHZ): F7 PLOT..... AB

CONFIGURATION 6

60 DB SCALE



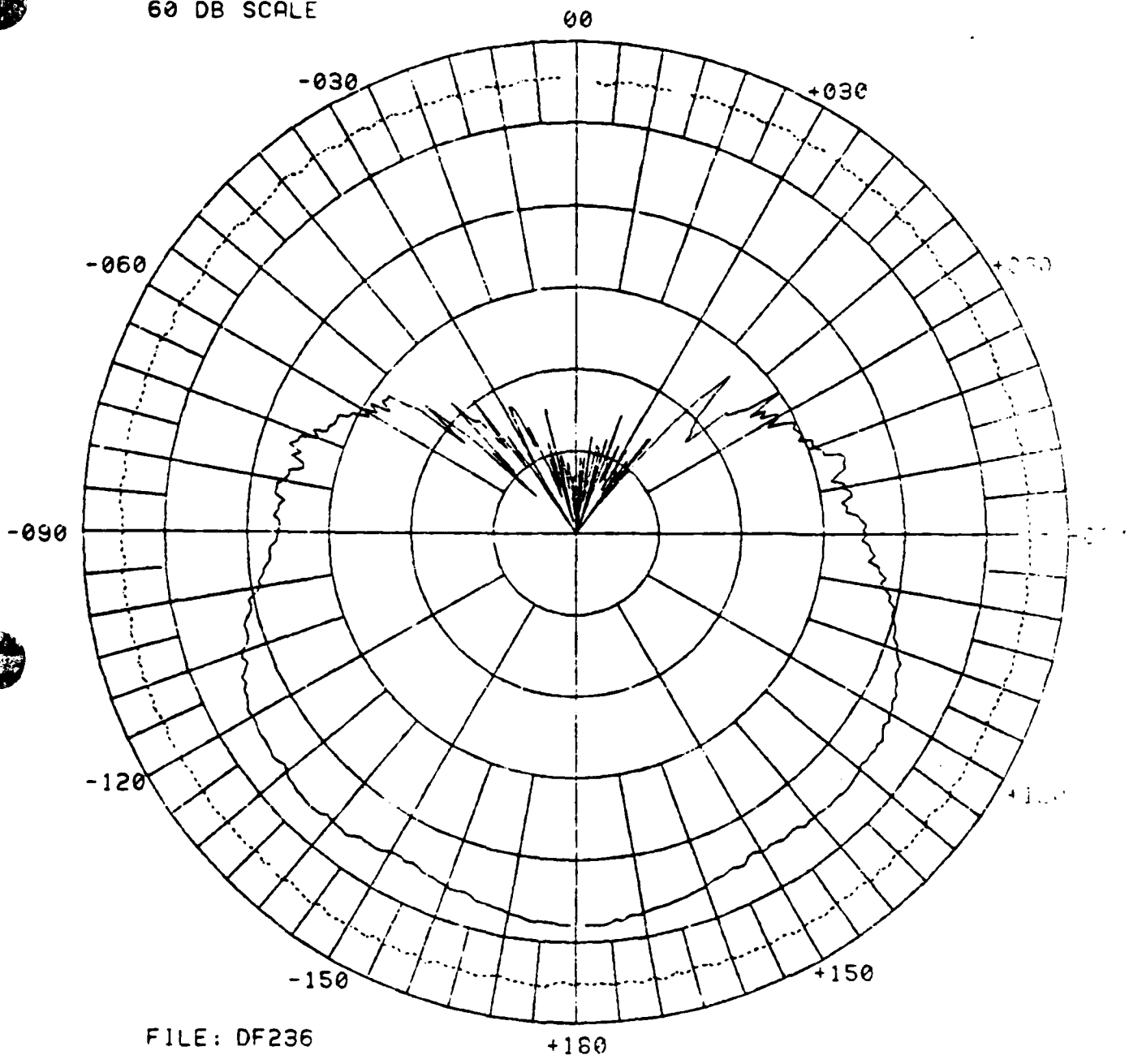
FILE: DF236

SCAN NR: 1 STEP ANGLE: 0.00 PLOT_____ AA

FREQ NR: 2 FREQ(MHZ): F8 PLOT..... AB

CONFIGURATION 6

60 DB SCALE



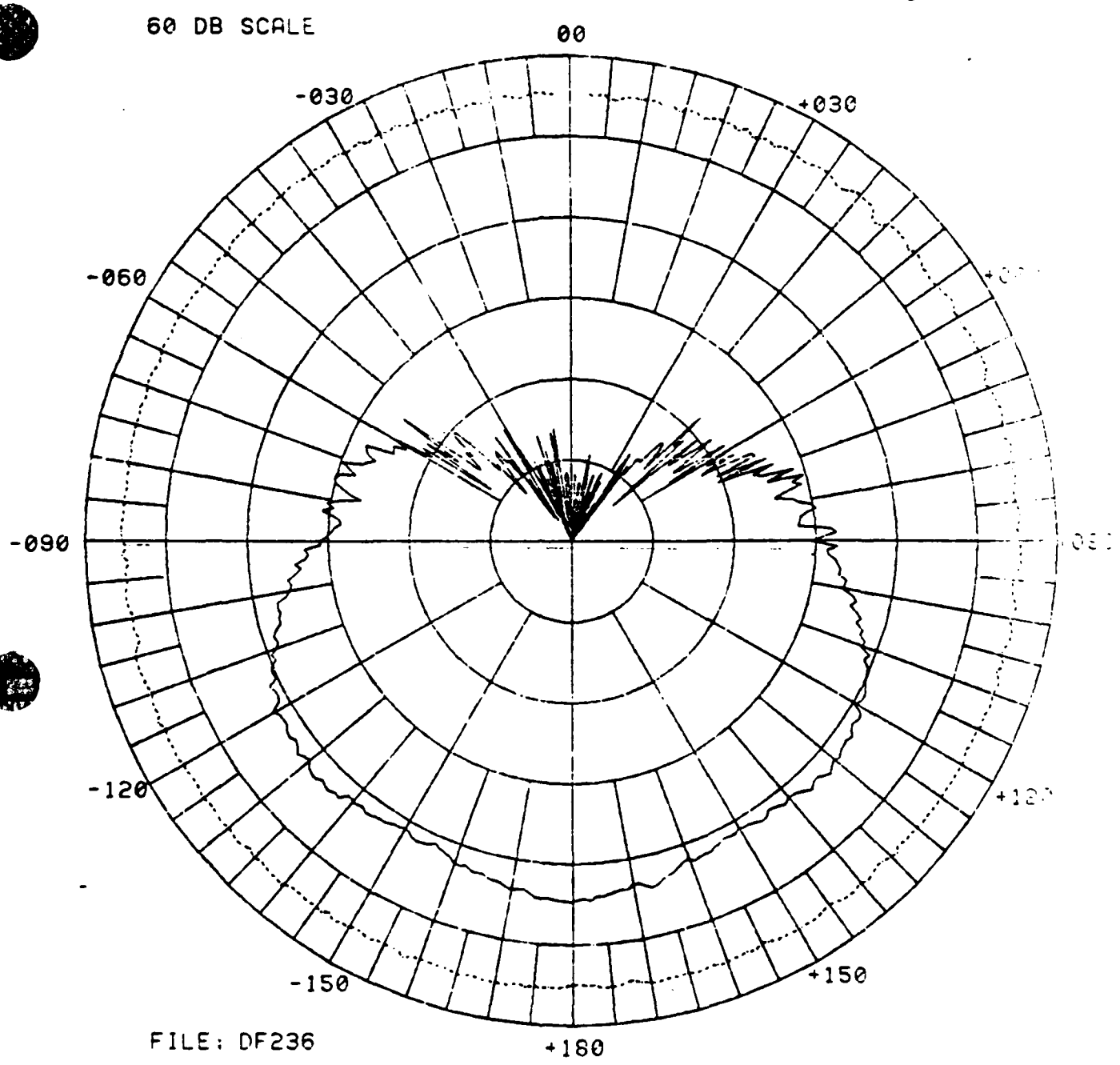
FILE: DF236

SCAN NR: 2 STEP ANGLE: -10.00 PLOT_____ AA

FREQ NR: 2 FREQ(MHZ): F8 PLOT..... AB

CONFIGURATION 6

60 DB SCALE



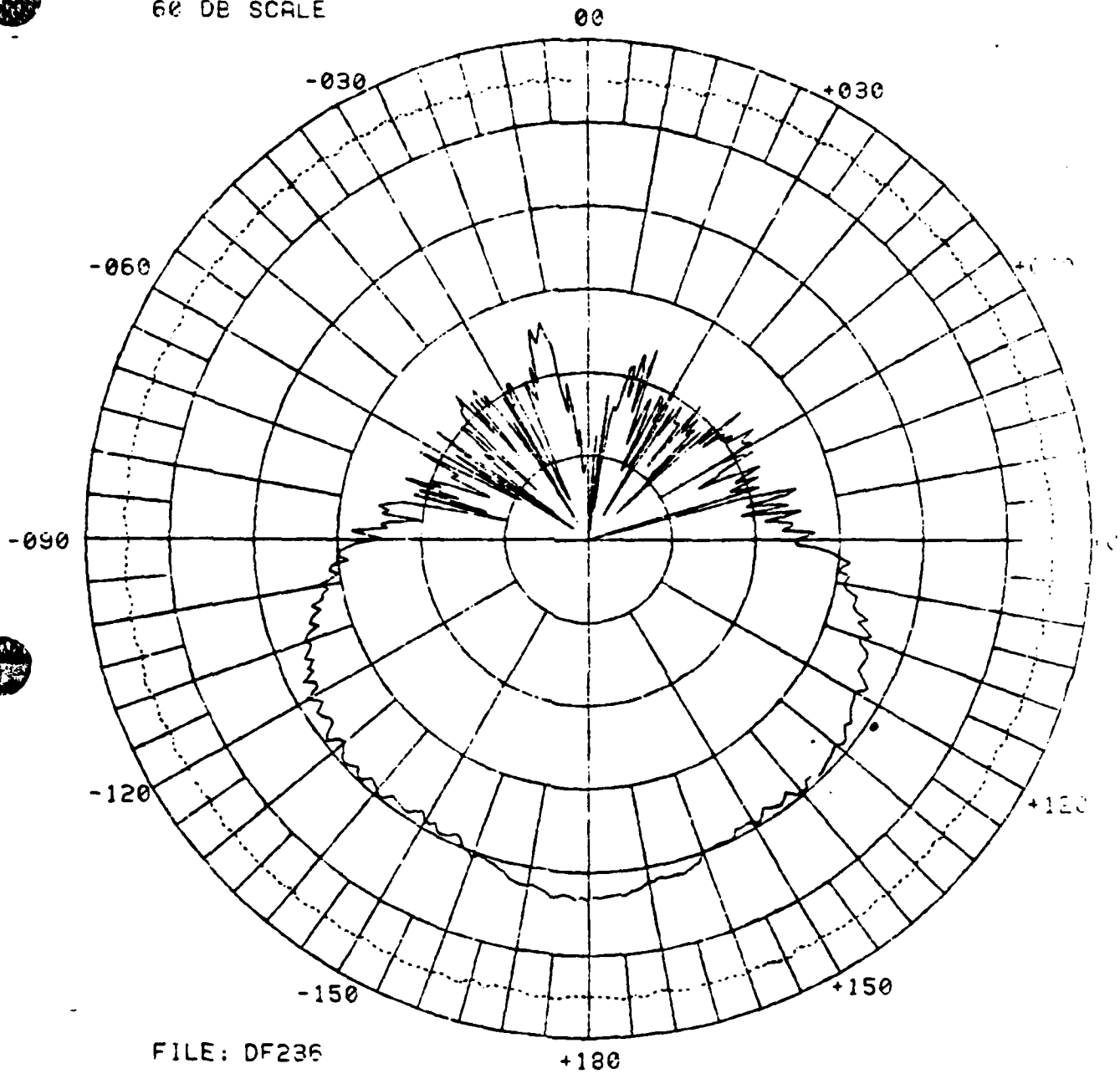
FILE: DF236

SCAN NR: 3 STEP ANGLE: -20.00 PLOT_____ AA

FREQ NR: 2 FREQ(MHZ): F8 PLOT..... AB

CONFIGURATION 6

60 DB SCALE



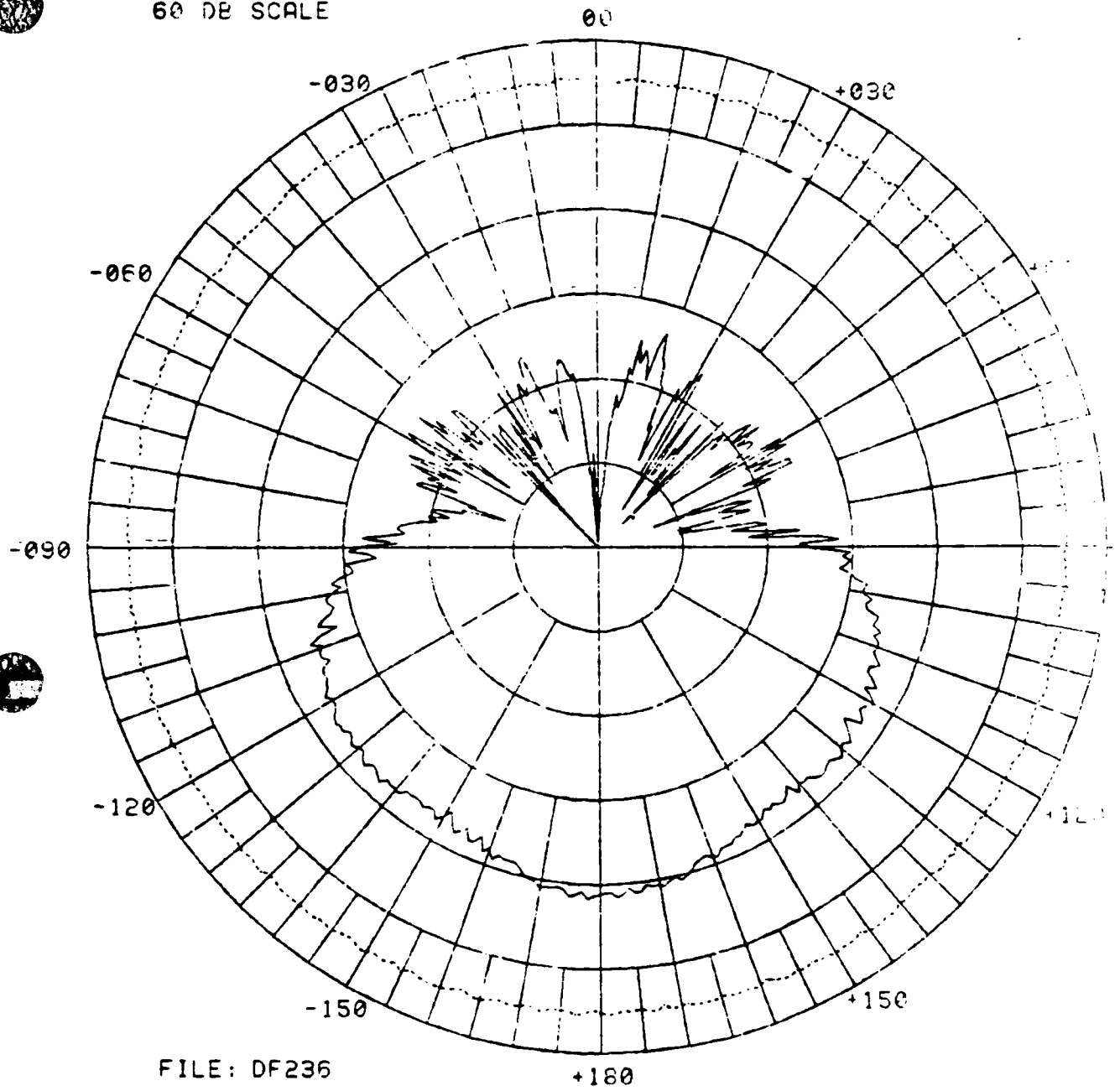
FILE: DF236

SCAN NR: 4 STEP ANGLE: -30.00 PLOT_____ AA

FREQ NR: 2 FREQ(MHZ): F8 PLOT..... AB

CONFIGURATION 6

60 DB SCALE



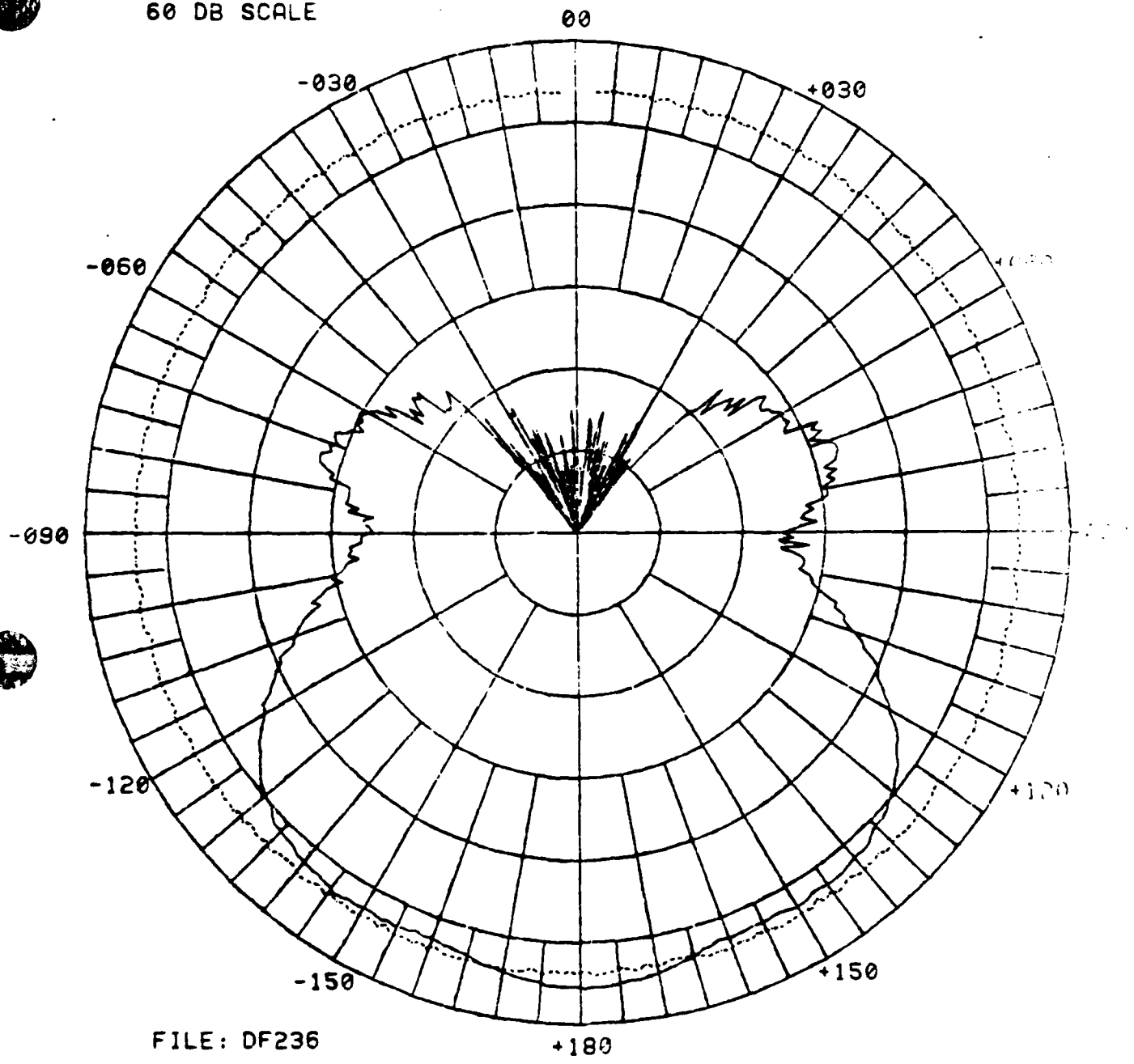
FILE: DF236

SCAN NR: 5 STEP ANGLE: -40.00 PLOT_____ AA

FREQ NR: 2 FREQ(MHZ): F8 PLOT..... AB

CONFIGURATION 6

60 DB SCALE

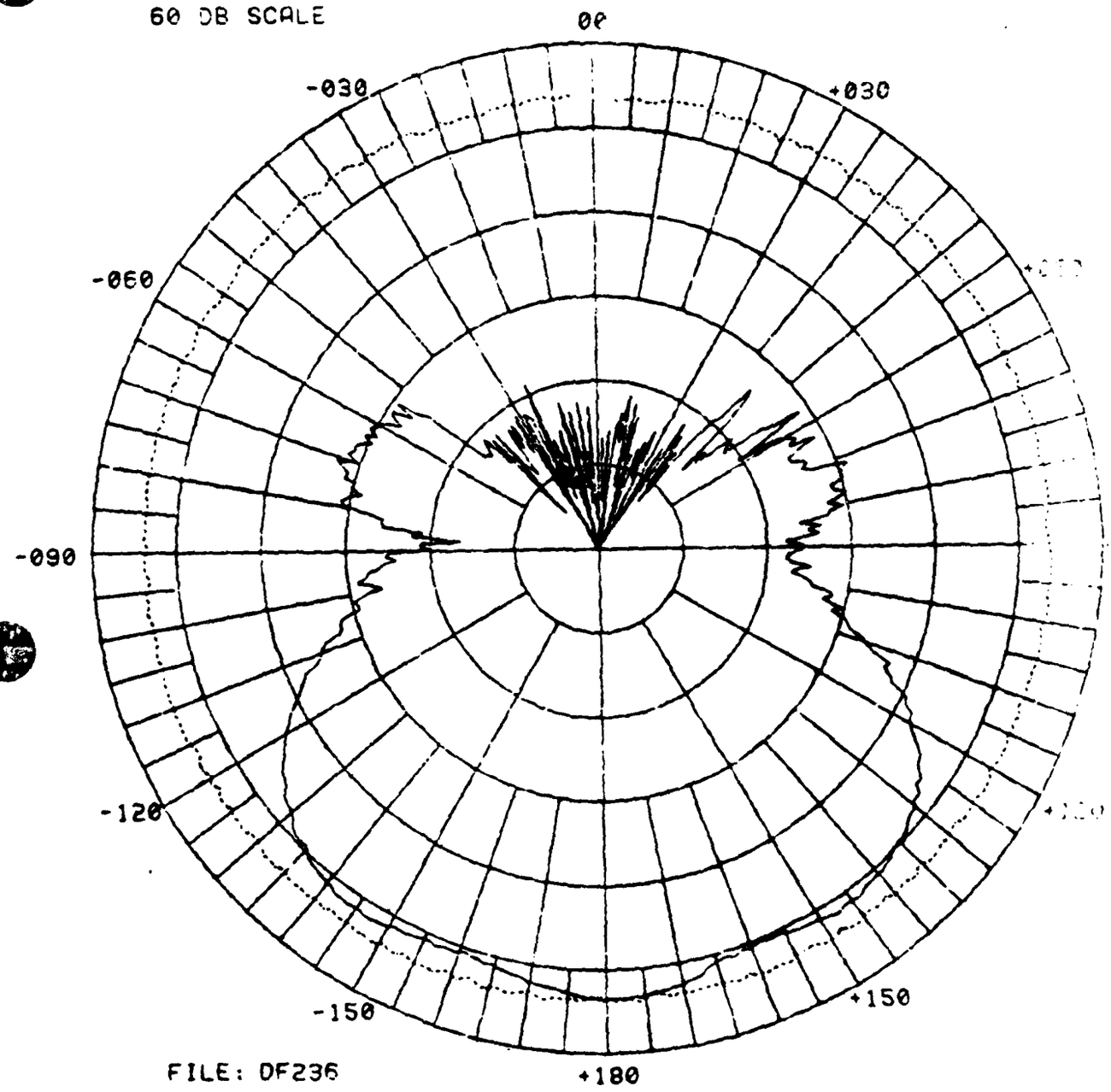


FILE: DF236

SCAN NR: 1 STEP ANGLE: 0.00 PLOT_____ AA

FREQ NR: 3 FREQ(MHZ): F9 PLOT..... AB

CONFIGURATION 6



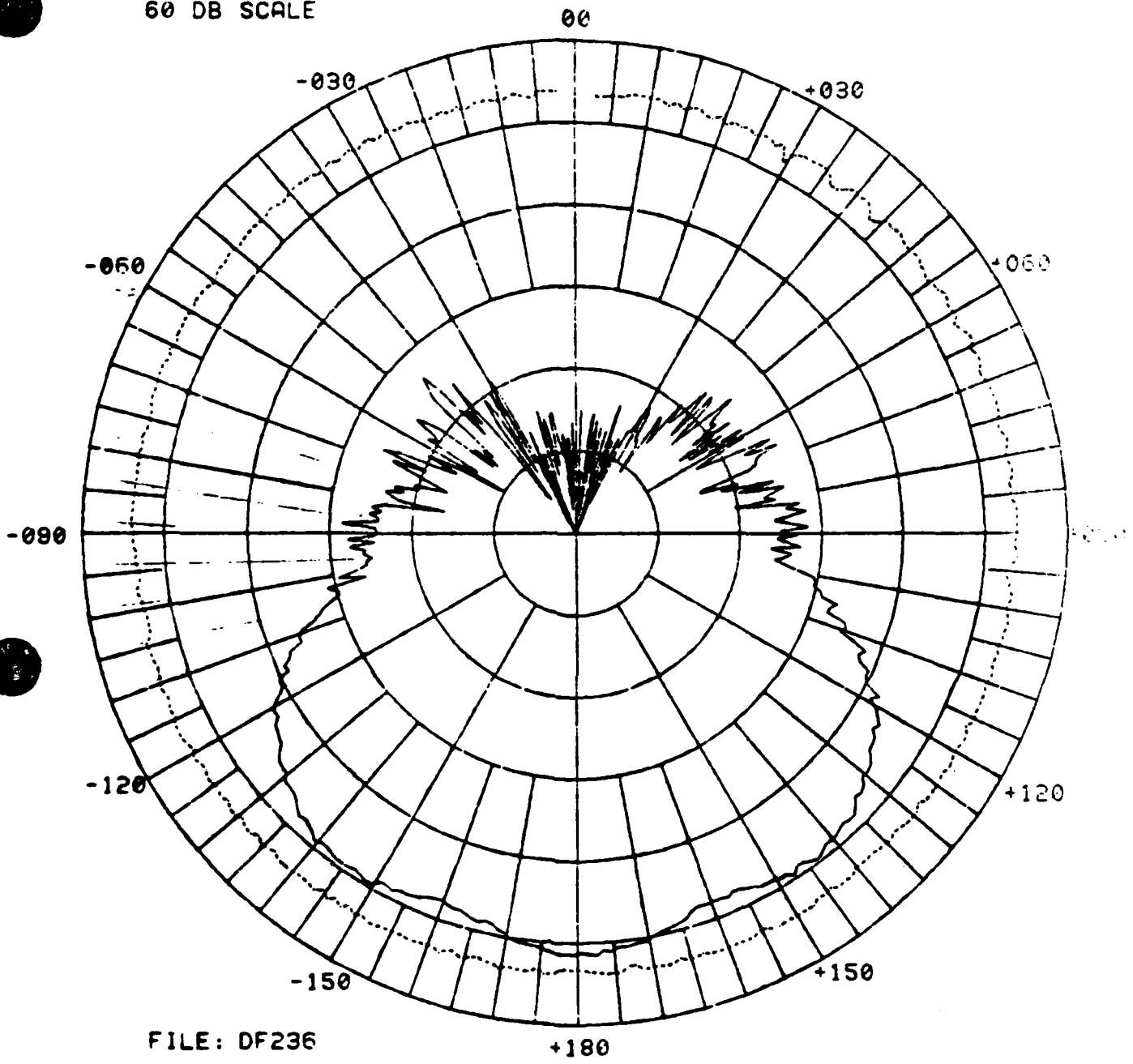
FILE: DF236

SCAN NR: 2 STEP ANGLE: -10.00 PLOT_____ AA

FREQ NR: 3 FREQ(MHZ): F9 PLOT_____ AB

CONFIGURATION 6

60 DB SCALE



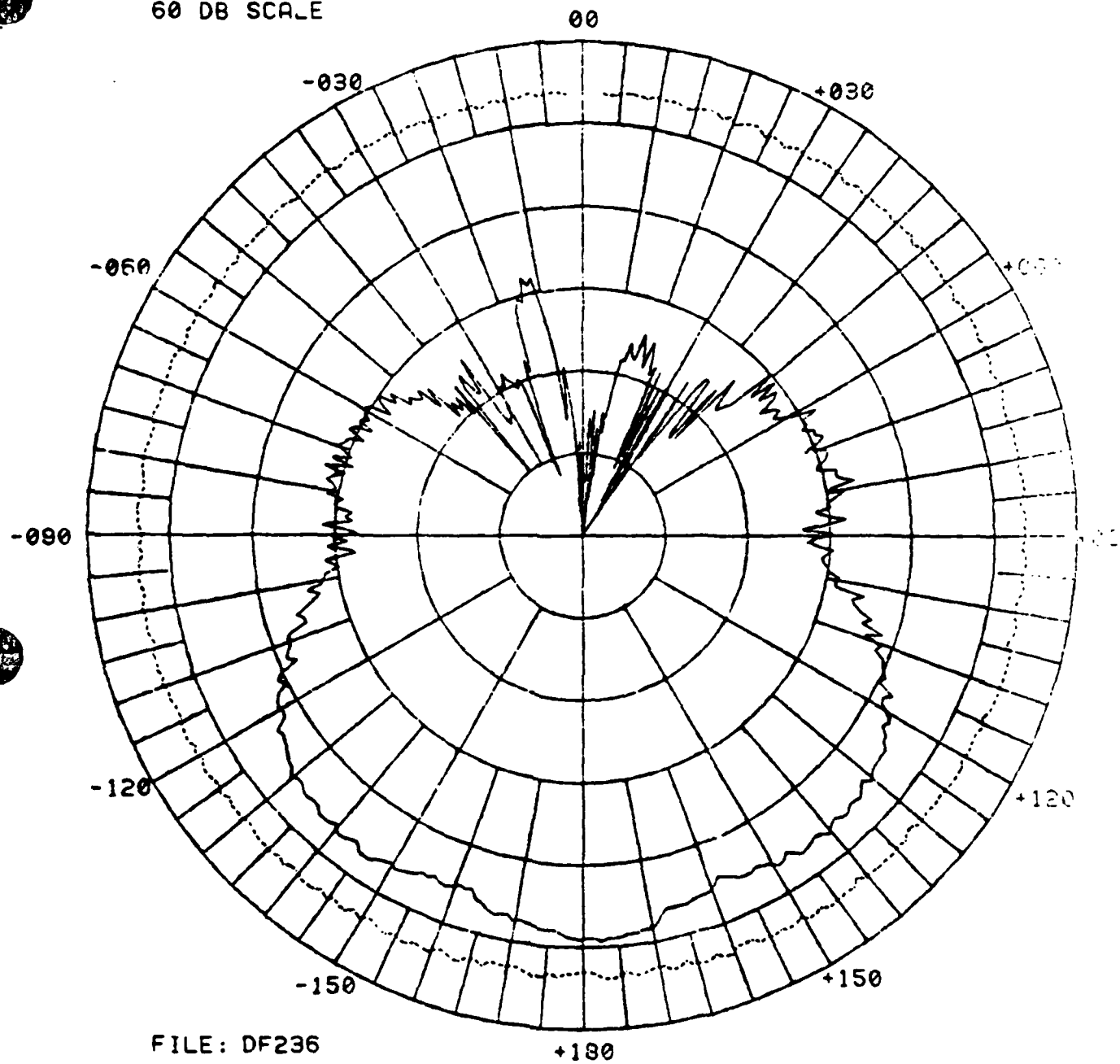
FILE: DF236

SCAN NR: 3 STEP ANGLE: -20.00 PLOT_____ AA

FREQ NR: 3 FREQ(MHZ): F9 PLOT..... AB

CONFIGURATION 6

60 DB SCALE



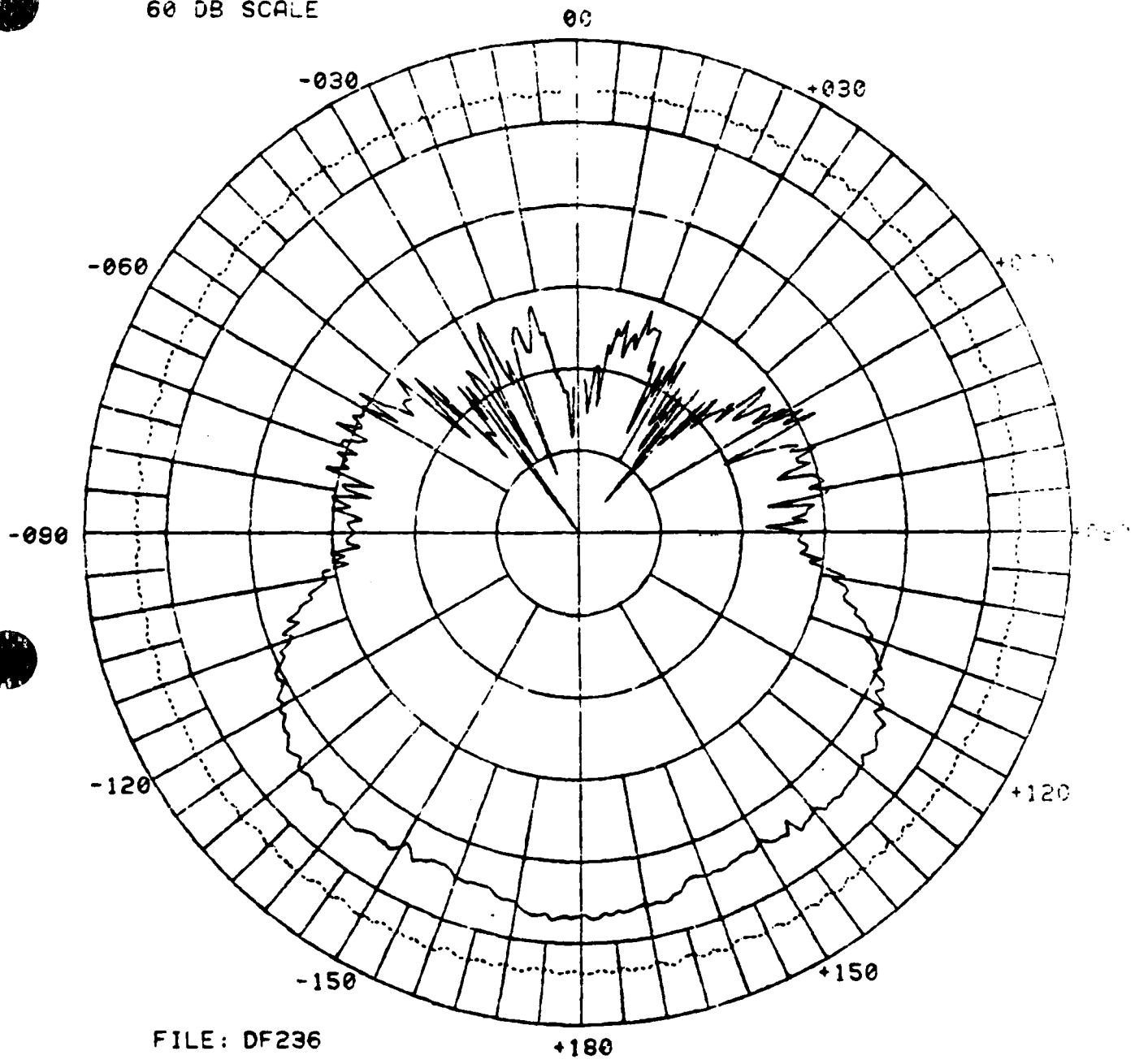
FILE: DF236

SCAN NR: 4 STEP ANGLE: -30.00 PLOT_____ AA

FREQ NR: 3 FREQ(MHZ): F9 PLOT..... AB

CONFIGURATION 6

60 DB SCALE



FILE: DF236

SCAN NR: 5 STEP ANGLE: -40.00 PLOT_____ AA

FREQ NR: 3 FREQ(MHZ): F9 PLOT..... AB

CONFIGURATION 6

Appendix 9 contains AN/ALQ-162 antenna patterns as recorded by the 20/20 system during test. They are in polar plot format. These patterns cover frequencies F10, F11, and F12 and elevations of +40° through -40° for both the forward and aft antennas. They are arranged as follows:

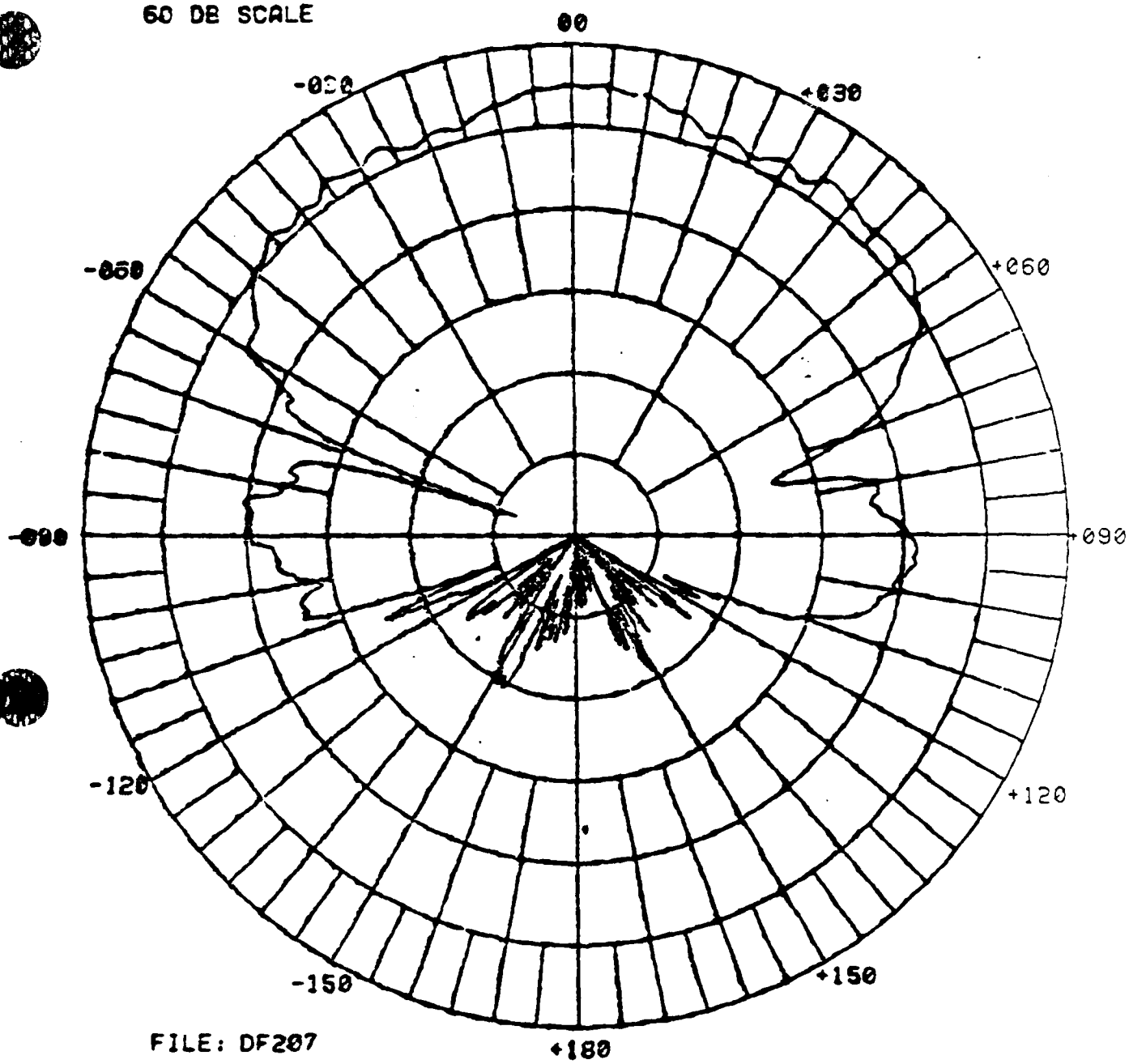
DF207 — Forward antenna, upper hemisphere

