

**Preliminary Specification for
TRASAR® Top Mounted, Dual Adjacent
Channel UHF Elliptically Polarized
Coaxial Slotted Array Television Antenna**

Electrical Characteristics:

Channel:	25		
Frequency:	536 MHz to 542 MHz		
Service:	ATSC		
Azimuth Pattern Number:	Horizontal Polarization	ATW-O	
	Vertical Polarization	ATW-O	
Elevation Pattern Number:	Horizontal Polarization	ATW14HS5H	
	Vertical Polarization	ATW14HS5V	
Azimuth Directivity:	Horizontal Polarization	1.00	(0.00 dB)
	Vertical Polarization	1.00	(0.00 dB)
Elevation Directivity:	Horizontal Polarization	14.00	(11.46 dBd)
	Vertical Polarization	14.00	(11.46 dBd)
Peak Power Gain:	Horizontal Polarization	10.77	(10.32 dBd)
	Vertical Polarization	3.23	(5.09 dBd)
Gain at Horizontal:	Horizontal Polarization	7.80	(8.92 dBd)
	Vertical Polarization	2.34	(3.69 dBd)
Vertical/Horizontal Ratio:	0.30		
Electrical Beam Tilt:	1.25 Degrees		
Input Power Required:	12.07 kW (10.82 dBk)		
RF Input:	6-1/8-inch, 75 ohm, EIA flanged male		
Input Power Rating (maximum):	50 kW Average Power, 8VSB		
Antenna VSWR (maximum):	1.10 Over 6 MHz Channel		

Broadcast Antenna System Power Analysis

WWOR-TV RF Channel: 25
FOX TELEVISION STATIONS INC.
Secaucus, NJ
ATW14H4-ETO25/26H

Antenna Parameters

Azimuth Directivity:

Horizontal:	1.00	(0.00 dB)
Vertical:	1.00	(0.00 dB)

Elevation Directivity:

Horizontal:	14.00	(11.46 dB)
Vertical:	14.00	(11.46 dB)

Transmission Line

Vertical Run:

Type:	6-1/8-inch, 75 ohm, rigid line	
Length:	500 feet	152.4 meters
Attenuation:	0.106 dB/100 feet	0.348 dB/100 mtrs

Horizontal Run:

Type:	6-1/8-inch, 75 ohm, rigid line	
Length:	50 feet	15.2 meters
Attenuation:	0.106 dB/100 feet	0.348 dB/100 mtrs

Total Losses: 0.583 dB

Line Efficiency: 87.44%

Effective Radiated Power:

Horizontal:	130.00 kW	(21.14 dBk)
Vertical:	39.00 kW	(15.91 dBk)

Power Gain:

Horizontal:	10.77 numeric	(10.32 dBd)
Vertical:	3.23 numeric	(5.09 dBd)

Antenna Input Power:

12.07 kW	(10.82 dBk)
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Transmission Line Losses:

-1.73 kW	(0.583 dB)
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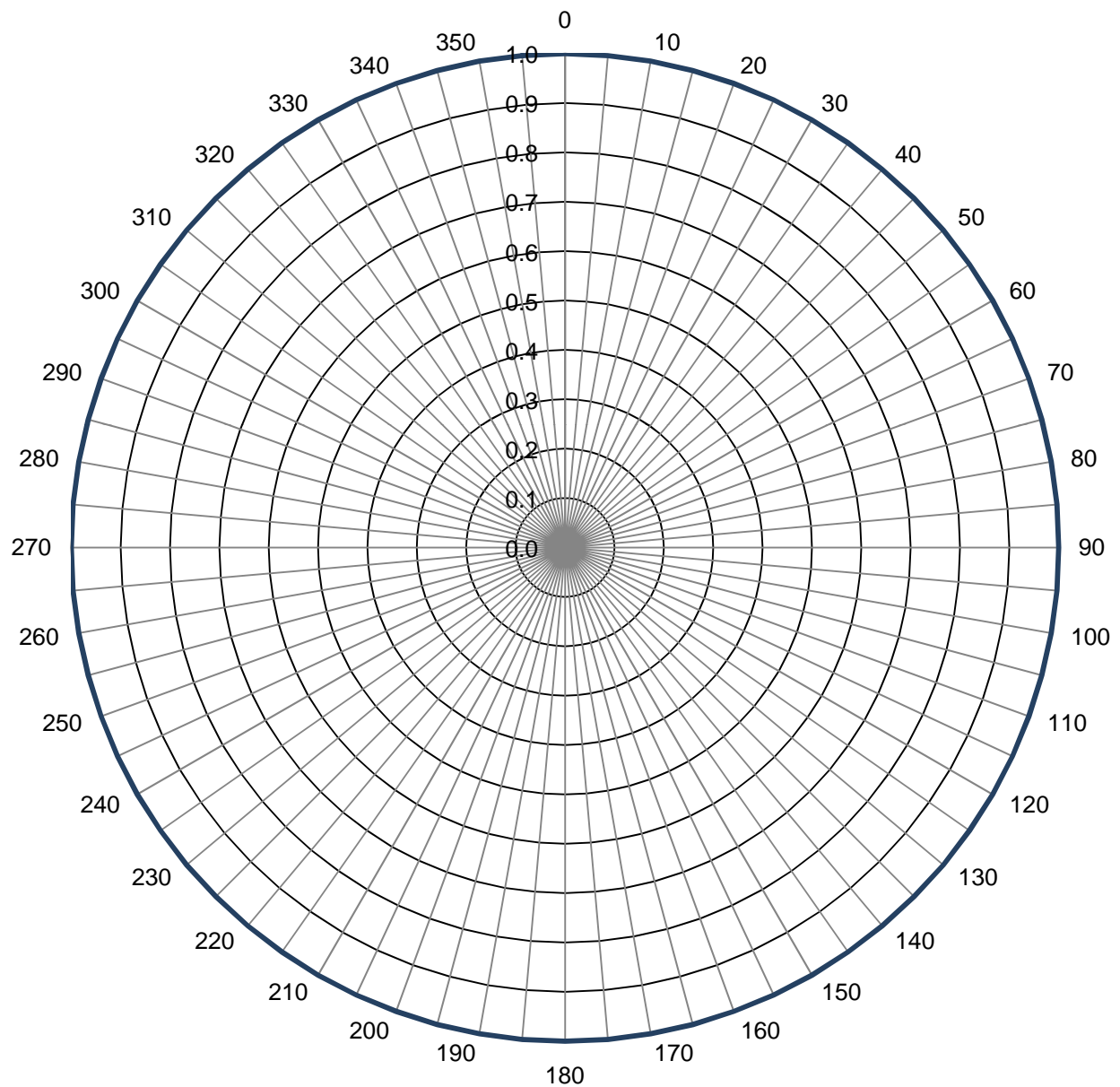
Transmitter Power Output:

13.81 kW	(11.40 dBk)
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Azimuth Pattern

Type:	ATW-O	Polarization:	Horizontal
Directivity:	1.00 numeric (0.00 dB)	Frequency:	25 (ATSC)
Peak(s) at:		Location:	Secaucus, NJ
		NOTE: Pattern shape and directivity may vary with channel and mounting configuration.	

Relative Field

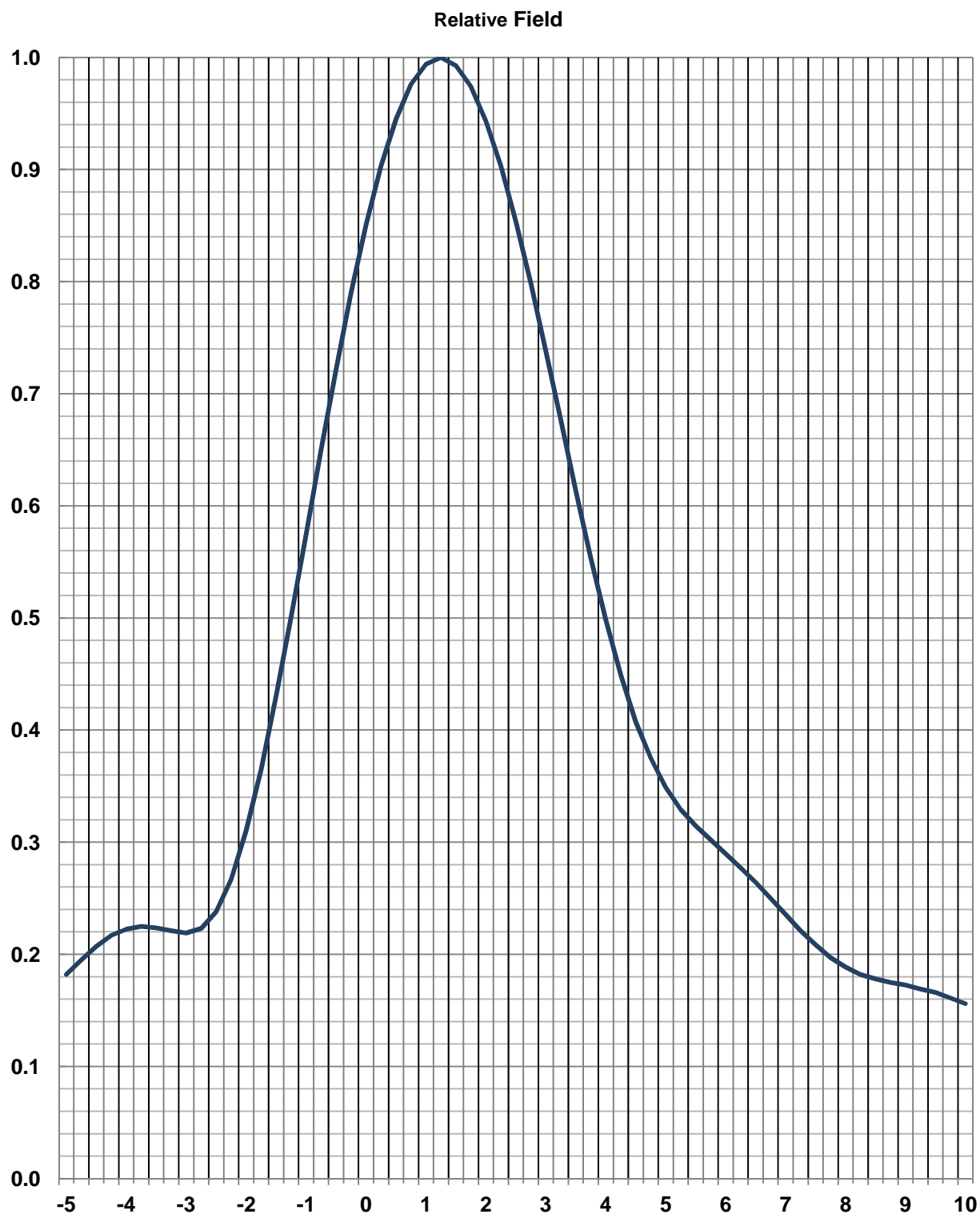


Tabulated Data for Azimuth PatternType: ATW-O

Angle	Field	dB	Angle	Field	dB	Angle	Field	dB	Angle	Field	dB
0	1.000	0.00	100	1.000	0.00	200	1.000	0.00	300	1.000	0.00
2	1.000	0.00	102	1.000	0.00	202	1.000	0.00	302	1.000	0.00
4	1.000	0.00	104	1.000	0.00	204	1.000	0.00	304	1.000	0.00
6	1.000	0.00	106	1.000	0.00	206	1.000	0.00	306	1.000	0.00
8	1.000	0.00	108	1.000	0.00	208	1.000	0.00	308	1.000	0.00
10	1.000	0.00	110	1.000	0.00	210	1.000	0.00	310	1.000	0.00
12	1.000	0.00	112	1.000	0.00	212	1.000	0.00	312	1.000	0.00
14	1.000	0.00	114	1.000	0.00	214	1.000	0.00	314	1.000	0.00
16	1.000	0.00	116	1.000	0.00	216	1.000	0.00	316	1.000	0.00
18	1.000	0.00	118	1.000	0.00	218	1.000	0.00	318	1.000	0.00
20	1.000	0.00	120	1.000	0.00	220	1.000	0.00	320	1.000	0.00
22	1.000	0.00	122	1.000	0.00	222	1.000	0.00	322	1.000	0.00
24	1.000	0.00	124	1.000	0.00	224	1.000	0.00	324	1.000	0.00
26	1.000	0.00	126	1.000	0.00	226	1.000	0.00	326	1.000	0.00
28	1.000	0.00	128	1.000	0.00	228	1.000	0.00	328	1.000	0.00
30	1.000	0.00	130	1.000	0.00	230	1.000	0.00	330	1.000	0.00
32	1.000	0.00	132	1.000	0.00	232	1.000	0.00	332	1.000	0.00
34	1.000	0.00	134	1.000	0.00	234	1.000	0.00	334	1.000	0.00
36	1.000	0.00	136	1.000	0.00	236	1.000	0.00	336	1.000	0.00
38	1.000	0.00	138	1.000	0.00	238	1.000	0.00	338	1.000	0.00
40	1.000	0.00	140	1.000	0.00	240	1.000	0.00	340	1.000	0.00
42	1.000	0.00	142	1.000	0.00	242	1.000	0.00	342	1.000	0.00
