

# Night Allocation Protection Report

Call: KEYS  
 Freq: 1440 kHz  
 CORPUS CHRISTI, TX, US  
 Hours: N  
 Lat: 27-47-02 N  
 Lng: 097-27-29 W  
 Power: 0.199 kW  
 Theo RMS: 336.58 mV/m @ 1km @ 1kW

#	Field Ratio	Phase (deg)	Spacing (deg)	Orient (deg)	Height (deg)	Ref Switch	TL Switch	A (deg)	B (deg)	C (deg)	D (deg)
1	1.000	0.0	0.0	0.0	146.0	0	0	0.0	0.0	0.0	0.0

Call Letters	Ct	St	City	Azi (deg)	Ang Low (deg)	Ang High (deg)	SWFF (100uV/m)	Req Prot (mV/m)	Permis (mV/m)	Cur Rad (mV/m)	Margin (mV/m)
KPUR	US	TX	AMARILLO	334.31	6.89	12.59	53.56	1.581	147.54	147.40	0.14
50% = 4.863, 25% = 6.344; WGEM=3.72 XEFCD/A=3.13 KTUV=2.29 KELG=2.17 KFOO=2.04 KEXB=1.58											
KELG	US	TX	MANOR	358.35	26.33	39.55	226.53	7.066	155.95	115.06	40.89
50% = 8.308, 25% = 10.459; KEYS=7.07 KPUR=4.37 XEFCD/A=3.77 WGEM=3.33 XEEST/ =2.84 KEXB=2.65											
WLWI	US	AL	MONTGOMERY	62.22	4.24	8.70	36.00	1.468	203.93	149.12	54.81
50% = 4.069, 25% = 6.008; WHIS=3.18 WGVL=2.54 WLXN=1.72 WIBU=1.62 KTUV=1.60 PJA 5-A=1.56 WROK=1.55 WMAX=1.51 WWCL=1.47 KEYS=1.47											
XEFCD/A	MX	CH	CD. CAMARGO	271.07	12.46	12.46	90.94	3.695	203.17	141.32	61.85
50% = 7.391, 25% = 8.816; XEHW/A=5.11 XE/A=3.79 XEEST/ =3.77 KEXB=3.08 KFOO=2.70 KELG=2.52											
XEFCD/O	MX	CH	CD. CAMARGO	271.07	12.46	12.46	90.94	3.695	203.17	141.32	61.85
50% = 7.391, 25% = 8.816; XEHW/A=5.11 XE/A=3.79 XEEST/ =3.77 KEXB=3.08 KFOO=2.70 KELG=2.52											
KTUV	US	AR	LITTLE ROCK	31.26	6.89	12.59	53.45	2.320	217.03	147.40	69.64
50% = 7.489, 25% = 9.28; WLWI=6.07 KEXB=4.39 WGEM=3.68 WGVL=3.06 KTBZ=2.67											
KTUV	US	AR	LITTLE ROCK	31.26	6.89	12.59	53.45	2.320	217.03	147.40	69.64
50% = 7.489, 25% = 9.28; WLWI=6.07 KEXB=4.39 WGEM=3.68 WGVL=3.06 KTBZ=2.67											
KEXB	US	TX	UNIVERSITY PARK	7.10	13.24	21.97	106.53	4.780	224.36	140.34	84.01
50% = 9.858, 25% = 11.382; WGEM=5.64 KEYS=4.78 KELG=4.74 KPUR=4.49 KTUV=4.45 KTBZ=3.54											

XE/A	MX CI PARRAS	242.07	18.49	18.49	119.05	5.996	251.85	131.54	120.31
50% = 11.09, 25% = 13.042; XEFCD/A=6.97 XEEST/ =6.20 KEYS=6.00 XEHW/A=5.26 KELG=4.41									
XEEST/O	MX DF GRANJAS MEXICO	190.52	9.29	9.29	69.36	3.973	286.36	145.19	141.17
50% = 8.513, 25% = 9.417; XENAC/A=6.34 TGMS-A=4.05 XEHW/A=3.97 XEFCD/A=2.98 XE/A=2.71									
XEEST/	MX DF MAGDALENA ATLAZ	190.54	9.26	9.26	69.08	3.969	287.29	145.19	142.10
50% = 8.513, 25% = 9.412; XENAC/A=6.34 TGMS-A=4.06 XEHW/A=3.97 XEFCD/A=2.97 XE/A=2.70									
KMAJ	US KS TOPEKA	7.47	3.67	7.88	31.46	1.911	303.69	149.35	154.34
50% = 5.555, 25% = 7.643; KTUV=3.45 WROK=3.27 WLWI=2.88 KYCR=2.74 KPUR=2.41 WGV L=2.35 WNFL=2.19 WGEM=1.98									
XECC/O	MX VC TLAPACOYAN	178.28	10.47	10.47	78.40	5.038	321.31	143.86	177.45
50% = 10.076, 25% = 12.429; XENAC/A=7.37 XEEST/ =6.87 TGMS-A=4.83 KEYS=4.36 XEHW/A=3.26									
XEHW/A	MX SI ROSARIO	239.94	8.69	8.69	64.67	4.245	328.22	145.80	182.42
50% = 8.491, 25% = 9.962; XEFCD/A=6.23 XEEST/ =5.77 KEYS=3.81 XE/A=3.55									
XE/O	MX GT ACAMBARO	201.75	9.70	9.70	72.56	4.785	329.75	144.77	184.98
50% = 9.587, 25% = 11.568; XEEST/ =6.54 XENAC/A=5.12 XEHW/A=4.79 XEFCD/A=3.74 XE/A=3.11 TGMS-A=3.03 KEYS=3.01									
XECCC/O	MX JA TONALA	217.72	8.72	8.72	64.89	4.643	357.79	145.80	211.99
50% = 9.287, 25% = 12.248; XEEST/ =7.54 XEHW/A=5.42 XEFCD/A=4.63 KEYS=4.47 XENAC/A=3.39 XE/A=3.29									
XECCC1/O	MX JA TONALA	217.72	8.72	8.72	64.89	4.643	357.79	145.80	211.99
50% = 9.287, 25% = 12.248; XEEST/ =7.54 XEHW/A=5.42 XEFCD/A=4.63 KEYS=4.47 XENAC/A=3.39 XE/A=3.29									
XEURM/O	MX MC URUAPAN	207.72	8.07	8.07	59.70	4.569	382.71	146.37	236.34
50% = 9.139, 25% = 11.6; XEEST/ =7.66 XEHW/A=4.98 XENAC/A=4.25 XEFCD/A=3.68 KEYS=3.28 XE/A=2.95									
KFOO	US CA RIVERSIDE	295.04	0.00	2.20	14.88	1.291	433.88	150.15	283.73
50% = 3.774, 25% = 5.166; KMED=2.53 KUHL=2.07 KELG=1.89 CKJR/A=1.82 XEFCD/A=1.68 KYNO=1.54 KPUR=1.47 KVEN=1.33									
WWCL	US FL LEHIGH ACRES	91.09	1.66	5.06	24.32	2.199	452.16	149.98	302.19
50% = 5.096, 25% = 7.343; WPRD=3.00 PJA 5-A=2.98 WGV L=2.84 WLWI=2.44 YVZJ-A=2.39 KEYS=2.20 TIDVC-A=2.07 XENAC/A=1.91 YNSO-A=1.88									
KKXL	US ND GRAND FORKS	0.83	0.00	1.01	9.51	0.976	513.31	150.15	363.16
50% = 2.616, 25% = 3.977; CKJR/A=2.00 WROK=1.69 KPUR=1.29 KBMW=1.22 KBUN=1.22 KZZJ=1.11 KYCR=1.09 KEZW=0.98 WNFL=0.98									

