

Technical Exhibit Form 301
Minor Modification of Construction Permit BNPH-20091016ADW
New (FM) CHANNEL 298 A
FACILITY ID 183342
WAPANUCKA, OKLAHOMA
KEYSTONE BROADCASTING CORPORATION

Purpose of Application

Keystone Broadcasting Corporation, ("Keystone") proposes with this instant application to modify this construction permit to specify an existing tower for the facility. The existing tower is located at N 34° 25' 08" W 96° 11' 24". There is one user at present on the existing tower, commonly owned KHKC-FM Facility ID 3652, Atoka, OK. The proposed facility will operate with 1.85 kW horizontal and vertical at 130m HAAT.

Spacing Requirements

The existing tower antenna site specified meets all spacing requirements of 73.207, with the exception of KPLT-FM, Facility ID 35484, Paris, TX. This proposal provides contour protection to KPLT as a maximum C2 under 73.215. At the power and height specified, the 60 dBu 50-50 protected contours of neither facility are overlapped by the 54 dBu 50-10 interference contour of the other facility. See the contour exhibit in the following pages that was generated by a computer program, V-soft Probe 4. The 03 second NED terrain database was used to determine all contours. Attached is a distance to contour file of these contours of the Keystone proposed facility 60 dBu 50-50 and the KPLT 54 dBu 50-10 contour.

Community Coverage

The standard 50-50 method of predicting coverage does not demonstrate 70 dBu coverage to the community of Wapanucka. The entire community is encompassed by the 60 dBu 50-50 protected contour. Keystone believes that a supplemental showing and alternate method of coverage prediction is appropriate to demonstrate coverage to the community of license and compliance with 73.315. A Longley-Rice propagation model was utilized using the V-soft Probe 4 computer program and 03 second terrain data. The bearing toward Wapanucka from the proposed location is an arc from 250 to 260 degrees true. The average increase of the 70 dBu Longley-Rice predicted contour over the FCC 70 dBu 50-50 method is 85%. This increase is over 30% and that alone justifies the utilization of a supplemental showing to demonstrate coverage of the community and obviates the need for any further demonstration of terrain variation or delta h study¹.

¹FCC 08-139, May 28,2008 and DA 10-1760, September 16 2010

A tabulation of the comparison of coverage along these radials is as follows:

Bearing (deg.)	70 dBu 50-50 Distance (k)	70 dBu Calculated L- R (k)	Increase (%)	HAAT (m)
250	13.72	24.95	81.85	133.1
255	13.66	24.0	75.69	131.9
260	13.63	27.1	98.8	131.3

The supplemental showing demonstrates 100% coverage of the population and area of the community of license.

Environmental

Keystone proposes adding an antenna and transmission line to an existing tower. No other alteration to the tower or site will take place as a result of a grant of this application. The site was evaluated the OET FM Model Program. The ERI 3 bay full wave spaced rototiller type antenna will produce a maximum power density level at 2 meters above ground level of .8035 microwatts/cm². This level occurs at 64 meters from the base of the tower and is .4% of the maximum permissible level for general population, uncontrolled exposure level. As this is far less than 5% of the general population level, this facility is excluded as a contributor.

