TECHNICAL EXHIBIT

APPLICATION FOR FM LICENSE TO COVER

FACILITY ID 139279

SUNSET VALLEY TEXAS

CH 246D 99 WATTS

Technical Narrative

The technical exhibit of which this narrative is part was prepared in support of a license to cover for an FM translator at Sunset Valley, Texas (FCC File No. BPFT-20100420AAE, Facility ID 139279).

Compliance with Section 73.317 (b – d)

Per the construction permit issued July 19, 2010, Measurements were made to establish that the operation authorized in the construction permit is in compliance with the spurious emissions requirements of 47 C.F.R. Sections 73.317(b) through 73.317(d). The measurements were performed using a calibrated spectrum analyzer manufactured by Z-Technology Model # R-507 with a calibration expiration date of April, 2011. The results of the measurements appear in Figure 1 below and show that all results comply with Section 73.317 (b) through (d).

K246BD Antenna System Calculations

Figure 2, appearing below, demonstrate the antenna, transmission line and combiner system loss calculations. The transmission line system plumbing contains a total of 22 connectors and was calculated at 0.125 Db. loss per connector.

K246BD Directional Pattern Certification

I certify that the installed directional pattern more than protects between the 40 – 65 degree azimuths as defined in the construction permit. My qualifications are a matter of record before the Federal Communications Commission.

I certify that the information contained in this report is true and correct to the best of my knowledge and belief.

_____ 9/28/2010

Greg Shapiro

RF Services Inc.

Figure 1 (a)
73.317 B) emission appearing on a frequency removed from the carrier by between 120 kHz and 240 kHz inclusive must be attenuated at least 25 dB below the level of the unmodulated carrier.

