

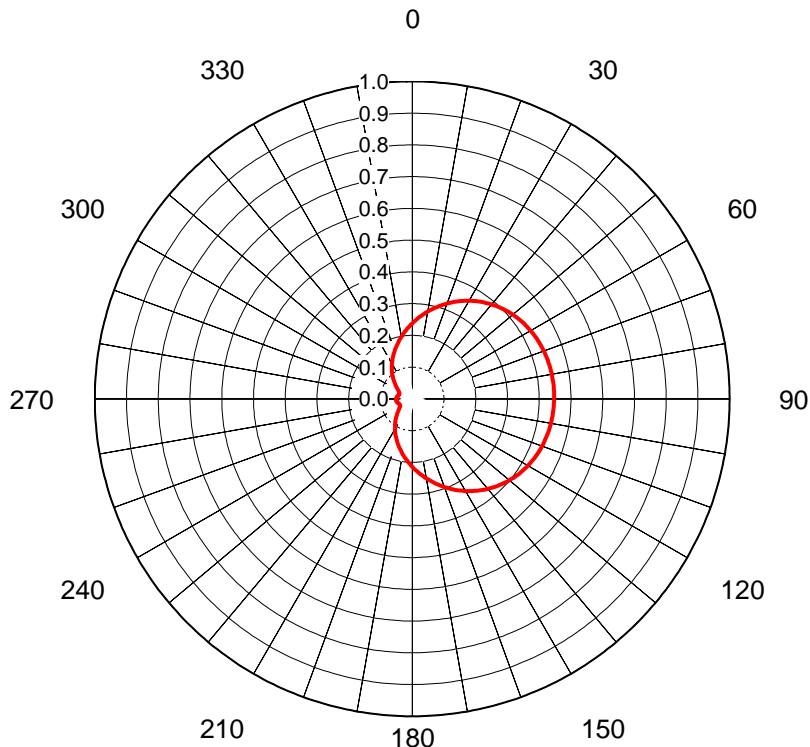
AZIMUTH PATTERN Horizontal Polarization

In Free Space

Proposal No. **C-71959-1**
 Date **24-Oct-22**
 Call Letters **WFGC**
 Channel **7**
 Frequency **177 MHz**
 Antenna Type **THV-5A7/VP-R P220 SM**
 Gain **2.05 (3.12dB)**
 Calculated

