Exhibit A- Radiation Hazard Analysis

Cobham SATCOM
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Maximum Safe RF Exposure Power Levels

Antenna Diameter Meters	Antenna Area cm^2	Typical BUC Power Watts	Peak Power Density mW/cm^2	Nominal Power Density mW/cm^2	Max Safe BUC Power Watts	Peak Power Density mW/cm^2	Nominal Power Density mW/cm^2
0.6	2,827	5	1.8	0.1	25	8.8	0.6
1	7,854	8	1.0	0.1	75	9.5	0.6
1.2	11,310	25	2.2	0.1	100	8.8	0.6
1.5	17,671	25	1.4	0.1	150	8.5	0.5
1.8	25,447	25	1.0	0.1	250	9.8	0.6
2	31,416	50	1.6	0.1	300	9.5	0.6
2.4	45,239	75	1.7	0.1	450	9.9	0.6
3.6	101,788	100	1.0	0.1	1000	9.8	0.6
8797 (2.0)	30,500	50	1.6	0.1	300	9.8	0.6
9797 (2.4)	42,450	100	2.4	0.1	400	9.4	0.6

Notes:
The **'Peak Power Density'** values shown above assume a 100 percent duty cycle modulation of the RF power amplifier (BUC) at its maximum possible output power. No satellite network is ever operated at this extreme level. The **'Nominal Power Density'** values shown above, represent operation with a 10 percent duty cycle modulation and a 2 dB power backoff (0.1 x 0.63). These are realistic values for operation within a network that accommodates multiple users.

The FCC has defined, in document 'OET Bulletin 65', the maximum safe exposure level for controlled environments to be 5 mW/cm^2 and the maximum safe exposure level for uncontrolled environments to be 1 mW/cm^2. Clearly, the **'Typical BUC Power'** installations meet this requirement with a safety margin of 10. Furthermore, any system equipped with a BUC or RF power amplifier equal to or less than the **'Max Safe BUC Power'** stated above, is guaranteed to be safe outside the confines of the radome walls.

By contrast, an analog cellular telephone, with a peak power output of 2 Watts produces a power density, averaged over the area of your head of 20 mW/cm^2. Localized power densities, i.e. next to your ear, can approach 200 mW/cm^2. Digital cellular telephones typically operate with a duty cycle between 1 and 5 percent making the averaged power density equal to or slightly below the FCC defined safe level. Compared to the table values above, a cellular telephone produces between 10 and 100 times the RF exposure level of a typical Sea Tel satellite terminal.

Peter G. Blaney
Chief Engineer, Sea Tel Products
Cobham SATCOM, Marine Systems

Doc: 130856_B

Exhibit B – Declaration of Peter Blaney, Chief Engeneer of Cobham SATCOM, Sea Tel Inc.

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Declaration of Cobham SATCOM, Sea Tel, Inc.

1. Cobham SATCOM - Marine Systems, Sea Tel Products designs, develops, manufactures and services marine stabilized antenna systems for satellite communication at sea. These products are in turn used by our customers as part of their Ku-band Earth Station on Vessels (ESV) networks.
2. FCC regulation 47 C.F.R. § 25.222 defines the provisions for blanket licensing of ESV antennas operating in the Ku Band. This declaration covers the requirements for meeting § 25.222 (a)(1) by the demonstrations outlined in paragraphs (b)(1)(i) and (b)(1)(iii). The requirements for meeting § 25.222 (a)(3)-(a)(7) are left to the applicant. The paragraph numbers in this declaration refer to the 2009 version of FCC 47 C.F.R. § 25.222.
3. Sea Tel hereby declares that the antennas listed below will meet the off-axis EIRP spectral density requirements of § 25.222 (a)(1)(i) with an N value of 1, when the following Input Power spectral density limitations are met:

0.6 Meter Ku Band, Models 2406 and USAT-24 are limited to	-21.6 dBW/4kHz
0.75 Meter Ku Band, Model USAT-30 is limited to	-21.6 dBW/4kHz
1.0 Meter Ku Band, Models 4003/4006/4009/4010 are limited to	-16.3 dBW/4kHz
1.2 Meter Ku Band, Models 4996/5009/5010 are limited to	-14.0 dBW/4kHz
1.5 Meter Ku Band, Models 6006/6009 are limited to	-14.0 dBW/4kHz
2.4 Meter Ku Band, Model 9797 is limited to	-14.0 dBW/4kHz

4. Sea Tel hereby declares that the antennas referenced in paragraph 3 above, will maintain a stabilization pointing accuracy of better than 0.2 degrees under specified ship motion conditions, thus meeting the requirements of § 25.222 (a)(1)(ii).
5. Sea Tel hereby declares that the antennas referenced in paragraph 3 above, will automatically cease transmission within 100 milliseconds if the pointing error should exceed 0.5 degrees and will not resume transmission until the error drops below 0.2 degrees, thus meeting the requirements of § 25.222 (a)(1)(iii).
6. Sea Tel maintains all relevant test data, which is available upon request, to verify these declarations.

Executed on: 7/28/10

By:

Peter G. Blaney
Chief Engineer, Sea Tel Products
Cobham SATCOM, Marine Systems

Document Number 130445 rev E

Exhibit C- EIRP Density Tables

Cobham SATCOM, Sea Tel Products

1.0m EIRPsd Data Table

Co Pol Azimuth, -10 to +10 Degrees @ 0.1 deg (A)

14.25 GHz @ -16.3 dBW / 4 kHz

Angle	EIRPsd	Mask
Degrees	dBW/4kHz	dBW/4kHz
-10.0	-20.2	-7.0
-9.9	-18.8	-6.9
-9.8	-17.5	-6.8
-9.7	-16.8	-6.7
-9.6	-16.2	-6.6
-9.5	-16.0	-6.4
-9.4	-16.1	-6.3
-9.3	-16.2	-6.2
-9.2	-16.3	-6.1
-9.1	-16.4	-6.0
-9.0	-16.7	-6.0
-8.9	-17.0	-6.0
-8.8	-17.9	-6.0
-8.7	-18.7	-6.0
-8.6	-19.4	-6.0
-8.5	-19.8	-6.0
-8.4	-19.9	-6.0
-8.3	-19.9	-6.0
-8.2	-19.9	-6.0
-8.1	-19.6	-6.0
-8.0	-18.6	-6.0
-7.9	-17.6	-6.0
-7.8	-16.9	-6.0
-7.7	-16.3	-6.0
-7.6	-15.9	-6.0
-7.5	-14.8	-6.0
-7.4	-13.4	-6.0
-7.3	-12.2	-6.0
-7.2	-11.2	-6.0
-7.1	-10.5	-6.0
-7.0	-10.1	-6.0
-6.9	-9.9	-6.0
-6.8	-10.1	-5.8
-6.7	-10.6	-5.7
-6.6	-11.4	-5.5
-6.5	-13.0	-5.3
-6.4	-15.7	-5.2
-6.3	-18.6	-5.0
-6.2	-22.1	-4.8
-6.1	-22.6	-4.6
-6.0	-21.4	-4.5
-5.9	-20.4	-4.3
-5.8	-19.9	-4.1
-5.7	-19.3	-3.9
-5.6	-17.6	-3.7
-5.5	-15.3	-3.5
-5.4	-12.8	-3.3
-5.3	-10.7	-3.1
-5.2	-8.9	-2.9
-5.1	-7.3	-2.7
-5.0	-6.3	-2.5
-4.9	-5.6	-2.3
-4.8	-5.1	-2.0
-4.7	-4.9	-1.8
-4.6	-4.8	-1.6
-4.5	-4.7	-1.3
-4.4	-4.9	-1.1
-4.3	-5.2	-0.8

14.25 GHz @ -16.3 dBW / 4 kHz

Angle	EIRPsd	Mask
Degrees	dBW/4kHz	dBW/4kHz
0.0	24.4	
0.1	24.3	
0.2	24.1	
0.3	23.8	
0.4	23.4	
0.5	22.9	
0.6	22.3	
0.7	21.3	
0.8	20.5	
0.9	19.4	
1.0	18.0	
1.1	16.8	
1.2	14.8	
1.3	12.7	
1.4	10.4	
1.5	7.0	10.6
1.6	3.2	9.9
1.7	-2.9	9.2
1.8	-18.1	8.6
1.9	-7.7	8.0
2.0	-1.3	7.5
2.1	1.1	6.9
2.2	2.5	6.4
2.3	3.4	6.0
2.4	3.6	5.5
2.5	3.3	5.1
2.6	2.6	4.6
2.7	1.9	4.2
2.8	0.8	3.8
2.9	-0.2	3.4
3.0	-1.2	3.1
3.1	-2.4	2.7
3.2	-3.4	2.4
3.3	-4.5	2.0
3.4	-5.6	1.7
3.5	-6.6	1.4
3.6	-7.2	1.1
3.7	-7.5	0.8
3.8	-7.3	0.5
3.9	-6.6	0.2
4.0	-5.9	-0.1
4.1	-5.0	-0.3
4.2	-4.3	-0.6
4.3	-4.0	-0.8
4.4	-4.0	-1.1
4.5	-4.2	-1.3
4.6	-4.5	-1.6
4.7	-4.8	-1.8
4.8	-5.2	-2.0
4.9	-5.8	-2.3
5.0	-6.7	-2.5
5.1	-7.7	-2.7
5.2	-9.2	-2.9
5.3	-10.5	-3.1
5.4	-11.9	-3.3
5.5	-13.7	-3.5
5.6	-15.2	-3.7
5.7	-17.6	-3.9

Cobham SATCOM, Sea Tel Products

1.0m EIRPsd Data Table

Co Pol Azimuth, -10 to +10 Degrees @ 0.1 deg (A)

-4.2	-5.7	-0.6
-4.1	-6.6	-0.3
-4.0	-7.6	-0.1
-3.9	-8.6	0.2
-3.8	-9.7	0.5
-3.7	-10.4	0.8
-3.6	-10.7	1.1
-3.5	-10.3	1.4
-3.4	-9.6	1.7
-3.3	-7.9	2.0
-3.2	-6.0	2.4
-3.1	-4.3	2.7
-3.0	-2.3	3.1
-2.9	-0.8	3.4
-2.8	0.7	3.8
-2.7	1.9	4.2
-2.6	2.6	4.6
-2.5	3.2	5.1
-2.4	3.2	5.5
-2.3	2.9	6.0
-2.2	1.7	6.4
-2.1	0.2	6.9
-2.0	-3.5	7.5
-1.9	-11.3	8.0
-1.8	-6.5	8.6
-1.7	1.8	9.2
-1.6	6.2	9.9
-1.5	9.3	10.6
-1.4	12.3	
-1.3	14.2	
-1.2	16.1	
-1.1	17.6	
-1.0	18.8	
-0.9	20.1	
-0.8	21.0	
-0.7	21.9	
-0.6	22.6	
-0.5	23.1	
-0.4	23.6	
-0.3	24.0	
-0.2	24.2	
-0.1	24.4	
0.0	24.4	

