

KXAS-TV Application for Auxiliary Broadcast Facility**73.625(c) Data
September 5, 2021****AZIMUTH PATTERN (H-Pol): TUA-C3-6/18U-1-R DC SM**

Main beam axis of symmetry: 350° true

Electrical Beam Tilt: 0.80°

Main Beam Calculated Max. H-pol Azimuth Pattern Gain (peak): 1.91 (2.81 dBd)

Maximum Main Beam H-Pol. Effective Radiated Power (ERP): 391.7 kW 25.93 dBk

Tabulation of Azimuth Pattern (Horizontal polarization)

Angle	RF	dBk	ERP kW
0	0.936	25.35	343.2
10	0.750	23.43	220.3
20	0.705	22.89	194.7
30	0.876	24.78	300.6
40	0.893	24.95	312.4
50	0.760	23.55	226.2
60	0.776	23.73	235.9
70	0.926	25.26	335.9
80	0.971	25.67	369.3
90	0.904	25.05	320.1
100	0.805	24.05	253.8
110	0.716	23.03	200.8
120	0.583	21.24	133.1
130	0.366	17.20	52.5
140	0.196	11.77	15.0
150	0.202	12.04	16.0
160	0.134	8.47	7.0
170	0.115	7.14	5.2
180	0.137	8.66	7.4
190	0.174	10.74	11.9
