



NAV CANADA
CPWG 17
Samara, Russia
June 3-6, 2014

SERVING A WORLD IN MOTION



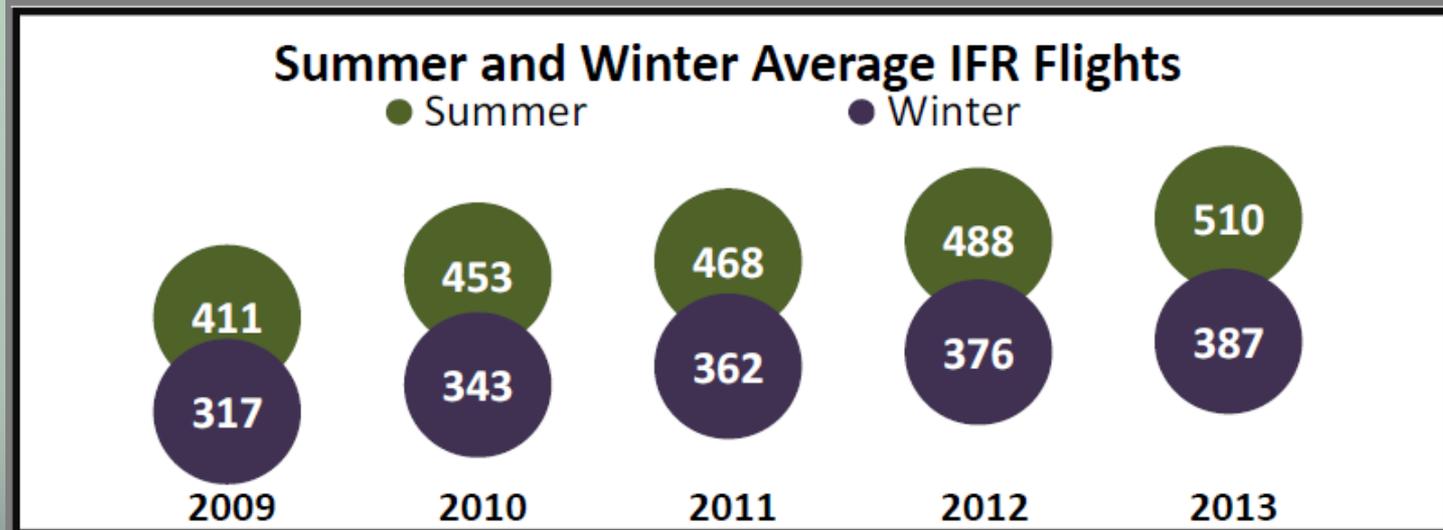
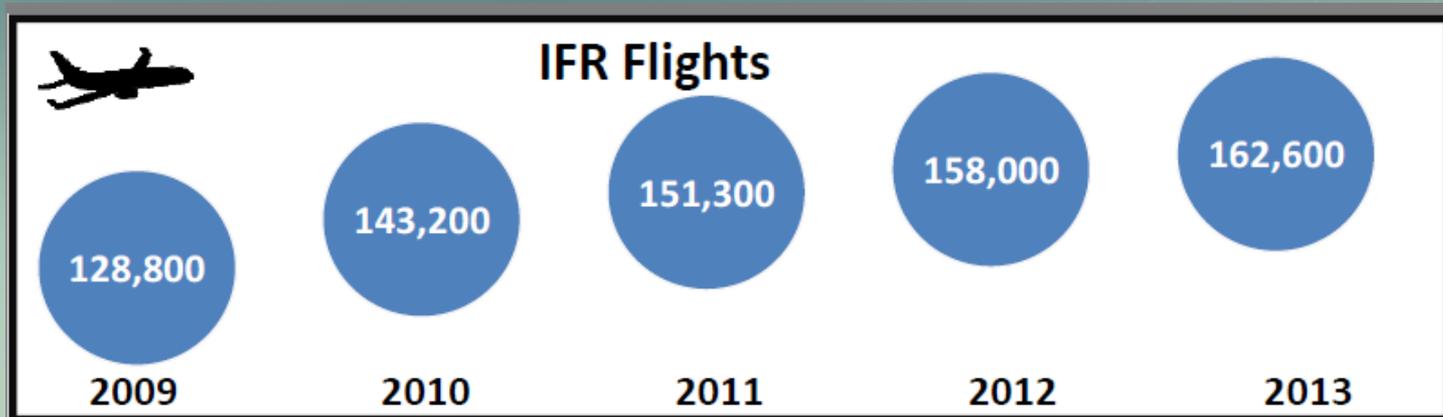
Key Polar Highlights

