

TECHNICAL EXHIBIT  
APPLICATION FOR MODIFICATION OF  
CONSTRUCTION PERMIT  
TELEVISION STATION KIFI-DT  
IDAHO FALLS, IDAHO

January 17, 2006

CHANNEL 9 17.9 KW 464 M

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Technical Statement

This Technical Exhibit was prepared on behalf of digital television broadcast station KIFI-DT, Idaho Falls, Idaho, in support of an application for modification of construction permit.<sup>\*</sup> The KIFI-DT construction permit authorizes operation on Channel 9 with a non-directional effective radiated power (ERP) of 63 kW and an antenna height above average terrain (HAAT) of 463 m. The purpose of this application is to obtain a modified construction permit for the KIFI-DT facility now operating pursuant to FCC Special Temporary Authority (STA),<sup>†</sup> with corrections in the transmitter site location and elevation. This is required in order to meet the “use-it-or-lose-it” deadline imposed by the FCC in the *Report and Order* in the Second Periodic Review of the Commission’s Rules and Policies Affecting the Conversion to Digital Television, Released: September 7, 2004.

The proposed facility will not result in any extension of the predicted 36 dBu noise-limited contour relative to the KIFI-DT authorized construction permit facility.<sup>‡</sup> Therefore, the proposal meets the terms of the FCC Filing Freeze for television stations.<sup>§</sup> Furthermore, there will be no extension of the predicted 36 dBu noise-limited

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<sup>\*</sup> See FCC File No. BPCDT-19991019AAZ

<sup>†</sup> See FCC File No. BDSTA-20030715ADG.

<sup>‡</sup> See Figure 1.

<sup>§</sup> See *August 2004 Filing Freeze PN*, DA 04-2446 (MB rel. Aug. 3, 2004).

contour beyond that of the KIFI-DT original DTV allotment facility. Therefore, this proposal qualifies as a DTV “checklist” facility.

This proposal also corrects the KIFI-DT site coordinates and elevation data. There is no change in the physical tower location. However, the correct site coordinates and elevation data differ from the information on file in the FCC engineering records. The antenna HAAT was recalculated to be 464 m based on the corrected site location and elevation data. This is based on a revised antenna radiation center height of 2,033 m AMSL.

#### Proposed Facilities

The KIFI-DT transmitting facility will employ the existing Dielectric Communications model TF-12HT-DC-H superturnstile transmitting antenna, which will be shared with KIFI-TV, Channel 8. The transmitter site elevation is 1,990 m AMSL. The antenna center of radiation is located at 43 m above ground level and 2,033 m AMSL. The proposed KIFI-DT facility will operate on Channel 9 with a non-directional average ERP of 12.5 dBk (17.9 kW) and antenna radiation center HAAT of 464 m.

The proposed facility provides minimum 43 dBu, f(50,90), coverage of Idaho Falls in compliance with Section 73.625(a)(1) of the FCC Rules. Figure 1 herein is a map depicting the predicted coverage contours of the proposed facility.

#### Tower Registration

The existing antenna structure has an overall height of 55 m AGL. There are no public landing facilities within 8 km of the site. There will be no change in the overall height of the antenna structure as a result of the instant proposal. Therefore, FAA

notification of the proposal is not necessary and FCC antenna structure registration is not required.

