

TECHNICAL EXHIBIT  
APPLICATION FOR CONSTRUCTION PERMIT  
TELEVISION STATION KFTR-DT  
ONTARIO, CALIFORNIA

October 25, 2002

CHANNEL 29c 400 KW (MAX-DA) 937 M

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Technical Statement

This Technical Exhibit was prepared on behalf of digital television broadcast station KFTR-DT<sup>\*</sup>, Ontario, California, in support of an application for construction permit. KFTR-DT is paired with analog NTSC TV station KFTR-TV, Channel 46. KFTR-DT was allotted Channel 29c, with a maximum average effective radiated power (ERP) of 155 kW and antenna height above average terrain (HAAT) of 927 m, as its transitional DTV allotment channel.<sup>†</sup> The instant application proposes operation of the KFTR-DT facility with a maximum average ERP of 400 kW(H) using an elliptically-polarized transmitting antenna<sup>‡</sup> with an antenna HAAT of 937 m. The proposal meets the *de minimis* interference requirements as outlined FCC's DTV Processing Guidelines.<sup>§</sup>

Proposed facility

The proposed facility will employ an Andrew, model ATW21HS6-EBC1 elliptically-polarized cardioid-type directional antenna with  $-1.5^{\circ}$  electrical beam tilt.

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<sup>\*</sup> FCC Facility ID No. 124048.

<sup>†</sup> See *Report and Order*, MM Docket No. 01-23, Released July 29, 2002.

<sup>‡</sup> The maximum average ERP for the vertically-polarized component of radiated energy is 80 kW.

<sup>§</sup> See FCC *Public Notice*, "Additional Application Processing Guidelines for Digital Television (DTV)", Released: August 10, 1998. See also *Second Memorandum Opinion and Order on Reconsideration of the Fifth and Sixth Report and Orders*, FCC-98-315, Released: December 18, 1998.

The antenna will be oriented to 200° True and will be installed with a mechanical beam tilt of -1.0° at an azimuth of 200° True. Appendix 1 herein includes the horizontal plane and vertical plane relative field radiation patterns for the proposed transmitting antenna as supplied by the antenna manufacturer. An azimuthal relative field radiation pattern is included herein as Figure 2. This pattern takes into account the proposed -1.5° electrical beam tilt and -1.0° mechanical beam tilt at 200° True.\*\*

There are no AM broadcast stations located within 3.2 km of the proposed transmitter site. The proposed transmitter is located approximately 207 km from the closest point on the border with Mexico. The closest FCC Monitoring station is located at Livermore, California at a distance of 511 km at a bearing of 321° True.

The applicant recognizes its responsibility to correct objectionable electromagnetic interference problems that may result from its proposed operation.

The proposed facility is located in the Mexican border area. The proposed facility will require notification to Mexico pursuant to the requirements of the *U.S.-Mexican MOU* concerning digital television.††

### Tower Registration

The KFTR-TV antenna structure has been registered with the FCC and bears antenna structure registration number 1232157. The overall height of the existing structure is 107.0 m above ground level. There will be no change in the overall height of

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\*\* The vertical plane relative field pattern adjustment is applicable only on those bearings where the relative field factor is less than 90%, pursuant to Section 73.625(b) of the FCC Rules.

†† See *Memorandum of Understanding Between the Federal Communications Commission of the United States of America and the Secretaria de Comunicaciones y Transportes of the United Mexican States Related to the use of the 54-72 MHz, 76-88 MHz, 174-216 MHz and 470-806 MHz Bands for the Digital Television Broadcasting Service Along the Common Border* (July 22, 1998) (referred to herein as “*U.S.-Mexican MOU*”).

the KFTR-TV antenna structure as a result of the instant proposal. The KFTR-TV tower structure is located atop Mount Wilson, near Pasadena, California.

### Predicted Coverage Contours

The predicted f(50,90) coverage contours for the proposed facility were calculated in accordance the FCC Rules. The 3-16 km terrain data were obtained through use of the U.S.G.S. 3-second computer database. The predicted coverage contours are projected on a map included herein as Figure 3. As indicated, the predicted 48 dBu, f(50,90) contour encompasses the entire community of Ontario in compliance with Section 73.625 of the FCC Rules.

Figure 3 also includes a comparison of the predicted KFTR-DT 41 dBu, f(50,90) contour and the predicted KCBS-TV Grade B (47 dBu) contour. As indicted in Figure 3, the proposed KFTR-DT 41 dBu contour encompasses a geographic area of 42,580 square kilometers. The KCBS-TV Grade B contour encompasses a geographic area of 52,910 square kilometers. Therefore, since the geographic area within the KFTR-DT 41 dBu contour is less than that of the KCBS-TV Grade B contour, the proposal is in compliance with Section 73.622(f)(5) of the FCC Rules concerning the permissible limits on DTV ERP.

### Allocation Considerations

The proposed KFTR-DT facility meets the requirements of Section 73.623 of the FCC Rules concerning predicted interference to other existing NTSC facilities and DTV allotments and assignments. Longley-Rice interference analyses were conducted pursuant to the requirements of the FCC Rules; OET Bulletin No. 69; and published FCC guidelines for preparation of such interference analyses. The Longley-Rice interference analyses were conducted using the software developed by du Treil,

Lundin & Rackley, Inc. based on the FCC published software routines.<sup>‡‡</sup> Stations selected for analysis were determined pursuant to the distance requirements outlined in the FCC DTV Processing Guidelines Public Notice. Accordingly, co-channel DTV and NTSC stations within 429 km and 407 km, respectively, were examined for potential interference; and first-adjacent DTV and NTSC stations within 229 km and 207 km, respectively, were examined for potential interference. Analog taboo-related NTSC stations within 142 km were examined for potential interference. The results of the interference analyses for the proposed KFTR-DT facility are summarized herein at Figure 4. As indicated therein, the proposed facility will meet the 2%/10% criterion outlined in the FCC Rules and published guidelines with respect to all considered stations.

With respect to Class A TV station protection, the proposal has been evaluated according to the requirements of Section 73.623(c)(5) of the FCC Rules. The analysis reveals the following potentially affected Class A TV facilities:

- KNET-LP, Los Angeles-CA, BPTTL-JG0601JK, Channel 25
- KSFV-LP, San Fernando Valley-CA, BLTTL-20010507AAN, Channel 26
- KTSB-LP, Santa Barbara-CA, BPTTL-19980601QB, Channel 29

The Longley-Rice interference prediction provisions outlined in OET-69 have been applied to Class A facilities pursuant to Section 73.623(c)(5)(iii). A waiver is requested if necessary to permit the use of the OET-69 methodology. The results of the OET-69 interference analysis are included herein at Figure 4. Therein it is demonstrated that the interference protection requirements with respect to all Class A facilities are met.