- Polar flights up 5.3%
- Overall Arctic High Traffic up 2.9%
- Expansion of User Preferred Routes
- Arctic Airspace changes
- AID-C Planning
- SAT ADS-B Support

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Arctic High Traffic



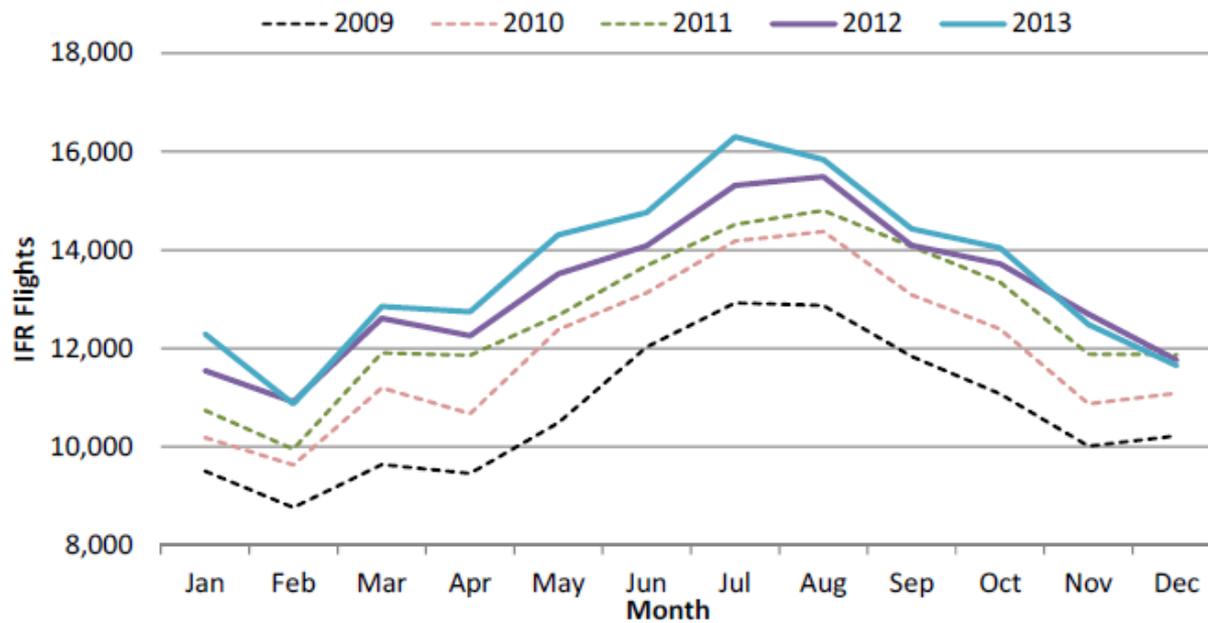
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Arctic High Traffic

