FCC Experimental STA Application
Update: 8 August 2017

Narrative Summary

Astranis Space Technologies Corp. ("Astranis") is a U.S.-based, space technology company headquartered in San Francisco, California. Astranis is developing a line of agile, frequency flexible and low-cost geostationary telecommunications satellites to open new and underserved markets, including those which do not otherwise support a costly traditional telecommunications satellite and those would benefit from a more incremental addition of satellite capacity.

To accomplish this mission, Astranis seeks to validate and demonstrate key technologies. Towards this end the Astranis Demosat-2 satellite, with its Software Defined Radio ("SDR") digital transponder payload, will allow Astranis to test and demonstrate components, software design, and operational concepts that are integral to the planned satellite product line.

The experimental tests and demonstrations planned by Astranis will be conducted intermittently over a six-month period commencing shortly after launch of the satellite. The TT&C and experimental payload communications frequencies, ground station location and operational constraints have been carefully identified to avoid the potential for interference to other spectrum users. In addition, this request is filed in accordance with the guidance and time frames established by the Commission for consideration of such experimental satellite applications.[1] Accordingly, grant of the requested experimental special temporary authorization ("STA") is fully consistent with Commission's guidance, policy and experimental licensing rules.[2]

Astranis notes that due to a launch slip, the expected launch date is now expected to be approximately October 1, 2017. Therefore, Astranis respectfully requests that the Commission consider and authorize the proposed experimental satellite operations (as appropriately conditioned) as soon as practicable, and in any event not later than approximately August 15, 2017, to ensure Astranis obtains such authority in time to support integration into the launcher as required by its launch provider.

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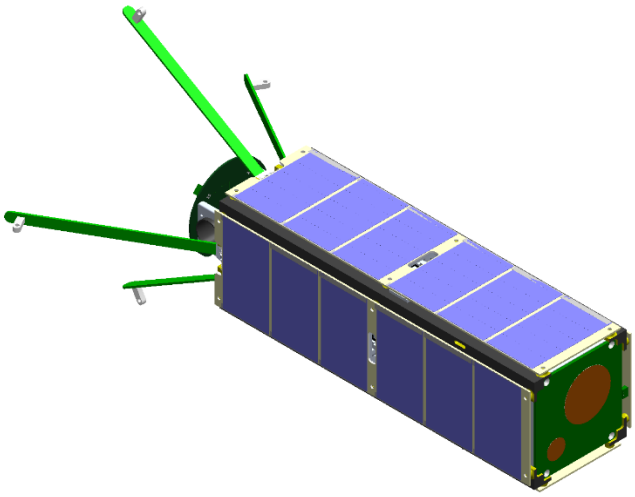
[1] *See* Guidance on Obtaining Licenses for Small Satellites, *Public Notice*, DA 13-445 (March 15, 2013) ("*Small Satellite Guidance*").

[2] *See* 47 C.F.R. Part 5; *see also* 47 C.F.R. §5.61 (Procedure for obtaining a special temporary authorization).

Experimental Satellite

The Astranis Demosat-2 satellite conforms to the form factor of a 3U cubesat (35 cm X 10 cm X 10 cm in size), with a total mass of approximately 5 kg. The maximum power generated by the solar panels is approximately 10 W, with a maximum transmitter output power of approximately 3 W. The communications payload uses patch antennas and the TT&C radio uses monopole antennas, as indicated in Figure 1.

Figure 1 – Demosat-2 Configuration



Orbit. The Astranis Demosat-2 satellite will be launched as a secondary payload aboard a Polar Satellite Launch Vehicle (PSLV) in September 2017. The satellite will be launched into a nominal circular, sun-synchronous orbit at 580 km apogee and 580 km perigee with an inclination from the equator of 97.71°. A potential lower drop-off deployment altitude of 550 km, also a circular sun-synchronous orbit, is being evaluated by the launch provider. If given this option we will deploy our spacecraft at the lower altitude. An orbital lifetime calculation for this orbit estimates that the satellite will remain on obit for approximately 16.6 years if deployed at 580 km altitude and 10.8 years if deployed at 550 km altitude, well within the limits set by internationally accepted guidelines.[3]

Communications Payload. The payload consists of an SDR-based digital transponder, including a low noise amplifier and a GaN solid state power amplifier with patch antennas for transmit and receive operations. Specific technical parameters include:

[3] *See* Orbital Debris Assessment Report (attached).

- 3 W spacecraft transmitter output power, 12.6 dBW EIRP
- TX in 2.390-2.400 GHz, RX in 5.950-5.960 GHz (10 MHz bandwidth)
- Circularly polarized, QPSK modulation

The communications payload will operate intermittently and on an as-needed basis to conduct experiments between one to six times per day while the satellites pass over dedicated earth stations located in Fairbanks, Alaska. Satellite communications will begin once the satellite has been deployed into its intended orbit (currently planned for mid-September 2017) and will cease six months thereafter. Accordingly, Astranis requests an STA period from September 1, 2017 to March 1, 2018.

Operation of the downlink payload will only take place during the brief periods (approximately 10 minutes) that the satellite is passing over the Fairbanks TT&C and communications earth station site. Satellite downlink (earth station receive) operations will be conducted in the 2.390-2.400 GHz band, which was chosen because it is consistent with Commission small satellite guidance.[4] In addition, based on NTIA spectrum use reports, Astranis understands there are no U.S. government operations in this band in Alaska,[5] and ULS reveals no licenses within Alaska that could be adversely affected by the proposed downlink operations.

TT&C. Tracking, telemetry and control of the Astranis Demosat-2 satellite will be conducted using a GomSpace AX100 UHF transceiver, with monopole antennas, for transmit and receive operations. TT&C downlink operations in the 401 MHz band will take place intermittently when the satellite is in view of the Fairbanks, Alaska earth station site. Astranis will coordinate its TT&C operations to ensure compatibility with any other co-frequency TT&C operations in the area. Particulars of the TT&C downlink operations include:

- 1 W spacecraft transmitter output power, 1.4 dBW EIRP
- Tx (downlink) at 401.600-401.750 MHz (150 kHz bandwidth)
- Linearly polarized, GMSK modulation

Communications Earth Stations

Earth station uplink and downlink operations will be conducted at a site in Fairbanks, Alaska. A General Dynamics Series 1244 2.4 m antenna will be located at an existing satellite earth station facility that serves other earth station antennas and provides associated support functionality (power, terrestrial connectivity, etc.). The earth station antennas will track the satellite as it passes over the site, and will transmit and receive intermittently and for brief periods (approximately 10 minutes) when the satellite is in view.

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[4] *See Small Satellite Guidance* at 2 ("What Frequencies Can Be Used?").

[5] *See* https://www.ntia.doc.gov/page/federal-government-spectrum-use-reports-225mhz-5ghz.

The uplink earth station will transmit with an EIRP of 49 dBW in the 5.950-5.960 GHz band. The earth station will be subject to operational constraints to prevent harmful interference to co-frequency terrestrial FS operations and C-band geostationary satellites. Astranis will operate at a minimum elevation angle of approximately 35° in directions towards victim terrestrial links, and maintain a 20° separation from the GSO arc and 20° minimum elevation angles in other directions that ensure there is no interference into any potentially affected terrestrial links.

The 20° minimum angular separation from the GSO arc will ensure compliance with the C-band equivalent power flux-density (EPFD↑) limit in the ITU Radio Regulations, with a substantial margin, to fully protect such operations from potential interference. Radio Regulation 22.5D provides that the EPFD↑ produced at any point in the GSO by emissions from NGSO earth stations shall not exceed the limits given in Table 22-2, establishes a limit of -183 dBW/m^2 per 4 kHz of spectrum for 100% of the time.

TABLE **22-2** (WRC-03)

Limits to the epfd↑ radiated by non-geostationary-satellite systems in the fixed-satellite service in certain frequency bands[15]

Frequency band	**epfd↑ (dB(W/m²))**	**Percentage of time epfd↑ level may not be exceeded**	**Reference bandwidth (kHz)**	**Reference antenna beamwidth and reference radiation pattern**[16]
5 925-6 725 MHz	−183.0	100	4	1.5° Recommendation ITU-R S.672-4, $Ls = -20$

Using the §25.209-compliant General Dynamics Series 1244 2.4 m earth station antenna and a 20° angular separation from the GSO arc, Astranis' uplink operations in the 5.950-5.960 GHz band will produce an EPFD↑ value of -186.8 dBW/m^2/4 kHz, which satisfies the limit by more than 3.5 dB.

Geostationary Satellite Altitude	35786.0	km
Slant Range to Closest Possible GSO Satellite	39868.0	km
Main Lobe EIRP	49.0	dBW
Necessary Bandwidth	7.65	MHz
Sidelobe Isolation at 20 degrees	40.0	dB
Max EIRP toward GSO Arc	9.0	dBW
Max EIRP density toward GSO Arc	-59.8	dBW/Hz
Max EIRP density toward GSO Arc in 4 kHz band	-23.8	dBW/4 KHz
Spreading Loss	163.0	dB
EPFD up	-186.8	dBW/M^2
EPFD up - Margin	3.8	dB

Because compliance with the ITU EPFD↑ value is deemed to fully protect GSO operations, Astranis can conduct its intermittent, temporary uplink operations without causing interference to GSO satellite operations. Please also note that Astranis used conservative assumptions regarding earth station performance in this analysis. Notably, although the antenna patterns submitted herewith demonstrate approximately a 50 dB difference between on-axis and sidelobe gain at 20° off axis, Astranis used 40 dB for the analysis above. Astranis also commits to adjust or suspend earth station operations in the 5.950-5.960 GHz band upon notification that such operations are causing harmful interference to GSO satellite operations.

In addition, Astranis has carefully examined co-frequency terrestrial microwave operations to ensure they are also not adversely affected by the proposed experimental operations. Employing a minimum elevation angle to preserve the 20° angular separation from the GSO arc will fully protect two terrestrial links in southerly directions from the Fairbanks, Alaska earth station site. In addition, Astranis will ensure that its minimum elevation angle in northerly directions protect the single FS link located in this region. Nonetheless, Astranis commits to adjust or suspend earth station uplink operations in the 5.950-5.960 GHz band upon notification that such operations are causing harmful interference to terrestrial operations.

TT&C Earth Station

Astranis will utilize a GomSpace GS100 radio and associated equipment, including an AS100 Yagi antenna, to conduct TT&C operations. The TT&C earth station will be collocated with the communications earth stations at the Fairbanks, Alaska facility. The TT&C earth station will transmit and receive in the 401.600-401.750 MHz band (150 kHz bandwidth total, with smaller emissions). This band was selected because it is allocated to space operations and similar services, and can be used in both directions of transmission.[6]

TT&C uplink operations in the 401 MHz band will take place intermittently and for brief periods (approximately 10 minutes) when the satellite is in view of the Fairbanks, Alaska earth station site. Through coordination with any other co-frequency operations in the area, Astranis will ensure its TT&C operations will be fully compatibility with other spectrum users and are conducted on a strictly unprotected, non-interference basis only. Nonetheless, Astranis commits to adjust or suspend earth station uplink operations in the 401.600-401.750 MHz band upon notification that such operations are causing harmful interference to other spectrum users.

[6] The U.S. Table of Allocations includes Earth Exploration Satellite and Meteorological-Satellite operations in the Earth-to-space direction in the 401 MHz band, and such operations are similar to and compatible with intermittent, temporary TT&C operations. Astranis' proposed experimental TT&C uplink operations can be permitted in the band because they will be conducted on an unprotected, non-interference basis.

RESPONSES TO FCC QUESTIONS
August 8, 2017

Question #1 was not answered so we are forwarding it again for a response. 1) Has the applicant perform any RF compatibility analysis for any of the frequency band?

- Please see attached frequency compatibility study for the 5950-5960 MHz band. All other bands have been coordinated and confirmed there are no potentially affected users. *See* Prior response to questions.

Question #2, requested antenna pattern or represented antenna pattern for the earth station yet we did NOT receive this information. We did receive the space station antenna pattern but NOT the earth station in the 5.9 GHz band.

2) Please provide an antenna pattern (or a representative one) showing both horizontal (from -180 to 180 degrees) and vertical (0 to 90 degrees) planes for the 5950-5960 MHz band.

- Please see attached antenna patterns for the Series 1244 antenna at C-band frequencies demonstrating approximately 50 dB of roll-off between boresight (on-axis) and 20 degree sidelobe (off-axis) gain.

Question #3, was clarified I the exhibit and API; however, the Form 442 was not updated to reflect the changes of antenna main beam gain or ERP value.

3) We found a discrepancy with the 5 GHz antenna gain; in the API the gain value is 41.6 dBi, yet in other calculations in exhibit it appears that the gain could be 40.5 dBi; please verify the antenna gain for the 5 GHz uplink band and provide the correct value.

- Update ITU information included 42 dBi gain for the antenna based on prior consultation with the Commission. Calculations have been updated to reflect this value.

EPFD calculation comments (**5950-5960 MHz**):

4) We did NOT receive the earth station antenna pattern or represented antenna pattern so we could not verify the off-axis antenna gain at 35 deg.

As noted above in #2, we will need an antenna pattern to obtain the off-axis gain at 35 degrees.

- Please see attached antenna patterns for the Series 1244 antenna at C-band frequencies demonstrating approximately 50 dB of roll-off between boresight (on-axis) and 20 degree sidelobe (off-axis) gain.

5) Using the exhibit max EIRP off axis value (6.4 dBW) towards the GSO arc, our max EIRP density calculation was = -54.4 dBW/Hz using the 1M91D7W emission shown in the API. Exhibit claims that **emission 7M65D7W generates the max EIRP density**; however, our calculation shows that emission 1M91D7W generates the max EIRP density and emission 3M82D7W generate the second max EIRP density.

- Exhibit has been updated.

Form 442 ALL frequency bands

6) We note that the API filing contains emission designators that are not in the FCC Form 442; we also note that Form 442 was not updated after we provided our comments. Applicant please update Form 442 or explain why Form 442 was not updated?

- Form 442 has been updated

Form 442 **UPLINK** (5.9 GHz band):

7) In Form 442, we checked the UPLINK ERP value and our calculation shows an EIRP of (7 + 42) = 49 dBW; convert to ERP subtract 2.15 dB = 46.85 dBW then convert to watts; **48.417 kW ERP**; currently Form 442 shows ERP value of 34.196 kW.

- Form 442 has been updated

8) We also notice a small discrepancy in the antenna beamwidth provided in Form 442 of 1.5 deg and in the API file of 1.4 deg. Let us know which one is the correct value.

- Form 442 has been updated

9) Form 442 is showing emission 10M0G1D which is no longer in the API file; make sure the API file and form 442 information are in synch or explain why they are different.

- Form 442 has been updated

Form 442 **UPLINK** (401 MHz band):

10) In Form 442, we checked the UPLINK ERP value and our calculation shows an EIRP of (14 + 16.2) = 32.2 dBW; convert to ERP subtract 2.15 dB = 30.05 dBW then convert to watts; **638.3 W ERP**; currently Form 442 shows ERP value of 764 W ERP. Please review the ERP calculation and confirm the value.

- Form 442 has been updated

11) We also notice a small discrepancy in the antenna beamwidth provided in Form 442 of 33 deg and in the API of 30 deg. Let us know which one is the correct value.

- Form 442 has been updated

12) Form 442 is showing emission 150KG1D which is no longer in the API file; make sure the API file and form 442 information are in synch or explain why they are different.

- Form 442 has been updated

Form 442 **DOWNLINK** (2390-2400 MHz band):

13) Form 442 is showing emission 10M0G1D which is no longer in the API file; make sure the API file and form 442 information are in synch or explain why they are different.

- Form 442 has been updated

Form 442 **DOWNLINK** (401 MHz band):

14) Form 442 is showing emission 150KG1D which is no longer in the API file; make sure the API file and form 442 information are in synch or explain why they are different.

- Form 442 has been updated

API file, **UPLINK Beam** (5.9 GHz band):

15) Applicant check the emission designator with Form 442 and either explain why some are missing from Form 442 or add them to the form.

- Form 442 has been updated

API file, **DOWNLINK** Beam (2.9 GHz band):

16) Applicant check the emission designator with Form 442 and either explain why some are missing from Form 442 or add them to the form.

- Form 442 has been updated

API **DOWNLINK** (401 MHz band):

16) Applicant check the emission designator with Form 442 and either explain why some are missing from Form 442 or add them to the form.

- Form 442 has been updated

Astranis Space Technologies Corp.
Call Sign: WL9XAF
File No.: 0113-EX-ST-2017

micronet COMMUNICATIONS, INC.

Spectrum Compatibility Study: 2.4m Earth Station Communicating with NGSO Satellite at 5.950-5.960 GHz in Fairbanks, AK

Micronet Communications, Inc., a frequency coordinator and telecommunications consulting company, has been engaged by Astranis Space Technologies Corp. ("Astranis") to conduct a spectrum compatibility study of proposed operation of a 2.4m earth station communicating with a non-geostationary satellite orbit ("NGSO") satellite in the 5.950-5.960 GHz band in Fairbanks, AK. As demonstrated below, Astranis' proposed operations will not cause harmful interference to any co-frequency terrestrial microwave operations in the region.

The Astranis 2.4 m earth station antenna will be located at a University of Alaska Fairbanks site at 64°51'31.0"N, 147°50'07.0"W. The antenna will be mounted on the northeast corner of the Reichardt Building (48 feet above ground level) and will track the associated NGSO satellite as it passes over the site, and may transmit and receive intermittently and for brief periods (approximately 10 minutes) during each orbit when the satellite is in view, but it will not operate at all times during each orbit pass. The uplink earth station will transmit with an EIRP of 49 dBW in the 5.950-5.960 GHz band, and will operate at a minimum elevation angle of approximately 35° in directions towards potentially affected terrestrial links.

The objectives for earth station interference into microwave receivers (i.e., protection criteria), below which there is no harmful interference, are listed below for the 6 GHz band.

Frequency	**<=10 GHz**			
Interferer	Es	Es	Mw	Mw
Victim System	Mw	Mw	Es	Es
Victim Modulation	Analog	Digital	Analog	Digital
p1 (%)	20	20	20	20
p2 (%)	0.01	0.005	0.03	0.005
n2	2	3	3	3
B (Hz)	4000	1000000	1000000	1000000
J (dB)	9	-6	-10	-10
W (dB)	0	0	4	0
Tr (K)	750	750	100	100
Ms (dB)	33	37	2	2
NL (dB)	0	0	1	1
long term (dBW)	-154.829	-130.85	-162.6	-158.6
short term (dBW)	-130.831	-102.85	-153.929	-149.929

Table 1. Interference Protection Criteria

As indicated in the table, the long-term protection criteria is -130.85 dBW/MHz and the short-term protection criteria is -102.85 dBW/MHz. The short-term time percentage is 0.005%. This study demonstrates operation of the 2.4m earth station will be a non-interference basis ("NIB") relative to potentially affected terrestrial microwave links (i.e., meeting the long-term protection criteria) without considering the time-varying nature or considering terrain blockages, and considering building blockage in only a single case where the blockage can be demonstrated conclusively given the proximity and heights of the buildings.

Methodology

Earth station interference programs are generally designed for earth stations that transmit to geostationary satellite orbit ("GSO") satellites (i.e., with a single azimuth and elevation angle) rather than NGSO satellites (where the earth station tracks the satellite across the sky and thus operates throughout a range of azimuth and elevation angles). Accordingly, we used our fixed point-to-point interference analysis to simulate the potential interference cases. We created a "dummy" path in our point-to-point database using an omni-directional antenna at the proposed transmit location to determine the maximum potential for interference in all azimuth angles for each terrestrial receiver in our database, then we focused on those azimuths that pointed directly towards a point victim microwave receiver.

Note that we assumed the earth station was pointing at a 0° elevation angle for this simulation and we did not take any blockage, terrain or time variation into consideration in calculating the initial results. Note also that the units are different when determining interference between point-to-point links than for earth station interference into microwave receivers. The earth station interference objectives are listed below as maximum interfering levels for a specific bandwidth. In this case the units are dBW/MHz. However, the interference objectives for PTP links are usually expressed as T/I objectives. Radio Threshold minus the T/I objective yields the interference objective and this is specified in dBm. Annex 1, attached, shows the results of these calculations.

The values we are interested in on the attached report are the receive levels. These are highlighted and are shown as Level Rx and Level Dv on the report. Level Rx is the interfering level referencing the main antennas and Level Dv is the interfering levels referencing the diversity antennas (if applicable). The level into the main antennas is usually the major concern.

Converting the 49 dBW EIRP transmit power to EIRP/MHz we get 39 dBW/MHz. Converting from dBW to dBm we add 30 dB. So, the EIRP value we use to model this in our interference analysis program is 69 dBm/MHz. Again, we used a 1 dB gain omni antenna and listed the transmit power at 68 dBm to simulate maximum power in all azimuths at a 0° elevation angle considering only distance/free space loss. Converting back to dBW, we subtract the 30 dB we added earlier from the interfering levels and gives the levels listed in the table below.

Licensee	Site	Distance	Interference Impact	Satisfies Long-Term Criteria	Satisfies Short-Term Criteria	Potential Mitigating Factors
Golden Valley Electric	Zehnder (WED358)	3.4 miles	-74.5 dBW/MHz	No	No	Antenna Roll-off, Building Blockage, Time Variation
Alascom, Inc.	Buck (WAS434)	54.1 miles	-93.3 dBW/MHz	No	No	Antenna Roll-off, Time Variation
Alascom, Inc.	Pedro (WAS440)	15.6 miles	-102.5 dBW/MHz	No	No	Antenna Roll-off, Terrain Blockage, Time Variation
Golden Valley Electric	Kobe (WNEH474)	62.4 miles	-103.2 dBW/MHz	No	Yes	Antenna Roll-off, Terrain Blockage, Time Variation
Unicom, Inc.	Bean Ridge (WQZQ704)	85.1 miles	-109.9 dBW/MHz	No	Yes	Antenna Roll-off, Terrain Blockage, Time Variation
Golden Valley Electric	Canyon Creek (WQDS735)	54.1 miles	-114.6 dBW/MHz	No	Yes	Antenna Roll-off, Time Variation
Alascom, Inc.	Gerstle River	112.1 miles	-102.9 dBW/MHz	No	Yes	Antenna Roll-off, Terrain Blockage, Time Variation
DRS Global Enterprises	Murphy Dome	16.9 miles	-123 dBW/MHz	No	Yes	Antenna Roll-off, Time Variation

Table 2. Potentially Affected Microwave Links – Interference Impact without Antenna Roll-off, Building/Terrain or Time Effects

The antenna performance plots attached to this submission demonstrate that there is a 50 dB difference between on-axis gain and gain at 35° off-axis for the 2.4m antenna. Accordingly, 50 dB must be subtracted from the results in Table 2 to account for the minimum elevation angle of the Astranis 2.4m earth station. Subtracting 50 dB from the interference results in the table above confirm that all potentially affected sites, with the exception of Zehnder (WED358), are below the long-term protection criteria of -130.85 dBW/MHz.

Licensee	Site	Distance	Interference Impact with Antenna Roll-Off	Satisfies Long-Term Criteria	Satisfies Short-Term Criteria	Potential Mitigating Factors
Golden Valley Electric	Zehnder (WED358)	3.4 miles	-124.5 dBW/MHz	No (-6.35 dB)	Yes	Antenna Roll-off, Building Blockage, Time Variation
Alascom, Inc.	Buck (WAS434)	54.1 miles	-143.3 dBW/MHz	Yes	Yes	Antenna Roll-off, Time Variation
Alascom, Inc.	Pedro (WAS440)	15.6 miles	-152.5 dBW/MHz	Yes	Yes	Antenna Roll-off, Terrain Blockage, Time Variation
Golden Valley Electric	Kobe (WNEH474)	62.4 miles	-153.2 dBW/MHz	Yes	Yes	Antenna Roll-off, Terrain Blockage, Time Variation
Unicom, Inc.	Bean Ridge (WQZQ704)	85.1 miles	-162.2 dBW/MHz	Yes	Yes	Antenna Roll-off, Terrain Blockage, Time Variation
Golden Valley Electric	Canyon Creek (WQDS735)	54.1 miles	-164.6 dBW/MHz	Yes	Yes	Antenna Roll-off, Time Variation
Alascom, Inc.	Gerstle River	112.1 miles	-159.8 dBW/MHz	Yes	Yes	Antenna Roll-off, Terrain Blockage, Time Variation
DRS Global Enterprises	Murphy Dome	16.9 miles	-173 dBW/MHz	Yes	Yes	Antenna Roll-off, Time Variation

Table 3. Potentially Affected Microwave Links –
Interference Impact with Antenna Roll-off
But No Building/Terrain Blockage

With respect to the Zehnder site, adjusting for antenna roll-off puts the impact of Astranis' proposed operations well below the short-term protection criteria of -102.85 dBW/MHz (-74.5 dBW/MHz – 50 dB roll-off = -124.5 dBW/MHz) and very close to the long-term protection criteria noted above. Thus, any potential mitigation factors that produce 6.35 dB in additional protection results in NIB operations through compliance with the long-term protection criteria. In this case, a large building is located directly between the Astranis earth station installation site and the Zehnder site.

Figure 1. Astranis Earth Station Interference Path

Specifically, the eight-story Moore-Bartlett-Skarland Complex is directly between the earth station installation site on the three-story Reichardt Building and the Zehnder receiver location.[1]

[1] *See* building descriptions at http://www.uaf.edu/campusmap/buildings/reichardt/ and http://www.uaf.edu/campusmap/buildings/mbs-complex/.

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Because the 2.4m antenna will be mounted on the northeast corner of the Reichardt Building at a height of 48 feet above ground level, the higher Moore-Bartlett-Skarland buildings block the interference path and provides far greater than 6.35 dB in additional protection. As indicated in Annex 2, attached, based on the NSMA Terrain Loss Model we calculate that the building would provide approximately 19 dB of long-term loss and approximately 8 dB of short-term loss. This puts the Zehnder case more than 12 dB below the long-term protection criteria value and thus no interference would result.

Further examination of these issue reveals significant terrain blockage on many links, as well as time variation component that would provide additional protection. Specifically, because we assumed a worst-case interference situation at the lowest elevation angle and an azimuth directly towards the victim microwave link but the 2.4m earth station will track the NGSO satellite across the sky in various orientations relative to the microwave link, the more appropriate protection criteria may be the short-term limit rather than the long-term limit.

Astranis informs us that the orbit period at 580 km is 96 minutes or 15 passes per day. Of these 15 passes, 11 are at a sufficiently high elevation to communicate with the earth station in Fairbanks, AK. Of these 11 accessible passes the average duration is 10.6 minutes with a maximum of 12.7 and a minimum of 6.5 minutes. The percentage of the orbit where access is possible is approximately 7.5%. However, only a very small fraction of that time would be at the worst-case geometry of minimum elevation angle and an azimuth directly towards the victim microwave receiver, which may well satisfy the short-term time percentage once all orientations across the sky are considered.

In any event, because this analysis demonstrates compliance with the long-term protection criteria, the proposed operation of the 2.4m earth station at the Fairbanks location will not cause harmful interference to potentially affected terrestrial links.

PRODELIN
CORPORATION

Prodelin Corporation

Riverbend Antenna Range
7945 Riverbend Road
Claremont NC 28610

Test No. 0651

Prodelin 2.4 Meter
4-Pc. Series 1244
Receive / Transmit
Offset Antenna System
C-Band Circular

This package contains original patterns

+/- 9° LHCP
TRANSMIT

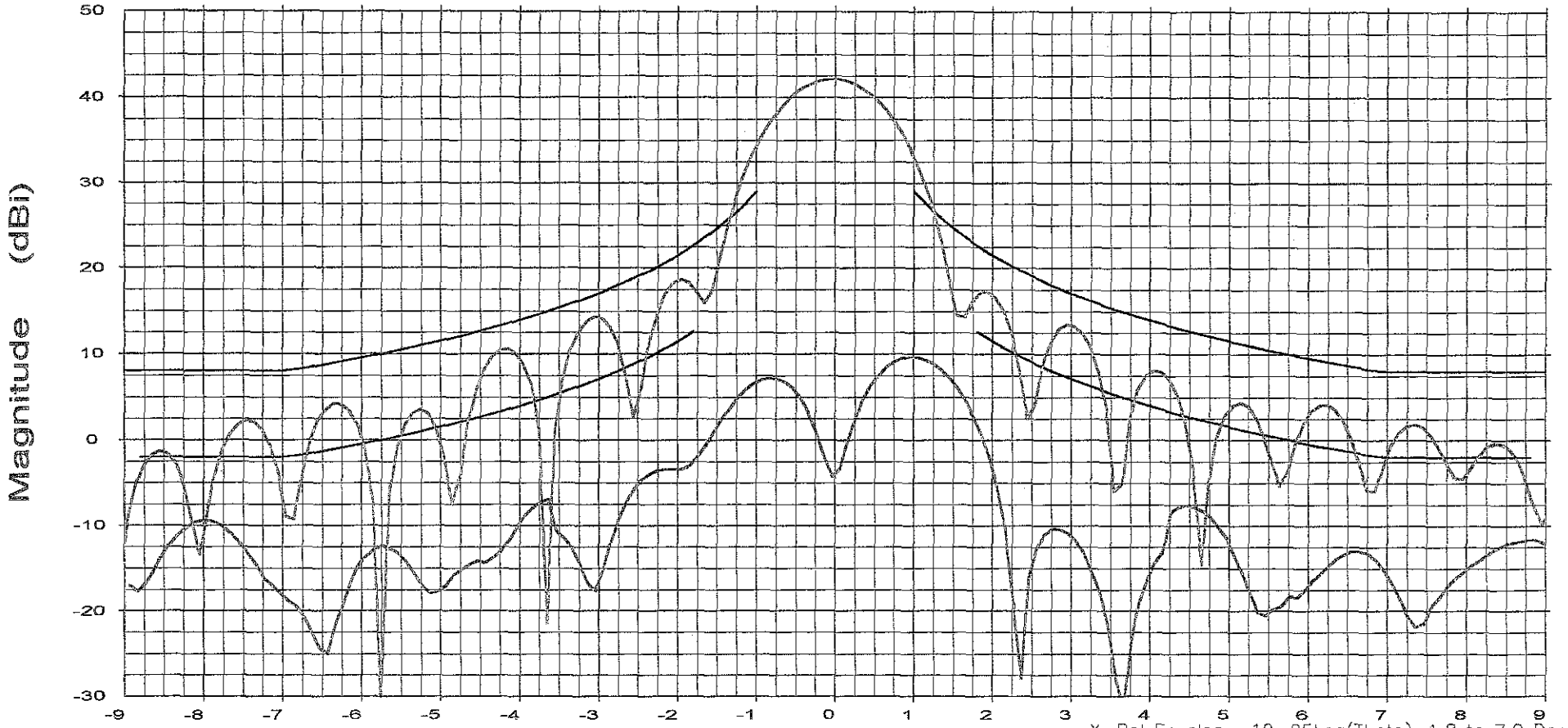
File: See Legend

Prodelin 2.4 Meter 4-Pc. Receive Transmit Antenna System
Series 1244 / C-Band Circular

Frequency : 6.425 GHz

Operator: D. Lutz
Ser. no.: 24
Channel: test

Tx pol: LHCP Rx pol: LHCP



Sidelobe Envelope: 29−25Log(Theta)~1.0 to 7 Deg
+8 dBi~7 to 9.2 Deg | 32−25Log(Theta)~9.2 to 48 Deg
−10 dBi~48 to 180 Deg

X−Pol Envelope: 19−25Log(Theta)~1.8 to 7.0 Deg
−2.0 dBi~7.0 to 9.2 Deg

Overlays	Cal. file	units	Beam Peak Deg	Beam Peak dB
065118.DAT-ant_under_test———	065118.DAT	dBi	-0.05	42.11
065122.DAT-ant_under_test———	065122.DAT	dBi	0.96	9.65

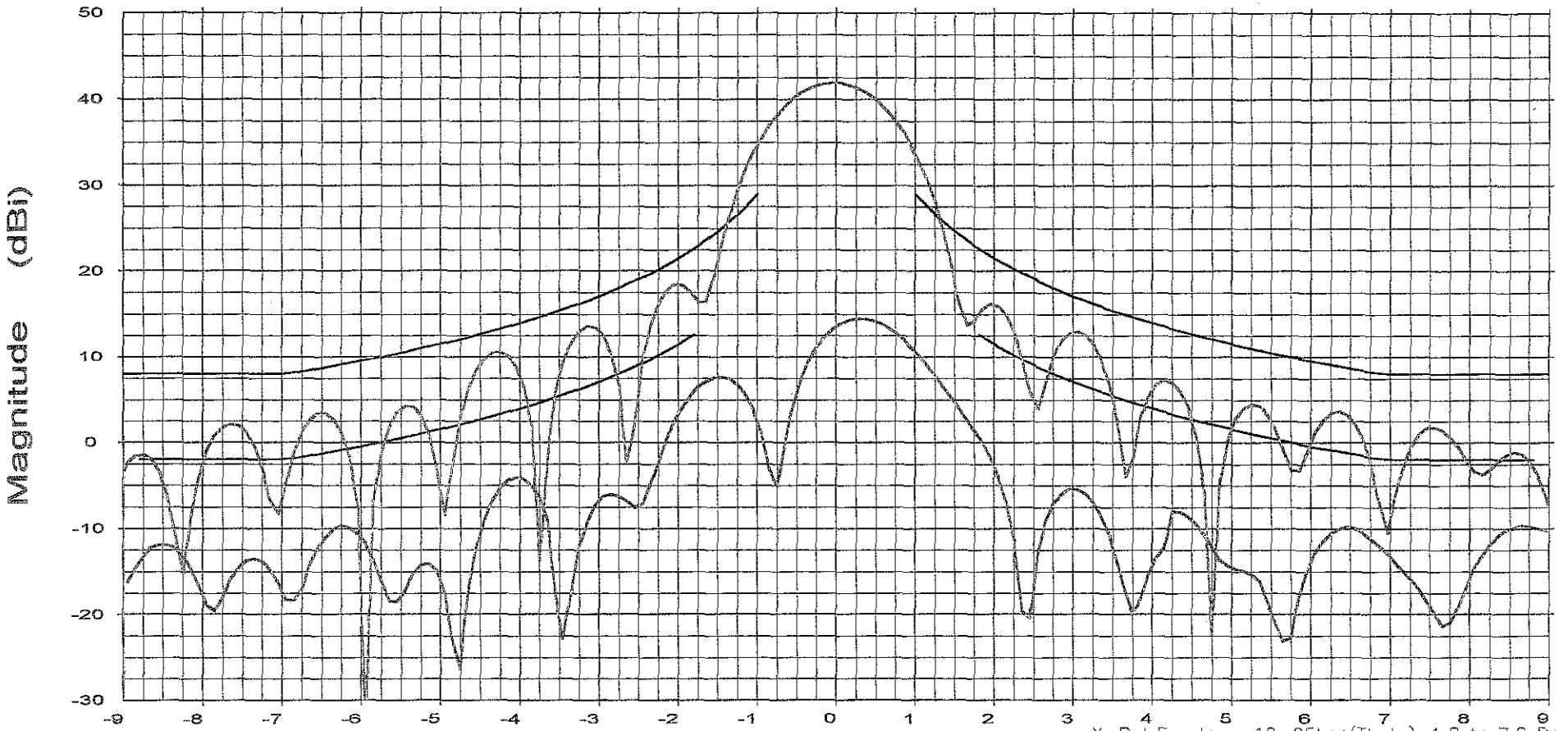
Prodelin Corporation
Riverbend Test Range
Claremont NC

