Our 3.6-meter offset feed design enables this antenna to meet stringent ITU and FCC transmit requirements at C- and Ku-band.

- Compliant with FCC, INTELSAT, EUTELSAT, ITU and more
- CE compliant
- High-efficiency, cost-effective offset feed optics
- Use with C-band, Extended C-band, or Ku-band systems (custom frequency bands available)
- Add our 8860/8861A/8862 Antenna Controller with patented AdaptTrack for accurate tracking
- Minimal satellite repointing time with high-speed motorized option
- Three-piece stretch-formed aluminum reflector minimizes your shipping, installation, and maintenance costs
- No panel alignment required

CE

Model 8136 3.6 Meter Earth Station Antenna

Model 8136 is a 3.6-meter earth station antenna that is ideally suited for high-performance video, voice, and data communications, or thin-route telephony. The offset feed design maximizes efficiency and antenna pattern performance at both C- and Ku-band frequencies. A hot dipped galvanized mount is an elevation-over-azimuth pedestal, providing a full 360° of azimuth coverage and 90° of continuous elevation movement. The three-piece all-aluminum reflector makes shipment and installation easy.

Options

- Embedded pipe mounts
- De-icing for reflector and feed
- Lightning protection

SPECIFICATIONS

ELECTRICAL

	C-band	Ku-band
Operating Frequency (GHz):		
Transmit	5.850 – 6.425	14.0 – 14.5
Receive	3.625 – 4.2	10.95 –12.75
Gain (Midband, Ref. Feed Horn):		
Transmit	45.9 dBi[3]	52.3 dBi[4]
Receive	41.8 dBi[1]	50.8 dBi[2]
Feed Insertion Loss (dB):		
DP – 2-Port RX/RX Linear:		
Receive	0.10 dB	0.12 dB
RT – 2-Port RX/TX Linear:		
Transmit	0.10 dB	0.30 dB
Receive	0.15 dB	0.45 dB
VSWR:		
TX	1.3:1	1.3:1
RX	1.3:1	1.3:1
Beamwidth (-3 dB):		
Transmit	0.90°	0.44°
Receive	1.35°	0.48°
First Sidelobe Level:		
	18.0 dB	18.0 dB

Radiation Pattern:

C- and Ku-band: Meets standards set by FCC, INTELSAT, EUTELSAT, ITU and others.

Antenna Noise Temp (Typical, Ref. Feed Horn):

Elevation	C-band	Ku-band
10°	24 K	31 K
20°	16 K	23 K
30°	15 K	21 K
40°	14 K	20 K

Power Handling Per TX Port:		
	5 kW (CW)	2 kW (CW)
Cross Pol Isolation (on axis, min.) (Linear):		
Transmit	35 dB	35 dB
Receive	35 dB	35 dB
Feed Port Isolation (4-Port Linear):		
TX/RX	85 dB	85 dB

MECHANICAL

Antenna Diameter: 3.6 meters (11.8 ft)

Antenna Type: offset feed

Reflector Construction: 3 panels, precision stretch-formed aluminum

Mount Type: pipe, elevation-over-azimuth

Antenna Travel:

Elevation: 0° to 90° continuous[5]

Azimuth: Manual 360° ±4° Vernier

Motorized 360° in 125° sectors

Polarization Adjustment:

Manual: ±90°

Motorized: ±90°

Antenna Travel Rate (Motorized):

Various — consult factory

Feed Interface:

Transmit C-band:	CPR-137G
Transmit Ku-band:	WR-75
Receive C-band:	CPR-229G
Receive Ku-band:	WR-75

Weight C-band:

Net: 454 kg (1,000 lbs)

Ship: 589 kg (1,300 lbs)

Shipping Volume: 15.6 cubic meters (550 cubic feet)

ENVIRONMENTAL

Wind Loading:

Operational: 72 kph (45 mph)

Survival: 201 kph (125 mph)

Temperature Range:

Operational: -40° C to +65° C (-40° F to +150° F)

Atmospheric Conditions:

Salt, pollutants and corrosive contaminants as found in coastal and industrial areas

NOTES:

[1] Referenced at 3.95 GHz
[2] Referenced at 11.95 GHz
[3] Referenced at 6.175 GHz
[4] Referenced at 14.25 GHz
[5] Minimum elevation angle is 5° with the hot air de-icing option installed

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722640-5001

Scientific Atlanta
Network Systems Group

MEMORANDUM

DATE: MAY 3, 1993

TO: STU KRAVITZ NAT. SALES MGR. BROADCAST SYSTEMS ATL 31-K

FROM: RICK BARKER ANTENNA ENGINEERING

SUBJECT: ANTENNAS DESIGNED FOR FCC 2 DEGREE COMPLIANCE

THE FOLLOWING LIST OF SCIENTIFIC ATLANTA ANTENNA MODELS HAVE BEEN DESIGNED AND TESTED TO MEET THE MANDATORY REQUIREMENTS FOR 2 DEGREE SPACING. IN ORDER TO INCLUDE SOME ANTENNAS WHICH HAVE BEEN MADE COMPLIANT BY RETROFITTING FEED AND SUBREFLECTOR SYSTEMS, THE FEED MODEL NUMBER IS USED FOR IDENTIFICATION.

PURSUANT TO SECTION 25.132 OF THE COMMISSIONS RULES AND REGULATIONS, THIS DOCUMENT IS TO BE USED AS CERTIFICATION THAT THESE ANTENNAS HAVE BEEN TESTED ON A CALIBRATED TEST RANGE AND ARE IN COMPLIANCE WITH THE PERFORMANCE STANDARDS SET FORTH IN SECTION 25.209. THESE DATA HAVE BEEN RECORDED AND SUBMITTED TO THE COMMISSION. COPIES ARE ALSO FILED AT THE MANUFACTURERS FACILITY AND ARE AVAILABLE ON REQUEST.

SIZE	ANTENNA MODEL/SERIES	FEED MODEL
3.6 METER (OFFSET)	8136	ALL MODELS
4.5 METER	8345	ALL PRIME FOCUS ANTENNAS
6 METER	8060	ALL MODELS
7 METER	8010 K	ALL MODELS
7 METER	8010 C	ALL MODELS
10 METER	8015	8223
11 METER	8016	8224
16 METER	8116	ALL MODELS
18 METER	8118	ALL MODELS

Model 8136
3.6-Meter Satellite Earth Station Antenna

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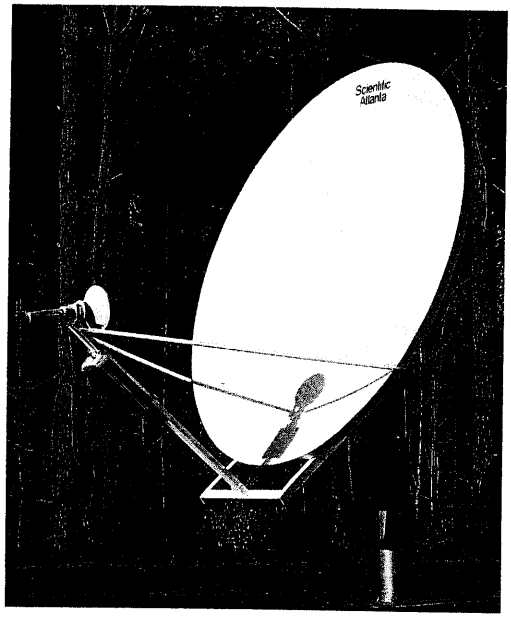

P0295

Scientific-Atlanta's Model 8136 3.6-Meter Antenna is a state-of-the-art, high-efficiency antenna designed specifically for transmit/receive applications. It is ideally suited for thin-route telephony. The offset feed design enables it to meet the stringent CCIR and FCC transmit requirements at C- and Ku-band.

DESCRIPTION

The Scientific-Atlanta Model 8136 is designed for a variety of voice, data, and video applications. Its cost-effective, high-efficiency design allows the Model 8136 to meet the stringent transmission standards in both C- and Ku-band frequencies.

The all-aluminum reflector is built in three pieces for ease of shipment and installation.

The 3.6-meter antenna is an offset fed antenna specifically designed for maximum efficiency and low side-lobes.

The mount is an elevation-over-azimuth pedestal and is made of hot dipped galvanized steel for superior corrosion protection. The manual azimuth coverage is a full 360 degrees with a Vernier adjustment of ±4 degrees. Optional motor drive coverage is 360 degrees in over-lapping 125-degree sectors. The elevation travel, both manual and motorized, is from 0 to 90 degrees.