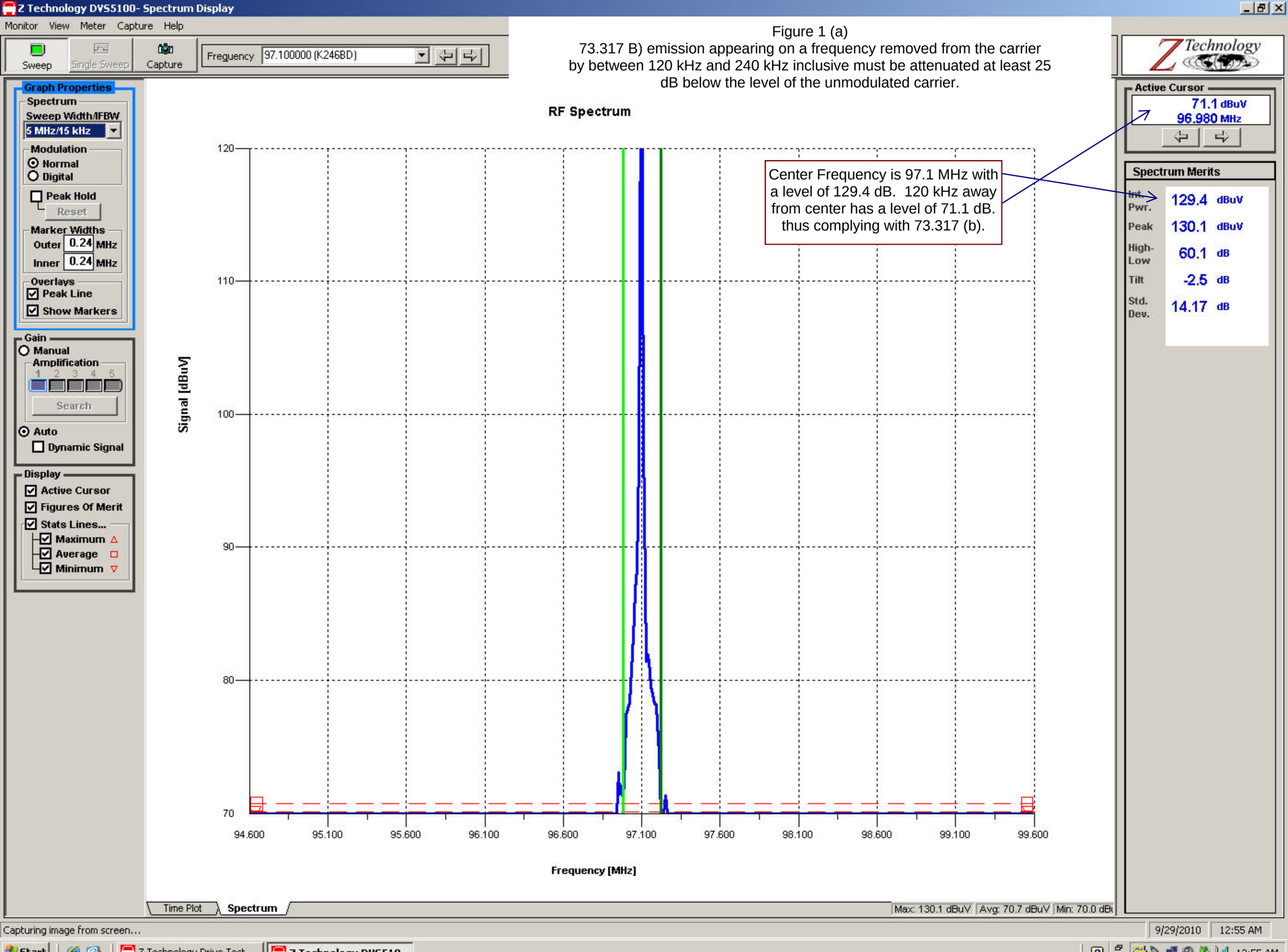

Figure 1 (b)
73.317 (c)emission appearing on a frequency removed from the carrier by more than 240 kHz and up to and including 600 kHz must be attenuated at least 35 dB below the level of the unmodulated carrier.

Z Technology DVS5100- Spectrum Display

Monitor View Meter Capture Help

Sweep | Single Sweep | Capture | Frequency 97.100000 (K246BD)

Graph Properties
Spectrum
Sweep Width/IFBW 5 MHz/15 kHz
Modulation: Normal / Digital
Peak Hold — Reset
Marker Widths: Outer 0.6 MHz, Inner 0.6 MHz
Overlays: Peak Line, Show Markers
Gain: Manual, Amplification 1 2 3 4 5, Search, Auto, Dynamic Signal
Display: Active Cursor, Figures Of Merit, Stats Lines... Maximum, Average, Minimum

RF Spectrum

Signal [dBuV]

120
110
100
90
80
70

94.600 95.100 95.600 96.100 96.600 97.100 97.600 98.100 98.600 99.100 99.600

Frequency [MHz]

Center Frequency is 97.1 MHz with a level of 128.9 dB. 300 kHz away from center has a level of 70 dB. thus complying with 73.317 (c).

Active Cursor
70.0 dBuV
96.800 MHz

Spectrum Merits

Int. Pwr.	128.9 dBuV
Peak	130.0 dBuV
High-Low	60.0 dB
Tilt	-0.5 dB
Std. Dev.	11.39 dB

Time Plot | Spectrum

Max: 130.0 dBuV Avg: 70.7 dBuV Min: 70.0 dB

Capturing image from screen...

9/29/2010 1:01 AM

Start | Z Technology Drive Test ... | Z Technology DVS510... | 73 | 1:01 AM

ELECTRONICS RESEARCH, INC. ERI®

CALCULATIONS FOR MULTI-STATION ERI SHP ROTOTILLER® CIRCULARLY POLARIZED FM BROADCAST ANTENNA

Prepared For
K246BD
Channel 246
Austin Tower Farm
September 22, 2010

ANTENNA TYPE:
SHP-2AE-HW

SPECIFICATION NO:
971

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Chandler, IN 47610-9219
USA

+1 812 925-6000 (tel)
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SPECIFICATION FOR ERI SHP ROTOTILLER® CIRCULARLY POLARIZED FM BROADCAST ANTENNA

