

**ENGINEERING STATEMENT PREPARED IN SUPPORT OF
301 APPLICATION FOR MODIFIED STANDARD PATTERN
WWRV 5/10 kW LS DA-2 U
NEW YORK, NEW YORK**

JANUARY 2009

SUMMARY

The following engineering statement has been prepared on behalf of **Radio Vision Cristiana Management**, licensee of standard broadcast station **WWRV**, FCC ID 54874, New York, New York. This application proposes to change WWRV's daytime and nighttime standard patterns slightly to conform to a partial proof of performance, FCC File number BZ-20080902AEL. Implementation of the proposed daytime and nighttime modified standard patterns, in accordance with *Rule Section 73.152*, is believed to comply fully with the allocation standards in *Sections 73.37* and *73.182* of the Rules.

MODIFIED STANDARD PATTERNS

Exhibits 1 and 2 attached, and associated *Figures 1 and 2*, are the daytime and nighttime modified standard patterns. Radiation exceeds the standard pattern value only on the 146 degree major lobe radial. An augmentation, equal to the partial proof performance analyzed inverse field, has been applied to each pattern. It is noted that the latitude for the transmitter site has been adjusted by one second to comport with the recently filed 301 and 302 applications for collocated WNYM(AM), 970 kHz, Hackensack, New Jersey. The array parameters have been modeled based on use of the center tower as the reference tower. The radiation pattern associated with the modified parameters is essentially identical to the radiation pattern associated with the current station license and should not be considered a change in the authorized standard pattern.

ALLOCATION STUDIES

Figure 3 is the daytime co-channel allocation mapping while *Figure 4* depicts the 1st adjacent channel daytime allocation. For stations on 1320 – 1340 kHz, any prohibited overlap occurs across the 141 – 151 degree augmentation and is located entirely over sea water. The central 146 degree augmentation bearing is depicted on both map figures. Map *Figure 5* depicts the 2nd and 3rd adjacent channel daytime allocation employing the proposed modified standard pattern. No prohibited contour overlap was found to or from stations on 1300, 1310, 1350 and 1360 kHz.

Figure 6 depicts the 146 degree central augmentation bearing overlaid on a wide area map. The closest point of land on the island of Bermuda lies at NL: 32° 16' 54", WL: 64° 53' 15" which is 1,257.9 km at a bearing of 136.8 degrees from the **WWRV** site and outside the proposed augmentation. The only nighttime facilities lying within the 141 to 151 degree arc of augmentation are Class B and C facilities, greater than 5,000 km distant and for which **WWRV** does not enter the nighttime allocation. Exhibit III is a tabulation depicting allowable nighttime radiation, versus proposed radiation, to those facilities lying across the augmentation span.

CONCLUSION

The foregoing was prepared on behalf of **Radio Vision Cristiana Management** by Clarence M Beverage of Communications Technologies, Inc. Marlton, New Jersey whose qualifications are a matter of record with the Federal Communications Commission. The undersigned certifies, under penalty of perjury, that the statements herein are true and correct of his own knowledge, except such statements made on information and belief, and as to these statements he believes them to be true and correct.

By /S/ Clarence M. Beverage

for Communications Technologies, Inc.
Marlton, New Jersey
January 8, 2009

EXHIBIT I
Page 1 of 2

RADIO VISION CRISTIANA MANAGEMENT
AM BROADCAST STATION WWRV
NEW YORK, NEW YORK

1330 kHz 5 kW, 10 kW-LS U DA-2

DAYTIME MODIFIED STANDARD RADIATION PATTERN DATA
Radiation Values at One Kilometer)

TOWER Number	Field Ratio	Phase (deg)	Spacing (deg)	Bearing (deg)	Height (deg)
-----	-----	-----	-----	-----	-----
1	0.971	+138.0	123.2	326.0	122.0
2	1.000	+0.0	0.0	0.0	122.0
3	0.680	-138.0	123.2	146.0	122.0

Input Power (kW)	Loop Loss (ohms)	Theoretical RMS (mV/m)	Q RSS (mV/m)	Q Factor (mV/m)	Modified RMS (mV/m)
-----	-----	-----	-----	-----	-----
10.0	1.00	1104.6	1206.4	31.6	1167.4

---PATTERN AUGMENTATIONS---		
Central Bearing (deg)	Span Angle (deg)	Augmented Field (mV/m)
-----	-----	-----
146.0	10.0	2386.5

EXHIBIT I**Page 2 of 2****DAYTIME MODIFIED STANDARD RADIATION PATTERN DATA
WWRV, NEW YORK, NEW YORK****HORIZONTAL PLANE RADIATION
(at One Kilometer)**

Azimuth (deg)	Field (mV/m)	Azimuth (deg)	Field (mV/m)	Azimuth (deg)	Field (mV/m)	Azimuth (deg)	Field (mV/m)
0	254.	90	1317.	180	1915.	270	402.
5	195.	95	1496.	185	1822.	275	315.
10	207.	100	1650.	190	1705.	280	231.
15	279.	105	1778.	195	1561.	285	190.
20	368.	110	1881.	200	1392.	290	225.
25	448.	115	1960.	205	1199.	295	306.
30	506.	120	2019.	210	987.	300	397.
35	532.	125	2061.	215	765.	305	481.
40	521.	130	2089.	220	542.	310	552.
45	469.	135	2107.	225	338.	315	606.
50	381.	140	2118.	230	201.	320	640.
55	268.	145	2362.	235	226.	325	655.
60	191.	150	2147.	240	337.	330	648.
65	270.	155	2112.	245	438.	335	622.
70	457.	160	2098.	250	505.	340	576.
75	675.	165	2073.	255	532.	345	511.
80	899.	170	2037.	260	520.	350	432.
85	1116.	175	1986.	265	474.	355	342.

