



SYSTEMS WITH RELIABILITY, Inc.
Broadcast Antenna & Transmission Systems

ANTENNA SPECIFICATION SUMMARY

Station Call : Unknown
Antenna Type : SWLP16OI/43 & 44
Customer : NIA Broadcasting
Location : Unknown

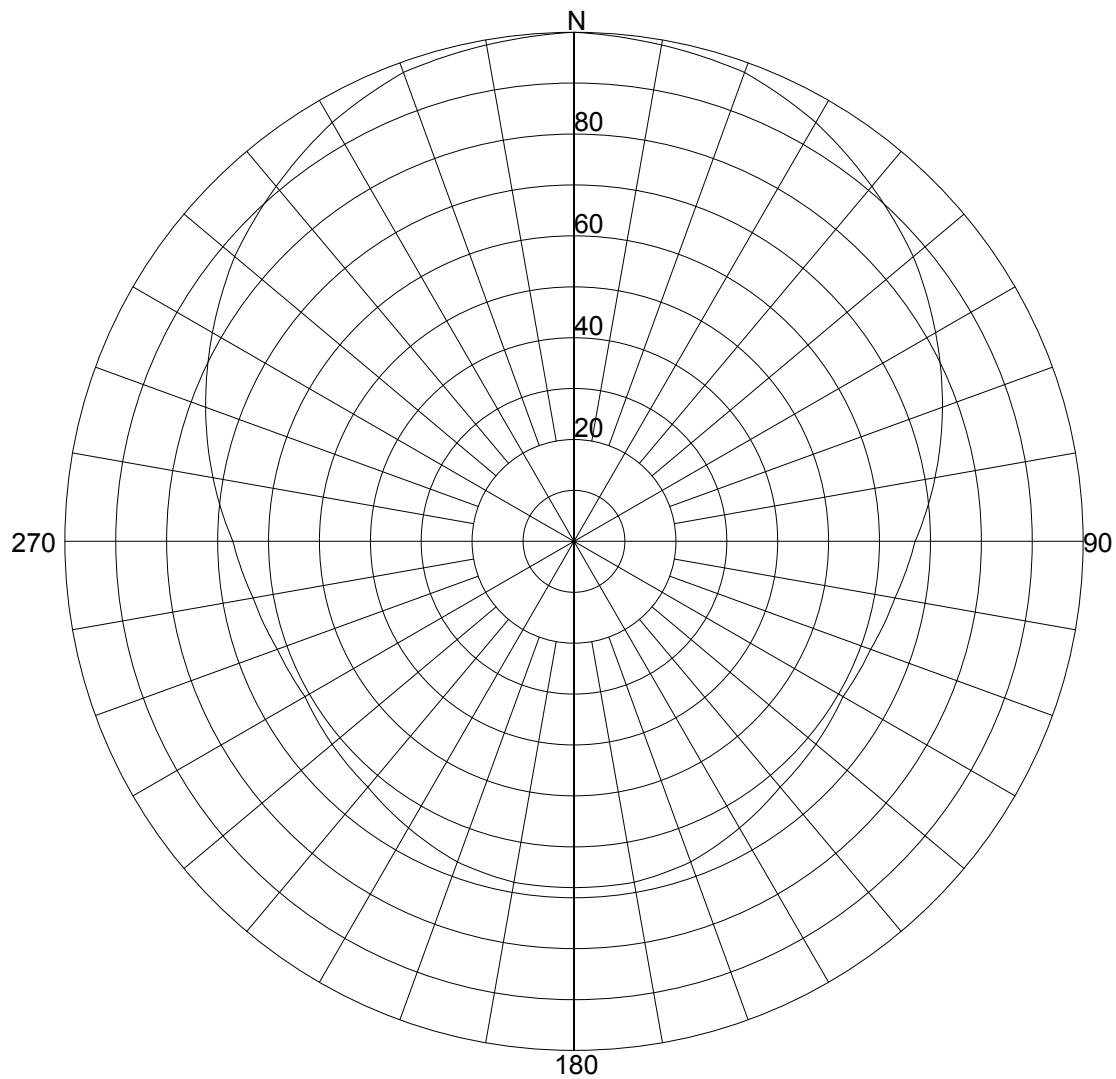
Date : 10/27/2004
Channel: 43 & 44
Shop Order: 01156