DF208 — Forward antenna, upper hemisphere horizon

DF216 — Aft antenna, upper hemisphere

DF217 — Aft antenna, upper hemisphere

DF234 — Aft antenna, lower hemisphere

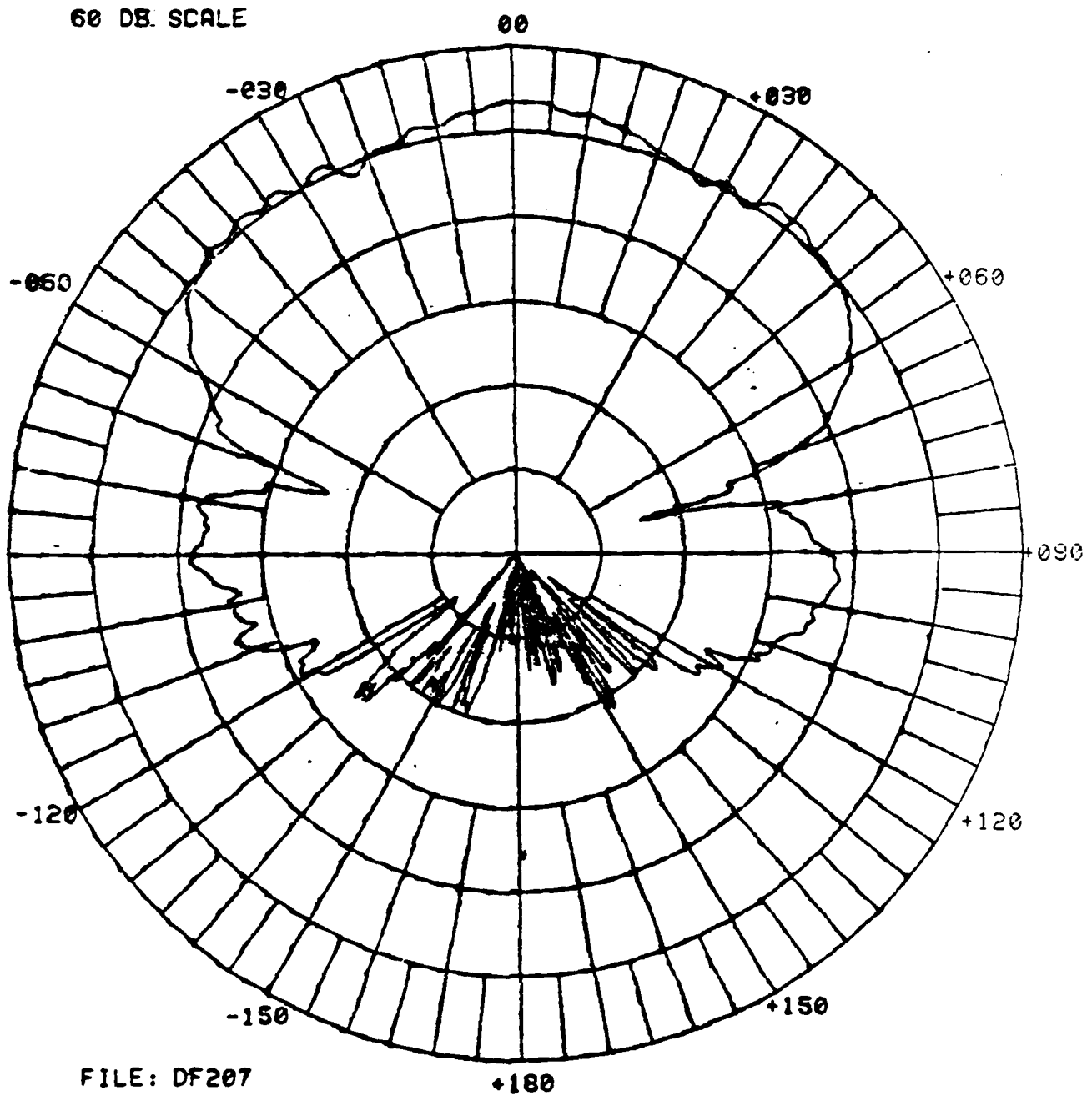


FILE: DF207

SCAN NR: 1 STEP ANGLE: 0.00 PLOT_____ AA

FREQ NR: 1 FREQ(MHZ): F10

CONFIGURATION 2

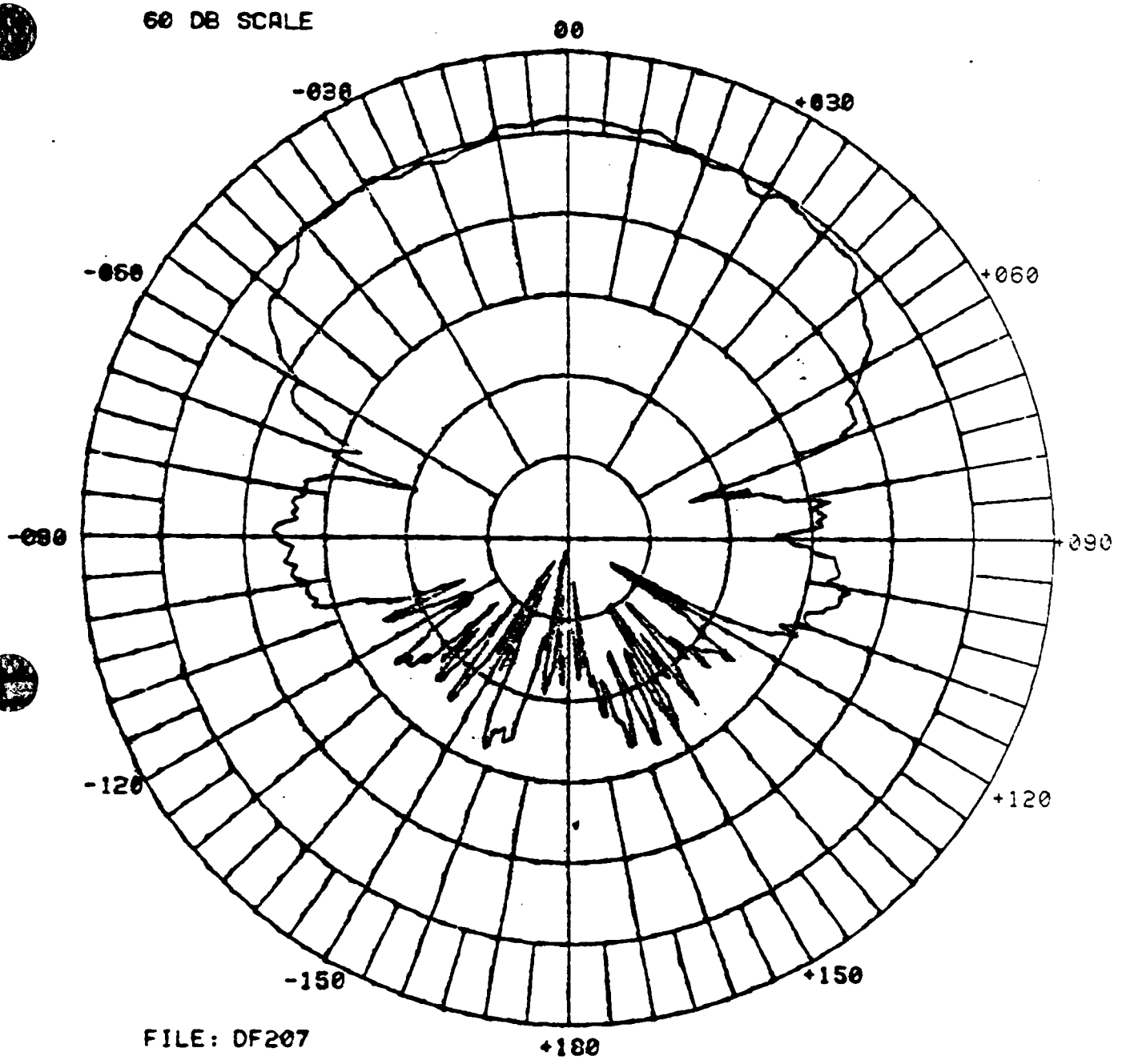


FILE: DF207

SCAN NR: 2 STEP ANGLE: 10.00 PLOT_____ AA

FREQ NR: 1 FREQ(MHZ): F10

CONFIGURATION 2

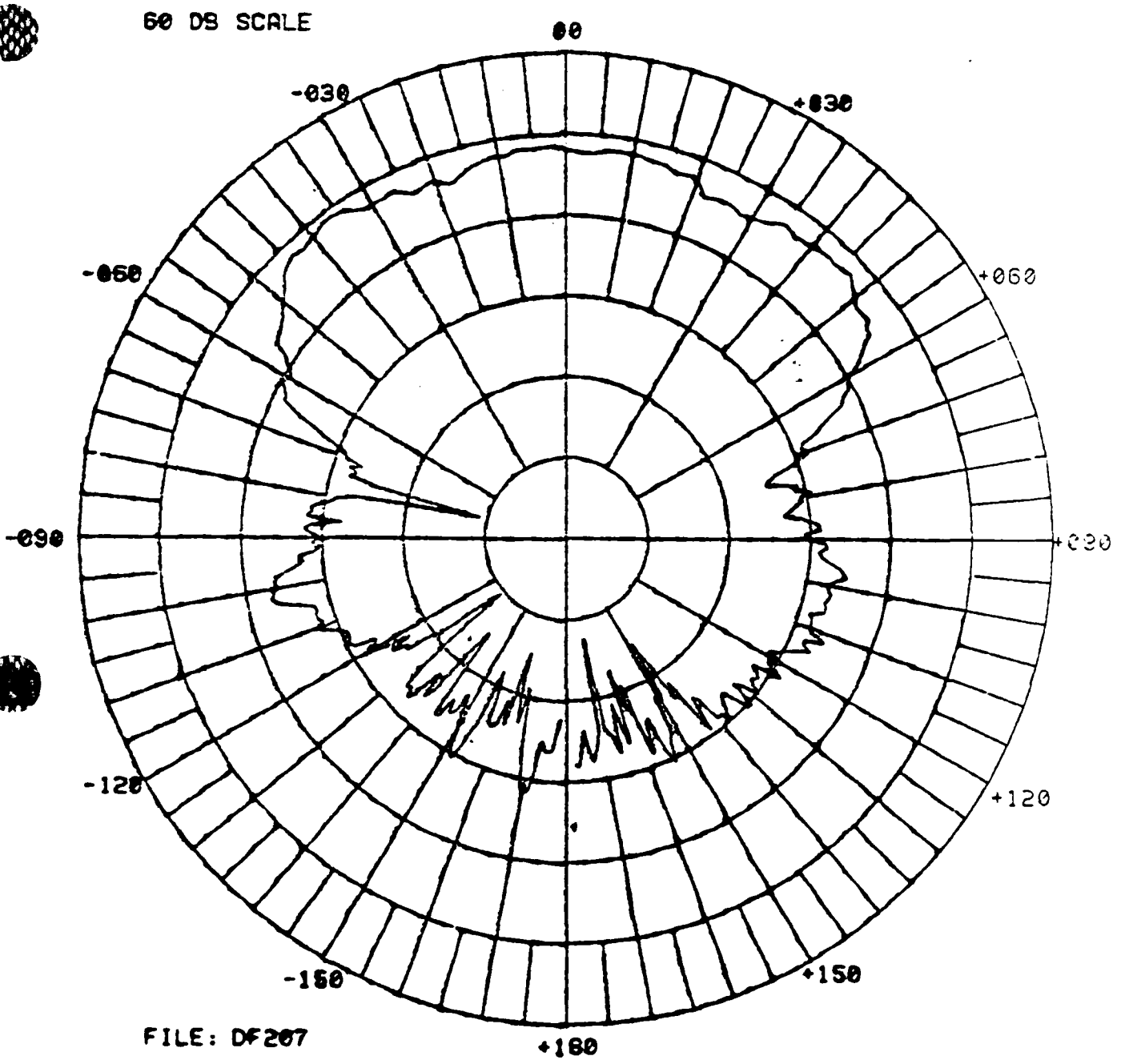


FILE: DF207

SCAN NR: 3 STEP ANGLE: 20.00 PLOT_____ AA

FREQ NR: 1 FREQ(MHZ): F10

CONFIGURATION 2

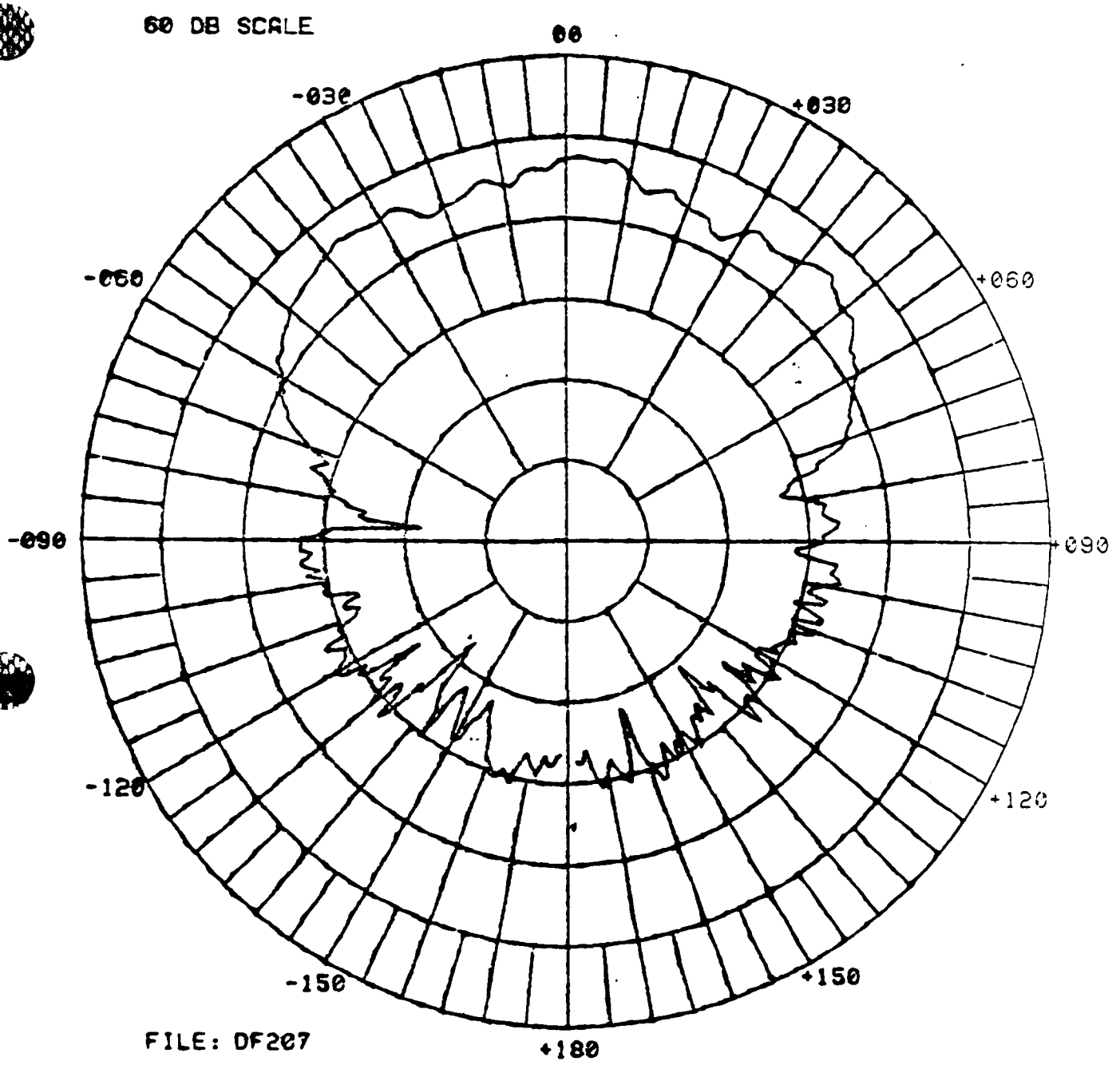


FILE: DF207

SCAN NR: 4 STEP ANGLE: 30.00 PLOT_____ AA

FREQ NR: 1 FREQ(MHZ): F10

CONFIGURATION 2

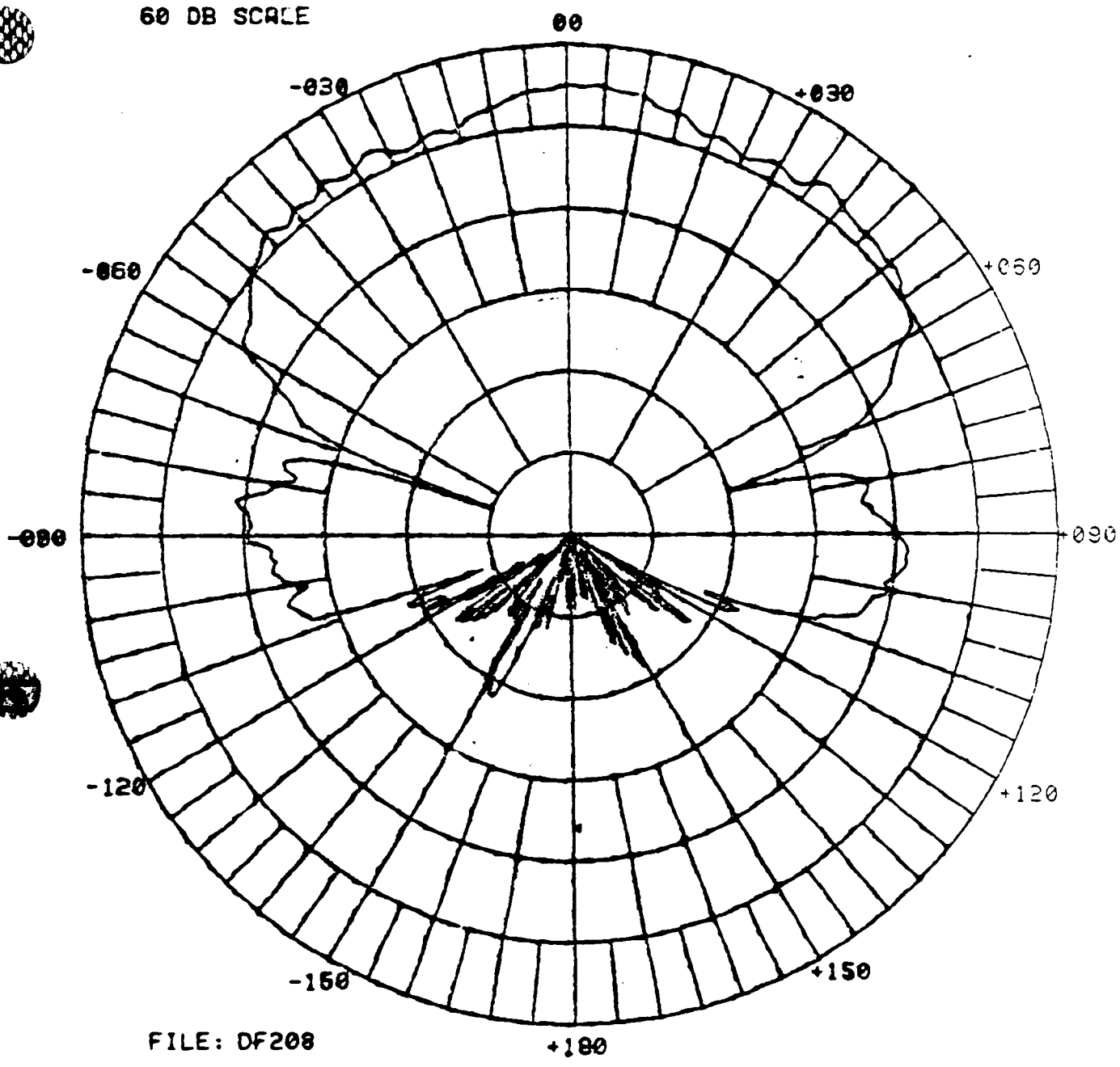


FILE: DF207

SCAN NR: 5 STEP ANGLE: 40.00 PLOT_____ AA

FREQ NR: 1 FREQ(MHZ): F10

CONFIGURATION 2

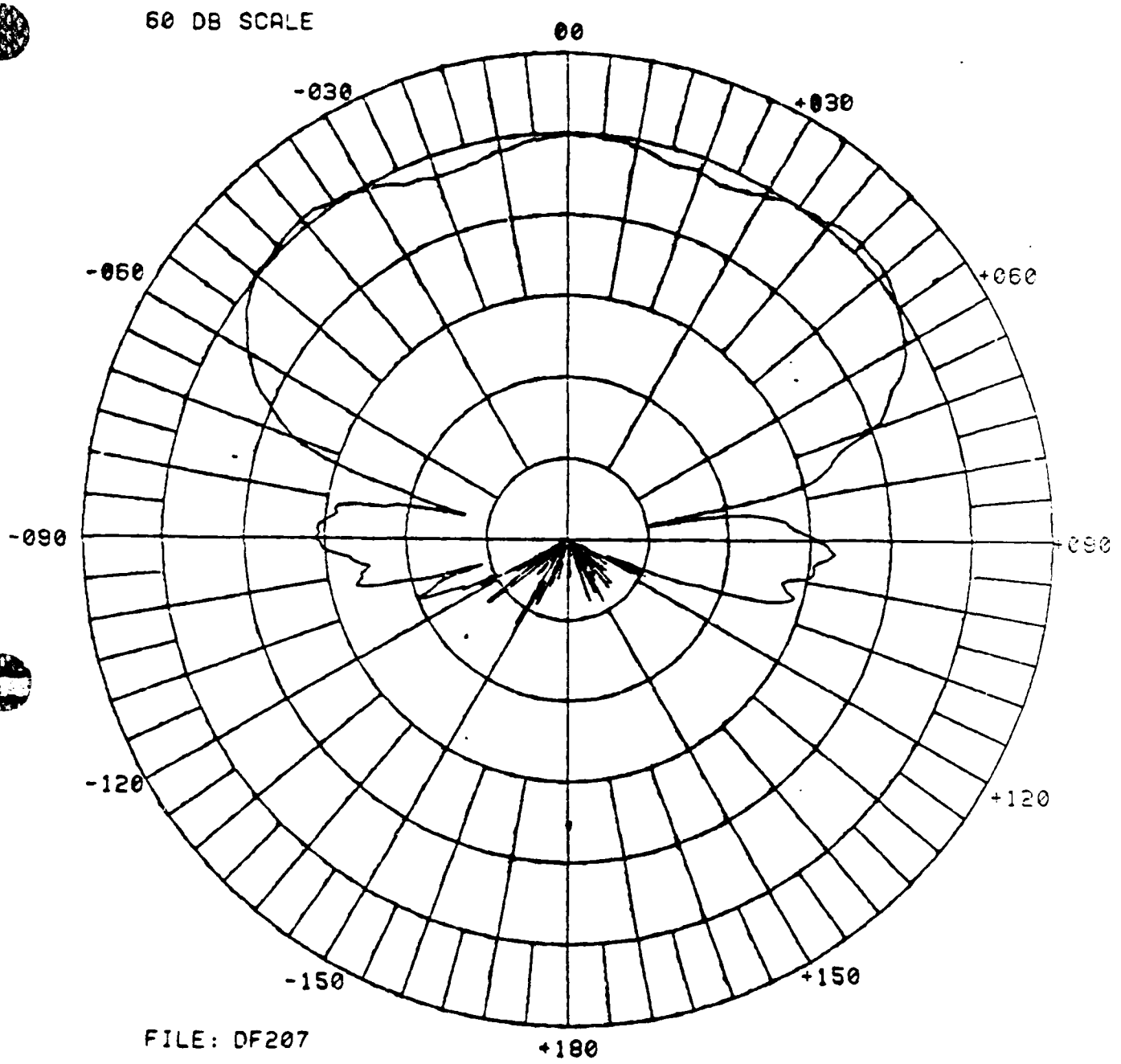


FILE: DF208

SCAN NR: 1 STEP ANGLE: 0.00 PLOT_____ AA

FREQ NR: 1 FREQ(MHZ): F10

CONFIGURATION 2



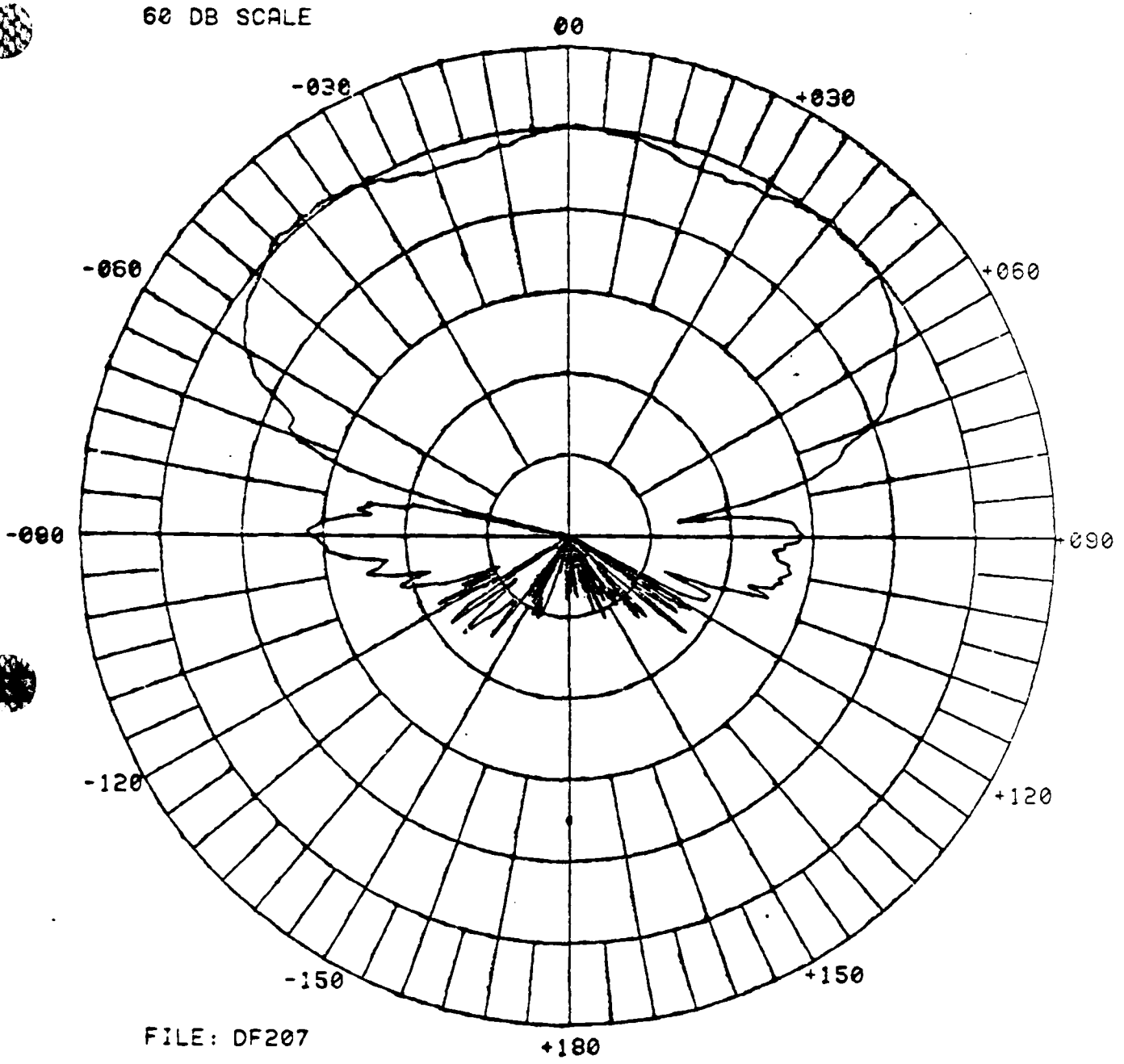
FILE: DF207

SCAN NR: 1 STEP ANGLE: 0.00 PLOT_____ AA

FREQ NR: 2 FREQ(MHZ): F||

CONFIGURATION 2

60 DB SCALE

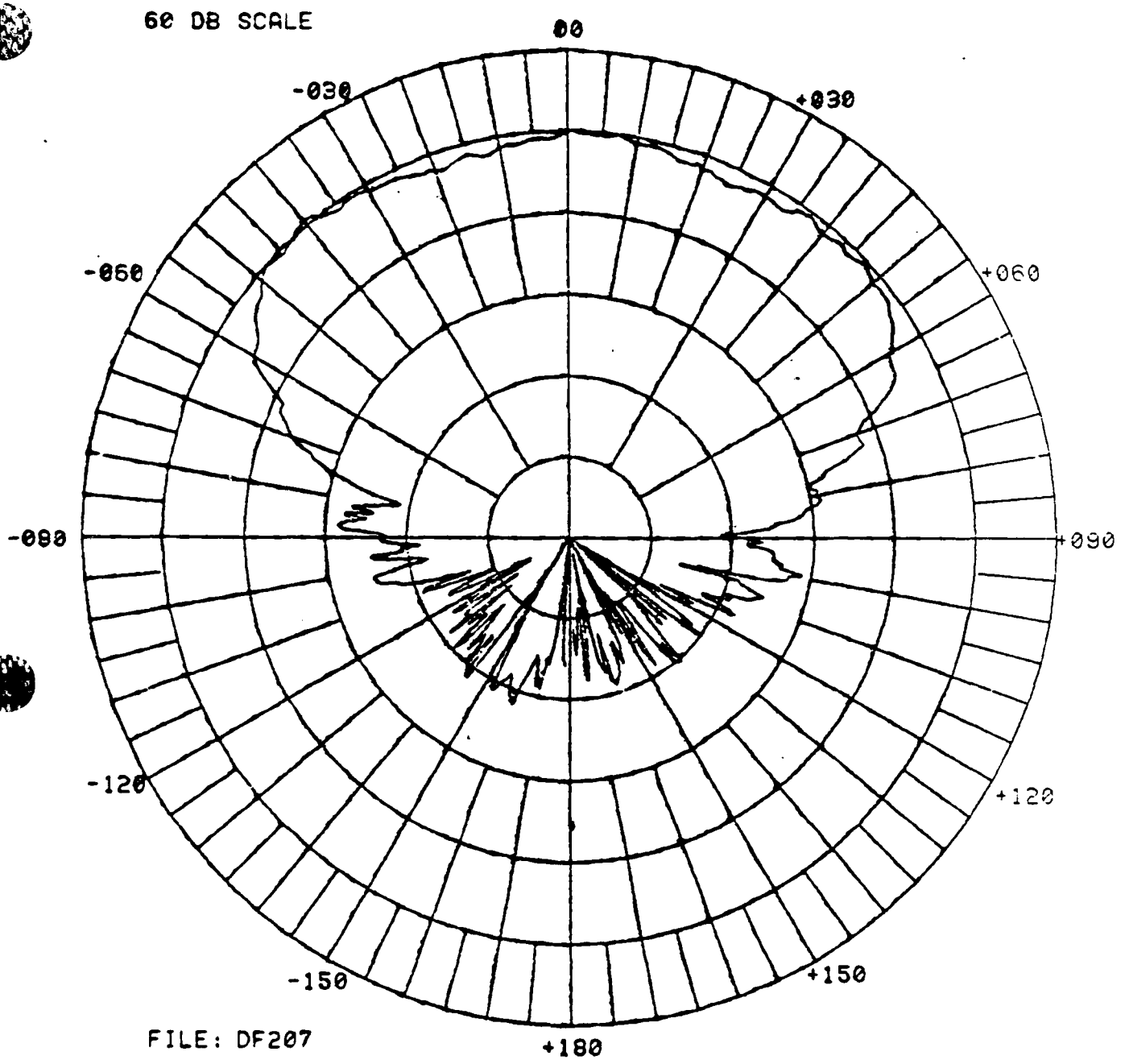


FILE: DF207

SCAN NR: 2 STEP ANGLE: 10.00 PLOT_____ AA

FREQ NR: 2 FREQ(MHZ): F||

CONFIGURATION 2

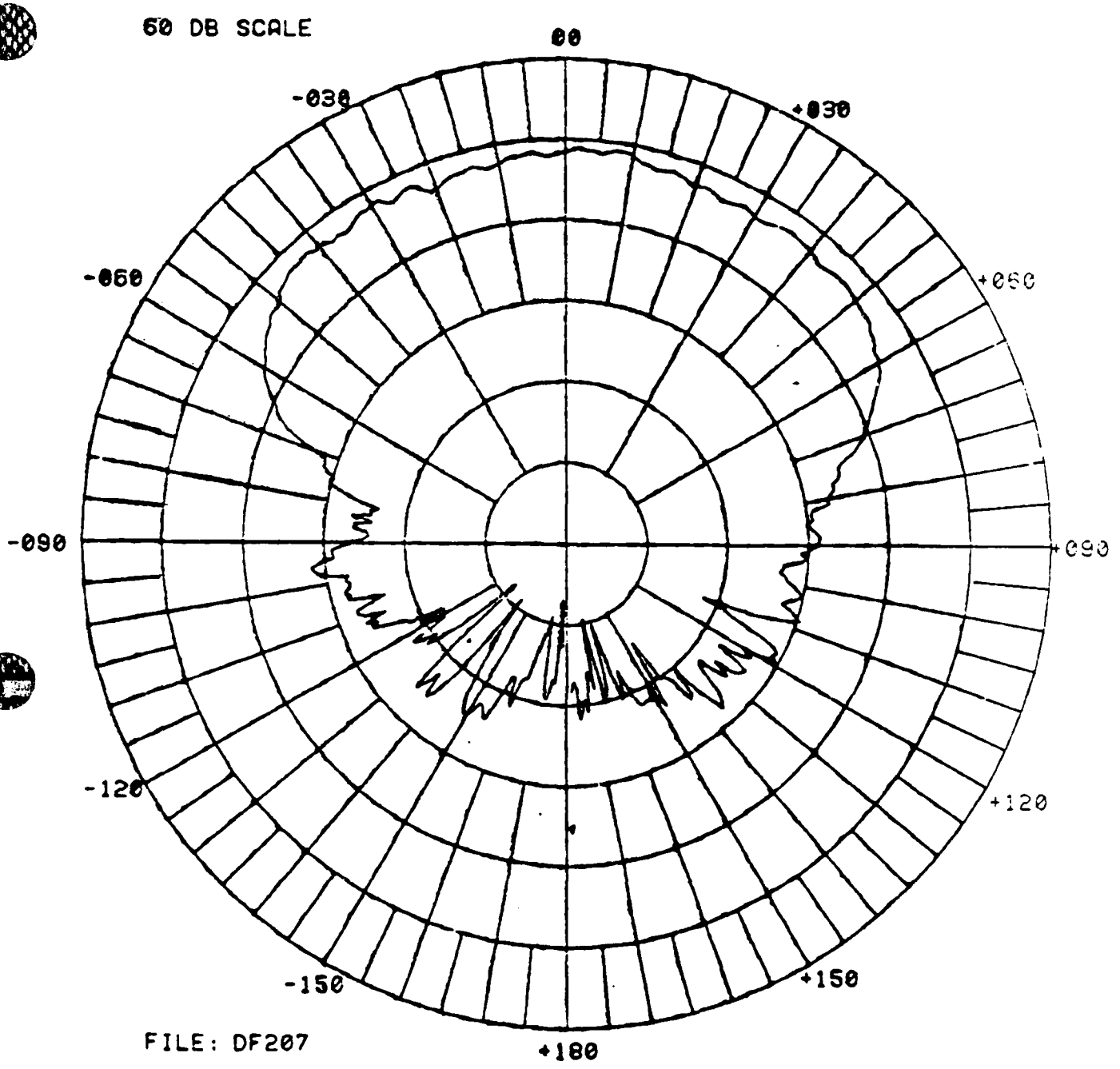


FILE: DF207

SCAN NR: 3 STEP ANGLE: 20.00 PLOT_____ AA

FREQ NR: 2 FREQ(MHZ): F11

CONFIGURATION 2



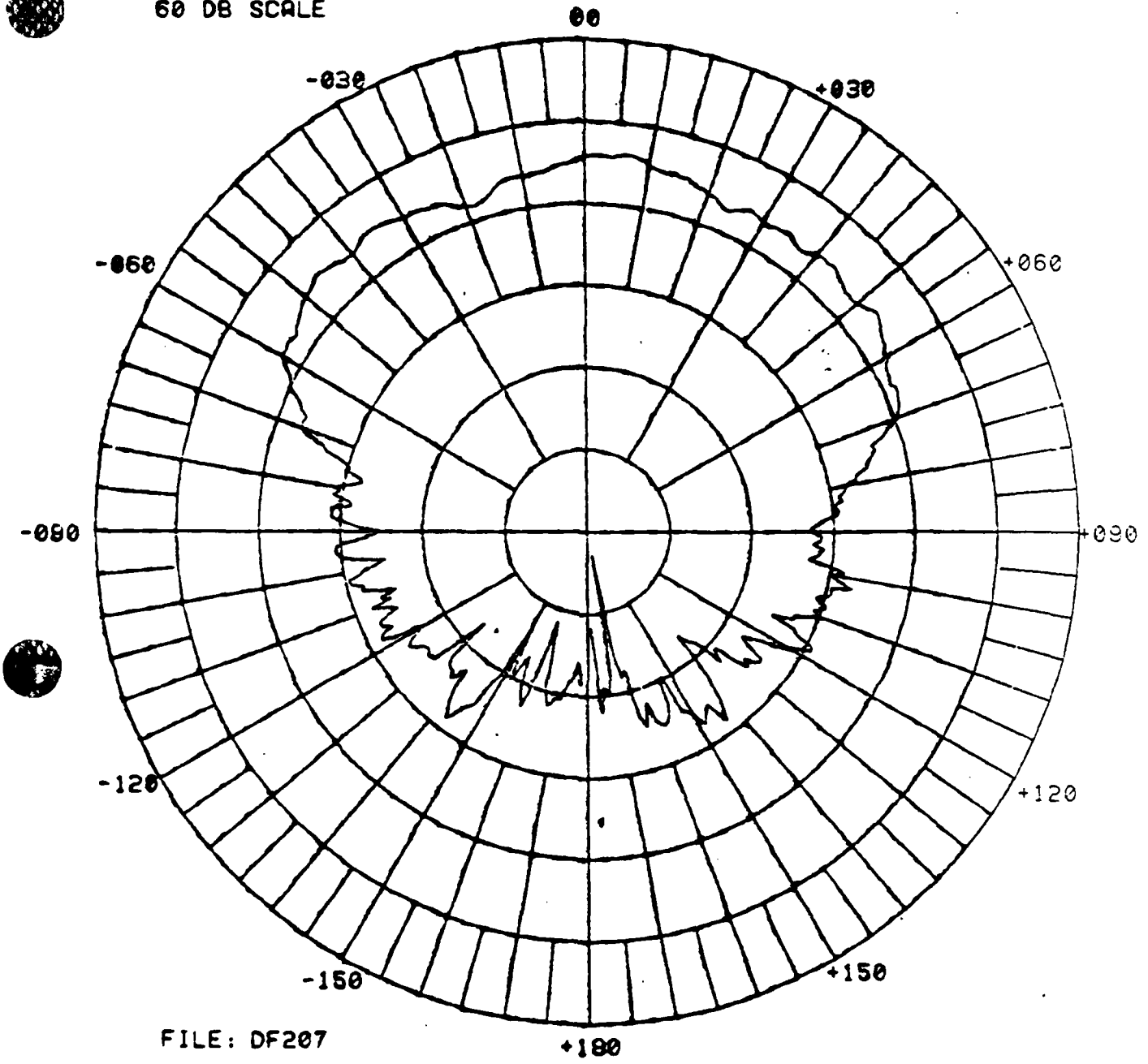
FILE: DF207

SCAN NR: 4 STEP ANGLE: 30.00 PLOT_____ AA

FREQ NR: 2 FREQ(MHZ): F11

CONFIGURATION 2

60 DB SCALE

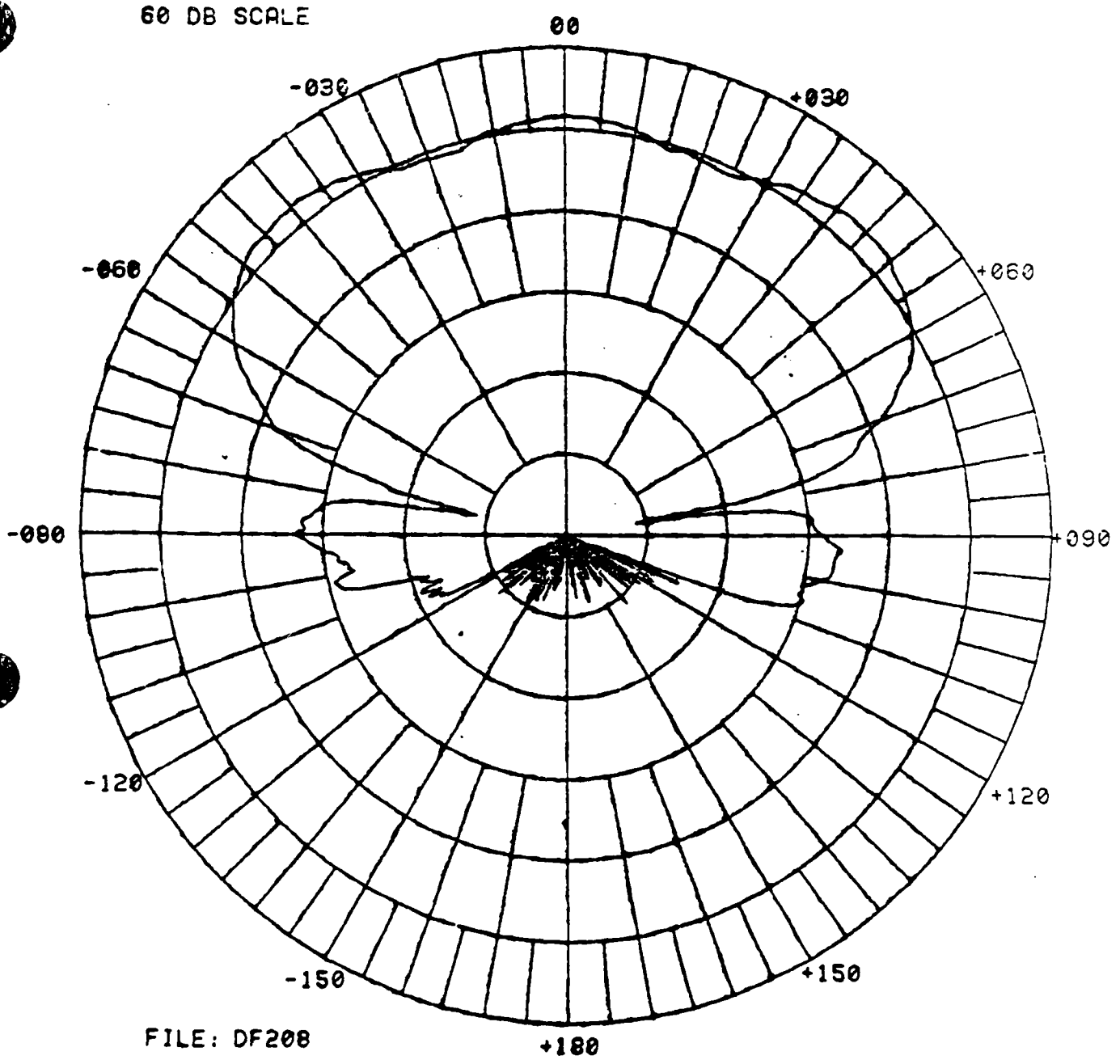


FILE: DF207

SCAN NR: 5 STEP ANGLE: 40.00 PLOT_____ AA

