



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

S E R V I N G A W O R L D I N M O T I O N



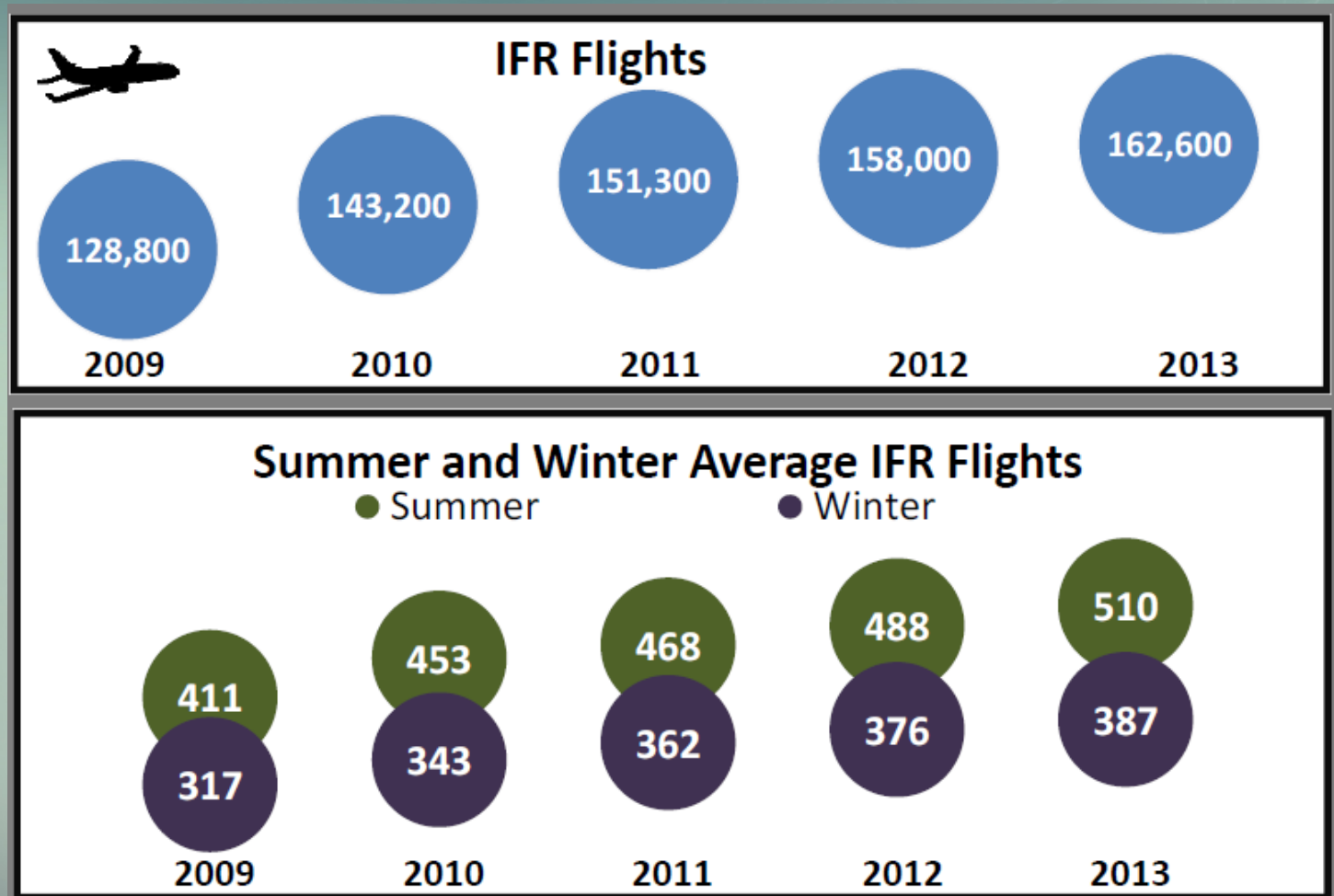
Key Polar Highlights

- 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