ELECTRICAL SPECIFICATION			
Polarization Type: Horizontal Polarization Ratio: H-Pol 100.0000 % Elevation Directivity Azimuth Directivity H-Pol. Antenna Gain Power Capability Beam Tilt Null Fill Input Line Size		Power	dB
		17.271	12.373
		1.687	2.271
		29.135	14.644
		1 kW	
		-0.75 degrees	
		15, 10, 5 %	
1 5/8"-50 ohm EIA			
MECHANICAL SPECIFICATION			
Antenna Aperature Length		22.42 ft.	
Antenna Total Length		25.88 ft.	
Center of Radiation (AGL)		Unknown ft.	
Wind Force (50/33)		433.00 lb.	
Antenna Weight		167.00 lb.	

Mechanical Specifications will be certified upon final construction and testing.
Note: Given values can be used for planning system.

Prepared by:

Jason Duncan



Azimuth Pattern

Scale: Linear

Unit: Relative Field

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Date: 10/27/2004

ANTENNA TYPE: SWLP16OI/43 & 44

FREQUENCY: Channels 43 & 44

PATTERN POL.: Horizontal

CIRCULARITY(+/-dB):

AZ. DIRECTIVITY: 1.68694 / 2.27dB

PATTERN RMS: 0.770

Relative Field Tabulation(Azimuth)

Azimuth Heading	Relative Field(dB)	Azimuth Heading	Relative Field(dB)
0	1.0000 (0.01)	180	.6800 (-3.34)
5	.9950 (-0.03)	185	.6800 (-3.34)
10	.9900 (-0.08)	190	.6800 (-3.34)
15	.9850 (-0.12)	195	.6750 (-3.4)
20	.9800 (-0.17)	200	.6700 (-3.47)
25	.9650 (-0.3)	205	.6600 (-3.6)
30	.9500 (-0.44)	210	.6500 (-3.73)
35	.9300 (-0.62)	215	.6400 (-3.86)
40	.9100 (-0.81)	220	.6300 (-4)
45	.8900 (-1)	225	.6250 (-4.07)
50	.8700 (-1.2)	230	.6200 (-4.14)
55	.8450 (-1.45)	235	.6150 (-4.21)
60	.8200 (-1.71)	240	.6100 (-4.28)
65	.7950 (-1.98)	245	.6150 (-4.21)
70	.7700 (-2.26)	250	.6200 (-4.14)
75	.7450 (-2.55)	255	.6300 (-4)
80	.7200 (-2.84)	260	.6400 (-3.86)
85	.6950 (-3.15)	265	.6550 (-3.66)
90	.6700 (-3.47)	270	.6700 (-3.47)
95	.6550 (-3.66)	275	.6950 (-3.15)
100	.6400 (-3.86)	280	.7200 (-2.84)
105	.6300 (-4)	285	.7450 (-2.55)
110	.6200 (-4.14)	290	.7700 (-2.26)
115	.6150 (-4.21)	295	.7950 (-1.98)
120	.6100 (-4.28)	300	.8200 (-1.71)
125	.6150 (-4.21)	305	.8450 (-1.45)
130	.6200 (-4.14)	310	.8700 (-1.2)
135	.6250 (-4.07)	315	.8900 (-1)
140	.6300 (-4)	320	.9100 (-0.81)
145	.6400 (-3.86)	325	.9300 (-0.62)
150	.6500 (-3.73)	330	.9500 (-0.44)
155	.6600 (-3.6)	335	.9650 (-0.3)
160	.6700 (-3.47)	340	.9800 (-0.17)
165	.6750 (-3.4)	345	.9850 (-0.12)
170	.6800 (-3.34)	350	.9900 (-0.08)
175	.6800 (-3.34)	355	.9950 (-0.03)