44	1.000	0.00	144	1.000	0.00	244	1.000	0.00	344	1.000	0.00
46	1.000	0.00	146	1.000	0.00	246	1.000	0.00	346	1.000	0.00
48	1.000	0.00	148	1.000	0.00	248	1.000	0.00	348	1.000	0.00
50	1.000	0.00	150	1.000	0.00	250	1.000	0.00	350	1.000	0.00
52	1.000	0.00	152	1.000	0.00	252	1.000	0.00	352	1.000	0.00
54	1.000	0.00	154	1.000	0.00	254	1.000	0.00	354	1.000	0.00
56	1.000	0.00	156	1.000	0.00	256	1.000	0.00	356	1.000	0.00
58	1.000	0.00	158	1.000	0.00	258	1.000	0.00	358	1.000	0.00
60	1.000	0.00	160	1.000	0.00	260	1.000	0.00	360	1.000	0.00
62	1.000	0.00	162	1.000	0.00	262	1.000	0.00			
64	1.000	0.00	164	1.000	0.00	264	1.000	0.00			
66	1.000	0.00	166	1.000	0.00	266	1.000	0.00			
68	1.000	0.00	168	1.000	0.00	268	1.000	0.00			
70	1.000	0.00	170	1.000	0.00	270	1.000	0.00			
72	1.000	0.00	172	1.000	0.00	272	1.000	0.00			
74	1.000	0.00	174	1.000	0.00	274	1.000	0.00			
76	1.000	0.00	176	1.000	0.00	276	1.000	0.00			
78	1.000	0.00	178	1.000	0.00	278	1.000	0.00			
80	1.000	0.00	180	1.000	0.00	280	1.000	0.00			
82	1.000	0.00	182	1.000	0.00	282	1.000	0.00			
84	1.000	0.00	184	1.000	0.00	284	1.000	0.00			
86	1.000	0.00	186	1.000	0.00	286	1.000	0.00			
88	1.000	0.00	188	1.000	0.00	288	1.000	0.00			
90	1.000	0.00	190	1.000	0.00	290	1.000	0.00			
92	1.000	0.00	192	1.000	0.00	292	1.000	0.00			
94	1.000	0.00	194	1.000	0.00	294	1.000	0.00			
96	1.000	0.00	196	1.000	0.00	296	1.000	0.00			
98	1.000	0.00	198	1.000	0.00	298	1.000	0.00			

Elevation Pattern

Type:	ATW14HS5H		Polarization:	Horizontal
Directivity:			Frequency:	25 (ATSC)
Main Lobe:	14.00 numeric	(11.46 dB)	Location:	Secaucus, NJ
Horizontal:	10.14 numeric	(10.06 dB)	Beam Tilt:	1.25 degrees



Tabulated Data for Elevation PatternType: ATW14HS5H

-5 to 10 degrees in 0.25 degree increments.

10 to 90 degrees in 0.50 degree increments.