WHIS	US WV BLUEFIELD	51.03	0.30	3.21	16.24	1.681	517.59	150.14	367.45
50% = 4.733, 25% = 6.864; WLXN=3.08 WGVN=2.85 WROK=2.20 WHKZ=2.04 WIBU=1.95 WAJR=1.92 WLWI=1.91									
WEIR=1.91 WNFL=1.71 WXNT=1.68									
WGEM	US IL QUINCY	21.00	2.29	5.93	23.97	2.649	552.56	149.84	402.72
50% = 7.812, 25% = 10.681; WROK=6.73 DKZQZ=3.97 WIBU=3.84 WLWI=3.46 KTUV=3.37 WGVN=2.81 KYCR=2.65									
WROK	US IL ROCKFORD	23.10	0.60	3.61	16.37	1.946	594.56	150.13	444.44
50% = 5.784, 25% = 7.785; WMAX=3.60 WIBU=3.55 WXNT=2.82 KYCR=2.53 WLWI=2.47 DKZQZ=2.42 WHIS=2.14									
WNFL=2.06									
XENAC/A	MX TB NACAJUCA	155.99	6.76	6.76	48.91	6.144	628.12	147.48	480.65
50% = 11.794, 25% = 13.196; TGMS-A=7.44 XEEST/ =6.78 KEYS=6.14 YNSO-A=4.77 TIDVC-A=3.51									
KYCR	US MN GOLDEN VALLEY	9.69	0.00	2.60	13.33	1.758	659.44	150.15	509.29
50% = 5.889, 25% = 7.159; WROK=4.66 KMAJ=3.60 WNFL=2.40 KKXL=2.01 WMAX=1.91 DKZQZ=1.76									
XEVSD/O	MX BS VILLA CONSTITUC	263.50	4.33	4.33	29.44	4.143	703.56	149.07	554.49
50% = 8.286, 25% = 8.286; XEFCD/A=5.34 XEHW/A=4.66 KFOO=4.29									
WIBU	US IL PARIS	31.80	1.58	4.95	20.82	2.973	714.09	150.00	564.09
50% = 9.442, 25% = 12.109; WROK=6.76 WMKM=4.87 WMAX=4.45 WLWI=3.87 WHIS=3.65 WNFL=3.27 KTUV=3.10									
WHKZ=2.97									
WPRD	US FL WINTER PARK	82.96	1.66	5.06	23.53	3.369	716.01	149.98	566.03
50% = 11.648, 25% = 13.477; WWCL=11.65 WGVN=5.17 WLWI=4.39									
XE/O	MX YC BUCTZOTZ	127.98	6.96	6.96	50.61	7.342	725.37	147.32	578.05
50% = 11.431, 25% = 13.946; KEYS=7.34 XENAC/A=6.93 WWCL=5.36 TGMS-A=5.20 YNSO-A=4.67 XEEST/ =3.88									
WGVN	US SC GREENVILLE	57.28	1.40	4.70	20.95	3.078	734.52	150.03	584.49
50% = 10.727, 25% = 12.313; WHIS=8.31 WLWI=6.79 WLXN=4.59 WGIG=3.93									
WGIG	US GA BRUNSWICK	72.43	1.62	5.00	22.50	3.796	843.57	150.00	693.58
50% = 14.168, 25% = 15.185; WGVN=11.08 WLWI=8.83 WLTG=3.92 WPRD=3.81									
KMED	US OR MEDFORD	311.89	0.00	0.00	7.12	1.282	901.08	150.15	750.93
50% = 4.45, 25% = 5.129; KFOO=3.30 CKJR/A=2.99 KVON=1.77 KPUR=1.31 CFCE/A=1.29									
WMAX	US MI BAY CITY	31.08	0.00	1.61	11.29	2.068	915.71	150.15	765.56
50% = 5.888, 25% = 8.273; WROK=4.99 WMKM=3.13 WHKZ=2.75 WHIS=2.72 CHKT/A=2.24 WXNT=2.20 WFOB=2.15									
WNFL=2.08									
WNFL	US WI GREEN BAY	21.89	0.00	2.09	12.17	2.291	940.95	150.15	790.81

50% = 8.689, 25% = 9.165; WROK=7.03 WMAX=5.11 KYCR=2.91

WVEI US MA WORCESTER 48.35 0.00 0.00 6.26 1.281 1023.54 150.15 873.39  
 50% = 3.829, 25% = 5.124; WENE=3.27 WRED=2.00 WHIS=1.72 NEW OTTAWA/A=1.62 WNSW=1.60 WNPV=1.34  
 WWSC=1.29

WMKM US MI INKSTER 34.70 0.00 2.01 12.38 2.541 1026.11 150.15 875.96  
 50% = 9.406, 25% = 10.165; WMAX=6.75 WROK=4.72 WHKZ=4.55 WHIS=3.85

