AZIMUTH PATTERN Ex2
Horizontal Polarization
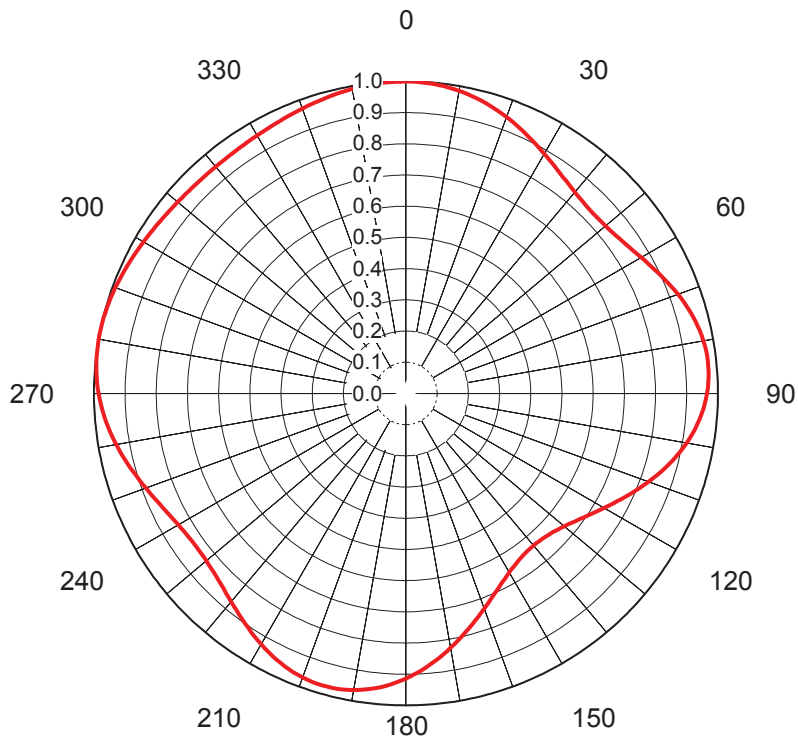
Proposal No.	**C-71188**
Date	**12-Jul-18**
Call Letters	**WNUV**
Channel	**25**
Frequency	**539 MHz**
Antenna Type	**TFU-16GTH/VP-R O6SP**
Gain	**1.24 (0.93dB)**
	Calculated

