

Fuze

Meeting

and

Telecon

1-866-398-2885

Passcode 151869##



Oceanic Work Group Meeting

Date:

January 21, 2015



Oakland Center Update

Dennis Addison

SM Oceanic Airspace and Procedures

January 21, 2015



**Federal Aviation
Administration**

Oakland ARTCC Webpage



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Air Traffic Organization

ATO Organization

Air Route Traffic Control Centers (ARTCC)

Airport Traffic Control Towers (ATCT)

Terminal Radar Approach Control Facilities (TRACON)

Oakland Air Route Traffic Control Center (ZOA)



At the heart of Oakland ARTCC is a team of Air Traffic and Technical Operations Professionals. Oakland Center is unique in that two distinctly different air traffic control functions are handled here. There is the normal en route air traffic control as well as an oceanic air traffic operation that manages the largest volume of international airspace in the world at one facility.

- [KZOA Domestic ATC Operations](#)
- [KZAK Oceanic ATC Operations](#)
- [NOTAMS, TFRs, SUAs](#)



Oakland ARTCC

Oakland ARTCC
5125 Central Ave.
Fremont, CA. 94536
Phone: (510) 745-3000

Rohitkumar Desai,
Web POC
[ZOA Web Site](#)
[Feedback](#)

http://www.faa.gov/about/office_org/headquarters_offices/ato/service_units/air_traffic_services/artcc/oakland/



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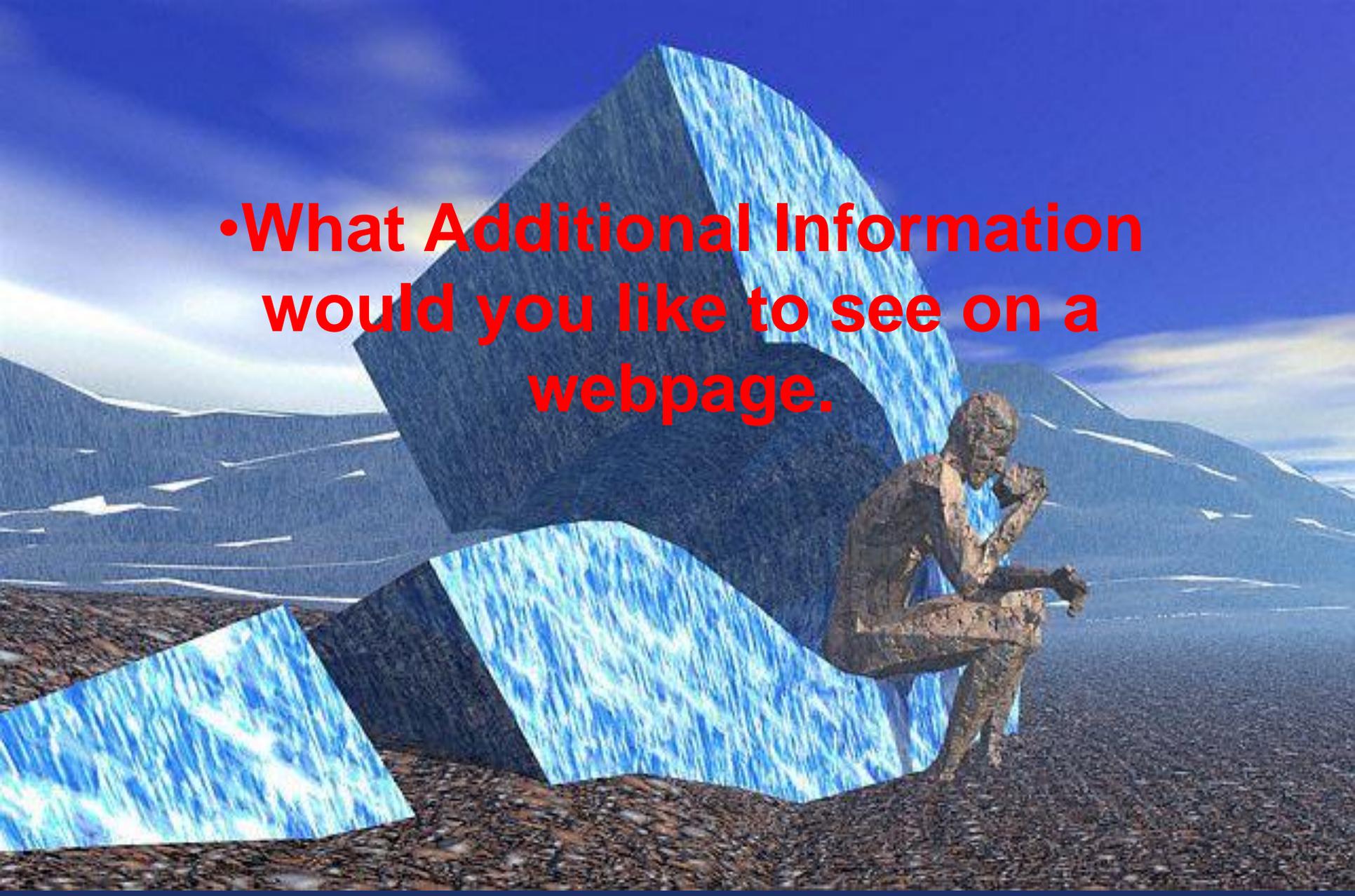
KZAK Oceanic ATC Operations

- [Oakland Oceanic Controlled Airspace/Flight Information Region \(OCA/FIR\) \(PDF\)](#)
- [Oakland ARTCC Oceanic Points of Contact \(PDF\)](#)
- [User Preferred Route \(UPR\) Flight Planning Guidelines \(PDF\)](#)
- [Pacific Organized Track System \(PACOTS\) Guidelines \(PDF\)](#)
- [Track Advisory User's Guide for Dispatchers \(PDF\)](#)
- [Central East Pacific \(CEP\) Routes Guidelines \(PDF\)](#)
- [Oakland Oceanic CPDLC \(PDF\)](#)
- [Guam Area Preferential Routings \(PDF\)](#)

Pacific Meetings

- [Informal Pacific Coordinating Group \(IPACG\)](#)
- [Informal South Pacific Coordinating Group \(ISPACG\)](#)
- [Oceanic Workgroup Meeting \(OWG\)](#)





•What Additional Information would you like to see on a webpage.

ADS-C CDP & ADS-B ITP

Status Update



Federal Aviation
Administration

ADS-C CDP

Procedure is based on in-trail Distance Measuring Equipment (DME) rules in ICAO Doc 4444

- Near Simultaneous ADS-C Demand Reports
- Climb/Descend an aircraft through the altitude of a blocking aircraft

Automated Procedure

CWP16

ATC ADS-C CDP CHECKLIST

PRELIMINARY SCREENING CRITERIA CHECKS (STEPS 1-3)

Step #	Checklist Item	Checkmark or Insert Data
1.	AIRCRAFT CALLSIGNS <i>ACH3059 / ACH3055</i>	<input checked="" type="checkbox"/>
2.	BOTH Blocking and Maneuvering Aircraft must have the "3" 30/30 ADS separation flag set.	<input checked="" type="checkbox"/>
3.	a. Both Aircraft Level Flight/Aircraft 1,000 Feet Apart/Planned Altitude Change 2,000 Feet or more. b. Neither Aircraft on WX Dev nor requesting a WX Dev. c. Both Aircraft RVSM d. "POS" NOT Displayed on Either Data Block e. There are no Out of Conformance (ARP) messages for either aircraft in the Sector Queue. f. Aircraft Same Direction traffic	<input checked="" type="checkbox"/>
FINAL SCREENING CRITERIA CHECKS (STEPS 4-9)		
4.	Initiate ADS DEMAND for both Aircraft. ENTER TIME that DEMAND request was sent to Maneuvering Aircraft <i>1245Z</i>	<input checked="" type="checkbox"/>
5.	From ADD Report, Mach Number of Maneuvering Aircraft <i>A350 12.79</i> Mach Number of Blocking Aircraft <i>A350 12.80</i> <i>opn. S1</i>	<input checked="" type="checkbox"/>
6.	SAME SPEED OR FASTER AIRCRAFT IN FRONT: 6a, 6b, and 6c Must be Satisfied	
6a.	From Conflict Report Window, ACTUAL Longitudinal Distance Between Maneuvering and Blocking Aircraft <u>AT LEAST 16 MILES</u> <i>11.6</i>	<input checked="" type="checkbox"/>
6b.	From ASD, Both Aircraft Same Groundspeed, or Faster Aircraft is in Front <i>Faster in front</i>	<input checked="" type="checkbox"/>
6c.	From Step # 5, Both Aircraft Same Mach Number, or FASTER Mach AIRCRAFT IN FRONT	<input checked="" type="checkbox"/>
7.	OVERTAKE SITUATION: 7a, 7b, and 7c Must be Satisfied	
7a.	From Conflict Report Window, ACTUAL Longitudinal Distance Between Maneuvering and Blocking Aircraft <u>AT LEAST 26 MILES</u>	<input type="checkbox"/>
7b.	From ASD, Trailing Aircraft Groundspeed Must <u>NOT</u> be More Than 10 Knots Faster	<input type="checkbox"/>
7c.	From Step # 5, Trailing Aircraft is <u>NOT</u> More Than .02 Mach Faster	<input type="checkbox"/>
8.	Build Clearance utilizing MOPS Message 26 or 28, "CLIMB/DESCEND TO REACH (level) BY (time). Probe the Pending Clearance. Ensure that Time Inserted in Clearance is within 15 Minutes of Time Inserted in Step #4.	<input checked="" type="checkbox"/>
9a.	Append Free-Text Advisory from the Pre Formatted messages "ADS-C CDP PROCEDURE IS BEING APPLIED BY ATC".	<input checked="" type="checkbox"/>
9b.	Check the 2nd Profile Conflicts of the Maneuvering Aircraft. IF THERE ARE ACTUAL OR IMMINENT CONFLICTS WITH OTHER AIRCRAFT, DO <u>NOT</u> EXECUTE PROCEDURE	<input checked="" type="checkbox"/>

CLEARANCE

ANA61A 37N160E 1631/ 39N170E 1725/ 41N180E 1817/ 42N170W 1908/ 42N160W 1957/ 40N150W 2050/ 39N140W 2

Urgent	Rpt	Negot	Rspn	Misc	Vert	Route	Speed	X-ing	Conn	Pre-Fnt							
RP	RR	climb	0Time	0Fix	0Time	0Fix	DSCND	0Time	0Fix	0Time	0Fix	CROSS	AOA	AOB	NDA	OTA	HOLD
		20	CLIMB TO AND MAINTAIN (alt)	F330			EOS										
		26	CLIMB TO REACH (alt)	F330		BY (time)											
		27	CLIMB TO REACH (alt)	F330		BY (pos)											
		(20)	CLIMB TO AND MAINTAIN (alt)	F330													
																	INS
																	DEL

Probing : CLIMB TO AND MAINTAIN F330
[ANA61A]: Conflict with 1 aircraft, 0 airspace, IMMINENT
CDP is available

CDP CAN TPRB SND UNABL VHF SAVE EALT DYRB COORD RCPT REJ HLP ELS



CLIMB/DESCEND PROCEDURE

REQUESTING ACID: ANA61A BLOCKING ACID: ANA60B ON-DEMAND STATUS: WAITING

REQUESTED ALT: F330 COUNTDOWN TIMER: 14 : 26

Clearance:

(26) CLIMB TO AND REACH (alt) F330 BY (time) 2129 EOS

Response Area:

CDP-PROBE SEND UNABLE RESET CLOSE

•Ocean21 will check the FOM in the ADS-C reports to make sure they meet RNP4 standards

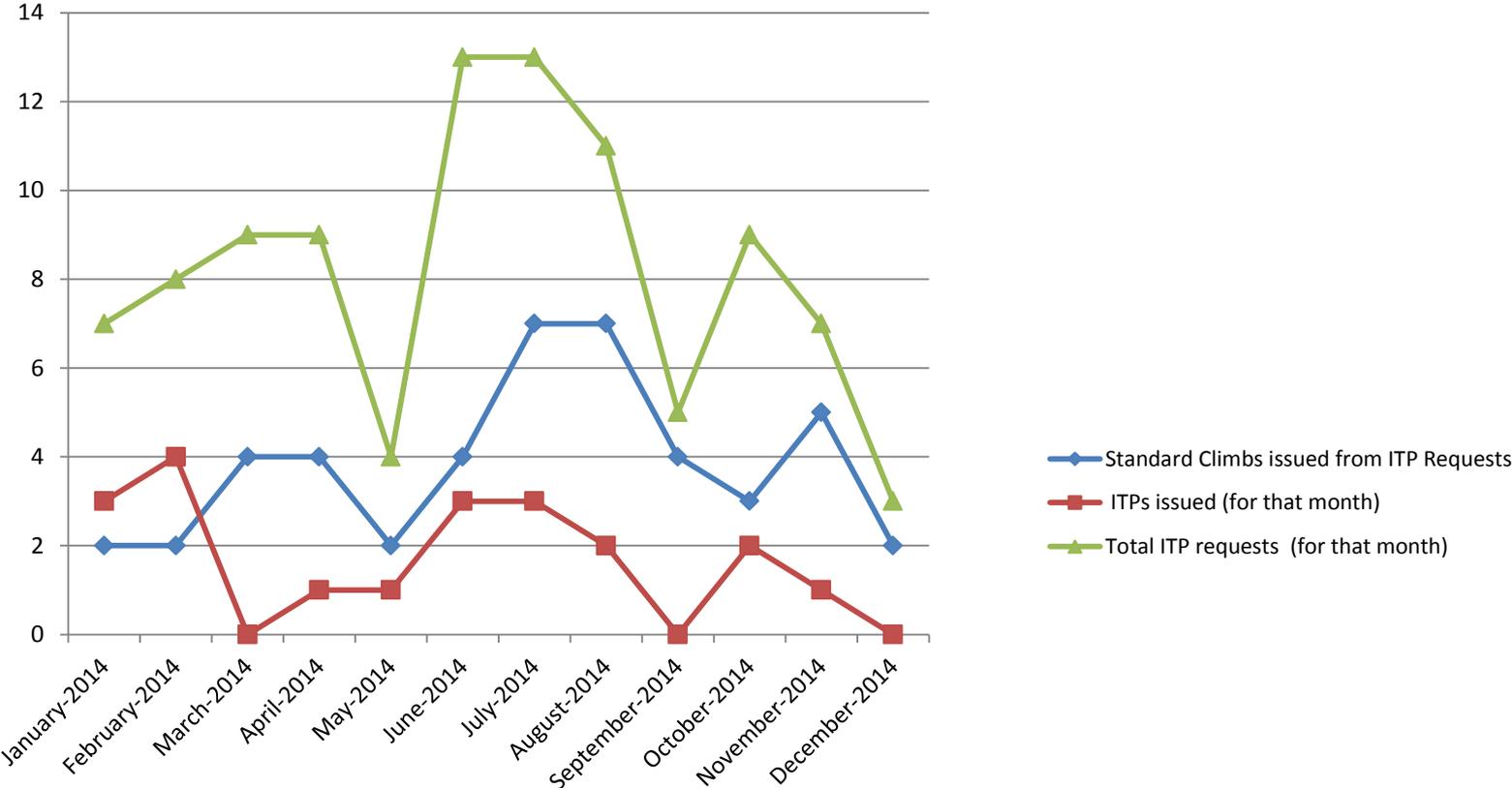


Ocean21 Automation Platform



- **Manual trial ended 2/15/2013**
- **CDP procedure is seen as a benefit.**
- **T24 software update 2016**

2014 ITP Activity



5.4.2.7 LONGITUDINAL SEPARATION MINIMA BASED ON DISTANCE
USING ADS-B IN-TRAIL PROCEDURE (ITP)

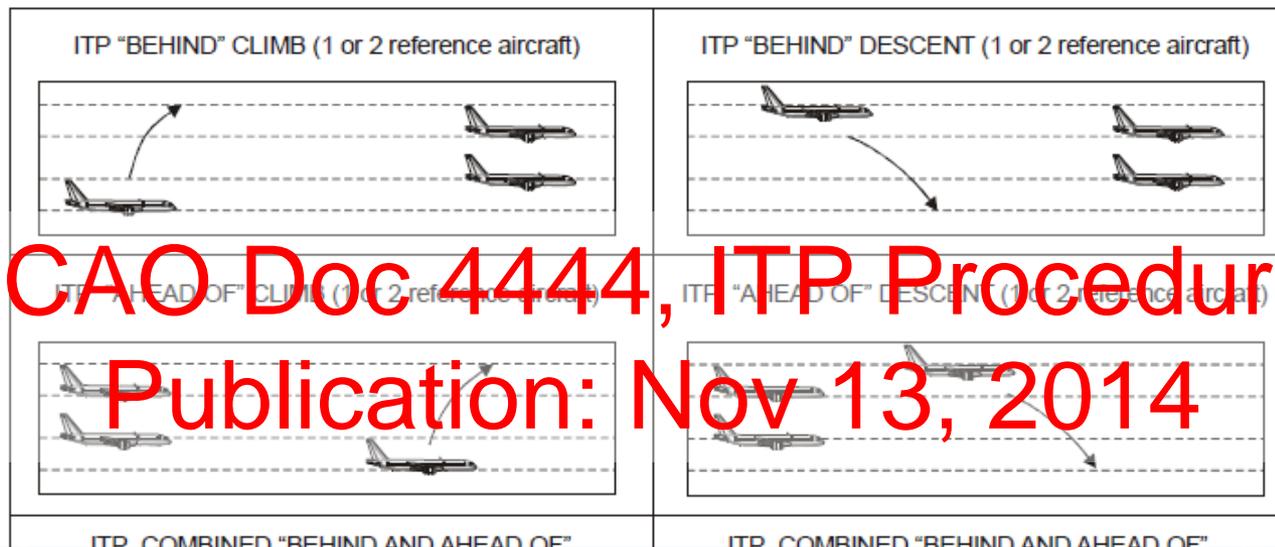
Note 1.— Attention is drawn to Circular 325, In-Trail Procedure (ITP) Using Automatic Dependent Surveillance — Broadcast (ADS-B).

Note 2.— Guidance material on ITP equipment can be found in RTCA DO-312/EUROCAE ED-159 Safety Performance and Interoperability Requirements Document for the In-Trail Procedure in Oceanic Airspace (ATSA-ITP) Application and Supplement and RTCA DO-317A/EUROCAE ED-194, Minimum Operational Performance Standards (MOPS) for Aircraft Surveillance Application (ASA) System.

5.4.2.7.1 The routes or airspace where application of the in-trail procedure is authorized, and the procedures to be followed by pilots in accordance with the provisions of Section 5.4.2.7, shall be promulgated in aeronautical information publications (AIPs).

5.4.2.7.2 ITP requests and clearances shall be communicated via a CPDLC message exchange only and in accordance with the appropriate message elements in Appendix 5.

5.4.2.7.3 Longitudinal separation between a climbing or descending ITP aircraft and reference aircraft shall be applied in accordance with 5.4.2.7.3.1, 5.4.2.7.3.2 and 5.4.2.7.3.3. An ITP aircraft shall not be separated simultaneously from more than two reference aircraft using the ITP separation minimum (see Figure 5-35).



ICAO Doc 4444, ITP Procedure
Publication: Nov 13, 2014

ADS-B ITP Checklist

- Manual Checklist is being automated in Ocean21.
- Automation is planned to be delivered 2016

ADS-B ITP CONTROLLER PROCEDURE

This procedure must be initiated by an ITP request

If any of the following steps are not true, advise the aircraft UNABLE

Validate ITP Request

The pilot reports on CPDLC a distance between the ITP aircraft and any referenced aircraft that is at least 18nm.

Initiate probe on ITP aircraft

Maximum of 1 or 2 conflicts exist

All call signs in conflict report(s) are included in the ITP request

All conflict aircraft are same direction traffic as ITP aircraft until vertical separation is reestablished

Closing mach difference of ITP aircraft and any referenced aircraft is $\leq .06$.

All conflict aircraft are within 2000' of the ITP aircraft

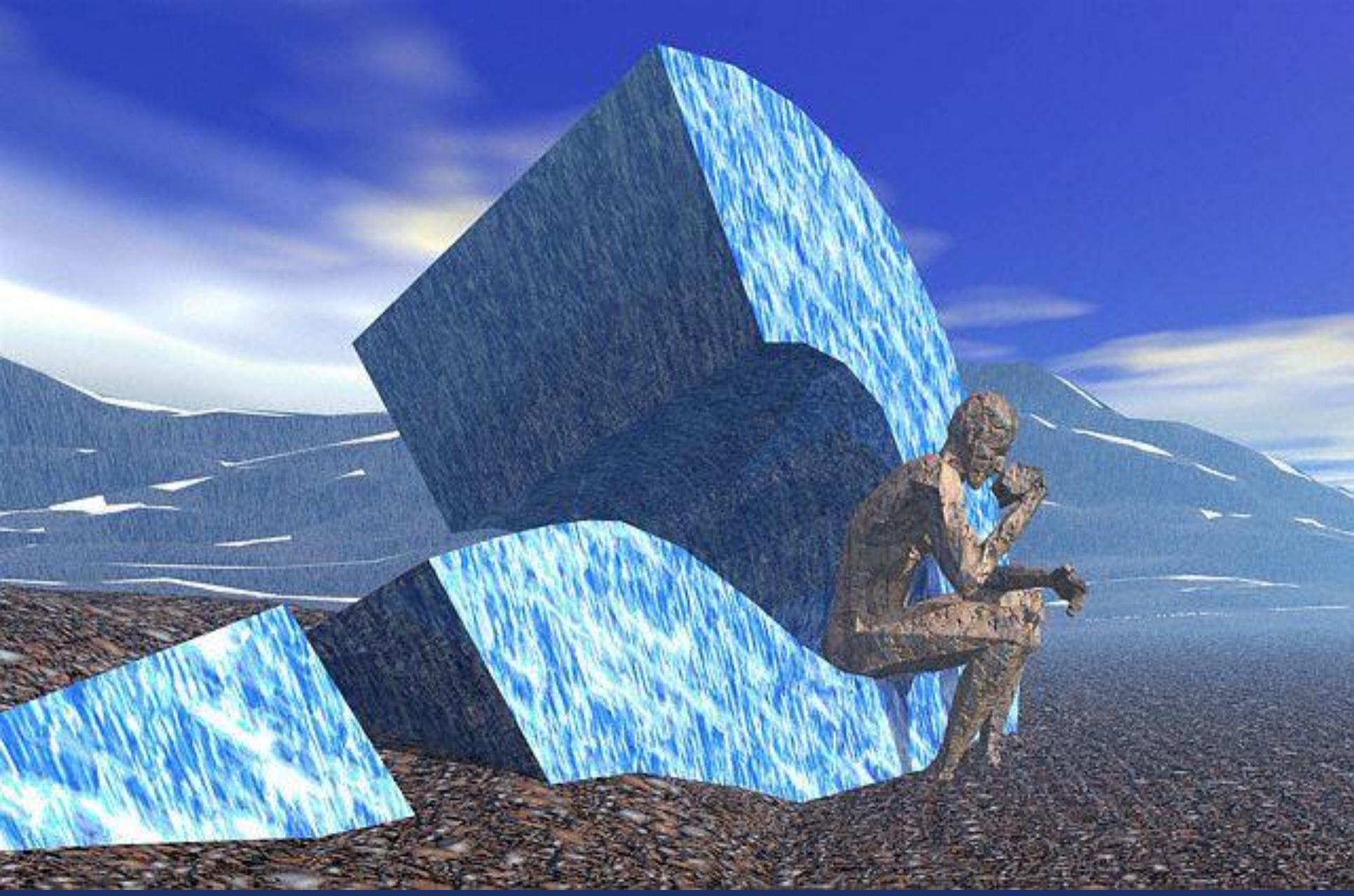
All conflict aircraft are at a single-assigned altitude

No conflict exists at the requested altitude.

No aircraft involved are cleared for or requesting a route deviation

ITP aircraft and Reference aircraft are not part of another ITP operation at the same time

Issue ITP Altitude Change Clearance (message examples are listed on the back side of this form)



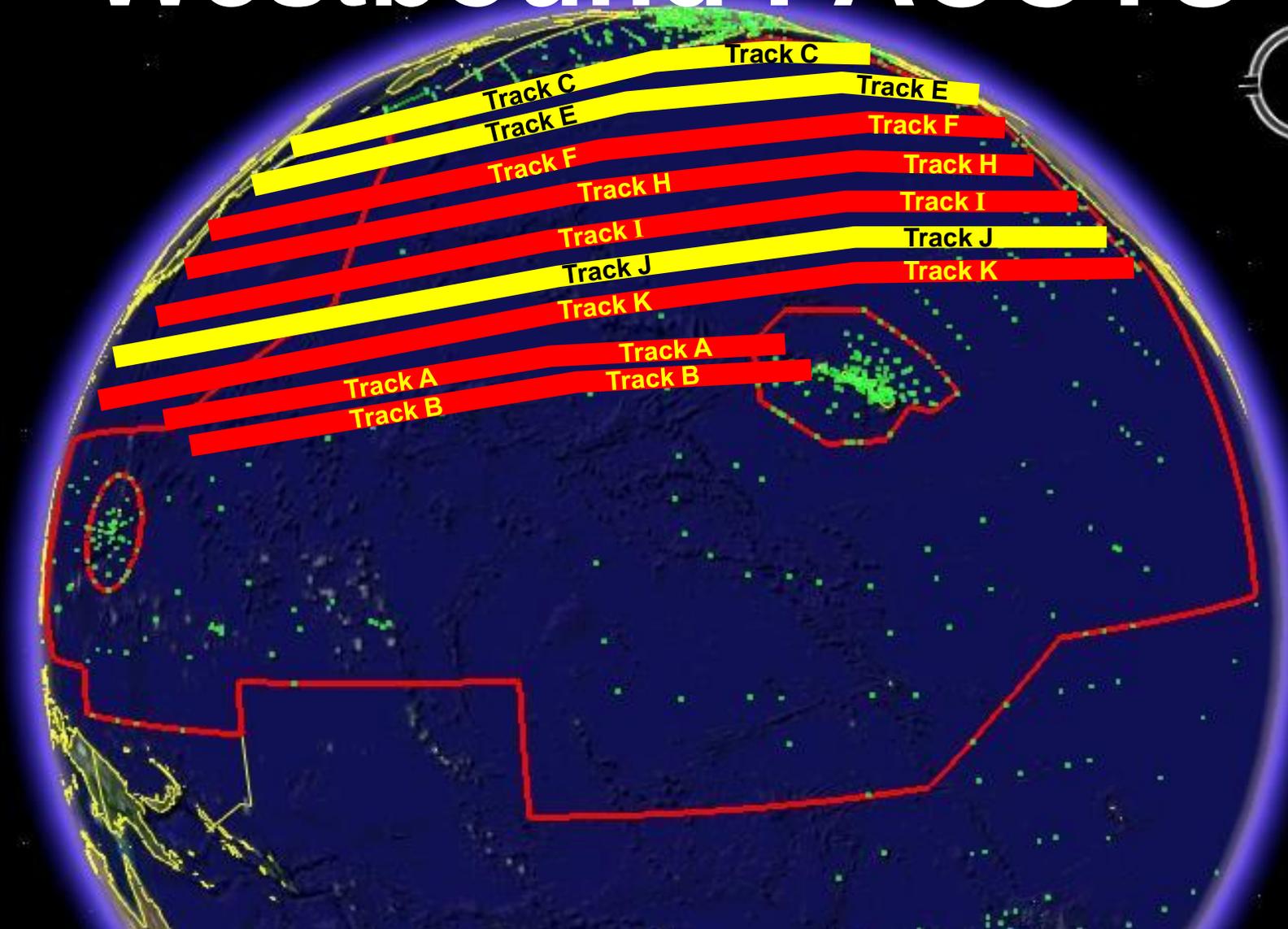
User Preferred Routes

Presented By: FAA, Oakland ARTCC
Airspace and Procedures

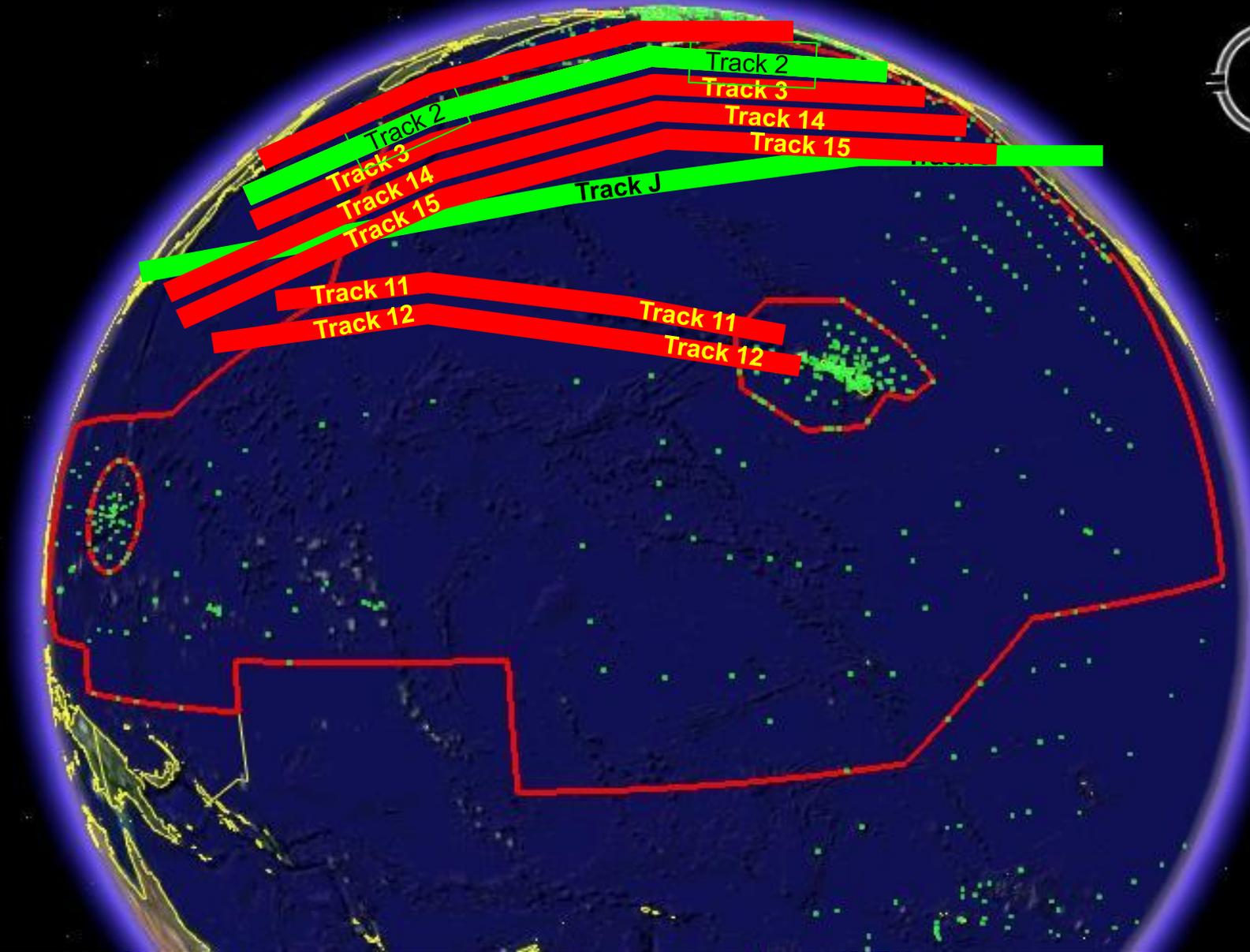


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Westbound PACOTS



Eastbound PACOTS



PACOTS vs UPRs



**Overall 18 of 22
PACOTS Tracks
have been
replaced with
UPRs**

UPRs

????
Kg An.

1.09M.
Kg An.

2.88M.
Kg An.

10M.
Kg An.

1.09 Kg
An.

Over 32.8 Mil
Kg Fuel
Savings
Annually

1017Kg
Flight

.266M.
Kg An.

9.61M
Kg An

2.88M.
Kg An.

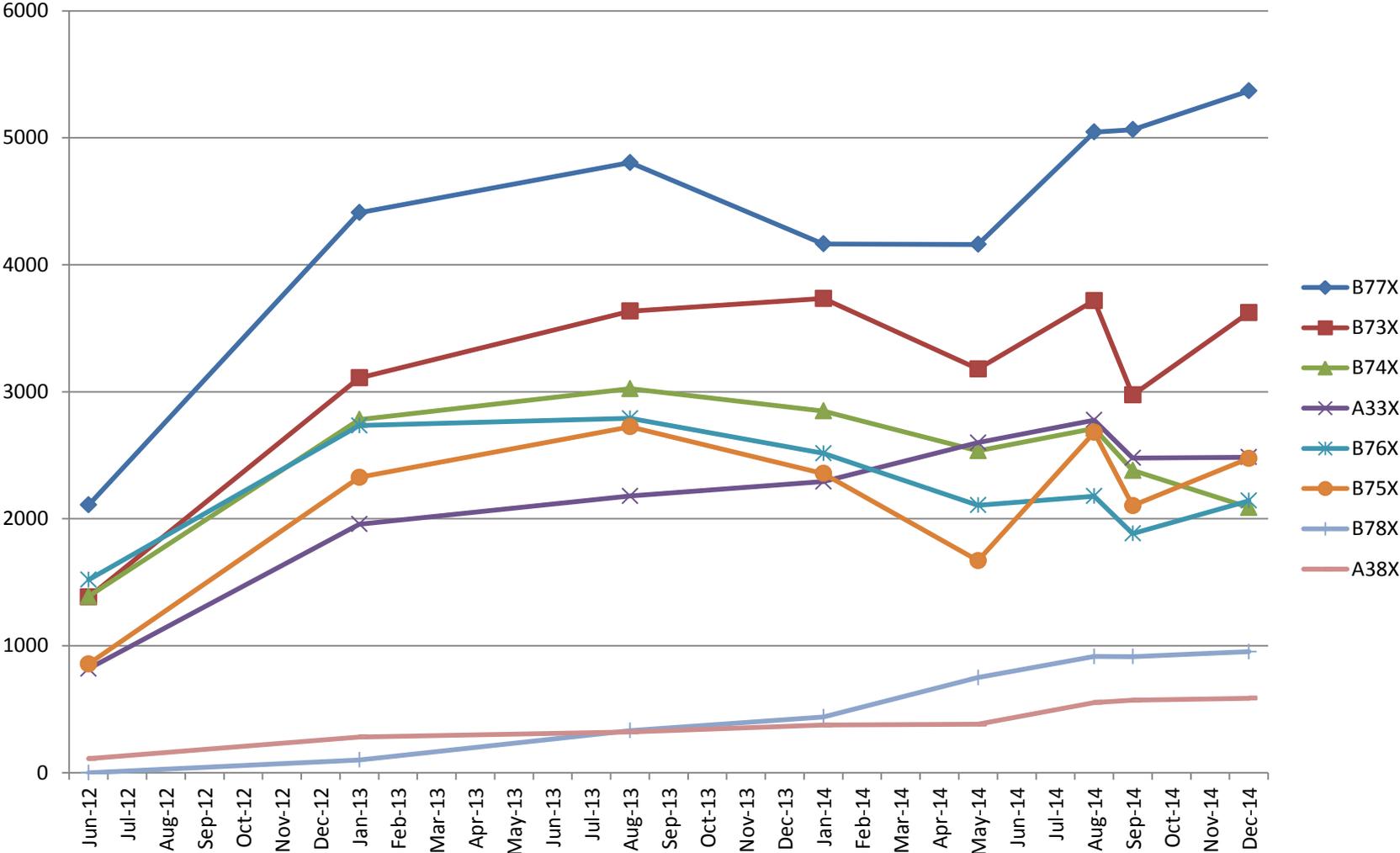
2.09M.
Kg An.

????
Kg An.

High Level UPR Trial

- Newer Composite aircraft climb above most traffic on PACOTS routes.
- Anchorage ARTCC started a High Level UPR Trial allowing aircraft at or above F400 by 170W can UPR up to NIPPI or OMOTO.
- Oakland has developing the guidelines for a High Level UPR Trial as an alternative to westbound PACOTS to NOPAC
- Trial will have an indefinite lifespan.

