

KVSS - Minor Amendment  
Directional Antenna Pattern Modification

REFERENCE 41 18 47 N 96 00 36 W		CH#	205A - 88.9 MHz, Pwr= 1.5 kW, HAAT=147.0 M, COR= 485 M Average Protected F(50-50)= 24.53 km					DISPLAY DATES DATA 08-30-02 SEARCH 08-30-02			
		Ave.	F(50-10)	40	dBu= 73.7	54	dBu= 36.9	80	dBu= 7.8	100	dBu= 2.1
CH CITY	CALL	TYPE STATE	AZI. <--	DI ST FILE #	LAT. LNG.	Pwr(kW) HAAT(M)	COR(M) INT(km)	PRO(km) LICENSEE	*IN* (Overlap in km)	*OUT*	
205A Omaha	KVSS. A	APP DEX NE	0.0 180.0	0.00 BNPED20020425AAM	41 18 47 96 00 36	1.500 147	485 73.7	24.5 Vss Cathol ic	-98.24<	-98.24<	
205A Omaha	KVSS. C	CP DEX NE	103.1 283.1	0.55 BNPED20010329ACP	41 18 43 96 00 13	2.750 101	440 74.8	23.9 Vss Cathol ic	-98.75<	-97.03<	
205A Omaha	KVSS	LIC CX NE	103.1 283.1	0.55 BLED20011024ABD	41 18 43 96 00 13	0.500 71	405 45.1	12.9 Vss Cathol ic	-69.06<	-86.08<	
205C2 Beatrice > Reference	*AP205 HAAT at	APP DVX NE	209.6 29.6	96.06 BNPED19990927AAP	40 33 38 96 34 21	4.922 93	502 82.4	26.2 American Family	0.43	25.74	
			209.6°= 148.5 M, Pwr= 0.12567 kW, Pro. Di st. = 13.22 km, Int Di st. = 44.11 km								
205C3 Beatrice > Reference	*AP205 HAAT at	APP V NE	205.4 25.4	111.92 BNPED19990927AAP	40 24 08 96 34 41	9.000 108	516 94.6	32.3 American Family	3.92	34.84	
			205.4°= 149.1 M, Pwr= 0.13354 kW, Pro. Di st. = 13.45 km, Int Di st. = 44.8 km								
206C1 Shenandoah	AP206	APP EX IA	152.8 332.8	110.87 BNPED20000225ACT	40 25 27 95 24 40	100.000 61	368 72.1	42.4 Csn International	14.21	31.65	
206C1 Shenandoah	AP206	APP DEX IA	152.8 332.8	110.87 BNPED20000225ACT	40 25 27 95 24 40	100.000 61	368 72.1	42.4 Csn International	14.21	31.65	
205A Sioux City > Reference	*AP205 HAAT at	APP DVX IA	342.6 162.6	113.73 BNPED20000324ABG	42 17 20 96 25 29	1.364 79	482 60.0	17.8 American Family	32.35	28.79	
			342.6°= 107.9 M, Pwr= 1.5 kW, Pro. Di st. = 21.4 km, Int Di st. = 67.17 km								
205C3 Adel	KIHS. C	CP DCN IA	78.2 258.2	167.06 BPED19990104MI	41 36 12 94 02 53	10.000 47	345 85.1	22.5 Csn International	57.43	70.83	
203A Lincoln	KLCV	LIC VN NE	226.8 46.8	61.95 BLED19960719KA	40 55 51 96 32 50	4.700 94	455 2.5	26.0 Communi ty Broadcasting, In	34.92	33.88	
207A Lincoln	KZUM	LIC CN NE	226.6 46.6	80.70 BLED19870610KA	40 48 47 96 42 24	1.500 31	405 1.6	11.4 Sunrise Communi cations, In	54.56	67.28	
206C1 Hastings	KHNEFM	LIC CY NE	251.6 71.6	184.91 BLED19900625KB	40 46 17 98 05 22	68.000 329	879 102.7	70.6 Nebraska Ed Telecommuni cat	57.68	77.41	
205C2 Spirit Lake	KJIA. C	CP CX IA	16.0 196.0	234.98 BPED19981231MH	43 20 34 95 12 24	50.000 83	530 127.6	41.6 Minn-iowa Christi an Broadc	82.87	119.71	
207C1 Norfolk	KXNEFM	LIC CY NE	314.8 134.8	147.17 BLED19900605KA	42 14 15 97 16 41	45.000 300	816 8.1	64.3 Nebraska Ed Telecommuni cat	114.52	80.79	
205A I ndiola	KSTM	LIC CN IA	87.5 267.5	204.67 BLED19940422KD	41 22 00 93 33 57	0.100 38	307 21.0	6.3 Simpson College	159.14	124.67	
205C2 Chillicothe	KRNW	LIC CN MO	128.4 308.4	264.04 BLED19931006KB	39 48 48 93 35 26	38.000 156	382 132.5	50.5 Northwest Missouri State U	107.03	139.81	
06+2C Omaha	WOWTTV	LI HN NE	261.3 81.3	1.44 BLCT19831024KI	41 18 40 96 01 37	100.000 418	761 0.0	113.0 Benedek License Corporatio	To Grd B=	-111.53	

