

Sensor System: AMS Wildfire Instrument

AMS Wildfire Sensor

Band	Wavelength μm
1	0.42 - 0.45
2	0.45 - 0.52 (TM1)
3	0.52 - 0.60 (TM2)
4	0.60 - 0.62
5	0.63 - 0.69 (TM3)
6	0.69 - 0.75
7	0.76 - 0.90 (TM4)
8	0.91 - 1.05
9	1.55 - 1.75 (TM5) (high gain)
10	2.08 - 2.35 (TM7) (high gain)
11	3.60 - 3.79 (VIIRS M12) (high gain)
12	10.26 - 11.26 (VIIRS M15) (high gain)
13	1.55 - 1.75 (TM5) (low gain)
14	2.08 - 2.35 (TM7) (low gain)
15	3.60 - 3.79 (VIIRS M12) (low gain)
16	10.26 - 11.26 (VIIRS M15) (low gain)

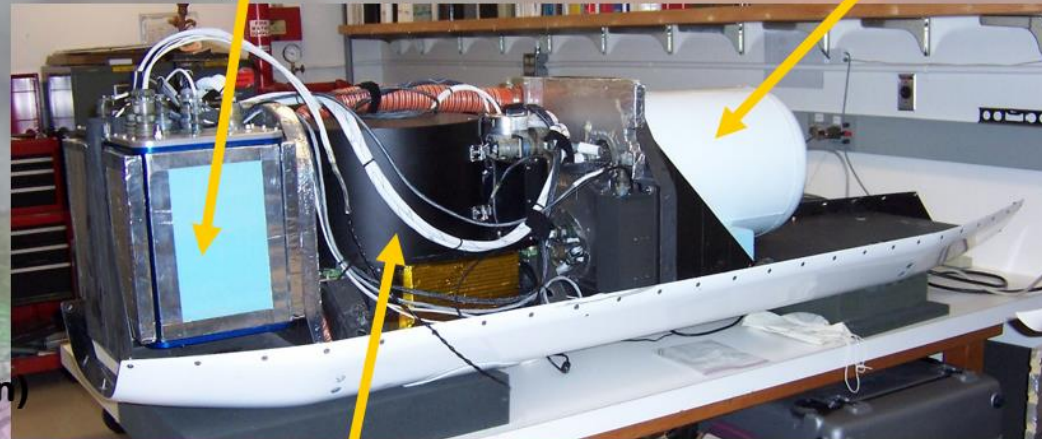
Total Field of View: 42.5 or 85.9 degrees
(selectable)

IFOV: 1.25 mrad or 2.5mrad (")

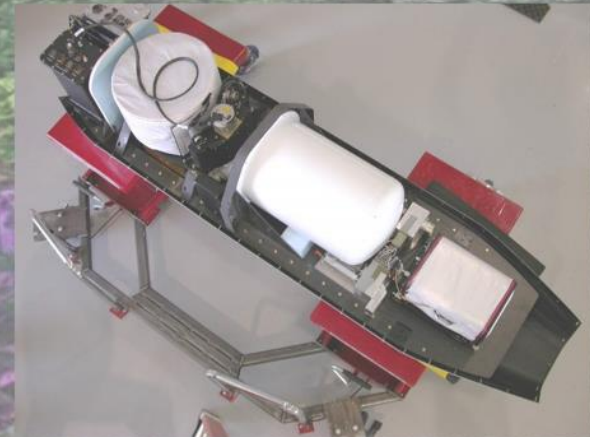
Spatial Resolution: 3 – 50 meters (variable)

Two environmental enclosures (data disks & GPS; and power supplies & controllers)

Data System Enclosure



Scan Head



Size Weight and Power (SWaP)

- **Size** – How big is the sensor?
 - Length, Width, Height
 - Shape
- **Weight** – Sensor, Batteries, IMU
- **Power** – How much power is required to run the sensor?
 - Internal power – battery pack (extra weight).
 - External power – runs off electricity supplied by UA.

Sensor Considerations

- Application
- Integration with Aircraft
 - Manufacture
 - Custom
- Positional data integration
- Stability
 - Electronic
 - Mechanical
- Data Storage
- Software Compatibility

Mounting

- Gimbals
 - Stabilization
 - Added complexity to processing
- NADIR