5.8	-21.5	-4.1
5.9	-26.3	-4.3
6.0	-27.0	-4.5
6.1	-21.2	-4.6
6.2	-17.7	-4.8
6.3	-15.5	-5.0
6.4	-14.4	-5.2
6.5	-13.7	-5.3
6.6	-13.3	-5.5
6.7	-12.8	-5.7
6.8	-12.0	-5.8
6.9	-11.4	-6.0
7.0	-11.1	-6.1
7.1	-11.2	-6.0
7.2	-11.4	-6.0
7.3	-11.9	-6.0
7.4	-12.4	-6.0
7.5	-12.9	-6.0
7.6	-14.3	-6.0
7.7	-16.2	-6.0
7.8	-19.3	-6.0
7.9	-23.8	-6.0
8.0	-27.6	-6.0
8.1	-26.7	-6.0
8.2	-23.6	-6.0
8.3	-21.9	-6.0
8.4	-20.6	-6.0
8.5	-20.1	-6.0
8.6	-19.7	-6.0
8.7	-19.6	-6.0
8.8	-19.8	-6.0
8.9	-20.0	-6.0
9.0	-20.0	-6.0
9.1	-19.4	-6.0
9.2	-18.6	-6.0
9.3	-17.5	-6.2
9.4	-16.7	-6.3
9.5	-16.3	-6.4
9.6	-16.3	-6.6
9.7	-17.0	-6.7
9.8	-18.3	-6.8
9.9	-20.0	-6.9
10.0	-22.8	-7.0

Cobham SATCOM, Sea Tel Products

1.0m EIRPsd Data Table

Cross Pol Azimuth, -10 to +10 Degrees @ 0.1 deg (C)

14.25 GHz @ -16.3 dBW / 4 kHz

Angle Degrees	EIRPsd dBW/4kHz	Mask dBW/4kHz
-10.0	-36.3	-16.0
-9.9	-33.3	-16.0
-9.8	-32.9	-16.0
-9.7	-33.8	-16.0
-9.6	-34.3	-16.0
-9.5	-36.5	-16.0
-9.4	-35.4	-16.0
-9.3	-33.9	-16.0
-9.2	-35.8	-16.0
-9.1	-33.5	-16.0
-9.0	-30.8	-16.0
-8.9	-33.3	-16.0
-8.8	-37.2	-16.0
-8.7	-28.1	-16.0
-8.6	-30.6	-16.0
-8.5	-36.5	-16.0
-8.4	-35.8	-16.0
-8.3	-36.1	-16.0
-8.2	-31.4	-16.0
-8.1	-31.8	-16.0
-8.0	-31.8	-16.0
-7.9	-33.5	-16.0
-7.8	-30.1	-16.0
-7.7	-29.4	-16.0
-7.6	-31.7	-16.0
-7.5	-30.6	-16.0
-7.4	-34.7	-16.0
-7.3	-30.5	-16.0
-7.2	-33.1	-16.0
-7.1	-34.8	-16.0
-7.0	-36.4	-16.0
-6.9	-30.2	-16.0
-6.8	-33.3	-15.8
-6.7	-30.1	-15.7
-6.6	-31.0	-15.5
-6.5	-29.1	-15.3
-6.4	-31.4	-15.2
-6.3	-31.0	-15.0
-6.2	-29.4	-14.8
-6.1	-29.6	-14.6
-6.0	-31.7	-14.5
-5.9	-37.4	-14.3
-5.8	-32.4	-14.1
-5.7	-37.7	-13.9
-5.6	-32.3	-13.7
-5.5	-36.5	-13.5
-5.4	-33.0	-13.3
-5.3	-29.7	-13.1
-5.2	-33.1	-12.9
-5.1	-35.0	-12.7
-5.0	-33.6	-12.5
-4.9	-35.1	-12.3
-4.8	-35.1	-12.0
-4.7	-47.7	-11.8
-4.6	-39.6	-11.6
-4.5	-49.3	-11.3
-4.4	-34.4	-11.1
-4.3	-55.7	-10.8

14.25 GHz @ -16.3 dBW / 4 kHz

Angle Degrees	EIRPsd dBW/4kHz	Mask dBW/4kHz
0.0	-30.8	
0.1	-28.8	
0.2	-21.9	
0.3	-20.0	
0.4	-19.4	
0.5	-18.8	
0.6	-18.4	
0.7	-17.4	
0.8	-18.4	
0.9	-18.4	
1.0	-19.1	
1.1	-19.4	
1.2	-20.1	
1.3	-20.8	
1.4	-22.0	
1.5	-21.1	
1.6	-21.4	
1.7	-21.7	
1.8	-21.2	-1.4
1.9	-21.2	-2.0
2.0	-19.5	-2.5
2.1	-20.6	-3.1
2.2	-20.0	-3.6
2.3	-18.4	-4.0
2.4	-19.5	-4.5
2.5	-18.9	-4.9
2.6	-20.4	-5.4
2.7	-20.3	-5.8
2.8	-20.8	-6.2
2.9	-21.2	-6.6
3.0	-22.1	-6.9
3.1	-23.6	-7.3
3.2	-25.4	-7.6
3.3	-27.2	-8.0
3.4	-28.2	-8.3
3.5	-31.1	-8.6
3.6	-34.1	-8.9
3.7	-34.7	-9.2
3.8	-37.3	-9.5
3.9	-40.5	-9.8
4.0	-49.4	-10.1
4.1	-37.0	-10.3
4.2	-39.9	-10.6
4.3	-37.8	-10.8
4.4	-37.4	-11.1
4.5	-42.5	-11.3
4.6	-49.7	-11.6
4.7	-50.3	-11.8
4.8	-43.5	-12.0
4.9	-44.1	-12.3
5.0	-46.3	-12.5
5.1	-35.5	-12.7
5.2	-37.3	-12.9
5.3	-41.1	-13.1
5.4	-40.9	-13.3
5.5	-40.3	-13.5
5.6	-40.1	-13.7
5.7	-40.3	-13.9

Cobham SATCOM, Sea Tel Products

1.0m EIRPsd Data Table

Cross Pol Azimuth, -10 to +10 Degrees @ 0.1 deg (C)

-4.2	-38.6	-10.6
-4.1	-43.4	-10.3
-4.0	-41.3	-10.1
-3.9	-48.3	-9.8
-3.8	-45.8	-9.5
-3.7	-43.4	-9.2
-3.6	-33.4	-8.9
-3.5	-35.6	-8.6
-3.4	-29.9	-8.3
-3.3	-29.6	-8.0
-3.2	-26.9	-7.6
-3.1	-23.6	-7.3
-3.0	-24.0	-6.9
-2.9	-21.1	-6.6
-2.8	-21.2	-6.2
-2.7	-18.9	-5.8
-2.6	-19.4	-5.4
-2.5	-19.2	-4.9
-2.4	-19.0	-4.5
-2.3	-20.0	-4.0
-2.2	-19.7	-3.6
-2.1	-20.8	-3.1
-2.0	-22.7	-2.5
-1.9	-24.0	-2.0
-1.8	-22.0	-1.4
-1.7	-21.5	
-1.6	-18.2	
-1.5	-17.2	
-1.4	-15.2	
-1.3	-14.3	
-1.2	-13.2	
-1.1	-13.1	
-1.0	-13.4	
-0.9	-13.2	
-0.8	-13.0	
-0.7	-14.1	
-0.6	-14.7	
-0.5	-15.9	
-0.4	-17.7	
-0.3	-21.1	
-0.2	-25.9	
-0.1	-32.9	
0.0	-30.8	

5.8	-42.2	-14.1
5.9	-39.2	-14.3
6.0	-34.5	-14.5
6.1	-35.6	-14.6
6.2	-34.0	-14.8
6.3	-39.5	-15.0
6.4	-35.4	-15.2
6.5	-36.7	-15.3
6.6	-35.7	-15.5
6.7	-32.1	-15.7
6.8	-35.9	-15.8
6.9	-34.8	-16.0
7.0	-49.2	-16.0
7.1	-42.8	-16.0
7.2	-40.1	-16.0
7.3	-34.4	-16.0
7.4	-43.2	-16.0
7.5	-40.2	-16.0
7.6	-42.7	-16.0
7.7	-40.7	-16.0
7.8	-43.5	-16.0
7.9	-39.9	-16.0
8.0	-35.5	-16.0
8.1	-37.4	-16.0
8.2	-44.9	-16.0
8.3	-35.3	-16.0
8.4	-39.6	-16.0
8.5	-36.4	-16.0
8.6	-36.4	-16.0
8.7	-46.3	-16.0
8.8	-37.2	-16.0
8.9	-36.0	-16.0
9.0	-36.7	-16.0
9.1	-33.2	-16.0
9.2	-36.0	-16.0
9.3	-37.4	-16.0
9.4	-31.9	-16.0
9.5	-36.0	-16.0
9.6	-35.6	-16.0
9.7	-36.5	-16.0
9.8	-47.3	-16.0
9.9	-40.2	-16.0
10.0	-35.7	-16.0

Cobham SATCOM, Sea Tel Products

1.0m EIRPsd Data Table

Co Pol Azimuth, -180 to +180 Degrees @ 1.0 deg (A)

14.25 GHz @ -16.3 dBW / 4 kHz

Angle	EIRPsd	Mask
Degrees	dBW/4kHz	dBW/4kHz
-180.0	-41.9	-24.0
-179.0	-45.1	-24.0
-178.0	-44.0	-24.0
-177.0	-51.5	-24.0
-176.0	-44.9	-24.0
-175.0	-49.7	-24.0
-174.0	-41.5	-24.0
-173.0	-45.4	-24.0
-172.0.	-49.6	-24.0
-171.0	-49.0	-24.0
-170.0	-44.6	-24.0
-169.0	-47.3	-24.0
-168.0	-44.9	-24.0
-167.0	-44.3	-24.0
-166.0	-50.7	-24.0
-165.0	-46.9	-24.0
-164.0	-43.6	-24.0
-163.0	-50.0	-24.0
-162.0	-44.9	-24.0
-161.0	-46.7	-24.0
-160.0	-42.9	-24.0
-159.0	-44.5	-24.0
-158.0	-44.0	-24.0
-157.0	-45.6	-24.0
-156.0	-43.4	-24.0
-155.0	-44.9	-24.0
-154.0	-42.5	-24.0
-153.0	-43.7	-24.0
-152.0	-44.2	-24.0
-151.0	-44.5	-24.0
-150.0	-43.3	-24.0
-149.0	-45.8	-24.0
-148.0	-42.9	-24.0
-147.0	-43.5	-24.0
-146.0	-44.3	-24.0
-145.0	-43.7	-24.0
-144.0	-42.7	-24.0
-143.0	-46.0	-24.0
-142.0	-42.9	-24.0
-141.0	-42.4	-24.0
-140.0	-43.5	-24.0
-139.0	-44.8	-24.0
-138.0	-42.5	-24.0
-137.0	-46.2	-24.0
-136.0	-43.7	-24.0
-135.0	-44.3	-24.0
-134.0	-47.1	-24.0
-133.0	-41.9	-24.0
-132.0	-44.0	-24.0
-131.0	-45.3	-24.0
-130.0	-42.9	-24.0
-129.0	-44.7	-24.0
-128.0	-46.2	-24.0
-127.0	-42.7	-24.0
-126.0	-42.6	-24.0
-125.0	-48.0	-24.0
-124.0	-41.3	-24.0
-123.0	-44.0	-24.0
-122.0	-45.6	-24.0