NAV CANADA

SERVING A WORLD IN MOTION

Arctic High Traffic



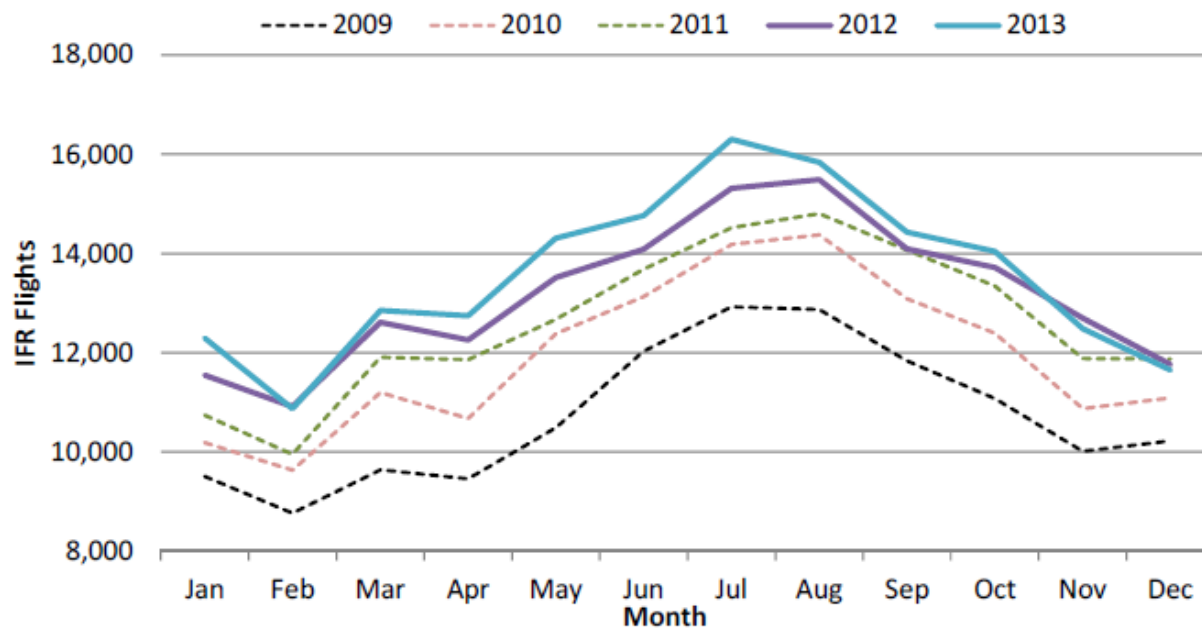
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SERVING A WORLD IN MOTION

