

W230DG CP Mod Form 349
Proposal Compliance Technical Certification
Exhibit #3 – Allocation Study

The attached exhibits depict the proposed facility with respect to all pertinent co and adjacent facilities. Contours were calculated using the maximum ERP and 1-degree radial intervals. HAAT data for the proposed facility was derived from the FCC's 30-second terrain database using RadioSoft Comstudy.

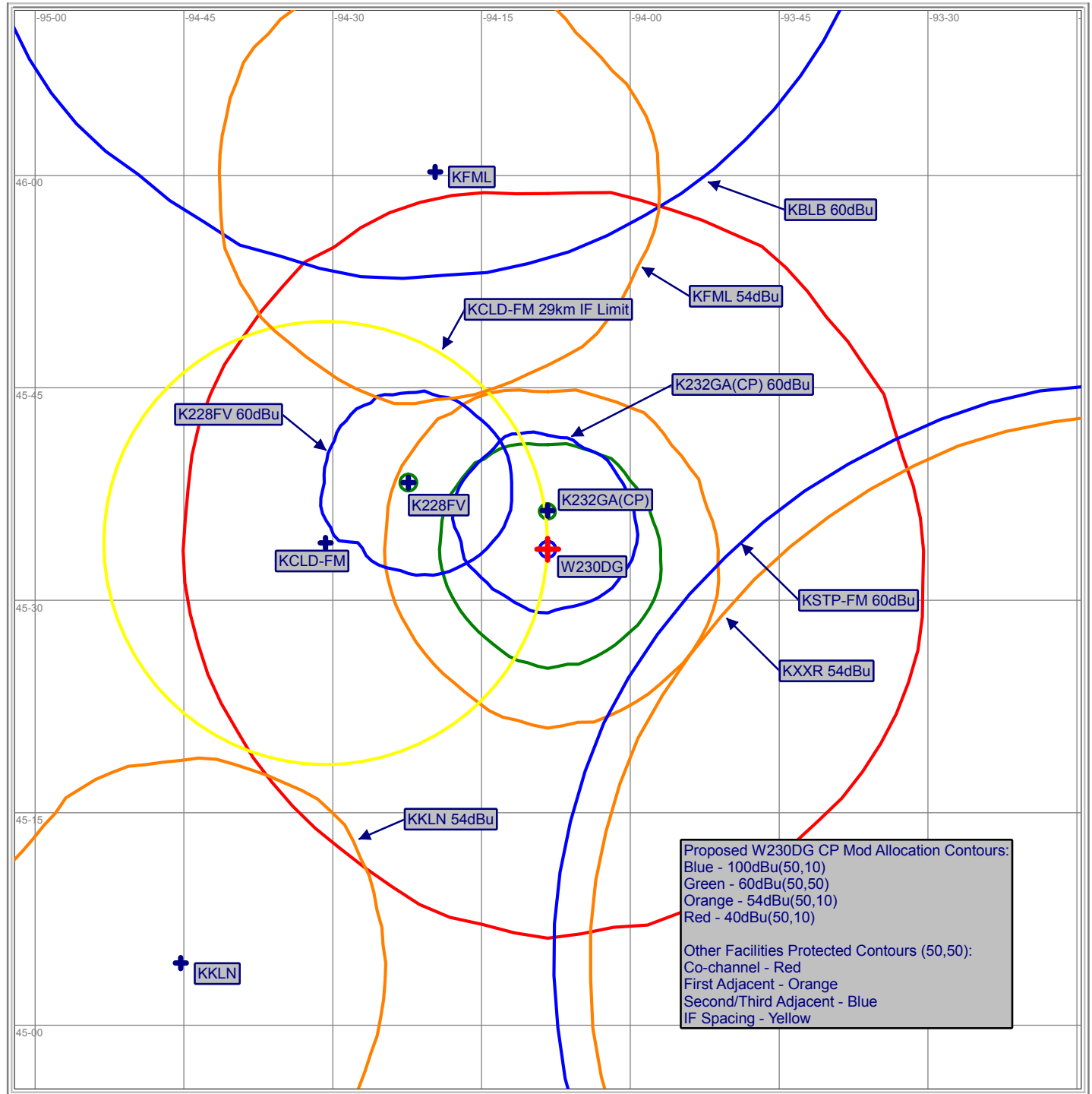
The proposed W230DG CP mod facility is operable as presented with the following notes:

- Because the proposed facility will operate with greater than 100 watts Effective Radiated Power, separation to existing broadcast stations 53 or 54 channels removed (IF channels) was analyzed and found to be fully spaced per 47 C.F.R. 74.1204(g).

