

## AZIMUTH PATTERN Horizontal Polarization

In Free Space

Proposal No. **C-71053**  
 Date **5-Dec-17**  
 Call Letters **WHDH**  
 Channel **35**  
 Frequency **599 MHz**  
 Antenna Type **TFU-16WB C160**  
 Gain **1.69 (2.27dB)**  
 Calculated

Deg	Value	Deg	Value	Deg	Value	Deg	Value	Deg	Value	Deg	Value	Deg	Value	Deg	Value	Deg	Value	Deg	Value
0	0.869	36	0.992	72	0.822	108	0.823	144	0.998	180	0.873	216	0.578	252	0.453	288	0.453	324	0.578
1	0.874	37	0.991	73	0.818	109	0.827	145	0.999	181	0.868	217	0.563	253	0.466	289	0.439	325	0.593
2	0.879	38	0.990	74	0.814	110	0.832	146	1.000	182	0.863	218	0.548	254	0.480	290	0.425	326	0.607
3	0.883	39	0.988	75	0.811	111	0.837	147	1.000	183	0.858	219	0.532	255	0.493	291	0.411	327	0.621
4	0.888	40	0.986	76	0.808	112	0.842	148	1.000	184	0.853	220	0.517	256	0.505	292	0.398	328	0.634
5	0.893	41	0.983	77	0.805	113	0.847	149	0.999	185	0.848	221	0.501	257	0.517	293	0.384	329	0.647
6	0.898	42	0.980	78	0.802	114	0.852	150	0.998	186	0.843	222	0.485	258	0.529	294	0.371	330	0.659
7	0.903	43	0.977	79	0.799	115	0.858	151	0.997	187	0.838	223	0.468	259	0.539	295	0.359	331	0.671
8	0.908	44	0.973	80	0.797	116	0.863	152	0.995	188	0.833	224	0.452	260	0.549	296	0.348	332	0.683
9	0.913	45	0.969	81	0.795	117	0.869	153	0.993	189	0.828	225	0.436	261	0.558	297	0.338	333	0.694
10	0.918	46	0.965	82	0.793	118	0.875	154	0.991	190	0.823	226	0.421	262	0.567	298	0.329	334	0.704
11	0.923	47	0.960	83	0.792	119	0.881	155	0.988	191	0.817	227	0.405	263	0.574	299	0.322	335	0.714
12	0.928	48	0.955	84	0.790	120	0.888	156	0.985	192	0.812	228	0.391	264	0.581	300	0.316	336	0.724
13	0.933	49	0.950	85	0.789	121	0.894	157	0.982	193	0.806	229	0.377	265	0.586	301	0.312	337	0.733
14	0.938	50	0.945	86	0.788	122	0.900	158	0.979	194	0.800	230	0.364	266	0.591	302	0.310	338	0.742
15	0.943	51	0.940	87	0.788	123	0.906	159	0.975	195	0.794	231	0.351	267	0.594	303	0.311	339	0.750
16	0.947	52	0.934	88	0.787	124	0.913	160	0.971	196	0.788	232	0.341	268	0.597	304	0.313	340	0.758
17	0.952	53	0.928	89	0.787	125	0.919	161	0.967	197	0.781	233	0.331	269	0.599	305	0.317	341	0.765
18	0.956	54	0.922	90	0.787	126	0.925	162	0.962	198	0.774	234	0.323	270	0.599	306	0.323	342	0.773
19	0.960	55	0.916	91	0.787	127	0.931	163	0.958	199	0.767	235	0.317	271	0.599	307	0.331	343	0.780
20	0.964	56	0.910	92	0.787	128	0.937	164	0.953	200	0.759	236	0.313	272	0.597	308	0.340	344	0.786
21	0.968	57	0.904	93	0.788	129	0.943	165	0.949	201	0.751	237	0.311	273	0.595	309	0.351	345	0.792
22	0.972	58	0.898	94	0.788	130	0.949	166	0.944	202	0.743	238	0.310	274	0.591	310	0.364	346	0.798
23	0.975	59	0.892	95	0.789	131	0.954	167	0.939	203	0.734	239	0.312	275	0.586	311	0.377	347	0.804
24	0.979	60	0.886	96	0.791	132	0.959	168	0.934	204	0.725	240	0.316	276	0.581	312	0.391	348	0.810
25	0.982	61	0.880	97	0.792	133	0.964	169	0.929	205	0.715	241	0.322	277	0.575	313	0.405	349	0.815
26	0.984	62	0.874	98	0.794	134	0.969	170	0.923	206	0.705	242	0.329	278	0.567	314	0.421	350	0.820
27	0.987	63	0.868	99	0.795	135	0.973	171	0.918	207	0.694	243	0.338	279	0.559	315	0.436	351	0.826
28	0.989	64	0.862	100	0.798	136	0.978	172	0.913	208	0.683	244	0.348	280	0.550	316	0.452	352	0.831
29	0.990	65	0.856	101	0.800	137	0.981	173	0.908	209	0.672	245	0.359	281	0.540	317	0.468	353	0.836
30	0.992	66	0.851	102	0.802	138	0.985	174	0.903	210	0.660	246	0.371	282	0.529	318	0.484	354	0.840
31	0.993	67	0.845	103	0.805	139	0.988	175	0.898	211	0.647	247	0.384	283	0.518	319	0.501	355	0.845
32	0.993	68	0.840	104	0.808	140	0.991	176	0.893	212	0.634	248	0.397	284	0.506	320	0.517	356	0.850
33	0.994	69	0.835	105	0.812	141	0.993	177	0.888	213	0.621	249	0.411	285	0.493	321	0.532	357	0.855
34	0.994	70	0.831	106	0.815	142	0.995	178	0.883	214	0.607	250	0.425	286	0.480	322	0.548	358	0.859
35	0.993	71	0.826	107	0.819	143	0.997	179	0.878	215	0.593	251	0.439	287	0.467	323	0.563	359	0.864

