

INTERFERENCE ANALYSIS

Concerning
KCBX, Inc.
Minor Change
K236AF
Lompoc, California
File No. BLFT-19990324TA
October 2006

Page #2 of this exhibit is a computer generated channel study, showing the contour relationship between the proposed translator and adjacent stations. Page #3 is an explanation of the methods used in preparing the study. There is significant contour overlap to third adjacent stations KPAT and KSPE-FM.

Section 73.1204(a) states that “an application for an FM translator station will not be accepted for filing if the proposed operation would involve overlap of predicted field strength contours with any other station, including commercial and noncommercial educational FM stations, FM translators and Class D (secondary) noncommercial educational FM stations.” However, Section 74.1204(d) states that “the provisions of this section concerning prohibited overlap will not apply where the area of such overlap lies entirely over water. In addition, *an application otherwise precluded by this section will be accepted if it can be demonstrated that no actual interference will occur due to intervening terrain, lack of population or other such factors as may be applicable.* (Emphasis added.)

FCC F(50-50) curves were used to determine the signal strength, in dBu, of KPSE-FM at the proposed translator's transmitter site. That signal strength of KPSE-FM was calculated to be 60.3 dBu, based on an HAAT toward the reference of 858 meters, power of 0.88 kW and distance of 50.75 km. Incorporating the 40 dB U/D ratio, the resulting translator interference contour is 100.3 dBu. Page #4 is a distance to 100.3 dBu interference contour for the proposed translator. The 100.3 dBu interference contour extends 200 meters.

Using the above method, the signal strength of KPAT at the proposed transmitter site was determined to be 122.6 dBu, based on an HAAT toward the reference of 197 meters, power of 3.3 kW and distance of 0.3 kilometers. The resulting interference contour is then 162.6 dBu, which extends less than 10 meters (Page #5). The antenna will be installed at 10 meters HAAT, therefore the interference are will be contained entirely on the tower.

Page #6 is a topographic map¹ depicting the proposed translator site. According to information provided by KCBX, Inc. and this topographic map, this is an isolated location, with no buildings (other than the transmitter building), residences or roads within the interference area. Due to the absence of “potential listeners” within the interference contour, Section 74.1204(d) is applicable in this case.

Pages #7-10 consist of a contour-to-contour map of the proposed translator and KXTZ and an FMOver table, depicting that relationship.

