

TECHNICAL EXHIBIT  
APPLICATION FOR LICENSE  
TELEVISION STATION WEDW-DT  
BRIDGEPORT, CONNECTICUT

April 25, 2003

CHANNEL 52 50 KW(MAX-DA) 189 M

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Table of Contents

Technical Statement

Figure 1

Technical Specifications

Appendix 1

Transmitting Antenna Manufacturer's Azimuthal Plane  
and Vertical Plane Pattern Data

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Technical Statement

This Technical Exhibit was prepared on behalf of WEDW-DT, Bridgeport, Connecticut, in support of an application for license. WEDW-DT holds a construction permit (CP) for operation on Channel 52 with a maximum directional effective radiated power (ERP) of 50 kW and an antenna height above average terrain (HAAT) of 189 m.\* This Technical Statement provides additional documentation concerning the replacement antenna employed by WEDW-DT in lieu of the authorized antenna pursuant to Section 73.1690(c)(3) of the FCC Rules.

The WEDW-DT facility operates with the same location, height, antenna pattern and maximum ERP as indicated in the WEDW-DT CP. However, the model of antenna actually installed differs from that indicated in the WEDW-DT CP; and the electrical beam tilt has been changed to 1.0° from 0.5°. These changes do not materially change the operation of the WEDW-DT facility from what has been authorized. The installed transmitting antenna is a Dielectric, model TFU-8DSB-J. The manufacturer's supplied data sheets are included in Appendix 1 of this report. Figure 1 summarizes the technical specifications for the proposed operation.

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\* See FCC File No. BPEDT-20000419AAT.

With respect to the potential for human exposure to radio frequency (RF) radiation, calculations prepared in accordance with FCC Bulletin OET-65 (Edition 97-01) indicate that the proposal will not result in human exposure to RF radiation at ground level in excess of FCC standards. Power density calculations were conducted at 2-m above ground<sup>†</sup> based on the following conservative assumptions, with the following results:

Call Sign	Channel	Peak Visual ERP or Average ERP (kW)	Aural ERP (kW)	Relative Field Factor <sup>‡</sup>	FCC Limit <sup>§</sup> (mW/cm <sup>2</sup> )	Percentage of Limit
WEDW-DT	52	50	--	0.15	0.466	0.67%

As indicated above, the exposure to RF radiation at 2-m above ground level will not exceed 0.67% of the FCC limit for general population / uncontrolled exposure. Therefore, the proposal complies with the FCC limits for human exposure to RF radiation and it is categorically excluded from environmental processing. The applicant, in coordination with other users of the transmission facility, shall reduce power or cease operation as necessary to protect persons having access to the tower or antenna from radio frequency radiation in excess of the FCC guidelines.

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April 25, 2003

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<sup>†</sup> The radiation center height above ground is 112 m.

<sup>‡</sup> This is a conservative estimate of the relative field in the downward direction. See Appendix 1.

<sup>§</sup> for general population/uncontrolled environments

Figure 1

TECHNICAL EXHIBIT  
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BRIDGEPORT, CONNECTICUT  
CHANNEL 52 50 KW(MAX-DA) 189 M

Technical Specifications

Channel / Frequency Band	52 / 698-704 MHz
Site Coordinates (NAD 27)	41°16'44" North Latitude 73°11'08" West Longitude
Site elevation	161 m AMSL
Average elevation of standard eight radials, 3 to 16 km	84 m AMSL
Overall height of existing structure	150 m AGL / 311 m AMSL
Height of antenna radiation center	112 m AGL / 273 m AMSL
Antenna radiation center HAAT	189 m
Antenna Structure Registration Number	1205267

Proposed Operation	
Parameter	DTV
Transmitter power output	6.23 dBk (4.2 kW)
Transmission line loss (450-ft of 3-inch EIA rigid coaxial line)	1.27 dB
Antenna input power	4.96 dBk
Nominal antenna gain (Dielectric, model TFU-8DSB-J)	12.04 dB
Effective radiated power (at main beam of radiation lobe)	17.0 dBk (50 kW)

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Transmitting Antenna Manufacturer's  
Azimuthal Plane and Vertical Plane Pattern Data