Environmental Considerations

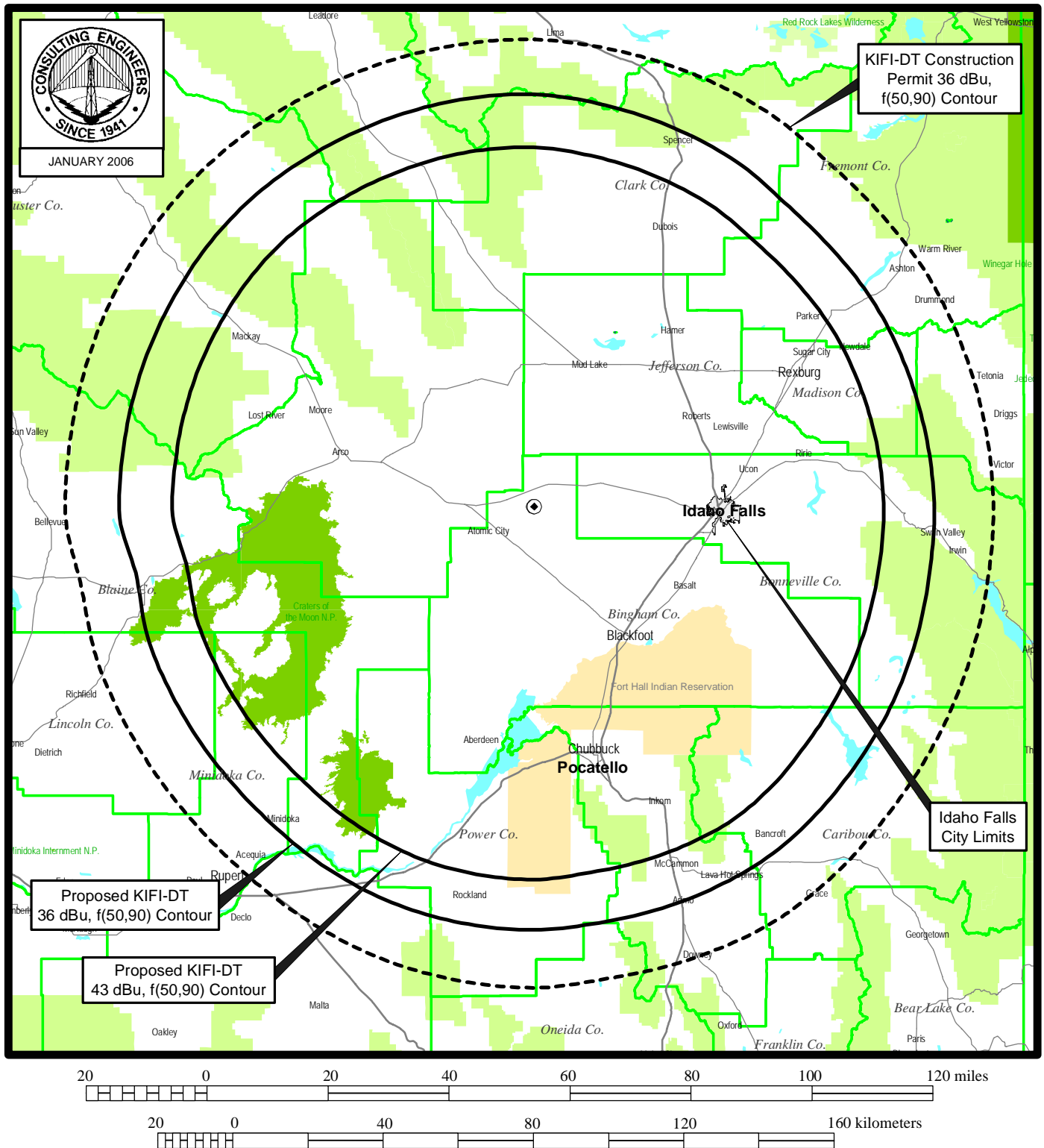
The proposal is categorically excluded from environmental processing under Section 1.1306 of the FCC Rules as the proposal would not result in radio frequency (RF) energy exposure in excess of the maximum permissible exposure (MPE) limit of Section 1.1310 of the FCC Rules. Calculations of RF energy from the proposed facility were made at horizontal distances from the base of the tower at ground level under the procedures of OET Bulletin No. 65. For Channel 9 the MPE for general population / uncontrolled environments is  $0.20 \text{ mW/cm}^2$ . As indicated in Figure 2, the calculated RF exposure at ground level will not exceed  $0.0095 \text{ mW/cm}^2$ , or 4.7% of the MPE at any location on the ground.\*\* The transmitter site is in a remote location that is not likely to be visited by the general public. The access road to the site is gated and marked with the appropriate warning signs. Under this condition, the site may be considered a controlled environment, which would result in the calculated MPE for the site not exceeding 1% of the MPE for controlled environments. Therefore, the proposal complies with the FCC limits for human exposure to RF radiation and it is categorically excluded from environmental processing. The applicant shall reduce power or cease operation as necessary to protect persons having access to the tower or antenna from RF radiation in excess of the FCC guidelines.