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<sup>‡‡</sup> The duTreil, Lundin & Rackley, Inc. DTV interference analysis program is a precise implementation of the program and procedures outlined by the FCC in the Sixth Report and Order; subsequent Memorandum Opinion and Order; and FCC OET Bulletin No. 69. A nominal grid size resolution of 2 km was employed.

The proposed facility meets the minimum distance separation requirements outlined in the *U.S.-Mexican MOU* with respect to all pertinent Mexican TV and DTV allotments.

### Environmental Considerations

With respect to the potential for human exposure to radio frequency (RF) radiation, calculations prepared in accordance with FCC Bulletin OET-65 (Edition 97-01) indicate that the proposal will not result in human exposure to RF energy at ground level in excess of FCC standards. Power density calculations were conducted at 2-m above ground<sup>§§</sup> based on the following conservative assumptions, with the following results:

Call Sign	Channel	Peak Visual ERP or Average ERP (kW)	Aural ERP (kW)	Relative Field Factor <sup>***</sup>	FCC Limit <sup>†††</sup> (mW/cm <sup>2</sup> )	Percentage of Limit
KFTR-DT	29	480	--	0.05	0.373	1.8%

As indicated above, the exposure to RF radiation at 2-m above ground level will not exceed 1.8% of the FCC limit for general population / uncontrolled exposure.

Therefore, based on the 5% responsibility threshold, the proposal complies with the FCC limit for human exposure to RF radiation and it is categorically excluded from environmental processing.

Access to the transmitting site will be restricted and appropriately marked with warning signs. Furthermore, as this is a multi-user site, an agreement will be in effect with the other stations in the event that workers or other authorized personnel

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§§ The radiation center is located 79 m above ground level.

\*\*\* This is a conservative estimate of the relative field factor in the downward direction not exceeded at downward angles greater than 20-degrees below the horizon. See Appendix 1.

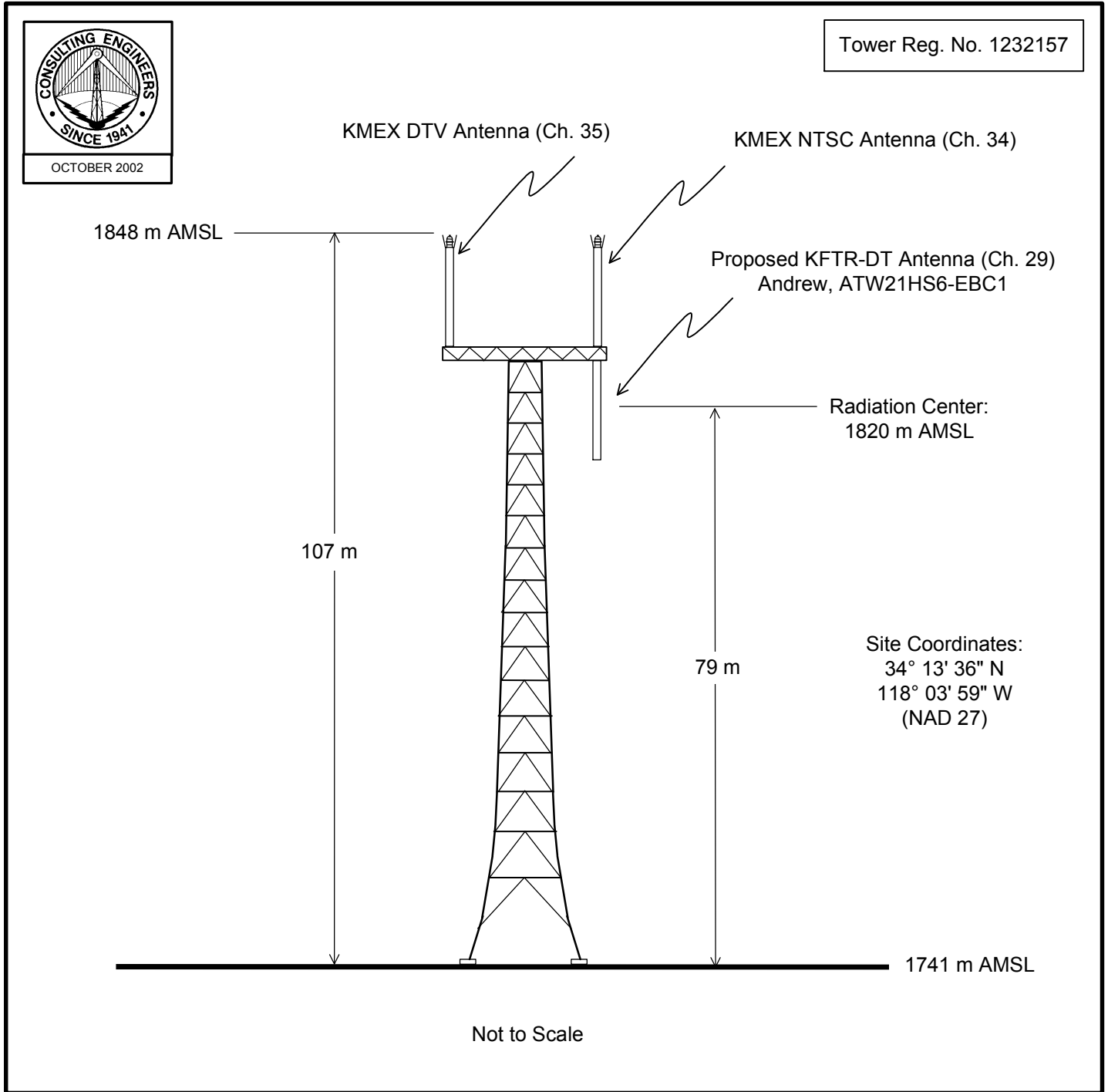
††† for general population/uncontrolled environments

enter the restricted area or climb the tower to ensure that appropriate measures will be taken to assure worker safety with respect to radio frequency radiation exposure. Such measures include reducing the average exposure by spreading out the work over a longer period of time, the use of protective clothing, or scheduling work when the stations are operating at reduced power or shut down.

Louis Robert du Treil, Jr.