(four pages follow)



Proposal Number	<b>2B000</b>	Revision	
Date	<b>19 Mar 2002</b>		
Call Letters	<b>WEDW-DT</b>	Channel	<b>52</b>
Location	<b>Bridgeport, CT</b>		
Customer	<b>Thales</b>		
Antenna Type	<b>TFU-8DSB-J</b>		

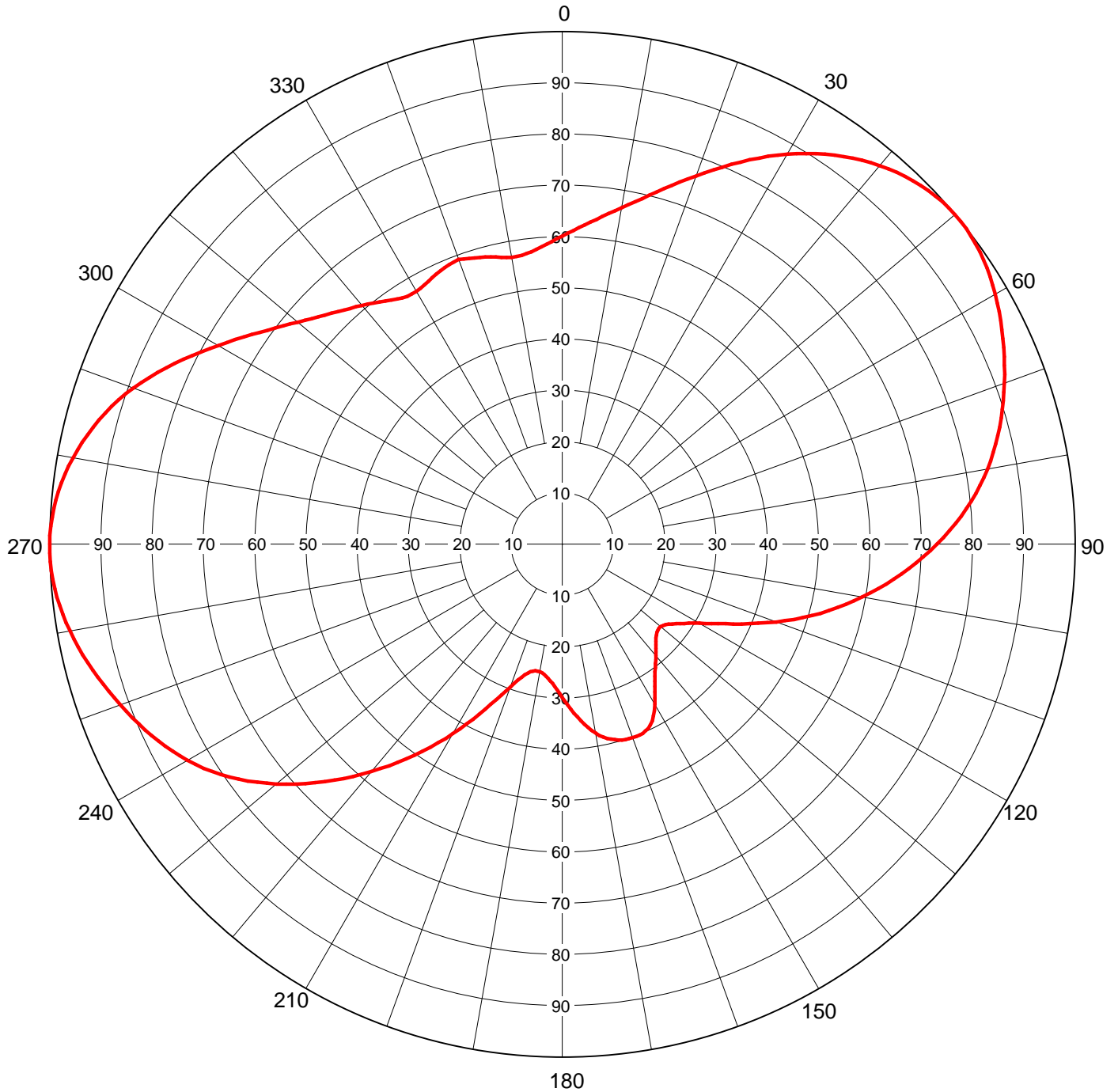
### AZIMUTH PATTERN

RMS Gain at Main Lobe  
Calculated / Measured

**2.00 (3.01 dB)**  
**Calculated**

Frequency  
Drawing #

**701 MHz**  
**DSB-J**



Remarks:



Proposal Number **2B000** Revision  
 Date **19 Mar 2002**  
 Call Letters **WEDW-DT** Channel **52**  
 Location **Bridgeport, CT**  
 Customer **Thales**  
 Antenna Type **TFU-8DSB-J**

## TABULATION OF AZIMUTH PATTERN

Azimuth Pattern Drawing # **DSB-J**

Angle	Field	Angle	Field	Angle	Field	Angle	Field	Angle	Field	Angle	Field	Angle	Field	Angle	Field
0	0.601	45	0.989	90	0.731	135	0.259	180	0.299	225	0.655	270	1.000	315	0.637
1	0.606	46	0.993	91	0.718	136	0.263	181	0.291	226	0.670	271	0.999	316	0.630
2	0.612	47	0.995	92	0.705	137	0.268	182	0.285	227	0.685	272	0.998	317	0.624
3	0.618	48	0.997	93	0.692	138	0.273	183	0.278	228	0.699	273	0.997	318	0.619
4	0.624	49	0.999	94	0.678	139	0.279	184	0.273	229	0.713	274	0.994	319	0.613
5	0.630	50	1.000	95	0.664	140	0.284	185	0.268	230	0.728	275	0.991	320	0.608
6	0.637	51	1.000	96	0.650	141	0.290	186	0.263	231	0.741	276	0.988	321	0.602
7	0.644	52	0.999	97	0.637	142	0.295	187	0.259	232	0.755	277	0.984	322	0.597
8	0.651	53	0.998	98	0.623	143	0.301	188	0.256	233	0.767	278	0.979	323	0.592
9	0.658	54	0.996	99	0.608	144	0.308	189	0.254	234	0.780	279	0.974	324	0.586
10	0.666	55	0.994	100	0.594	145	0.315	190	0.253	235	0.792	280	0.969	325	0.581
11	0.674	56	0.991	101	0.580	146	0.323	191	0.252	236	0.803	281	0.963	326	0.576
12	0.683	57	0.988	102	0.566	147	0.331	192	0.253	237	0.814	282	0.957	327	0.573
13	0.692	58	0.984	103	0.551	148	0.340	193	0.254	238	0.825	283	0.950	328	0.570
14	0.701	59	0.980	104	0.536	149	0.351	194	0.257	239	0.834	284	0.943	329	0.569
15	0.711	60	0.975	105	0.521	150	0.361	195	0.260	240	0.844	285	0.935	330	0.569
16	0.721	61	0.970	106	0.506	151	0.371	196	0.265	241	0.852	286	0.927	331	0.570
17	0.732	62	0.965	107	0.491	152	0.380	197	0.271	242	0.861	287	0.919	332	0.572
18	0.742	63	0.960	108	0.475	153	0.387	198	0.279	243	0.869	288	0.910	333	0.575
19	0.753	64	0.954	109	0.460	154	0.392	199	0.287	244	0.876	289	0.900	334	0.578
