

# FAA Anchorage ARTCC



**Presented to:** Cross Polar Working Group / 19

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Anchorage ARTCC

**Date:** May 11-15, 2015



Federal Aviation  
Administration



# Anchorage ARTCC (ZAN) Overview

- Anchorage ARTCC Facts
- ZAN Sector “64”
- Space Launch Activities
- UAS Operations
- Large Scale Military Exercises
- ZAN Traffic Count

# Anchorage ARTCC 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/)



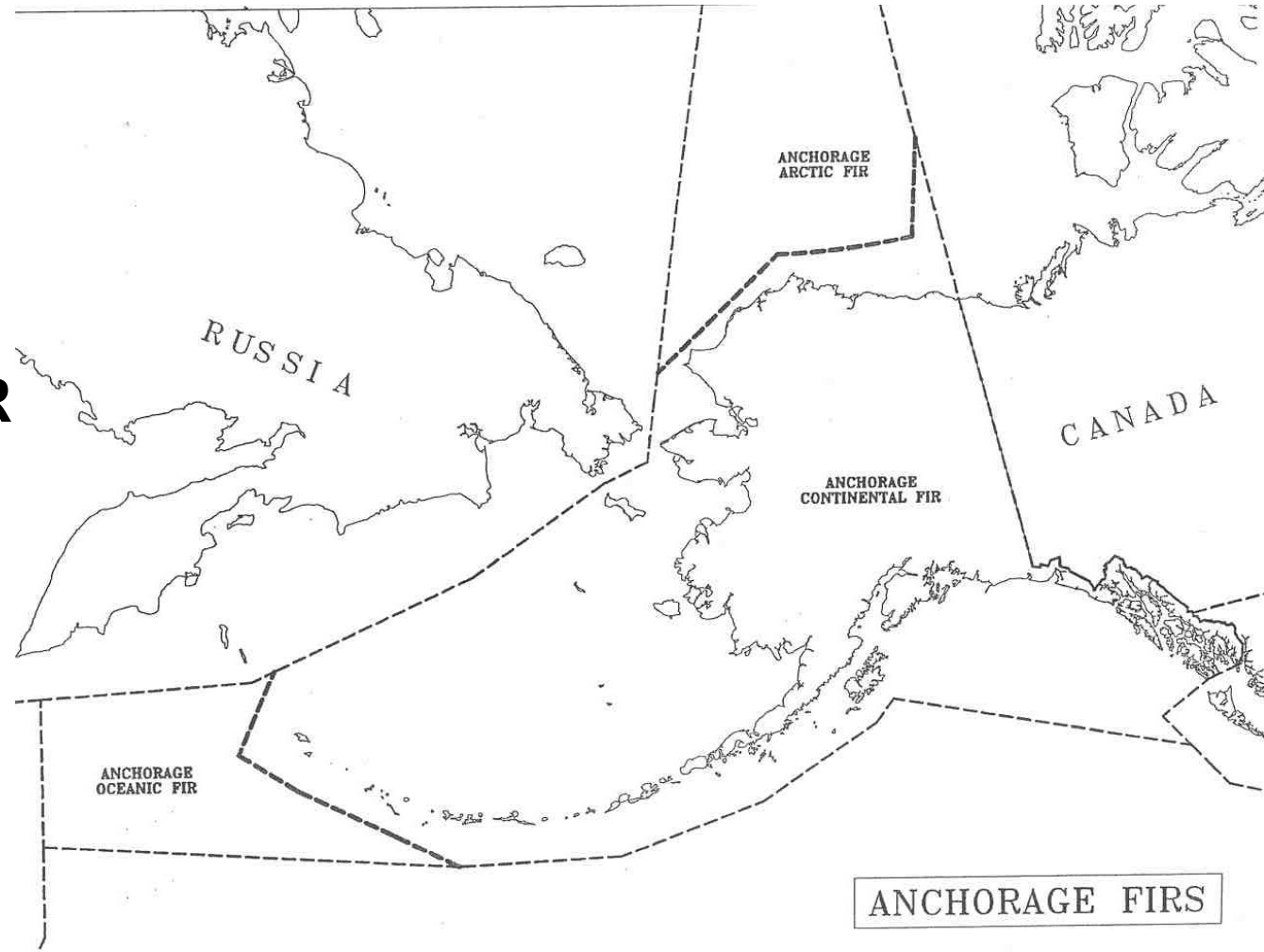
# Air Traffic Facility Personnel

- 160 Employees total
- 66 Controller Work Force
- 39 Trainees
- 21 Front Line Managers (include STMC)
- 3 Operations Managers
- 4 Support Managers
- 10 Support Staff
- 4 Traffic Management Coordinators
- 9 Flight Data Unit
- 4 CWSU Weather Unit