October 25, 2002

Figure 1



## **ANTENNA AND SUPPORTING STRUCTURE**

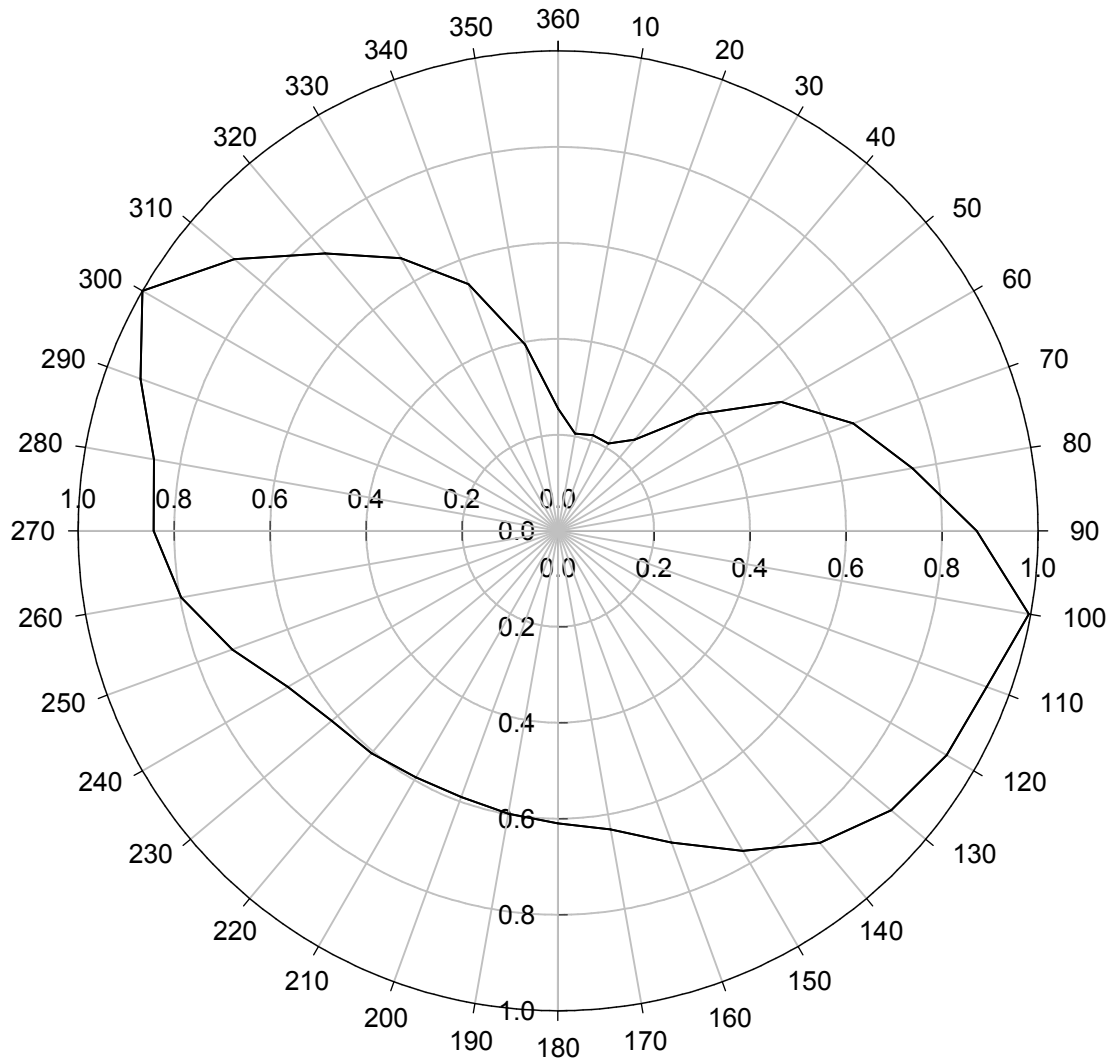
TELEVISION STATION KFTR-DT

ONTARIO, CALIFORNIA

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du Treil, Lundin & Rackley, Inc., Sarasota, Florida

Figure 2

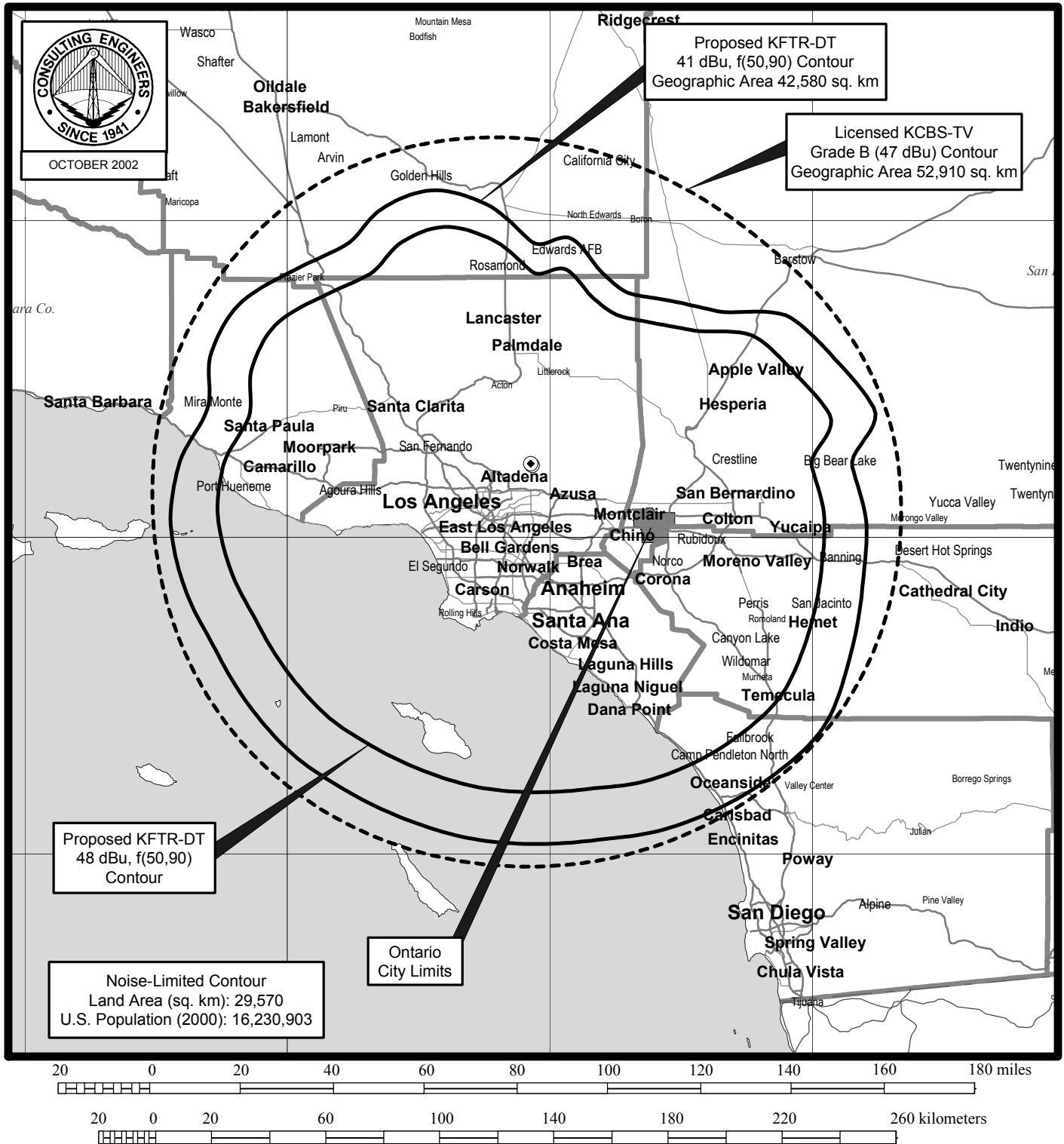


Antenna: Andrew, model ATW21HS6-EBC1-29  
 Pattern calculated considering  $-1.5^\circ$  electrical beam tilt and  
 $-1.0$  mechanical beam tilt at  $200^\circ$  true taking into account  
 90% relative field provision of Section 73.625(b)(2). This  
 pattern is to be used to compute FCC coverage for KFTR-DT.

