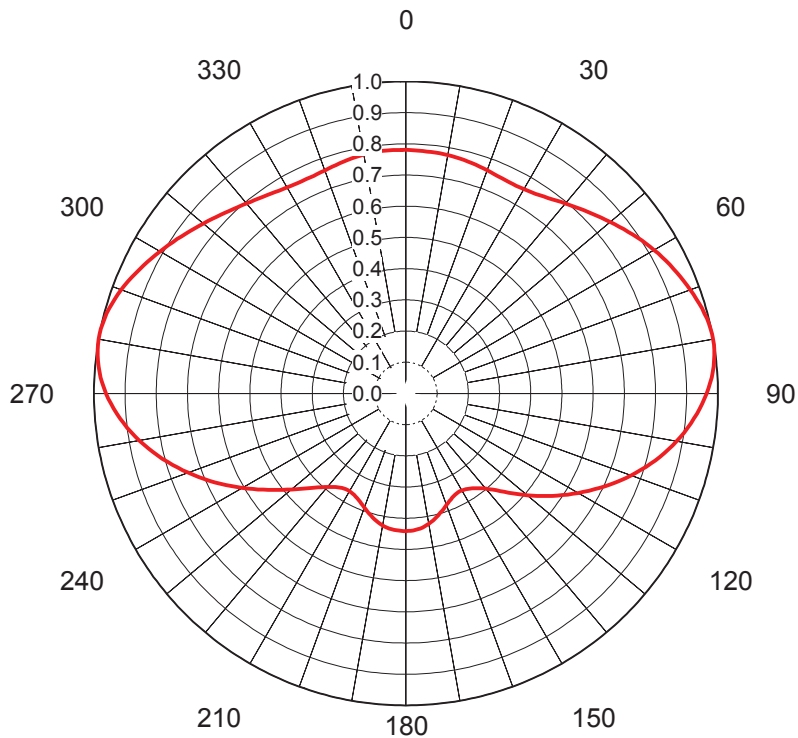


## AZIMUTH PATTERN Horizontal Polarization



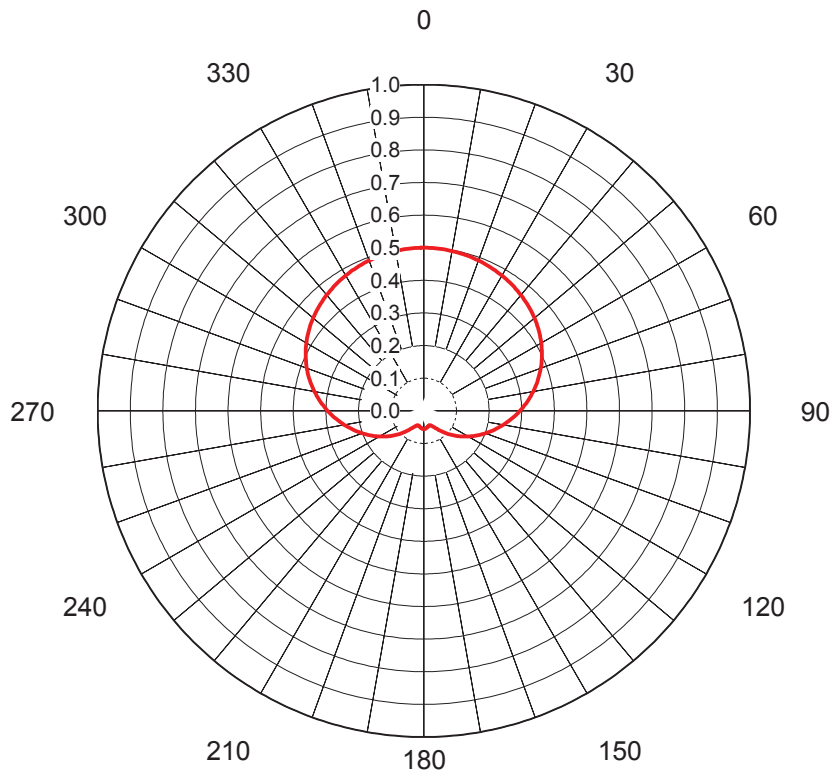
Proposal No. **C-70034-1**  
 Date **8-Mar-17**  
 Call Letters **WICS**  
 Channel **15**  
 Frequency **479 MHz**  
 Antenna Type **TFU-24DSC/VP-R I**  
 Gain **1.84 (2.64dB)**  
**Calculated**