¹ www.topozone.com

Kcbx, Inc. K236AF Move CH# 236D - 95.1 MHz, Pwr= 0.009 kW, HAAT=225.4 M, COR= 384 M Average Protected F(50-50)= 8.52 km Ave. F(50-10) 40 dBu= 29.2 54 dBu= 12.3 80 dBu= 2.0 100 dBu= .2 DI SPLAY DATES DATA 10-10-06 SEARCH 10-10-06										
CH CITY	CALL	TYPE STATE	AZI. <--	DIST FILE #	LAT. LNG.	Pwr(kW) HAAT(M)	COR(M) INT(km)	PRO(km) LICENSEE	*OUT* (Overlap in km)	
239B1 Orcutt	KPAT	CP CX CA	0.0 180.0	0.03 BPH20050426AAE	34 44 30 120 26 45	3.300 317	425 -11.9	47.4 Agm-santa Maria, Lp	-47.63*<	
239B1 Orcutt	KPAT	LIC CN CA	160.0 340.0	0.30 BLH19931222KA	34 44 20 120 26 41	3.300 197	379 -12.2	39.3 Agm-santa Maria, Lp	-39.35*<	
236D Lompoc	K236AF	LIC VN CA	147.2 327.2	10.39 BLFT19990324TA	34 39 46 120 23 03	0.027 -32	145 -11.2	4.0 Kcbx, Inc.	-22.69<	
233B Ellwood	KSPE-FM	LIC CY CA	118.1 298.4	50.75 BLH19890214KC	34 31 32 119 57 28	0.880 858	1252 43.3	65.1 Citicasters Licenses, L.p.	-14.74*<	
237A Pismo Beach	KXTZ	LIC CN CA	339.4 159.3	49.25 BMLH199111114KA	35 09 24 120 38 11	4.200 119	258 -13.8	37.0 Mapleton Communications, L	0.85	
236B Ventura	KBBY-FM	LIC CN CA	118.4 299.2	145.25 BLH19911023KB	34 06 47 119 03 34	12.500 267	411 0.9	73.0 Cumulus Licensing Lic	46.42	
235B1 Cambria	KPYG	LIC CN CA	327.4 147.1	103.35 BLH19890206KA	35 31 26 121 03 40	25.000 100	287 11.6	63.4 Mapleton Communications, L	25.93	
235D San Luis Obispo	KPYG-FM1	LIC DV CA	341.0 160.9	61.36 BLFTB20060522ABQ	35 15 50 120 39 59	0.900	159 37.7	11.0 Mapleton Communications, L	39.00	
235A Maricopa	KXTT	CP CX CA	67.1 247.7	99.98 BMPH20051216ABD	35 05 10 119 26 06	6.000 11	462 69.0	15.8 College Creek Broadcasting	73.49	
236A Avenal	KAAX	CP CN CA	13.3 193.5	144.87 BMPED19960826IA	36 00 40 120 04 26	0.920 200	413 70.1	21.7 Avenal Educational Service	95.28	
237B1 Oildale	KLLY	LIC CN CA	58.0 238.8	152.43 BLH19911108KA	35 27 33 119 01 13	12.500 141	339 77.4	52.1 Buckley Broadcasting Of Ca	88.29	
233D Cambria	AP9724	APP C CA	327.4 147.1	103.35 BNPFT20030317CVY	35 31 26 121 03 40	0.010	283 94.7	9.6 Edgewater Broadcasting, In	93.52	
233D El Paso De Robles	K233AV	CP C CA	345.3 165.1	103.84 BNPFT20030822ACA	35 38 46 120 44 17	0.010	562 95.5	10.0 Horizon Christian Fellowsh	93.67	
239D El Paso De Robles	K239AI	CP C CA	345.3 165.1	103.84 BNPFT20030826ADX	35 38 46 120 44 17	0.010	562 95.5	10.0 Ihr Educational Broadcasti	93.67	
239D Cambria	K239AR	CP C CA	327.4 147.1	103.35 BNPFT20030828AEU	35 31 26 121 03 40	0.005	283 94.8	7.9 Horizon Christian Fellowsh	95.19	

Terrain database is NGDC 30 SEC

ERP and HAAT are on direct line to and from reference station.

Incoming contour overlap is ignored.

***affixed to 'IN' or 'Out' values = site inside protected contour. "<" = contour overlap

HOW TO READ THE FM COMPUTER PRINT-OUT

The computer printout should be self-explanatory for the most part. The parameters of the station being checked, (reference station) are printed in the heading. The 60 dBu protected contour is predicted from the Commission's F(50-50) table, while the 40, 54, 80 and 100 dBu contours are interference contours derived from the Commission's F(50-10) table. Contour distances are in kilometers and are predicted using spline interpolation from data points identical to those published in Report No. RS 76-01 by Gary C. Kalagian. Critical contour distances are determined using the Commission's TVFMINT FORTRAN subroutine. When interference contour distances are less than 16 kilometers the F(50-50) tables are used. If signal contour distances are less than 1.6 km the free-space equation is used.

The column labeled "** OUT **" shows the distance in kilometers of overlap or clearance between the reference station's interference contour and the database station's protected contour. (All distances are derived by the method detailed in Sec. 73.208 of the Rules and Regulations as amended in Docket 80-90.) Therefore, the column is a measure of outgoing interference. Negative distance figures in this column indicate outgoing overlap interference. Listed antenna heights are the average heights of eight standard radials as found in the Commission's records unless otherwise noted, in which case the specific antenna heights and the DA power, if applicable, along the straight line azimuths between the reference station and the database station are used and visa versa.

Under the "AZIMUTH" column, the first row of numbers indicate the bearings from True North of the data base stations in relationship with the reference station, while the numbers in the second row indicate the reverse bearings from the database station to the reference station.

The columns labeled "INT" and "PRO" hold the distance in kilometers of the appropriate interference contour and the protected contour of a data base station.

