

TECHNICAL STATEMENT
K249EX DENVER, COLORADO
MOUNTAIN COMMUNITY TRANSLATORS, LLC
FCC FORM 349
JANUARY 2018

This Technical Statement is made in support of a minor change application for FM translator station K249EX at Denver, Colorado, facility ID 157657. K249EX seeks to modify its current directional pattern. No other changes are being proposed. It will remain a "fill-in" translator for KBNO(AM) Denver, Colorado. The following will show that the new proposed operation of K249EX will meet all of the Commissions technical requirements for an FM translator station.

The proposed operation of K249EX specifies an Effective Radiated Power of 0.25 kilowatts. It will operate with a Custom BEXT model TFC2K-D directional antenna with circular polarization. The antenna will be mounted on an existing non-registered tower, with an overall height of 10 meters above the ground. The antenna will be mounted with a Center of Radiation of 10 meters above the ground, and 2253 meters Above Mean Sea Level. The coordinates of this tower are located at N 39° 43' 46.1", W 105° 14' 08.1", NAD 27. This is a multi-user site located on Lookout Mountain. There are several towers and mounting poles at this facility. This will be the only antenna mounted on a 10 meter monopole at this site. It will replace the current antenna system for K248EX at the same height.

Figure 1 is a detailed interference study conducted on channel 249D with these new proposed facilities. It shows that the new operation of K249EX will not cause any interference to any existing or proposed FM stations on any of the pertinent same channel or adjacent channels to channel 249, with the exception of 2nd adjacent channel station KBCO Boulder, Colorado operating on channel 247C, facility ID 48966.

The proposed operation of K249EX on 249D is located within the protected 60 dB μ contour of 2nd adjacent KBCO. The predicted F(50-50) field strength of KBCO at the proposed K249EX transmitter site is 91.9 dB μ , see figure 2. Therefore, the respective predicted interfering contour F(50-10) generated by the proposed K249EX on channel 249D is an additional 40 dB μ or 131.9 dB μ .

Figure 3 shows the predicted 131.9 dB μ interference contour. The applicant, Mountain Community Translators, LLC, respectfully requests a waiver of C.F.R. 74.1204(d) of the Commission's rules based on the fact that there is no population within the area of predicted interference. There are no homes nearby the proposed existing tower site, which is a privately owned with private access. The transmitter building is uninhabited and does not have indoor plumbing. Should any unforeseen actual interference be caused, the licensee will immediately cease broadcasting with K249EX until such interference can be eliminated.

Figure 4 is a tabulation of the directional antenna pattern.

The proposed operation of K249EX Denver will be considered a "Fill-In" operation for Class B AM station KBNO Denver, Colorado, facility ID 59956. KBNO(AM) operates with 5 kilowatts daytime with a directional antenna system on 1280 kHz. Figure 5 shows that the proposed 60 dB μ contour for the proposed K249EX will not extend beyond the daytime 2.0 mV/m contour of KBNO. Since this is a "Fill-In" translator, the maximum ERP for a fill-in translator is 250 watts ERP.

It was found that the new proposed operation of K249EX Denver, Colorado on channel 249D, will satisfy all of the required commission rules and regulations for an FM translator station.

FIGURE 1 - DETAILED CHANNEL INTERFERENCE STUDY

K249EX DENVER, COLORADO, CH. 249D

REFERENCE
39 43 46.1 N.
105 14 08.1 W.CH# 249D - 97.7 MHz, Pwr= 0.25 kW DA, HAAT= 0.0 M, COR= 2253 M
Average Protected F(50-50)= 7.09 km
Standard DirectionalDISPLAY DATES
DATA 01-14-18
SEARCH 01-15-18