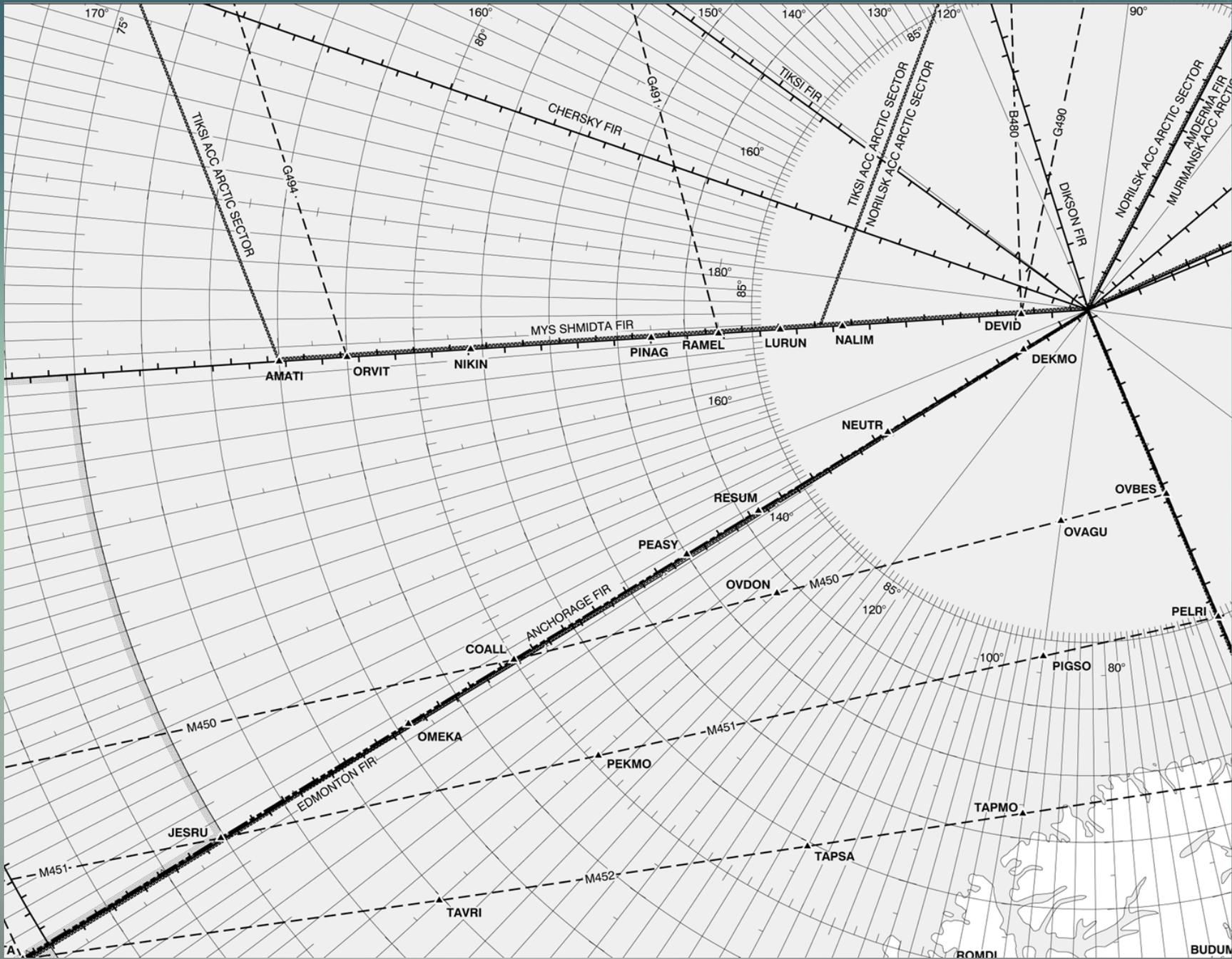


IFR Flights 5 Year Comparison



Customer Support

- Continued expansion of Customer Preferred Routing
 - In depth route planning
 - Route Efficiencies
 - NCA Lima, Hotel and November
 - 5 letter waypoint names
- Efficiency at ANC and Russian entry points
- Reach out to remaining customers