"\*" = ERP and HAAT on direct line to and from reference station. "<" = 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 listed "**\* IN \***" is the sum of the reference station's 60 dBu protected contour and the data file station's interference contour subtracted from the distance between the stations. (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 incoming interference. Negative distances in this column indicate the presence of 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. 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. Negative distance figures in this column indicate outgoing overlap interference.

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.

For I.F. relationships the "IN" and "OUT" columns change their significance. The letter "R" stands for the minimum **required** distance in kilometers, while the letter "M" in the next column follows the **available clear space** separation in kilometers. Minimum separation distances when displayed are taken from Sec 73.207 of the rules as amended. Canadian and Mexican separation distances, U/D ratios and protected contour values are from the US/Mexican Working Agreement and the US/Canada Working Agreement".

The first three letters of the "TYPE" column identify the current FCC status of the stations. The fourth letter will be a "D" if the facility is directional. "Z" indicates a 73.215 directional. An "N" indicates it is a 73.215 station that operates omni. 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 or an "X" if the commission is not sure, otherwise it will be an "N".

## KVSSNew vs. AP205 Beatrice (As Amended)

### KVSSNew

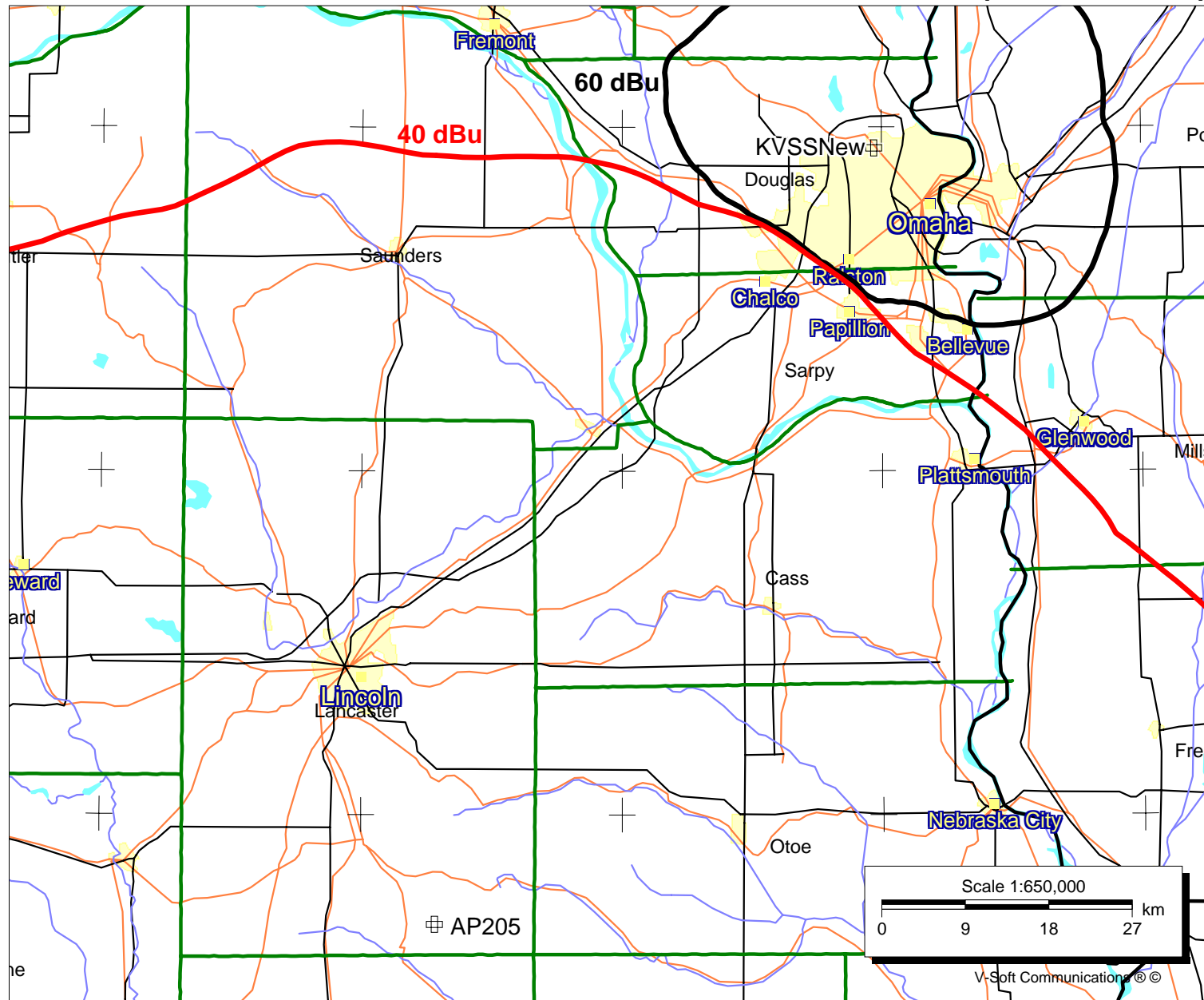
BMPED20020425AAM  
Latitude: 41-18-47 N  
Longitude: 096-00-36 W  
ERP: 1.50 kW  
Channel: 205  
Frequency: 88.9 MHz  
AMSL Height: 485.0 m  
Elevation: 355.74 m  
HAAT: 147.0 m  
Horiz. Pattern: Directional  
Vert. Pattern: No  
Prop Model: FCC Contour

