

# **Tele-Sci Solutions**

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## **FREQUENCY COORDINATION REPORT**

### **4 AND 6 GHZ TRANSMIT-RECEIVE EARTH STATION**

#### **CHRISTIAN TELEVISION NETWORK**

**PALM BEACH, FL**

**JUNE 9, 2011**

1. **CONCLUSIONS**

An Interference Study considering all existing, proposed and prior coordinated microwave and wireless facilities within the coordination contours of the proposed Earth Station demonstrates that this site will operate satisfactorily with the Common Carrier and Private Microwave Environment as defined on the frequency coordination data sheet.

2. **SUMMARY OF RESULTS**

There were no potential great circle interference cases at 4 GHz. There were no potential great circle interference cases at 6 GHz.

There were no reported cases of rain scatter beam intersections.

3. **SUPPLEMENTAL SHOWING**

The Satellite Earth station proposed in this Application was coordinated by Tele-Sci Solutions, using computer techniques and in accordance with Parts 25 and 101 of the FCC Rules and Regulations.

4. **FREQUENCY COORDINATION DATA**

The attached Frequency Coordination Data contains the following:

Technical Characteristics of Proposed Earth Station

Horizon Antenna Gain Plot 6 & 4 GHz

Satellite Elevation Plot

Local Horizon Plot

4 and 6 GHz Coordination Contour

4 and 6 GHz Rain Scatter

5. **FREQUENCY COORDINATION STATEMENT (FCC PART 101)**

Holders of licenses, permittees, prior filed applicants or planners of 6 GHz transmitting stations were notified on February 25, 2008 of the proposed Earth Station technical details in accordance with Section 25.203 (c-2) of the FCC Rules and Regulations. Satisfactory coordination was achieved on the basis that harmful interference would not occur, or that sufficient terrestrial and/or artificial shielding exists.

Alltel Wireless Holdings, LLC  
Comsearch  
Embarq Florida, Inc.  
Florida RSA No. 2B (Indian River) LP  
Harris Corporation – Orlando, FL  
Miami-Dade County  
Micronet Communications  
New Cingular Wireless PCS LLC – N FL  
New Cingular Wireless PCS LLC – S FL  
Palm Beach County Facilities Dev & Ops  
Radyn, Inc.  
South Florida Water Management District  
Verizon Wireless Personal Comm, LP (S FL)

6. **Certification of Person Responsible for Preparing Frequency Coordination Information Submitted in this Application**

I hereby certify that I am the technically qualified person responsible for preparation of the frequency coordination information contained in this application; that I am familiar with Parts 101 and 25 of the Commission's Rules;

that I have either prepared or reviewed the frequency coordination information submitted in this application; and, that it is complete and accurate to the best of my knowledge.

*Janine I. Miliband*

Janine I. Miliband  
Tele-Sci Solutions  
June 9, 2011

## **Tele-Sci Solutions**

**P.O. Box 237**

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**Phone: 973-383-7845**

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**TO: All Coordinators**

**May 3, 2011**

**Re: Christian Television Network  
Permanent T/R C-Band Earth Station  
Palm Beach, FL**

Dear Frequency Coordinator:

On behalf of Christian Television Network we are forwarding the attached frequency coordination request for a permanent, T/R earth station to be located at Palm Beach, FL. Please review this data for potential interference in accordance with Part 101 and 25 of the FCC Rules and Regulations.

We would appreciate your reply either by telephone, mail, email or fax to the Tele-Sci Solutions office by **June 3, 2011**. If we do not hear from you by this date, we will assume that you concur with our proposal. If you should have any questions, please do not hesitate to contact Tele-Sci Solutions.  
Thank you for your assistance in this coordination.

Sincerely,

Janine Miliband  
General Manager

SATELLITE EARTH STATION  
FREQUENCY COORDINATION DATA  
04/29/11

COMPANY NAME:	CHRISTIAN TELEVISION NETWORK
EARTH STATION LOCATION:	PALM BEACH, FL
LATITUDE (DMS):	26 38 55.79
LONGITUDE (DMS):	80 5 13.29
SITE GROUND ELEVATION (FT. AMSL):	13.0
ANTENNA CENTER LINE ( FT)	10.0
ANTENNA TYPE:	COMTECH OFFSAT
ANTENNA DIAMETER (METERS):	4.1
4 GHZ ANTENNA GAIN (DBI):	42.0
15 DB HALF BEAMWIDTH (DEG):	2.30
6 GHZ ANTENNA GAIN (DBI):	45.9
15 DB HALF BEAMWIDTH (DEG)	1.60
OPERATING MODE:	T/R
RECEIVE BAND (MHZ):	4121 H
TRANSMIT BAND (MHZ):	6346 V
EMISSION DESIGNATOR	2M50G1F; 2M50G7D
MODULATION:	DIGITAL
MAX. AVAILABLE RF POWER (DBW/4KHZ):	-9.0
(DBW/2.5MHZ) :	19.0
MAX. EIRP (DBW/4KHZ):	36.9
(DBW/2.5MHZ) :	64.9
MAX. PERMISSIBLE INTERFERENCE POWER	
4 GHZ 20% (DBW)	-140.0
4 GHZ 0.0100% (DBW)	-130.0
6 GHZ 20% (DBW/4KHZ)	-154.0
6 GHZ 0.0025% (DBW/4KHZ)	-131.0
SATELLITE ARC (MIN/MAX)	58/ 58 DEG
AZIMUTH	137.9/137.9 DEG
ELEVATION	50.4/ 50.4 DEG
RADIO CLIMATE	A
RAIN ZONE	1
MAXIMUM GREAT CIRCLE COORDINATION DISTANCE (KM)	
4 GHZ	214.6
6 GHZ	133.4
PRECIPITATION SCATTER CONTOUR RADIUS (KM)	
4 GHZ	171.4
6 GHZ	201.9
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Satellite Earth Station  
Frequency Coordination Data  
04/29/11

