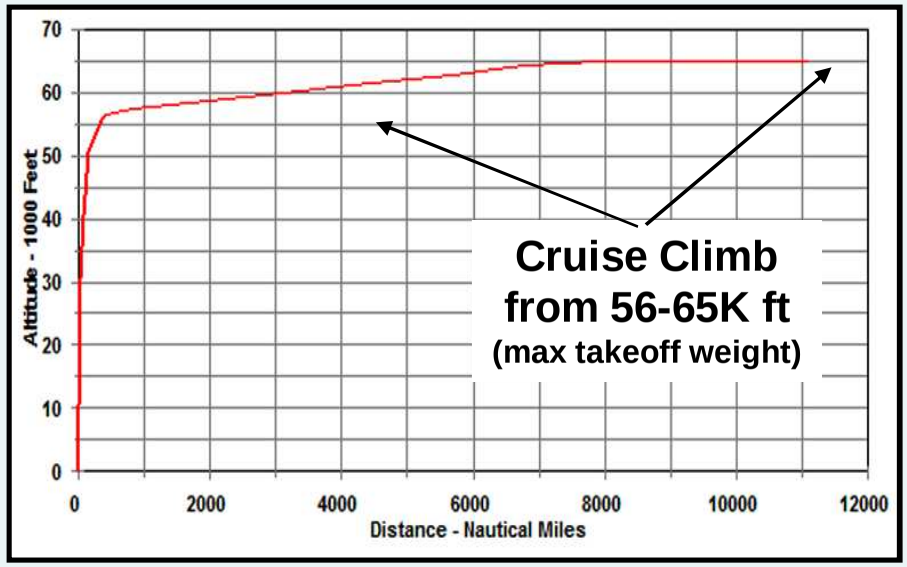
NASA Global Hawk
ATTREX Operations Overview

Dave Fratello, Payload Manager
August 26, 2010

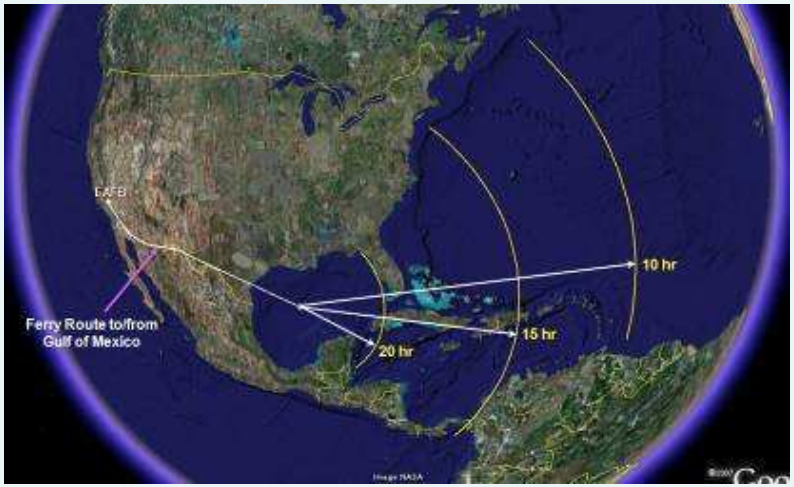
NASA Global Hawk System

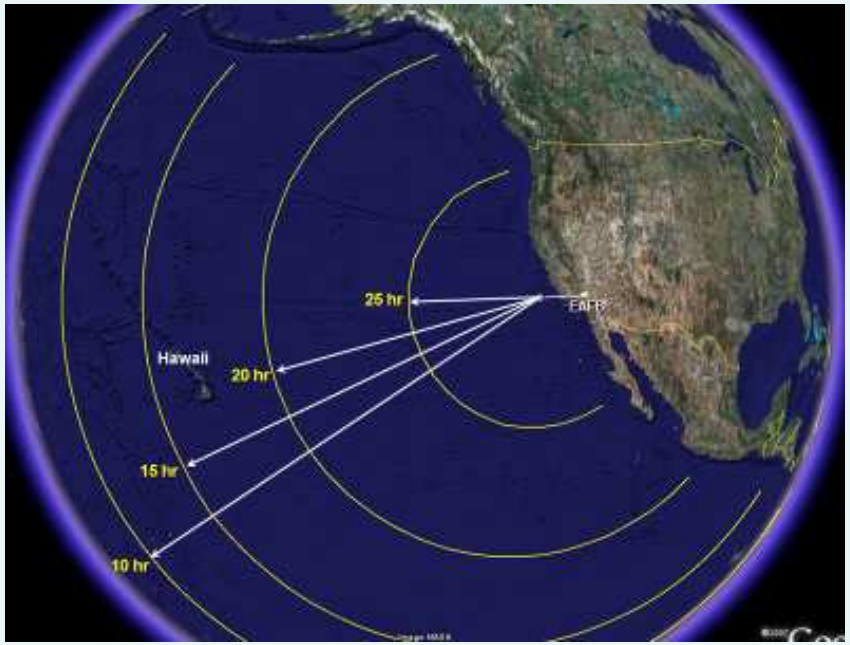
Endurance	> 30 hours
Range	>11,000 nmi
Service Ceiling	65,000 ft
Airspeed (55K+ ft)	335 KTAS
Payload	1,000-1,500 lb
Length	44 ft
Wingspan	116 ft

