



# Eleventh Air Force

*Integrity - Service - Excellence*

# Alaska Civil/Military Aviation Council Welcome!

**Please Check in at Sign-up Table**

Image © 2012 TerraMetrics  
Data SIO, NOAA, U.S. Navy, NGA, GEBCO  
Image © 2012 GeoEye

61°06'41.97" N 149°39'32.76" W elev 2168 ft

Google

Eye alt



# Eleventh Air Force

*Integrity - Service - Excellence*

## Airspace Management Team

## Joint Base Elmendorf-Richardson

### Maj Mike Oldenkamp



# ***Eleventh Air Force***

***Integrity - Service - Excellence***

## **ADMINISTRATION**

**Silence cell phones and other accessories**

**Please ensure you have signed in**

**Hold questions until the end of presentations**

**Introductions**

**11 AF/CV – ACMAC Chairman**

**Breaks**



# *Eleventh Air Force*

*Integrity - Service - Excellence*

## **Alaska Civil/Military Aviation Council**

**Col Patrick Moylan**



# *353d Combat Training Squadron*



## **RED FLAG-Alaska CY-13 ACMAC Update**



**Mr. Pete “Bruster” Bussa  
Operations, 353 CTS**

**U.S. AIR FORCE**

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# RF-A Exercise Plan



## ■ RF-A 13-2 (25 Apr-10 May 13)

- Fam Day (26 Apr 13)

- **Eielson**            **12 x F-16C+**
- USAF                26 x F-16, 18 x F-22
- USAF                2 x E-3, 1 x EC-130H
- USAF                6 x KC-135, 1 x HH-60
- USAF                1 x RC-135V/W
- **Australia**        **1 x C-130**
- **UK**                 **8 x GR-4, 1 x E-3**
- **UK**                 **2 x C-130**
- **Canada**            **? x CF-18 / 1 x CC-130T**
- **SOCOM**            **JTACS**
- **Army**              **1-25 SCBT**
- **GPS Jamming?**

**50+ aircraft / 1,100 participants**

## ■ NE-13 (13-28 June 13)

- Fam Day (14 Jun 13)

- **USAF**
  - 12 x F-15E
  - 26 x F-15C
  - 10 x F-22
  - 31 x F-16
  - 3x E-3
  - 12-18 x KC-135
  - 4 x KC-10
  - 3 x B-52
- **Navy/Marines**
  - 4 x P-3
  - 42 x F-18

**174+ aircraft / 6,000+ participants**



# RF-A Exercise Plan



- **RF-A 13-3 (8 - 23 Aug 13)**

- **Fam Day (9 Aug 13)**

- **Eielson**                    **12 x F-16C+**
- **USAF**                      **22 x A-10, 20 x F-16CM**
- **USAF**                      **? x C-130H**
- **USAF**                      **1 x HH-60, 6 x KC-135**
- **USMC**                     **20 x F/A-18**
- **Romania**                 **1 x C-130**
- **Japan**                     **6 x F-15MJ / JAWACS**
- **Japan**                     **3 x C-130 / 2 x KC-767**
- **Australia**               **E-7A / 2 x C-130H/J**
- **Malaysia**               **C-130, F-18**
- **Thailand**                 **C-130**

**60+ aircraft / 1,600 participants**



# CY 2012 ACCOMPLISHMENTS



- 7100 Personnel Trained
- 14 Different Countries
- 3259 Sorties Flown
- 7920 Hours Flown
- 249 Aircraft Participated
- 1619 Short Tons of Cargo
- 175,000 Pounds of Munitions

# RED FLAG-Alaska



Questions?



# JBER Special use Airspace Awareness

CW4 J. Reed Greenwood  
USARAK G3/5/7 AVN  
907-384-2700

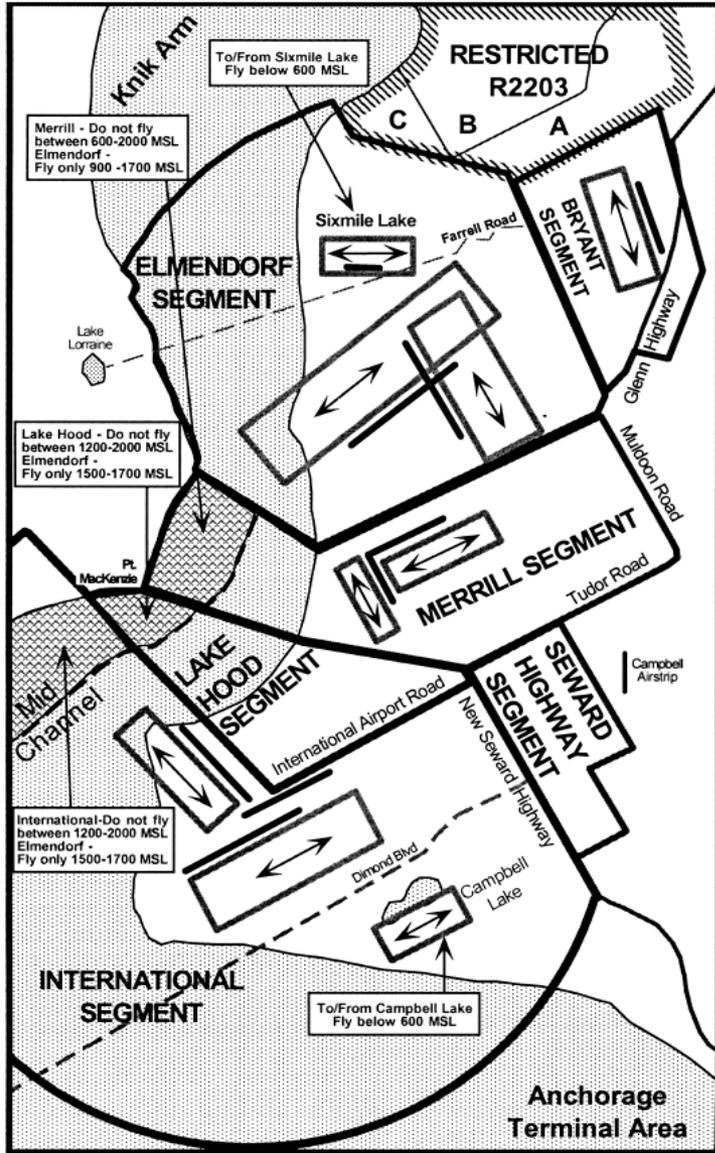


# JBER Controlled Firing Area (CFA) Conflict

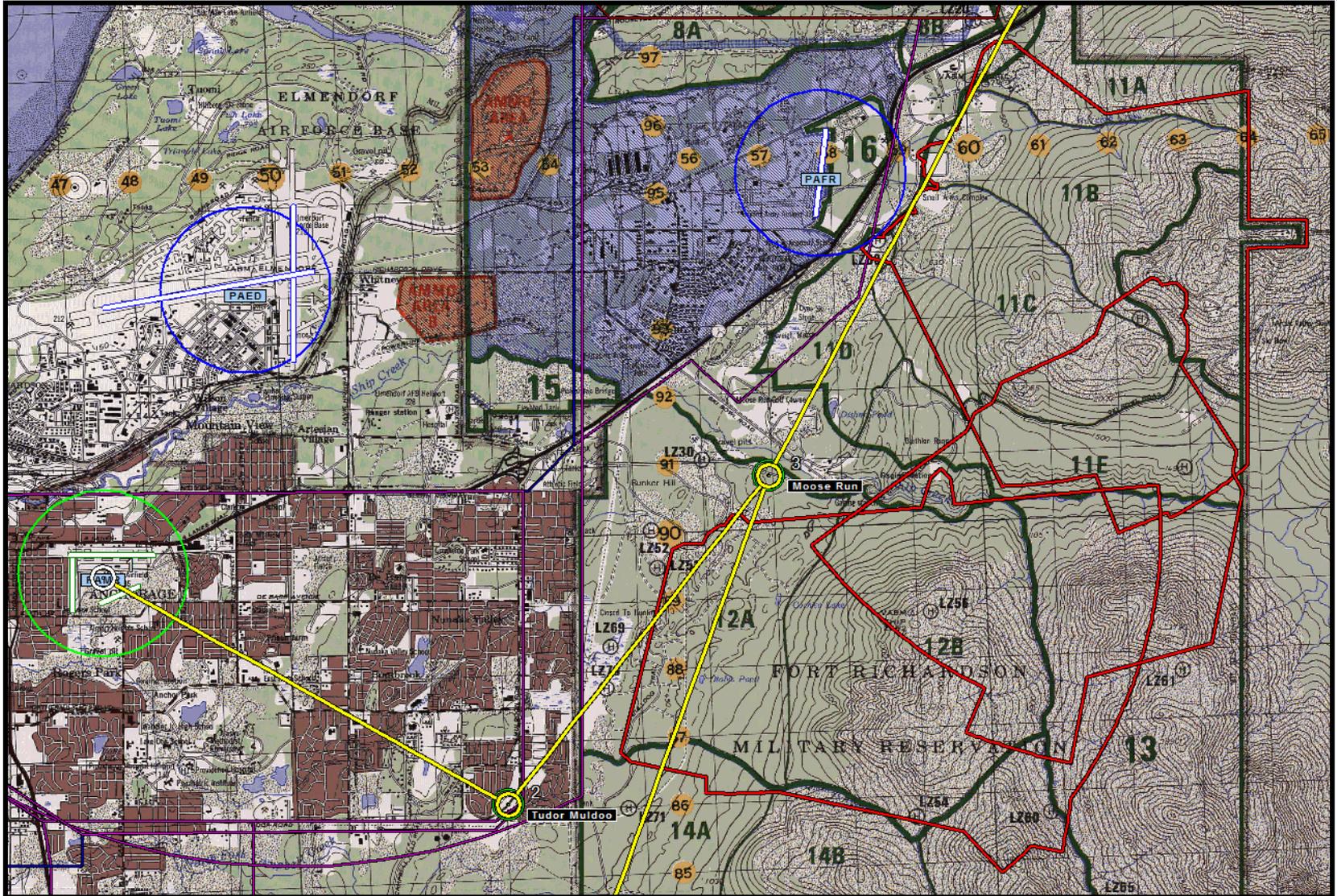
## \*Problem Statement

– Small aircraft incurring training delays on the JBER Small Arms Range. Soldiers have verbalized aircraft interruptions in training affect overall unit readiness

\* Bottom Line Staff analysis indicates these are costly disruptions however no evidence suggest unit readiness has been affected.



| ANCHORAGE, ALASKA  | VFR OVERFLIGHT ROUTE               | EASTSIDE OVERFLIGHT                |
|--|------------------------------------|------------------------------------|
| <p><b>ROUTE PURPOSE:</b><br/>                     The EASTSIDE OVERFLIGHT provides an orderly route for transiting the Anchorage bowl while avoiding Class C/D airspace and reducing potential conflict with aircraft using established routes to and from adjacent airports.</p>  |                                    |                                    |
| ENA AFSS<br>122.3  | ANCHORAGE APP CON<br>119.1 (NORTH) | ANCHORAGE APP CON<br>126.4 (SOUTH) |
|  |                                    |                                    |
| <p>VFR PROCEDURE ONLY<br/>                     CHART NOT TO SCALE -- NOT TO BE USED FOR NAVIGATION</p>   |                                    |                                    |
| <p><b>ROUTE INSTRUCTIONS:</b></p> <p><b>NORTH TO SOUTH:</b> Fly southbound along the Glenn Highway to the Eagle River Bridge, then direct Moose Run Golf Course, direct Potter, maintain 2500' MSL.</p> <p><b>SOUTH TO NORTH:</b> Proceed from Potter direct to Moose Run Golf Course, direct Eagle River Bridge, then northbound along the Glenn Highway, maintain 3500' MSL.</p> <p>Go to <a href="http://www.alaska.faa.gov/ata">www.alaska.faa.gov/ata</a> for more information.</p> |                                    |                                    |





## JO 7400.2

# Chapter 27. Controlled Firing Areas

## Section 1. General

### 27-1-1. DEFINITION

A controlled firing area (CFA) is airspace designated to contain activities that if not conducted in a controlled environment would be hazardous to nonparticipating aircraft.

### 27-1-2. PURPOSE

CFAs provide a means to accommodate, **without impact to aviation**, certain hazardous activities that can be immediately suspended if a nonparticipating aircraft approaches the area.

FAA interpretation is that no impact means: No impact



Questions?

# *Arctic Thunder 2012*





# Arctic Thunder 2012 Overview



- 231,000 Spectators
  - Minimal security incidents
  - Rapid medical response to minor emergencies
- 14 Flying Demonstrations
  - 1 minor aircraft incident
- 75+ Static Displays
  - No ground incidents
- \$80,000 Budget
  - World class open house
  - 30% of 2010



# Arctic Thunder 2012 Performance



- What Worked Well
  - Special Needs Day
  - Disaster Response Plan
    - Ambassador Program and EME integration
  - Flexibility and Adaptability of Staff
- What to Improve
  - DV CONOPS
  - AASA ROE
  - Parking and Transportation



# Questions



**America's finest fighting team,  
engaged in crises worldwide  
while securing America's future  
in the Last Frontier**

# **Noise Complaints**



**Tommie Baker  
December 12, 2012**



# Noise Complaint Process

72- hour window

## NOISE OCCURS

- Complainant contacts ALCOM  
1-800-JET NOIS (1-800-538-6647) or 907-552-2341

If complainant calls directly to a Wing PA office or Ops, skip to the appropriate POC below to continue the process.

