NASA Global Hawk

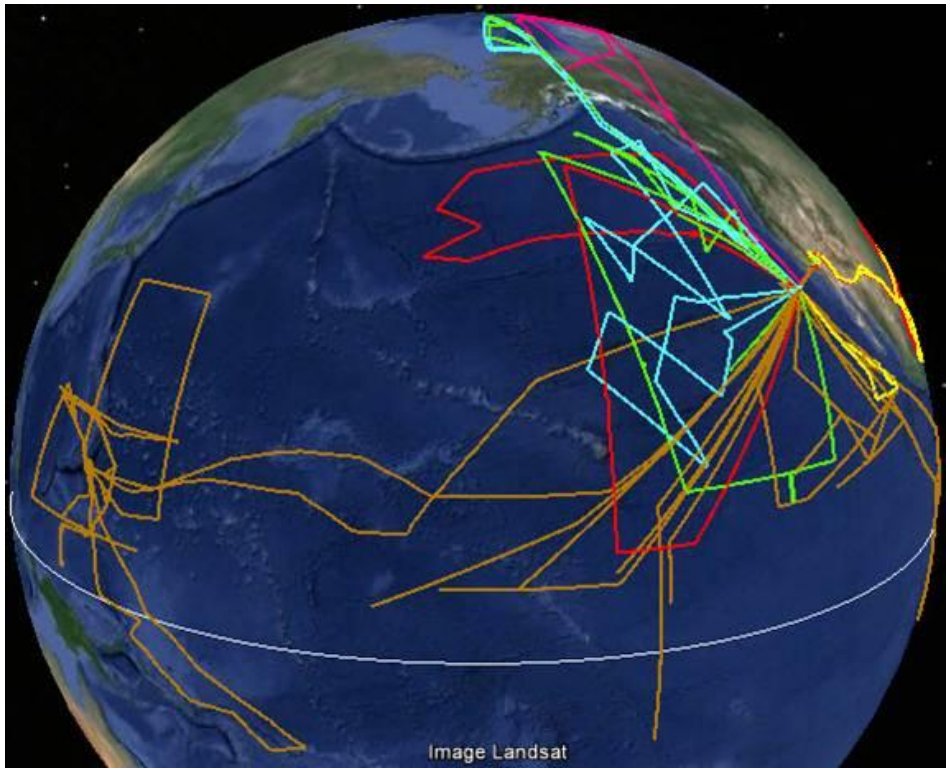
Aircraft Status, Integration, Op's, Schedule

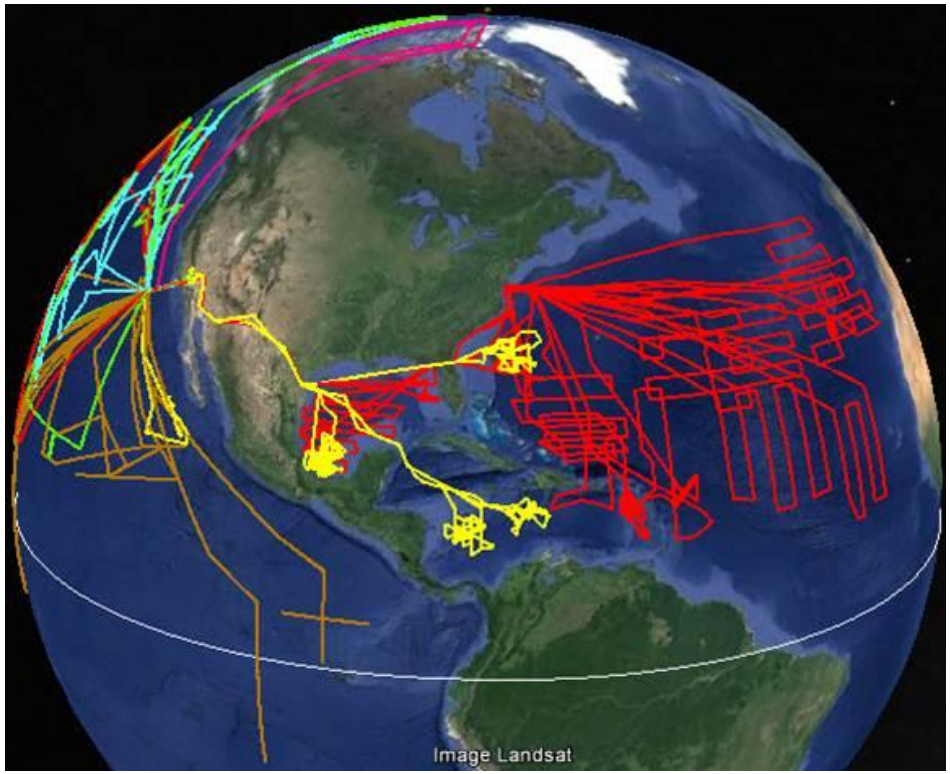
29 April 2014

Hurricane and Severe Storm Sentinel (HS3)

Science Campaign 2014

48-months of GH Science Flights:

