ENGINEERING STATEMENT

OF

JOHN F.X. BROWNE, P.E.

IN SUPPORT OF

AN APPLICATION FOR CONSTRUCTION PERMIT

FOR

DISPLACEMENT AND DIGITAL "FLASHCUT"

K66AE

COLFAX, NM

Background

KOAT Hearst-Argyle Television, Inc. (KOAT) is the licensee of television translator station K66AE, Channel 66, (BLTT-19891017JK, Facility ID. 53918) at Colfax, NM. KOAT is applying for a construction permit to change its assigned channel to Channel 23 due to displacement (out-of-core) and also proposes to "flashcut" K66AE to digital operation on Channel 23.

Site and Tower

The tower is located at 36° 33′ 36″ N and 105° 11′ 40″ W (NAD27). The overall height of the tower with the proposed antenna will be 19.8m AGL and, therefore, does not require an ASR, nor notification to the FAA. The transmitting antenna will be side-mounted. This is the same site and tower that is specified in the current K66AE authorization.

Antenna and Power

The proposed antenna is a Dielectric TLP-8D directional radiator. The radiation center of the antenna will be at a height of 14.4m AGL. Appendix A, attached hereto, contains the azimuth and elevation patterns and associated tabulations for the TLP-8D antenna. The digital ERP will be 2.31 kW and the 51 dBu F(50,90) contour will completely encompass the area of Colfax, NM.

Interference

An interference study was conducted using the proposed facility parameters with software that emulates that used by the Commission. That study shows that there would not be more than 0.49% interference to any full-service NTSC station, DTV station or Class A station, nor more than 1.99% interference to any other low power station as required by the Commission's Rules.

Environmental/RFR

This construction does not involve any of the conditions that require an Environmental Assessment as specified in 47 CFR Section 1.1311, therefore, further consideration is not required.

The additional ground level RFR contributed to the site by this proposal in public areas is calculated to be 0.003693 mW/cm^2, which is less than 5% of the MPE for public exposure (0.351 mW/cm^2) at the proposed frequency.

KOAT agrees to comply with the Commission's requirements regarding power adjustments or cessation of operation as may be necessary to ensure a compliant environment for worker access. Workers will also be encouraged to wear personal RFR

monitors when on the structure. The tower base is enclosed with a locked security fence enclose and appropriate signage warning of RFR hazards are in place.

Certification

I hereby certify that the foregoing report or statement was prepared by me but may include work performed by others under my supervision or direction. The statements of fact contained therein are believed to be true and correct based on personal knowledge, information and belief unless otherwise stated; with respect to facts not known of my own personal knowledge, I believe them to be true and correct based on their origin from sources known to me to be generally reliable and accurate. I have prepared this document with due care and in accordance with applicable standards of professional practice.

John F.X. Browne, P.E.
June 30, 2006

Appendix A

Date   **30 Jun 2006**
Call Letters   **K66AE**   Channel   **23**
Location
Customer
Antenna Type   **TLP-8D**

