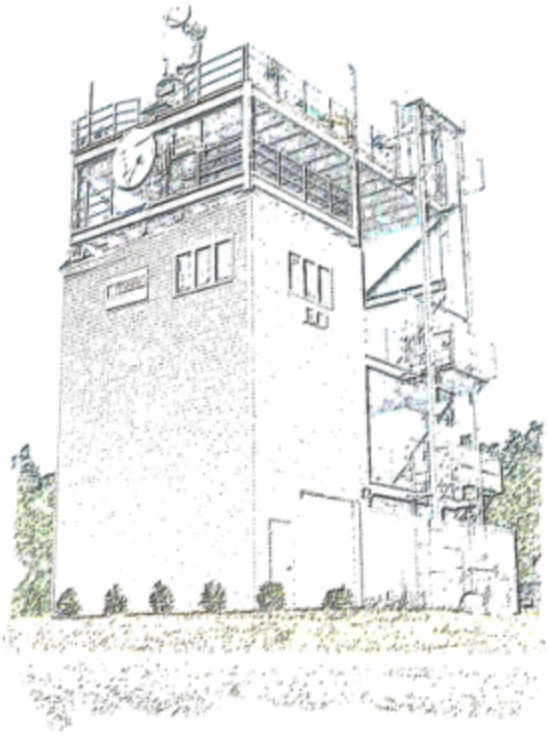
GENERAL DYNAMICS
SATCOM Technologies

Antenna Test Report

Test No. 1770

Project: 3.8M Series 1385 C-Band Linear Rx/Tx System.



General Dynamics SATCOM Technologies
East Maiden Antenna Test Facility
4488 Lawing Chapel Church Road
Maiden, North Carolina 28650
828-428-1485 / 828-428-1488 fax

Test report prepared by Dwight B. Lutz

General Dynamics SATCOM Technologies

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1.0 Product Details

PRODELIN®

TRANSMIT / RECEIVE ~ NEW SERIES 1385 ~ 3.8m VSAT ANTENNA

Key Features

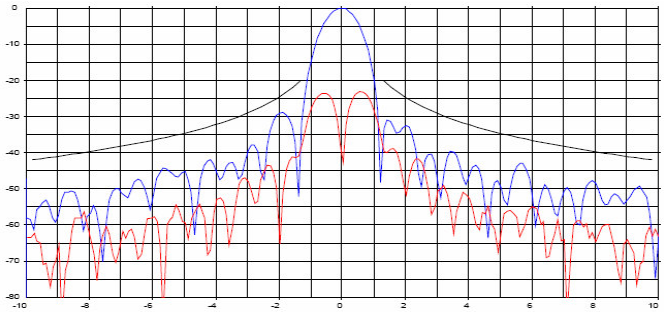
- **UPGRADED INTEGRAL RIB DESIGN FOR HIGHER FREQUENCY OPERATION.**
- **INCREASED STRENGTH FOR HEAVIER RADIO AND ODU EQUIPMENT LOADS.**
- **HIGHER PRECISION ASSEMBLY AND ALIGNMENT FROM AUTOMATED MANUFACTURING PROCESSES.**
- **FIELD FRIENDLY INSTALLATION WITHOUT REQUIREMENT FOR SPECIALIZED TOOLS.**
- **ANTI-ICE CAPABILITY FOR USE IN COLD CLIMATE AND ARCTIC ENVIRONMENTAL CONDITIONS.**
- **OPTIMIZED, 4-PIECE REFLECTOR DESIGN FOR MAXIMUM SHIPPING EFFICIENCIES.**
- **UPGRADABLE FOR HIGH XPD PERFORMANCE.**

Description

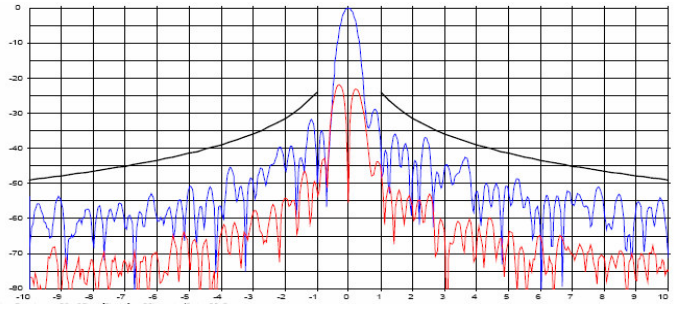
The General Dynamics new series 1385 ~ 3.8m antenna has been designed to provide a reliable, long-life and trouble free antenna solution for demanding applications in the primary VSAT communications bands. Enhancements to this antenna design have improved the structural stability and surface tolerances of the reflector, offering growth potential for reliable communications up to Ka-band.

The antenna has been designed to meet the performance requirements of the major satellite service providers and regulatory agencies.

The mechanical design has been optimized for high efficiency packaging to reduce shipping costs. Material selections for the reflector significantly reduce the risk for shipping damage when compared to metal reflector solutions. Factory pre-assembly of critical components eliminates the requirement for complex assembly procedures in the field.



C-band Azimuth, +/- 10 deg, Coverage (Tx) Band



Ku-band Azimuth, +/- 10 deg, Coverage (Tx) Band

GENERAL DYNAMICS
SATCOM Technologies

PRODELIN®

Series 1385 Transmit / Receive Multi-band 3.8m VSAT Antenna

PARAMETER		C-Band Linear	C-Band Circular	Ku-Band Linear
ELECTRICAL PERFORMANCE				
Antenna Size		3.8M	3.8M	3.8M
Operating Frequency	Rx Tx	3625 - 4200 MHz 5845 - 6425 MHz	3625 - 4200 MHz 5845 - 6425 MHz	10.95-12.75 GHz 13.75-14.50 GHz
Midband Gain (+/-0.2 dB)	Rx Tx	41.8 dB 46.2 dB	42.1 dB 46.0 dB	51.7 dB 53.2 dB
HPBW Nominal mid-band to -3 dB points (degrees)	Rx Tx	1.4 deg 0.9 deg	1.4 deg 0.9 deg	0.5 deg 0.4 deg
Antenna Noise Temperature (at feed flange)				
	10°	31K	28K	29K
	20°	25K	22K	21K
	30°	23K	20K	20K
	40°	22K	19K	19K
Sidelobe Envelope Co-pol (Azimuth) (Gain - dBi)				
	1° <= θ <= 20°	29 - 25 LOG(θ) (Note)	29 - 25 LOG(θ) (Note)	29 - 25 LOG(θ)
	20° <θ <= 26.3°	-3.5 dBi	-3.5 dBi	-3.5 dBi
	26.3° <θ <= 48°	32-25 Log (θ)	32-25 Log (θ)	32-25 Log (θ)
	48° < θ < 180	<= - 10 dBi averaged	<= - 10 dBi averaged	<= - 10 dBi averaged
	Note: In receive portion of C-band only, sidelobe envelope specified from 100λ/D rather than 1°			
Polarization		Linear	Circular	Linear
Feed Interface	Rx Tx	CPR 229 CPR 137 or Type N	CPR 229 CPR 137 or Type N	WR 75 or direct radio Connect
Cross Pol Isolation		>30 dB on axis	>17.69 dB on axis	>30 dB on axis
	Note: Standard C-band Circular polarizaion in Tx-band provides an axial ratio of of 1.3 (XPD equivalence of 17.69 dB). Optional F-1 station feed available with axial ratio of 1.09 (XPD equivalence >27.2 dB) in Tx band. Call factory when specifying this option.			
VSWR	Tx Rx	1.3:1 Max. (Γ<-17.7dB) 1.5:1 Max. (Γ<-14.0dB)	1.3:1 Max. (Γ<-17.7dB) 1.5:1 Max. (Γ<-14.0dB)	1.3:1 Max. (Γ<-17.7dB) 1.5:1 Max. (Γ<-14.0dB)
MECHANICAL PERFORMANCE				
Reflector Material		Glass Fiber Reinforced SMC. Highly resistant to corrosion, fungus and UV radiation.		
Antenna Optics		Easy-to-assemble, 4-Piece, Offset Fed Prime Focus Design with 0.6 F/D optics.		
Mast Pipe Size		10" SHC 40 Pipe (10.75" OD) 27.3 cm.		
Elevation Adjustment Range		12° to 90° or 0° to 15° for polar latitudes		
Azimuth Adjustment Range		360° Continuous with +/- 35° Fine Adjustment		
Maximum Radio weights		20 lbs on feedboom (unsupported). Call factory for feed stabilizer option when using heavier radios.		
Shipping Specifications		Weight (nominal) 1882 lbs, (855 Kg)		
ENVIRONMENTAL PERFORMANCE				
Wind Loading	Operational Survival		50 mph (80 km/h) 125 mph (201 km/h)	
Temperature	Operational Survival		-40° to 140°F (-40° to 60°C) -50° to 160° F (-46° to 71° C)	
Atmospheric Conditions			Salt, Pollutants and Contaminants as Encountered in Coastal and Industrial Areas	
Solar Radiation			360 BTU/h/ft^2	

GENERAL DYNAMICS
SATCOM Technologies

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E-mail: prodelin@gdsatcom.com • Web Site: www.gdsatcom.com

CMR Rev 04-2008

2.0 Test Results

2.1 Gain and Efficiency

Freq. (GHz)	Vertical Pol	Horizontal Pol	Average Gain (dB)	Efficiency (%)
3.625	41.5	41.6	41.6	68%
3.825	41.9	42.0	42.0	67%
4.025	42.3	42.3	42.3	66%
4.200	42.6	42.7	42.6	66%
5.845	45.7	45.6	45.7	68%
6.045	45.9	46.1	46.0	69%
6.245	46.2	46.3	46.3	68%
6.425	46.6	46.5	46.6	69%

* 46.2dB Gain used for 29-25 Log theta Specification Line On TX Patterns

* 41.8dB Gain used for 29-25 Log theta Specification Line On RX Patterns

2.2 BeamWidth Analysis

3-dB						
Freq. (GHz)	Azimuth Vertical (Deg)	Elevation Vertical (Deg)	Azimuth Horizontal (Deg)	Elevation Horizontal (Deg)	Average (Deg)	Maximum (Deg)
5.845	0.95	0.98	0.95	0.99	0.97	0.99
6.045	0.92	0.95	0.91	0.95	0.93	0.95
6.245	0.89	0.93	0.87	0.92	0.90	0.93
6.425	0.86	0.91	0.85	0.90	0.88	0.91

10-dB						
Freq. (GHz)	Azimuth Vertical (Deg)	Elevation Vertical (Deg)	Azimuth Horizontal (Deg)	Elevation Horizontal (Deg)	Average (Deg)	Maximum (Deg)
5.845	1.65	1.74	1.67	1.75	1.70	1.75
6.045	1.61	1.68	1.59	1.68	1.64	1.68
6.245	1.56	1.64	1.52	1.63	1.59	1.64
6.425	1.52	1.61	1.48	1.60	1.55	1.61

15-dB						
Freq. (GHz)	Azimuth Vertical (Deg)	Elevation Vertical (Deg)	Azimuth Horizontal (Deg)	Elevation Horizontal (Deg)	Average (Deg)	Maximum (Deg)
5.845	1.96	2.09	1.98	2.12	2.04	2.12
6.045	1.90	2.03	1.89	2.02	1.96	2.03
6.245	1.83	1.98	1.81	1.94	1.89	1.98
6.425	1.79	1.94	1.76	1.91	1.85	1.94

2.3 1st Sidelobe Level

Counter Clockwise from Main Beam										
Freq. (GHz)	Vertical Pol Azimuth		Vertical Pol Elevation		Horizontal Pol Azimuth		Horizontal Pol Elevation		Amplitude Average (dB)	Amplitude Maximum (dB)
	Angle	Amplitude	Angle	Amplitude	Angle	Amplitude	Angle	Amplitude		
5.845	1.55	36.1	1.55	33.6	2.10	26.90	2.00	29.70	31.58	26.90
6.045	1.45	35.1	1.50	32.1	1.50	41.80	1.97	30.40	34.85	30.40
6.245	1.42	36.4	1.47	33.9	1.40	43.90	1.93	30.60	36.20	33.90
6.425	1.40	40.00	1.46	32.8	1.42	43.00	1.90	31.10	36.73	31.10

Clockwise from Main Beam										
Freq. (GHz)	Vertical Pol Azimuth		Vertical Pol Elevation		Horizontal Pol Azimuth		Horizontal Pol Elevation		Amplitude Average (dB)	Amplitude Maximum (dB)
	Angle	Amplitude	Angle	Amplitude	Angle	Amplitude	Angle	Amplitude		
5.845	1.50	30.80	2.00	26.40	2.00	31.30	2.00	27.00	28.88	26.40
6.045	1.47	30.60	1.90	25.80	1.40	30.00	1.95	26.70	28.28	25.80
6.245	1.45	29.50	1.80	26.70	1.40	29.90	1.90	27.60	28.43	26.70
6.425	1.45	29.30	1.70	28.30	1.40	29.80	1.85	29.20	29.15	28.30

2.4 Cross Pol Isolation On Axis

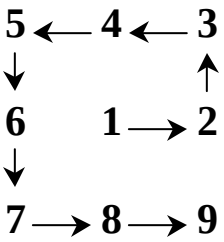
*On axis referenced to mainbeam peal						
Freq. (GHz)	Vertical Pol Azimuth (dB)	Vertical Pol Elevation (dB)	Horizontal Pol Azimuth (dB)	Horizontal Pol Elevation (dB)	Average (dB)	Minimum (dB)
3.625	-34.3	-32.6	-48.1	-39.7	-38.7	-32.6
3.825	-33.4	-34.1	-42.3	-44.2	-38.5	-33.4
4.025	-38.5	-36.6	-48.8	-39.5	-40.9	-36.6
4.200	-40.4	-43.0	-43.8	-45.4	-43.2	-40.4
5.845	-52.3	-34.6	-44.4	-38.3	-42.4	-34.6
6.045	-41.0	-34.9	-40.8	-33.4	-37.5	-33.4
6.245	-42.9	-35.3	-44.7	-38.8	-40.4	-35.3
6.425	-46.0	-32.0	-42.8	-34.2	-38.8	-32.0

* Levels Indicate X-POL level on axis down from main beam peak.

9-Point Swept X-Pol Worst Case Level										
//////////////	Pos #1	Pos #2	Pos#3	Pos #4	Pos #5	Pos #6	Pos #7	Pos #8	Pos #9	Avg
Vertical	37.0	37.7	27.3	35.5	27.5	29.9	26.3	32.0	30.5	31.5
Horizontal	35.0	27.2	27.0	31.0	29.8	28.0	28.0	35.0	27.0	29.8

9 Point Swept X-Pol Measurement
C-Band Linear Polarity

9 Points as illustrated:



- No.1 - defined as AUT and source antenna aligned for maximum peak.
- No. 2 - AUT azimuth pointed right facing source antenna by 0.18 degrees and elevation at zero degrees.
- No. 3 - AUT azimuth pointed right facing source antenna by 0.18 degrees and AUT elevation pointed up by 0.18 degrees.
- No. 4 - AUT elevation pointed up by 0.18 degrees AUT azimuth at zero degrees.
- No. 5 - AUT azimuth pointed left facing source antenna by 0.18 degrees and AUT antenna elevation pointed up by 0.18 degrees.
- No. 6 - AUT azimuth pointed left facing source antenna by 0.18 degrees AUT elevation at zero degrees.
- No. 7 - AUT azimuth pointed left facing source antenna by 0.18 degrees and AUT elevation pointed down by 0.18 degrees.
- No. 8 - AUT elevation pointed down by 0.18 degrees AUT azimuth at zero degrees.
- No. 9 - AUT azimuth pointed right facing source antenna by 0.18 degrees and AUT elevation pointed down by 0.18 degrees.

Step size calculated as: $\frac{4.286}{f \times d}$

Where f = Frequency in GHz and d = Diameter of antenna in meters.

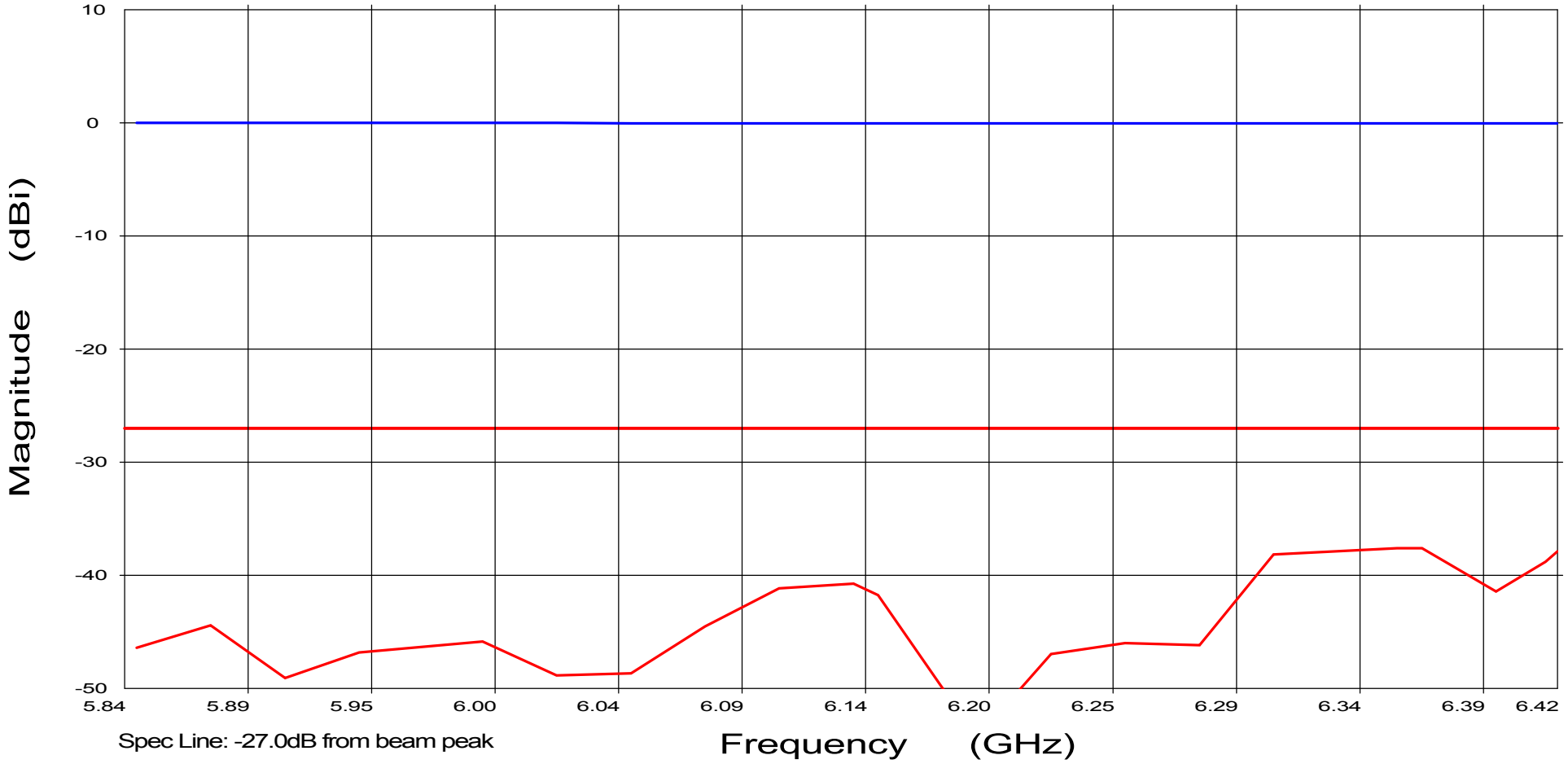
2.5 9-Point Swept Frequency Transmit Isolation

Position # 1

General Dynamics
3.8 Meter Series 1385 Antenna System
C-Band Linear

Operator: Dwight B. Lutz
Ser. no.:
Channel: ch1 Tx pol: Vert. Rx pol: Vert.

Azimuth : 0.00 Deg
Elevation : 0.00 Deg



Spec Line: -27.0dB from beam peak

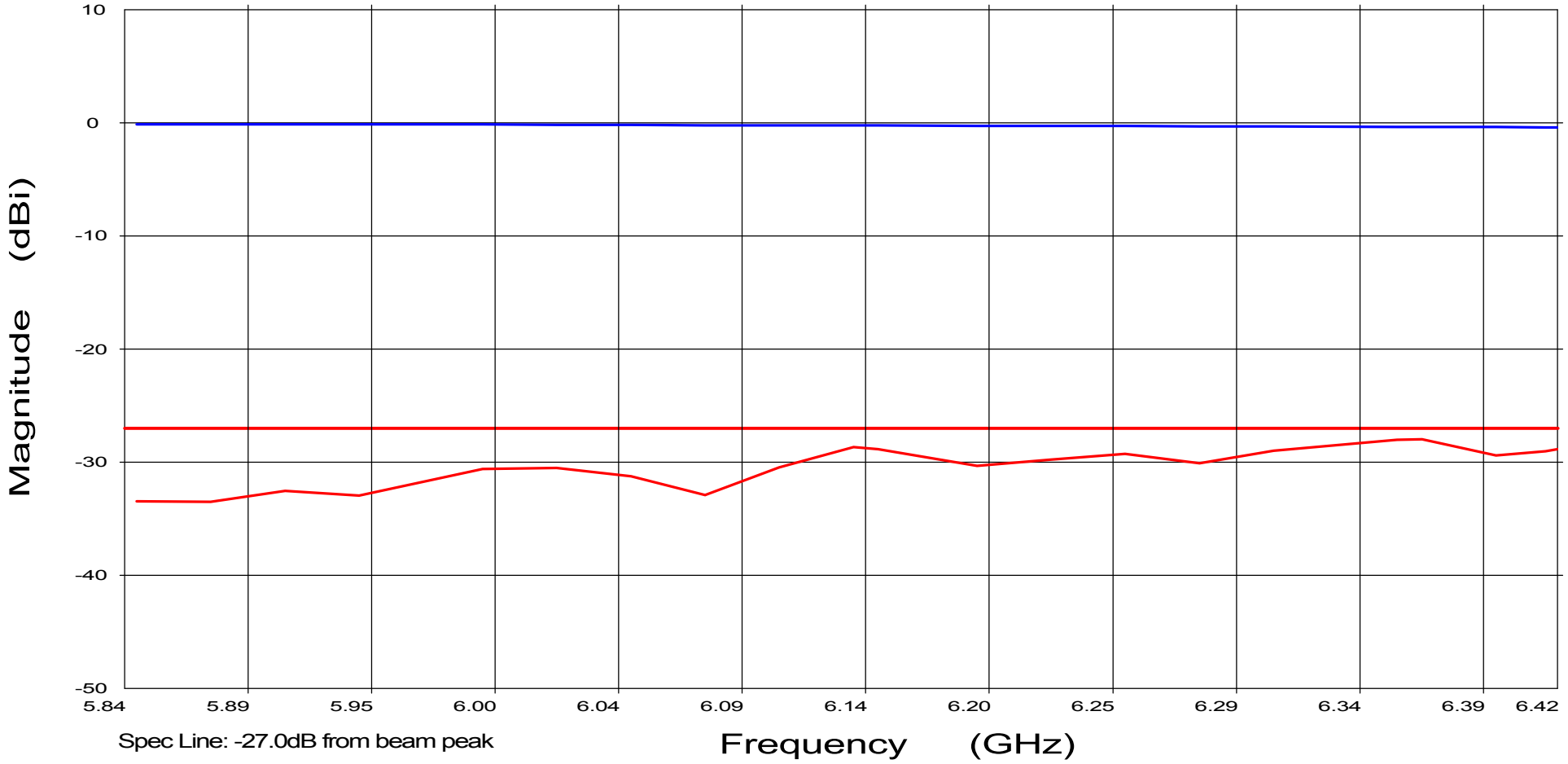
Overlays	Cal. file	table	channel	units
1770 20.dat-ant_under_test	1770 20.dat	SGA-70.	ch1	dBi
1770 21.dat-ant_under_test	1770 21.dat	SGA-70.	ch1	dBi

Position # 2

General Dynamics
3.8 Meter Series 1385 Antenna System
C-Band Linear

Operator: Dwight B. Lutz
Ser. no.:
Channel: ch1 Tx pol: Vert. Rx pol: Vert.

Azimuth : 0.18 Deg
Elevation : 0.00 Deg



Spec Line: -27.0dB from beam peak

Overlays	Cal. file	table	channel	units
1770 20.dat-ant_under_test	1770 20.dat	SGA-70.	ch1	dBi
1770 21.dat-ant_under_test	1770 21.dat	SGA-70.	ch1	dBi

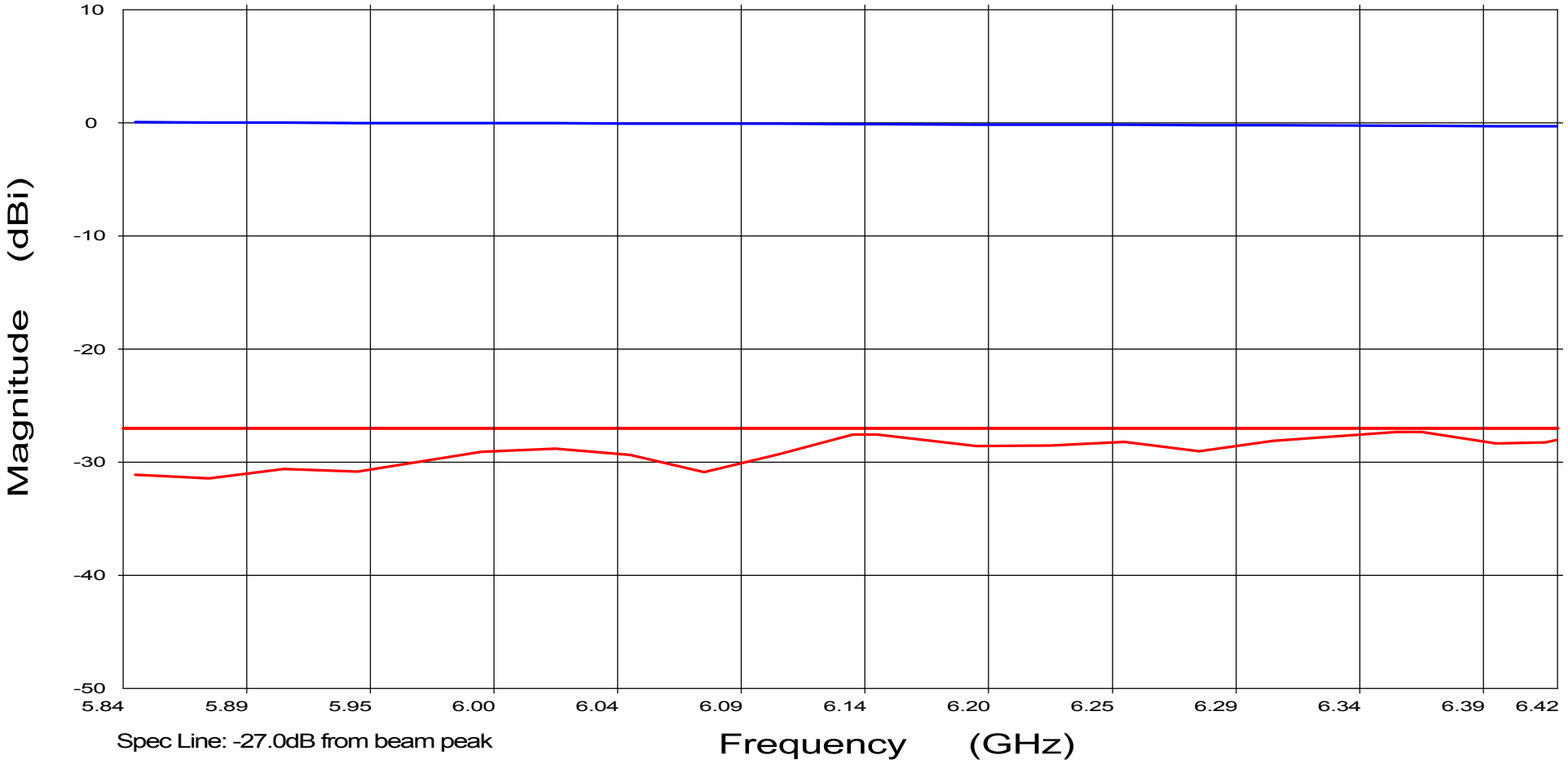
Prodelin Corporation
East Maiden Test Range
Maiden NC

Position # 3

General Dynamics
3.8 Meter Series 1385 Antenna System
C-Band Linear

Operator: Dwight B. Lutz
Ser. no.:
Channel: ch1 Tx pol: Vert. Rx pol: Vert.

Azimuth : 0.18 Deg
Elevation : 0.18 Deg



Spec Line: -27.0dB from beam peak

Overlays	Cal. file	table	channel	units
1770 20.dat-ant_under_test	1770 20.dat	SGA-70.	ch1	dBi
1770 24.dat-ant_under_test	1770 24.dat	SGA-70.	ch1	dBi

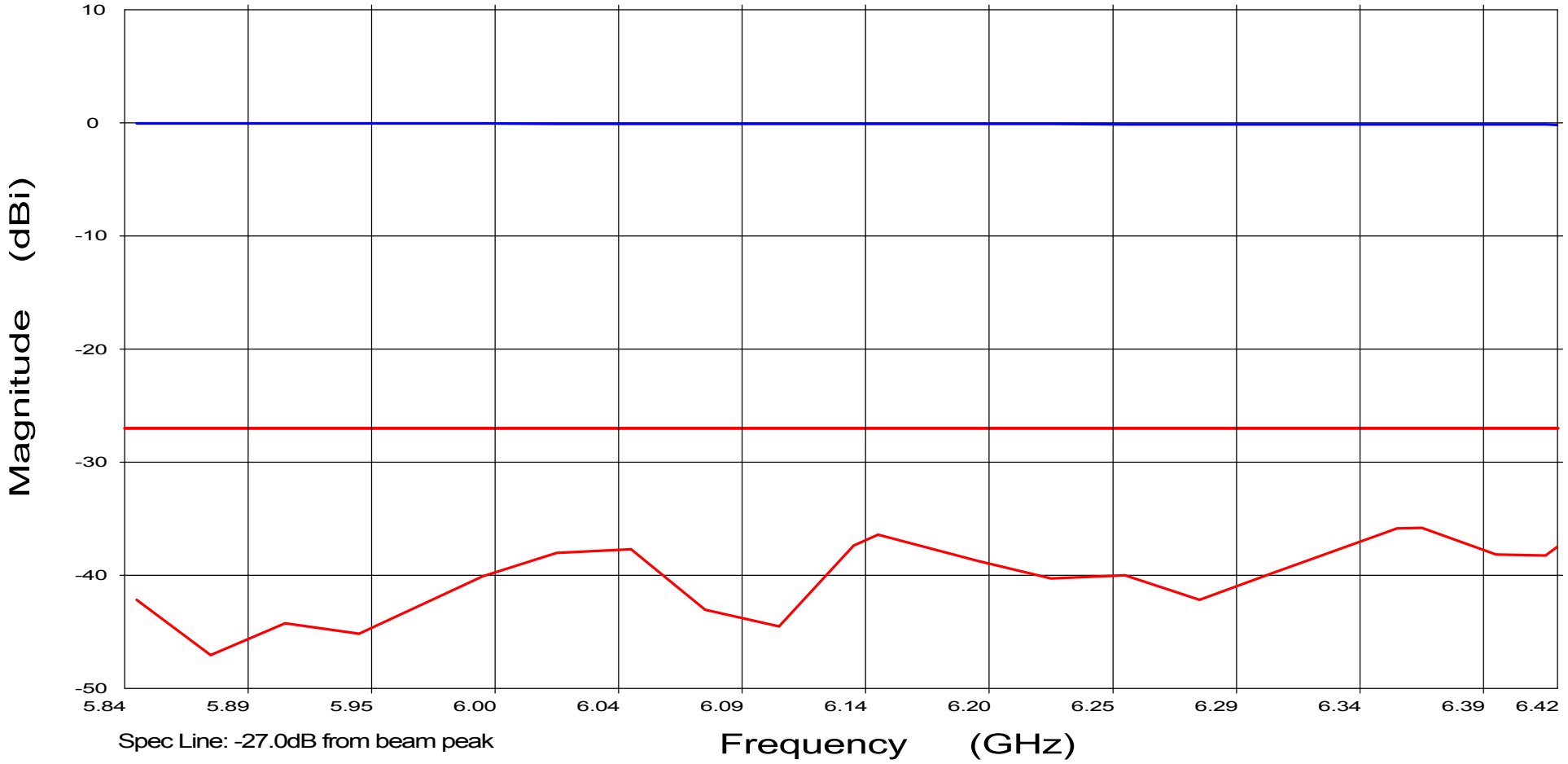
Prodelin Corporation
East Maiden Test Range
Maiden NC

Position # 4

General Dynamics
3.8 Meter Series 1385 Antenna System
C-Band Linear

Operator: Dwight B. Lutz
Ser. no.:
Channel: ch1 Tx pol: Vert. Rx pol: Vert.

Azimuth : 0.00 Deg
Elevation : 0.18 Deg



Spec Line: -27.0dB from beam peak

Overlays	Cal. file	table	channel	units
1770 20.dat-ant_under_test	1770 20.dat	SGA-70.	ch1	dBi
1770 24.dat-ant_under_test	1770 24.dat	SGA-70.	ch1	dBi

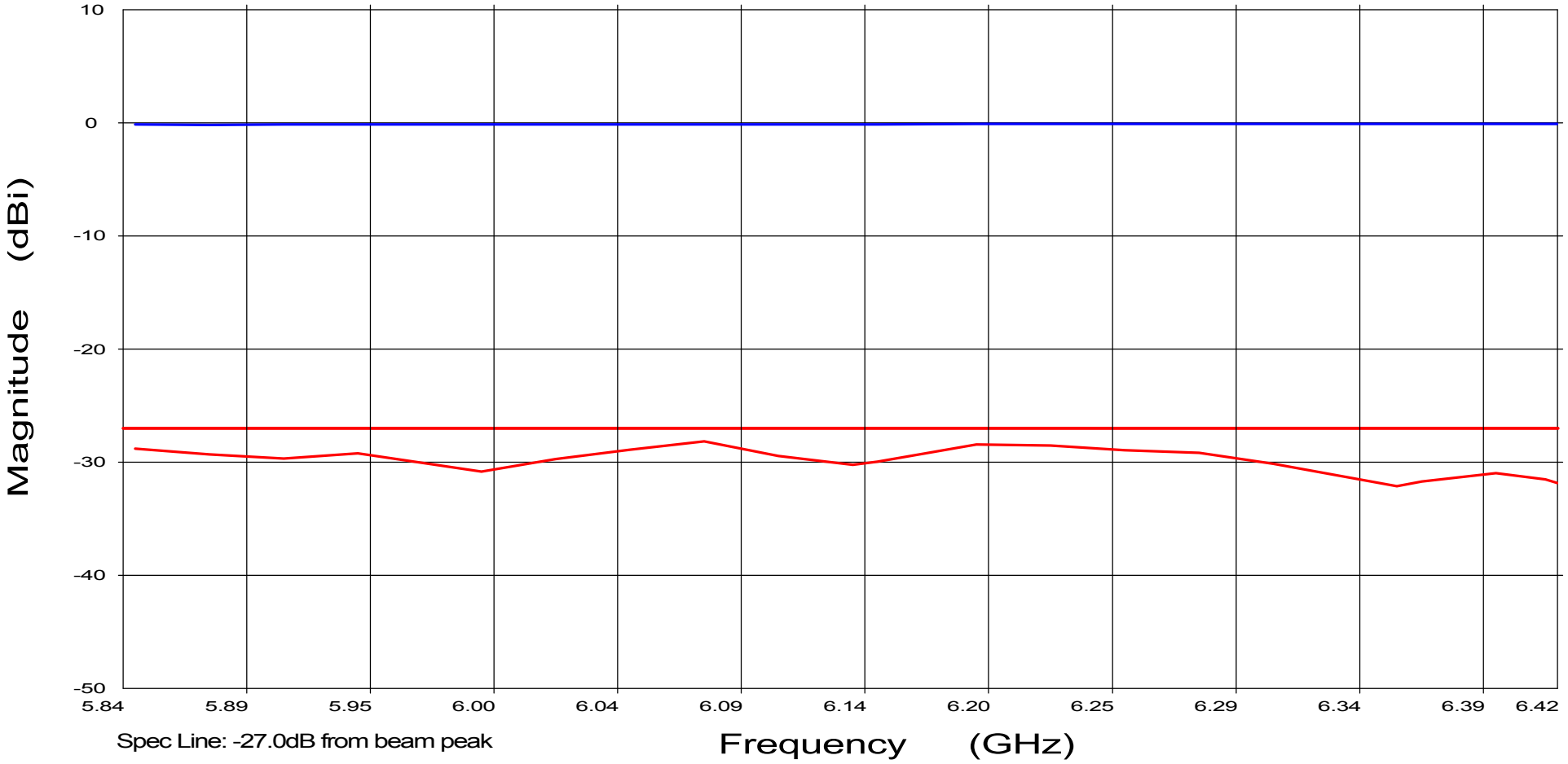
Prodelin Corporation
East Maiden Test Range
Maiden NC

Position # 5

General Dynamics
3.8 Meter Series 1385 Antenna System
C-Band Linear

Operator: Dwight B. Lutz
Ser. no.:
Channel: ch1 Tx pol: Vert. Rx pol: Vert.

Azimuth : -0.18 Deg
Elevation : 0.18 Deg



Spec Line: -27.0dB from beam peak

Overlays	Cal. file	table	channel	units
1770 20.dat-ant_under_test	1770 20.dat	SGA-70.	ch1	dBi
1770 24.dat-ant_under_test	1770 24.dat	SGA-70.	ch1	dBi

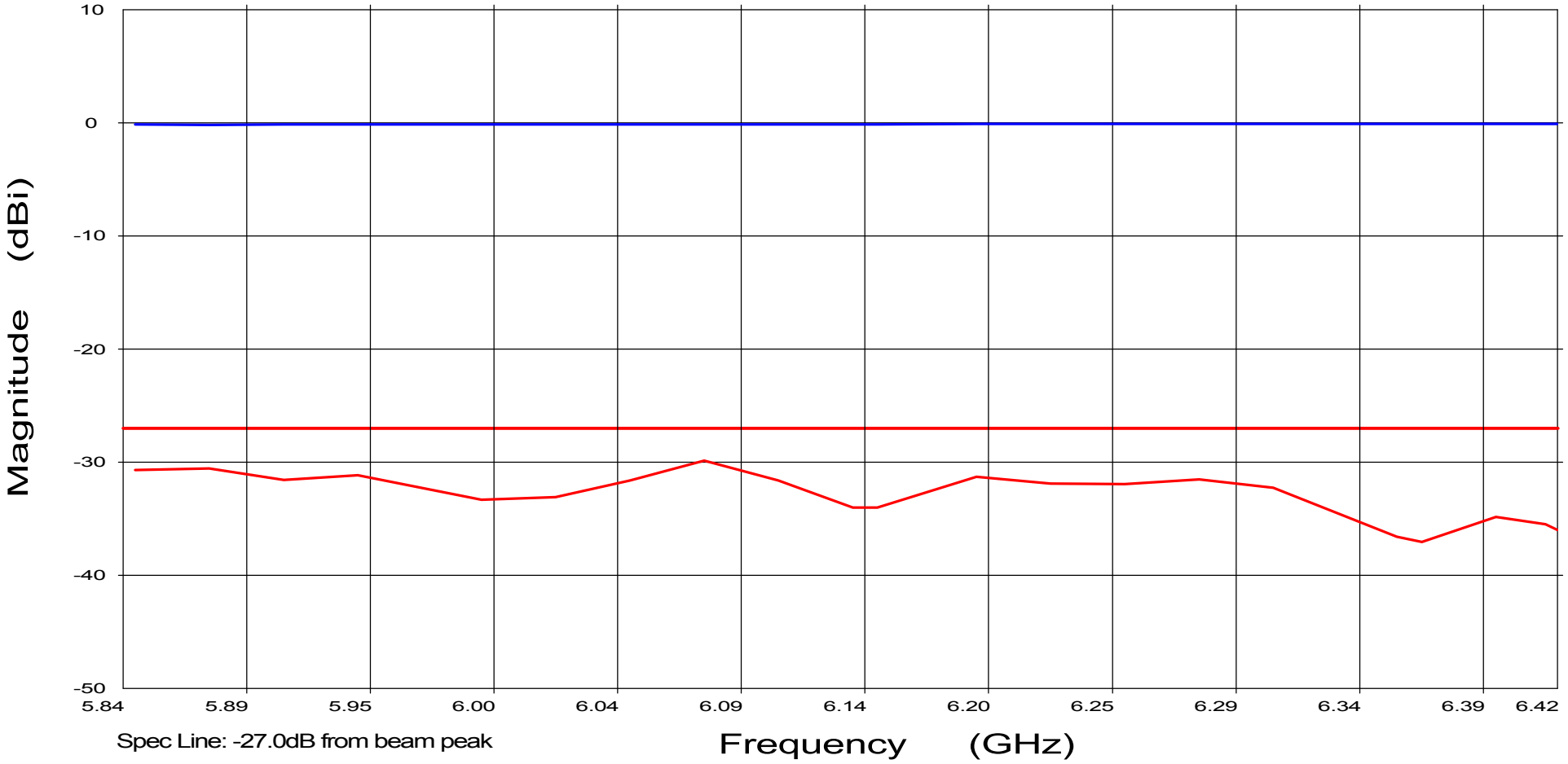
Prodelin Corporation
East Maiden Test Range
Maiden NC

Position # 6

General Dynamics
3.8 Meter Series 1385 Antenna System
C-Band Linear

Operator: Dwight B. Lutz
Ser. no.:
Channel: ch1 Tx pol: Vert. Rx pol: Vert.

Azimuth : -0.18 Deg
Elevation : 0.00 Deg



Spec Line: -27.0dB from beam peak

Overlays	Cal. file	table	channel	units
1770 20.dat-ant_under_test	1770 20.dat	SGA-70.	ch1	dBi
1770 21.dat-ant_under_test	1770 21.dat	SGA-70.	ch1	dBi

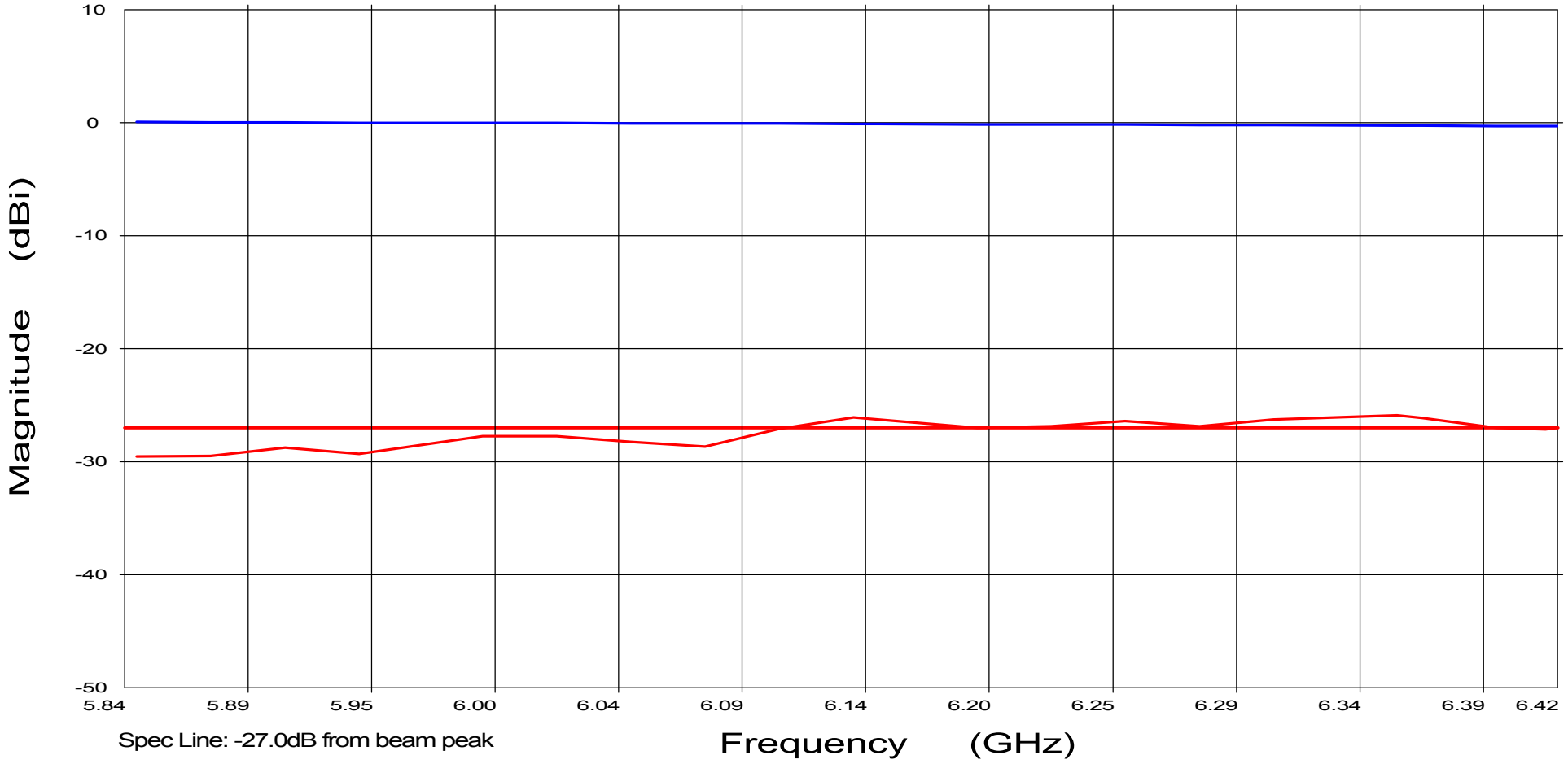
Prodelin Corporation
East Maiden Test Range
Maiden NC

Position # 7

General Dynamics
3.8 Meter Series 1385 Antenna System
C-Band Linear

Operator: Dwight B. Lutz
Ser. no.:
Channel: ch1 Tx pol: Vert. Rx pol: Vert.

Azimuth : -0.18 Deg
Elevation : -0.18 Deg



Spec Line: -27.0dB from beam peak

Overlays	Cal. file	table	channel	units
1770 20.dat-ant_under_test	1770 20.dat	SGA-70.	ch1	dBi
1770 23.dat-ant_under_test	1770 23.dat	SGA-70.	ch1	dBi

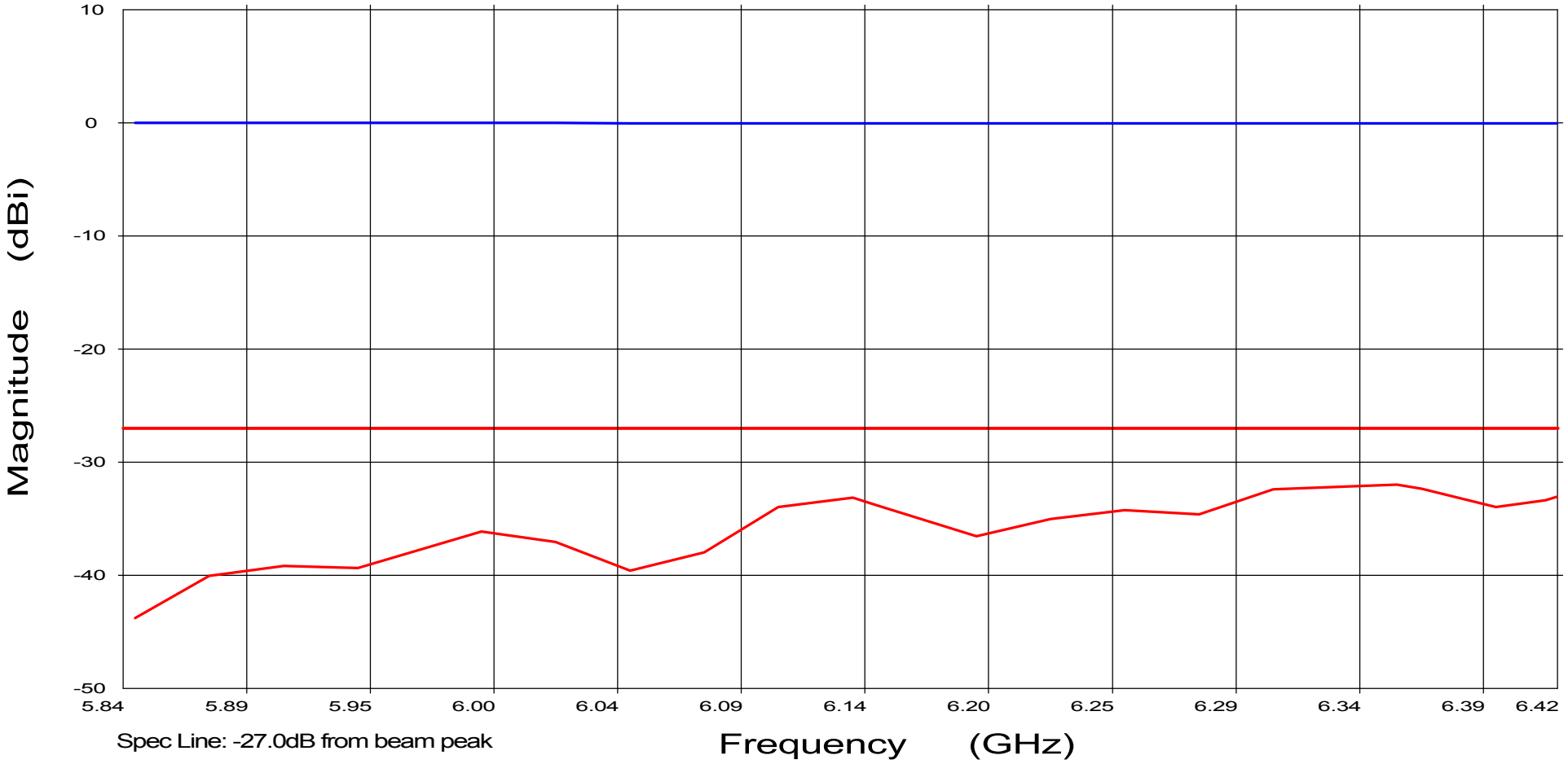
Prodelin Corporation
East Maiden Test Range
Maiden NC

Position # 8

General Dynamics
3.8 Meter Series 1385 Antenna System
C-Band Linear

Operator: Dwight B. Lutz
Ser. no.:
Channel: ch1 Tx pol: Vert. Rx pol: Vert.

Azimuth : 0.00 Deg
Elevation : -0.18 Deg



Spec Line: -27.0dB from beam peak

Overlays	Cal. file	table	channel	units
1770 20.dat-ant_under_test	1770 20.dat	SGA-70.	ch1	dBi
1770 23.dat-ant_under_test	1770 23.dat	SGA-70.	ch1	dBi

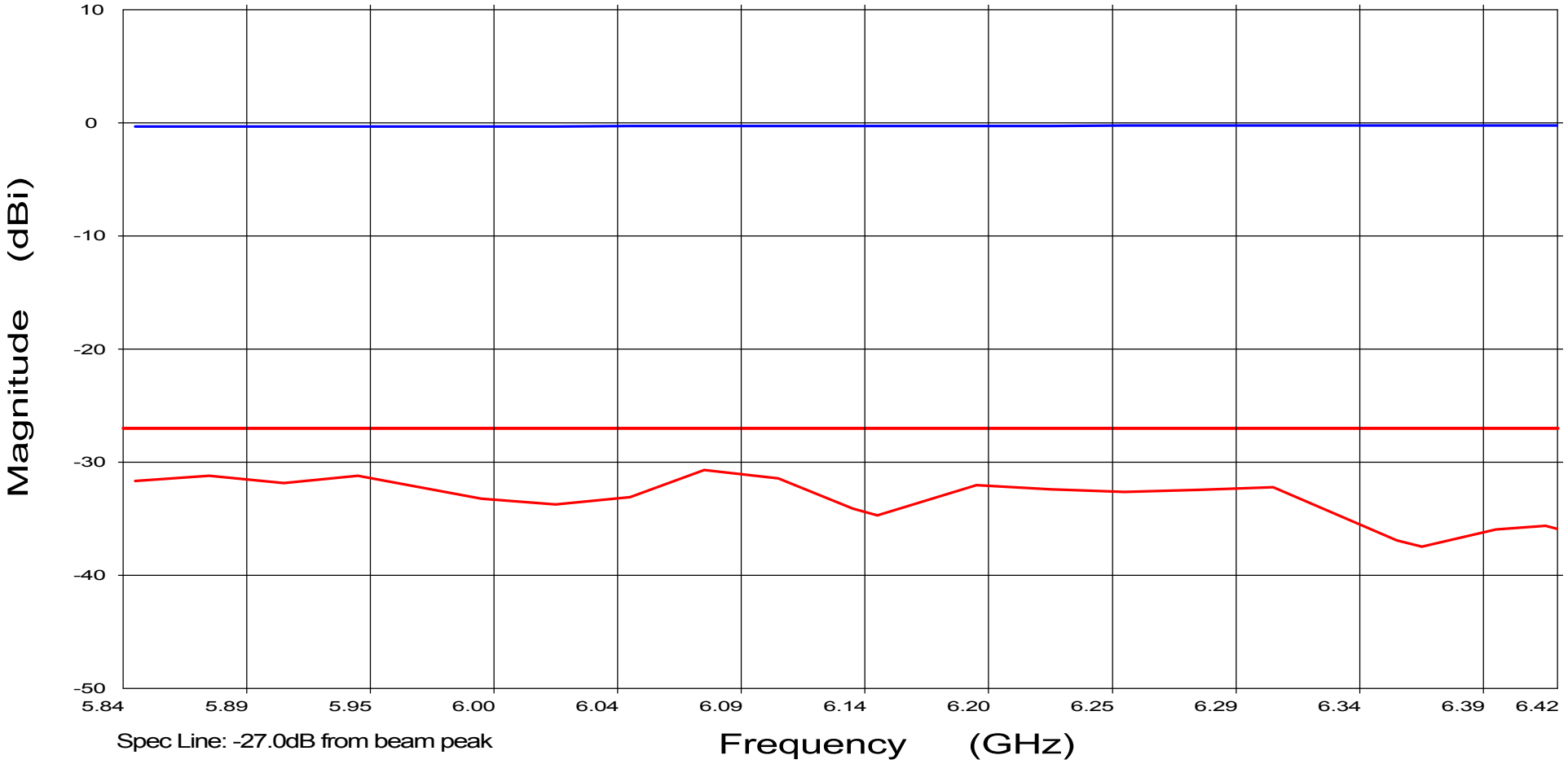
Prodelin Corporation
East Maiden Test Range
Maiden NC

Position # 9

General Dynamics
3.8 Meter Series 1385 Antenna System
C-Band Linear

Operator: Dwight B. Lutz
Ser. no.:
Channel: ch1 Tx pol: Vert. Rx pol: Vert.