Aircraft Type



High Level UPR Trial Beginning February 2, 2015

- THE HIGH ALTITUDE UPR TRIAL IS ONLY USEABLE DURING THE TIME PERIOD WHEN THE WESTBOUND PACOTS TRACKS ARE IN EFFECT.
- AIRCRAFT MUST ENTER THE OAKLAND OCEANIC FIR AT A PUBLISHED BOUNDARY WAYPOINT AT OR ABOVE FL380.
- UPR MUST BE PLANNED TO AVOID ACTIVE MILITARY SPECIAL USE AIRSPACE.
- WHEN TRANSITING ANCHORAGE OCEANIC FIR, OPERATORS MUST ADHERE TO THE PROVISIONS OF ANCHORAGE OCEANIC CTA (PAZA) NOTAM A0367/14 REFERENCE USER PREFERRED ROUTE (UPR) REQUIREMENTS FOR AIRCRAFT TRANSITING THE PAZA FIR.

Merging PACOTS Tracks C and E



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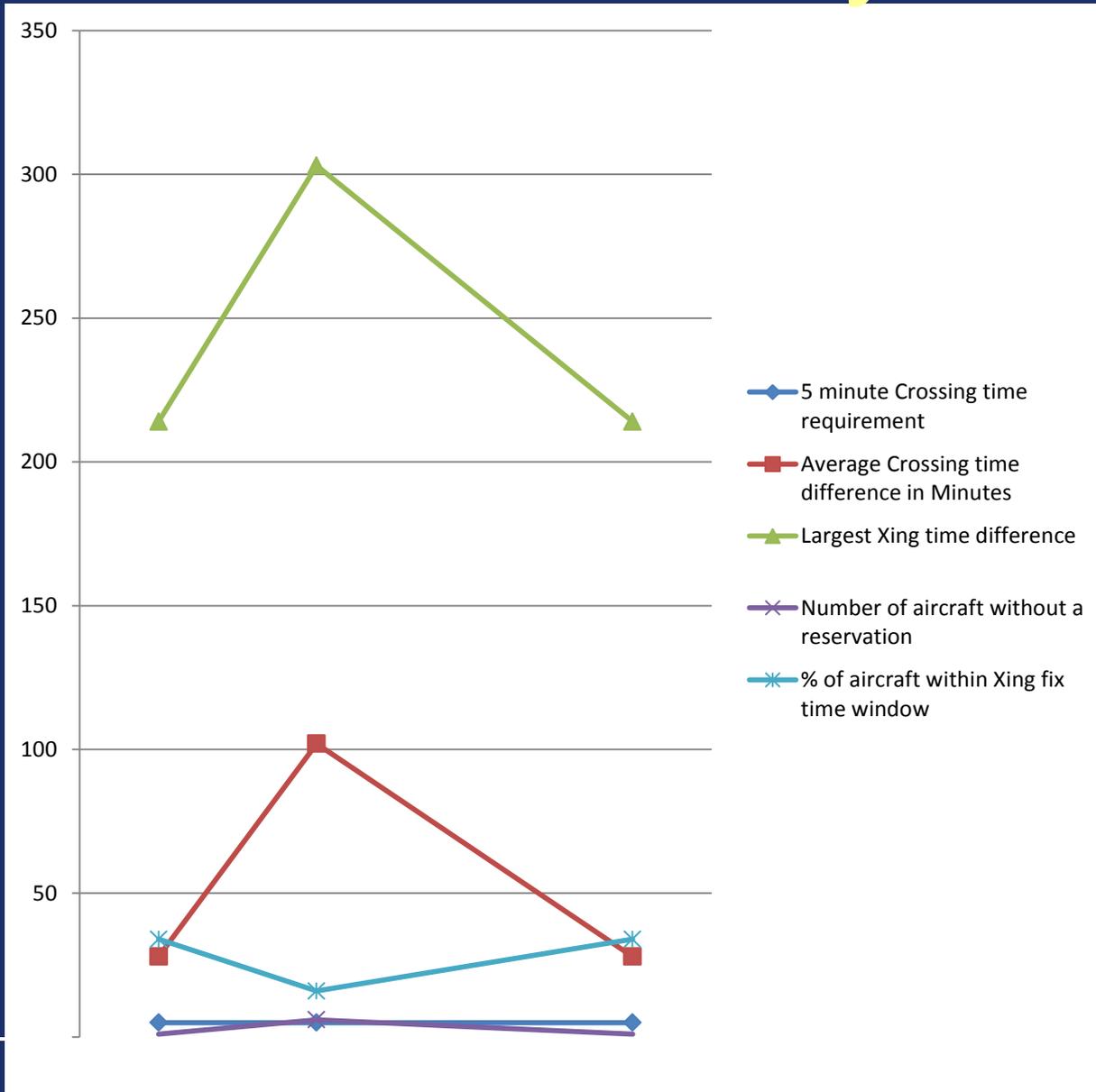
Operational Trial

- March 13, 2013 began a 1 year operational trial of Merging Tracks C and E when it provided an advantage.

Merged Track C and E Operational Trial

- March 13, 2013 began a 1 year operational trial of Merging Tracks C and E when it provided an advantage.
- OF THE FIRST 38 DAYS OF THE OPERATIONAL TRIAL;
 - TRACKS C & E MERGED 14 DAYS.
 - AVERAGE FUEL SAVINGS PER FLIGHT WAS 1120 LBS (10 DAYS)

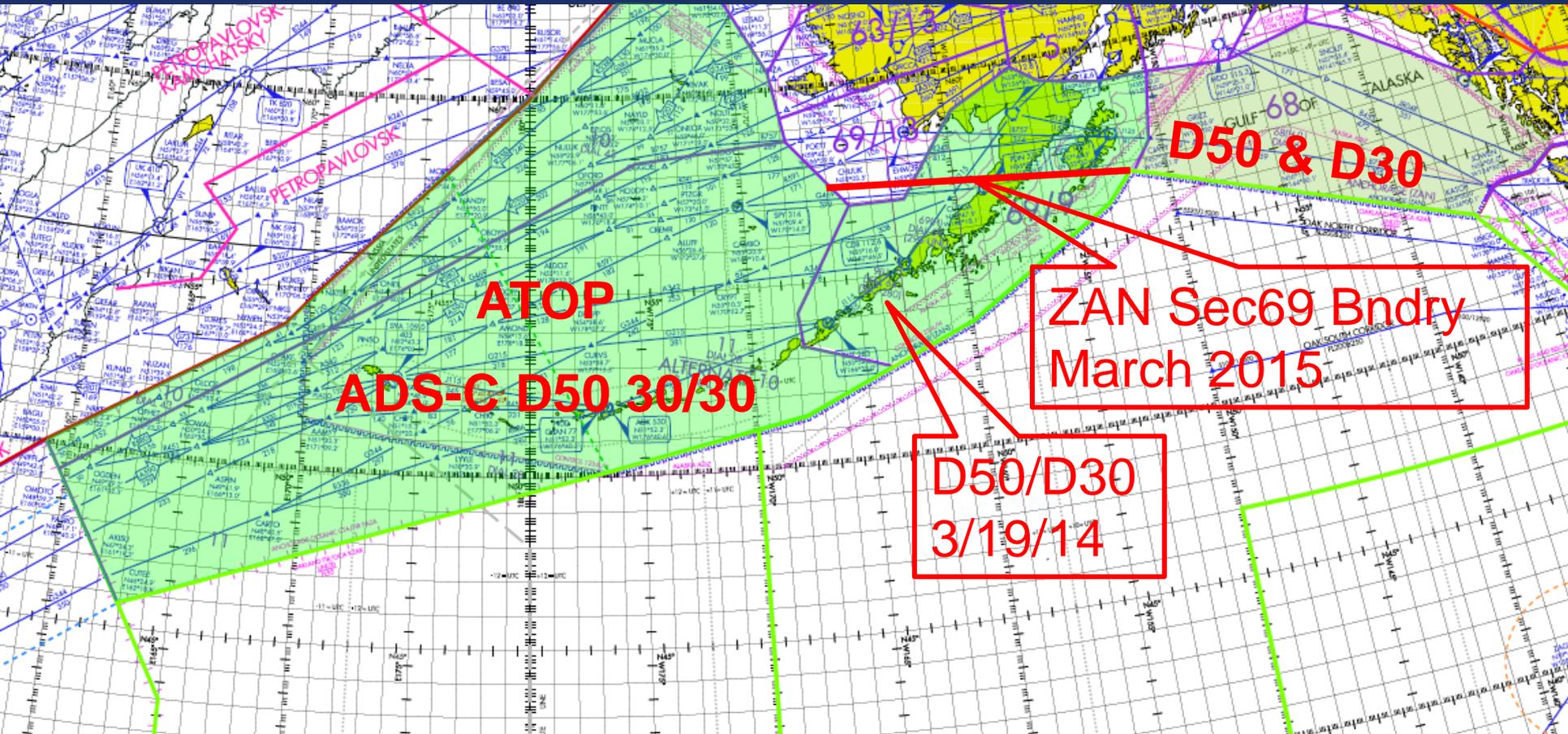
4/22-25 Track Advisory Issues



Moving Forward C/E Trial

- When the PACOTS Tracks C and E would merge, Oakland will coordinate with the next facility for the use of Non-Standard Altitudes for the next day.
- If approval for the use of the necessary Non-Standard altitudes can be obtained, the tracks will be published with a merge.
- If approval for the use of the necessary Non-Standard altitudes cannot be obtained, the tracks will be published without a merge in the Oakland FIR.

Merging PACOTS C&E Resume



April 2015

PACOTS TRACK DISCUSSION



Track Advisory Early Intent Trial



Federal Aviation
Administration

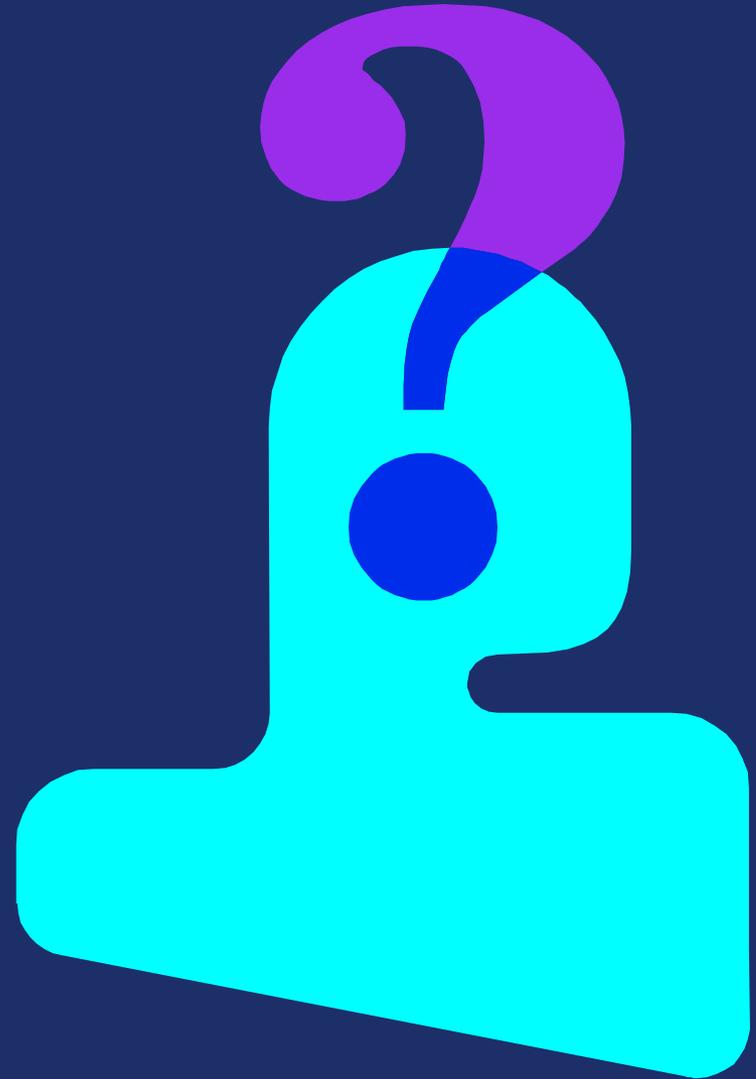
TA Early Intent GRL

- OWG Operators requested an “Early Intent Gateway Reservation” publication of the GRL to get an idea of how the traffic is distributed on the PACOTS Tracks or RTE entry points.
- Initial correspondence indicated that it would be possible.
- Oakland required the FAA Technical Center to run a EIGR test.
- Testing revealed a problem with EIGR:
 - When the EIGR is compiled before the normal GRL, it changes the TA mode to negotiation. This causes no entries when the GRL is normally compiled.

TA Early Intent GRL

- It would require a change to DOTS+ Track Advisory in order to make EIGR work.
- The intent of EIGR is to allow an early look at Track/Fix loading.
- **As an alternative the GRL could be published 1 hour earlier.**
- If an operator wanted to make a track/fix change they would negotiate a change in TA.
- This would provide the EIGR look and allow for changes if desired

EIGR DISCUSSION

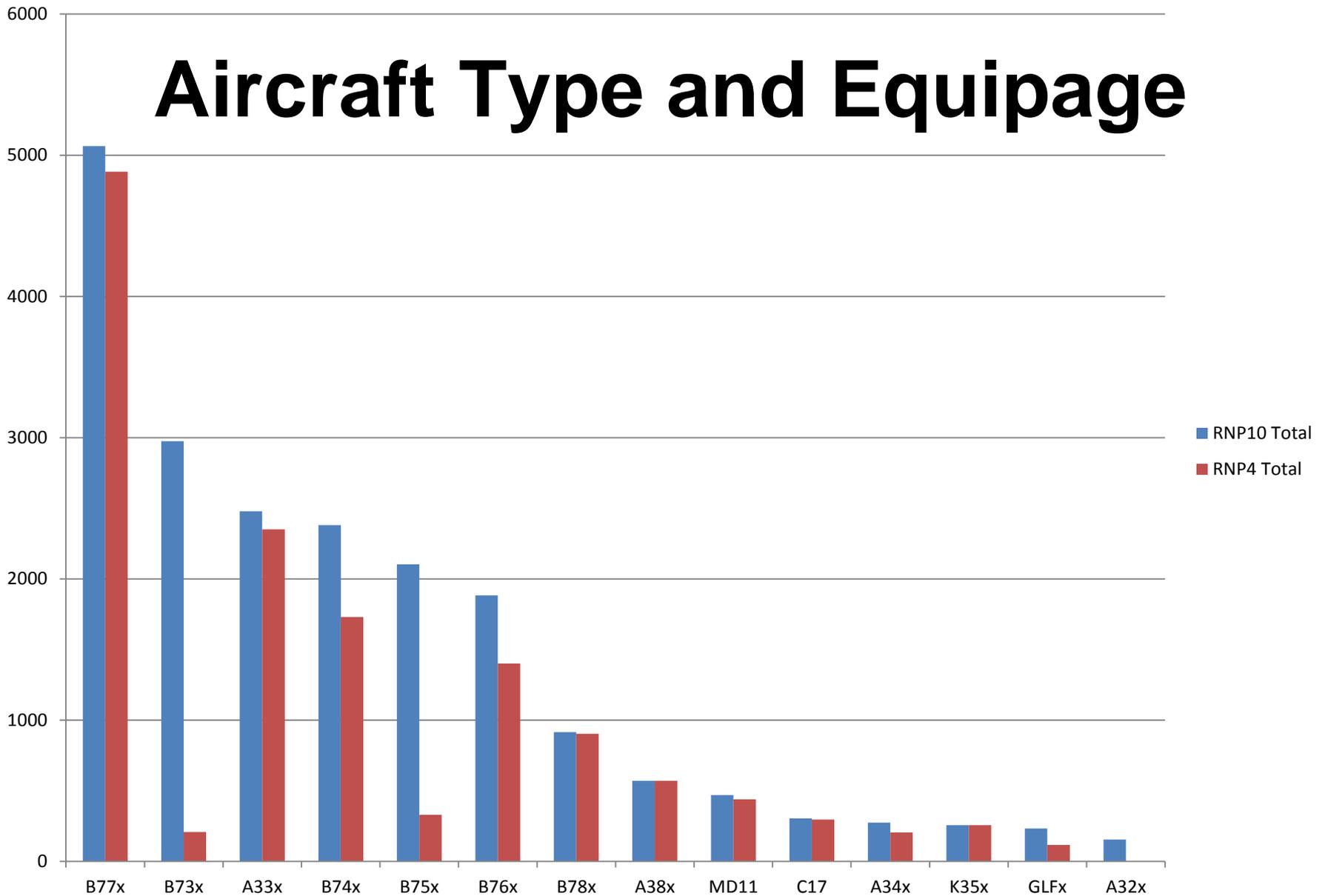


Oceanic Equipage and Separation Standards

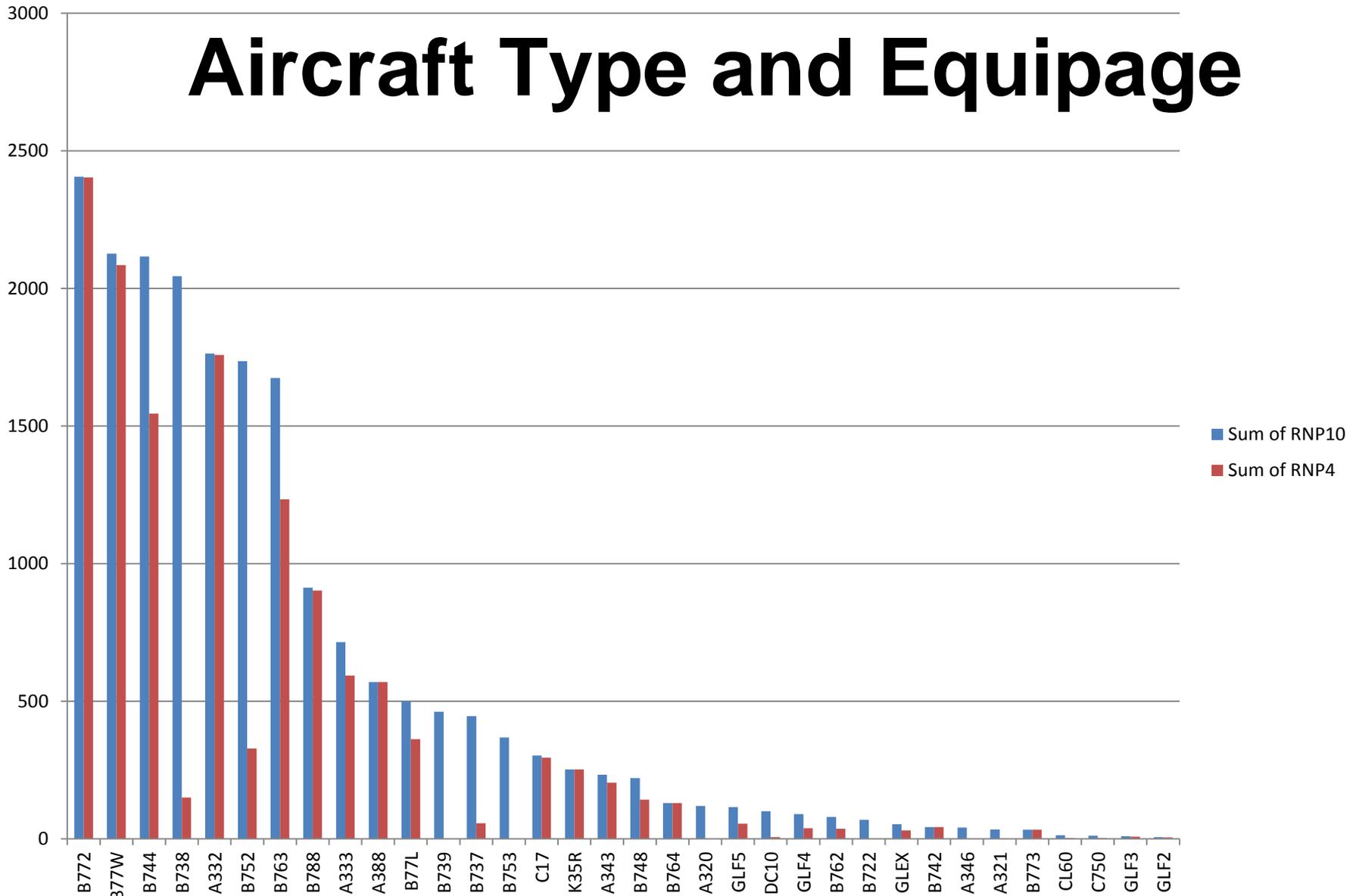


Federal Aviation
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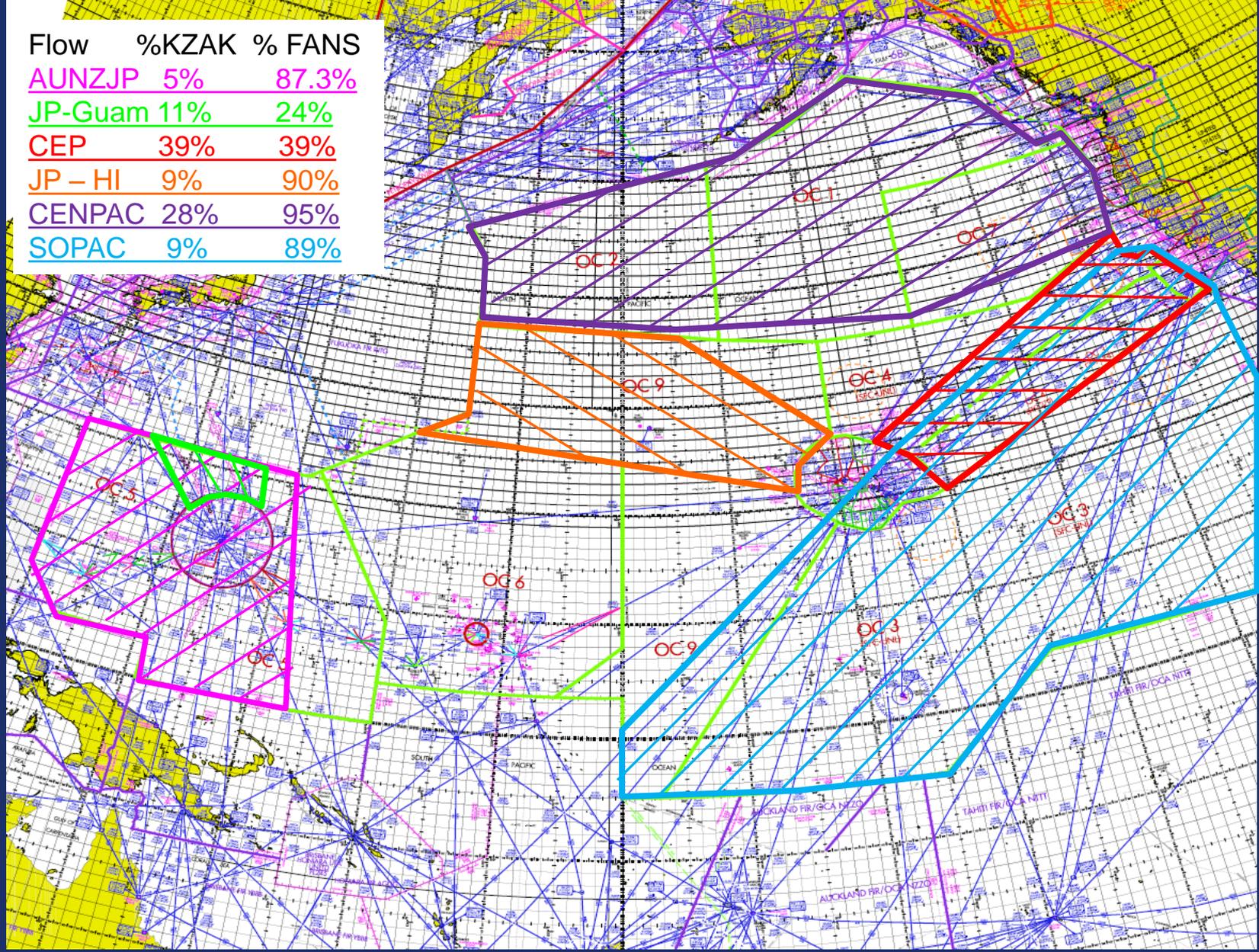
Aircraft Type and Equipage

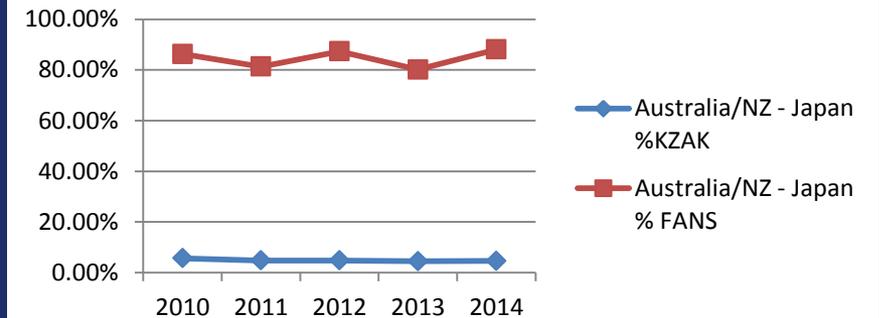
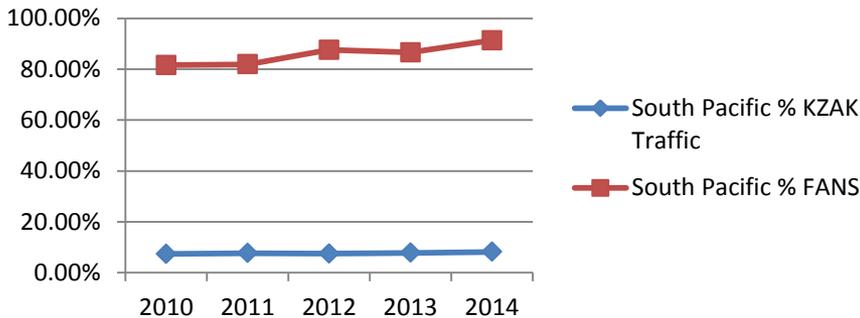
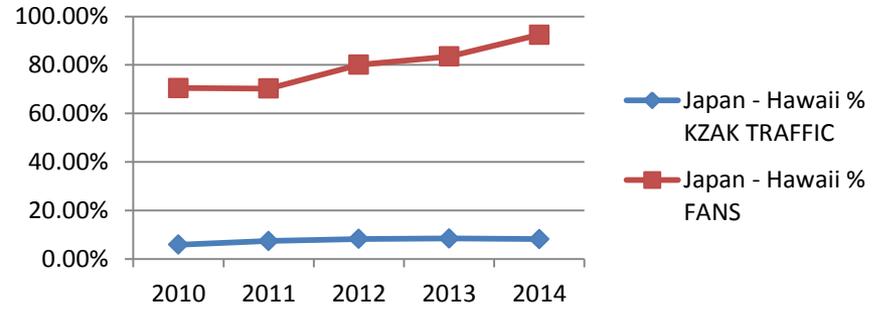
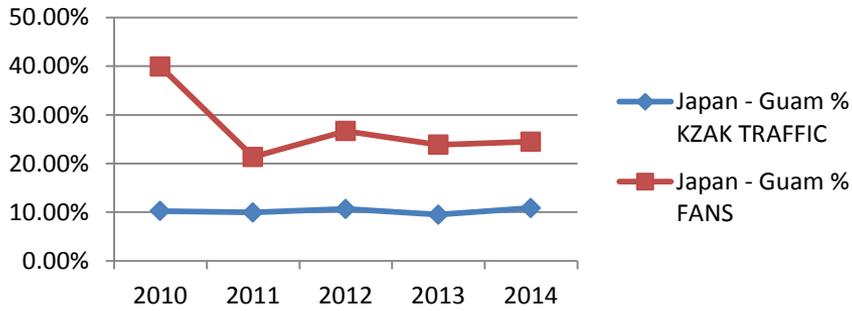
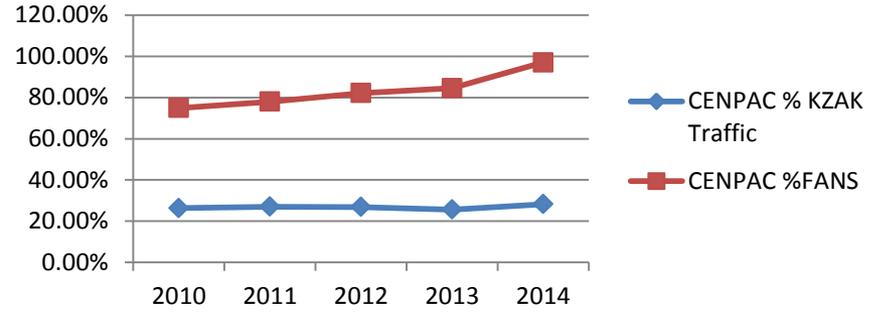
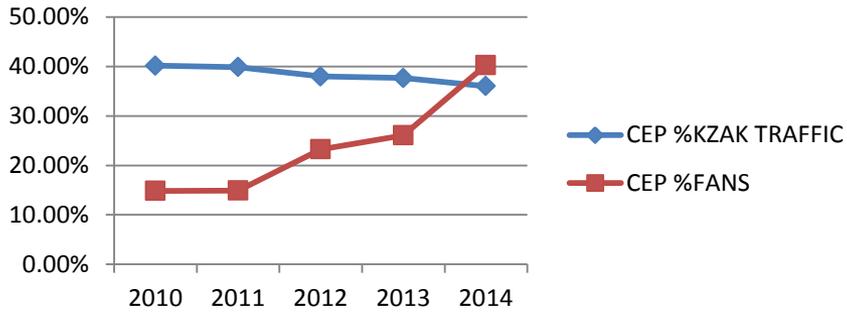


Aircraft Type and Equipage

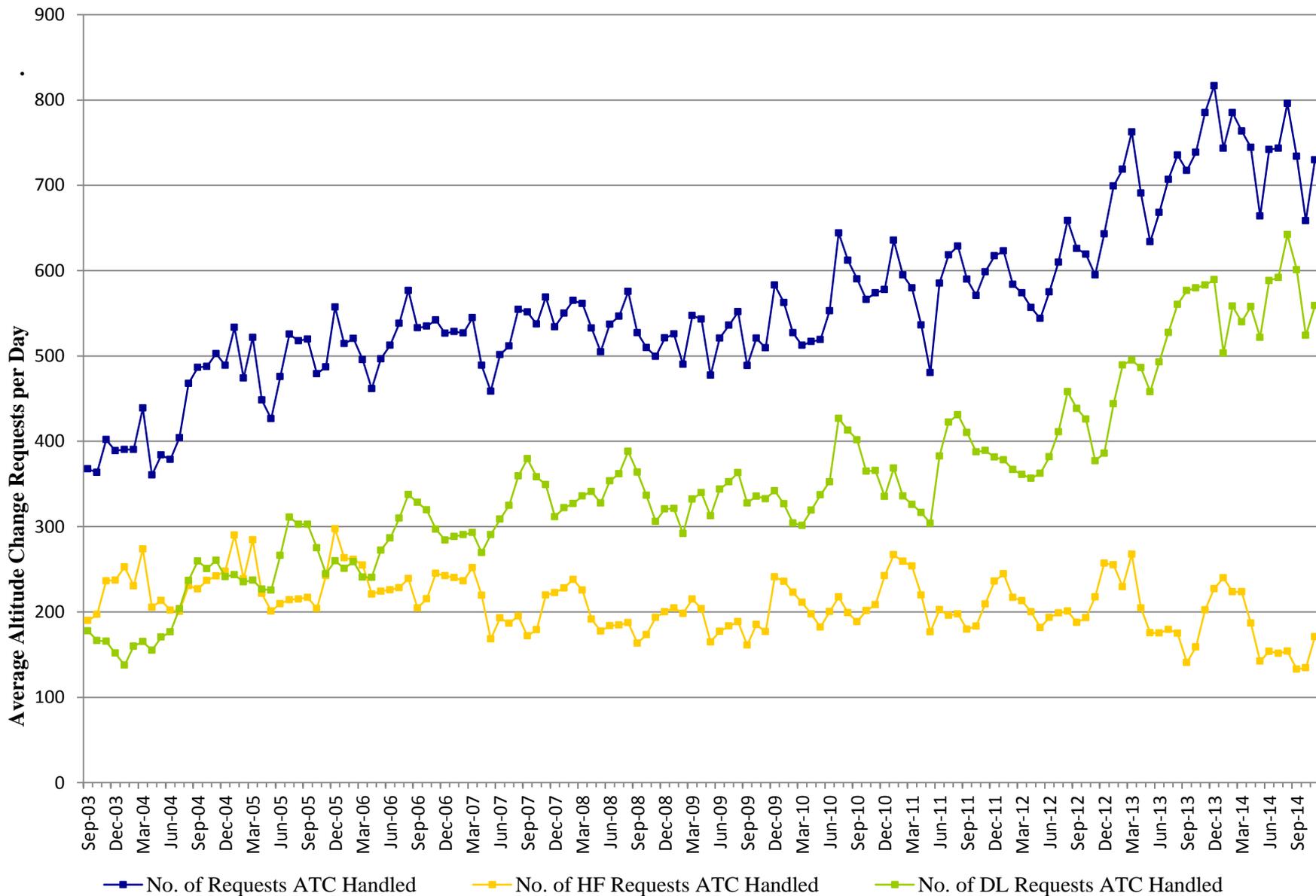


Flow	%KZAK	% FANS
AUNZJP	5%	87.3%
JP-Guam	11%	24%
CEP	39%	39%
JP - HI	9%	90%
CENPAC	28%	95%
SOPAC	9%	89%

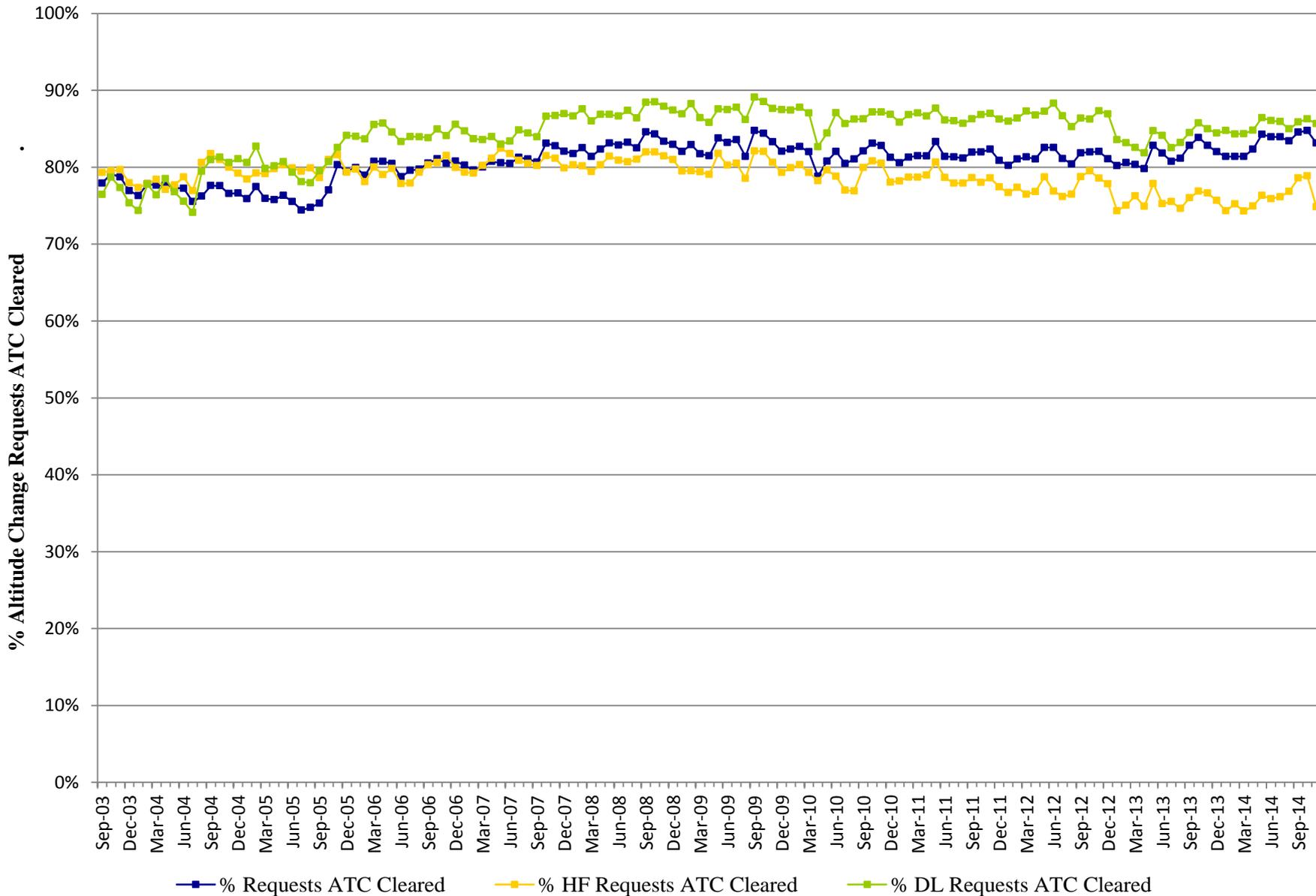




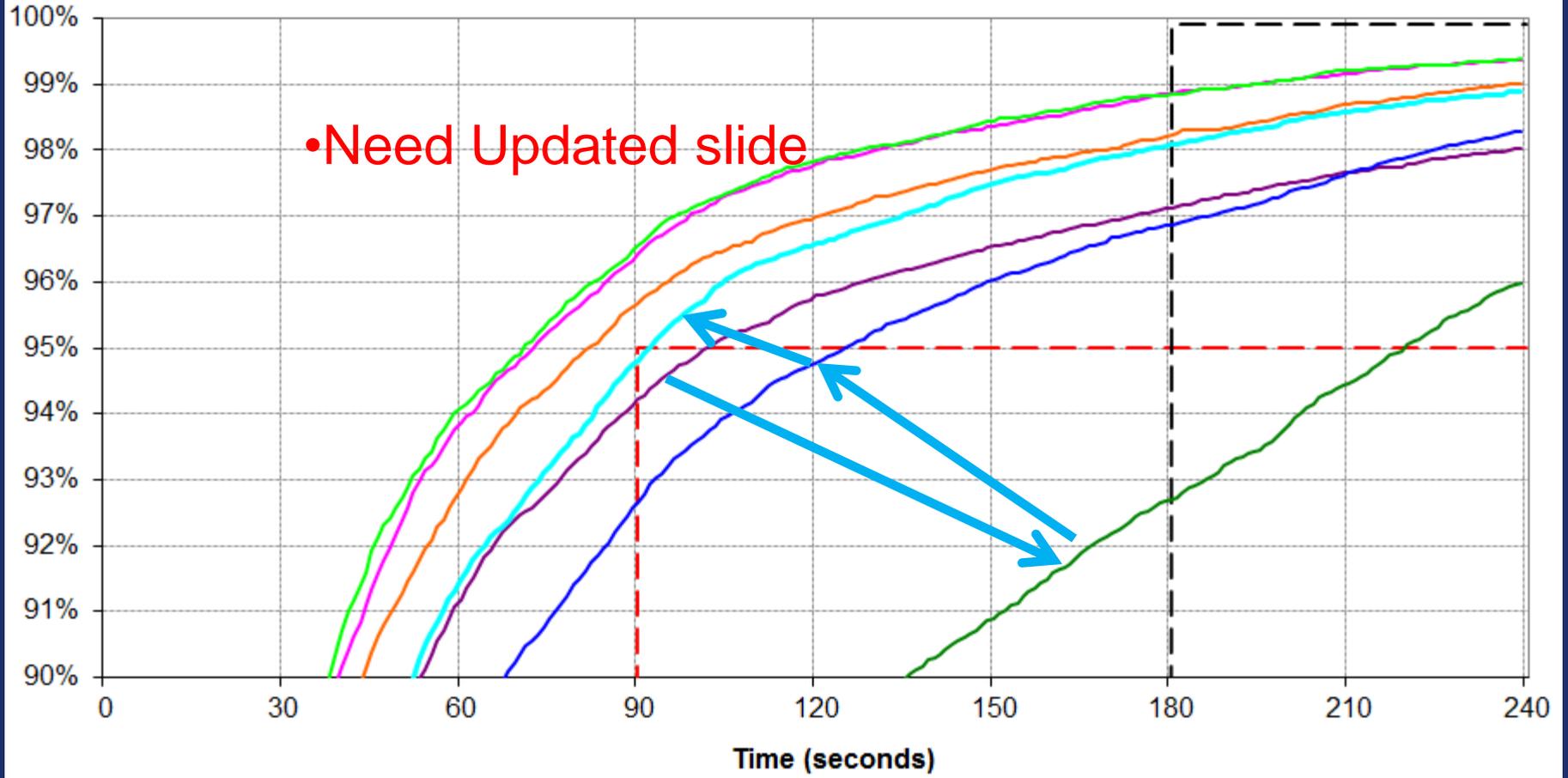
ZOA Altitude Change Requests ATC Handled



