

Azi	Rel	dBk	kW	dB	Azi	Rel	dBk	kW	dB
0	1.000	2.04	1.600	0.00	180	1.000	2.04	1.600	0.00
10	1.000	2.04	1.600	0.00	190	1.000	2.04	1.600	0.00
20	1.000	2.04	1.600	0.00	200	1.000	2.04	1.600	0.00
30	1.000	2.04	1.600	0.00	210	1.000	2.04	1.600	0.00
40	0.796	0.06	1.014	-1.98	220	1.000	2.04	1.600	0.00
50	0.632	-1.94	0.639	-3.99	230	1.000	2.04	1.600	0.00
60	0.502	-3.94	0.403	-5.99	240	1.000	2.04	1.600	0.00
70	0.409	-5.72	0.268	-7.77	250	1.000	2.04	1.600	0.00
80	0.337	-7.41	0.182	-9.45	260	1.000	2.04	1.600	0.00
90	0.337	-7.41	0.182	-9.45	270	1.000	2.04	1.600	0.00
100	0.340	-7.33	0.185	-9.37	280	1.000	2.04	1.600	0.00
110	0.428	-5.33	0.293	-7.37	290	1.000	2.04	1.600	0.00
120	0.539	-3.33	0.465	-5.37	300	1.000	2.04	1.600	0.00
130	0.678	-1.33	0.735	-3.38	310	1.000	2.04	1.600	0.00
140	0.854	0.67	1.167	-1.37	320	1.000	2.04	1.600	0.00
150	1.000	2.04	1.600	0.00	330	1.000	2.04	1.600	0.00
160	1.000	2.04	1.600	0.00	340	0.959	1.68	1.471	-0.36
170	1.000	2.04	1.600	0.00	350	0.909	1.21	1.322	-0.83
Extra Radial									
147	1.000	2.04	1.600	0.00					
336	1.000	2.04	1.600	0.00					

