Appendix A

ET Docket No. 04-186: Unlicensed Operation in the TV Broadcast Bands

CEA Field Test Results

January 31, 2005

Consumer Electronics Association
2500 Wilson Blvd. Arlington, VA 22201-3834 USA
(866) 858-1555 toll free (703) 907-7600 main (703) 907-7601 fax www.CE.org

PRODUCER OF International CES

Site #	Site Name	Test Date	Time of Day	Weather	Test Site Coordinates					
*	*	(m/d/y)	(24hr)	*	(deg N)	(min N)	(sec N)	(deg W)	(min W)	(sec W)
1	C-1	12/1/2004	14:15	Windy 50	38	47	43	77	4	52.4
2	C-1	12/1/2004	15:00	Windy 50	38	47	43	77	4	52.4
3	C-1	12/1/2004	16:00	Windy 50	38	47	43	77	4	52.4
4	C-1	12/1/2004	17:05	Windy 50	38	47	43	77	4	52.4
5	C-2	12/2/2004	9:50	Clear 40	39	2	41.5	77	4	20.2
6	C-2	12/2/2004	10:45	Clear 40	39	2	41.5	77	4	20.2
7	C-2	12/2/2004	11:12	Clear 40	39	2	41.5	77	4	20.2
8	C-2	12/2/2004	11:45	Clear 40	39	2	41.5	77	4	20.2
9	C-3	12/7/2004	10:18	Lt. Rain 50	39	10	59.7	76	51	22.7
10	C-3	12/7/2004	11:13	Lt. Rain 50	39	10	59.7	76	51	22.7
11	C-3	12/7/2004	11:50	Lt. Rain 50	39	10	59.7	76	51	22.7
12	C-3	12/7/2004	12:15	Lt. Rain 50	39	10	59.7	76	51	22.7
13	C-4	12/8/2004	11:30	Clear 60	38	37	11.5	76	56	26.5
14	C-4	12/8/2004	12:31	Clear 60	38	37	11.5	76	56	26.5
15	C-4	12/8/2004	13:01	Clear 60	38	37	11.5	76	56	26.5
16	C-4	12/8/2004	13:28	Clear 60	38	37	11.5	76	56	26.5
17	C-5	12/9/2004	9:10	Cloudy 45	39	2	46.9	76	50	17.1
18	C-5	12/9/2004	11:05	Cloudy 45	39	2	46.9	76	50	17.1
19	C-6	12/10/2004	9:30	Lt. Rain 47	39	6	27.9	77	13	35.2
20	C-6	12/10/2004	10:09	Lt. Rain 47	39	6	27.9	77	13	35.2
21	C-6	12/10/2004	11:20	Lt. Rain 47	39	6	27.9	77	13	35.2
22	C-6	12/10/2004	11:55	Lt. Rain 47	39	6	27.9	77	13	35.2
23	C-7	12/12/2004	10:20	Clear 50	38	40	49.8	77	20	18.1
24	C-7	12/12/2004	11:10	Clear 50	38	40	49.8	77	20	18.1
25	C-7	12/12/2004	11:34	Clear 50	38	40	49.8	77	20	18.1

Site #	Site Name	Test Date	Time of Day	Weather	Test Site Coordinates					
*	*	(m/d/y)	(24hr)	*	(deg N)	(min N)	(sec N)	(deg W)	(min W)	(sec W)
26	C-7	12/12/2004	12:05	Clear 50	38	40	49.8	77	20	18.1
27	C-8	12/15/2004	10:00	Clear 30	38	59	53.4	77	7	31.5
28	C-8	12/15/2004	11:45	Clear 38	38	59	53.4	77	7	31.5
29	C-8	12/15/2004	12:30	Clear 37	38	59	53.4	77	7	31.5
30	C-8	12/15/2004	13:05	Clear 38	38	59	53.4	77	7	31.5
31	C-9	12/16/2004	11:40	Clear 40	38	58	51.1	76	44	38.7
32	C-9	12/16/2004	11:00	Clear 35	38	58	51.1	76	44	38.7
33	C-9	12/16/2004	12:05	Clear 40	38	58	51.1	76	44	38.7
34	C-9	12/16/2004	12:50	Clear 45	38	58	51.1	76	44	38.7
36	C-10	12/17/2004	10:00	Clear 45	38	55	43.6	76	43	21.5
37	C-10	12/17/2004	11:10	Clear 50	38	55	43.6	76	43	21.5
38	C-10	12/17/2004	11:55	Clear 50	38	55	43.6	76	43	21.5
39	C-10	12/17/2004	12:45	Clear 50	38	55	43.6	76	43	21.5

Site #	Site Name	House Side (Direction) / Corresponding Room	INDOOR DTV Field Strength Ch. 39 WJLA DT	OUTDOOR 6 Ft. DTV Field Strength Ch. 39 WJLA DT	Attenuation from Outdoor to Indoor at 6 Ft.- Ch. 39	OUTDOOR 30 Ft. DTV Field Strength Ch. 39 WJLA-DT	Attenuation from 30 Ft. to 6 Ft. - Ch. 39	Attenuation from 30 Ft. to Indoor 6 ft. Ch. 39 WJLA DT	INDOOR DTV Field Strength Ch. 40 WNUV-DT
*	*		(dBuv/m)	(dBuv/m)	(dB)	(dBuV/m)	(dB)	(dB)	(dBuv/m)
1	C-1	West / Living Room	34.8	86.0	51.2	77.13	-8.9	42.3	27.28
2	C-1	North/LR / Entertainment	40.3	89.9	49.6	77.13	-12.8	36.8	26.98
3	C-1	East / Kitchen	35.8	86.5	50.7	77.13	-9.4	41.3	25.68
4	C-1	South / Bedroom	37.5	82.3	44.8	77.13	-5.2	39.6	27.58
5	C-2	BR/South/Ent.Cluster	92.4	91.4	-1.0	93.93	2.5	1.5	50.53
6	C-2	East / Kitchen	91.2	99.0	7.7	93.93	-5.0	2.7	53.78
7	C-2	North / Dining Room	86.3	91.5	5.2	93.93	2.4	7.6	53.48
8	C-2	West / Living Room	94.4	90.2	-4.2	93.93	3.7	-0.5	52.58
9	C-3	NW Living Room	51.1	54.2	3.1	66.63	12.4	15.5	61.48
10	C-3	ENE - Massage Room	47.1	53.8	6.7	66.63	12.8	19.5	68.58
11	C-3	SSW / Kitchen	50.5	55.6	5.1	66.63	11.0	16.1	63.68
12	C-3	WSW / Dining Room	49.0	54.9	5.9	66.63	11.7	17.6	65.28
13	C-4	EAST / Living Room	64.1	66.1	2.0	76.73	10.6	12.6	40.68
14	C-4	North / Dining Room	64.9	79.3	14.4	76.73	-2.6	11.8	41.18
15	C-4	West/ Kitchen	62.4	74.2	11.8	76.73	2.5	14.3	39.78
16	C-4	South / Garage	59.7	69.2	9.5	76.73	7.5	17.0	41.48
17	C-5	South / Living Room	62.5	66.0	3.5	59.33	-6.7	-3.2	52.78
18	C-5	East/ Kitchen	59.4	70.1	10.7	59.33	-10.8	-0.1	55.88
19	C-6	Southwest / Kitchen	58.2	69.9	11.7	82.13	12.2	23.9	51.98
20	C-6	Northeast / Den	56.7	65.0	8.3	82.13	17.1	25.4	48.68
21	C-6	SouthEast / Living Room	61.9	66.6	4.7	82.13	15.5	20.2	53.78
22	C-6	NorthWest / Garage	60.6	63.4	2.8	82.13	18.7	21.5	48.48
23	C-7	North / Family Room	55.8	67.5	11.7	73.53	6.0	17.7	40.28
24	C-7	West / Sun Room	62.0	68.6	6.6	73.53	4.9	11.5	41.98
25	C-7	South / Living Room	61.7	78.4	16.7	73.53	-4.9	11.8	39.98

Site #	Site Name	House Side (Direction) / Corresponding Room	INDOOR DTV Field Strength Ch. 39 WJLA DT	OUTDOOR 6 Ft. DTV Field Strength Ch. 39 WJLA DT	Attenuation from Outdoor to Indoor at 6 Ft.- Ch. 39	OUTDOOR 30 Ft. DTV Field Strength Ch. 39 WJLA-DT	Attenuation from 30 Ft. to 6 Ft. - Ch. 39	Attenuation from 30 Ft. to Indoor 6 ft. Ch. 39 WJLA DT	INDOOR DTV Field Strength Ch. 40 WNUV-DT
*	*		(dBuv/m)	(dBuv/m)	(dB)	(dBuV/m)	(dB)	(dB)	(dBuv/m)
26	C-7	East / Bedroom	55.9	68.9	13.0	73.53	4.6	17.6	40.28
27	C-8	East / Den	62.3	77.5	15.2	61.43	-16.1	-0.9	33.58
28	C-8	North / Bedroom	58.7	75.9	17.2	61.43	-14.5	2.7	30.58
29	C-8	West / Dining Room	60.6	72.9	12.3	61.43	-11.5	0.8	29.38
30	C-8	South / Living Room	52.8	78.4	25.6	61.43	-17.0	8.6	30.68
31	C-9	North / Dining Room	51.5	53.2	1.7	65.83	12.6	14.3	60.13
32	C-9	EAST / Living Room	50.4	58.7	8.3	65.83	7.1	15.4	63.28
33	C-9	West / Bedroom	56.7	56.9	0.2	65.83	8.9	9.1	64.68
34	C-9	South / Bedroom	57.1	57.0	-0.1	65.83	8.8	8.7	59.38
36	C-10	South / Family Room	58.3	54.9	-3.4	76.73	21.8	18.4	57.18
37	C-10	East / Kitchen	57.1	58.1	1.0	76.73	18.6	19.6	54.68
38	C-10	North / Dining Room	59.2	64.9	5.7	76.73	11.8	17.5	52.78
39	C-10	West / Living Room	65.4	63.3	-2.1	76.73	13.4	11.3	63.48
				Median	**7.2**	**76.7**	**5.5**	**14.9**	**51.3**
				Std. Deviation	**14.5**	**9.7**	**10.9**	**11.4**	**12.7**
				Average	**11.4**	**74.1**	**3.5**	**14.9**	**47.7**

Site #	Site Name	OUTDOOR 6 Ft. DTV Field Strength Ch. 40 WNUV-DT	Attenuation from Outdoor to Indoor at 6 Ft.- Ch. 40	OUTDOOR 30 Ft. DTV Field Strength Ch. 40 WNUV-DT	Attenuation from 30 Ft. to 6 Ft. - Ch. 40	Attenuation from 30 Ft. to Indoor 6 ft. Ch. 40 WNUV-DT
*	*	(dBuV/m)	(dB)	(dBuV/m)	(dB)	(dB)
1	C-1	72.6	45.32	66.82	-5.78	39.54
2	C-1	73.2	46.22	66.82	-6.38	39.84
3	C-1	70.7	45.02	66.82	-3.88	41.14
4	C-1	65.7	38.12	66.82	1.12	39.24
5	C-2	56.4	5.87	61.38	4.98	10.85
6	C-2	58.1	4.32	61.38	3.28	7.6
7	C-2	55.4	1.92	61.38	5.98	7.9
8	C-2	59.9	7.32	61.38	1.48	8.8
9	C-3	66.5	5.02	67.78	1.28	6.3
10	C-3	65.8	-2.78	67.78	1.98	-0.8
11	C-3	70.4	6.72	67.78	-2.62	4.1
12	C-3	66.5	1.22	67.78	1.28	2.5
13	C-4	45.5	4.82	57.18	11.68	16.5
14	C-4	49.3	8.12	57.18	7.88	16
15	C-4	44.9	5.12	57.18	12.28	17.4
16	C-4	47.4	5.92	57.18	9.78	15.7
17	C-5	62.2	9.42	53.98	-8.22	1.2
18	C-5	66.7	10.82	53.98	-12.72	-1.9
19	C-6	63.8	11.82	72.68	8.88	20.7
20	C-6	56.4	7.72	72.68	16.28	24
21	C-6	58.3	4.52	72.68	14.38	18.9
22	C-6	56.5	8.02	72.68	16.18	24.2
23	C-7	47.5	7.22	49.38	1.88	9.1
24	C-7	43.2	1.22	49.38	6.18	7.4
25	C-7	47.3	7.32	49.38	2.08	9.4

Site #	Site Name	OUTDOOR 6 Ft. DTV Field Strength Ch. 40 WNUV-DT	Attenuation from Outdoor to Indoor at 6 Ft.- Ch. 40	OUTDOOR 30 Ft. DTV Field Strength Ch. 40 WNUV-DT	Attenuation from 30 Ft. to 6 Ft. - Ch. 40	Attenuation from 30 Ft. to Indoor 6 ft. Ch. 40 WNUV-DT
*	*	(dBuV/m)	(dB)	(dBuV/m)	(dB)	(dB)
26	C-7	51.5	11.22	49.38	-2.12	9.1
27	C-8	46.6	13.02	43.88	-2.72	10.3
28	C-8	47.3	16.72	43.88	-3.42	13.3
29	C-8	43.5	14.12	43.88	0.38	14.5
30	C-8	47.3	16.62	43.88	-3.42	13.2
31	C-9	61.7	1.57	79.68	17.98	19.55
32	C-9	64	0.72	79.68	15.68	16.4
33	C-9	68.8	4.12	79.68	10.88	15
34	C-9	68.1	8.72	79.68	11.58	20.3
36	C-10	54.3	-2.88	76.68	22.38	19.5
37	C-10	65.8	11.12	76.68	10.88	22
38	C-10	65.2	12.42	76.68	11.48	23.9
39	C-10	59.5	-3.98	76.68	17.18	13.2
		58.9	**7.3**	**66.8**	**4.1**	**14.8**
		9.2	**12.6**	**11.5**	**8.4**	**10.8**
		58.3	**10.5**	**63.4**	**5.2**	**15.7**

Site #	Site Name	House Type / Construction	Approximate Age of Home	Test Date	Time of Day	Weather	Test Site Coordinates	Test Site Coordinates	Test Site Coordinates	Test Site Coordinates	Test Site Coordinates	Test Site Coordinates	Orient Antenna to WJLA DT Channel 39
*	*			(m/d/y)	(24hr)	*	(deg N)	(min N)	(sec N)	(deg W)	(min W)	(sec W)	
1	C-1	2 Story brick/Siding	45 Yrs	12/1/2004	9:09	Rain 50 Windy	38	47	43	77	4	52.4	
2	C-2	2 Story Cape Cod/ Brick	50 Yrs	12/2/2004	15:12	Clearing 40	39	2	41.5	77	4	20.2	
3	C-3	2 Story / Brick & Siding	35 Yrs	12/7/2004	10:17	Lt. Rain / 50	39	10	59.7	76	51	22.7	
4	C-4	2 Story w/ Siding	15 Yrs	12/8/2004	16:10	Clear 60	38	37	11.5	76	56	26.5	
5	C-5	3 Story Townhouse	30 yrs	12/9/2004	12:40	Cloudy 45	39	2	46.9	76	50	17.1	
6	C-6	2 Story brick/Siding	25 Yrs	12/10/2004	14:15	Lt. Rain / 50	39	6	27.9	77	13	35.2	
7	C-7	2 Story Brick Front/ Siding	5 Yrs	12/12/2004	15:35	Clear 50	38	40	49.8	77	20	18.1	
8	C-8	1 Story All Brick	53 Yrs	12/15/2004	16:30	Clear 37	38	59	53.4	77	7	31.5	
9	C-9	1 Story Ranch Siding	45 Yrs	12/16/2004	16:15	Clear 45	38	58	51.1	76	44	38.7	
10	C-10	2 Story Brick Front/ Siding	8 Yrs	12/17/2004	15:56	Clear 45	38	55	43.6	76	43	21.5	

