

MMA-India SAR/Navigator Flight Test

APY-10(I) Radar (India P-8I)

Starting Point:

APY-10 Radar for the P-8A



Modify APY-10
Radar per Boeing
Radar SCD

- New Capabilities
- Export Restrictions



Boeing P-8I

APY-10(I) Radar for P-8I

- Modify APY-10 Radar for Export to India
 - Modify Radar navigator to remove accumulated carrier phase and revert to earlier, less sophisticated navigator
 - Remove Precision Targeting capability
 - Remove UHR ISAR capability
 - Remove 1 and 3 foot SAR capability
 - Limit performance to meet 30 meter SAR geo-location accuracy
- Add an Interleaved Weather Capability
- Add an Air-to-Air Target Detection / Tracking Capability

Flight Test Overview

- Raytheon contracted to demonstrate key requirements of the modified radar via flight test
- The Navigator and image generation for SAR and ISAR modes are tightly coupled and the primary reason for flight test
 - Less precise navigator is required by customer requirements
 - Imaging performance can only be demonstrated via flight test
- Sherman, TX area of operations
 - SAR imaging of flat and hilly land areas
 - Interleaving pilot and radar operator displays
- Gulf of Mexico area of operations
 - ISAR imaging of maritime targets of opportunity
 - Surface detection of maritime targets of opportunities
 - Data collection for Air to Air mode algorithm verification in blue water and light littoral areas
- McKinney, TX
 - Air to Air mode ground testing for detection of airborne targets of opportunity

Imaging performance can only be demonstrated via flight test

North Tx Flight Path (typ)



Test Aircraft



- Airborne Resources
Convair C-131 B
 - military version of the Convair 340
 - Built for airborne electronics equipment testing
- Design of equipment required to install radar equipment is in work