14.25 GHz @ -16.3 dBW / 4 kHz

Angle	EIRPsd	Mask
Degrees	dBW/4kHz	dBW/4kHz
0.0	24.4	
1.0	20.0	
2.0	2.9	7.5
3.0	0.3	3.1
4.0	-4.2	-0.1
5.0	-5.5	-2.5
6.0	-16.6	-4.5
7.0	-11.1	-6.1
8.0	-21.5	-6.0
9.0	-18.0	-6.0
10.0	-19.2	-7.0
11.0	-30.5	-8.0
12.0	-17.4	-9.0
13.0	-21.4	-9.8
14.0	-19.8	-10.7
15.0	-22.0	-11.4
16.0	-35.1	-12.1
17.0	-26.3	-12.8
18.0	-28.2	-13.4
19.0	-30.4	-14.0
20.0	-40.4	-14.5
21.0	-32.2	-15.1
22.0	-27.0	-15.6
23.0	-35.3	-16.0
24.0	-31.5	-16.5
25.0	-21.8	-16.9
26.0	-19.4	-17.4
27.0	-21.8	-17.8
28.0	-26.2	-18.2
29.0	-26.6	-18.6
30.0	-26.3	-18.9
31.0	-28.6	-19.3
32.0	-23.2	-19.6
33.0	-22.2	-20.0
34.0	-28.4	-20.3
35.0	-30.3	-20.6
36.0	-25.7	-20.9
37.0	-24.4	-21.2
38.0	-24.6	-21.5
39.0	-24.2	-21.8
40.0	-25.6	-22.1
41.0	-23.9	-22.3
42.0	-23.4	-22.6
43.0	-24.0	-22.8
44.0	-29.9	-23.1
45.0	-32.5	-23.3
46.0	-28.4	-23.6
47.0	-28.9	-23.8
48.0	-32.1	-24.0
49.0	-43.9	-24.0
50.0	-37.0	-24.0
51.0	-34.3	-24.0
52.0	-37.0	-24.0
53.0	-36.2	-24.0
54.0	-32.4	-24.0
55.0	-28.5	-24.0
56.0	-27.9	-24.0
57.0	-28.5	-24.0
58.0	-29.4	-24.0

Cobham SATCOM, Sea Tel Products

1.0m EIRPsd Data Table

Co Pol Azimuth, -180 to +180 Degrees @ 1.0 deg (A)

-121.0	-43.2	-24.0
-120.0	-45.1	-24.0
-119.0	-51.5	-24.0
-118.0	-43.7	-24.0
-117.0	-41.7	-24.0
-116.0	-47.7	-24.0
-115.0	-41.8	-24.0
-114.0	-43.5	-24.0
-113.0	-47.4	-24.0
-112.0	-43.2	-24.0
-111.0	-42.5	-24.0
-110.0	-51.6	-24.0
-109.0	-41.1	-24.0
-108.0	-41.2	-24.0
-107.0	-51.7	-24.0
-106.0	-39.7	-24.0
-105.0	-39.2	-24.0
-104.0	-44.2	-24.0
-103.0	-40.8	-24.0
-102.0	-38.1	-24.0
-101.0	-40.3	-24.0
-100.0	-50.8	-24.0
-99.0	-40.0	-24.0
-98.0	-38.1	-24.0
-97.0	-40.4	-24.0
-96.0	-45.1	-24.0
-95.0	-36.8	-24.0
-94.0	-35.9	-24.0
-93.0	-40.7	-24.0
-92.0	-40.5	-24.0
-91.0	-34.6	-24.0
-90.0	-34.3	-24.0
-89.0	-38.4	-24.0
-88.0	-39.6	-24.0
-87.0	-33.2	-24.0
-86.0	-32.4	-24.0
-85.0	-35.1	-24.0
-84.0	-40.8	-24.0
-83.0	-35.0	-24.0
-82.0	-31.2	-24.0
-81.0	-31.2	-24.0
-80.0	-34.5	-24.0
-79.0	-42.6	-24.0
-78.0	-34.4	-24.0
-77.0	-30.9	-24.0
-76.0	-30.1	-24.0
-75.0	-32.0	-24.0
-74.0	-39.3	-24.0
-73.0	-38.3	-24.0
-72.0	-33.0	-24.0
-71.0	-32.6	-24.0
-70.0	-34.1	-24.0
-69.0	-44.2	-24.0
-68.0	-45.0	-24.0
-67.0	-42.5	-24.0
-66.0	-41.3	-24.0
-65.0	-43.1	-24.0
-64.0	-36.3	-24.0
-63.0	-34.9	-24.0
-62.0	-34.9	-24.0
-61.0	-34.4	-24.0
-60.0	-34.4	-24.0
59.0	-31.0	-24.0
60.0	-32.2	-24.0
61.0	-31.6	-24.0
62.0	-32.3	-24.0
63.0	-32.7	-24.0
64.0	-33.7	-24.0
65.0	-39.3	-24.0
66.0	-41.7	-24.0
67.0	-42.1	-24.0
68.0	-48.3	-24.0
69.0	-42.7	-24.0
70.0	-34.7	-24.0
71.0	-32.3	-24.0
72.0	-33.3	-24.0
73.0	-36.4	-24.0
74.0	-40.8	-24.0
75.0	-33.9	-24.0
76.0	-31.4	-24.0
77.0	-31.7	-24.0
78.0	-35.6	-24.0
79.0	-47.1	-24.0
80.0	-35.9	-24.0
81.0	-32.7	-24.0
82.0	-32.9	-24.0
83.0	-35.7	-24.0
84.0	-46.6	-24.0
85.0	-35.9	-24.0
86.0	-34.1	-24.0
87.0	-35.3	-24.0
88.0	-41.6	-24.0
89.0	-39.9	-24.0
90.0	-35.6	-24.0
91.0	-35.3	-24.0
92.0	-42.0	-24.0
93.0	-41.5	-24.0
94.0	-37.7	-24.0
95.0	-39.0	-24.0
96.0	-47.9	-24.0
97.0	-41.6	-24.0
98.0	-39.8	-24.0
99.0	-42.0	-24.0
100.0	-53.4	-24.0
101.0	-41.4	-24.0
102.0	-39.9	-24.0
103.0	-45.5	-24.0
104.0	-45.8	-24.0
105.0	-42.1	-24.0
106.0	-42.8	-24.0
107.0	-55.2	-24.0
108.0	-44.4	-24.0
109.0	-43.7	-24.0
110.0	-51.9	-24.0
111.0	-44.9	-24.0
112.0	-42.2	-24.0
113.0	-53.5	-24.0
114.0	-42.4	-24.0
115.0	-43.2	-24.0
116.0	-48.0	-24.0
117.0	-42.7	-24.0
118.0	-45.1	-24.0
119.0	-48.0	-24.0
120.0	-46.1	-24.0

Cobham SATCOM, Sea Tel Products

1.0m EIRPsd Data Table

Co Pol Azimuth, -180 to +180 Degrees @ 1.0 deg (A)

-59.0	-32.1	-24.0
-58.0	-29.6	-24.0
-57.0	-28.8	-24.0
-56.0	-27.6	-24.0
-55.0	-28.6	-24.0
-54.0	-31.6	-24.0
-53.0	-36.4	-24.0
-52.0	-37.3	-24.0
-51.0	-33.4	-24.0
-50.0	-34.5	-24.0
-49.0	-38.6	-24.0
-48.0	-32.7	-24.0
-47.0	-29.4	-23.8
-46.0	-28.9	-23.6
-45.0	-32.8	-23.3
-44.0	-30.7	-23.1
-43.0	-24.4	-22.8
-42.0	-24.2	-22.6
-41.0	-25.2	-22.3
-40.0	-26.2	-22.1
-39.0	-24.5	-21.8
-38.0	-24.1	-21.5
-37.0	-24.4	-21.2
-36.0	-26.0	-20.9
-35.0	-30.6	-20.6
-34.0	-27.7	-20.3
-33.0	-22.9	-20.0
-32.0	-24.5	-19.6
-31.0	-31.5	-19.3
-30.0	-26.7	-18.9
-29.0	-27.2	-18.6
-28.0	-25.4	-18.2
-27.0	-21.4	-17.8
-26.0	-19.7	-17.4
-25.0	-23.0	-16.9
-24.0	-30.2	-16.5
-23.0	-34.3	-16.0
-22.0	-30.9	-15.6
-21.0	-33.4	-15.1
-20.0	-35.6	-14.5
-19.0	-29.6	-14.0
-18.0	-27.1	-13.4
-17.0	-26.1	-12.8
-16.0	-33.5	-12.1
-15.0	-22.0	-11.4
-14.0	-20.1	-10.7
-13.0	-20.2	-9.8
-12.0	-17.5	-9.0
-11.0	-30.4	-8.0
-10.0	-17.2	-7.0
-9.0	-16.3	-6.0
-8.0	-16.6	-6.0
-7.0	-10.0	-6.0
-6.0	-19.6	-4.5
-5.0	-5.0	-2.5
-4.0	-6.2	-0.1
-3.0	1.3	3.1
-2.0	1.0	7.5
-1.0	21.5	
0.0	24.4	

121.0	-46.1	-24.0
122.0	-47.3	-24.0
123.0	-44.8	-24.0
124.0	-42.8	-24.0
125.0	-51.9	-24.0
126.0	-43.9	-24.0
127.0	-43.9	-24.0
128.0	-49.0	-24.0
129.0	-45.0	-24.0
130.0	-47.5	-24.0
131.0	-44.4	-24.0
132.0	-46.1	-24.0
133.0	-43.9	-24.0
134.0	-52.2	-24.0
135.0	-43.0	-24.0
136.0	-44.4	-24.0
137.0	-47.5	-24.0
138.0	-44.9	-24.0
139.0	-47.8	-24.0
140.0	-44.7	-24.0
141.0	-46.6	-24.0
142.0	-45.0	-24.0
143.0	-47.7	-24.0
144.0	-43.5	-24.0
145.0	-43.4	-24.0
146.0	-46.0	-24.0
147.0	-42.7	-24.0
148.0	-46.0	-24.0
149.0	-44.2	-24.0
150.0	-46.0	-24.0
151.0	-46.9	-24.0
152.0	-43.9	-24.0
153.0	-45.5	-24.0
154.0	-45.4	-24.0
155.0	-44.6	-24.0
156.0	-44.8	-24.0
157.0	-44.5	-24.0
158.0	-43.7	-24.0
159.0	-44.4	-24.0
160.0	-43.0	-24.0
161.0	-43.1	-24.0
162.0	-46.4	-24.0
163.0	-47.2	-24.0
164.0	-45.8	-24.0
165.0	-45.5	-24.0
166.0	-49.8	-24.0
167.0	-43.4	-24.0
168.0	-46.5	-24.0
169.0	-49.5	-24.0
170.0	-42.5	-24.0
171.0	-45.9	-24.0
172.0	-47.7	-24.0
173.0	-43.9	-24.0
174.0	-46.9	-24.0
175.0	-44.0	-24.0
176.0	-48.0	-24.0
177.0	-48.2	-24.0
178.0	-49.3	-24.0
179.0	-46.2	-24.0
180.0	-48.2	-24.0