Azimuth : 0.18 Deg
Elevation : -0.18 Deg



Spec Line: -27.0dB from beam peak

Overlays	Cal. file	table	channel	units
1770 20.dat-ant_under_test	1770 20.dat	SGA-70.	ch1	dBi
1770 23.dat-ant_under_test	1770 23.dat	SGA-70.	ch1	dBi

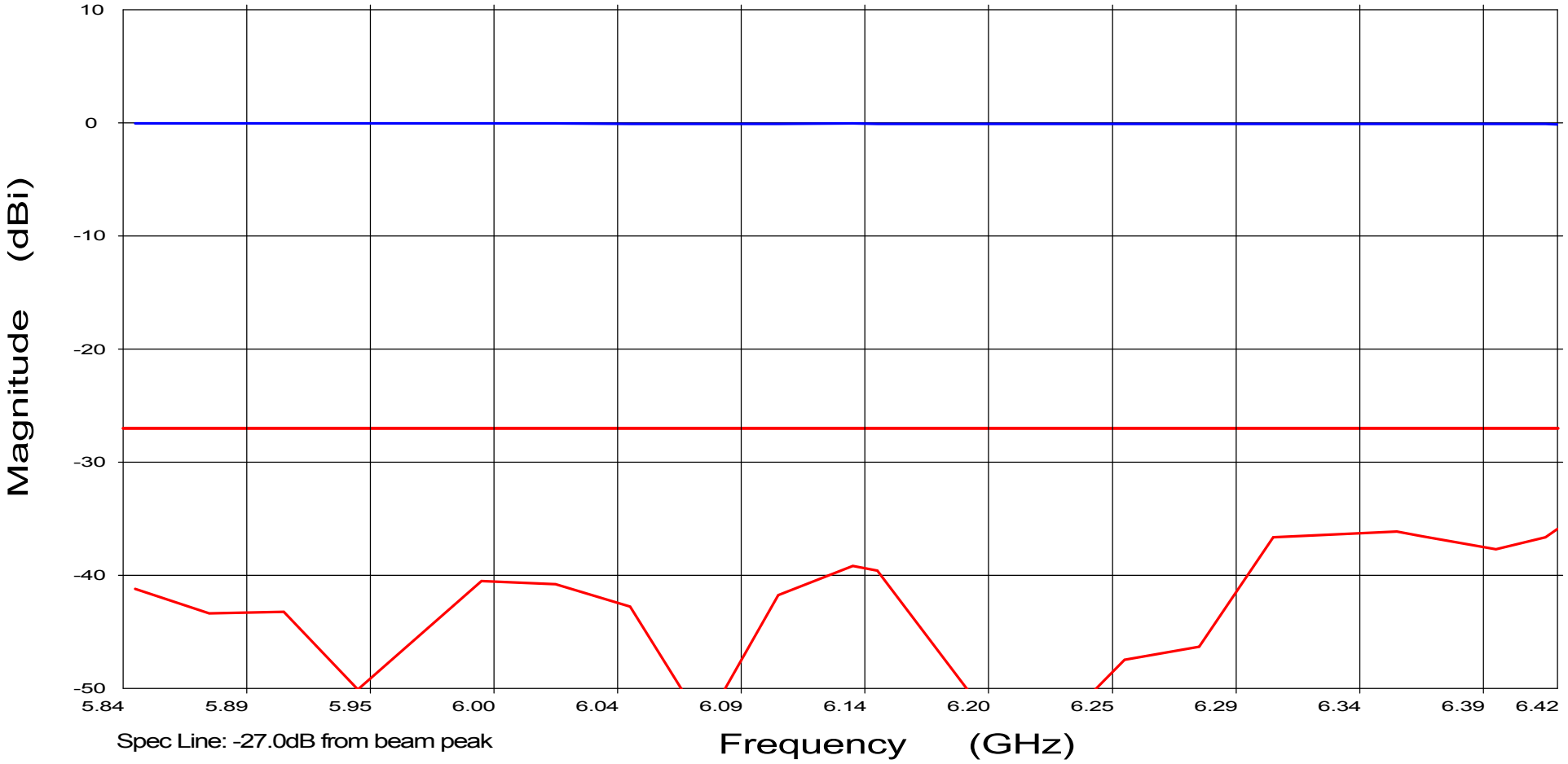
Prodelin Corporation
East Maiden Test Range
Maiden NC

Position # 1

General Dynamics
3.8 Meter Series 1385 Antenna System
C-Band Linear

Operator: Dwight B. Lutz
Ser. no.:
Channel: ch1 Tx pol: Horiz. Rx pol: Horiz.

Azimuth : 0.00 Deg
Elevation : 0.00 Deg



Spec Line: -27.0dB from beam peak

Overlays	Cal. file	table	channel	units
1770 12.dat-ant_under_test	1770 12.dat	SGA-70.	ch1	dBi
1770 13.dat-ant_under_test	1770 13.dat	SGA-70.	ch1	dBi

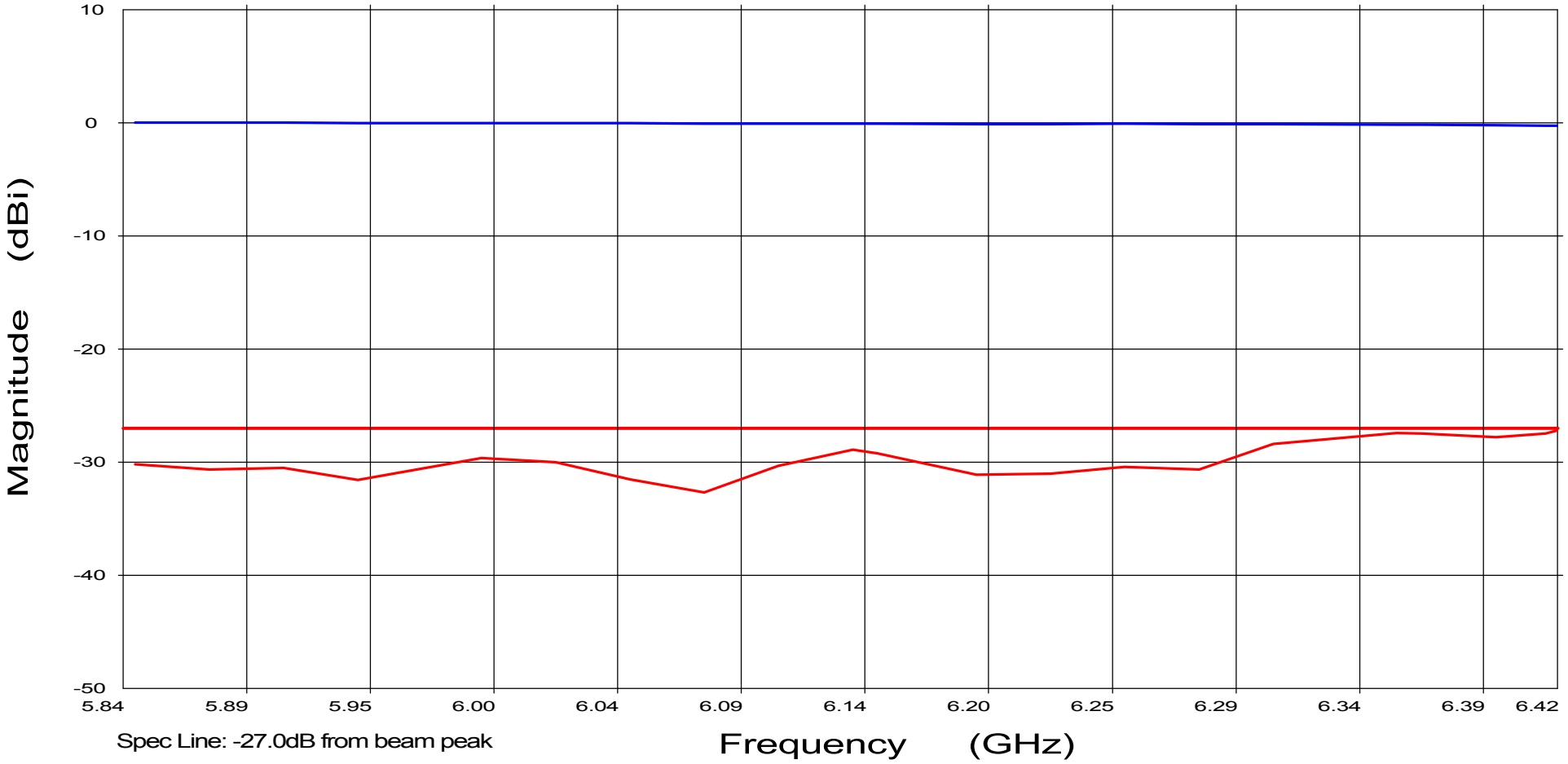
Prodelin Corporation
East Maiden Test Range
Maiden NC

Position # 2

General Dynamics
3.8 Meter Series 1385 Antenna System
C-Band Linear

Operator: Dwight B. Lutz
Ser. no.:
Channel: ch1 Tx pol: Horiz. Rx pol: Horiz.

Azimuth : 0.18 Deg
Elevation : 0.00 Deg



Spec Line: -27.0dB from beam peak

Overlays	Cal. file	table	channel	units
1770 12.dat-ant_under_test	1770 12.dat	SGA-70.	ch1	dBi
1770 13.dat-ant_under_test	1770 13.dat	SGA-70.	ch1	dBi

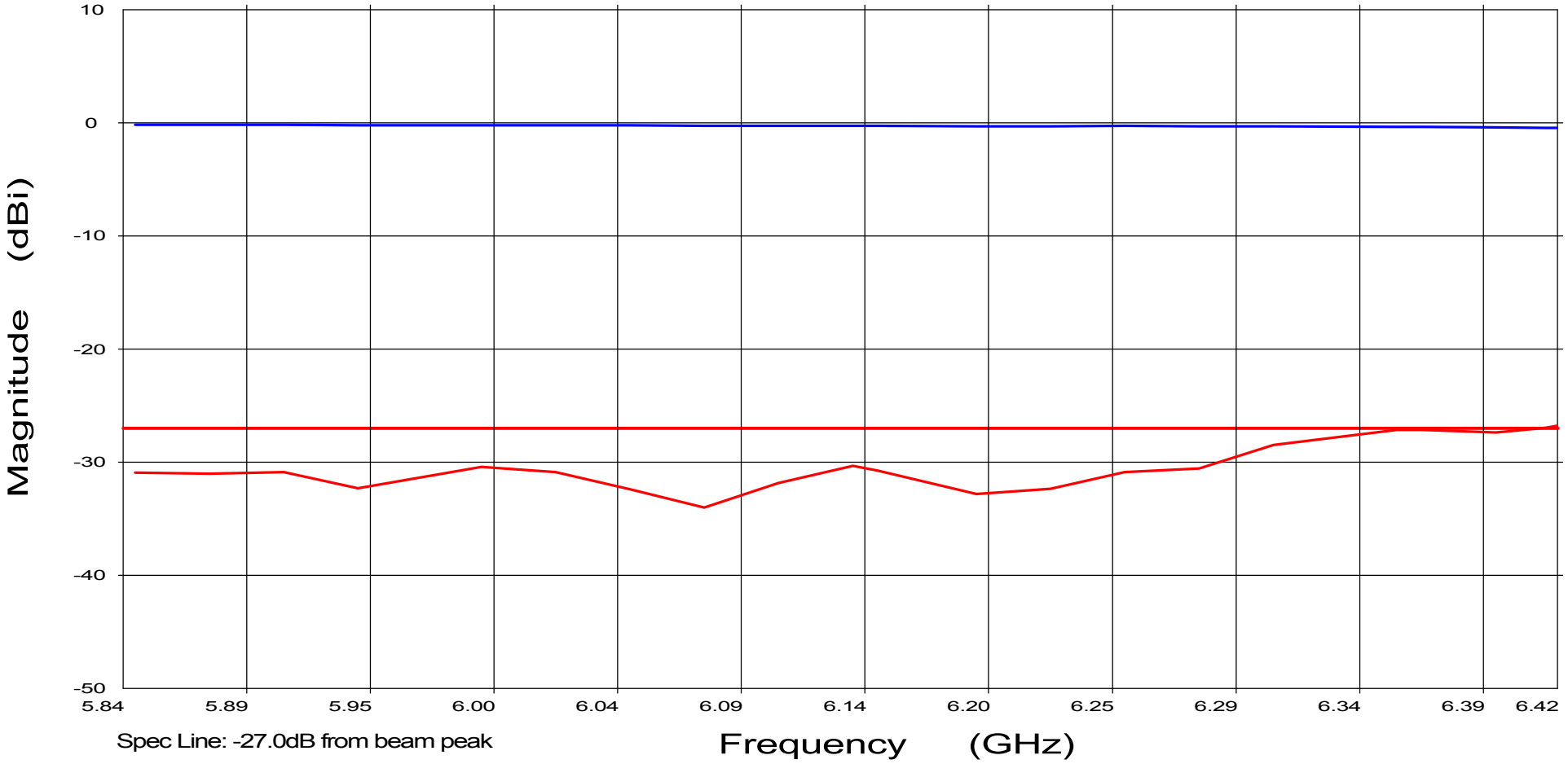
Prodelin Corporation
East Maiden Test Range
Maiden NC

Position # 3

General Dynamics
3.8 Meter Series 1385 Antenna System
C-Band Linear

Operator: Dwight B. Lutz
Ser. no.:
Channel: ch1 Tx pol: Horiz. Rx pol: Horiz.

Azimuth : 0.18 Deg
Elevation : 0.18 Deg



Spec Line: -27.0dB from beam peak

Overlays	Cal. file	table	channel	units
1770 12.dat-ant_under_test	1770 12.dat	SGA-70.	ch1	dBi
1770 16.dat-ant_under_test	1770 16.dat	SGA-70.	ch1	dBi

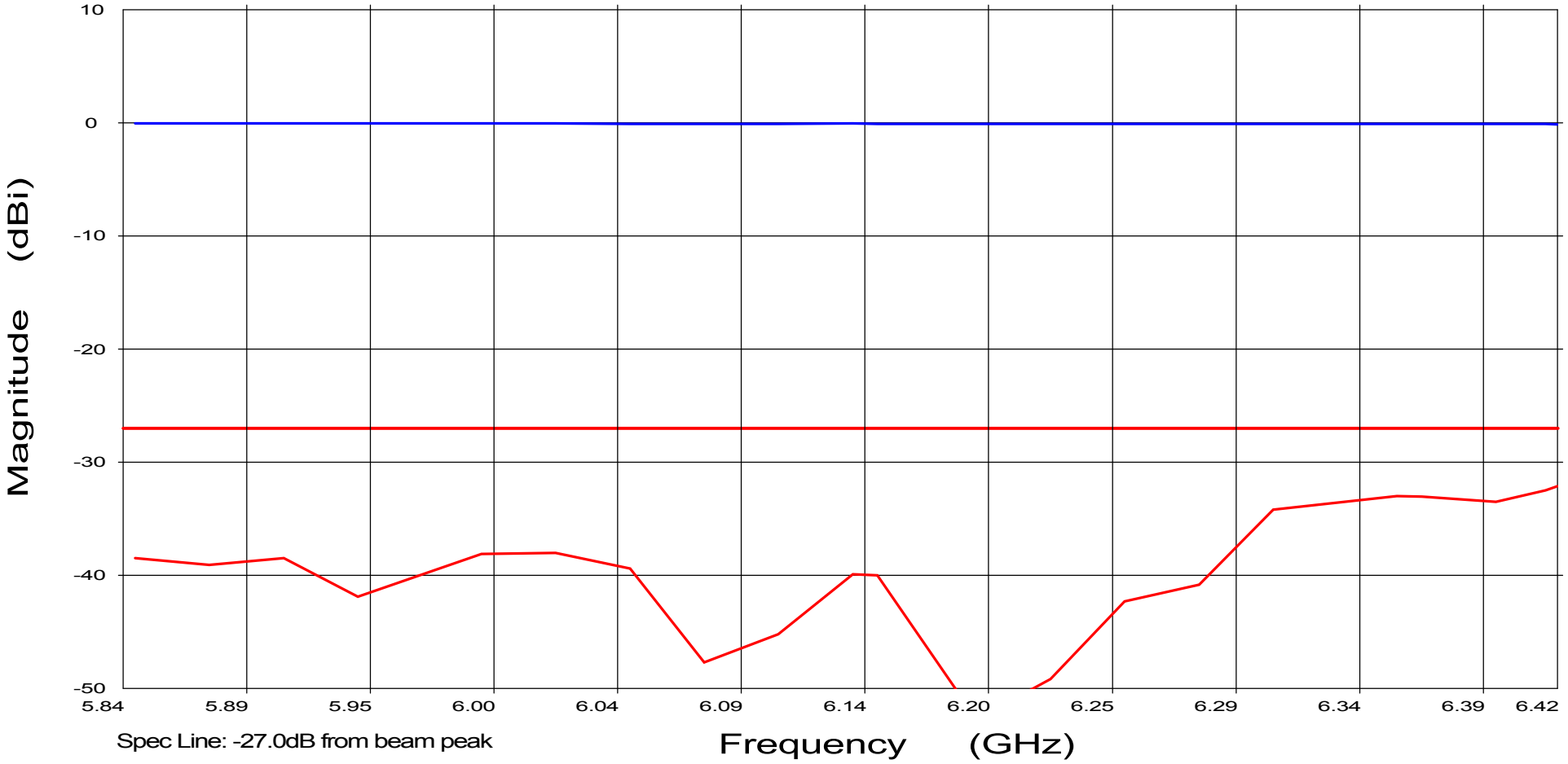
Prodelin Corporation
East Maiden Test Range
Maiden NC

Position # 4

General Dynamics
3.8 Meter Series 1385 Antenna System
C-Band Linear

Operator: Dwight B. Lutz
Ser. no.:
Channel: ch1 Tx pol: Horiz. Rx pol: Horiz.

Azimuth : 0.00 Deg
Elevation : 0.18 Deg



Spec Line: -27.0dB from beam peak

Overlays	Cal. file	table	channel	units
1770 12.dat-ant_under_test	1770 12.dat	SGA-70.	ch1	dBi
1770 16.dat-ant_under_test	1770 16.dat	SGA-70.	ch1	dBi

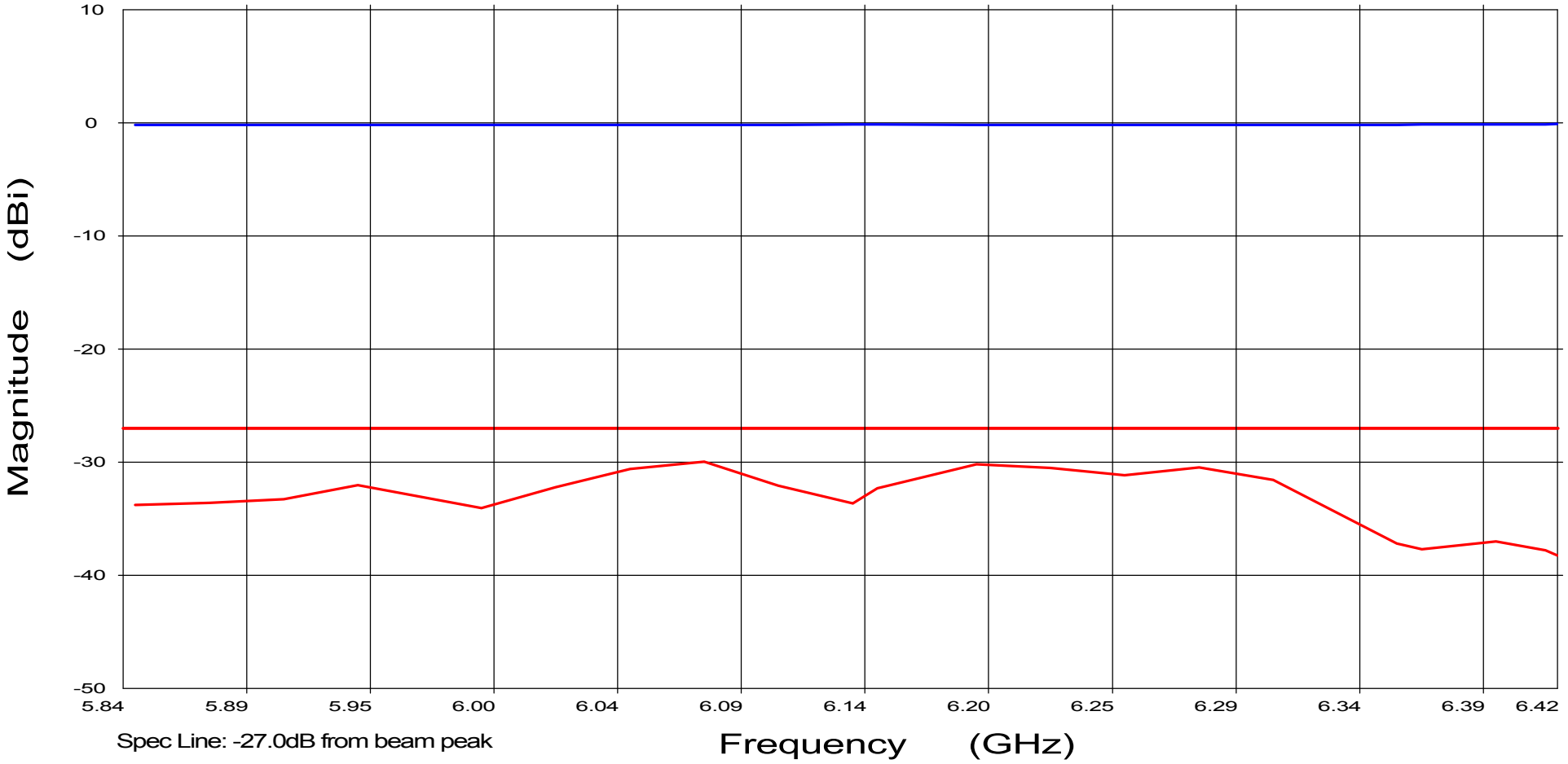
Prodelin Corporation
East Maiden Test Range
Maiden NC

Position # 5

General Dynamics
3.8 Meter Series 1385 Antenna System
C-Band Linear

Operator: Dwight B. Lutz
Ser. no.:
Channel: ch1 Tx pol: Horiz. Rx pol: Horiz.

Azimuth : -0.18 Deg
Elevation : 0.18 Deg



Spec Line: -27.0dB from beam peak

Overlays	Cal. file	table	channel	units
1770 12.dat-ant_under_test	1770 12.dat	SGA-70.	ch1	dBi
1770 16.dat-ant_under_test	1770 16.dat	SGA-70.	ch1	dBi

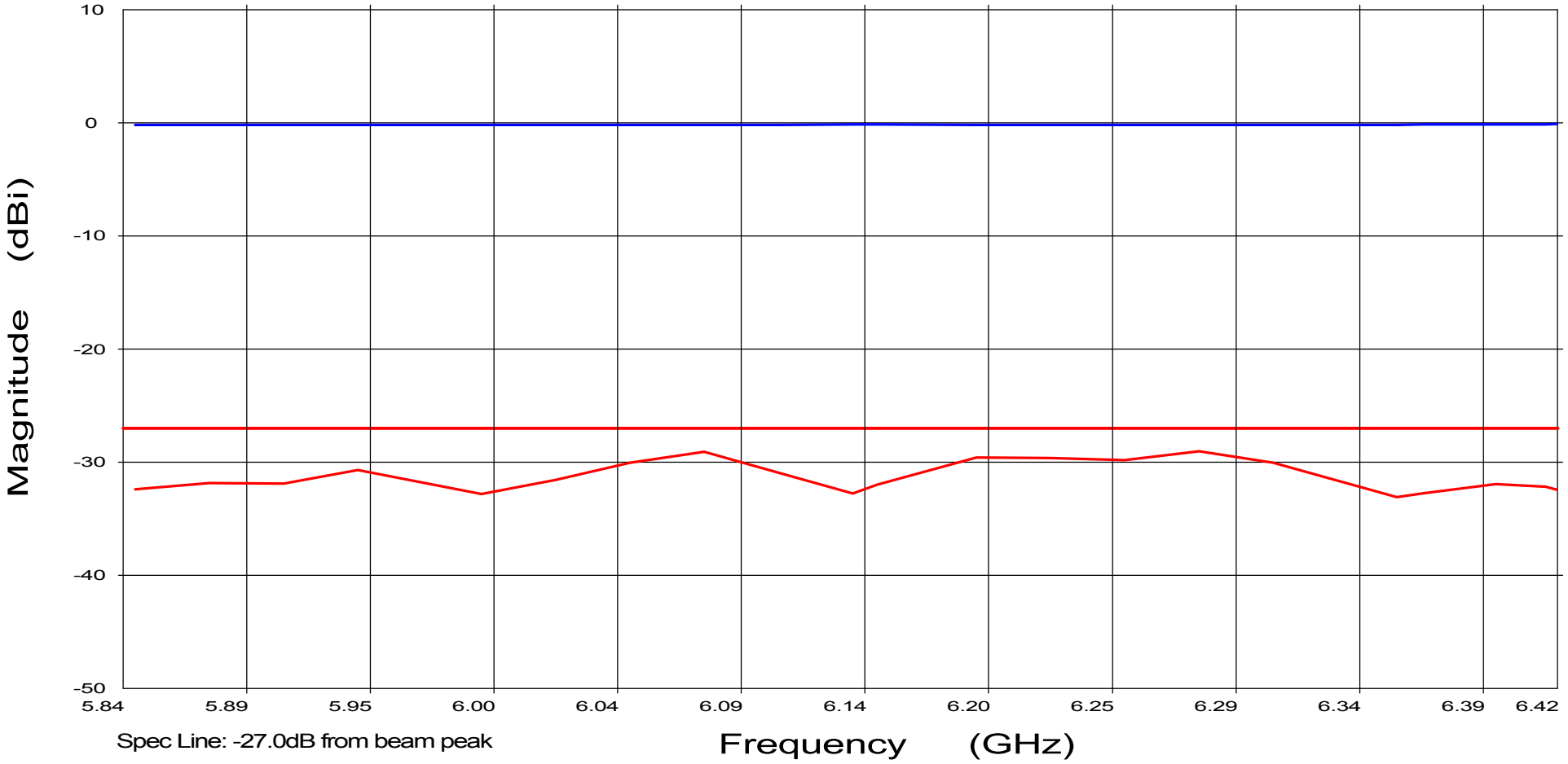
Prodelin Corporation
East Maiden Test Range
Maiden NC

Position # 6

General Dynamics
3.8 Meter Series 1385 Antenna System
C-Band Linear

Operator: Dwight B. Lutz
Ser. no.:
Channel: ch1 Tx pol: Horiz. Rx pol: Horiz.

Azimuth : -0.18 Deg
Elevation : 0.00 Deg



Spec Line: -27.0dB from beam peak

Overlays	Cal. file	table	channel	units
1770 12.dat-ant_under_test	1770 12.dat	SGA-70.	ch1	dBi
1770 13.dat-ant_under_test	1770 13.dat	SGA-70.	ch1	dBi

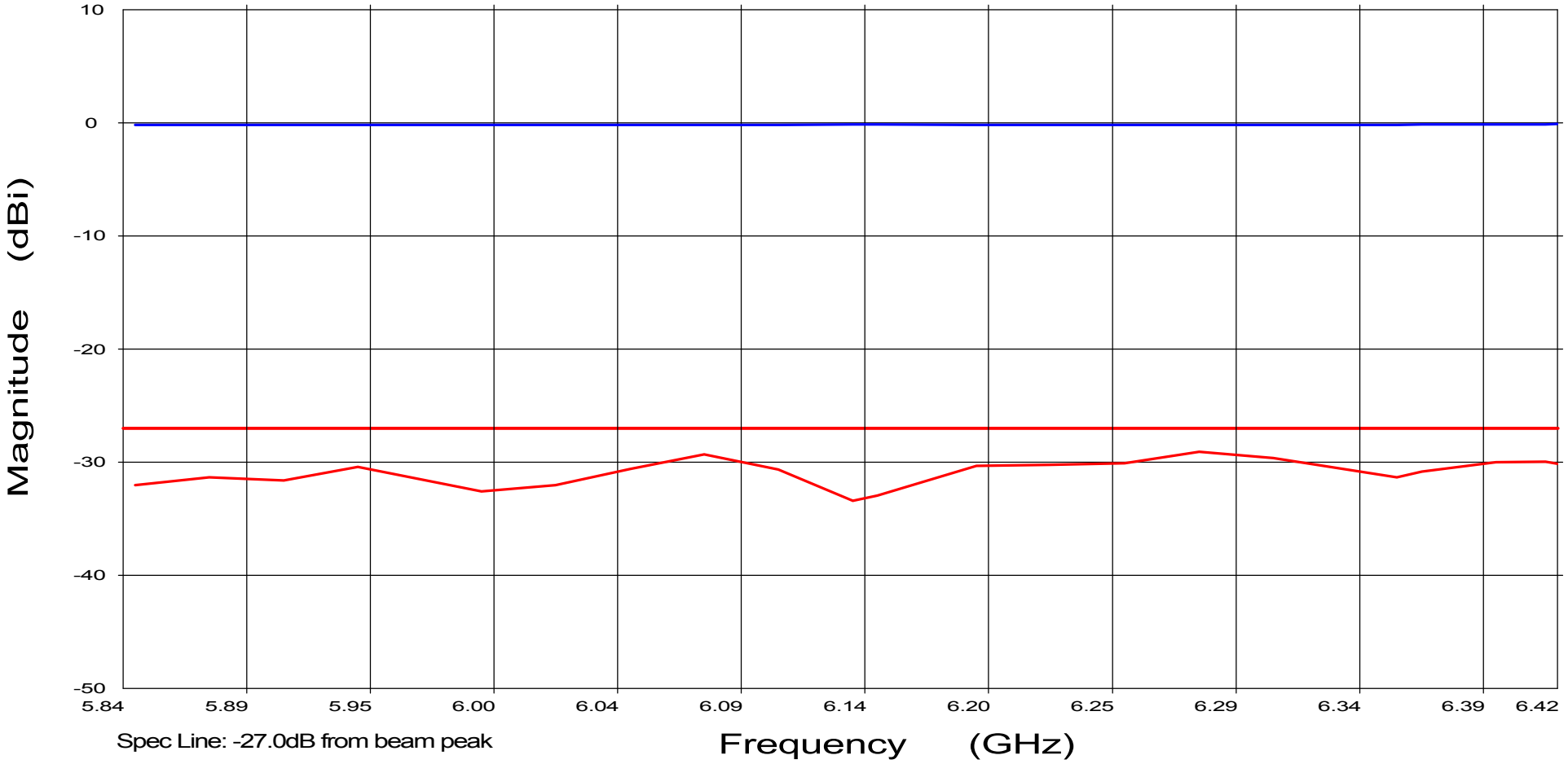
Prodelin Corporation
East Maiden Test Range
Maiden NC

Position # 7

General Dynamics
3.8 Meter Series 1385 Antenna System
C-Band Linear

Operator: Dwight B. Lutz
Ser. no.:
Channel: ch1 Tx pol: Horiz. Rx pol: Horiz.

Azimuth : -0.18 Deg
Elevation : -0.18 Deg



Spec Line: -27.0dB from beam peak

Overlays	Cal. file	table	channel	units
1770 12.dat-ant_under_test	1770 12.dat	SGA-70.	ch1	dBi
1770 15.dat-ant_under_test	1770 15.dat	SGA-70.	ch1	dBi

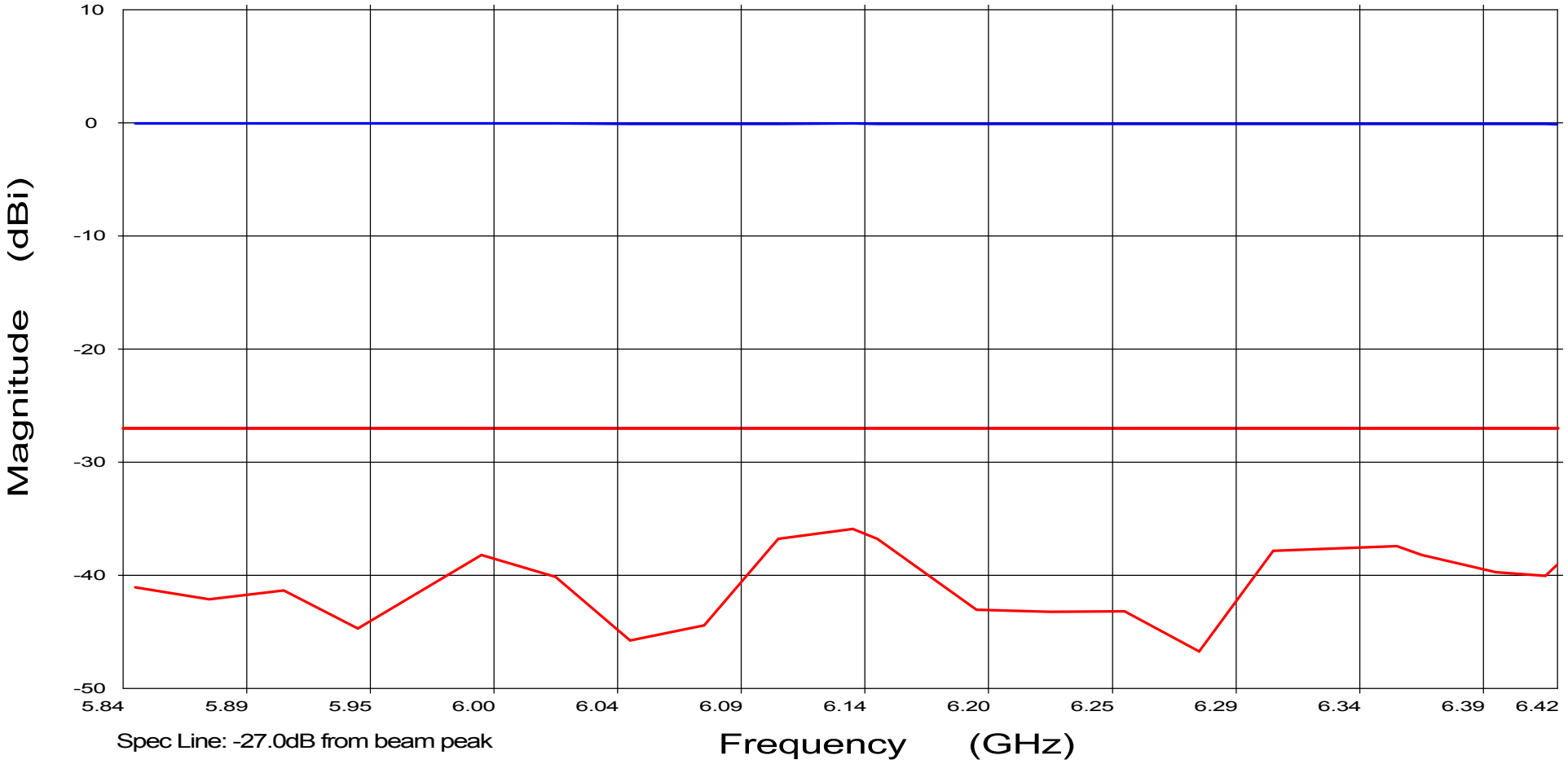
Prodelin Corporation
East Maiden Test Range
Maiden NC

Position # 8

General Dynamics
3.8 Meter Series 1385 Antenna System
C-Band Linear

Operator: Dwight B. Lutz
Ser. no.:
Channel: ch1 Tx pol: Horiz. Rx pol: Horiz.

Azimuth : 0.00 Deg
Elevation : -0.18 Deg



Spec Line: -27.0dB from beam peak

Overlays	Cal. file	table	channel	units
1770 12.dat-ant_under_test	1770 12.dat	SGA-70.	ch1	dBi
1770 15.dat-ant_under_test	1770 15.dat	SGA-70.	ch1	dBi

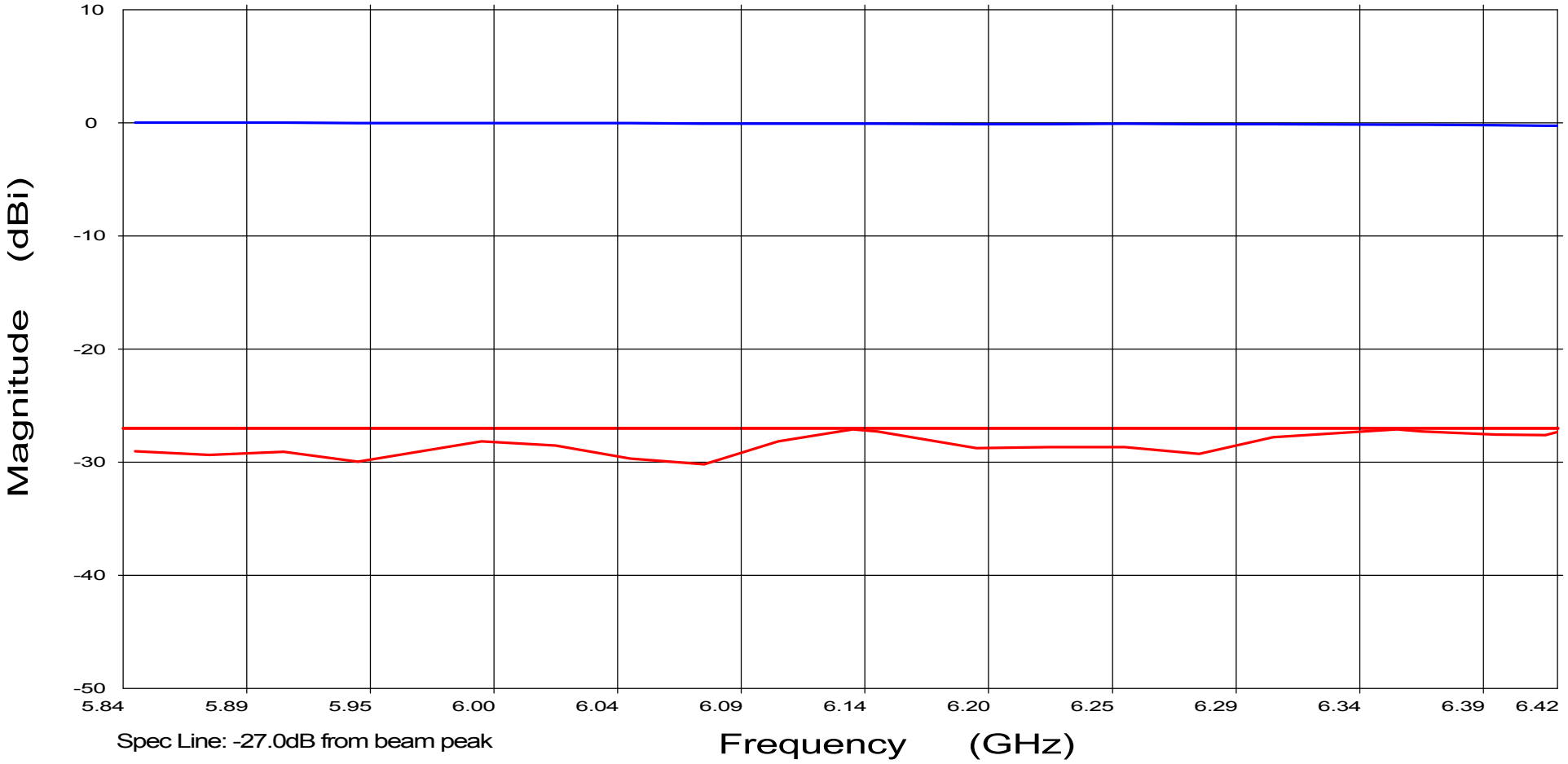
Prodelin Corporation
East Maiden Test Range
Maiden NC

Position # 9

General Dynamics
3.8 Meter Series 1385 Antenna System
C-Band Linear

Operator: Dwight B. Lutz
Ser. no.:
Channel: ch1 Tx pol: Horiz. Rx pol: Horiz.

Azimuth : 0.18 Deg
Elevation : -0.18 Deg



Spec Line: -27.0dB from beam peak

Overlays	Cal. file	table	channel	units
1770 12.dat-ant_under_test	1770 12.dat	SGA-70.	ch1	dBi
1770 15.dat-ant_under_test	1770 15.dat	SGA-70.	ch1	dBi

Prodelin Corporation
East Maiden Test Range
Maiden NC

3.0 Antenna Pattern Measurements

3.1 Vertical Polarization Transmit Close-in Patterns

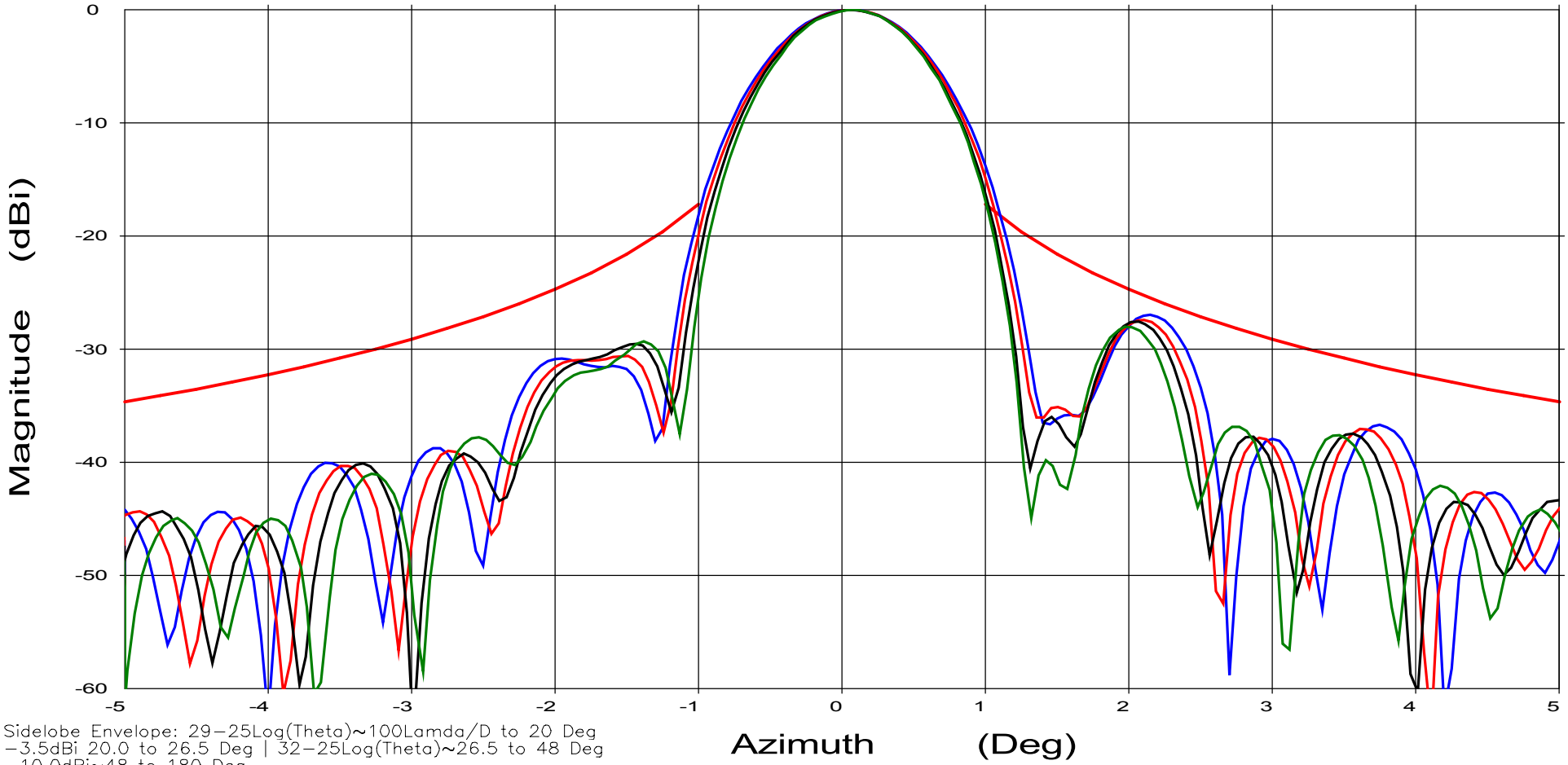
File: 1770 02.dat

General Dynamics
3.8 Meter Series 1385 Antenna System
C-Band Linear

Operator: Dwight B. Lutz
Ser. no.:
Channel: ch1 Tx pol: Vert. Rx pol: Vert.

Calibration status:
File: 1770 02.dat
Chan.: ch1
Table: SGA-70
Units: dBi

Frequency : See Legend



Sidelobe Envelope: 29−25Log(Theta)~100Lamda/D to 20 Deg
−3.5dBi 20.0 to 26.5 Deg | 32−25Log(Theta)~26.5 to 48 Deg
−10.0dBi~48 to 180 Deg

Overlays

		Beam Width @ 3 dB (Deg)	Beam Width @ 10 dB (Deg)
Frequency :	5.845 GHz	0.95	1.65
Frequency :	6.045 GHz	0.92	1.61
Frequency :	6.245 GHz	0.89	1.56
Frequency :	6.425 GHz	0.86	1.52

Prodelin Corporation
East Maiden Test Range
Maiden NC

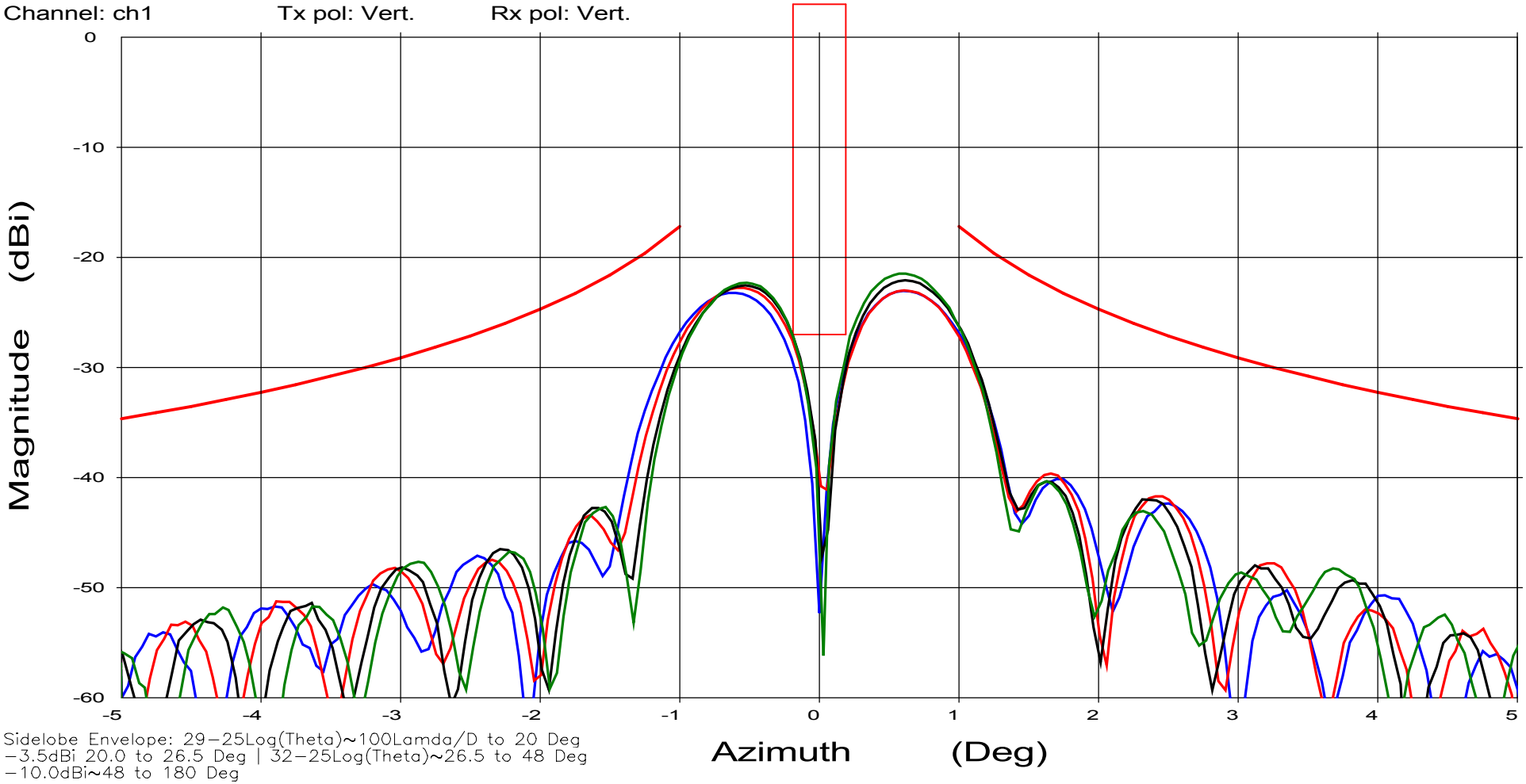
File: 1770 04.dat

General Dynamics
3.8 Meter Series 1385 Antenna System
C-Band Linear

Calibration status:
File: 1770 04.dat
Chan.: ch1
Table: SGA-70
Units: dBi

Frequency : See Legend

Operator: Dwight B. Lutz
Ser. no.:
Channel: ch1 Tx pol: Vert. Rx pol: Vert.



Sidelobe Envelope: 29−25Log(Theta)~100Lamda/D to 20 Deg
−3.5dBi 20.0 to 26.5 Deg | 32−25Log(Theta)~26.5 to 48 Deg
−10.0dBi~48 to 180 Deg

Overlays
Frequency : 5.845 GHz
Frequency : 6.045 GHz
Frequency : 6.245 GHz
Frequency : 6.425 GHz

Prodelin Corporation
East Maiden Test Range
Maiden NC

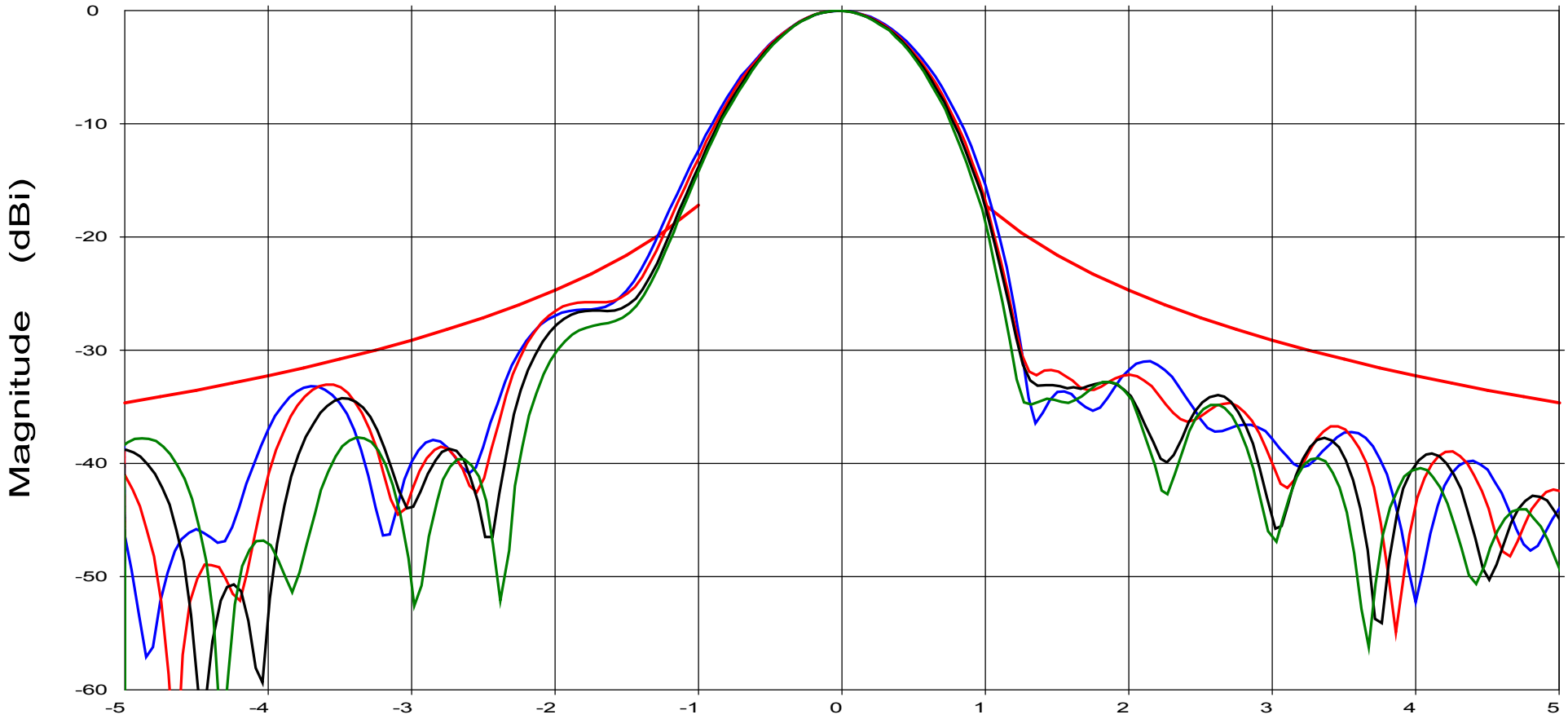
File: 1770 05.dat

General Dynamics
3.8 Meter Series 1385 Antenna System
C-Band Linear

Calibration status:
File: 1770 05.dat
Chan.: ch1
Table: SGA-70
Units: dBi

Frequency : See Legend

Operator: Dwight B. Lutz
Ser. no.:
Channel: ch1 Tx pol: Vert. Rx pol: Vert.



Sidelobe Envelope: 29−25Log(Theta)~100Lamda/D to 20 Deg
−3.5dBi 20.0 to 26.5 Deg | 32−25Log(Theta)~26.5 to 48 Deg
−10.0dBi~48 to 180 Deg

Overlays

		Beam Width @ 3 dB (Deg)	Beam Width @ 10 dB (Deg)
Frequency :	5.845 GHz	0.98	1.74
Frequency :	6.045 GHz	0.95	1.68
Frequency :	6.245 GHz	0.93	1.64
Frequency :	6.425 GHz	0.91	1.61

Prodelin Corporation
East Maiden Test Range
Maiden NC

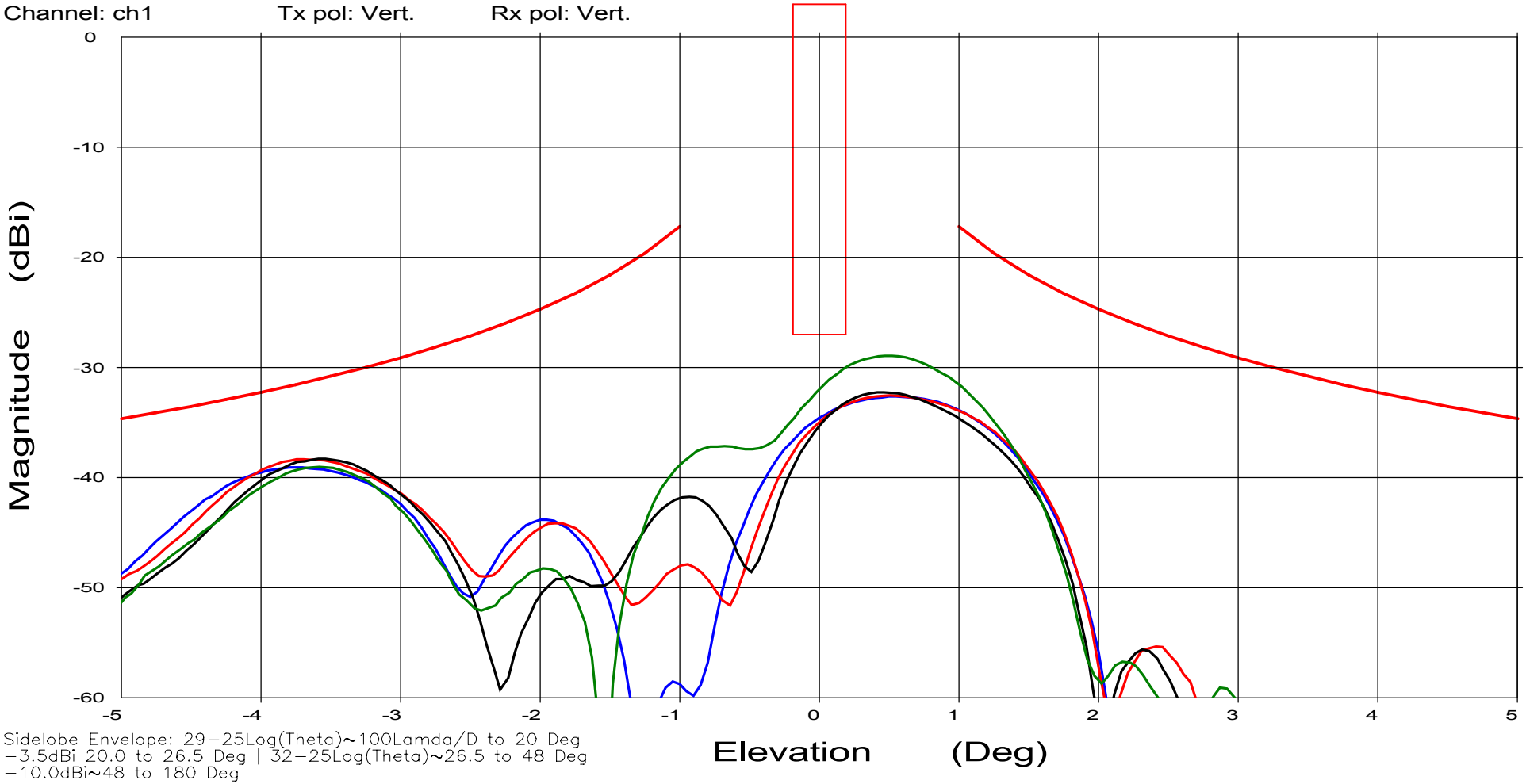
File: 1770 06.dat

General Dynamics
3.8 Meter Series 1385 Antenna System
C-Band Linear

Calibration status:
File: 1770 06.dat
Chan.: ch1
Table: SGA-70
Units: dBi

Frequency : See Legend

Operator: Dwight B. Lutz
Ser. no.:
Channel: ch1 Tx pol: Vert. Rx pol: Vert.