OPTIONS

- Full Antenna De-icing
- Lightning Protection
- Motorized Drives
- Linear C-band and Ku-band Feeds

FEATURES

- Offset feed optics for low sidelobes in both C- and Ku-band
- Three piece, precision stretch-formed aluminum reflector
- Installation time of 5 hours
- Meets FCC, INTELSAT, and CCIR recommendations
- Designed for 125 mi/h (201 km/h) wind loading
- Designed for minimum installation costs
- Full line of standard feed options
- Full azimuth and elevation coverage
- Pipe mount
- Cost effective antenna control system; 8860/8861/8862 with AdapTrack
- Optional de-icing and lightning protection

Scientific-Atlanta
770-903-6001

Model 8136
3.6-Meter Satellite Earth Station Antenna

SPECIFICATIONS

Electrical

	C-Band	Ku-Band
Operating Frequency (GHz):		
Transmit	5.850 to 6.425	14.0 to 14.5
Receive	3.625 to 4.200	10.95 to 12.75
Gain (Midband, Ref Feed Horn):		
Transmit	45.9 dBi[3]	52.3 dBi[4]
Receive	41.8 dBi[1]	50.8 dBi[2]
Feed Insertion Loss (dB)		
DP - 2-Port RX/RX Linear:		
Receive	.10	.12[2]
RT - 2-Port RX/TX Linear:		
Transmit	.10[3]	.30
Receive	.15	.45
VSWR:		
Transmit/Receive	1.3:1	1.3:1
Beamwidth (-3 dB):		
Transmit	.90°	.44°
Receive	1.35°	.48°
First Sidelobe Level	-18 dB	-18 dB

Radiation Pattern (C-Band and Ku-Band):
Meets current FCC, INTELSAT, and CCIR specifications

Antenna Noise Temperature (Typical, Ref. Feed Horn):

Elevation	C-Band	Ku-Band
10°	24 K	31 K
20°	16 K	23 K
30°	15 K	21 K
40°	14 K	20 K

Power Handling Capability	5 kW (CW)	2 kW (CW)
Cross Polarization Isolation (on axis, linear pol. min.):		
Transmit/Receive	35 dB	35 dB
Feed Port Isolation (Linear):		
TX/RX	85 dB	85 dB

Mechanical

Antenna Diameter: 3.6 meters (11.8 ft)
Antenna Type: Offset feed
Reflector Construction: Aluminum, 3 stretch-formed panels
Mount Type: Pipe, elevation-over-azimuth
Antenna Travel:
Elevation: 0° to 90° manual and motorized
Azimuth: 360° ±4° Vernier manual, 360° in 125° sectors motorized
Polarization Adjustment:
Manual/Motorized: ±90°
Antenna Travel Rate (Motorized): Various - Consult Factory

	C-Band	Ku-Band
Feed Interface:		
Transmit:	CPR-137G	WR-75
Receive:	CPR-229G	WR-75

Weight:
Net: 1,000 lbs (454 kg)
Shipping: 1,300 lbs (589 kg)
Shipping Volume: 550 ft³ (15.6 m³)

Environmental

Wind Loading:
Operational: 45 mi/h (72 km/h) gusting to 65 mi/h (105 km/h)
Survival: 125 mi/h (201 km/h)
Temperature Range:
Operational/Survival: -40°F to +140°F, (-40°C to +60°C)
Atmospheric Conditions: Salt, pollutants and corrosive contaminants as found in coastal and industrial areas

Note: [1] Referenced at 3.95 GHz
[2] Referenced at 11.95 GHz
[3] Referenced at 6.175 GHz
[4] Referenced at 14.25 GHz

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Scientific Atlanta

ViaSat Model 8136 3.6 Meter Antenna

Pattern Log Co-Pol +/- 9 Degree

File	Frequency	Polarization	Ang. Scale	Pattern Cut	
1	5.85	E	9	Elevation	Symmetrical
2	5.85	H	9	Elevation	Symmetrical
3	6.175	E	9	Elevation	Symmetrical
4	6.175	H	9	Elevation	Symmetrical
5	6.425	E	9	Elevation	Symmetrical
6	6.425	H	9	Elevation	Symmetrical
7	5.85	E	9	Azimuth	Asymmetrical
8	5.85	H	9	Azimuth	Asymmetrical
9	6.175	E	9	Azimuth	Asymmetrical
10	6.175	H	9	Azimuth	Asymmetrical
11	6.425	E	9	Azimuth	Asymmetrical
12	6.425	H	9	Azimuth	Asymmetrical
13	3.625	E	9	Elevation	Symmetrical
14	3.625	H	9	Elevation	Symmetrical
15	3.95	E	9	Elevation	Symmetrical
16	3.95	H	9	Elevation	Symmetrical
17	4.2	E	9	Elevation	Symmetrical
18	4.2	H	9	Elevation	Symmetrical
19	3.625	E	9	Azimuth	Asymmetrical
20	3.625	H	9	Azimuth	Asymmetrical
21	3.95	E	9	Azimuth	Asymmetrical
22	3.95	H	9	Azimuth	Asymmetrical
23	4.2	E	9	Azimuth	Asymmetrical
24	4.2	H	9	Azimuth	Asymmetrical

ViaSat Model 8136 3.6 Meter Antenna

Pattern Log Co-Pol +/- 45 Degree

File	Frequency	Polarization	Ang. Scale	Pattern Cut	
25	5.85	E	45	Elevation	Symmetrical
26	5.85	H	45	Elevation	Symmetrical
27	6.175	E	45	Elevation	Symmetrical
28	6.175	H	45	Elevation	Symmetrical
29	6.425	E	45	Elevation	Symmetrical
30	6.425	H	45	Elevation	Symmetrical
31	5.85	E	45	Azimuth	Asymmetrical
32	5.85	H	45	Azimuth	Asymmetrical
33	6.175	E	45	Azimuth	Asymmetrical
34	6.175	H	45	Azimuth	Asymmetrical
35	6.425	E	45	Azimuth	Asymmetrical
36	6.425	H	45	Azimuth	Asymmetrical
37	3.625	E	45	Elevation	Symmetrical
38	3.625	H	45	Elevation	Symmetrical
39	3.95	E	45	Elevation	Symmetrical
40	3.95	H	45	Elevation	Symmetrical
41	4.2	E	45	Elevation	Symmetrical
42	4.2	H	45	Elevation	Symmetrical
43	3.625	E	45	Azimuth	Asymmetrical
44	3.625	H	45	Azimuth	Asymmetrical
45	3.95	E	45	Azimuth	Asymmetrical
46	3.95	H	45	Azimuth	Asymmetrical
47	4.2	E	45	Azimuth	Asymmetrical
48	4.2	H	45	Azimuth	Asymmetrical

ViaSat Model 8136 3.6 Meter Antenna

Pattern Log Co-Pol +/- 180 Degree

File	Frequency	Polarization	Ang. Scale	Pattern Cut	
49	6.175	E	180	Elevation	Symmetrical
50	6.175	H	180	Elevation	Symmetrical
51	6.175	E	180	Azimuth	Asymmetrical
52	6.175	H	180	Azimuth	Asymmetrical
53	3.95	E	180	Elevation	Symmetrical
54	3.95	H	180	Elevation	Symmetrical
55	3.95	E	180	Azimuth	Asymmetrical
56	3.95	H	180	Azimuth	Asymmetrical

Pattern Log X-Pol +/- 9 Degree

File	Frequency	Polarization	Ang. Scale	Pattern Cut	
57	6.175	E	9	Elevation	Symmetrical
58	6.175	H	9	Elevation	Symmetrical
59	6.175	E	9	Azimuth	Asymmetrical
60	6.175	H	9	Azimuth	Asymmetrical
61	3.95	E	9	Elevation	Symmetrical
62	3.95	H	9	Elevation	Symmetrical
63	3.95	E	9	Azimuth	Asymmetrical
64	3.95	H	9	Azimuth	Asymmetrical

PROJECT 3.6m ENGR RB GB DATE 1-14-92

REMARKS 5.85GHz E-PLANE SYM.