Deg	Value	Deg	Value	Deg	Value	Deg	Value	Deg	Value	Deg	Value	Deg	Value	Deg	Value	Deg	Value
0	0.781	36	0.775	72	0.979	108	0.793	144	0.376	180	0.441	216	0.372	252	0.770	288	0.981
1	0.780	37	0.779	73	0.984	109	0.781	145	0.372	181	0.441	217	0.376	253	0.783	289	0.976
2	0.780	38	0.784	74	0.988	110	0.768	146	0.368	182	0.441	218	0.380	254	0.795	290	0.971
3	0.779	39	0.789	75	0.991	111	0.755	147	0.365	183	0.440	219	0.386	255	0.808	291	0.966
4	0.779	40	0.795	76	0.994	112	0.743	148	0.362	184	0.440	220	0.391	256	0.821	292	0.960
5	0.779	41	0.800	77	0.997	113	0.730	149	0.360	185	0.439	221	0.398	257	0.833	293	0.954
6	0.778	42	0.806	78	0.998	114	0.717	150	0.359	186	0.438	222	0.405	258	0.845	294	0.948
7	0.778	43	0.812	79	1.000	115	0.704	151	0.358	187	0.436	223	0.412	259	0.856	295	0.942
8	0.777	44	0.817	80	1.000	116	0.691	152	0.358	188	0.434	224	0.420	260	0.868	296	0.936
9	0.777	45	0.823	81	1.000	117	0.677	153	0.359	189	0.432	225	0.429	261	0.879	297	0.929
10	0.776	46	0.830	82	0.998	118	0.664	154	0.361	190	0.429	226	0.438	262	0.890	298	0.923
11	0.775	47	0.836	83	0.996	119	0.651	155	0.363	191	0.426	227	0.447	263	0.900	299	0.917
12	0.774	48	0.842	84	0.993	120	0.638	156	0.366	192	0.423	228	0.457	264	0.910	300	0.910
13	0.773	49	0.848	85	0.990	121	0.625	157	0.369	193	0.420	229	0.468	265	0.920	301	0.904
14	0.771	50	0.855	86	0.986	122	0.612	158	0.373	194	0.416	230	0.479	266	0.929	302	0.897
15	0.770	51	0.862	87	0.981	123	0.599	159	0.376	195	0.411	231	0.490	267	0.938	303	0.891
16	0.768	52	0.868	88	0.976	124	0.585	160	0.381	196	0.407	232	0.502	268	0.946	304	0.885
17	0.766	53	0.875	89	0.970	125	0.572	161	0.385	197	0.403	233	0.514	269	0.954	305	0.878
18	0.765	54	0.881	90	0.964	126	0.559	162	0.390	198	0.398	234	0.526	270	0.961	306	0.872
19	0.763	55	0.888	91	0.957	127	0.546	163	0.394	199	0.394	235	0.539	271	0.968	307	0.866
20	0.761	56	0.894	92	0.950	128	0.533	164	0.399	200	0.389	236	0.552	272	0.974	308	0.859
21	0.759	57	0.901	93	0.943	129	0.521	165	0.403	201	0.385	237	0.565	273	0.980	309	0.853
22	0.758	58	0.907	94	0.935	130	0.508	166	0.408	202	0.381	238	0.578	274	0.985	310	0.847
23	0.756	59	0.913	95	0.927	131	0.495	167	0.412	203	0.377	239	0.592	275	0.989	311	0.841
24	0.755	60	0.919	96	0.918	132	0.482	168	0.417	204	0.373	240	0.605	276	0.993	312	0.836
25	0.754	61	0.925	97	0.910	133	0.470	169	0.420	205	0.370	241	0.619	277	0.995	313	0.830
26	0.754	62	0.930	98	0.901	134	0.458	170	0.424	206	0.367	242	0.633	278	0.998	314	0.825
27	0.754	63	0.936	99	0.891	135	0.446	171	0.428	207	0.365	243	0.647	279	0.999	315	0.819
28	0.754	64	0.941	100	0.881	136	0.435	172	0.431	208	0.363	244	0.661	280	1.000	316	0.814
29	0.755	65	0.946	101	0.871	137	0.425	173	0.433	209	0.362	245	0.675	281	1.000	317	0.809
30	0.756	66	0.951	102	0.861	138	0.415	174	0.436	210	0.362	246	0.688	282	0.999	318	0.804
31	0.758	67	0.956	103	0.850	139	0.406	175	0.437	211	0.362	247	0.702	283	0.998	319	0.799
32	0.760	68	0.961	104	0.839	140	0.399	176	0.439	212	0.362	248	0.716	284	0.995	320	0.795
33	0.763	69	0.966	105	0.828	141	0.392	177	0.440	213	0.364	249	0.729	285	0.993	321	0.791
34	0.766	70	0.970	106	0.817	142	0.386	178	0.440	214	0.366	250	0.743	286	0.989	322	0.786
35	0.770	71	0.975	107	0.805	143	0.380	179	0.441	215	0.368	251	0.756	287	0.985	323	0.783