20	0.764	65	0.948	110	0.444	155	0.396	200	0.296	245	0.883	290	0.890	335	0.581
21	0.776	66	0.942	111	0.428	156	0.399	201	0.307	246	0.891	291	0.879	336	0.583
22	0.787	67	0.936	112	0.413	157	0.401	202	0.318	247	0.897	292	0.868	337	0.586
23	0.799	68	0.930	113	0.397	158	0.402	203	0.330	248	0.904	293	0.857	338	0.588
24	0.810	69	0.924	114	0.382	159	0.402	204	0.342	249	0.911	294	0.845	339	0.589
25	0.822	70	0.918	115	0.368	160	0.402	205	0.355	250	0.917	295	0.834	340	0.591
26	0.834	71	0.911	116	0.355	161	0.401	206	0.369	251	0.923	296	0.822	341	0.588
27	0.845	72	0.905	117	0.342	162	0.401	207	0.383	252	0.930	297	0.810	342	0.586
28	0.856	73	0.898	118	0.330	163	0.399	208	0.397	253	0.936	298	0.798	343	0.584
29	0.867	74	0.890	119	0.319	164	0.397	209	0.412	254	0.942	299	0.786	344	0.582
30	0.878	75	0.883	120	0.309	165	0.395	210	0.427	255	0.948	300	0.775	345	0.580
31	0.888	76	0.875	121	0.300	166	0.392	211	0.442	256	0.954	301	0.763	346	0.577
32	0.898	77	0.868	122	0.292	167	0.389	212	0.457	257	0.960	302	0.752	347	0.574
33	0.908	78	0.859	123	0.284	168	0.385	213	0.472	258	0.965	303	0.741	348	0.572
34	0.917	79	0.851	124	0.277	169	0.380	214	0.487	259	0.970	304	0.731	349	0.570
35	0.926	80	0.842	125	0.271	170	0.374	215	0.502	260	0.975	305	0.720	350	0.568
36	0.934	81	0.833	126	0.265	171	0.368	216	0.518	261	0.980	306	0.710	351	0.568
37	0.942	82	0.823	127	0.260	172	0.361	217	0.533	262	0.984	307	0.700	352	0.569
38	0.950	83	0.813	128	0.256	173	0.354	218	0.548	263	0.987	308	0.691	353	0.571
39	0.957	84	0.803	129	0.252	174	0.346	219	0.564	264	0.991	309	0.682	354	0.573
40	0.964	85	0.792	130	0.250	175	0.338	220	0.579	265	0.994	310	0.673	355	0.577
41	0.970	86	0.780	131	0.250	176	0.330	221	0.594	266	0.996	311	0.665	356	0.581
42	0.975	87	0.768	132	0.251	177	0.322	222	0.609	267	0.998	312	0.657	357	0.585
43	0.981	88	0.756	133	0.252	178	0.314	223	0.625	268	0.999	313	0.650	358	0.590
44	0.985	89	0.744	134	0.255	179	0.306	224	0.640	269	1.000	314	0.643	359	0.595