File: See Legend

Prodelin 2.4 Meter 4-Pc. Receive Transmit Antenna System
Series 1244 / C-Band Circular

Frequency : 6.250 GHz

Operator: D. Lutz
Ser. no.: 24
Channel: test Tx pol: LHCP Rx pol: LHCP



Sidelobe Envelope: 29−25Log(Theta)~1.0 to 7 Deg
+8 dBi~7 to 9.2 Deg | 32−25Log(Theta)~9.2 to 48 Deg
−10 dBi~48 to 180 Deg

X−Pol Envelope: 19−25Log(Theta)~1.8 to 7.0 Deg
−2.0 dBi~7.0 to 9.2 Deg

Overlays	Cal. file	units	Beam Peak Deg	Beam Peak dB
065118.DAT-ant_under_test———	065118.DAT	dBi	-0.04	41.92
065122.DAT-ant_under_test———	065122.DAT	dBi	0.34	14.45

Prodelin Corporation
Riverbend Test Range
Claremont NC

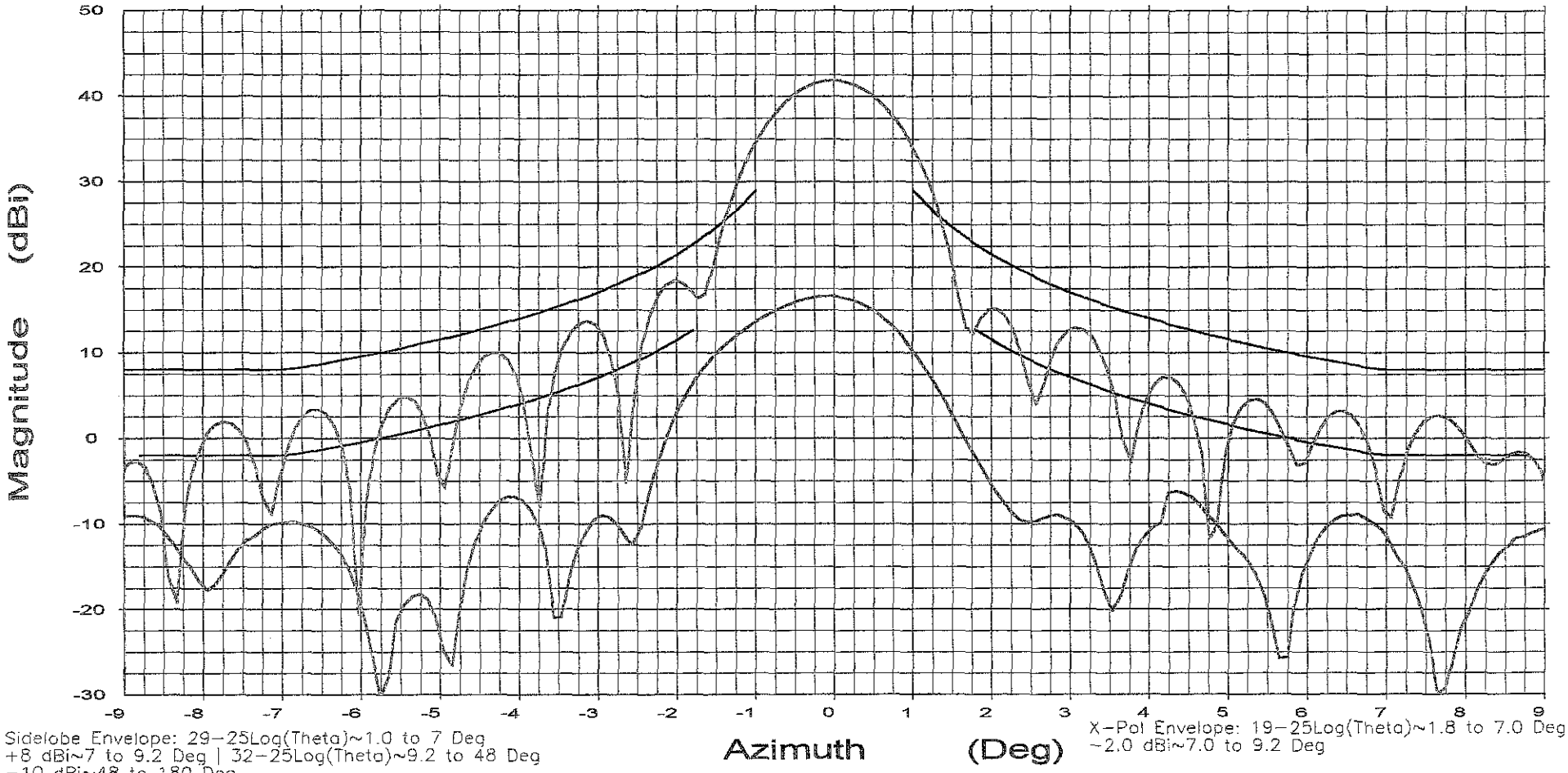
File: See Legend

Prodelin 2.4 Meter 4-Pc. Receive Transmit Antenna System
Series 1244 / C-Band Circular

Frequency : 6.175 GHz

Operator: D. Lutz
Ser. no.: 24
Channel: test

Tx pol: LHCP Rx pol: LHCP



Sidelobe Envelope: 29−25Log(Theta)~1.0 to 7 Deg
+8 dBi~7 to 9.2 Deg | 32−25Log(Theta)~9.2 to 48 Deg
−10 dBi~48 to 180 Deg

X−Pol Envelope: 19−25Log(Theta)~1.8 to 7.0 Deg
−2.0 dBi~7.0 to 9.2 Deg

Overlays	Cal. file	units	Beam Peak Deg	Beam Peak dB
065118.DAT-ant_under_test———	065118.DAT	dBi	-0.03	41.82
065122.DAT-ant_under_test———	065122.DAT	dBi	-0.06	16.59

Prodelin Corporation
Riverbend [illegible] Range
C[illegible]mont NC

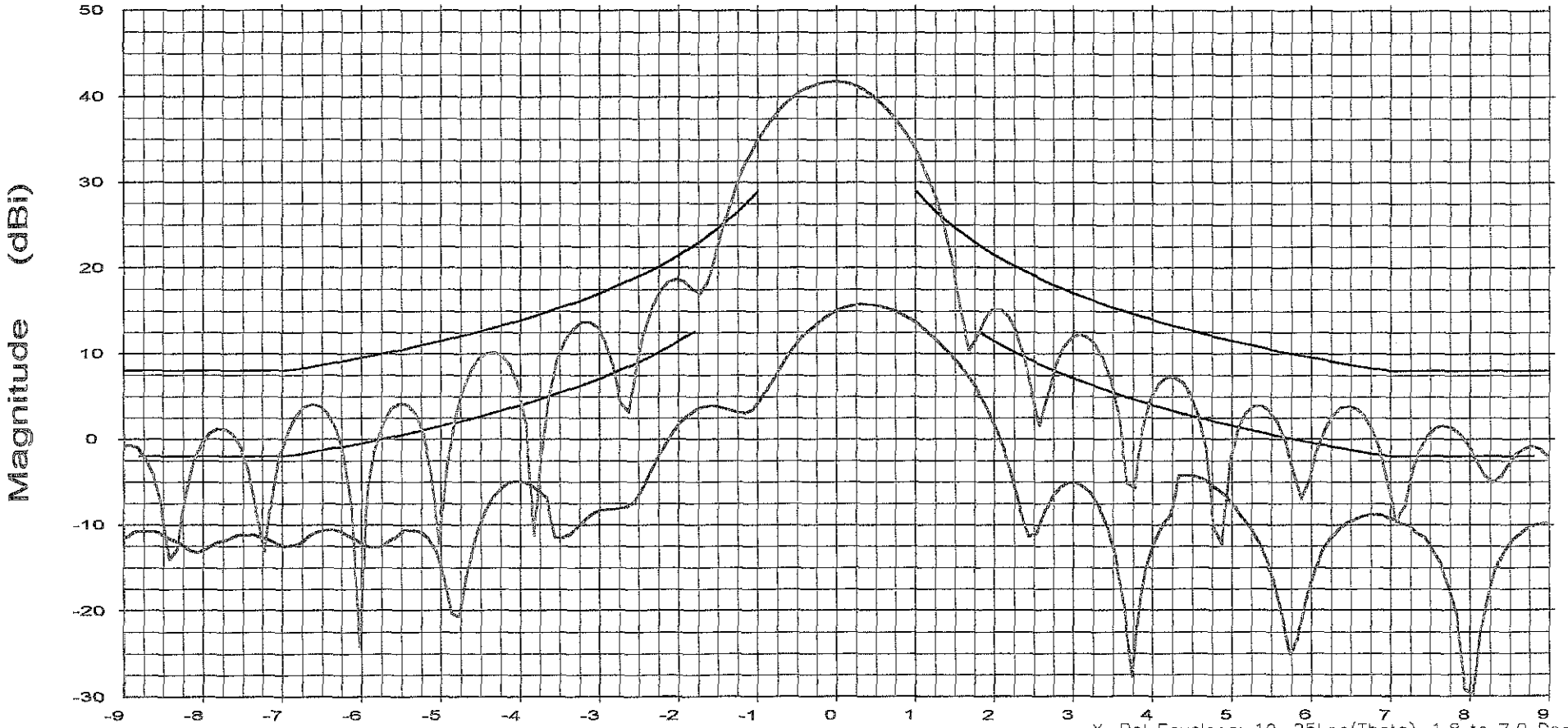
File: See Legend

Prodelin 2.4 Meter 4-Pc. Receive Transmit Antenna System
Series 1244 / C-Band Circular

Frequency : 6.138 GHz

Operator: D. Lutz
Ser. no.: 24
Channel: test

Tx pol: LHCP Rx pol: LHCP



Sidelobe Envelope: 29−25Log(Theta)~1.0 to 7 Deg
+8 dBi~7 to 9.2 Deg | 32−25Log(Theta)~9.2 to 48 Deg
−10 dBi~48 to 180 Deg

X-Pol Envelope: 19−25Log(Theta)~1.8 to 7.0 Deg
−2.0 dBi~7.0 to 9.2 Deg

Overlays	Cal. file	units	Beam Peak Deg	Beam Peak dB
065118.DAT-ant_under_test———	065118.DAT	dBi	-0.03	41.78
065122.DAT-ant_under_test———	065122.DAT	dBi	0.33	15.76

Prodelin Corporation
Riverbend Test Range
Claremont NC

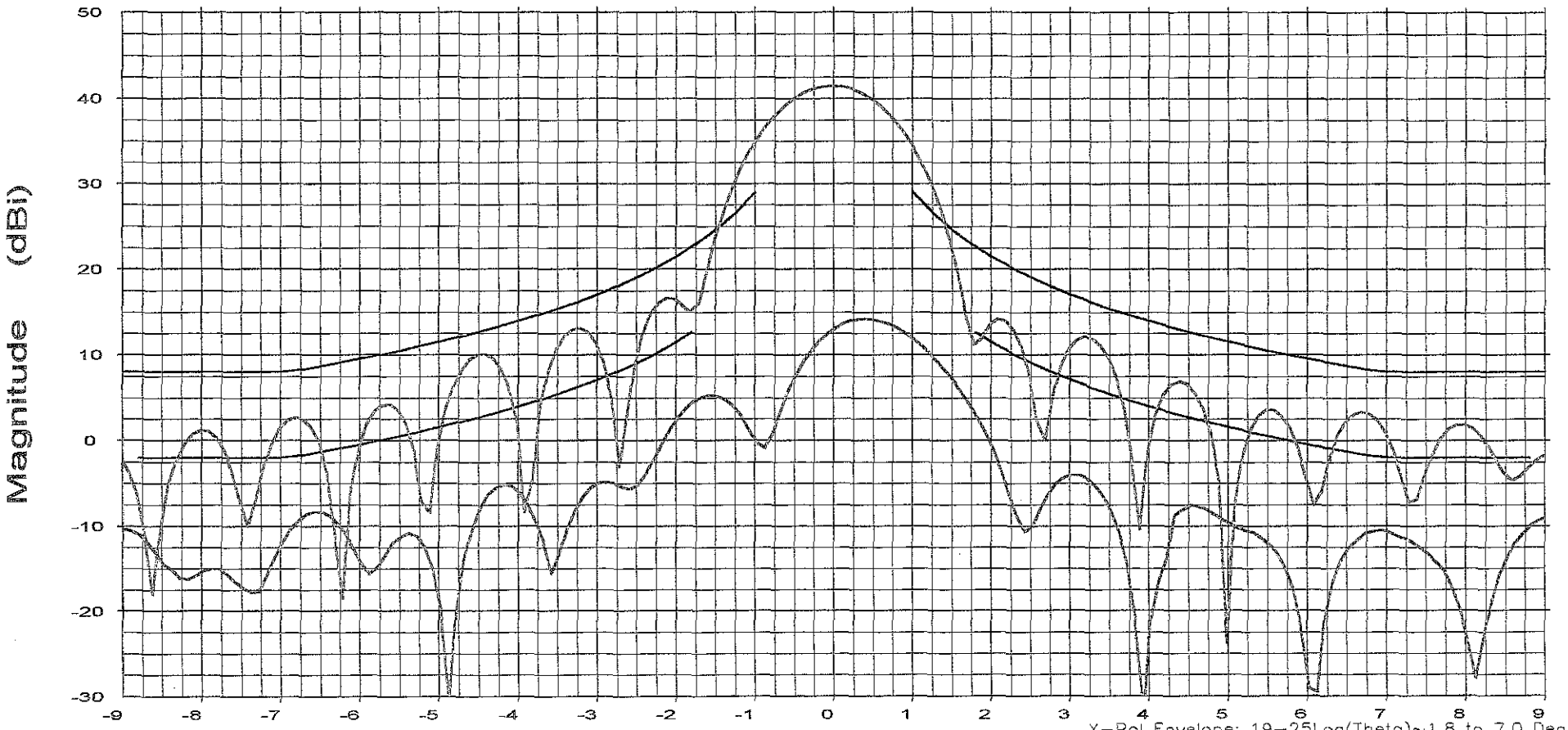
File: See Legend

Prodelin 2.4 Meter 4-Pc. Receive Transmit Antenna System
Series 1244 / C-Band Circular

Frequency : 5.950 GHz

Operator: D. Lutz
Ser. no.: 24
Channel: test

Tx pol: LHCP Rx pol: LHCP



Sidelobe Envelope: 29-25Log(Theta)~1.0 to 7 Deg
+8 dBi~7 to 9.2 Deg | 32-25Log(Theta)~9.2 to 48 Deg
-10 dBi~48 to 180 Deg

X-Pol Envelope: 19-25Log(Theta)~1.8 to 7.0 Deg
-2.0 dBi~7.0 to 9.2 Deg

Overlays	Cal. file	units	Beam Peak Deg	Beam Peak dB
065118.DAT-ant_under_test———	065118.DAT	dBi	-0.02	41.47
065122.DAT-ant_under_test———	065122.DAT	dBi	0.42	14.17

Prodelin Corporation
Riverbend Test Range
Conover NC

File: See Legend

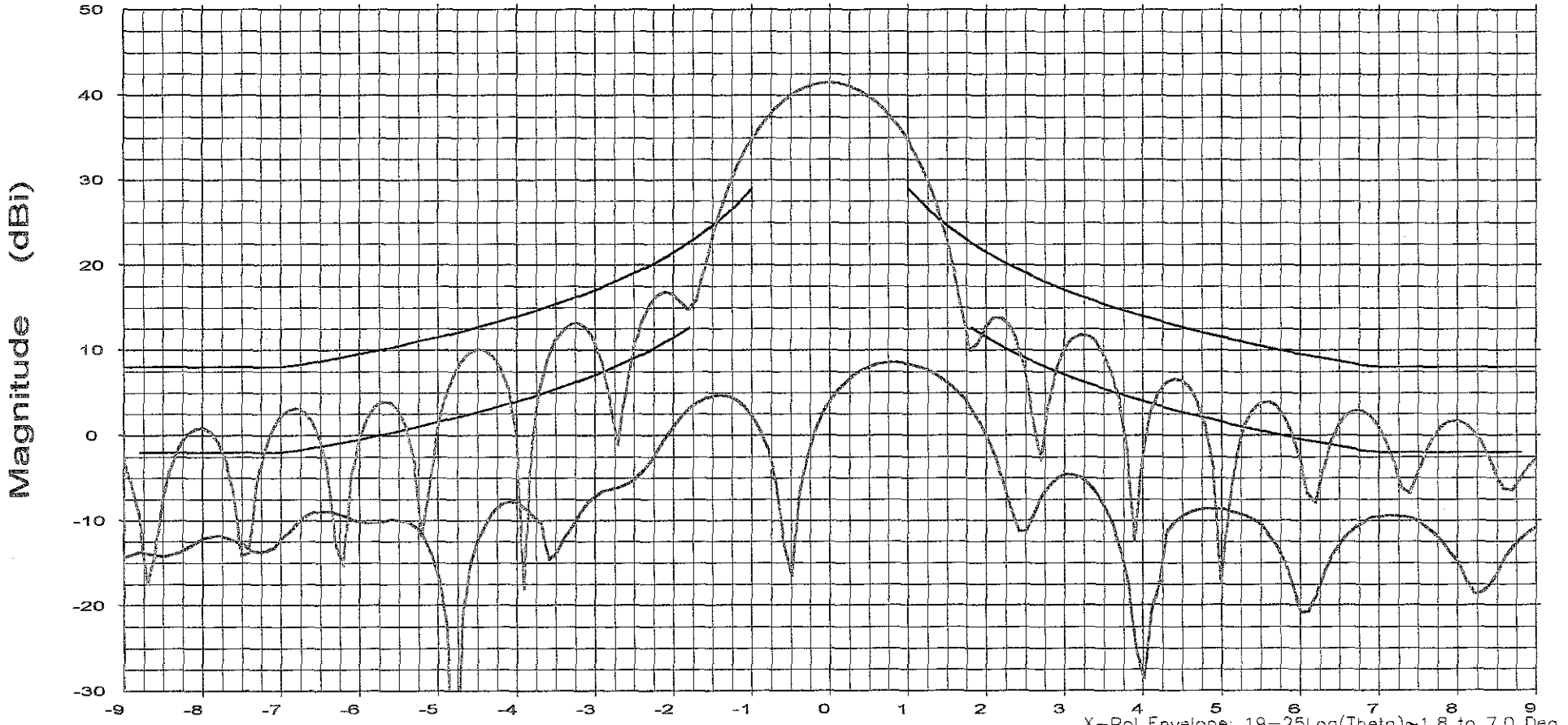
Prodelin 2.4 Meter 4-Pc. Receive Transmit Antenna System
Series 1244 / C-Band Circular

Frequency : 5.925 GHz

Operator: D. Lutz
Ser. no.: 24
Channel: test

Tx pol: LHCP

Rx pol: LHCP



Sidelobe Envelope: 29−25Log(Theta)~1.0 to 7 Deg
+8 dBi~7 to 9.2 Deg | 32−25Log(Theta)~9.2 to 48 Deg
−10 dBi~48 to 180 Deg

X−Pol Envelope: 19−25Log(Theta)~1.8 to 7.0 Deg
−2.0 dBi~7.0 to 9.2 Deg

Overlays	Cal. file	units	Beam Peak Deg	Beam Peak dB
065118.DAT-ant_under_test———	065118.DAT	dBi	-0.01	41.45
065122.DAT-ant_under_test———	065122.DAT	dBi	0.81	8.53

Prodelin Corporation
Riverbend [illegible] Range
C[illegible]mont NC

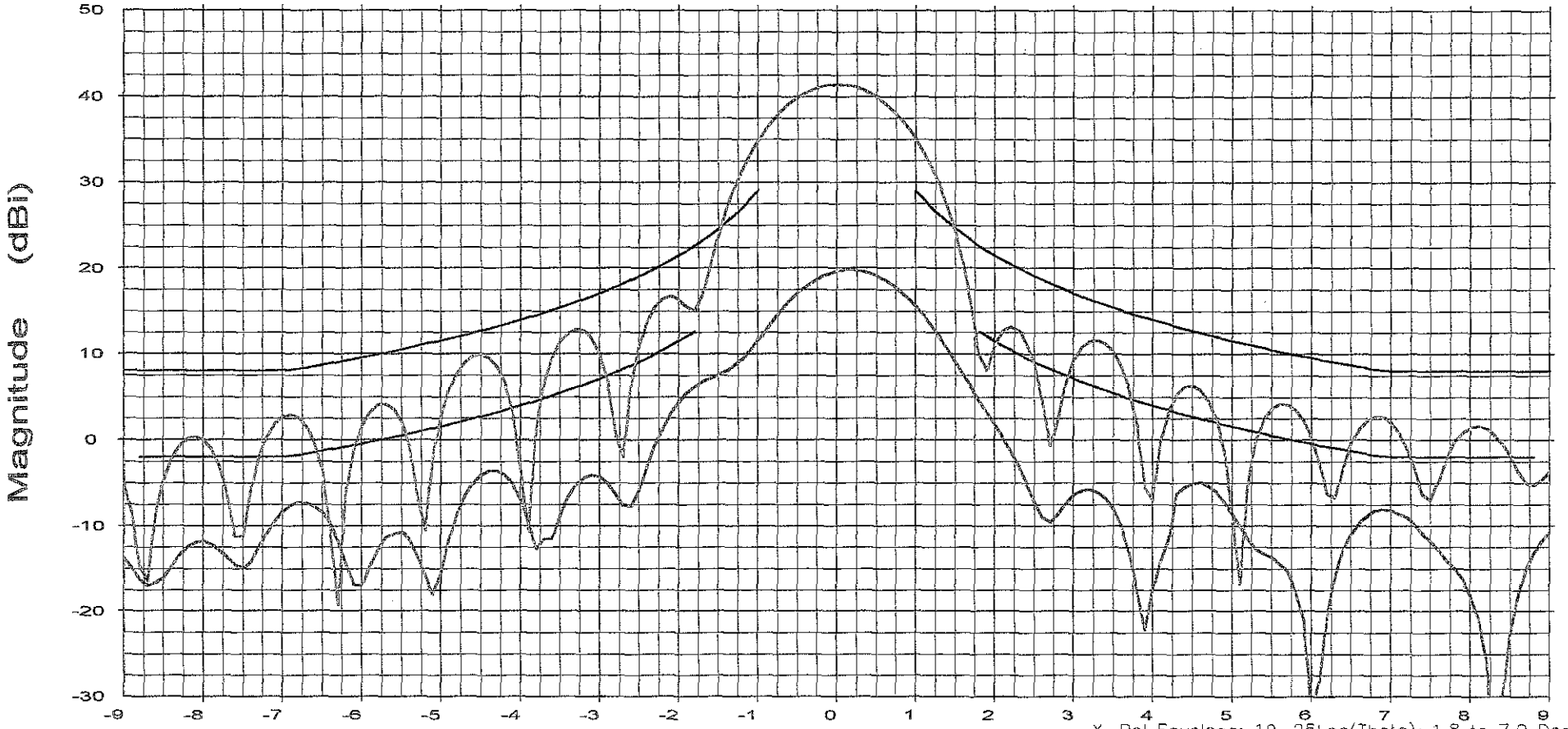
File: See Legend

Prodelin 2.4 Meter 4-Pc. Receive Transmit Antenna System
Series 1244 / C-Band Circular

Frequency : 5.850 GHz

Operator: D. Lutz
Ser. no.: 24
Channel: test

Tx pol: LHCP Rx pol: LHCP



Sidelobe Envelope: 29−25Log(Theta)~1.0 to 7 Deg
+8 dBi~7 to 9.2 Deg | 32−25Log(Theta)~9.2 to 48 Deg
−10 dBi~48 to 180 Deg

X−Pol Envelope: 19−25Log(Theta)~1.8 to 7.0 Deg
−2.0 dBi~7.0 to 9.2 Deg

Overlays	Cal. file	units	Beam Peak Deg	Beam Peak dB
065118.DAT-ant_under_test———	065118.DAT	dBi	0.00	41.42
065122.DAT-ant_under_test———	065122.DAT	dBi	0.20	19.76

Prodelin Corporation
Riverbend [illegible]st Range
C[illegible]mont NC

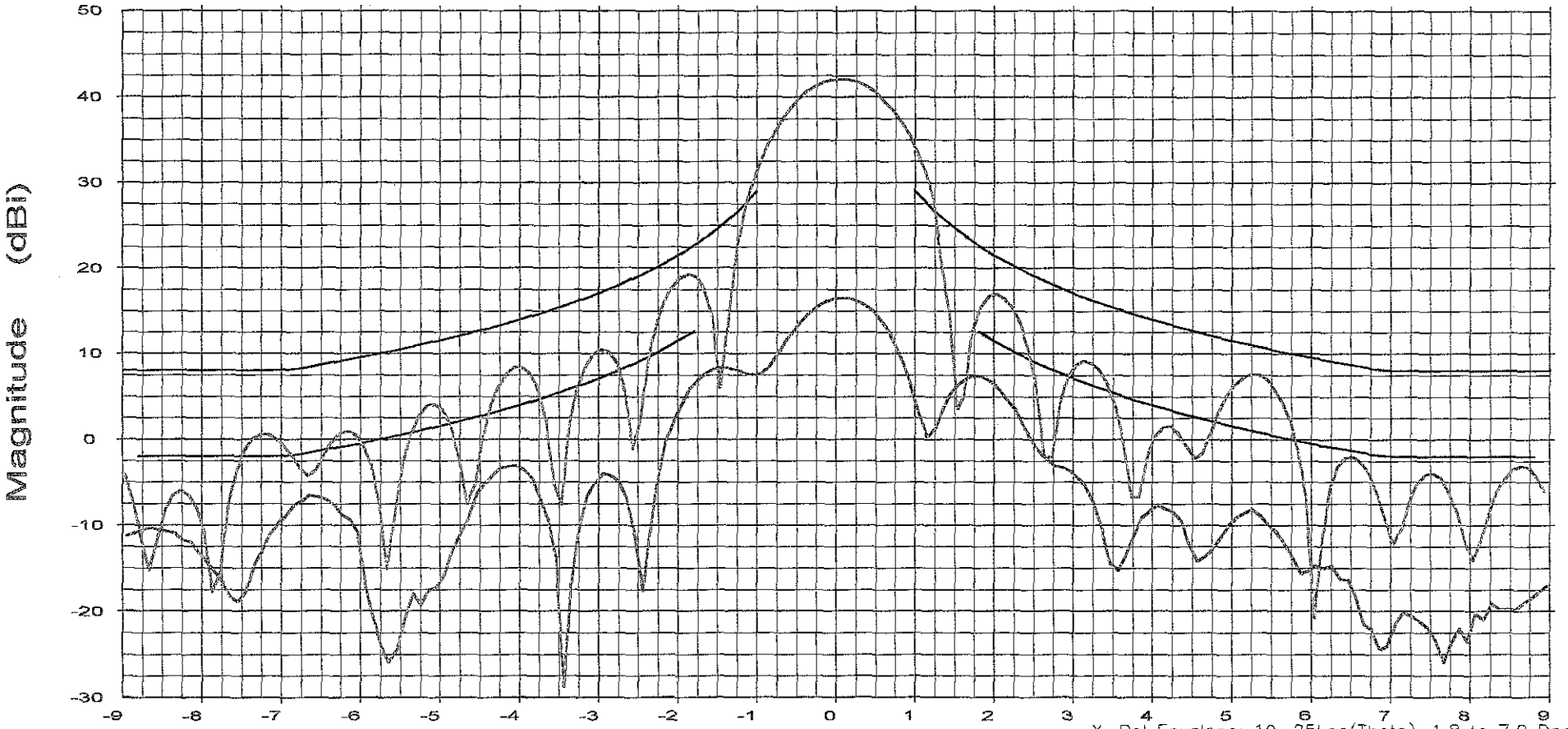
File: See Legend

Prodelin 2.4 Meter 4-Pc. Receive Transmit Antenna System
Series 1244 / C-Band Circular

Frequency : 6.425 GHz

Operator: D. Lutz
Ser. no.: 24
Channel: test

Tx pol: LHCP Rx pol: LHCP



Sidelobe Envelope: 29−25Log(Theta)~1.0 to 7 Deg
+8 dBi~7 to 9.2 Deg | 32−25Log(Theta)~9.2 to 48 Deg
−10 dBi~48 to 180 Deg

X−Pol Envelope: 19−25Log(Theta)~1.8 to 7.0 Deg
−2.0 dBi~7.0 to 9.2 Deg

Overlays	Cal. file	units	Beam Peak Deg	Beam Peak dB
065120.DAT-ant_under_test——	065120.DAT	dBi	0.03	42.07
065123.DAT-ant_under_test——	065123.DAT	dBi	0.06	16.47

Prodelin Corporation
Riverbend [illegible]st Range
Cl[illegible]mont NC

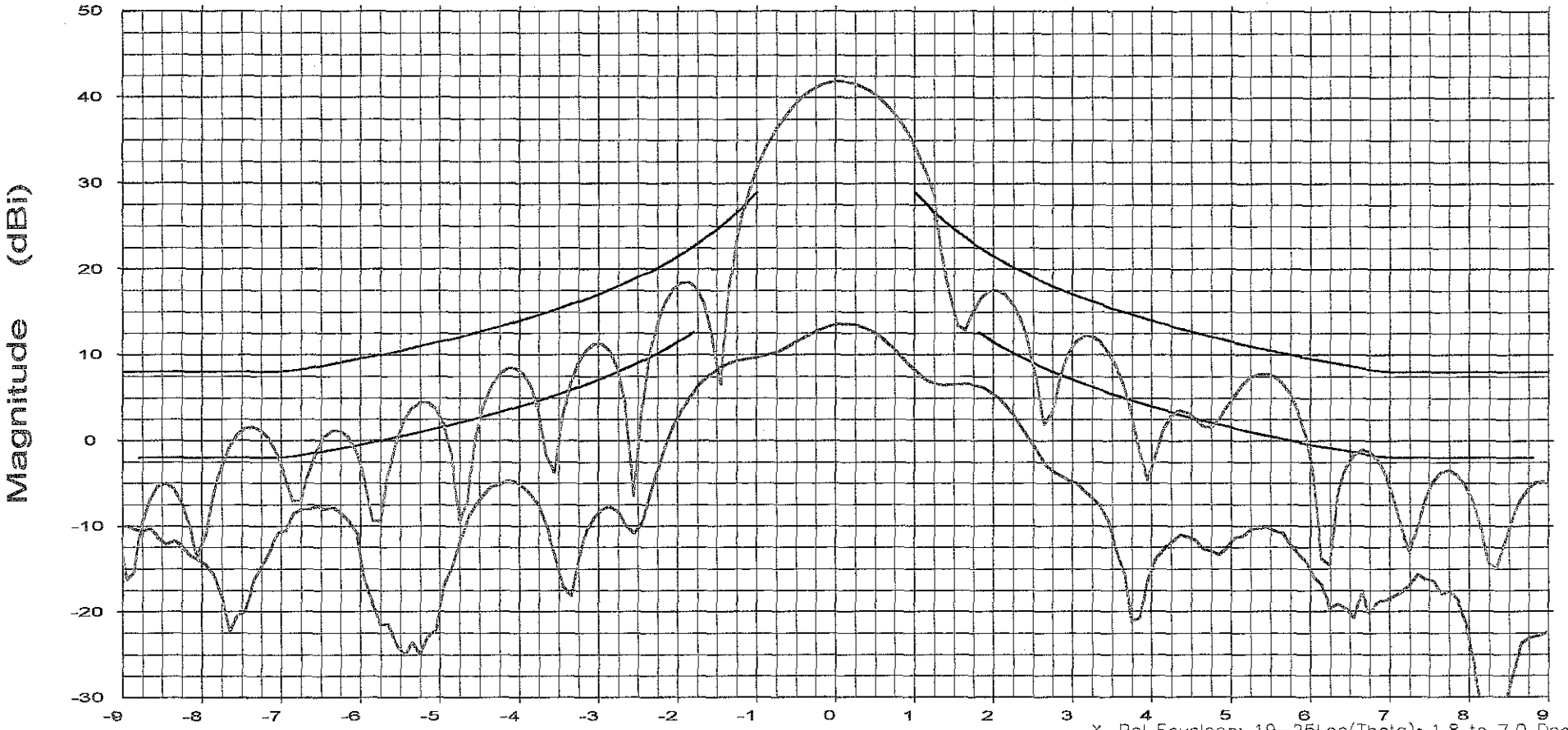
File: See Legend

Prodelin 2.4 Meter 4-Pc. Receive Transmit Antenna System
Series 1244 / C-Band Circular

Frequency : 6.250 GHz

Operator: D. Lutz
Ser. no.: 24
Channel: test

Tx pol: LHCP Rx pol: LHCP



Sidelobe Envelope: 29−25Log(Theta)~1.0 to 7 Deg
+8 dBi~7 to 9.2 Deg | 32−25Log(Theta)~9.2 to 48 Deg
−10 dBi~48 to 180 Deg

X−Pol Envelope: 19−25Log(Theta)~1.8 to 7.0 Deg
−2.0 dBi~7.0 to 9.2 Deg

Overlays	Cal. file	units	Beam Peak Deg	Beam Peak dB
065120.DAT-ant_under_test———	065120.DAT	dBi	0.04	41.84
065123.DAT-ant_under_test———	065123.DAT	dBi	0.14	13.58