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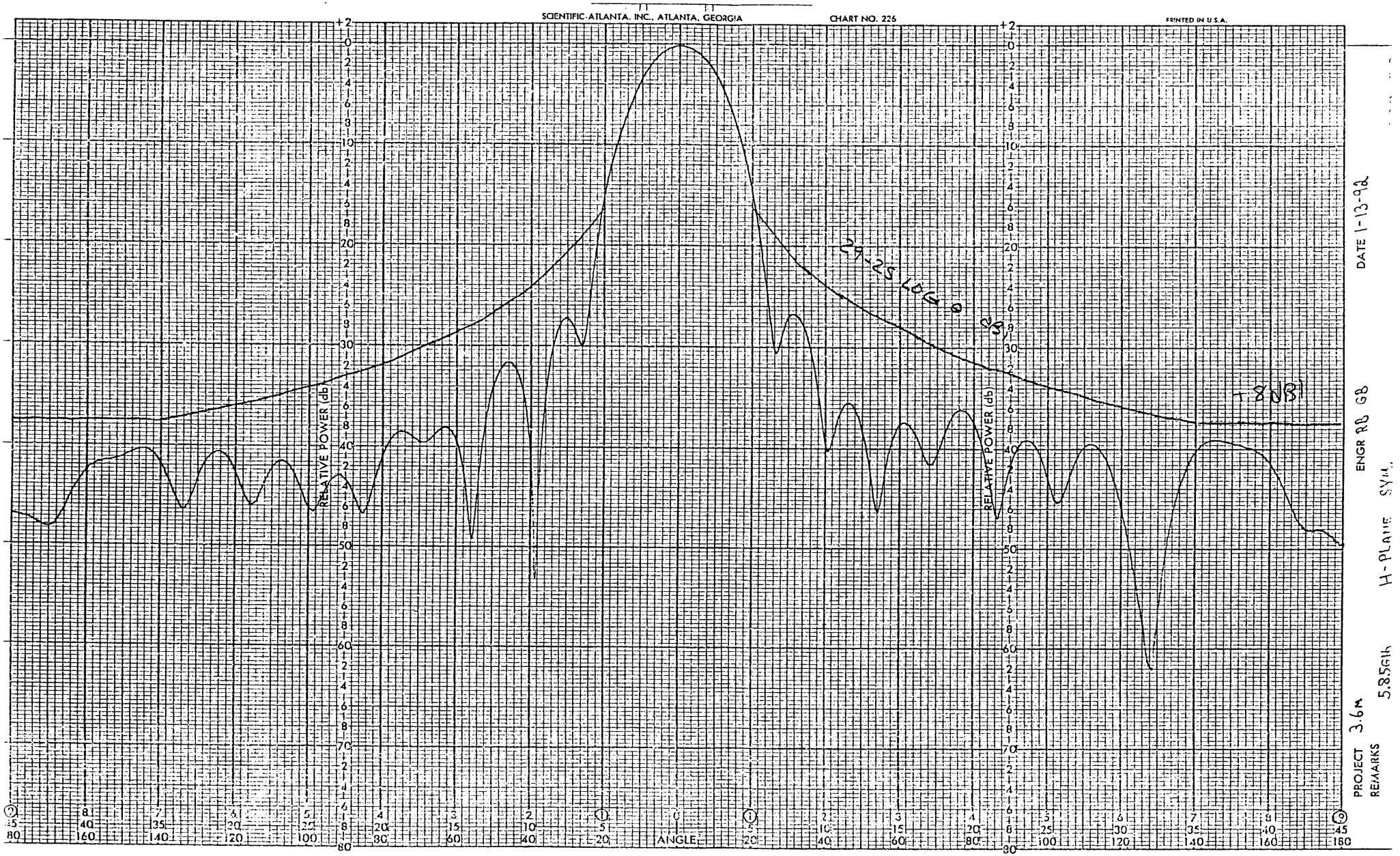
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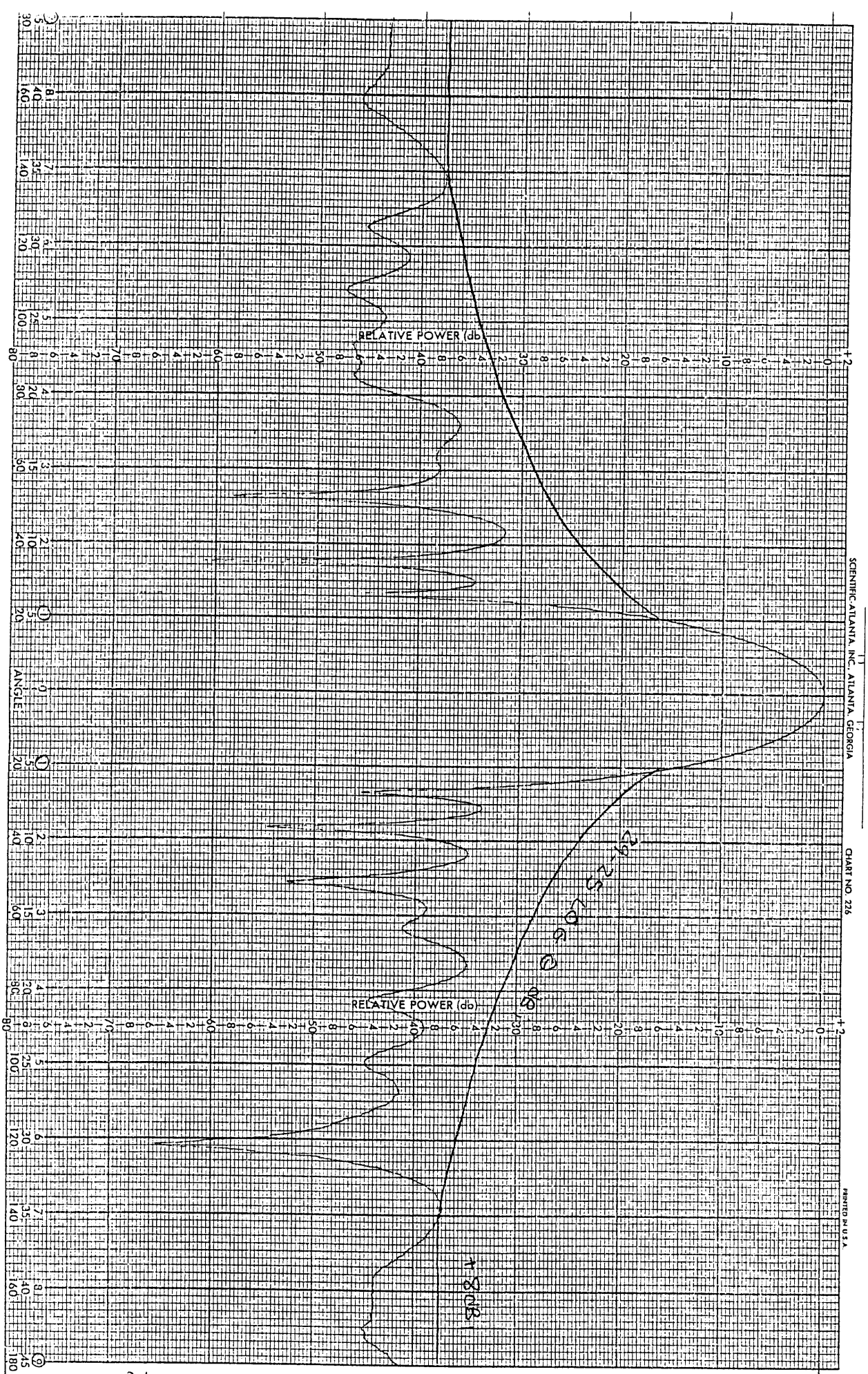

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REMARKS 6.175GHz E-PLANE SYM.