The first three letters of the "TYPE" column identify the current FCC status of the stations. The fourth letter will be a "D" or "Z" (Sec. 73.215) if the facility is directional. The fifth letter will be an E, H or V depending on the type of antenna polarization. The sixth letter will be a "Y" if the antenna uses beam tilt.

N. Lat. = 34 44 29 W. Lng. = 120 26 45

HAAT and Distance to Contour - FCC Method - NGDC 30 SEC

K236AF (New) Distance to 100.3 dBu Interference Contour

Azi. AV EL HAAT ERP kW dBk Field 100.3-F1

000	152.2	231.8	0.0090	-20.46	1.000	0.20
030	224.5	159.5	0.0090	-20.46	1.000	0.20
060	221.6	162.4	0.0090	-20.46	1.000	0.20
090	217.7	166.3	0.0090	-20.46	1.000	0.20
120	276.3	107.7	0.0090	-20.46	1.000	0.20
150	136.3	247.7	0.0090	-20.46	1.000	0.20
180	107.9	276.1	0.0090	-20.46	1.000	0.20
210	96.5	287.5	0.0090	-20.46	1.000	0.20
240	79.5	304.5	0.0090	-20.46	1.000	0.20
270	101.0	283.0	0.0090	-20.46	1.000	0.20
300	126.8	257.2	0.0090	-20.46	1.000	0.20
330	162.3	221.7	0.0090	-20.46	1.000	0.20

Ave El= 158.55 M HAAT= 225.45 M AMSL= 384

N. Lat. = 34 44 29 W. Lng. = 120 26 45

HAAT and Distance to Contour - FCC Method - NGDC 30 SEC

K236AF (new) distance to 162.6 dBu contour

Azi.	AV EL	HAAT	ERP kW	dBk	Field	162.6-F1
000	152.2	231.8	0.0090	-20.46	1.000	0.00
030	224.5	159.5	0.0090	-20.46	1.000	0.00
060	221.6	162.4	0.0090	-20.46	1.000	0.00
090	217.7	166.3	0.0090	-20.46	1.000	0.00
120	276.3	107.7	0.0090	-20.46	1.000	0.00
150	136.3	247.7	0.0090	-20.46	1.000	0.00
180	107.9	276.1	0.0090	-20.46	1.000	0.00
210	96.5	287.5	0.0090	-20.46	1.000	0.00
240	79.5	304.5	0.0090	-20.46	1.000	0.00
270	101.0	283.0	0.0090	-20.46	1.000	0.00
300	126.8	257.2	0.0090	-20.46	1.000	0.00
330	162.3	221.7	0.0090	-20.46	1.000	0.00

Ave El= 158.55 M HAAT= 225.45 M AMSL= 384 M



0 0.1 0.2 0.3 0.4 0.5 km

0 0.09 0.18 0.27 0.36 0.45 mi

34° 44' 29"N, 120° 26' 45"W (NAD27)