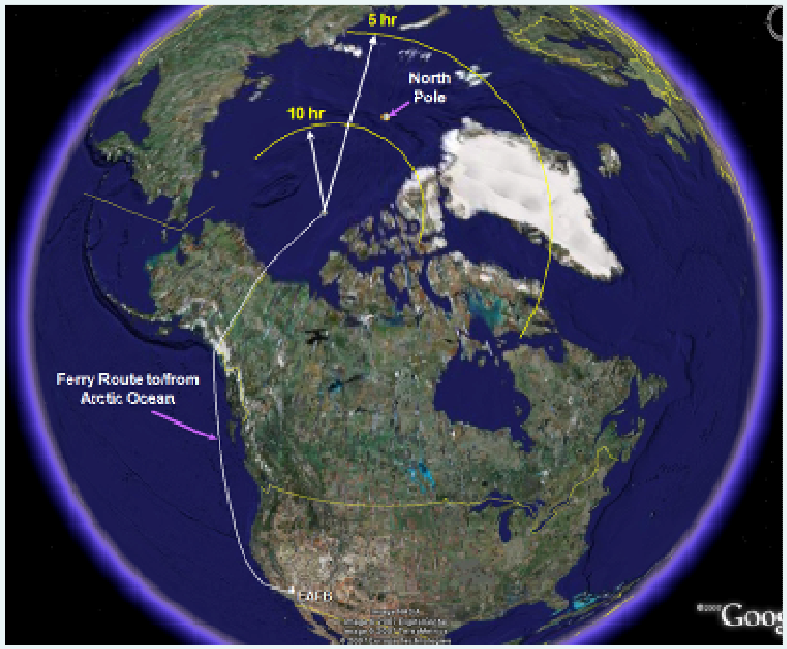


Mission Capability
(With Base of Operations at EAFB)

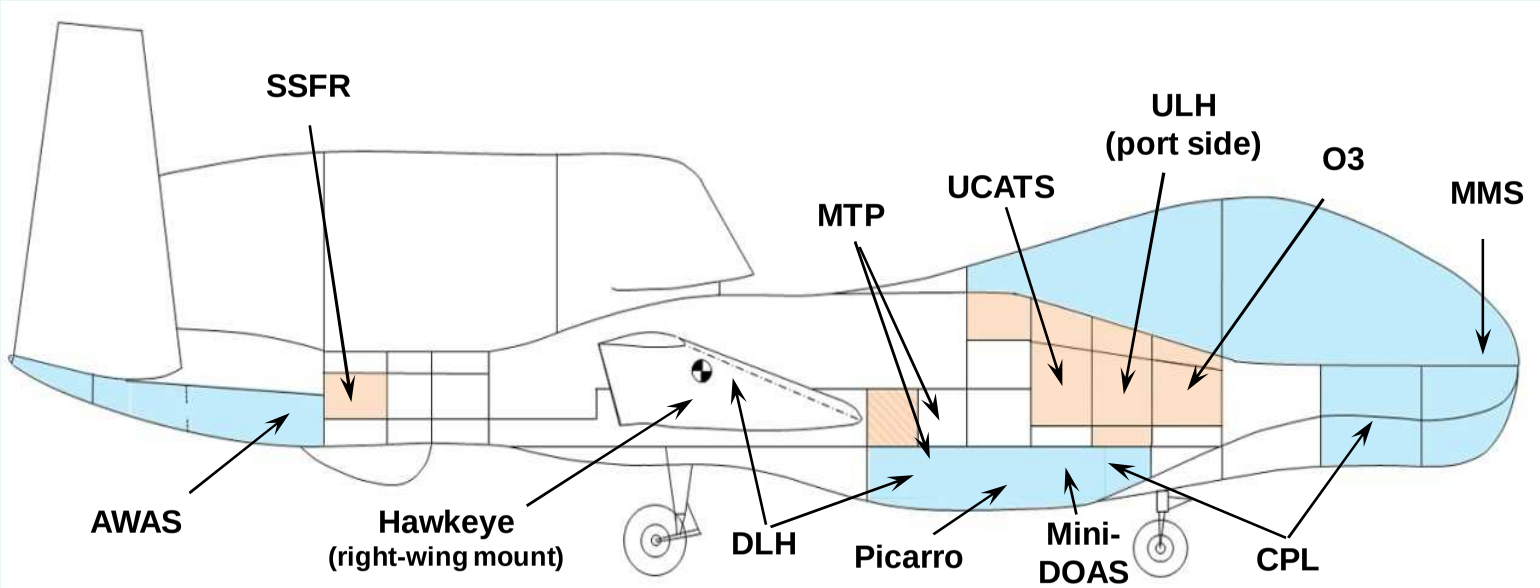
The arcs represent on-station dwell times before return to base.