FREQ NR: 2 FREQ(MHZ): F||

CONFIGURATION 2



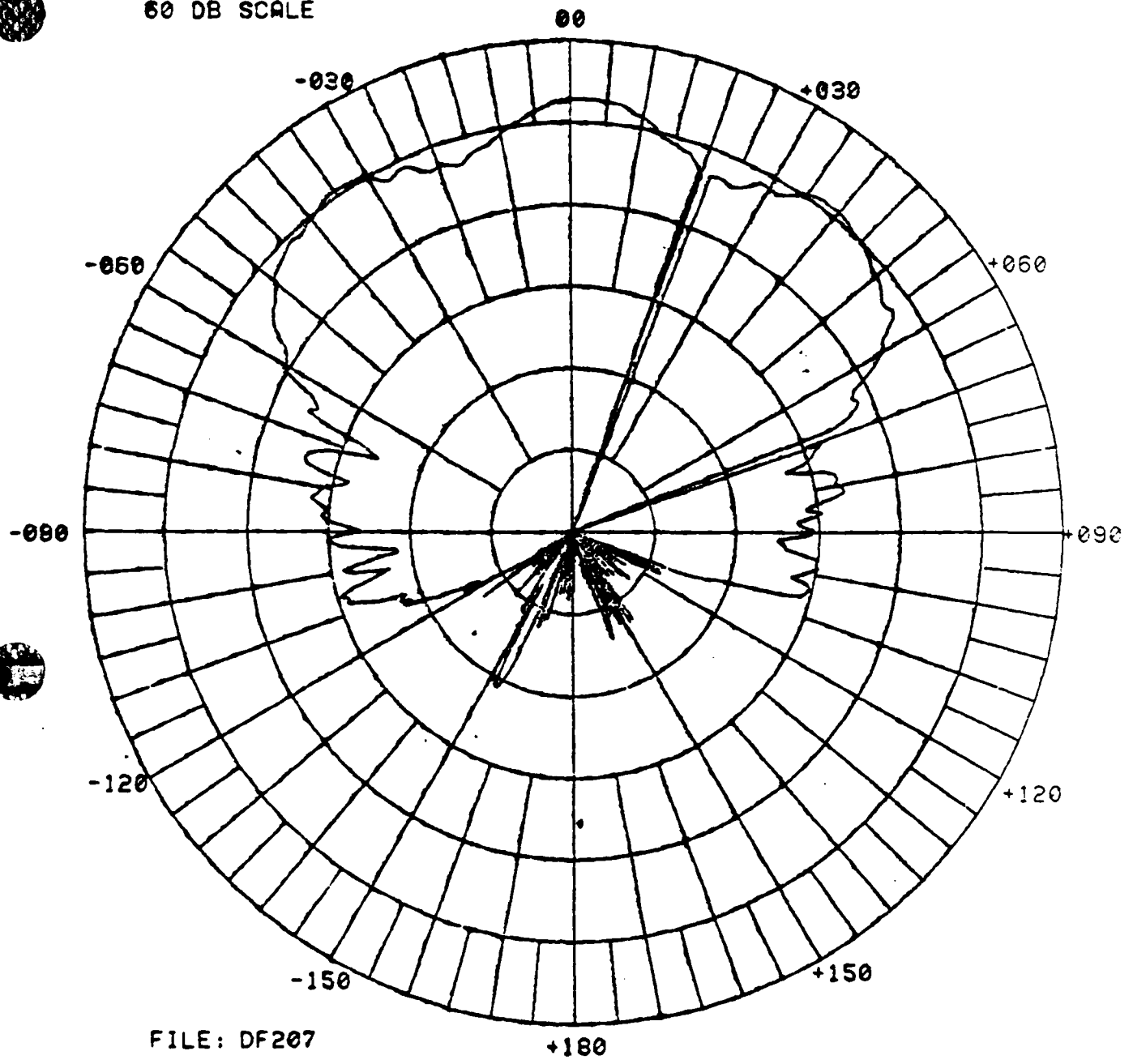
FILE: DF208

SCAN NR: 1 STEP ANGLE: 0.00 PLOT_____ AA

FREQ NR: 2 FREQ(MHZ): F11

CONFIGURATION 2

60 DB SCALE

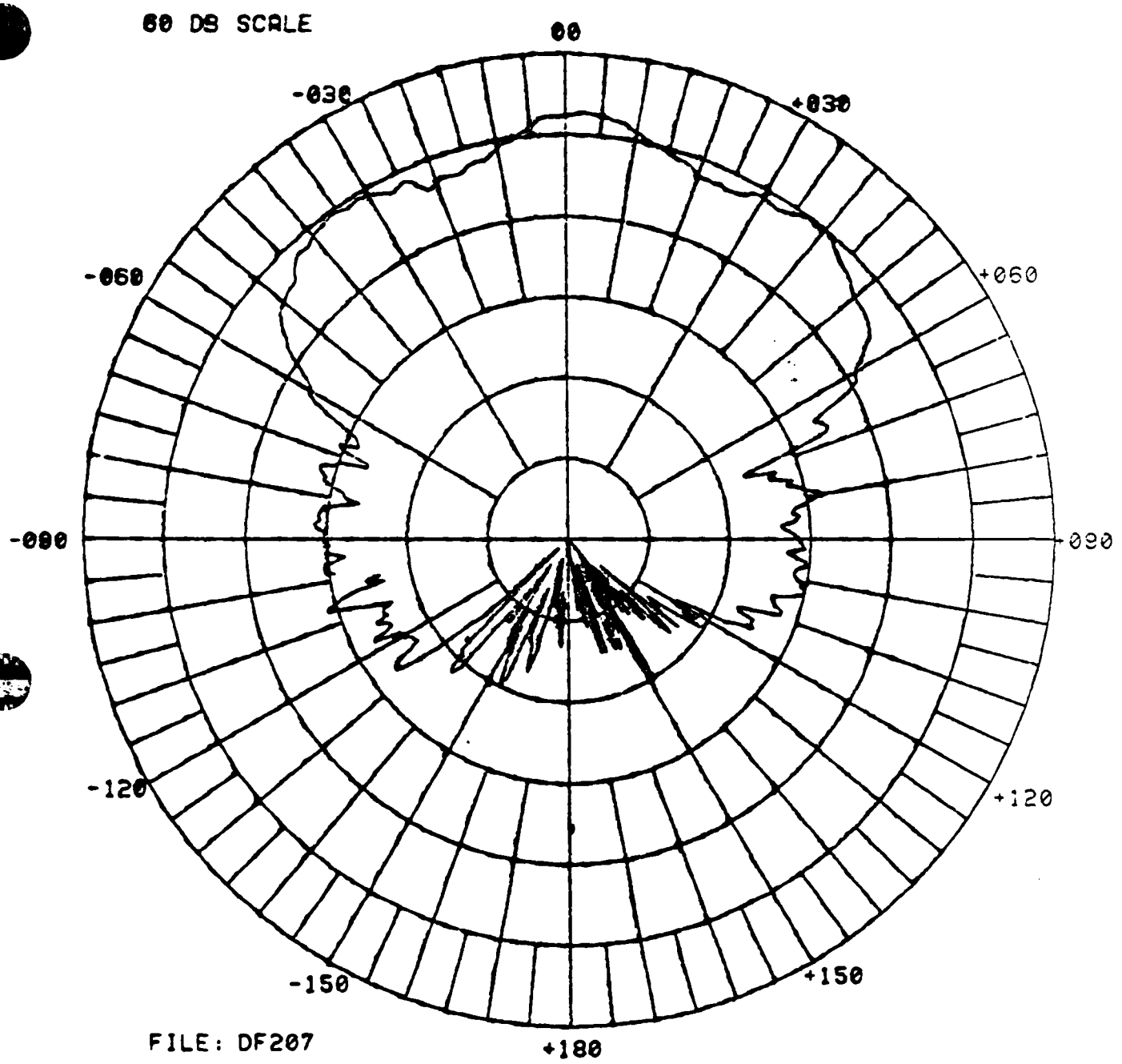


FILE: DF207

SCAN NR: 1 STEP ANGLE: 0.00 PLOT_____ AA

FREQ NR: 3 FREQ(MHZ): F/2

CONFIGURATION 2

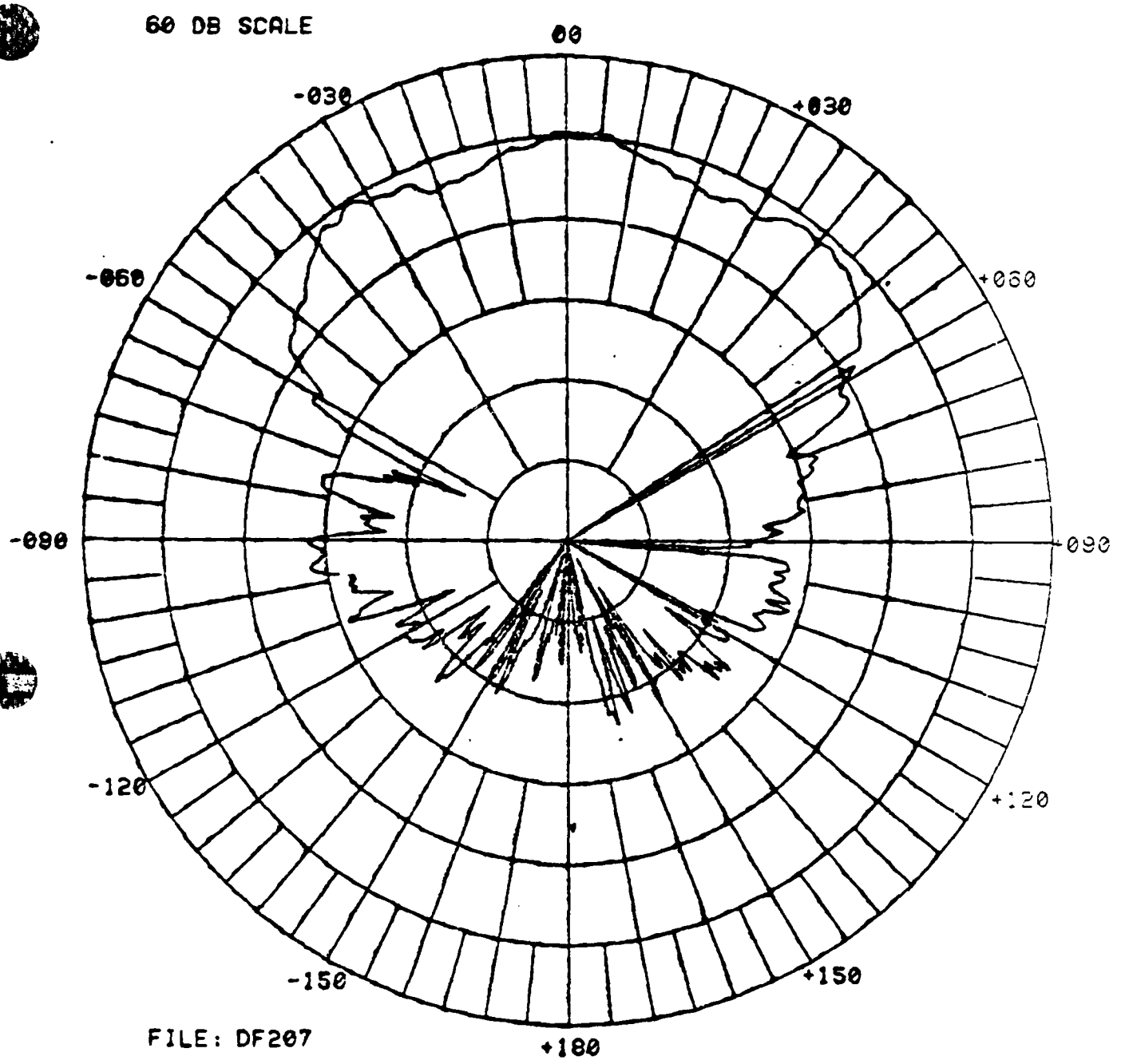


FILE: DF207

SCAN NR: 2 STEP ANGLE: 10.00 PLOT_____ AA

FREQ NR: 3 FREQ(MHZ): F12

CONFIGURATION 2

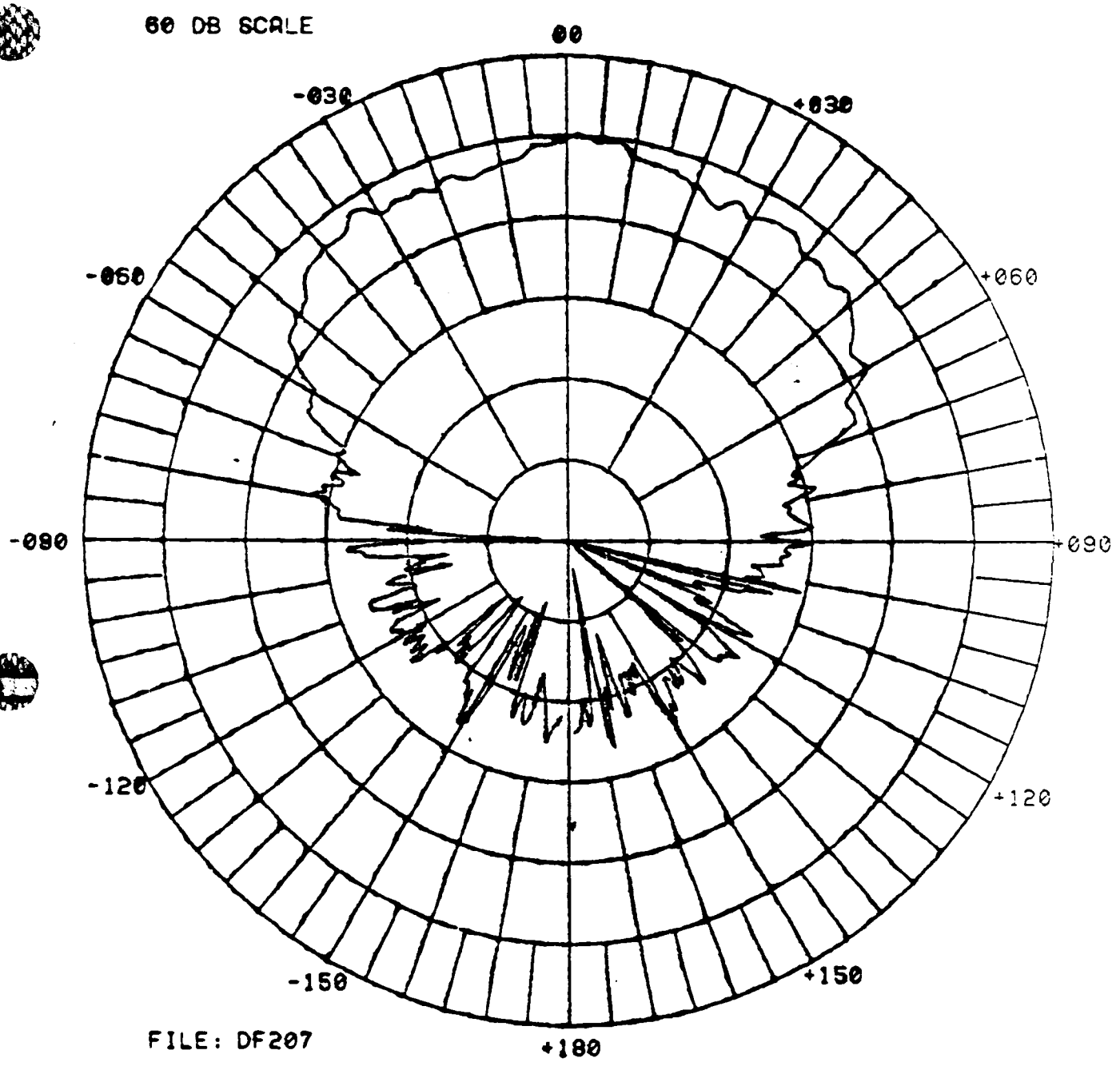


FILE: DF207

SCAN NR: 3 STEP ANGLE: 20.00 PLOT_____ AA

FREQ NR: 3 FREQ(MHZ): F/2

CONFIGURATION 2



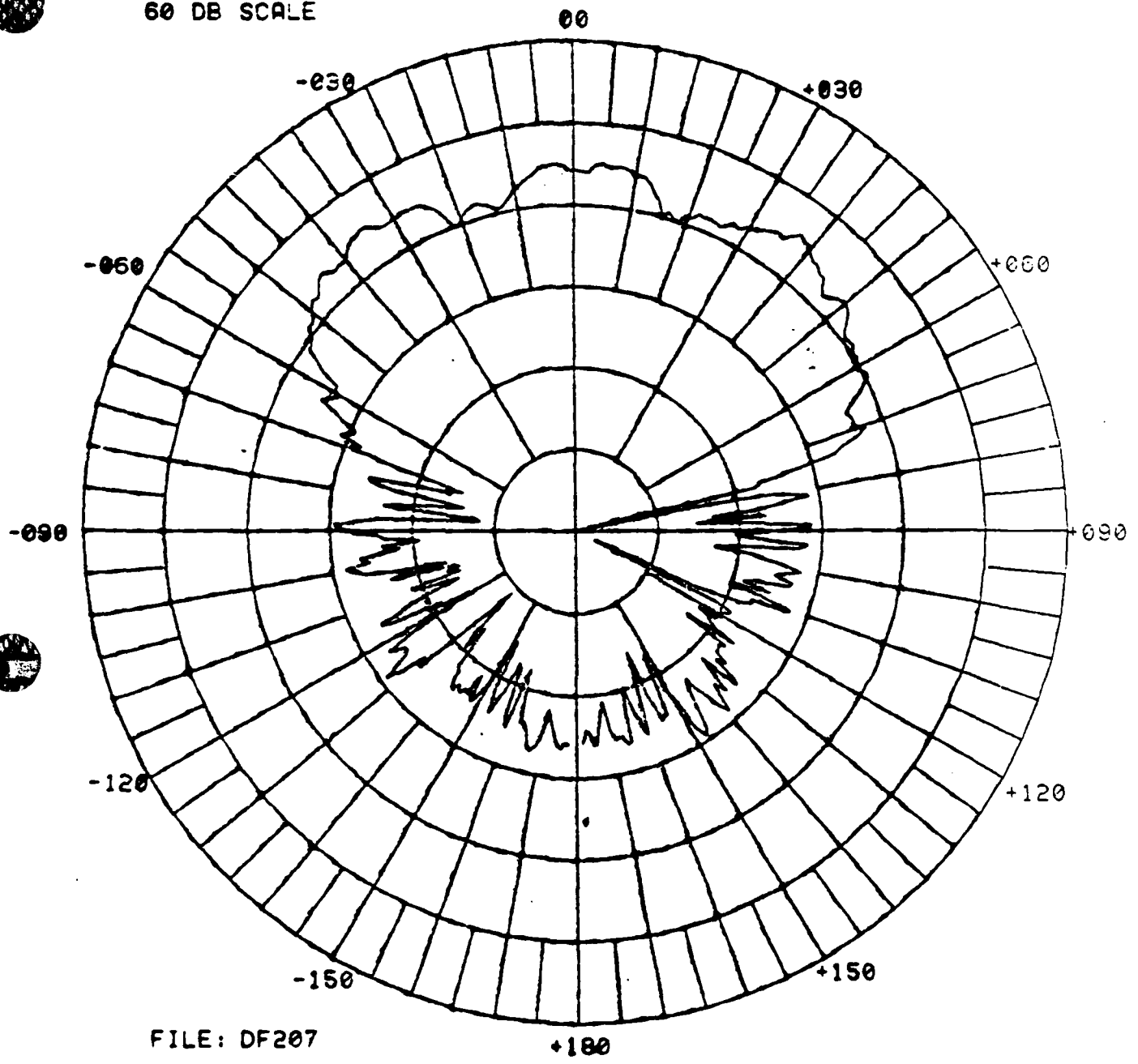
FILE: DF207

SCAN NR: 4 STEP ANGLE: 30.00 PLOT_____ AA

FREQ NR: 3 FREQ(MHZ): F12

CONFIGURATION 2

60 DB SCALE



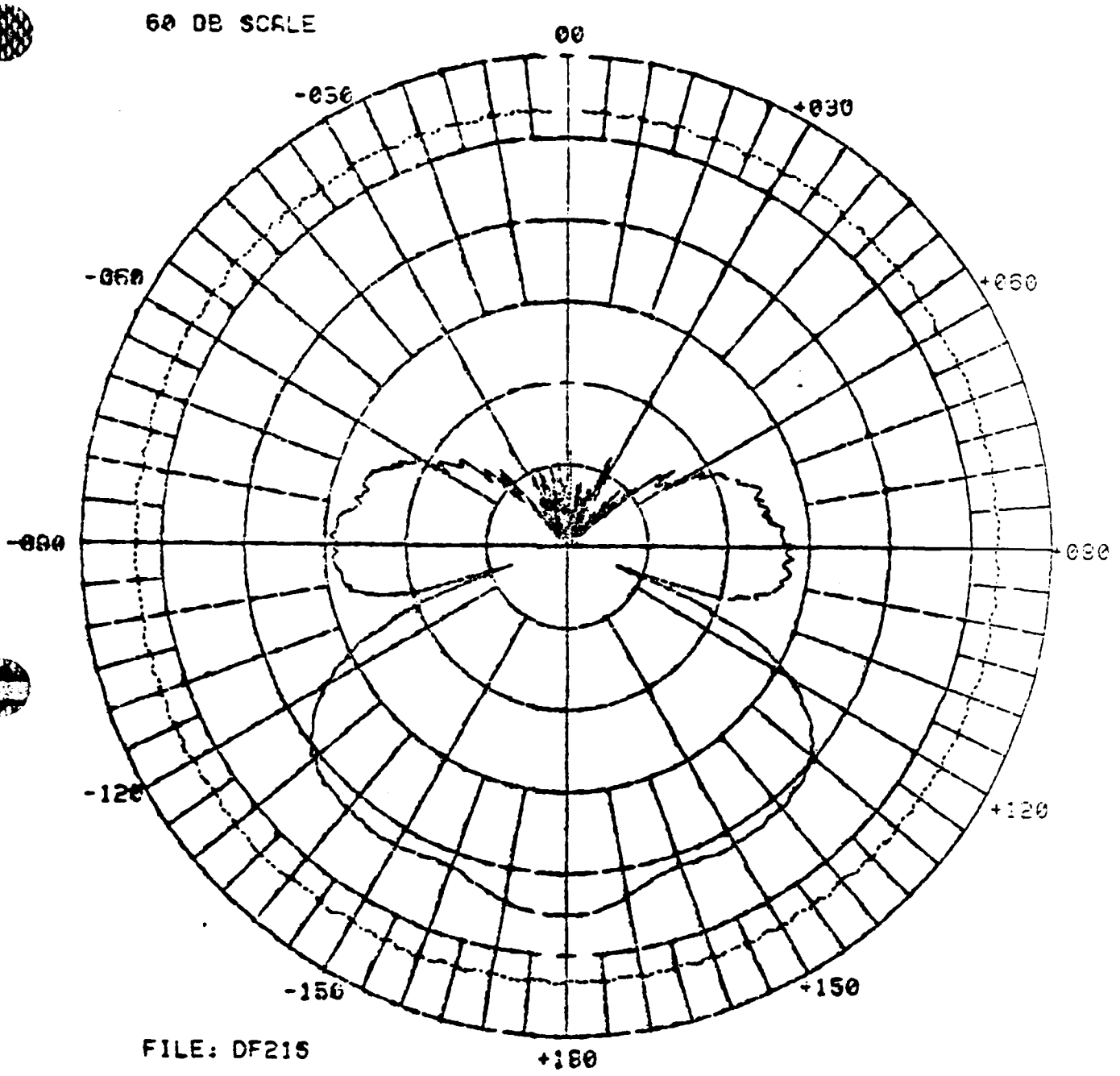
FILE: DF207

SCAN NR: 5 STEP ANGLE: 40.00 PLOT_____ AA

FREQ NR: 3 FREQ(MHZ): F12

CONFIGURATION 2

60 DB SCALE



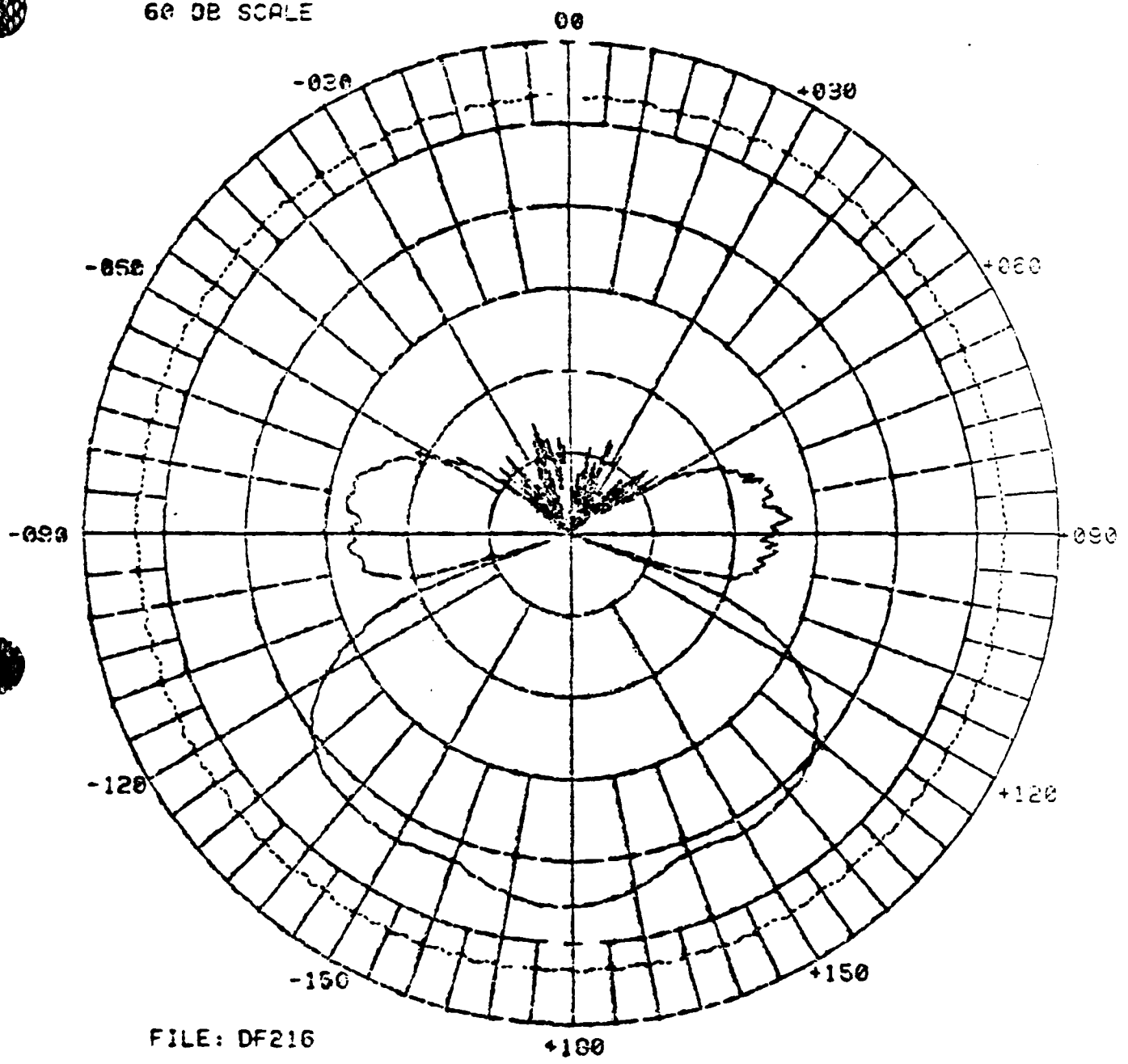
FILE: DF215

SCAN NR: 1 STEP ANGLE: 0.00 PLOT_____ AA

FREQ NR: 1 FREQ(MHZ): F10 PLOT_____ AB

CONFIGURATION 5

9 JUN 1984



FILE: DF216

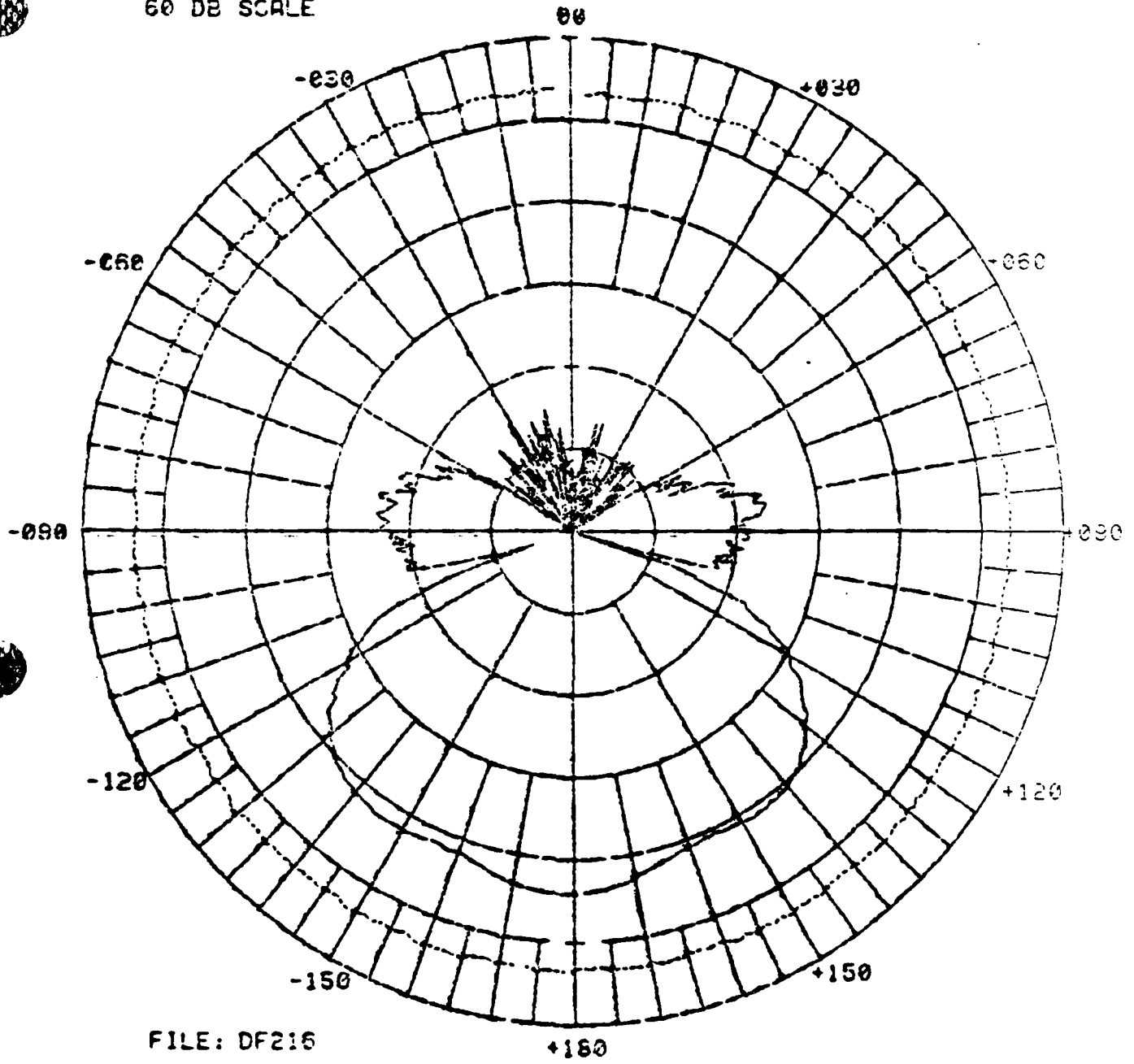
SCAN NR: 2 STEP ANGLE: 10.00 PLOT____ AA

FREQ NR: 1 FREQ(MHZ): F10 PLOT____ AB

CONFIGURATION 5

9 JUN 1984

60 DB SCALE



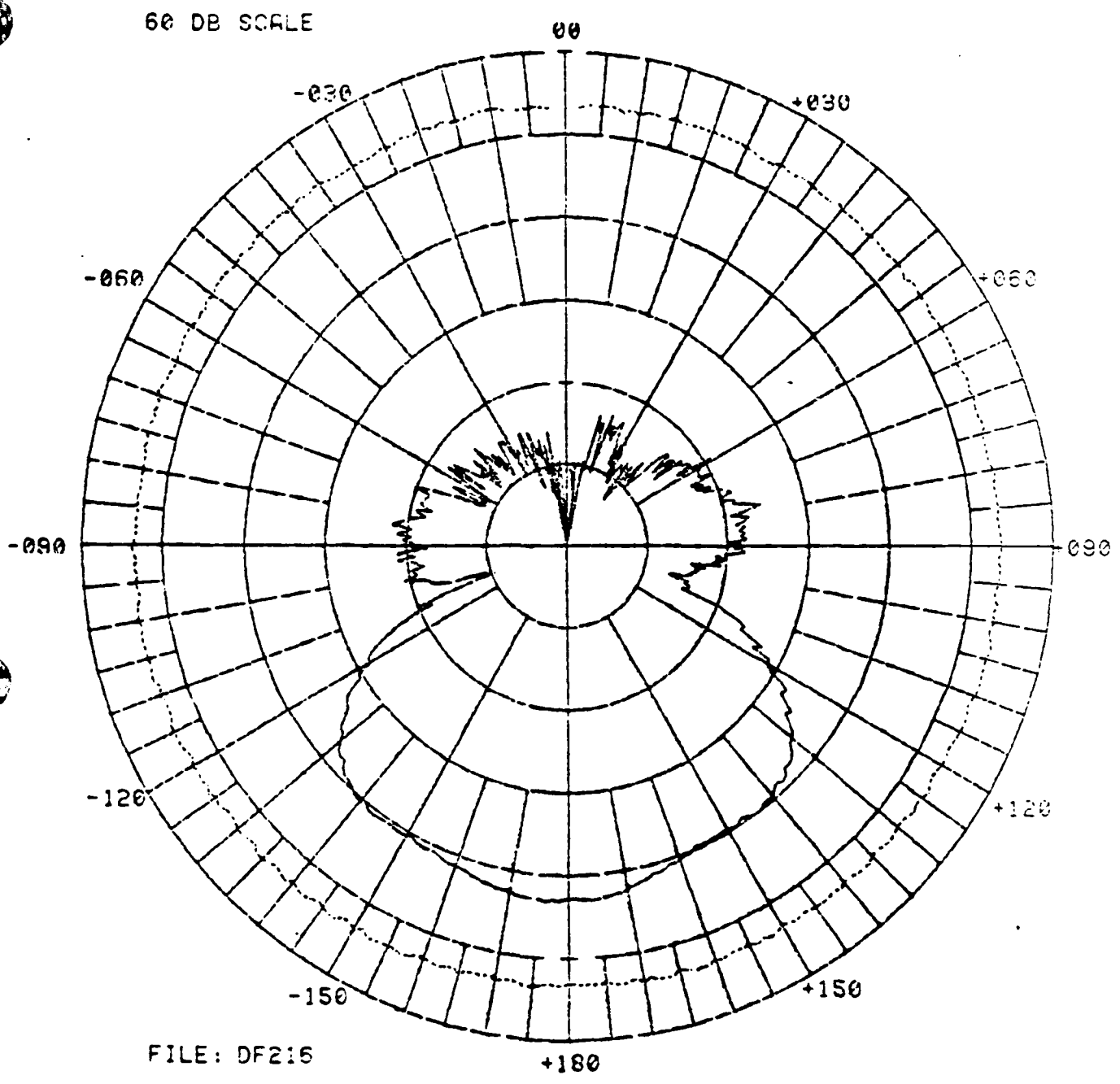
FILE: DF216

SCAN NR: 3 STEP ANGLE: 20.00 PLOT____ AA

FREQ NR: 1 FREQ(MHZ): F10 PLOT____ AB

CONFIGURATION 5

9 JUN 1994



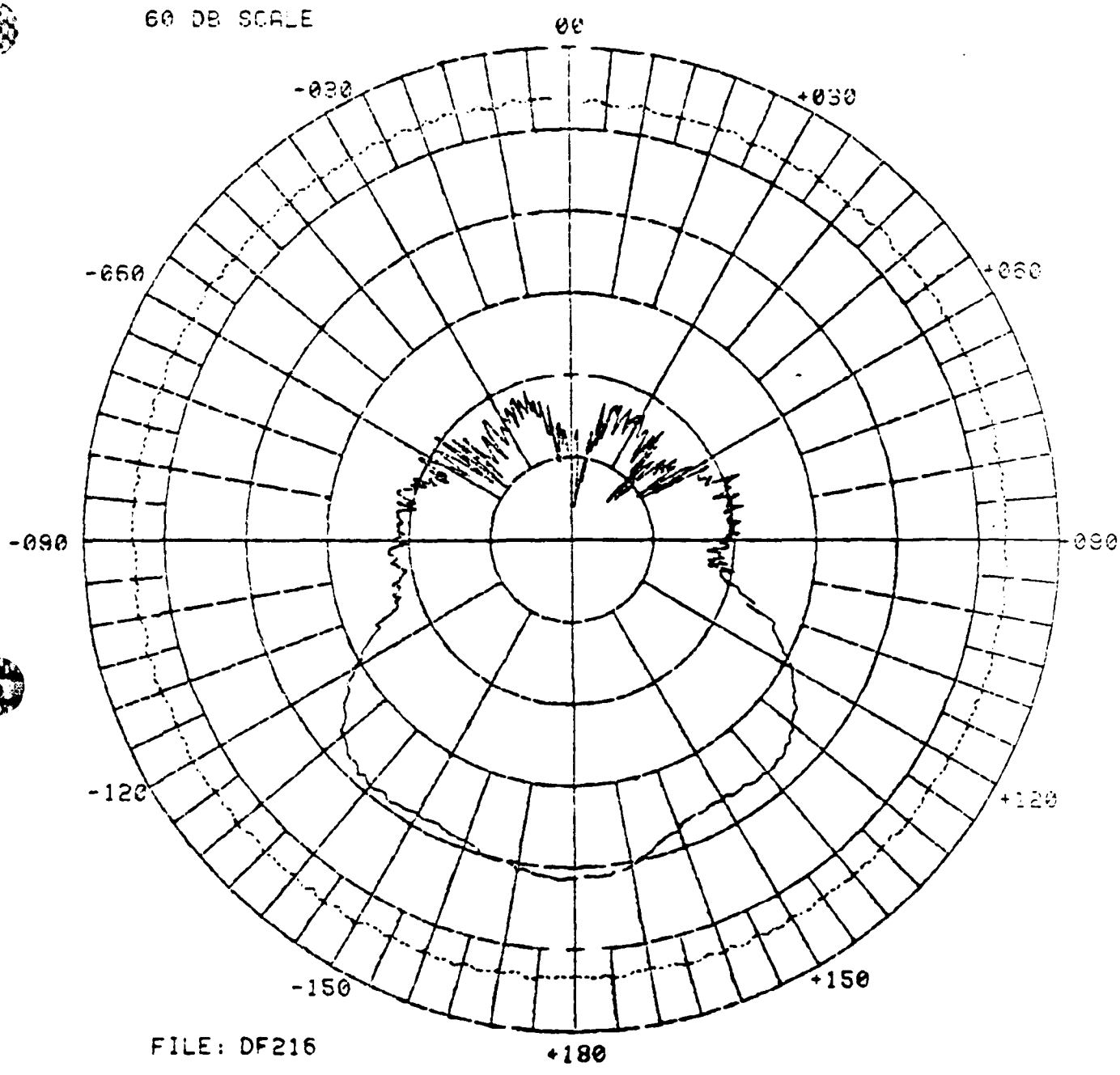
FILE: DF215

SCAN NR: 4 STEP ANGLE: 30.00 PLOT____ AA

FREQ NR: 1 FREQ(MHZ): F10 PLOT____ AB

CONFIGURATION 5

9 JUN 1984



FILE: DF216

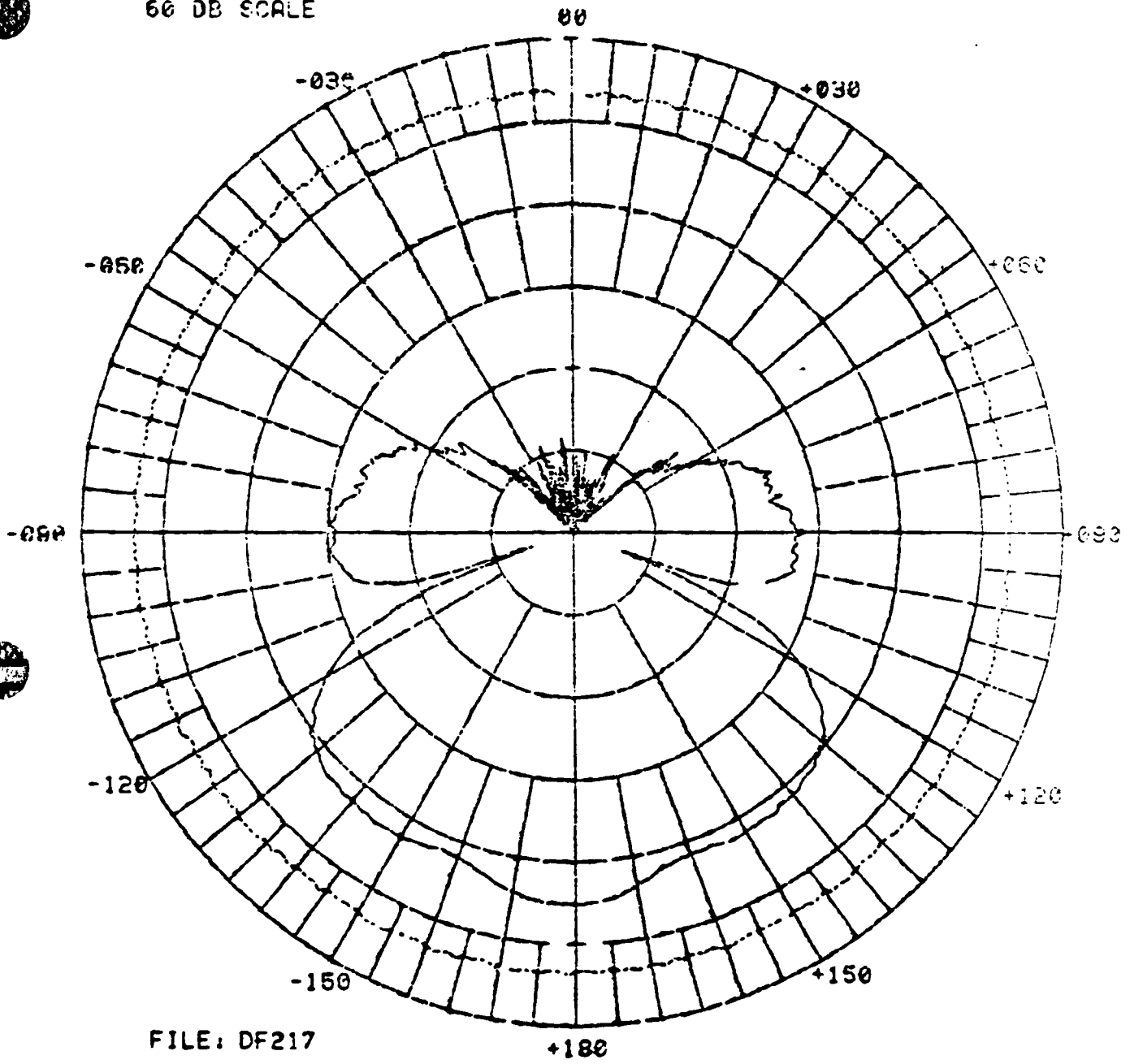
SCAN NR: 5 STEP ANGLE: 40.00 PLOT_____ AA