## ALCOM

- Fills out Noise Complaint Form
- Emails to appropriate agency PA office

## PA Office

- Forwards form to Ops POC
  - Cc ALCOM/J08 PA  
*v3ALCOM.J08@us.af.mil*

If call begins at Wing PA office, Wing PA generates Part I of the form and follows the process from here.

## Ops POC

- Fills out Part II, Operations Info
- Returns form to Wing/PA POC

If complainant calls directly to Ops, the Ops POC completes Part I of the form and forwards the form to Wing PA POC and ccs ALCOM/J08 PA. Ops continues the process from here.

## PA Office

- Responds to Complainant
- Fills out Part III, Response to caller
- Emails completed form to ALCOM/J08 PA



# Complaints Filed

## ▪FY11

▪68: Eielson, 49  
JBER, 19

## ▪FY12

▪107: Eielson, 85  
JBER, 22

## ▪FY13

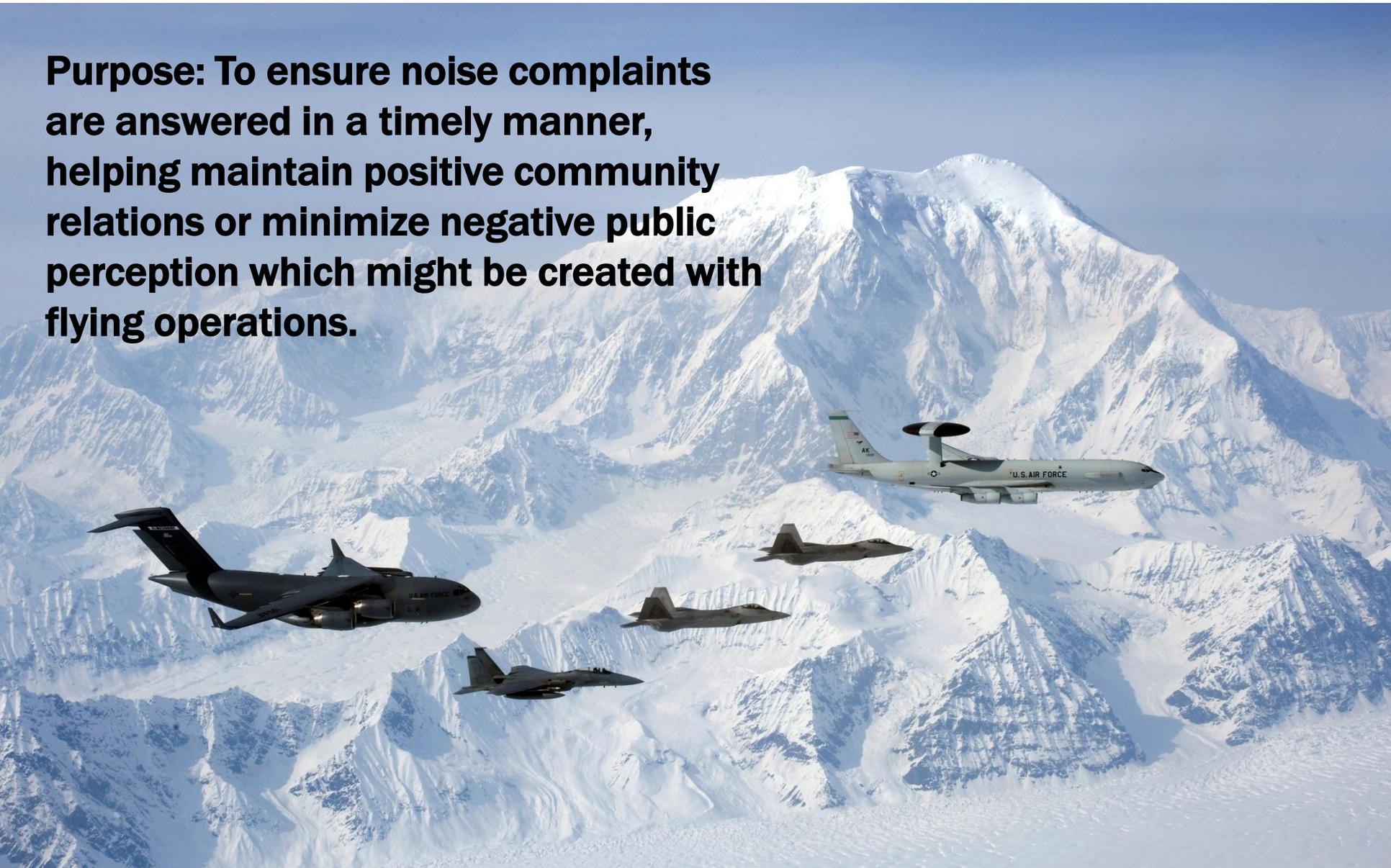
▪5: Eielson, 5  
JBER, 1





# Thank You for Your Support

**Purpose: To ensure noise complaints are answered in a timely manner, helping maintain positive community relations or minimize negative public perception which might be created with flying operations.**



# **ALASKA CIVIL/MILITARY AVIATION COUNCIL**

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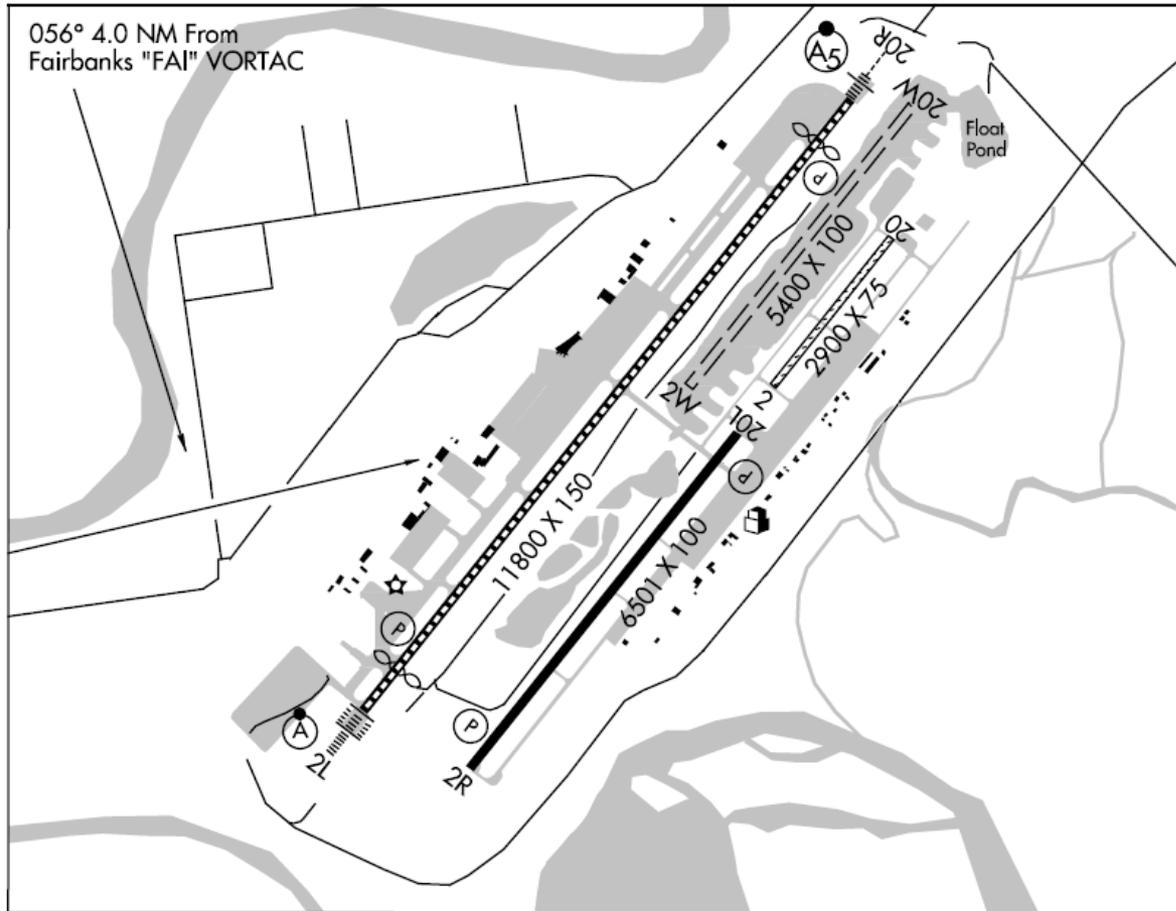
## **AIRFIELD STATUS UPDATE**



**Airport Presentations from:**

- Fairbanks Int'l – Ms. Osborn**
  - Bryant Army Airfield – Mr. Johnson**
-

# Fairbanks International



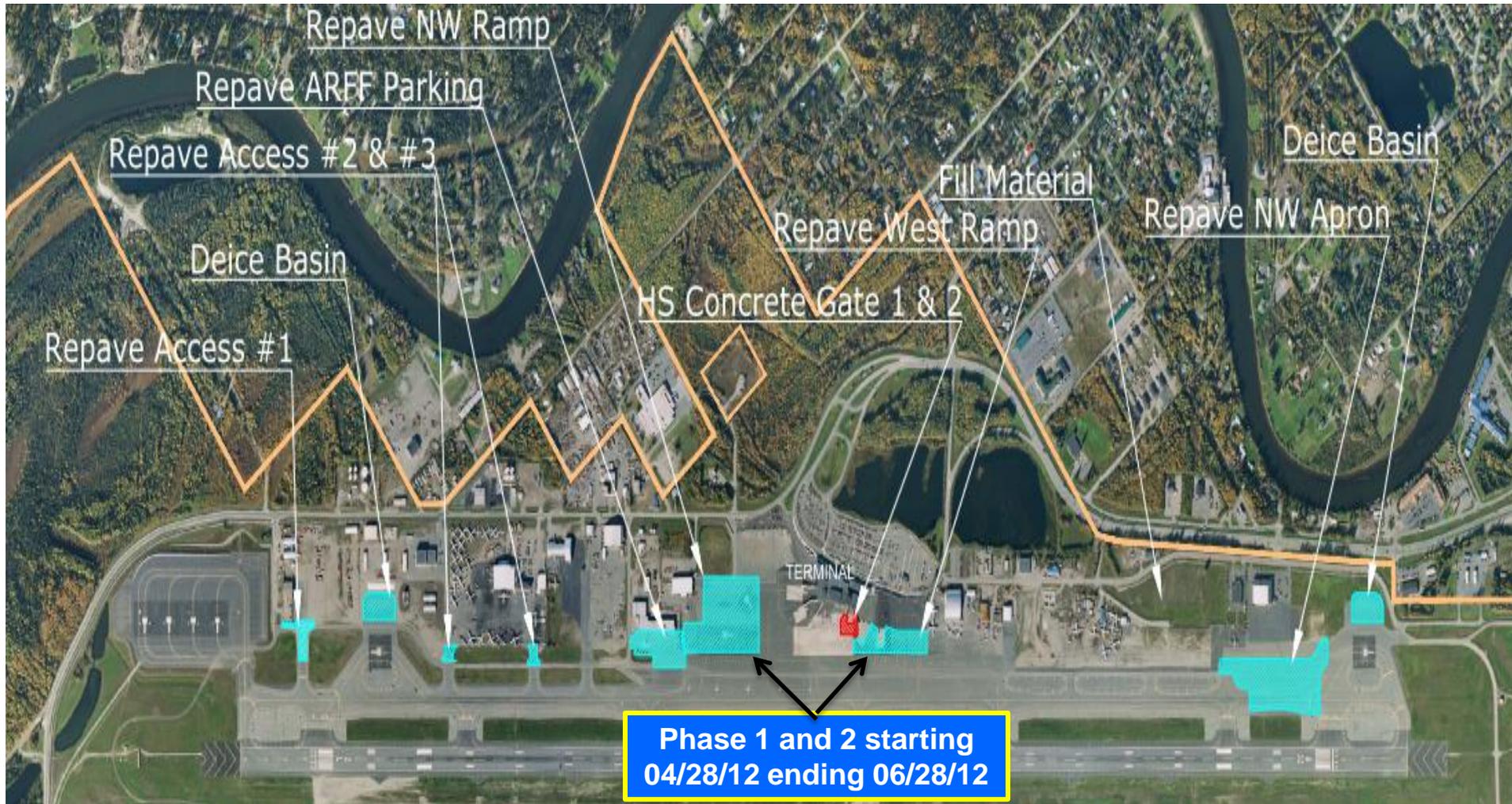
# Fairbanks International

## Short-Term

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| <b>CONSTRUCTION PROJECTS / NAVAIDS</b>     | <b>CONSTRUCTION PERIOD</b>                          | <b>EFFECTS/LIMFACs/ TEMPORARY OPS</b>  |
|--|---|--|
| 2L DME installed at LOC                    | Completion date May 31, 2012                        | No change to Procedures until Spring 2012 due to flight check and publishing.                          |
| Install 20R DME at LOC                     | Completion date July 26, 2012                       | No change to procedures until flight checked and published.  |
| West Apron Improvement<br>See attached map | Initial start 04/28/2012<br>Completion Date 9/30/12 | Resurface Areas of the west ramp asphalt.<br>Contract and work schedules are in the process of review. |