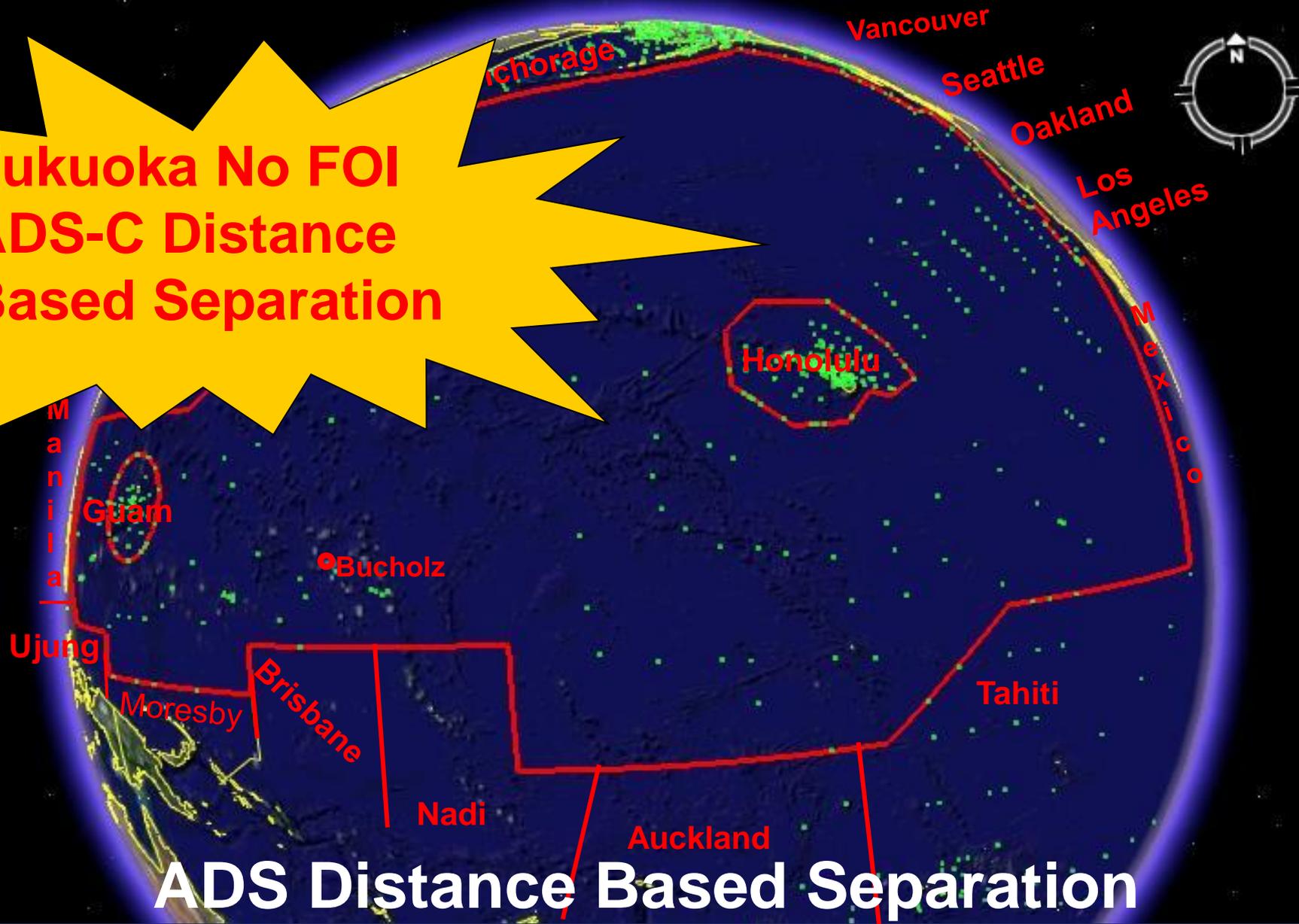
ZOA % Altitude Change Requests ATC Cleared



Oakland FIR - Iridium - January to July 2014 Actual Surveillance Performance (ASP)



Fukuoka No FOI ADS-C Distance Based Separation



ADS Distance Based Separation

Lost Fuel Burn Savings

The following slides identify denied aircraft requests for climb to optimum altitudes and places a value on the increased fuel burn due to lack of FANS equipment and RNP certification

RNP4 and FANS Improves efficiency

Non FANS RNP10

FANS RNP10

FANS RNP4

DAL2237
340
N157

DAL1151
390
N394

FDX3875
360
N410

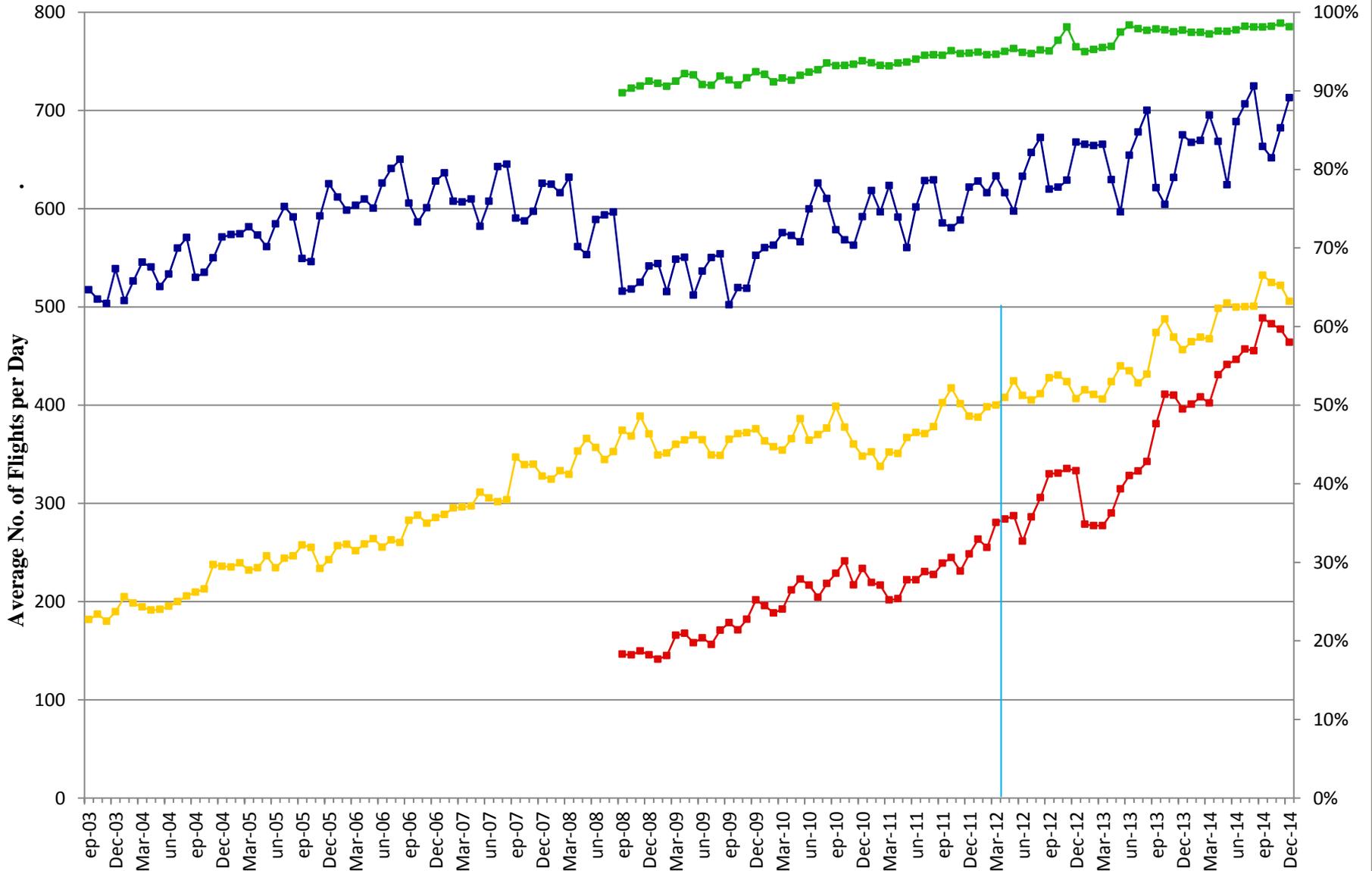
DAL650 3
350
N536

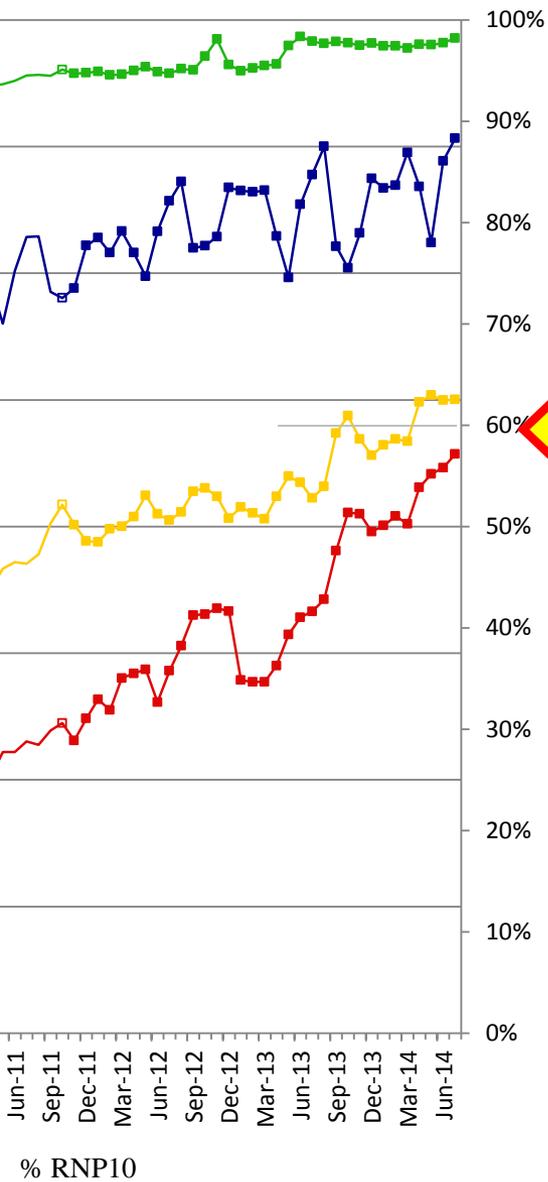
A: 051M21

N17CX
410
N522

DAL836 3
& 340↑360
N522
r360

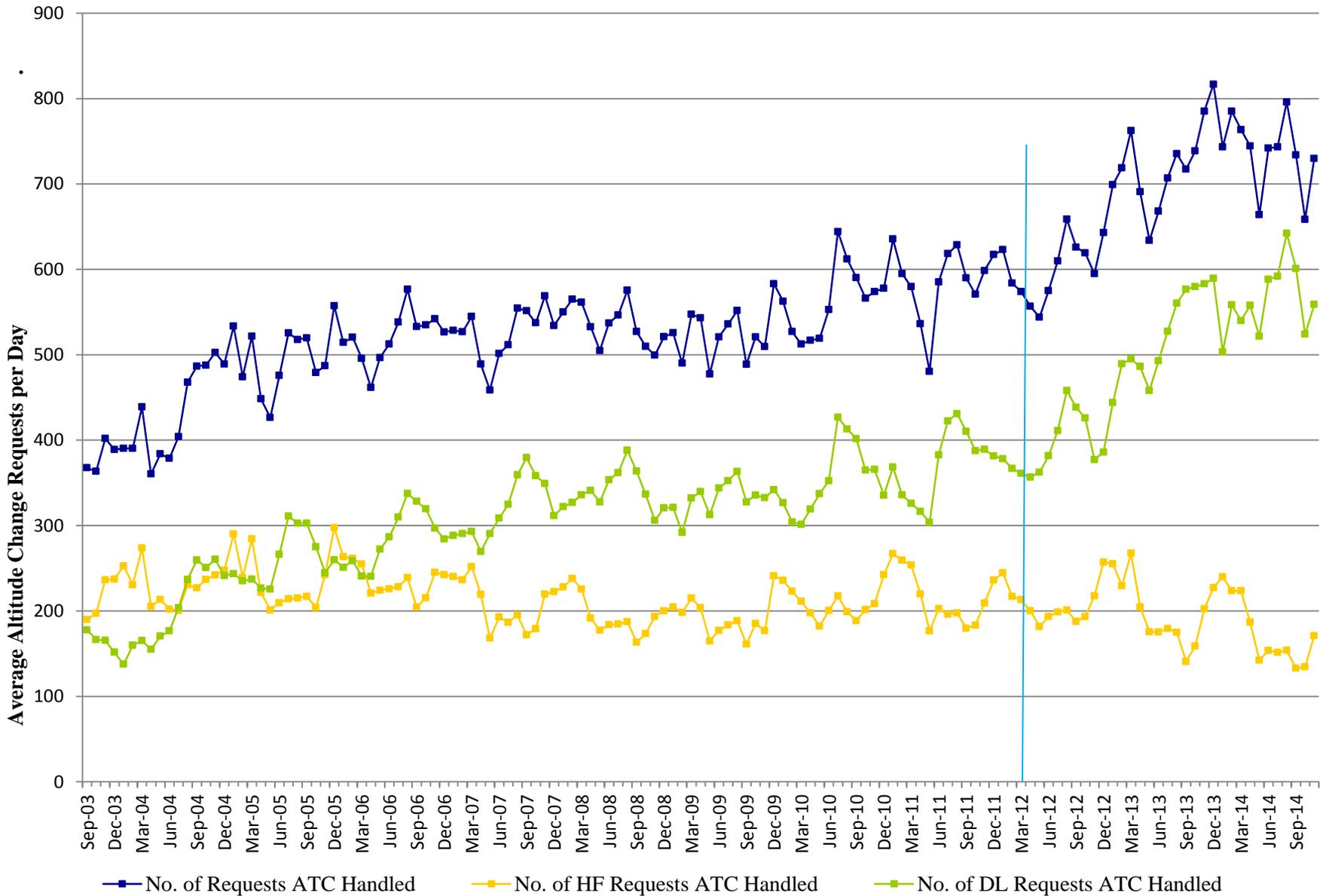
ZOA Flights & Equipment Utilization





Filed NON_RNP4	
T/B744	"T" 28 Flights
P/B77W	"P" 227 Flights
P/B763	
P/B77L	
F/A333	"F" 268 Flights
F/B744	
??*/B77L	??* 3 Flights
QQQ/B748	"QQQ" 51 Flights
QQQ/B744	
A/B752	"A" 26 flights

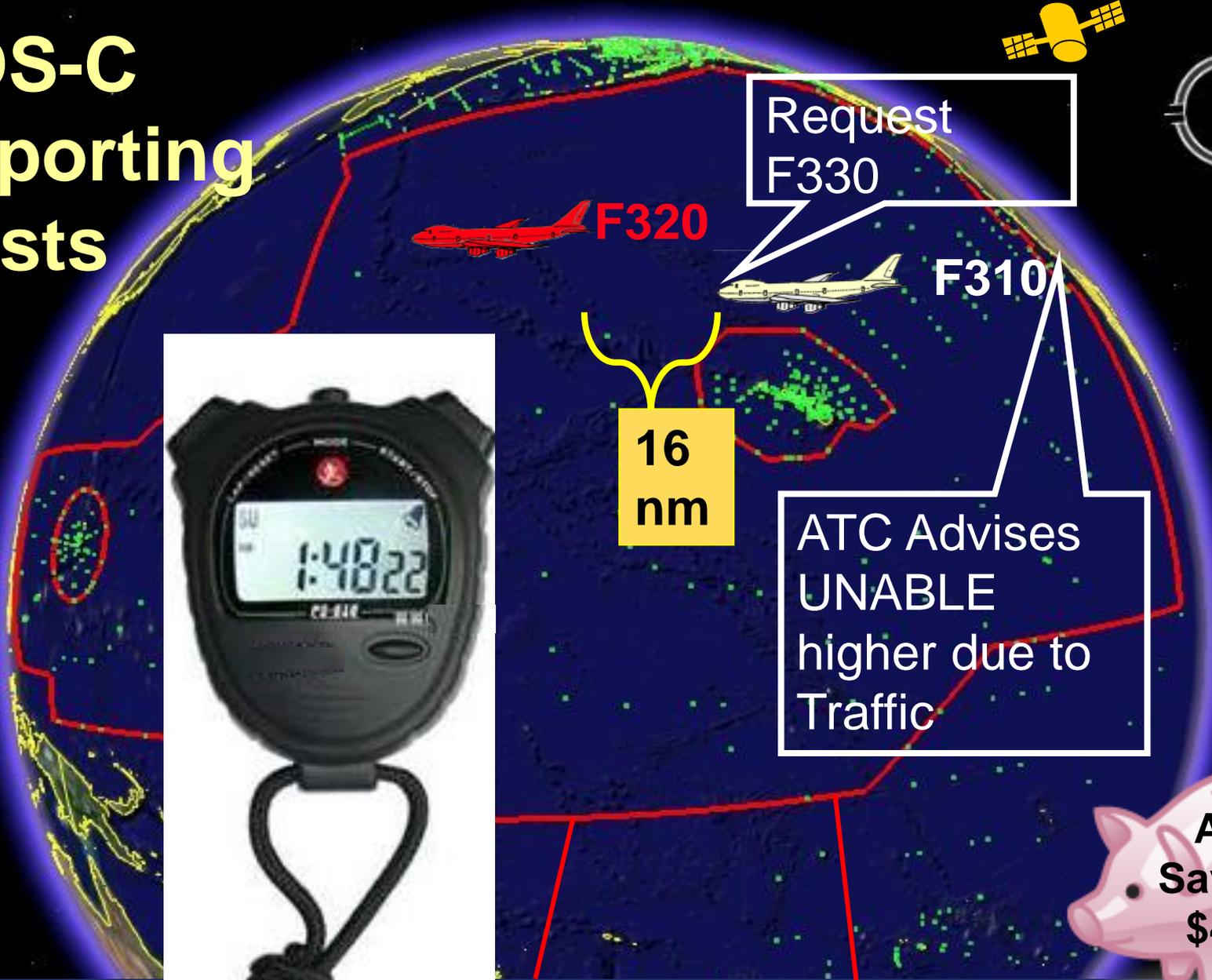
ZOA Altitude Change Requests ATC Handled



Lost Fuel Burn Savings

The following slides identify denied aircraft requests for climb to optimum altitudes and places a value on the increased fuel burn due to lack of FANS equipment and RNP certification

ADS-C Reporting Costs



16
nm

Request
F330

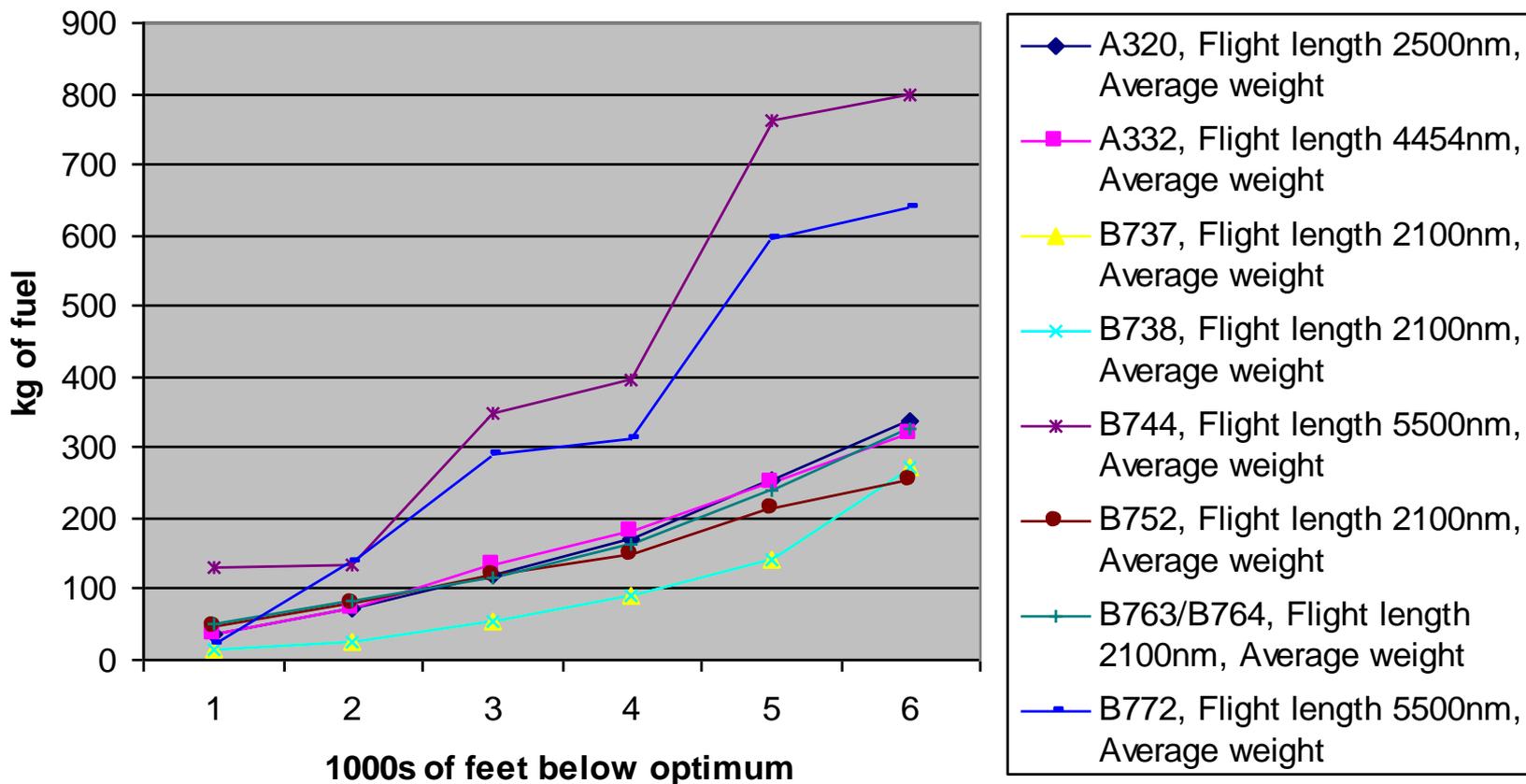
ATC Advises
UNABLE
higher due to
Traffic

ADS
Savings
\$4.25

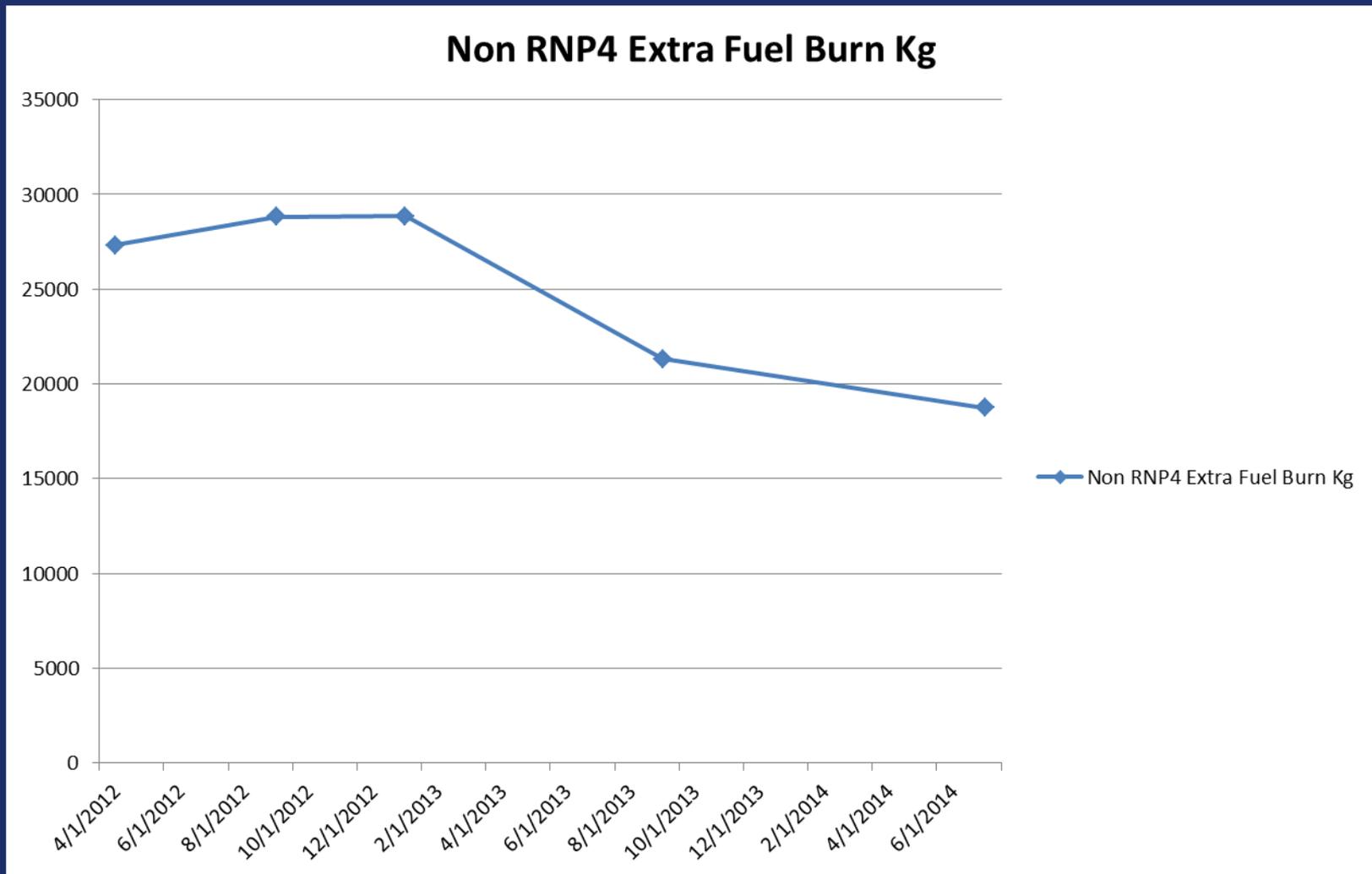


Impact of Denied Altitude Change Requests

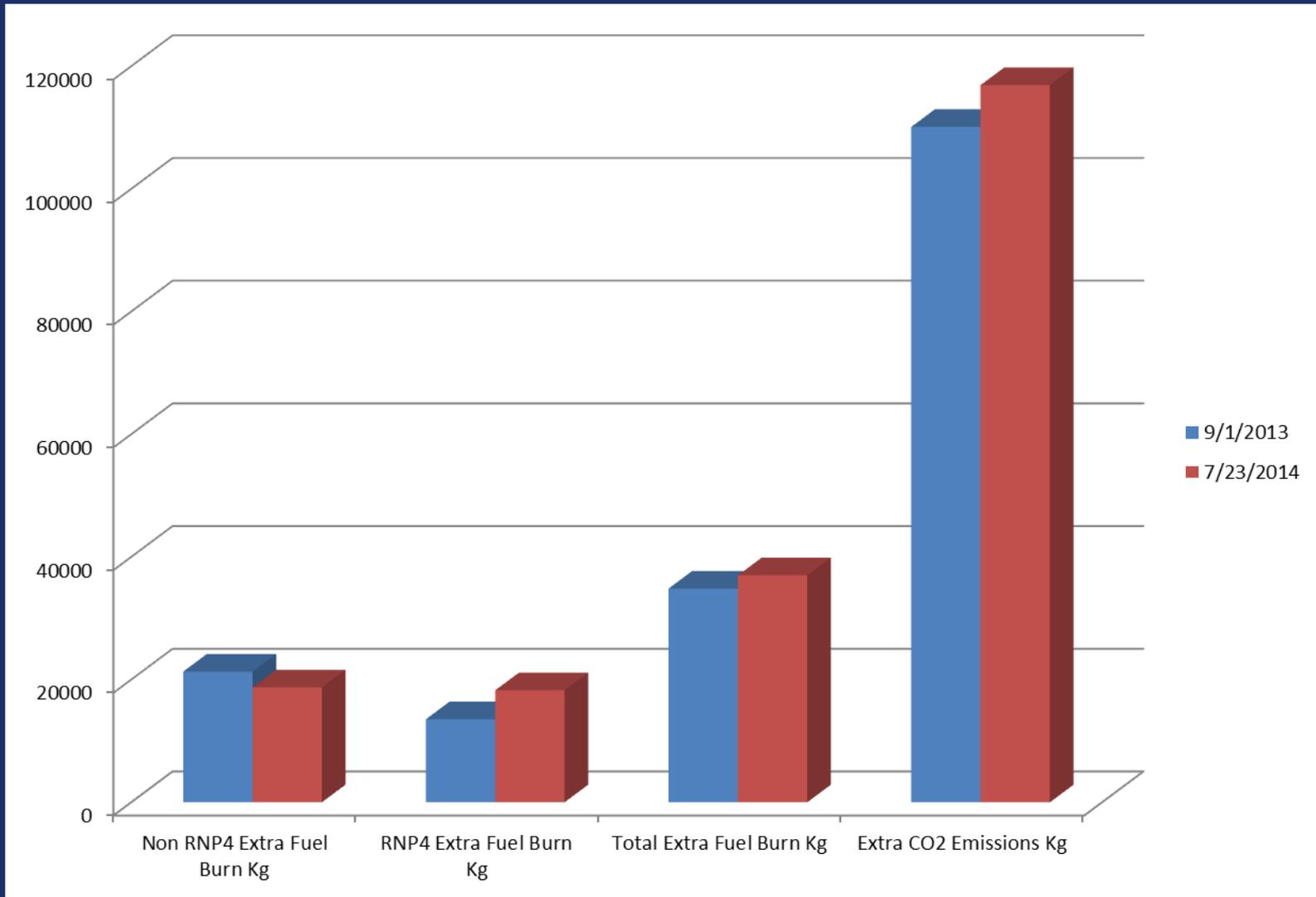
Fuel Burn Below Optimum Altitude



Lack of RNP4 extra fuel burn



RNP4 extra fuel burn



Additional benefits are not tracked

- 30nm separation after two opposite direction aircraft have passed
- If an aircraft is held below optimum altitude because of traffic and does not make requests for a new optimum altitude.

