discussion of the original reservation of FM spectrum explains the apparent discrepancy.

> Not restricted to this spectrum, however, noncommercial educational broadcasters (NCEs) may also apply for licenses in the unreserved spectrum, known as "commercial" licenses.[53]

This discrepancy is simply not relevant to the decision in NPR v. FCC. Nor does it change the fact that a non-profit educational applicant has always been free to apply for non-reserved spectrum to construct a broadcast station to provide a commercial service or a noncommercial educational service and only the former is properly characterized as a "commercial" license.

Accordingly, there is no basis in NPR v. FCC for defining "noncommercial educational station" and "public broadcast station" based solely on the legal nature of the entity seeking a construction permit and without regard to the proposed use of the facility.

C. The Exemption of "Noncommercial Educational Station" and "Public Broadcast Station," As Defined By Both The Nature of the Entity and Its Proposed Service Is Consistent with the Public Safety Exemption

In authorizing the Commission to award spectrum licenses among mutually exclusive applicants, the statute, as noted above, subjects the Commission's auction authority to certain limitations.[54] In the interest of ensuring that the Commission's auction authority is exercised in a manner faithful to the statute in all respects, the Second Further NPRM notes the Commission's

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as well as reserved licenses," it did so in the context of explaining that general rules need not list everything they cover and why the failure of Congress to explicitly reference "non-reserved spectrum" in Section 309(j)(2)(C) did not render the statute ambiguous. See id. at 229-230 (emphasis added). See also id. at 231 (stating that "the Commission may not require NCEs to participate in auctions, regardless of the type of license they seek" in the context of explaining why the legislative history failed to demonstrate that Congress intended to limit the Section 309(j)(2)(C) exemption to the reserved spectrum).

[53] Id. at 227 (emphasis added).

[54] 47 U.S.C. § 309(j)(2)(A).

desire to interpret the NCE exemption consistently with the other auction exemptions and, in particular, the public safety exemption.[55] Based on differences in the statutory language used to define the two exemptions, as well as differences in how the Commission historically has allocated spectrum for public safety services and NCE stations, we believe the definition of "noncommercial educational station" and "public broadcast station" as requiring both a non-profit educational entity and a noncommercial educational service is consistent with Commission's interpretation of the public safety exemption.

As discussed in a recent Order,[56] the public safety exemption is specifically directed to public safety "services" rather than specific users.[57] "Service," in turn, consists of "a combination of operating and eligibility rules and associated spectrum."[58] The NCE exemption, by contrast, applies to noncommercial educational or public broadcast "stations." NCE and public broadcast stations are defined, in turn, by reference to (1) a particular type of entity -- a public agency, nonprofit educational organization, or a municipality -- that (2) proposes a noncommercial educational broadcast service.[59]

This distinction is reinforced by the legislative history underlying Section 309(j)(2)(6). The prior version of the relevant provision of the Balanced Budget Act of 1997 defined the

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55 Second Further NPRM at ¶ 10.

56 Implementation of Sections 309(j) and 337 of the Communications Act of 1934 as Amended, Memorandum Opinion and Order, WT Docket No. 99-87 (rel. April 18, 2002).

57 Id. at ¶¶ 22-26.

58 Id. at ¶ 26.

59 47 U.S.C. § 397(6); 47 C.F.R. §§ 73.503(a); 73.621(a).

public broadcast exemption by reference to "public telecommunications services."[60] That term is defined in the Communications Act far more broadly than "noncommercial educational broadcast station" and "public broadcast station" to include all noncommercial educational and cultural radio and television programs and related noncommercial instructional or informational material" regardless of the electronic means by which it may be transmitted.[61] Such an exemption, had it been enacted, would have applied to a broad category of "services" which, like the public safety exemption, the Commission would have to authorize, or have authorized, in the context of specific spectrum.

As a related matter, noncommercial educational broadcast stations are tied inextricably to their historic use of the AM, FM, and television spectrum. For decades, the Commission has authorized NCE applicants to obtain access to specific reserved and non-reserved broadcast spectrum in furtherance of providing a noncommercial educational service. So understood, the public broadcast auction exemption does not readily lend itself to a claim by a putative NCE applicant to make competing use of existing non-broadcast spectrum that is otherwise subject to auction. In the case of public safety services, on the other hand, the Commission historically has responded to proposals to use spectrum to facilitate some public safety communication in a way that is comparable to or at least coexistent with existing private service uses of the spectrum at issue. The nature of the particular uses and the specific spectrum is therefore much more fluid and requires the Commission to affirmatively weigh the authorization of such services using specific spectrum in the context of other competing uses of the spectrum.

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[60] S. 947, 105th Cong. 1st Sess., § 3001(a)(1) (not enacted); H.R. 2015, 105th Cong. 1st Sess., § 3301(a)(1) (enacted as amended) (emphasis added).

[61] 47 U.S.C. § 397(14).

Given these differences between the public broadcast and public safety exemptions, defining the public broadcasting exemption based on the nature of the applicant and its proposed service does not alter or undermine the Commission's interpretation of the public safety exemption.

Conclusion

NPR supports the Commission's efforts to establish appropriate rules to resolve mutually exclusive applications for non-reserved spectrum involving NCE applicants, including through the adoption of measures consistent with the foregoing comments.

Respectfully submitted,

NATIONAL PUBLIC RADIO, INC.

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General Counsel and Secretary
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May 15, 2002

ATTACHMENT A

Comments of National Public Radio, Inc.

NATIONAL PUBLIC RADIO
635 MASSACHUSETTS AVENUE NW, 1ST FLOOR
WASHINGTON, DC 20001

AUCTION #37
NCE/COMMERCIAL FM
ALLOCATION STUDIES

In the Matter of Reexamination of the
Comparative Standards for Noncommercial
Educational Applicants,
Association of Americas' Public Television
Stations' Motion for Stay of Low Power
Television Auction (No. 81)

Second Further Notice of Proposed Rulemaking
MM Docket 95-31

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May 15, 2002

PREFACE

Frequency Analysis Methodology

For the Noncommercial Educational FM band, a reference NCE station was selected at the coordinates of the commercial channel allocation. V-Soft Communication's frequency search program, FMCONT, was then used to identify all stations having a frequency and distance relationship with the reference station on each of the 20 NCE reserved channels. The program uses the FCC's CDBS database to generate distances to the protected 60 dBu signal contours and the appropriate interference signal contours of all relevant stations based on the criteria detailed in section 73.215 of the Commission's Rules and Regulations. The NGDC 30 arc-second digital terrain elevation database was used to predict pertinent antenna heights. The directional patterns of database stations were also used in the calculations.

Stations on a successfully identified channel, neither cause contour overlap nor receive it. If it were determined that an NCE channel could not be found at the reference coordinates, the coordinates were moved in the direction of the least contour overlap and a new channel search was performed. If a channel was identified which could operate from the new coordinate set, its 60 dBu was plotted over a 60 dBu signal contour map of the allocation's fully classed facilities. If the channel supported a coverage area that was greater than 50 percent of the proposed allocation's 60 dBu coverage, it was duly noted. If a channel still could not be found, other reference station locations were tried that centered around a wide circle from the allocation coordinates. The attached NCE allocations narrative explains how to read the NCE channel study printouts attached to the report.

Commercial Channels were identified using the minimum distance spacings defined in section 73.207 of the Commission's Rules and Regulations. The allocation's reference coordinates were input into the V-Soft Communications FMCONT computer program that was placed into its "minimum spacings" mode. The program was then used to identify other "fully-allocatable" channels available for use at the reference coordinates. If no channels were found at the reference coordinates, a graphics based plot of the minimum spacings required for each station was used to identify "drop-in" channels that would provide coverage to at least 50% of the allocation's 60 dBu signal contour at full power and antenna height for its class.

The commercial channel printouts, included in the report, show the minimum distances in kilometers that must be maintained between the reference station and those stations from the CDBS database having relevant distance and contour relationships. The printouts are sort ordered such that the stations having the greatest spacings overlap appear first in the listing. The "Margin" column is the minimum spacing distance defined by Section 72.207 subtracted from the distance in kilometers between the reference station and the relevant database station. The maps shown at the top of each channel page show the minimum spacings graphically.

How to Read the FM Computer Printout

The parameters of the station being checked (reference station), are printed in the heading. The 60 dBu protected contour is predicted from the Commission's F(50-50) table, while the 40, 54, 80 and 100 dBu contours are interference contours derived from the Commission's F(50-10) table. Contour distances are in kilometers and are predicted using spline interpolation from data points identical to those published in Report No. RS 76-01 by Gary C. Kalagian. Critical contour distances are determined using the Commission's TVFMINT FORTRAN subroutine. When

interference contour distances are less than 16 kilometers the F(50-50) tables are used. If signal contour distances are less than 1.6 km the free-space equation is used.

The column listed "IN" is the sum of the reference station's 60 dBu protected contour and the data file station's interference contour subtracted from the distance between the stations. (All distances are derived by the method detailed in Sec. 73.208 of the Rules and Regulations as amended in Docket 80-90.) Therefore, the column is a measure of incoming interference. Negative distances in this column indicate the presence of contour overlap interference. Listed antenna heights are the average heights of eight standard radials as found in the Commission's records unless otherwise noted by the "*", in which case the specific antenna heights and antenna field values along the azimuths between the reference station and the database station are used and visa versa. The appearance of a "<" next to a value in the "IN" column indicates the presence of contour overlap that may or may not appear along the direct line between the reference station and the database station.

