WSCV Application for CP for New Digital Auxiliary Facility **73.625(c) Data**
June 1, 2022

AZIMUTH PATTERN: RFS RD16C170500620HDS
Electrical Beam Tilt: 0.60°
Main Beam Calculated Max. H-pol Azimuth Pattern Gain (peak) 1.667 2.22 dBd
Maximum Main Beam H-Pol. Effective Radiated Power (ERP): 380.0 kW 25.80 dBk

Tabulation of Main Beam Azimuth Pattern (Horizontal polarization)

Angle	RF	dBk	ERP kW
0	0.937	25.23	333.6
10	0.919	25.06	320.9
20	0.875	24.64	290.9
30	0.800	23.86	243.2
40	0.690	22.57	180.9
50	0.555	20.68	117.0
60	0.415	18.16	65.4
70	0.310	15.63	36.5
80	0.281	14.77	30.0
90	0.310	15.63	36.5
100	0.343	16.50	44.7
110	0.347	16.60	45.8
120	0.321	15.93	39.2
130	0.297	15.25	33.5
140	0.334	16.27	42.4
150	0.441	18.69	73.9
160	0.572	20.95	124.3
170	0.696	22.65	184.1
180	0.803	23.89	245.0
190	0.890	24.79	301.0
200	0.955	25.40	346.6
210	0.992	25.73	373.9
220	0.999	25.79	379.2
230	0.980	25.62	365.0
240	0.949	25.34	342.2
250	0.922	25.09	323.0
260	0.913	25.01	316.8
270	0.922	25.09	323.0
280	0.938	25.24	334.3
290	0.947	25.32	340.8
300	0.944	25.30	338.6
310	0.932	25.19	330.1
320	0.923	25.10	323.7
330	0.922	25.09	323.0
340	0.930	25.17	328.7
350	0.938	25.24	334.3

Maximum

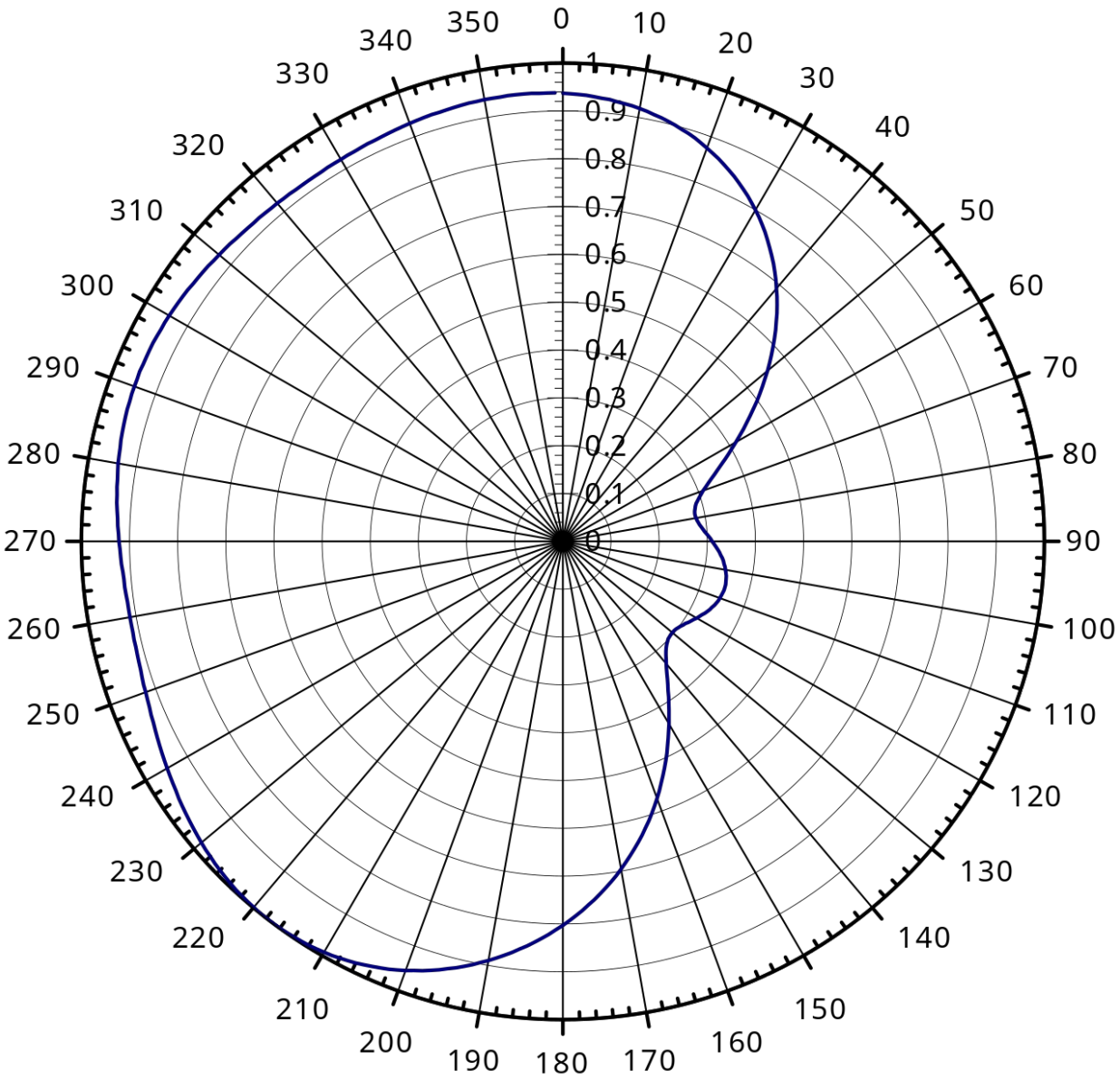
Angle	RF	dBk	ERP kW
106	0.350	16.68	46.6
218	1.000	25.80	380.0
292	0.948	25.33	341.5
354	0.939	25.25	335.1