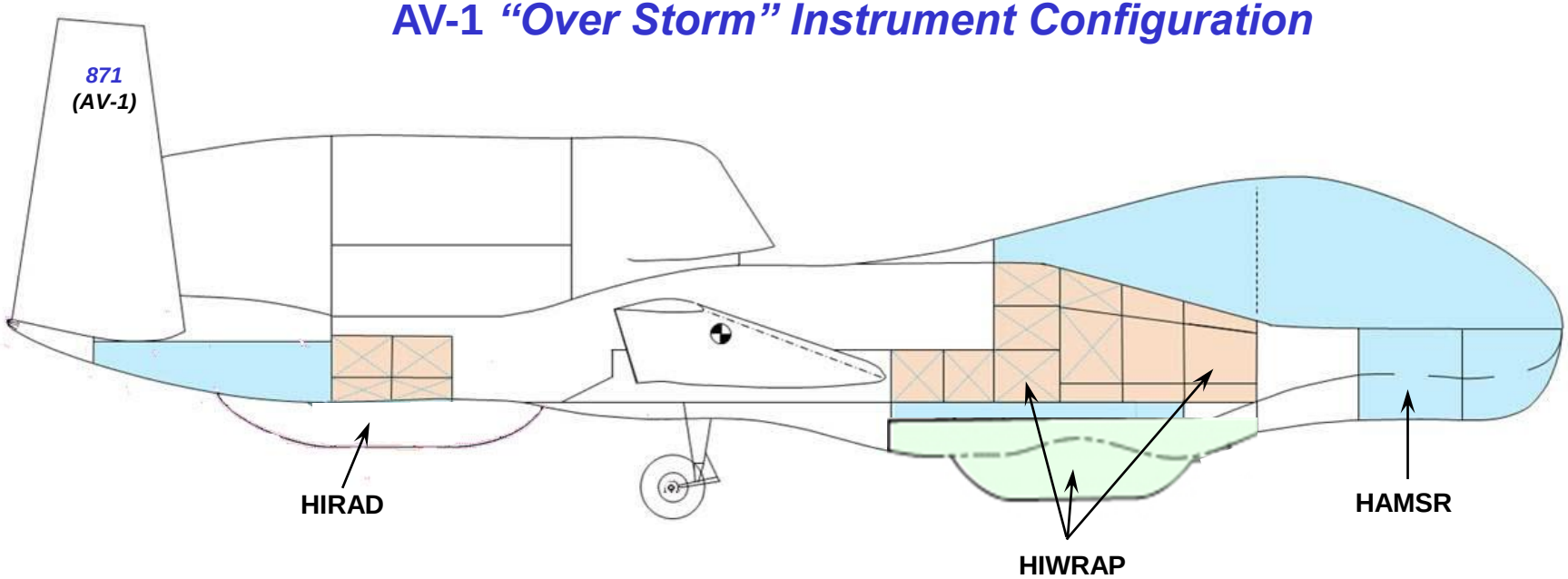




10 Science Missions, 28 Instruments,
74 Science Flights, 1232 Flt-Hrs, 740,000 Km's

HS3 Payload on AV-1

AV-1 *"Over Storm" Instrument Configuration*

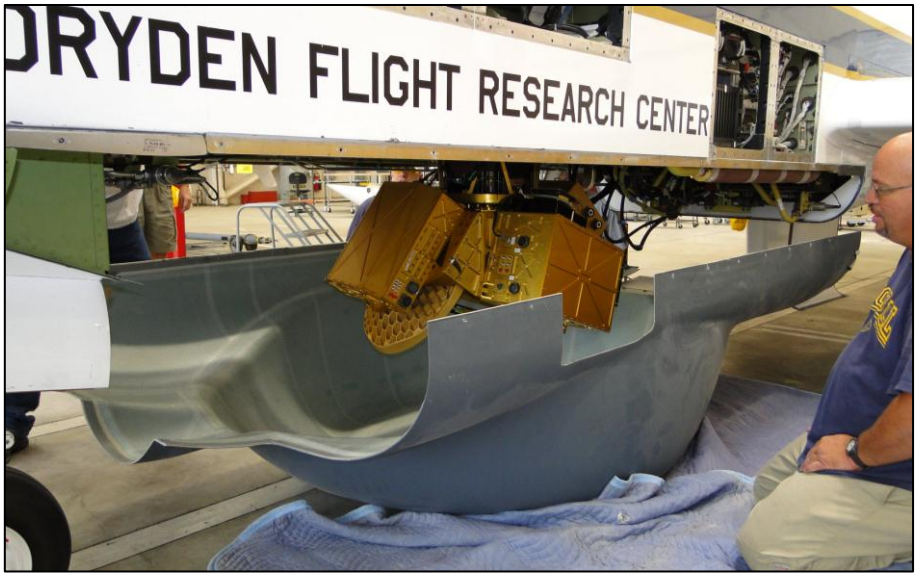


HAMSR

<u>Issues / Status</u> :

Ready

HIWRAP



Issues / Status :