KRQK-FM (Lompoc), USGS LOMPOC (CA) Quadrangle

Projection is UTM Zone 10 NAD83 Datum



M=14.062

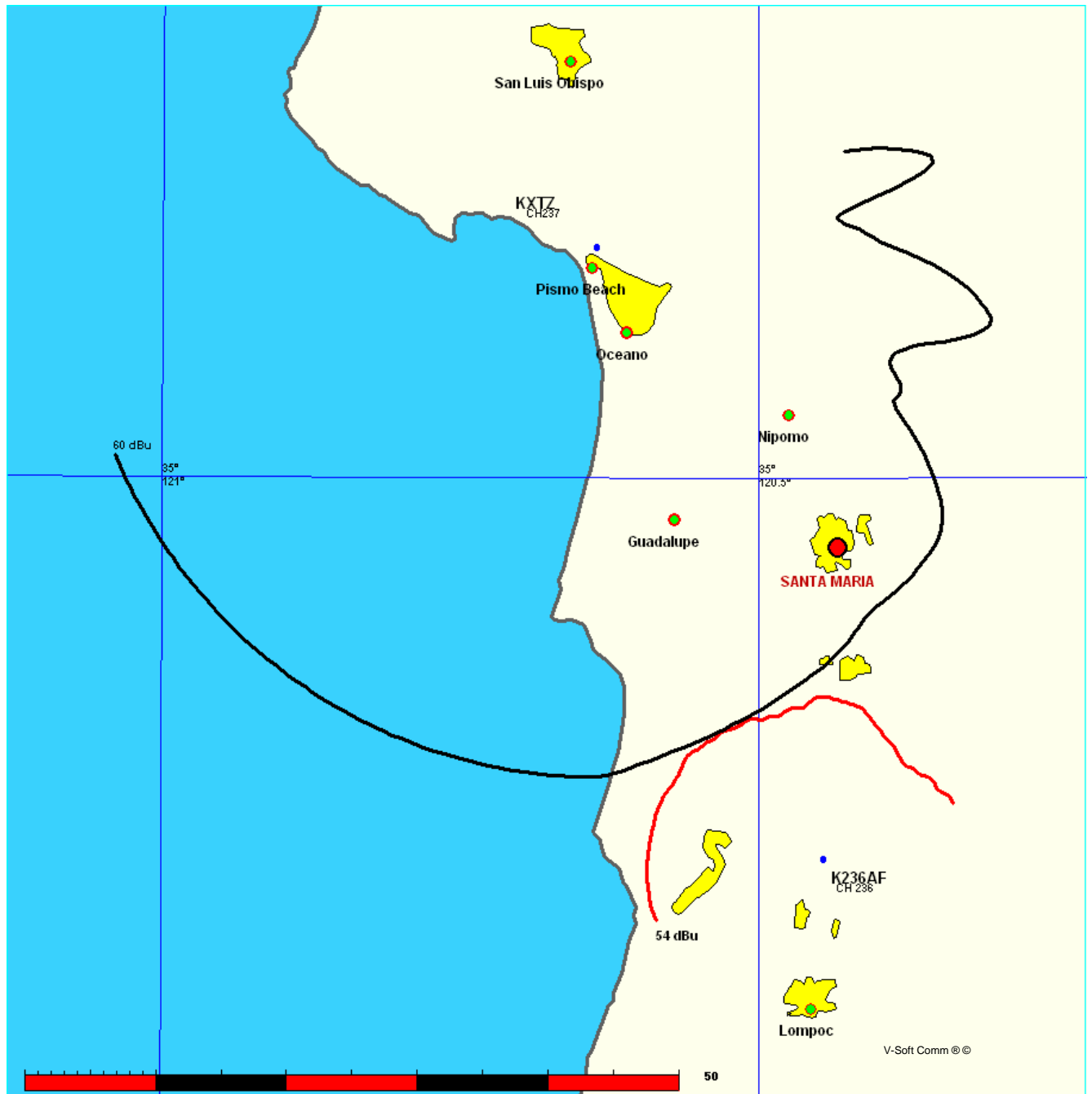
G=1.456

FMCommander Single Allocation Study
10-11-2006

K236AF CH 236 D
0.009 kW 384 M COR
Prot. = 60 dBu
Intef. = 54 dBu

KXTZ CH 237 A BMLH19911114KA
4.2 kW, 258 M COR
Prot. = 60 dBu
Intef. = 54 dBu

Scale = 1:750,000



KXTZ BMLH19911114KA
 Channel = 237A
 Max ERP = 4.2 kW
 RCAMSL = 258 M
 N. Lat = 35 09 24
 W. Lng = 120 38 11
 Protected
 60 dBu

K236AF
 Channel = 236D
 Max ERP = 0.009 kW
 RCAMSL = 384 M
 N. Lat = 34 44 29
 W. Lng = 120 26 45
 Interfering
 54 dBu