Angle	Field	dB	Angle	Field	dB	Angle	Field	dB	Angle	Field	dB	Angle	Field	dB
-5.00	0.182	-14.80	7.25	0.221	-13.11	29.00	0.055	-25.19	53.50	0.044	-27.13	78.00	0.032	-29.76
-4.75	0.195	-14.20	7.50	0.208	-13.62	29.50	0.055	-25.19	54.00	0.044	-27.13	78.50	0.032	-29.90
-4.50	0.207	-13.68	7.75	0.197	-14.11	30.00	0.055	-25.19	54.50	0.044	-27.13	79.00	0.031	-30.17
-4.25	0.217	-13.27	8.00	0.188	-14.49	30.50	0.054	-25.27	55.00	0.044	-27.13	79.50	0.031	-30.17
-4.00	0.223	-13.05	8.25	0.182	-14.80	31.00	0.053	-25.51	55.50	0.045	-26.94	80.00	0.031	-30.17
-3.75	0.225	-12.96	8.50	0.178	-14.99	31.50	0.052	-25.68	56.00	0.046	-26.74	80.50	0.031	-30.17
-3.50	0.223	-13.01	8.75	0.175	-15.14	32.00	0.051	-25.85	56.50	0.047	-26.56	81.00	0.031	-30.17
-3.25	0.221	-13.11	9.00	0.172	-15.26	32.50	0.051	-25.85	57.00	0.047	-26.56	81.50	0.031	-30.17
-3.00	0.219	-13.19	9.25	0.169	-15.44	33.00	0.051	-25.85	57.50	0.047	-26.56	82.00	0.031	-30.17
-2.75	0.223	-13.03	9.50	0.166	-15.60	33.50	0.052	-25.68	58.00	0.046	-26.74	82.50	0.031	-30.17
-2.50	0.238	-12.47	9.75	0.161	-15.86	34.00	0.052	-25.68	58.50	0.045	-26.94	83.00	0.030	-30.46
-2.25	0.267	-11.47	10.00	0.156	-16.14	34.50	0.051	-25.85	59.00	0.045	-26.94	83.50	0.029	-30.75
-2.00	0.310	-10.17	10.50	0.144	-16.83	35.00	0.050	-26.02	59.50	0.044	-27.13	84.00	0.028	-30.90
-1.75	0.365	-8.75	11.00	0.132	-17.59	35.50	0.049	-26.20	60.00	0.044	-27.13	84.50	0.027	-31.37
-1.50	0.430	-7.33	11.50	0.124	-18.10	36.00	0.049	-26.20	60.50	0.045	-26.94	85.00	0.026	-31.70
-1.25	0.501	-6.00	12.00	0.120	-18.42	36.50	0.049	-26.20	61.00	0.046	-26.74	85.50	0.024	-32.40
-1.00	0.575	-4.81	12.50	0.117	-18.60	37.00	0.049	-26.20	61.50	0.048	-26.38	86.00	0.022	-33.15
-0.75	0.650	-3.74	13.00	0.113	-18.90	37.50	0.050	-26.02	62.00	0.049	-26.20	86.50	0.020	-33.98
-0.50	0.722	-2.83	13.50	0.108	-19.29	38.00	0.050	-26.02	62.50	0.051	-25.93	87.00	0.018	-34.89
-0.25	0.790	-2.05	14.00	0.102	-19.79	38.50	0.049	-26.20	63.00	0.051	-25.85	87.50	0.015	-36.19
0.00	0.851	-1.40	14.50	0.097	-20.22	39.00	0.048	-26.38	63.50	0.051	-25.85	88.00	0.012	-38.06
0.25	0.903	-0.89	15.00	0.096	-20.35	39.50	0.047	-26.56	64.00	0.051	-25.85	88.50	0.010	-40.00
0.50	0.945	-0.49	15.50	0.095	-20.45	40.00	0.047	-26.56	64.50	0.050	-26.02	89.00	0.007	-43.10
0.75	0.976	-0.21	16.00	0.095	-20.45	40.50	0.047	-26.56	65.00	0.048	-26.29	89.50	0.004	-46.94
1.00	0.994	-0.05	16.50	0.092	-20.68	41.00	0.047	-26.56	65.50	0.047	-26.56	90.00	0.001	-56.48
1.25	1.000	0.00	17.00	0.089	-20.96	41.50	0.048	-26.38	66.00	0.045	-26.84			
1.50	0.992	-0.07	17.50	0.085	-21.36	42.00	0.048	-26.38	66.50	0.044	-27.13			
1.75	0.974	-0.23	18.00	0.082	-21.67	42.50	0.048	-26.38	67.00	0.044	-27.13			
2.00	0.943	-0.51	18.50	0.081	-21.83	43.00	0.047	-26.56	67.50	0.044	-27.13			
2.25	0.903	-0.89	19.00	0.081	-21.83	43.50	0.046	-26.65	68.00	0.044	-27.13			
2.50	0.853	-1.38	19.50	0.079	-21.99	44.00	0.046	-26.74	68.50	0.045	-26.94			
2.75	0.798	-1.96	20.00	0.077	-22.21	44.50	0.046	-26.74	69.00	0.047	-26.56			
3.00	0.738	-2.64	20.50	0.074	-22.62	45.00	0.046	-26.74	69.50	0.049	-26.29			
3.25	0.676	-3.40	21.00	0.071	-22.97	45.50	0.047	-26.56	70.00	0.050	-26.02			
3.50	0.613	-4.24	21.50	0.069	-23.22	46.00	0.048	-26.38	70.50	0.051	-25.85			
3.75	0.553	-5.15	22.00	0.068	-23.35	46.50	0.048	-26.38	71.00	0.052	-25.68			
4.00	0.498	-6.05	22.50	0.068	-23.35	47.00	0.048	-26.38	71.50	0.053	-25.51			
4.25	0.449	-6.96	23.00	0.067	-23.41	47.50	0.048	-26.38	72.00	0.052	-25.60			
4.50	0.407	-7.80	23.50	0.066	-23.61	48.00	0.047	-26.56	72.50	0.052	-25.68			
4.75	0.375	-8.52	24.00	0.064	-23.88	48.50	0.046	-26.74	73.00	0.051	-25.85			
5.00	0.349	-9.14	24.50	0.062	-24.15	49.00	0.046	-26.74	73.50	0.049	-26.11			
5.25	0.329	-9.66	25.00	0.061	-24.29	49.50	0.046	-26.74	74.00	0.048	-26.38			
5.50	0.314	-10.05	25.50	0.061	-24.29	50.00	0.047	-26.56	74.50	0.046	-26.74			
5.75	0.302	-10.40	26.00	0.061	-24.29	50.50	0.048	-26.47	75.00	0.043	-27.23			
6.00	0.289	-10.77	26.50	0.060	-24.44	51.00	0.048	-26.38	75.50	0.041	-27.64			
6.25	0.277	-11.15	27.00	0.059	-24.58	51.50	0.048	-26.38	76.00	0.039	-28.18			
6.50	0.264	-11.57	27.50	0.057	-24.81	52.00	0.048	-26.38	76.50	0.037	-28.64			
6.75	0.250	-12.04	28.00	0.056	-25.04	52.50	0.047	-26.56	77.00	0.035	-29.12			
7.00	0.235	-12.56	28.50	0.055	-25.19	53.00	0.045	-26.84	77.50	0.034	-29.37			

