

TECHNICAL EXHIBIT
APPLICATION FOR MODIFICATION OF
CONSTRUCTION PERMIT
TELEVISION STATION WTXL-DT
TALLAHASSEE, FLORIDA

February 17, 2006

CHANNEL 22 8.7 KW 487 M

TECHNICAL EXHIBIT
APPLICATION FOR MODIFICATION OF CONSTRUCTION PERMIT
TELEVISION STATION WTXL-DT
TALLAHASSEE, FLORIDA
CHANNEL 22 8.7 KW 487 M

Table of Contents

Technical Statement

Figure 1 Technical Specifications

Figure 2 Predicted Coverage Contours

Appendix Transmitting Antenna Manufacturer's Pattern Data

TECHNICAL EXHIBIT
APPLICATION FOR MODIFICATION OF CONSTRUCTION PERMIT
TELEVISION STATION WTXL-DT
TALLAHASSEE, FLORIDA
CHANNEL 22 8.7 KW 487 M

Technical Statement

This Technical Exhibit was prepared on behalf of digital television broadcast station WTXL-DT, Tallahassee, Florida, in support of an application for modification of construction permit. WTXL-DT is paired with analog NTSC TV station WTXL-TV, Channel 27. Pursuant to the FCC *Sixth Report and Order* concerning digital television, WTXL-DT was allotted Channel 22, with a maximum effective radiated power (ERP) of 91.4 kW and antenna height above average terrain (HAAT) of 518 m, as its transitional DTV allotment channel.^{*} WTXL-DT is authorized for operation on Channel 22 with a non-directional ERP of 1000 kW with an HAAT of 487 m.[†] The instant application proposes operation of the WTXL-DT facility at the authorized height and location, and with the same omni-directional antenna pattern, but with a decrease in ERP to 8.7 kW. No other changes are proposed. The proposal complies with the DTV application “checklist” filing requirements[‡] and the requirements the FCC Filing Freeze for television stations.[§]

^{*} See DTV Table of Allotments, *Second Memorandum Opinion and Order on Reconsideration of the Fifth and Sixth Report and Orders*, 14 FCC Rcd 1348, at Appendix B

[†] See FCC File No. BPCDT-20040920ABX.

[‡] See FCC *Public Notice*, “Commission Details Application Filing Procedures Digital Television (DTV)”, Released: October 16, 1997; and, FCC *Public Notice*, “Additional Application Processing Guidelines for Digital Television (DTV)”, Released: August 10, 1998.

[§] See *August 2004 Filing Freeze PN*, DA 04-2446 (MB rel. Aug. 3, 2004).

Proposed Facilities

The proposed facility will employ an ERI model ALP24L3-HSO-22. The antenna is to be mounted with a center of radiation at 488 m above ground level and 536 m above mean sea level. The antenna radiation center HAAT is calculated to be 487 m based on the U.S.G.S. 3-second computer database. Technical specifications for the proposed operation are included herein as Figure 1.

The proposed facility provides minimum 48 dBu, f(50,90), coverage of Tallahassee in compliance with Section 73.625(a)(1) of the FCC Rules. Figure 2 herein is a map depicting the predicted coverage contours of the proposed facility.

The proposed WTXL-DT facility meets the requirements of Section 73.622(f)(3) of the FCC Rules concerning the maximum permissible ERP for DTV stations with a decrease in HAAT relative to the DTV Allotment facility in Appendix B.**

As illustrated on the coverage map at Figure 2, the proposed 41 dBu, f(50,90) contour of the proposed WTXL-DT facility will not extend beyond that of the WTXL-DT allotment facility.

The proposed transmitter is located beyond the coordination zone with either Canada or Mexico. The closest FCC Monitoring station is located at Power Springs, Georgia at a distance of 362 km at a bearing of 349°True. The facility is located more than 800 km from the National Radio Quiet Zones in West Virginia and Colorado. The proposal is located more than 3.2 km from the closest AM broadcast facility.

** See DTV Table of Allotments, *Second Memorandum Opinion and Order on Reconsideration of the Fifth and Sixth Report and Orders*, 14 FCC Rcd 1348, at Appendix B

No adverse electromagnetic impact is expected as a result of the proposed operation. However, the applicant recognizes its responsibility to correct objectionable electromagnetic interference problems that result from its proposed operation.