Rotation Angle = 0

Antenna Mfg.: Shively Labs
Antenna Type: 6014-2/3R

Date: 4/29/2011

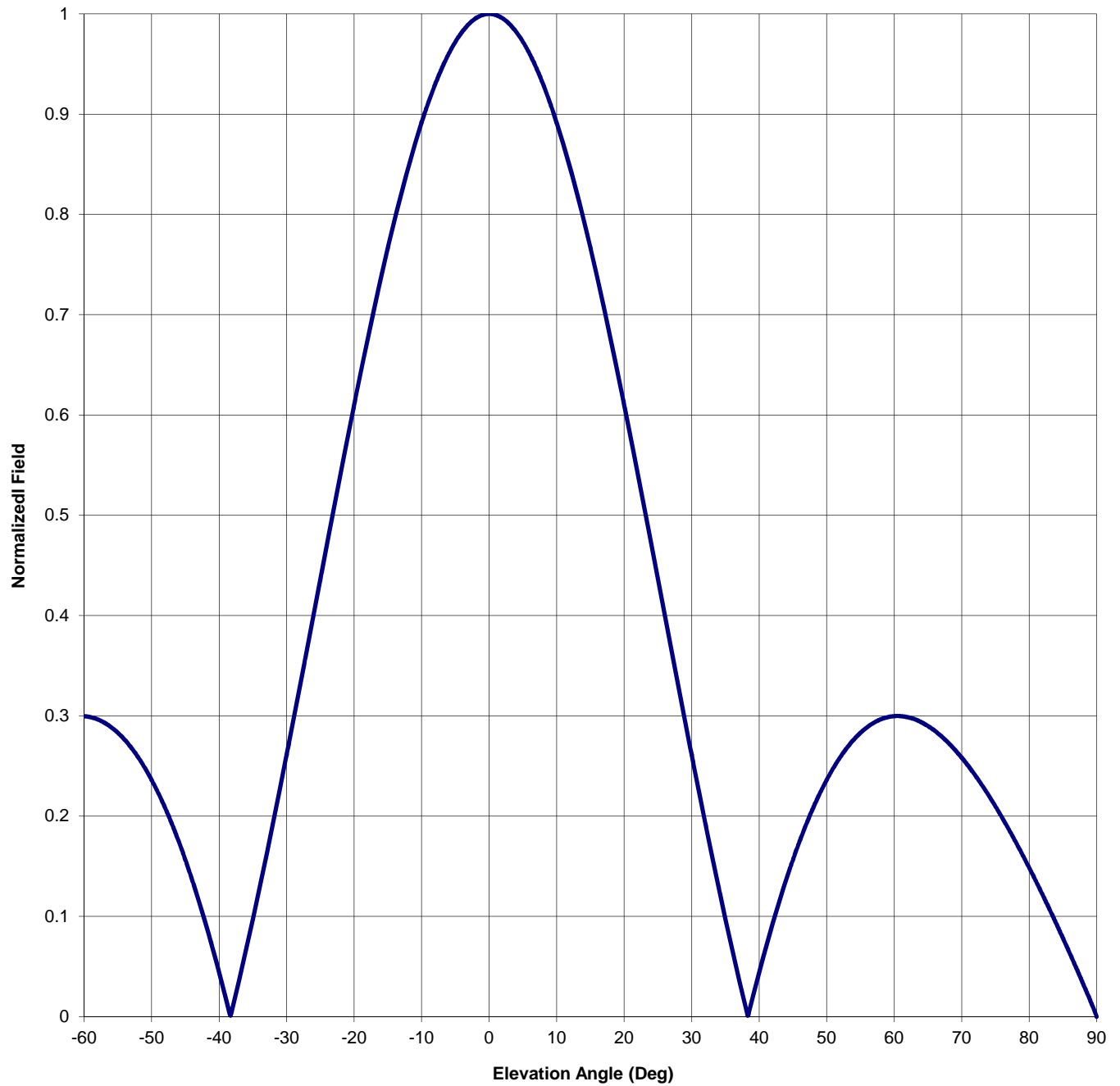
Station: WNCH

Frequency: 88.1

Channel #: 201

Figure: Figure 3

Beam Tilt	0	
Gain (Max)	1.472	1.680 dB
Gain (Horizon)	1.472	1.680 dB



Antenna Mfg.: Shively Labs

Date: 4/29/2011

Antenna Type: 6014-2/3R

Station: WNCH

Beam Tilt 0

Frequency: 88.1

Gain (Max) 1.472

1.680 dB

Channel #: 201

Gain (Horizon) 1.472

1.680 dB

Figure: Figure 3

Angle of Depression (Deg)	Relative Field	Angle of Depression (Deg)	Relative Field	Angle of Depression (Deg)	Relative Field	Angle of Depression (Deg)	Relative Field
-90	0.000	-44	0.137	0	1.000	46	0.175
-89	0.017	-43	0.115	1	0.999	47	0.192
-88	0.033	-42	0.093	2	0.996	48	0.208
-87	0.048	-41	0.069	3	0.990	49	0.223
-86	0.063	-40	0.044	4	0.982	50	0.236
-85	0.078	-39	0.018	5	0.972	51	0.248
-84	0.093	-38	0.009	6	0.960	52	0.259
-83	0.107	-37	0.038	7	0.946	53	0.268
-82	0.121	-36	0.067	8	0.930	54	0.276
-81	0.135	-35	0.097	9	0.912	55	0.283
-80	0.149	-34	0.129	10	0.892	56	0.289
-79	0.162	-33	0.161	11	0.870	57	0.293
-78	0.174	-32	0.194	12	0.846	58	0.296
-77	0.187	-31	0.227	13	0.821	59	0.299
-76	0.198	-30	0.261	14	0.795	60	0.300
-75	0.210	-29	0.296	15	0.767	61	0.300
-74	0.221	-28	0.331	16	0.738	62	0.299
-73	0.231	-27	0.366	17	0.707	63	0.297
-72	0.241	-26	0.401	18	0.676	64	0.294
-71	0.250	-25	0.437	19	0.643	65	0.290
-70	0.258	-24	0.472	20	0.610	66	0.285
-69	0.266	-23	0.507	21	0.576	67	0.280
-68	0.273	-22	0.542	22	0.542	68	0.273
-67	0.280	-21	0.576	23	0.507	69	0.266
-66	0.285	-20	0.610	24	0.472	70	0.258
-65	0.290	-19	0.643	25	0.437	71	0.250
-64	0.294	-18	0.676	26	0.401	72	0.241
-63	0.297	-17	0.707	27	0.366	73	0.231
-62	0.299	-16	0.738	28	0.331	74	0.221
-61	0.300	-15	0.767	29	0.296	75	0.210
-60	0.300	-14	0.795	30	0.261	76	0.198
-59	0.299	-13	0.821	31	0.227	77	0.187
-58	0.296	-12	0.846	32	0.194	78	0.174
-57	0.293	-11	0.870	33	0.161	79	0.162
-56	0.289	-10	0.892	34	0.129	80	0.149
-55	0.283	-9	0.912	35	0.097	81	0.135
-54	0.276	-8	0.930	36	0.067	82	0.121
-53	0.268	-7	0.946	37	0.038	83	0.107
-52	0.259	-6	0.960	38	0.009	84	0.093
-51	0.248	-5	0.972	39	0.018	85	0.078
-50	0.236	-4	0.982	40	0.044	86	0.063
-49	0.223	-3	0.990	41	0.069	87	0.048
-48	0.208	-2	0.996	42	0.093	88	0.033
-47	0.192	-1	0.999	43	0.115	89	0.017
-46	0.175	0	1.000	44	0.137	90	0.000
-45	0.156			45	0.156		

Directional Antenna

The proposed custom directional panel antenna pattern meets the Commission's rules in that the radio frequency emission does not change more than two dB for each ten degrees of azimuthal variation. Also, the maximum pattern attenuation in the deepest null is less than 15 dB. The pattern shown is a composite of the maximum field values in the horizontal and vertical planes.

The proposed panel antenna will be mounted on the side of a tower that has been specified by the antenna manufacturer in accordance with the instructions provided by the manufacturer. The antenna will not be mounted on the top of a tower that includes a top mounted platform larger than the nominal cross-sectional area of the tower in the horizontal plane. No other antennas of any type will be mounted at the same tower level as the directional antenna nor within the horizontal or vertical distance specified by the manufacturer as being necessary to maintain proper directional operation. The antenna will be designed and tested by a major manufacturer of broadcast antennas known to the Commission. The pattern will be achieved through traditional methods including power-splitting, resonators and phasing.