Azimuth Pattern

Type:

ATW-O

Polarization:

Vertical

Directivity:

1.00 numeric

(0.00 dB)

Frequency:

25 (ATSC)

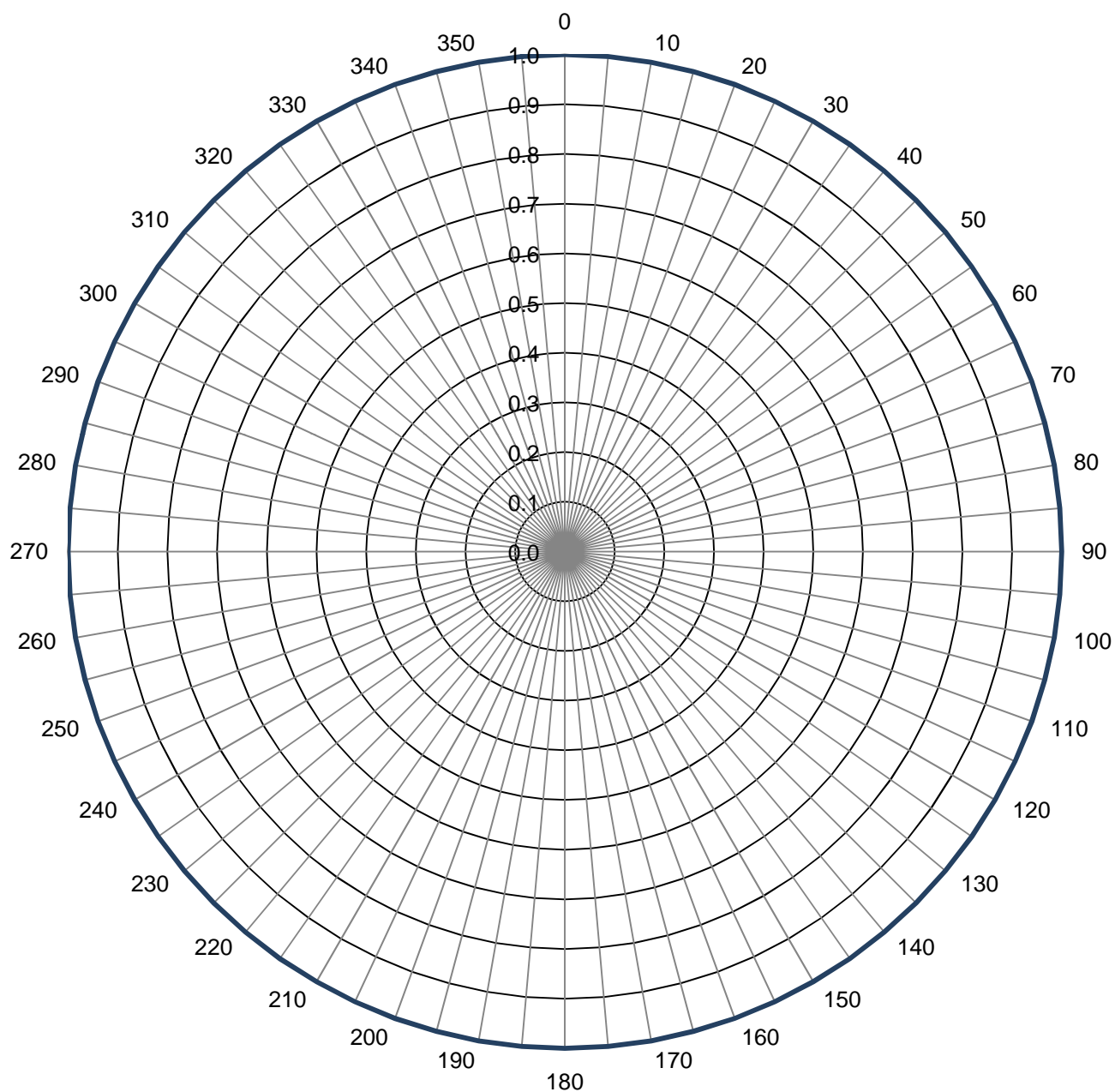
Peak(s) at:

Location:

Secaucus, NJ

NOTE: Pattern shape and directivity may vary with channel and mounting configuration.

