

INTERFERENCE ANALYSIS FOR KSPX-TV CHANNEL 21 (CONSIDERING KTXL MOVE TO CHANNEL 22)

tvstudy v2.2.3 (Dxtpx3)

Database: localhost, Study: kspcx21p4a, Model: Longley-Rice

Study build station data: LMS TV 2017-09-29 (61)

Proposal: KSPX21P4 D21 DT APP SACRAMENTO, CA
File number: kspcx21p4
Facility ID: 52953
Station data: User record
Record ID: 1423
Country: U.S.
Zone: II

User records included:

1455 KTXL22M6A D22 DT APP SACRAMENTO, CA ktxl22m6a (KTXL-22 application.)

Individual records excluded:

0000027009 KSPX-TV D22 DT CP SACRAMENTO, CA BLANK0000027009 (Former KSPX-22 construction permit.)

Stations affected by proposal:

Call	Chan	Svc	Status	City, State	File Number	Distance
K20JX-D	D20	DC	LIC	SACRAMENTO, CA	BLDTA20101006AAS	64.9 km
KDTV-DT	D20	DT	CP	SAN FRANCISCO, CA	BLANK0000025150	91.5
KFTV-DT	D21	DT	CP	HANFORD, CA	BLANK0000025107	224.5
KCNZ-CD	D21z	DC	CP	SAN FRANCISCO, CA	BLANK0000028256	104.7
KDTV-CD	D21	DC	CP	SANTA ROSA, CA	BLANK0000025110	107.1
KTXL22M6A	D22	DT	APP	SACRAMENTO, CA	ktxl22m6a	1.5

No non-directional AM stations found within 0.8 km

No directional AM stations found within 3.2 km

Record parameters as studied:

Channel: D21

Latitude: 38 15 54.00 N (NAD83)

Longitude: 121 29 28.00 W

Height AMSL: 490.4 m

HAAT: 488.0 m

Peak ERP: 952 kW

Antenna: DIE-TFU-24DSC/VP-R CT150 (ID 1001561) 0.0 deg

Elev Pattn: Generic

Elec Tilt: 1.0

39.5 dBu contour:

Azimuth	ERP	HAAT	Distance
0.0 deg	685 kW	487.9 m	113.4 km
45.0	952	482.6	116.3
90.0	685	483.7	113.1
135.0	921	486.6	116.2
180.0	406	490.9	108.5
225.0	206	490.6	102.0
270.0	406	490.7	108.5
315.0	921	489.0	116.4

ERP exceeds maximum

ERP: 952 kW ERP maximum: 547 kW

Distance to Canadian border: 1119.3 km

Distance to Mexican border: 728.5 km

**Proposal is within coordination distance of FCC monitoring station

Conditions at FCC monitoring station: Livermore CA

Bearing: 201.1 degrees Distance: 64.3 km

ERP: 43.4 kW HAAT: 491.2 m Field strength: 55.5 dBu, 0.6 mV/m

Proposal is not within the West Virginia quiet zone area

Conditions at Table Mountain receiving zone:

Bearing: 76.5 degrees Distance: 1411.8 km

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No land mobile station failures found

Study cell size: 2.00 km
Profile point spacing: 0.50 km

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

Interference to BLDTA20101006AAS LIC, scenario 1

****IX: 6.10% interference**

Desired:	Call	Chan	Svc	Status	City, State	File Number	Distance
	K20JX-D	D20	DC	LIC	SACRAMENTO, CA	BLDTA20101006AAS	
Undesireds:	KSPX21P4	D21	DT	APP	SACRAMENTO, CA	kspx21p4	64.9 km
	KNVN	D20	DT	CP	CHICO, CA	BLANK0000027885	171.7
Service area		Terrain-limited		IX-free, before		IX-free, after	Percent New IX
1617.5 1,161,591		1617.5 1,161,591		1613.5 1,161,591		1537.2 1,090,726	4.73 6.10
Undesired		Total IX		Unique IX, before		Unique IX, after	
KSPX21P4 D21 DT APP		80.4		70,865		76.4 70,865	
KNVN D20 DT CP		4.0		0		0.0 0	

(Waiver of interference protection requirements requested with respect to K20JX-D facility.)