# Three Flight Information Regions (FIR)

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



# **Anchorage ARTCC Flight Information Regions**

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



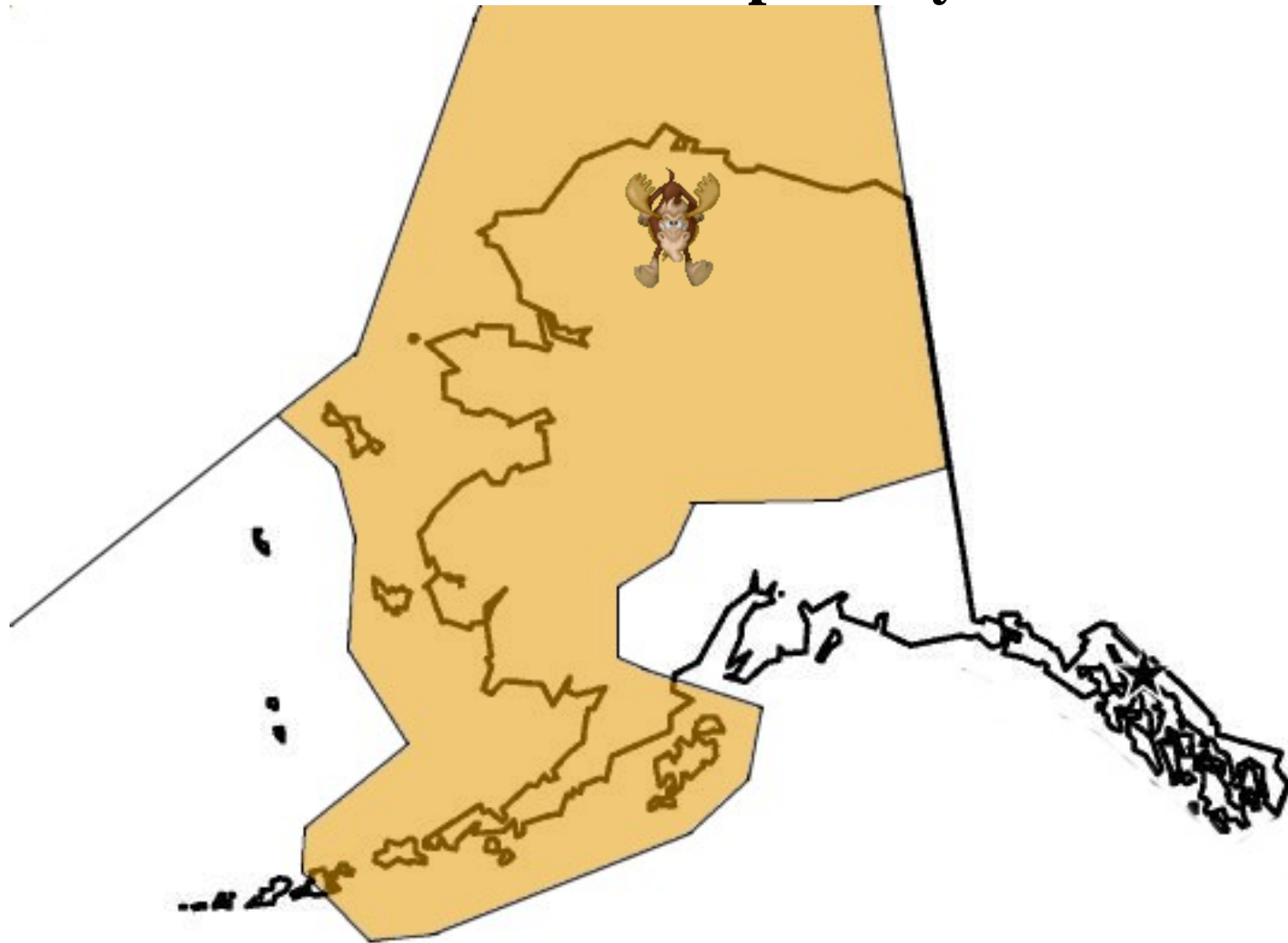
# Anchorage ARTCC

- **Airspace and Sector Structure**

Three Areas of Specialization

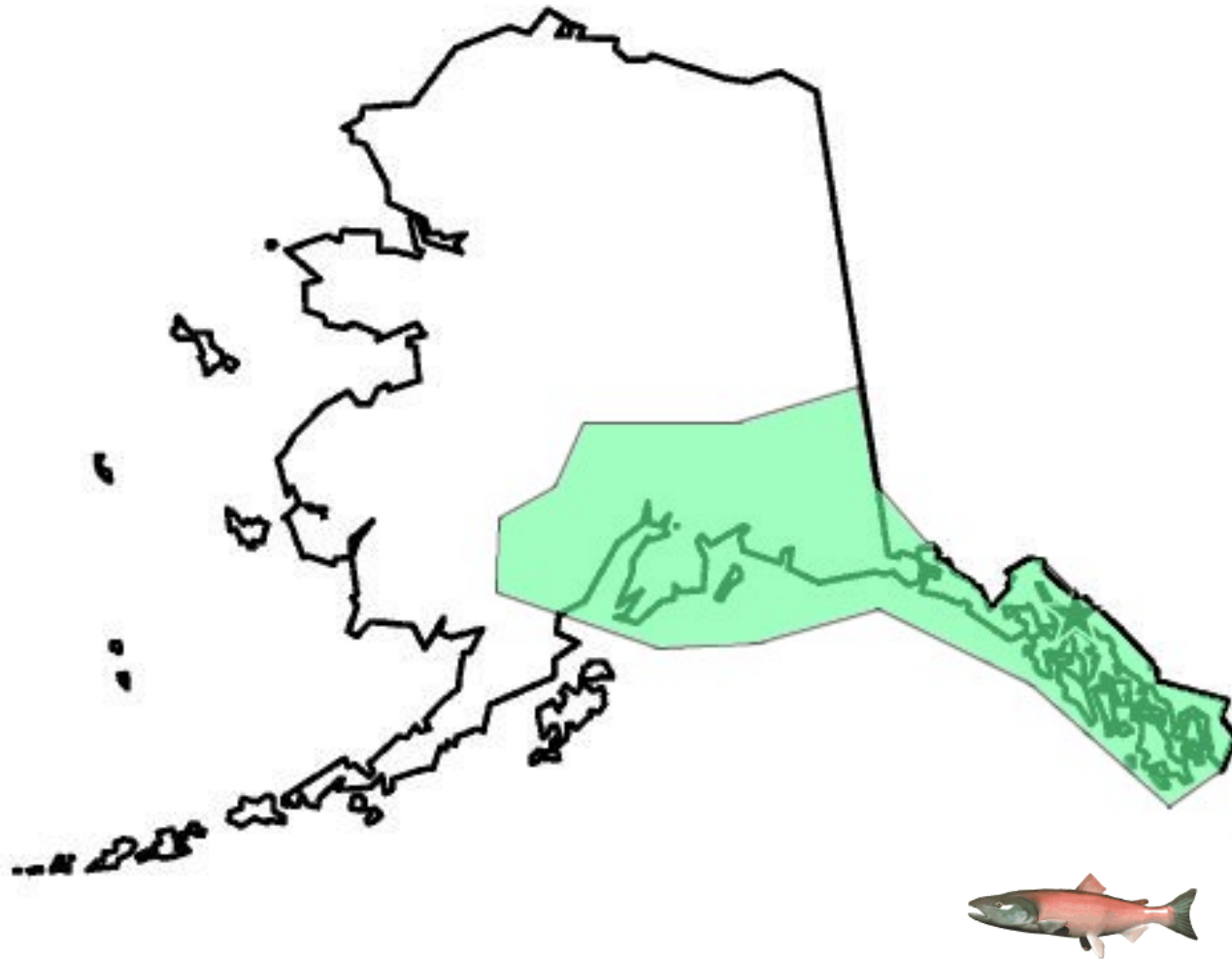
- \* North
- \* South
- \* High

# North Specialty

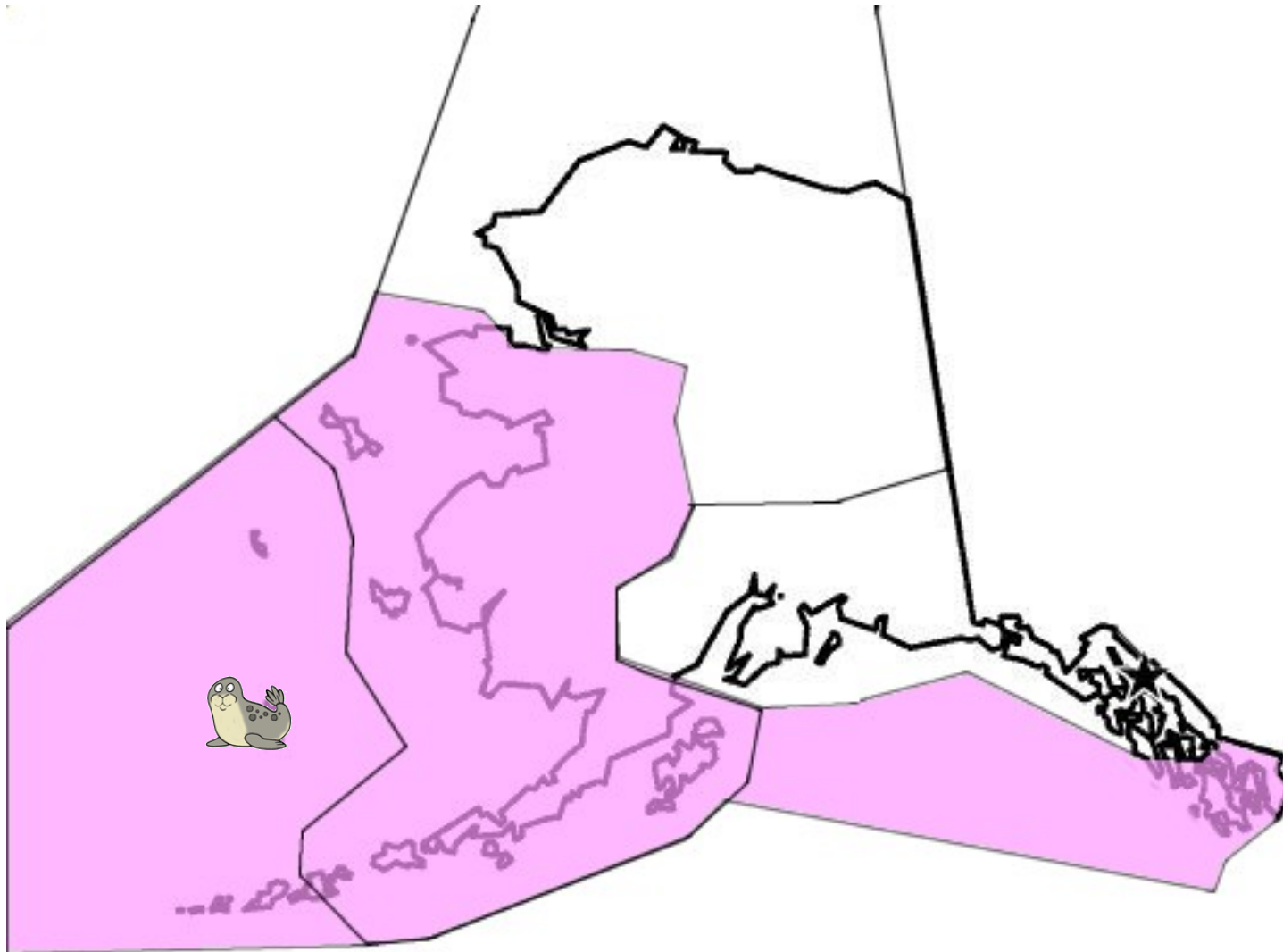




# South Specialty



# High Specialty





# Volcanoes





## Active volcanoes of Kamchatka and the northern Kurile Islands

Ksudach	Komarov	Karymsky (6)	Sheveluch (1)
Zheltovsky	Gamchen	Dzenzursky	Ushkovsky
Iliysky	Kronotsky	Zhupanovsky	Klyuchevskoy (2)
Koshelev	Krashennnikov	<b>Koryaksky (7)</b>	<b>Bezmianny (3)</b>
Kambalny	Uzon	<b>Avachinsky (8)</b>	<b>Plosky Tolbachik (4)</b>
<b>Alaid (11)</b>	Kikhpinych	<b>Gorely (9)</b>	Ichinsky
Ebeko	Boishei Semiachik	Opala	New Tolbachik
Chikurachki	Maly Semiachik	<b>Mutnovsky (10)</b>	<b>Kizimen (5)</b>
Fuss Peak			
Karpinsky Group			