**HORIZONTAL PLANE RADIATION BEFORE AUGMENTATION
(at One Kilometer)**

Azimuth (deg)	Field (mV/m)	Azimuth (deg)	Field (mV/m)
145	2122.	150	2120.

EXHIBIT II

Page 1 of 6

**RADIO VISION CRISTIANA MANAGEMENT
AM BROADCAST STATION WWRV
NEW YORK, NEW YORK**

1330 kHz 5 kW, 10 kW-LS U DA-2

**NIGHTTIME MODIFIED STANDARD RADIATION PATTERN DATA
(Radiation Values at One Kilometer)**

TOWER Number	Field Ratio	Phase (deg)	Spacing (deg)	Bearing (deg)	Height (deg)
-----	-----	-----	-----	-----	-----
1	0.971	+138.0	123.2	326.0	122.0
2	1.000	+0.0	0.0	0.0	122.0
3	0.680	-138.0	123.2	146.0	122.0

Input Power (kW)	Loop Loss (ohms)	Theoretical RMS (mV/m)	Q RSS (mV/m)	Q Factor (mV/m)	Modified RMS (mV/m)
-----	-----	-----	-----	-----	-----
5.00	1.00	781.1	853.1	22.4	825.5

---PATTERN AUGMENTATIONS---		
Central Bearing (deg)	Span Angle (deg)	Augmented Field (mV/m)
-----	-----	-----
146.0	10.0	1687.5

EXHIBIT II**Page 2 of 6****NIGHTTIME MODIFIED STANDARD RADIATION PATTERN DATA
WWRV, NEW YORK, NEW YORK****MODIFIED STANDARD RADIATION
(at One Kilometer)**

Azimuth Angle (deg)	-----Elevation Angle in Degrees-----						
	0 (mV/m)	5 (mV/m)	10 (mV/m)	15 (mV/m)	20 (mV/m)	25 (mV/m)	30 (mV/m)
0	180.	175.	161.	142.	123.	112.	113.
5	138.	136.	131.	126.	125.	130.	139.
10	146.	147.	149.	153.	159.	167.	175.
15	197.	198.	201.	204.	208.	211.	212.
20	260.	260.	260.	259.	257.	253.	246.
25	317.	316.	312.	307.	298.	287.	272.
30	358.	356.	350.	339.	325.	308.	286.
35	376.	373.	365.	352.	334.	312.	287.
40	368.	365.	356.	342.	322.	299.	272.
45	332.	329.	320.	307.	288.	267.	242.
50	269.	267.	260.	249.	234.	217.	197.
55	190.	188.	184.	177.	168.	156.	144.
60	135.	134.	131.	126.	120.	113.	105.
65	191.	189.	183.	172.	159.	144.	128.
70	323.	319.	307.	289.	264.	236.	206.
75	477.	471.	454.	426.	390.	348.	303.
80	636.	628.	605.	569.	521.	466.	405.
85	789.	780.	752.	708.	650.	581.	507.
90	931.	920.	888.	837.	770.	691.	604.
95	1058.	1046.	1011.	954.	879.	791.	693.
100	1167.	1154.	1116.	1055.	975.	879.	773.
105	1257.	1244.	1204.	1141.	1056.	955.	842.
110	1330.	1316.	1276.	1210.	1123.	1018.	901.
115	1386.	1372.	1331.	1265.	1177.	1070.	949.
120	1427.	1414.	1373.	1307.	1218.	1110.	988.
125	1457.	1443.	1403.	1337.	1249.	1141.	1018.
130	1477.	1464.	1424.	1359.	1271.	1163.	1040.
135	1490.	1477.	1437.	1373.	1286.	1178.	1055.
140	1497.	1484.	1445.	1381.	1294.	1187.	1065.
145	1670.	1656.	1614.	1545.	1452.	1338.	1208.
150	1518.	1505.	1465.	1401.	1313.	1206.	1082.
155	1494.	1480.	1441.	1377.	1290.	1183.	1060.
160	1483.	1470.	1430.	1365.	1277.	1170.	1047.
165	1466.	1453.	1412.	1347.	1259.	1151.	1028.
170	1441.	1427.	1386.	1320.	1231.	1124.	1001.
175	1404.	1390.	1349.	1283.	1195.	1087.	966.

EXHIBIT II**Page 3 of 6****NIGHTTIME MODIFIED STANDARD RADIATION PATTERN DATA
WWRV, NEW YORK, NEW YORK****MODIFIED STANDARD RADIATION
(at One Kilometer)**

Azimuth Angle (deg)	-----Elevation Angle in Degrees-----					
	35 (mV/m)	40 (mV/m)	45 (mV/m)	50 (mV/m)	55 (mV/m)	60 (mV/m)
0	123.	135.	144.	145.	139.	124.
5	150.	158.	161.	156.	144.	127.
10	180.	181.	177.	166.	149.	128.
15	210.	203.	191.	174.	152.	128.
20	235.	220.	201.	179.	153.	127.
25	253.	231.	207.	180.	152.	123.
30	262.	235.	206.	177.	147.	118.
35	259.	229.	199.	168.	139.	110.
40	244.	214.	184.	155.	127.	101.
45	216.	189.	162.	136.	111.	88.9
50	176.	154.	133.	113.	93.4	75.5
55	130.	116.	102.	87.9	74.6	61.9
60	95.7	86.5	77.3	68.1	59.1	50.3
65	111.	95.2	80.3	67.1	55.6	45.8
70	174.	144.	116.	90.7	69.4	52.2
75	256.	210.	167.	128.	94.9	67.7
80	342.	281.	223.	171.	125.	87.9
85	429.	353.	281.	215.	158.	110.
90	513.	423.	337.	259.	191.	133.
95	591.	489.	391.	301.	222.	155.
100	661.	549.	441.	341.	252.	177.
105	723.	602.	486.	377.	280.	196.
110	776.	649.	525.	409.	305.	215.
115	821.	689.	559.	437.	327.	231.
120	857.	721.	588.	461.	346.	245.
125	885.	747.	611.	481.	361.	256.
130	906.	767.	629.	496.	373.	266.
135	921.	781.	641.	507.	382.	272.
140	931.	790.	649.	513.	388.	277.
145	1065.	916.	768.	624.	492.	374.
150	947.	806.	664.	528.	401.	289.
155	926.	786.	645.	510.	385.	274.
160	913.	774.	634.	501.	377.	269.
165	894.	756.	619.	487.	366.	260.
170	869.	733.	598.	469.	352.	250.
175	836.	703.	571.	447.	335.	237.