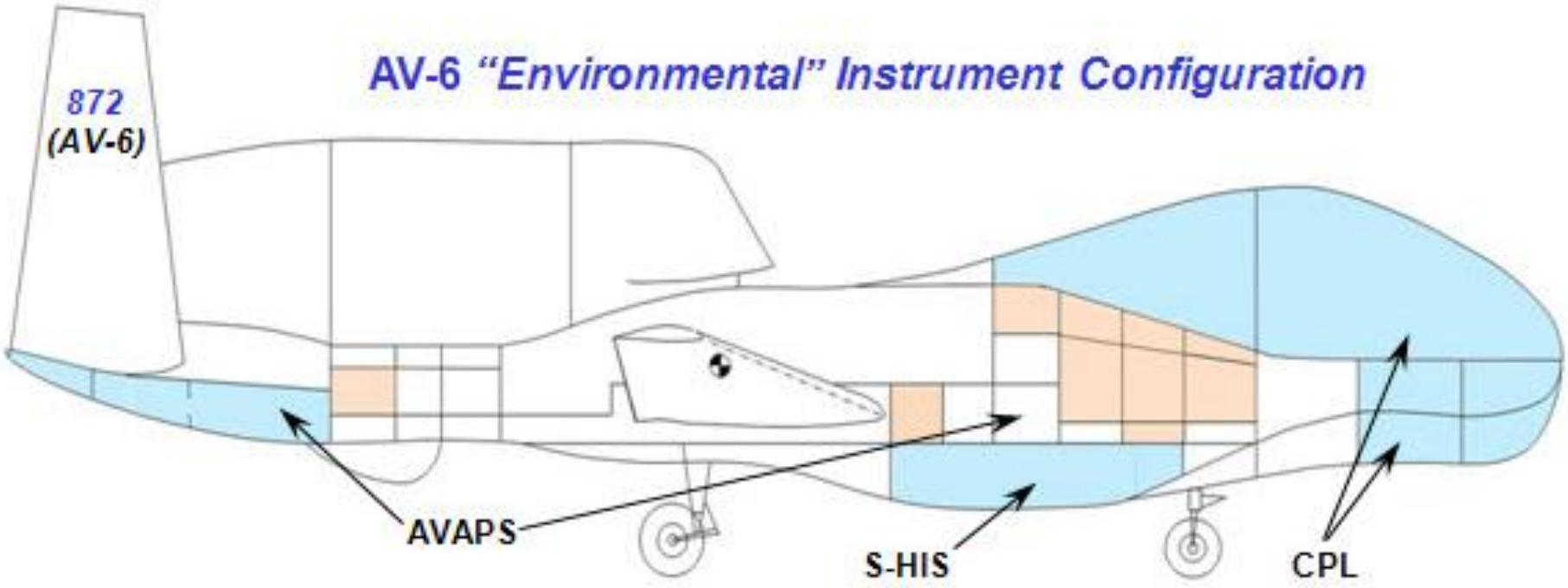
- *Battery Backup remote Command Circuit being updated with new wiring.*
- *Zone-12/16 Heat issue: Resolved with new Heater/Cmnd*

HIRAD

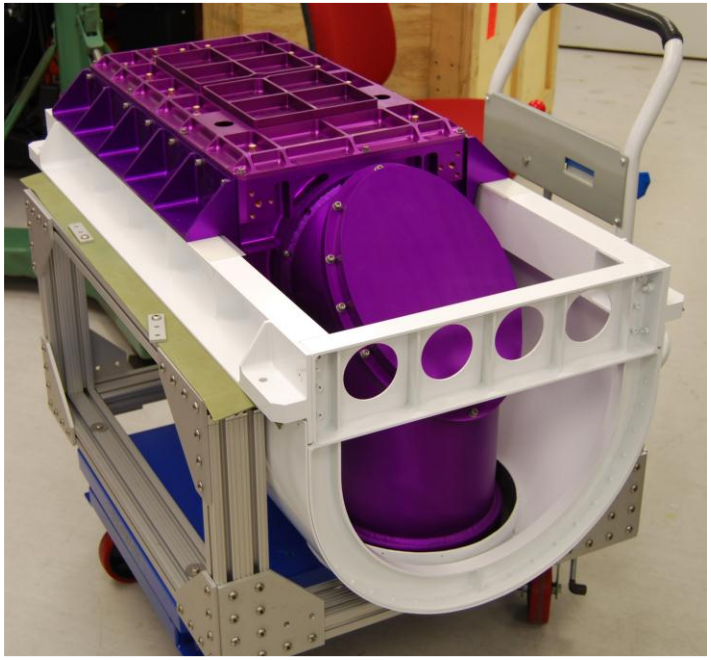
Issues / Status:

- *RF issue being reviewed*
- *Temp issue being reviewed,*
- *Evaluating inlet/exhaust on Mid-fairing*