ELECTRICAL CHARACTERISTICS:

CHANNEL:		246
FREQUENCY:		97.1 MHz
POWER GAIN:	Cir Pol:	0.7020 (-1.5366 dBd)
GAIN AT HORIZONTAL:	Cir Pol:	0.7020 (-1.5366 dBd)
ELECTRICAL BEAM TILT:		0.00 Degrees
FIRST NULL FILL:		0.00 %
SECOND NULL FILL:		0.00 %
INPUT POWER REQUIRED:		0.142 kW Average Power
MAXIMUM INPUT POWER:		80.00 kW Average Power
INPUT TYPE:		3-1/8 EIA 50 Ohm
ANTENNA VSWR (MAXIMUM):		1.07:1 or less, with field matching; 1.25:1 or less, top pole or Lambda™ section mounting; 1.5:1 or less, side mounted, without field mounting.

SPECIFICATION FOR ERI SHP ROTOTILLER® CIRCULARLY POLARIZED FM BROADCAST ANTENNA

MECHANICAL CHARACTERISTICS:

MOUNTING CONFIGURATION: **(Tower Interface supplied and installed by others.)*		*Side Mount*
HEIGHT OF ANTENNA:		*8.9 feet*
HEIGHT OF CENTER OF RADIATION:		*4.4 feet*
REQUIRED MOUNTING APERTURE°:		*20.1 feet*
DEICING:		*Radomes or deicing heaters not normally required for radial ice less than 1/2-inch*
DEICER SELECTED:		*NO*
RADOME SELECTED:		*NO*
CALCULATED WEIGHT¹:		*206 lbs.*
ANTENNA AREA:	$C_A A_C$:	*8.4 square feet*

This antenna is designed to be supported by a structure that can resist the antenna base reactions and which provides a support that is rigid in the three transitional and three rotational degrees of freedom.

° Vertical tower space is based on the top bay mounted 5 feet from the top of the tower. Add 5 feet if the antenna is to be mounted somewhere other than near the top of the tower.

¹ Calculated weight is based on the PRELIMINARY design of the antenna. The actual weight of the antenna will be within ± 10% of the calculated weight. The actual weight will be given in the technical manual that accompanies the antenna. Weight and wind figures do not include radomes or radial ice.

Note: Localized conditions may require higher wind speed specifications than TIA/EIA specifications. Check with local authorities to verify wind speed requirements.

FM Broadcast Antenna System
Power Analysis

K246BD Channel 246
Austin Tower Farm
SHP-2AE-HW

ERP: **Hor or Ver Pol:**
kW: 0.099
dBk: -10.03

POWER GAIN:
Ratio: 0.70
dBd: -1.54

TRANSMISSION LINE:

VERTICAL RUN:
Type: HJ5-50
Length, ft: 1000 ft.
Attenuation, dB/100 ft: 0.366 dB/100 ft.

HORIZONTAL RUN:
Type: HJ5-50
Length, ft: 100 ft.
Attenuation, dB/100 ft: 0.366 dB/100 ft.