Prodelin Corporation
Riverbend Test Range
Claremont NC

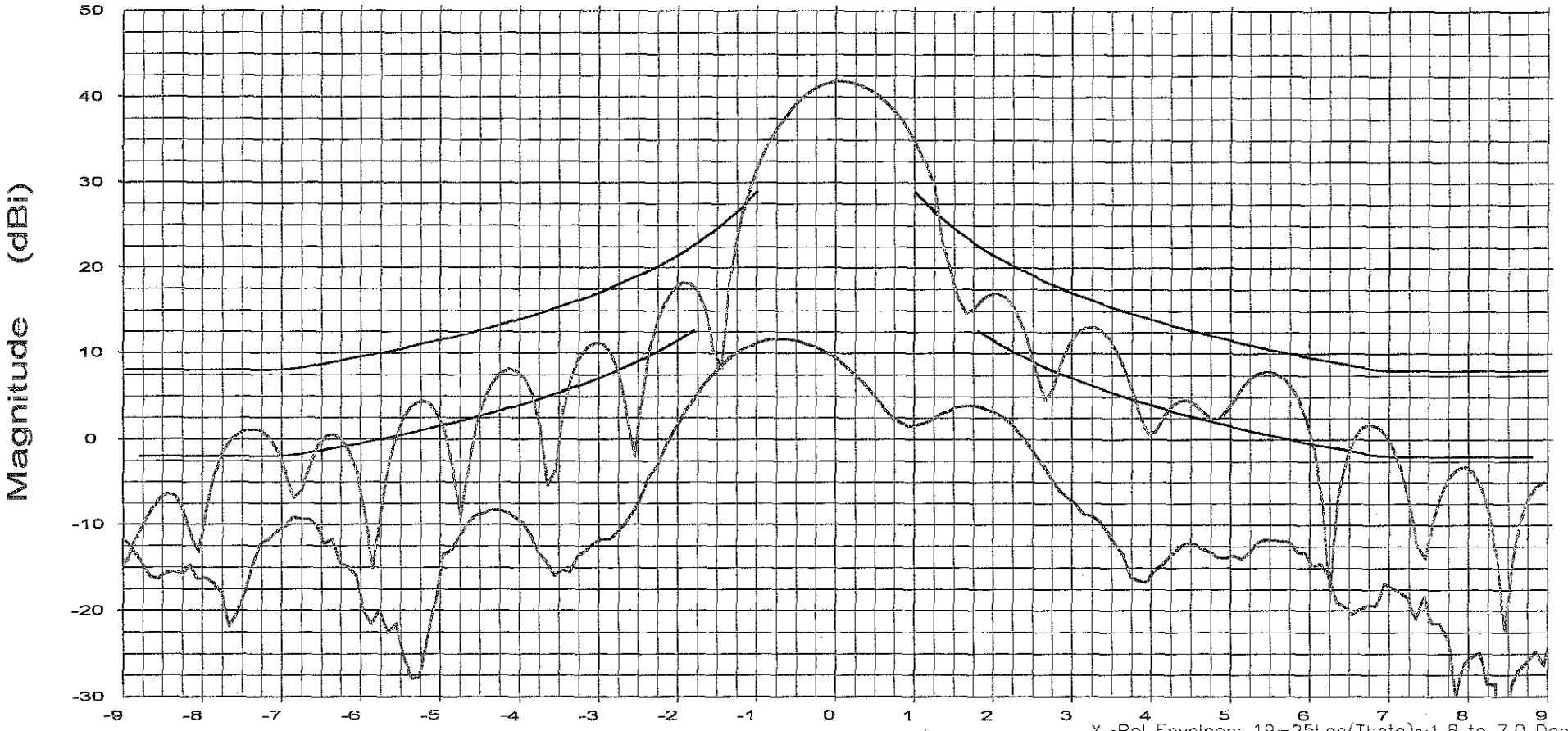
File: See Legend

Prodelin 2.4 Meter 4-Pc. Receive Transmit Antenna System
Series 1244 / C-Band Circular

Frequency : 6.175 GHz

Operator: D. Lutz
Ser. no.: 24
Channel: test

Tx pol: LHCP Rx pol: LHCP



Sidelobe Envelope: 29−25Log(Theta)~1.0 to 7 Deg
+8 dBi~7 to 9.2 Deg | 32−25Log(Theta)~9.2 to 48 Deg
−10 dBi~48 to 180 Deg

X−Pol Envelope: 19−25Log(Theta)~1.8 to 7.0 Deg
−2.0 dBi~7.0 to 9.2 Deg

Overlays	Cal. file	units	Beam Peak Deg	Beam Peak dB
065120.DAT-ant_under_test———	065120.DAT	dBi	0.05	41.79
065123.DAT-ant_under_test———	065123.DAT	dBi	-0.77	11.60

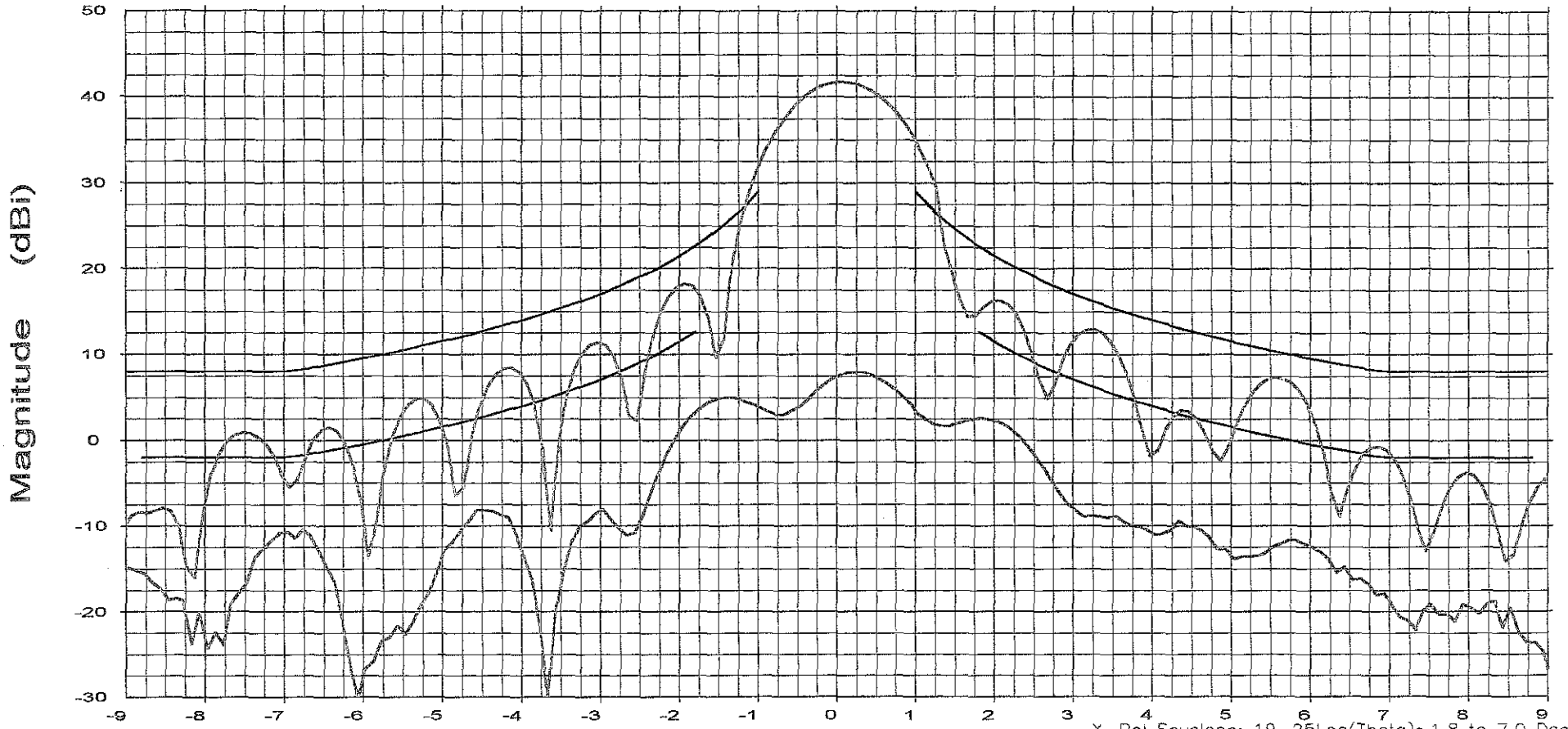
Prodelin Corporation
Riverbend [illegible] Range
Cl[illegible]mont NC

File: See Legend

Prodelin 2.4 Meter 4-Pc. Receive Transmit Antenna System
Series 1244 / C-Band Circular

Frequency : 6.138 GHz

Operator: D. Lutz
Ser. no.: 24
Channel: test Tx pol: LHCP Rx pol: LHCP



Sidelobe Envelope: 29−25Log(Theta)~1.0 to 7 Deg
+8 dBi~7 to 9.2 Deg | 32−25Log(Theta)~9.2 to 48 Deg
−10 dBi~48 to 180 Deg

X−Pol Envelope: 19−25Log(Theta)~1.8 to 7.0 Deg
−2.0 dBi~7.0 to 9.2 Deg

Overlays	Cal. file	units	Beam Peak Deg	Beam Peak dB
065120.DAT-ant_under_test———	065120.DAT	dBi	0.07	41.73
065123.DAT-ant_under_test———	065123.DAT	dBi	0.33	7.93

Prodelin Corporation
Riverbend [illegible]st Range
C[illegible]mont NC

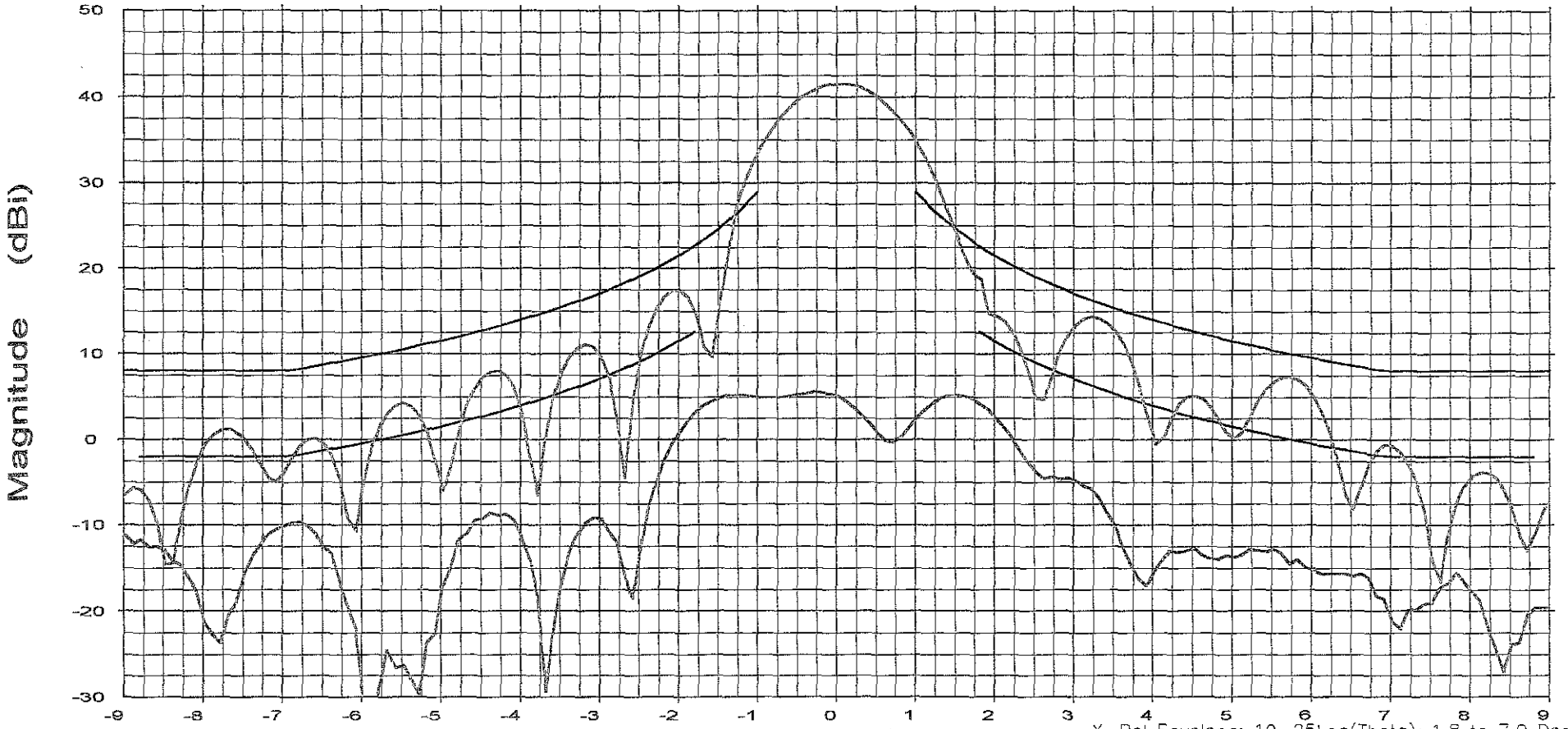
File: See Legend

Prodelin 2.4 Meter 4-Pc. Receive Transmit Antenna System
Series 1244 / C-Band Circular

Frequency : 5.950 GHz

Operator: D. Lutz
Ser. no.: 24
Channel: test

Tx pol: LHCP Rx pol: LHCP



Sidelobe Envelope: 29−25Log(Theta)~1.0 to 7 Deg
+8 dBi~7 to 9.2 Deg | 32−25Log(Theta)~9.2 to 48 Deg
−10 dBi~48 to 180 Deg

X−Pol Envelope: 19−25Log(Theta)~1.8 to 7.0 Deg
−2.0 dBi~7.0 to 9.2 Deg

Overlays	Cal. file	units	Beam Peak Deg	Beam Peak dB
065119.DAT-ant_under_test——	065119.DAT	dBi	0.02	41.50
065123.DAT-ant_under_test——	065123.DAT	dBi	-0.28	5.56

Prodelin Corporation
Riverbend [illegible]st Range
Cl[illegible]mont NC

File: See Legend

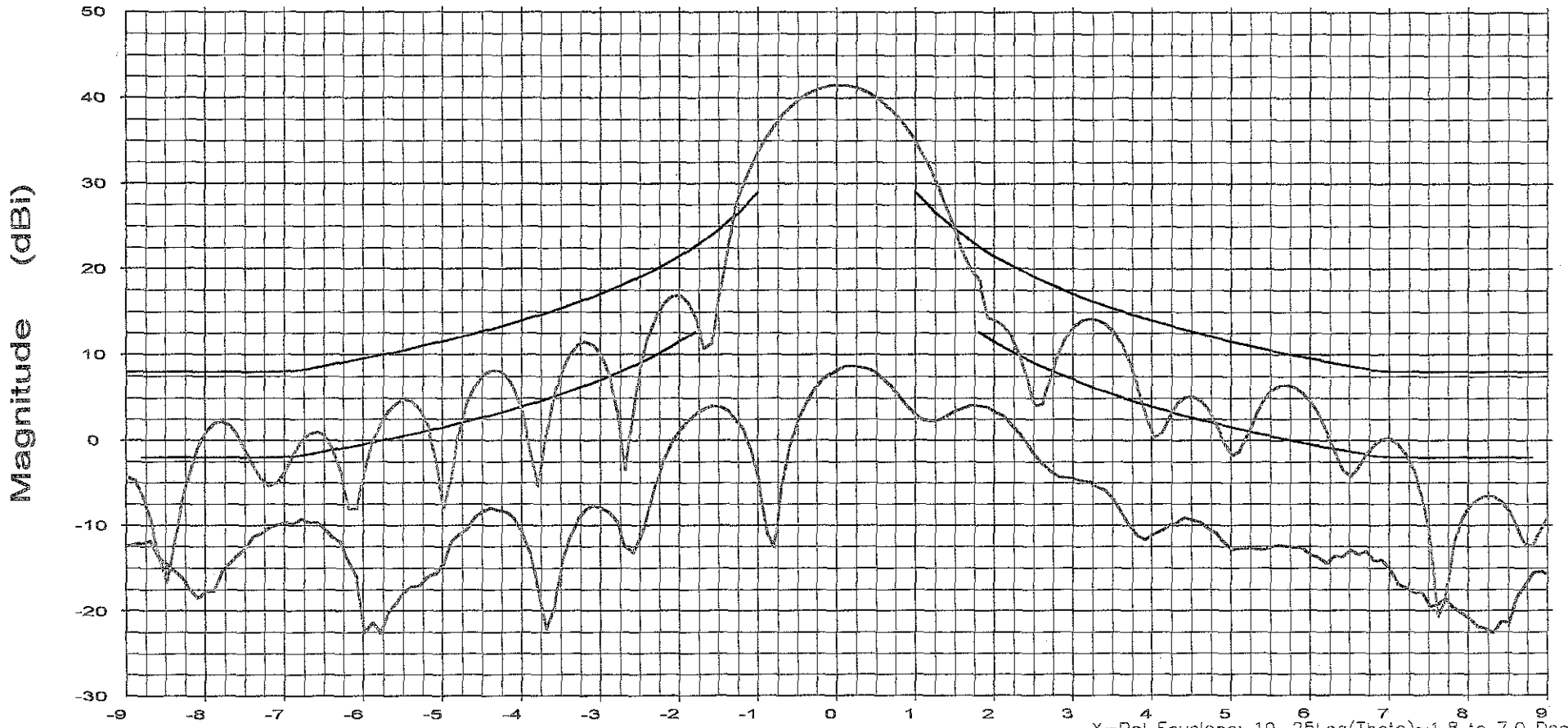
Prodelin 2.4 Meter 4-Pc. Receive Transmit Antenna System
Series 1244 / C-Band Circular

Frequency : 5.925 GHz

Operator: D. Lutz
Ser. no.: 24
Channel: test

Tx pol: LHCP

Rx pol: LHCP



Sidelobe Envelope: 29−25Log(Theta)~1.0 to 7 Deg
+8 dBi~7 to 9.2 Deg | 32−25Log(Theta)~9.2 to 48 Deg
−10 dBi~48 to 180 Deg

X−Pol Envelope: 19−25Log(Theta)~1.8 to 7.0 Deg
−2.0 dBi~7.0 to 9.2 Deg

Overlays	Cal. file	units	Beam Peak Deg	Beam Peak dB
065119.DAT-ant_under_test——	065119.DAT	dBi	0.01	41.48
065123.DAT-ant_under_test——	065123.DAT	dBi	0.21	8.68

Prodelin Corporation
Riverbend Test Range
Claremont NC

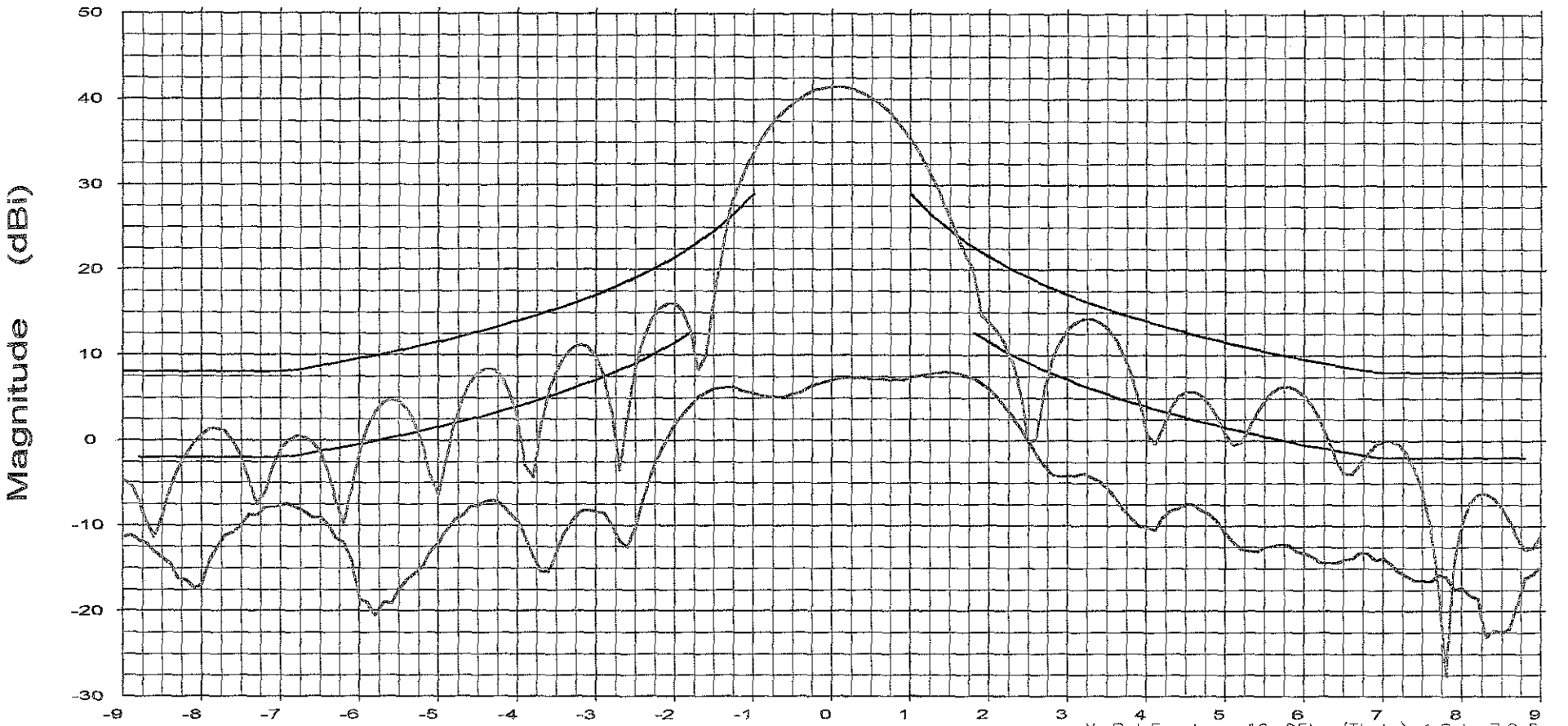
File: See Legend

Prodelin 2.4 Meter 4-Pc. Receive Transmit Antenna System
Series 1244 / C-Band Circular

Frequency : 5.850 GHz

Operator: D. Lutz
Ser. no.: 24
Channel: test

Tx pol: LHCP Rx pol: LHCP



Sidelobe Envelope: 29−25Log(Theta)~1.0 to 7 Deg
+8 dBi~7 to 9.2 Deg | 32−25Log(Theta)~9.2 to 48 Deg
−10 dBi~48 to 180 Deg

X−Pol Envelope: 19−25Log(Theta)~1.8 to 7.0 Deg
−2.0 dBi~7.0 to 9.2 Deg

Overlays	Cal. file	units	Beam Peak Deg	dB
065119.DAT-ant_under_test———	065119.DAT	dBi	0.00	41.44
065123.DAT-ant_under_test———	065123.DAT	dBi	1.40	7.97

Prodelin Corporation
Riverbend Test Range
Claremont NC

+/- 9° RHCP
TRANSMIT

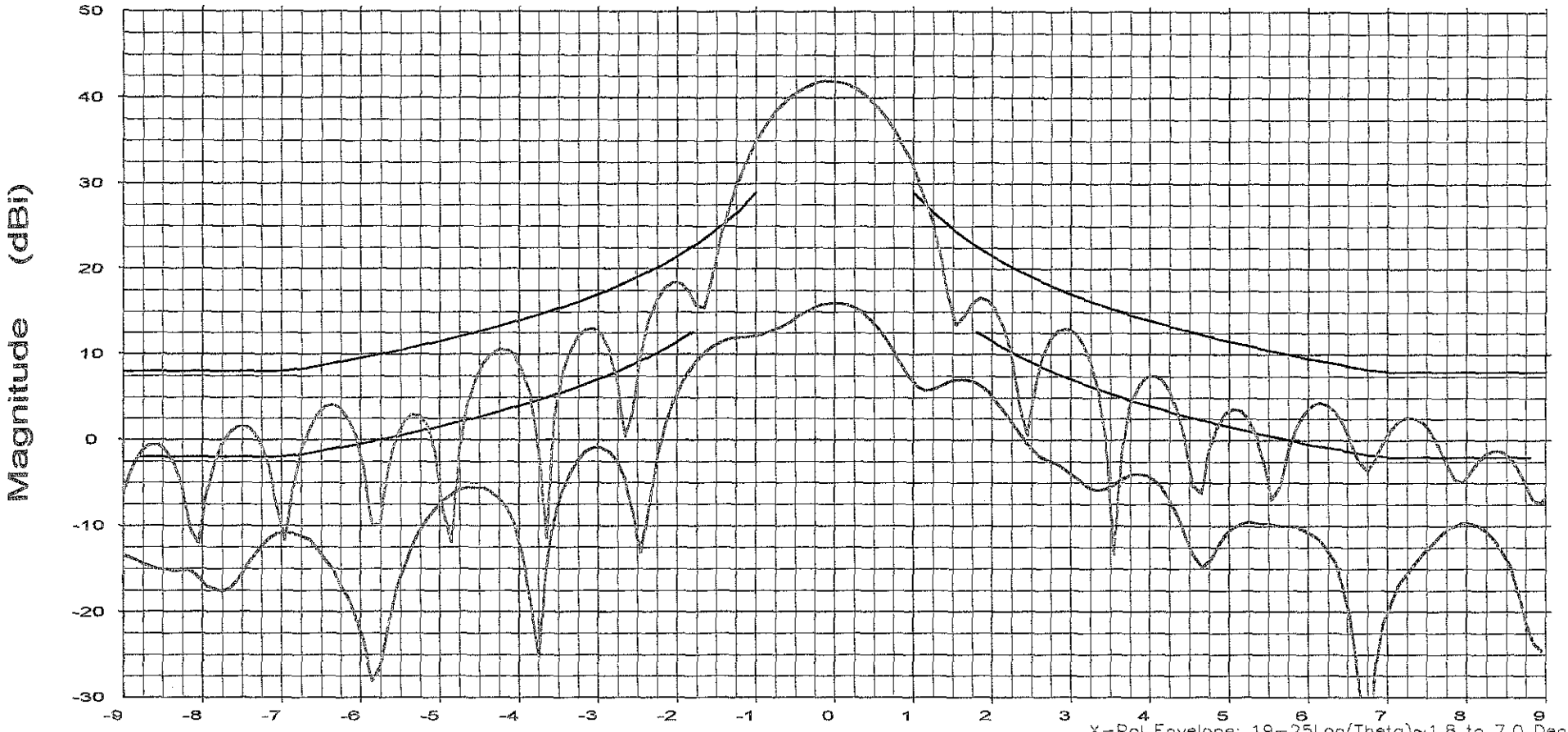
File: See Legend

Prodelin 2.4 Meter 4-Pc. Receive Transmit Antenna System
Series 1244 / C-Band Circular

Frequency : 6.425 GHz

Operator: D. Lutz
Ser. no.: 24
Channel: test

Tx pol: RHCP Rx pol: RHCP



Sidelobe Envelope: 29−25Log(Theta)~1.0 to 7 Deg
+8 dBi~7 to 9.2 Deg | 32−25Log(Theta)~9.2 to 48 Deg
−10 dBi~48 to 180 Deg

X-Pol Envelope: 19−25Log(Theta)~1.8 to 7.0 Deg
−2.0 dBi~7.0 to 9.2 Deg

Overlays	Cal. file	units	Beam Peak Deg	Beam Peak dB
065113.DAT-ant_under_test———	065113.DAT	dBi	-0.05	41.95
065116.DAT-ant_under_test———	065116.DAT	dBi	-0.05	16.03

Prodelin Corporation
Riverbend Test Range
Claremont NC

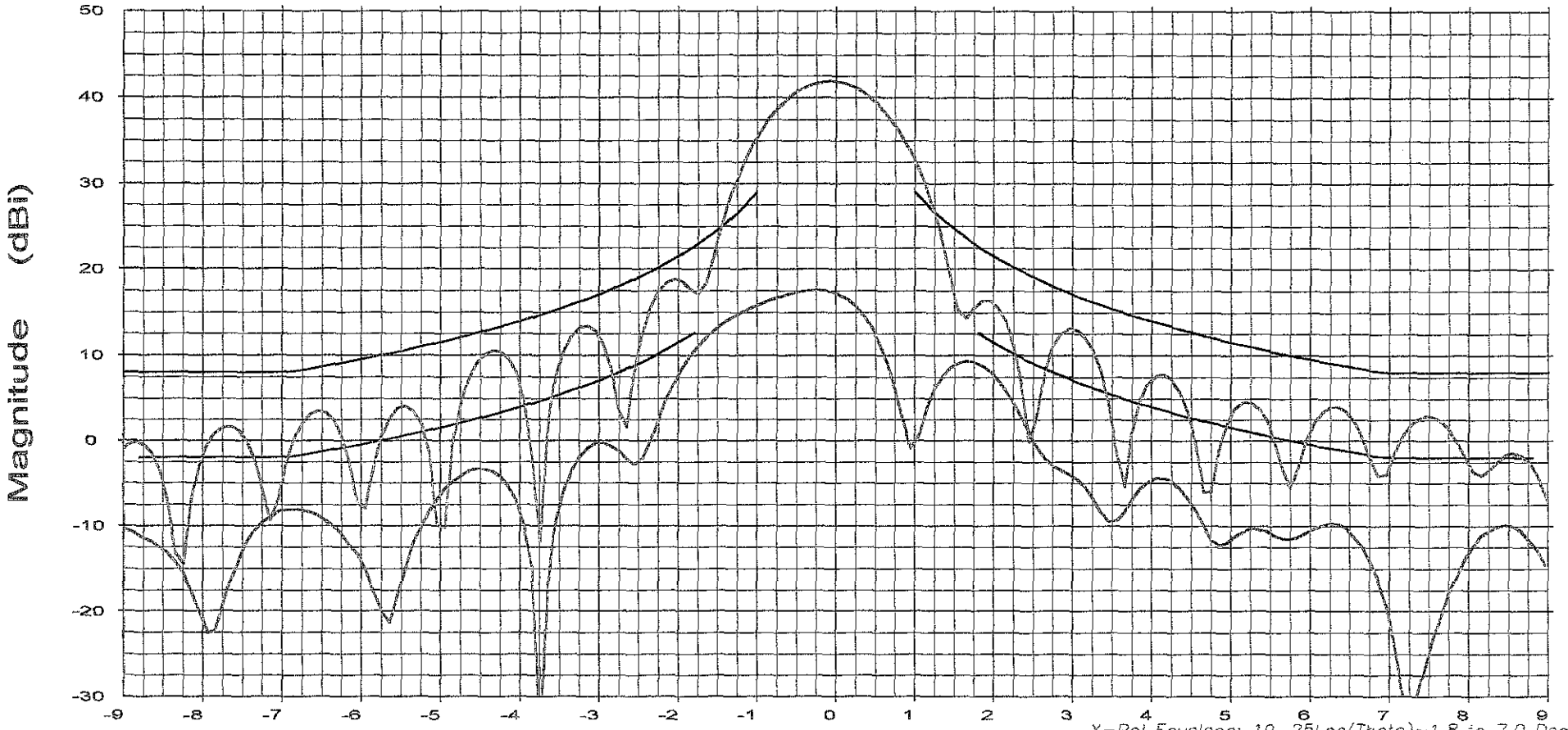
File: See Legend

Prodelin 2.4 Meter 4-Pc. Receive Transmit Antenna System
Series 1244 / C-Band Circular

Frequency : 6.250 GHz

Operator: D. Lutz
Ser. no.: 24
Channel: test

Tx pol: RHCP Rx pol: RHCP



Sidelobe Envelope: 29−25Log(Theta)~1.0 to 7 Deg
+8 dBi~7 to 9.2 Deg | 32−25Log(Theta)~9.2 to 48 Deg
−10 dBi~48 to 180 Deg

X-Pol Envelope: 19−25Log(Theta)~1.8 to 7.0 Deg
−2.0 dBi~7.0 to 9.2 Deg

Overlays	Cal. file	units	Beam Peak Deg	Beam Peak dB
065113.DAT-ant_under_test———	065113.DAT	dBi	-0.04	41.87
065116.DAT-ant_under_test———	065116.DAT	dBi	-0.25	17.57

Prodelin Corporation
Riverbend [illegible]st Range
C[illegible]mont NC

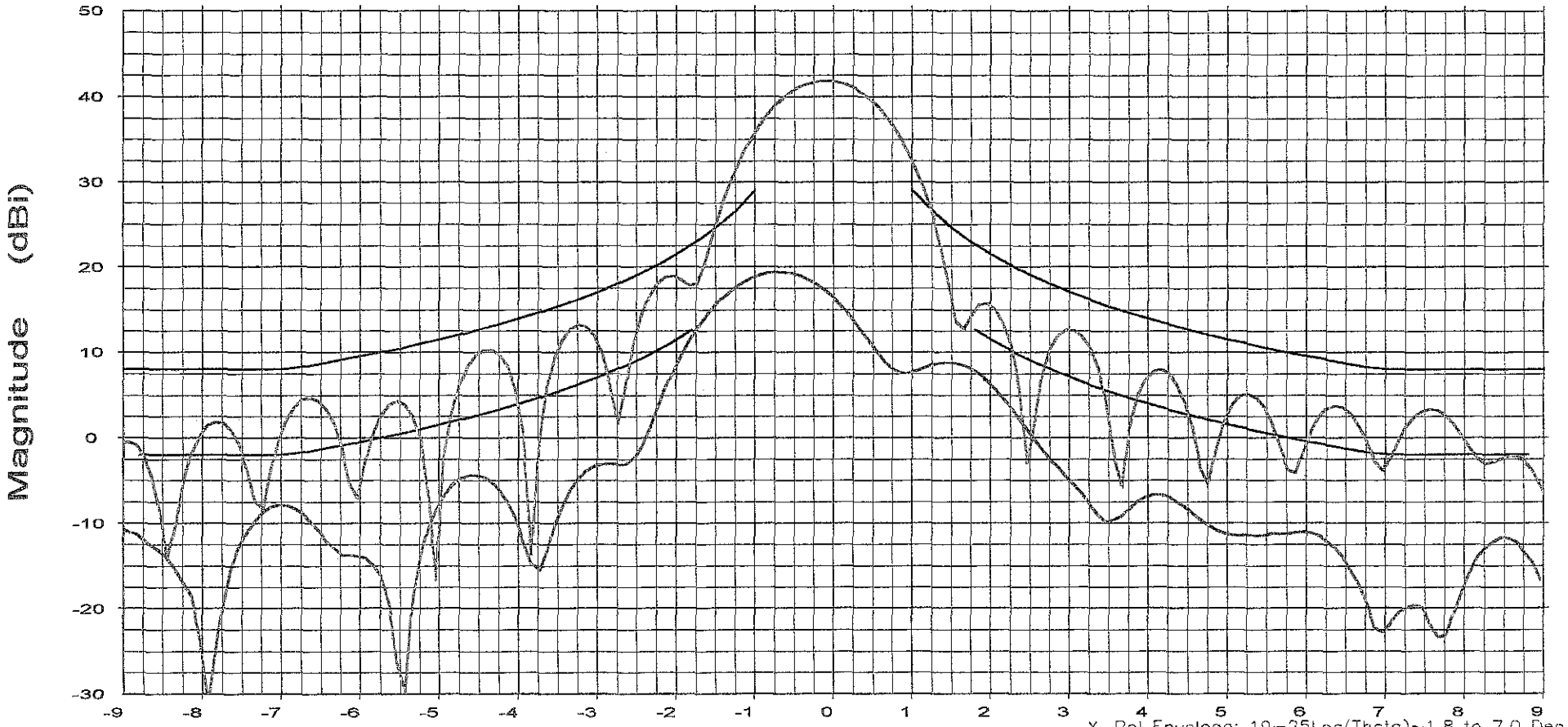
File: See Legend

Prodelin 2.4 Meter 4-Pc. Receive Transmit Antenna System
Series 1244 / C-Band Circular

