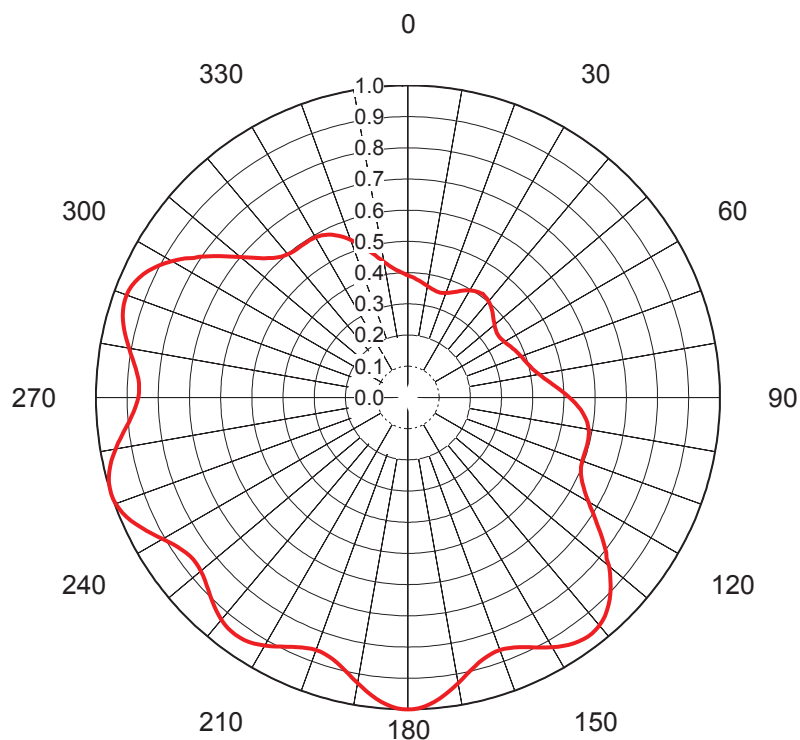


## AZIMUTH PATTERN Horizontal Polarization

Proposal No. **C-70043**  
 Date **24-Mar-17**  
 Call Letters **WNUV**  
 Channel **25**  
 Frequency **539 MHz**  
 Antenna Type **TUD-C5SP-10/36SPH-1-B**  
 Gain **1.84 (2.65dB)**  
 Calculated