- The proposed facility is within the 60dBu (50,50) contour of second-adjacent translator station K232GA, (BNPFT-20181018ABJ), which is proposed to be located approximately 5.1 kilometers away. The calculated K232GA(CP) signal level at the proposed W230DG location is 77.1dBu (50,50), resulting in an interference contour level from W230DG of 117.1dBu. Utilizing the FCC's Curves program, the W230DG interference contour with respect to K232GA(CP) would extend an estimated 147 meters from the proposed W230DG antenna in the horizontal plane. Further utilizing the manufacturer's published vertical field data for the proposed W230DG antenna, an analysis indicates that no interference to K232GA(CP) would exist below an elevation of 102 meters above ground level. It is therefore believed that any interference to K232GA(CP) would be incapable of reaching the general public. A Google Earth aerial image of the proposed site is included as an attachment within this exhibit. Based on these showings, a waiver of 47 C.F.R. 74.1204 is respectfully requested in accordance with 'Living Way Ministries, Inc.' (FCC 08-242) on the basis of zero population in the area of interference.

Should any actual interference occur, the applicant acknowledges that it will promptly suspend operation of this translator in accordance with 47 C.F.R. 74.1203.

Exhibit #3 - W230DG CP Mod - Allocation Contours

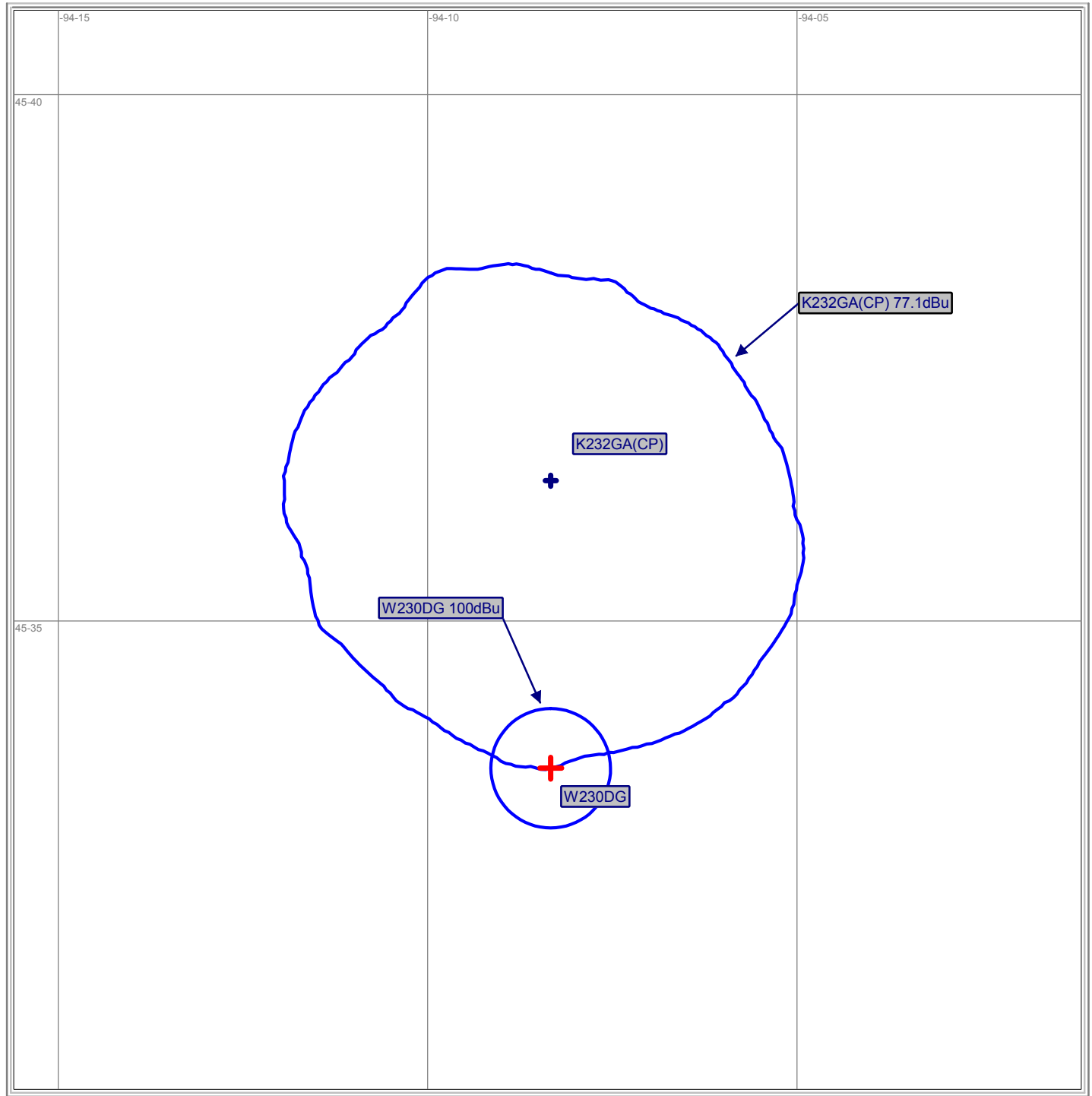


State Borders Lat/Lon Grid

Map Scale: 1:750000 1 cm = 7.50 km V/H Size: 140.86 x 139.38 km

Prepared by Townsquare Media

Exhibit #3 - W230DG CP Mod - Living Way Waiver Contours



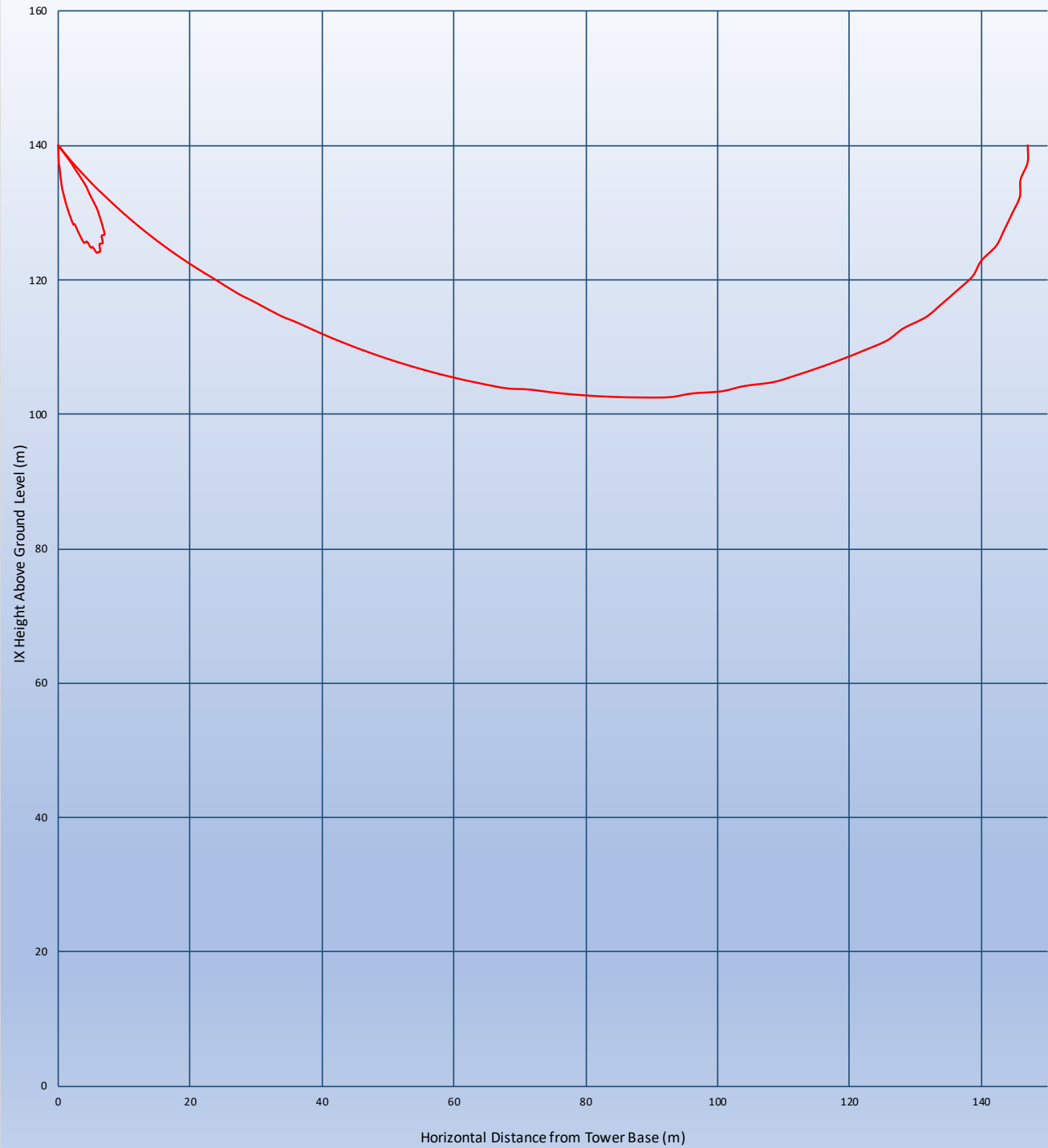
State Borders Lat/Lon Grid

Interference Calculation with respect to K232GA Sauk Rapids, MN

Proposed Facility: W230DG
 Proposed Antenna: Shively 6832-2 0.5 Wavelength
 Proposed Max ERP (W): 225
 Proposed COR AGL (m): 140
 Protected Adjacent Station: K232GA - Channel 232D (Construction Permit)
 Signal level of protected station at proposed site (dBu): 77.1
 Proposed +40dB Interfering Contour Level (dBu): 117.1

