

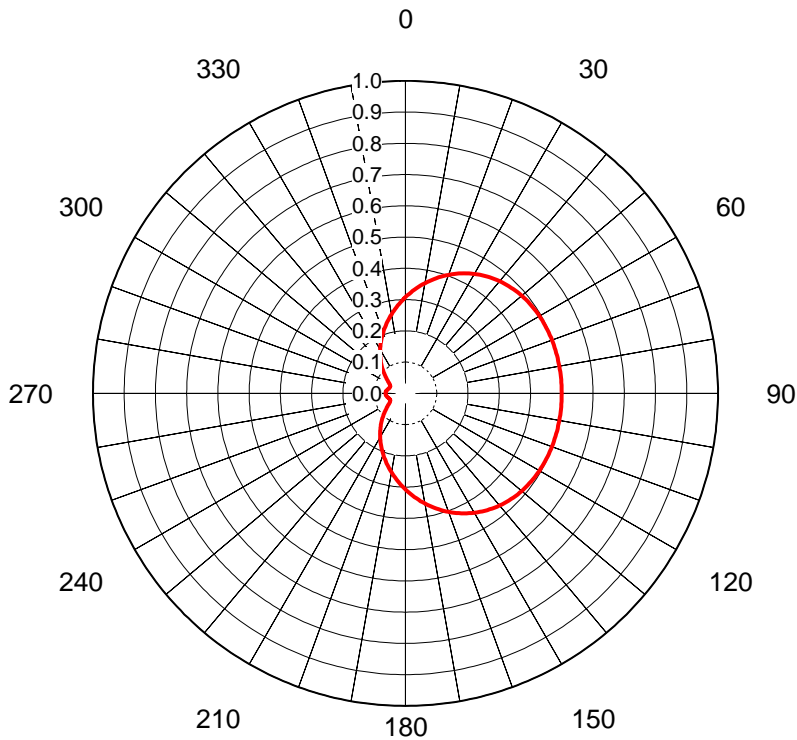
## AZIMUTH PATTERN Horizontal Polarization

In Free Space

Proposal No. **C-71639-2**  
Date **13-Oct-22**  
Call Letters **KCBY**  
Channel **34**  
Frequency **593 MHz**  
Antenna Type **TFU-16DSB/VP-J-R SP**  
Gain **2.08 (3.19dB)**  
Calculated