Deg	Value	Deg	Value	Deg	Value	Deg	Value	Deg	Value	Deg	Value	Deg	Value	Deg	Value	Deg	Value
0	0.392	36	0.410	72	0.392	108	0.594	144	0.958	180	1.000	216	0.940	252	1.000	288	0.958
1	0.389	37	0.408	73	0.395	109	0.594	145	0.955	181	0.999	217	0.940	253	0.999	289	0.959
2	0.386	38	0.407	74	0.398	110	0.595	146	0.951	182	0.997	218	0.938	254	0.997	290	0.959
3	0.383	39	0.405	75	0.401	111	0.596	147	0.946	183	0.992	219	0.934	255	0.992	291	0.958
4	0.380	40	0.403	76	0.405	112	0.599	148	0.939	184	0.987	220	0.930	256	0.987	292	0.955
5	0.378	41	0.400	77	0.410	113	0.602	149	0.932	185	0.979	221	0.925	257	0.979	293	0.950
6	0.375	42	0.396	78	0.415	114	0.607	150	0.924	186	0.971	222	0.918	258	0.971	294	0.943
7	0.371	43	0.392	79	0.420	115	0.614	151	0.916	187	0.962	223	0.911	259	0.962	295	0.935
8	0.368	44	0.388	80	0.427	116	0.622	152	0.908	188	0.951	224	0.904	260	0.951	296	0.926
9	0.365	45	0.384	81	0.434	117	0.631	153	0.899	189	0.941	225	0.897	261	0.941	297	0.915
10	0.362	46	0.379	82	0.441	118	0.642	154	0.891	190	0.929	226	0.889	262	0.929	298	0.902
11	0.360	47	0.375	83	0.449	119	0.655	155	0.883	191	0.918	227	0.882	263	0.918	299	0.889
12	0.357	48	0.370	84	0.458	120	0.669	156	0.877	192	0.908	228	0.876	264	0.908	300	0.874
13	0.355	49	0.366	85	0.468	121	0.684	157	0.871	193	0.897	229	0.870	265	0.897	301	0.858
14	0.353	50	0.362	86	0.477	122	0.700	158	0.866	194	0.888	230	0.866	266	0.888	302	0.842
15	0.352	51	0.359	87	0.487	123	0.716	159	0.863	195	0.880	231	0.863	267	0.880	303	0.820
16	0.352	52	0.356	88	0.498	124	0.734	160	0.862	196	0.873	232	0.862	268	0.873	304	0.807
17	0.352	53	0.354	89	0.508	125	0.752	161	0.862	197	0.868	233	0.862	269	0.868	305	0.788
18	0.353	54	0.353	90	0.518	126	0.770	162	0.864	198	0.864	234	0.864	270	0.864	306	0.770
19	0.354	55	0.352	91	0.528	127	0.788	163	0.868	199	0.862	235	0.868	271	0.862	307	0.752
20	0.356	56	0.352	92	0.537	128	0.807	164	0.873	200	0.862	236	0.873	272	0.862	308	0.734
21	0.359	57	0.352	93	0.546	129	0.820	165	0.880	201	0.863	237	0.880	273	0.863	309	0.716
22	0.362	58	0.353	94	0.555	130	0.842	166	0.888	202	0.866	238	0.888	274	0.866	310	0.700
23	0.366	59	0.355	95	0.562	131	0.858	167	0.897	203	0.870	239	0.897	275	0.871	311	0.684
24	0.370	60	0.357	96	0.569	132	0.874	168	0.908	204	0.876	240	0.908	276	0.877	312	0.669
25	0.375	61	0.360	97	0.575	133	0.889	169	0.918	205	0.882	241	0.918	277	0.883	313	0.655
26	0.379	62	0.362	98	0.581	134	0.902	170	0.929	206	0.889	242	0.929	278	0.891	314	0.642
27	0.384	63	0.365	99	0.585	135	0.915	171	0.941	207	0.897	243	0.941	279	0.899	315	0.631
28	0.388	64	0.368	100	0.588	136	0.926	172	0.951	208	0.904	244	0.951	280	0.908	316	0.622
29	0.392	65	0.371	101	0.591	137	0.935	173	0.962	209	0.911	245	0.962	281	0.916	317	0.614
30	0.396	66	0.375	102	0.593	138	0.943	174	0.971	210	0.918	246	0.971	282	0.924	318	0.607
31	0.400	67	0.378	103	0.594	139	0.950	175	0.979	211	0.925	247	0.979	283	0.932	319	0.602
32	0.403	68	0.380	104	0.594	140	0.955	176	0.987	212	0.930	248	0.987	284	0.939	320	0.599
33	0.405	69	0.383	105	0.594	141	0.958	177	0.992	213	0.934	249	0.992	285	0.946	321	0.596
34	0.407	70	0.386	106	0.594	142	0.959	178	0.997	214	0.938	250	0.997	286	0.951	322	0.595
35	0.408	71	0.389	107	0.594	143	0.959	179	0.999	215	0.940	251	0.999	287	0.955	323	0.594