Arctic High Traffic

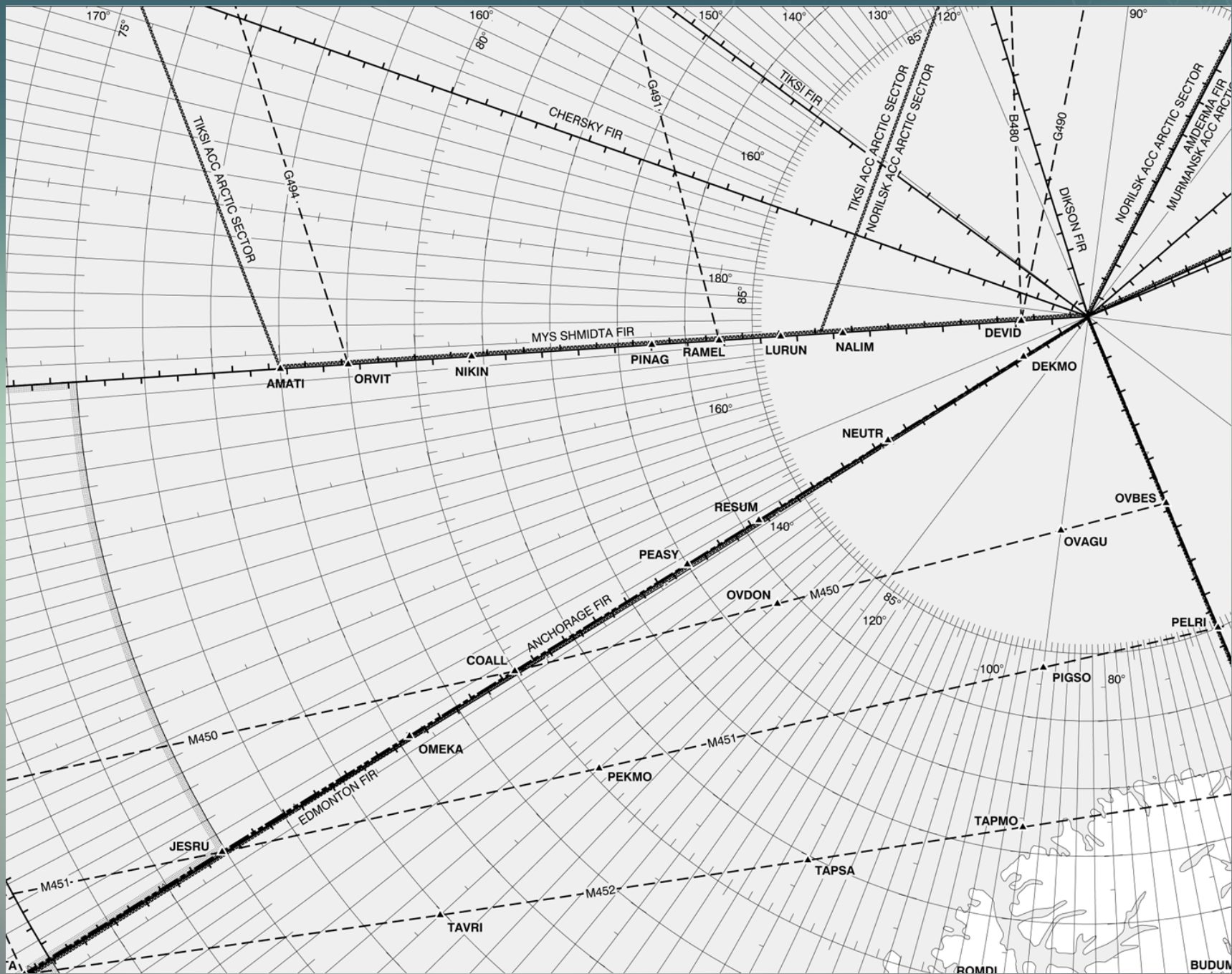


IFR Flights 5 Year Comparison



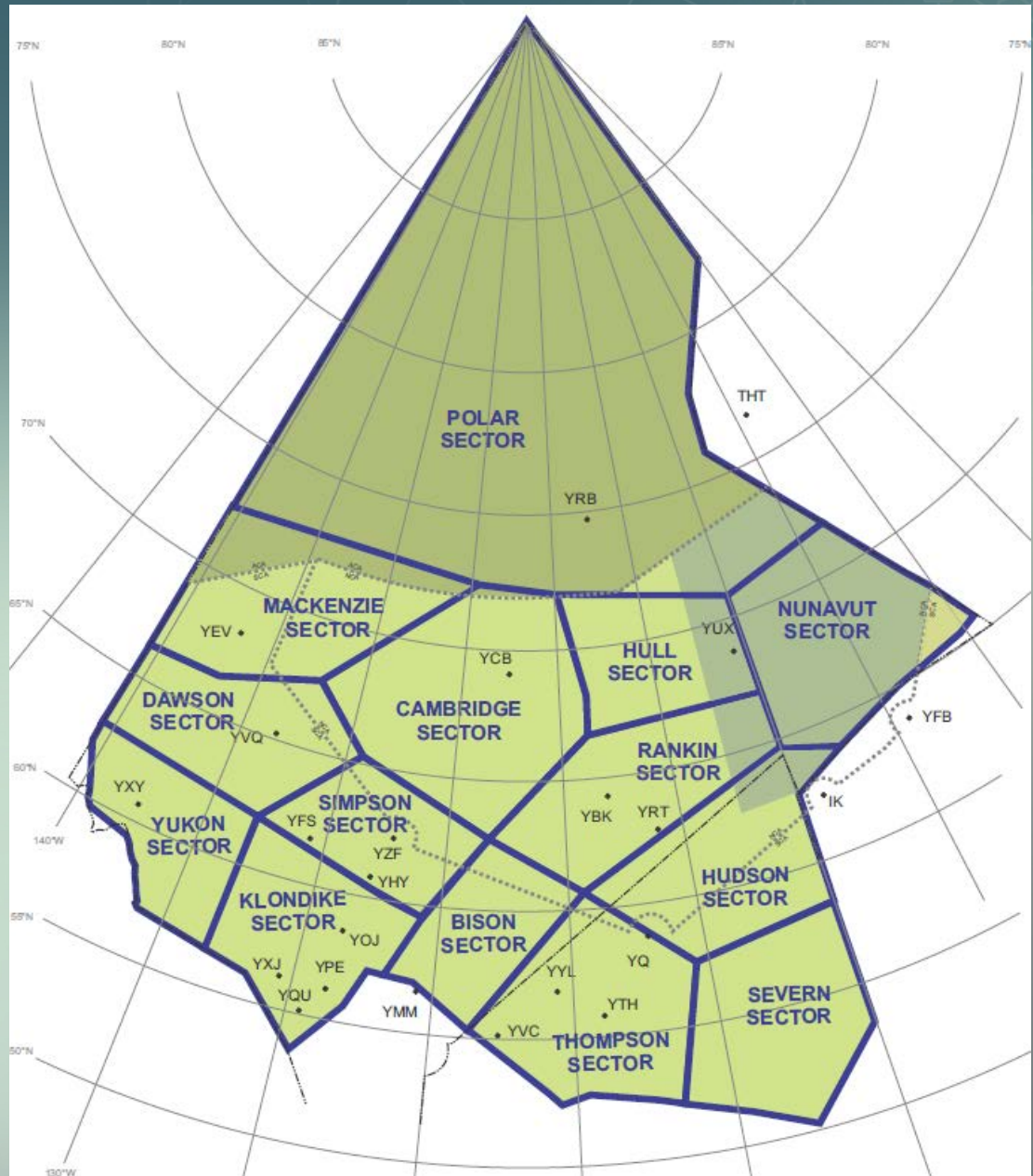
Customer Support