200	0.188	11.41	13.8
210	0.375	17.41	55.1
220	0.597	21.45	139.6
230	0.711	22.97	198.0
240	0.795	23.94	247.6
250	0.895	24.97	313.8
260	0.953	25.51	355.7
270	0.923	25.23	333.7
280	0.778	23.75	237.1
290	0.796	23.95	248.2
300	0.928	25.28	337.3
310	0.857	24.59	287.7
320	0.654	22.24	167.5
330	0.721	23.09	203.6
340	0.928	25.28	337.3
350	1.000	25.93	391.7

Maximum

Angle	RF	dBk
36	0.917	25.18
80	0.971	25.67
147	0.211	12.4
193	0.177	10.9
197	0.177	10.89
260	0.953	25.51
302	0.937	25.36
330	0.721	23.09
350	1.000	25.93

Minimum

Angle	RF	dBk
17	0.686	22.66
54	0.733	23.23
110	0.716	23.03
140	0.196	11.77
168	0.115	7.14
190	0.174	10.74
195	0.176	10.84
284	0.751	23.44
323	0.637	22.01

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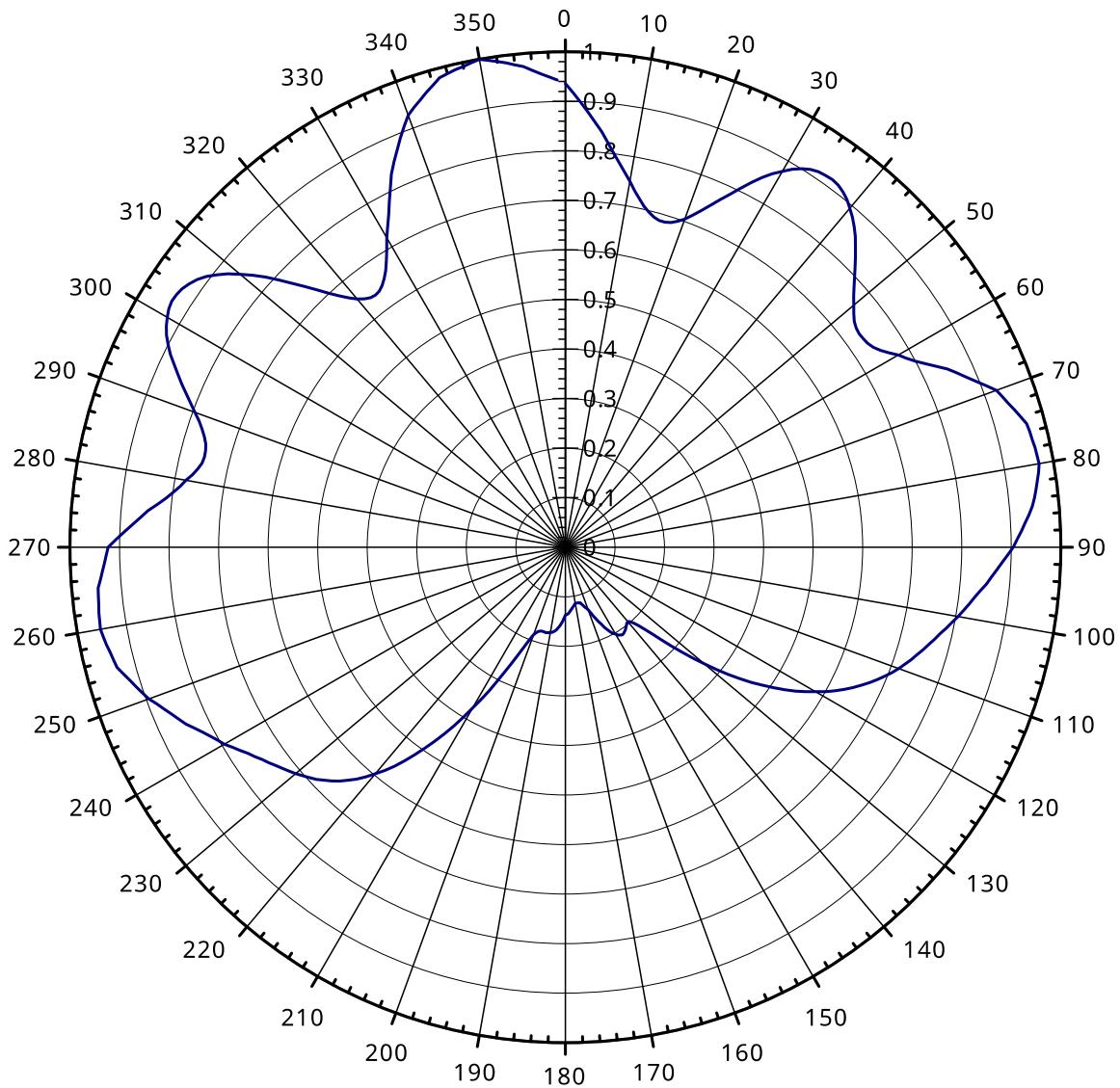
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AZIMUTH PATTERN RELATIVE FIELD