## AZIMUTH PATTERN

Gain   **2.90 (4.62 dB)**   Frequency   **527 MHz**
Calculated / Measured   **Calculated**   Drawing #   **TLP-D**
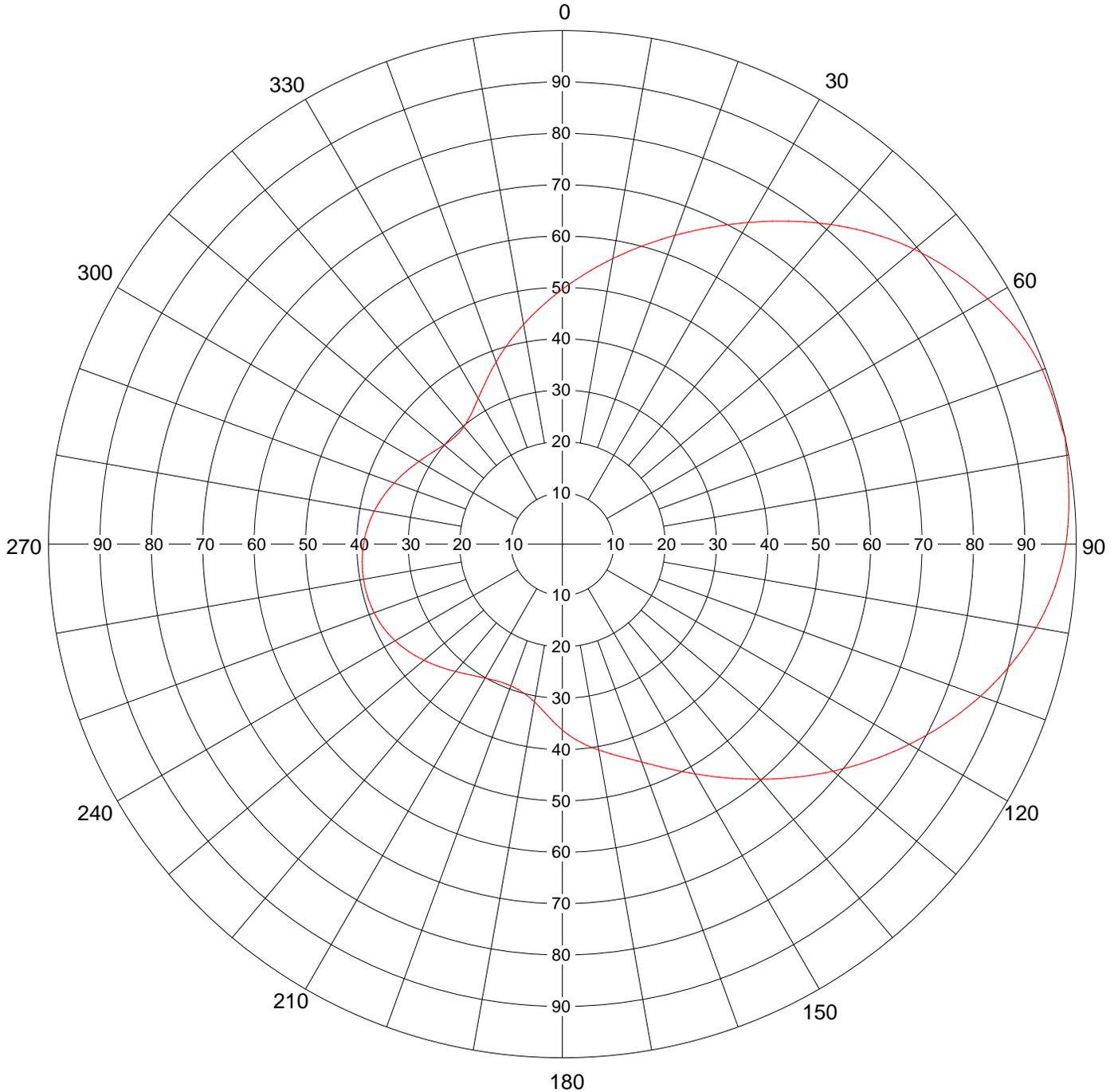
Remarks:

Date **30 Jun 2006**
Call Letters **K66AE** Channel **23**
Location
Customer
Antenna Type **TLP-8D**