Frequency : 6.175 GHz

Operator: D. Lutz
Ser. no.: 24
Channel: test

Tx pol: RHCP Rx pol: RHCP



Sidelobe Envelope: 29−25Log(Theta)~1.0 to 7 Deg
+8 dBi~7 to 9.2 Deg | 32−25Log(Theta)~9.2 to 48 Deg
−10 dBi~48 to 180 Deg

X-Pol Envelope: 19−25Log(Theta)~1.8 to 7.0 Deg
−2.0 dBi~7.0 to 9.2 Deg

Overlays	Cal. file	units	Beam Peak Deg	Beam Peak dB
065113.DAT-ant_under_test———	065113.DAT	dBi	-0.14	41.86
065116.DAT-ant_under_test———	065116.DAT	dBi	-0.73	19.38

Prodelin Corporation
Riverbend Test Range
Claremont NC

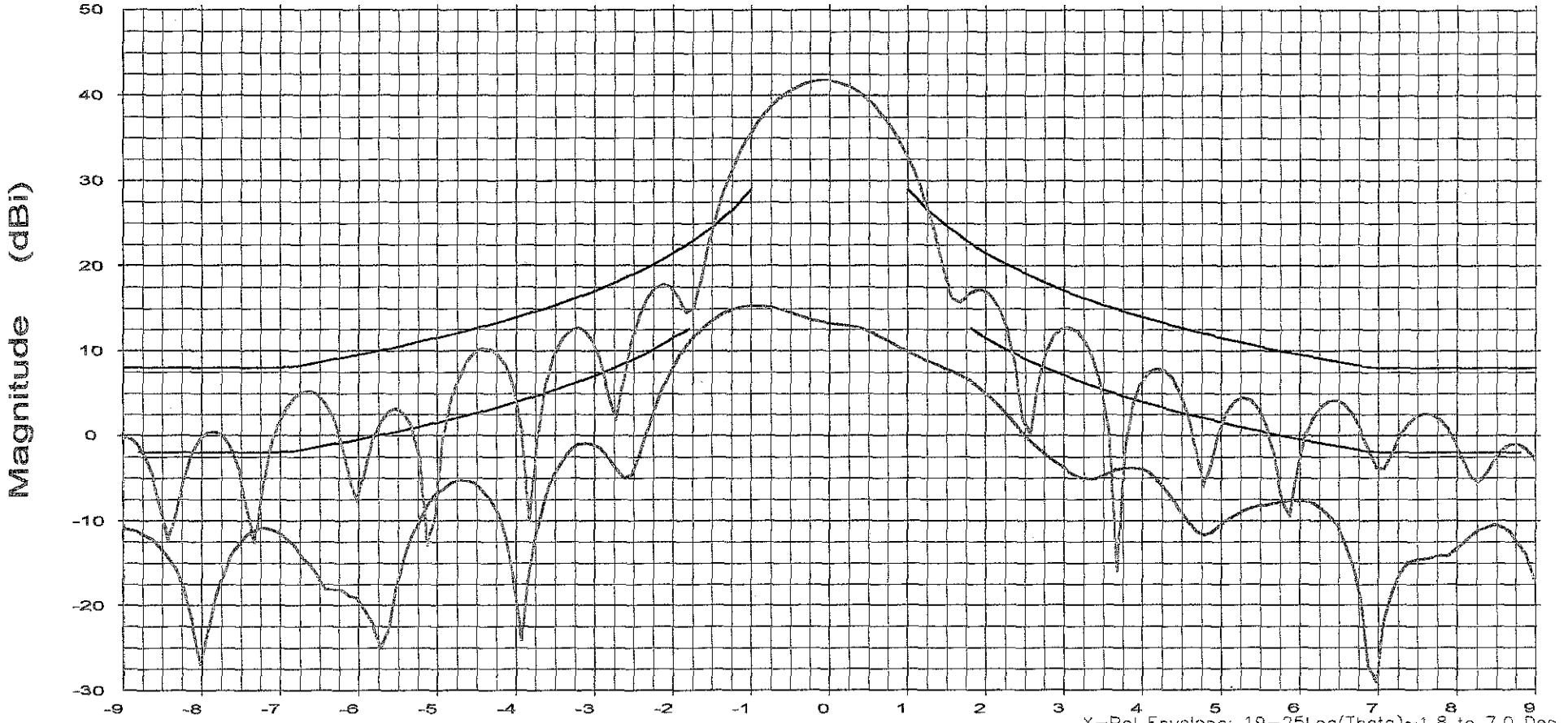
File: See Legend

Prodelin 2.4 Meter 4-Pc. Receive Transmit Antenna System
Series 1244 / C-Band Circular

Frequency : 6.138 GHz

Operator: D. Lutz
Ser. no.: 24
Channel: test

Tx pol: RHCP Rx pol: RHCP



Sidelobe Envelope: 29−25Log(Theta)~1.0 to 7 Deg
+8 dBi~7 to 9.2 Deg | 32−25Log(Theta)~9.2 to 48 Deg
−10 dBi~48 to 180 Deg

X−Pol Envelope: 19−25Log(Theta)~1.8 to 7.0 Deg
−2.0 dBi~7.0 to 9.2 Deg

Overlays	Cal. file	units	Beam Peak Deg	Beam Peak dB
065113.DAT-ant_under_test——	065113.DAT	dBi	-0.13	41.75
065116.DAT-ant_under_test——	065116.DAT	dBi	-0.93	15.33

Prodelin Corporation
Riverbend Test Range
Claremont NC

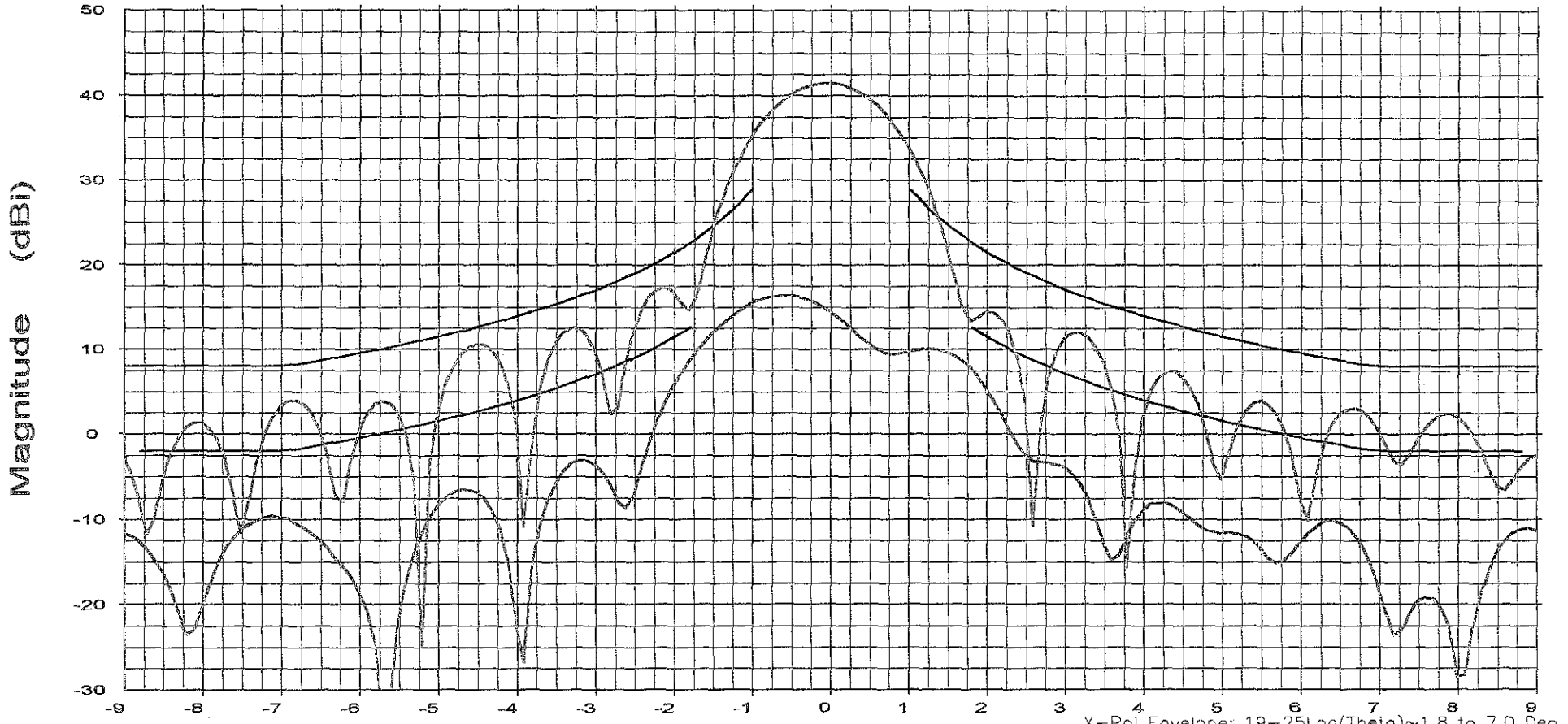
File: See Legend

Prodelin 2.4 Meter 4-Pc. Receive Transmit Antenna System
Series 1244 / C-Band Circular

Frequency : 5.950 GHz

Operator: D. Lutz
Ser. no.: 24
Channel: test

Tx pol: RHCP Rx pol: RHCP



Sidelobe Envelope: 29-25Log(Theta)~1.0 to 7 Deg
+8 dBi~7 to 9.2 Deg | 32-25Log(Theta)~9.2 to 48 Deg
-10 dBi~48 to 180 Deg

X-Pol Envelope: 19-25Log(Theta)~1.8 to 7.0 Deg
-2.0 dBi~7.0 to 9.2 Deg

Overlays	Cal. file	units	Beam Peak Deg	Beam Peak dB
065113.DAT-ant_under_test———	065113.DAT	dBi	-0.02	41.44
065116.DAT-ant_under_test———	065116.DAT	dBi	-0.62	16.41

Prodelin Corporation
Riverbend Test Range
Claremont NC

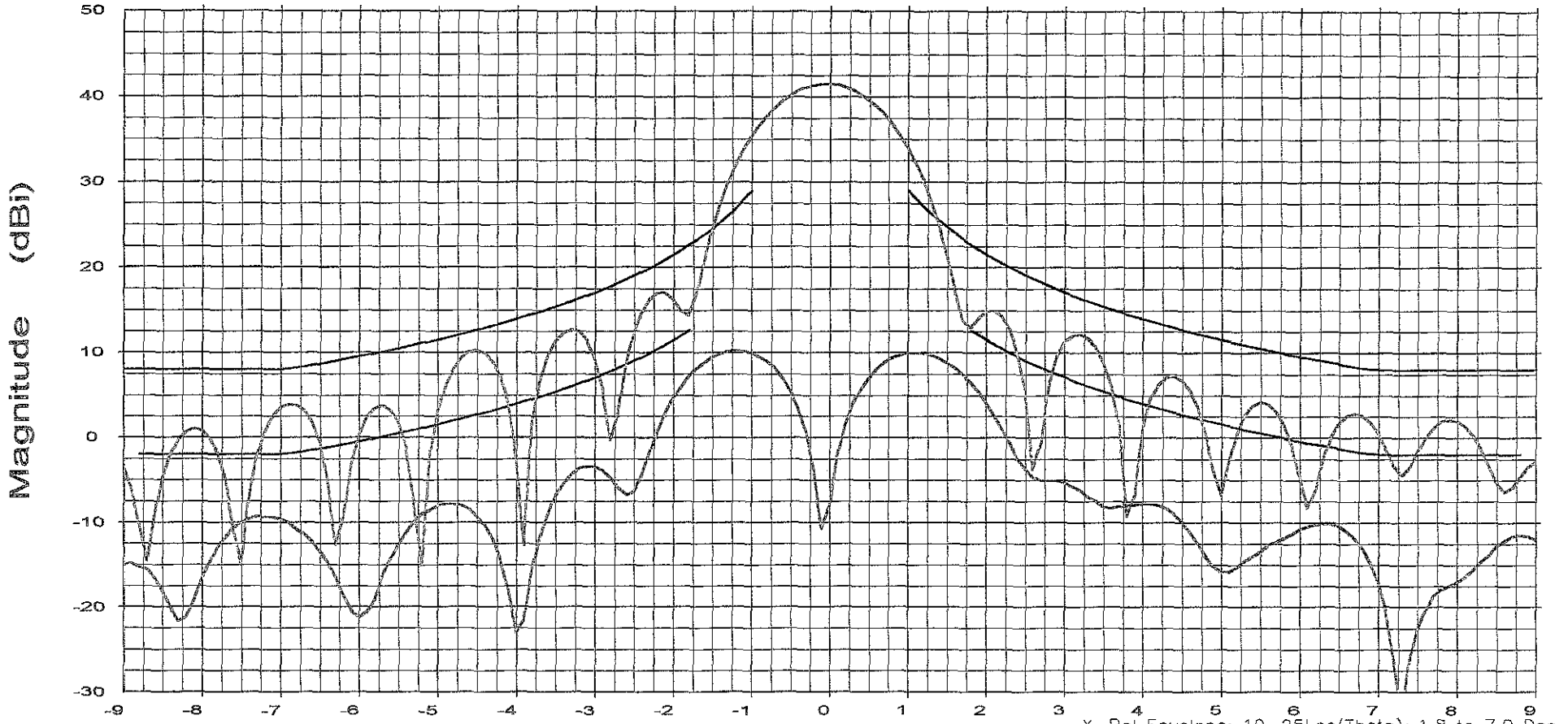
File: See Legend

Prodelin 2.4 Meter 4-Pc. Receive Transmit Antenna System
Series 1244 / C-Band Circular

Frequency : 5.925 GHz

Operator: D. Lutz
Ser. no.: 24
Channel: test

Tx pol: RHCP Rx pol: RHCP



Sidelobe Envelope: 29−25Log(Theta)~1.0 to 7 Deg
+8 dBi~7 to 9.2 Deg | 32−25Log(Theta)~9.2 to 48 Deg
−10 dBi~48 to 180 Deg

X−Pol Envelope: 19−25Log(Theta)~1.8 to 7.0 Deg
−2.0 dBi~7.0 to 9.2 Deg

Overlays	Cal. file	units	Beam Peak Deg	Beam Peak dB
065113.DAT-ant_under_test———	065113.DAT	dBi	-0.01	41.50
065116.DAT-ant_under_test———	065116.DAT	dBi	-1.21	10.19

Prodelin Corporation
Riverbend Test Range
Claremont NC

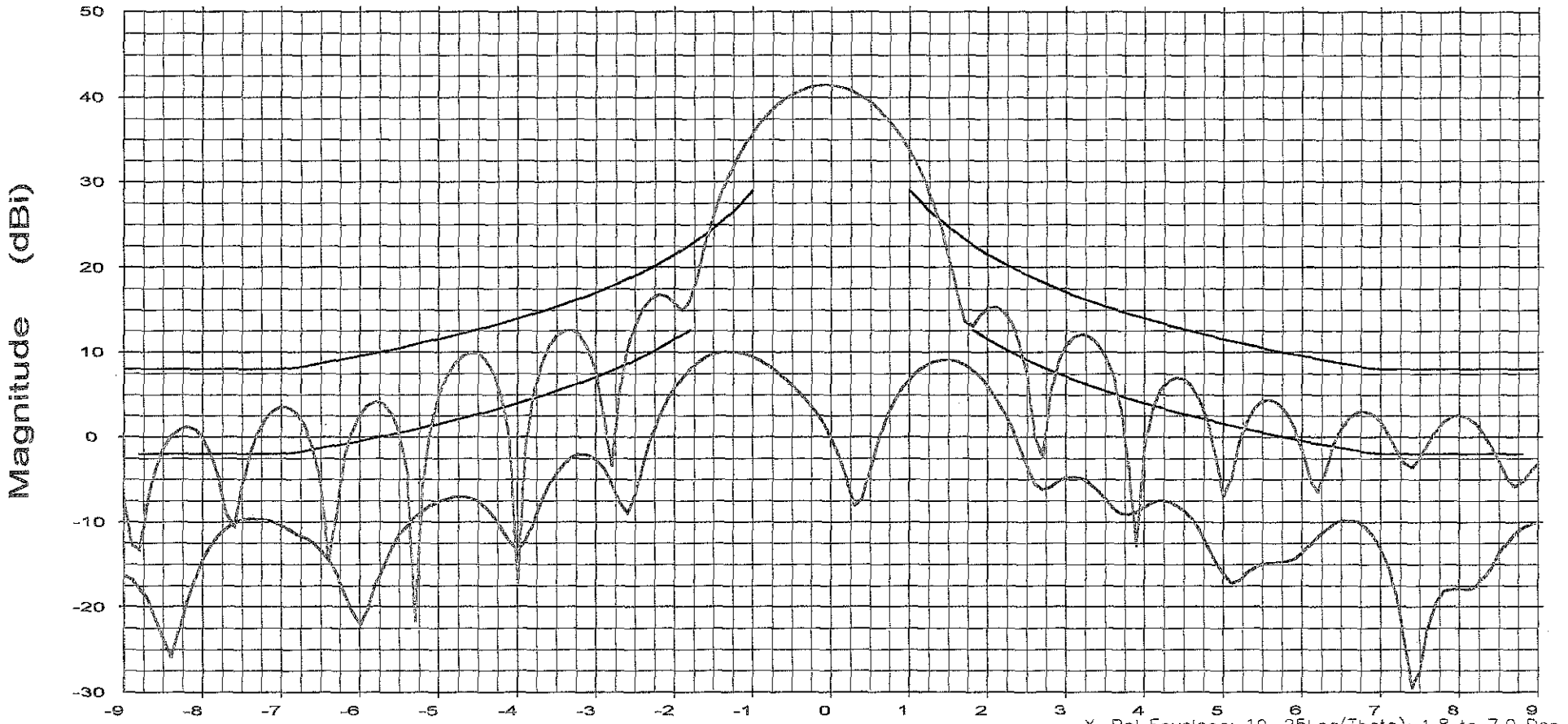
File: See Legend

Prodelin 2.4 Meter 4-Pc. Receive Transmit Antenna System
Series 1244 / C-Band Circular

Frequency : 5.850 GHz

Operator: D. Lutz
Ser. no.: 24
Channel: test

Tx pol: RHCP Rx pol: RHCP



Sidelobe Envelope: 29−25Log(Theta)~1.0 to 7 Deg
+8 dBi~7 to 9.2 Deg | 32−25Log(Theta)~9.2 to 48 Deg
−10 dBi~48 to 180 Deg

X−Pol Envelope: 19−25Log(Theta)~1.8 to 7.0 Deg
−2.0 dBi~7.0 to 9.2 Deg

Overlays	Cal. file	units	Beam Peak Deg	Beam Peak dB
065113.DAT-ant_under_test——	065113.DAT	dBi	-0.10	41.42
065116.DAT-ant_under_test——	065116.DAT	dBi	-1.30	10.04

Prodelin Corporation
Riverbend [illegible]st Range
C[illegible]mont NC

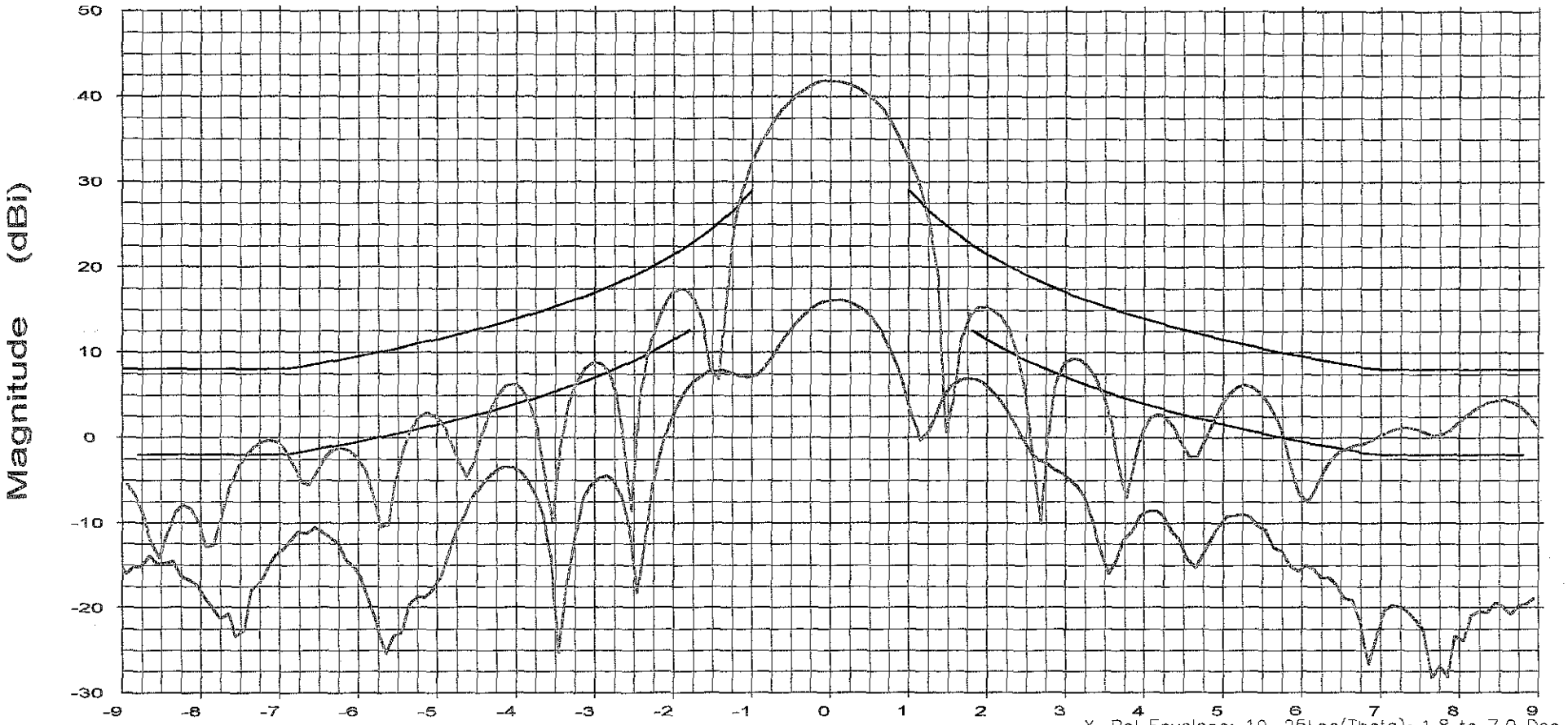
File: See Legend

Prodelin 2.4 Meter 4-Pc. Receive Transmit Antenna System
Series 1244 / C-Band Circular

Frequency : 6.425 GHz

Operator: D. Lutz
Ser. no.: 24
Channel: test

Tx pol: RHCP Rx pol: RHCP



Sidelobe Envelope: 29−25Log(Theta)~1.0 to 7 Deg
+8 dBi~7 to 9.2 Deg | 32−25Log(Theta)~9.2 to 48 Deg
−10 dBi~48 to 180 Deg

X−Pol Envelope: 19−25Log(Theta)~1.8 to 7.0 Deg
−2.0 dBi~7.0 to 9.2 Deg

Overlays	Cal. file	units	Beam Peak Deg	Beam Peak dB
065115.DAT-ant_under_test——	065115.DAT	dBi	-0.02	41.82
065117.DAT-ant_under_test——	065117.DAT	dBi	0.04	16.17

Prodelin Corporation
Riverbend Test Range
Claremont NC

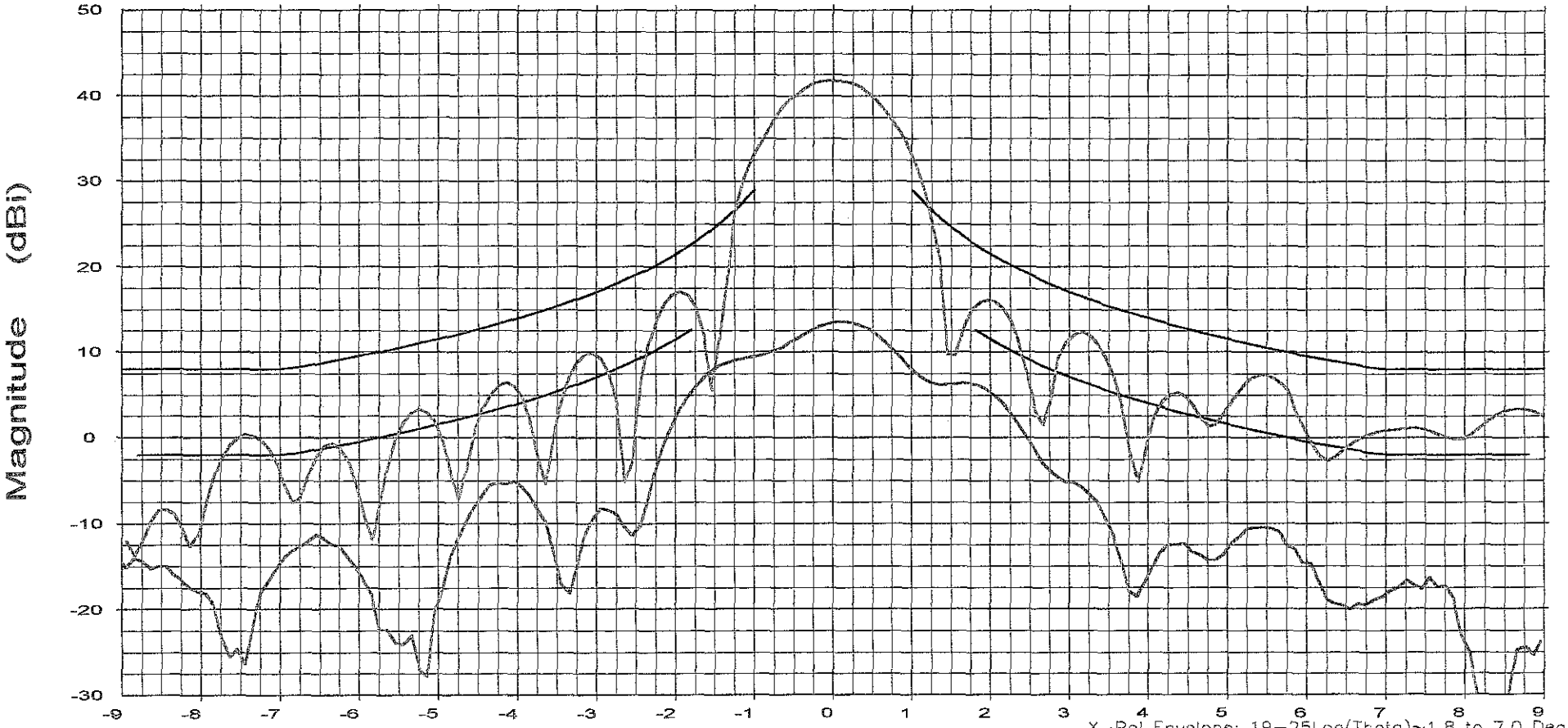
File: See Legend

Prodelin 2.4 Meter 4-Pc. Receive Transmit Antenna System
Series 1244 / C-Band Circular

Frequency : 6.250 GHz

Operator: D. Lutz
Ser. no.: 24
Channel: test

Tx pol: RHCP Rx pol: RHCP



Sidelobe Envelope: 29−25Log(Theta)~1.0 to 7 Deg
+8 dBi~7 to 9.2 Deg | 32−25Log(Theta)~9.2 to 48 Deg
−10 dBi~48 to 180 Deg

X−Pol Envelope: 19−25Log(Theta)~1.8 to 7.0 Deg
−2.0 dBi~7.0 to 9.2 Deg

Overlays	Cal. file	units	Beam Peak Deg	Beam Peak dB
065115.DAT-ant_under_test———	065115.DAT	dBi	-0.04	41.74
065117.DAT-ant_under_test———	065117.DAT	dBi	0.15	13.49

Prodelin Corporation
Riverbend Test Range
Claremont NC

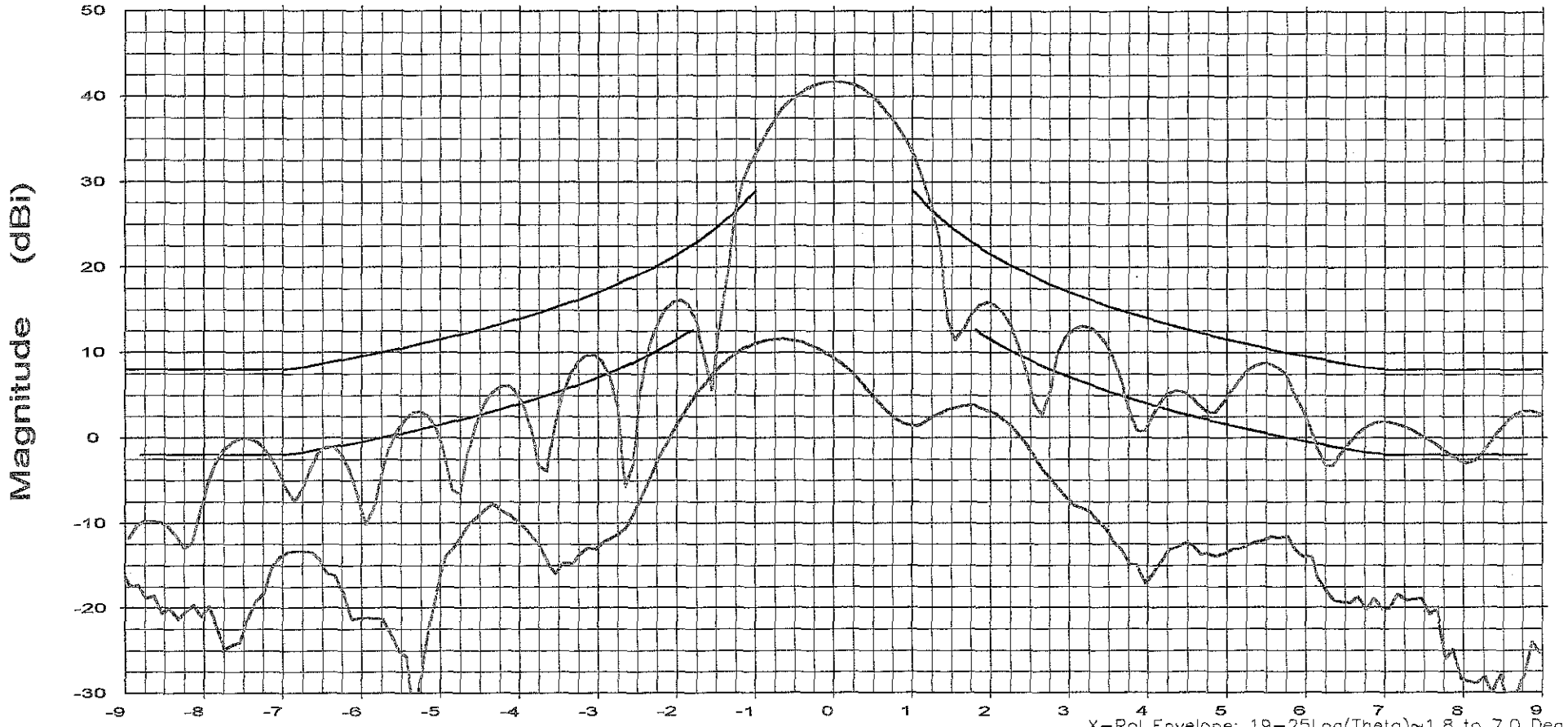
File: See Legend

Prodelin 2.4 Meter 4-Pc. Receive Transmit Antenna System
Series 1244 / C-Band Circular

Frequency : 6.175 GHz

Operator: D. Lutz
Ser. no.: 24
Channel: test

Tx pol: RHCP Rx pol: RHCP



Sidelobe Envelope: 29-25Log(Theta)~1.0 to 7 Deg
+8 dBi~7 to 9.2 Deg | 32-25Log(Theta)~9.2 to 48 Deg
-10 dBi~48 to 180 Deg

X-Pol Envelope: 19-25Log(Theta)~1.8 to 7.0 Deg
-2.0 dBi~7.0 to 9.2 Deg

Overlays	Cal. file	units	Beam Peak Deg	Beam Peak dB
065115.DAT-ant_under_test	065115.DAT	dBi	-0.05	41.71
065117.DAT-ant_under_test	065117.DAT	dBi	-0.64	11.53

