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Oceanic Work Group Meeting

Date:

June 18, 2014



Oakland Center Update

Dennis Addison

SM Oceanic Airspace and Procedures

June 18, 2014



**Federal Aviation
Administration**

Oakland ARTCC Webpage



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FAA Home

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News

A-Z Index

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Aircraft

Airports

Air Traffic

Data & Research

Licenses & Certificates

Regulations & Policies

Training & Testing

FAA Home » Offices » Air Traffic Organization » Air Route Traffic Control Centers (ARTCC) »

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/



Oakland ARTCC Webpage



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FAA Home

Jobs

News

About FAA

A-Z Index

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Flight Plan Filing

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RVSM General Information

Air Route Traffic Control Centers (ARTCC)

Airport Traffic Control Towers (ATCT)

Terminal Radar Approach Control Facilities (TRACON)

FAA Home > Offices > Air Traffic Organization > Service Units > Air Traffic Services > Air Route Traffic Control Centers (ARTCC)

KZAK Oceanic ATC Operations

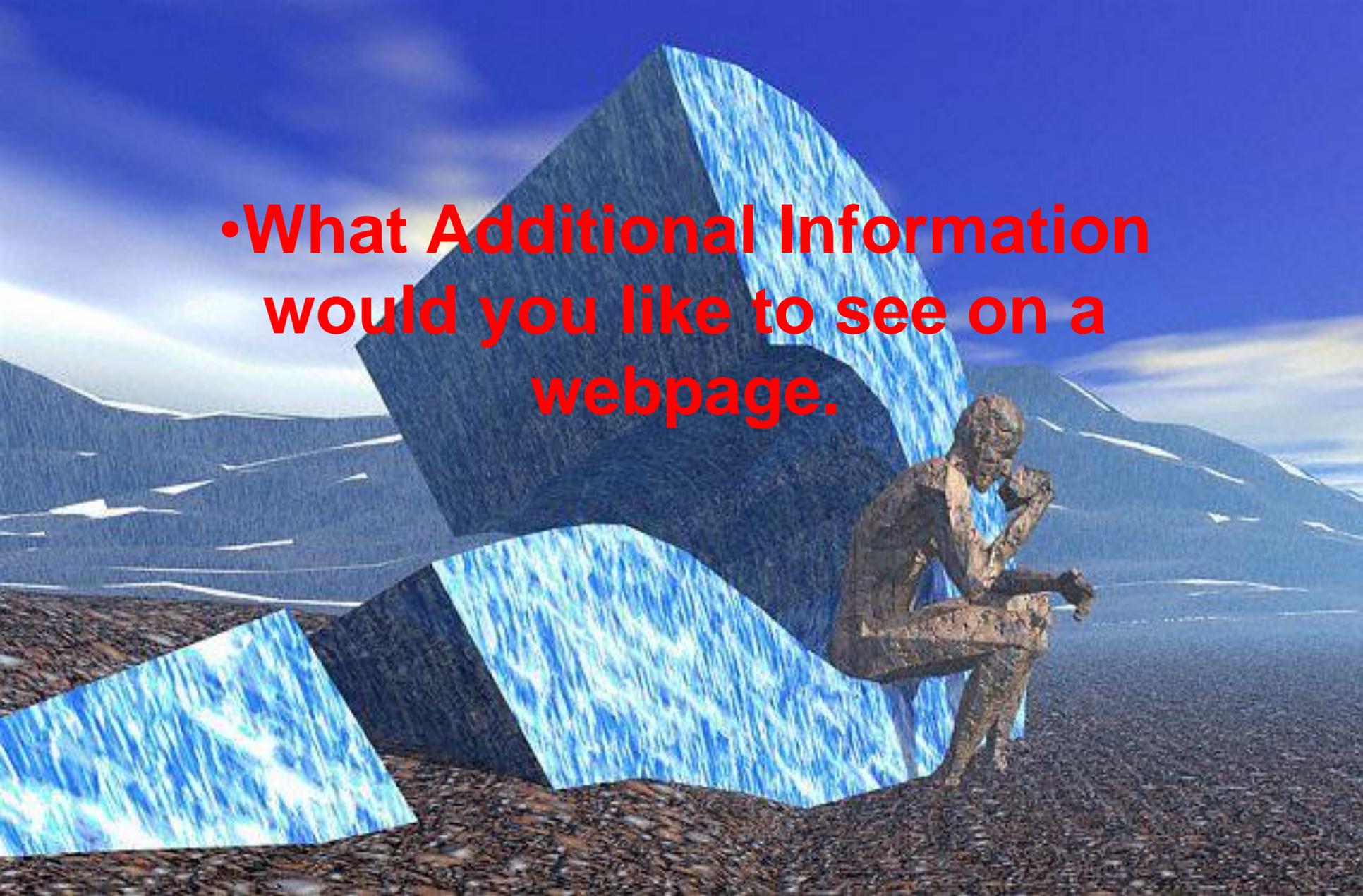
Print Share

- [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-B In Trail Procedure (ITP) Status Update



Federal Aviation
Administration

Operational Evaluation Partnership Agreement

- **Partnership**

- FAA and United Airlines agreement signed in April 2009



- Retrofit 12 UAL 747-400 aircraft with certified ITP systems
- Gather data on use of systems in SOPAC for a year starting in 2011

★ April 18, 2013 = 100 percent Pilots Trained

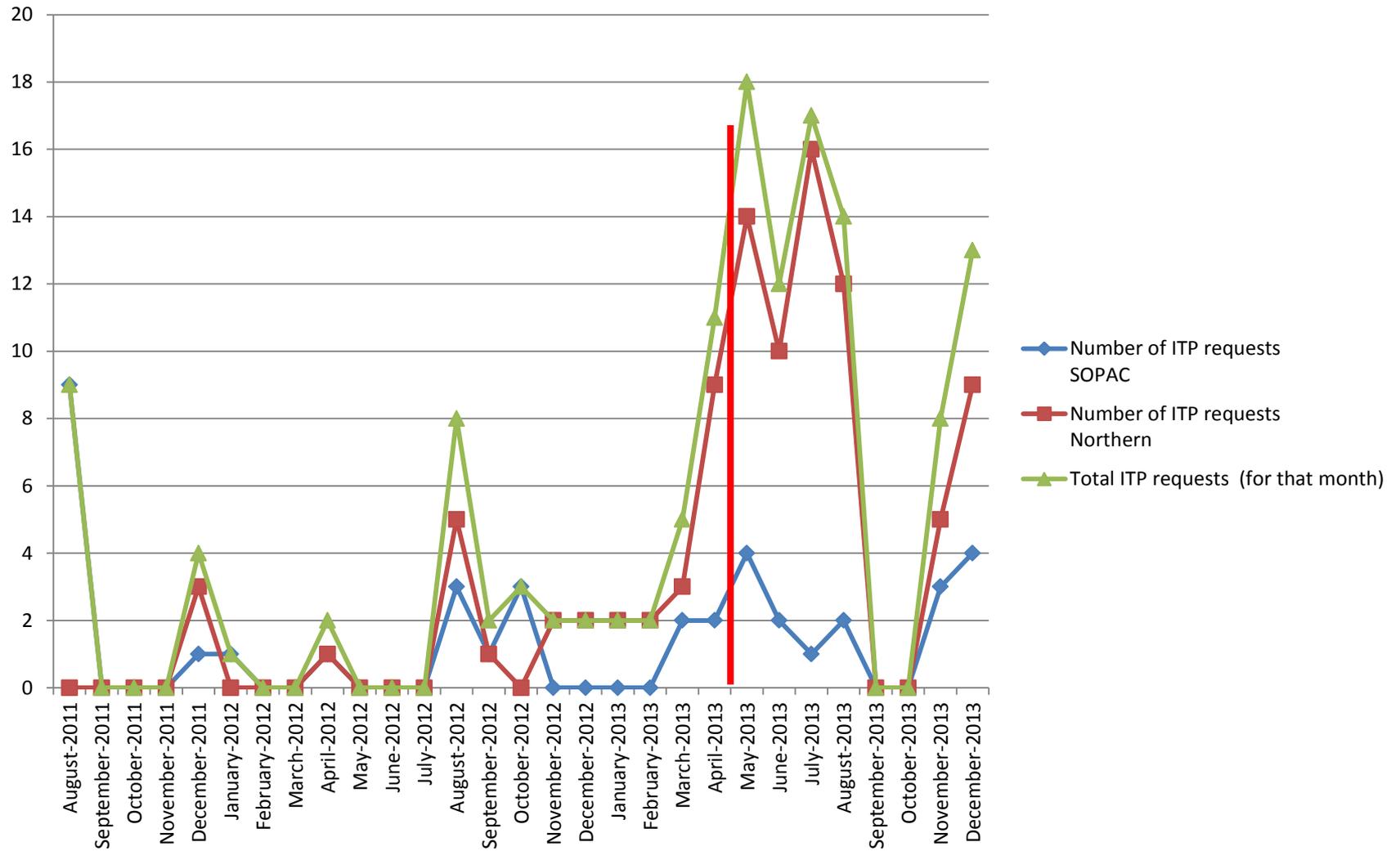
ADS-B ITP



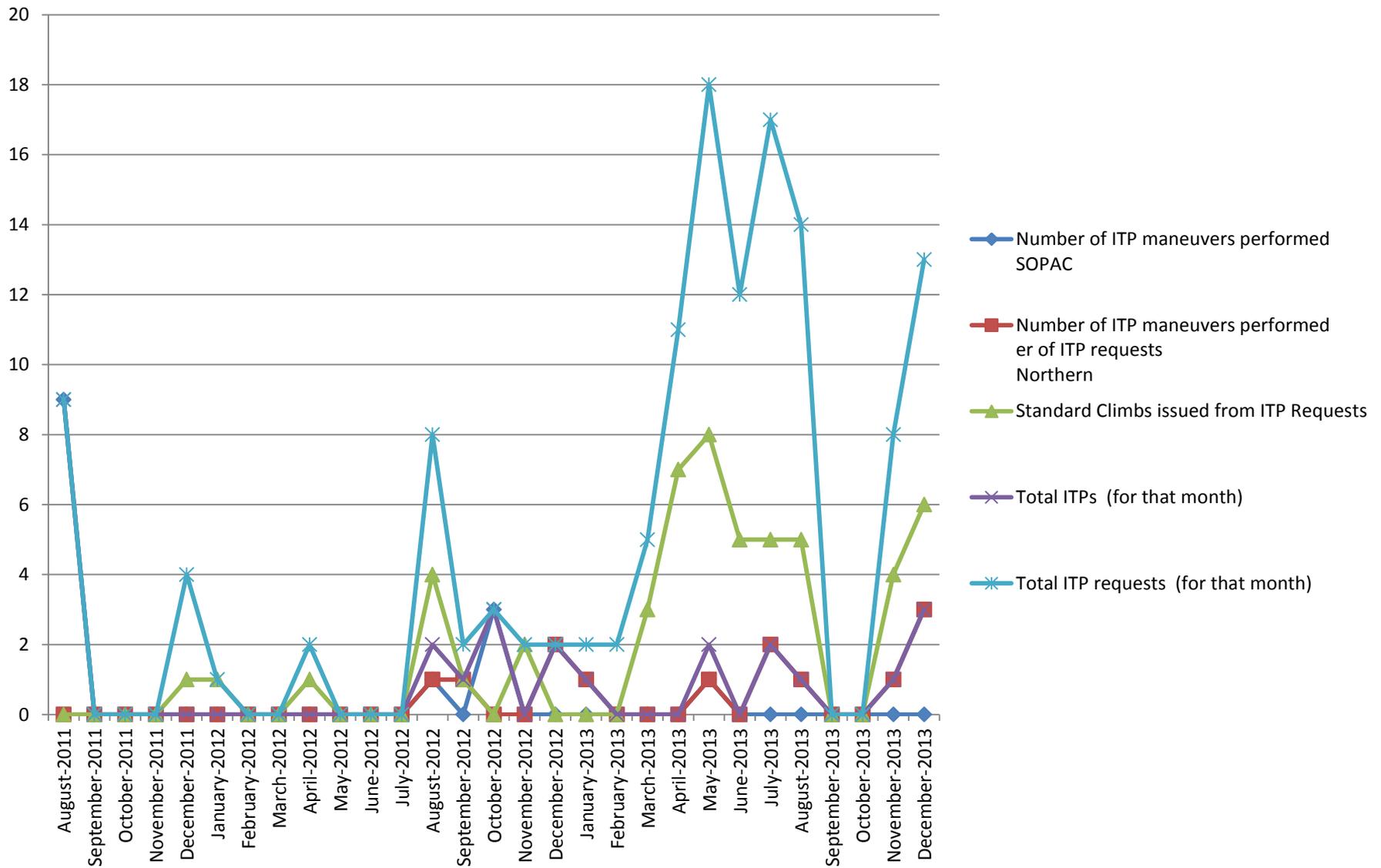
Entire Oakland FIR
December 9, 2011

South Pacific
August 15, 2011

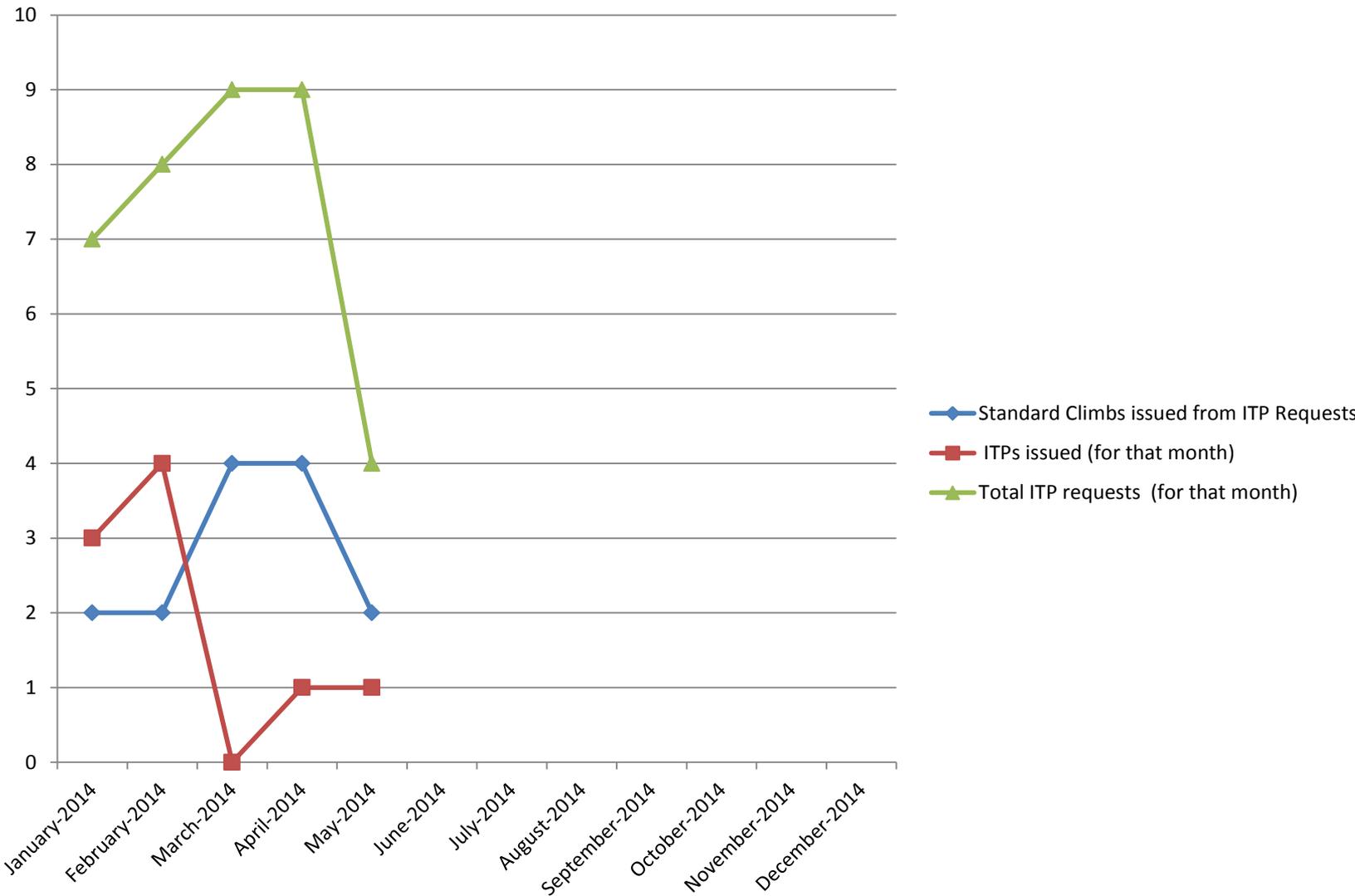
ITP Requests



ITP Maneuvers



2014 ITP Activity



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.

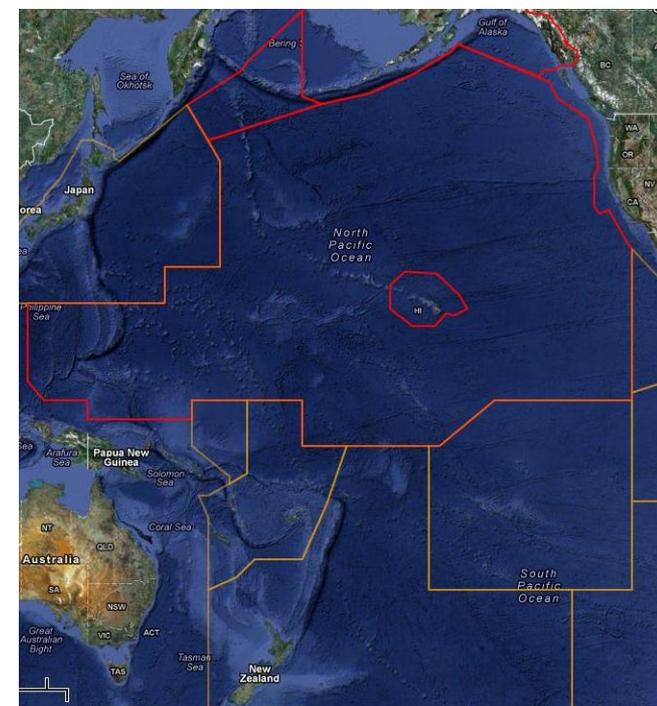
No aircraft involved are cleared for or requesting a route deviation

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)

Activity Status

- ITP Expansion
 - Fiji
 - Restarted Operational ITP Trial on January 6, 2014
 - New Zealand
 - Trial ends in February, making a request to extend.
 - Japan
 - Presented ITP OpEval results; talked to Japanese about ITP plans



ADS-C Climb/Descent Procedure (CDP)

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

ADS-C CDP Clearances

Only 8 clearances issued during the Manual Trial.

□ FDX3875
◦ 360
◦ N410

□ DAL1151
◦ 380
◦ N150

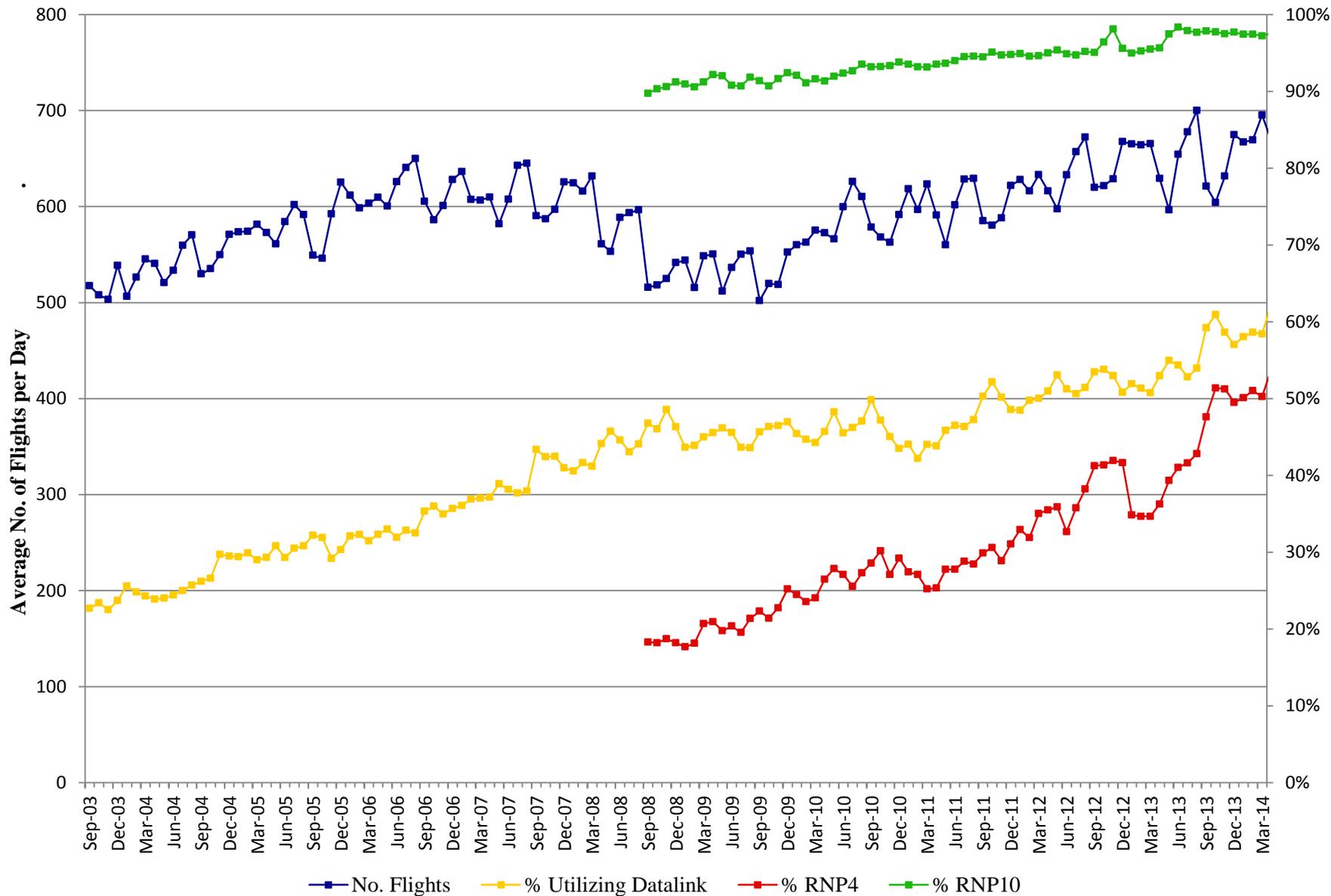
□ DAL650 3
◦ 350
◦ N536

A: 051M21

□ N170X
◦ 410
◦ N522

□ DAL836 3
& 340↑360
◦ N522
r360

ZOA Flights & Equipment Utilization



Automated Procedure

CWP16

ATC ADS-C CDP CHECKLIST

PRELIMINARY SCREENING CRITERIA CHECKS (STEPS 1-3)

1. AIRCRAFT CALLSIGNS: ANA2059 / ANA0315

2. BOTH Blocking and Maneuvering Aircraft must have the "3" 30/30 ADS separation flag set.

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 (ARF) messages for either aircraft in the Sector Queue.
 f. Aircraft Same Direction traffic.

FINAL SCREENING CRITERIA CHECKS (STEPS 4-9)

4. Initiate ADS DEMAND for both Aircraft. ENTER TIME that DEMAND request was sent to Maneuvering Aircraft: 1245Z

5. From ADD Report,
 Mach Number of Maneuvering Aircraft: 0.80 km.79
 Mach Number of Blocking Aircraft: 0.80 km.81

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 AT LEAST 19 MILES 116

6b. From ASD, Both Aircraft Same Groundspeed, or Faster Aircraft is in Front faster in front

6c. From Step # 5, Both Aircraft Same Mach Number, or FASTER Mach AIRCRAFT IN FRONT

7. OVERTAKE SITUATION: 7a, 7b, and 7c Must be Satisfied

7a. From Conflict Report Window, ACTUAL Longitudinal Distance Between Maneuvering And Blocking Aircraft AT LEAST 28 MILES

7b. From ASD, Trailing Aircraft Groundspeed Must NOT be More Than 10 Knots Faster

7c. From Step # 5, Trailing Aircraft is NOT More Than .02 Mach Faster

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.

8a. Append Free-Text Advisory from the Pre Formatted messages "ADS-C CDP PROCEDURE IS BEING APPLIED BY ATC".

9. Check the 2nd Profile Conflicts of the Maneuvering Aircraft. IF THERE ARE ACTUAL OR IMMINENT CONFLICTS WITH OTHER AIRCRAFT, DO NOT EXECUTE PROCEDURE

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	etime	ofix	time	fix	DSCND	etime	ofix	time
		20	CLIMB TO AND MAINTAIN (alt)	F330			EOS			
		26	CLIMB TO REACH (alt)	F330	BY (time)		EOS			
		27	CLIMB TO REACH (alt)	F330	BY (pos)		EOS			
		(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 DVRB COORD RCPT REJ HLP CLS



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

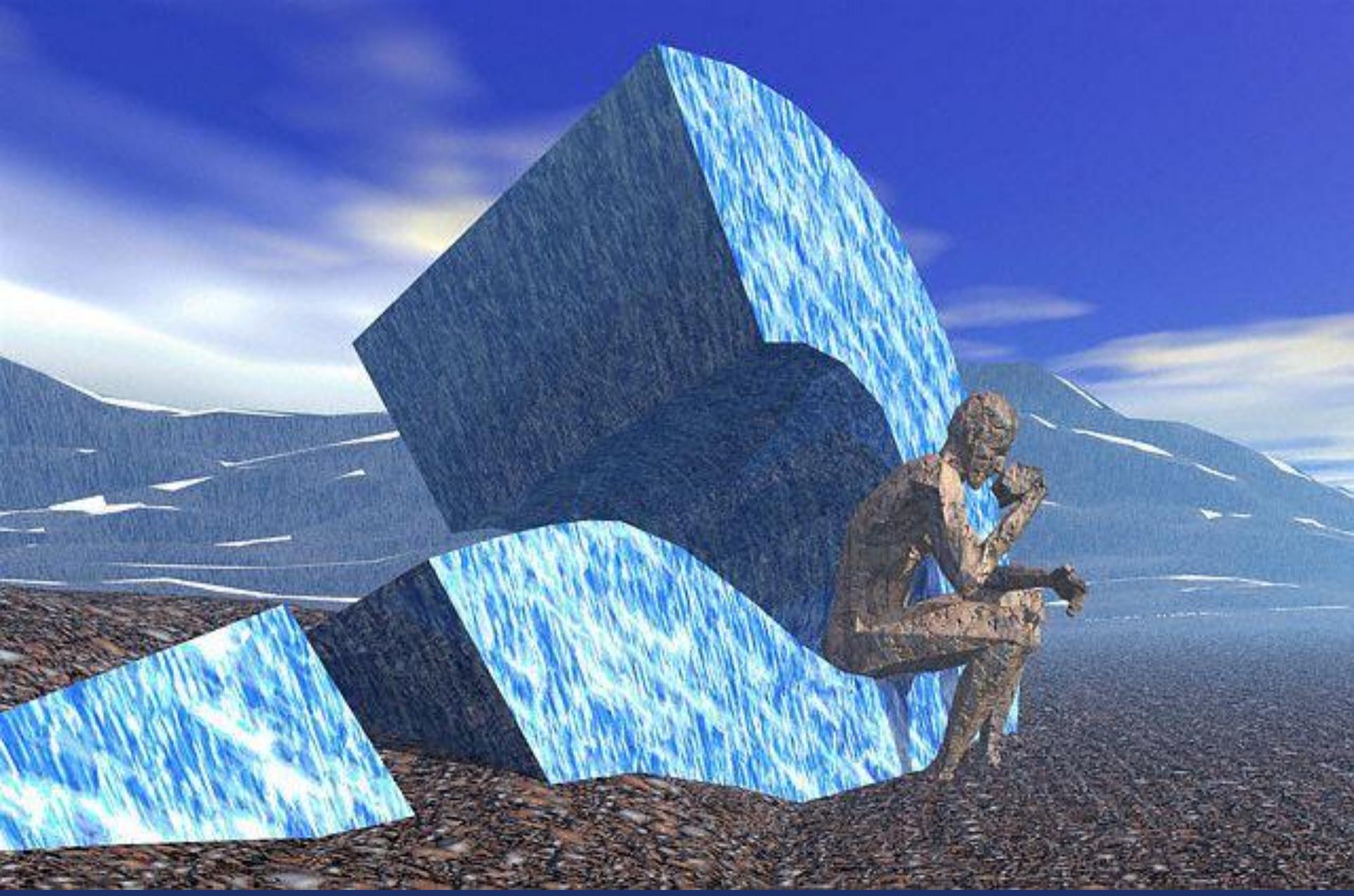
Response Area:

CDP-PROBE SEND UNABLE RESET CLOSE

Ocean21 Automation Platform



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



BOEING 777



36120 nm

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>

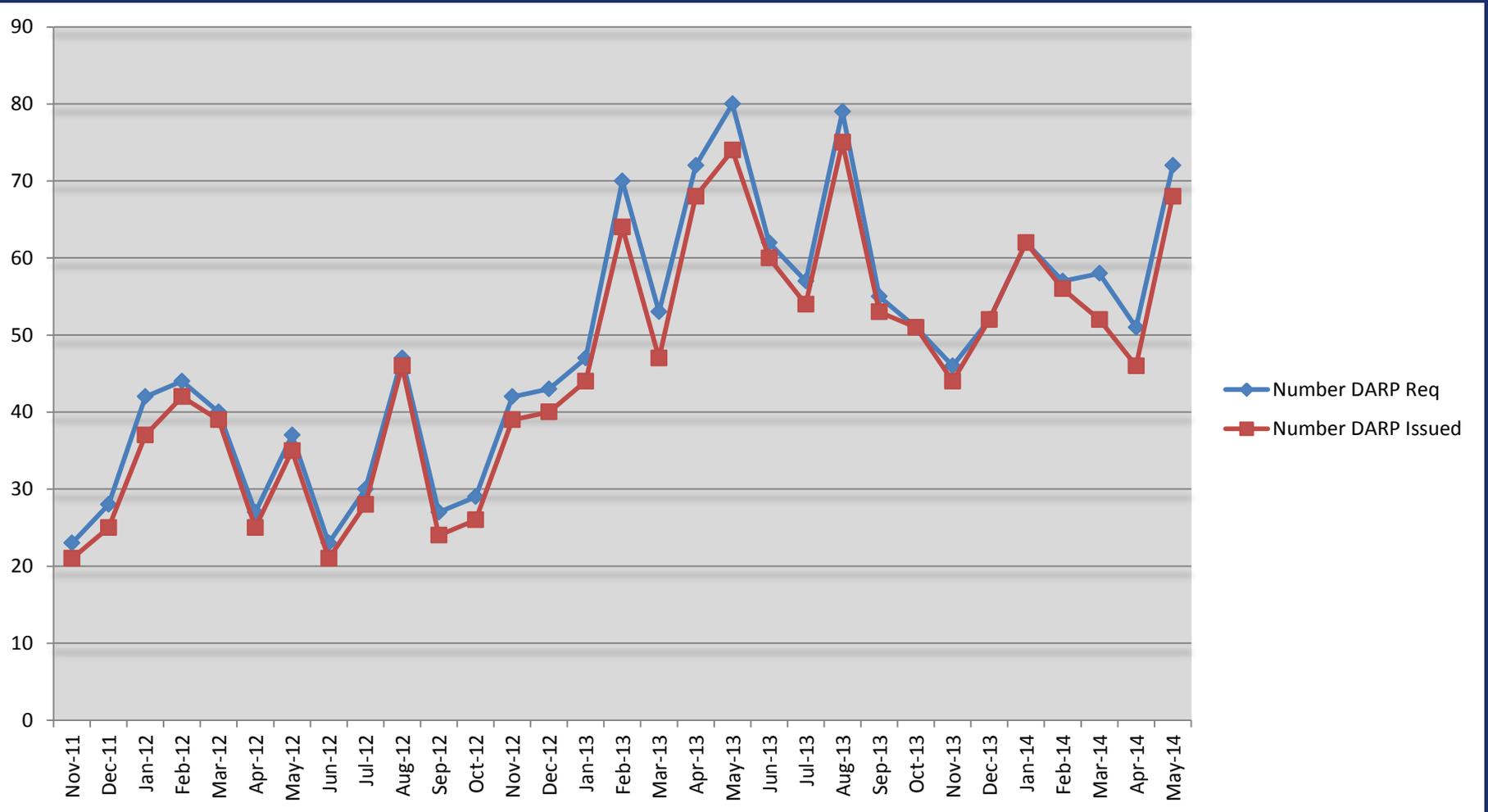
ACT RTE 1 LEGS
 084° 237NM
 N14E170 ,834
 081° 583NM
 N14W180 ,833
 071° 355NM
 N15W174 ,833
 055° 570NM
 N19W165 ,83
 046° 117NM
 AJINK ,83

 <RTE 2 LEGS R

DARPS

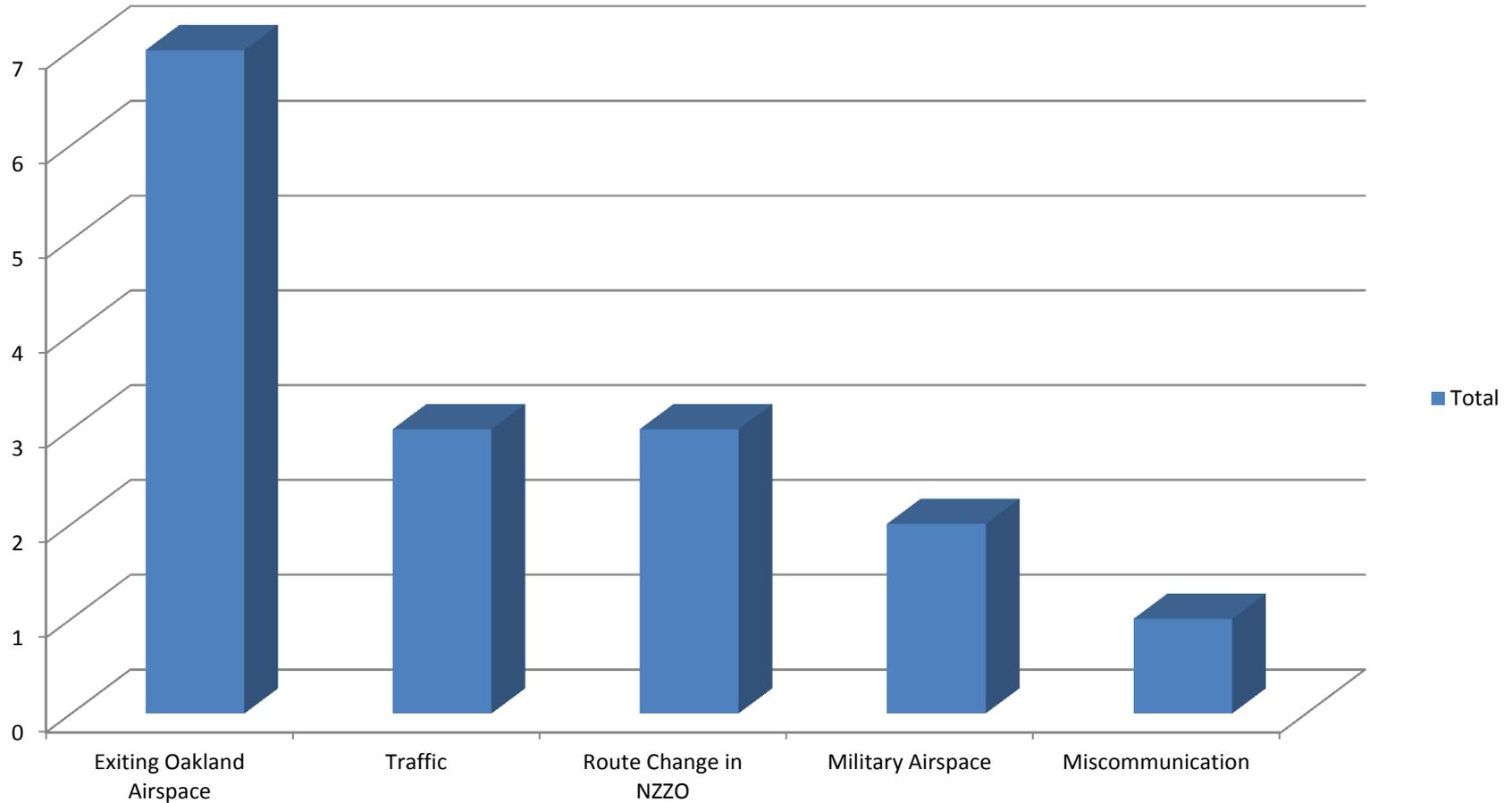


Oakland FIR DARP Usage

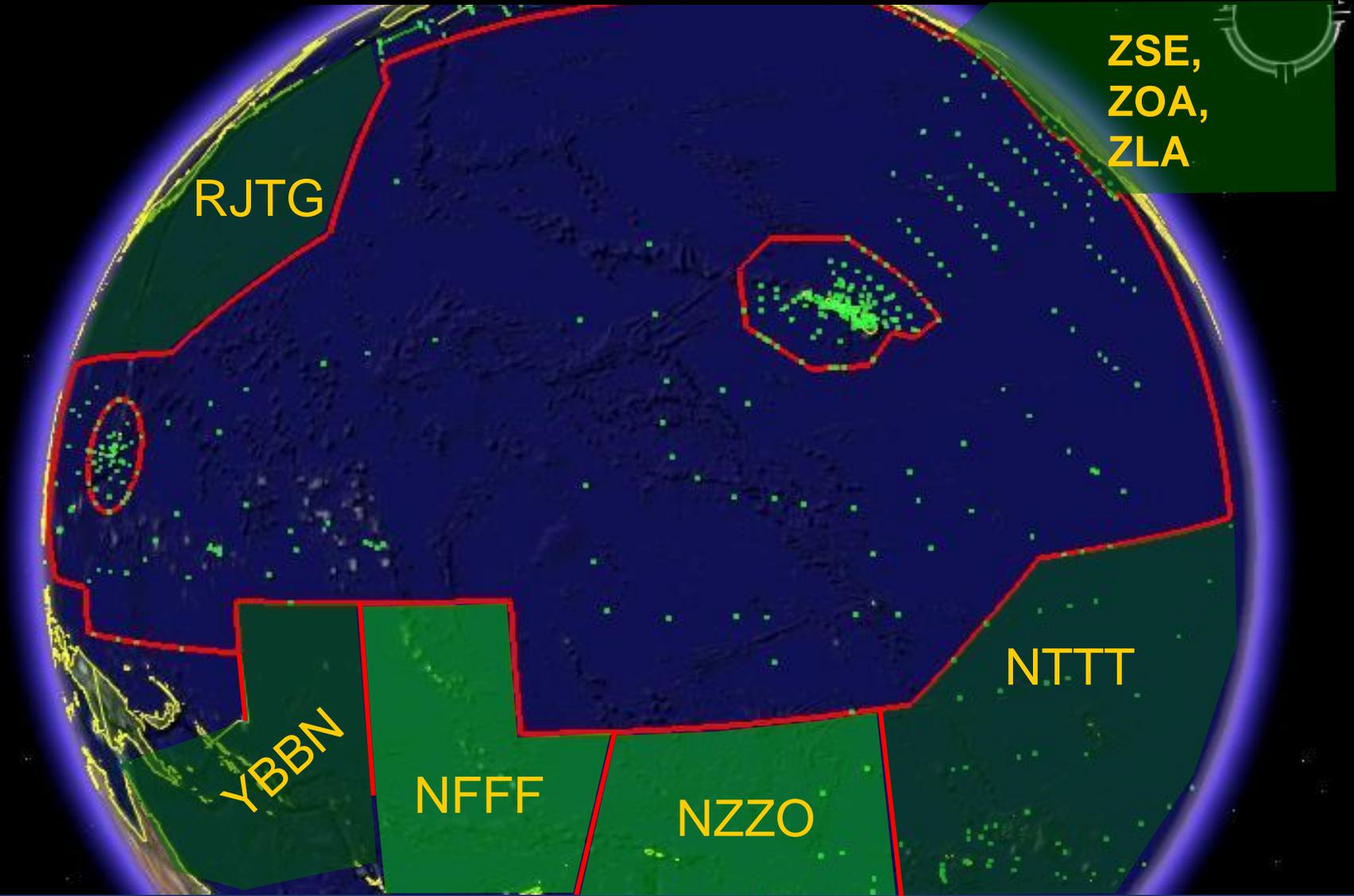


Oakland FIR DARP Usage

Total



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 AIC

WEF 19 September 2013 0000UTC,

OPERATIONAL TRIAL FOR DYNAMIC AIRBORNE REROUTE PROCEDURE (DARP) IN THE FUKUOKA FIR

WEF 22 August 2013 0000UTC, Operational Trial for DARP issued in the Fukuoka FIR will be underway. The following procedures must be adhered to when planning DARP.