TABULATION OF AZIMUTH PATTERN

Azimuth Pattern Drawing # **TLP-D**

Angle	Field	Angle	Field	Angle	Field	Angle	Field	Angle	Field	Angle	Field	Angle	Field	Angle	Field
0	0.496	45	0.855	90	0.980	135	0.642	180	0.362	225	0.338	270	0.387	315	0.296
1	0.503	46	0.863	91	0.977	136	0.633	181	0.356	226	0.340	271	0.386	316	0.296
2	0.510	47	0.871	92	0.974	137	0.624	182	0.351	227	0.343	272	0.385	317	0.296
3	0.516	48	0.879	93	0.970	138	0.615	183	0.345	228	0.346	273	0.383	318	0.296
4	0.523	49	0.886	94	0.966	139	0.606	184	0.340	229	0.349	274	0.382	319	0.297
5	0.530	50	0.893	95	0.962	140	0.597	185	0.335	230	0.352	275	0.380	320	0.298
6	0.537	51	0.901	96	0.958	141	0.589	186	0.330	231	0.354	276	0.379	321	0.300
7	0.543	52	0.907	97	0.953	142	0.580	187	0.325	232	0.357	277	0.377	322	0.302
8	0.550	53	0.914	98	0.948	143	0.572	188	0.320	233	0.360	278	0.375	323	0.304
9	0.557	54	0.920	99	0.942	144	0.564	189	0.316	234	0.362	279	0.374	324	0.307
10	0.565	55	0.927	100	0.936	145	0.555	190	0.312	235	0.365	280	0.372	325	0.310
11	0.572	56	0.933	101	0.930	146	0.547	191	0.309	236	0.367	281	0.370	326	0.313
12	0.579	57	0.939	102	0.924	147	0.539	192	0.306	237	0.370	282	0.368	327	0.316
13	0.586	58	0.944	103	0.918	148	0.532	193	0.303	238	0.372	283	0.365	328	0.320
14	0.594	59	0.950	104	0.911	149	0.524	194	0.301	239	0.374	284	0.363	329	0.324
15	0.601	60	0.956	105	0.904	150	0.516	195	0.299	240	0.376	285	0.361	330	0.328
16	0.609	61	0.961	106	0.896	151	0.509	196	0.297	241	0.378	286	0.358	331	0.332
17	0.616	62	0.966	107	0.889	152	0.502	197	0.296	242	0.380	287	0.356	332	0.337
18	0.624	63	0.971	108	0.881	153	0.495	198	0.295	243	0.381	288	0.353	333	0.341
19	0.632	64	0.976	109	0.874	154	0.488	199	0.294	244	0.383	289	0.351	334	0.346
20	0.640	65	0.980	110	0.866	155	0.482	200	0.294	245	0.384	290	0.348	335	0.351
21	0.648	66	0.984	111	0.858	156	0.475	201	0.293	246	0.386	291	0.346	336	0.356
22	0.656	67	0.987	112	0.849	157	0.469	202	0.293	247	0.387	292	0.343	337	0.361
23	0.664	68	0.990	113	0.841	158	0.463	203	0.294	248	0.388	293	0.341	338	0.367
24	0.672	69	0.992	114	0.832	159	0.457	204	0.294	249	0.389	294	0.338	339	0.372
25	0.680	70	0.994	115	0.824	160	0.452	205	0.295	250	0.390	295	0.335	340	0.377
26	0.689	71	0.995	116	0.815	161	0.446	206	0.296	251	0.391	296	0.333	341	0.383
27	0.697	72	0.996	117	0.806	162	0.441	207	0.297	252	0.391	297	0.330	342	0.388
28	0.706	73	0.996	118	0.798	163	0.436	208	0.298	253	0.392	298	0.328	343	0.394
29	0.714	74	0.997	119	0.789	164	0.432	209	0.299	254	0.392	299	0.325	344	0.400
30	0.723	75	0.997	120	0.780	165	0.427	210	0.301	255	0.393	300	0.322	345	0.405
31	0.732	76	0.998	121	0.770	166	0.423	211	0.303	256	0.393	301	0.320	346	0.411
32	0.741	77	0.998	122	0.761	167	0.419	212	0.305	257	0.393	302	0.317	347	0.417
33	0.750	78	1.000	123	0.752	168	0.415	213	0.307	258	0.393	303	0.315	348	0.423
34	0.759	79	0.998	124	0.743	169	0.411	214	0.309	259	0.393	304	0.313	349	0.429
35	0.768	80	0.997	125	0.734	170	0.407	215	0.311	260	0.393	305	0.310	350	0.434
36	0.777	81	0.995	126	0.725	171	0.403	216	0.313	261	0.393	306	0.308	351	0.440
37	0.786	82	0.994	127	0.715	172	0.399	217	0.316	262	0.393	307	0.306	352	0.446
38	0.795	83	0.992	128	0.706	173	0.395	218	0.318	263	0.392	308	0.304	353	0.452
39	0.804	84	0.991	129	0.697	174	0.391	219	0.321	264	0.392	309	0.302	354	0.459
40	0.812	85	0.989	130	0.688	175	0.386	220	0.324	265	0.391	310	0.301	355	0.465
41	0.821	86	0.988	131	0.678	176	0.382	221	0.326	266	0.390	311	0.299	356	0.471
42	0.830	87	0.986	132	0.669	177	0.377	222	0.329	267	0.390	312	0.298	357	0.477
43	0.838	88	0.984	133	0.660	178	0.372	223	0.332	268	0.389	313	0.297	358	0.484
44	0.847	89	0.982	134	0.651	179	0.367	224	0.335	269	0.388	314	0.296	359	0.490

Remarks:

Dielectric

Date	**30 Jun 2006**
Call Letters	**K66AE**
Location	
Customer	
Antenna Type	**TLP-8D**