PROJECT 3.6M

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ENGR RB GB

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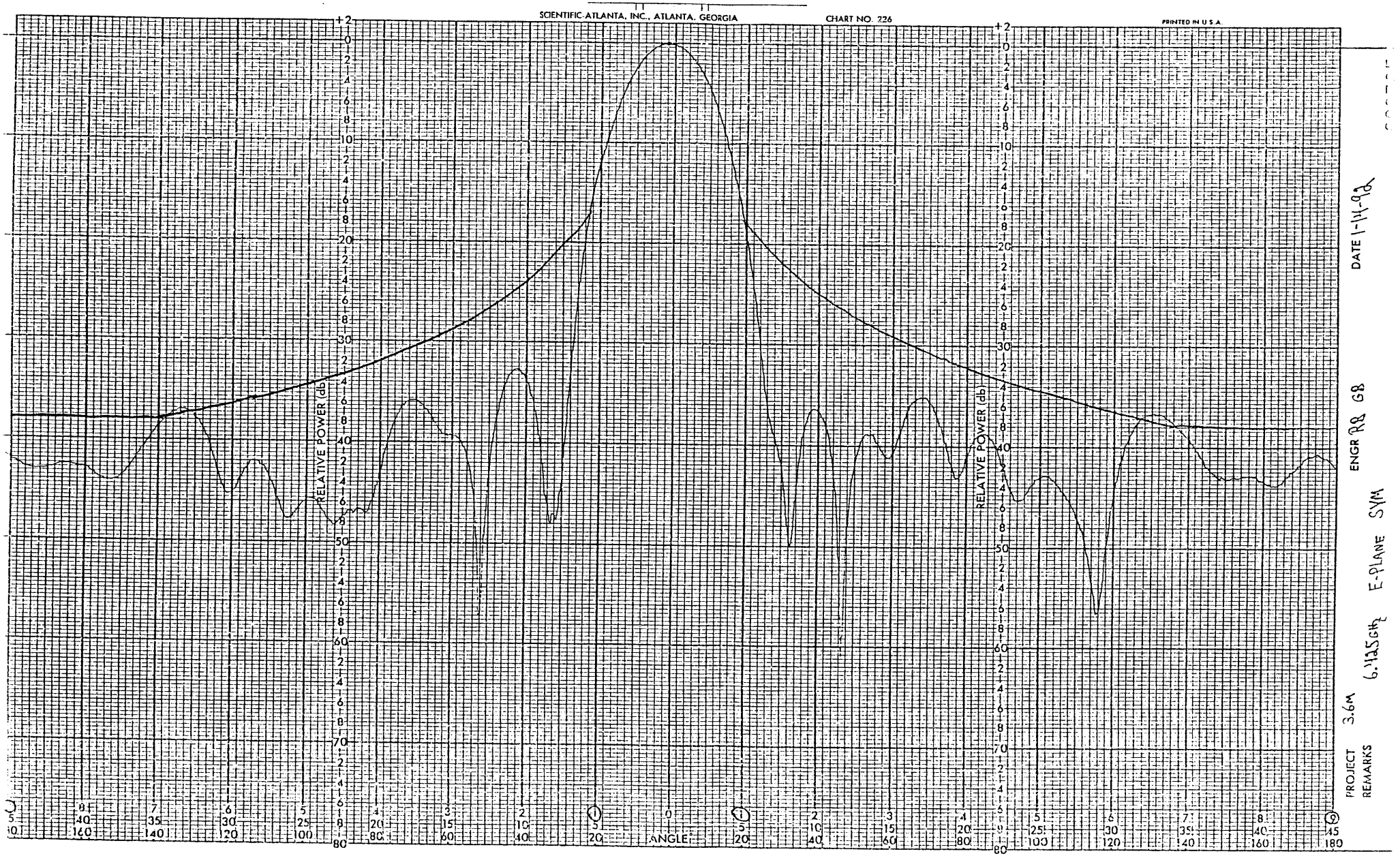
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