CH CITY	CALL	TYPE STATE	ANT AZI <--	DIST FILE #	LAT LNG	PWR(kw) HAAT(M)	INT(km) COR(M)	PRO(km) LICENSEE	*IN* (Overlap in km)	*OUT*
249D Denver	K249EX	LIC DC_ CO	0.0 0.0	0.00 BLFT20170403AAF	39 43 46.1 105 14 08.1	0.250 2253	57.5	17.3 Mountain Community Transla	-83.6*	-95.6*
247C Boulder	KBCO*	LIC DEY CO	346.7 166.7	20.98 BMLH19960506KA	39 54 48.0 105 17 32.0	100.000 469	12.3 2583	87.2 Citicasters Licenses, Inc.	-13.3*	-67.4*
249C2 Strasburg	KSJL	CP _CX CO	103.6 284.3	94.48 BPED20140304ADG	39 31 32.0 104 10 02.0	50.000 150	139.0 1854	51.7 Radio 74 Internationale	-57.4*	1.8
249C2 Avon	KZYR	LIC NC_ CO	264.6 83.8	104.40 BLH20010913AAK	39 38 05.0 106 26 47.0	15.000 134	128.7 3028	54.3 Rocky Mountain Radio Group	-35.9*	26.2
249C3 Strasburg	KSJL	LIC NH_ CO	91.4 272.1	88.43 BLED20120315AEJ	39 42 19.0 104 12 17.0	25.000 16	99.8 1621	22.7 Radio 74 Internationale	-27.5*	24.3
250C1 Cheyenne	KXBG	CP _CX WY	1.4 181.5	129.45 BPH20171103AAE	40 53 41.7 105 11 49.4	100.000 293	118.3 2248	78.1 Citicasters Licenses, Inc.	-15.2	8.2
250C1 Cheyenne	KXBG	LIC _CX WY	1.5 181.6	129.46 BLH20020529AAV	40 53 42.0 105 11 38.0	100.000 247	111.7 2197	74.7 Citicasters Licenses, Inc.	-8.8	11.8
251C Colorado Springs	KKFM	LIC _CN CO	163.5 343.8	114.12 BLH19940321KC	38 44 36.0 104 51 44.0	71.000 698	14.1 2949	97.1 Radio License Holding Cbc,	77.8	15.7
251D Longmont	K251AB	LIC DCN CO	15.1 195.2	58.74 BLFT19920831TD	40 14 24.0 105 03 19.0	0.250 77	1.0 1615	11.6 Bonneville International C	30.5	45.9
248D Woodland Park	K248AS	LIC _C_ CO	162.3 342.5	98.25 BLFT20120927AGP	38 53 10.0 104 53 24.0	0.250 -105	10.1 2215	7.1 Educational Communications	65.9	51.5
248D Silverthorne	K248AP	LIC _H_ CO	260.0 79.5	72.50 BLFT20010713ABO	39 36 50.0 106 04 02.0	0.105 -288	8.1 2861	5.7 Skandia, Llc	53.0	56.6
248C3 Poncha Springs	KWUZ	LIC NCX CO	205.7 25.2	157.01 BLH20170831BCE	38 27 11.0 106 01 02.0	0.250 834	65.6 3575	45.5 Three Eagles Communication	77.0	100.9
248C2 Sterling	KSRX	LIC _CX CO	64.9 246.2	195.08 BMLH20100204ADR	40 27 15.1 103 09 06.1	38.000 171	81.8 1492	54.9 Media Logic Llc	89.9	111.9
248A Poncha Springs	KWUZ	LIC ZCX CO	205.7 25.2	157.01 BLH20080109AGB	38 27 11.0 106 01 02.0	0.029 892	20.8 3575	12.8 Three Eagles Communication	121.8	125.7
252C1 Otis	KATR-FM	LIC NC_ CO	67.6 249.0	207.96 BLH19991115AAT	40 25 13.0 102 58 10.0	100.000 169	7.3 1500	59.5 Media Logic, Llc	177.9	148.0
249C2 Orchard Mesa	KN0Z	LIC NCX CO	257.4 75.2	311.20 BLH20120127AIR	39 04 00.0 108 44 45.0	5.000 446	149.2 2239	66.8 Varecha, Paul	150.7	220.4
252C3 Gunnison	KEJJ	RSV-A _N CO	227.6 46.5	197.11	38 31 22.0 106 54 28.0	25.000 100	2.3 2630	22.7 John Harvey Rees	186.2	155.4
251C0 Meeker	KAYW	CP _CX CO	283.6 101.9	236.35 BPH20161212AAI	40 11 47.0 107 56 04.0	100.000 372	8.5 2637	64.8 Western Slope Communicatio	216.0	164.1
246C1 Stratton	DKGGY	VAC _ CO	100.6 282.3	235.20	39 18 34.0 102 33 17.0	100.000 299	9.7 1621	70.6 Kona Coast Radio, Llc	209.6	164.3
246A Crested Butte	KAYV	LIC _CX CO	239.0 57.9	175.69 BLH20111205AGJ	38 54 10.0 106 58 22.0	0.300 -211	1.2 2967	7.4 Arkansas Valley Broadcasti	165.1	167.2
251C0 Meeker	KAYW	LIC _C_ CO	283.6 101.8	236.24 BLH20070802ABI	40 11 45.0 107 56 00.0	100.000 349	7.9 2609	62.2 Western Slope Communicatio	216.5	165.9
252A Gunnison	KEJJ	LIC _CN CO	227.6 46.5	197.11 BLH19811216AQ	38 31 22.0 106 54 28.0	3.000 91	1.6 2627	13.2 John Harvey Rees	186.9	170.0
246C1 Terrytown	KCMI	LIC _CX NE	30.3 211.3	255.33 BLH20160525AAB	41 42 08.0 103 41 00.0	100.000 211	7.4 1521	60.1 Christian Media Incorporat	220.2	193.9
250C1 Colby	KWGB	LIC _C_ KS	95.7 278.0	318.15 BLH19981216KD	39 23 24.0 101 33 35.0	100.000 216	94.6 1296	63.6 Melia Communications Inc	207.6	237.7
247A Lake City	NEW	CP _CX CO	223.8 42.5	264.25 BNPH20151013AIR	37 59 43.4 107 19 16.9	1.022 242	1.9 3605	24.8 Munera, Campo E	253.2	216.0