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## AZIMUTH PATTERN Vertical Polarization

Proposal No. **C-70034-1**  
 Date **8-Mar-17**  
 Call Letters **WICS**  
 Channel **15**  
 Frequency **479 MHz**  
 Antenna Type **TFU-24DSC/VP-R I**  
 Gain **2.33 (3.68dB)**  
**Calculated**



Deg	Value	Deg	Value	Deg	Value	Deg	Value	Deg	Value	Deg	Value	Deg	Value	Deg	Value	Deg	Value
0	0.500	36	0.470	72	0.374	108	0.210	144	0.069	180	0.056	216	0.069	252	0.210	288	0.374
1	0.500	37	0.468	73	0.370	109	0.206	145	0.066	181	0.056	217	0.071	253	0.215	289	0.378
2	0.500	38	0.467	74	0.366	110	0.201	146	0.063	182	0.056	218	0.074	254	0.220	290	0.382
3	0.500	39	0.465	75	0.362	111	0.197	147	0.061	183	0.056	219	0.077	255	0.224	291	0.385
4	0.500	40	0.463	76	0.358	112	0.192	148	0.059	184	0.055	220	0.080	256	0.229	292	0.389
5	0.499	41	0.462	77	0.353	113	0.188	149	0.057	185	0.055	221	0.084	257	0.233	293	0.393
6	0.499	42	0.460	78	0.349	114	0.183	150	0.055	186	0.055	222	0.087	258	0.238	294	0.396
7	0.499	43	0.458	79	0.345	115	0.179	151	0.054	187	0.054	223	0.090	259	0.243	295	0.400
8	0.498	44	0.456	80	0.341	116	0.175	152	0.052	188	0.054	224	0.094	260	0.248	296	0.403
9	0.498	45	0.454	81	0.336	117	0.170	153	0.051	189	0.053	225	0.097	261	0.252	297	0.406
10	0.498	46	0.452	82	0.332	118	0.166	154	0.050	190	0.053	226	0.101	262	0.257	298	0.410
11	0.497	47	0.450	83	0.327	119	0.162	155	0.049	191	0.052	227	0.105	263	0.262	299	0.413
12	0.496	48	0.447	84	0.323	120	0.157	156	0.049	192	0.052	228	0.109	264	0.266	300	0.416
13	0.496	49	0.445	85	0.318	121	0.153	157	0.048	193	0.051	229	0.112	265	0.271	301	0.419
14	0.495	50	0.443	86	0.313	122	0.149	158	0.048	194	0.050	230	0.116	266	0.276	302	0.422
15	0.495	51	0.440	87	0.309	123	0.145	159	0.048	195	0.050	231	0.120	267	0.281	303	0.425
16	0.494	52	0.438	88	0.304	124	0.140	160	0.048	196	0.049	232	0.124	268	0.285	304	0.427
17	0.493	53	0.435	89	0.300	125	0.136	161	0.048	197	0.049	233	0.128	269	0.290	305	0.430
18	0.492	54	0.433	90	0.295	126	0.132	162	0.048	198	0.048	234	0.132	270	0.295	306	0.433
19	0.491	55	0.430	91	0.290	127	0.128	163	0.049	199	0.048	235	0.136	271	0.300	307	0.435
20	0.490	56	0.427	92	0.285	128	0.124	164	0.049	200	0.048	236	0.140	272	0.304	308	0.438
21	0.489	57	0.425	93	0.281	129	0.120	165	0.050	201	0.048	237	0.145	273	0.309	309	0.440
22	0.488	58	0.422	94	0.276	130	0.116	166	0.050	202	0.048	238	0.149	274	0.313	310	0.443
23	0.487	59	0.419	95	0.271	131	0.112	167	0.051	203	0.048	239	0.153	275	0.318	311	0.445
24	0.486	60	0.416	96	0.266	132	0.109	168	0.052	204	0.049	240	0.157	276	0.323	312	0.447
25	0.485	61	0.413	97	0.262	133	0.105	169	0.052	205	0.049	241	0.162	277	0.327	313	0.450
26	0.484	62	0.410	98	0.257	134	0.101	170	0.053	206	0.050	242	0.166	278	0.332	314	0.452
27	0.483	63	0.406	99	0.252	135	0.097	171	0.053	207	0.051	243	0.170	279	0.336	315	0.454
28	0.482	64	0.403	100	0.248	136	0.094	172	0.054	208	0.052	244	0.175	280	0.341	316	0.456
29	0.480	65	0.400	101	0.243	137	0.090	173	0.054	209	0.054	245	0.179	281	0.345	317	0.458
30	0.479	66	0.396	102	0.238	138	0.087	174	0.055	210	0.055	246	0.183	282	0.349	318	0.460
31	0.478	67	0.393	103	0.233	139	0.084	175	0.055	211	0.057	247	0.188	283	0.353	319	0.462
32	0.476	68	0.389	104	0.229	140	0.080	176	0.055	212	0.059	248	0.192	284	0.358	320	0.463
33	0.475	69	0.385	105	0.224	141	0.077	177	0.056	213	0.061	249	0.197	285	0.362	321	0.465
34	0.473	70	0.382	106	0.220	142	0.074	178	0.056	214	0.063	250	0.201	286	0.366	322	0.467
35	0.472	71	0.378	107	0.215	143	0.071	179	0.056	215	0.066	251	0.206	287	0.370	323	0.468