Instrument Arrangement (initial)



NASA Global Hawk Operations Overview

Instrument Loading, T-16H

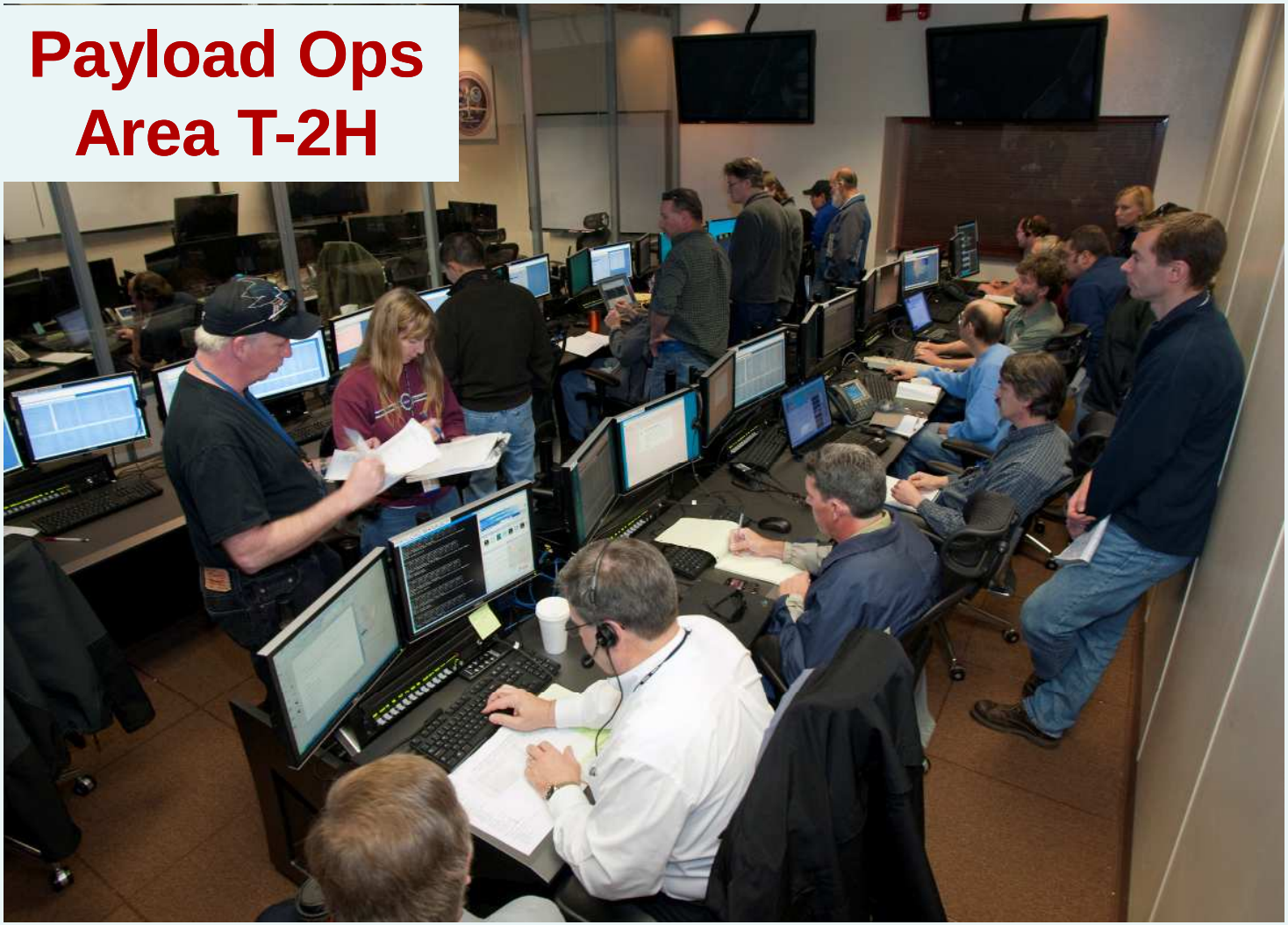
NASA Global Hawk Operations Overview

Instrument Preflight Sign-off, T-8H