Azimuth (degrees)	ERP (kW)	HAAT (m)	Dist (km)	Azimuth (degrees)	ERP (kW)	HAAT (m)	Dist (km)	Actual (dBu)
099.0	004.2000	0138.9	030.1	016.5	000.0090	0203.7	043.2	31.65
100.0	004.2000	0143.6	030.6	017.2	000.0090	0203.7	042.7	31.86
101.0	004.2000	0143.6	030.6	017.3	000.0090	0203.7	042.2	32.09
102.0	004.2000	0139.5	030.2	016.8	000.0090	0203.7	041.6	32.35
103.0	004.2000	0132.7	029.5	015.9	000.0090	0207.8	041.0	32.80
104.0	004.2000	0121.7	028.5	014.5	000.0090	0211.5	040.5	33.22
105.0	004.2000	0111.4	027.4	013.0	000.0090	0216.6	040.0	33.67
106.0	004.2000	0101.7	026.3	011.4	000.0090	0218.3	039.6	33.94
107.0	004.2000	0094.0	025.4	010.0	000.0090	0218.9	039.3	34.13
108.0	004.2000	0089.4	024.8	009.0	000.0090	0219.7	038.9	34.33
109.0	004.2000	0085.9	024.3	008.2	000.0090	0220.9	038.6	34.55
110.0	004.2000	0083.9	024.0	007.7	000.0090	0220.9	038.2	34.72
111.0	004.2000	0083.8	024.0	007.6	000.0090	0220.9	037.8	34.91
112.0	004.2000	0085.2	024.2	007.7	000.0090	0220.9	037.3	35.13
113.0	004.2000	0089.7	024.8	008.4	000.0090	0220.9	036.8	35.40
114.0	004.2000	0094.1	025.4	009.1	000.0090	0219.7	036.2	35.62
115.0	004.2000	0096.1	025.6	009.3	000.0090	0219.7	035.7	35.87
116.0	004.2000	0095.6	025.6	009.0	000.0090	0219.7	035.3	36.07
117.0	004.2000	0094.6	025.5	008.6	000.0090	0219.7	034.9	36.26
118.0	004.2000	0097.8	025.9	009.0	000.0090	0219.7	034.4	36.54
119.0	004.2000	0105.0	026.7	010.1	000.0090	0218.9	033.6	36.86
120.0	004.2000	0114.4	027.8	011.6	000.0090	0217.5	032.9	37.21
121.0	004.2000	0124.1	028.7	012.9	000.0090	0216.6	032.1	37.56
122.0	004.2000	0132.9	029.5	014.0	000.0090	0214.5	031.4	37.87
123.0	004.2000	0141.0	030.3	015.1	000.0090	0211.5	030.6	38.16
124.0	004.2000	0148.6	031.1	016.1	000.0090	0207.8	029.9	38.43
125.0	004.2000	0155.5	031.8	017.1	000.0090	0203.7	029.1	38.71
126.0	004.2000	0161.9	032.5	018.1	000.0090	0198.9	028.4	38.97
127.0	004.2000	0167.4	033.1	018.8	000.0090	0193.7	027.7	39.21
128.0	004.2000	0171.9	033.5	019.3	000.0090	0193.7	027.0	39.67
129.0	004.2000	0175.4	033.8	019.6	000.0090	0188.6	026.3	39.89
130.0	004.2000	0177.8	034.1	019.6	000.0090	0188.6	025.7	40.33
131.0	004.2000	0179.4	034.2	019.4	000.0090	0193.7	025.1	40.98
132.0	004.2000	0180.3	034.3	019.1	000.0090	0193.7	024.5	41.40
133.0	004.2000	0181.0	034.3	018.7	000.0090	0193.7	023.9	41.82

