

TECHNICAL EXHIBIT
FORM 340
ABILENE CHRISTINE UNIVERSITY
MINOR CHANGE TO A LICENSED FACILITY
KACU (FM) CH. 208 C1
FID#300
Abilene, TX

Purpose Of Application

Abilene Christian University proposes in this instant application to change the height, antenna, and directional pattern of this facility on the existing tower of the presently licensed facility. The proposal is to operate with 59 kW ERP horizontal and vertical with a height above average terrain of 196.84 meters with a new directional antenna. This height was calculated with a computer program V-Soft FM Commander using 03 second terrain data. This proposal is in compliance with 47 CFR 73.509 with respect to all other licenses and applications. See attached study demonstrating compliance with 73.509 and the proposed directional pattern.

Environmental

This proposal utilizes an existing tower. No modification will be done other than replacing the existing 3 bay panel antenna with a new 8 Bay SWR FM10. Based on the use of this EPA Type 2 full wave spaced antenna with a center of radiation of 138.5 meters, the maximum radiation at 2 meters above ground level is 21.1 microwatts/cm². This is 10.5 percent of the maximum for general population uncontrolled exposure level. The only other facility is KGNZ at 88.1. This facility is licensed at 91kW H&V and utilizes a Dielectric 10 Bay .85 Wave spaced antenna. The maximum contribution of KGNZ is .745 microwatts/cm². The total from both facilities at 2 meters above ground level is 21.645 microwatts/cm². This is 10.9 percent of the maximum level for general population uncontrolled exposure level. The facility is located on a remote mountain top with limited access to the general public.

KACU Prop Abilene Christian University CH# 208C1 - 89.5 MHZ, Pwr= 59 kw DA, HAAT= 189.2 M, COR= 803 M Average Protected F(50-50)= 57.9 km Standard Directional													DISPLAY DATES DATA SEARCH 07-27-22	
CH CITY	CALL	TYPE STATE	ANT STATE	AZI <--	DIST FILE #	LAT LNG	PWR(kw) HAAT(M)	INT(km) COR(M)	PRO(km) LICENSEE	*IN* (Overlap in km)	*OUT*			
208C1 KACU Abilene		LIC DCN TX		330.6 150.6	0.01 BLED20150415AAT	32 13 47.50 99 37 43.30	100.000 189		---Reference--- Abilene Christian Universi					
205C VA8692 Brownwood		VAC __N TX		132.8 313.1	83.12	31 43 12.55 98 59 01.17	100.000 600	13.5 1046	91.3 From CDBS	33.9	-11.3*			
207A KHBW Brownwood		CP __CN TX		134.0 314.3	79.90 0000162220	31 43 46.00 99 01 13.00	3.000 143	42.3 594	26.9 Houston Christian Broadcas	2.7	0.0			
208C2 KEQX Stephenville		CP DCN TX		94.0 274.8	155.96 0000150890	32 07 21.20 97 58 47.20	20.000 152	106.1 500	38.1 Cssi Non-Profit Educationa	7.9	11.4			
207A KNAR San Angelo		LIC __CN TX		232.6 52.2	96.75 0000113043	31 41 57.40 100 26 28.80	1.000 244	46.2 899	29.2 Educational Media Foundati	11.4	8.0			
208C2 KEQX Stephenville		LIC __CN TX		94.0 274.8	155.96 BLED20170728AAO	32 07 21.20 97 58 47.20	12.000 152	102.0 500	36.3 Cssi Non-Profit Educationa	12.0	13.4			
211A VA9998 Ballinger		VAC __N TX		209.0 28.8	62.31	31 44 18.54 99 56 55.31	6.000 100	2.6 619	27.3 From CDBS	25.2	30.8			
208C3 KMOC Wichita Falls		LIC __CN TX		28.1 208.7	209.47 BLED20100929ACM	33 53 23.40 98 33 31.20	3.000 200	90.2 503	32.9 Christian Service Foundati	62.5	32.5			
210C1 KQXB Breckenridge		CP __CN TX		70.1 250.5	81.82 0000150935	32 28 38.00 98 48 35.00	80.000 90	4.9 546	43.8 Cssi Non-Profit Educationa	32.9	32.9			
210C3 KQXB Breckenridge		LIC __CN TX		70.1 250.5	81.79 BLED20110121AAH	32 28 38.00 98 48 36.20	15.000 90	3.2 546	30.5 Cssi Non-Profit Educationa	34.6	45.6			
209C1 KWTR Eldorado		LIC __CN TX		208.1 27.7	154.76 BLED20150420AAF	30 59 52.60 100 23 44.30	75.000 145	80.7 855	52.0 The Center For Education N	39.9	51.2			