Prodelin Corporation
Riverbend Test Range
Claremont NC

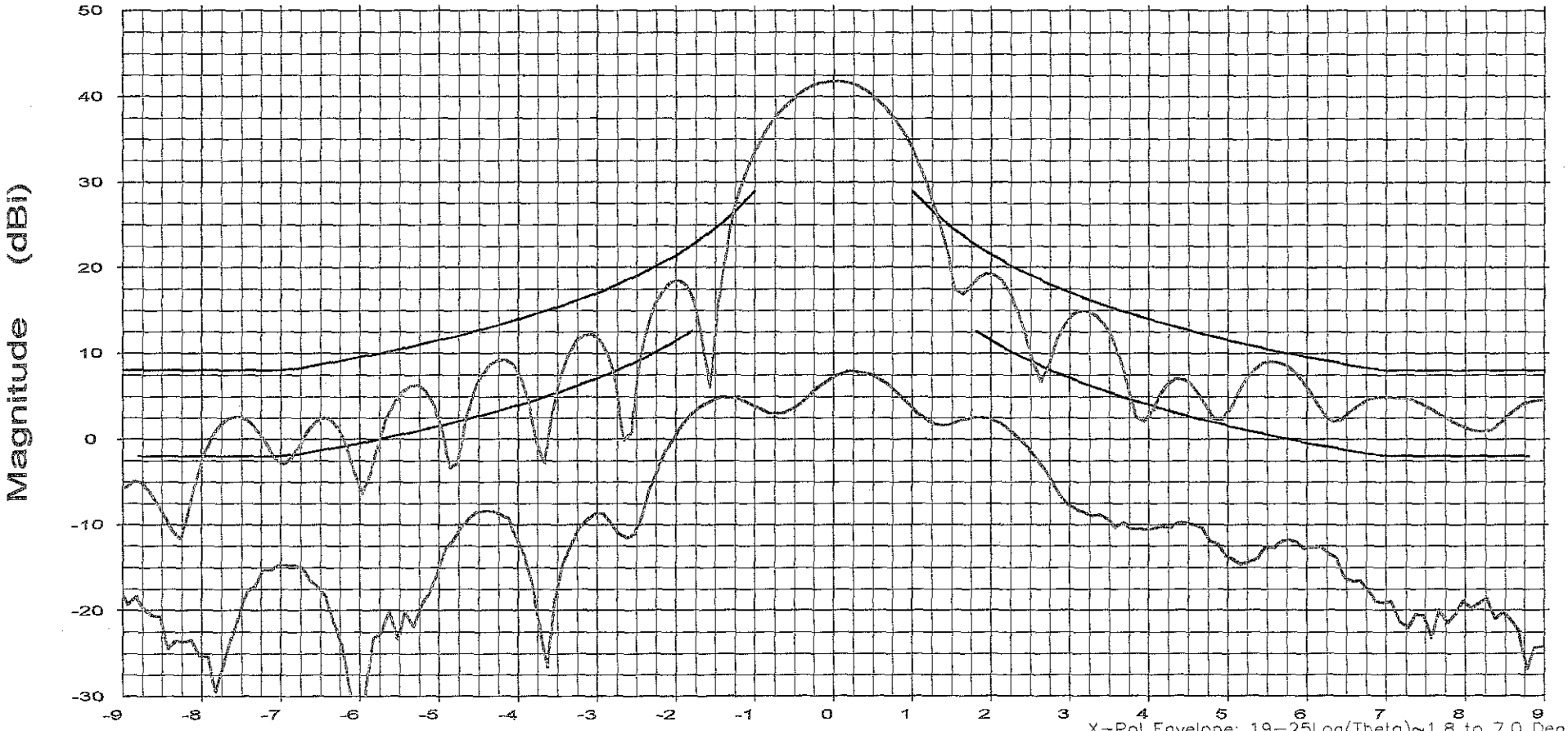
File: See Legend

Prodelin 2.4 Meter 4-Pc. Receive Transmit Antenna System
Series 1244 / C-Band Circular

Frequency : 6.138 GHz

Operator: D. Lutz
Ser. no.: 24
Channel: test

Tx pol: RHCP Rx pol: RHCP



Sidelobe Envelope: 29−25Log(Theta)~1.0 to 7 Deg
+8 dBi~7 to 9.2 Deg | 32−25Log(Theta)~9.2 to 48 Deg
−10 dBi~48 to 180 Deg

X−Pol Envelope: 19−25Log(Theta)~1.8 to 7.0 Deg
−2.0 dBi~7.0 to 9.2 Deg

Overlays	Cal. file	units	Beam Peak Deg	Beam Peak dB
065114.DAT-ant_under_test——	065114.DAT	dBi	0.03	41.84
065117.DAT-ant_under_test——	065117.DAT	dBi	0.27	7.84

Prodelin Corporation
Riverbend [illegible] Range
[illegible]mont NC

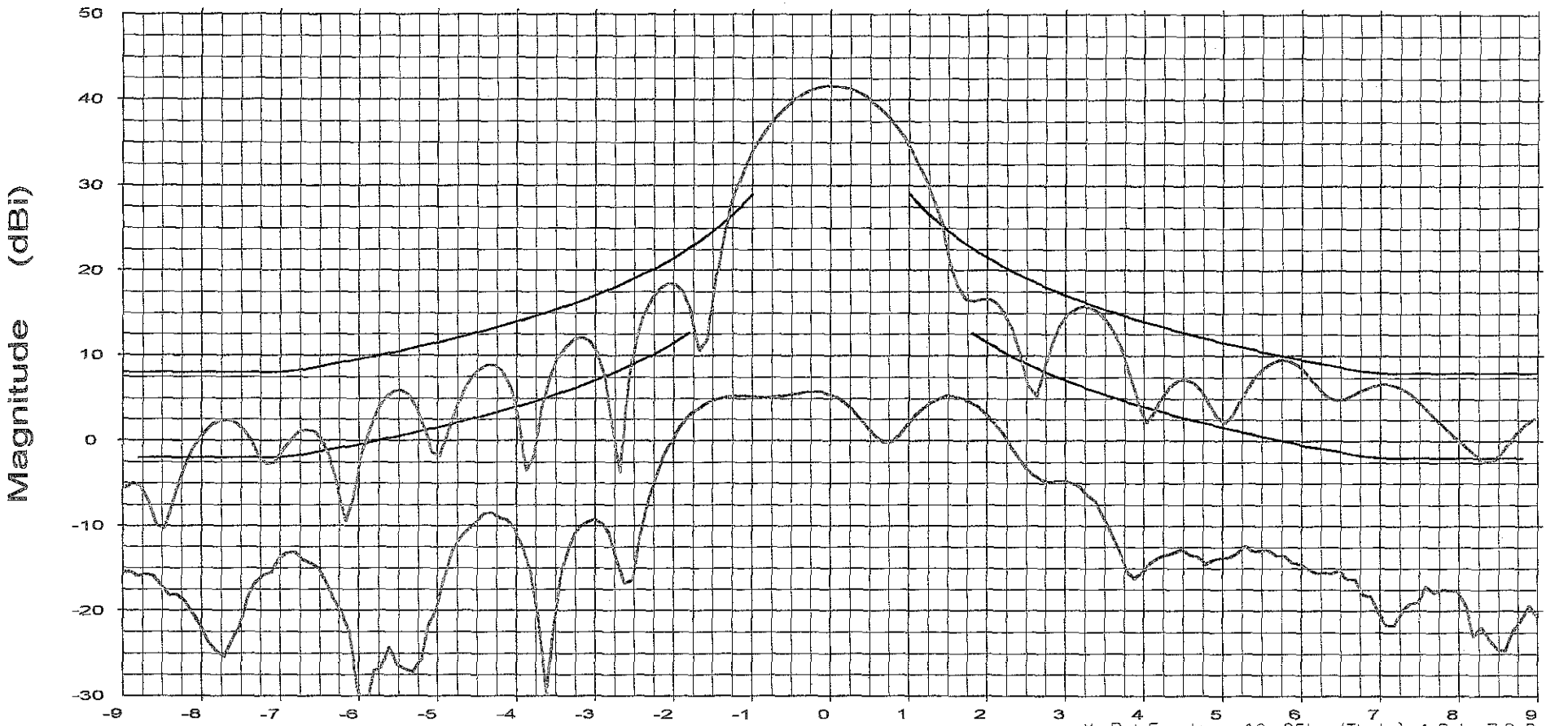
File: See Legend

Prodelin 2.4 Meter 4-Pc. Receive Transmit Antenna System
Series 1244 / C-Band Circular

Frequency : 5.950 GHz

Operator: D. Lutz
Ser. no.: 24
Channel: test

Tx pol: RHCP Rx pol: RHCP



Sidelobe Envelope: 29−25Log(Theta)~1.0 to 7 Deg
+8 dBi~7 to 9.2 Deg | 32−25Log(Theta)~9.2 to 48 Deg
−10 dBi~48 to 180 Deg

X−Pol Envelope: 19−25Log(Theta)~1.8 to 7.0 Deg
−2.0 dBi~7.0 to 9.2 Deg

Overlays	Cal. file	units	Beam Peak Deg	Beam Peak dB
065114.DAT-ant_under_test———	065114.DAT	dBi	0.02	41.55
065117.DAT-ant_under_test———	065117.DAT	dBi	-0.12	5.71

Prodelin Corporation
Riverbend Test Range
Claremont NC

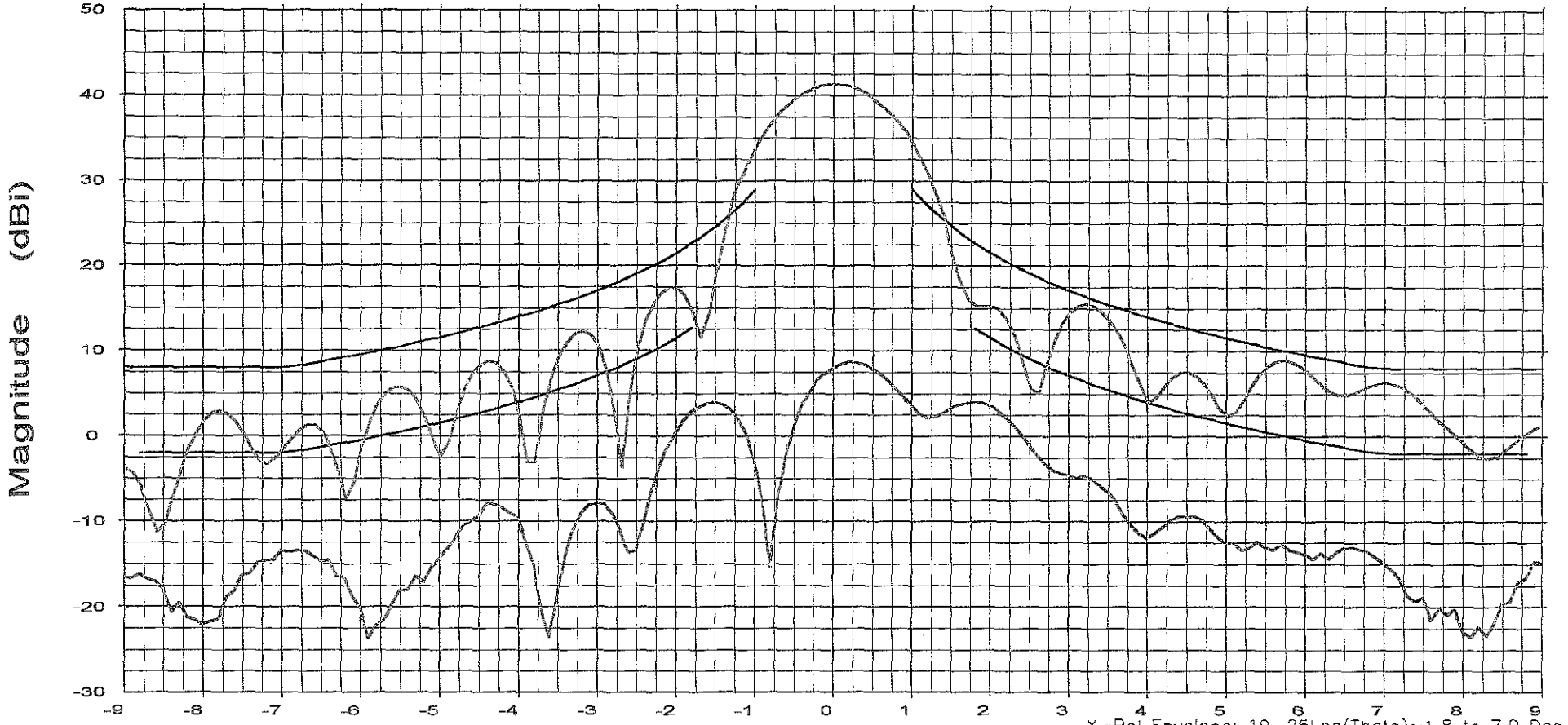
File: See Legend

Prodelin 2.4 Meter 4-Pc. Receive Transmit Antenna System
Series 1244 / C-Band Circular

Frequency : 5.925 GHz

Operator: D. Lutz
Ser. no.: 24
Channel: test

Tx pol: RHCP Rx pol: RHCP



Sidelobe Envelope: 29−25Log(Theta)~1.0 to 7 Deg
+8 dBi~7 to 9.2 Deg | 32−25Log(Theta)~9.2 to 48 Deg
−10 dBi~48 to 180 Deg

X−Pol Envelope: 19−25Log(Theta)~1.8 to 7.0 Deg
−2.0 dBi~7.0 to 9.2 Deg

Overlays	Cal. file	units	Beam Peak Deg	Beam Peak dB
065114.DAT-ant_under_test———	065114.DAT	dBi	0.01	41.30
065117.DAT-ant_under_test———	065117.DAT	dBi	0.19	8.66

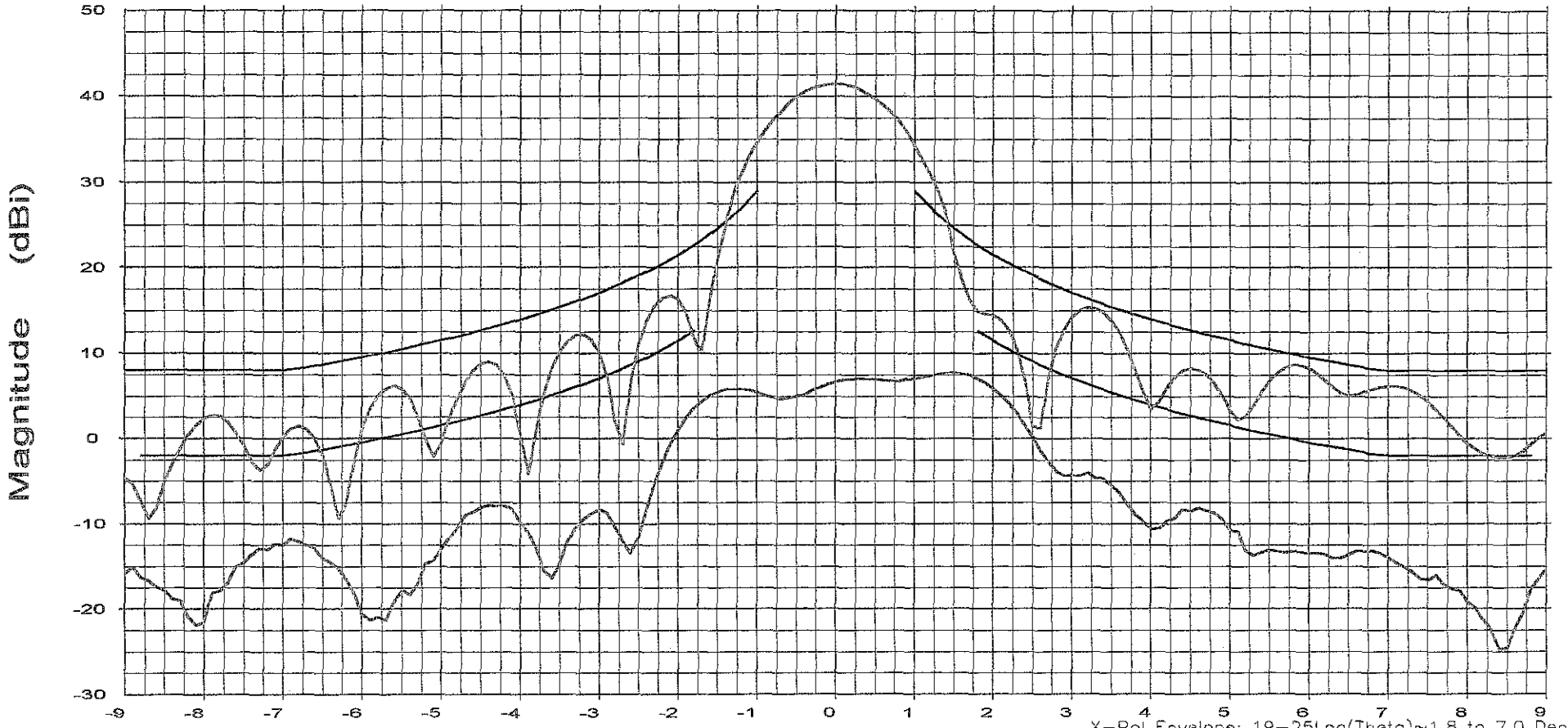
Prodelin Corporation
Riverbend Test Range
Claremont NC

File: See Legend

Prodelin 2.4 Meter 4-Pc. Receive Transmit Antenna System
Series 1244 / C-Band Circular

Frequency : 5.850 GHz

Operator: D. Lutz
Ser. no.: 24
Channel: test Tx pol: RHCP Rx pol: RHCP



Sidelobe Envelope: 29−25Log(Theta)~1.0 to 7 Deg
+8 dBi~7 to 9.2 Deg | 32−25Log(Theta)~9.2 to 48 Deg
−10 dBi~48 to 180 Deg

X−Pol Envelope: 19−25Log(Theta)~1.8 to 7.0 Deg
−2.0 dBi~7.0 to 9.2 Deg

Overlays	Cal. file	units	Beam Peak Deg	Beam Peak dB
065114.DAT-ant_under_test———	065114.DAT	dBi	0.00	41.41
065117.DAT-ant_under_test———	065117.DAT	dBi	1.50	7.71

Prodelin Corporation
Riverbend Test Range
Claremont NC

+/- 45° LHCP
TRANSMIT

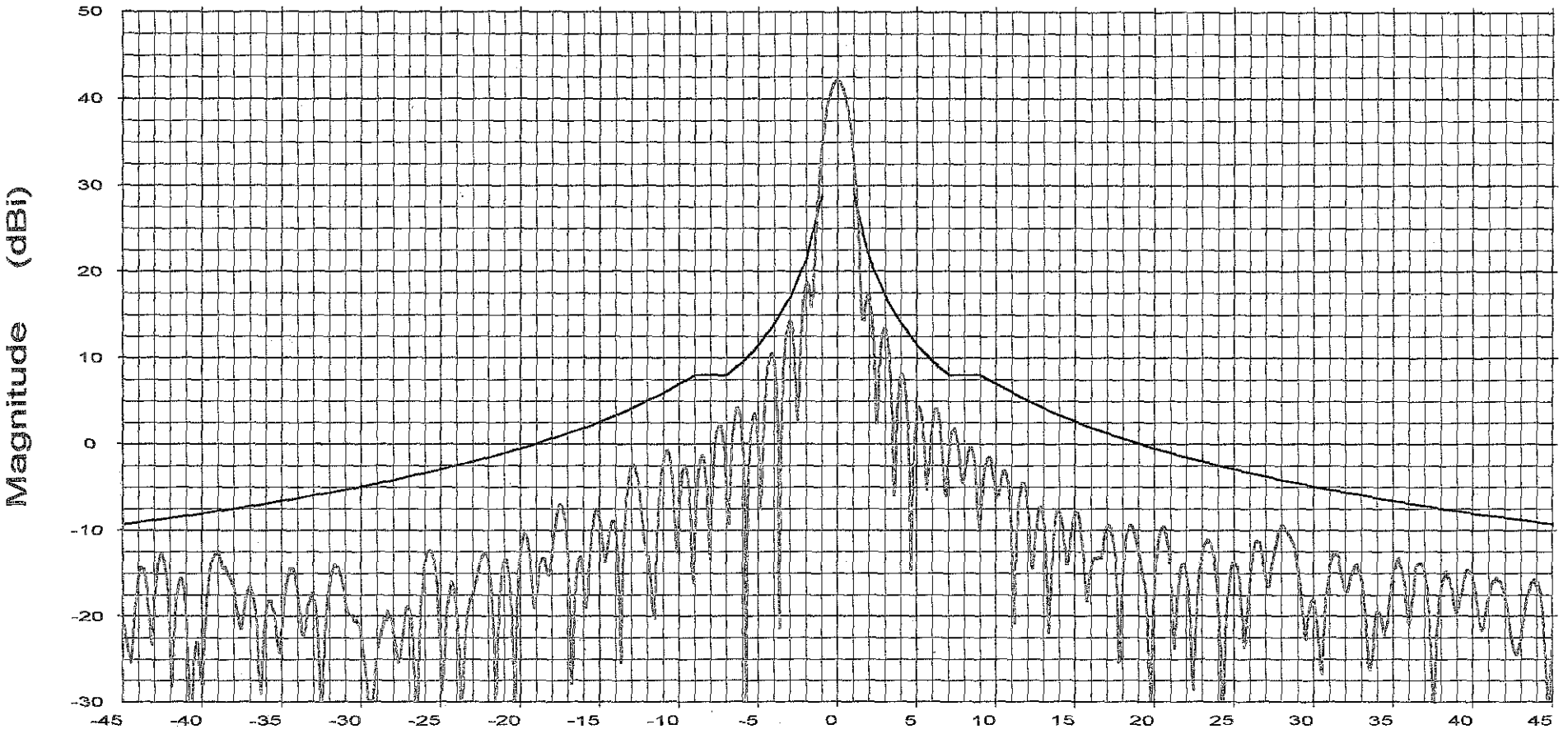
File: See Legend

Prodelin 2.4 Meter 4-Pc. Receive Transmit Antenna System
Series 1244 / C-Band Circular

Frequency : 6.425 GHz

Operator: D. Lutz
Ser. no.: 24
Channel: test

Tx pol: LHCP Rx pol: LHCP



Sidelobe Envelope: 29-25Log(Theta)~1.0 to 7 Deg
+8 dBi~7 to 9.2 Deg | 32-25Log(Theta)~9.2 to 48 Deg
-10 dBi~48 to 180 Deg

Overlays	Cal. file	units	Beam Peak Deg	Beam Peak dB
065118.DAT-ant_under_test——	065118.DAT	dBi	-0.05	42.11

Prodelin Corporation
Riverbend Test Range
Claremont NC

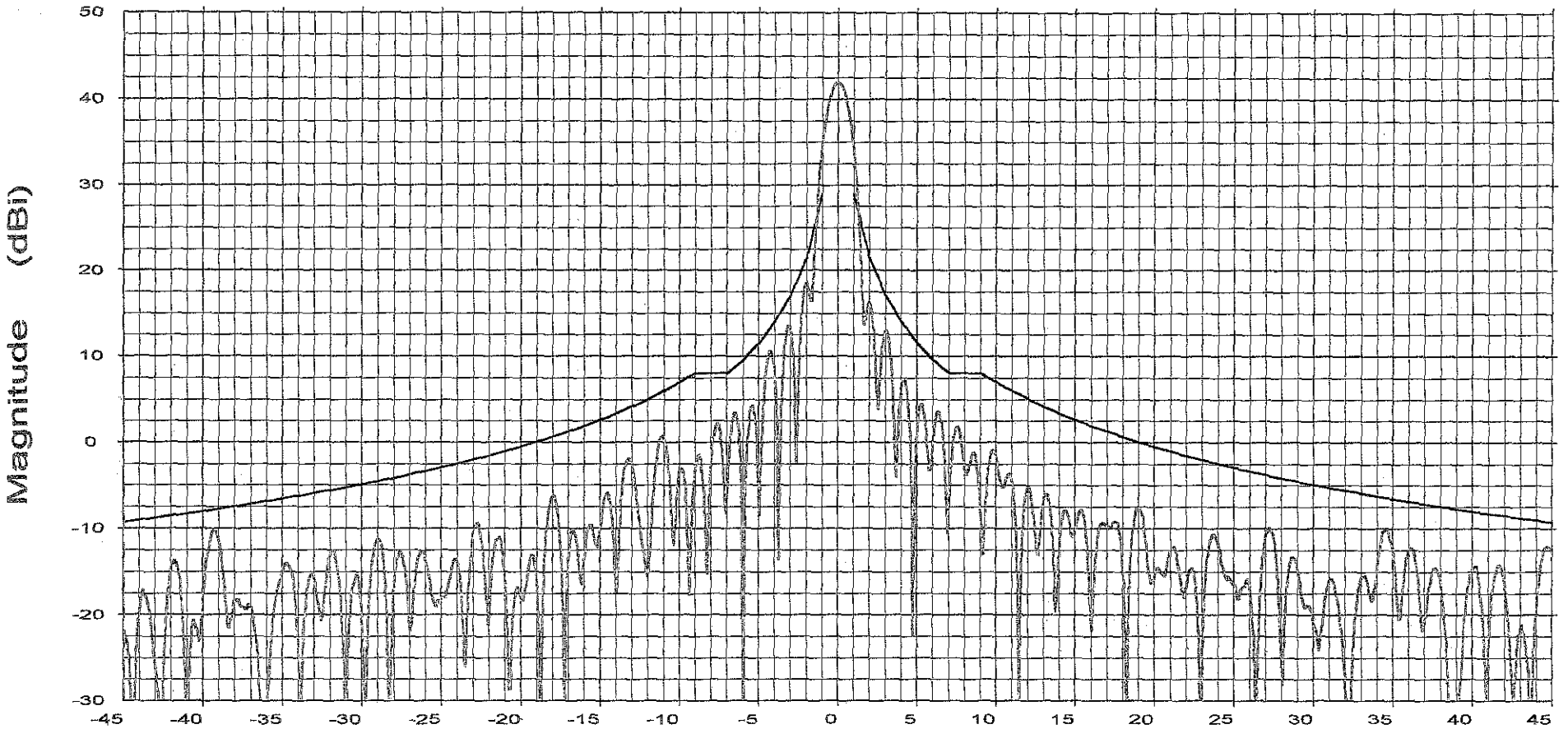
File: See Legend

Prodelin 2.4 Meter 4-Pc. Receive Transmit Antenna System
Series 1244 / C-Band Circular

Frequency : 6.250 GHz

Operator: D. Lutz
Ser. no.: 24
Channel: test

Tx pol: LHCP Rx pol: LHCP



Sidelobe Envelope: 29−25Log(Theta)~1.0 to 7 Deg
+8 dBi~7 to 9.2 Deg | 32−25Log(Theta)~9.2 to 48 Deg
−10 dBi~48 to 180 Deg

Overlays	Cal. file	units	Beam Peak Deg	Beam Peak dB
065118.DAT-ant_under_test———	065118.DAT	dBi	-0.04	41.92

Prodelin Corporation
Riverbend Test Range
Claremont NC

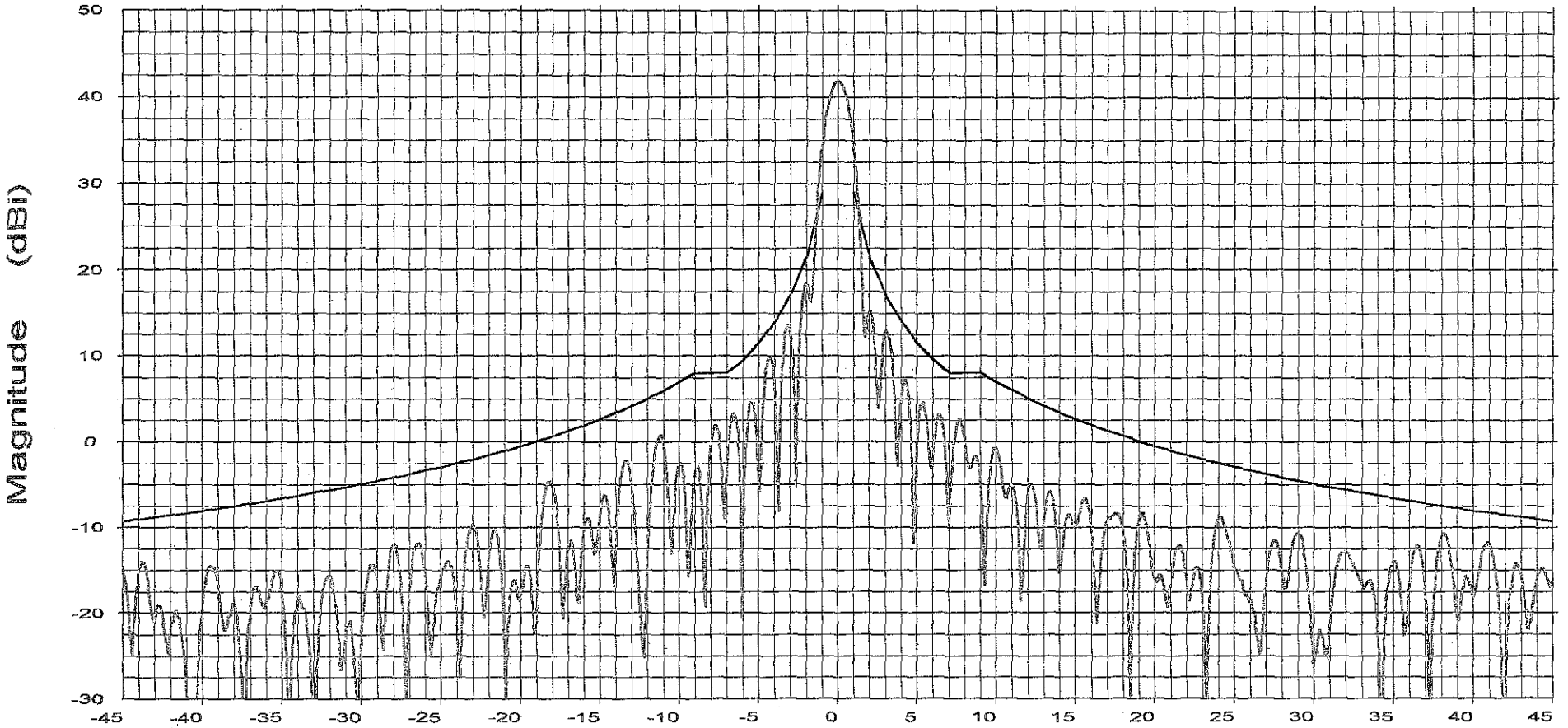
File: See Legend

Prodelin 2.4 Meter 4-Pc. Receive Transmit Antenna System
Series 1244 / C-Band Circular

Frequency : 6.175 GHz

Operator: D. Lutz
Ser. no.: 24
Channel: test

Tx pol: LHCP Rx pol: LHCP



Sidelobe Envelope: 29-25Log(Theta)~1.0 to 7 Deg
+8 dBi~7 to 9.2 Deg | 32-25Log(Theta)~9.2 to 48 Deg
-10 dBi~48 to 180 Deg

Overlays	Cal. file	units	Beam Peak Deg	Beam Peak dB
065118.DAT-ant_under_test———	065118.DAT	dBi	-0.03	41.82

Prodelin Corporation
Riverbend Test Range
Conover NC

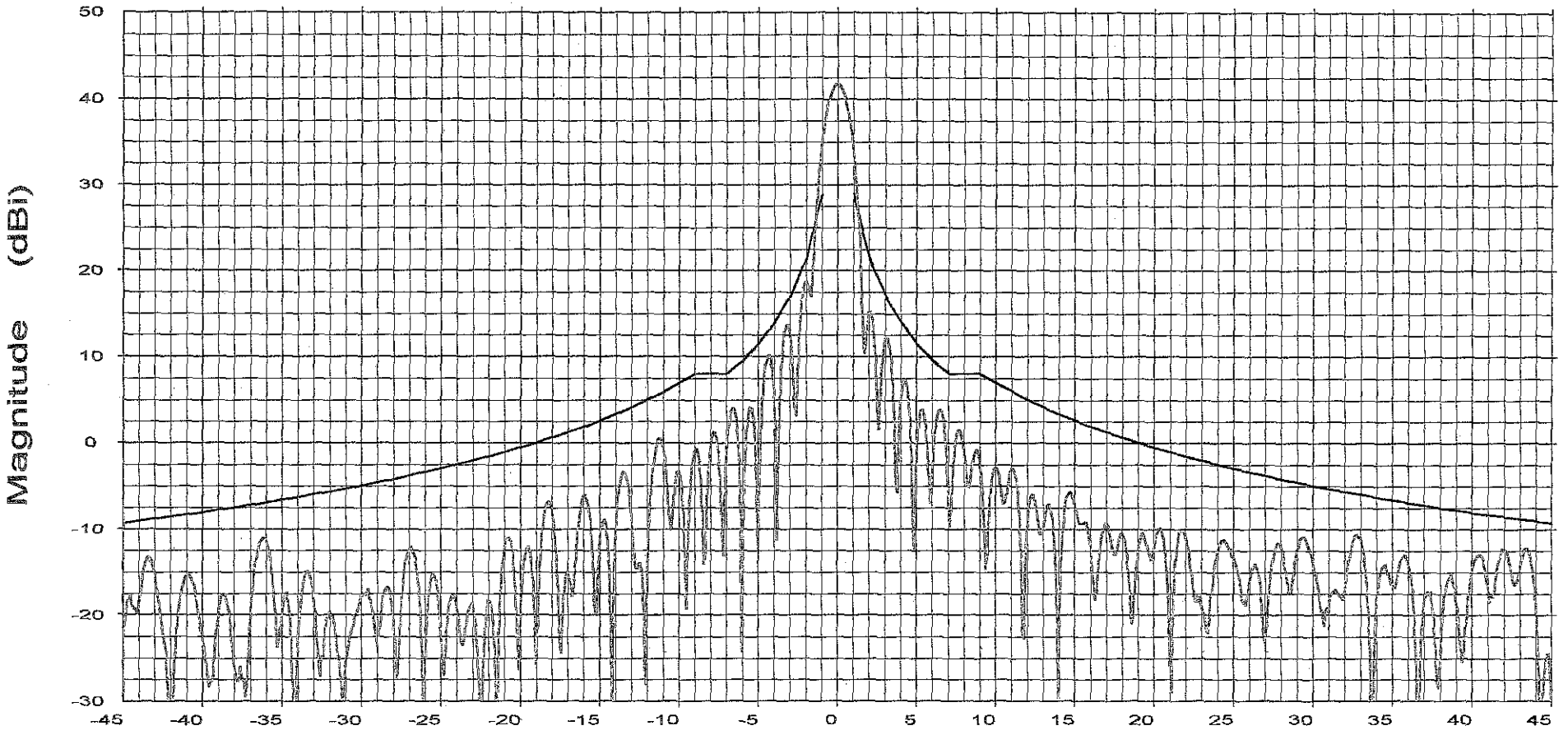
File: See Legend

Prodelin 2.4 Meter 4-Pc. Receive Transmit Antenna System
Series 1244 / C-Band Circular

Frequency : 6.138 GHz

Operator: D. Lutz
Ser. no.: 24
Channel: test

Tx pol: LHCP Rx pol: LHCP



Sidelobe Envelope: 29-25Log(Theta)~1.0 to 7 Deg
+8 dBi~7 to 9.2 Deg | 32-25Log(Theta)~9.2 to 48 Deg
-10 dBi~48 to 180 Deg

Overlays	Cal. file	units	Beam Peak Deg	Beam Peak dB
065118.DAT-ant_under_test———	065118.DAT	dBi	-0.03	41.78