Azimuth (degrees)	ERP (kW)	HAAT (m)	Dist (km)	Azimuth (degrees)	ERP (kW)	HAAT (m)	Dist (km)	Actual (dBu)
134.0	004.2000	0181.7	034.4	018.2	000.0090	0198.9	023.3	42.47
135.0	004.2000	0182.5	034.5	017.7	000.0090	0198.9	022.8	42.90
136.0	004.2000	0183.3	034.6	017.1	000.0090	0203.7	022.2	43.54
137.0	004.2000	0183.7	034.6	016.4	000.0090	0207.8	021.7	44.13
138.0	004.2000	0183.6	034.6	015.6	000.0090	0207.8	021.2	44.53
139.0	004.2000	0183.2	034.5	014.6	000.0090	0211.5	020.7	45.06
140.0	004.2000	0182.8	034.5	013.5	000.0090	0214.5	020.2	45.57
141.0	004.2000	0182.7	034.5	012.5	000.0090	0217.5	019.7	46.07
142.0	004.2000	0183.0	034.5	011.4	000.0090	0218.3	019.2	46.49
143.0	004.2000	0183.7	034.6	010.3	000.0090	0218.9	018.8	46.91
144.0	004.2000	0185.2	034.7	009.3	000.0090	0219.7	018.2	47.37
145.0	004.2000	0187.4	034.9	008.4	000.0090	0220.9	017.7	47.89
146.0	004.2000	0190.2	035.1	007.4	000.0090	0222.2	017.1	48.43
147.0	004.2000	0193.1	035.4	006.3	000.0090	0223.6	016.5	48.97
148.0	004.2000	0195.6	035.6	005.1	000.0090	0225.0	016.0	49.49
149.0	004.2000	0197.8	035.8	003.6	000.0090	0226.9	015.5	49.99
150.0	004.2000	0199.6	035.9	002.0	000.0090	0231.1	015.0	50.25
151.0	004.2000	0201.1	036.0	000.1	000.0090	0231.8	014.6	50.77
152.0	004.2000	0202.2	036.1	358.1	000.0090	0232.0	014.2	51.23
153.0	004.2000	0203.2	036.2	355.9	000.0090	0224.0	013.9	51.35
154.0	004.2000	0204.2	036.3	353.5	000.0090	0213.6	013.6	51.33
155.0	004.2000	0205.4	036.4	351.1	000.0090	0205.4	013.3	51.37
156.0	004.2000	0206.9	036.5	348.5	000.0090	0209.3	013.0	51.91
157.0	004.2000	0208.6	036.6	345.9	000.0090	0207.1	012.8	52.17
158.0	004.2000	0210.5	036.8	343.1	000.0090	0199.3	012.5	52.16
159.0	004.2000	0212.4	036.9	340.2	000.0090	0202.4	012.4	52.56
160.0	004.2000	0214.2	037.0	337.1	000.0090	0202.4	012.2	52.74
161.0	004.2000	0215.7	037.2	334.1	000.0090	0214.3	012.2	53.32
162.0	004.2000	0217.1	037.3	331.0	000.0090	0221.6	012.2	53.62
163.0	004.2000	0218.6	037.4	327.9	000.0090	0220.6	012.2	53.51
164.0	004.2000	0220.2	037.5	324.8	000.0090	0224.5	012.3	53.54
165.0	004.2000	0222.0	037.6	321.8	000.0090	0234.0	012.4	53.73
166.0	004.2000	0224.2	037.8	318.8	000.0090	0238.2	012.6	53.67
167.0	004.2000	0226.3	037.9	315.8	000.0090	0239.2	012.8	53.43
168.0	004.2000	0228.2	038.0	313.0	000.0090	0247.4	013.0	53.36
169.0	004.2000	0229.8	038.2	310.4	000.0090	0253.0	013.3	53.13
170.0	004.2000	0231.5	038.3	308.0	000.0090	0260.0	013.7	52.91
171.0	004.2000	0233.5	038.4	305.6	000.0090	0264.3	014.0	52.58
172.0	004.2000	0235.9	038.6	303.3	000.0090	0261.5	014.4	52.00
173.0	004.2000	0238.5	038.7	301.1	000.0090	0258.4	014.8	51.40
174.0	004.2000	0241.1	038.9	299.0	000.0090	0256.6	015.3	51.14
175.0	004.2000	0243.7	039.1	297.1	000.0090	0256.8	015.8	50.74
176.0	004.2000	0246.6	039.2	295.3	000.0090	0259.1	016.3	50.39
177.0	004.2000	0250.5	039.5	293.5	000.0090	0263.4	016.7	50.10
178.0	004.2000	0254.0	039.7	291.8	000.0090	0266.3	017.3	49.75
179.0	004.2000	0256.4	039.9	290.5	000.0090	0268.8	017.9	49.34
180.0	004.2000	0256.8	039.9	289.7	000.0090	0270.5	018.5	48.86
181.0	004.2000	0257.3	039.9	288.9	000.0090	0271.8	019.2	48.37
182.0	004.2000	0257.7	039.9	288.2	000.0090	0273.0	019.8	47.87
183.0	004.2000	0257.7	039.9	287.7	000.0090	0273.0	020.5	47.33
184.0	004.2000	0257.8	039.9	287.2	000.0090	0273.9	021.2	46.82