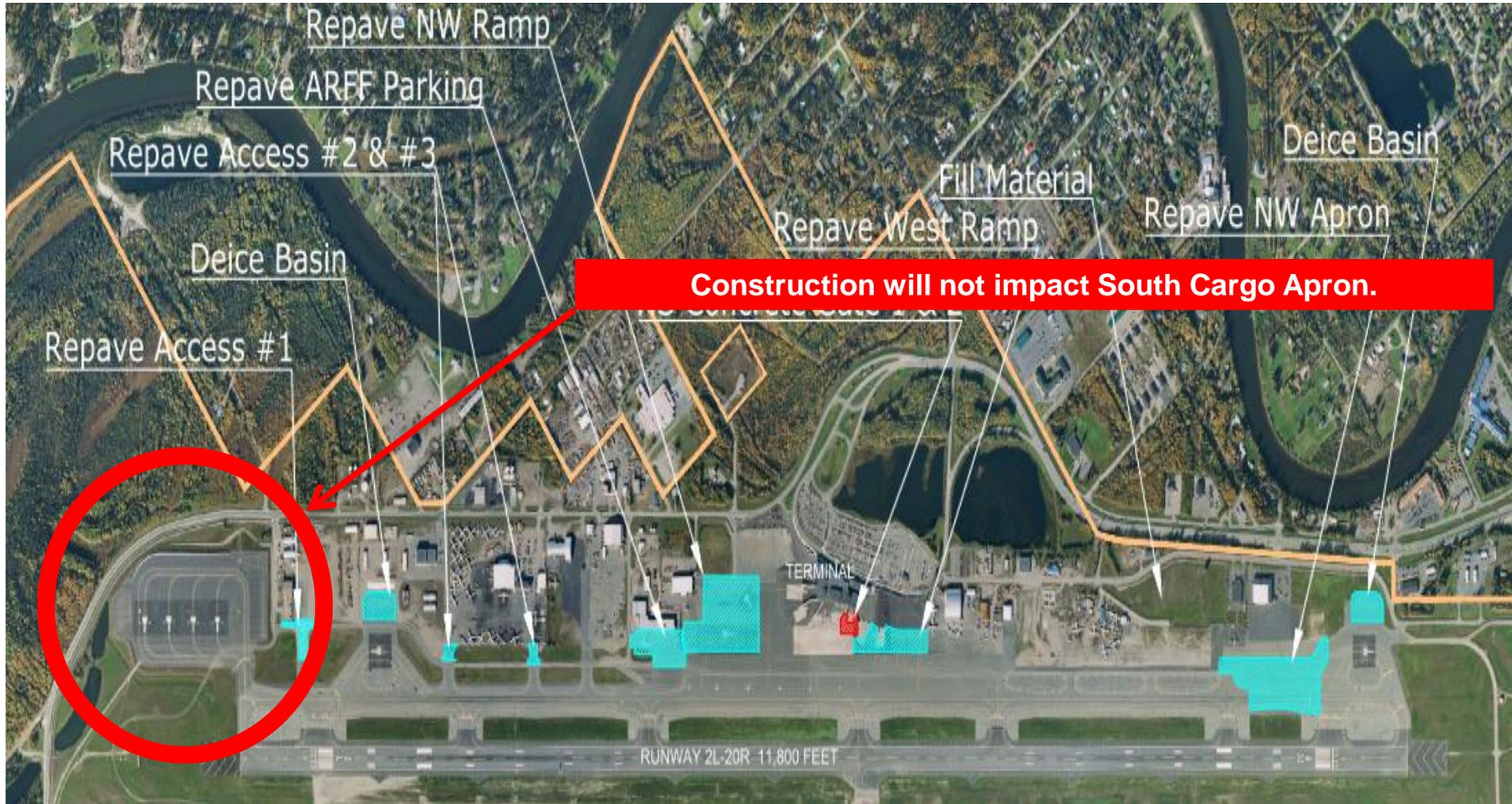
# 2012 West Apron Improvement



# 2012 West Apron Improvement

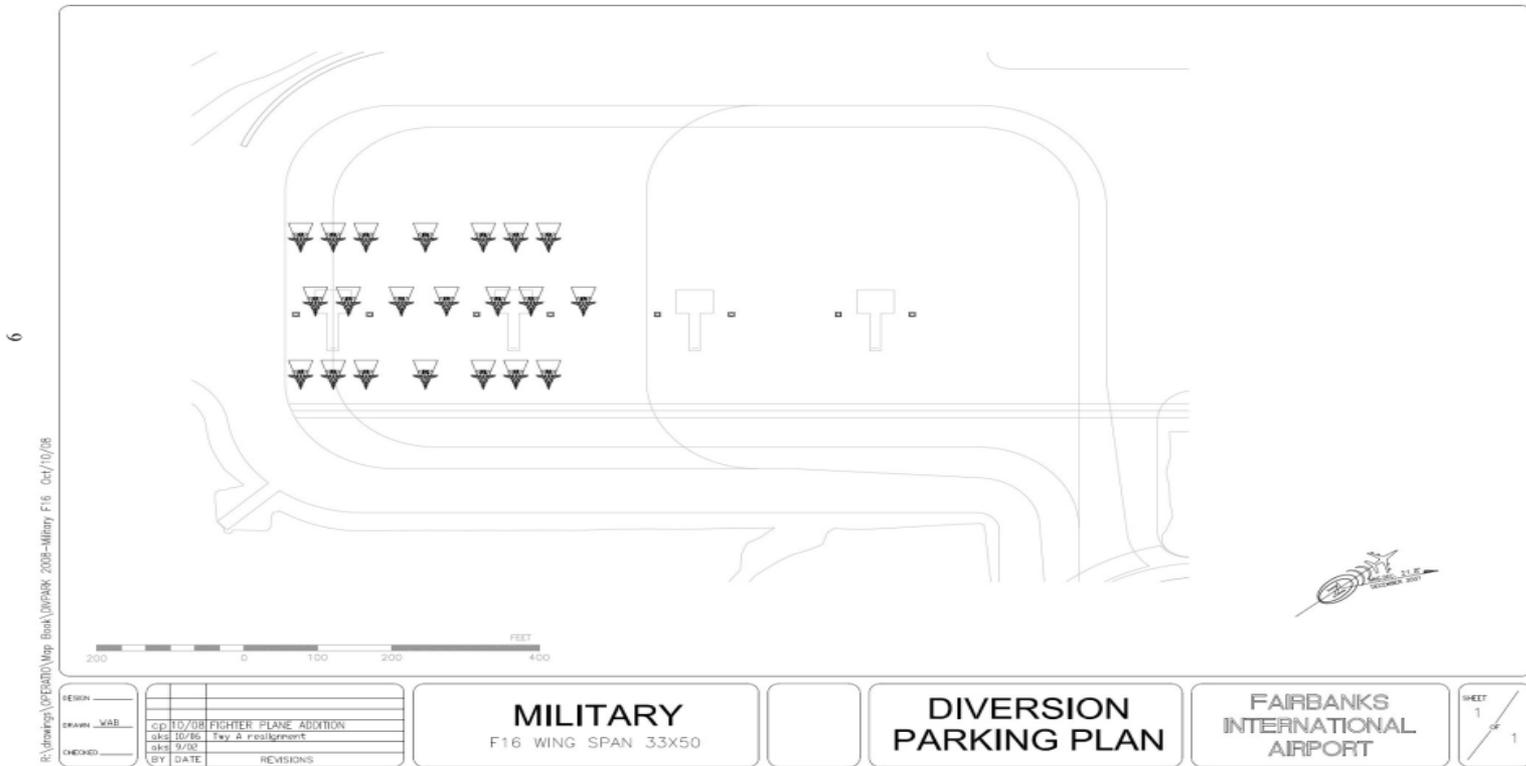


# 2012 West Apron Improvement



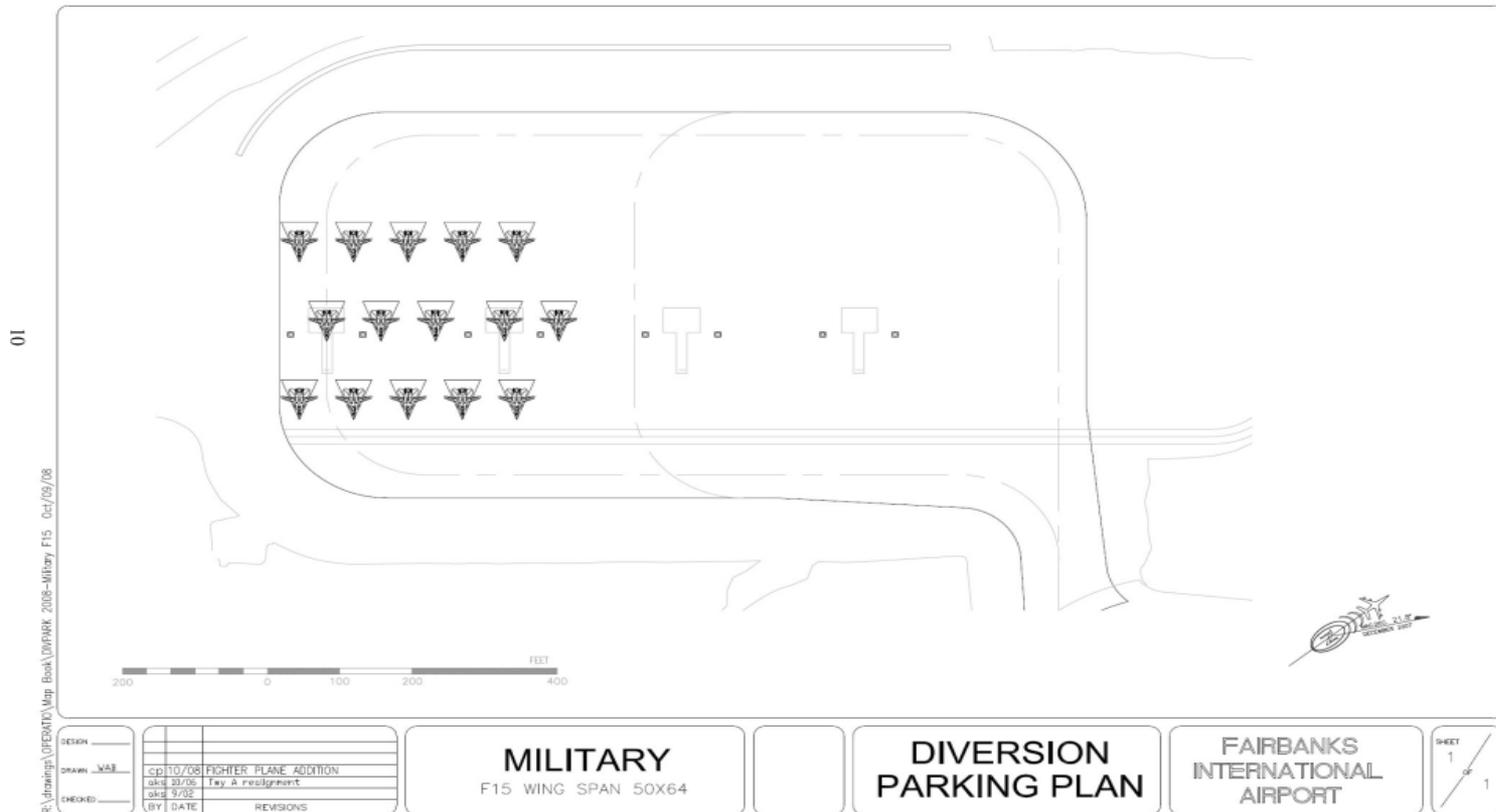
# 2012 Construction Military Diversion Parking

Parking for "Small" F16 Size Aircraft (Ramp Capacity: 48)



# 2012 Construction Military Diversion Parking

Parking for “Large” F15/F22 Size Aircraft (Ramp Capacity: 36)