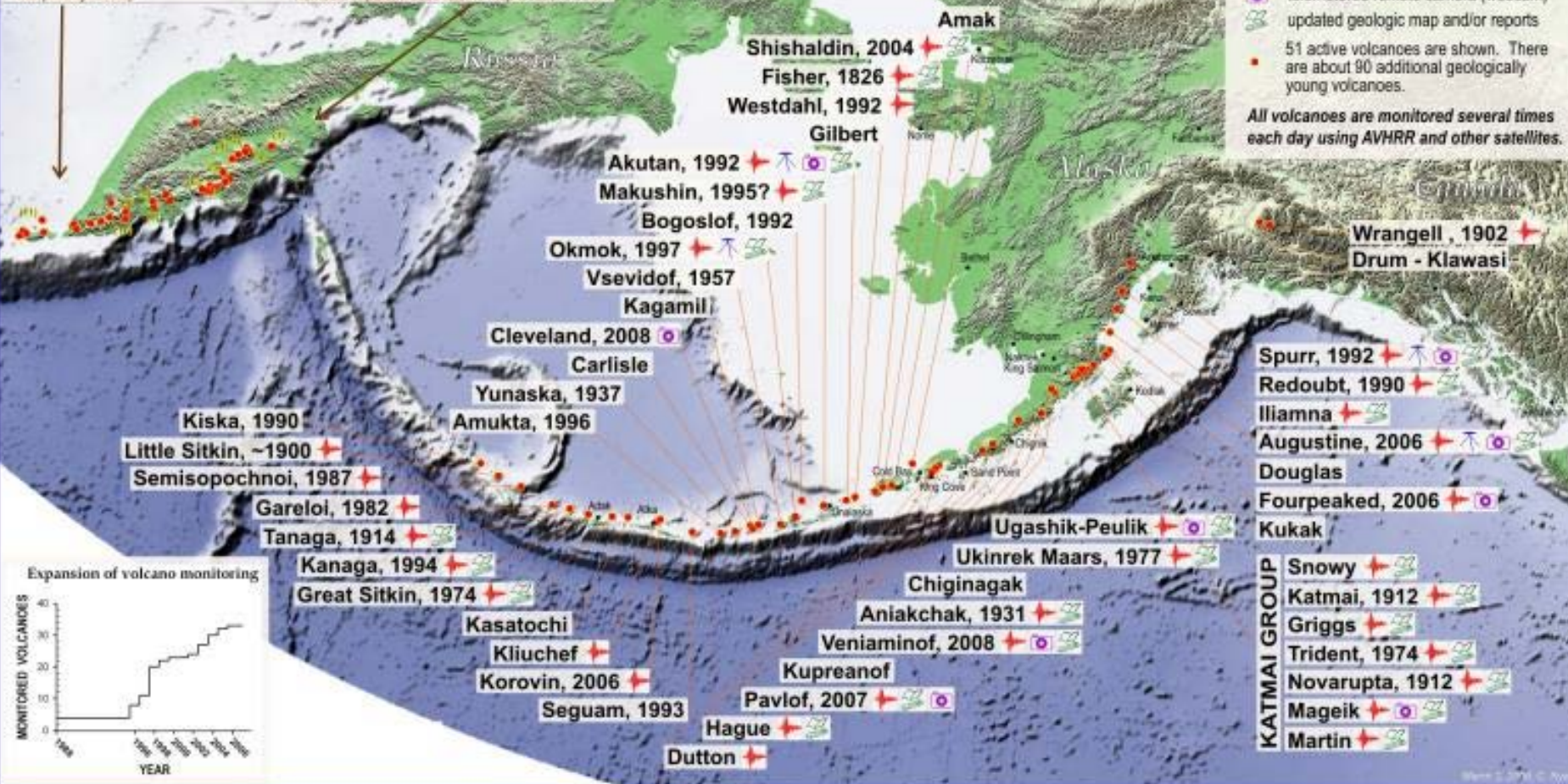
Volcanoes in **bold-underline** are systematically monitored  
Numbers in parentheses refer to map locations below

## Monitoring status of active volcanoes in Alaska

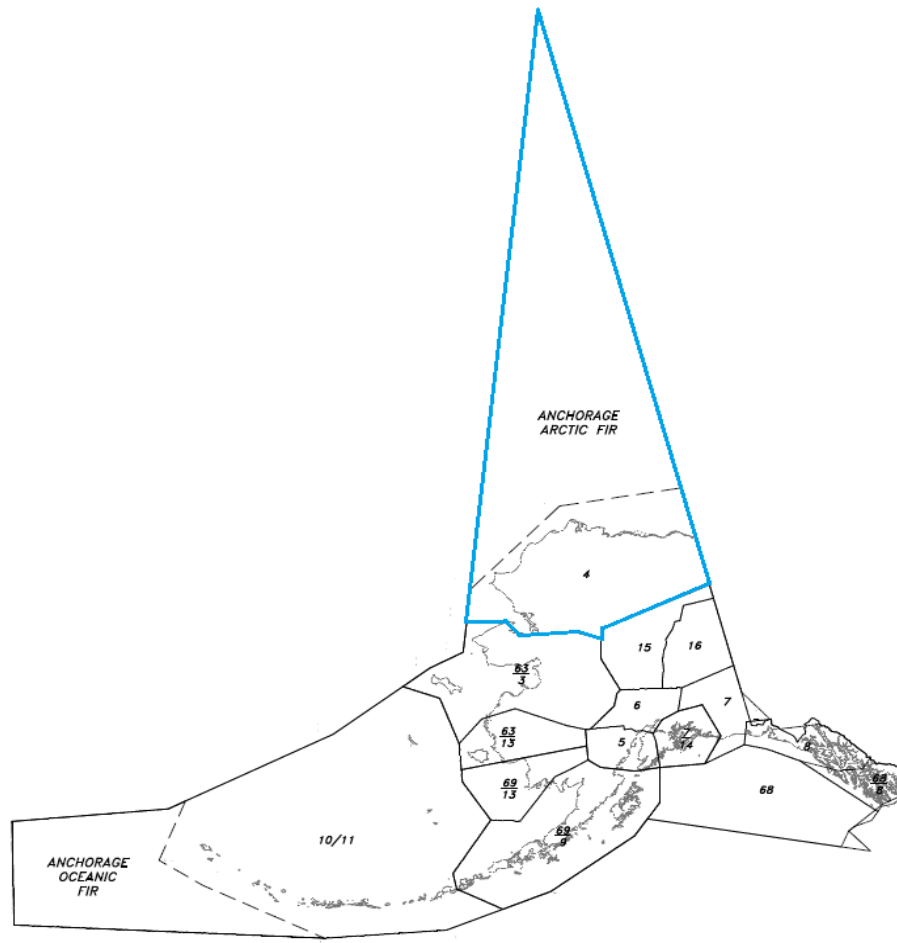
### EXPLANATION

- 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.

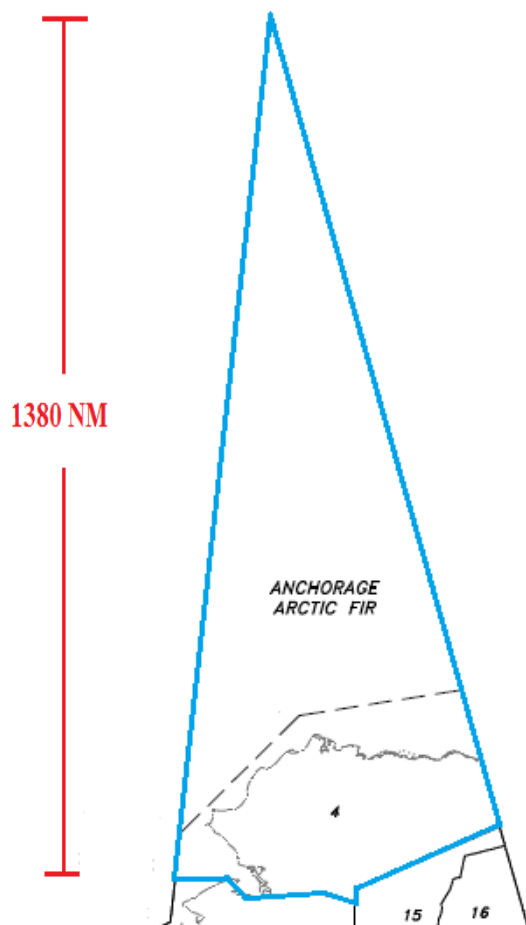


# ZAN Sector “4” to “4 and 64”



**Current Airspace**

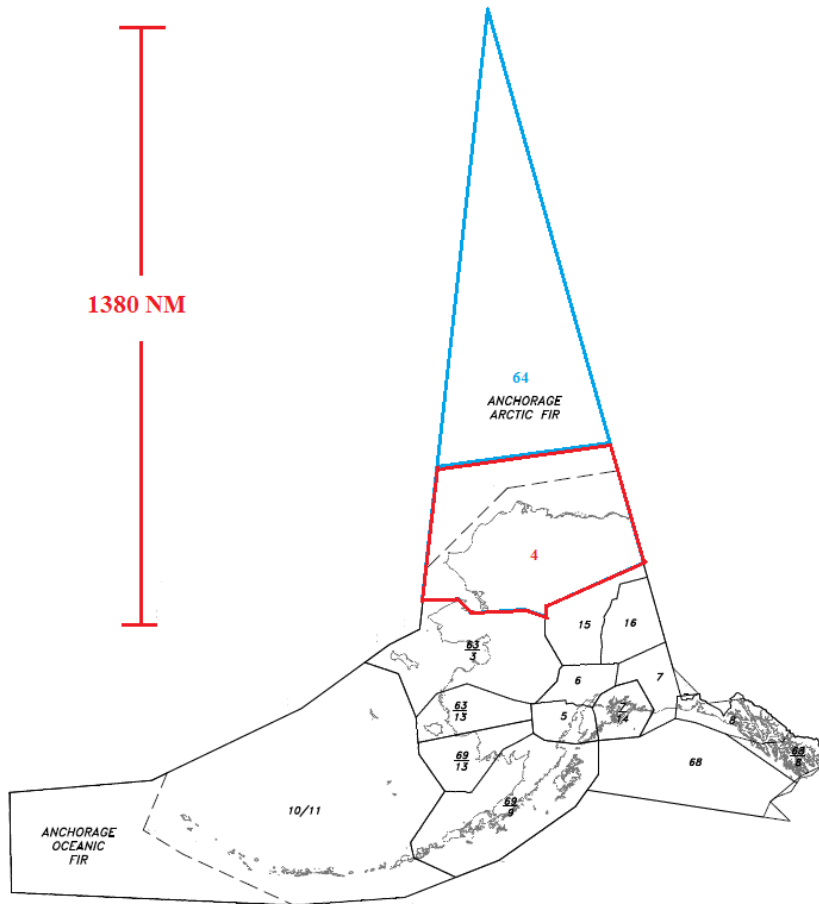
# Current - ZAN Sector “4”



- 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 end of 3<sup>rd</sup> Qtr. CY 2015.