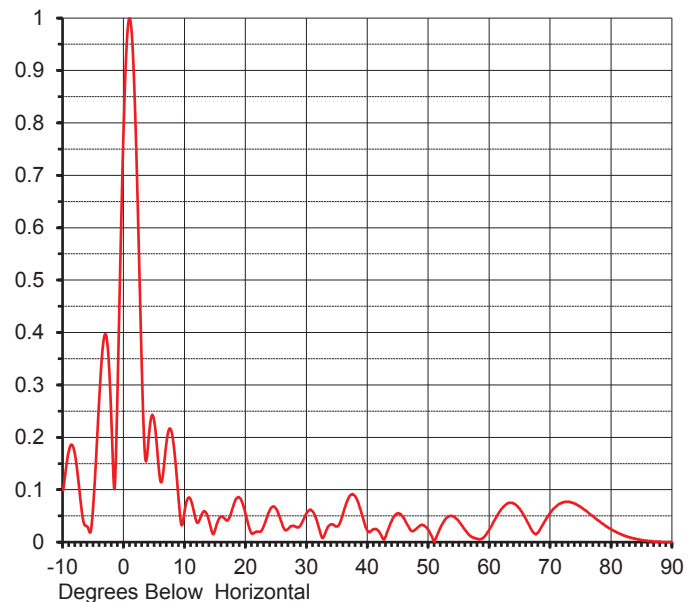
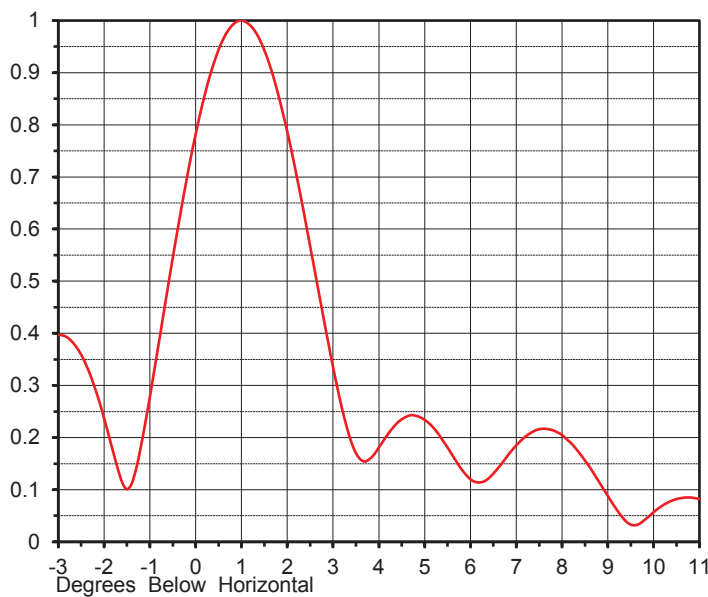
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## ELEVATION PATTERN

Proposal No. **C-70043**  
 Date **24-Mar-17**  
 Call Letters **WNUV**  
 Channel **25**  
 Frequency **539 MHz**  
 Antenna Type **TUD-C5SP-10/36SPH-1-B**

RMS Directivity at Main Lobe **20.3 ( 13.07 dB )**  
 RMS Directivity at Horizontal **13.7 ( 11.37 dB )**  
**Calculated**

Beam Tilt **0.90 deg**  
 Pattern Number **10U203090**



Angle	Field	Angle	Field	Angle	Field	Angle	Field	Angle	Field
-10.0	0.099	10.0	0.064	30.0	0.056	50.0	0.022	70.0	0.057
-9.0	0.177	11.0	0.079	31.0	0.058	51.0	0.003	71.0	0.069
-8.0	0.163	12.0	0.037	32.0	0.026	52.0	0.030	72.0	0.076
-7.0	0.064	13.0	0.058	33.0	0.017	53.0	0.047	73.0	0.077
-6.0	0.029	14.0	0.038	34.0	0.034	54.0	0.049	74.0	0.073
-5.0	0.081	15.0	0.026	35.0	0.030	55.0	0.039	75.0	0.066
-4.0	0.290	16.0	0.049	36.0	0.057	56.0	0.023	76.0	0.058
-3.0	0.396	17.0	0.042	37.0	0.088	57.0	0.010	77.0	0.049
-2.0	0.205	18.0	0.072	38.0	0.086	58.0	0.006	78.0	0.040
-1.0	0.331	19.0	0.084	39.0	0.054	59.0	0.009	79.0	0.031
0.0	0.822	20.0	0.051	40.0	0.021	60.0	0.025	80.0	0.024
1.0	0.997	21.0	0.016	41.0	0.025	61.0	0.046	81.0	0.018
2.0	0.747	22.0	0.020	42.0	0.017	62.0	0.064	82.0	0.013
3.0	0.293	23.0	0.033	43.0	0.013	63.0	0.074	83.0	0.009
4.0	0.194	24.0	0.063	44.0	0.043	64.0	0.073	84.0	0.006
5.0	0.227	25.0	0.063	45.0	0.055	65.0	0.062	85.0	0.004
6.0	0.115	26.0	0.032	46.0	0.044	66.0	0.043	86.0	0.002
7.0	0.194	27.0	0.026	47.0	0.023	67.0	0.021	87.0	0.001
8.0	0.197	28.0	0.030	48.0	0.026	68.0	0.019	88.0	0.001
9.0	0.074	29.0	0.033	49.0	0.033	69.0	0.039	89.0	0.000
								90.0	0.000

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