

TECHNICAL EXHIBIT
MINOR CHANGE APPLICATION FOR
MODIFICATION OF CONSTRUCTION PERMIT
STATION WHTV-DT (FACILITY ID 29706)
JACKSON, MICHIGAN

APRIL 6, 2006

CH 34 11.5 KW-DA 283 M

TECHNICAL EXHIBIT
MINOR CHANGE APPLICATION FOR
MODIFICATION OF CONSTRUCTION PERMIT
STATION WHTV-DT (FACILITY ID 29706)
JACKSON, MICHIGAN
CH 34 11.5 KW-DA 283 M

Table of Contents

	Technical Narrative
Figure 1	Predicted DTV Coverage Contours
Figure 2	Antenna Patterns

TECHNICAL EXHIBIT
MINOR CHANGE APPLICATION FOR
MODIFICATION OF CONSTRUCTION PERMIT
STATION WHTV-DT (FACILITY ID 29706)
JACKSON, MICHIGAN
CH 34 11.5 KW-DA 283 M

Technical Narrative

This Technical Exhibit supports a minor change application for modification of construction permit (CP) for digital television (DTV) station WHTV-DT at Jackson, Michigan (Facility ID 29706).

Station WHTV was allotted DTV channel 34 at a former analog site (42-14-08, 84-24-00). The FCC assigned the channel 34 DTV allotment an effective radiated power (ERP) of 50 kilowatts (kW) and antenna height above average terrain (HAAT) of 73 meters.

Station WHTV-DT is currently authorized to operate on channel 34 (BPCDT-19991101AEC) with a non-directional (ND) antenna system. The ERP is 4 kW and the antenna HAAT is 53 meters. The antenna center of radiation is 63.4 meters above ground level (AGL), and 349.6 meters above mean sea level (AMSL). The transmitter site coordinates are 42-14-52, 84-24-24 (NAD-27). The FCC antenna structure registration number is 1021285.

Station WHTV-DT has an application pending (BMPCDT-20000501AEL) to use a directional antenna (DA) system. The antenna pattern is cardioid shaped and the major lobe is oriented toward 270 degrees True. The maximum ERP is 130 kW and the antenna HAAT is 299 meters. The antenna center of radiation is 301 meters AGL, and 587.5 meters AMSL. The transmitter site coordinates are 42-25-13, 84-31-25 (NAD-27). The FCC antenna structure registration number is 1027514.

Proposed DTV Facilities

This minor change application to modify the CP proposes to relocate to the WLNS-TV tower. It is proposed to use an ERI model ALP8L5-HSNR-34 directional antenna system. The major lobe of the antenna pattern will be oriented toward 199 degrees True. The proposed maximum ERP is 11.5 kW. The antenna will be mounted on the WLNS-TV tower with the center of radiation 282 meters AGL, and 555 meters AMSL. The proposed antenna HAAT will be 283 meters. The proposed site coordinates are 42-41-19, 84-22-35 (NAD-27) and the FCC antenna structure registration number is 1035420. There is no proposed change in channel (34) or city of license (Jackson, MI).

Figure 1 is a map showing the predicted 41 dBu and 48 dBu contours for the proposed WHTV-DT operation. The city limits of Jackson, Michigan are indicated. The predicted 48 dBu contour encompasses all of the land area within the Jackson city limits. The estimated population (2000 Census) and land area within the predicted 41 dBu contour are 819,787 people and 9,109 square kilometers, respectively.

Figure 1 also shows the predicted 41 dBu contour for the pending WHTV-DT application operation (Ch.34, 130 kW-DA, 299 m). The proposed 41 dBu contour is completely within the application 41 dBu contour, complying with the FCC's freeze exemption for minor change DTV applications.

Figure 2 shows the proposed antenna's azimuth and vertical radiation patterns.

Allocation Study

An interference study was conducted using the procedures outlined in the FCC's OET-69 Bulletin, a 2 kilometer grid, and the 1990 Census (current FCC processing method). The proposed operation complies with the FCC's interference standards.