Deg	Value	Deg	Value	Deg	Value	Deg	Value	Deg	Value	Deg	Value	Deg	Value	Deg	Value	Deg	Value
0	1.000	36	0.799	72	0.494	108	0.528	144	0.855	180	0.988	216	0.634	252	0.185	288	0.235
1	1.000	37	0.789	73	0.489	109	0.535	145	0.864	181	0.985	217	0.620	253	0.178	289	0.245
2	1.000	38	0.779	74	0.485	110	0.542	146	0.873	182	0.981	218	0.605	254	0.171	290	0.255
3	1.000	39	0.769	75	0.481	111	0.549	147	0.881	183	0.976	219	0.591	255	0.166	291	0.265
4	0.999	40	0.759	76	0.477	112	0.556	148	0.890	184	0.972	220	0.576	256	0.160	292	0.276
5	0.998	41	0.749	77	0.474	113	0.564	149	0.898	185	0.967	221	0.561	257	0.155	293	0.288
6	0.996	42	0.739	78	0.471	114	0.572	150	0.906	186	0.961	222	0.547	258	0.151	294	0.299
7	0.994	43	0.729	79	0.468	115	0.580	151	0.913	187	0.955	223	0.532	259	0.147	295	0.311
8	0.992	44	0.719	80	0.465	116	0.588	152	0.921	188	0.949	224	0.517	260	0.144	296	0.324
9	0.989	45	0.709	81	0.463	117	0.597	153	0.928	189	0.942	225	0.503	261	0.141	297	0.336
10	0.986	46	0.700	82	0.461	118	0.605	154	0.934	190	0.935	226	0.488	262	0.138	298	0.349
11	0.982	47	0.690	83	0.460	119	0.614	155	0.941	191	0.927	227	0.473	263	0.136	299	0.362
12	0.978	48	0.680	84	0.459	120	0.623	156	0.947	192	0.919	228	0.459	264	0.134	300	0.375
13	0.974	49	0.670	85	0.458	121	0.632	157	0.953	193	0.911	229	0.445	265	0.133	301	0.389
14	0.969	50	0.660	86	0.457	122	0.642	158	0.959	194	0.902	230	0.431	266	0.133	302	0.403
15	0.964	51	0.651	87	0.457	123	0.651	159	0.964	195	0.893	231	0.416	267	0.132	303	0.416
16	0.959	52	0.642	88	0.457	124	0.660	160	0.969	196	0.884	232	0.403	268	0.133	304	0.431
17	0.953	53	0.632	89	0.458	125	0.670	161	0.974	197	0.874	233	0.389	269	0.133	305	0.445
18	0.947	54	0.623	90	0.459	126	0.680	162	0.978	198	0.864	234	0.375	270	0.134	306	0.459
19	0.941	55	0.614	91	0.460	127	0.690	163	0.982	199	0.853	235	0.362	271	0.136	307	0.473
20	0.934	56	0.605	92	0.461	128	0.700	164	0.986	200	0.842	236	0.349	272	0.138	308	0.488
21	0.928	57	0.597	93	0.463	129	0.709	165	0.989	201	0.831	237	0.336	273	0.141	309	0.503
22	0.921	58	0.588	94	0.465	130	0.719	166	0.992	202	0.820	238	0.324	274	0.144	310	0.517
23	0.913	59	0.580	95	0.468	131	0.729	167	0.994	203	0.808	239	0.311	275	0.147	311	0.532
24	0.906	60	0.572	96	0.471	132	0.739	168	0.996	204	0.796	240	0.299	276	0.151	312	0.547
25	0.898	61	0.564	97	0.474	133	0.749	169	0.998	205	0.784	241	0.288	277	0.155	313	0.561
26	0.890	62	0.556	98	0.477	134	0.759	170	0.999	206	0.771	242	0.276	278	0.160	314	0.576
27	0.881	63	0.549	99	0.481	135	0.769	171	1.000	207	0.758	243	0.265	279	0.166	315	0.591
28	0.873	64	0.542	100	0.485	136	0.779	172	1.000	208	0.745	244	0.255	280	0.171	316	0.605
29	0.864	65	0.535	101	0.489	137	0.789	173	1.000	209	0.732	245	0.245	281	0.178	317	0.620
30	0.855	66	0.528	102	0.494	138	0.799	174	1.000	210	0.719	246	0.235	282	0.185	318	0.634
31	0.846	67	0.522	103	0.499	139	0.809	175	0.999	211	0.705	247	0.225	283	0.192	319	0.649
32	0.837	68	0.516	104	0.504	140	0.818	176	0.997	212	0.691	248	0.216	284	0.200	320	0.663
33	0.828	69	0.510	105	0.510	141	0.828	177	0.996	213	0.677	249	0.208	285	0.208	321	0.677
34	0.818	70	0.504	106	0.516	142	0.837	178	0.994	214	0.663	250	0.200	286	0.216	322	0.691
35	0.809	71	0.499	107	0.522	143	0.846	179	0.991	215	0.649	251	0.192	287	0.225	323	0.705

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AZIMUTH PATTERN Vertical Polarization

In Free Space

Proposal No. **C-71959-1**
 Date **24-Oct-22**
 Call Letters **WFGC**
 Channel **7**
 Frequency **177 MHz**
 Antenna Type **THV-5A7/VP-R P220 SM**
 Gain **2.56 (4.07dB)**
 Calculated