HS3 Payload on AV-6



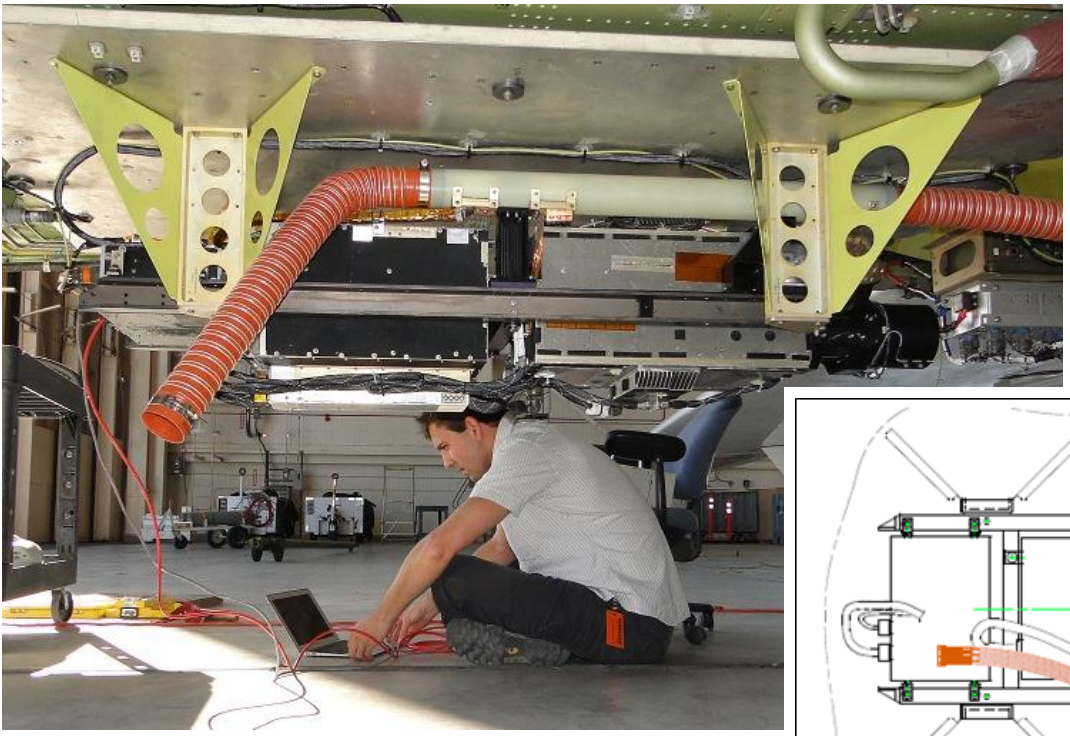
CPL

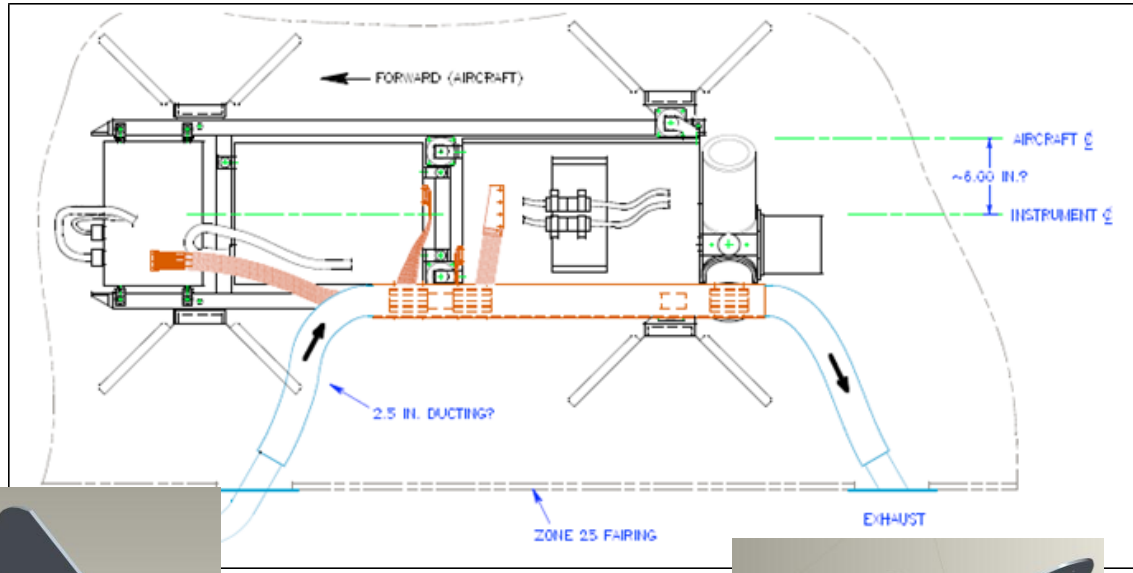


Issues / Status:

- *Laser Ops in R2508 – approved*
- *Laser Ops during over-land flight – approved*
- *FL530 Laser limitation remains.*
- *Inst. is currently at AFRC after ATTREX*

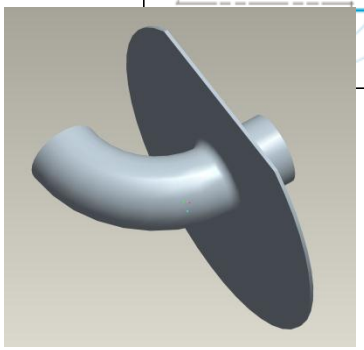
S-HIS

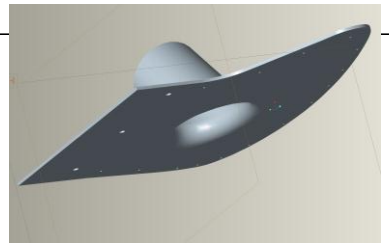




Issues / Status:

Cooling issue - resolved



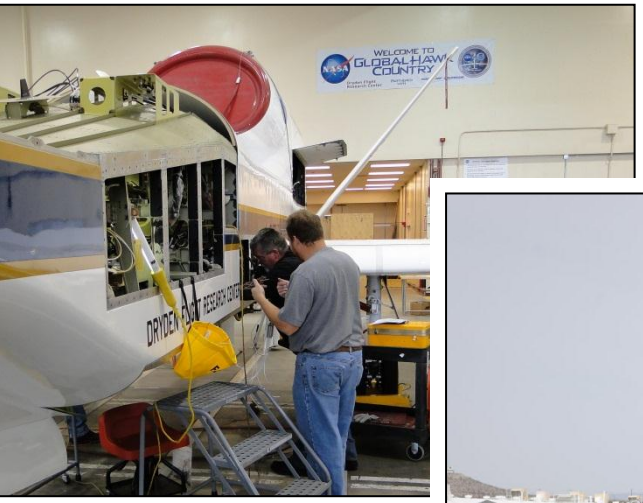


AVAPS

Issues / Status:

- *RF Issue – resolved w/Z-65 Antenna location*
- *Currently at AFRC to fly with TWiLiTE*

Integration, Testing, Safety



HS3 2014 Payload Integration

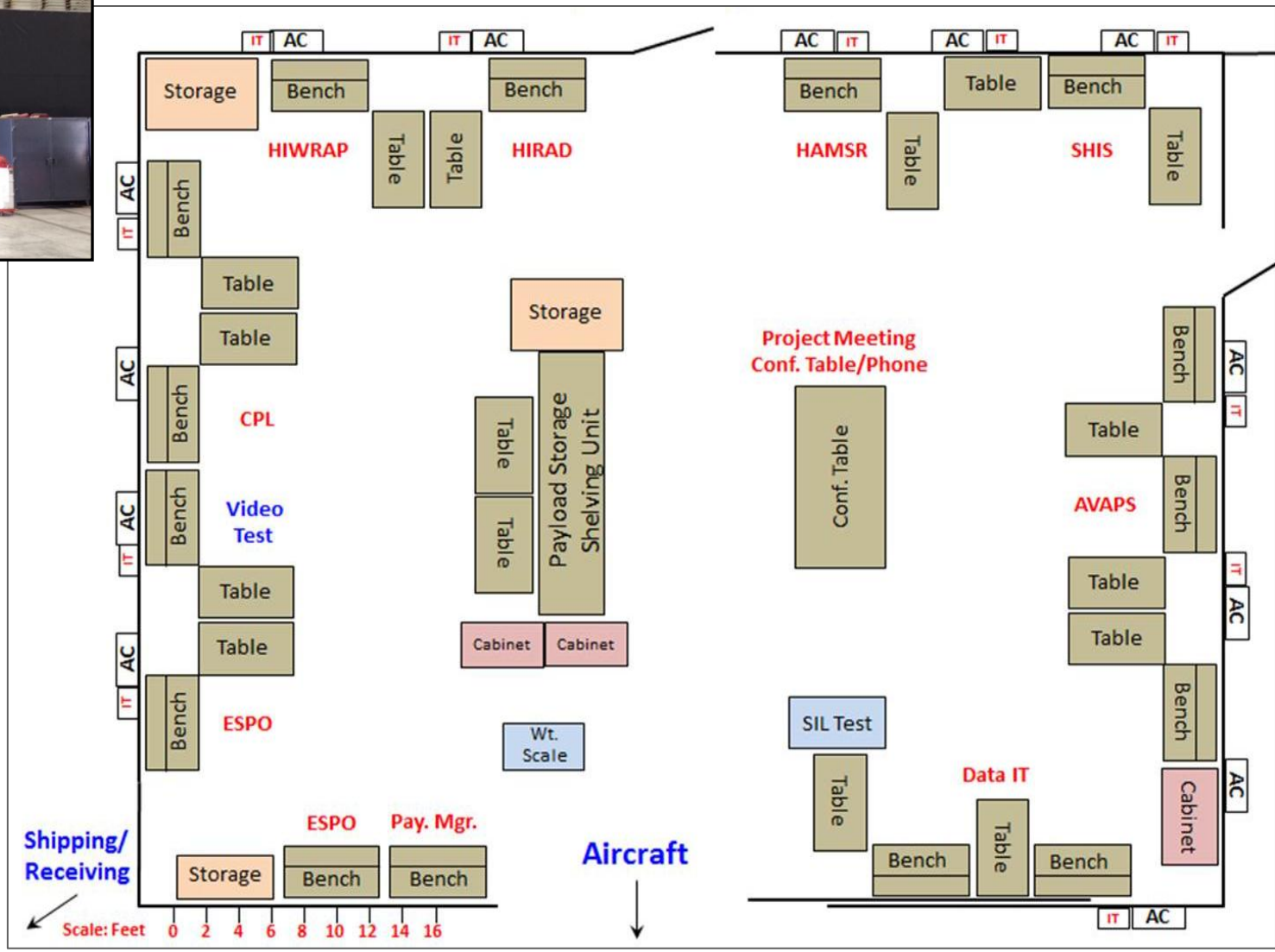
- ***Preflight Instrument Testing at DFRC***
  - *SIL-Bench Power, Safety, and Data Comm's Checkout*
    - ***All instruments will be re-weighed***
    - ***All instruments will use SIL-Bench Test Procedure***
    - ***Be sure to Contact Caitlin Barnes, Don Sullivan with any Data-IT Changes***
  - *Integration and Instrument Testing on aircraft*
    Please have the right skill set at AFRC in case of issues
  - *Outdoor SatCom Testing with PI's in GHOC-E (Pre-CST)*
  - *Formal Combined System Test with PI's in GHOC-E (CST)*
  - *Functional Tests during Range Flight w/Cold Soak*
- ***All Payload Op's shall take place from WFF GHOC-E***