Additional benefits are not tracked

- Savings that could be realized by developing route systems based on a 30nm lateral standard.
- This paper only captures the lost savings for the Oakland FIR. It would be much higher if calculated for all FIRs

Conclusion

- **The meeting is requested to:**
 - **Recognize the benefits of RNP 4 and FANS equipage; and**
 - **Consider certifying FANS equipped aircraft as RNP 4; and**
 - **Consider equipping aircraft with satellite FANS and RNP 4 certification.**

Anchorage
D50, 30/30
PAZN FIR

Anchorage

Vancouver

Seattle

Oakland

Los Angeles



Vancouver
D50

Anchorage
D50 D30

Fukuoka
D50, 30/30

ZSE, ZOA,
ZLA
D50, 30/30

Honolulu

Brisbane
D50, 30/30

Nadi
D50, 30/30

HCF
D50, 30/30

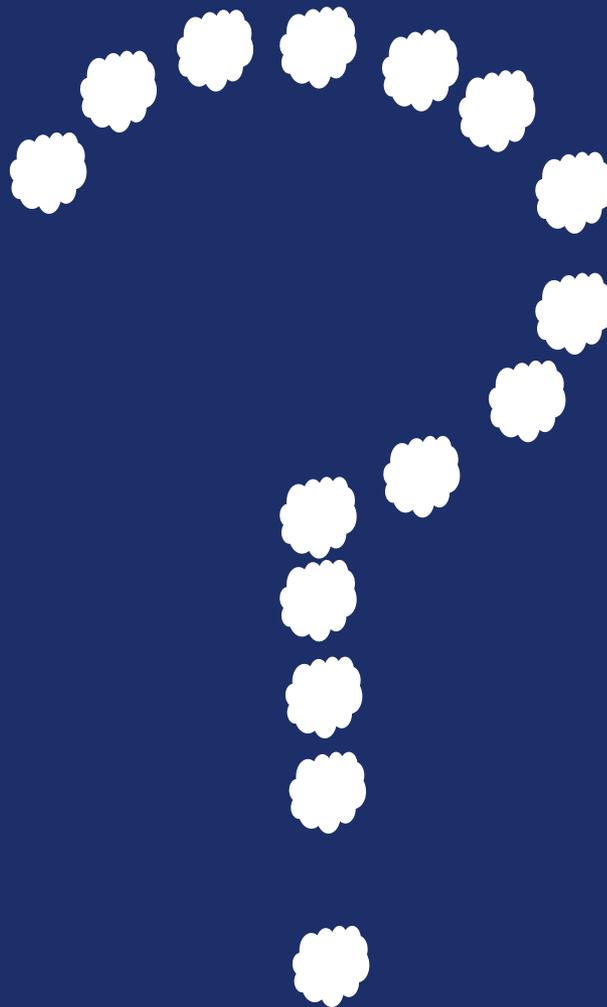
Manila
Guam
Ujung
Guam
D50, 30/30

Brisbane
Nadi

Auckland

Auckland
D50, 30/30

ADS Distance Based Separation



Flight Planned Mach Speeds



Federal Aviation
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Mach Speed Variation

- The FAA has presented papers at IPACG and ISPACG which outline the dangers of unannounced speed changes.
- This issue needs attention by ICAO and a Global or Regional Procedure developed.
- The ISPACG Working Group has been working on this issue to try and develop a unified regional procedure.

ICAO Annex 2 3.6.2.2 change

- *3.6.2.2 Inadvertent changes. In the event that a controlled flight inadvertently deviates from its current flight plan, the following action shall be taken:*
- *a) Deviation from track: if the aircraft is off track, action shall be taken forthwith to adjust the heading of the aircraft to regain track as soon as practicable.*
- *b) Variation in true airspeed: if the average true airspeed at cruising level between reporting points varies or is expected to vary by plus or minus 5 per cent of the true airspeed, from that given in the flight plan, the appropriate air traffic services unit shall be so informed.*
- *c) Change in time estimate: if the time estimate for the next applicable reporting point, flight information region boundary or destination aerodrome, whichever comes first, is found to be in error in excess of 2 minutes from that notified to air traffic services, or such other period of time as is prescribed by the appropriate ATS authority or on the basis of air navigation regional agreements, a revised estimated time shall be notified as soon as possible to the appropriate air traffic services unit.*
-
- *3.6.2.2.1 Additionally, when an ADS agreement is in place, the air traffic services unit shall be informed automatically via data link whenever changes occur beyond the threshold values stipulated by the ADS event contract.*

Mach Speed Variation

- Many aircrews do not monitor their flown speed versus the flight planned speed.
- AIDC can over-right flight planned aircraft speeds.
- It does not matter whether an ATC system uses the first speed in field 15 of the FPL or accounts for the speed changes imbedded in the route of flight.

Flight Planned Speed Changes

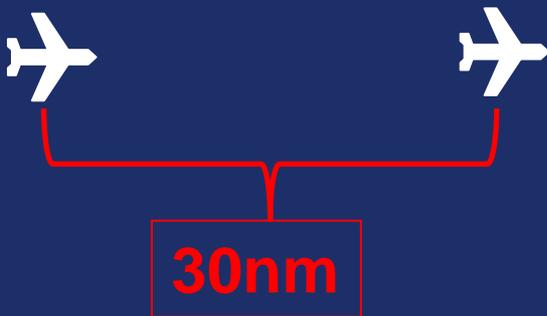
- (FPL-XXXX-IS
- -B753/M-SDE2E3FGHIRWXYZ/S
- -KSEA0035
- -N0396F300 HAROB4 HQM C1418 SEDAR A331 ZINNO/N0463F340
A331 ZIGIE MAGGI3
- -PHNL0541
- -PBN/A1B1C1D1O1S1T1 NAV/RNVD1E2A1 REG/XXXXX
- EET/KZAK0039
- SEL/XXXX
- RMK/TCAS AGCS EQUIPPED NRP USA)

Mach Speed Variation

- Annex 2 change fails to fully address the issue.
- An en route aircraft at 500 knots only has to inform ATC when its true airspeed changes by 25 knots or more from the speed given in the flight plan. This allows for speed changes of 48 knots without informing ATC.

Mach Speed Variation

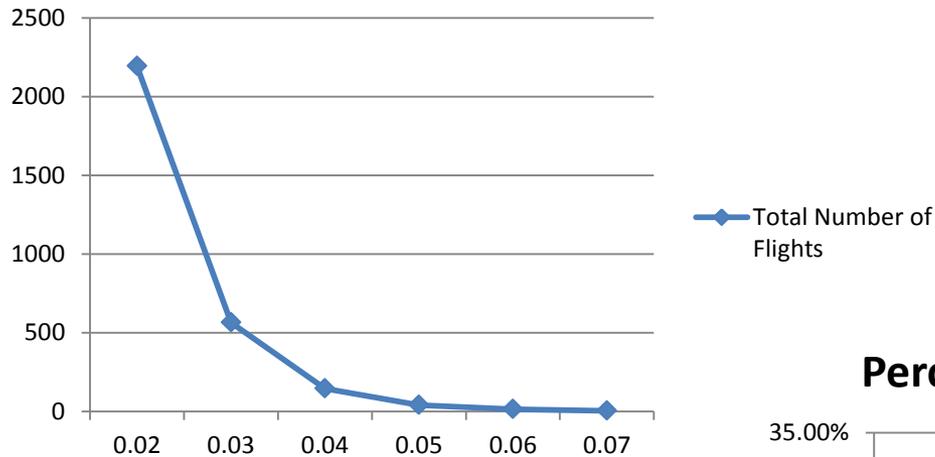
- ICAO ADS-C 30/30 Separation Rules, FIRs may apply 30nm longitudinal separation standard using an ADS-C reporting rate of 14 minutes. A 48 knot speed change by one aircraft could result in an 11nm closure between two aircraft between ADS-C reports.



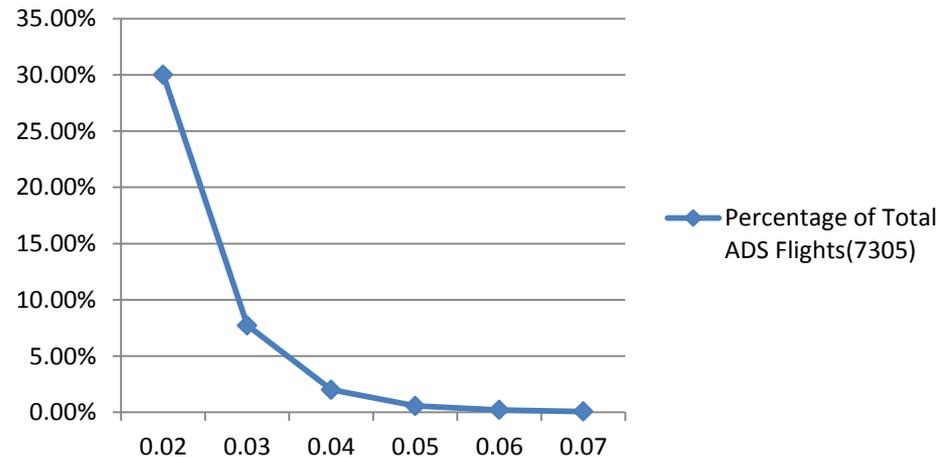
Mach Speed Variation

7305 ADS-C Flights, 7/10/14 to 7/24/14

Total Number of Flights



Percentage of Total ADS Flights(7305)

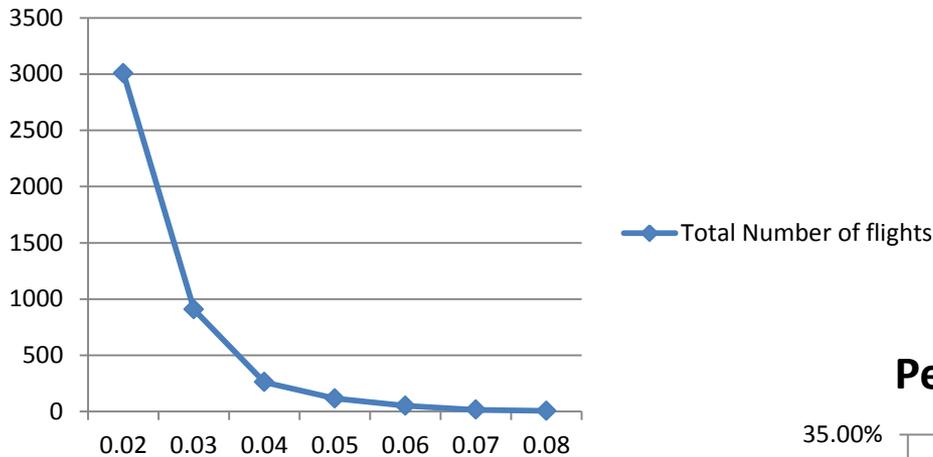


	Jul-14	Dec-14
M.02+	2193	3008
M.03+	565	907
M.04+	146	261
M.05+	41	115
M.06+	15	51
M.07+	5	16
M.08+	0	5

Mach Speed Variation

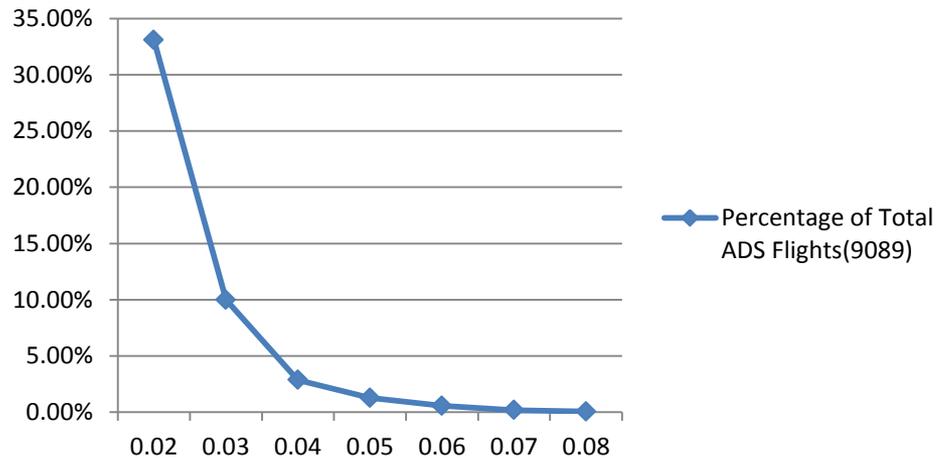
9089 ADS-C Flights, 12/28/14 to 1/12/15

Total Number of flights



	Jul-14	Dec-14
M.02+	2193	3008
M.03+	565	907
M.04+	146	261
M.05+	41	115
M.06+	15	51
M.07+	5	16
M.08+	0	5
M.09+	0	1
M.10+	0	1

Percentage of Total ADS Flights(9089)



Mach Speed Variation

9089 ADS-C Flights, 12/28/14 to 1/12/15

- Closely analyzed 261 ADS-C flights which had a speed change of .04 Mach or greater between ADS-C reports in level flight.
- A Mach Speed change of M.04 by one aircraft could cause:
 - A 5.5nm reduction in separation between RNP4 ADS-C reports
 - A 10.8nm reduction in separation between RNP10 ADS-C reports

Mach Speed Variation

9089 ADS-C Flights, 12/28/14 to 1/12/15

- In 261 flights, identified 333 incidents of changes of M.04 or greater
- Of the 333 incidents, ATC was advised of the speed change only 20 times.
- 6 flights had a change of M.08 or more between ADS-C reports
 - 1 of the 6 had an ATC clearance for the change.
 - A Mach Speed change of M.08 could lead to an 11nm reduction in separation.
 - One flight changed speed by M.10 without advising ATC, that could create a 1nm minute overtake

Australia AIP Amendment

- *AIP ENR 1.1 para 21:*
- *A pilot must inform ATS if the average cruising speed, either TAS or Mach whichever is applicable, between reporting points, varies or is expected to vary, by a value equal to or greater than:*
 - *a. 5% TAS*
 - *b. 0.01 Mach from that given in the flight plan.*

Speed Change NOTAM Proposal

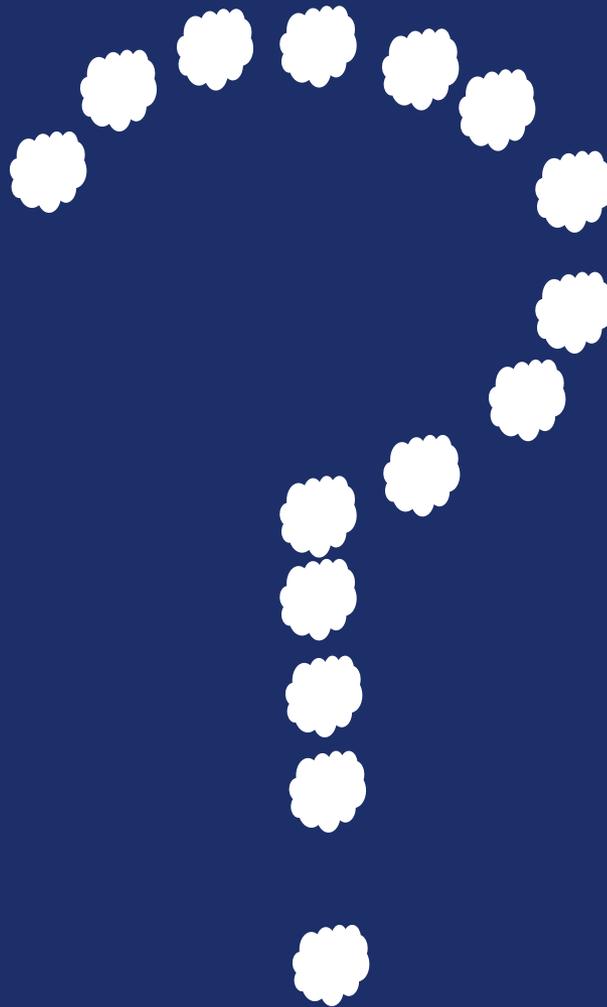
- IN ORDER TO PREVENT UNANNOUNCED SPEED CHANGES AIRCREWS ARE REQUIRED TO USE THE FOLLOWING PROCEDURES IN THE KZAK FIR. UPON CROSSING THE KZAK FIR BOUNDARY, AIRCRAFT ARE REQUIRED TO REPORT THEIR SPEED VIA CPDLC OR HF VOICE. TURBOJET AIRCRAFT ARE TO REPORT THEIR MACH NUMBER **(AND NON-TURBOJET AIRCRAFT ARE TO REPORT A TRUE AIRSPEED.)**
- A PILOT MUST INFORM ATS EACH TIME THE CRUISING **(SPEED, EITHER TAS OR) MACH NUMBER (WHICHEVER IS APPLICABLE)** VARIES OR IS EXPECTED TO VARY BY A VALUE EQUAL TO OR GREATER THAN:
 - (A. 10 KNOTS TAS FROM THE PREVIOUSLY REPORTED SPEED - Non-Turbojet)**
 - B. 0.02 MACH FROM THE PREVIOUSLY REPORTED SPEED (- Turbojet.)**

Mach Speed Variation

- By requiring a speed report upon entering the FIR/CTA, a pilot is made aware of their speed and the need to notify ATC if the speed will change by .02 Mach or more.
- The speed report also allows ATC to check the speed the ATC system is using to calculate separation for the aircraft.

Speed Change Proposal

- Procedurally when an aircraft wanted to change by .02 Mach number, they could downlink DM18 with the requested speed (Mach number).
- If ATC required a speed assignment for separation, an appropriate speed assignment would be assigned ie UM106 *MAINTAIN Speed.*
- If ATC did not require a speed assignment, the following could be Uplinked:
 - UM ROGER
 - UM169 Speed change to M0.84 approved
 - This advises the aircraft that the requested speed change is approved but no speed restriction has been assigned.



Pacific Island Traffic



Federal Aviation
Administration

Oakland Oceanic Airports

Guam

OC9

PMDY

PWAK

OC6

PKWA

OC3

PTYA

PTPN

PKMJ

PTRO

OC5

PTKK

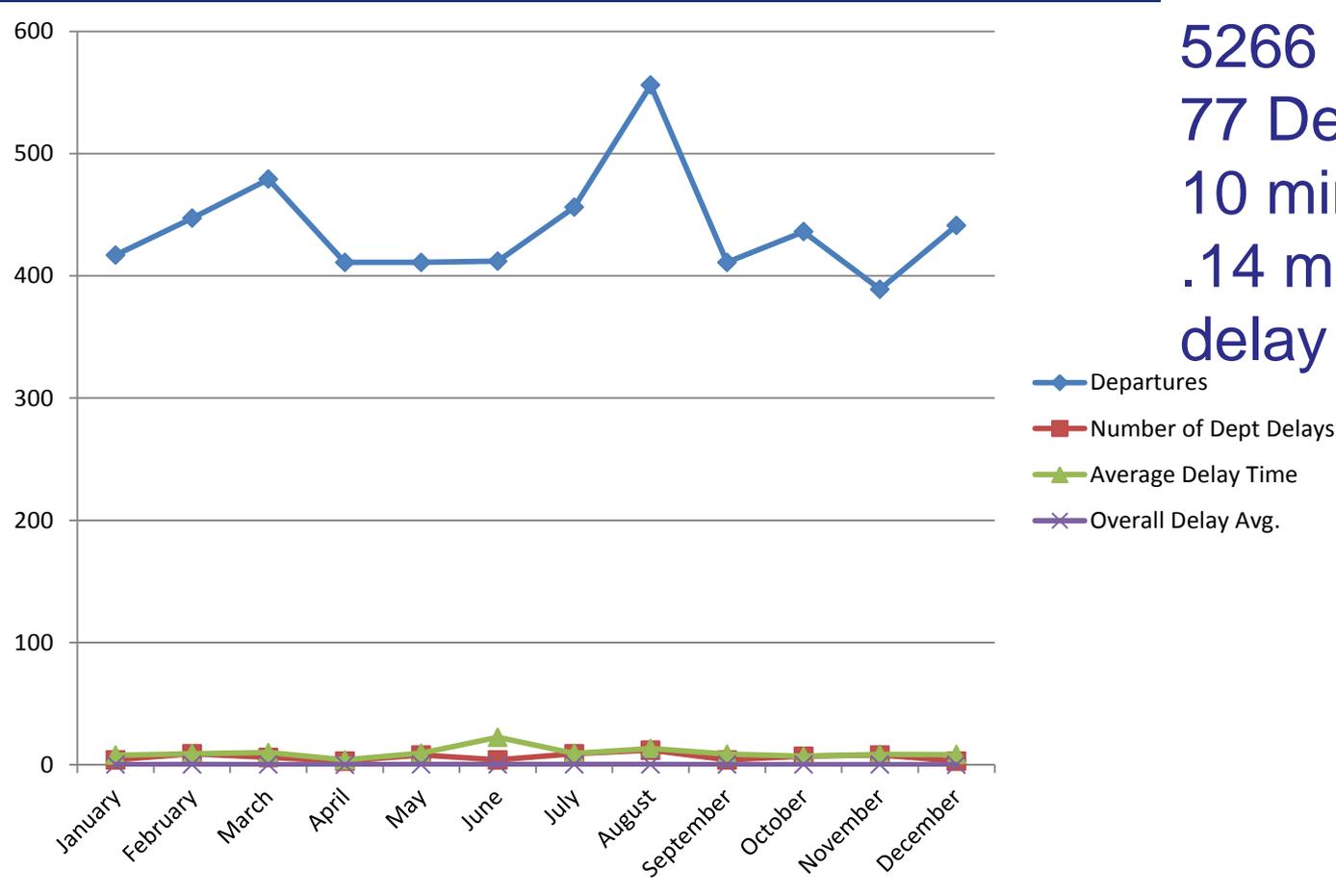
PTSA

PLCH

Oakland Oceanic FIR

2014 Island Departure Delays

•2014 Totals
5266 Departures
77 Departure Delays
10 mins avg delay
.14 mins Overall
delay avg

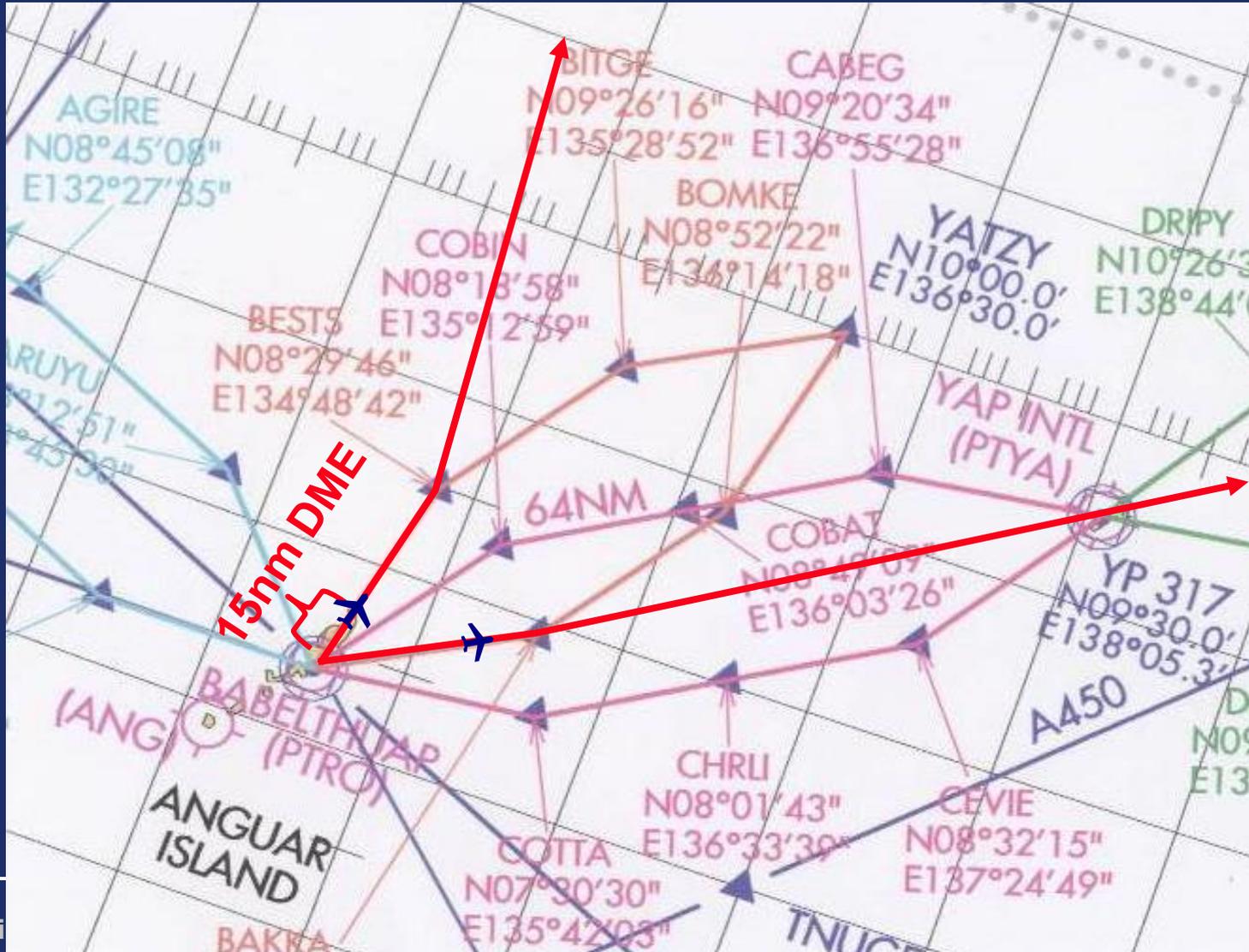


Overall average flight delay was less than a minute

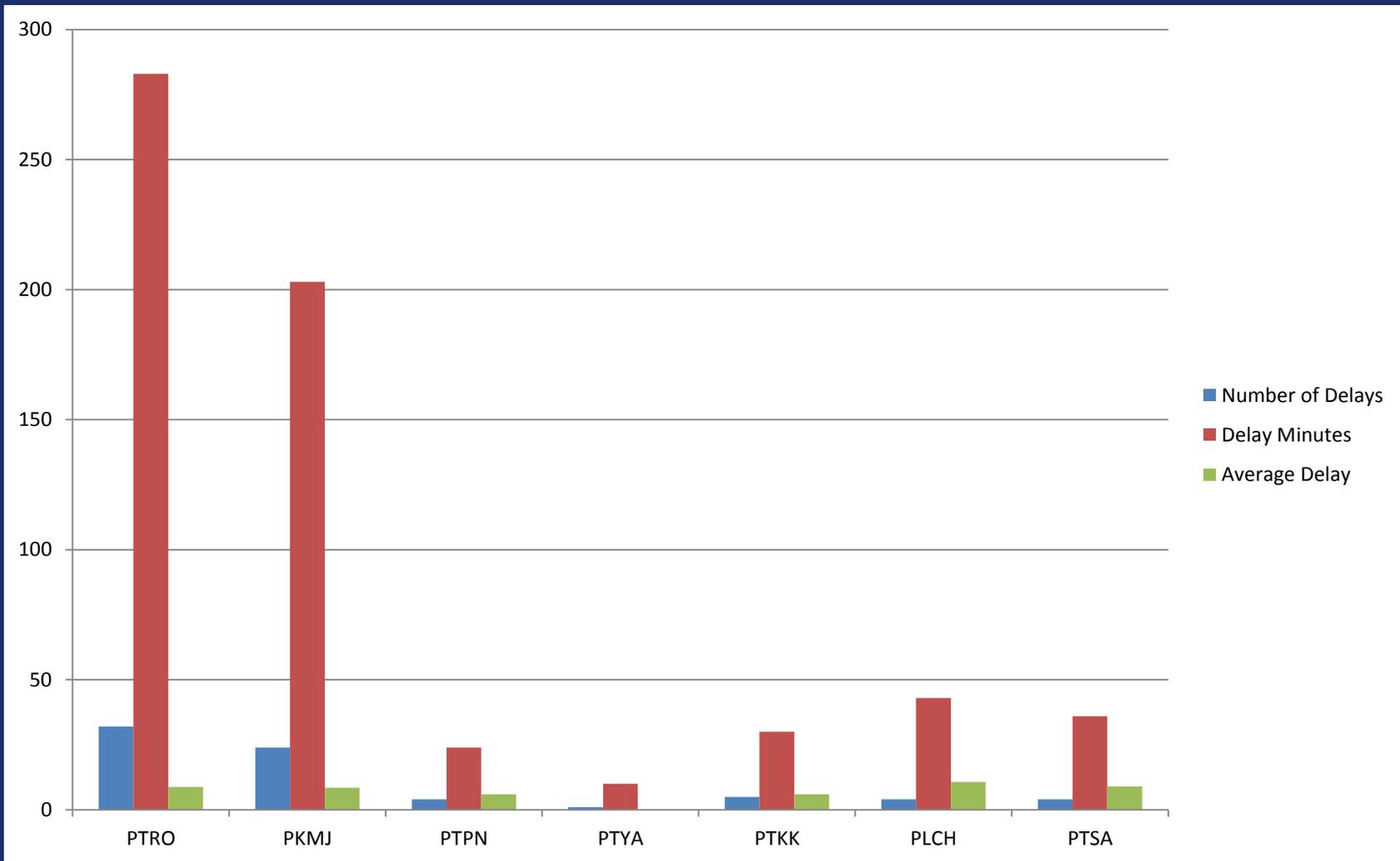
Island Departure Delays

- **Departure Delays, October 2010 to March 9, 2011**
 - About 4% of departures are delayed.
 - Delayed flight average = 18 minutes
- **Departure Delays, 2014**
 - 0.14% of departures were delayed
 - Delayed flight average = 10 minutes

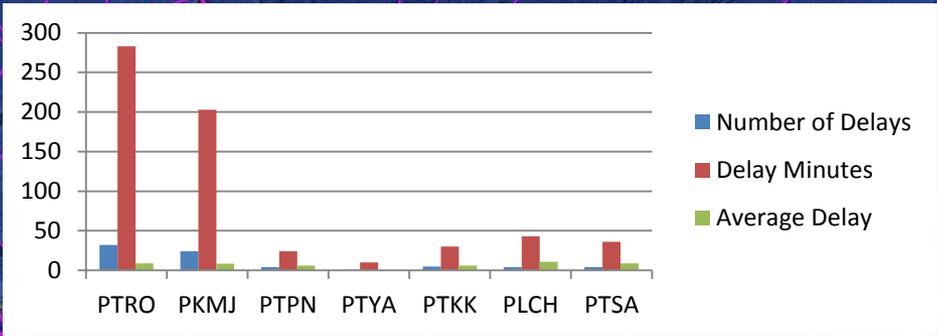
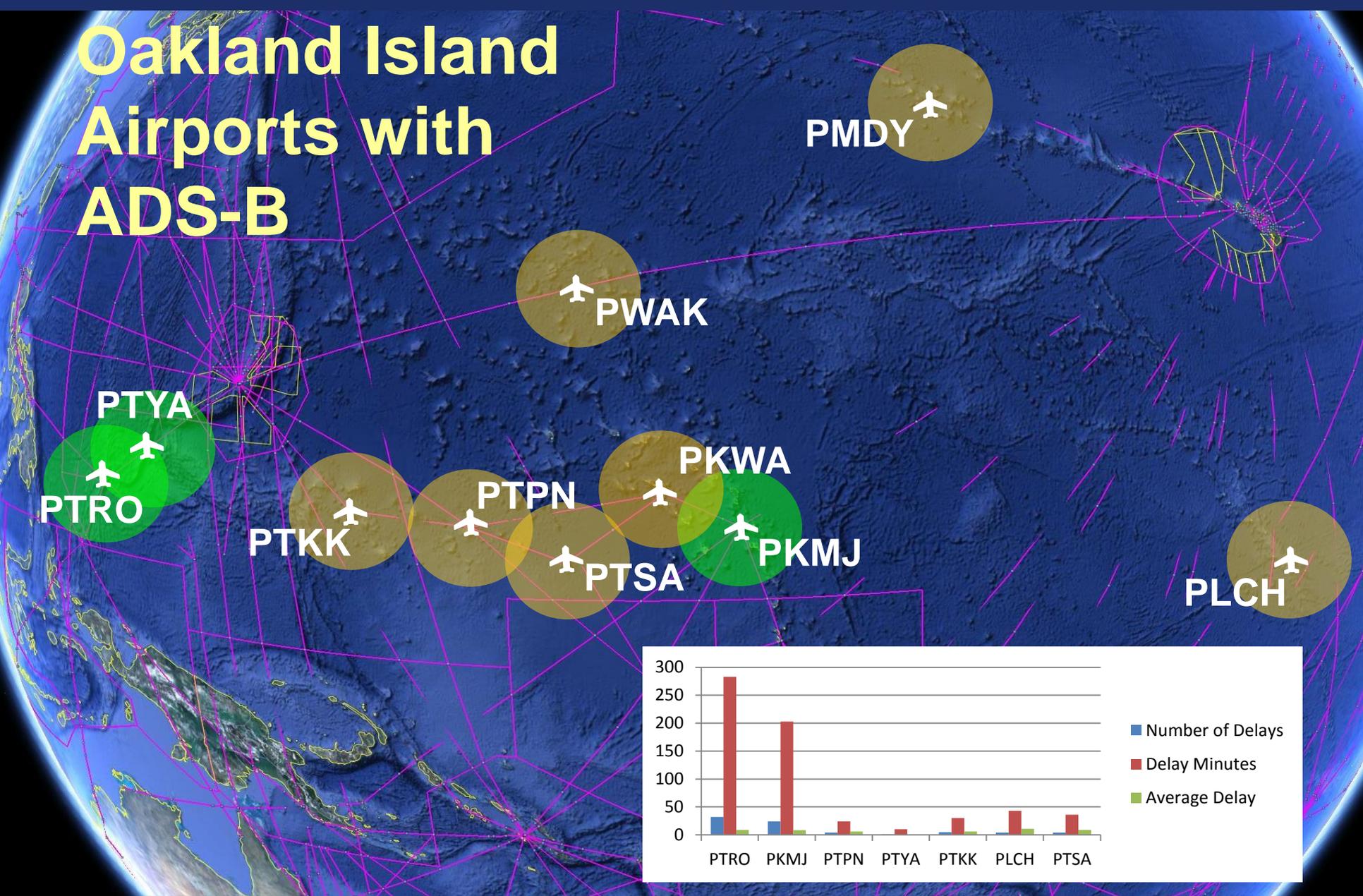
Pacific Island Airport Waypoints Dead Reckoning Lateral Separation



2014 Island Departure Delays



Oakland Island Airports with ADS-B



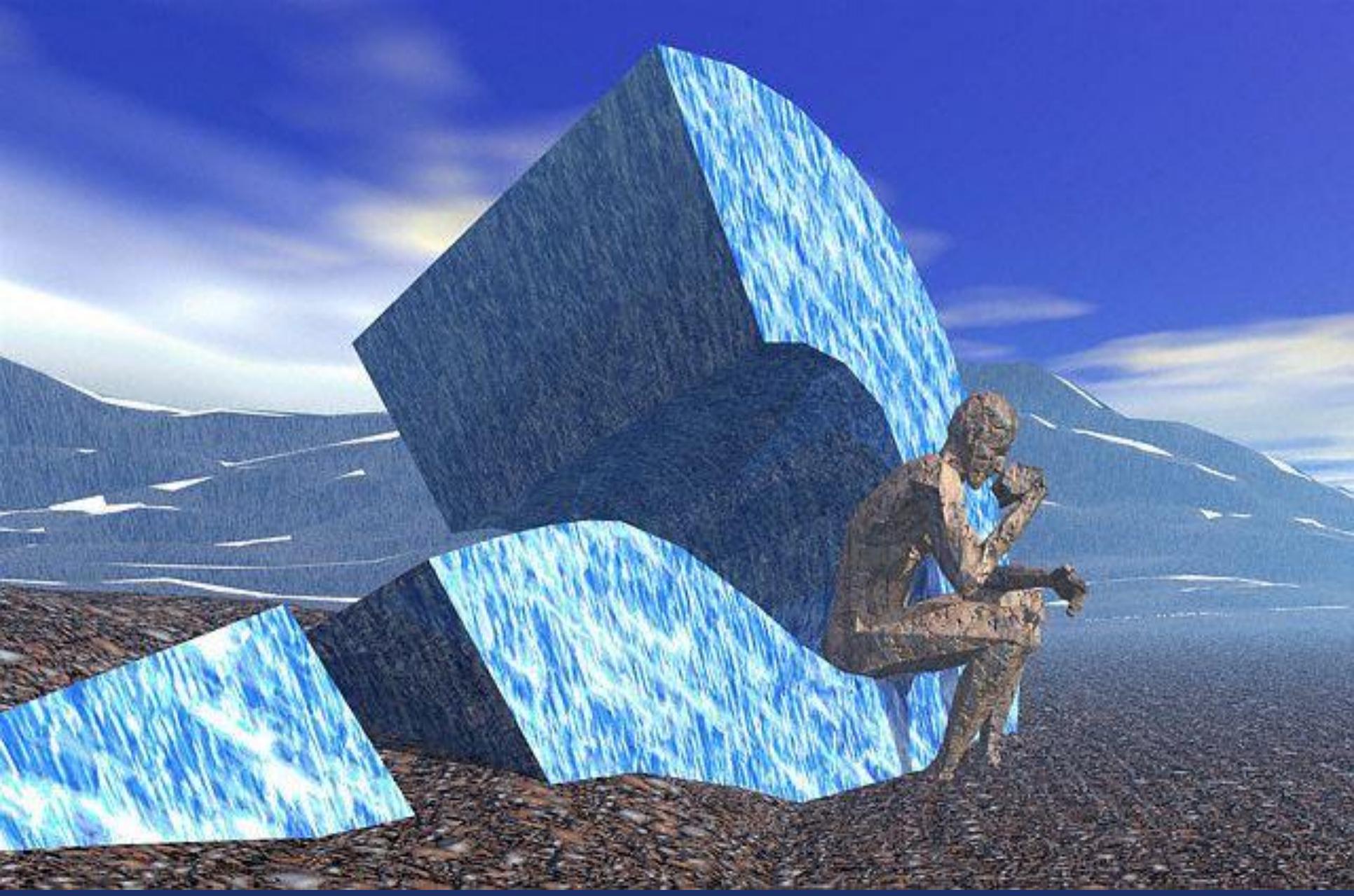
Space Based ADS-B Surveillance



ZOA



•The FAA is also investigating the feasibility of Space Based ADS-B Surveillance. In conjunction with CPDLC the possibility exists to reduce separation standards



Aircraft Tracking Task Force (ATTF)



Federal Aviation
Administration

Aircraft Tracking Task Force (ATTF)

- ATTF was endorsed and actively supported by the International Civil Aviation Organization (ICAO)
- ICAO ATTF Report is on Memory Stick

ATTF report based on 3 principles

1. The safety of passengers and crew is the primary consideration of the airline industry.
2. There are technologies and best practices in use today to conduct aircraft tracking.
3. Technologies will continue to evolve, and as they do so will the ability to continue to improve global aircraft tracking.