Prodelin Corporation
Riverbend Test Range
Claremont NC

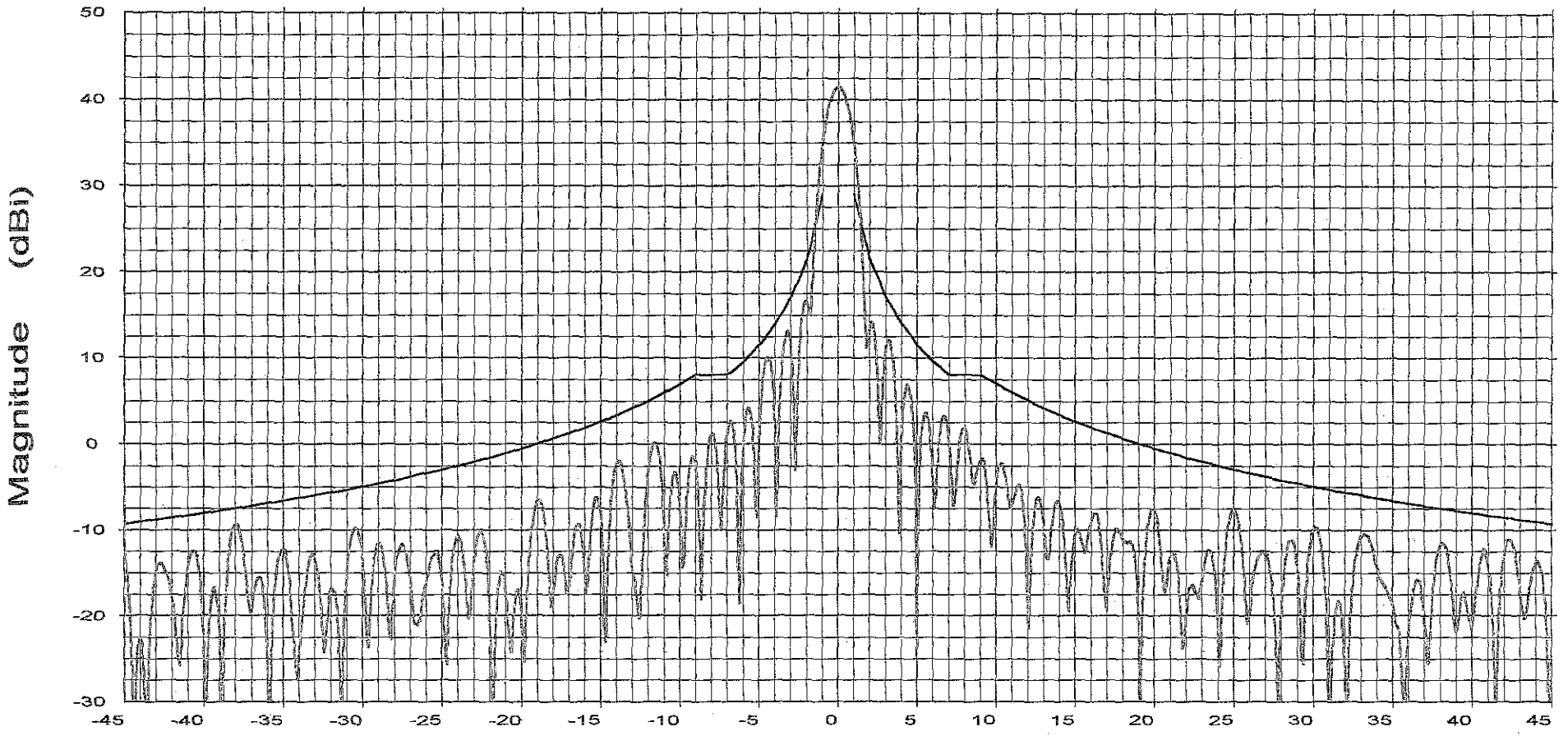
File: See Legend

Prodelin 2.4 Meter 4-Pc. Receive Transmit Antenna System
Series 1244 / C-Band Circular

Frequency : 5.950 GHz

Operator: D. Lutz
Ser. no.: 24
Channel: test

Tx pol: LHCP Rx pol: LHCP



Sidelobe Envelope: 29−25Log(Theta)~1.0 to 7 Deg
+8 dBi~7 to 9.2 Deg | 32−25Log(Theta)~9.2 to 48 Deg
−10 dBi~48 to 180 Deg

Overlays	Cal. file	units	Beam Peak Deg	Beam Peak dB
065118.DAT-ant_under_test———	065118.DAT	dBi	-0.02	41.47

Prodelin Corporation
Riverbend Test Range
Claremont NC

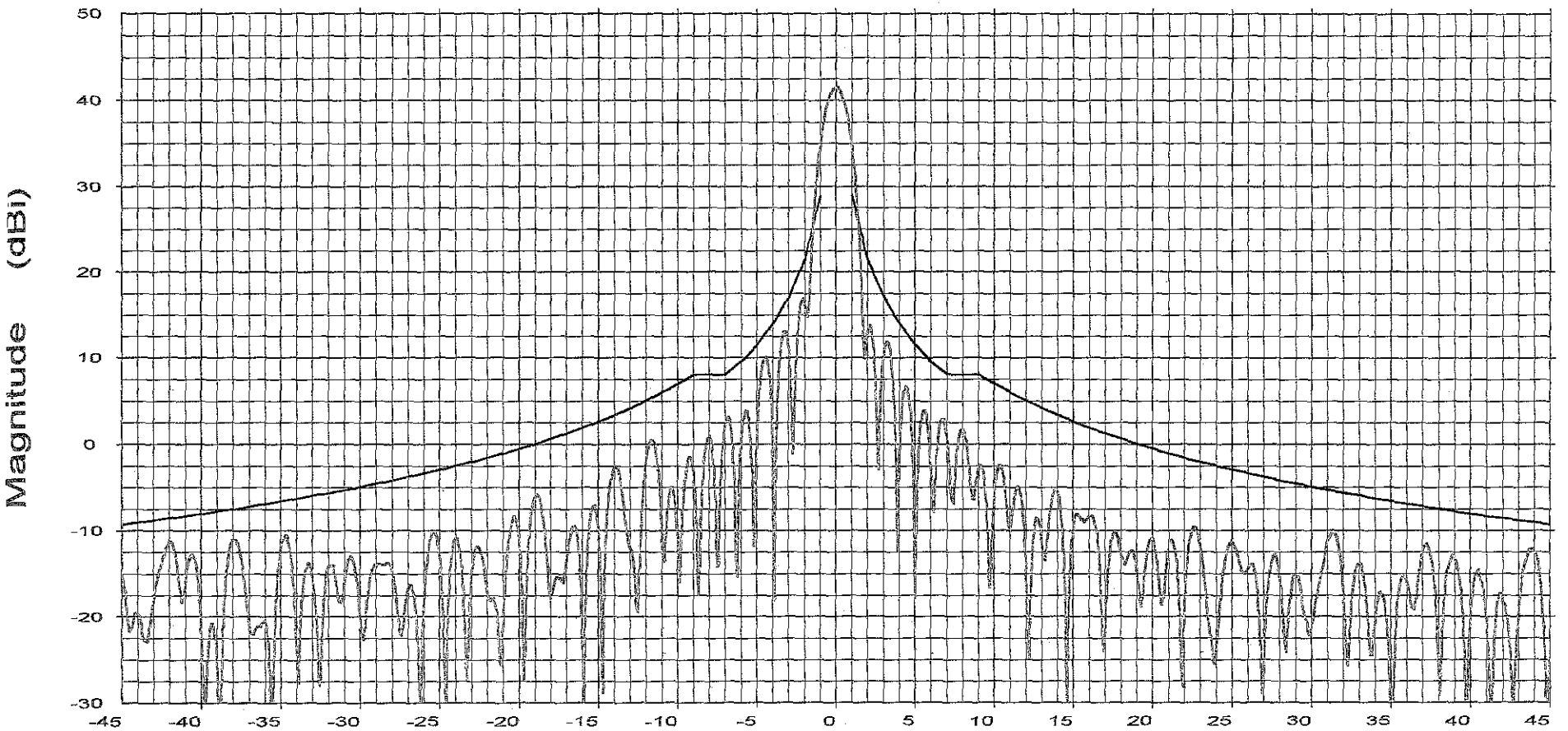
File: See Legend

Prodelin 2.4 Meter 4-Pc. Receive Transmit Antenna System
Series 1244 / C-Band Circular

Frequency : 5.925 GHz

Operator: D. Lutz
Ser. no.: 24
Channel: test

Tx pol: LHCP Rx pol: LHCP



Sidelobe Envelope: 29−25Log(Theta)~1.0 to 7 Deg
+8 dBi~7 to 9.2 Deg | 32−25Log(Theta)~9.2 to 48 Deg
−10 dBi~48 to 180 Deg

Overlays	Cal. file	units	Beam Peak Deg	Beam Peak dB
065118.DAT-ant_under_test———	065118.DAT	dBi	-0.01	41.45

Prodelin Corporation
Riverbend Test Range
Claremont NC

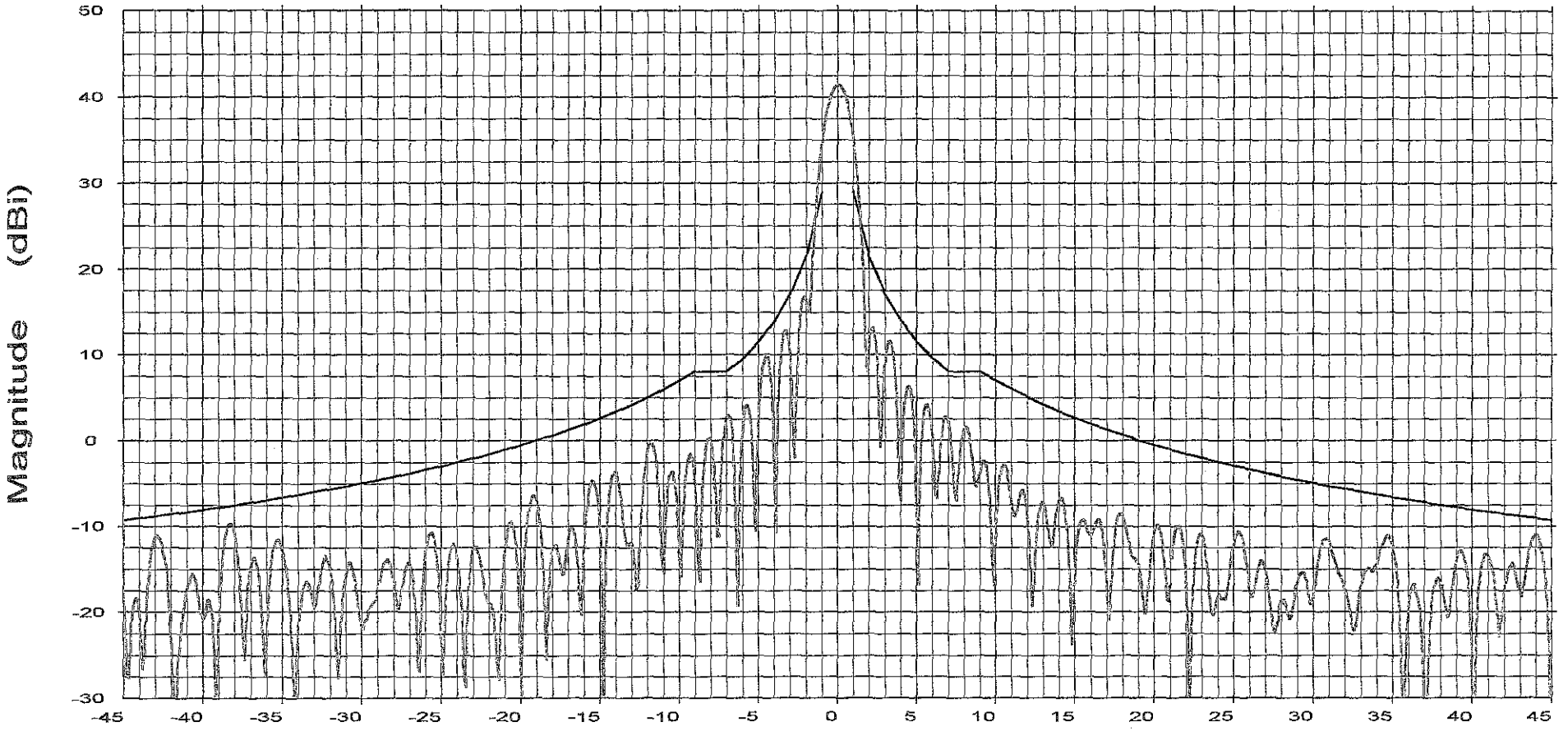
File: See Legend

Prodelin 2.4 Meter 4-Pc. Receive Transmit Antenna System
Series 1244 / C-Band Circular

Frequency : 5.850 GHz

Operator: D. Lutz
Ser. no.: 24
Channel: test

Tx pol: LHCP Rx pol: LHCP



Sidelobe Envelope: 29−25Log(Theta)~1.0 to 7 Deg
+8 dBi~7 to 9.2 Deg | 32−25Log(Theta)~9.2 to 48 Deg
−10 dBi~48 to 180 Deg

Overlays	Cal. file	units	Beam Peak Deg	Beam Peak dB
065118.DAT-ant_under_test———	065118.DAT	dBi	0.00	41.42

Prodelin Corporation
Riverbend Test Range
Claremont NC

+/- 45° RHCP TRANSMIT

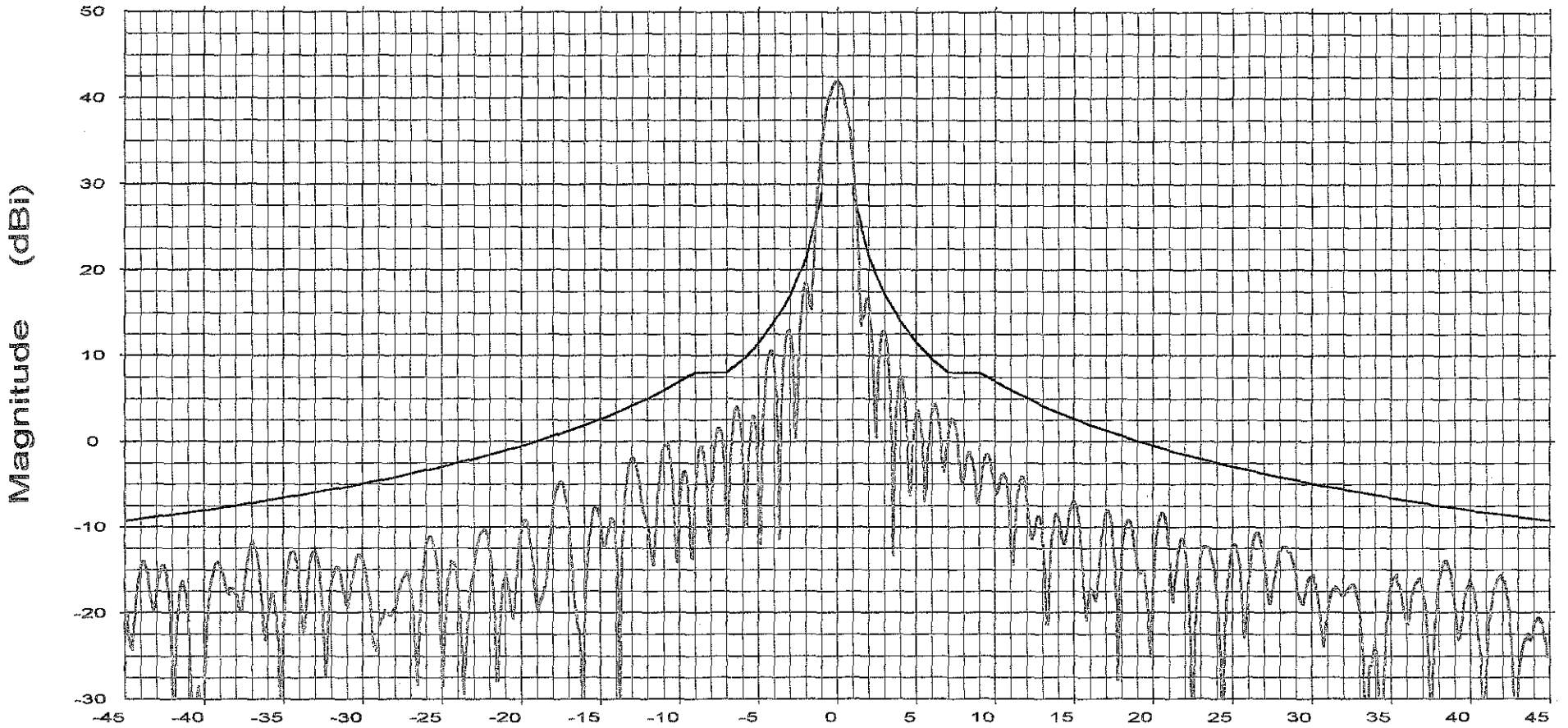
File: See Legend

Prodelin 2.4 Meter 4-Pc. Receive Transmit Antenna System
Series 1244 / C-Band Circular

Frequency : 6.425 GHz

Operator: D. Lutz
Ser. no.: 24
Channel: test

Tx pol: RHCP Rx pol: RHCP



Sidelobe Envelope: 29−25Log(Theta)~1.0 to 7 Deg
+8 dBi~7 to 9.2 Deg | 32−25Log(Theta)~9.2 to 48 Deg
−10 dBi~48 to 180 Deg

Overlays	Cal. file	units	Beam Peak Deg	dB
065113.DAT-ant_under_test———	065113.DAT	dBi	-0.05	41.95

Prodelin Corporation
Riverbend [illegible] Range
Ci[illegible]mont NC

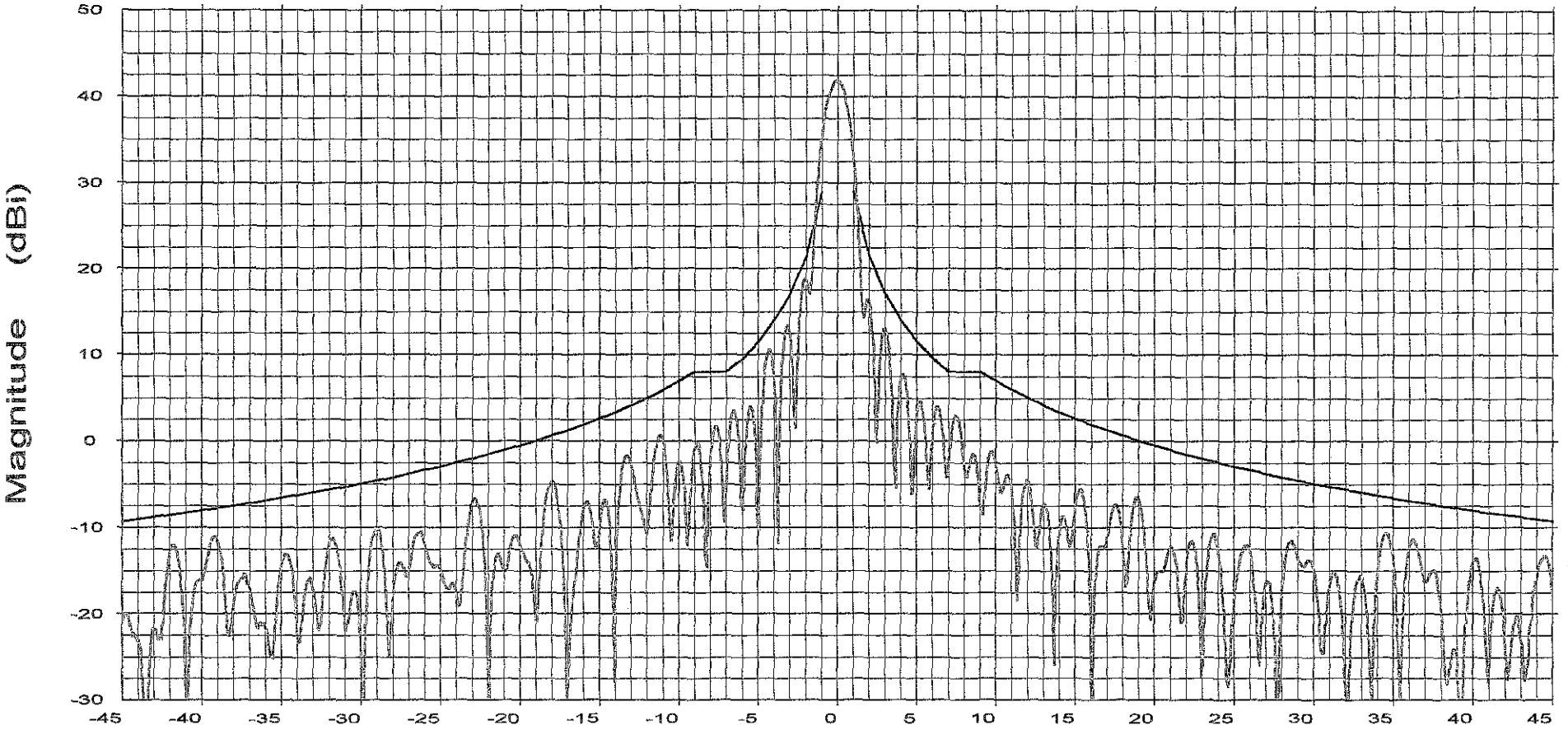
File: See Legend

Prodelin 2.4 Meter 4-Pc. Receive Transmit Antenna System
Series 1244 / C-Band Circular

Frequency : 6.250 GHz

Operator: D. Lutz
Ser. no.: 24
Channel: test

Tx pol: RHCP Rx pol: RHCP



Sidelobe Envelope: 29−25Log(Theta)~1.0 to 7 Deg
+8 dBi~7 to 9.2 Deg | 32−25Log(Theta)~9.2 to 48 Deg
−10 dBi~48 to 180 Deg

Overlays	Cal. file	units	Beam Peak Deg	Beam Peak dB
065113.DAT-ant_under_test———	065113.DAT	dBi	-0.04	41.87

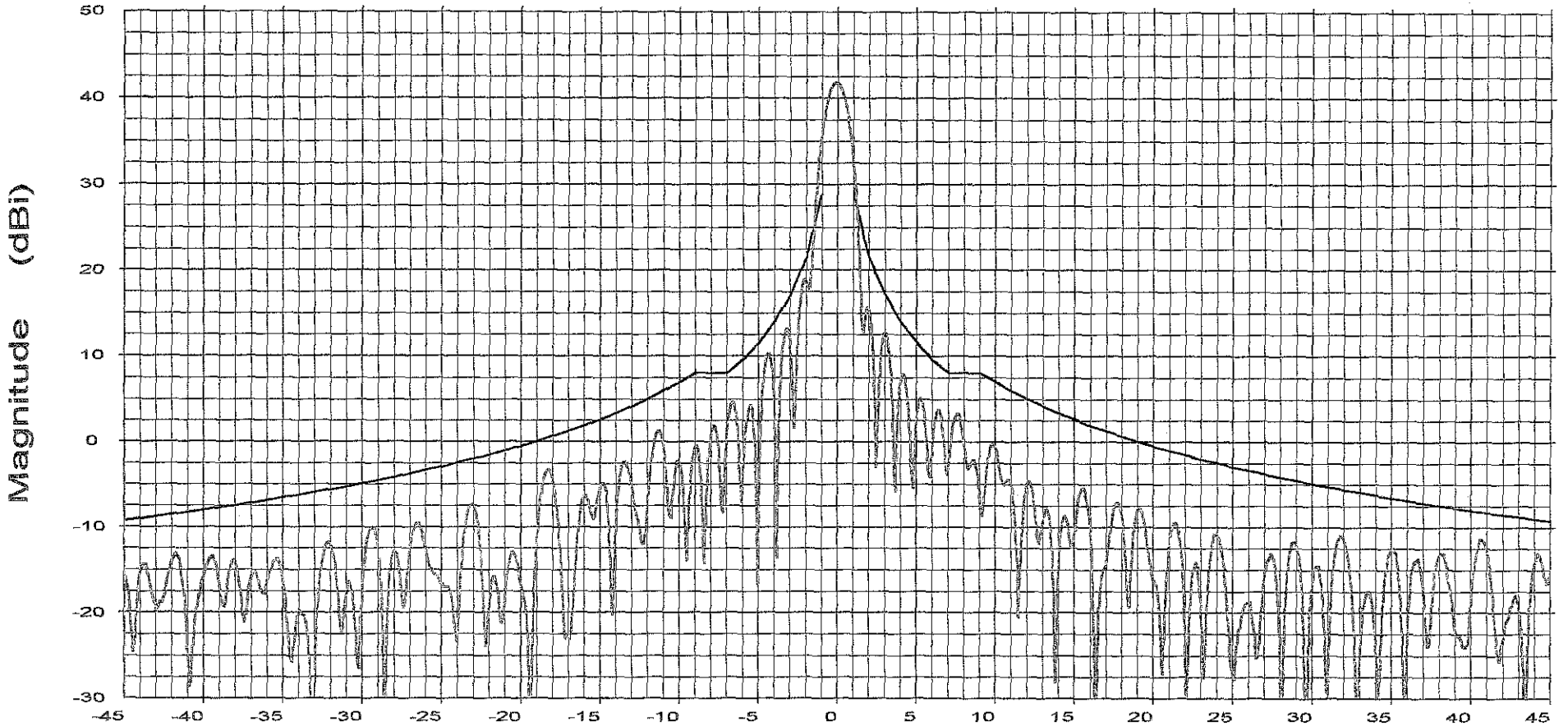
Prodelin Corporation
Riverbend Test Range
Claremont NC

File: See Legend

Prodelin 2.4 Meter 4-Pc. Receive Transmit Antenna System
Series 1244 / C-Band Circular

Frequency : 6.175 GHz

Operator: D. Lutz
Ser. no.: 24
Channel: test Tx pol: RHCP Rx pol: RHCP



Sidelobe Envelope: 29-25Log(Theta)~1.0 to 7 Deg
+8 dBi~7 to 9.2 Deg | 32-25Log(Theta)~9.2 to 48 Deg
-10 dBi~48 to 180 Deg

Overlays	Cal. file	units	Beam Peak Deg	dB
065113.DAT-ant_under_test———	065113.DAT	dBi	-0.14	41.86

Prodelin Corporation
Riverbend Test Range
Claremont NC

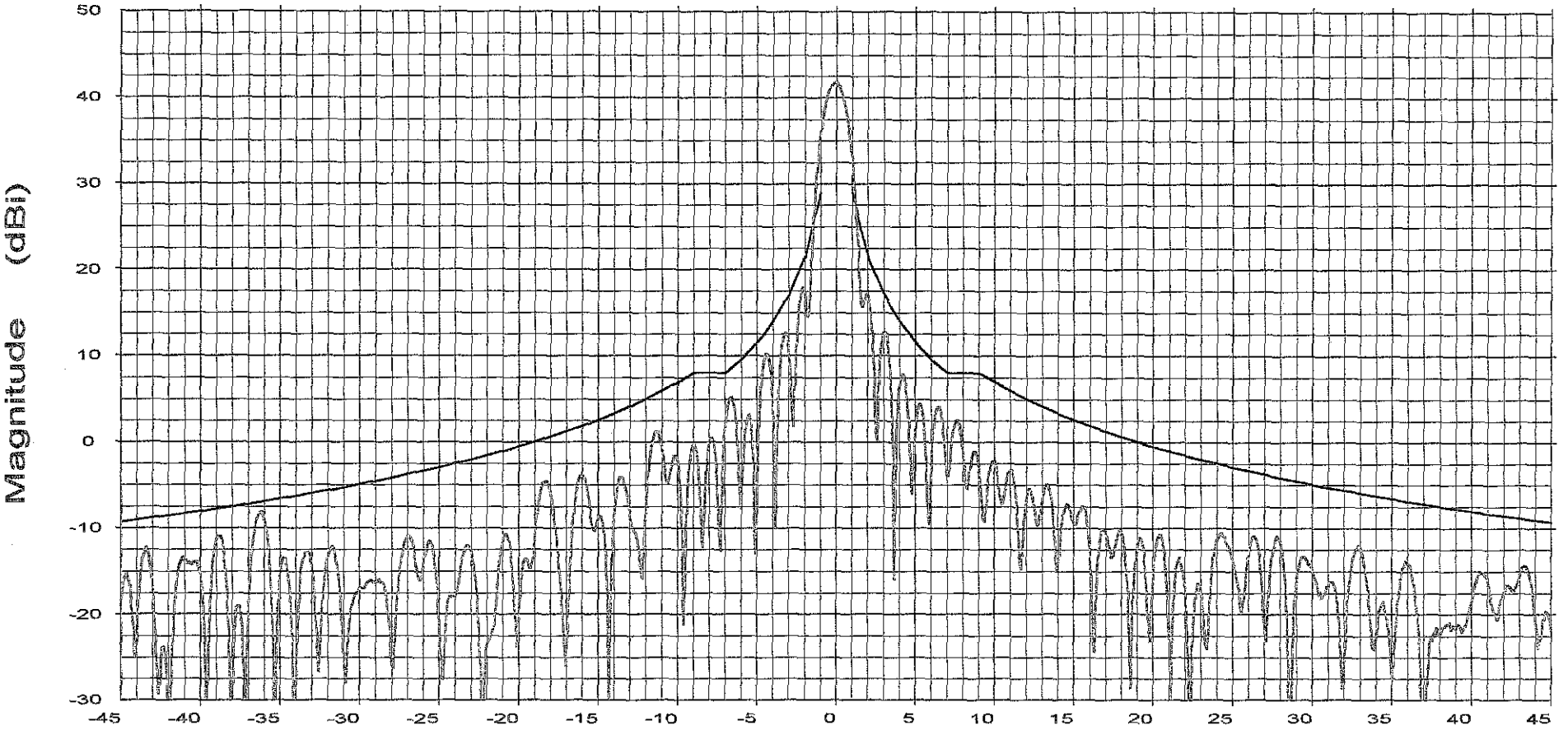
File: See Legend

Prodelin 2.4 Meter 4-Pc. Receive Transmit Antenna System
Series 1244 / C-Band Circular

Frequency : 6.138 GHz

Operator: D. Lutz
Ser. no.: 24
Channel: test

Tx pol: RHCP Rx pol: RHCP



Sidelobe Envelope: 29−25Log(Theta)~1.0 to 7 Deg
+8 dBi~7 to 9.2 Deg | 32−25Log(Theta)~9.2 to 48 Deg
−10 dBi~48 to 180 Deg

Overlays	Cal. file	units	Beam Peak Deg	dB
065113.DAT-ant_under_test———	065113.DAT	dBi	-0.13	41.75

Prodelin Corporation
Riverbend Test Range
Claremont NC

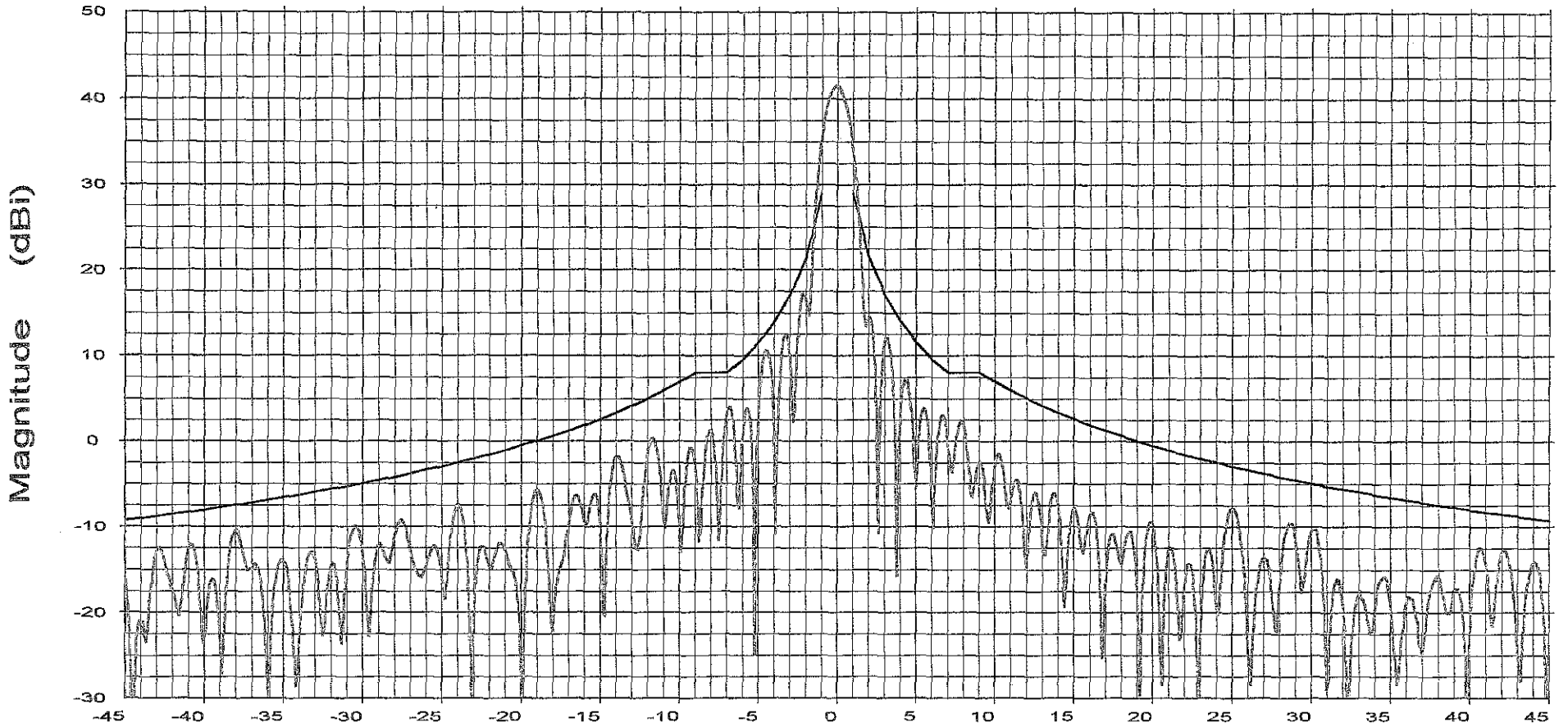
File: See Legend

Prodelin 2.4 Meter 4-Pc. Receive Transmit Antenna System
Series 1244 / C-Band Circular

Frequency : 5.950 GHz

Operator: D. Lutz
Ser. no.: 24
Channel: test

Tx pol: RHCP Rx pol: RHCP



Sidelobe Envelope: 29-25Log(Theta)~1.0 to 7 Deg
+8 dBi~7 to 9.2 Deg | 32-25Log(Theta)~9.2 to 48 Deg
-10 dBi~48 to 180 Deg

Overlays	Cal. file	units	Beam Peak Deg	dB
065113.DAT-ant_under_test———	065113.DAT	dBi	-0.02	41.44