CH	CALL	TYPE	ANT	AZI	DIST	LAT	PWR(kw)	INT(km)	PRO(km)	Page # 2	
CITY		STATE		<--	FILE #	LNG	HAAT(M)	COR(M)	LICENSEE	*IN*	*OUT*

246C3	KZBR	LIC _CX		196.5	273.04	37 22 05.0	25.000	4.6	43.1	251.1	228.9
La Jara		CO		15.9	BLH20080416AAD	106 06 44.0	55	2458	Wolf Creek Broadcasting, L		
249C2	KCYA	LIC _CX		345.4	346.34	42 44 28.0	3.600	88.2	31.0	232.8	243.0
Rolling Hills		WY		164.6	BLH20100707KNL	106 18 31.0	506	2473	Cochise Media Licenses Llc		
252A	KERM	LIC _CN		18.7	266.23	41 59 41.0	3.000	2.1	22.0	236.9	243.1
Torrington		WY		199.4	BLH7692	104 12 05.0	91	1370	Kath Broadcasting Co, Llc		
248C1	KQSK	LIC _CN		28.2	368.95	42 38 06.0	100.000	93.8	63.2	247.5	262.0
Chadron		NE		209.6	BLH19790910AA	103 06 12.0	256	1519	Eagle Communications, Inc.		
251A	DKNPE	VAC ____		33.6	285.66	41 51 12.0	6.000	3.4	35.6	254.6	249.1
Bayard		NE		214.9		103 19 33.0	100	1331	In Phase Broadcasting, Inc		
249L1	KQO0-LP	LIC ____		61.3	337.19	41 07 55.0	0.063			296.8	268.4
Ogallala		NE		243.6	BLL20170201AAF	101 42 40.0	10	1020	Adventist Learning Center		
250C	KISZ-FM	LIC _CN		224.8	365.43	37 21 48.0	100.000	59.1	31.0	297.3	315.0
Cortez		CO		43.0	BLH19780921AG	108 09 00.0	399	3104	Winton Road Broadcasting C		
246C1	KCYN	LIC _CX		250.4	376.43	38 31 37.0	29.000	2.4	23.5	363.4	326.1
Moab		UT		67.9	BLH19981223KB	109 18 21.0	394	2767	Moab Communications, Llc		

Terrain database is NGDC 30 SEC , R= 73.215 qualifying spacings or FCC minimum Spacings in KM, M= Margin in KM
In & Out distances between contours are shown at closest points. Reference zone= West Zone, Co to 3rd adjacent.
All separation margins (if shown) include rounding.
Ant Column: (D= DA Standard, Z= DA 73.215, N= Not DA 73.215, _= Omni), Polarization (C,H,V,E), Beamtilt(Y,N,X)
"-"affixed to 'IN' or 'OUT' values = site inside restricted contour.

* No actual interference will be caused to KBCO(FM) since the 131.9 DBU interference contour will not cover any population. See the Technical Statement for more details.