WHKZ US OH WARREN 41.17 0.00 1.64 11.77 2.529 1074.39 150.15 924.25  
 50% = 8.114, 25% = 10.116; WMAX=5.86 WHIS=5.61 WAJR=3.50 WROK=2.89 WNPV=2.82 WMKM=2.82

KTBZ US OK TULSA 8.18 6.47 11.97 50.16 1.092 1088.13 147.70 940.43  
 50% = 2.889, 25% = 4.401; WXNT=1.51 KBTN=1.44 XELL/A=1.42 WGEM=1.41 WOWW=1.36 WOC=1.35 WLKF=1.32  
 XECOC/A=1.27 XE/A=1.23 CHKT/A=1.13 KSHJ=1.09

KUHL US CA SANTA MARIA 295.94 0.00 0.65 11.47 3.068 1337.88 150.15 1187.74  
 50% = 10.716, 25% = 12.272; KFOO=10.72 KVON=4.88 KMED=3.45

WAJR US WV MORGANTOWN 46.05 0.00 1.86 12.52 3.476 1388.26 150.15 1238.12  
 50% = 13.905, 25% = 13.905; WHKZ=11.25 WHIS=8.17

TGMS-A GT VOZMAZATENAN 156.10 3.24 3.24 8.63 2.411 1396.84 149.55 1247.29  
 50% = 4.822, 25% = 5.168; XENAC/A=3.08 YNSO-A=2.69 TIDVC-A=2.56 XEEST/ =1.86

CMIL-D CU CIEGO DE AVI 105.07 0.97 0.97 4.15 1.162 1399.34 150.09 1249.25  
 50% = 2.325, 25% = 3.484; PJA 5-A=1.89 CMCL-C=1.36 WGVL=1.16 WGIG=1.10 YNSO-A=1.07 TIDVC-A=1.06  
 YVZJ-A=0.99 HIAD-C=0.96

KVON US CA NAPA 303.20 0.00 0.00 8.98 2.591 1442.19 150.15 1292.04  
 50% = 9.66, 25% = 10.365; KMED=7.27 KFOO=6.36 KUHL=3.76

WLXN US NC LEXINGTON 56.76 0.28 3.19 16.44 5.252 1596.77 150.14 1446.63  
 50% = 20.195, 25% = 21.006; WGVL=17.66 WHIS=9.80 WAJR=5.78

KSHJ US TX HOUSTON 43.60 24.55 37.35 211.89 7.670 1809.97 119.15 1690.82  
 50% = 27.796, 25% = 30.681; KTBZ=17.95 WLTV=16.31 KEES=13.58 WOWW=12.99

CMCL-C CU GUINES 106.21 2.92 2.92 7.78 3.326 2138.45 149.66 1988.80  
 50% = 2.223, 25% = 2.647; YNSO-A=1.28 TIDVC-A=1.08 XENAC/A=1.06 PJA 5-A=1.01 KEYS=0.89 TGMS-A=0.85  
 WLWI=0.74

KLO US UT OGDEN 321.76 0.00 2.39 14.10 0.754 2673.07 150.15 2522.92  
 50% = 2.311, 25% = 3.015; WXNT=1.37 XEOX/A=1.11 DKZQZ=1.08 KALV=1.03 KEZW=1.03 KVVN=0.85 KYNO=0.84

XECOC/A=0.80 CHKT/A=0.78

YNSO-A	NU	RADIO SOL	141.91	1.25	1.25	4.54	2.512	2766.56	150.06	2616.50
50% = 5.023, 25% = 5.684; TIDVC-A=4.24 TGMS-A=2.69 XENAC/A=1.97 HOS 21-A=1.79										
KEZW	US CO	AURORA	334.18	2.22	5.83	24.11	1.405	2913.69	149.86	2763.83
50% = 4.934, 25% = 5.62; KLO=4.24 KALV=2.52 WXNT=2.26 WEEF=1.45										
KALV	US OK	ALVA	353.98	5.83	11.02	45.60	2.699	2959.28	148.20	2811.08
50% = 10.794, 25% = 10.794; KTBZ=10.79										
DKZQZ	US MO	ST LOUIS	27.57	2.89	6.78	27.28	1.664	3049.12	149.66	2899.46
50% = 5.387, 25% = 6.655; WXNT=4.53 WOWW=2.91 CHKT/A=2.14 KTBZ=2.03 WYMC=1.89 WYKG=1.73										
WFNY	US NY	GLOVERSVILLE	44.66	0.00	0.00	6.91	4.828	3494.62	150.15	3344.48
50% = 19.311, 25% = 19.311; WVEI=12.08 WHKZ=11.17 WNPV=10.11										
WNPV	US PA	LANSDALE	49.94	0.00	0.02	8.84	6.732	3809.13	150.15	3658.98
50% = 26.927, 25% = 26.927; WHKZ=26.93										
TIDVC-A	CS	ALAJUELA 1	142.44	0.00	0.00	2.62	2.010	3840.87	150.15	3690.72
50% = 4.019, 25% = 5.087; YNSO-A=3.00 HOS 21-A=2.67 TGMS-A=1.81 HCDY4-A=1.69 HJNZ-A=1.40 PJA 5-A=1.27										
KYNO	US CA	FRESNO	301.60	0.00	0.69	11.28	0.886	3929.77	150.15	3779.62
50% = 2.738, 25% = 3.559; KVVN=1.89 KLO=1.46 XEOX/A=1.34 KMRB=1.26 KFOO=1.00 XEXX/A=0.98 XECOC/A=0.91 KALV=0.89										
WXNT	US IN	INDIANAPOLIS	34.80	1.04	4.21	18.52	1.536	4146.26	150.09	3996.17
50% = 4.034, 25% = 6.143; CHKT/A=3.45 WOWW=2.09 WYKG=1.94 WION=1.92 DKZQZ=1.88 WEEF=1.67 WLKF=1.66 WFOB=1.57 WBEV=1.56										
CKJR/A	CA AB	WETASKIWIN	339.17	0.00	0.00	3.36	2.990	4453.49	150.15	4303.34
50% = 5.98, 25% = 6.55; CFCP/A=5.98 KMED=2.02 KKXL=1.76										
KEES	US TX	GLADEWATER	24.52	12.56	20.97	100.45	9.287	4622.65	141.19	4481.47
50% = 32.968, 25% = 37.146; KTBZ=32.97 WOWW=13.58 WLTG=10.42										
WLKF	US FL	LAKELAND	85.28	1.96	5.47	25.15	2.872	5711.52	149.91	5561.61
50% = 8.182, 25% = 11.489; WXNT=5.40 WOIR=4.64 KTBZ=4.03 WTNA=3.51 DKZQZ=3.40 WEIR=3.37 WNAV=3.28 WPLN=3.10 WOWW=3.08										
WLTG	US FL	PANAMA CITY	74.25	4.26	8.74	36.79	4.392	5969.23	149.07	5820.16
50% = 13.399, 25% = 17.569; WLKF=8.55 WXNT=7.80 KTBZ=6.76 WPLN=6.31 DKZQZ=6.23 WYMC=5.54 KEES=4.45										