Interference to BLANK0000025150 CP, scenario 1

Desired:	Call	Chan	Svc	Status	City, State	File Number	Distance
	KDTV-DT	D20	DT	CP	SAN FRANCISCO, CA	BLANK0000025150	
Undesireds:	KSPX21P4	D21	DT	APP	SACRAMENTO, CA	kspx21p4	91.5 km
	KNVN	D20	DT	CP	CHICO, CA	BLANK0000027885	307.3
	KSEE	D20	DT	APP	FRESNO, CA	BLANK0000029688	221.5
	K20JX-D	D20	DC	LIC	SACRAMENTO, CA	BLDTA20101006AAS	155.9
	KCNZ-CD	D21z	DC	CP	SAN FRANCISCO, CA	BLANK0000028256	53.8
Service area		Terrain-limited		IX-free, before		IX-free, after	Percent New IX
30273.0 7,801,715		20911.2 6,678,012		19115.4 6,441,518		19071.9 6,415,046	0.23 0.41
Undesired		Total IX		Unique IX, before		Unique IX, after	
KSPX21P4 D21 DT APP		945.9		182,741		43.5 26,472	
KNVN D20 DT CP		387.8		75,267		3.9 15	
KSEE D20 DT APP		1593.8		192,919		821.9 37,092	
K20JX-D D20 DC LIC		419.5		43,096		15.9 283	
KCNZ-CD D21z DC CP		47.6		42,830		39.7 42,820	

Interference to BLANK0000025107 CP, scenario 1

Desired:	Call	Chan	Svc	Status	City, State	File Number	Distance
	KFTV-DT	D21	DT	CP	HANFORD, CA	BLANK0000025107	
Undesireds:	KSPX21P4	D21	DT	APP	SACRAMENTO, CA	kspx21p4	224.5 km
	KSEE	D20	DT	APP	FRESNO, CA	BLANK0000029688	0.5
	KCNZ-CD	D21z	DC	CP	SAN FRANCISCO, CA	BLANK0000028256	273.9
	KPMR	D21	DT	LIC	SANTA BARBARA, CA	BLCDT20110607ABB	287.2
	KDTV-CD	D21	DC	CP	SANTA ROSA, CA	BLANK0000025110	330.2
	KNXT	D22	DT	CP	VISALIA, CA	BLANK0000028226	102.1
Service area		Terrain-limited		IX-free, before		IX-free, after	Percent New IX
31249.1 1,795,121		28740.6 1,779,164		28362.1 1,765,986		27717.0 1,764,630	2.27 0.08
Undesired		Total IX		Unique IX, before		Unique IX, after	
KSPX21P4 D21 DT APP		808.2		3,243		645.1 1,356	
KSEE D20 DT APP		67.8		2,241		59.8 2,143	
KCNZ-CD D21z DC CP		75.5		265		8.0 0	
KPMR D21 DT LIC		31.9		131		8.0 5	
KDTV-CD D21 DC CP		63.6		146		4.0 0	
KNXT D22 DT CP		195.4		10,548		127.6 9,143	

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Interference to BLANK0000025107 CP, scenario 2

	Call	Chan	Svc	Status	City, State	File Number	Distance
Desired:	KFTV-DT	D21	DT	CP	HANFORD, CA	BLANK0000025107	
Undesireds:	KSPX21P4	D21	DT	APP	SACRAMENTO, CA	kspx21p4	224.5 km
	KSEE	D20	DT	APP	FRESNO, CA	BLANK0000029688	0.5
	KCNZ-CD	D21z	DC	CP	SAN FRANCISCO, CA	BLANK0000028256	273.9
	KPMR	D21	DT	APP	SANTA BARBARA, CA	BPCDT20120817ABD	287.2
	KDTV-CD	D21	DC	CP	SANTA ROSA, CA	BLANK0000025110	330.2
	KNXT	D22	DT	CP	VISALIA, CA	BLANK0000028226	102.1

Service area	Terrain-limited	IX-free, before	IX-free, after	Percent New IX
31249.1 1,795,121	28740.6 1,779,164	28354.1 1,765,986	27717.0 1,764,630	2.25 0.08

Undesired	Total IX	Unique IX, before	Unique IX, after
KSPX21P4 D21 DT APP	808.2 3,243	637.1 1,356	
KSEE D20 DT APP	67.8 2,241	59.8 2,143	
KCNZ-CD D21z DC CP	75.5 265	39.7 238	8.0 0
KPMR D21 DT APP	55.9 257	20.0 5	8.0 5
KDTV-CD D21 DC CP	63.6 146	27.8 119	4.0 0
KNXT D22 DT CP	195.4 10,548	163.5 10,296	123.6 9,108