Terrain database is NED 03 SEC , R= 73.215 qualifying spacings or FCC minimum Spacings in KM, M= Margin in KM
 In & Out distances between contours are shown at closest points. Reference zone= - Zone 2, Co to 3rd adjacent.
 All separation margins (if shown) include rounding.
 Ant Column: (D= DA Standard, Z= DA 73.215, N= Not DA 73.215, _= Omni), Polarization (C,H,V,E), Beamtilt(Y,N,X)
 "*"affixed to 'IN' or 'OUT' values = site inside restricted contour.
 « = Station meets FCC minimum distance spacing for its class.

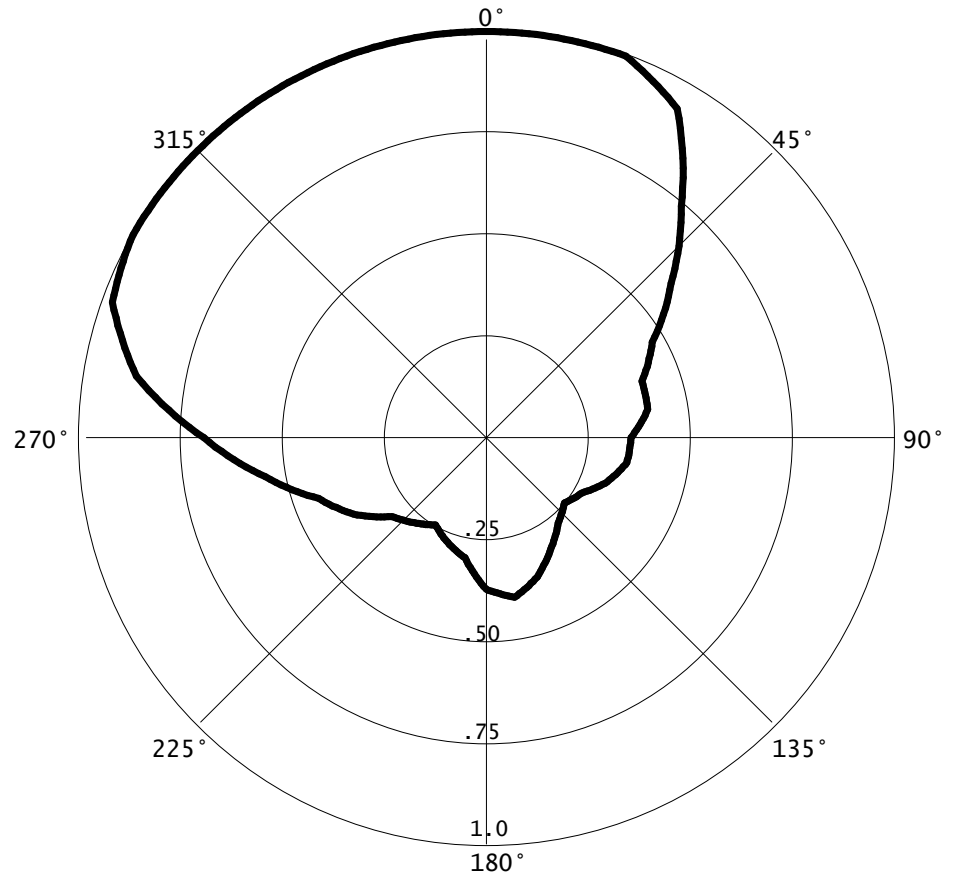
KACU

07-28-2022

RMS(V)= .658

Graph is Relative Field

Azi	Field	dBk	kw
000	1.000	17.709	59.000
010	1.000	17.709	59.000
020	1.000	17.709	59.000
030	0.936	17.134	51.690
040	0.744	15.140	32.659
050	0.591	13.140	20.608
060	0.470	11.150	13.033
070	0.406	09.879	9.725
080	0.402	09.793	9.535
090	0.355	08.713	7.435
100	0.350	08.590	7.227
110	0.316	07.702	5.892
120	0.271	06.368	4.333
130	0.250	05.667	3.688
140	0.274	06.464	4.429
150	0.316	07.702	5.892
160	0.365	08.954	7.860
170	0.399	09.728	9.393
180	0.373	09.143	8.209
190	0.300	07.251	5.310
200	0.275	06.495	4.462
210	0.248	05.598	3.629
220	0.273	06.432	4.397
230	0.302	07.309	5.381
240	0.376	09.212	8.341
250	0.437	10.518	11.267
260	0.550	12.516	17.848
270	0.692	14.511	28.253
280	0.871	16.509	44.760
290	0.975	17.489	56.087
300	1.000	17.709	59.000
310	1.000	17.709	59.000
320	1.000	17.709	59.000
330	1.000	17.709	59.000
340	1.000	17.709	59.000
350	1.000	17.709	59.000



07-27-2022

Terrain Data: NED 03 SEC

FMOver Analysis

KACU

KHBW 0000162220

Channel = 208C1

Channel = 207A

Max ERP = 59 kW

Max ERP = 3 kW

RCAMSL = 803 m

RCAMSL = 594 m

N. Lat. 32 13 47.20

N. Lat. 31 43 46.00

W. Lng. 99 37 43.10

W. Lng. 99 01 13.00

Protected

Interfering

60 dBu

54 dBu

Azimuth (degrees)	ERP (kW)	HAAT (m)	Dist (km)	Azimuth (degrees)	ERP (kW)	HAAT (m)	Dist (km)	Actual (dBu)	IX (km)
074.0	009.6297	0206.4	043.2	347.0	003.0000	0140.3	069.1	44.14	
075.0	009.6297	0207.2	043.3	347.1	003.0000	0140.5	068.3	44.39	
076.0	009.6297	0207.6	043.3	347.1	003.0000	0140.6	067.6	44.64	
077.0	009.5821	0206.9	043.2	347.0	003.0000	0140.4	066.8	44.87	