WOIR	US FL HOMESTEAD	94.87	1.00	4.15	21.75	3.183	7316.08	150.09	7165.99
50% = 11.256, 25% = 12.736; WLKF=11.26 WXNT=3.88 KTBZ=3.22 WNEL=3.18									
KRGI	US NE GRAND ISLAND	357.28	2.36	6.02	24.26	3.552	7319.16	149.81	7169.35
50% = 11.968, 25% = 14.206; KTBZ=9.25 DKZQZ=7.60 WXNT=5.56 KEZW=5.26									
HOS 21-A	PM RADIO UNION	134.22	0.00	0.00	1.69	2.971	8788.77	150.15	8638.63
50% = 5.943, 25% = 8.31; TIDVC-A=3.78 YVZJ-A=3.31 PJA 5-A=3.17 HJNZ-A=2.74 HCDY4-A=2.51 HJEK-A=2.43									
HJBM-A=2.40 YVTY-A=2.04 HJGM-A=2.02									
WNSW	US NJ NEWARK	49.56	0.00	0.00	7.91	1.448	9152.20	150.15	9002.06
50% = 4.533, 25% = 5.914; CHKT/A=4.53 WENE=1.96 WNAV=1.83 WKOX=1.66 WTNA=1.54 WDJS=1.45									
KCLK	US WA ASOTIN	325.47	0.00	0.00	7.09	1.304	9194.25	150.15	9044.11
50% = 4.741, 25% = 5.216; KLO=3.00 KBRC=2.89 KEZW=2.27 KYKN=2.17									
WRED	US ME WESTBROOK	46.64	0.00	0.00	5.24	9.949	9485.92	150.15	9335.77
50% = 39.796, 25% = 39.796; WVEI=39.80									
WEIR	US WV WEIRTON	43.23	0.00	1.83	12.30	2.548	10356.61	150.15	10206.47
50% = 8.792, 25% = 10.193; CHKT/A=8.79 WXNT=3.43 WNAV=2.79 WNSW=2.65									
WOWW	US TN GERMANTOWN	39.38	4.98	9.78	40.13	8.399	10464.40	148.70	10315.71
50% = 28.823, 25% = 33.596; WYMC=20.03 DKZQZ=15.77 WXNT=13.45 KTBZ=12.82 WPLN=11.55									
WYMC	US KY MAYFIELD	37.30	3.41	7.51	30.38	6.456	10627.37	149.47	10477.89
50% = 24.293, 25% = 25.825; WXNT=19.77 DKZQZ=14.12 WOWW=8.76									
WTNA	US PA ALTOONA	46.04	0.00	1.02	10.61	2.305	10860.49	150.15	10710.35
50% = 8.713, 25% = 9.221; CHKT/A=5.45 WHKZ=5.08 WNAV=4.52 WENE=3.02									
WYKG	US GA COVINGTON	60.07	2.41	6.09	25.76	6.092	11822.92	149.81	11673.11
50% = 23.381, 25% = 24.367; WOWW=15.21 WXNT=13.68 WPLN=11.33 WEIR=6.86									
KBRC	US WA MOUNT VERNON	323.77	0.00	0.00	4.79	1.134	11830.53	150.15	11680.39
50% = 3.833, 25% = 4.536; KITI=3.40 KYKN=1.78 KCLK=1.71 KRIZ=1.27 KEZW=1.16									
CFCP/A	CA BC COURTENAY	323.71	0.00	0.00	2.74	6.686	12196.71	150.15	12046.57
50% = 13.373, 25% = 14.189; CKJR/A=13.37 KMED=4.74									
WPLN	US TN MADISON	44.27	2.83	6.69	27.39	7.439	13581.88	149.69	13432.19
50% = 28.576, 25% = 29.757; WXNT=25.05 WOWW=13.74 DKZQZ=8.30									
NEW OTTAWA/A	CA ON OTTAWA	38.79	0.00	0.00	4.52	13.885	15355.02	150.15	15204.87

50% = 27.769, 25% = 35.939; WHKZ=27.77 WMKM=13.82 WVEI=11.54 WMAX=10.04 WFNY=9.78

NEW OTTAWA/A CA ON OTTAWA 38.79 0.00 0.00 4.52 13.885 15355.02 150.15 15204.87  
50% = 27.769, 25% = 35.939; WHKZ=27.77 WMKM=13.82 WVEI=11.54 WMAX=10.04 WFNY=9.78

PJA 5-A NA R KELKBOOM 115.18 0.00 0.00 1.14 3.617 15932.37 150.15 15782.23  
50% = 7.234, 25% = 8.19; YVZJ-A=7.23 YVRF-A=2.80 YVTY-A=2.63

KYKN US OR KEIZER 317.01 0.00 0.00 6.01 2.016 16760.59 150.15 16610.45  
50% = 7.547, 25% = 8.062; KBRC=5.18 KCLK=4.23 KLO=3.49 KITI=2.83

WFOB US OH FOSTORIA 37.23 0.00 2.54 13.83 4.659 16850.40 150.15 16700.25  
50% = 17.482, 25% = 18.637; WXNT=17.48 CHKT/A=6.46

WDEX US NC MONROE 59.17 0.58 3.59 17.68 6.019 17022.85 150.13 16872.73  
50% = 19.761, 25% = 24.077; WXNT=12.53 WEIR=11.14 WTNA=10.46 WNAV=8.43 WPLN=7.75 WOWW=7.62