Sidelobe Envelope: 29−25Log(Theta)~100Lamda/D to 20 Deg
−3.5dBi 20.0 to 26.5 Deg | 32−25Log(Theta)~26.5 to 48 Deg
−10.0dBi~48 to 180 Deg

Overlays
Frequency : 5.845 GHz
Frequency : 6.045 GHz
Frequency : 6.245 GHz
Frequency : 6.425 GHz

Prodelin Corporation
East Maiden Test Range
Maiden NC

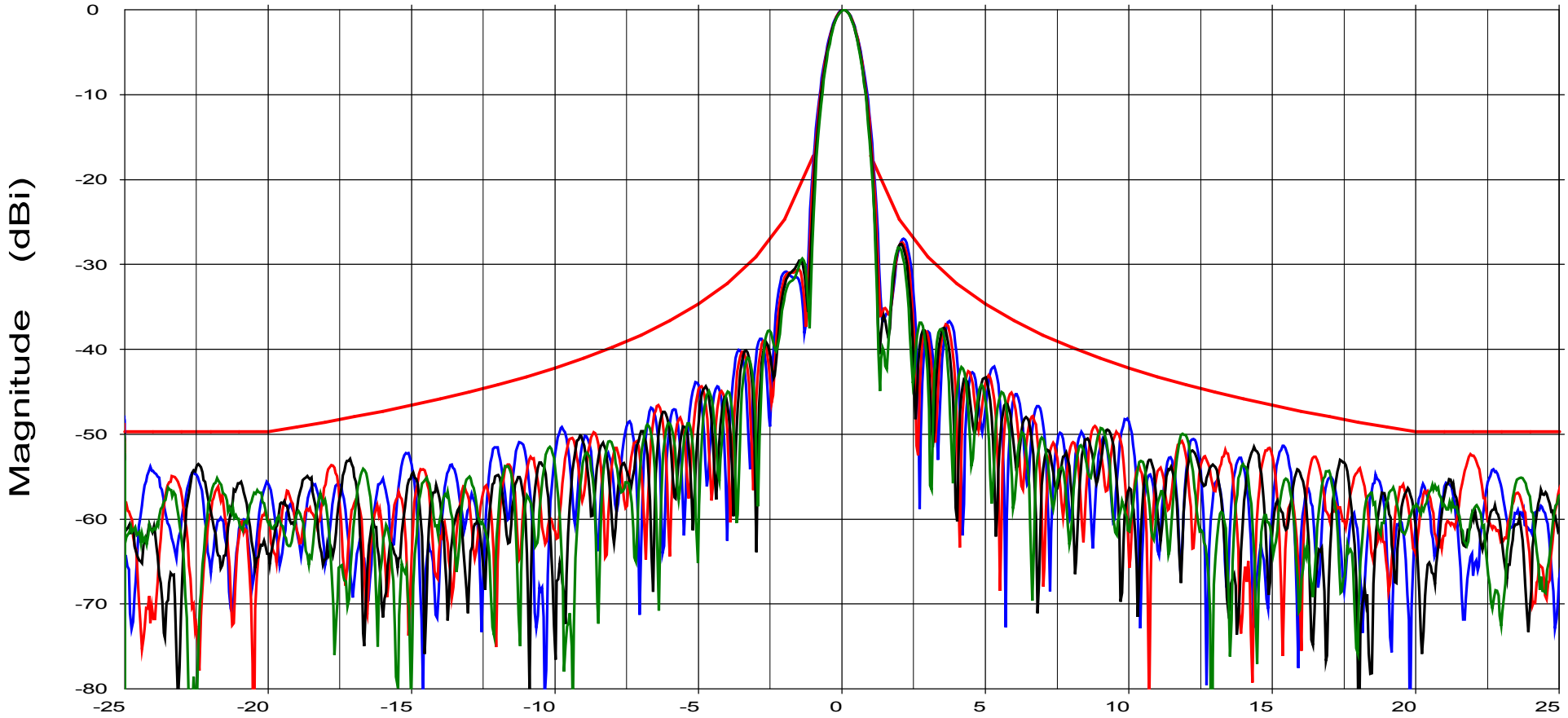
File: 1770 02.dat

General Dynamics
3.8 Meter Series 1385 Antenna System
C-Band Linear

Calibration status:
File: 1770 02.dat
Chan.: ch1
Table: SGA-70
Units: dBi

Frequency : See Legend

Operator: Dwight B. Lutz
Ser. no.:
Channel: ch1 Tx pol: Vert. Rx pol: Vert.



Sidelobe Envelope: 29−25Log(Theta)~100Lamda/D to 20 Deg
−3.5dBi 20.0 to 26.5 Deg | 32−25Log(Theta)~26.5 to 48 Deg
−10.0dBi~48 to 180 Deg

Overlays
Frequency : 5.845 GHz
Frequency : 6.045 GHz
Frequency : 6.245 GHz
Frequency : 6.425 GHz

Prodelin Corporation
East Maiden Test Range
Maiden NC

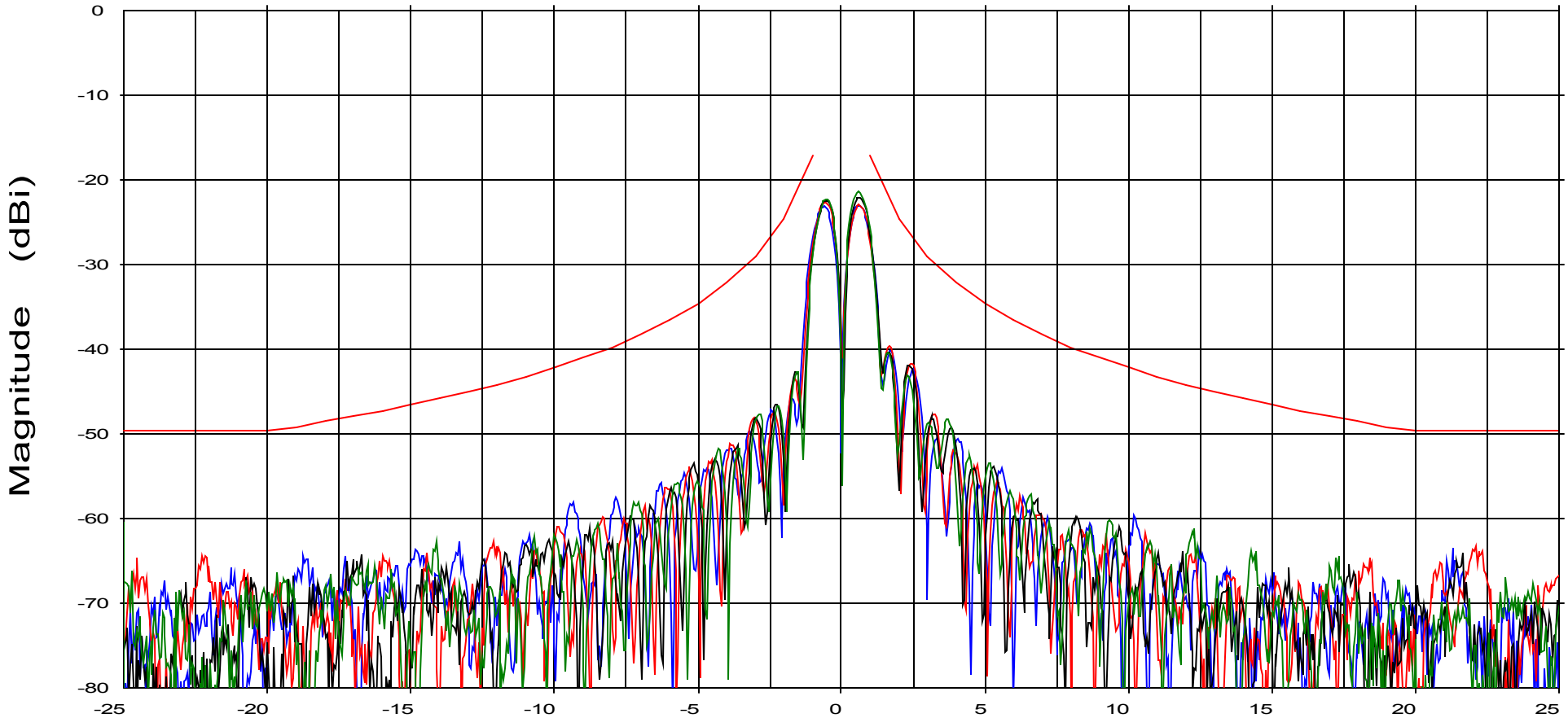
File: 1770 04.dat

General Dynamics
3.8 Meter Series 1385 Antenna System
C-Band Linear

Calibration status:
File: 1770 04.dat
Chan.: ch1
Table: SGA-70
Units: dBi

Frequency : See Legend

Operator: Dwight B. Lutz
Ser. no.:
Channel: ch1 Tx pol: Vert. Rx pol: Vert.



Sidelobe Envelope: 29-25Log(Theta)~100Lamda/D to 20 Deg
-3.5dBi 20.0 to 26.5 Deg | 32-25Log(Theta)~26.5 to 48 Deg
-10.0dBi~48 to 180 Deg

Overlays
Frequency : 5.845 GHz
Frequency : 6.045 GHz
Frequency : 6.245 GHz
Frequency : 6.425 GHz

Prodelin Corporation
East Maiden Test Range
Maiden NC

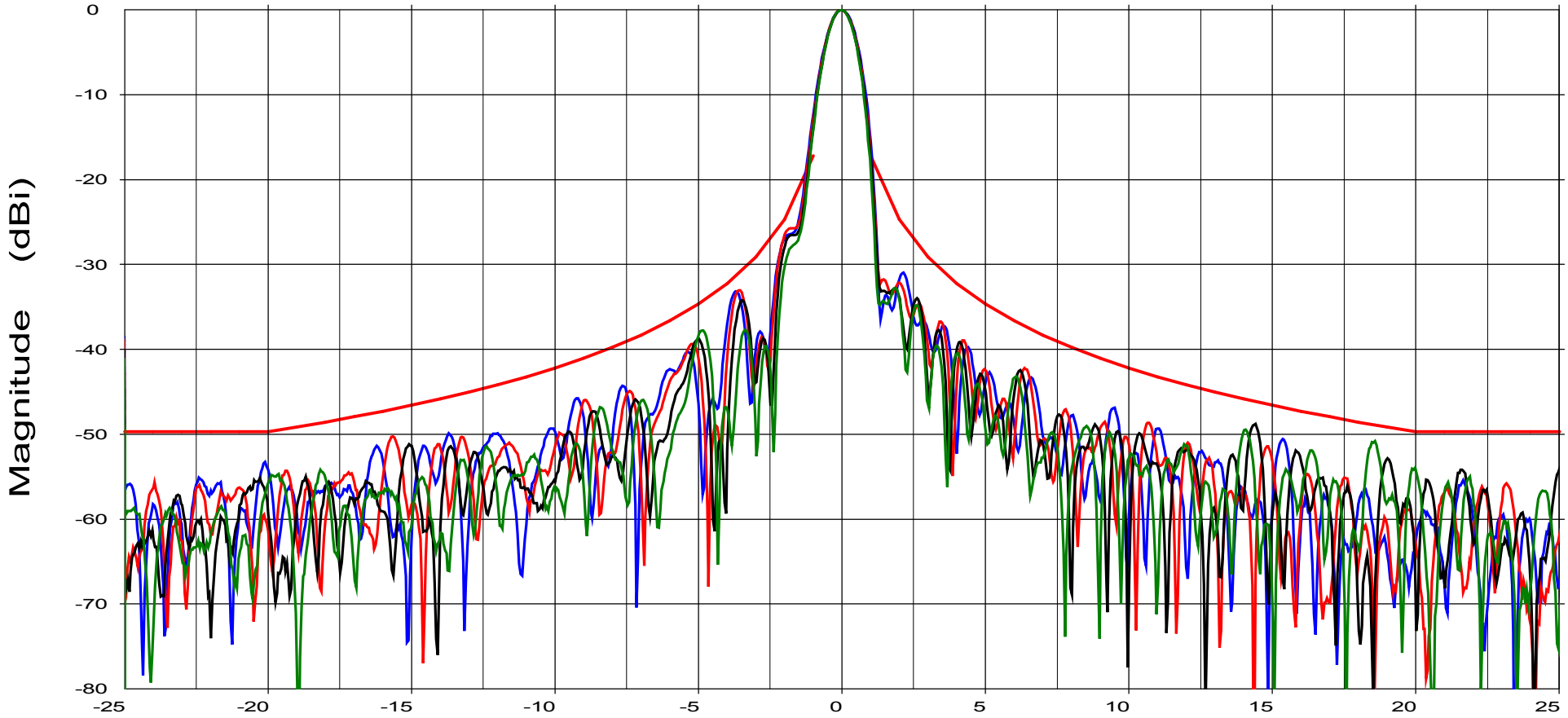
File: 1770 05.dat

General Dynamics
3.8 Meter Series 1385 Antenna System
C-Band Linear

Calibration status:
File: 1770 05.dat
Chan.: ch1
Table: SGA-70
Units: dBi

Frequency : See Legend

Operator: Dwight B. Lutz
Ser. no.:
Channel: ch1 Tx pol: Vert. Rx pol: Vert.



Sidelobe Envelope: 29−25Log(Theta)~100Lamda/D to 20 Deg
−3.5dBi 20.0 to 26.5 Deg | 32−25Log(Theta)~26.5 to 48 Deg
−10.0dBi~48 to 180 Deg

Overlays
Frequency : 5.845 GHz
Frequency : 6.045 GHz
Frequency : 6.245 GHz
Frequency : 6.425 GHz

Prodelin Corporation
East Maiden Test Range
Maiden NC

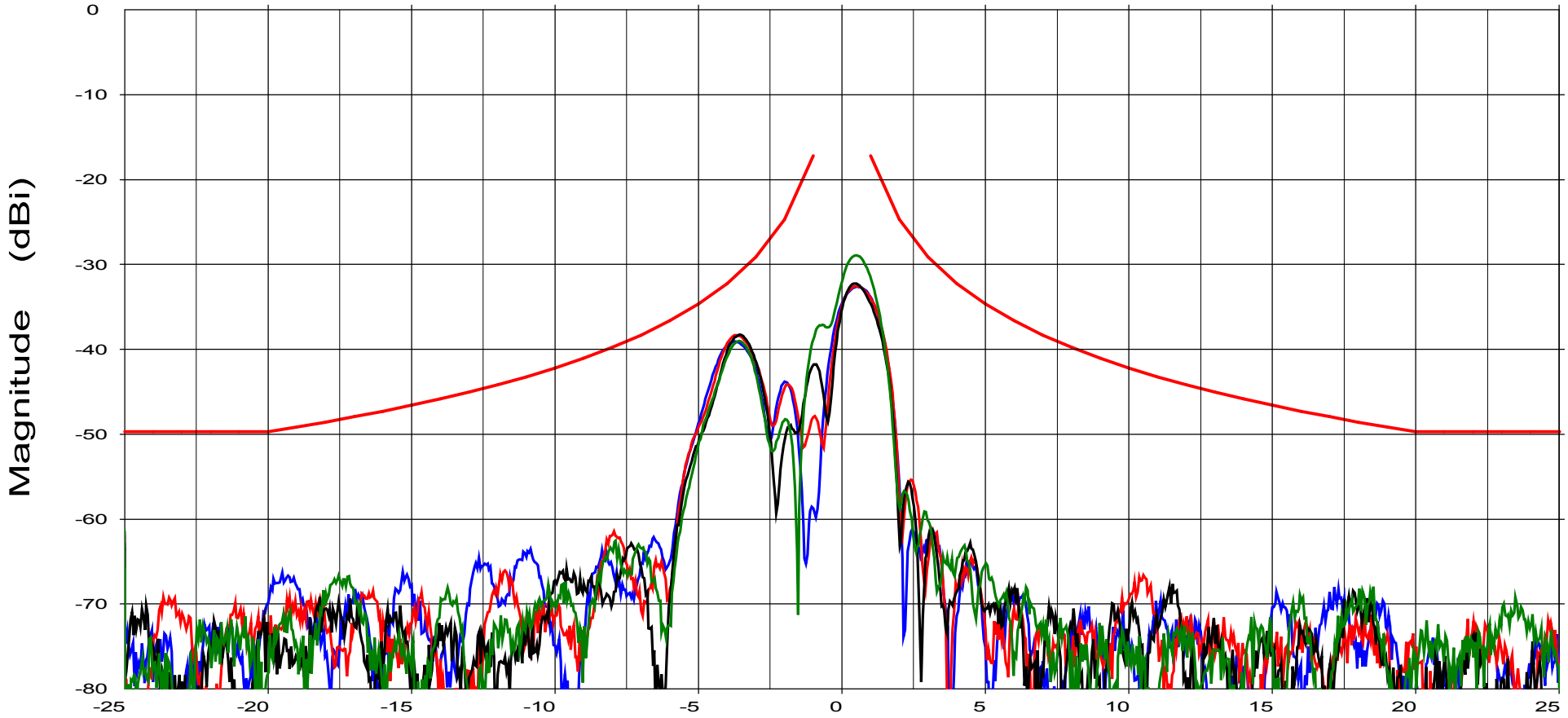
File: 1770 06.dat

General Dynamics
3.8 Meter Series 1385 Antenna System
C-Band Linear

Calibration status:
File: 1770 06.dat
Chan.: ch1
Table: SGA-70
Units: dBi

Frequency : See Legend

Operator: Dwight B. Lutz
Ser. no.:
Channel: ch1 Tx pol: Vert. Rx pol: Vert.



Sidelobe Envelope: 29−25Log(Theta)~100Lamda/D to 20 Deg
−3.5dBi 20.0 to 26.5 Deg | 32−25Log(Theta)~26.5 to 48 Deg
−10.0dBi~48 to 180 Deg

Overlays
Frequency : 5.845 GHz
Frequency : 6.045 GHz
Frequency : 6.245 GHz
Frequency : 6.425 GHz

Prodelin Corporation
East Maiden Test Range
Maiden NC

3.2 Vertical Polarization Transmit Wide Angle Patterns

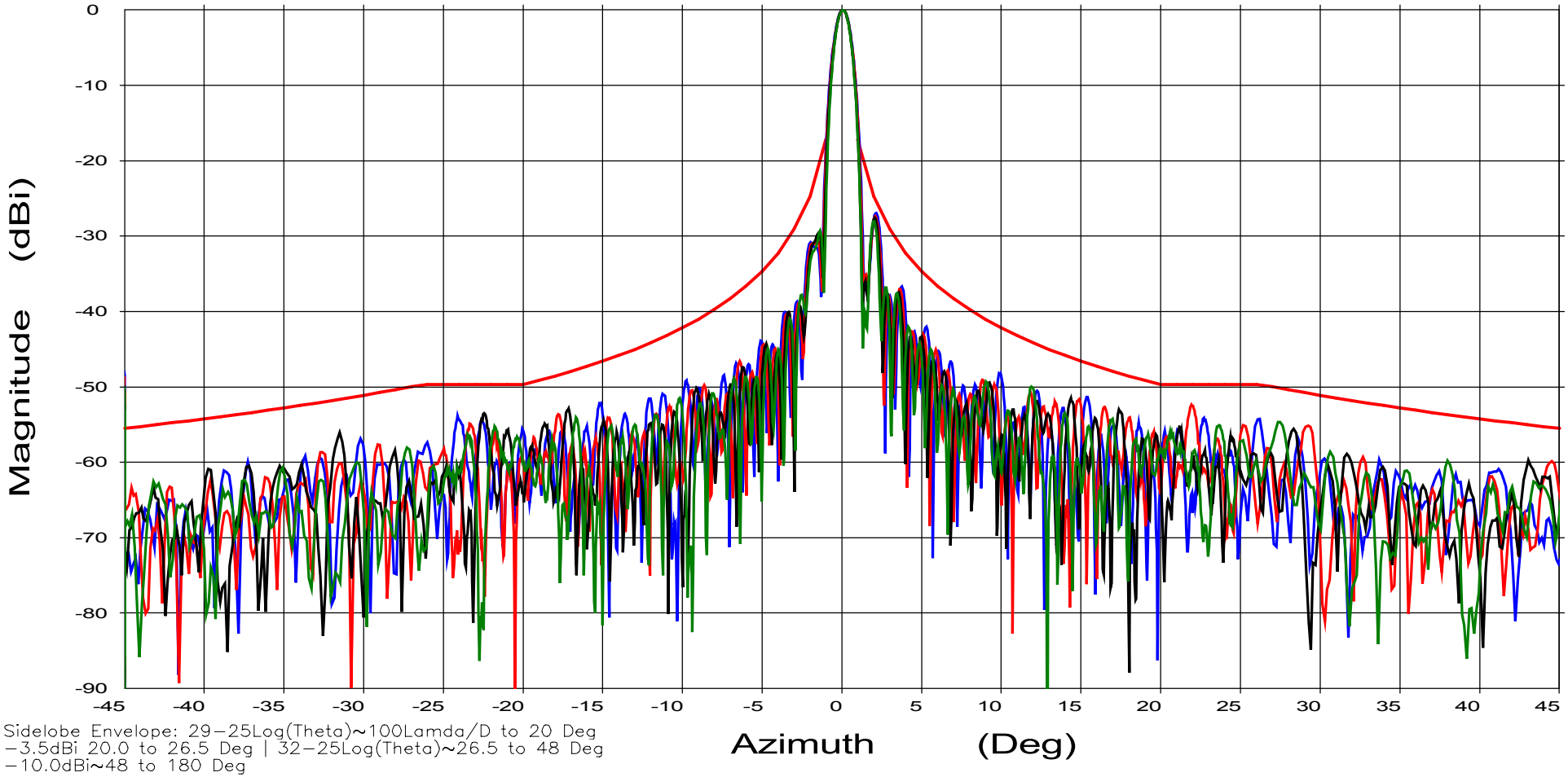
File: 1770 02.dat

General Dynamics
3.8 Meter Series 1385 Antenna System
C-Band Linear

Calibration status:
File: 1770 02.dat
Chan.: ch1
Table: SGA-70
Units: dBi

Frequency : See Legend

Operator: Dwight B. Lutz
Ser. no.:
Channel: ch1 Tx pol: Vert. Rx pol: Vert.



Sidelobe Envelope: 29−25Log(Theta)~100Lamda/D to 20 Deg
−3.5dBi 20.0 to 26.5 Deg | 32−25Log(Theta)~26.5 to 48 Deg
−10.0dBi~48 to 180 Deg

Overlays
Frequency : 5.845 GHz
Frequency : 6.045 GHz
Frequency : 6.245 GHz
Frequency : 6.425 GHz

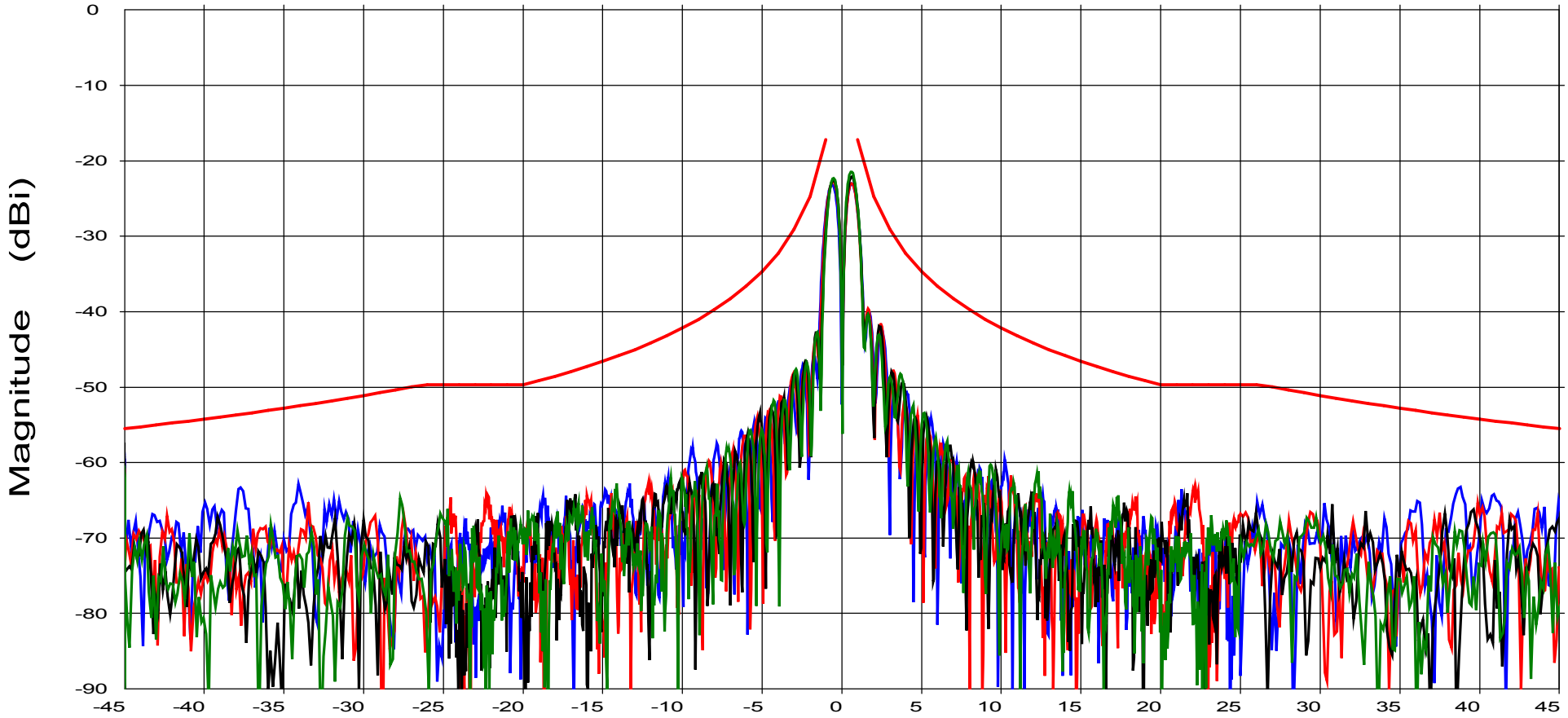
File: 1770 04.dat

General Dynamics
3.8 Meter Series 1385 Antenna System
C-Band Linear

Calibration status:
File: 1770 04.dat
Chan.: ch1
Table: SGA-70
Units: dBi

Frequency : See Legend

Operator: Dwight B. Lutz
Ser. no.:
Channel: ch1 Tx pol: Vert. Rx pol: Vert.



Sidelobe Envelope: 29−25Log(Theta)~100Lamda/D to 20 Deg
−3.5dBi 20.0 to 26.5 Deg | 32−25Log(Theta)~26.5 to 48 Deg
−10.0dBi~48 to 180 Deg

Overlays
Frequency : 5.845 GHz
Frequency : 6.045 GHz
Frequency : 6.245 GHz
Frequency : 6.425 GHz

Prodelin Corporation
East Maiden Test Range
Maiden NC

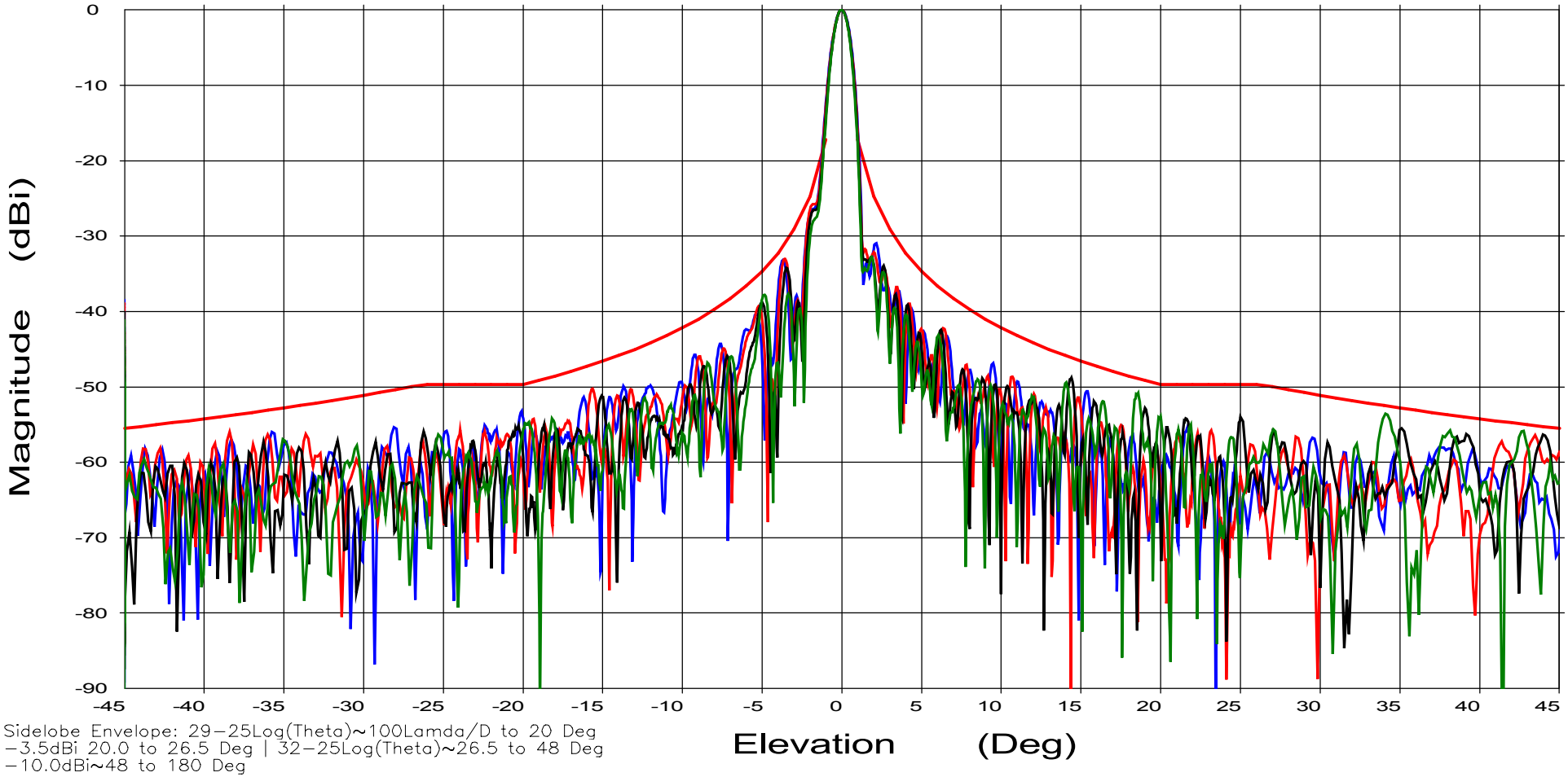
File: 1770 05.dat

General Dynamics
3.8 Meter Series 1385 Antenna System
C-Band Linear

Calibration status:
File: 1770 05.dat
Chan.: ch1
Table: SGA-70
Units: dBi

Frequency : See Legend

Operator: Dwight B. Lutz
Ser. no.:
Channel: ch1 Tx pol: Vert. Rx pol: Vert.



Sidelobe Envelope: 29−25Log(Theta)~100Lamda/D to 20 Deg
−3.5dBi 20.0 to 26.5 Deg | 32−25Log(Theta)~26.5 to 48 Deg
−10.0dBi~48 to 180 Deg

Overlays
Frequency : 5.845 GHz
Frequency : 6.045 GHz
Frequency : 6.245 GHz
Frequency : 6.425 GHz

Prodelin Corporation
East Maiden Test Range
Maiden NC

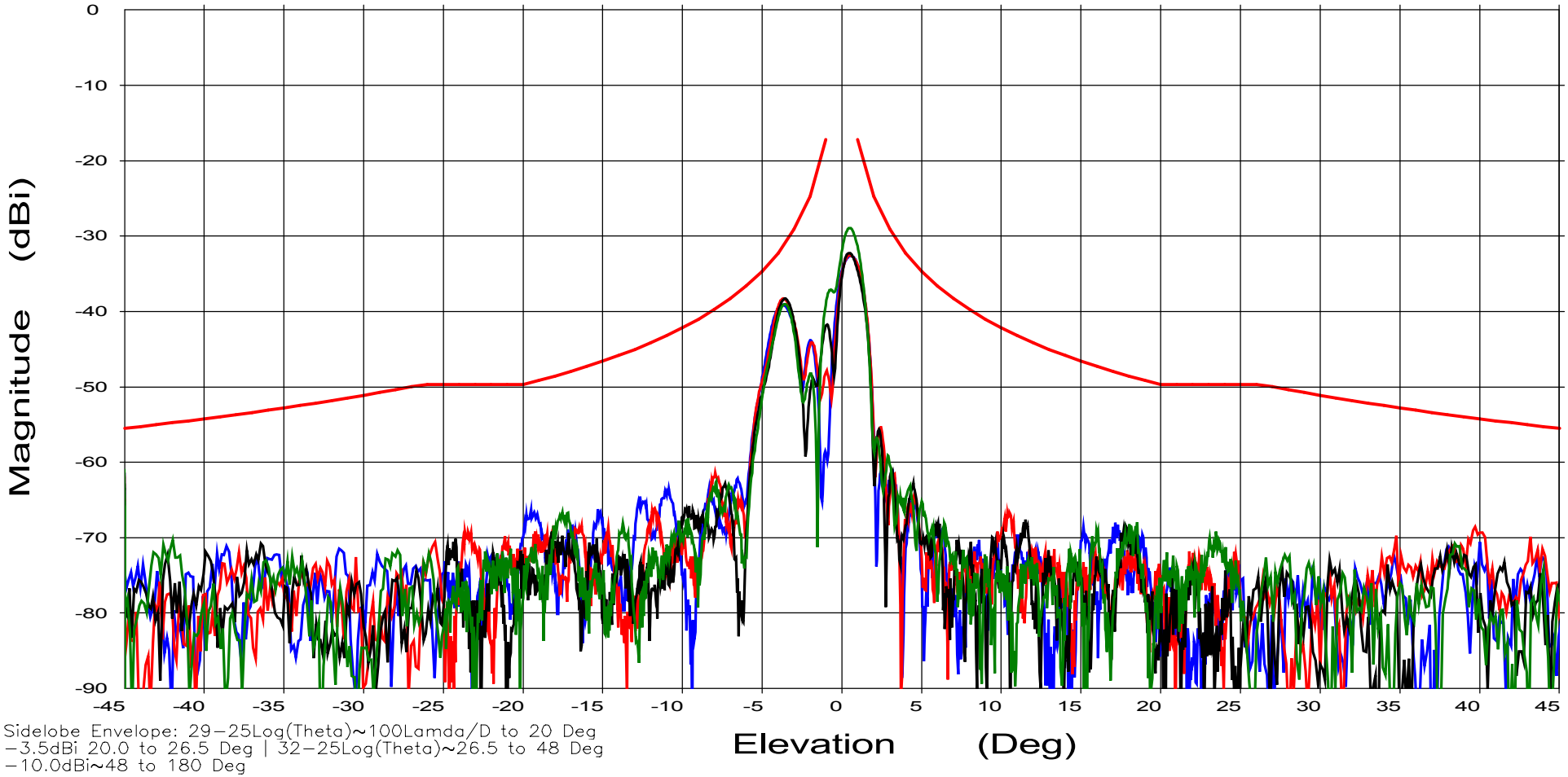
File: 1770 06.dat

General Dynamics
3.8 Meter Series 1385 Antenna System
C-Band Linear

Calibration status:
File: 1770 06.dat
Chan.: ch1
Table: SGA-70
Units: dBi

Frequency : See Legend

Operator: Dwight B. Lutz
Ser. no.:
Channel: ch1 Tx pol: Vert. Rx pol: Vert.



Sidelobe Envelope: 29−25Log(Theta)~100Lamda/D to 20 Deg
−3.5dBi 20.0 to 26.5 Deg | 32−25Log(Theta)~26.5 to 48 Deg
−10.0dBi~48 to 180 Deg

Overlays
Frequency : 5.845 GHz
Frequency : 6.045 GHz
Frequency : 6.245 GHz
Frequency : 6.425 GHz

Prodelin Corporation
East Maiden Test Range
Maiden NC

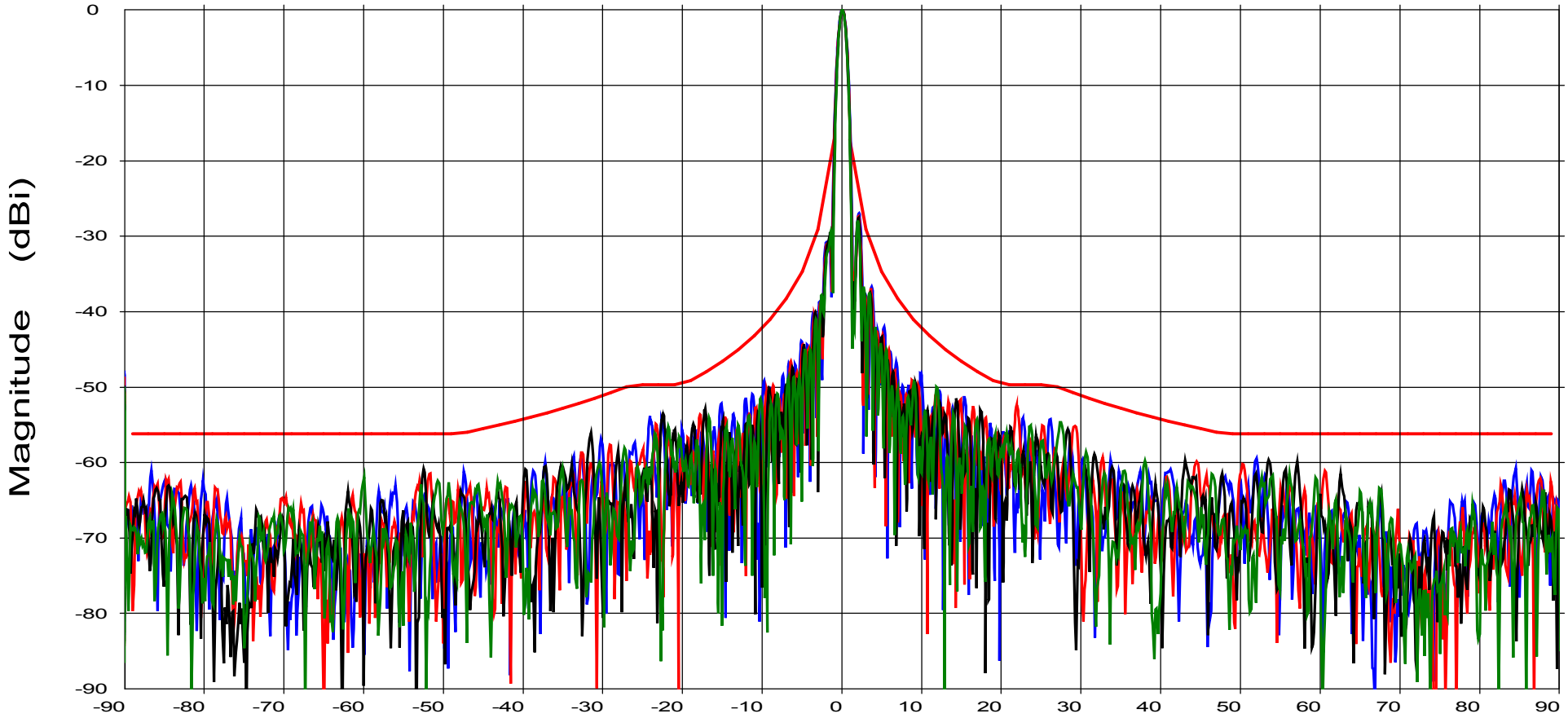
File: 1770 02.dat

General Dynamics
3.8 Meter Series 1385 Antenna System
C-Band Linear

Calibration status:
File: 1770 02.dat
Chan.: ch1
Table: SGA-70
Units: dBi

Frequency : See Legend

Operator: Dwight B. Lutz
Ser. no.:
Channel: ch1 Tx pol: Vert. Rx pol: Vert.



Sidelobe Envelope: 29−25Log(Theta)~100Lamda/D to 20 Deg
−3.5dBi 20.0 to 26.5 Deg | 32−25Log(Theta)~26.5 to 48 Deg
−10.0dBi~48 to 180 Deg

Overlays
Frequency : 5.845 GHz
Frequency : 6.045 GHz
Frequency : 6.245 GHz
Frequency : 6.425 GHz

Prodelin Corporation
East Maiden Test Range
Maiden NC

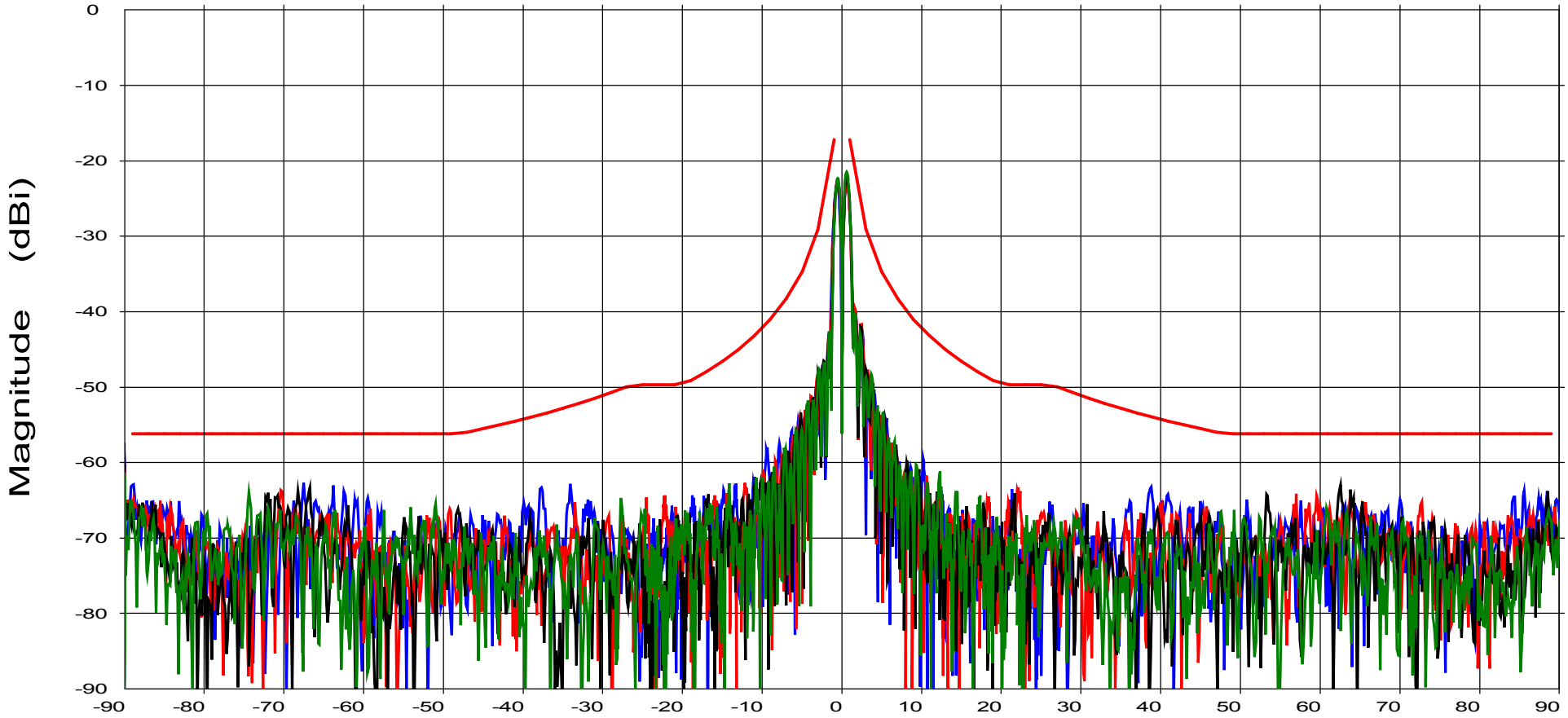
File: 1770 04.dat

General Dynamics
3.8 Meter Series 1385 Antenna System
C-Band Linear

Calibration status:
File: 1770 04.dat
Chan.: ch1
Table: SGA-70
Units: dBi

Frequency : See Legend

Operator: Dwight B. Lutz
Ser. no.:
Channel: ch1 Tx pol: Vert. Rx pol: Vert.



Sidelobe Envelope: 29−25Log(Theta)~100Lamda/D to 20 Deg
−3.5dBi 20.0 to 26.5 Deg | 32−25Log(Theta)~26.5 to 48 Deg
−10.0dBi~48 to 180 Deg

Overlays
Frequency : 5.845 GHz
Frequency : 6.045 GHz
Frequency : 6.245 GHz
Frequency : 6.425 GHz

Prodelin Corporation
East Maiden Test Range
Maiden NC

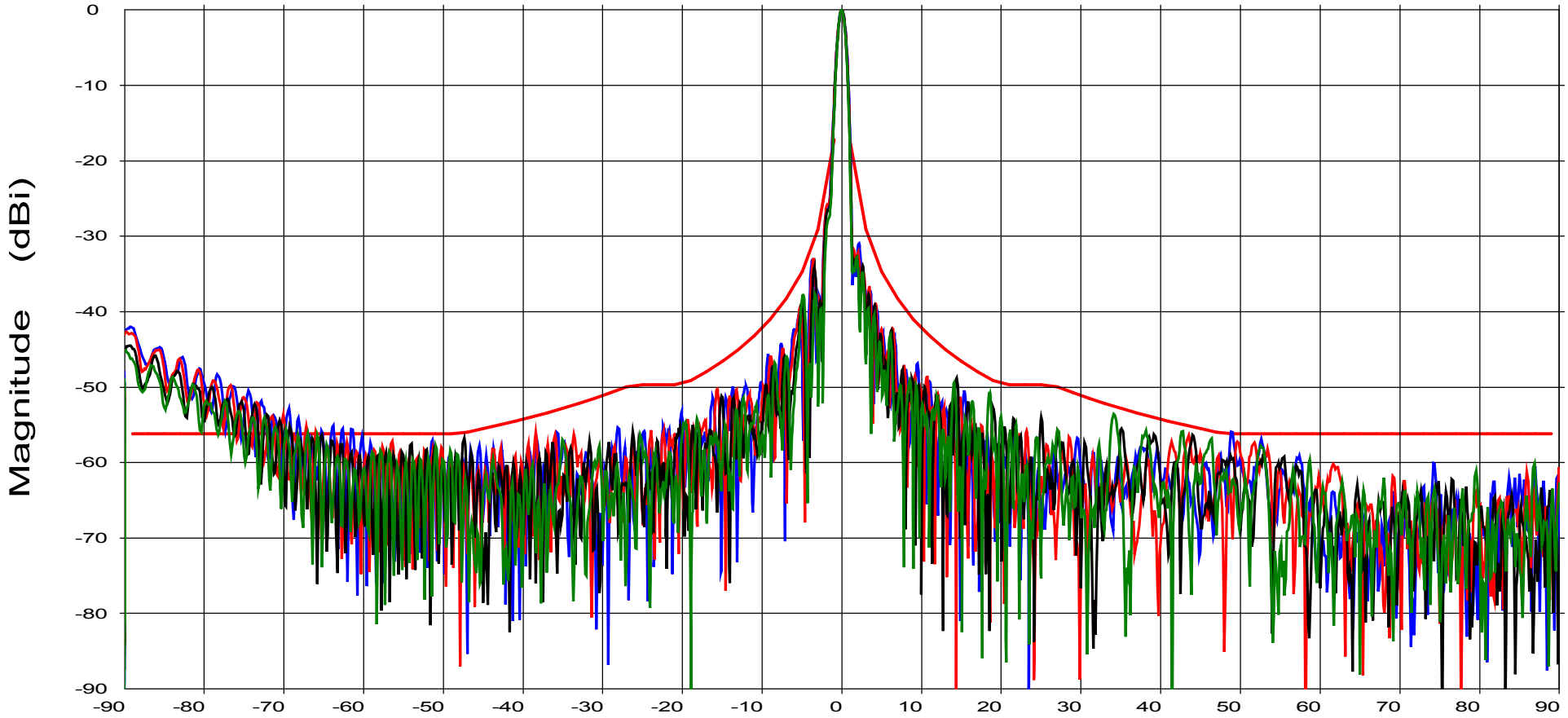
File: 1770 05.dat

General Dynamics
3.8 Meter Series 1385 Antenna System
C-Band Linear

Calibration status:
File: 1770 05.dat
Chan.: ch1
Table: SGA-70
Units: dBi

Frequency : See Legend

Operator: Dwight B. Lutz
Ser. no.:
Channel: ch1 Tx pol: Vert. Rx pol: Vert.



Sidelobe Envelope: 29−25Log(Theta)~100Lamda/D to 20 Deg
−3.5dBi 20.0 to 26.5 Deg | 32−25Log(Theta)~26.5 to 48 Deg
−10.0dBi~48 to 180 Deg

Overlays
Frequency : 5.845 GHz
Frequency : 6.045 GHz
Frequency : 6.245 GHz
Frequency : 6.425 GHz

Prodelin Corporation
East Maiden Test Range
Maiden NC

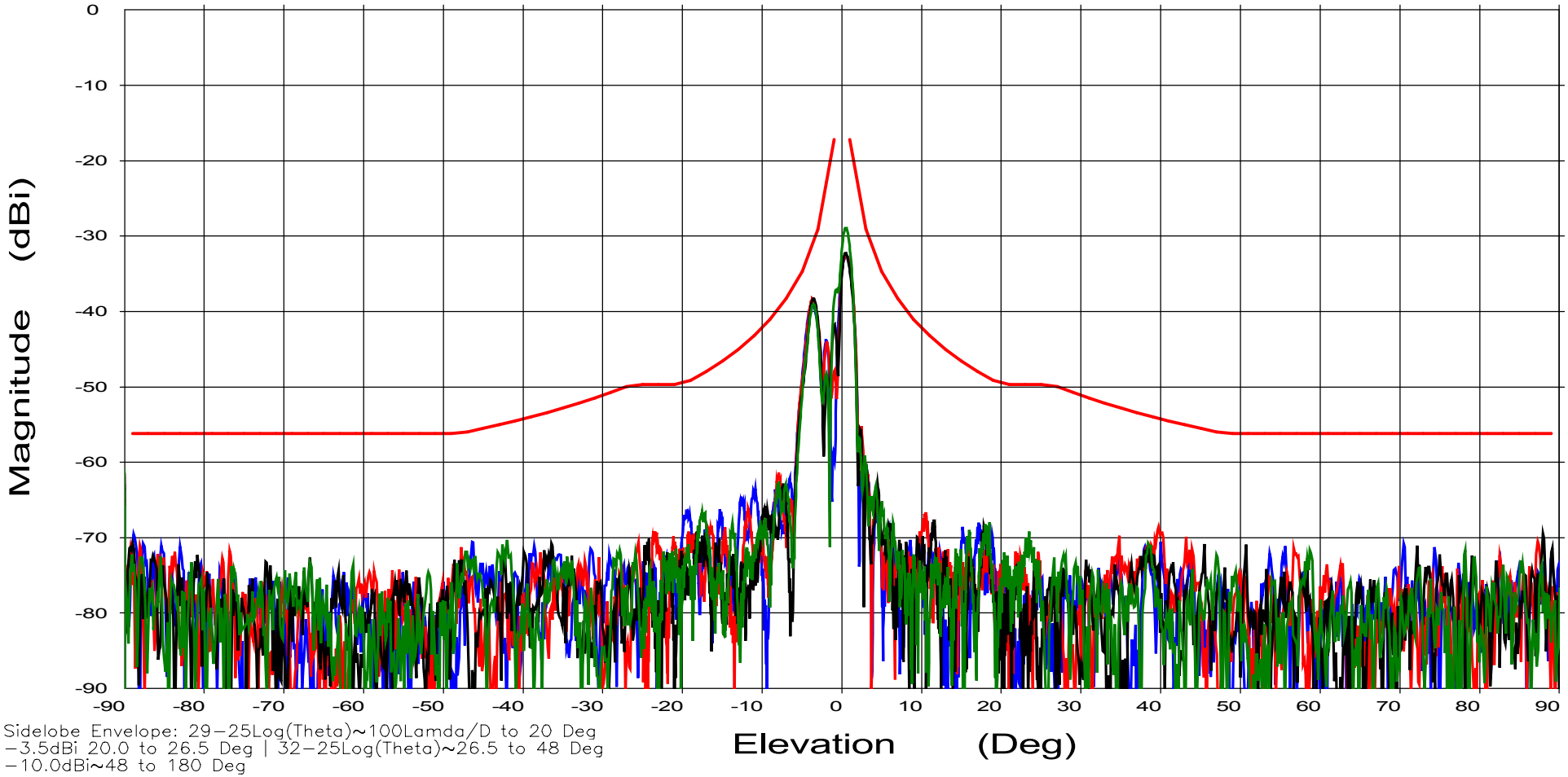
File: 1770 06.dat

General Dynamics
3.8 Meter Series 1385 Antenna System
C-Band Linear

Calibration status:
File: 1770 06.dat
Chan.: ch1
Table: SGA-70
Units: dBi

Frequency : See Legend

Operator: Dwight B. Lutz
Ser. no.:
Channel: ch1 Tx pol: Vert. Rx pol: Vert.



Sidelobe Envelope: 29−25Log(Theta)~100Lamda/D to 20 Deg
−3.5dBi 20.0 to 26.5 Deg | 32−25Log(Theta)~26.5 to 48 Deg
−10.0dBi~48 to 180 Deg

Overlays
Frequency : 5.845 GHz
Frequency : 6.045 GHz
Frequency : 6.245 GHz
Frequency : 6.425 GHz

Prodelin Corporation
East Maiden Test Range
Maiden NC

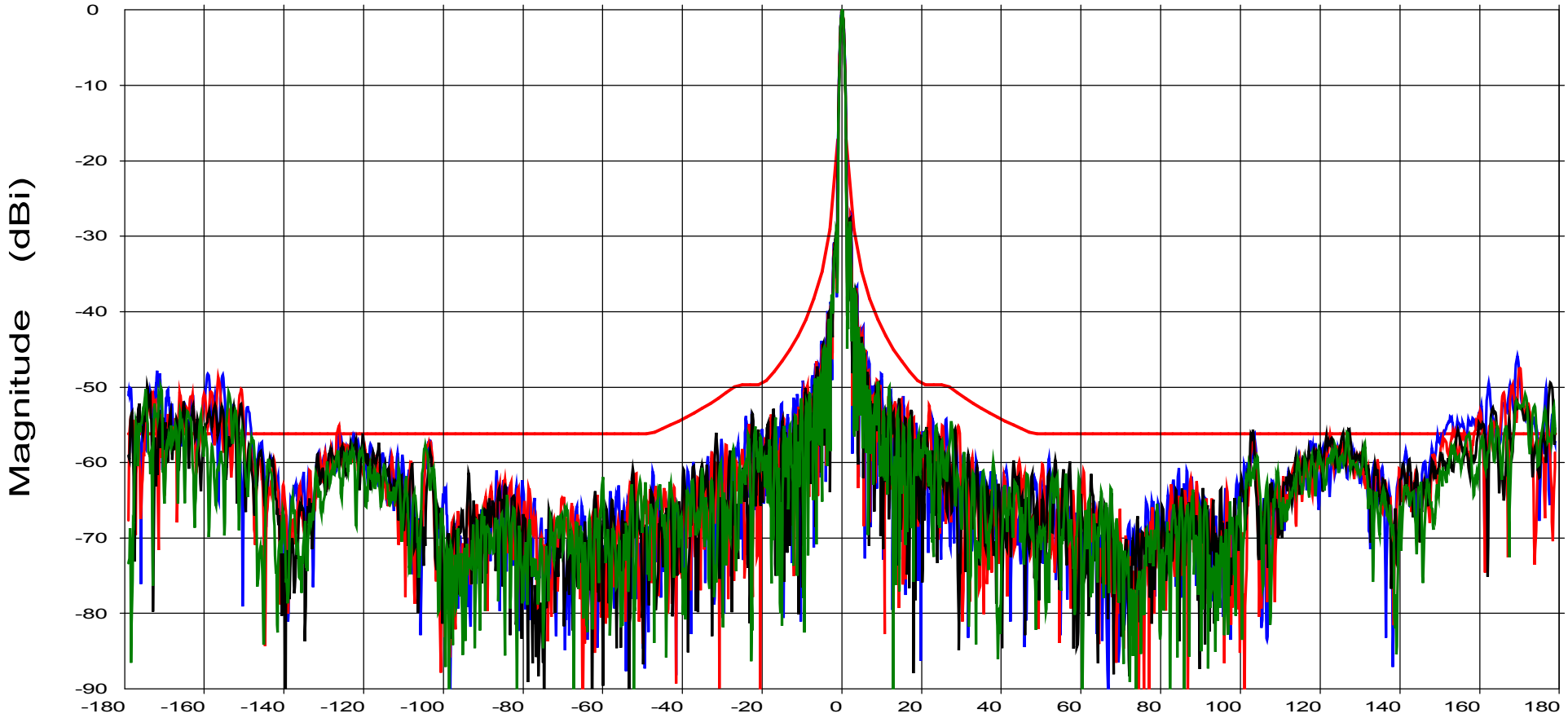
File: 1770 02.dat

General Dynamics
3.8 Meter Series 1385 Antenna System
C-Band Linear

Calibration status:
File: 1770 02.dat
Chan.: ch1
Table: SGA-70
Units: dBi

Frequency : See Legend

Operator: Dwight B. Lutz
Ser. no.:
Channel: ch1 Tx pol: Vert. Rx pol: Vert.