Minimum

Angle	RF	dBk	ERP kW
79	0.280	14.74	29.8
130	0.297	15.25	33.5
260	0.913	25.01	316.8
325	0.921	25.08	322.3

AZIMUTH PATTERN: RFS RD16C170500620HDS
Electrical Beam Tilt: 0.60°
Main Beam Calculated Max. H-pol Azimuth Pattern Gain (peak) 1.667 2.22 dBd
Maximum Main Beam H-Pol. Effective Radiated Power (ERP): 380.0 kW 25.80 dBk

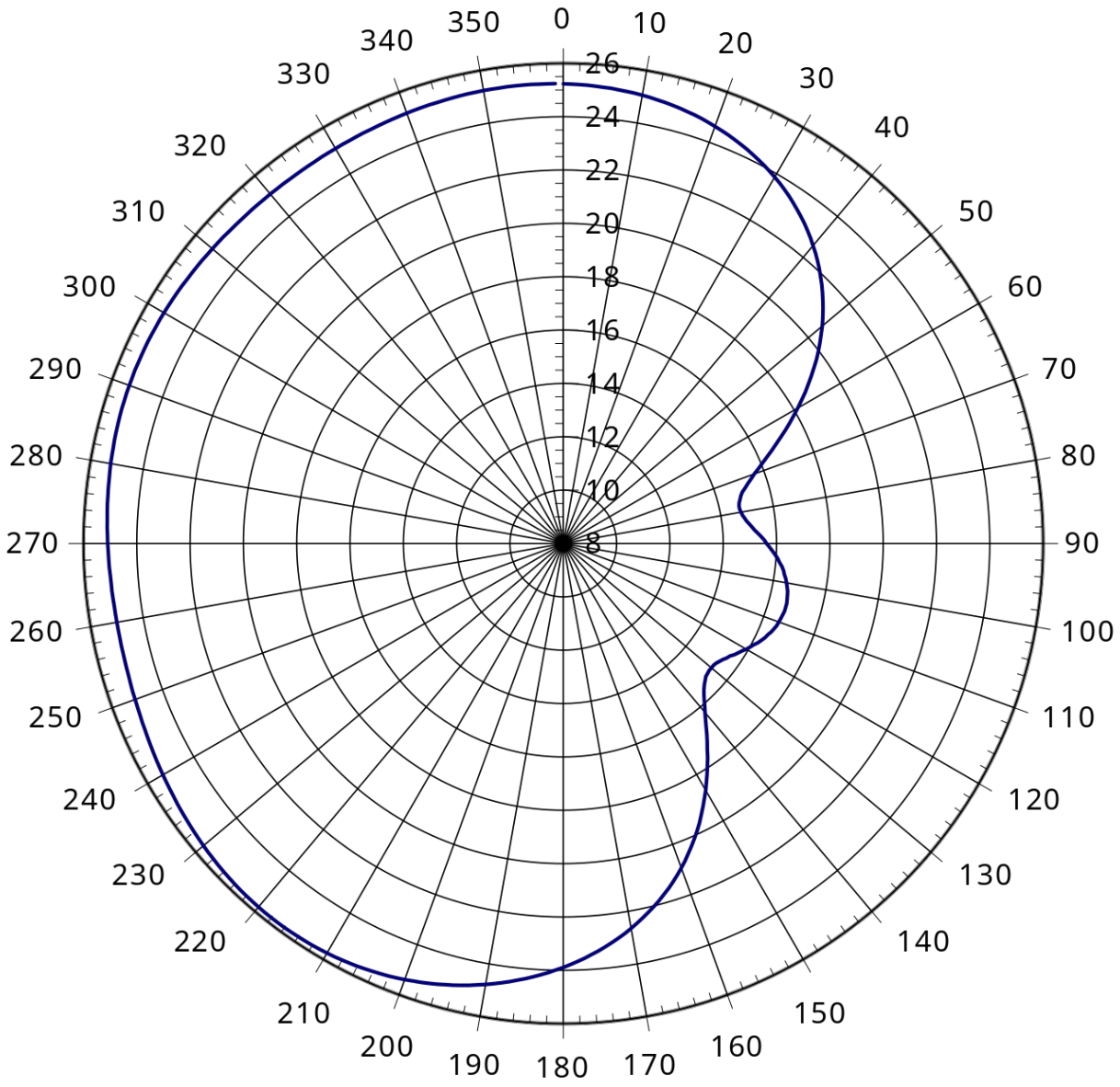
MAIN BEAM AZIMUTH PATTERN RELATIVE FIELD



Blue plot shows azimuth pattern relative field at horizontal polarization

AZIMUTH PATTERN: RFS RD16C170500620HDS
Electrical Beam Tilt: 0.60°
Main Beam Calculated Max. H-pol Azimuth Pattern Gain (peak) 1.667 2.22 dBd
Maximum Main Beam H-Pol. Effective Radiated Power (ERP): 380.0 kW 25.80 dBk

MAIN BEAM AZIMUTH PATTERN ERP (dBk)