Site #	Site Name	START Ch. 39 Measurements WJLA-DT	Distance From Test Site to Tx Ch. 39 WJLA DT	GPS Bearing wrt North	Antenna Azimuth Compass Ch. 39 WJLA DT
*	*		(miles)	(deg)	(deg)
1	C-1		10.7	11	16
2	C-2		6.56	194	175
3	C-3		20.1	228	215
4	C-4		24	353	347
5	C-5		14.6	254	242
6	C-6		13.4	155	145
7	C-7		23.3	47	43
8	C-8		4.12	154	142
9	C-9		18.2	274	273
10	C-10		19.3	286	278

Site #	Site Name	Antenna Height	WID Atten @ Nom Level	RF System Gain Ch. 39 (Includes Downlead Loss)	RF System Noise Floor	DTV Signal Power Ch. 39	DTV Field Strength Ch. 39 WJLA DT	DTV S/N @ Nom Ch. 39	Passband Tilt Plot Filename Ch. 39 (Print & SAVE)	Stopband Plot Filename Ch. 39 (Print & Save)	Keep Antenna Pointed at 39 & Measure Ch. 40	DTV Signal Power Ch. 40 (WNUV DT With Antenna pointed at Ch. 39)	DTV Field Strength Ch. 40 (WNUV DT With antenna pointed at Ch. 39)	DTV S/N Ch. 40 WNUV DT With antenna pointed at CH 39	Ch. 39/40 D/U Ratio with antenna at Ch. 39 (Should be greater than -35)
*	*	(feet)	(dB)	(dB)	(dBm)	(dBm)	(dBuv/m)	(dB)				(dBm)	(dBuV/m)	(dB)	(dB)
1	C-1	30	0	4.46	-84.8	-50.3	77.1	34.45	9_optimized_3	39_optimized	30_1KHZ	-66.19	61.3	18.6	-15.8
2	C-2	30	0	4.46	-85.0	-33.5	93.9	51.5	zed39_30Ft_d	zed_30Foot_1	KHZ_20M	-71.3	56.2	13.7	-37.8
3	C-3	30	0	4.46	-83.5	-60.8	66.6	22.7	zed39_30Ft_d	zed_30Foot_1	KHZ_20M	-56.2	71.3	27.3	4.7
4	C-4	30	0	4.46	-83.9	-50.7	76.7	33.2	zed39_30Ft_d	zed_30Foot_1	KHZ_20M	-73	54.5	10.9	-22.3
5	C-5	30	0	4.46	-83.6	-68.1	59.3	15.5	zed39_30Ft_d	zed_30Foot_1	KHZ_20M	-75.1	52.4	8.5	-7.0
6	C-6	30	0	4.46	-83.7	-45.3	82.1	38.4	zed39_30Ft_d	zed_30Foot_1	KHZ_20M	-64.8	62.7	18.9	-19.5
7	C-7	30	0	4.46	-83.5	-53.9	73.5	29.6	zed39_30Ft_d	zed_30Foot_1	KHZ_20M	-78.6	48.9	4.9	-24.7
8	C-8	30	0	4.46	-83.8	-66.0	61.4	17.8	zed39_30Ft_d	zed_30Foot_1	KHZ_20M	-83.5	44.0	0.3	-17.5
9	C-9	30	0	4.46	-83.9	-61.6	65.8	22.3	zed39_30Ft_d	zed_30Foot_1	KHZ_20M	-58.6	68.9	25.3	3.1
10	C-10	30	0	4.46	-87.3	-50.7	76.7	36.6	zed39_30Ft_d	zed_30Foot_1	KHZ_20M	-66.2	61.3	21.1	-15.5

Site #	Site Name	Passband Tilt Plot Filename Ch. 40 WNUV DT (Print & Save)	Stopband Plot Filename Ch. 40 WNUV DT (Print & Save)	Brief Site Comments on Ch. 39/40 with antenna at 39	Orient Antenna to Ch. 40 WNUV DT	START CH. 40 Measurements on WNUV-DT	Distance From Test Site to Tx Ch. 40 WNUV DT	GPS Bearing wrt North	Antenna Azimuth Compass Ch. 40 WNUV DT	Antenna Height
*	*			(Text)			(miles)	(deg)	(deg)	(feet)
1	C-1	0_optimized3	0_optimized3	Windy Coniditions Some Dynamic Multipath /one preamp /weak signal			43.9	42	54	30
2	C-2	ed39_30Foot	zed39_30foot	On Roadway across street from house / Ok signals			30.3	59	51	30
3	C-3	ed39_30Foot	zed39_30foot	Foggy and Lt. Rain 55 / Signals okay at 30 Feet			15.3	57	52	30
4	C-4	ed39_30Foot	zed39_30foot	clear skies 60 / Very good 39 signal / 40 somewhat weak (OK w/ Log)			51.8	28	18	30
5	C-5	ed39_30Foot	zed39_30foot	Starting to Lt. Rain 50 / Dipole Signals Ok / somewhat weak			22.4	38	28	30
6	C-6	ed39_30Foot	zed39_30foot	Driveway signal okay on 39 and 40			34.7	74	78	30
7	C-7	ed39_30Foot	zed39_30foot	30 FT. Driveway Ch. 39 signal ok / 40 weak / Log OK]			58.5	50	34	30
8	C-8	ed39_30Foot	zed39_30foot	Driveway 30 Ft. Ch. 39 OK / Ch. 40 Very Weak			34.6	58	59	30
9	C-9	ed39_30Foot	zed39_30foot	30 Ft. at street / Good Signals on 39 & 40			25	23	21	30
10	C-10	zed39_30Foo	zed39_30foo	30 ft. in driveway / good signals on 39 & 40			28.4	19	15	30

Site #	Site Name	WID Atten @ Nom Level	RF System Gain Ch. 40 (Includes Downlead Loss)	RF System Noise Floor	DTV Signal Power Ch. 40	DTV Field Strength Ch. 40 WNUV DT	DTV S/N @ Nom Ch. 40	Passband Tilt Plot Filename Ch. 40 (Print & SAVE) 10mhz	Stopband Plot Filename Ch. 40 (Print & Save) 20 mhz	Keep Antenna Pointed at Ch. 40 & Measure Ch. 39	DTV Signal Power Ch. 39 (WJLA DT With Antenna pointed at Ch. 40)	DTV Field Strength Ch. 39 (WJLA DT With antenna pointed at Ch. 40)	DTV S/N Ch.39 WJLA DT With antenna pointed at CH 40	Ch. 39/40 D/U Ratio with antenna at Ch. 40
*	*	(dB)	(dB)	(dBm)	(dBm)	(dBuv/m)	(dB)				(dBm)	(dBuV/m)	(dB)	(dB)
1	C-1	0	4.41	-85.0	-60.7	66.8	24.34	30_OPTIMIZED40	30_OPTIMIZED40_1KHZ_1		-53.4	74.0	31.6	7.2
2	C-2	0	4.41	-85.0	-66.1	61.4	18.9	OPTIMIZED40_1KH	_OPTIMIZED40_1KHZ_10r		-34.5	92.9	50.5	31.6
3	C-3	0	4.41	-84	-59.7	67.8	24.3	OPTIMIZED40_1KH	_OPTIMIZED40_1KHZ_10r		-61.5	65.9	22.5	-1.8
4	C-4	0	4.41	-83.9	-70.3	57.2	13.6	OPTIMIZED40_1KH	_OPTIMIZED40_1KHZ_10r		-53.3	74.1	30.6	17.0
5	C-5	0	4.41	-83.6	-73.5	54.0	10.1	OPTIMIZED40_1KH	_OPTIMIZED40_1KHZ_10r		-74.2	53.2	9.4	-0.8
6	C-6	0	4.41	-84.1	-54.8	72.7	29.3	OPTIMIZED40_1KH	_OPTIMIZED40_1KHZ_10r		-58.5	68.9	25.6	-3.8
7	C-7	0	4.41	-83.5	-78.1	49.4	5.4	OPTIMIZED40_1KH	_OPTIMIZED40_1KHZ_10r		-53.9	73.5	29.6	24.2
8	C-8	0	4.41	-83.8	-83.6	43.9	0.2	OPTIMIZED40_1KH	_OPTIMIZED40_1KHZ_10r		-71.6	55.8	12.2	12.0
9	C-9	0	4.41	-83.9	-47.8	79.7	36.1	OPTIMIZED40_1KH	_OPTIMIZED40_1KHZ_10r		-71.1	56.3	12.8	-23.4
10	C-10	0	4.41	-87.9	-50.8	76.7	37.1	_OPTIMIZED40_1KT	_OPTIMIZED40_1KHZ_10		-71.7	55.7	16.2	-21.0

Site #	Site Name	Passband Tilt Plot Filename Ch. 39 WJLA DT (Print & Save)	Stopband Plot Filename Ch. 39 WJLA DT (Print & Save)	Brief Site Comments on Ch. 39/40 with antenna at 39	Initials Of Measurement Engineers			END
*	*			(Text)				
1	C-1	9_30FT_OPTIMIZED40_1	9_30FT_OPTIMIZED40_1	Windy some dynamic multipath / lt rain.	DW	JD		
2	C-2	FT_OPTIMIZED40_1KHz	FT_OPTIMIZED40_1KHz	Outside 30 Ft. in front of house / Signals okay	DW	JD		
3	C-3	FT_OPTIMIZED40_1KHz	FT_OPTIMIZED40_1KHz	Outside 30 Ft. in front of house / Signals okay	DW	JD		
4	C-4	FT_OPTIMIZED40_1KHz	FT_OPTIMIZED40_1KHz	Outside 30 Ft. in front of house / Signals okay	DW	JD		
5	C-5	FT_OPTIMIZED40_1KHz	FT_OPTIMIZED40_1KHz	Outside 30 Ft. in front of house / Signals okay	DW	JD		
6	C-6	FT_OPTIMIZED40_1KHz	FT_OPTIMIZED40_1KHz	Outside 30 Ft. in front of house / Signals okay	DW	JD		
7	C-7	FT_OPTIMIZED40_1KHz	FT_OPTIMIZED40_1KHz	Outside 30 Ft. in front of house / Signals okay	DW	JD		
8	C-8	FT_OPTIMIZED40_1KHz	FT_OPTIMIZED40_1KHz	Outside 30 Ft. in front of house / CH. 40 Not Visible	DW	JD		
9	C-9	FT_OPTIMIZED40_1KHz	FT_OPTIMIZED40_1KHz	Outside 30 ft. in street in front of house / Good Signals	DW	JD		
10	C-10	FT_OPTIMIZED40_1KHz	FT_OPTIMIZED40_1KHz	Outside 30 Ft. in driveway - Good Signals	DW	JD		

	A	B	C	D	E	F	G	H	I	J	K	L	M	N	S	T	U	V
1	Site #	Site Name	Test Date	Time of Day	Weather	Test Site Coordinates						Place Tripod	Orient Antenna To WJLA-DT 39	House Side Number (Direction) / Corresponding Room	WID Atten @ Nom Level	RF System Gain Ch. 39 (Includes Downlead Loss)	RF System Noise Floor	DTV Signal Power Ch. 39
2	*	*	(m/d/y)	(24hr)	*	(deg N)	(min N)	(sec N)	(deg W)	(min W)	(sec W)				(dB)	(dB)	(dBm)	(dBm)
3	1	C-1	12/1/2004	11:15	Clearing Windy 50	38	47	43	77	4	52.4			West / Living Room	0	9.86	-85.9	-36.0
4	2	C-1	12/1/2004	12:05	Very Windy 50	38	47	43	77	4	52.4			North / LR/KITCHEN	0	9.86	-85.9	-32.1
5	3	C-1	12/1/2004	12:45	Very Windy 50	38	47	43	77	4	52.4			East / Kitchen	0	9.86	-85.9	-35.5
6	4	C-1	12/1/2004	13:20	Very Windy 50	38	47	43	77	4	52.4			South /BedRoom	0	9.86	-85.9	-39.7
7	5	C-2	12/2/2004	12:25	Partly Cldy 50	39	2	41.5	77	4	20.2			South/ Bedroom/TV	0	9.86	-85.0	-30.6
8	6	C-2	12/2/2004	13:30	Partly Cldy 50	39	2	41.5	77	4	20.2			East / Kitchen	0	9.86	-85.0	-23.1
9	7	C-2	12/2/2004	13:58	Partly Cldy 50	39	2	41.5	77	4	20.2			North / Dining Room	0	9.86	-85.0	-30.5
10	8	C-2	12/2/2004	14:25	Partly Cldy 50	39	2	41.5	77	4	20.2			West / Living Room	0	9.86	-85.0	-31.8
11	9	C-3	12/7/2004	13:55	Lt. Rain 50	39	10	59.7	76	51	22.7			ENE / Massage Room	0	9.86	-83.5	-68.2
12	10	C-3	12/7/2004	14:35	Lt. Rain 50	39	10	59.7	76	51	22.7			NW / Living Room	0	9.86	-83.5	-67.8
13	11	C-3	12/7/2004	15:06	Lt. Rain 50	39	10	59.7	76	51	22.7			SSW / Kitchen	0	9.86	-83.5	-66.4
14	12	C-3	12/7/2004	13:45	Lt. Rain 50	39	10	59.7	76	51	22.7			WSW / Dining Room	0	9.86	-83.5	-67.1
15	13	C-4	12/8/2004	13:55	Clear 60	38	37	11.5	76	56	26.5			South / Garage	0	9.86	-83.9	-52.8
16	14	C-4	12/8/2004	14:29	Clear 60	38	37	11.5	76	56	26.5			West / Kitchen	0	9.86	-83.9	-47.8
17	15	C-4	12/8/2004	15:07	Clear 60	38	37	11.5	76	56	26.5			East / Living Room	0	9.86	-83.9	-55.9
18	16	C-4	12/8/2004	15:40	Clear 60	38	37	11.5	76	56	26.5			North / Dining Room	0	9.86	-83.9	-42.7
19	17	C-5	12/9/2004	10:35	Cloudy 45	39	2	46.9	76	50	17.1			South Living Room	0	9.86	-83.5	-56.0
20	18	C-5	12/9/2004	12:05	Cloudy 50	39	2	46.9	76	50	17.1			East / Kitchen	0	9.86	-83.7	-51.9
21	19	C-6	12/10/2004	12:15	Lt. Rain 50	39	6	27.9	77	13	35.2			Southwest / Kitchen	0	9.86	-83.5	-52.1
22	20	C-6	12/10/2004	12:40	Lt. Rain 50	39	6	27.9	77	13	35.2			SouthEast / Living Room	0	9.86	-83.5	-55.4
23	21	C-6	12/10/2004	13:15	Lt. Rain 50	39	6	27.9	77	13	35.2			Northwest / Garage	0	9.86	-83.5	-58.6
24	22	C-6	12/10/2004	13:40	Lt. Rain 50	39	6	27.9	77	13	35.2			West/ Den	0	9.86	-83.6	-57.0
25	23	C-7	12/12/2004	13:15	Partly Cldy 50	38	40	49.8	77	20	18.1			South/ Living Room	0	9.86	-83.5	-57.6
26	24	C-7	12/12/2004	13:44	Partly Cldy 50	38	40	49.8	77	20	18.1			West / Sunroom	0	9.86	-83.4	-53.4
27	25	C-7	12/12/2004	14:21	Partly Cldy 50	38	40	49.8	77	20	18.1			North Family room	0	9.86	-83.5	-54.5
28	26	C-7	12/12/2004	14:55	Partly Cldy 50	38	40	49.8	77	20	18.1			East / BR	0	9.86	-83.4	-53.1
29	27	C-8	12/15/2004	13:50	Clear 38	38	59	53.4	77	7	31.5			South Living Room	0	9.86	-94.1	-43.6
30	28	C-8	12/15/2004	14:25	Clear 38	38	59	53.4	77	7	31.5			East / Den	0	9.86	-94.1	-44.5
31	29	C-8	12/15/2004	15:00	Clear 38	38	59	53.4	77	7	31.5			West/ Dining Room	0	9.86	-94.1	-49.1
32	30	C-8	12/15/2004	15:50	Clear 37	38	59	53.4	77	7	31.5			North / Bedroom	0	9.86	-94.2	-46.1
33	31	C-9	12/16/2004	13:40	Clear 45	38	58	51.1	76	44	38.7			West/ BR	0	9.86	-89.3	-65.1
34	32	C-9	12/16/2004	14:08	Clear 45	38	58	51.1	76	44	38.7			South / BR	0	9.86	-89.3	-65.0