Deg	Value	Deg	Value	Deg	Value	Deg	Value	Deg	Value	Deg	Value	Deg	Value	Deg	Value	Deg	Value	Deg	Value
0	1.000	36	0.857	72	0.939	108	0.847	144	0.641	180	0.914	216	0.894	252	0.898	288	0.994	324	0.949
1	1.000	37	0.853	73	0.944	109	0.837	145	0.643	181	0.921	217	0.888	253	0.904	289	0.993	325	0.950
2	0.999	38	0.849	74	0.948	110	0.828	146	0.646	182	0.928	218	0.882	254	0.910	290	0.991	326	0.951
3	0.998	39	0.846	75	0.953	111	0.818	147	0.649	183	0.934	219	0.877	255	0.915	291	0.989	327	0.952
4	0.997	40	0.843	76	0.957	112	0.809	148	0.653	184	0.940	220	0.871	256	0.921	292	0.987	328	0.952
5	0.996	41	0.840	77	0.960	113	0.799	149	0.658	185	0.945	221	0.866	257	0.927	293	0.985	329	0.954
6	0.994	42	0.837	78	0.963	114	0.789	150	0.663	186	0.950	222	0.861	258	0.932	294	0.984	330	0.955
7	0.992	43	0.836	79	0.966	115	0.780	151	0.668	187	0.955	223	0.857	259	0.938	295	0.982	331	0.956
8	0.990	44	0.834	80	0.969	116	0.770	152	0.674	188	0.959	224	0.852	260	0.943	296	0.979	332	0.957
9	0.988	45	0.833	81	0.970	117	0.761	153	0.680	189	0.962	225	0.848	261	0.948	297	0.977	333	0.959
10	0.985	46	0.833	82	0.972	118	0.752	154	0.687	190	0.965	226	0.845	262	0.953	298	0.975	334	0.960
11	0.982	47	0.832	83	0.973	119	0.743	155	0.694	191	0.968	227	0.842	263	0.958	299	0.973	335	0.962
12	0.978	48	0.833	84	0.973	120	0.734	156	0.701	192	0.970	228	0.839	264	0.962	300	0.971	336	0.964
13	0.975	49	0.834	85	0.973	121	0.725	157	0.709	193	0.972	229	0.837	265	0.967	301	0.969	337	0.966
14	0.971	50	0.835	86	0.973	122	0.717	158	0.717	194	0.973	230	0.835	266	0.971	302	0.967	338	0.967
15	0.967	51	0.837	87	0.972	123	0.709	159	0.725	195	0.973	231	0.834	267	0.975	303	0.966	339	0.969
16	0.962	52	0.839	88	0.970	124	0.701	160	0.734	196	0.973	232	0.833	268	0.978	304	0.964	340	0.971
17	0.958	53	0.842	89	0.968	125	0.694	161	0.743	197	0.973	233	0.832	269	0.982	305	0.962	341	0.973
18	0.953	54	0.845	90	0.965	126	0.687	162	0.752	198	0.972	234	0.833	270	0.985	306	0.960	342	0.975
19	0.948	55	0.848	91	0.962	127	0.680	163	0.761	199	0.970	235	0.833	271	0.988	307	0.959	343	0.977
20	0.943	56	0.852	92	0.959	128	0.674	164	0.770	200	0.969	236	0.834	272	0.990	308	0.957	344	0.979
21	0.938	57	0.857	93	0.955	129	0.668	165	0.780	201	0.966	237	0.836	273	0.992	309	0.956	345	0.982
22	0.932	58	0.861	94	0.950	130	0.663	166	0.789	202	0.963	238	0.837	274	0.994	310	0.955	346	0.984
23	0.927	59	0.866	95	0.945	131	0.658	167	0.799	203	0.960	239	0.840	275	0.996	311	0.954	347	0.986
24	0.921	60	0.871	96	0.940	132	0.653	168	0.809	204	0.957	240	0.843	276	0.997	312	0.952	348	0.987
25	0.915	61	0.876	97	0.934	133	0.649	169	0.818	205	0.953	241	0.846	277	0.998	313	0.952	349	0.989
26	0.910	62	0.882	98	0.928	134	0.646	170	0.828	206	0.948	242	0.849	278	0.999	314	0.951	350	0.991
27	0.904	63	0.888	99	0.921	135	0.643	171	0.837	207	0.944	243	0.853	279	1.000	315	0.950	351	0.993
28	0.898	64	0.894	100	0.914	136	0.641	172	0.847	208	0.939	244	0.857	280	1.000	316	0.949	352	0.994
29	0.893	65	0.899	101	0.906	137	0.639	173	0.856	209	0.934	245	0.862	281	1.000	317	0.949	353	0.996
30	0.887	66	0.905	102	0.899	138	0.638	174	0.865	210	0.928	246	0.866	282	1.000	318	0.949	354	0.997
31	0.882	67	0.911	103	0.891	139	0.637	175	0.874	211	0.923	247	0.871	283	0.999	319	0.949	355	0.998
32	0.876	68	0.917	104	0.882	140	0.637	176	0.882	212	0.917	248	0.876	284	0.999	320	0.948	356	0.999
33	0.871	69	0.923	105	0.874	141	0.637	177	0.891	213	0.911	249	0.882	285	0.998	321	0.949	357	0.999
34	0.866	70	0.928	106	0.865	142	0.638	178	0.899	214	0.905	250	0.887	286	0.997	322	0.949	358	1.000
35	0.862	71	0.934	107	0.856	143	0.639	179	0.906	215	0.899	251	0.893	287	0.996	323	0.949	359	1.000

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AZIMUTH PATTERN Ex3
Vertical Polarization