# Space Launch Activities



Courtesy [www.akaerospace.com](http://www.akaerospace.com)



# Space Launch Activities

- **No launch activity planned for this period.**



# Unmanned Aircraft Systems (UAS)



# UAS Activities

- **No updates**



# Military Exercises



May 11 – 15, 2015

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# Military Exercises

- **3 Large scale military exercises planned for 2015 (dates tentative):**
  - Red Flag                      15-2      4 May - 15 May 2015
  - Northern Edge              15      15 Jun - 26 Jun 2015
  - Red Flag                      15-3      6 Aug - 21 Aug 2015
- **Exercises involve 50 plus aircraft and numerous Military Operations Areas (MOAs), ATC Assigned Airspaces (ATCAAs), and Restricted Areas.**
- **Traffic Management Initiatives (TMIs) will be issued to accommodate non-participating aircraft.**



# Military Exercises

## Red Flag 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 NICH0 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 TMI

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 TMLs

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

**(A)** A2, A15 AND B25

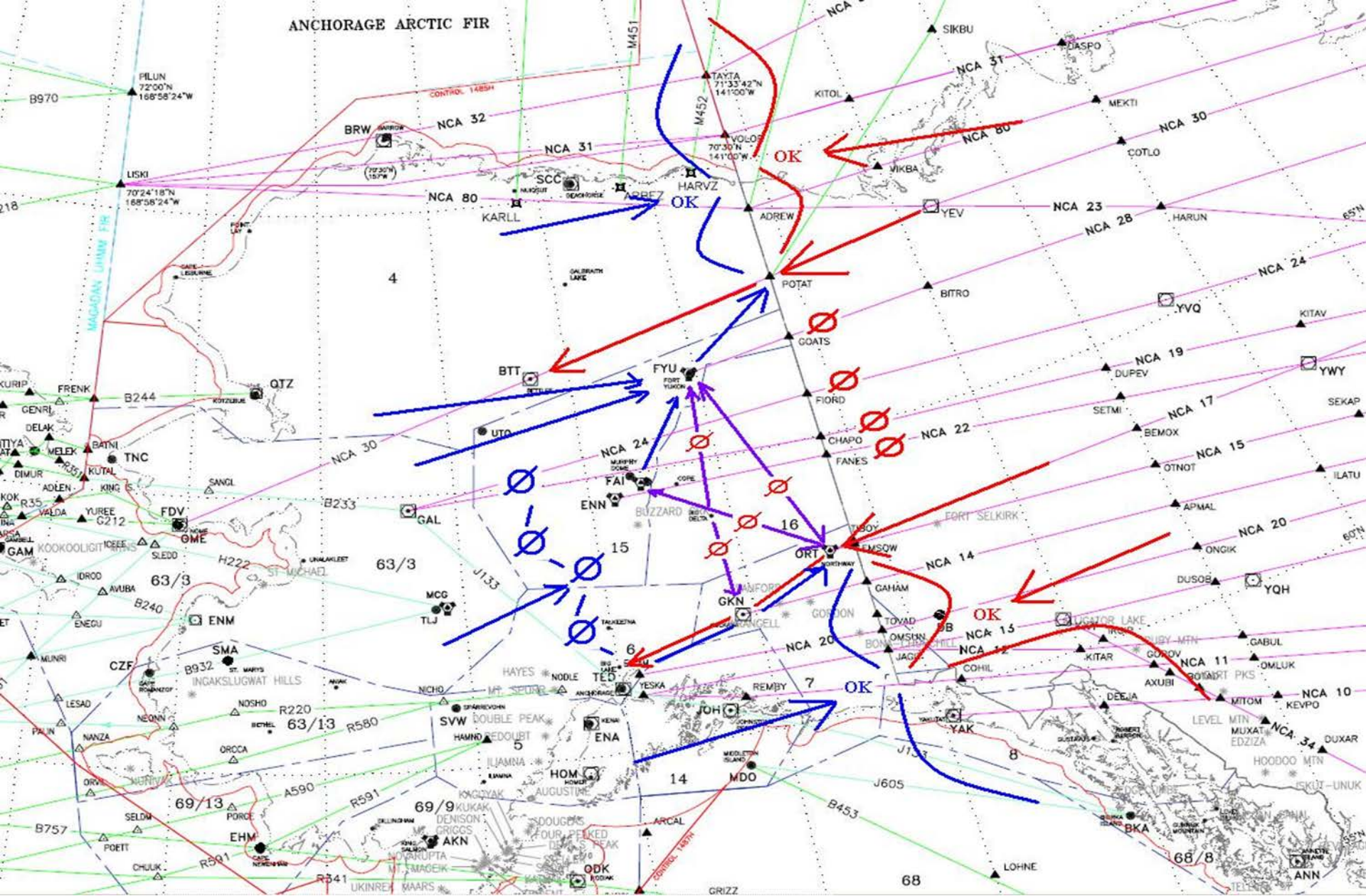
**(B)** V444, V481 AND V515

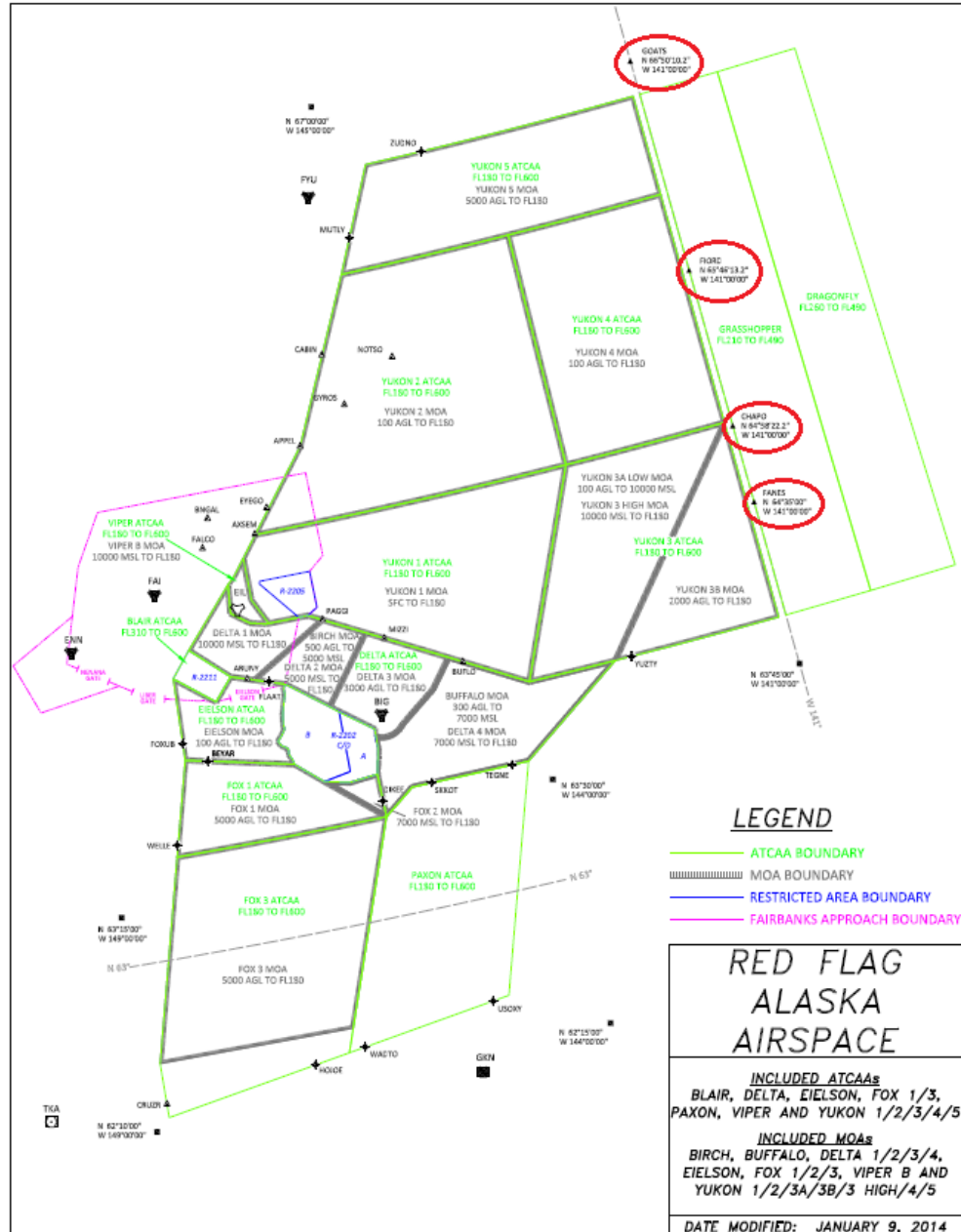
**(C)** T232 AND T226

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

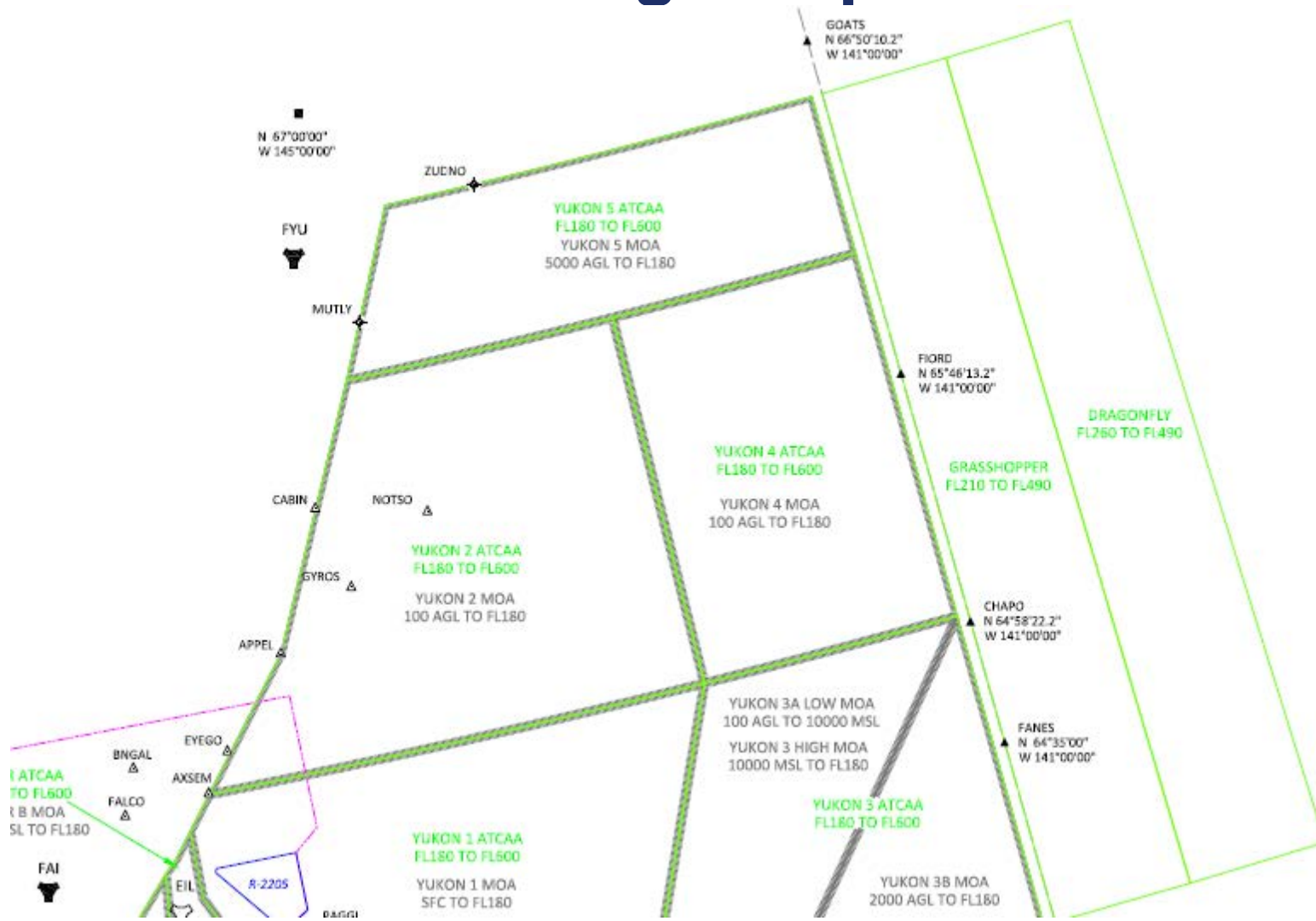
**6)** FROM 1800-2030 UTC AND 0000-0230 UTC, IFR ARRIVALS/DEPARTURES TO/FROM ALLEN AAF ARE UNAVAILABLE.