There are no known AM stations within 5 kilometers (3.1 miles) of the proposed WHTV-DT site. There are no FM stations within 2 kilometers of the proposed site. The co-located operations of WLNS-TV (Ch.6) and WLNS-DT (Ch.59) at Lansing, Michigan

are the only TV stations within 2 kilometers of the proposed site. No adverse electromagnetic interaction is expected from WHTV-DT's proposed operation. The applicant recognizes its responsibility to correct prohibited interference problems that its proposed operation may create.

The WHTV-DT site is 113 kilometers from the closest point of the Canadian border. Consideration has been given to the US-Canada Letter of Understanding (LOU) concerning implementation of DTV in the border zone. The proposed WHTV-DT operation is considered as Class C for purposes of the LOU. The proposed WHTV-DT operation meets all of the LOU's separation requirements to pertinent Canadian analog (NTSC) and DTV allotments. Therefore, the proposed WHTV-DT operation is in compliance with the US-Canada DTV agreement and should not be a coordination problem.

The WHTV-DT site is more than 2000 kilometers from the closest point of the Mexican border. The closest FCC monitoring station is at Allegan, Michigan, 129 kilometers to the west. The closest point of the National Radio Quiet Zone (VA/WVA) is more than 500 kilometers to the southeast. The closest point of the Table Mountain Radio Quiet Zone (CO) is more than 1700 kilometers to the west. The closest radio astronomy site using channel 37 is at North Liberty, Iowa, approximately 601 kilometers to the west.

Calculations have been made concerning interference that the proposed WHTV-DT operation would receive. The calculations are based on the OET-69 procedures using a 2 kilometer grid and the 2000 Census. The proposed WHTV-DT operation receives calculated interference to 25,614 people (3.1%) and serves 800,595 people.

Radiofrequency Electromagnetic Field Exposure

The proposed WHTV-DT facilities were evaluated in terms of potential radio frequency (RF) energy exposure at ground level to workers and the general public. The radiation center for the proposed antenna is located 282 meters above ground level. The proposed maximum ERP of 11.5 kW is assumed. A relative field value of 0.35 was assumed for the antenna's downward radiation (see Figure 2). The calculated power density at a point 2 meters (6.6 feet) above ground level is 0.0006 mW/cm^2 . This is less than 1% of the FCC's

recommended limit of 0.40 mW/cm^2 for channel 34 for an “uncontrolled” environment. The calculated power density is less than 1% of the FCC’s recommended limit for a “controlled” environment.

Access to the transmitting equipment will be restricted and appropriately marked with warning signs. In the event that workers or other authorized personnel enter restricted areas or climb the tower, 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, wearing "accepted" RFR protective clothing and/or RFR exposure monitors or scheduling work when the stations are at reduced power or shut down. It is noted that this statement only addresses the potential for radiofrequency electromagnetic field exposure. All other aspects of the environmental processing analysis will be or already have been provided to the FCC by the tower owner as part of the tower registration process.