EXHIBIT II**Page 4 of 6****NIGHTTIME MODIFIED STANDARD RADIATION PATTERN DATA
WWRV, NEW YORK, NEW YORK****MODIFIED STANDARD RADIATION
(at One Kilometer)**

Azimuth Angle (deg)	-----Elevation Angle in Degrees-----						
	0 (mV/m)	5 (mV/m)	10 (mV/m)	15 (mV/m)	20 (mV/m)	25 (mV/m)	30 (mV/m)
180	1354.	1340.	1300.	1234.	1146.	1040.	922.
185	1289.	1275.	1235.	1170.	1085.	982.	867.
190	1205.	1192.	1154.	1091.	1009.	911.	802.
195	1104.	1091.	1055.	996.	919.	827.	726.
200	984.	973.	939.	886.	815.	732.	640.
205	848.	838.	808.	761.	699.	626.	546.
210	698.	690.	665.	625.	573.	513.	446.
215	541.	534.	515.	483.	443.	395.	343.
220	383.	379.	365.	343.	314.	280.	243.
225	239.	236.	228.	214.	197.	177.	155.
230	142.	141.	137.	131.	124.	115.	105.
235	160.	159.	156.	150.	143.	134.	124.
240	238.	236.	230.	221.	208.	193.	176.
245	310.	307.	299.	286.	269.	248.	225.
250	357.	354.	345.	331.	311.	288.	262.
255	376.	373.	365.	351.	332.	309.	283.
260	368.	366.	359.	347.	331.	312.	288.
265	335.	334.	330.	322.	311.	297.	279.
270	284.	284.	282.	280.	275.	268.	257.
275	222.	223.	224.	227.	228.	228.	226.
280	164.	165.	167.	172.	178.	185.	190.
285	135.	134.	132.	132.	136.	143.	153.
290	159.	155.	145.	131.	120.	116.	122.
295	216.	210.	193.	167.	138.	115.	105.
300	281.	273.	251.	217.	177.	136.	106.
305	340.	332.	306.	267.	219.	167.	121.
310	390.	381.	353.	310.	256.	197.	141.
315	428.	418.	389.	343.	285.	221.	158.
320	453.	442.	412.	364.	304.	237.	170.
325	463.	452.	421.	373.	312.	243.	175.
330	458.	448.	417.	369.	308.	240.	173.
335	440.	429.	399.	353.	294.	228.	164.
340	407.	397.	369.	324.	268.	207.	148.
345	362.	353.	326.	285.	234.	179.	129.
350	305.	297.	274.	238.	194.	148.	111.
355	242.	235.	216.	187.	153.	121.	103.

EXHIBIT II
Page 5 of 6

NIGHTTIME MODIFIED STANDARD RADIATION PATTERN DATA
WWRV, NEW YORK, NEW YORK

MODIFIED STANDARD RADIATION
(at One Kilometer)

Azimuth Angle (deg)	-----Elevation Angle in Degrees-----					
	35 (mV/m)	40 (mV/m)	45 (mV/m)	50 (mV/m)	55 (mV/m)	60 (mV/m)
180	795.	666.	540.	421.	314.	221.
185	745.	622.	502.	390.	290.	204.
190	687.	571.	459.	356.	264.	185.
195	620.	513.	412.	318.	234.	164.
200	545.	450.	359.	276.	203.	142.
205	463.	381.	304.	233.	171.	119.
210	377.	310.	246.	188.	138.	96.7
215	290.	238.	189.	145.	107.	75.4
220	206.	169.	135.	105.	78.7	57.6
225	133.	111.	91.6	74.0	59.2	47.0
230	94.3	84.0	74.0	64.6	55.7	47.3
235	113.	102.	90.2	78.8	67.6	56.8
240	158.	139.	121.	103.	85.8	70.0
245	201.	176.	151.	127.	104.	83.7
250	234.	205.	176.	148.	121.	96.2
255	254.	224.	194.	163.	134.	107.
260	262.	234.	204.	174.	144.	115.
265	258.	234.	207.	179.	150.	121.
270	243.	225.	204.	180.	153.	125.
275	220.	210.	195.	176.	153.	128.
280	192.	190.	182.	169.	151.	128.
285	162.	167.	167.	160.	146.	127.
290	133.	144.	151.	150.	141.	125.
295	110.	123.	134.	139.	135.	123.
300	96.4	105.	119.	128.	129.	120.
305	94.0	92.9	107.	119.	123.	117.
310	99.6	86.3	96.9	111.	118.	115.
315	108.	84.0	90.3	105.	114.	113.
320	114.	84.0	86.4	102.	112.	112.
325	118.	84.3	84.9	100.	111.	111.
330	116.	84.2	85.6	101.	111.	111.
335	111.	83.9	88.4	104.	113.	112.
340	103.	85.0	93.9	109.	117.	114.
345	95.6	89.6	102.	116.	121.	116.
350	94.2	99.5	114.	124.	127.	119.
355	103.	115.	128.	135.	133.	122.