FREQ NR: 1 FREQ(MHZ): F10 PLOT_____ AB

CONFIGURATION 5

9 JUN 1984

60 DB SCALE



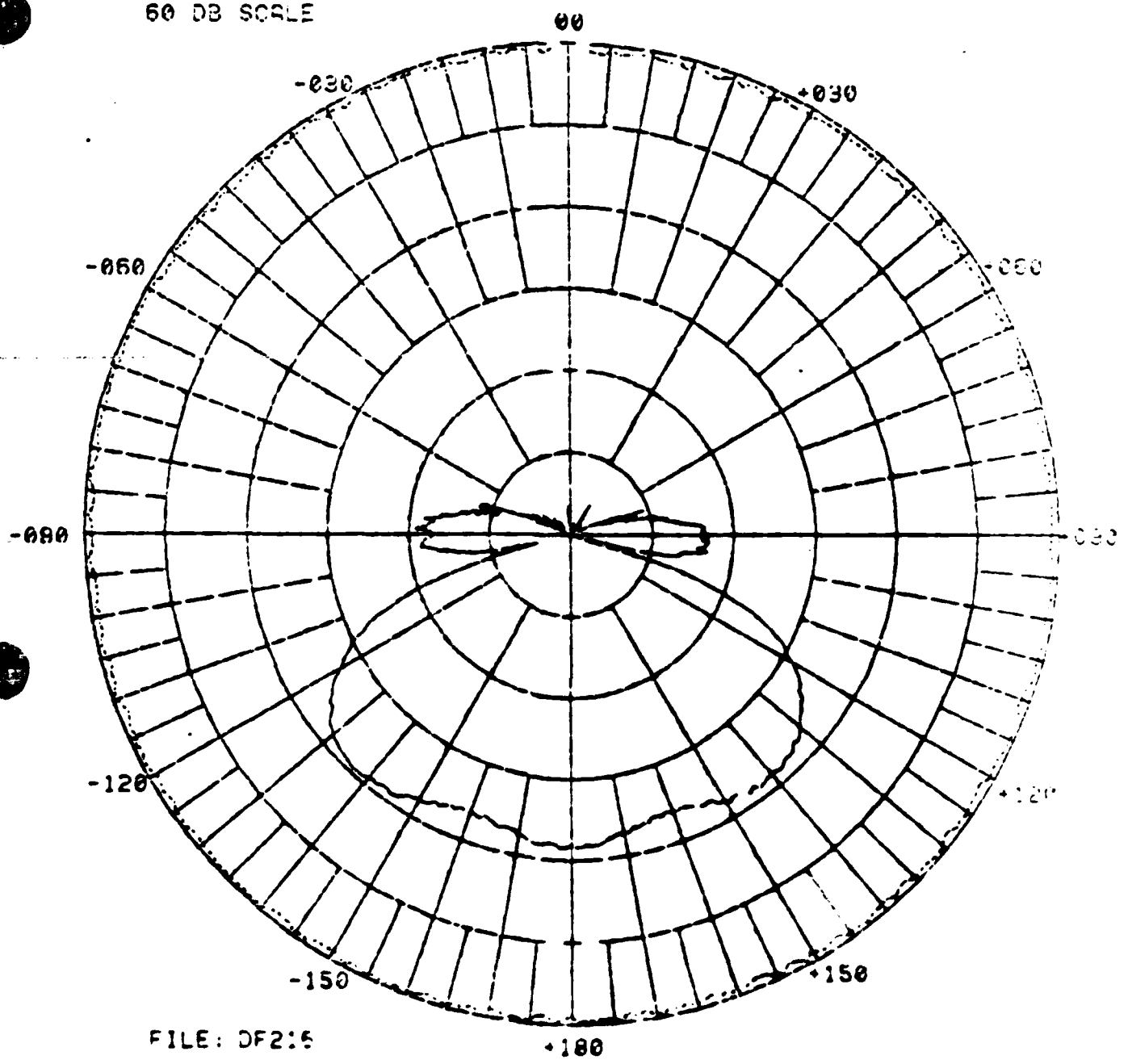
FILE: DF217

SCAN NR: 1 STEP ANGLE: 0.00 PLOT_____ AA

FREQ NR: 1 FREQ(MHZ): F10 PLOT_____ AB

CONFIGURATION 5

9 JUN 1984



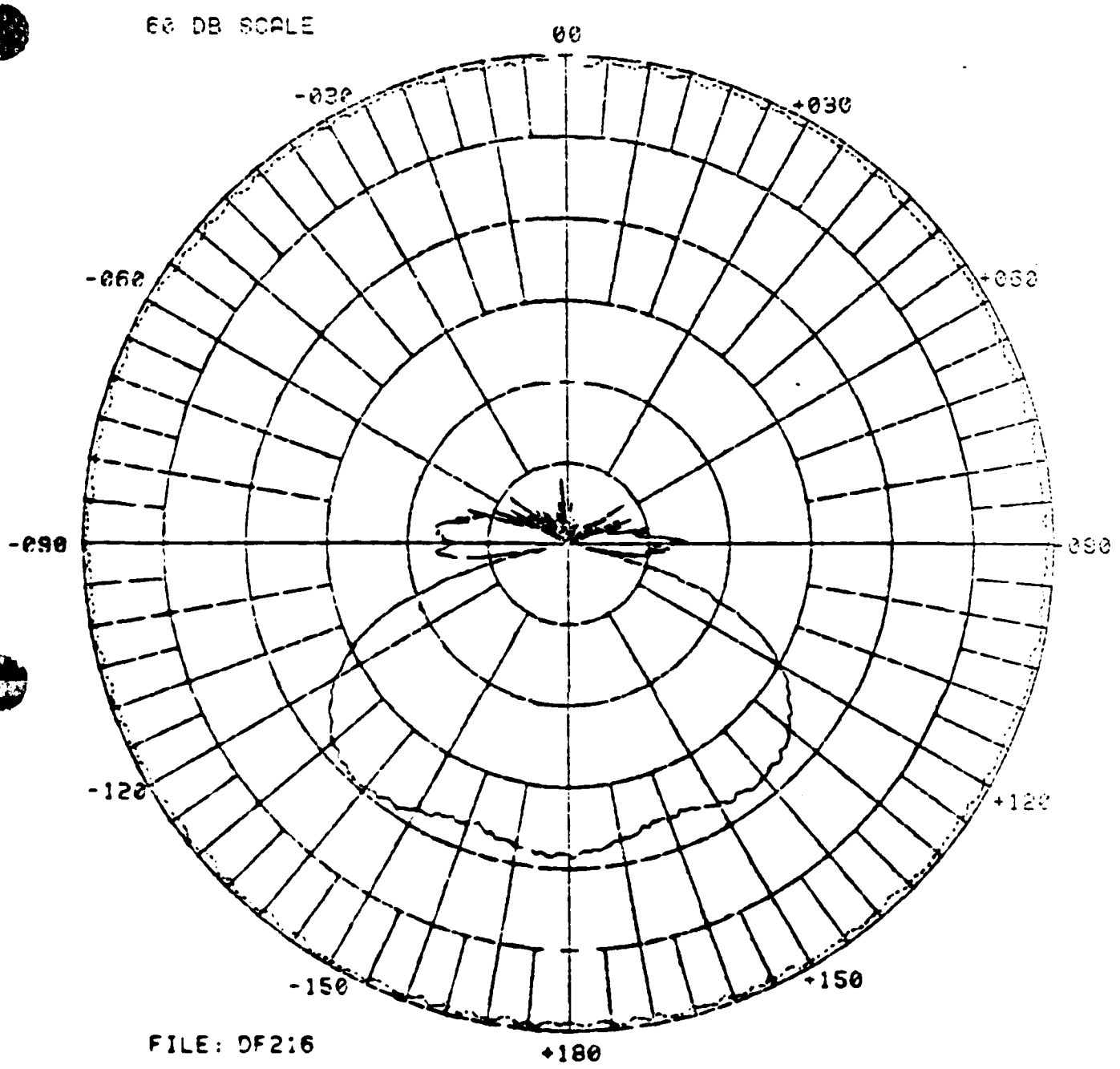
FILE: DF215

SCAN NR: 1 STEP ANGLE: 0.00 PLOT_____ AA

FREQ NR: 2 FREQ(MHZ): F11 PLOT_____ AB

CONFIGURATION 5

9 JUN 1984



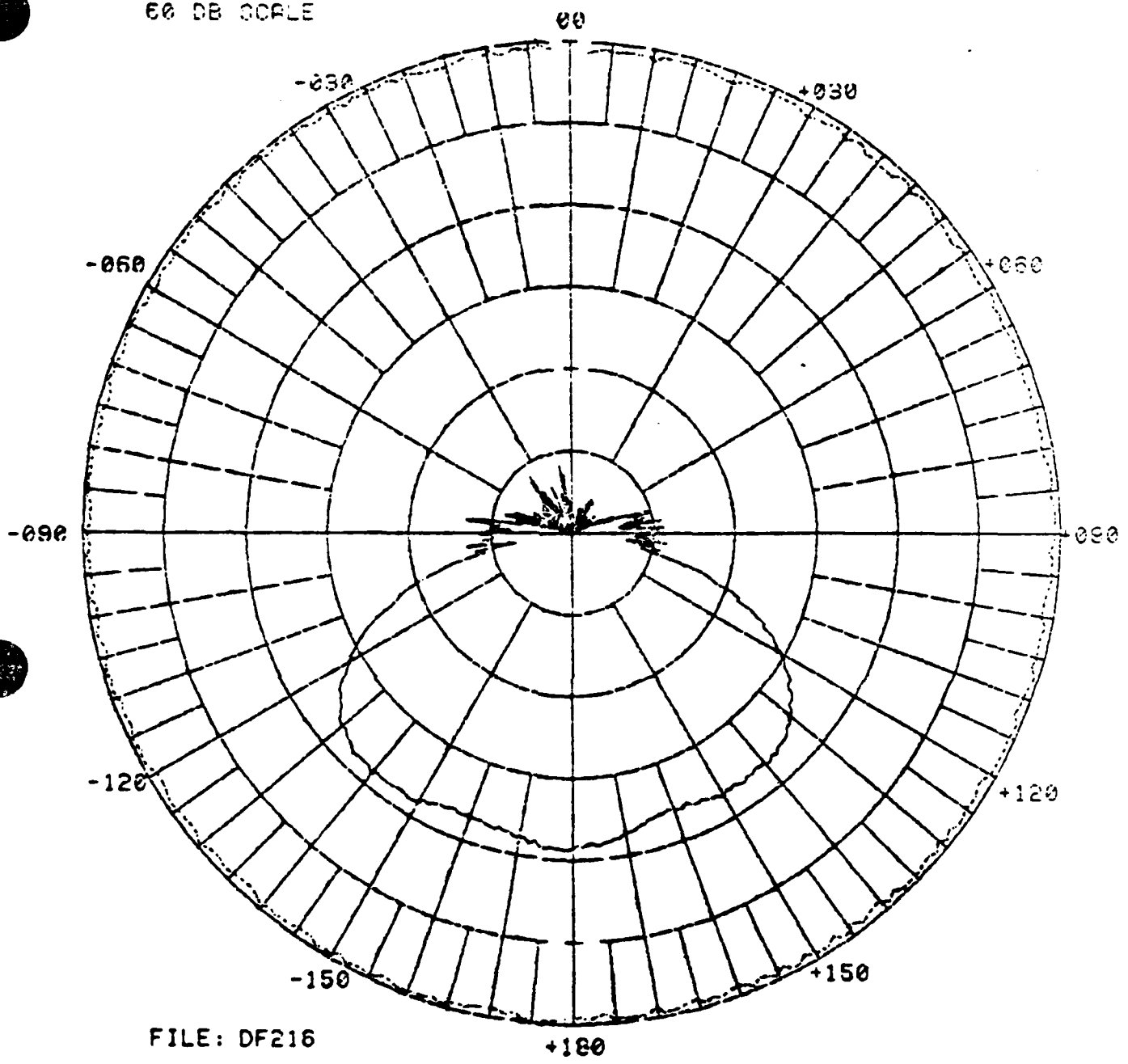
FILE: DF216

SCAN NR: 2 STEP ANGLE: 10.00 PLOT_____ AA

FREQ NR: 2 FREQ(MHZ): F|| PLOT_____ AB

CONFIGURATION 5

9 JUN 1984



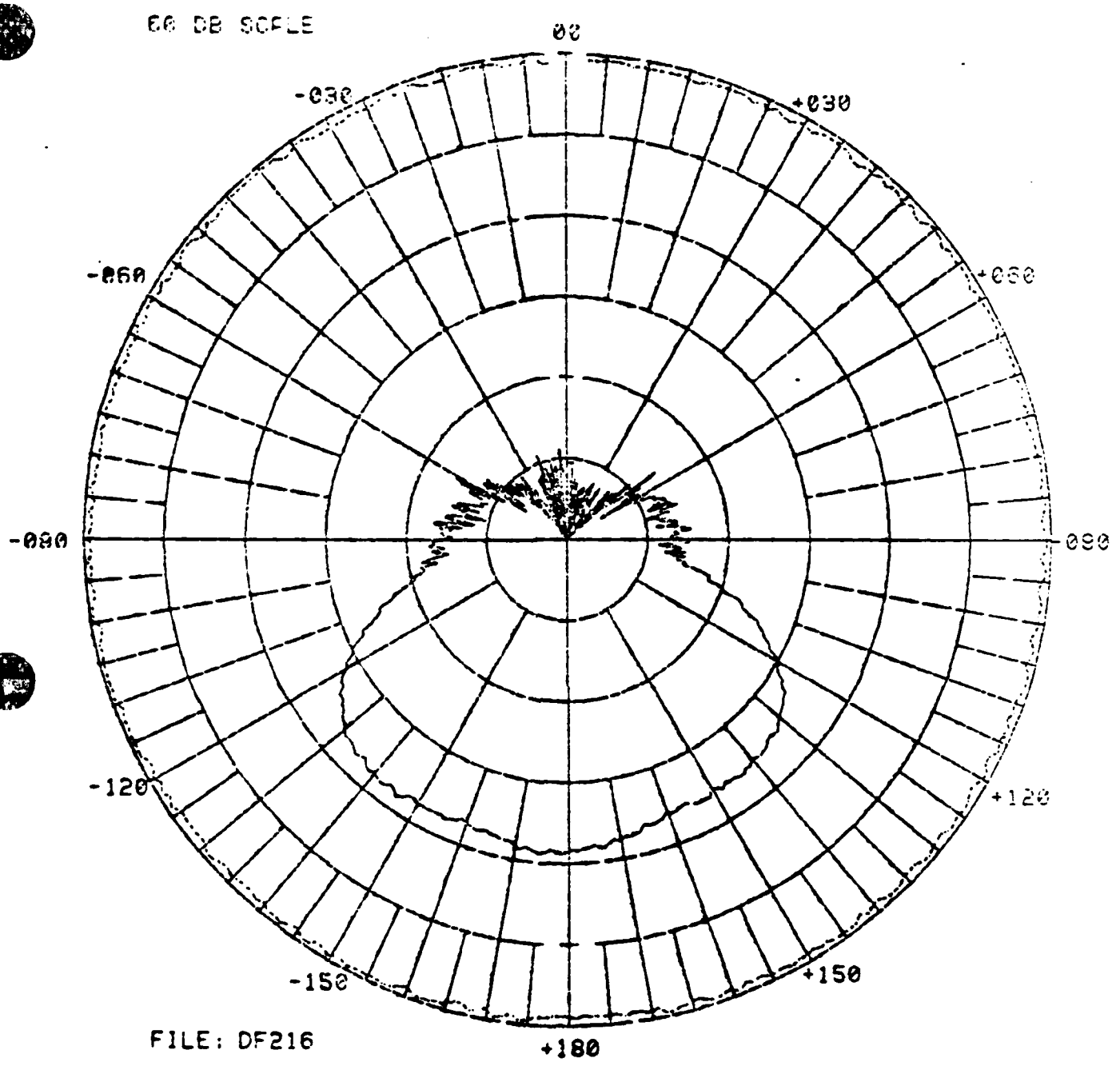
FILE: DF216

SCAN NR: 3 STEP ANGLE: 20.00 PLOT_____ AA

FREQ NR: 2 FREQ(MHZ): F// PLOT_____ AB

CONFIGURATION 5

9 JUN 1984

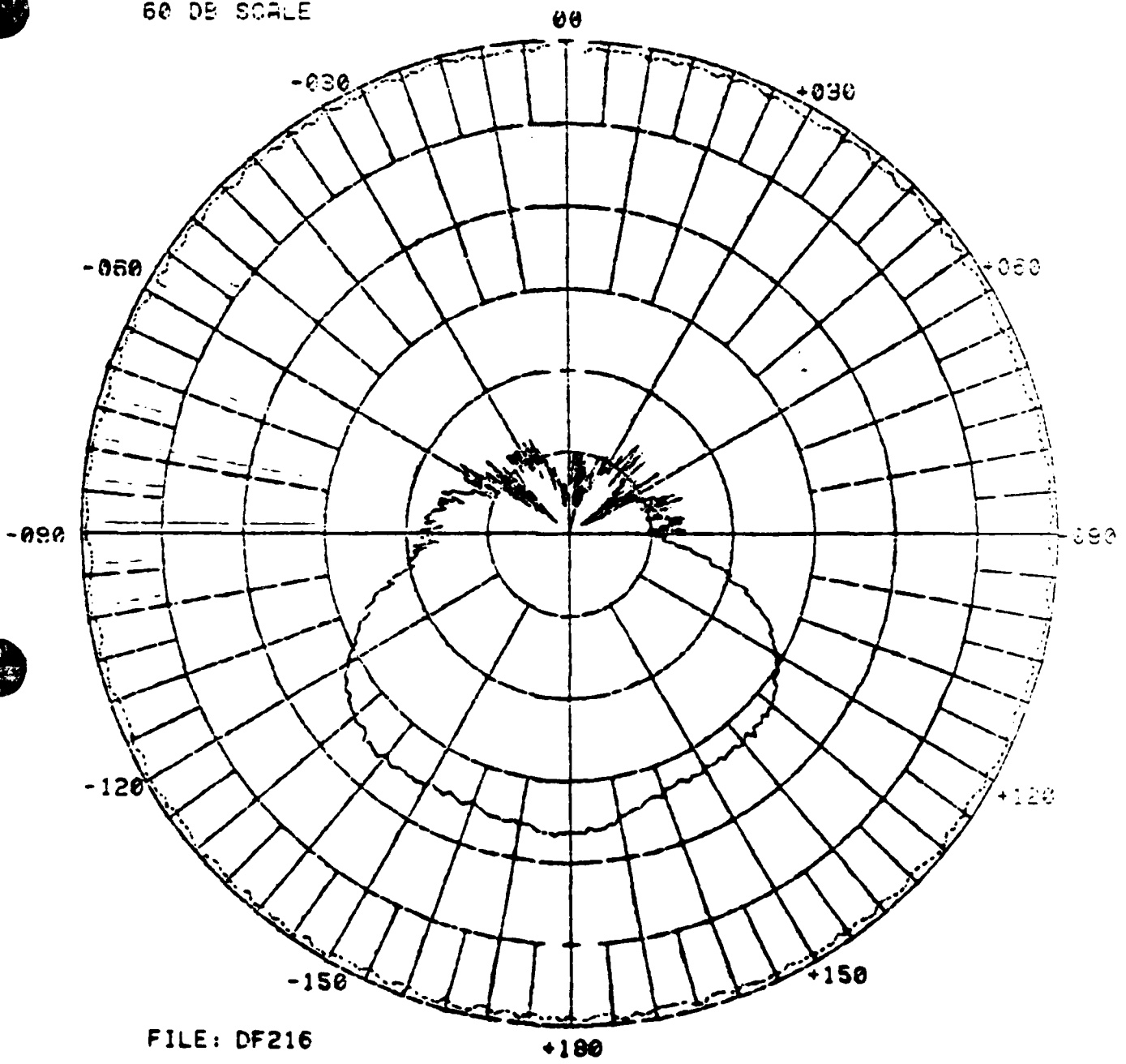


FILE: DF216

SCAN NR:	4	STEP ANGLE:	30.00	PLOT_____	AA
FREQ NR:	2	FREQ(MHZ):	F11	PLOT_____	AB

CONFIGURATION 5

9 JUN 1984



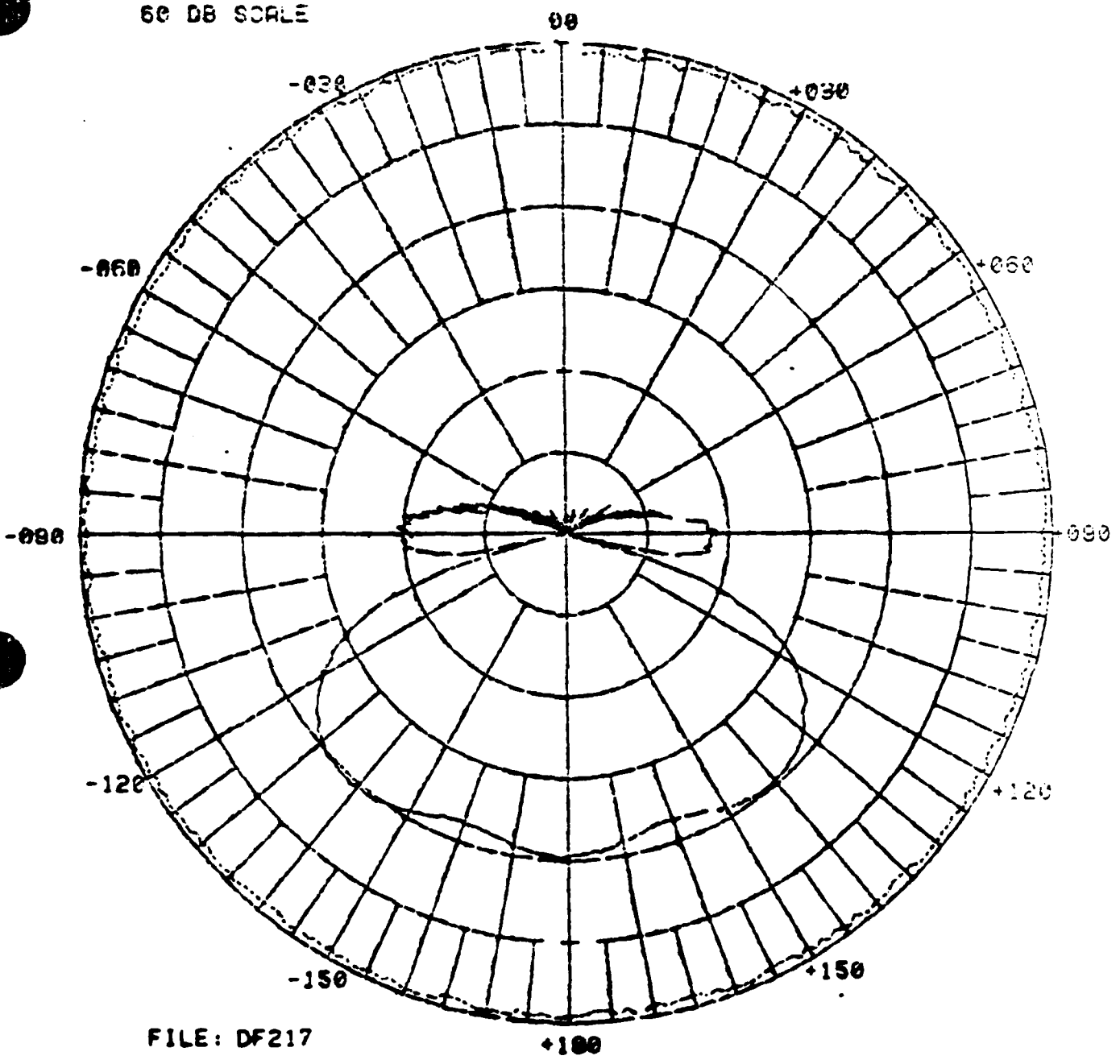
FILE: DF216

SCAN NR: 5 STEP ANGLE: 40.00 PLOT_____ AA

FREQ NR: 2 FREQ(MHZ): F/I PLOT_____ AB

CONFICURATION 5

9 JUN 1964



FILE: DF217

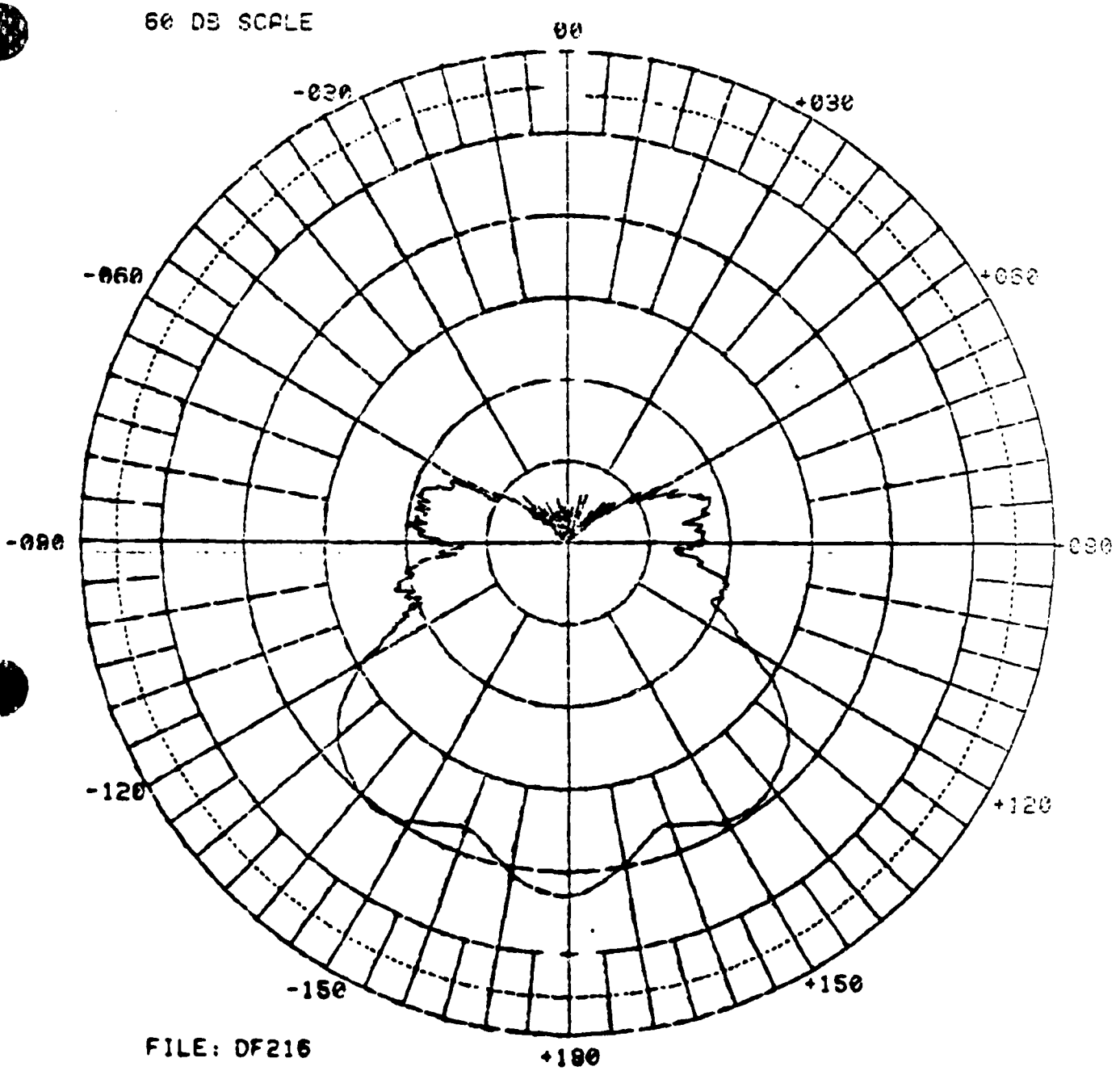
SCAN NR: 1 STEP ANGLE: 0.00 PLOT____ AA

FREQ NR: 2 FREQ(MHZ): F// PLOT____ AB

CONFIGURATION 5

9 JUN 1984

60 DB SCALE



FILE: DF216

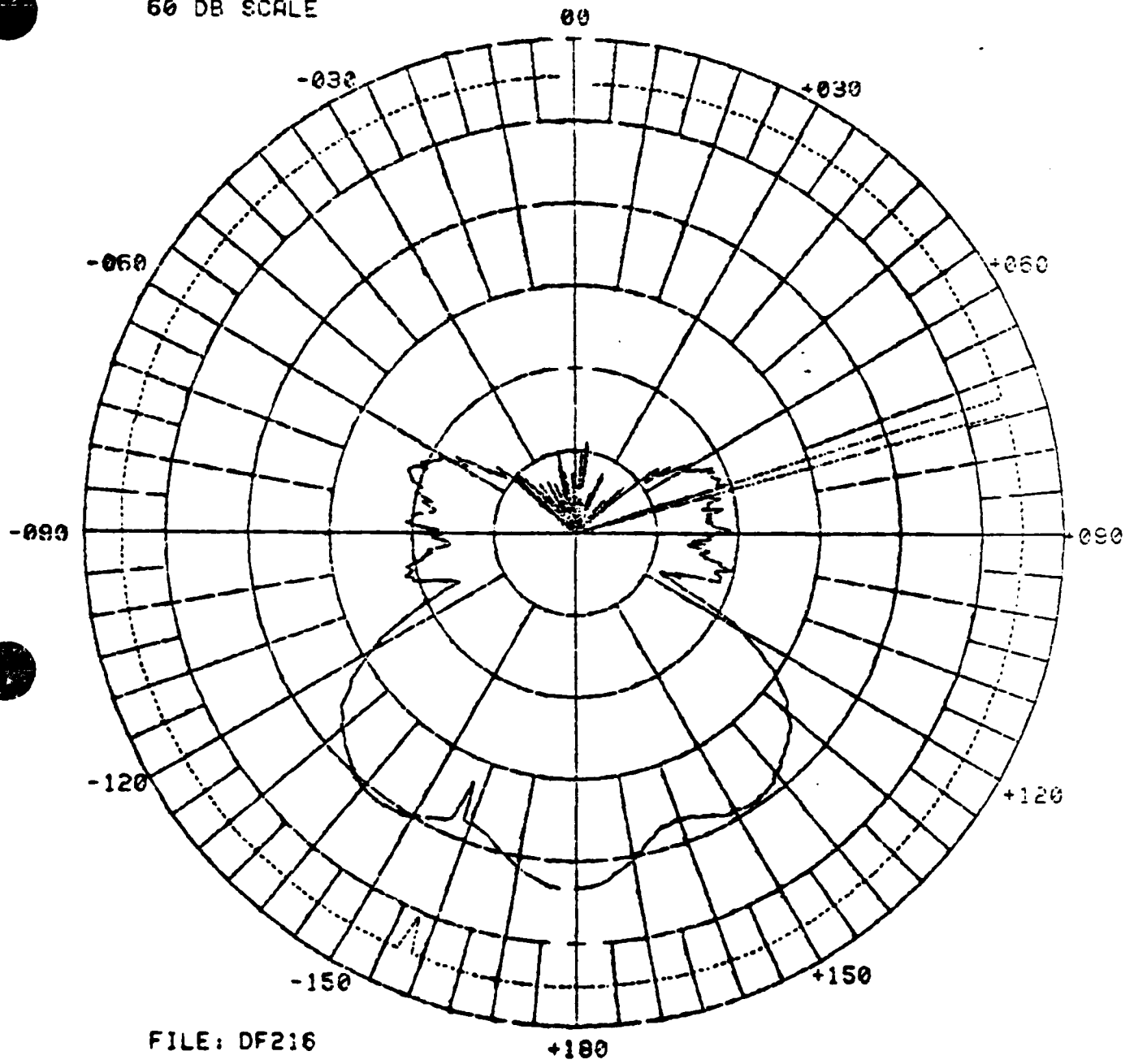
SCAN NR: 1 STEP ANGLE: 0.00 PLOT_____ AA

FREQ NR: 3 FREQ(MHZ): F 2 PLOT_____ AB

CONFIGURATION 5

9 JUN 1994

60 DB SCALE



FILE: DF216

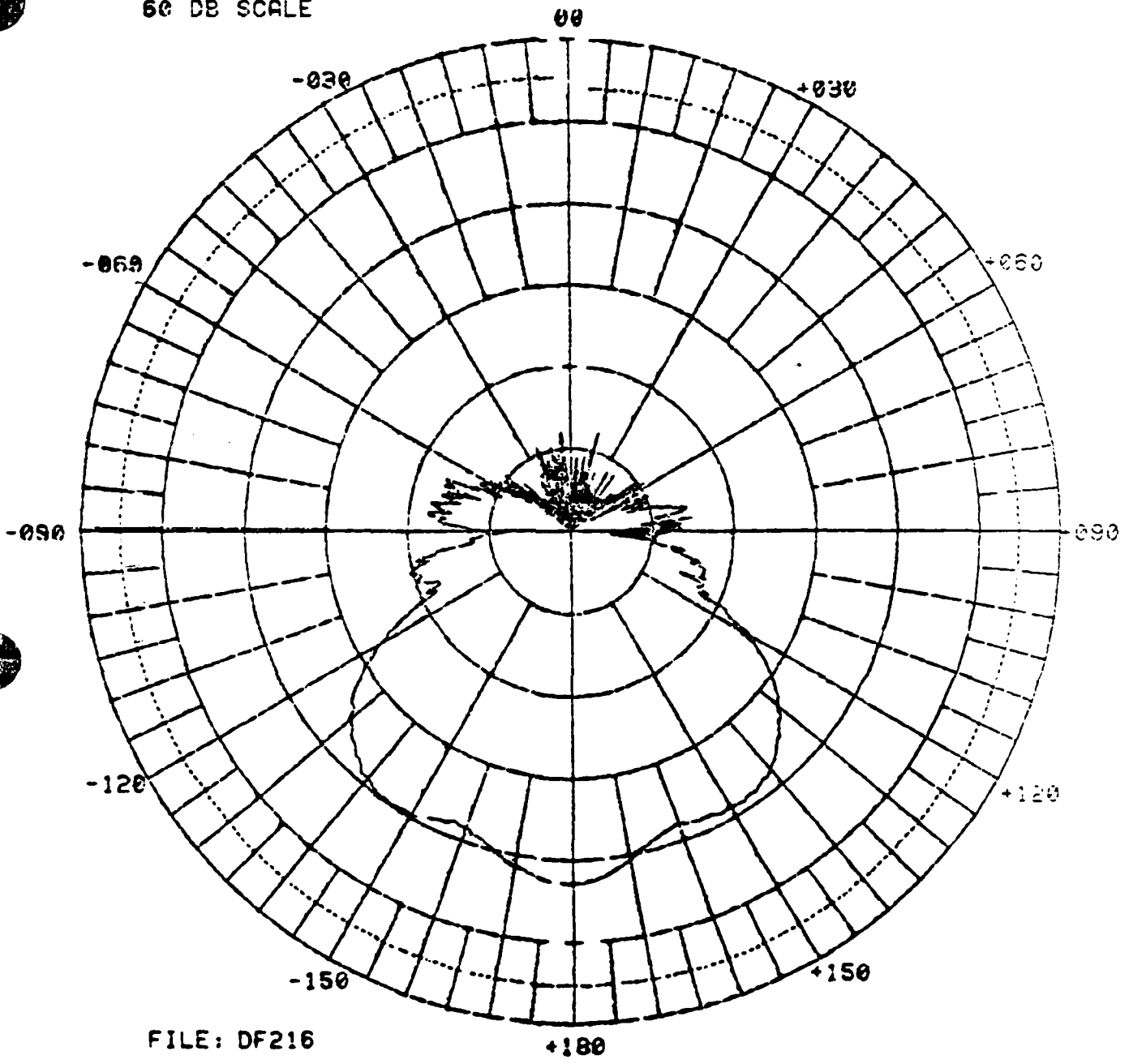
SCAN NR: 2 STEP ANGLE: 10.00 PLOT_____ AA

FREQ NR: 3 FREQ(MHZ): F/2 PLOT_____ AB

CONFIGURATION 5

9 JUN 1994

60 DB SCALE



FILE: DF216

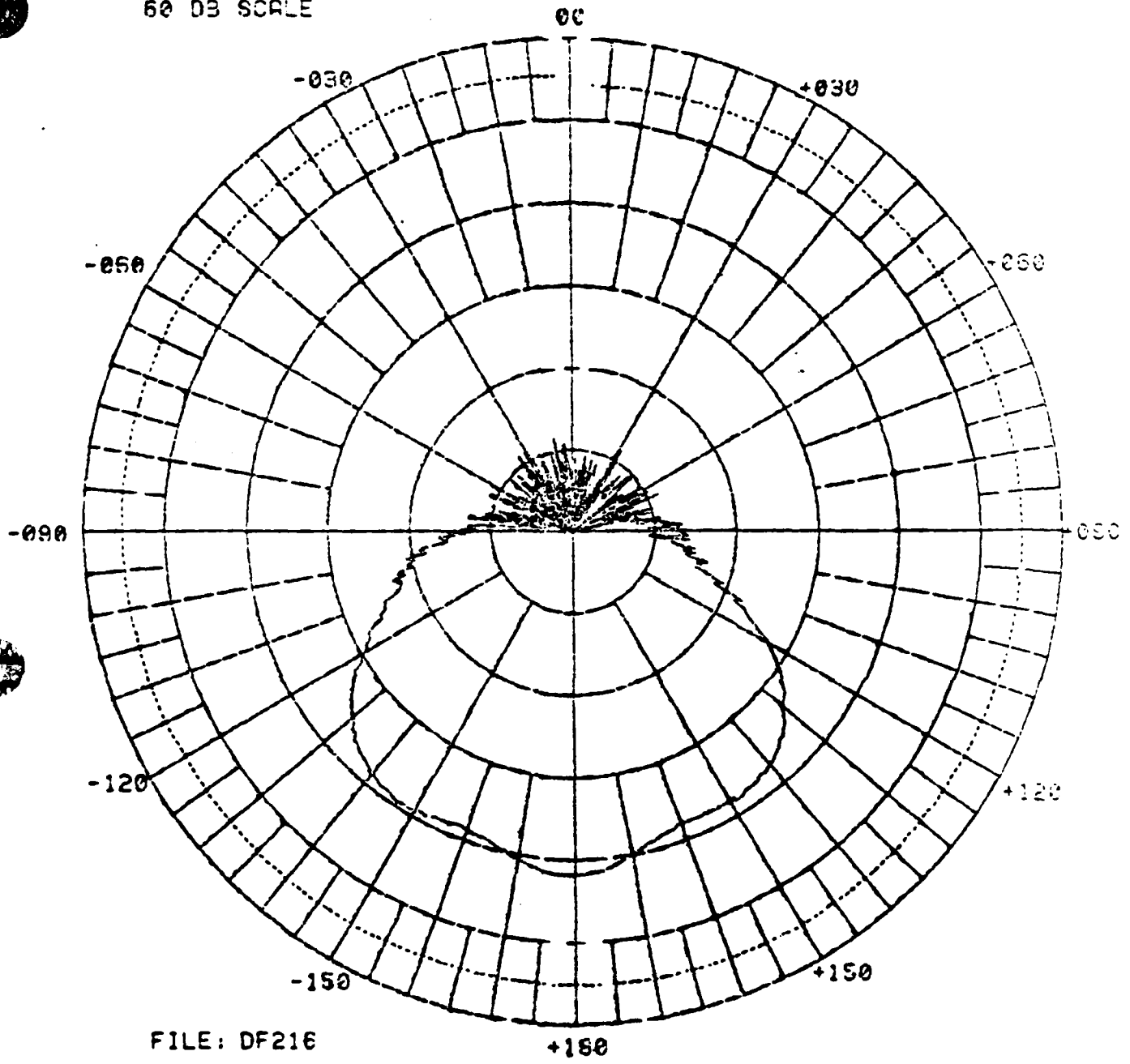
SCAN NR: 3 STEP ANGLE: 20.00 PLOT____ AA

FREQ NR: 3 FREQ(MHZ): F12 PLOT____ AB

CONFIGURATION 5

9 JUN 1984

60 DB SCALE



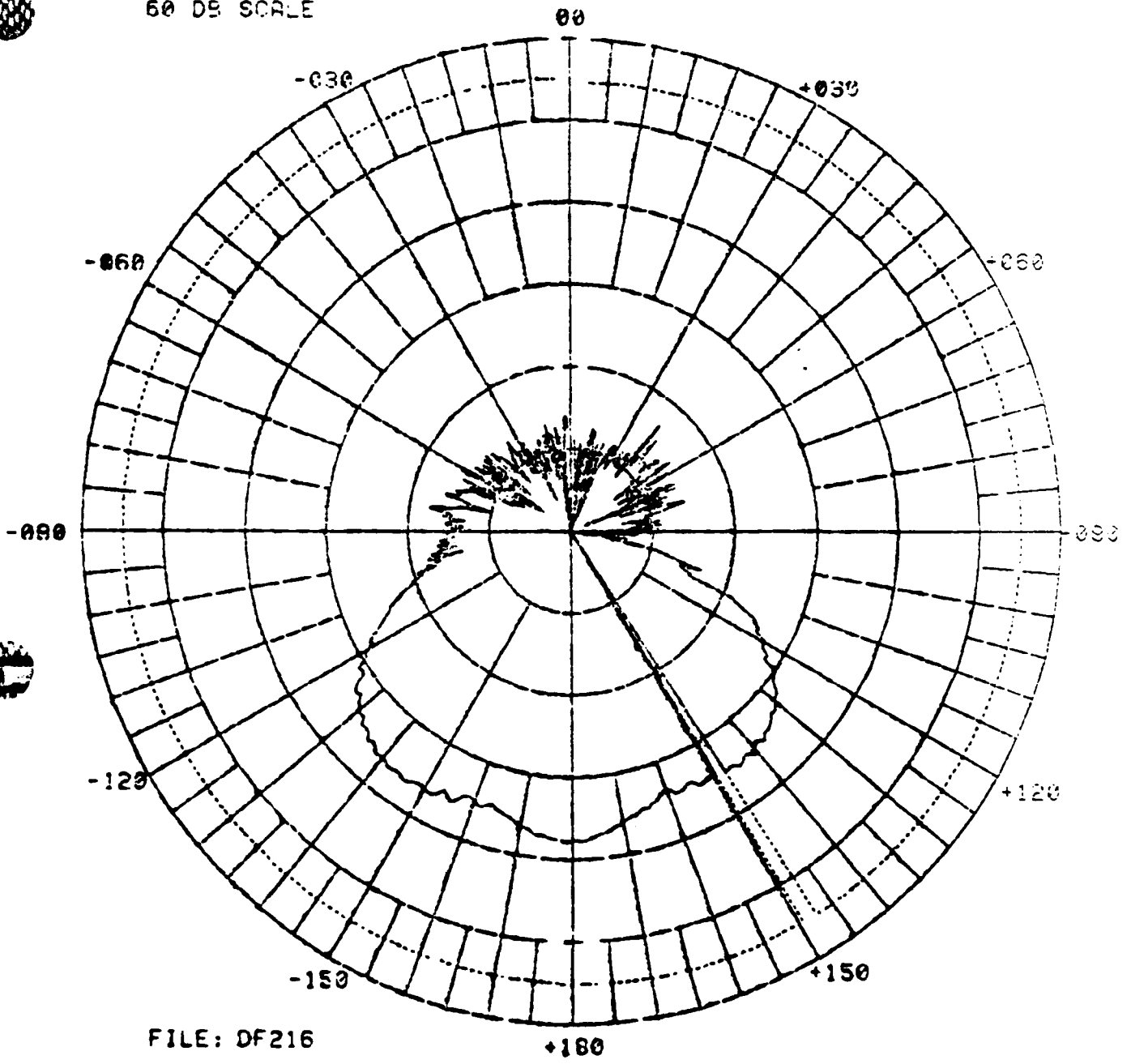
FILE: DF216

SCAN NR: 4 STEP ANGLE: 30.00 PLOT_____ AA

FREQ NR: 3 FREQ(MHZ): F12 PLOT_____ AB

CONFIGURATION 5

9 JUN 1984



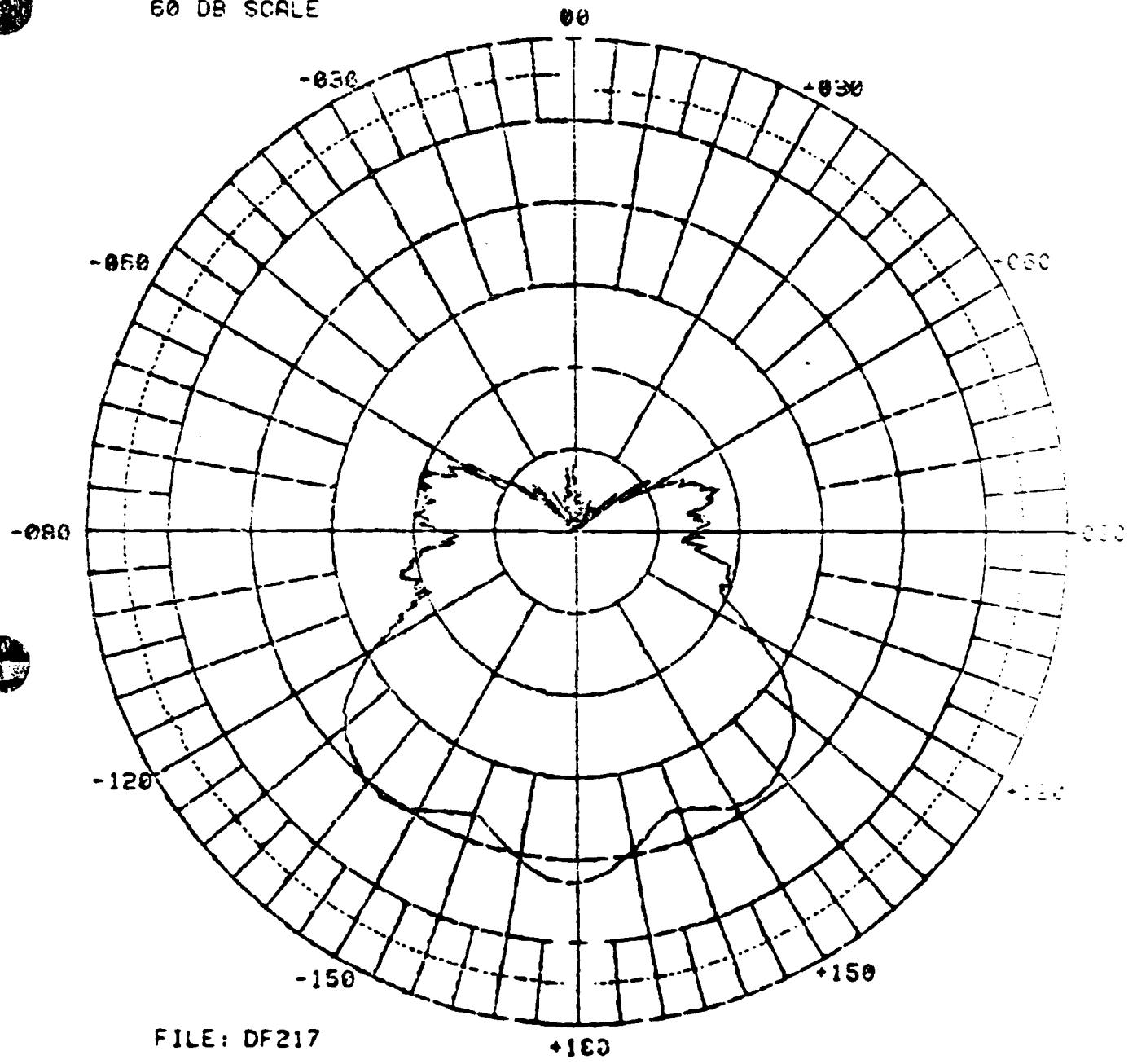
FILE: DF216

SCAN NR:	5	STEP ANGLE:	40.00	PLOT_____	AA
FREQ NR:	2	FREQ(MHZ):	F12	PLOT_____	AB

CONFIGURATION 5

9 JUN 1984

60 DB SCALE



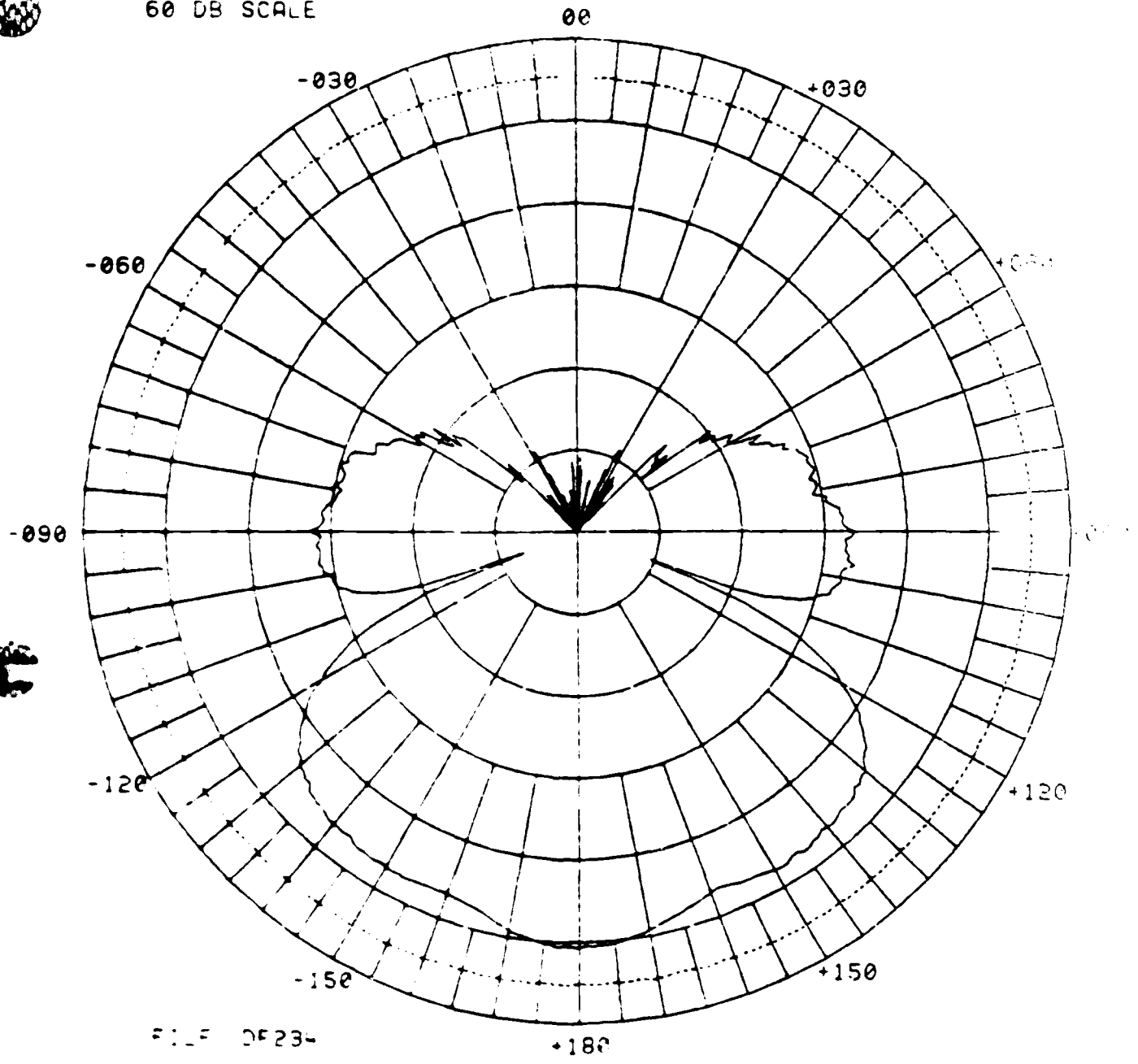
FILE: DF217

SCAN NR: 1 STEP ANGLE: 0.00 PLOT____ AA

FREQ NR: 3 FREQ(MHZ). F12 PLOT____ AB

CONFIGURATION F

9 JUN 198-



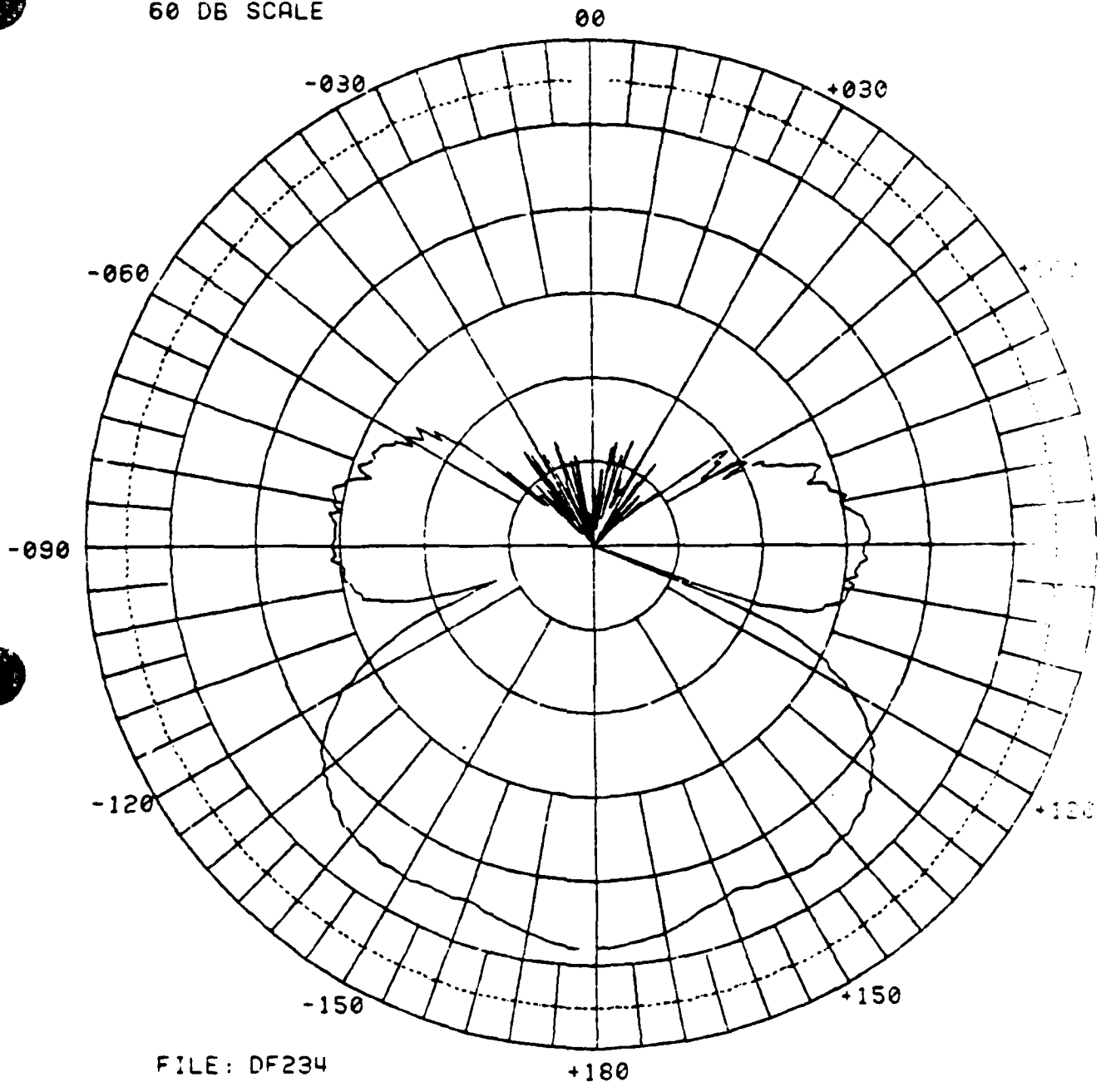
FILE DF234

SCAN NR : STEP ANGLE: 0.00 PLOT_____ AA

FREQ NR : FREQ MHZ): F10 PLOT..... AB

CONFIGURATION 6

10 JUL 84



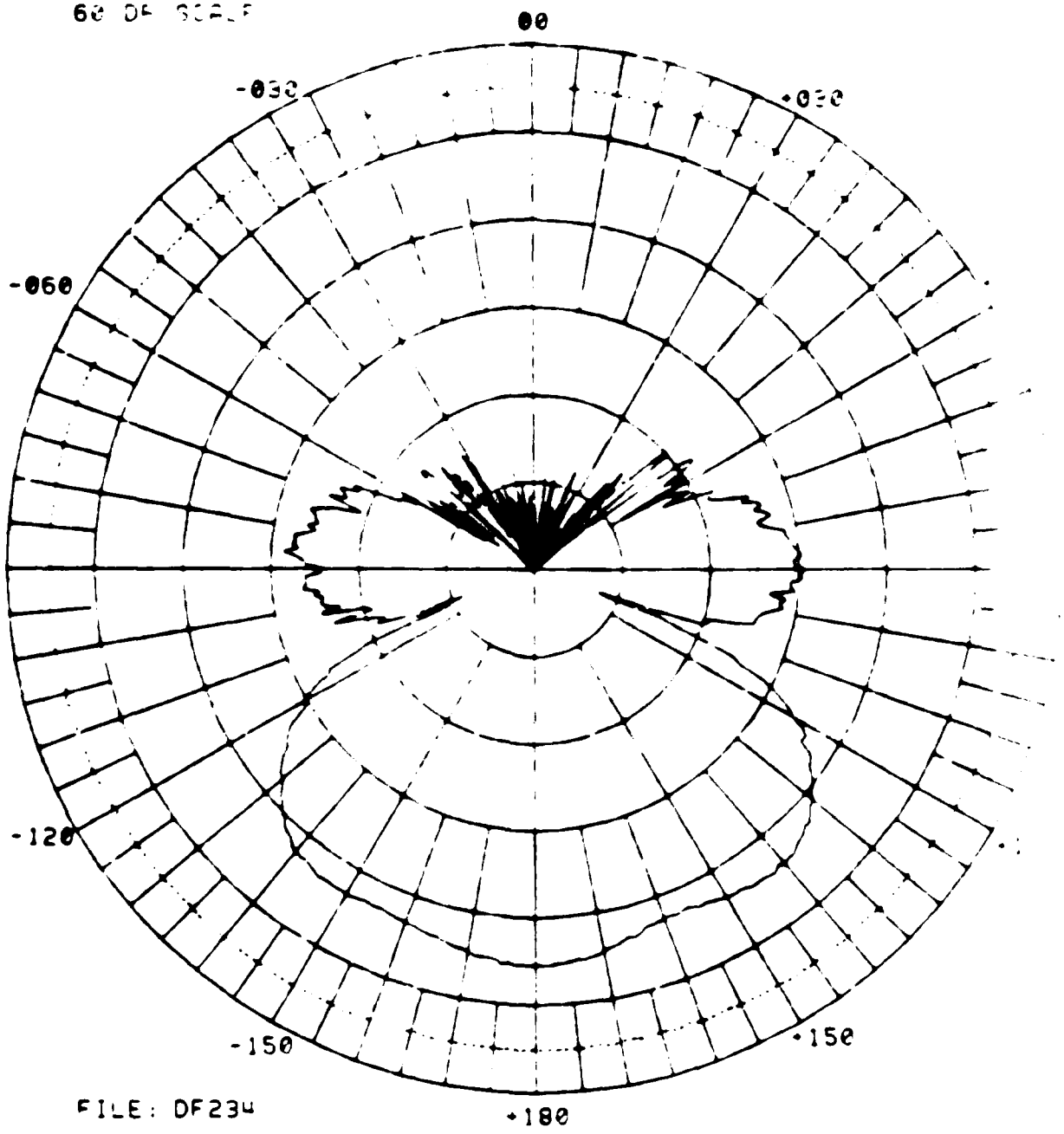
FILE: DF234

SCAN NR: 2 STEP ANGLE: -10.00 PLOT_____ AA