Proposal No.	**C-71188**
Date	**12-Jul-18**
Call Letters	**WNUV**
Channel	**25**
Frequency	**539 MHz**
Antenna Type	**TFU-16GTH/VP-R O6SP**
Gain	**1.73 (2.39dB)**
	Calculated
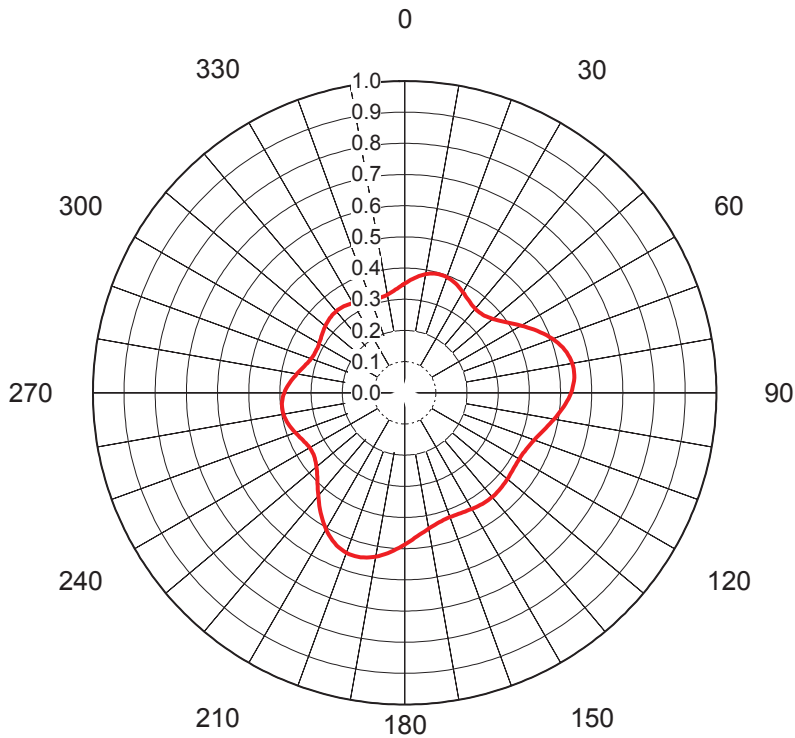
Deg	Value	Deg	Value	Deg	Value	Deg	Value	Deg	Value	Deg	Value	Deg	Value	Deg	Value	Deg	Value	Deg	Value
0	0.350	36	0.358	72	0.517	108	0.450	144	0.435	180	0.487	216	0.462	252	0.379	288	0.324	324	0.340
1	0.354	37	0.356	73	0.522	109	0.446	145	0.435	181	0.492	217	0.454	253	0.382	289	0.321	325	0.339
2	0.358	38	0.354	74	0.527	110	0.443	146	0.434	182	0.497	218	0.446	254	0.384	290	0.320	326	0.338
3	0.362	39	0.353	75	0.532	111	0.439	147	0.433	183	0.502	219	0.439	255	0.387	291	0.318	327	0.337
4	0.366	40	0.352	76	0.536	112	0.437	148	0.432	184	0.507	220	0.431	256	0.389	292	0.317	328	0.335
5	0.370	41	0.352	77	0.539	113	0.434	149	0.431	185	0.512	221	0.424	257	0.391	293	0.316	329	0.334
6	0.374	42	0.352	78	0.542	114	0.432	150	0.430	186	0.517	222	0.416	258	0.392	294	0.315	330	0.332
7	0.377	43	0.352	79	0.544	115	0.430	151	0.429	187	0.522	223	0.409	259	0.394	295	0.315	331	0.331
8	0.380	44	0.353	80	0.546	116	0.428	152	0.428	188	0.526	224	0.402	260	0.395	296	0.314	332	0.329
9	0.383	45	0.354	81	0.547	117	0.427	153	0.427	189	0.530	225	0.396	261	0.396	297	0.315	333	0.327
10	0.386	46	0.356	82	0.548	118	0.426	154	0.426	190	0.534	226	0.390	262	0.396	298	0.315	334	0.326
11	0.389	47	0.359	83	0.548	119	0.425	155	0.426	191	0.537	227	0.384	263	0.396	299	0.316	335	0.324
12	0.391	48	0.362	84	0.547	120	0.425	156	0.425	192	0.540	228	0.379	264	0.396	300	0.317	336	0.322
13	0.392	49	0.365	85	0.546	121	0.424	157	0.425	193	0.542	229	0.374	265	0.395	301	0.318	337	0.321
14	0.394	50	0.369	86	0.545	122	0.424	158	0.424	194	0.545	230	0.369	266	0.394	302	0.319	338	0.319
15	0.395	51	0.374	87	0.542	123	0.425	159	0.424	195	0.546	231	0.365	267	0.392	303	0.321	339	0.318