078.0	009.5821	0206.5	043.2	347.0	003.0000	0140.3	066.1	45.11	
079.0	009.5346	0206.7	043.2	346.9	003.0000	0140.3	065.3	45.35	
080.0	009.5346	0206.9	043.2	346.9	003.0000	0140.2	064.6	45.60	
081.0	009.2989	0207.2	043.0	346.7	003.0000	0139.9	063.8	45.82	
082.0	009.1125	0207.5	042.8	346.5	003.0000	0139.6	063.1	46.05	
083.0	008.8821	0208.0	042.7	346.3	003.0000	0139.3	062.4	46.28	
084.0	008.6547	0208.9	042.5	346.0	003.0000	0139.2	061.7	46.52	
085.0	008.4302	0209.4	042.3	345.8	003.0000	0139.2	061.0	46.77	
086.0	008.2527	0210.2	042.2	345.5	003.0000	0139.3	060.3	47.03	
087.0	008.0335	0211.9	042.1	345.3	003.0000	0139.6	059.6	47.30	
088.0	007.8173	0212.2	041.9	345.0	003.0000	0140.1	058.9	47.57	
089.0	007.6464	0212.4	041.7	344.6	003.0000	0140.7	058.2	47.85	
090.0	007.4355	0212.5	041.5	344.2	003.0000	0141.1	057.6	48.11	
091.0	007.3936	0212.2	041.5	344.0	003.0000	0140.7	056.9	48.34	
092.0	007.3936	0213.9	041.6	343.8	003.0000	0140.4	056.2	48.60	
093.0	007.3519	0215.9	041.7	343.7	003.0000	0139.9	055.5	48.84	
094.0	007.3519	0217.5	041.8	343.6	003.0000	0139.4	054.8	49.09	
095.0	007.3103	0218.2	041.8	343.3	003.0000	0138.4	054.1	49.30	
096.0	007.3103	0219.8	041.9	343.1	003.0000	0137.9	053.4	49.55	
097.0	007.3103	0221.2	042.0	342.9	003.0000	0137.5	052.7	49.80	
098.0	007.2689	0221.6	042.0	342.5	003.0000	0137.1	052.0	50.03	
099.0	007.2275	0222.8	042.0	342.2	003.0000	0137.0	051.3	50.29	
100.0	007.2275	0225.3	042.2	342.0	003.0000	0136.9	050.6	50.57	
101.0	007.1041	0227.4	042.2	341.6	003.0000	0137.0	050.0	50.82	
102.0	006.9413	0228.1	042.1	341.0	003.0000	0137.5	049.4	51.07	
103.0	006.8204	0227.0	041.9	340.3	003.0000	0138.3	048.9	51.31	
104.0	006.6609	0224.7	041.5	339.5	003.0000	0139.0	048.5	51.50	
105.0	006.5425	0221.2	041.1	338.6	003.0000	0137.8	048.1	51.58	
106.0	006.4251	0218.7	040.8	337.8	003.0000	0136.6	047.8	51.65	
107.0	006.2703	0217.3	040.5	337.0	003.0000	0136.1	047.4	51.76	
108.0	006.1554	0216.0	040.2	336.2	003.0000	0136.1	047.1	51.91	
109.0	006.0039	0215.9	040.0	335.4	003.0000	0136.5	046.7	52.08	
110.0	005.8915	0215.6	039.9	334.7	003.0000	0137.3	046.3	52.27	
111.0	005.7433	0215.6	039.7	333.9	003.0000	0137.8	046.0	52.43	
112.0	005.5607	0215.2	039.4	333.0	003.0000	0136.9	045.8	52.48	