Blue plot shows effective radiated power (dBk) at horizontal polarization

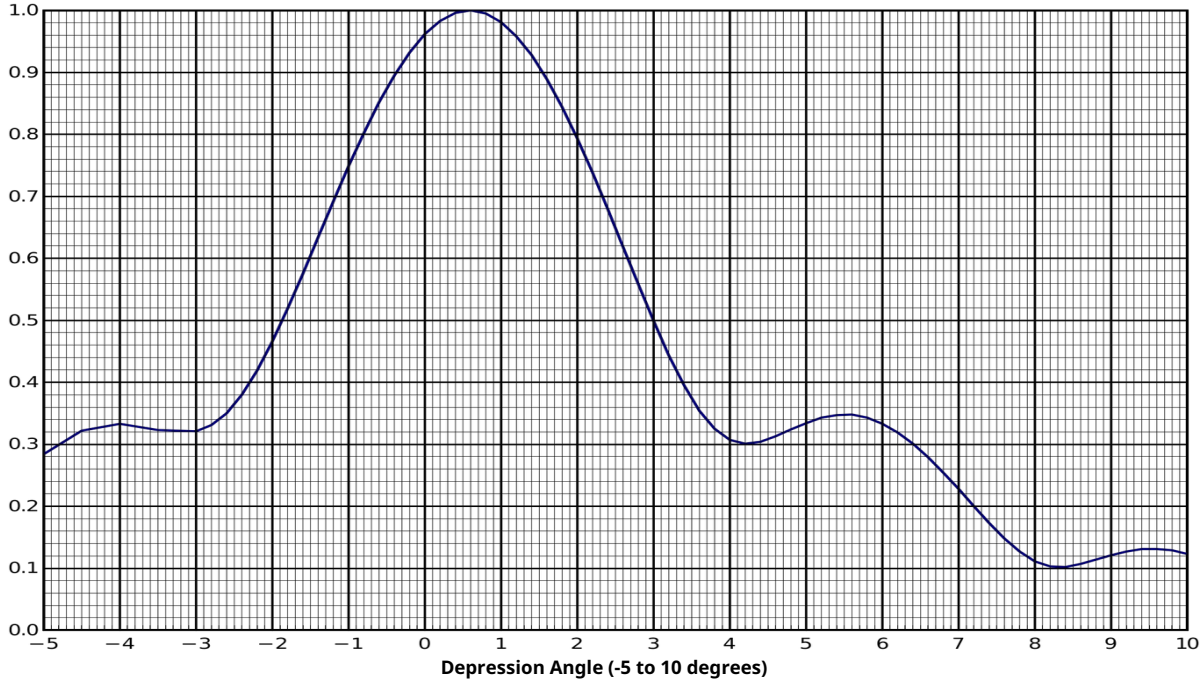
ELEVATION PATTERN RFS RD16C170500620HDS (18E171050)

Electrical Beam Tilt: 0.60º

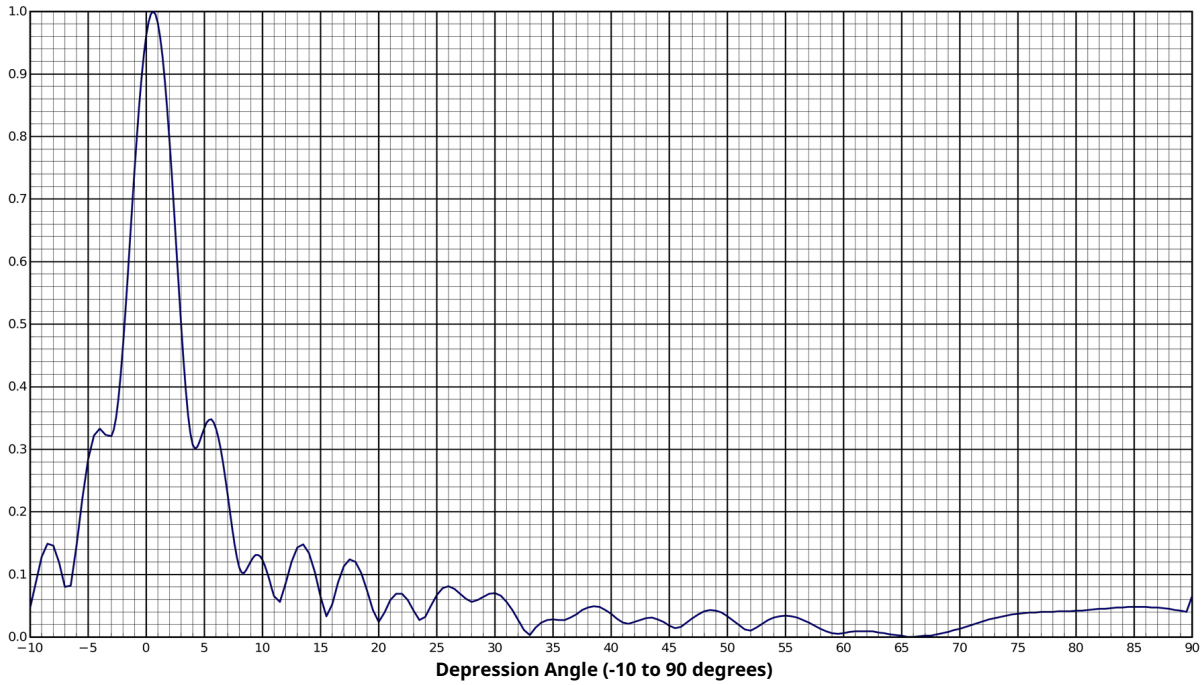
Calculated Maximum Elevation Gain	:	15.03	11.77 dBd
RMS Directivity at Horizontal:		13.90	11.43 dBd
Maximum Main Beam H-Pol. Effective Radiated Power (ERP):		380.0 kW	25.80 dBk