	A	B	C	D	E	F	G	H	I	J	K	L	M	N	S	T	U	V
1	Site #	Site Name	Test Date	Time of Day	Weather	Test Site Coordinates						Place Tripod	Orient Antenna To WJLA-DT 39	House Side Number (Direction) / Corresponding Room	WID Atten @ Nom Level	RF System Gain Ch. 39 (Includes Downlead Loss)	RF System Noise Floor	DTV Signal Power Ch. 39
2	*	*	(m/d/y)	(24hr)	*	(deg N)	(min N)	(sec N)	(deg W)	(min W)	(sec W)				(dB)	(dB)	(dBm)	(dBm)
35	33	C-9	12/16/2004	14:45	Clear 45	38	58	51.1	76	44	38.7			East / BR	0	9.86	-89.3	-63.3
36	34	C-9	12/16/2004	15:30	Clear 45	38	58	51.1	76	44	38.7			North / Dining Room	0	9.86	-89.3	-68.8
37	35	C-10	12/17/2004	13:40	Clear 50	38	55	43.6	76	43	21.5			East / Kitchen	0	9.86	-87.8	-63.9
38	36	C-10	12/17/2004	14:03	Clear 50	38	55	43.6	76	43	21.5			North /Dining Room	0	9.86	-87.8	-57.1
39	37	C-10	12/17/2004	15:00	Clear 50	38	55	43.6	76	43	21.5			West / Living Room	0	9.86	-87.8	-58.7
40	38	C-10	12/17/2004	15:35	Clear 50	38	55	43.6	76	43	21.5			South / Family Room	0	9.86	-87.8	-67.1

	A	B	W	X	Y	Z	AA	AB	AC	AD	AE	AF	AG
1	Site #	Site Name	DTV Field Strength Ch. 39 WJLA DT	DTV S/N @ Nom Ch. 39	Passband Tilt Plot Filename Ch. 39 (Print & SAVE) 10MHZ	Stopband Plot Filename Ch. 39 (Print & Save) 20 MHZ	Keep Antenna Pointed at 39 & Measure Ch. 40	DTV Signal Power Ch. 40 (WNUV DT With Antenna pointed at Ch. 39)	DTV Field Strength Ch. 40 (WNUV DT With antenna pointed at Ch. 39)	DTV S/N Ch. 40 WNUV DT With antenna pointed at CH 39	Ch. 39/40 D/U Ratio with antenna at Ch. 39 (Should be greater than -35)	Passband Tilt Plot Filename Ch. 40 WNUV DT (Print & Save)	Stopband Plot Filename Ch. 40 WNUV DT (Print & Save)
2	*	*	(dBuv/m)	(dB)				(dBm)	(dBuV/m)	(dB)	(dB)		
3	1	C-1	86.0	49.9	39_6ft_1KH	39_6ft_1KHz_20MHZ		-51.53	70.6	34.3	-15.5	6ft_opt39_1KHz	6ft_opt39_1KHz
4	2	C-1	89.9	53.8	6ft_1KHz_	6ft_1KHz_20MHZ_north		-50.4	71.7	35.5	-18.3	6ft_opt39_1KHz	6ft_opt39_1KHz
5	3	C-1	86.5	50.4	6ft_1KHz_	6ft_1KHz_20MHZ_east		-51.1	71.0	34.8	-15.6	6ft_opt39_1KHz	6ft_opt39_1KHz
6	4	C-1	82.3	46.2	6ft_1KHz_1	6ft_1KHz_20MHZ_south		-57.8	64.3	28.1	-18.1	6ft_opt39_1KHz	6ft_opt39_1KHz
7	5	C-2	91.4	54.4	6ftOutdoor_	6ftOutdoor_1KHz_20MH		-67.3	54.8	17.7	-36.7	1KHz_10MHZ_	1KHz_20MHZ_
8	6	C-2	99.0	61.9	9_6ftOutdoo	9_6ftOutdoor_1KHz_20M		-64.2	57.9	20.8	-41.1	39_1KHz_10MH	39_1KHz_20MH
9	7	C-2	91.5	54.5	6ft_Outdoor	9_6ftOutdoor_1KHz_20M		-67.0	55.1	18.0	-36.5	9_1KHz_10MHZ	9_1KHz_20MHZ
10	8	C-2	90.2	53.2	9_6ft_Outdo	9_6ftOutdoor_1KHz_20M		-61.6	60.5	23.4	-29.8	39_1KHz_10MH	39_1KHz_20MH
11	9	C-3	53.8	15.3	6ft_Outdoo	6ftOutdoor_1KHz_20MH		-55.9	66.2	27.6	12.4	9_1KHz_10MHZ	9_1KHz_20MHZ
12	10	C-3	54.2	15.7	6ft_Outdoo	6ftOutdoor_1KHz_20M		-59.0	63.1	24.5	8.8	39_1KHz_10MHZ	9_1KHz_20MHZ
13	11	C-3	55.6	17.1	6ft_Outdoo	6ftOutdoor_1KHz_20MH		-52.5	69.6	31.0	14.0	9_1KHz_10MHZ	9_1KHz_20MHZ
14	12	C-3	54.9	16.4	6ft_Outdoo	6ftOutdoor_1KHz_20MH		-57.9	64.2	25.6	9.3	1KHz_10MHZ_	1KHz_20MHZ_
15	13	C-4	69.2	31.1	ft_Outdoor_	ftOutdoor_1KHz_20MHZ		-79.5	42.6	4.4	-26.7	1KHz_10MHZ_C	1KHz_20MHZ_
16	14	C-4	74.2	36.1	6ft_Outdoor	6ftOutdoor_1KHz_20MH		-77.2	44.9	6.7	-29.4	1KHz_10MHZ_	1KHz_20MHZ_
17	15	C-4	66.1	28.0	6ft_Outdoor	6ftOutdoor_1KHz_20MH		-77.4	44.7	6.5	-21.5	1KHz_10MHZ	1KHz_20MHZ
18	16	C-4	79.3	41.2	6ft_Outdoor	6ftOutdoor_1KHz_20MHZ		-73	49.1	10.9	-30.3	1KHz_10MHZ_	1KHz_20MHZ_
19	17	C-5	66.0	27.5	6ft_Outdoor	6ftOutdoor_1KHz_20MHZ		-66.8	55.3	16.7	-10.7	1KHz_10MHZ_	1KHz_20MHZ_
20	18	C-5	70.1	31.8	6ft_Outdoor	6ftOutdoor_1KHz_20MH		-58	64.1	25.7	-6.1	1KHz_10MHZ	1KHz_20MHZ
21	19	C-6	69.9	31.4	t_Outdoor_	utdoor_1KHz_20MHZ_S		-65.8	56.3	17.7	-13.7	Hz_10MHZ_OU	Hz_20MHZ_OU
22	20	C-6	66.6	28.1	t_Outdoor_	utdoor_1KHz_20MHZ_S		-73.9	48.2	9.6	-18.5	KHz_10MHZ_OU	Hz_20MHZ_OU
23	21	C-6	63.4	24.9	_Outdoor_1	Outdoor_1KHz_20MHZ_		-67.8	54.3	15.7	-9.1	KHz_10MHZ_O	KHz_20MHZ_O
24	22	C-6	65.0	26.6	6ft_Outdoor	6ftOutdoor_1KHz_20MHZ		-73.9	48.2	9.7	-16.9	1KHz_10MHZ_	1KHz_20MHZ_
25	23	C-7	64.4	25.9	_OUTDOOR	OUTDOOR_1KHz_20M		-81.2	40.9	2.3	-23.6	1KHz_10MHZ_	1KHz_20MHZ_
26	24	C-7	68.6	30.0	UTDOOR_1	TDOOR_1KHz_20MHZ_		-79.5	42.6	3.9	-26.1	Hz_10MHZ_OU	Hz_20MHZ_OU
27	25	C-7	67.5	29.0	_OUTDOOR	OUTDOOR_1KHz_20M		-76.3	45.8	7.2	-21.8	1KHz_10MHZ_	1KHz_20MHZ_
28	26	C-7	68.9	30.3	ft_OUTDOO	ftOUTDOOR_1KHz_20M		-74.3	47.8	9.1	-21.2	1KHz_10MHZ	1KHz_20MHZ
29	27	C-8	78.4	50.5	_OUTDOOR	OUTDOOR_1KHz_20M		-75.9	46.2	18.2	-32.3	1KHz_10MHZ_	1KHz_20MHZ_
30	28	C-8	77.5	49.6	_OUTDOOR	tOUTDOOR_1KHz_20M		-76.1	46.0	18.0	-31.6	1KHz_10MHZ_	1KHz_20MHZ_
31	29	C-8	72.9	45.0	t_OUTDOO	tOUTDOOR_1KHz_20M		-78.6	43.5	15.5	-29.5	1KHz_10MHZ_	1KHz_20MHZ_
32	30	C-8	75.9	48.1	_OUTDOOR	OUTDOOR_1KHz_20MH		-75.2	46.9	19.0	-29.1	1KHz_10MHZ_	1KHz_20MHZ_
33	31	C-9	56.9	24.2	t_OUTDOO	tOUTDOOR_1KHz_20M		-57.4	64.7	31.9	7.8	1KHz_10MHZ_	1KHz_20MHZ_
34	32	C-9	57.0	24.3	_OUTDOOR	OUTDOOR_1KHz_20MH		-54.3	67.8	35.0	10.8	1KHz_10MHZ_	1KHz_20MHZ_

	A	B	W	X	Y	Z	AA	AB	AC	AD	AE	AF	AG
1	Site #	Site Name	DTV Field Strength Ch. 39 WJLA DT	DTV S/N @ Nom Ch. 39	Passband Tilt Plot Filename Ch. 39 (Print & SAVE) 10MHZ	Stopband Plot Filename Ch. 39 (Print & Save) 20 MHZ	Keep Antenna Pointed at 39 & Measure Ch. 40	DTV Signal Power Ch. 40 (WNUV DT With Antenna pointed at Ch. 39)	DTV Field Strength Ch. 40 (WNUV DT With antenna pointed at Ch. 39)	DTV S/N Ch. 40 WNUV DT With antenna pointed at CH 39	Ch. 39/40 D/U Ratio with antenna at Ch. 39 (Should be greater than -35)	Passband Tilt Plot Filename Ch. 40 WNUV DT (Print & Save)	Stopband Plot Filename Ch. 40 WNUV DT (Print & Save)
2	*	*	(dBuv/m)	(dB)				(dBm)	(dBuV/m)	(dB)	(dB)		
35	33	C-9	58.7	26.0	ft_OUTDOO	ftOUTDOOR_1KHz_20M		-62.3	59.8	27.0	1.1	9_1KHz_10MHZ	9_1KHz_20MHZ
36	34	C-9	53.2	20.5	_OUTDOOR	OUTDOOR_1KHz_20MH		-63.5	58.6	25.8	5.3	_1KHz_10MHZ_	1KHz_20MHZ_
37	35	C-10	58.1	23.9	6ft_OUTDO	6ftOUTDOOR_1KHz_20M		-60.5	61.6	27.3	3.4	9_1KHz_10MHZ	9_1KHz_20MHZ
38	36	C-10	64.9	30.7	t_OUTDOO	ftOUTDOOR_1KHz_20M		-67.5	54.6	20.3	-10.4	_1KHz_10MHZ_	_1KHz_20MHZ_
39	37	C-10	63.3	29.1	6ft_OUTDO	6ftOUTDOOR_1KHz_20M		-67.1	55.0	20.7	-8.3	9_1KHz_10MHZ	9_1KHz_20MHZ
40	38	C-10	54.9	20.7	t_OUTDOO	ftOUTDOOR_1KHz_20M		-68.2	53.9	19.6	-1.1	_1KHz_10MHZ_	_1KHz_20MHZ

	A	B	AH	AI	AJ	AO	AP	AQ	AR	AS	AT	AU	AV	AW
1	Site #	Site Name	Brief Site Comments on Ch. 39/40 with antenna at 39	Orient Antenna to Ch. 40 WNUV DT	START CH. 40 Measurements on WNUV-DT	WID Atten @ Nom Level	RF System Gain Ch. 40 (Includes Downlead Loss)	RF System Noise Floor	DTV Signal Power Ch. 40	DTV Field Strength Ch. 40 WNUV DT	DTV S/N @ Nom Ch. 40	Passband Tilt Plot Filename Ch. 40 (Print & SAVE)	Stopband Plot Filename Ch. 40 (Print & Save)	Keep Antenna Pointed at Ch. 40 & Measure Ch. 39
2	*	*	(Text)			(dB)	(dB)	(dBm)	(dBm)	(dBuv/m)	(dB)			
3	1	C-1	Very Gusty Winds Clearing No Rain - Front of House Bay Window / WEST			0	9.81	-85.0	-49.5	72.6	35.5	ft_Opt40_1KH	t_Opt40_1KHZ_20MH	
4	2	C-1	Very Gusty Winds Clearing No Rain - North Side of House			0	9.81	-85.6	-48.9	73.2	36.7	t_Opt40_1KH	t_Opt40_1KHZ_20MH	
5	3	C-1	Very Gusty Winds Clearing No Rain - east Side of House			0	9.81	-85.6	-51.4	70.7	34.2	ft_Opt40_1KH	t_Opt40_1KHZ_20MH	
6	4	C-1	very gusty no rain - south side of house			0	9.81	-85.6	-56.4	65.7	29.2	t_Opt40_1KH	_Opt40_1KHZ_20MH	
7	5	C-2	South side of house / Good ch.39 / 40 is weak			0	9.81	-85.6	-65.7	56.4	19.9	1KHZ_10MHZ	KHZ_20MHZ_OUTDO	
8	6	C-2	East Kitchen / Good 39 Signal / 40 is weak			0	9.81	-85.6	-64	58.1	21.6	0_1KHZ_10M	_1KHZ_20MHZ_OUTD	
9	7	C-2	North Dining Room 39 Signal multipath / 40 weak			0	9.81	-85.6	-66.7	55.4	18.9	_1KHZ_10MH	1KHZ_20MHZ_OUTD	
10	8	C-2	West Living Room / OK signal 39 / 40 Weak			0	9.81	-85.6	-62.2	59.9	23.4	0_1KHZ_10M	_1KHZ_20MHZ_OUTD	
11	9	C-3	Eeast Northeast / Massage Room / CH. 39 Weak / 40 Okay			0	9.81	-83.9	-56.3	65.8	27.6	_1KHZ_10MH	1KHZ_20MHZ_OUTD	
12	10	C-3	Northwest Living Room / Signal on 40 Okay / 39 weak			0	9.81	-83.9	-55.6	66.5	28.3	0_1KHZ_10MH	_1KHZ_20MHZ_OUTD	
13	11	C-3	South Southwest / Kitchen/ Okay signal on 40			0	9.81	-83.9	-51.7	70.4	32.2	_1KHZ_10MH	1KHZ_20MHZ_OUTD	
14	12	C-3	West Southwest / Dining Room / some mutipath			0	9.81	-83.9	-55.6	66.5	28.3	1KHZ_10MH	1KHZ_20MHZ_OUTD	
15	13	C-4	South Side of Garage / Multipath on 39 / 40 is weak			0	9.81	-83.9	-74.7	47.4	9.2	KHZ_10MHZ	KHZ_20MHZ_OUTDO	
16	14	C-4	West Kitchen. / Good signal on 39 / Ch. 40 is weak			0	9.81	-83.9	-77.2	44.9	6.7	1KHZ_10MH	1KHZ_20MHZ_OUTD	
17	15	C-4	East Living Room / Ch. 39 Multipath / Ch. 40 weak			0	9.81	-83.9	-76.6	45.5	7.3	_1KHZ_10MH	1KHZ_20MHZ_OUTD	
18	16	C-4	North Dining Room / Ch 39 signal good / Ch. 40 weak			0	9.81	-83.9	-72.8	49.3	11.1	_1KHZ_10MH	1KHZ_20MHZ_OUTD	
19	17	C-5	South Side of TH / LR / Okay Signal levels / Lots multipath			0	9.81	-83.5	-59.9	62.2	23.6	1KHZ_10MHZ	KHZ_20MHZ_OUTDO	
20	18	C-5	East Side of TH / Kitchen /			0	9.81	-83.6	-55.4	66.7	28.2	_1KHZ_10MH	1KHZ_20MHZ_OUTD	
21	19	C-6	Southwest Side House Kitchen /			0	9.81	-83.7	-58.3	63.8	25.4	HZ_10MHZ_O	Z_20MHZ_OUTDOOF	
22	20	C-6	Southeast Sid of house / some multipath			0	9.81	-83.5	-63.8	58.3	19.7	HZ_10MHZ_O	Z_20MHZ_OUTDOOF	
23	21	C-6	Northwest Side near garage / Signals ok - lots multipath			0	9.81	-83.6	-65.6	56.5	18	HZ_10MHZ_	HZ_20MHZ_OUTDOO	
24	22	C-6	West side / Den / Signal ok			0	9.81	-83.5	-65.7	56.4	17.8	1KHZ_10MHZ	KHZ_20MHZ_OUTDO	
25	23	C-7	Southside / near living room / OK signal Dynamic Multipath/ ch. 40 Weak			0	9.81	-83.5	-80.8	41.3	2.7	1KHZ_10MHZ	KHZ_20MHZ_OUTDO	
26	24	C-7	Dynamic Multipath on 39 / 40 Very Weak			0	9.81	-83.5	-78.9	43.2	4.6	C7_WNUV4	C7_WNUV	
27	25	C-7	Ok signal on 39 / 40 still weak			0	9.81	-83.5	-74.6	47.5	8.9	C7_WNUV4	C7_WNUV	
28	26	C-7	East BR/ Good Signal / Ch. 40 Visible			0	9.81	-83.5	-70.6	51.5	12.9	C7_WNUV4	C7_WNUV	
29	27	C-8	South LR / Good Signal on 39 / 40 Weak			0	9.81	-94.1	-74.8	47.3	19.3	C8_WNUV4	C8_WNUV	
30	28	C-8	East Den / Good Signal 39 /Weak on 40 multipath			0	9.81	-94.1	-75.5	46.6	18.6	C8_WNUV4	C8_WNUV	
31	29	C-8	West Dining Room / Multipath on both Channel / Ch. 40 Weak			0	9.81	-94.1	-78.6	43.5	15.5	C8_WNUV4	C8_WNUV	
32	30	C-8	North Bedroom / OK signal on 39 / 40 is Weak			0	9.81	-94.1	-74.8	47.3	19.3	C8_WNUV4	C8_WNUV	
33	31	C-9	West Side / Lots of Multipath / 40 higher than 39			0	9.81	-89.3	-53.3	68.8	36	C9_WNUV4	C9_WNUV	
34	32	C-9	South BR / Lots of Multipath / Ch. 40 higher than 39			0	9.81	-89.3	-54	68.1	35.3	C9_WNUV4	C9_WNUV	