Downward Angle (degrees)	Relative Vertical Field	ERP(W)	Distance to IX Contour along Depression Angle (m)	Distance to IX contour from tower base (m)	IX Height Above Ground Level (m)	Downward Angle (degrees)	Relative Vertical Field	ERP(W)	Distance to IX Contour along Depression Angle (m)	Distance to IX contour from tower base (m)	IX Height Above Ground Level (m)
0	1.000	225.0	147	147	140	46	0.088	1.7	13	9	131
1	0.999	224.6	147	147	137	47	0.069	1.1	10	7	133
2	0.997	223.7	146	146	135	48	0.052	0.6	8	5	134
3	0.993	221.9	146	146	132	49	0.036	0.3	5	3	136
4	0.988	219.6	145	145	130	50	0.020	0.1	3	2	138
5	0.981	216.5	144	143	127	51	0.005	0.0	0	0	140
6	0.973	213.0	143	142	125	52	0.009	0.0	0	0	140
7	0.963	208.7	141	140	123	53	0.021	0.1	3	2	138
8	0.952	203.9	140	139	121	54	0.033	0.2	4	2	137
9	0.940	198.8	138	136	118	55	0.045	0.5	7	4	134
10	0.926	192.9	136	134	116	56	0.055	0.7	8	4	133
11	0.911	186.7	134	132	114	57	0.064	0.9	9	5	132
12	0.895	180.2	131	128	113	58	0.073	1.2	11	6	131
13	0.877	173.1	129	126	111	59	0.080	1.4	12	6	130
14	0.859	166.0	126	122	110	60	0.087	1.7	13	7	129
15	0.839	158.4	123	119	108	61	0.093	1.9	14	7	128
16	0.819	150.9	120	115	107	62	0.098	2.2	15	7	127
17	0.797	142.9	117	112	106	63	0.103	2.4	15	7	127
18	0.775	135.1	114	108	105	64	0.106	2.5	15	7	127
19	0.752	127.2	110	104	104	65	0.109	2.7	16	7	125
20	0.728	119.2	107	101	103	66	0.111	2.8	16	7	125
21	0.703	111.2	103	96	103	67	0.112	2.8	16	6	125
22	0.678	103.4	100	93	103	68	0.113	2.9	17	6	124
23	0.653	95.9	96	88	102	69	0.113	2.9	17	6	124
24	0.627	88.5	92	84	103	70	0.112	2.8	17	6	124
25	0.601	81.3	88	80	103	71	0.110	2.7	16	5	125
26	0.574	74.1	84	75	103	72	0.108	2.6	16	5	125
27	0.547	67.3	80	71	104	73	0.106	2.5	15	4	126
28	0.521	61.1	77	68	104	74	0.103	2.4	15	4	126
29	0.494	54.9	73	64	105	75	0.099	2.2	15	4	126
30	0.467	49.1	69	60	106	76	0.095	2.0	14	3	126
31	0.440	43.6	65	56	107	77	0.090	1.8	13	3	127
32	0.413	38.4	61	52	108	78	0.085	1.6	12	2	128
33	0.387	33.7	57	48	109	79	0.080	1.4	12	2	128
34	0.361	29.3	53	44	110	80	0.074	1.2	11	2	129
35	0.335	25.3	49	40	112	81	0.068	1.0	10	2	130
36	0.309	21.5	45	36	114	82	0.061	0.8	9	1	131
37	0.284	18.1	42	34	115	83	0.055	0.7	8	1	132
38	0.260	15.2	38	30	117	84	0.048	0.5	7	1	133
39	0.236	12.5	35	27	118	85	0.040	0.4	6	1	134
40	0.213	10.2	31	24	120	86	0.033	0.2	4	0	136
41	0.190	8.1	28	21	122	87	0.025	0.1	3	0	137
42	0.168	6.4	25	19	123	88	0.017	0.1	3	0	137
43	0.147	4.9	22	16	125	89	0.009	0.0	0	0	140
44	0.126	3.6	19	14	127	90	0.000	0.0	0	0	140
45	0.107	2.6	16	11	129						



Interference Calculation with respect to 2nd-channel adjacent station K232GA



W230DG CP Mod

102m radius indicated

Legend

-  102 Meters
-  W230DG



Google Earth

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300 ft