Aircraft Tracking Task Force (ATTF)

- ATTF Recommendations are in the ICAO paper file on the memory stick.
- “In order to be effective, the aircraft tracking functionality needs to be active at take-off and remain operational while the aircraft is airborne. The aircraft’s position should be reported at least every 15 minutes. In airspace where ATS surveillance services or ADS-C identifies the position at least every 15 minutes, the aircraft operator may rely on those systems for tracking information. “

Aircraft Tracking Task Force (ATTF)

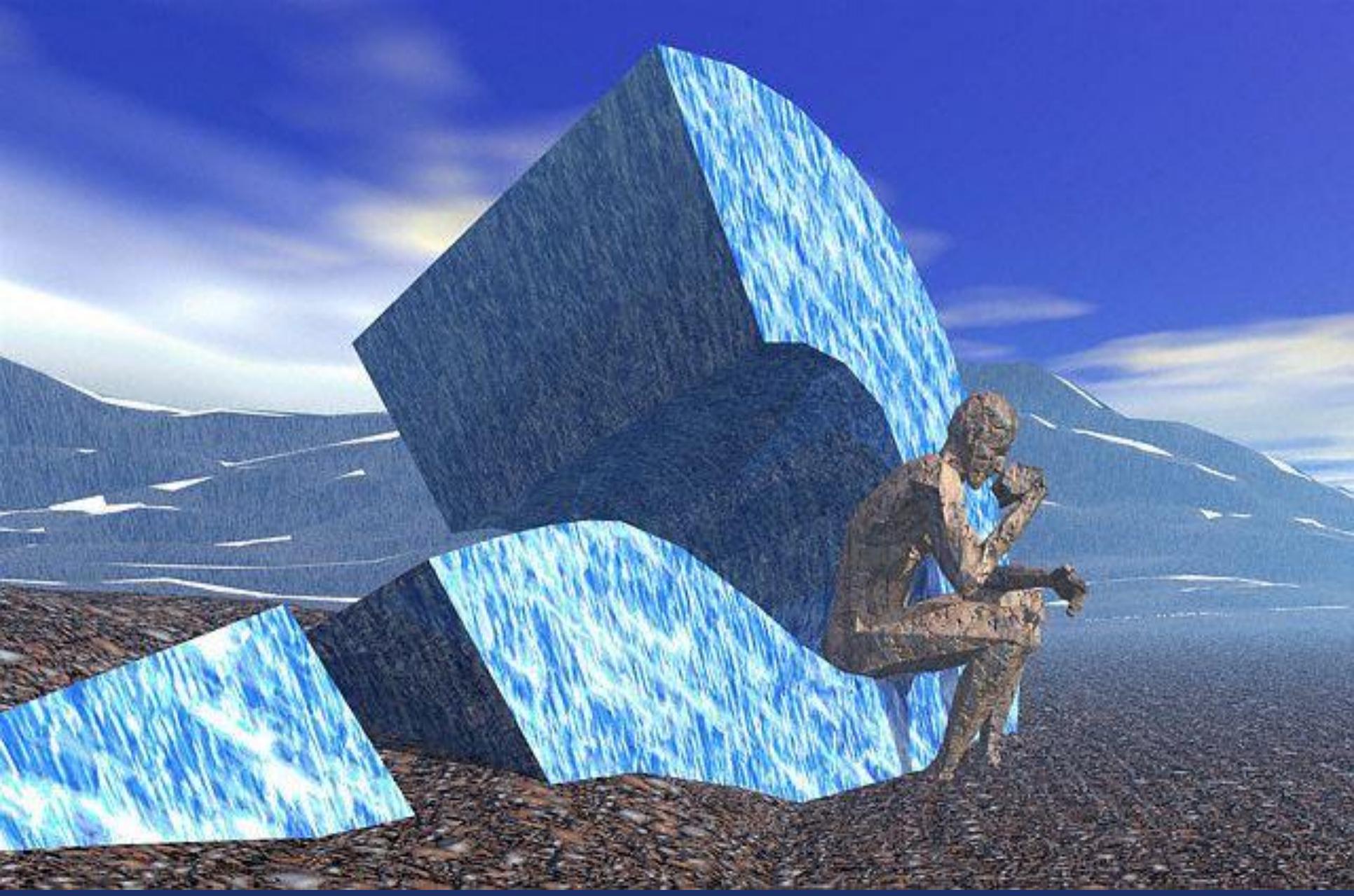
- ATTF Report Tracking methods:
 - Radar
 - Multi-Lateration
 - ADS-B Ground Based
 - ADS-C
 - ANSP
 - OOC Direct Feed
 - ACARS
 - Stand-Alone GNSS Sat. reporting devices
 - ADS-B Space Based

Aircraft Tracking Task Force (ATTF) Recommendations

1. Aircraft operators, air navigation service providers, tracking and communications service providers evaluate their current aircraft tracking capabilities against these performance criteria;
2. Operators not currently meeting these criteria implement measures do so within 12 months of the issuance of this ATTF Report;
3. Operators exchange best practices regarding aircraft tracking via a venue and methodology to be defined by IATA;
4. Any future ICAO provisions for aircraft tracking be performance-based and take into consideration experience gained by operators in implementing these criteria;

Aircraft Tracking Task Force (ATTF) Recomendations

5. Any future ICAO aircraft tracking standards not prescribe specific solutions in order to allow industry to make best use of existing and emerging technologies appropriate to their operation;
6. ICAO encourage Member States to require ANSPs to establish communication protocols between themselves and aircraft operators;
7. ICAO encourage Member States to conduct practice exercises involving airline operation centers, air navigation service providers, and rescue coordination centers to test and verify their ability to respond and coordinate in an integrated manner to abnormal flight scenarios.

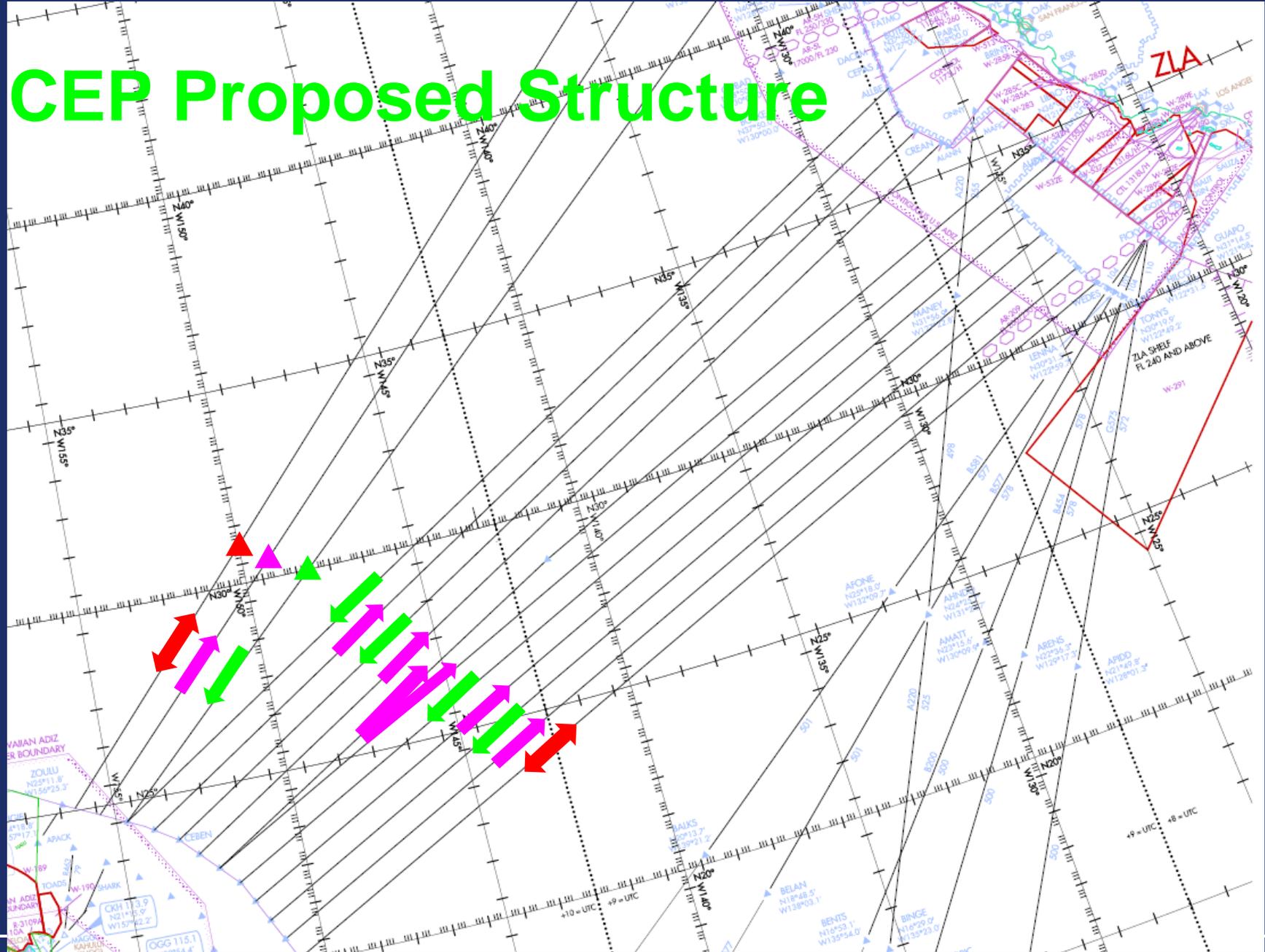


CEP Route Structure



Federal Aviation
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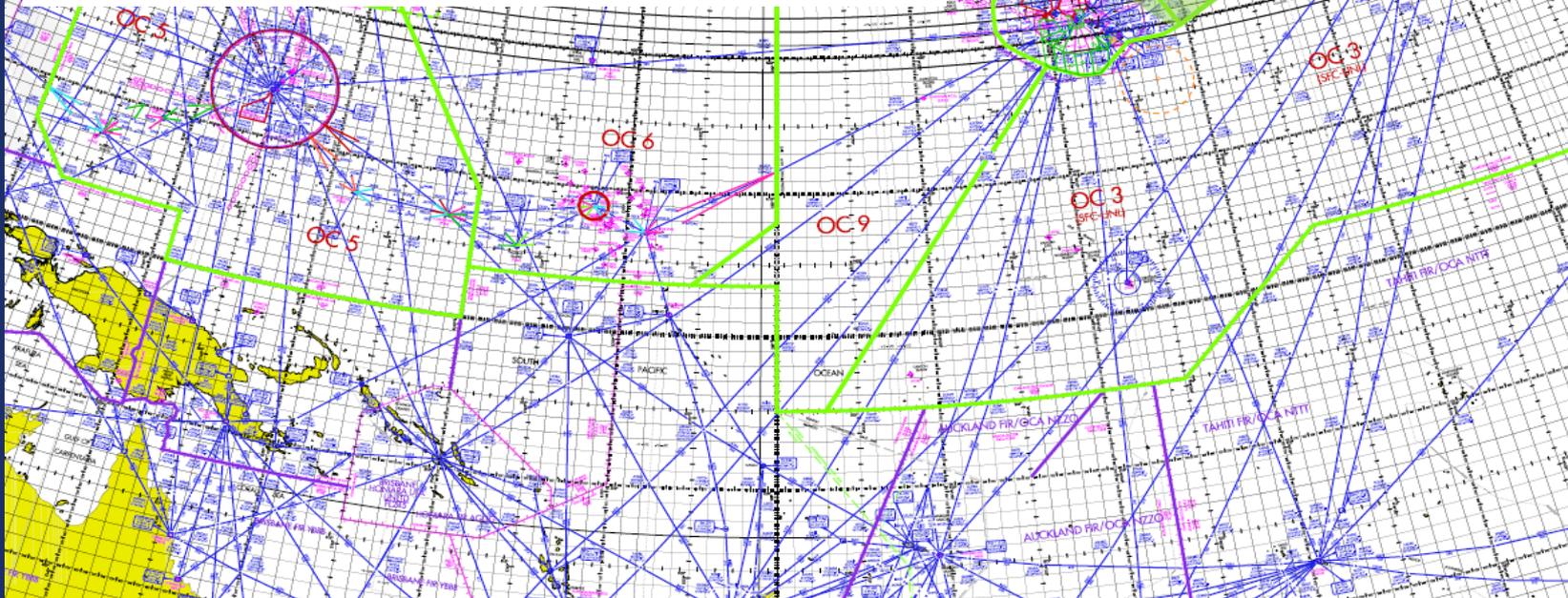
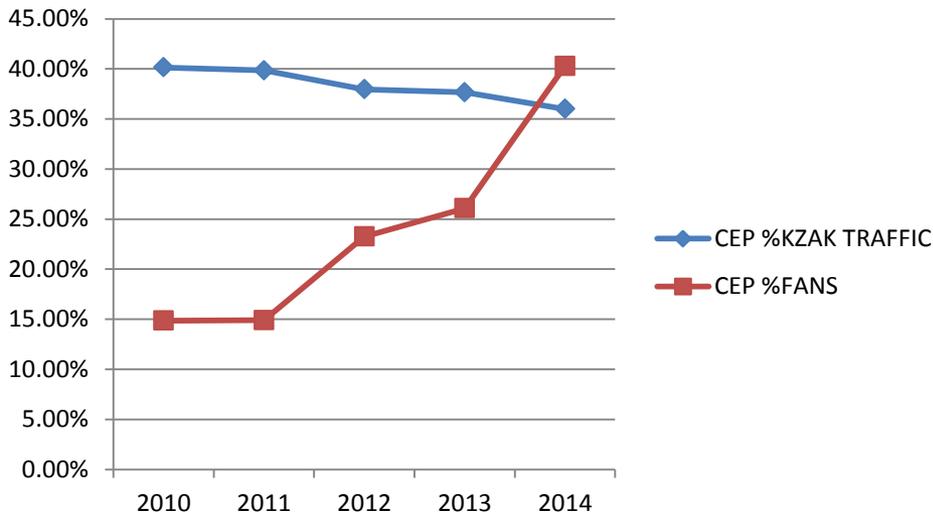
CEP Proposed Structure



OWG Meeting
January 21, 2015



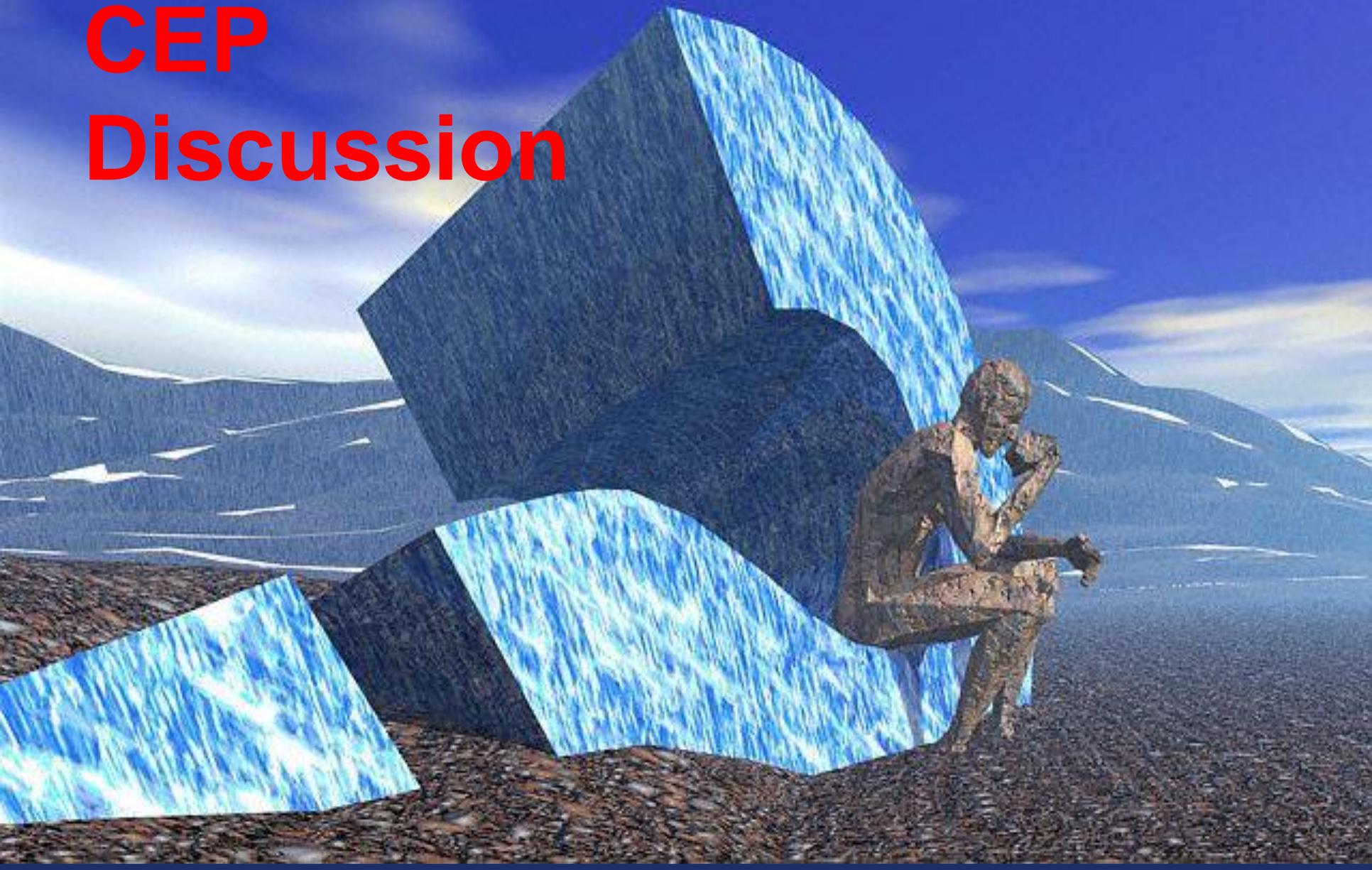
Federal Aviation
Administration



30nm CEP Track Discussion

- Aircraft Lifespan.
- At a certain point it makes sense to switch to 30nm separated CEP Routes.
- Drawing a line in the sand.

CEP Discussion

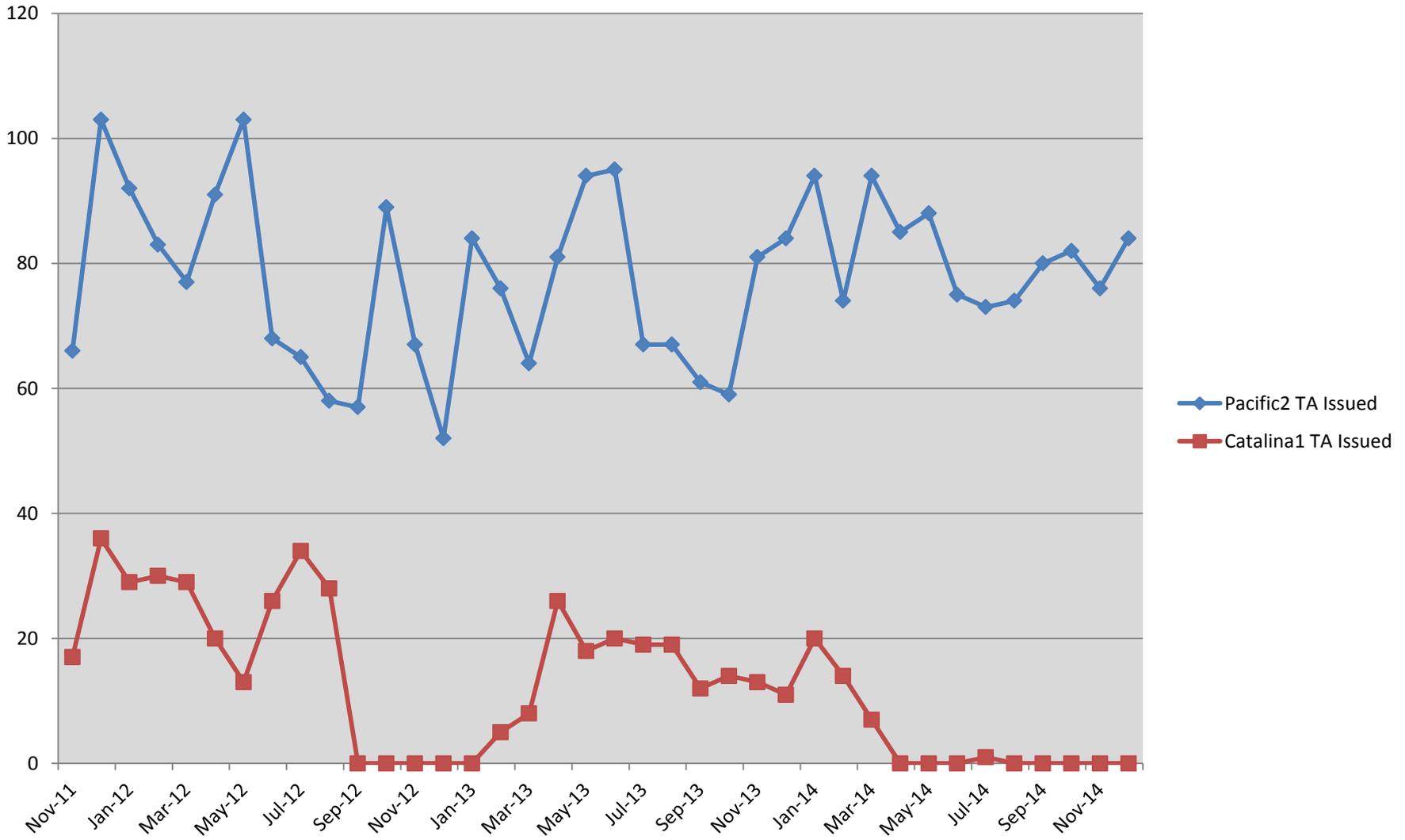


Tailored Arrivals



Federal Aviation
Administration

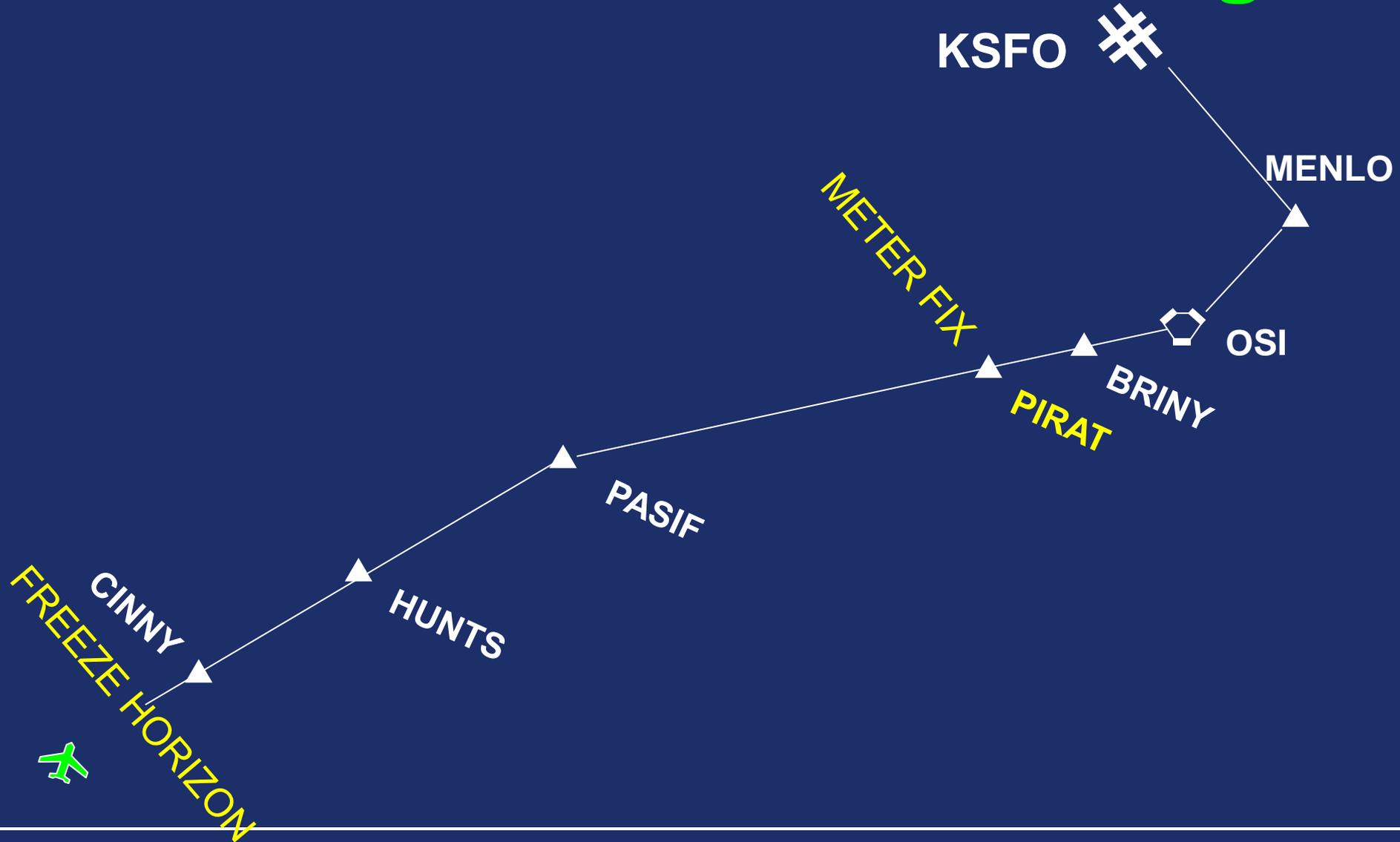
Tailored Arrival Clearances



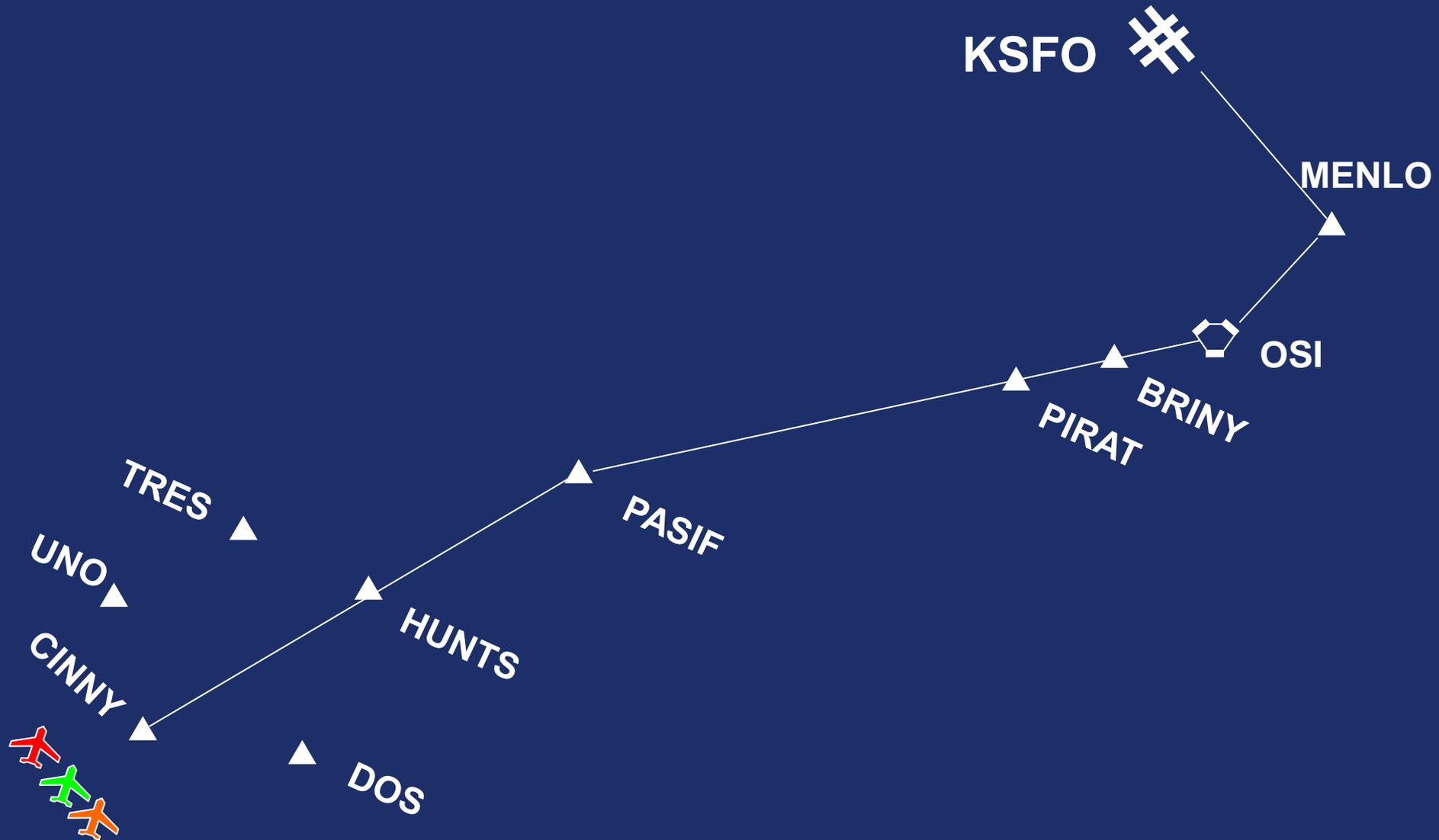
KSFO Tailored Arrivals

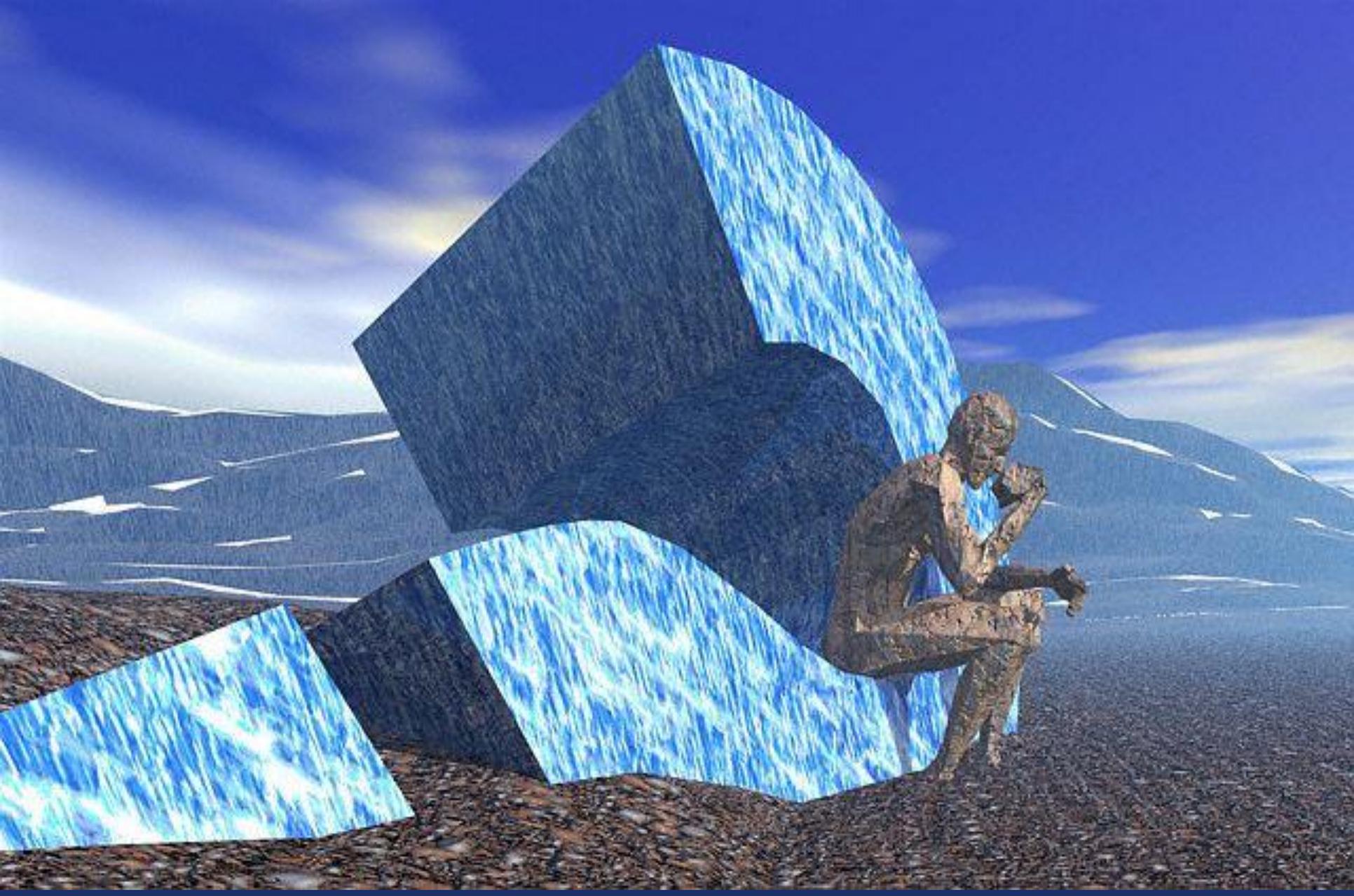
- A new RNAV PIRAT1 STAR is being developed to mirror the KSFO Pacific 2 TA.
- The PIRAT1 STAR would provide an OPD for non FANS aircraft.
- The Target Date for implementation is ???