113.0	005.4167	0215.2	039.1	332.2	003.0000	0136.6	045.5	52.58
114.0	005.2394	0214.5	038.8	331.3	003.0000	0137.5	045.3	52.69
115.0	005.0997	0213.2	038.5	330.3	003.0000	0139.2	045.2	52.84
116.0	004.9277	0213.7	038.3	329.5	003.0000	0137.8	045.0	52.84
117.0	004.7923	0212.9	038.0	328.5	003.0000	0135.2	044.9	52.75
118.0	004.6256	0211.5	037.6	327.6	003.0000	0134.3	044.9	52.69
119.0	004.4619	0211.0	037.3	326.6	003.0000	0133.9	044.9	52.68
120.0	004.3330	0209.8	037.0	325.7	003.0000	0133.0	044.9	52.63
121.0	004.2693	0209.4	036.8	324.9	003.0000	0133.8	044.8	52.72
122.0	004.2061	0208.7	036.6	324.0	003.0000	0134.0	044.7	52.77
123.0	004.1433	0207.9	036.5	323.2	003.0000	0134.0	044.6	52.79
124.0	004.0810	0207.5	036.3	322.4	003.0000	0133.8	044.6	52.81
125.0	004.0191	0206.5	036.1	321.5	003.0000	0133.7	044.6	52.79
126.0	003.9273	0205.8	035.9	320.7	003.0000	0132.8	044.6	52.72
127.0	003.8666	0204.9	035.7	319.8	003.0000	0132.2	044.7	52.66
128.0	003.8064	0204.1	035.5	319.0	003.0000	0131.5	044.8	52.60
129.0	003.7467	0203.8	035.3	318.2	003.0000	0130.4	044.8	52.52
130.0	003.6875	0203.9	035.2	317.4	003.0000	0128.7	044.8	52.41
131.0	003.7467	0204.0	035.3	316.6	003.0000	0127.9	044.6	52.45
132.0	003.8365	0203.3	035.5	315.8	003.0000	0128.4	044.5	52.55
133.0	003.8969	0202.2	035.5	315.0	003.0000	0127.7	044.4	52.54
134.0	003.9884	0200.9	035.6	314.2	003.0000	0126.7	044.3	52.53
135.0	004.0500	0199.6	035.6	313.4	003.0000	0125.5	044.3	52.46
136.0	004.1121	0198.7	035.7	312.6	003.0000	0124.9	044.3	52.43
137.0	004.2061	0198.2	035.8	311.8	003.0000	0125.9	044.2	52.53
138.0	004.2693	0197.1	035.8	311.0	003.0000	0125.9	044.2	52.51
139.0	004.3651	0196.0	035.9	310.2	003.0000	0125.9	044.2	52.51
140.0	004.4295	0194.4	035.9	309.4	003.0000	0126.1	044.4	52.46
141.0	004.5598	0193.9	036.1	308.5	003.0000	0125.9	044.3	52.48
142.0	004.6919	0193.8	036.3	307.7	003.0000	0125.2	044.3	52.46
143.0	004.8598	0193.4	036.6	306.8	003.0000	0125.0	044.2	52.48
144.0	004.9962	0192.9	036.8	305.9	003.0000	0123.9	044.2	52.41
145.0	005.1345	0192.2	036.9	305.1	003.0000	0122.2	044.3	52.30
146.0	005.2747	0191.3	037.1	304.2	003.0000	0121.8	044.4	52.24
147.0	005.4167	0190.3	037.2	303.4	003.0000	0123.6	044.5	52.28
148.0	005.5970	0187.9	037.3	302.6	003.0000	0120.8	044.7	52.04
149.0	005.7433	0186.4	037.4	301.8	003.0000	0117.4	044.9	51.75
150.0	005.8915	0185.5	037.5	301.0	003.0000	0116.4	045.1	51.61
151.0	006.0794	0186.1	037.8	300.1	003.0000	0116.0	045.2	51.55
152.0	006.2703	0186.0	038.1	299.2	003.0000	0116.8	045.3	51.54
153.0	006.4641	0186.2	038.3	298.3	003.0000	0117.3	045.5	51.51
154.0	006.6609	0185.0	038.5	297.5	003.0000	0117.3	045.8	51.40
155.0	006.8204	0182.9	038.5	296.8	003.0000	0116.2	046.2	51.18
156.0	007.0225	0180.8	038.6	296.1	003.0000	0114.9	046.5	50.95
157.0	007.2275	0180.8	038.8	295.3	003.0000	0114.1	046.8	50.79
158.0	007.4355	0182.1	039.2	294.4	003.0000	0114.2	047.0	50.72
159.0	007.6464	0180.3	039.2	293.7	003.0000	0114.9	047.4	50.59
160.0	007.8603	0175.9	039.1	293.3	003.0000	0115.5	048.0	50.39
161.0	007.9900	0171.5	038.8	293.0	003.0000	0115.9	048.8	50.14
162.0	008.1647	0170.3	038.8	292.5	003.0000	0116.0	049.2	49.97
163.0	008.2969	0171.8	039.1	291.7	003.0000	0115.8	049.6	49.82
164.0	008.4748	0172.8	039.4	291.0	003.0000	0115.8	050.0	49.67
165.0	008.6095	0173.7	039.6	290.3	003.0000	0115.6	050.4	49.49
166.0	008.7453	0173.3	039.7	289.8	003.0000	0115.3	050.9	49.27
167.0	008.9279	0173.5	039.9	289.2	003.0000	0114.6	051.4	49.04
168.0	009.0662	0173.4	040.0	288.7	003.0000	0114.6	051.9	48.83