### AP205

BNPED19990927AAP  
Latitude: 40-33-38 N  
Longitude: 096-34-21 W  
ERP: 35.00 kW  
Channel: 205  
Frequency: 88.9 MHz  
AMSL Height: 502.0 m  
Elevation: 435.4 m  
HAAT: 502.0 m  
Horiz. Pattern: Directional  
Vert. Pattern: No

Sept. 3, 2002

**V** Doug Vernier  
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## KVSSNew vs. AP205 Beatrice (As Amended) - Close Up

### KVSSNew

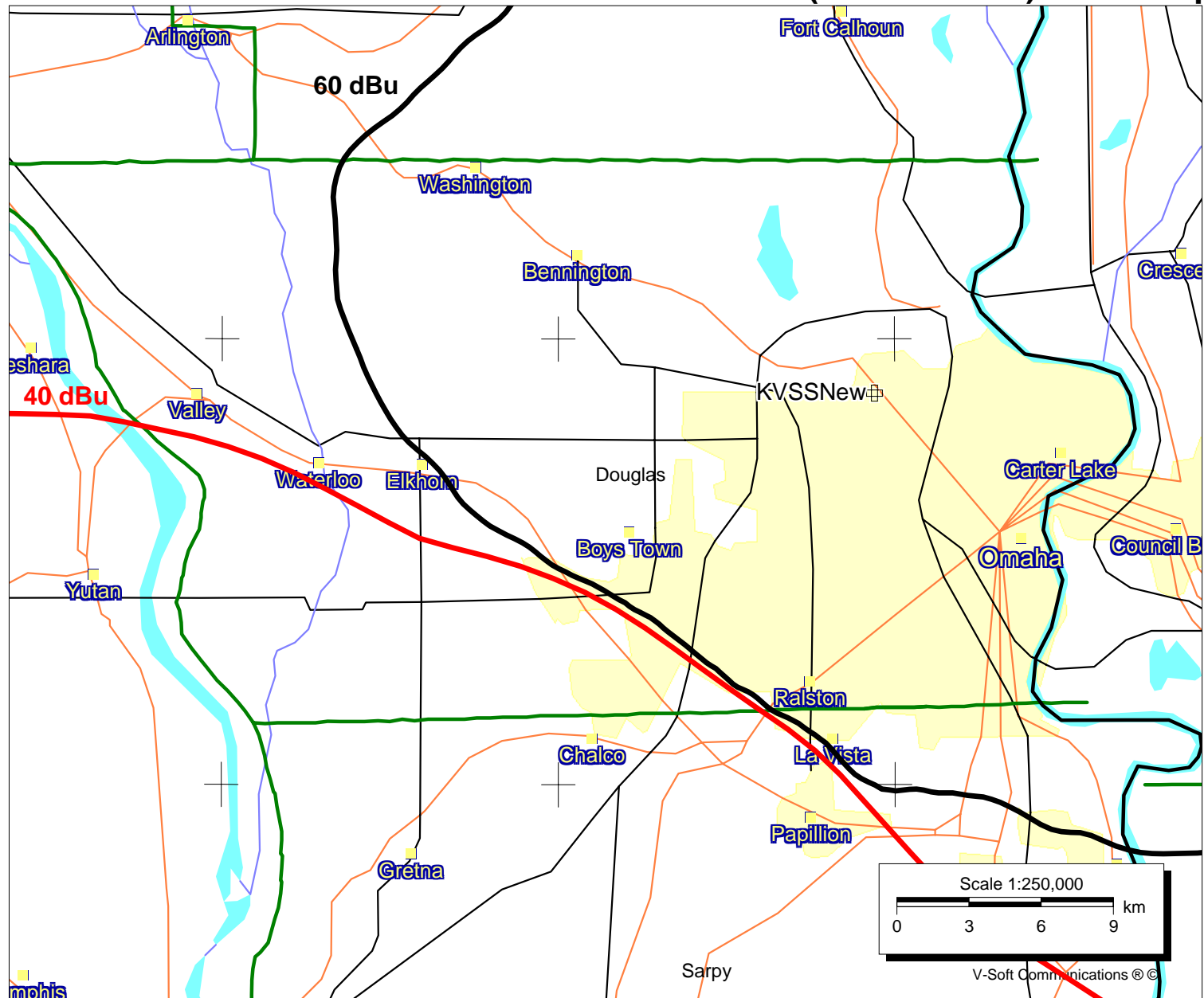
BMPED20020425AAM  
Latitude: 41-18-47 N  
Longitude: 096-00-36 W  
ERP: 1.50 kW  
Channel: 205  
Frequency: 88.9 MHz  
AMSL Height: 485.0 m  
Elevation: 355.74 m  
HAAT: 147.0 m  
Horiz. Pattern: Directional  
Vert. Pattern: No  
Prop Model: FCC Contour

### AP205

BNPED19990927AAP  
Latitude: 40-33-38 N  
Longitude: 096-34-21 W  
ERP: 35.00 kW  
Channel: 205  
Frequency: 88.9 MHz  
AMSL Height: 502.0 m  
Elevation: 435.4 m  
HAAT: 502.0 m  
Horiz. Pattern: Directional  
Vert. Pattern: No

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Doug Vernier Telecommunications Consultants  
09-03-2002 30 Sec. Terrain Data

KVSS.A BMPED20020425AAM  
Channel = 205A  
Max ERP = 1.5 kW  
RCAMSL = 485 M  
N. Lat = 41 18 47  
W. Lng = 96 00 36

AP205 BNPED19990927AAP  
Channel = 205C2  
Max ERP = 35 kW  
RCAMSL = 502 M  
N. Lat = 40 33 38  
W. Lng = 96 34 21