## NORMALIZED AZIMUTHAL RELATIVE FIELD PATTERN

TELEVISION STATION KFTR-DT  
 ONTARIO, CALIFORNIA  
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du Treil, Lundin & Rackley, Inc. Sarasota, Florida



## PREDICTED KFTR-DT COVERAGE CONTOURS AND COMPARISON WITH KCBS-TV GRADE B CONTOUR

TELEVISION STATION KFTR-DT  
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du Treil, Lundin & Rackley, Inc. Sarasota, Florida

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Summary of Domestic Allocation Analysis

Stations Potentially Affected by Proposed Station							
Facility Number	Channel	Call	City State	Distance (km)	Status	Application Prefix	Application Reference Number
1	22	KWHY-TV	LOS ANGELES CA	0	LIC	BLCT	19940317KM
2	25	KNET-LP	LOS ANGELES CA	32.5	APP	BPTTL	JG0601JK
3	25	K24DM	OXNARD CA	88.6	CP MOD	BMPTTL	JG0601UP
4	26	KSFV-LP	SAN FERNANDO V	1.6	LIC	BLTTL	20010507AAN
5	26	KDIG-LP	Temecula CA	116.3	CP	BPTTL	JG0601UR
6	28	KCET	LOS ANGELES CA	0.5	LIC	BLET	19820607LE
7	29	KBAK-TV	BAKERSFIELD CA	144.4	LIC	BLCT	2317
8	29	KTSB-LP	SANTA BARBARA	178.5	APP	BPTTL	19980601QB
9	29	KFBT-DT	LAS VEGAS NV	341.4	CP	BPCDT	19991101AKC

Stations Potentially Affected by Proposed Station							
Facility Number	Channel	Call	City State	Distance (km)	Status	Application Prefix	Application Reference Number
10	29	KFBT-DT	LAS VEGAS NV	334.9	PLN	DTVPLN	DTVP0755
11	30	KPXN	SAN BERNARDINO	34	LIC	BLCT	19940124KF
12	30	KPXN	SAN BERNARDINO	1.5	APP	BPCT	20010131ABT
13	30	KPBS-DT	SAN DIEGO CA	199.7	LIC	BLEDT	20011203CEP
14	30	KPBS-DT	SAN DIEGO CA	199.8	PLN	DTVPLN	DTVP0777
15	31	KABE-CA	BAKERSFIELD CA	144.6	APP	BPTTA	20020520ABR
16	31	KABE-LP	BAKERSFIELD CA	144.6	APP	BPTTL	JG0601NW
17	31	KABE-LP	BAKERSFIELD CA	144.6	CP	BPTTL	20010116AHS

Summary of Interference Analysis for Worst-Case Scenarios							
Facility Number	Interference Population Before Analysis	Interference Population After Analysis	Baseline Population	Net Change in Interference	Percent of Baseline	Permissible Percent of Baseline	Result
1	--	--	--	--	0.00	--	pass
2	--	--	--	--	0.00	--	pass
3	--	--	--	--	0.00	--	pass
4	--	--	--	--	0.00	--	pass
5	--	--	--	--	0.00	--	pass
6	182648	227188	13982571	44540	0.319	2.0	pass
7	0	2278	629158	2278	0.362	2.0	pass
8	--	--	--	--	0.00	--	pass
9	--	--	--	--	0.00	--	pass
10	--	--	--	--	0.00	--	pass
11	840488	855882	13526612	15394	0.114	2.0	pass
12	578155	591864	13737624	13709	0.1	2.0	pass
13	54846	54846	2549996	0	0	2.0	pass
14	47024	47024	2549996	0	0	2.0	pass
15	--	--	--	--	0.00	--	pass
16	--	--	--	--	0.00	--	pass
17	--	--	--	--	0.00	--	pass

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Transmitting Antenna Manufacturer's  
Azimuthal Plane and Vertical Plane Pattern Data

(five sheets follow)