Sidelobe Envelope: 29−25Log(Theta)~100Lamda/D to 20 Deg
−3.5dBi 20.0 to 26.5 Deg | 32−25Log(Theta)~26.5 to 48 Deg
−10.0dBi~48 to 180 Deg

Overlays
Frequency : 5.845 GHz
Frequency : 6.045 GHz
Frequency : 6.245 GHz
Frequency : 6.425 GHz

Prodelin Corporation
East Maiden Test Range
Maiden NC

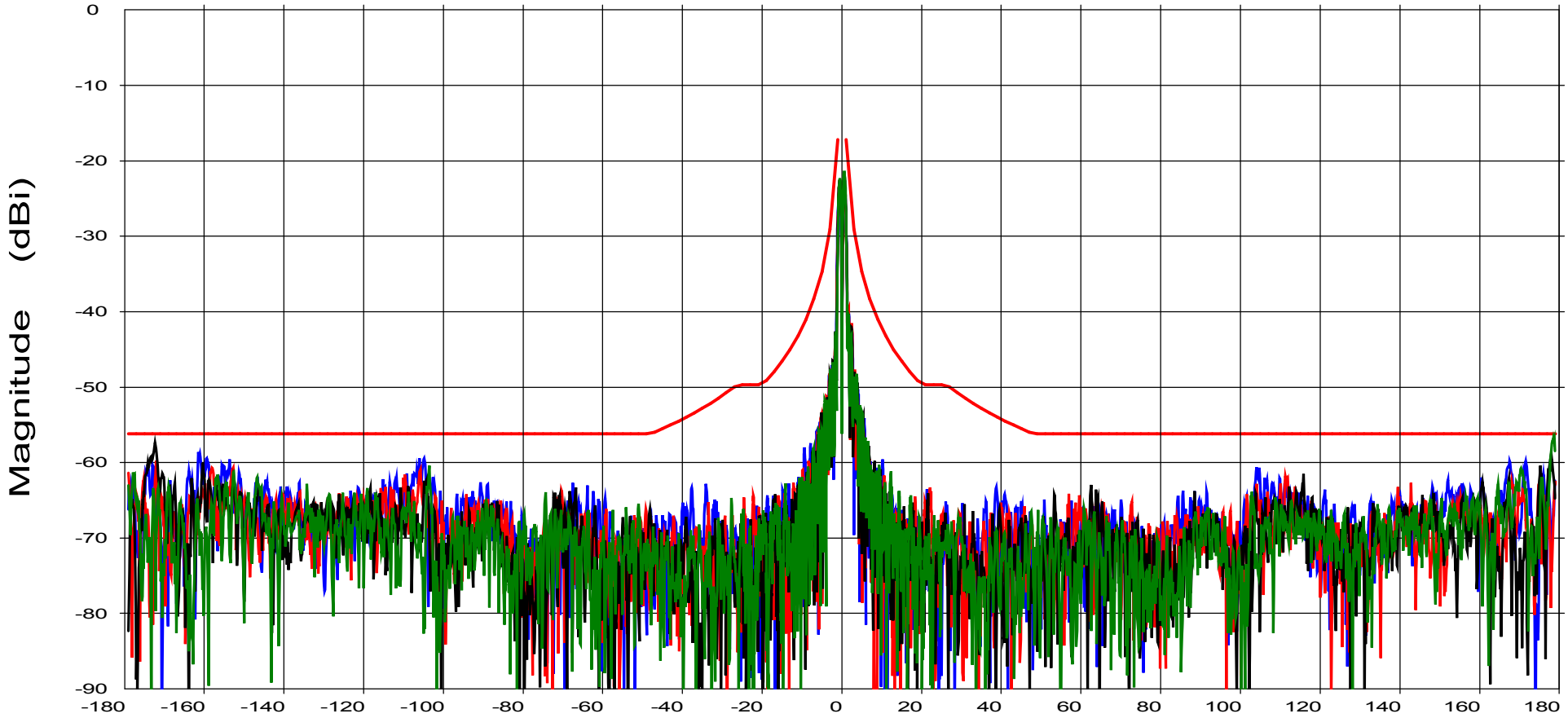
File: 1770 04.dat

General Dynamics
3.8 Meter Series 1385 Antenna System
C-Band Linear

Calibration status:
File: 1770 04.dat
Chan.: ch1
Table: SGA-70
Units: dBi

Frequency : See Legend

Operator: Dwight B. Lutz
Ser. no.:
Channel: ch1 Tx pol: Vert. Rx pol: Vert.



Sidelobe Envelope: 29−25Log(Theta)~100Lamda/D to 20 Deg
−3.5dBi 20.0 to 26.5 Deg | 32−25Log(Theta)~26.5 to 48 Deg
−10.0dBi~48 to 180 Deg

Overlays
Frequency : 5.845 GHz
Frequency : 6.045 GHz
Frequency : 6.245 GHz
Frequency : 6.425 GHz

Prodelin Corporation
East Maiden Test Range
Maiden NC

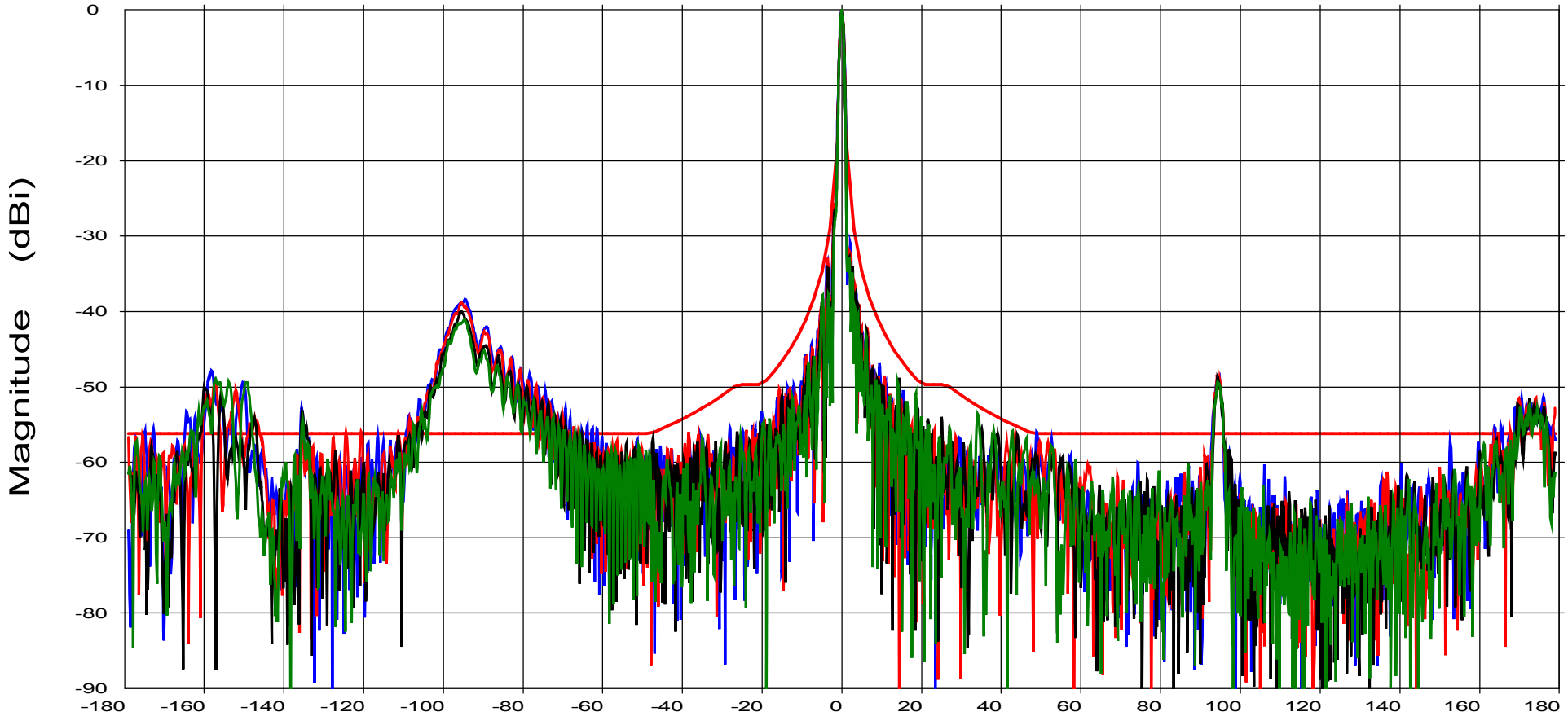
File: 1770 05.dat

General Dynamics
3.8 Meter Series 1385 Antenna System
C-Band Linear

Calibration status:
File: 1770 05.dat
Chan.: ch1
Table: SGA-70
Units: dBi

Frequency : See Legend

Operator: Dwight B. Lutz
Ser. no.:
Channel: ch1 Tx pol: Vert. Rx pol: Vert.



Sidelobe Envelope: 29−25Log(Theta)~100Lamda/D to 20 Deg
−3.5dBi 20.0 to 26.5 Deg | 32−25Log(Theta)~26.5 to 48 Deg
−10.0dBi~48 to 180 Deg

Overlays
Frequency : 5.845 GHz
Frequency : 6.045 GHz
Frequency : 6.245 GHz
Frequency : 6.425 GHz

Prodelin Corporation
East Maiden Test Range
Maiden NC

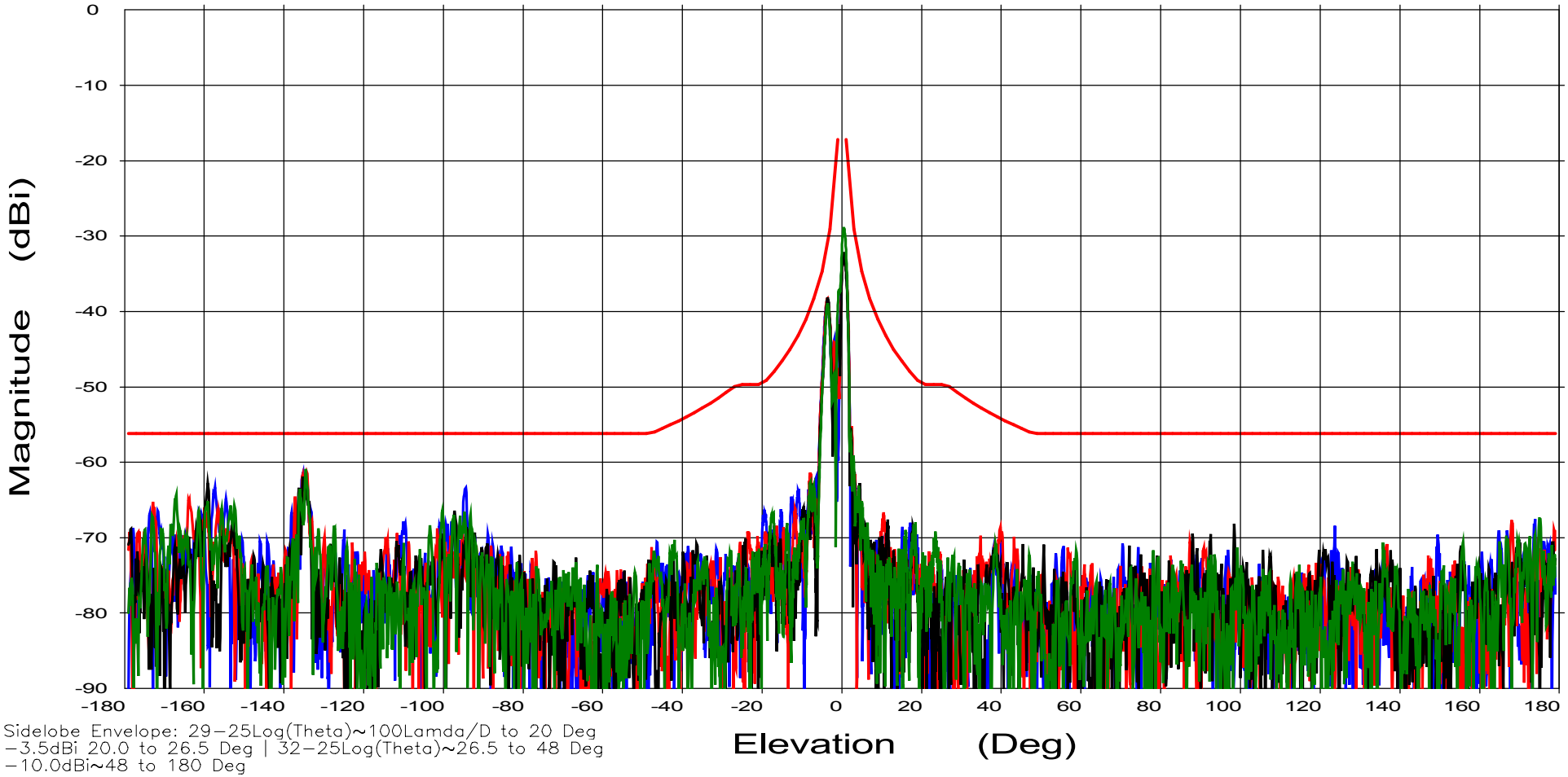
File: 1770 06.dat

General Dynamics
3.8 Meter Series 1385 Antenna System
C-Band Linear

Calibration status:
File: 1770 06.dat
Chan.: ch1
Table: SGA-70
Units: dBi

Frequency : See Legend

Operator: Dwight B. Lutz
Ser. no.:
Channel: ch1 Tx pol: Vert. Rx pol: Vert.



Sidelobe Envelope: 29−25Log(Theta)~100Lamda/D to 20 Deg
−3.5dBi 20.0 to 26.5 Deg | 32−25Log(Theta)~26.5 to 48 Deg
−10.0dBi~48 to 180 Deg

Overlays
Frequency : 5.845 GHz
Frequency : 6.045 GHz
Frequency : 6.245 GHz
Frequency : 6.425 GHz

3.3 Horizontal Polarization Transmit Close-in Patterns

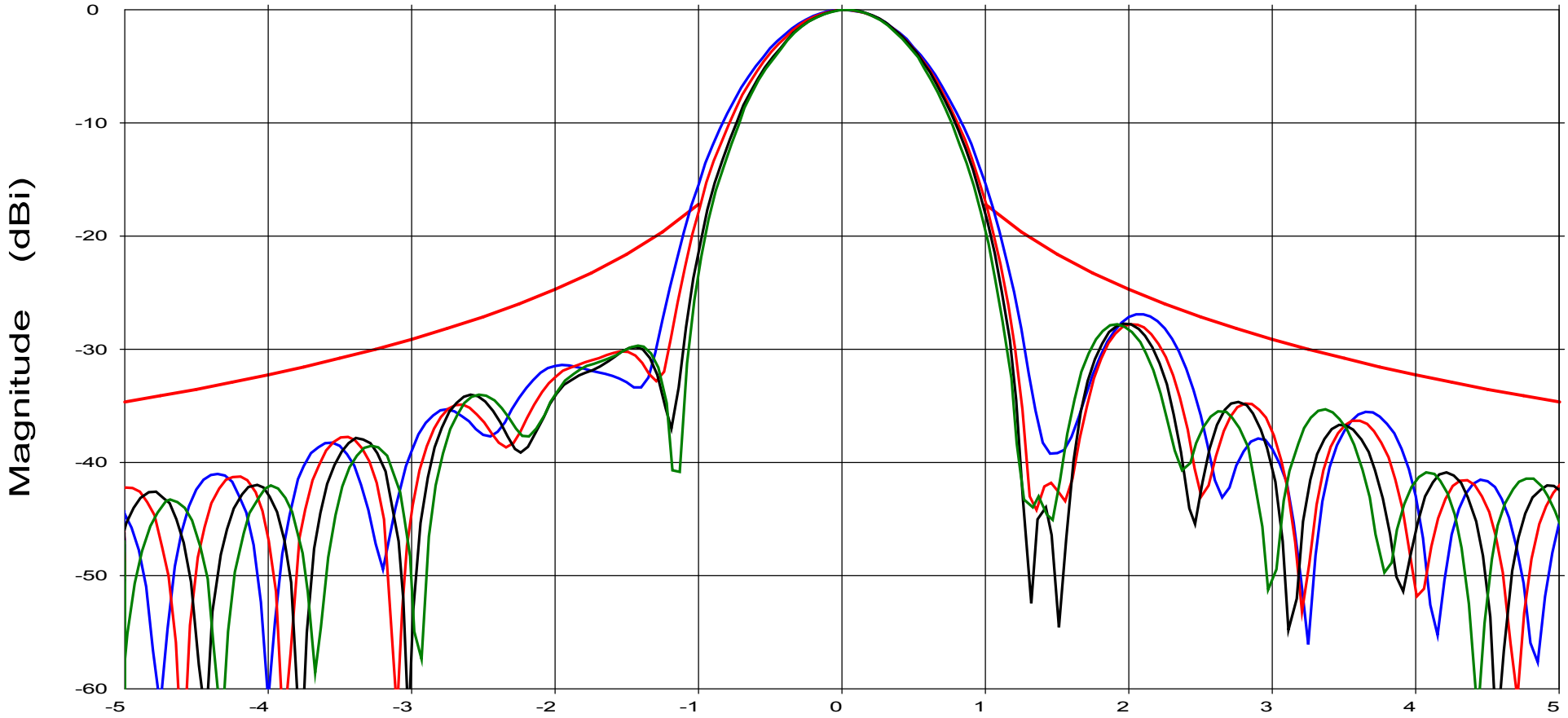
File: 1770 08.dat

General Dynamics
3.8 Meter Series 1385 Antenna System
C-Band Linear

Operator: Dwight B. Lutz
Ser. no.:
Channel: ch1 Tx pol: Horiz. Rx pol: Horiz.

Calibration status:
File: 1770 08.dat
Chan.: ch1
Table: SGA-70.
Units: dBi

Frequency : See Legend



Sidelobe Envelope: 29−25Log(Theta)~100Lamda/D to 20 Deg
−3.5dBi 20.0 to 26.5 Deg | 32−25Log(Theta)~26.5 to 48 Deg
−10.0dBi~48 to 180 Deg

Overlays

		Beam Width @ 3 dB (Deg)	Beam Width @ 10 dB (Deg)
Frequency :	5.845 GHz	0.95	1.67
Frequency :	6.045 GHz	0.91	1.59
Frequency :	6.245 GHz	0.87	1.52
Frequency :	6.425 GHz	0.85	1.48

Prodelin Corporation
East Maiden Test Range
Maiden NC

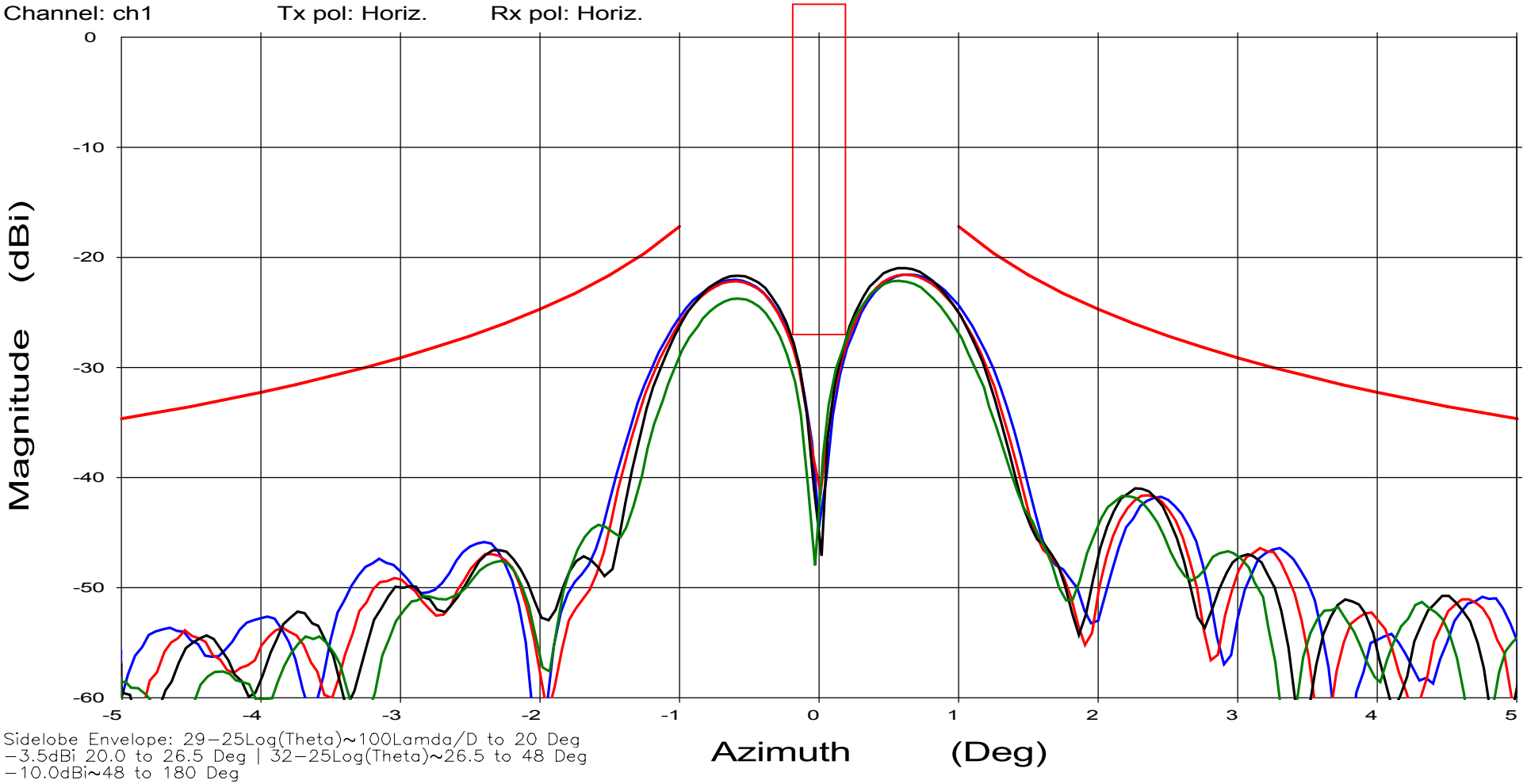
File: 1770 09.dat

General Dynamics
3.8 Meter Series 1385 Antenna System
C-Band Linear

Calibration status:
File: 1770 09.dat
Chan.: ch1
Table: SGA-70.
Units: dBi

Frequency : See Legend

Operator: Dwight B. Lutz
Ser. no.:
Channel: ch1 Tx pol: Horiz. Rx pol: Horiz.



Sidelobe Envelope: 29−25Log(Theta)~100Lamda/D to 20 Deg
−3.5dBi 20.0 to 26.5 Deg | 32−25Log(Theta)~26.5 to 48 Deg
−10.0dBi~48 to 180 Deg

Overlays
Frequency : 5.845 GHz
Frequency : 6.045 GHz
Frequency : 6.245 GHz
Frequency : 6.425 GHz

Prodelin Corporation
East Maiden Test Range
Maiden NC

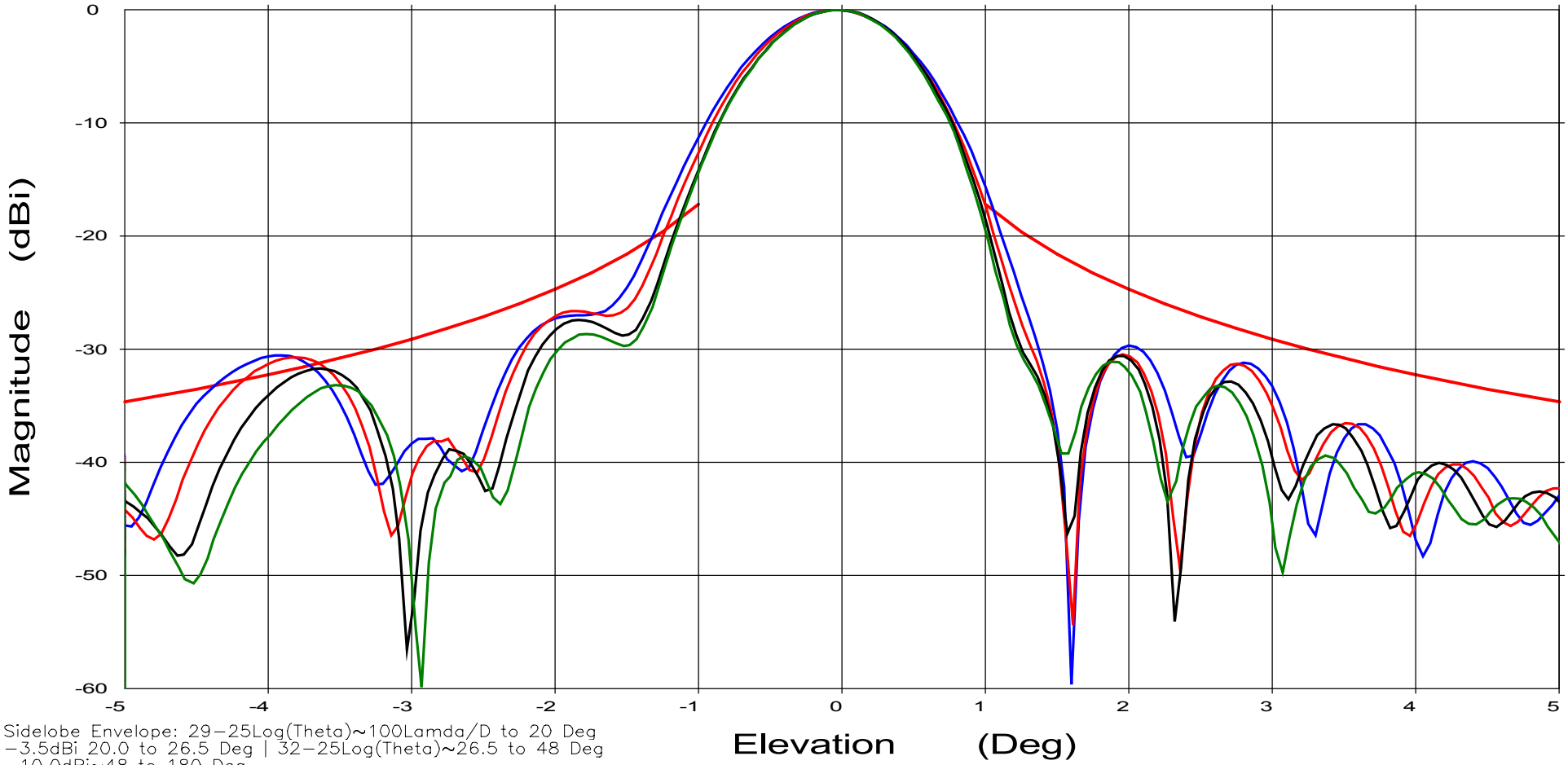
File: 1770 10.dat

General Dynamics
3.8 Meter Series 1385 Antenna System
C-Band Linear

Calibration status:
File: 1770 10.dat
Chan.: ch1
Table: SGA-70.
Units: dBi

Frequency : See Legend

Operator: Dwight B. Lutz
Ser. no.:
Channel: ch1 Tx pol: Horiz. Rx pol: Horiz.



Sidelobe Envelope: 29−25Log(Theta)~100Lamda/D to 20 Deg
−3.5dBi 20.0 to 26.5 Deg | 32−25Log(Theta)~26.5 to 48 Deg
−10.0dBi~48 to 180 Deg

Overlays

		Beam Width @ 3 dB (Deg)	Beam Width @ 10 dB (Deg)
Frequency :	5.845 GHz	0.99	1.75
Frequency :	6.045 GHz	0.95	1.68
Frequency :	6.245 GHz	0.92	1.63
Frequency :	6.425 GHz	0.90	1.60

Prodelin Corporation
East Maiden Test Range
Maiden NC

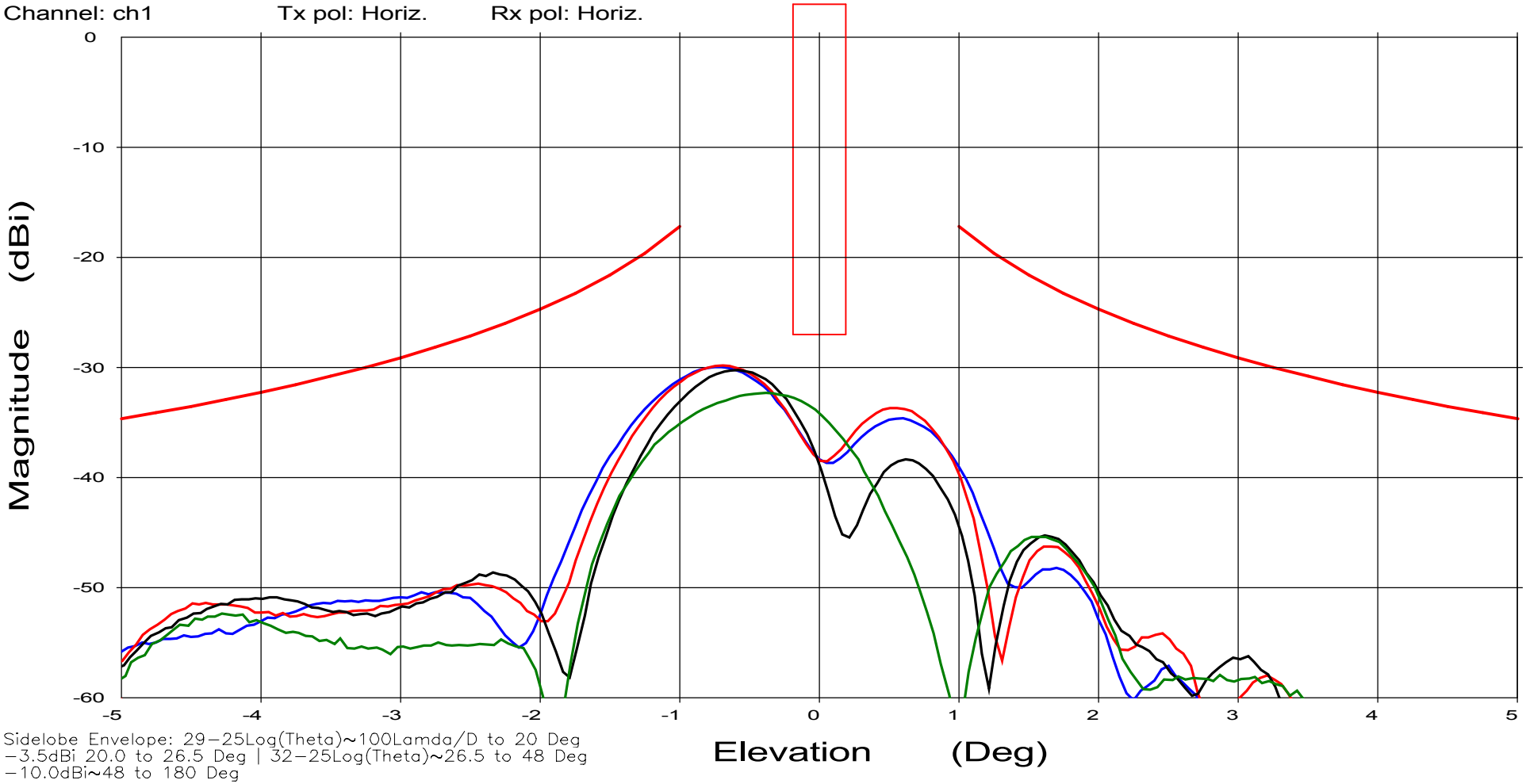
File: 1770 11.dat

General Dynamics
3.8 Meter Series 1385 Antenna System
C-Band Linear

Calibration status:
File: 1770 11.dat
Chan.: ch1
Table: SGA-70.
Units: dBi

Frequency : See Legend

Operator: Dwight B. Lutz
Ser. no.:
Channel: ch1 Tx pol: Horiz. Rx pol: Horiz.



Sidelobe Envelope: 29−25Log(Theta)~100Lamda/D to 20 Deg
−3.5dBi 20.0 to 26.5 Deg | 32−25Log(Theta)~26.5 to 48 Deg
−10.0dBi~48 to 180 Deg

Overlays
Frequency : 5.845 GHz
Frequency : 6.045 GHz
Frequency : 6.245 GHz
Frequency : 6.425 GHz

Prodelin Corporation
East Maiden Test Range
Maiden NC

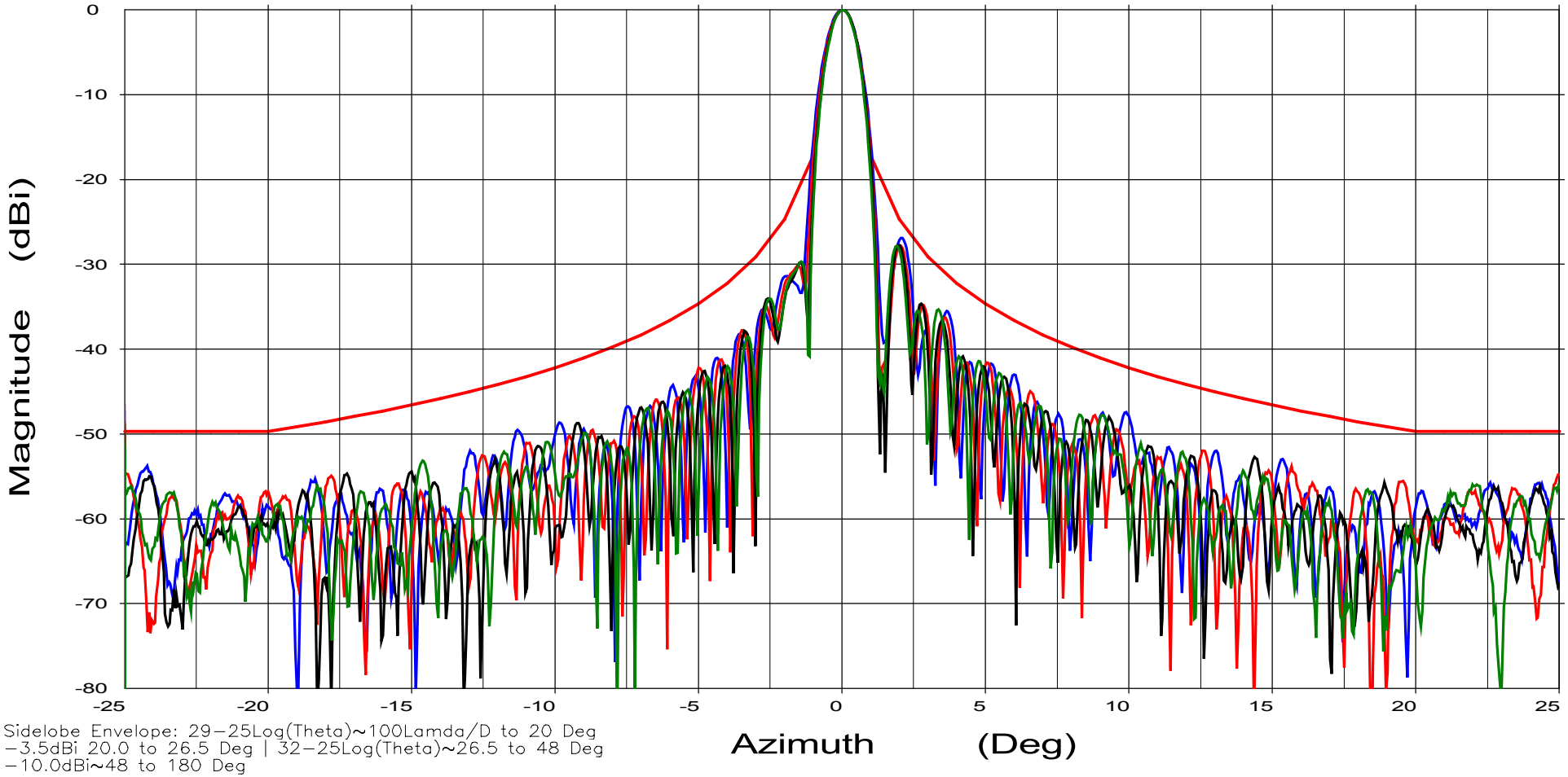
File: 1770 08.dat

General Dynamics
3.8 Meter Series 1385 Antenna System
C-Band Linear

Calibration status:
File: 1770 08.dat
Chan.: ch1
Table: SGA-70.
Units: dBi

Frequency : See Legend

Operator: Dwight B. Lutz
Ser. no.:
Channel: ch1 Tx pol: Horiz. Rx pol: Horiz.



Sidelobe Envelope: 29−25Log(Theta)~100Lamda/D to 20 Deg
−3.5dBi 20.0 to 26.5 Deg | 32−25Log(Theta)~26.5 to 48 Deg
−10.0dBi~48 to 180 Deg

Overlays
Frequency : 5.845 GHz
Frequency : 6.045 GHz
Frequency : 6.245 GHz
Frequency : 6.425 GHz

Prodelin Corporation
East Maiden Test Range
Maiden NC

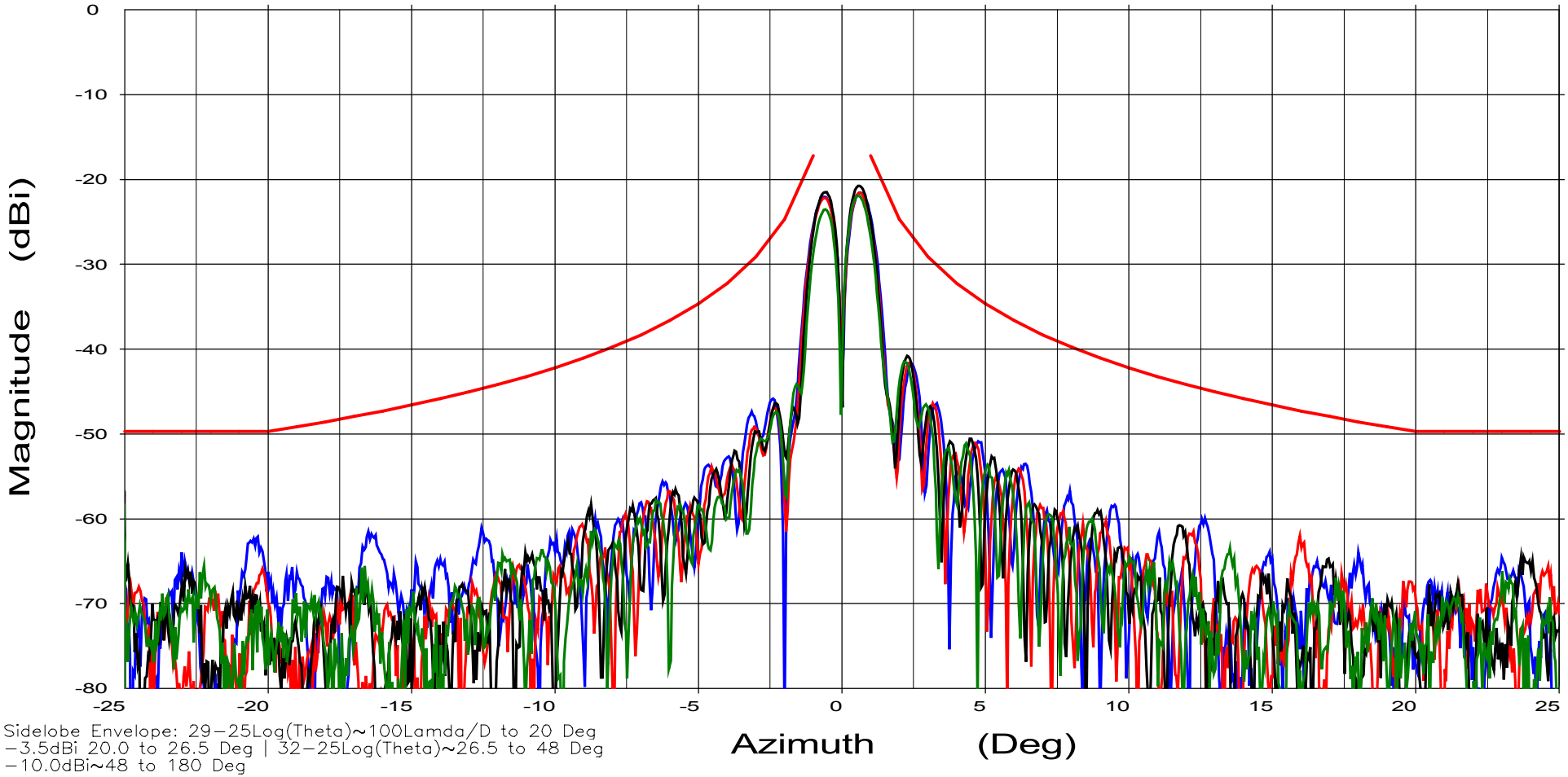
File: 1770 09.dat

General Dynamics
3.8 Meter Series 1385 Antenna System
C-Band Linear

Calibration status:
File: 1770 09.dat
Chan.: ch1
Table: SGA-70.
Units: dBi

Frequency : See Legend

Operator: Dwight B. Lutz
Ser. no.:
Channel: ch1 Tx pol: Horiz. Rx pol: Horiz.



Sidelobe Envelope: 29−25Log(Theta)~100Lamda/D to 20 Deg
−3.5dBi 20.0 to 26.5 Deg | 32−25Log(Theta)~26.5 to 48 Deg
−10.0dBi~48 to 180 Deg

Overlays
Frequency : 5.845 GHz
Frequency : 6.045 GHz
Frequency : 6.245 GHz
Frequency : 6.425 GHz

Prodelin Corporation
East Maiden Test Range
Maiden NC

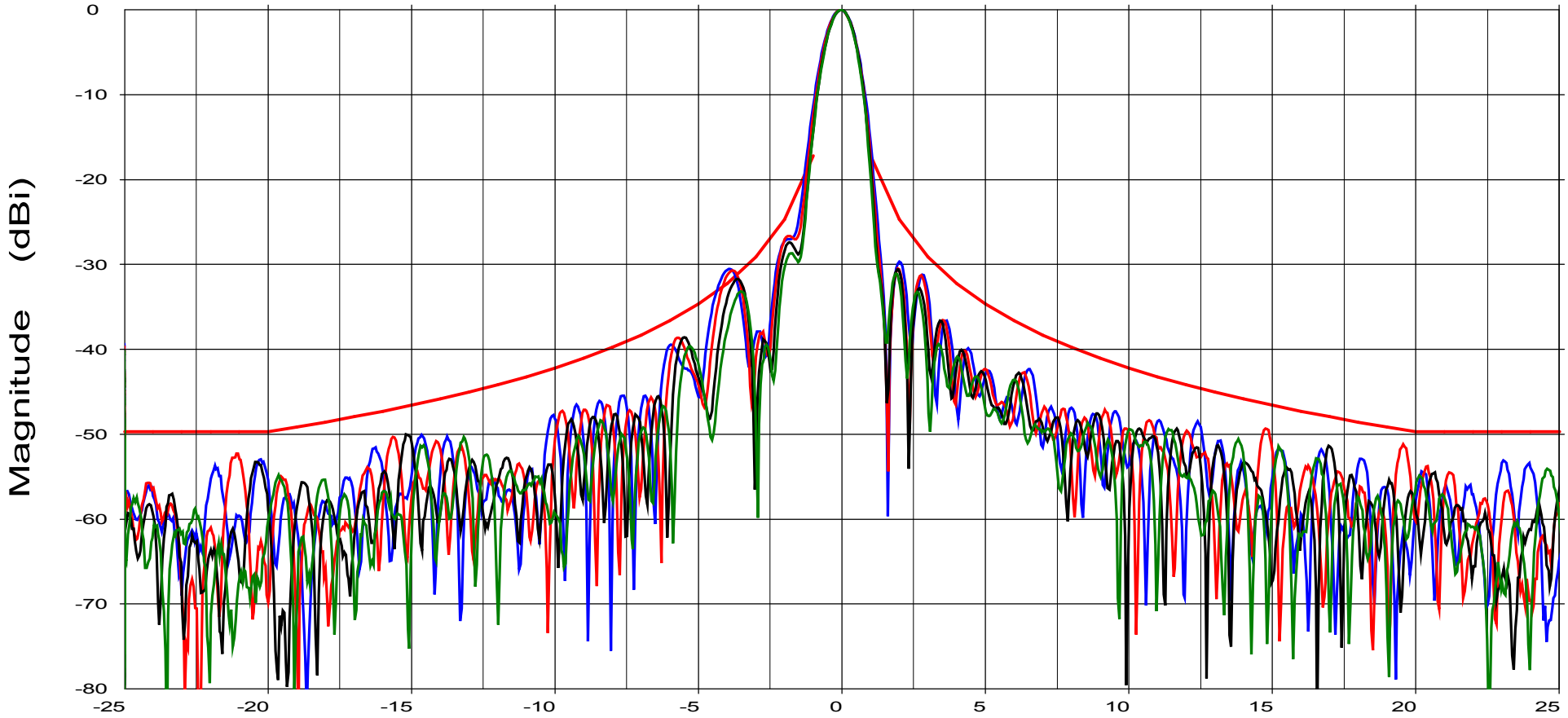
File: 1770 10.dat

General Dynamics
3.8 Meter Series 1385 Antenna System
C-Band Linear

Calibration status:
File: 1770 10.dat
Chan.: ch1
Table: SGA-70.
Units: dBi

Frequency : See Legend

Operator: Dwight B. Lutz
Ser. no.:
Channel: ch1 Tx pol: Horiz. Rx pol: Horiz.



Sidelobe Envelope: 29−25Log(Theta)~100Lamda/D to 20 Deg
−3.5dBi 20.0 to 26.5 Deg | 32−25Log(Theta)~26.5 to 48 Deg
−10.0dBi~48 to 180 Deg

Overlays
Frequency : 5.845 GHz
Frequency : 6.045 GHz
Frequency : 6.245 GHz
Frequency : 6.425 GHz

Prodelin Corporation
East Maiden Test Range
Maiden NC

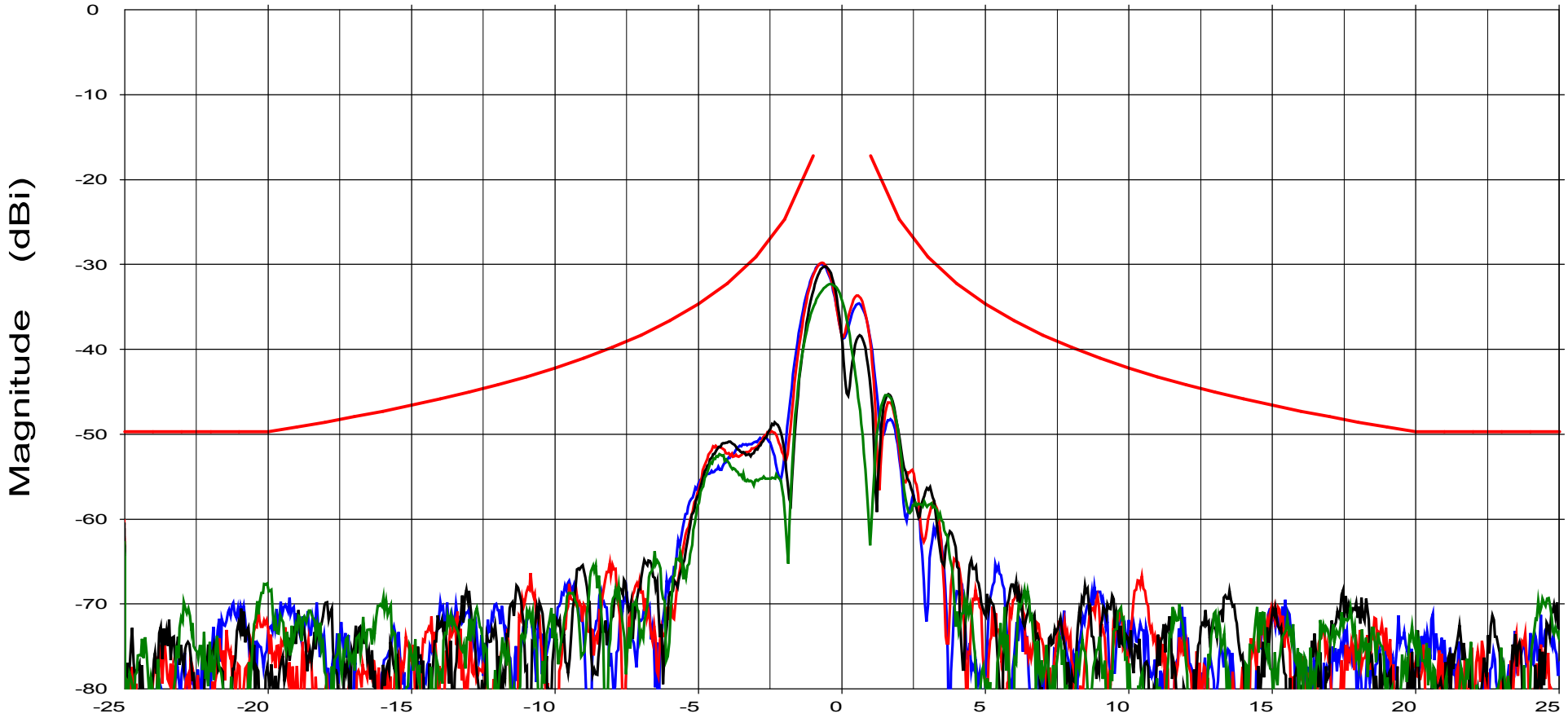
File: 1770 11.dat

General Dynamics
3.8 Meter Series 1385 Antenna System
C-Band Linear

Calibration status:
File: 1770 11.dat
Chan.: ch1
Table: SGA-70.
Units: dBi

Frequency : See Legend

Operator: Dwight B. Lutz
Ser. no.:
Channel: ch1 Tx pol: Horiz. Rx pol: Horiz.



Sidelobe Envelope: 29−25Log(Theta)~100Lamda/D to 20 Deg
−3.5dBi 20.0 to 26.5 Deg | 32−25Log(Theta)~26.5 to 48 Deg
−10.0dBi~48 to 180 Deg

Overlays
Frequency : 5.845 GHz
Frequency : 6.045 GHz
Frequency : 6.245 GHz
Frequency : 6.425 GHz

Prodelin Corporation
East Maiden Test Range
Maiden NC

3.4 Horizontal Polarization Transmit Wide Angle Patterns

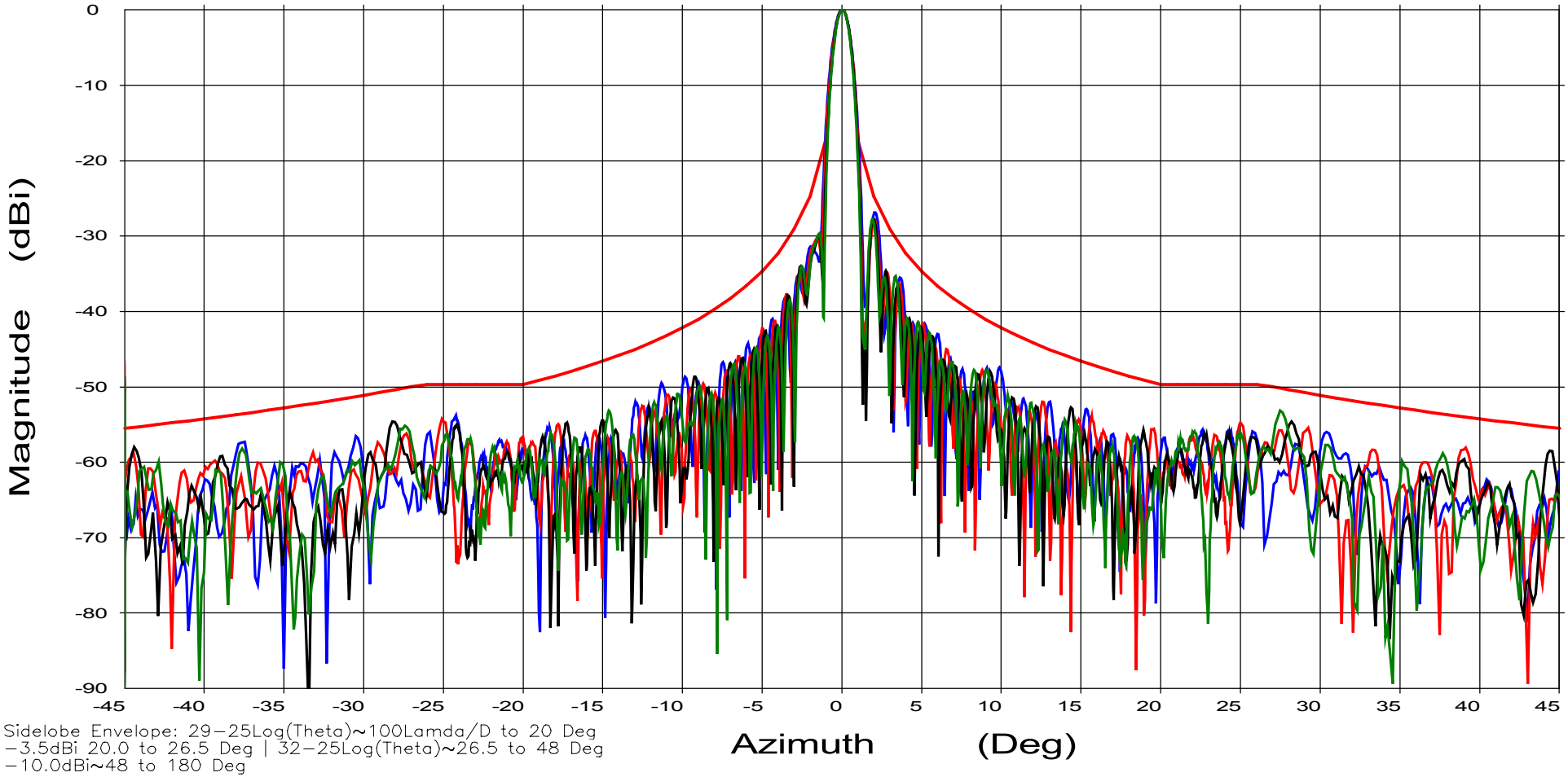
File: 1770 08.dat

General Dynamics
3.8 Meter Series 1385 Antenna System
C-Band Linear

Calibration status:
File: 1770 08.dat
Chan.: ch1
Table: SGA-70.
Units: dBi

Frequency : See Legend

Operator: Dwight B. Lutz
Ser. no.:
Channel: ch1 Tx pol: Horiz. Rx pol: Horiz.