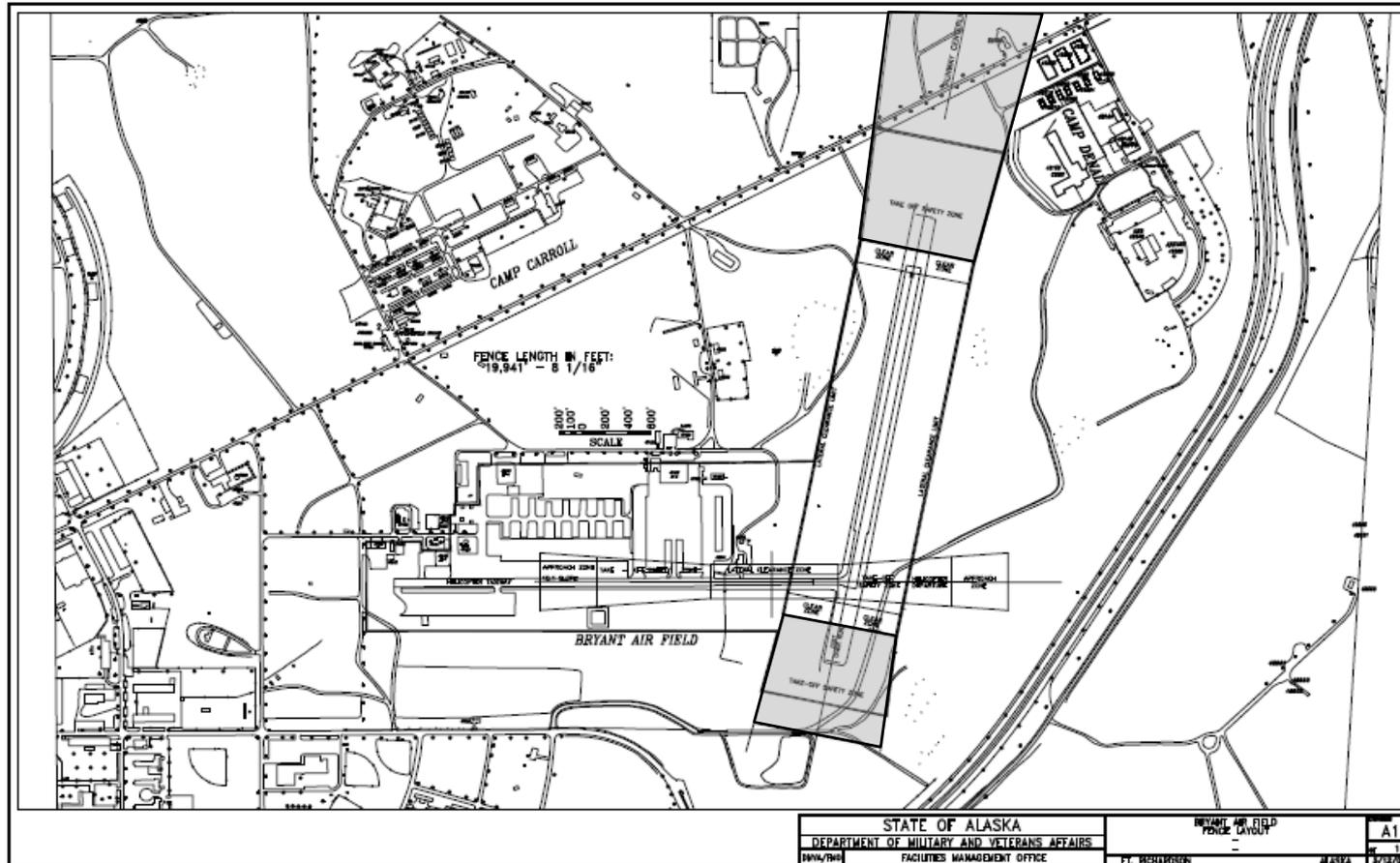


# Fairbanks International

## Long-Term

| <b>CONSTRUCTION PROJECTS / NAVAIDS</b> | <b>CONSTRUCTION PERIOD</b> | <b>EFFECTS/LIMFACs/ TEMPORARY OPS</b> |
|--|----------------------------|---------------------------------------|
| ARFF Remodel                           | 2013                       | None                                  |
|  |                            |                                       |
|  |                            |                                       |

# Bryant Army Airfield



# Bryant Army Airfield

- **NGB Task**

- Directive - Army Campaign Plan
- Manage 23 Airfields
- Additional Airfield Personnel Growth Positions
- National ATC Contract Positions
- All Airfield Management Positions Non-deployable

- **TAG Task**

- Aviation Safety
- ATSCOM Study of Need - Confirmed
- USAASA - Validated

- **Mission**

- No Change
- Assigned: 20 UH-60, 8 C-23
- Deployments: 2003- 2013 One Unit or More Has Been or will be Deployed.
- A/1-207 (UH-60) is deploying 2013 for another 12 months

# Bryant Army Airfield

- **Control Tower**

Currently Advisory Service 125.0

- **Class D Airspace**

Bryant Segment Footprint. SFC 1600 East of Hwy, SFC 2900 West of Hwy

- **Letters of Agreement**

Agreements Being Established with EDF/A11

Transparent to Flying Community

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# QUESTIONS?

# **Impacts of GPS Jamming Notices**

**ACMAC Meeting**

**December 12, 2012**

**Tom George, Aircraft Owners and Pilots Association**

**Adam White, Alaska Airmen's Association**

# Nature of activity described by military

## GPS Jamming: Airfields

- Airfield jamming: directional, narrow azimuth, away from critical ATC facilities, targeted <500'AGL



# Nature of activity described by military

## GPS Jamming: Airfields

- Airfield jamming: directional, narrow azimuth, away from critical ATC facilities, targeted <500'AGL



# FAA Notice

**GPS Interference Testing  
PACAF 12-03  
August 8 –August 15, 2012  
Fairbanks, Alaska**

GPS testing is scheduled as follows and may result in unreliable or unavailable GPS signal.

- A. Location: Centered at 644048N/1470703W or the FAI VOR 107 degree radial at 24NM.
- B. Dates and times:

|                    |                           |
|--------------------|---------------------------|
| 08-09 August, 2012 | 1600-1800Z and 2200-2359Z |
| 10 August, 2012    | 2200-2359Z                |
| 13 August, 2012    | 1600-1800Z                |
| 14-15 August, 2012 | 1600-1800Z and 2200-2359Z |
- C. Duration: A single event may last up to 90 min and start at any time during the requested period.
- D. During testing, the GPS signal may be unreliable or unavailable within a 218NMR centered at 644048N/1470703W or the FAI VOR 107 degree radial at 24NM at FL400 and above, decreasing in area with a decrease in altitude to 174NMR at FL250, 113NMR at 10,000 FT MSL, 110NMR at 4,000 FT AGL and 79NMR at 50 FT AGL.
- E. Pilots are strongly encouraged to report anomalies during testing to the appropriate ARTCC to assist in the determination of the extent of GPS degradation during tests.

**The NOTAMs discussed in this advisory may change with little or no notice. Pilots are advised to check NOTAMs frequently for possible changes prior to operations in the area. NOTAMs will be published at least 24 hours in advance of any GPS tests.**