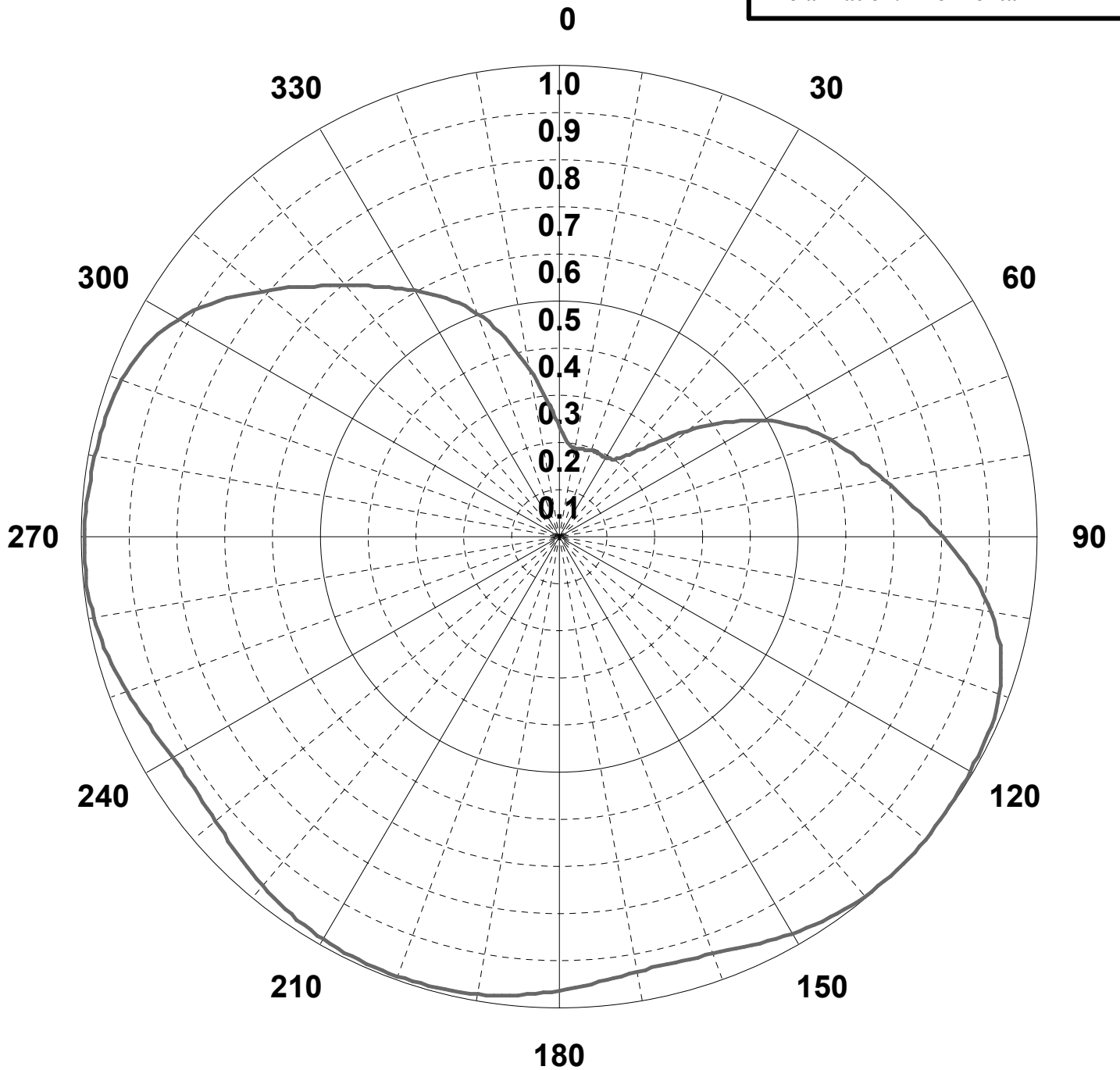
**ANDREW**

Channel: 29

Type: ATW-C1

Gain: 1.52 (1.82 dB)

Polarization: Horizontal



ANDREW CORPORATION  
10500 W. 153rd Street  
Orland Park, Illinois U.S.A. 60462

Company:  
Site:  
Proposal Number:

Author:

Date: 10/25/2002



Angle	Amp	dB	Angle	Amp	dB	Angle	Amp	dB	Angle	Amp	dB	Angle	Amp	dB
0	0.235	-12.58	72	0.620	-4.15	144	0.989	-0.10	216	0.976	-0.21	288	0.978	-0.19
1	0.227	-12.88	73	0.628	-4.04	145	0.986	-0.12	217	0.974	-0.23	289	0.976	-0.21
2	0.219	-13.19	74	0.637	-3.92	146	0.984	-0.14	218	0.971	-0.26	290	0.974	-0.23
3	0.212	-13.47	75	0.645	-3.81	147	0.981	-0.17	219	0.968	-0.28	291	0.971	-0.26
4	0.206	-13.72	76	0.654	-3.69	148	0.978	-0.19	220	0.966	-0.30	292	0.968	-0.28
5	0.202	-13.89	77	0.663	-3.57	149	0.975	-0.22	221	0.963	-0.33	293	0.964	-0.32
6	0.198	-14.07	78	0.672	-3.45	150	0.972	-0.25	222	0.960	-0.35	294	0.960	-0.35
7	0.195	-14.20	79	0.682	-3.32	151	0.968	-0.28	223	0.957	-0.38	295	0.955	-0.40
8	0.192	-14.33	80	0.691	-3.21	152	0.965	-0.31	224	0.954	-0.41	296	0.950	-0.45
9	0.191	-14.38	81	0.701	-3.09	153	0.962	-0.34	225	0.951	-0.44	297	0.944	-0.50
10	0.190	-14.42	82	0.711	-2.96	154	0.959	-0.36	226	0.948	-0.46	298	0.937	-0.57
11	0.190	-14.42	83	0.721	-2.84	155	0.955	-0.40	227	0.946	-0.48	299	0.929	-0.64
12	0.190	-14.42	84	0.732	-2.71	156	0.952	-0.43	228	0.943	-0.51	300	0.921	-0.71
13	0.191	-14.38	85	0.744	-2.57	157	0.949	-0.45	229	0.941	-0.53	301	0.912	-0.80
14	0.191	-14.38	86	0.755	-2.44	158	0.946	-0.48	230	0.938	-0.56	302	0.903	-0.89
15	0.192	-14.33	87	0.767	-2.30	159	0.943	-0.51	231	0.937	-0.57	303	0.893	-0.98
16	0.192	-14.33	88	0.778	-2.18	160	0.941	-0.53	232	0.935	-0.58	304	0.882	-1.09
17	0.193	-14.29	89	0.790	-2.05	161	0.939	-0.55	233	0.934	-0.59	305	0.871	-1.20
18	0.194	-14.24	90	0.803	-1.91	162	0.938	-0.56	234	0.933	-0.60	306	0.860	-1.31
19	0.195	-14.20	91	0.815	-1.78	163	0.936	-0.57	235	0.932	-0.61	307	0.848	-1.43
20	0.195	-14.20	92	0.827	-1.65	164	0.935	-0.58	236	0.932	-0.61	308	0.836	-1.56
21	0.195	-14.20	93	0.839	-1.52	165	0.934	-0.59	237	0.933	-0.60	309	0.823	-1.69
22	0.195	-14.20	94	0.852	-1.39	166	0.934	-0.59	238	0.933	-0.60	310	0.811	-1.82
23	0.195	-14.20	95	0.863	-1.28	167	0.935	-0.58	239	0.934	-0.59	311	0.799	-1.95
24	0.195	-14.20	96	0.875	-1.16	168	0.935	-0.58	240	0.935	-0.58	312	0.787	-2.08
25	0.194	-14.24	97	0.886	-1.05	169	0.936	-0.57	241	0.937	-0.57	313	0.775	-2.21
26	0.194	-14.24	98	0.897	-0.94	170	0.937	-0.57	242	0.939	-0.55	314	0.762	-2.36
27	0.194	-14.24	99	0.907	-0.85	171	0.939	-0.55	243	0.942	-0.52	315	0.750	-2.50
28	0.193	-14.29	100	0.917	-0.75	172	0.941	-0.53	244	0.944	-0.50	316	0.738	-2.64
29	0.193	-14.29	101	0.926	-0.67	173	0.943	-0.51	245	0.947	-0.47	317	0.727	-2.77
30	0.193	-14.29	102	0.935	-0.58	174	0.945	-0.49	246	0.950	-0.45	318	0.716	-2.90
31	0.194	-14.24	103	0.942	-0.52	175	0.948	-0.46	247	0.953	-0.42	319	0.706	-3.02
32	0.195	-14.20	104	0.950	-0.45	176	0.951	-0.44	248	0.956	-0.39	320	0.695	-3.16
33	0.197	-14.11	105	0.956	-0.39	177	0.954	-0.41	249	0.960	-0.35	321	0.685	-3.29
34	0.198	-14.07	106	0.962	-0.34	178	0.957	-0.38	250	0.963	-0.33	322	0.675	-3.41
35	0.201	-13.94	107	0.967	-0.29	179	0.960	-0.35	251	0.966	-0.30	323	0.666	-3.53
36	0.205	-13.76	108	0.972	-0.25	180	0.963	-0.33	252	0.969	-0.27	324	0.656	-3.66
37	0.210	-13.56	109	0.976	-0.21	181	0.966	-0.30	253	0.972	-0.25	325	0.647	-3.78
38	0.215	-13.35	110	0.979	-0.18	182	0.968	-0.28	254	0.975	-0.22	326	0.638	-3.90
39	0.221	-13.11	111	0.982	-0.16	183	0.971	-0.26	255	0.978	-0.19	327	0.629	-4.03
40	0.228	-12.84	112	0.985	-0.13	184	0.974	-0.23	256	0.981	-0.17	328	0.621	-4.14
41	0.237	-12.51	113	0.987	-0.11	185	0.976	-0.21	257	0.983	-0.15	329	0.612	-4.26
42	0.246	-12.18	114	0.988	-0.10	186	0.978	-0.19	258	0.985	-0.13	330	0.604	-4.38
43	0.257	-11.80	115	0.989	-0.10	187	0.980	-0.18	259	0.987	-0.11	331	0.595	-4.51
44	0.267	-11.47	116	0.991	-0.08	188	0.982	-0.16	260	0.989	-0.10	332	0.587	-4.63
45	0.279	-11.09	117	0.991	-0.08	189	0.984	-0.14	261	0.990	-0.09	333	0.577	-4.78
46	0.291	-10.72	118	0.992	-0.07	190	0.985	-0.13	262	0.992	-0.07	334	0.568	-4.91
47	0.305	-10.31	119	0.992	-0.07	191	0.987	-0.11	263	0.993	-0.06	335	0.559	-5.05
48	0.318	-9.95	120	0.993	-0.06	192	0.988	-0.10	264	0.994	-0.05	336	0.549	-5.21
49	0.333	-9.55	121	0.994	-0.05	193	0.989	-0.10	265	0.994	-0.05	337	0.538	-5.38
50	0.348	-9.17	122	0.995	-0.04	194	0.990	-0.09	266	0.994	-0.05	338	0.527	-5.56
51	0.363	-8.80	123	0.995	-0.04	195	0.991	-0.08	267	0.994	-0.05	339	0.515	-5.76
52	0.378	-8.45	124	0.996	-0.03	196	0.991	-0.08	268	0.994	-0.05	340	0.504	-5.95
53	0.393	-8.11	125	0.996	-0.03	197	0.991	-0.08	269	0.994	-0.05	341	0.492	-6.16
54	0.408	-7.79	126	0.997	-0.03	198	0.991	-0.08	270	0.994	-0.05	342	0.479	-6.39
55	0.423	-7.47	127	0.998	-0.02	199	0.992	-0.07	271	0.994	-0.05	343	0.465	-6.65
56	0.438	-7.17	128	0.998	-0.02	200	0.992	-0.07	272	0.993	-0.06	344	0.452	-6.90
57	0.452	-6.90	129	0.999	-0.01	201	0.992	-0.07	273	0.992	-0.07	345	0.437	-7.19
58	0.467	-6.61	130	0.999	-0.01	202	0.992	-0.07	274	0.991	-0.08	346	0.423	-7.47
59	0.481	-6.36	131	1.000	0.00	203	0.992	-0.07	275	0.991	-0.08	347	0.408	-7.79
60	0.495	-6.11	132	1.000	0.00	204	0.991	-0.08	276	0.990	-0.09	348	0.393	-8.11
61	0.508	-5.88	133	1.000	0.00	205	0.991	-0.08	277	0.989	-0.10	349	0.378	-8.45
62	0.520	-5.68	134	1.000	0.00	206	0.990	-0.09	278	0.988	-0.10	350	0.363	-8.80
63	0.531	-5.50	135	1.000	0.00	207	0.990	-0.09	279	0.988	-0.10	351	0.348	-9.17
64	0.543	-5.30	136	1.000	0.00	208	0.989	-0.10	280	0.987	-0.11	352	0.333	-9.55
65	0.553	-5.15	137	0.999	-0.01	209	0.988	-0.10	281	0.986	-0.12	353	0.319	-9.92
66	0.564	-4.97	138	0.998	-0.02	210	0.987	-0.11	282	0.985	-0.13	354	0.305	-10.31
67	0.574	-4.82	139	0.997	-0.03	211	0.986	-0.12	283	0.984	-0.14	355	0.292	-10.69
68	0.584	-4.67	140	0.996	-0.03	212	0.984	-0.14	284	0.983	-0.15	356	0.279	-11.09
69	0.593	-4.54	141	0.995	-0.04	213	0.982	-0.16	285	0.982	-0.16	357	0.267	-11.47
70	0.602	-4.41	142	0.993	-0.06	214	0.981	-0.17	286	0.981	-0.17	358	0.255	-11.87
71	0.611	-4.28	143	0.991	-0.08	215	0.978	-0.19	287	0.979	-0.18	359	0.245	-12.22