Protected  
60 dBu

Interfering  
40 dBu

Azimuth (degrees)	ERP (kW)	HAAT (m)	Dist (km)	Azimuth (degrees)	ERP (kW)	HAAT (m)	Dist (km)	Actual (dBu)
170.0	000.3758	0136.4	016.9	036.6	004.9219	0085.4	083.8	39.2
171.0	000.3609	0138.6	016.8	036.5	004.9219	0086.8	083.6	39.4
172.0	000.3462	0140.0	016.7	036.3	004.9219	0086.8	083.5	39.4
173.0	000.3319	0141.3	016.6	036.1	004.9219	0086.8	083.3	39.4
174.0	000.3179	0143.2	016.5	035.9	004.9219	0086.8	083.2	39.5
175.0	000.3041	0145.9	016.5	035.8	004.9219	0086.8	083.0	39.5
176.0	000.2907	0149.1	016.5	035.6	004.9219	0086.8	082.8	39.6
177.0	000.2776	0152.5	016.5	035.5	004.9219	0088.5	082.6	39.7
178.0	000.2647	0155.2	016.5	035.3	004.9219	0088.5	082.5	39.7
179.0	000.2522	0157.9	016.4	035.1	004.9219	0088.5	082.4	39.8
180.0	000.2400	0158.9	016.3	034.9	004.9219	0088.5	082.3	39.8
181.0	000.2329	0159.1	016.1	034.7	004.9219	0088.5	082.3	39.8
182.0	000.2258	0159.2	016.0	034.5	004.9219	0090.3	082.2	39.9
183.0	000.2189	0158.7	015.9	034.2	004.9219	0090.3	082.2	39.9
184.0	000.2121	0157.2	015.6	034.0	004.9219	0090.3	082.3	39.9
185.0	000.2054	0155.1	015.4	033.7	004.9219	0090.3	082.4	39.9
186.0	000.1987	0153.2	015.1	033.5	004.9219	0091.7	082.4	39.9
187.0	000.1922	0151.2	014.9	033.3	004.9219	0091.7	082.5	39.9
188.0	000.1859	0149.9	014.7	033.0	004.9219	0091.7	082.6	39.9
189.0	000.1796	0149.8	014.5	032.8	004.9219	0091.7	082.6	39.9
190.0	000.1734	0149.8	014.4	032.6	004.9219	0091.7	082.7	39.8
191.0	000.1704	0149.2	014.3	032.5	004.9219	0092.5	082.6	39.9
192.0	000.1673	0148.2	014.2	032.3	004.9219	0092.5	082.7	39.9
193.0	000.1643	0147.3	014.1	032.1	004.9219	0092.5	082.7	39.9
194.0	000.1614	0147.3	014.0	031.9	004.9219	0092.5	082.7	39.9
195.0	000.1584	0147.6	014.0	031.7	004.9219	0092.5	082.7	39.9
196.0	000.1555	0148.2	013.9	031.6	004.9219	0092.5	082.6	39.9
197.0	000.1526	0148.8	013.9	031.4	004.9219	0092.9	082.6	39.9
198.0	000.1498	0149.1	013.8	031.2	004.9219	0092.9	082.6	39.9
199.0	000.1470	0148.8	013.8	031.1	004.9219	0092.9	082.6	39.9
200.0	000.1442	0148.2	013.7	030.9	004.9219	0092.9	082.6	39.9
201.0	000.1422	0147.4	013.6	030.7	004.9219	0092.9	082.7	39.9
202.0	000.1402	0146.9	013.5	030.5	004.9219	0092.9	082.7	39.9
203.0	000.1383	0147.1	013.5	030.4	004.9219	0093.4	082.7	39.9
204.0	000.1363	0148.1	013.5	030.2	004.9219	0093.4	082.7	39.9
205.0	000.1344	0149.1	013.5	030.1	004.9219	0093.4	082.7	39.9