KMRB US CA SAN GABRIEL 294.85 0.00 1.84 14.03 5.022 17900.50 150.15 17750.35  
50% = 20.089, 25% = 20.089; KYNO=20.09

WENE US NY ENDICOTT 45.03 0.00 0.00 8.17 3.561 21794.15 150.15 21644.01  
50% = 13.171, 25% = 14.243; CHKT/A=8.88 WTNA=7.39 WNSW=6.32 WNAV=5.42

HCMD7-A EC PUYO 144.25 0.00 0.00 0.80 3.607 22418.26 150.15 22268.11  
50% = 8.045, 25% = 8.858; HCTB5-A=5.49 HCDY4-A=4.64 OBX1I-A=3.61 HCDF1-A=2.76 HJEK-A=2.47

WNAV US MD ANNAPOLIS 51.85 0.00 0.74 10.34 4.757 23001.05 150.15 22850.91  
50% = 16.853, 25% = 19.026; WTNA=14.42 WNSW=8.72 WEIR=6.58 CHKT/A=5.89

HIAD-C DR S JUAN 104.83 0.00 0.00 1.61 7.688 23848.11 150.15 23697.97  
50% = 6.395, 25% = 7.187; PJA 5-A=5.54 YVZJ-A=3.19 HIAK-C=1.98 HIFS-C=1.94 HILF-C=1.75

WNEL US PR CAGUAS 101.49 0.00 0.00 6.99 3.343 23902.90 150.15 23752.76  
50% = 11.135, 25% = 13.373; YVTN-A=9.73 4VGM-A=5.42 HJQX-A=4.84 HIVG-C=4.27 HJKU-A=3.64

WNEL US PR CAGUAS 101.49 0.00 0.00 6.99 3.343 23902.90 150.15 23752.76  
50% = 11.135, 25% = 13.373; YVTN-A=9.73 4VGM-A=5.42 HJQX-A=4.84 HIVG-C=4.27 HJKU-A=3.64

YVTY-A VE TARIBA 125.16 0.00 0.00 1.03 4.982 24196.61 150.15 24046.46  
50% = 9.963, 25% = 11.434; YVZJ-A=7.73 PJA 5-A=6.28 HJGM-A=3.56 HJBM-A=3.08 HJNZ-A=3.06

KVVN US CA SANTA CLARA 301.20 0.00 0.00 9.58 4.769 24882.31 150.15 24732.17  
50% = 19.077, 25% = 19.077; KYNO=19.08

KKMP	US MP	GARAPAN-SAIPAN	296.76	0.00	0.00	0.39	1.990	25499.46	150.15	25349.31
50% = 0.166, 25% = 0.197; CKJR/A=0.11 KVON=0.10 KUHL=0.08 KFOO=0.07 CFCP/A=0.06 KMED=0.05										
HIAK-C	DR	S DOMINGO 4	104.22	0.00	0.00	1.43	7.384	25732.24	150.15	25582.10
50% = 6.744, 25% = 7.337; PJA 5-A=5.82 YVZJ-A=3.41 HILF-C=2.10 HIAD-C=1.98										
ZYH-603-A	BR	CRATO	112.93	0.00	0.00	0.22	1.154	26297.46	150.15	26147.31
50% = 2.309, 25% = 2.66; ZYH-466-A=1.84 ZYJ930-A=1.39 UNK-A=1.04 ZYJ-469-A=0.81										
HJNZ-A	CO	MEDELLIN 17	132.00	0.00	0.00	1.14	6.166	27158.52	150.15	27008.37
50% = 7.872, 25% = 11.062; YVZJ-A=5.42 PJA 5-A=4.12 HJBM-A=3.95 HJEK-A=3.55 HJGM-A=3.40 HCDY4-A=3.12										
HCMD7-A=3.10 YVTY-A=3.06 HOS 21-A=2.74										
HIFS-C	DR	NAGUA	102.42	0.00	0.00	1.48	8.050	27183.04	150.15	27032.89
50% = 5.933, 25% = 6.549; PJA 5-A=5.17 YVZJ-A=2.91 HILF-C=1.97 HIAD-C=1.94										
WBEV	US WI	BEAVER DAM	21.58	0.04	2.87	14.22	7.793	27401.48	150.15	27251.34
50% = 29.597, 25% = 31.171; WXNT=22.51 DKZQZ=19.21 WFOB=9.78										
HILF-C	DR	HIGUEY 2	102.96	0.00	0.00	1.33	7.557	28402.17	150.15	28252.03
50% = 6.549, 25% = 7.156; PJA 5-A=5.65 YVZJ-A=3.31 HIAK-C=2.10 HIFS-C=1.97										
HJEK-A	CO	TULUA 2	135.70	0.00	0.00	1.02	5.860	28605.41	150.15	28455.27
50% = 8.103, 25% = 10.516; HCMD7-A=4.27 YVZJ-A=4.26 HCDY4-A=3.91 HJBM-A=3.75 HJNZ-A=3.52 HJGM-A=3.08										
HCTB5-A=2.89 PJA 5-A=2.84 YVTY-A=2.57										
HCTB5-A	EC	AZOGUES	146.49	0.00	0.00	0.78	4.484	28917.69	150.15	28767.55
50% = 8.968, 25% = 9.769; HCMD7-A=6.73 HCDY4-A=4.27 OBX1I-A=4.11 HCCS5-A=2.95 HCDF1-A=2.52										
WEEF	US IL	DEERFIELD	26.01	0.44	3.40	15.81	9.158	28965.40	150.14	28815.27
50% = 31.96, 25% = 36.631; WXNT=31.96 DKZQZ=14.48 WFOB=10.52										
WEEF	US IL	DEERFIELD	26.01	0.44	3.40	15.81	9.158	28965.40	150.14	28815.27
50% = 31.96, 25% = 36.631; WXNT=31.96 DKZQZ=14.48 WFOB=10.52										
YVRF-A	VE	ALTAGRACIA	115.42	0.00	0.00	0.82	4.956	30096.59	150.15	29946.44
50% = 9.911, 25% = 9.911; YVZJ-A=7.27 PJA 5-A=6.74										
HJBM-A	CO	HONDA	132.20	0.00	0.00	1.02	6.283	30798.07	150.15	30647.92
50% = 7.779, 25% = 10.973; YVZJ-A=5.52 HJNZ-A=3.89 PJA 5-A=3.87 HJEK-A=3.75 HJGM-A=3.73 HCMD7-A=3.47										
HCDY4-A=3.22 YVTY-A=3.07										
ZYJ-469-A	BR	RIO DE JANEI	128.54	0.00	0.00	0.18	1.138	30879.39	150.15	30729.25
50% = 2.276, 25% = 2.877; ZYK752-A=1.39 ZYK568-A=1.35 UNK-A=1.19 ZYK-634-A=0.98 UNK-A=0.97 UNK-A=0.81										