Tower Registration

The existing antenna structure is registered with the FCC. The FCC antenna structure registration number is 1031204. There will be no change in the overall height of the antenna structure as a result of the instant proposal.

Allocation Considerations

The proposed WTXL-DT facility meets the criteria of Section 73.622(f)(2) of the FCC Rules. Therefore, pursuant to that section, the application shall not be subject to further consideration of electromagnetic interference to other DTV or analog TV broadcast stations.

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 radiation at ground level in excess of FCC standards. Power density calculations were conducted at 2-m above ground^{††} based on the following conservative assumptions, with the following results:

^{††} The radiation center height above ground is 488 m.

Call Sign	Channel	Average ERP (kW)	Relative Field Factor ^{††}	FCC Limit ^{§§} (mW/cm ²)	Percentage of Limit
WTXL-DT	22	8.7	0.30	0.3473	0.03%

As indicated above, the exposure to RF radiation at 2-m above ground level will not exceed 0.03% of the FCC limit for general population / uncontrolled exposure.

Therefore, the proposal complies with the FCC limits for human exposure to RF radiation and it is categorically excluded from environmental processing. The applicant, in coordination with any other users of the transmission facility, shall reduce power or cease operation as necessary to protect persons having access to the tower or antenna from radio frequency radiation in excess of the FCC guidelines.



Louis Robert du Treil, Jr.

du Treil, Lundin & Rackley, Inc.
201 Fletcher Ave.
Sarasota, FL 34237

February 17, 2006

^{††} This is a conservative estimate of the relative field factor in the downward direction. See Appendix.
^{§§} for general population/uncontrolled environments

Figure 1

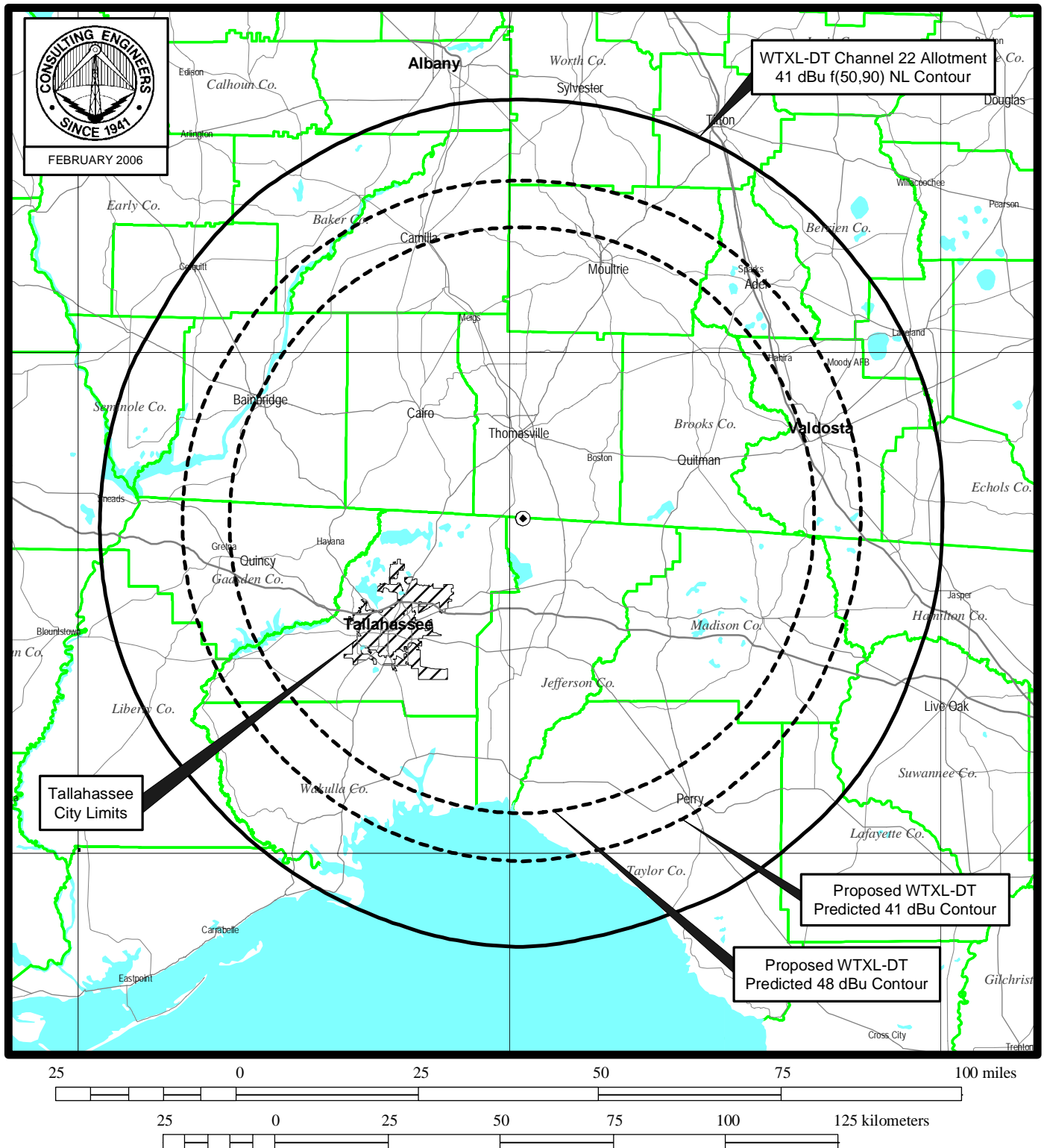
TECHNICAL EXHIBIT
APPLICATION FOR MODIFICATION OF CONSTRUCTION PERMIT
TELEVISION STATION WTXL-DT
TALLAHASSEE, FLORIDA
CHANNEL 22 8.7 KW 487 M