Cobham SATCOM, Sea Tel Products

1.0m EIRPsd Data Table

Co Pol Elevation, 0 to +30 Degrees @ 0.1 / 0.5 deg (B)

14.25 GHz @ -16.3 dBW / 4 kHz

Angle	EIRPsd	Mask
Degrees	dBW/4kHz	dBW/4kHz
0.0	24.5	
0.1	24.5	
0.2	24.4	
0.3	24.2	
0.4	23.9	
0.5	23.5	
0.6	23.1	
0.7	22.5	
0.8	21.8	
0.9	21.1	
1.0	20.2	
1.1	19.0	
1.2	18.0	
1.3	16.5	
1.4	15.1	
1.5	13.4	
1.6	11.5	
1.7	9.3	
1.8	6.1	
1.9	2.8	
2.0	-2.1	
2.1	-12.7	
2.2	-11.9	
2.3	-5.1	
2.4	-1.9	
2.5	-0.6	
2.6	0.1	
2.7	0.3	
2.8	0.1	
2.9	-0.2	
3.0	-0.5	6.1
3.1	-0.9	5.7
3.2	-1.3	5.4
3.3	-1.8	5.0
3.4	-2.5	4.7
3.5	-3.2	4.4
3.6	-4.1	4.1
3.7	-5.1	3.8
3.8	-5.9	3.5
3.9	-6.7	3.2
4.0	-7.4	2.9
4.1	-7.8	2.7
4.2	-8.3	2.4
4.3	-8.6	2.2
4.4	-8.7	1.9
4.5	-8.6	1.7
4.6	-8.3	1.4
4.7	-7.7	1.2
4.8	-7.3	1.0
4.9	-6.9	0.7
5.0	-6.9	0.5
5.1	-7.3	0.3
5.2	-8.1	0.1
5.3	-9.8	-0.1
5.4	-11.8	-0.3
5.5	-14.3	-0.5
5.6	-16.6	-0.7

14.25 GHz @ -16.3 dBW / 4 kHz

Angle	EIRPsd	Mask
Degrees	dBW/4kHz	dBW/4kHz
10.0	-15.7	-7.0
10.5	-17.5	-7.5
11.0	-20.7	-8.0
11.5	-21.9	-8.5
12.0	-22.8	-9.0
12.5	-25.6	-9.4
13.0	-29.1	-9.8
13.5	-28.0	-10.3
14.0	-23.5	-10.7
14.5	-20.3	-11.0
15.0	-19.6	-11.4
15.5	-20.7	-11.8
16.0	-22.7	-12.1
16.5	-27.2	-12.4
17.0	-38.8	-12.8
17.5	-40.0	-13.1
18.0	-33.0	-13.4
18.5	-31.3	-13.7
19.0	-30.5	-14.0
19.5	-31.3	-14.3
20.0	-33.8	-14.5
20.5	-38.0	-14.8
21.0	-35.8	-15.1
21.5	-32.9	-15.3
22.0	-32.0	-15.6
22.5	-33.6	-15.8
23.0	-40.1	-16.0
23.5	-43.0	-16.3
24.0	-34.0	-16.5
24.5	-29.7	-16.7
25.0	-30.3	-16.9
25.5	-34.5	-17.2
26.0	-43.0	-17.4
26.5	-39.4	-17.6
27.0	-34.6	-17.8
27.5	-32.2	-18.0
28.0	-30.9	-18.2
28.5	-32.2	-18.4
29.0	-31.0	-18.6
29.5	-28.6	-18.7
30.0	-27.2	-18.9

Cobham SATCOM, Sea Tel Products

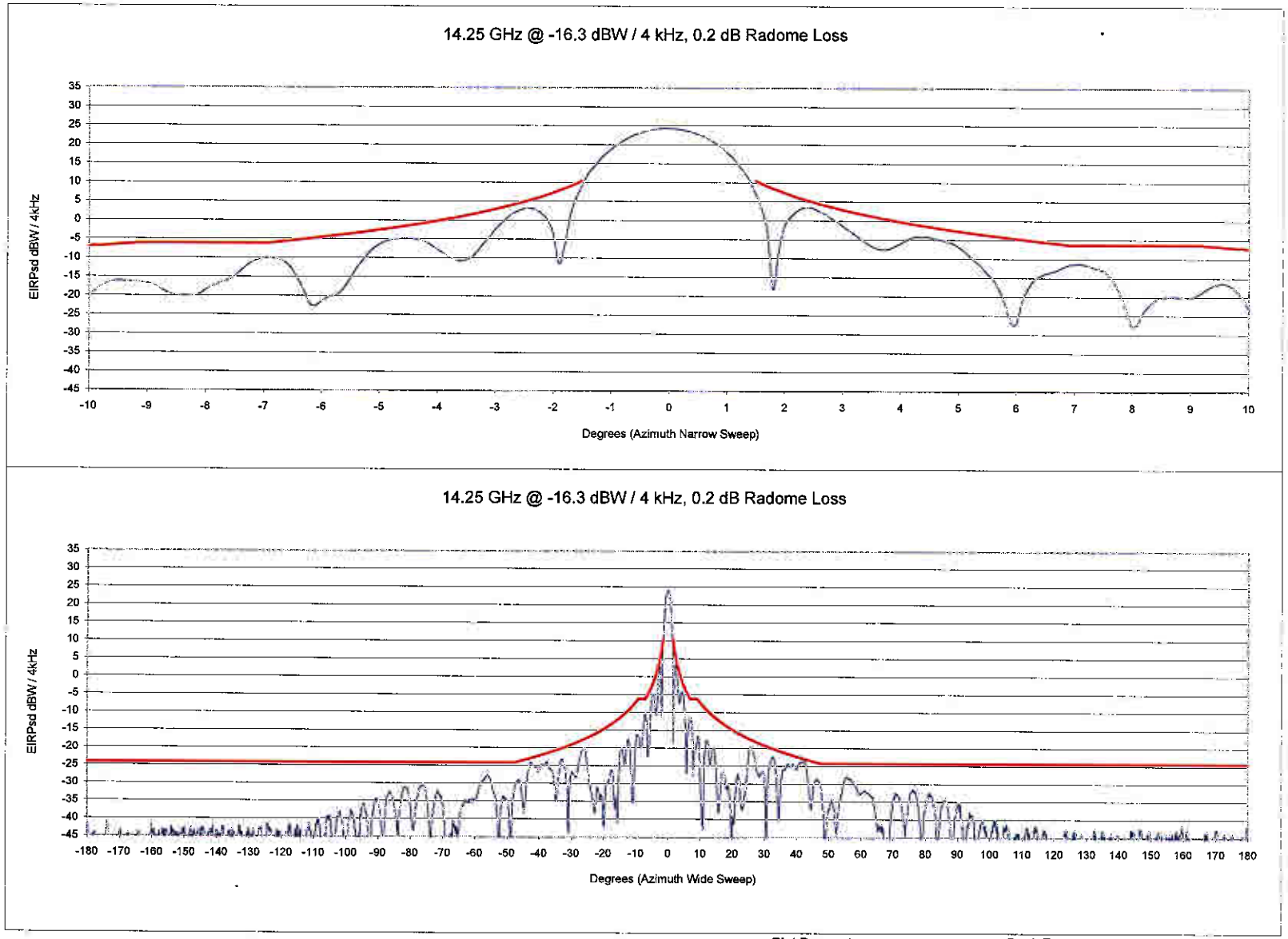
1.0m EIRPsd Data Table

Co Pol Elevation, 0 to +30 Degrees @ 0.1 / 0.5 deg (B)

5.7	-17.6	-0.9
5.8	-18.2	-1.1
5.9	-17.7	-1.3
6.0	-16.5	-1.5
6.1	-15.0	-1.6
6.2	-14.1	-1.8
6.3	-13.9	-2.0
6.4	-14.3	-2.2
6.5	-15.0	-2.3
6.6	-15.7	-2.5
6.7	-16.3	-2.7
6.8	-16.8	-2.8
6.9	-17.2	-3.0
7.0	-18.4	-3.1
7.1	-20.2	-3.3
7.2	-22.2	-3.4
7.3	-23.4	-3.6
7.4	-23.8	-3.7
7.5	-23.9	-3.9
7.6	-25.0	-4.0
7.7	-26.0	-4.2
7.8	-25.7	-4.3
7.9	-23.3	-4.4
8.0	-21.3	-4.6
8.1	-20.4	-4.7
8.2	-19.9	-4.8
8.3	-19.6	-5.0
8.4	-19.3	-5.1
8.5	-19.3	-5.2
8.6	-19.2	-5.4
8.7	-19.0	-5.5
8.8	-19.0	-5.6
8.9	-18.8	-5.7
9.0	-18.5	-5.9
9.1	-18.1	-6.0
9.2	-17.8	-6.1
9.3	-17.3	-6.2
9.4	-16.9	-6.3
9.5	-16.5	-6.4
9.6	-16.2	-6.6
9.7	-15.7	-6.7
9.8	-15.4	-6.8
9.9	-15.4	-6.9
10.0	-15.7	-7.0