Azimuth (degrees)	ERP (kW)	HAAT (m)	Dist (km)	Azimuth (degrees)	ERP (kW)	HAAT (m)	Dist (km)	Actual (dBu)
185.0	004.2000	0257.8	039.9	286.8	000.0090	0273.9	021.8	46.29
186.0	004.2000	0257.9	039.9	286.5	000.0090	0274.4	022.5	45.78
187.0	004.2000	0257.9	040.0	286.2	000.0090	0274.4	023.2	45.26
188.0	004.2000	0258.0	040.0	285.9	000.0090	0274.4	023.9	44.74
189.0	004.2000	0258.0	040.0	285.7	000.0090	0274.4	024.6	44.24
190.0	004.2000	0258.0	040.0	285.6	000.0090	0274.4	025.3	43.74
191.0	004.2000	0258.0	040.0	285.4	000.0090	0274.8	026.0	43.27
192.0	004.2000	0258.0	040.0	285.3	000.0090	0274.8	026.7	42.79
193.0	004.2000	0258.0	040.0	285.3	000.0090	0274.8	027.4	42.33
194.0	004.2000	0258.0	040.0	285.2	000.0090	0274.8	028.1	41.88
195.0	004.2000	0258.0	040.0	285.2	000.0090	0274.8	028.8	41.45
196.0	004.2000	0258.0	040.0	285.2	000.0090	0274.8	029.5	41.03
197.0	004.2000	0258.0	040.0	285.3	000.0090	0274.8	030.2	40.62
198.0	004.2000	0258.0	040.0	285.3	000.0090	0274.8	030.9	40.23
199.0	004.2000	0258.0	040.0	285.4	000.0090	0274.8	031.6	39.86
200.0	004.2000	0258.0	040.0	285.5	000.0090	0274.8	032.3	39.51
201.0	004.2000	0258.0	040.0	285.6	000.0090	0274.4	032.9	39.15
202.0	004.2000	0258.0	040.0	285.7	000.0090	0274.4	033.6	38.81
203.0	004.2000	0258.0	040.0	285.9	000.0090	0274.4	034.3	38.47
204.0	004.2000	0258.0	040.0	286.0	000.0090	0274.4	035.0	38.13
205.0	004.2000	0258.0	040.0	286.2	000.0090	0274.4	035.7	37.80
206.0	004.2000	0258.0	040.0	286.4	000.0090	0274.4	036.4	37.47
207.0	004.2000	0258.0	040.0	286.6	000.0090	0273.9	037.1	37.13
208.0	004.2000	0258.0	040.0	286.8	000.0090	0273.9	037.8	36.81
209.0	004.2000	0258.0	040.0	287.0	000.0090	0273.9	038.5	36.49
210.0	004.2000	0258.0	040.0	287.2	000.0090	0273.9	039.1	36.18
211.0	004.2000	0258.0	040.0	287.5	000.0090	0273.9	039.8	35.87
212.0	004.2000	0258.0	040.0	287.7	000.0090	0273.0	040.5	35.54
213.0	004.2000	0258.0	040.0	288.0	000.0090	0273.0	041.2	35.24
214.0	004.2000	0258.0	040.0	288.2	000.0090	0273.0	041.8	34.94
215.0	004.2000	0258.0	040.0	288.5	000.0090	0273.0	042.5	34.65
216.0	004.2000	0258.0	040.0	288.8	000.0090	0271.8	043.2	34.32
217.0	004.2000	0258.0	040.0	289.1	000.0090	0271.8	043.8	34.04
218.0	004.2000	0258.0	040.0	289.3	000.0090	0271.8	044.5	33.76
219.0	004.2000	0258.0	040.0	289.6	000.0090	0270.5	045.2	33.44