Deg	Value	Deg	Value	Deg	Value	Deg	Value	Deg	Value	Deg	Value	Deg	Value	Deg	Value	Deg	Value
0	0.917	36	0.927	72	0.597	108	0.590	144	0.917	180	0.918	216	0.506	252	0.295	288	0.314
1	0.923	37	0.919	73	0.592	109	0.595	145	0.926	181	0.911	217	0.491	253	0.301	289	0.306
2	0.930	38	0.910	74	0.586	110	0.601	146	0.935	182	0.905	218	0.475	254	0.308	290	0.299
3	0.936	39	0.900	75	0.581	111	0.606	147	0.942	183	0.898	219	0.460	255	0.315	291	0.291
4	0.942	40	0.890	76	0.576	112	0.612	148	0.950	184	0.891	220	0.444	256	0.323	292	0.285
5	0.948	41	0.879	77	0.573	113	0.618	149	0.957	185	0.883	221	0.428	257	0.331	293	0.278
6	0.954	42	0.868	78	0.570	114	0.624	150	0.964	186	0.876	222	0.413	258	0.340	294	0.273
7	0.960	43	0.857	79	0.569	115	0.630	151	0.970	187	0.868	223	0.397	259	0.351	295	0.268
8	0.965	44	0.845	80	0.569	116	0.637	152	0.975	188	0.859	224	0.382	260	0.361	296	0.263
9	0.970	45	0.834	81	0.570	117	0.644	153	0.981	189	0.851	225	0.368	261	0.371	297	0.259
10	0.975	46	0.822	82	0.572	118	0.651	154	0.985	190	0.842	226	0.355	262	0.380	298	0.256
11	0.980	47	0.810	83	0.575	119	0.658	155	0.989	191	0.833	227	0.342	263	0.387	299	0.254
12	0.984	48	0.798	84	0.578	120	0.666	156	0.993	192	0.823	228	0.330	264	0.392	300	0.253
13	0.987	49	0.786	85	0.581	121	0.674	157	0.995	193	0.813	229	0.319	265	0.396	301	0.252
14	0.991	50	0.775	86	0.584	122	0.683	158	0.998	194	0.803	230	0.309	266	0.399	302	0.253
15	0.994	51	0.763	87	0.586	123	0.692	159	0.999	195	0.792	231	0.300	267	0.401	303	0.254
16	0.996	52	0.752	88	0.588	124	0.701	160	1.000	196	0.780	232	0.292	268	0.402	304	0.257
17	0.998	53	0.741	89	0.589	125	0.711	161	1.000	197	0.769	233	0.284	269	0.402	305	0.260
18	0.999	54	0.731	90	0.591	126	0.721	162	0.999	198	0.756	234	0.277	270	0.402	306	0.265
19	1.000	55	0.720	91	0.588	127	0.732	163	0.998	199	0.744	235	0.271	271	0.401	307	0.271
20	1.000	56	0.710	92	0.586	128	0.742	164	0.996	200	0.731	236	0.265	272	0.401	308	0.279
21	0.999	57	0.700	93	0.584	129	0.753	165	0.994	201	0.718	237	0.260	273	0.399	309	0.287
22	0.998	58	0.691	94	0.582	130	0.764	166	0.991	202	0.705	238	0.256	274	0.397	310	0.296
23	0.997	59	0.682	95	0.580	131	0.776	167	0.988	203	0.692	239	0.252	275	0.395	311	0.307
24	0.994	60	0.673	96	0.577	132	0.787	168	0.984	204	0.678	240	0.250	276	0.392	312	0.318
25	0.991	61	0.665	97	0.574	133	0.799	169	0.980	205	0.664	241	0.250	277	0.389	313	0.330
26	0.988	62	0.657	98	0.572	134	0.810	170	0.975	206	0.650	242	0.251	278	0.385	314	0.342
27	0.984	63	0.650	99	0.570	135	0.822	171	0.970	207	0.637	243	0.252	279	0.380	315	0.355
28	0.979	64	0.643	100	0.568	136	0.834	172	0.965	208	0.623	244	0.255	280	0.374	316	0.369
29	0.974	65	0.637	101	0.568	137	0.845	173	0.960	209	0.608	245	0.259	281	0.368	317	0.383
30	0.969	66	0.630	102	0.569	138	0.856	174	0.954	210	0.594	246	0.263	282	0.361	318	0.397
31	0.963	67	0.624	103	0.571	139	0.867	175	0.948	211	0.580	247	0.268	283	0.354	319	0.412
32	0.957	68	0.619	104	0.573	140	0.878	176	0.942	212	0.566	248	0.273	284	0.346	320	0.427
33	0.950	69	0.613	105	0.577	141	0.888	177	0.936	213	0.551	249	0.279	285	0.338	321	0.442
34	0.943	70	0.608	106	0.581	142	0.898	178	0.930	214	0.536	250	0.284	286	0.330	322	0.457
35	0.935	71	0.602	107	0.585	143	0.908	179	0.924	215	0.521	251	0.290	287	0.322	323	0.472

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## AZIMUTH PATTERN Vertical Polarization

In Free Space

Proposal No. **C-71639-2**  
 Date **13-Oct-22**  
 Call Letters **KCBY**  
 Channel **34**  
 Frequency **593 MHz**  
 Antenna Type **TFU-16DSB/VP-J-R SP**  
 Gain **2.17 (3.37dB)**  
 Calculated