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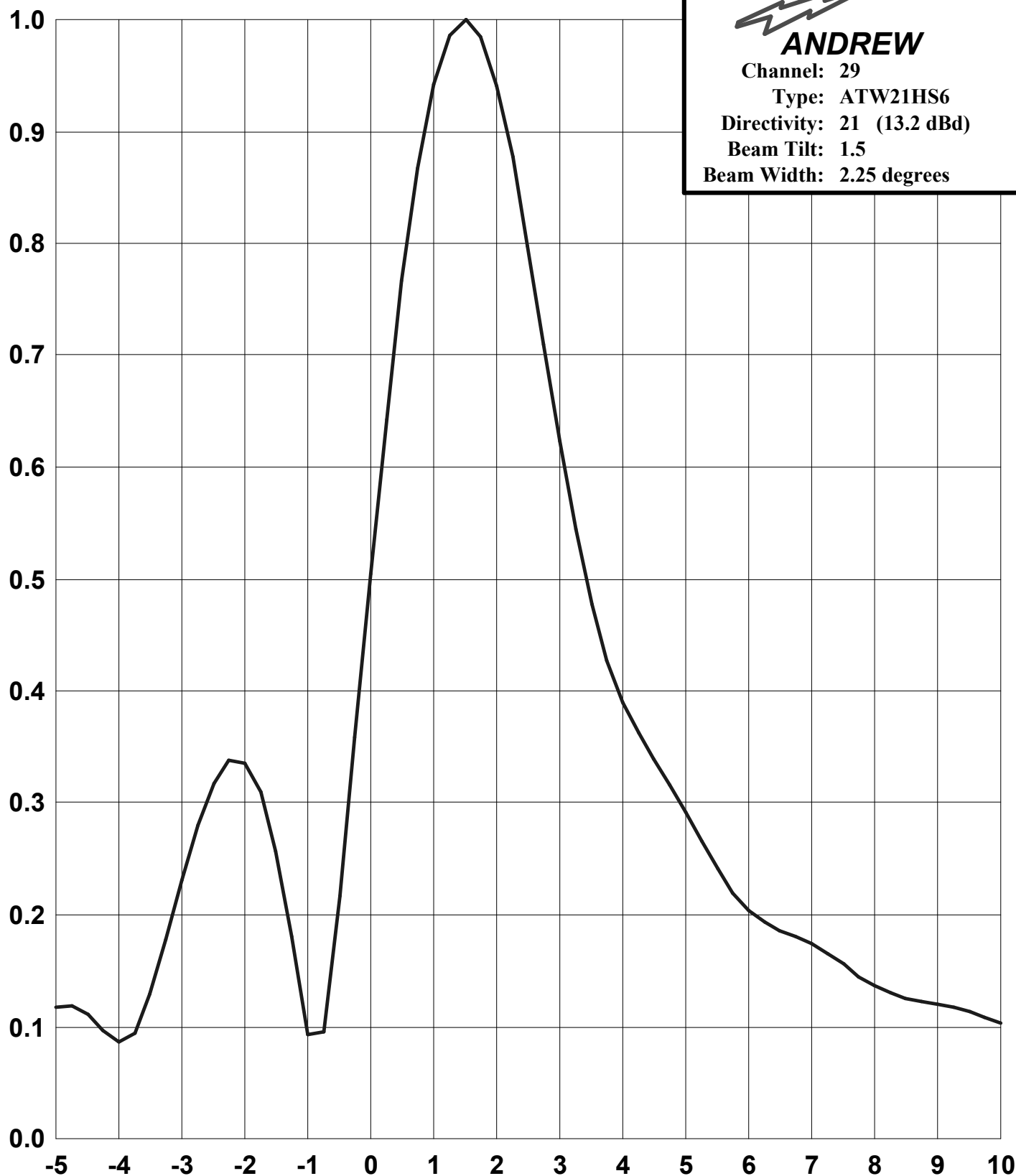
Channel: 29

Type: ATW21HS6

Directivity: 21 (13.2 dBd)