The column labeled "OUT" shows the distance in kilometers of overlap or clearance between the reference station's interference contour and the database station's protected contour. Negative distance figures in this column usually indicate outgoing contour overlap interference. The appearance of a "<" next to a value in the "OUT" column indicates the presence of prohibited contour overlap.

Under the "BEARING" column, the first row of numbers indicate the bearings from true north of the data base stations in relationship with the reference station, while the numbers in the second row indicate the reverse bearings from the database station to the reference station.

The columns labeled "INT" and "PRO" hold the distance in kilometers of the appropriate interference contour and the protected contour of a data base station.

For I.F. relationships the "IN" and "OUT" columns change their significance. The letter "R" stands for the minimum **required** distance in kilometers, while the letter "M" in the next column follows the **available clear space** separation in kilometers. Minimum separation distances when displayed are taken from Sec 73.207 of the rules as amended. Canadian and Mexican separation distances, U/D ratios and protected contour values are from the US/Mexican Working Agreement and the US/Canada Working Agreement".

The first three letters of the "TYPE" column identify the current FCC status of the stations. The fourth letter will be a "D" or "Z" (Sec. 73.215) if the facility is directional. The fifth letter will be an E, H or V depending on the type of antenna polarization. The sixth letter will be a "Y" if the antenna uses beam tilt.

Submitted by Doug Vernier

Declaration:

I, Doug Vernier, declare that I have received training as an engineer from the University of Michigan School of Engineering. That, I have received degrees from the University in the field of Broadcast Telecommunications. That, I have been active in broadcast consulting for over 25 years;

That, I have held a Federal Communications Commission First Class Radiotelephone License continually since 1964. In 1985, this license was reissued by the Commission as a lifetime General Radiotelephone license no. PG-16-16464;

That, I am certified as a Professional Broadcast Engineer (#50258) by the Society of Broadcast Engineers, Indianapolis, Indiana. (Re-certified 11/95.)

That, my qualifications are a matter of record with the Federal Communications Commission;

That, I have been retained by National Public Radio, Washington, D.C., and as such have prepared the engineering showings appended hereto;

That, I have prepared these engineering showings, the technical information contained in same and the facts stated within are true of my knowledge;

That, under penalty of perjury, I declare that the foregoing is correct.

Douglas L. Vernier

Executed on May 10, 2002

Subscribed and sworn before me this 10th day of May, 2002.

Katherine A. Meckler
Notary Public in and for the State of Iowa

TABLE OF CONTENTS

AUCTION #37
NCE/COMMERCIAL FM
ALLOCATION STUDIES

1. Yarnell, Arizona
2. Alturas, California
3. Carbondale, Colorado
4. Dove Creek, Colorado
5. Perry, Florida
6. Rockford, Iowa
7. Twin Falls, Idaho
8. Watseka, Illinois
9. Kiowa, Kansas
10. Republic, Michigan
11. Friar's Point, Mississippi
12. Lockwood, Montana
13. Belfield, North Dakota
14. Ravenna, Nebraska
15. Texico, New Mexico
16. Elko, Nevada
17. Amherst, New York
18. Hollis, Oklahoma
19. Elgin, Oregon
20. Presho, South Dakota
21. Lovelady, Texas
22. Lufkin, Texas
23. Zapata, Texas
24. Castle Dale, Utah
25. Evanston, WY

					Coordinates								Bidding		Upfront	NCE	Comm
Market	State	City	Channel	Class	Latitude				Longitude				Units	MOB	Payment	Avail	Avail
FM24	AZ	YARNELL	258	A	34	13	18	N	112	44	48	W	5,000	$5,000	$5,000	No	No
FM25	CA	ALTURAS	297	C	41	29	34	N	120	31	37	W	25,000	$25,000	$25,000	Yes	No
FM44	CO	CARBONDALE	244	A	39	25	30	N	107	22	43	W	25,000	$25,000	$25,000	No	No
FM48	CO	DOVE CREEK	273	C3	37	45	54	N	108	54	18	W	2,500	$2,500	$2,500	Yes	Yes
FM68	FL	PERRY	228	A	30	7	0	N	83	34	26	W	15,000	$15,000	$15,000	No	Yes
FM93	IA	ROCKFORD	225	A	43	1	55	N	92	57	53	W	50,000	$50,000	$50,000	No	Yes
FM105	ID	TWIN FALLS	269	A	42	33	42	N	114	28	12	W	70,000	$70,000	$70,000	No	Yes
FM114	IL	WATSEKA	240	A	40	48	0	N	87	47	15	W	25,000	$25,000	$25,000	No	No
FM124	KS	KIOWA	252	C1	37	1	0	N	98	29	12	W	50,000	$50,000	$50,000	Yes	No
FM150	MI	REPUBLIC	244	A	46	26	9	N	88	7	12	W	20,000	$20,000	$20,000	Yes	Yes
FM159	MS	FRIARS POINT	254	A	34	24	9	N	90	38	51	W	50,000	$50,000	$50,000	Yes	No
FM176	MT	LOCKWOOD	294	A	45	49	9	N	108	24	51	W	125,000	$125,000	$125,000	Yes	Yes
FM191	ND	BELFIELD	230	C1	46	53	6	N	103	11	48	W	50,000	$50,000	$50,000	Yes	Yes
FM212	NE	RAVENNA	276	C2	41	1	36	N	98	54	48	W	125,000	$125,000	$125,000	Yes	Yes
FM225	NM	TEXICO	243	A	34	23	0	N	103	2	48	W	50,000	$50,000	$50,000	Yes	Yes
FM230	NV	ELKO	248	C1	40	49	48	N	115	45	36	W	35,000	$35,000	$35,000	Yes	Yes
FM236	NY	AMHERST	221	A	42	58	42	N	78	48	0	W	200,000	$200,000	$200,000	No	No
FM251	OK	HOLLIS	223	A	34	41	0	N	99	54	54	W	2,500	$2,500	$2,500	Yes	No
FM258	OR	ELGIN	290	A	45	33	54	N	117	55	0	W	7,500	$7,500	$7,500	Yes	No
FM272	SD	PRESHO	262	A	43	54	24	N	100	3	36	W	1,500	$1,500	$1,500	Yes	Yes
FM293	TX	LOVELADY	282	C3	31	9	51	N	95	27	9	W	35,000	$35,000	$35,000	No	Yes
FM294	TX	LUFKIN	230	A	31	20	48	N	94	43	30	W	90,000	$90,000	$90,000	Yes	Yes
FM310	TX	ZAPATA	274	A	26	54	30	N	99	16	18	W	10,000	$10,000	$10,000	Yes	Yes
FM312	UT	CASTLE DALE	237	C3	39	12	48	N	111	1	18	W	10,000	$10,000	$10,000	Yes	Yes
FM347	WY	EVANSTON	252	C2	41	16	0	N	110	57	48	W	20,000	$20,000	$20,000	Yes	Yes

West

Yarnell AZ Study
West of Yarnell

REFERENCE
34 12 57 N
112 53 53 W

CH# 201D - 88.1 MHz, Pwr= 0.08 kW, HAAT=100.0 M, COR= 1176 M
Average Protected F(50-50)= 9.77 km
Ave. F(50-10) 40 dBu= 32.9 54 dBu= 13.7 80 dBu= 3.0 100 dBu= .6