VIP at 250NM

218NM at FL400 and above

174NM at FL250

113NM at 10,000ft MSL

110NM at 4,000ft AGL

79NM at 50ft AGL

N64 40 48 W147 07 03

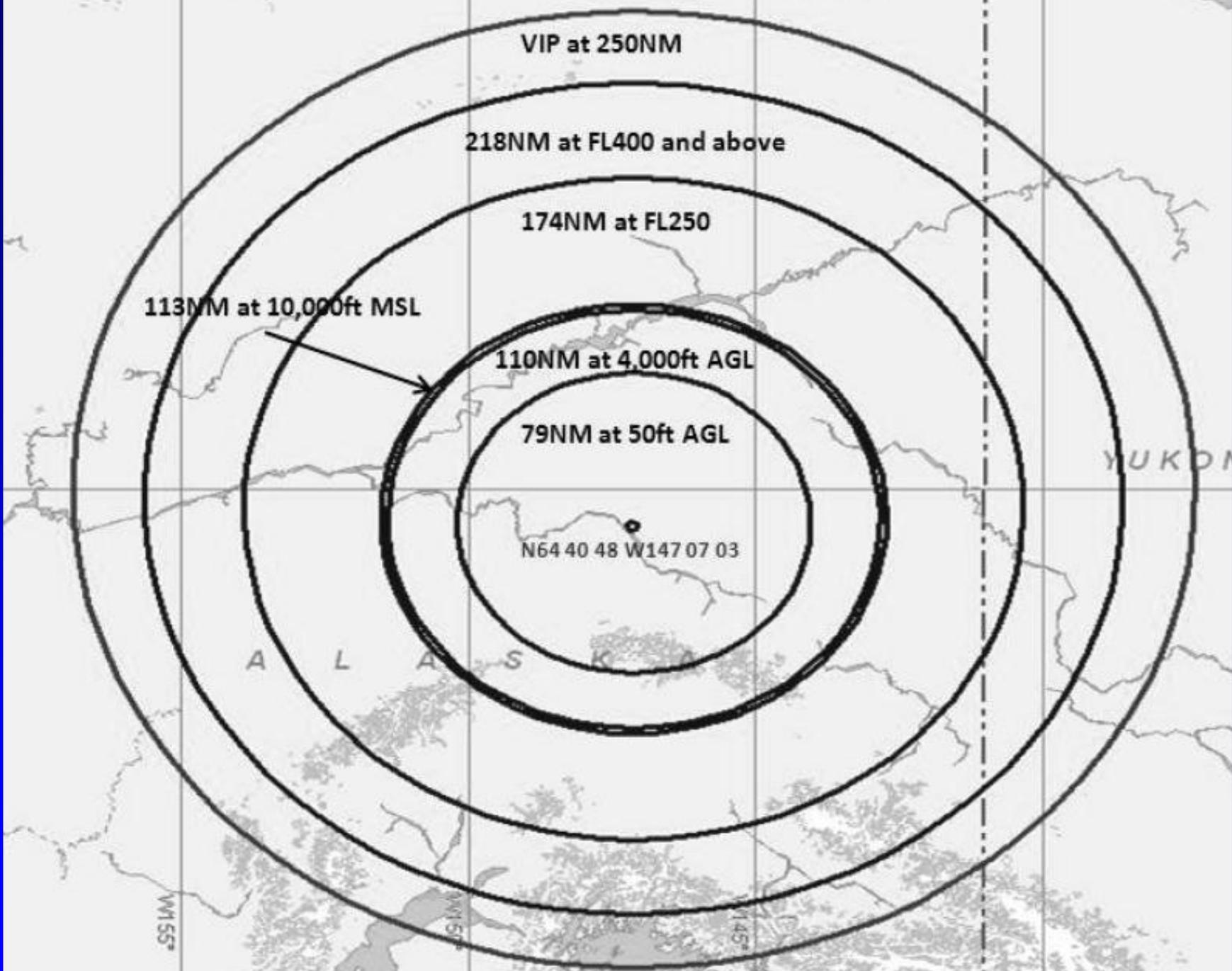
A L A S K A

YUKON

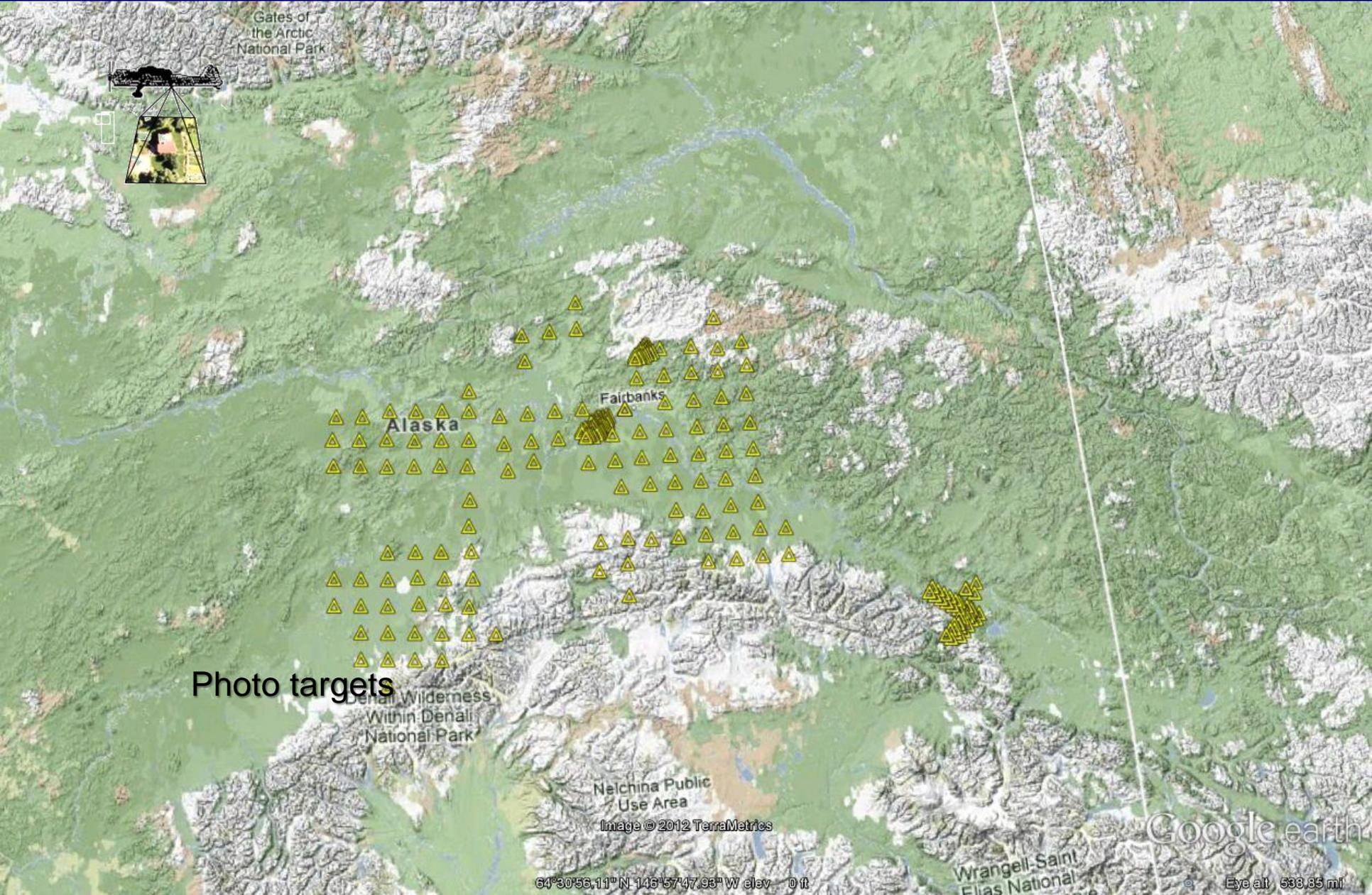
155°

157°

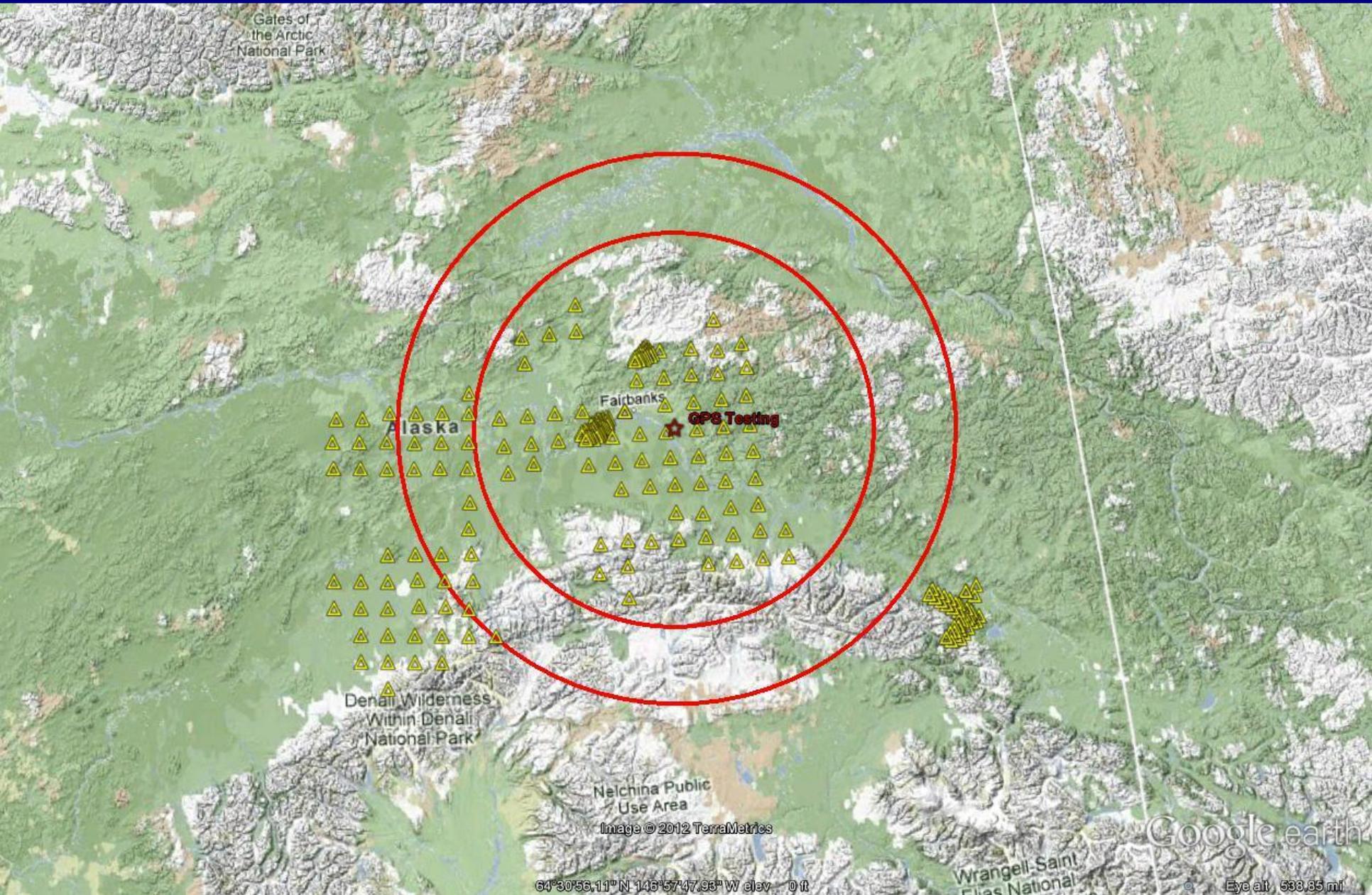
145°



# GPS Jamming Impacts



# GPS Jamming Impacts

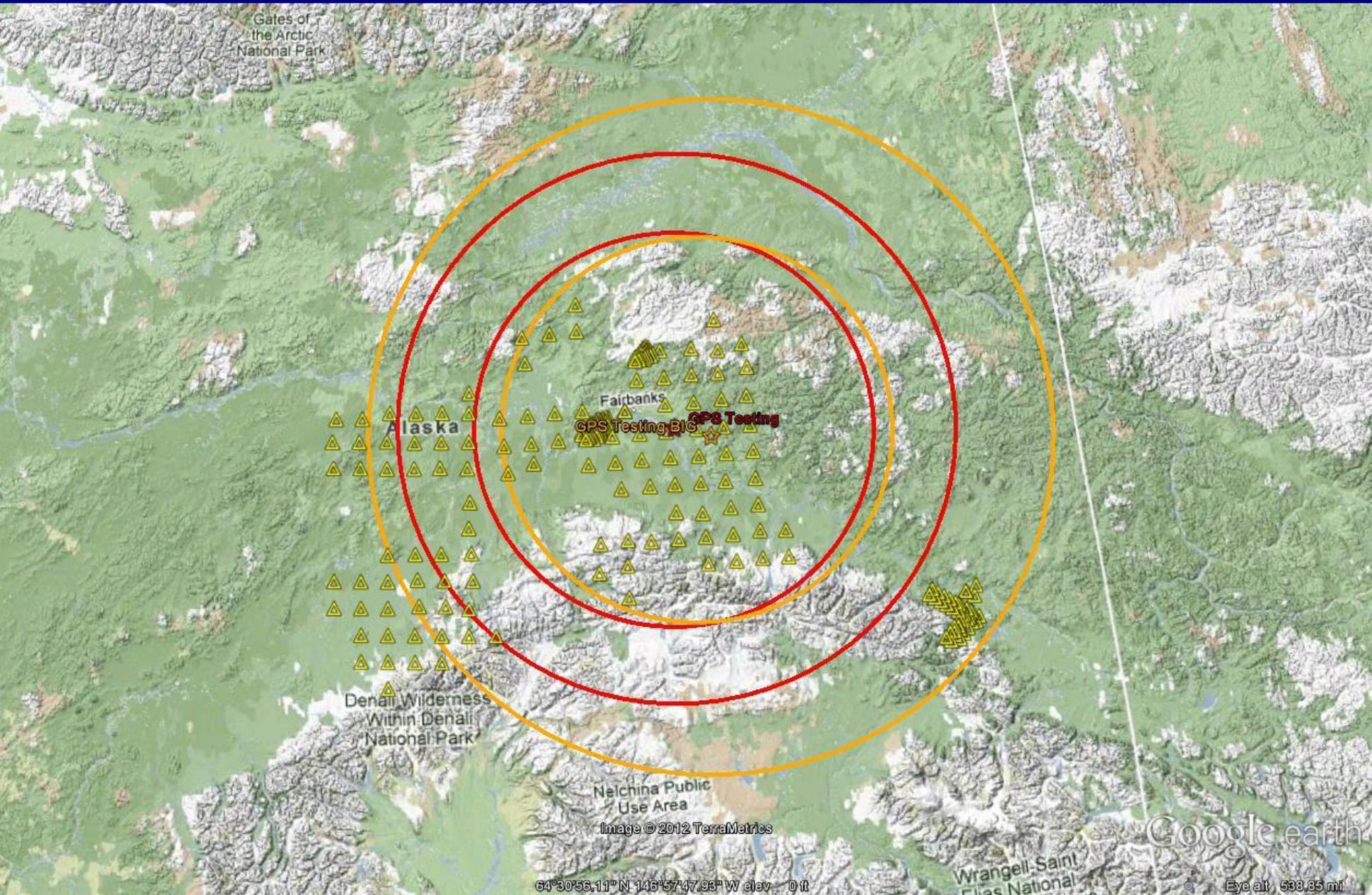


64°30'56.11" N 146°57'47.93" W elev 0 ft

Google earth

Eye alt 538.85 mi

# GPS Jamming Impacts



# Pictometry Project

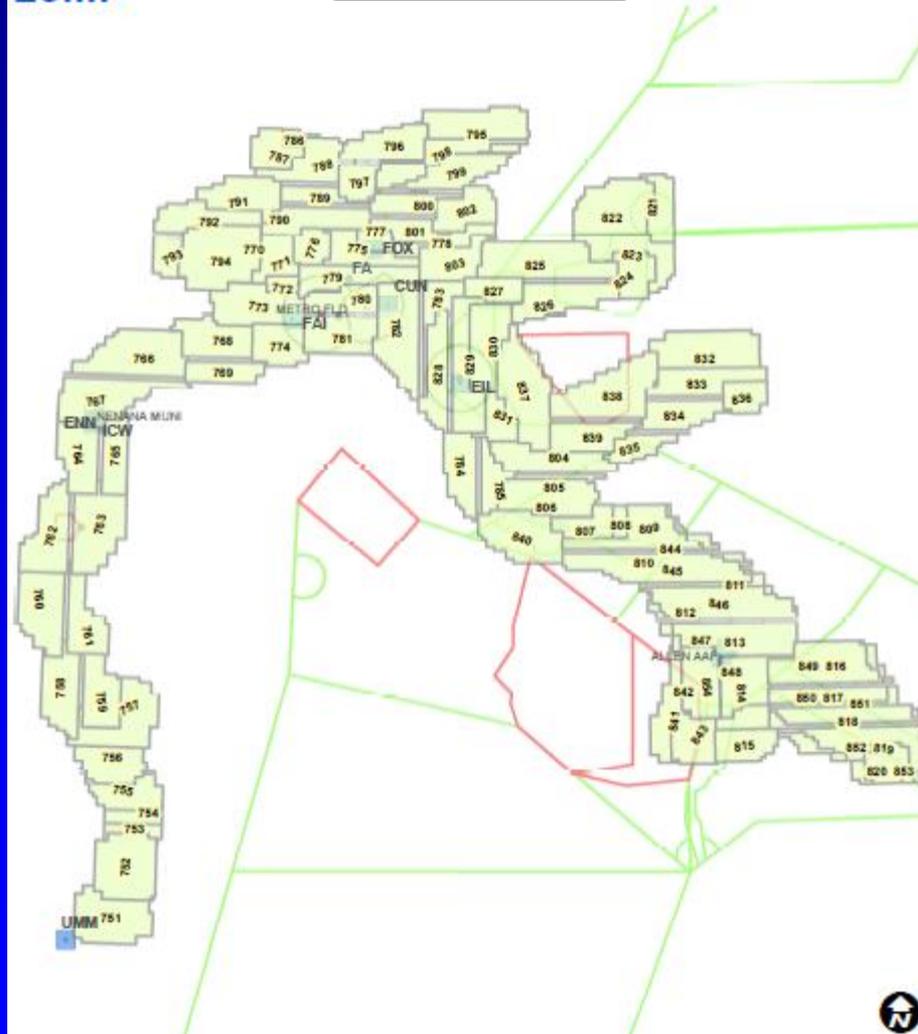
**AKXFAI12**  
**C5 FP751-854**  
**29MP**

**Pilot Contact Information**

Name \_\_\_\_\_  
Local Phone \_\_\_\_\_  
Toll Number \_\_\_\_\_



Pat Blankford  
Vice President of Production  
100 Town Centre Drive, Rochester, NY 14623  
Phone 585.486.0093  
Fax 585.486.0098