EXHIBIT II
Page 6 of 6

NIGHTTIME MODIFIED STANDARD RADIATION PATTERN DATA
WWRV, NEW YORK, NEW YORK

STANDARD RADIATION BEFORE AUGMENTATION
(at One Kilometer)

Azimuth Angle (deg)	-----Elevation Angle in Degrees-----						
	0	5	10	15	20	25	30
	(mV/m)	(mV/m)	(mV/m)	(mV/m)	(mV/m)	(mV/m)	(mV/m)
-----	-----	-----	-----	-----	-----	-----	-----
145	1500.	1487.	1448.	1384.	1298.	1191.	1068.
150	1499.	1486.	1447.	1383.	1296.	1190.	1067.

Azimuth Angle (deg)	-----Elevation Angle in Degrees-----					
	35	40	45	50	55	60
	(mV/m)	(mV/m)	(mV/m)	(mV/m)	(mV/m)	(mV/m)
-----	-----	-----	-----	-----	-----	-----
145	934.	794.	653.	516.	390.	278.
150	933.	792.	651.	515.	389.	278.

AM Allocation Study

[illegible]

Call sign: WWRV
Frequency: 1330 kHz
Power: 10.000 kW
ERSS: 1206.44 mV/m at 1 km
Q factor at zero degrees:
31.60 mV/m at 1 km
Theoretical pattern RMS:
1104.60 mV/m at 1 km
Standard pattern RMS:
1160.30 mV/m at 1 km
Modified pattern RMS:
1167.43 mV/m at 1 km

Coordinates:
N40°54'40.00" W74°01'42.00"

No. of augmentations: 1

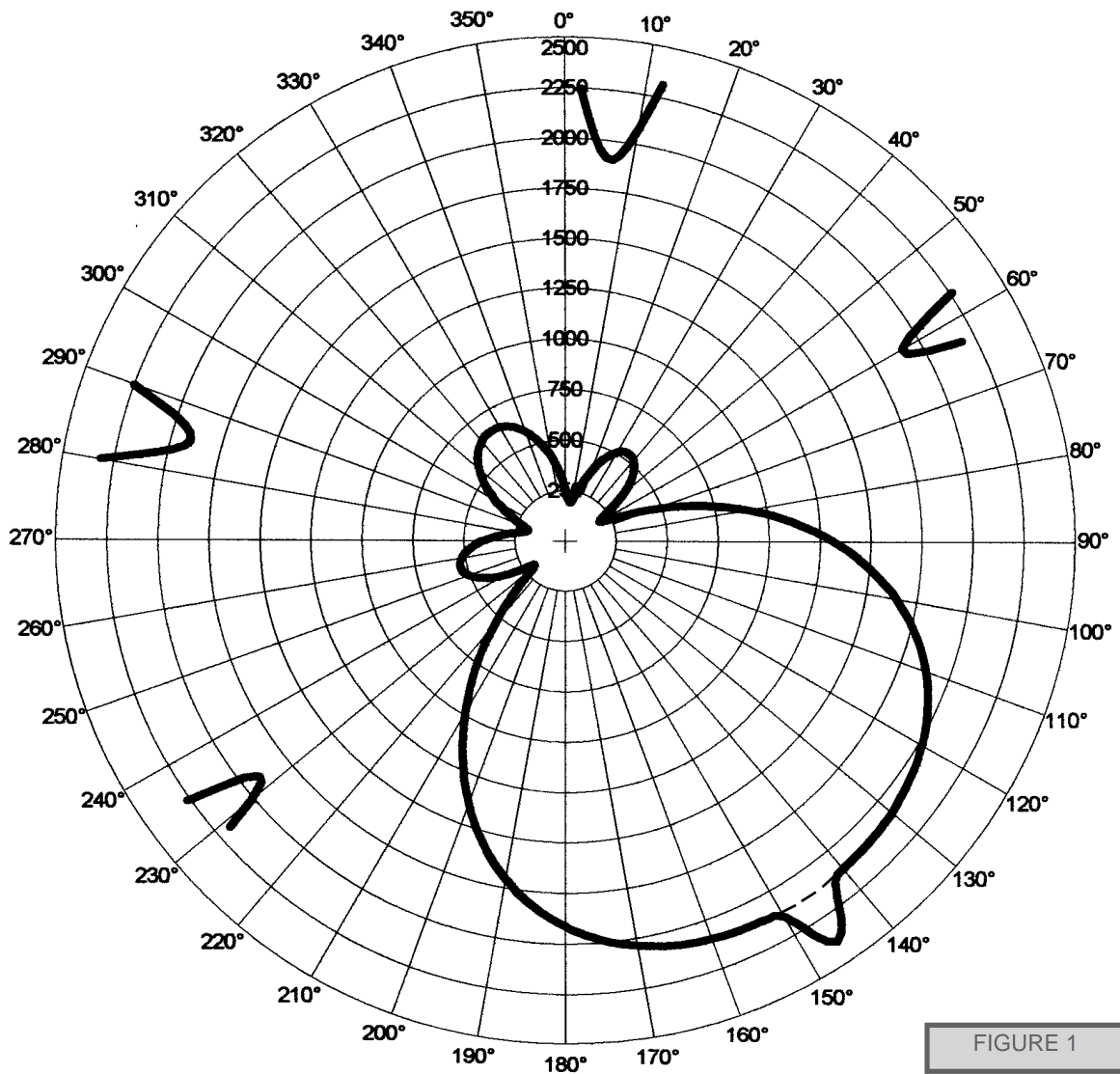
TOWER PARAMETERS

##	Field Ratio	Phase (deg.)	Spacing (deg.)	Bearing (deg.)	Tower Ref. Switch	Elec. Height (deg.)	Length Twr. A (deg.)	Length Twr. B (deg.)	Length Twr. C (deg.)	Length Twr. D (deg.)
1	0.971	138.0	123.2	326.0	0	122.0	0.0	0.0	0.0	0.0
2	1.000	0.0	0.0	0.0	0	122.0	0.0	0.0	0.0	0.0
3	0.680	-138.0	123.2	146.0	0	122.0	0.0	0.0	0.0	0.0