KSFO Time Based Metering



“Tailored” Arrivals





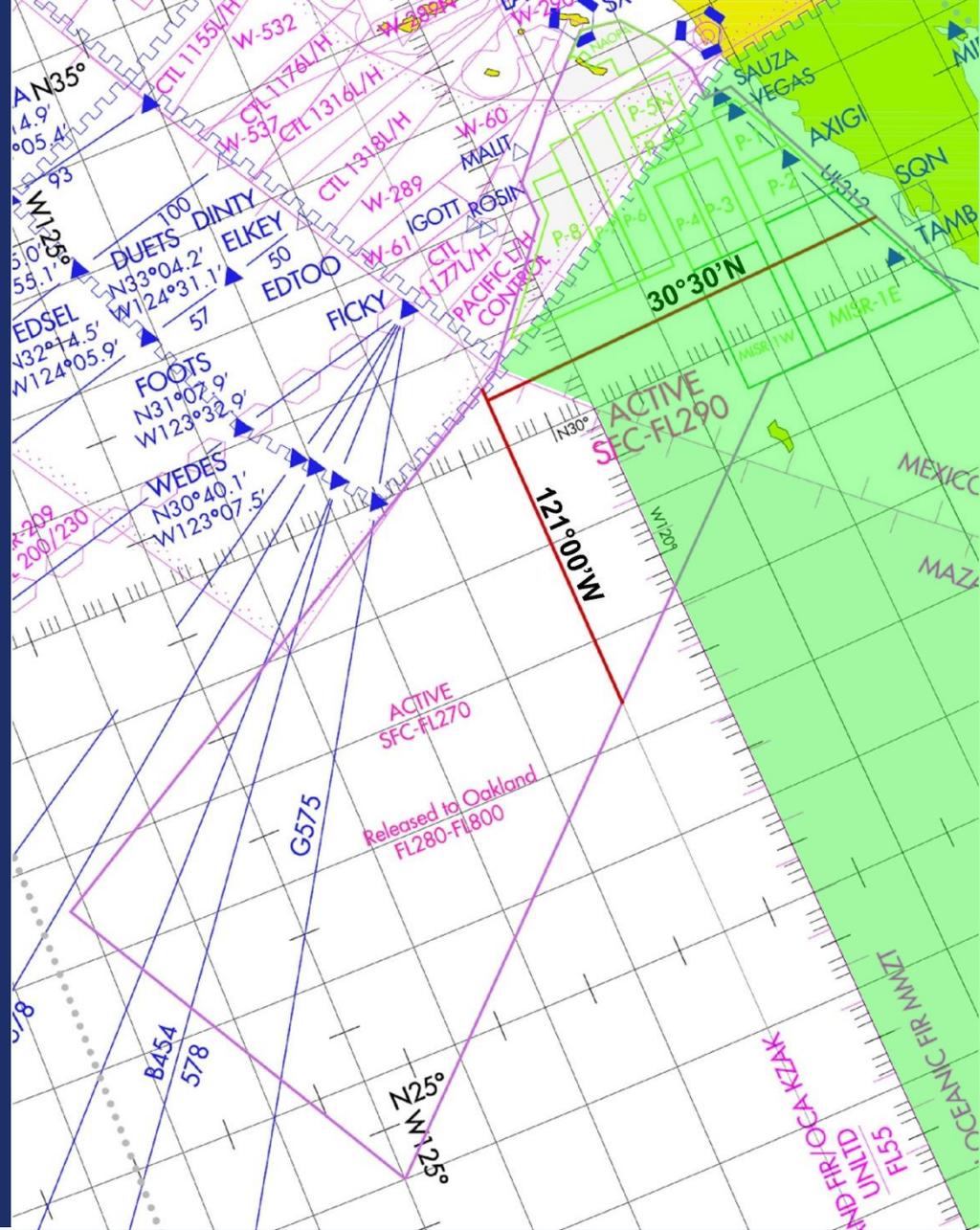
Port Moresby 50nm RNP10 Lateral Separation

- 50nm lateral Sep began November 14, 2013
- Investigating New Routes
- D50 Longitudinal Separation



Mazatlan ACC

- FAA working to establish an AIDC connection between Oakland and Mazatlan. Target Feb 2015
- Mazatlan announced they are working to convert their Class G Airspace to Controlled Airspace.



Impacts From Hypersonic Technology Test

Hypersonic Technology Test

Initial Request

0700Z – 1430Z

August 25th – Primary Date

August 26th-29th – Back-up Dates

No Corridor for Asia-Hawaii

A traffic analysis was conducted and based on the volume of traffic in the North Pacific and lack of a corridor for Asia-Hawaii Oakland ARTCC told MDA that the approved window would be

0845Z – 1100Z

Single Corridor
Only wide enough for one bi-directional route to accommodate traffic between Japan/Asia and North America

Impacts From Hypersonic Technology Test

After Traffic Analysis and Open Dialogue with Test Group

Unfortunately, the Narrow North Corridor Could Not Be Expanded

Hypersonic Technology Test

Revised Request

0730Z – 1100Z

August 25th – Primary Date

August 26th-29th – Back-up Dates

New Corridor for Asia-Hawaii,
Manila and Guam

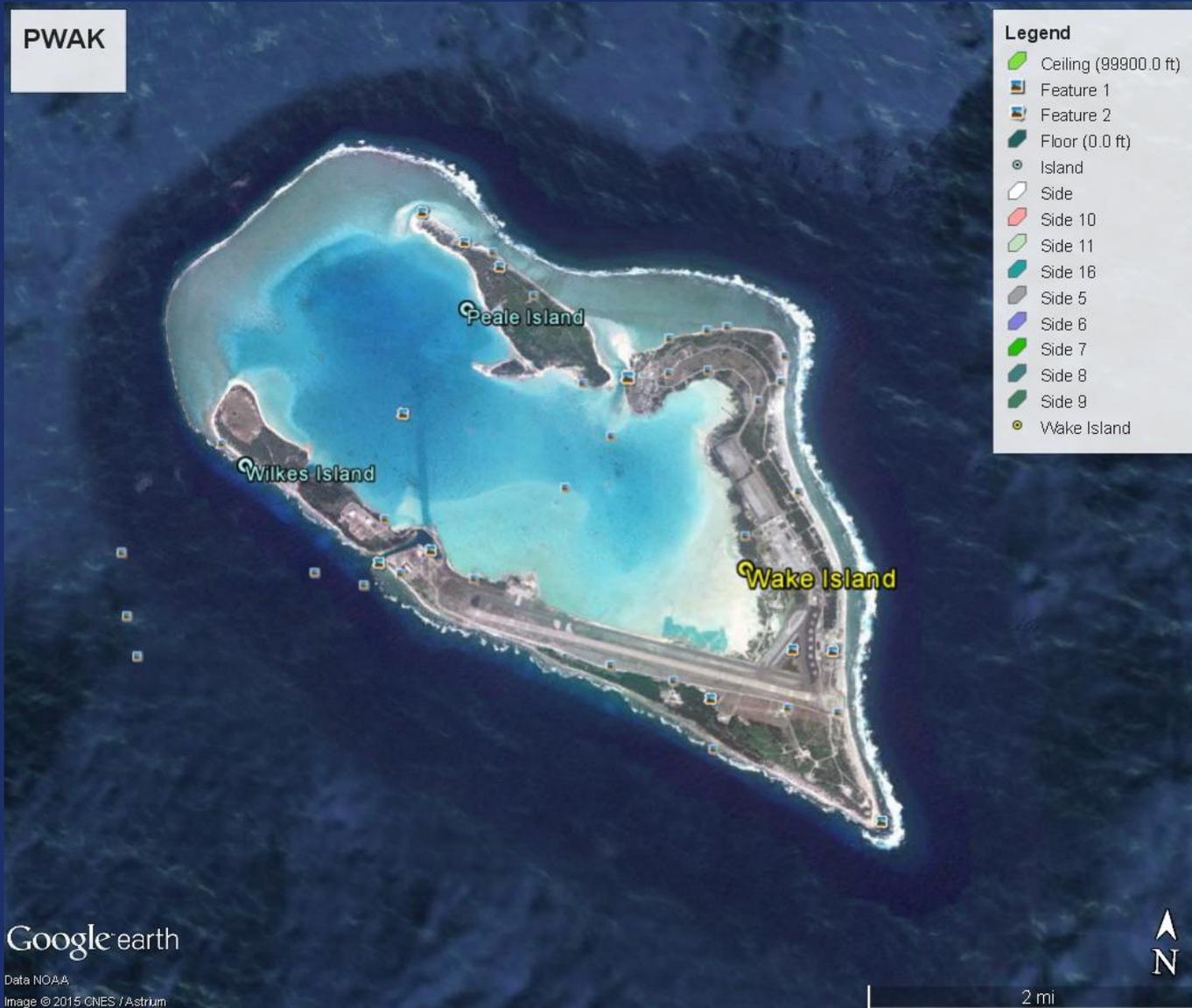
Area 3

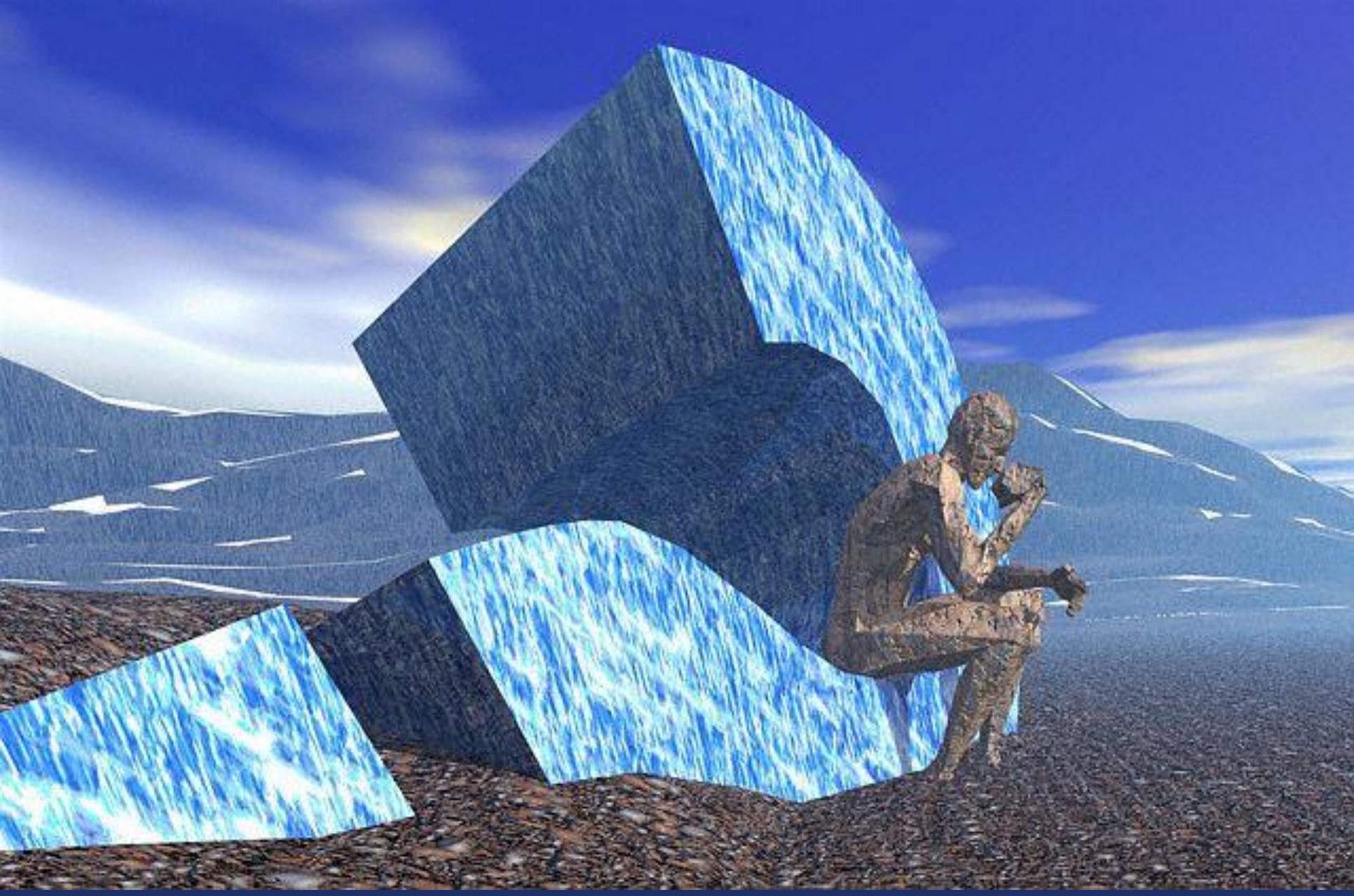
Area 2

Area 1

Single Corridor
Only wide enough for
one bi-directional route
to accommodate traffic
between Japan/Asia
and North America

Future Military Activities





Volcanic Ash & PACOTS



Federal Aviation
Administration

Volcanic Ash & PACOTS Generation

- ICAO Doc 9974 Chapter 2 states:
- THE AIRCRAFT OPERATOR
- 2.3 ICAO's generic safety risk assessment process is described in the *Safety Management Manual (SMM)* (Doc 9859). An approach, aligned with an operator's SMS, would be equally appropriate. The material in this document is designed to provide States with information to support operators in developing the safety risk assessment, within their SMS, covering the volcanic cloud hazard.
-
- 2.4 Responsibilities
- **The operator is responsible for the safety of its operations.**
- In order to decide whether or not to operate into airspace forecast to be, or aerodromes known to be, contaminated with volcanic ash, the operator should have in place an identifiable safety risk assessment within its SMS.
- *Note.— Guidance on the production of a safety risk assessment is provided in Appendices 1 (Guidelines for completing a safety risk assessment), 2 (Procedures to be considered when conducting a safety risk assessment) and 3 (Hazards and risks to be considered by aircraft operators). Each operator should develop its own list of procedures and hazards since these have to be relevant to the specific equipment, experience and knowledge of the operator, and to the routes to be flown.*

Volcanic Ash & PACOTS Generation

- ICAO's safety risk assessment process is described in the *Safety Management Manual (SMM)* (Doc 9859). An approach, aligned with an organization's SMS, would be equally appropriate.
- 2.10 The State is advised that the CAA exercising oversight of an operator that intends to undertake operations into airspace forecast to be, or aerodromes known to be, contaminated with volcanic ash should establish a methodology for evaluating the safety risk assessment process of the operator's SMS particular to volcanic ash. **The operator should not be prevented from operating through, under or over, airspace forecast to be affected by a VAA, VAG or SIGMET provided it has demonstrated in its SMS the capability to do so safely.** The guidance set out in Appendix 6 indicates a process that the CAA can use to achieve this outcome.

The ATC responsibilities are covered in ICAO Doc 4444 par 15.8:

15.8 PROCEDURES FOR AN ATC UNIT WHEN A VOLCANIC ASH CLOUD IS REPORTED OR FORECAST

15.8.1 If a volcanic ash cloud is reported or forecast in the FIR for which the ACC is responsible, the controller should:

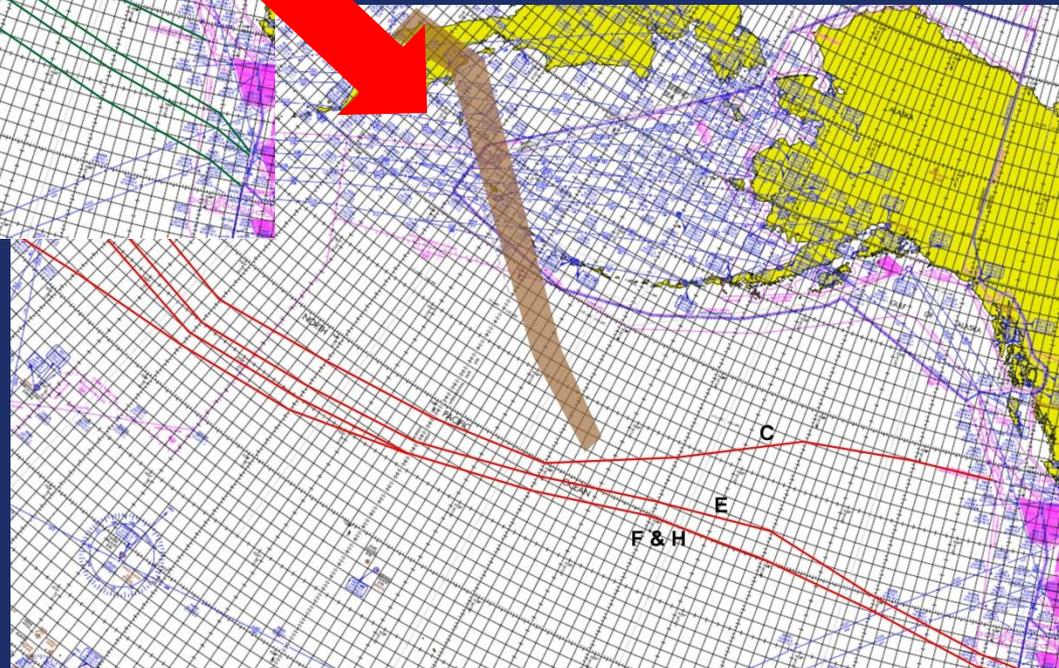
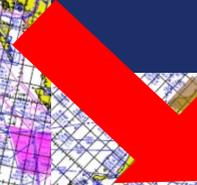
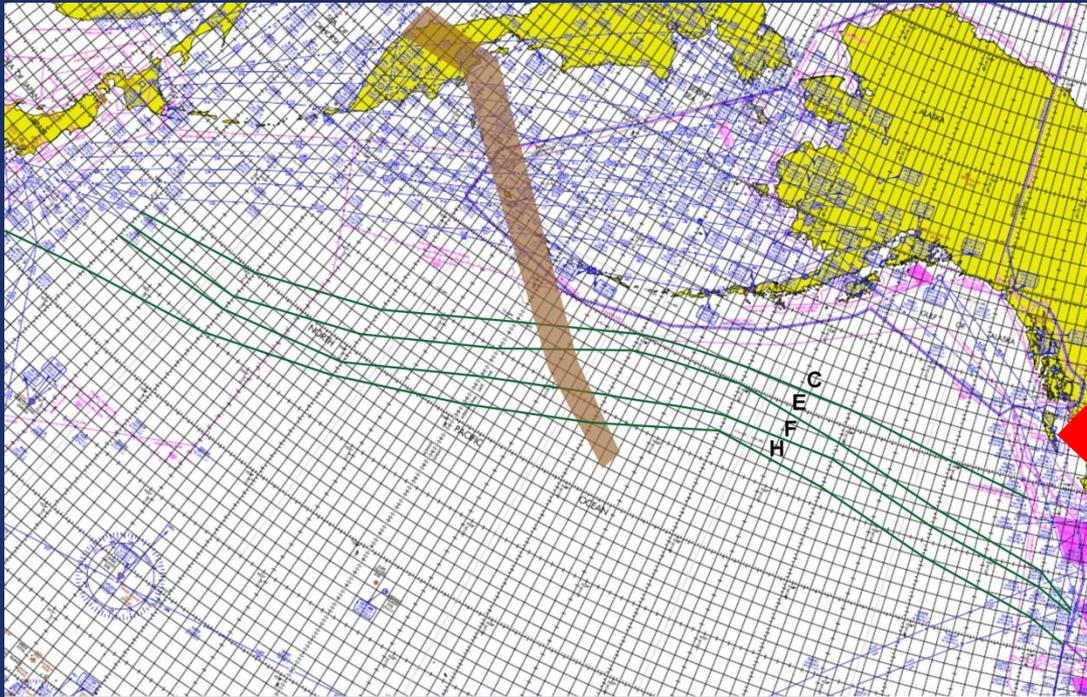
- a) relay all information available immediately to pilots whose aircraft could be affected to ensure that they are aware of the ash cloud's position and the flight levels affected;**
- b) suggest appropriate re-routing to the flight crew to avoid an area of known or forecast ash clouds;**
- c) inform pilots that volcanic ash clouds are not detected by relevant ATS surveillance systems;**
- d) if the ACC has been advised by an aircraft that it has entered a volcanic ash cloud the controller should:
 - 1) consider the aircraft to be in an emergency situation;**
 - 2) not initiate any climb clearances to turbine-powered aircraft until the aircraft has exited the ash cloud; and**
 - 3) not initiate vectoring without pilot concurrence.****

Note.— Experience has shown that the recommended escape manoeuvre for an aircraft which has encountered an ash cloud is to reverse its course and begin a descent if terrain permits. The final responsibility for this decision, however, rests with the pilot.

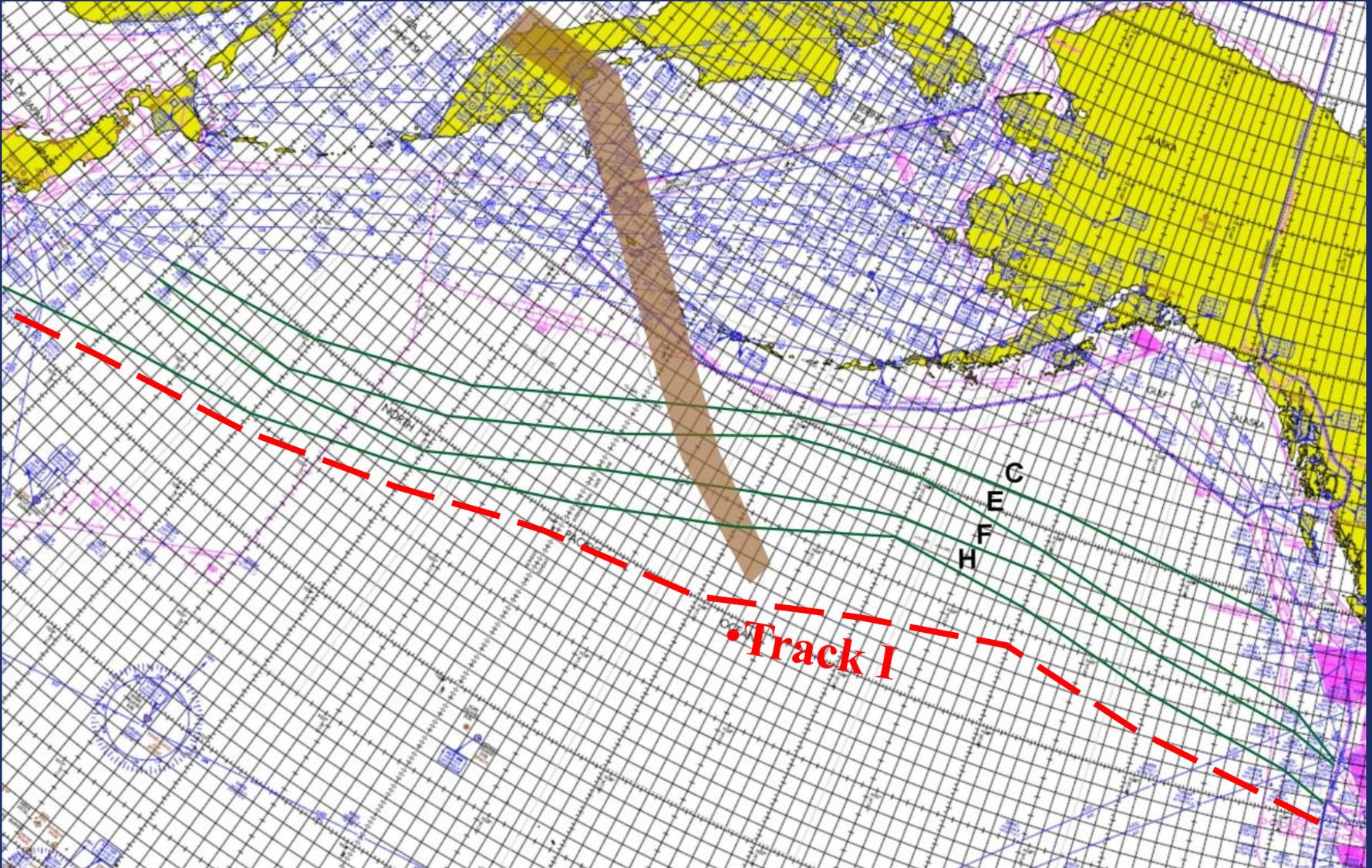
Volcanic Ash & PACOTS Generation

- **VOLKAM13 (IPACG39 Paper IP11)**
- **October 2013, Kamchatka Volcano Klyuchevskoy Eruption.**
- **Ad-hoc telecon to discuss PACOTS and Ash Plume**
 - Need for international dispatchers on telecon.
- **Decision was made to move PACOTS south around Ash Plume**
- **Ash Plume was found to be lower than forecast**

Volcanic Ash & PACOTS Generation



Volcanic Ash & PACOTS Generation

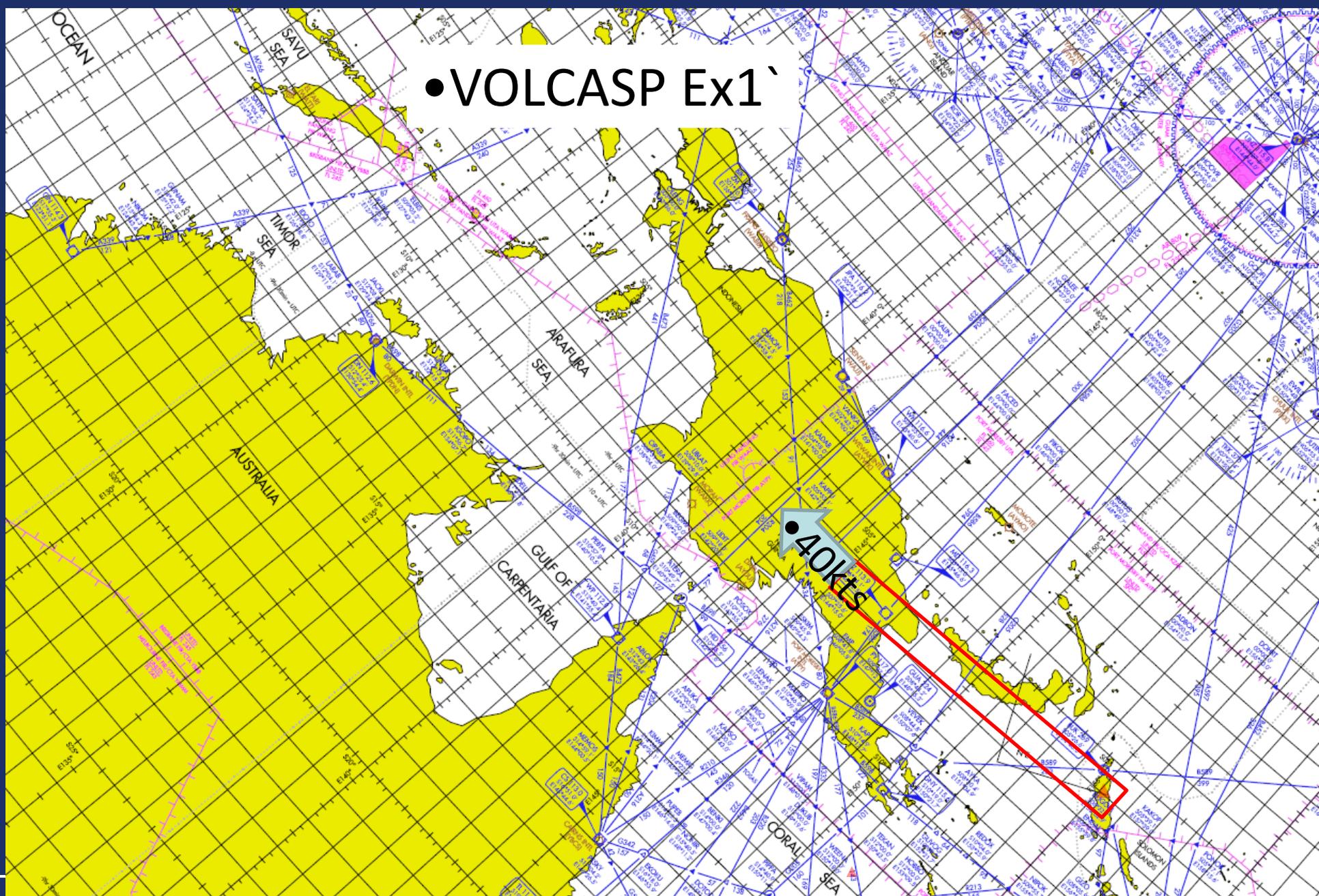


Volcanic Ash & PACOTS Generation

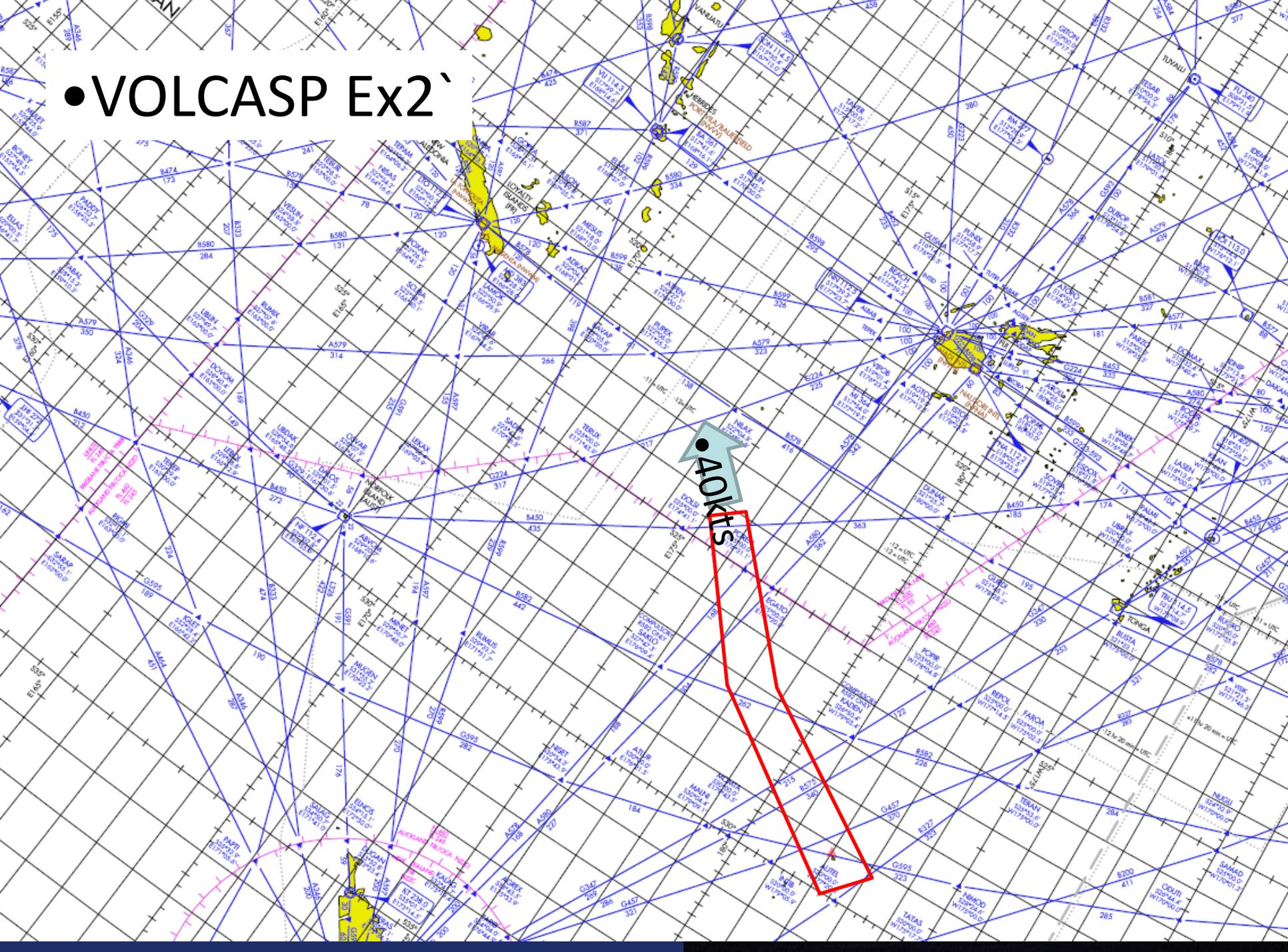
- **IPACG40, in the event of an Ash Plume:**
- **Critical Event Contact List (CECL)**
 - 24 Hour Emergency Contact List
 - Emails
 - Cell Phone #, Text Notification
- **Collaborative Decision Making (CDM)**
 - When time allows
 - Allow 1 hour lead time when possible
- **Online Meetings**
 - No Cost Phone Calls
 - Control extraneous noise
 - Visual Impact Display
- **Discuss Options**
- **Reach Consensus Plan**