Line Efficiency: 39.57 %

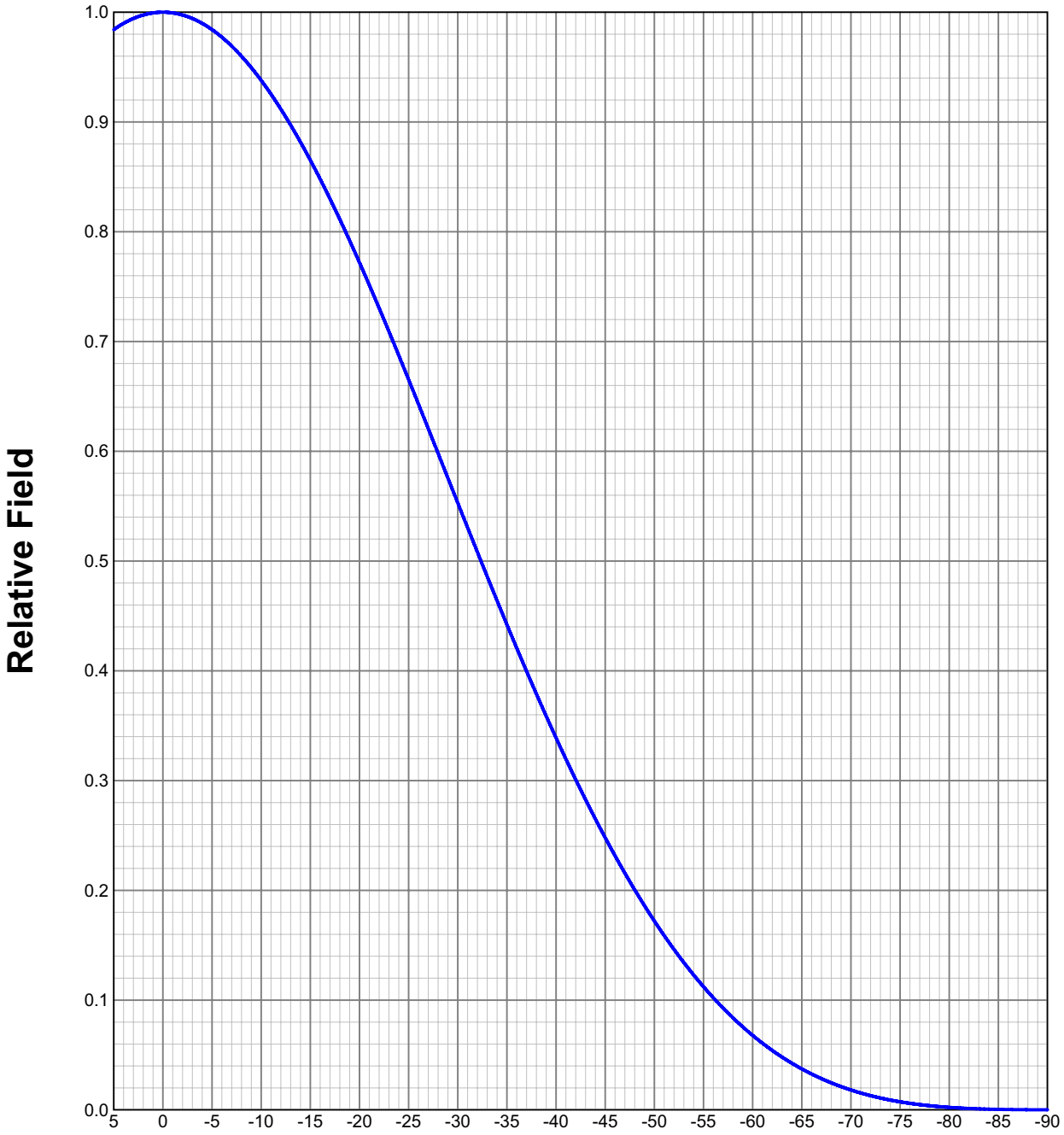
ANTENNA INPUT:
kW: 0.14
dBk: -8.49

LINE LOSS:
kW: 0.22
dB: 4.03

Connector Loss	Filter Loss	Combiner Loss	Transmitter Power
kW: 0.29 dB: 2.60	kW: 0.00 dB: 0.00	kW: 0.04 dB: 0.25	kW: 0.69 dBk: -1.61

ELEVATION PATTERN

Type:	SHP-2H		Channel:	246
Directivity:	Numeric	dBd	Location:	Austin Tower Farm
Main Lobe:	0.70	-1.54	Beam Tilt:	0.00
Horizontal:	0.70	-1.54	Polarization:	Circular