Remarks:

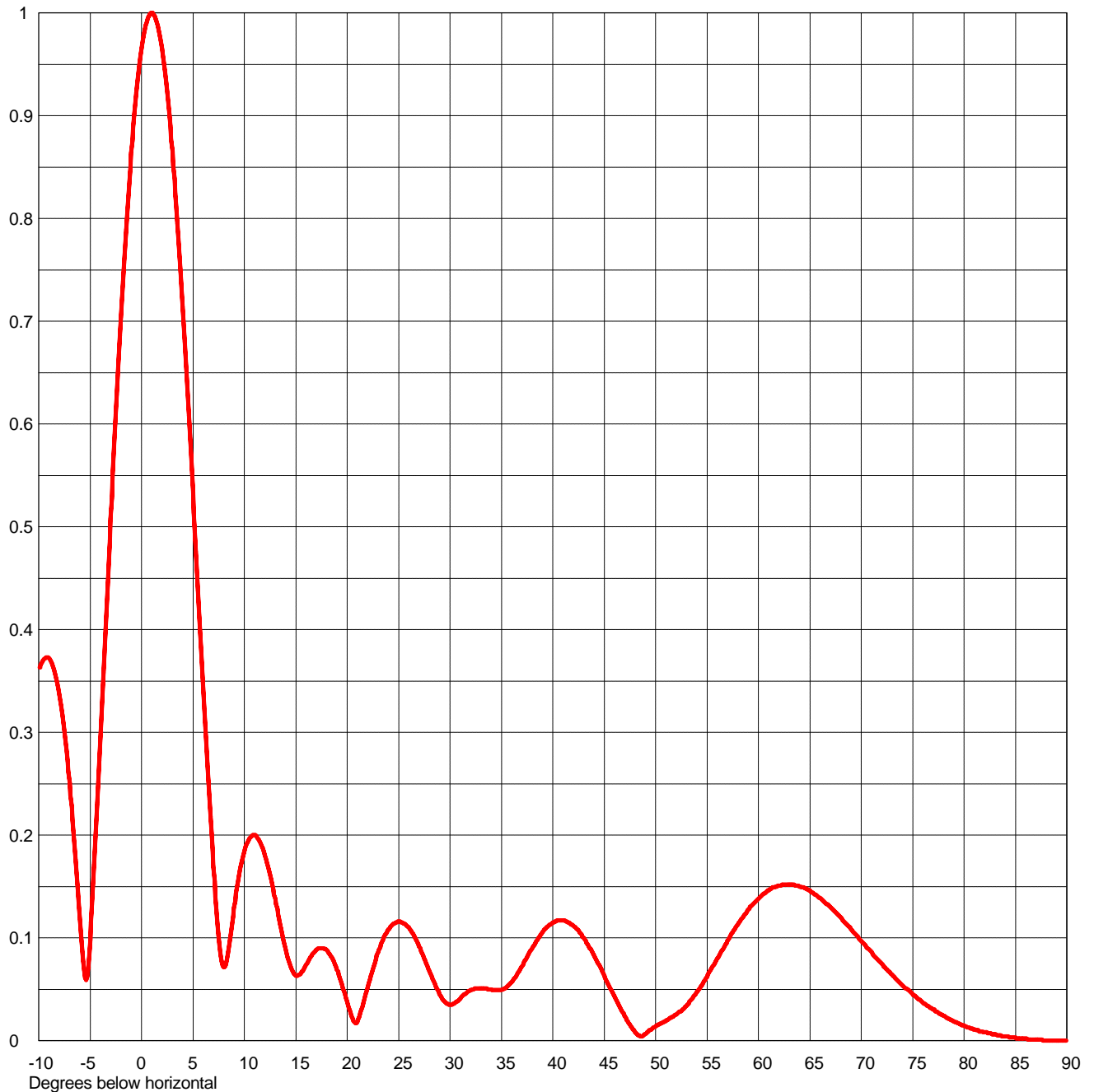




Proposal Number	<b>2B000</b>	Revision	
Date	<b>19 Mar 2002</b>		
Call Letters	<b>WEDW-DT</b>	Channel	<b>52</b>
Location	<b>Bridgeport, CT</b>		
Customer	<b>Thales</b>		
Antenna Type	<b>TFU-8DSB-J</b>		

### ELEVATION PATTERN

RMS Gain at Main Lobe	<b>8.0 (9.03 dB)</b>	Beam Tilt	<b>1.00 Degrees</b>
RMS Gain at Horizontal	<b>7.4 (8.69 dB)</b>	Frequency	<b>701.00 MHz</b>
Calculated / Measured	<b>Calculated</b>	Drawing #	<b>08B080100-90</b>



Remarks:



Proposal Number **2B000** Revision  
 Date **19 Mar 2002**  
 Call Letters **WEDW-DT** Channel **52**  
 Location **Bridgeport, CT**  
 Customer **Thales**  
 Antenna Type **TFU-8DSB-J**