169.0	009.2521	0173.9	040.2	288.1	003.0000	0114.3	052.4	48.62
170.0	009.3929	0174.8	040.5	287.5	003.0000	0114.3	053.0	48.41
171.0	009.2521	0176.3	040.5	287.2	003.0000	0114.6	053.6	48.19
172.0	009.1589	0177.3	040.5	286.8	003.0000	0114.9	054.2	47.95
173.0	009.0200	0177.8	040.4	286.6	003.0000	0114.8	054.9	47.68
174.0	008.9279	0177.0	040.2	286.5	003.0000	0114.7	055.6	47.40
175.0	008.7908	0178.2	040.2	286.2	003.0000	0114.4	056.3	47.13
176.0	008.6547	0180.0	040.2	286.0	003.0000	0113.9	056.9	46.86
177.0	008.5645	0181.3	040.3	285.7	003.0000	0113.5	057.6	46.58
178.0	008.4302	0182.6	040.2	285.5	003.0000	0113.3	058.3	46.32
179.0	008.3412	0181.7	040.1	285.5	003.0000	0113.3	059.0	46.05
180.0	008.2086	0180.6	039.9	285.5	003.0000	0113.3	059.7	45.78
181.0	007.9034	0180.6	039.5	285.6	003.0000	0113.4	060.5	45.52
182.0	007.5617	0180.8	039.2	285.8	003.0000	0113.6	061.2	45.27
183.0	007.2689	0181.6	038.9	285.9	003.0000	0113.8	061.9	45.02
184.0	006.9818	0183.3	038.7	285.9	003.0000	0113.9	062.7	44.79
185.0	006.6609	0183.8	038.4	286.1	003.0000	0114.3	063.4	44.57
186.0	006.3862	0185.1	038.1	286.2	003.0000	0114.4	064.1	44.35
187.0	006.1174	0187.1	038.0	286.3	003.0000	0114.5	064.8	44.14
188.0	005.8543	0186.5	037.5	286.6	003.0000	0114.8	065.5	43.92
189.0	005.5607	0184.6	037.0	287.0	003.0000	0114.8	066.2	43.70
190.0	005.3100	0185.0	036.6	287.2	003.0000	0114.6	066.9	43.47
191.0	005.2394	0186.6	036.6	287.1	003.0000	0114.7	067.5	43.28
192.0	005.1345	0186.2	036.4	287.3	003.0000	0114.5	068.2	43.07
193.0	005.0651	0184.0	036.1	287.5	003.0000	0114.3	068.8	42.86