GH Hangar (B-4840)

Standard GH Hangar Rules as in the Past:

- COMSEC Training req'd for Unescorted Hangar Access (WFF Training does not pass to AFRC)
- No Tools outside of the "Payload Cage" Area
- Dave F. and ESPO will coordinate Tech Support

GH Payload Area (B-4840)



Pre-Ferry Flight DFRC Op's

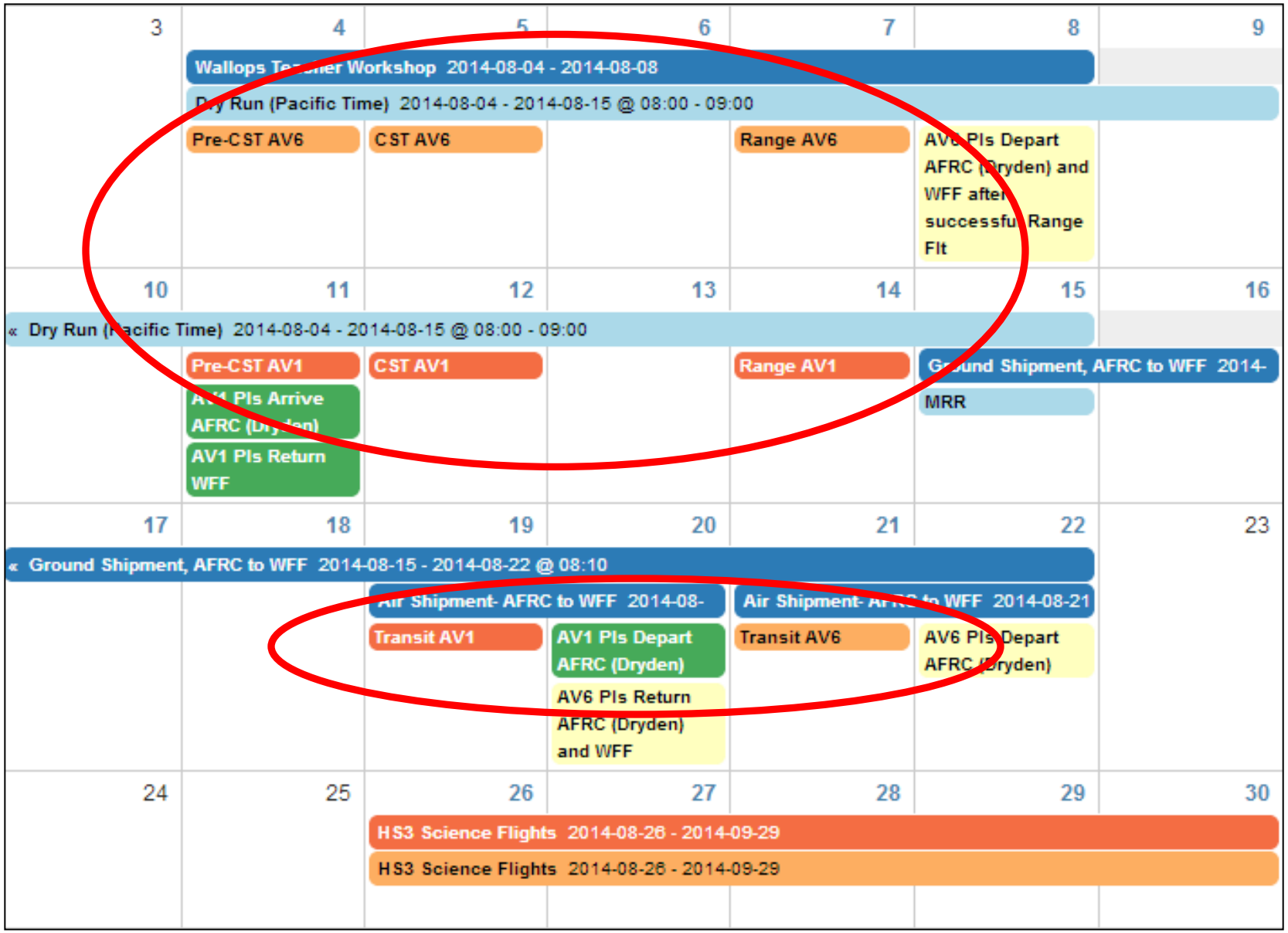
"Pre-CST":
Payload System Satcom, GHOC-E Op., and Instrument C3 Test