Exhibit D – Antenna Patterns

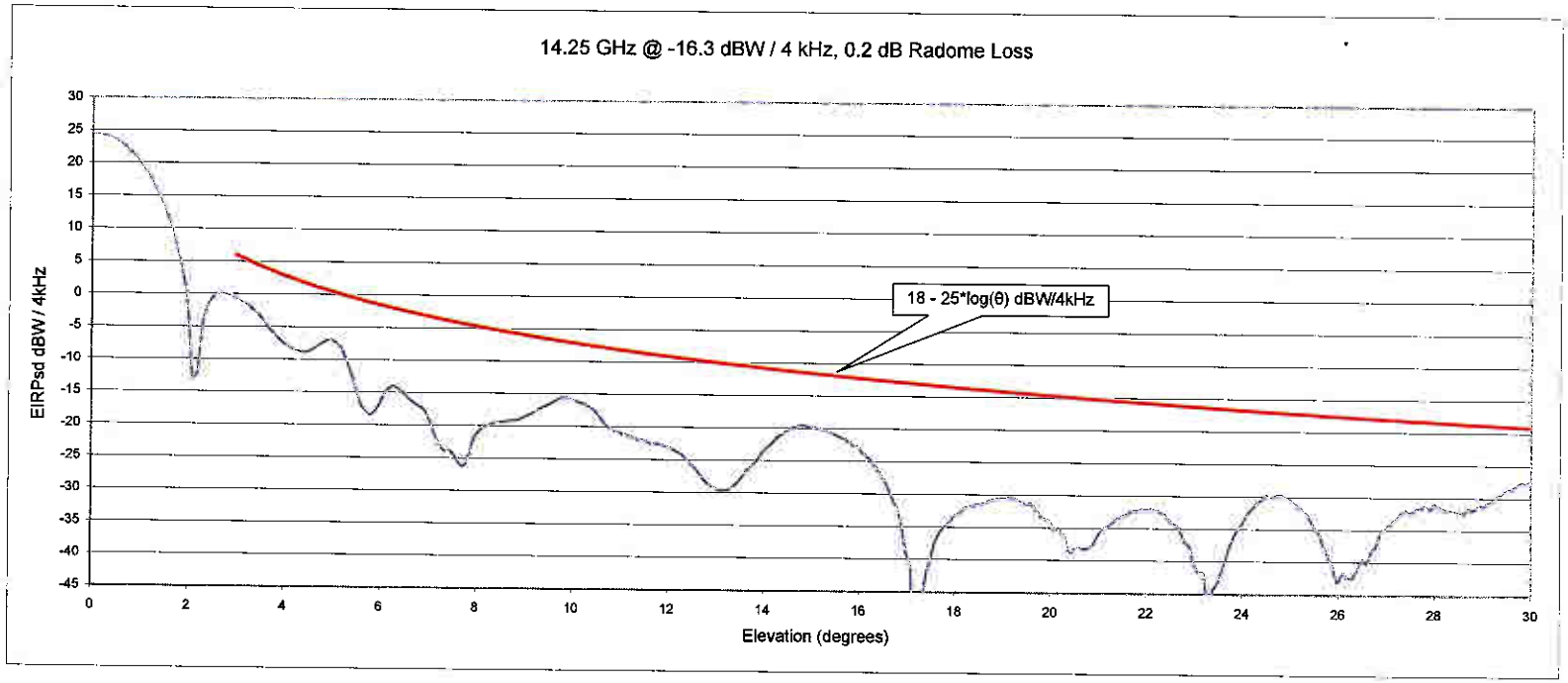
Cobham SATCOM, Sea Tel Products
1.0 m EIRPsd, HH Co-Pol, Azimuth, E-Plane (A)



File
D:\SEATEL\ACQUIREDDATA\AZ1425_40_H.MDB

Plot Parameters			Peak Excursions dB		
Input sd	**Gain**	**Cal Factor**	**1.5° to 7°**	**7° to 180°**	**% Over**
-16.3	40.88	55.82	-1.2	-0.7	0%

Cobham SATCOM, Sea Tel Products
1.0 meter EIRPsd, HH Co-Pol, Elevation, H-Plane (B)



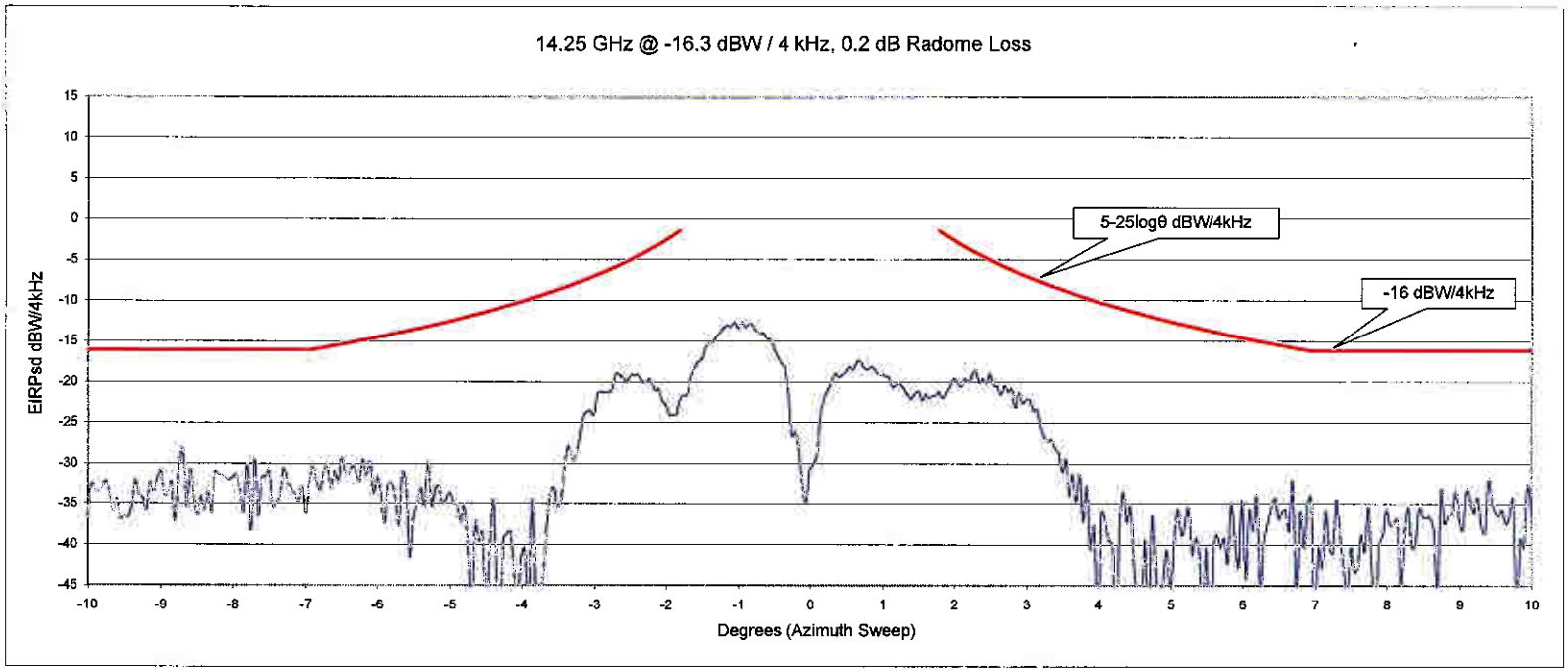
File
D:\SEATEL\ACQUIREDDATA\AZ1425_40_E_V.MDB

Plot Parameters		
Input sd	**Gain**	**Cal Factor**
-16.3	40.88	56.36

Peak Excursions dB	
-	**3° to 30°**
-	-6.59

% Over
0%

Cobnam SATCOM, Sea Tel Products
1.0 meter EIRPsd, VH X-Pol, Azimuth, E-Plane (C)

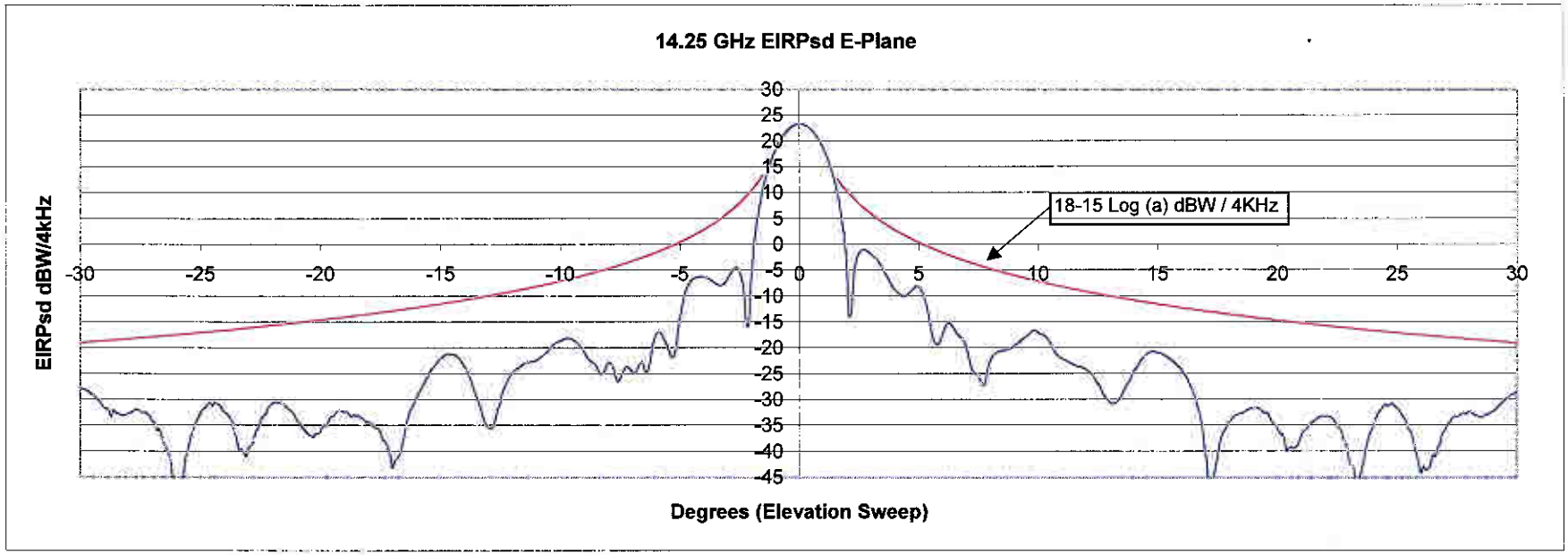


File:
E:\LOOPCANYON\ACQUIREDDATA\1425XAZ_HH_ND_2.MDB

Plot Parameters			Peak Excursions dB		
Pin sd	**Gain**	**Cal Factor**	**1.8° to 7°**	**7° to 180°**	**% Over**
-16.3	43.05	42.12	-13.09	-13.31	0.00

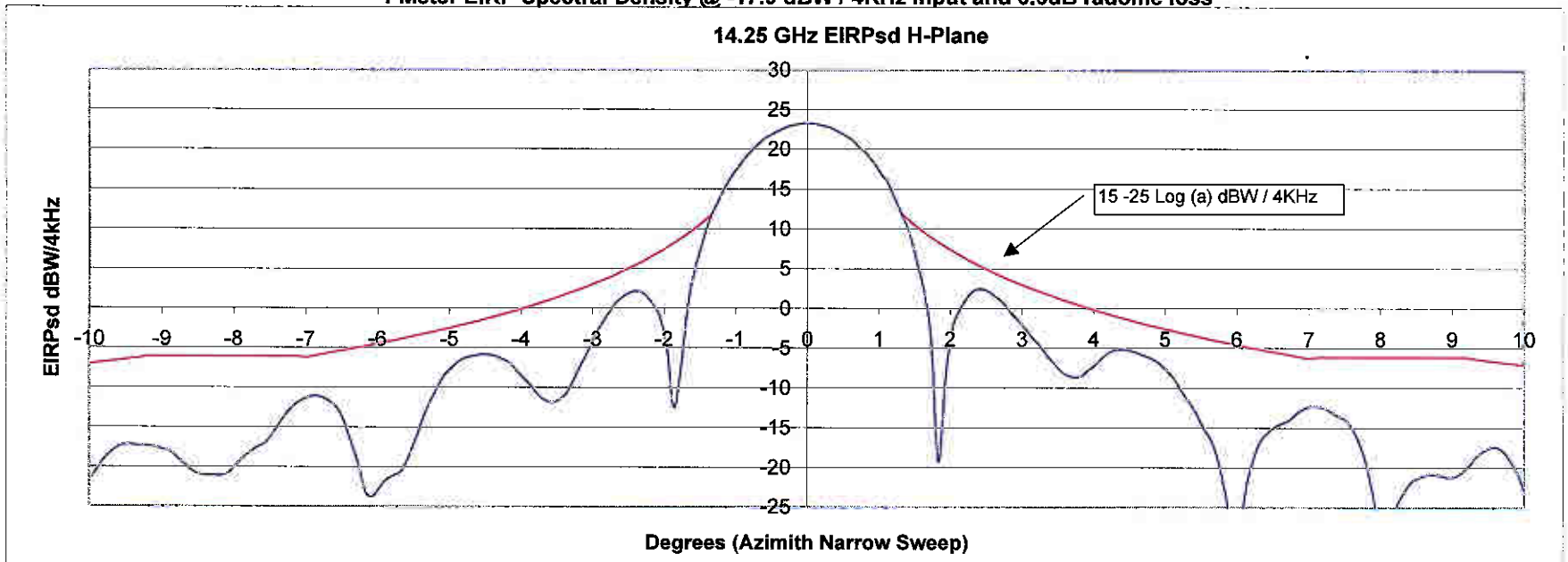
Sea Tel, Inc.