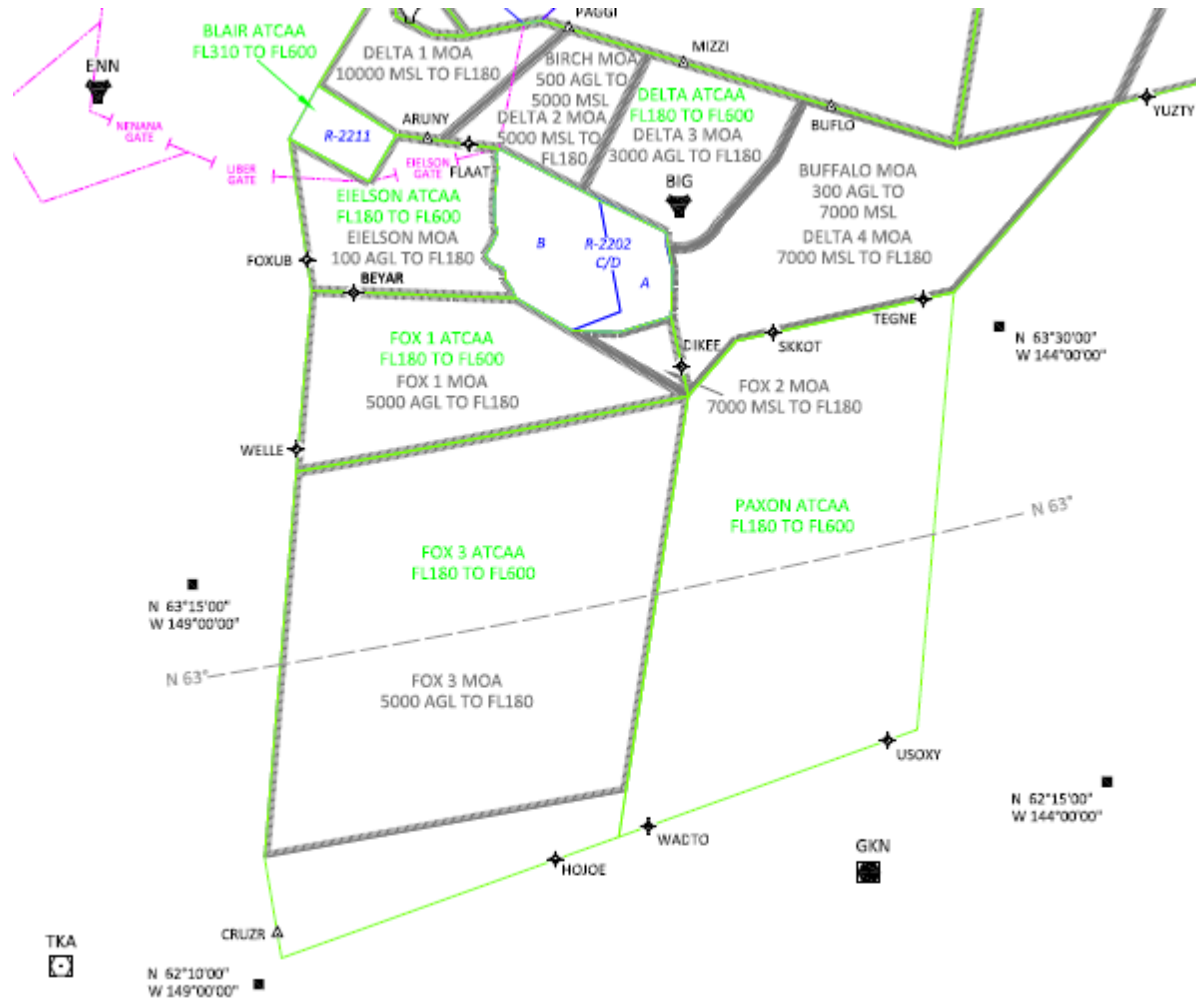


# Red Flag Airspace





# Red Flag Airspace

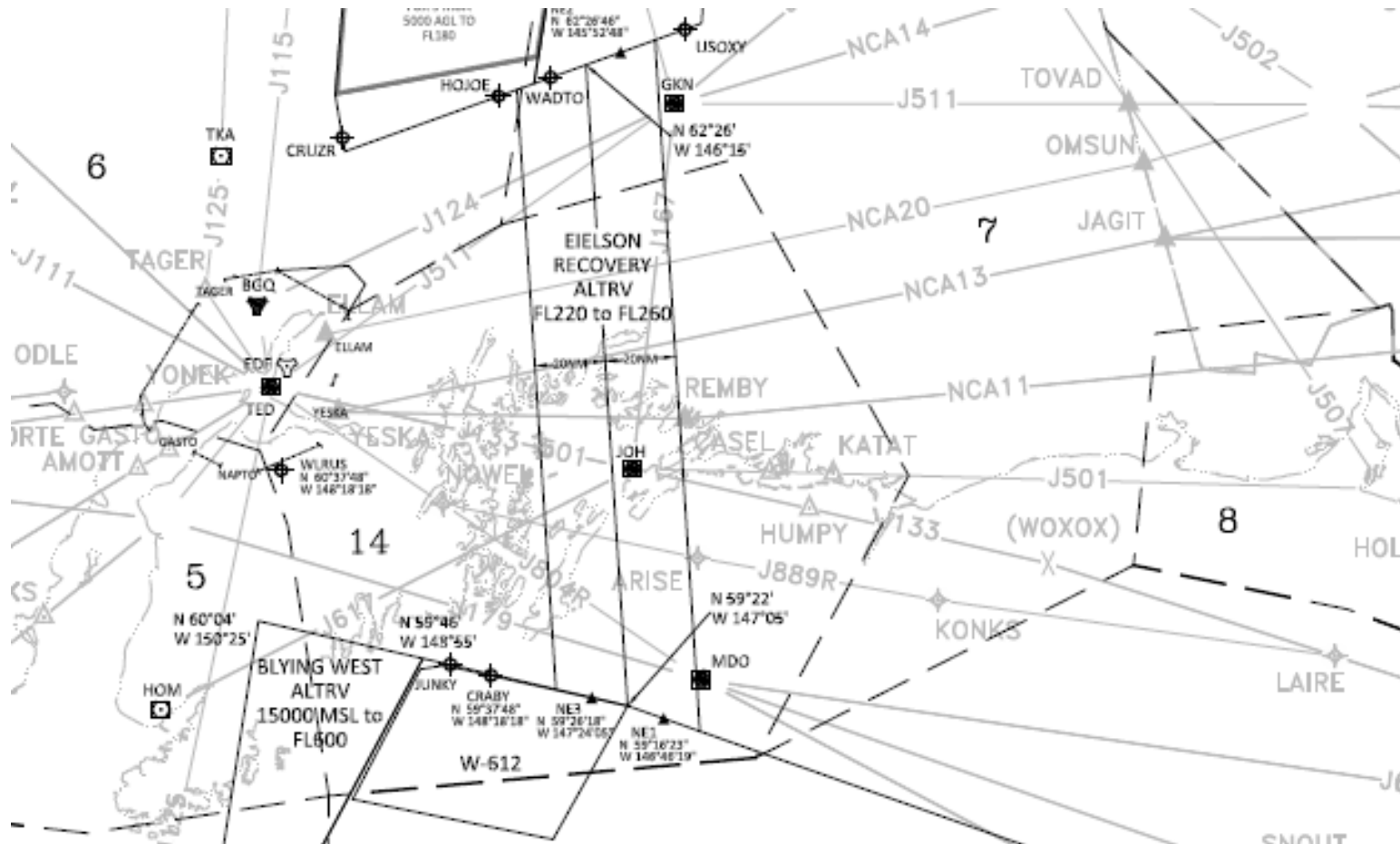


# Northern Edge Airspace

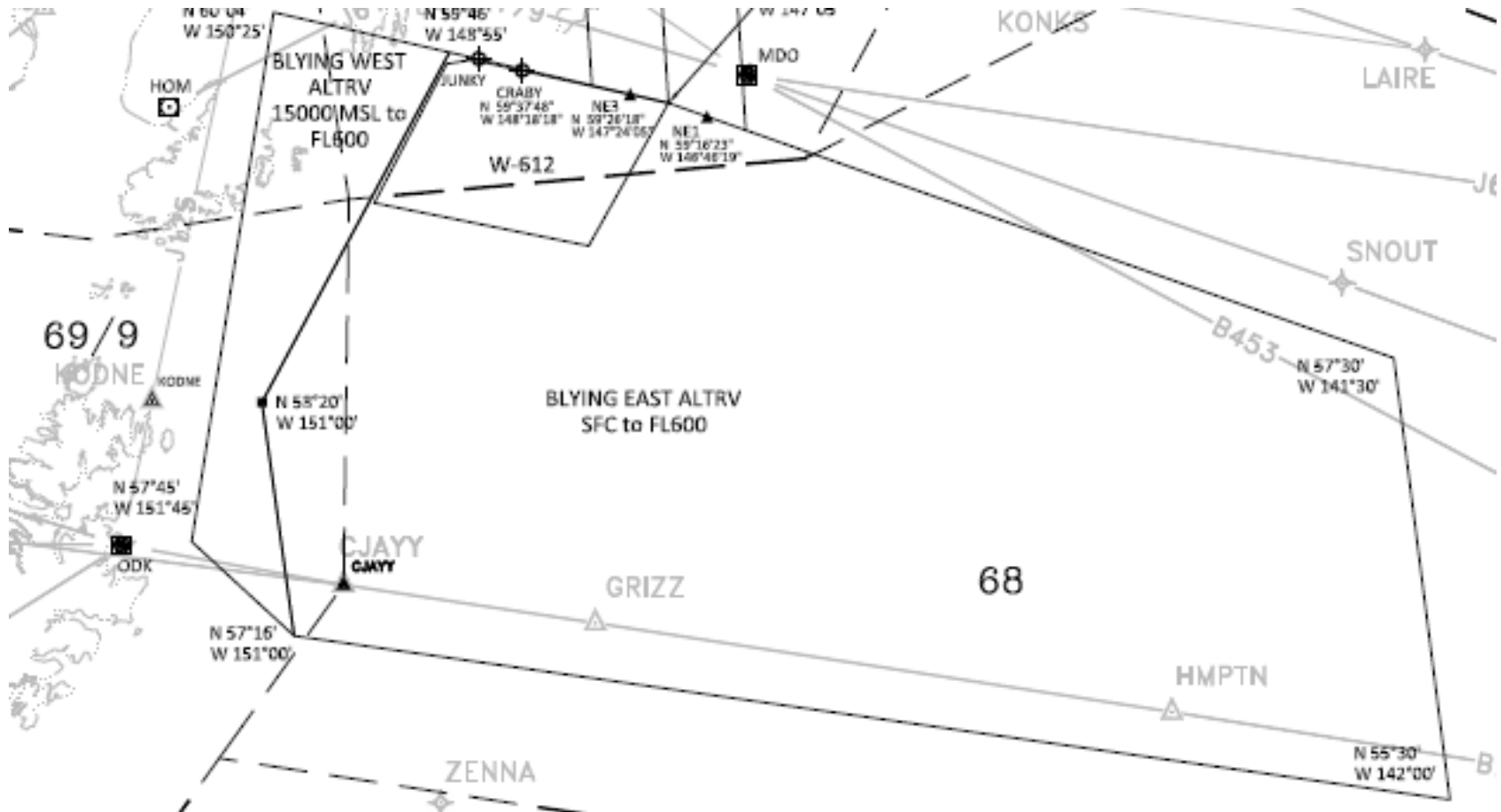
**“Northern Edge” includes all Red Flag airspace plus:**

- **The Blying Sound East and West Altitude Reservations (ALTRVs)**