Sidelobe Envelope: 29−25Log(Theta)~100Lamda/D to 20 Deg
−3.5dBi 20.0 to 26.5 Deg | 32−25Log(Theta)~26.5 to 48 Deg
−10.0dBi~48 to 180 Deg

Overlays
Frequency : 5.845 GHz
Frequency : 6.045 GHz
Frequency : 6.245 GHz
Frequency : 6.425 GHz

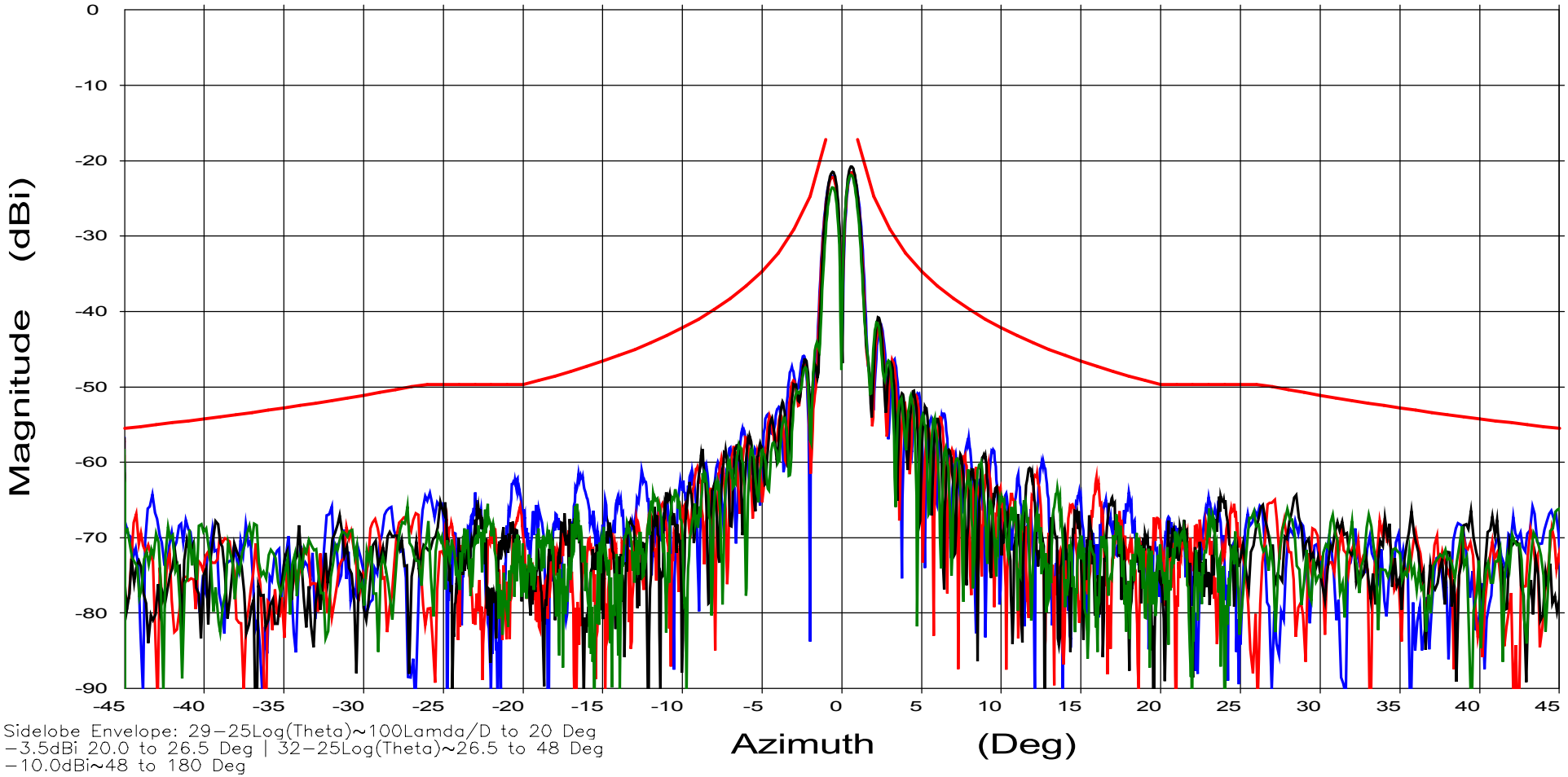
File: 1770 09.dat

General Dynamics
3.8 Meter Series 1385 Antenna System
C-Band Linear

Calibration status:
File: 1770 09.dat
Chan.: ch1
Table: SGA-70.
Units: dBi

Frequency : See Legend

Operator: Dwight B. Lutz
Ser. no.:
Channel: ch1 Tx pol: Horiz. Rx pol: Horiz.



Sidelobe Envelope: 29−25Log(Theta)~100Lamda/D to 20 Deg
−3.5dBi 20.0 to 26.5 Deg | 32−25Log(Theta)~26.5 to 48 Deg
−10.0dBi~48 to 180 Deg

Overlays
Frequency : 5.845 GHz
Frequency : 6.045 GHz
Frequency : 6.245 GHz
Frequency : 6.425 GHz

Prodelin Corporation
East Maiden Test Range
Maiden NC

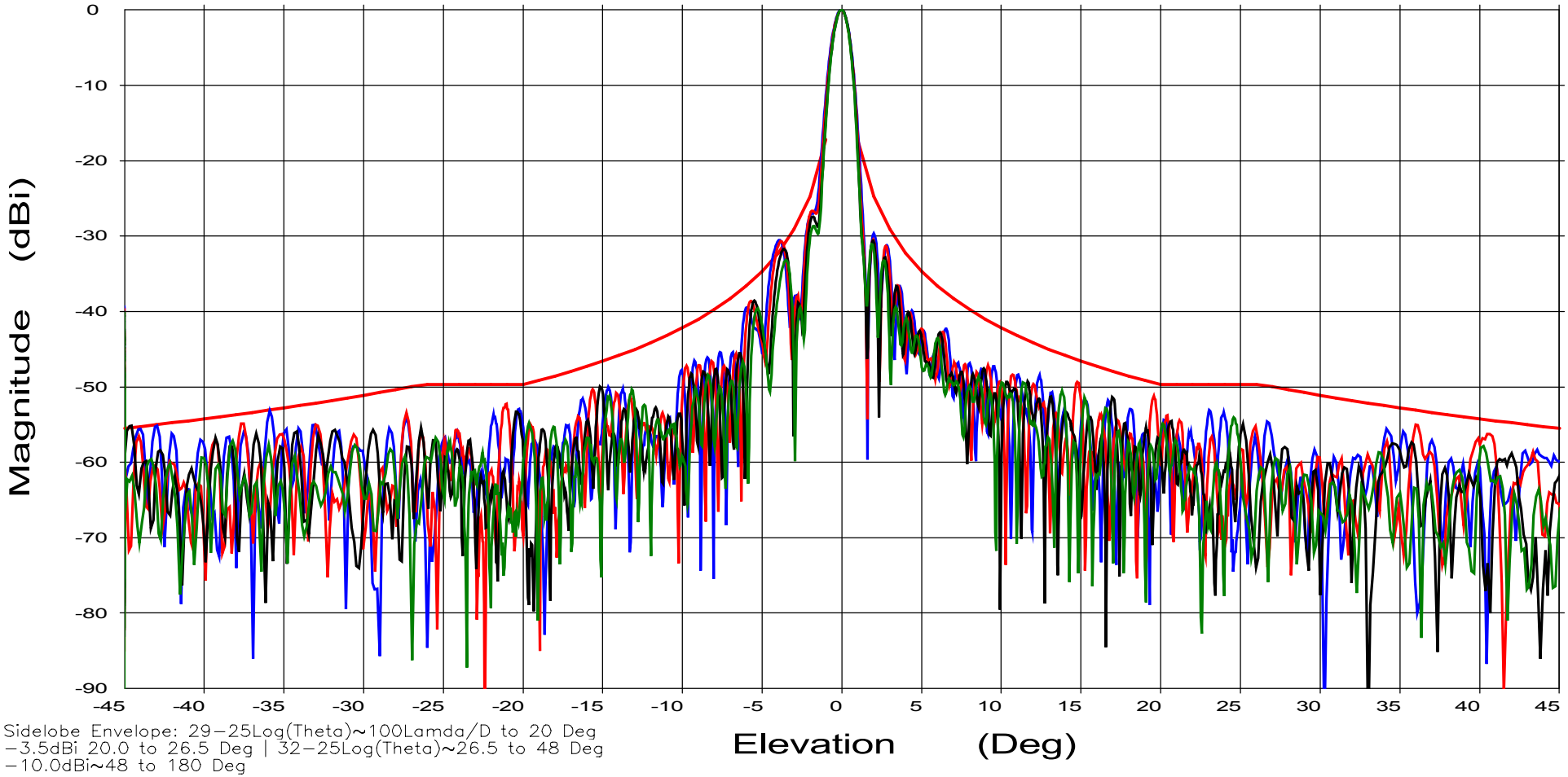
File: 1770 10.dat

General Dynamics
3.8 Meter Series 1385 Antenna System
C-Band Linear

Calibration status:
File: 1770 10.dat
Chan.: ch1
Table: SGA-70.
Units: dBi

Frequency : See Legend

Operator: Dwight B. Lutz
Ser. no.:
Channel: ch1 Tx pol: Horiz. Rx pol: Horiz.



Sidelobe Envelope: 29−25Log(Theta)~100Lamda/D to 20 Deg
−3.5dBi 20.0 to 26.5 Deg | 32−25Log(Theta)~26.5 to 48 Deg
−10.0dBi~48 to 180 Deg

Overlays
Frequency : 5.845 GHz
Frequency : 6.045 GHz
Frequency : 6.245 GHz
Frequency : 6.425 GHz

Prodelin Corporation
East Maiden Test Range
Maiden NC

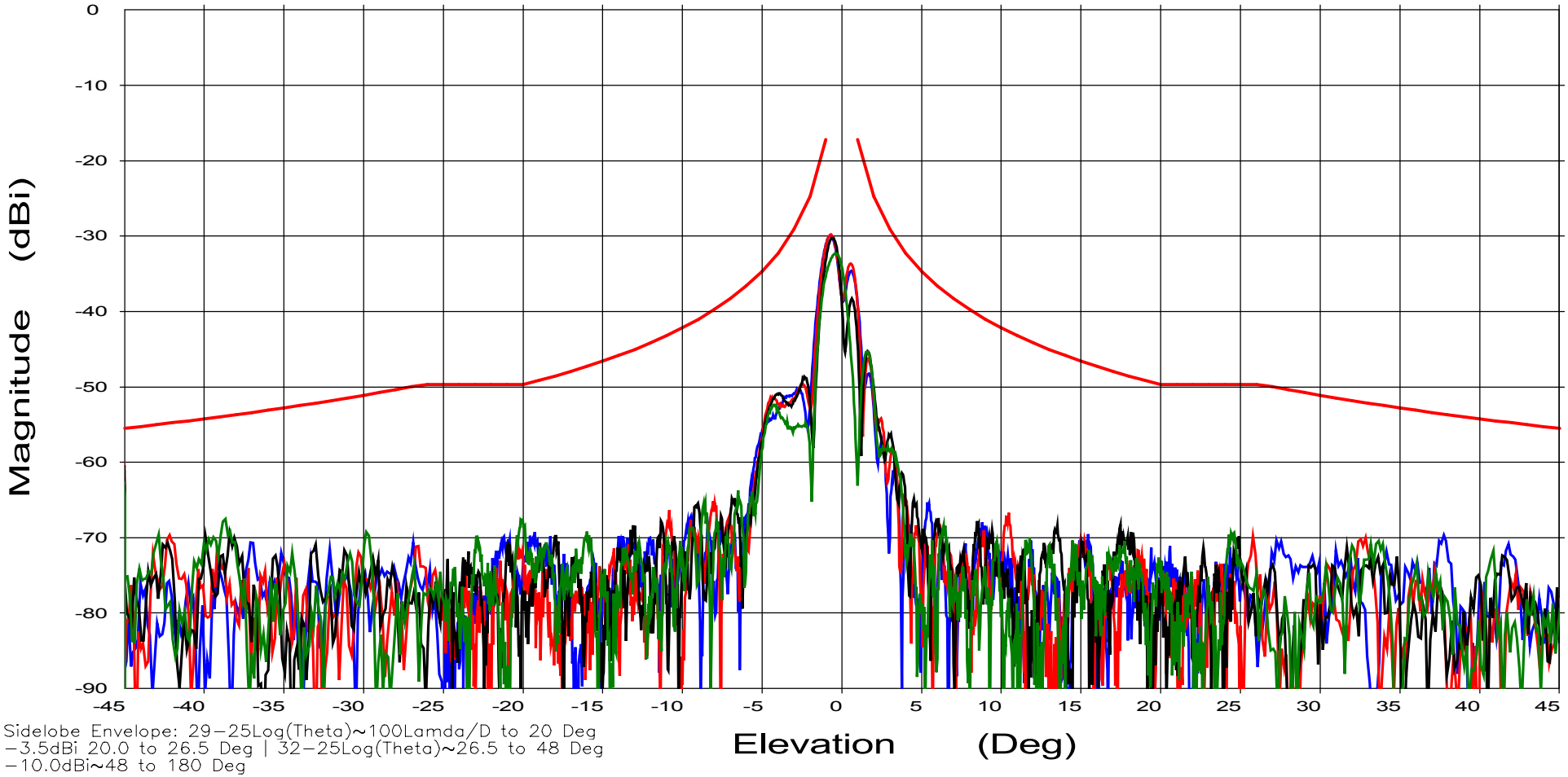
File: 1770 11.dat

General Dynamics
3.8 Meter Series 1385 Antenna System
C-Band Linear

Calibration status:
File: 1770 11.dat
Chan.: ch1
Table: SGA-70.
Units: dBi

Frequency : See Legend

Operator: Dwight B. Lutz
Ser. no.:
Channel: ch1 Tx pol: Horiz. Rx pol: Horiz.



Sidelobe Envelope: 29−25Log(Theta)~100Lamda/D to 20 Deg
−3.5dBi 20.0 to 26.5 Deg | 32−25Log(Theta)~26.5 to 48 Deg
−10.0dBi~48 to 180 Deg

Overlays
Frequency : 5.845 GHz
Frequency : 6.045 GHz
Frequency : 6.245 GHz
Frequency : 6.425 GHz

Prodelin Corporation
East Maiden Test Range
Maiden NC

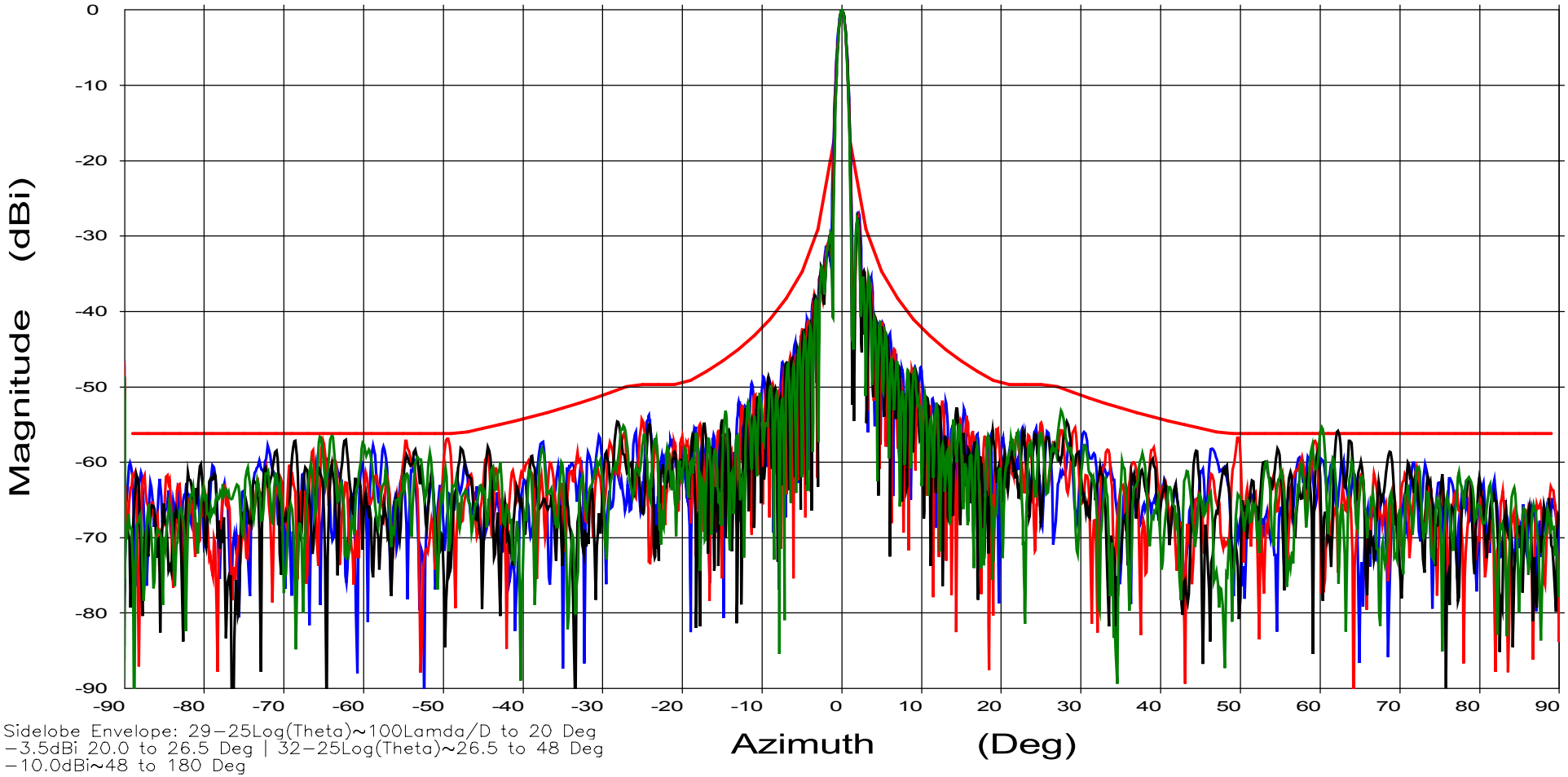
File: 1770 08.dat

General Dynamics
3.8 Meter Series 1385 Antenna System
C-Band Linear

Calibration status:
File: 1770 08.dat
Chan.: ch1
Table: SGA-70.
Units: dBi

Frequency : See Legend

Operator: Dwight B. Lutz
Ser. no.:
Channel: ch1 Tx pol: Horiz. Rx pol: Horiz.



Sidelobe Envelope: 29−25Log(Theta)~100Lamda/D to 20 Deg
−3.5dBi 20.0 to 26.5 Deg | 32−25Log(Theta)~26.5 to 48 Deg
−10.0dBi~48 to 180 Deg

Overlays
Frequency : 5.845 GHz
Frequency : 6.045 GHz
Frequency : 6.245 GHz
Frequency : 6.425 GHz

Prodelin Corporation
East Maiden Test Range
Maiden NC

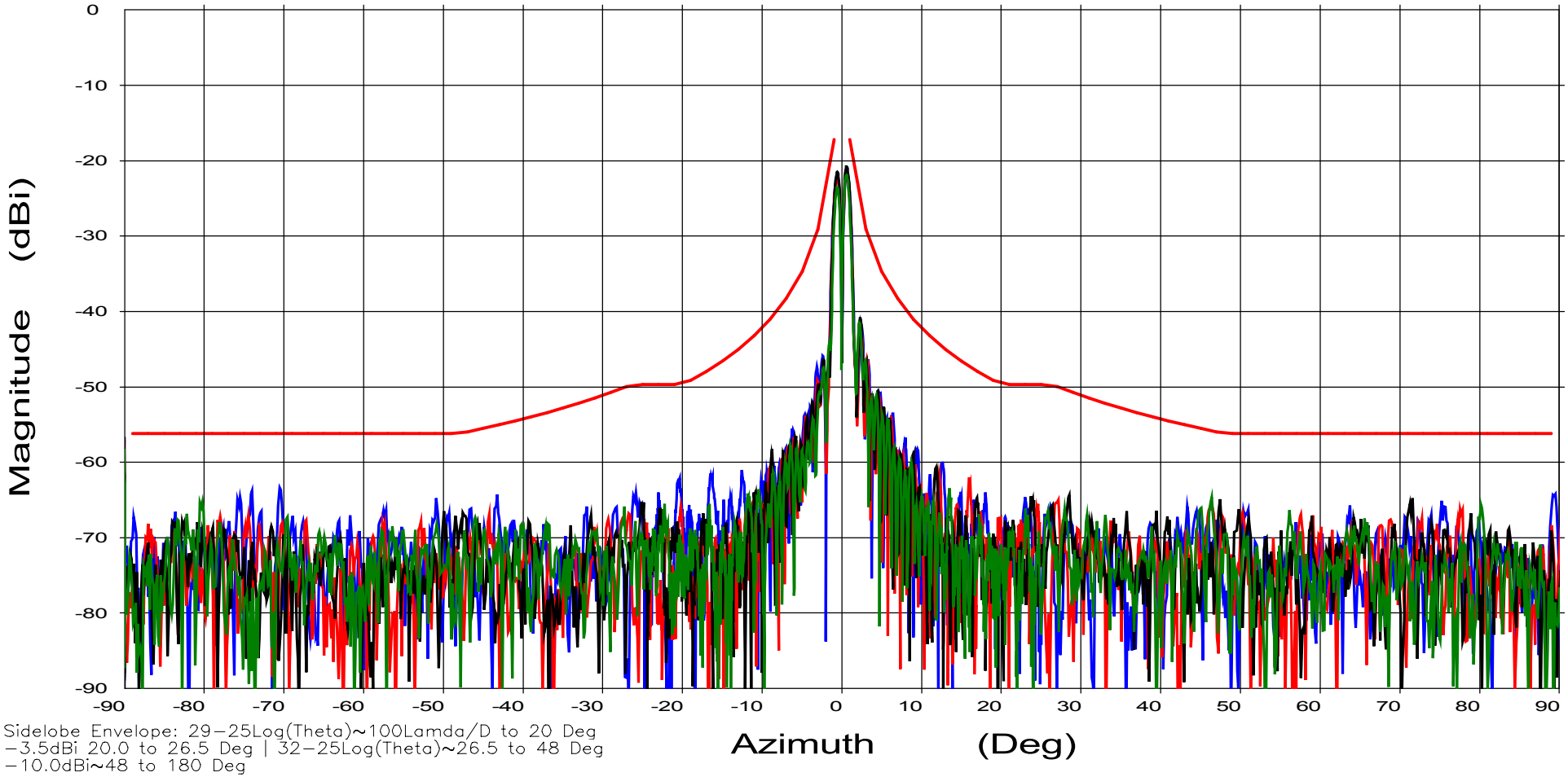
File: 1770 09.dat

General Dynamics
3.8 Meter Series 1385 Antenna System
C-Band Linear

Calibration status:
File: 1770 09.dat
Chan.: ch1
Table: SGA-70.
Units: dBi

Frequency : See Legend

Operator: Dwight B. Lutz
Ser. no.:
Channel: ch1 Tx pol: Horiz. Rx pol: Horiz.



Sidelobe Envelope: 29−25Log(Theta)~100Lamda/D to 20 Deg
−3.5dBi 20.0 to 26.5 Deg | 32−25Log(Theta)~26.5 to 48 Deg
−10.0dBi~48 to 180 Deg

Overlays
Frequency : 5.845 GHz
Frequency : 6.045 GHz
Frequency : 6.245 GHz
Frequency : 6.425 GHz

Prodelin Corporation
East Maiden Test Range
Maiden NC

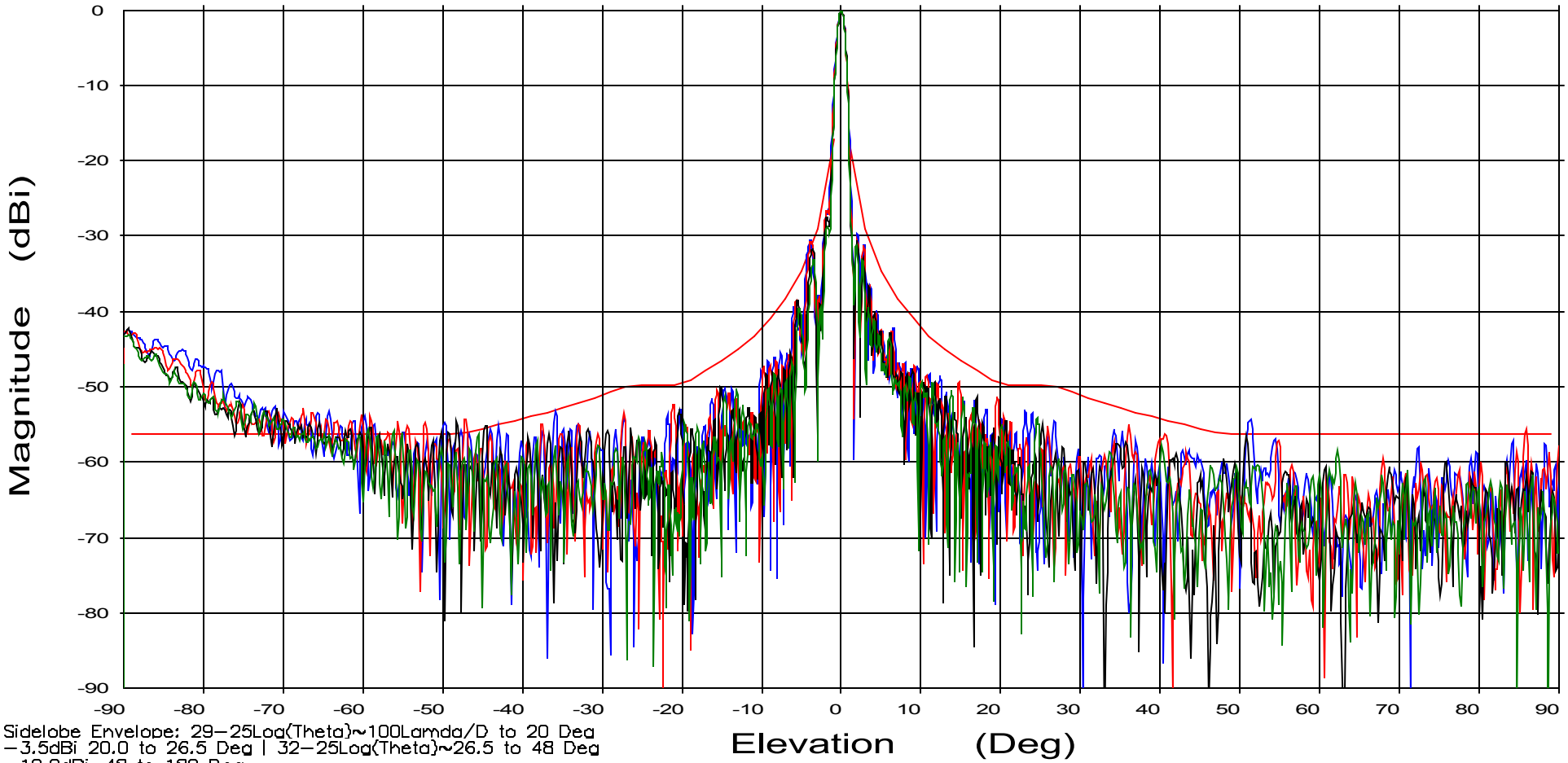
File: 1770 10.dat

General Dynamics
3.8 Meter Series 1385 Antenna System
C-Band Linear

Calibration status:
File: 1770 10.dat
Chan.: ch1
Table: SGA-70.
Units: dBi

Frequency : See Legend

Operator: Dwight B. Lutz
Ser. no.:
Channel: ch1 Tx pol: Horiz. Rx pol: Horiz.



Sidelobe Envelope: 29−25Log(Theta)~100Lamda/D to 20 Deg
−3.5dBi 20.0 to 26.5 Deg | 32−25Log(Theta)~26.5 to 48 Deg
−10.0dBi~48 to 180 Deg

Overlays
Frequency : 5.845 GHz
Frequency : 6.045 GHz
Frequency : 6.245 GHz
Frequency : 6.425 GHz

Prodelin Corporation
East Maiden Test Range
Maiden NC

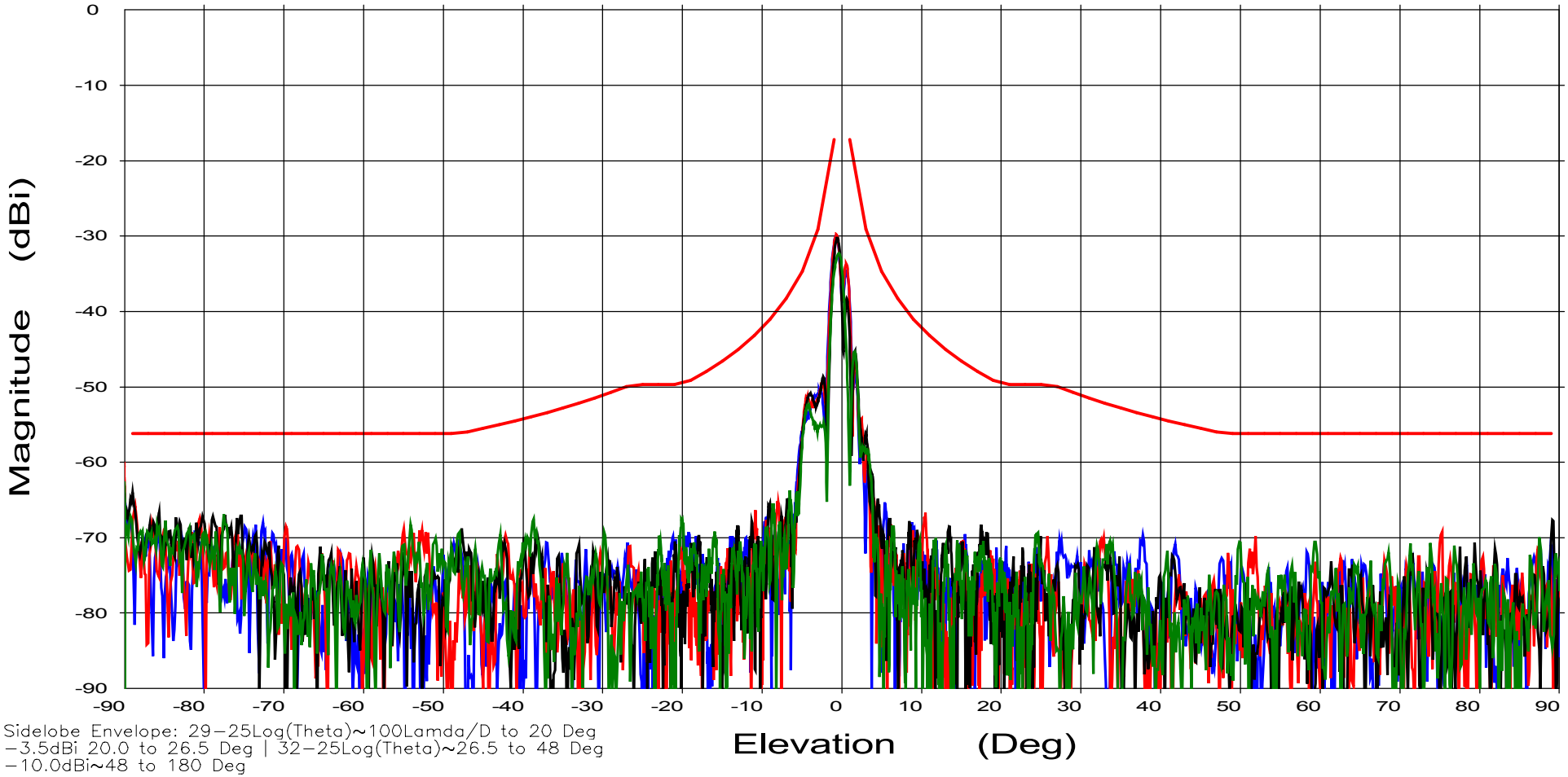
File: 1770 11.dat

General Dynamics
3.8 Meter Series 1385 Antenna System
C-Band Linear

Calibration status:
File: 1770 11.dat
Chan.: ch1
Table: SGA-70.
Units: dBi

Frequency : See Legend

Operator: Dwight B. Lutz
Ser. no.:
Channel: ch1 Tx pol: Horiz. Rx pol: Horiz.



Sidelobe Envelope: 29−25Log(Theta)~100Lamda/D to 20 Deg
−3.5dBi 20.0 to 26.5 Deg | 32−25Log(Theta)~26.5 to 48 Deg
−10.0dBi~48 to 180 Deg

Overlays
Frequency : 5.845 GHz
Frequency : 6.045 GHz
Frequency : 6.245 GHz
Frequency : 6.425 GHz

Prodelin Corporation
East Maiden Test Range
Maiden NC

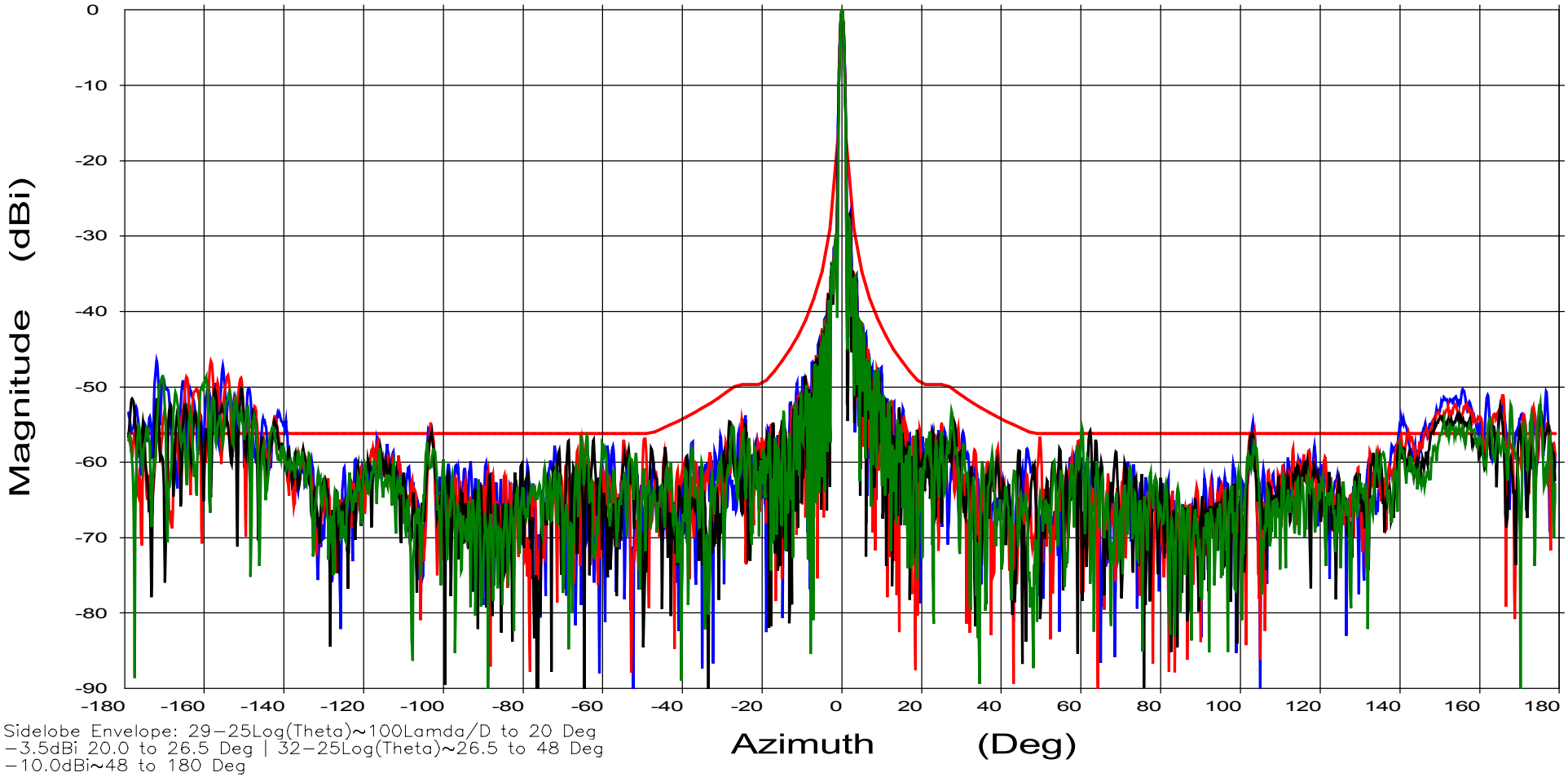
File: 1770 08.dat

General Dynamics
3.8 Meter Series 1385 Antenna System
C-Band Linear

Calibration status:
File: 1770 08.dat
Chan.: ch1
Table: SGA-70.
Units: dBi

Frequency : See Legend

Operator: Dwight B. Lutz
Ser. no.:
Channel: ch1 Tx pol: Horiz. Rx pol: Horiz.



Sidelobe Envelope: 29−25Log(Theta)~100Lamda/D to 20 Deg
−3.5dBi 20.0 to 26.5 Deg | 32−25Log(Theta)~26.5 to 48 Deg
−10.0dBi~48 to 180 Deg

Overlays
Frequency : 5.845 GHz
Frequency : 6.045 GHz
Frequency : 6.245 GHz
Frequency : 6.425 GHz

Prodelin Corporation
East Maiden Test Range
Maiden NC

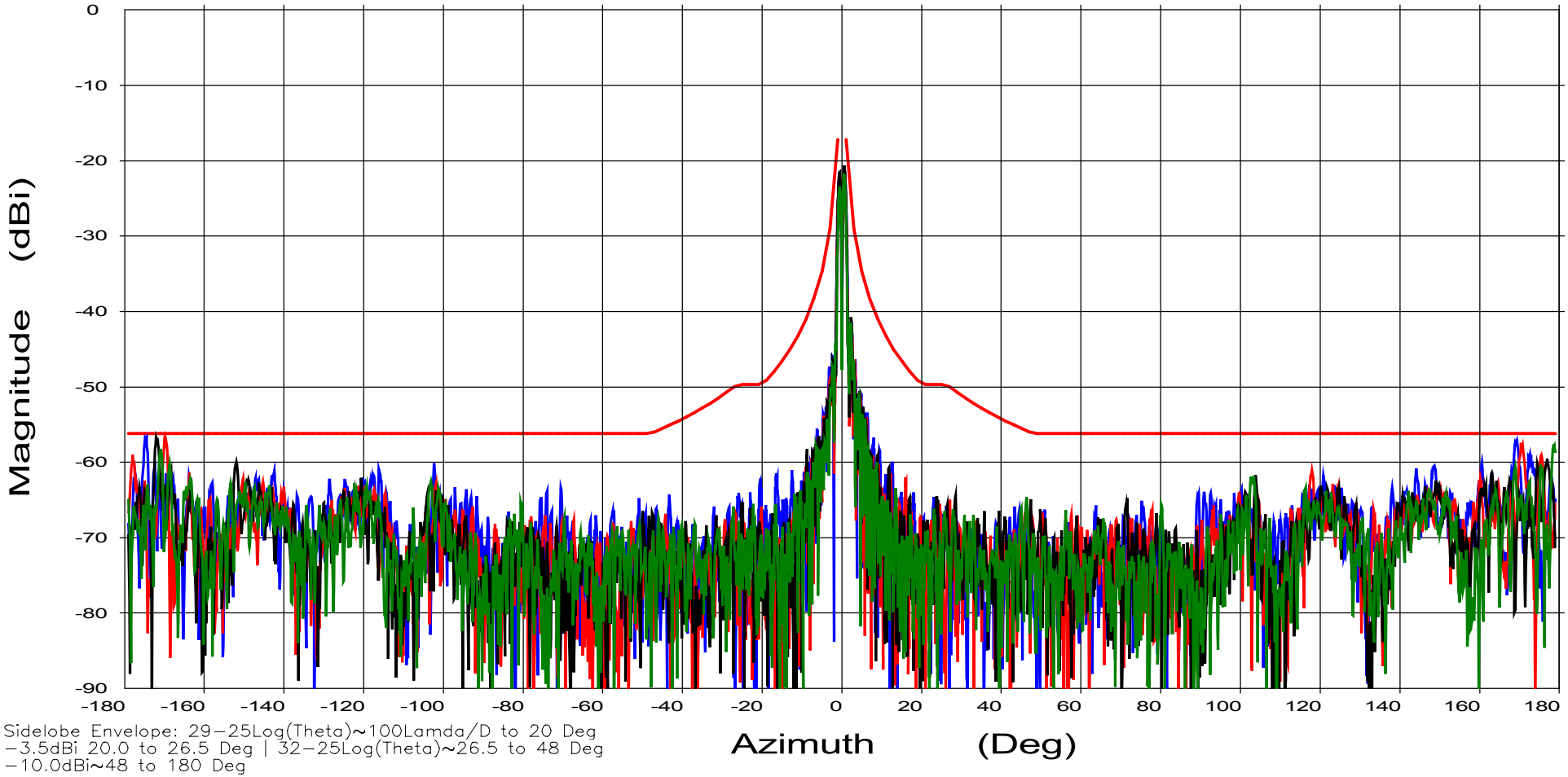
File: 1770 09.dat

General Dynamics
3.8 Meter Series 1385 Antenna System
C-Band Linear

Calibration status:
File: 1770 09.dat
Chan.: ch1
Table: SGA-70.
Units: dBi

Frequency : See Legend

Operator: Dwight B. Lutz
Ser. no.:
Channel: ch1 Tx pol: Horiz. Rx pol: Horiz.



Sidelobe Envelope: 29−25Log(Theta)~100Lamda/D to 20 Deg
−3.5dBi 20.0 to 26.5 Deg | 32−25Log(Theta)~26.5 to 48 Deg
−10.0dBi~48 to 180 Deg

Overlays
Frequency : 5.845 GHz
Frequency : 6.045 GHz
Frequency : 6.245 GHz
Frequency : 6.425 GHz

Prodelin Corporation
East Maiden Test Range
Maiden NC

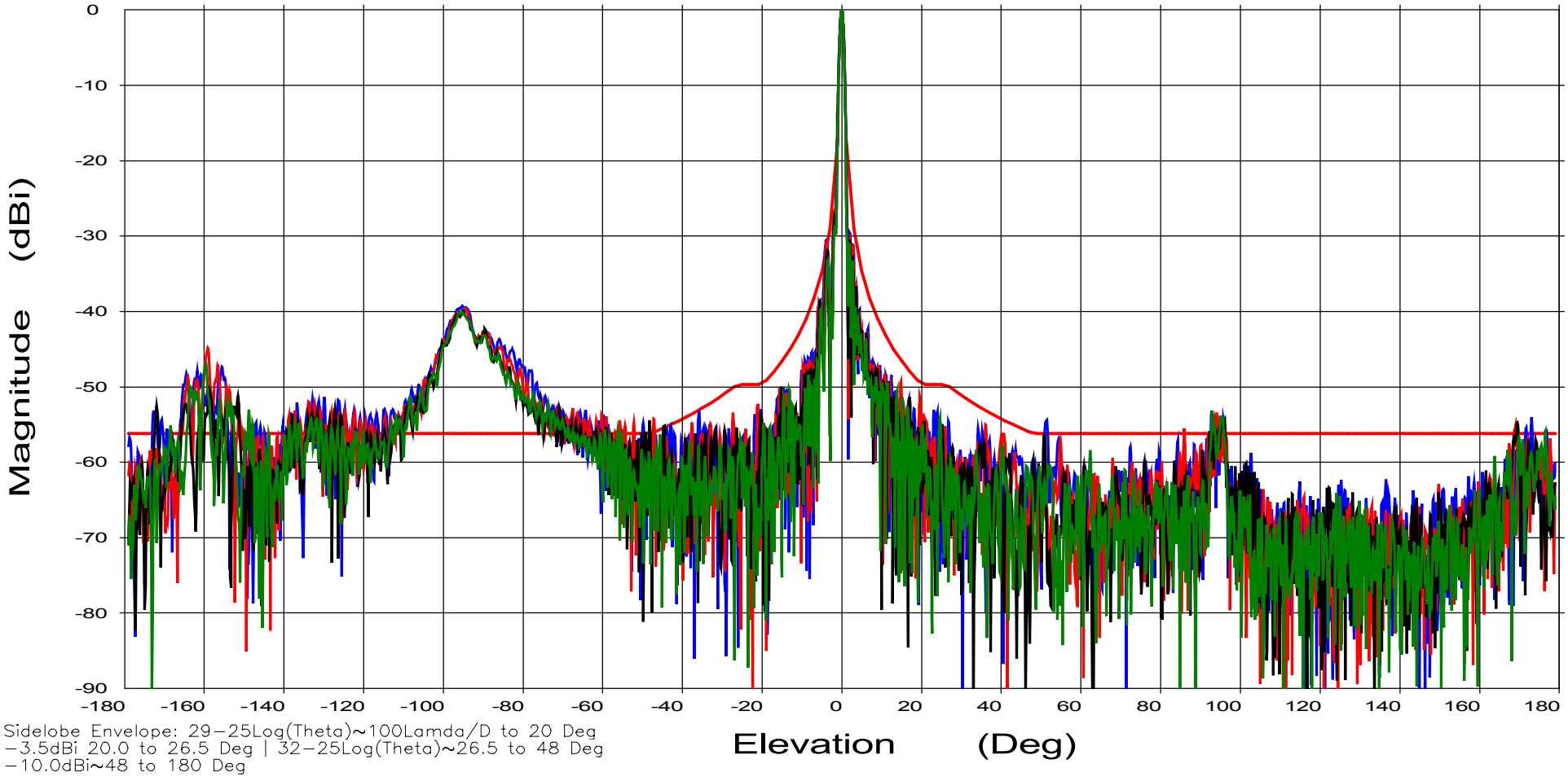
File: 1770 10.dat

General Dynamics
3.8 Meter Series 1385 Antenna System
C-Band Linear

Calibration status:
File: 1770 10.dat
Chan.: ch1
Table: SGA-70.
Units: dBi

Frequency : See Legend

Operator: Dwight B. Lutz
Ser. no.:
Channel: ch1 Tx pol: Horiz. Rx pol: Horiz.



Sidelobe Envelope: 29−25Log(Theta)~100Lamda/D to 20 Deg
−3.5dBi 20.0 to 26.5 Deg | 32−25Log(Theta)~26.5 to 48 Deg
−10.0dBi~48 to 180 Deg

Overlays
Frequency : 5.845 GHz
Frequency : 6.045 GHz
Frequency : 6.245 GHz
Frequency : 6.425 GHz

Prodelin Corporation
East Maiden Test Range
Maiden NC

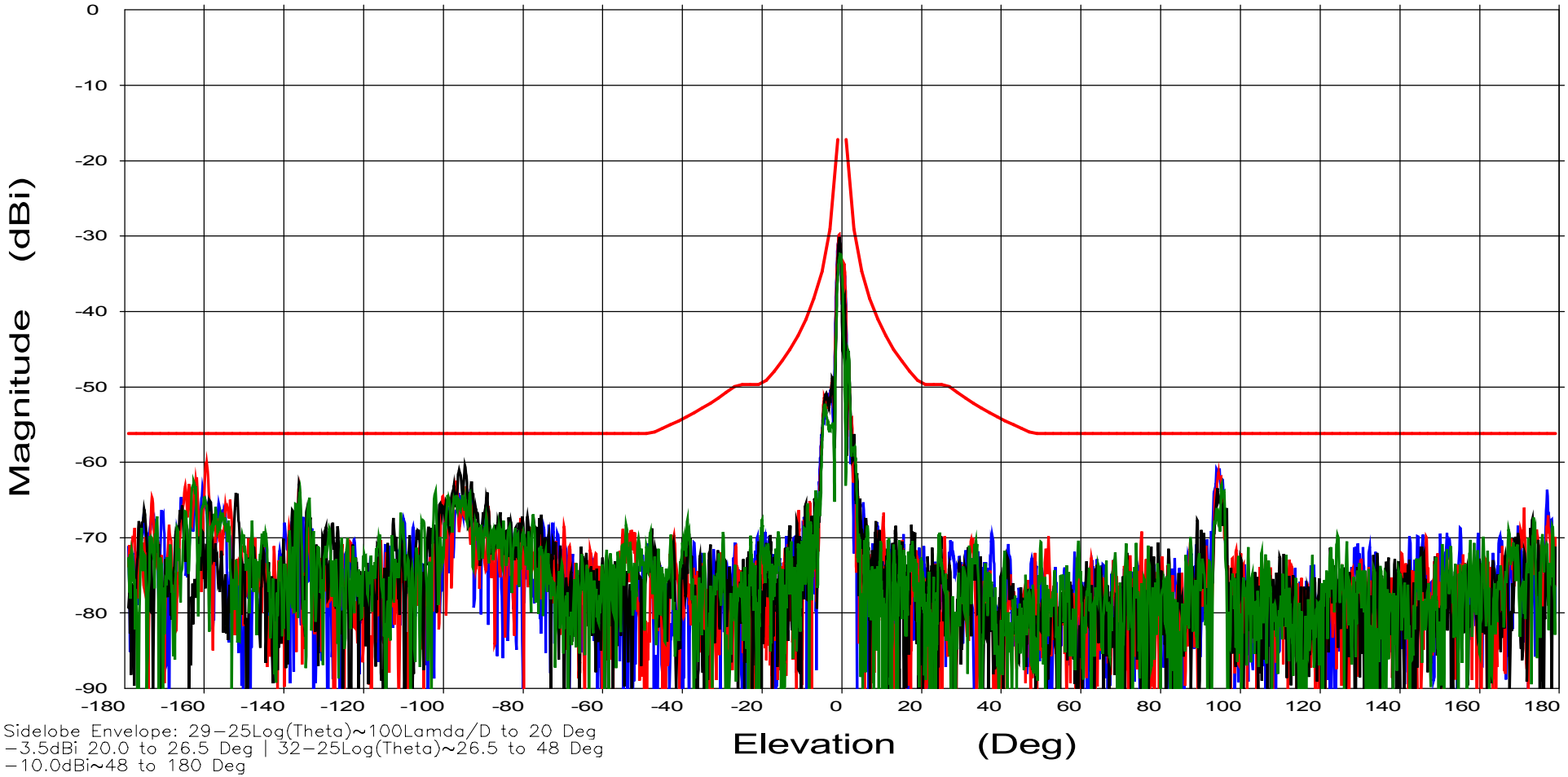
File: 1770 11.dat

General Dynamics
3.8 Meter Series 1385 Antenna System
C-Band Linear

Calibration status:
File: 1770 11.dat
Chan.: ch1
Table: SGA-70.
Units: dBi

Frequency : See Legend

Operator: Dwight B. Lutz
Ser. no.:
Channel: ch1 Tx pol: Horiz. Rx pol: Horiz.



Sidelobe Envelope: 29−25Log(Theta)~100Lamda/D to 20 Deg
−3.5dBi 20.0 to 26.5 Deg | 32−25Log(Theta)~26.5 to 48 Deg
−10.0dBi~48 to 180 Deg

Overlays
Frequency : 5.845 GHz
Frequency : 6.045 GHz
Frequency : 6.245 GHz
Frequency : 6.425 GHz

Prodelin Corporation
East Maiden Test Range
Maiden NC

3.5 Vertical Polarization Receive Close-in Patterns

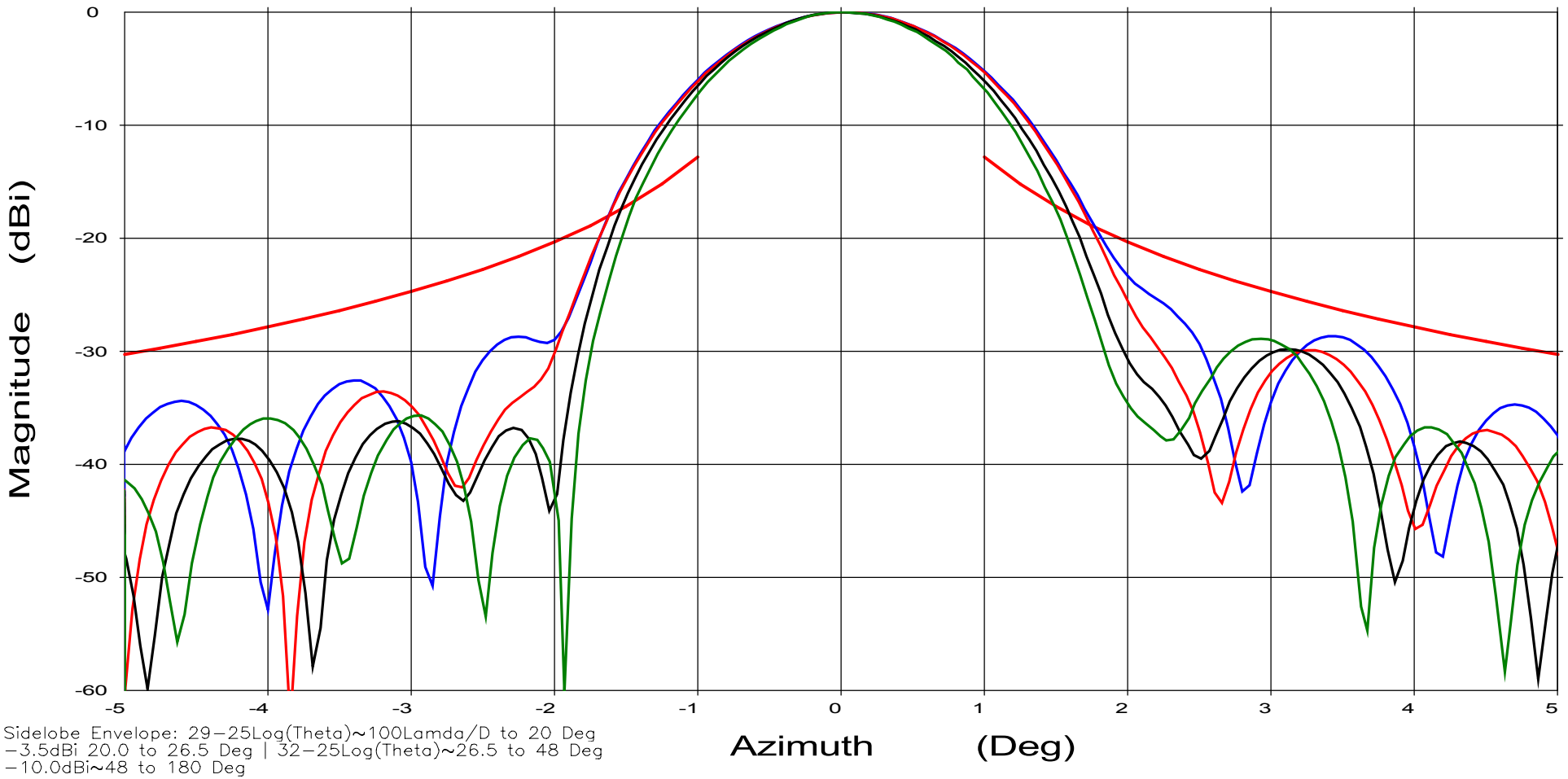
File: 1770 28.dat

General Dynamics
3.8 Meter Series 1385 Antenna System
C-Band Linear

Operator: Dwight B. Lutz
Ser. no.:
Channel: ch1 Tx pol: Vert. Rx pol: Vert.