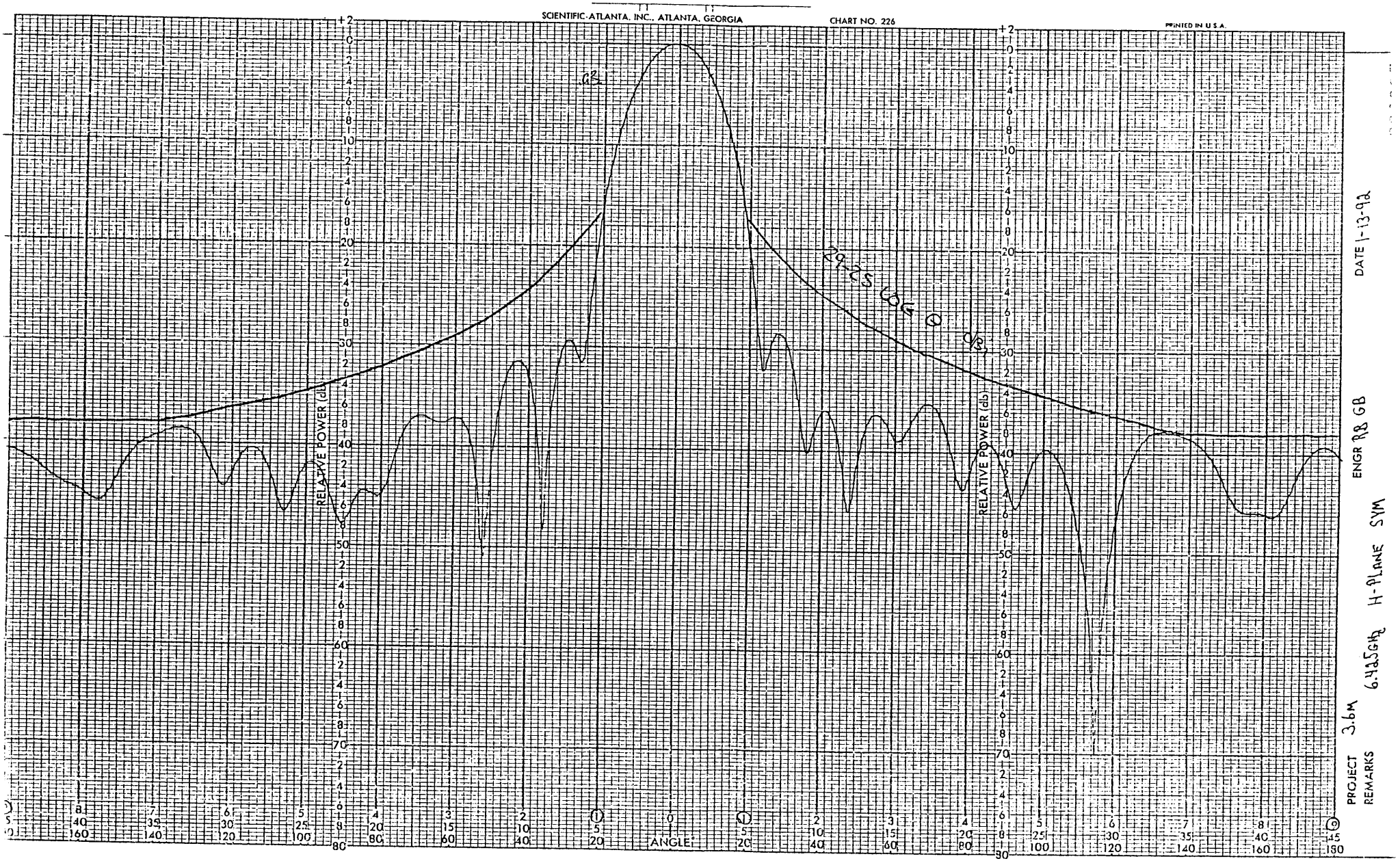
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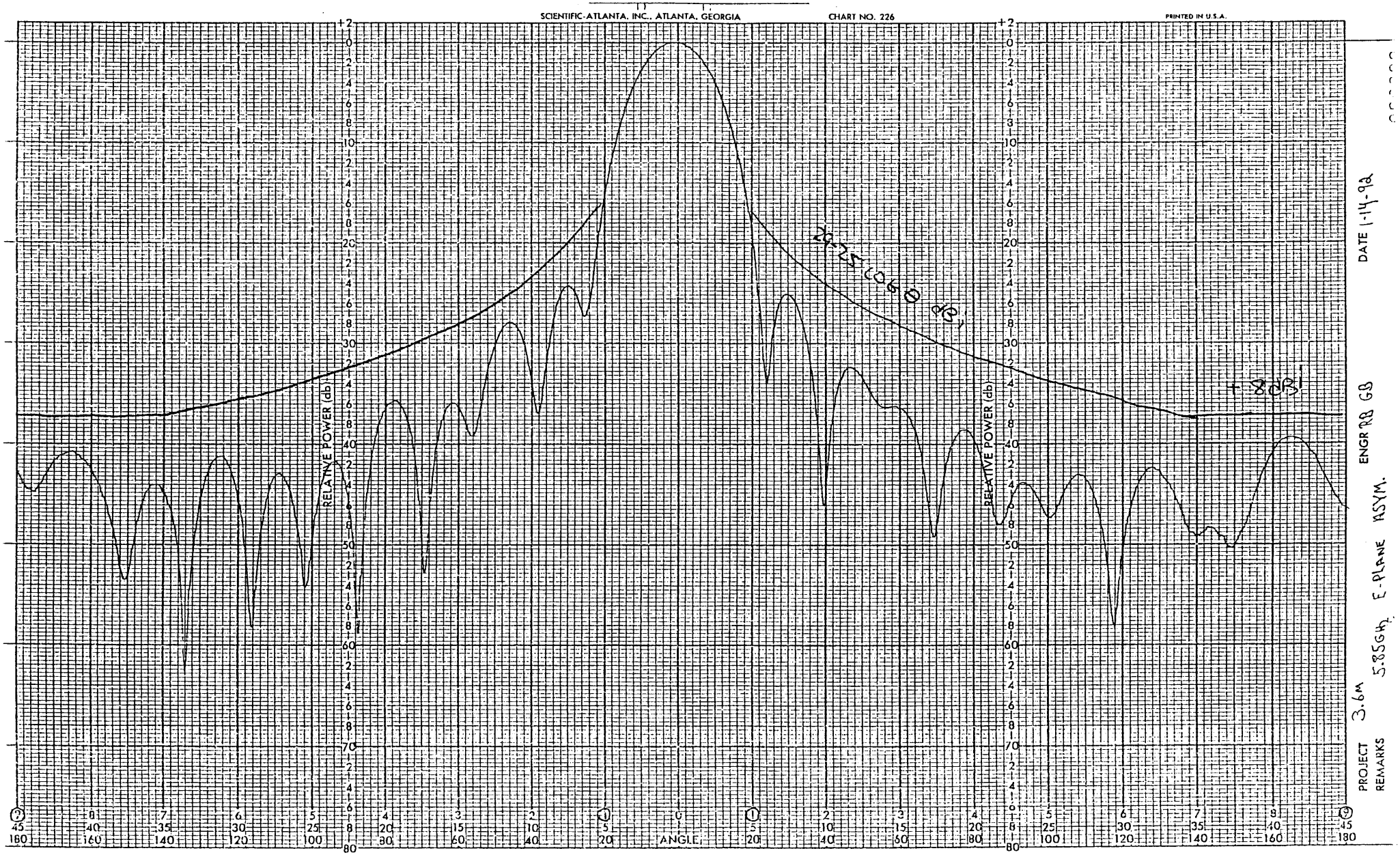
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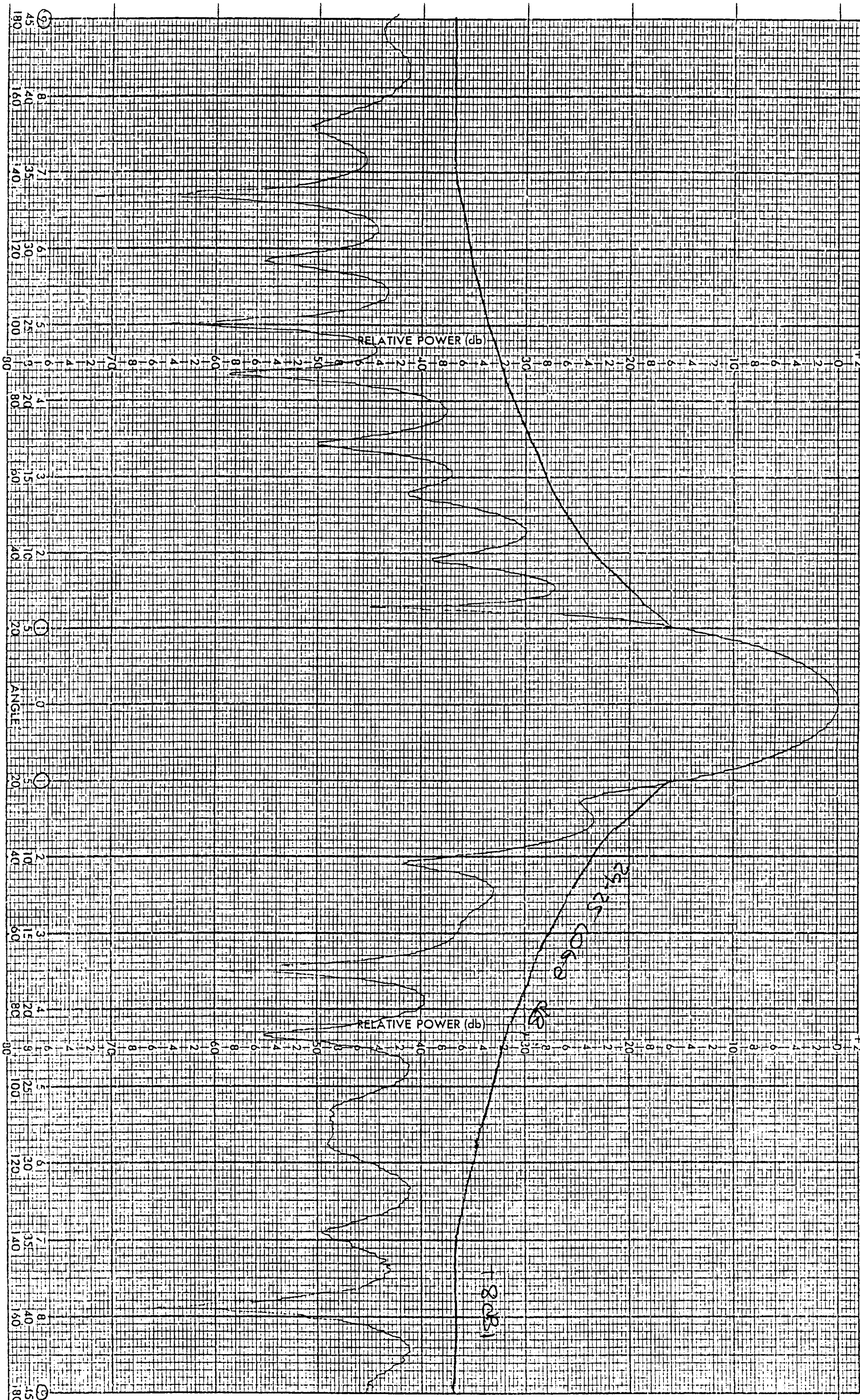