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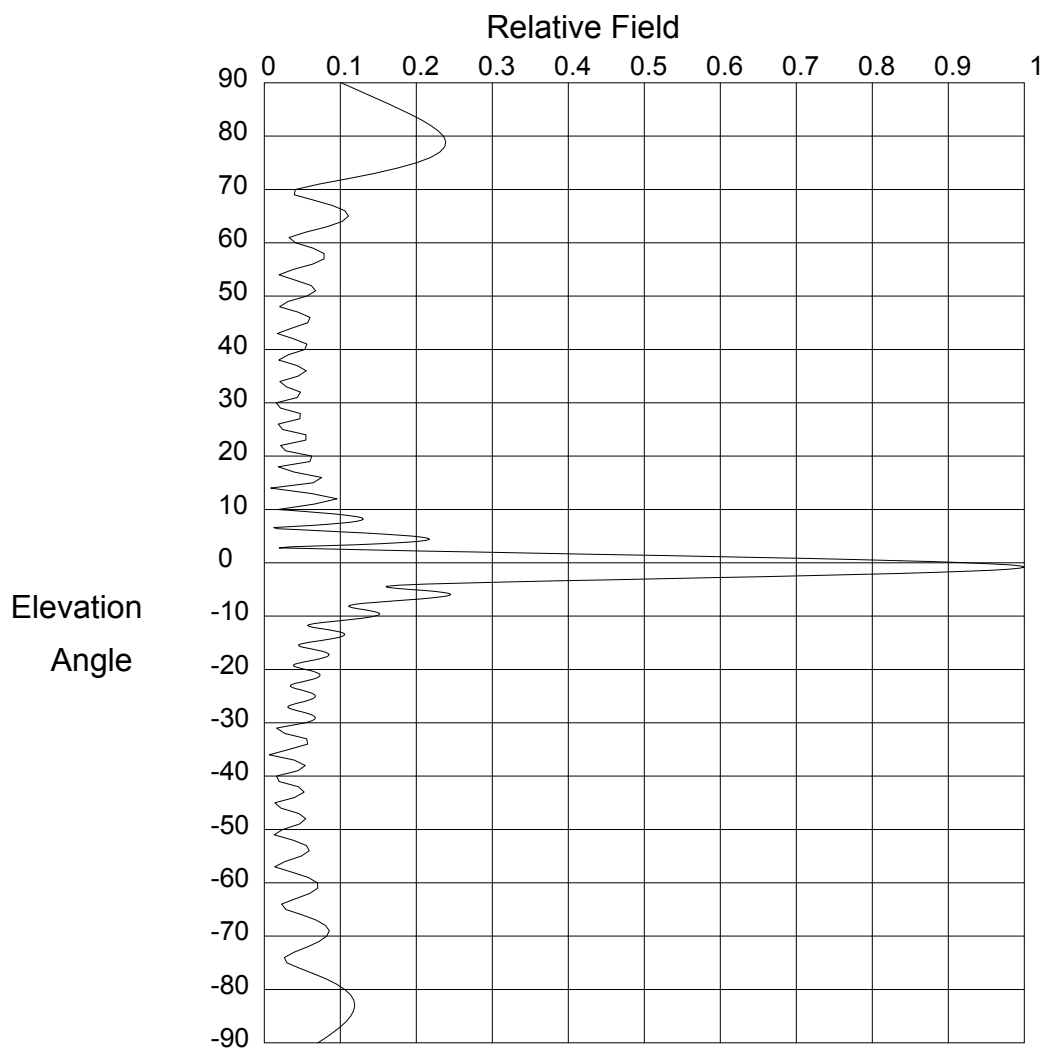
FREQUENCY: Channels 43 & 44

PATTERN POL.: Horizontal

CIRCULARITY(+/-dB):