"CST":
Formal Aircraft EMI Test, Preflight Op. with Engine Run

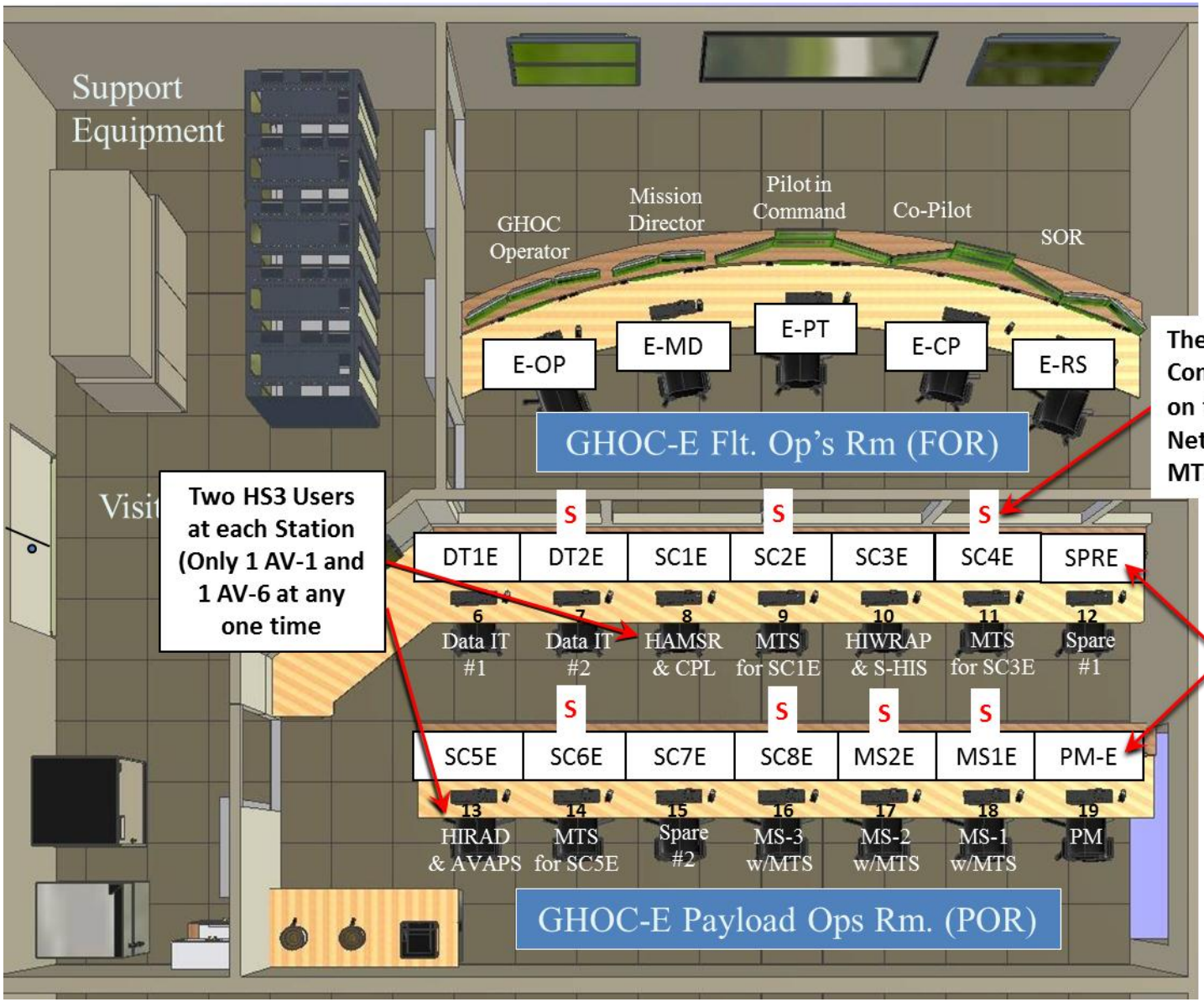
Schedule – July '14

29	30	1	2	3	4	5
6	7	8	9	10	11	12
13	14	15	16	17	18	19
	AV1 Integration, Hangar & IT Testing 2014-07-14 - 2014-07-18					
	AV1 PIs Arrive AFRC (Dryden)					
20	21	22	23	24	25	26
AV1 PIs Arrive WFF	AV6 Integration, Hangar & IT Testing 2014-07-21 - 2014-07-25					AV1 PIs Depart AFRC (Dryden)
	AV1 Outdoor Testing 2014-07-21 - 2014-07-25					AV1 PIs Depart WFF
	AV6 PIs Arrive AFRC (Dryden)					
27	28	29	30	31	1	2
AV6 PIs Arrive WFF	AV6 Outdoor Testing 2014-07-28 - 2014-08-01					