## TABULATION OF ELEVATION PATTERN

Elevation Pattern Drawing # **08B080100**

Angle	Field	Angle	Field	Angle	Field	Angle	Field	Angle	Field	Angle	Field
-10.0	0.360	2.4	0.932	10.6	0.198	30.5	0.037	51.0	0.019	71.5	0.080
-9.5	0.371	2.6	0.912	10.8	0.200	31.0	0.041	51.5	0.022	72.0	0.075
-9.0	0.372	2.8	0.889	11.0	0.200	31.5	0.045	52.0	0.025	72.5	0.069
-8.5	0.361	3.0	0.865	11.5	0.194	32.0	0.049	52.5	0.029	73.0	0.064
-8.0	0.337	3.2	0.838	12.0	0.180	32.5	0.051	53.0	0.034	73.5	0.059
-7.5	0.300	3.4	0.810	12.5	0.161	33.0	0.051	53.5	0.040	74.0	0.054
-7.0	0.251	3.6	0.780	13.0	0.138	33.5	0.051	54.0	0.047	74.5	0.050
-6.5	0.189	3.8	0.748	13.5	0.113	34.0	0.050	54.5	0.054	75.0	0.045
-6.0	0.119	4.0	0.714	14.0	0.090	34.5	0.049	55.0	0.062	75.5	0.041
-5.5	0.061	4.2	0.680	14.5	0.072	35.0	0.049	55.5	0.071	76.0	0.037
-5.0	0.098	4.4	0.644	15.0	0.063	35.5	0.052	56.0	0.080	76.5	0.034
-4.5	0.191	4.6	0.608	15.5	0.065	36.0	0.057	56.5	0.088	77.0	0.030
-4.0	0.294	4.8	0.571	16.0	0.074	36.5	0.064	57.0	0.097	77.5	0.027
-3.5	0.401	5.0	0.533	16.5	0.082	37.0	0.072	57.5	0.105	78.0	0.024
-3.0	0.507	5.2	0.495	17.0	0.088	37.5	0.081	58.0	0.113	78.5	0.021
-2.8	0.548	5.4	0.457	17.5	0.090	38.0	0.090	58.5	0.120	79.0	0.019
-2.6	0.589	5.6	0.418	18.0	0.088	38.5	0.098	59.0	0.127	79.5	0.017
-2.4	0.628	5.8	0.381	18.5	0.081	39.0	0.105	59.5	0.133	80.0	0.015
-2.2	0.667	6.0	0.343	19.0	0.069	39.5	0.111	60.0	0.138	80.5	0.013
-2.0	0.704	6.2	0.306	19.5	0.055	40.0	0.115	60.5	0.143	81.0	0.011
-1.8	0.739	6.4	0.270	20.0	0.038	40.5	0.117	61.0	0.146	81.5	0.009
-1.6	0.773	6.6	0.235	20.5	0.022	41.0	0.117	61.5	0.149	82.0	0.008
-1.4	0.805	6.8	0.202	21.0	0.019	41.5	0.115	62.0	0.151	82.5	0.007
-1.2	0.835	7.0	0.170	21.5	0.033	42.0	0.112	62.5	0.152	83.0	0.006
-1.0	0.863	7.2	0.140	22.0	0.052	42.5	0.107	63.0	0.152	83.5	0.005
-0.8	0.888	7.4	0.114	22.5	0.070	43.0	0.100	63.5	0.152	84.0	0.004
-0.6	0.911	7.6	0.092	23.0	0.086	43.5	0.092	64.0	0.150	84.5	0.003
-0.4	0.932	7.8	0.077	23.5	0.098	44.0	0.083	64.5	0.148	85.0	0.003
-0.2	0.950	8.0	0.071	24.0	0.108	44.5	0.074	65.0	0.146	85.5	0.002
0.0	0.965	8.2	0.074	24.5	0.114	45.0	0.063	65.5	0.142	86.0	0.002
0.2	0.978	8.4	0.085	25.0	0.116	45.5	0.053	66.0	0.139	86.5	0.001
0.4	0.988	8.6	0.099	25.5	0.114	46.0	0.043	66.5	0.134	87.0	0.001
0.6	0.995	8.8	0.114	26.0	0.110	46.5	0.033	67.0	0.130	87.5	0.001
0.8	0.999	9.0	0.129	26.5	0.102	47.0	0.024	67.5	0.125	88.0	0.000
1.0	1.000	9.2	0.143	27.0	0.092	47.5	0.016	68.0	0.120	88.5	0.000
1.2	0.998	9.4	0.155	27.5	0.080	48.0	0.008	68.5	0.114	89.0	0.000
1.4	0.994	9.6	0.167	28.0	0.068	48.5	0.004	69.0	0.109	89.5	0.000
1.6	0.987	9.8	0.176	28.5	0.056	49.0	0.006	69.5	0.103	90.0	0.000
1.8	0.977	10.0	0.184	29.0	0.045	49.5	0.010	70.0	0.097		
2.0	0.965	10.2	0.191	29.5	0.038	50.0	0.014	70.5	0.091		
2.2	0.949	10.4	0.195	30.0	0.035	50.5	0.017	71.0	0.086		

Remarks: