

TECHNICAL EXHIBIT
APPLICATION FOR CONSTRUCTION PERMIT
FCC FILE NO. BLTTA-20030306AAV
CLASS A STATION K36DB
FACILITY ID 23179
AVON, COLORADO
CH 36 0.0013 KW (MAX-DA)

Technical Narrative

The technical exhibit of which this narrative is part was prepared in support of an application for construction permit for Class A station K36DB on channel 36 at Avon, Colorado (Facility ID: 23179; File No. BLTTA-20030306AAV). Specifically, K36DB proposes to change transmitter site location, to decrease its maximum directional effective radiated power (ERP), to decrease its antenna radiation center above mean sea level, and to change the orientation of its directional antenna system. No other changes are proposed, including no change in channel (36), frequency offset designation (z), or community of license (Avon). As detailed below, this application is considered a "minor change" in facilities pursuant to Section 73.3572.

Proposed Operation

It is proposed to operate on channel 36 with a "zero" carrier frequency offset, a directional antenna maximum ERP of 0.0013 kW and an RCMSL of 2274 meters. It is proposed to side-mount an "off-the-shelf" Scala model CL-1469 "yagi" directional antenna (Antenna ID 20778) on a 10 foot pole on top of a two story building. The Scala CL-1469 directional antenna will be oriented with the main lobe oriented at 0 degrees true rather than the currently licensed orientation of 180° true.

Response to Paragraph 6 - Antenna Registration

FAA notification or tower registration will not be required as the overall height does not exceed two hundred feet, and there are no airports within 8 kilometers of the site.

Minor Change Application

Figure 1 depicts the licensed and herein proposed 74 dBu contours for K36DB. As indicated, the licensed 74 dBu contour overlaps a portion of the proposed 74 dBu contour. Therefore, the proposed modification is considered a "minor" change in facilities pursuant to Section 73.3572.

Response to Paragraph 13(a) - TV Broadcast Analog Protection

A study has been conducted using the provisions of Section 74.705 which indicates that the proposed K36DB operation will not create prohibited interference to other existing, authorized or proposed TV broadcast analog (NTSC) full-power stations.

Response to Paragraph 13(b) - DTV Station Protection

Calculations based on OET Bulletin No. 69 indicate that the proposed K36DB operation on channel 36 is not predicted to cause interference to any allotted, proposed or actual DTV operating facilities on channels 35 and 36.¹

Response to Paragraph 13(c) - LPTV/TV Translator, Class A Station Protection

A study has been conducted which indicates that the K36DB proposal will not create prohibited interference to other existing, authorized or proposed LPTV, TV Translator and Class A stations.

Environmental Considerations

The proposed K36DB television facilities were evaluated in terms of potential radiofrequency radiation exposure at ground level in accordance with OST Bulletin No. 65, "Evaluating Compliance With FCC-Specified Guidelines for

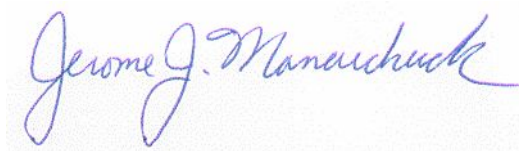
¹ The du Treil, Lundin & Rackley, Inc. DTV interference analysis program is based on the program and procedures outlined by the FCC in the Sixth Report and Order; subsequent Memorandum Opinion and Order; and FCC OET Bulletin No. 69. A nominal grid size resolution of 2 km was employed. A Sun based processor computer system was employed.

Human Exposure to Radiofrequency Radiation". The calculated power density at the base of the tower was calculated using the appropriate equation of the Bulletin.

As indicated on Figure 2, the vertical plane relative field does not exceed 0.15 at angles down toward the rooftop (-60° to -90° elevation). Therefore, using a greater than expected vertical relative field value of 0.15 towards the rooftop, a maximum visual effective radiated power of 0.0013 kilowatts and 10 percent aural power, and an antenna center of radiation height above the rooftop of 3 meters, the calculated power density at 2 meters above the rooftop is 0.0207 milliwatt per square centimeter (mW/cm^2), or 4.7% percent of the Commission's recommended limit applicable to general population/uncontrolled exposure areas ($0.44 \text{ mW}/\text{cm}^2$ for TV channel 45). As this is less than 5 percent of the Commission's recommended limit applicable to general population/uncontrolled exposure areas, the proposal will comply with the RF emission limits.

Access to the transmitting site will be restricted and appropriately marked with warning signs. Furthermore, as this is a multi-user site, an agreement will be in effect in the event that workers or other authorized personnel access the rooftop to ensure that appropriate measures will be taken to assure worker safety with respect to radio frequency radiation exposure. Such measures include reducing the average exposure by spreading out the work over a longer period of time, wearing "accepted" RFR protective

clothing and/or RFR exposure monitors or scheduling work when
the stations are at reduced power or shut down.

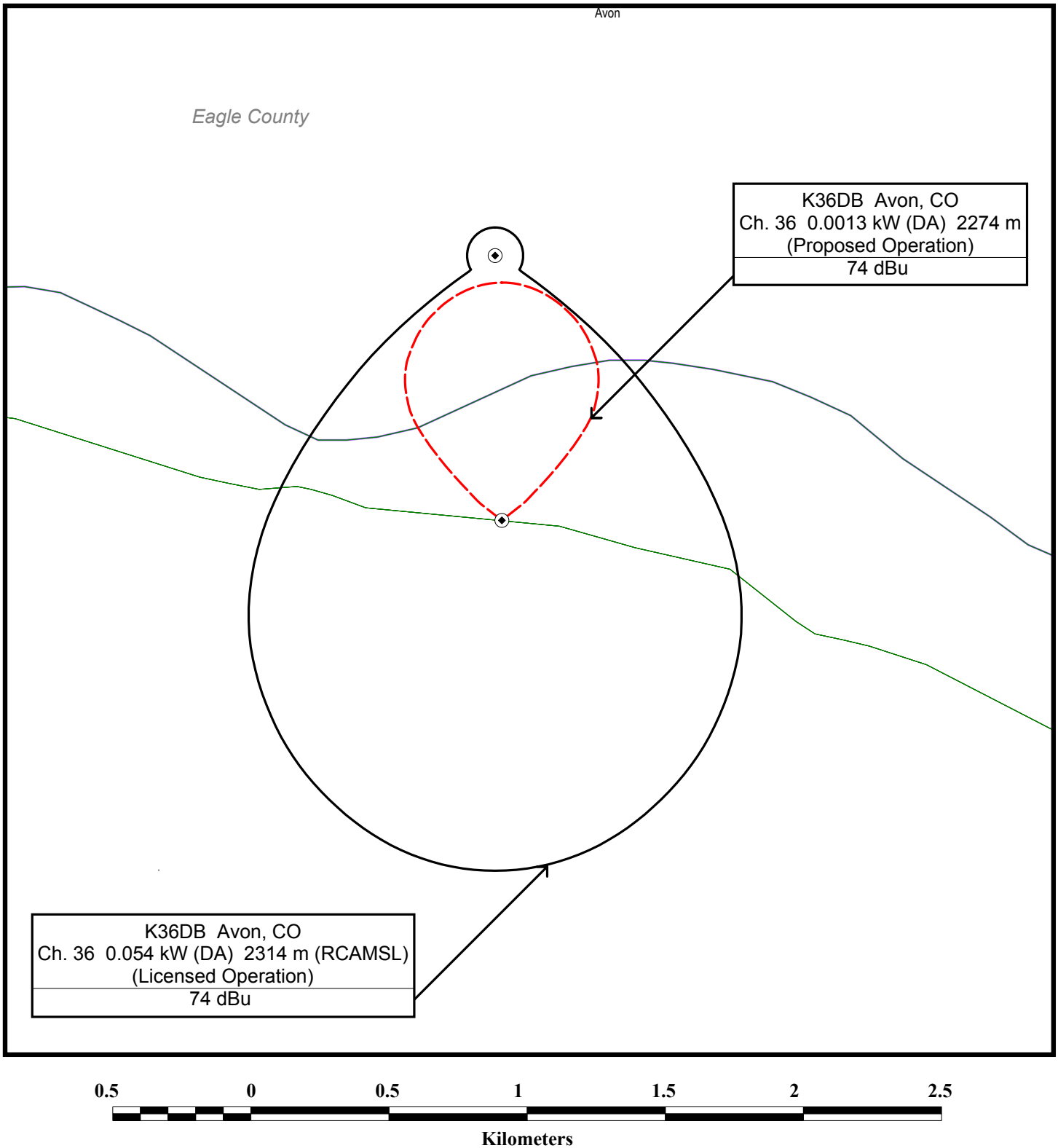


Jerome J. Manarchuck

du Treil, Lundin & Rackley, Inc.
201 Fletcher Avenue
Sarasota, Florida 34237
(941) 329-60000
JERRY@DLR.COM

May 6, 2005

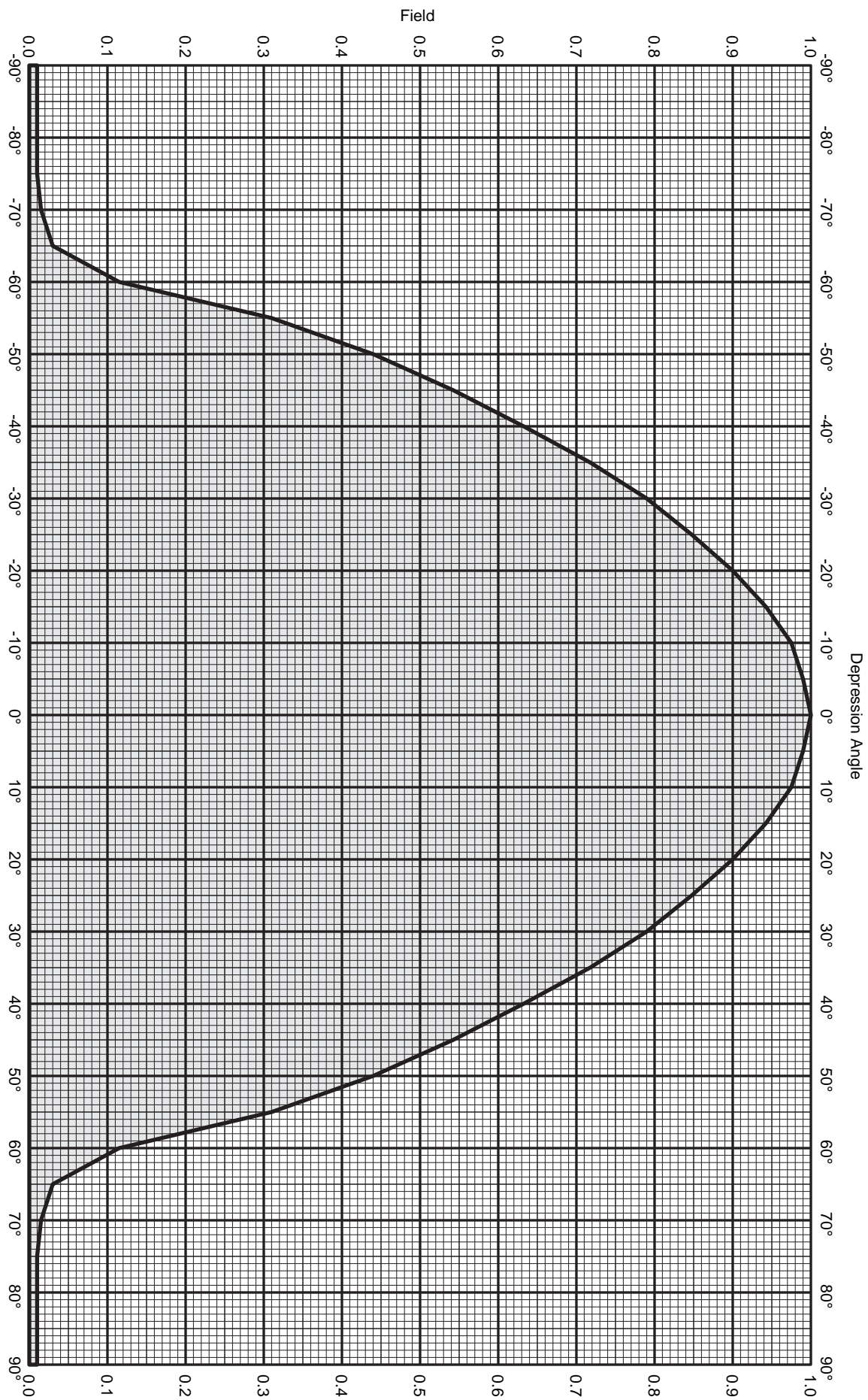
Figure 1



PREDICTED 74 dBu COVERAGE CONTOURS

CLASS A STATION K36DB
AVON, COLORADO
CH 36 0.0013 KW (DA) 2274 m (RCAMSL)

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



CL-1469B Log-periodic

Ch-14-69

8.0 dBd (10.15 dBi)

Horizontal polarization



KATHREIN
SCALA DIVISION

Post Office Box 4580
Medford, OR 97501 (USA)
Phone: (541) 779-6500
Fax: (541) 779-3991
<http://www.kathrein-scala.com>



CL-1469B Log-periodic

Vertical radiation pattern

Ch-14-69

8.0 dBd (10.15 dBi)

Horizontal polarization

Angle	Field	Rel.dB	dBd	PwrMult	Angle	Field	Rel.dB	dBd	PwrMult
-90	0.010	-40.00	-32.00	0.00	-45	0.543	-5.31	2.69	1.86
-89	0.010	-40.00	-32.00	0.00	-44	0.561	-5.03	2.97	1.98
-88	0.010	-40.00	-32.00	0.00	-43	0.579	-4.75	3.25	2.11
-87	0.010	-40.00	-32.00	0.00	-42	0.597	-4.49	3.51	2.25
-86	0.010	-40.00	-32.00	0.00	-41	0.615	-4.23	3.77	2.38
-85	0.010	-40.00	-32.00	0.00	-40	0.632	-3.98	4.02	2.52
-84	0.010	-40.00	-32.00	0.00	-39	0.649	-3.75	4.25	2.66
-83	0.010	-40.00	-32.00	0.00	-38	0.667	-3.52	4.48	2.80
-82	0.010	-40.00	-32.00	0.00	-37	0.683	-3.31	4.69	2.95
-81	0.010	-40.00	-32.00	0.00	-36	0.701	-3.09	4.91	3.10
-80	0.010	-40.00	-32.00	0.00	-35	0.717	-2.88	5.12	3.25
-79	0.010	-40.00	-32.00	0.00	-34	0.732	-2.71	5.29	3.38
-78	0.010	-40.00	-32.00	0.00	-33	0.747	-2.54	5.46	3.52
-77	0.010	-40.00	-32.00	0.00	-32	0.761	-2.37	5.63	3.65
-76	0.010	-40.00	-32.00	0.00	-31	0.775	-2.21	5.79	3.79
-75	0.010	-40.00	-32.00	0.00	-30	0.790	-2.05	5.95	3.94
-74	0.011	-39.17	-31.17	0.00	-29	0.801	-1.92	6.08	4.05
-73	0.012	-38.42	-30.42	0.00	-28	0.813	-1.80	6.20	4.17
-72	0.013	-37.72	-29.72	0.00	-27	0.825	-1.68	6.32	4.29
-71	0.014	-37.08	-29.08	0.00	-26	0.836	-1.56	6.44	4.41
-70	0.015	-36.48	-28.48	0.00	-25	0.847	-1.44	6.56	4.53
-69	0.018	-34.89	-26.89	0.00	-24	0.858	-1.33	6.67	4.64
-68	0.021	-33.56	-25.56	0.00	-23	0.868	-1.22	6.78	4.76
-67	0.024	-32.40	-24.40	0.00	-22	0.879	-1.12	6.88	4.88
-66	0.027	-31.37	-23.37	0.00	-21	0.890	-1.02	6.98	4.99
-65	0.030	-30.46	-22.46	0.01	-20	0.900	-0.92	7.08	5.11
-64	0.047	-26.56	-18.56	0.01	-19	0.908	-0.83	7.17	5.21
-63	0.064	-23.88	-15.88	0.03	-18	0.917	-0.75	7.25	5.31
-62	0.081	-21.83	-13.83	0.04	-17	0.925	-0.67	7.33	5.40
-61	0.098	-20.18	-12.18	0.06	-16	0.934	-0.59	7.41	5.50
-60	0.115	-18.79	-10.79	0.08	-15	0.942	-0.51	7.49	5.60
-59	0.154	-16.25	-8.25	0.15	-14	0.949	-0.45	7.55	5.68
-58	0.193	-14.29	-6.29	0.24	-13	0.956	-0.40	7.60	5.76
-57	0.232	-12.69	-4.69	0.34	-12	0.962	-0.34	7.66	5.84
-56	0.271	-11.34	-3.34	0.46	-11	0.969	-0.28	7.72	5.92
-55	0.310	-10.17	-2.17	0.61	-10	0.975	-0.22	7.78	6.00
-54	0.336	-9.47	-1.47	0.71	-9	0.978	-0.19	7.81	6.04
-53	0.362	-8.83	-0.83	0.83	-8	0.981	-0.17	7.83	6.07
-52	0.388	-8.22	-0.22	0.95	-7	0.984	-0.14	7.86	6.11
-51	0.414	-7.66	0.34	1.08	-6	0.987	-0.11	7.89	6.15
-50	0.440	-7.13	0.87	1.22	-5	0.990	-0.09	7.91	6.18
-49	0.461	-6.74	1.26	1.34	-4	0.992	-0.07	7.93	6.21
-48	0.481	-6.36	1.64	1.46	-3	0.994	-0.05	7.95	6.23
-47	0.502	-5.99	2.01	1.59	-2	0.996	-0.03	7.97	6.26
-46	0.522	-5.65	2.35	1.72	-1	0.998	-0.02	7.98	6.28
					0	1.000	0.00	8.00	6.31



CL-1469B Log-periodic

Vertical radiation pattern

Ch-14-69

8.0 dBd (10.15 dBi)