DISPLAY DATES
DATA 04-23-02
SEARCH 05-01-02

CH CALL CITY	TYPE STATE	AZI. <---	DIST FILE #	LAT. LNG.	Pwr(kW) HAAT(M)	COR(M) INT(km)	PRO(km) LICENSEE	*IN*	*OUT* (Overlap in km)
202C1 KPHF Phoenix	LIC C AZ	132.6 312.6	101.40 BLED19990716KB	33 35 47 112 05 31	22.500 297	704 84.1	57.4 Family Stations, Inc.	7.54	30.34
202C1 KNAI Phoenix	LIC CN AZ	132.6 312.6	101.44 BLED19920121KC	33 35 47 112 05 29	22.500 304	704 84.8	57.9 National Farm Workers Serv	6.89	29.90
202C1 ALLO Phoenix	USE AZ	137.9 317.9	113.87 RM	33 27 12 112 04 28	100.000 299	0 105.0	72.3	-0.88	27.91
204C KNAU Flagstaff	LIC C AZ	56.3 236.3	152.54 BLED19991014AAT	34 58 07 111 30 24	100.000 445	2624 12.1	83.1 Northern Arizona Universit	130.67	68.84
254C ALLO Phoenix	USE AZ	141.6 321.6	124.75	33 20 00 112 03 48	100.000 600	0 0.0	91.8	26.0R	98.8M
254C KKLT Phoenix	LIC CY AZ	141.6 321.6	124.80 BLH19901002KA	33 19 58 112 03 48	100.000 545	911 0.0	89.4 Emmis Radio License Corpor	26.0R	98.8M
203A AP203 Kingman	APP VX AZ	317.0 137.0	134.22 BNPED20000406ABG	35 05 39 113 54 19	0.500 879	2355 1.5	46.6 Faith Communications Corp.	122.95	87.02
254A RADD Seligman	ADD AZ	5.6 185.6	123.51	35 19 26 112 45 55	6.000 100	0 0.0	28.3	5.5R	118.0M
203C1 AP203 Ajo	APP VX AZ	179.3 359.3	203.97 BNPED19991214AAB	32 22 37 112 52 16	100.000 45	577 3.9	37.1 Csn International	190.32	166.21
203A KERUFM Blythe	LIC CN CA	247.3 67.3	170.80 BLED19941014KA	33 36 40 114 35 48	0.100 -17	96 0.7	5.6 Escuela De La Raza Unida	160.33	164.54
203A ALLO Blythe	USE CA	247.3 67.3	170.80	33 36 40 114 35 48	6.000 100	0 2.8	28.3	158.28	141.88
201A KCFY.A Yuma	APP CN AZ	223.1 43.1	232.99 BPED19970205IC	32 40 25 114 35 58	3.000 37	94 57.8	14.5 Voice Of Intl. Christn. Ev	165.45	185.60
201A KCFY Yuma	LIC CN AZ	221.8 41.8	233.12 BLED19920501KA	32 38 31 114 33 34	3.000 73	135 70.4	20.8 Voice Of Intl. Christn. Ev	153.00	179.47
201C1 960229 Mammoth	APP CN AZ	134.0 314.0	284.96 BPED19960229MA	32 24 54 110 42 56	1.100 1088	2624 134.3	58.2 Mammoth Educational Founda	140.92	193.89
201C1 KUYI Hotevilla	LIC C AZ	52.7 232.7	297.68 BLED20001221ABG	35 48 29 110 16 23	69.000 124	2002 141.3	51.5 The Hopi Foundation	146.60	213.35
201A ALLO Sonoita	SO	175.7 355.7	262.14	31 51 52 112 41 30	6.000 100	0 86.7	28.3	165.71	200.98
201C2 KCEP Las Vegas	LIC CY NV	316.7 136.7	276.56 BLED19930617KA	36 00 31 115 00 22	10.000 364	1059 129.8	54.2 Operation Opportunities-cl	136.99	189.49
201C2 960229 Mammoth	APP CX AZ	134.0 314.0	284.96 BPED19960229MA	32 24 54 110 42 56	0.160 1083	0 105.3	39.7 Mammoth Educational Founda	169.87	212.37
201A AP201 Calipatria	APP CX CA	244.0 64.0	271.27 BNPED20000120AAW	33 07 12 115 30 47	3.000 20	-21 53.3	13.2 Ihr Educational Broadcasti	208.22	225.19
201A KNNB.C Whiteriver	CP CN AZ	99.8 279.8	274.86 BPED19950508IH	33 45 37 109 58 27	1.250 195	1961 77.9	26.7 Apache Radio Broadcasting	187.22	215.31
203A 960712 Globe	APP VN AZ	117.7 297.7	216.74 BPED19960712MH	33 17 37 110 50 09	0.024 1032	2377 0.3	22.9 American Ed Broadcasting I	206.63	193.17
201A KNNB Whiteriver	LIC CN AZ	99.7 279.7	276.01 BLED19820924AG	33 45 47 109 57 39	0.630 183	1963 67.3	22.2 Apache Radio Broadcasting	198.90	220.90
255C1 ALLO Leupp	USE AZ	54.6 234.6	210.46	35 17 50 111 00 34	100.000 299	0 0.0	72.3	18.5R	192.0M
255C1 KJKI.C Leupp	CP CN AZ	54.6 234.6	210.46 BPH20010129AAL	35 17 50 111 00 34	52.000 12	1496 0.0	26.7 Oraibi Media Association	18.5R	192.0M
255B KHWY Essex	LIC CN CA	291.0 111.0	212.38 BLH19950822KB	34 52 50 115 04 05	10.000 327	1114 0.0	65.1 Khwy, Inc.	11.8R	200.6M

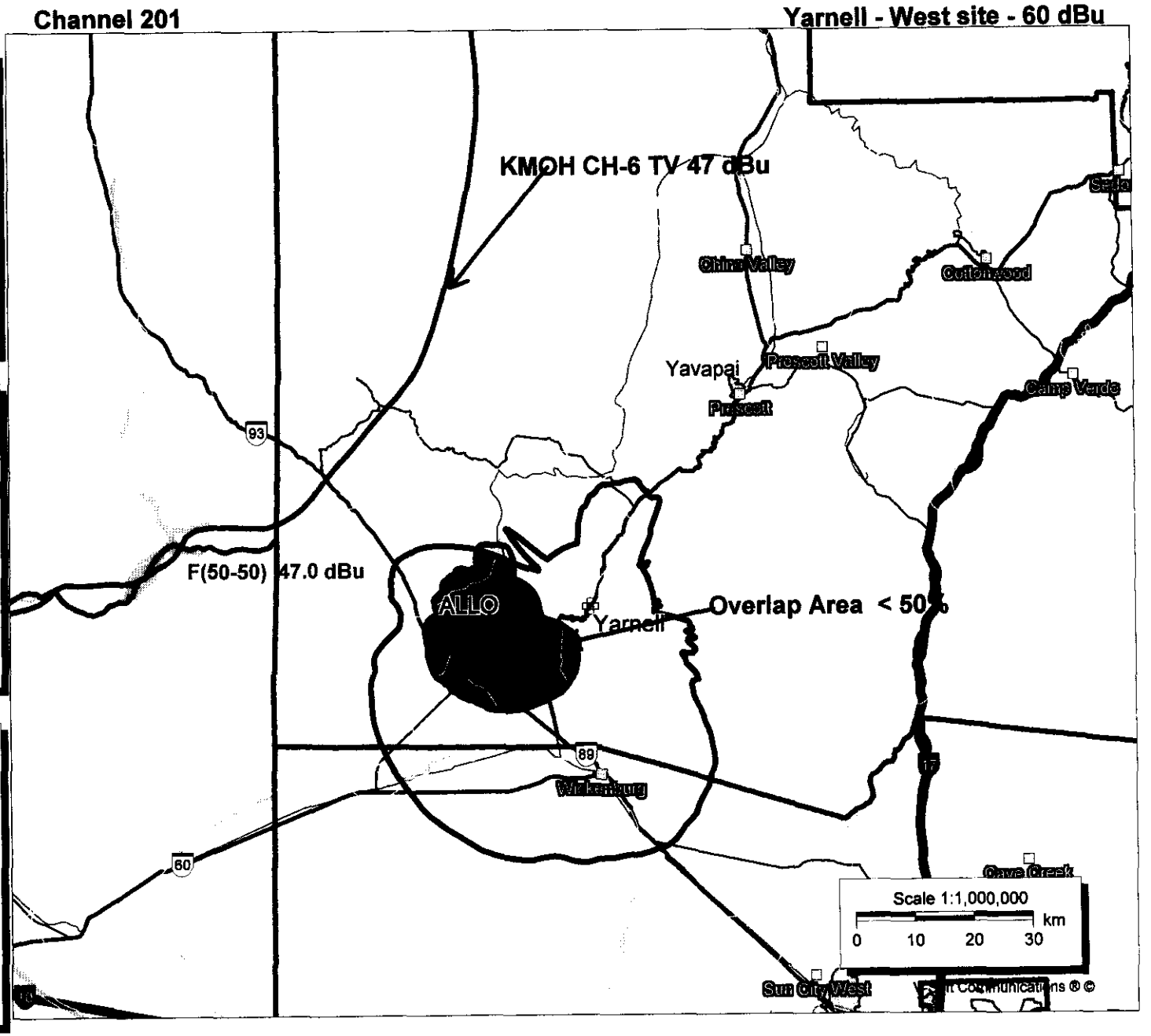
CH CITY	CALL	TYPE STATE	AZI. <--	DIST FILE #	LAT. LNG.	Pwr(kW) HAAT(M)	COR(M) INT(km)	PRO(km) LICENSEE	*IN* (Overlap	*OUT* in km)
255A Leupp	KJKI	LIC C AZ	54.6 234.6	210.46 BLH20010129AAK	35 17 50 111 00 34	0.119 6	1490 0.0	5.9 Oraibi Media Association	5.5R	205.0M
201B Yucca Valley	990310	APP CN CA	269.7 89.7	321.88 BPED19990310MQ	34 09 11 116 23 20	50.000 116	1179 133.0	47.4 Sacramento Brain Trust Inc	179.07	241.63
255B Essex	ALLO	USE CA	286.4 106.4	224.59	34 45 51 115 15 07	50.000 150	0 0.0	65.1	11.8R	212.8M
201B1 Yucca Valley	990310	APP CN CA	269.1 89.1	327.49 BPED19990310MB	34 07 13 116 26 53	7.000 -107	1023 72.0	16.4 Broadcasting For The Chall	245.69	278.18
201B1 Yucca Valley	981013	APP DCN CA	269.1 89.1	331.50 BPED19981013MB	34 06 59 116 29 29	8.400 114	1291 94.3	32.6 Penfold Communications, In	227.39	266.08
203A San Luis Rio Colora	XHCRSF	OPE HN SO	222.8 42.8	259.18	32 29 30 114 46 36	3.000 100	0 2.3	24.2	247.13	234.33
203A San Luis Rio Colora	XHCRSF	OPE HN SO	222.8 42.8	259.18	32 29 30 114 46 36	3.000 100	0 2.3	24.2	247.13	234.33
203A San Luis Rio Colora	XHCRSF	OPE HN SO	222.8 42.8	259.18	32 29 30 114 46 36	3.000 100	0 2.3	24.2	247.13	234.33
203A San Luis Rio Colora	ALLO	SO	222.8 42.8	259.18	32 29 30 114 46 36	3.000 100	0 2.3	24.2	247.13	234.33
203A San Luis Rio Colora	ALLO	SO	222.8 42.8	259.18	32 29 30 114 46 36	3.000 100	0 2.3	24.2	247.13	234.33
203A San Luis Rio Colora	ALLO	SO	222.8 42.8	259.18 RM	32 29 30 114 46 36	3.000 100	0 2.3	24.2	247.13	234.33
203C1 Mesquite	950512	APP DVX NV	332.2 152.2	314.34 BPED19950512MA	36 42 33 114 32 35	100.000 282	885 9.8	70.9 Southern Nevada Ed Broadca	294.74	242.79
255B Cuervos	ALLO	BN	226.3 46.3	253.10	32 37 35 114 51 03	50.000 150	0 0.0	65.1	10.0R	243.1M
06-2C Kingman	KMOHTV	CP DHN AZ	304.5 124.5	162.22 BPCT19990708KF	35 01 57 114 21 56	100.000 592	1377 0.0	127.6 Multimedia Holdings Corpor	To Grd B=	34.63