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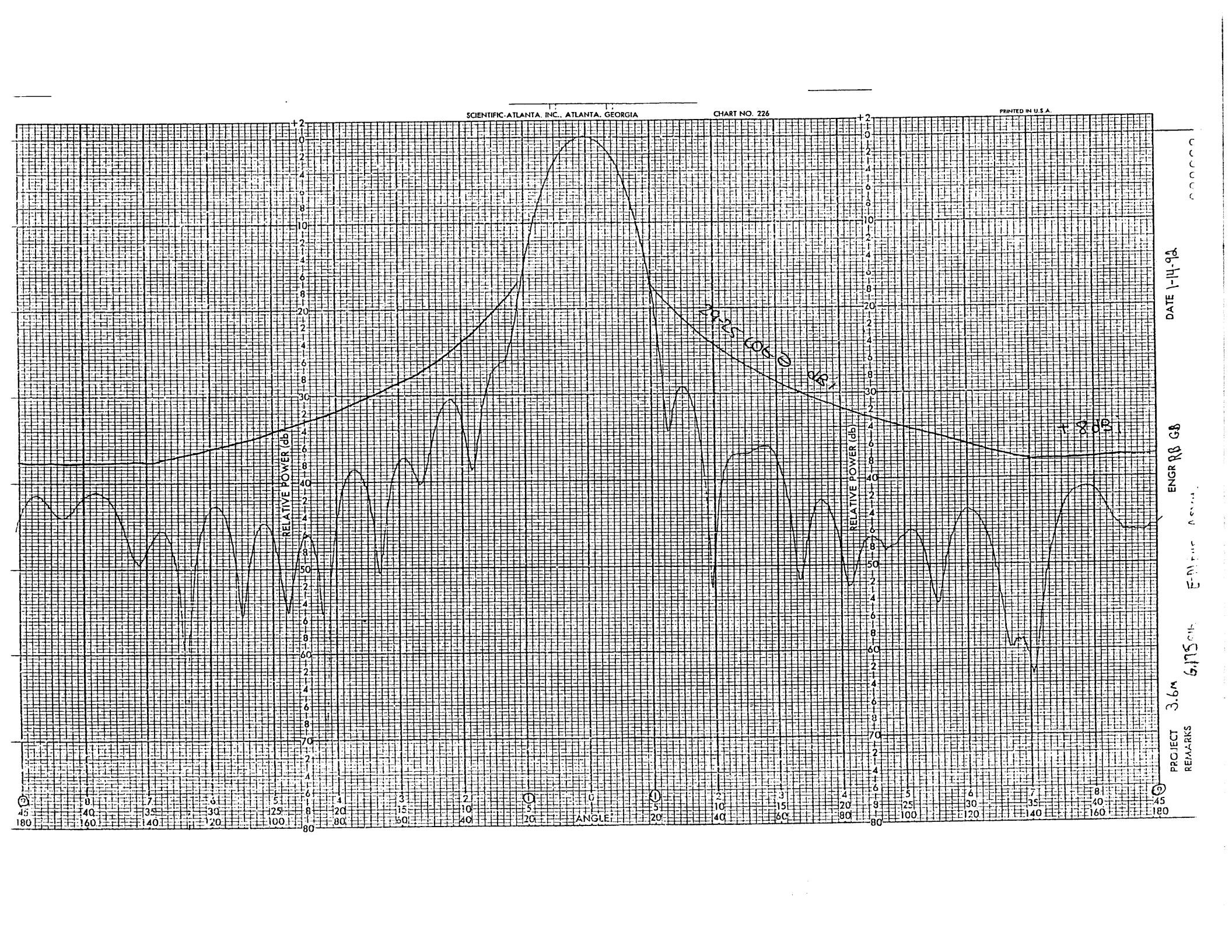
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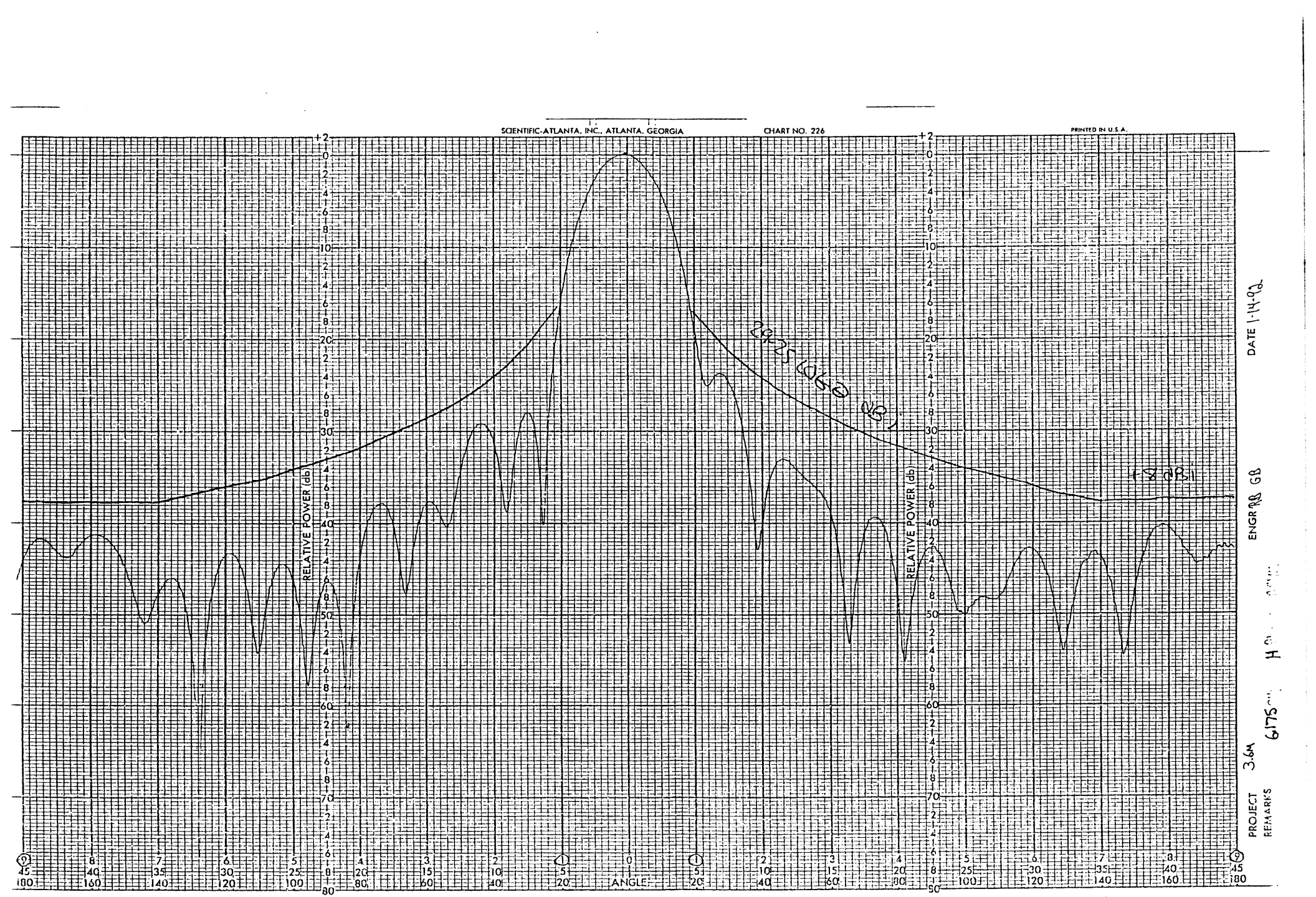
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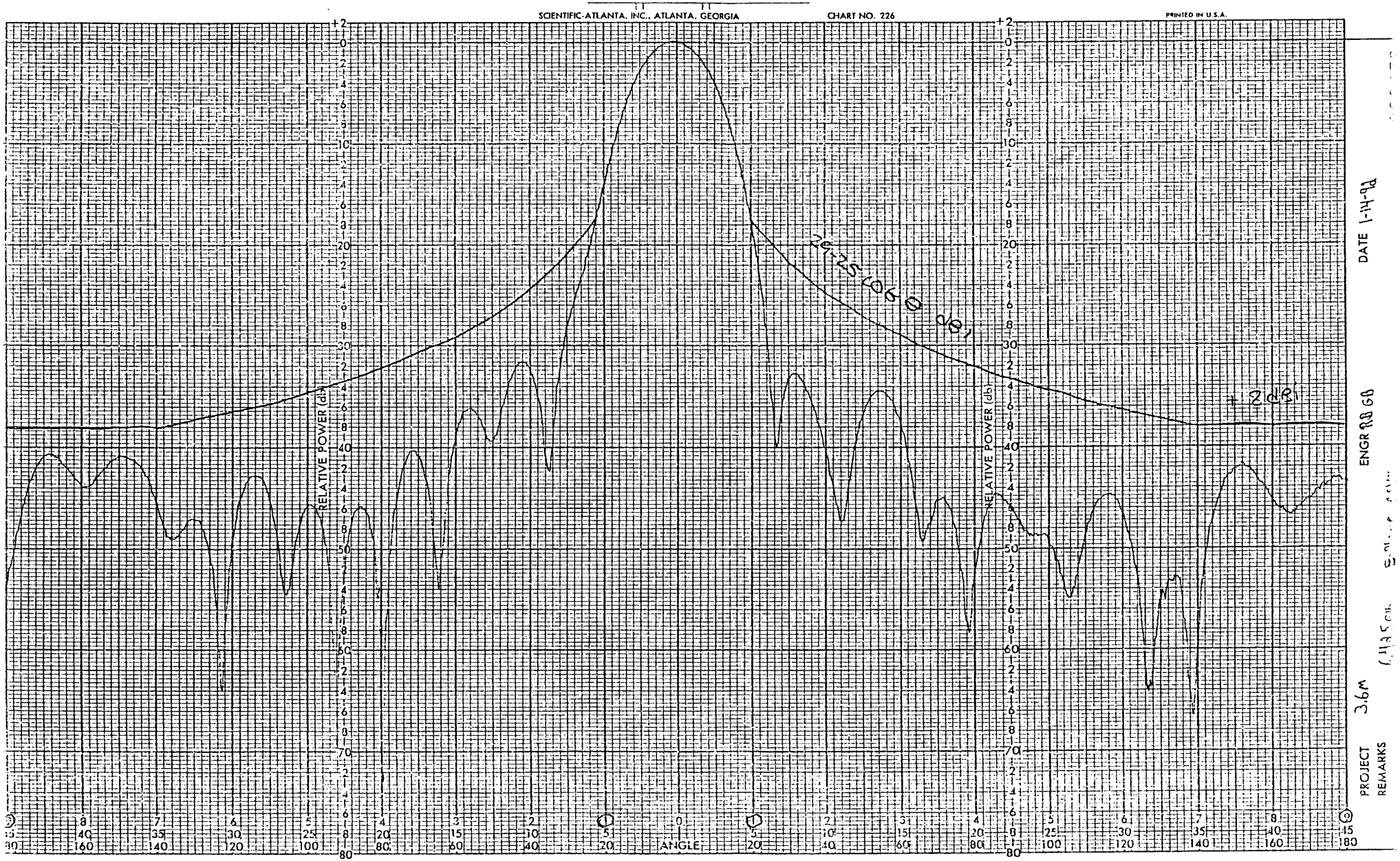