Deg	Value	Deg	Value	Deg	Value	Deg	Value	Deg	Value	Deg	Value	Deg	Value	Deg	Value	Deg	Value
0	0.238	36	0.377	72	0.442	108	0.437	144	0.357	180	0.214	216	0.091	252	0.046	288	0.043
1	0.242	37	0.380	73	0.443	109	0.436	145	0.353	181	0.210	217	0.088	253	0.046	289	0.043
2	0.246	38	0.383	74	0.444	110	0.435	146	0.350	182	0.206	218	0.085	254	0.047	290	0.043
3	0.250	39	0.386	75	0.444	111	0.434	147	0.346	183	0.202	219	0.083	255	0.047	291	0.043
4	0.254	40	0.388	76	0.445	112	0.433	148	0.343	184	0.198	220	0.080	256	0.048	292	0.043
5	0.258	41	0.391	77	0.445	113	0.432	149	0.339	185	0.194	221	0.077	257	0.048	293	0.044
6	0.263	42	0.394	78	0.446	114	0.430	150	0.335	186	0.191	222	0.075	258	0.049	294	0.044
7	0.267	43	0.397	79	0.446	115	0.429	151	0.331	187	0.187	223	0.072	259	0.049	295	0.045
8	0.271	44	0.399	80	0.446	116	0.427	152	0.327	188	0.183	224	0.070	260	0.050	296	0.046
9	0.275	45	0.402	81	0.446	117	0.426	153	0.324	189	0.180	225	0.067	261	0.050	297	0.047
10	0.279	46	0.404	82	0.447	118	0.424	154	0.320	190	0.176	226	0.065	262	0.050	298	0.048
11	0.283	47	0.406	83	0.447	119	0.423	155	0.316	191	0.172	227	0.063	263	0.050	299	0.049
12	0.287	48	0.409	84	0.447	120	0.421	156	0.312	192	0.169	228	0.061	264	0.051	300	0.050
13	0.291	49	0.411	85	0.447	121	0.419	157	0.308	193	0.165	229	0.059	265	0.051	301	0.052
14	0.296	50	0.413	86	0.447	122	0.417	158	0.304	194	0.162	230	0.057	266	0.051	302	0.053
15	0.300	51	0.415	87	0.447	123	0.415	159	0.300	195	0.158	231	0.055	267	0.051	303	0.055
16	0.304	52	0.417	88	0.447	124	0.413	160	0.296	196	0.155	232	0.053	268	0.051	304	0.057
17	0.308	53	0.419	89	0.447	125	0.411	161	0.291	197	0.151	233	0.052	269	0.051	305	0.059
18	0.312	54	0.421	90	0.447	126	0.409	162	0.287	198	0.148	234	0.050	270	0.051	306	0.061
19	0.316	55	0.423	91	0.447	127	0.406	163	0.283	199	0.144	235	0.049	271	0.050	307	0.063
20	0.320	56	0.424	92	0.447	128	0.404	164	0.279	200	0.141	236	0.048	272	0.050	308	0.065
21	0.324	57	0.426	93	0.446	129	0.402	165	0.275	201	0.138	237	0.047	273	0.050	309	0.067
22	0.327	58	0.427	94	0.446	130	0.399	166	0.271	202	0.134	238	0.046	274	0.050	310	0.070
23	0.331	59	0.429	95	0.446	131	0.397	167	0.267	203	0.131	239	0.045	275	0.049	311	0.072
24	0.335	60	0.430	96	0.446	132	0.394	168	0.263	204	0.128	240	0.044	276	0.049	312	0.075
25	0.339	61	0.432	97	0.445	133	0.391	169	0.258	205	0.125	241	0.044	277	0.048	313	0.077
26	0.343	62	0.433	98	0.445	134	0.388	170	0.254	206	0.121	242	0.043	278	0.048	314	0.080
27	0.346	63	0.434	99	0.444	135	0.386	171	0.250	207	0.118	243	0.043	279	0.047	315	0.083
28	0.350	64	0.435	100	0.444	136	0.383	172	0.246	208	0.115	244	0.043	280	0.047	316	0.085
29	0.353	65	0.436	101	0.443	137	0.380	173	0.242	209	0.112	245	0.043	281	0.046	317	0.088
30	0.357	66	0.437	102	0.442	138	0.377	174	0.238	210	0.109	246	0.043	282	0.046	318	0.091
31	0.360	67	0.438	103	0.442	139	0.373	175	0.234	211	0.106	247	0.044	283	0.045	319	0.094
32	0.364	68	0.439	104	0.441	140	0.370	176	0.230	212	0.103	248	0.044	284	0.045	320	0.097
33	0.367	69	0.440	105	0.440	141	0.367	177	0.226	213	0.100	249	0.044	285	0.044	321	0.100
34	0.370	70	0.441	106	0.439	142	0.364	178	0.222	214	0.097	250	0.045	286	0.044	322	0.103
35	0.373	71	0.442	107	0.438	143	0.360	179	0.218	215	0.094	251	0.045	287	0.044	323	0.106

