FAA Anchorage ARTCC

Federal Aviation Administration

Presented to: Cross Polar Working Group / 21

By: Steve Kessler,
Support Manager for Airspace and Procedures,
Anchorage ARTCC

Date: May 17 – 20, 2016

Anchorage ARTCC (ZAN) Update

- **Anchorage ARTCC - background**
- **Sector “64”**
- **Oceanic Performance**
- **Space Launch Activities**
- **UAS Operations**
- **Large Scale Military Exercises**
- **Traffic Count**

Anchorage ARTCC (ZAN) Update

Anchorage ARTCC – background - Website

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

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

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Anchorage Air Route Traffic Control Center (ZAN)

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Air Traffic Services

- Flight Plan Filing
- Air Route Traffic Control Centers (ARTCC)
- Airport Traffic Control Towers (ATCT)
- Terminal Radar Approach Control Facilities (TRACON)

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Anchorage Air Route Traffic Control Center (ZAN)

Anchorage ARTCC (ZAN) is the northern, eastern and western-most center. It is one of three designated oceanic centers. Anchorage ARTCC has control responsibility for more then two-million square miles of airspace. It has three areas of specialty and 15 sectors. ZAN operates on two separate automation platforms, ATOP (Advanced Technologies Oceanic Procedures) and MEARTS/FDP-2000 (Micro En Route Automated Radar Tracking System). Some of the sectors cover extremely large geographic areas and on average use more communications frequencies per sector than any other facility. RADAR coverage is limited to 55-60% of the airspace.

Resources for Pilots & Dispatchers

Anchorage ARTCC

Anchorage ARTCC
700 North Boniface Parkway
Anchorage, AK 99506

- Contact List

Josh McKinley, Web POC
ZAN Web Site Feedback

Anchorage ARTCC (ZAN) Update

Anchorage ARTCC – background - Air Traffic Facility Personnel

- 167 Employees total
- 64 Controller Work Force
- 52 Trainees
- 19 Front Line Managers (include STMC)
- 3 Operations Managers
- 3 Support Managers
- 9 Support Staff
- 4 Traffic Management Coordinators
- 9 Flight Data Unit
- 4 CWSU Weather Unit

Anchorage ARTCC (ZAN) Update

Anchorage ARTCC – background - Airspace

- **Anchorage Arctic FIR**
- **Anchorage Oceanic FIR**
- **Anchorage Continental FIR**

Anchorage ARTCC (ZAN) Update

Anchorage ARTCC – background - Airspace

Flight Information Regions

- **Oceanic** 229,067 Miles^2 (593,280.8 Km^2)
- **Continental** 1,647,105 Miles^2 (4,265,982 Km^2)
- **Arctic** 551,971 Miles^2 (1,429,598 Km^2)
- **Total** 2,427,971 Miles^2 (6,288,416 Km^2)

Anchorage ARTCC (ZAN) Update

Anchorage ARTCC – background - Airspace and Structure

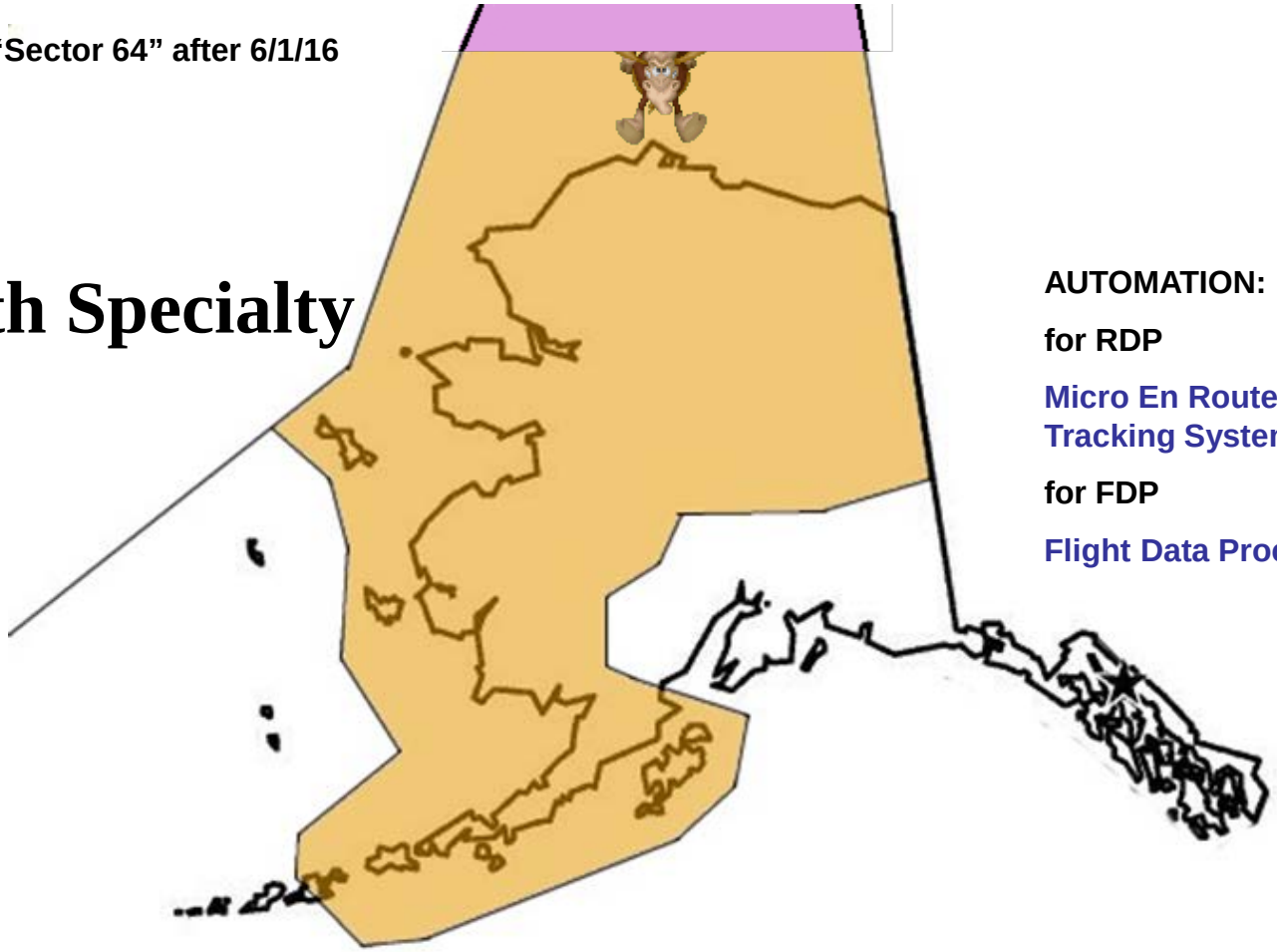
Three Areas of Specialization: North, South and High

Anchorage ARTCC (ZAN) Update

Anchorage ARTCC – background - Airspace and Structure

"Sector 64" after 6/1/16

North Specialty



AUTOMATION:

for RDP

Micro En Route Automated Radar Tracking System – MEARTS

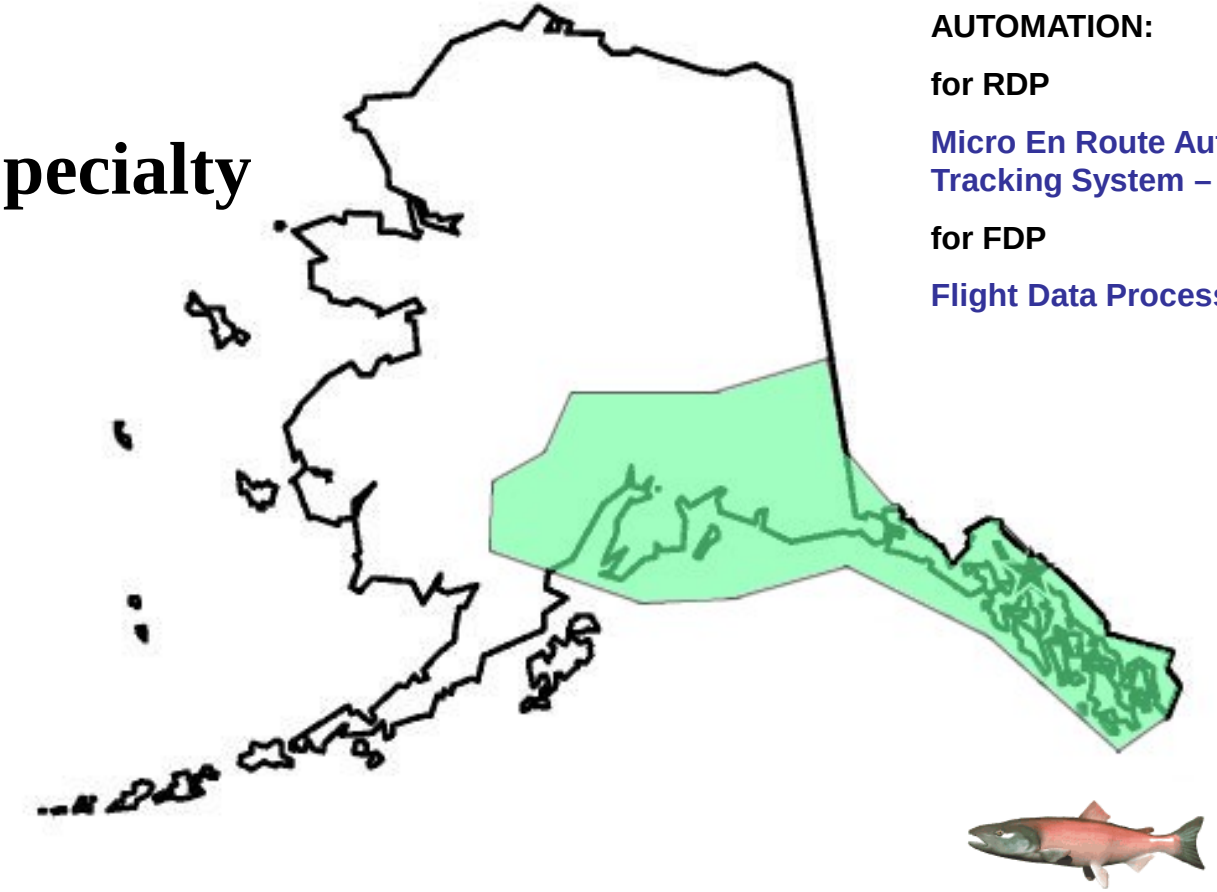
for FDP

Flight Data Processor 2000 – FDP200

Anchorage ARTCC (ZAN) Update

Anchorage ARTCC – background - Airspace and Structure

South Specialty



AUTOMATION:

for RDP

Micro En Route Automated Radar Tracking System – MEARTS

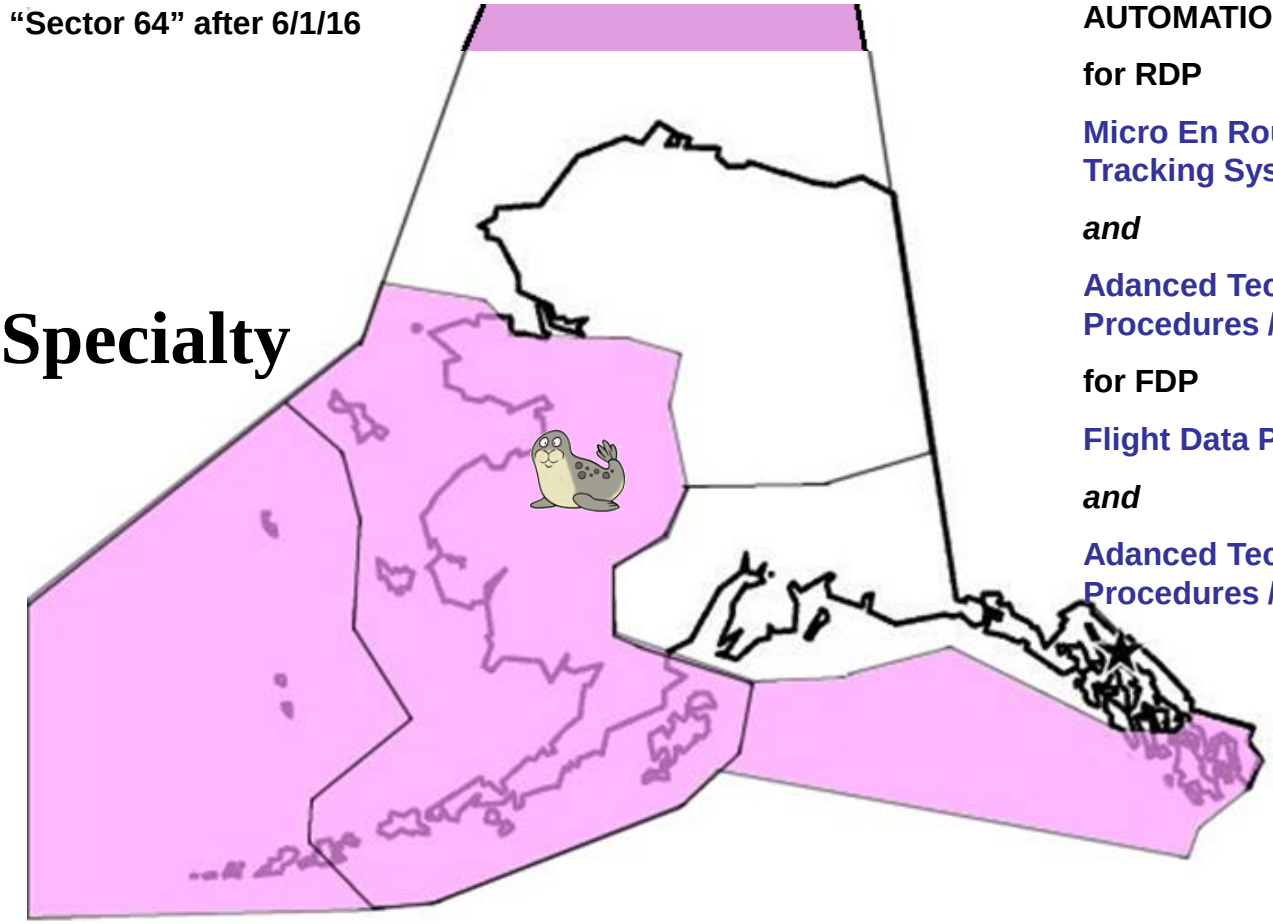
for FDP

Flight Data Processor 2000 – FDP200

Anchorage ARTCC (ZAN) Update

Anchorage ARTCC – background - Airspace and Structure

High Specialty



AUTOMATION:

for RDP

Micro En Route Automated Radar Tracking System – MEARTS

and

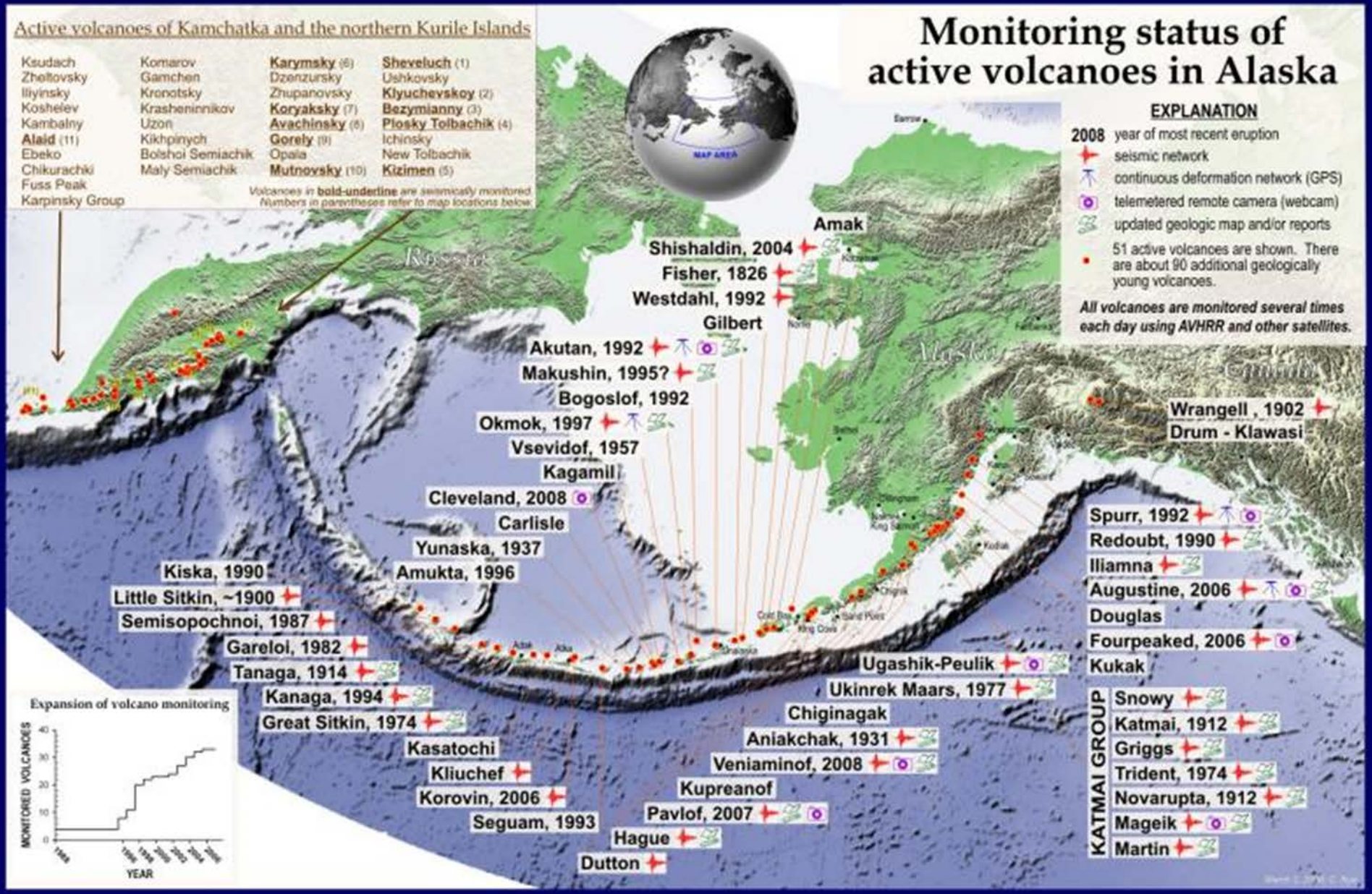
Adanced Technologies and Oceanic Procedures / Ocean 21 – ATOP/OC21

for FDP

Flight Data Processor 2000 – FDP2000

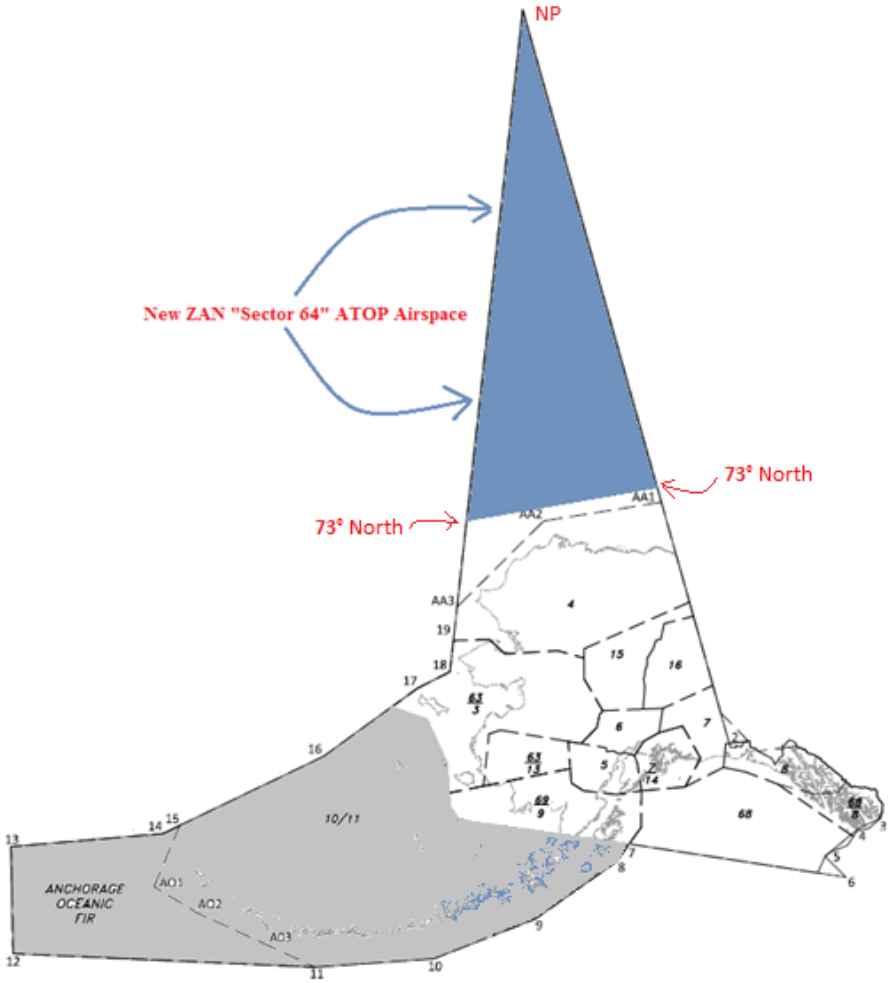
and

Adanced Technologies and Oceanic Procedures / Ocean 21 – ATOP/OC21


Active volcanoes of Kamchatka and the northern Kurile Islands
Ksudach
Zheltovsky
Iliyinsky
Koshelev
Kambalny
Alaid (11)
Ebeko
Chikurachki
Fuss Peak
Karpinsky Group
Komarov
Gamchen
Kronotsky
Krasheninnikov
Uzon
Kikhpinych
Bolshoi Semiachik
Maly Semiachik
Karymsky (6)
Dzenzursky
Zhupanovsky
Koryaksky (7)
Avachinsky (8)
Gorely (9)
Opala
Mutnovsky (10)
Sheveluch (1)
Ushkovsky
Klyuchevskoy (2)
Bezymianny (3)
Plosky Tolbachik (4)
Ichinsky
New Tolbachik
Kizimen (5)
Volcanoes in bold-underline are seismically monitored
Numbers in parentheses refer to map locations below
Monitoring status of active volcanoes in Alaska
MAP AREA
EXPLANATION
2008 year of most recent eruption
seismic network
continuous deformation network (GPS)
telemetered remote camera (webcam)
updated geologic map and/or reports
51 active volcanoes are shown. There are about 90 additional geologically young volcanoes.
All volcanoes are monitored several times each day using AVHRR and other satellites.
Amak
Shishaldin, 2004
Fisher, 1826
Westdahl, 1992
Gilbert
Akutan, 1992
Makushin, 1995?
Bogoslof, 1992
Okmok, 1997
Vsevidof, 1957
Kagamil
Cleveland, 2008
Carlisle
Yunaska, 1937
Amukta, 1996
Kiska, 1990
Little Sitkin, ~1900
Semisopochnoi, 1987
Gareloi, 1982
Tanaga, 1914
Kanaga, 1994
Great Sitkin, 1974
Kasatochi
Kliuchef
Korovin, 2006
Seguam, 1993
Hague
Dutton
Wrangell , 1902
Drum - Klawasi
Spurr, 1992
Redoubt, 1990
Iliamna
Augustine, 2006
Douglas
Fourpeaked, 2006
Kukak
Ugashik-Peulik
Ukinrek Maars, 1977
Chiginagak
Aniakchak, 1931
Veniaminof, 2008
Kupreanof
Pavlof, 2007
KATMAI GROUP
Snowy
Katmai, 1912
Griggs
Trident, 1974
Novarupta, 1912
Mageik
Martin
Expansion of volcano monitoring
MONITORED VOLCANOES
YEAR

Anchorage ARTCC (ZAN) Update

Anchorage ARTCC – Sector “64”



Anchorage ARTCC (ZAN) Update

Anchorage ARTCC – Sector “64”

- Implementation planned for 18:00 UTC on 6/1/2016.
- Flight Plans for aircraft transiting Anchorage Arctic FIR need to be filed with both PAZNZQZX and PAZAZQZX.
- Anchorage will be establishing ADS-C contracts with FANS1/A equipped aircraft.
- Auto FANS address forwarding will be completed to both GDXB, for aircraft entering Magadan airspace, and CZEG, for aircraft entering Edmonton airspace.
- ADS-C position report data and ATOP operational experience will be used to determine airspace efficiencies (i.e. removal of routing restrictions). Update will be provided at CPWG/22.

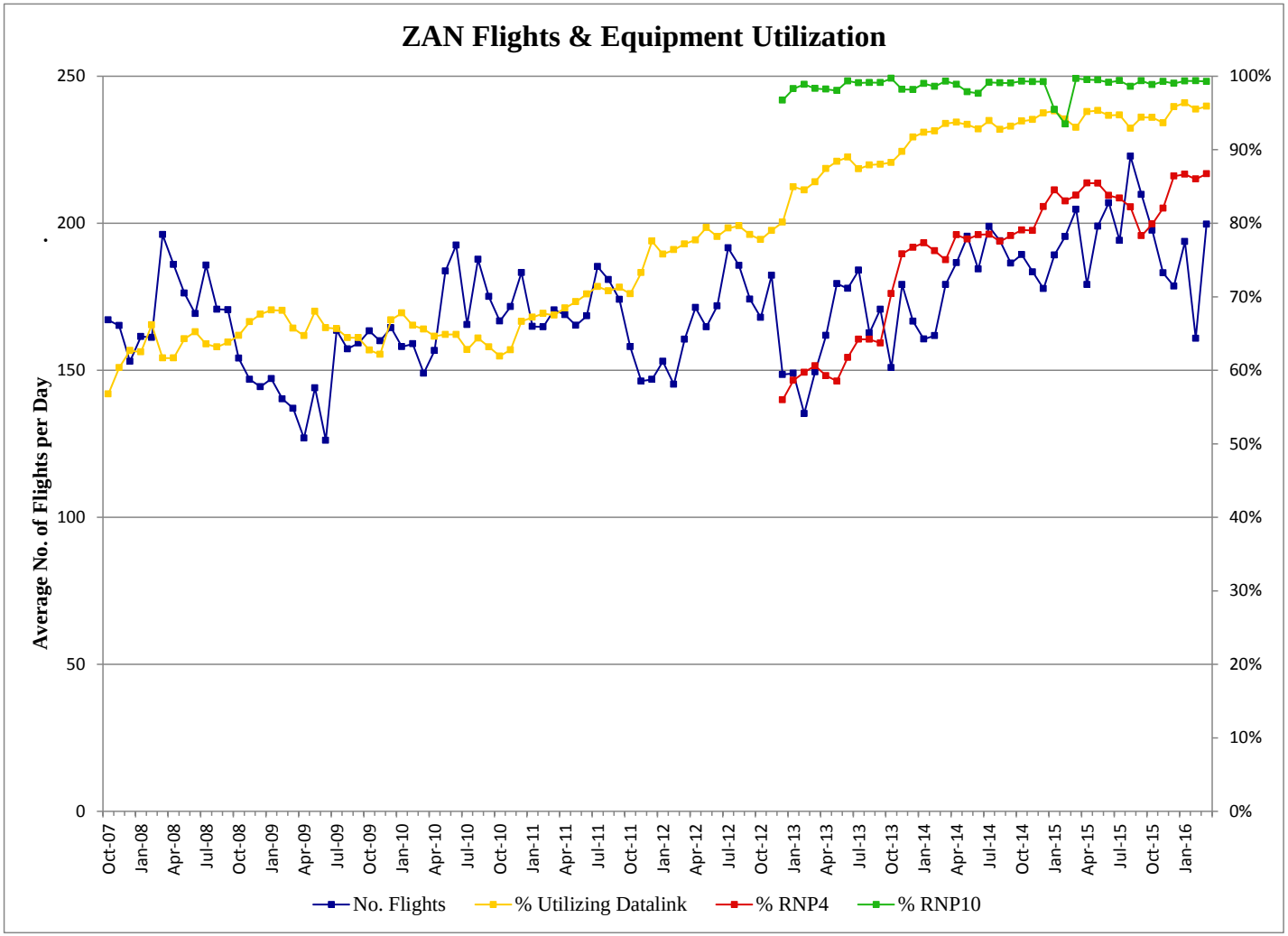
Anchorage ARTCC (ZAN) Update

Anchorage ARTCC - Oceanic Performance

The Advanced Technologies and Oceanic Procedures / Ocean 21 system (ATOP/OC21) permits FAA to gather data vis-à-vis Oceanic operations. The following charts provide a visual presentation of this selected data.

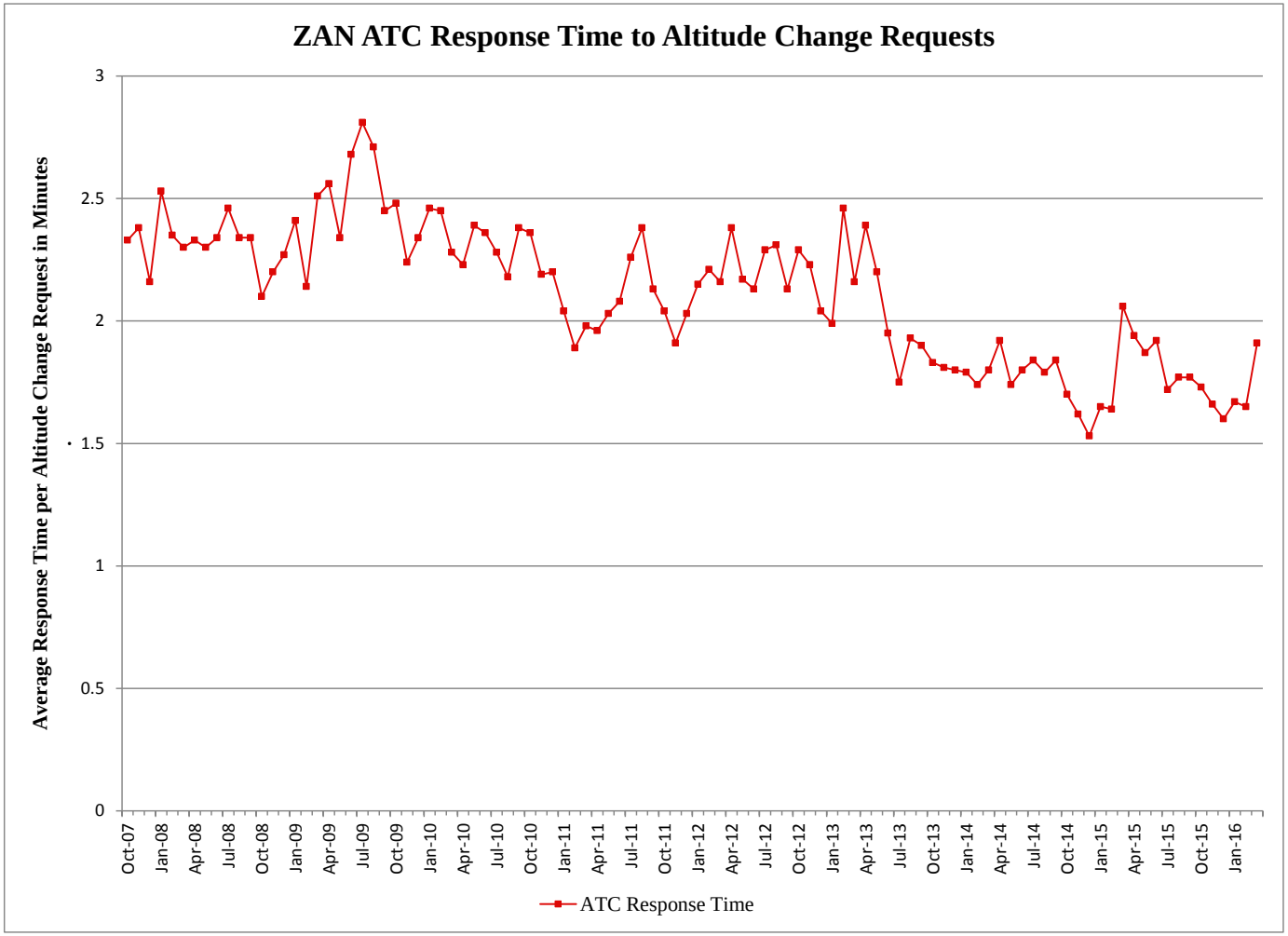
Anchorage ARTCC (ZAN) Update

Anchorage ARTCC Oceanic Performance



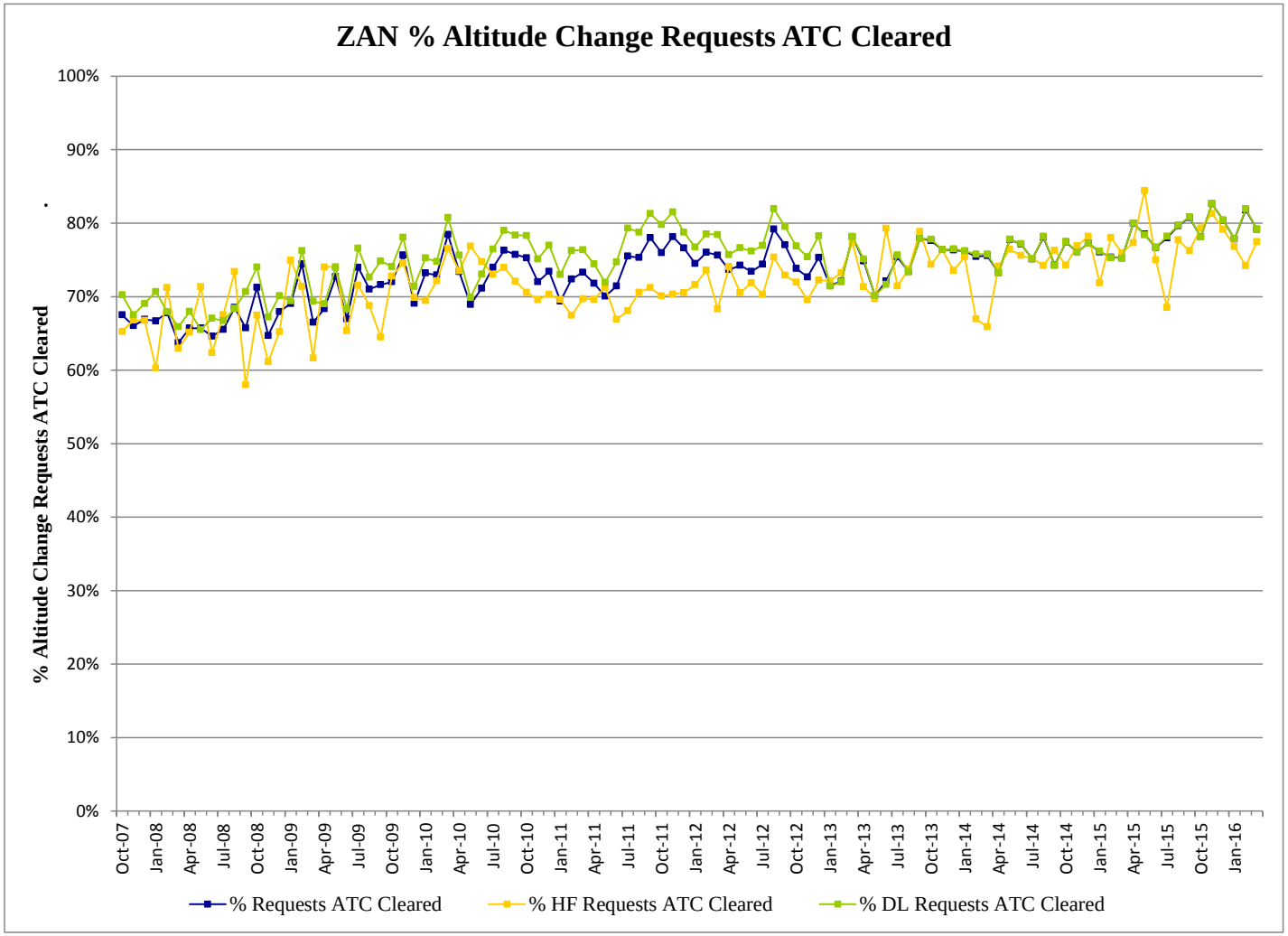
Anchorage ARTCC (ZAN) Update

Anchorage ARTCC - Oceanic Performance



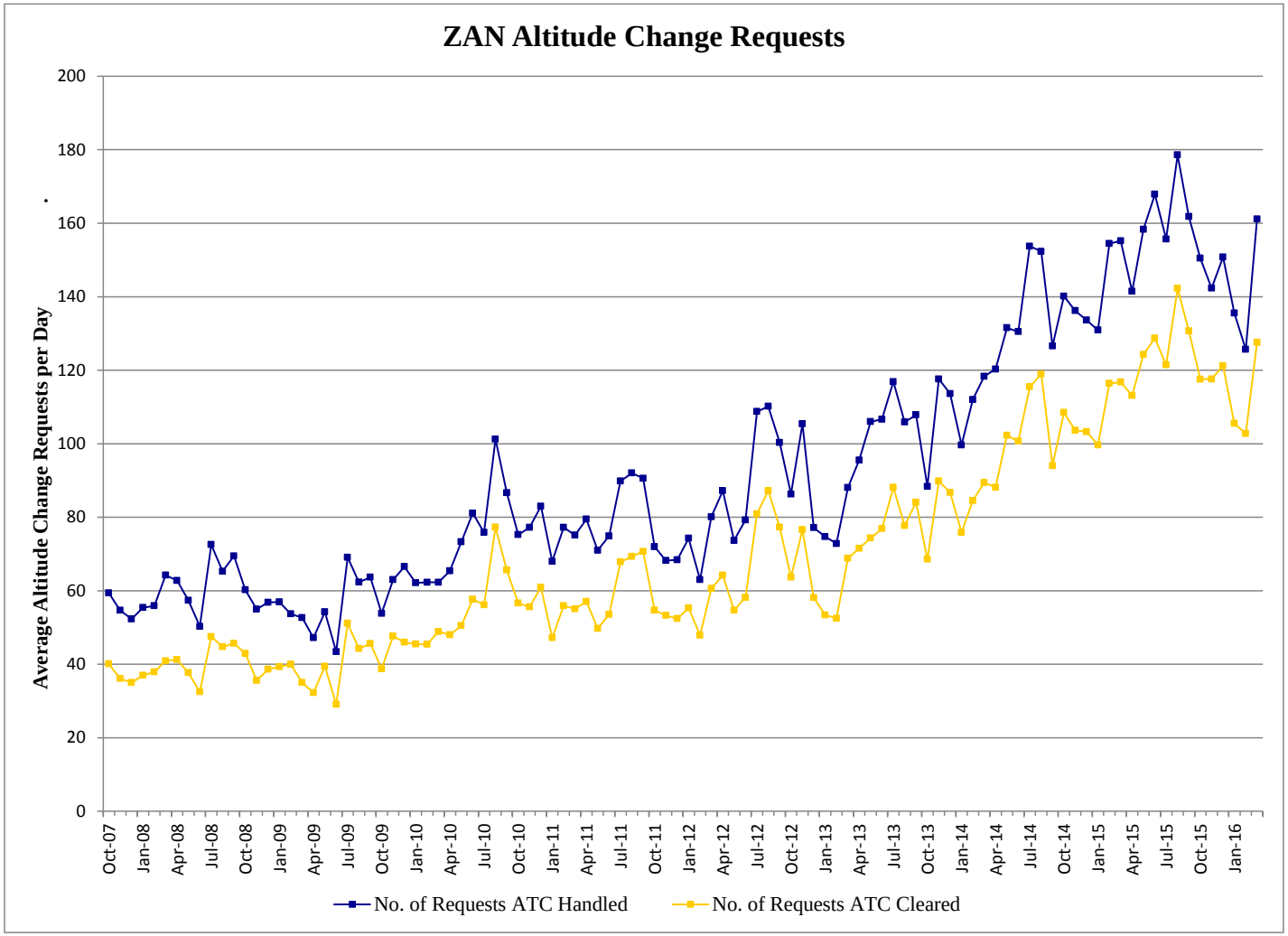
Anchorage ARTCC (ZAN) Update

Anchorage ARTCC - Oceanic Performance



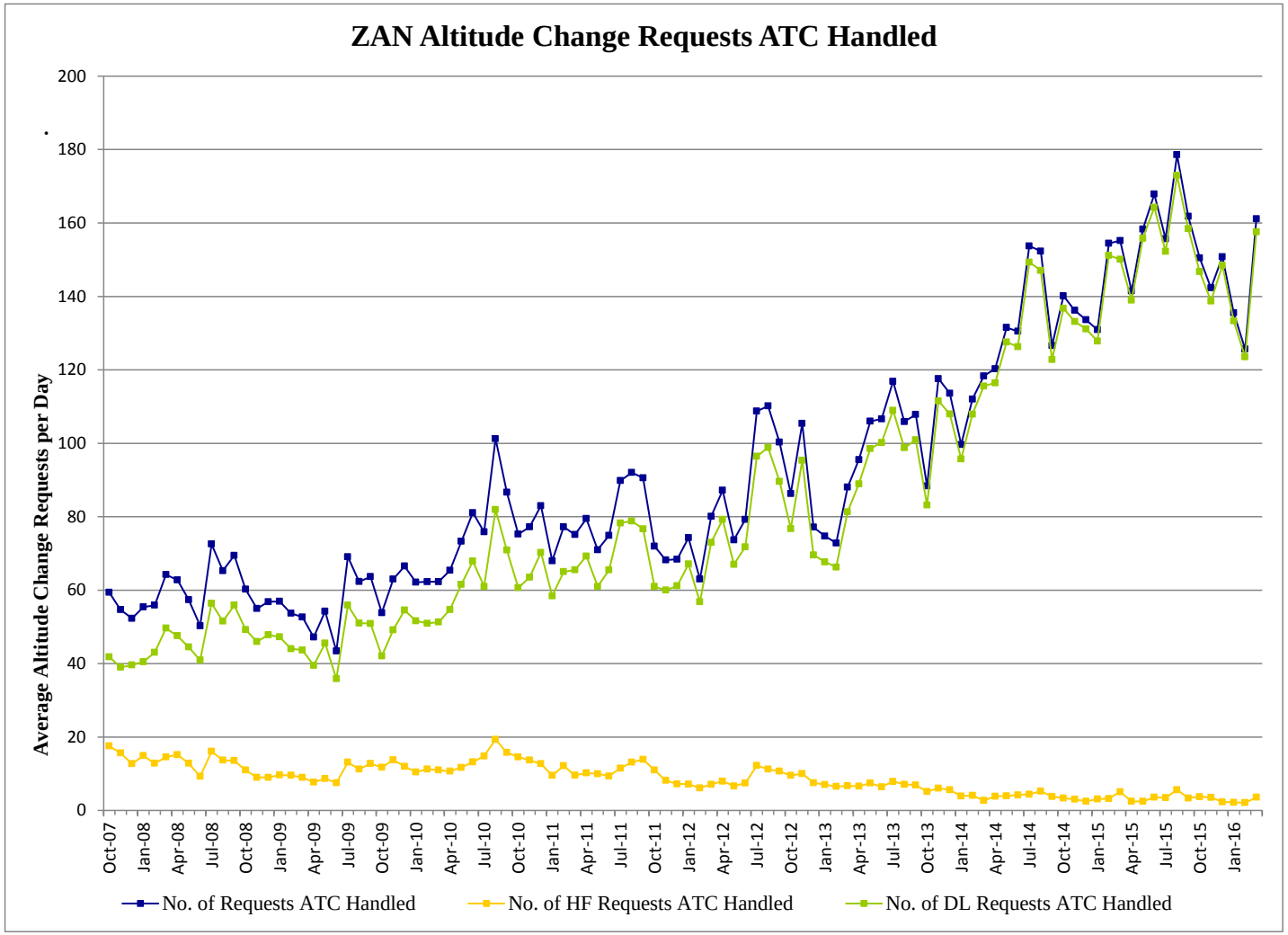
Anchorage ARTCC (ZAN) Update

Anchorage ARTCC - Oceanic Performance



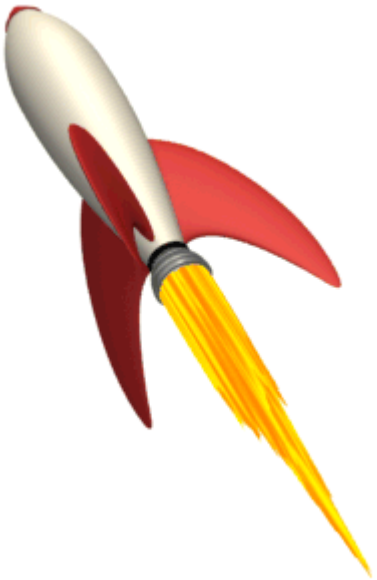
Anchorage ARTCC (ZAN) Update

Anchorage ARTCC - Oceanic Performance



Anchorage ARTCC (ZAN) Update

Anchorage ARTCC - Space Launch Activities



- **No scheduled (known) launch activities affecting Anchorage FIRs**

Anchorage ARTCC (ZAN) Update

Anchorage ARTCC - Unmanned Aircraft Systems (UAS)

No scheduled (known) high altitude / oceanic UAS activities affecting Anchorage FIRs

Anchorage ARTCC (ZAN) Update

Anchorage ARTCC - Military Exercises

Anchorage ARTCC (ZAN) Update

Anchorage ARTCC - Military Exercises

- **Large scale military exercises planned for 2016:**
  - Red Flag 16-2 dates 03 Jun – 17 Jun, 2016
  - Red Flag 16-3 dates 05 Aug – 19 Aug, 2016
  - Red Flag 17-1 dates 07 Oct – 21 Oct, 2016

- **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.**

Anchorage ARTCC (ZAN) Update

Anchorage ARTCC - Military Exercises

Red Flag TMIs

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

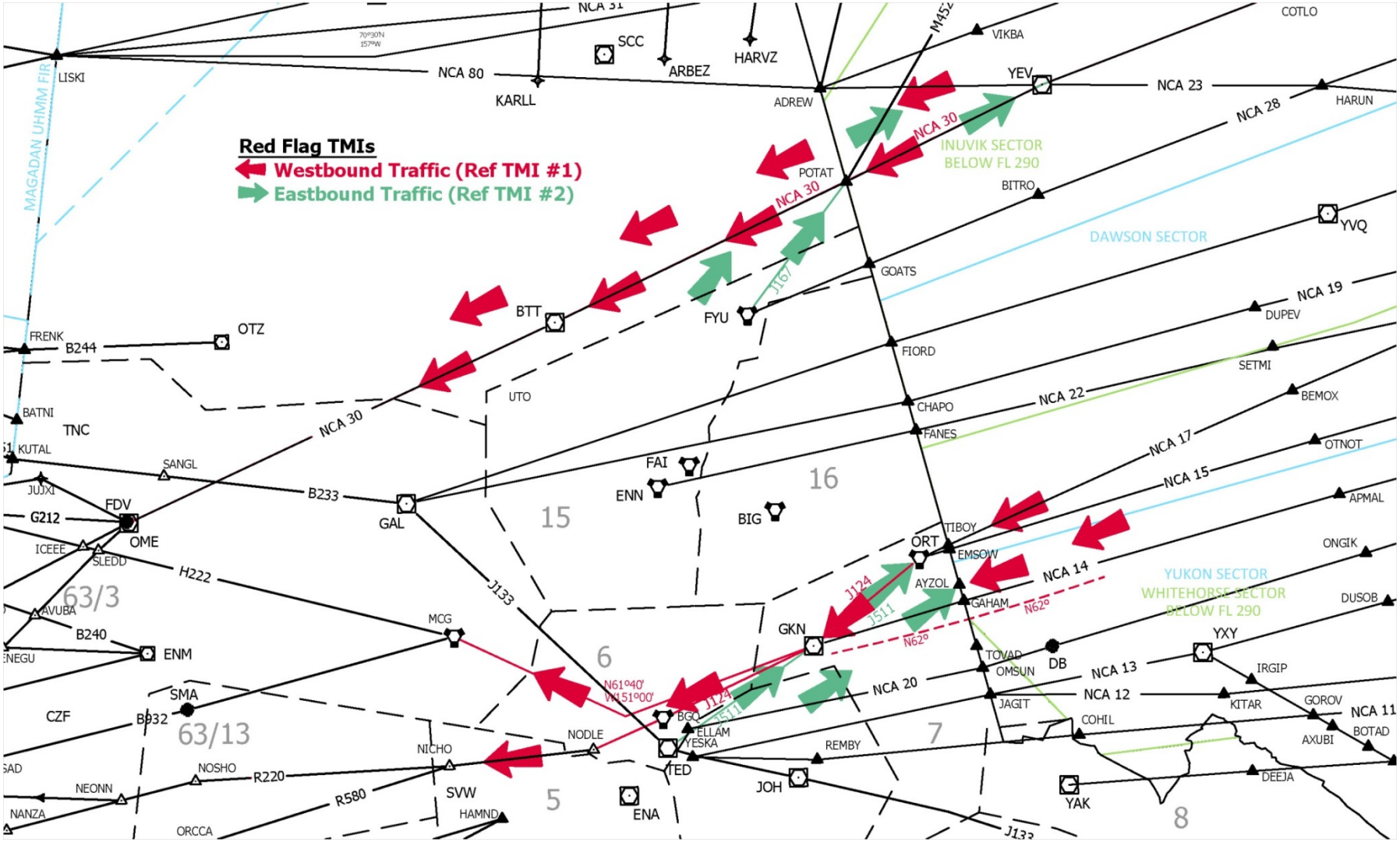
2) ***ALL EASTBOUND FLIGHTS TRANSITING THE ANCHORAGE FIR SHALL FLIGHT PLAN VIA ONE OF THE FOLLOWING***:

(A) ON OR NORTH OF FYU J167 POTAT NCA30

(B) OVER OR SOUTH OF ANC J511 GKN J124 ORT

Anchorage ARTCC (ZAN) Update

Anchorage ARTCC - Military Exercises



Anchorage ARTCC (ZAN) Update

Anchorage ARTCC - Military Exercises

Red Flag TMIs

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***

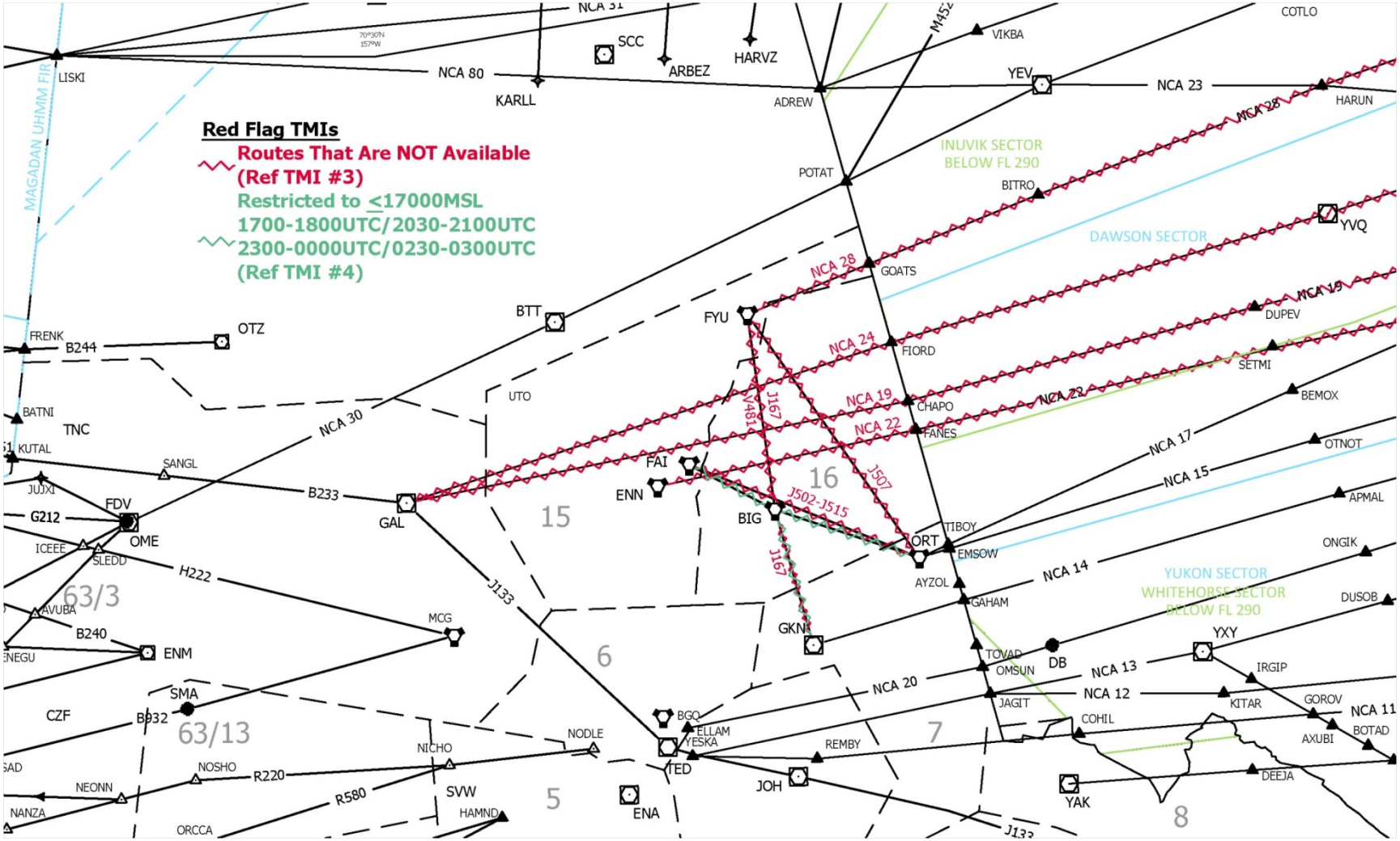
(D) V481 BETWEEN BIG AND FYU

(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.

Anchorage ARTCC (ZAN) Update

Anchorage ARTCC - Military Exercises



Anchorage ARTCC (ZAN) Update

Anchorage ARTCC - Military Exercises

Red Flag TMIs

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

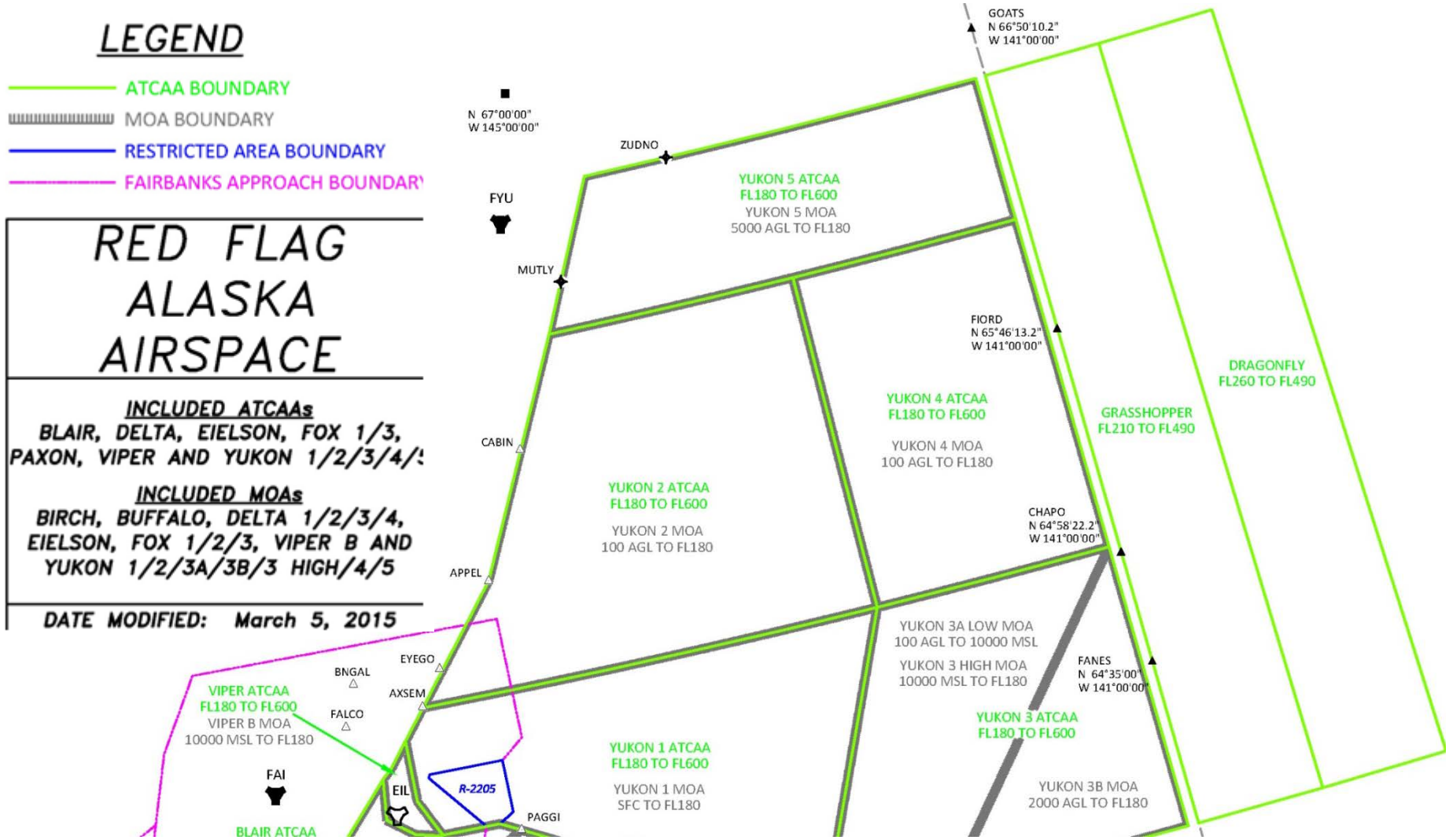
(C) T232 AND T226

(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.

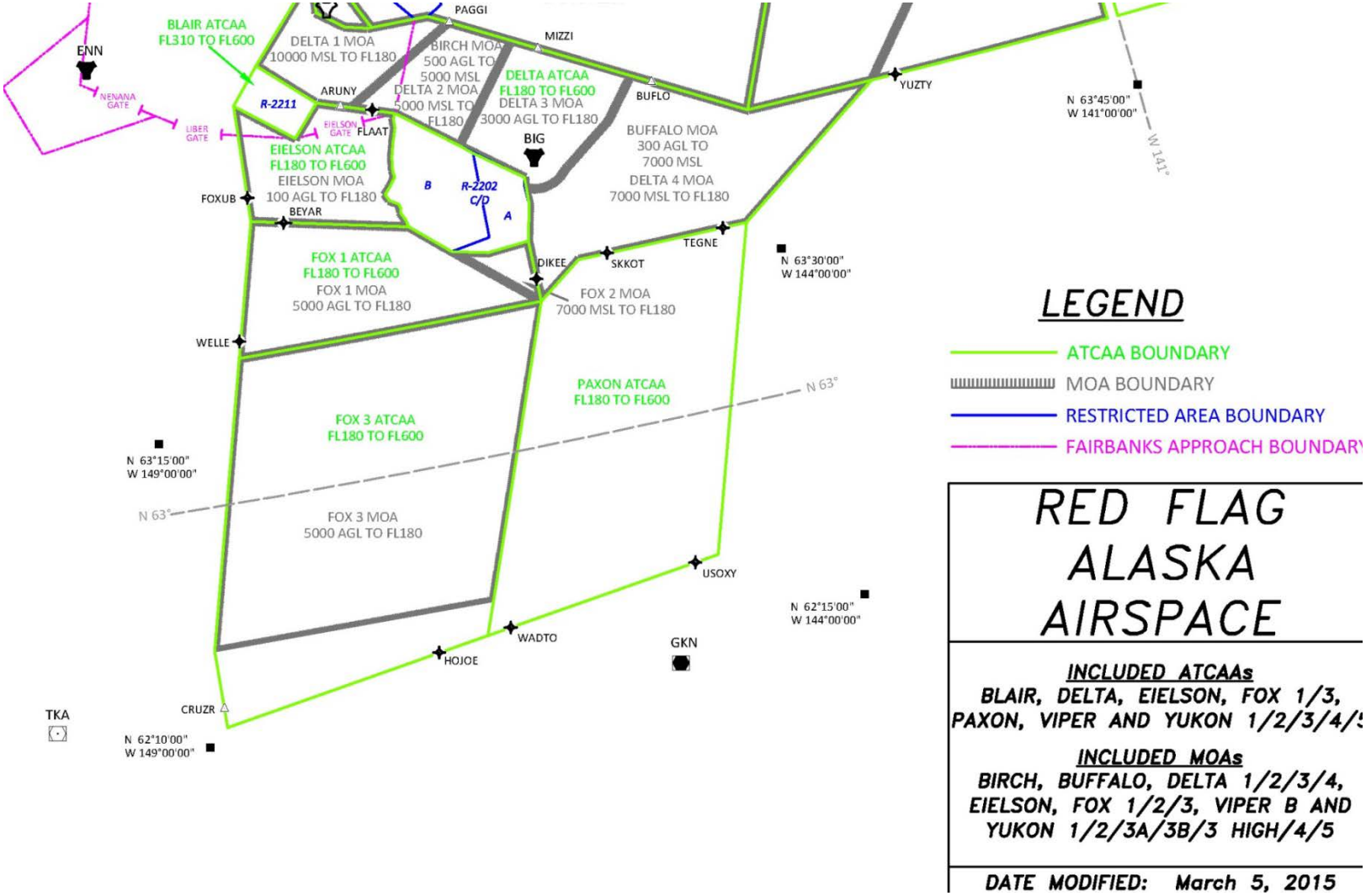
Anchorage ARTCC (ZAN) Update

Anchorage ARTCC - Military Exercises



Anchorage ARTCC (ZAN) Update

Anchorage ARTCC - Military Exercises



Anchorage ARTCC (ZAN) Update

Anchorage ARTCC - Military Exercises

Refer to NOTAMs and

FAA's "SUA" website - http://sua.faa.gov

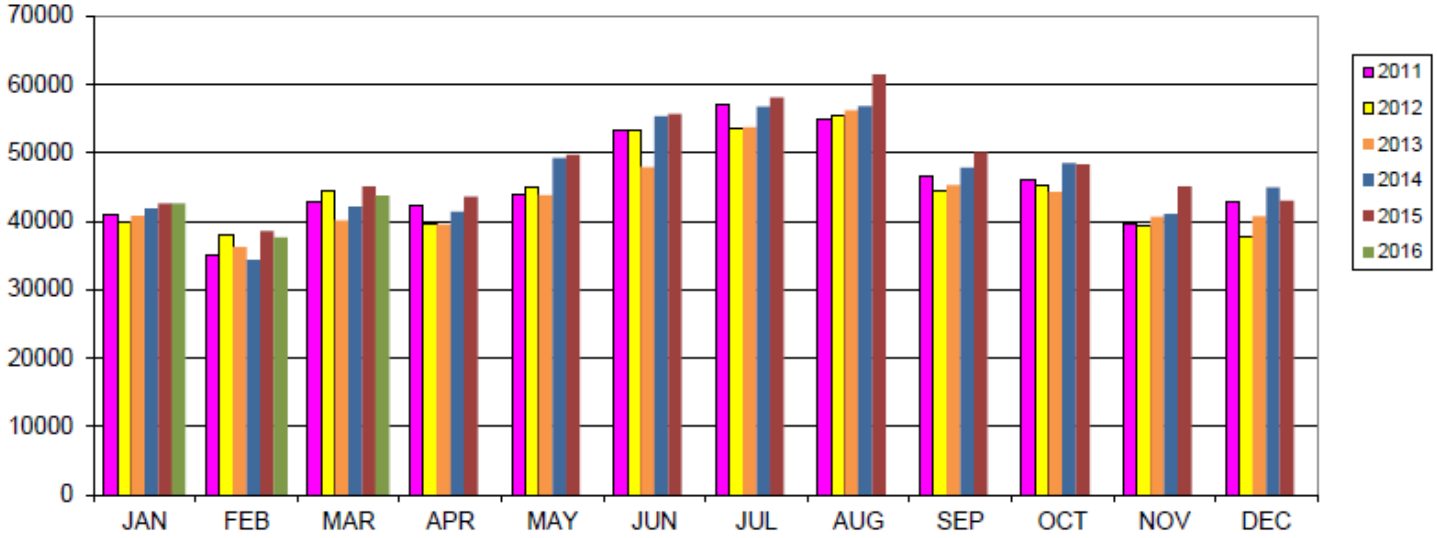
for updated Special Use Airspace information

Anchorage ARTCC (ZAN) Update

Anchorage ARTCC - Traffic Count

Total Facility

	2011	2012	2013	2014	2015	2016
JAN	40841	39982	40761	41896	42631	42588
FEB	35074	37909	36213	34342	38544	37626
MAR	42750	44344	40090	42091	45089	43765
APR	42285	39622	39482	41358	43626	0
MAY	43866	45085	43815	49224	49695	0
JUN	53225	53173	47914	55353	55700	0
JUL	56989	53573	53756	56752	58107	0
AUG	54995	55355	56217	56797	61453	0
SEP	46635	44524	45292	47812	50044	0
OCT	46187	45132	44277	48511	48279	0
NOV	39616	39457	40642	41037	45070	0
DEC	42907	37824	40738	44914	43006	0
Total	545370	535980	529197	560087	581244	123979
% Chang	2%	-2%	-1%	6%	4%	-79%

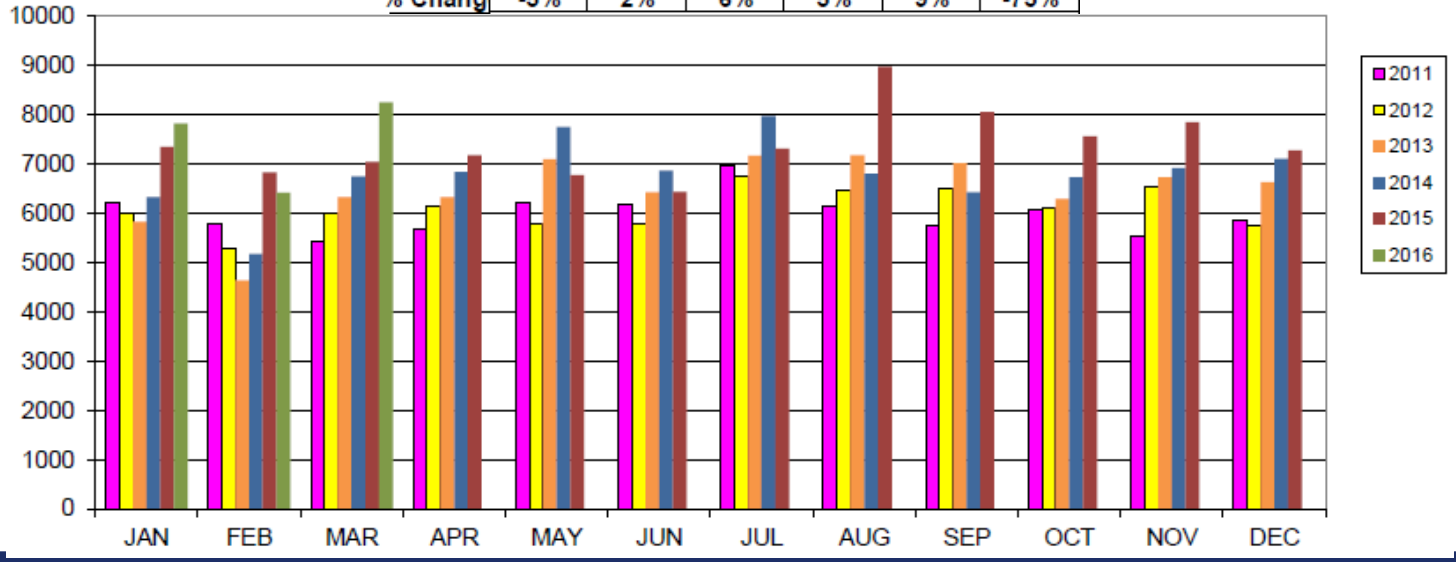


Anchorage ARTCC (ZAN) Update

Anchorage ARTCC - Traffic Count

Oceanic

	2011	2012	2013	2014	2015	2016
JAN	6205	6016	5825	6331	7344	7816
FEB	5783	5281	4637	5169	6829	6420
MAR	5437	5986	6334	6752	7045	8253
APR	5684	6150	6330	6842	7182	0
MAY	6207	5772	7096	7752	6775	0
JUN	6199	5792	6433	6864	6437	0
JUL	6984	6738	7166	7977	7309	0
AUG	6161	6458	7179	6803	8978	0
SEP	5752	6489	7018	6430	8058	0
OCT	6072	6116	6291	6731	7558	0
NOV	5536	6540	6733	6914	7849	0
DEC	5859	5738	6635	7107	7275	0
Total	71879	73076	77677	81672	88639	22489
% Chang	-5%	2%	6%	5%	9%	-75%



Anchorage ARTCC (ZAN) Update

Anchorage ARTCC - Traffic Count

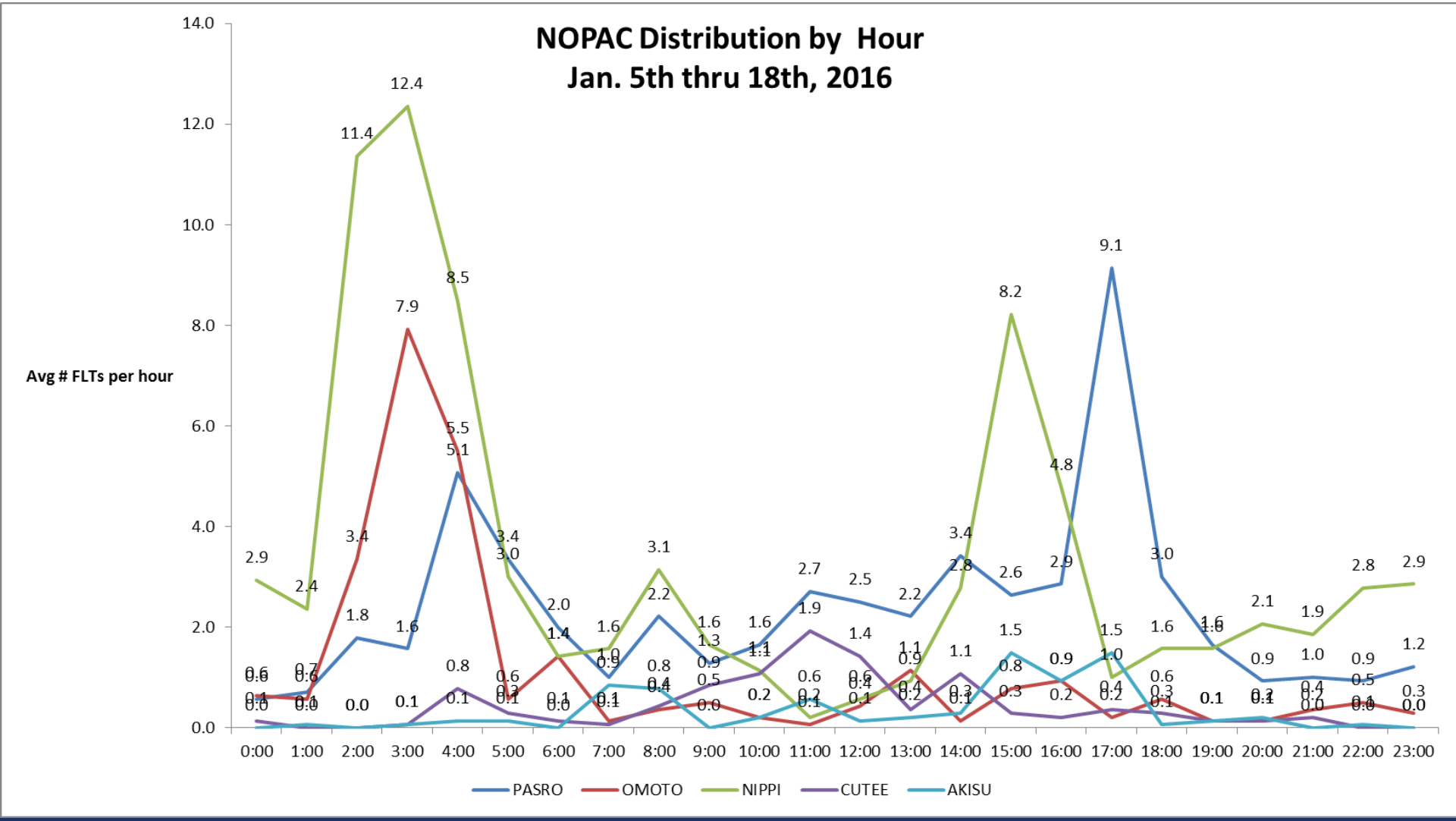
NOPAC*

	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
JAN	5122	5103	5047	4769	5188	5336	5354	4668	4167	6163	6284
FEB	4609	5021	4381	4043	4765	4925	4428	3708	4288	5653	4953
MAR	6022	7632	6365	4513	4682	4564	4888	4896	5547	5661	6719
APR	6083	6923	6107	4109	4967	4908	5214	5284	5780	5688	0
MAY	5394	7224	5461	4563	6094	5304	4749	5938	6289	5435	0
JUN	6088	7440	4947	3958	6050	5225	4853	5489	5649	5533	0
JUL	6144	7540	5583	5279	5524	5947	5737	6020	6409	5732	0
AUG	6273	7584	5385	5524	6192	4892	5479	5991	5188	7346	0
SEP	5772	7462	5322	5147	5514	4711	5316	5761	5021	6618	0
OCT	5782	6750	4928	5131	5291	5018	5203	4887	5192	5920	0
NOV	5796	6231	4600	5044	5321	4363	5598	5627	5673	6258	0
DEC	4933	5204	4662	5354	5710	4678	4588	5145	5674	5811	0
Total	**68018**	**80114**	**62788**	**57434**	**65298**	**59871**	**61407**	**63414**	**64877**	**71818**	**17956**
% Change		**18%**	**-22%**	**-9%**	**14%**	**-8%**	**3%**	**3%**	**2%**	**11%**	**-75%**

*** "NOPAC" equals "Oceanic" minus "Cross Polar"**

Anchorage ARTCC (ZAN) Update

Anchorage ARTCC - Traffic Count

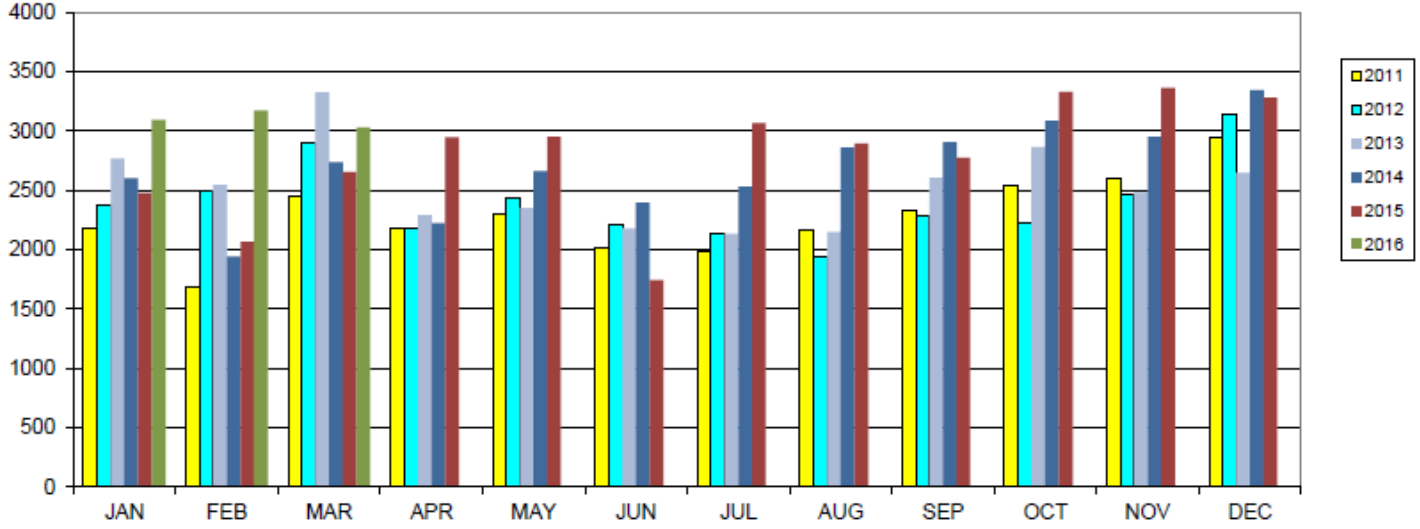


Anchorage ARTCC (ZAN) Update

Anchorage ARTCC - Traffic Count

Cross Polar and RFE

	2011	2012	2013	2014	2015	2016
JAN	2188	2383	2768	2605	2481	3094
FEB	1690	2499	2544	1943	2067	3173
MAR	2453	2904	3326	2738	2655	3028
APR	2184	2176	2294	2223	2949	0
MAY	2297	2442	2351	2664	2951	0
JUN	2016	2215	2179	2395	1741	0
JUL	1983	2136	2134	2529	3067	0
AUG	2159	1942	2148	2861	2894	0
SEP	2333	2280	2608	2905	2776	0
OCT	2538	2225	2867	3089	3330	0
NOV	2603	2473	2482	2951	3363	0
DEC	2939	3134	2647	3346	3281	0
Total	27383	28809	30348	32249	33555	9295
% Increas	17%	5%	5%	6%	4%	-72%



Anchorage ARTCC (ZAN) Update

Anchorage ARTCC - Traffic Count

Cross Polar Distribution

2015

2015	DEVID		NALIM		LURUN		RAMEL		PINAG		LETUN		NIKIN		SALET		ORVIT		AMATI		BEKER		BARIP		PILUN		LISKI		TOTAL
	E	W	E	W	E	W	E	W	E	W	E	W	E	W	E	W	E	W	E	W	E	W	E	W	E	W	E	W	
JAN	4	43	0	1	1	51	4	126	1	36	0	0	7	107	0	0	62	123	19	21	0	0	0	0	192	111	101	171	1181
FEB	3	12	0	1	1	25	10	124	10	75	0	0	10	118	0	0	29	184	21	23	0	0	0	0	162	105	126	137	1176
MAR	1	26	1	2	0	53	8	170	4	56	0	0	7	124	5	6	52	197	27	27	0	0	23	11	131	148	91	214	1384
APR	0	27	0	2	2	43	18	162	3	129	0	0	9	95	5	16	39	170	44	19	0	0	7	12	69	224	65	334	1494
MAY	1	21	0	0	2	35	10	103	9	52	0	0	32	69	13	11	83	171	47	17	0	0	20	5	125	168	121	225	1340
JUN	0	0	1	6	2	83	1	136	4	56	0	0	11	38	5	10	38	104	17	12	0	0	10	9	71	112	73	105	904
JUL	2	22	2	7	16	126	39	157	7	87	0	0	18	62	15	16	87	229	36	26	0	0	18	12	123	127	123	220	1577
AUG	1	14	2	6	12	64	34	125	14	64	0	0	27	84	10	31	58	313	24	47	0	0	37	34	143	173	145	170	1632
SEP	7	17	1	3	1	41	9	120	5	81	0	0	27	99	5	26	36	240	36	39	0	0	10	37	98	195	104	203	1440
OCT	1	22	0	6	1	67	5	230	0	90	0	0	19	87	3	16	28	241	26	42	0	0	49	33	161	161	131	219	1638
NOV	1	9	0	1	0	41	3	154	0	130	0	4	5	83	3	38	17	262	13	34	0	0	14	52	85	184	69	389	1591
DEC	1	11	0	1	0	64	2	150	0	63	2	24	13	87	0	36	16	265	19	30	1	1	13	30	166	146	86	237	1464
TOTAL	22	224	7	36	38	693	143	1757	57	919	2	28	185	1053	64	206	545	2499	329	337	1	1	201	235	1526	1854	1235	2624	**16821**

Anchorage ARTCC (ZAN) Update

Anchorage ARTCC - Traffic Count

Cross Polar Distribution

2016

2016	DEVID		NALIM		LURUN		RAMEL		PINAG		LETUN		NIKIN		SALET		ORVIT		AMATI		BEKER		BARIP		PILUN		LISKI		TOTAL
	E	W	E	W	E	W	E	W	E	W	E	W	E	W	E	W	E	W	E	W	E	W	E	W	E	W	E	W	
JAN	2	23	0	6	0	55	0	151	1	71	1	71	7	95	0	16	18	244	41	41	14	6	29	31	146	120	108	235	1532
FEB	0	19	0	4	0	36	2	99	1	29	0	93	12	75	1	27	11	266	29	24	8	4	18	48	128	137	96	300	1467
MAR	0	24	0	3	0	68	4	125	2	48	1	77	19	66	3	11	36	264	26	19	16	5	41	22	157	113	128	256	1534
APR																													0
MAY																													0
JUN																													0
JUL																													0
AUG																													0
SEP																													0
OCT																													0
NOV																													0
DEC																													0
TOTAL	2	66	0	13	0	159	6	375	4	148	2	241	38	236	4	54	65	774	96	84	38	15	88	101	431	370	332	791	**4533**

Anchorage ARTCC (ZAN) Update

Anchorage ARTCC - Traffic Count

RFE Distribution

2015

2015	FRENK		KUTAL		VALDA		ERNIK		RUSOR		BESAT		BAMOK		KOKES		LUMES		KUNAD		TOTAL
	E	W	E	W	E	W	E	W	E	W	E	W	E	W	E	W	E	W	E	W	
JAN	22	95	6	91	24	553	4	174	21	32	52	97	45	12	1	16	0	43	0	22	1310
FEB	29	41	4	62	17	414	5	120	10	7	34	54	31	13	0	10	0	30	0	7	888
MAR	23	79	13	82	15	604	10	203	29	14	37	76	37	12	1	5	0	24	0	7	1271
APR	30	94	11	209	17	695	11	174	21	15	39	104	21	6	0	4	0	4	0	2	1457
MAY	20	144	4	128	27	677	4	243	19	24	72	142	46	13	0	17	0	18	0	13	1611
JUN	13	28	12	27	19	307	4	49	19	24	72	142	46	13	0	18	0	13	0	0	806
JUL	11	119	20	58	26	671	6	205	37	67	82	88	61	4	2	18	0	14	0	1	1490
AUG	10	80	14	29	25	603	8	69	35	43	98	124	59	13	3	17	0	31	0	1	1262
SEP	11	86	43	74	17	603	11	116	48	49	102	86	60	5	1	9	0	6	0	9	1336
OCT	15	90	16	123	82	751	6	202	36	103	54	139	62	17	0	14	0	27	0	9	1746
NOV	12	126	30	239	6	844	4	133	27	53	83	77	112	5	2	7	0	8	0	4	1772
DEC	6	120	7	199	14	874	9	228	18	62	44	116	74	5	0	15	0	18	0	8	1817
TOTAL	202	1102	180	1321	289	7596	82	1916	320	493	769	1245	654	118	10	150	0	236	0	83	16766

Anchorage ARTCC (ZAN) Update

Anchorage ARTCC - Traffic Count

RFE Distribution

2016

2016	FRENK		KUTAL		VALDA		ERNIK		RUSOR		BESAT		BAMOK		KOKES		LUMES		KUNAD		TOTAL
	E	W	E	W	E	W	E	W	E	W	E	W	E	W	E	W	E	W	E	W	
JAN	13	78	9	123	21	833	8	171	16	72	37	67	46	9	1	18	0	25	0	9	1556
FEB	6	63	17	147	180	732	3	238	31	86	42	54	37	6	0	19	0	3	0	5	1669
MAR	7	62	16	47	250	623	0	158	16	66	54	94	40	11	1	8	0	36	0	5	1494
APR																					0
MAY																					0
JUN																					0
JUL																					0
AUG																					0
SEP																					0
OCT																					0
NOV																					0
DEC																					0
TOTAL	26	203	42	317	451	2188	11	567	63	224	133	215	123	26	2	45	0	64	0	19	4719

Anchorage ARTCC (ZAN) Update

Anchorage ARTCC - Contact Information

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Questions?