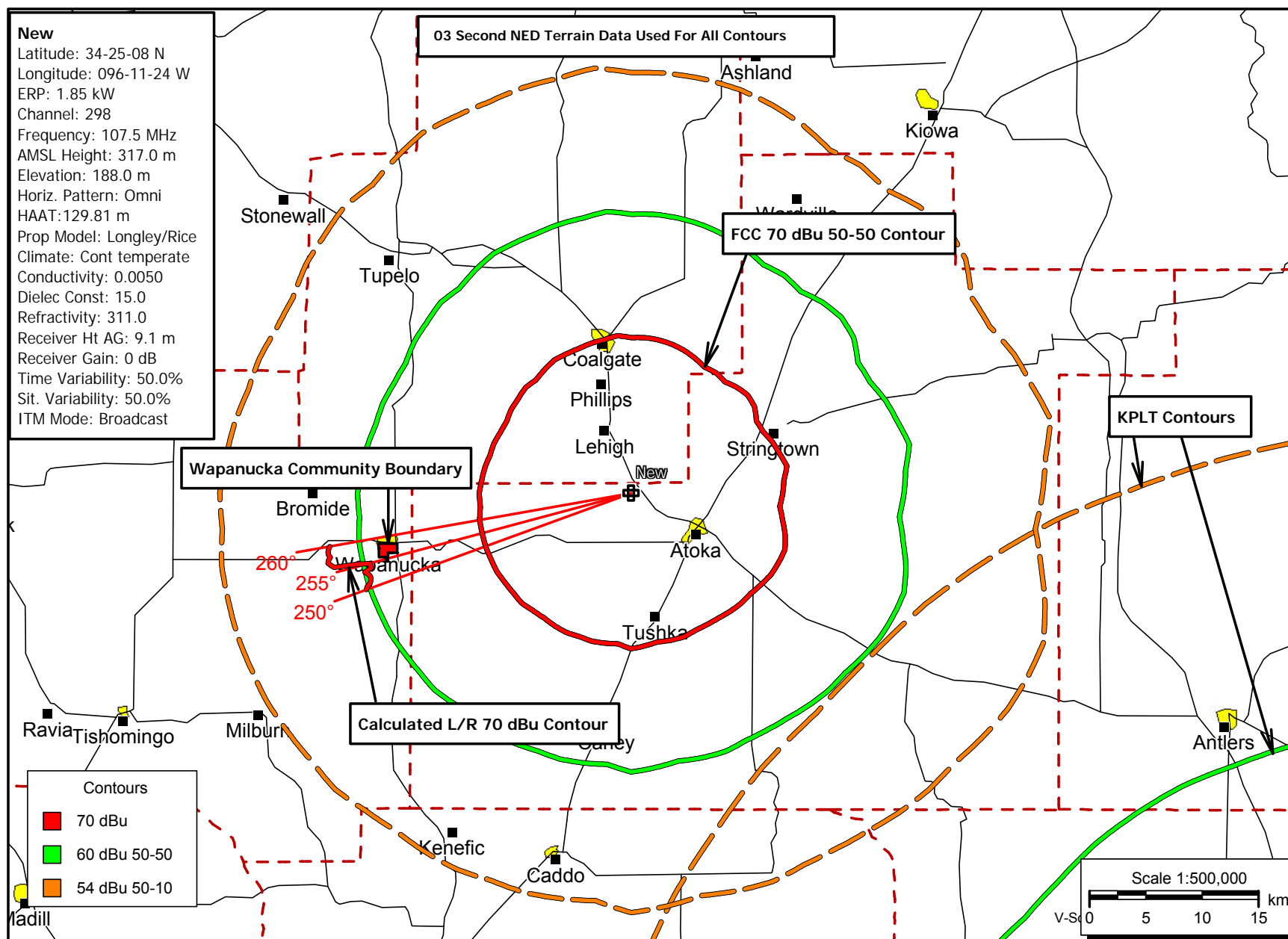
73.207 Spacings

ComStudy 2.2 search of channel 298 (107.5 MHz Class A) at 34-25-08.0 N, 96-11-24.0 W.

CALL	CITY	ST CHN CL	DIST	SEP	BRNG	CLEARANCE
NEW	WAPANUCKA	OK 298 A	7.22	115.00	244.4	-107.8 1
KPLT-FM	PARIS	TX 299 C2	103.19	106.00	136.0	-2.8 2
KRXO	OKLAHOMA CITY	OK 299 C	173.24	165.00	317.5	8.2
KQDR	SAVOY	TX 297 A	81.19	72.00	194.0	9.2
KOMS	POTEAU	OK 297 C	176.92	165.00	69.4	11.9
KMVK	FORT WORTH	TX 298 C1	215.80	200.00	199.9	15.8
KMVK	FORT WORTH	TX 298 C1	215.83	200.00	199.6	15.8