---PATTERN AUGMENTATIONS---
Central Span Augmented
Bearing Angle Field
(deg) (deg) (mV/m)

146.0 10.0 2386.5

HORIZONTAL PLANE PATTERN



Field in mV/m

outer curve: x10 scale

DAYTIME MODIFIED STANDARD RADIATION PATTERN DATA
Radiation Values at One Kilometer)

Call sign: WWRV
 Frequency: 1330 kHz
 Power: 5.000 kW
 ERSS: 853.07 mV/m at 1 km
 Q factor at zero degrees:
 22.40 mV/m at 1 km
 Theoretical pattern RMS:
 781.06 mV/m at 1 km
 Standard pattern RMS:
 820.45 mV/m at 1 km
 Modified pattern RMS:
 825.49 mV/m at 1 km

Coordinates:
 N40°54'40.00" W74°01'42.00"

No. of augmentations: 1

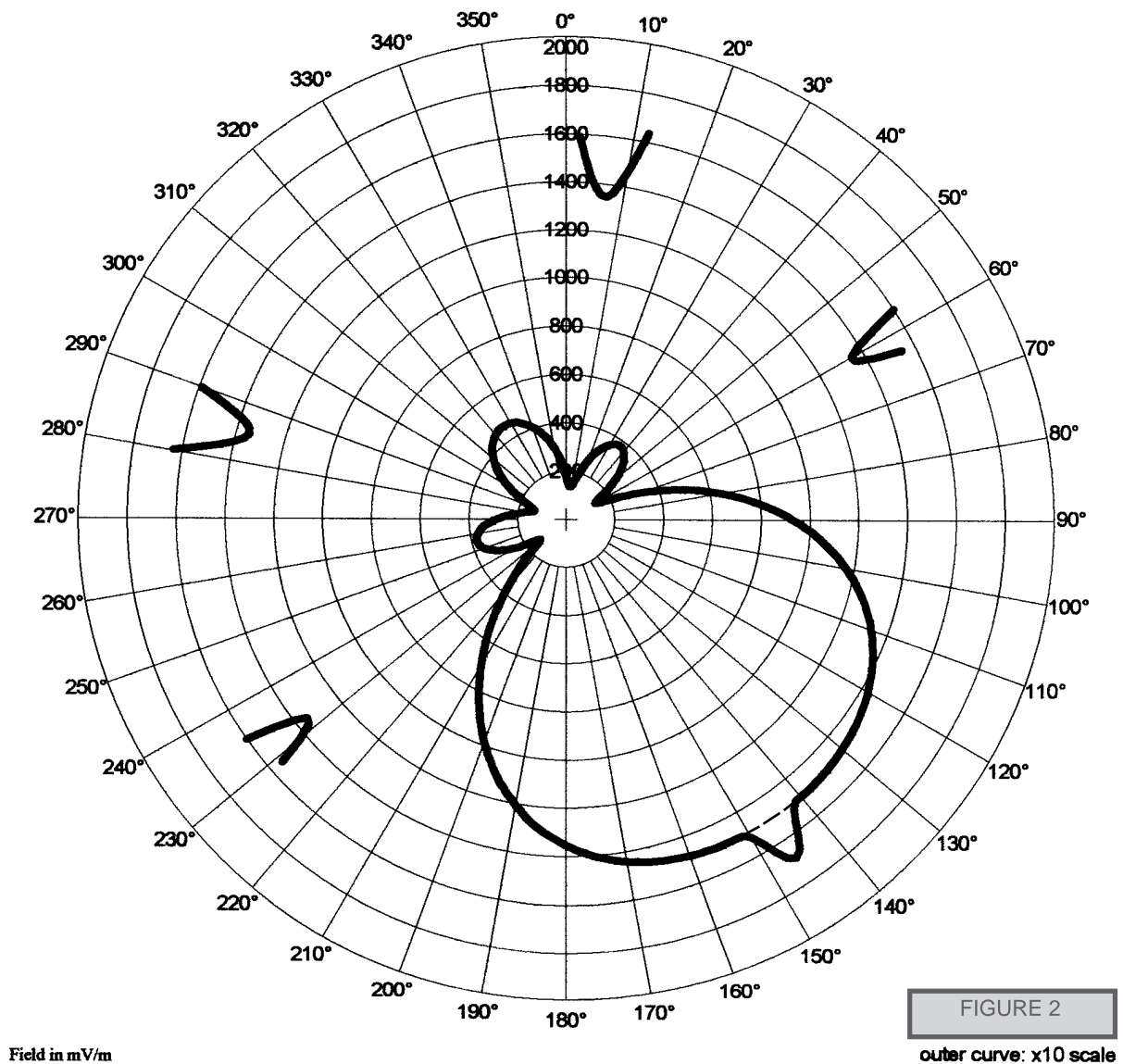
TOWER PARAMETERS

##	Field Ratio	Phase (deg.)	Spacing (deg.)	Bearing (deg.)	Tower Ref. Switch	Elec. Height (deg.)	Length Twr. A (deg.)	Length Twr. B (deg.)	Length Twr. C (deg.)	Length Twr. D (deg.)
1	0.971	138.0	123.2	326.0	0	122.0	0.0	0.0	0.0	0.0
2	1.000	0.0	0.0	0.0	0	122.0	0.0	0.0	0.0	0.0
3	0.680	-138.0	123.2	146.0	0	122.0	0.0	0.0	0.0	0.0