16	0.396	52	0.379	88	0.540	124	0.425	160	0.425	196	0.547	232	0.362	268	0.391	304	0.322	340	0.317
17	0.396	53	0.384	89	0.537	125	0.426	161	0.425	197	0.548	233	0.359	269	0.389	305	0.324	341	0.316
18	0.396	54	0.390	90	0.534	126	0.426	162	0.426	198	0.548	234	0.356	270	0.386	306	0.326	342	0.315
19	0.396	55	0.396	91	0.530	127	0.427	163	0.427	199	0.547	235	0.354	271	0.383	307	0.327	343	0.315
20	0.395	56	0.402	92	0.526	128	0.428	164	0.428	200	0.546	236	0.353	272	0.380	308	0.329	344	0.314
21	0.394	57	0.409	93	0.522	129	0.429	165	0.430	201	0.544	237	0.352	273	0.377	309	0.331	345	0.315
22	0.392	58	0.416	94	0.517	130	0.430	166	0.432	202	0.542	238	0.352	274	0.374	310	0.332	346	0.315
23	0.391	59	0.424	95	0.512	131	0.431	167	0.434	203	0.539	239	0.352	275	0.370	311	0.334	347	0.316
24	0.389	60	0.431	96	0.507	132	0.432	168	0.437	204	0.536	240	0.352	276	0.366	312	0.335	348	0.317
25	0.387	61	0.439	97	0.502	133	0.433	169	0.439	205	0.532	241	0.353	277	0.362	313	0.337	349	0.318
26	0.384	62	0.446	98	0.497	134	0.434	170	0.443	206	0.527	242	0.354	278	0.358	314	0.338	350	0.320
27	0.382	63	0.454	99	0.492	135	0.435	171	0.446	207	0.522	243	0.356	279	0.354	315	0.339	351	0.321
28	0.379	64	0.462	100	0.487	136	0.435	172	0.450	208	0.517	244	0.358	280	0.350	316	0.340	352	0.324
29	0.376	65	0.470	101	0.482	137	0.436	173	0.454	209	0.511	245	0.360	281	0.347	317	0.340	353	0.326
30	0.373	66	0.477	102	0.477	138	0.436	174	0.458	210	0.505	246	0.362	282	0.343	318	0.341	354	0.329
31	0.370	67	0.484	103	0.472	139	0.436	175	0.462	211	0.498	247	0.365	283	0.339	319	0.341	355	0.332
32	0.368	68	0.492	104	0.467	140	0.437	176	0.467	212	0.492	248	0.368	284	0.336	320	0.341	356	0.336
33	0.365	69	0.498	105	0.462	141	0.436	177	0.472	213	0.484	249	0.370	285	0.332	321	0.341	357	0.339
34	0.362	70	0.505	106	0.458	142	0.436	178	0.477	214	0.477	250	0.373	286	0.329	322	0.341	358	0.343
35	0.360	71	0.511	107	0.454	143	0.436	179	0.482	215	0.470	251	0.376	287	0.326	323	0.340	359	0.347