Yarnell

Latitude: 34-13-18 N
Longitude: 112-44-48 W
Power: 1.23 kW
Channel: 258
Frequency: 99.5 MHz
AMSL Height: 1500.0 m
Elevation: 1490.19 m
Horiz. Pattern: Omni
Vert. Pattern: No

NCE ALLO
Latitude: 34-12-57 N
Longitude: 112-53-53 W
Power: .08 kW
Channel: 201
Frequency: 88.1 MHz
AMSL Height: 1181 m
Elevation: 1179 m
Horiz. Pattern: Omni
Vert. Pattern: No
Prop Model: FCC

KMOHTV
BLCT19880315KH
Latitude: 35-01-57 N
Longitude: 114-21-56 W
Power: 100.00 kW
Channel: 06-
Frequency: 84.5 MHz
AMSL Height: 1370.0 m
Elevation: 1250.83 m
Horiz. Pattern: Omni
Vert. Pattern: No



North

Yarnell AZ Study
Channel duplicates only 31%

REFERENCE CH# 201A - 88.1 MHz, Pwr= 0.17 kW, HAAT=100.0 M, COR= 1449 M DISPLAY DATES
34 16 38 N Average Protected F(50-50)= 11.72 km DATA 04-23-02
112 46 55 W Ave. F(50-10) 40 dBu= 40.1 54 dBu= 17.2 80 dBu= 3.7 100 dBu= .9 SEARCH 05-01-02

CH CITY	CALL	TYPE STATE	AZI. <--	DIST FILE #	LAT. LNG.	Pwr(kW) HAAT(M)	COR(M) INT(km)	PRO(km) LICENSEE	*IN* (Overlap in km)	*OUT*
202C1 Phoenix	*KPHF	LIC C AZ	139.8 319.8	98.87 BLED19990716KB	33 35 47 112 05 31	22.500 284	704 82.9	56.5 Family Stations, Inc.	0.27	18.88
> Reference HAAT at 139.8°= -11.0 M, Pwr= 6.0 kW, Pro. Dist. = 15.75 km, Int Dist. = 23.48 km										
202C1 Phoenix	*KNAI	LIC CN AZ	139.7 319.7	98.91 BLED19920121KC	33 35 47 112 05 29	22.500 283	704 82.8	56.4 National Farm Workers Serv	0.40	18.99
> Reference HAAT at 139.7°= -11.0 M, Pwr= 6.0 kW, Pro. Dist. = 15.75 km, Int Dist. = 23.48 km										
202C1 Phoenix	*ALLO	USE AZ	144.3 324.3	112.43 RM	33 27 12 112 04 28	100.000 -351	0 59.1	31.0	35.80	55.52
> Reference HAAT at 144.3°= 37.2 M, Pwr= 6.0 kW, Pro. Dist. = 17.57 km, Int Dist. = 25.94 km										
204C Flagstaff	KNAU	LIC C AZ	56.3 236.3	139.86 BLED19991014AAT	34 58 07 111 30 24	100.000 445	2624 12.1	83.1 Northern Arizona Universit	116.04	55.88
201C1 Mammoth	960229	APP CN AZ	136.6 316.6	282.25 BPED19960229MA	32 24 54 110 42 56	1.100 1088	2624 134.3	58.2 Mammoth Educational Founda	136.26	183.90
201C1 Hotevilla	KUYI	LIC C AZ	52.6 232.6	285.03 BLED20001221ABG	35 48 29 110 16 23	69.000 124	2002 141.3	51.5 The Hopi Foundation	132.00	193.41
254C Phoenix	ALLO	USE AZ	147.5 327.5	124.07	33 20 00 112 03 48	100.000 600	0 0.0	91.8	29.0R	95.1M
254C Phoenix	KKLT	LIC CY AZ	147.5 327.5	124.12 BLH19901002KA	33 19 58 112 03 48	100.000 545	911 0.0	89.4 Emmis Radio License Corpor	29.0R	95.1M
06-2C Kingman	KMOHTV	CP DHN AZ	300.6 120.6	167.60 BPCT19990708KF	35 01 57 114 21 56	100.000 592	1377 0.0	127.6 Multimedia Holdings Corpor	To Grd B=	40.01

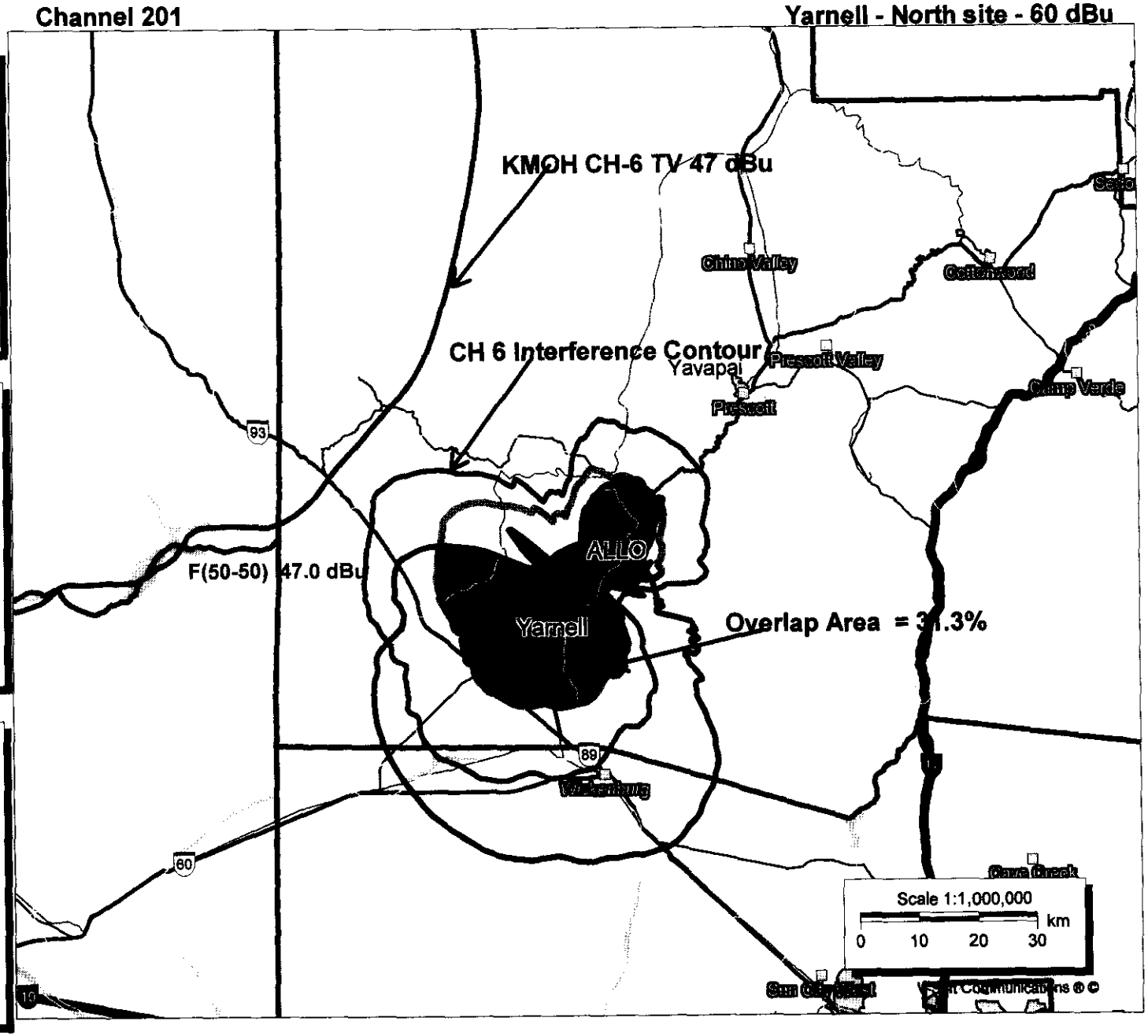
"*" = ERP and HAAT on direct line to and from reference station.