---PATTERN AUGMENTATIONS---

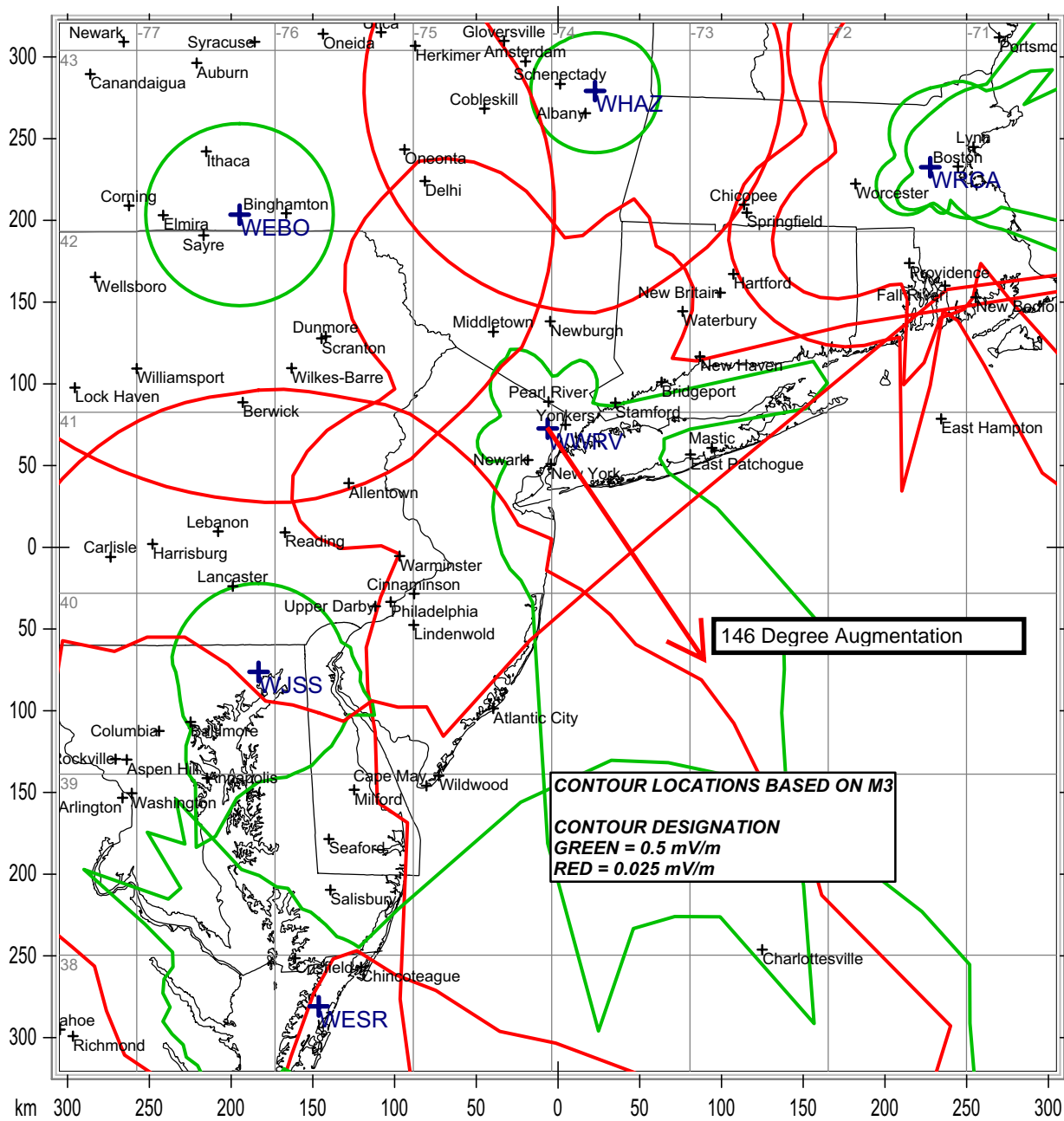
Central	Span	Augmented
Bearing	Angle	Field
(deg)	(deg)	(mV/m)
-----	-----	-----
146.0	10.0	1687.5

HORIZONTAL PLANE PATTERN



NIGHTTIME MODIFIED STANDARD RADIATION PATTERN DATA
 (Radiation Values at One Kilometer)