07-27-2022 Terrain Data: NED 03 SEC FMOver Analysis

KHBW 0000162220

KACU

Channel = 207A
Max ERP = 3 kW
RCAMSL = 594 m
N. Lat. 31 43 46.00
W. Lng. 99 01 13.00
Protected
60 dBu

Channel = 208C1
Max ERP = 59 kW
RCAMSL = 803 m
N. Lat. 32 13 47.20
W. Lng. 99 37 43.10
Interfering
54 dBu

Azimuth (degrees)	ERP (kW)	HAAT (m)	Dist (km)	Azimuth (degrees)	ERP (kW)	HAAT (m)	Dist (km)	Actual (dBu)	IX (km)

254.0	003.0000	0111.0	025.4	152.1	006.2922	0186.0	070.7	48.99	
255.0	003.0000	0110.6	025.4	152.0	006.2719	0186.0	070.3	49.12	
256.0	003.0000	0109.8	025.3	151.9	006.2422	0185.9	069.9	49.23	
257.0	003.0000	0109.4	025.3	151.7	006.2195	0185.9	069.5	49.35	
258.0	003.0000	0109.2	025.2	151.6	006.1967	0185.9	069.1	49.48	
259.0	003.0000	0108.8	025.2	151.5	006.1705	0185.9	068.6	49.59	
260.0	003.0000	0108.1	025.1	151.3	006.1390	0186.0	068.3	49.71	
261.0	003.0000	0107.1	025.0	151.1	006.0999	0186.0	067.9	49.81	
262.0	003.0000	0106.2	024.9	150.9	006.0610	0186.1	067.5	49.91	
263.0	003.0000	0105.2	024.8	150.7	006.0192	0186.0	067.1	49.99	
264.0	003.0000	0104.0	024.7	150.4	005.9731	0185.8	066.8	50.07	