	A	B	AH	AI	AJ	AO	AP	AQ	AR	AS	AT	AU	AV	AW
1	Site #	Site Name	Brief Site Comments on Ch. 39/40 with antenna at 39	Orient Antenna to Ch. 40 WNUV DT	START CH. 40 Measurements on WNUV-DT	WID Atten @ Nom Level	RF System Gain Ch. 40 (Includes Downlead Loss)	RF System Noise Floor	DTV Signal Power Ch. 40	DTV Field Strength Ch. 40 WNUV DT	DTV S/N @ Nom Ch. 40	Passband Tilt Plot Filename Ch. 40 (Print & SAVE)	Stopband Plot Filename Ch. 40 (Print & Save)	Keep Antenna Pointed at Ch. 40 & Measure Ch. 39
2	*	*	(Text)			(dB)	(dB)	(dBm)	(dBm)	(dBuv/m)	(dB)			
35	33	C-9	East Living Room /both channels lots of multpath			0	9.81	-89.3	-58.1	64.0	31.2	C9_WNUV4	C9_WNUV	
36	34	C-9	North Dining Room / Lots of multipath			0	9.81	-89.3	-60.4	61.7	28.9	C9_WNUV4	C9_WNUV	
37	35	C-10	East / Kitchen / OK Signals			0	9.81	-87.7	-56.3	65.8	31.4	C10_WNUV	C10_WNU	
38	36	C-10	North Dining Room / Ok Signals			0	9.81	-87.7	-56.9	65.2	30.8	C10_WNUV	C10_WNU	
39	37	C-10	West Living Room / Good signal on 39 some static Multipath			0	9.81	-87.7	-62.6	59.5	25.1	C10_WNUV	C10_WNU	
40	38	C-10	South Family Room / Signals lots of multipath			0	9.81	-87.7	-67.8	54.3	19.9	C10_WNUV	C10_WNU	

	A	B	AX	AY	AZ	BA	BB	BC	BD	CW	CX
1	Site #	Site Name	DTV Signal Power Ch. 39 (WJLA DT With Antenna pointed at Ch. 40)	DTV Field Strength Ch. 39 (WJLA DT With antenna pointed at Ch. 40)	DTV S/N Ch.39 WJLA DT With antenna pointed at CH 40	Ch. 39/40 D/U Ratio with antenna at Ch. 40	Passband Tilt Plot Filename Ch. 39 WJLA DT (Print & Save)	Stopband Plot Filename Ch. 39 WJLA DT (Print & Save)	Brief Site Comments on Ch. 39/40 with antenna at 39	Initials Of Measuremen	
2	*	*	(dBm)	(dBuV/m)	(dB)	(dB)			(Text)		
3	1	C-1	-34.4	87.6	50.6	15.1	9_6ft_opt40_1KHz_1	6ft_opt40_1KHz_	Gusty Winds Clearing West Side of House near Bay Window	DW	JD
4	2	C-1	-32.0	90.1	53.6	16.9	9_6ft_opt40_1KHz_1	6ft_opt40_1KHz_1	Gusty Winds Clearing North Side of house	DW	JD
5	3	C-1	-36.9	85.1	48.7	14.5	9_6ft_opt40_1KHz_1	6ft_opt40_1KHz_	Gusty Winds Clearing east Side of house	DW	JD
6	4	C-1	-38.7	83.3	46.9	17.7	6ft_opt40_1KHz_1	6ft_opt40_1KHz_1	Gusts of wind 30-40MPH- South Side of House	DW	JD
7	5	C-2	-29.1	92.9	56.5	36.6	0_1KHz_10MHz_OU	0_1KHz_10MHz_OU	south side of house / good 39 signal / 40 weak/	DW	JD
8	6	C-2	-22.1	99.9	63.5	41.9	t40_1KHz_10MHz_	t40_1KHz_10MHz_	East Side of House / Kitchen / Good 39 weak 40	DW	JD
9	7	C-2	-32.1	89.9	53.5	34.6	t40_1KHz_10MHz_	40_1KHz_10MHz_	North Dining Room Multipath on 39 / Weak 40	DW	JD
10	8	C-2	-31.8	90.2	53.8	30.4	t40_1KHz_10MHz_	t40_1KHz_10MHz_	West Living Room / Good 39 and weak 40	DW	JD
11	9	C-3	-74.3	47.7	9.6	-18.1	40_1KHz_10MHz_C	0_1KHz_10MHz_C	ENE Massage Room / Multipath OK chnl 40 / 39 weak	DW	JD
12	10	C-3	-68.4	53.6	15.5	-12.9	t40_1KHz_10MHz_	40_1KHz_10MHz_	Northwest Living room / Ch. 39 Weak / Ch. 40 Multipath	DW	JD
13	11	C-3	-66.5	55.5	17.4	-14.9	40_1KHz_10MHz_C	0_1KHz_10MHz_C	South Soutwest / Ch. 40 Okay/ 39 Weak	DW	JD
14	12	C-3	-72.5	49.5	11.4	-17.0	40_1KHz_10MHz_C	0_1KHz_10MHz_C	West Southwest / Dining Room / Ch 39 Ok / Ch. 40 Multipath	DW	JD
15	13	C-4	-57.2	64.8	26.7	17.5	1KHz_10MHz_OU	1KHz_10MHz_OU	South Garage Ch. 39 Multipath / Ch. 40 Weak	DW	JD
16	14	C-4	-47.4	74.6	36.5	29.8	0_1KHz_10MHz_O	0_1KHz_10MHz_C	West Kitchen / Ch. 39 ok / Ch. 40 weak	DW	JD
17	15	C-4	-56.5	65.5	27.4	20.1	40_1KHz_10MHz_C	0_1KHz_10MHz_C	East Living Room / Ch. 39 Multipath / Ch. 40 Weak	DW	JD
18	16	C-4	-42.2	79.8	41.7	30.6	0_1KHz_10MHz_OU	0_1KHz_10MHz_OU	North Dining Room Multipath on 39 / Moderate 40	DW	JD
19	17	C-5	-58.8	63.2	24.7	1.1	0_1KHz_10MHz_OU	0_1KHz_10MHz_OU	South Living Room / Lots Mutipath / Signals OK	DW	JD
20	18	C-5	-52.3	69.7	31.3	3.0	40_1KHz_10MHz_C	0_1KHz_10MHz_C	East Side of TH / Kitchen /	DW	JD
21	19	C-6	-52.6	69.4	31.1	5.7	KHz_10MHz_OUTD	KHz_10MHz_OUTD	Southwest of house KT/ Good Signals	DW	JD
22	20	C-6	-62.1	59.9	21.4	1.6	KHz_10MHz_OUTD	KHz_10MHz_OUTD	Southeast of house (LR) / Signals ok some multipath	DW	JD
23	21	C-6	-63.5	58.5	20.1	2.1	1KHz_10MHz_OUT	1KHz_10MHz_OUT	Northwest of house / Signals ok lots multipath	DW	JD
24	22	C-6	-63.4	58.6	20.1	2.3	0_1KHz_10MHz_OU	0_1KHz_10MHz_OU	West Side of house Den / Lots of multipath	DW	JD
25	23	C-7	-57.6	64.4	25.9	23.2	0_1KHz_10MHz_OU	0_1KHz_20MHz_OU	Southside LR / Weak ch. 40 / 39 dynamic Multpath	DW	JD
26	24	C-7	-52.1	69.9	31.4	26.8	C7_WJLA39_6ft_o	C7_WJLA39_6ft_	West Sunroom / Lots of Dynamic Multipath / lots of trees	DW	JD
27	25	C-7	-54.5	67.5	29.0	20.1	C7_WJLA39_6ft_o	C7_WJLA39_6ft_	North FR/ Ok signals / weak 40	DW	JD
28	26	C-7	-50.1	71.9	33.4	20.5	C7_WJLA39_6ft_o	C7_WJLA39_6ft_	East BR/ Good Signals / 40 Visible	DW	JD
29	27	C-8	-40.2	81.8	53.9	34.6	C8_WJLA39_6ft_o	C8_WJLA39_6ft_	South Living Room / Ok signal 39 / 40 Multipath	DW	JD
30	28	C-8	-46.6	75.4	47.5	28.9	C8_WJLA39_6ft_o	C8_WJLA39_6ft_	East Den / OK signal on 39 / Ch. 40 Weak	DW	JD
31	29	C-8	-49.6	72.4	44.5	29.0	C8_WJLA39_6ft_o	C8_WJLA39_6ft_	West DR / OK signal 39 / 40 Weak	DW	JD
32	30	C-8	-44.7	77.3	49.4	30.1	C8_WJLA39_6ft_o	C8_WJLA39_6ft_	North BR / Ch. 39 OK some multipath / 40 Weak	DW	JD
33	31	C-9	-67.7	54.3	21.6	-14.5	C9_WJLA39_6ft_o	C9_WJLA39_6ft_	West BR/ Lots of Multipath / Ch. 40 stronger than 39	DW	JD
34	32	C-9	-63.4	58.6	25.9	-9.4	C9_WJLA39_6ft_o	C9_WJLA39_6ft_	South BR Lots of Multipath / Ch. 40 higher than 39	DW	JD

	A	B	AX	AY	AZ	BA	BB	BC	BD	CW	CX
1	Site #	Site Name	DTV Signal Power Ch. 39 (WJLA DT With Antenna pointed at Ch. 40)	DTV Field Strength Ch. 39 (WJLA DT With antenna pointed at	DTV S/N Ch.39 WJLA DT With antenna pointed at CH 40	Ch. 39/40 D/U Ratio with antenna at Ch. 40	Passband Tilt Plot Filename Ch. 39 WJLA DT (Print & Save)	Stopband Plot Filename Ch. 39 WJLA DT (Print & Save)	Brief Site Comments on Ch. 39/40 with antenna at 39	Initials Of Measuremen	
2	*	*	(dBm)	(dBuV/m)	(dB)	(dB)			(Text)		
35	33	C-9	-67.9	54.1	21.4	-9.9	C9_WJLA39_6ft_o	C9_WJLA39_6ft_	East LR / Dynamic Multipath / ch. 40 stronger than 39	DW	JD
36	34	C-9	-74	48.0	15.3	-13.7	C9_WJLA39_6ft_o	C9_WJLA39_6ft_	North Dining Room / Dynamic Multipath	DW	JD
37	35	C-10	-68.2	53.8	19.5	-12.0	C10_WJLA39_6ft_	C10_WJLA39_6ft	East Kitchen / OK signals both channels	DW	JD
38	36	C-10	-70.2	51.8	17.5	-13.4	C10_WJLA39_6ft_	C10_WJLA39_6ft	North Dining Room / Signals OK	DW	JD
39	37	C-10	-63.8	58.2	23.9	-1.3	C10_WJLA39_6ft_	C10_WJLA39_6ft	West Living Room / good signals	DW	JD
40	38	C-10	-66.5	55.5	21.2	1.3	C10_WJLA39_6ft_	C10_WJLA39_6ft	South Family Room / Lots of Multipath /	DW	JD

Site #	Site Name	Test Date	Time of Day	Weather	Test Site Coordinates						Place Tripod In Room	Orient Antenna To WJLA-DT 39
*	*	(m/d/y)	(24hr)	*	(deg N)	(min N)	(sec N)	(deg W)	(min W)	(sec W)		
1	C-1	12/1/2004	14:15	Windy 50	38	47	43	77	4	52.4		
2	C-1	12/1/2004	15:00	Windy 50	38	47	43	77	4	52.4		
3	C-1	12/1/2004	16:00	Windy 50	38	47	43	77	4	52.4		
4	C-1	12/1/2004	17:05	Windy 50	38	47	43	77	4	52.4		
5	C-2	12/2/2004	9:50	Clear 40	39	2	41.5	77	4	20.2		
6	C-2	12/2/2004	10:45	Clear 40	39	2	41.5	77	4	20.2		
7	C-2	12/2/2004	11:12	Clear 40	39	2	41.5	77	4	20.2		
8	C-2	12/2/2004	11:45	Clear 40	39	2	41.5	77	4	20.2		
9	C-3	12/7/2004	10:18	Lt. Rain 50	39	10	59.7	76	51	22.7		
10	C-3	12/7/2004	11:13	Lt. Rain 50	39	10	59.7	76	51	22.7		
11	C-3	12/7/2004	11:50	Lt. Rain 50	39	10	59.7	76	51	22.7		
12	C-3	12/7/2004	12:15	Lt. Rain 50	39	10	59.7	76	51	22.7		
13	C-4	12/8/2004	11:30	Clear 60	38	37	11.5	76	56	26.5		
14	C-4	12/8/2004	12:31	Clear 60	38	37	11.5	76	56	26.5		
15	C-4	12/8/2004	13:01	Clear 60	38	37	11.5	76	56	26.5		
16	C-4	12/8/2004	13:28	Clear 60	38	37	11.5	76	56	26.5		
17	C-5	12/9/2004	9:10	Cloudy 45	39	2	46.9	76	50	17.1		
18	C-5	12/9/2004	11:05	Cloudy 45	39	2	46.9	76	50	17.1		
19	C-6	12/10/2004	9:30	Lt. Rain 47	39	6	27.9	77	13	35.2		
20	C-6	12/10/2004	10:09	Lt. Rain 47	39	6	27.9	77	13	35.2		
21	C-6	12/10/2004	11:20	Lt. Rain 47	39	6	27.9	77	13	35.2		
22	C-6	12/10/2004	11:55	Lt. Rain 47	39	6	27.9	77	13	35.2		
23	C-7	12/12/2004	10:20	Clear 50	38	40	49.8	77	20	18.1		
24	C-7	12/12/2004	11:10	Clear 50	38	40	49.8	77	20	18.1		
25	C-7	12/12/2004	11:34	Clear 50	38	40	49.8	77	20	18.1		
26	C-7	12/12/2004	12:05	Clear 50	38	40	49.8	77	20	18.1		
27	C-8	12/15/2004	10:00	Clear 30	38	59	53.4	77	7	31.5		
28	C-8	12/15/2004	11:45	Clear 38	38	59	53.4	77	7	31.5		