1.

Relative Field



Depression Angle (-5 to 10 degrees)

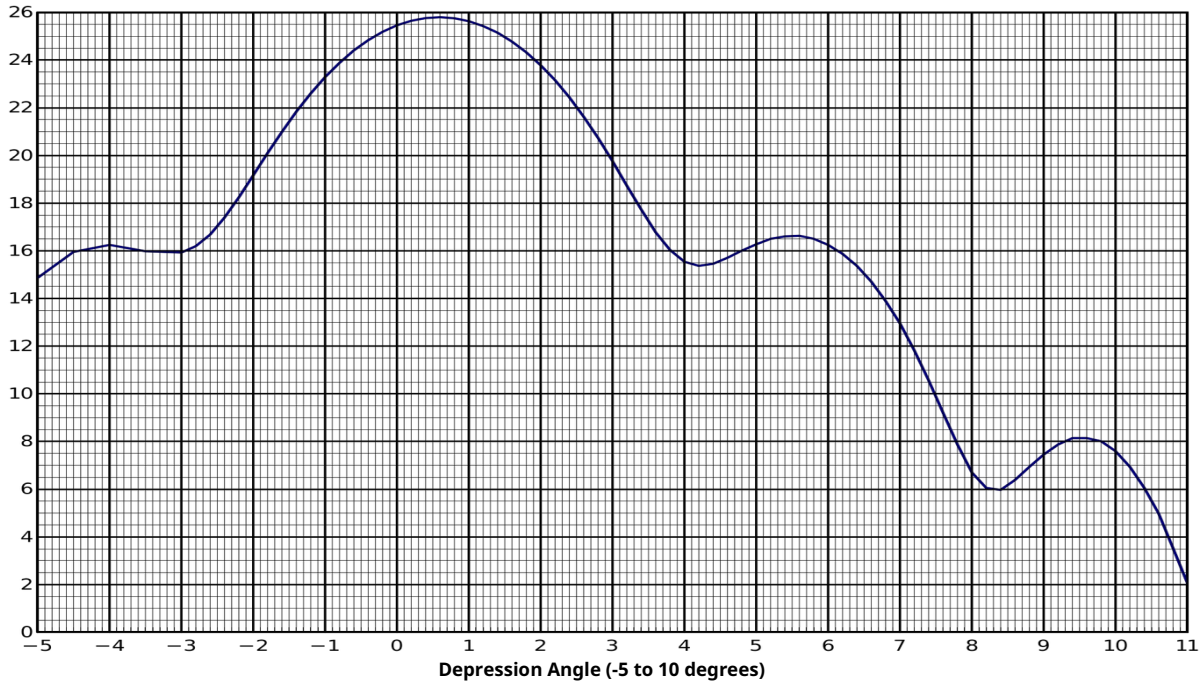


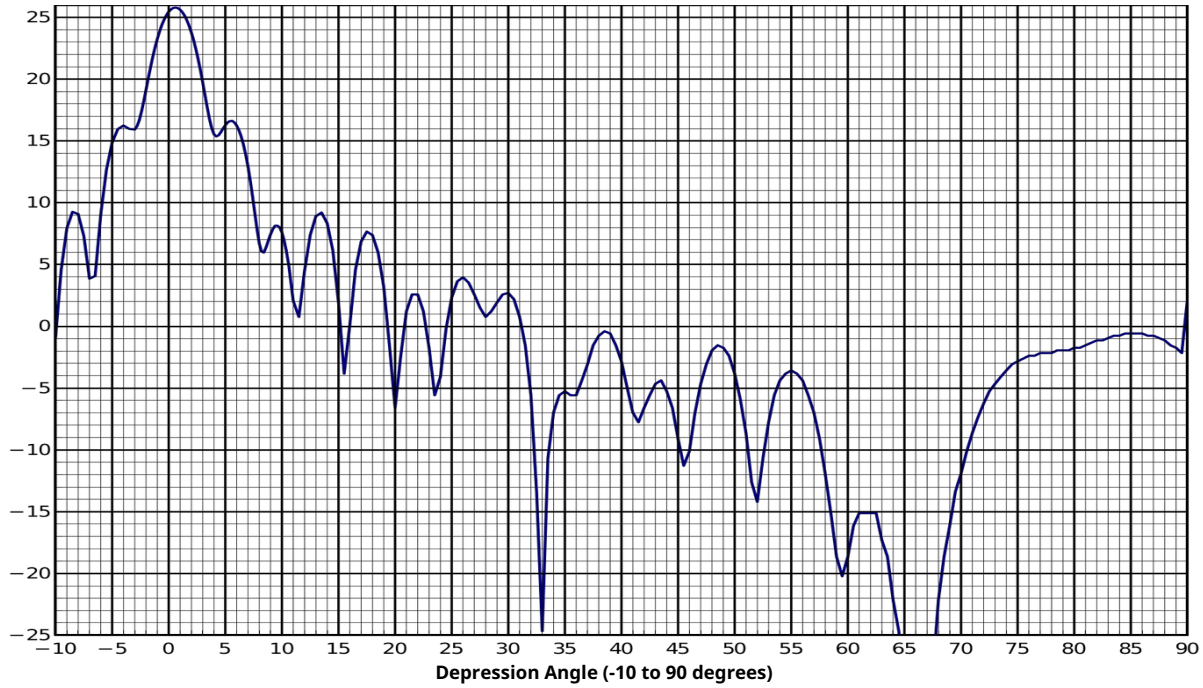
Depression Angle (-10 to 90 degrees)

ELEVATION PATTERN RFS RD16C170500620HDS (18E171050)

Electrical Beam Tilt:	0.60°		
Calculated Maximum Elevation Gain	:	15.03	11.77 dBd
RMS Directivity at Horizontal:		13.90	11.43 dBd
Maximum Main Beam H-Pol. Effective Radiated Power (ERP):		380.0 kW	25.80 dBk

ERP (dBk):





ELEVATION PATTERN RFS RD16C170500620HDS (18E171050)

Electrical Beam Tilt: 0.60º

Calculated Maximum Elevation Gain	:	15.03	11.77 dBd
RMS Directivity at Horizontal:		13.90	11.43 dBd
Maximum Main Beam H-Pol. Effective Radiated Power (ERP):		380.0 kW	25.80 dBk