AZ. DIRECTIVITY: 1.68694 / 2.27dB

PATTERN RMS: 0.770



Elevation Pattern

Scale: Linear

Units: Field, Relative

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FREQUENCY: 43 & 44

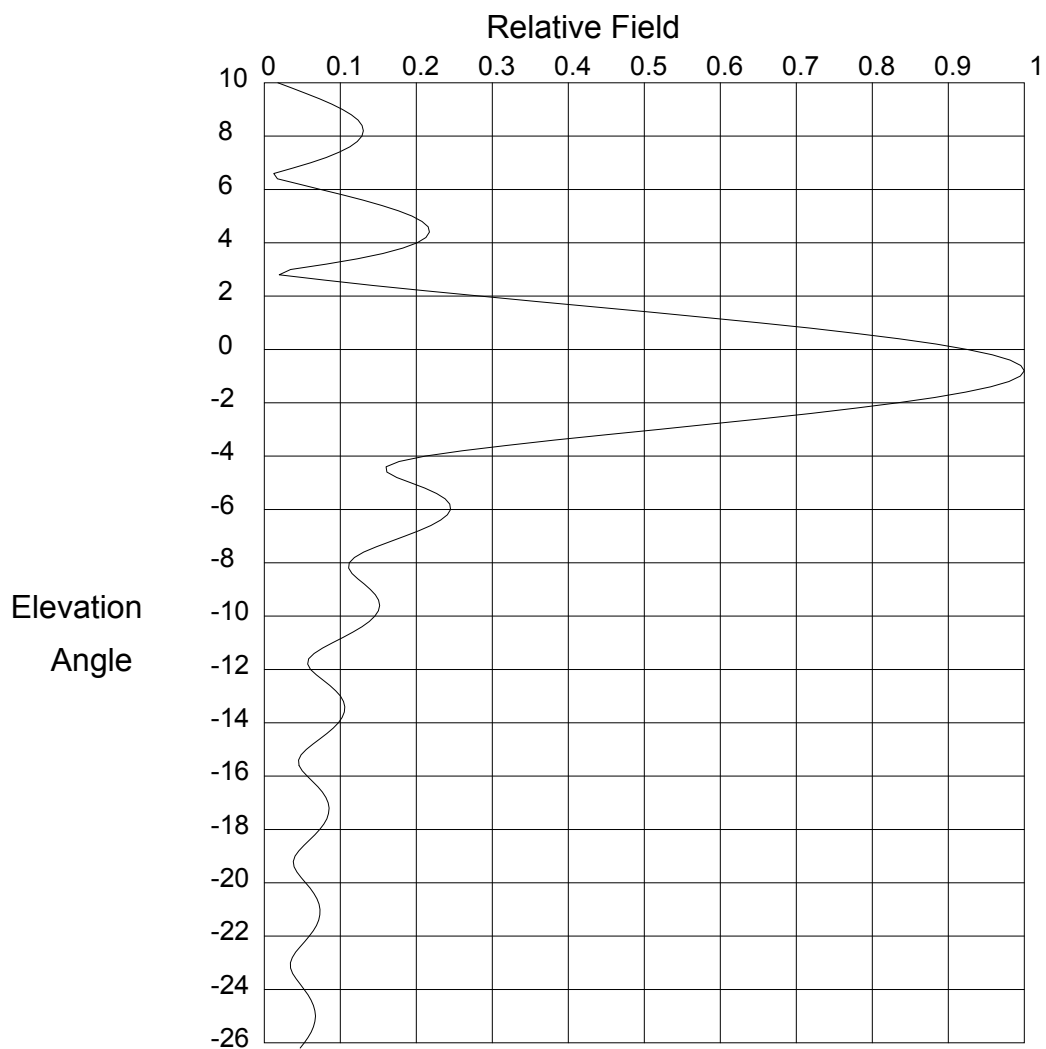
PATTERN POL.: Horizontal

DIRECTIVITY(Peak): 17.271/12.373 dBd

Beam Tilt (Deg.) : - .75

DIRECTIVITY(Horiz): 14.79/11.70 dBd

Null Fill(s)(%) : 15, 10, 5



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Scale: Linear

Units: Field, Relative

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Null Fill(s)(%) : 15, 10, 5

Relative Field Tabulation

Elev. Angle	Rel. Fld(dB)	Elev. Angle	Rel. Fld(dB)	Elev. Angle	Rel. Fld(dB)
3.2	.082 (-21.717)	-4.4	.16 (-15.893)	-12.0	.061 (-24.305)
3.0	.035 (-29.192)	-4.6	.161 (-15.846)	-12.2	.068 (-23.295)
2.8	.02 (-34.082)	-4.8	.174 (-15.167)	-12.4	.077 (-22.223)
2.6	.079 (-22.04)	-5.0	.193 (-14.298)	-12.6	.086 (-21.277)
2.4	.144 (-16.856)	-5.2	.211 (-13.505)	-12.8	.094 (-20.526)
2.2	.212 (-13.46)	-5.4	.227 (-12.886)	-13.0	.10 (-19.981)
2.0	.284 (-10.929)	-5.6	.238 (-12.467)	-13.2	.104 (-19.641)
1.8	.358 (-8.92)	-5.8	.244 (-12.246)	-13.4	.106 (-19.498)
1.6	.433 (-7.271)	-6.0	.245 (-12.214)	-13.6	.105 (-19.547)
1.4	.508 (-5.89)	-6.2	.241 (-12.363)	-13.8	.103 (-19.785)
1.2	.581 (-4.72)	-6.4	.232 (-12.687)	-14.0	.098 (-20.215)
1.0	.651 (-3.724)	-6.6	.219 (-13.18)	-14.2	.091 (-20.839)
.8	.718 (-2.877)	-6.8	.203 (-13.837)	-14.4	.083 (-21.663)