Deg	Value	Deg	Value	Deg	Value	Deg	Value	Deg	Value	Deg	Value	Deg	Value	Deg	Value	Deg	Value	Deg	Value
0	0.308	36	0.459	72	0.499	108	0.499	144	0.459	180	0.308	216	0.136	252	0.055	288	0.055	324	0.136
1	0.313	37	0.461	73	0.499	109	0.499	145	0.456	181	0.303	217	0.132	253	0.055	289	0.054	325	0.140
2	0.318	38	0.464	74	0.499	110	0.499	146	0.453	182	0.297	218	0.128	254	0.056	290	0.054	326	0.144
3	0.323	39	0.466	75	0.499	111	0.498	147	0.450	183	0.292	219	0.124	255	0.057	291	0.053	327	0.149
4	0.328	40	0.468	76	0.500	112	0.498	148	0.447	184	0.287	220	0.120	256	0.057	292	0.053	328	0.153
5	0.333	41	0.471	77	0.500	113	0.498	149	0.444	185	0.282	221	0.116	257	0.058	293	0.053	329	0.157
6	0.338	42	0.473	78	0.500	114	0.498	150	0.441	186	0.277	222	0.112	258	0.059	294	0.053	330	0.162
7	0.343	43	0.475	79	0.500	115	0.497	151	0.438	187	0.272	223	0.108	259	0.060	295	0.054	331	0.166
8	0.348	44	0.477	80	0.500	116	0.497	152	0.434	188	0.267	224	0.104	260	0.060	296	0.054	332	0.171
9	0.353	45	0.478	81	0.500	117	0.496	153	0.431	189	0.262	225	0.100	261	0.061	297	0.055	333	0.175
10	0.358	46	0.480	82	0.500	118	0.496	154	0.427	190	0.257	226	0.097	262	0.061	298	0.056	334	0.180
11	0.363	47	0.482	83	0.500	119	0.495	155	0.424	191	0.252	227	0.093	263	0.062	299	0.057	335	0.184
12	0.367	48	0.483	84	0.500	120	0.495	156	0.420	192	0.247	228	0.090	264	0.063	300	0.059	336	0.189
13	0.372	49	0.484	85	0.500	121	0.494	157	0.416	193	0.242	229	0.086	265	0.063	301	0.060	337	0.194
14	0.377	50	0.486	86	0.500	122	0.494	158	0.412	194	0.237	230	0.083	266	0.063	302	0.062	338	0.198
15	0.381	51	0.487	87	0.500	123	0.493	159	0.408	195	0.232	231	0.080	267	0.064	303	0.064	339	0.203
16	0.386	52	0.488	88	0.500	124	0.492	160	0.404	196	0.227	232	0.077	268	0.064	304	0.066	340	0.208
17	0.391	53	0.489	89	0.500	125	0.491	161	0.399	197	0.222	233	0.074	269	0.064	305	0.069	341	0.213
18	0.395	54	0.490	90	0.500	126	0.490	162	0.395	198	0.217	234	0.071	270	0.064	306	0.071	342	0.217
19	0.399	55	0.491	91	0.500	127	0.489	163	0.391	199	0.213	235	0.069	271	0.064	307	0.074	343	0.222
20	0.404	56	0.492	92	0.500	128	0.488	164	0.386	200	0.208	236	0.066	272	0.064	308	0.077	344	0.227
21	0.408	57	0.493	93	0.500	129	0.487	165	0.381	201	0.203	237	0.064	273	0.064	309	0.080	345	0.232
22	0.412	58	0.494	94	0.500	130	0.486	166	0.377	202	0.198	238	0.062	274	0.063	310	0.083	346	0.237
23	0.416	59	0.494	95	0.500	131	0.484	167	0.372	203	0.194	239	0.060	275	0.063	311	0.086	347	0.242
24	0.420	60	0.495	96	0.500	132	0.483	168	0.367	204	0.189	240	0.059	276	0.063	312	0.090	348	0.247
25	0.424	61	0.495	97	0.500	133	0.482	169	0.363	205	0.184	241	0.057	277	0.062	313	0.093	349	0.252
26	0.427	62	0.496	98	0.500	134	0.480	170	0.358	206	0.180	242	0.056	278	0.061	314	0.097	350	0.257
27	0.431	63	0.496	99	0.500	135	0.478	171	0.353	207	0.175	243	0.055	279	0.061	315	0.100	351	0.262
28	0.434	64	0.497	100	0.500	136	0.477	172	0.348	208	0.171	244	0.054	280	0.060	316	0.104	352	0.267
29	0.438	65	0.497	101	0.500	137	0.475	173	0.343	209	0.166	245	0.054	281	0.060	317	0.108	353	0.272
30	0.441	66	0.498	102	0.500	138	0.473	174	0.338	210	0.162	246	0.053	282	0.059	318	0.112	354	0.277
31	0.444	67	0.498	103	0.500	139	0.471	175	0.333	211	0.157	247	0.053	283	0.058	319	0.116	355	0.282
32	0.447	68	0.498	104	0.500	140	0.468	176	0.328	212	0.153	248	0.053	284	0.057	320	0.120	356	0.287
33	0.450	69	0.498	105	0.499	141	0.466	177	0.323	213	0.149	249	0.053	285	0.057	321	0.124	357	0.292
34	0.453	70	0.499	106	0.499	142	0.464	178	0.318	214	0.144	250	0.054	286	0.056	322	0.128	358	0.297
35	0.456	71	0.499	107	0.499	143	0.461	179	0.313	215	0.140	251	0.054	287	0.055	323	0.132	359	0.303