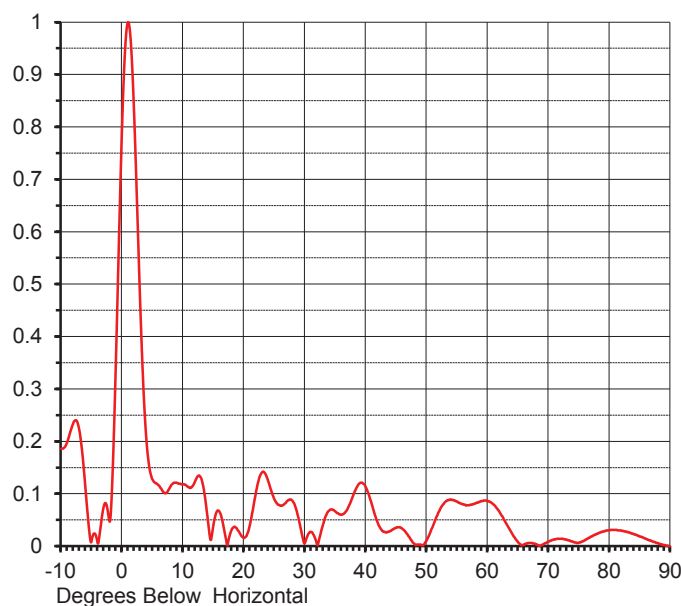
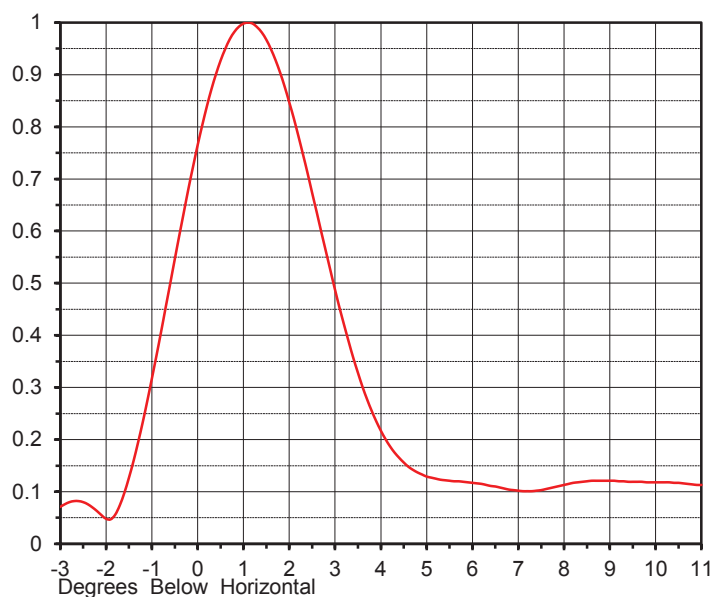
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## ELEVATION PATTERN

Proposal No. **C-70034-1**  
 Date **8-Mar-17**  
 Call Letters **WICS**  
 Channel **15**  
 Frequency **479 MHz**  
 Antenna Type **TFU-24DSC/VP-R I**

RMS Directivity at Main Lobe **19.0 ( 12.79 dB )**  
 RMS Directivity at Horizontal **11.1 ( 10.45 dB )**  
**Calculated**

Beam Tilt **1.00 deg**  
 Drawing Number **24Q190100**



Angle	Field	Angle	Field	Angle	Field	Angle	Field	Angle	Field
-10.0	0.186	10.0	0.118	30.0	0.006	50.0	0.012	70.0	0.009
-9.0	0.199	11.0	0.112	31.0	0.027	51.0	0.038	71.0	0.013
-8.0	0.235	12.0	0.124	32.0	0.003	52.0	0.066	72.0	0.014
-7.0	0.220	13.0	0.129	33.0	0.042	53.0	0.084	73.0	0.012
-6.0	0.108	14.0	0.057	34.0	0.068	54.0	0.089	74.0	0.008
-5.0	0.011	15.0	0.041	35.0	0.066	55.0	0.085	75.0	0.007