Schedule – August '14

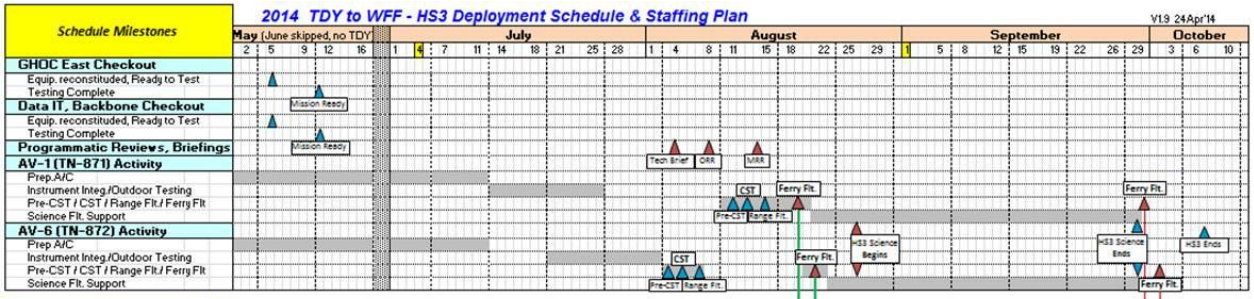


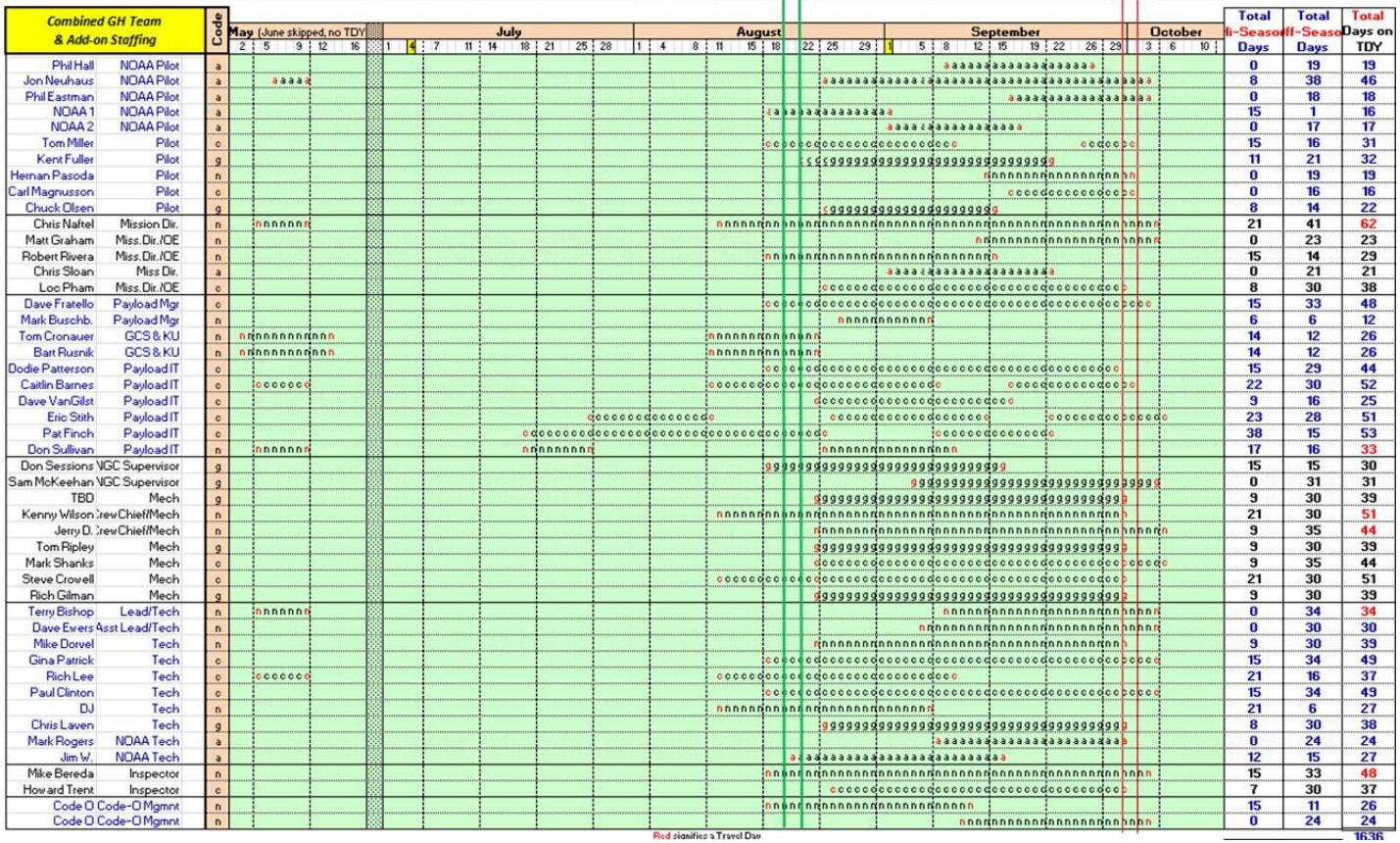
GHOC-E Station Assignments



GH Team Staffing – Ops Tempo

AFRC GH Deployed Staff at WFF for 2014: ~1635 "Man/Days" – increase of 320 from 2013.





Highlights of Key Issues

- **Fuel – decision to use "low freeze point" fuel**
  - **- AV-1 flight to Gulf of Mexico shortened due to fuel temp**
  - *** Low Freeze Pt. JP8 Fuel (~ -72 deg) has been identified at Puget Sound and is being procured and will be used on all flts**

- **On-board Camera functionality is being improved (from horrible)**
  - **- Low-light Nose Camera**
  - **- HDVis on AV-6**
  - **- Need HDVis "equivalent" on AV-1 with HIRAD**
  - *** New Work is ongoing in all three areas**

HDVis & Low-Light Nose Pics

Highlights of Interest

- **Aircraft Mission Ops**
  - *** Update…**
    - **LCDR Jon Neuhaus, Lead GH Pilot**

- **AV-1 Altitude Capability**
  - *** Significant progress being made….**
    - **Mark Buschbacher, GH Chief Engineer**

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