.6	.78 (-2.161)	-7.0	.185 (-14.649)	-14.6	.073 (-22.683)
.4	.836 (-1.561)	-7.2	.166 (-15.595)	-14.8	.064 (-23.874)
.2	.884 (-1.067)	-7.4	.147 (-16.627)	-15.0	.055 (-25.145)
.0	.925 (-0.673)	-7.6	.131 (-17.653)	-15.2	.049 (-26.279)
-.2	.958 (-0.373)	-7.8	.119 (-18.515)	-15.4	.045 (-26.915)
-.4	.981 (-0.162)	-8.0	.112 (-19.028)	-15.6	.046 (-26.779)
-.6	.996 (-0.039)	-8.2	.111 (-19.086)	-15.8	.05 (-26.003)
-.8	1.00 (0)	-8.4	.115 (-18.752)	-16.0	.057 (-24.956)
-1.0	.995 (-0.046)	-8.6	.123 (-18.204)	-16.2	.064 (-23.921)
-1.2	.98 (-0.176)	-8.8	.132 (-17.614)	-16.4	.071 (-23.03)
-1.4	.956 (-0.392)	-9.0	.14 (-17.092)	-16.6	.076 (-22.327)
-1.6	.923 (-0.696)	-9.2	.146 (-16.697)	-16.8	.081 (-21.822)
-1.8	.882 (-1.091)	-9.4	.15 (-16.454)	-17.0	.084 (-21.509)
-2.0	.834 (-1.581)	-9.6	.152 (-16.375)	-17.2	.085 (-21.384)
-2.2	.779 (-2.171)	-9.8	.15 (-16.467)	-17.4	.085 (-21.443)
-2.4	.719 (-2.869)	-10.0	.146 (-16.733)	-17.6	.082 (-21.684)
-2.6	.654 (-3.685)	-10.2	.138 (-17.181)	-17.8	.078 (-22.109)
-2.8	.587 (-4.628)	-10.4	.129 (-17.817)	-18.0	.073 (-22.721)
-3.0	.518 (-5.712)	-10.6	.117 (-18.651)	-18.2	.067 (-23.523)
-3.2	.449 (-6.952)	-10.8	.104 (-19.689)	-18.4	.06 (-24.506)
-3.4	.382 (-8.363)	-11.0	.09 (-20.922)	-18.6	.052 (-25.638)
-3.6	.318 (-9.95)	-11.2	.077 (-22.298)	-18.8	.046 (-26.817)
-3.8	.26 (-11.689)	-11.4	.066 (-23.655)	-19.0	.041 (-27.82)
-4.0	.212 (-13.473)	-11.6	.059 (-24.65)	-19.2	.038 (-28.316)
-4.2	.177 (-15.023)	-11.8	.057 (-24.881)	-19.4	.039 (-28.098)