29	C-8	12/15/2004	12:30	Clear 37	38	59	53.4	77	7	31.5		
30	C-8	12/15/2004	13:05	Clear 38	38	59	53.4	77	7	31.5		
31	C-9	12/16/2004	11:40	Clear 40	38	58	51.1	76	44	38.7		
32	C-9	12/16/2004	11:00	Clear 35	38	58	51.1	76	44	38.7		
33	C-9	12/16/2004	12:05	Clear 40	38	58	51.1	76	44	38.7		
34	C-9	12/16/2004	12:50	Clear 45	38	58	51.1	76	44	38.7		
36	C-10	12/17/2004	10:00	Clear 45	38	55	43.6	76	43	21.5		
37	C-10	12/17/2004	11:10	Clear 50	38	55	43.6	76	43	21.5		
38	C-10	12/17/2004	11:55	Clear 50	38	55	43.6	76	43	21.5		
39	C-10	12/17/2004	12:45	Clear 50	38	55	43.6	76	43	21.5		

House Side (Direction) / Corresponding Room	WID Atten @ Nom Level	RF System Gain Ch. 39 (Includes Downlead Loss)	RF System Noise Floor	DTV Signal Power Ch. 39	DTV Field Strength Ch. 39 WJLA DT	DTV S/N @ Nom Ch. 39	Passband Tilt Plot Filename Ch. 39 (Print & SAVE) 10MHZ	Stopband Plot Filename Ch. 39 (Print & Save) 20 MHZ	Keep Antenna Pointed at 39 & Measure Ch. 40	DTV Signal Power Ch. 40 (WNUV DT With Antenna
	(dB)	(dB)	(dBm)	(dBm)	(dBuv/m)	(dB)				(dBm)
West / Living Room	0	9.86	-97.0	-87.2	34.8	9.8	d39_1KHZ_1	39_1KHZ_	20MHZ_Inc	-94.1
North/LR / Entertainment Cluster	0	9.86	-97.0	-81.7	40.3	15.3	d39_1KHZ_1	39_1KHZ_	20MHZ_Ind	-94.5
East / Kitchen	0	9.86	-97.0	-86.2	35.8	10.8	ed39_1KHZ_	d39_1KHZ_	20MHZ_In	-96.3
South / Bedroom	0	9.86	-97.0	-84.5	37.5	12.5	d39_1KHZ_1	39_1KHZ_	20MHZ_Inc	-95.6
BR/South/Ent.Cluster	0	9.86	-85.5	-29.6	92.4	55.9	d39_1KHZ_1	39_1KHZ_	20MHZ_Inc	-69.5
East / Kitchen	0	9.86	-85.0	-30.8	91.2	54.2	d39_1KHZ_1	39_1KHZ_	20MHZ_Ind	-69.2
North / Dining Room	0	9.86	-85.0	-35.7	86.3	49.3	d39_1KHZ_1	39_1KHZ_	20MHZ_Ind	-72.4
West / Living Room	0	9.86	-85.0	-27.6	94.4	57.4	39_1KHZ_1	39_1KHZ_	20MHZ_Indo	-69.7
NW Living Room	0	9.86	-83.9	-70.9	51.1	13	ed39_1KHZ_	39_1KHZ_	20MHZ_Inc	-60.8
ENE - Massage Room	0	9.86	-84.0	-74.9	47.1	9.1	d39_1KHZ_1	39_1KHZ_	20MHZ_Ind	-57.8
SSW / Kitchen	0	9.86	-84.0	-71.5	50.5	12.5	d39_1KHZ_1	39_1KHZ_	20MHZ_Ind	-58.8
WSW / Dining Room (Front)	0	9.86	-84.0	-73.0	49.0	11	39_1KHZ_1	39_1KHZ_	20MHZ_Indo	-57.8
EAST / Living Room	0	9.86	-83.9	-57.9	64.1	26	d39_1KHZ_1	39_1KHZ_	20MHZ_Ind	-81.9
North / Dining Room	0	9.86	-83.9	-57.1	64.9	26.8	39_1KHZ_10	9_1KHZ_2	0MHZ_Indo	-80.7
West/ Kitchen	0	9.86	-83.9	-59.6	62.4	24.3	39_1KHZ_1	39_1KHZ_	20MHZ_Indo	-82.5
South / Garage	0	9.86	-83.9	-62.3	59.7	21.6	9_1KHZ_10M	_1KHZ_2	0MHZ_Indoo	-81.8
South / Living Room	0	9.86	-83.2	-59.5	62.5	23.7	39_1KHZ_10	9_1KHZ_2	0MHZ_Indo	-65.6
East/ Kitchen	0	9.86	-83.9	-62.6	59.4	21.3	d39_1KHZ_1	39_1KHZ_	20MHZ_Ind	-63.8
Southwest / Kitchen	0	9.86	-83.9	-63.8	58.2	20.1	9_1KHZ_10M	_1KHZ_2	0MHZ_Indoo	-71.9
Northeast / Den	0	9.86	-83.9	-65.3	56.7	18.6	1KHZ_10MHZ	KHZ_20M	HZ_Indoor_	-73.7
SouthEast / Living Room	0	9.86	-83.9	-60.1	61.9	23.8	_1KHZ_10MH	KHZ_20M	HZ_Indoor_	-75.2
NorthWest / Garage	0	9.86	-83.9	-61.4	60.6	22.5	KHZ_10MHZ	1KHZ_20M	HZ_Indoor	-74.2
North / Family Room	0	9.86	-84.2	-66.2	55.8	18	39_1KHZ_10	39_1KHZ_	20MHZ_Ind	-81.9
West / Sun Room	0	9.86	-83.9	-60.0	62.0	23.9	_1KHZ_10MH	KHZ_20M	HZ_Indoor_	-79.7
South / Living Room	0	9.86	-83.7	-60.3	61.7	23.4	39_1KHZ_10	9_1KHZ_2	0MHZ_Indo	-82.1
East / Bedroom	0	9.86	-83.5	-66.1	55.9	17.4	d39_1KHZ_1	39_1KHZ_	20MHZ_Ind	-82.9
East / Den	0	9.86	-89.2	-59.7	62.3	29.5	39_1KHZ_10	9_1KHZ_2	0MHZ_Indo	-87.4
North / Bedroom	0	9.86	-89.1	-63.3	58.7	25.8	39_1KHZ_10	9_1KHZ_2	0MHZ_Indo	-90.5

West / Dining Room	0	9.86	-94.1	-61.4	60.6	32.7	39_1KHZ_10	9_1KHZ_20	MHZ_Indo	-88.6
South / Living Room	0	9.86	-94.1	-69.2	52.8	24.9	39_1KHZ_10	9_1KHZ_20	MHZ_Indo	-93.1
North / Dining Room	0	9.86	-83.9	-70.5	51.5	13.4	39_1KHZ_10	9_1KHZ_20	MHZ_Indo	-62.1
EAST / Living Room	0	9.86	-83.9	-71.6	50.4	12.3	d39_1KHZ_1	39_1KHZ_20	MHZ_Ind	-58.8
West / Bedroom	0	9.86	-83.9	-65.3	56.7	18.6	39_1KHZ_10	9_1KHZ_20	MHZ_Indo	-58.8
South / Bedroom	0	9.86	-83.9	-64.9	57.1	19	39_1KHZ_10	9_1KHZ_20	MHZ_Indo	-65.2
South / Family Room	0	9.86	-88.5	-63.7	58.3	24.8	d39_1KHZ_1	39_1KHZ_20	MHZ_Indo	-66.8
East / Kitchen	0	9.86	-87.9	-64.9	57.1	23	d39_1KHZ_1	39_1KHZ_	20MHZ_Ind	-69.3
North / Dining Room	0	9.86	-88.0	-62.8	59.2	25.2	39_1KHZ_10	9_1KHZ_20	MHZ_Indo	-68.3
West / Living Room	0	9.86	-87.9	-56.6	65.4	31.3	d39_1KHZ_1	39_1KHZ_20	MHZ_Ind	-68.5
		Median	**-84.0**	**-63.5**	**58.5**	**22.8**			**Median**	**-73.1**
		Std. Dev.	**4.5**	**13.6**	**13.6**	**12.2**			**Std. Dev.**	**11.9**
		Average	**-86.6**	**-62.9**	**59.1**	**23.8**			**Average**	**-75.0**

DTV Field Strength Ch. 40 (WNUV DT With antenna pointed at	DTV S/N Ch. 40 WNUV DT With antenna pointed at CH 39	Ch. 39/40 D/U Ratio with antenna at Ch. 39 (Should be greater	Passband Tilt Plot Filename Ch. 40 WNUV DT (Print & Save)	Stopband Plot Filename Ch. 40 WNUV DT (Print & Save)	Brief Site Comments on Ch. 39/40 with antenna at 39	Orient Antenna to Ch. 40 WNUV DT
(dBuV/m)	(dB)	(dB)			(Text)	
28.0	2.9	-6.8	imized39_1KHZ_10	mized39_1KHZ_20	Inside LR Window next to chair/ Very Weak Signals	
27.5	2.4	-12.8	mized39_1KHZ_10	mized39_1KHZ_20	LR North Wall at Entertainment Cluster	
25.8	0.7	-10.1	timized39_1KHZ_1	timized39_1KHZ_2	East Wall Kitchen - Weak Signals -	
26.5	1.4	-11.1	imized39_1KHZ_10	mized39_1KHZ_20	South Bedroom - weak signals	
52.6	16.0	-39.9	imized39_1KHZ_10	mized39_1KHZ_20	South Bedroom/TV Room / Good DC Signals/Baltimore weak	
52.9	15.8	-38.4	mized39_1KHZ_10	mized39_1KHZ_20	East Kitchen - Good DC Signals / Balt. Weak	
49.7	12.6	-36.7	ized39_1KHZ_10M	mized39_1KHZ_20	North Dining Room / DC Signal Multipath / BW Weak	
52.4	15.3	-42.1	nized39_1KHZ_10	mized39_1KHZ_20	West Living Room / Good DC Signal / BW Weak	
61.3	23.1	10.2	imized39_1KHZ_1	timized39_1KHZ_2	NW Living Room / Lots Multipath / Both Signals weak	
64.3	26.2	17.2	mized39_1KHZ_10	mized39_1KHZ_20	ENE Massage Room / Dynamic Multipath / Weak Signals	
63.3	25.2	12.8	mized39_1KHZ_10	mized39_1KHZ_20	South / Southwest / Kitchen - Some Multipath	
64.3	26.2	15.3	mized39_1KHZ_10	mized39_1KHZ_20	West Southwest Dining Room / Signal Weak / Multipath	
40.2	2.0	-24.0	mized39_1KHZ_10	mized39_1KHZ_20	East Side Living Room / ch. 39 Good Signal / 40 Weak	
41.4	3.2	-23.6	ized39_1KHZ_10M	ized39_1KHZ_20M	North Dining Room / Ch 39 Good Signal / 40 Weak	
39.6	1.4	-22.9	nized39_1KHZ_10	mized39_1KHZ_20	West Kitchen / Ch. 39 OK / 40 Weak	
40.3	2.1	-19.5	zed39_1KHZ_10MH	zed39_1KHZ_20MH	South Garage / Multipath on 39 / Weak 40	
56.5	17.6	-6.1	ized39_1KHZ_10M	ized39_1KHZ_20M	South Living Room / Weak Signals	
58.3	20.1	-1.1	ized39_1KHZ_10M	ized39_1KHZ_20M	East Kitchen / Lots Mutipath/ Ok signal levels	
50.2	12.0	-8.1	d39_1KHZ_10MHZ_	d39_1KHZ_20MHZ_	Southwest / Kitchen / Lots of multipath	
48.4	10.2	-8.4	d39_1KHZ_10MHZ_	d39_1KHZ_20MHZ_	Northeast / Den / Lot of Multipath / Weak 40	
46.9	8.7	-15.1	zed39_1KHZ_10MH	zed39_1KHZ_20MH	Southeast Living Room / Ok Signal on 39/ 40 Multipath	
47.9	9.7	-12.8	ed39_1KHZ_10MHZ	ed39_1KHZ_20MHZ	Northwest Garage / Signal lots of multipath	
40.2	2.3	-15.7	mized39_1KHZ_10	mized39_1KHZ_20	North / Living Room / Good Signal on 39 / 40 Weak	
42.4	4.2	-19.7	ed39_1KHZ_10MHZ	ed39_1KHZ_20MHZ	est Sunroom / Signal on 39 dynamic Multipath / 40 Very Weak	
40.0	1.6	-21.8	ized39_1KHZ_10M	ized39_1KHZ_20M	South Living Room / Multipath on 39 / 40 Very Weak	
39.2	0.6	-16.8	mized39_1KHZ_10	mized39_1KHZ_20	East Bedroom / VERY Dynamic Multipath (20dB) / Weak 40	
34.7	1.8	-27.7	ized39_1KHZ_10M	ized39_1KHZ_20M	East / Den / Very Dyanamic / Windy / Strong 39 weak 40	
31.6	-1.4	-27.2	mized39_1KHZ_10	mized39_1KHZ_20	North Bedroom / Very dynamic/ Ch. 39 ok / 40 Weak	

33.5	5.5	-27.2	nized39_1KHZ_10M	nized39_1KHZ_20M	West Dining Room / Weak 40 / 39 OK / Very Dynamic	
29.0	1.0	-23.9	nized39_1KHZ_10M	nized39_1KHZ_20M	South Living Room / Weak 40 / Ch. 39 OK	
60.0	21.8	8.5	ized39_1KHZ_10M	ized39_1KHZ_20M	North Dining Room / Ch.40 Signal good / 39 weaker	
63.3	25.1	12.9	mized39_1KHZ_10M	mized39_1KHZ_20M	East Living Room/ Signal on 40 very good / 39 weaker	
63.3	25.1	6.6	nized39_1KHZ_10M	nized39_1KHZ_20M	West Bedroom/ Moderate 40 signal / 39 lower	
56.9	18.7	-0.3	ized39_1KHZ_10M	nized39_1KHZ_20M	South BR/ Lots Multipath / Equiv. Levels	
55.3	21.7	-3.1	nized39_1KHZ_10M	nized39_1KHZ_20M	South Family Room / Signals with Lots of multipath	
52.8	18.6	-4.3	mized39_1KHZ_10	mized39_1KHZ_20	Kitchen / East / OK signals	
53.8	19.7	-5.5	nized39_1KHZ_10M	nized39_1KHZ_20M	North Dining Room / Good Signal on 39	
53.6	19.4	-11.9	mized39_1KHZ_10M	mized39_1KHZ_20M	West Living Room / Good Signals	
49.0	**11.1**	**-12.3**				
11.9	**9.3**	**15.7**				
47.0	**11.6**	**-12.1**				