FIGURE 2 - KBCO PREDICTED 91.9 DBU CONTOUR
K281BW DENVER, CO. CH. 249D

Coverage Study - NGDC 30 SEC
01-15-2018

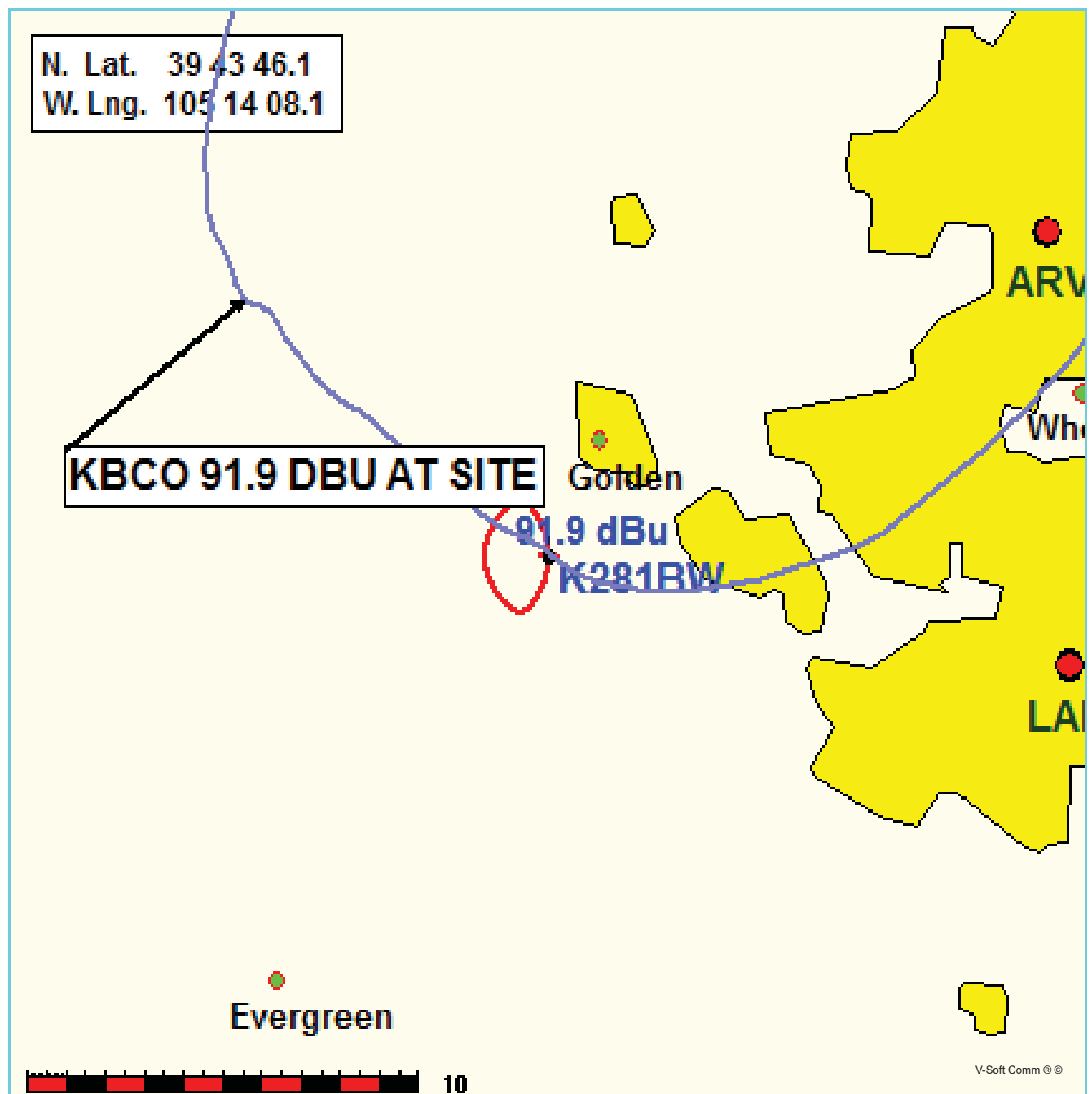


FIGURE 3 - PREDICTED 131.9 DBU INTERFERENCE CONTOUR
K249EX DENVER, COLORADO, CH. 249D

Coverage Study - NGDC 30 SEC
01-15-2018

K249EX CH249 D , 0.25 kW, 0.0m HAAT, 2253.0m COR AMSL
Interference Contour = 131.9 dBu. Population = 0