- 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

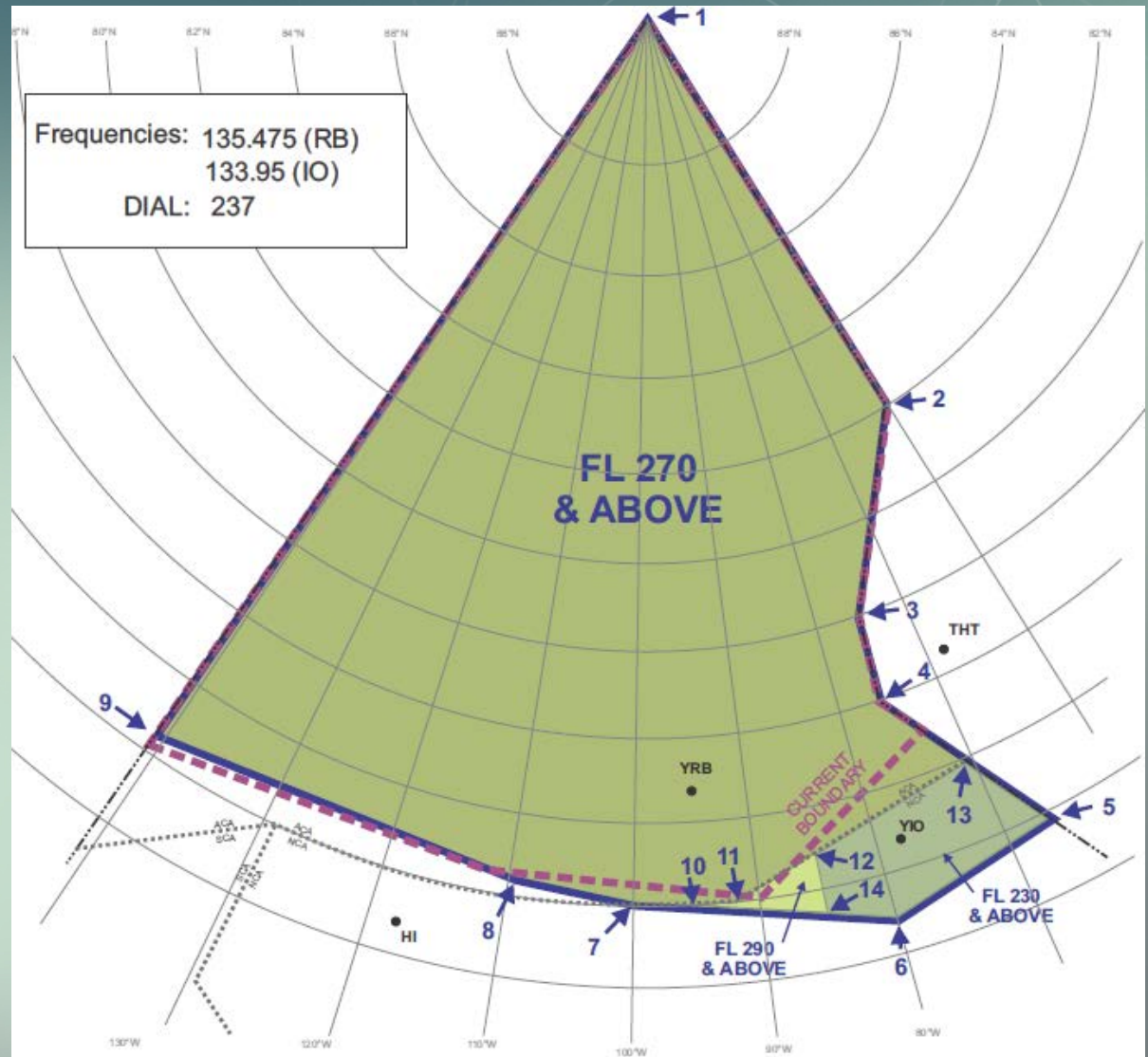


Polar Sector

Small piece added

Less coordination

More consistent
traffic flows



AID-C Implementation