Relative Field



Tabulated Data for Azimuth PatternType: ATW-O

Angle	Field	dB
0	1.000	0.00
2	1.000	0.00
4	1.000	0.00
6	1.000	0.00
8	1.000	0.00
10	1.000	0.00
12	1.000	0.00
14	1.000	0.00
16	1.000	0.00
18	1.000	0.00
20	1.000	0.00
22	1.000	0.00
24	1.000	0.00
26	1.000	0.00
28	1.000	0.00
30	1.000	0.00
32	1.000	0.00
34	1.000	0.00
36	1.000	0.00
38	1.000	0.00
40	1.000	0.00
42	1.000	0.00
44	1.000	0.00
46	1.000	0.00
48	1.000	0.00
50	1.000	0.00
52	1.000	0.00
54	1.000	0.00
56	1.000	0.00
58	1.000	0.00
60	1.000	0.00
62	1.000	0.00
64	1.000	0.00
66	1.000	0.00
68	1.000	0.00
70	1.000	0.00
72	1.000	0.00
74	1.000	0.00
76	1.000	0.00
78	1.000	0.00
80	1.000	0.00
82	1.000	0.00
84	1.000	0.00
86	1.000	0.00
88	1.000	0.00
90	1.000	0.00
92	1.000	0.00
94	1.000	0.00
96	1.000	0.00
98	1.000	0.00

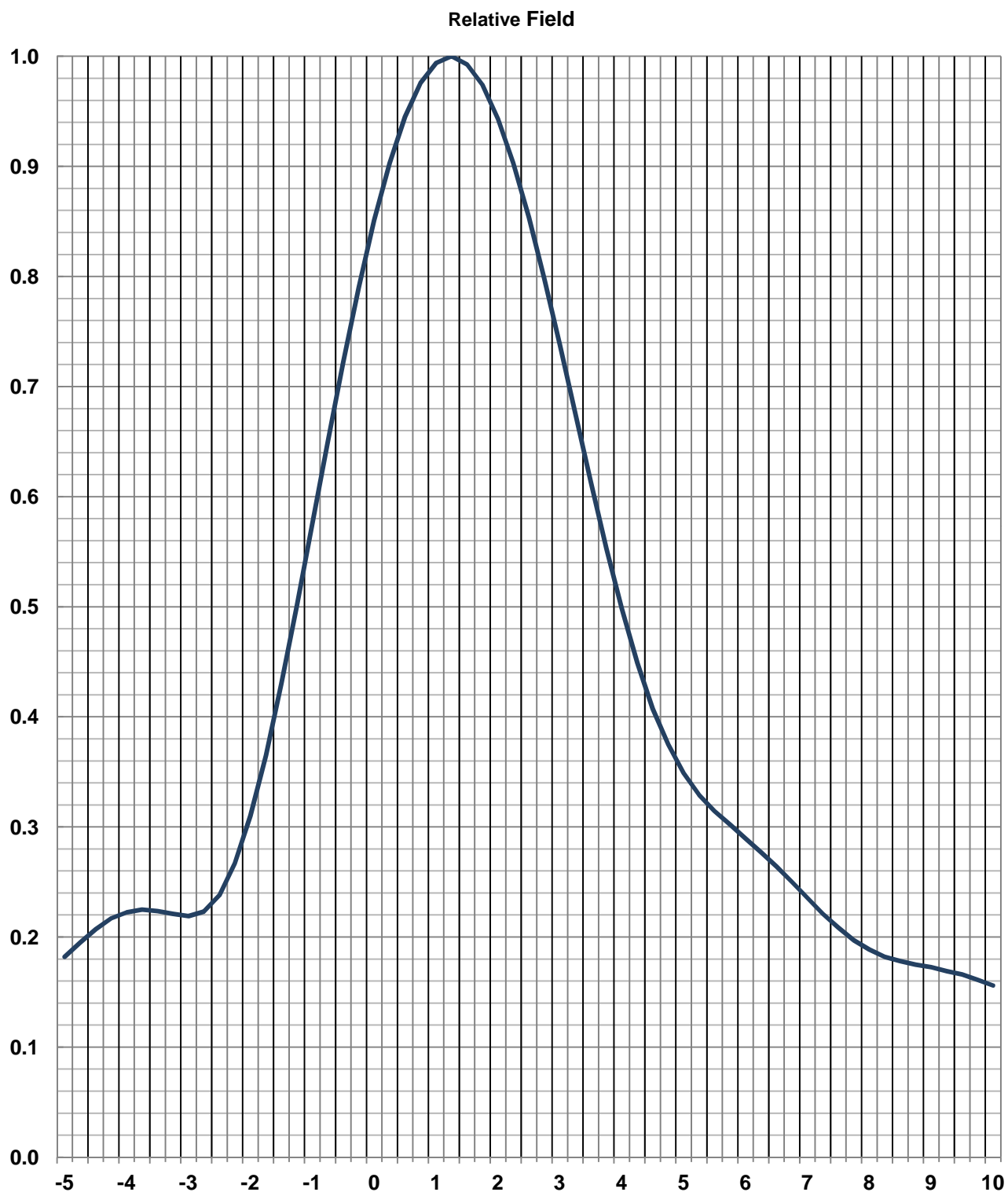
Angle	Field	dB
100	1.000	0.00
102	1.000	0.00
104	1.000	0.00
106	1.000	0.00
108	1.000	0.00
110	1.000	0.00
112	1.000	0.00
114	1.000	0.00
116	1.000	0.00
118	1.000	0.00
120	1.000	0.00
122	1.000	0.00
124	1.000	0.00
126	1.000	0.00
128	1.000	0.00
130	1.000	0.00
132	1.000	0.00
134	1.000	0.00
136	1.000	0.00
138	1.000	0.00
140	1.000	0.00
142	1.000	0.00
144	1.000	0.00
146	1.000	0.00
148	1.000	0.00
150	1.000	0.00
152	1.000	0.00
154	1.000	0.00
156	1.000	0.00
158	1.000	0.00
160	1.000	0.00
162	1.000	0.00
164	1.000	0.00
166	1.000	0.00
168	1.000	0.00
170	1.000	0.00
172	1.000	0.00
174	1.000	0.00
176	1.000	0.00
178	1.000	0.00
180	1.000	0.00
182	1.000	0.00
184	1.000	0.00
186	1.000	0.00
188	1.000	0.00
190	1.000	0.00
192	1.000	0.00
194	1.000	0.00
196	1.000	0.00
198	1.000	0.00