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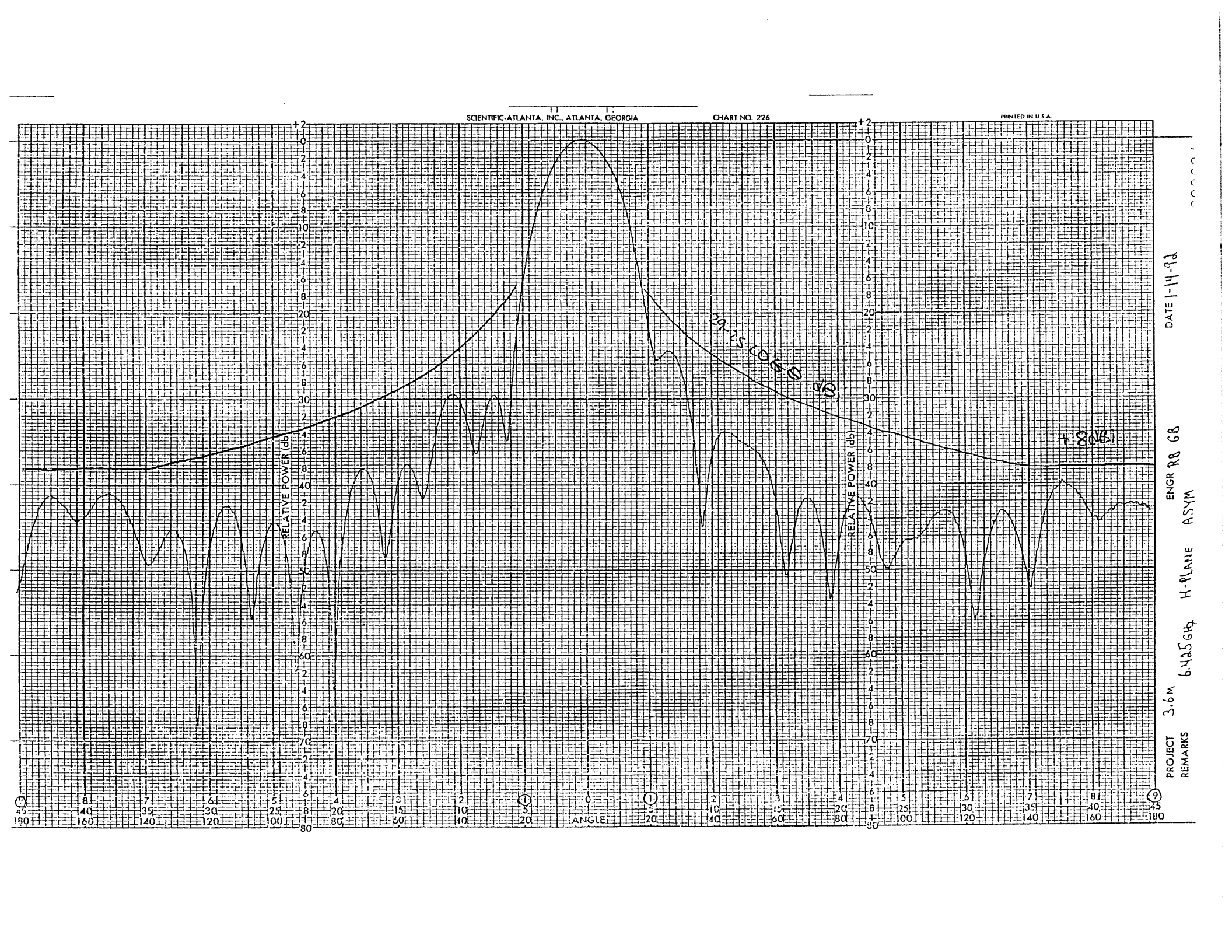
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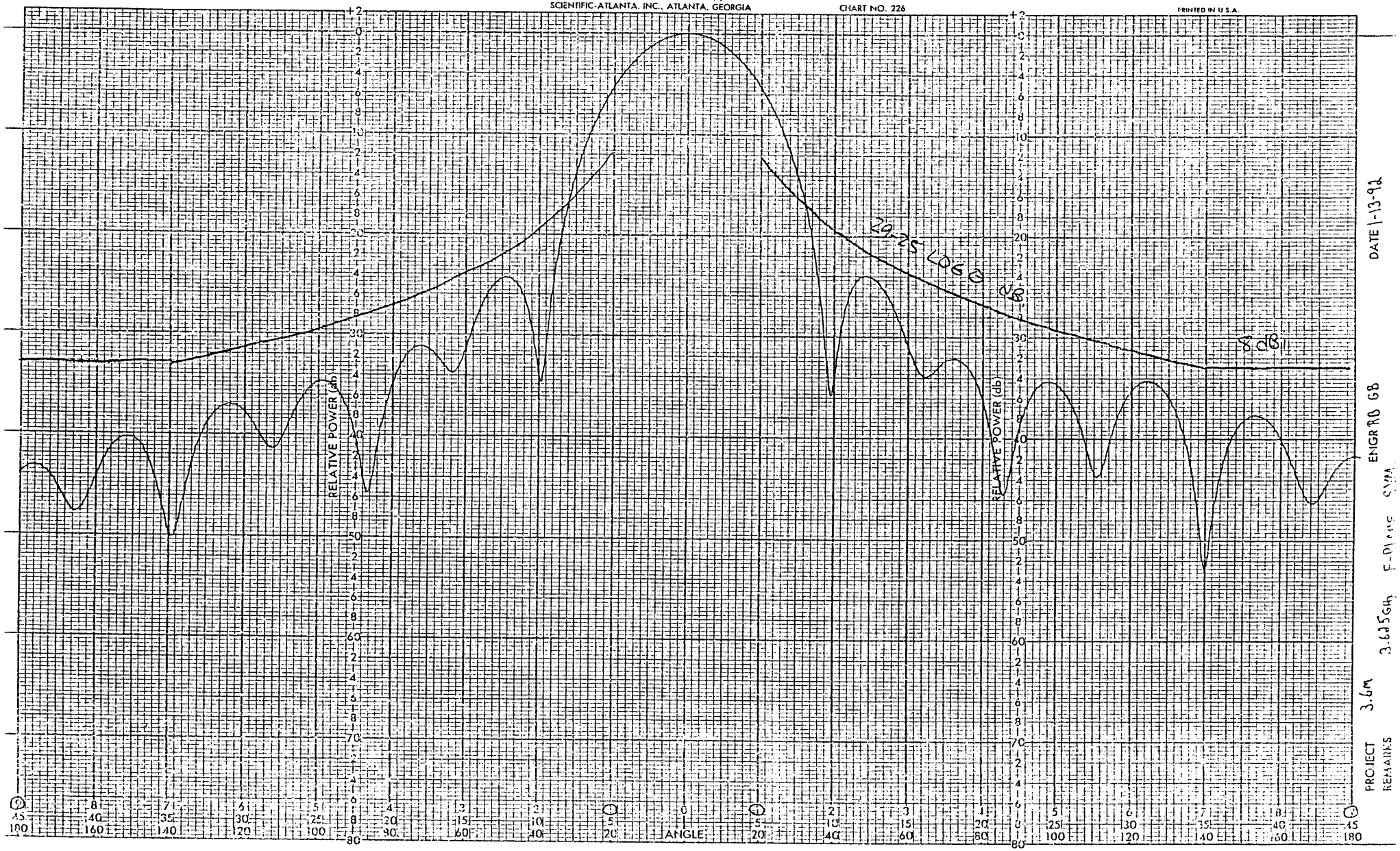
PROJECT 3.6m
REMARKS 6.425GHz H-PLANE ASYM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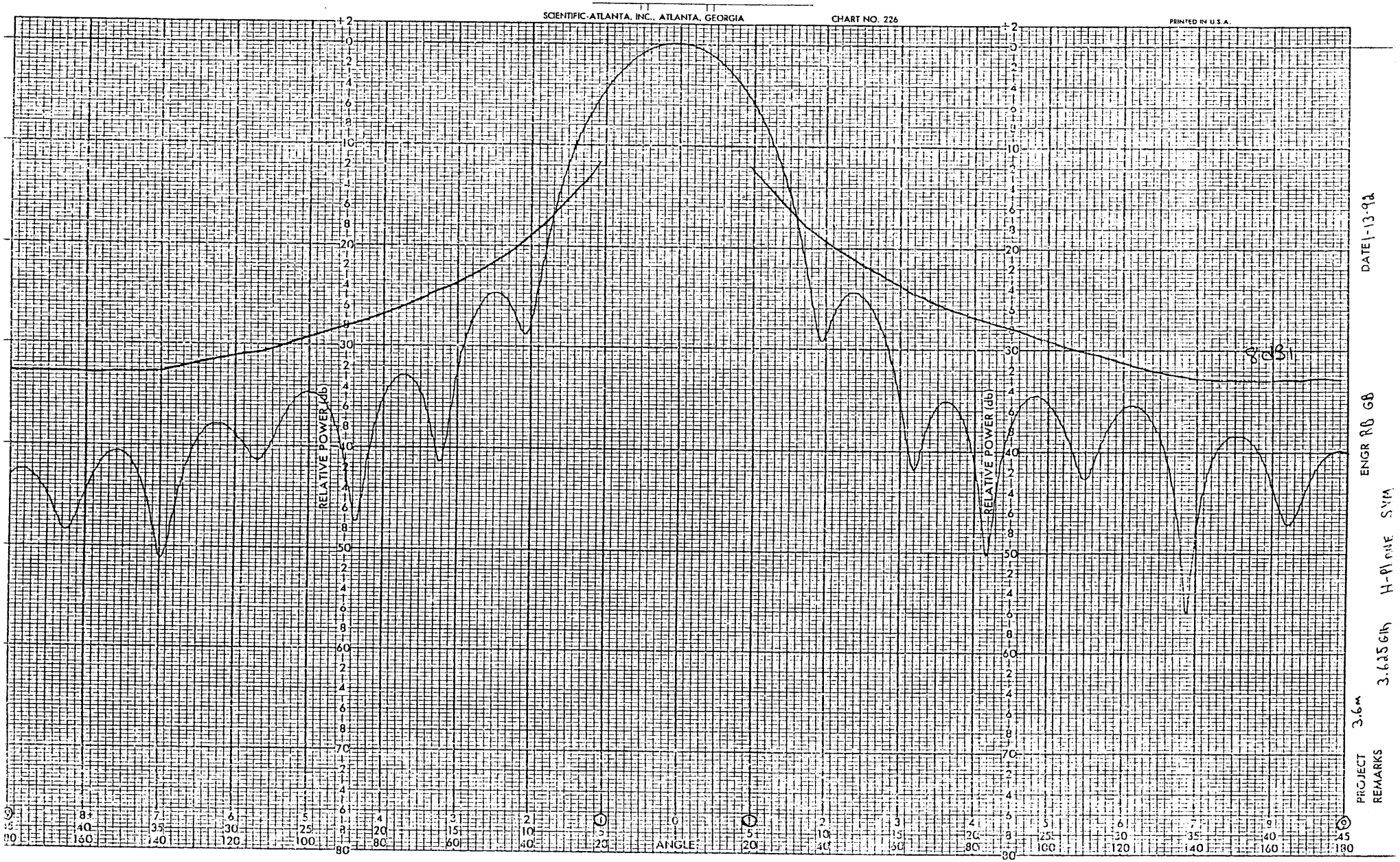
PROJECT 3.6M
