

# INTERFERENCE ANALYSIS FOR PROPOSED WRAL-TV, RALEIGH, NORTH CAROLINA (CHANNEL 17)

tvstudy v2.2.5 (4uoc83)  
Database: localhost, Study: wral\_p03, Model: Longley-Rice

Study build station data: LMS TV 2019-05-31

Proposal: WRAL\_P03 D17 DT APP RALEIGH, NC  
File number: wral\_p03  
Facility ID: 8688  
Station data: User record  
Record ID: 3914  
Country: U.S.  
Zone: II

Search options:  
Baseline record excluded if station has CP

Stations potentially affected by proposal:

IX	Call	Chan	Svc	Status	City, State	File Number	Distance
Yes	WPXU-TV	D16	DT	CP	JACKSONVILLE, NC	BLANK0000072136	161.6 km
Yes	WXII-TV	D16	DT	CP	WINSTON-SALEM, NC	BLANK0000034697	183.3
No	WJPM-TV	D16	DT	CP	FLORENCE, SC	BLANK0000025028	190.5
No	WTKR	D16	DT	CP	NORFOLK, VA	BLANK0000034472	221.0
Yes	WTAT-TV	D17	DT	CP	CHARLESTON, SC	BLANK0000034503	322.3
Yes	WHNS	D17	DT	CP	GREENVILLE, SC	BLANK0000024830	380.2
No	WKTD-CD	D17	DC	LIC	PORTSMOUTH, VA	BLTTA20050316ACC	221.1
Yes	WVVA	D17	DT	CP	BLUEFIELD, WV	BLANK0000027470	295.2
Yes	WCCB	D18	DT	CP	CHARLOTTE, NC	BLANK0000067979	204.8
Yes	WLFL	D18	DT	CP	RALEIGH, NC	BLANK0000068685	0.0

No non-directional AM stations found within 0.8 km

No directional AM stations found within 3.2 km

Record parameters as studied:

## Channel: D17

Latitude: 35 40 29.00 N (NAD83)  
Longitude: 78 31 39.00 W  
Height AMSL: 706.0 m  
HAAT: 625.0 m

## Peak ERP: 834 kW

Antenna: Omnidirectional  
Elev Pattern: Generic  
Elec Tilt: 1.00

39.0 dBu contour:

Azimuth	ERP	HAAT	Distance
0.0 deg	834 kW	636.0 m	125.4 km
45.0	834	630.1	125.1
90.0	834	621.1	124.6
135.0	834	624.6	124.8
180.0	834	634.4	125.4
225.0	834	620.3	124.5
270.0	834	613.9	124.1
315.0	834	621.7	124.6

## ERP exceeds maximum

ERP: 834 kW ERP maximum: 303 kW (Proposal compliant with largest station in the market provision of the FCC Rules.)

Distance to Canadian border: 746.6 km

Distance to Mexican border: 2055.1 km

Conditions at FCC monitoring station: Laurel MD  
Bearing: 20.7 degrees Distance: 416.2 km

Proposal is not within the West Virginia quiet zone area

Conditions at Table Mountain receiving zone:  
Bearing: 290.0 degrees Distance: 2383.7 km

No land mobile station failures found

# INTERFERENCE ANALYSIS FOR PROPOSED WRAL-TV, RALEIGH, NORTH CAROLINA (CHANNEL 17)

Study cell size: 2.00 km  
Profile point spacing: 1.00 km

Maximum new IX to full-service and Class A: 0.50%  
Maximum new IX to LPTV: 2.00%

## ----- Interference to BLANK0000072136 CP scenario 1

	Call	Chan	Svc	Status	City, State	File Number	Distance
Desired:	WPXU-TV	D16	DT	CP	JACKSONVILLE, NC	BLANK0000072136	
Undesireds:	WRAL-TV	D17	DT	BL	RALEIGH, NC	DTVBL8688	161.7 km
	WRAL_P03	D17	DT	APP	RALEIGH, NC	wral_p03	161.6
	WRAZ	D15	DT	CP	RALEIGH, NC	BLANK0000034036	161.6
Service area		Terrain-limited		IX-free, before		IX-free, after	Percent New IX
19449.8		700,488		19449.8		700,488	0.02
				19445.8		700,467	0.00
Undesired		Total IX		Unique IX, before		Unique IX, after	
WRAL-TV D17 DT BL		4.0		0		0	
WRAL_P03 D17 DT APP		7.9		21		4.0	21
WRAZ D15 DT CP		4.0		0		0.0	0

