

## MMA-India SAR/Navigator Flight Test

#### Raytheon **Space and Airborne Systems** APY-10(I) Radar (India P-8I) **Starting Point:** APY-10 Radar for the P-8A Modify APY-10 Radar per Boeing ACE XMTR Radar SCD New Capabilities ANT Export Restrictions RDC Boeing P-81 APY-10(I) Radar for P-8I

Modify APY-10 Radar for Export to India

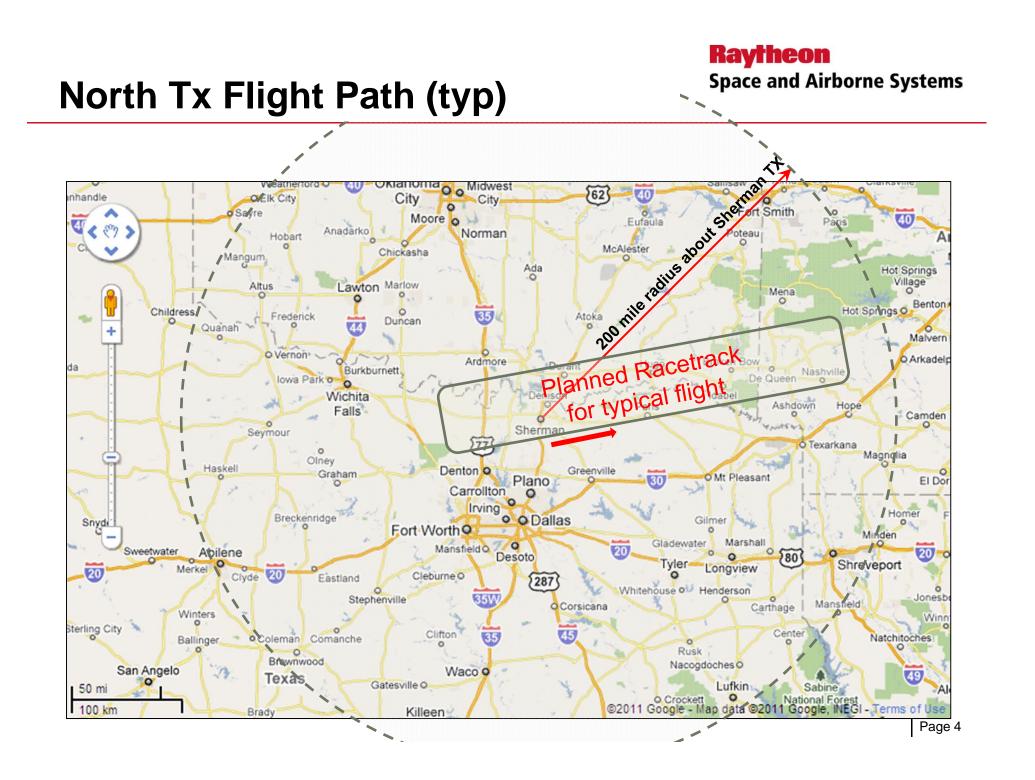
- Modify Radar navigator to remove accumulated carrier phase and revert to earlier, less sophisticated navigator

- 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



#### **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