Blue plot shows azimuth pattern relative field

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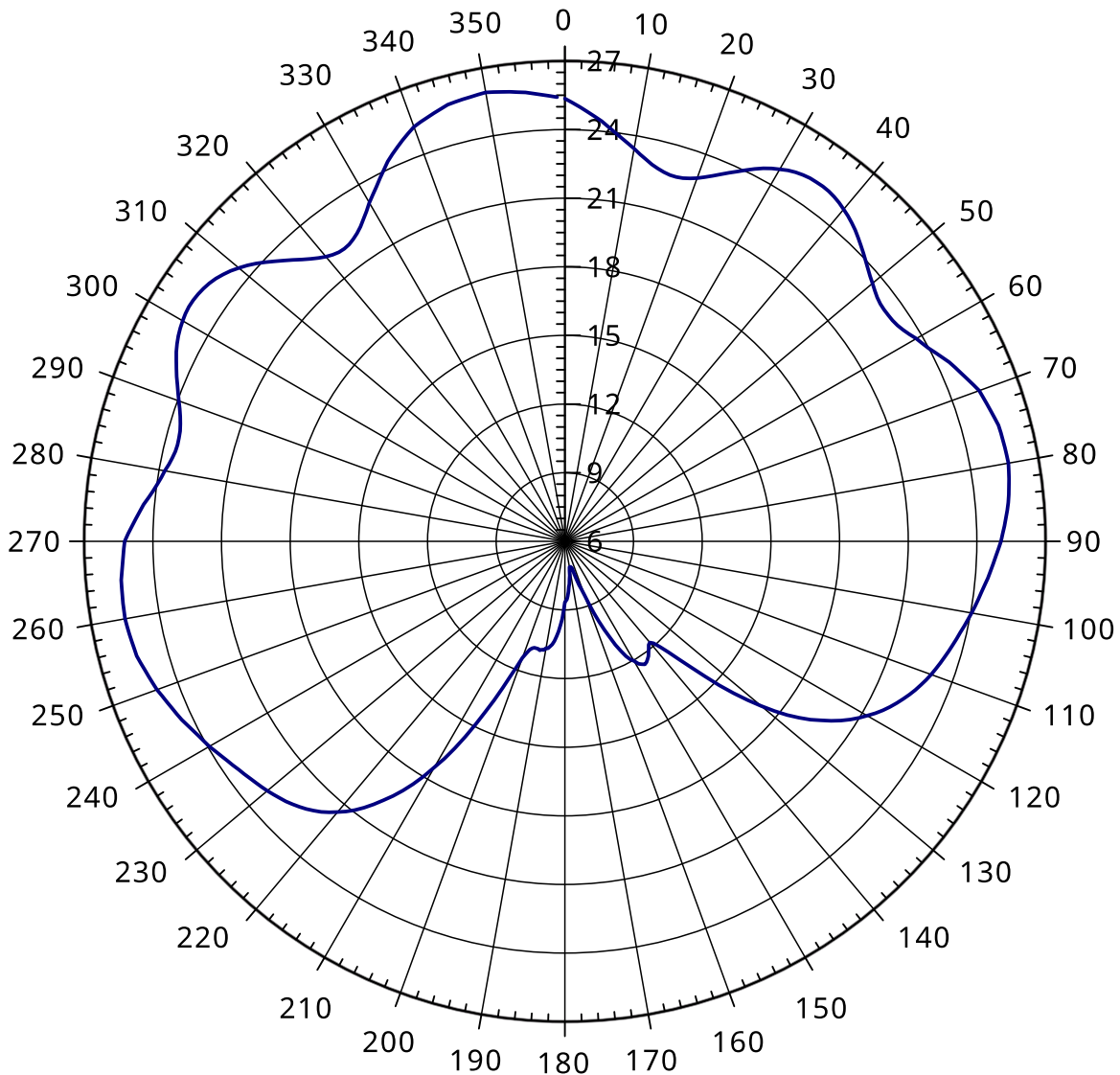
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AZIMUTH PATTERN ERP (dBk)



