The Center for Interdisciplinary Remotely-Piloted Aircraft Studies (CIRPAS) provides Manned and Unmanned Air Vehicle flight services to the scientific and engineering communities.

CIRPAS became an University National Oceanographic Laboratory System (UNOLS) National Facility on 27 September 2002
THE AIRCRAFT FLEET

UV 18-A Twin Otter

Pelican (2)

Predator (3)
FACILITIES:

- **Marina Facility**
  - 3500 ft runway - manned operations only
  - 30,000 sq ft maintenance hangar
  - Instrumentation and Calibration Laboratory
  - Maintenance and Payload integration shops
  - Offices
CIRPAS FACILITIES:

- Camp Roberts Facility
  - Friendly airspace for UAV testing and training (R2503).
  - Military ground maneuvers (equipment, personnel)
  - 3500 x 60 ft runway
  - 2000 sq ft hangar
  - Office Space
Research Aircraft: Twin Otter

- Research Capacity: 1500 lbs
- Research Power: 5600 W at 28 VDC, 4000W 110VAC 60 hz
- Speed: 100-140 Kts
- Practical Ceiling: 18000 ft.
Twin Otter: Facility Payload

- **Nose:**
  - Temperature
  - Dew Point
  - Pressure
    - Static
    - Dynamic
  - Sideslip
  - Attack angle
  - GPS/INS
  - IR Temperature
  - Liquid Water Content
  - Aerosol Inlet
Twin Otter: Facility Payload
Wings: CAPS, FSSP, PCASP, CIP, PIP, APS
Hard points and pods for ‘research’ or ‘guest’ instruments

Aerosol and Cloud
Spectrometers
Twin Otter: Facility Payload
Cabin: Nephelometer, Sootphotometer, CPCs, UFCPC, Data System
Racks for ‘Research’ and ‘Guest’ Instruments.
CIRPAS SCIENTIFIC INSTRUMENTATION

95 GHz Cloud Radar

C-FMCW Radar System
(Ptx = 300 mW)
CIRPAS Research Instrument Example
Wind Lidar

TODWL two axis scanner
CIRPAS Research Instrument Example
Smart Towed Vehicle

Smart Towed Vehicle (STV)
NEW INSTRUMENTATION
Stabilized Radiometer Platform
NEW INSTRUMENTATION
MICRO-SIZED AIR-LAUNCHED EXPENDABLE METEOROLOGICAL SENSOR & CHAFF
NEW INSTRUMENTATION
GROUND BASED ASSETS

MWR-05X Mobile Storm Radar
Pelican
Predator Surrogate

Modified Cessna 337/O2
Configured as a true Predator Surrogate by
General Atomics Aeronautical Systems and
Zivko Aeronautics.
Ideal Training Platform, reasons:
  FAA Restrictions on UAVs
  Less Expensive to operate than Predator
  Provides realistic capabilities
Pelican enhances training by providing an asset not readily available to the unit.