Arctic High Sector Changes

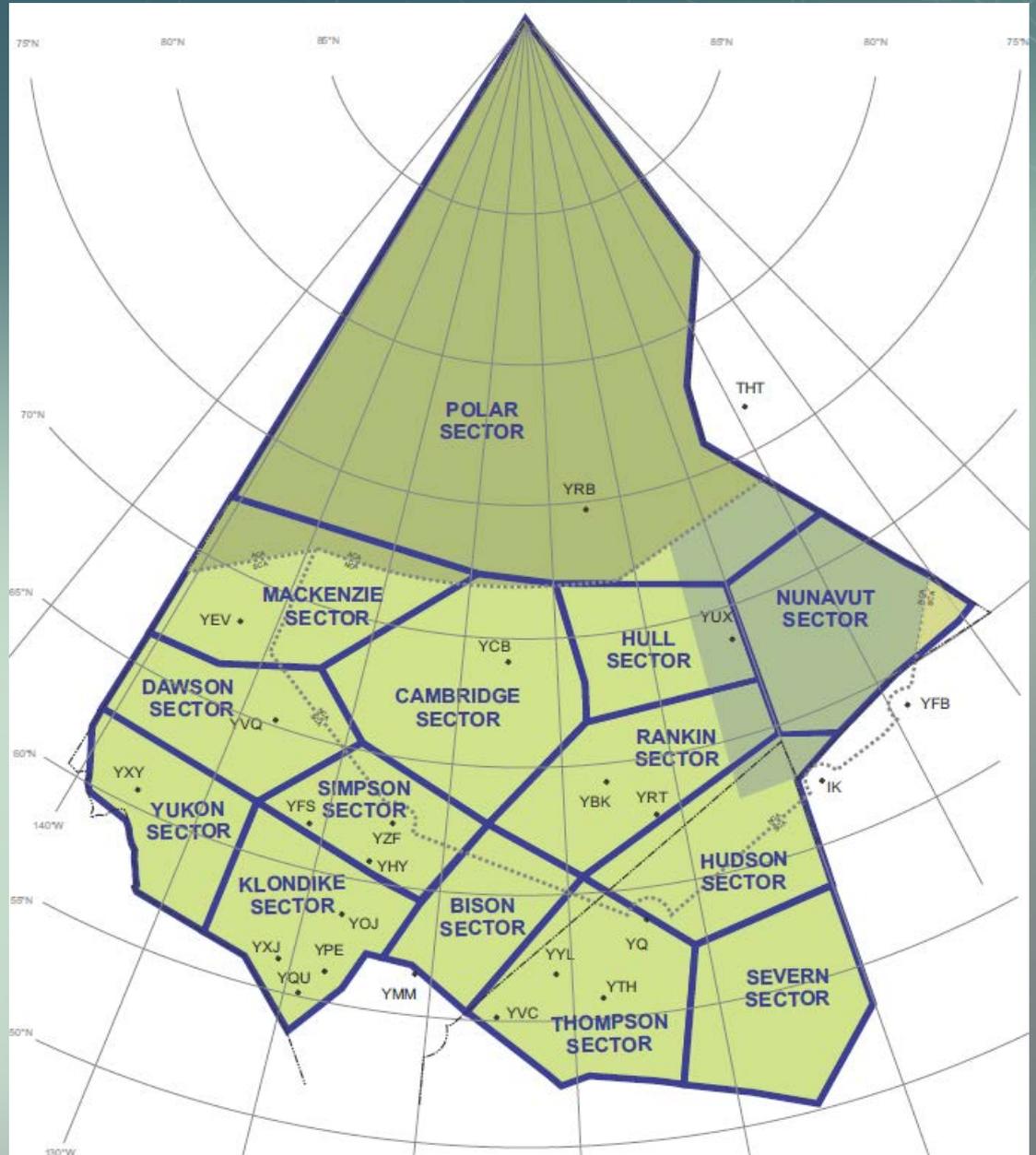
- Changes went into effect April 2014
- Aligns sectors with User Preferred Routes
- Reduces need to split off sectors in quiet traffic
- Better coordination procedures
- Efficient use of existing frequencies
- Add to overall efficiency of the airspace