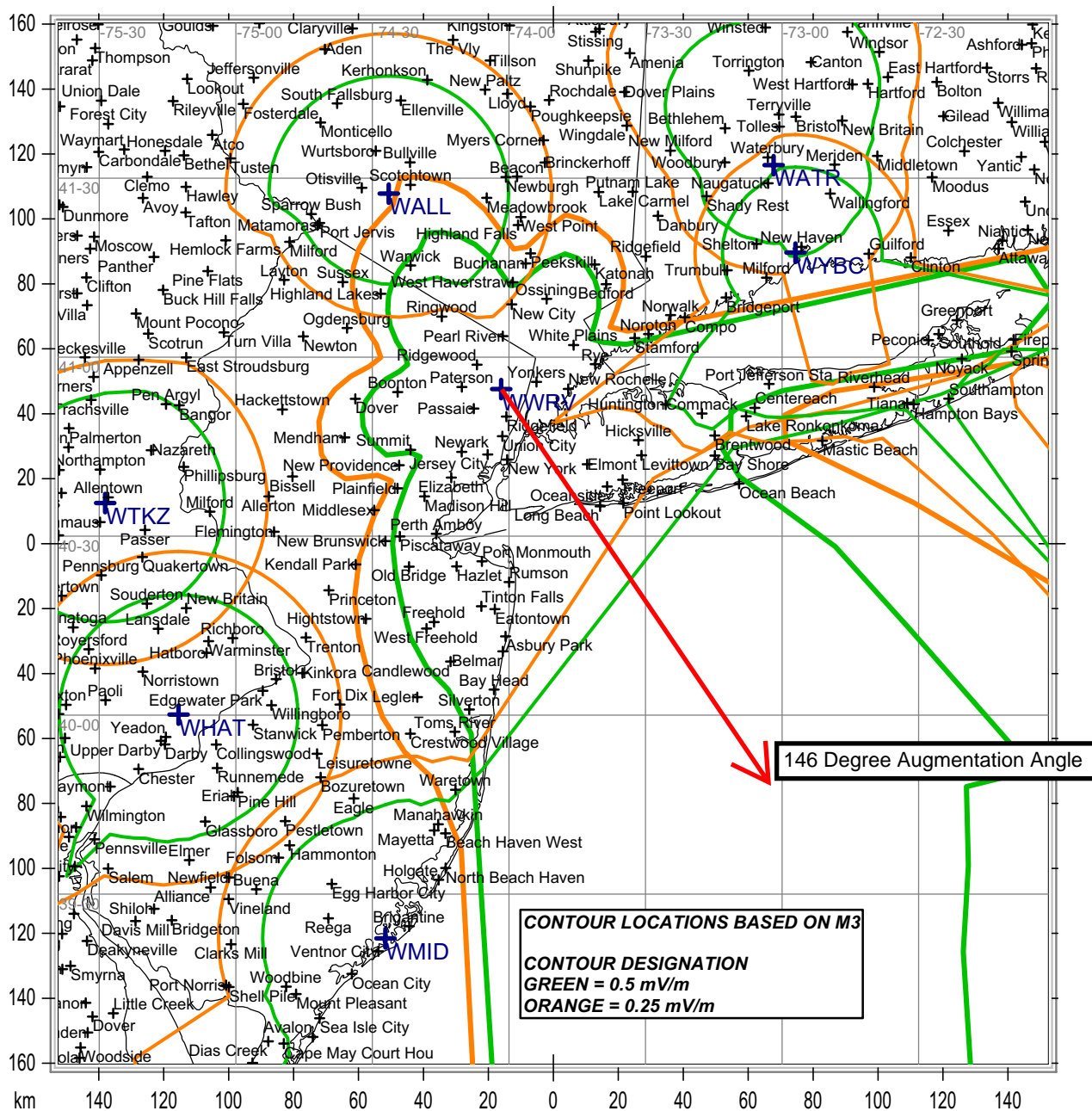
WWRV 1330 kHz 10 kW DAY MODIFIED PATTERN NEW YORK, NEW YORK



Communications Technologies, Inc. Marlton, New Jersey

State Borders Lat/Lon Grid

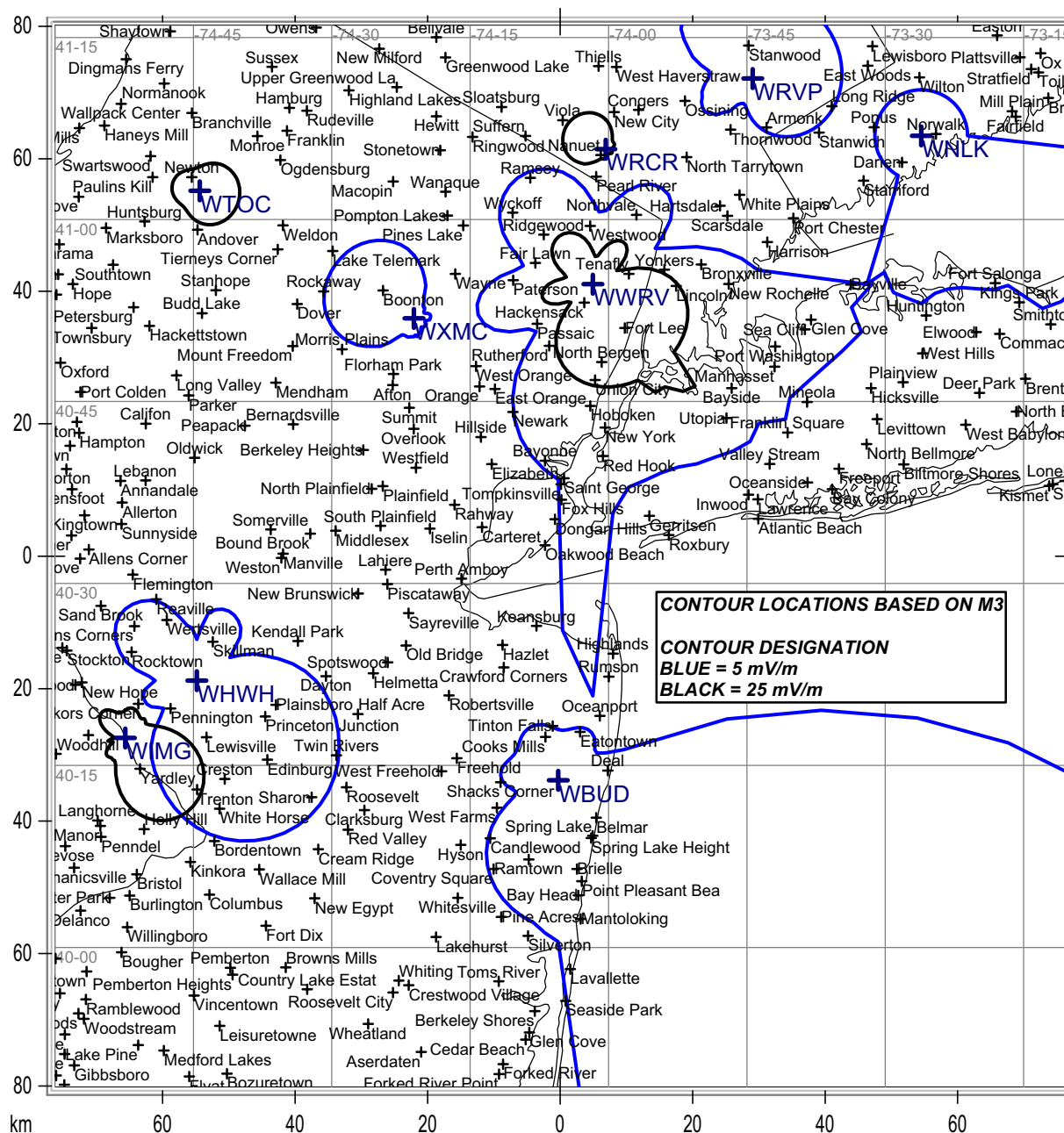
WWRV 1330 kHz 10 kW DAY MODIFIED PATTERN NEW YORK, NEW YORK



Communications Technologies, Inc. Marlton, New Jersey