# AeroMetric Feedback



info@aerometric.com | 1-800-558-6707

**Tom**

**AeroMetric conducts high accuracy aerial surveys from April through October in the areas described in Flight Advisory GPS Interference Testing PACAF 12-03 and 12-02. Our ability to capture the data that our clients need depend upon GPS positioning within centimeters. Any jamming or degradation of that positioning would cause us to collect useless data requiring recollection at costs often in the tens of thousands of dollars. Much of our data collection can only be accomplished in clear weather which is very hard to come by in Alaska. The impacted areas shown in PACAF 12-01 and 12-02 cover a very significant area of Alaska and if truly affected would cause us to virtually shut down our operations on the days testing occurs. This would not only impact AeroMetric but also our clients including Military and Government Agencies delaying mapping products and imagery upon which they depend.**

**Sincerely**

**Warren Penny**

**Warren D Penny**

**Production Manager Alaska**

**2014 Merrill Field Dr., Anchorage, AK 99501**

**P: 907-272-4495 | F: 907-274-3265 | M: 907-748-3233**

**[www.aerometric.com](http://www.aerometric.com)**

# Impacts

- **Impacts of GPS “testing” are broader than VFR/IFR navigation and aviation safety**
- **FAA notices need to depict realistic expectations to avoid un-necessary economic impacts**



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# TAKE A BREAK



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# SUAIS -OUTAGE REPORTS

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**LtCol Scott Babos**  
**Air Force Representative to the FAA**



# SUAIS Radio Install

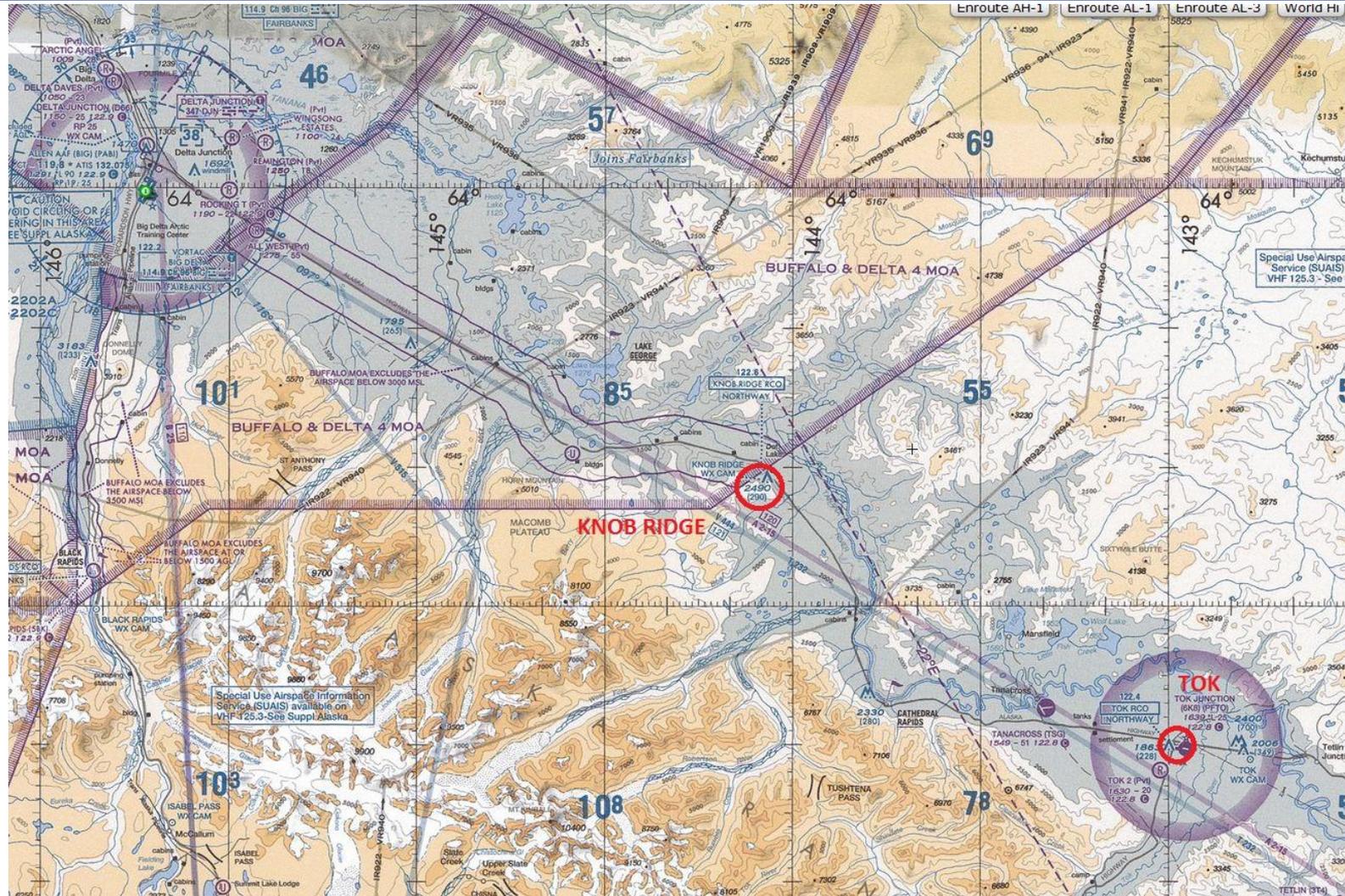
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- Knob Ridge radio to enhance comm
- Radio and antenna installed now
- AT&T establishing comm link to Eielson
- Contract agent working to complete task



# KNOB RIDGE AREA



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# EIS UPDATES

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- **JPARC Modernization & Enhancement**
- **F-16 Relocation**
- **Gulf of Alaska, Supplemental (Navy)**

Maj Bill Moody  
Airspace Manager



# JPARC EIS



- **6 Proposals for decisions**
  - **AF: Fox MOA, RLOD, Extend MOA Hrs**
  - **Army: UAS Corr, BAX R22XX, R2205 Exp**
- **Public Comments – All considered**
- **Draft-Final document review – Now**
- **Final EIS goes public – Mar/Apr**
- **Airspace Proposals to FAA – Mar/Apr**
- **Record of Decision – after 30 days**
- **FAA decision – Proposals separated**



# F-16 Relocation EIS

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- **EIS vs EA**
- **Purpose/Need – Now**
- **NOI in Fed Register – Dec/Jan**
- **Normal NEPA process for EIS**
  - **Public Scoping Meetings**
  - **Draft EIS**
  - **Public Comments**
  - **Final & ROD**

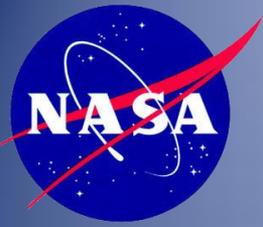


# Gulf of Alaska Supplemental EIS

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- **Supplemental – 5 years elapsed**
  - **Re-evaluation of impacts**
- **Proposed Actions (DOPAA)**
  - **In Development Now**
- **Typical NEPA process**
  - **Public involvement/comments**
- **Website**
  - **[www.GOAeis.com](http://www.GOAeis.com)**



**National Aeronautics and Space Administration  
Dryden Flight Research Center, Edwards AFB, CA**

# **NASA MQ-9 Ikhana**

## **Alaska Deployment Overview**



**Hernan Posada  
Research Pilot**

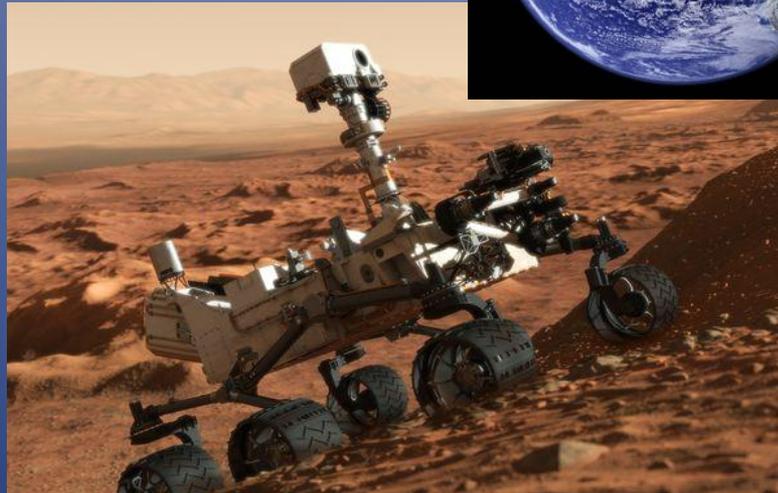


# Agenda

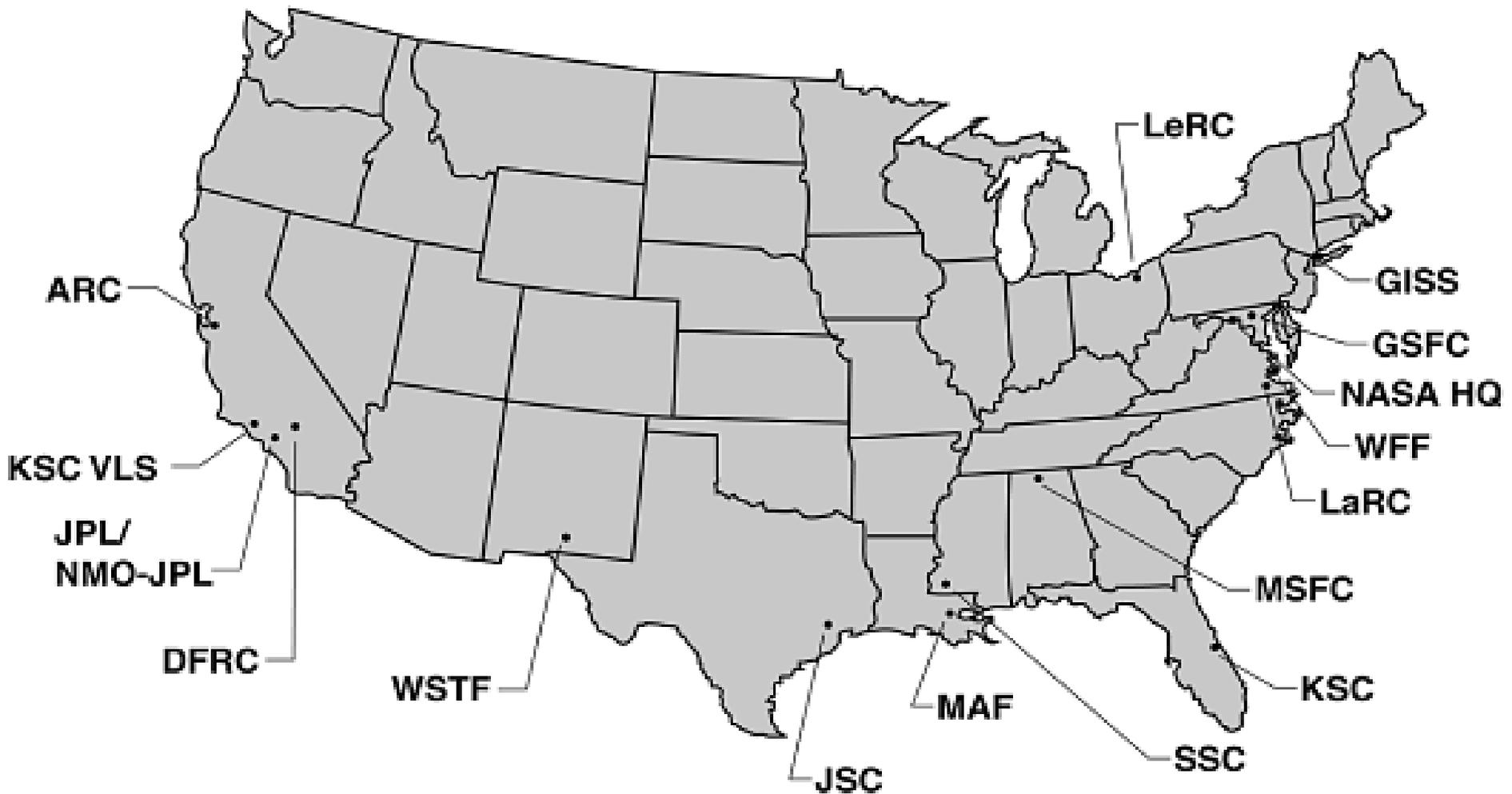
- **NASA Missions**
- **DFRC Overview**
- **Alaska MISOPEX Campaign 2013**