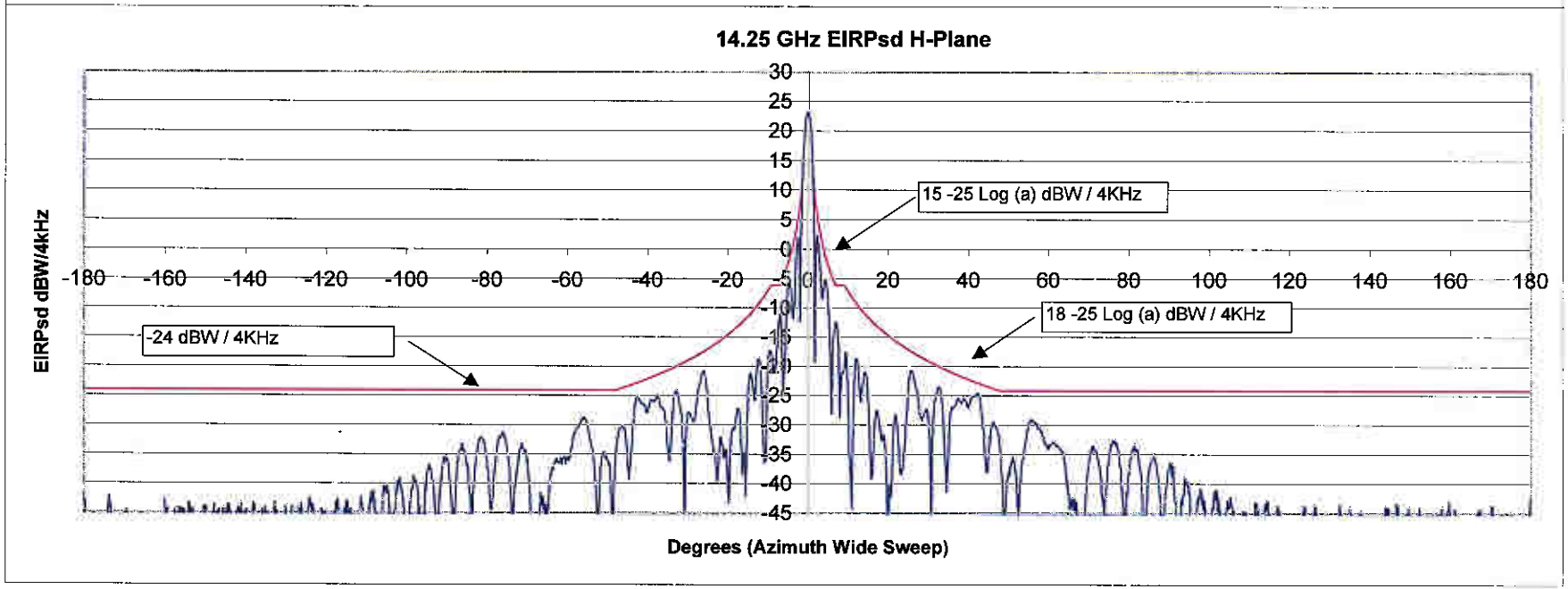
1 Meter EIRP Spectral Density @ -17.9 dBW / 4kHz input and 0.6 dB radome loss



Sea Tel, Inc.

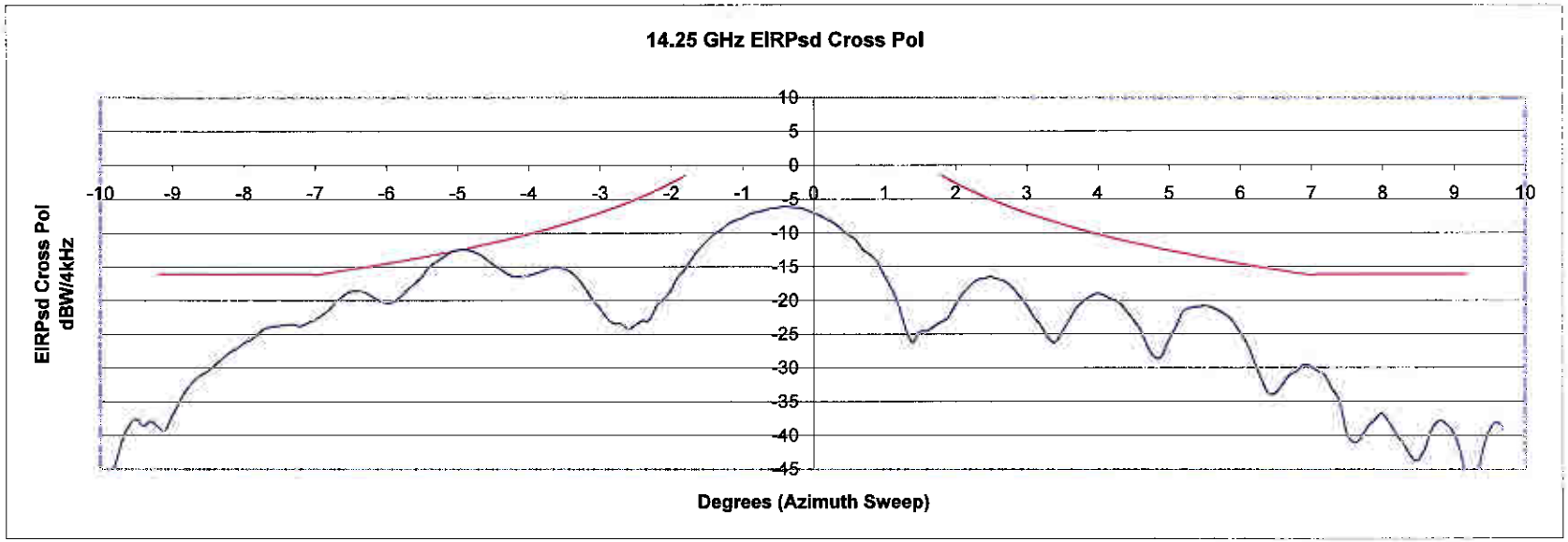
1 Meter EIRP Spectral Density @ -17.9 dBW / 4KHz input and 0.6dB radome loss





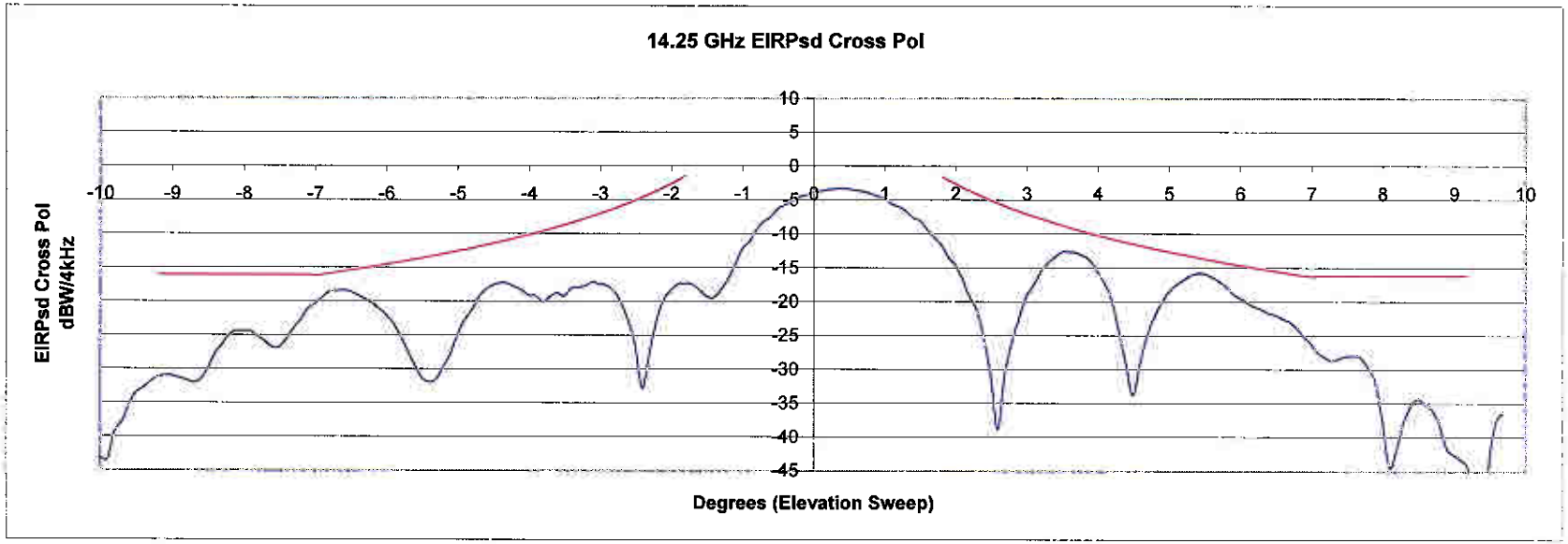
Sea Tel, Inc.