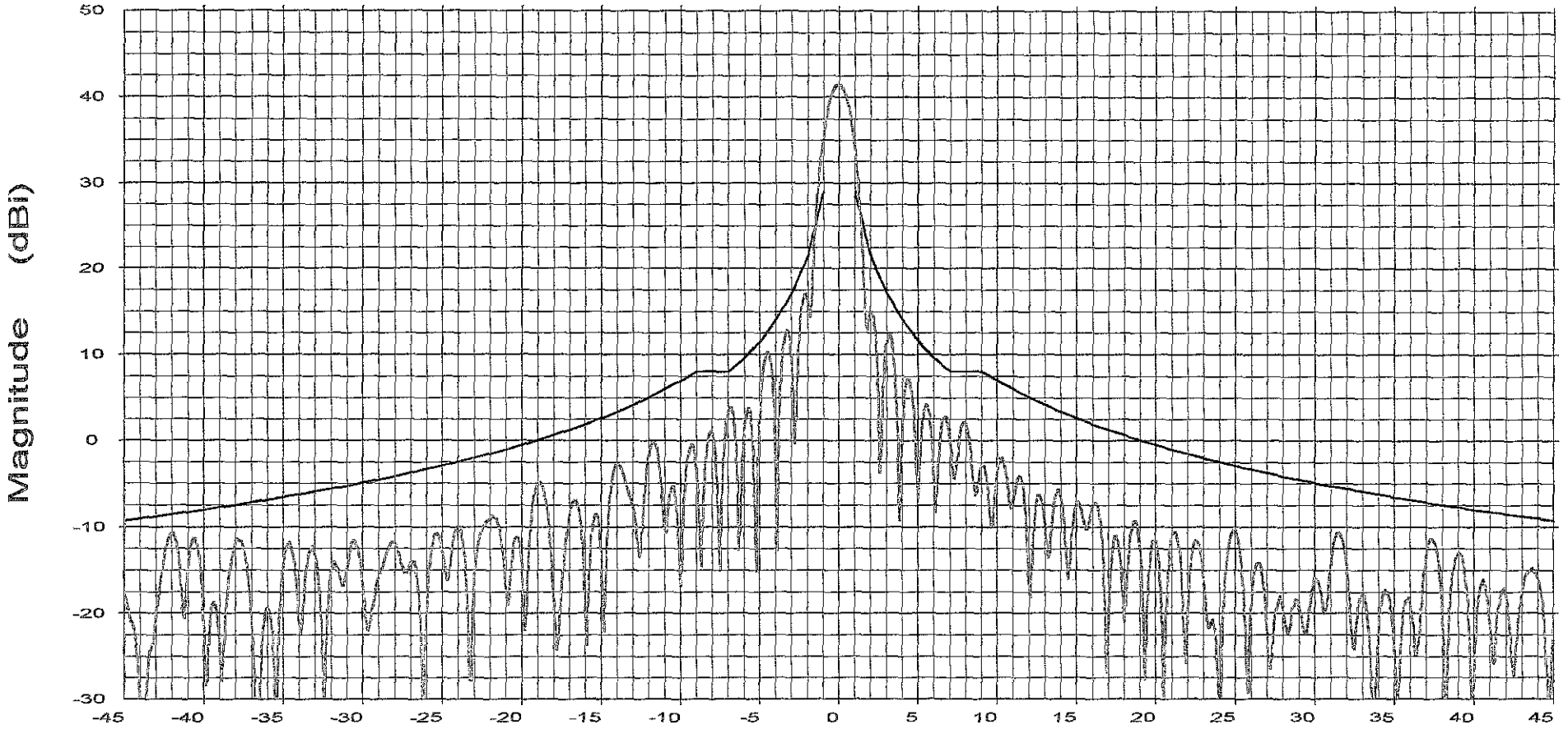
Prodelin Corporation
Riverbend Test Range
Claremont NC

File: See Legend

Prodelin 2.4 Meter 4-Pc. Receive Transmit Antenna System
Series 1244 / C-Band Circular

Frequency : 5.925 GHz

Operator: D. Lutz
Ser. no.: 24
Channel: test Tx pol: RHCP Rx pol: RHCP



Sidelobe Envelope: 29−25Log(Theta)~1.0 to 7 Deg
+8 dBi~7 to 9.2 Deg | 32−25Log(Theta)~9.2 to 48 Deg
−10 dBi~48 to 180 Deg

Overlays	Cal. file	units	Beam Peak Deg	Beam Peak dB
065113.DAT-ant_under_test———	065113.DAT	dBi	-0.01	41.50

Prodelin Corporation
Riverbend Test Range
Claremont NC

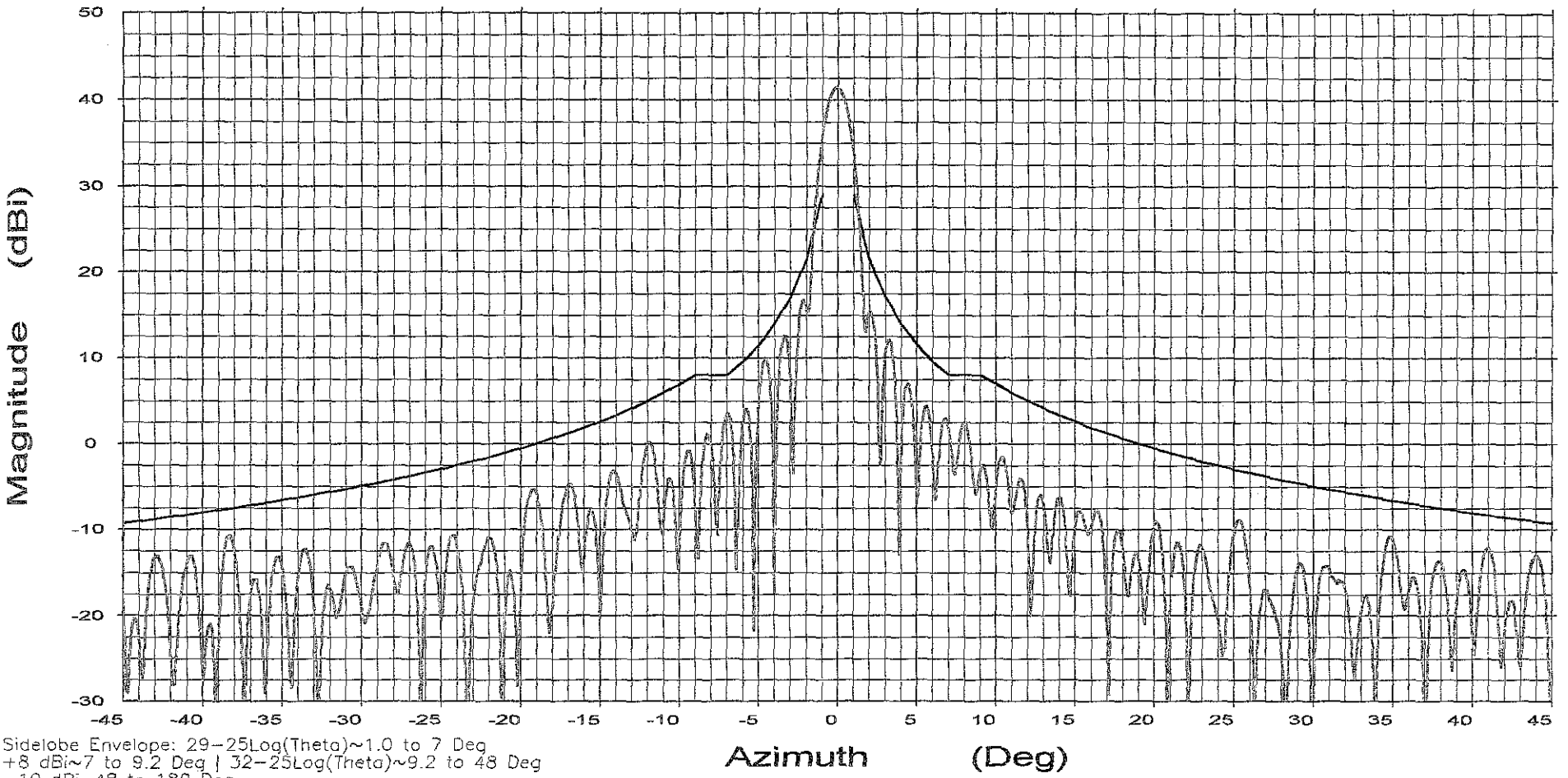
File: See Legend

Prodelin 2.4 Meter 4-Pc. Receive Transmit Antenna System
Series 1244 / C-Band Circular

Frequency : 5.850 GHz

Operator: D. Lutz
Ser. no.: 24
Channel: test

Tx pol: RHCP Rx pol: RHCP



Sidelobe Envelope: 29−25Log(Theta)~1.0 to 7 Deg
+8 dBi~7 to 9.2 Deg | 32−25Log(Theta)~9.2 to 48 Deg
−10 dBi~48 to 180 Deg

Overlays	Cal. file	units	Beam Peak Deg	dB
065113.DAT-ant_under_test———	065113.DAT	dBi	-0.10	41.42

Prodelin Corporation
Riverbend Test Range
Conover NC

+/- 180 ° LHCP TRANSMIT

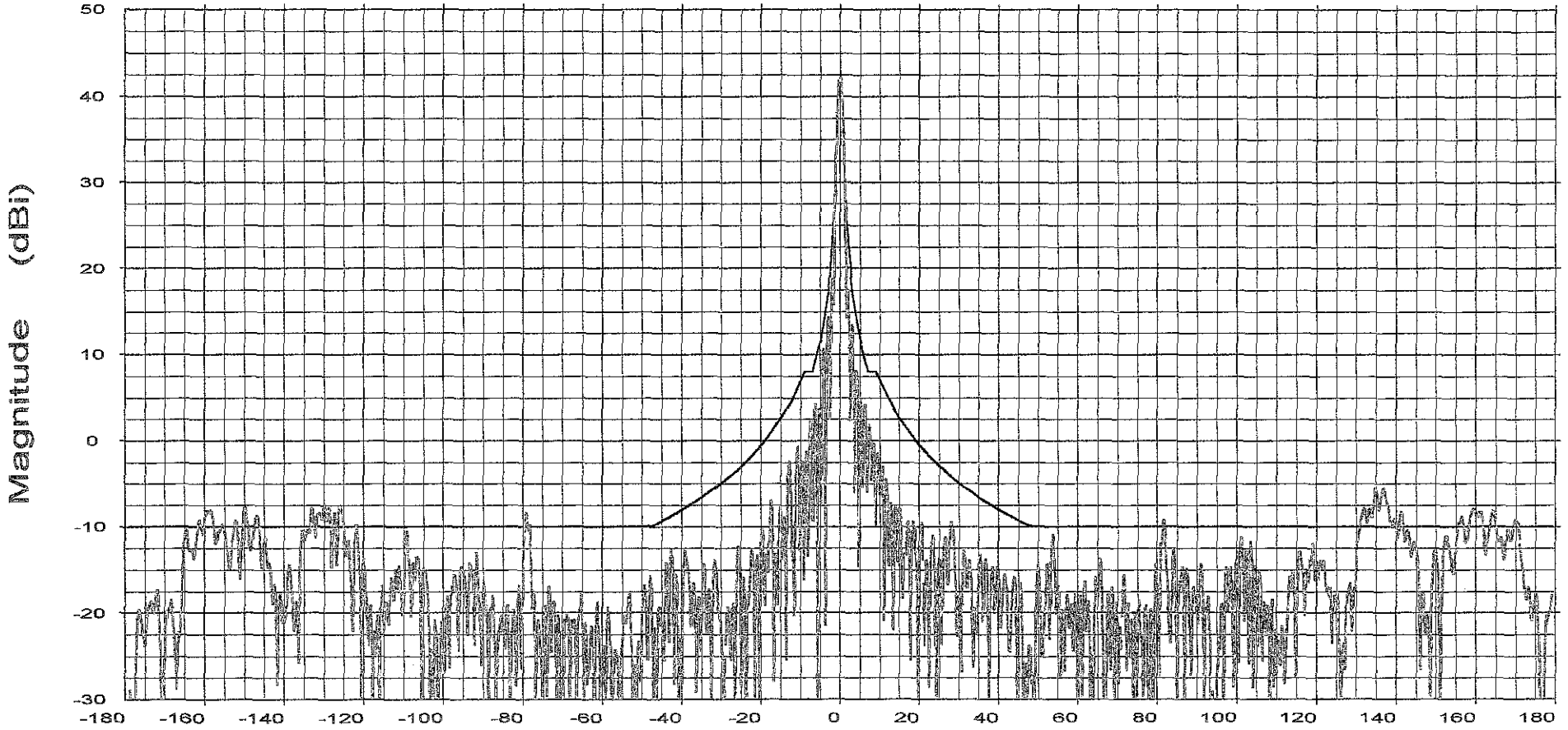
File: See Legend

Prodelin 2.4 Meter 4-Pc. Receive Transmit Antenna System
Series 1244 / C-Band Circular

Frequency : 6.425 GHz

Operator: D. Lutz
Ser. no.: 24
Channel: test

Tx pol: LHCP Rx pol: LHCP



Sidelobe Envelope: 29−25Log(Theta)~1.0 to 7 Deg
+8 dBi~7 to 9.2 Deg | 32−25Log(Theta)~9.2 to 48 Deg
−10 dBi~48 to 180 Deg

Overlays	Cal. file	units	Beam Peak Deg	Beam Peak dB
065118.DAT-ant_under_test———	065118.DAT	dBi	-0.05	42.11

Prodelin Corporation
Riverbend Test Range
Claremont NC

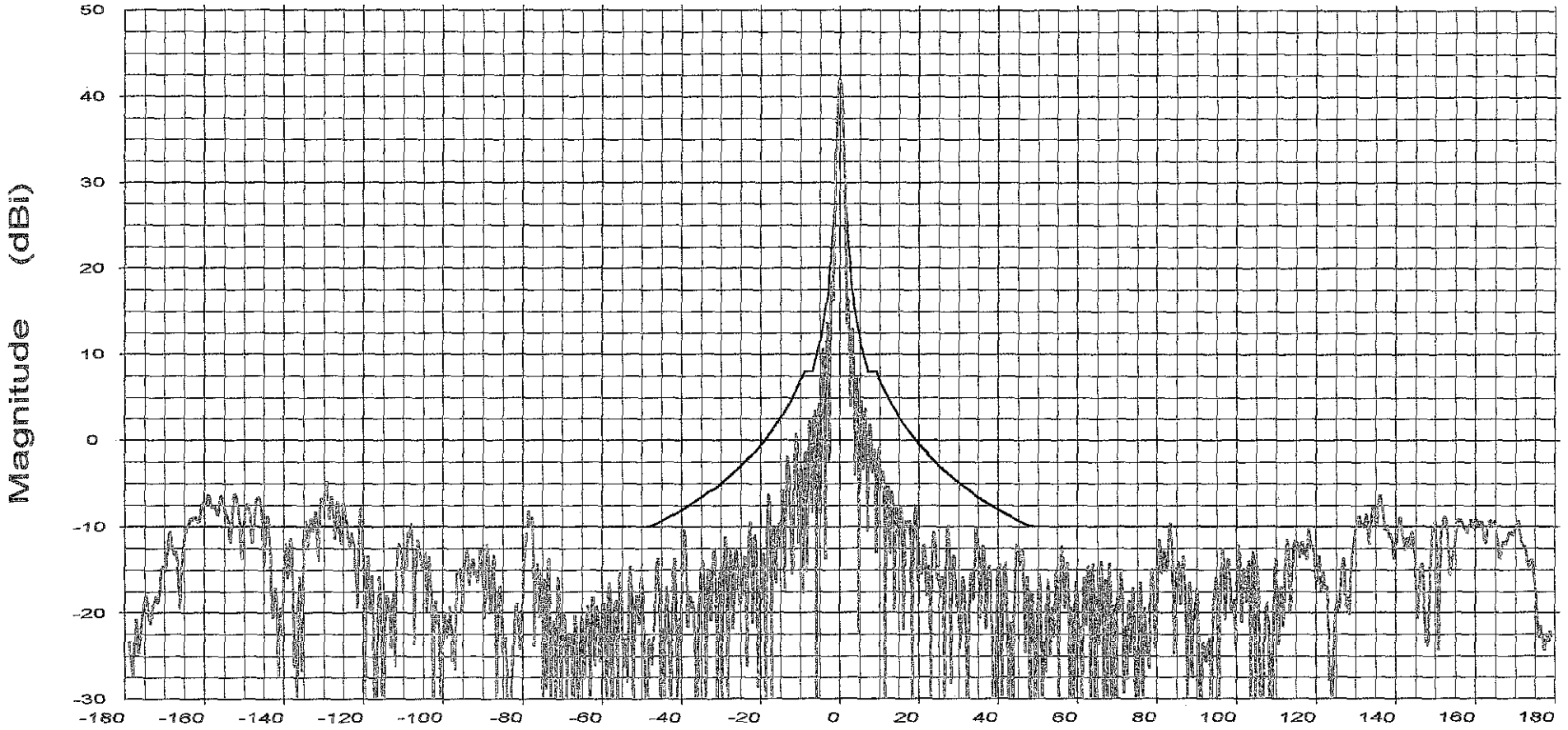
File: See Legend

Prodelin 2.4 Meter 4-Pc. Receive Transmit Antenna System
Series 1244 / C-Band Circular

Frequency : 6.250 GHz

Operator: D. Lutz
Ser. no.: 24
Channel: test

Tx pol: LHCP Rx pol: LHCP



Sidelobe Envelope: 29-25Log(Theta)~1.0 to 7 Deg
+8 dBi~7 to 9.2 Deg | 32-25Log(Theta)~9.2 to 48 Deg
-10 dBi~48 to 180 Deg

Overlays	Cal. file	units	Beam Peak Deg	Beam Peak dB
065118.DAT-ant_under_test———	065118.DAT	dBi	-0.04	41.92

Prodelin Corporation
Riverbend Test Range
Claremont NC

File: See Legend

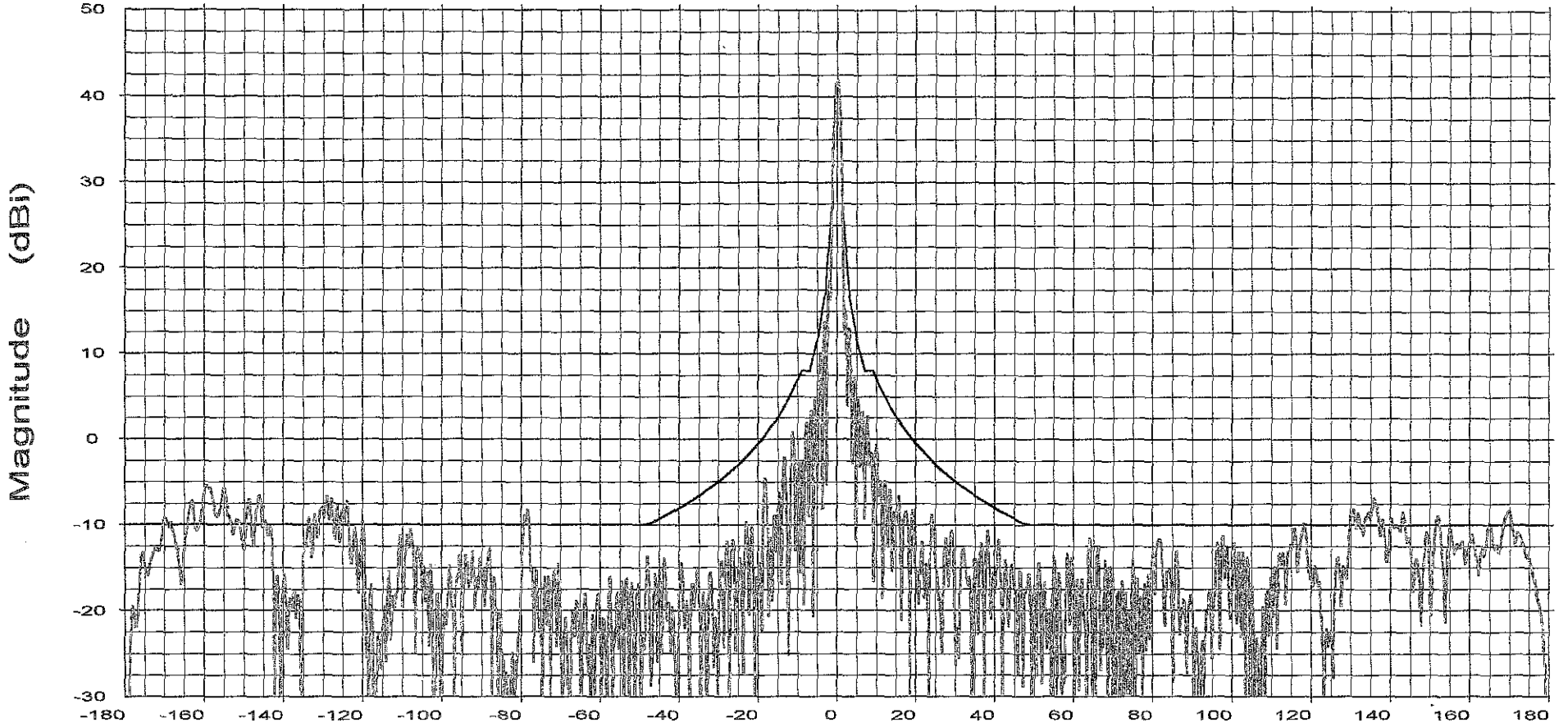
Prodelin 2.4 Meter 4-Pc. Receive Transmit Antenna System
Series 1244 / C-Band Circular

Frequency : 6.175 GHz

Operator: D. Lutz
Ser. no.: 24
Channel: test

Tx pol: LHCP

Rx pol: LHCP



Sidelobe Envelope: 29−25Log(Theta)~1.0 to 7 Deg
+8 dBi~7 to 9.2 Deg | 32−25Log(Theta)~9.2 to 48 Deg
−10 dBi~48 to 180 Deg

Overlays	Cal. file	units	Beam Peak Deg	Beam Peak dB
065118.DAT-ant_under_test———	065118.DAT	dBi	-0.03	41.82

Prodelin Corporation
Riverbend Test Range
Claremont NC

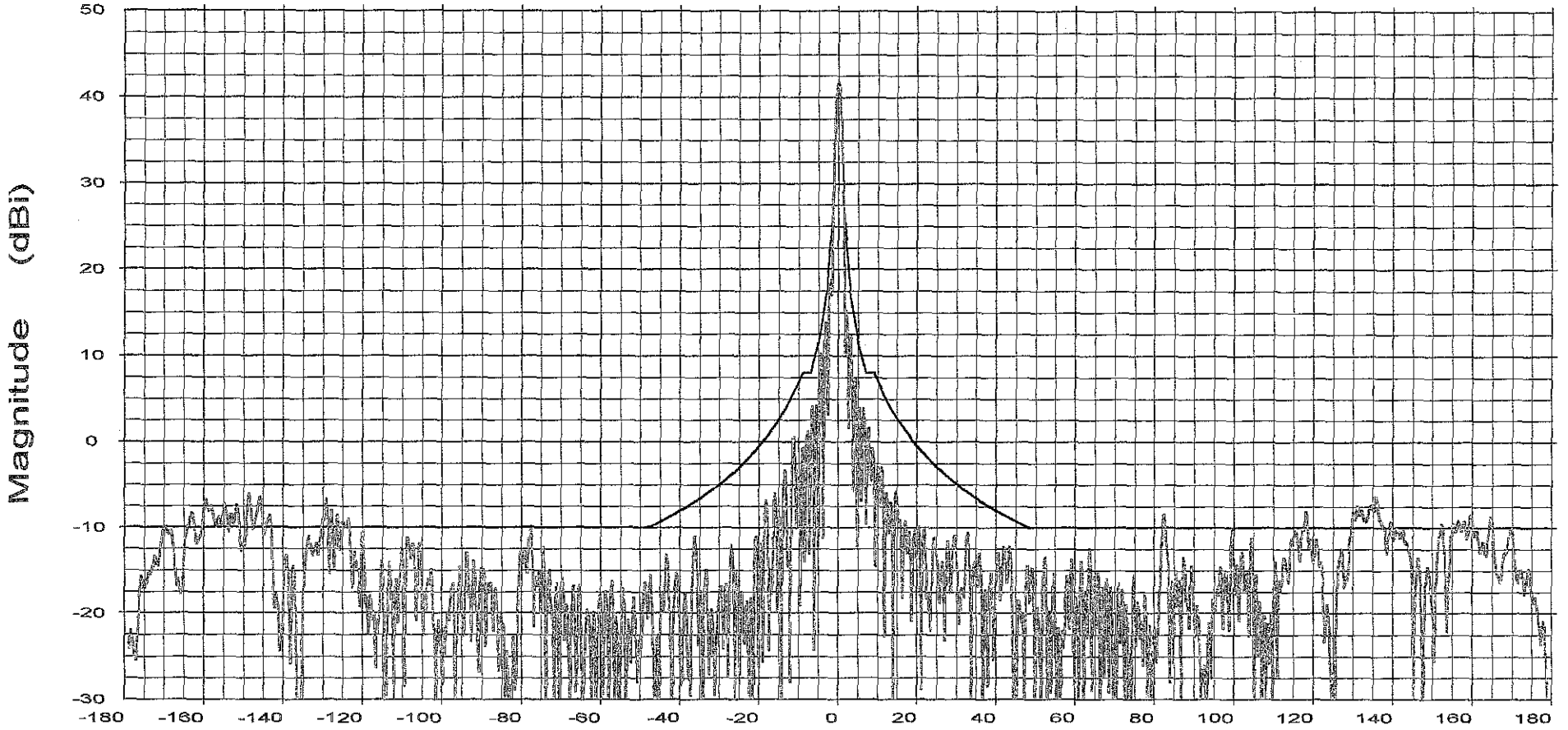
File: See Legend

Prodelin 2.4 Meter 4-Pc. Receive Transmit Antenna System
Series 1244 / C-Band Circular

Frequency : 6.138 GHz

Operator: D. Lutz
Ser. no.: 24
Channel: test

Tx pol: LHCP Rx pol: LHCP



Sidelobe Envelope: 29−25Log(Theta)~1.0 to 7 Deg
+8 dBi~7 to 9.2 Deg | 32−25Log(Theta)~9.2 to 48 Deg
−10 dBi~48 to 180 Deg

Overlays	Cal. file	units	Beam Peak Deg	Beam Peak dB
065118.DAT-ant_under_test———	065118.DAT	dBi	-0.03	41.78

Prodelin Corporation
Riverbend Test Range
Claremont NC

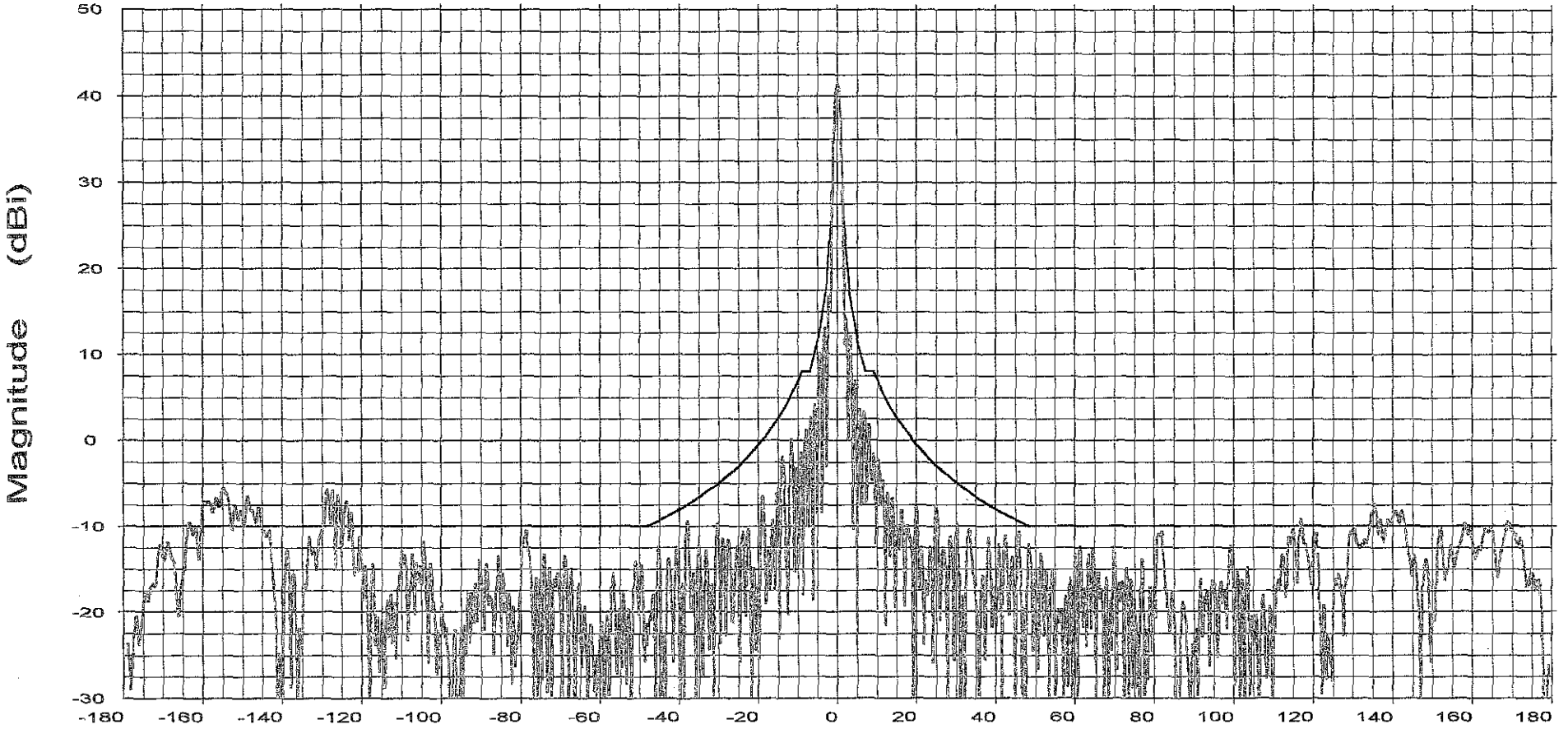
File: See Legend

Prodelin 2.4 Meter 4-Pc. Receive Transmit Antenna System
Series 1244 / C-Band Circular

Frequency : 5.950 GHz

Operator: D. Lutz
Ser. no.: 24
Channel: test

Tx pol: LHCP Rx pol: LHCP



Sidelobe Envelope: 29−25Log(Theta)~1.0 to 7 Deg
+8 dBi~7 to 9.2 Deg | 32−25Log(Theta)~9.2 to 48 Deg
−10 dBi~48 to 180 Deg

Overlays	Cal. file	units	Beam Peak Deg	Beam Peak dB
065118.DAT-ant_under_test———	065118.DAT	dBi	-0.02	41.47

Prodelin Corporation
Riverbend Test Range
Claremont NC

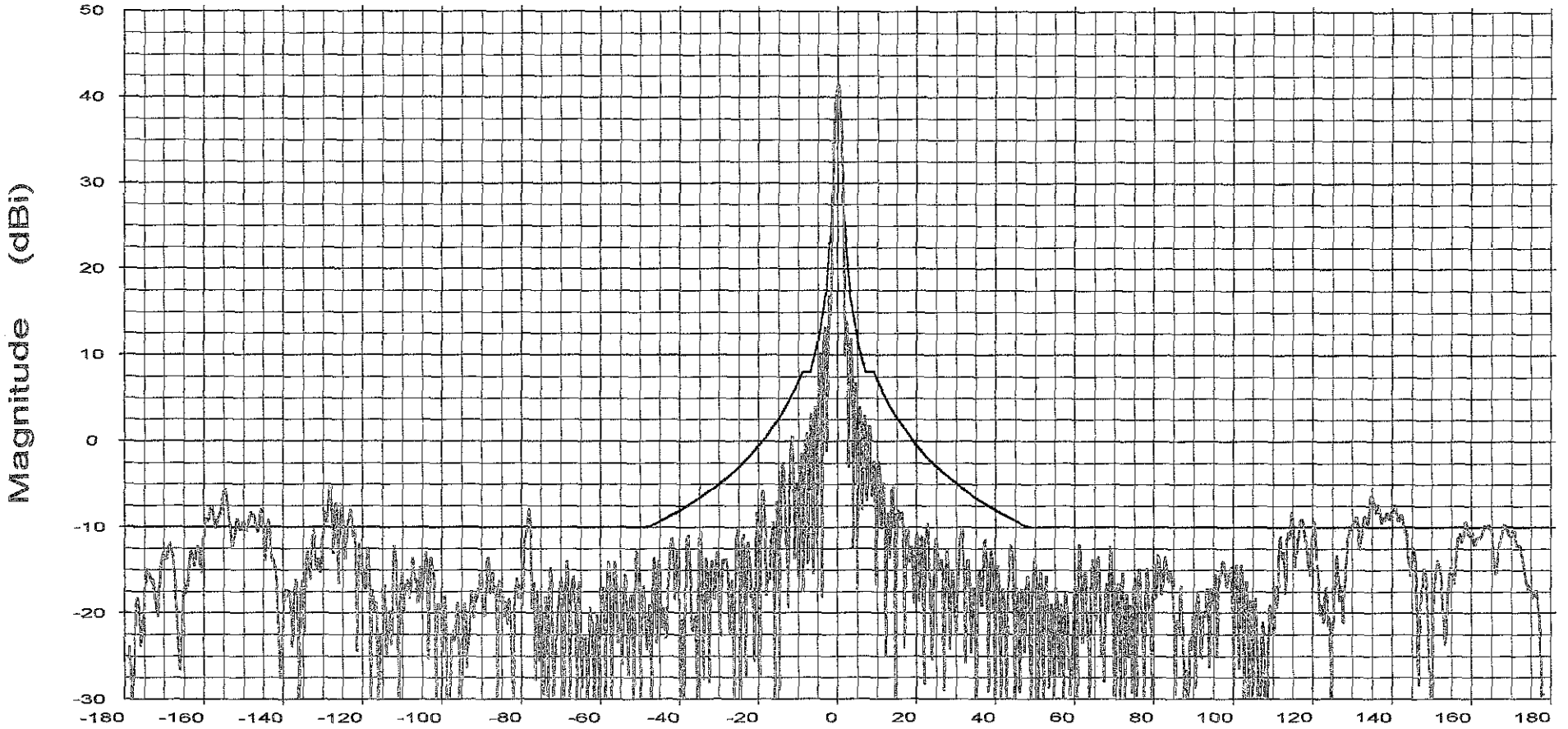
File: See Legend

Prodelin 2.4 Meter 4-Pc. Receive Transmit Antenna System
Series 1244 / C-Band Circular

Frequency : 5.925 GHz

Operator: D. Lutz
Ser. no.: 24
Channel: test

Tx pol: LHCP Rx pol: LHCP



Sidelobe Envelope: 29−25Log(Theta)~1.0 to 7 Deg
+8 dBi~7 to 9.2 Deg | 32−25Log(Theta)~9.2 to 48 Deg
−10 dBi~48 to 180 Deg

Overlays	Cal. file	units	Beam Peak Deg	Beam Peak dB
065118.DAT-ant_under_test———	065118.DAT	dBi	-0.01	41.45

