

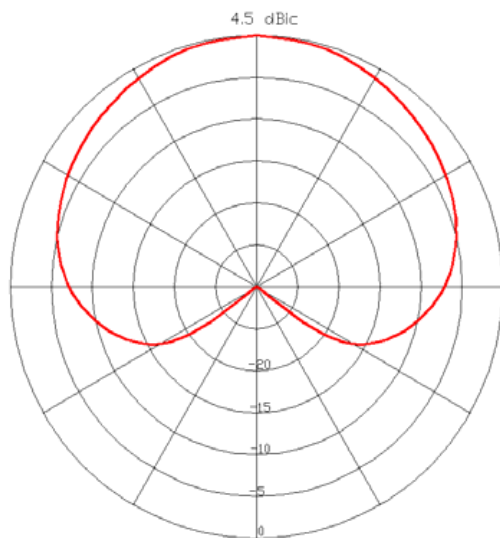
Requested Allocation details:

Requested start date: June 1, 2013

Requested end date: December 1, 2013

Desired Frequency (MHz)	Potential Frequency (MHz)	Max RF at TX Output (Watts)	Max ERP (Watts)	Peak or Mean Power (Watts)	Emission	Modulating Signal bandwidth
1440	1435-1535	10	28.2	10 Peak	400KD1W	<300 kHz
2200.3	2200-2290	10	28.2	10 Peak	400KD1W	<300 kHz

Directional Antenna Used: Yes, Conical Spiral



Half Power (3dB) Beam Width: 120°

Polarization: RHCP

Peak Gain: 4.5 dBic at Zenith

Orientation in horizontal plane: 360°

Orientation in vertical plane: 90° (zenith)

Antenna will not be more than 20 ft above ground

Equipment Manufacturers:

TX Unit # 1: National Instruments Vector Signal Generator and Ophir Model 5150 RF Power Amplifier, Production COTs units

TX Unit # 2: Symmetricom Hail Mary 3, Not Experimental

Both sites will employ the same antennas and equipment as described.

Site Location Information:

Fixed Site # 1

Lockheed Martin Space Systems Company

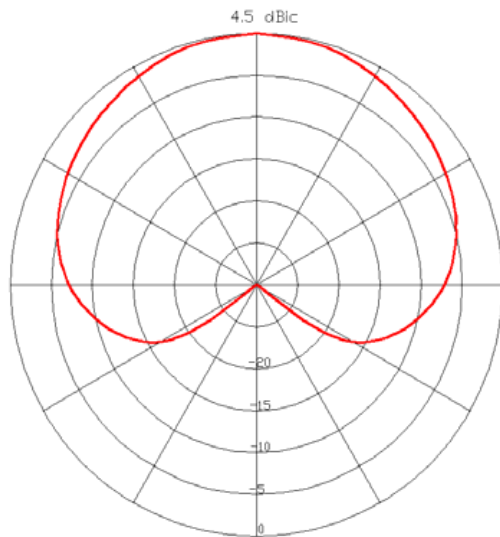
12257 Highway 121

Jefferson County

Littleton, CO

Antenna Location: North 39° 30' 45.6", West 105° 6' 54.9"

Directional Antenna Used: Yes, Conical Spiral



Half Power (3dB) Beam Width: 120°

Polarization: RHCP

Peak Gain: 4.5 dBic at Zenith

Orientation in horizontal plane: 360°

Orientation in vertical plane: 90° (zenith)

Antenna will not be more than 20 ft above ground

Equipment Manufacturers:

TX Unit # 1: National Instruments Vector Signal Generator and Ophir Model 5150 RF Power Amplifier, Production COTs units

TX Unit # 2: Symmetricom Hail Mary 3, Not Experimental

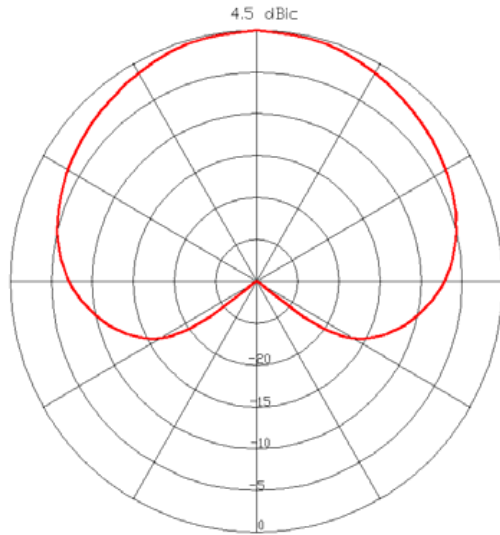
Site Location Information:
Fixed Site # 2

Naval Base Ventura County
Ventura County CA
Ventura CA

Antenna Locations: NBVC Site 24 North 34° 6' 25.4", West 119° 4' 0.3"

NBVC Site 23 North 34° 6' 25.4", West 119° 4' 0.3"

Directional Antenna Used: Yes, Conical Spiral



Half Power (3dB) Beam Width: 120°

Polarization: RHCP

Peak Gain: 4.5 dBic at Zenith

Orientation in horizontal plane: 360°

Orientation in vertical plane: 90° (zenith)

Antenna will not be more than 20 ft above ground

Equipment Manufacturers:

TX Unit # 1: National Instruments Vector Signal Generator and Ophir Model 5150 RF Power Amplifier, Production COTs units

TX Unit # 2: Symmetricom Hail Mary 3, Not Experimental