Angle	Field	dB
200	1.000	0.00
202	1.000	0.00
204	1.000	0.00
206	1.000	0.00
208	1.000	0.00
210	1.000	0.00
212	1.000	0.00
214	1.000	0.00
216	1.000	0.00
218	1.000	0.00
220	1.000	0.00
222	1.000	0.00
224	1.000	0.00
226	1.000	0.00
228	1.000	0.00
230	1.000	0.00
232	1.000	0.00
234	1.000	0.00
236	1.000	0.00
238	1.000	0.00
240	1.000	0.00
242	1.000	0.00
244	1.000	0.00
246	1.000	0.00
248	1.000	0.00
250	1.000	0.00
252	1.000	0.00
254	1.000	0.00
256	1.000	0.00
258	1.000	0.00
260	1.000	0.00
262	1.000	0.00
264	1.000	0.00
266	1.000	0.00
268	1.000	0.00
270	1.000	0.00
272	1.000	0.00
274	1.000	0.00
276	1.000	0.00
278	1.000	0.00
280	1.000	0.00
282	1.000	0.00
284	1.000	0.00
286	1.000	0.00
288	1.000	0.00
290	1.000	0.00
292	1.000	0.00
294	1.000	0.00
296	1.000	0.00
298	1.000	0.00

Angle	Field	dB
300	1.000	0.00
302	1.000	0.00
304	1.000	0.00
306	1.000	0.00
308	1.000	0.00
310	1.000	0.00
312	1.000	0.00
314	1.000	0.00
316	1.000	0.00
318	1.000	0.00
320	1.000	0.00
322	1.000	0.00
324	1.000	0.00
326	1.000	0.00
328	1.000	0.00
330	1.000	0.00
332	1.000	0.00
334	1.000	0.00
336	1.000	0.00
338	1.000	0.00
340	1.000	0.00
342	1.000	0.00
344	1.000	0.00
346	1.000	0.00
348	1.000	0.00
350	1.000	0.00
352	1.000	0.00
354	1.000	0.00
356	1.000	0.00
358	1.000	0.00
360	1.000	0.00

Elevation Pattern

Type:	ATW14HS5V		Polarization:	Vertical
Directivity:			Frequency:	25 (ATSC)
Main Lobe:	14.00 numeric	(11.46 dB)	Location:	Secaucus, NJ
Horizontal:	10.14 numeric	(10.06 dB)	Beam Tilt:	1.25 degrees



Tabulated Data for Elevation PatternType: ATW14HS5V

-5 to 10 degrees in 0.25 degree increments.

10 to 90 degrees in 0.50 degree increments.