Louis Robert du Treil, Jr.

du Treil, Lundin & Rackley, Inc.  
201 Fletcher Ave.  
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Figure 1

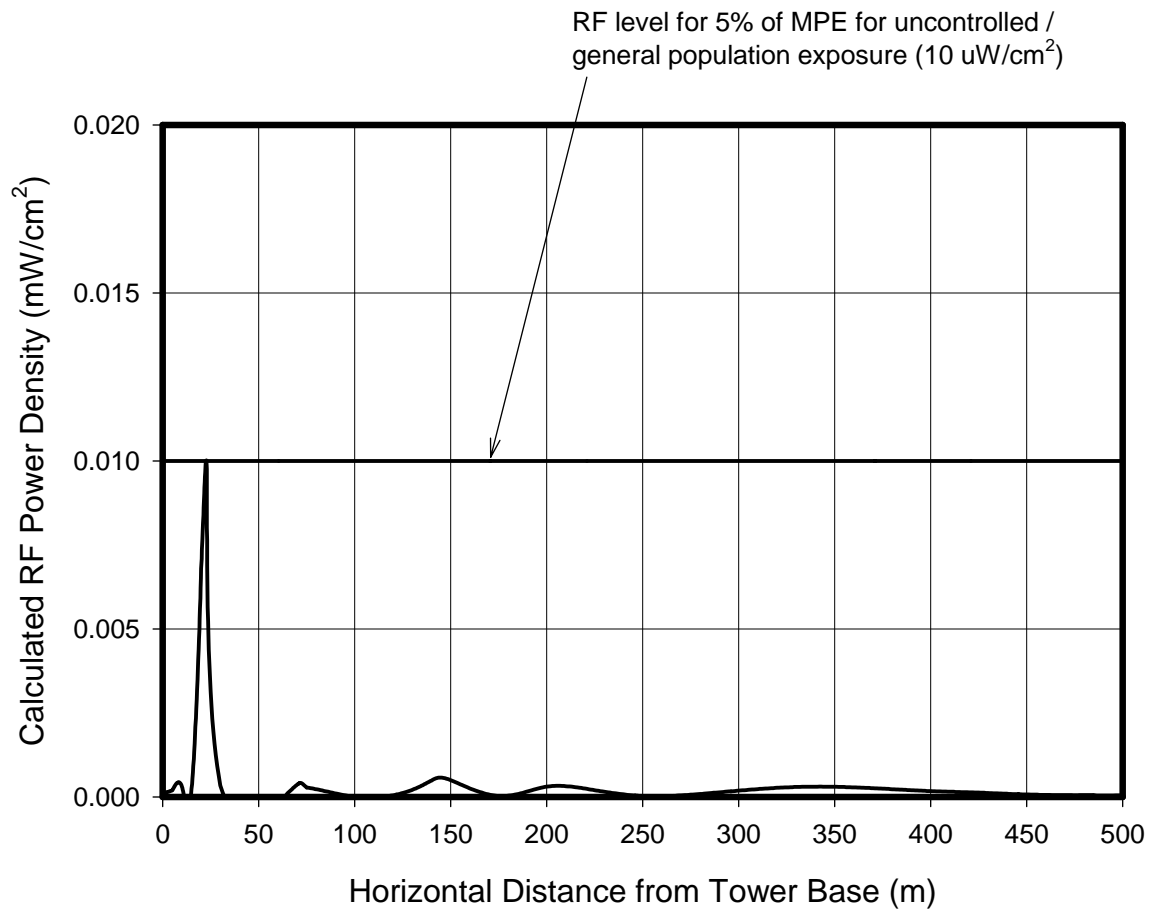


## PREDICTED DTV NL COVERAGE CONTOURS

TELEVISION STATION KIFI-DT  
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du Treil, Lundin & Rackley, Inc. Sarasota, Florida

Figure 2



Based on maximum horizontally polarized average ERP of 17.9 kW.

## CALCULATED RF POWER DENSITY AT GROUND LEVEL

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du Treil, Lundin & Rackley, Inc. Sarasota, Florida

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Transmitting Antenna  
Elevation Pattern Data

(two pages follow)