TABULATED DATA FOR ELEVATION PATTERN

Type: SHP-2H
Polarization: Circular

ANGLE	FIELD	dB	ANGLE	FIELD	dB	ANGLE	FIELD	dB	ANGLE	FIELD	dB	ANGLE	FIELD	dB
5.00	0.984	-0.14	-6.75	0.971	-0.25	-27.00	0.621	-4.14	-50.50	0.165	-15.63	-74.00	0.009	-40.92
4.75	0.986	-0.13	-7.00	0.969	-0.27	-27.50	0.609	-4.30	-51.00	0.159	-15.98	-74.50	0.008	-41.76
4.50	0.987	-0.11	-7.25	0.967	-0.29	-28.00	0.598	-4.46	-51.50	0.152	-16.34	-75.00	0.007	-42.63
4.25	0.989	-0.10	-7.50	0.965	-0.31	-28.50	0.587	-4.63	-52.00	0.146	-16.70	-75.50	0.007	-43.52
4.00	0.990	-0.09	-7.75	0.962	-0.33	-29.00	0.576	-4.80	-52.50	0.140	-17.07	-76.00	0.006	-44.43
3.75	0.991	-0.08	-8.00	0.960	-0.36	-29.50	0.564	-4.97	-53.00	0.134	-17.44	-76.50	0.005	-45.37
3.50	0.992	-0.07	-8.25	0.957	-0.38	-30.00	0.553	-5.15	-53.50	0.129	-17.82	-77.00	0.005	-46.33
3.25	0.993	-0.06	-8.50	0.955	-0.40	-30.50	0.542	-5.33	-54.00	0.123	-18.21	-77.50	0.004	-47.32
3.00	0.994	-0.05	-8.75	0.952	-0.43	-31.00	0.530	-5.51	-54.50	0.117	-18.60	-78.00	0.004	-48.33
2.75	0.995	-0.04	-9.00	0.949	-0.45	-31.50	0.519	-5.69	-55.00	0.112	-19.00	-78.50	0.003	-49.38
2.50	0.996	-0.03	-9.25	0.947	-0.48	-32.00	0.508	-5.88	-55.50	0.107	-19.40	-79.00	0.003	-50.45
2.25	0.997	-0.03	-9.50	0.944	-0.50	-32.50	0.497	-6.07	-56.00	0.102	-19.81	-79.50	0.003	-51.56
2.00	0.997	-0.02	-9.75	0.941	-0.53	-33.00	0.486	-6.27	-56.50	0.097	-20.23	-80.00	0.002	-52.70
1.75	0.998	-0.02	-10.00	0.938	-0.56	-33.50	0.475	-6.47	-57.00	0.093	-20.66	-80.50	0.002	-53.87
1.50	0.999	-0.01	-10.50	0.932	-0.61	-34.00	0.464	-6.67	-57.50	0.088	-21.09	-81.00	0.002	-55.08
1.25	0.999	-0.01	-11.00	0.925	-0.67	-34.50	0.453	-6.88	-58.00	0.084	-21.53	-81.50	0.002	-56.32
1.00	0.999	-0.01	-11.50	0.919	-0.74	-35.00	0.442	-7.09	-58.50	0.080	-21.98	-82.00	0.001	-57.60
0.75	1.000	0.00	-12.00	0.912	-0.80	-35.50	0.431	-7.30	-59.00	0.076	-22.43	-82.50	0.001	-58.91
0.50	1.000	0.00	-12.50	0.905	-0.87	-36.00	0.421	-7.52	-59.50	0.072	-22.89	-83.00	0.001	-60.26
0.25	1.000	0.00	-13.00	0.897	-0.94	-36.50	0.410	-7.74	-60.00	0.068	-23.36	-83.50	0.001	-61.65
0.00	1.000	0.00	-13.50	0.889	-1.02	-37.00	0.400	-7.97	-60.50	0.064	-23.84	-84.00	0.001	-63.08
-0.25	1.000	0.00	-14.00	0.882	-1.09	-37.50	0.389	-8.20	-61.00	0.061	-24.33	-84.50	0.001	-64.53