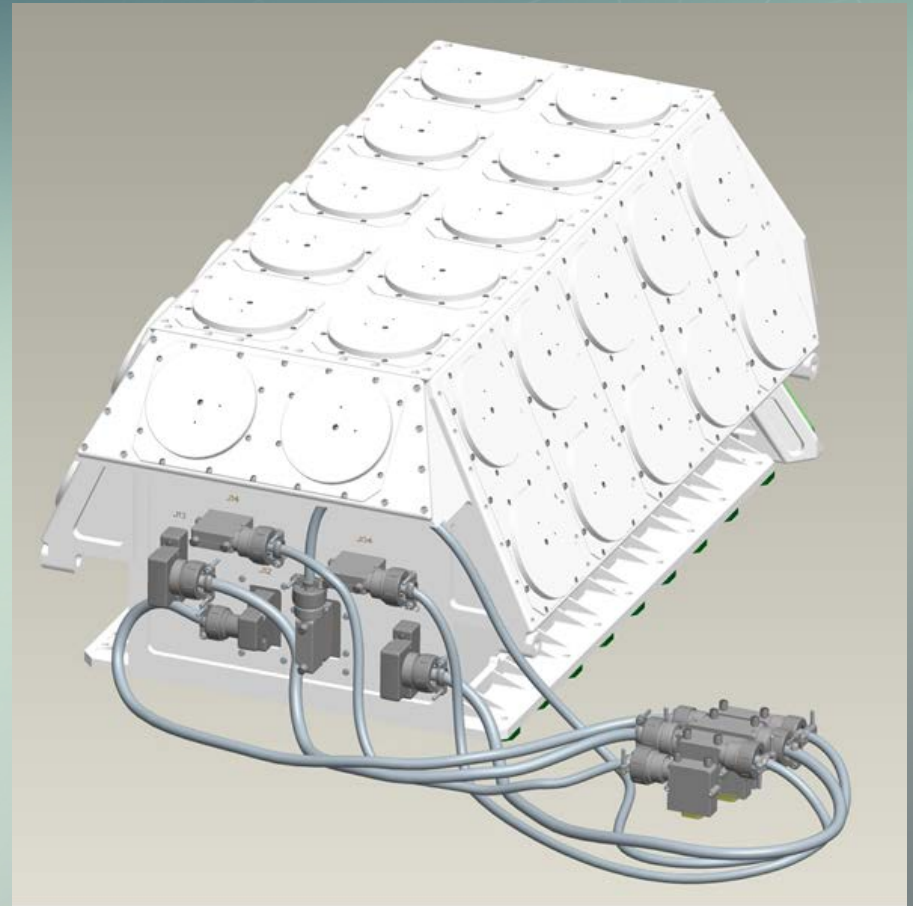
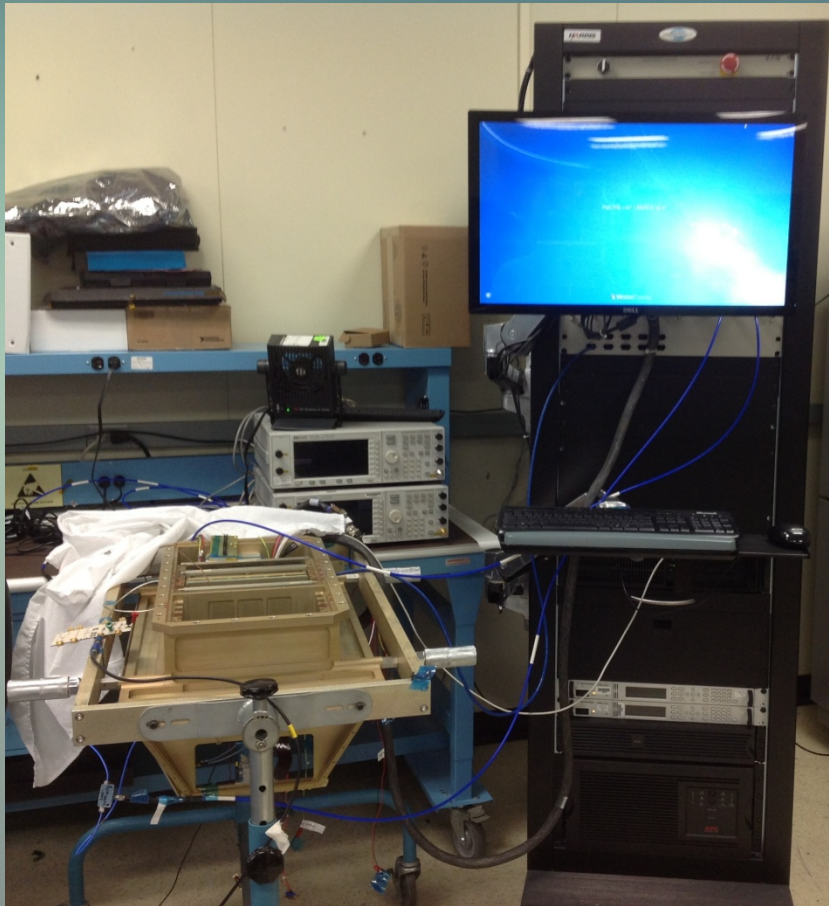
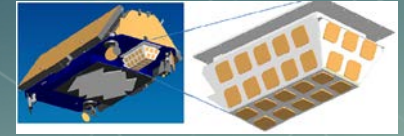
- Conformance reporting to be added to CAATS fall 2014
- Compliment current CADS reporting
- Report altitude and lateral deviations
- Added safety
- Review of efficiency gains
- Develop strategy for Lateral and Longitudinal
- Goal of RNP 4