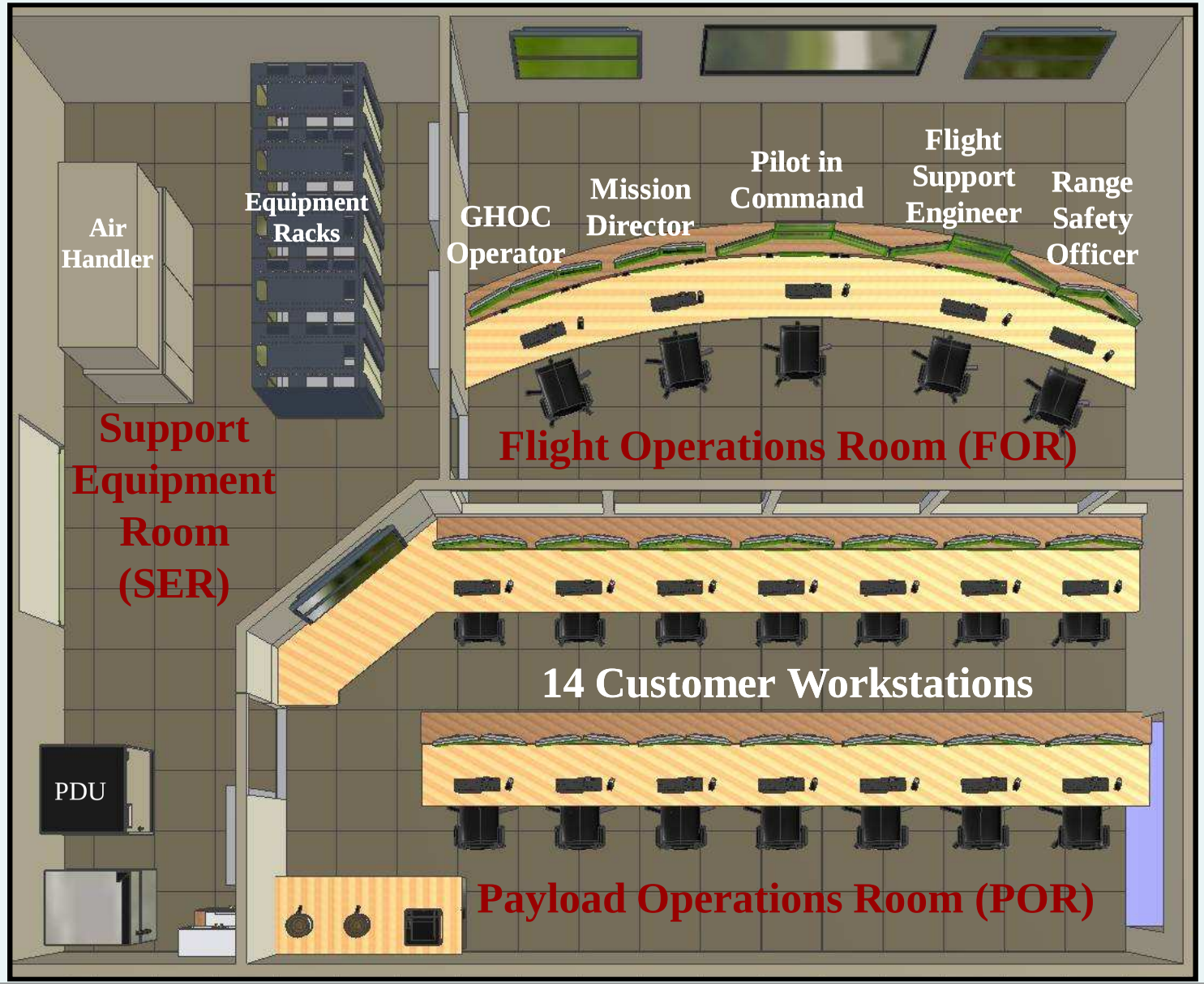
NASA Global Hawk Operations Overview

Mission Staging Location T-3H

NASA Global Hawk Operations Overview



Global Hawk Operations Center (GHOC)