Channel **23**

ELEVATION PATTERN

RMS Gain at Main Lobe	**8.0 (9.03 dB)**	Beam Tilt	**1.00 Degrees**
RMS Gain at Horizontal	**7.5 (8.75 dB)**	Frequency	**527.00 MHz**
Calculated / Measured	**Calculated**	Drawing #	**08L080100**
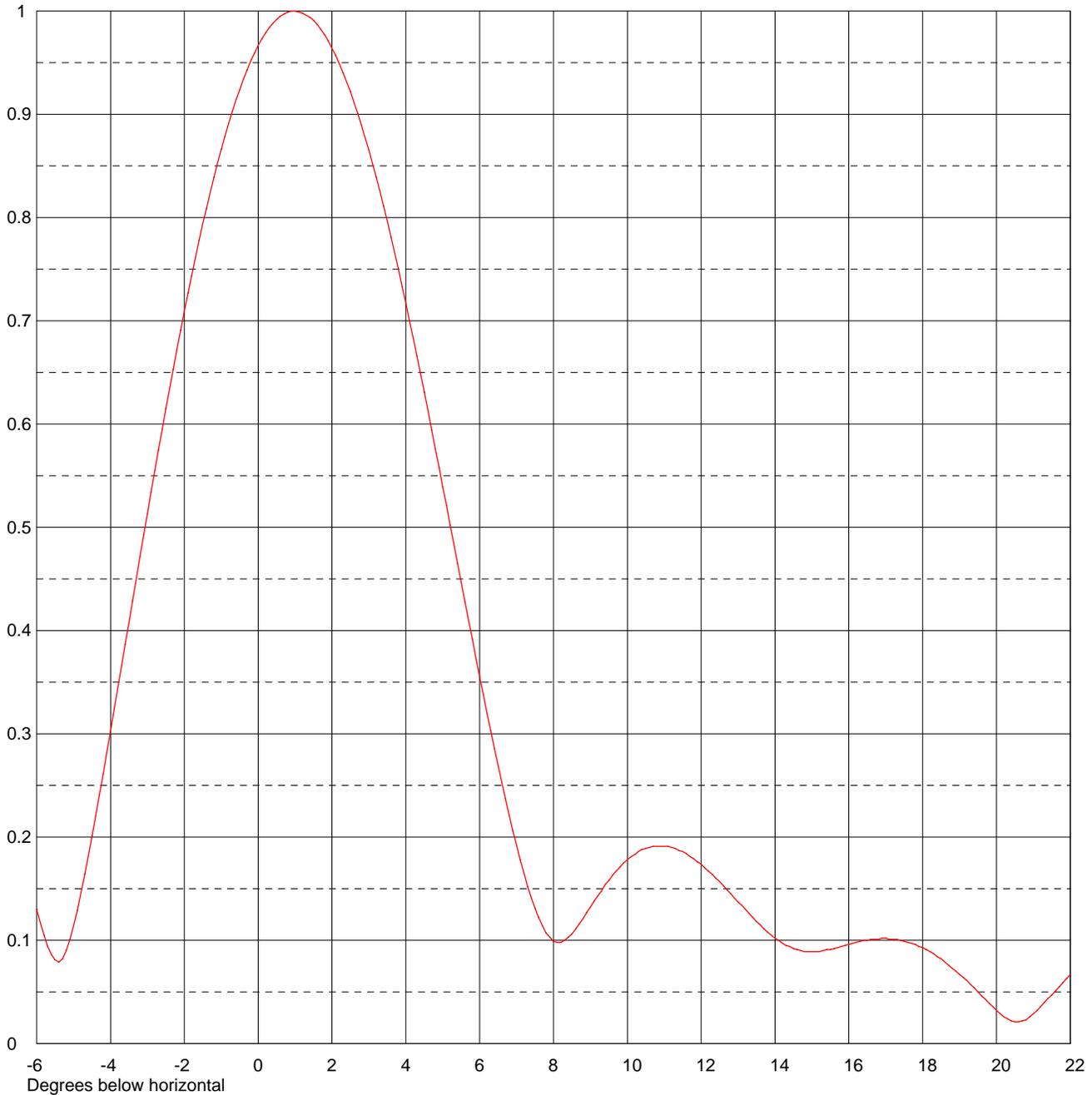
Degrees below horizontal

Remarks:

Date **30 Jun 2006**
Call Letters **K66AE** Channel **23**
Location
Customer
Antenna Type **TLP-8D**