Arctic High Specialty

New Sectors April 25

No training required

Small boundary tweaks

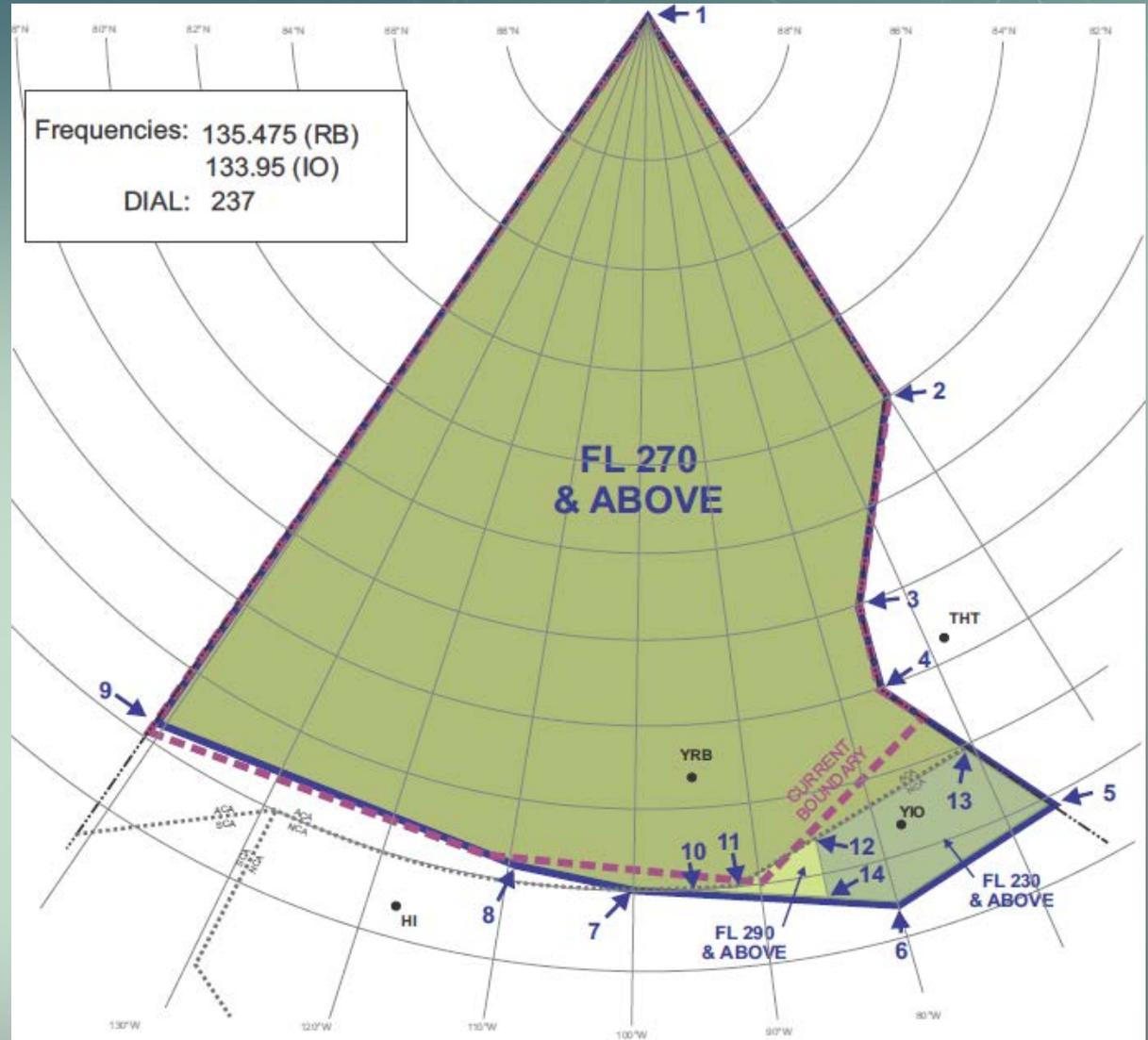


Polar Sector

Small piece added

Less coordination

More consistent
traffic flows



AID-C Implementation

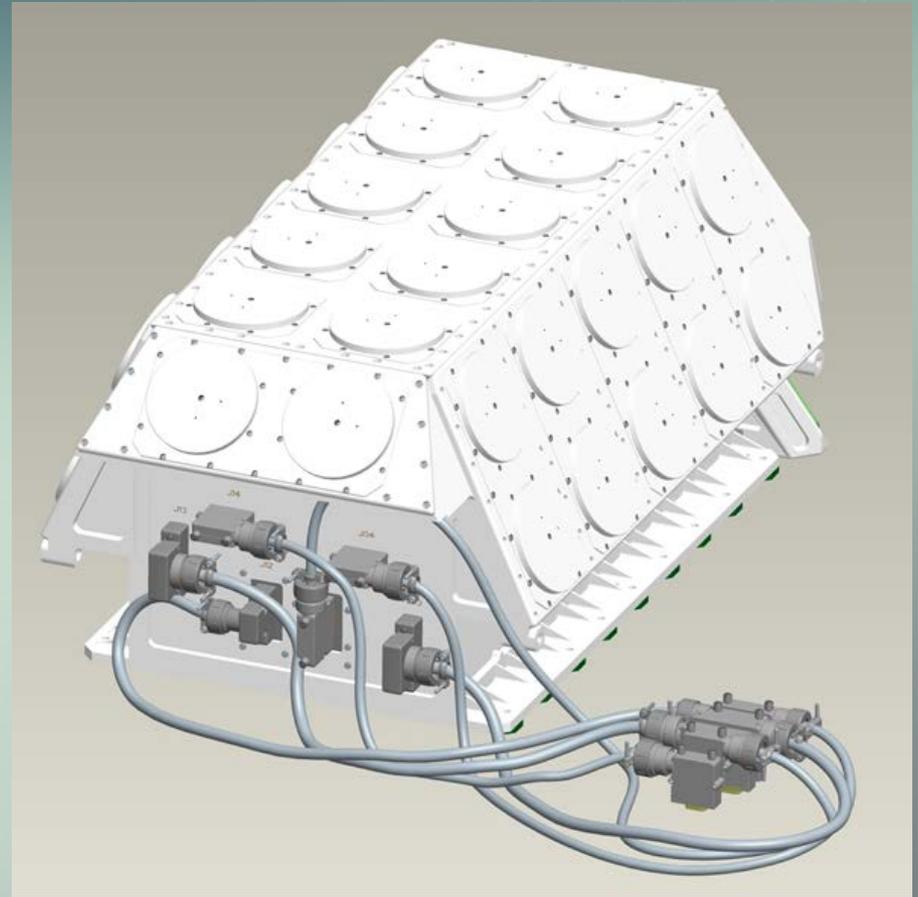
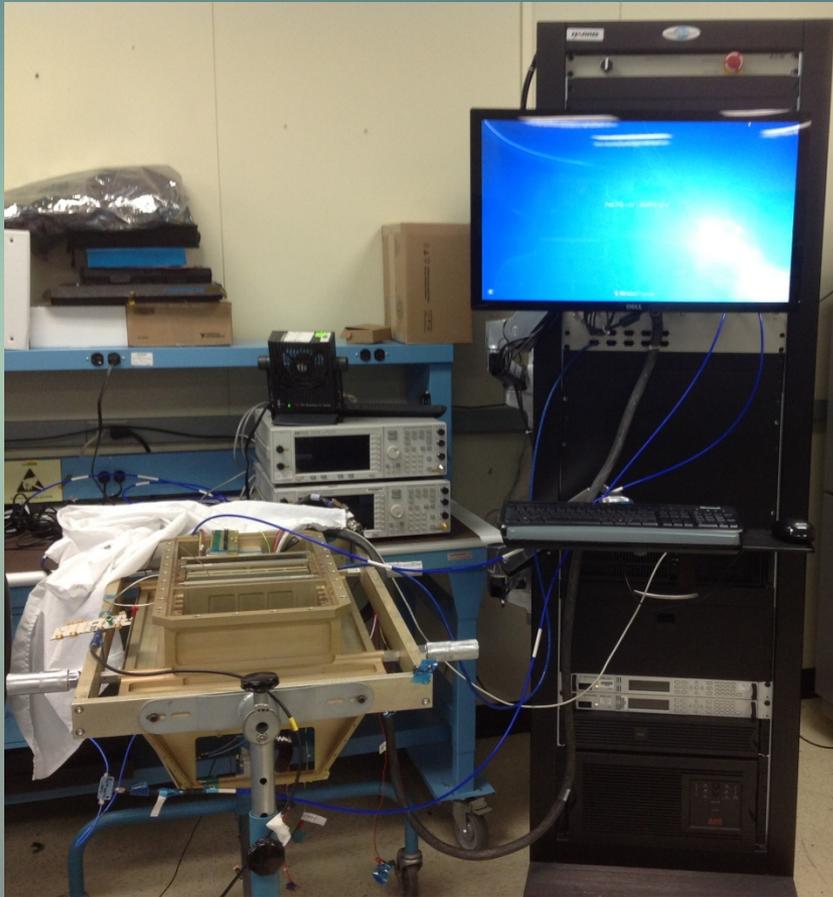
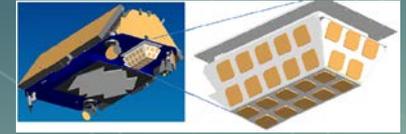
- Conformance reporting to be added to CAATS fall 2014
- Compliment current CADS reporting
- Report altitude and lateral deviations
- Added safety
- Review of efficiency gains
- Develop strategy for Lateral and Longitudinal
- Goal of RNP 4