## ----- Interference to BLANK0000034697 CP scenario 1

	Call	Chan	Svc	Status	City, State	File Number	Distance
Desired:	WXII-TV	D16	DT	CP	WINSTON-SALEM, NC	BLANK0000034697	
Undesireds:	WRAL-TV	D17	DT	BL	RALEIGH, NC	DTVBL8688	183.3 km
	WRAL_P03	D17	DT	APP	RALEIGH, NC	wral_p03	183.3
	W21CK-D	D15	DC	CP	CHARLOTTE, NC	BLANK0000034509	138.4
	WRAZ	D15	DT	CP	RALEIGH, NC	BLANK0000034036	183.3
	WPXU-TV	D16	DT	CP	JACKSONVILLE, NC	BLANK0000072136	334.6
	WJPM-TV	D16	DT	CP	FLORENCE, SC	BLANK0000025028	239.8
	WAPK-CD	D16	DC	LIC	BRISTOL VA/KINGSPORT, TN	BLANK0000070481	157.9
	WTKR	D16	DT	CP	NORFOLK, VA	BLANK0000034472	348.7
	WVVA	D17	DT	CP	BLUEFIELD, WV	BLANK0000027470	121.4
Service area		Terrain-limited		IX-free, before		IX-free, after	Percent New IX
45264.5		3,630,551		42015.9		3,248,206	0.18
				3,302,717			0.10
Undesired		Total IX		Unique IX, before		Unique IX, after	
WRAL-TV D17 DT BL		381.6		12,348		0.0	0
WRAL_P03 D17 DT APP		478.0		17,659		72.3	3,161
W21CK-D D15 DC CP		4.0		5,934		4.0	5,934
WRAZ D15 DT CP		405.7		14,498		24.1	2,150
WPXU-TV D16 DT CP		124.9		5,279		8.1	185
WJPM-TV D16 DT CP		294.7		18,957		218.1	13,970
WAPK-CD D16 DC LIC		259.7		10,340		239.6	9,046
WTKR D16 DT CP		116.1		2,899		84.0	2,048
WVVA D17 DT CP		128.1		569		120.1	569

## ----- Interference to BLANK0000034503 CP scenario 1

	Call	Chan	Svc	Status	City, State	File Number	Distance
Desired:	WTAT-TV	D17	DT	CP	CHARLESTON, SC	BLANK0000034503	
Undesireds:	WRAL-TV	D17	DT	BL	RALEIGH, NC	DTVBL8688	322.3 km
	WRAL_P03	D17	DT	APP	RALEIGH, NC	wral_p03	322.3
	WSAV-TV	D16	DT	LIC	SAVANNAH, GA	BLANK0000055021	179.4
	WJPM-TV	D16	DT	CP	FLORENCE, SC	BLANK0000025028	149.0
	WFXU	D17	DT	CP	LIVE OAK, FL	BLANK0000026640	410.9
Service area		Terrain-limited		IX-free, before		IX-free, after	Percent New IX
40650.1		1,159,634		40650.1		1,158,645	0.04
				40537.3			0.07
Undesired		Total IX		Unique IX, before		Unique IX, after	
WRAL-TV D17 DT BL		4.0		0		4.0	0
WRAL_P03 D17 DT APP		20.1		852		20.1	852
WSAV-TV D16 DT LIC		104.8		72		104.8	72
WJPM-TV D16 DT CP		4.0		65		4.0	65

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Interference to BLANK0000024830 CP scenario 1

	Call	Chan	Svc	Status	City, State	File Number	Distance		
Desired:	WHNS	D17	DT	CP	GREENVILLE, SC	BLANK0000024830			
Undesireds:	WRAL-TV	D17	DT	BL	RALEIGH, NC	DTVBL8688	380.2 km		
	WRAL_P03	D17	DT	APP	RALEIGH, NC	wral_p03	380.2		
	WPXA-TV	D16	DT	CP	ROME, GA	BLANK0000034338	203.9		
	WAPK-CD	D16	DC	LIC	BRISTOL VA/KINGSPORT, TN	BLANK0000070481	147.3		
	WAAY-TV	D17	DT	LIC	HUNTSVILLE, AL	BLANK0000071637	354.3		
	WLGA	D17	DD	CP	OPELIKA, AL	BLANK0000030376	354.3		
	WKSO-TV	D17	DT	CP	SOMERSET, KY	BLANK0000034631	292.7		
	WTAT-TV	D17	DT	CP	CHARLESTON, SC	BLANK0000034503	371.1		
	WVVA	D17	DT	CP	BLUEFIELD, WV	BLANK0000027470	266.9		
	WCCB	D18	DT	CP	CHARLOTTE, NC	BLANK0000067979	177.1		
	WPXK-TV	D18	DT	CP	JELLCO, TN	BLANK0000068234	145.9		
Service area		Terrain-limited		IX-free, before		IX-free, after		Percent New IX	
42319.4	2,549,610	34950.7	2,270,868	34449.9	2,252,357	34445.8	2,251,615	0.01	0.03