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FREQUENCY: 43 & 44

PATTERN POL.: Horizontal

DIRECTIVITY(Peak): 17.271/12.373 dBd

Beam Tilt (Deg.) : -.75

DIRECTIVITY(Horiz): 14.79/11.70 dBd

Null Fill(s)(%) : 15, 10, 5

Relative Field Tabulation

Elev. Angle	Rel. Fld(dB)	Elev. Angle	Rel. Fld(dB)	Elev. Angle	Rel. Fld(dB)
-19.6	.043 (-27.311)	-27.2	.032 (-29.909)	-54.0	.059 (-24.522)
-19.8	.048 (-26.287)	-27.4	.035 (-29.055)	-55.0	.049 (-26.241)
-20.0	.054 (-25.275)	-27.6	.04 (-27.946)	-56.0	.027 (-31.256)
-20.2	.06 (-24.396)	-27.8	.046 (-26.836)	-57.0	.014 (-37.199)
-20.4	.065 (-23.693)	-28.0	.051 (-25.847)	-58.0	.036 (-28.821)
-20.6	.069 (-23.176)	-28.2	.056 (-25.025)	-59.0	.058 (-24.731)
-20.8	.072 (-22.842)	-28.4	.06 (-24.378)	-60.0	.07 (-23.08)
-21.0	.073 (-22.687)	-28.6	.064 (-23.904)	-61.0	.07 (-23.037)
-21.2	.073 (-22.707)	-28.8	.066 (-23.597)	-62.0	.06 (-24.482)
-21.4	.072 (-22.902)	-29.0	.067 (-23.455)	-63.0	.041 (-27.75)
-21.6	.069 (-23.273)	-29.2	.067 (-23.477)	-64.0	.023 (-32.826)
-21.8	.064 (-23.822)	-29.4	.066 (-23.665)	-65.0	.028 (-30.919)
-22.0	.059 (-24.553)	-29.6	.063 (-24.03)	-66.0	.049 (-26.116)
-22.2	.053 (-25.459)	-29.8	.059 (-24.586)	-67.0	.068 (-23.3)
-22.4	.047 (-26.514)	-30.0	.054 (-25.359)	-68.0	.081 (-21.847)
-22.6	.042 (-27.638)	-31.0	.016 (-35.747)	-69.0	.085 (-21.365)
-22.8	.037 (-28.65)	-32.0	.027 (-31.279)	-70.0	.082 (-21.699)
-23.0	.034 (-29.254)	-33.0	.056 (-25.059)	-71.0	.072 (-22.835)
-23.2	.035 (-29.2)	-34.0	.057 (-24.866)	-72.0	.057 (-24.882)
-23.4	.037 (-28.535)	-35.0	.032 (-29.839)	-73.0	.04 (-28.039)
-23.6	.042 (-27.551)	-36.0	.006 (-43.751)	-74.0	.026 (-31.561)
-23.8	.047 (-26.517)	-37.0	.04 (-28.058)	-75.0	.03 (-30.514)
-24.0	.053 (-25.581)	-38.0	.054 (-25.375)	-76.0	.046 (-26.745)
-24.2	.058 (-24.802)	-39.0	.044 (-27.116)	-77.0	.064 (-23.836)
-24.4	.062 (-24.199)	-40.0	.016 (-35.78)	-78.0	.081 (-21.819)
-24.6	.065 (-23.772)	-41.0	.02 (-34.07)	-79.0	.095 (-20.428)
-24.8	.067 (-23.517)	-42.0	.045 (-26.917)	-80.0	.106 (-19.489)
-25.0	.067 (-23.432)	-43.0	.053 (-25.588)	-81.0	.114 (-18.894)
-25.2	.067 (-23.515)	-44.0	.04 (-27.984)	-82.0	.118 (-18.573)
-25.4	.065 (-23.766)	-45.0	.014 (-37.048)	-83.0	.119 (-18.482)
-25.6	.062 (-24.188)	-46.0	.022 (-33.228)	-84.0	.118 (-18.59)
-25.8	.058 (-24.787)	-47.0	.045 (-26.847)	-85.0	.114 (-18.88)
-26.0	.053 (-25.566)	-48.0	.055 (-25.258)	-86.0	.108 (-19.341)
-26.2	.047 (-26.518)	-49.0	.046 (-26.697)	-87.0	.10 (-19.973)
-26.4	.042 (-27.613)	-50.0	.024 (-32.266)	-88.0	.091 (-20.783)
-26.6	.037 (-28.751)	-51.0	.013 (-37.64)	-89.0	.081 (-21.789)
-26.8	.033 (-29.716)	-52.0	.038 (-28.498)	-90.0	.071 (-23.023)
-27.0	.031 (-30.175)	-53.0	.055 (-25.119)	90.0	.00 (-50)

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Beam Tilt (Deg.) : -.75

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Null Fill(s)(%) : 15, 10, 5