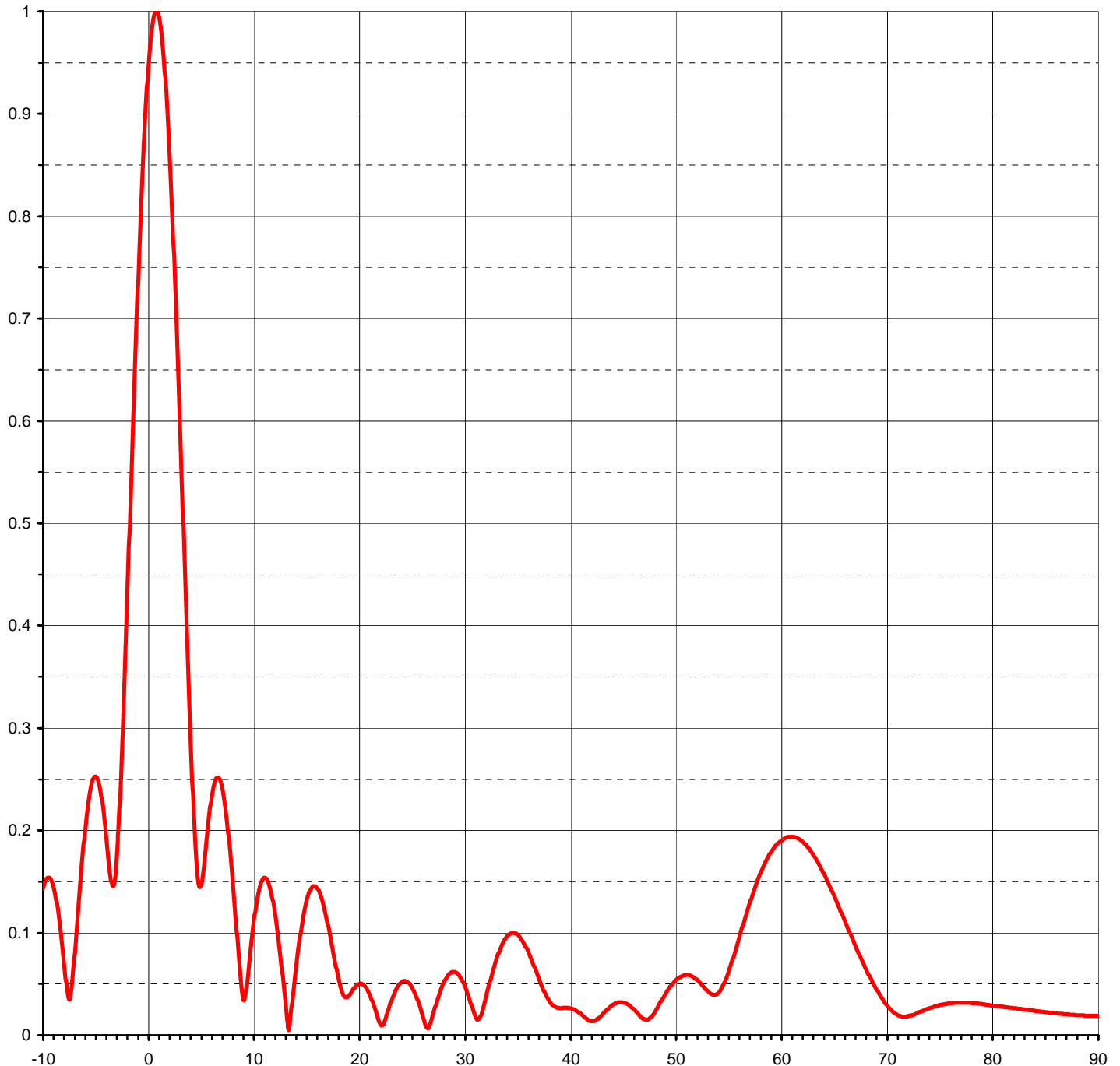




Proposal Number	<b>DCA-10056</b>	Revision:	<b>4</b>
Date	<b>5-Mar-03</b>		
Call Letters	<b>KIFI-DT</b>	Channel	<b>9</b>
Location	<b>Idaho Falls, ID</b>		
Customer			
Antenna Type	<b>TF-12HT-DC-H</b>		

## ELEVATION PATTERN

RMS Gain at Main Lobe	<b>11.90 ( 10.76 dB )</b>	Beam Tilt	<b>0.75 deg</b>
RMS Gain at Horizontal	<b>10.70 ( 10.29 dB )</b>	Frequency	<b>189.00 MHz</b>
Calculated / Measured	<b>Calculated</b>	Drawing #	<b>12S119075-90</b>



Degrees Below Horizontal



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Date **5-Mar-03**  
Call Letters **KIFI-DT** Channel **9**  
Location **Idaho Falls, ID**  
Customer  
Antenna Type **TF-12HT-DC-H**