Additional Emission Designators 4.1 Meter Offsat Antenna  
Christian Television Network

Emission Designator	Modulation	Max. Available RF Power (DBW/4KHz)	Max EIRP Density (DBW/4KHz)
3M0 G1F	Digital	-9.75	36.15
3M0 G7D	Digital	-9.75	36.15
3M70G1F	Digital	-10.66	35.24
3M70G7D	Digital	-10.66	35.24

Prepared by  
Tele-Sci Solutions  
P.O. Box 237 Augusta, NJ 07822-0237 973-383-7845

PALM BEACH, FL

26 38 55.79

80 5 13.29

AZIMUTH DEGREES	HORIZON ANGLE DEGREES	DISC ANGLE DEGREES	HORIZON GAIN DBI	4GHZ COORD DISTANCE KM	6 GHZ DISTANCE KM	RAIN4 SCATTER KM	RAIN6 SCATTER KM
5.	.0	142.0	-10.0	214.6	133.4	171.4	201.9
10.	.0	137.4	-10.0	214.6	133.4	171.4	201.9
15.	.0	132.8	-10.0	214.6	133.4	171.4	201.9
20.	.0	128.2	-10.0	214.6	133.4	171.4	201.9
25.	.0	123.6	-10.0	214.6	133.4	171.4	201.9
30.	.0	119.1	-10.0	214.6	133.4	171.4	201.9
35.	.0	114.5	-10.0	214.6	133.4	171.4	201.9
40.	.0	110.1	-10.0	214.6	133.4	171.4	201.9
45.	.0	105.7	-10.0	214.6	133.4	171.4	201.9
50.	.0	101.3	-10.0	214.6	133.4	171.4	201.9
55.	.0	97.0	-10.0	214.6	133.4	171.4	201.9
60.	.0	92.7	-10.0	214.6	133.4	171.4	201.9
65.	.0	88.6	-10.0	214.6	133.4	171.4	201.9
70.	.0	84.5	-10.0	214.6	133.4	171.4	201.9
75.	.0	80.6	-10.0	214.6	133.4	171.4	201.9
80.	.0	76.7	-10.0	214.6	133.4	171.4	201.9
85.	.0	73.0	-10.0	214.6	133.4	171.4	201.9
90.	.0	69.5	-10.0	214.6	133.4	171.4	201.9
95.	.0	66.2	-10.0	214.6	133.4	171.4	201.9
100.	.0	63.0	-10.0	214.6	133.4	171.4	201.9
105.	.0	60.2	-10.0	214.6	133.4	171.4	201.9
110.	.0	57.6	-10.0	214.6	133.4	171.4	201.9
115.	.0	55.3	-10.0	214.6	133.4	171.4	201.9
120.	.0	53.5	-10.0	214.6	133.4	171.4	201.9
125.	.0	52.0	-10.0	214.6	133.4	171.4	201.9
130.	.0	51.0	-10.0	214.6	133.4	171.4	201.9
135.	.0	50.5	-10.0	214.6	133.4	171.4	201.9
140.	.0	50.4	-10.0	214.6	133.4	171.4	201.9
145.	.0	50.9	-10.0	214.6	133.4	171.4	201.9
150.	.0	51.8	-10.0	214.6	133.4	171.4	201.9
155.	.0	53.2	-10.0	214.6	133.4	171.4	201.9
160.	.0	55.0	-10.0	214.6	133.4	171.4	201.9
165.	.0	57.2	-10.0	214.6	133.4	171.4	201.9
170.	.0	59.8	-10.0	214.6	133.4	171.4	201.9
175.	.0	62.6	-10.0	214.6	133.4	171.4	201.9
180.	.0	65.7	-10.0	214.6	133.4	171.4	201.9
185.	.0	69.0	-10.0	214.6	133.4	171.4	201.9
190.	.0	72.5	-10.0	214.6	133.4	171.4	201.9
195.	.0	76.2	-10.0	214.6	133.4	171.4	201.9
200.	.0	80.0	-10.0	214.6	133.4	171.4	201.9
205.	.0	83.9	-10.0	214.6	133.4	171.4	201.9
210.	.0	88.0	-10.0	214.6	133.4	171.4	201.9
215.	.0	92.1	-10.0	214.6	133.4	171.4	201.9
220.	.0	96.4	-10.0	214.6	133.4	171.4	201.9

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PALM BEACH, FL  
26 38 55.79  
80 5 13.29

AZIMUTH DEGREES	HORIZON ANGLE DEGREES	DISC ANGLE DEGREES	HORIZON GAIN DBI	4GHZ COORD DISTANCE KM	6 GHZ DISTANCE KM	RAIN4 SCATTER KM	RAIN6 SCATTER KM
225.	.0	100.7	-10.0	214.6	133.4	171.4	201.9
230.	.0	105.0	-10.0	214.6	133.4	171.4	201.9
235.	.0	109.4	-10.0	214.6	133.4	171.4	201.9
240.	.0	113.9	-10.0	214.6	133.4	171.4	201.9
245.	.0	118.4	-10.0	214.6	133.4	171.4	201.9
250.	.0	122.9	-10.0	214.6	133.4	171.4	201.9
255.	.0	127.5	-10.0	214.6	133.4	171.4	201.9
260.	.0	132.1	-10.0	214.6	133.4	171.4	201.9
265.	.0	136.8	-10.0	214.6	133.4	171.4	201.9
270.	.0	141.4	-10.0	214.6	133.4	171.4	201.9
275.	.0	146.1	-10.0	214.6	133.4	171.4	201.9
280.	.0	150.8	-10.0	214.6	133.4	171.4	201.9
285.	.0	155.5	-10.0	214.6	133.4	171.4	201.9
290.	.0	160.3	-10.0	214.6	133.4	171.4	201.9
295.	.0	165.0	-10.0	214.6	133.4	171.4	201.9
300.	.0	169.8	-10.0	214.6	133.4	171.4	201.9
305.	.0	174.6	-10.0	214.6	133.4	171.4	201.9
310.	.0	179.0	-10.0	214.6	133.4	171.4	201.9
315.	.0	179.0	-10.0	214.6	133.4	171.4	201.9
320.	.0	179.0	-10.0	214.6	133.4	171.4	201.9
325.	.0	179.0	-10.0	214.6	133.4	171.4	201.9
330.	.0	179.0	-10.0	214.6	133.4	171.4	201.9
335.	.0	179.0	-10.0	214.6	133.4	171.4	201.9
340.	.0	179.0	-10.0	214.6	133.4	171.4	201.9
345.	.0	179.0	-10.0	214.6	133.4	171.4	201.9
350.	.0	179.0	-10.0	214.6	133.4	171.4	201.9
355.	.0	179.0	-10.0	214.6	133.4	171.4	201.9
360.	.0	179.0	-10.0	214.6	133.4	171.4	201.9

TELE-SCI SOLUTIONS

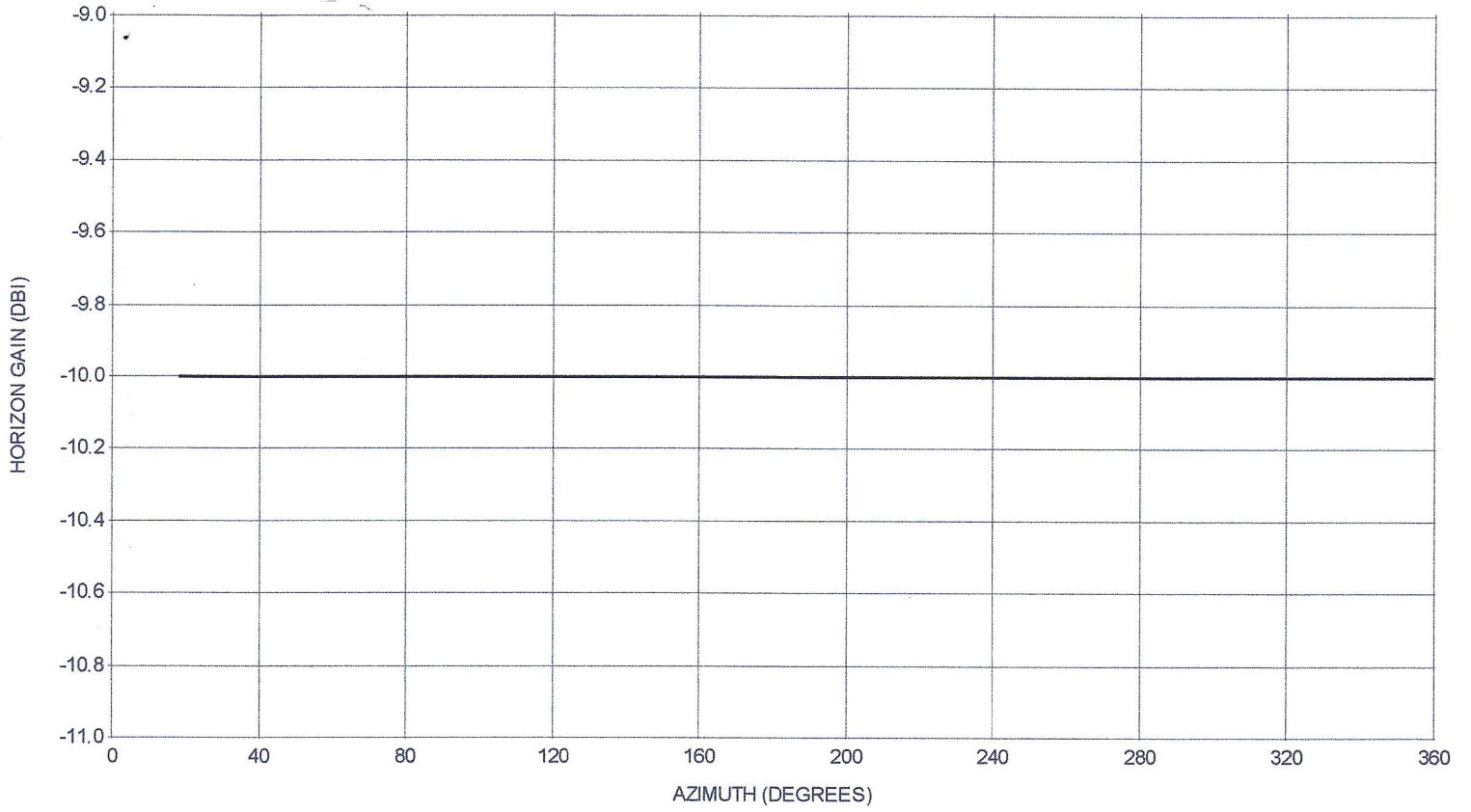
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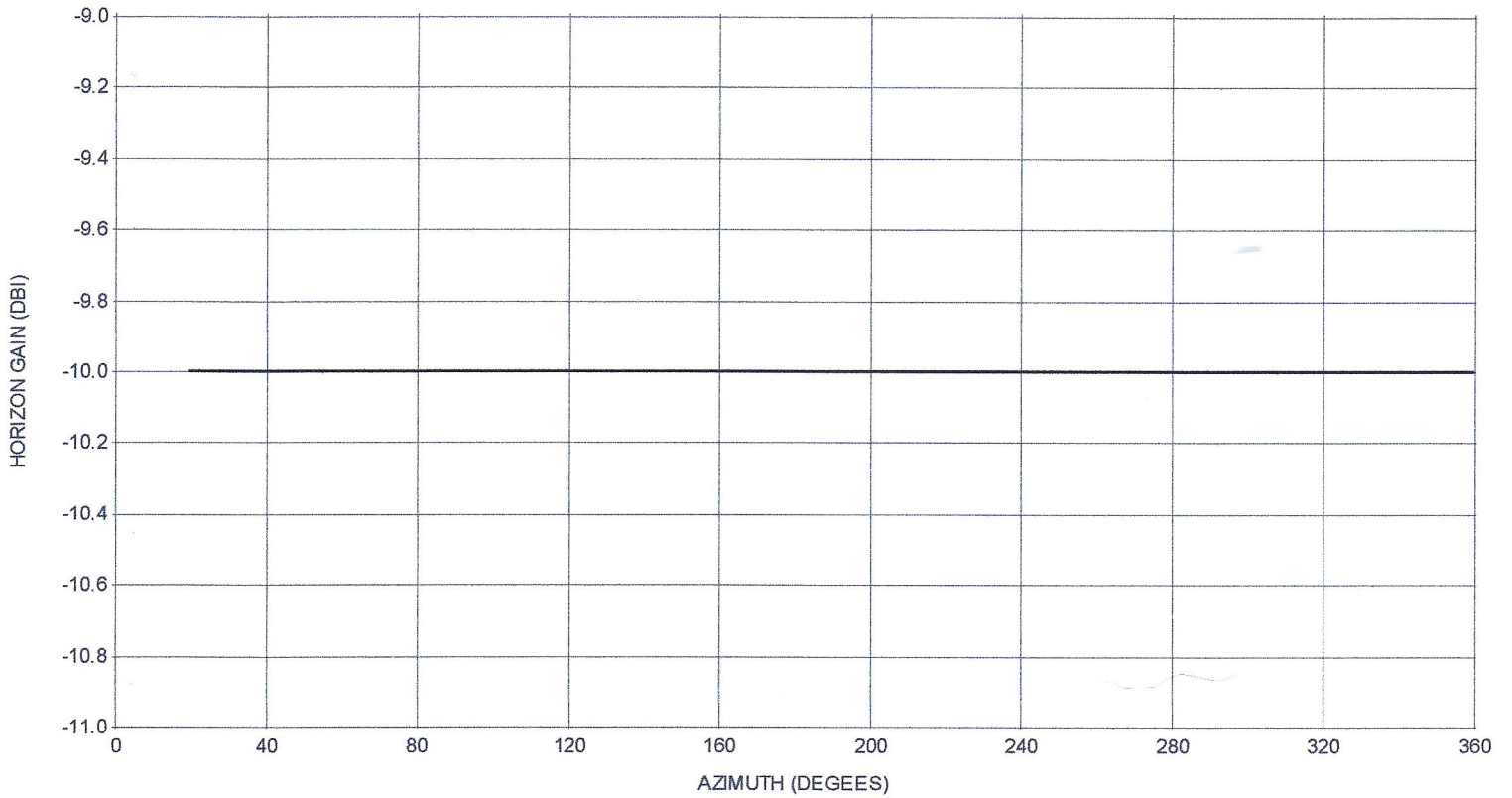
POINTING AZIMUTH AND ELEVATION ANGLES

SATELLITE	LONG	ELEV	SATELLITE	
LONGITUDE	DIFF	AZIMUTH	ANGLE	NAME
58.00	-22.09	137.86	50.39	

### HORIZON ANTENNA GAIN PLOT 6 GHZ



### HORIZON ANTENNA GAIN PLOT 4 GHZ



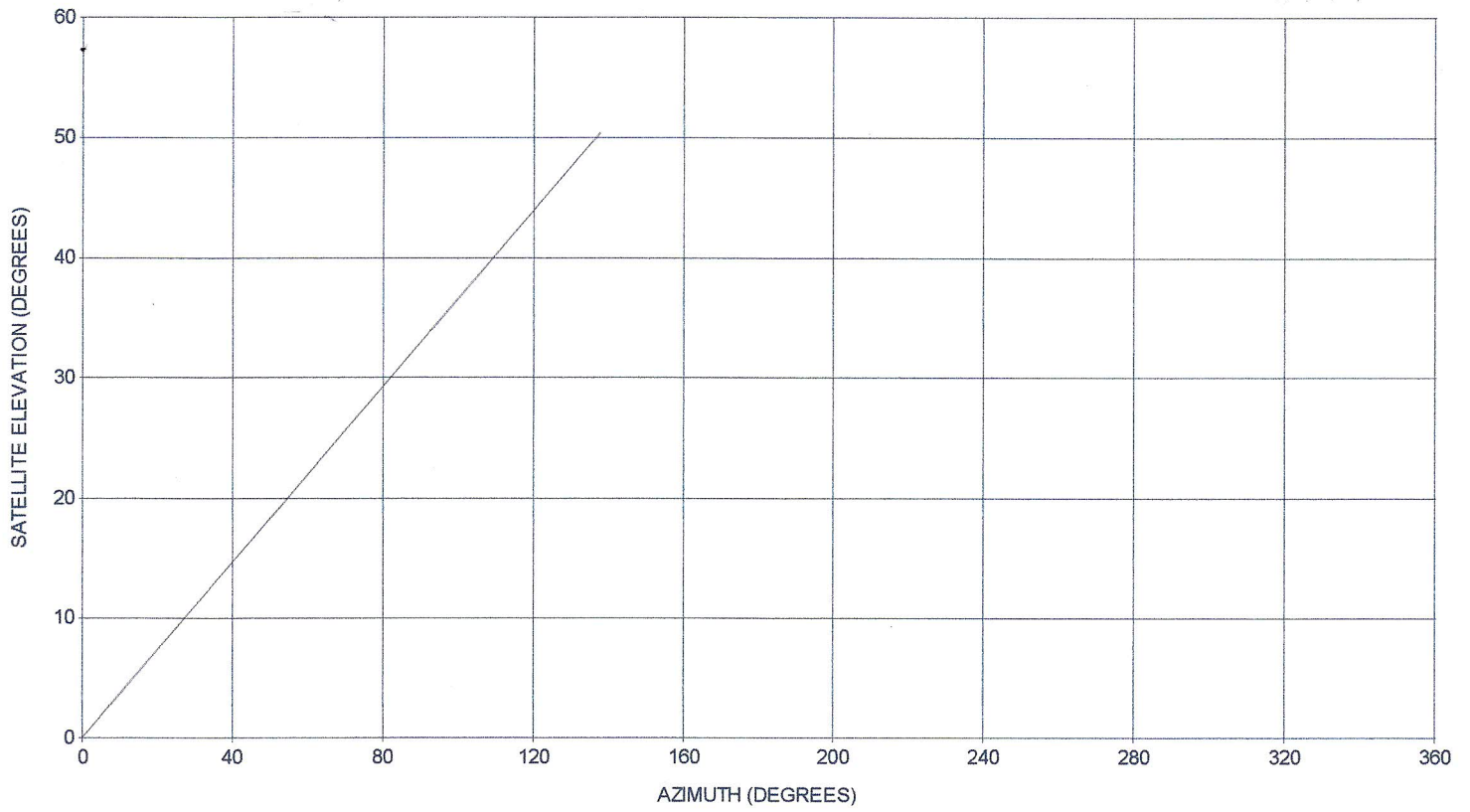
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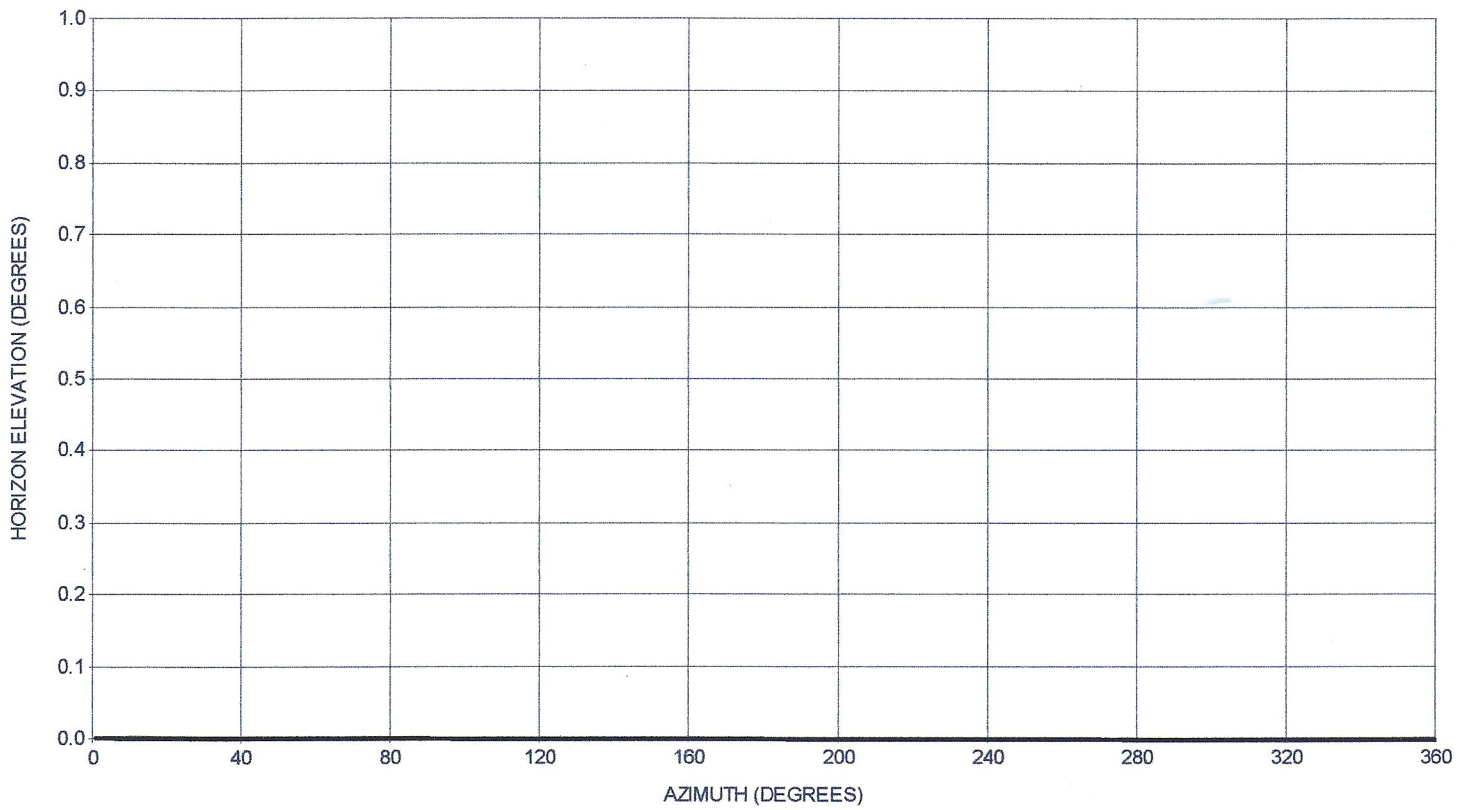
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### SATELLITE ELEVATION PLOT



### LOCAL HORIZON PLOT

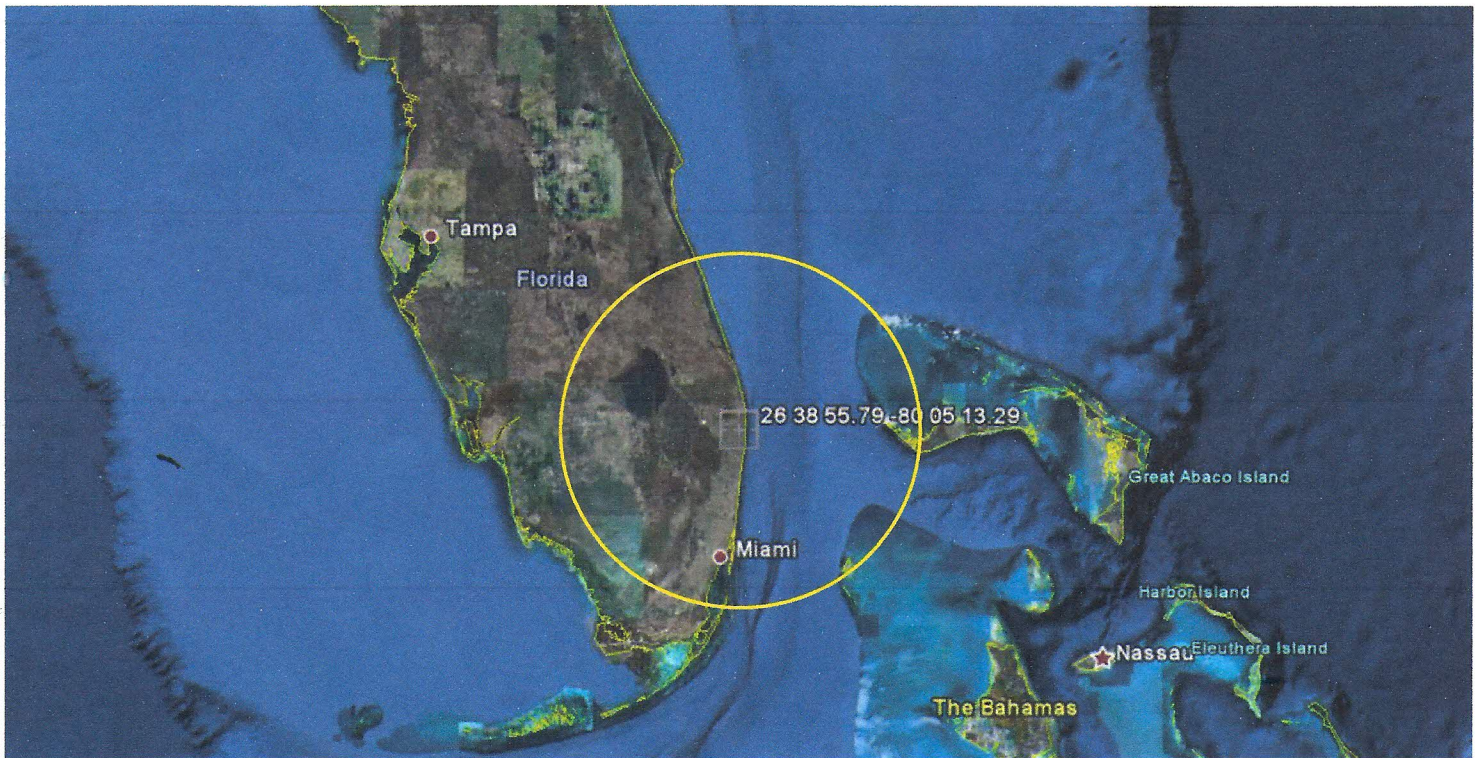


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# COORDINATION CONTOUR

6 GHZ



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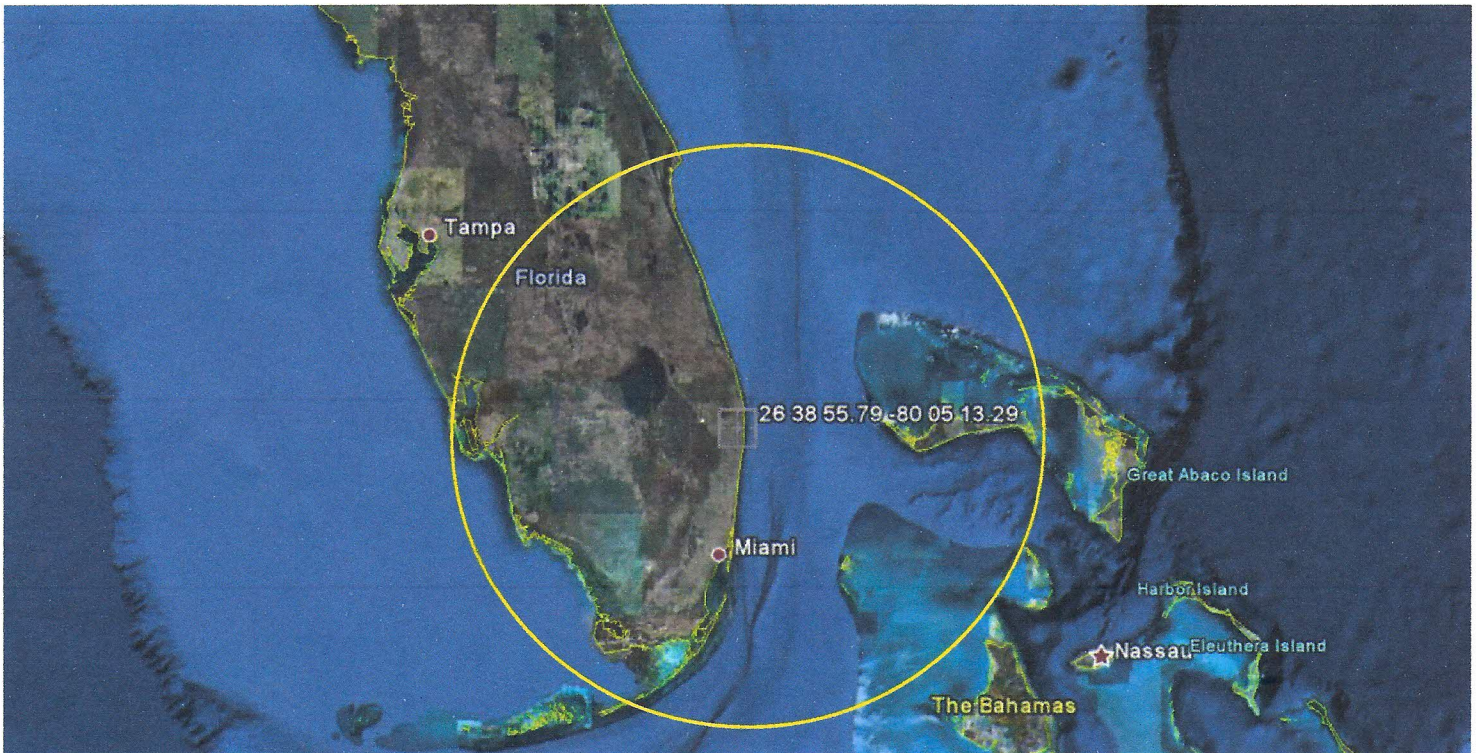
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# COORDINATION CONTOUR

4 GHZ



CHRISTIAN TELEVISION NETWORK

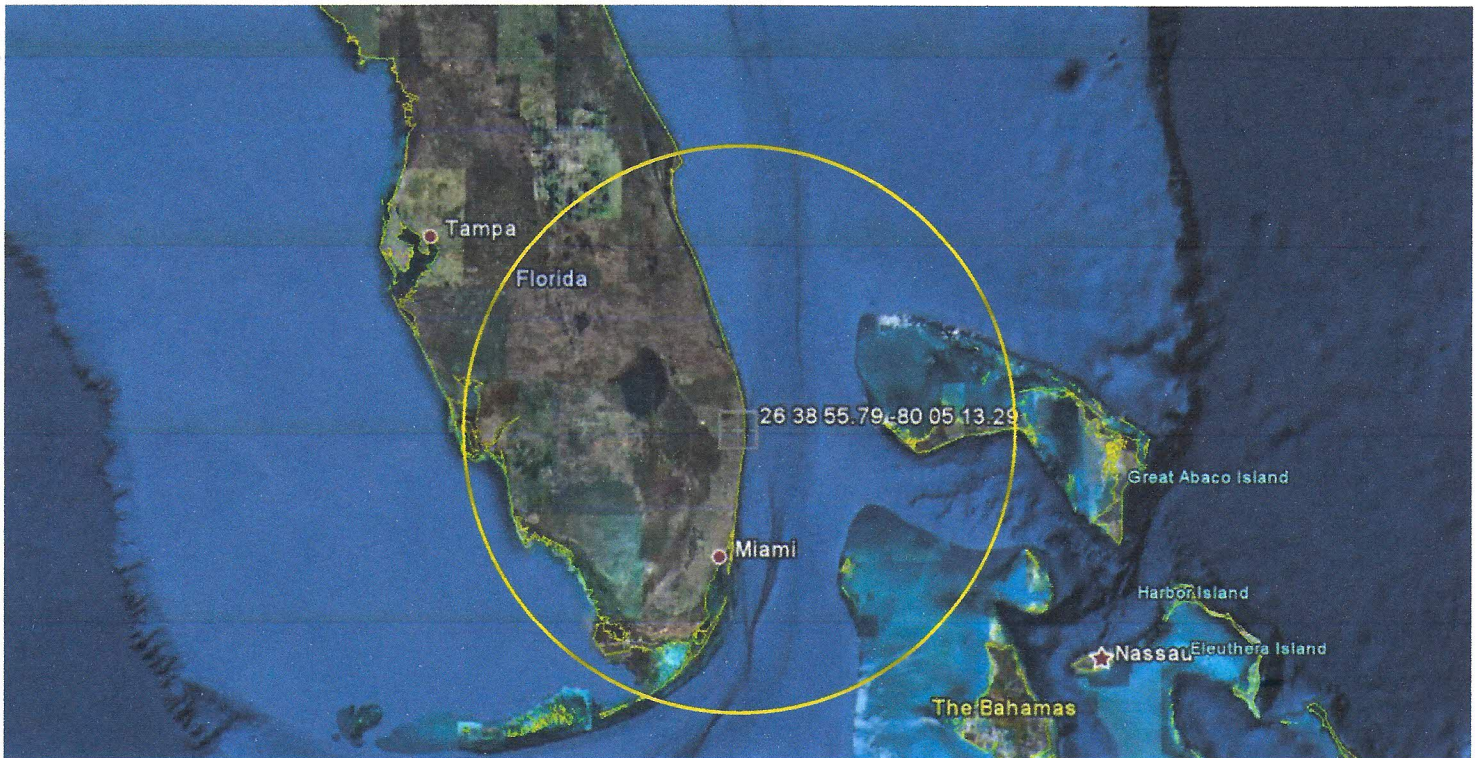
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RAIN SCATTER COORDINATION CONTOUR  
6 GHZ

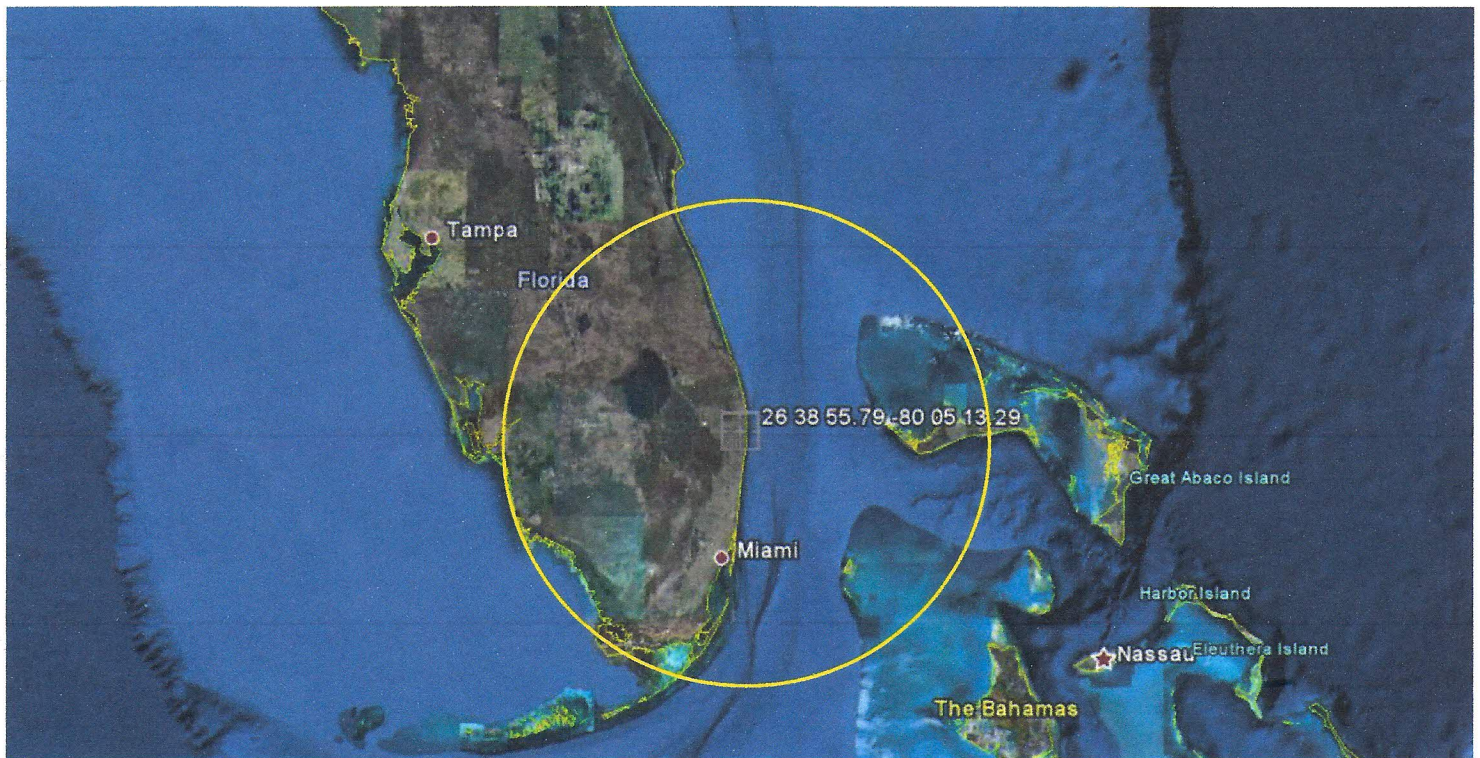


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# RAIN SCATTER COORDINATION CONTOUR

4 GHZ



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26 38 55.79

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