Blue plot shows effective radiated power (dBk)

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ELEVATION PATTERN TUA-C3-6/18U-1-R DC SM

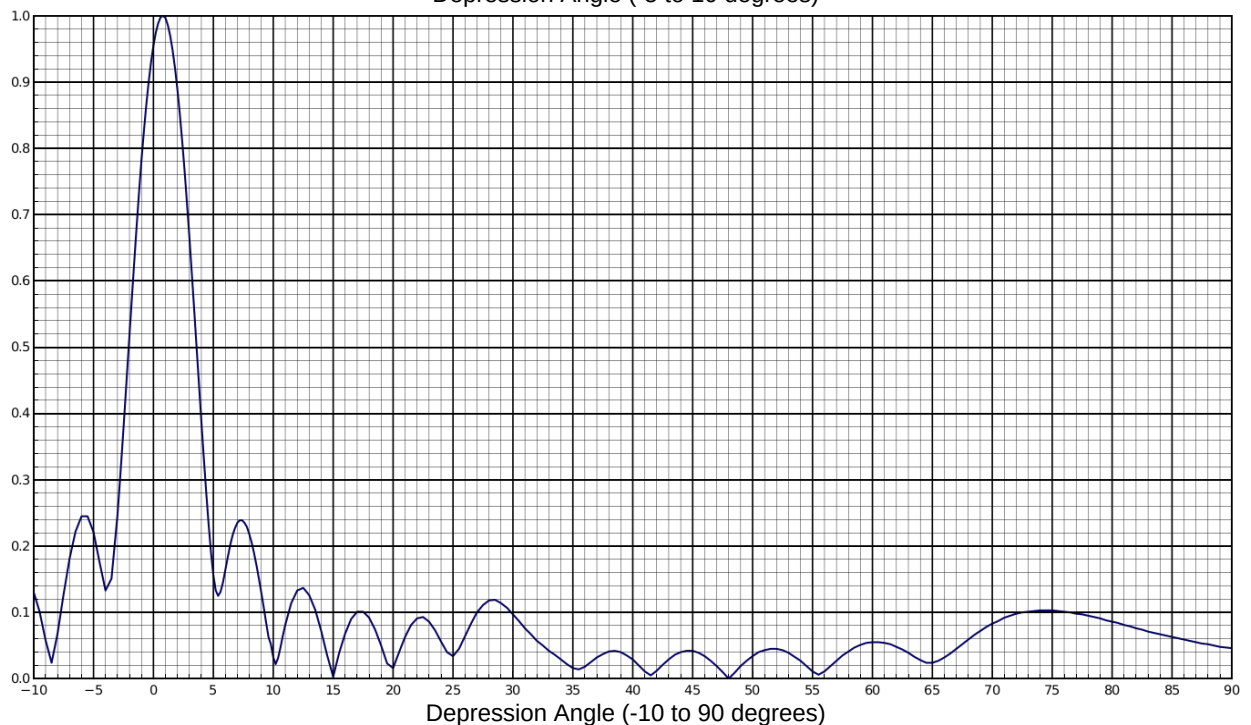
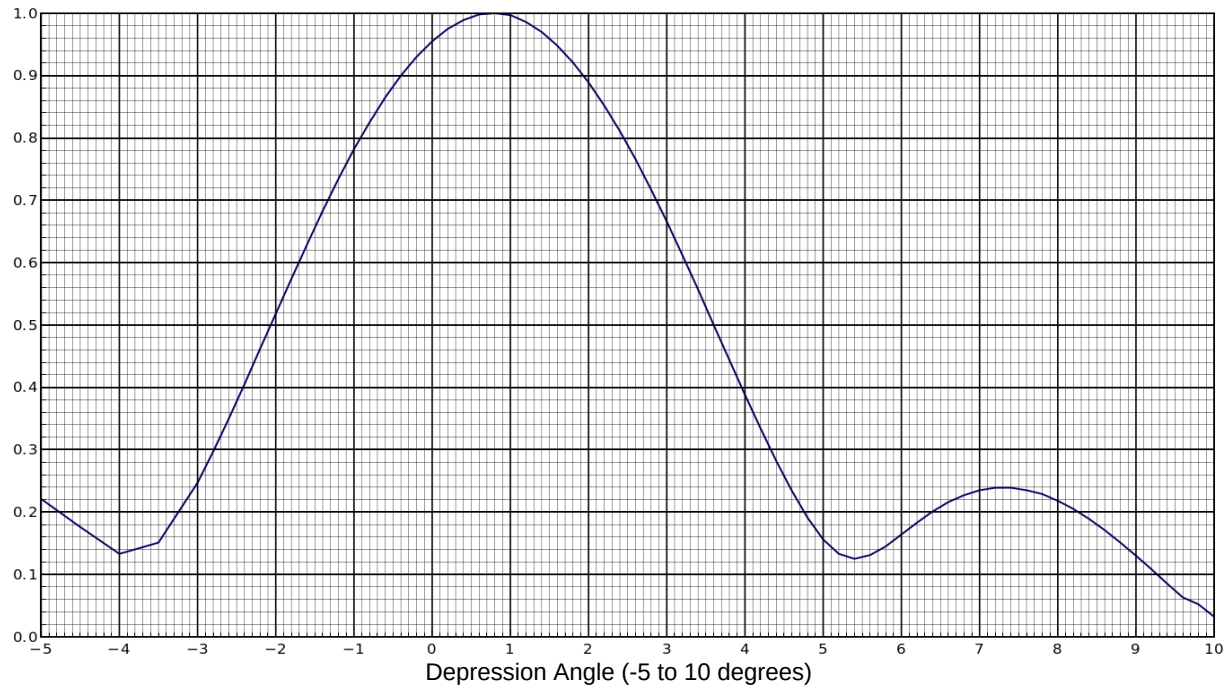
Electrical Beam Tilt: 0.80°