START CH. 40 Measurements on WNUV-DT	WID Atten @ Nom Level	RF System Gain Ch. 40 (Includes Downlead Loss)	RF System Noise Floor	DTV Signal Power Ch. 40	DTV Field Strength Ch. 40 WNUV DT	DTV S/N @ Nom Ch. 40	Passband Tilt Plot Filename Ch. 40 (Print & SAVE)	Stopband Plot Filename Ch. 40 (Print & Save)	Keep Antenna Pointed at Ch. 40 & Measure Ch. 39	DTV Signal Power Ch. 39 (WJLA DT With Antenna pointed at	DTV Field Strength Ch. 39 (WJLA DT With antenna pointed at	DTV S/N Ch.39 WJLA DT With antenna pointed at CH 40
(mi	(dB)	(dB)	(dBm)	(dBm)	(dBuv/m)	(dB)				(dBm)	(dBuV/m)	(dB)
	0	9.81	-97.5	-94.8	27.3	2.7	d40_1KH	d40_1KHZ_20MHZ_		-87.2	34.8	10.3
	0	9.81	-97	-95.1	27.0	1.9	ed40_1KH	d40_1KHZ_20MHZ_		-81.2	40.8	15.8
	0	9.81	-97	-96.4	25.7	0.6	d40_1KH	40_1KHZ_20MHZ_I		-87.7	34.3	9.3
	0	9.81	-97	-94.5	27.6	2.5	d40_1KH	40_1KHZ_20MHZ_		-82.5	39.5	14.5
	0	9.81	-85	-71.55	50.5	13.45	d40_1KH	40_1KHZ_20MHZ_		-32.4	89.6	52.6
	0	9.81	-85	-68.3	53.8	16.7	ed40_1KH	d40_1KHZ_20MHZ_		-30.8	91.2	54.2
	0	9.81	-85	-68.6	53.5	16.4	40_1KHZ	40_1KHZ_20MHZ_I		-39.7	82.3	45.3
	0	9.81	-85	-69.5	52.6	15.5	ed40_1KH	40_1KHZ_20MHZ_I		-36.9	85.1	48.1
	0	9.81	-83.5	-60.6	61.5	22.9	d40_1KH	d40_1KHZ_20MHZ_		-70.3	51.7	13.2
	0	9.81	-84	-53.5	68.6	30.5	d40_1KH	40_1KHZ_20MHZ_I		-76.3	45.7	7.7
	0	9.81	-84	-58.4	63.7	25.6	d40_1KH	40_1KHZ_20MHZ_I		-75.6	46.4	8.4
	0	9.81	-84	-56.8	65.3	27.2	40_1KHZ	40_1KHZ_20MHZ_I		-74.4	47.6	9.6
	0	9.81	-83.9	-81.4	40.7	2.5	40_1KHZ	40_1KHZ_20MHZ_I		-57.7	64.3	26.2
	0	9.81	-83.9	-80.9	41.2	3	0_1KHZ_	0_1KHZ_20MHZ_In		-57	65.0	26.9
	0	9.81	-83.9	-82.3	39.8	1.6	40_1KHZ	40_1KHZ_20MHZ_I		-65.6	56.4	18.3
	0	9.81	-83.9	-80.6	41.5	3.3	0_1KHZ_	0_1KHZ_20MHZ_Ind		-62.9	59.1	21.0
	0	9.81	-83.5	-69.3	52.8	14.2	0_1KHZ_	0_1KHZ_20MHZ_In		-58.8	63.2	24.7
	0	9.81	-83.5	-66.2	55.9	17.3	40_1KHZ	40_1KHZ_20MHZ_I		-63.2	58.8	20.3
	0	9.81	-83.5	-70.1	52.0	13.4	0_1KHZ_1	0_1KHZ_20MHZ_Ind		-70.3	51.7	13.2
	0	9.81	-83.5	-73.4	48.7	10.1	KHZ_10	KHZ_20MHZ_Indoo		-65.1	56.9	18.4
	0	9.81	-83.5	-68.3	53.8	15.2	0_1KHZ_	0_1KHZ_20MHZ_Ind		-66.7	55.3	16.8
	0	9.81	-83.5	-73.6	48.5	9.9	_1KHZ_1	1KHZ_20MHZ_Indo		-65.4	56.6	18.1
	0	9.81	-83.6	-81.8	40.3	1.8	40_1KHZ	40_1KHZ_20MHZ_I		-66.4	55.6	17.2
	0	9.81	-83.7	-80.1	42.0	3.6	KHZ_10	KHZ_20MHZ_Indoo		-59.8	62.2	23.9
	0	9.81	-83.5	-82.1	40.0	1.4	0_1KHZ_	0_1KHZ_20MHZ_In		-59.2	62.8	24.3
	0	9.81	-83.4	-81.8	40.3	1.6	40_1KHZ	40_1KHZ_20MHZ_I		-64.2	57.8	19.2
	0	9.81	-93.5	-88.5	33.6	5	0_1KHZ_	0_1KHZ_20MHZ_In		-62.1	59.9	31.4
	0	9.81	-93.8	-91.5	30.6	2.3	0_1KHZ_	0_1KHZ_20MHZ_In		-63.2	58.8	30.6

	0	9.81	-94.1	-92.7	29.4	1.4	40_1KHZ	40_1KHZ_20MHZ_Ir	-68.5	53.5	25.6
	0	9.81	-94.1	-91.4	30.7	2.7	40_1KHZ	0_1KHZ_20MHZ_In	-65.9	56.1	28.2
	0	9.81	-83.9	-61.95	60.1	21.95	40_1KHZ	0_1KHZ_20MHZ_In	-70.5	51.5	13.4
	0	9.81	-83.9	-58.8	63.3	25.1	40_1KHZ	40_1KHZ_20MHZ_I	-71.7	50.3	12.2
	0	9.81	-83.9	-57.4	64.7	26.5	40_1KHZ	40_1KHZ_20MHZ_Ir	-65.6	56.4	18.3
	0	9.81	-83.9	-62.7	59.4	21.2	0_1KHZ	0_1KHZ_20MHZ_In	-68.5	53.5	15.4
	0	9.81	-88.4	-64.9	57.2	23.5	40_1KHZ	40_1KHZ_20MHZ_Ir	-66.7	55.3	21.7
	0	9.81	-88.5	-67.4	54.7	21.1	40_1KH	40_1KHZ_20MHZ_	-65.2	56.8	23.3
	0	9.81	-86.3	-69.3	52.8	17	40_1KHZ	40_1KHZ_20MHZ_Ir	-64.3	57.7	22.0
	0	9.81	-87.2	-58.6	63.5	28.6	40_1KHZ	40_1KHZ_20MHZ_I	-66	56.0	21.2
	Median	**9.8**	**-84.0**	**-70.8**	**51.3**	**13.4**			**Median**	**-65.6**	**56.4**	**19.8**
	Std. Dev.	**0.0**	**4.8**	**12.7**	**12.7**	**9.8**			**Std. Dev.**	**12.7**	**12.7**	**11.5**
	Average	**9.8**	**-86.7**	**-74.3**	**47.7**	**12.4**			**Average**	**-64.6**	**57.4**	**22.1**

Ch. 39/40 D/U Ratio with antenna at Ch. 40	Passband Tilt Plot Filename Ch. 39 WJLA DT (Print & Save)	Stopband Plot Filename Ch. 39 WJLA DT (Print & Save)	D/U Ratio Ch. 39/40 with ant. Optimized for Each (Field Strength)	Brief Site Comments on Ch. 39/40 with antenna at 39	WIDEBAND VHF / UHF RF Noise Measurements	Set UHF DIPOLE
(dB)			(dB)	(Text)		
7.6	d40_1KHZ_	40_1KHZ_	-7.6	LR west window / Weak Signals		
13.9	40_1KHZ_	40_1KHZ_	-13.4	LR entertainment cluster - north wall - weak signals		
8.7	d40_1KHZ	d40_1KHZ	-10.2	East Side - Kitchen - Weak Signals		
12.0	d40_1KHZ_	40_1KHZ_	-10.0	south bedroom - Weak Signals		
39.1	d40_1KHZ_	40_1KHZ_	-41.9	South Bedroom / TV Room / DC Signals Good / BW Weak		
37.5	d40_1KHZ_	40_1KHZ_	-37.5	East Kitchen / DC Signal Good / BW Weak		
28.9	40_1KHZ_	40_1KHZ_	-32.9	North / Dining Room / Multipath / Weak signals from WNUV		
32.6	40_1KHZ_	40_1KHZ_	-41.9	West Living Room / Good DC Signal Lots multipath / BW Weak		
-9.8	d40_1KHZ	d40_1KHZ	10.4	Northwest Living Room / Weak Signals		
-22.9	40_1KHZ_	40_1KHZ_	21.5	East Northeast / Massage Room / BW Signal OK / DC Weak		
-17.3	40_1KHZ_	40_1KHZ_	13.2	SSW / Kitchen / BW Signal OK / DC Weak		
-17.7	40_1KHZ_	40_1KHZ_	16.3	WSW Dining Room / BW Signal OK /DC Weak		
23.7	40_1KHZ_	40_1KHZ_	-23.5	EAST Living Room / Ch. 39 Good / Ch. 40 Weak		Sharp 32" TV/
23.9	40_1KHZ_	40_1KHZ_	-23.8	North Dining Room / Ch 39 Ok/ Ch. 40 Weak		
16.7	40_1KHZ_	40_1KHZ_	-22.7	West Kitchen / Good channel 39 some multipath / 40 weak		
17.7	0_1KHZ_10	_1KHZ_20	-18.3	South Garage Multipath on 39 / weak 40		
10.5	0_1KHZ_1	0_1KHZ_2	-9.8	South Living Room / Weak Signals		
3.0	40_1KHZ_	40_1KHZ_	-3.6	East Kitchen / Signal lots multipath / Signal ok		
-0.3	_1KHZ_10	_1KHZ_20	-6.3	Southwest / Kitchen / lots of Multipath / Ok Signals		
8.3	KHZ_10MH	KHZ_20MH	-8.1	Northeast Den / Signals lot of mulltipath / Ch. 40 Weak/Spurious		
1.6	_1KHZ_10	_1KHZ_20	-8.1	Southeast / Living Room / Signals Ok some multipath 39		
8.1	_1KHZ_10M	1KHZ_20M	-12.2	Northwest Garage/ Multipath on 39 / Signals OK		
15.4	40_1KHZ_	40_1KHZ_	-15.6	Signal on 40 Weak /Multipath on 39		
20.3	KHZ_10MH	KHZ_20MH	-20.1	West Sunroom / Signal on 39 Very Dynamic / 40 Very Weak		
22.9	0_1KHZ_1	0_1KHZ_2	-21.8	South / Living Room / Ch. 39 Signal Multipath / 40 Very Weak		
17.6	40_1KHZ_	40_1KHZ_	-15.7	East Bedroom / Ch. 39 Multipath / Ch. 40 Very Weak		
26.4	0_1KHZ_1	0_1KHZ_2	-28.8	East /Den / Very Dynamic Multipath /		
28.3	0_1KHZ_1	0_1KHZ_2	-28.2	North Bedroom / Very dynamic / weak 40 / 39 OK		

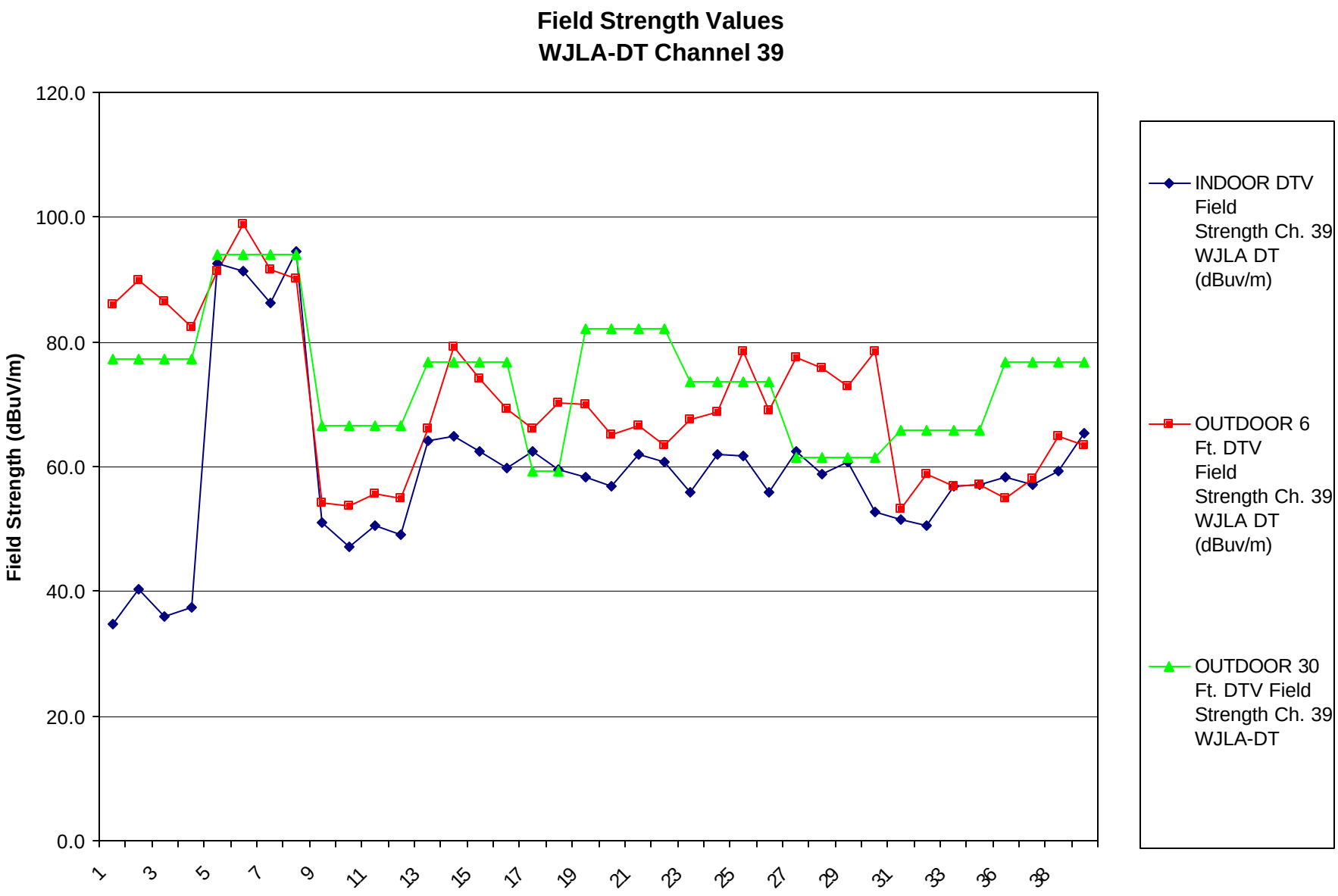
24.2	40_1KHZ_1	0_1KHZ_2	-31.3	West Dining Room / Ok 39 / Very Weak 40 / Dynamic		
25.5	0_1KHZ_1	0_1KHZ_2	-22.2	South Living Room / Ch. 39 OK / Ch. 40 Weak		
-8.6	0_1KHZ_1	0_1KHZ_2	8.6	North Dining Room ch. 40 good / 39 weaker		
-13.0	40_1KHZ_	40_1KHZ_	12.9	East Living Room ch. 39 weaker Ch. 40 Good		
-8.3	40_1KHZ_1	0_1KHZ_2	8.0	West Bedroom / Ch. 39 good / Ch. 40 Very Good		
-5.8	0_1KHZ_1	0_1KHZ_2	2.3	South Bedroom / lots multipath / Ok levels ch. 40 stronger		
-1.8	40_1KHZ_1	0_1KHZ_2	-1.2	South Family Room / Multipath evident / Ch. 39/40 equiv.		
2.2	40_1KHZ_	40_1KHZ_	-2.5	Kitchen East / Static Multipath / Ch. 39/40 equiv.		
5.0	40_1KHZ_1	0_1KHZ_2	-6.5	North Dining Room / Good Signal 39 / 40 lots multipath		
-7.5	40_1KHZ_	40_1KHZ_	-1.9	West Living Room ok signals on both channels		
9.6			**-10.1**			
16.1			**16.2**			
9.7			**-11.4**			