ZYH-466-A=0.73

HJGM-A CO SOGAMOSO 1 129.01 0.00 0.00 0.96 5.923 30932.88 150.15 30782.74  
50% = 8.057, 25% = 10.95; YVZJ-A=6.51 PJA 5-A=4.75 HJBM-A=3.72 YVTY-A=3.52 HJNZ-A=3.38 HJEK-A=3.08  
HCMD7-A=2.80

HCDF1-A EC IBARRA 2 144.27 0.00 0.00 0.93 6.377 34409.05 150.15 34258.90  
50% = 7.703, 25% = 9.354; HCMD7-A=6.18 HCTB5-A=4.59 OBX1I-A=2.95 HJEK-A=2.76 HCCS5-A=2.58 HJBM-A=2.28

YVZJ-A VE GUANARE 120.29 0.00 0.00 0.96 6.632 34706.75 150.15 34556.61  
50% = 7.485, 25% = 9.498; PJA 5-A=7.48 YVTY-A=3.37 YVRF-A=3.10 HJGM-A=2.79 HJBM-A=2.34

LRK388-A AR S A D L COBR 147.02 0.00 0.00 0.26 1.868 35610.62 150.15 35460.47  
50% = 4.016, 25% = 4.767; CA 144-A=2.17 CA 144A-A=2.07 CP 104-A=1.91 CP 61-A=1.87 OAX6R-A=1.47  
LRK376-A=1.23 LRK370-A=1.22 CP 107-A=1.20

HCDY4-A EC ESMERALDAS 144.62 0.00 0.00 0.98 7.036 35828.32 150.15 35678.18  
50% = 7.106, 25% = 9.019; HCMD7-A=5.68 HCTB5-A=4.27 HJEK-A=2.77 OBX1I-A=2.72 HCCS5-A=2.38 HJBM-A=2.28  
HJNZ-A=2.21

CA 144-A CI ARICA 147.24 0.00 0.00 0.33 2.410 36336.59 150.15 36186.44  
50% = 4.82, 25% = 5.077; OAX6R-A=3.47 CP 61-A=3.35 CP 104-A=1.60

WION US MI IONIA 30.09 0.00 2.16 12.59 9.147 36338.12 150.15 36187.97  
50% = 34.993, 25% = 36.589; WXNT=27.24 WFOB=21.96 CHKT/A=10.69

WDJS US NC MOUNT OLIVE 60.90 0.00 2.27 14.24 10.516 36937.10 150.15 36786.96  
50% = 38.142, 25% = 42.066; WDEX=38.14 WTNA=12.65 WNAV=12.43

HCCS5-A EC RIOBAMBA 3 145.28 0.00 0.00 0.82 6.531 40030.78 150.15 39880.63  
50% = 7.573, 25% = 9.203; HCTB5-A=5.89 HCDY4-A=4.76 OBX1I-A=3.70 HCDF1-A=2.83 HJEK-A=2.39

CX144-A UY RIVERA 1 142.69 0.00 0.00 0.19 1.641 42551.54 150.15 42401.40  
50% = 3.283, 25% = 4.764; CV144-A=2.75 LT41-A=1.79 ZYK-221-A=1.56 UNK-A=1.56 ZYJ-469-A=1.42  
ZYZ-792-A=1.38 ZYK328-A=1.32 ZYJ-250-A=1.18

ZYH-466-A BR SANTO AMARO 117.16 0.00 0.00 0.20 1.709 42882.53 150.15 42732.39  
50% = 3.419, 25% = 3.777; ZYH-603-A=2.53 ZYJ-469-A=2.30 ZYJ930-A=1.61

ZYJ-250-A BR CASCABEL PR 137.07 0.00 0.00 0.21 1.870 44457.98 150.15 44307.83  
50% = 3.739, 25% = 5.318; ZYJ-469-A=3.13 CX144-A=2.05 ZYZ-792-A=1.81 ZYK-634-A=1.57 ZYK-221-A=1.53  
ZYI-407-A=1.46 UNK-A=1.44 CV144-A=1.41

UNK-A BR CORBELIA 136.85 0.00 0.00 0.21 1.892 44951.68 150.15 44801.53

50% = 3.783, 25% = 5.138; ZYJ-469-A=3.21 CX144-A=2.00 ZYZ-792-A=1.79 ZYK-634-A=1.60 ZYK-221-A=1.51  
 ZYI-407-A=1.46 CV144-A=1.37

WCPR US PR COAMO 102.04 0.00 0.00 7.13 6.439 45170.36 150.15 45020.22  
 50% = 23.471, 25% = 25.757; UNK-A=23.47 YVJJ-A=10.61

LV27-A AR SAN FRANCISC 147.85 0.00 0.00 0.21 1.888 45484.83 150.15 45334.69  
 50% = 3.775, 25% = 5.067; CX144-A=2.19 CA 144A-A=1.82 LT41-A=1.79 LRJ382-A=1.71 CV144-A=1.69  
 LRG376-A=1.38 CC144-A=1.37 LRK370-A=1.26 LRG376-A=1.26 LRJ371-A=1.26

LRJ382-A AR LA PAZ 1 153.26 0.00 0.00 0.21 1.934 45793.47 150.15 45643.32  
 50% = 3.868, 25% = 5.067; CA 144A-A=2.75 CC144-A=2.72 LRA53-A=1.93 LRG376-A=1.90 LT41-A=1.34  
 LRJ371-A=1.27

LRG376-A AR SAN A OESTE 155.05 0.00 0.00 0.18 1.613 45880.14 150.15 45729.99  
 50% = 3.227, 25% = 4.235; LRA53-A=2.42 CC144-A=2.13 LRJ382-A=1.34 LU36-A=1.26 LRG374-A=1.24  
 C-144-A=1.19 LRJ371-A=1.09