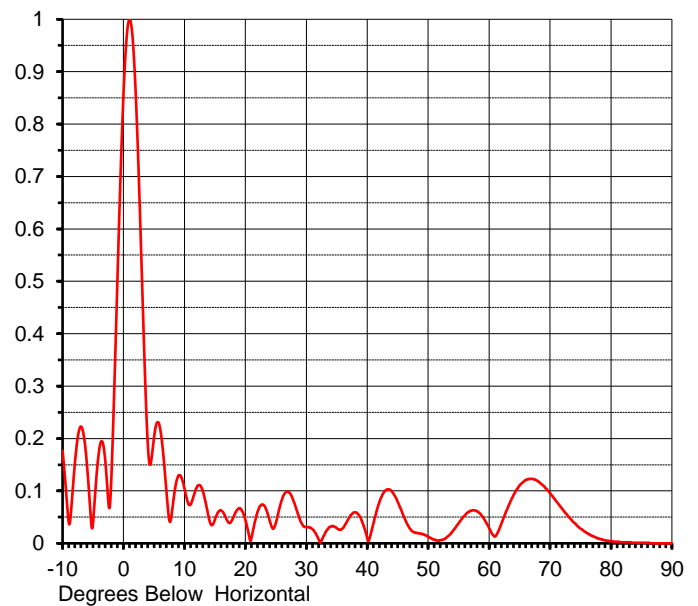
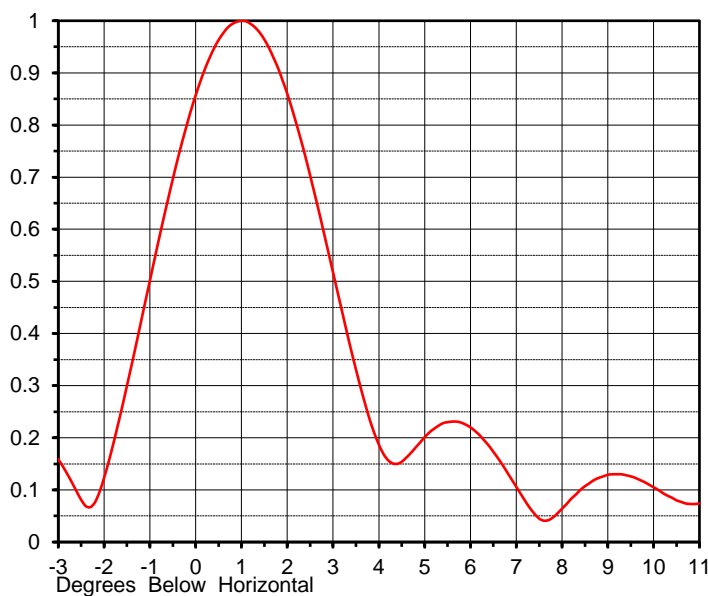
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## ELEVATION PATTERN

Proposal No. **C-71639-2**  
 Date **13-Oct-22**  
 Call Letters **KCBY**  
 Channel **34**  
 Frequency **593 MHz**  
 Antenna Type **TFU-16DSB/VP-J-R SP**

RMS Directivity at Main Lobe **16.0 ( 12.04 dB )**  
 RMS Directivity at Horizontal **11.8 ( 10.72 dB )**  
**Calculated**

Beam Tilt **1.00 deg**  
 Pattern Number **100**



Angle	Field	Angle	Field	Angle	Field	Angle	Field	Angle	Field
-10.0	0.177	10.0	0.105	30.0	0.031	50.0	0.013	70.0	0.096
-9.0	0.041	11.0	0.074	31.0	0.027	51.0	0.007	71.0	0.081
-8.0	0.150	12.0	0.106	32.0	0.008	52.0	0.006	72.0	0.066
-7.0	0.223	13.0	0.100	33.0	0.017	53.0	0.011	73.0	0.051
-6.0	0.150	14.0	0.049	34.0	0.032	54.0	0.023	74.0	0.039
-5.0	0.039	15.0	0.045	35.0	0.029	55.0	0.038	75.0	0.028
-4.0	0.177	16.0	0.063	36.0	0.029	56.0	0.053	76.0	0.020
-3.0	0.159	17.0	0.044	37.0	0.048	57.0	0.062	77.0	0.014
-2.0	0.123	18.0	0.049	38.0	0.059	58.0	0.061	78.0	0.009
-1.0	0.501	19.0	0.067	39.0	0.046	59.0	0.050	79.0	0.006
0.0	0.857	20.0	0.045	40.0	0.010	60.0	0.029	80.0	0.004
1.0	1.000	21.0	0.010	41.0	0.037	61.0	0.013	81.0	0.003
2.0	0.860	22.0	0.060	42.0	0.079	62.0	0.037	82.0	0.002
3.0	0.517	23.0	0.073	43.0	0.101	63.0	0.066	83.0	0.002
4.0	0.187	24.0	0.043	44.0	0.100	64.0	0.092	84.0	0.001
5.0	0.201	25.0	0.039	45.0	0.079	65.0	0.110	85.0	0.001
6.0	0.220	26.0	0.083	46.0	0.051	66.0	0.121	86.0	0.001
7.0	0.106	27.0	0.099	47.0	0.028	67.0	0.123	87.0	0.000
8.0	0.064	28.0	0.078	48.0	0.020	68.0	0.119	88.0	0.000
9.0	0.129	29.0	0.044	49.0	0.018	69.0	0.109	89.0	0.000
								90.0	0.000

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