- **North/South Transition Corridors**

# Northern Edge Airspace



# Northern Edge Airspace



# Military Exercises

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





# ZAN Traffic Count

1

%

2

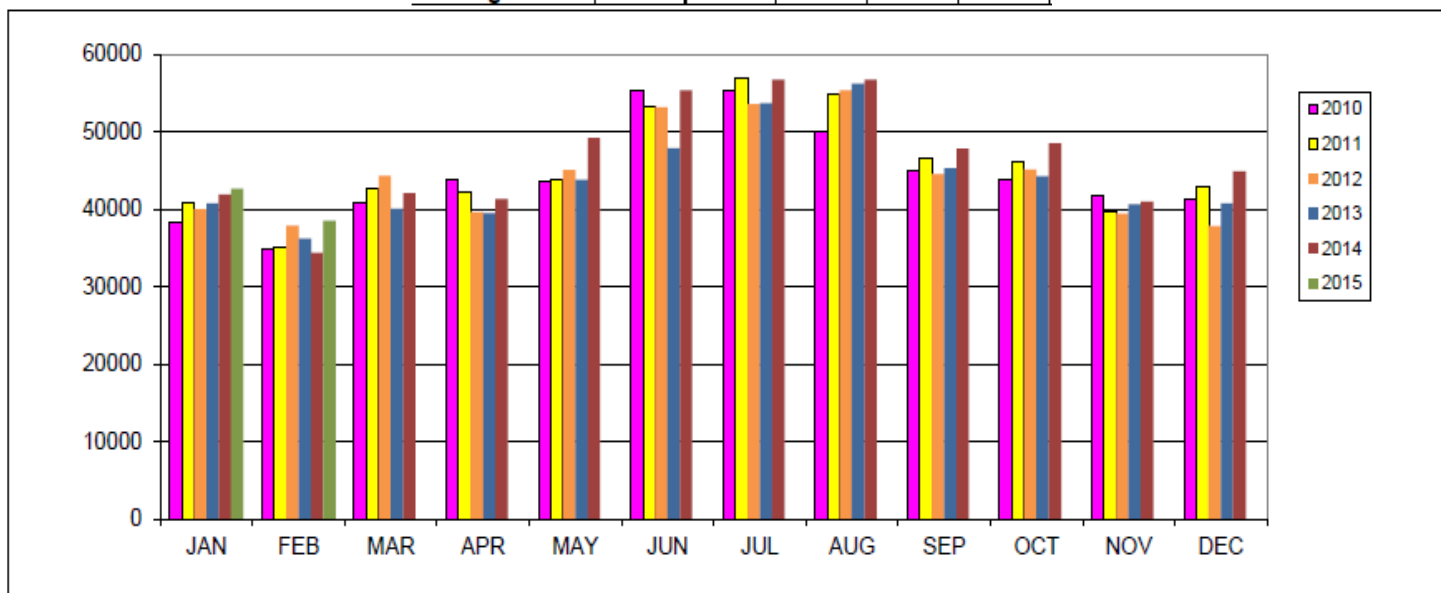
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# ZAN Traffic Count