TABULATION OF ELEVATION PATTERN

Elevation Pattern Drawing # **08L080100**

Angle	Field	Angle	Field	Angle	Field	Angle	Field	Angle	Field	Angle	Field
-10.0	0.374	2.4	0.931	10.6	0.190	30.5	0.054	51.0	0.035	71.5	0.143
-9.5	0.384	2.6	0.911	10.8	0.191	31.0	0.062	51.5	0.039	72.0	0.135
-9.0	0.383	2.8	0.889	11.0	0.191	31.5	0.069	52.0	0.044	72.5	0.127
-8.5	0.371	3.0	0.865	11.5	0.186	32.0	0.074	52.5	0.049	73.0	0.119
-8.0	0.346	3.2	0.839	12.0	0.174	32.5	0.077	53.0	0.055	73.5	0.111
-7.5	0.308	3.4	0.811	12.5	0.157	33.0	0.077	53.5	0.063	74.0	0.104
-7.0	0.258	3.6	0.781	13.0	0.137	33.5	0.077	54.0	0.071	74.5	0.096
-6.5	0.197	3.8	0.750	13.5	0.118	34.0	0.075	54.5	0.081	75.0	0.089
-6.0	0.130	4.0	0.717	14.0	0.102	34.5	0.073	55.0	0.092	75.5	0.082
-5.5	0.081	4.2	0.683	14.5	0.092	35.0	0.072	55.5	0.103	76.0	0.076
-5.0	0.114	4.4	0.648	15.0	0.089	35.5	0.072	56.0	0.115	76.5	0.070
-4.5	0.201	4.6	0.613	15.5	0.091	36.0	0.075	56.5	0.127	77.0	0.064
-4.0	0.303	4.8	0.576	16.0	0.096	36.5	0.081	57.0	0.139	77.5	0.058
-3.5	0.408	5.0	0.539	16.5	0.100	37.0	0.089	57.5	0.150	78.0	0.053
-3.0	0.513	5.2	0.502	17.0	0.102	37.5	0.098	58.0	0.162	78.5	0.048
-2.8	0.555	5.4	0.465	17.5	0.099	38.0	0.107	58.5	0.173	79.0	0.043
-2.6	0.595	5.6	0.428	18.0	0.093	38.5	0.116	59.0	0.183	79.5	0.039
-2.4	0.634	5.8	0.392	18.5	0.082	39.0	0.124	59.5	0.192	80.0	0.035
-2.2	0.672	6.0	0.355	19.0	0.067	39.5	0.130	60.0	0.201	80.5	0.031
-2.0	0.709	6.2	0.320	19.5	0.050	40.0	0.135	60.5	0.208	81.0	0.028
-1.8	0.744	6.4	0.286	20.0	0.032	40.5	0.138	61.0	0.215	81.5	0.025
-1.6	0.778	6.6	0.253	20.5	0.021	41.0	0.138	61.5	0.220	82.0	0.022
-1.4	0.809	6.8	0.221	21.0	0.029	41.5	0.136	62.0	0.224	82.5	0.019
-1.2	0.839	7.0	0.192	21.5	0.047	42.0	0.132	62.5	0.227	83.0	0.017
-1.0	0.866	7.2	0.165	22.0	0.067	42.5	0.126	63.0	0.229	83.5	0.014
-0.8	0.891	7.4	0.141	22.5	0.085	43.0	0.119	63.5	0.230	84.0	0.012
-0.6	0.914	7.6	0.122	23.0	0.100	43.5	0.109	64.0	0.230	84.5	0.011
-0.4	0.934	7.8	0.107	23.5	0.112	44.0	0.099	64.5	0.229	85.0	0.009
-0.2	0.952	8.0	0.099	24.0	0.121	44.5	0.087	65.0	0.227	85.5	0.007
0.0	0.967	8.2	0.098	24.5	0.125	45.0	0.075	65.5	0.223	86.0	0.006
0.2	0.979	8.4	0.103	25.0	0.125	45.5	0.062	66.0	0.220	86.5	0.005
0.4	0.988	8.6	0.111	25.5	0.121	46.0	0.050	66.5	0.215	87.0	0.004
0.6	0.995	8.8	0.121	26.0	0.114	46.5	0.037	67.0	0.209	87.5	0.003
0.8	0.999	9.0	0.132	26.5	0.104	47.0	0.025	67.5	0.203	88.0	0.002
1.0	1.000	9.2	0.143	27.0	0.092	47.5	0.015	68.0	0.197	88.5	0.001
1.2	0.998	9.4	0.154	27.5	0.078	48.0	0.005	68.5	0.190	89.0	0.001
1.4	0.994	9.6	0.163	28.0	0.064	48.5	0.006	69.0	0.183	89.5	0.000
1.6	0.987	9.8	0.171	28.5	0.052	49.0	0.013	69.5	0.175	90.0	0.000
1.8	0.977	10.0	0.178	29.0	0.044	49.5	0.020	70.0	0.167		
2.0	0.964	10.2	0.183	29.5	0.042	50.0	0.025	70.5	0.159		
2.2	0.949	10.4	0.188	30.0	0.047	50.5	0.030	71.0	0.151		

Remarks: