Approved by OMB
3060–0678

APPLICATION FOR EARTH STATION SPECIAL TEMPORARY AUTHORITY

APPLICANT INFORMATIONEnter a description of this application to identify it on the main menu:
Temporary Ku uplink

1. Applicant

Name:	Pacific Television Center	**Phone Number:**	310–287–3824
DBA Name:		**Fax Number:**	
Street:	3440 Motor Ave Circular Bldg	**E–Mail:**	howard@pactv.com
City:	Los Angeles	**State:**	CA
Country:	USA	**Zipcode:**	90034 –4769
Attention:	Mr Howard M Fine		

Conditions: Must operate on a non-interference-

File # SES-STA-20140502-00329

Call Sign N/A Grant Date 5/6/2014
(or other identifier)

Term Dates
From 5/6/2014 To: 6/5/2014

GRANTED
International Bureau

Approved: Paul E. Hoffman

- basis. Must protect personnel from radiation hazards in accordance with measures specified in the submitted radiation analysis. DSL

2. Contact

Name:	Howard Fine	**Phone Number:**	310–287–3824
Company:	Pacific Television Center	**Fax Number:**	
Street:	3440 Motor Ave Circular Bldg	E–Mail:	howard@pactv.com
City:	Los Angeles	**State:**	CA
Country:	USA	**Zipcode:**	90034 –4769
Attention:	Mr Howard Fine	**Relationship:**	Same

(If your application is related to an application filed with the Commission, enter either the file number or the IB Submission ID of the related application. Please enter only one.)
3. Reference File Number or Submission ID

4a. Is a fee submitted with this application?
◉ If Yes, complete and attach FCC Form 159. If No, indicate reason for fee exemption (see 47 C.F.R.Section 1.1114).
○ Governmental Entity ○ Noncommercial educational licensee
○ Other(please explain):

4b. Fee Classification CGB – Mobile Satellite Earth Stations

5. Type Request

○ Use Prior to Grant ○ Change Station Location ◉ Other

6. Requested Use Prior Date 05/05/2014	
7. City Various	8. Latitude (dd mm ss.s h) 0 0 0.0

9. State	10. Longitude (dd mm ss.s h) 0 0 0.0

11. Please supply any need attachments.

Attachment 1: 2 degree spacing Attachment 2: Link Budget Attachment 3: Radiation Hazard

12. Description. (If the complete description does not appear in this box, please go to the end of the form to view it in its entirety.)

This is a request for use of a temporary mobile uplink to provide news coverage of severe weather in the US.

13. By checking Yes, the undersigned certifies that neither applicant nor any other party to the application is subject to a denial of Federal benefits that includes FCC benefits pursuant to Section 5301 of the Anti–Drug Act of 1988, 21 U.S.C. Section 862, because of a conviction for possession or distribution of a controlled substance. See 47 CFR 1.2002(b) for the meaning of "party to the application" for these purposes.

(●) Yes ( ) No

14. Name of Person Signing Howard Fine	15. Title of Person Signing President

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ANALYSIS OF NON-IONIZING RADIATION
for Pacific Television Center
Site: Various State: NA
Latitude: 0 0 0.0 Longitude: 0 0 0.0 (NAD83)
05-01-2014

The Office of Science and Technology Bulletin, No. 65, October 1985 and revised August 1997, specifies that the maximum level of non-ionizing radiation that a person may be exposed to over a six minute period is an average power density equal to 5 mW/cm**2 (five milliwatts per centimeter squared) for a controlled environment. For an uncontrolled environment, the maximum level of non-ionizing radiation that a person may be exposed to over a thirty minute period is an average power density equal to 1 mW/cm**2 (one milliwatt per centimeter squared). It is the purpose of this report to determine the maximum power flux densities of the earth station in the far zone, near zone, transition zone, at the main reflector surface, and between the antenna edge and the ground.

Parameters which were used in the calculations:
==========

Antenna Diameter, (D) = 1.0000 m

Antenna Surface Area (Sa) = pi(D**2)/4 = 0.7854 m**2

Wavelength at 14.1200 GHz (lambda) = 0.0212 m

Transmit Power at Flange (P) = 56.1600 Watts

Antenna Gain at Earth Site (GES) = 41.5000 dBi = 14125.3754
Power Ratio:
AntiLog(GES/10)

pi = 3.1415927

Antenna Aperture Efficiency (n) = 0.6500

1. FAR ZONE CALCULATIONS

Distance to the Far Zone (Df) = $\frac{(n)(D^{**}2)}{lambda}$ = 30.6604 m

Far Zone Power Density (Rf) = $\frac{(GES)(P)}{4*pi*(Df^{**}2)}$ = 67.1525 W/m**2

= 6.7153 mW/cm**2

2. NEAR ZONE CALCULATIONS

Power Flux Density is considered to be at a maximum value throughout the entire length of this Zone. The Zone is contained within a cylindrical volume which has the same diameter as the antenna. Beyond the Near Zone, the Power Flux Density will decrease with distance from the Antenna.

Distance to the Near Zone (Dn) = $\frac{D^{**}2}{4*lambda}$ = 11.7925 m

Near Zone Power Density (Rn) = $\frac{16.0(n)P}{pi(D^{**}2)}$ = 185.9133 W/m**2

= 18.5913 mW/cm**2

3. TRANSITION ZONE CALCULATIONS

The Power Density begins to decrease with distance in the Transition Zone. While the Power Density decreases inversely with distance in the Transition Zone, the Power Density decreases inversely with the square of the distance in the Far Zone. Since the maximum Power Density in the Transition Zone will not exceed the Near Zone values, it is not calculated.

4. MAIN REFLECTOR ZONE

Main Reflector Power Density = $\frac{2(P)}{Sa}$ = 143.0103 W/m**2

= 14.3010 mW/cm**2

5. ZONE BETWEEN THE MAIN REFLECTOR AND THE GROUND

Applying uniform illumination of the Main Reflector Surface:

Main to Ground Power Density = $\frac{P}{Sa}$ = 71.5051 W/m**2

= 7.1505 mW/cm**2

CALCULATED SAFETY MARGINS SUMMARY
AND EVALUATION

Controlled Safety Margin = 5.0 - Calculated Zone Value (mW/cm**2)

Zones	Safety Margins (mW/cm**2)	Conclusions
1. Far Zone	-1.7153	POTENTIALLY HAZARDOUS
2. Near Zone	-13.5913	POTENTIALLY HAZARDOUS
3. Transition Zone	Rf < Rt < Rn	Complies with ANSI
4. Main Reflector Surface	-9.3010	POTENTIALLY HAZARDOUS
5. Main Reflector to Ground	-2.1505	POTENTIALLY HAZARDOUS

Uncontrolled Safety Margin = 1.0 - Calculated Zone Value (mW/cm**2)

Zones	Safety Margins (mW/cm**2)	Conclusions
1. Far Zone	-5.7153	POTENTIALLY HAZARDOUS
2. Near Zone	-17.5913	POTENTIALLY HAZARDOUS
3. Transition Zone	Rf < Rt < Rn	Complies with ANSI
4. Main Reflector Surface	-13.3010	POTENTIALLY HAZARDOUS
5. Main Reflector to Ground	-6.1505	POTENTIALLY HAZARDOUS

6. EVALUATION

A. Controlled Environment
The FAR ZONE does not comply with the ANSI standards!
WARNING SIGNS will be posted for the affected Zone indicating danger while the system is in use. Additionally, the system will be shut down for servicing.

The NEAR ZONE does not comply with the ANSI standards!
WARNING SIGNS will be posted for the affected Zone indicating danger while

the system is in use. Additionally, the system will be shut down for servicing.

The MAIN Reflector Surface ZONE does not comply with the ANSI standards! WARNING SIGNS will be posted for the affected Zone indicating danger while the system is in use. Additionally, the system will be shut down for servicing.

The MAIN Reflector to GROUND ZONE does not comply with the ANSI standards! WARNING SIGNS will be posted for the affected Zone indicating danger while the system is in use. Additionally, the system will be shut down for servicing.

B. Uncontrolled Environment
The FAR ZONE does not comply with the ANSI standards!
WARNING SIGNS will be posted for the affected Zone indicating danger while the system is in use. Additionally, the system will be shut down for servicing.

The NEAR ZONE does not comply with the ANSI standards!
WARNING SIGNS will be posted for the affected Zone indicating danger while the system is in use. Additionally, the system will be shut down for servicing.

The MAIN Reflector Surface ZONE does not comply with the ANSI standards! WARNING SIGNS will be posted for the affected Zone indicating danger while the system is in use. Additionally, the system will be shut down for servicing.

The MAIN Reflector to GROUND ZONE does not comply with the ANSI standards! WARNING SIGNS will be posted for the affected Zone indicating danger while the system is in use. Additionally, the system will be shut down for servicing.

LINK BUDGET CALCULATIONS RESULTS

CARRIER INFORMATION

DATA RATE	6500	kbps
NUMBER OF PHASES	4	
FEC	3 / 4	
REED-SOLOMON	188 / 204	
REQUIRED Eb/No	5.50	dB
IF BANDWIDTH	4,702	kHz
C/N REQUIRED	6.91	dB
Spacing Factor	1.35	

MARGINS

Faded System Margin	1.0	dB
Uncompensated U/L Fade	0.0	dB
Required Downlink Availability	99.950%	

TRANSPONDER OPERATIONS

Transponder SCPC IBO	7	dB
Transponder SCPC OBO	4	dB
Carrier IBO	16.50	dB
Carrier OBO	13.50	dB

UPLINK INFORMATION

UPLINK SITE	NEW YORK NY	
UPLINK SFD	-96.98	dBW/m2
ATTENUATOR	8	dB
UPLINK G/T	4.91	dB/K
UPLINK FREQ	14120.00	MHz
UPLINK EIRP	57.02	dBW
UPLINK C/N	16.7	dB

OTHER INFORMATION

DOWNLINK FREQ	11820.00	MHz
ASSUMED C/I	14.0	dB
SATELLITE	AM01	
TRANSPONDER	06K	
Transponder Bandwidth	36	MHz

RESULTS SUMMARY

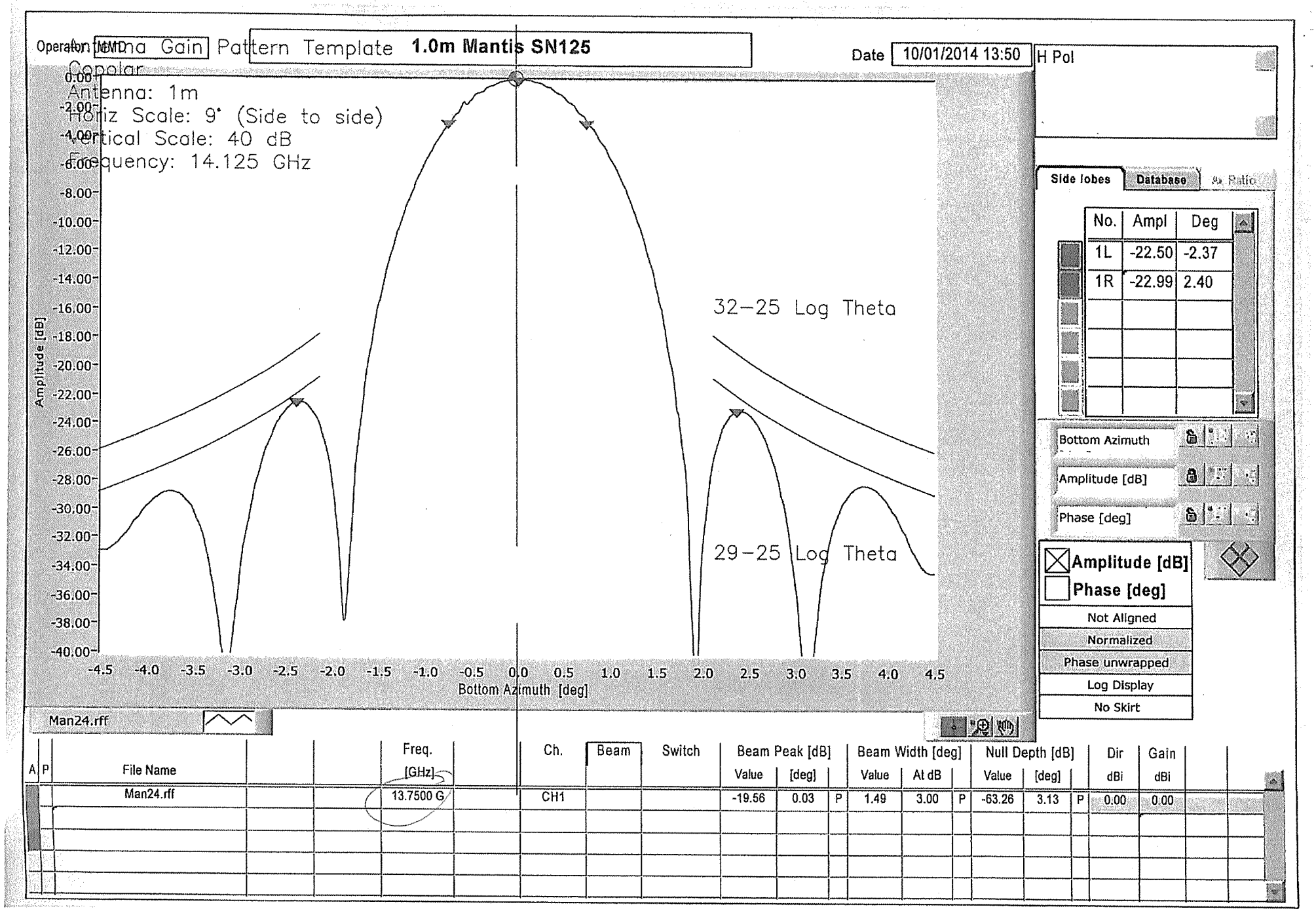
Required Bandwidth	6.348	MHz
Allocated Bandwidth	6.350	MHz
Carrier PEB	4.04	MHz

UPLINK RESULTS

Antenna Size	1	meters
Efficiency	0.65	
Losses	2	dB
HPA Power	56.16	Watts
Up Density	-15.21	dBW/4KHz

LOCATION	ANTENNA SIZE (meters)	CARRIER EIRP (dBW)	CLEAR SKY DOWNLINK C/N (dB)	CLEAR SKY TOTAL C/N (dB)	CLEAR SKY TOTAL Eb/No (dB)	MARGIN TO REQUIRED Eb/No (dB)	AVERAGE ANNUAL AVAIL	FAILS AVAIL CRITERIA
NEW YORK NY	4.50	34.05	21.6	10.7	9.3	3.8	99.976%	

4/17/2014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Antenna Gain
Pattern Template 1.0m Mantis SN125
Date 10/01/2014 13:50
H Pol
Copolar
Antenna: 1m
Horiz Scale: 9° (Side to side)
Vertical Scale: 40 dB
Frequency: 14.125 GHz
32−25 Log Theta
29−25 Log Theta
Amplitude [dB]
Bottom Azimuth [deg]
Side lobes
Database
No. Ampl Deg
1L -22.50 -2.37
1R -22.99 2.40
Bottom Azimuth
Amplitude [dB]
Phase [deg]
Amplitude [dB]
Phase [deg]
Not Aligned
Normalized
Phase unwrapped
Log Display
No Skirt
Man24.rff
A P File Name Freq. [GHz] Ch. Beam Switch Beam Peak [dB] Value [deg] Beam Width [deg] Value At dB Null Depth [dB] Value [deg] Dir dBi Gain dBi
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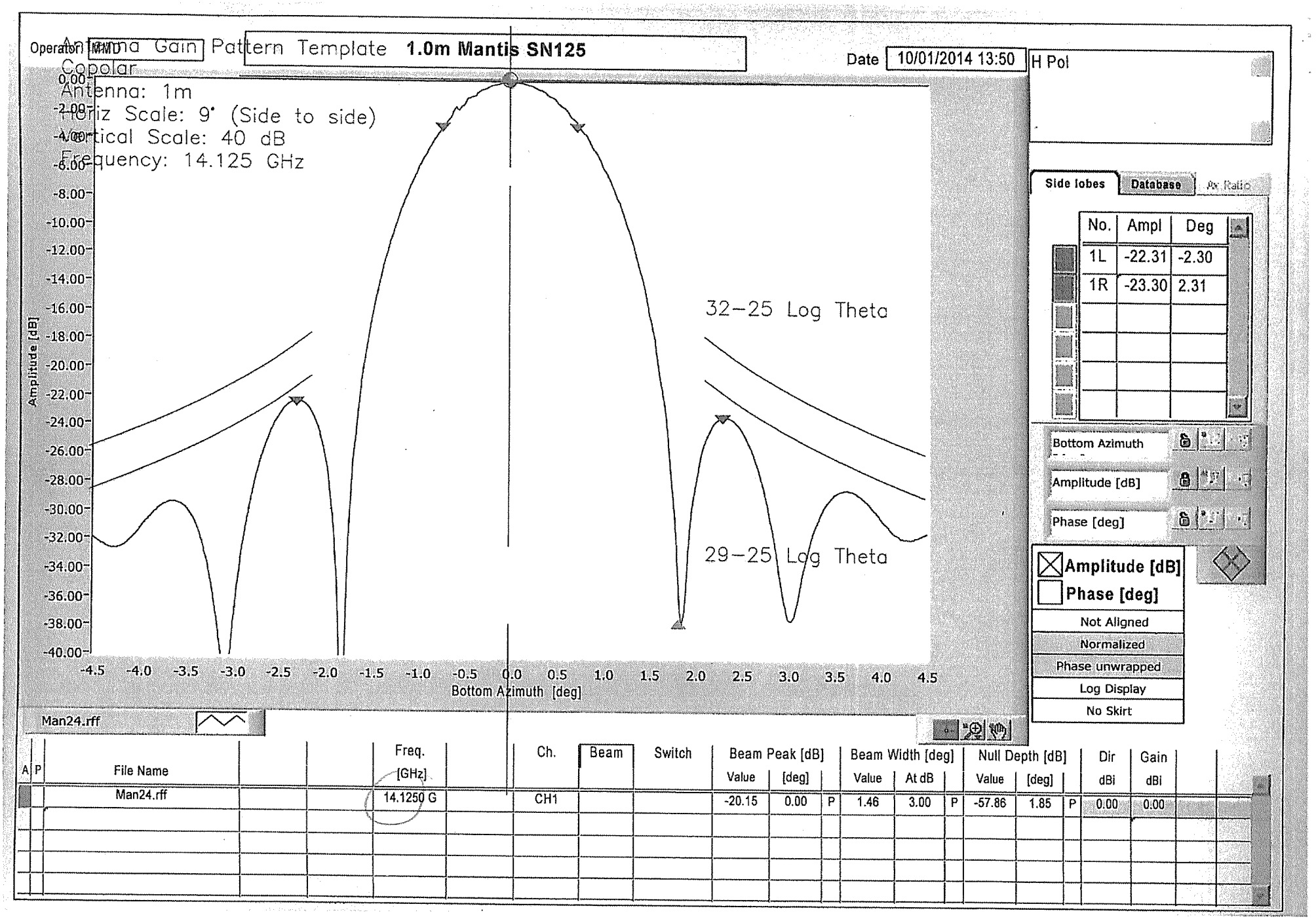
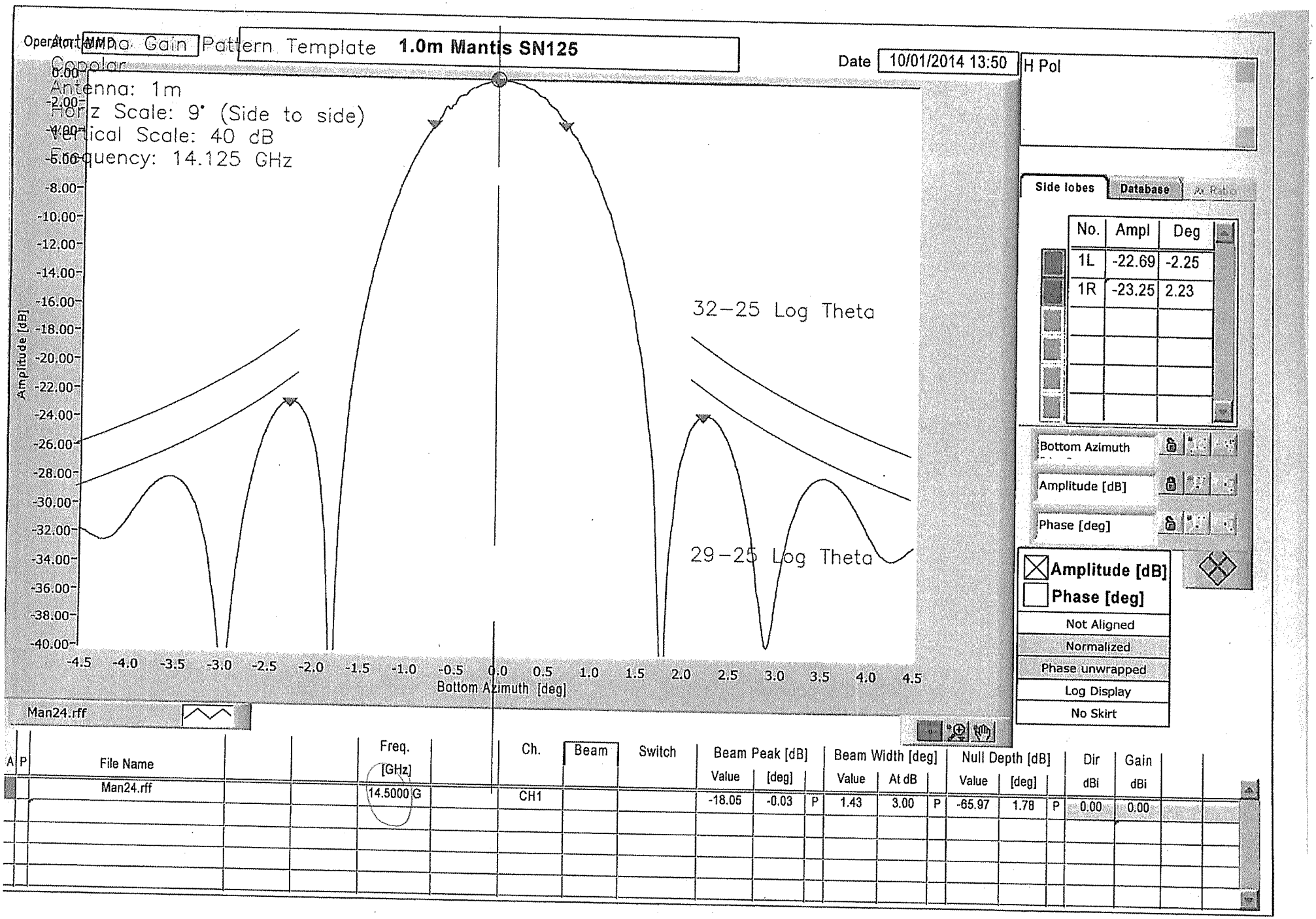

Operator MMD
Antenna Gain Pattern Template 1.0m Mantis SN125
Date 10/01/2014 13:50
H Pol
Copolar
Antenna: 1m
Horiz Scale: 9° (Side to side)
Vertical Scale: 40 dB
Frequency: 14.125 GHz
32−25 Log Theta
29−25 Log Theta
Amplitude [dB]
Bottom Azimuth [deg]
Side lobes
Database
Ax Ratio
No. Ampl Deg
1L -22.31 -2.30
1R -23.30 2.31
Bottom Azimuth
Amplitude [dB]
Phase [deg]
Amplitude [dB]
Phase [deg]
Not Aligned
Normalized
Phase unwrapped
Log Display
No Skirt
Man24.rff
A P File Name Freq. [GHz] Ch. Beam Switch Beam Peak [dB] Value [deg] Beam Width [deg] Value At dB Null Depth [dB] Value [deg] Dir dBi Gain dBi
Man24.rff 14.1250 G CH1 -20.15 0.00 P 1.46 3.00 P -57.86 1.85 P 0.00 0.00


Operator MMD
Antenna Gain Pattern Template 1.0m Mantis SN125
Date 10/01/2014 13:50
H Pol
Copolar
Antenna: 1m
Horiz Scale: 9° (Side to side)
Vertical Scale: 40 dB
Frequency: 14.125 GHz
32−25 Log Theta
29−25 Log Theta
Amplitude [dB]
Bottom Azimuth [deg]
Side lobes
Database
No. Ampl Deg
1L -22.69 -2.25
1R -23.25 2.23
Bottom Azimuth
Amplitude [dB]
Phase [deg]
Amplitude [dB]
Phase [deg]
Not Aligned
Normalized
Phase unwrapped
Log Display
No Skirt
Man24.rff
A P File Name Freq. [GHz] Ch. Beam Switch Beam Peak [dB] Value [deg] Beam Width [deg] Value At dB Null Depth [dB] Value [deg] Dir dBi Gain dBi
Man24.rff 14.5000 G CH1 -18.05 -0.03 P 1.43 3.00 P -65.97 1.78 P 0.00 0.00