Beam Tilt: 1.5

Beam Width: 2.25 degrees



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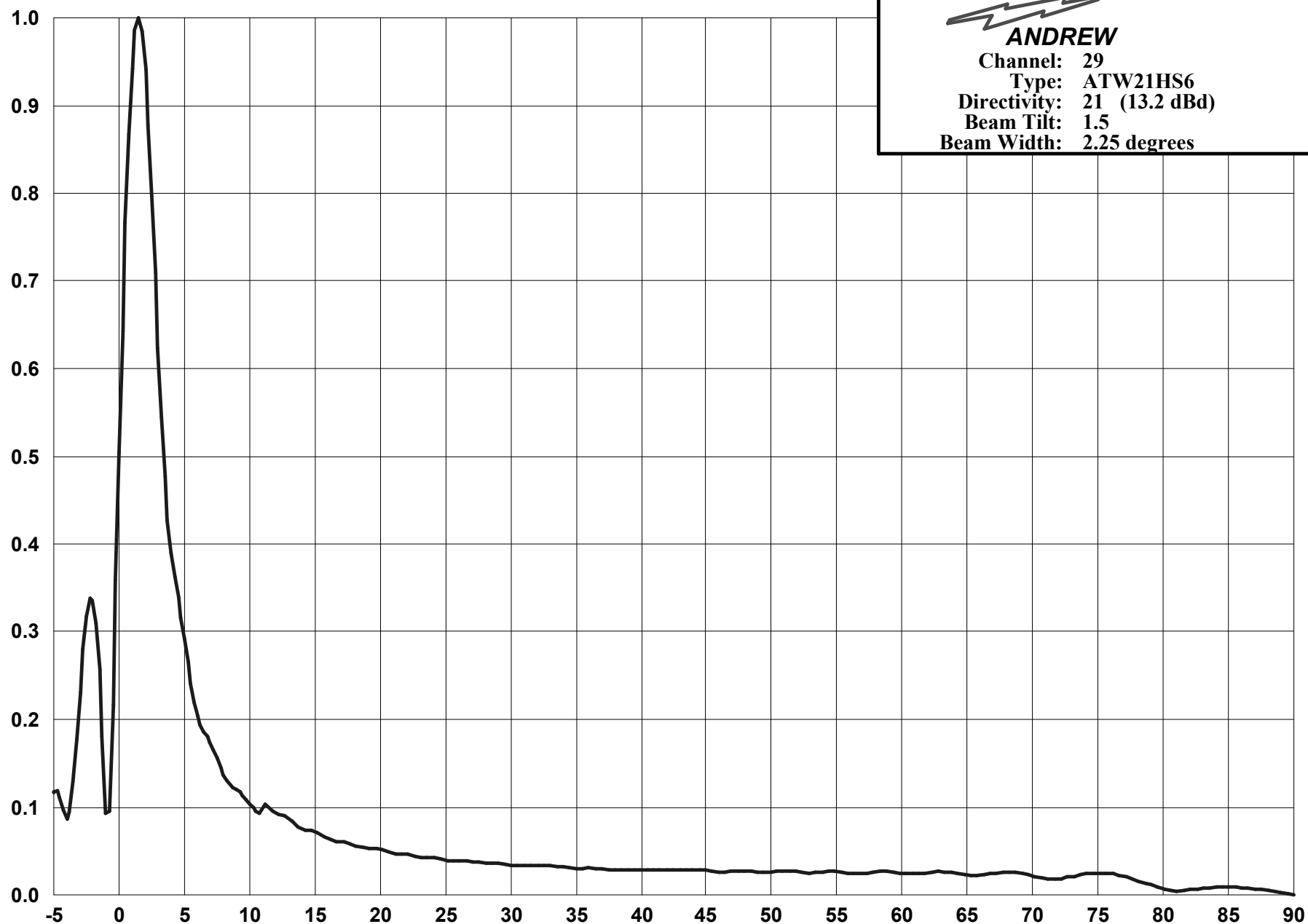
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Angle	Amp	dB	Angle	Amp	dB	Angle	Amp	dB	Angle	Amp	dB
-5.00	0.118	-18.56	9.00	0.120	-18.42	36.00	0.030	-30.36	63.50	0.026	-31.70
-4.75	0.119	-18.49	9.25	0.117	-18.64	36.50	0.030	-30.46	64.00	0.024	-32.28
-4.50	0.111	-19.09	9.50	0.113	-18.94	37.00	0.029	-30.65	64.50	0.023	-32.70
-4.25	0.097	-20.26	9.75	0.108	-19.33	37.50	0.029	-30.75	65.00	0.022	-33.09
-4.00	0.086	-21.31	10.00	0.103	-19.74	38.00	0.029	-30.75	65.50	0.022	-33.15
-3.75	0.094	-20.54	10.50	0.095	-20.45	38.50	0.029	-30.75	66.00	0.023	-32.82
-3.50	0.129	-17.79	11.00	0.099	-20.09	39.00	0.029	-30.75	66.50	0.024	-32.45
-3.25	0.178	-14.99	11.50	0.093	-20.59	39.50	0.029	-30.75	67.00	0.025	-32.09
-3.00	0.231	-12.73	12.00	0.091	-20.82	40.00	0.028	-30.96	67.50	0.026	-31.75
-2.75	0.280	-11.06	12.50	0.087	-21.22	40.50	0.028	-31.06	68.00	0.026	-31.70
-2.50	0.318	-9.95	13.00	0.081	-21.84	41.00	0.028	-31.06	68.50	0.026	-31.70
-2.25	0.338	-9.42	13.50	0.076	-22.39	41.50	0.028	-31.06	69.00	0.025	-32.00
-2.00	0.336	-9.47	14.00	0.073	-22.68	42.00	0.028	-31.06	69.50	0.023	-32.67
-1.75	0.310	-10.17	14.50	0.072	-22.86	42.50	0.028	-31.06	70.00	0.021	-33.45
-1.50	0.257	-11.80	15.00	0.068	-23.30	43.00	0.028	-31.06	70.50	0.019	-34.31
-1.25	0.181	-14.85	15.50	0.064	-23.82	43.50	0.028	-31.06	71.00	0.018	-34.84
-1.00	0.093	-20.63	16.00	0.062	-24.16	44.00	0.028	-31.06	71.50	0.018	-34.89
-0.75	0.096	-20.35	16.50	0.061	-24.29	44.50	0.028	-31.06	72.00	0.018	-34.89
-0.50	0.217	-13.27	17.00	0.059	-24.53	45.00	0.027	-31.28	72.50	0.020	-34.08
-0.25	0.359	-8.90	17.50	0.057	-24.90	45.50	0.026	-31.61	73.00	0.021	-33.60
0.00	0.505	-5.93	18.00	0.055	-25.21	46.00	0.026	-31.70	73.50	0.023	-32.84
0.25	0.643	-3.84	18.50	0.053	-25.44	46.50	0.027	-31.46	74.00	0.024	-32.43
0.50	0.766	-2.32	19.00	0.053	-25.51	47.00	0.027	-31.37	74.50	0.025	-32.08
0.75	0.867	-1.24	19.50	0.052	-25.70	47.50	0.027	-31.37	75.00	0.025	-32.04
1.00	0.942	-0.52	20.00	0.050	-26.04	48.00	0.027	-31.37	75.50	0.024	-32.36
1.25	0.986	-0.12	20.50	0.048	-26.40	48.50	0.026	-31.61	76.00	0.024	-32.40
1.50	1.000	0.00	21.00	0.047	-26.56	49.00	0.026	-31.70	76.50	0.022	-33.08
1.75	0.984	-0.14	21.50	0.046	-26.66	49.50	0.026	-31.70	77.00	0.020	-33.91
2.00	0.941	-0.53	22.00	0.045	-26.96	50.00	0.027	-31.45	77.50	0.018	-34.82
2.25	0.877	-1.14	22.50	0.043	-27.25	50.50	0.027	-31.37	78.00	0.016	-35.84
2.50	0.797	-1.97	23.00	0.042	-27.45	51.00	0.027	-31.37	78.50	0.013	-37.58
2.75	0.710	-2.97	23.50	0.042	-27.54	51.50	0.027	-31.37	79.00	0.011	-39.06
3.00	0.623	-4.11	24.00	0.041	-27.66	52.00	0.026	-31.62	79.50	0.009	-40.79
3.25	0.544	-5.29	24.50	0.040	-28.00	52.50	0.025	-31.96	80.00	0.006	-44.17
3.50	0.477	-6.43	25.00	0.039	-28.18	53.00	0.026	-31.78	80.50	0.005	-45.92
3.75	0.427	-7.39	25.50	0.039	-28.18	53.50	0.026	-31.70	81.00	0.004	-47.84
4.00	0.390	-8.18	26.00	0.039	-28.18	54.00	0.027	-31.45	81.50	0.005	-46.11
4.25	0.362	-8.83	26.50	0.038	-28.31	54.50	0.027	-31.37	82.00	0.006	-44.51
4.50	0.339	-9.40	27.00	0.037	-28.54	55.00	0.026	-31.63	82.50	0.007	-43.16
4.75	0.316	-10.01	27.50	0.036	-28.78	55.50	0.025	-31.97	83.00	0.008	-41.99
5.00	0.291	-10.72	28.00	0.036	-28.87	56.00	0.025	-32.04	83.50	0.008	-41.94
5.25	0.266	-11.50	28.50	0.036	-28.87	56.50	0.025	-32.04	84.00	0.009	-40.95
5.50	0.241	-12.36	29.00	0.035	-29.02	57.00	0.025	-32.04	84.50	0.009	-40.92
5.75	0.220	-13.15	29.50	0.034	-29.27	57.50	0.026	-31.77	85.00	0.009	-40.92
6.00	0.204	-13.81	30.00	0.034	-29.37	58.00	0.027	-31.44	85.50	0.009	-40.92
6.25	0.194	-14.24	30.50	0.034	-29.37	58.50	0.027	-31.37	86.00	0.008	-41.91
6.50	0.186	-14.61	31.00	0.033	-29.53	59.00	0.026	-31.64	86.50	0.008	-41.94
6.75	0.180	-14.89	31.50	0.033	-29.63	59.50	0.025	-31.97	87.00	0.007	-43.07
7.00	0.174	-15.19	32.00	0.033	-29.63	60.00	0.024	-32.33	87.50	0.006	-44.41
7.25	0.165	-15.65	32.50	0.033	-29.63	60.50	0.024	-32.40	88.00	0.005	-46.00
7.50	0.156	-16.14	33.00	0.032	-29.80	61.00	0.024	-32.40	88.50	0.004	-47.94
7.75	0.145	-16.77	33.50	0.032	-29.90	61.50	0.025	-32.10	89.00	0.003	-50.44
8.00	0.137	-17.27	34.00	0.031	-30.07	62.00	0.026	-31.76	89.50	0.001	-59.95
8.25	0.130	-17.72	34.50	0.030	-30.36	62.50	0.027	-31.43	90.00	0.000	-226.38
8.50	0.125	-18.06	35.00	0.030	-30.46	63.00	0.026	-31.64			
8.75	0.123	-18.20	35.50	0.031	-30.27	63.50	0.026	-31.70			

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