*DARP is to allow Operational Control to initiate the process for an airborne aircraft to be issued an amended route clearance by ATC.

Regardless of AIP GEN3.3.3.7.5 3), DARP request and clearance must be made via CPDLC, after the pre-coordination with Air Traffic Management Center (ATMC).

1. Operational requirements for DARP trial

- a. DARP clearance is limited to aircraft bound for Hawaii.
- b. Operational CPDLC is required for aircraft requesting DARP.
- c. DARP request must be made:
 - i. at or east of 145E.
 - ii. by the pilot at least 20 minutes before the divergence waypoint to allow processing time by ATC and pilot.
 - iii. at least 1 hour prior to crossing the Fukuoka/Oakland FIR boundary.
- d. ATMC issue clearance the identical route with the requested route from aircraft, or uplink "UNABLE". (ATMC shall not issue clearance with any modification to the requested route.)
- e. Operators wishing to employ DARP trial initiated in the Fukuoka FIR must pre-coordinate with ATMC office by email (atmc_ocean@cab.mlit.go.jp).

2. Other FIRs

For the details on DARP procedures within other FIRs, refer to aeronautical information published by the state associated with the FIR.

3. For further questions

The Fukuoka Air Traffic Management Center (The Fukuoka AMTC)

- Office atmc_ocean@cab.mlit.go.jp TEL : +81-92-608-8869
- Oceanic supervisor TEL : +81-92-608-8890

Note: Operational questions should be directed to the oceanic supervisor.

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 REQ Must be Made

•1 Hour Prior to the BDRY

•At or EAST of 145E

•20 Min Prior to Divergence



DARP Pacific Operations

- ATMC issue clearance the identical route with the requested route from aircraft, or uplink “UNABLE”. (ATMC shall not issue clearance with any modification to the requested route.)

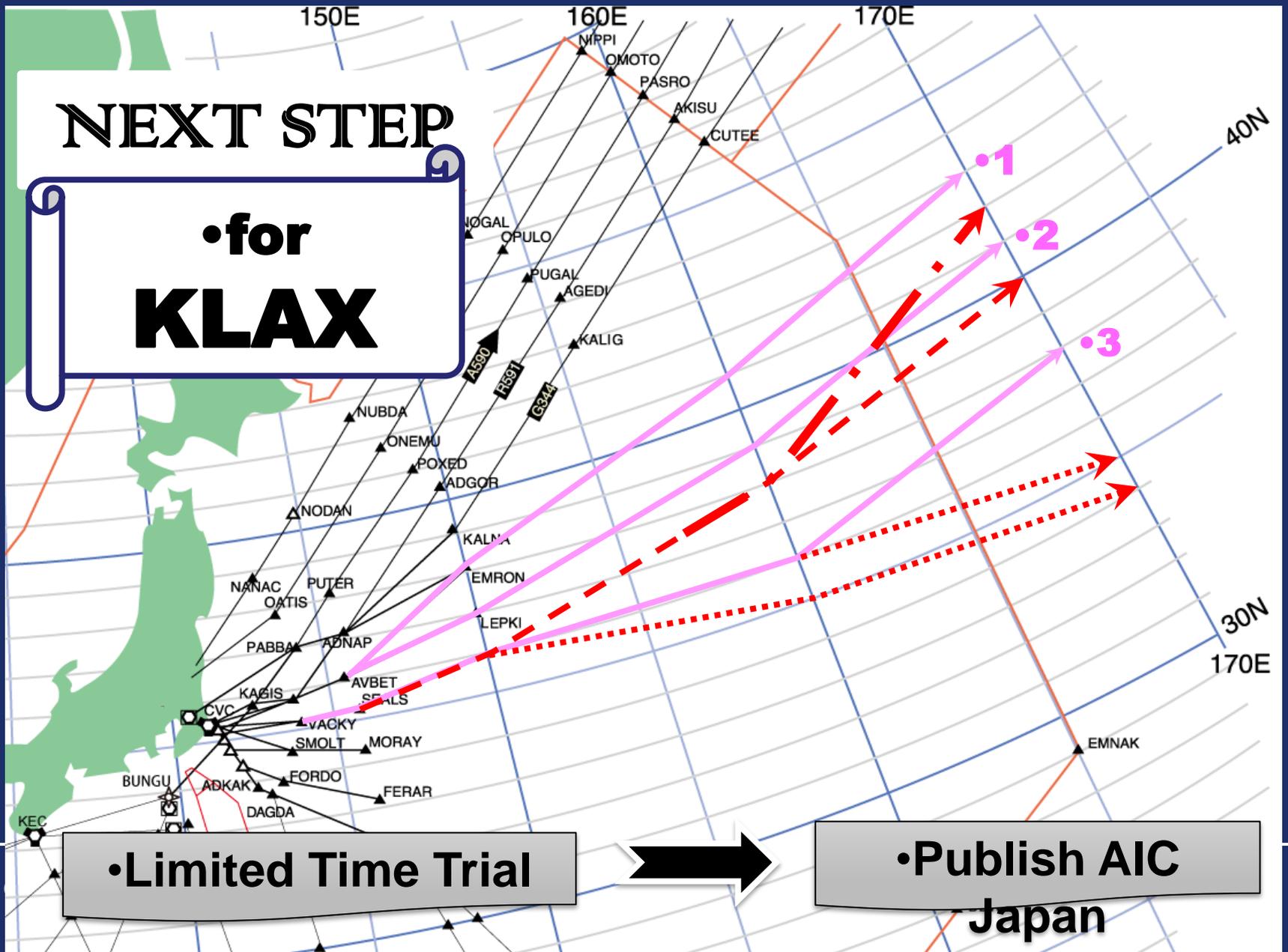
NEXT STEP

•for
KLAX

•Limited Time Trial



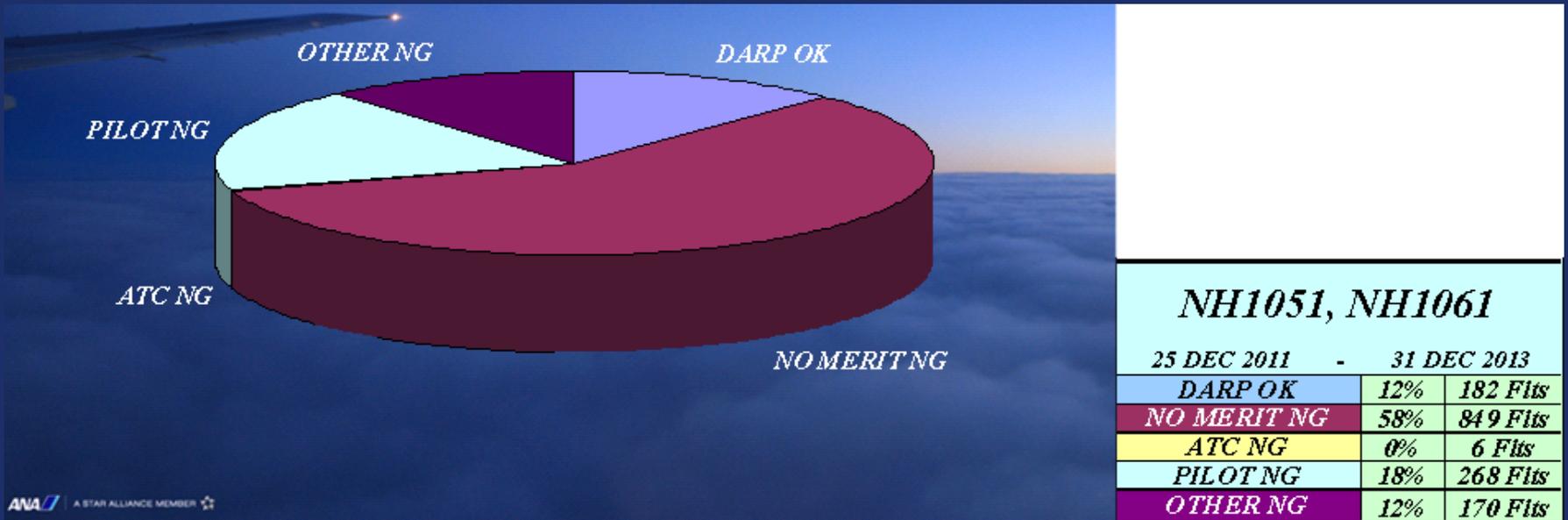
•Publish AIC
Japan



Feed Back on the advantages of DARP Operation ANA///

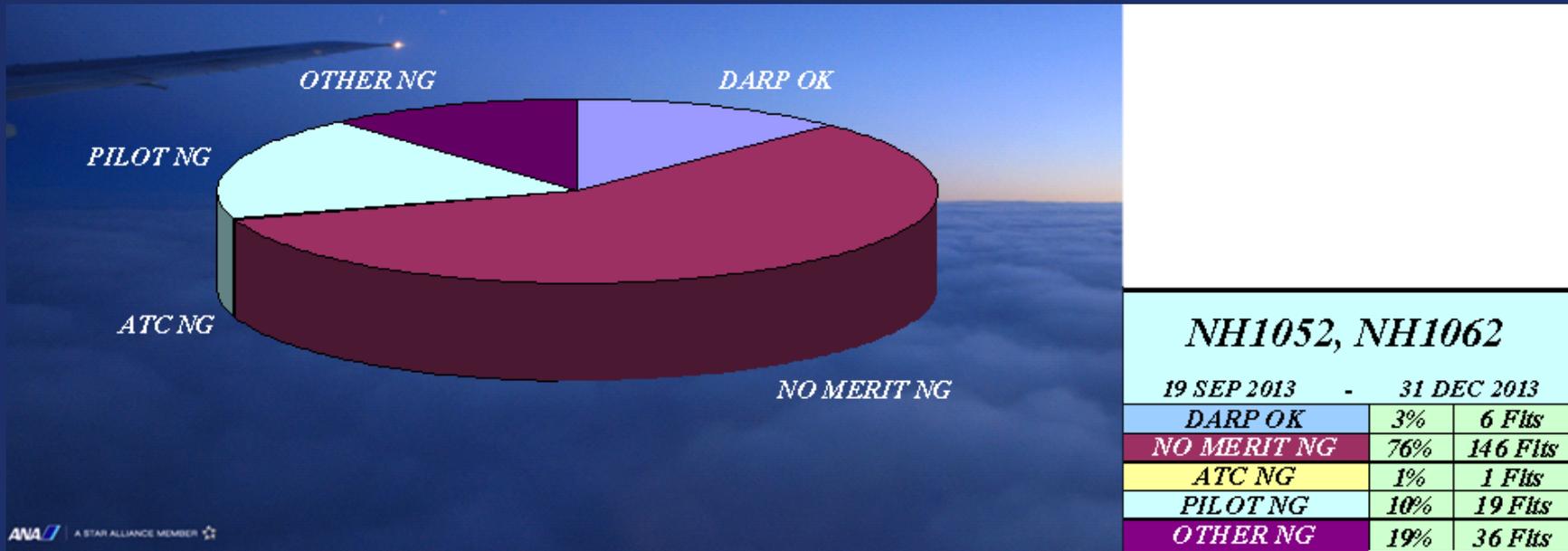
*IPACG/39
Fukuoka, Japan
February 5-6, 2014*

•Detail Result (HNL - TYO)



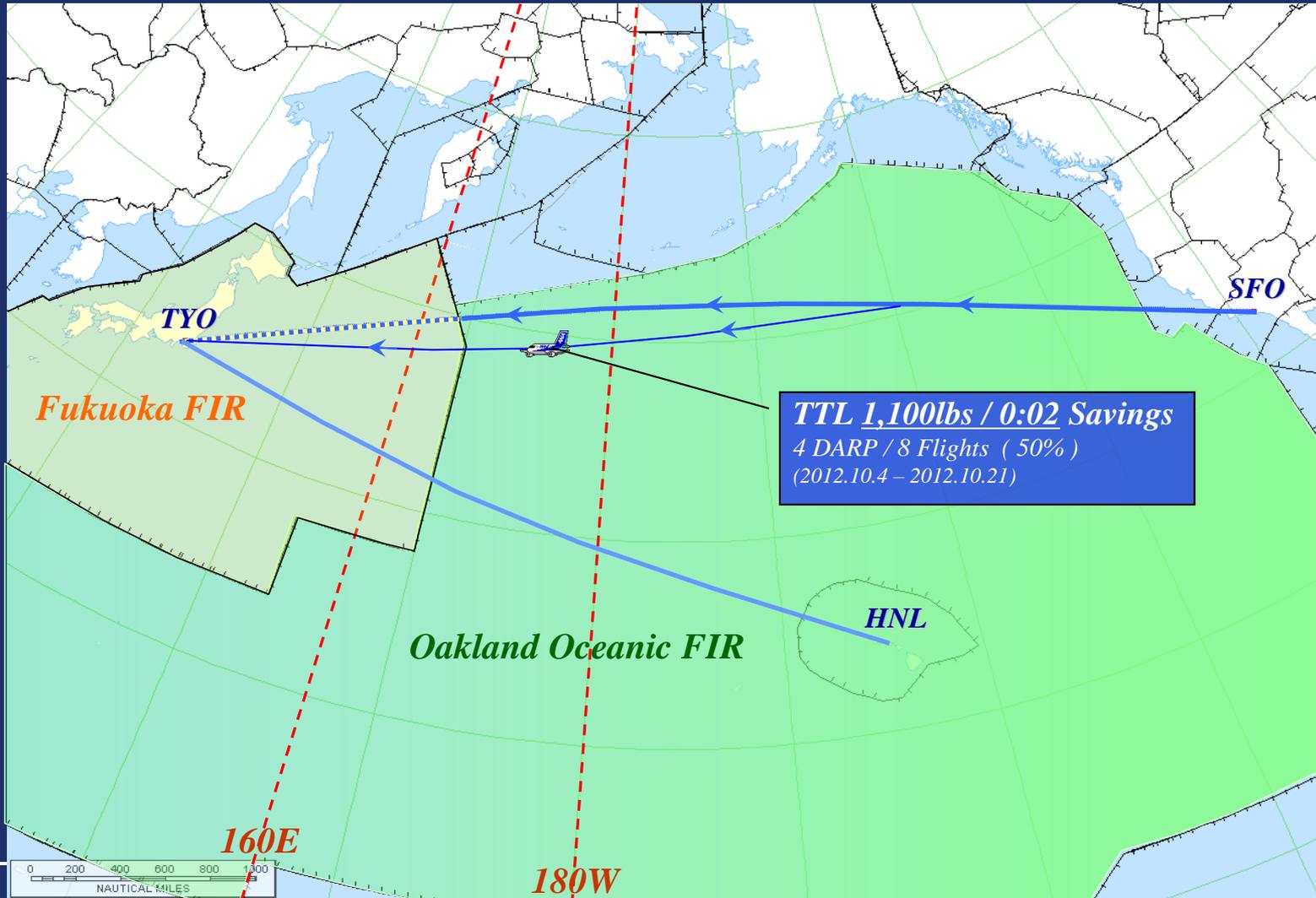
		Fuel	Time
Saving	Average	<u>662 lbs</u>	<u>0:03</u>
	Maximum	4200 lbs	0:21
	Total	120500 lbs	6:35

•Detail Result (TYO - HNL)

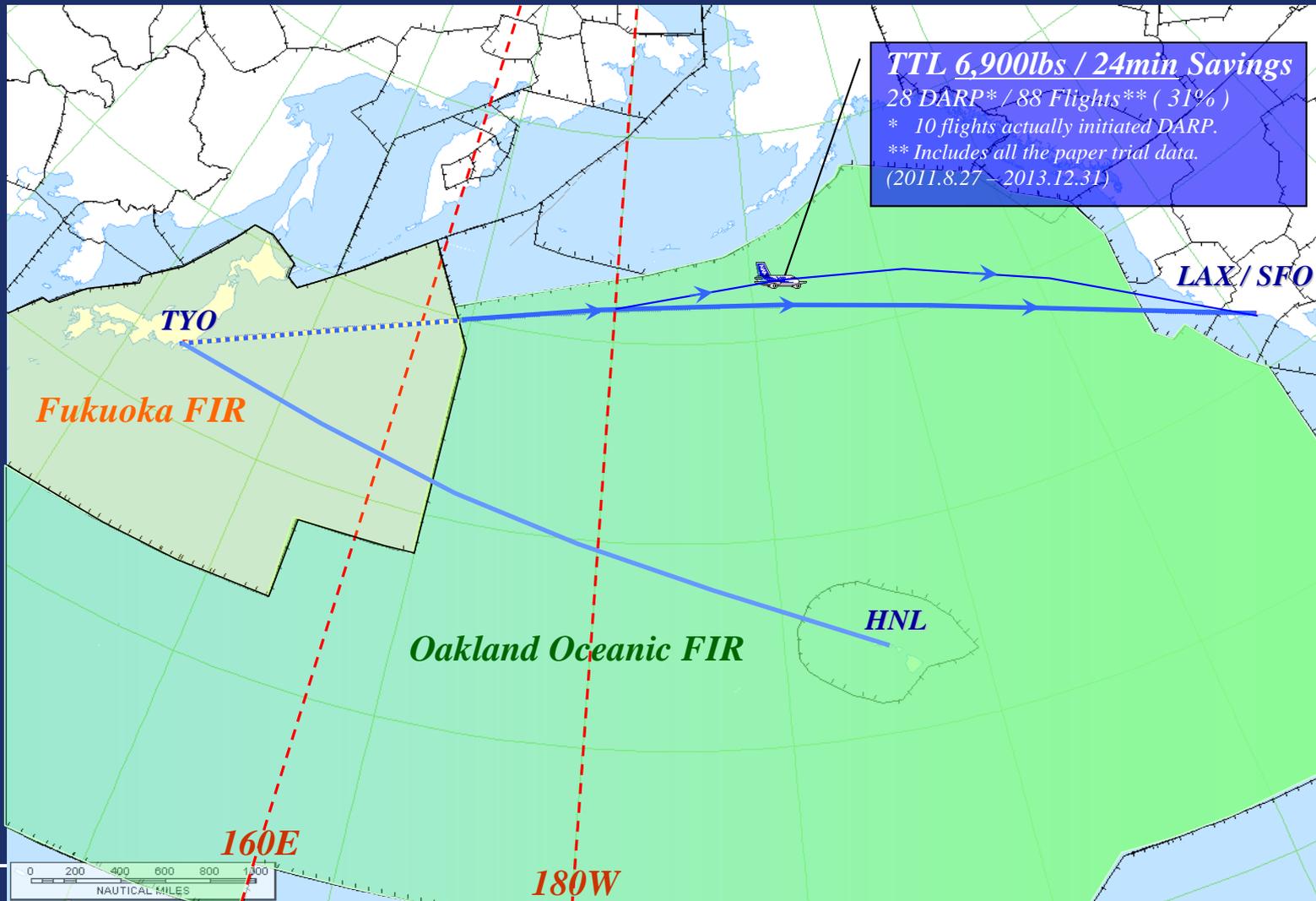


		Fuel	Time
Saving	Average	<u>550 lbs</u>	<u>0:06</u>
	Maximum	2000 lbs	0:14
	Total	3300 lbs	0:36

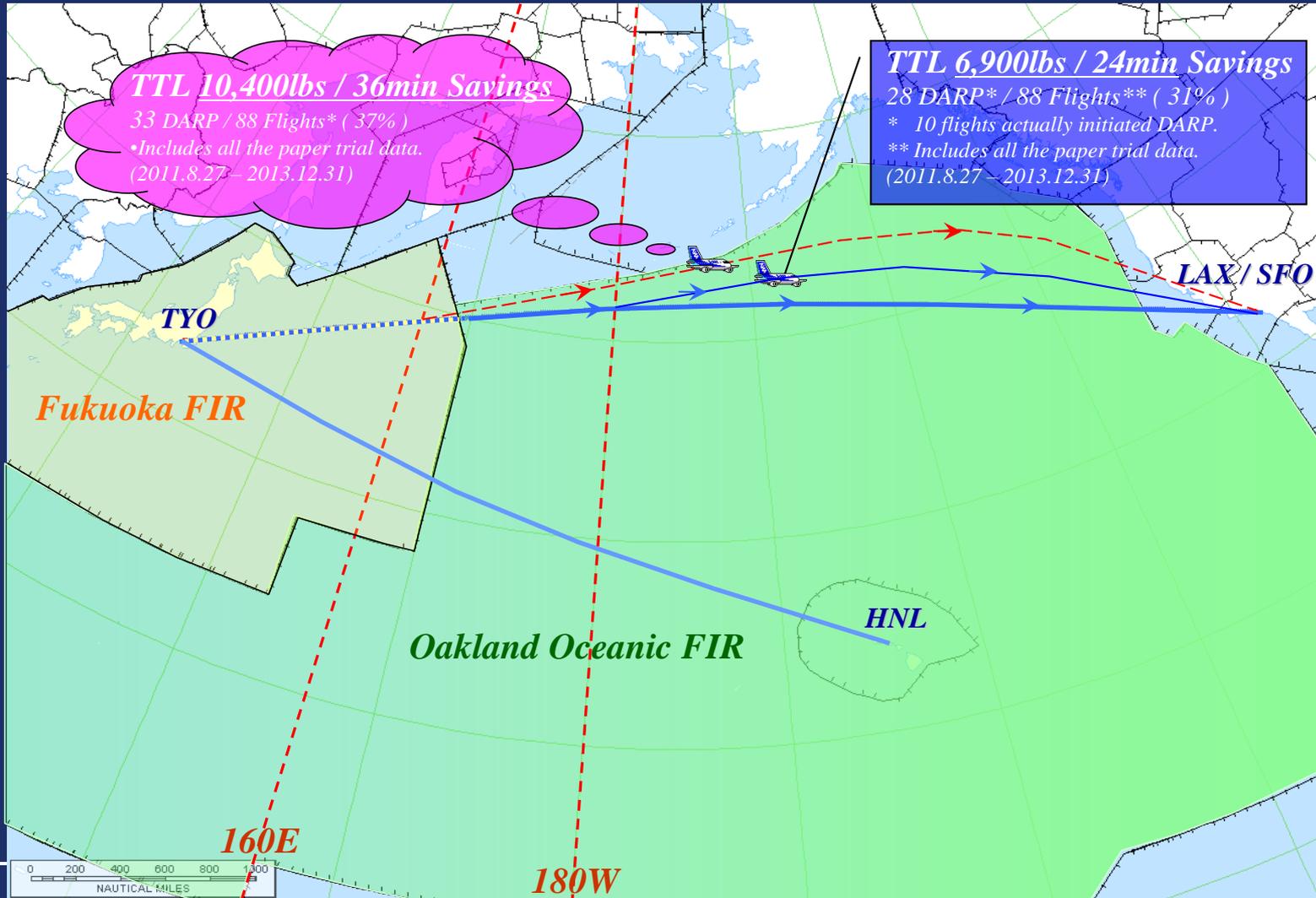
•Result (SFO - TYO)



•Result 1 (TYO - LAX/SFO)



•Result 2 (TYO - LAX/SFO)



• *Result (Workload)*



• *Flight Crew DARP Procedure ;*

- *20-25min (includes 5-10min waiting ATC Clearance)*



• *Flight Dispatcher DARP Procedure ;*

- *10-15min (time for preparing DARP route)*

- *Note : After 2 years of DARP implementation, DARP preparing time has been*
- *reduced from "20-25min".*

• *Conclusion*



• *Effect of DARP from Fukuoka FIR is larger than the effect of DARP restricted within Oakland Oceanic FIR.*

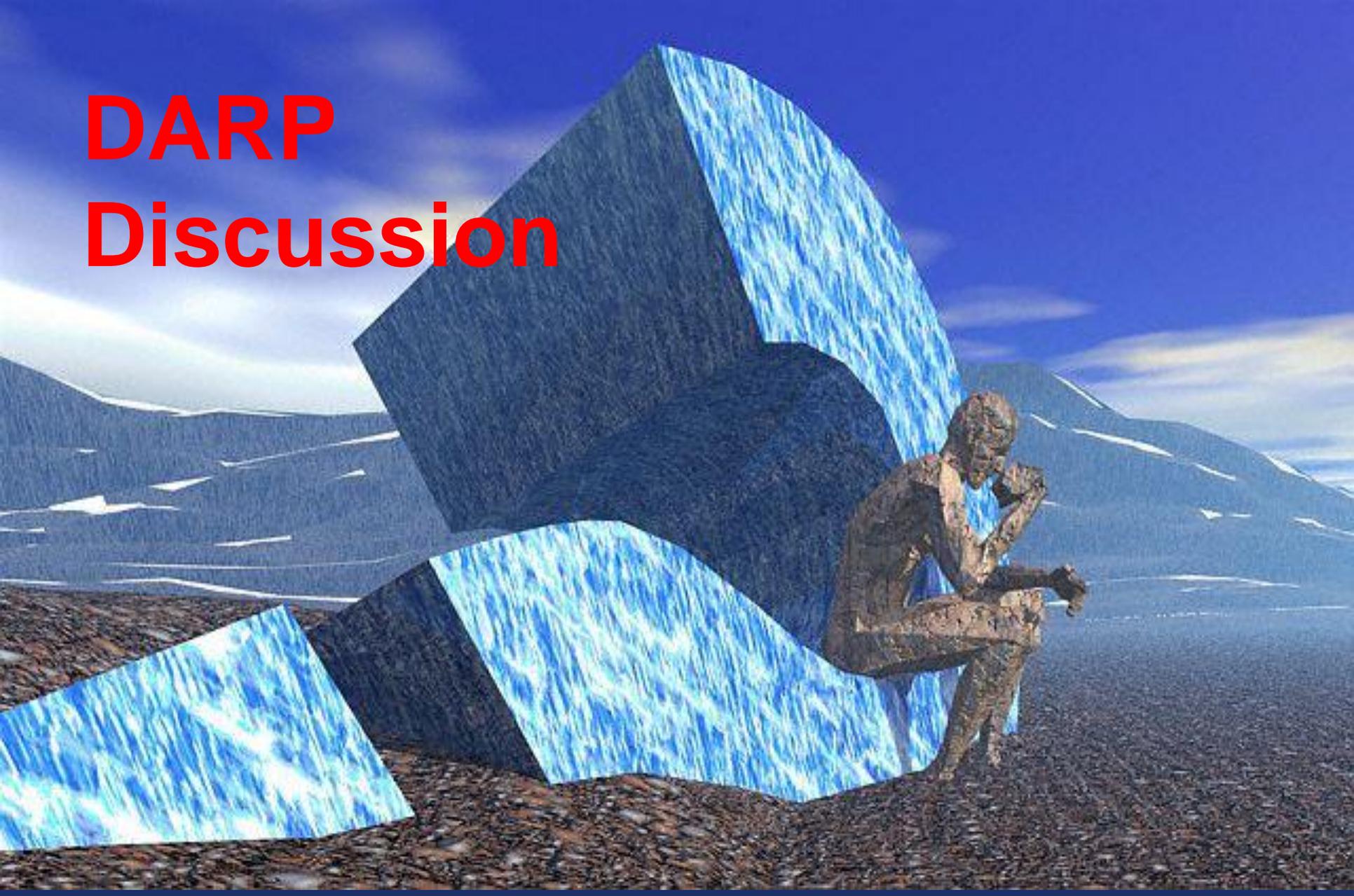


• *Flight Dispatcher's DARP familiarization has moved forward after 2 years of implementation.*



• *Expansion of DARP applicable city pair is expected. (e.g. TYO to/from LAX, SFO Flights)*

DARP Discussion



User Preferred Routes

Presented By: FAA, Oakland ARTCC
Airspace and Procedures



Federal Aviation
Administration

UPRRs

????
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.

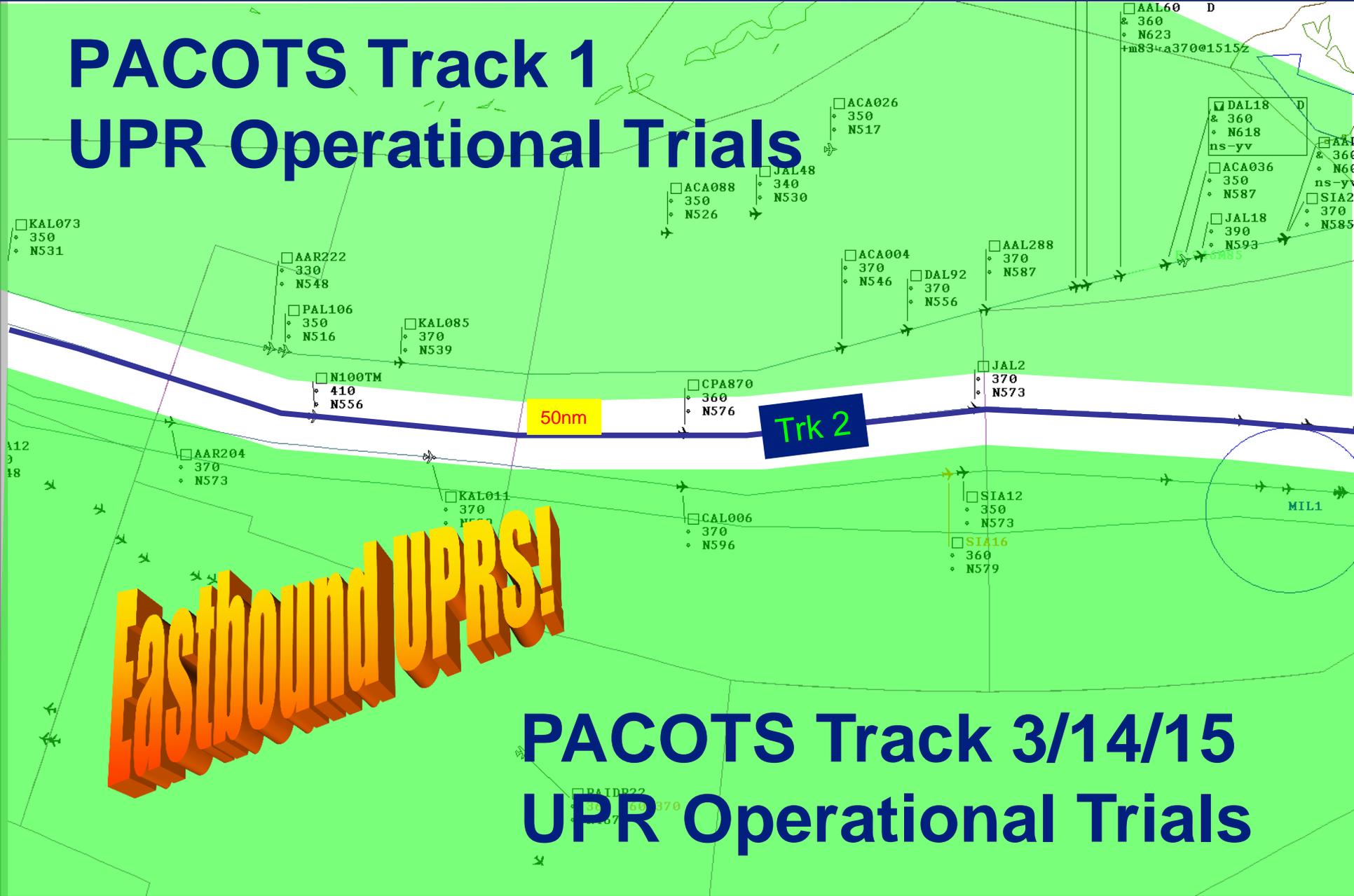
9.61M
Kg An

2.88M.
Kg An.

2.09M.
Kg An.

????
Kg An.

PACOTS Track 1 UPR Operational Trials



Eastbound UPRs!

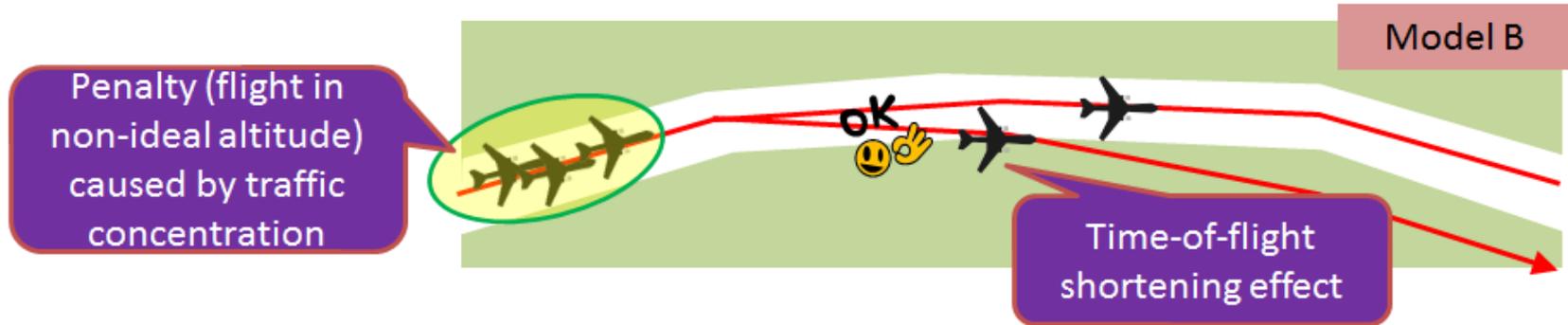
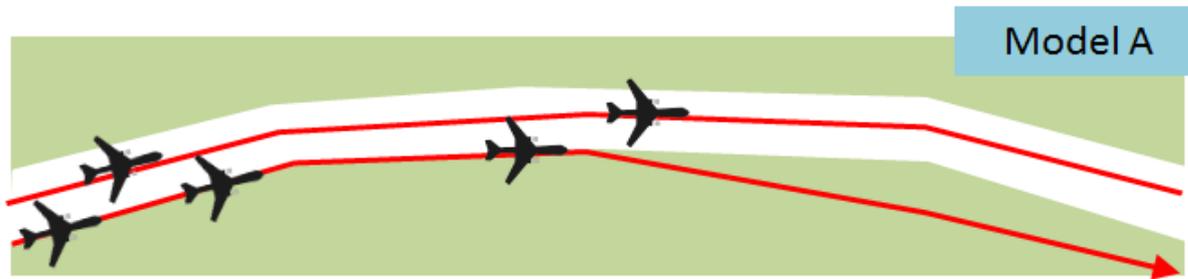
PACOTS Track 3/14/15 UPR Operational Trials



ENRI IPACG39 Track 2 Divergence Paper

Discussion

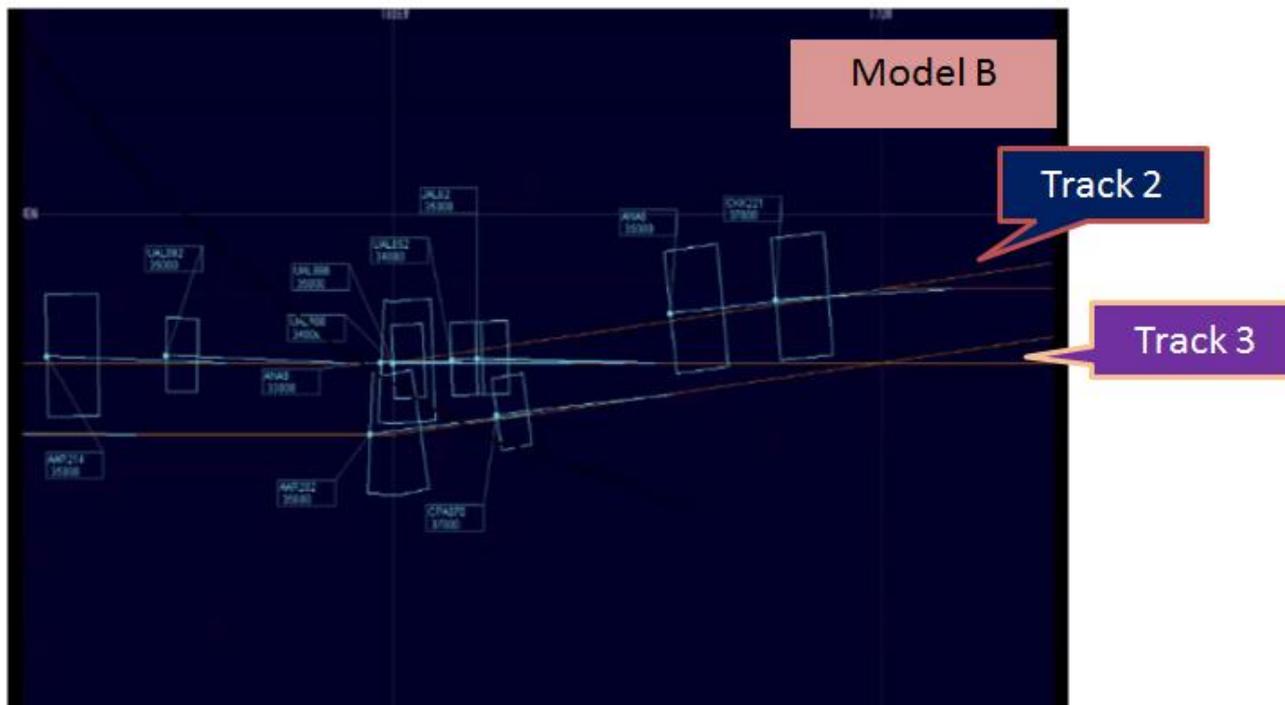
- Total effect
 - Trade-off of flight on ideal altitude and time-of-flight shortening effect of the branch.



ENRI IPACG39 Track 2 Divergence Paper

Discussion

Merging that occurs after the branch



Day2 1130Z 170W

IATA IPACG39 UPR Paper



Summary

- IATA proposes the staged implementation of an unrestricted UPR Zone within Oakland airspace as a means of achieving the objectives of the Pacific Project.

Discussion

- To manage implementation IATA proposes the following timetable:
 - Year 1 - Eastbound routes wholly contained within Oakland airspace, starting from the Fukuoka boundary;
 - Year 2 - Westbound routes wholly contained within Oakland airspace to the Fukuoka boundary;

Discussion

- Year 3 onwards – Progressive expansion of UPR start/end points inside Fukuoka FIR, ultimately to/from the boundary between Japanese domestic and oceanic airspace;
- Year 4 – Expansion into Anchorage airspace.