# NASA Missions

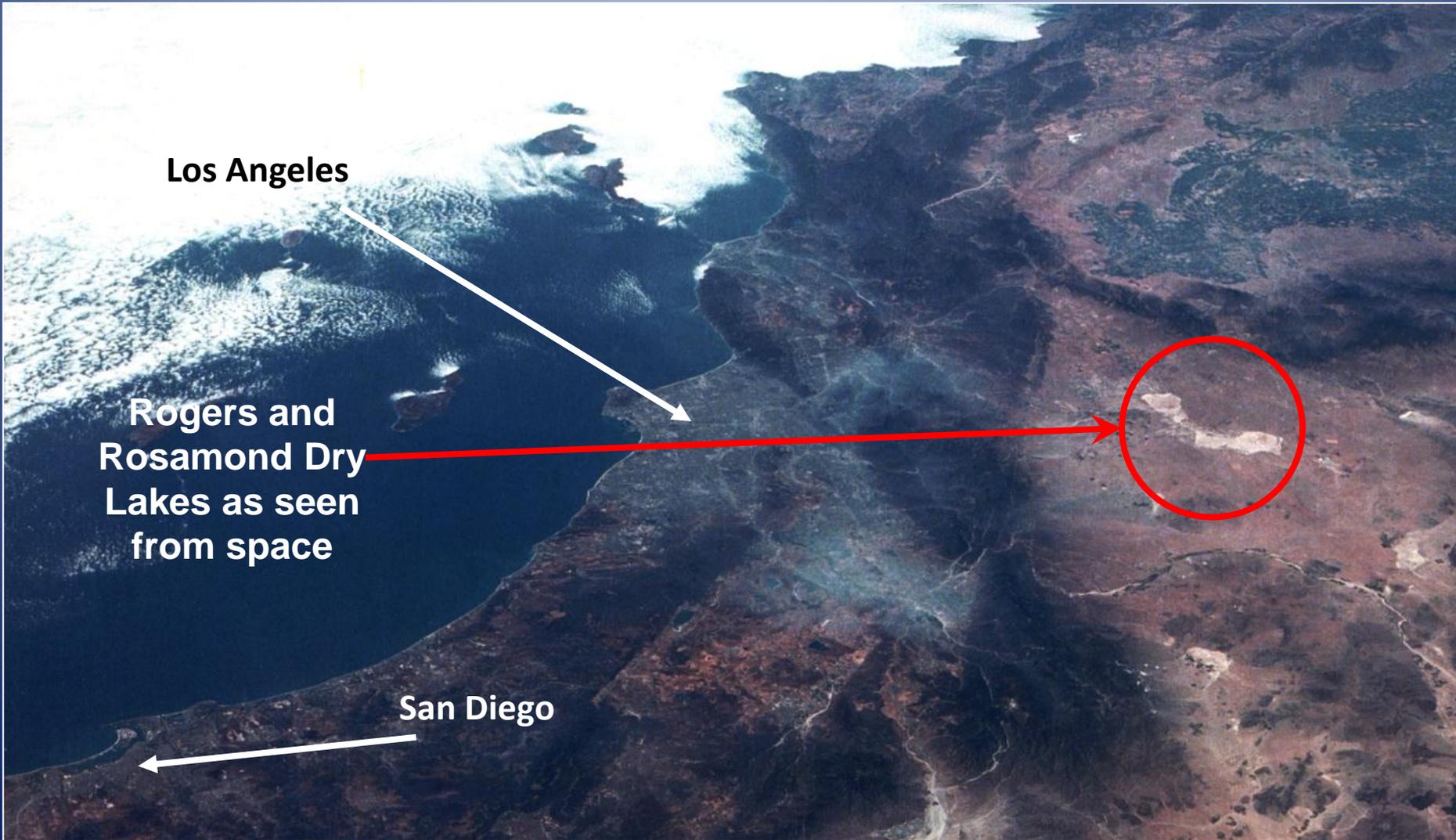
- Human Exploration
- Space Operations
- Science
- Aeronautics



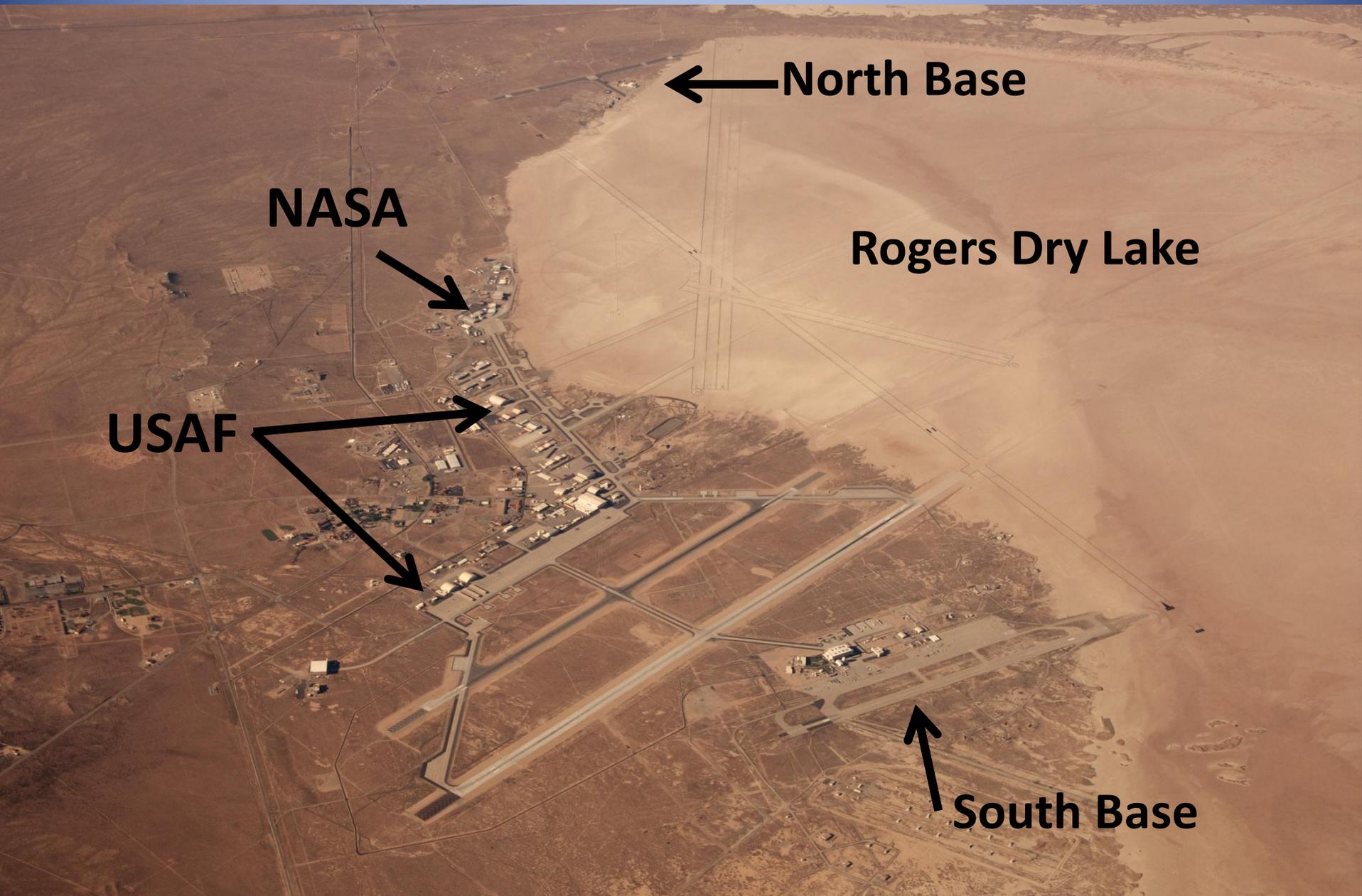
# NASA Centers



# Dryden at Edwards Air Force Base



# Edwards AFB



← North Base

NASA

Rogers Dry Lake

USAF

↑ South Base

# NASA Dryden Aircraft Fleet



**Aeronautics**

**Airborne Science**

# Dryden Aircraft Operations Facility, Palmdale



# A LEGACY OF UAV RESEARCH at NASA DRYDEN



# UAS Experience



# NASA DFRC Unmanned Aircraft Systems

**RQ-4 Global Hawk**



**X-48**

**MQ-9 Ikhana**



**DROID**

# MQ-9 Ikhana



## MQ-9 Reaper/ Predator-B



## MQ-1 Predator -A



# NASA MQ-9 *Ikhana*

*Ikhana* = Native American Choctaw word for...

“Intelligence”

“Learning”

“Awareness”



# The System

Aircraft and GSE

Ground Control Station (GCS)

C&C Links:

GDT/PGDT – C-Band Antenna

Ku-Band SATCOM Dish

Navigation: INS/GPS

PGDT C-Band Line-of-sight



Ku-Band SATCOM



# MQ-9 Ground Control Station (GCS)

Two Pilot Stations





**Ground Control Station:**  
Pilots  
Systems Monitor  
Mission Director  
Range Safety  
Engineers  
Scientists

# Ikhana *MIZOPEX* Overview



## *Marginal Ice Zone Observations and Processes EXperiment*



**Mauricio Rivas, Project Manager**

**Mark Pestana, Project Pilot**

# MIZOPEX Science Overview

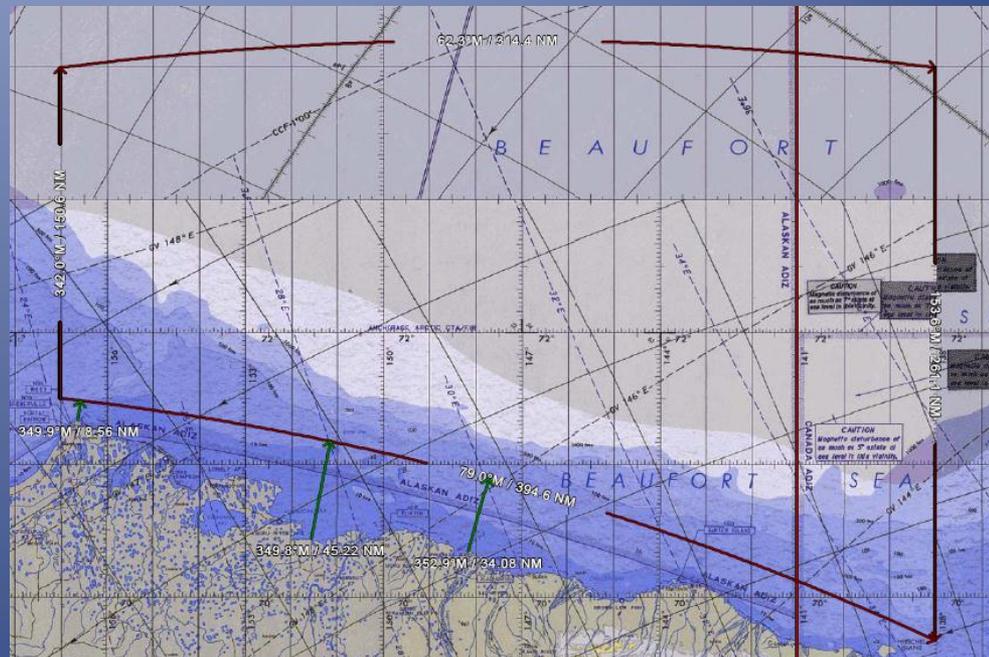


An interdisciplinary effort that brings together oceanographers, cryospheric scientists, aeronautical engineers, UAS operators and database/data systems experts.

-How much is the warming of the MIZ in the Arctic Ocean under or over estimated by satellite measurements?

-How does this warming affect sea ice melt in the MIZ?

- Can we better characterize sea ice survival rates in the transition zone between open ocean and permanent ice through improved data input to ice forecasting and climate models?

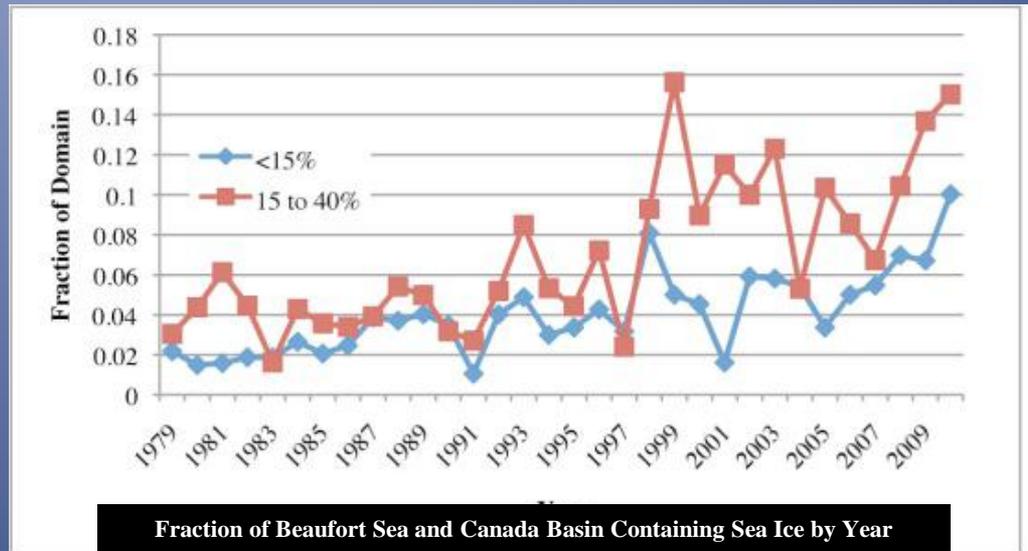




# MIZOPEX Missions Objectives

## – Science

- Quantify the variability of sea surface temperature and salinity, ice conditions in and near the marginal ice zone
- Determine the accuracy of satellite-derived data
- Investigate how well measurements represent subsurface temperatures
- Assess ice-ocean interactions
- Identify variations in ice thickness and surface characteristics
- Investigate what types of ice survive summer melt