Horizontal polarization

Angle	Field	Rel.dB	dBd	PwrMult	Angle	Field	Rel.dB	dBd	PwrMult
0	1.000	0.00	8.00	6.31	45	0.543	-5.31	2.69	1.86
1	0.998	-0.02	7.98	6.28	46	0.522	-5.65	2.35	1.72
2	0.996	-0.03	7.97	6.26	47	0.502	-5.99	2.01	1.59
3	0.994	-0.05	7.95	6.23	48	0.481	-6.36	1.64	1.46
4	0.992	-0.07	7.93	6.21	49	0.461	-6.74	1.26	1.34
5	0.990	-0.09	7.91	6.18	50	0.440	-7.13	0.87	1.22
6	0.987	-0.11	7.89	6.15	51	0.414	-7.66	0.34	1.08
7	0.984	-0.14	7.86	6.11	52	0.388	-8.22	-0.22	0.95
8	0.981	-0.17	7.83	6.07	53	0.362	-8.83	-0.83	0.83
9	0.978	-0.19	7.81	6.04	54	0.336	-9.47	-1.47	0.71
10	0.975	-0.22	7.78	6.00	55	0.310	-10.17	-2.17	0.61
11	0.969	-0.28	7.72	5.92	56	0.271	-11.34	-3.34	0.46
12	0.962	-0.34	7.66	5.84	57	0.232	-12.69	-4.69	0.34
13	0.956	-0.40	7.60	5.76	58	0.193	-14.29	-6.29	0.24
14	0.949	-0.45	7.55	5.68	59	0.154	-16.25	-8.25	0.15
15	0.942	-0.51	7.49	5.60	60	0.115	-18.79	-10.79	0.08
16	0.934	-0.59	7.41	5.50	61	0.098	-20.18	-12.18	0.06
17	0.925	-0.67	7.33	5.40	62	0.081	-21.83	-13.83	0.04
18	0.917	-0.75	7.25	5.31	63	0.064	-23.88	-15.88	0.03
19	0.908	-0.83	7.17	5.21	64	0.047	-26.56	-18.56	0.01
20	0.900	-0.92	7.08	5.11	65	0.030	-30.46	-22.46	0.01
21	0.890	-1.02	6.98	4.99	66	0.027	-31.37	-23.37	0.00
22	0.879	-1.12	6.88	4.88	67	0.024	-32.40	-24.40	0.00
23	0.868	-1.22	6.78	4.76	68	0.021	-33.56	-25.56	0.00
24	0.858	-1.33	6.67	4.64	69	0.018	-34.89	-26.89	0.00
25	0.847	-1.44	6.56	4.53	70	0.015	-36.48	-28.48	0.00
26	0.836	-1.56	6.44	4.41	71	0.014	-37.08	-29.08	0.00
27	0.825	-1.68	6.32	4.29	72	0.013	-37.72	-29.72	0.00
28	0.813	-1.80	6.20	4.17	73	0.012	-38.42	-30.42	0.00
29	0.801	-1.92	6.08	4.05	74	0.011	-39.17	-31.17	0.00
30	0.790	-2.05	5.95	3.94	75	0.010	-40.00	-32.00	0.00
31	0.775	-2.21	5.79	3.79	76	0.010	-40.00	-32.00	0.00
32	0.761	-2.37	5.63	3.65	77	0.010	-40.00	-32.00	0.00
33	0.747	-2.54	5.46	3.52	78	0.010	-40.00	-32.00	0.00
34	0.732	-2.71	5.29	3.38	79	0.010	-40.00	-32.00	0.00
35	0.717	-2.88	5.12	3.25	80	0.010	-40.00	-32.00	0.00
36	0.701	-3.09	4.91	3.10	81	0.010	-40.00	-32.00	0.00
37	0.683	-3.31	4.69	2.95	82	0.010	-40.00	-32.00	0.00
38	0.667	-3.52	4.48	2.80	83	0.010	-40.00	-32.00	0.00
39	0.649	-3.75	4.25	2.66	84	0.010	-40.00	-32.00	0.00
40	0.632	-3.98	4.02	2.52	85	0.010	-40.00	-32.00	0.00
41	0.615	-4.23	3.77	2.38	86	0.010	-40.00	-32.00	0.00
42	0.597	-4.49	3.51	2.25	87	0.010	-40.00	-32.00	0.00
43	0.579	-4.75	3.25	2.11	88	0.010	-40.00	-32.00	0.00
44	0.561	-5.03	2.97	1.98	89	0.010	-40.00	-32.00	0.00
					90	0.010	-40.00	-32.00	0.00