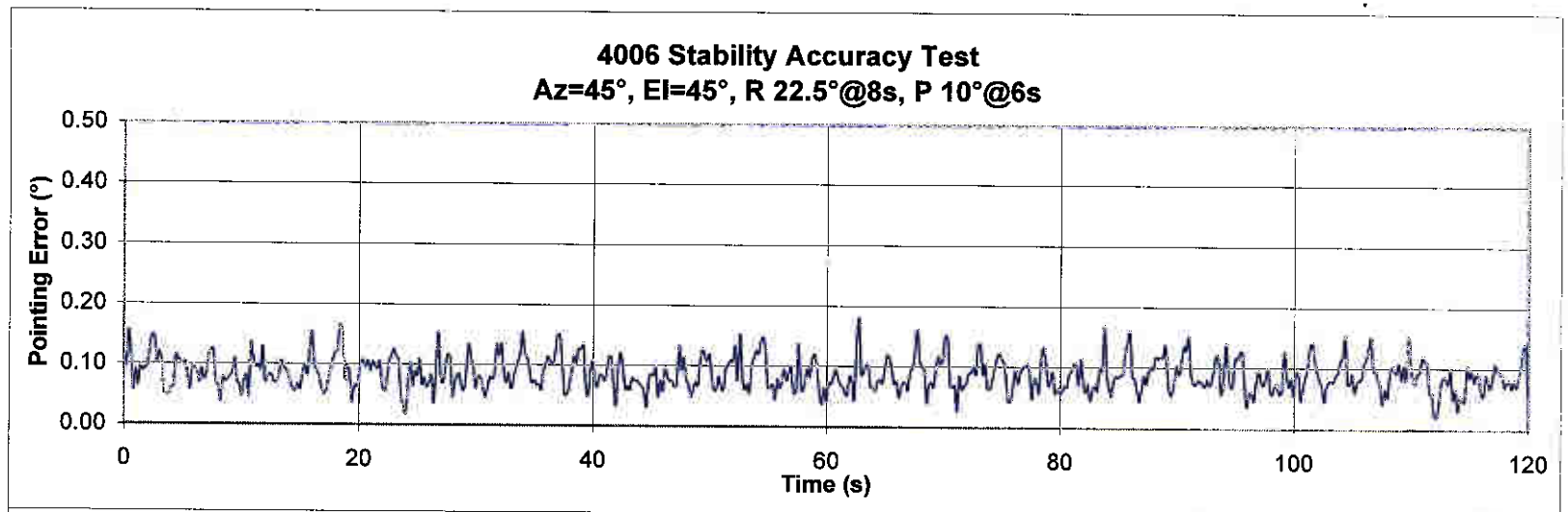
1 Meter EIRP Spectral Density @ -17.9 dBW / 4KHz input and 0.6dB radome loss

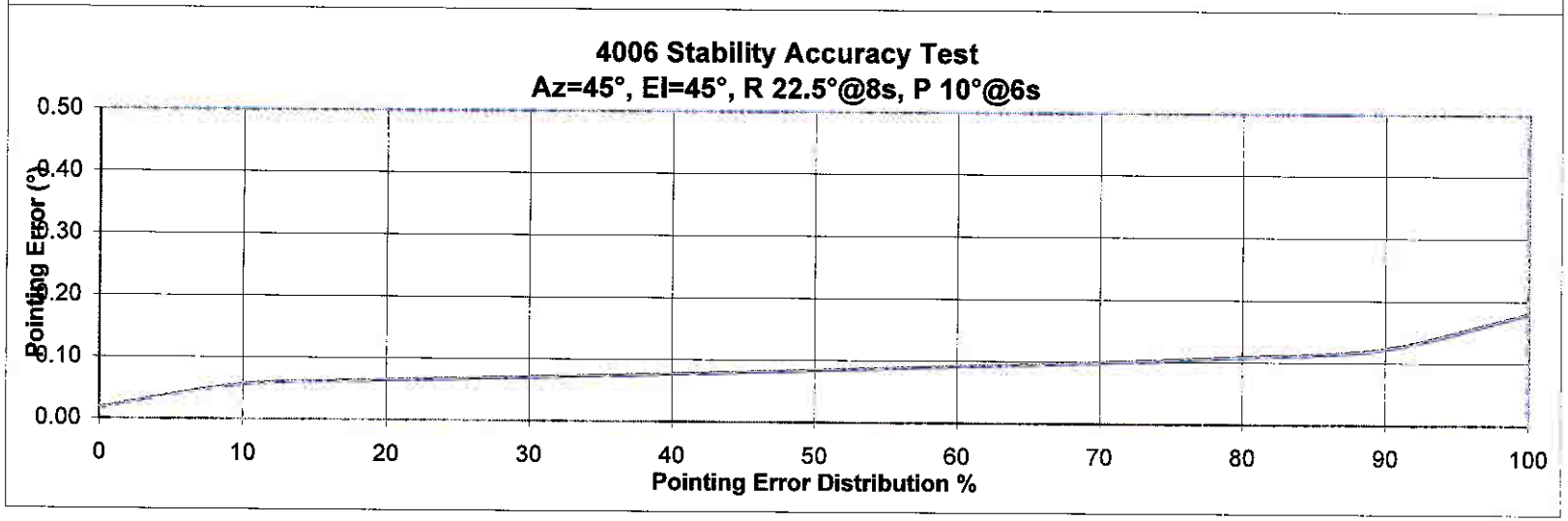


Sea Tel, Inc.

1 Meter EIRP Spectral Density @ -17.9 dBW / 4KHz input and 0.6dB radome loss



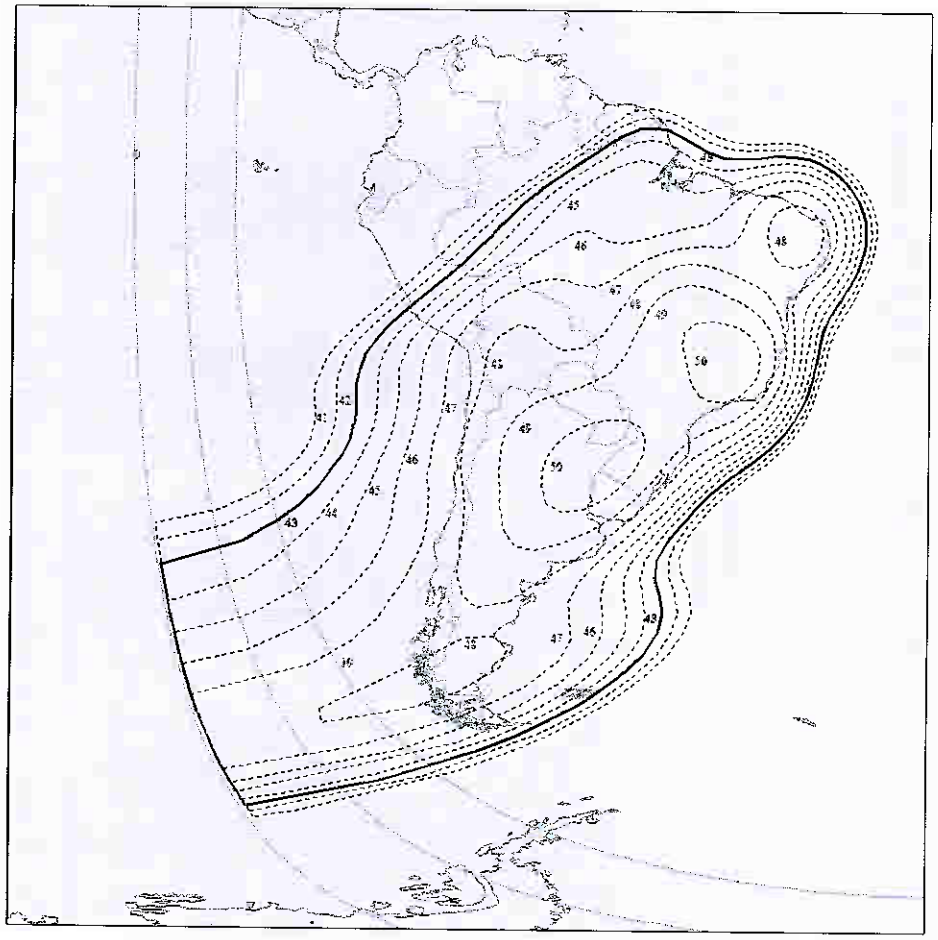




Ave Err (°)	0.088	RMS Err (°)	0.092	Max Err (°)	0.182

Exhibit E – ESVs operating Regions

Ku-Band Southern Cone (SC) EIRP



Contours Shown

EIRP [dBW]

50.6 Beam peak

50	49
48	47
46	45
44	43
42	41

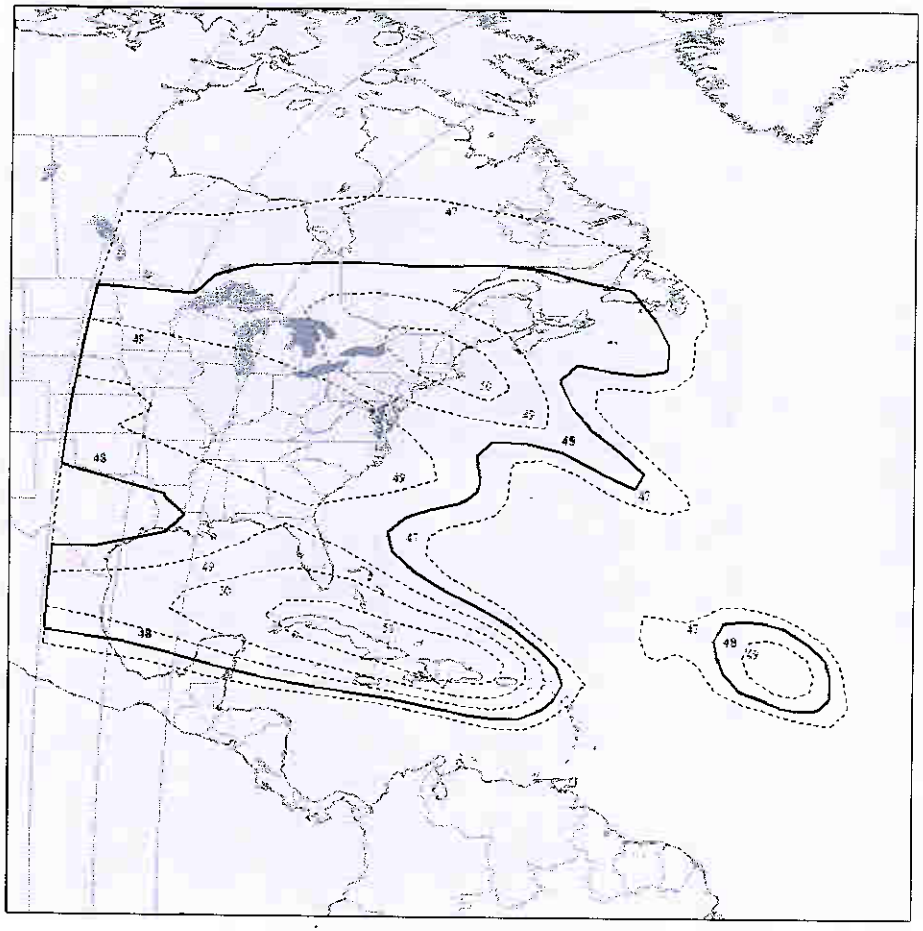
Notes

The adjacent plot shows the measured performance of a typical satellite transponder. Small performance differences should be expected between individual transponders.