1 Facility studied

2 73.215 contour protection specified with respect to this facility



Distance to Contour Report

Type of contour: FCC
Location Variability: 50.0 %
Time Variability: 50.0 %
of Radials Calculated: 72
FCC Matching HAAT Calculation Used
Field Strength: 60.00 dBuV/m

Primary Terrain: NED 3 Second US Terrain
Secondary Terrain: NED 30 Meter Terrain

----- Transmitter Information:

Call Letters: New
File Number: n/a
Latitude: 34-25-08 N
Longitude: 096-11-24 W
ERP: 1.85 kW
Channel: 298
Frequency: 107.5 MHz
AMSL Height: 317.0 m
Elevation: 188.0 m
Horiz. Antenna Pattern: Omni
Vert. Elevation Pattern: No

Azimuth (deg)	Distance (km)	HAAT (m)
-----	-----	-----
0.0	24.72	134.3
5.0	24.79	135.2
10.0	24.73	134.5
15.0	24.58	132.6
20.0	24.30	129.0
25.0	23.90	123.9
30.0	23.39	117.7
35.0	23.57	119.9
40.0	23.34	117.2
45.0	23.92	124.3
50.0	24.27	128.6
55.0	24.03	125.7
60.0	23.17	115.2
65.0	23.33	117.0
70.0	23.98	125.0
75.0	24.42	130.6
80.0	25.00	138.0
85.0	24.38	130.1
90.0	24.15	127.1
95.0	23.83	123.1
100.0	24.44	130.9
105.0	25.18	140.2
110.0	25.69	146.9
115.0	25.60	145.8
120.0	25.45	143.8
125.0	25.10	139.2
130.0	24.72	134.4

135.0	24.68	133.9
140.0	24.47	131.3
145.0	24.24	128.3
150.0	24.15	127.2
155.0	24.12	126.7
160.0	24.33	129.4
165.0	24.23	128.1
170.0	24.06	126.1
175.0	24.37	129.9
180.0	24.67	133.8
185.0	24.09	126.3
190.0	24.23	128.2
195.0	24.35	129.7
200.0	24.26	128.6
205.0	24.41	130.5
210.0	24.35	129.7
215.0	24.23	128.2
220.0	24.35	129.7
225.0	24.62	133.2
230.0	24.52	131.9
235.0	24.57	132.5
240.0	24.67	133.8
245.0	24.61	133.0
250.0	24.61	133.1
255.0	24.52	131.9
260.0	24.48	131.3
265.0	24.15	127.2
270.0	24.23	128.2
275.0	23.97	124.9
280.0	23.75	122.1
285.0	23.43	118.2
290.0	23.39	117.7
295.0	23.15	114.9
300.0	23.07	114.1
305.0	23.45	118.4
310.0	23.60	120.3
315.0	23.88	123.8
320.0	23.69	121.4
325.0	24.10	126.6
330.0	24.47	131.3
335.0	24.46	131.1
340.0	24.49	131.5
345.0	24.67	133.7
350.0	24.75	134.8
355.0	25.04	138.5

Average HAAT for radials shown: 128.8 m

Distance to Contour Report

Type of contour: FCC
Location Variability: 50.0 %
Time Variability: 10.0 %
of Radials Calculated: 72
FCC Matching HAAT Calculation Used
Field Strength: 54.00 dBuV/m

Primary Terrain: NED 3 Second US Terrain
Secondary Terrain: NED 30 Meter Terrain

----- Transmitter Information:

Call Letters: KPLT-FM-Max
File Number: BLH20040317ACP
Latitude: 33-44-55 N
Longitude: 095-24-53 W
ERP: 50.00 kW
Channel: 299
Frequency: 107.7 MHz
AMSL Height: 296.26 m
Elevation: 160.0 m
Horiz. Antenna Pattern: Omni
Vert. Elevation Pattern: No