Calibration status:
File: 1770 28.dat
Chan.: ch1
Table: SGA-40
Units: dBi

Frequency : See Legend



Sidelobe Envelope: 29−25Log(Theta)~100Lamda/D to 20 Deg
−3.5dBi 20.0 to 26.5 Deg | 32−25Log(Theta)~26.5 to 48 Deg
−10.0dBi~48 to 180 Deg

Overlays
Frequency : 3.625 GHz
Frequency : 3.825 GHz
Frequency : 4.025 GHz
Frequency : 4.200 GHz

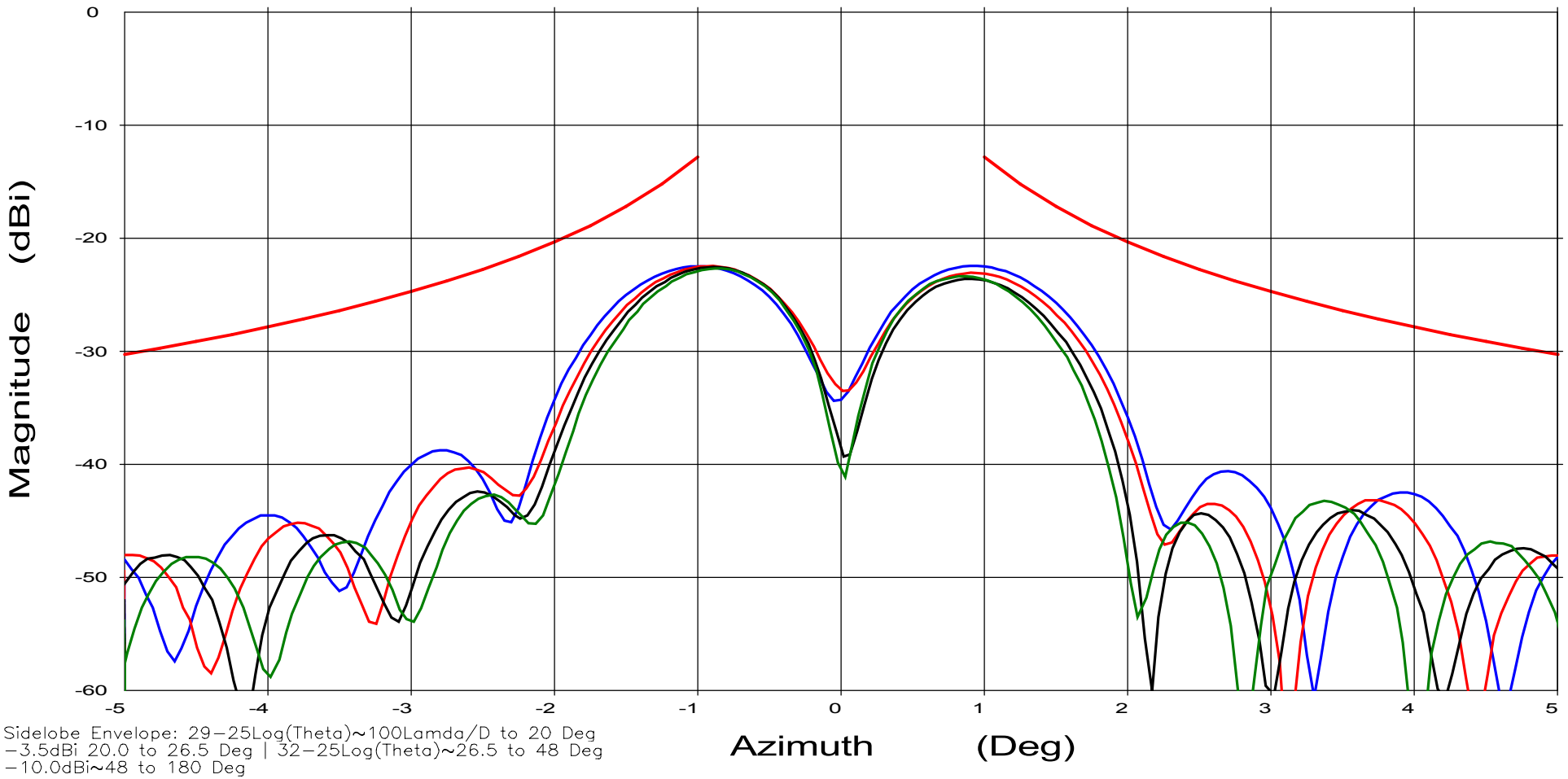
File: 1770 30.dat

General Dynamics
3.8 Meter Series 1385 Antenna System
C-Band Linear

Calibration status:
File: 1770 30.dat
Chan.: ch1
Table: SGA-40
Units: dBi

Frequency : See Legend

Operator: Dwight B. Lutz
Ser. no.:
Channel: ch1 Tx pol: Vert. Rx pol: Vert.



Sidelobe Envelope: 29−25Log(Theta)~100Lamda/D to 20 Deg
−3.5dBi 20.0 to 26.5 Deg | 32−25Log(Theta)~26.5 to 48 Deg
−10.0dBi~48 to 180 Deg

Overlays
Frequency : 3.625 GHz
Frequency : 3.825 GHz
Frequency : 4.025 GHz
Frequency : 4.200 GHz

Prodelin Corporation
East Maiden Test Range
Maiden NC

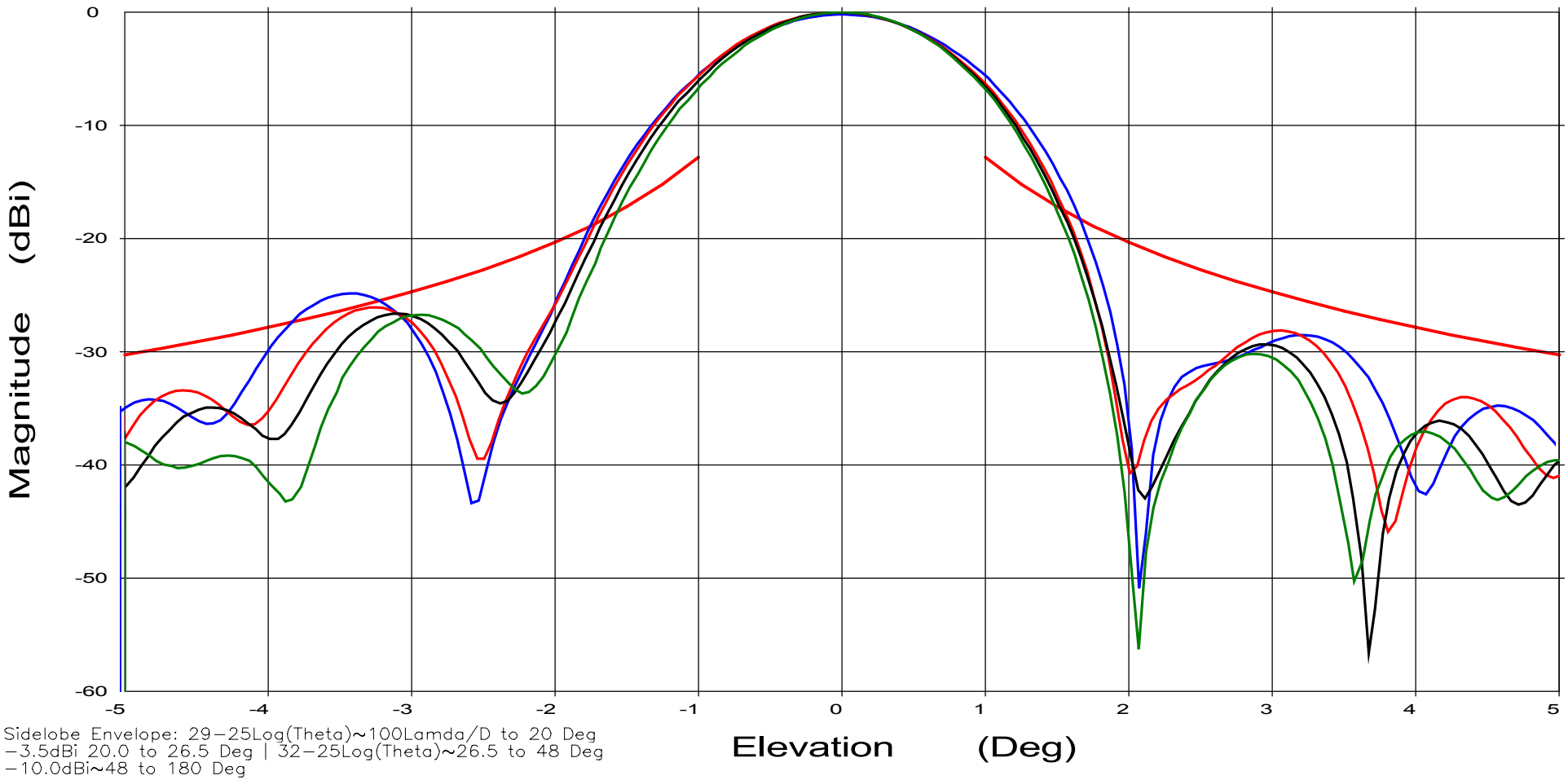
File: 1770 33.dat

General Dynamics
3.8 Meter Series 1385 Antenna System
C-Band Linear

Calibration status:
File: 1770 33.dat
Chan.: ch1
Table: SGA-40
Units: dBi

Frequency : See Legend

Operator: Dwight B. Lutz
Ser. no.:
Channel: ch1 Tx pol: Vert. Rx pol: Vert.



Sidelobe Envelope: 29−25Log(Theta)~100Lamda/D to 20 Deg
−3.5dBi 20.0 to 26.5 Deg | 32−25Log(Theta)~26.5 to 48 Deg
−10.0dBi~48 to 180 Deg

Overlays
Frequency : 3.625 GHz
Frequency : 3.825 GHz
Frequency : 4.025 GHz
Frequency : 4.200 GHz

Prodelin Corporation
East Maiden Test Range
Maiden NC

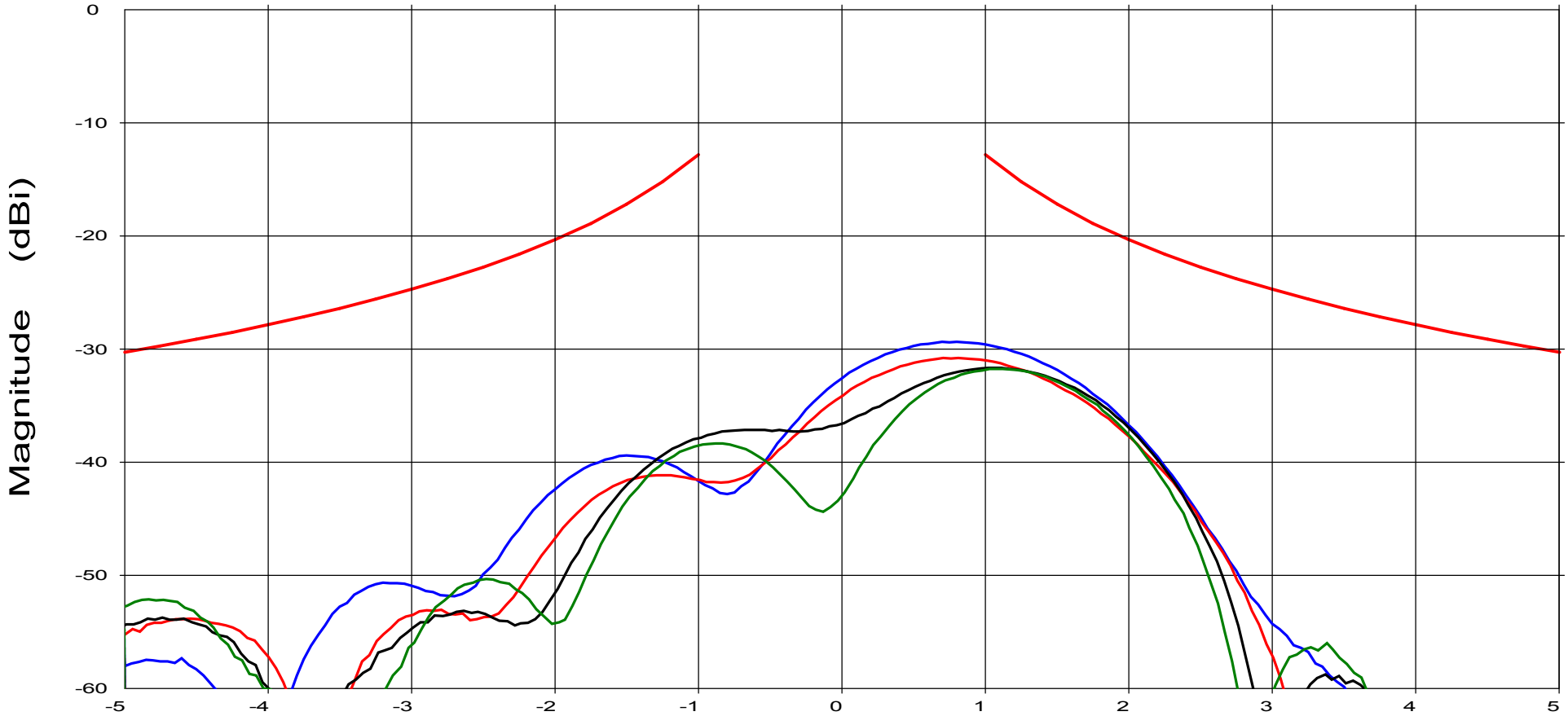
File: 1770 34.dat

General Dynamics
3.8 Meter Series 1385 Antenna System
C-Band Linear

Calibration status:
File: 1770 34.dat
Chan.: ch1
Table: SGA-40
Units: dBi

Frequency : See Legend

Operator: Dwight B. Lutz
Ser. no.:
Channel: ch1 Tx pol: Vert. Rx pol: Vert.



Sidelobe Envelope: 29−25Log(Theta)~100Lamda/D to 20 Deg
−3.5dBi 20.0 to 26.5 Deg | 32−25Log(Theta)~26.5 to 48 Deg
−10.0dBi~48 to 180 Deg

Overlays
Frequency : 3.625 GHz
Frequency : 3.825 GHz
Frequency : 4.025 GHz
Frequency : 4.200 GHz

Prodelin Corporation
East Maiden Test Range
Maiden NC

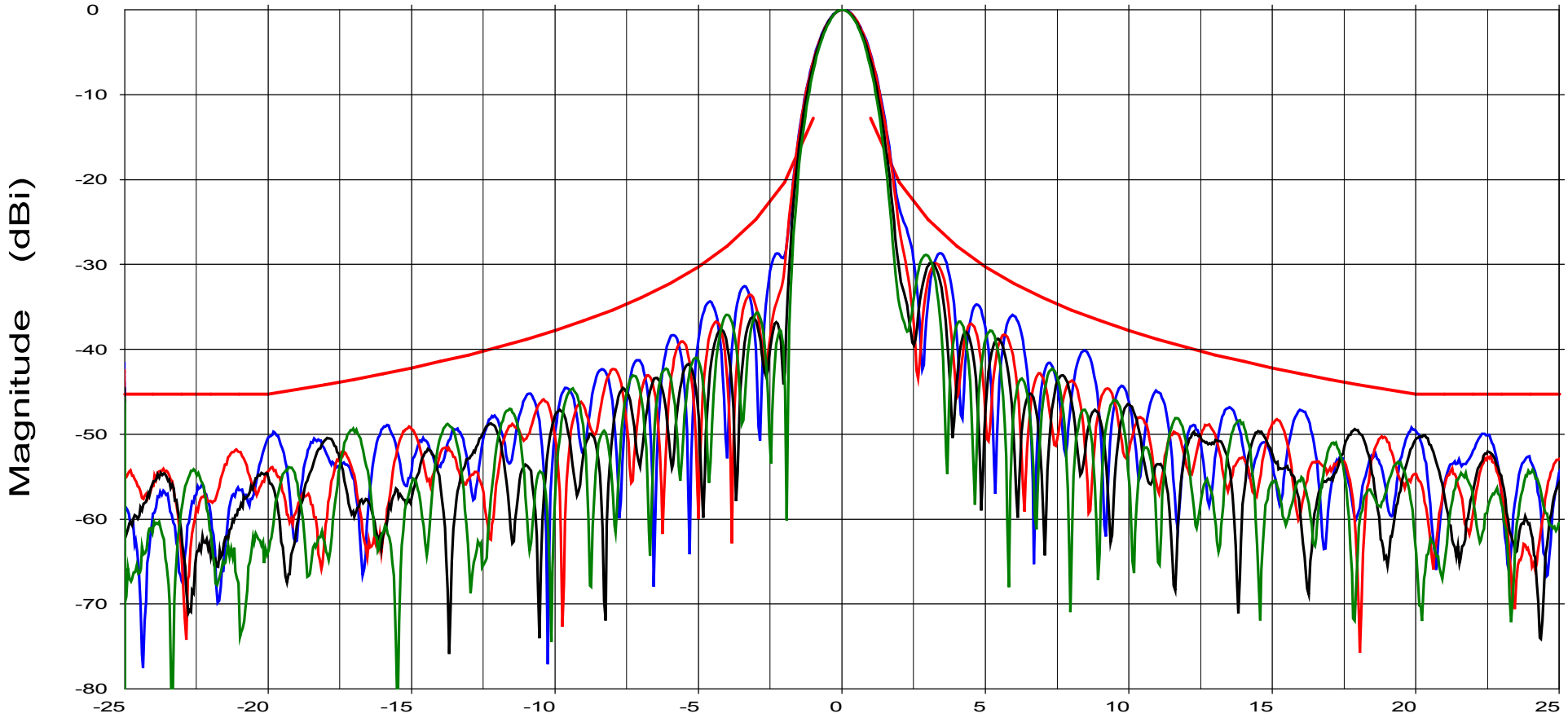
File: 1770 28.dat

General Dynamics
3.8 Meter Series 1385 Antenna System
C-Band Linear

Calibration status:
File: 1770 28.dat
Chan.: ch1
Table: SGA-40
Units: dBi

Frequency : See Legend

Operator: Dwight B. Lutz
Ser. no.:
Channel: ch1 Tx pol: Vert. Rx pol: Vert.



Sidelobe Envelope: 29−25Log(Theta)~100Lamda/D to 20 Deg
−3.5dBi 20.0 to 26.5 Deg | 32−25Log(Theta)~26.5 to 48 Deg
−10.0dBi~48 to 180 Deg

Overlays
Frequency : 3.625 GHz
Frequency : 3.825 GHz
Frequency : 4.025 GHz
Frequency : 4.200 GHz

Prodelin Corporation
East Maiden Test Range
Maiden NC

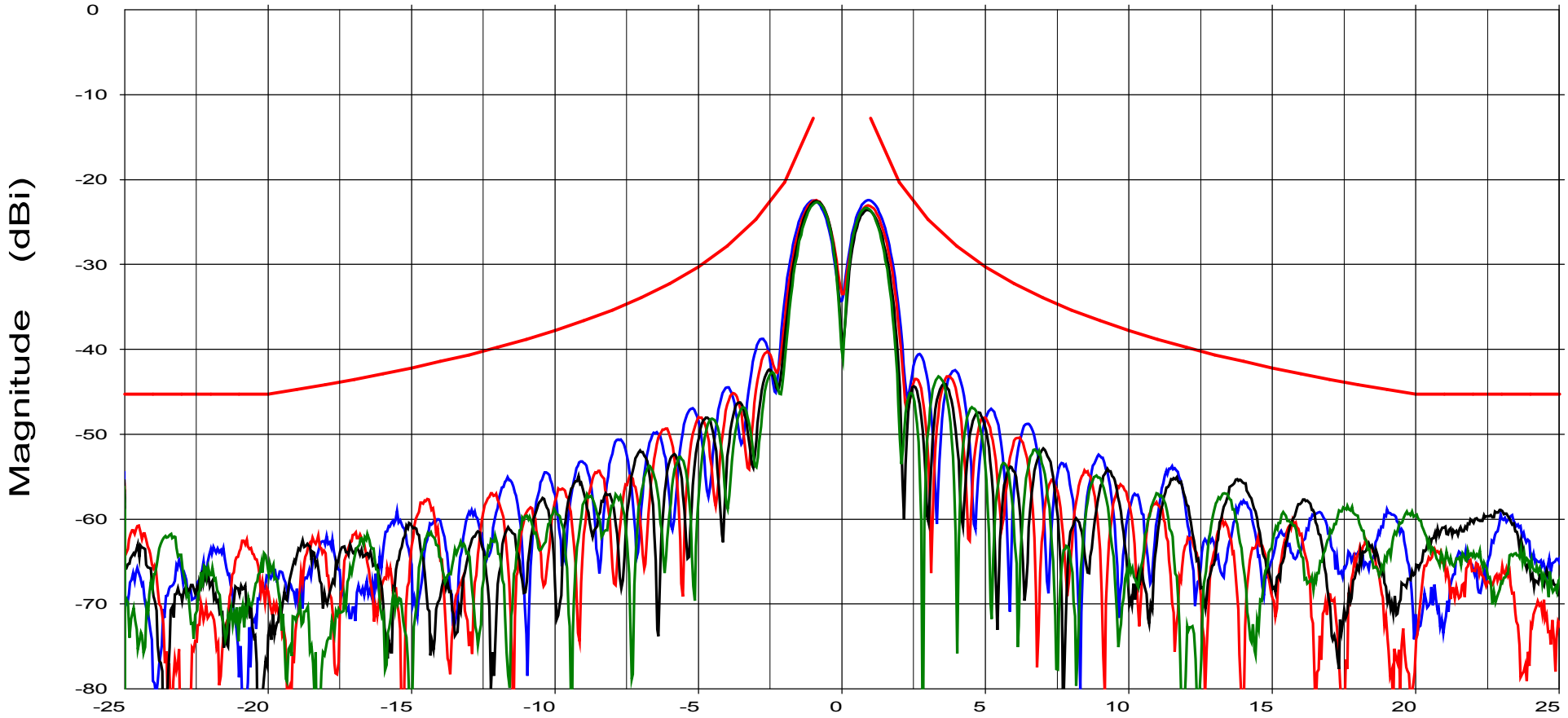
File: 1770 30.dat

General Dynamics
3.8 Meter Series 1385 Antenna System
C-Band Linear

Calibration status:
File: 1770 30.dat
Chan.: ch1
Table: SGA-40
Units: dBi

Frequency : See Legend

Operator: Dwight B. Lutz
Ser. no.:
Channel: ch1 Tx pol: Vert. Rx pol: Vert.



Sidelobe Envelope: 29−25Log(Theta)~100Lamda/D to 20 Deg
−3.5dBi 20.0 to 26.5 Deg | 32−25Log(Theta)~26.5 to 48 Deg
−10.0dBi~48 to 180 Deg

Overlays
Frequency : 3.625 GHz
Frequency : 3.825 GHz
Frequency : 4.025 GHz
Frequency : 4.200 GHz

Prodelin Corporation
East Maiden Test Range
Maiden NC

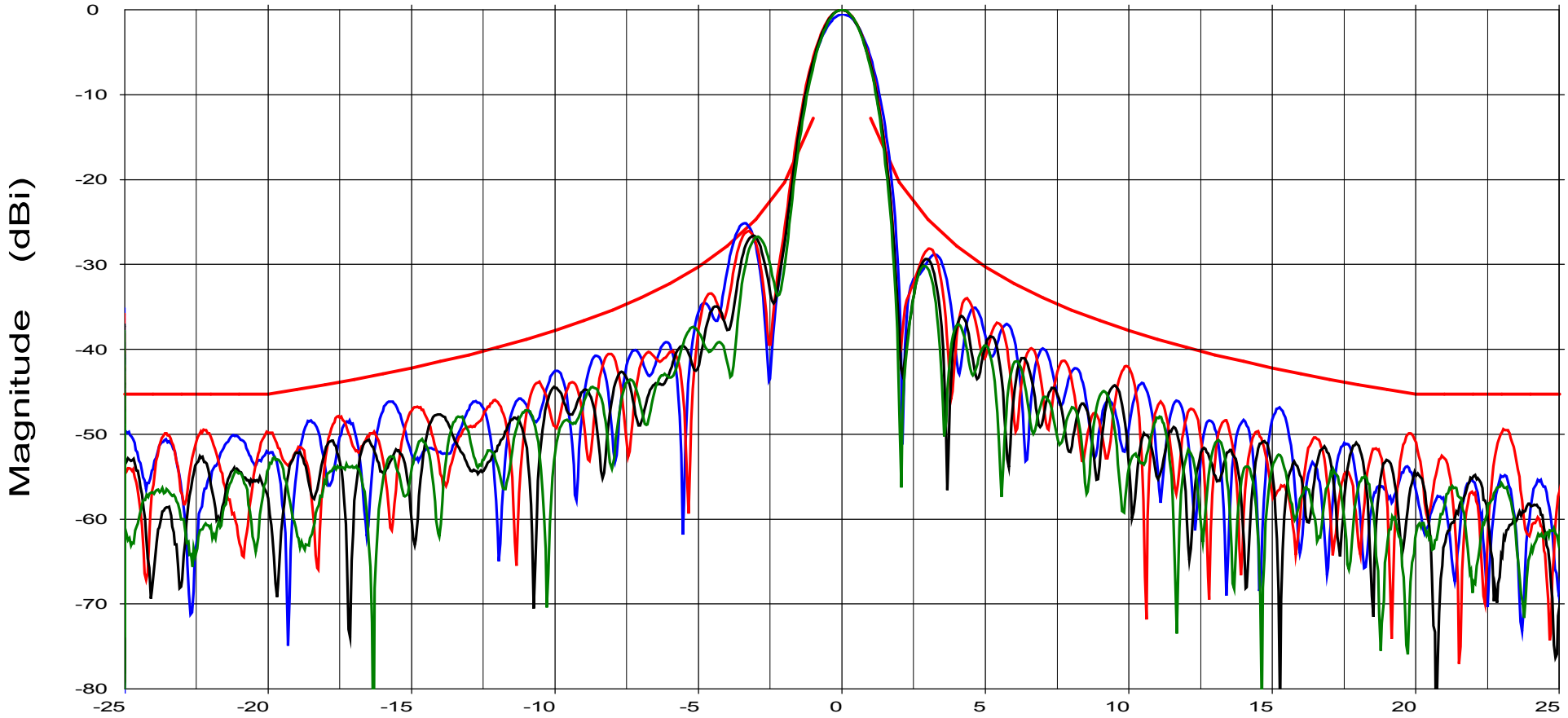
File: 1770 33.dat

General Dynamics
3.8 Meter Series 1385 Antenna System
C-Band Linear

Calibration status:
File: 1770 33.dat
Chan.: ch1
Table: SGA-40
Units: dBi

Frequency : See Legend

Operator: Dwight B. Lutz
Ser. no.:
Channel: ch1 Tx pol: Vert. Rx pol: Vert.



Sidelobe Envelope: 29−25Log(Theta)~100Lamda/D to 20 Deg
−3.5dBi 20.0 to 26.5 Deg | 32−25Log(Theta)~26.5 to 48 Deg
−10.0dBi~48 to 180 Deg

Overlays
Frequency : 3.625 GHz
Frequency : 3.825 GHz
Frequency : 4.025 GHz
Frequency : 4.200 GHz

Prodelin Corporation
East Maiden Test Range
Maiden NC

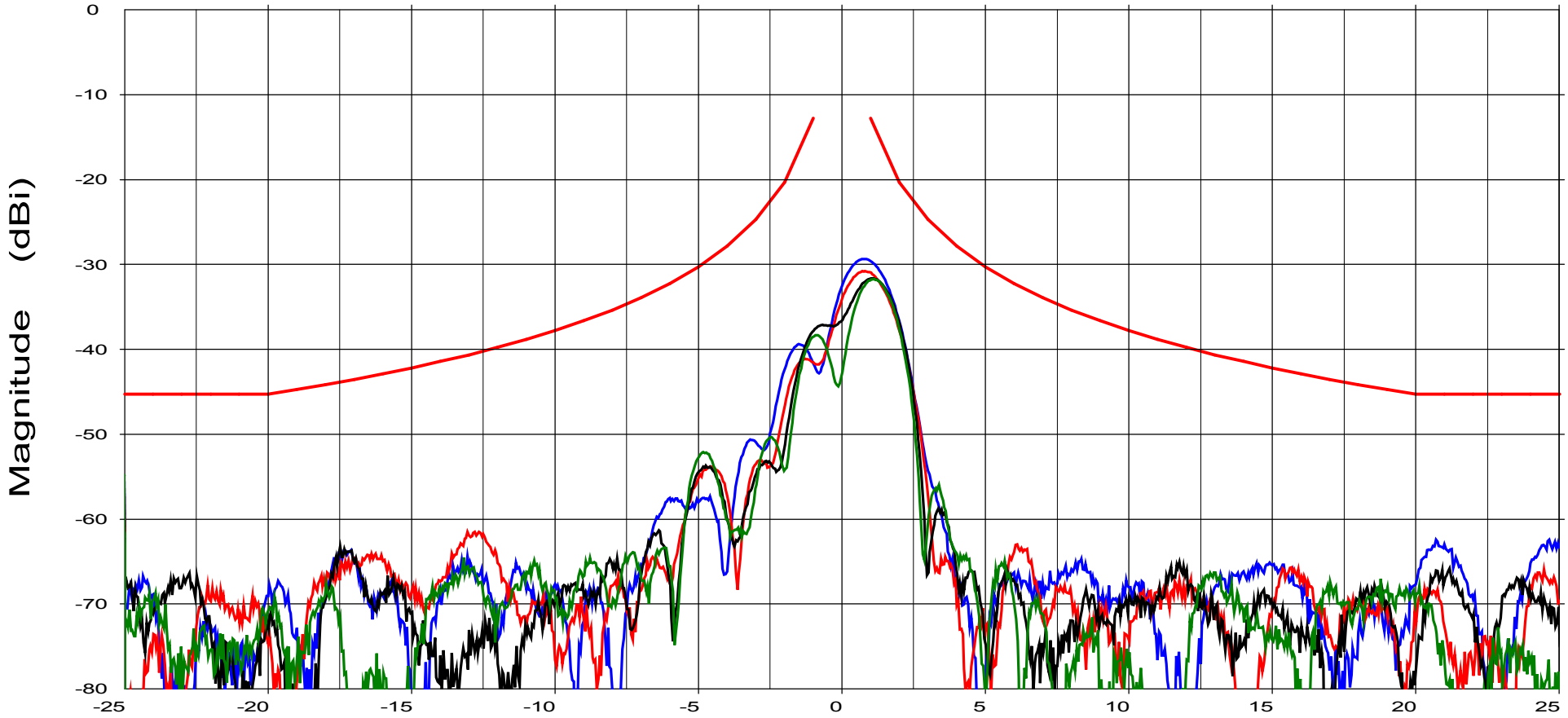
File: 1770 34.dat

General Dynamics
3.8 Meter Series 1385 Antenna System
C-Band Linear

Calibration status:
File: 1770 34.dat
Chan.: ch1
Table: SGA-40
Units: dBi

Frequency : See Legend

Operator: Dwight B. Lutz
Ser. no.:
Channel: ch1 Tx pol: Vert. Rx pol: Vert.



Sidelobe Envelope: 29−25Log(Theta)~100Lamda/D to 20 Deg
−3.5dBi 20.0 to 26.5 Deg | 32−25Log(Theta)~26.5 to 48 Deg
−10.0dBi~48 to 180 Deg

Overlays
Frequency : 3.625 GHz
Frequency : 3.825 GHz
Frequency : 4.025 GHz
Frequency : 4.200 GHz

Prodelin Corporation
East Maiden Test Range
Maiden NC

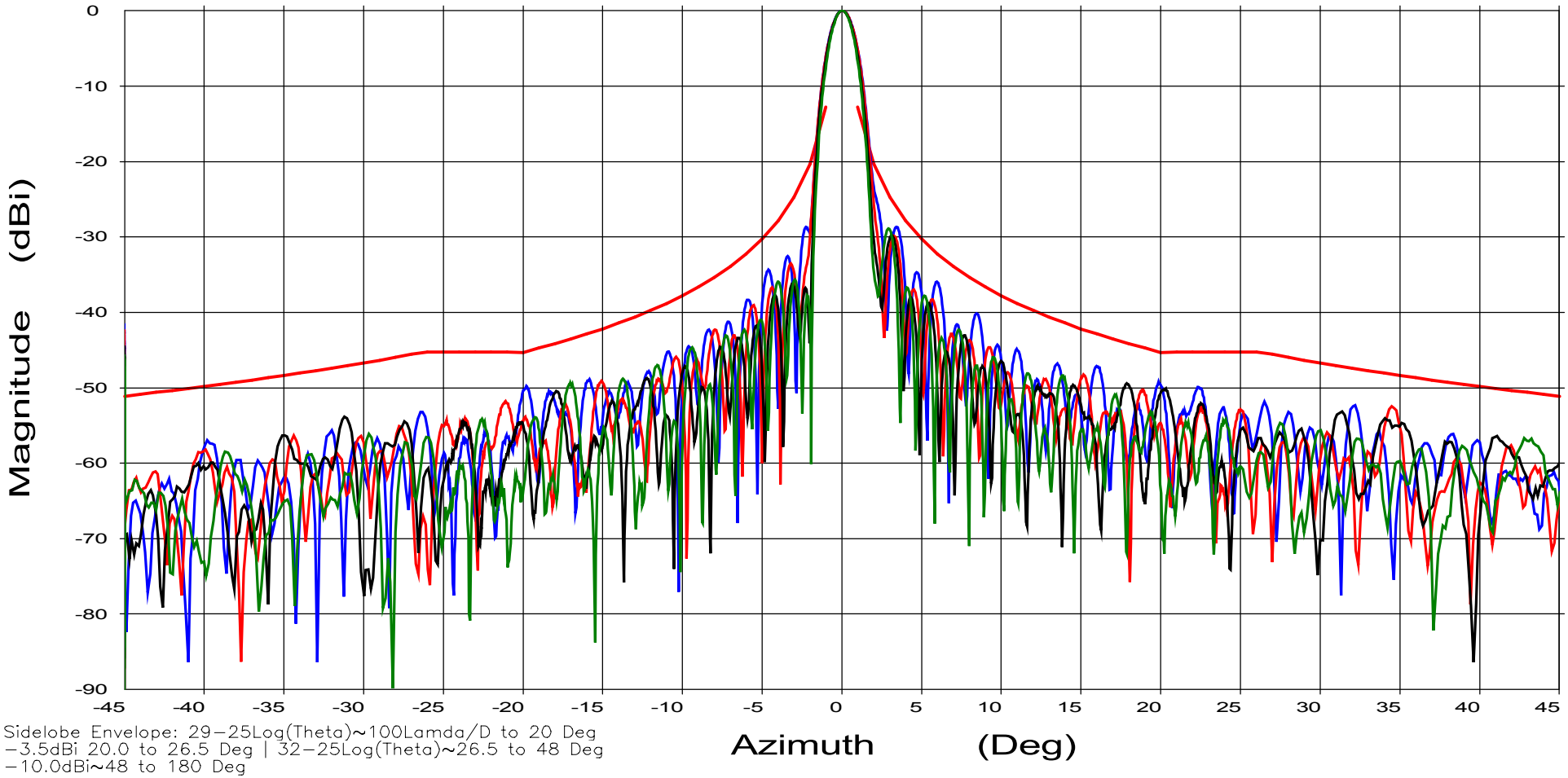
File: 1770 28.dat

General Dynamics
3.8 Meter Series 1385 Antenna System
C-Band Linear

Calibration status:
File: 1770 28.dat
Chan.: ch1
Table: SGA-40
Units: dBi

Frequency : See Legend

Operator: Dwight B. Lutz
Ser. no.:
Channel: ch1 Tx pol: Vert. Rx pol: Vert.



Sidelobe Envelope: 29−25Log(Theta)~100Lamda/D to 20 Deg
−3.5dBi 20.0 to 26.5 Deg | 32−25Log(Theta)~26.5 to 48 Deg
−10.0dBi~48 to 180 Deg

Overlays
Frequency : 3.625 GHz
Frequency : 3.825 GHz
Frequency : 4.025 GHz
Frequency : 4.200 GHz

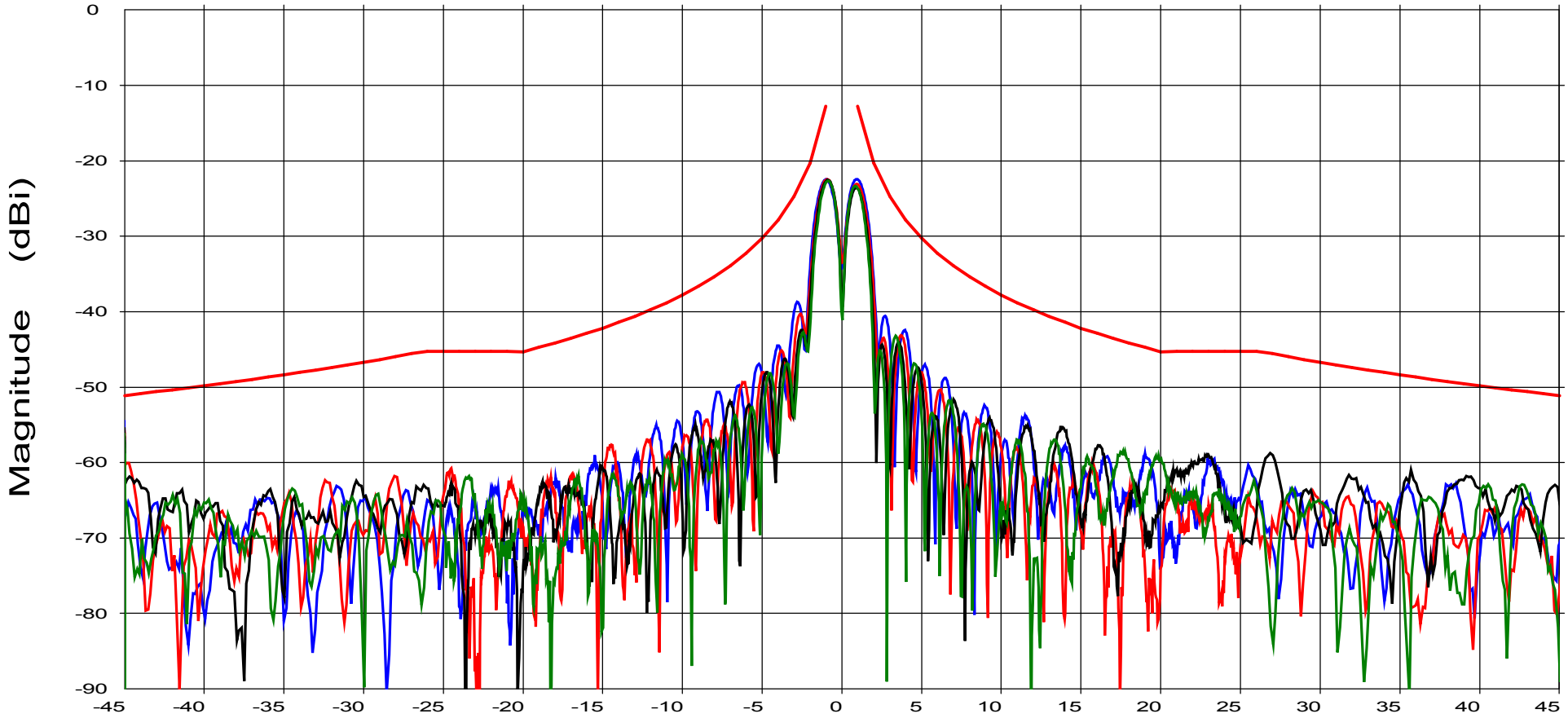
File: 1770 30.dat

General Dynamics
3.8 Meter Series 1385 Antenna System
C-Band Linear

Calibration status:
File: 1770 30.dat
Chan.: ch1
Table: SGA-40
Units: dBi

Frequency : See Legend

Operator: Dwight B. Lutz
Ser. no.:
Channel: ch1 Tx pol: Vert. Rx pol: Vert.



Sidelobe Envelope: 29−25Log(Theta)~100Lamda/D to 20 Deg
−3.5dBi 20.0 to 26.5 Deg | 32−25Log(Theta)~26.5 to 48 Deg
−10.0dBi~48 to 180 Deg

Overlays
Frequency : 3.625 GHz
Frequency : 3.825 GHz
Frequency : 4.025 GHz
Frequency : 4.200 GHz

Prodelin Corporation
East Maiden Test Range
Maiden NC

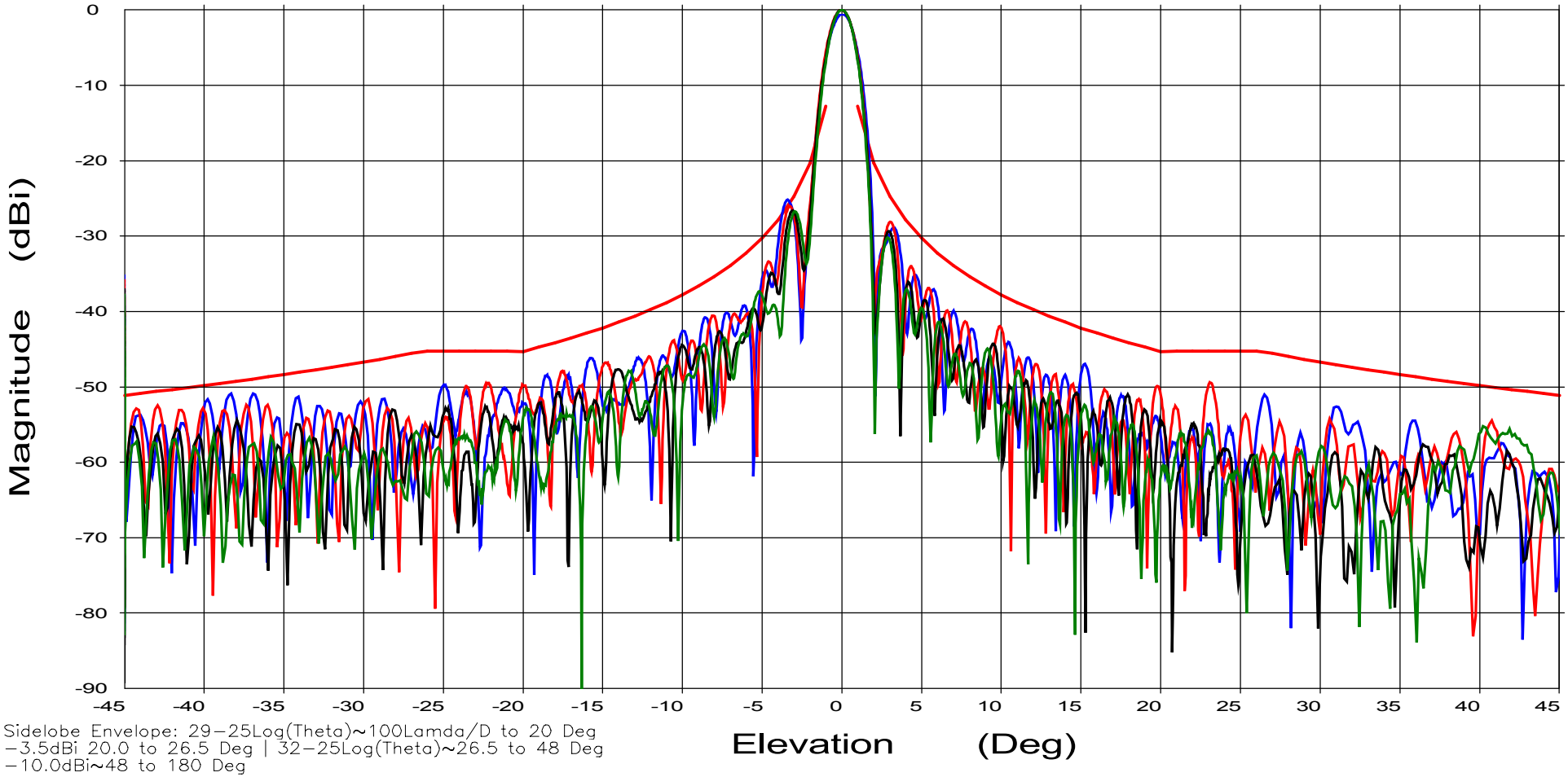
File: 1770 33.dat

General Dynamics
3.8 Meter Series 1385 Antenna System
C-Band Linear

Calibration status:
File: 1770 33.dat
Chan.: ch1
Table: SGA-40
Units: dBi

Frequency : See Legend

Operator: Dwight B. Lutz
Ser. no.:
Channel: ch1 Tx pol: Vert. Rx pol: Vert.



Sidelobe Envelope: 29−25Log(Theta)~100Lamda/D to 20 Deg
−3.5dBi 20.0 to 26.5 Deg | 32−25Log(Theta)~26.5 to 48 Deg
−10.0dBi~48 to 180 Deg

Overlays
Frequency : 3.625 GHz
Frequency : 3.825 GHz
Frequency : 4.025 GHz
Frequency : 4.200 GHz

Prodelin Corporation
East Maiden Test Range
Maiden NC

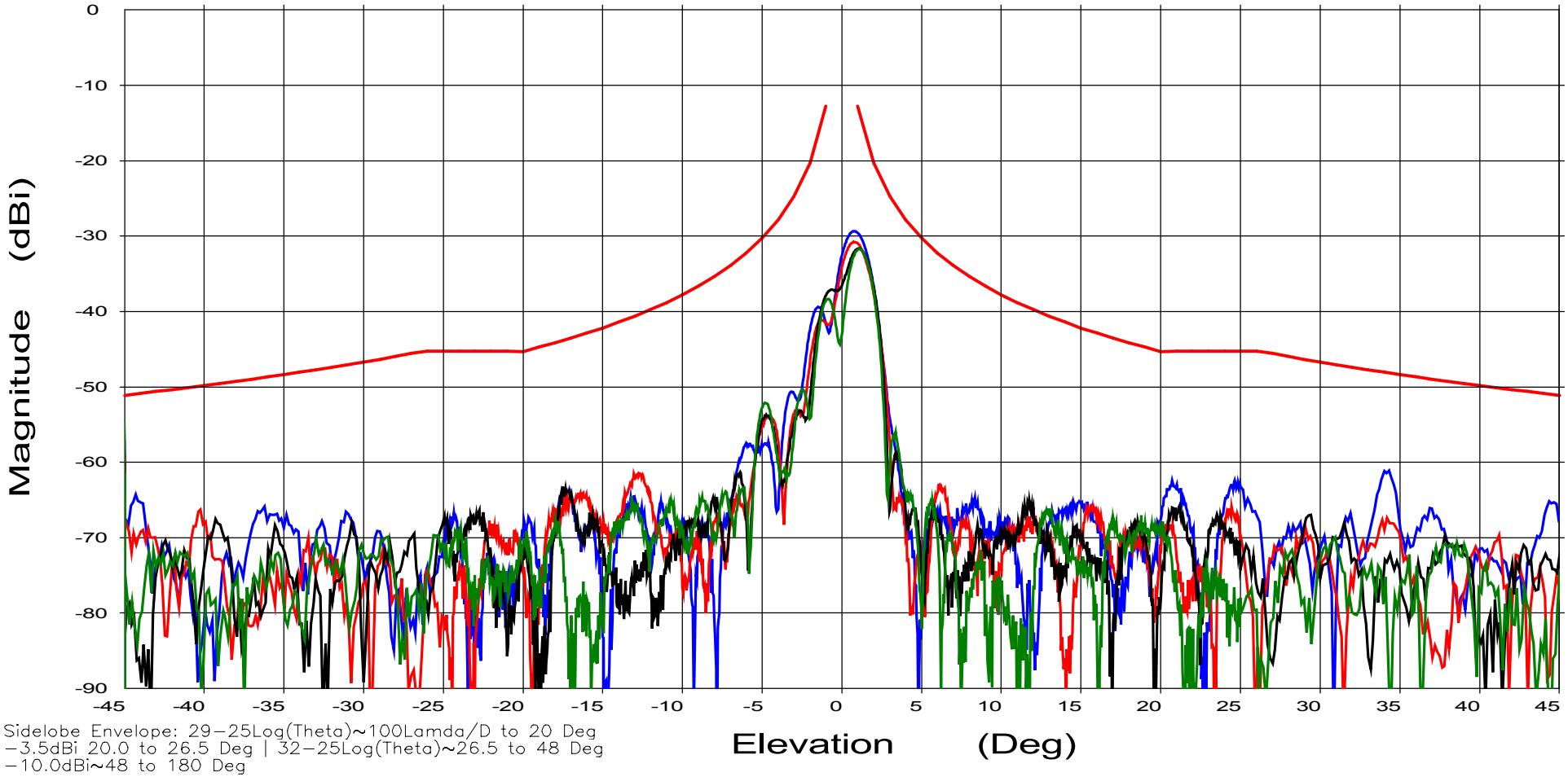
File: 1770 34.dat

General Dynamics
3.8 Meter Series 1385 Antenna System
C-Band Linear

Calibration status:
File: 1770 34.dat
Chan.: ch1
Table: SGA-40
Units: dBi

Frequency : See Legend

Operator: Dwight B. Lutz
Ser. no.:
Channel: ch1 Tx pol: Vert. Rx pol: Vert.



Sidelobe Envelope: 29−25Log(Theta)~100Lamda/D to 20 Deg
−3.5dBi 20.0 to 26.5 Deg | 32−25Log(Theta)~26.5 to 48 Deg
−10.0dBi~48 to 180 Deg

Overlays
Frequency : 3.625 GHz
Frequency : 3.825 GHz
Frequency : 4.025 GHz
Frequency : 4.200 GHz

Prodelin Corporation
East Maiden Test Range
Maiden NC

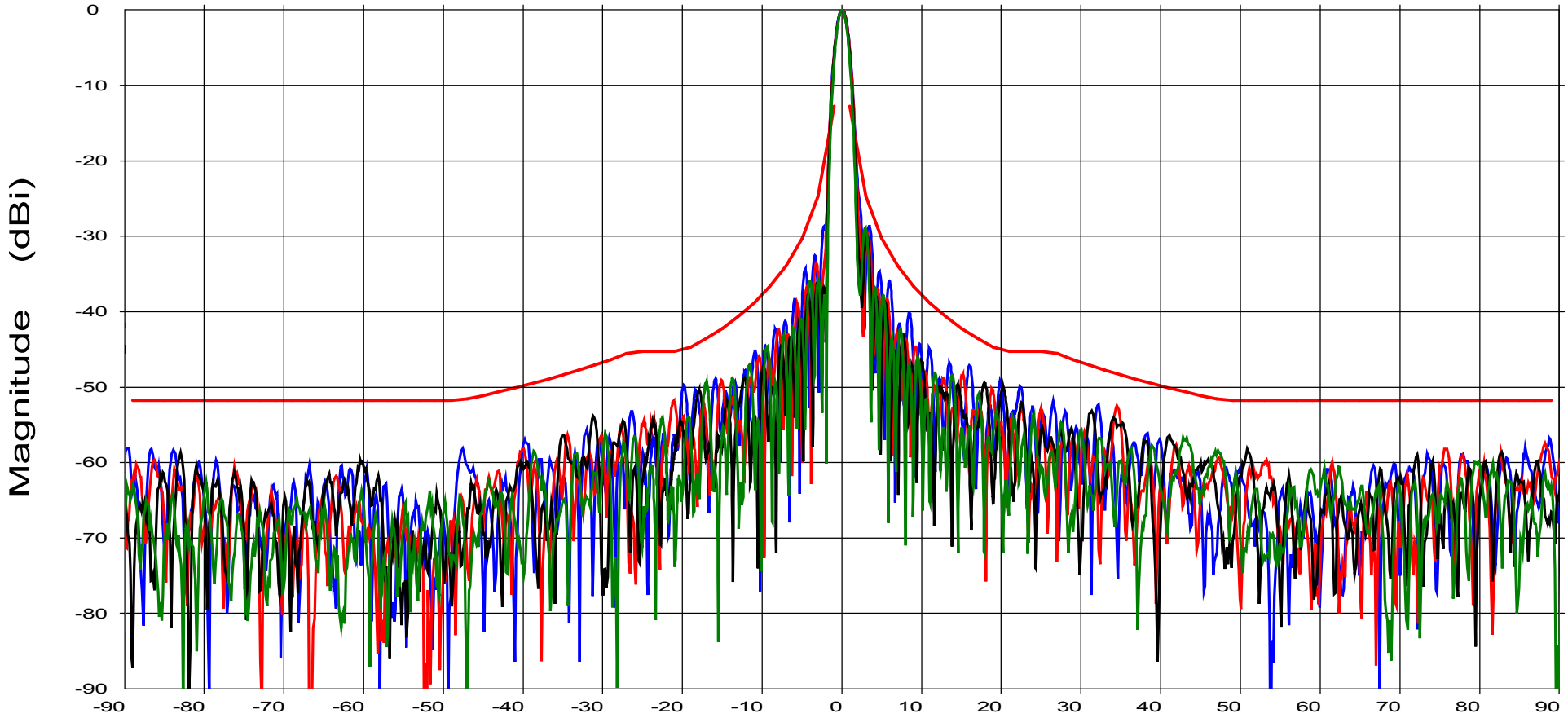
File: 1770 28.dat

General Dynamics
3.8 Meter Series 1385 Antenna System
C-Band Linear

Calibration status:
File: 1770 28.dat
Chan.: ch1
Table: SGA-40
Units: dBi

Frequency : See Legend

Operator: Dwight B. Lutz
Ser. no.:
Channel: ch1 Tx pol: Vert. Rx pol: Vert.



Sidelobe Envelope: 29−25Log(Theta)~100Lamda/D to 20 Deg
−3.5dBi 20.0 to 26.5 Deg | 32−25Log(Theta)~26.5 to 48 Deg
−10.0dBi~48 to 180 Deg

Overlays
Frequency : 3.625 GHz
Frequency : 3.825 GHz
Frequency : 4.025 GHz
Frequency : 4.200 GHz

Prodelin Corporation
East Maiden Test Range
Maiden NC

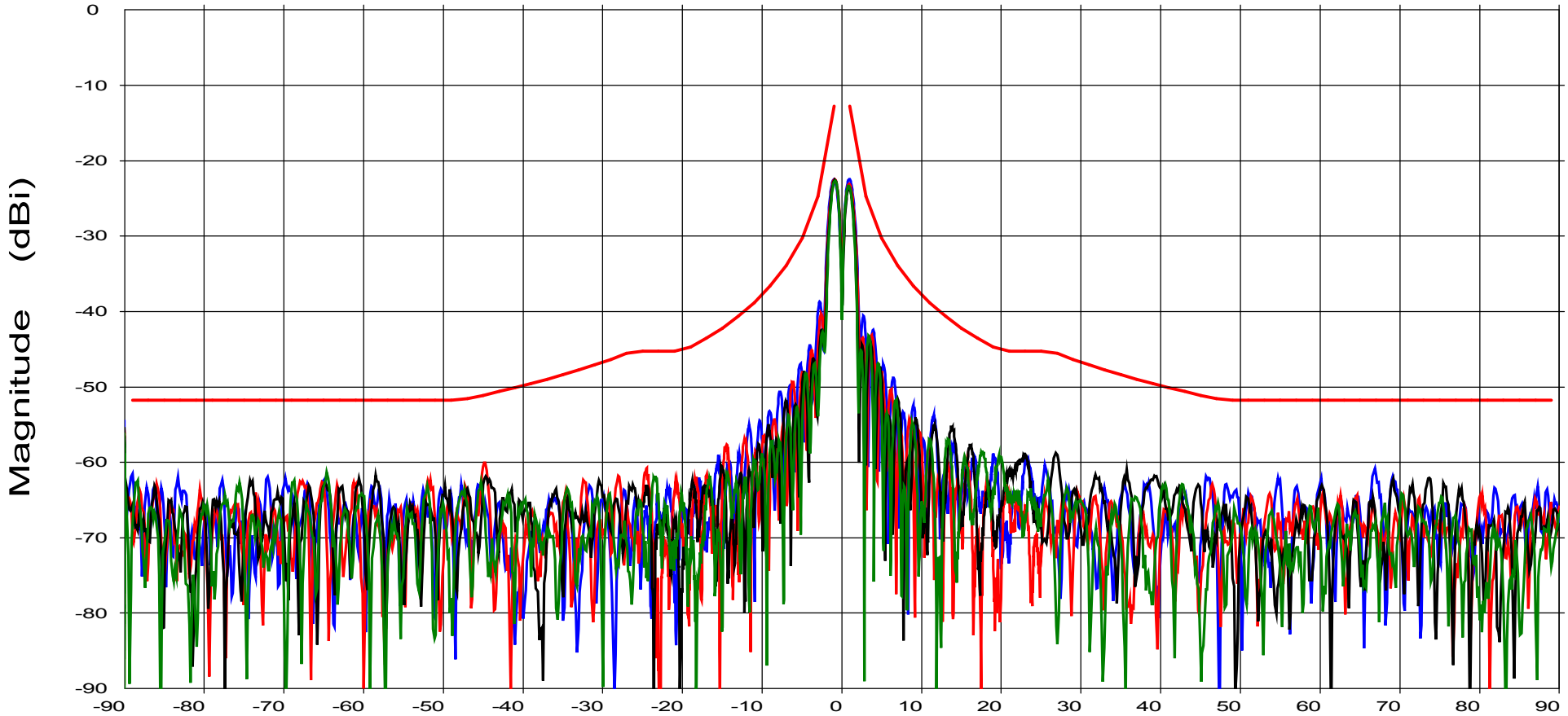
File: 1770 30.dat

General Dynamics
3.8 Meter Series 1385 Antenna System
C-Band Linear

Calibration status:
File: 1770 30.dat
Chan.: ch1
Table: SGA-40
Units: dBi

Frequency : See Legend

Operator: Dwight B. Lutz
Ser. no.:
Channel: ch1 Tx pol: Vert. Rx pol: Vert.