Yarnell

Latitude: 34-13-18 N
Longitude: 112-44-48 W
Power: 1.23 kW
Channel: 258
Frequency: 99.5 MHz
AMSL Height: 1500.0 m
Elevation: 1490.19 m
Horiz. Pattern: Omni
Vert. Pattern: No

NCE ALLO
Latitude: 34-20-55 N
Longitude: 112-46-47 W
Power: .17 kW
Channel: 201
Frequency: 88.1 MHz
AMSL Height: 1449.0 m
Elevation: 1572.904 m
Horiz. Pattern: Omni
Vert. Pattern: No
Prop Model: FCC

KMOHTV
BLCT19880315KH
Latitude: 35-01-57 N
Longitude: 114-21-56 W
Power: 100.00 kW
Channel: 06-
Frequency: 84.5 MHz
AMSL Height: 1370.0 m
Elevation: 1250.83 m
Horiz. Pattern: Omni
Vert. Pattern: No



CHANNEL PRECLUSION STUDY
Yarnell AZ Study
Study from Yarnell AZ Allocation Site

REFERENCE
34 13 18 N
112 44 48 W

Class= A , Pwr= 0.1 kW, HAAT= 33 M, COR= 1315 M
Average Protected F(50-50)= 5.88 km
Ave. F(50-10) 40 dBu= 19.5 54 dBu= 8.4 80 dBu= 1.9 100 dBu= .7

DISPLAY DATES
DATA 04-23-02
SEARCH 05-01-02

CH CALL / CITY	TYPE / STATE	AZI. <--	DIST / FILE #	LAT. / LNG.	Pwr(kW) / HAAT(M)	COR(M) / INT(km)	PRO(km) / LICENSEE	*IN*	*OUT* (Overlap in km)
--- Channel 201 88.1 MHz. ---									
202C1 *KPHF	LIC C	138.8	92.07	33 35 47	22.500	704	56.9	-0.22<	22.68
Phoenix	AZ	318.8	BLED19990716KB	112 05 31	290	83.4	Family Stations, Inc.		
> Reference HAAT at 138.8°= 74.1 M, Pwr= 0.1 kW, Pro. Dist. = 8.89 km, Int Dist. = 12.47 km									
202C1 *KNAI	LIC CN	138.8	92.10	33 35 47	22.500	704	56.8	-0.11<	22.78
Phoenix	AZ	318.8	BLED19920121KC	112 05 29	289	83.3	National Farm Workers Serv		
> Reference HAAT at 138.8°= 74.1 M, Pwr= 0.1 kW, Pro. Dist. = 8.89 km, Int Dist. = 12.47 km									
202C1 ALLO	USE	143.8	105.52	33 27 12	100.000	0	72.3	-5.34	24.85
Phoenix	AZ	323.8	RM	112 04 28	299	105.0			
--- Channel 202 88.3 MHz. ---									
202C1 KPHF	LIC C	138.8	92.07	33 35 47	22.500	704	56.9	-49.94<	15.66<
Phoenix	AZ	318.8	BLED19990716KB	112 05 31	297	136.1	Family Stations, Inc.		
> Reference HAAT at 138.8°= 74.1 M, Pwr= 0.1 kW, Pro. Dist. = 8.89 km, Int Dist. = 12.47 km									
202C1 KNAI	LIC CN	138.8	92.10	33 35 47	22.500	704	56.8	-49.82<	15.75<
Phoenix	AZ	318.8	BLED19920121KC	112 05 29	304	136.0	National Farm Workers Serv		
> Reference HAAT at 138.8°= 74.1 M, Pwr= 0.1 kW, Pro. Dist. = 8.89 km, Int Dist. = 12.47 km									
202C1 ALLO	USE	143.8	105.52	33 27 12	100.000	0	72.3	-72.24<	13.71
Phoenix	AZ	323.8	RM	112 04 28	299	171.9			
205C AP205	APP DEX	252.9	58.73	34 03 55	47.000	1612	92.4	40.94	-34.36<
Wickenburg	AZ	72.9	BNPED19991110AAM	113 21 18	838	11.9	Living Proof, Inc.		
--- Channel 203 88.5 MHz. ---									
205C AP205	APP DEX	252.9	58.73	34 03 55	47.000	1612	92.4	40.94	-34.36<
Wickenburg	AZ	72.9	BNPED19991110AAM	113 21 18	838	11.9	Living Proof, Inc.		
202C1 ALLO	USE	143.8	105.52	33 27 12	100.000	0	72.3	-5.34	24.85
Phoenix	AZ	323.8	RM	112 04 28	299	105.0			
--- Channel 204 88.7 MHz. ---									
205C AP205	APP DEX	252.9	58.73	34 03 55	47.000	1612	92.4	-82.48<	-42.02<
Wickenburg	AZ	72.9	BNPED19991110AAM	113 21 18	838	135.3	Living Proof, Inc.		
204C KNAU	LIC C	53.5	140.73	34 58 07	100.000	2624	83.1	-51.73<	38.16
Flagstaff	AZ	233.5	BLED19991014AAT	111 30 24	445	186.6	Northern Arizona Universit		
258A ALLO	VAC	0.0	0.00	34 13 18	6.000	0	28.3	15.0R	-15.0M
Yarnell	AZ	180.0		112 44 48	100	0.0			
--- Channel 205 88.9 MHz. ---									
205C AP205	APP DEX	252.9	58.73	34 03 55	47.000	1612	92.4	-142.24<	-53.16<
Wickenburg	AZ	72.9	BNPED19991110AAM	113 21 18	838	195.1	Living Proof, Inc.		
208C KBAQ.A	APP DC	167.6	71.46	33 35 33	30.000	1232	83.4	56.03	-12.68
Phoenix	AZ	347.6	BPED20010220ABC	112 34 49	706	9.5	Maricopa County Comm. Coll		
208C KBAQ	LIC DCN	167.6	71.46	33 35 33	12.500	1232	74.1	58.87	-3.30
Phoenix	AZ	347.6	BLED19980609KG	112 34 49	706	6.7	Maricopa County Comm. Coll		
258A ALLO	VAC	0.0	0.00	34 13 18	6.000	0	28.3	29.0R	-29.0M
Yarnell	AZ	180.0		112 44 48	100	0.0			
--- Channel 206 89.1 MHz. ---									
205C AP205	APP DEX	252.9	58.73	34 03 55	47.000	1612	92.4	-82.48<	-42.02<
Wickenburg	AZ	72.9	BNPED19991110AAM	113 21 18	838	135.3	Living Proof, Inc.		

CH CITY	CALL	TYPE STATE	AZI. <--	DIST FILE #	LAT. LNG.	Pwr(kW) HAAT(M)	COR(M) INT(km)	PRO(km) LICENSEE	*IN* (Overlap in km)	*OUT*
207A Prescott	KNAQ	LIC C AZ	33.3 213.3	35.67 BLED19971209KD	34 29 24 112 31 59	0.100 483	2175 34.9	22.8 Northern Arizona Universit	-5.15<	4.55
208C Phoenix	KBAQ	LIC DCN AZ	167.6 347.6	71.46 BLED19980609KG	33 35 33 112 34 49	12.500 706	1232 6.7	74.1 Maricopa County Comm. Coll	58.87	-3.30
208C Phoenix	KBAQ.A	APP DC AZ	167.6 347.6	71.46 BPED20010220ABC	33 35 33 112 34 49	30.000 706	1232 9.5	83.4 Maricopa County Comm. Coll	56.03	-12.68
209A Wickenburg	ALLO	VAC AZ	177.1 357.1	28.17	33 58 05 112 43 53	6.000 100	0 2.8	28.3	19.54	-0.83
--- Channel 207 89.3 MHz. ---										
208C Phoenix	KBAQ.A	APP DC AZ	167.6 347.6	71.46 BPED20010220ABC	33 35 33 112 34 49	30.000 706	1232 122.4	83.4 Maricopa County Comm. Coll	-56.81<	-20.34<
208C Phoenix	KBAQ	LIC DCN AZ	167.6 347.6	71.46 BLED19980609KG	33 35 33 112 34 49	12.500 706	1232 108.7	74.1 Maricopa County Comm. Coll	-43.12<	-10.97<
207A Prescott	KNAQ	LIC C AZ	33.3 213.3	35.67 BLED19971209KD	34 29 24 112 31 59	0.100 483	2175 72.4	22.8 Northern Arizona Universit	-42.63<	-6.58<
205C Wickenburg	AP205	APP DEX AZ	252.9 72.9	58.73 BNPED19991110AAM	34 03 55 113 21 18	47.000 838	1612 11.9	92.4 Living Proof, Inc.	40.94	-34.36<
209A Wickenburg	ALLO	VAC AZ	177.1 357.1	28.17	33 58 05 112 43 53	6.000 100	0 2.8	28.3	19.54	-0.83
--- Channel 208 89.5 MHz. ---										
208C Phoenix	KBAQ.A	APP DC AZ	167.6 347.6	71.46 BPED20010220ABC	33 35 33 112 34 49	30.000 706	1232 177.0	83.4 Maricopa County Comm. Coll	-111.47<	-31.47<
208C Phoenix	KBAQ	LIC DCN AZ	167.6 347.6	71.46 BLED19980609KG	33 35 33 112 34 49	12.500 706	1232 161.4	74.1 Maricopa County Comm. Coll	-95.81<	-22.10<
209A Wickenburg	ALLO	VAC AZ	177.1 357.1	28.17	33 58 05 112 43 53	6.000 100	0 43.7	28.3	-21.45<	-8.49<
207A Prescott	KNAQ	LIC C AZ	33.3 213.3	35.67 BLED19971209KD	34 29 24 112 31 59	0.100 483	2175 34.9	22.8 Northern Arizona Universit	-5.15<	4.55
205C Wickenburg	AP205	APP DEX AZ	252.9 72.9	58.73 BNPED19991110AAM	34 03 55 113 21 18	47.000 838	1612 11.9	92.4 Living Proof, Inc.	40.94	-34.36<
--- Channel 209 89.7 MHz. ---										
208C Phoenix	KBAQ.A	APP DC AZ	167.6 347.6	71.46 BPED20010220ABC	33 35 33 112 34 49	30.000 706	1232 122.4	83.4 Maricopa County Comm. Coll	-56.81<	-20.34<
208C Phoenix	KBAQ	LIC DCN AZ	167.6 347.6	71.46 BLED19980609KG	33 35 33 112 34 49	12.500 706	1232 108.7	74.1 Maricopa County Comm. Coll	-43.12<	-10.97<
209A Wickenburg	ALLO	VAC AZ	177.1 357.1	28.17	33 58 05 112 43 53	6.000 100	0 86.7	28.3	-64.37<	-19.63<
--- Channel 210 89.9 MHz. ---										
210C Bullhead City	981023	APP DVN AZ	313.9 133.9	142.87 BPED19981023MO	35 06 28 113 52 40	40.000 913	2382 195.4	92.7 Csn International	-58.42<	30.64
210C1 Flagstaff	KJTA	LIC C AZ	53.4 233.4	140.61 BLED20001219AAQ	34 58 06 111 30 29	9.000 440	2617 136.8	57.5 Joy Public Broadcasting Co	-2.04<	63.63
209A Wickenburg	ALLO	VAC AZ	177.1 357.1	28.17	33 58 05 112 43 53	6.000 100	0 43.7	28.3	-21.45<	-8.49<
208C Phoenix	KBAQ	LIC DCN AZ	167.6 347.6	71.46 BLED19980609KG	33 35 33 112 34 49	12.500 706	1232 6.7	74.1 Maricopa County Comm. Coll	58.87	-3.30
208C Phoenix	KBAQ.A	APP DC AZ	167.6 347.6	71.46 BPED20010220ABC	33 35 33 112 34 49	30.000 706	1232 9.5	83.4 Maricopa County Comm. Coll	56.03	-12.68

