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CARRIE (M7245) Highlights

- DARPASAT (U) conceived as experimental satellite providing direct support to warfighters.
  - Planned mission lifetime = 1 year: Actual = 8 years until re-entry.
- Spinning platform geolocated selected targets in 100 - 850 MHz band.
- Provides on-board recognition, geolocation determination and report generation.
- Demonstrated that a spaceborne collector could be operated as an organic asset for fielded military users
  - Rapid, direct & assured tasking
  - Immediate access to all data collected
- On orbit operational software was fully reloadable.
  - 2 complete uploads of enhanced software increased throughput & recognition capability.
- Launched as rideshare on 1st TAURUS March 13, 1994; 1st day antenna deployment
- CARRIE has provided a unique collection capability at low frequencies.
  - Found evidence of heritage Soviet systems still operating in Cuba.
  - Geolocated previously uncopied, unidentified emitters in Russia, North Korea, Cuba, Chechnya, Bosnia, Serbia, Afganistan.
- EDO(AIL) designed & built complete payload: flat spiral antennas, receivers, processor hardware & software.
- Ball Aerospace provided inertially spinning bus
- ~24 month, ~$35M build program

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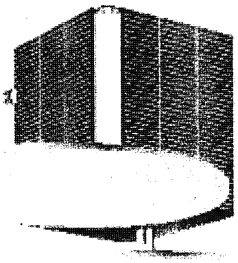
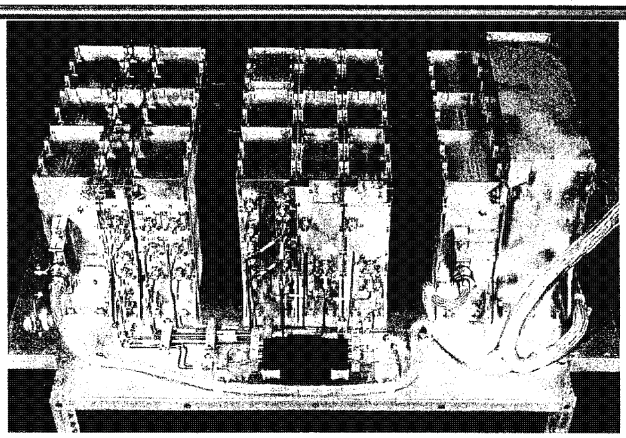
CARRIE Payload Characteristics





- **Spinning Interferometer:** Two Flat spiral antennas
  Two superheterodyne receiver channels
  Processor using C30 CPUs @ ~3 MIPS
- **Frequency Range:** 100 to 850 MHz
- **Frequency Accuracy:** 1 KHz
- **Frequency Bandwidth:** 12.5, 50, or 100 KHz (Selectable) 25X1
- **Geolocation Accuracy:** [redacted] (Typical with 0.4^0 attitude accuracy)
- **Detectable Ground ERP:** As Low As [redacted]
- **Modulations:** [redacted]
- **Payload Electronics:** 60 pounds; 60 watts

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