IATA Eastbound PACOTS UPR Paper Trial

Westbound	Airline flight #	a/c type	block time	current dep time	Units	Avg saving - fuel	Best saving - fuel	Eastbound	Airline flight #	a/c type	block time	current dep time	Units	Avg saving - fuel	Best saving - fuel
JFK-HKG*	CX 845	B77W	15:50	00:50L	KGS	543	2,500	HKG-JFK	CX 846	B77W	15:40	19:45L	KGS	2,343	5,600
ANC-HKG	CX xxx	B748	~10:00		KGS	1,300	3,000	HKG-ANC	CX xxx	B748	~09:00		KGS	1,986	3,000
DEN-NRT	UA 139	B788	12:15	12:20L	LBS	886	1,810	NRT-DEN	UA 138	B788	10:50	17:55L	LBS	1,377	3,416
LAX-NRT	UA 32	B788	11:55	11:05L	LBS	775	2,073	NRT-LAX	UA 33	B788	09:45	18:15L	LBS	996	2,364
DFW-NRT	AA 175	B777	13:20	10:35L	LBS	3,455	8,174	NRT-DFW	AA 60	B777	11:45	18:20	LBS	1,613	3,663
SEA-NRT	DL 155	A333	10:50	13:05L	LBS	1,827	4,400	NRT-SEA	DL 156	A333	08:55	14:50L	LBS	1,859	4,200
LAX-HND**	NH 1005	B772	12:15	00:45L	LBS	476	5,300	HND-LAX**	NH 1006	B772	09:55	00:05L	LBS	347	1,700
LAX-NRT	SQ 11	A388	11:30	15:45L	KGS	2,474	4051	NRT-LAX	SQ 12	A388	10:15	19:15L	KGS	823	2409
*April only - filed route the most fuel efficient on 4/7 days															
** March, April, May - filed route the most fuel efficient on 11/17 days															
*** March, April, May - filed route the most fuel efficient on 8/15 days															
Dates	Mon-Sun	Mon-Fri													
March	3rd - 9th	3rd - 7th													
April	7th - 13th	7th - 11th													
May	5th - 11th	5th - 9th													
June	9th-15th	9th - 13th	To avoid CPWG												
July	7th - 13th	7th - 11th													
August	4th - 10th	4th - 8th													

IATA Eastbound PACOTS UPR Paper Trial

AC Data Summary March and April - avg fuel savings

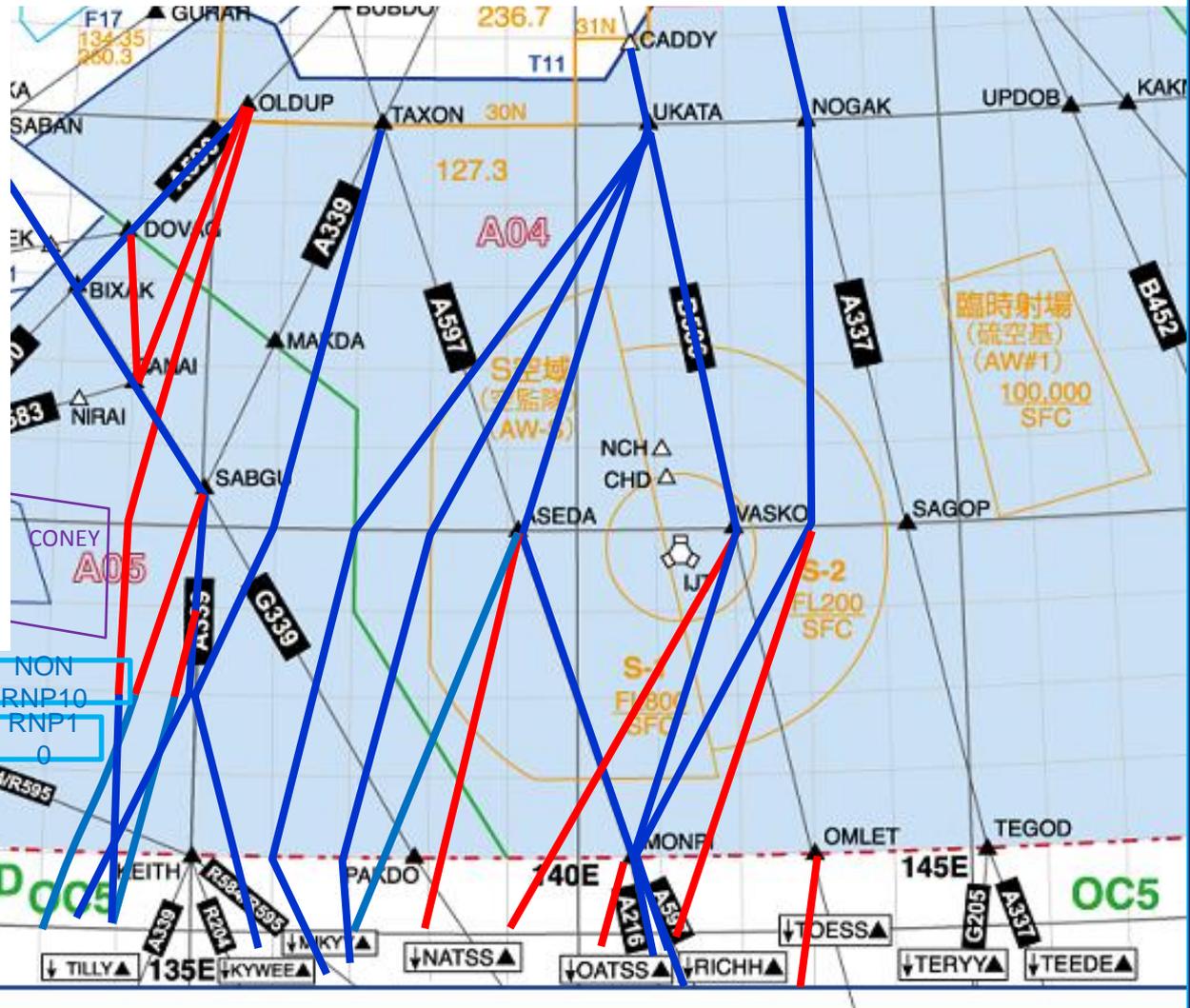
Westbound		Eastbound	
Route	KGS	Route	KGS
YYZ-HKG	2,760	HKG-YYZ	5,770
YYZ-PVG	2,846	PVG-YYZ	3,718
YYZ-PEK	4,864	PEK-YYZ	5,216
YVR-HKG	5,033	HKG-YVR	2,741
YVR-PVG	2,787	PVG-YVR	3,082
YVR-PEK		PEK-YVR	795
YVR-NRT	1,924	NRT-YVR	2,462
YVR-ICN	2,283	ICN-YVR	3,325

PACOTS UPRs

- **Eastbound PACOT UPRs are easier to deal with than Westbound UPRs.**
- **IATA desires to further expand the use of UPRs**
- **More analysis needs to occur to determine the impacts of removing PACOTS Track 2 as a dividing line.**
- **Want to study the IATA UPRs versus DOTS unseparated routes and traffic impacts.**

PTRO UPRS

- July 25, 2013
- One Operator reports 67,800 lbs. fuel burn savings after only a couple months.



PACOTS Track F UPR Trial

- Operational Trial began July 25, 2013, to allow Track F UPRs at least 50nm south of PACOTS Tracks C & E.
- Remain 50nm South of Track E and Normal UPR Guidelines.
- Guidelines published in KZAK NOTAM A3212/13 and Oakland Website.

Merging PACOTS Tracks C and E



Federal Aviation
Administration

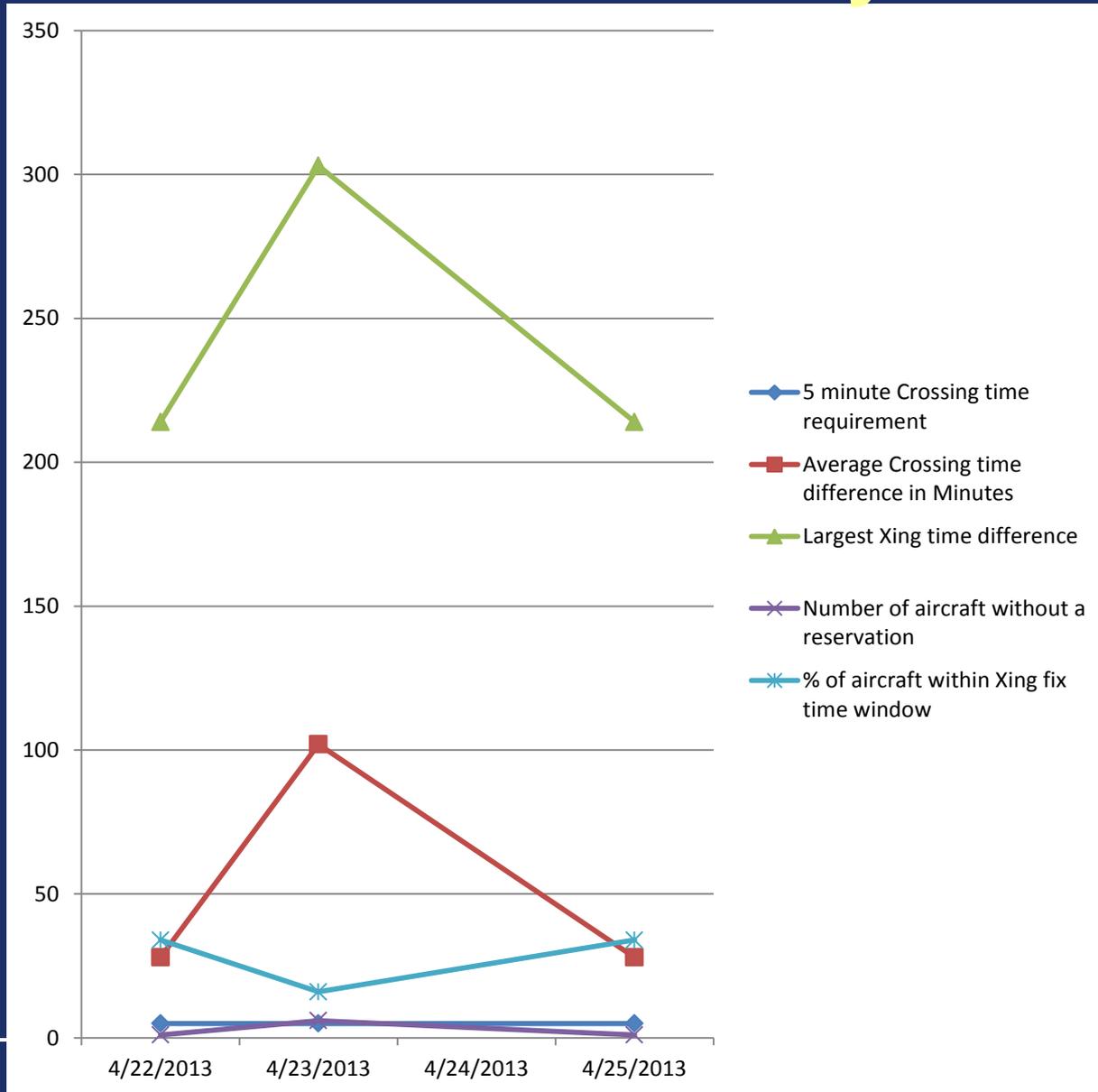
Operational Trial

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

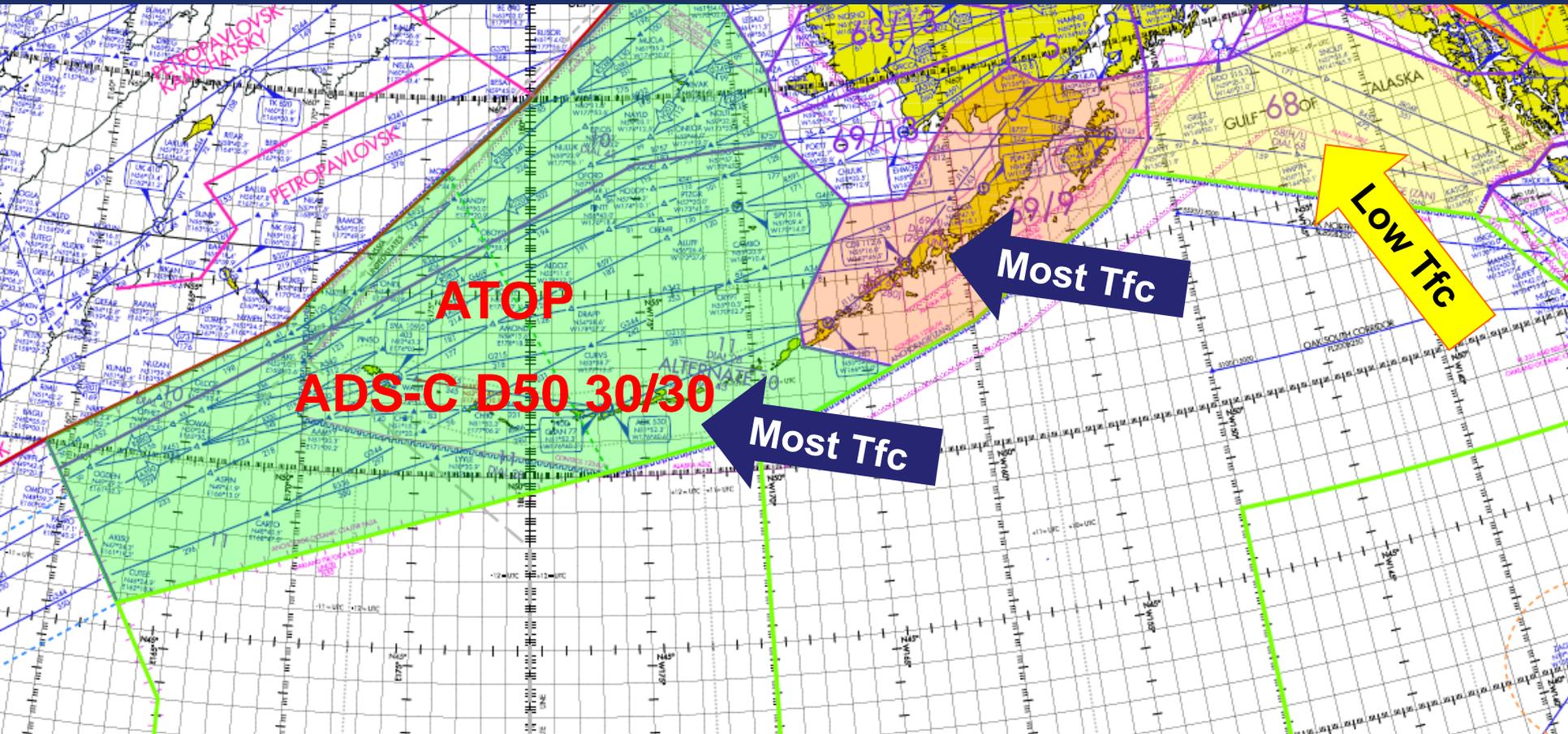
Merged Track C and E Operational Trial

- 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

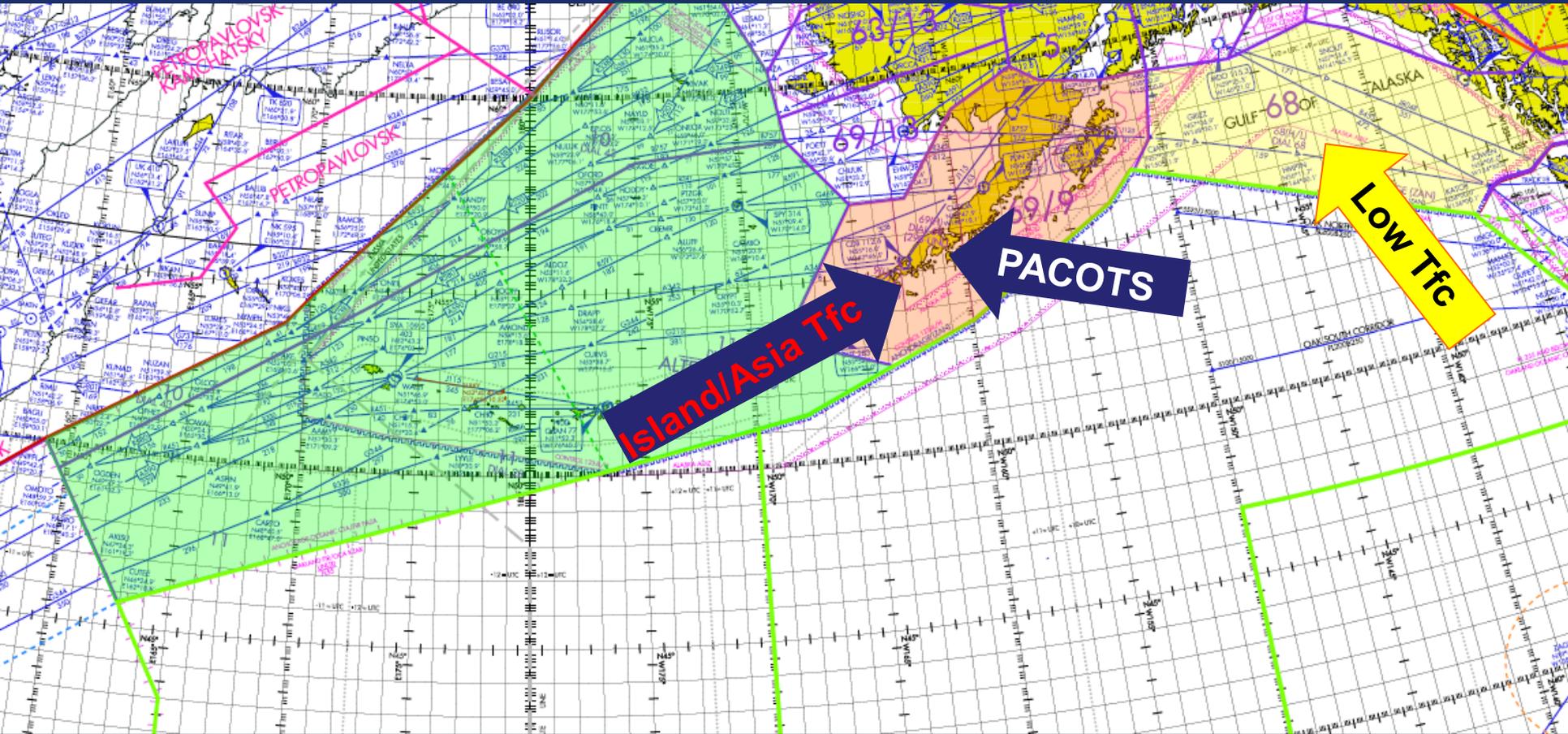


Anchorage ADS-C Distance Based Separation

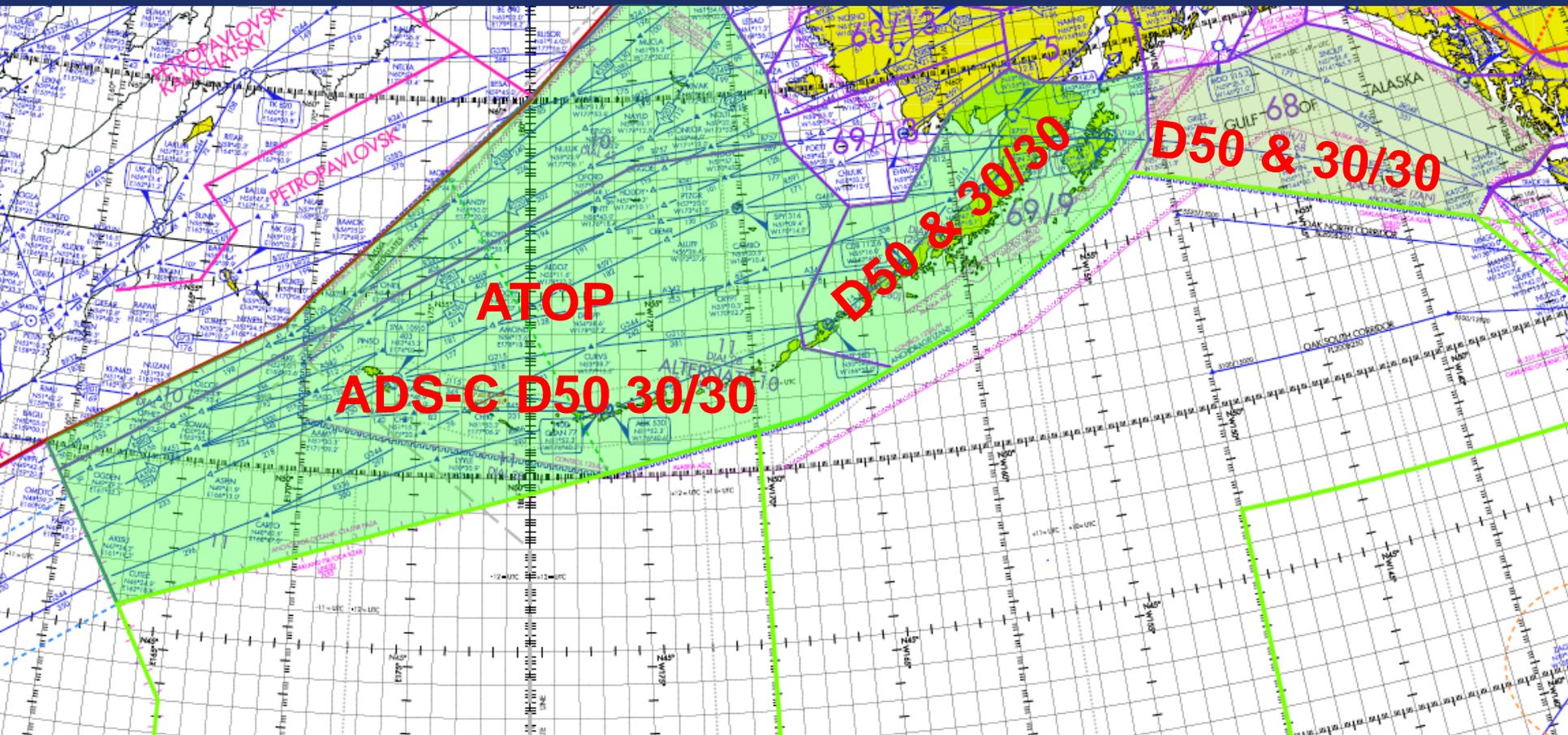


January 2014

Anchorage ADS-C Distance Based Separation



Anchorage ADS-C Distance Based Separation



February 19, 2014

Moving Forward C/E Trial

- **Operators must be better at meeting their Gateway Fix reservation times.**
- **Merging C/E requires the use of Non-Standard Altitudes.**
 - Not an issue for NOPAC
 - Mix of Aircraft types
 - Gateway time errors

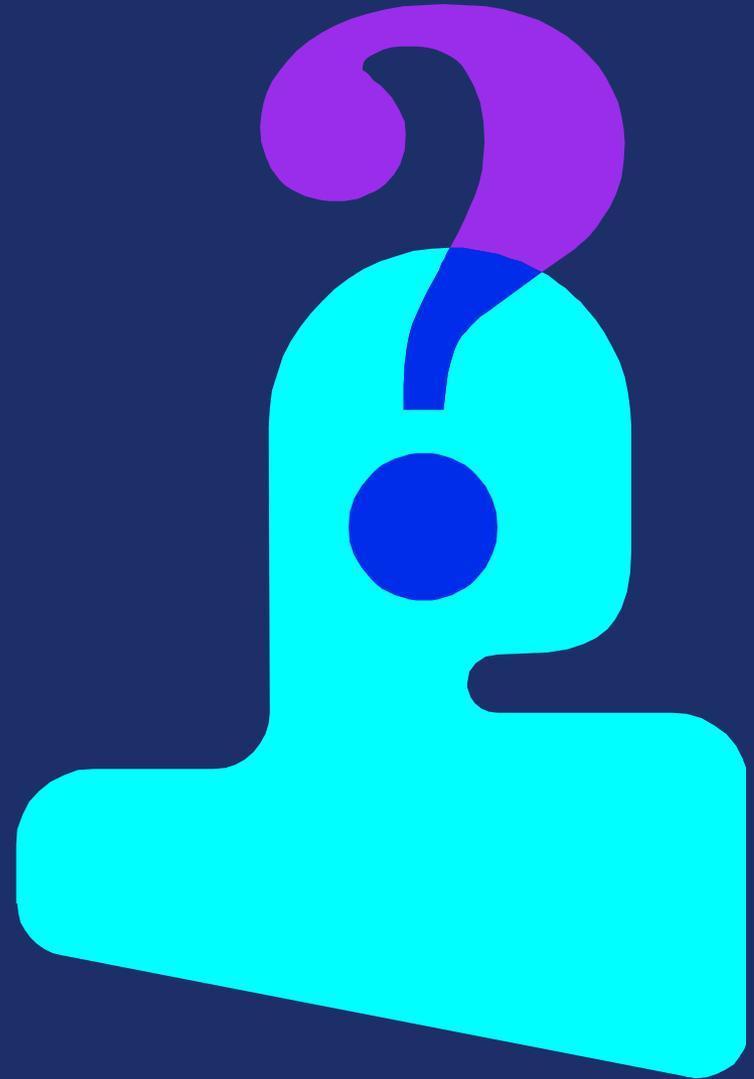
Moving Forward C/E Trial

- 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.

Moving Forward C/E Trial

- Tentative Resume Date November 2014

PACOTS TRACK DISCUSSION

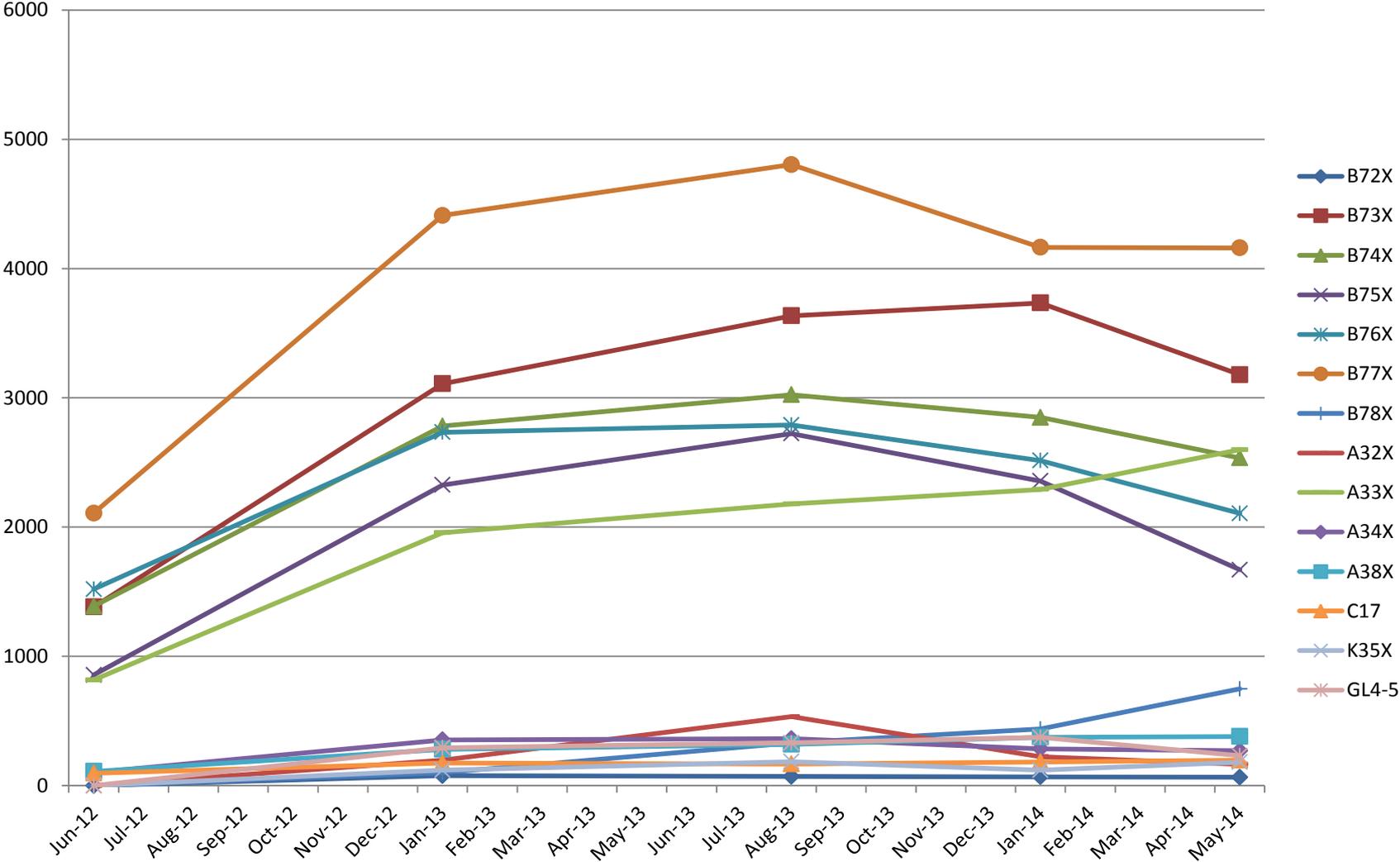


Oceanic Equipage and Separation Standards

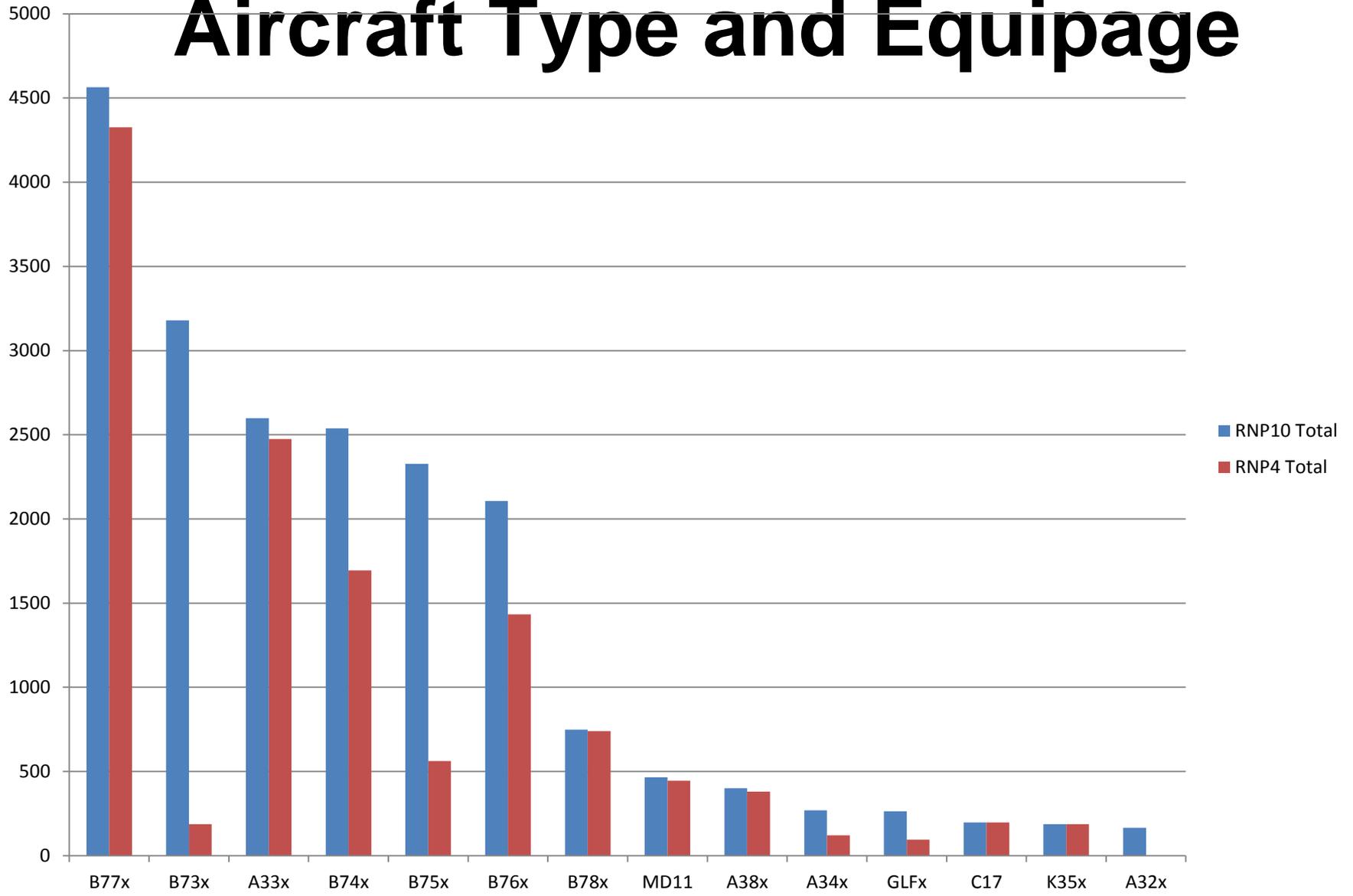


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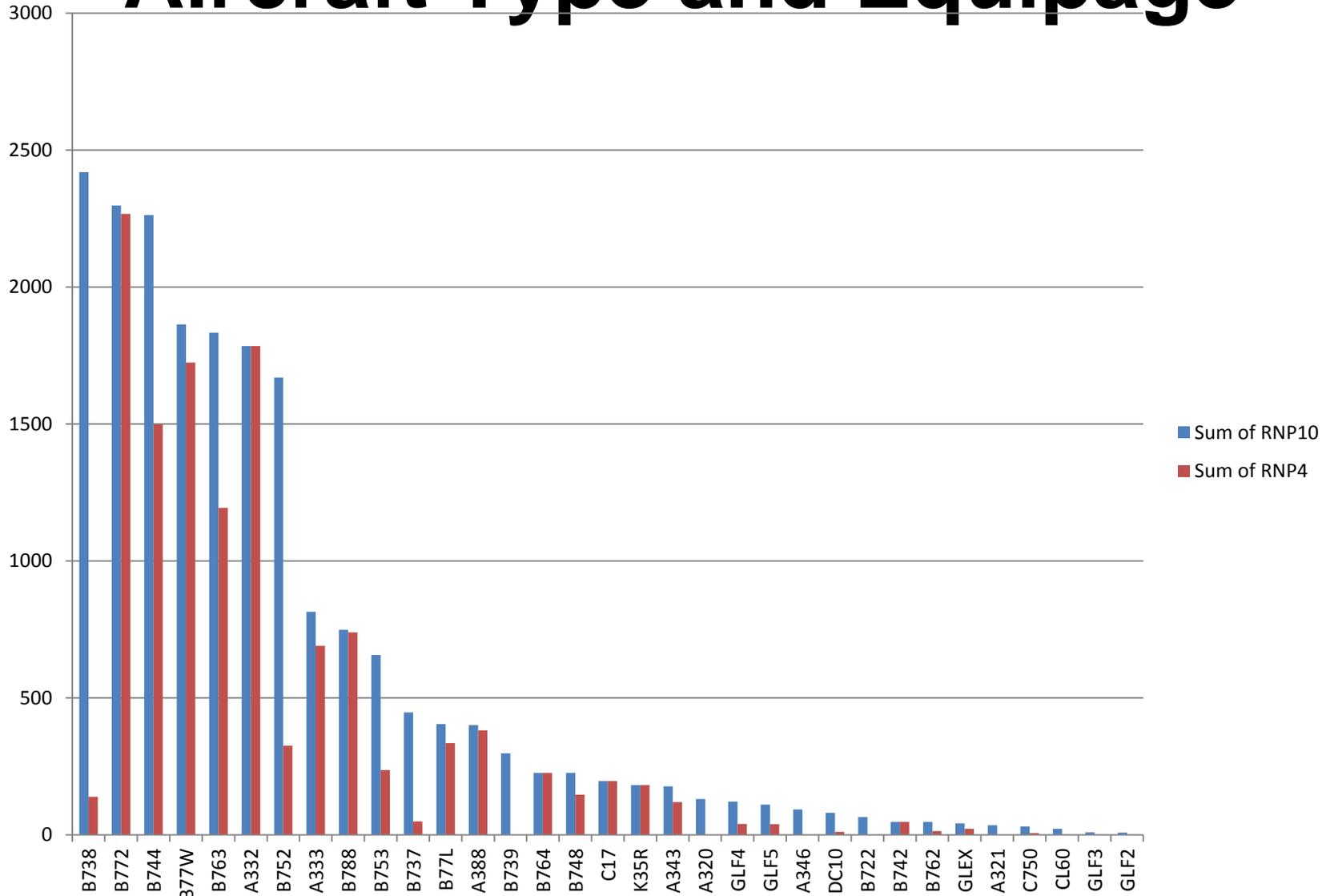
Aircraft Type



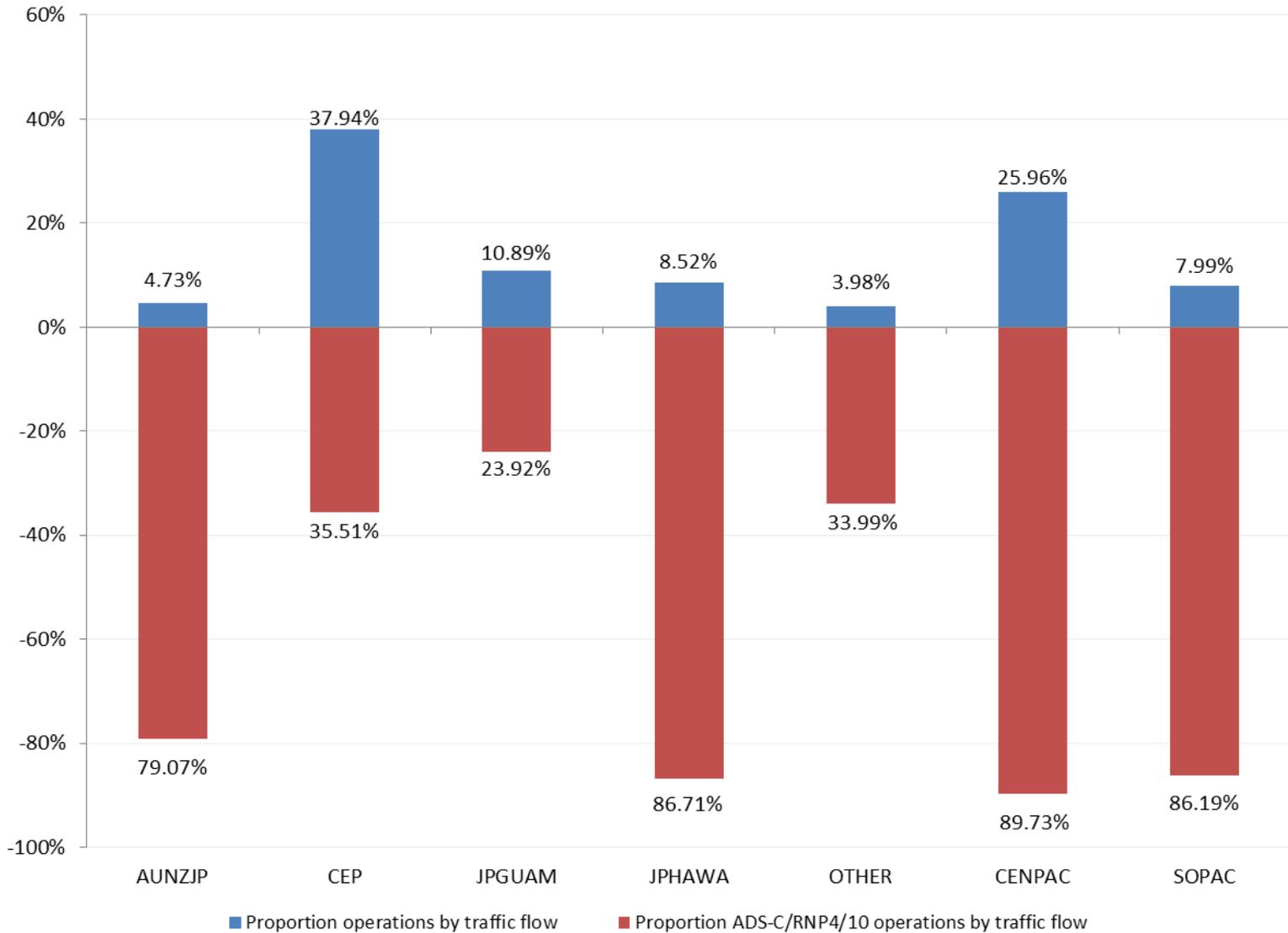
Aircraft Type and Equipage

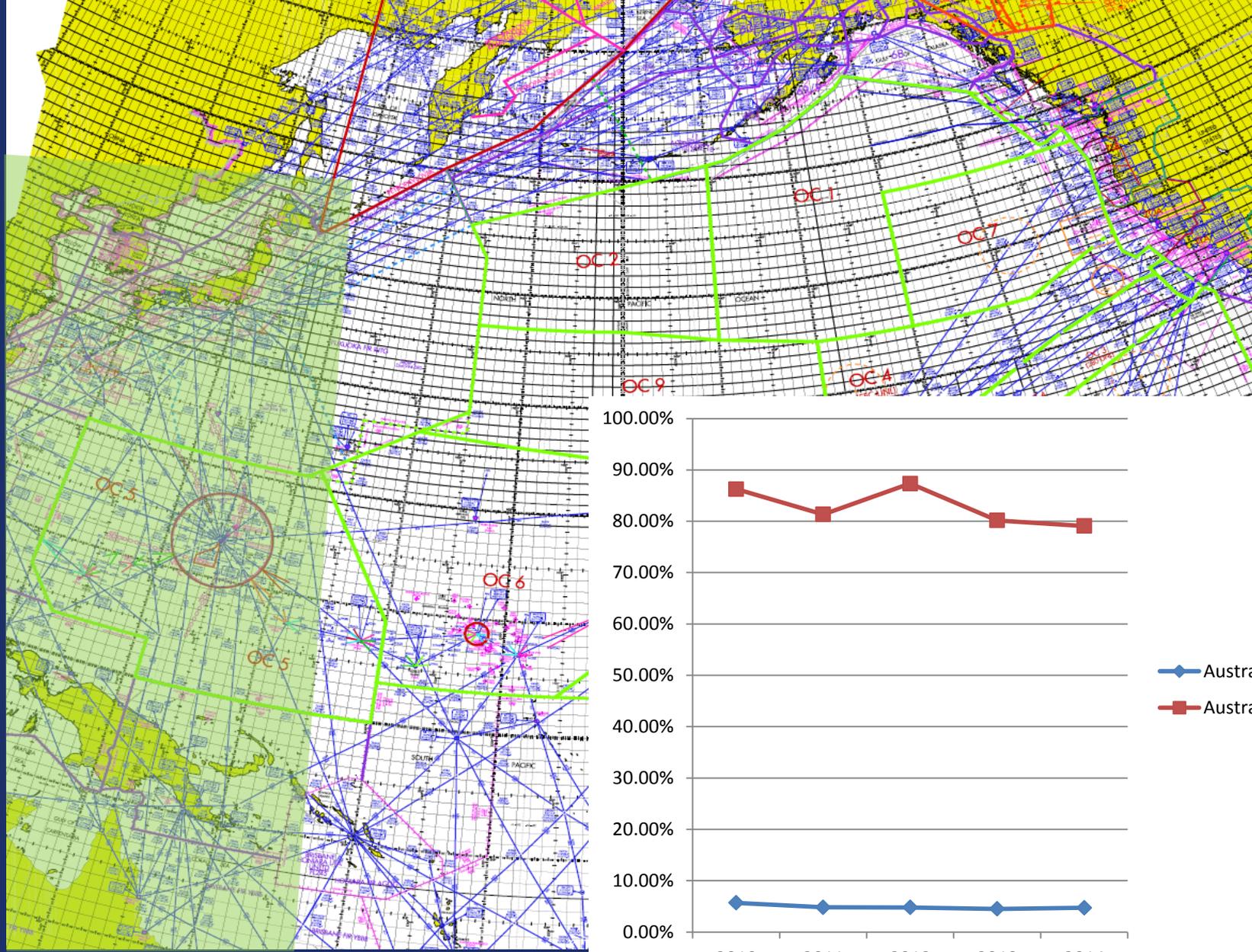


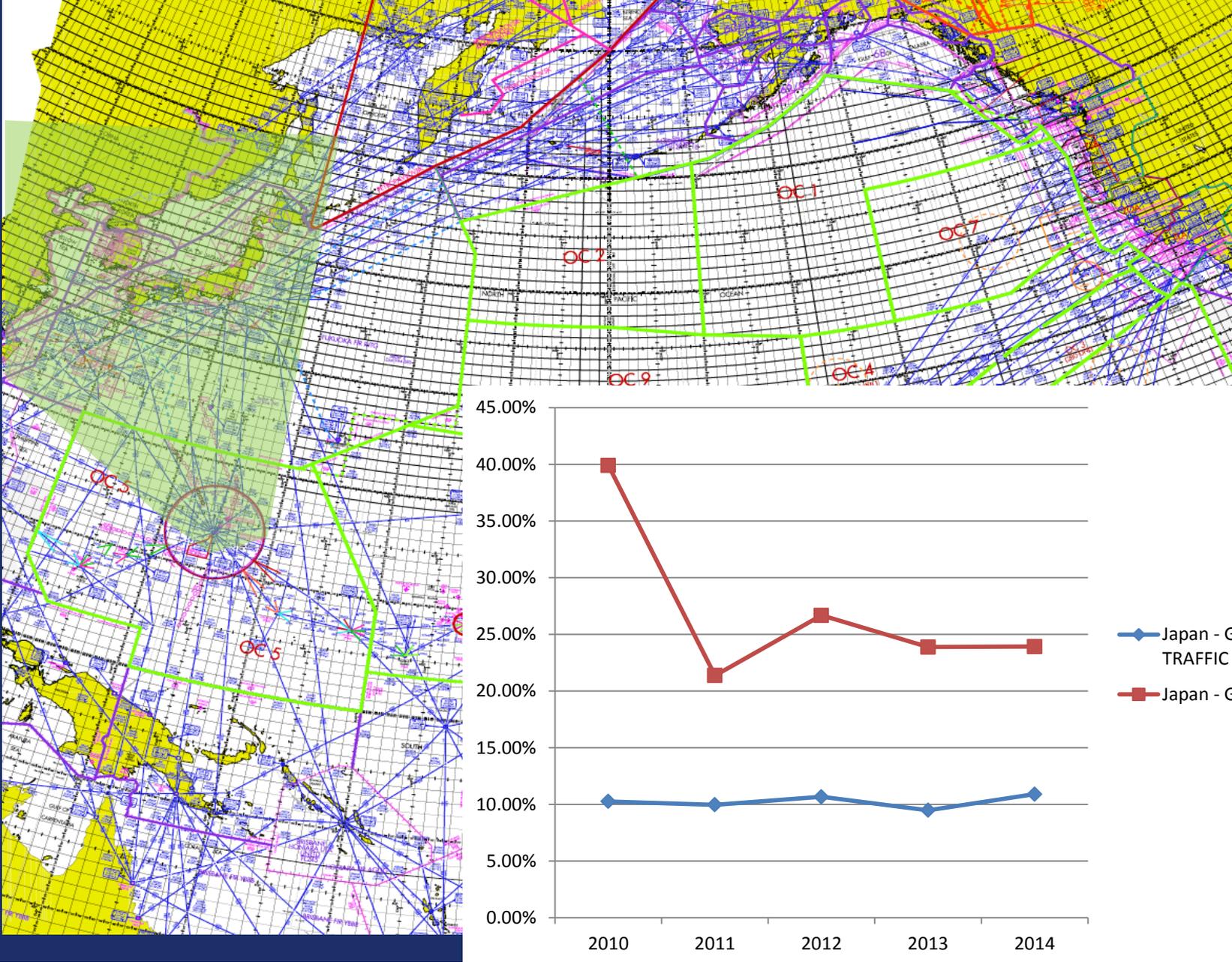
Aircraft Type and Equipage

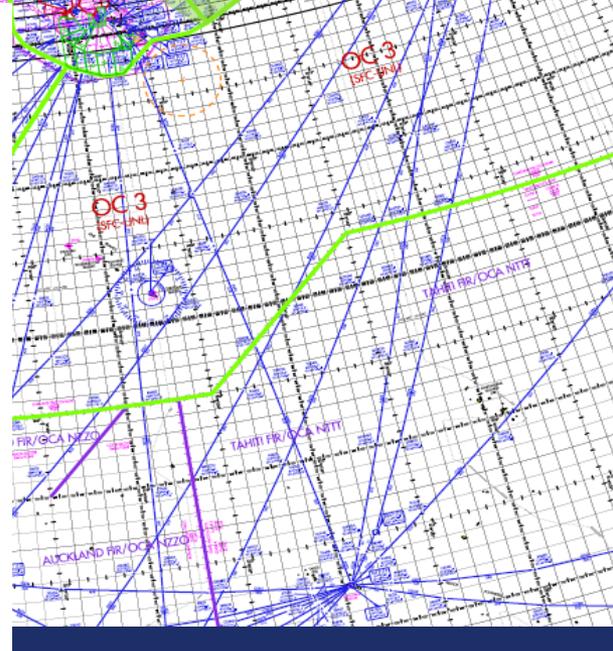
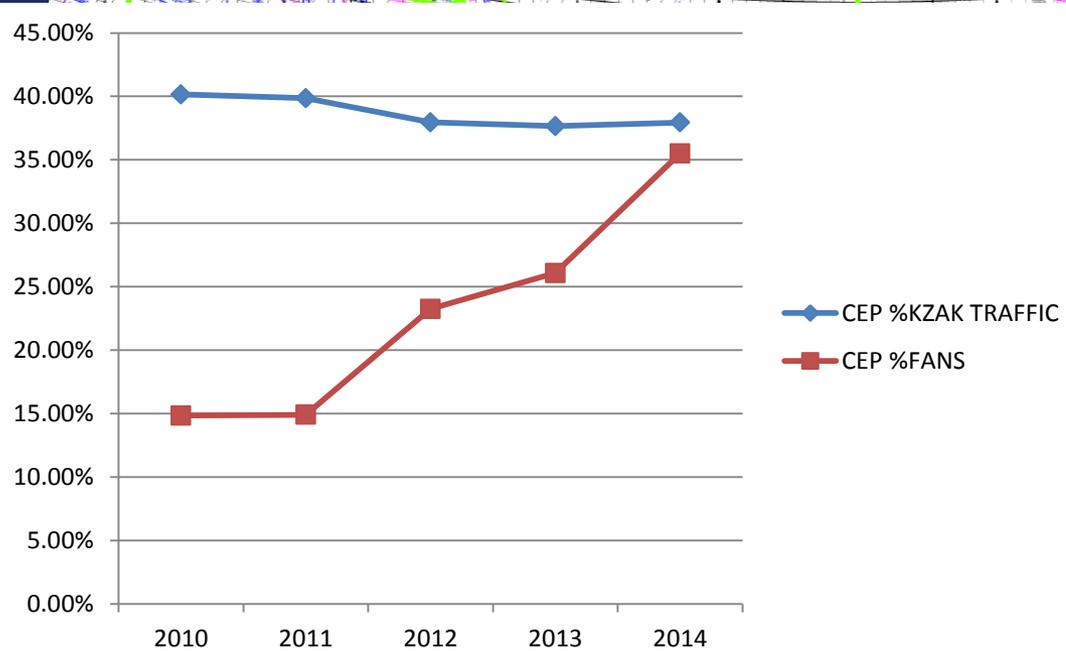
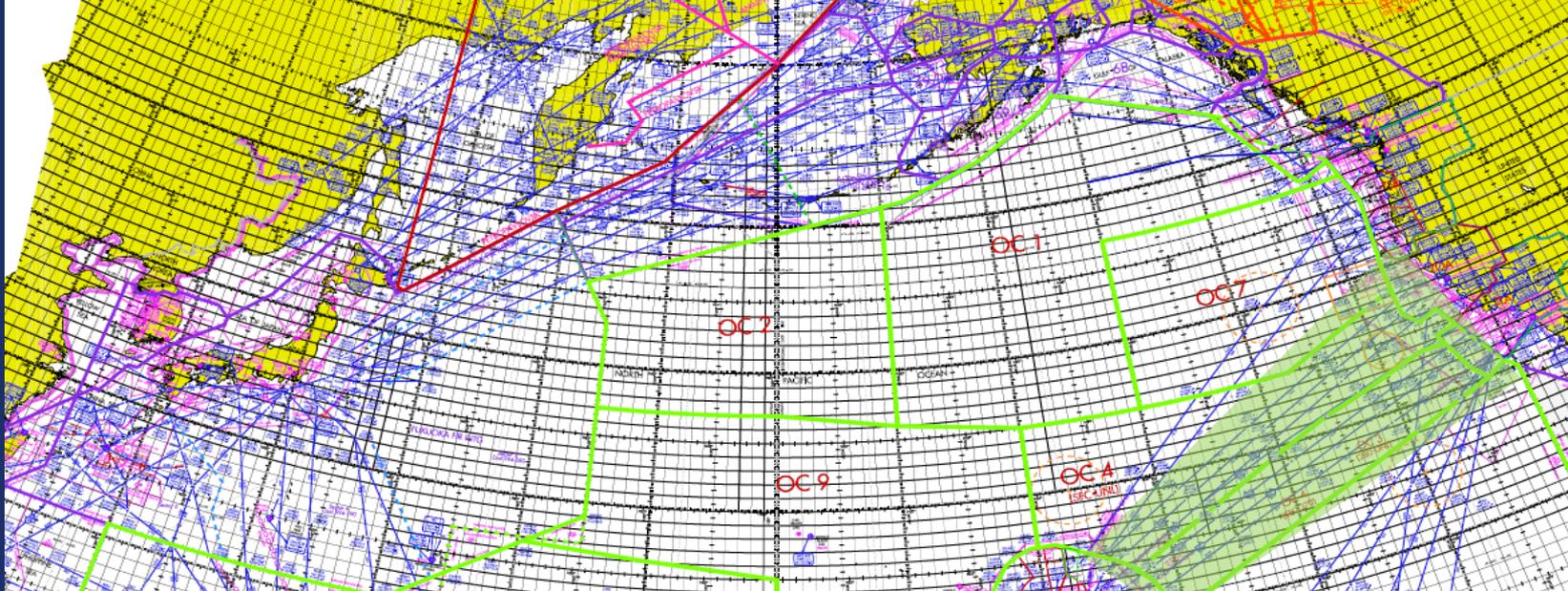


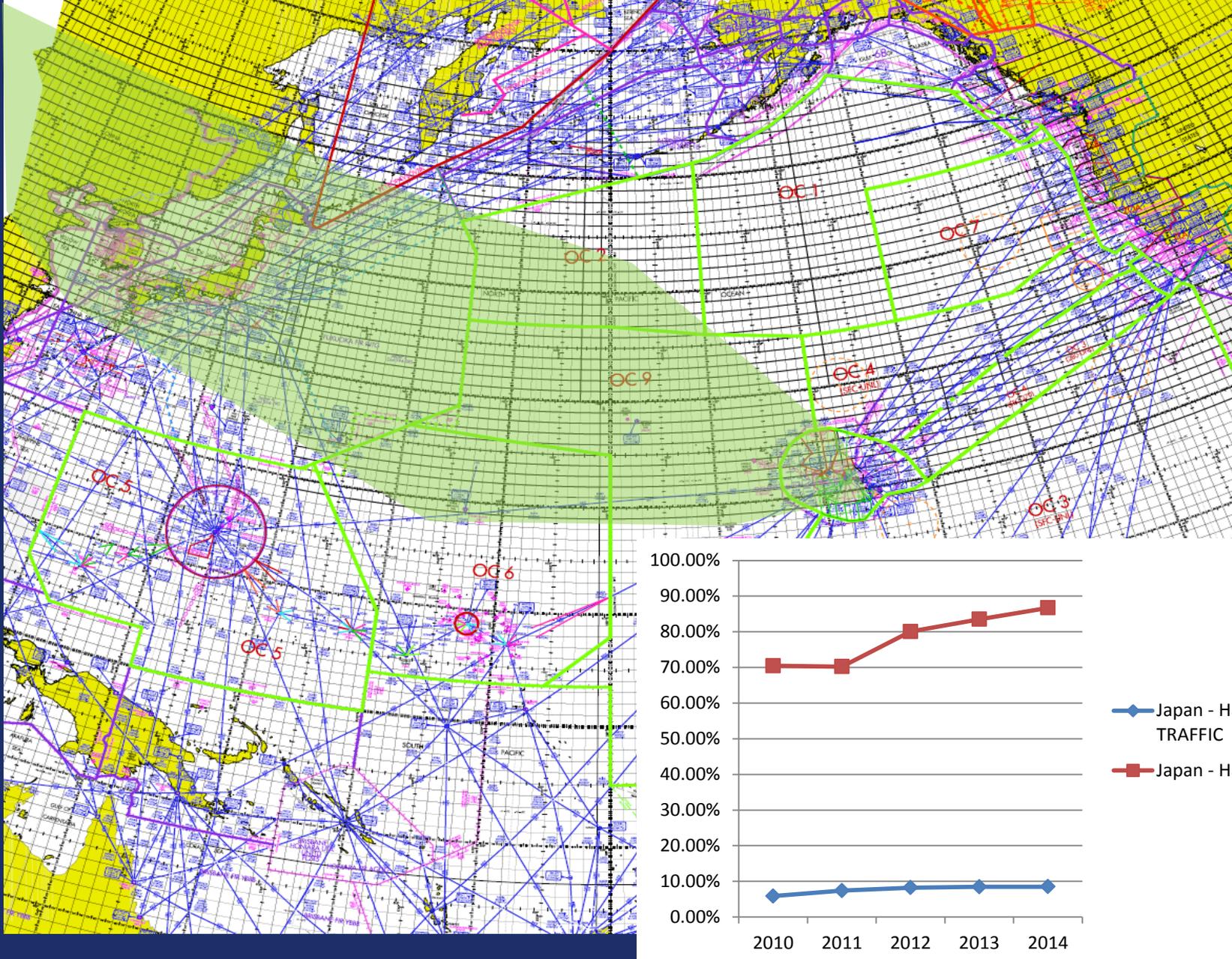
Proportion of Operations by Traffic Flow and ADS-C + RNP4/10 within Traffic Flow -
Jan/Feb/Mar/Apr 2014

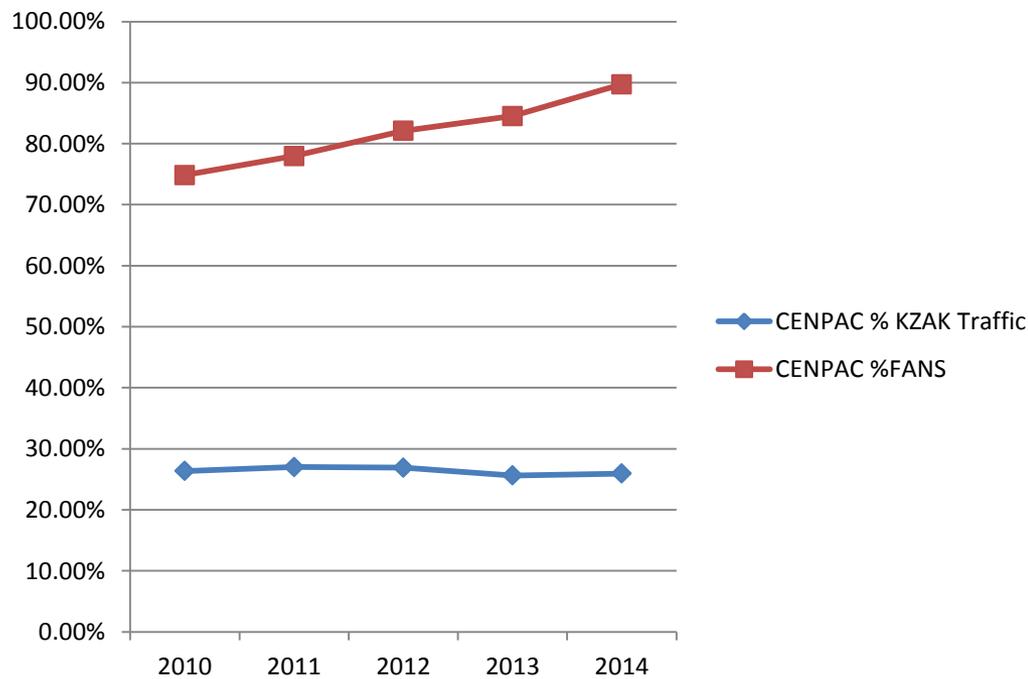
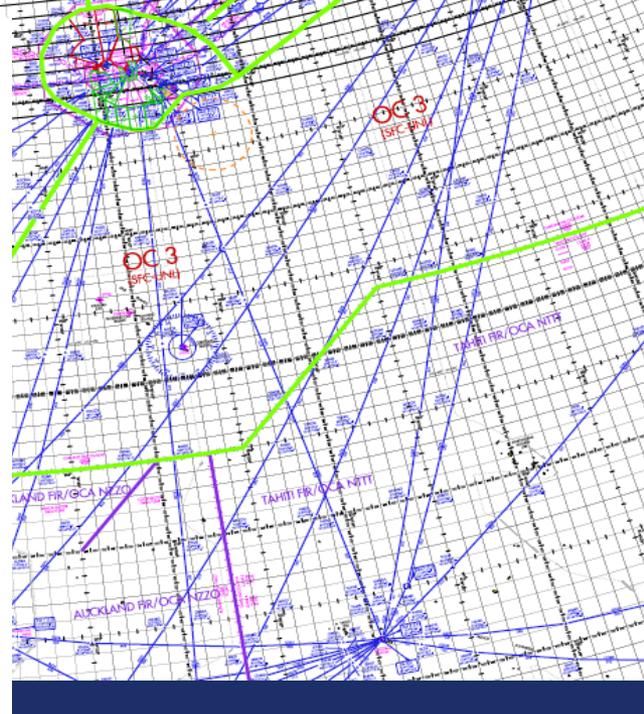
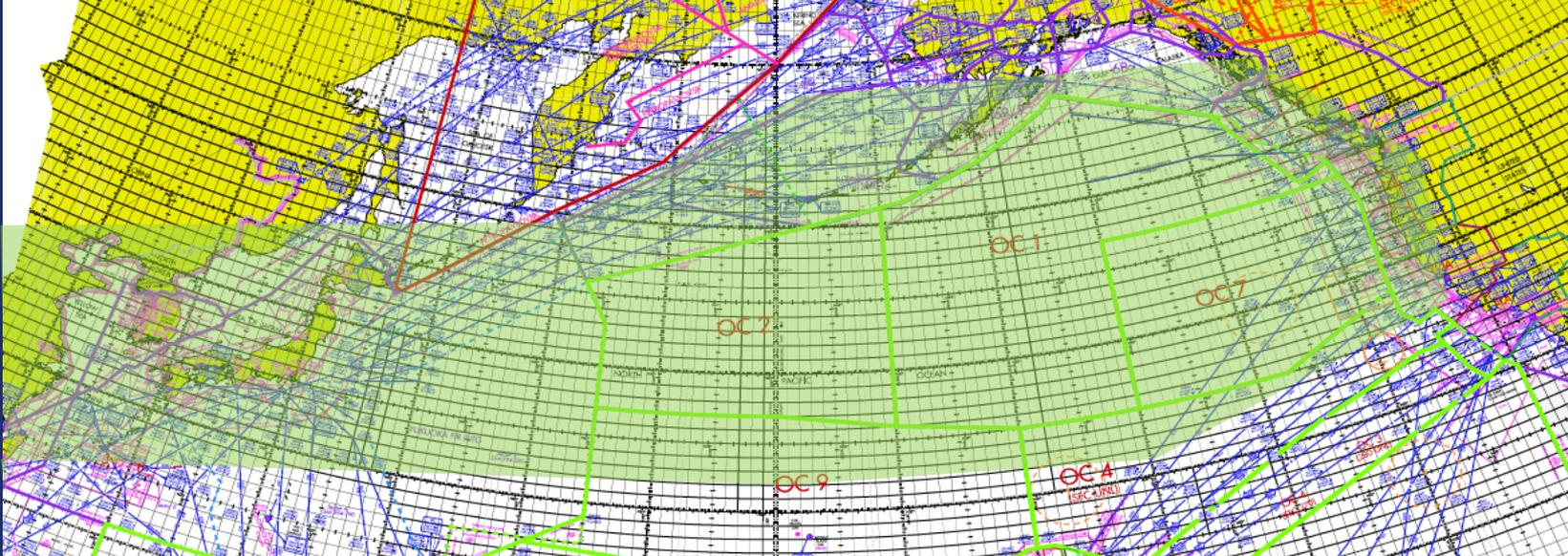


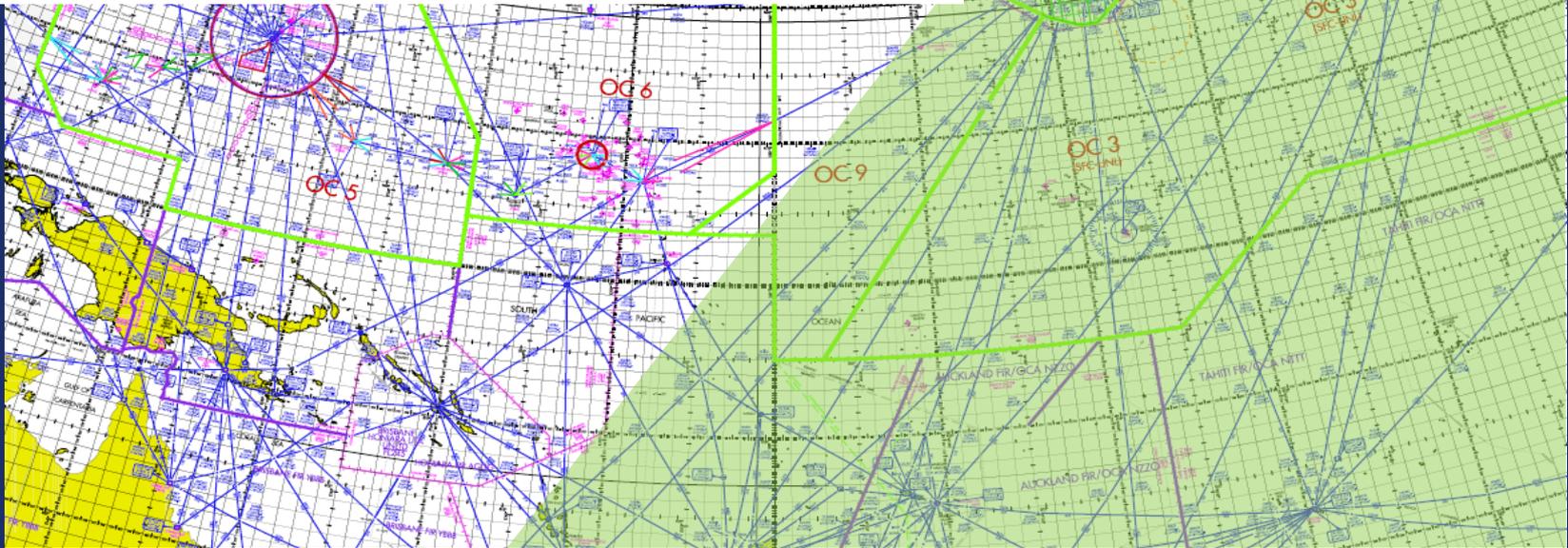
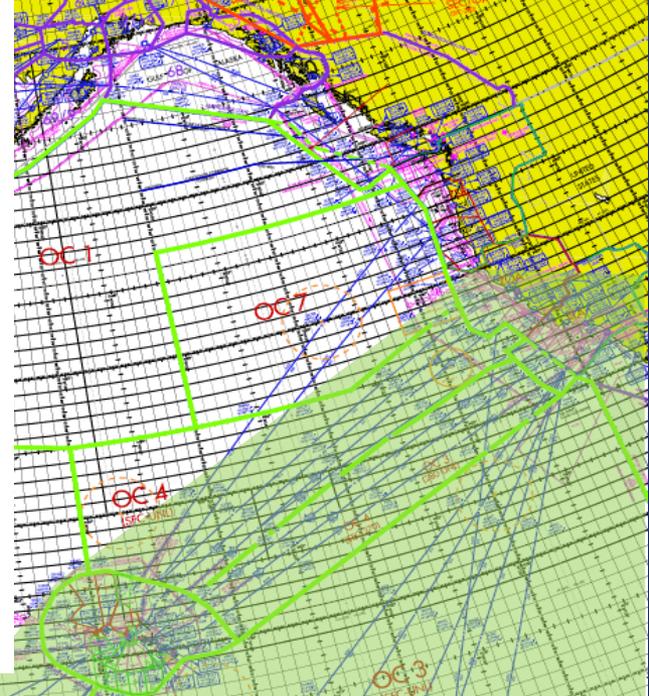
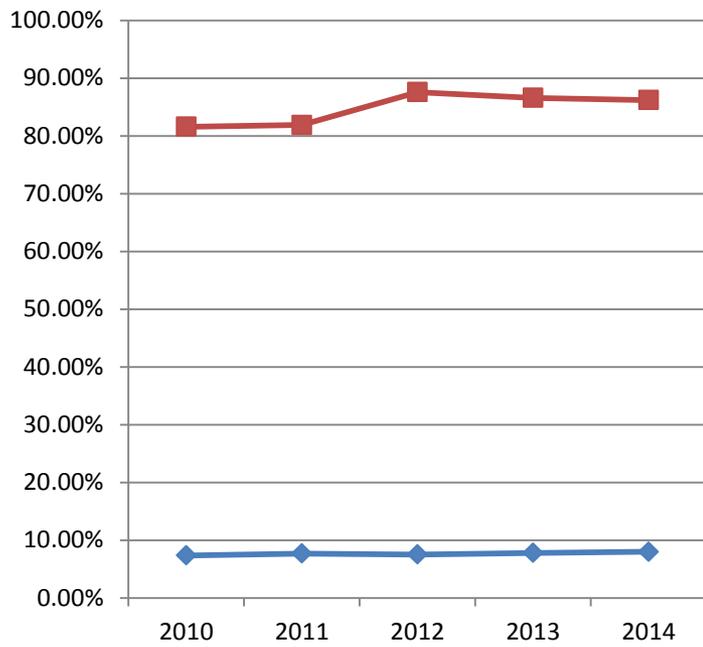




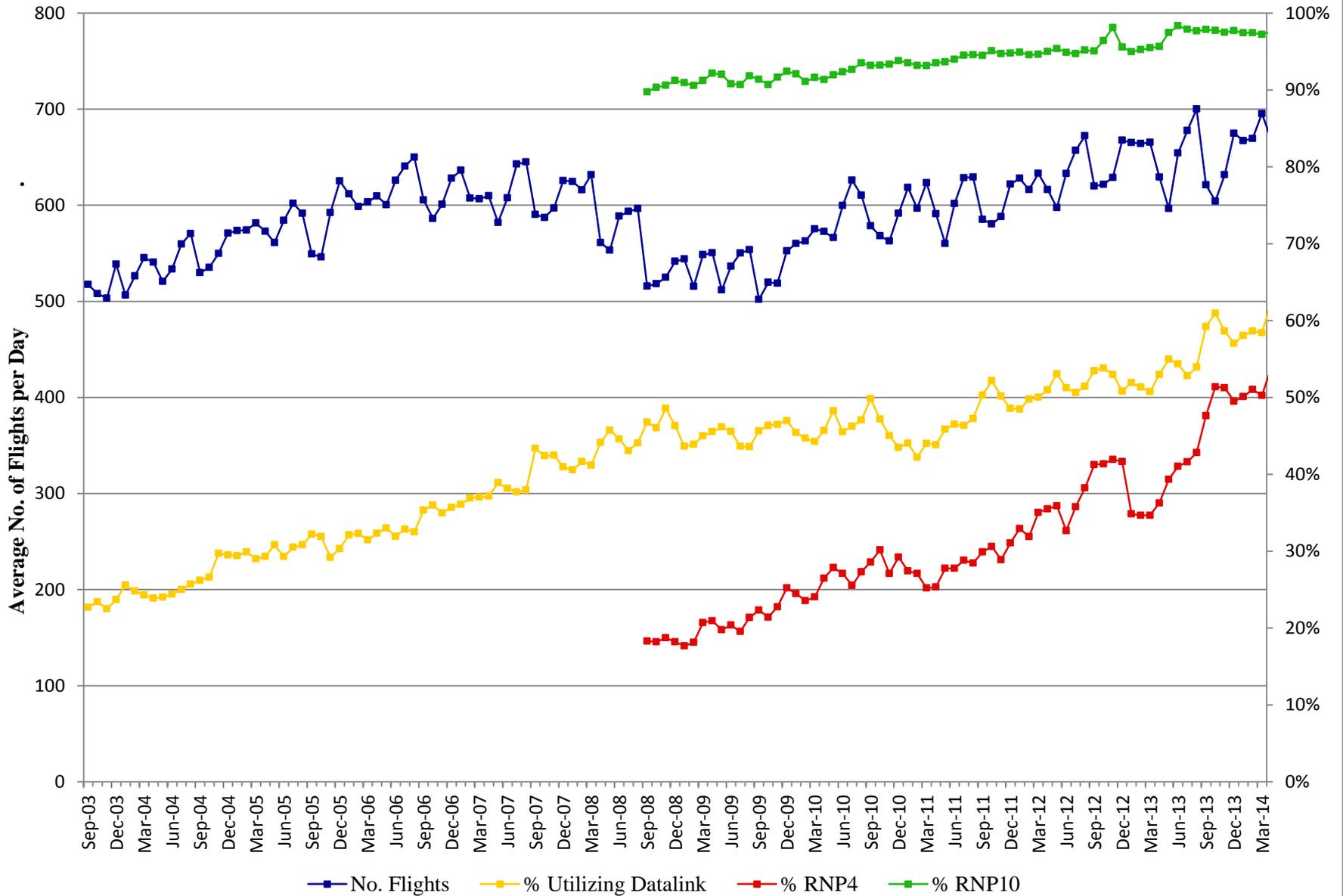


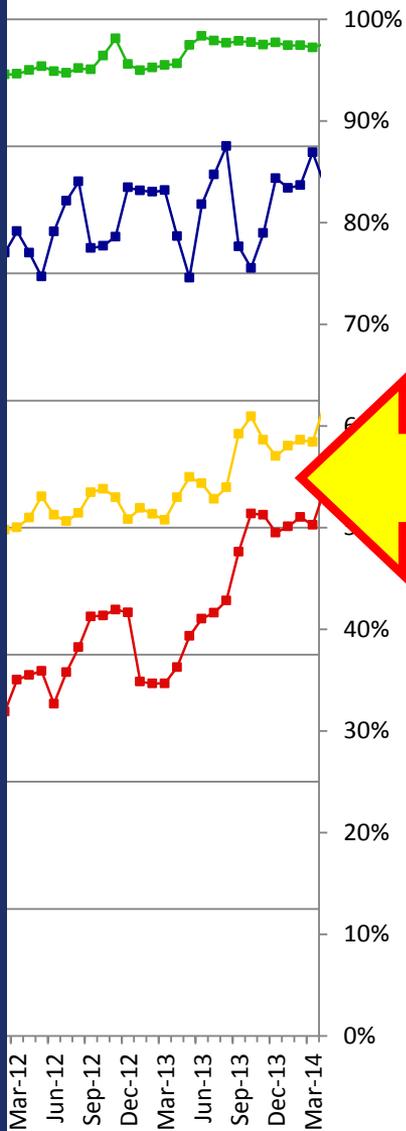






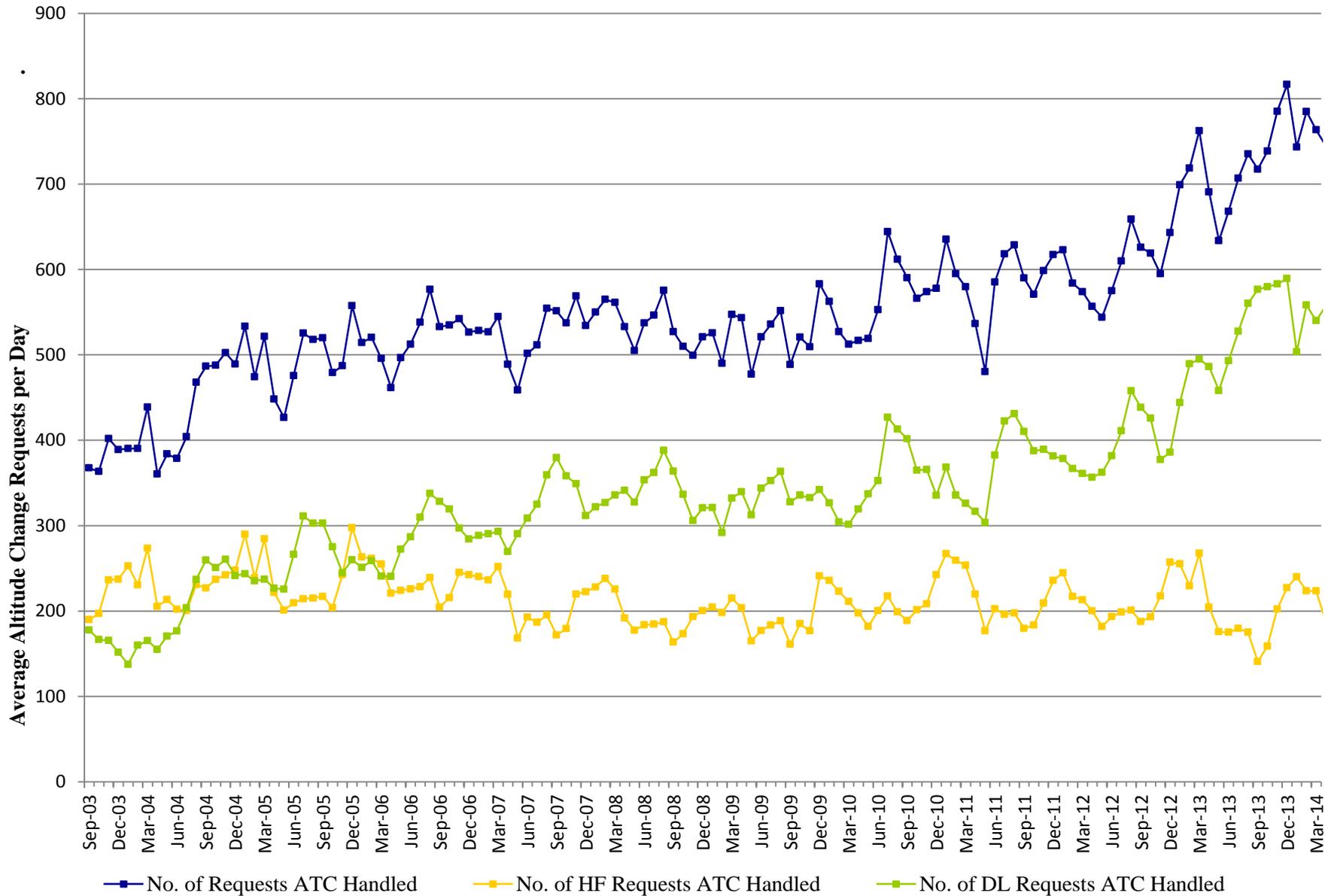
ZOA Flights & Equipment Utilization



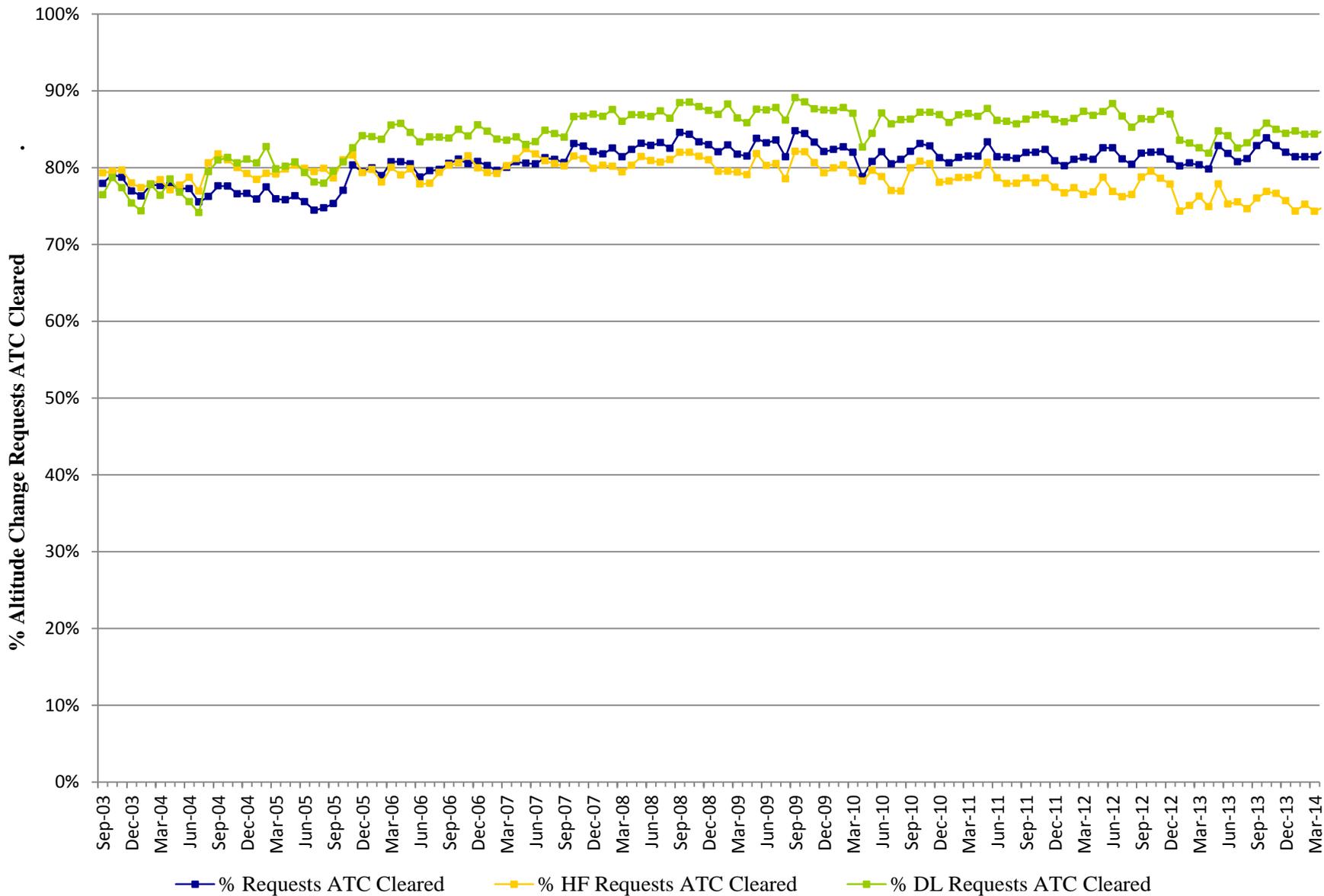


Filed NON_RNP4	
T/B744	"T" 28 Flights
P/B77W	"P" 227 Flights
P/B763	
P/B77L	
F/A333	"F" 268 Flights
F/B744	
??/B77L	??? 3 Flights
QQQ/B748	"QQQ" 51 Flights
QQQ/B744	
A/B752	"A" 26 flights

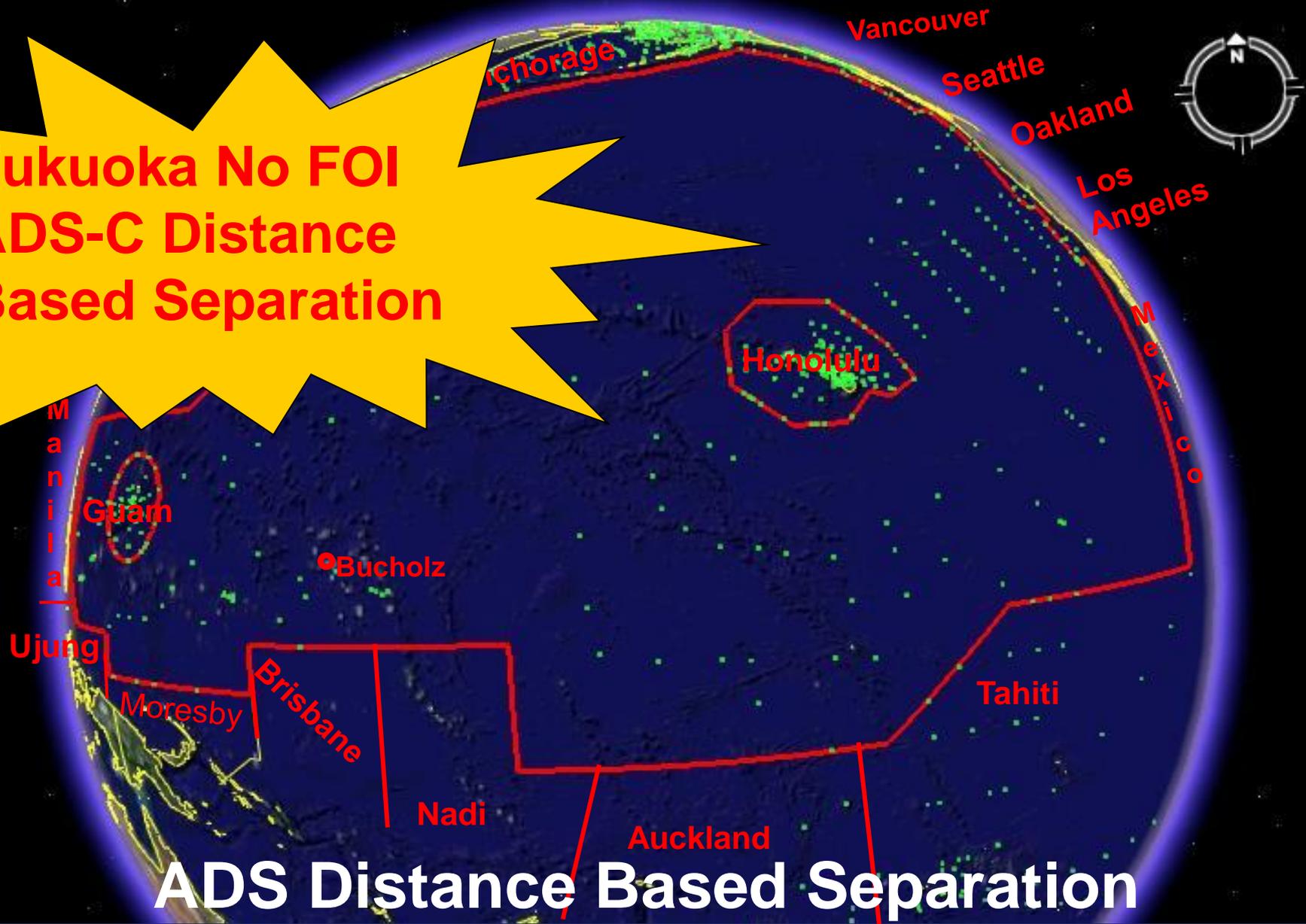
ZOA Altitude Change Requests ATC Handled



ZOA % Altitude Change Requests ATC Cleared



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

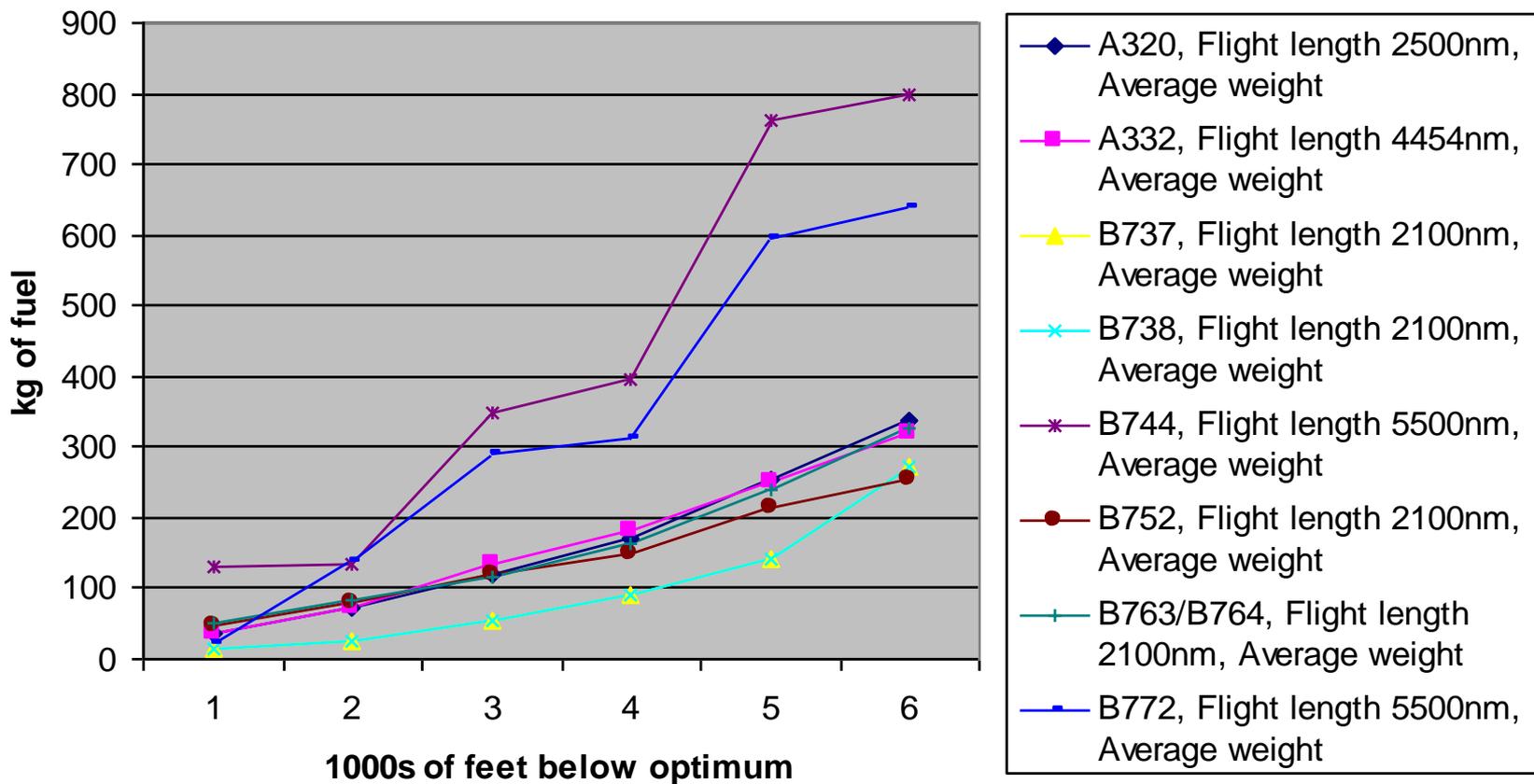
051M21

DAL836 3
& 340↑360
N522
r360

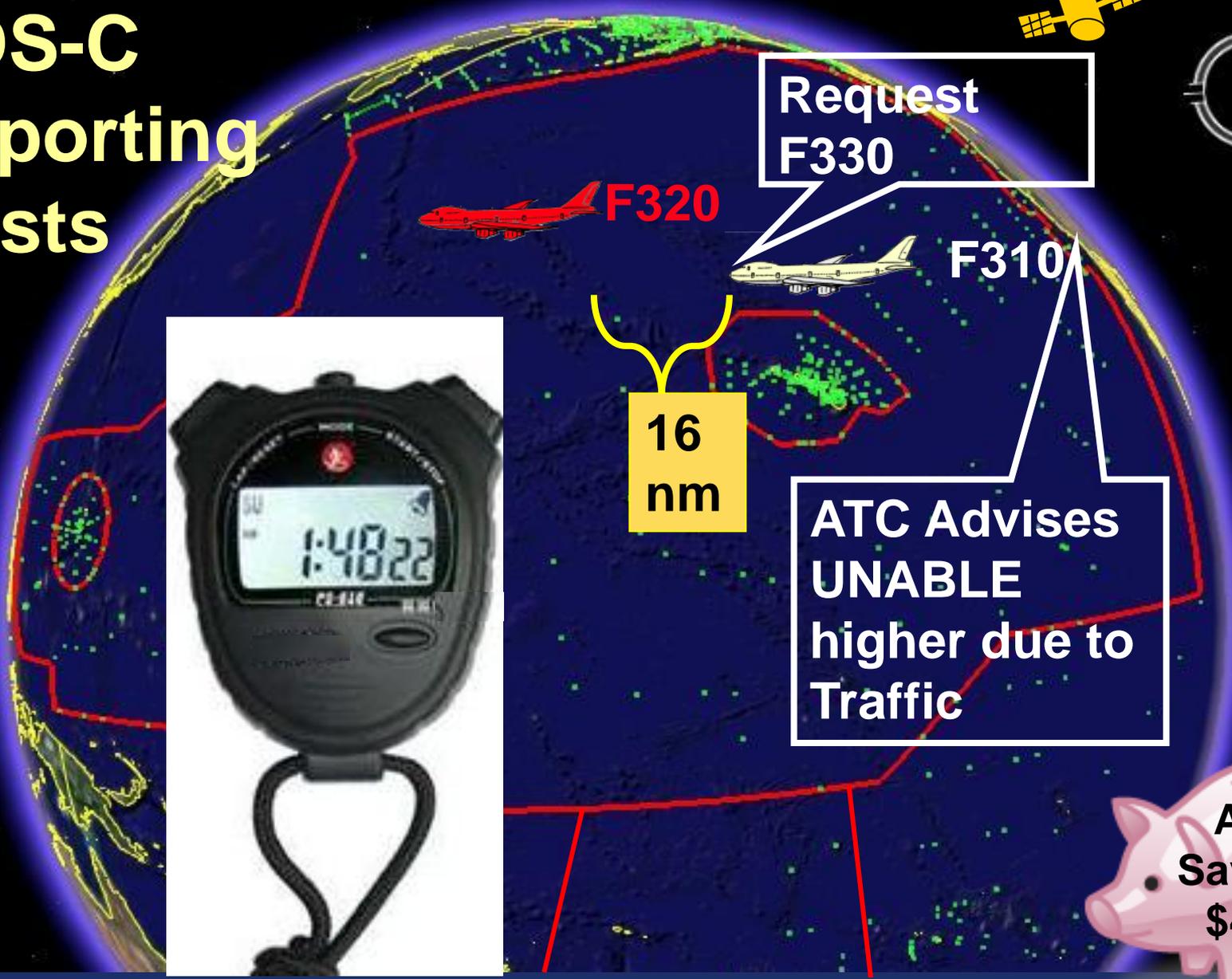
N17CX
410
N522

Impact of Denied Altitude Change Requests

Fuel Burn Below Optimum Altitude



ADS-C Reporting Costs



Request
F330

F320

F310

16
nm

ATC Advises
UNABLE
higher due to
Traffic

ADS
Savings
\$4.25





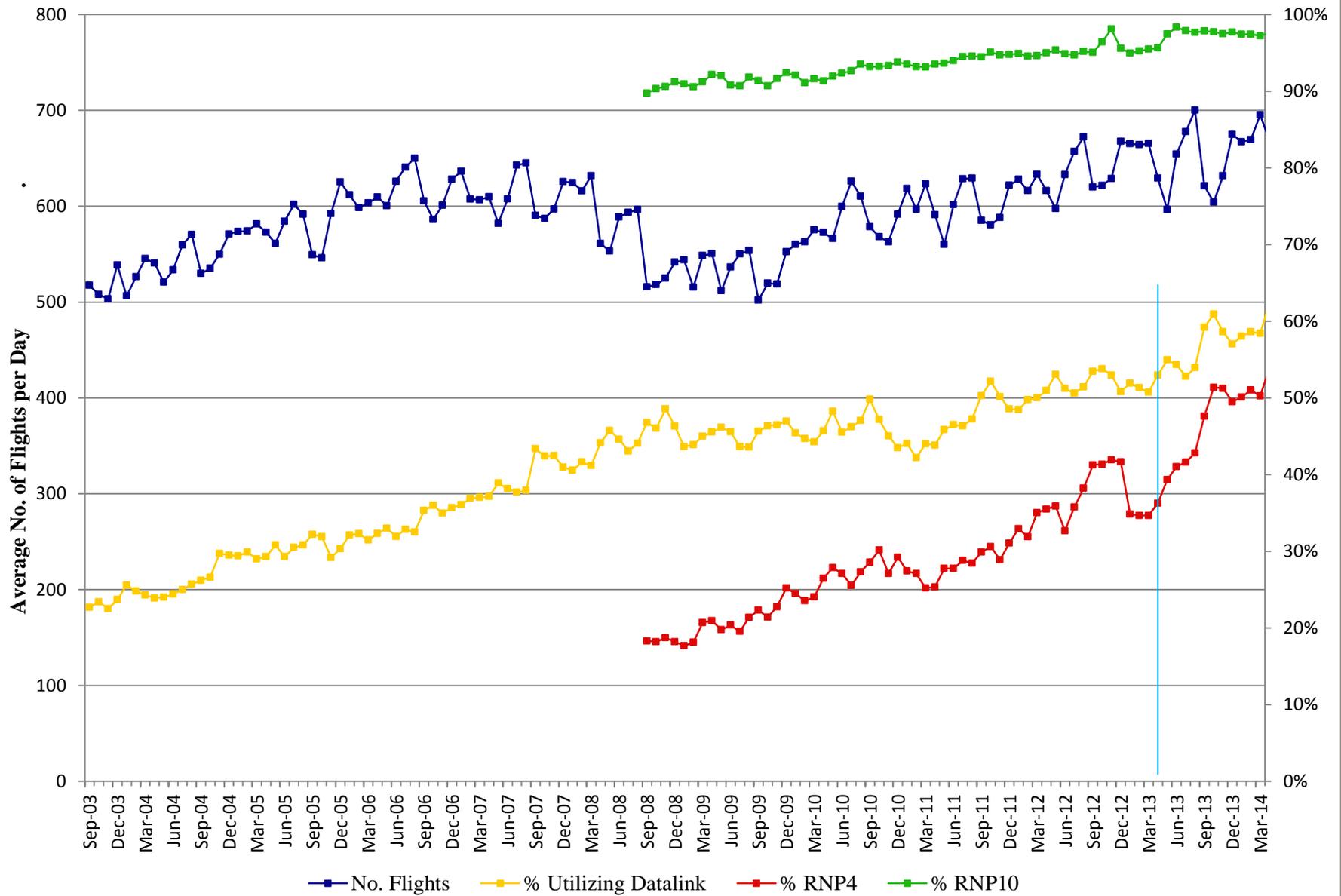
- ❖ **Data tracked for 15 days**
- ❖ **April 1-16, 2012 Extra fuel burn of 27,331kg (60,128) lbs due to lack of FANS and RNP4**
- ❖ **Sept 10-24, 2012 Extra fuel burn of 28,829kg (63,423 lbs) due to lack of FANS and RNP4**
- ❖ **Jan 6-21, 2013 Extra fuel burn of 28,858kg (63,487 lbs) due to lack of FANS and RNP4**
- ❖ **Extrapolated over a 1 year time period, an annual extra fuel burn of 702,211kg (1,544,850 lbs)**
- ❖ **Extra 4.9 million lbs of CO2 emissions**

Lack of RNP4 extra fuel burn



- ❖ Data tracked for 15 days (Sept 1-16, 2013)
- ❖ Non RNP4 Aircraft Extra fuel burn of 21,310 kg kilograms (46,882 lbs) due to lack of FANS and RNP4
- ❖ RNP4 aircraft Extra fuel burn of 13,534 kilograms (kg) (29,744 lbs) due to lack of FANS and RNP4
- ❖ Total Extra Fuel Burn of 34,844 kilograms (kg)
- ❖ Extrapolated over a 1 year time period, an annual extra fuel burn of 847,754 kg (1,865,059 lbs)
- ❖ Extra 2.6 million kg of CO2 emissions

ZOA Flights & Equipment Utilization



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

Guam
D50, 30/30

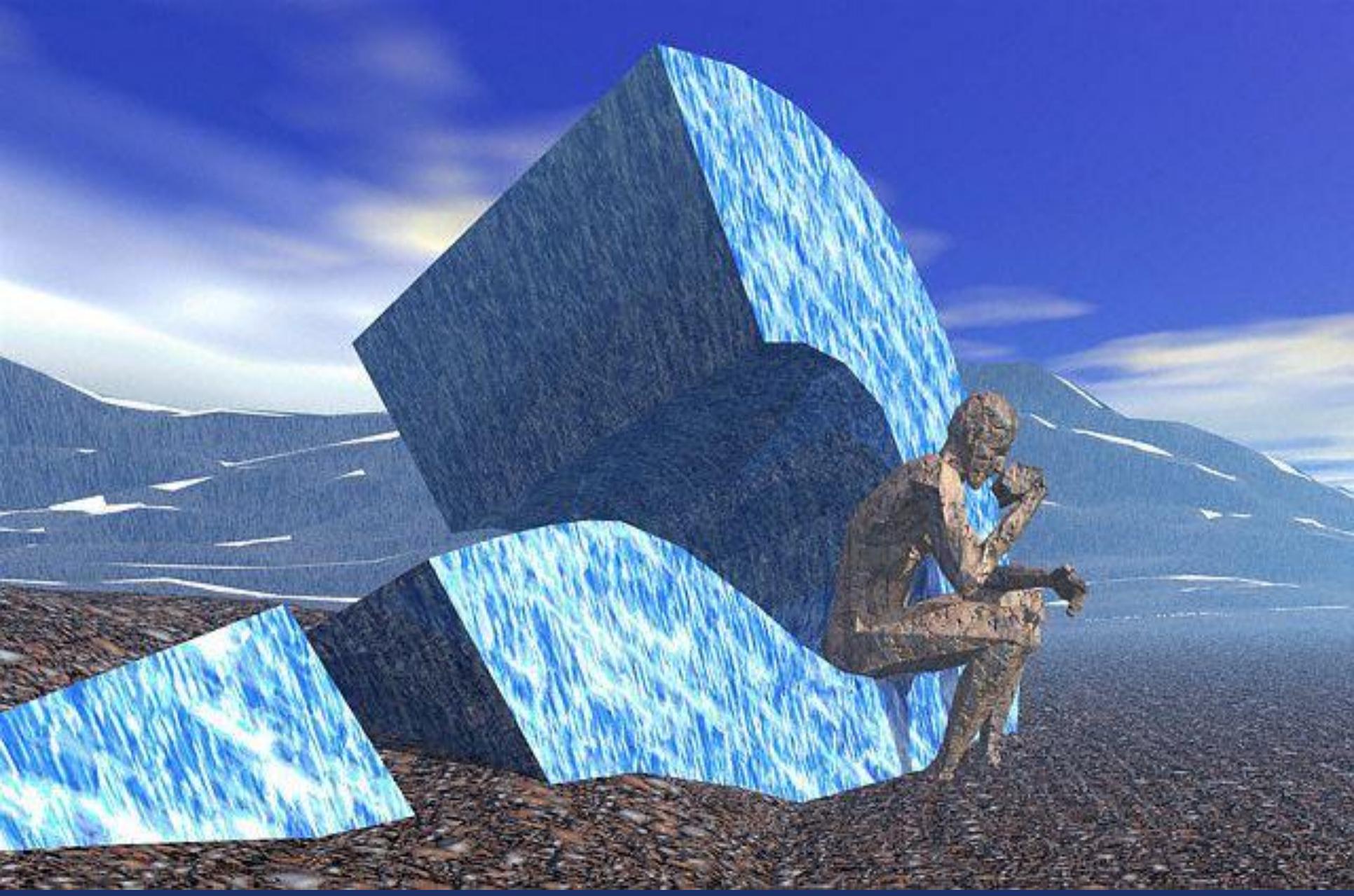
Brisbane

Nadi

Auckland

Auckland
D50, 30/30

ADS Distance Based Separation



Flight Planned Mach Speeds



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Mach Speed Variation

- **Aircrews predominantly do not monitor their flown speed versus the flight planned speed.**
- **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.**

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

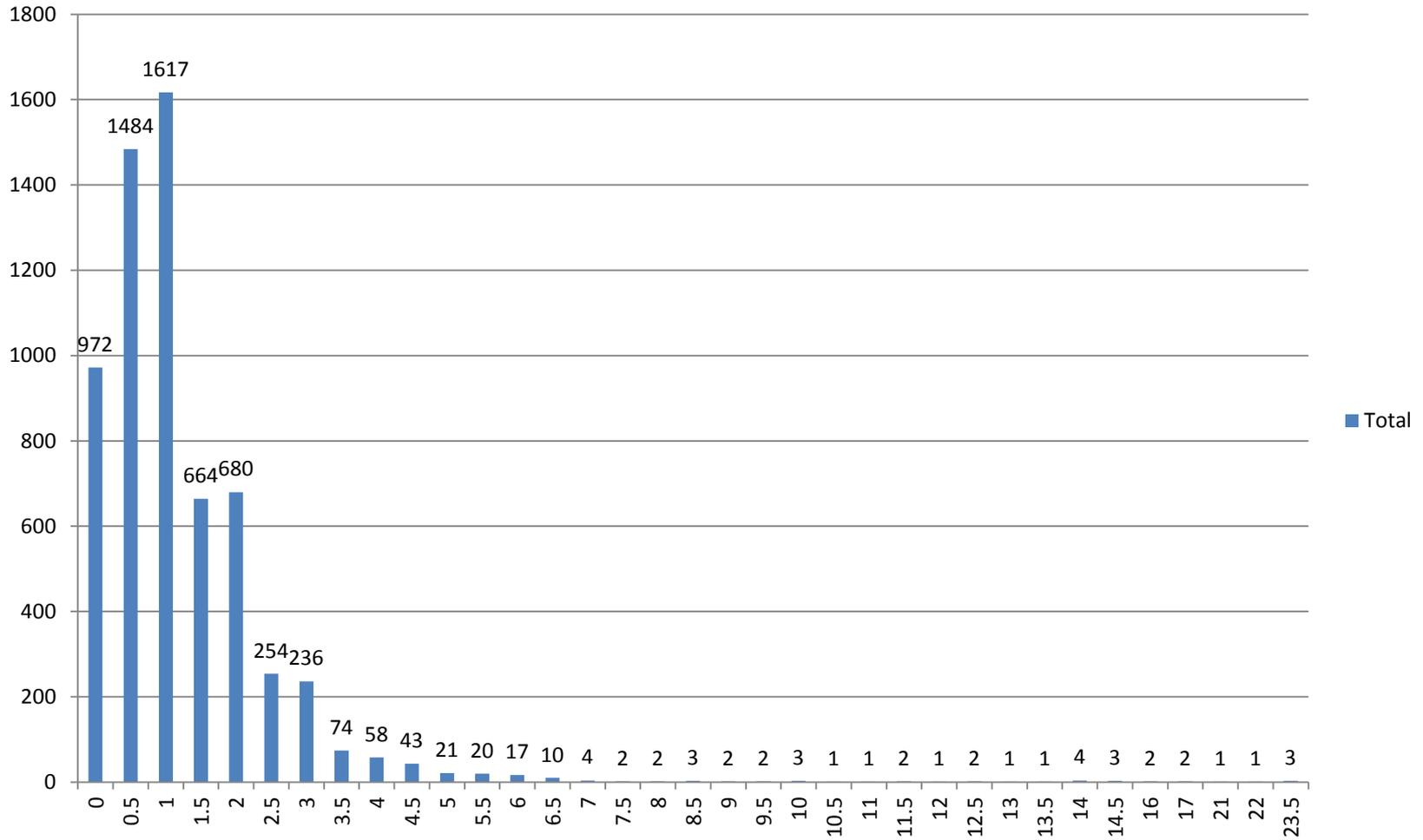
- **3.6.2.2 Inadvertent changes.** *In the event that a controlled flight inadvertently deviates from its current flight plan, the following action shall be taken:*
- **a) Deviation from track:** *if the aircraft is off track, action shall be taken forthwith to adjust the heading of the aircraft to regain 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

- **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

Mach Speed Variation



Flight Planned Speed Changes

- (FPL-XXXX-IS
- -B744/H-SDE3FGHIJ3J5M1RWXY/LB2D1
- -RJAA1025
- -M073F290 DCT CUPID Y808 ALLEN/M072F290 Y812 SCORE OTR11
LEPKI DCT 37N160E/M071F290 DCT 35N170E/M084F390 DCT
32N180E DCT 27N170W DCT CANON V15 LILIA/M083F390 DCT
KLANI KLANI2
- -PHNL0633 PHJR
- -PBN/A1L1B1C1D1O1S2 DOF/140508 REG/XXXXX EET/KZAK0227
- PHZH0542 SEL/FGJP CODE/XXXX RVR/75 OPR/XXX PER/D
RALT/RJCK PMDY RMK/TCAS)

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

- In the Pacific many FIRs are applying 30nm longitudinal separation standard using an ADS-C reporting rate of 14 minutes. A 48 knot speed change by 1 aircraft could result in an 11nm closure between two aircraft between ADS-C reports.

Australia AIP Amendment

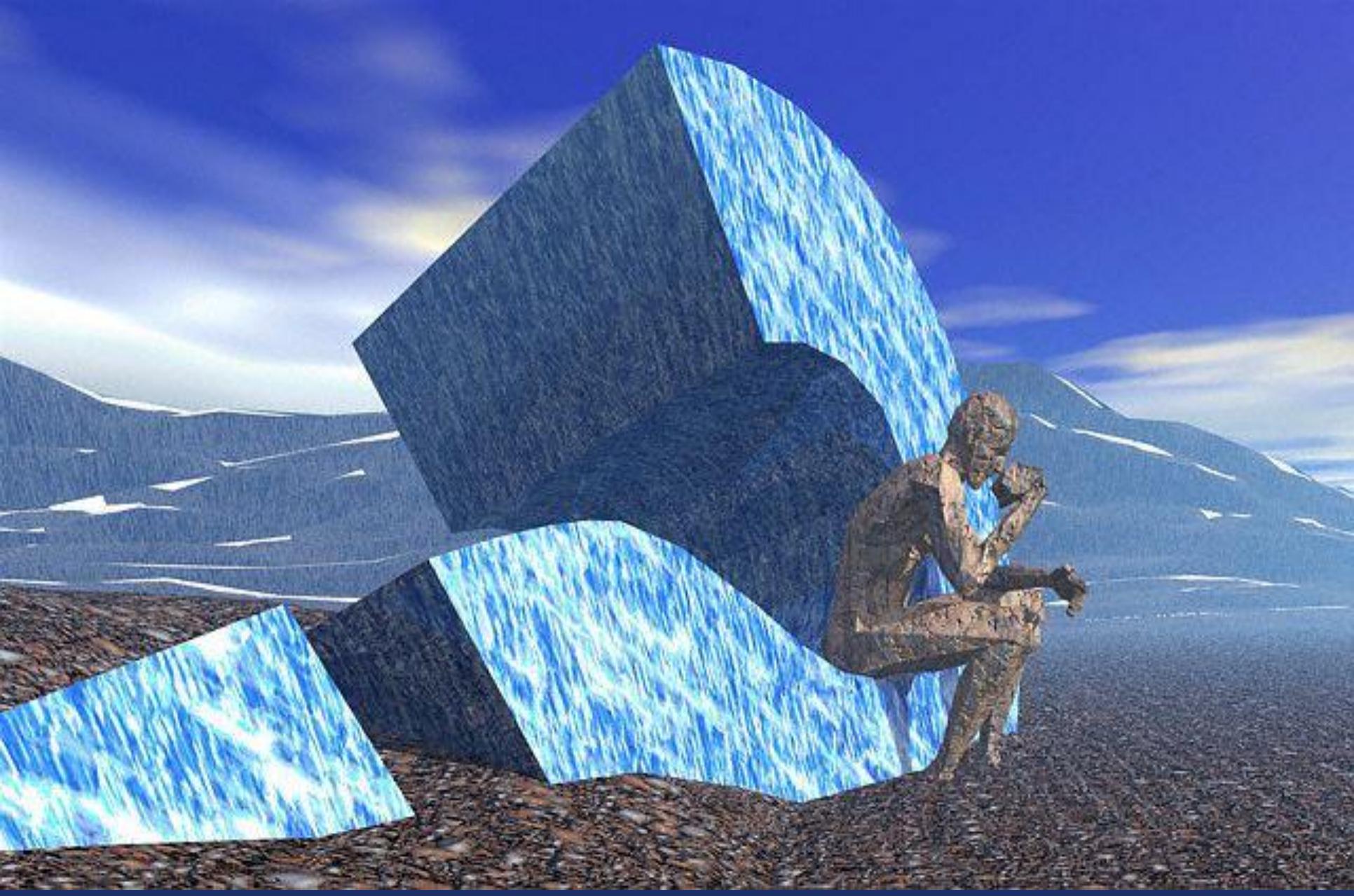
- *AIP ENR 1.1 para 21:*
- *A pilot must inform ATS if the average cruising speed, either TAS or Mach whichever is applicable, between reporting points, varies or is expected to vary, by a value equal to or greater than:*
 - *a. 5% TAS*
 - *b. 0.01 Mach from that given in the flight plan.*

Speed Change NOTAM Proposal

- **UNANNOUNCED AIRCRAFT SPEED CHANGES PLACE RISK INTO THE ATC SYSTEM. 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 IN THE FIR POSITION REPORT 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 ATIS EACH TIME THE CRUISING SPEED, EITHER TAS OR MACH 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.

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



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Oakland Oceanic Airports

Guam

OC9

PMDY

PWAK

OC6

PKWA

OC3

PTYA

PTPN

PKMJ

PTRO

OC5

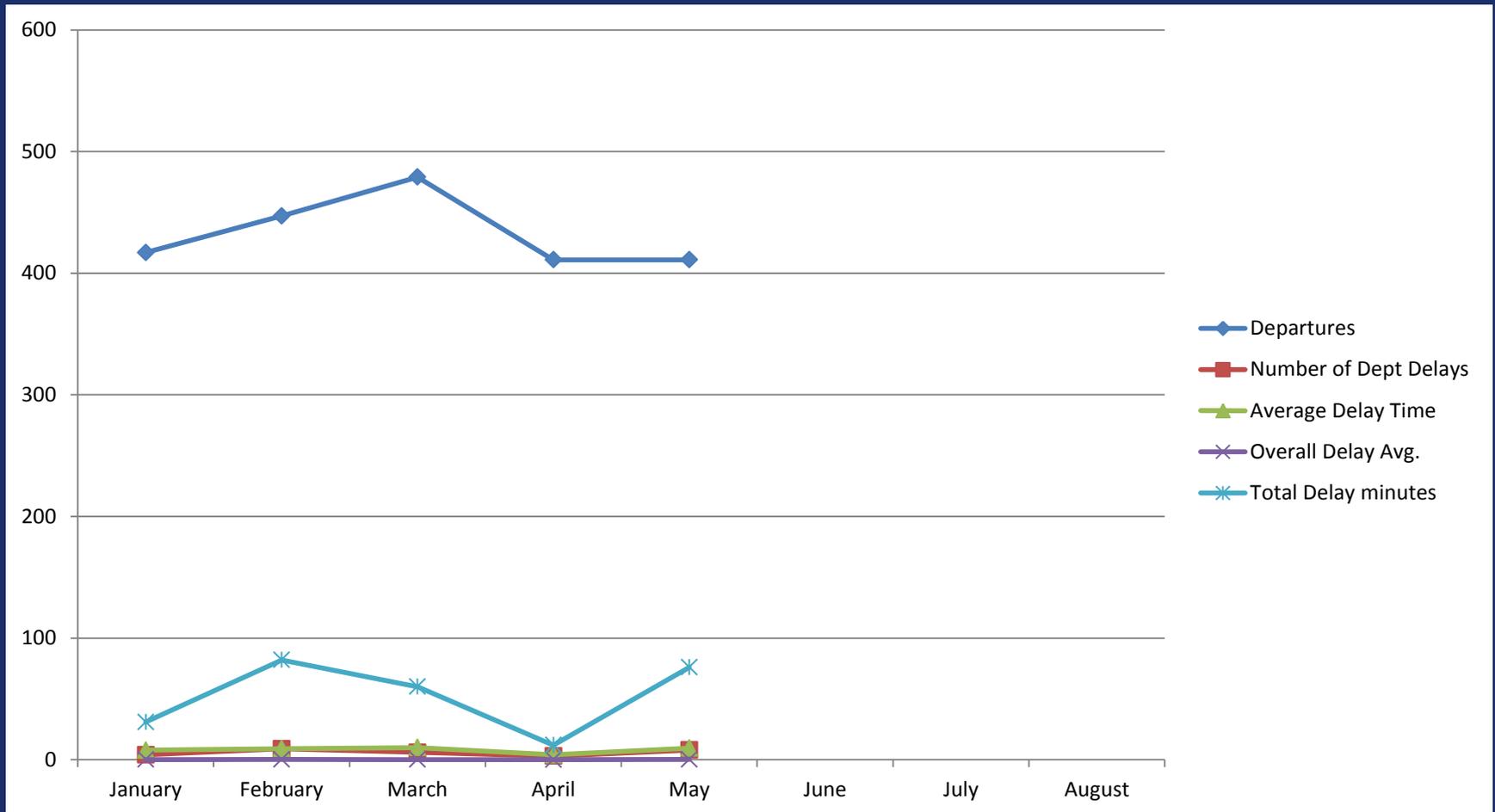
PTKK

PTSA

PLCH

Oakland Oceanic FIR

2014 Island Departure Delays

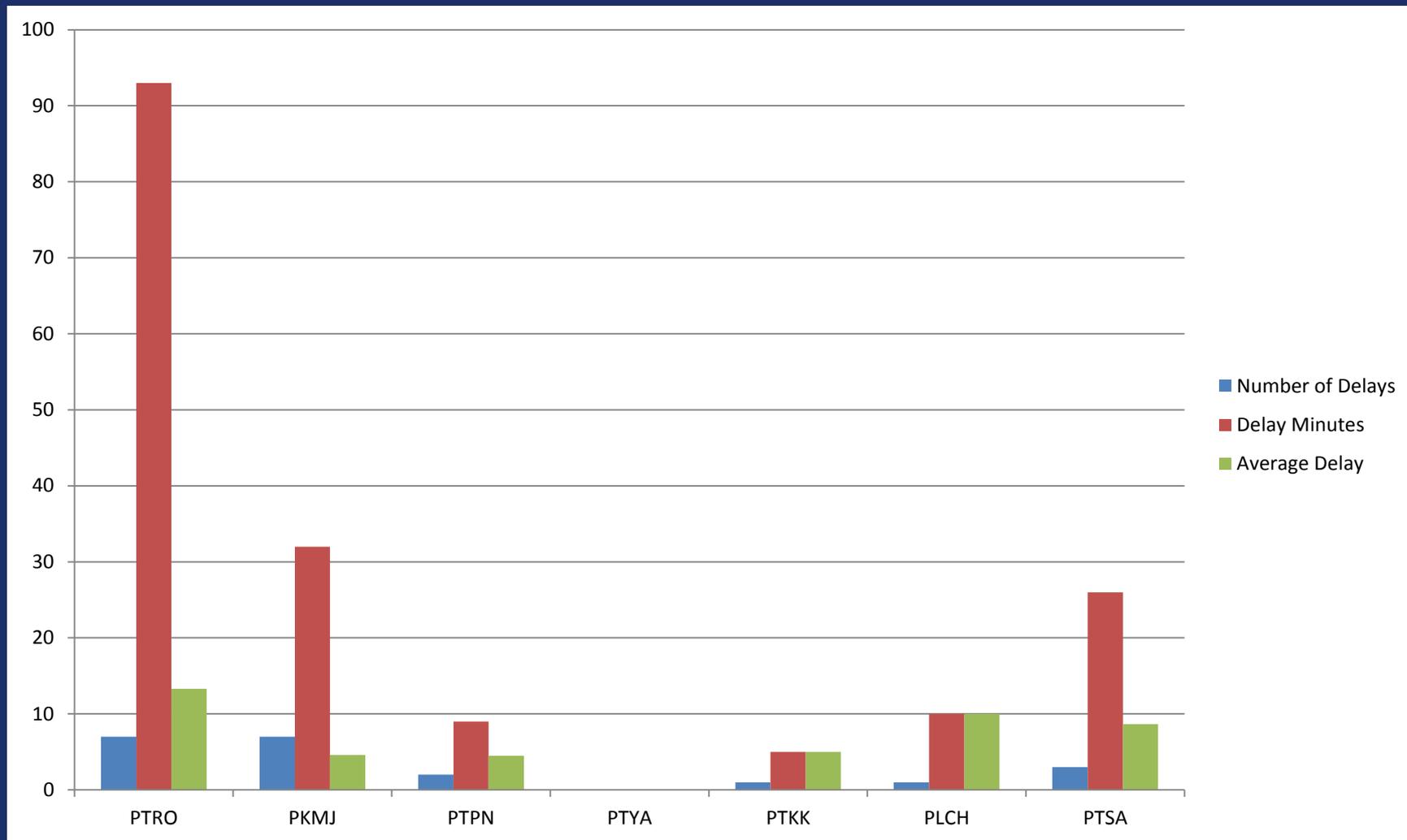


Overall average flight delay was less than a minute

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**
 - 0.014% of departures were delayed
 - Delayed flight average = 8.7 minutes

2013 Island Departure Delays

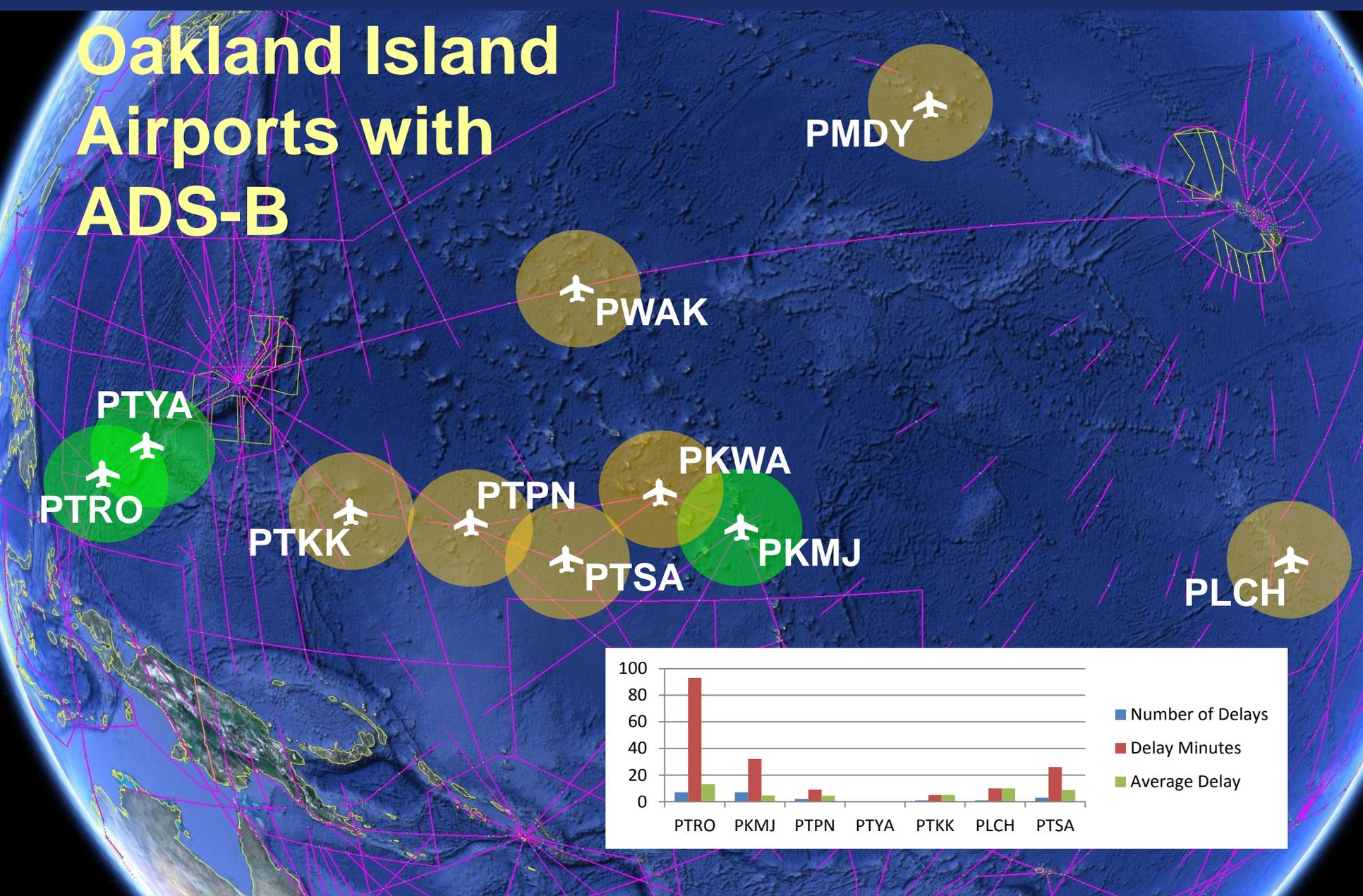


ADS-B

- The FAA is investigating the possibility of using ADS-B at selected oceanic island airports to facilitate improved aircraft operations.



Oakland Island Airports with ADS-B



Space Based ADS-B Surveillance



ZOA

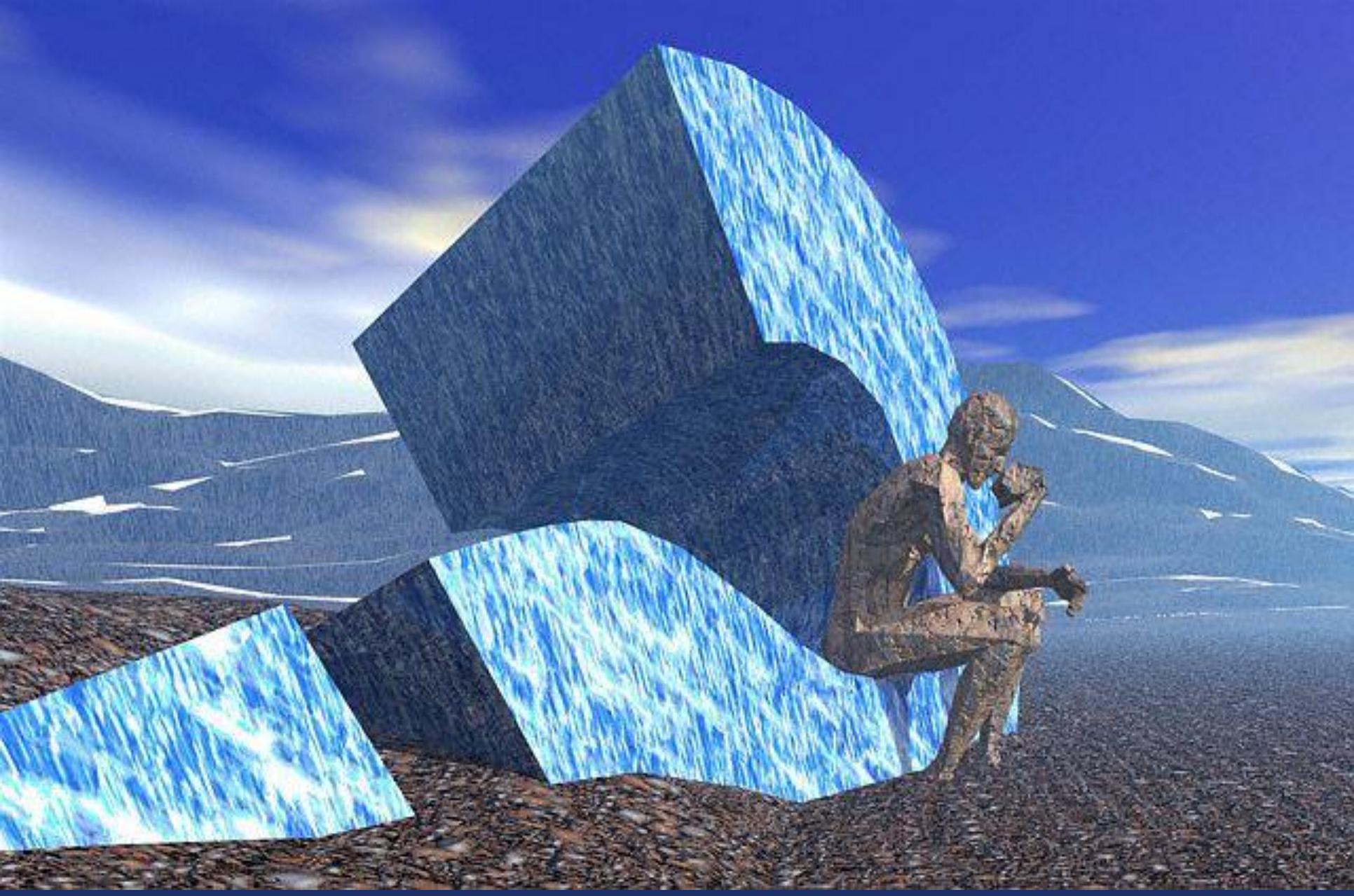


•The FAA is also investigating the feasibility of Space Based ADS-B Surveillance. In conjunction with CPDLC the possibility exists to greatly reduce separation standards

Island Arrivals



•Call Airport with ETA prior to arrival.

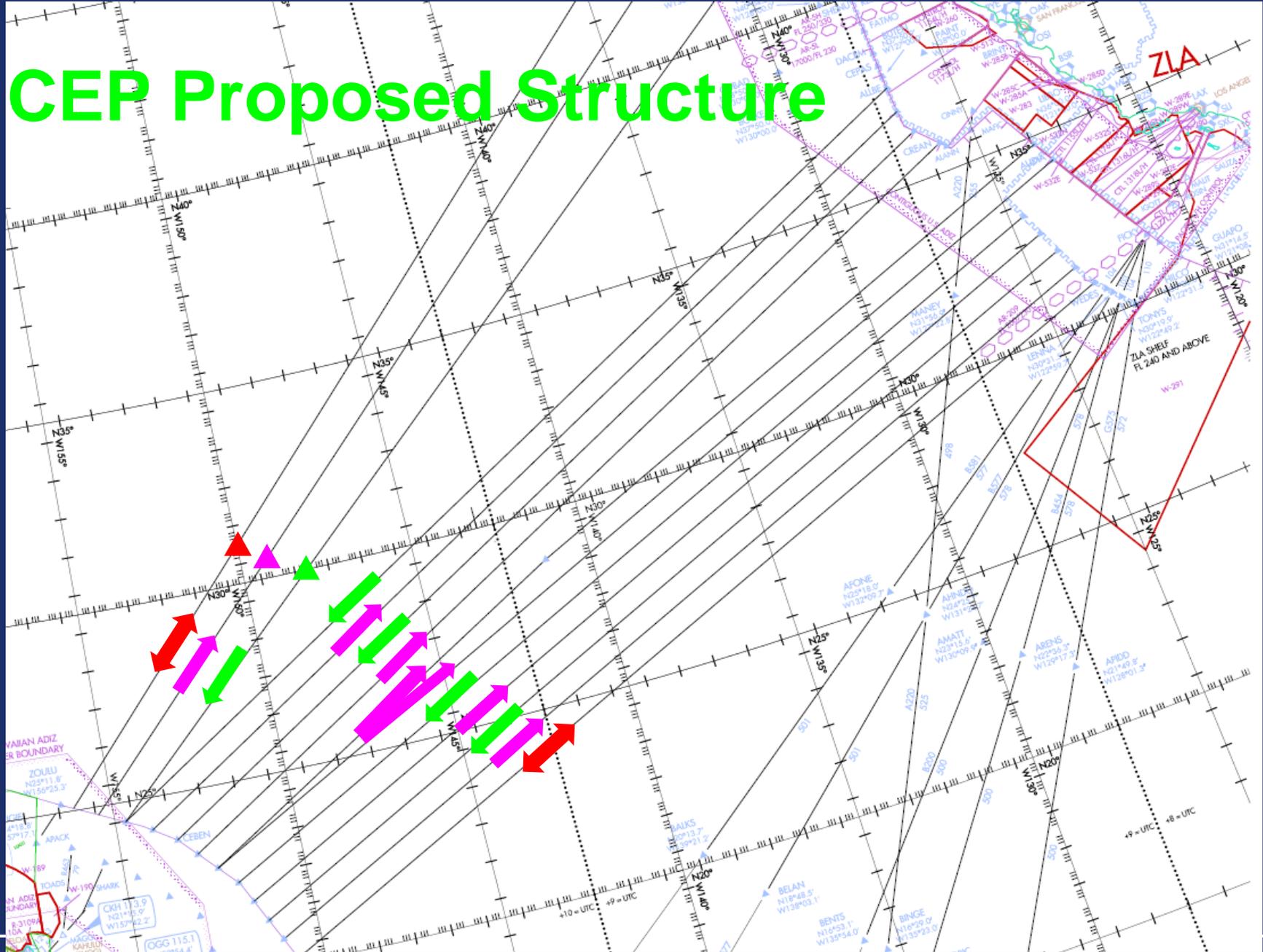


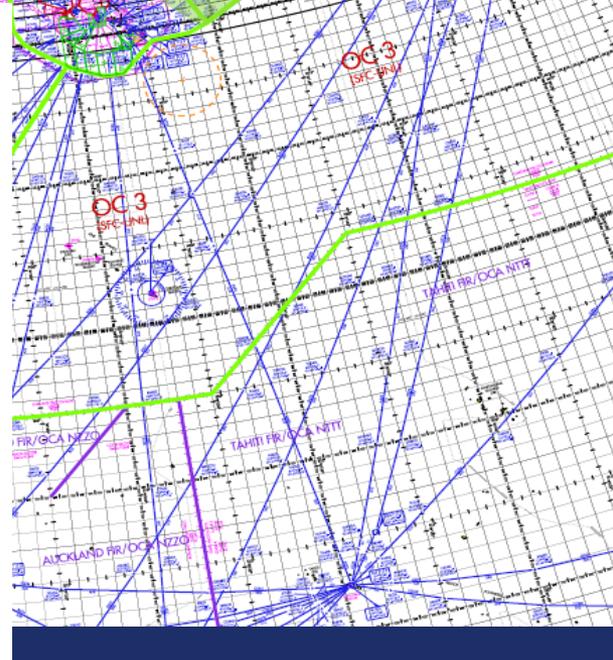
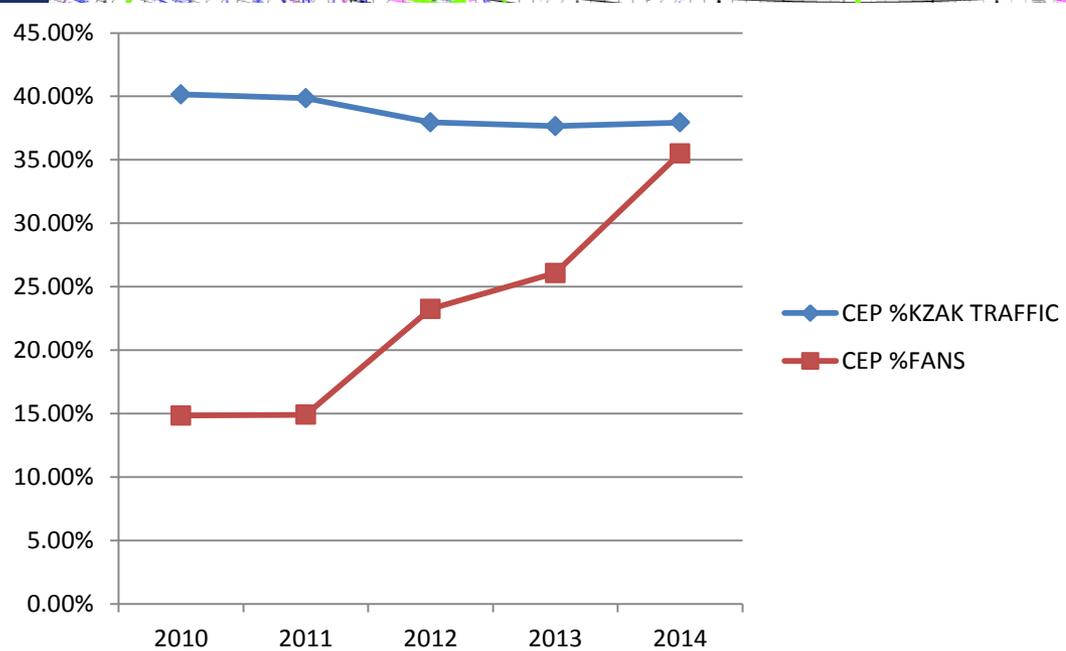
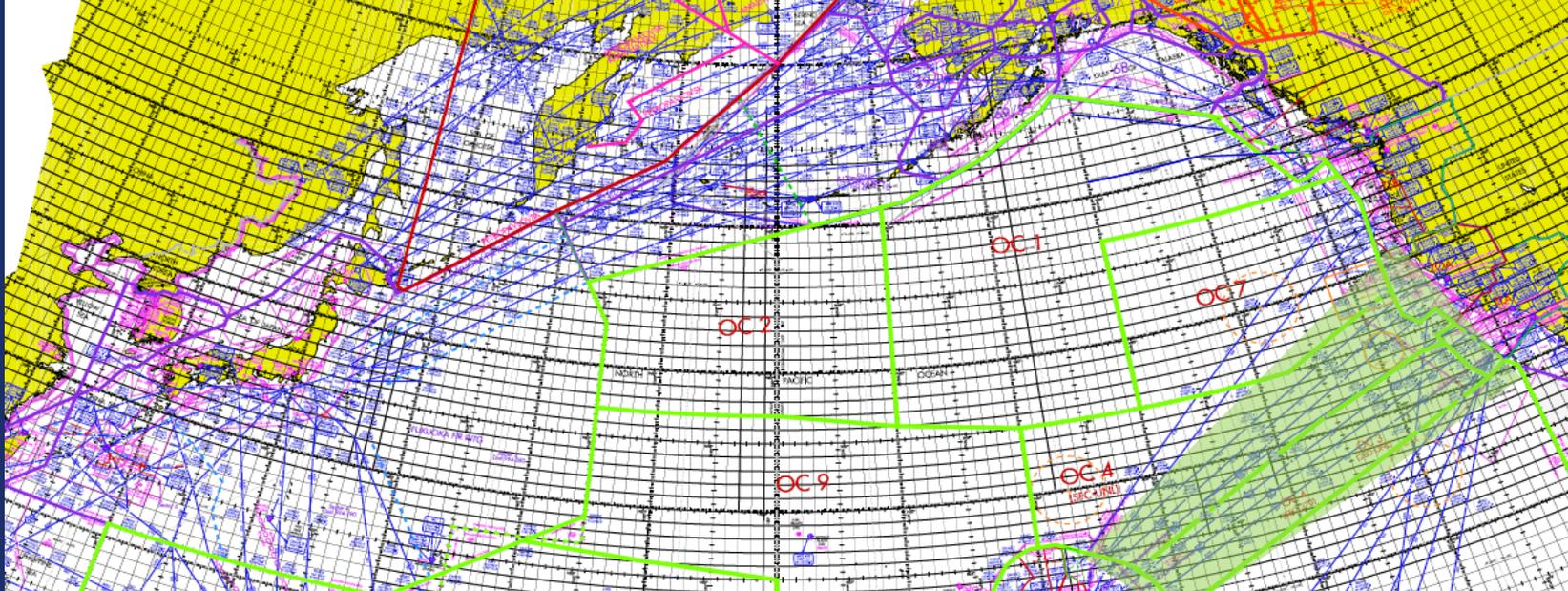
CEP Route Structure



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CEP Proposed Structure

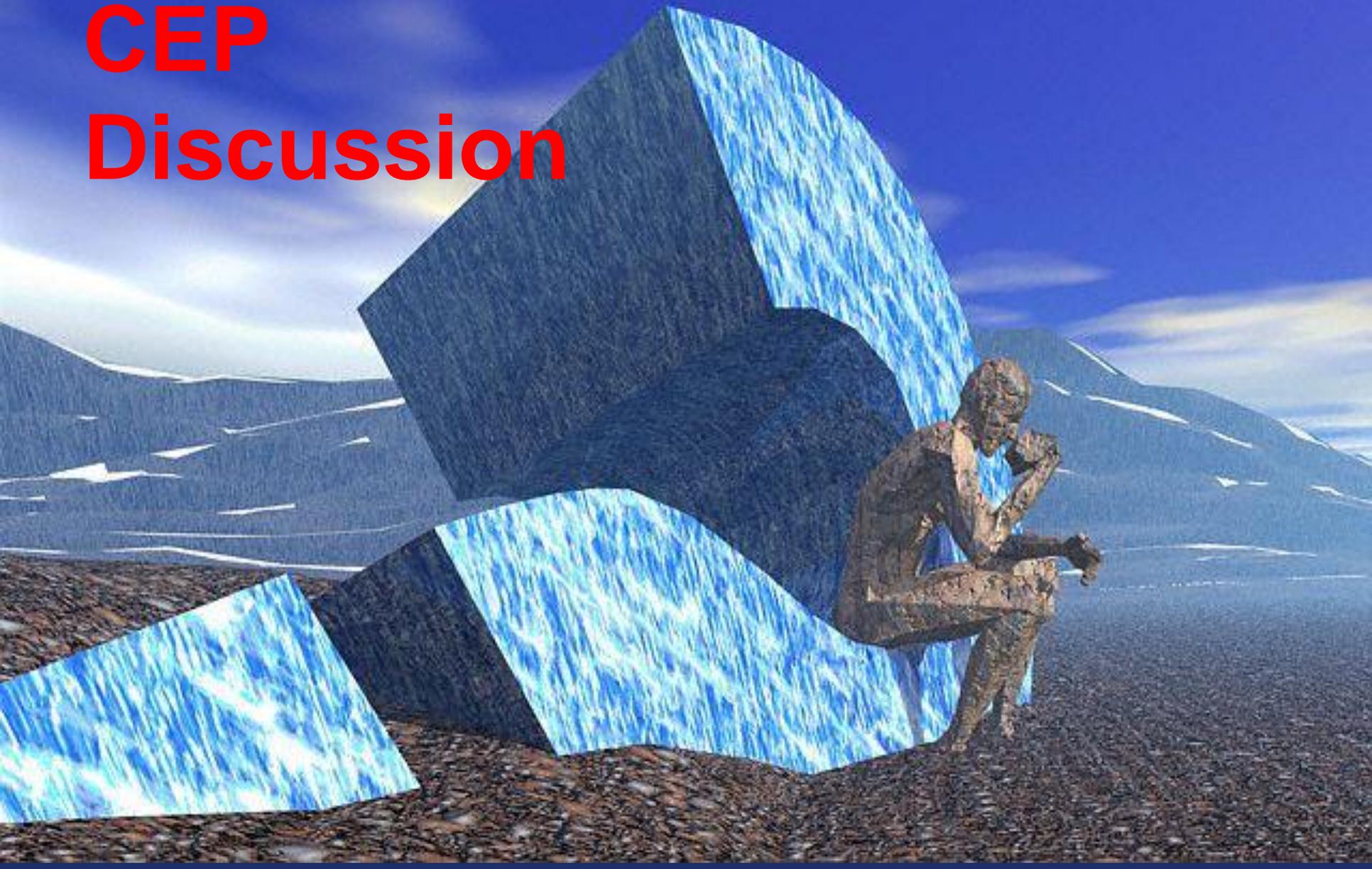




30nm CEP Track Discussion

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

CEP Discussion

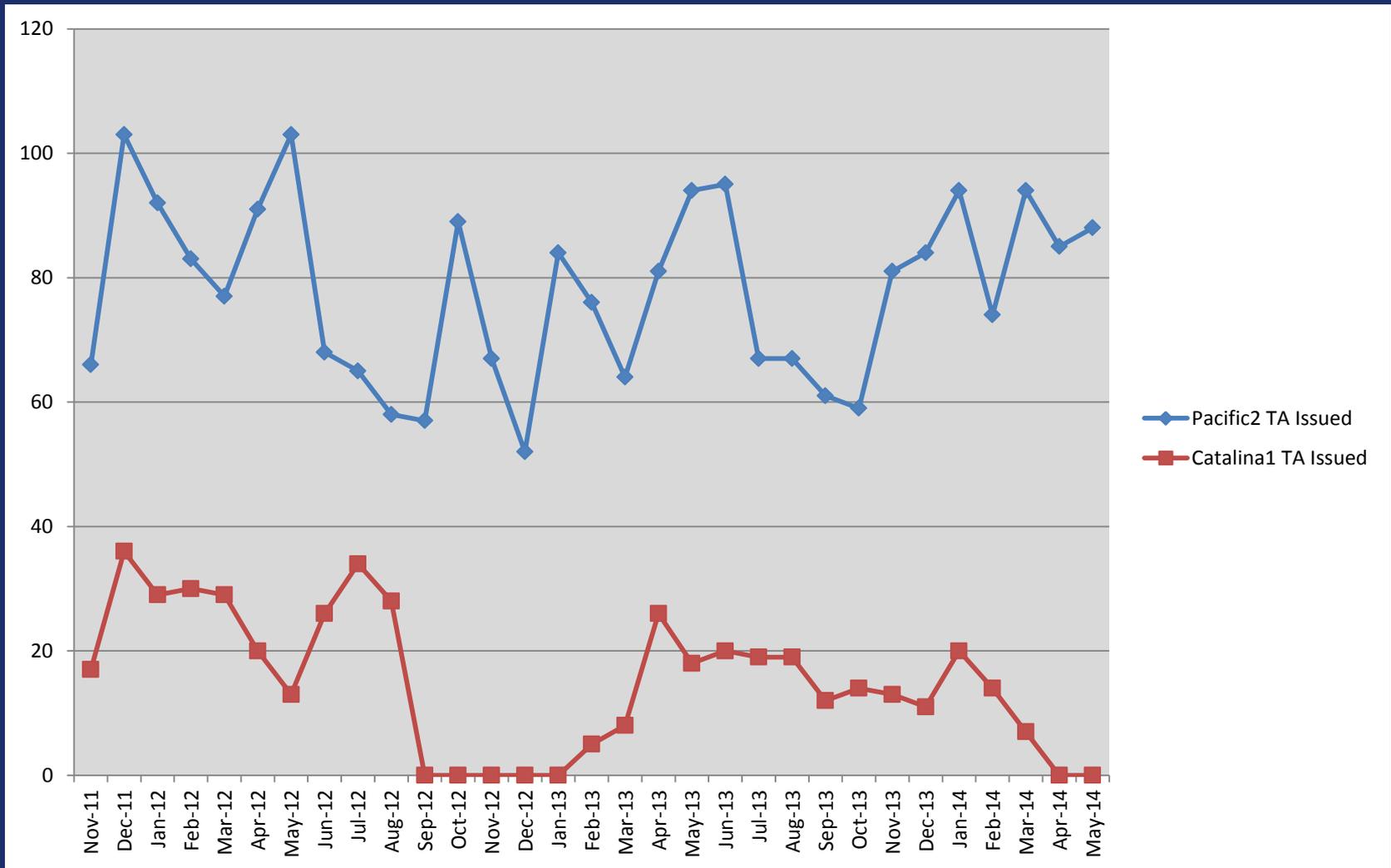


Tailored Arrivals



Federal Aviation
Administration

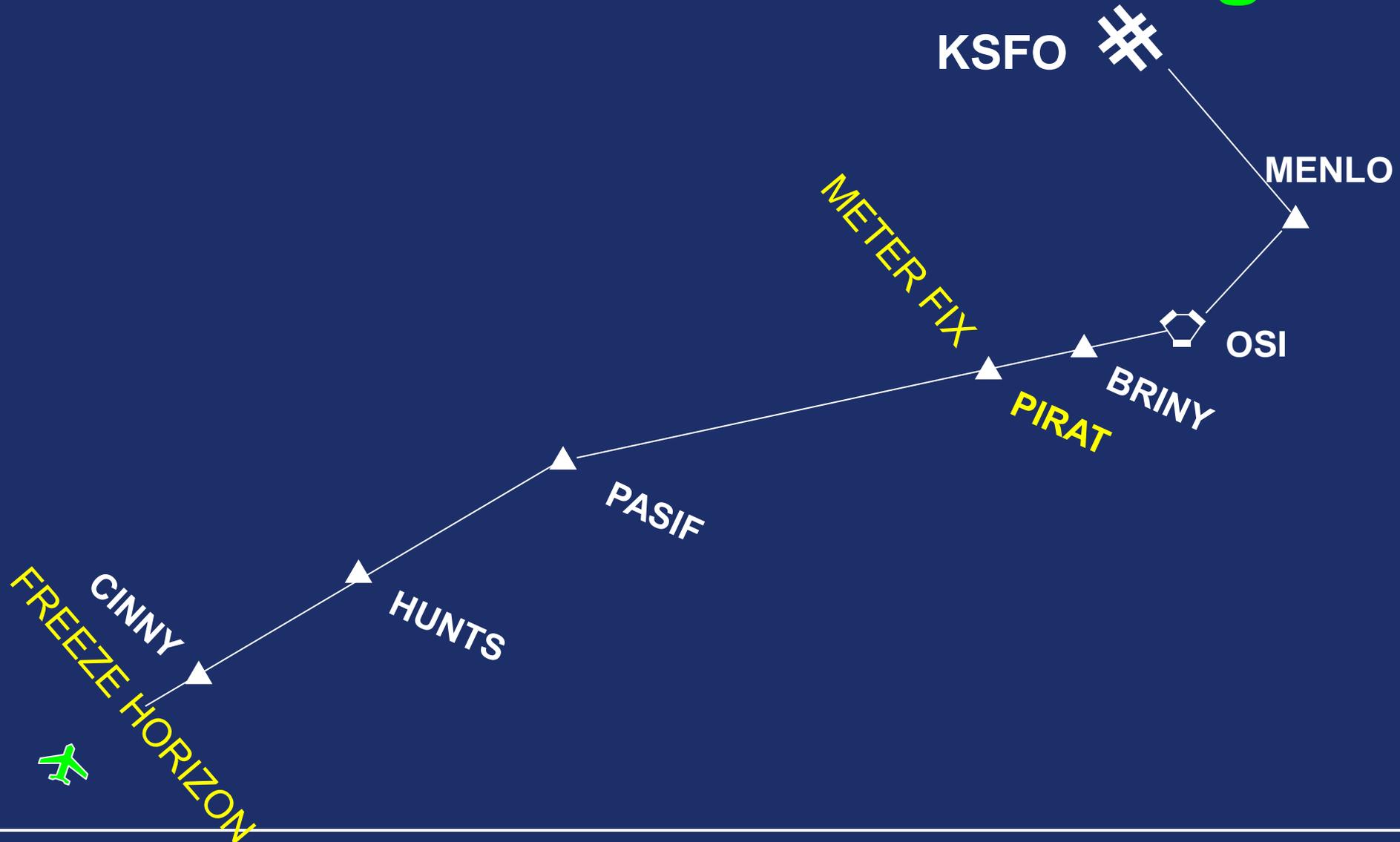
Tailored Arrival Clearances



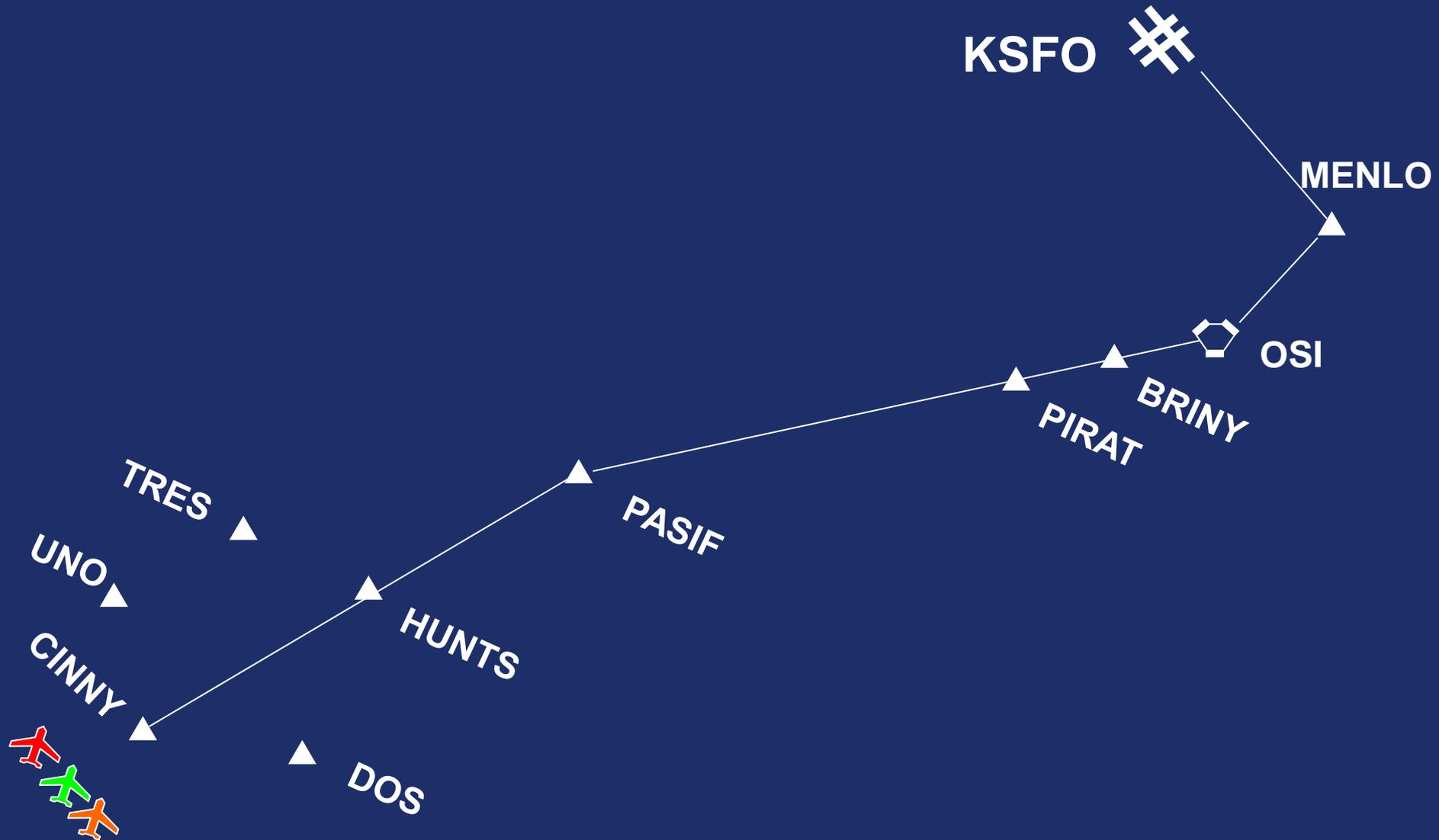
KSFO Tailored Arrivals

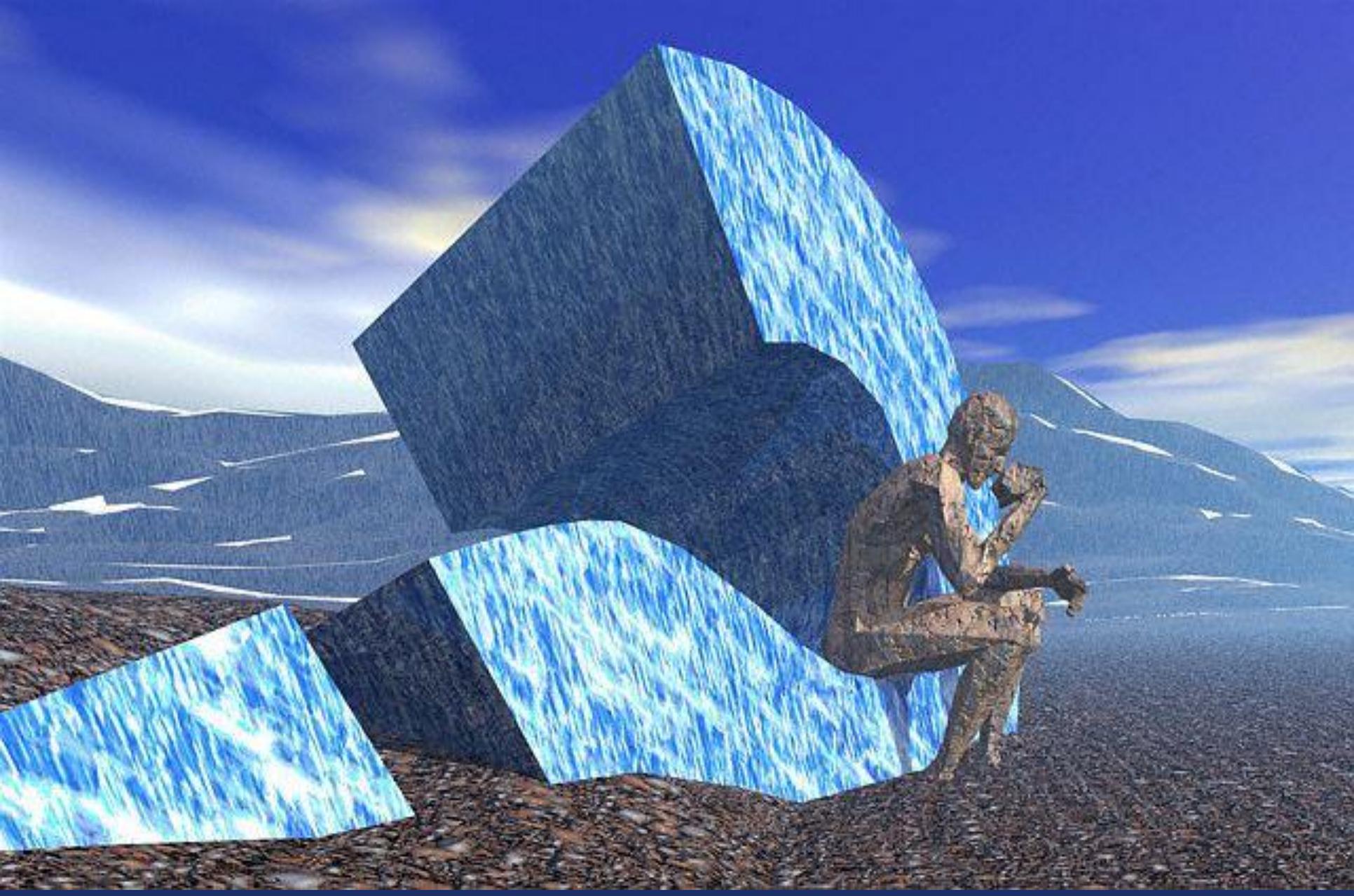
- A new RNAV PIRAT1 STAR is being developed to mirror the KSFO Pacific 2 TA.
- The PIRAT1 STAR would provide an OPD for non FANS aircraft.
- The Target Date for implementation is ???

KSFO Time Based Metering



“Tailored” Arrivals





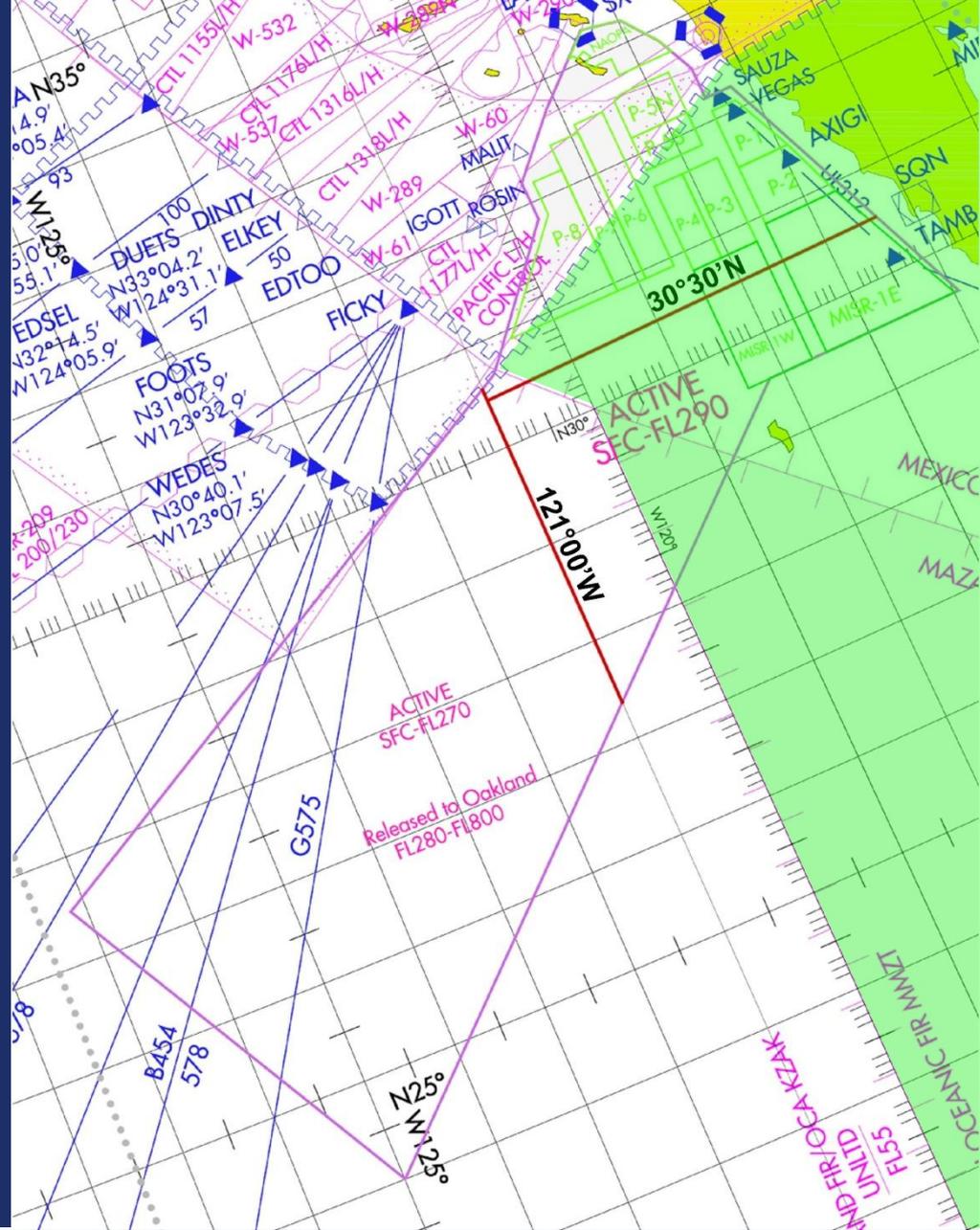
Port Moresby 50nm RNP10 Lateral Separation

- Began November 14, 2013
- Investigating New Routes
- D50 Longitudinal Separation



Mazatlan ACC

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



Impacts From Missile Defense Testing

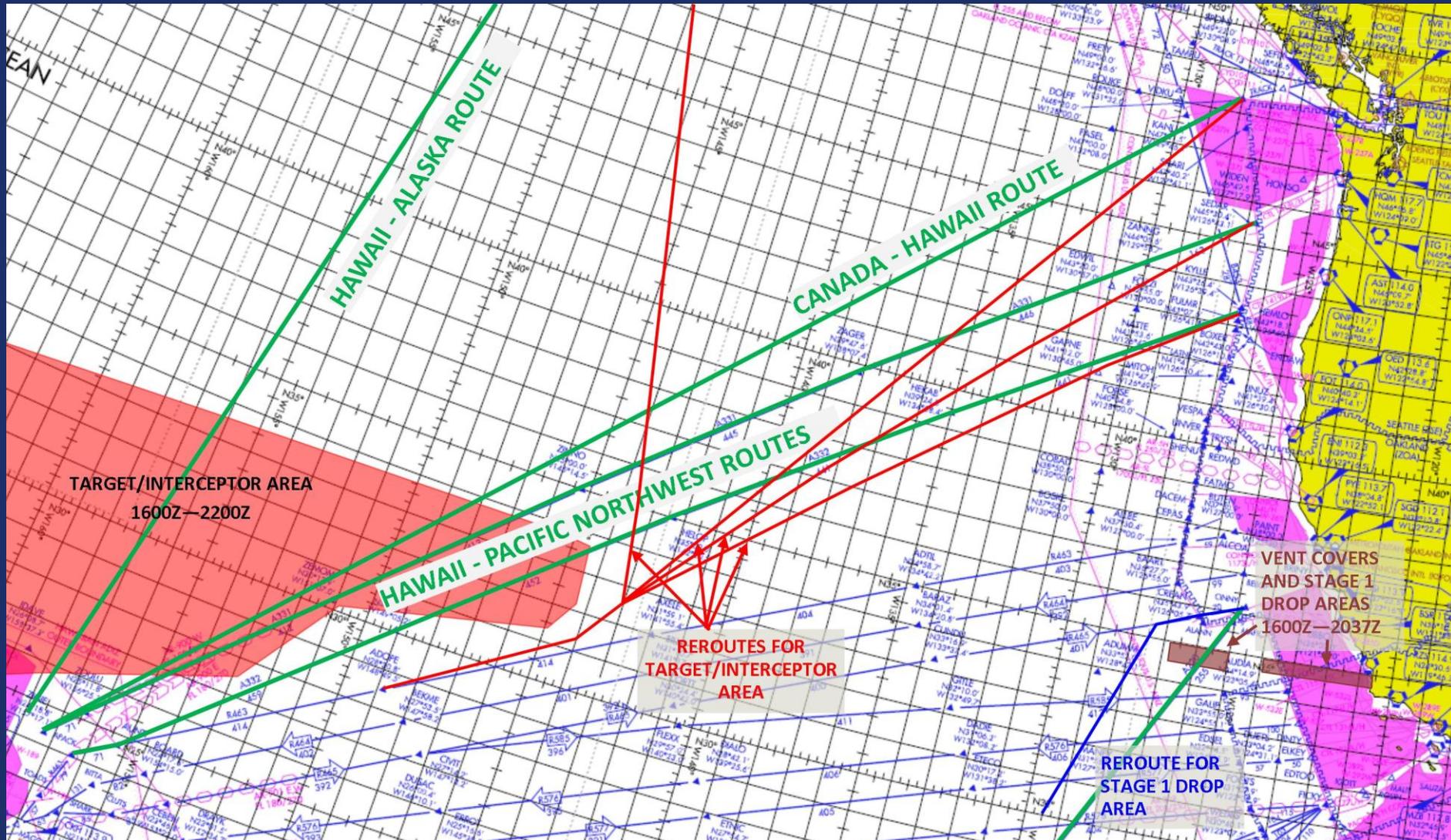
**ALTITUDE RESERVATION
MISSILE DEFENSE INTERCEPT TESTING
2 ROPS AIROP DO-1402
SCHEDULED FOR 1600 UTC - 2200 UTC
JUNE 22, 2014 (PRIMARY)
JUNE 23, 2014 (BACK-UP)
JUNE 24, 2014 (BACK-UP)**

**Green Lines indicate Normal Flight Routes
Red Lines Indicate Routings Around
Released Airspace**

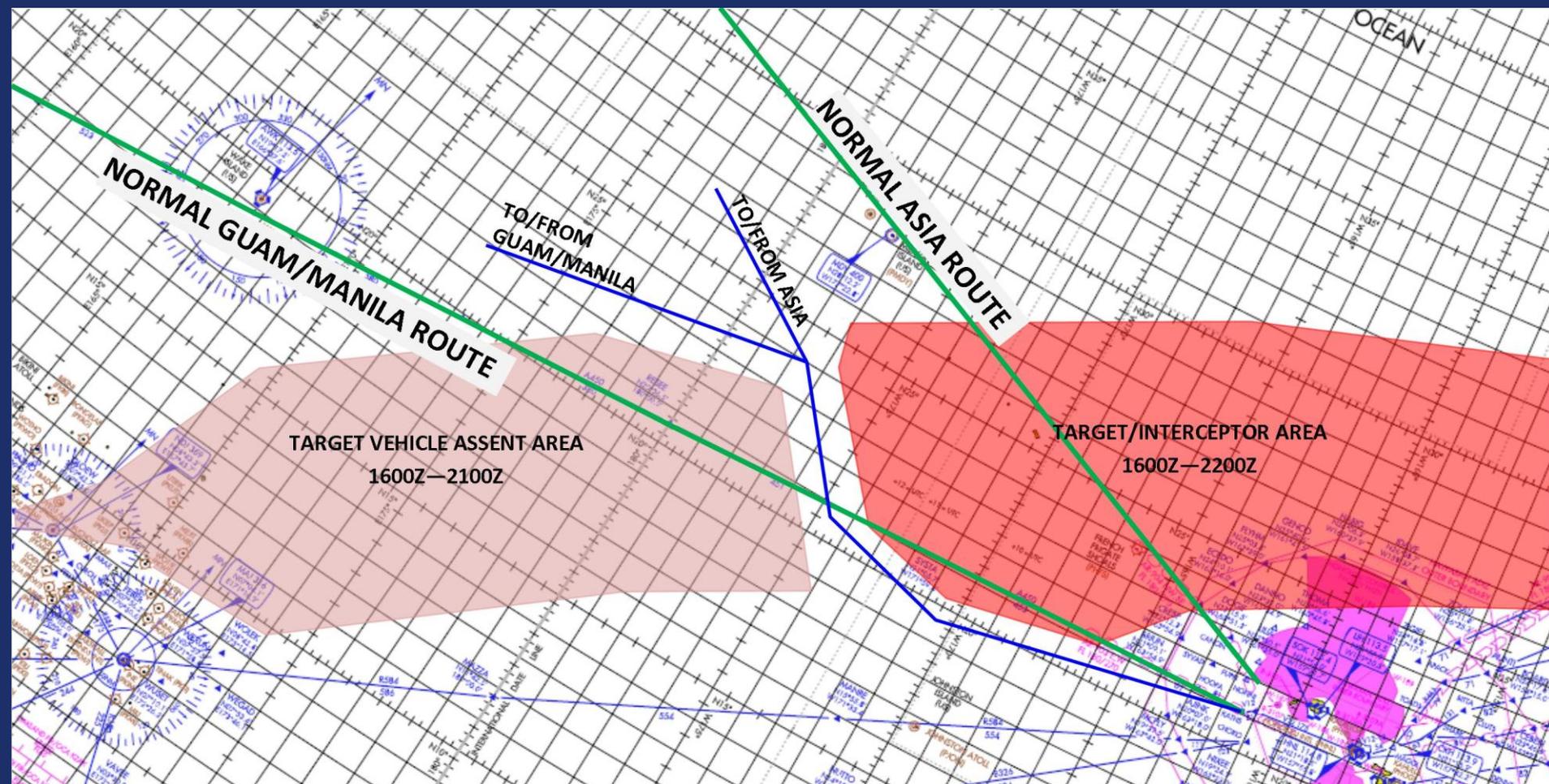
Twenty-seven aircraft required to fly an extra 157 nautical miles to avoid released airspace between Asia and Hawaii for a total of 4,239 additional miles.

Twenty-one aircraft required to fly between 14 and 45 nautical miles extra to avoid released airspace between North America and Hawaii/ South Pacific for a total of 313 additional miles.

Impacts From Missile Defense Testing



Impacts From Missile Defense Testing

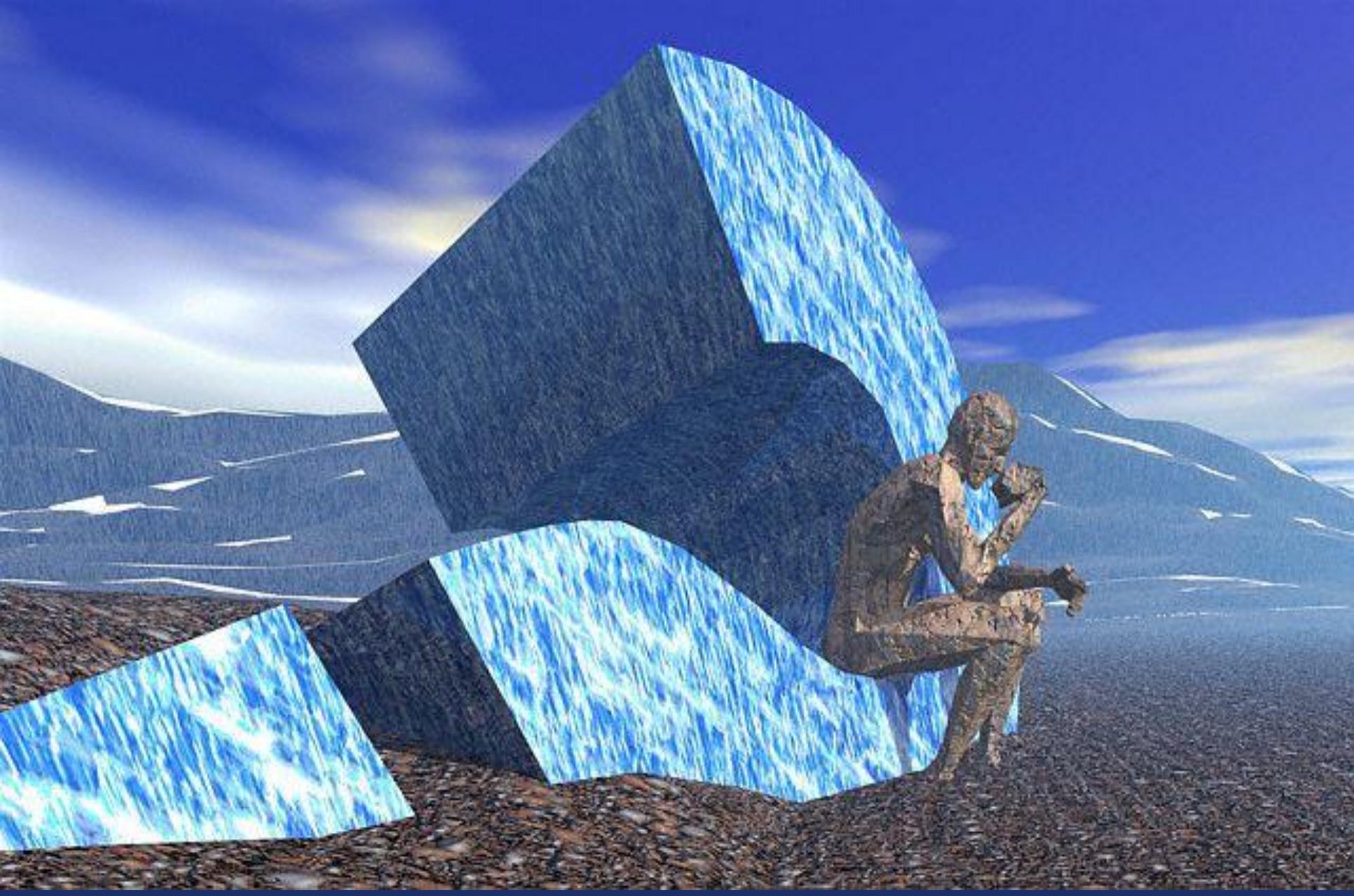


Impacts From Missile Defense Testing

For 1600Z - 2200Z Launch/Drop Window:		Reduce to 1600Z - 2000Z	
48 aircraft affected		44 aircraft affected	
15 Foreign carriers affected		13 Foreign carriers affected	
1 aircraft had reroute of 2 NM		1 aircraft had reroute of 2 NM	
19 aircraft had reroutes of 14 NM		18 aircraft had reroutes of 14 NM	
1 aircraft had reroute of 45 NM		1 aircraft had reroute of 45 NM	
27 aircraft had reroutes of 157 NM		24 aircraft had reroutes of 157 NM	
TOTAL REROUTE MILES: 4552		4,067	Diff: -485

Impacts From Missile Defense Testing

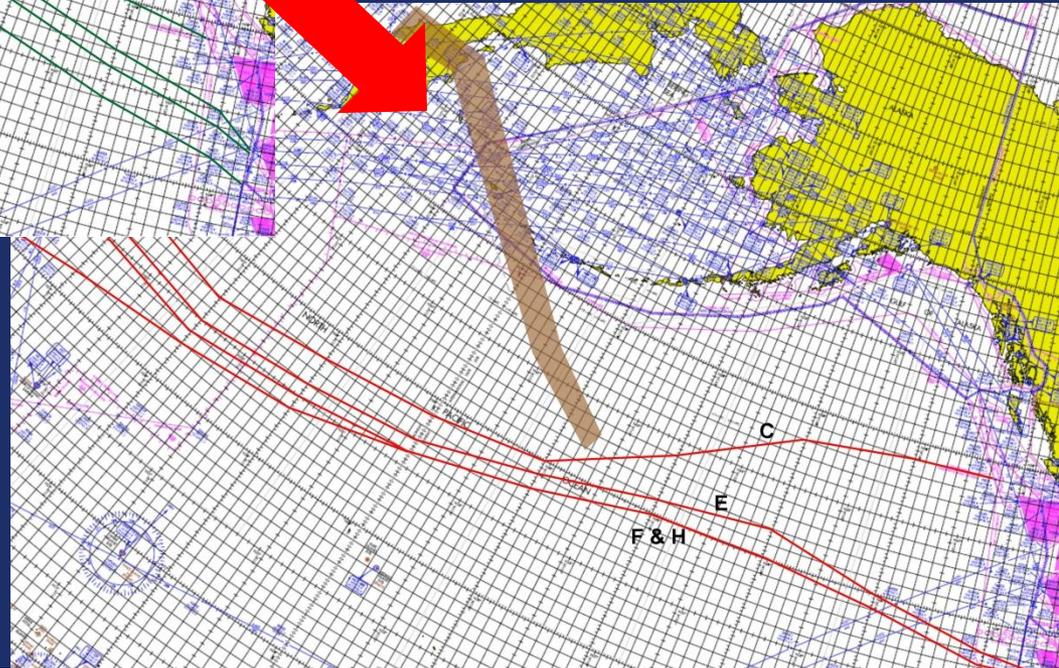
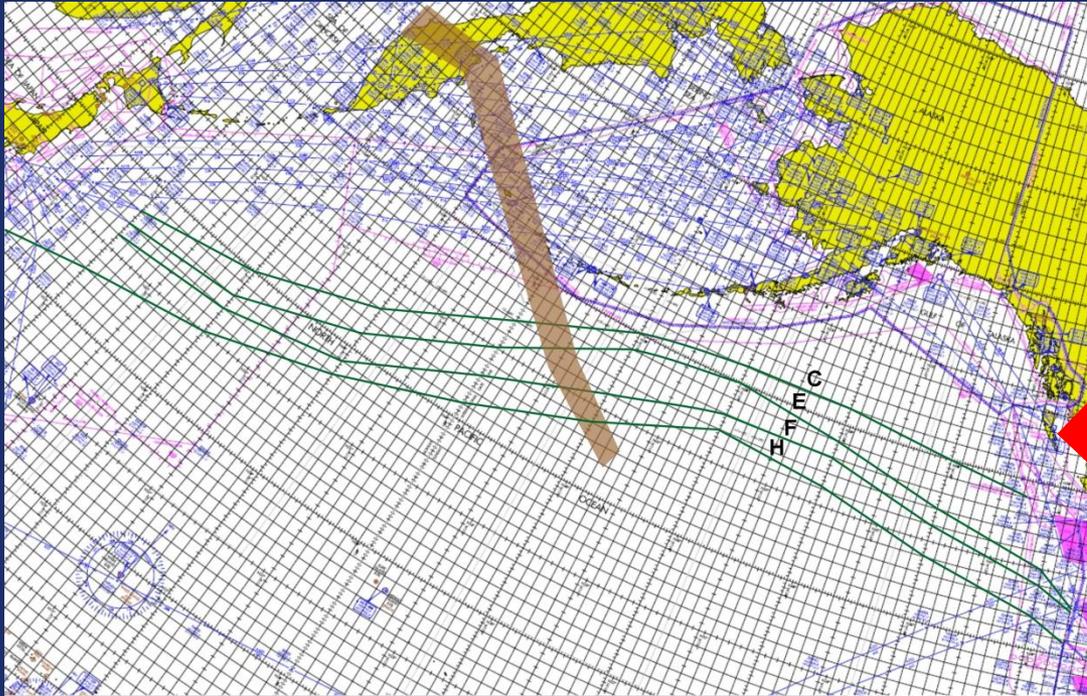
- **6 hour impact window the first day.**
- **Backup days are a 4 hour impact window.**
- **If MDA cancels the operation for the next day in time to cancel the NOTAMs and aircraft can flight plan their normal routes, MDA will be given a second 6 hour impact window on the backup day.**



Volcanic Ash & PACOTS Generation

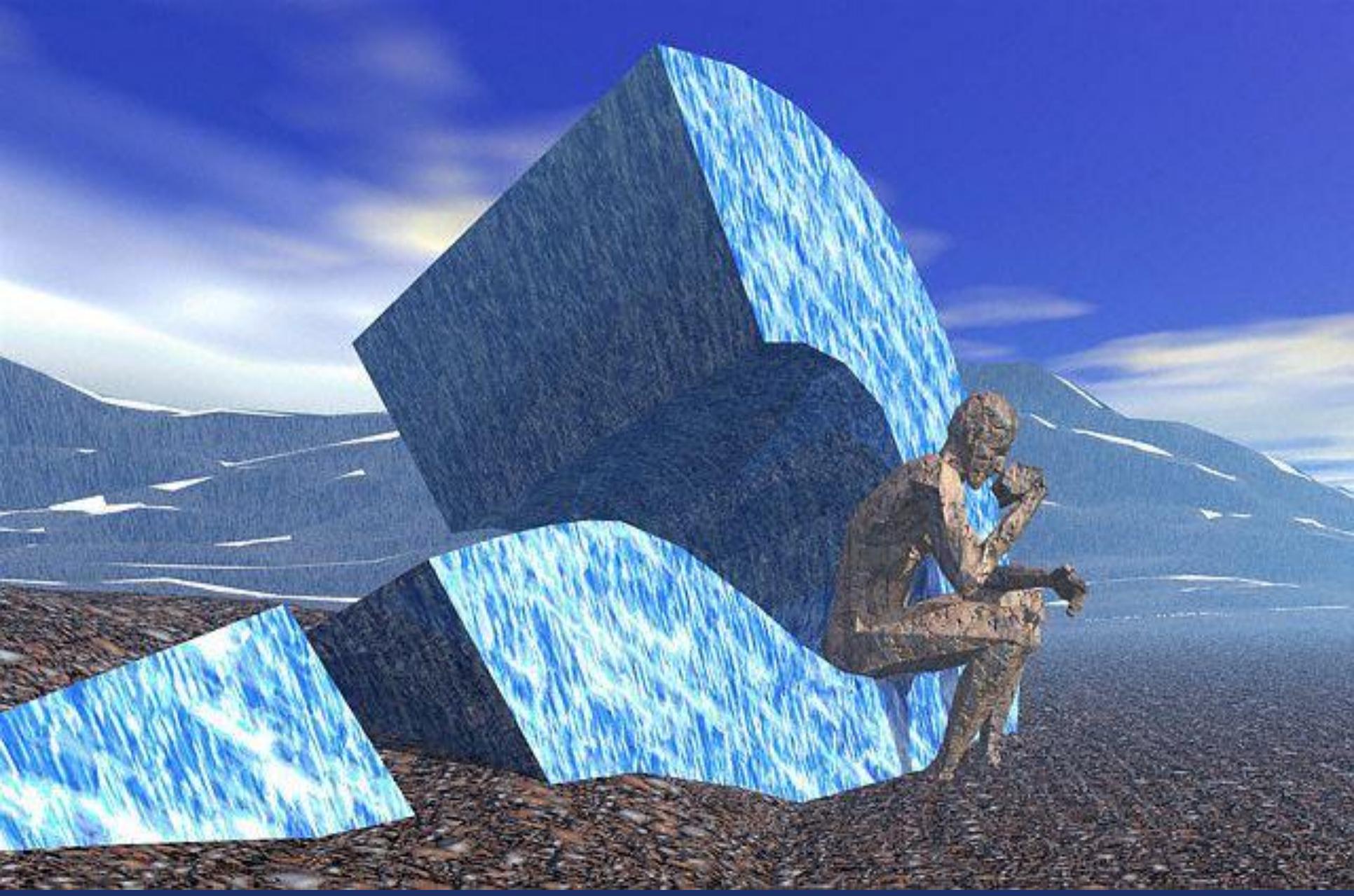
- **VOLKAM13 (IPACG39 Paper IP11)**
- **October 2013, Kamchatka Volcano Klyuchevskoy Eruption.**
- **Ad-hoc telecon to discuss PACOTS and Ash Plume**
 - Need for international dispatchers on telecon.
- **Decision was made to move PACOTS south around Ash Plume**
- **Ash Plume was found to be lower than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

Volcanic Ash & PACOTS Generation



Volcanic Ash & PACOTS Generation

- In the event of an Ash Plume:
- Teleconference with International dispatchers
- Reach Agreement on the affected airspace
- When there is no agreement on affected airspace but credible evidence exists that the PACOTS will be affected by the Ash Plume, the PACOTS will be moved so that they are clear of the Ash Plume.
- This is a more conservative approach that keeps aircraft clear of volcanic ash.
- Operators that have completed their SMS analysis and determined that there is no risk could flight plan a route through the affected area.
- ATC would give advisories as required.



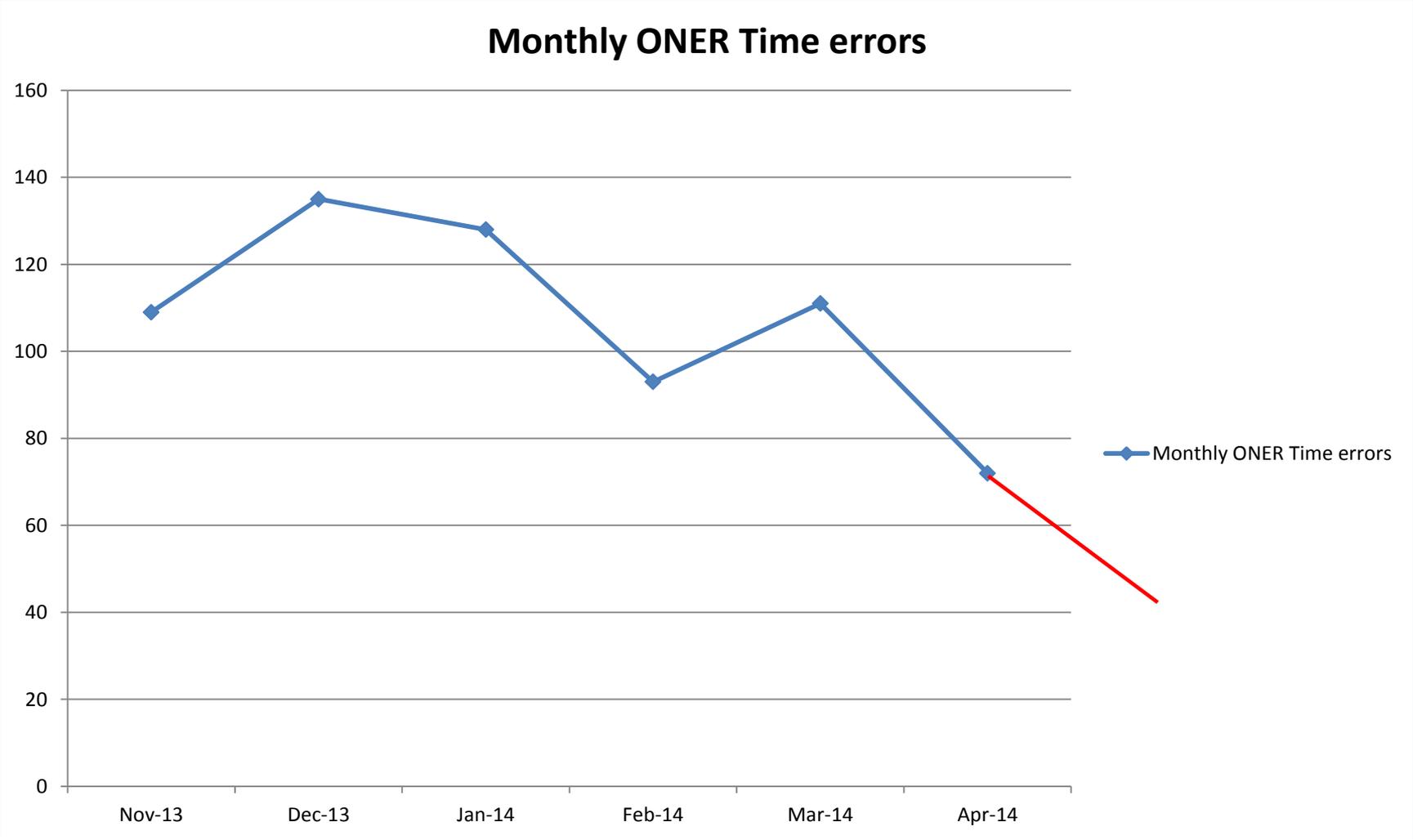
ICAO Annex 2 3.6.2.2 change

- *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.*

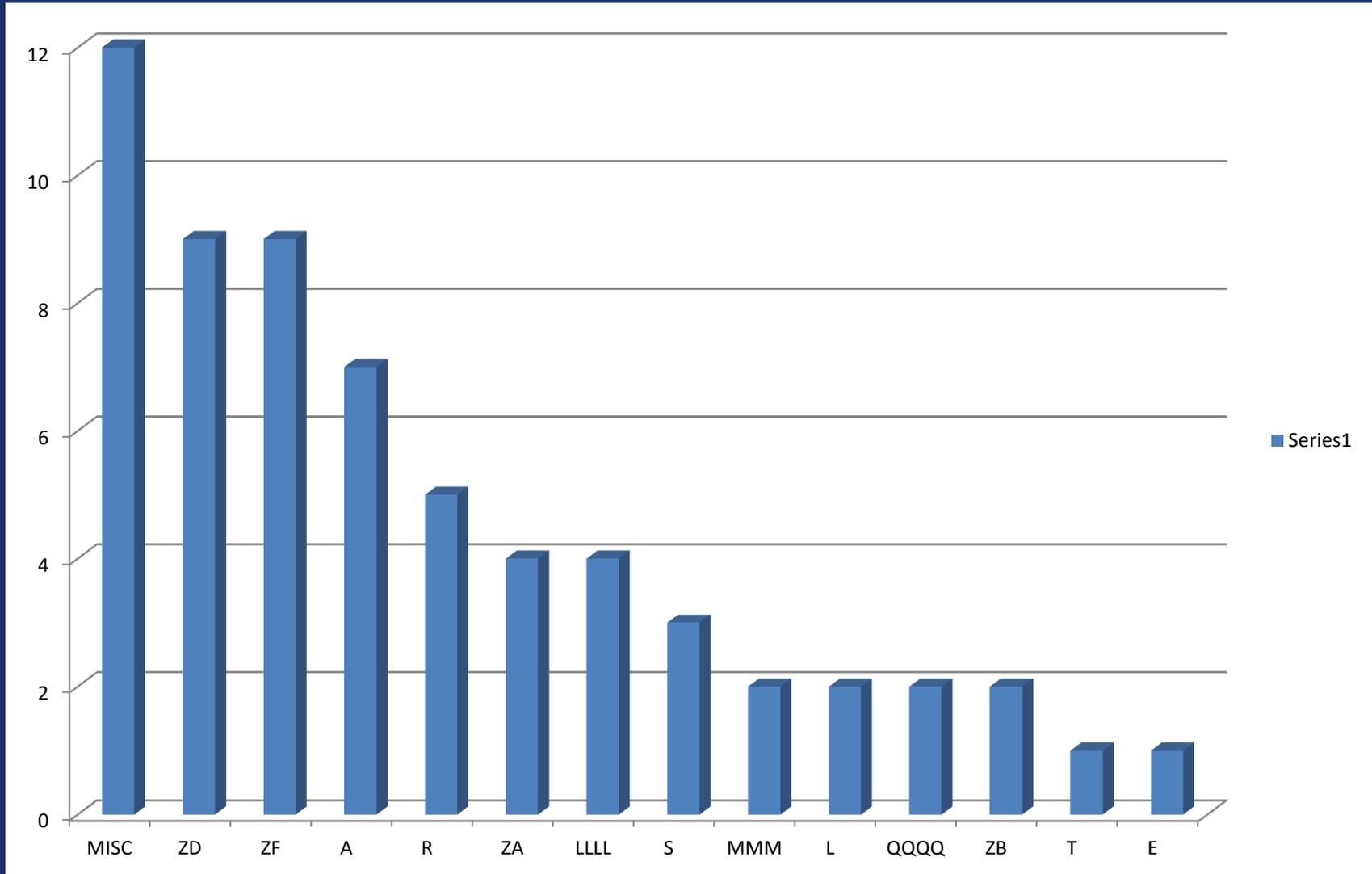
Oceanic Navigation Error Reporting

- **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.**

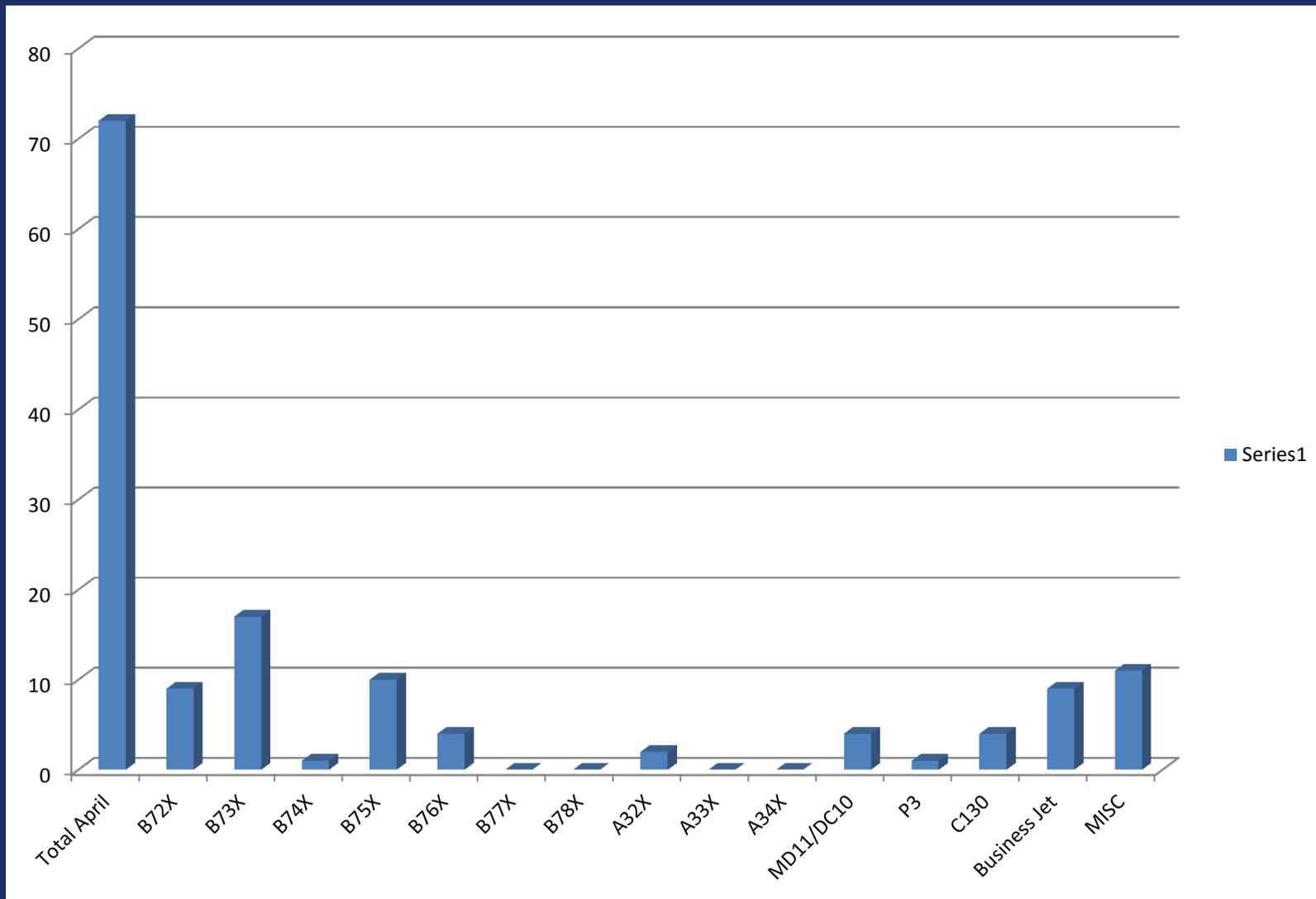
ONER Time Errors



April Operator ONER Time Errors



ONER Time Errors April 2014



B788 180E ADS Reports

PR-1083-GS

B788

S180W180

B788 180E ADS Reports

PR Details - Windows Internet Explorer
http://www.ispacg-cra.com/problem_detail.asp?tid=1106

Convert Select
Favorites My FAA eLMS FAA eCenter IceMan WebConnect IdeaHub
PR Details

ISPACG
Informal South Pacific Air Traffic Services Coordinating Group

Home About Gold Info Problem Reports System Availability Performance Information Contact

ISPACG-CRA, NAT DLMA
Problem Reports

- Problem Reports - (De-identified)
- Problem Reports - Secure Access
- Log a Problem Report
- Log Out

View Problem Report - You are the Originator

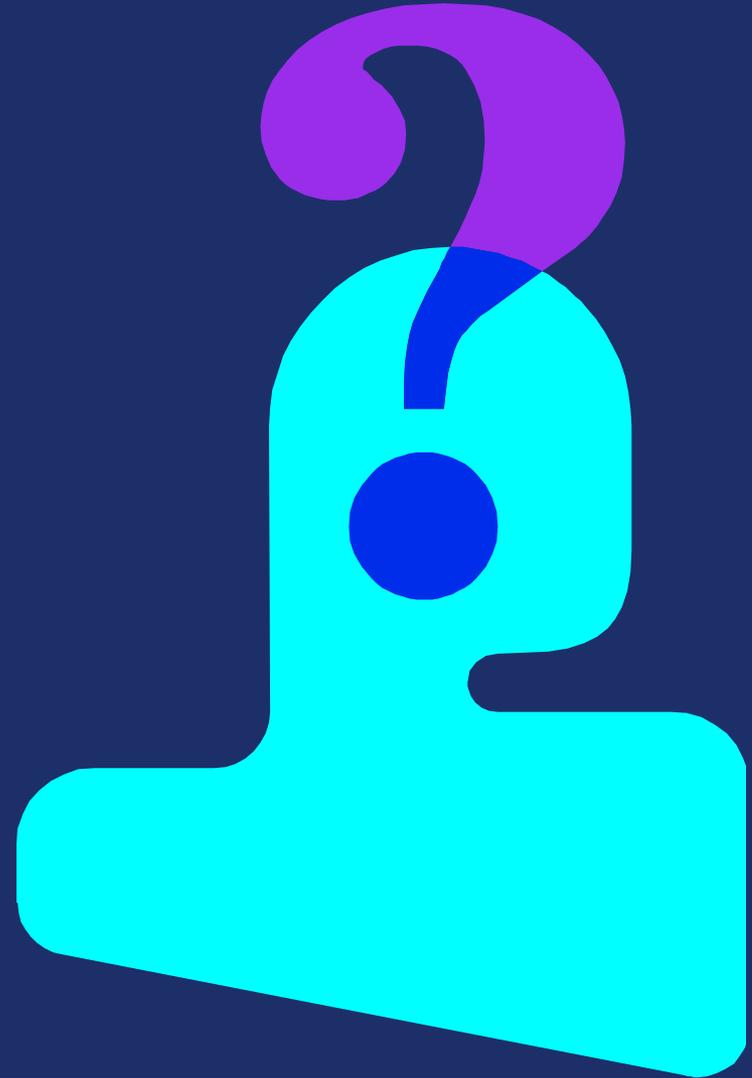
Originator Reference Number		ZOA-2014-007	
Title	ADS-C position reports with improperly encoded next and next+1 waypoints		
Date UTC	multiple	Time UTC	
Registration	multiple	Flight Number	
Flight Sector			
Originator	Julia Fuller	Aircraft Type	B788
Organization	FAA		
Active Center	KZAK	Host Center	
Region	SOPAC		
<p>Over the past 15 days, received position reports from the following B787s with the next and next+1 waypoints which contained a longitude of 180 encoded as S180W180.</p> <p>ANA JAB06A JAB05A JAB20A</p> <p>JAL JAB22J JAB21J JAB23J JAB28J JAB24J JAB25J JAB27J JAB30J JAB32J JAB26J JAB29J JAB33J JAB34J</p> <p>UAL N27903 N27902</p>			

Internet | Protected Mode: On 75%



If you enter or
pass within 50nm
of the KZAK FIR
send us a FPL

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



Oceanic Work Group Meeting

Anchorage ARTCC Update

OWG

Anchorage ARTCC;
Airspace and Procedures Office

June 18, 2014

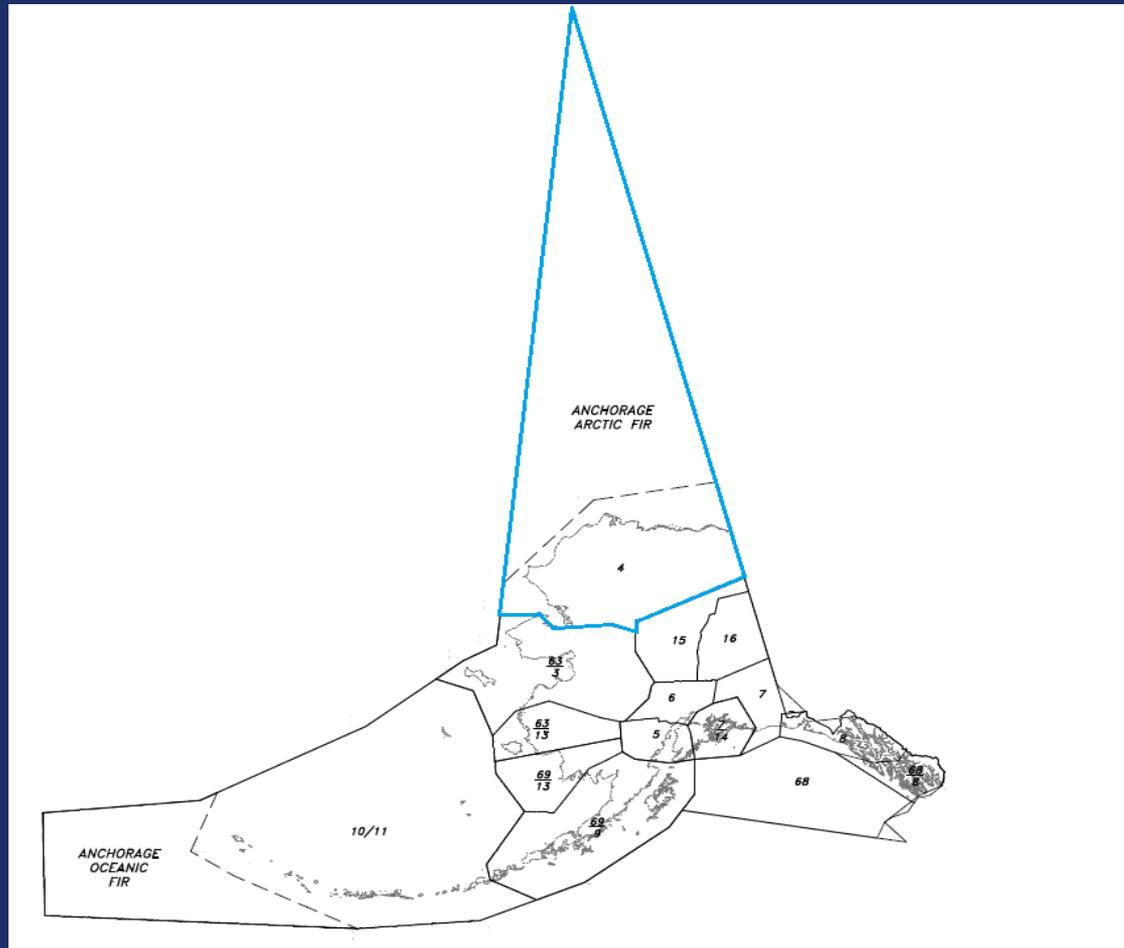


Federal Aviation
Administration

Anchorage ARTCC (ZAN) Overview

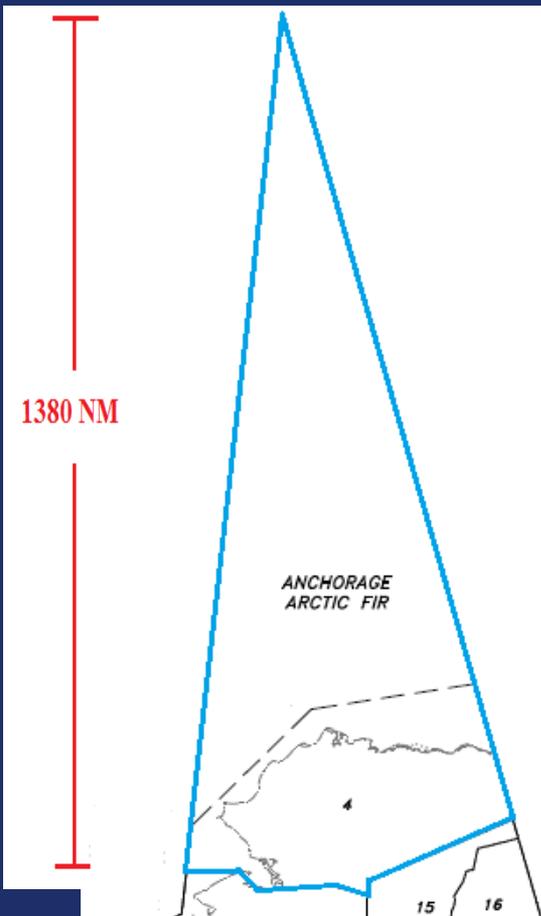
- ZAN Sector “64”
- ZAN ATOP and ADS-B
- Large Scale Military Exercises
- UPR Expansion

ZAN Sector "4" to "4 and 64"



Current Airspace

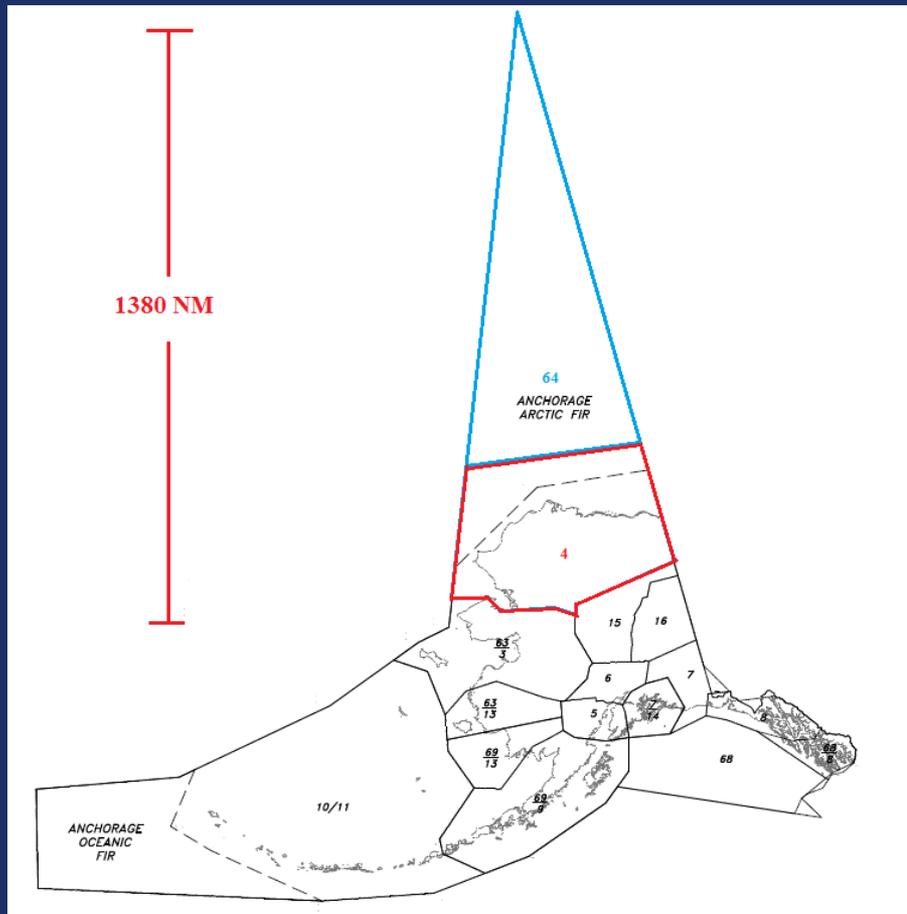
Current - ZAN Sector “4”



- Current Sector 4 utilizes Flight Data Processor 2000 (FDP2K) and Micro En Route Automated Radar Tracking System (MEARTS).
- FDP2K supports Controller / Pilot Data Link (CPDLC) and Air Traffic Services Inter-facility Data Coordination (AIDC).
- MEARTS radar surveillance limited to land based radar sensors.
- FDP2K does not provide conflict detection. MEARTS provides short term, (tactical), conflict “alert.”
- FDP2K does not support FANS Automatic Dependent Surveillance – Contract (ADS-C).
- Unique geometry limits the scale of paper diagrams, i.e. controller charts, thereby limiting the controller’s ability to chart flight paths and determine lateral conflicts and/or flight path de-confliction points.

Result – the need, in the Arctic FIR, for proceduralized airspace.

Future – ZAN Sectors “4” and “64”



- Sector 4 divided into Sectors 4 and 64.
- Division line tentatively set at 73° N.
- Sector 4 continues with FDP2K and MEARTS
- Sector 64 will utilize Advanced Technologies and Oceanic Procedures Ocean 21 system, (ATOP/OC21).
- ATOP supports CPDLC, AIDC and ADS-C.
- Implementation of Sector 64 requires controller staffing + controller training + modification of systems' adaptation (i.e. database) + system testing (stand alone and inter-facility) + correction of any discovered deficiencies.
- Sum total of above variables yields tentative implementation date 1st Qtr. CY 2015.

ZAN ATOP and ADS-B

- FAA's goal is to incorporate Automatic Dependent Surveillance – Broadcast (ADS-B) data into all existing surveillance systems, including ATOP.
- ZAN is the key site (i.e. initial site for deployment) for ATOP ADS-B surveillance.
- Implementation goal is 4th Qtr. FY2014.
- Implementation goal is based on current ADS-B ground infrastructure, i.e. existing radio stations.

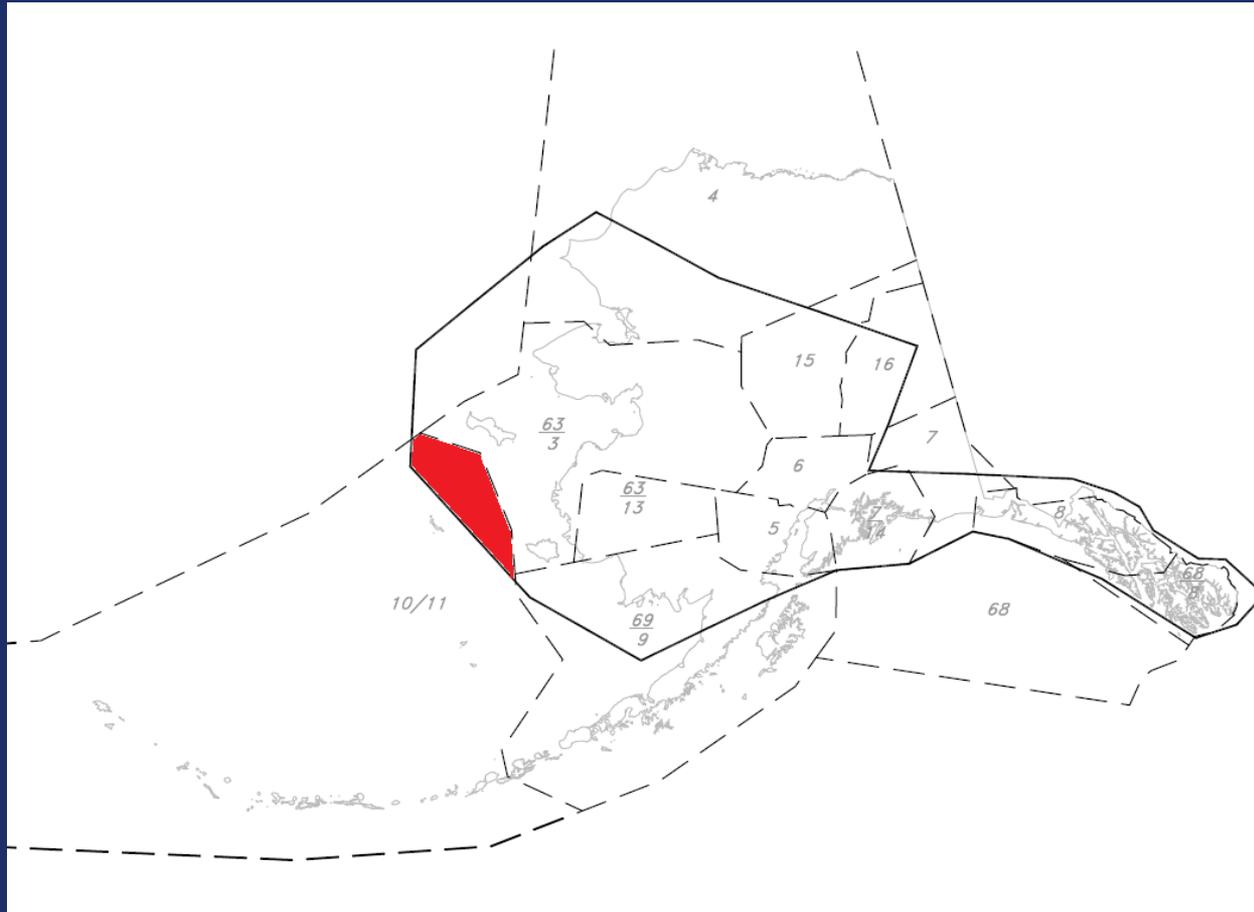
ZAN ATOP and ADS-B

Current Alaska ADS-B Surveillance Area



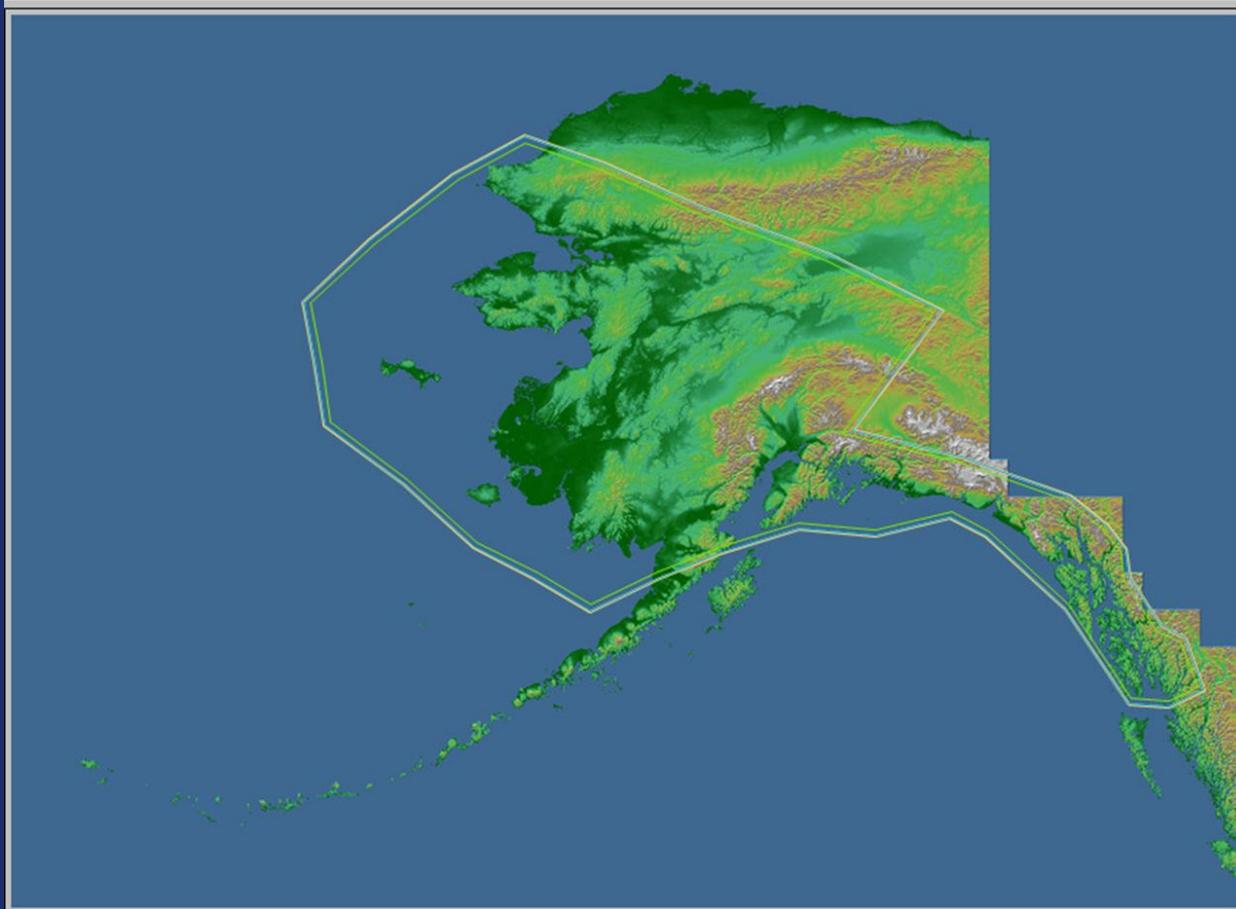
ZAN ATOP and ADS-B

ADS-B Surveillance Area within ATOP



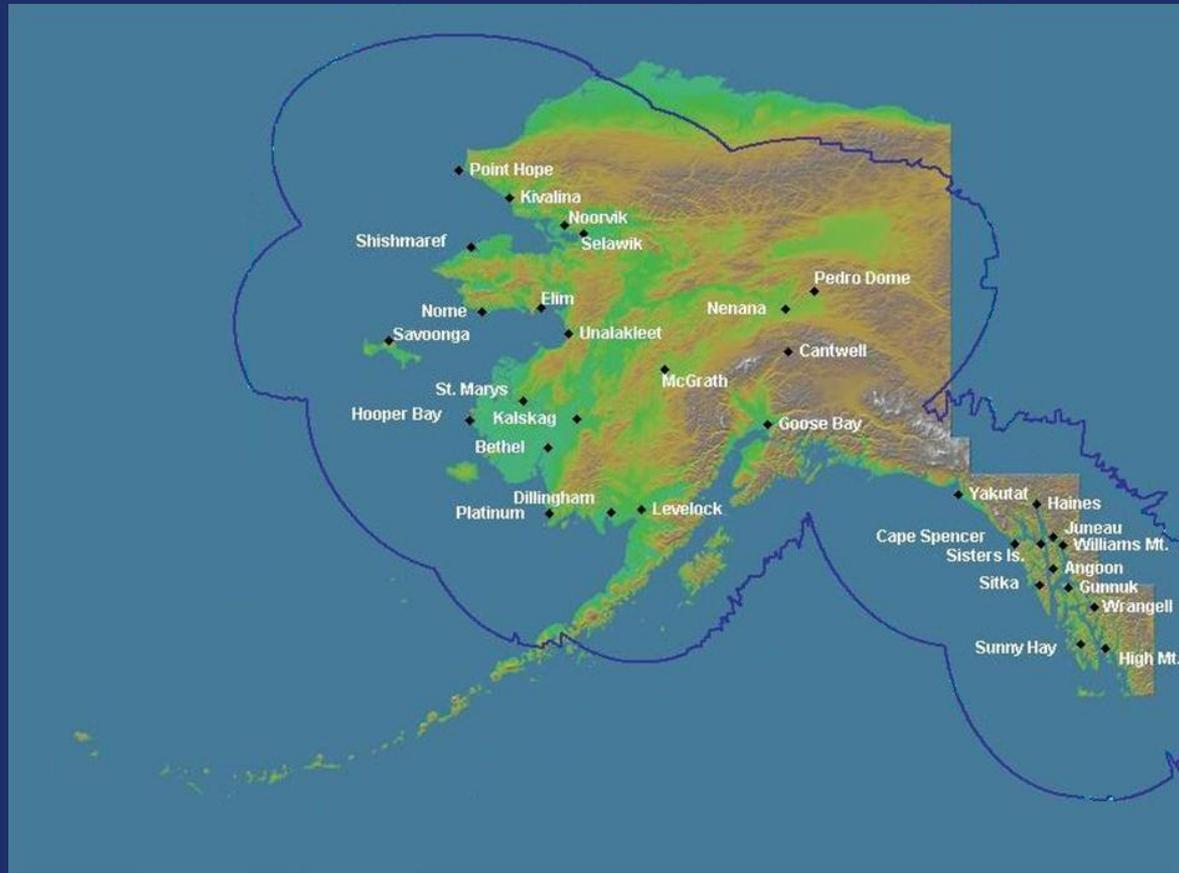
ZAN ATOP and ADS-B

Current Alaska ADS-B Surveillance Area



ZAN ATOP and ADS-B

- Planned installation of additional ADS-B ground interrogators will increase ADS-B coverage over the Alaska Peninsula.



Military Exercises



Military Exercises

- **3 Large scale military exercises planned for remainder of 2014:**
 - Currently ongoing to 6/27/14 “Red Flag 14/02”
 - 8/8/14 to 8/22/14 “Red Flag 14/03”
 - 10/3/14 to 10/17/14 “Red Flag 15/01”
- **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 TMI

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:

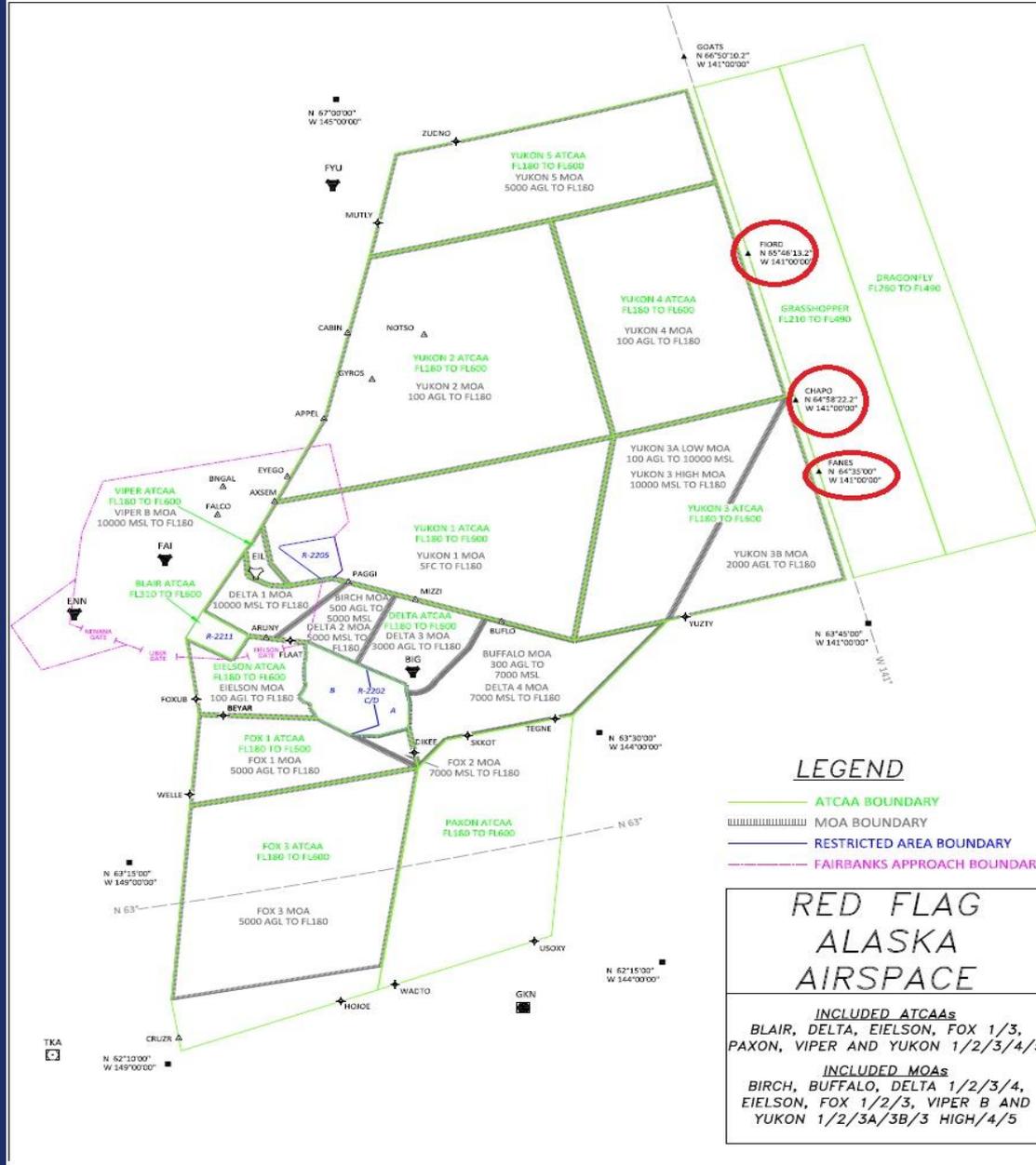
(A) A2, A15 AND B25

(B) V444, V481 AND V515

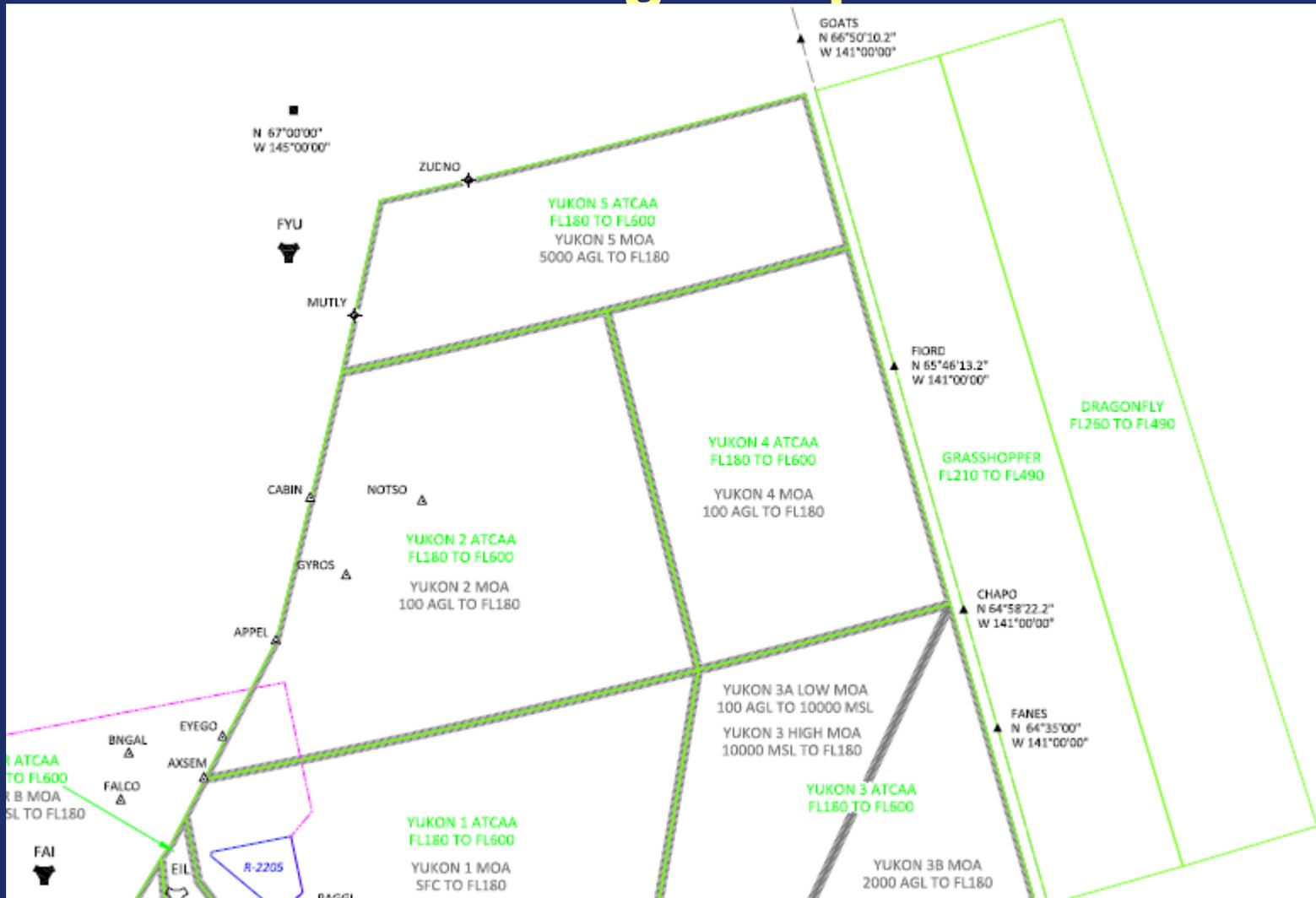
(C) T232 AND T226

(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



Military Exercises

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



ZAN User Preferred Routing (UPR) Modification

- Current ZAN UPR guidance contained in PAZA NOTAM A0073/14 and “Supplement Alaska”
- Based on discussions at CPWG/17, an allowance has been designed for those aircraft capable of FL400 at, or prior, to crossing 170W°
- Revised NOTAM will be published 6/19/2014.

REVISED ZAN UPR NOTAM

Axxx/14 - USER PREFERRED ROUTE (UPR) REQUIREMENTS FOR AIRCRAFT TRANSITING WITHIN THE ANCHORAGE ARTCC FIR.

1. UPR FLIGHTS MAY ENTER/EXIT ANCHORAGE FIR AIRSPACE:

A. ANYWHERE OVER OR EAST OF KATCH PROVIDED FLIGHTS REMAIN IN THE ANCHORAGE FIR AIRSPACE AND NOT RE-ENTER THE EDMONTON (CZEG) FIR.

B. ANYWHERE BETWEEN KATCH AND 152 DEGREES 30 MINUTES WEST LONGITUDE, PROVIDED THE FLIGHT OVERFLIES ONE OF THE FOLLOWING: KATCH, HMPTN, GRIZZ, CJAYY, OR ODK VORTAC;

C. ANYWHERE OVER OR BETWEEN 152 DEGREES 30 MINUTES WEST LONGITUDE AND 170 DEGREES EAST LONGITUDE PROVIDED FLIGHTS DO NOT FLIGHT PLAN THROUGH THE AREA BOUNDED BY 53N162W, 5210N162W, 5210N165W AND 53N165W.

REVISED ZAN UPR NOTAM

2. WESTBOUND FLIGHTS ENTERING PAZA AIRSPACE BETWEEN NCA30 AND NCA10 MUST FLIGHT PLAN OVER ONE OF THE FOLLOWING FIXES: POTAT, GOATS, FIORD, CHAPO, FANES, TIBOY, EMSOW, BIBEM, AYZOL, GAHAM, TOVAD, OMSUN, JAGIT, COHIL OR DEEJA. NON-RNP10 CERTIFIED AIRCRAFT MUST ALSO FILE THE ASSOCIATED NCA ROUTE OR AIRWAY.

3. WESTBOUND FLIGHTS ENTERING THE NOPAC MUST ADHERE TO THE FOLLOWING RESTRICTIONS:

A. MUST JOIN R220 NO FURTHER WEST THAN NATES. (NO FURTHER WEST THAN NIPPI FOR AIRCRAFT ABLE FL400 AT OR BEFORE 170W LONGITUDE.)

B. MUST JOIN R580 NO FURTHER WEST THAN OPAKE. (NO FURTHER WEST THAN OMOTO FOR AIRCRAFT ABLE FL400 AT OR BEFORE 170W LONGITUDE.)

C. A590 IS NOT AVAILABLE.

D. R591 AND G344 ARE NOT AVAILABLE UNLESS DESIGNATED AS WESTBOUND PACOTS TRACKS AND AIRCRAFT MUST CROSS THE FUKUOKA/ANCHORAGE OCEANIC FIR BOUNDARY BETWEEN 0000 UTC AND 0600 UTC. ADDITIONALLY, AIRCRAFT:

1) MUST JOIN R591 NO FURTHER WEST THAN AKISU.

2) MUST JOIN G344 NO FURTHER WEST THEN CUTEE.

REVISED ZAN UPR NOTAM

4. EASTBOUND AIRCRAFT TRANSITIONING FROM THE NOPAC MUST FLIGHT PLAN ONE OF THE FOLLOWING TRANSITIONS:

A. A590: PASRO A590 POWAL

B. R591: AKISU R591 ASPIN

C. G344: CUTEE G344 CARTO, OR CUTEE 48N170E 49N180E (OR A POINT NORTH OF 49N180E), OR CUTEE 49N170E, OR CUTEE 50N170E

5. AIRCRAFT ON ESTABLISHED ROUTES, AIRWAYS, OR PACOTS TRACKS HAVE PRIORITY FOR ALTITUDE ASSIGNMENT OVER UPR FLIGHTS IN THE ANCHORAGE FIR.

6. AIRCRAFT CROSSING NOPAC OR OTHER ATS ROUTES IN NON-RADAR AREAS MAY BE REQUIRED TO DESCEND.

7. FLIGHTS TRANSITING THE RUSSIA/ANCHORAGE FIR BOUNDARY MUST ADHERE TO THE RTE/CP REQUIREMENTS NOTAM.

Questions?



NAV CANADA



Honolulu Control Facility

Operations

Honolulu Control Facility



Federal Aviation
Administration

Oceanic and Offshore Operations AJE-32



Federal Aviation
Administration

New York ARTCC

Update



Federal Aviation
Administration

OWG Charter Update



Federal Aviation
Administration

OWG Charter Update

Current

Background

The OWG has been in place since the early 1990's as a Pacific user/provider working group, chaired by the FAA, Oakland Center. This working group was originally made up of a small cadre of domestic and international carriers and FAA personnel from Oakland Center. The OWG dealt with issues in the Pacific related to improving oceanic operations, capacity and the overall efficiency of service within the Oakland Flight Information Region (FIR). The OWG has been the driving force behind the evolution of the Pacific Organized Track System (PACOTS), the Oakland Center Track Advisory Program, improvements in the evolution of the Dynamic Oceanic Track System (DOTS) and overall improvements in the efficiency of the oceanic ATC system in the Pacific.

OWG Charter Update

Current

Background (2)

Because of the success of the OWG and the broad scope of issues addressed, attendance in regular meetings has grown dramatically. **The OWG has become too large in membership and the scope of issues being addressed involve several other ATC provider states.** The ability to deal with issues in the Pacific for the group had become a cumbersome process. **For this reason, the OWG has decided to re-focus its efforts and develop a charter to support the activities of the Informal South Pacific Air Traffic Services Coordinating Group (ISPACG), Informal Pacific Air Traffic Services Coordinating Group (IPACG) and the Russian American Coordinating Group for Air Traffic (RACGAT).**

OWG Charter Update

Current

Vision

The OWG will serve as a user-provider forum working to improve the safety and efficiency of oceanic air traffic services in the Pacific.

Membership and Meetings

Oakland Center will host and chair OWG meetings. OWG membership is open to all users in the Pacific as well as FAA and international ATS providers. **The meetings will be held quarterly**, as a minimum, and the agenda will be developed through input from all members. The chair will distribute a call for agenda items followed by the distribution of the proposed agenda prior to the meetings.

OWG Charter Update

Current

OWG Procedures; The handling of issues

Issues/recommendations are provided to the OWG through any member. Members may bring subject matter experts as required by the issues. The OWG will prioritize issues; develop recommendations through sub-group activity, as necessary. Upon consensus of the group, recommendations for action or review will be forwarded to either the ATS provider or IPACG/ISPACG.

OWG Charter Update Current

OWG Sub-Group (OWGSG)

- Because of the size of the OWG and the administrative workload, a smaller “Core Group” of members, the OWGSG, has been established. The OWGSG consists of 10 carrier representatives and 10 FAA/International ATS provider representatives. The OWGSG will be tasked by the OWG to review pertinent issues, prioritize them and develop recommendations and reports to be submitted to the OWG for review.
-
- OWGSG will be facilitated by the Air Transport Association (ATA), Western Region Assistant Director, and membership consists of representatives from Japan Airlines (JAL), Northwest (NWA), United (UAL), American (AAL), Korean (KAL), Delta (DAL), Canadian (CDN), Air Canada (ACA), EVA Air (EVA) and Cathay Pacific (CPA). The ATS providers will be represented by FAA, Western-Pacific Region, Oakland Center, Alaska Region, Anchorage Center, FAA Headquarters ATO-230 (ATCSCC), NAV CANADA/Vancouver ACC, Tokyo ACC and JCAB. A quorum is required for OWGSG recommendations. As a minimum, a quorum consists of three user representatives and three ATS provider representatives.

OWG Charter Update

Current

OWG Sub-Group (OWGSG)

- The OWGSG meetings will be conducted on the basis of the issues at hand and at least on the day before the regularly scheduled OWG meeting. The OWGSG is empowered by the OWG to establish Ad Hoc working groups, as necessary, to deal with issues requiring on-going detailed review and evaluation.

OWG Charter Update Proposed

Overall Roles and Responsibilities

- The Oceanic Work Group (OWG) has been in place since the early 1990's as a user/provider working group, partnering to provide for the continued development of effective, streamlined oceanic operations with the goal of increased capacity and the overall efficiency of service within the Pacific Region.

Responsibilities

- To support the activities of the Informal South Pacific Air Traffic Services Coordinating Group (ISPACG), Informal Pacific Air Traffic Services Coordinating Group (IPACG) and the Cross Polar Work Group (CPWG) and make recommendations when appropriate.
- To serve as a user-provider forum working to improve the safety and efficiency of oceanic air traffic services in the Pacific Region.

OWG Charter Update

Proposed

Members

OWG membership is open to:

- Airspace users in the Pacific Region.
- The International Air Transport Association (IATA).
- Interested air navigation service providers (ANSP).
- FAA Air Traffic Control System Command Center (ATCSCC).
- Ancillary Aviation Services providers (e.g., Rockwell Collins ARINC, Mitre Corporation, etc.).
- When necessary, an OWG sub-group (OWGSG) made up of representatives from the general membership may be formed to address major issues brought forward during a meeting. The OWGSG membership will be determined based on the specific issue(s) to be reviewed. The OWGSG is empowered by the OWG to establish Ad Hoc working groups, as necessary, to deal with issues requiring on-going detailed review and evaluation.

OWG Charter Update

Proposed Meetings

- OWG Meetings:
 - Meetings will be held at least twice a year. An optional third meeting may be added midway between the two, if deemed necessary.
 - Oakland Air Route Traffic Control Center (ARTCC) will chair OWG meetings.
 - The agenda for each meeting will be developed through input from all members.
 - The chair will distribute a call for agenda items followed by the distribution of the proposed agenda prior to the meetings.
 - A tentative location for the meeting will be determined by the chair and agreed to by the members.
 - In addition to the physical meeting, a virtual meeting will be broadcast with an associated telephone conference line for those wishing to participate, but unable to attend in person. The meeting URL and conference number and passcode will be included with the agenda.

OWG Charter Update

Proposed

Meetings

- OWGSG Meetings:
- The chairperson for the OWGSG will be selected from the sub-group membership at the time of formation.
- Meetings will be held either face-to-face or online, as agreed to by the sub-group membership.
- A quorum is required for OWGSG recommendations. As a minimum, a quorum consists of two representatives from the airspace users and two ANSP representatives.
- The sub-group will provide updates on their progress at subsequent OWG meetings.

OWG Charter Update Proposed

Issues/Recommendations

- Issues/recommendations may be provided to the OWG through any member. Members may bring subject matter experts as required by the issues.
- The OWG will prioritize issues and develop recommendations as a whole, or through sub-group activity, as necessary.
- Upon consensus of the group, recommendations for action or review will be forwarded to either the ANSP or ISPACG/IPACG.

OWG Charter Update Proposed Reports

- The membership will receive the following:
- The PowerPoint presentation(s) developed for the OWG meeting.
- The synopsis from the OWG meeting.
- Reports and recommendations received from the OWGSG.

Charter Adoption

This Charter was reviewed and adopted at the regular meeting of the OWG held on June 18, 2014 and supersedes the OWG Charter dated May 13, 1997.

Action Item 03-06

- OWG members to provide known status on island airport.



Other Meetings

- **IPACG 40 September 8, 2014
Washington DC**
- **ISPACG 29 Date TBD
Santiago Chile**

Next OWG Meeting

October 8, 2014