Azimuth (degrees)	ERP (kW)	HAAT (m)	Dist (km)	Azimuth (degrees)	ERP (kW)	HAAT (m)	Dist (km)	Actual (dBu)
206.0	000.1325	0149.3	013.4	029.9	004.9219	0093.4	082.7	39.9
207.0	000.1306	0148.9	013.4	029.7	004.9219	0093.4	082.7	39.9
208.0	000.1287	0148.6	013.3	029.6	004.9219	0093.4	082.8	39.9
209.0	000.1269	0148.5	013.2	029.4	004.9219	0094.3	082.8	39.9
210.0	000.1250	0148.5	013.2	029.2	004.9219	0094.3	082.9	39.9
211.0	000.1250	0148.4	013.2	029.1	004.9219	0094.3	082.9	39.9
212.0	000.1250	0148.1	013.2	028.9	004.9219	0094.3	082.9	39.9
213.0	000.1250	0147.6	013.2	028.8	004.9219	0094.3	082.9	39.9
214.0	000.1250	0147.1	013.1	028.6	004.9219	0094.3	083.0	39.9
215.0	000.1250	0146.7	013.1	028.5	004.9219	0095.3	083.0	39.9
216.0	000.1250	0146.3	013.1	028.3	004.9219	0095.3	083.1	39.9
217.0	000.1250	0146.0	013.1	028.2	004.9219	0095.3	083.1	39.9
218.0	000.1250	0146.0	013.1	028.0	004.9219	0095.3	083.2	39.9
219.0	000.1250	0146.2	013.1	027.8	004.9219	0095.3	083.2	39.9
220.0	000.1250	0146.1	013.1	027.7	004.9219	0095.3	083.2	39.9
221.0	000.1269	0145.5	013.1	027.5	004.9219	0095.3	083.3	39.9
222.0	000.1287	0144.6	013.1	027.4	004.9219	0096.4	083.3	39.9
223.0	000.1306	0143.7	013.1	027.2	004.9219	0096.4	083.4	39.9
224.0	000.1325	0143.2	013.1	027.1	004.9219	0096.4	083.4	39.9
225.0	000.1344	0143.1	013.2	026.9	004.9219	0096.4	083.5	39.9
226.0	000.1363	0143.5	013.2	026.8	004.9219	0096.4	083.5	39.9
227.0	000.1383	0144.3	013.3	026.6	004.9219	0096.4	083.5	39.9
228.0	000.1402	0145.2	013.4	026.4	004.9219	0097.3	083.5	39.9
229.0	000.1422	0145.6	013.5	026.2	004.9219	0097.3	083.5	39.9
230.0	000.1442	0145.5	013.5	026.1	004.9219	0097.3	083.5	39.9
231.0	000.1507	0144.6	013.6	025.9	004.9219	0097.3	083.5	39.9
232.0	000.1575	0143.4	013.7	025.7	004.9219	0097.3	083.6	39.9
233.0	000.1643	0142.3	013.8	025.6	004.9219	0097.3	083.6	39.9
234.0	000.1714	0141.5	013.9	025.4	004.9219	0097.7	083.6	39.9
235.0	000.1785	0140.9	014.0	025.2	004.9219	0097.7	083.6	39.9
236.0	000.1859	0140.6	014.1	025.0	004.9219	0097.7	083.6	39.9
237.0	000.1933	0140.8	014.3	024.8	004.9219	0097.7	083.6	39.9
238.0	000.2009	0141.4	014.5	024.6	004.9219	0097.7	083.6	39.9
239.0	000.2087	0142.0	014.7	024.4	004.9219	0097.6	083.6	39.9
240.0	000.2166	0142.1	014.8	024.2	004.9219	0097.6	083.6	39.9
241.0	000.2280	0141.9	015.0	024.0	004.9219	0097.6	083.6	39.9
242.0	000.2397	0141.2	015.2	023.8	004.9219	0097.6	083.7	39.9
243.0	000.2516	0140.1	015.3	023.6	004.9219	0097.6	083.7	39.8
244.0	000.2639	0138.9	015.4	023.4	004.9219	0097.1	083.8	39.8
245.0	000.2764	0137.7	015.5	023.2	004.9219	0097.1	083.9	39.8
246.0	000.2893	0137.0	015.7	023.0	004.9219	0097.1	084.0	39.7
247.0	000.3024	0136.8	015.9	022.8	004.9219	0097.1	084.0	39.7
248.0	000.3158	0137.3	016.1	022.5	004.9219	0097.1	084.1	39.7
249.0	000.3296	0138.2	016.4	022.3	004.9219	0096.1	084.1	39.7
250.0	000.3436	0139.0	016.6	022.0	004.9219	0096.1	084.1	39.7
251.0	000.3616	0139.3	016.9	021.7	004.9219	0096.1	084.2	39.6
252.0	000.3801	0139.0	017.1	021.5	004.9219	0095.0	084.2	39.6
253.0	000.3990	0138.5	017.3	021.3	004.9219	0095.0	084.4	39.5
254.0	000.4184	0138.1	017.5	021.0	004.9219	0095.0	084.5	39.5
255.0	000.4383	0137.7	017.7	020.8	004.9219	0095.0	084.6	39.5
256.0	000.4586	0136.7	017.8	020.6	004.9219	0095.0	084.8	39.4