Undesired			Total IX	Unique IX, before		Unique IX, after	
WRAL-TV D17 DT BL	52.4		1,988	20.2	301		
WRAL_P03 D17 DT APP	60.4		2,774			24.2	1,043
WPXA-TV D16 DT CP	4.0		752	4.0	752	4.0	752
WAPK-CD D16 DC LIC	20.0		867	0.0	0	0.0	0
WAAY-TV D17 DT LIC	8.1		0	0.0	0	0.0	0
WLGA D17 DD CP	186.9		5,113	186.9	5,113	186.9	5,113
WKSO-TV D17 DT CP	52.2		218	8.0	0	8.0	0
WTAT-TV D17 DT CP	7.9		79	7.9	79	4.0	35
WVVA D17 DT CP	213.3		10,272	136.9	7,151	136.9	7,151
WCCB D18 DT CP	48.4		2,500	36.3	1,825	36.3	1,825
WPXK-TV D18 DT CP	28.2		24	8.0	22	8.0	22

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Interference to BLANK0000027470 CP scenario 1

Desired:	Call WVVA	Chan D17	Svc DT	Status CP	City, State BLUEFIELD, WV	File Number BLANK0000027470	Distance			
Undesireds:	WRAL-TV	D17	DT	BL	RALEIGH, NC	DTVBL8688	295.2 km			
	WRAL_P03	D17	DT	APP	RALEIGH, NC	wral_p03	295.2			
	WXII-TV	D16	DT	CP	WINSTON-SALEM, NC	BLANK0000034697	121.4			
	WAPK-CD	D16	DC	LIC	BRISTOL VA/KINGSPORT, TN	BLANK0000070481	125.0			
	WKSO-TV	D17	DT	CP	SOMERSET, KY	BLANK0000034631	322.7			
	WCET	D17	DT	CP	CINCINNATI, OH	BLANK0000026835	358.1			
	WHNS	D17	DT	CP	GREENVILLE, SC	BLANK0000024830	266.9			
	WLPX-TV	D18	DT	CP	CHARLESTON, WV	BLANK0000034886	144.7			
	Service area	Terrain-limited		IX-free, before		IX-free, after		Percent New IX		
32623.9	1,037,632	26607.9		722,666	25959.2	711,360	25887.4	709,790	0.28	0.22

Undesired			Total IX	Unique IX, before		Unique IX, after	
WRAL-TV D17 DT BL	271.3		5,665	195.7	4,418		
WRAL_P03 D17 DT APP	351.2		7,289			267.6	5,988
WXII-TV D16 DT CP	103.5		1,347	55.8	539	51.8	531
WAPK-CD D16 DC LIC	47.9		2,184	35.8	1,960	35.8	1,960
WKSO-TV D17 DT CP	8.0		101	8.0	101	8.0	101
WCET D17 DT CP	27.7		596	19.8	596	19.8	596
WHNS D17 DT CP	127.6		2,430	75.8	1,448	71.8	1,402
WLPX-TV D18 DT CP	166.1		650	158.2	650	158.2	650

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Interference to BLANK0000067979 CP scenario 1

Desired:	Call	Chan	Svc	Status	City, State	File Number	Distance
	WCCB	D18	DT	CP	CHARLOTTE, NC	BLANK0000067979	
Undesireds:	WRAL-TV	D17	DT	BL	RALEIGH, NC	DTVBL8688	204.8 km
	WRAL_P03	D17	DT	APP	RALEIGH, NC	wral_p03	204.8
	WHNS	D17	DT	CP	GREENVILLE, SC	BLANK0000024830	177.1
	WUVG-DT	D18	DT	CP	ATHENS, GA	BLANK0000066944	367.8
	WLFL	D18	DT	CP	RALEIGH, NC	BLANK0000068685	204.8
	WPXK-TV	D18	DT	CP	JELLYCO, TN	BLANK0000068234	300.9