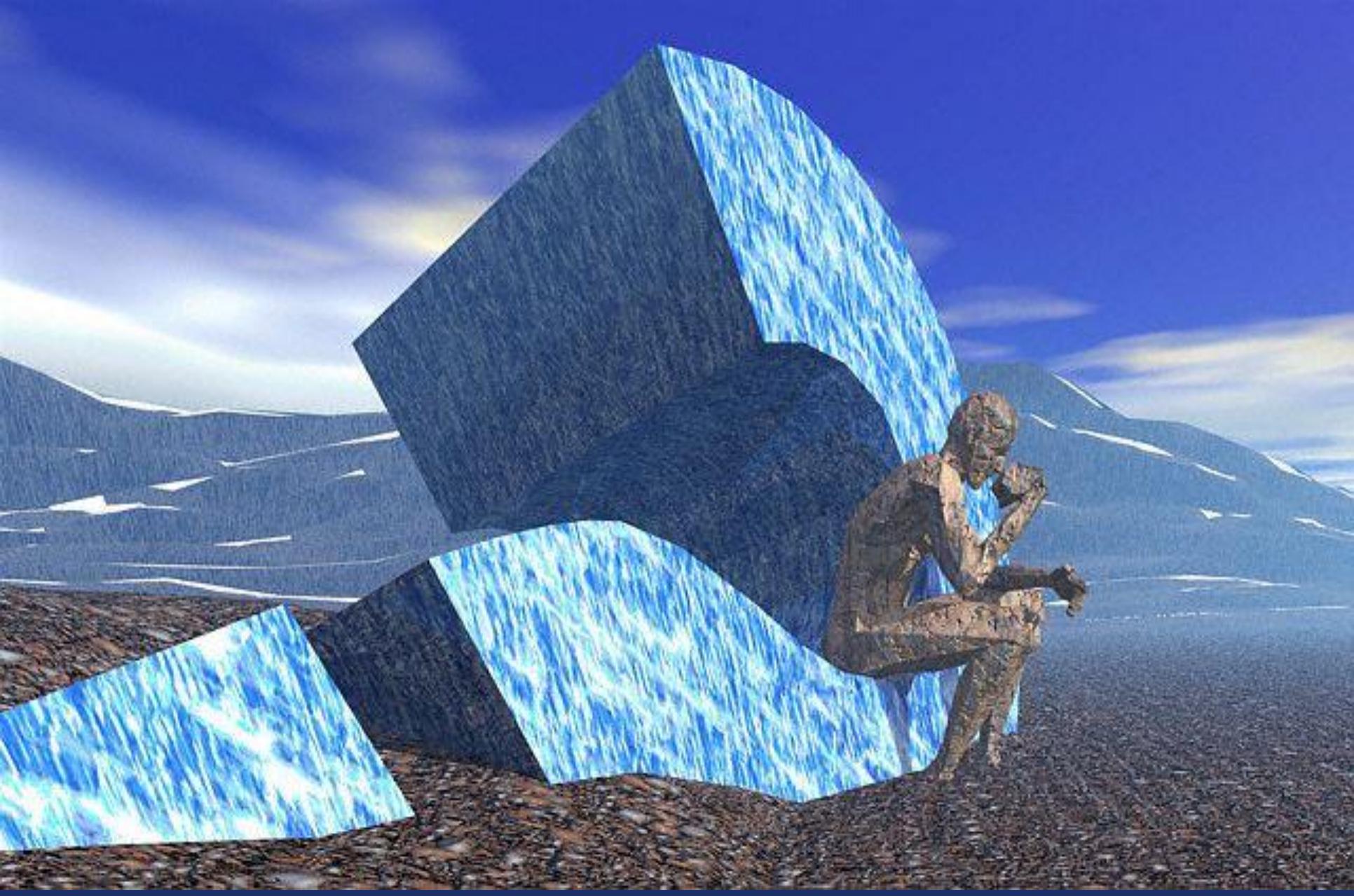


•VOLCASP Ex1`



•VOLCASP Ex2`





ICAO Annex 2 3.6.2.2 change

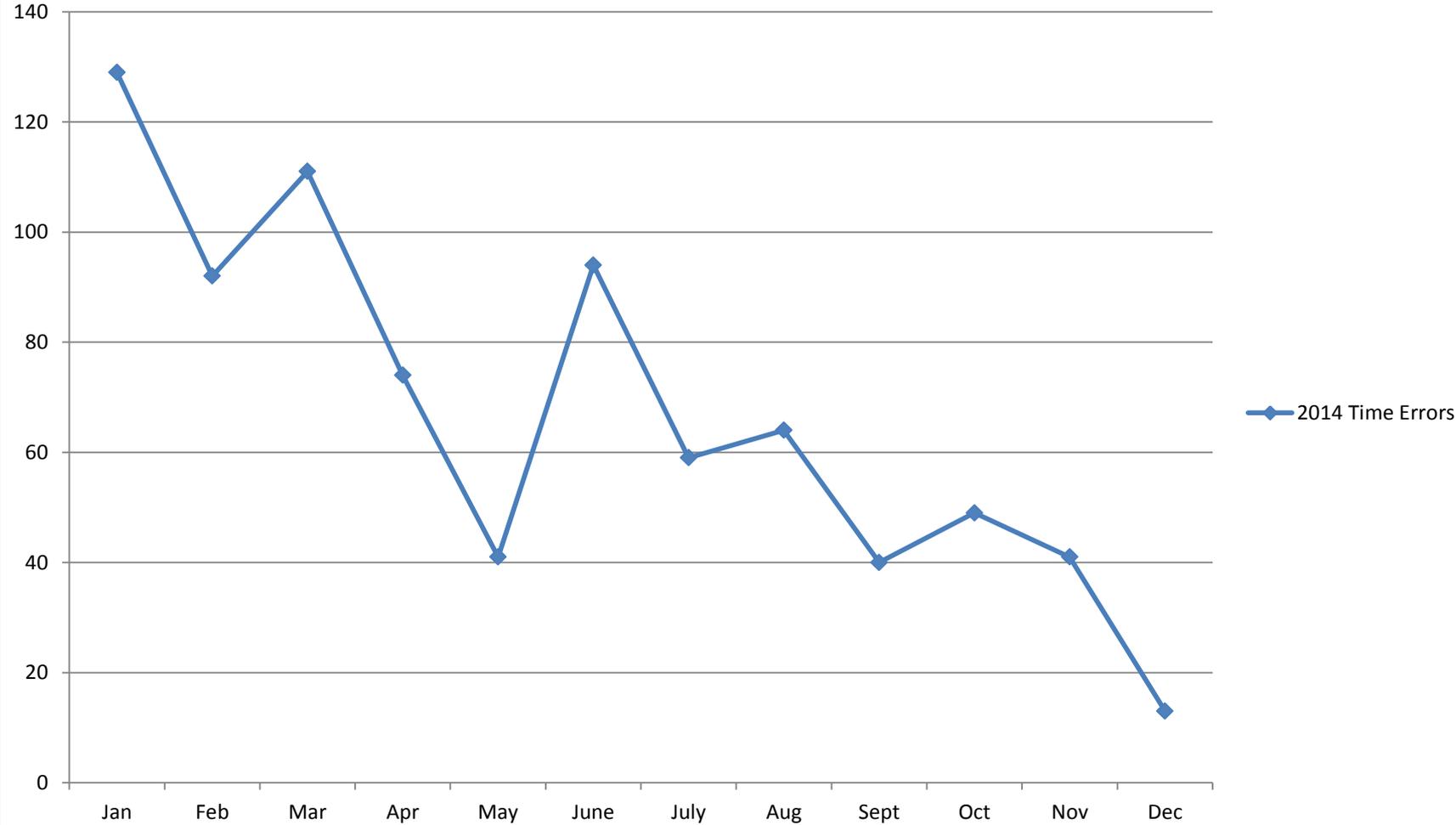
- **3.6.2.2 Inadvertent changes.** *In the event that a controlled flight inadvertently deviates from its current flight plan, the following action shall be taken:*
- **a) Deviation from track:** *if the aircraft is off track, action shall be taken forthwith to adjust the heading of the aircraft to regain track as soon as practicable.*
- **b) Variation in true airspeed:** *if the average true airspeed at cruising level between reporting points varies or is expected to vary by plus or minus 5 per cent of the true airspeed, from that given in the flight plan, the appropriate air traffic services unit shall be so informed.*
- **c) Change in time estimate:** *if the time estimate for the next applicable reporting point, flight information region boundary or destination aerodrome, whichever comes first, is found to be in error in excess of 2 minutes from that notified to air traffic services, or such other period of time as is prescribed by the appropriate ATS authority or on the basis of air navigation regional agreements, a revised estimated time shall be notified as soon as possible to the appropriate air traffic services unit.*
-
- **3.6.2.2.1** *Additionally, when an ADS agreement is in place, the air traffic services unit shall be informed automatically via data link whenever changes occur beyond the threshold values stipulated by the ADS event contract.*

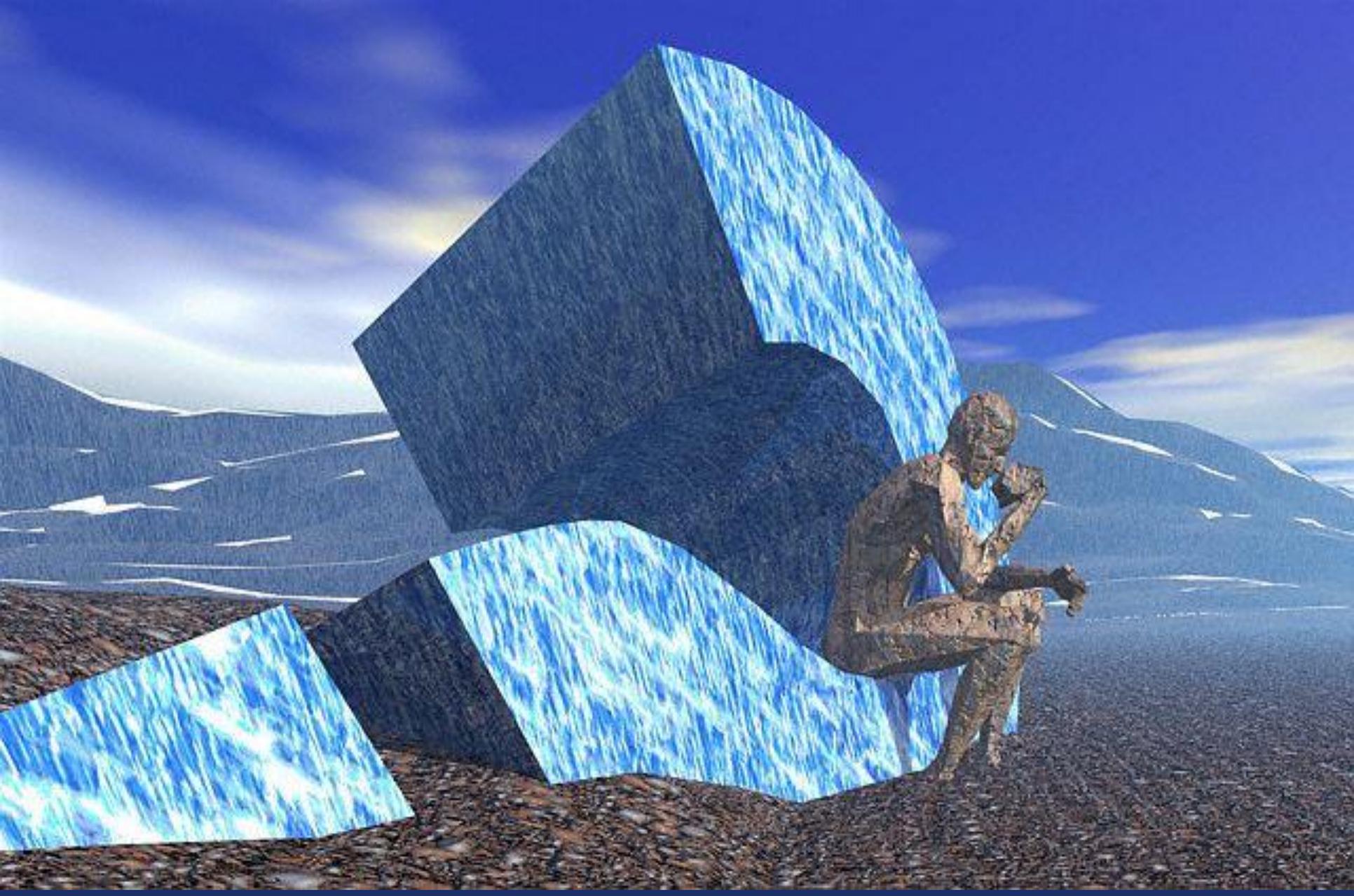
Oceanic Navigation Error Reporting

- **FAA requires reporting of Oceanic Navigation Errors:**
 - GNE (Gross Navigation Error) 25nm or more.
 - Intervention: Aircraft on different route than ATC.
 - Height Error: 300 feet or more.
 - Time Errors: Pacific = More than 3 minutes
- **ONER Reports are forwarded to:**
 - Flight Standards
 - Technical Center, Airspace Safety Calculations.
- **Oakland has automated Time Error tracking and reporting.**

ONER Time Errors

2014 Time Errors





BOEING 777



ATC	FLIGHT INFORMATION	COMPANY
REVIEW	MANAGER	NEW MESSAGES

2319z ATC UPLINK

AT N1400.0E17000.0 CLEARED
 ROUTE CLEARANCE
 ORIGIN:PGUM DEST:PHNL
 DEPARTURE:06
 VIA TO
 DIRECT N1330.0W18000.0
 DIRECT N1400.0W17400.0
 DIRECT N1800.0W16500.0
 DIRECT MCFLY
 DIRECT CHOKO
 DIRECT GECKO
 DIRECT HNL

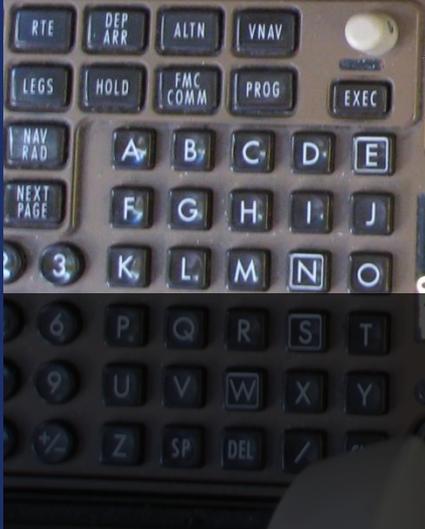
ACCEPT	LOAD FMC	PRINT	DISPLAY REQUEST	REJECT REASONS	REJECT
--------	----------	-------	-----------------	----------------	--------

RTE 2 2/3
 VIA TO
 DIRECT N14E170
 DIRECT N13W180
 DIRECT N14W174
 DIRECT N18W165
 DIRECT MCFLY

 <RTE 1 ACTIVATE>

ACT RTE 1 LEGS
 084° 237NM
 N14E170 ,834
 081° 583NM
 N14W180 ,833
 071° 355NM
 N15W174 ,833
 055° 570NM
 N19W165 ,83
 046° 117NM
 AJINK ,83

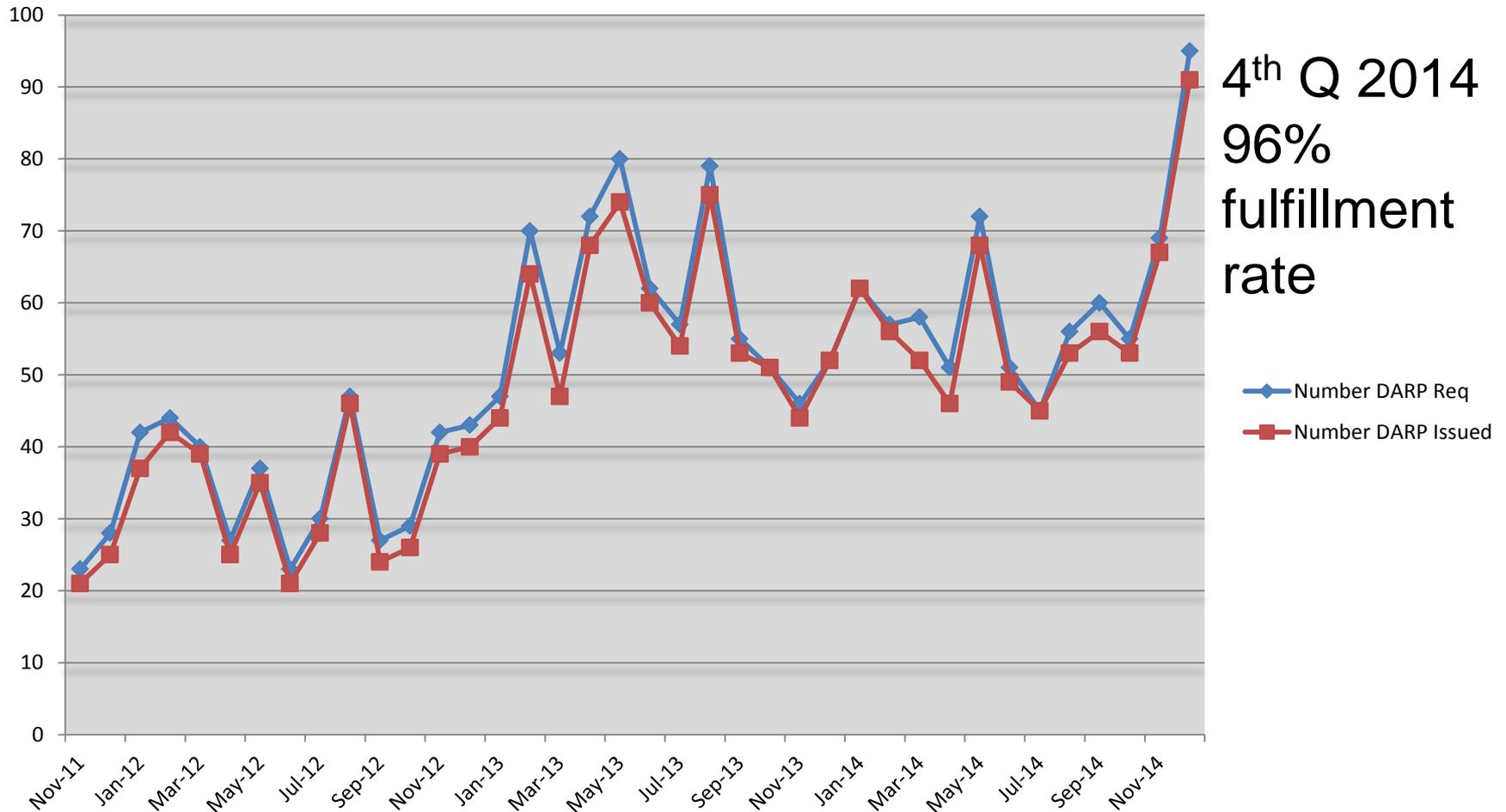
 <RTE 2 LEGS R



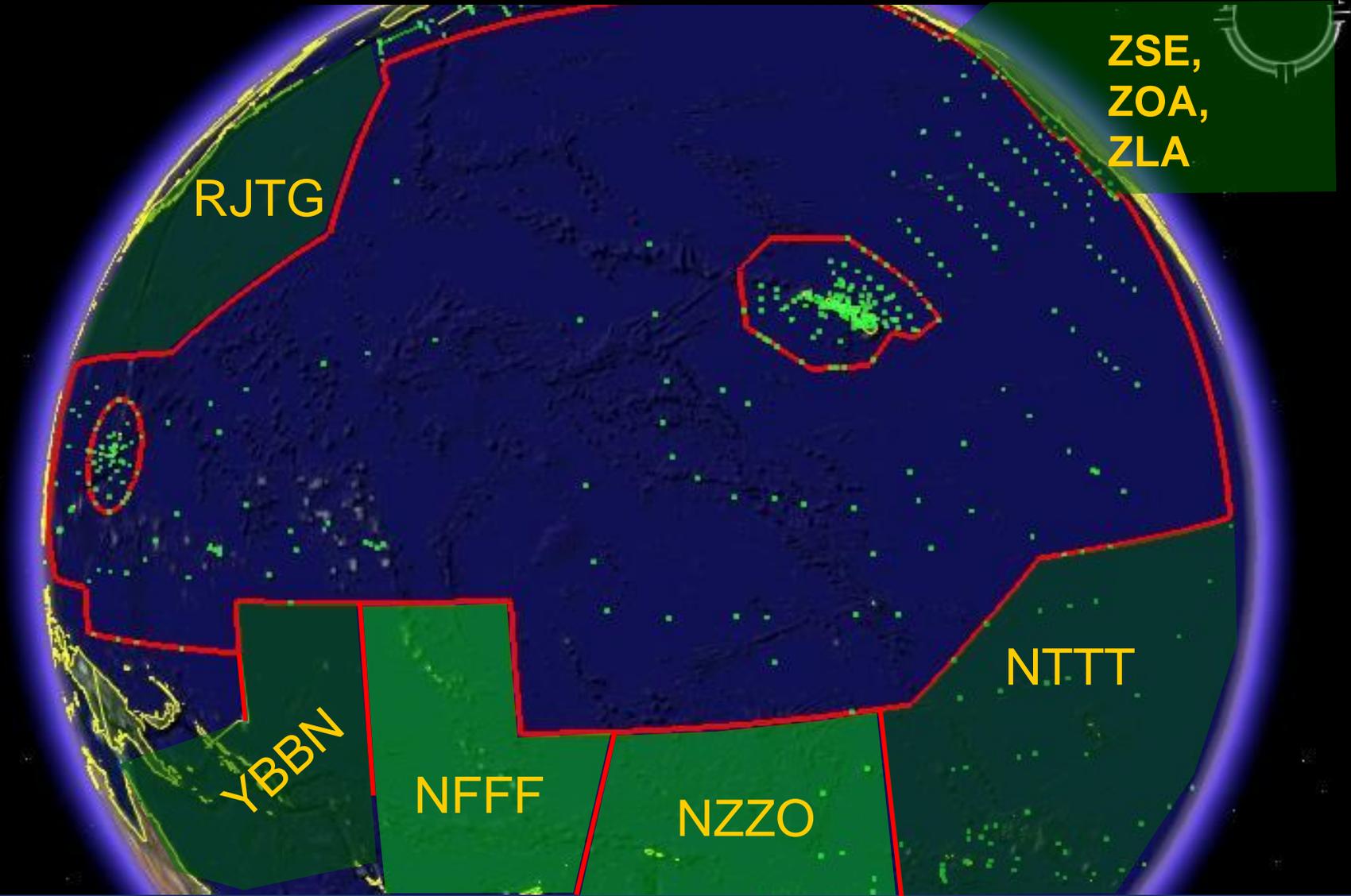
DARPS



Oakland FIR DARP Usage



Dynamic Airborne Reroutes



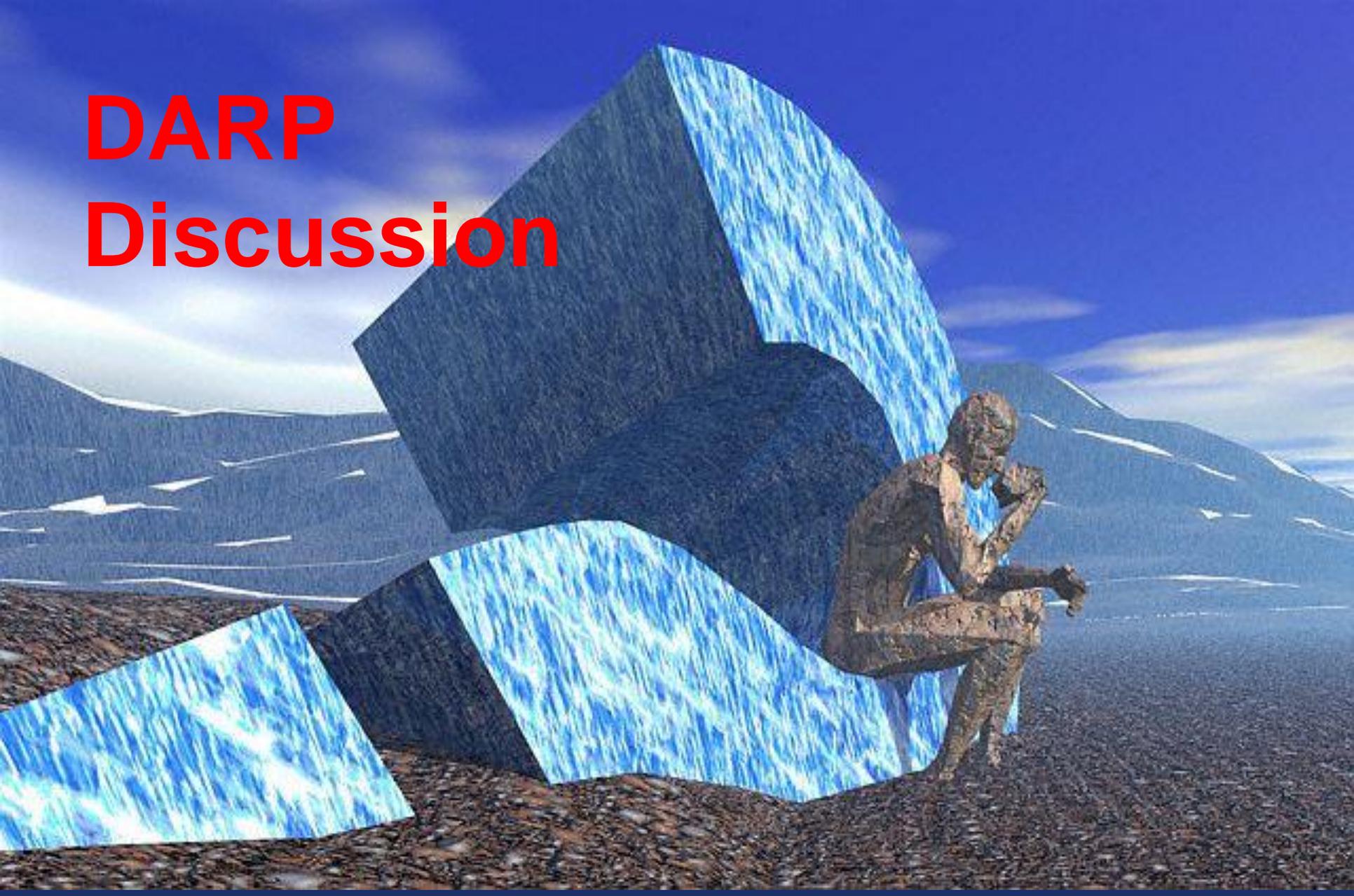
Dynamic Airborne Reroutes

- **DARP Procedure requires AIDC.**
- **AIDC is required between all facilities to destination.**
- **Do not request a DARP Reroute into FIRs that do not support the procedure.**

JCAB DARP Operations

- Requirements for DARP usage on flights to Hawaii.
- Pre-Coordinate DARP Flight Requests with ATMC:
 - atmc_ocean@cab.mlit.go.jp
- Operational CPDLC is required for aircraft requesting airborne DARP reroutes.

DARP Discussion



ICAO RNP2/GNSS Separation Rules



Federal Aviation
Administration

ICAO Doc 4444 5.4.1.2.1.6.e

5.4.1.2.1.6 *Lateral separation of aircraft on parallel or non-intersecting tracks or ATS routes.* Within designated airspace or on designated routes, lateral separation between aircraft operating on parallel or non-intersecting tracks or ATS routes shall be established in accordance with the following:

a) for a minimum spacing between tracks of 93 km (50 NM) a navigational performance of RNAV 10 (RNP 10), RNP 4 or RNP 2 shall be prescribed;

b) for a minimum spacing between tracks of 55.5 km (30 NM) a navigational performance of RNP 4 or RNP 2 shall be prescribed;

c) for a minimum spacing between tracks of 27.8 km (15 NM) a navigational performance of RNP 2 or a GNSS equipage shall be prescribed. **Direct controller-pilot VHF voice communication shall be maintained** while such separation is applied;

d) for a minimum spacing between tracks of 13 km (7 NM), applied while one aircraft climbs/descends through the level of another aircraft, a navigational performance of RNP 2 or a GNSS equipage shall be prescribed. **Direct controller-pilot VHF voice communication shall be maintained** while such separation is applied; and

★ **e)** for a minimum spacing between tracks of 37 km (20 NM), applied while one aircraft climbs/descends through the level of another aircraft whilst using other types of communication than specified in d) above, a navigational performance of RNP 2 or a GNSS equipage shall be prescribed.

ICAO Doc 4444 5.4.2.1.6.e

- **FAA is investigating the potential use of GNSS/RNP2 lateral separation rule to climb or descend an aircraft through the altitude of blocking traffic.**
- **Use of the rule would require careful safety study to ensure use of the rule would maintain the TLS for FAA airspace.**
- **95% of Oakland Oceanic flight plans contain GNSS equipment “G” in field 10a of the FPL.**
- **Ocean21 software changes**

ICAO Doc 4444 5.4.2.1.6.e

- **FAA potential uses:**
- **Oceanic Enroute traffic with 20nm lateral separation requesting an altitude change to be above or below blocking traffic.**
- **Oakland conducted a study of a heavy traffic day where 229 aircraft were advised UNABLE to an altitude change request.**
- **Each UNABLE advisory was manually examined to see if GNSS 20nm lateral separation could have been used to approve an altitude change.**

ICAO Doc 4444 5.4.2.1.6.e

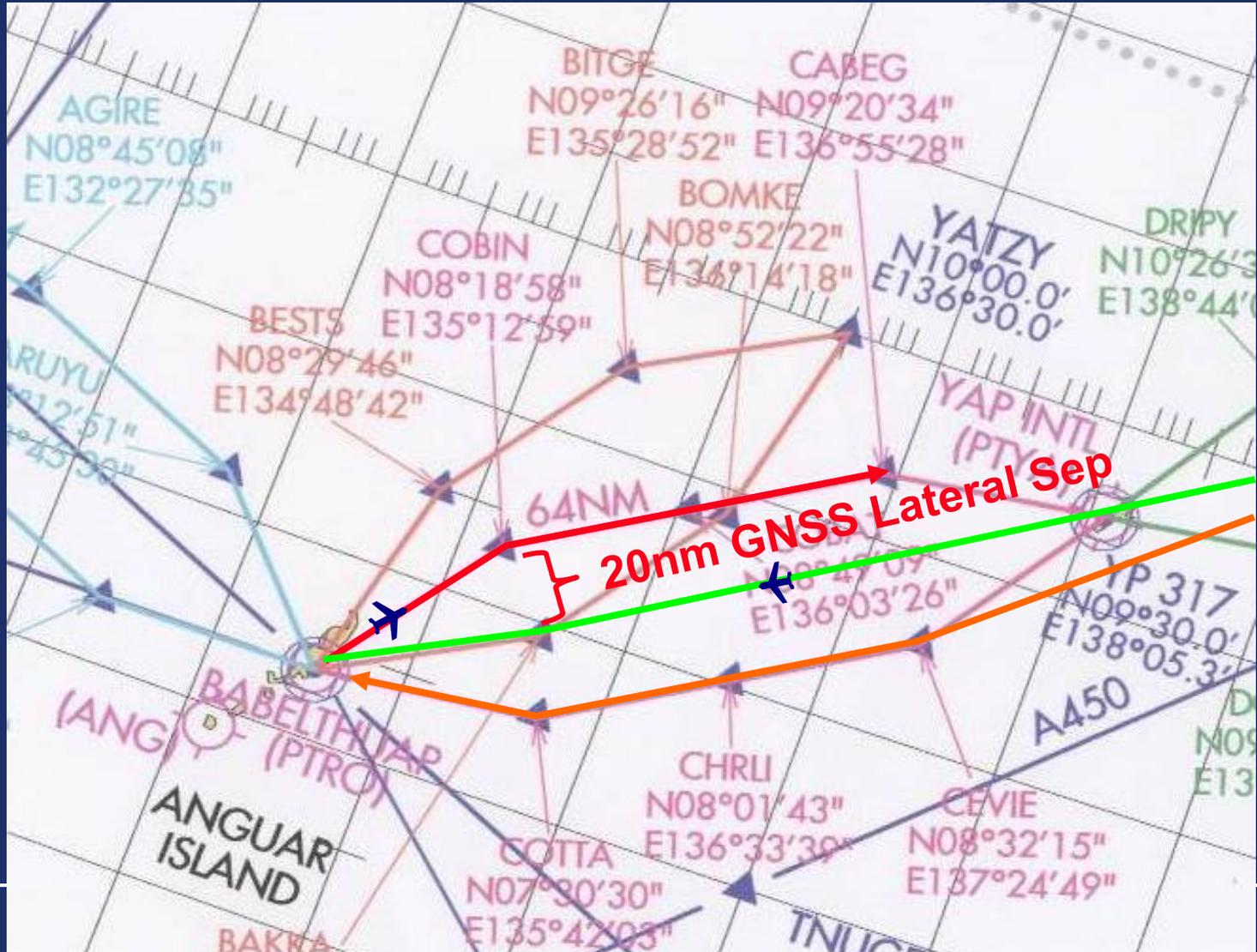
- **On January 3, 2015, 229 times Oakland ATC advised aircraft UNABLE when an altitude change was requested.**
 - Small data sample so results may be skewed
- **18 times of the 229 requests (7.86%), the potential existed for the GNSS 20nm lateral separation rule to be applied.**
- **Oakland receives about 39,300 altitude requests a year.**
- **About 15% of the time aircraft are advised UNABLE.**
 - About 5895 UNABLE advisories a year
- **If the January 3 data sample is representative; 463 times GNSS 20nm lateral separation could have been used.**

ICAO Doc 4444 5.4.2.1.6.e

- **20nm offset clearances could be used to climb aircraft through blocking traffic instead of 30nm or 50nm offset clearances**

Pacific Island Possible New GNSS/RNP2 Lateral Separation

- Island Aircraft 89% "G" Equipped



HF Block Altitude Position reporting procedures



Federal Aviation
Administration

Block Altitude Position Reporting

PROCEDURES

129

3. CONTENTS OF POSITION REPORT

Position reports shall include information on present position, estimated next position, and ensuing position in sequence as indicated below.

- a. PRESENT POSITION – Information shall include:
 - (1) The word “position.”
 - (2) Aircraft identification.
 - (3) Reporting point name, or if not named:
 - (a) Latitude (2 digits or more) and,
 - (b) Longitude (3 digits or more).
- b. Time over reporting point (4 digits UTC).
- c. Altitude (Flight Level). When forwarding an altitude report within the Oakland OCA/FIR, pilots should report their present altitude and their assigned altitude exactly as cleared if the present and assigned altitudes differ. A restriction to cross a point at an altitude is not a block altitude assignment and should not be reported as a block of altitudes.
- d. ESTIMATED NEXT POSITION
 - (1) Reporting point name, or if not named, latitude and longitude as in a.3 above and,
 - (2) Estimated time over next position (4 digits UTC).
- e. ENSUING FIX
 - (1) Name only of the next succeeding fix whether compulsory or not, or if not named, latitude and longitude as in a.3 above.

•Aircraft assigned a block altitude must state their assigned block altitude in a position report.

World Record Attempts



Federal Aviation
Administration

Two Eagles Balloon Distance record



TWO EAGLES ACROSS THE PACIFIC BY BALLOON

Two Eagles

Still Watching, Still Waiting . . .

Albuquerque, NM, and Saga, Japan (1/17/15 5 PM MST and 1/18/15 9 AM JST (0000 UTC):

Not much has changed with the Two Eagles balloon team's attempt to break the world gas balloon distance record of 5,208 miles (8,383 km) by flying across the Pacific Ocean from Japan to North America. Weather conditions are still unfavorable and are unlikely to improve for the next few days. [More ...](#) »

[View current Flight Status »](#)



Two Eagles : 10513 Espira Ct NW, Albuquerque, NM 87114

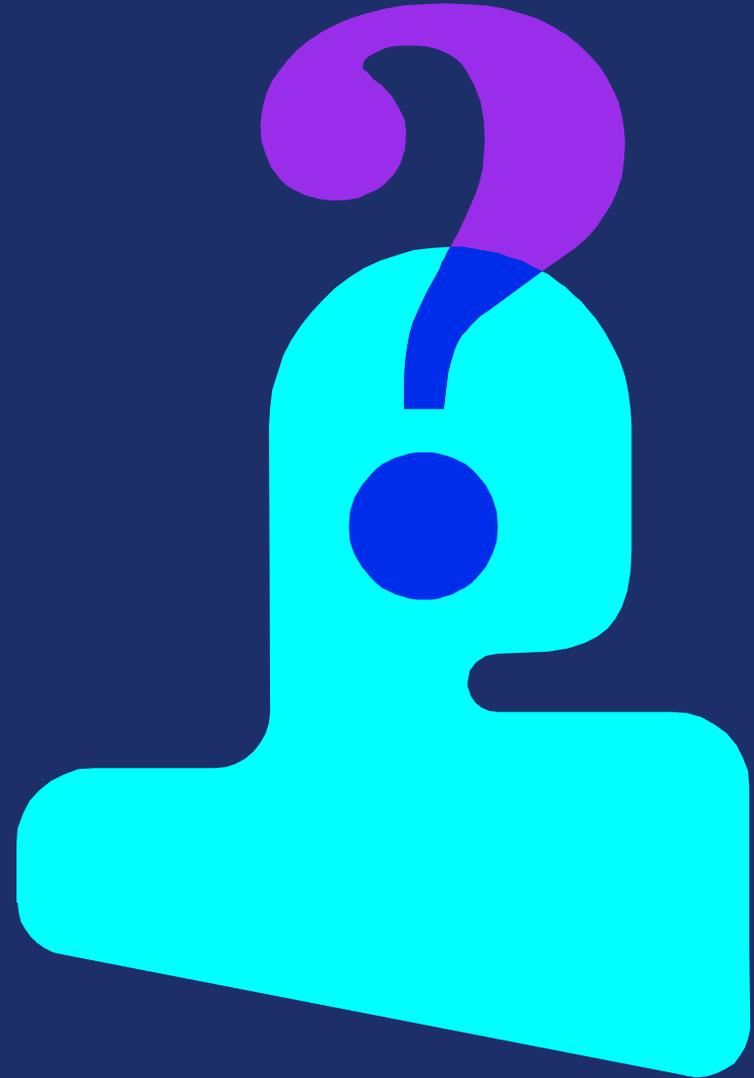
Solar Impulse Round the World Flight record

FIRST ROUND-THE-WORLD SOLAR
FLIGHT STARTS MARCH 1ST



Follow us to get updates about our new **LIVE** website and tests flights before the departure for our #RTW adventure.