CH	CALL	TYPE	AZI.	DIST	LAT.	Pwr(kW)	COR(M)	PRO(km)	*IN*	*OUT*
CITY		STATE	<--	FILE #	LNG.	HAAT(M)	INT(km)	LICENSEE	(Overlap in km)	
--- Channel 211 90.1 MHz. ---										
208C	KBAQ.A	APP DC	167.6	71.46	33 35 33	30.000	1232	83.4	56.03	-12.68
Phoenix		AZ	347.6	BPED20010220ABC	112 34 49	706	9.5	Maricopa County Comm. Coll		
208C	KBAQ	LIC DCN	167.6	71.46	33 35 33	12.500	1232	74.1	58.87	-3.30
Phoenix		AZ	347.6	BLED19980609KG	112 34 49	706	6.7	Maricopa County Comm. Coll		
214C2	ALLO	VAC	36.1	43.59	34 32 18	50.000	0	52.2	31.75	-9.31
Prescott		AZ	216.1		112 27 58	150	6.0			
209A	ALLO	VAC	177.1	28.17	33 58 05	6.000	0	28.3	19.54	-0.83
Wickenburg		AZ	357.1		112 43 53	100	2.8			
--- Channel 212 90.3 MHz. ---										
212C2	KFLRFM	LIC CN	147.2	117.11	33 20 02	3.900	854	52.0	-16.30<	45.57
Phoenix		AZ	327.2	BLED19970807KB	112 03 44	485	127.5	Family Life Broadcasting,		
212C2	ALLO	USE	147.2	117.11	33 20 02	50.000	0	52.2	-26.49<	45.41
Phoenix		AZ	327.2	RM9543	112 03 44	150	137.7			
215C	KGCB	LIC CN	47.9	77.56	34 41 15	58.000	2360	92.5	59.06	-15.62<
Prescott		AZ	227.9	BLED19941212KD	112 07 02	772	12.6	Grand Canyon Broadcasters,		
214C2	ALLO	VAC	36.1	43.59	34 32 18	50.000	0	52.2	31.75	-9.31
Prescott		AZ	216.1		112 27 58	150	6.0			
209A	ALLO	VAC	177.1	28.17	33 58 05	6.000	0	28.3	19.54	-0.83
Wickenburg		AZ	357.1		112 43 53	100	2.8			
--- Channel 213 90.5 MHz. ---										
214C2	ALLO	VAC	36.1	43.59	34 32 18	50.000	0	52.2	-40.40<	-16.97
Prescott		AZ	216.1		112 27 58	150	78.1			
215C	KGCB	LIC CN	47.9	77.56	34 41 15	58.000	2360	92.5	59.06	-15.62<
Prescott		AZ	227.9	BLED19941212KD	112 07 02	772	12.6	Grand Canyon Broadcasters,		
--- Channel 214 90.7 MHz. ---										
214C2	ALLO	VAC	36.1	43.59	34 32 18	50.000	0	52.2	-100.01<	-28.11<
Prescott		AZ	216.1		112 27 58	150	137.7			
215C	KGCB	LIC CN	47.9	77.56	34 41 15	58.000	2360	92.5	-64.23<	-23.28<
Prescott		AZ	227.9	BLED19941212KD	112 07 02	772	135.9	Grand Canyon Broadcasters,		
--- Channel 215 90.9 MHz. ---										
215C	KGCB	LIC CN	47.9	77.56	34 41 15	58.000	2360	92.5	-124.50<	-34.41<
Prescott		AZ	227.9	BLED19941212KD	112 07 02	772	196.2	Grand Canyon Broadcasters,		
214C2	ALLO	VAC	36.1	43.59	34 32 18	50.000	0	52.2	-40.40<	-16.97
Prescott		AZ	216.1		112 27 58	150	78.1			
--- Channel 216 91.1 MHz. ---										
215C	KGCB	LIC CN	47.9	77.56	34 41 15	58.000	2360	92.5	-64.23<	-23.28<
Prescott		AZ	227.9	BLED19941212KD	112 07 02	772	135.9	Grand Canyon Broadcasters,		
214C2	ALLO	VAC	36.1	43.59	34 32 18	50.000	0	52.2	31.75	-9.31
Prescott		AZ	216.1		112 27 58	150	6.0			
--- Channel 217 91.3 MHz. ---										
218C	KJZZ	LIC CY	147.3	117.09	33 19 58	100.000	856	86.1	-17.21<	22.61
Phoenix		AZ	327.3	BLED19890728KA	112 03 53	490	128.4	Maricopa County Comm. Coll		
215C	KGCB	LIC CN	47.9	77.56	34 41 15	58.000	2360	92.5	59.06	-15.62<
Prescott		AZ	227.9	BLED19941212KD	112 07 02	772	12.6	Grand Canyon Broadcasters,		

CH CITY	CALL	TYPE STATE	AZI. <--	DIST FILE #	LAT. LNG.	Pwr(kW) HAAT(M)	COR(M) INT(km)	PRO(km) LICENSEE	*IN* (Overlap	*OUT* in km)
214C2	ALLO	VAC	36.1	43.59	34 32 18	50.000	0	52.2	31.75	-9.31
Prescott		AZ	216.1		112 27 58	150	6.0			
--- Channel 218 91.5 MHz. ---										
218C	KJZZ	LIC CY	147.3	117.09	33 19 58	100.000	856	86.1	-78.79<	11.48<
Phoenix		AZ	327.3	BLED19890728KA	112 03 53	490	190.0	Maricopa County Comm. Coll		
215C	KGCB	LIC CN	47.9	77.56	34 41 15	58.000	2360	92.5	59.06	-15.62<
Prescott		AZ	227.9	BLED19941212KD	112 07 02	772	12.6	Grand Canyon Broadcasters,		
--- Channel 219 91.7 MHz. ---										
218C	KJZZ	LIC CY	147.3	117.09	33 19 58	100.000	856	86.1	-17.21<	22.61
Phoenix		AZ	327.3	BLED19890728KA	112 03 53	490	128.4	Maricopa County Comm. Coll		
--- Channel 220 91.9 MHz. ---										
220C	980619	APP VN	312.4	142.67	35 04 53	24.000	2619	91.7	-57.24<	31.42
Kingman		AZ	132.4	BPED19980619MH	113 54 15	1137	194.0	Broadcasting For The Chall		
220C	970822	APP EN	313.9	143.22	35 06 35	40.000	2350	91.9	-56.35<	31.80
Kingman		AZ	133.9	BPED19970822MA	113 52 51	882	193.7	Csn International		
220C	980619	APP EN	313.9	143.34	35 06 37	39.000	2351	91.7	-55.79<	32.11
Kingman		AZ	133.9	BPED19980619MK	113 52 55	885	193.2	Mohave Community College		
220C	980611	APP VN	314.0	143.66	35 06 48	30.000	2362	89.2	-50.01<	34.94
Kingman		AZ	134.0	BPED19980611ME	113 53 00	898	187.8	American Family Associatio		
220C	ALLO	VAC	312.4	160.76	35 11 20	100.000	0	91.8	-42.88	49.44
Kingman		AZ	132.4		114 03 12	600	197.8			
---- Channel-six TV station of concern ----										
06-2C	KMOHTV	CP DHN	301.8	173.58	35 01 57	100.000	1377	127.6	To Grd B=	45.99
Kingman		AZ	121.8	BPCT19990708KF	114 21 56	592	0.0	Multimedia Holdings Corpor		

Alturas CA Study
Study at allocation site

REFERENCE CH# 211C - 90.1 MHz, Pwr= 51 kW, HAAT=449.2 M, COR= 1877 M DISPLAY DATES
41 29 34 N Average Protected F(50-50)= 76.34 km DATA 04-23-02
120 31 37 W Ave. F(50-10) 40 dBu= 172.2 54 dBu= 112.5 80 dBu= 35.8 100 dBu= 10.0 SEARCH 05-01-02