Technical Specifications

Channel / Frequency Band	22 / 518-524 MHz
Site Coordinates (NAD 27)	30°40'06" North Latitude 83°58'10" West Longitude
Site elevation	48 m AMSL
Average elevation of standard eight radials, 3 to 16 km	49 m AMSL
Overall height of existing structure	523 m AGL / 571 m AMSL
Height of antenna radiation center	488 m AGL / 536 m AMSL
Antenna radiation center HAAT	487 m
Antenna structure ASRN	1031204

Proposed Operation	
Parameter	DTV
Transmitter power output (output of mask filter)	-1.21 dBk (0.75 kW)
Transmission line loss (533-m, ERI, HJ9-50, 5-in, air, coax)	3.41 dB
Antenna input power	-4.62 dBk
Antenna RMS gain (ERI, model ALP24L3-HSO-22)	14.02 dBd
Nominal non-directional effective radiated power	9.4 dBk (8.7 kW)

Figure 2



PREDICTED COVERAGE CONTOURS

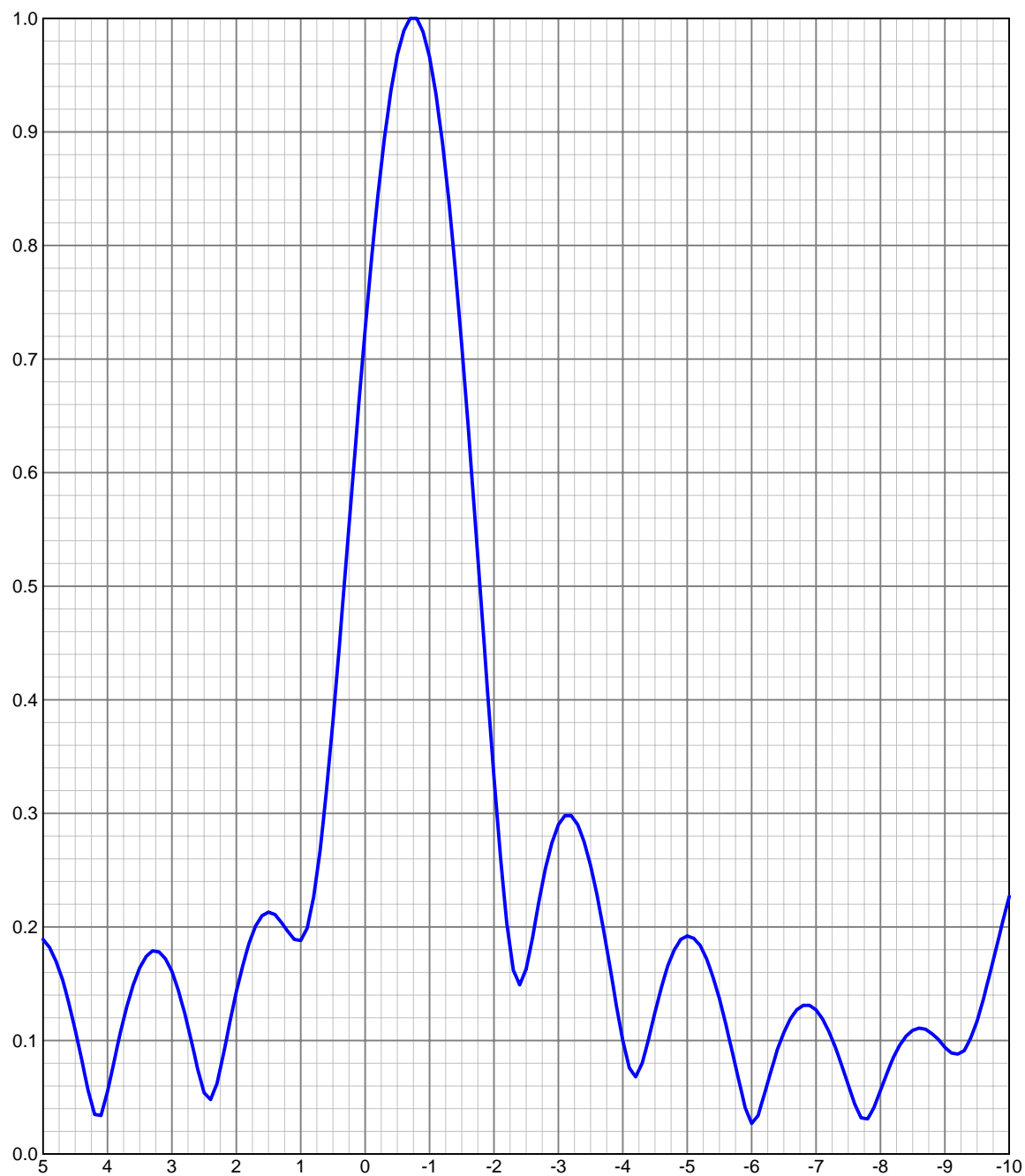
TELEVISION STATION WTXL-DT
TALLAHASSEE, FLORIDA
CHANNEL 22 8.7 KW 487 M

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

TECHNICAL EXHIBIT
APPLICATION FOR MODIFICATION OF CONSTRUCTION PERMIT
TELEVISION STATION WTXL-DT
TALLAHASSEE, FLORIDA
CHANNEL 22 8.7 KW 487 M

Transmitting Antenna Manufacturer's Pattern Data

(two pages follow)

ELEVATION PATTERN**Type:****ALP24L3****Channel:****22****Directivity:****Numeric****dBd****Location:****Main Lobe:****25.21****14.02****Beam Tilt:****-0.75****Horizontal:****13.29****11.23****Polarization:****Horizontal****Relative Field**