## TABULATION OF ELEVATION PATTERN

Elevation Pattern Drawing #: **12S119075-90**

Angle	Field	Angle	Field	Angle	Field	Angle	Field	Angle	Field	Angle	Field
-10.0	0.143	2.4	0.763	10.6	0.143	30.5	0.036	51.0	0.059	71.5	0.018
-9.5	0.154	2.6	0.708	10.8	0.150	31.0	0.020	51.5	0.058	72.0	0.019
-9.0	0.145	2.8	0.650	11.0	0.153	31.5	0.017	52.0	0.055	72.5	0.020
-8.5	0.115	3.0	0.590	11.5	0.148	32.0	0.034	52.5	0.050	73.0	0.022
-8.0	0.070	3.2	0.528	12.0	0.124	32.5	0.054	53.0	0.044	73.5	0.024
-7.5	0.035	3.4	0.466	12.5	0.086	33.0	0.072	53.5	0.040	74.0	0.026
-7.0	0.080	3.6	0.404	13.0	0.039	33.5	0.086	54.0	0.040	74.5	0.028
-6.5	0.145	3.8	0.344	13.5	0.013	34.0	0.096	54.5	0.048	75.0	0.029
-6.0	0.202	4.0	0.287	14.0	0.059	34.5	0.100	55.0	0.060	75.5	0.030
-5.5	0.240	4.2	0.235	14.5	0.099	35.0	0.099	55.5	0.076	76.0	0.031
-5.0	0.253	4.4	0.192	15.0	0.128	35.5	0.093	56.0	0.093	76.5	0.032
-4.5	0.236	4.6	0.161	15.5	0.143	36.0	0.083	56.5	0.110	77.0	0.032
-4.0	0.192	4.8	0.146	16.0	0.145	36.5	0.071	57.0	0.127	77.5	0.032
-3.5	0.148	5.0	0.147	16.5	0.133	37.0	0.058	57.5	0.142	78.0	0.031
-3.0	0.174	5.2	0.161	17.0	0.113	37.5	0.045	58.0	0.156	78.5	0.031
-2.8	0.211	5.4	0.181	17.5	0.086	38.0	0.034	58.5	0.168	79.0	0.030
-2.6	0.258	5.6	0.201	18.0	0.060	38.5	0.029	59.0	0.178	79.5	0.030
-2.4	0.312	5.8	0.219	18.5	0.041	39.0	0.026	59.5	0.185	80.0	0.029
-2.2	0.371	6.0	0.234	19.0	0.038	39.5	0.027	60.0	0.190	80.5	0.028
-2.0	0.432	6.2	0.244	19.5	0.045	40.0	0.026	60.5	0.193	81.0	0.028
-1.8	0.495	6.4	0.250	20.0	0.050	40.5	0.025	61.0	0.194	81.5	0.027
-1.6	0.557	6.6	0.252	20.5	0.049	41.0	0.021	61.5	0.193	82.0	0.026
-1.4	0.619	6.8	0.248	21.0	0.041	41.5	0.017	62.0	0.190	82.5	0.026
-1.2	0.678	7.0	0.240	21.5	0.027	42.0	0.014	62.5	0.185	83.0	0.025
-1.0	0.735	7.2	0.228	22.0	0.012	42.5	0.015	63.0	0.178	83.5	0.024
-0.8	0.788	7.4	0.212	22.5	0.015	43.0	0.019	63.5	0.169	84.0	0.024
-0.6	0.836	7.6	0.193	23.0	0.030	43.5	0.024	64.0	0.160	84.5	0.023
-0.4	0.880	7.8	0.171	23.5	0.043	44.0	0.029	64.5	0.147	85.0	0.022
-0.2	0.917	8.0	0.147	24.0	0.051	44.5	0.032	65.0	0.135	85.5	0.022
0.0	0.949	8.2	0.121	24.5	0.053	45.0	0.032	65.5	0.123	86.0	0.021
0.2	0.972	8.4	0.095	25.0	0.048	45.5	0.030	66.0	0.111	86.5	0.021
0.4	0.989	8.6	0.070	25.5	0.037	46.0	0.026	66.5	0.099	87.0	0.020
0.6	0.998	8.8	0.047	26.0	0.022	46.5	0.021	67.0	0.087	87.5	0.020
0.8	1.000	9.0	0.034	26.5	0.007	47.0	0.016	67.5	0.075	88.0	0.020
1.0	0.994	9.2	0.040	27.0	0.018	47.5	0.016	68.0	0.064	88.5	0.019
1.2	0.981	9.4	0.057	27.5	0.035	48.0	0.022	68.5	0.054	89.0	0.019
1.4	0.960	9.6	0.077	28.0	0.049	48.5	0.030	69.0	0.044	89.5	0.019
1.6	0.933	9.8	0.087	28.5	0.059	49.0	0.039	69.5	0.036	90.0	0.019
1.8	0.899	10.0	0.105	29.0	0.062	49.5	0.047	70.0	0.029		
2.0	0.859	10.2	0.120	29.5	0.059	50.0	0.053	70.5	0.023		
2.2	0.813	10.4	0.133	30.0	0.049	50.5	0.057	71.0	0.020		