Azimuth (deg)	Distance (km)	HAAT (m)
-----	-----	-----
0.0	79.90	162.4
5.0	80.36	165.7
10.0	80.29	165.2
15.0	80.05	163.5
20.0	79.80	161.7
25.0	79.63	160.5
30.0	79.41	158.9
35.0	78.83	154.9
40.0	78.37	151.7
45.0	79.40	158.8
50.0	79.27	157.9
55.0	78.83	154.9
60.0	78.13	150.1
65.0	77.83	148.1
70.0	78.04	149.5
75.0	77.72	147.4
80.0	77.63	146.8
85.0	77.50	145.9
90.0	77.54	146.2
95.0	77.46	145.7
100.0	77.04	143.0
105.0	76.88	141.9
110.0	76.41	138.9
115.0	76.40	138.8
120.0	76.42	139.0
125.0	76.61	140.2
130.0	76.33	138.4

135.0	76.06	136.6
140.0	76.14	137.2
145.0	76.40	138.8
150.0	76.62	140.2
155.0	76.08	136.8
160.0	75.49	133.1
165.0	75.46	132.9
170.0	75.43	132.7
175.0	75.85	135.3
180.0	76.60	140.1
185.0	76.37	138.6
190.0	75.90	135.6
195.0	75.94	135.9
200.0	76.07	136.7
205.0	76.12	137.0
210.0	76.45	139.1
215.0	76.53	139.6
220.0	76.52	139.5
225.0	76.39	138.8
230.0	76.61	140.2
235.0	77.02	142.8
240.0	77.37	145.1
245.0	76.96	142.4
250.0	77.46	145.7
255.0	78.00	149.3
260.0	78.77	154.5
265.0	78.97	155.9
270.0	79.16	157.2
275.0	78.96	155.8
280.0	78.28	151.1
285.0	78.19	150.5
290.0	77.55	146.2
295.0	77.87	148.4
300.0	78.16	150.4
305.0	78.06	149.7
310.0	78.17	150.4
315.0	77.84	148.2
320.0	78.24	150.9
325.0	78.92	155.5
330.0	79.23	157.7
335.0	79.47	159.4
340.0	79.34	158.4
345.0	79.50	159.6
350.0	79.64	160.6
355.0	79.98	163.0

Average HAAT for radials shown: 147.6 m

Distance to Contour Report

Type of contour: FCC
Location Variability: 50.0 %
Time Variability: 50.0 %
of Radials Calculated: 72
FCC Matching HAAT Calculation Used
Field Strength: 70.00 dBuV/m

Primary Terrain: NED 3 Second US Terrain
Secondary Terrain: NED 30 Meter Terrain

----- Transmitter Information:

Call Letters: New
File Number: n/a
Latitude: 34-25-08 N
Longitude: 096-11-24 W
ERP: 1.85 kW
Channel: 298
Frequency: 107.5 MHz
AMSL Height: 317.0 m
Elevation: 188.0 m
Horiz. Antenna Pattern: Omni
Vert. Elevation Pattern: No

Azimuth (deg)	Distance (km)	HAAT (m)
-----	-----	-----
0.0	13.79	134.3
5.0	13.84	135.2
10.0	13.80	134.5
15.0	13.70	132.6
20.0	13.51	129.0
25.0	13.24	123.9
30.0	12.93	117.7
35.0	13.04	119.9
40.0	12.90	117.2
45.0	13.26	124.3
50.0	13.49	128.6
55.0	13.33	125.7
60.0	12.80	115.2
65.0	12.89	117.0
70.0	13.30	125.0
75.0	13.59	130.6
80.0	13.99	138.0
85.0	13.56	130.1
90.0	13.41	127.1
95.0	13.20	123.1
100.0	13.60	130.9
105.0	14.11	140.2
110.0	14.48	146.9
115.0	14.42	145.8
120.0	14.31	143.8
125.0	14.06	139.2
130.0	13.79	134.4