Interference to BLANK0000028256 CP, scenario 1

	Call	Chan	Svc	Status	City, State	File Number	Distance
Desired:	KCNZ-CD	D21z	DC	CP	SAN FRANCISCO, CA	BLANK0000028256	
Undesireds:	KSPX21P4	D21	DT	APP	SACRAMENTO, CA	kspx21p4	104.7 km
	KDTV-DT	D20	DT	CP	SAN FRANCISCO, CA	BLANK0000025150	53.8
	KFTV-DT	D21	DT	CP	HANFORD, CA	BLANK0000025107	273.9
	KDTV-CD	D21	DC	CP	SANTA ROSA, CA	BLANK0000025110	108.9
	KTXL22M6A	D22	DT	APP	SACRAMENTO, CA	ktxl22m6a	104.1

Service area	Terrain-limited	IX-free, before	IX-free, after	Percent New IX
7383.0 5,092,064	5925.6 4,416,722	5624.0 4,225,714	5584.4 4,225,581	0.70 0.00

Undesired	Total IX	Unique IX, before	Unique IX, after
KSPX21P4 D21 DT APP	91.1 10,847	39.6 133	
KDTV-DT D20 DT CP	51.5 38,789	19.8 194	19.8 0
KFTV-DT D21 DT CP	27.8 12,566	19.8 8,667	19.8 8,667
KDTV-CD D21 DC CP	250.0 181,231	218.3 142,636	194.5 132,116
KTXL22M6A D22 DT APP	7.9 916	4.0 916	4.0 916

Interference to BLANK0000025110 CP, scenario 1

	Call	Chan	Svc	Status	City, State	File Number	Distance
Desired:	KDTV-CD	D21	DC	CP	SANTA ROSA, CA	BLANK0000025110	
Undesireds:	KSPX21P4	D21	DT	APP	SACRAMENTO, CA	kspx21p4	107.1 km
	KFTV-DT	D21	DT	CP	HANFORD, CA	BLANK0000025107	330.2
	KCNZ-CD	D21z	DC	CP	SAN FRANCISCO, CA	BLANK0000028256	108.9
	KTXL22M6A	D22	DT	APP	SACRAMENTO, CA	ktxl22m6a	105.6

Service area	Terrain-limited	IX-free, before	IX-free, after	Percent New IX
10765.0 786,252	8253.8 578,221	8051.6 529,550	7999.8 529,333	0.64 0.04

Undesired	Total IX	Unique IX, before	Unique IX, after
KSPX21P4 D21 DT APP	135.1 14,986	51.9 217	
KFTV-DT D21 DT CP	4.0 0	4.0 0	0.0 0
KCNZ-CD D21z DC CP	194.1 48,659	190.1 48,659	118.9 33,902
KTXL22M6A D22 DT APP	8.1 12	4.0 12	0.0 0

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Interference to ktxl22m6a APP, scenario 1

Desired:	Call	Chan	Svc	Status	City, State	File Number	Distance
	KTXL22M6A	D22	DT	APP	SACRAMENTO, CA	ktxl22m6a	
Undesireds:	KSPX21P4	D21	DT	APP	SACRAMENTO, CA	ksp21p4	1.5 km
	KCNZ-CD	D21z	DC	CP	SAN FRANCISCO, CA	BLANK0000028256	104.1
	KDTV-CD	D21	DC	CP	SANTA ROSA, CA	BLANK0000025110	105.6
	KAXT-CD	D22	DC	CP	SAN FRANCISCO, SAN JO, CA	BLANK0000027887	91.7
	KNXT	D22	DT	CP	VISALIA, CA	BLANK0000028226	322.9
	KQCA	D23	DT	CP	STOCKTON, CA	BLANK0000024621	1.5
	Service area				Terrain-limited		
	42272.0	8,306,449	38112.4	6,041,182	IX-free, before	IX-free, after	Percent New IX
					37026.3	5,858,530	37022.3 5,858,451 0.01 0.00
Undesired					Total IX	Unique IX, before	Unique IX, after
KSPX21P4 D21 DT APP					63.8 1,455	4.0 79	
KCNZ-CD D21z DC CP					23.8 27,969	0.0 0	
KDTV-CD D21 DC CP					4.0 71	0.0 0	
KAXT-CD D22 DC CP					496.0 156,997	460.3 125,154	
KNXT D22 DT CP					510.2 24,271	502.3 24,271	
KQCA D23 DT CP					91.8 5,187	83.9 1,384	24.1 8