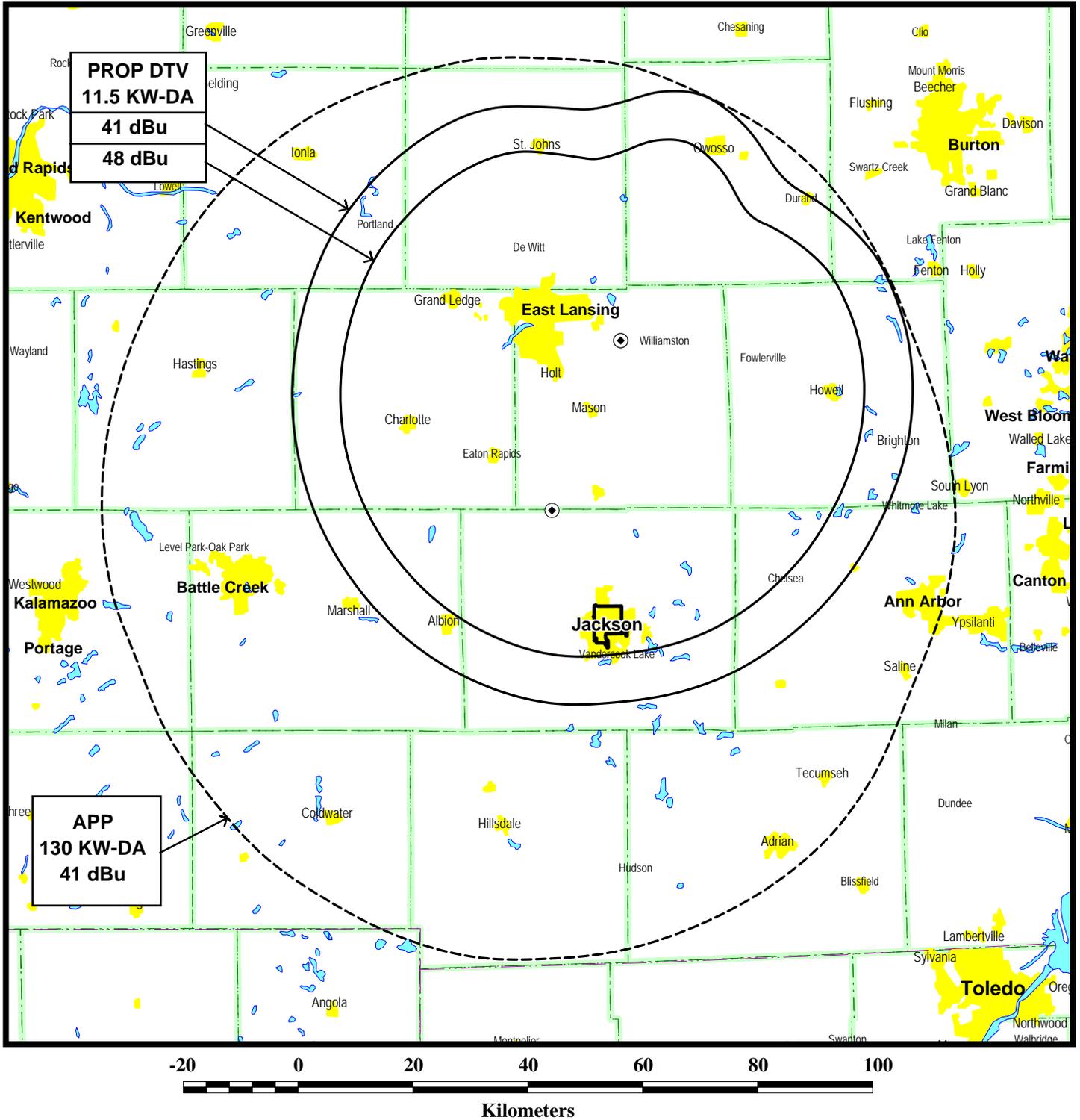
If there are questions concerning the technical portion of this application, please contact the office of the undersigned.

John A. Lundin

du Treil, Lundin & Rackley, Inc.
201 Fletcher Avenue
Sarasota, Florida 34237
(941) 329-6000 voice
(941) 329-6030 fax
john@DLR.com e-mail