Tabulated Elevation Pattern

Angle	Field	Angle	Field	Angle	Field	Angle	Field	Angle	Field	Angle	Field	Angle	Field
-10.0	0.046	1.2	0.958	8.2	0.103	21.5	0.069	39.0	0.048	56.5	0.027	74.0	0.034
-9.5	0.087	1.4	0.928	8.4	0.102	22.0	0.069	39.5	0.043	57.0	0.023	74.5	0.036
-9.0	0.128	1.6	0.889	8.6	0.107	22.5	0.059	40.0	0.037	57.5	0.018	75.0	0.037
-8.5	0.149	1.8	0.844	8.8	0.114	23.0	0.042	40.5	0.029	58.0	0.013	75.5	0.038
-8.0	0.146	2.0	0.793	9.0	0.121	23.5	0.027	41.0	0.023	58.5	0.009	76.0	0.039
-7.5	0.119	2.2	0.738	9.2	0.127	24.0	0.032	41.5	0.021	59.0	0.006	76.5	0.039
-7.0	0.080	2.4	0.679	9.4	0.131	24.5	0.050	42.0	0.024	59.5	0.005	77.0	0.040
-6.5	0.082	2.6	0.618	9.6	0.131	25.0	0.067	42.5	0.027	60.0	0.006	77.5	0.040
-6.0	0.146	2.8	0.558	9.8	0.129	25.5	0.078	43.0	0.030	60.5	0.008	78.0	0.040
-5.5	0.221	3.0	0.499	10.0	0.123	26.0	0.081	43.5	0.031	61.0	0.009	78.5	0.041
-5.0	0.284	3.2	0.443	10.2	0.114	26.5	0.077	44.0	0.028	61.5	0.009	79.0	0.041
-4.5	0.322	3.4	0.395	10.4	0.103	27.0	0.069	44.5	0.024	62.0	0.009	79.5	0.041
-4.0	0.333	3.6	0.354	10.6	0.091	27.5	0.061	45.0	0.018	62.5	0.009	80.0	0.042
-3.5	0.323	3.8	0.325	10.8	0.077	28.0	0.056	45.5	0.014	63.0	0.007	80.5	0.042
-3.0	0.321	4.0	0.307	11.0	0.065	28.5	0.059	46.0	0.016	63.5	0.006	81.0	0.043
-2.8	0.331	4.2	0.301	11.5	0.056	29.0	0.064	46.5	0.023	64.0	0.004	81.5	0.044
-2.6	0.350	4.4	0.304	12.0	0.086	29.5	0.069	47.0	0.030	64.5	0.003	82.0	0.045
-2.4	0.380	4.6	0.313	12.5	0.120	30.0	0.070	47.5	0.036	65.0	0.002	82.5	0.045
-2.2	0.419	4.8	0.324	13.0	0.143	30.5	0.066	48.0	0.041	65.5	0.000	83.0	0.046
-2.0	0.466	5.0	0.334	13.5	0.148	31.0	0.056	48.5	0.043	66.0	0.000	83.5	0.047
-1.8	0.519	5.2	0.343	14.0	0.134	31.5	0.043	49.0	0.042	66.5	0.001	84.0	0.047
-1.6	0.575	5.4	0.347	14.5	0.104	32.0	0.027	49.5	0.039	67.0	0.002	84.5	0.048
-1.4	0.634	5.6	0.348	15.0	0.064	32.5	0.011	50.0	0.033	67.5	0.002	85.0	0.048
-1.2	0.692	5.8	0.343	15.5	0.033	33.0	0.003	50.5	0.026	68.0	0.004	85.5	0.048
-1.0	0.749	6.0	0.333	16.0	0.052	33.5	0.015	51.0	0.019	68.5	0.006	86.0	0.048
-0.8	0.802	6.2	0.319	16.5	0.087	34.0	0.023	51.5	0.012	69.0	0.008	86.5	0.047
-0.6	0.852	6.4	0.301	17.0	0.113	34.5	0.027	52.0	0.010	69.5	0.011	87.0	0.047
-0.4	0.895	6.6	0.279	17.5	0.124	35.0	0.028	52.5	0.015	70.0	0.013	87.5	0.046
-0.2	0.932	6.8	0.254	18.0	0.120	35.5	0.027	53.0	0.021	70.5	0.016	88.0	0.045
0.0	0.962	7.0	0.228	18.5	0.102	36.0	0.027	53.5	0.027	71.0	0.019	88.5	0.043
0.2	0.983	7.2	0.200	19.0	0.074	36.5	0.031	54.0	0.031	71.5	0.022	89.0	0.042
0.4	0.996	7.4	0.173	19.5	0.043	37.0	0.036	54.5	0.033	72.0	0.025	89.5	0.040
0.6	**1.000**	7.6	0.148	20.0	0.024	37.5	0.043	55.0	0.034	72.5	0.028	90.0	0.066
0.8	0.995	7.8	0.127	20.5	0.039	38.0	0.047	55.5	0.033	73.0	0.030		
1.0	0.981	8.0	0.111	21.0	0.059	38.5	0.049	56.0	0.031	73.5	0.032		