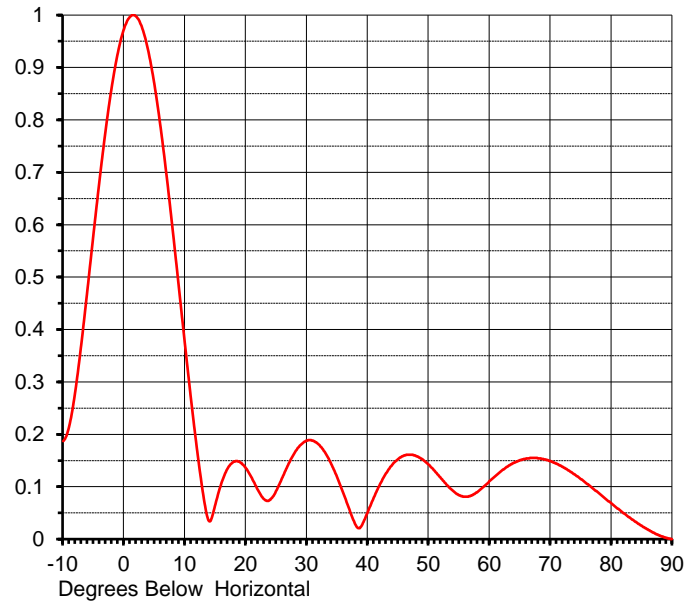
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ELEVATION PATTERN

Proposal No. **C-71959-1**
 Date **24-Oct-22**
 Call Letters **WFGC**
 Channel **7**
 Frequency **177 MHz**
 Antenna Type **THV-5A7/VP-R P220 SM**

RMS Directivity at Main Lobe **5.0 (6.99 dB)**
 RMS Directivity at Horizontal **4.7 (6.72 dB)**
Calculated

Beam Tilt **1.50 deg**
 Pattern Number **05V050150**



Angle	Field	Angle	Field	Angle	Field	Angle	Field	Angle	Field
-10.0	0.187	10.0	0.370	30.0	0.188	50.0	0.142	70.0	0.149
-9.0	0.216	11.0	0.265	31.0	0.188	51.0	0.130	71.0	0.144
-8.0	0.283	12.0	0.168	32.0	0.180	52.0	0.116	72.0	0.138
-7.0	0.374	13.0	0.084	33.0	0.165	53.0	0.103	73.0	0.131
-6.0	0.478	14.0	0.034	34.0	0.143	54.0	0.092	74.0	0.123
-5.0	0.585	15.0	0.067	35.0	0.117	55.0	0.084	75.0	0.114
-4.0	0.688	16.0	0.108	36.0	0.087	56.0	0.081	76.0	0.105
-3.0	0.783	17.0	0.135	37.0	0.056	57.0	0.083	77.0	0.096
-2.0	0.865	18.0	0.148	38.0	0.027	58.0	0.090	78.0	0.087
-1.0	0.929	19.0	0.147	39.0	0.026	59.0	0.100	79.0	0.077
0.0	0.974	20.0	0.135	40.0	0.052	60.0	0.111	80.0	0.068
1.0	0.997	21.0	0.116	41.0	0.080	61.0	0.121	81.0	0.058
2.0	0.997	22.0	0.093	42.0	0.105	62.0	0.131	82.0	0.049
3.0	0.974	23.0	0.076	43.0	0.126	63.0	0.139	83.0	0.041
4.0	0.930	24.0	0.075	44.0	0.142	64.0	0.146	84.0	0.033
5.0	0.866	25.0	0.093	45.0	0.153	65.0	0.151	85.0	0.025
6.0	0.785	26.0	0.118	46.0	0.160	66.0	0.154	86.0	0.018
7.0	0.691	27.0	0.144	47.0	0.161	67.0	0.155	87.0	0.012
8.0	0.587	28.0	0.165	48.0	0.158	68.0	0.154	88.0	0.006
9.0	0.479	29.0	0.180	49.0	0.152	69.0	0.152	89.0	0.002
								90.0	0.000

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