Dennis Addison
Support Manager
Oakland Center
Oceanic Airspace &
Procedures
510-745-3258
Dennis.Addison@faa.gov



Oceanic Work Group Meeting

Anchorage ARTCC Update

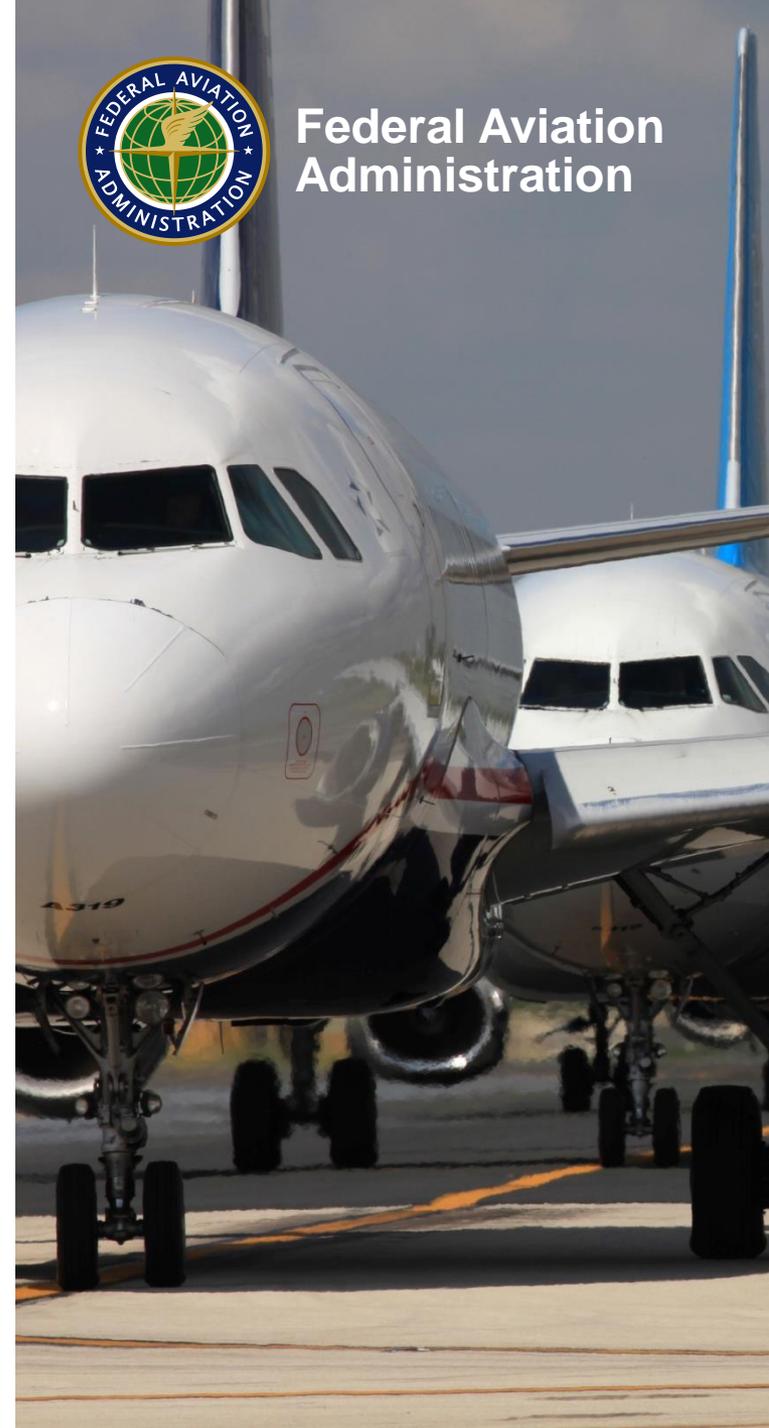
Presented to: OWG

By: Steve Kessler,
Support Manager, Airspace and Procedures

Date: January 21, 2015



Federal Aviation
Administration



Anchorage ARTCC (ZAN) Overview

- **R220 and the PAZA / UHPP FIR Boundary**
- **Extension of ZAN ATOP Airspace**
 - **ZAN Sector “64”**
 - **ZAN Sector “11 East”**
- **Military Exercises**
- **Missile Launch Activity**

R220 and PAZA / UHPP FIR Boundary

- As briefed at last OWG meeting, the segment of ATS Route R220 between position NATES and NRKEY falls within 25NM of the Petropavlovsk-Kamchatsky FIR.
- ZAN briefed that the outfall from this route alignment presents flight coordination difficulties which require solution.
- The two options being considered are:
 - A. Proscribing RNP4 and FANS 1/A equipage for R220 between NATES and NIPPI, or
 - B. Reorienting portions of the NOPAC so as to achieve continuous, appropriate, lateral spacing with the UHPP FIR boundary.

R220 and PAZA / UHPP FIR Boundary

- Both options are still under consideration.
- Option A is currently scheduled for Safety Risk Management review during February 2015.
- Potential implementation dates have not yet been determined.
- Operators will be updated as soon as dates are determined.
- OWG members may refer to the 10/8/14 OWG presentation* for the full description of this issue.

*available here:

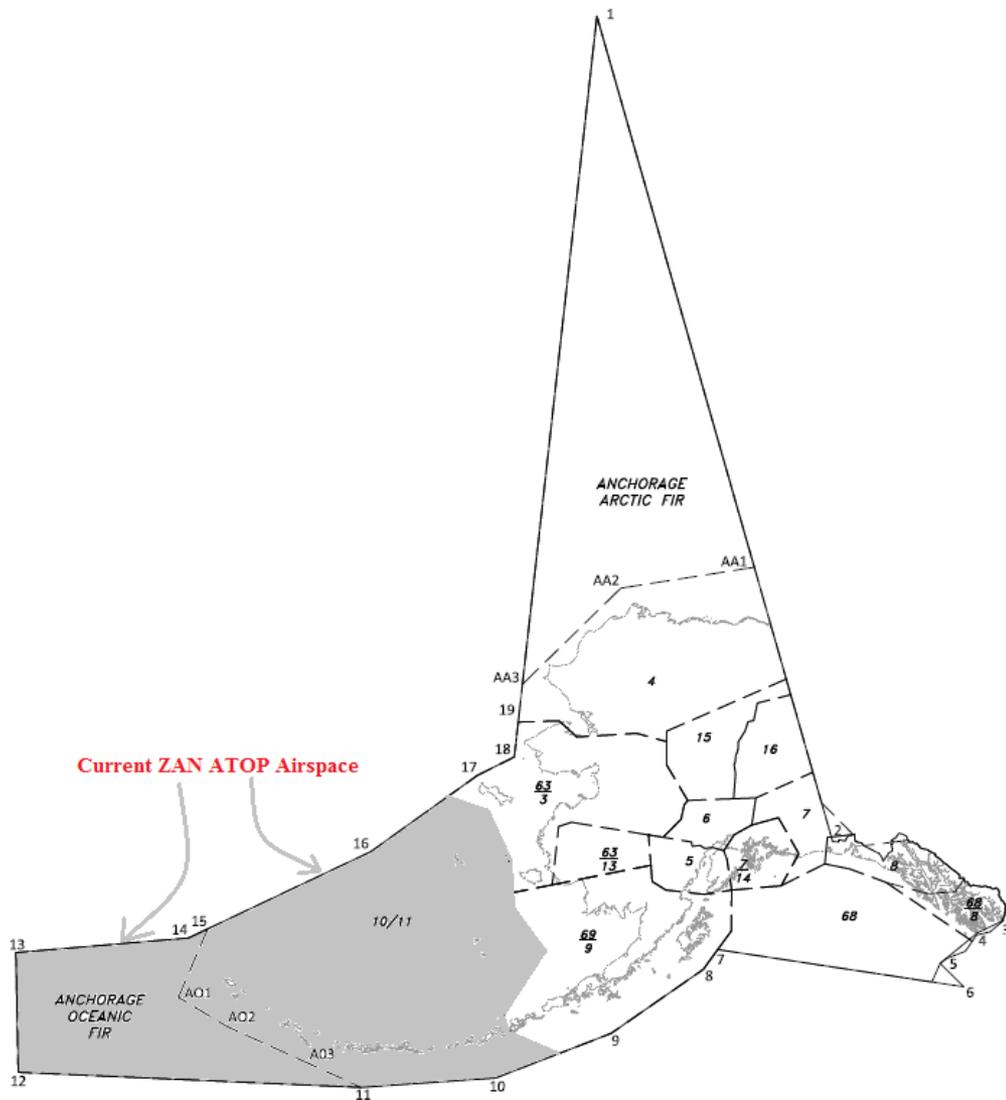
http://www.faa.gov/about/office_org/headquarters_offices/ato/service_units/air_traffic_services/artcc/oakland/kzak/owg/



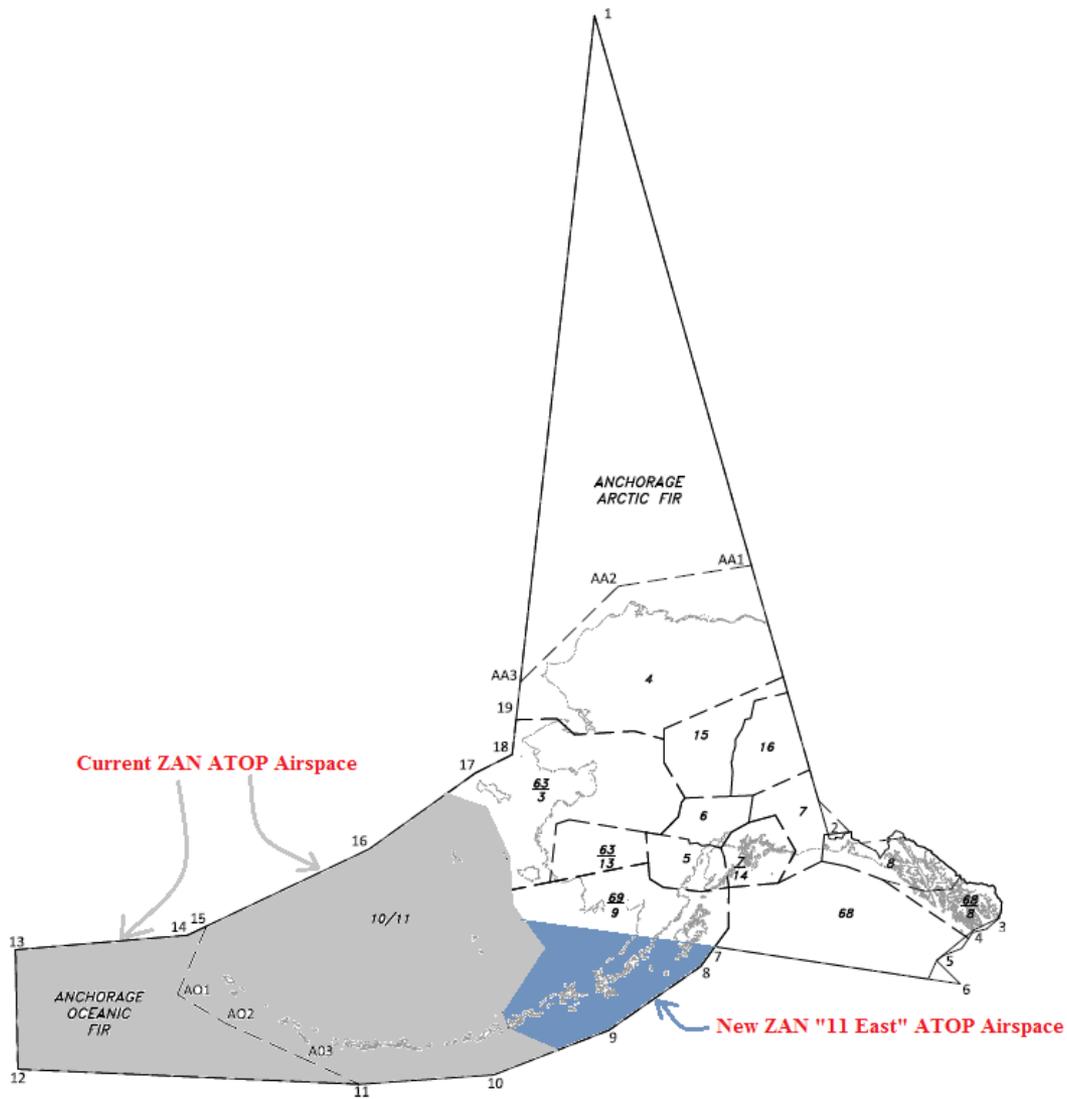
Extension of ZAN ATOP Airspace

- Anchorage ARTCC is currently working on two projects designed to extend the use of the ATOP system into additional Anchorage FIR airspace: ZAN Sector “64” and ZAN Sector “11 East”.
- ZAN Sector “64,” which consists mainly of the Anchorage Arctic FIR, is scheduled for implementation during 2nd Qtr CY2015.
 - (A full description of this project is available in the 10/8/14 OWG Presentation.)
- ZAN Sector “11 East” (depicted on the following slides) is tentatively scheduled for late 1st Qtr or early 2nd Qtr 2015. While CPDLC and ADS-C D30 and D50 separation are already permitted through this airspace, the implementation of “11 East” will improve the seamless operation as aircraft will transition directly from the ZOA ATOP system to the ZAN ATOP system and vice-versa.

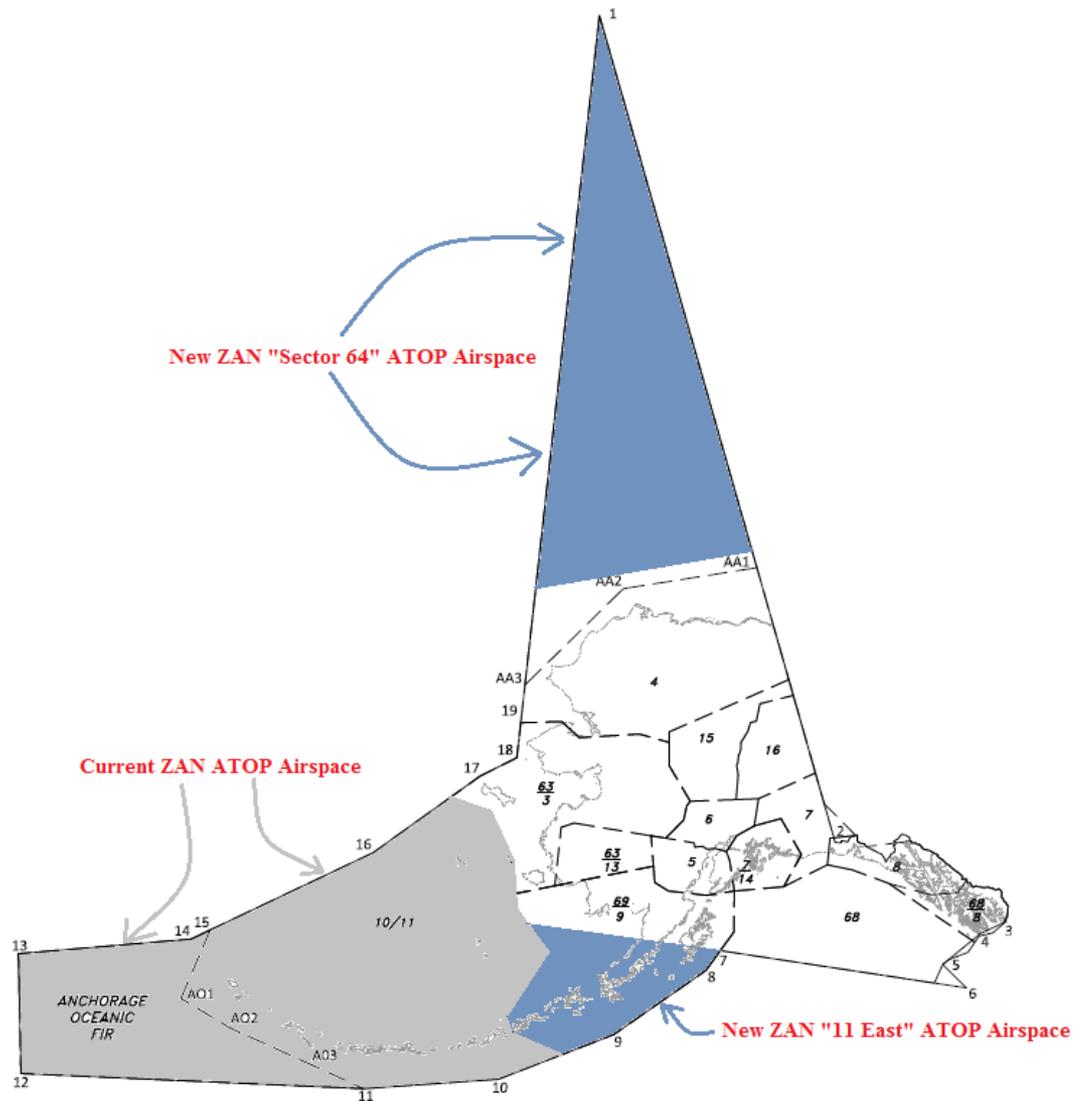
Extension of ZAN ATOP Airspace



Extension of ZAN ATOP Airspace



Extension of ZAN ATOP Airspace



Military Exercises



Military Exercises

- **3 Large scale military exercises planned for 2015 (dates tentative):**
 - Red Flag 15-2 30 Apr - 15 May 2015
 - Northern Edge 15 11 Jun - 26 Jun 2015
 - Red Flag 15-3 6 Aug - 21 Aug 2015
- **Exercises involve 50 plus aircraft and numerous Military Operations Areas (MOAs), ATC Assigned Airspaces (ATCAAs), and Restricted Areas.**
- **Traffic Management Initiatives (TMIs) will be issued to accommodate non-participating aircraft.**

Military Exercises

Red Flag TMs

1) ALL WESTBOUND FLIGHTS ENTERING THE ANCHORAGE FIR NORTH OF 62N141W MUST BE ESTABLISHED ON ONE OF THE FOLLOWING ROUTES: (A) ON OR NORTH OF NCA30 (B) OVER OR SOUTH OF ORT. IF ROUTING VIA ORT, UTILIZE ONE OF THE FOLLOWING TRANSITIONS:

- (1) ORT J124 BGQ NODLE R220**
- (2) ORT J124 BGQ NODLE NICHO R580**
- (3) ORT J124 GKN 6140N151W MCG**

2) ALL EASTBOUND FLIGHTS TRANSITING THE ANCHORAGE FIR SHALL FLIGHT PLAN VIA ONE OF THE FOLLOWING:

- (A) ON OR NORTH OF FYU J167 POTAT NCA30**
- (B) OVER OR SOUTH OF ANC J511 GKN J124 ORT**

Military Exercises

Red Flag TMs

3) THE FOLLOWING ROUTES ARE **NOT** AVAILABLE:

(A) NCA28, NCA24, NCA19 AND NCA22

(B) J167 BETWEEN GKN AND FYU

(C) J502/J515 BETWEEN FAI AND ORT

(D) V481 BETWEEN BIG AND FYU

(E) J507 BETWEEN ORT AND FYU

4) FROM 1700-1800 UTC, 2030-2100 UTC, 2300-0000 UTC AND 0230-0300 UTC WEEKDAYS AIRCRAFT LANDING/DEPARTING FAI AND LOW ALTITUDE AIRCRAFT FILED BETWEEN BIG AND ORT OR BIG AND GKN WILL BE RESTRICTED AT OR BELOW 17000 MSL.

Military Exercises

Red Flag TMs

5) FROM 1800-2030 UTC AND 0000-0230 UTC WEEKDAYS, THE FOLLOWING ROUTES ARE NOT AVAILABLE:

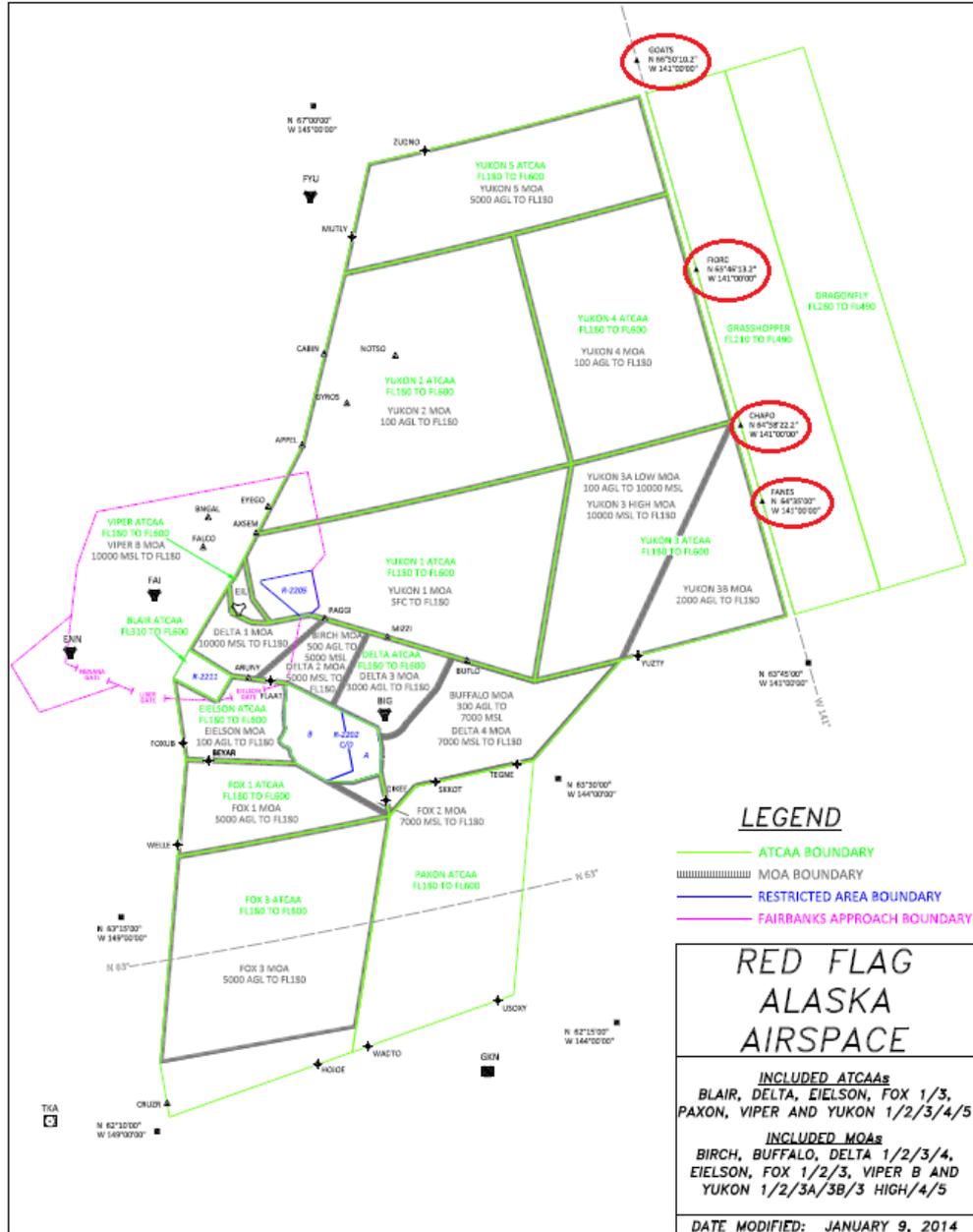
(A) A2, A15 AND B25

(B) V444, V481 AND V515

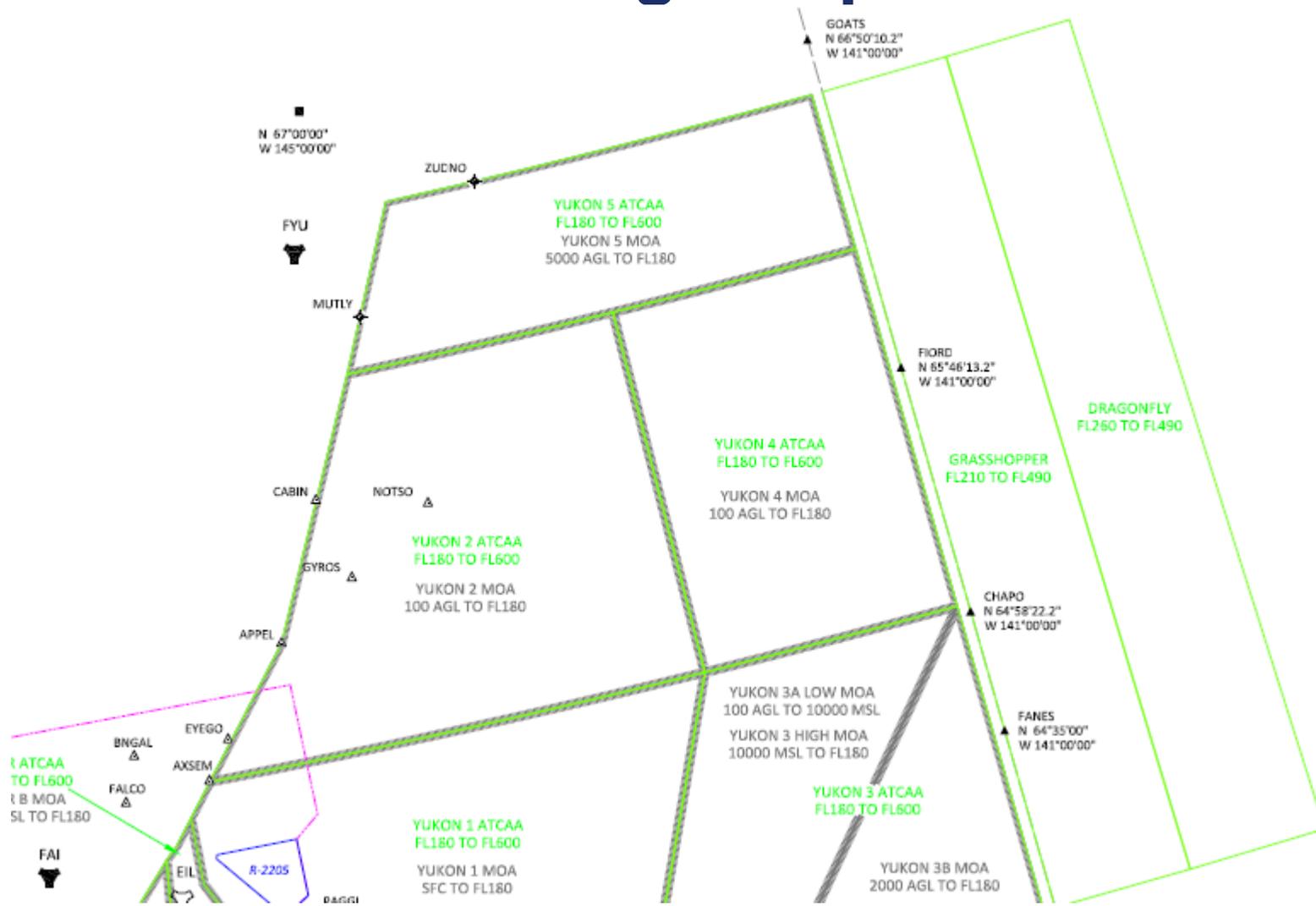
(C) T232 AND T226

(D) DIRECT ROUTES OVER OR IN THE VICINITY OF BIG.

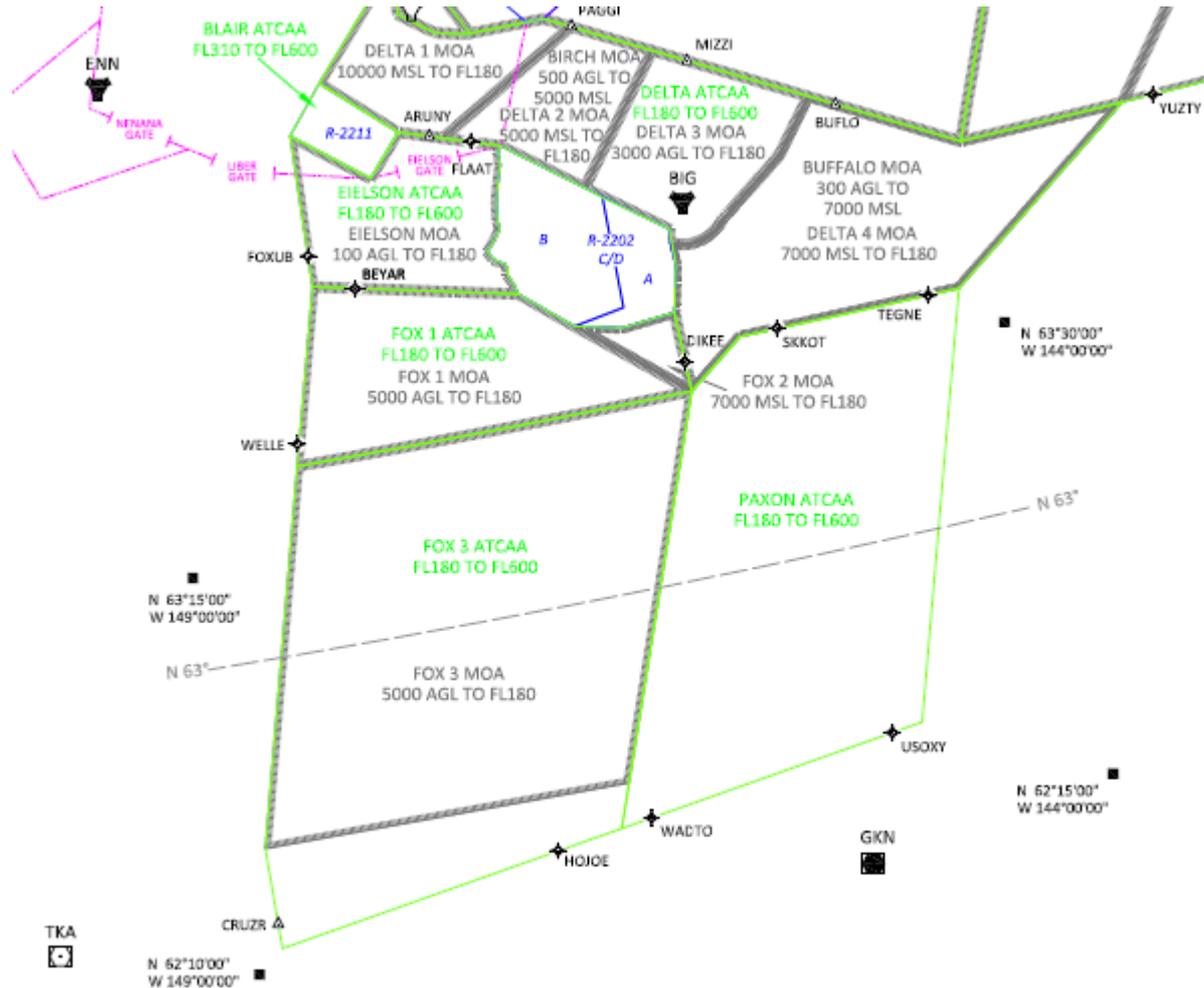
6) FROM 1800-2030 UTC AND 0000-0230 UTC, IFR ARRIVALS/DEPARTURES TO/FROM ALLEN AAF ARE UNAVAILABLE.



Red Flag Airspace



Red Flag Airspace



Military Exercises

Refer to NOTAMs and FAA's "SUA" website for updated Special Use Airspace information - <http://sua.faa.gov>



Kodiak Launch Facility



Courtesy www.akaerospace.com

Questions?



NAV CANADA



Honolulu Control Facility

Operations

Honolulu Control Facility



Federal Aviation
Administration

Oceanic and Offshore Procedures

AJV-84

Presented to: ZOA OWG
By: Steve Pinkerton, FAA
Date: 21 January 2015



Federal Aviation
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Overview

- **Cross Polar Work Group Meeting**
- **Pacific Project Meeting**
- **Tailored Arrival Order**
- **ADS-C CDP/ADS-B ITP**
- **New York Oceanic Work Group (ZNY OWG)**



Cross Polar Work Group (CPWG)

- **18th Meeting held in Paris at ICAO EUR-NAT Headquarters 16-19 December 2014**
- **Well attended with participation from numerous airlines, IATA, ICAO, industry, and several ANSPs**
- **Topics of interest for OWG-**
 - Commercial space ops
 - ATOP in the Arctic
 - Use of CHG messages and procedures for significant airborne reroutes
- **Next Meeting 11-15 May 2015 in Tokyo, Japan**



Pacific Project Team (PPT)

- **8th Meeting held in conjunction with CPWG/18 in Paris on 16 December 2015**
- **Leading up to and during TRASAS/4 meeting, several discussions about progress of PPT**
- **Following agreements reached during TRASAS, IATA and FAA agreed to re-evaluate work program**
- **In a working paper presented by FAA, suggestion made to divide Pacific Project airspace into four distinct geographical regions and develop seamless airspace chart**
 - Arctic; Russian Trans East (RTE)-Anchorage; NOPAC; PACOTS/CEP
- **Based upon chart, gap analysis and development of work program with realistic short, mid, and long term goals will be developed**
- **For the purposes of PPT discussions at CPWG and to avoid duplication of efforts in other forums, such as IPACG and OWG, work in the PACOTS/CEP region would remain within those forums; PACOTS/CEP matters will be reported but no work developed by PPT**
- **IATA presented a working paper requesting consideration of some near, mid, and long-term projects**
 - Projects included expansion of UPRs to Russian boundary fixes and replacing ATS Routes with a flex-track system



Tailored Arrival (TA) Order

- **TA's have been successfully trialed and are used regularly for KSFO oceanic arrivals**
 - Trials at Miami and Los Angeles encountered some issues
- **AJV-84 developed a TA Order that will allow for expanded use of TAs**
 - Currently limited to oceanic facilities due to requirement to upload clearance to aircraft
 - Order describes steps needed to build and implement a TA
 - Expected publication in late 2015/early 2016



ADS-C CDP and ADS-B ITP

- **Engineering requirements complete**
- **Software to be available to all three oceanic facilities in Jan-Feb 2016**
- **ICAO process for adoption as a global standard on track for 2016**
 - Will be available as an implementation vs. operational trial, expected mid to late 2016
- **ATC procedures for 7110.65 being developed**

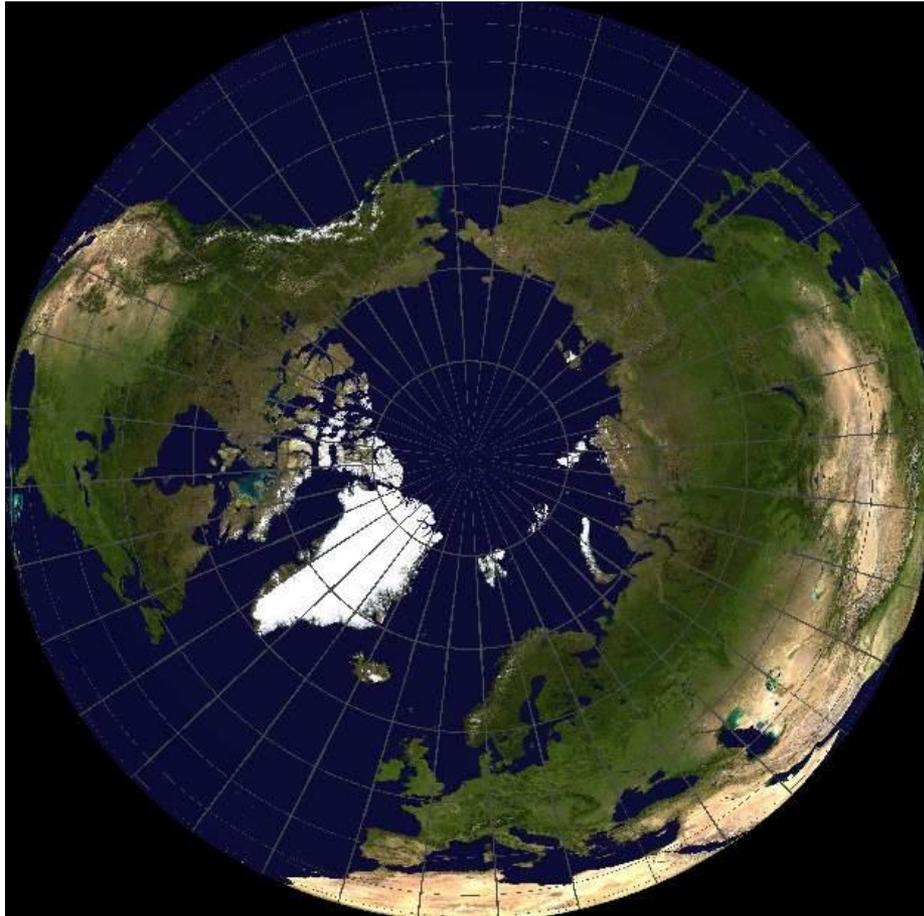


New York Oceanic Work Group

- **First ZNY OWG scheduled for 11-12 February 2015 in Manhattan, New York**
- **Format will be similar to ZOA OWG**
- **Discussions will include both ZNY East (North Atlantic) and ZNY West (WATRS) airspace**
- **First meeting will be with FAA facilities only, with future meetings open to other ANSPs**



Questions?



Action Item 03-06

- OWG members to provide known status on island airport.



Other Meetings

- **ISPACG 29 Date March 2-6, 2015
Santiago Chile**
- **IPACG Provider Mtg, June 2-4, 2015
Anchorage Alaska**

Next OWG Meeting

June 17, 2015?