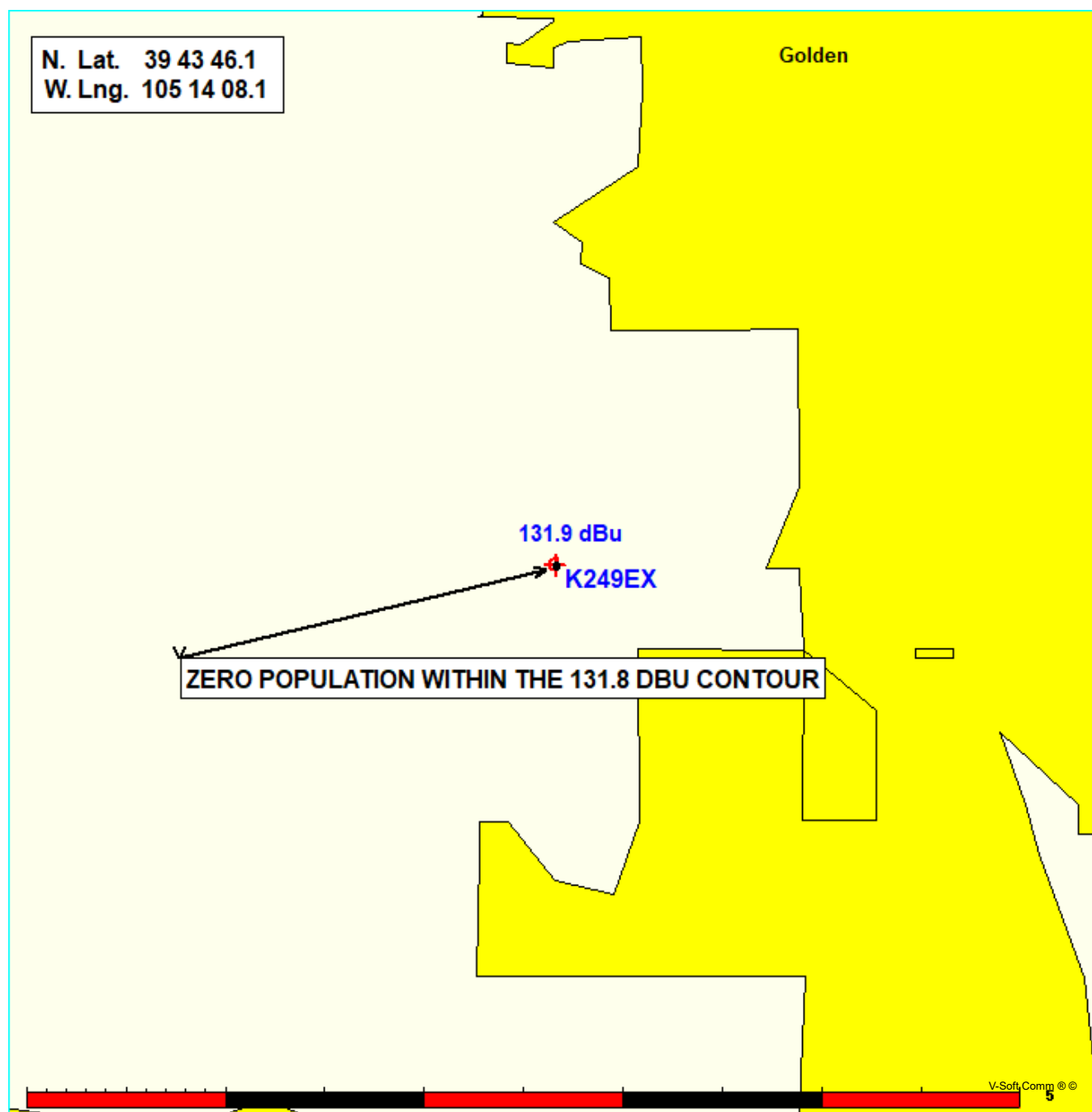


FIGURE 4 - DIRECTIONAL ANTENNA DATA
K249EX

01-15-2018

RMS(V)= .847

Graph is Relative Field

Azi	Field	dBk	kw
000	1.000	-06.021	0.250
010	1.000	-06.021	0.250
020	0.980	-06.196	0.240
030	0.900	-06.936	0.202
040	0.750	-08.519	0.141
050	0.570	-10.903	0.081
060	0.380	-14.425	0.036
070	0.250	-18.062	0.016
080	0.180	-20.915	0.008
090	0.150	-22.499	0.006
100	0.150	-22.499	0.006
110	0.180	-20.915	0.008
120	0.250	-18.062	0.016
130	0.380	-14.425	0.036
140	0.570	-10.903	0.081
150	0.750	-08.519	0.141
160	0.900	-06.936	0.202
170	0.980	-06.196	0.240
180	1.000	-06.021	0.250
190	1.000	-06.021	0.250
200	1.000	-06.021	0.250