Calculated Maximum Elevation Gain (H polarization): 12.42 10.94 dBd

RMS Gain at Horizontal (H polarization): 11.30 10.53 dBd

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Relative Field



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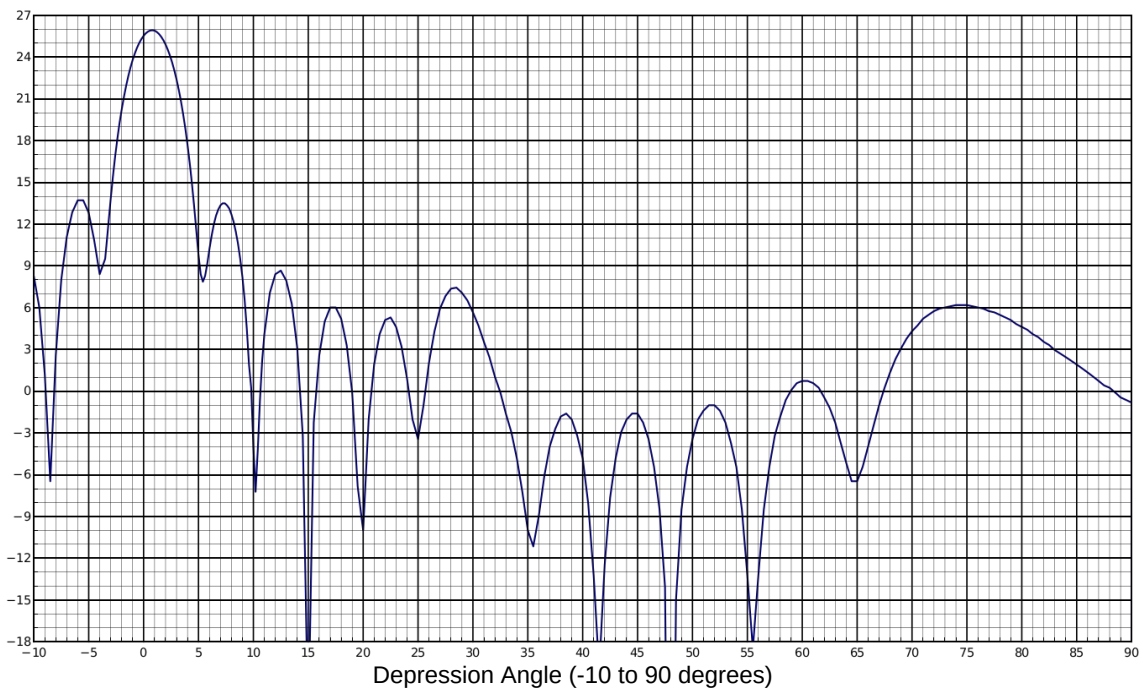
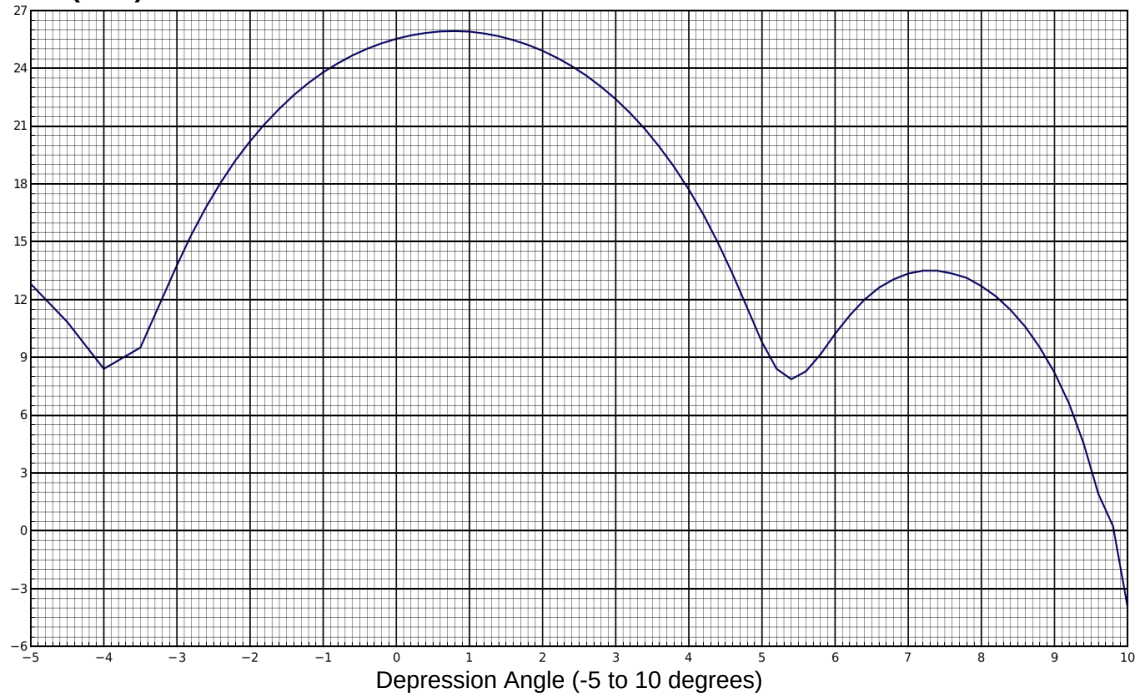
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ERP (dBK)



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Elevation Pattern Tabulation:

Angle	Field	Angle	Field	Angle	Field	Angle	Field	Angle	Field	Angle	Field	Angle	Field
-10.0	0.131	1.20	0.986	8.20	0.205	21.5	0.081	39.0	0.040	56.5	0.019	74.0	0.103
-9.50	0.101	1.40	0.970	8.40	0.189	22.0	0.091	39.5	0.035	57.0	0.027	74.5	0.103
-9.00	0.058	1.60	0.948	8.60	0.171	22.5	0.093	40.0	0.029	57.5	0.035	75.0	0.103
-8.50	0.024	1.80	0.921	8.80	0.151	23.0	0.086	40.5	0.020	58.0	0.041	75.5	0.102
-8.00	0.068	2.00	0.889	9.00	0.130	23.5	0.073	41.0	0.011	58.5	0.047	76.0	0.101
-7.50	0.127	2.20	0.852	9.20	0.108	24.0	0.056	41.5	0.005	59.0	0.051	76.5	0.100
-7.00	0.181	2.40	0.811	9.40	0.085	24.5	0.040	42.0	0.012	59.5	0.054	77.0	0.098
-6.50	0.222	2.60	0.766	9.60	0.063	25.0	0.034	42.5	0.021	60.0	0.055	77.5	0.097
-6.00	0.245	2.80	0.717	9.80	0.052	25.5	0.045	43.0	0.029	60.5	0.055	78.0	0.095
-5.50	0.245	3.00	0.666	10.00	0.032	26.0	0.064	43.5	0.036	61.0	0.054	78.5	0.093
-5.00	0.221	3.20	0.612	10.2	0.022	26.5	0.083	44.0	0.040	61.5	0.052	79.0	0.091
-4.50	0.176	3.40	0.557	10.4	0.031	27.0	0.1	44.5	0.042	62.0	0.048	79.5	0.088
-4.00	0.133	3.60	0.500	10.6	0.047	27.5	0.111	45.0	0.042	62.5	0.044	80.0	0.086
-3.50	0.151	3.80	0.444	10.8	0.065	28.0	0.118	45.5	0.039	63.0	0.039	80.5	0.084
-3.00	0.247	4.00	0.388	11.0	0.081	28.5	0.119	46.0	0.034	63.5	0.033	81.0	0.081
-2.80	0.297	4.20	0.334	11.5	0.114	29.0	0.114	46.5	0.027	64.0	0.028	81.5	0.079
-2.60	0.350	4.40	0.282	12.0	0.133	29.5	0.107	47.0	0.019	64.5	0.024	82.0	0.076
-2.40	0.405	4.60	0.234	12.5	0.137	30.0	0.097	47.5	0.010	65.0	0.024	82.5	0.074
-2.20	0.462	4.80	0.191	13.0	0.126	30.5	0.087	48.0	0.000	65.5	0.027	83.0	0.071
-2.00	0.518	5.00	0.156	13.5	0.104	31.0	0.076	48.5	0.009	66.0	0.032	83.5	0.069
-1.80	0.574	5.20	0.133	14.0	0.072	31.5	0.067	49.0	0.019	66.5	0.038	84.0	0.067
-1.60	0.629	5.40	0.125	14.5	0.035	32.0	0.057	49.5	0.027	67.0	0.045	84.5	0.065
-1.40	0.683	5.60	0.131	15.0	0.003	32.5	0.050	50.0	0.034	67.5	0.052	85.0	0.063
-1.20	0.734	5.80	0.145	15.5	0.039	33.0	0.042	50.5	0.040	68.0	0.059	85.5	0.061
-1.00	0.782	6.00	0.164	16.0	0.068	33.5	0.036	51.0	0.043	68.5	0.066	86.0	0.059
-0.80	0.825	6.20	0.183	16.5	0.090	34.0	0.029	51.5	0.045	69.0	0.072	86.5	0.057
-0.60	0.865	6.40	0.201	17.0	0.101	34.5	0.022	52.0	0.045	69.5	0.078	87.0	0.055
-0.40	0.900	6.60	0.216	17.5	0.101	35.0	0.016	52.5	0.043	70.0	0.083	87.5	0.053
-0.20	0.930	6.80	0.227	18.0	0.092	35.5	0.014	53.0	0.039	70.5	0.087	88.0	0.052
0.00	0.955	7.00	0.235	18.5	0.074	36.0	0.018	53.5	0.033	71.0	0.092	88.5	0.050
0.20	0.975	7.20	0.239	19.0	0.050	36.5	0.025	54.0	0.027	71.5	0.095	89.0	0.048
0.40	0.989	7.40	0.239	19.5	0.023	37.0	0.032	54.5	0.019	72.0	0.098	89.5	0.047
0.60	0.998	7.60	0.235	20.0	0.016	37.5	0.037	55.0	0.011	72.5	0.100	90.0	0.046
0.80	1.000	7.80	0.229	20.5	0.040	38.0	0.041	55.5	0.006	73.0	0.101	90.0	0.000
1.00	0.997	8.00	0.218	21.0	0.063	38.5	0.042	56.0	0.011	73.5	0.102		