135.0	13.76	133.9
140.0	13.62	131.3
145.0	13.47	128.3
150.0	13.41	127.2
155.0	13.39	126.7
160.0	13.53	129.4
165.0	13.46	128.1
170.0	13.35	126.1
175.0	13.55	129.9
180.0	13.76	133.8
185.0	13.37	126.3
190.0	13.46	128.2
195.0	13.54	129.7
200.0	13.48	128.6
205.0	13.59	130.5
210.0	13.54	129.7
215.0	13.46	128.2
220.0	13.54	129.7
225.0	13.73	133.2
230.0	13.66	131.9
235.0	13.69	132.5
240.0	13.76	133.8
245.0	13.72	133.0
250.0	13.72	133.1
255.0	13.66	131.9
260.0	13.63	131.3
265.0	13.41	127.2
270.0	13.46	128.2
275.0	13.29	124.9
280.0	13.15	122.1
285.0	12.95	118.2
290.0	12.93	117.7
295.0	12.78	114.9
300.0	12.74	114.1
305.0	12.96	118.4
310.0	13.06	120.3
315.0	13.24	123.8
320.0	13.11	121.4
325.0	13.38	126.6
330.0	13.62	131.3
335.0	13.62	131.1
340.0	13.64	131.5
345.0	13.76	133.7
350.0	13.82	134.8
355.0	14.01	138.5

Average HAAT for radials shown: 128.8 m

Distance to Contour Report

Type of contour: Signal Calculated

of Radials Calculated: 360

Using the mean occurrence method at 70.0 dBu

----- Transmitter Information:

Call Letters: New

File Number: n/a

Latitude: 34-25-08 N

Longitude: 096-11-24 W

ERP: 1.85 kW

Channel: 298

Frequency: 107.5 MHz

AMSL Height: 317.0 m

Elevation: 188.0 m

Horiz. Antenna Pattern: Omni

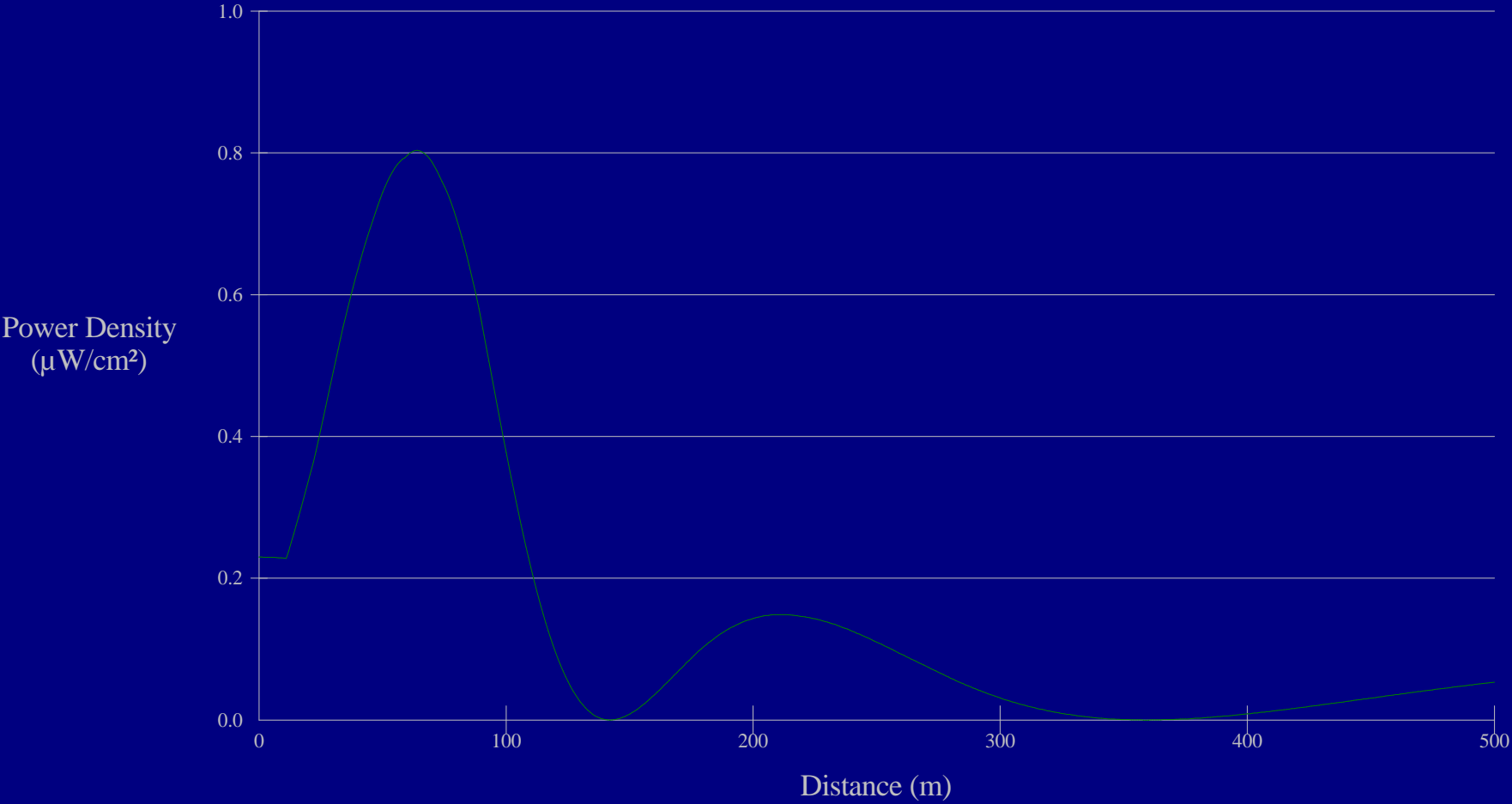
Vert. Elevation Pattern: No

Azimuth (deg)	Distance (km)	HAAT (m)
-----	-----	-----
0.0	26.49	134.3
5.0	26.45	135.2
10.0	26.42	134.5
15.0	26.39	132.6
20.0	26.36	129.0
25.0	26.33	123.9
30.0	26.30	117.7
35.0	26.27	119.9
40.0	26.24	117.2
45.0	26.21	124.3
50.0	26.18	128.6
55.0	26.15	125.7
60.0	26.12	115.2
65.0	26.09	117.0
70.0	26.06	125.0
75.0	26.02	130.6
80.0	25.99	138.0
85.0	25.96	130.1
90.0	25.93	127.1
95.0	25.90	123.1
100.0	25.87	130.9
105.0	25.84	140.2
110.0	25.81	146.9
115.0	25.78	145.8
120.0	25.75	143.8
125.0	25.72	139.2
130.0	25.69	134.4
135.0	25.66	133.9
140.0	25.63	131.3
145.0	25.60	128.3
150.0	25.56	127.2
155.0	25.53	126.7
160.0	25.50	129.4

165.0	25.47	128.1
170.0	25.44	126.1
175.0	25.41	129.9
180.0	25.38	133.8
185.0	25.35	126.3
190.0	25.32	128.2
195.0	25.29	129.7
200.0	25.26	128.6
205.0	25.23	130.5
210.0	25.20	129.7
215.0	25.17	128.2
220.0	25.13	129.7
225.0	25.10	133.2
230.0	25.07	131.9
235.0	25.04	132.5
240.0	25.01	133.8
245.0	24.98	133.0
250.0	24.95	133.1
255.0	24.00	131.9
260.0	27.10	131.3
265.0	27.07	127.2
270.0	27.04	128.2
275.0	27.01	124.9
280.0	26.98	122.1
285.0	26.95	118.2
290.0	26.92	117.7
295.0	26.88	114.9
300.0	26.85	114.1
305.0	26.82	118.4
310.0	26.79	120.3
315.0	26.76	123.8
320.0	26.73	121.4
325.0	26.70	126.6
330.0	26.67	131.3
335.0	26.64	131.1
340.0	26.61	131.5
345.0	26.58	133.7
350.0	26.55	134.8
355.0	26.52	138.5

Average HAAT for radials shown: 128.8 m

Power Density vs Distance



Horizontal ERP (W):	1850	Number of Elements:	3	Antenna Height (m):	129	Max density (uw/cm²):	.8035
Vertical ERP (W):	1850	Element Spacing:	1	Antenna Type:	EPA Type 3 ERI or Jampiro "Rototiller"	Distance (m):	64