

Pointing Angle of Transmitter:

The system is a radar interferometer with one transmit antenna and three or four receive antennas. All antennas are AESA - active electronically scanned array. Each antenna can scan its beam electronically to any angle between the mechanical boresight and 45 degrees away from the boresight. The boresights of all antennas are parallel with respect to each other. Total range of electronic scan capability fills the volume of a cone with a radius of 45 degrees.

All antennas including the transmit antenna are installed on a single truss. The truss can be physically rotated in azimuth and elevation to point the mechanical boresights of the antennas in the desired elevation and azimuth for system testing. Antenna boresight elevation can be pointed to any angle between the horizon and 70 degrees above the horizon. Antenna boresight azimuth can be pointed to any direction within a 360 degree circle, with the radar interferometer at the center of the circle.

The pointing angle of the antenna beam being transmitted is a combination of the physical pointing angle of the antenna mechanical boresight and the electronic scan angle of the ASEA transmit antenna array.

Operations:

The radar interferometer is designed to be used as a truth sensor to support weapon systems testing at United States Department of Defense test ranges including the Army Yuma Proving Ground and the Army White Sands Missile Range. The interferometer will track airborne targets (manned and unmanned aircraft, missiles, gun launched projectiles, and mortar projectiles). The track Data will be recorded and used for evaluating weapon system performance.

Initial integration and testing needs to be performed at our facility in Brea, California. Initial testing requires transmitting to track aircraft targets of opportunity to verify system operations. For tracking we will operate the system from the east side of our facility in Brea, California. Operations will be intermittent as targets come within view of the interferometer. The interferometer is installed on a trailer and pulled outside the building for tracking tests. In general, the system is outside a few hours each day. For most testing the system will only be transmitting a few minutes out of every hour as aircraft fly within view of the system.