## Total Facility

Up 6.8%  
YTD

	2010	2011	2012	2013	2014	2015
JAN	38266	40841	39982	40761	41896	42631
FEB	34911	35074	37909	36213	34342	38544
MAR	40790	42750	44344	40090	42091	
APR	43796	42285	39622	39482	41358	
MAY	43565	43866	45085	43815	49224	
JUN	55374	53225	53173	47914	55353	
JUL	55470	56989	53573	53756	56752	
AUG	50135	54995	55355	56217	56797	
SEP	45007	46635	44524	45292	47812	
OCT	43825	46187	45132	44277	48511	
NOV	41858	39616	39457	40642	41037	
DEC	41232	42907	37824	40738	44914	
<b>Total</b>	<b>534229</b>	<b>545370</b>	<b>535980</b>	<b>529197</b>	<b>560087</b>	<b>81175</b>
<b>% Change</b>		<b>2%</b>	<b>-2%</b>	<b>-1%</b>	<b>6%</b>	<b>-86%</b>

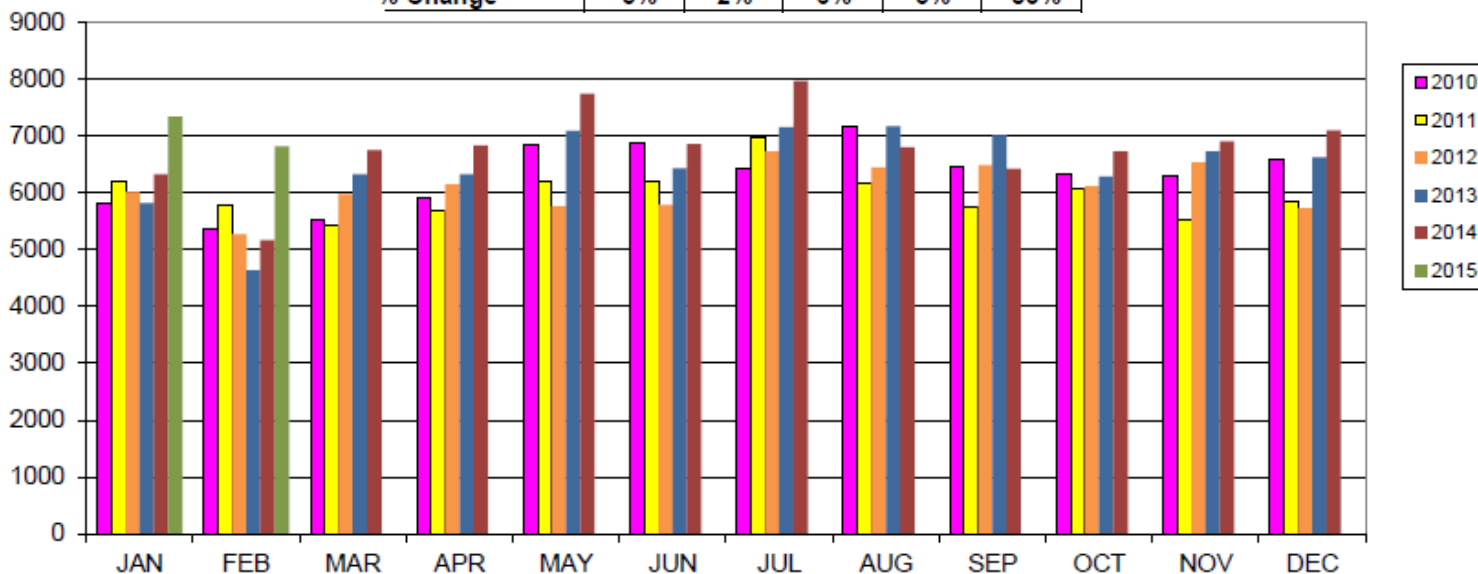


# ZAN Traffic Count

## Oceanic

Up  
16.2%  
YTD

	2010	2011	2012	2013	2014	2015
JAN	5826	6205	6016	5825	6331	7344
FEB	5385	5783	5281	4637	5169	6829
MAR	5525	5437	5986	6334	6752	
APR	5912	5684	6150	6330	6842	
MAY	6845	6207	5772	7096	7752	
JUN	6886	6199	5792	6433	6864	
JUL	6445	6984	6738	7166	7977	
AUG	7175	6161	6458	7179	6803	
SEP	6476	5752	6489	7018	6430	
OCT	6353	6072	6116	6291	6731	
NOV	6302	5536	6540	6733	6914	
DEC	6602	5859	5738	6635	7107	
<b>Total</b>	<b>75732</b>	<b>71879</b>	<b>73076</b>	<b>77677</b>	<b>81672</b>	<b>14173</b>
<b>% Change</b>		<b>-5%</b>	<b>2%</b>	<b>6%</b>	<b>5%</b>	<b>-83%</b>



# ZAN Traffic Count

## NOPAC\*

	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
JAN	5122	5103	5047	4769	5188	5336	5354	4668	4167	6163
FEB	4609	5021	4381	4043	4765	4925	4428	3708	4288	5653
MAR	6022	7632	6365	4513	4682	4564	4888	4896	5547	0
APR	6083	6923	6107	4109	4967	4908	5214	5284	5780	0
MAY	5394	7224	5461	4563	6094	5304	4749	5938	6289	0
JUN	6088	7440	4947	3958	6050	5225	4853	5489	5649	0
JUL	6144	7540	5583	5279	5524	5947	5737	6020	6409	0
AUG	6273	7584	5385	5524	6192	4892	5479	5991	5188	0
SEP	5772	7462	5322	5147	5514	4711	5316	5761	5021	0
OCT	5782	6750	4928	5131	5291	5018	5203	4887	5192	0
NOV	5796	6231	4600	5044	5321	4363	5598	5627	5673	0
DEC	4933	5204	4662	5354	5710	4678	4588	5145	5674	0
<b>Total</b>	<b>68018</b>	<b>80114</b>	<b>62788</b>	<b>57434</b>	<b>65298</b>	<b>59871</b>	<b>61407</b>	<b>63414</b>	<b>64877</b>	<b>11816</b>
<b>% Change</b>		<b>18%</b>	<b>-22%</b>	<b>-9%</b>	<b>14%</b>	<b>-8%</b>	<b>3%</b>	<b>3%</b>	<b>2%</b>	<b>-82%</b>

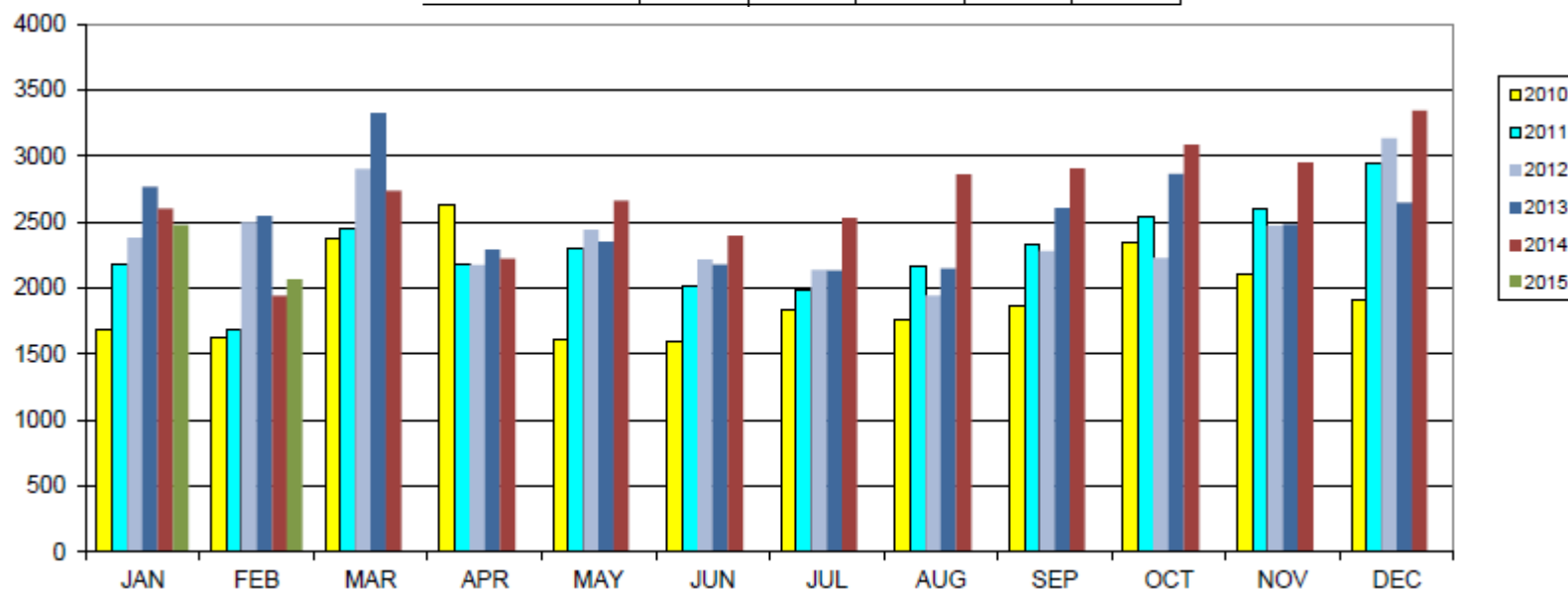
\* “NOPAC” equals “Oceanic” minus “Cross Polar”