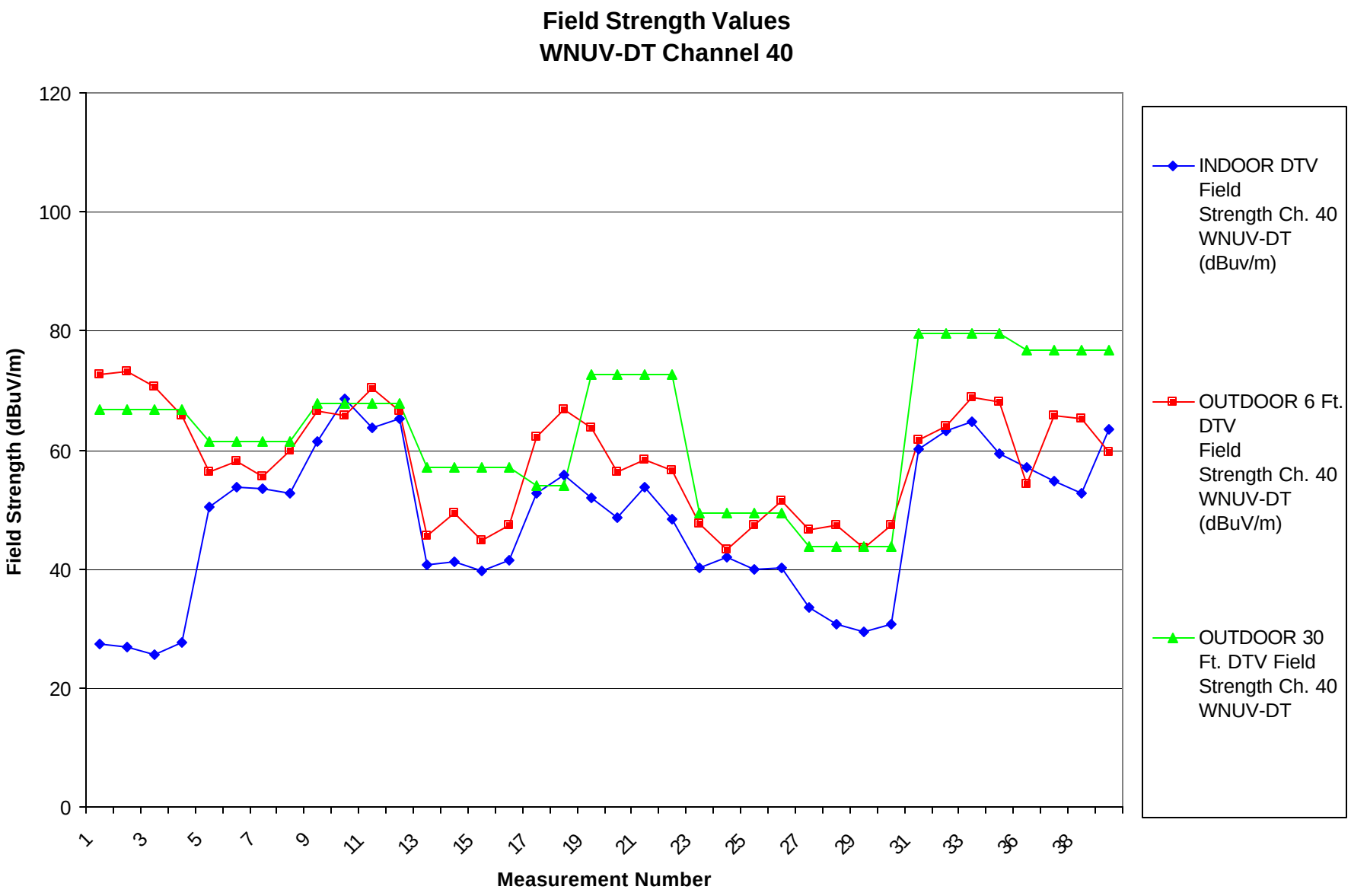
Place Tripod @ 1 meter from Entertainment / PC Cluster	List of Equipment in Cluster (Entertainment/PC)	WIDEBAND UHF Spectrum Plot RBW of 3KHz PLOTNAME OFF	WIDEBAND UHF Spectrum Plot RBW of 3KHz PLOTNAME ON	SET VHF DIPOLE
	VCR/DishRecvr/32"TV/DVD /Nintendo	C1_UHF_Wideband_Entertai	C1_UHF_Wideband_Entertainment	Cluster_L
	Power PC Mac/Maclaptop/HPRinter/Scanner	C1_UHF_Wideband_pc_Clus	C1_UHF_Wideband_pc_Cluster_mb	R_on
	17" TV and DVD Player	C2_UHF_Wideband_Entertai	C2_UHF_Wideband_Entertainment	Cluster_S
	PC/HPPrinter/fax/photoprinter/DSL/spkrs/	C2_UHF_Wideband_pc_Clus	C2_UHF_Wideband_pc_Cluster_U	BR_on
	VHS/DVD/ Toshiba 32" TV	C3_UHF_Wideband_Entertai	C3_UHF_Wideband_Entertainment	Cluster_S
Fax Machine / PC Sony Vaio / HP Printer/ Cable Moder		C3_UHF_Wideband_PC_Clus	C3_UHF_Wideband_PC_Cluster_	upstairs_B
GE DVD/JVC VHS/DirecTV Recvr/Nintendo 64/Sony CD/Sanyo		band_Entertainment_Cluster_	eband_Entertainment_Cluster_Liv	VHF_Wide
Acer Computer/Lexmark Printer/Speakers/Acer M		Wideband_PC_Cluster_Living	_Wideband_PC_Cluster_LivingRoo	C4_ON_VHF_
Admiral 27"TV/ Symphonic VHS/Zenith Stereo w		band_Entertainment_Cluster_	eband_Entertainment_Cluster_Liv	VHF_Wide
	Dell Laptop / Monitor	Wideband_PC_Cluster_Living	_Wideband_PC_Cluster_LivingRoo	C5_ON_VHF_
27" Sharp TV/Sony DVD/VHS / GI Cable STB		band_Entertainment_Cluster_F	eband_Entertainment_Cluster_Fam	VHF_Wide
	Dell PC & Mon / HP Printer/	HF_Wideband_PC_Cluster_DE	HF_Wideband_PC_Cluster_DEN_	OFFC6_VH
Hitachi 50" LCD	HDTV/Sony Hometheater Surround/ JVC DV	and_Entertainment_Cluster_F	eband_Entertainment_Cluster_Fam	VHF_Wide
Dell PC/viewsonic 17" / UPS APC800/ 2 Printers dell &		Wideband_PC_Cluster_Upsta	F_Wideband_PC_Cluster_Upstairs_	BC7_ON_VHF_
Sharp Aquos TV 17" FLAT / Magnavox VCR/ D		Wideband_Entertainment_Clu	F_Wideband_Entertainment_Cluster	C8_ON_VHF_

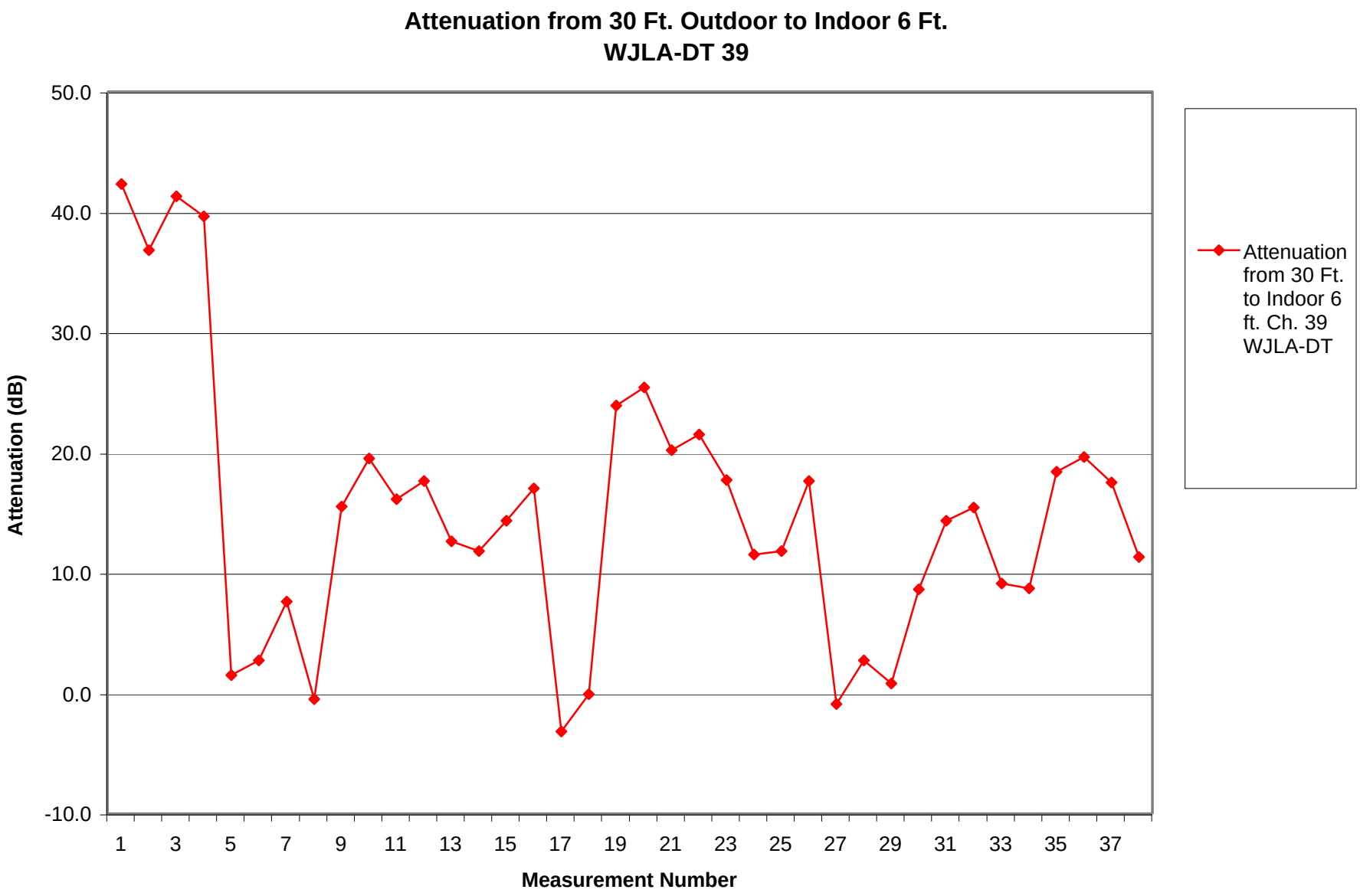
	P2 PC with Monitor/ Scanner / Printer	HF_Wideband_PC_Cluster_DR	UHF_Wideband_PC_Cluster_DR_ON	C9_VI
Magnavox 19"TV/ Sony CD/Pioneer Tuner/PhilipsDVD/Ma		ideband_Entertainment_Clust	Wideband_Entertainment_Cluster	C9_RVER_ON_W
Zenith 19" TV/ Toshiba VHS/ Panasonic VHS/D		Videband_Entertainment_Clus	_Wideband_Entertainment_Cluster	C10_RVER_ON_W
	C10_UHF_	Wideband_PC_Cluster_upstai	F_Wideband_PC_Cluster_upstairs_ON	C10_VI

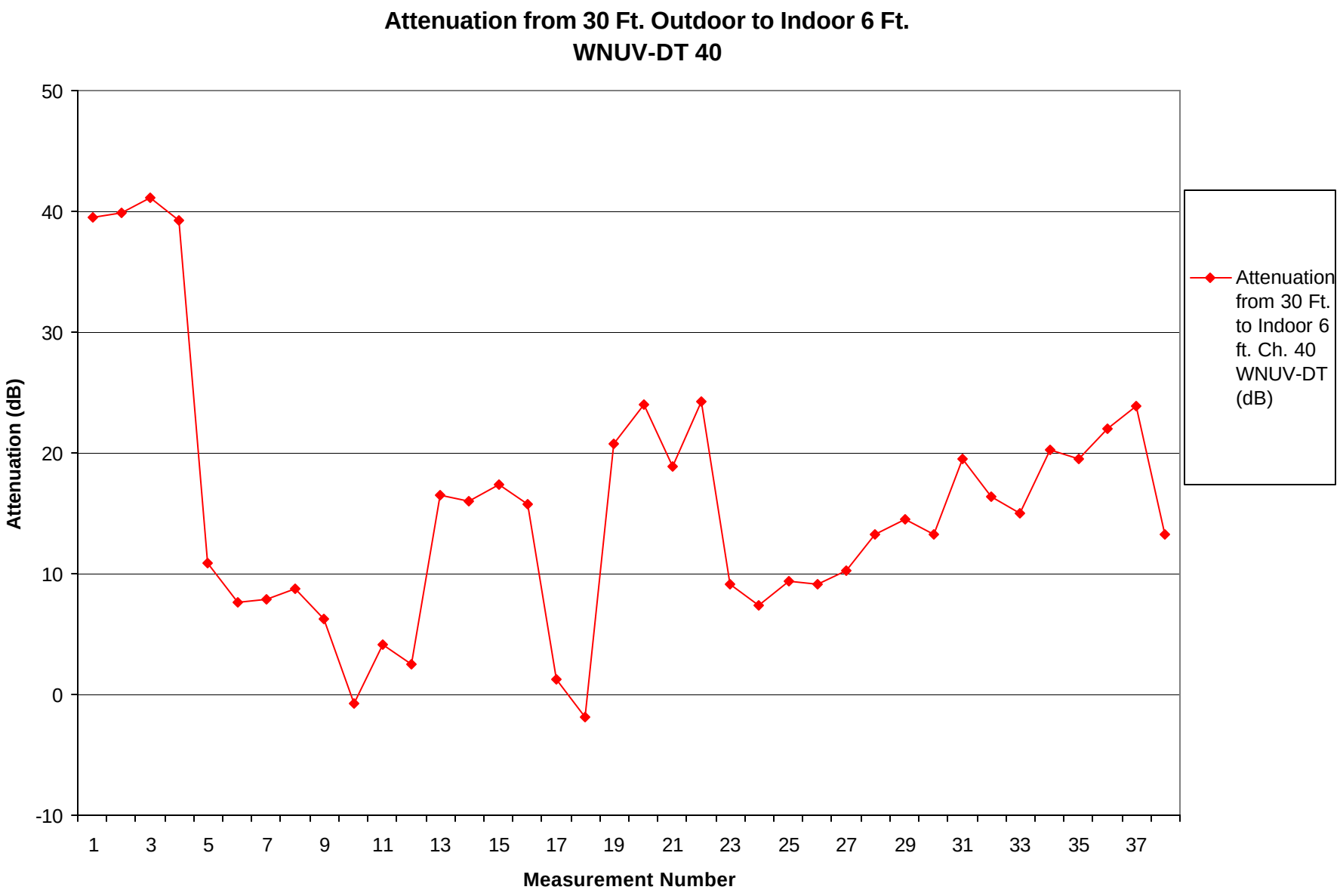
WIDEBAND VHF Spectrum Plot RBW of 3KHz PLOTNAME eq off	WIDEBAND VHF Spectrum Plot RBW of 3KHz PLOTNAME eq on	Comments on RF Noise Measurements	Initials Of Measurement Engineers				END
C1_VHF_Wideband_Entertain	C1_VHF_Wideband_EntertainmentCluster_LR_on		DW	JD			
C1_VHF_Wideband_pc_Cluste	C1_VHF_Wideband_pc_Cluster_mbR_on		DW	JD			
C2_VHF_Wideband_Entertain	C2_VHF_Wideband_EntertainmentCluster_South_Br_on		DW	JD			
C2_VHF_Wideband_pc_Cluste	C2_VHF_Wideband_pc_Cluster_UBR_on		DW	JD			
			DW	JD			
C3_VHF_Wideband_Entertain	C3_VHF_Wideband_EntertainmentCluster_South_LR_on		DW	JD			
			DW	JD			
			DW	JD			
C3_VHF_Wideband_PC_Clust	C3_VHF_Wideband_PC_Cluster_Upstairs_BR_on		DW	JD			
band_Entertainment_Cluster_L	and_Entertainment_Cluster_Living_Room		DW	JD			
Wideband_PC_Cluster_Living_	Wideband_PC_Cluster_Living_Room		DW	JD			
			DW	JD			
			DW	JD			
band_Entertainment_Cluster_Li	nd_Entertainment_Cluster_LivingRoom_ON		DW	JD			
Wideband_PC_Cluster_LivingR	deband_PC_Cluster_LivingRoom_ON		DW	JD			
band_Entertainment_Cluster_Fa	d_Entertainment_Cluster_FamilyRoom_ON		DW	JD			
HF_Wideband_PC_Cluster_DEI	_Wideband_PC_Cluster_	Spurs at 638MHz from Cordless Phone	DW	JD			
			DW	JD			
			DW	JD			
band_Entertainment_Cluster_Fa	d_Entertainment_Cluster_FamilyRoom_ON		DW	JD			
			DW	JD			
			DW	JD			
Wideband_PC_Cluster_Upstai	deband_PC_Cluster_UpstairsBR_ON		DW	JD			
Wideband_Entertainment_Clus	deband_Entertainment_Cluster__ON		DW	JD			
			DW	JD			