REMARKS 3.685GHz E-Plane SYM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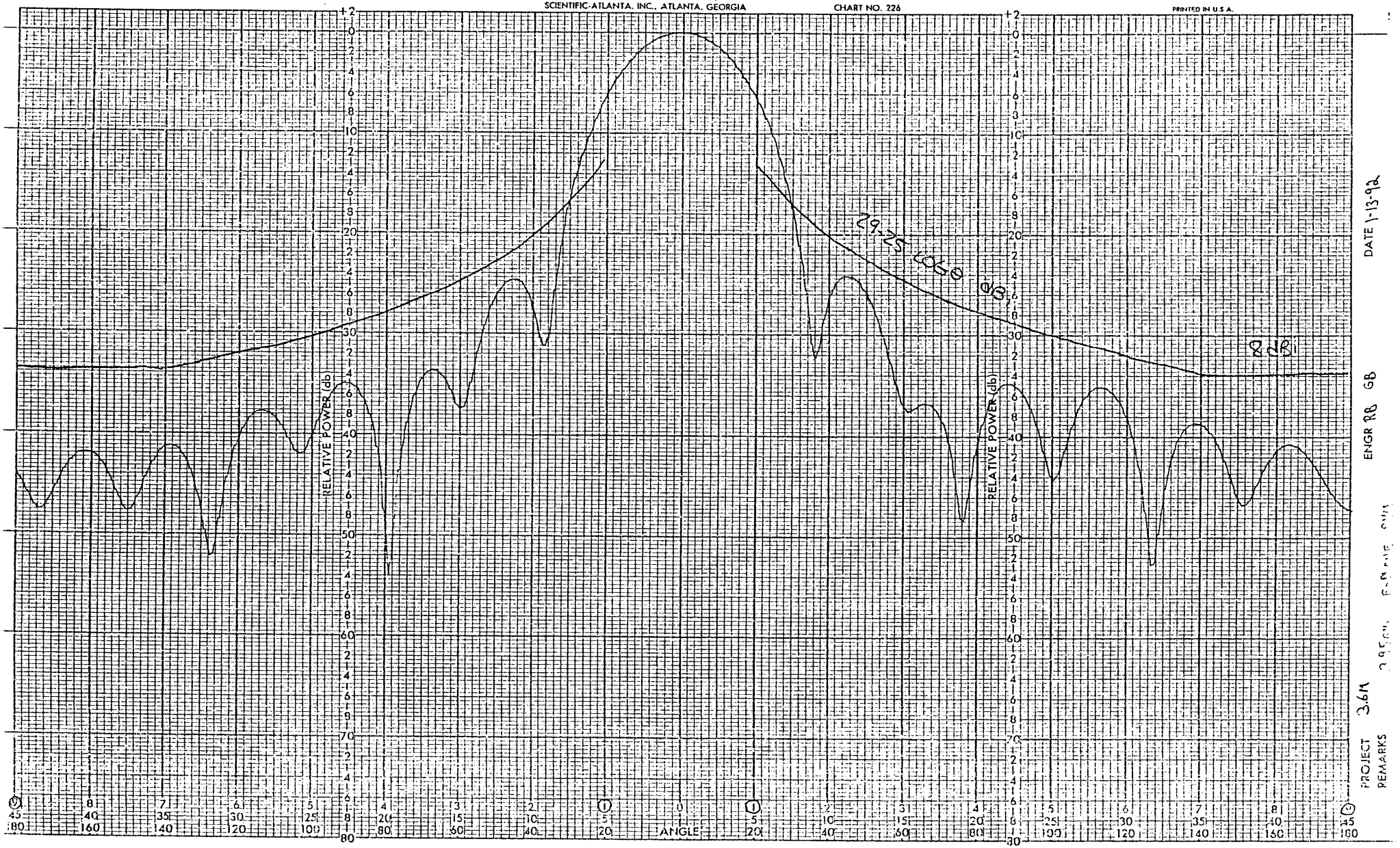
PROJECT 3.6m
REMARKS 3.625 Gh H-Plane SYM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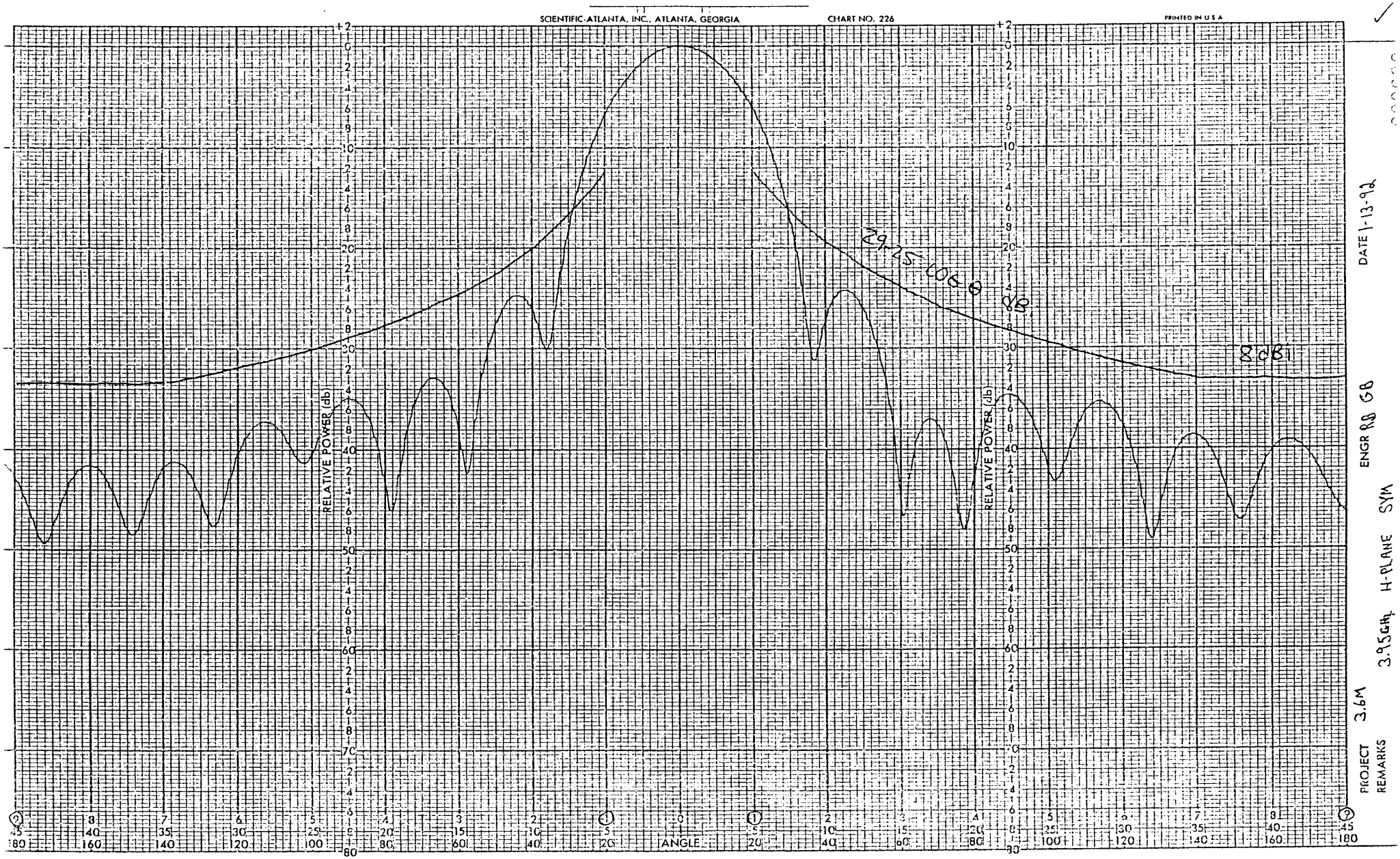
PROJECT 3.6M
REMARKS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8dB