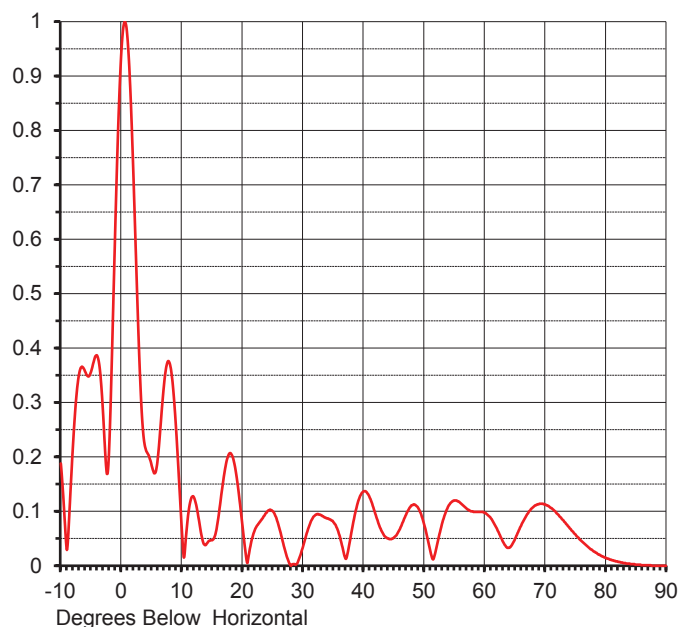
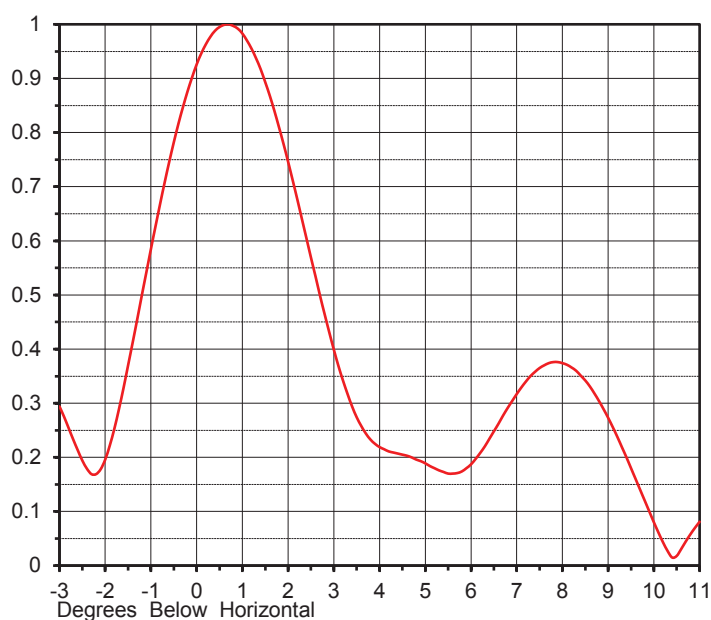
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## ELEVATION PATTERN

Proposal No. **C-71053**  
 Date **5-Dec-17**  
 Call Letters **WHDH**  
 Channel **35**  
 Frequency **599 MHz**  
 Antenna Type **TFU-16WB C160**

RMS Directivity at Main Lobe **14.3 ( 11.54 dB )**  
 RMS Directivity at Horizontal **12.8 ( 11.07 dB )**  
**Calculated**

Beam Tilt **0.55 deg**  
 Pattern Number **16W142055**



Angle	Field	Angle	Field	Angle	Field	Angle	Field	Angle	Field
-10.0	0.188	10.0	0.061	30.0	0.036	50.0	0.075	70.0	0.112
-9.0	0.029	11.0	0.092	31.0	0.073	51.0	0.027	71.0	0.106
-8.0	0.220	12.0	0.125	32.0	0.093	52.0	0.033	72.0	0.095
-7.0	0.351	13.0	0.070	33.0	0.093	53.0	0.080	73.0	0.083
-6.0	0.357	14.0	0.039	34.0	0.087	54.0	0.110	74.0	0.069
-5.0	0.357	15.0	0.047	35.0	0.080	55.0	0.120	75.0	0.057
-4.0	0.386	16.0	0.088	36.0	0.056	56.0	0.115	76.0	0.045
-3.0	0.275	17.0	0.170	37.0	0.013	57.0	0.105	77.0	0.035
-2.0	0.222	18.0	0.207	38.0	0.063	58.0	0.100	78.0	0.026
-1.0	0.627	19.0	0.165	39.0	0.115	59.0	0.099	79.0	0.020
0.0	0.946	20.0	0.072	40.0	0.137	60.0	0.097	80.0	0.014
1.0	0.970	21.0	0.018	41.0	0.125	61.0	0.087	81.0	0.010
2.0	0.712	22.0	0.065	42.0	0.093	62.0	0.068	82.0	0.007
3.0	0.369	23.0	0.083	43.0	0.063	63.0	0.044	83.0	0.005
4.0	0.215	24.0	0.098	44.0	0.050	64.0	0.033	84.0	0.003
5.0	0.184	25.0	0.100	45.0	0.052	65.0	0.050	85.0	0.002
6.0	0.197	26.0	0.072	46.0	0.068	66.0	0.074	86.0	0.001
7.0	0.329	27.0	0.029	47.0	0.094	67.0	0.095	87.0	0.001
8.0	0.371	28.0	0.000	48.0	0.111	68.0	0.108	88.0	0.000
9.0	0.256	29.0	0.004	49.0	0.106	69.0	0.114	89.0	0.000
								90.0	0.000

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