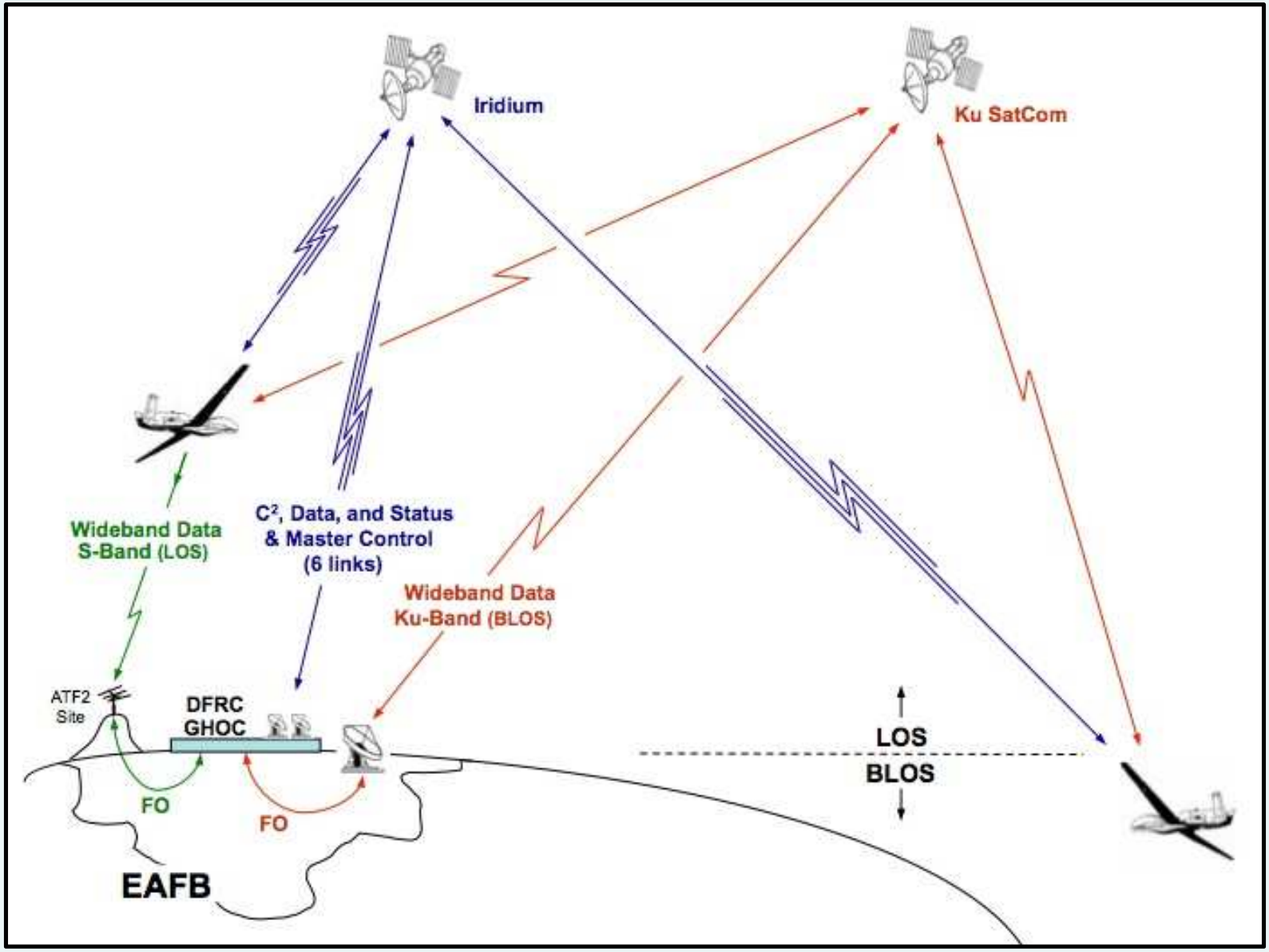


Facility Entrance

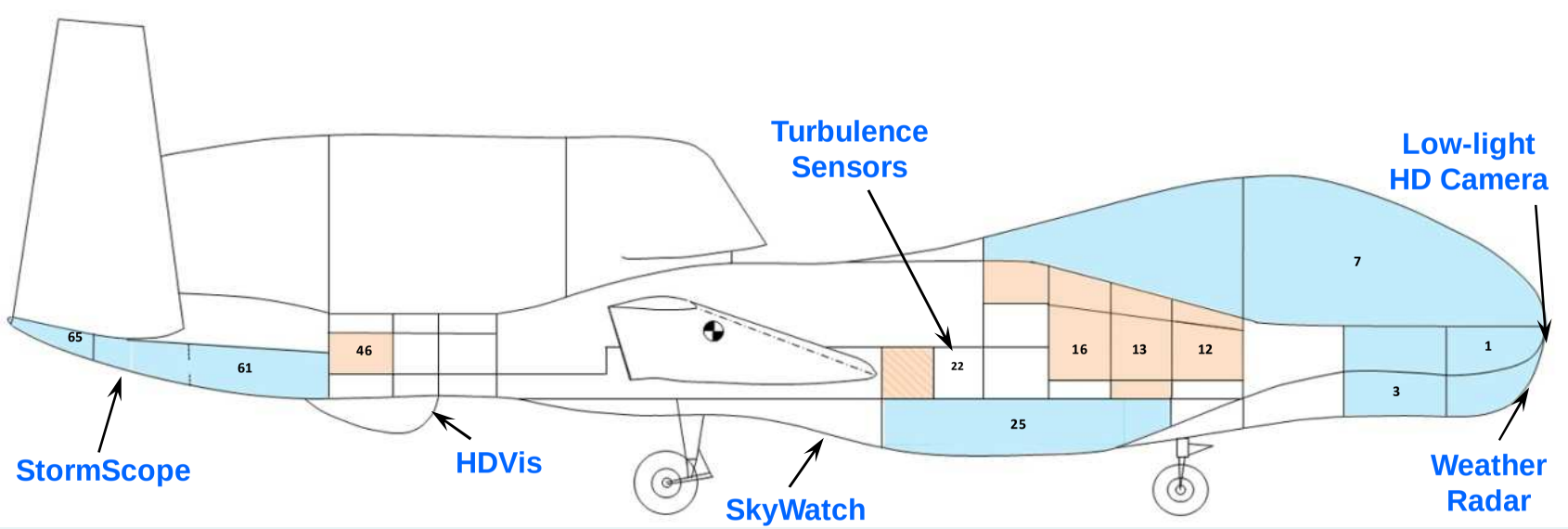
GHMOF

The GHMOF and Portable Payload Op's Trailer will be operational next year this time.

Payload Communications Architecture



Pilot Situational Awareness Enhancements



2 Cameras	-	**HDVis and HD Nose Low-light**
Storm Scope	-	**Lightning Detection Display**
Accelerometers	-	**Real-time Turbulence Time-history Display**
Weather Radar	-	**X-band Radar in Nose (proposed implementation)**
TCAS-I	-	**SkyWatch Display (proposed implementation)**

Key Op's Questions

- **Cold Temperature Fuel**
  - Several solutions being work
  - Interfacing with USAF GH Op's
- **Vertical Profiling**
  - New Power Monitoring System has resolved GloPac issues…
  - Evaluation will be made on ATTREX flight in 2011.
- **Remote Site Op's**
  - Site Visits planned
  - GH has operated from Guam
  - Key issues are IT comm's back to DFRC and Local Firewall issues – all are in work.