Prodelin Corporation
Riverbend [illegible]st Range
C[illegible]mont NC

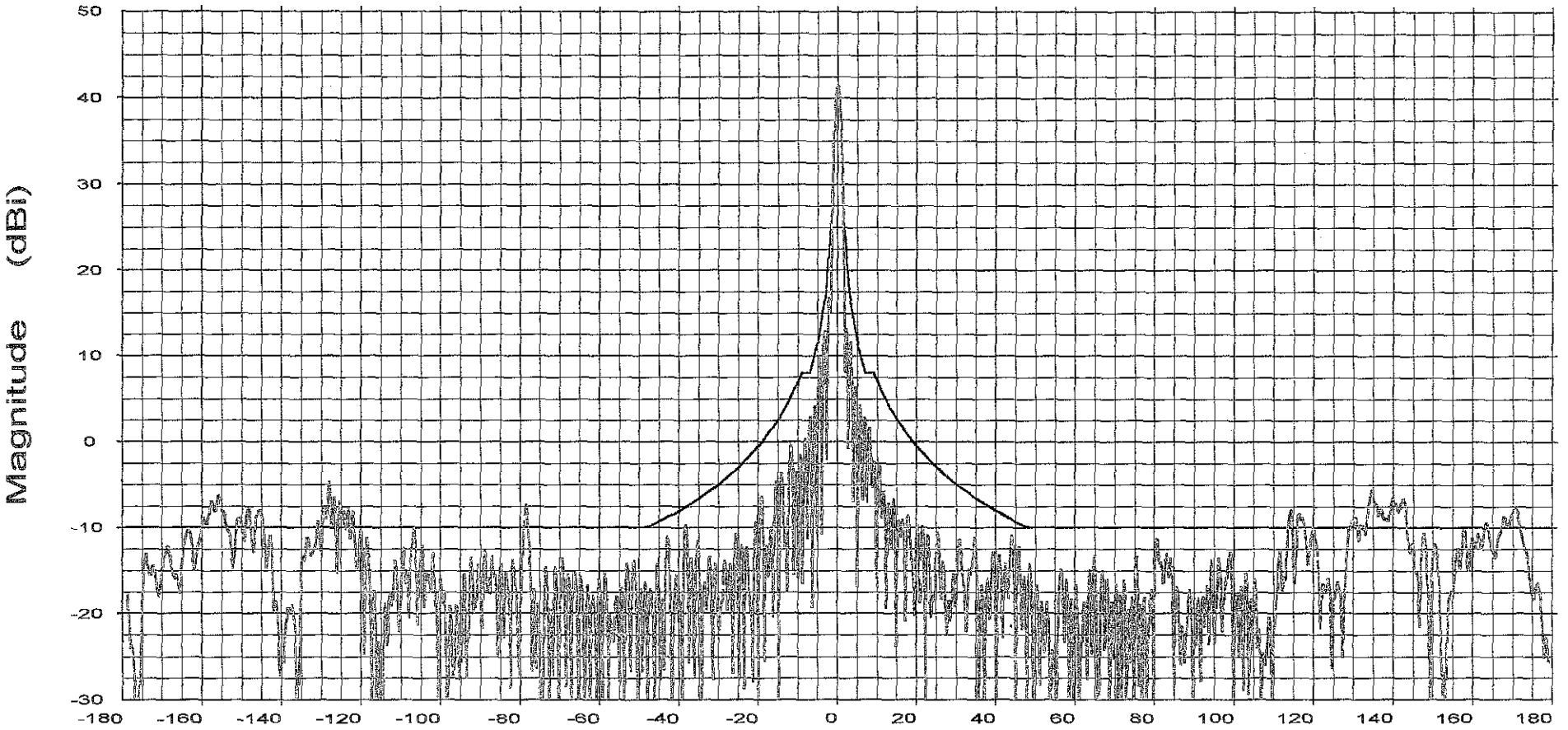
File: See Legend

Prodelin 2.4 Meter 4-Pc. Receive Transmit Antenna System
Series 1244 / C-Band Circular

Frequency : 5.850 GHz

Operator: D. Lutz
Ser. no.: 24
Channel: test

Tx pol: LHCP Rx pol: LHCP



Sidelobe Envelope: 29−25Log(Theta)~1.0 to 7 Deg
+8 dBi~7 to 9.2 Deg | 32−25Log(Theta)~9.2 to 48 Deg
−10 dBi~48 to 180 Deg

Overlays	Cal. file	units	Beam Peak Deg	Beam Peak dB
065118.DAT-ant_under_test———	065118.DAT	dBi	0.00	41.42

Prodelin Corporation
Riverbend Test Range
Conover NC

+/- 180 ° RHCP TRANSMIT

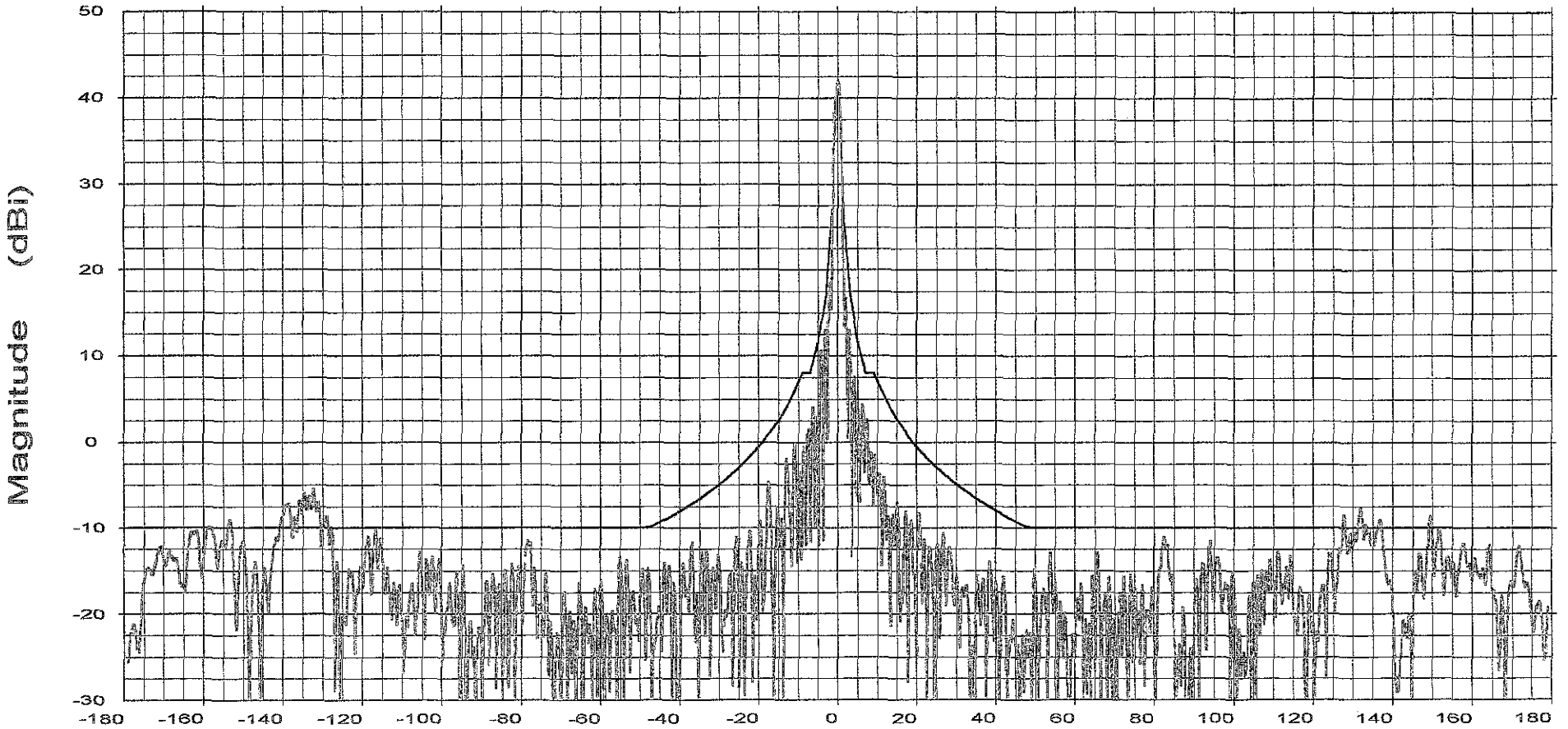
File: See Legend

Prodelin 2.4 Meter 4-Pc. Receive Transmit Antenna System
Series 1244 / C-Band Circular

Frequency : 6.425 GHz

Operator: D. Lutz
Ser. no.: 24
Channel: test

Tx pol: RHCP Rx pol: RHCP



Sidelobe Envelope: 29−25Log(Theta)~1.0 to 7 Deg
+8 dBi~7 to 9.2 Deg | 32−25Log(Theta)~9.2 to 48 Deg
−10 dBi~48 to 180 Deg

Overlays	Cal. file	units	Beam Peak Deg	Beam Peak dB
065113.DAT-ant_under_test———	065113.DAT	dBi	-0.05	41.95

Prodelin Corporation
Riverbend Test Range
Claremont NC

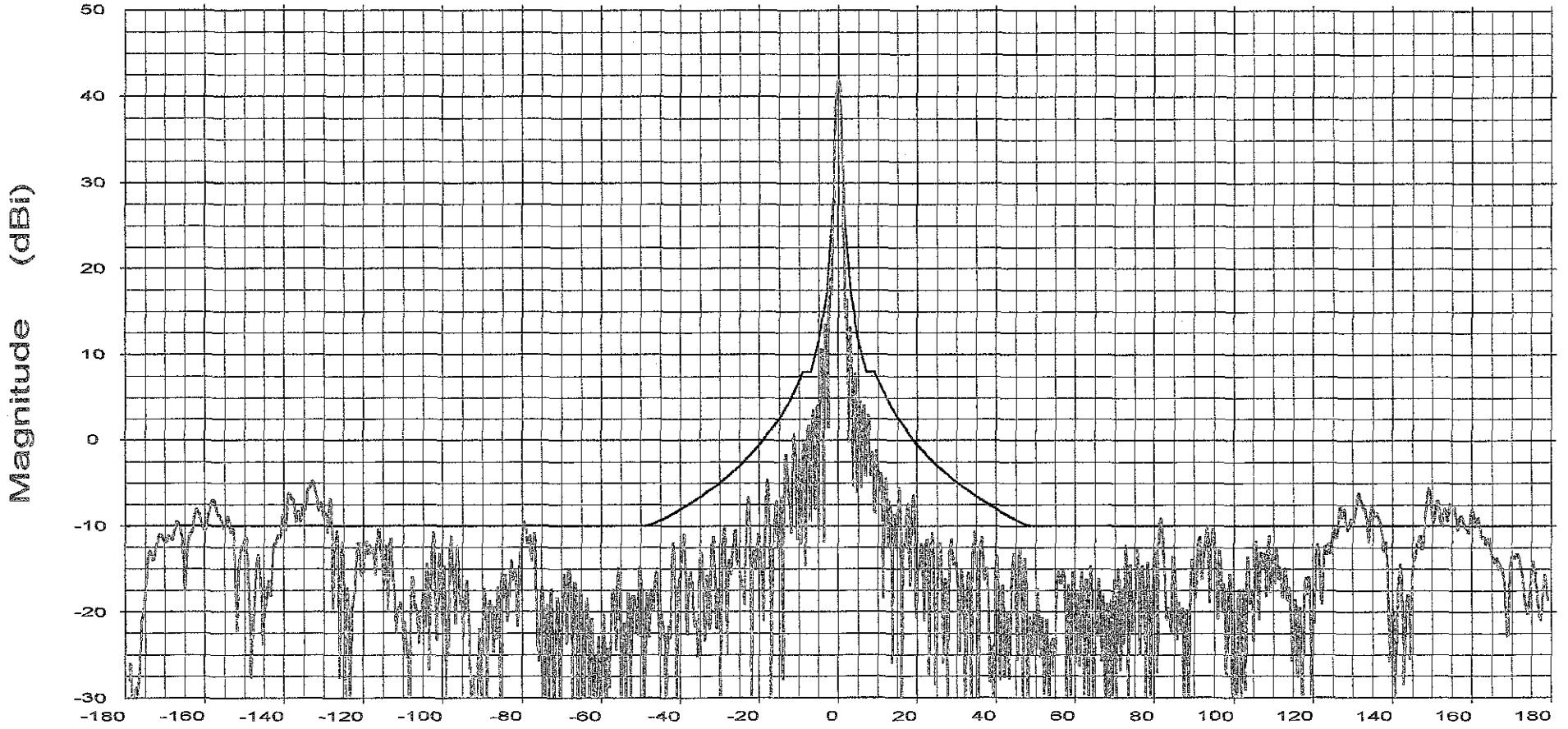
File: See Legend

Prodelin 2.4 Meter 4-Pc. Receive Transmit Antenna System
Series 1244 / C-Band Circular

Frequency : 6.250 GHz

Operator: D. Lutz
Ser. no.: 24
Channel: test

Tx pol: RHCP Rx pol: RHCP



Sidelobe Envelope: 29-25Log(Theta)~1.0 to 7 Deg
+8 dBi~7 to 9.2 Deg | 32-25Log(Theta)~9.2 to 48 Deg
-10 dBi~48 to 180 Deg

Overlays	Cal. file	units	Beam Peak Deg	Beam Peak dB
065113.DAT-ant_under_test———	065113.DAT	dBi	-0.04	41.87

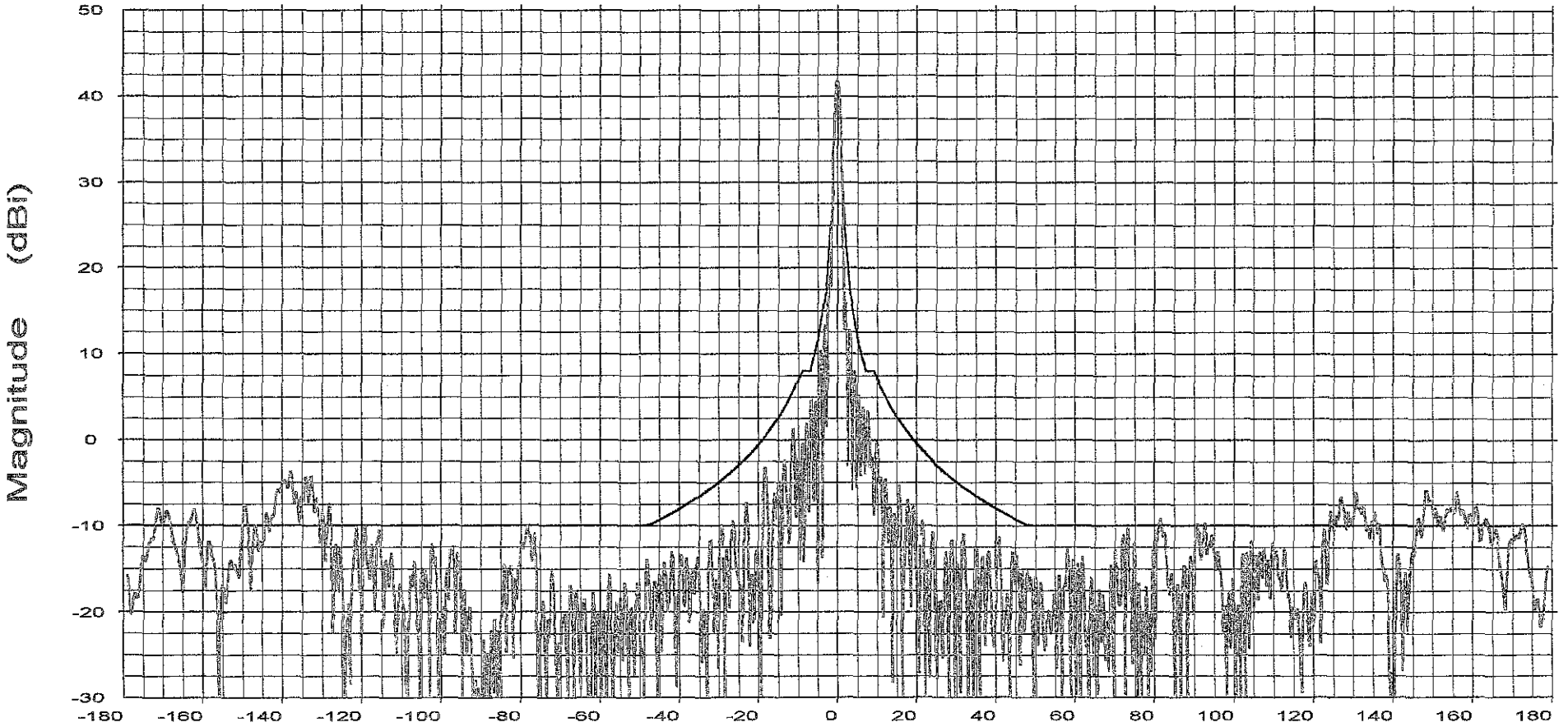
Prodelin Corporation
Riverbend [illegible]t Range
C[illegible]mont NC

File: See Legend

Prodelin 2.4 Meter 4-Pc. Receive Transmit Antenna System
Series 1244 / C-Band Circular

Frequency : 6.175 GHz

Operator: D. Lutz
Ser. no.: 24
Channel: test Tx pol: RHCP Rx pol: RHCP



Sidelobe Envelope: 29−25Log(Theta)~1.0 to 7 Deg
+8 dBi~7 to 9.2 Deg | 32−25Log(Theta)~9.2 to 48 Deg
−10 dBi~48 to 180 Deg

Overlays	Cal. file	units	Beam Peak Deg	Beam Peak dB
065113.DAT-ant_under_test———	065113.DAT	dBi	-0.14	41.86

Prodelin Corporation
Riverbend Test Range
Conover NC

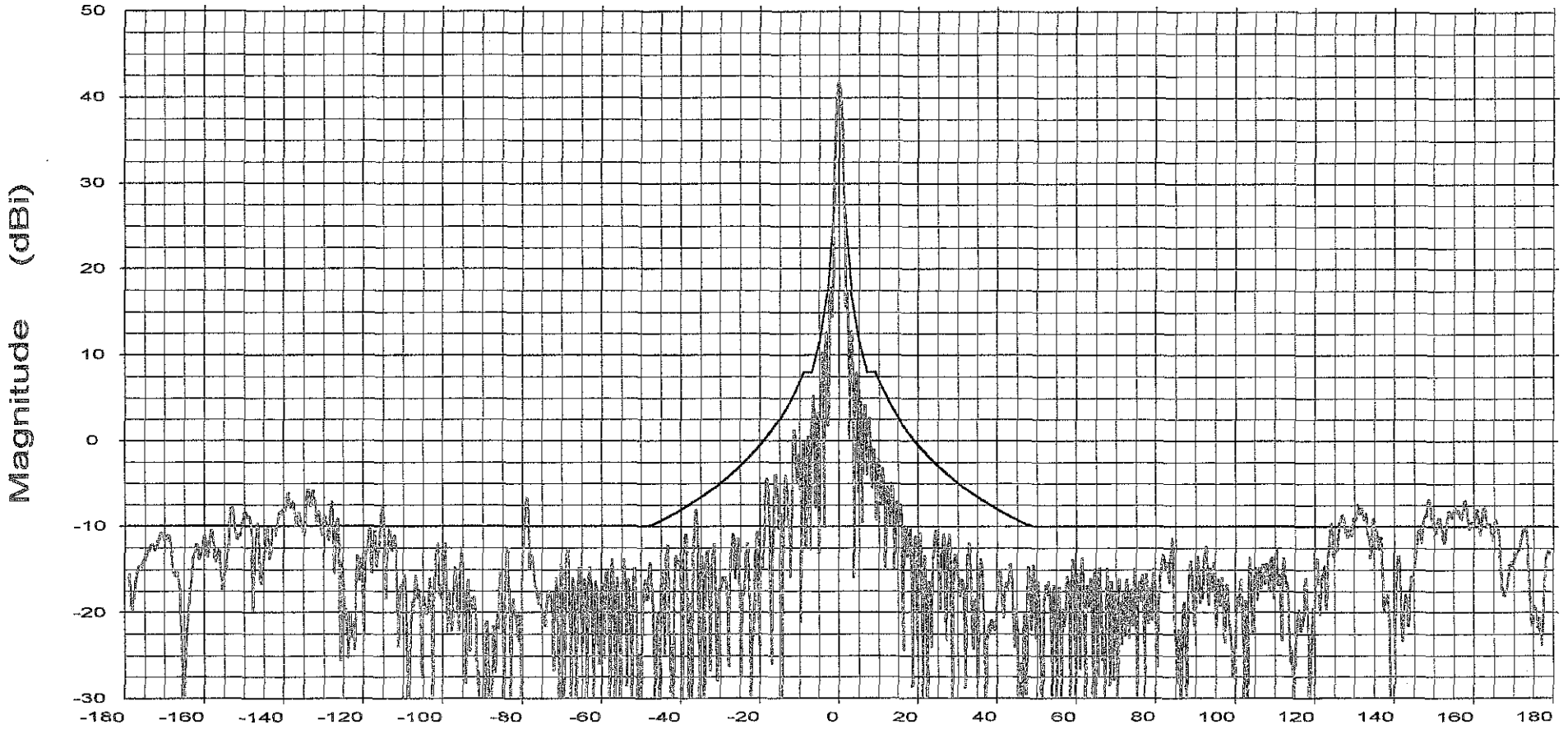
File: See Legend

Prodelin 2.4 Meter 4-Pc. Receive Transmit Antenna System
Series 1244 / C-Band Circular

Frequency : 6.138 GHz

Operator: D. Lutz
Ser. no.: 24
Channel: test

Tx pol: RHCP Rx pol: RHCP



Sidelobe Envelope: 29−25Log(Theta)~1.0 to 7 Deg
+8 dBi~7 to 9.2 Deg | 32−25Log(Theta)~9.2 to 48 Deg
−10 dBi~48 to 180 Deg

Overlays	Cal. file	units	Beam Peak Deg	Beam Peak dB
065113.DAT-ant_under_test———	065113.DAT	dBi	-0.13	41.75

Prodelin Corporation
Riverbend Test Range
Claremont NC

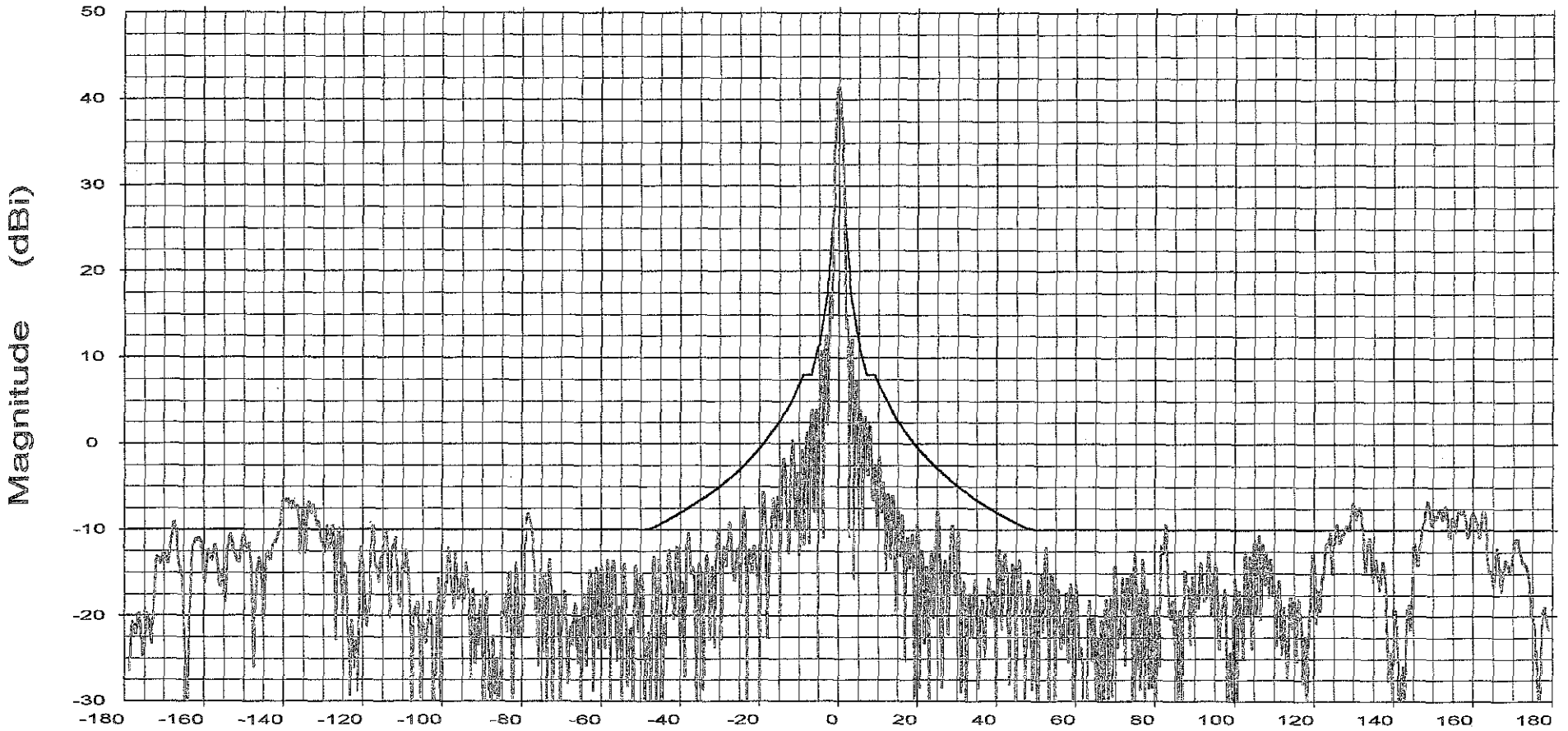
File: See Legend

Prodelin 2.4 Meter 4-Pc. Receive Transmit Antenna System
Series 1244 / C-Band Circular

Frequency : 5.950 GHz

Operator: D. Lutz
Ser. no.: 24
Channel: test

Tx pol: RHCP Rx pol: RHCP



Sidelobe Envelope: 29−25Log(Theta)~1.0 to 7 Deg
+8 dBi~7 to 9.2 Deg | 32−25Log(Theta)~9.2 to 48 Deg
−10 dBi~48 to 180 Deg

Overlays	Cal. file	units	Beam Peak Deg	dB
065113.DAT-ant_under_test———	065113.DAT	dBi	-0.02	41.44

Prodelin Corporation
Riverbend [illegible] Range
C[illegible]mont NC

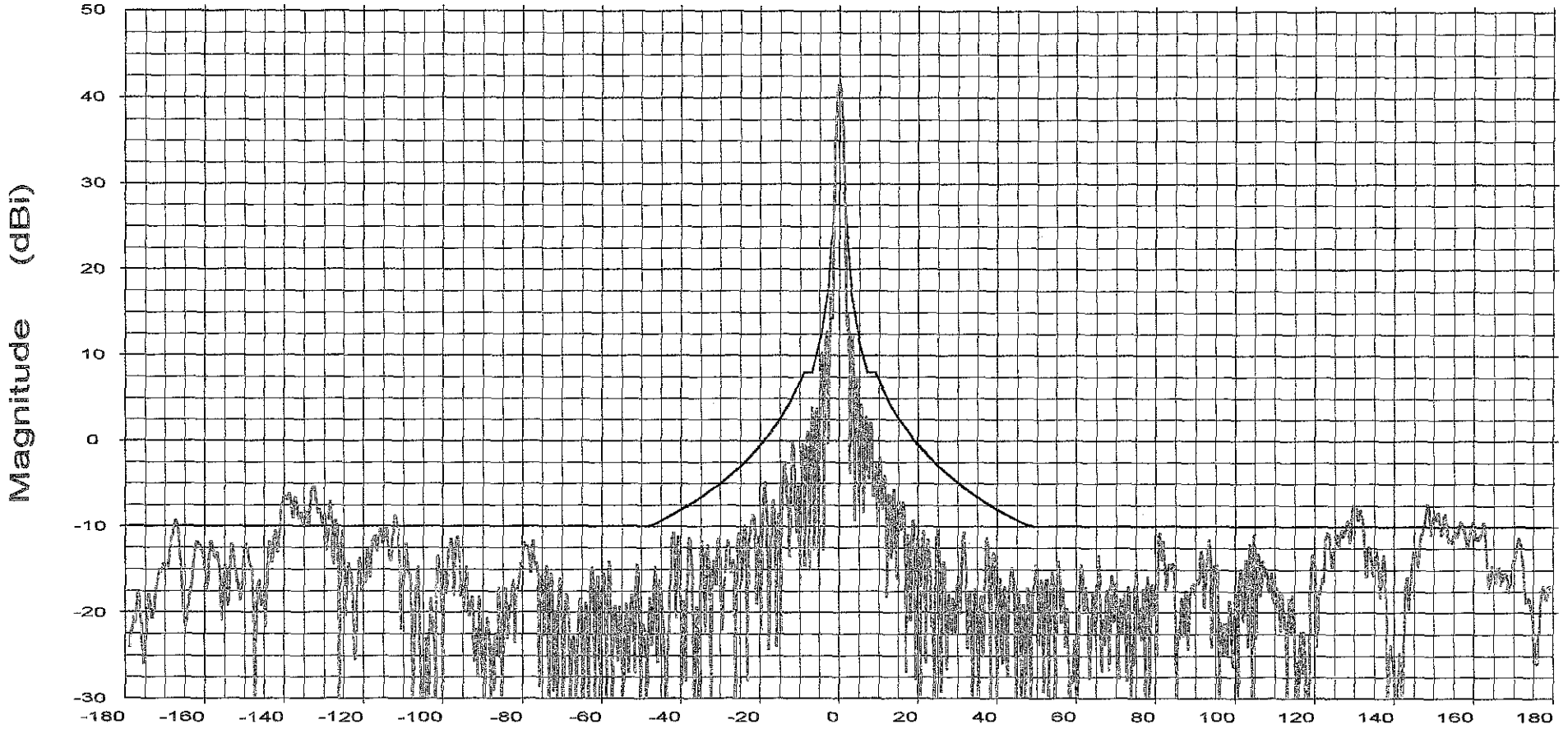
File: See Legend

Prodelin 2.4 Meter 4-Pc. Receive Transmit Antenna System
Series 1244 / C-Band Circular

Frequency : 5.925 GHz

Operator: D. Lutz
Ser. no.: 24
Channel: test

Tx pol: RHCP Rx pol: RHCP



Sidelobe Envelope: 29−25Log(Theta)~1.0 to 7 Deg
+8 dBi~7 to 9.2 Deg | 32−25Log(Theta)~9.2 to 48 Deg
−10 dBi~48 to 180 Deg

Overlays	Cal. file	units	Beam Peak Deg	Beam Peak dB
065113.DAT-ant_under_test———	065113.DAT	dBi	-0.01	41.50

Prodelin Corporation
Riverbend Test Range
Claremont NC

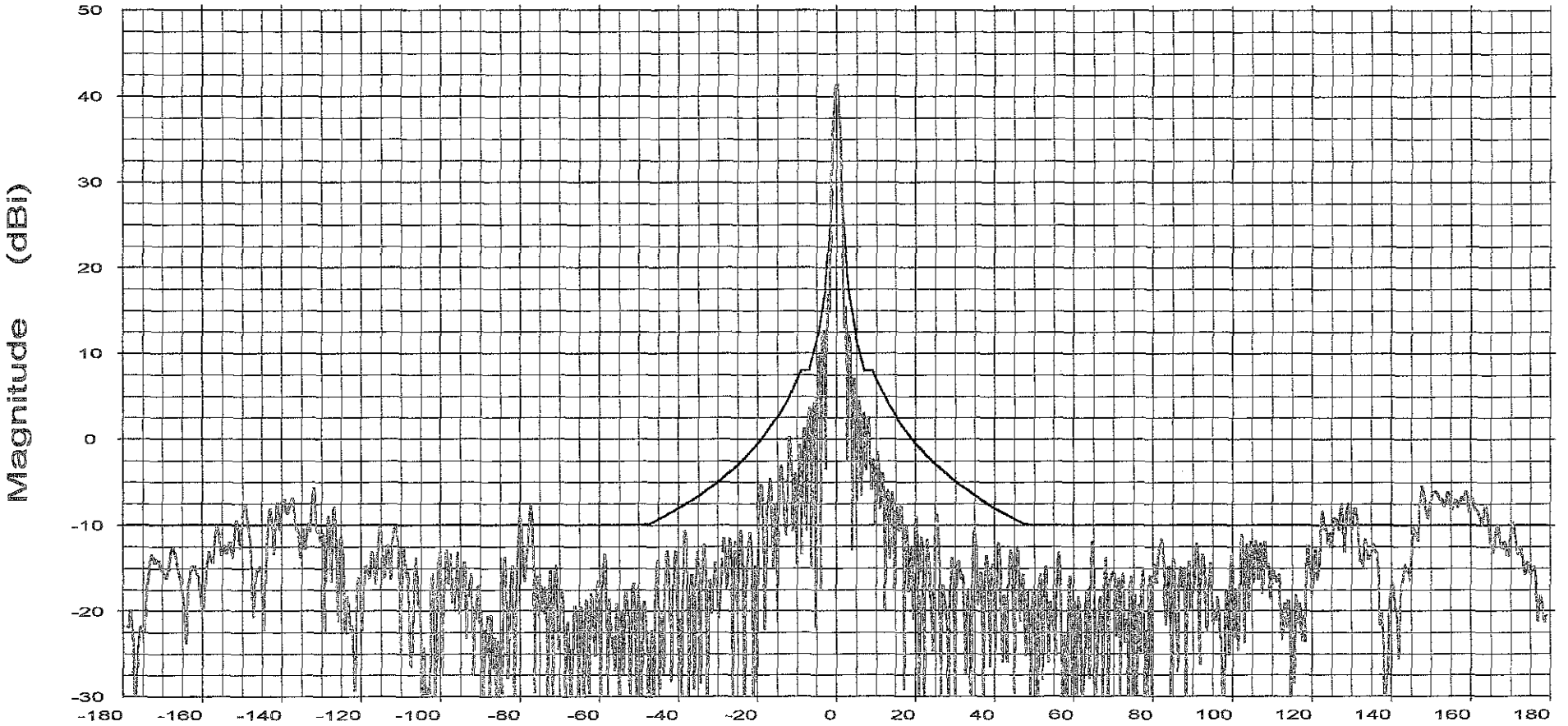
File: See Legend

Prodelin 2.4 Meter 4-Pc. Receive Transmit Antenna System
Series 1244 / C-Band Circular

Frequency : 5.850 GHz

Operator: D. Lutz
Ser. no.: 24
Channel: test

Tx pol: RHCP Rx pol: RHCP



Sidelobe Envelope: 29−25Log(Theta)~1.0 to 7 Deg
+8 dBi~7 to 9.2 Deg | 32−25Log(Theta)~9.2 to 48 Deg
−10 dBi~48 to 180 Deg

Overlays	Cal. file	units	Beam Peak Deg	Beam Peak dB
065113.DAT-ant_under_test———	065113.DAT	dBi	-0.10	41.42

Prodelin Corporation
Riverbend Test Range
Claremont NC