

Technical Data for Airborne Pulse Radar

- Airborne maximum altitude: 10000 ft (3.048 km)
- Airborne transmit parameters
 - Transmit type: pulse radar
 - Frequency : 200 MHz contiguous spectrum within the 220- 450 MHz band and the 1000-1500 MHz band
 - Channel bandwidth: 200 MHz
 - Transmit RF power (input to antenna)
 - Peak: 1.5 kW
 - Mean power: 90 W
 - Transmit antenna gain:
 - 220-450 MHz: 6 dBi (peak) or 4 dB in main beam
 - 3 dB beam width: 76 degrees in Horizontal and 66 degrees in Vertical
 - Transmit antenna patterns are shown in Figure 1 (attached)
 - In the 1000-1500 MHz: 13.5 dBi (peak)
 - 3 dB beam width: 28 degrees in horizontal and vertical
 - Transmit antenna patterns are shown in Figure 2 (attached)
 - Transmit EIRP
 - 220- 450 MHz:
 - Peak power: 37.76 dBWi – Beam center
 - Mean power: 25.5 dBWi – Beam center
 - 1000-1500 MHz:
 - Peak power: 45.26 dBWi – Beam center
 - Mean power: 33 dBWi – Beam center
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 - Polarization: Dual polarizations- Horizontal and Vertical
 - Modulation: Linear FM pulse
 - Transmit filter: programmable notch filter can be engaged to provide additional attenuation of out-of-band emissions or to protect designated frequencies within the 200 MHz bandwidth
 - Emission designator: 200MQ3N
 - Frequency tolerance: 1 ppm
 - Class of station: Aeronautical Mobile
- Location: Jasper Ridge, CA
 - Longitude: 122° 13' 23' West; Latitude: 37° 24' 49' North
 - Actually the experimental area is 5 km
 - Experimental duration: maximum of 2 hours per experiment
 - One experiment within the period 15 – 20 Dec 2008
 - Subsequent experiments to be determined.

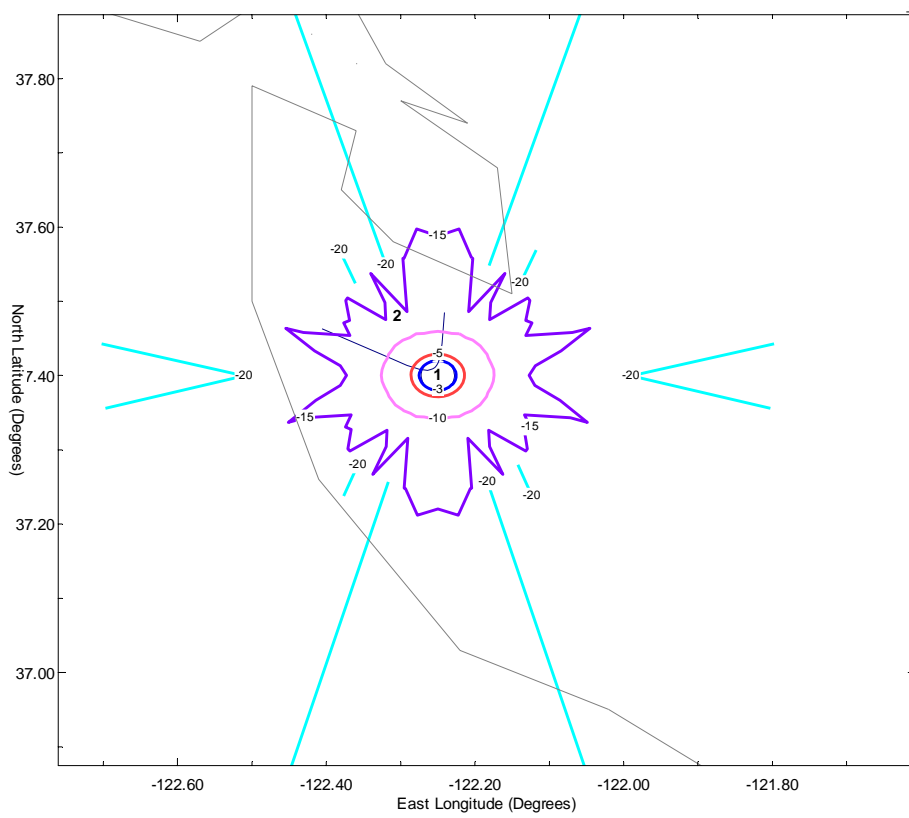


Figure 1: Airborne Transmit Antenna Patterns (Freq.: 200 MHz; Antenna peak gain: 6 dBi)

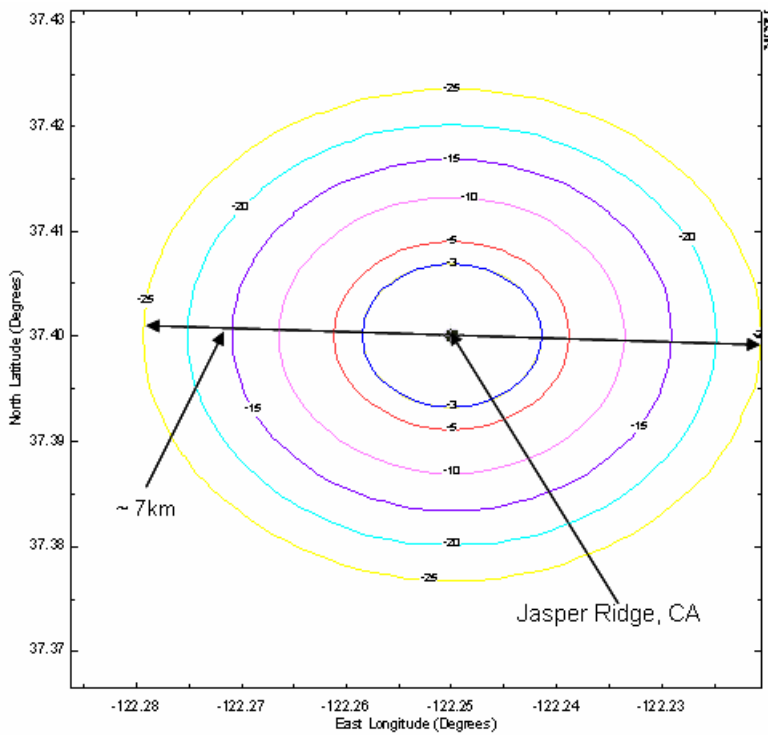


Figure 2: Airborne Transmit Antenna Patterns (Frequency: 1 GHz, Antenna Peak Gain: 13.5 dBi)