Sidelobe Envelope: 29−25Log(Theta)~100Lamda/D to 20 Deg
−3.5dBi 20.0 to 26.5 Deg | 32−25Log(Theta)~26.5 to 48 Deg
−10.0dBi~48 to 180 Deg

Overlays
Frequency : 3.625 GHz
Frequency : 3.825 GHz
Frequency : 4.025 GHz
Frequency : 4.200 GHz

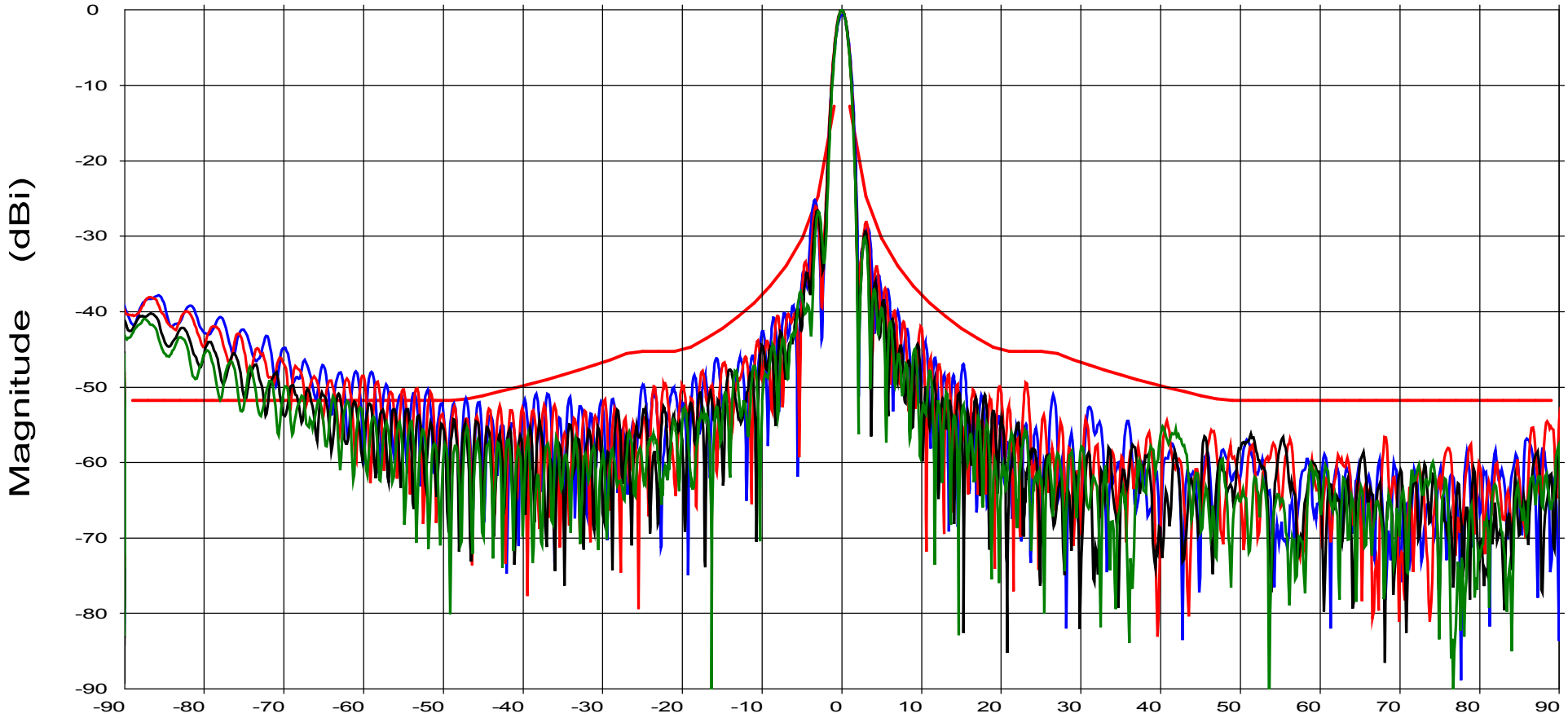
File: 1770 33.dat

General Dynamics
3.8 Meter Series 1385 Antenna System
C-Band Linear

Calibration status:
File: 1770 33.dat
Chan.: ch1
Table: SGA-40
Units: dBi

Frequency : See Legend

Operator: Dwight B. Lutz
Ser. no.:
Channel: ch1 Tx pol: Vert. Rx pol: Vert.



Sidelobe Envelope: 29−25Log(Theta)~100Lamda/D to 20 Deg
−3.5dBi 20.0 to 26.5 Deg | 32−25Log(Theta)~26.5 to 48 Deg
−10.0dBi~48 to 180 Deg

Overlays
Frequency : 3.625 GHz
Frequency : 3.825 GHz
Frequency : 4.025 GHz
Frequency : 4.200 GHz

Prodelin Corporation
East Maiden Test Range
Maiden NC

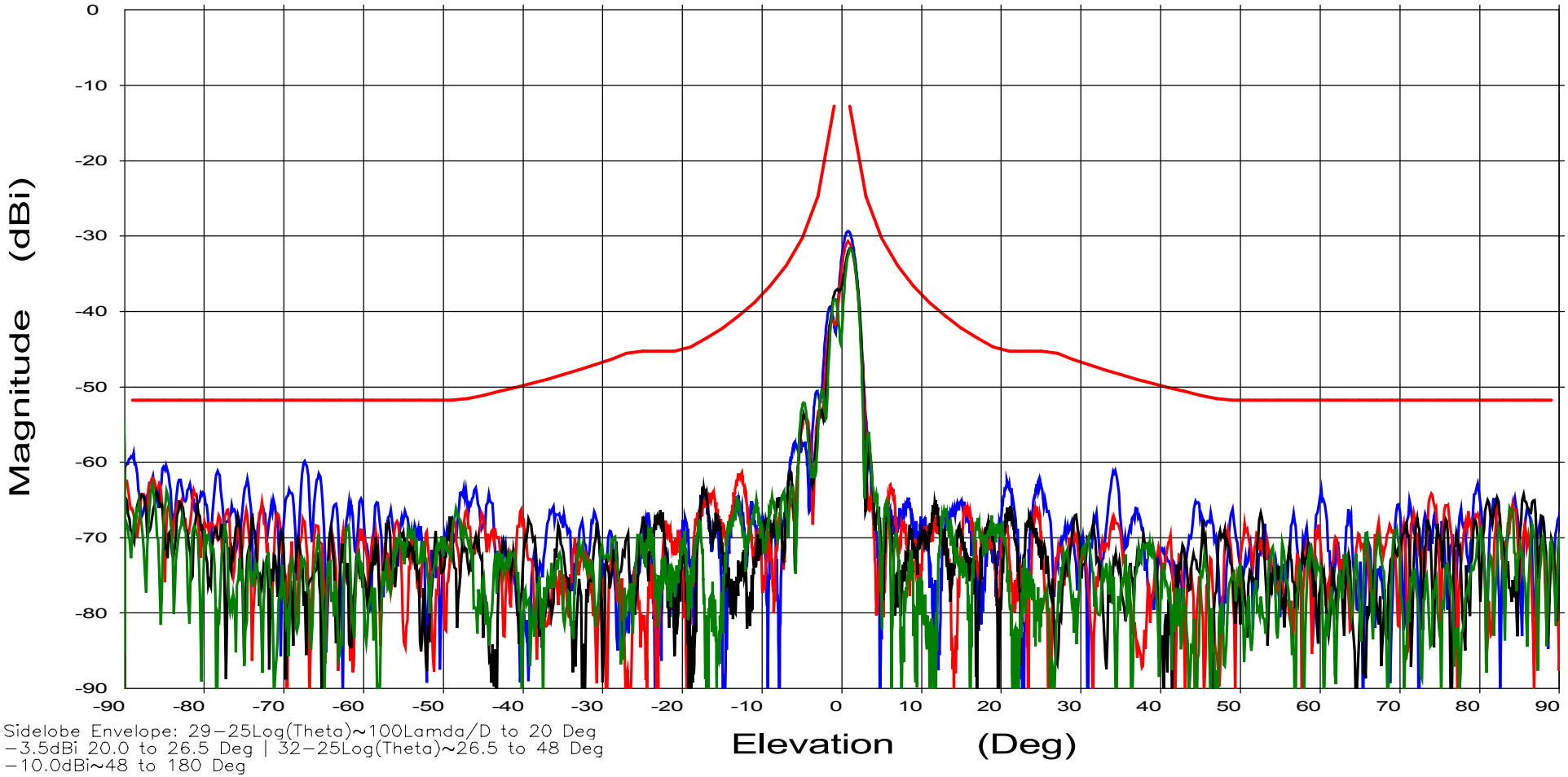
File: 1770 34.dat

General Dynamics
3.8 Meter Series 1385 Antenna System
C-Band Linear

Calibration status:
File: 1770 34.dat
Chan.: ch1
Table: SGA-40
Units: dBi

Frequency : See Legend

Operator: Dwight B. Lutz
Ser. no.:
Channel: ch1 Tx pol: Vert. Rx pol: Vert.



Sidelobe Envelope: 29−25Log(Theta)~100Lamda/D to 20 Deg
−3.5dBi 20.0 to 26.5 Deg | 32−25Log(Theta)~26.5 to 48 Deg
−10.0dBi~48 to 180 Deg

Overlays
Frequency : 3.625 GHz
Frequency : 3.825 GHz
Frequency : 4.025 GHz
Frequency : 4.200 GHz

Prodelin Corporation
East Maiden Test Range
Maiden NC

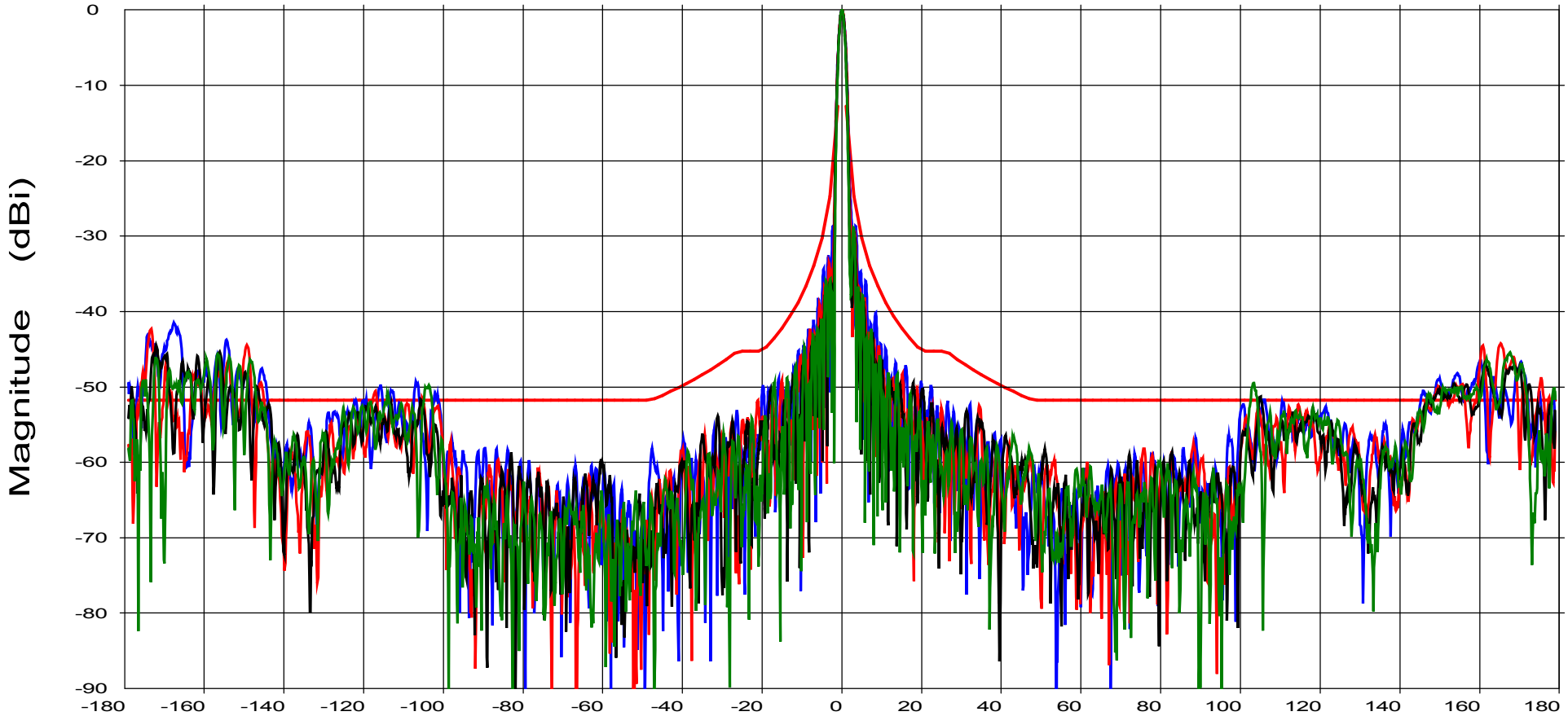
File: 1770 28.dat

General Dynamics
3.8 Meter Series 1385 Antenna System
C-Band Linear

Calibration status:
File: 1770 28.dat
Chan.: ch1
Table: SGA-40
Units: dBi

Frequency : See Legend

Operator: Dwight B. Lutz
Ser. no.:
Channel: ch1 Tx pol: Vert. Rx pol: Vert.



Sidelobe Envelope: 29−25Log(Theta)~100Lamda/D to 20 Deg
−3.5dBi 20.0 to 26.5 Deg | 32−25Log(Theta)~26.5 to 48 Deg
−10.0dBi~48 to 180 Deg

Overlays
Frequency : 3.625 GHz
Frequency : 3.825 GHz
Frequency : 4.025 GHz
Frequency : 4.200 GHz

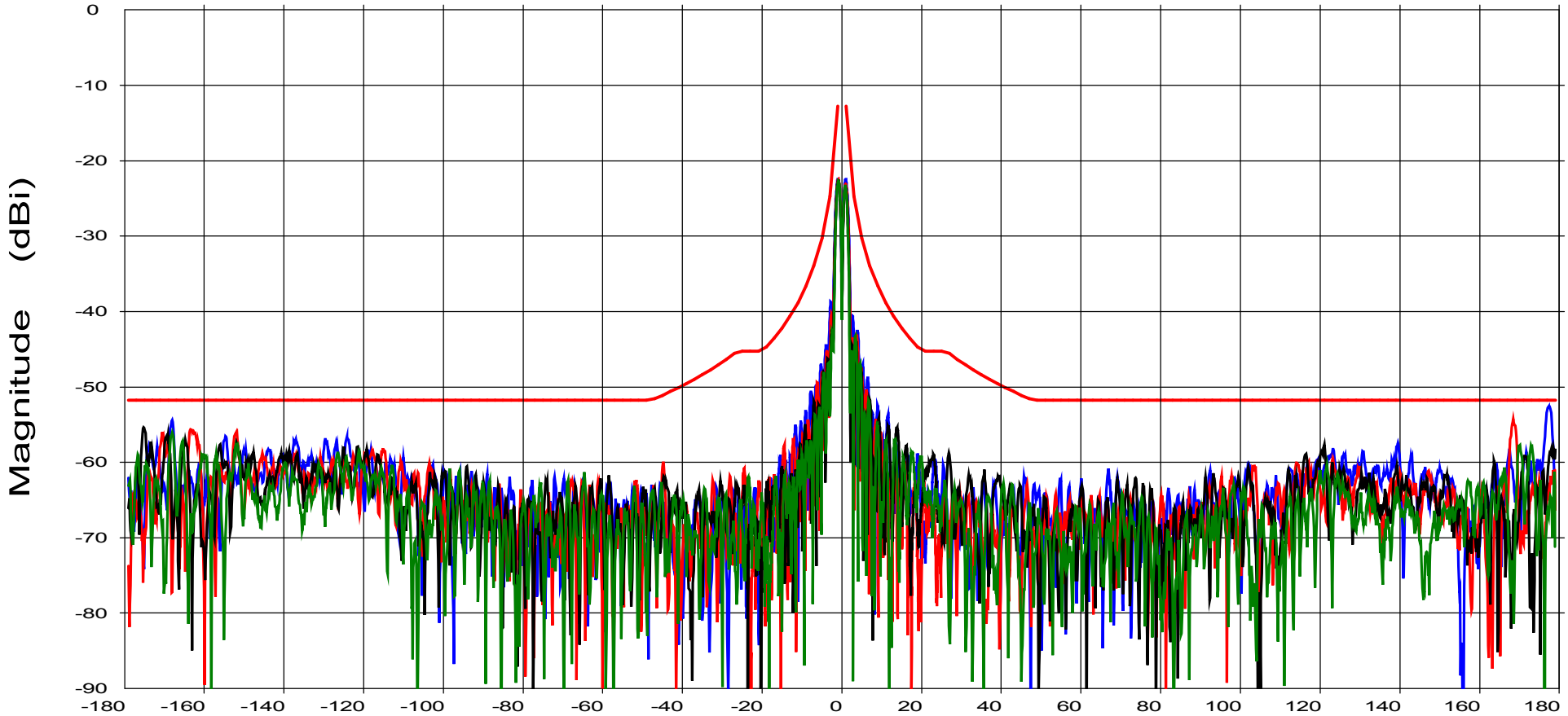
File: 1770 30.dat

General Dynamics
3.8 Meter Series 1385 Antenna System
C-Band Linear

Calibration status:
File: 1770 30.dat
Chan.: ch1
Table: SGA-40
Units: dBi

Frequency : See Legend

Operator: Dwight B. Lutz
Ser. no.:
Channel: ch1 Tx pol: Vert. Rx pol: Vert.



Sidelobe Envelope: 29−25Log(Theta)~100Lamda/D to 20 Deg
−3.5dBi 20.0 to 26.5 Deg | 32−25Log(Theta)~26.5 to 48 Deg
−10.0dBi~48 to 180 Deg

Overlays
Frequency : 3.625 GHz
Frequency : 3.825 GHz
Frequency : 4.025 GHz
Frequency : 4.200 GHz

Prodelin Corporation
East Maiden Test Range
Maiden NC

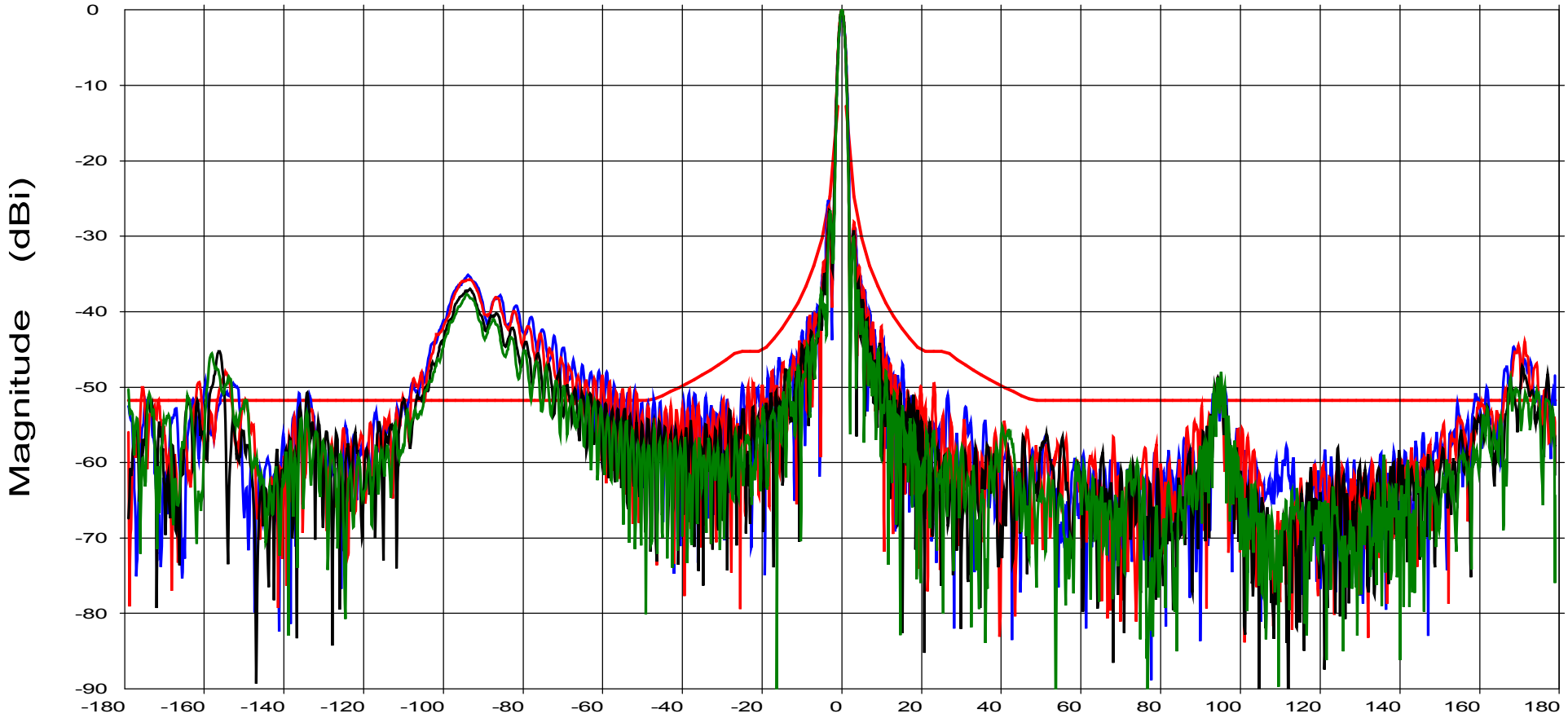
File: 1770 33.dat

General Dynamics
3.8 Meter Series 1385 Antenna System
C-Band Linear

Calibration status:
File: 1770 33.dat
Chan.: ch1
Table: SGA-40
Units: dBi

Frequency : See Legend

Operator: Dwight B. Lutz
Ser. no.:
Channel: ch1 Tx pol: Vert. Rx pol: Vert.



Sidelobe Envelope: 29−25Log(Theta)~100Lamda/D to 20 Deg
−3.5dBi 20.0 to 26.5 Deg | 32−25Log(Theta)~26.5 to 48 Deg
−10.0dBi~48 to 180 Deg

Overlays
Frequency : 3.625 GHz
Frequency : 3.825 GHz
Frequency : 4.025 GHz
Frequency : 4.200 GHz

Prodelin Corporation
East Maiden Test Range
Maiden NC

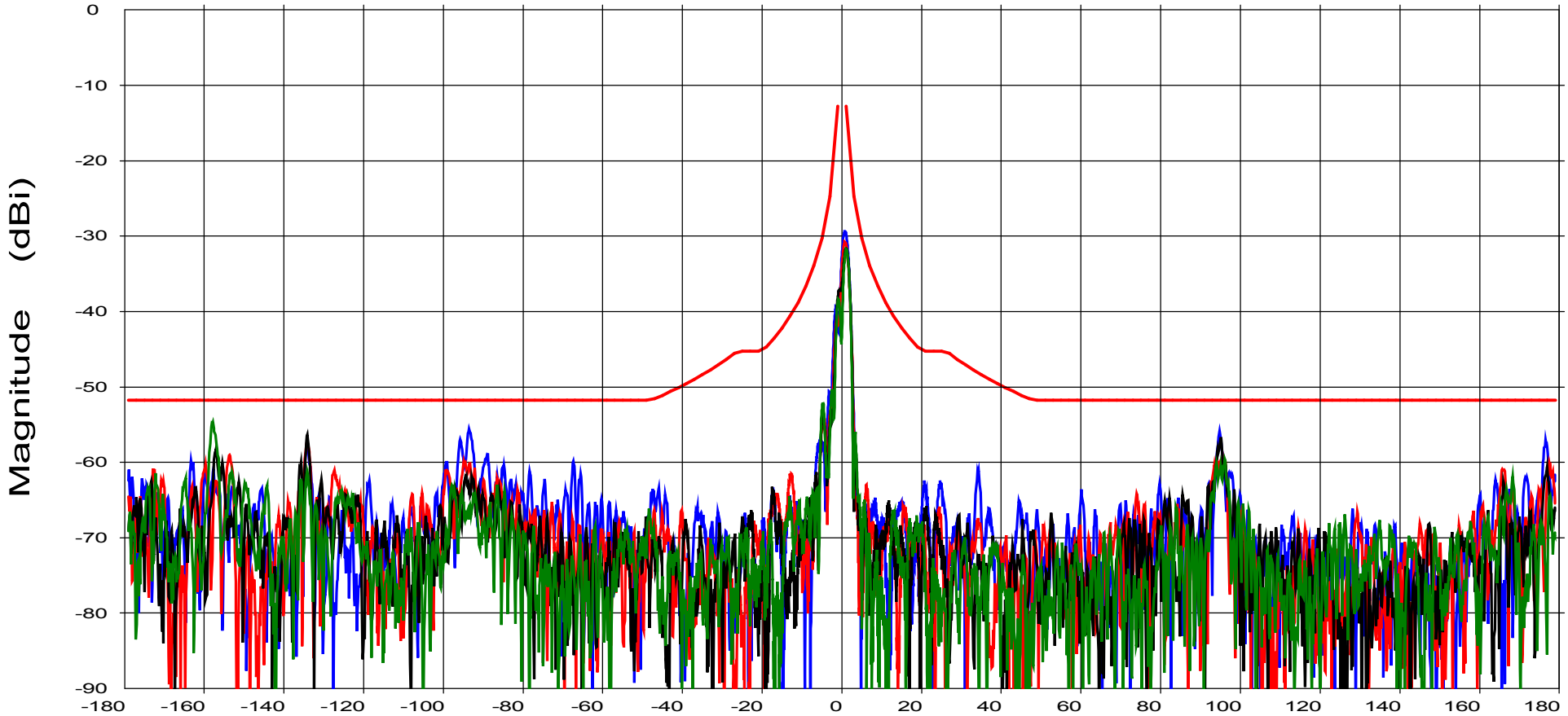
File: 1770 34.dat

General Dynamics
3.8 Meter Series 1385 Antenna System
C-Band Linear

Calibration status:
File: 1770 34.dat
Chan.: ch1
Table: SGA-40
Units: dBi

Frequency : See Legend

Operator: Dwight B. Lutz
Ser. no.:
Channel: ch1 Tx pol: Vert. Rx pol: Vert.



Sidelobe Envelope: 29−25Log(Theta)~100Lamda/D to 20 Deg
−3.5dBi 20.0 to 26.5 Deg | 32−25Log(Theta)~26.5 to 48 Deg
−10.0dBi~48 to 180 Deg

Overlays
Frequency : 3.625 GHz
Frequency : 3.825 GHz
Frequency : 4.025 GHz
Frequency : 4.200 GHz

Prodelin Corporation
East Maiden Test Range
Maiden NC

3.7 Horiaontal Polarization Receive Close-in Patterns

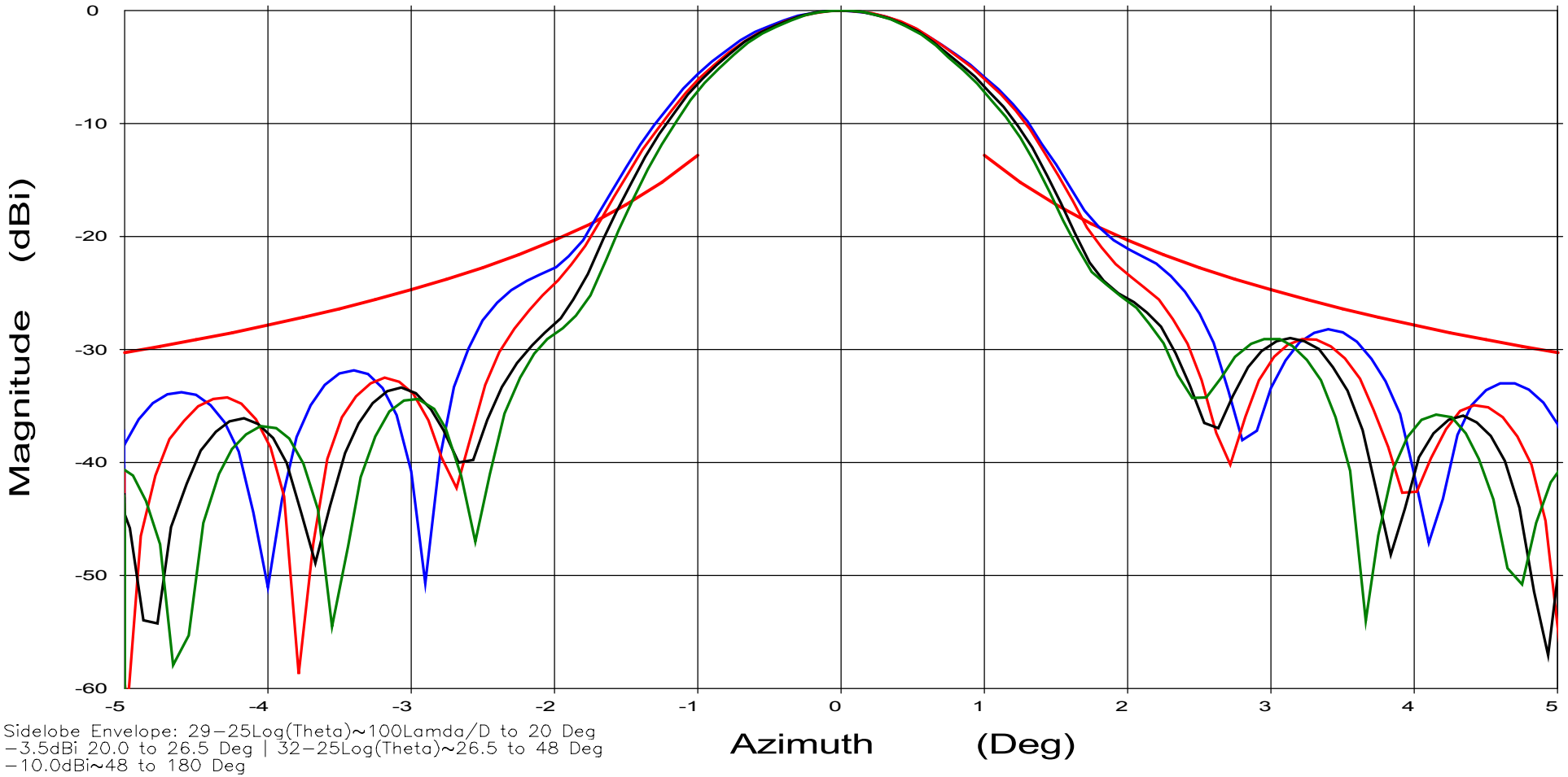
File: 1770 40.dat

General Dynamics
3.8 Meter Series 1385 Antenna System
C-Band Linear

Operator: Dwight B. Lutz
Ser. no.:
Channel: ch1 Tx pol: Horiz. Rx pol: Horiz.

Calibration status:
File: 1770 40.dat
Chan.: ch1
Table: SGA-40
Units: dBi

Frequency : See Legend



Sidelobe Envelope: 29−25Log(Theta)~100Lamda/D to 20 Deg
−3.5dBi 20.0 to 26.5 Deg | 32−25Log(Theta)~26.5 to 48 Deg
−10.0dBi~48 to 180 Deg

Overlays
Frequency : 3.625 GHz
Frequency : 3.825 GHz
Frequency : 4.025 GHz
Frequency : 4.200 GHz

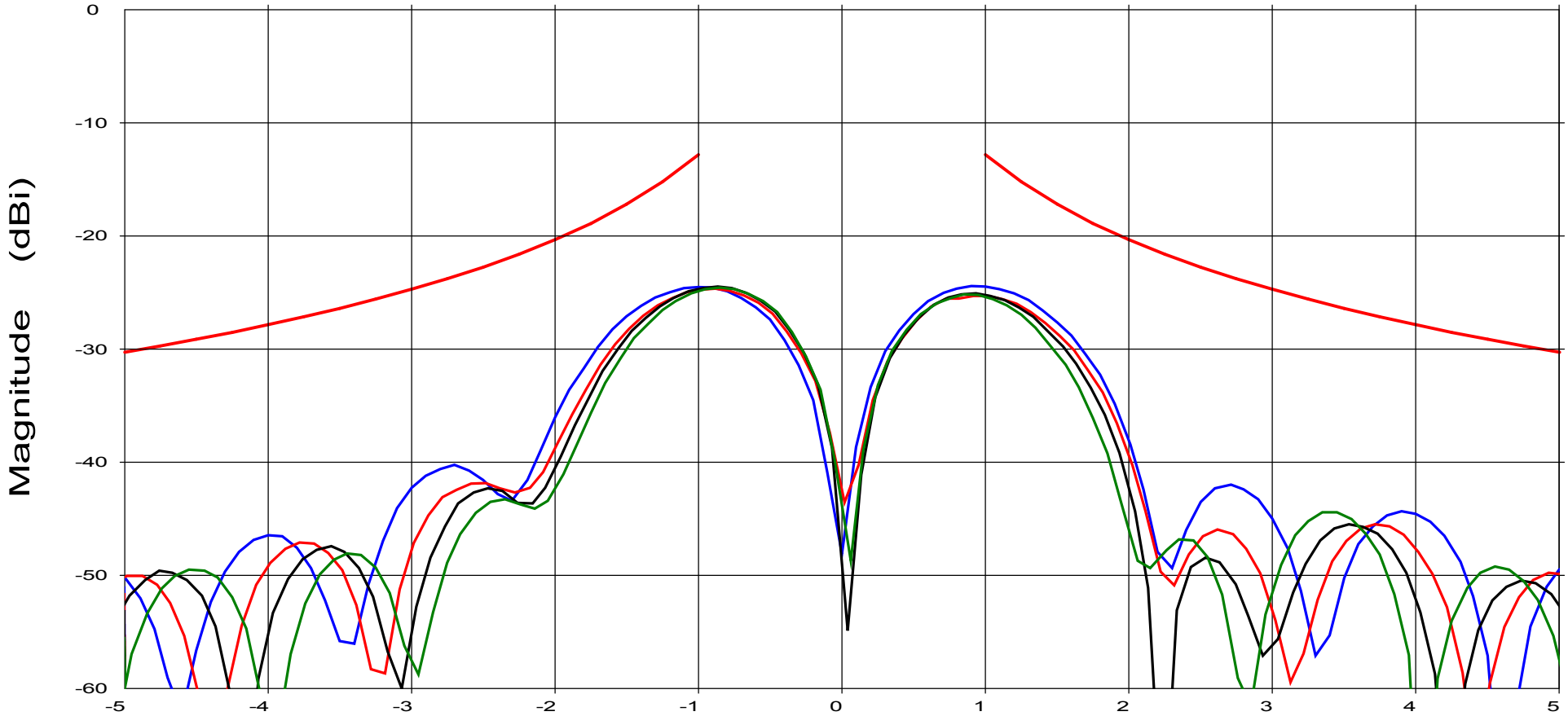
File: 1770 41.dat

General Dynamics
3.8 Meter Series 1385 Antenna System
C-Band Linear

Calibration status:
File: 1770 41.dat
Chan.: ch1
Table: SGA-40
Units: dBi

Frequency : See Legend

Operator: Dwight B. Lutz
Ser. no.:
Channel: ch1 Tx pol: Horiz. Rx pol: Horiz.



Sidelobe Envelope: 29−25Log(Theta)~100Lamda/D to 20 Deg
−3.5dBi 20.0 to 26.5 Deg | 32−25Log(Theta)~26.5 to 48 Deg
−10.0dBi~48 to 180 Deg

Overlays
Frequency : 3.625 GHz
Frequency : 3.825 GHz
Frequency : 4.025 GHz
Frequency : 4.200 GHz

Prodelin Corporation
East Maiden Test Range
Maiden NC

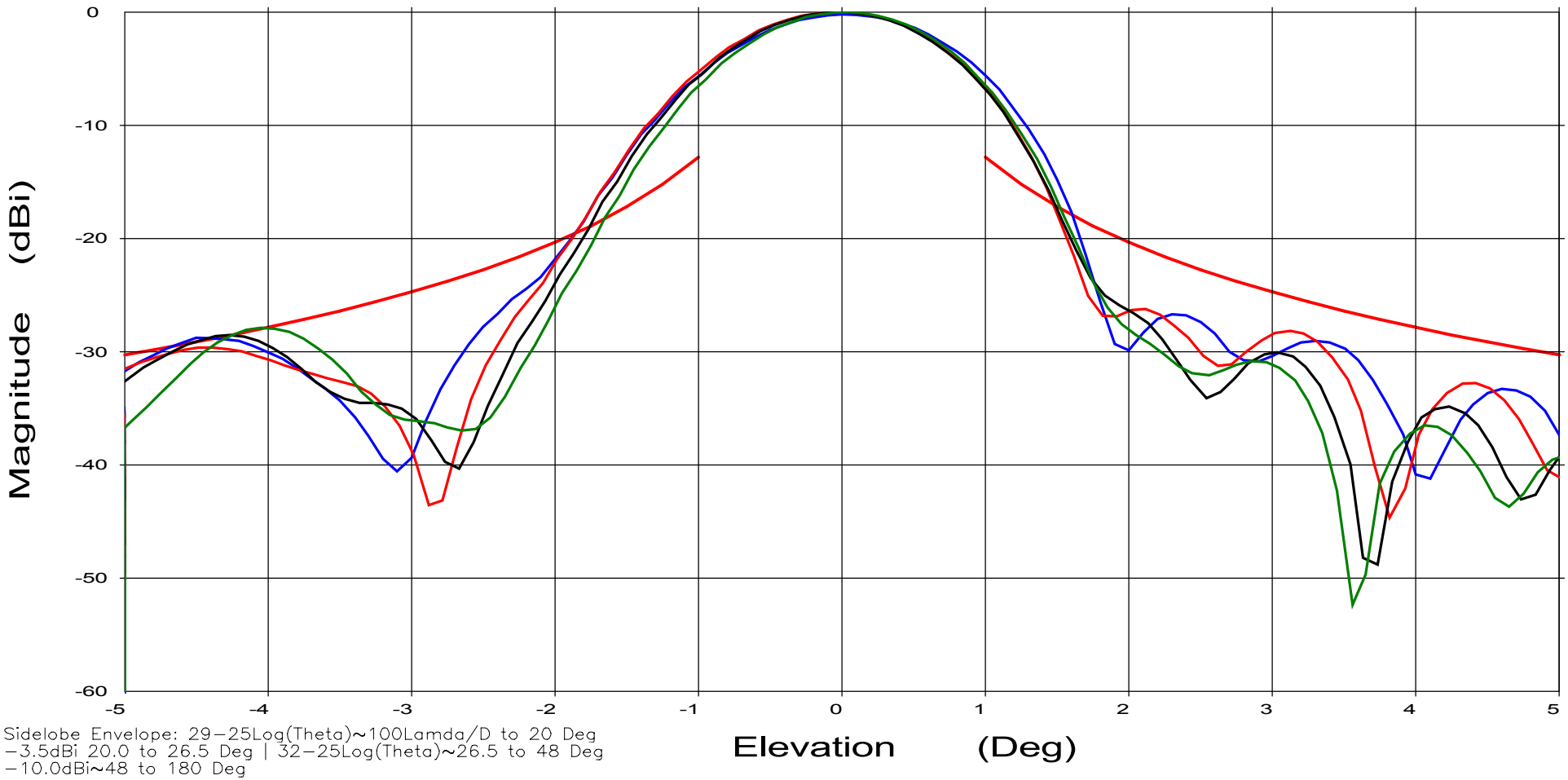
File: 1770 38.dat

General Dynamics
3.8 Meter Series 1385 Antenna System
C-Band Linear

Calibration status:
File: 1770 38.dat
Chan.: ch1
Table: SGA-40
Units: dBi

Frequency : See Legend

Operator: Dwight B. Lutz
Ser. no.:
Channel: ch1 Tx pol: Horiz. Rx pol: Horiz.



Sidelobe Envelope: 29−25Log(Theta)~100Lamda/D to 20 Deg
−3.5dBi 20.0 to 26.5 Deg | 32−25Log(Theta)~26.5 to 48 Deg
−10.0dBi~48 to 180 Deg

Overlays
Frequency : 3.625 GHz
Frequency : 3.825 GHz
Frequency : 4.025 GHz
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Prodelin Corporation
East Maiden Test Range
Maiden NC

File: 1770 37.dat

General Dynamics
3.8 Meter Series 1385 Antenna System
C-Band Linear

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Units: dBi

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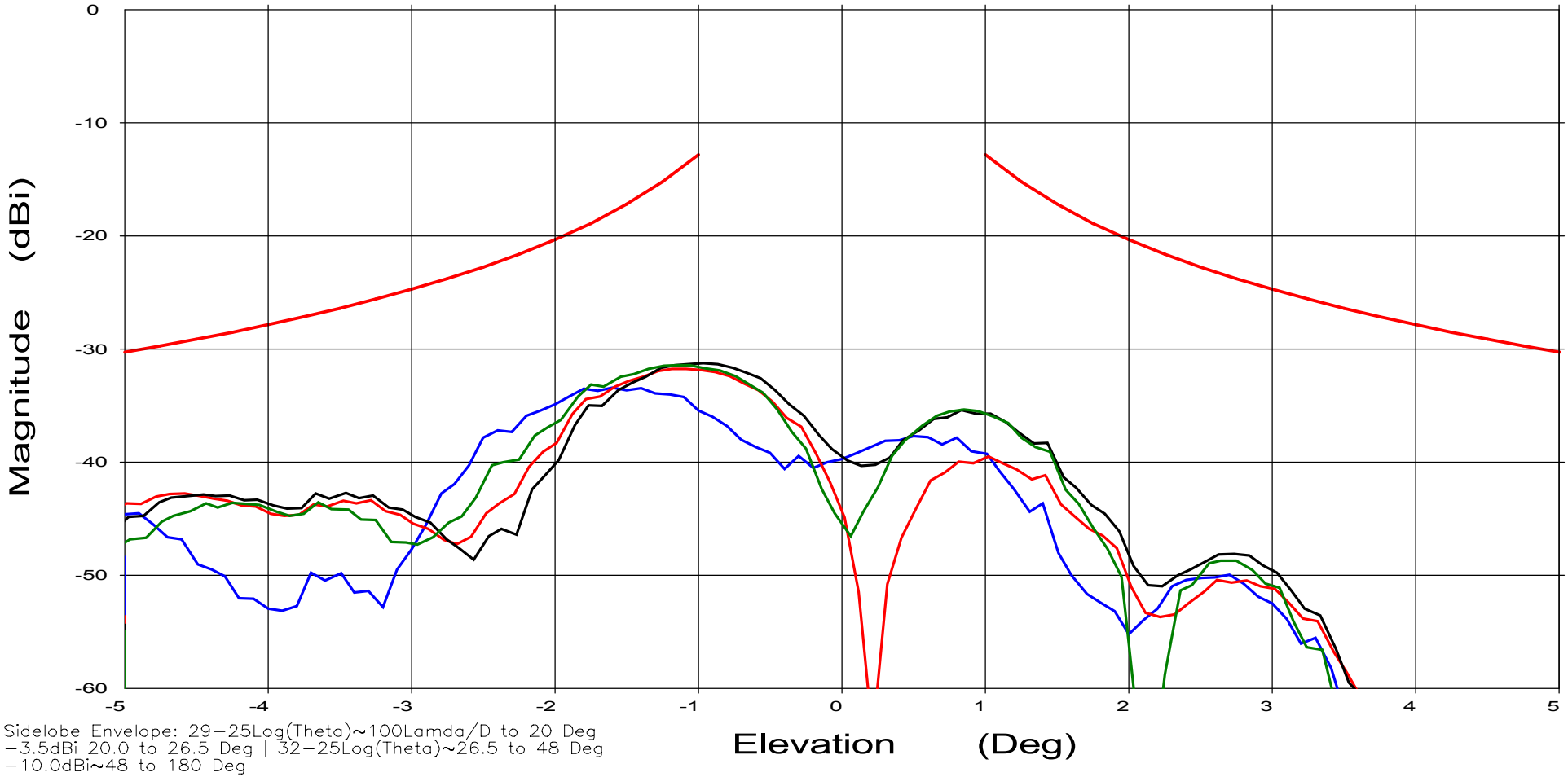

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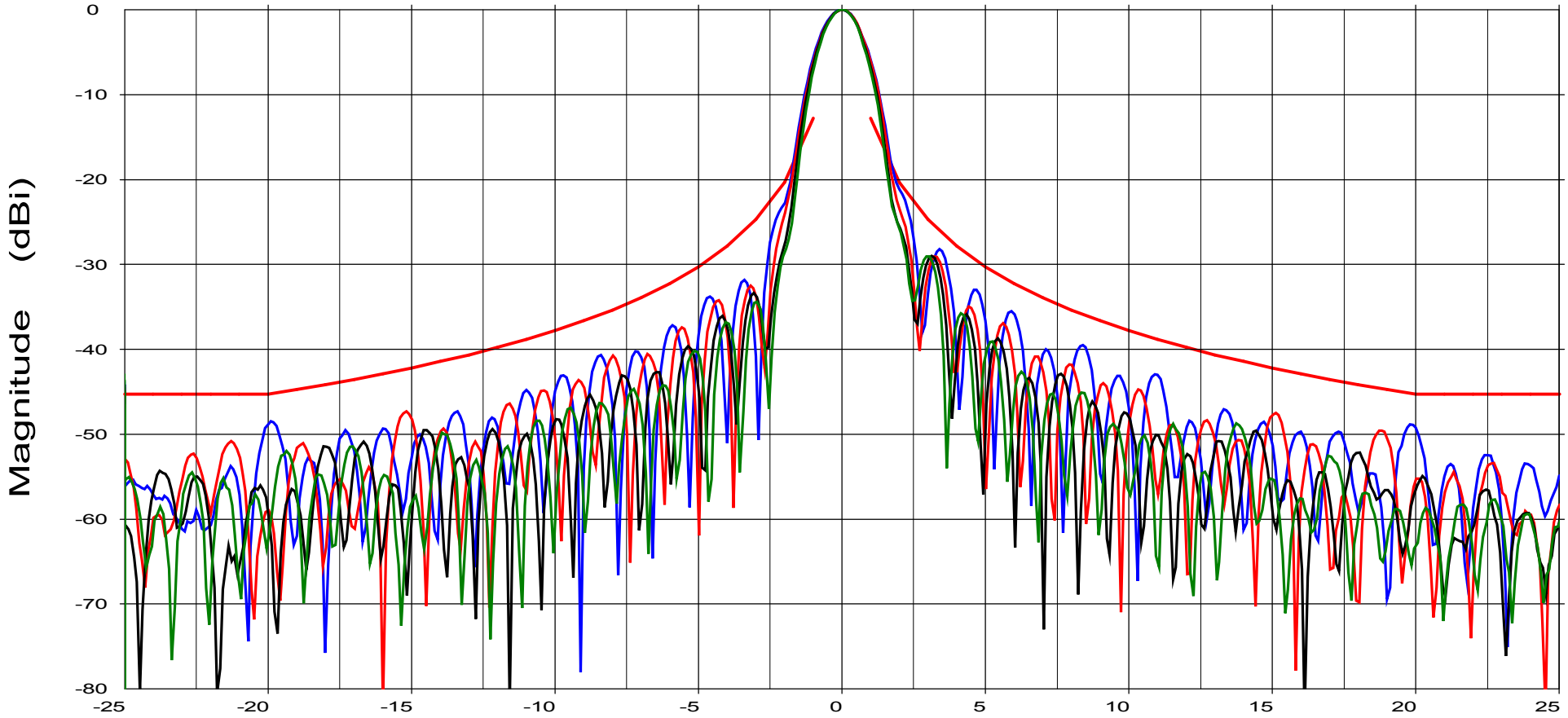

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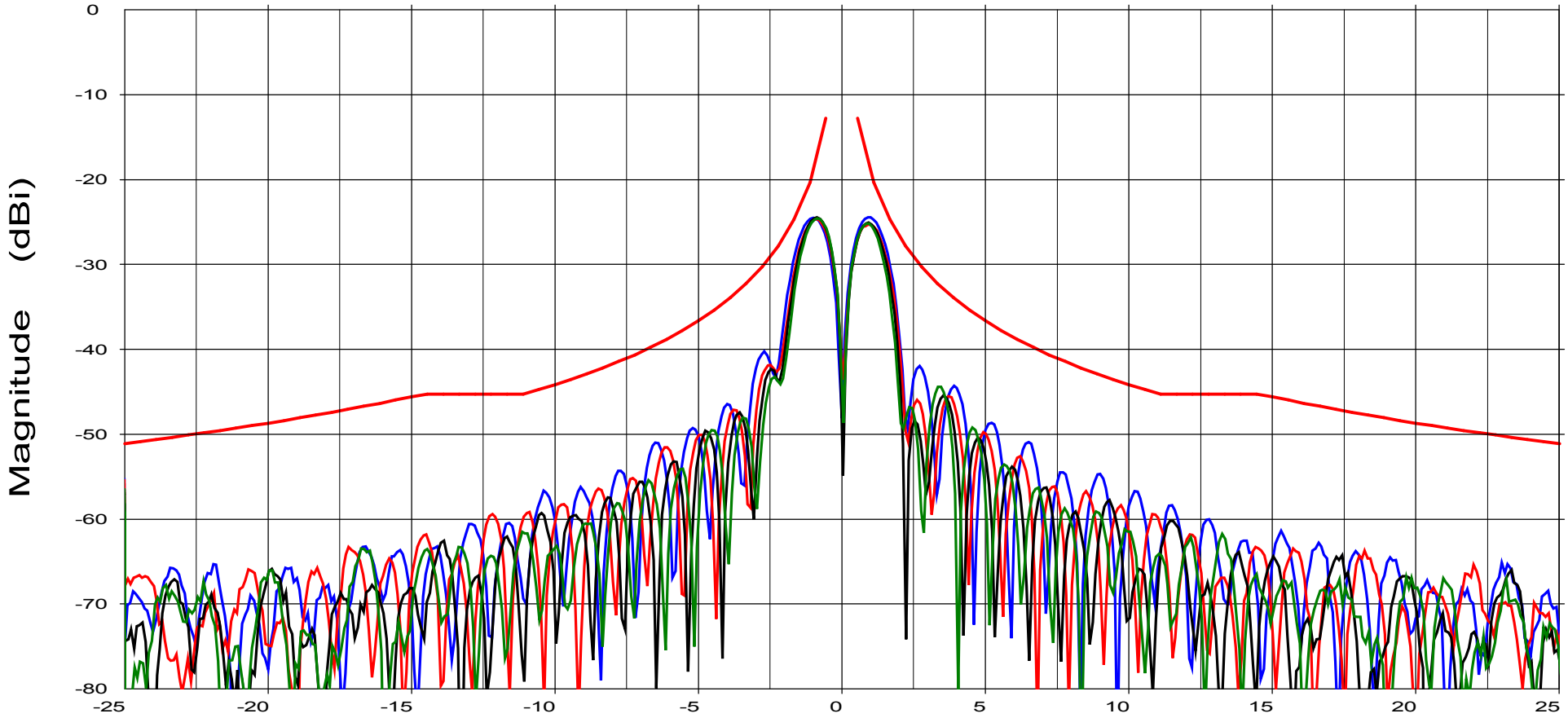

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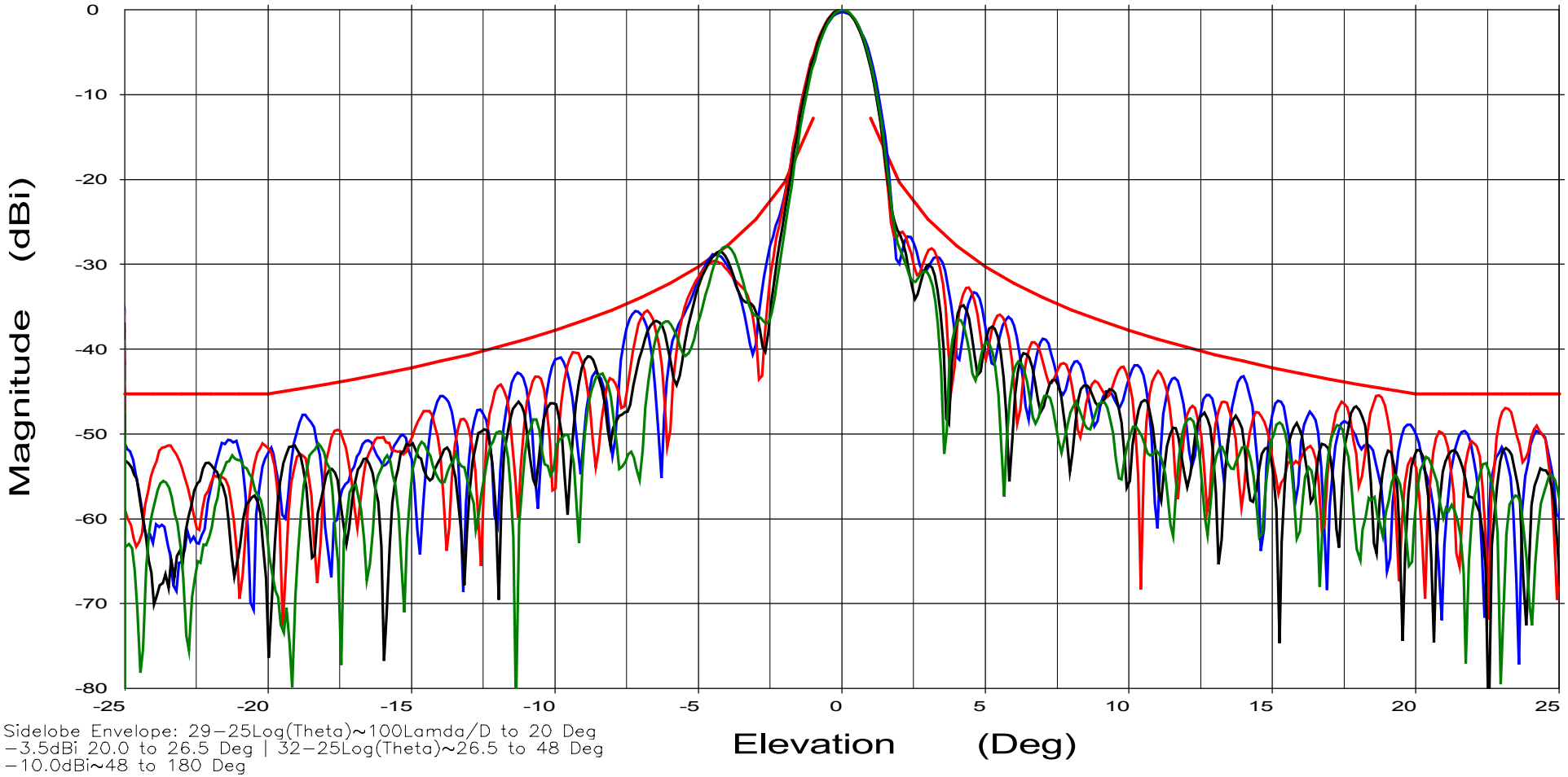