## – Aeronautical:

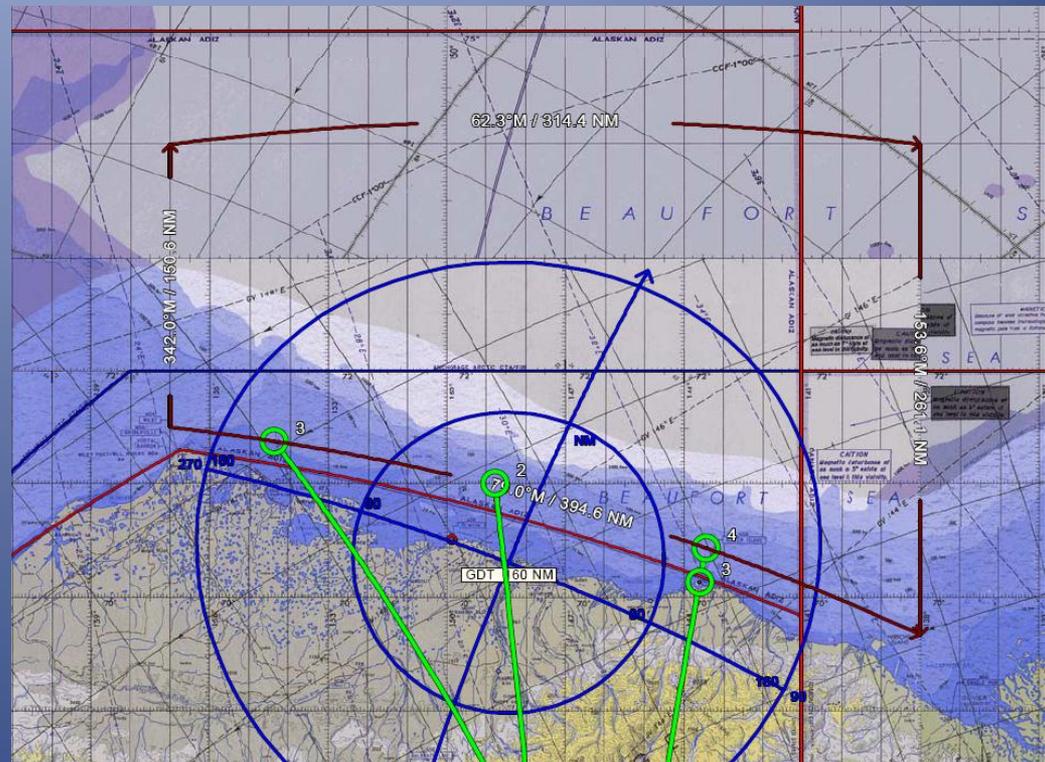
- Demonstrate coordinated operation of multiple classes of UAS
- Long-duration, repeated UAS missions in the NAS
- Deployment of unique combinations of remote sensing instrumentation

# Science Area

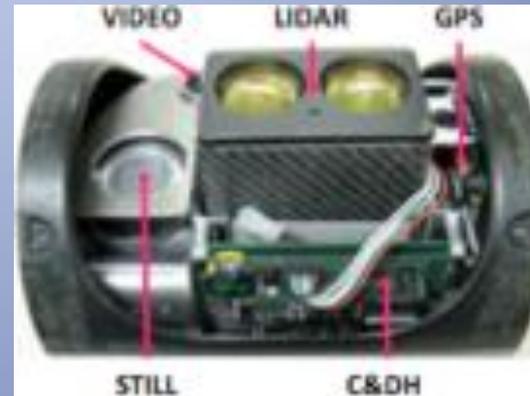


- Overfly areas of open water, mixed ice, solid ice
  - Seasonally dependent
  - Specific locations will be selected using current satellite imagery
  - Below clouds

- Area:
  - Starts ~10 nm off the coast
  - Extends out 250+ nm off the coast
- Includes Canadian airspace
- Desired operations below Class A
  - Down to 2000 AGL



# MIZOPEX Sensors



The MIZOPEX suite of sensors provides a comprehensive set of data targeting surface temperature, salinity, ice topography, and surface reflectance including:

- **Ball Experimental SST Radiometer (BESST):** A microbolometer radiometer providing real-time calibration
- **CU Laser Profiler and Imaging System (CULPIS):**  
A Lidar, IMU, GPS and digital still and video camera sensor suite to map ice sheet and sea ice topography including roughness, elevation, and surface features
- **Synthetic Aperture Radar Imaging:** X band SAR providing sea ice small-scale roughness and large-scale morphographic imagery
- **Airborne Automatic Identification System (AIS) Receiver:** AIS is a marine vessel transponder. The AIS receiver enables airborne tracing of vessels and maritime surveillance.

CULPIS

# Ikhana Flight Requirements -



- **Deployment Timeframe**
  - Deployment to Eielson could take place as early as June 2013 and last until as late as August 2013
    - Check out flight(s) to begin 1 – 2 weeks after arrival
    - MIZOPEX science missions targeted from mid July to mid August
  - Return to DFRC/EAFB in late August/early September
- **Science Flight Duration**
  - Planned single crew: 9 hours
  - Planned two crew: 20 hours (for a few flights)
- **Science Flight Frequency**
  - One flight per day, 3 – 5 science flights per week

# Eielson's Local Air Space



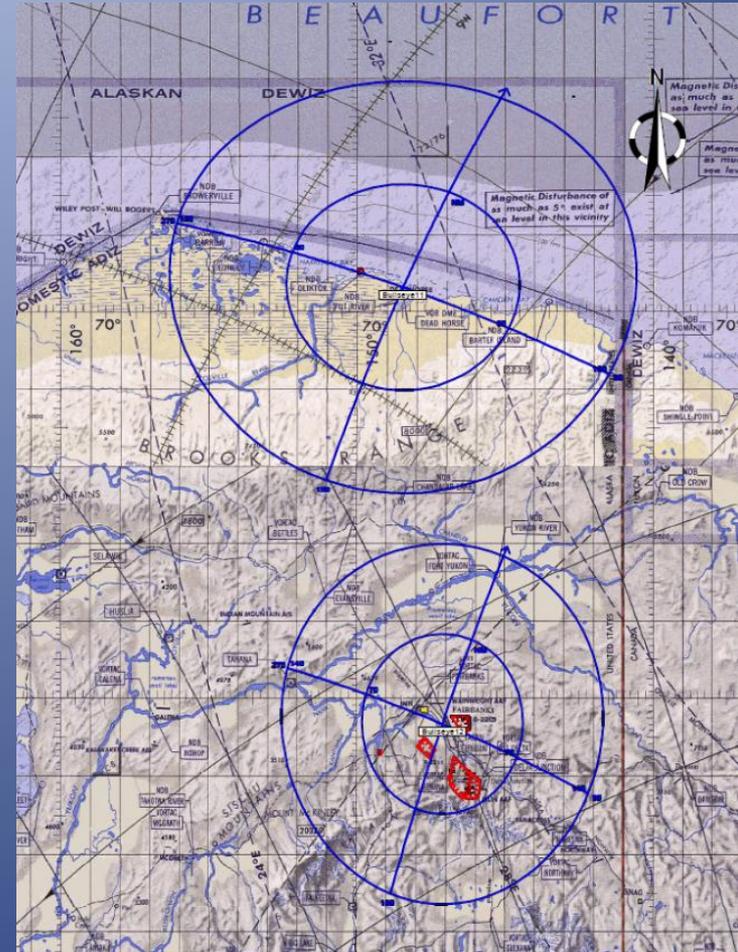
- Launch and recover at Eielson AFB
  - Departures and approaches from/to Eielson AFB designed to minimize impact to population and other users of Anchorage ARTCC (ZAN)
  - Possibly use Chase aircraft to mitigate see-and-avoid, or activate/NOTAM MOA from Class D airspace to Class A.
  - Establish a “Lost Link” orbit location.





# Flights from Eielson AFB

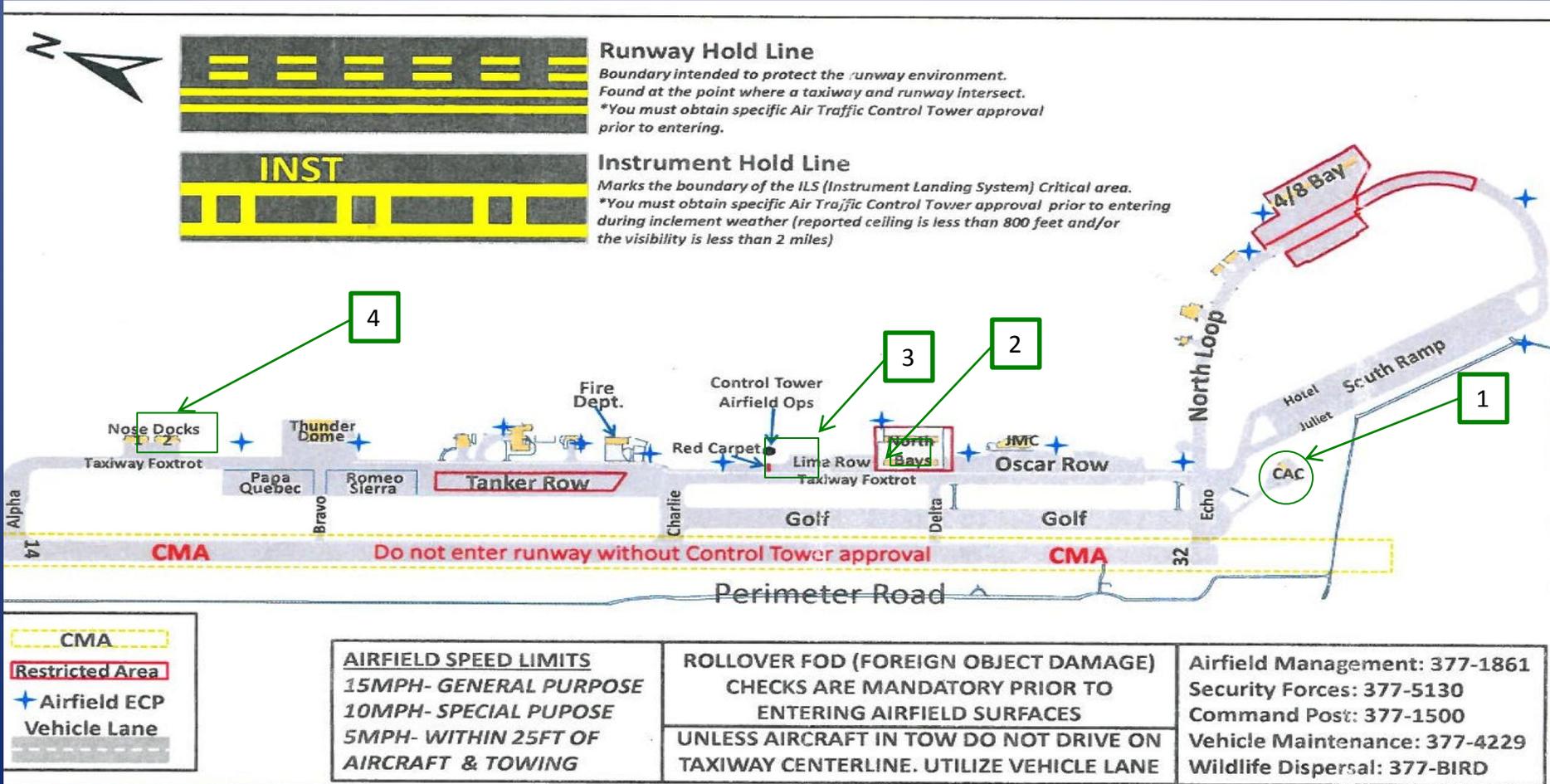
- GCS and PGDT at Eielson
  - Proven PGDT range to >120 nm, depending on local terrain
- GDT via fiber link at Deadhorse/Prudhoe Bay
  - Same as operations at DFRC, only farther
  - Will be used AS MUCH AS POSSIBLE to allow as much “full control” of the aircraft as possible
  - GDT range has not been tested. Subject to curvature of the earth and terrain restrictions at lower altitudes.
- Flight in GDT/PGDT coverage gaps will use
  - Newly installed C2 link(s)
  - As a last resort: “Lost link OK”



## **Basic Plan for Build-up to Full Science Missions**

- **Initial missions will validate/verify SATCOM links at high latitudes...while collecting science data**
- **Fly progressively lower altitudes (science objective) to test C&C link**
- **“Mature” science missions include low altitude surveys in conjunction with other science aircraft.**

# Staging Options



# Issues, Concerns, Challenges

- **Logistics/basing at Eielson AFB**
  - **Hangar, GCS, Local C&C Antenna & Satcom links**
- **Local Airspace: climbs and descent**
- **Transit to North Coast/ Arctic Sea**
- **SATCOM datalink reliability at high latitudes**
- **Weather**
- **Low level operations – air traffic de-confliction**
- **Multiple science aircraft operations**
- **THE COA...**

# Questions?





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# **CLOSING COMMENTS**



**Col Patrick Moylan**