April 6, 2006

Figure 1



PREDICTED COVERAGE CONTOURS

STATION WHTV-DT
JACKSON, MICHIGAN
CH 34 11.5 KW (MAX-DA) 283 M

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

AZIMUTH PATTERN

Type: ALP-NR

Numeric	dBd
3.80	5.80

Directivity: 3.80

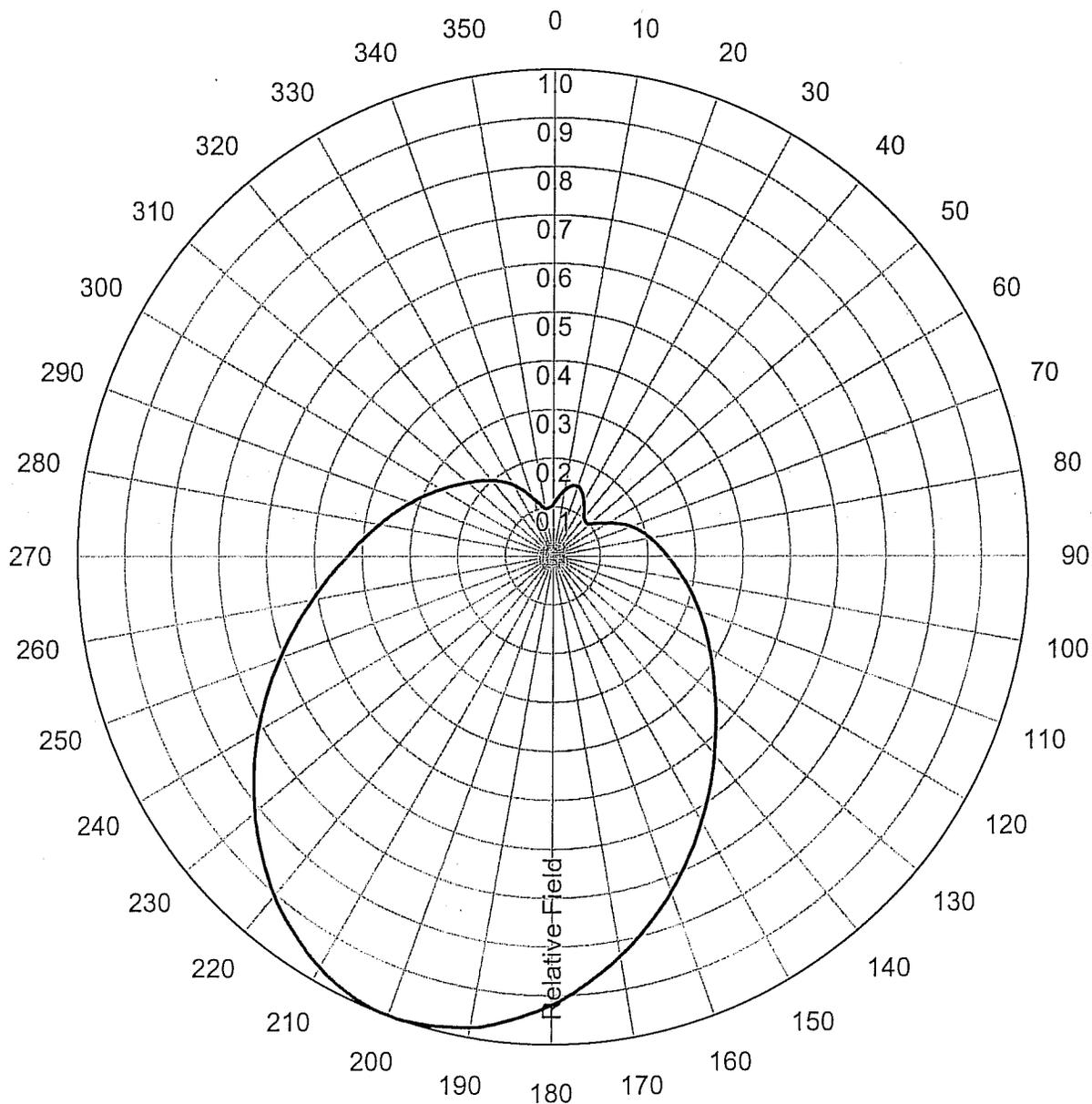
Peak(s) at:

Channel: 34

Location: ansing, Michigan -- WLNS Transmitter Site

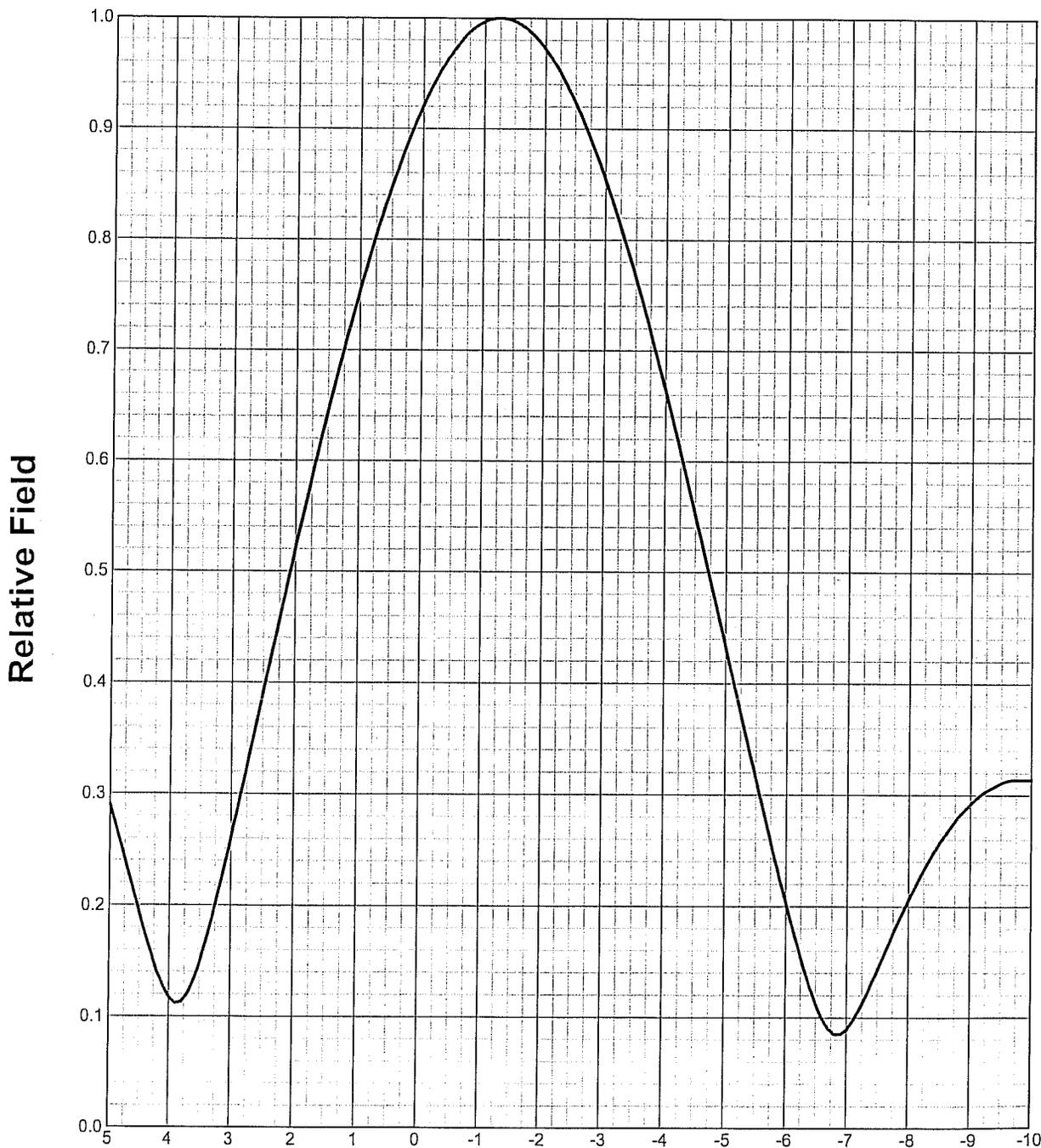
Polarization: Horizontal

Note: Pattern shape and directivity may vary with channel and mouting configuration.



ELEVATION PATTERN

Type:	<u>ALP8L5</u>		Channel:	<u>34</u>
Directivity:	<u>Numeric</u>	<u>dBd</u>	Location:	<u>Livingston, Michigan -- WLNS Transmitter Site</u>
Main Lobe:	<u>9.05</u>	<u>9.57</u>	Beam Tilt:	<u>-1.25</u>
Horizontal:	<u>7.68</u>	<u>8.85</u>	Polarization:	<u>Horizontal</u>



ELEVATION PATTERN

Type:	<u>ALP8L5</u>		Channel:	<u>34</u>
Directivity:	Numeric	dBd	Location:	<u>Living, Michigan -- WLNS Transmitter Site</u>
Main Lobe:	<u>9.05</u>	<u>9.57</u>	Beam Tilt:	<u>-1.25</u>
Horizontal:	<u>7.68</u>	<u>8.85</u>	Polarization:	<u>Horizontal</u>