210	1.000	-06.021	0.250
220	1.000	-06.021	0.250
230	1.000	-06.021	0.250
240	1.000	-06.021	0.250
250	1.000	-06.021	0.250
260	1.000	-06.021	0.250
270	1.000	-06.021	0.250
280	1.000	-06.021	0.250
290	1.000	-06.021	0.250
300	1.000	-06.021	0.250
310	1.000	-06.021	0.250
320	1.000	-06.021	0.250
330	1.000	-06.021	0.250
340	1.000	-06.021	0.250
350	1.000	-06.021	0.250

BEXT TFC2K- DA

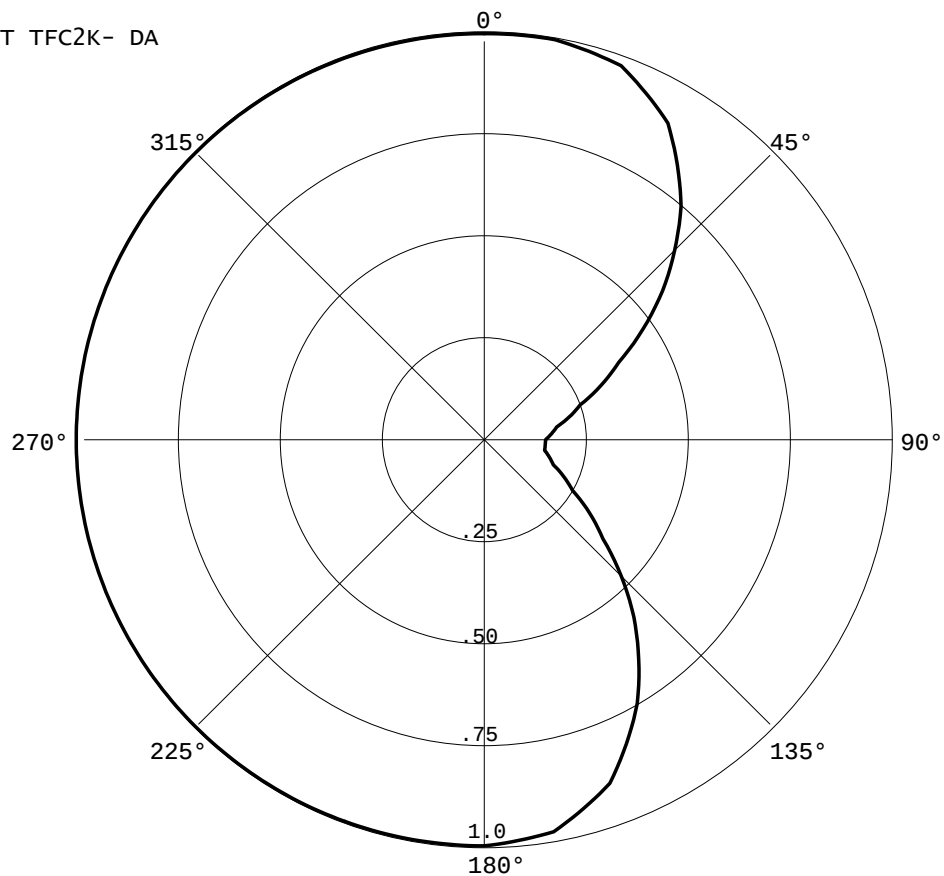


FIGURE 5 - FILL-IN MAP WITH KBNO(AM) DENVER, CO
K249EX DENVER, COLORADO, CH. 249D

Coverage Study - NGDC 30 SEC
01-15-2018

K249EX CH249 D , 0.25 kW, 0.0m HAAT, 2253.0m COR AMSL
Service Contour = 60 dBu. Population = 452,333