CV144-A UY CHUY 143.09 0.00 0.00 0.18 1.636 45910.51 150.15 45760.36  
 50% = 3.273, 25% = 4.268; CX144-A=2.75 LT41-A=1.77 ZYK-221-A=1.31 ZYJ-469-A=1.29 ZYK328-A=1.26  
 UNK-A=1.19 ZYZ-792-A=1.07

ZYJ930-A BR FREI PAULO 114.72 0.00 0.00 0.20 1.887 47085.71 150.15 46935.56  
 50% = 3.775, 25% = 4.041; ZYH-603-A=2.85 ZYH-466-A=2.47 ZYJ-469-A=1.44

ZYZ-792-A BR MARAVILHA 138.16 0.00 0.00 0.20 1.927 47692.18 150.15 47542.04  
 50% = 3.853, 25% = 5.712; ZYJ-469-A=3.01 CX144-A=2.41 CV144-A=1.86 ZYK-221-A=1.84 ZYJ-250-A=1.81  
 UNK-A=1.67 UNK-A=1.65 ZYK328-A=1.47

CC144-A CI CHILLAN 158.32 0.00 0.00 0.20 1.964 47927.57 150.15 47777.43  
 50% = 3.928, 25% = 4.779; LRA53-A=2.53 CA 144A-A=2.21 LRG376-A=2.03 C-144-A=1.74 LRJ382-A=1.73  
 LRG374-A=1.19

LT41-A AR GUALEGUAYCHU 146.16 0.00 0.00 0.19 1.857 48331.60 150.15 48181.46  
 50% = 3.714, 25% = 4.882; CX144-A=2.76 CV144-A=2.49 LRG376-A=1.45 LRJ382-A=1.34 LV27-A=1.27  
 LV20-A=1.25 LRJ371-A=1.24 LU36-A=1.20

LV20-A AR LABOULAYE 150.38 0.00 0.00 0.20 1.936 48703.90 150.15 48553.76  
 50% = 3.872, 25% = 5.094; LRG376-A=2.09 CC144-A=1.98 CA 144A-A=1.87 LRJ382-A=1.79 LT41-A=1.77  
 CX144-A=1.75 LRA53-A=1.55 CV144-A=1.53

LU36-A AR CNEL SUAREZ 151.21 0.00 0.00 0.18 1.804 49430.93 150.15 49280.79  
 50% = 3.57, 25% = 5.117; LRG376-A=2.51 LRA53-A=1.80 CC144-A=1.79 LT41-A=1.69 CV144-A=1.63  
 LRJ382-A=1.59 CX144-A=1.48 LV20-A=1.27 LRJ371-A=1.26

LRJ371-A	AR	SERREZUELA	150.69	0.00	0.00	0.20	1.974	49940.56	150.15	49790.42
50% = 3.947, 25% = 5.144; LRG376-A=2.19 CC144-A=2.04 CA 144A-A=1.84 LRJ382-A=1.79 LT41-A=1.76										
CX144-A=1.70 LRA53-A=1.64 CV144-A=1.49										
ZYK-634-A	BR	PRES PRUDENT	133.51	0.00	0.00	0.21	2.165	50396.44	150.15	50246.30
50% = 4.329, 25% = 5.68; ZYJ-469-A=4.33 UNK-A=1.59 ZYJ-250-A=1.56 UNK-A=1.55 UNK-A=1.49 UNK-A=1.42										
ZYK752-A=1.39										
LRK374-A	AR	J V GONZALEZ	145.68	0.00	0.00	0.25	2.514	50642.45	150.15	50492.30
50% = 3.111, 25% = 4.488; CP 104-A=1.88 CA 144A-A=1.86 CA 144-A=1.63 CP 61-A=1.46 LRK376-A=1.26										
LRK370-A=1.25 CX144-A=1.22 CP 107-A=1.13 LRK388-A=1.11 LRJ382-A=1.09										
ZYI-407-A	BR	BELA VISTA	137.36	0.00	0.00	0.24	2.409	51232.17	150.15	51082.02
50% = 3.193, 25% = 4.317; ZYJ-469-A=1.85 CP 104-A=1.53 UNK-A=1.51 ZYJ-250-A=1.46 CX144-A=1.38										
UNK-A=1.37 ZYK-634-A=1.37 ZYZ-792-A=1.26 UNK-A=1.09										
LRA53-A	AR	SAN MARTIN D	159.42	0.00	0.00	0.19	1.955	52080.92	150.15	51930.77
50% = 3.909, 25% = 4.737; CC144-A=3.07 LRG376-A=2.42 C-144-A=1.94 LRJ382-A=1.37 CA 144A-A=1.24										
UNK-A	BR	CAIBATE	140.27	0.00	0.00	0.20	2.124	52983.61	150.15	52833.46
50% = 4.248, 25% = 5.644; CX144-A=2.92 CV144-A=2.22 ZYJ-469-A=2.14 ZYK-221-A=1.87 ZYZ-792-A=1.79										
LT41-A=1.63 ZYJ-250-A=1.55 ZYK328-A=1.44										
C-144-A	CI	PITRUFQUEN	159.77	0.00	0.00	0.19	2.066	53138.73	150.15	52988.58
50% = 4.132, 25% = 4.957; CC144-A=3.47 LRG376-A=2.24 LRA53-A=1.76 CA 144A-A=1.51 LRJ382-A=1.45										
LRK376-A	AR	ANCASTI	149.04	0.00	0.00	0.23	2.460	53371.47	150.15	53221.32
50% = 3.154, 25% = 4.69; CA 144A-A=2.65 LRJ382-A=1.71 CC144-A=1.42 LT41-A=1.38 CX144-A=1.37										
LRK374-A=1.26 LV27-A=1.26 LRK370-A=1.25 LRK388-A=1.23										
LRG374-A	AR	VICTORICA	153.06	0.00	0.00	0.19	2.111	54346.98	150.15	54196.83
50% = 4.221, 25% = 5.169; CC144-A=2.59 LRG376-A=2.47 LRA53-A=2.23 CA 144A-A=1.85 LRJ382-A=1.78										
LT41-A=1.52										
LRK370-A	AR	QUIMILI	145.81	0.00	0.00	0.23	2.594	57068.71	150.15	56918.56
50% = 3.045, 25% = 4.542; CX144-A=1.89 CA 144A-A=1.82 LT41-A=1.56 LRJ382-A=1.38 CP 104-A=1.37										
LV27-A=1.26 LRK374-A=1.25 LRK376-A=1.25 LRK388-A=1.22 CV144-A=1.18										
ZYK-221-A	BR	CAMPO REAL	139.11	0.00	0.00	0.19	2.246	57727.00	150.15	57576.85
50% = 4.491, 25% = 5.832; ZYJ-469-A=2.75 CX144-A=2.73 CV144-A=2.27 ZYZ-792-A=1.84 UNK-A=1.75										
ZYK328-A=1.68 ZYJ-250-A=1.53 LT41-A=1.49										
UNK-A	BR	PARAMOTI	109.97	0.00	0.00	0.23	2.664	57968.09	150.15	57817.94