The bold contour line represents the nominal edge of coverage. For operation beyond this contour, co-channel interference levels should be assessed on a case by case basis.

Elevation Angles are shown at 0, 5 and 10 Degrees.

Ku-Band North America (NA) EIRP



Contours Shown

EIRP [dBW]

51.8 Beam peak

51

50

49

48

47

Notes

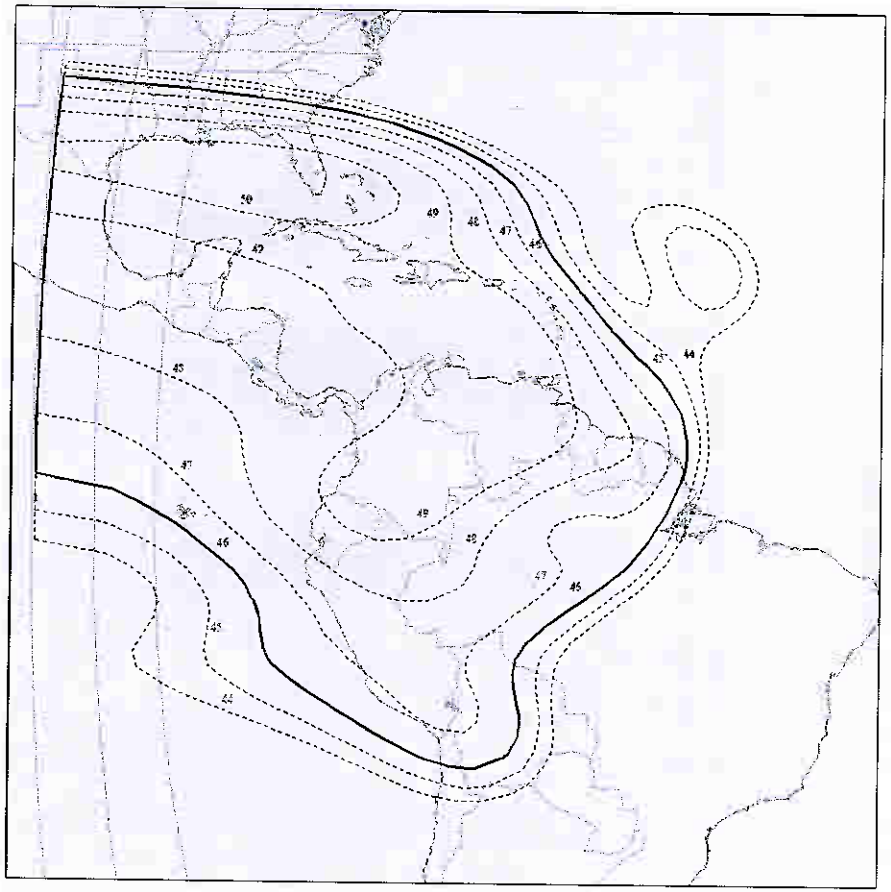
The adjacent plot shows the measured performance of a typical satellite transponder. Small performance differences should be expected between individual transponders.

The bold contour line represents the nominal edge of coverage. For operation beyond this contour, co-channel interference levels should be assessed on a case by case basis.

Elevation Angles are shown at 0, 5 and 10 Degrees.

SES WORLD SKIES

Ku-Band Central America (CA) EIRP



Contours Shown

EIRP [dBW]

50.7 Beam peak

50

49

48

47

46

45

44

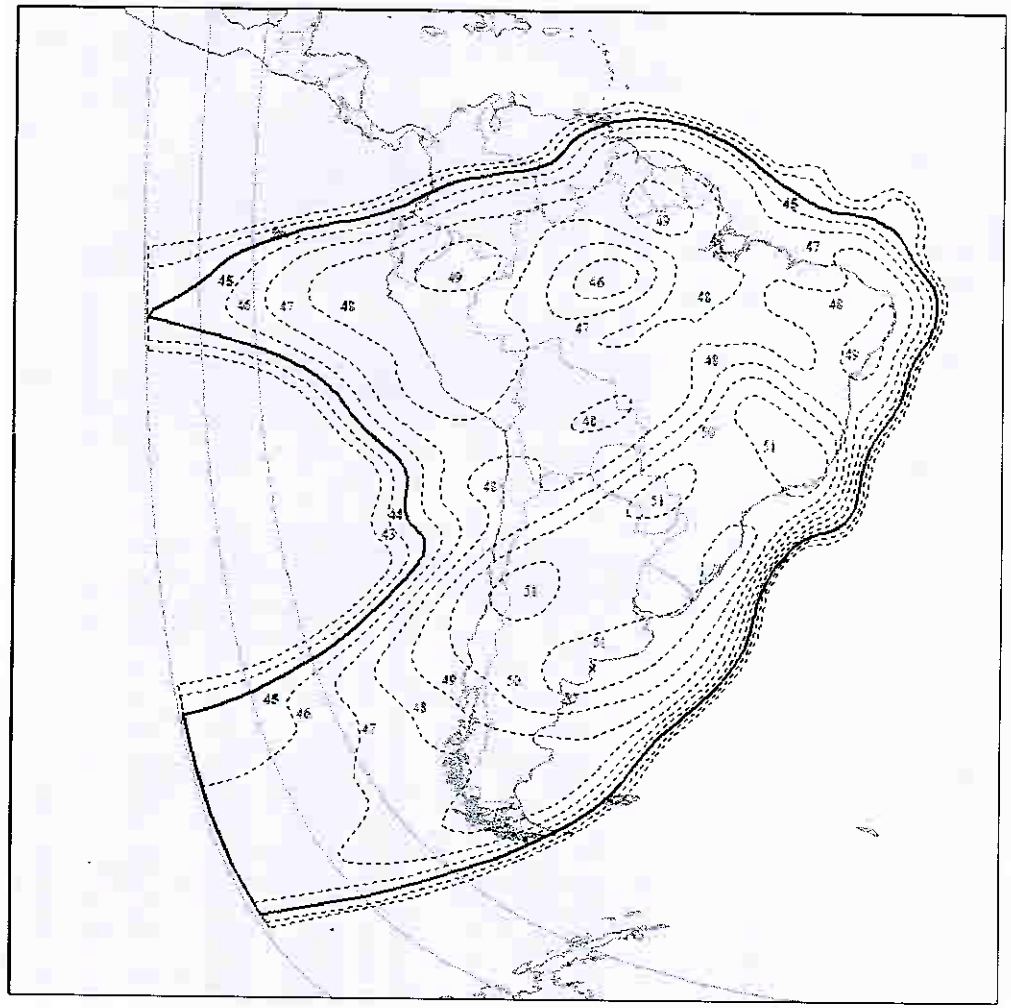
Notes

The adjacent plot shows the measured performance of a typical satellite transponder. Small performance differences should be expected between individual transponders.

The bold contour line represents the nominal edge of coverage. For operation beyond this contour, co-channel interference levels should be assessed on a case by case basis.

Elevation Angles are shown at 0, 5 and 10 Degrees.

Ku-Band South America (SA) EIRP



Contours Shown

EIRP [dBW]

51.7 Beam peak

51

50

49

48

47

46

45

44

43

Notes

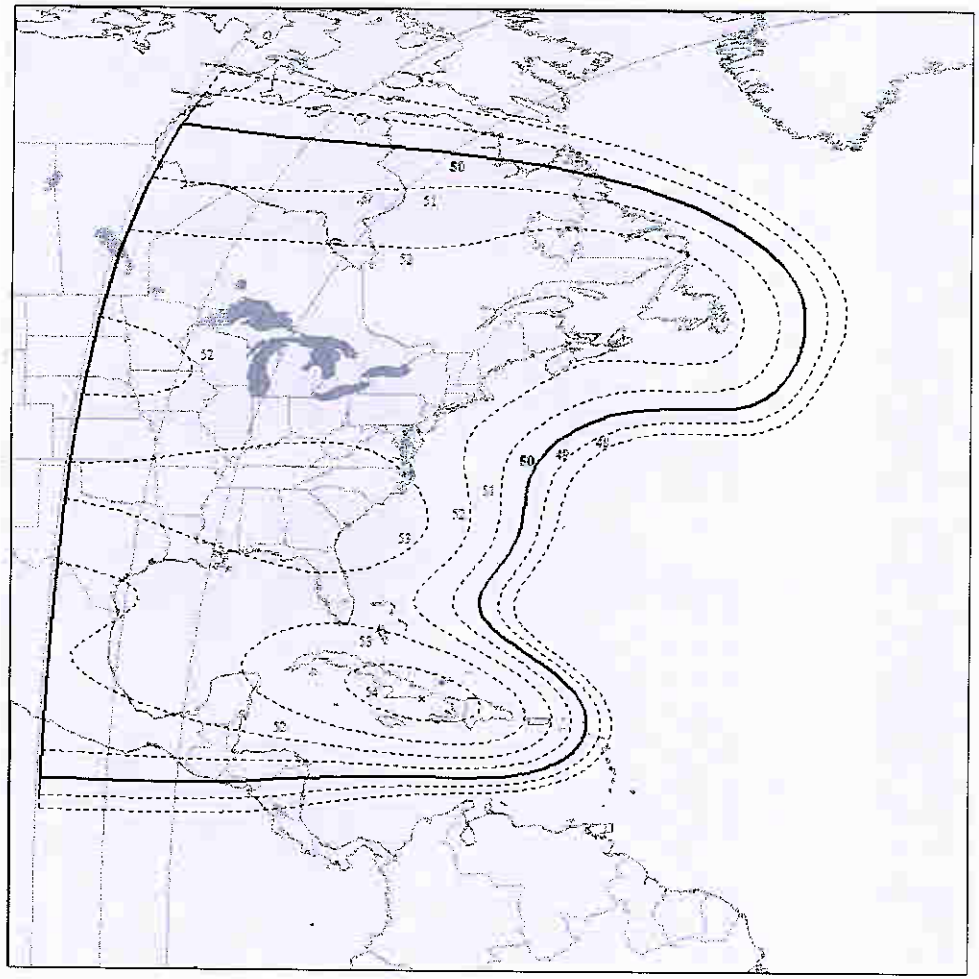
The adjacent plot shows the measured performance of a typical satellite transponder. Small performance differences should be expected between individual transponders.

The bold contour line represents the nominal edge of coverage. For operation beyond this contour, co-channel interference levels should be assessed on a case by case basis.

Elevation Angles are shown at 0, 5 and 10 Degrees.

SES WORLD SKIES

Ku-Band North America (NA) EIRP



Contours Shown

EIRP (dBW)

54.3 Beam peak

54

53

52

51

50

49

48

Notes

The adjacent plot shows the measured performance of a typical satellite transponder. Small performance differences should be expected between individual transponders.

The bold contour line represents the nominal edge of coverage. For operation beyond this contour, co-channel interference levels should be assessed on a case by case basis.

Elevation Angles are shown at 0, 5 and 10 Degrees.

SES WORLD SKIES

T11N - Mexico Gulf Area