ELEVATION PATTERN

Proposal No.	C-71188
Date	12-Jul-18
Call Letters	WNUV
Channel	25
Frequency	539 MHz
Antenna Type	TFU-16GTH/VP-R O6SP

RMS Directivity at Main Lobe   **14.0 (11.46 dB)**   Beam Tilt   **1.00 deg**

RMS Directivity at Horizontal   **11.8 (10.72 dB)**   Pattern Number   **16G140100**

Calculated
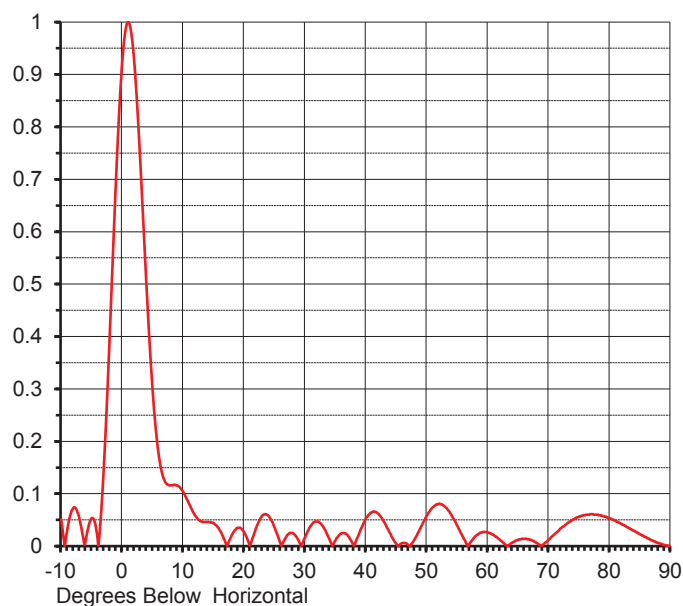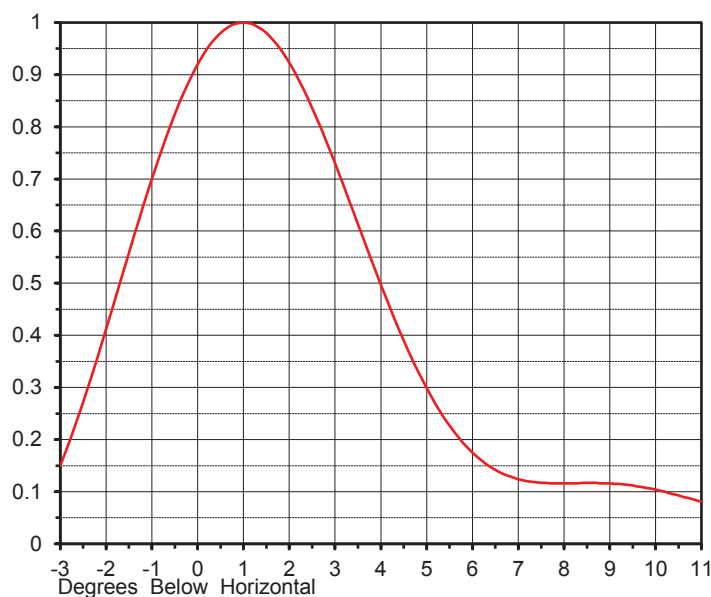
Angle	Field	Angle	Field	Angle	Field	Angle	Field	Angle	Field
-10.0	0.051	10.0	0.104	30.0	0.016	50.0	0.058	70.0	0.012
-9.0	0.031	11.0	0.081	31.0	0.039	51.0	0.074	71.0	0.023
-8.0	0.073	12.0	0.058	32.0	0.047	52.0	0.081	72.0	0.034
-7.0	0.052	13.0	0.047	33.0	0.037	53.0	0.075	73.0	0.043
-6.0	0.010	14.0	0.046	34.0	0.014	54.0	0.060	74.0	0.051
-5.0	0.053	15.0	0.044	35.0	0.011	55.0	0.039	75.0	0.056
-4.0	0.012	16.0	0.031	36.0	0.024	56.0	0.016	76.0	0.059
-3.0	0.150	17.0	0.006	37.0	0.021	57.0	0.004	77.0	0.061
-2.0	0.412	18.0	0.021	38.0	0.001	58.0	0.019	78.0	0.060
-1.0	0.700	19.0	0.035	39.0	0.027	59.0	0.026	79.0	0.057
0.0	0.920	20.0	0.027	40.0	0.052	60.0	0.026	80.0	0.053
1.0	1.000	21.0	0.001	41.0	0.065	61.0	0.021	81.0	0.048
2.0	0.923	22.0	0.035	42.0	0.062	62.0	0.012	82.0	0.042
3.0	0.730	23.0	0.058	43.0	0.046	63.0	0.002	83.0	0.036
4.0	0.497	24.0	0.058	44.0	0.024	64.0	0.006	84.0	0.029
5.0	0.299	25.0	0.036	45.0	0.004	65.0	0.012	85.0	0.023
6.0	0.175	26.0	0.005	46.0	0.006	66.0	0.014	86.0	0.017
7.0	0.124	27.0	0.019	47.0	0.002	67.0	0.012	87.0	0.011
8.0	0.116	28.0	0.025	48.0	0.013	68.0	0.006	88.0	0.006
9.0	0.116	29.0	0.010	49.0	0.035	69.0	0.002	89.0	0.002
								90.0	0.000

Trusted for Decades. Ready for Tomorrow.