50% = 2.984, 25% = 3.381; ZYH-603-A=2.98 ZYH-466-A=1.21 ZYJ930-A=1.03

CA 144A-A CI LA SERENA 2 154.54 0.00 0.00 0.24 2.845 59161.56 150.15 59011.41  
50% = 2.812, 25% = 3.687; CC144-A=2.21 LRJ382-A=1.73 LRA53-A=1.22 LRK376-A=1.20 LRK388-A=0.99  
CA 144-A=0.98 LV20-A=0.90

OBX1I-A PE COOP TUMAN 151.00 0.00 0.00 0.65 7.972 61672.24 150.15 61522.09  
50% = 6.037, 25% = 6.875; HCMD7-A=4.42 HCTB5-A=4.11 HCDY4-A=2.72 HCCS5-A=1.85

ZYK328-A BR GRAMADO 138.41 0.00 0.00 0.19 2.343 62961.13 150.15 62810.99  
50% = 4.686, 25% = 5.458; ZYJ-469-A=3.20 CX144-A=2.48 CV144-A=2.36 ZYK-221-A=1.80 ZYZ-792-A=1.58  
UNK-A=1.45

CP 61-A BL LA PAZ 143.77 0.00 0.00 0.34 4.582 67584.93 150.15 67434.78  
50% = 4.611, 25% = 5.146; CA 144-A=3.35 OAX6R-A=3.17 CP 104-A=1.79 CP 107-A=1.43

UNK-A BR ITAI 132.82 0.00 0.00 0.20 2.807 69647.93 150.15 69497.79  
50% = 5.614, 25% = 6.307; ZYJ-469-A=5.61 ZYK-634-A=1.71 ZYK752-A=1.70 ZYK568-A=1.55

WKOX US MA EVERETT 48.70 0.00 0.00 5.93 9.043 76217.80 150.15 76067.65  
50% = 36.172, 25% = 36.172; WENE=29.82 WNSW=20.47

ZYK568-A BR CAJURU 129.94 0.00 0.00 0.20 3.106 76448.60 150.15 76298.45  
50% = 6.213, 25% = 6.457; ZYJ-469-A=6.21 ZYK752-A=1.76

ZYH285-A BR MANAUS 124.54 0.00 0.00 0.42 6.402 76675.25 150.15 76525.11  
50% = 1.122, 25% = 1.436; YVZJ-A=0.97 PJA 5-A=0.56 YVRF-A=0.53 HCMD7-A=0.44 CP 61-A=0.41 HJGM-A=0.40

CP 107-A BL VALLEGRANDE 141.24 0.00 0.00 0.30 4.558 77186.68 150.15 77036.53  
50% = 4.634, 25% = 5.042; CP 61-A=2.86 CP 104-A=2.70 CA 144-A=2.46 OAX6R-A=1.99

ZYK752-A BR AMERICANA 131.10 0.00 0.00 0.20 3.193 80591.99 150.15 80441.85  
50% = 6.385, 25% = 6.838; ZYJ-469-A=6.39 ZYK568-A=1.76 UNK-A=1.70

CP 104-A BL CAMIRI 141.82 0.00 0.00 0.28 5.210 92994.51 150.15 92844.37  
50% = 3.887, 25% = 4.57; CP 61-A=2.53 CA 144-A=2.26 CP 107-A=1.91 OAX6R-A=1.68 LRK388-A=1.22  
LRK374-A=1.21

OAX6R-A PE EL TIEMPO 147.27 0.00 0.00 0.36 8.827 121009.22 150.15 120859.07  
50% = 4.7, 25% = 4.848; CA 144-A=3.47 CP 61-A=3.17 CP 104-A=1.19

KLAM US AK CORDOVA 329.27 0.00 0.00 0.70 1.806 129425.34 150.15 129275.19  
50% = 0.648, 25% = 0.859; KSUH=0.35 KEED=0.35 KONP=0.30 KBKW=0.29 KBPS=0.26 KBFI=0.24 CHOR/A=0.23  
KTRP=0.22 KHIT=0.21 KFLS=0.21

KVHZ	US AK WASILLA	329.78	0.00	0.00	0.54	1.624	149235.25	150.15	149085.10
50% = 1.167, 25% = 1.167; CJXX/A=1.04 KYKN=0.54									
UNK-A	BR BANDEIRANTES	134.05	0.00	0.00	0.24	9.421	198591.04	150.15	198440.89
50% = 3.353, 25% = 4.068; ZYJ-469-A=2.50 ZYI-407-A=1.63 ZYK-634-A=1.54 ZYJ-250-A=1.32 CP 104-A=1.17									
ZYZ-792-A=1.07 ZYK568-A=1.02									
UNK-A	BR APAR GOIANIA	127.79	0.00	0.00	0.23	9.228	201501.84	150.15	201351.69
50% = 3.853, 25% = 4.384; ZYJ-469-A=3.85 ZYK568-A=1.26 ZYK-634-A=1.25 ZYK752-A=1.10									
UNK-A	BR SANTA VITORI	130.05	0.00	0.00	0.22	9.031	201563.40	150.15	201413.25
50% = 4.295, 25% = 4.947; ZYJ-469-A=4.29 ZYK-634-A=1.54 ZYK568-A=1.42 ZYK752-A=1.28									