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

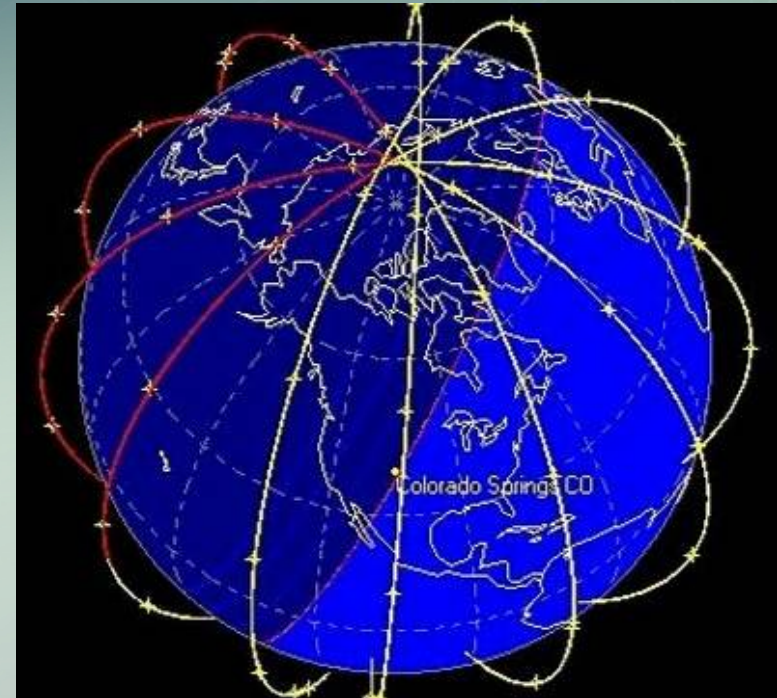
Hosted Payload



Inverted Hosted Payload

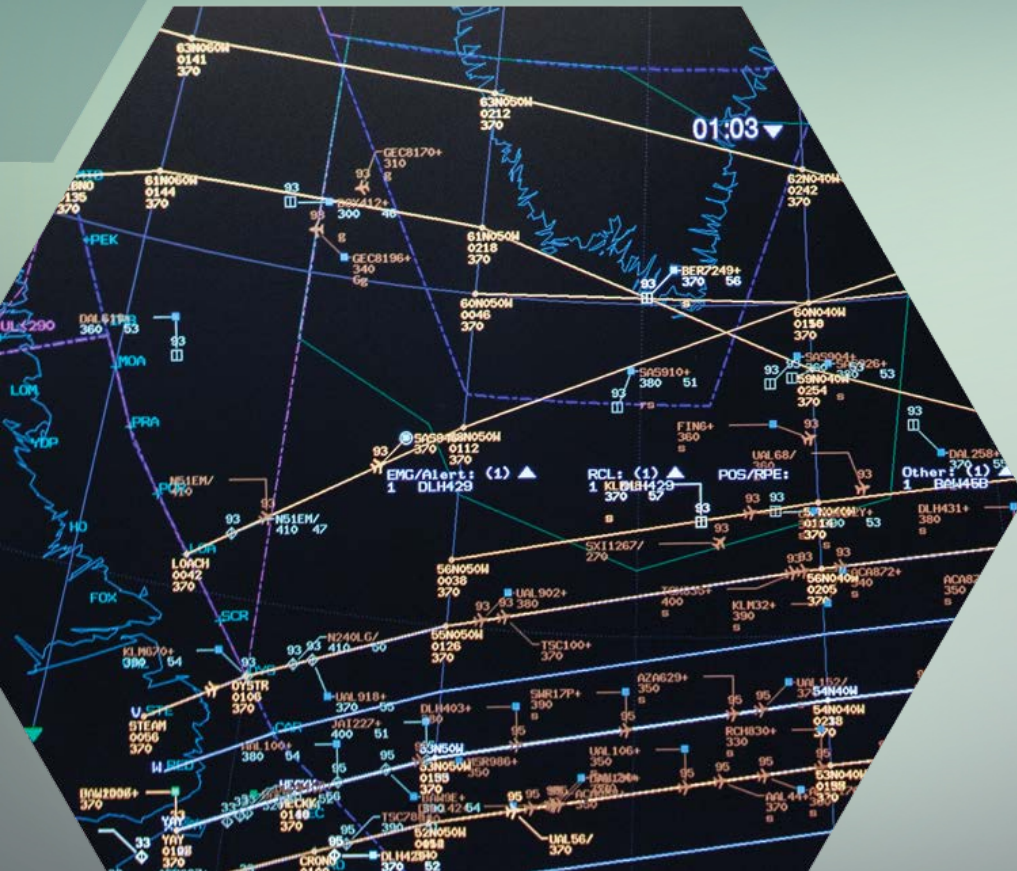
Orbit Characteristics

- 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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