Angle	Field	dB	Angle	Field	dB	Angle	Field	dB	Angle	Field	dB	Angle	Field	dB
-5.00	0.182	-14.80	7.25	0.221	-13.11	29.00	0.055	-25.19	53.50	0.044	-27.13	78.00	0.032	-29.76
-4.75	0.195	-14.20	7.50	0.208	-13.62	29.50	0.055	-25.19	54.00	0.044	-27.13	78.50	0.032	-29.90
-4.50	0.207	-13.68	7.75	0.197	-14.11	30.00	0.055	-25.19	54.50	0.044	-27.13	79.00	0.031	-30.17
-4.25	0.217	-13.27	8.00	0.188	-14.49	30.50	0.054	-25.27	55.00	0.044	-27.13	79.50	0.031	-30.17
-4.00	0.223	-13.05	8.25	0.182	-14.80	31.00	0.053	-25.51	55.50	0.045	-26.94	80.00	0.031	-30.17
-3.75	0.225	-12.96	8.50	0.178	-14.99	31.50	0.052	-25.68	56.00	0.046	-26.74	80.50	0.031	-30.17
-3.50	0.223	-13.01	8.75	0.175	-15.14	32.00	0.051	-25.85	56.50	0.047	-26.56	81.00	0.031	-30.17
-3.25	0.221	-13.11	9.00	0.172	-15.26	32.50	0.051	-25.85	57.00	0.047	-26.56	81.50	0.031	-30.17
-3.00	0.219	-13.19	9.25	0.169	-15.44	33.00	0.051	-25.85	57.50	0.047	-26.56	82.00	0.031	-30.17
-2.75	0.223	-13.03	9.50	0.166	-15.60	33.50	0.052	-25.68	58.00	0.046	-26.74	82.50	0.031	-30.17
-2.50	0.238	-12.47	9.75	0.161	-15.86	34.00	0.052	-25.68	58.50	0.045	-26.94	83.00	0.030	-30.46
-2.25	0.267	-11.47	10.00	0.156	-16.14	34.50	0.051	-25.85	59.00	0.045	-26.94	83.50	0.029	-30.75
-2.00	0.310	-10.17	10.50	0.144	-16.83	35.00	0.050	-26.02	59.50	0.044	-27.13	84.00	0.028	-30.90
-1.75	0.365	-8.75	11.00	0.132	-17.59	35.50	0.049	-26.20	60.00	0.044	-27.13	84.50	0.027	-31.37
-1.50	0.430	-7.33	11.50	0.124	-18.10	36.00	0.049	-26.20	60.50	0.045	-26.94	85.00	0.026	-31.70
-1.25	0.501	-6.00	12.00	0.120	-18.42	36.50	0.049	-26.20	61.00	0.046	-26.74	85.50	0.024	-32.40
-1.00	0.575	-4.81	12.50	0.117	-18.60	37.00	0.049	-26.20	61.50	0.048	-26.38	86.00	0.022	-33.15
-0.75	0.650	-3.74	13.00	0.113	-18.90	37.50	0.050	-26.02	62.00	0.049	-26.20	86.50	0.020	-33.98
-0.50	0.722	-2.83	13.50	0.108	-19.29	38.00	0.050	-26.02	62.50	0.051	-25.93	87.00	0.018	-34.89
-0.25	0.790	-2.05	14.00	0.102	-19.79	38.50	0.049	-26.20	63.00	0.051	-25.85	87.50	0.015	-36.19
0.00	0.851	-1.40	14.50	0.097	-20.22	39.00	0.048	-26.38	63.50	0.051	-25.85	88.00	0.012	-38.06
0.25	0.903	-0.89	15.00	0.096	-20.35	39.50	0.047	-26.56	64.00	0.051	-25.85	88.50	0.010	-40.00
0.50	0.945	-0.49	15.50	0.095	-20.45	40.00	0.047	-26.56	64.50	0.050	-26.02	89.00	0.007	-43.10
0.75	0.976	-0.21	16.00	0.095	-20.45	40.50	0.047	-26.56	65.00	0.048	-26.29	89.50	0.004	-46.94
1.00	0.994	-0.05	16.50	0.092	-20.68	41.00	0.047	-26.56	65.50	0.047	-26.56	90.00	0.001	-56.48
1.25	1.000	0.00	17.00	0.089	-20.96	41.50	0.048	-26.38	66.00	0.045	-26.84			
1.50	0.992	-0.07	17.50	0.085	-21.36	42.00	0.048	-26.38	66.50	0.044	-27.13			
1.75	0.974	-0.23	18.00	0.082	-21.67	42.50	0.048	-26.38	67.00	0.044	-27.13			
2.00	0.943	-0.51	18.50	0.081	-21.83	43.00	0.047	-26.56	67.50	0.044	-27.13			
2.25	0.903	-0.89	19.00	0.081	-21.83	43.50	0.046	-26.65	68.00	0.044	-27.13			
2.50	0.853	-1.38	19.50	0.079	-21.99	44.00	0.046	-26.74	68.50	0.045	-26.94			
2.75	0.798	-1.96	20.00	0.077	-22.21	44.50	0.046	-26.74	69.00	0.047	-26.56			
3.00	0.738	-2.64	20.50	0.074	-22.62	45.00	0.046	-26.74	69.50	0.049	-26.29			
3.25	0.676	-3.40	21.00	0.071	-22.97	45.50	0.047	-26.56	70.00	0.050	-26.02			
3.50	0.613	-4.24	21.50	0.069	-23.22	46.00	0.048	-26.38	70.50	0.051	-25.85			
3.75	0.553	-5.15	22.00	0.068	-23.35	46.50	0.048	-26.38	71.00	0.052	-25.68			
4.00	0.498	-6.05	22.50	0.068	-23.35	47.00	0.048	-26.38	71.50	0.053	-25.51			
4.25	0.449	-6.96	23.00	0.067	-23.41	47.50	0.048	-26.38	72.00	0.052	-25.60			
4.50	0.407	-7.80	23.50	0.066	-23.61	48.00	0.047	-26.56	72.50	0.052	-25.68			
4.75	0.375	-8.52	24.00	0.064	-23.88	48.50	0.046	-26.74	73.00	0.051	-25.85			
5.00	0.349	-9.14	24.50	0.062	-24.15	49.00	0.046	-26.74	73.50	0.049	-26.11			
5.25	0.329	-9.66	25.00	0.061	-24.29	49.50	0.046	-26.74	74.00	0.048	-26.38			
5.50	0.314	-10.05	25.50	0.061	-24.29	50.00	0.047	-26.56	74.50	0.046	-26.74			
5.75	0.302	-10.40	26.00	0.061	-24.29	50.50	0.048	-26.47	75.00	0.043	-27.23			
6.00	0.289	-10.77	26.50	0.060	-24.44	51.00	0.048	-26.38	75.50	0.041	-27.64			
6.25	0.277	-11.15	27.00	0.059	-24.58	51.50	0.048	-26.38	76.00	0.039	-28.18			
6.50	0.264	-11.57	27.50	0.057	-24.81	52.00	0.048	-26.38	76.50	0.037	-28.64			
6.75	0.250	-12.04	28.00	0.056	-25.04	52.50	0.047	-26.56	77.00	0.035	-29.12			
7.00	0.235	-12.56	28.50	0.055	-25.19	53.00	0.045	-26.84	77.50	0.034	-29.37			