TABULATED DATA FOR ELEVATION PATTERN

Type: ALP24L3

PolarizationHorizontal

ANGLEFIELD	dB	ANGLEFIELD	dB	ANGLEFIELD	dB	ANGLEFIELD	dB	ANGLEFIELD	dB
5.00	0.189	-14.47	-6.75	0.129	-17.79	-27.00	0.013	-37.72	-50.50
4.75	0.162	-15.81	-7.00	0.127	-17.92	-27.50	0.006	-44.44	-51.00
4.50	0.109	-19.25	-7.25	0.101	-19.91	-28.00	0.014	-37.08	-51.50
4.25	0.046	-26.84	-7.50	0.061	-24.29	-28.50	0.011	-39.17	-52.00
4.00	0.055	-25.19	-7.75	0.032	-30.03	-29.00	0.004	-47.96	-52.50
3.75	0.119	-18.53	-8.00	0.056	-25.04	-29.50	0.002	-53.98	-53.00
3.50	0.164	-15.70	-8.25	0.091	-20.87	-30.00	0.000	-40.00	-53.50
3.25	0.179	-14.97	-8.50	0.109	-19.25	-30.50	0.004	-47.96	-54.00
3.00	0.161	-15.86	-8.75	0.108	-19.33	-31.00	0.007	-43.10	-54.50
2.75	0.112	-19.02	-9.00	0.094	-20.54	-31.50	0.021	-33.56	-55.00
2.50	0.054	-25.35	-9.25	0.090	-20.96	-32.00	0.049	-26.20	-55.50
2.25	0.075	-22.50	-9.50	0.117	-18.64	-32.50	0.082	-21.72	-56.00
2.00	0.143	-16.89	-9.75	0.171	-15.37	-33.00	0.106	-19.49	-56.50
1.75	0.194	-14.27	-10.00	0.227	-12.88	-33.50	0.109	-19.25	-57.00
1.50	0.213	-13.43	-10.50	0.302	-10.40	-34.00	0.088	-21.11	-57.50
1.25	0.200	-13.98	-11.00	0.294	-10.63	-34.50	0.049	-26.20	-58.00
1.00	0.188	-14.52	-11.50	0.213	-13.43	-35.00	0.024	-32.40	-58.50
0.75	0.247	-12.16	-12.00	0.106	-19.49	-35.50	0.045	-26.94	-59.00
0.50	0.381	-8.38	-12.50	0.029	-30.75	-36.00	0.056	-25.04	-59.50
0.25	0.554	-5.14	-13.00	0.029	-30.75	-36.50	0.044	-27.13	-60.00
0.00	0.726	-2.78	-13.50	0.024	-32.40	-37.00	0.019	-34.42	-60.50
-0.25	0.870	-1.21	-14.00	0.008	-41.94	-37.50	0.024	-32.40	-61.00
-0.50	0.968	-0.28	-14.50	0.000	-40.00	-38.00	0.042	-27.54	-61.50
-0.75	1.000	0.00	-15.00	0.007	-43.10	-38.50	0.043	-27.33	-62.00
-1.00	0.966	-0.30	-15.50	0.016	-35.92	-39.00	0.027	-31.37	-62.50
-1.25	0.865	-1.26	-16.00	0.013	-37.72	-39.50	0.007	-43.10	-63.00
-1.50	0.712	-2.95	-16.50	0.007	-43.10	-40.00	0.024	-32.40	-63.50
-1.75	0.525	-5.60	-17.00	0.026	-31.70	-40.50	0.035	-29.12	-64.00
-2.00	0.332	-9.58	-17.50	0.031	-30.17	-41.00	0.031	-30.17	-64.50
-2.25	0.183	-14.77	-18.00	0.015	-36.48	-41.50	0.015	-36.48	-65.00
-2.50	0.163	-15.76	-18.50	0.024	-32.40	-42.00	0.012	-38.42	-65.50
-2.75	0.238	-12.49	-19.00	0.046	-26.74	-42.50	0.027	-31.37	-66.00
-3.00	0.290	-10.75	-19.50	0.045	-26.94	-43.00	0.032	-29.90	-66.50
-3.25	0.294	-10.63	-20.00	0.063	-24.01	-43.50	0.027	-31.37	-67.00
-3.50	0.254	-11.90	-20.50	0.137	-17.27	-44.00	0.029	-30.75	-67.50
-3.75	0.182	-14.82	-21.00	0.212	-13.47	-44.50	0.048	-26.38	-68.00
-4.00	0.100	-20.00	-21.50	0.246	-12.18	-45.00	0.068	-23.35	-68.50
-4.25	0.074	-22.62	-22.00	0.223	-13.03	-45.50	0.078	-22.16	-69.00
-4.50	0.125	-18.06	-22.50	0.151	-16.42	-46.00	0.074	-22.62	-69.50
-4.75	0.173	-15.24	-23.00	0.065	-23.74	-46.50	0.060	-24.44	-70.00
-5.00	0.192	-14.33	-23.50	0.041	-27.74	-47.00	0.040	-27.96	-70.50
-5.25	0.178	-14.99	-24.00	0.066	-23.61	-47.50	0.020	-33.98	-71.00
-5.50	0.137	-17.27	-24.50	0.057	-24.88	-48.00	0.006	-44.44	-71.50
-5.75	0.078	-22.21	-25.00	0.026	-31.70	-48.50	0.000	-40.00	-72.00
-6.00	0.027	-31.37	-25.50	0.019	-34.42	-49.00	0.003	-50.46	-72.50
-6.25	0.063	-24.01	-26.00	0.034	-29.37	-49.50	0.008	-41.94	-73.00
-6.50	0.107	-19.41	-26.50	0.030	-30.46	-50.00	0.013	-37.72	-73.50