## Up 24.8% YTD

# ZAN Traffic Count

## Cross Polar and RFE

	2010	2011	2012	2013	2014	2015
JAN	1686	2188	2383	2768	2605	2481
FEB	1619	1690	2499	2544	1943	2067
MAR	2379	2453	2904	3326	2738	
APR	2630	2184	2176	2294	2223	
MAY	1614	2297	2442	2351	2664	
JUN	1598	2016	2215	2179	2395	
JUL	1841	1983	2136	2134	2529	
AUG	1761	2159	1942	2148	2861	
SEP	1870	2333	2280	2608	2905	
OCT	2346	2538	2225	2867	3089	
NOV	2099	2603	2473	2482	2951	
DEC	1908	2939	3134	2647	3346	
<b>Total</b>	<b>23351</b>	<b>27383</b>	<b>28809</b>	<b>30348</b>	<b>32249</b>	<b>4548</b>
<b>% Increase</b>		<b>17%</b>	<b>5%</b>	<b>5%</b>	<b>6%</b>	<b>-86%</b>



# ZAN Traffic Count

## Cross Polar Distribution

2013	DEVID		NALIM		LURUN		RAMEL		PINAG		NIKIN		ORVIT		AMATI		PILUN		LISKI		TOTAL
	E	W	E	W	E	W	E	W	E	W	E	W	E	W	E	W	E	W	E	W	
JAN	1	14	0	3	0	25	10	185	0	33	7	12	32	255	1	9	48	130	49	231	1045
FEB	1	24	0	0	0	32	10	149	0	14	6	96	37	173	1	5	37	92	35	217	929
MAR	5	25	0	0	2	41	15	154	0	32	8	111	21	307	1	14	28	256	29	389	1438
APR	3	35	0	3	4	37	8	142	3	33	18	109	36	210	1	5	65	97	54	183	1046
MAY	3	12	1	8	7	73	35	139	2	32	28	72	92	202	1	3	109	141	70	134	1164
JUN	7	8	2	0	33	36	47	64	8	17	27	34	181	135	6	0	126	66	58	89	944
JUL	5	28	1	5	13	20	61	100	9	25	24	54	151	193	16	4	121	89	75	152	1146
AUG	4	15	4	9	6	52	37	141	4	42	10	69	114	239	7	12	101	111	72	139	1188
SEP	4	32	0	2	0	29	13	150	3	62	8	116	72	234	9	29	82	91	109	212	1257
OCT	2	25	0	8	1	66	14	120	1	31	13	108	59	280	12	24	73	191	69	307	1404
NOV	0	21	0	6	0	27	0	141	3	23	1	153	21	230	10	13	70	110	59	218	1106
DEC	0	16	0	0	1	71	6	144	3	32	7	104	22	260	9	18	69	138	68	222	1190
TOTAL	35	255	8	44	67	509	256	1629	36	376	157	1038	838	2718	74	136	929	1512	747	2493	13857

2014	DEVID		NALIM		LURUN		RAMEL		PINAG		NIKIN		ORVIT		AMATI		PILUN		LISKI		TOTAL
	E	W	E	W	E	W	E	W	E	W	E	W	E	W	E	W	E	W	E	W	
JAN	0	31	0	1	0	40	1	117	0	23	6	112	40	171	10	11	81	134	86	218	1082
FEB	0	25	0	1	0	13	6	53	2	28	11	81	58	153	11	8	97	42	87	205	881
MAR	0	26	0	3	2	45	3	107	5	53	4	164	49	158	16	2	118	127	67	256	1205
APR	0	8	0	7	3	29	10	122	3	70	8	114	36	235	5	13	99	110	92	98	1062
MAY	0	11	0	3	3	104	20	200	10	67	11	112	43	274	3	18	127	130	150	177	1463
JUN	4	4	5	5	3	62	54	106	23	13	42	54	70	231	9	15	102	156	79	178	1215
JUL	7	7	1	10	16	95	28	222	6	39	10	106	101	270	16	18	214	64	225	113	1568
AUG	4	22	2	4	7	39	94	115	19	54	34	80	81	292	26	29	194	197	116	206	1615
SEP	1	47	0	4	0	78	10	27	4	54	13	162	70	226	22	32	160	127	154	218	1409
OCT	1	29	0	1	4	33	6	99	2	65	4	116	39	292	14	39	135	223	104	333	1539
NOV	8	60	0	7	1	28	7	116	2	35	10	108	53	146	12	14	157	137	80	260	1241
DEC	5	8	0	2	3	33	6	107	2	86	8	90	14	290	8	45	129	204	86	307	1433
TOTAL	30	278	8	48	42	599	245	1391	78	587	161	1299	654	2738	152	244	1613	1651	1326	2569	15713

# ZAN Traffic Count

## Cross Polar Distribution

2015	DEVID		NALIM		LURUN		RAMEL		PINAG		NIKIN		SALET		ORVIT		AMATI		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	
JAN	4	43	0	1	1	51	4	126	1	36	7	107			62	123	19	21			192	111	101	171	1181
FEB	3	12	0	1	1	25	10	124	10	75	10	118			29	184	21	23			162	105	126	137	1176
MAR																									0
APR																									0
MAY																									0
JUN																									0
JUL																									0
AUG																									0
SEP																									0
OCT																									0
NOV																									0
DEC																									0
TOTAL	7	55	0	2	2	76	14	250	11	111	17	225	0	0	91	307	40	44	0	0	354	216	227	308	2357

- Initial Data for SALET and BARIP



# ZAN Traffic Count

## RFE Distribution

2013	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	73	48	10	151	40	641	3	261	11	7	32	281	6	15	0	20	0	12	0	0	1611
FEB	50	61	3	261	1	542	2	214	24	9	44	303	17	17	1	29	0	35	0	2	1615
MAR	70	73	12	323	7	718	0	280	13	7	61	267	19	3	0	28	0	7	0	0	1888
APR	64	79	22	83	5	436	1	101	39	13	63	214	16	33	0	24	0	52	0	3	1248
MAY	52	54	2	61	8	390	4	119	52	10	121	194	31	14	1	26	0	48	0	6	1193
JUN	25	78	1	46	16	440	6	242	23	7	62	256	19	9	1	20	0	12	0	2	1265
JUL	26	71	5	35	12	408	3	99	39	4	96	134	39	1	0	4	0	10	0	2	988
AUG	31	58	5	53	12	398	8	94	37	4	103	121	20	6	0	5	0	4	0	1	960
SEP	34	103	7	58	11	513	6	152	56	15	174	144	59	3	4	6	0	6	0	0	1351
OCT	45	64	11	142	13	622	8	203	55	10	78	150	43	6	2	5	0	5	0	1	1463
NOV	34	94	7	160	9	547	2	121	36	4	74	150	26	17	0	29	0	65	0	1	1376
DEC	45	71	6	144	6	588	0	182	20	20	30	194	20	28	1	45	0	50	0	6	1456
TOTAL	549	854	91	1517	140	6243	43	2068	405	110	938	2408	315	152	10	241	0	306	0	9	16414

2014	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	28	70	2	161	14	549	1	300	20	44	17	199	16	15	1	37	0	49	0	0	1523
FEB	24	93	7	77	15	406	2	109	18	15	26	160	14	20	3	31	0	39	0	3	1062
MAR	12	104	10	137	10	601	0	220	16	23	36	241	15	7	0	48	0	50	0	2	1532
APR	33	66	11	44	22	485	3	101	20	15	69	189	7	16	0	32	0	35	0	3	1151
MAY	41	68	12	110	18	467	3	111	37	3	78	117	24	17	1	37	0	55	0	2	1201
JUN	21	118	5	109	33	464	10	100	34	15	93	127	21	11	0	5	0	10	0	4	1180
JUL	35	36	19	33	16	401	10	71	41	10	96	116	24	15	4	12	0	16	0	6	961
AUG	26	101	11	64	7	464	6	142	33	29	95	182	49	18	0	10	0	9	0	0	1246
SEP	38	113	26	62	17	454	6	204	35	23	87	306	39	27	3	40	0	16	0	0	1496
OCT	28	101	24	158	12	595	9	170	40	19	93	183	57	18	2	26	0	15	0	0	1550
NOV	23	114	3	134	11	680	9	296	28	35	88	188	37	17	4	22	0	18	0	3	1710
DEC	50	83	9	198	12	755	4	322	18	43	51	236	40	21	1	18	0	37	0	15	1913
TOTAL	359	1067	139	1287	187	6321	63	2146	340	274	829	2244	343	202	19	318	0	349	0	18	16525

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
TOTAL	51	136	10	153	41	967	9	294	31	39	86	151	76	25	1	26	0	73	0	0	2198

# Anchorage ARTCC Contact Information



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# Questions?