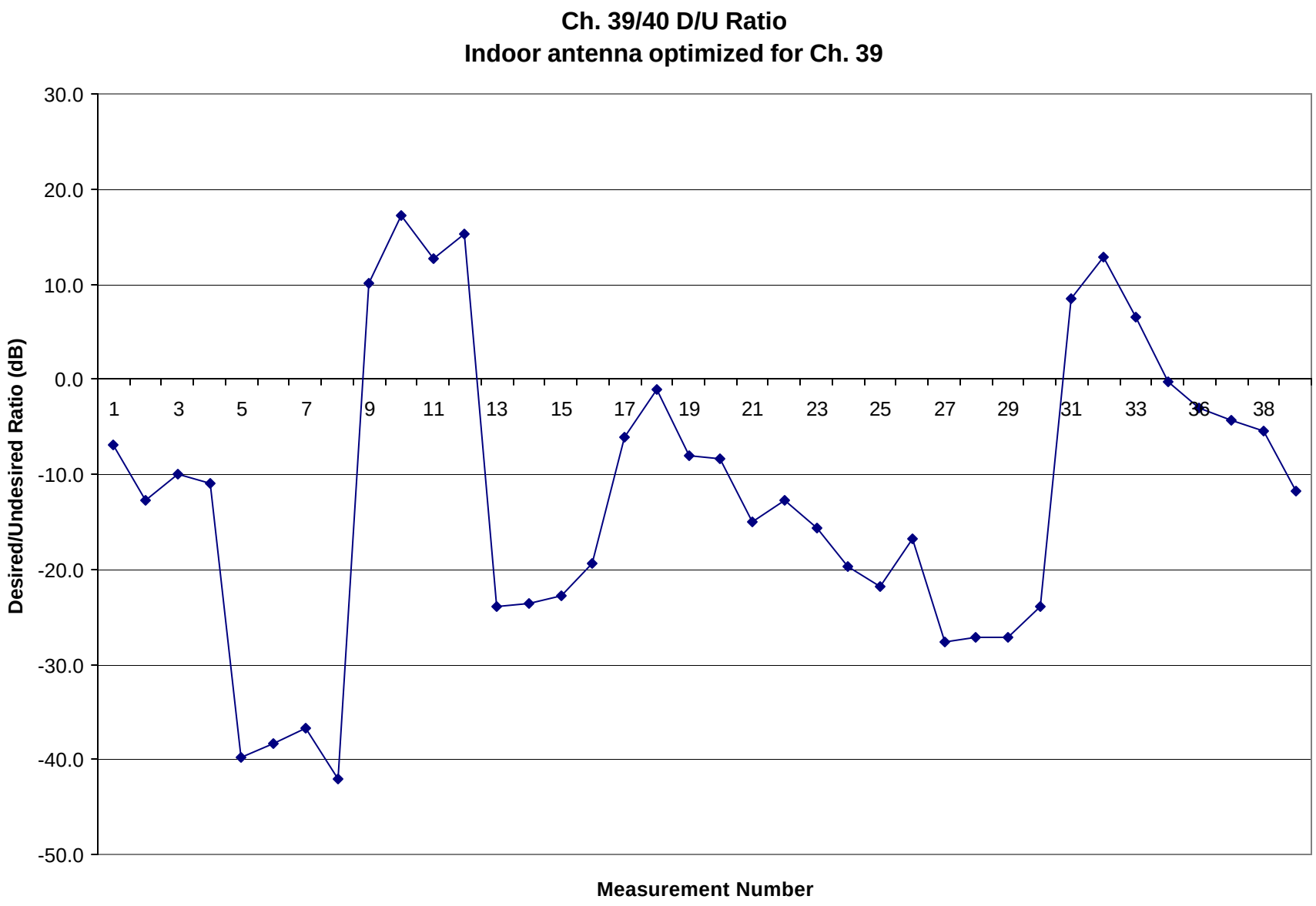
			DW	JD			
			DW	JD			
HF_Wideband_PC_Cluster_DR	Wideband_PC_Cluster_DR_OFF		DW	JD			
Videband_Entertainment_Clust	eband_Entertainment_Cluster_LR_OFF		DW	JD			
			DW	JD			
			DW	JD			
Wideband_Entertainment_Clust	deband_Entertainment_Cluster_FR_ON		DW	JD			
Wideband_PC_Cluster_upstai	ideband_PC_Cluster_upstairs_BR_ON		DW	JD			
			DW	JD			
			DW	JD			

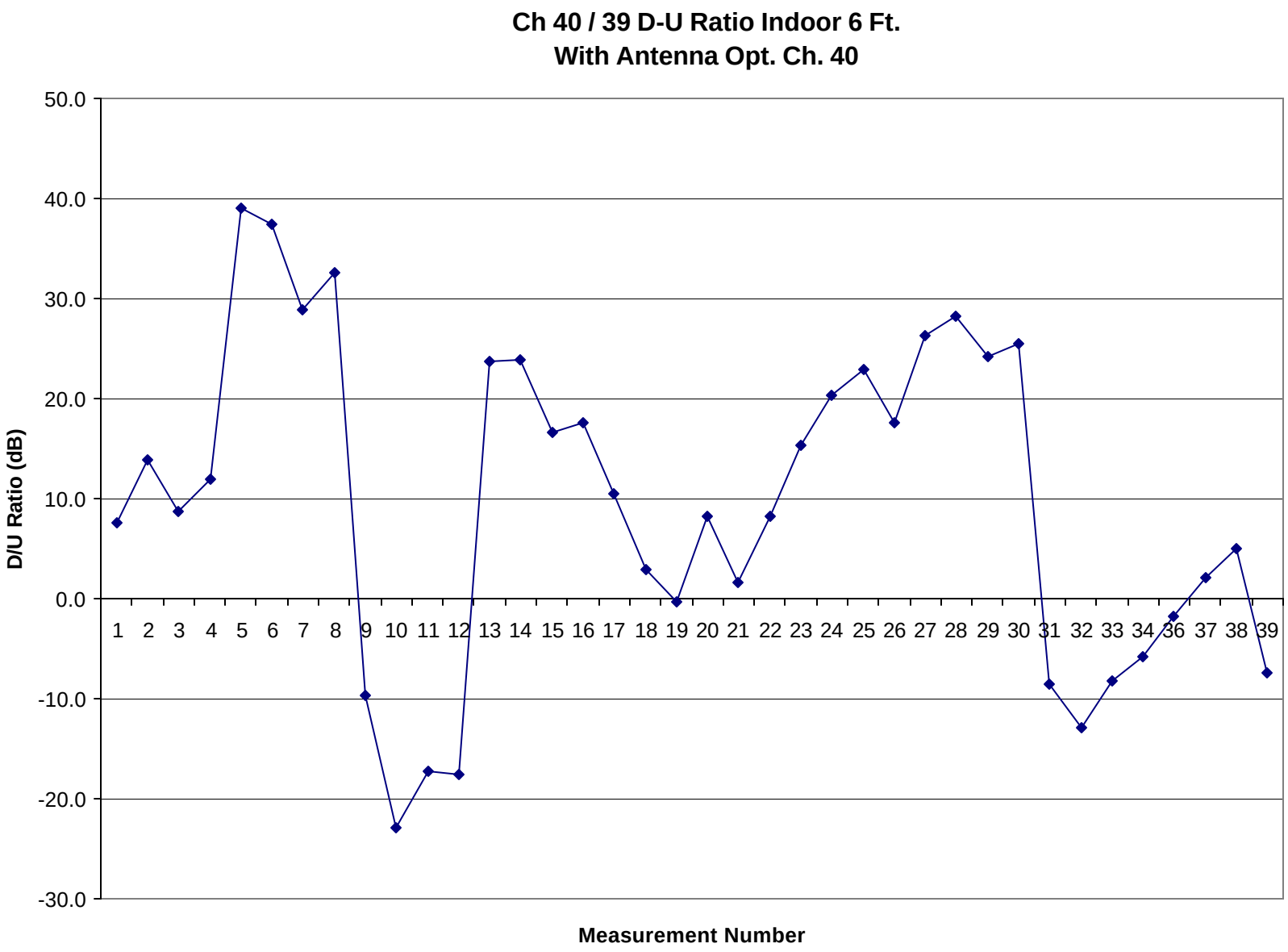

Field Strength Values
WJLA-DT Channel 39
Field Strength (dBuV/m)
120.0
100.0
80.0
60.0
40.0
20.0
0.0
1
3
5
7
9
11
13
15
17
19
21
23
25
27
29
31
33
36
38
INDOOR DTV Field Strength Ch. 39 WJLA DT (dBuv/m)
OUTDOOR 6 Ft. DTV Field Strength Ch. 39 WJLA DT (dBuv/m)
OUTDOOR 30 Ft. DTV Field Strength Ch. 39 WJLA-DT


Field Strength Values
WNUV-DT Channel 40
Field Strength (dBuV/m)
120
100
80
60
40
20
0
1
3
5
7
9
11
13
15
17
19
21
23
25
27
29
31
33
36
38
Measurement Number
INDOOR DTV Field Strength Ch. 40 WNUV-DT (dBuv/m)
OUTDOOR 6 Ft. DTV Field Strength Ch. 40 WNUV-DT (dBuV/m)
OUTDOOR 30 Ft. DTV Field Strength Ch. 40 WNUV-DT


Attenuation from 30 Ft. Outdoor to Indoor 6 Ft.
WJLA-DT 39
50.0
40.0
30.0
20.0
10.0
0.0
-10.0
Attenuation (dB)
1
3
5
7
9
11
13
15
17
19
21
23
25
27
29
31
33
35
37
Measurement Number
Attenuation from 30 Ft. to Indoor 6 ft. Ch. 39 WJLA-DT


Attenuation from 30 Ft. Outdoor to Indoor 6 Ft.
WNUV-DT 40
Attenuation (dB)
50
40
30
20
10
0
-10
1
3
5
7
9
11
13
15
17
19
21
23
25
27
29
31
33
35
37
Measurement Number
Attenuation from 30 Ft. to Indoor 6 ft. Ch. 40 WNUV-DT (dB)


Ch. 39/40 D/U Ratio
Indoor antenna optimized for Ch. 39
30.0
20.0
10.0
0.0
-10.0
-20.0
-30.0
-40.0
-50.0
Desired/Undesired Ratio (dB)
1
3
5
7
9
11
13
15
17
19
21
23
25
27
29
31
33
36
38
Measurement Number


Ch 40 / 39 D-U Ratio Indoor 6 Ft.
With Antenna Opt. Ch. 40
D/U Ratio (dB)
50.0
40.0
30.0
20.0
10.0
0.0
-10.0
-20.0
-30.0
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 36 37 38 39
Measurement Number

Parameter	Value	Value	Value	Value	Units
Broadcaster (City)	**WJLA-DT**	**WNUV-DT**	**WMPT-DT**	**WPXW-DT**	Call Sign
DTV/NTSC Channel # (Band)	**39**	**40**	**42**	**43**	*
Channel Center Frequency	**623.0**	**629.0**	**641.0**	**647.0**	MHz
Channel Offset from nominal	0.0	0.0	0.0	0.0	kHz
VSB Demodulator Manufacturer	LG	LG	LG	LG	*
VSB Demodulator Model #	LST3100	LST3100	LST3100	LST3100	*
Matching of 4-way Splitter Outputs	0.1	0.1	0.1	0.1	dB (±)
RF System Flatness (ripple/tilt)	0.1	0.1	0.1	0.1	dB, max
White Noise Data Error Threshold (S/N)	15.1	15.1	15.1	15.1	dB
RF Preamplifier gain ("works-in-a-drawer")	13.6	13.5	13.5	13.3	dB
RF Preamplifier Measured Output Noise Floor	-90.0	-90.0	-90.0	-90.0	dBm/6 MHz
Bandpass Filter (if any) Model #	X	X	X	X	
Bandpass Filter Magnitude/Group Delay Ripple	X	X	X	X	dB/nsec
Bandpass Filter 3 dB Bandwidth	X	X	X	X	MHz
Bandpass Filter 40 dB Bandwidth	X	X	X	X	MHz
Maximum Output Noise Level from Noise Source	-30.0	-30.0	-30.0	-30.0	dBm/6 MHz
Primary Signal Measurement Spectrum Analyzer Model #	89600A	89600A	89600A	89600A	*
Primary Signal Measurement Spectrum Analyzer Noise Floor	-99.0	-99.0	-99.0	-99.0	dBm/6 MHz
RF Preamplifier Equivalent Input Noise Floor	-103.6	-103.5	-103.5	-103.3	dBm/6 MHz
RF Preamplifier Input Signal Level @ Threshold	-88.5	-88.4	-88.4	-88.2	dBm/6 MHz
RF Preamplifier Noise Figure	2.4	2.5	2.5	2.7	dB
Downlead Coaxial Cable Type	RG58	RG58	RG59	RG60	
Downlead Coaxial Cable Length	50.0	50.0	50.0	50.0	feet
Downlead Coaxial Cable Loss/Foot	0.180	0.180	0.180	0.180	dB/foot
Total Downlead Coaxial Cable Loss	9.0	9.0	9.0	9.0	dB
Downlead Cable Input Signal Power @ Threshold	-79.5	-79.4	-79.4	-79.2	dBm/6 MHz
75/50 Ohm Transformer Loss	0.3	0.3	0.3	0.3	dB
Signal Power at 75/50 Ohm Transformer Input @ Threshold	-79.2	-79.1	-79.1	-78.9	dBm/6 MHz
Conversion From Power (dBm) to Voltage (uV in 75 Ohms)	108.75	108.75	108.75	108.75	dBuV/m-dBm
Antenna Output Signal Voltage @ Threshold	29.6	29.6	29.7	29.8	dBuV/75 Ohms
Antenna Manufacturer	Scala	Scala	Scala	Scala	*
Antenna Model # (Type)	Log Periodic	Log Periodic	Log Periodic	Log Periodic	(Log Periodic)
Antenna Impedance	50	50	50	50	Ohms
Antenna Front/Back Ratio	15	15	15	15	dB
Typical Antenna HAGL	30	30	30	30	feet
Antenna Gain	6.0	6.0	6.0	6.0	dBd

Dipole Conversion Gain (terminated in characteristic Z)	22.3	22.4	22.6	22.6	dBuV/m-dBuV
Total Dipole Factor (Reference Parameter)	131.1	131.1	131.3	131.4	dBm-dBuV/m
Minimum Antenna Input Field Strength @ Threshold	45.9	46.0	46.2	46.5	dBuV/m
FCC Minimum Antenna Input Field Strength @ Threshold	41.1	41.2	41.4	41.4	dBuV/m

Signal Level Planning Factors - Analog

UHF NTSC Grade A=	74dBuV/m
UHF NTSC Grade B=	64dBuV/m