-0.50	1.000	0.00	-14.50	0.874	-1.17	-38.00	0.379	-8.43	-61.50	0.057	-24.82	-85.00	0.001	-66.02
-0.75	1.000	0.00	-15.00	0.865	-1.26	-38.50	0.369	-8.67	-62.00	0.054	-25.33	-85.50	0.000	-67.53
-1.00	0.999	-0.01	-15.50	0.857	-1.34	-39.00	0.359	-8.91	-62.50	0.051	-25.84	-86.00	0.000	-69.05
-1.25	0.999	-0.01	-16.00	0.848	-1.43	-39.50	0.349	-9.15	-63.00	0.048	-26.36	-86.50	0.000	-70.57
-1.50	0.999	-0.01	-16.50	0.839	-1.52	-40.00	0.339	-9.40	-63.50	0.045	-26.89	-87.00	0.000	-72.09
-1.75	0.998	-0.02	-17.00	0.830	-1.62	-40.50	0.329	-9.65	-64.00	0.042	-27.44	-87.50	0.000	-73.58
-2.00	0.997	-0.02	-17.50	0.821	-1.72	-41.00	0.320	-9.91	-64.50	0.040	-27.99	-88.00	0.000	-75.03
-2.25	0.997	-0.03	-18.00	0.811	-1.82	-41.50	0.310	-10.17	-65.00	0.037	-28.55	-88.50	0.000	-76.41
-2.50	0.996	-0.03	-18.50	0.802	-1.92	-42.00	0.301	-10.43	-65.50	0.035	-29.12	-89.00	0.000	-77.71
-2.75	0.995	-0.04	-19.00	0.792	-2.03	-42.50	0.292	-10.70	-66.00	0.033	-29.71	-89.50	0.000	-78.92
-3.00	0.994	-0.05	-19.50	0.782	-2.14	-43.00	0.283	-10.97	-66.50	0.031	-30.30	-90.00	0.000	-80.02
-3.25	0.993	-0.06	-20.00	0.772	-2.25	-43.50	0.274	-11.25	-67.00	0.028	-30.91			
-3.50	0.992	-0.07	-20.50	0.762	-2.36	-44.00	0.265	-11.53	-67.50	0.027	-31.53			
-3.75	0.991	-0.08	-21.00	0.751	-2.48	-44.50	0.256	-11.82	-68.00	0.025	-32.16			
-4.00	0.990	-0.09	-21.50	0.741	-2.60	-45.00	0.248	-12.11	-68.50	0.023	-32.81			
-4.25	0.989	-0.10	-22.00	0.730	-2.73	-45.50	0.240	-12.41	-69.00	0.021	-33.47			
-4.50	0.987	-0.11	-22.50	0.720	-2.86	-46.00	0.232	-12.71	-69.50	0.020	-34.14			
-4.75	0.986	-0.13	-23.00	0.709	-2.99	-46.50	0.224	-13.01	-70.00	0.018	-34.83			
-5.00	0.984	-0.14	-23.50	0.698	-3.12	-47.00	0.216	-13.32	-70.50	0.017	-35.53			
-5.25	0.983	-0.15	-24.00	0.687	-3.26	-47.50	0.208	-13.64	-71.00	0.015	-36.25			
-5.50	0.981	-0.17	-24.50	0.676	-3.40	-48.00	0.201	-13.96	-71.50	0.014	-36.98			
-5.75	0.979	-0.18	-25.00	0.665	-3.54	-48.50	0.193	-14.28	-72.00	0.013	-37.73			
-6.00	0.977	-0.20	-25.50	0.654	-3.69	-49.00	0.186	-14.61	-72.50	0.012	-38.50			
-6.25	0.975	-0.22	-26.00	0.643	-3.84	-49.50	0.179	-14.95	-73.00	0.011	-39.29			
-6.50	0.973	-0.23	-26.50	0.632	-3.99	-50.00	0.172	-15.29	-73.50	0.010	-40.09			