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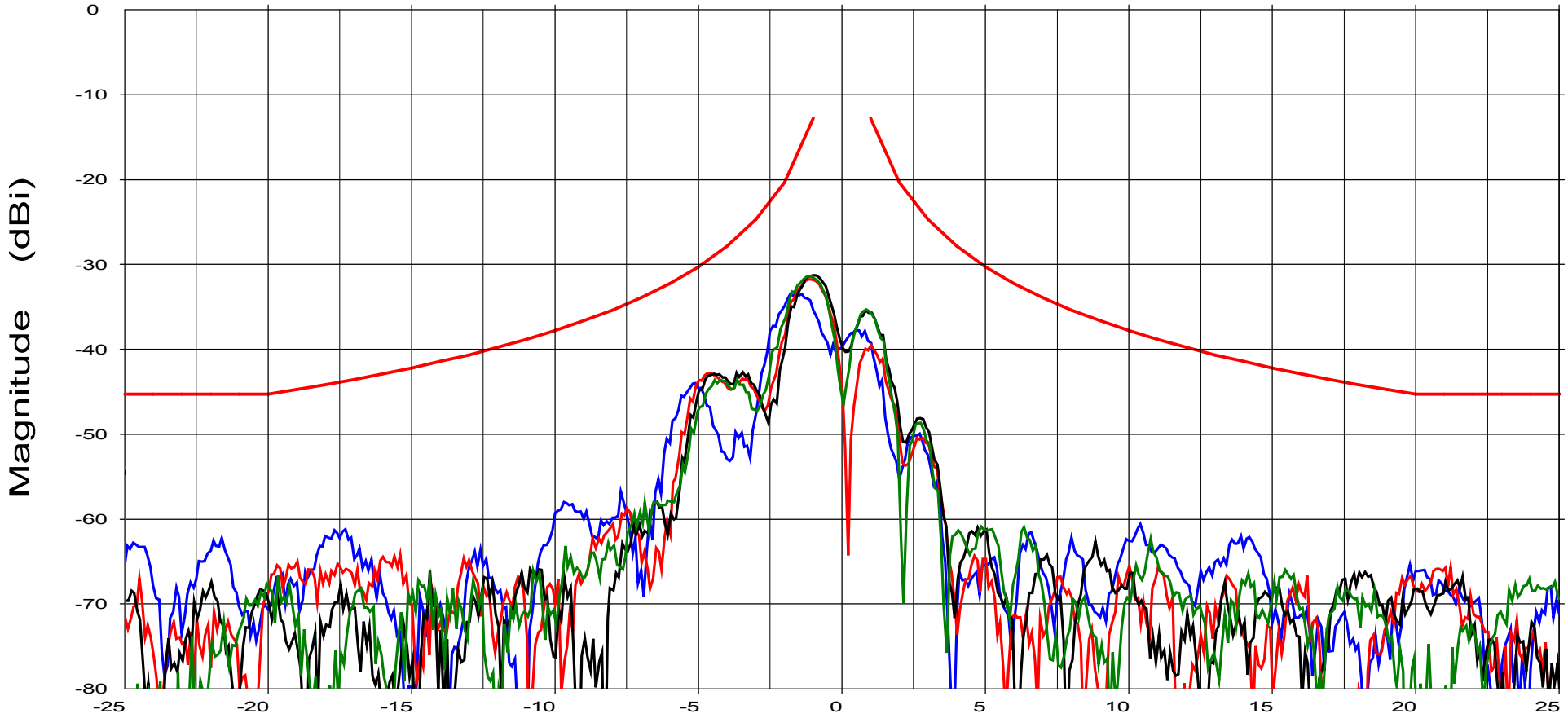

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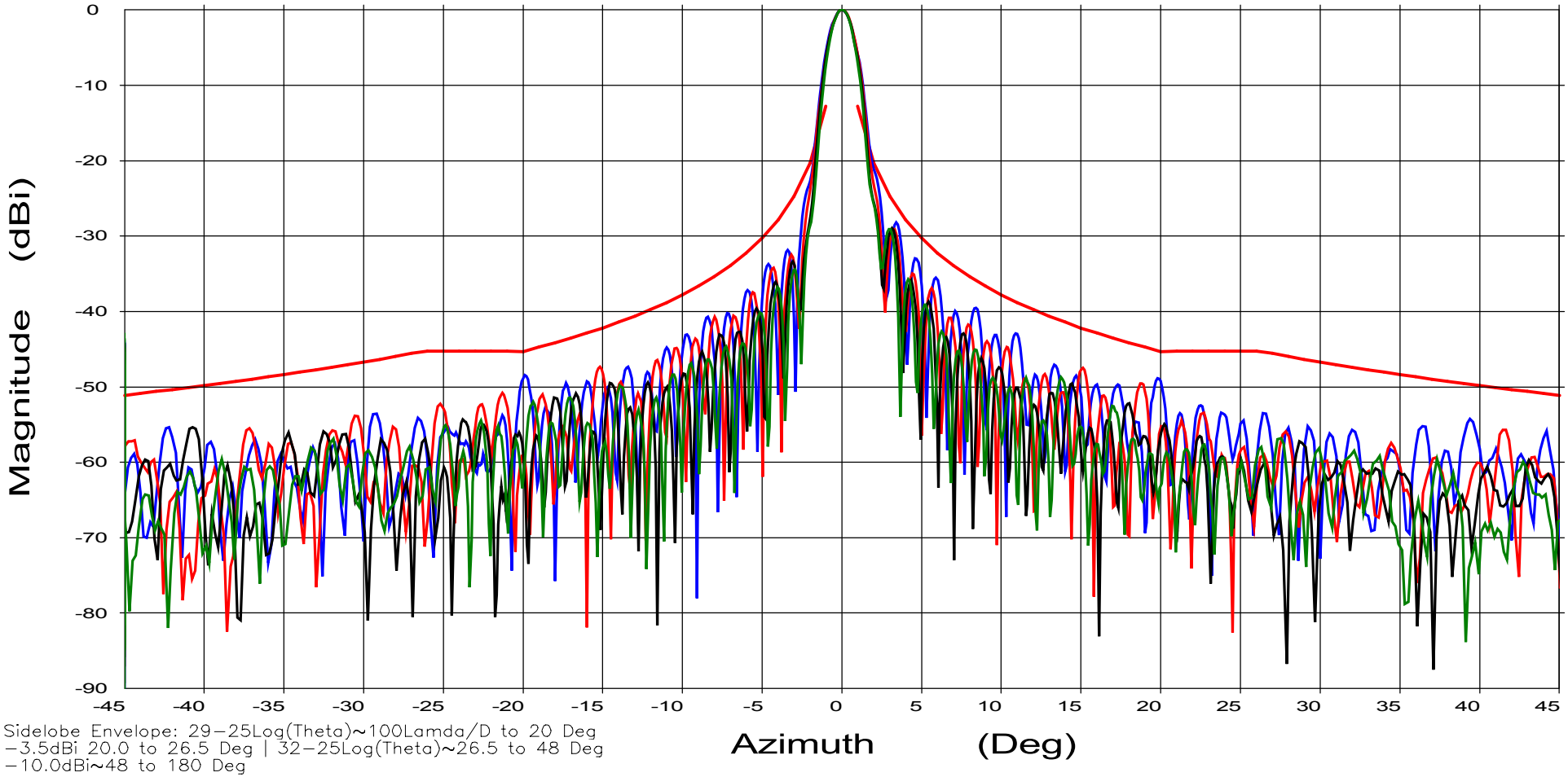

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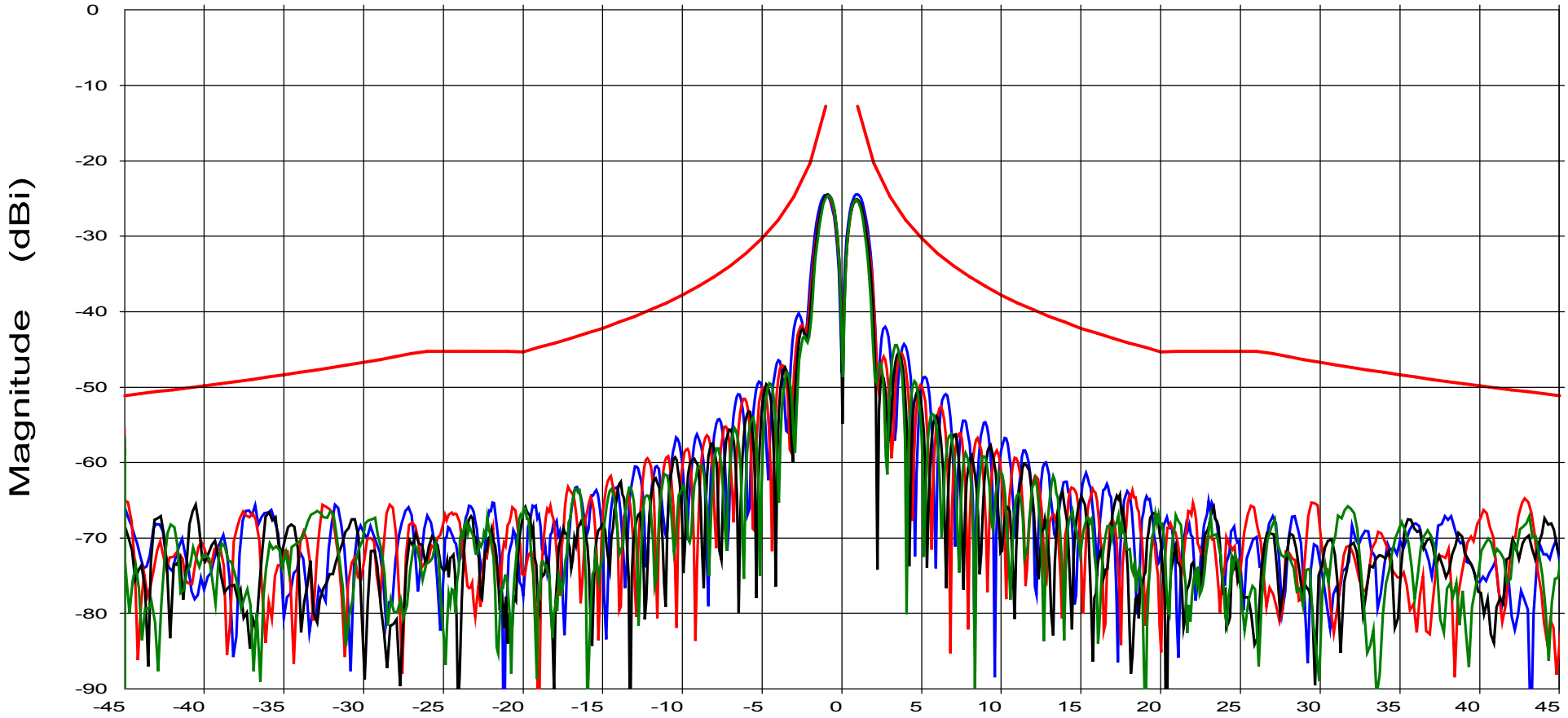

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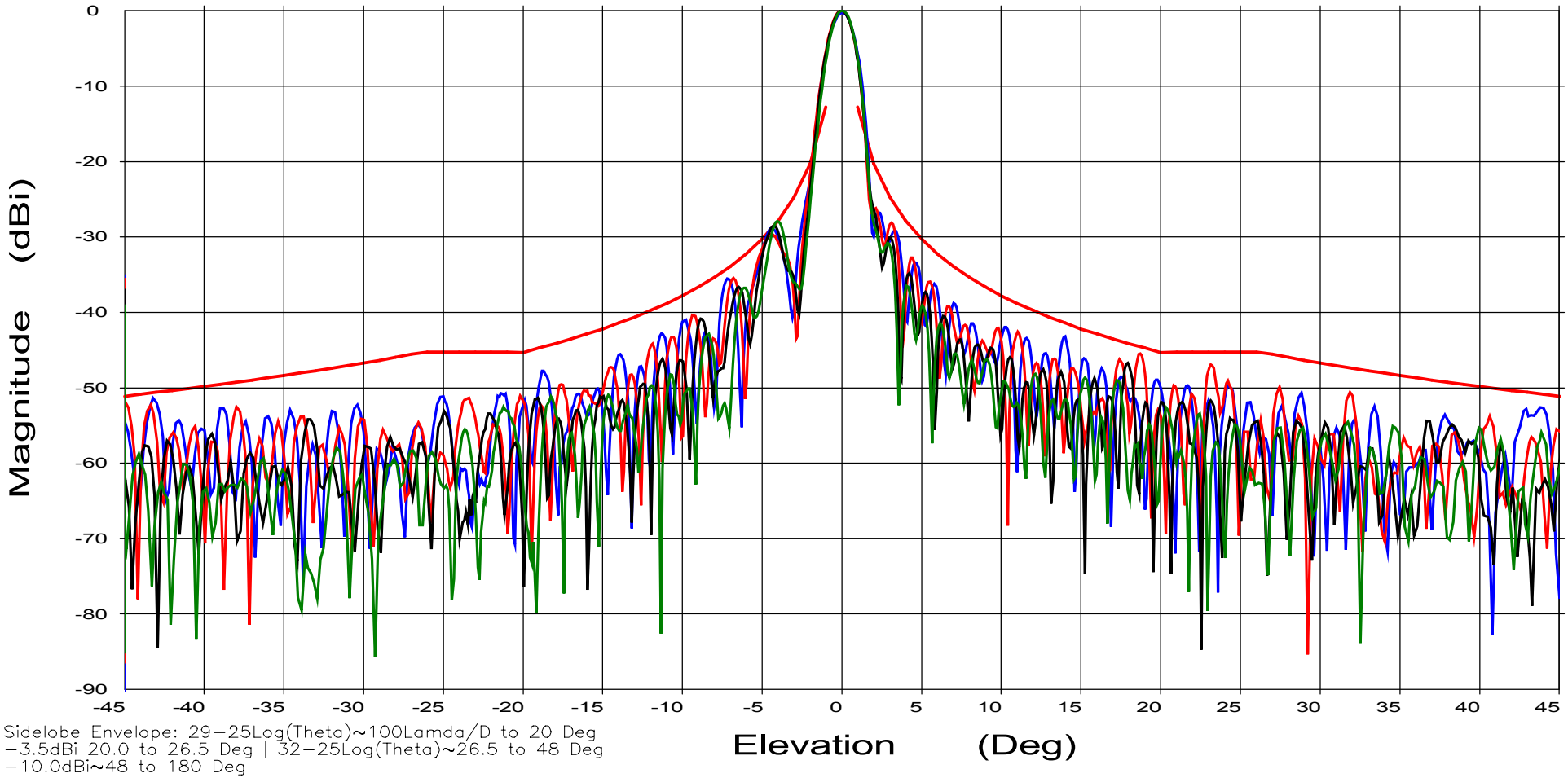

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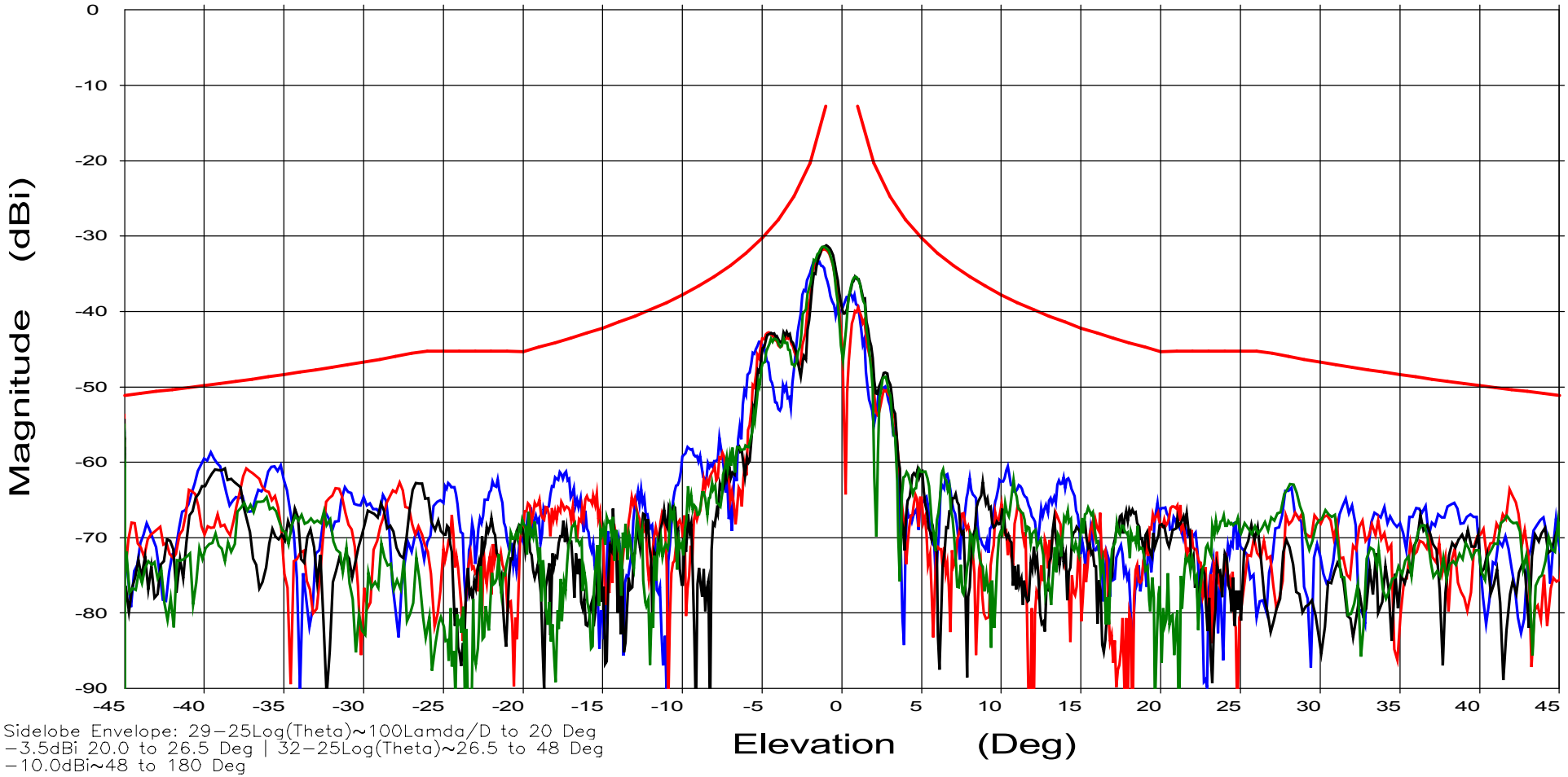

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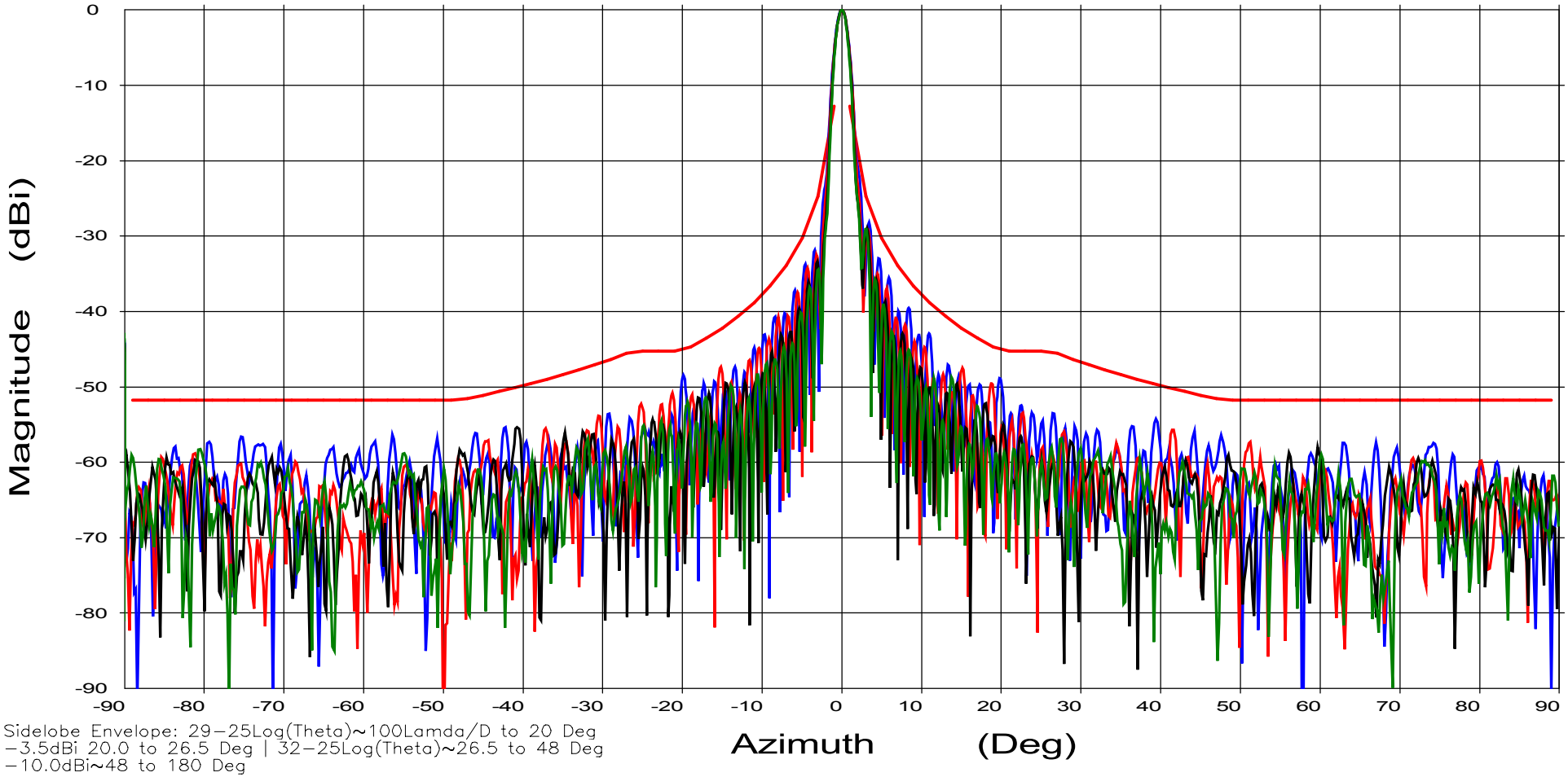

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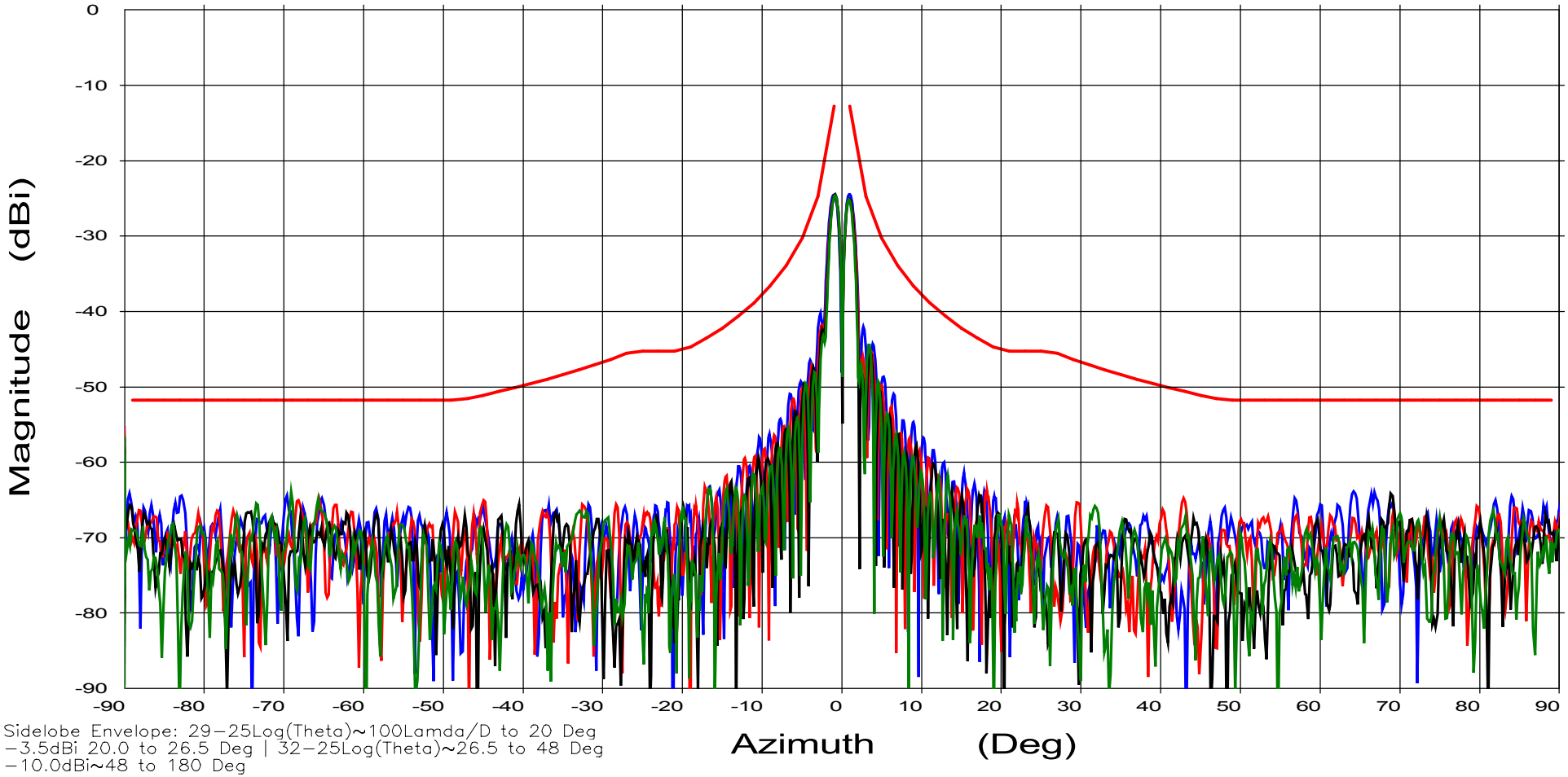

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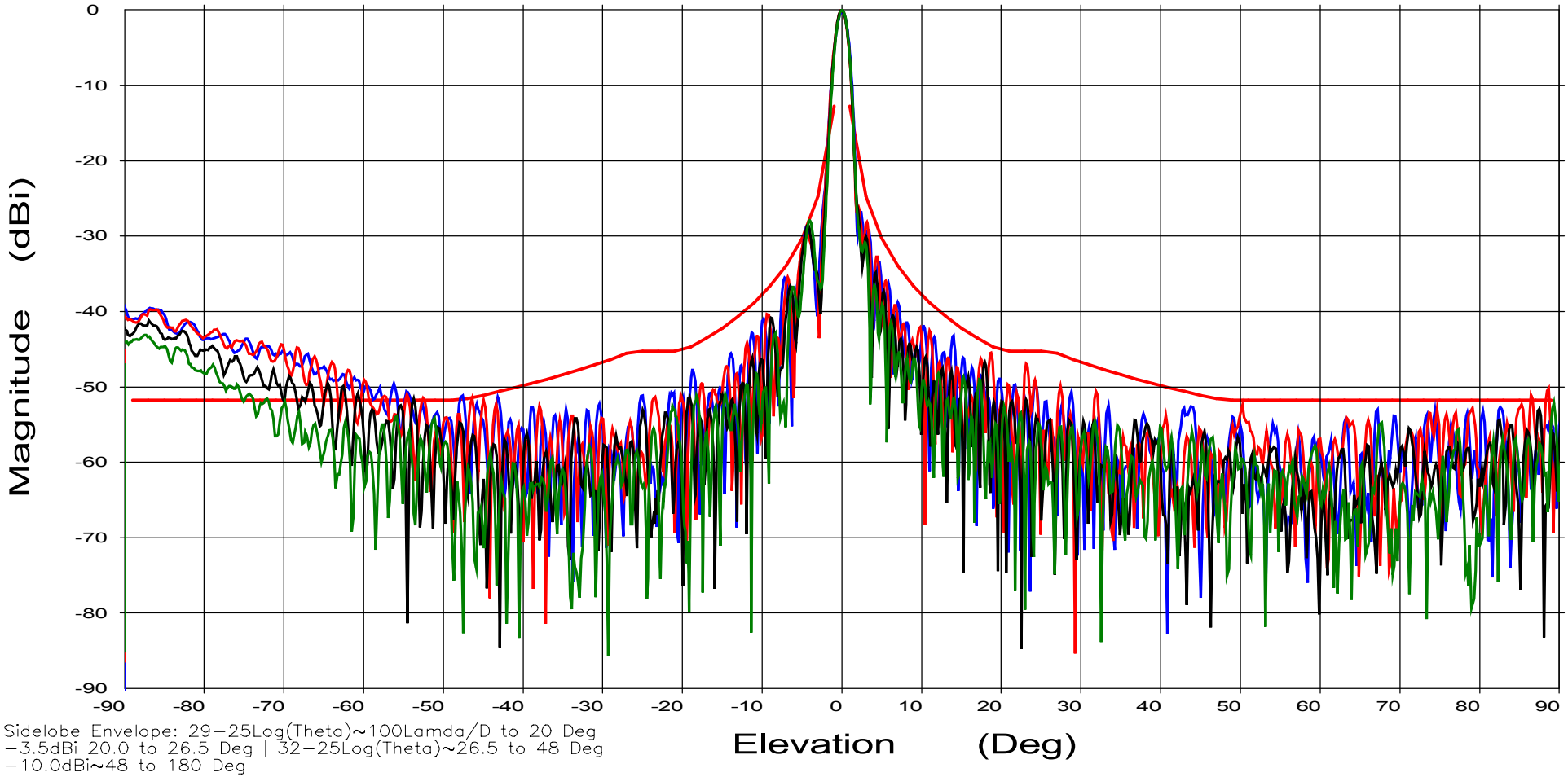

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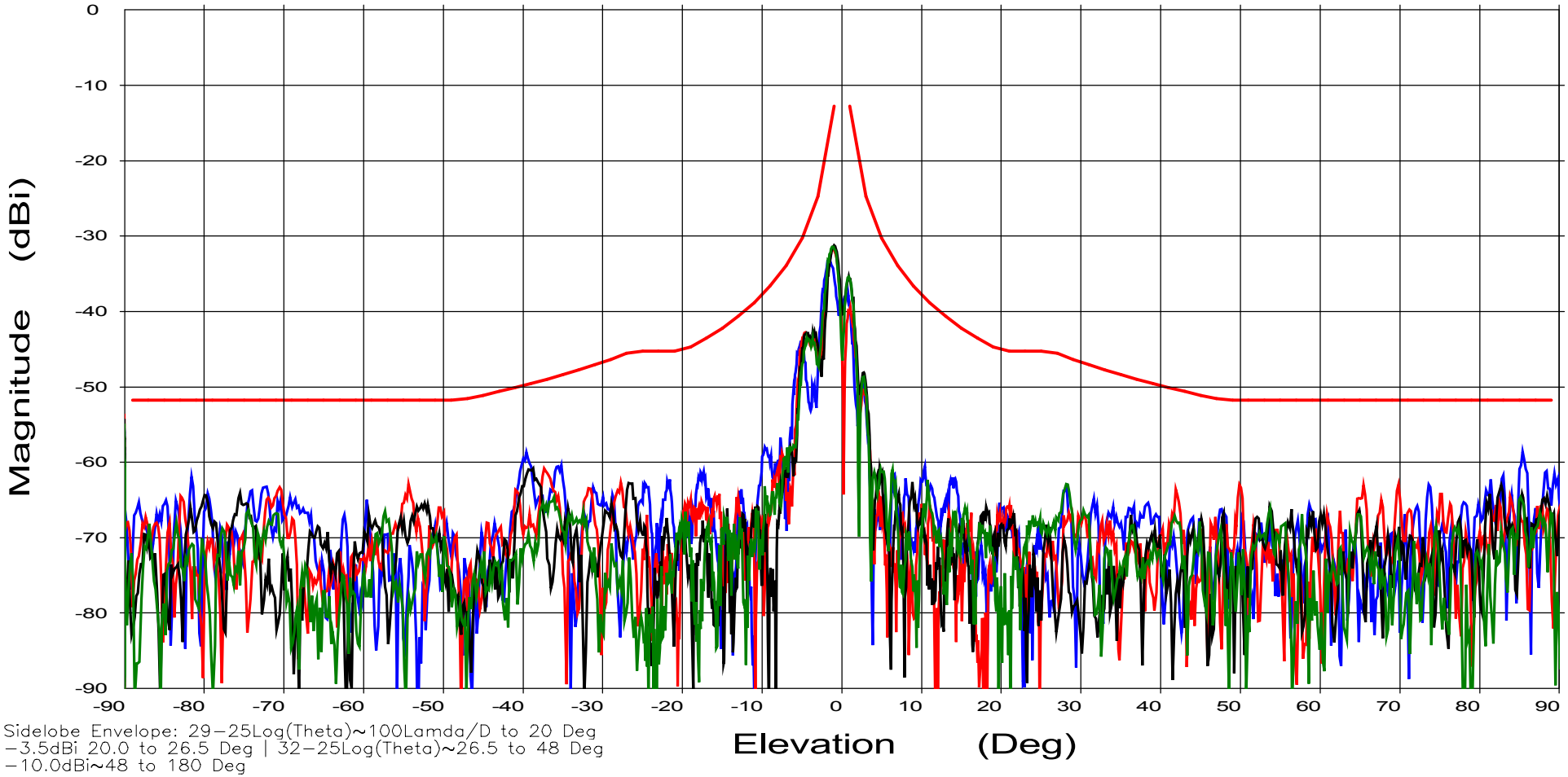

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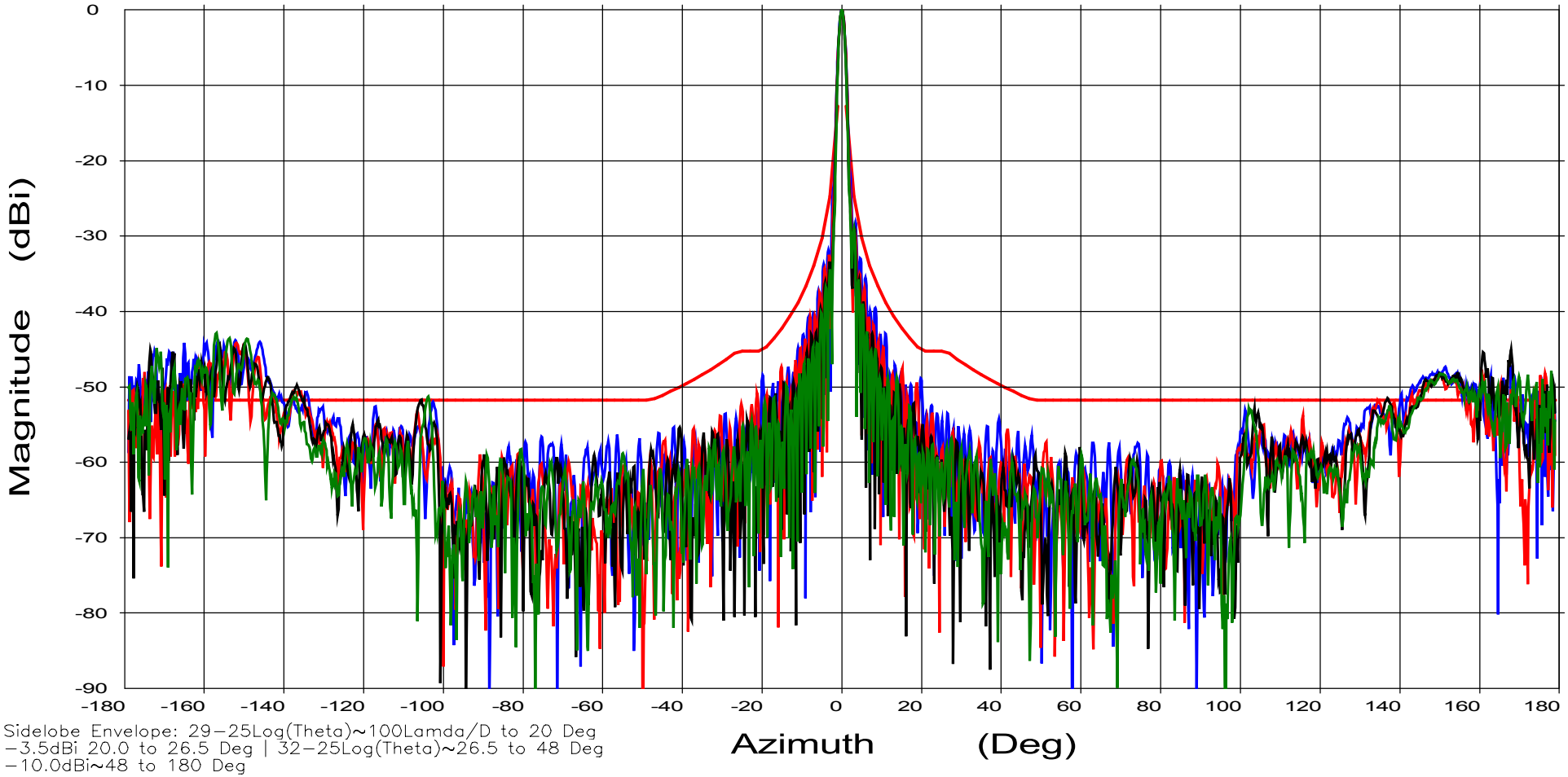

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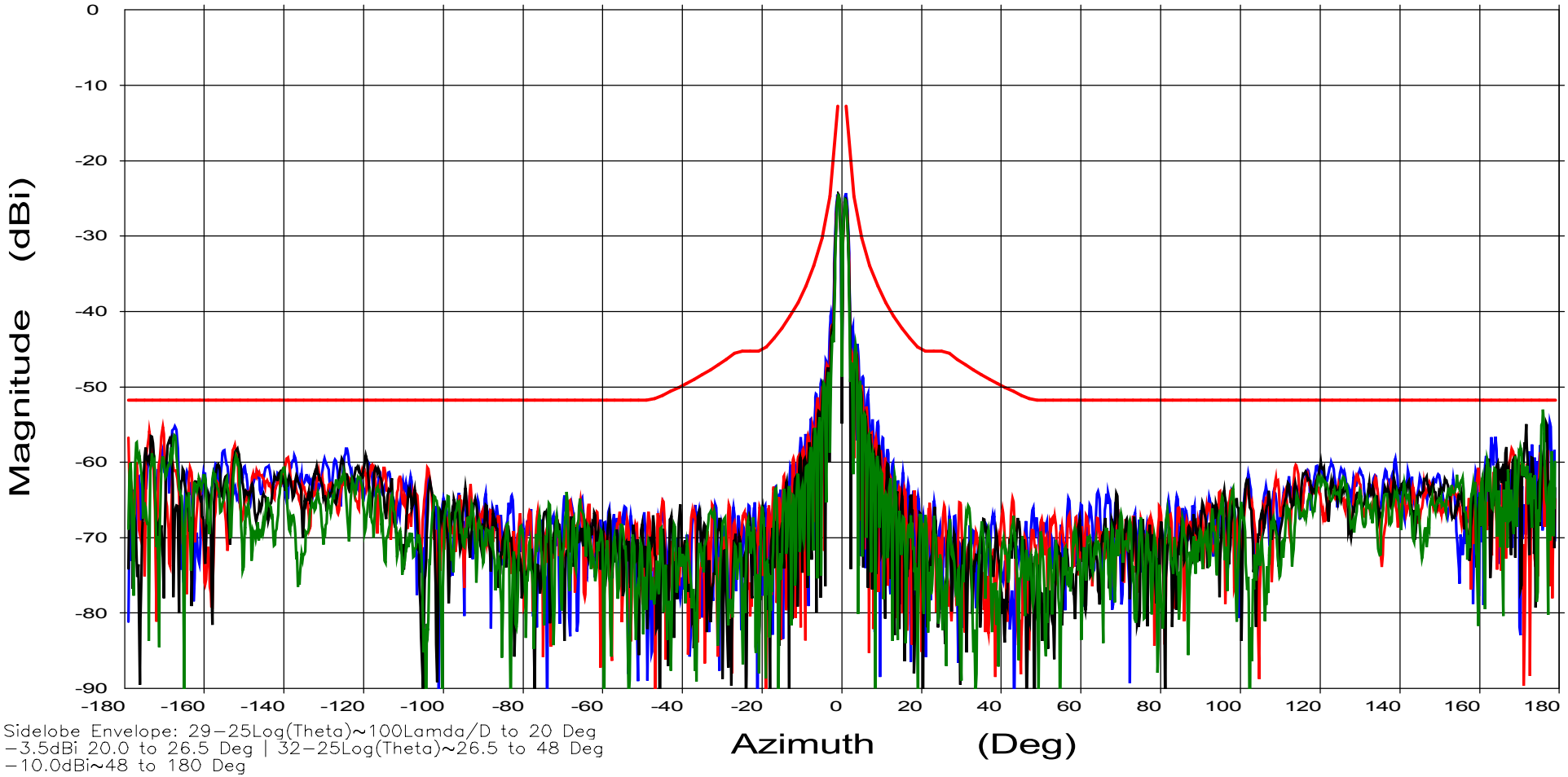

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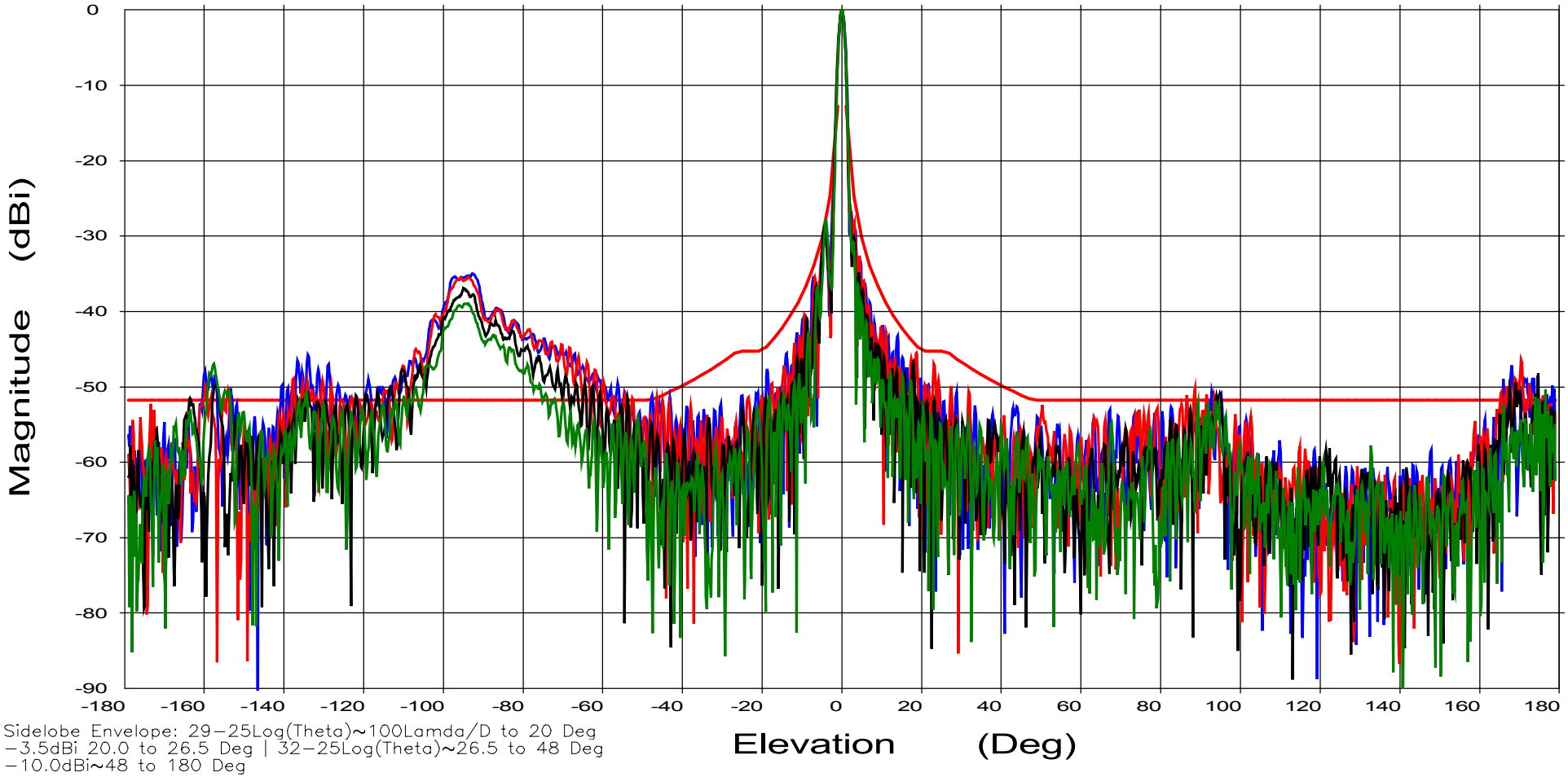

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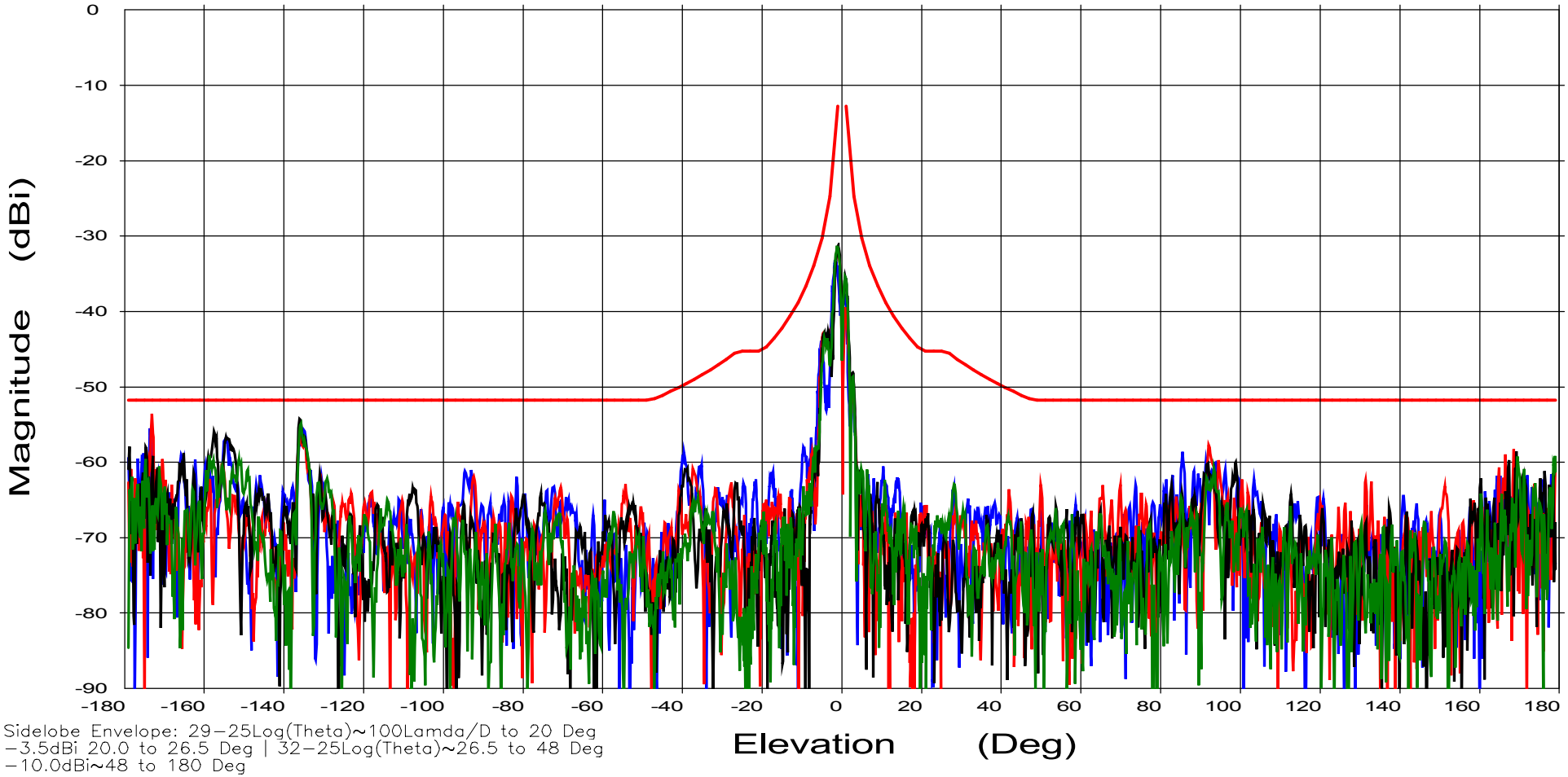

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Maiden NC

4.0 Test Photographs

5.0 Test Equipment Details

5.1 General Information

General Dynamics SATCOM Technologies / Prodelin Antenna Test Facility is located 5km (3 miles) East of Maiden, NC and approximately 16km (10 Miles) South-southeast of Prodelin main office in Newton, NC. We are located 61km (38 Miles) from Charlotte International Airport and 149km (90 miles) from Piedmont Triad International Airport in Greensboro, NC.

The antenna range can test a multitude of frequencies between 800 MHz and 30.00GHz, and antennas up to 4.5 meters in diameter.

Testing is accomplished over a test path between a fixed transmit tower location and a fixed receive tower location, separated by a distance of 1193.06 Meters (3914.44 feet). Transmit and receive tower heights are 17.41 meters (57.11 feet) above ground level. Using directional antennas, an unmodulated carrier wave (CW) test signal(s) are transmitted from the source tower location toward the receive tower location.

The signal is then received and interpreted by the sophisticated Orbit F/R959 Antenna Measurement System. Data is digitally recorded and many options of data analysis and presentation are possible using the Orbit F/R DataPro and GD specific software.

5.2 Test range specifics:

Range Length	1193.06 Meters (3914.44 Feet)
C/L Tx Source Antenna AGL	17.41 Meters (57.11 Feet)
C/L AUT Mounting Positioner AGL	17.49 Meters (57.88 Feet)

Test zone:

Frequency range	0.8 - 30.00 GHz
Dynamic range	80 dB (in most frequency bands)
Gain	+/- 0.5 dB*
Amplitude ripple	< +/- 0.3 dB* @ +/-20º-boresight
Amplitude ripple	< +/-0.5 dB* @ greater than 20º boresight
Phase ripple	< +/-5º*
Cross-polar purity:	-40 dB*

* For the majority of practical applications.

Positioner:

Axis 1 Azimuth	
Accuracy	< 0.12º
Axis 2 Elevation	
Accuracy	< 0.1º
Max load:	800 Lbs.

5.3 Test Equipment:

Manufacturer:	Model	Options	S/N
HP Microwave Receiver (Top Section)	8530A	010-011-8Ze	3031A08077
HP Microwave Receiver (Btm Section)	8530A	011-8ZE	3409A00301
HP Synthesized Sweeper Source #1 (Tx Source) 10Mhz – 50GHz	83651B		3844A00444
HP Amplifier 2-50GHz	83050A	8ZE	3331A00520
HP Power Supply (For 83050A Amplifier)	87421A		3611A00932
HP Synthesized Sweeper Source #2 (Reference Source) 10Mhz – 20GHz	83621B		3614A00156
HP LO/IF Distribution Unit	85309A		3224A00188
HP Extender (Up-Range)	37204A	03	3212U24550
HP Extender (Down-Range)	37204A	03	3212U23735
HP Mixer Module (Reference) 2 - 26.5GHz -71Mv	85320B		860A00143
HP Mixer Module (Test) 2 - 26.5GHz	85320A		3031A08077
HP Spectrum Analyzer 9kHz - 40 GHz	8564E		3745A01006

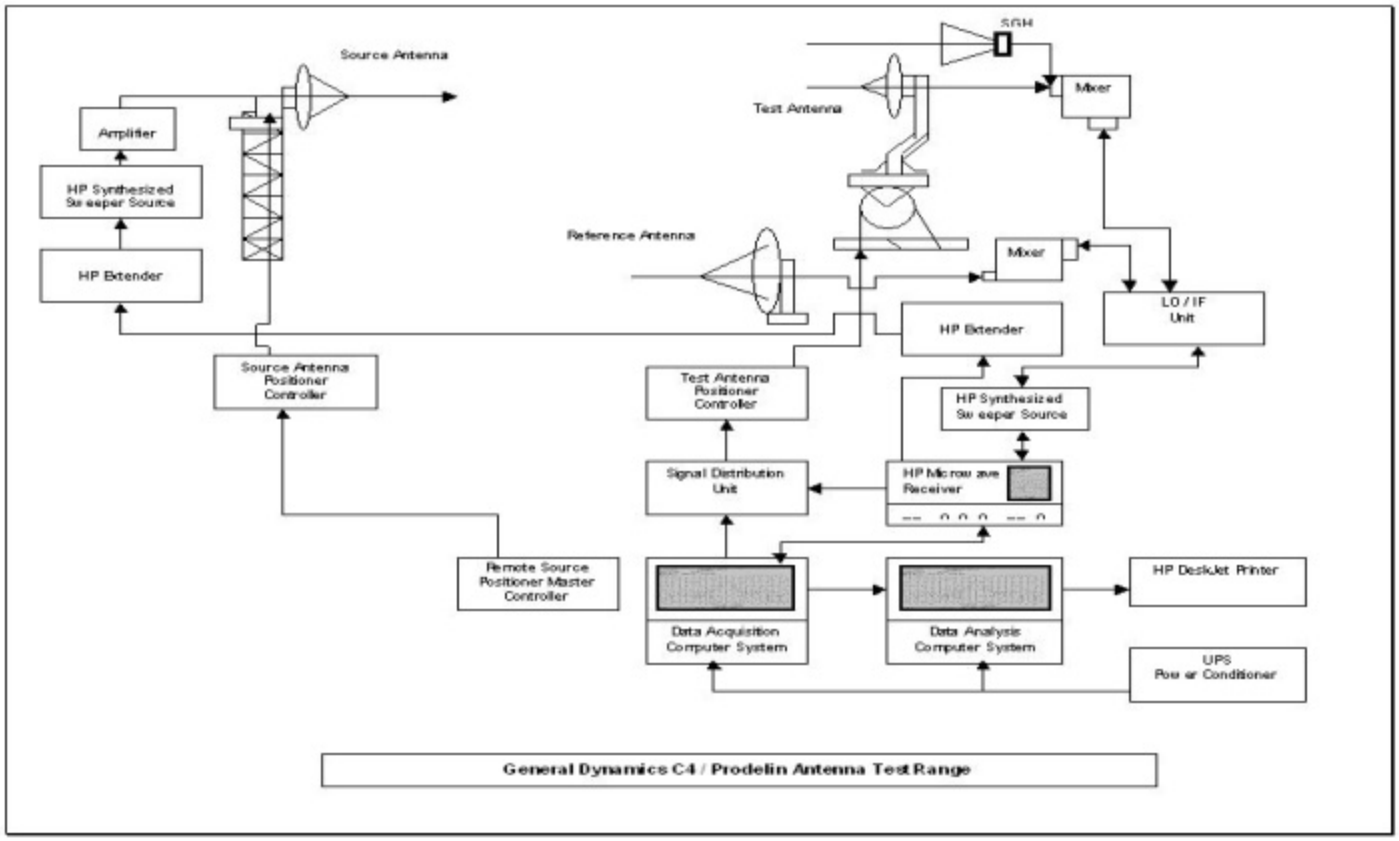
5.4 Positioner Equipment:

Orbit Positioner Programmer (To control Tx positioner)	AL-4706-3B		208
Orbit Positioner Controller & PCU (Up Range – Power Control Unit)	AL-4806-3A		182
Orbit Positioner Controller & PCU (Down Range – Power Control Unit)	AL-4806-3A	1 & 5	266

5.5 Software

F/R Signal Distribution Unit	959		K1036
Orbit F/R 959 Data Acquisition Software Automated Antenna Measurement Workstation	Spectrum Version 2.6.1	Rev-A	
Orbit F/R DataPro Plus Software Antenna Data Presentation and Analysis	Spectrum Version 2.6.1	Rev-A	

5.6 Bock Diagram



5.7 Staff / Contact Information:

Two full time operators with a combined total of 35+ Years experience in antenna testing.

Dwight B. Lutz phone: 828-428-1486
Email: dwight.lutz@gdsatcom.com

Ken Poovey phone: 828-428-1486
Email: kenneth.poovey@gdsatcom.com

Fax: 828-428-1488
Internet: http://www.gdsatcom.com