Aireon ADS-B System Benefits

Safety

- ADS-B provides near real time aircraft surveillance
- Improves situational awareness, conflict detection and reaction/resolution
- Aircraft would have more flexibility in emergency situations
- Provides surveillance source separate from the communications (CPDLC) network sources

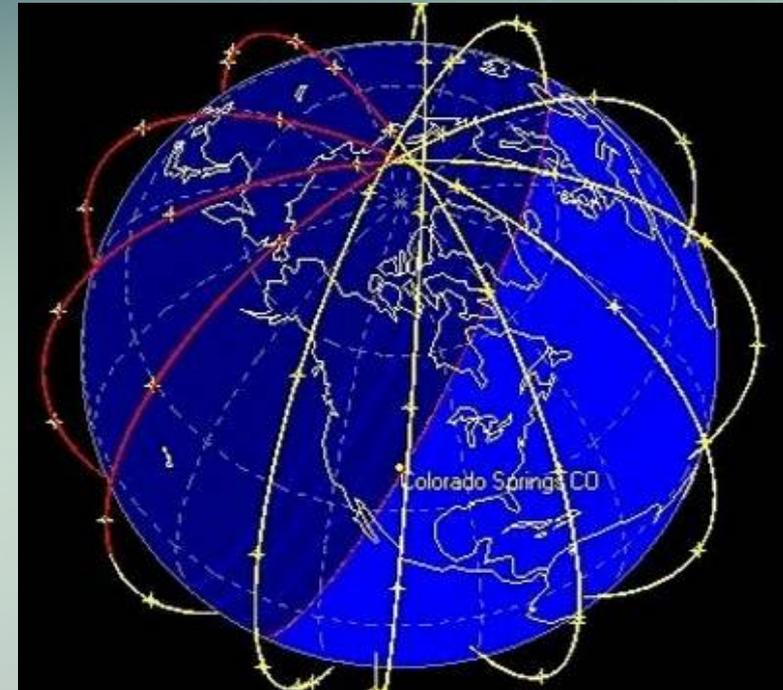
Hosted Payload



Inverted Hosted Payload

Orbit Characteristics

- 6 orbital planes of 11 satellites
- Near-polar orbit at 780 km altitude
- Orbit period ~ 100 minutes
- Ground speed $\sim 24,000$ km/h
- An aircraft will be in view of a given satellite for no more than 9 minutes



Initial Application in the NAT

- Late 2017: application of 15 NM longitudinal separation (with RLatSM) between surveillance-identified aircraft operating on the NAT OTS.
- Early 2018: 15 NM longitudinal separation expanded to aircraft operating off the NAT OTS.





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