-4.0	0.005	16.0	0.065	36.0	0.060	56.0	0.080	76.0	0.012
-3.0	0.076	17.0	0.016	37.0	0.071	57.0	0.078	77.0	0.018
-2.0	0.047	18.0	0.032	38.0	0.099	58.0	0.082	78.0	0.024
-1.0	0.361	19.0	0.030	39.0	0.120	59.0	0.086	79.0	0.028
0.0	0.803	20.0	0.016	40.0	0.112	60.0	0.086	80.0	0.030
1.0	1.000	21.0	0.042	41.0	0.079	61.0	0.079	81.0	0.031
2.0	0.816	22.0	0.105	42.0	0.043	62.0	0.064	82.0	0.029
3.0	0.452	23.0	0.141	43.0	0.027	63.0	0.044	83.0	0.027
4.0	0.201	24.0	0.123	44.0	0.029	64.0	0.024	84.0	0.023
5.0	0.127	25.0	0.089	45.0	0.035	65.0	0.007	85.0	0.018
6.0	0.116	26.0	0.077	46.0	0.033	66.0	0.003	86.0	0.014
7.0	0.101	27.0	0.085	47.0	0.019	67.0	0.006	87.0	0.009
8.0	0.115	28.0	0.086	48.0	0.004	68.0	0.003	88.0	0.005
9.0	0.121	29.0	0.051	49.0	0.003	69.0	0.003	89.0	0.002
								90.0	0.000

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