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WLPX-TV	D18	DT	CP	CHARLESTON, WV	BLANK0000034886	367.8
WSOC-TV	D19	DT	CP	CHARLOTTE, NC	BLANK0000034695	0.9

Service area	Terrain-limited	IX-free, before	IX-free, after	Percent New IX
33574.7    3,642,232	32693.8    3,574,928	29786.3    3,370,804	29786.3    3,370,804	0.00    0.00

Undesired	Total IX	Unique IX, before	Unique IX, after
WRAL-TV D17 DT BL	8.1    119	0.0    0	
WRAL_P03 D17 DT APP	12.1    199		0.0    0
WHNS D17 DT CP	243.7    16,903	148.0    11,885	148.0    11,885
WUVG-DT D18 DT CP	67.6    3,075	12.0    485	12.0    485
WLFL D18 DT CP	2479.6    182,270	2343.6    170,645	2339.5    170,565
WPXK-TV D18 DT CP	8.0    2,147	0.0    0	0.0    0
WSOC-TV D19 DT CP	296.2    14,834	220.3    6,906	220.3    6,906

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Interference to BLANK0000068685 CP scenario 1

Desired:	Call	Chan	Svc	Status	City, State	File Number	Distance
	WLFL	D18	DT	CP	RALEIGH, NC	BLANK0000068685	
Undesireds:	WRAL-TV	D17	DT	BL	RALEIGH, NC	DTVBL8688	0.0 km
	WRAL_P03	D17	DT	APP	RALEIGH, NC	wral_p03	0.0
	WCCB	D18	DT	CP	CHARLOTTE, NC	BLANK0000067979	204.8
	WSOC-TV	D19	DT	CP	CHARLOTTE, NC	BLANK0000034695	204.3
	WYDO	D19	DT	CP	GREENVILLE, NC	BLANK0000034494	125.2

Service area	Terrain-limited	IX-free, before	IX-free, after	Percent New IX
47212.7    3,747,583	47033.1    3,743,960	43779.7    3,600,418	43771.7    3,599,893	0.02    0.01

Undesired	Total IX	Unique IX, before	Unique IX, after
WRAL-TV D17 DT BL	0.0    0	0.0    0	
WRAL_P03 D17 DT APP	8.0    525		8.0    525
WCCB D18 DT CP	2388.6    131,435	2376.5    130,611	2376.5    130,611
WSOC-TV D19 DT CP	12.1    824	0.0    0	0.0    0
WYDO D19 DT CP	864.8    12,107	864.8    12,107	864.8    12,107

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Interference to proposal scenario 1  
2.07% interference received

Desired:	Call	Chan	Svc	Status	City, State	File Number	Distance
	WRAL_P03	D17	DT	APP	RALEIGH, NC	wral_p03	
Undesireds:	WPXU-TV	D16	DT	CP	JACKSONVILLE, NC	BLANK0000072136	161.6 km
	WXII-TV	D16	DT	CP	WINSTON-SALEM, NC	BLANK0000034697	183.3
	WTAT-TV	D17	DT	CP	CHARLESTON, SC	BLANK0000034503	322.3
	WHNS	D17	DT	CP	GREENVILLE, SC	BLANK0000024830	380.2
	WKTD-CD	D17	DC	LIC	PORTSMOUTH, VA	BLTTA20050316ACC	221.1
	WVVA	D17	DT	CP	BLUEFIELD, WV	BLANK0000027470	295.2
	WCCB	D18	DT	CP	CHARLOTTE, NC	BLANK0000067979	204.8

Service area	Terrain-limited	IX-free	Percent IX
48920.1    3,852,675	48716.4    3,848,801	47759.4    3,769,149	1.96    2.07

Undesired	Total IX	Unique IX	Prcnt Unique IX
WPXU-TV D16 DT CP	51.6    309	51.6    309	0.11    0.01
WXII-TV D16 DT CP	272.4    61,591	176.3    52,121	0.36    1.35
WTAT-TV D17 DT CP	254.0    9,348	210.2    8,134	0.43    0.21
WHNS D17 DT CP	100.2    4,323	20.1    542	0.04    0.01
WKTD-CD D17 DC LIC	55.7    1,782	55.7    1,782	0.11    0.05
WVVA D17 DT CP	386.9    15,176	278.8    5,543	0.57    0.14
WCCB D18 DT CP	24.2    1,131	8.1    25	0.02    0.00

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