CH CITY	CALL	TYPE STATE	AZI. <--	DIST FILE #	LAT. LNG.	Pwr(kW) HAAT(M)	COR(M) INT(km)	PRO(km) LICENSEE	*IN* (Overlap in km)	*OUT*
211B1 Chico	*KZFR	LIC CN CA	206.7 26.7	209.03 BLED19900713KD	39 48 25 121 37 35	6.300 -187	731 69.5	16.0 Golden Valley Community Br	60.70	18.37
> Reference HAAT at 206.7°= 483.3 M, Pwr= 51.0 kW, Pro. Dist. = 78.84 km, Int Dist. = 174.69 km										
211C Ashland	*KSOR	LIC DC OR	301.8 121.8	260.20 BMLED20010926ABP	42 41 30 123 13 44	9.618 761	1636 159.3	73.1 Oregon State Board Of High	28.50	19.68
> Reference HAAT at 301.8°= 395.3 M, Pwr= 51.0 kW, Pro. Dist. = 72.41 km, Int Dist. = 167.44 km										
212A Greenville	990405	APP CX CA	196.6 16.6	145.90 BPED19990405ME	40 14 00 121 01 11	0.056 696	2213 37.5	24.1 Pacific Cascade Communicat	32.09	9.29
209C2 Burney	KNCA	LIC CN CA	237.0 57.0	124.88 BLED19920422KA	40 52 30 121 46 14	2.300 447	1635 3.1	45.0 Oregon State Board Of High	45.48	69.81
213C2 Burney	KIBC	LIC CN CA	237.0 57.0	124.88 BLED19980206KA	40 52 29 121 46 13	3.000 444	1631 3.5	47.3 Burney Educ. Broadcasting	45.08	67.56
209C Burney	KNCA.A	APP CY CA	239.5 59.5	127.07 BPED19960417MD	40 54 21 121 49 38	30.000 629	1722 9.3	80.7 Oregon State Board Of High	41.47	36.39
208A Klamath Falls	KTEC	LIC CN OR	307.8 127.8	132.74 BLED19850104LL	42 12 59 121 47 57	0.210 56	1377 1.0	9.4 State Board Of Higher Educ	55.38	113.30
265C1 Malin	KHAT.A	APP CX OR	306.6 126.6	113.77 BMPED19991013AAH	42 05 48 121 37 57	12.500 649	1984 0.0	72.0 Malin Christian Church, In	41.0R	72.8M
213A Emigrant Valley	980319	APP DCN OR	292.1 112.1	174.64 BPED19980319MO	42 03 55 122 29 00	0.115 665	1835 0.8	28.0 Emigrant Valley Christian	97.54	136.57
213A Emigrant Valley	980318	APP DCN OR	292.1 112.1	174.64 BPED19980318MJ	42 03 55 122 29 00	0.115 665	1835 0.8	28.0 Emigrant Valley Public Rad	97.54	136.57
213A Hornbrook	980319	APP CN CA	285.9 105.9	175.12 BPED19980319MN	41 54 18 122 33 27	0.200 -305	659 1.0	6.7 Hornbrook Development Cent	97.78	158.39
213A Hornbrook	980319	APP CN CA	285.9 105.9	175.12 BPED19980319MM	41 54 18 122 33 27	0.200 -305	659 1.0	6.7 Oregon Ed. Radio Services	97.78	158.39
212A La Pine	980512	APP CX OR	343.2 163.2	250.83 BPED19980512MA	43 39 01 121 25 42	0.450 45	1472 14.1	10.2 Educational Media Foundati	160.35	128.22
265C1 Malin	KBUG.A	APP CX OR	299.4 119.4	138.95 BPH20010130ABK	42 05 43 121 59 31	16.000 587	1927 0.0	72.2 Malin Christian Church, In	41.0R	98.0M
214A Red Bluff	950714	APP CN CA	223.8 43.8	196.16 BPED19950714MF	40 12 31 122 07 27	2.500 100	300 2.2	23.2 Tehama County Community Br	117.66	162.90
211A Hams Station	KYCE.C	CP DVN CA	177.8 357.8	327.96 BPED19980707MF	38 32 28 120 22 59	0.100 285	1744 56.0	17.5 Your Christian Companion N	195.60	138.27

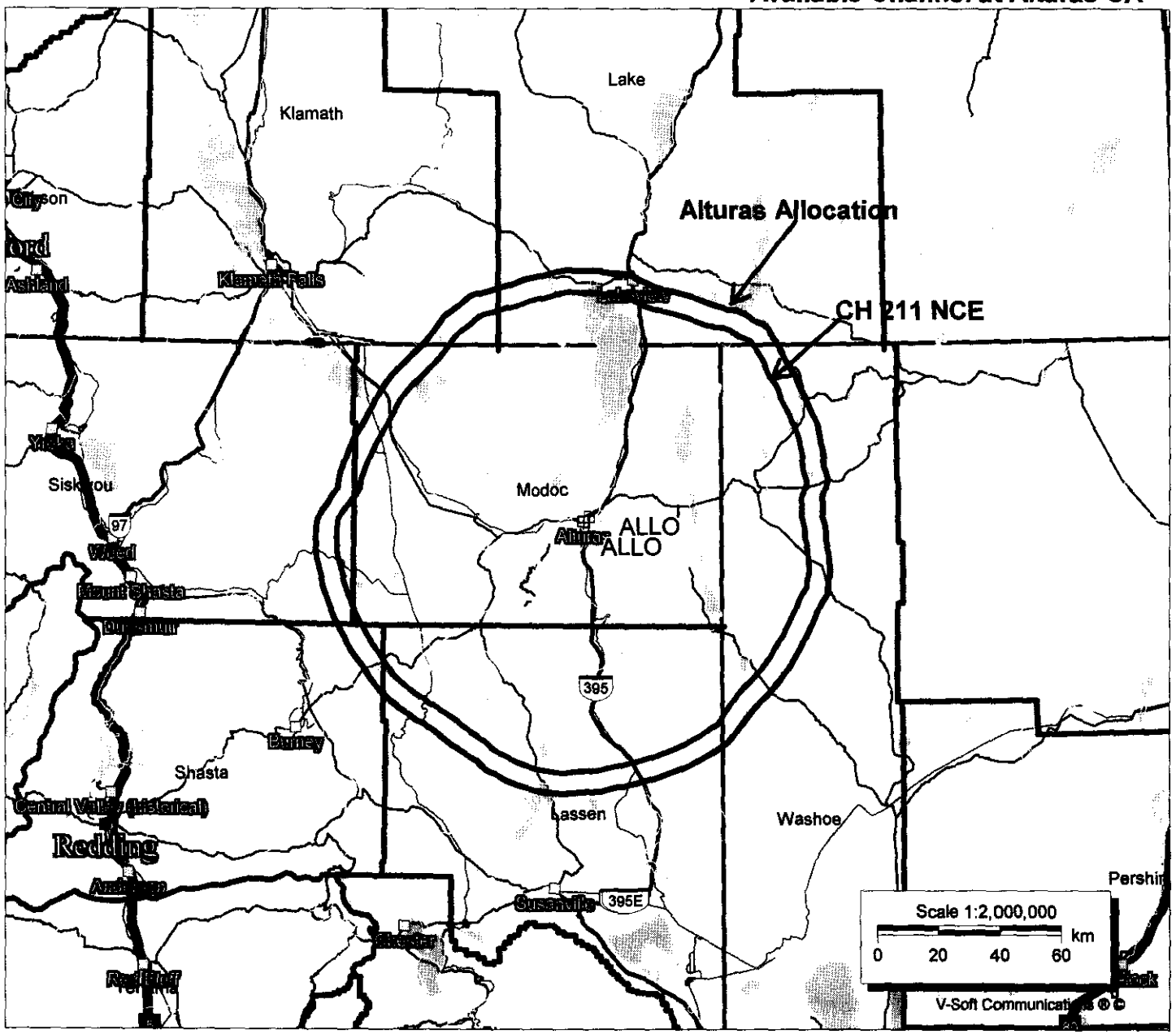
"*" = ERP and HAAT on direct line to and from reference station.

Available Channel at Alturas CA

ALLO

Latitude: 41-29-34 N
Longitude: 120-31-37 W
Power: 100.00 kW
Channel: 297
Frequency: 107.3 MHz
AMSL Height: 1877.75 m
Elevation: 1341.0 m
Horiz. Pattern: Omni
Vert. Pattern: No
Prop Model: FCC

ALLO - NCE
Latitude: 41-29-34 N
Longitude: 120-31-37 W
Power: 51.00 kW
Channel: 211
Frequency: 90.1 MHz
AMSL Height: 1877.0 m
Elevation: 1341.0 m
Horiz. Pattern: Omni
Vert. Pattern: No
Prop Model: FCC



Doug Vernier, Telecommunication Consultants
1600 Picturesque Dr. Cedat Falls, IA 50613

CHANNEL PRECLUSION STUDY
Carbondale CO

REFERENCE
39 25 30 N
107 22 43 W

Class= A , Pwr= 0.1 kW, HAAT= 773.8 M, COR= 3222 M
Average Protected F(50-50)= 29.32 km
Ave. F(50-10) 40 dBu= 88.1 54 dBu= 45.7 80 dBu= 6.2 100 dBu= .7