265.0	003.0000	0102.2	024.5	150.1	005.9163	0185.5	066.5	50.12
266.0	003.0000	0100.7	024.3	149.8	005.8681	0185.5	066.2	50.19
267.0	003.0000	0099.2	024.1	149.5	005.8241	0185.6	065.9	50.26
268.0	003.0000	0098.0	024.0	149.3	005.7817	0186.0	065.6	50.35
269.0	003.0000	0097.5	023.9	149.0	005.7495	0186.3	065.2	50.45
270.0	003.0000	0098.2	024.0	148.9	005.7314	0186.5	064.8	50.58
271.0	003.0000	0099.2	024.1	148.8	005.7160	0186.6	064.4	50.72
272.0	003.0000	0100.4	024.3	148.7	005.7020	0186.7	064.0	50.86
273.0	003.0000	0101.8	024.4	148.6	005.6888	0186.8	063.5	51.00
274.0	003.0000	0102.5	024.5	148.5	005.6653	0186.9	063.1	51.12
275.0	003.0000	0102.8	024.5	148.3	005.6345	0187.2	062.8	51.24
276.0	003.0000	0103.2	024.6	148.1	005.6056	0187.7	062.4	51.37
277.0	003.0000	0103.6	024.6	147.8	005.5693	0188.3	062.0	51.50
278.0	003.0000	0104.8	024.8	147.7	005.5406	0188.7	061.6	51.64
279.0	003.0000	0106.1	024.9	147.5	005.5108	0189.2	061.2	51.78
280.0	003.0000	0107.1	025.0	147.3	005.4760	0189.6	060.8	51.92
281.0	003.0000	0108.3	025.1	147.1	005.4409	0190.1	060.4	52.06
282.0	003.0000	0109.2	025.2	146.9	005.4041	0190.5	060.0	52.18
283.0	003.0000	0109.7	025.3	146.6	005.3656	0190.8	059.7	52.29
284.0	003.0000	0111.7	025.5	146.5	005.3413	0191.0	059.2	52.45
285.0	003.0000	0112.9	025.6	146.2	005.3066	0191.1	058.9	52.57
286.0	003.0000	0114.0	025.7	146.0	005.2701	0191.3	058.5	52.69
287.0	003.0000	0114.8	025.8	145.7	005.2288	0191.6	058.1	52.79
288.0	003.0000	0114.3	025.7	145.3	005.1759	0191.9	057.9	52.85
289.0	003.0000	0114.5	025.8	145.0	005.1282	0192.2	057.6	52.93
290.0	003.0000	0115.4	025.9	144.6	005.0842	0192.4	057.3	53.03
291.0	003.0000	0115.8	025.9	144.3	005.0351	0192.6	057.0	53.10
292.0	003.0000	0115.9	025.9	143.9	004.9834	0192.9	056.7	53.16
293.0	003.0000	0115.9	025.9	143.5	004.9302	0193.3	056.5	53.22
294.0	003.0000	0114.7	025.8	143.1	004.8683	0193.4	056.4	53.22
295.0	003.0000	0114.0	025.7	142.6	004.7972	0193.5	056.2	53.22
296.0	003.0000	0114.8	025.8	142.3	004.7349	0193.7	056.0	53.27
297.0	003.0000	0116.6	026.0	141.9	004.6810	0193.8	055.6	53.36
298.0	003.0000	0117.5	026.1	141.5	004.6294	0193.9	055.3	53.42
299.0	003.0000	0116.9	026.0	141.1	004.5696	0193.9	055.2	53.41
300.0	003.0000	0116.0	025.9	140.6	004.5078	0193.9	055.1	53.39
301.0	003.0000	0116.4	025.9	140.2	004.4523	0194.1	054.9	53.42
302.0	003.0000	0118.0	026.1	139.8	004.4150	0194.8	054.7	53.52
303.0	003.0000	0122.7	026.5	139.4	004.3938	0195.4	054.1	53.73
304.0	003.0000	0122.3	026.5	139.0	004.3618	0196.1	054.0	53.77
305.0	003.0000	0122.0	026.5	138.5	004.3156	0196.6	053.9	53.78
306.0	003.0000	0124.0	026.6	138.0	004.2737	0197.1	053.7	53.86
307.0	003.0000	0125.1	026.7	137.6	004.2425	0197.6	053.5	53.92
308.0	003.0000	0125.4	026.7	137.1	004.2118	0198.1	053.4	53.96
309.0	003.0000	0126.1	026.8	136.6	004.1687	0198.4	053.3	53.98
310.0	003.0000	0125.9	026.8	136.1	004.1218	0198.7	053.2	53.96
311.0	003.0000	0125.9	026.8	135.6	004.0873	0199.0	053.2	53.95
312.0	003.0000	0125.8	026.8	135.1	004.0562	0199.5	053.2	53.95
313.0	003.0000	0124.7	026.7	134.6	004.0249	0200.1	053.2	53.92
314.0	003.0000	0126.5	026.8	134.1	003.9941	0200.8	053.1	53.98
315.0	003.0000	0127.6	026.9	133.6	003.9503	0201.5	053.0	53.99
316.0	003.0000	0128.4	027.0	133.1	003.9036	0202.2	052.9	53.99
317.0	003.0000	0128.1	027.0	132.6	003.8707	0202.7	053.0	53.96
318.0	003.0000	0130.1	027.1	132.0	003.8390	0203.2	052.9	53.99
319.0	003.0000	0131.5	027.3	131.5	003.7928	0203.8	052.8	54.00*
320.0	003.0000	0132.2	027.3	131.0	003.7463	0204.0	052.8	53.95