FREQ NR: 1 FREQ(MHZ): F10 PLOT..... AB

CONFIGURATION 6

10 JUL 84



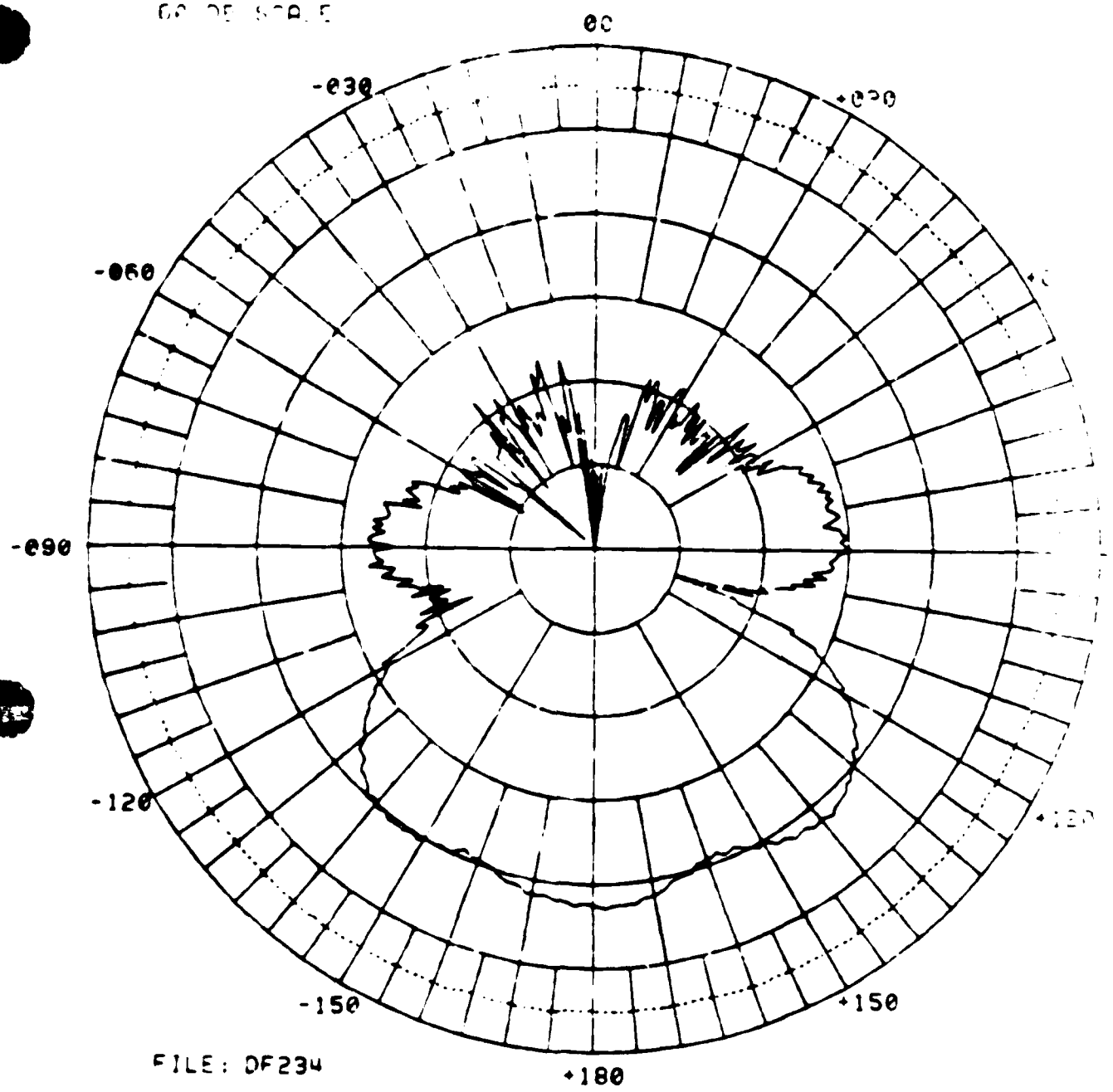
FILE: DF234

SCAN NR: 3 STEP ANGLE: -20.00 PLOT_____ AA

FREQ NR: 1 FREQ(MHZ): F10 PLOT..... AB

CONFIGURATION 6

10 JUL 84



FILE: DF234

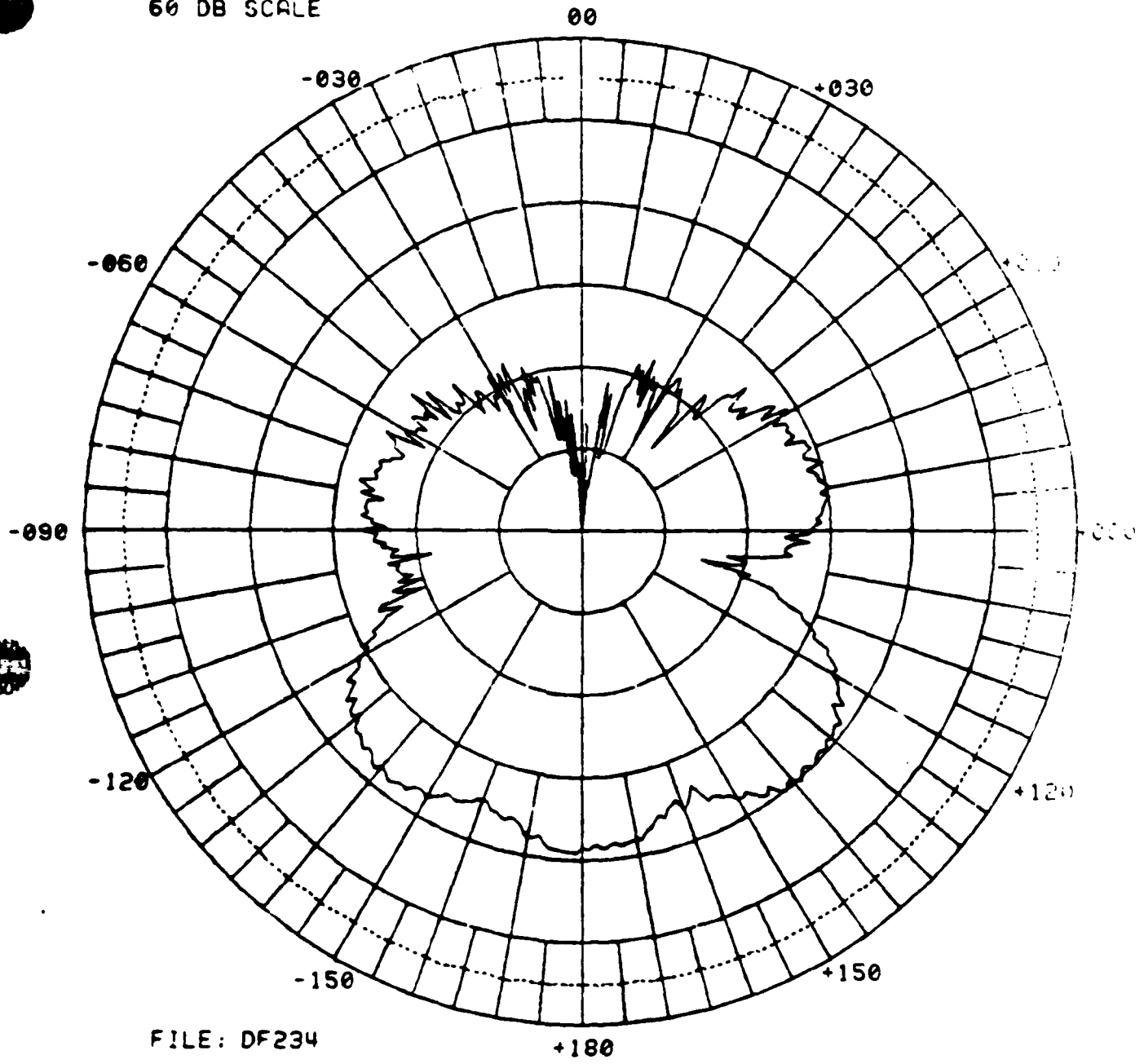
SCAN NR: 4 STEP ANGLE: -30.00 PLOT_____ AA

FREQ NR: 1 FREQ(MHZ): F10 PLOT..... AB

CONFIGURATION 6

10 JUL 84

60 DB SCALE



FILE: DF234

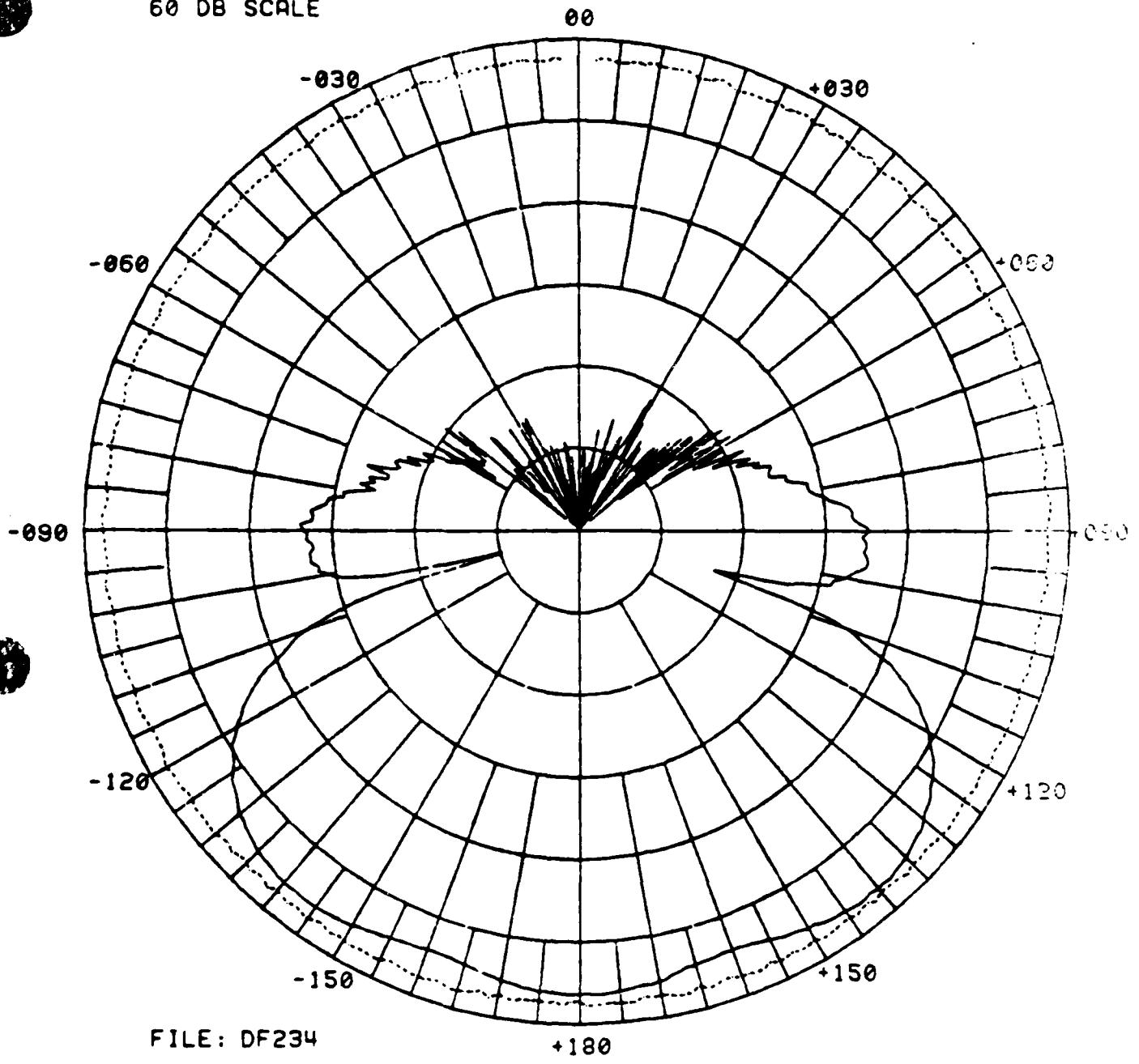
SCAN NR: 5 STEP ANGLE: -40.00 PLOT_____ AA

FREQ NR: 1 FREQ(MHZ): F10 PLOT..... AB

CONFIGURATION 6

10 JUL 84

60 DB SCALE



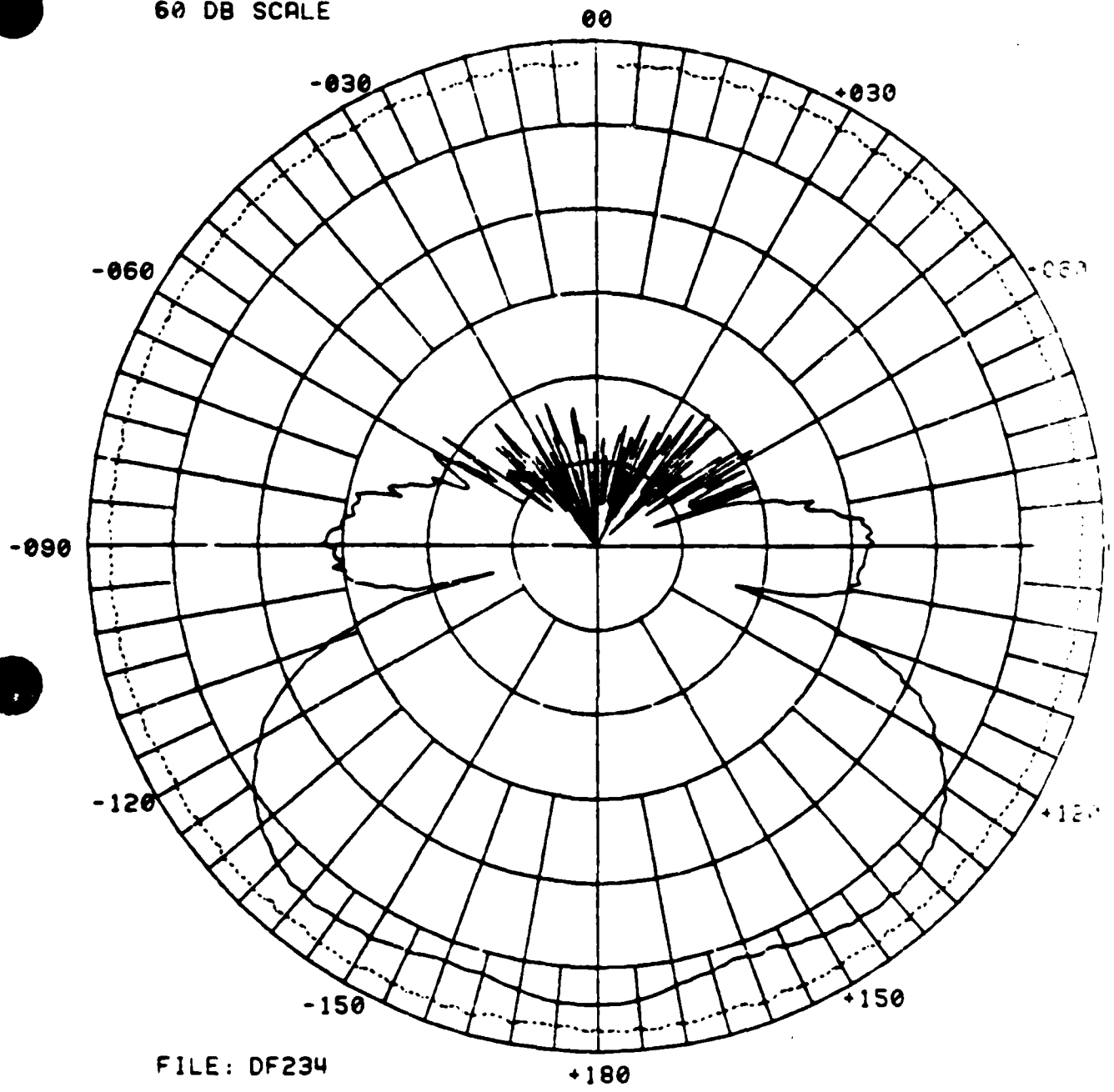
FILE: DF234

SCAN NR: 1 STEP ANGLE: 0.00 PLOT_____ AA

FREQ NR: 2 FREQ(MHZ): F11 PLOT..... AB

CONFIGURATION 6

10 JUL 84



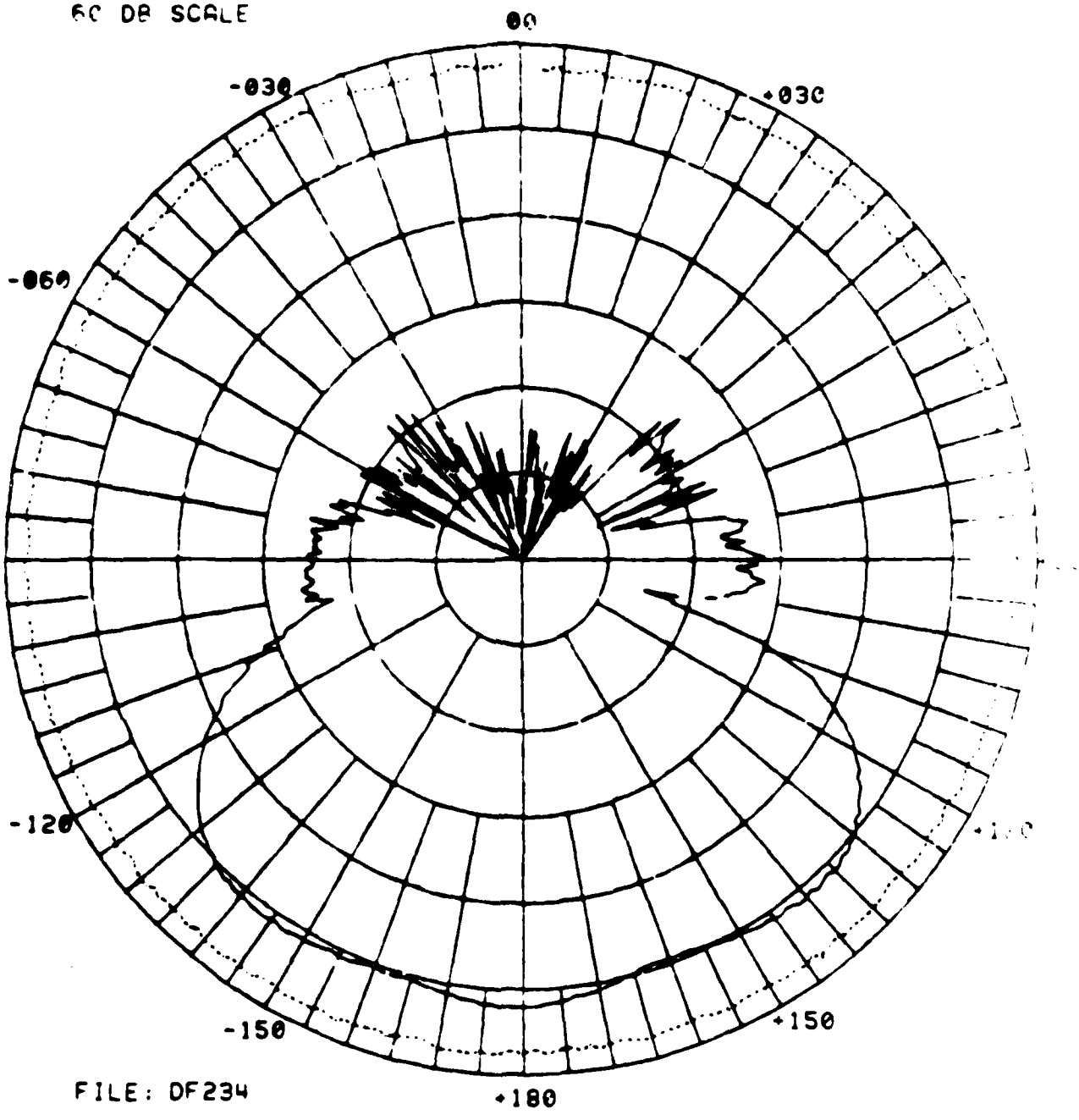
FILE: DF234

SCAN NR: 2 STEP ANGLE: -10.00 PLOT_____ AA

FREQ NR: 2 FREQ(MHZ): F11 PLOT..... AB

CONFIGURATION 6

10 JUL 84



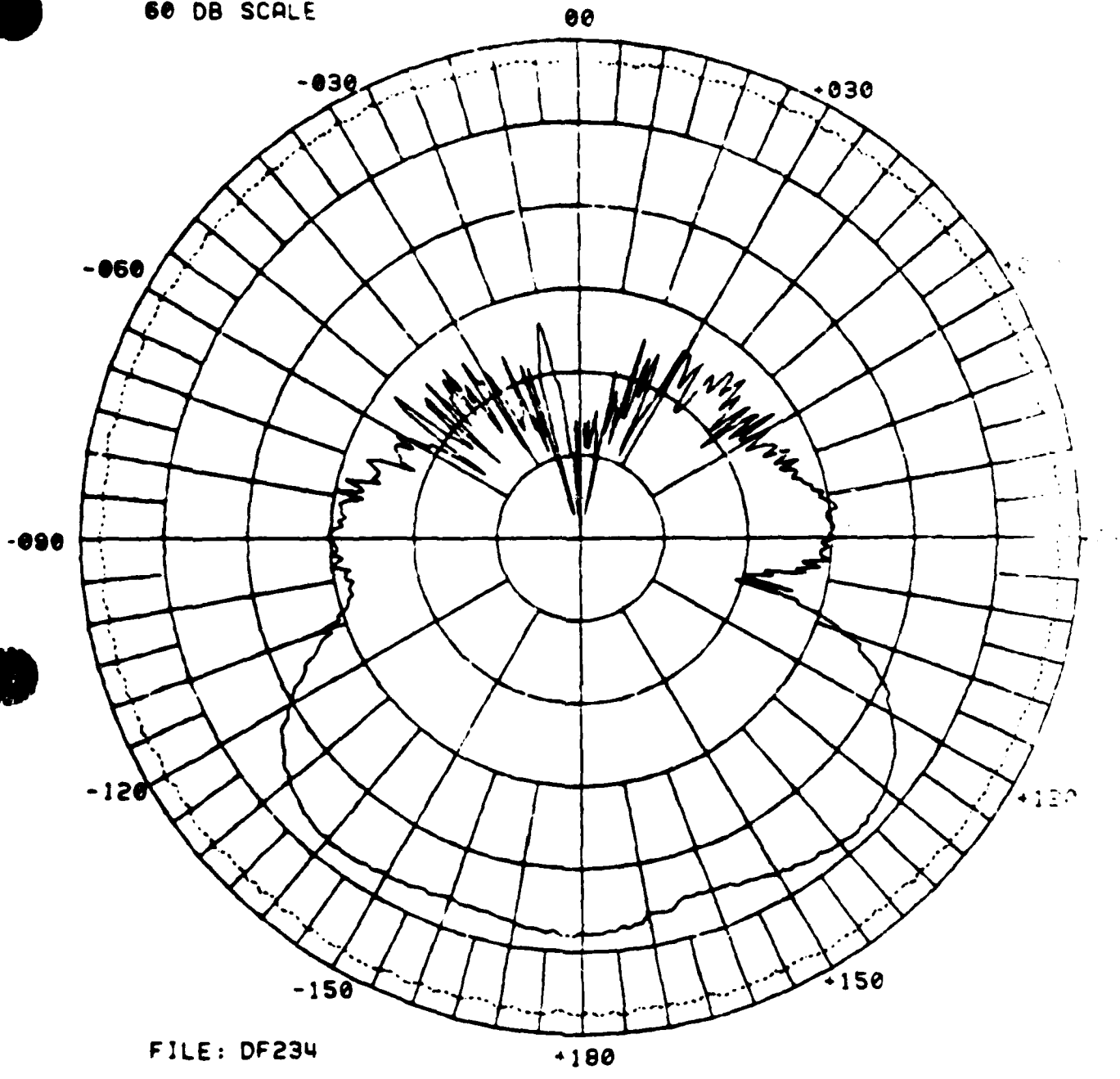
FILE: DF234

SCAN NR: 3 STEP ANGLE: -20.00 PLOT_____ AA

FREQ NR: 2 FREQ(MHZ): F11 PLOT..... AB

CONFIGURATION 6

10 JUL 84



FILE: DF234

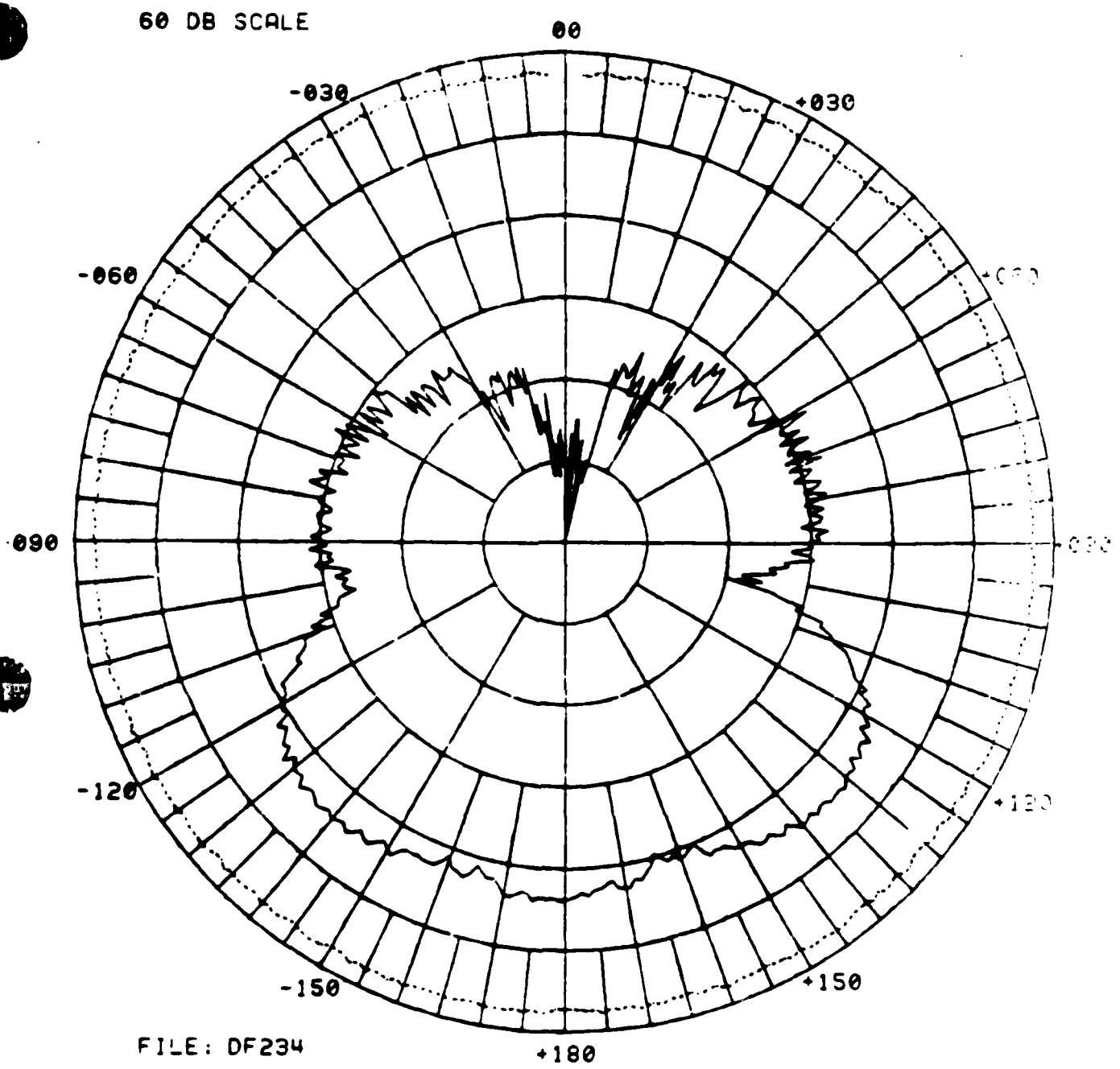
SCAN NR: 4 STEP ANGLE: -30.00 PLOT_____ AA

FREQ NR: 2 FREQ(MHZ): F11 PLOT..... AB

CONFIGURATION 6

10 JUL 84

60 DB SCALE



FILE: DF234

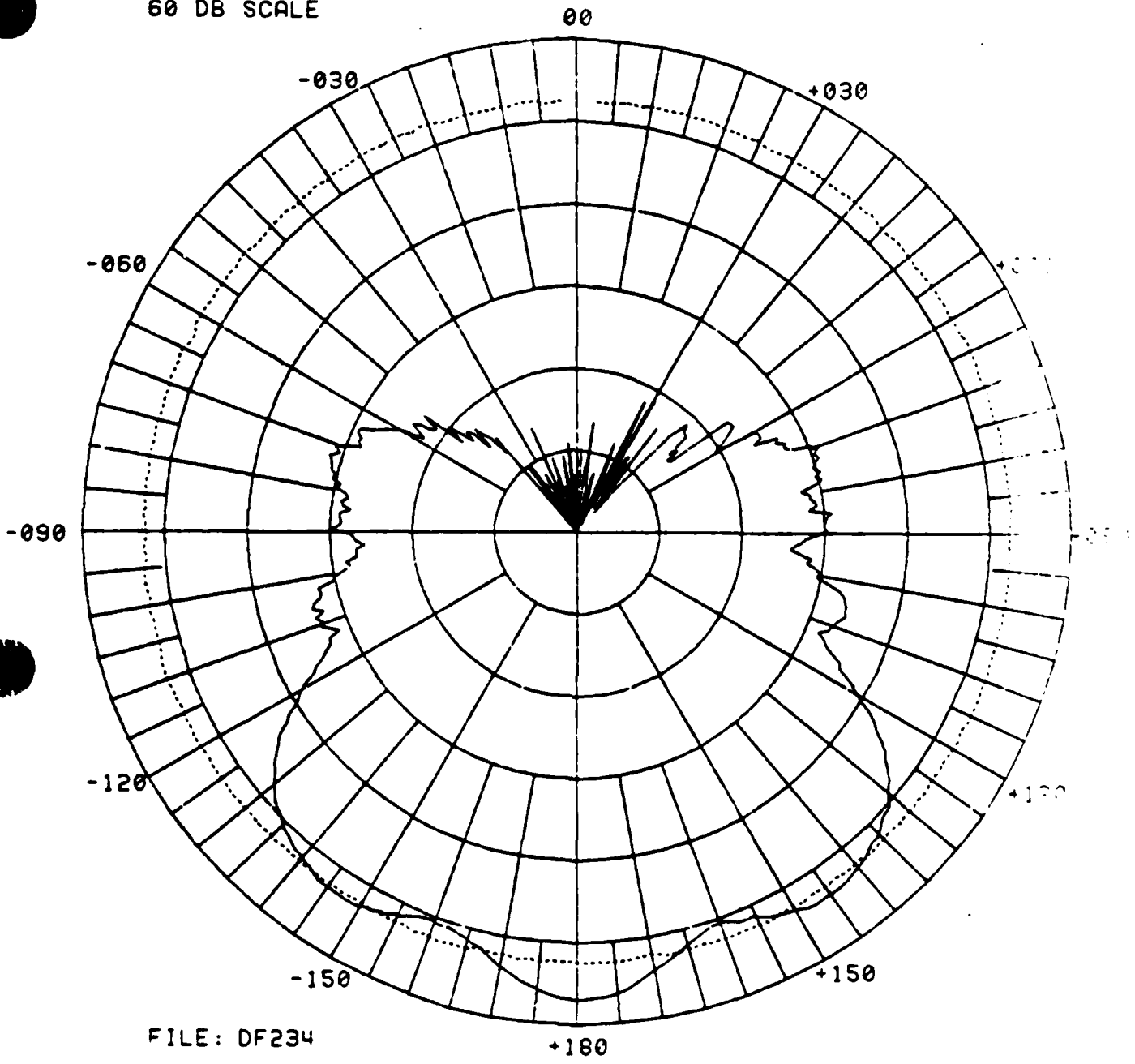
SCAN NR: 5 STEP ANGLE: -40.00 PLOT_____ AA

FREQ NR: 2 FREQ(MHZ): F11 PLOT..... AB

CONFIGURATION 6

10 JUL 84

60 DB SCALE



FILE: DF234

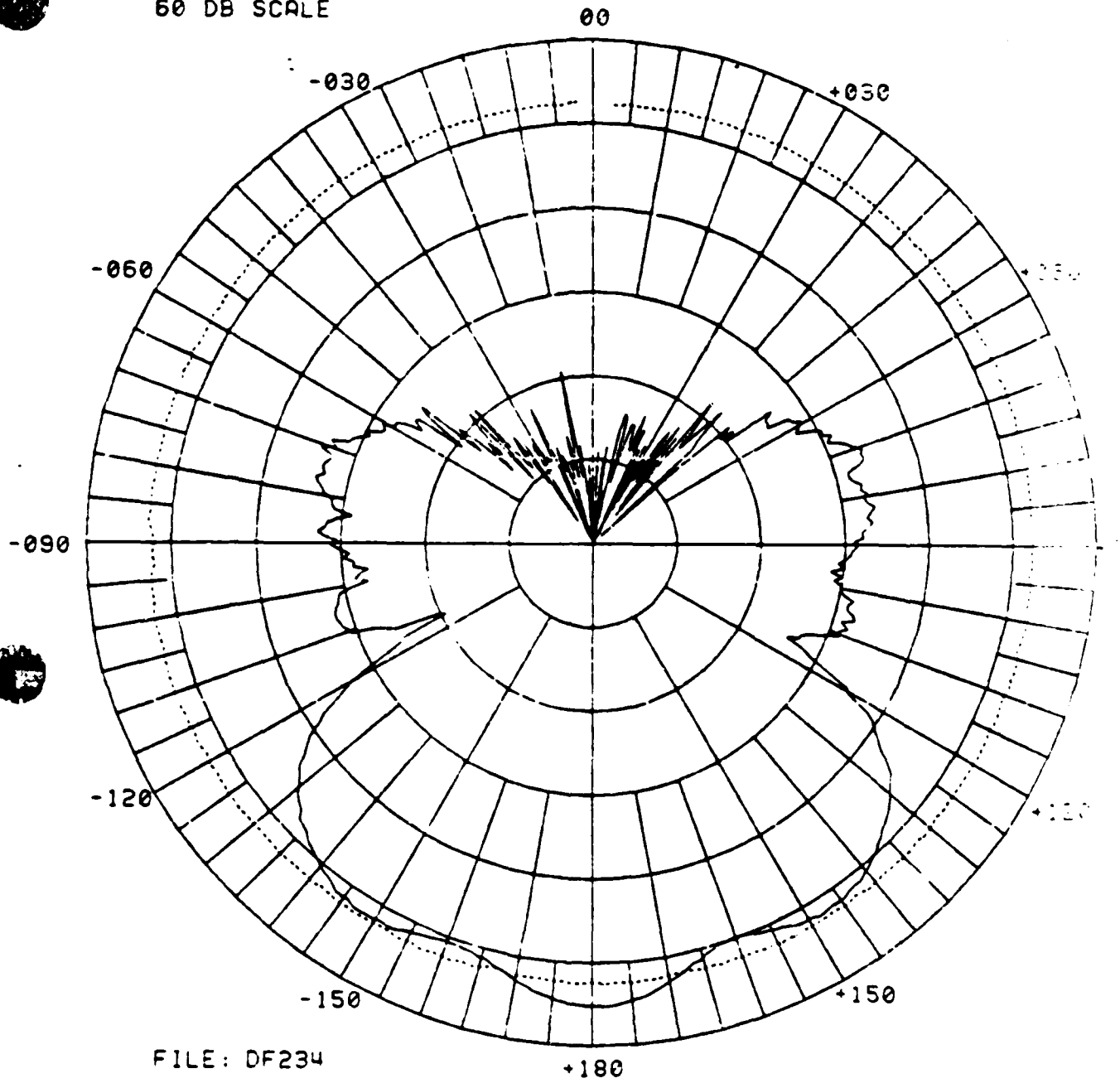
SCAN NR: 1 STEP ANGLE: 0.00 PLOT_____ AA

FREQ NR: 3 FREQ(MHZ): F12 PLOT..... AB

CONFIGURATION 6

10 JUL 84

60 DB SCALE



FILE: DF234

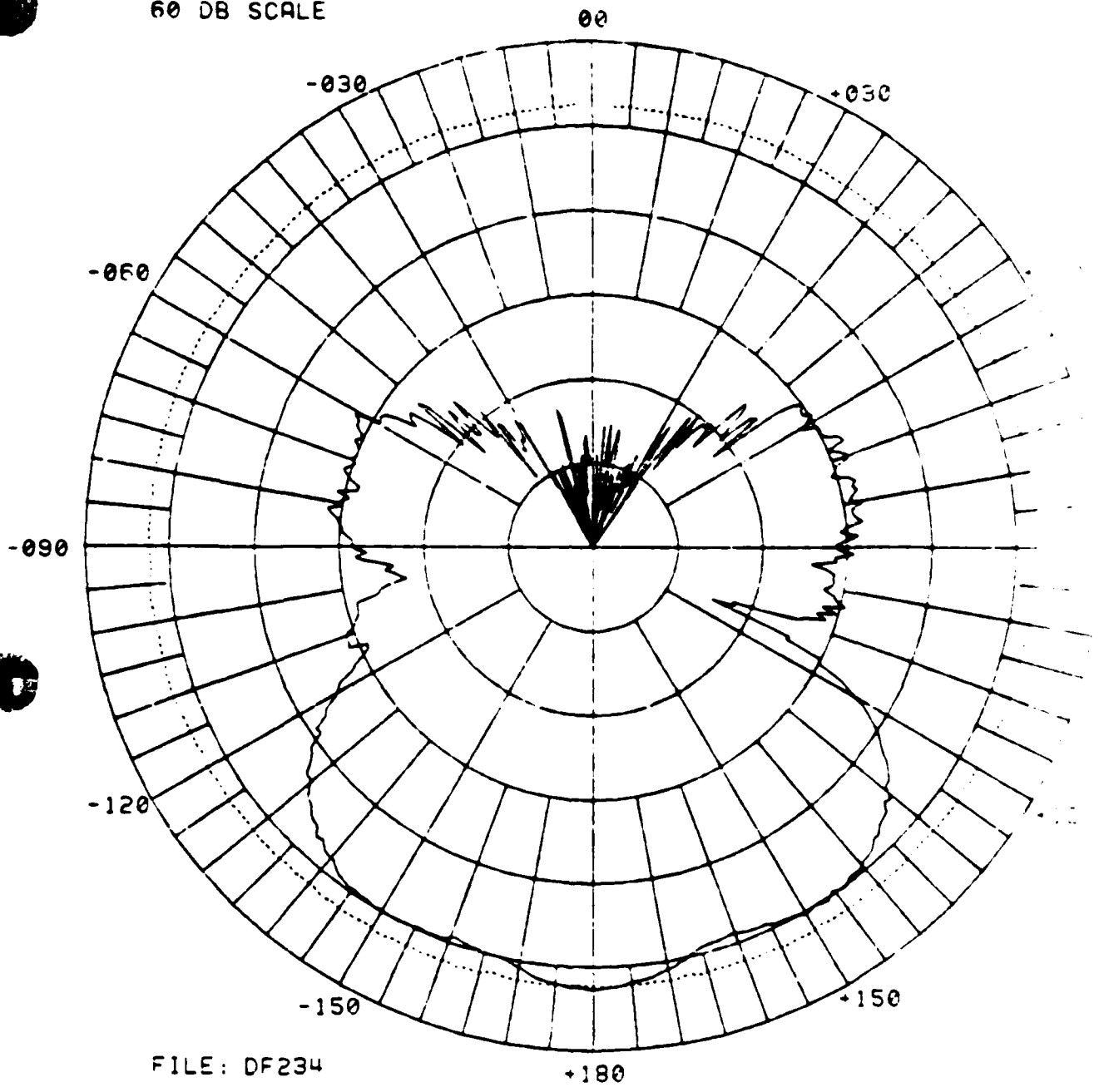
SCAN NR: 2 STEP ANGLE: -10.00 PLOT____ AA

FREQ NR: 3 FREQ(MHZ): F12 PLOT..... AB

CONFIGURATION 6

10 JUL 84

60 DB SCALE



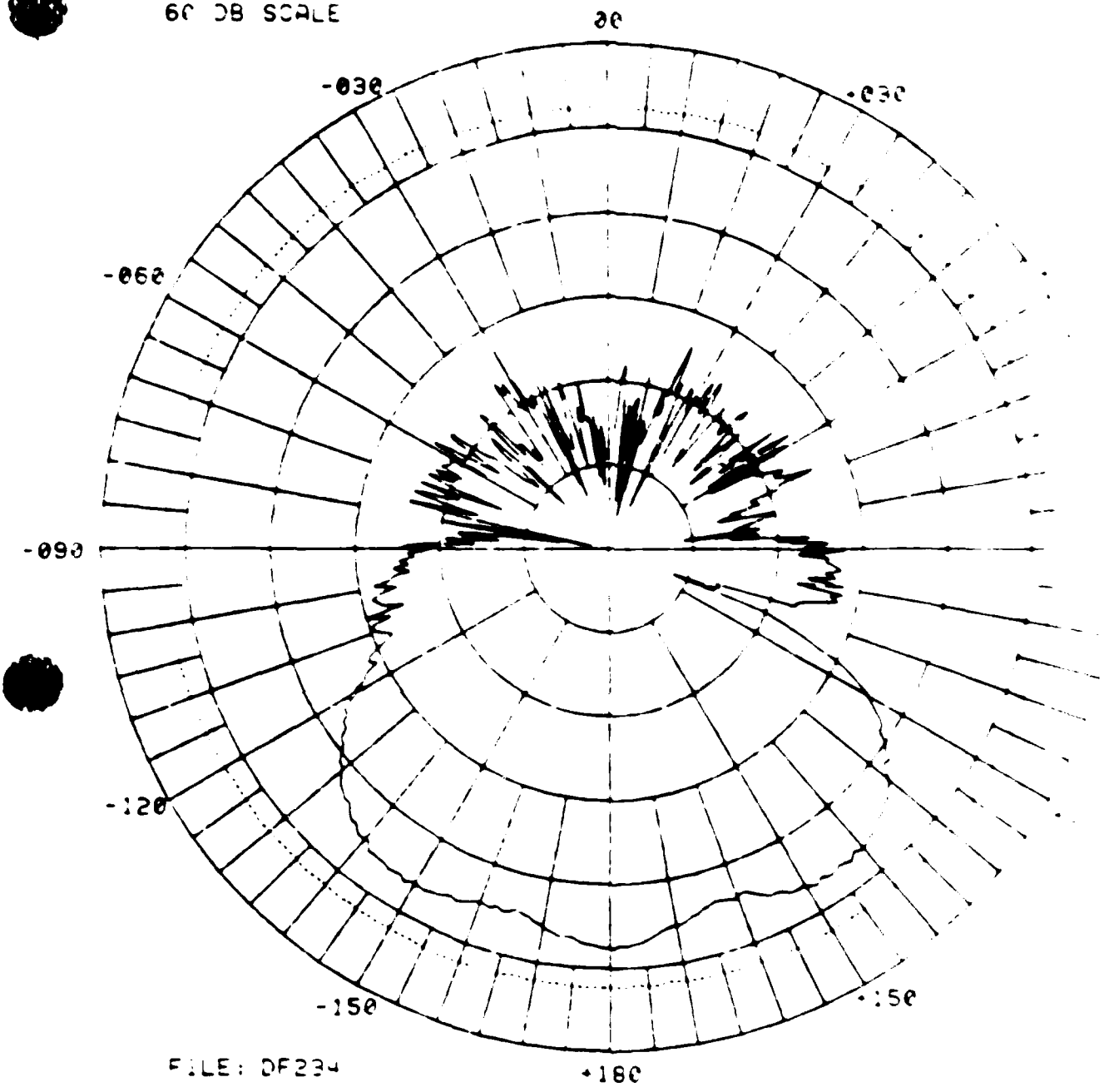
FILE: DF234

SCAN NR: 3 STEP ANGLE: -20.00 PLOT_____ AA

FREQ NR: 3 FREQ(MHZ): F12 PLOT..... AB

CONFIGURATION 6

10 JUL 84



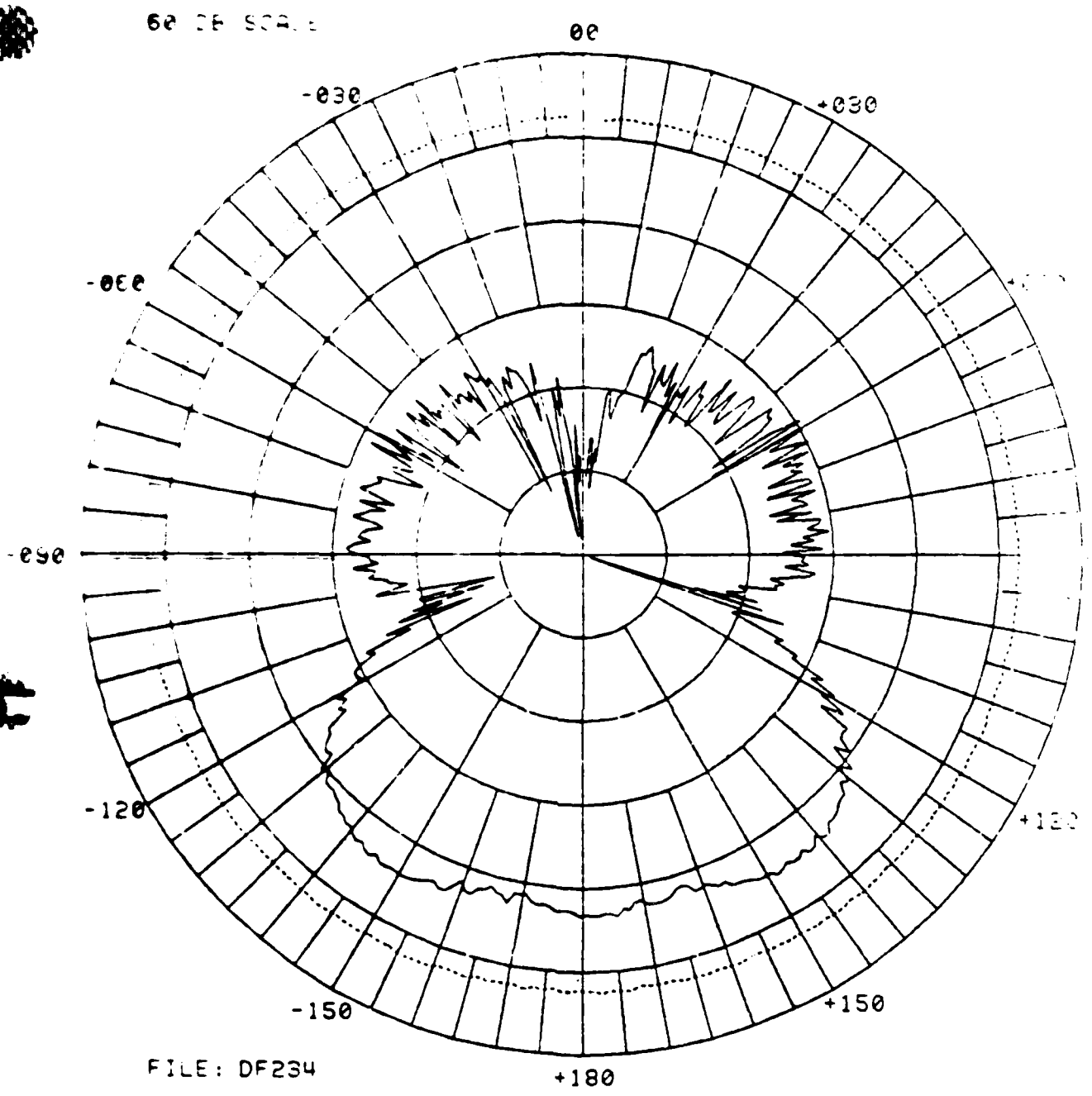
FILE: DF234

SCAN NR: 4 STEP ANGLE: -30.0° PLOT_____ AR

FREQ NR: 3 FREQ(MHZ): F12 PLOT..... AR

CONFIGURATION 6

10 JUL 84



FILE: DF234

SCAN NR: 5 STEP ANGLE: -40.00 PLOT_____ AA

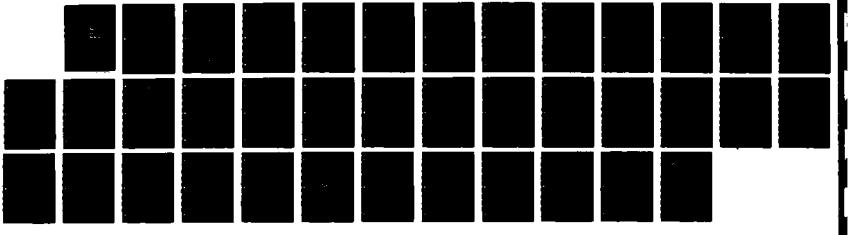
FREQ NR: 3 FREQ(MHZ): F12 PLOT..... BB

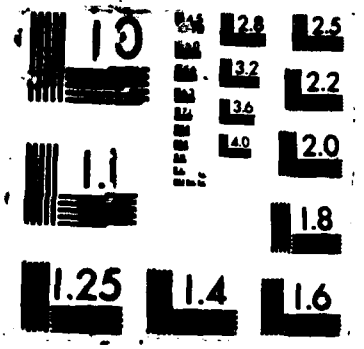
CONFIGURATION 6

10 JUL 84

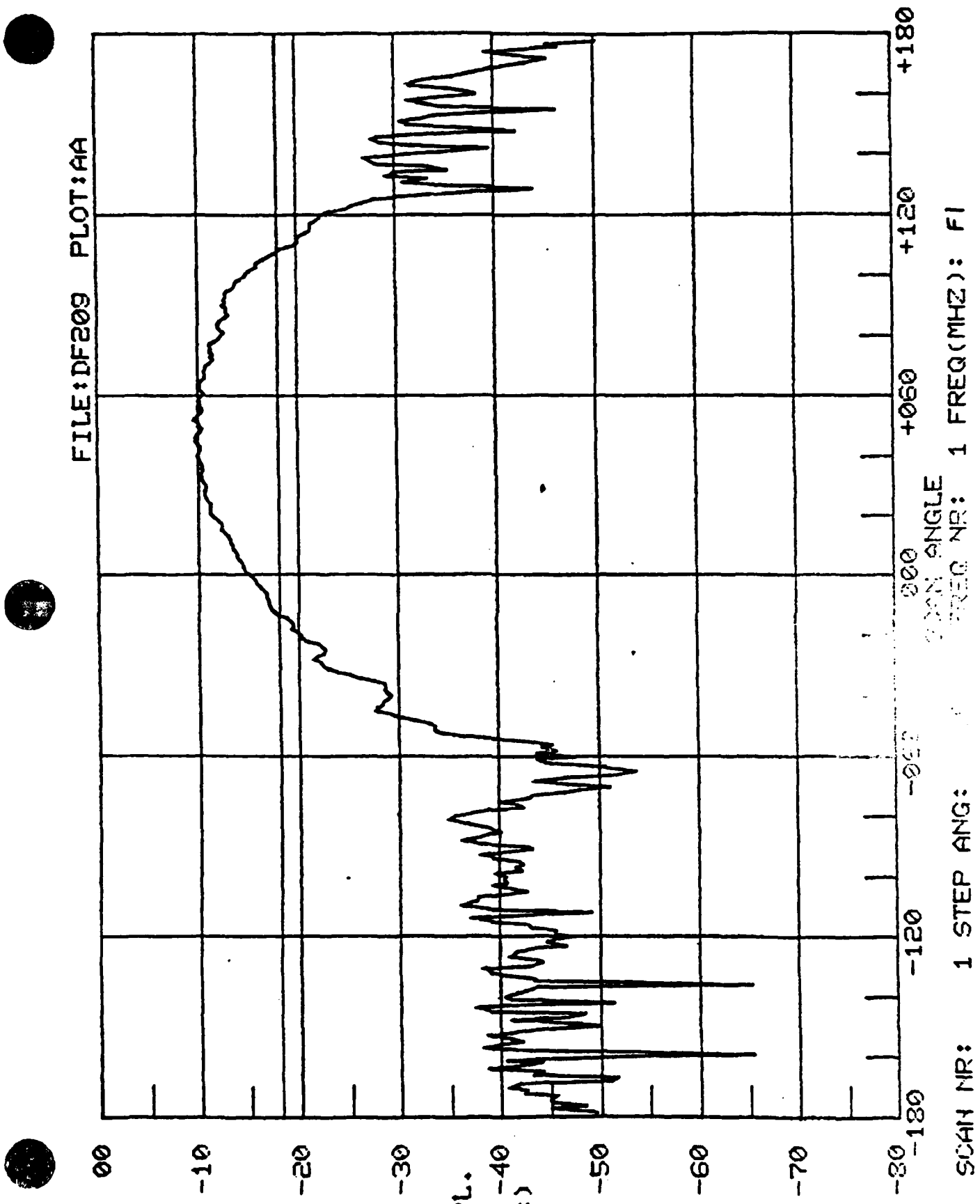
AD-A181 539 ANTENNA LOCATION SURVEY REPORT FOR THE AN/ALQ-156 AND AN/ALQ-162 SYSTEMS(U) BEECH AIRCRAFT CORP WICHITA KS G J MARTIN 29 OCT 84 ER-101E2240 DAAK50-83-C-0056 7/7

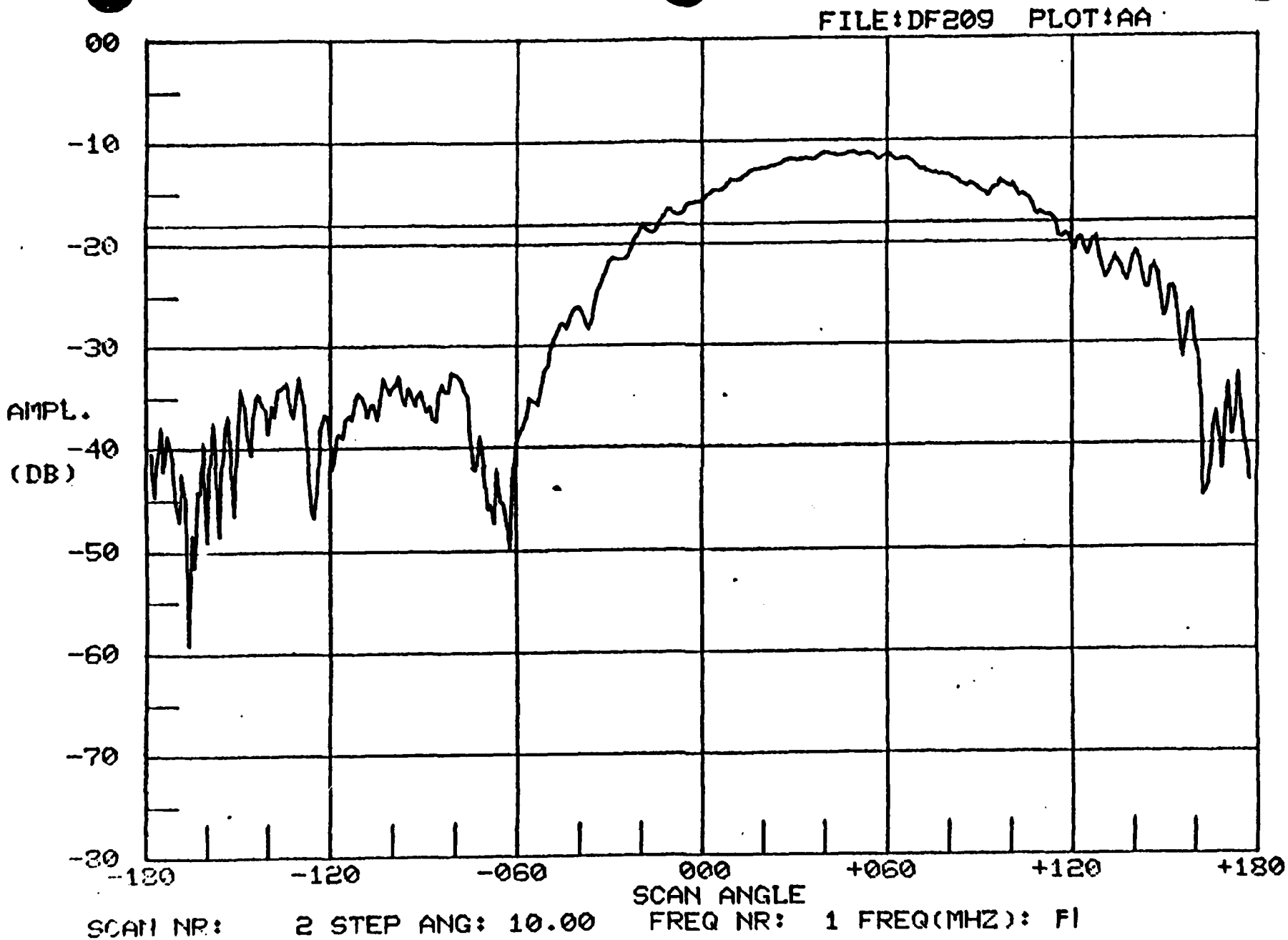
UNCLASSIFIED F/G 17/4 NL

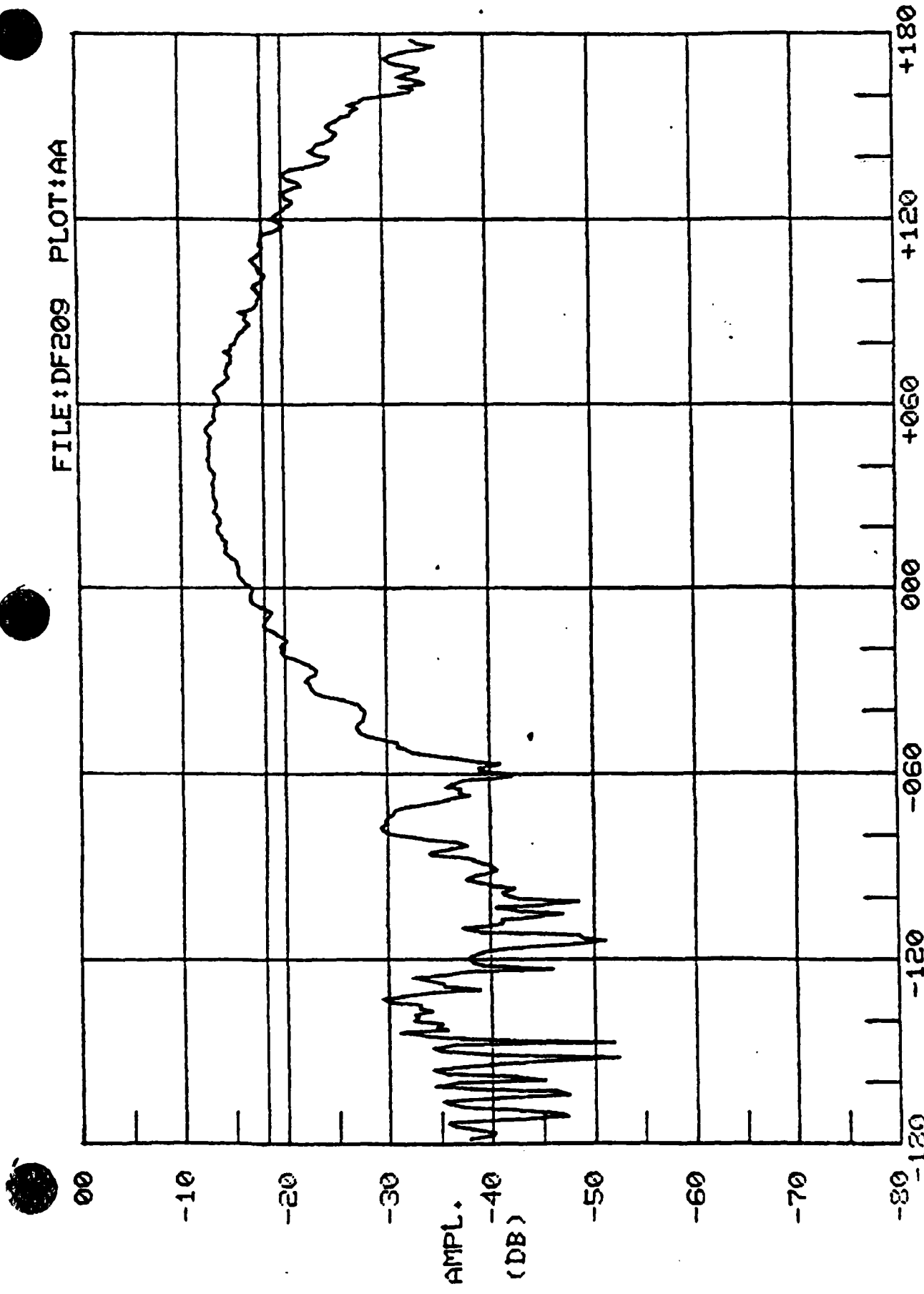


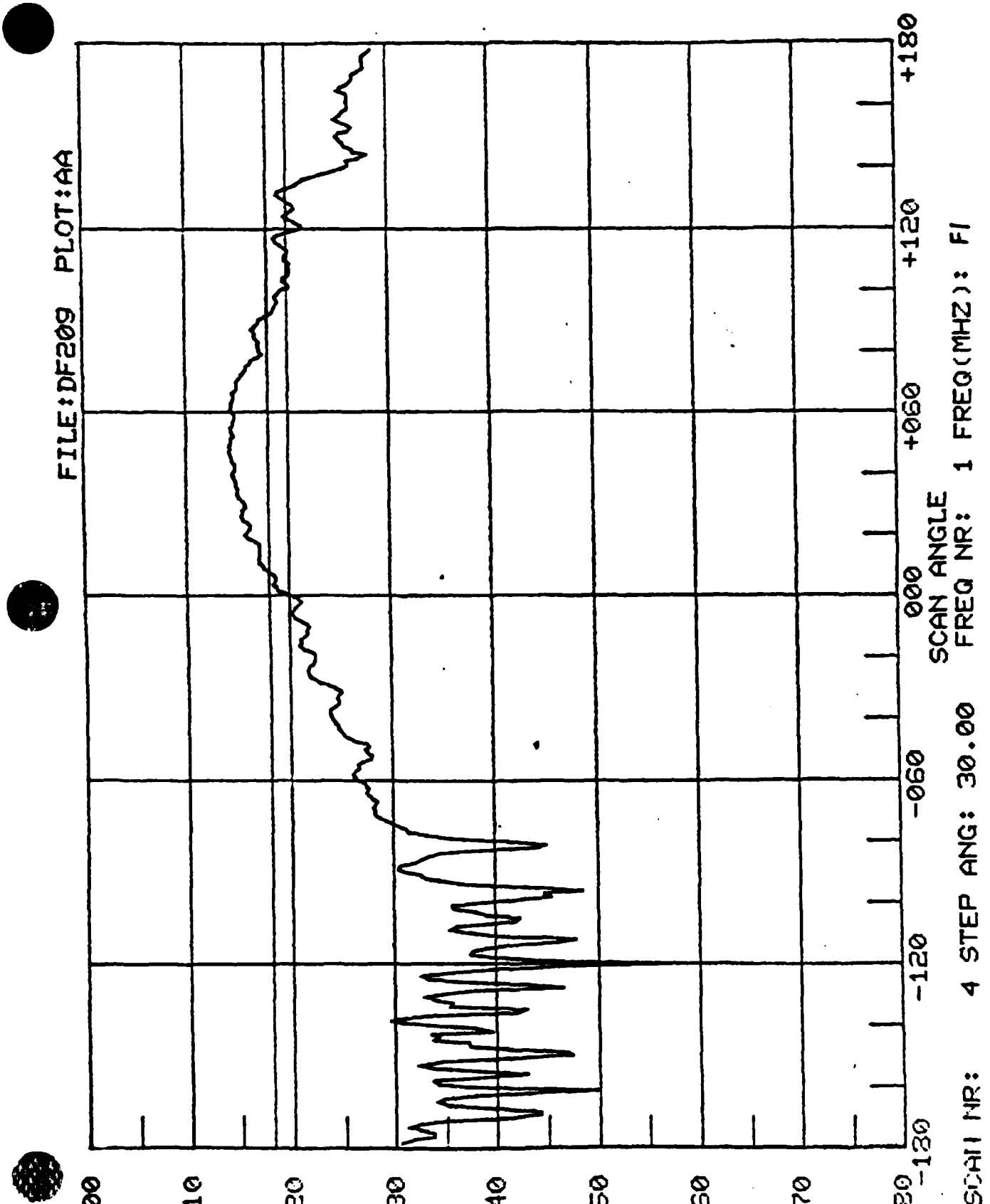

2.8
2.5
3.2
2.2
3.6
4.0
2.0
1.8
1.25
1.4
1.6

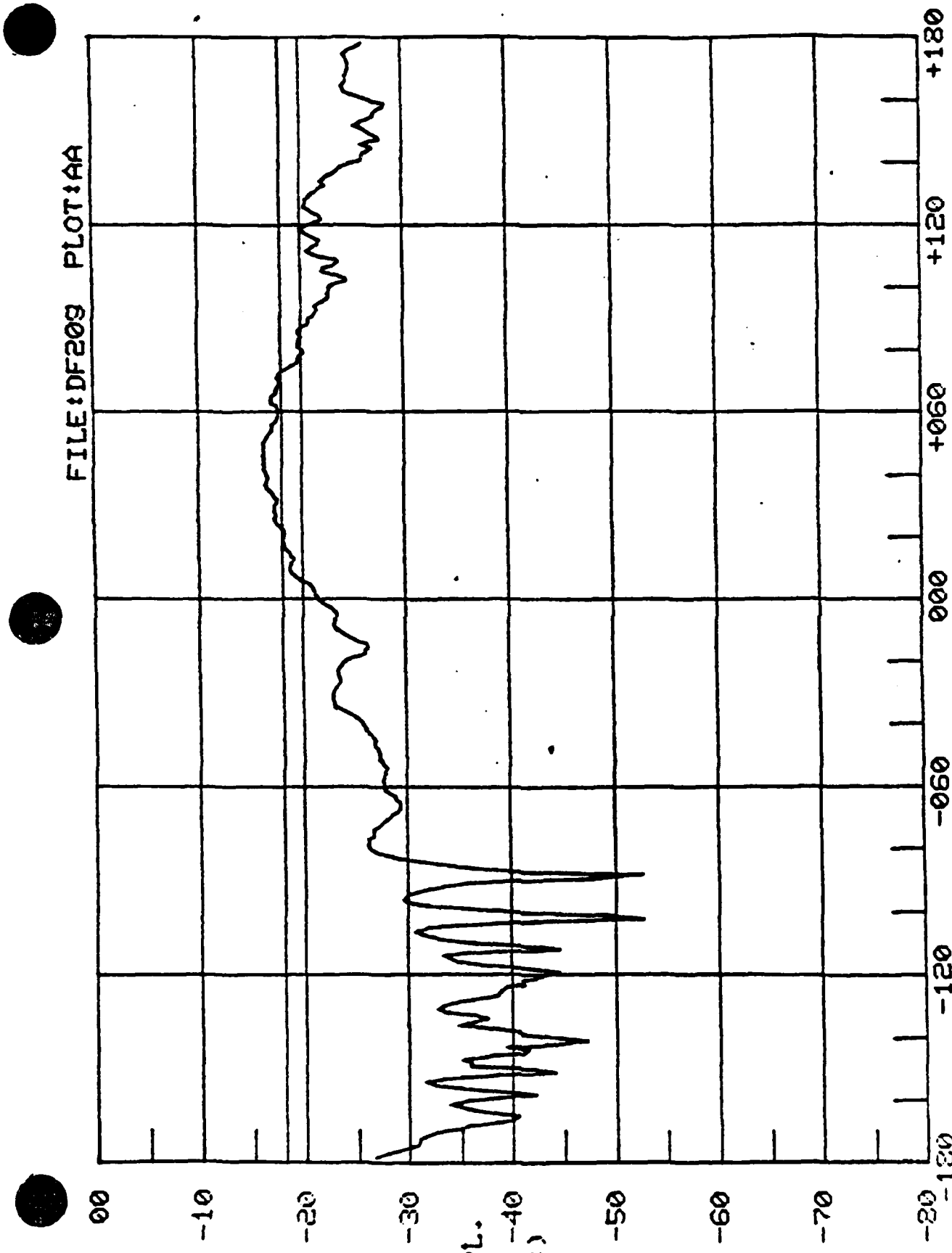
Appendix 10 contains AN/ALQ-156 antenna patterns as recorded by the 20/20 system during test. This was an unscheduled test using the planar slot (flat) antenna in place of the coffee can antenna. The test data is included here for reference only. The data is for the forward antenna, upper hemisphere only.

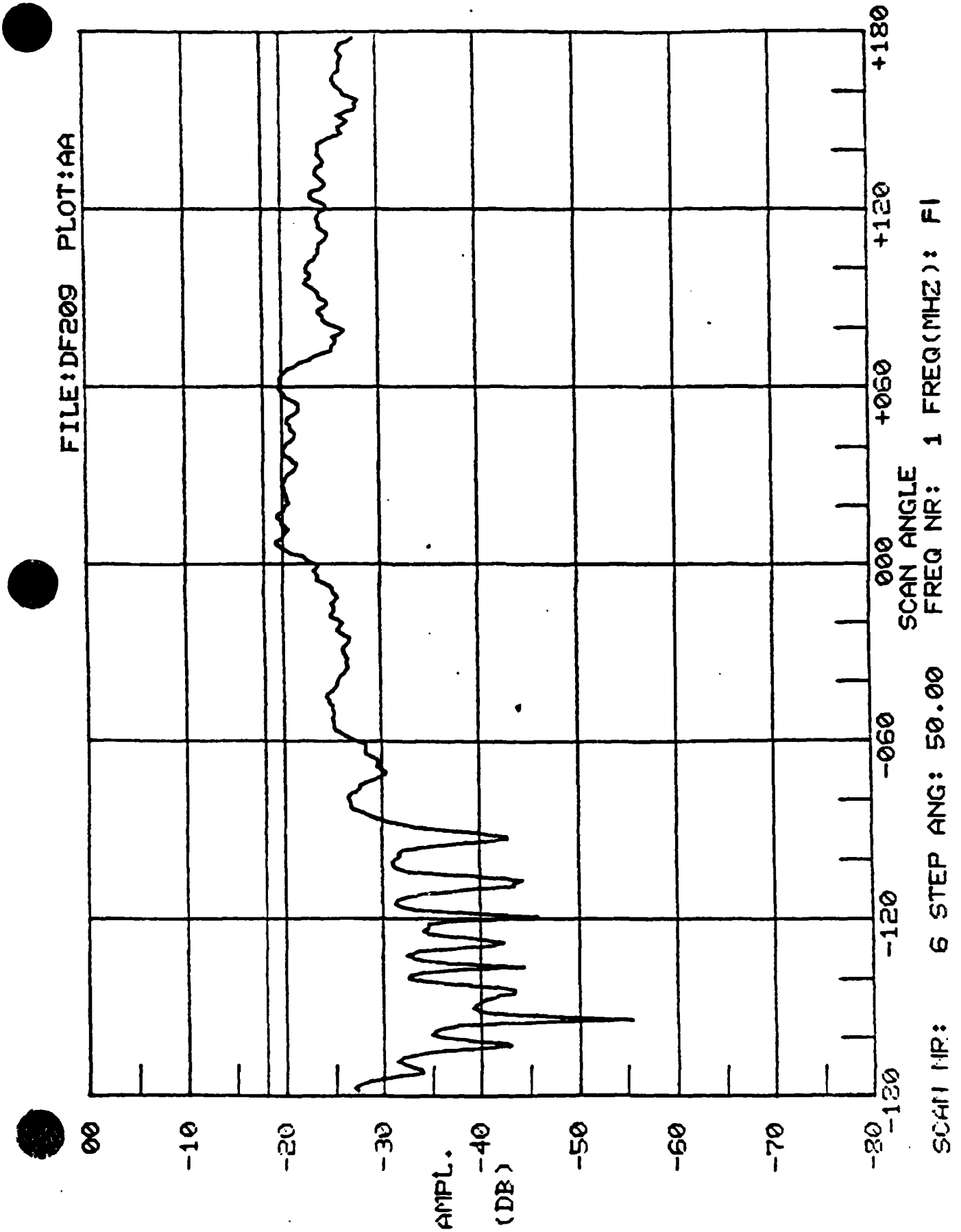

FILE:DF209 PLOT:AA
AMPL. (DB)
0
-10
-20
-30
-40
-50
-60
-70
-80
-180
-120
-060
000
+060
+120
+180
SCAN ANGLE
SCAN NR: 1 STEP ANG: FREQ NR: 1 FREQ(MHZ): F1

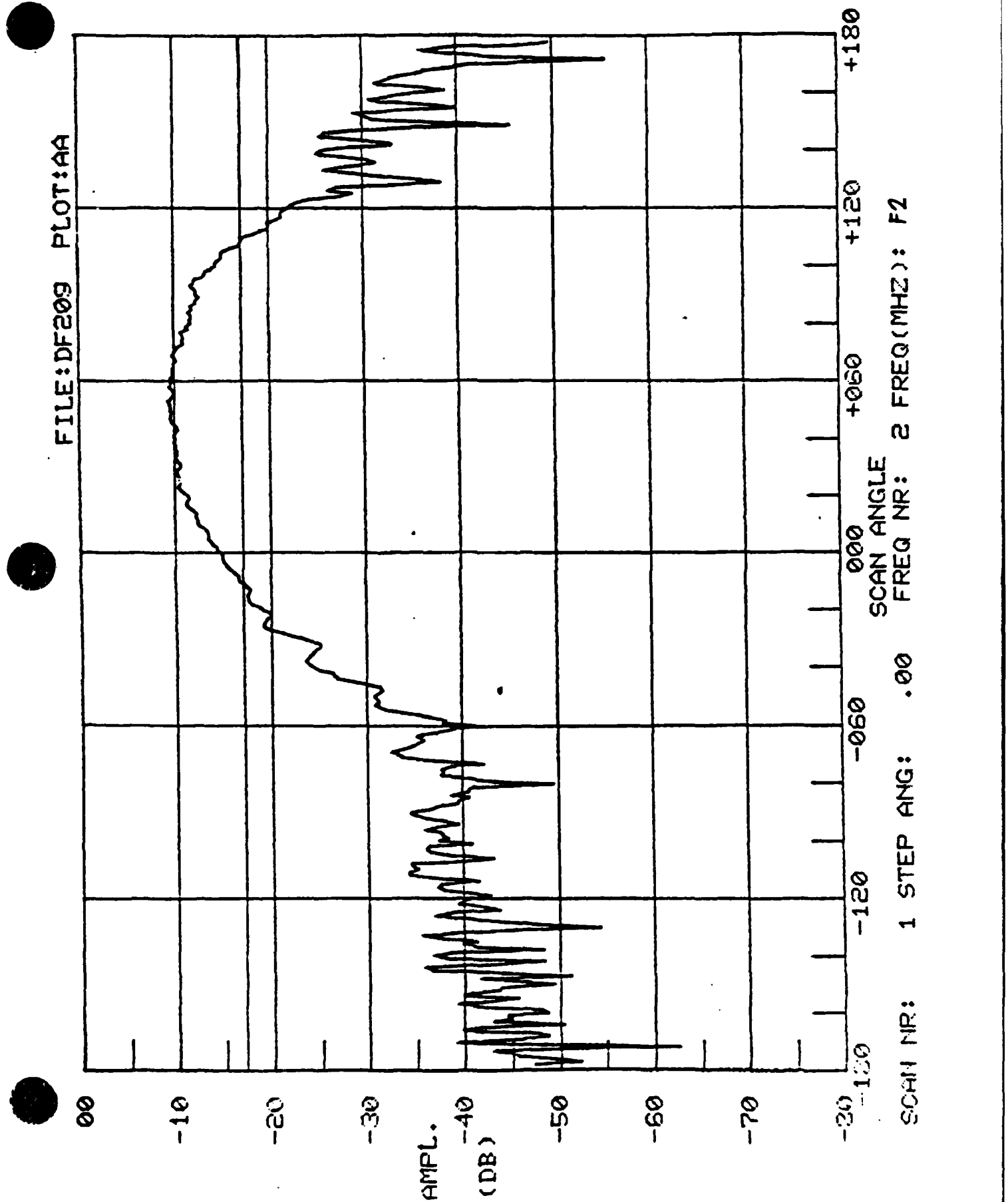

FILE:DF209 PLOT:AA
00
-10
-20
-30
AMPL.
-40
(DB)
-50
-60
-70
-80
-180
-120
-060
000
+060
+120
+180
SCAN ANGLE
SCAN NR: 2 STEP ANG: 10.00 FREQ NR: 1 FREQ(MHZ): F1

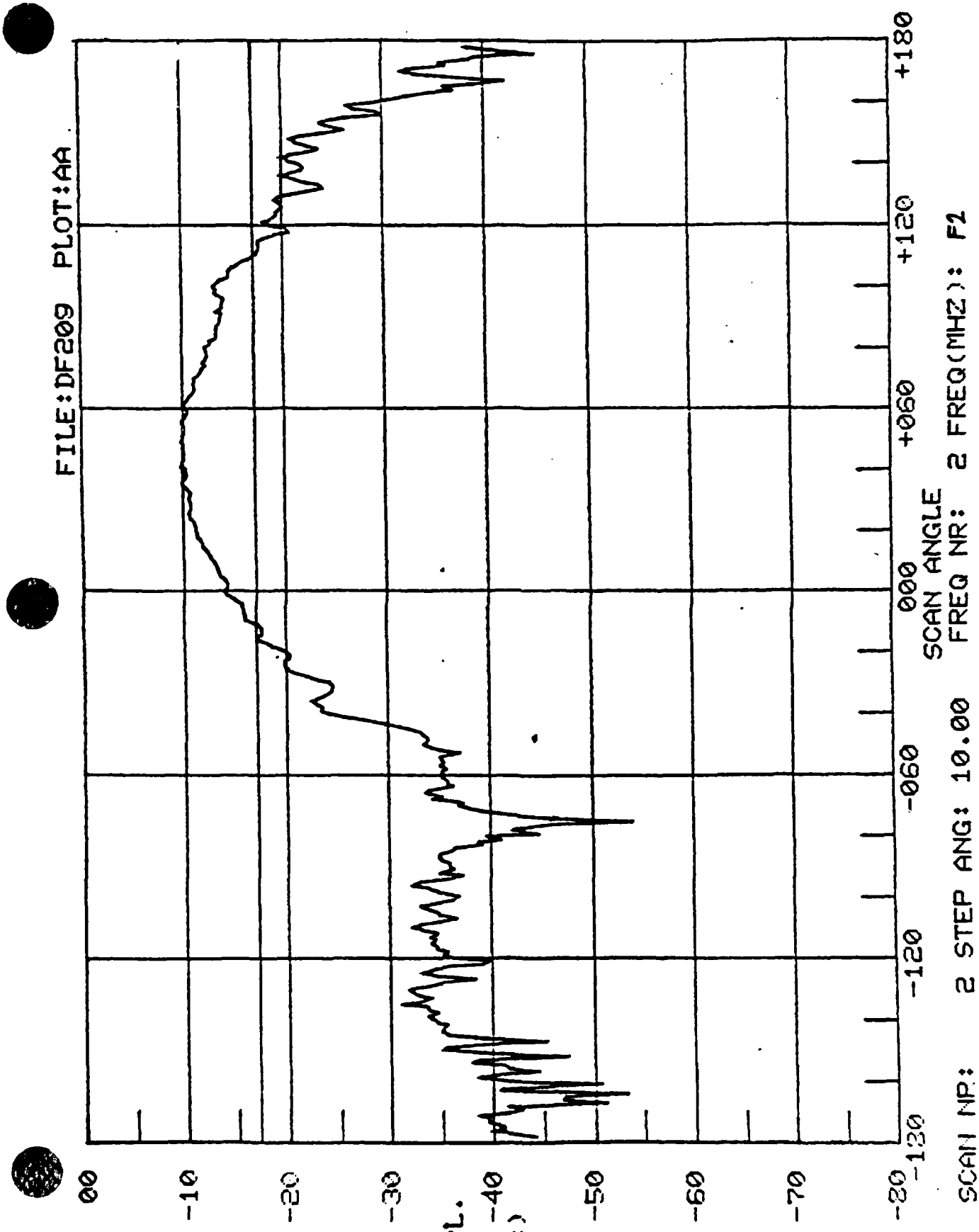

FILE:DF209 PLOT:AA
00
-10
-20
-30
-40
-50
-60
-70
-80
AMPL.
(DB)
-180
-120
-060
000
+060
+120
+180
SCAN ANGLE
SCAN NR: 3 STEP ANG: 20.00 FREQ NR: 1 FREQ(MHZ): F1

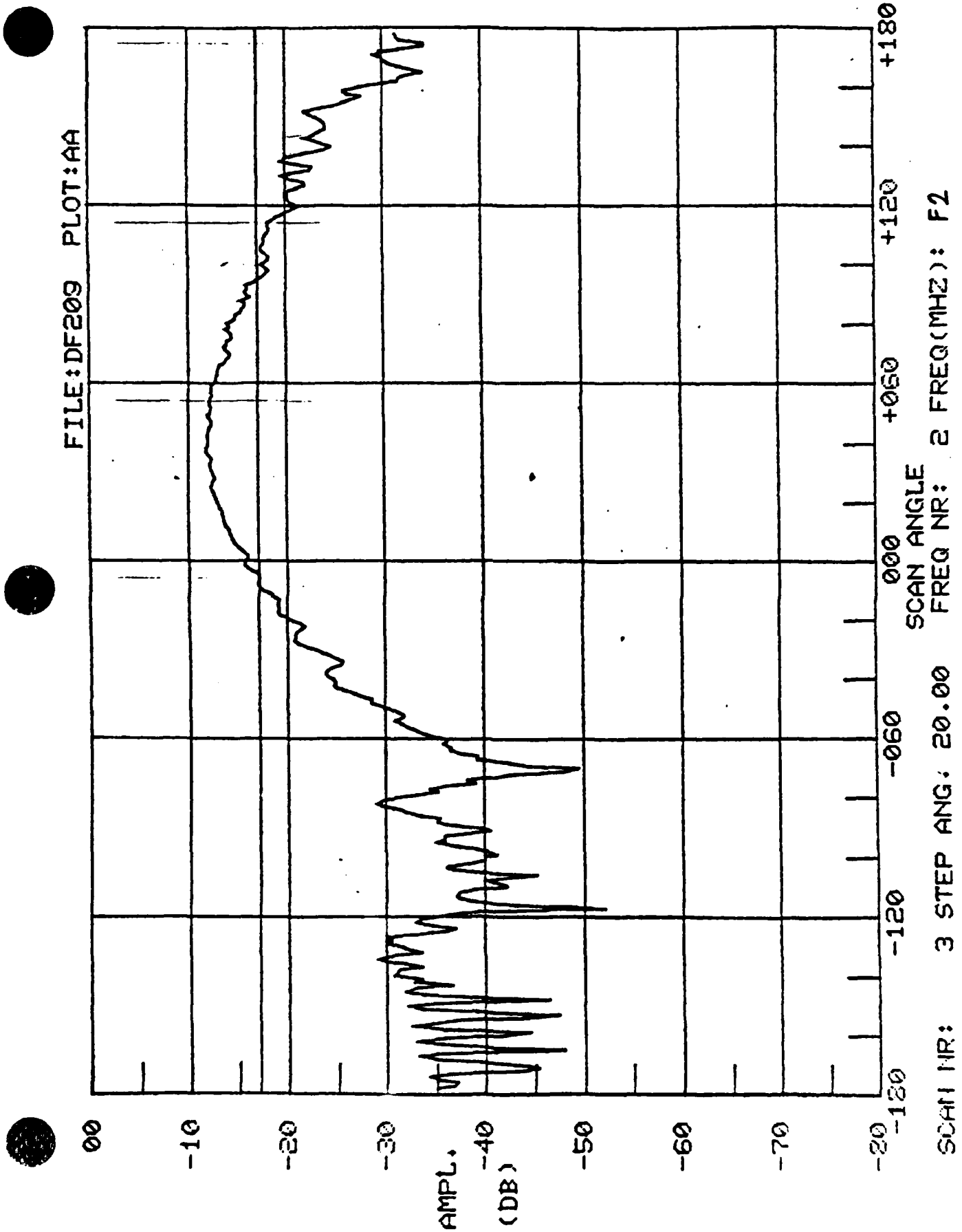

FILE:DF209 PLOT:AA
00
-10
-20
-30
-40
-50
-60
-70
-80
AMPL.
(DB)
-180
-120
-060
000
+060
+120
+180
SCAN ANGLE
SCAN NR: 4 STEP ANG: 30.00 FREQ NR: 1 FREQ(MHZ): F1

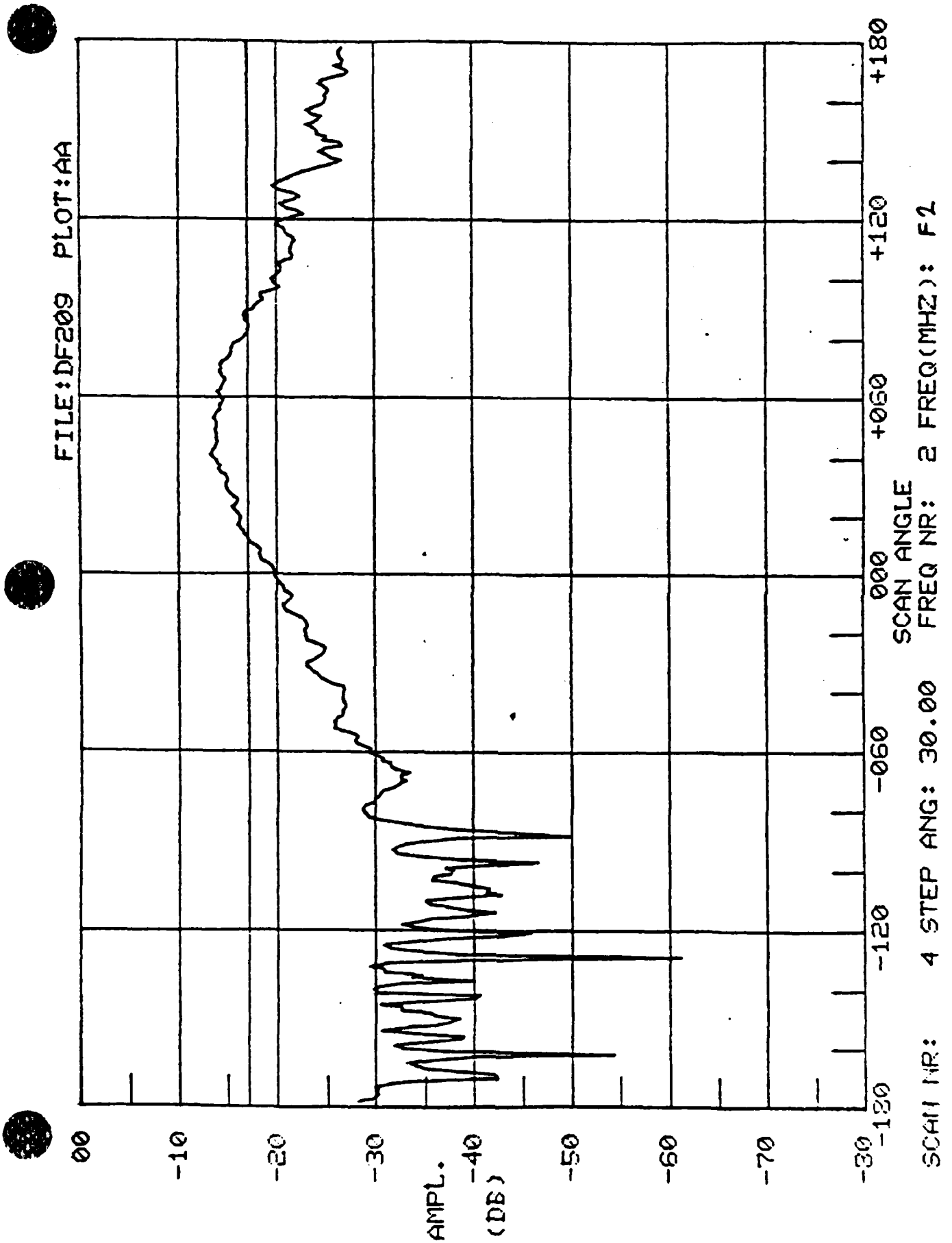

FILE:DF209 PLOT:AA
00
-10
-20
-30
-40
-50
-60
-70
-80
AMPL.
(DB)
-180
-120
-060
000
+060
+120
+180
SCAN ANGLE
SCAN NR: 5 STEP ANG: 40.00 FREQ NR: 1 FREQ(MHZ): FI

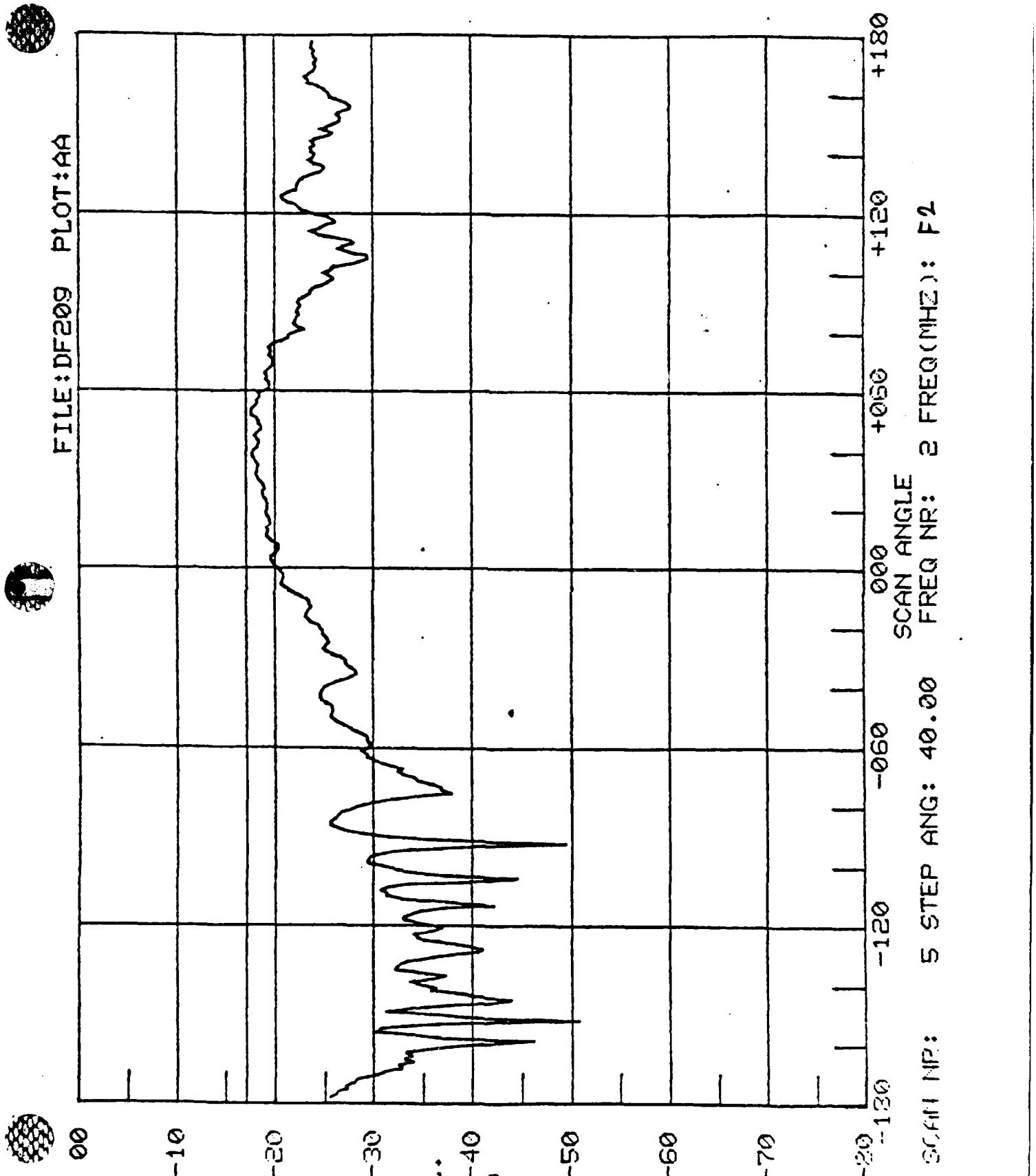

FILE:DF209 PLOT:AA
AMPL. (DB)
00
-10
-20
-30
-40
-50
-60
-70
-80
-120
-060
000
+060
+120
+180
SCAN ANGLE
SCAN NR: 6 STEP ANG: 50.00 FREQ NR: 1 FREQ(MHZ): FI

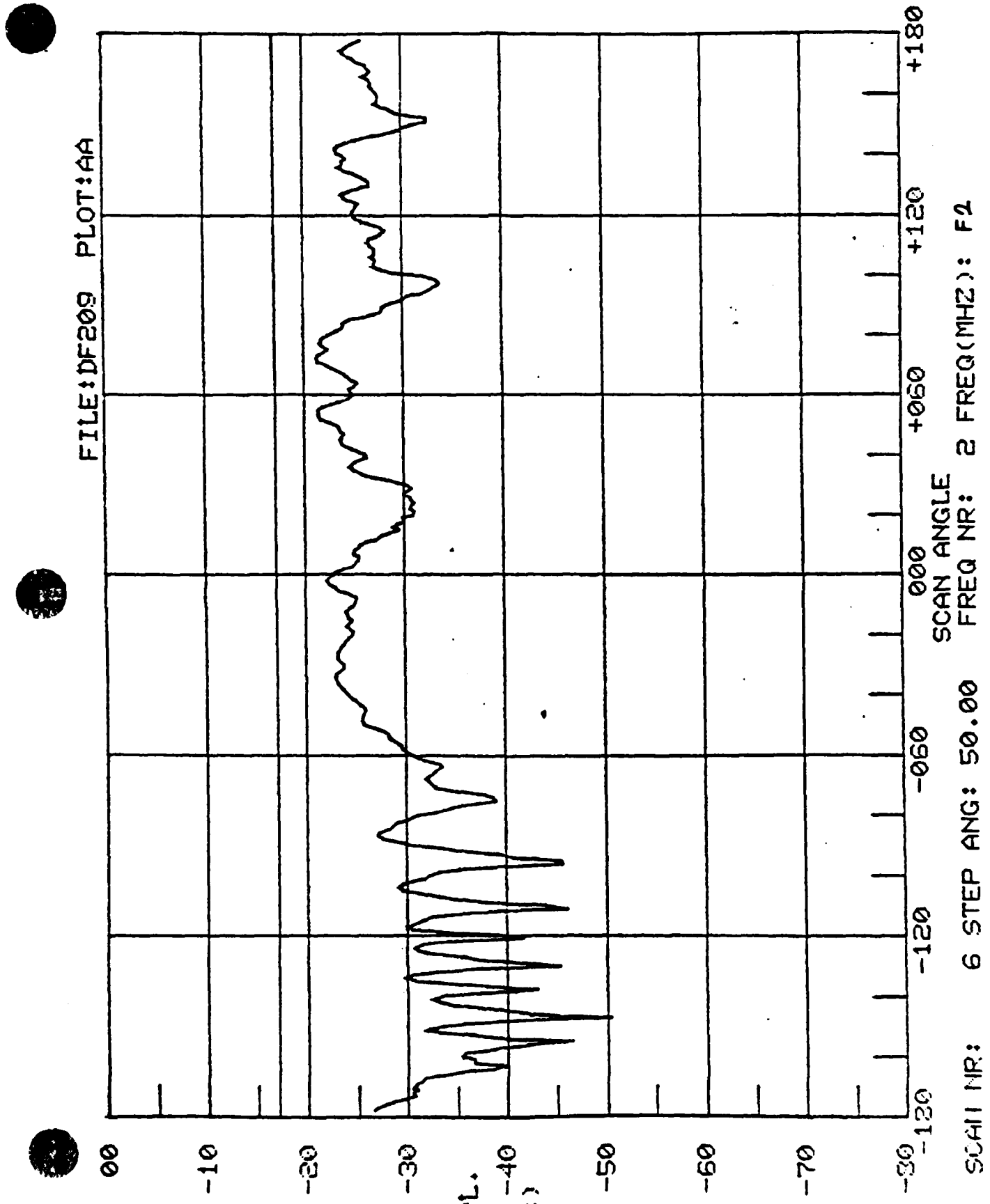

FILE:DF209 PLOT:AA
00
-10
-20
-30
-40
-50
-60
-70
-80
AMPL.
(DB)
-180
-120
-060
000
+060
+120
+180
SCAN ANGLE
SCAN NR: 1 STEP ANG: .00 FREQ NR: 2 FREQ(MHZ): F2

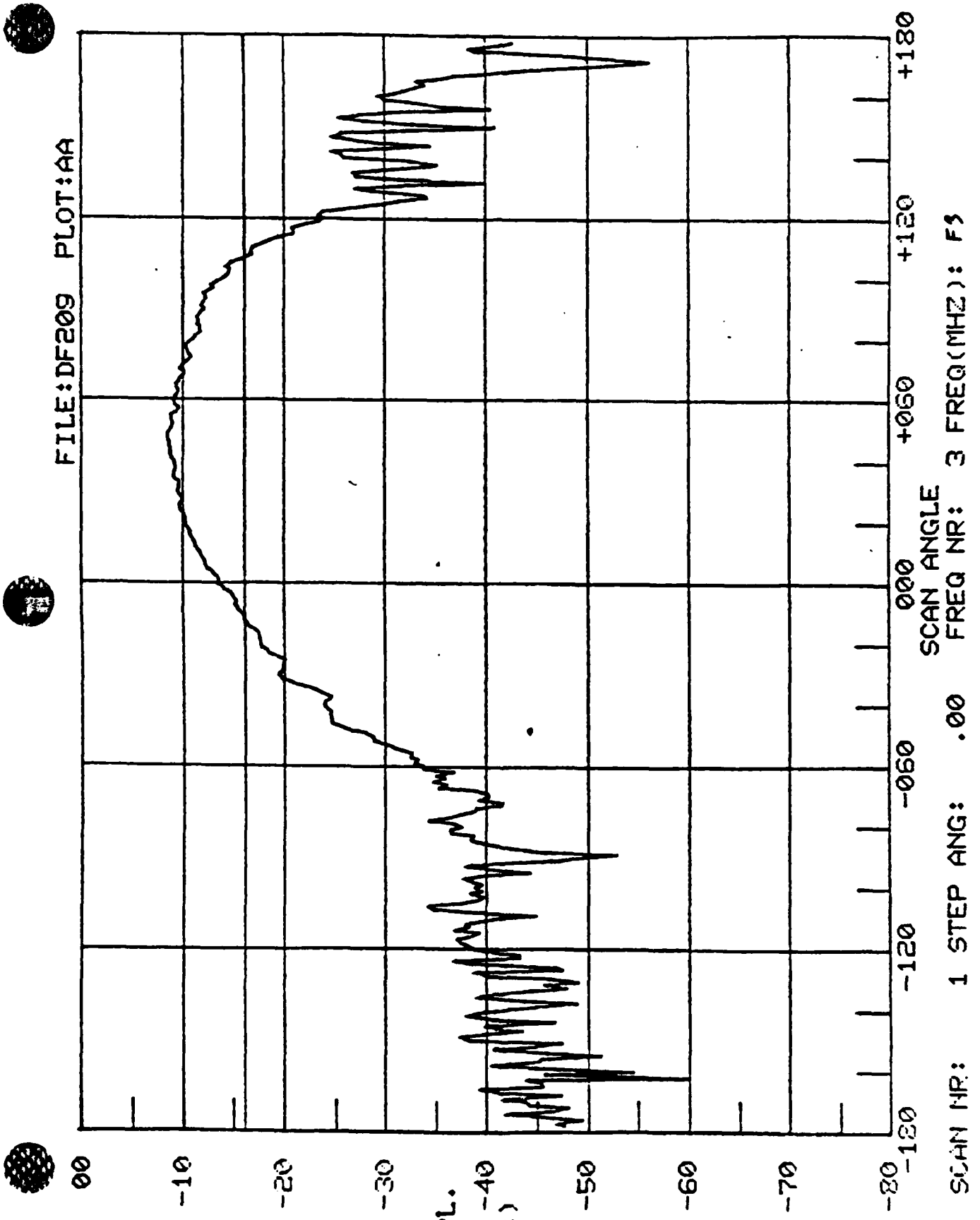

FILE:DF209 PLOT:AA
00
-10
-20
-30
-40
-50
-60
-70
-80
AMPL.
(DB)
-180
-120
-060
000
+060
+120
+180
SCAN ANGLE
SCAN NR: 2 STEP ANG: 10.00 FREQ NR: 2 FREQ(MHZ): F2

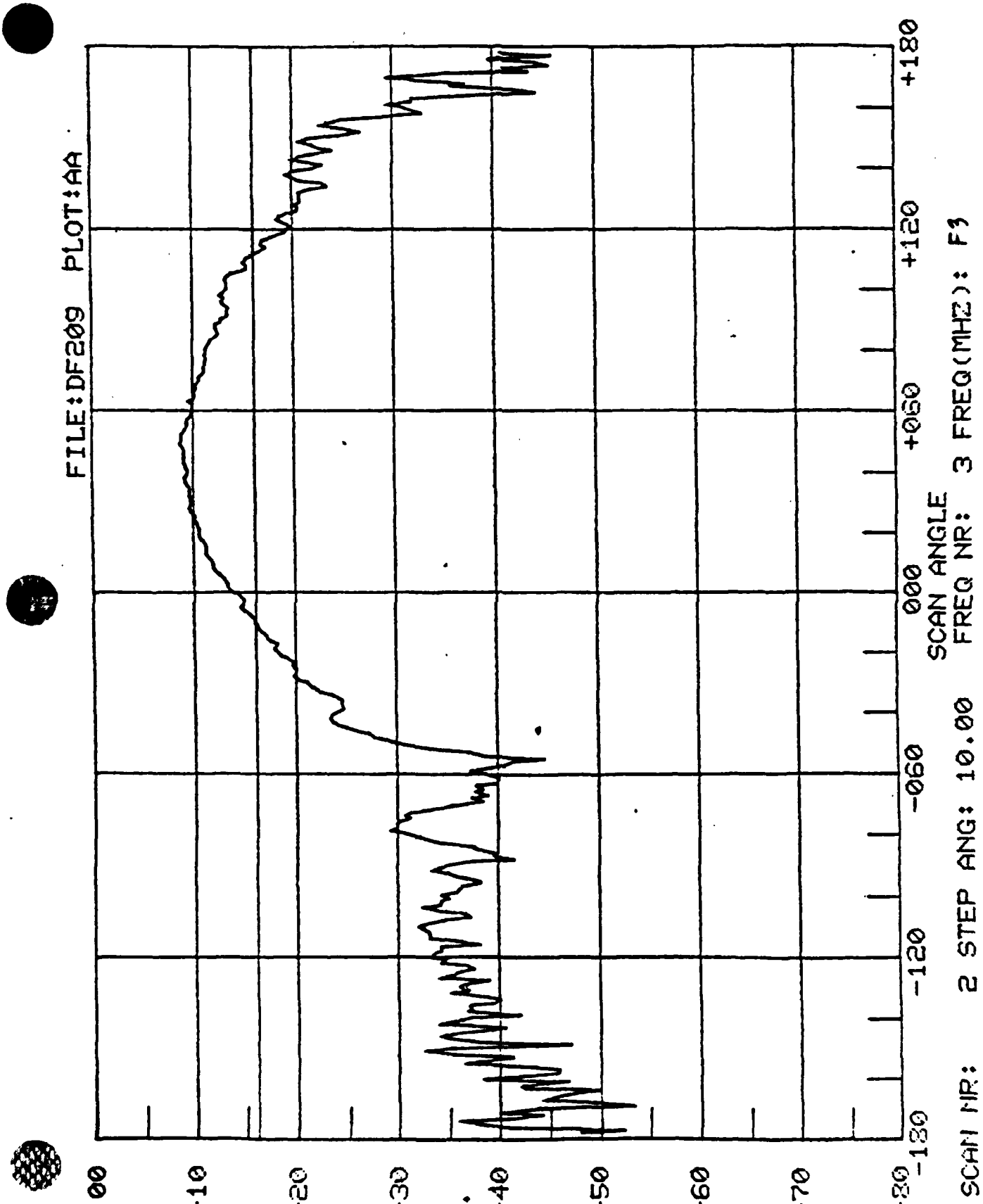

FILE:DF209 PLOT:AA
00
-10
-20
-30
-40
-50
-60
-70
-80
AMPL.
(DB)
-180
-120
-060
000
+060
+120
+180
SCAN ANGLE
SCAN NR: 3 STEP ANG: 20.00 FREQ NR: 2 FREQ(MHZ): F2

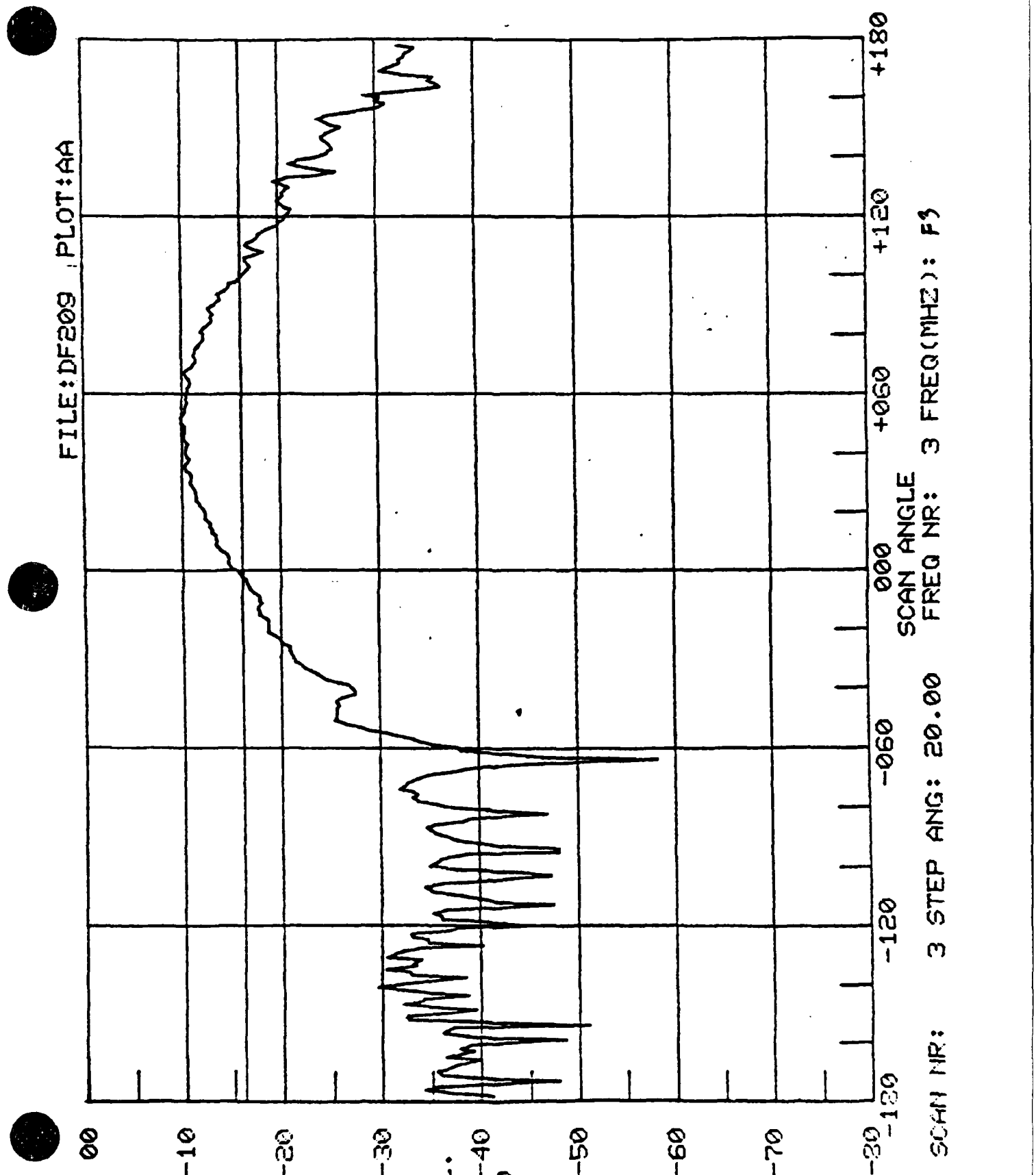

FILE:DF209 PLOT:AA
00
-10
-20
-30
-40
-50
-60
-70
-80
AMPL.
(DB)
-180
-120
-060
000
+060
+120
+180
SCAN ANGLE
SCAN NR: 4 STEP ANG: 30.00 FREQ NR: 2 FREQ(MHZ): F2

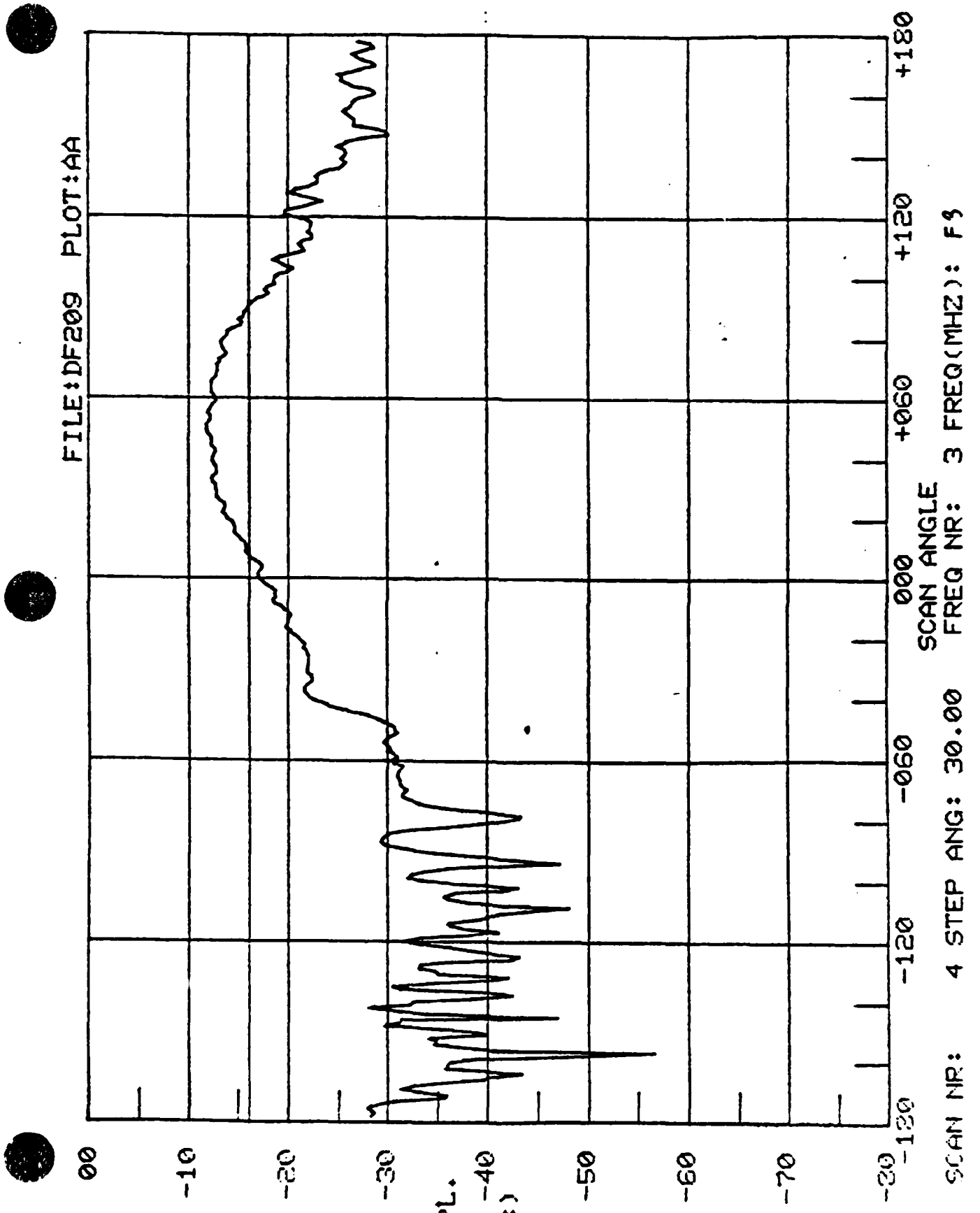

FILE:DF209 PLOT:AA
00
-10
-20
-30
-40
-50
-60
-70
-80
AMPL.
(DB)
-180
-120
-060
000
+060
+120
+180
SCAN ANGLE
SCAN NR: 5 STEP ANG: 40.00 FREQ NR: 2 FREQ(MHZ): F2

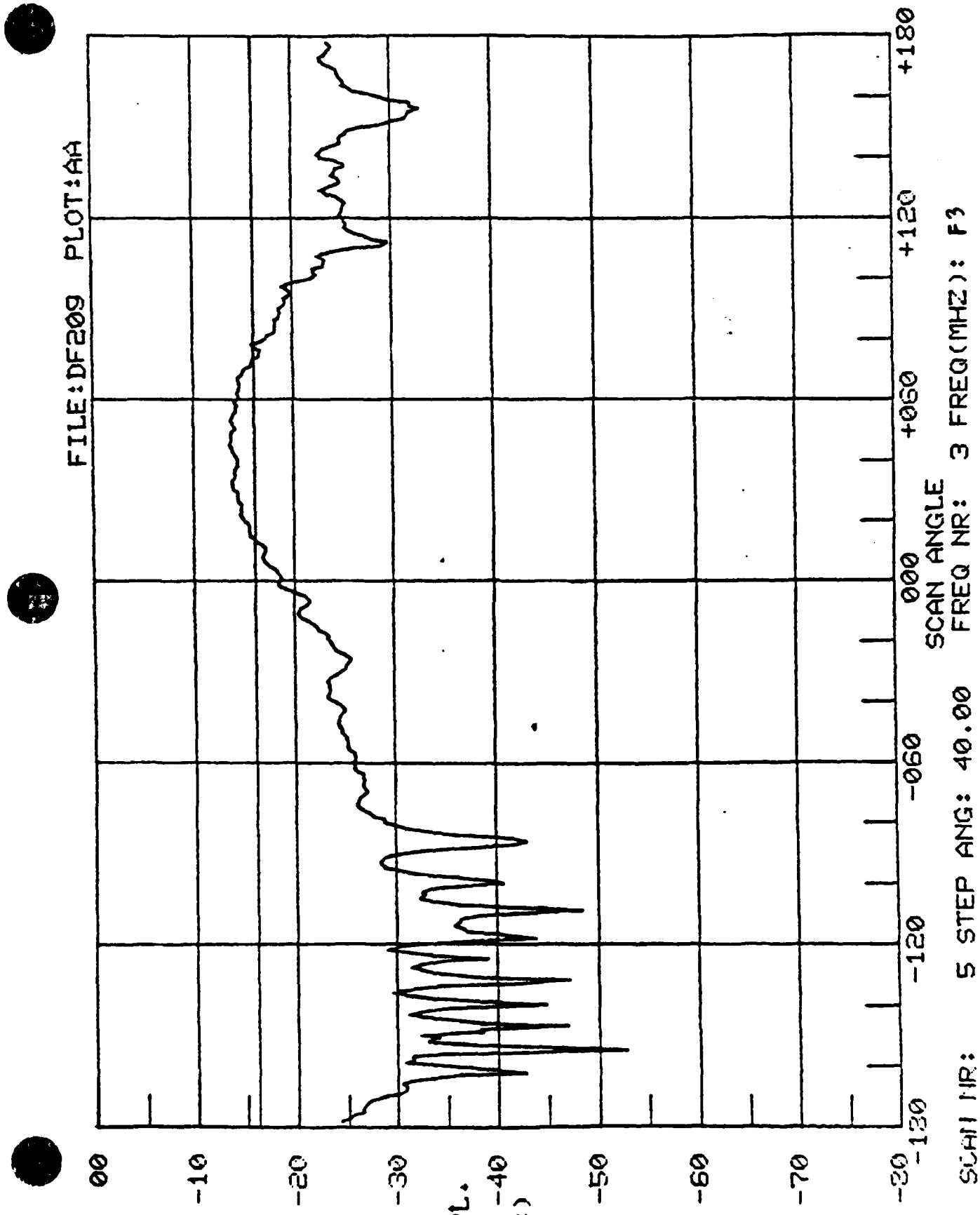

FILE:DF209 PLOT:AA
00
-10
-20
-30
-40
-50
-60
-70
-80
AMPL.
(DB)
-120
-060
000
+060
+120
+180
SCAN ANGLE
SCAN NR: 6 STEP ANG: 50.00 FREQ NR: 2 FREQ(MHZ): F2

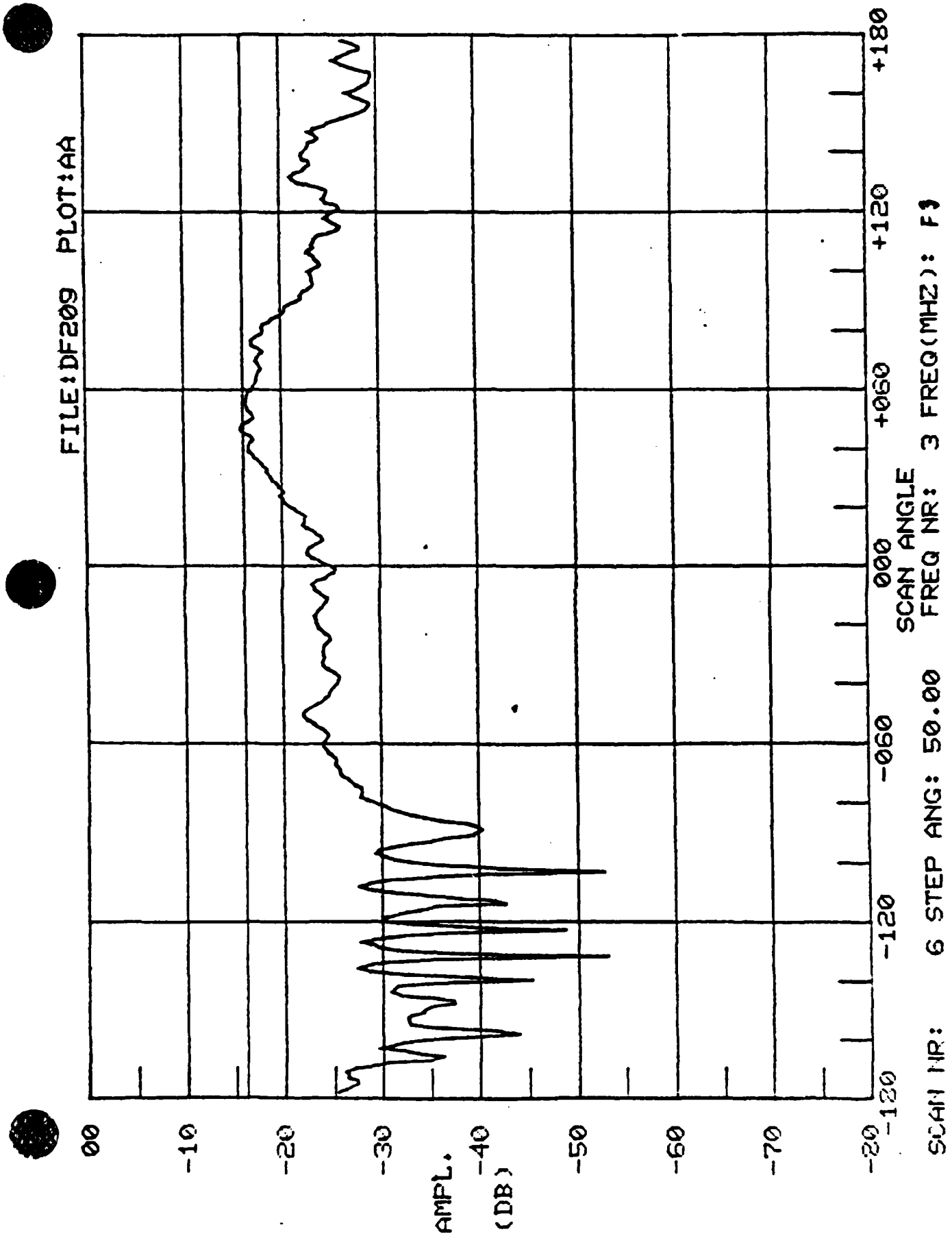

FILE:DF209 PLOT:AA
00
-10
-20
-30
-40
-50
-60
-70
-80
-120
-060
000
+060
+120
+180
AMPL.
(DB)
SCAN ANGLE
SCAN NR: 1 STEP ANG: .00 FREQ NR: 3 FREQ(MHZ): F3


FILE:DF209 PLOT:AA
AMPL. (DB)
00
-10
-20
-30
-40
-50
-60
-70
-80
-180
-120
-060
000
+060
+120
+180
SCAN ANGLE
SCAN NR: 2 STEP ANG: 10.00 FREQ NR: 3 FREQ(MHZ): F3

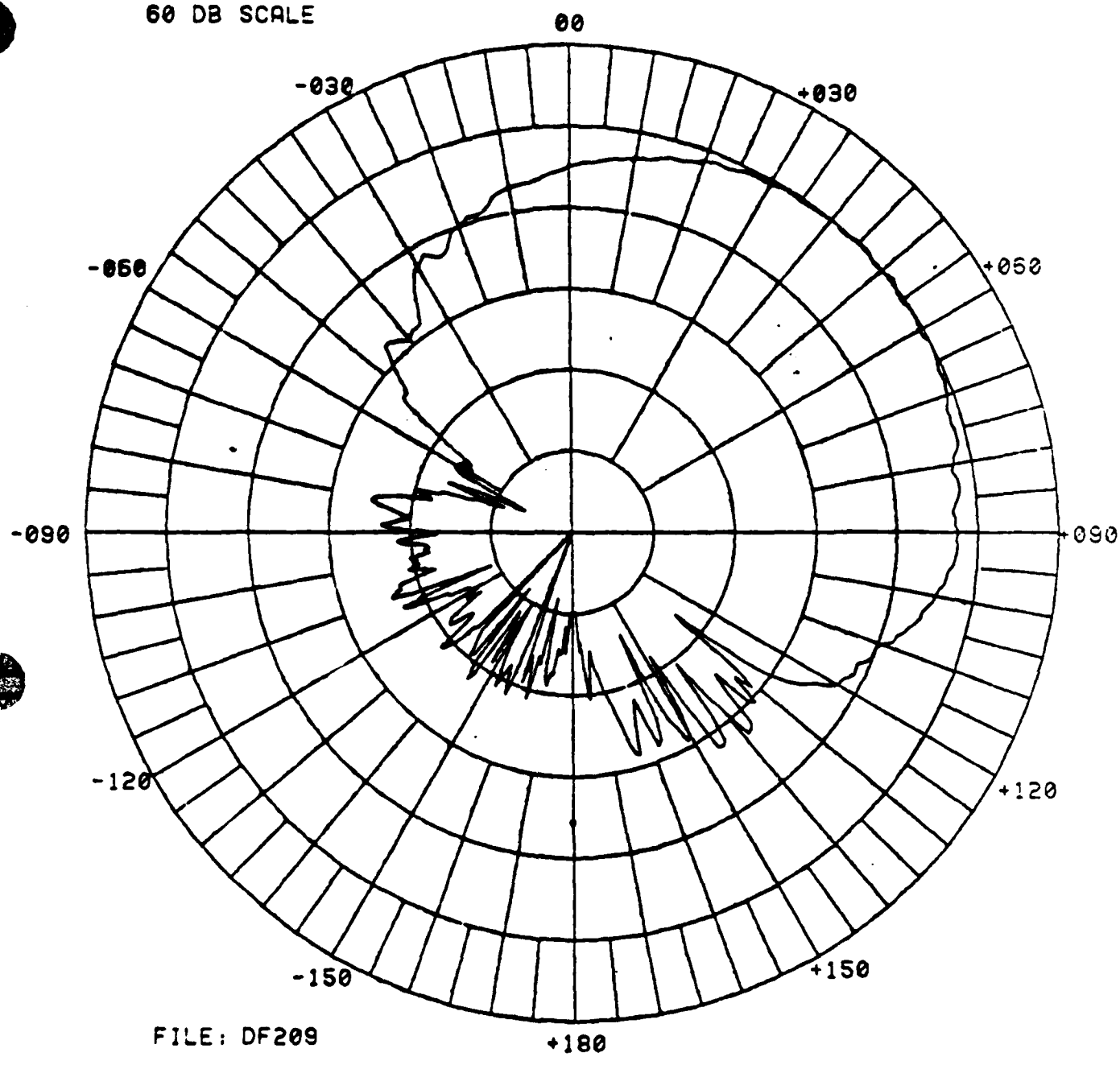

FILE:DF209 PLOT:AA
00
-10
-20
-30
-40
-50
-60
-70
-80
AMPL.
(DB)
-180
-120
-060
000
+060
+120
+180
SCAN ANGLE
SCAN NR: 3 STEP ANG: 20.00 FREQ NR: 3 FREQ(MHZ): F3


FILE:DF209 PLOT:AA
00
-10
-20
-30
-40
-50
-60
-70
-80
-120
AMPL.
(DB)
-180
-120
-060
000
+060
+120
+180
SCAN ANGLE
SCAN NR: 4 STEP ANG: 30.00 FREQ NR: 3 FREQ(MHZ): F3


FILE:DF209 PLOT:AA
00
-10
-20
-30
-40
-50
-60
-70
-80
AMPL.
(DB)
-180
-120
-060
000
+060
+120
+180
SCAN ANGLE
SCAN NR: 5 STEP ANG: 40.00 FREQ NR: 3 FREQ(MHZ): F3


FILE:DF209 PLOT:AA
00
-10
-20
-30
-40
-50
-60
-70
-80
AMPL.
(DB)
-180
-120
-060
000
+060
+120
+180
SCAN ANGLE
SCAN NR: 6 STEP ANG: 50.00 FREQ NR: 3 FREQ(MHZ): F3

60 DB SCALE



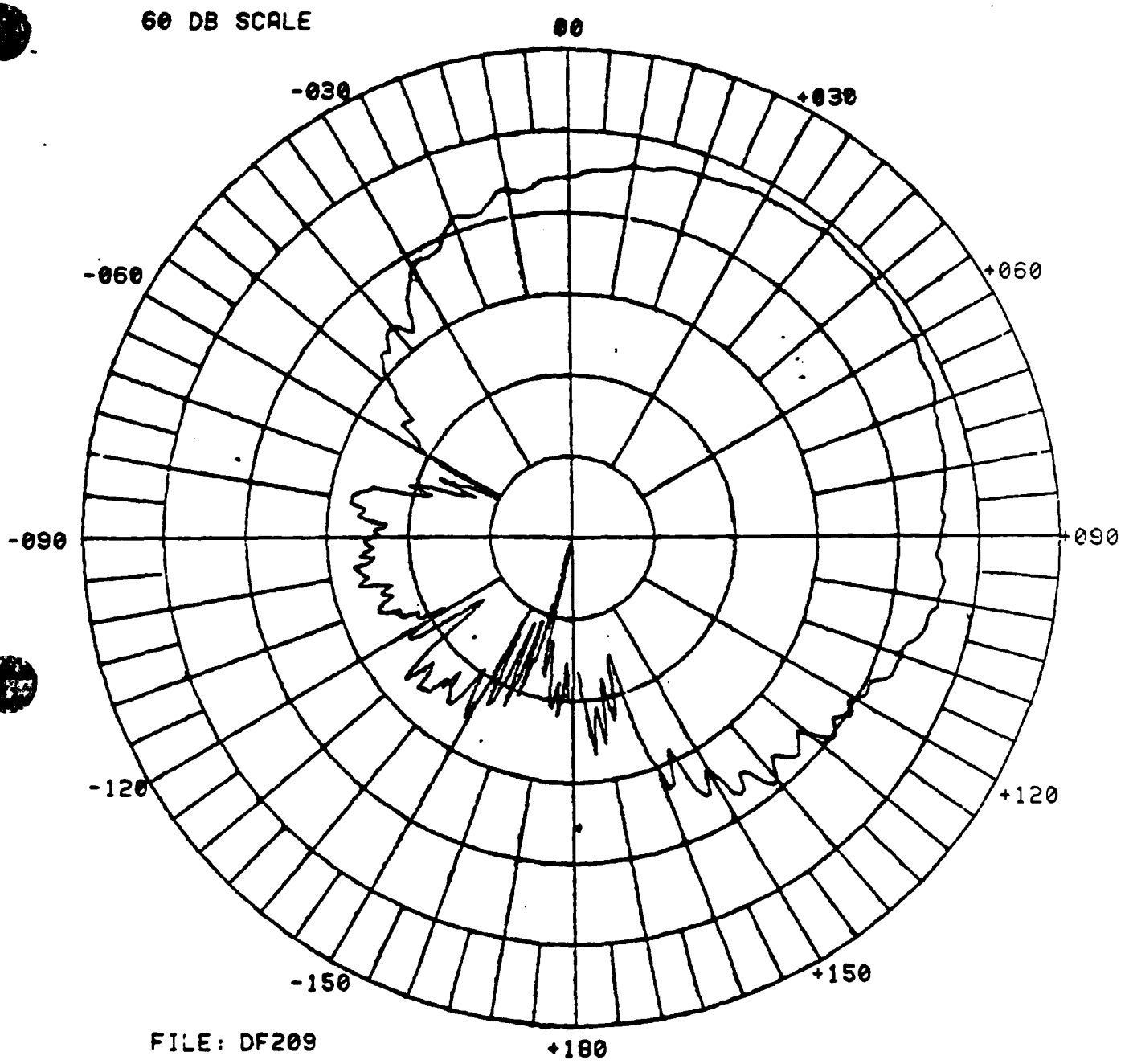
FILE: DF209

SCAN NR: 1 STEP ANGLE: 0.00 PLOT_____ AA

FREQ NR: 1 FREQ(MHZ): F1

CONFIGURATION 3

2 JUN 1984



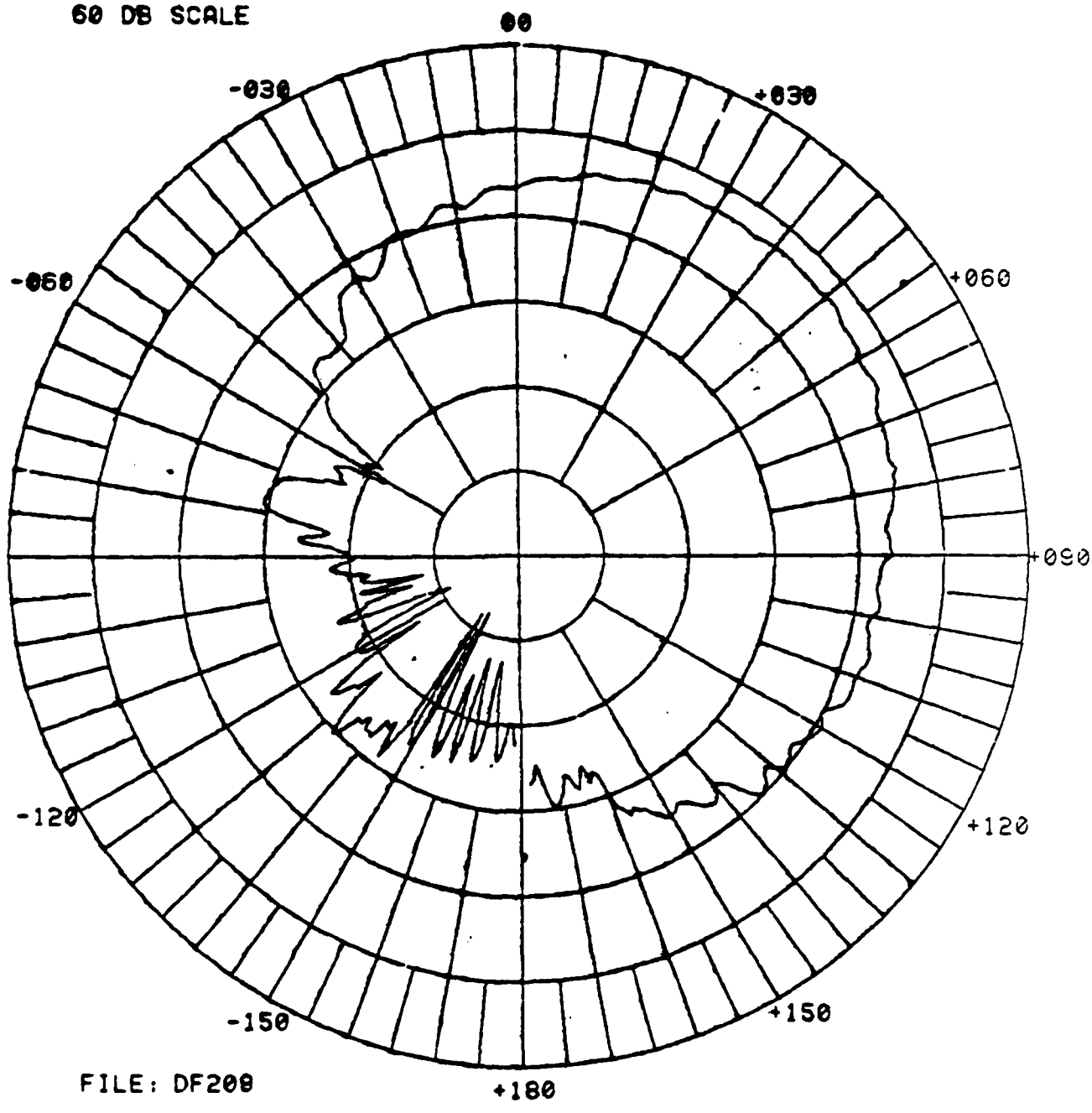
FILE: DF209

SCAN NR: 2 STEP ANGLE: 10.00 PLOT_____ AA

FREQ NR: 1 FREQ(MHZ): F1

CONFIGURATION 3

2 JUN 1984



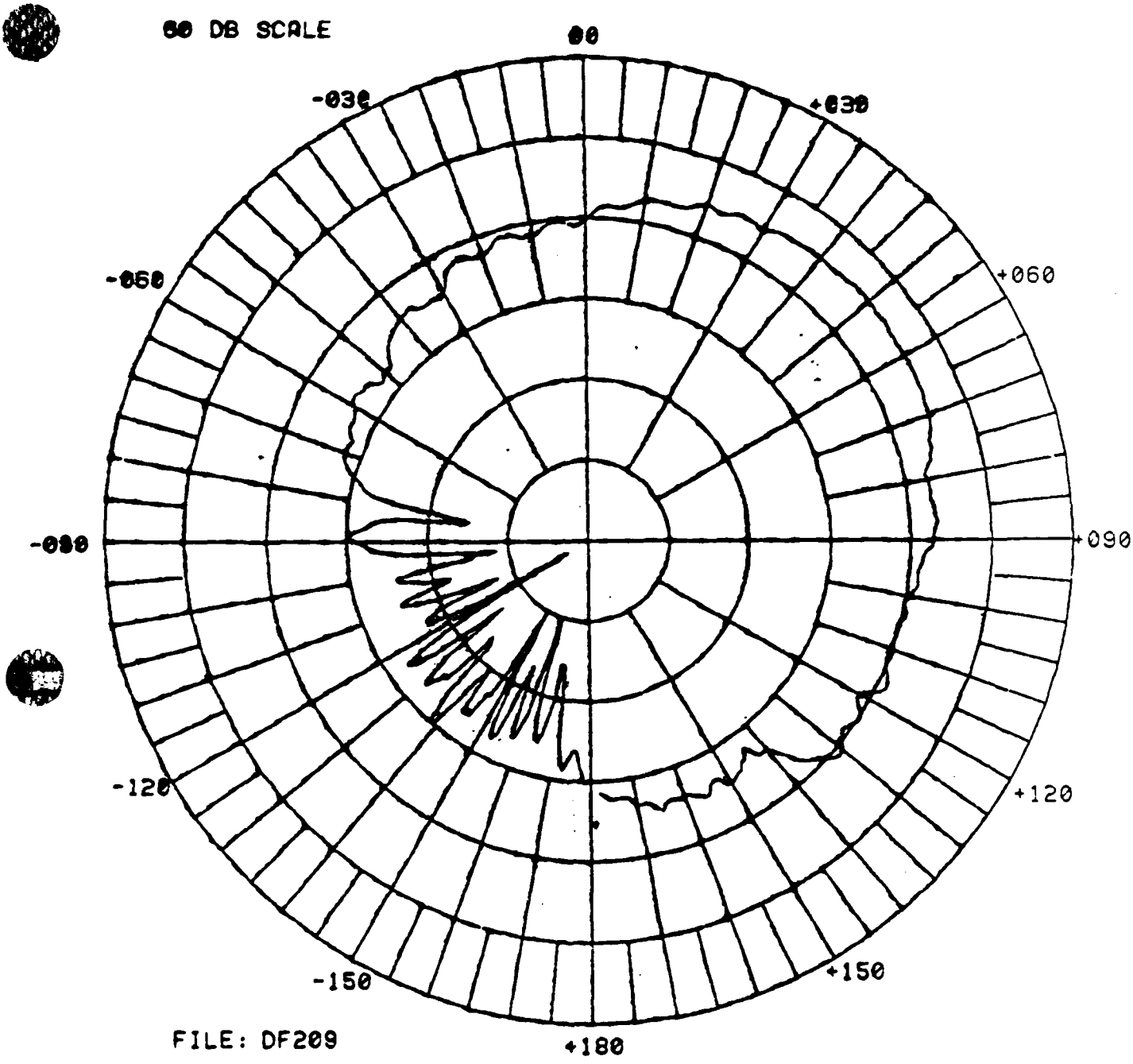
FILE: DF200

SCAN NR: 3 STEP ANGLE: 20.00 PLOT_____ AA

FREQ NR: 1 FREQ(MHZ): F1

CONFIGURATION 3

2 JUN 1984



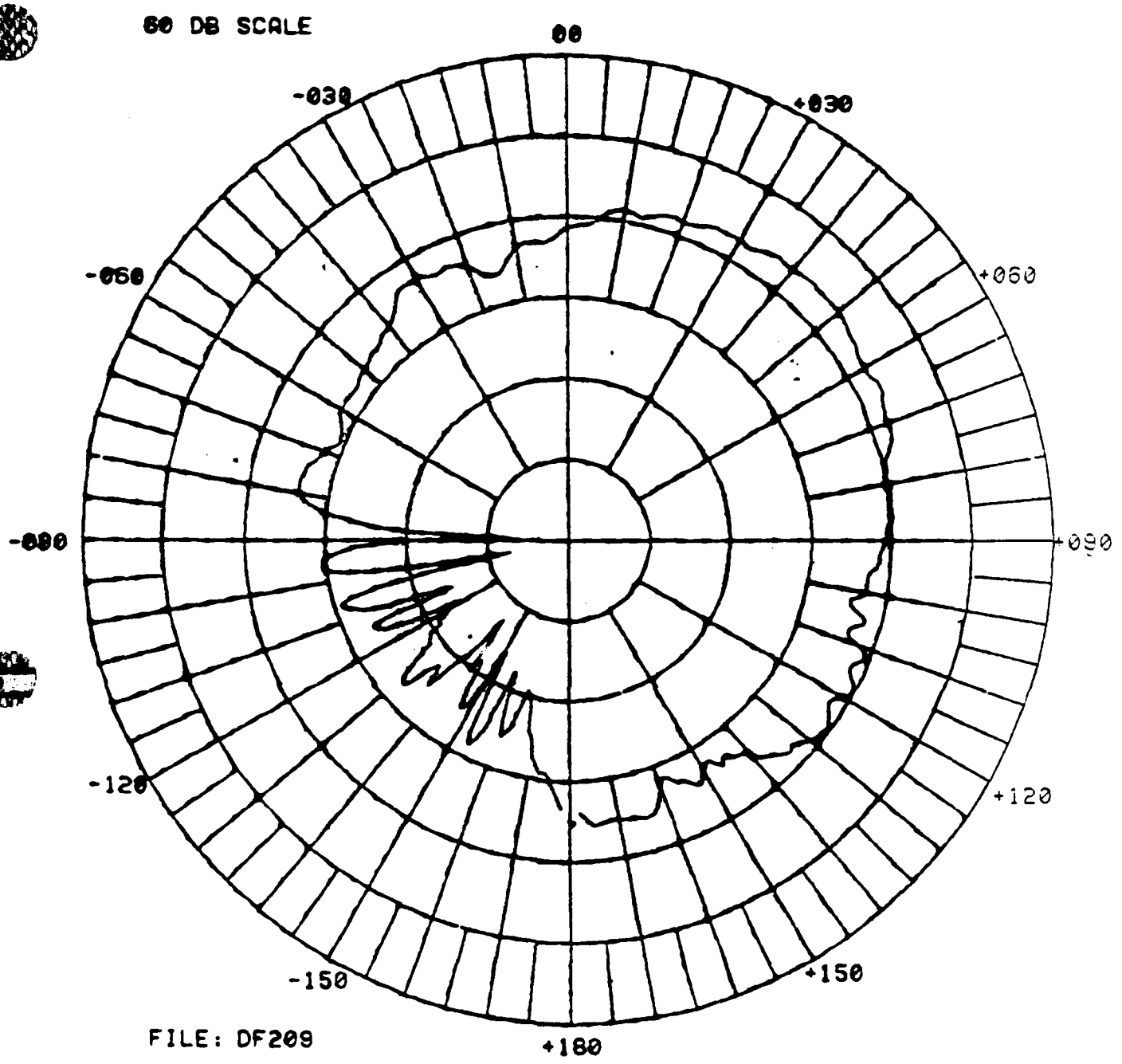
FILE: DF209

SCAN NR: 4 STEP ANGLE: 30.00 PLOT_____ AA

FREQ NR: 1 FREQ(MHZ): F/

CONFIGURATION 3

2 JUN 1984



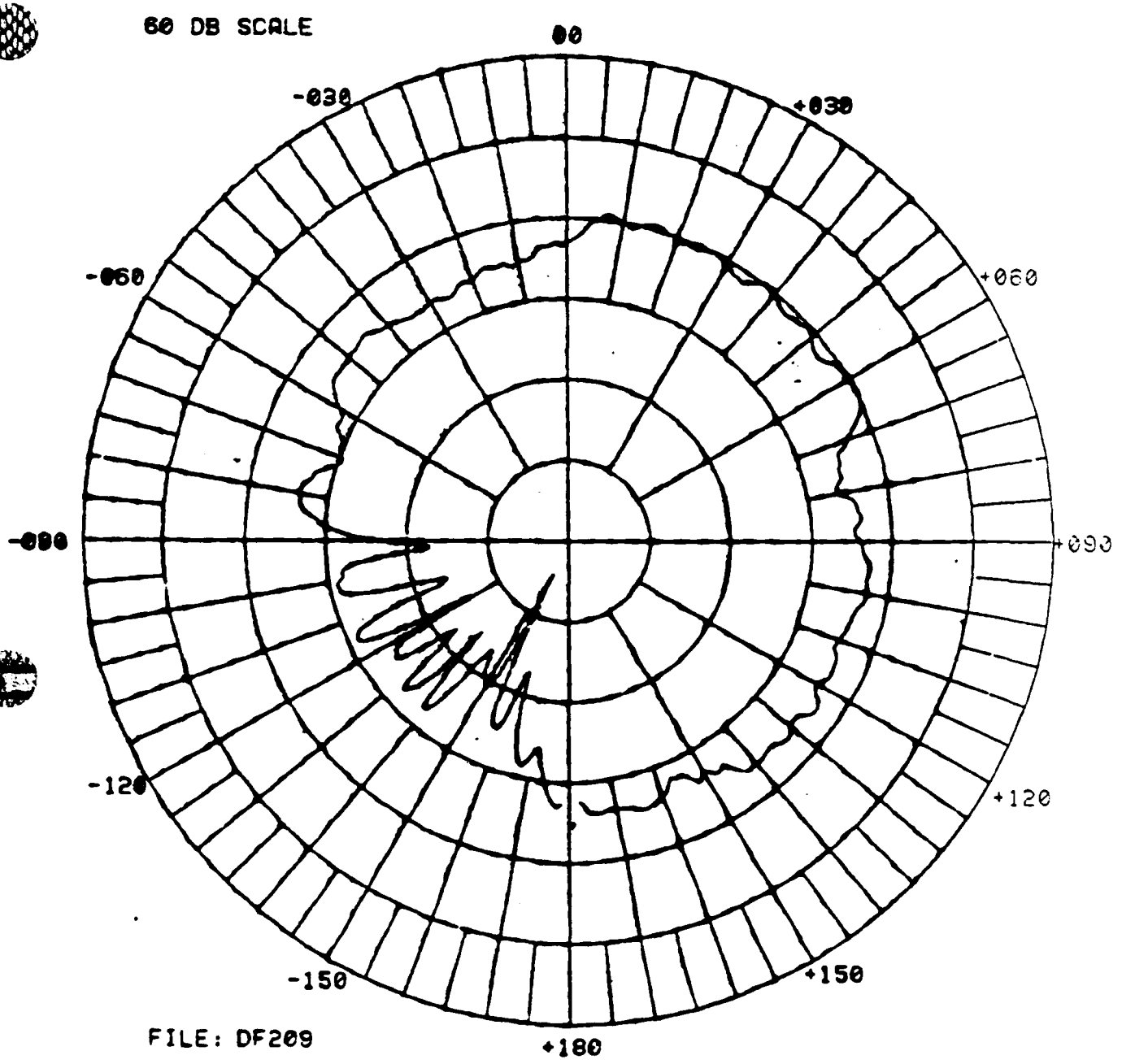
FILE: DF209

SCAN NR: 5 STEP ANGLE: 40.00 PLOT_____ AA

FREQ NR: 1 FREQ(MHZ): F1

CONFIGURATION 3

2 JUN 1984



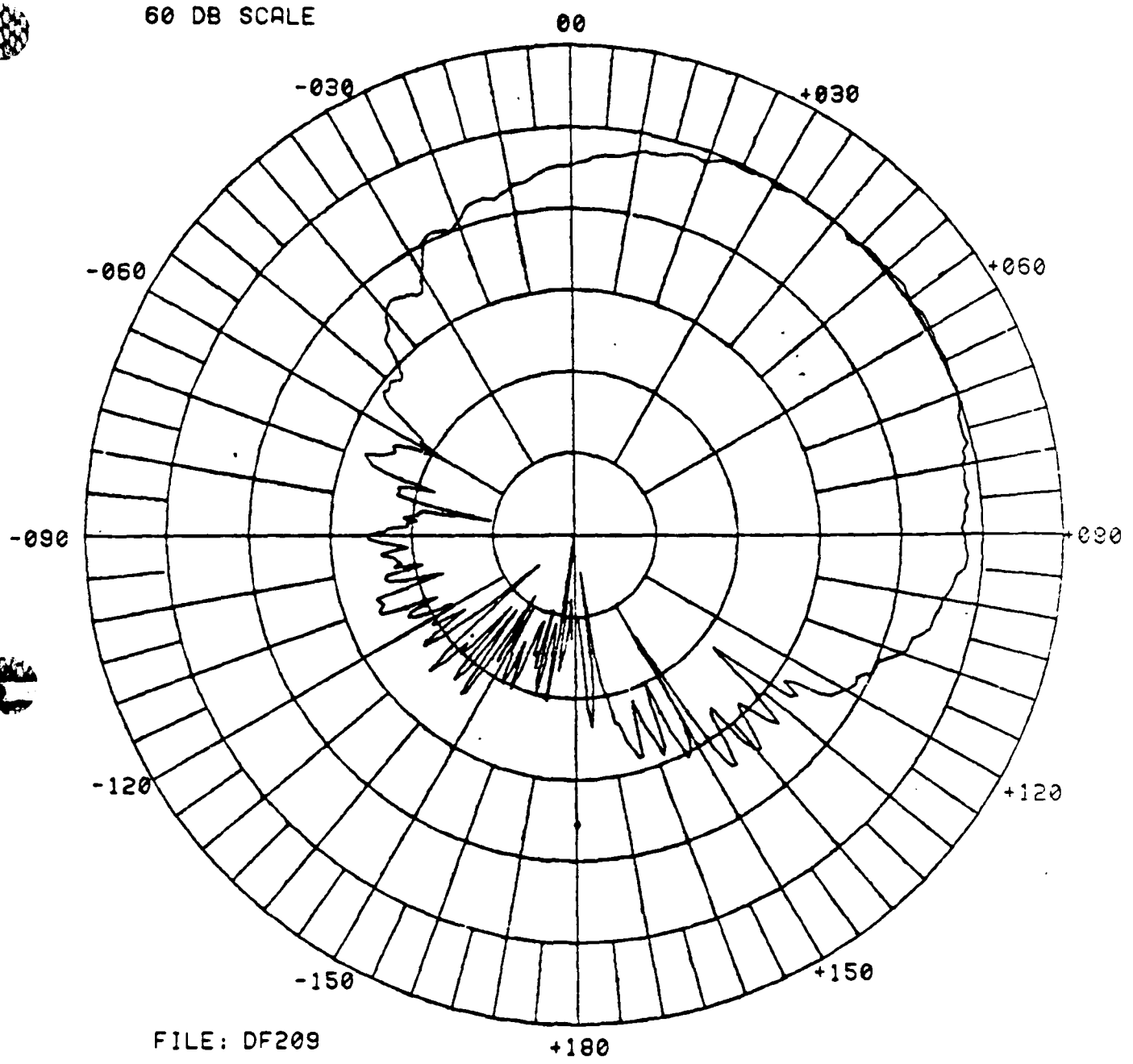
FILE: DF209

SCAN NR: 6 STEP ANGLE: 50.00 PLOT_____ AA

FREQ NR: 1 FREQ(MHZ): F1

CONFIGURATION 3

2 JUN 1984



FILE: DF209

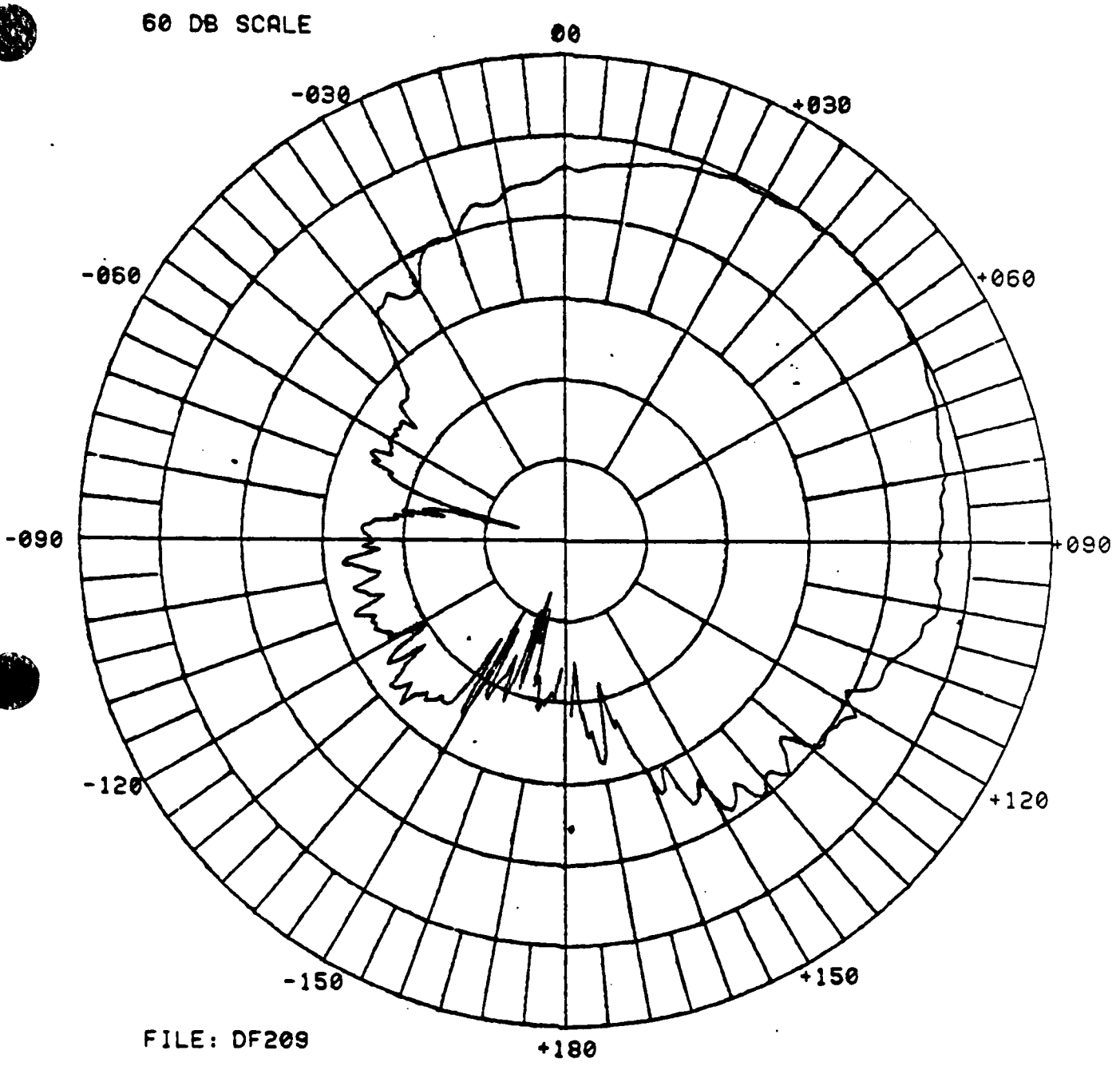
SCAN NR: 1 STEP ANGLE: 0.00 PLOT_____ AA

FREQ NR: 2 FREQ(MHZ): F2

CONFIGURATION 3

2 JUN 1984

60 DB SCALE



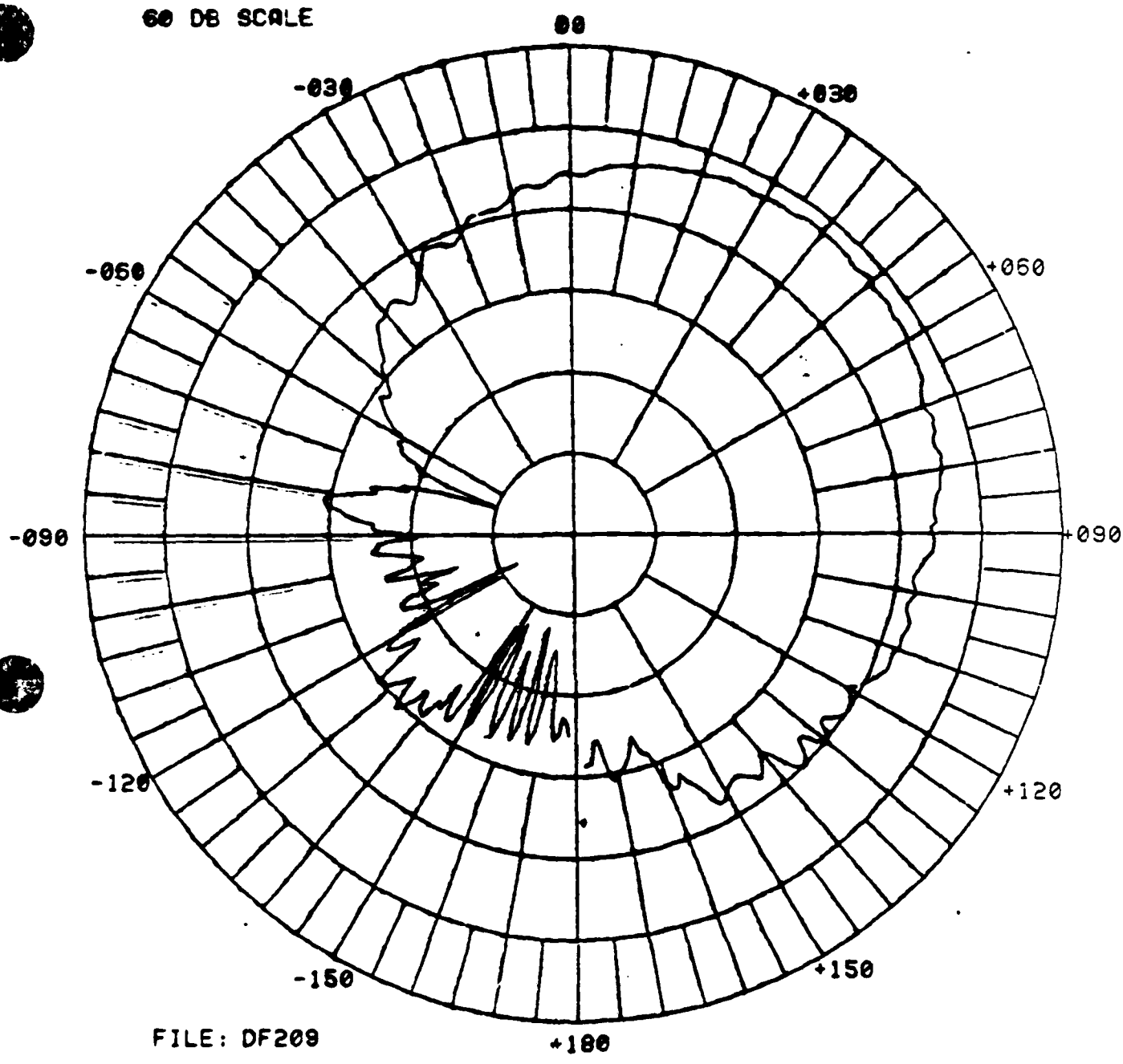
FILE: DF209

SCAN NR: 2 STEP ANGLE: 10.00 PLOT_____ AA

FREQ NR: 2 FREQ(MHZ): F2

CONFIGURATION 3

2 JUN 1984



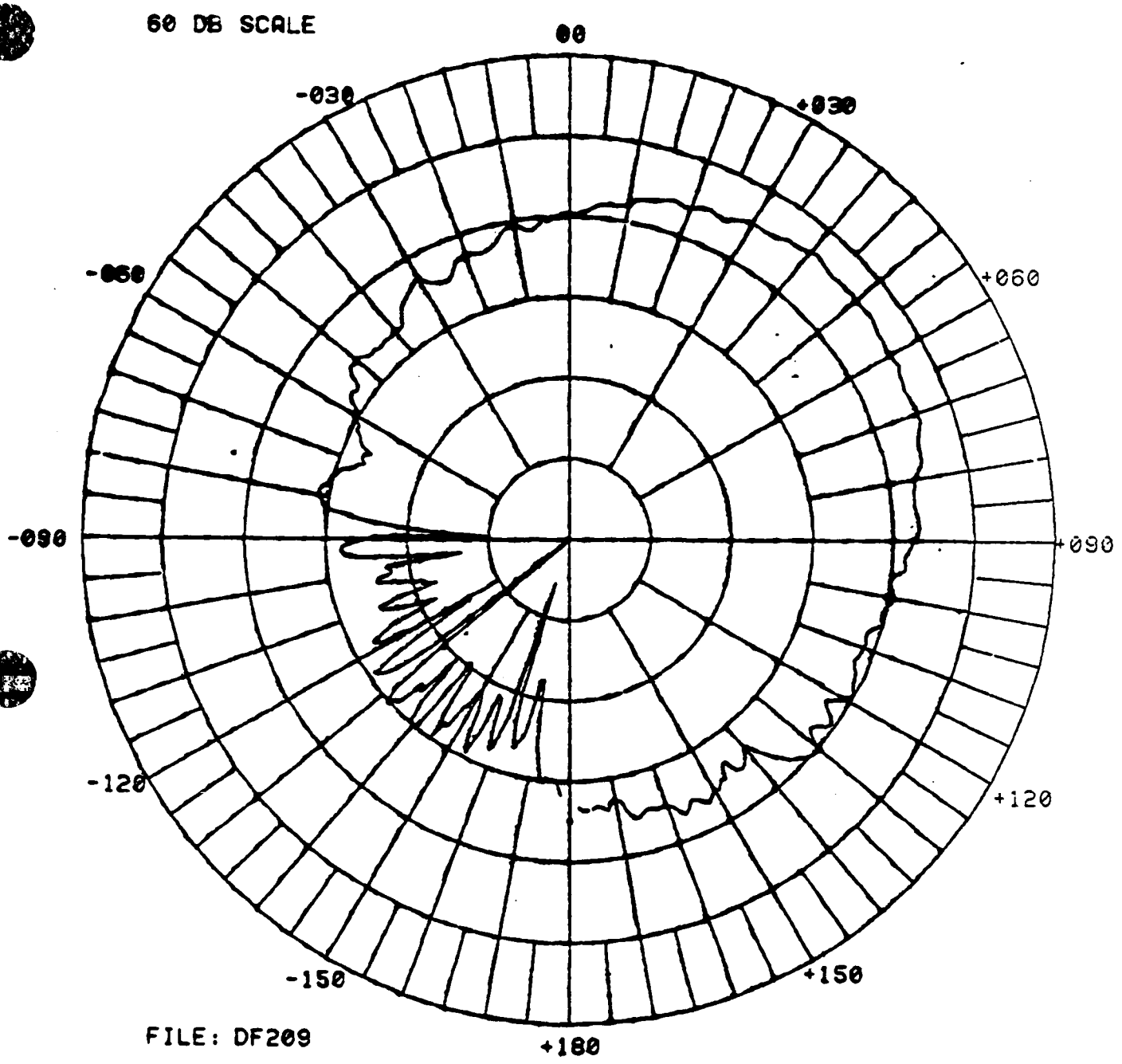
FILE: DF209

SCAN NR: 3 STEP ANGLE: 20.00 PLOT_____ AA

FREQ NR: 2 FREQ(MHZ): F2

CONFIGURATION 3

2 JUN 1984



FILE: DF209

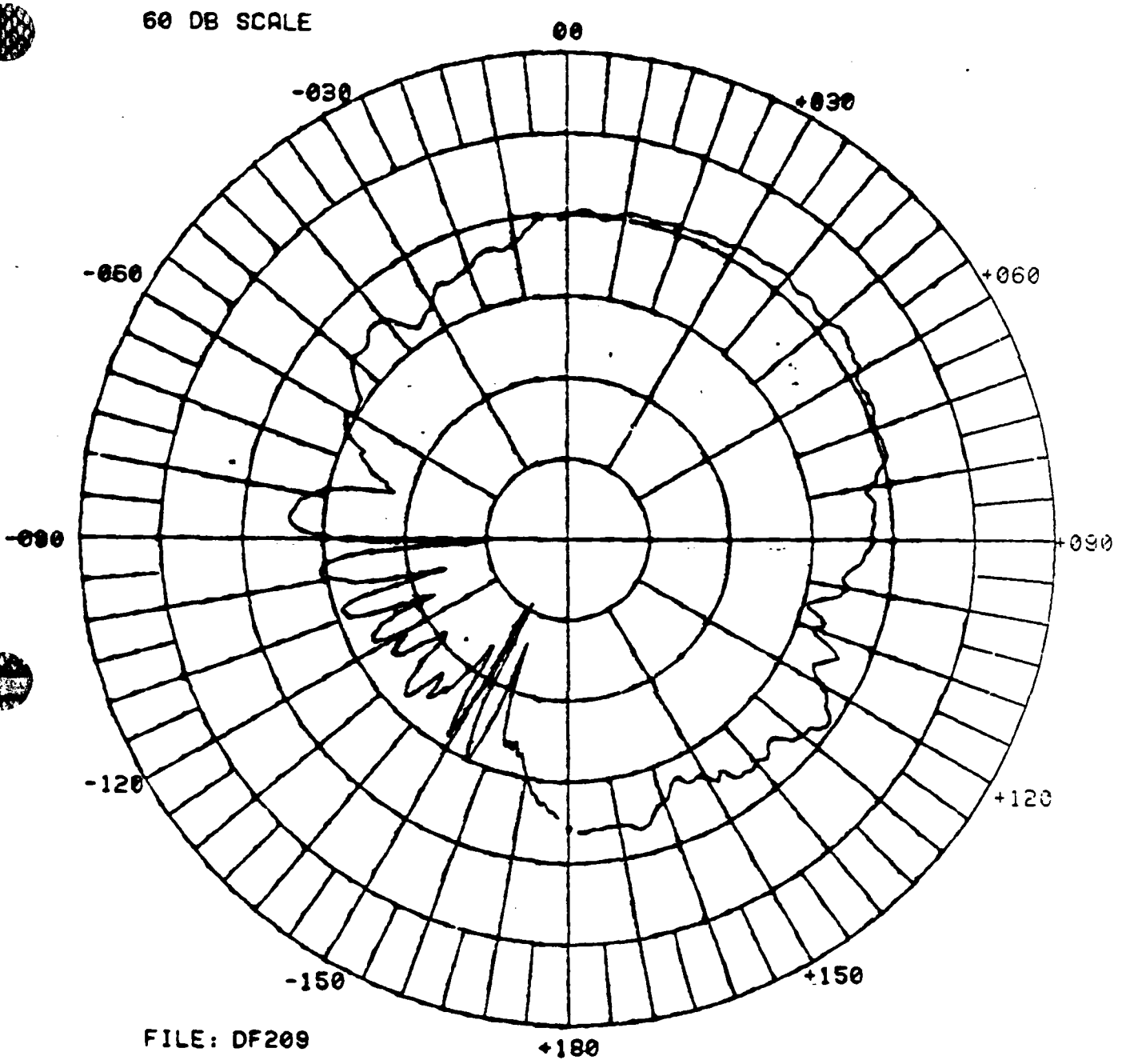
SCAN NR: 4 STEP ANGLE: 30.00 PLOT_____ AA

FREQ NR: 2 FREQ(MHZ): F2

CONFIGURATION 3

2 JUN 1984

60 DB SCALE



FILE: DF209

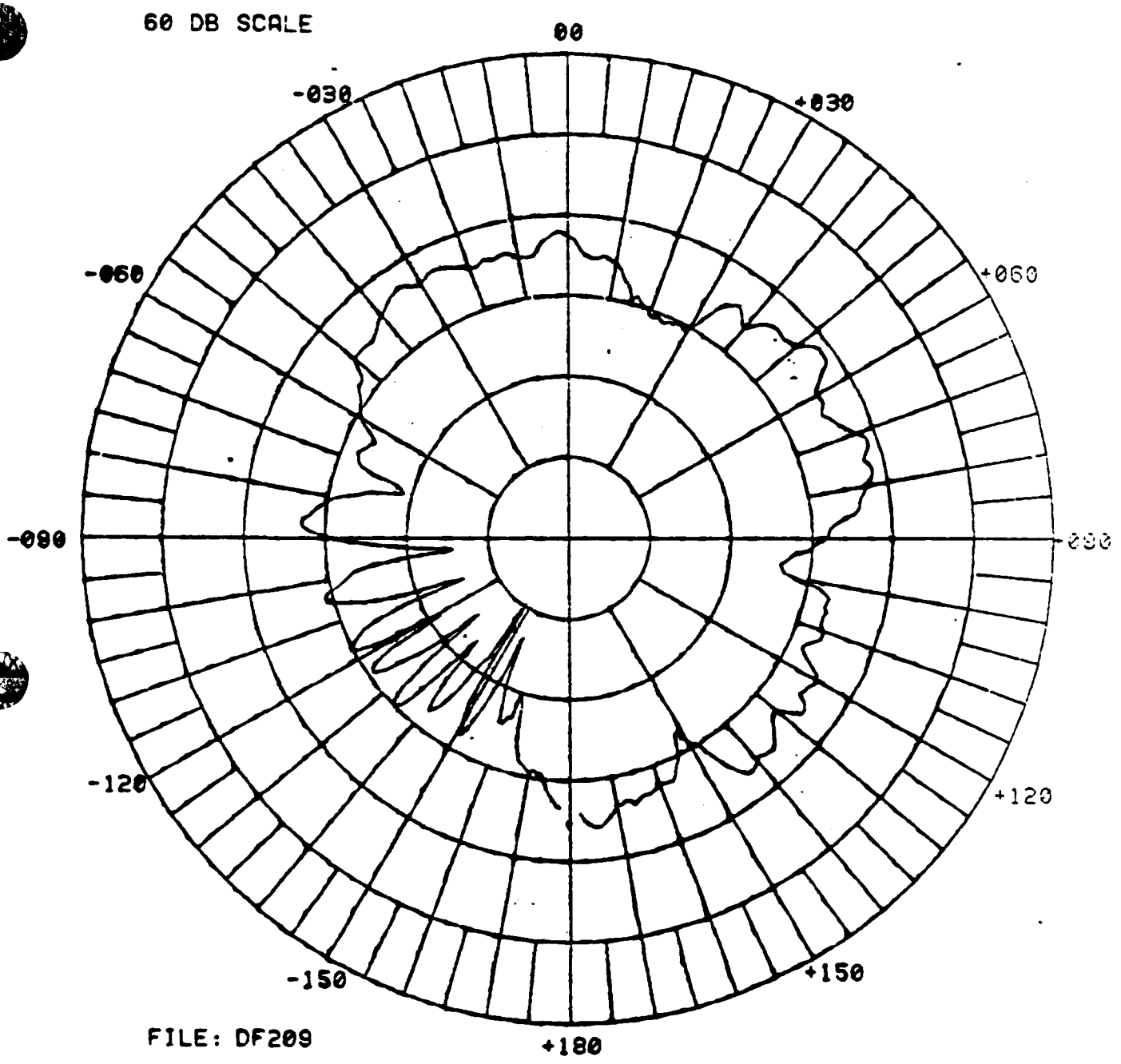
SCAN NR: 5 STEP ANGLE: 40.00 PLOT_____ AA

FREQ NR: 2 FREQ(MHZ): F2

CONFIGURATION 3

2 JUN 1984

60 DB SCALE



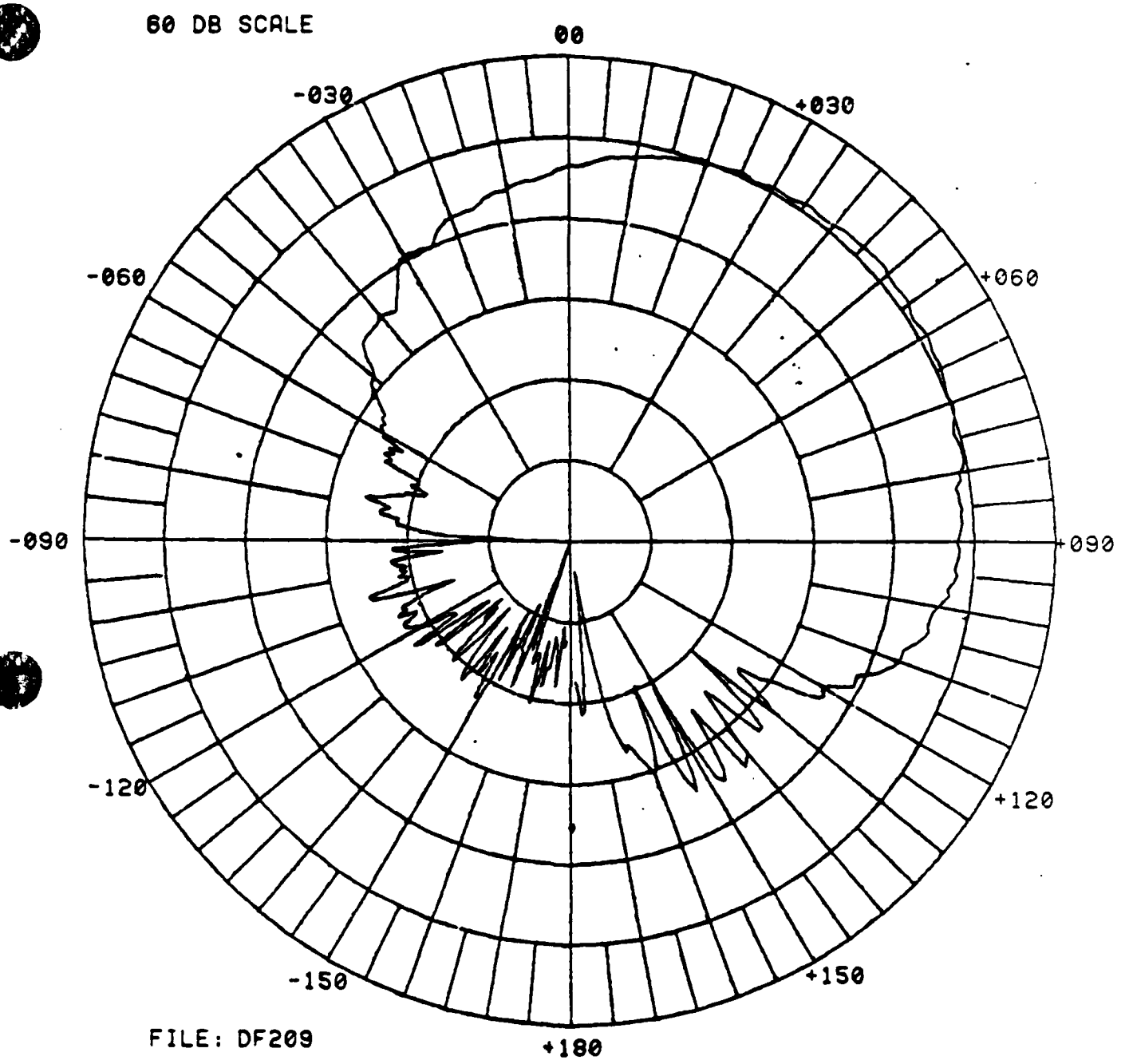
FILE: DF209

SCAN NR: 6 STEP ANGLE: 50.00 PLOT_____ AA

FREQ NR: 2 FREQ(MHZ): F2

CONFIGURATION 3

2 JUN 1984



FILE: DF209

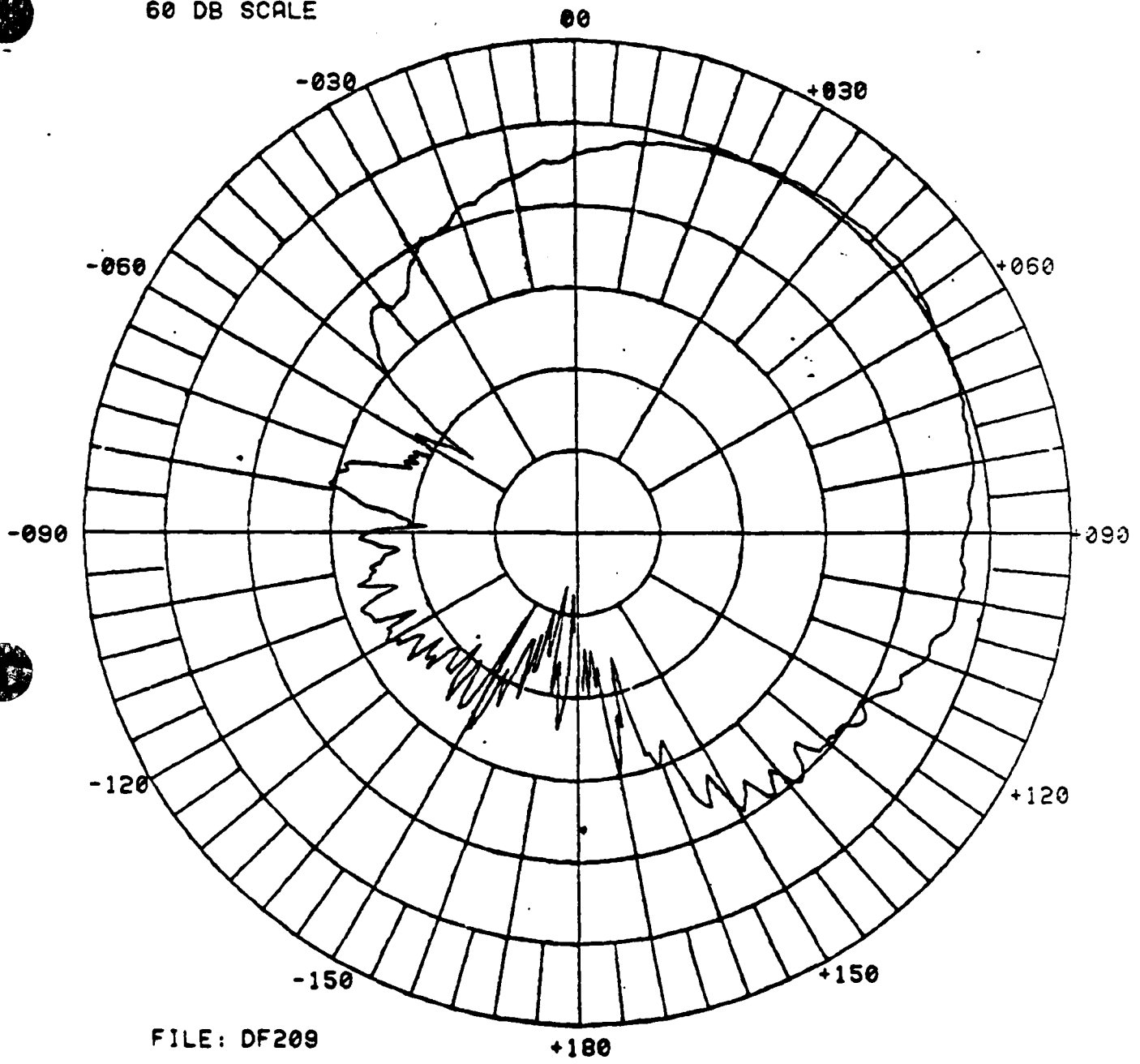
SCAN NR: 1 STEP ANGLE: 0.00 PLOT_____ AA

FREQ NR: 3 FREQ(MHZ): F3

CONFIGURATION 3

2 JUN 1984

60 DB SCALE



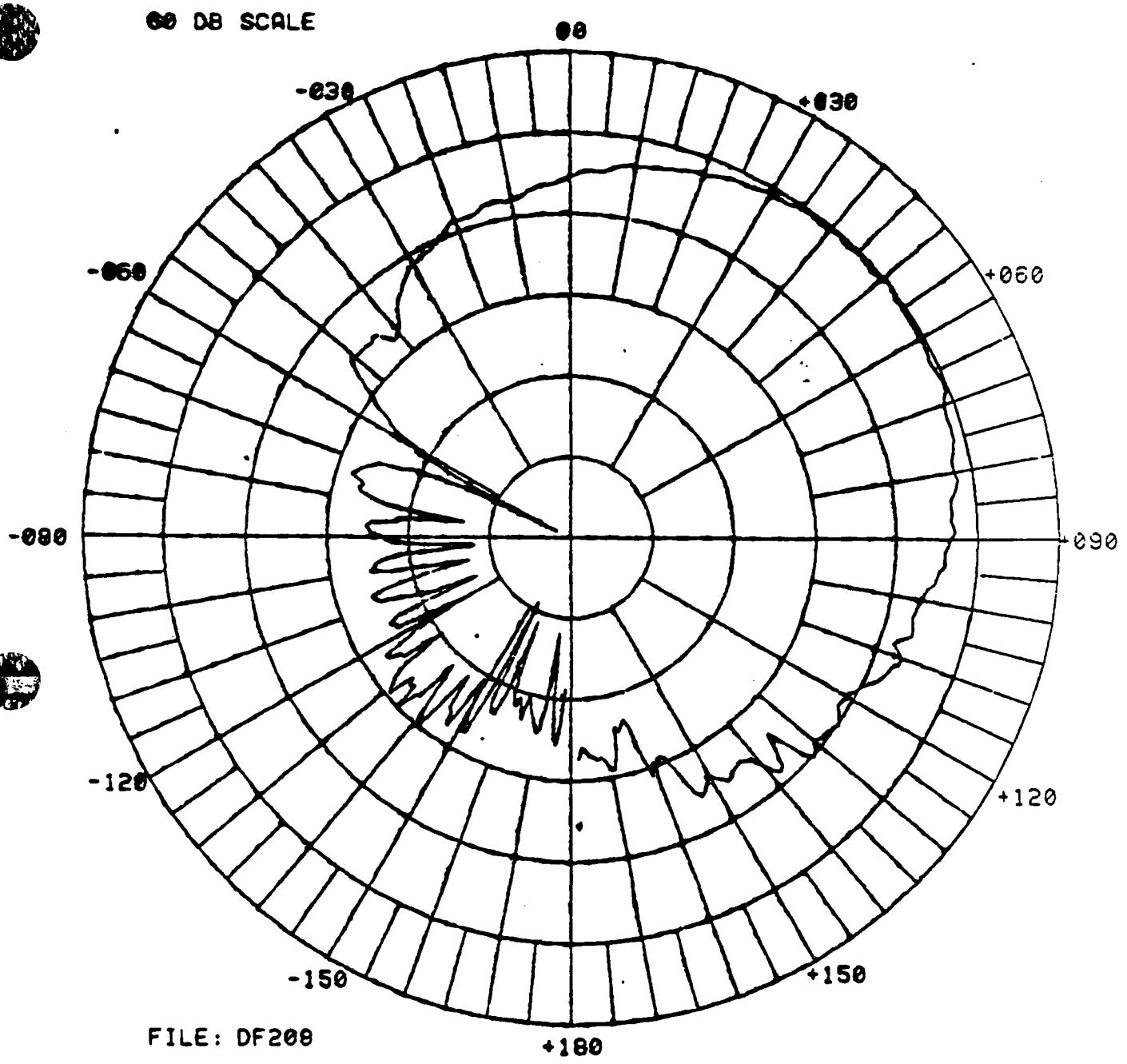
FILE: DF209

SCAN NR: 2 STEP ANGLE: 10.00 PLOT_____ AA

FREQ NR: 3 FREQ(MHZ): F5

CONFIGURATION 3

2 JUN 1984



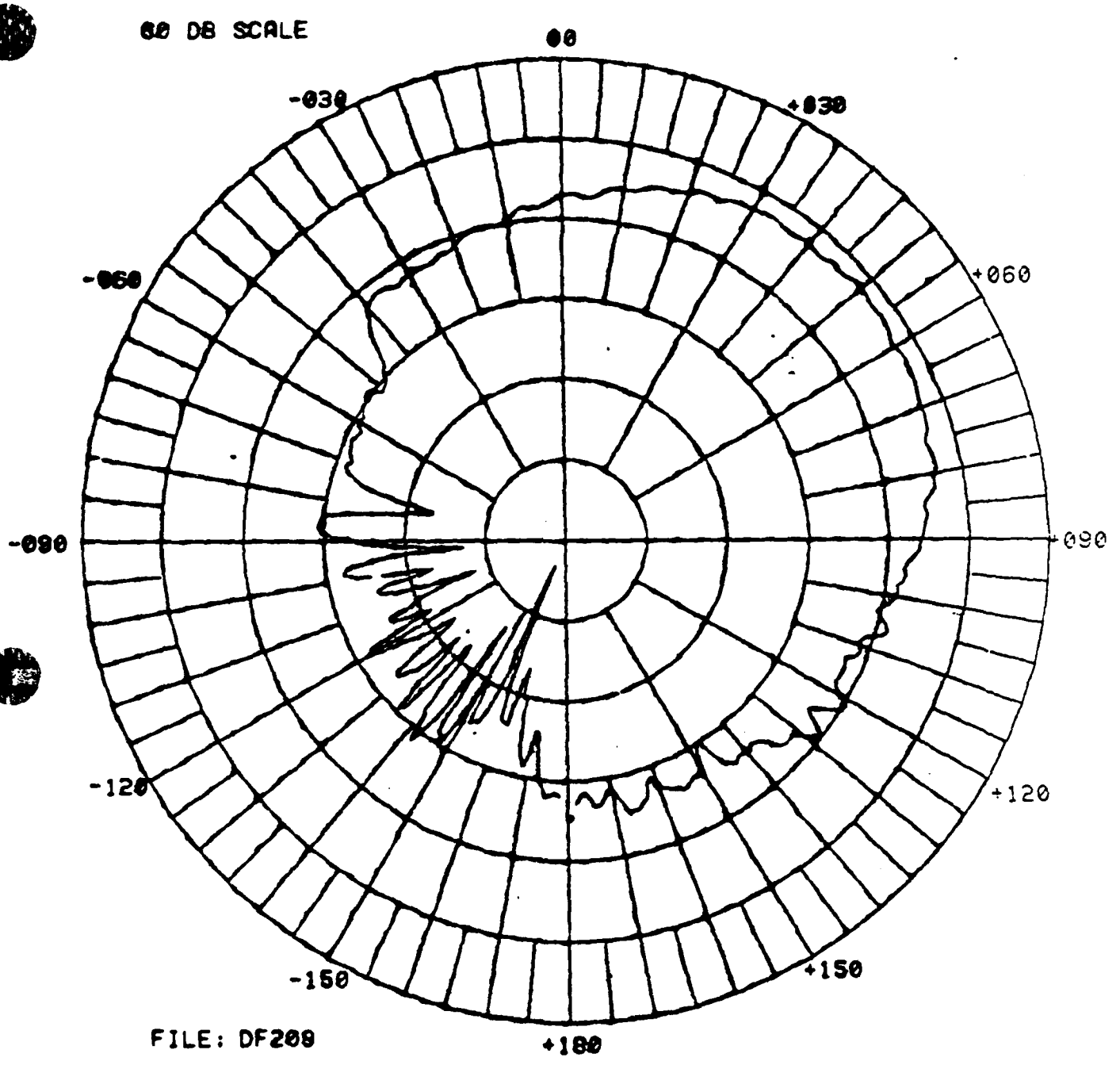
FILE: DF208

SCAN NR: 3 STEP ANGLE: 20.00 PLOT_____ AA

FREQ NR: 3 FREQ(MHZ): F3

CONFIGURATION 3

2 JUN 1984



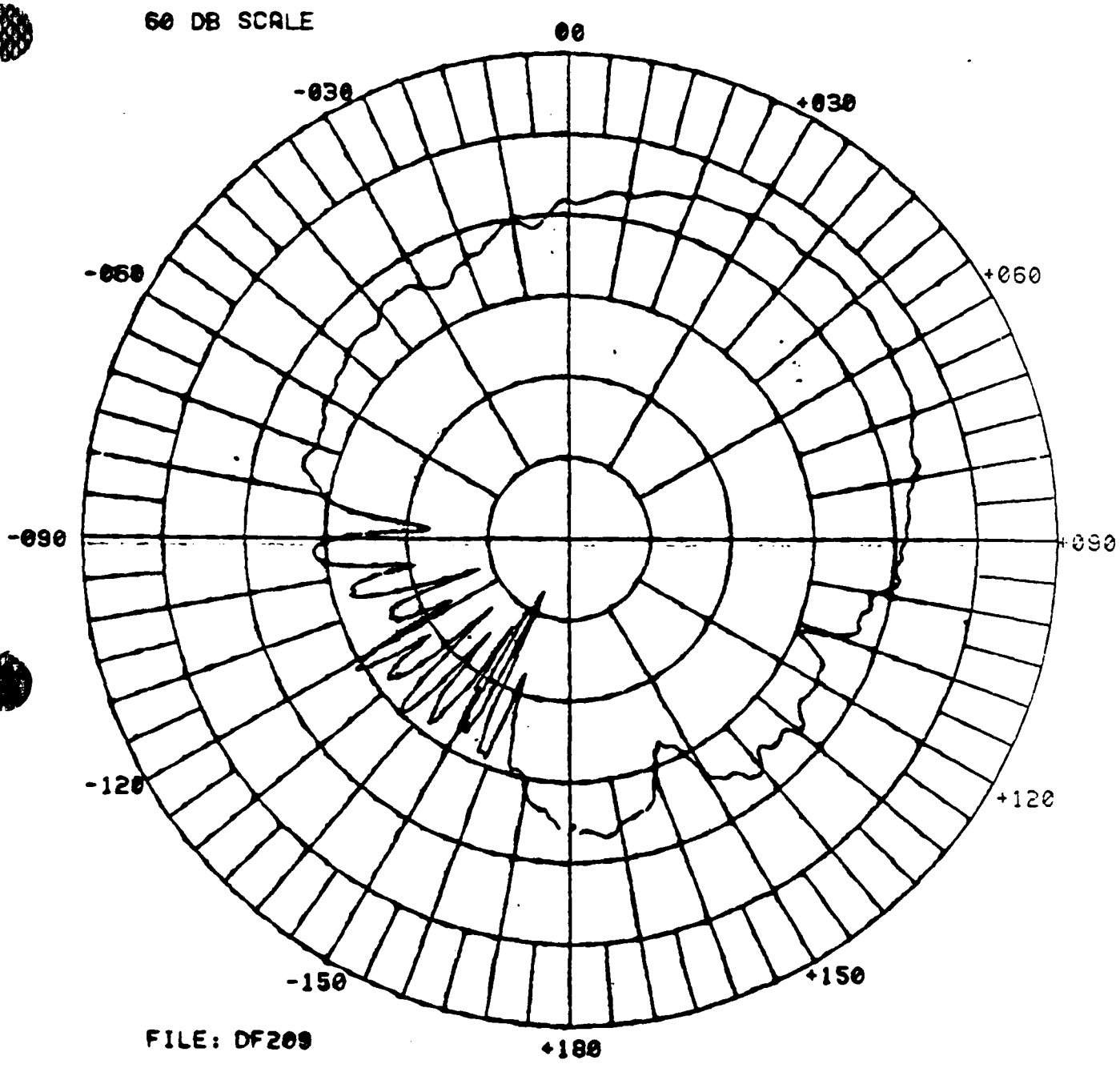
FILE: DF209

SCAN NR: 4 STEP ANGLE: 30.00 PLOT____ AA

FREQ NR: 3 FREQ(MHZ): F3

CONFIGURATION 3

2 JUN 1984



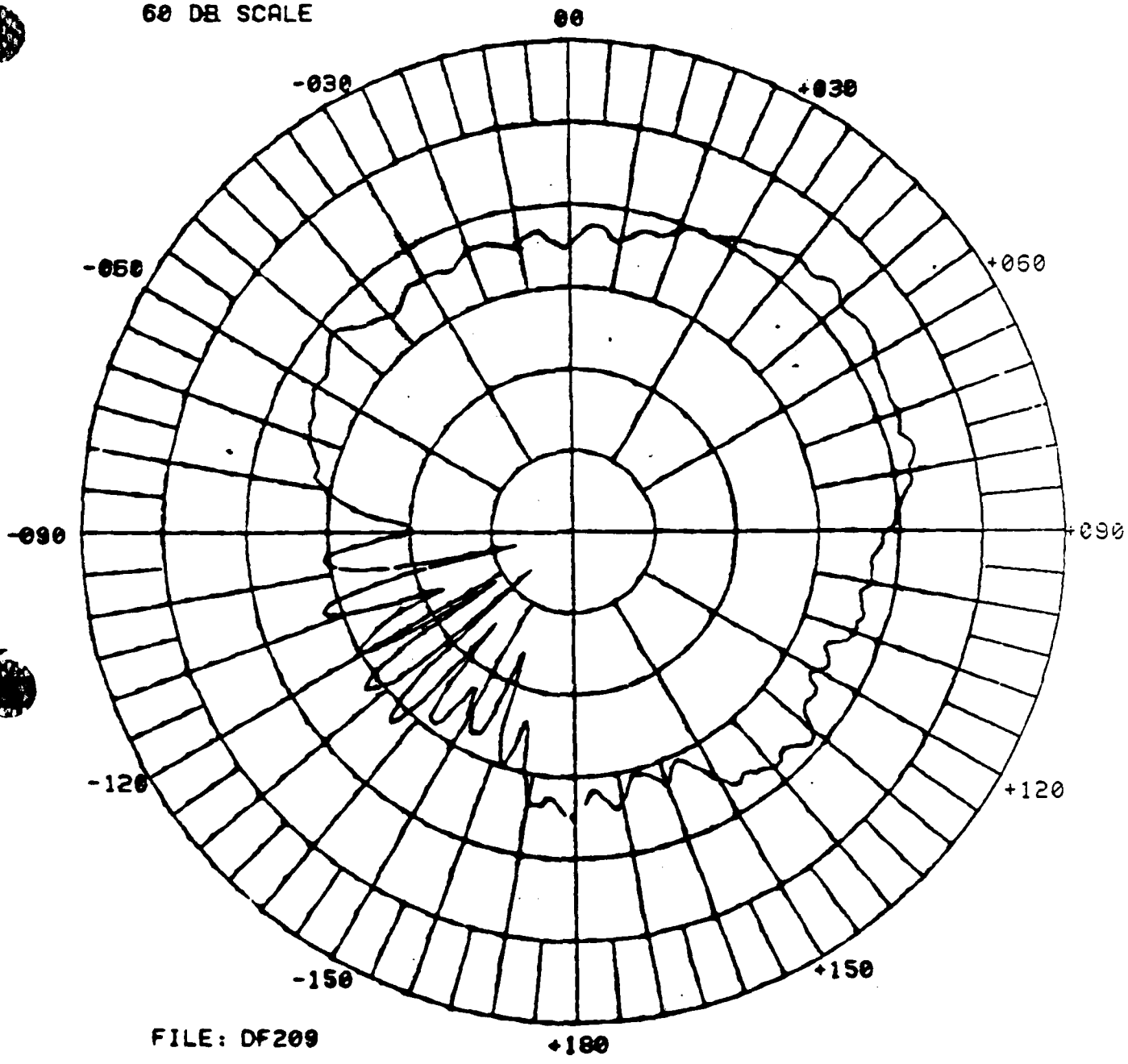
FILE: DF209

SCAN NR: 5 STEP ANGLE: 40.00 PLOT_____ AA

FREQ NR: 3 FREQ(MHZ): F3

CONFIGURATION 3

2 JUN 1984



FILE: DF209

SCAN NR: 6 STEP ANGLE: 50.00 PLOT_____ AA

FREQ NR: 3 FREQ(MHZ): F3

CONFIGURATION 3

2 JUN 1984

END

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