DISPLAY DATES
DATA 05-02-02
SEARCH 05-02-02

CH CITY	CALL	TYPE STATE		AZI. <--	DIST FILE #	LAT. LNG.	Pwr(kW) HAAT(M)	COR(M) INT(km)	PRO(km) LICENSEE	*IN* (Overlap	*OUT* in km)
--- Channel 201 88.1 MHz. ---											
201C2 Glenwood Springs	KVOV.C	CP CO	CX	133.3 313.3	0.36 BPED19970924MH	39 25 22 107 22 32	0.650 793	3240 116.6	46.8 Public Broadcasting Of Col	-145.59<	-134.60<
201C3 New Castle	980813	APP CO	CN	28.0 208.0	14.90 BPED19980813MD	39 32 36 107 17 49	1.000 37	2454 39.8	11.2 Educ. Communications Of Co	-54.25<	-84.38<
201C3 Glenwood Springs	980814	APP CO	CN	19.1 199.1	16.13 BPED19980814MH	39 33 44 107 19 01	0.500 -188	2225 28.5	8.5 Pitkin County	-41.72<	-80.48<
--- Channel 202 88.3 MHz. ---											
201C2 Glenwood Springs	KVOV.C	CP CO	CX	133.3 313.3	0.36 BPED19970924MH	39 25 22 107 22 32	0.650 793	3240 69.9	46.8 Public Broadcasting Of Col	-98.81<	-92.16<
202C1 Montrose	KPRH	LIC CO	CN	192.6 12.6	118.03 BLED19981124KD	38 23 14 107 40 28	3.500 511	2890 128.4	52.5 Public Broadcasting Of Col	-39.68<	-22.57
201C3 New Castle	980813	APP CO	CN	28.0 208.0	14.90 BPED19980813MD	39 32 36 107 17 49	1.000 37	2454 15.9	11.2 Educ. Communications Of Co	-30.31<	-41.94<
201C3 Glenwood Springs	980814	APP CO	CN	19.1 199.1	16.13 BPED19980814MH	39 33 44 107 19 01	0.500 -188	2225 12.0	8.5 Pitkin County	-25.18<	-38.05<
205C2 Carbondale	970312	CP CO	CN	125.3 305.3	0.32 BPED19970312MA	39 25 24 107 22 32	0.500 749	3234 1.5	43.0 Pitkin County	-30.50<	-43.42<
--- Channel 203 88.5 MHz. ---											
205C2 Carbondale	970312	CP CO	CN	125.3 305.3	0.32 BPED19970312MA	39 25 24 107 22 32	0.500 749	3234 1.5	43.0 Pitkin County	-30.50<	-43.42<
201C2 Glenwood Springs	KVOV.C	CP CO	CX	133.3 313.3	0.36 BPED19970924MH	39 25 22 107 22 32	0.650 793	3240 1.8	46.8 Public Broadcasting Of Col	-30.71<	-47.18<
203A Vail	970714	APP CO	CN	73.4 253.4	83.46 BPED19970714MB	39 38 05 106 26 47	1.500 90	3002 63.6	19.5 Public Broadcasting Of Col	-9.46<	-24.14<
203A Vail	980123	APP CO	CN	73.4 253.4	83.46 BPED19980123MO	39 38 05 106 26 47	1.900 60	2979 59.8	16.8 Denver Ed Broadcasting Inc	-5.63<	-21.46<
203A Meeker	AP203	APP CO	VX	325.4 145.4	83.61 BNPED19991004AAG	40 02 33 107 56 13	0.300 193	2277 59.3	19.1 Educational Communications	-5.02<	-23.58<
201C3 New Castle	980813	APP CO	CN	28.0 208.0	14.90 BPED19980813MD	39 32 36 107 17 49	1.000 37	2454 1.6	11.2 Educ. Communications Of Co	-16.03<	3.03
201C3 Glenwood Springs	980814	APP CO	CN	19.1 199.1	16.13 BPED19980814MH	39 33 44 107 19 01	0.500 -188	2225 1.6	8.5 Pitkin County	-14.76<	6.93
203A Vail	980122	APP CO	DCN	72.2 252.2	89.54 BPED19980122MA	39 39 57 106 23 04	6.000 -486	2284 68.3	15.8 Broadcasting For The Chall	-8.09<	-14.33<
203A Meeker	AP203	APP CO	VN	331.2 151.2	97.96 BNPED19991004AAG	40 11 47 107 56 02	0.100 337	2597 60.6	19.1 Educational Communications	8.04	-9.24<
--- Channel 204 88.7 MHz. ---											
205C2 Carbondale	970312	CP CO	CN	125.3 305.3	0.32 BPED19970312MA	39 25 24 107 22 32	0.500 749	3234 64.4	43.0 Pitkin County	-93.41<	-88.40<
201C2 Glenwood Springs	KVOV.C	CP CO	CX	133.3 313.3	0.36 BPED19970924MH	39 25 22 107 22 32	0.650 793	3240 1.8	46.8 Public Broadcasting Of Col	-30.71<	-47.18<
201C3 New Castle	980813	APP CO	CN	28.0 208.0	14.90 BPED19980813MD	39 32 36 107 17 49	1.000 37	2454 1.6	11.2 Educ. Communications Of Co	-16.03<	3.03

CH CALL CITY	TYPE STATE	AZI. <-- DIST FILE #	LAT. LNG.	Pwr(kW) HAAT(M)	COR(M) INT(km)	PRO(km) LICENSEE	*IN* (Overlap in km)	*OUT*
201C3 980814 Glenwood Springs	APP CN CO	19.1 16.13 199.1 BPED19980814MH	39 33 44 107 19 01	0.500 -188	2225 1.6	8.5 Pitkin County	-14.76<	6.93
--- Channel 205 88.9 MHz. ---								
205C2 970312 Carbondale	CP CN CO	125.3 0.32 305.3 BPED19970312MA	39 25 24 107 22 32	0.500 749	3234 110.6	43.0 Pitkin County	-139.64<	-130.83<
--- Channel 206 89.1 MHz. ---								
205C2 970312 Carbondale	CP CN CO	125.3 0.32 305.3 BPED19970312MA	39 25 24 107 22 32	0.500 749	3234 64.4	43.0 Pitkin County	-93.41<	-88.40<
206C1 KVMT.A Montrose	APP CN CO	210.2 142.43 30.2 BPED19990329IA	38 18 52 108 12 02	8.000 482	3092 139.3	58.8 North Fork Valley Public R	-26.23<	-4.49
206C2 KVMT Montrose	LIC C CO	210.2 142.43 30.2 BLED19990428KA	38 18 52 108 12 02	3.000 533	3093 127.8	52.3 North Fork Valley Public R	-14.73<	2.06
--- Channel 207 89.3 MHz. ---								
207C1 981215 Steamboat Springs	APP CN CO	24.9 125.92 204.9 BPED19981215MH	40 27 04 106 45 04	6.500 511	3138 138.8	58.6 Colorado Christian Univers	-42.16<	-20.74<
205C2 970312 Carbondale	CP CN CO	125.3 0.32 305.3 BPED19970312MA	39 25 24 107 22 32	0.500 749	3234 1.5	43.0 Pitkin County	-30.50<	-43.42<
--- Channel 208 89.5 MHz. ---								
208C1 KPRN Grand Junction	LIC CY CO	251.7 124.58 71.7 BLED19860327KH	39 03 57 108 44 45	10.000 363	2144 129.7	54.1 Public Broadcasting Of Col	-34.41<	-17.68<
205C2 970312 Carbondale	CP CN CO	125.3 0.32 305.3 BPED19970312MA	39 25 24 107 22 32	0.500 749	3234 1.5	43.0 Pitkin County	-30.50<	-43.42<
--- Channel 209 89.7 MHz. ---								
--- Channel 210 89.9 MHz. ---								
210C1 980107 Colona	CP VX CO	192.6 118.01 12.6 BPED19980107MB	38 23 15 107 40 31	4.000 498	2876 129.3	53.0 Educational Communicatio	-40.65<	-23.13
213C3 KDNK Carbondale	LIC CN CO	322.3 0.20 142.3 BLED19930913KF	39 25 35 107 22 48	0.215 862	3252 1.0	38.2 Carbondale Comm. Access Ra	-30.15<	-38.69<
210A KPRE Vail	LIC CN CO	73.4 83.46 253.4 BLED19980129KD	39 38 05 106 26 47	1.500 90	3002 63.6	19.5 Public B/casting Of Colora	-9.46<	-24.14<
--- Channel 211 90.1 MHz. ---								
211C2 981215 Hayden	APP CX CO	4.5 122.71 184.5 BPED19981215MF	40 31 36 107 15 52	10.000 159	2231 104.0	39.3 Broadcasting For The Chall	-10.61<	-4.71<
213C3 KDNK Carbondale	LIC CN CO	322.3 0.20 142.3 BLED19930913KF	39 25 35 107 22 48	0.215 862	3252 1.0	38.2 Carbondale Comm. Access Ra	-30.15<	-38.69<
--- Channel 212 90.3 MHz. ---								
213C3 KDNK Carbondale	LIC CN CO	322.3 0.20 142.3 BLED19930913KF	39 25 35 107 22 48	0.215 862	3252 57.5	38.2 Carbondale Comm. Access Ra	-86.61<	-83.66<
212A KBUT Crested Butte	LIC CN CO	148.8 67.72 328.8 BLED19981125KH	38 54 11 106 58 23	0.225 -194	2985 23.1	6.9 Crested Butte Mtn Educ. Ra	15.28	-27.30<
212C2 KJOL.A Grand Junction	APP CX CO	251.7 124.65 71.7 BPED20000330ABE	39 03 57 108 44 48	3.000 399	2196 113.4	45.0 Educational Media Foundati	-18.11<	-8.45<
212C2 KJOL.A Grand Junction	APP CN CO	251.7 124.65 71.7 BPED20000330ABE	39 03 57 108 44 48	3.000 399	2196 113.4	45.0 Educational Media Foundati	-18.11<	-8.45<