State Borders Lat/Lon Grid

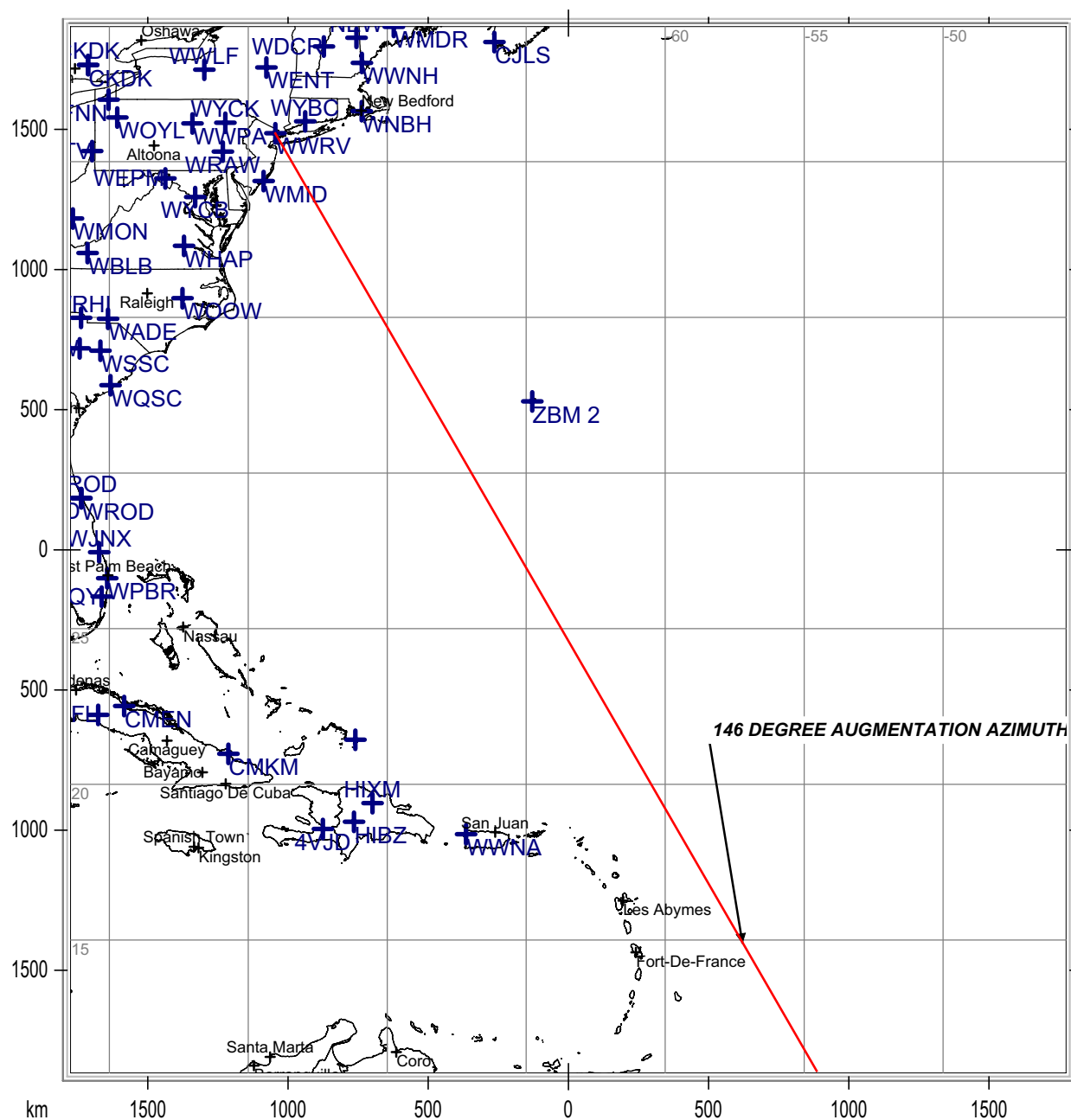
WWRV 1330 kHz 10 kW DAY MODIFIED PATTERN NEW YORK, NEW YORK



Communications Technologies, Inc. Marlton, New Jersey

State Borders Lat/Lon Grid

WWRV 1330 kHz 5 kW NIGHT MODIFIED PATTERN NEW YORK, NEW YORK



Communications Technologies, Inc. Marlton, New Jersey

 State Borders
  Lat/Lon Grid