321.0	003.0000	0133.2	027.4	130.5	003.7151	0204.0	052.8	53.91
322.0	003.0000	0133.9	027.5	129.9	003.6908	0203.9	052.8	53.87
323.0	003.0000	0133.9	027.5	129.4	003.7207	0203.7	052.9	53.85
324.0	003.0000	0134.0	027.5	128.9	003.7508	0203.8	053.0	53.85
325.0	003.0000	0133.6	027.5	128.4	003.7800	0204.0	053.2	53.82
326.0	003.0000	0133.1	027.4	128.0	003.8086	0204.1	053.4	53.79
327.0	003.0000	0134.2	027.5	127.4	003.8397	0204.5	053.5	53.81
328.0	003.0000	0134.4	027.5	127.0	003.8694	0204.9	053.6	53.81
329.0	003.0000	0136.6	027.7	126.4	003.9030	0205.5	053.6	53.87
330.0	003.0000	0139.2	027.9	125.8	003.9431	0205.9	053.6	53.94
331.0	003.0000	0138.2	027.8	125.4	003.9828	0206.2	053.9	53.89
332.0	003.0000	0136.6	027.7	125.0	004.0195	0206.5	054.2	53.81
333.0	003.0000	0136.9	027.7	124.5	004.0480	0207.0	054.4	53.78
334.0	003.0000	0137.7	027.8	124.0	004.0779	0207.5	054.6	53.77
335.0	003.0000	0137.0	027.7	123.6	004.1031	0207.8	054.9	53.69
336.0	003.0000	0136.1	027.7	123.3	004.1273	0207.9	055.2	53.59
337.0	003.0000	0136.1	027.7	122.8	004.1534	0208.0	055.5	53.52
338.0	003.0000	0136.9	027.7	122.4	004.1818	0208.4	055.7	53.49
339.0	003.0000	0138.3	027.9	121.9	004.2117	0208.8	055.9	53.46
340.0	003.0000	0138.6	027.9	121.5	004.2377	0209.0	056.2	53.38
341.0	003.0000	0137.5	027.8	121.2	004.2583	0209.2	056.5	53.27
342.0	003.0000	0136.9	027.7	120.8	004.2799	0209.5	056.9	53.17
343.0	003.0000	0137.7	027.8	120.4	004.3058	0209.7	057.2	53.09
344.0	003.0000	0140.8	028.1	119.9	004.3484	0209.9	057.3	53.09
345.0	003.0000	0140.1	028.0	119.6	004.3871	0210.2	057.7	52.99
346.0	003.0000	0139.1	027.9	119.3	004.4233	0210.6	058.1	52.89
347.0	003.0000	0140.4	028.0	118.9	004.4793	0211.1	058.4	52.86
348.0	003.0000	0142.8	028.3	118.4	004.5573	0211.1	058.6	52.85
349.0	003.0000	0144.5	028.4	118.0	004.6263	0211.5	058.9	52.82
350.0	003.0000	0144.9	028.4	117.7	004.6803	0212.0	059.3	52.75
351.0	003.0000	0145.1	028.4	117.4	004.7309	0212.4	059.7	52.67
352.0	003.0000	0145.2	028.5	117.1	004.7794	0212.8	060.1	52.58
353.0	003.0000	0144.7	028.4	116.8	004.8135	0213.2	060.5	52.47
354.0	003.0000	0144.4	028.4	116.6	004.8458	0213.6	060.9	52.35
355.0	003.0000	0144.1	028.4	116.4	004.8763	0213.8	061.4	52.23
356.0	003.0000	0144.2	028.4	116.1	004.9096	0213.8	061.8	52.10
357.0	003.0000	0143.8	028.3	115.9	004.9393	0213.7	062.2	51.96
358.0	003.0000	0144.8	028.4	115.6	004.9884	0213.3	062.6	51.85
359.0	003.0000	0144.7	028.4	115.4	005.0229	0213.2	063.1	51.72
000.0	003.0000	0144.6	028.4	115.2	005.0567	0213.1	063.5	51.58
001.0	003.0000	0144.8	028.4	115.1	005.0909	0213.2	064.0	51.46
002.0	003.0000	0145.2	028.5	114.8	005.1213	0213.4	064.4	51.34
003.0	003.0000	0145.3	028.5	114.7	005.1459	0213.7	064.9	51.22
004.0	003.0000	0145.6	028.5	114.5	005.1717	0213.9	065.3	51.09
005.0	003.0000	0145.9	028.5	114.3	005.1953	0214.2	065.8	50.97
006.0	003.0000	0146.1	028.5	114.2	005.2178	0214.4	066.2	50.83
007.0	003.0000	0145.7	028.5	114.1	005.2321	0214.5	066.7	50.69
008.0	003.0000	0145.7	028.5	113.9	005.2519	0214.6	067.2	50.54
009.0	003.0000	0146.7	028.6	113.7	005.2844	0214.8	067.7	50.42
010.0	003.0000	0149.5	028.8	113.4	005.3387	0215.0	068.1	50.33
011.0	003.0000	0152.3	029.1	113.1	005.3923	0215.1	068.5	50.23
012.0	003.0000	0153.6	029.2	113.0	005.4232	0215.2	069.0	50.10
013.0	003.0000	0154.5	029.3	112.8	005.4439	0215.2	069.5	49.95