

## DOCKETED

<b>Docket Number:</b>	09-AFC-07C
<b>Project Title:</b>	Palen Solar Power Project - Compliance
<b>TN #:</b>	202584
<b>Document Title:</b>	Email with attached Palen Aeronautical Study, dated June 9, 2014
<b>Description:</b>	N/A
<b>Filer:</b>	Alicia Campos
<b>Organization:</b>	Federal Aviation Administration/Dan Rollins
<b>Submitter Role:</b>	Public Agency
<b>Submission Date:</b>	6/24/2014 10:12:06 AM
<b>Docketed Date:</b>	6/24/2014

## Adams, Jim@Energy

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**From:** Daniel.Rollins@faa.gov  
**Sent:** Monday, June 09, 2014 9:51 AM  
**To:** Adams, Jim@Energy  
**Cc:** Johanna.Forkner@faa.gov; Flores, David@Energy; Koch, Andrea@Energy  
**Subject:** RE: Palen Aeronautical Study

Jim, here are some explanations for the questions we discussed over the phone.

Airport ID: BUR – Burbank CA, CRQ – Carlsbad/Palomar CA, SBA – Santa Barbara CA, TRM – Cochran Regional: Palm Springs CA, LGB – Long Beach CA, SAN – San Diego CA, PSP – Palm Springs CA, ONT – Ontario CA, SNA – John Wayne Orange County CA, LAX – Los Angeles International. TUS – Tucson AZ, JFK – John F Kennedy NY, AUS – Austin TX, BLH – Blythe CA, ATL – Atlanta GA, ORD – Chicago IL, MEM – Memphis TN, SDL – Scottsdale AZ, IAH – Houston TX, DFW – Dallas TX, PHX – Phoenix AZ

([www.airnav.com](http://www.airnav.com) provides easy searching of airport IDs)

Aircraft ID:

- MD82/MD83 – McDonald Douglas MD80 family, narrow body airliner
- MD11 – McDonald Douglas wide body (replaced the DC-10)
- B7xx – Boeing 7x7 family of aircraft, with multiple versions in each model
- C172 – Cessna Skyhawk, small high wing single engine, four passenger
- PA44 – Piper Seminole, small twin engine, four passenger
- A319/320/321 – Airbus narrow body airliner
- CRJ2/9 – Bombardier (Canadian) regional jet airliner, seats from 40-90

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**From:** Adams, Jim@Energy [<mailto:Jim.Adams@energy.ca.gov>]  
**Sent:** Friday, June 06, 2014 8:25 AM  
**To:** Rollins, Daniel (FAA)  
**Cc:** Forkner, Johanna (FAA); Flores, David@Energy; Koch, Andrea@Energy  
**Subject:** RE: Palen Aeronautical Study

Dan,

Thanks so much! I'll get back to you if I have questions.

Jim

**From:** [Daniel.Rollins@faa.gov](mailto:Daniel.Rollins@faa.gov) [mailto:[Daniel.Rollins@faa.gov](mailto:Daniel.Rollins@faa.gov)]  
**Sent:** Friday, June 06, 2014 8:10 AM  
**To:** Adams, Jim@Energy  
**Cc:** [Johanna.Forkner@faa.gov](mailto:Johanna.Forkner@faa.gov)  
**Subject:** Palen Aeronautical Study

Jim,

Attached is the FAA aeronautical analysis study for the area of the Palen solar project. As we discussed, the analysis covers a 15nm radius of the area, from the surface to the top of controlled airspace (60,000' MSL). We examined the entire month of May, 2014.

You will find significant traffic within the study area, mostly between FL200 and FL400. This is almost exclusively air carrier traffic. There are graphs with the most common arrival and departure airports, the most common aircraft types, and counts by time of day. Remember that all counts are for the entire month, and there are no estimated averages for the time of day. Of course, you can take the totals and divide by 31 to have a rough daily average.

Please note that there are no VFR aircraft included in this analysis. This is a limitation of our data source, and we have no method of retrieving such data for this particular area. There will be most certainly a number of low level VFR aircraft in the general area, but we have no method of retrieving such data.

Also, this information is being provided to you as another government entity, and the PowerPoint was not vetted for public release. We have no issue with your using the data provided, but request you contact us prior to using any of the images it contains. These were provided to you as an aid to understand the total traffic picture for the area.

If you have any questions about the data or its presentation, please feel free to call me between 6AM and 2:30PM Pacific. If the attachment is too large for your email filters (it is ~7MB), let me know and I will convert it to PDF. This will reduce the size by over a half.

Thanks!

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Elevations - Mean Sea Level  
SFC - surface MSL  
273/day in May 2014  
73% - FL 300-400

# Palen Solar Project

## Aeronautical Study

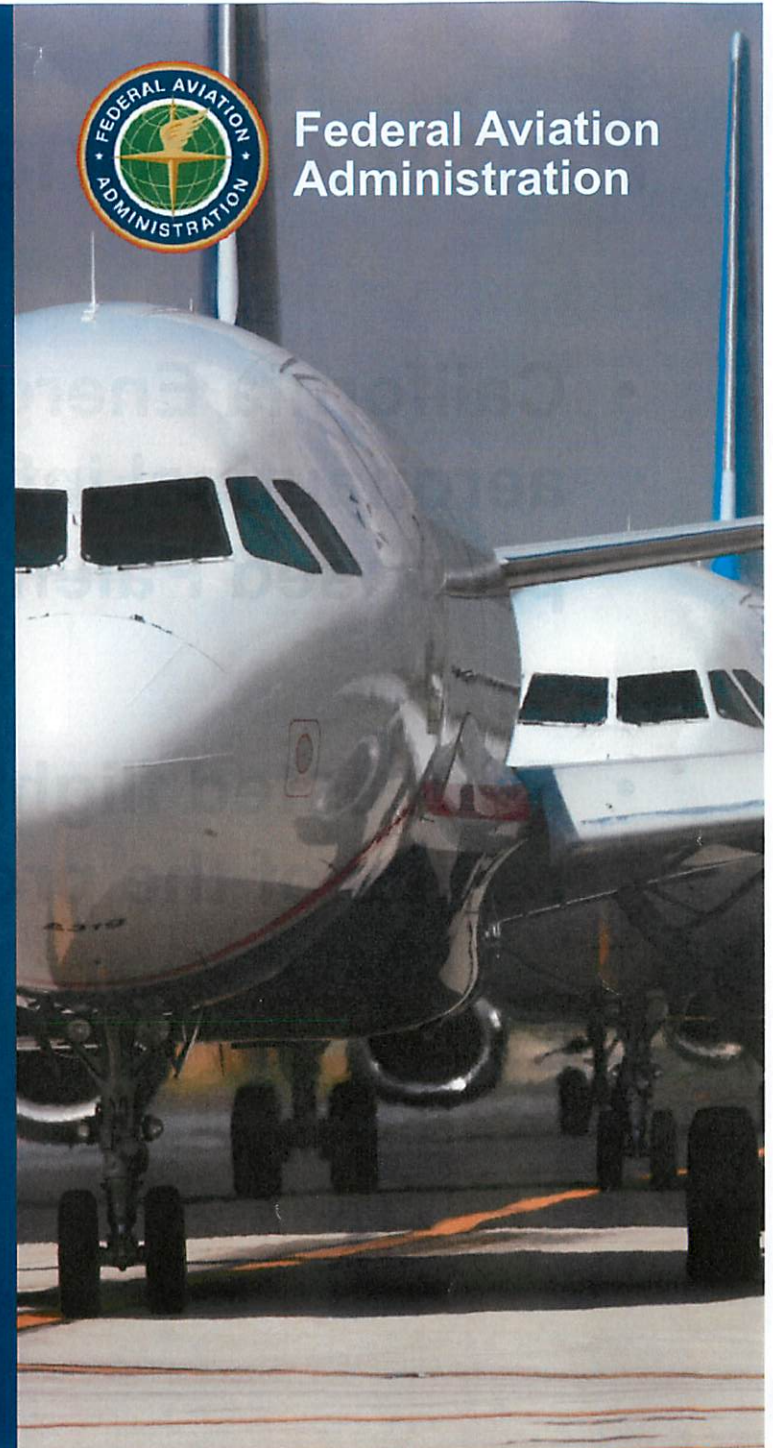
Presented to: California Energy Commission

By: Western Service Center Operations Support Group

Date: June 2014



Federal Aviation  
Administration



# Palen Aeronautical Study

- **California Energy Commission requested aeronautical information in the area of the proposed Palen Solar Project**
- **Requested flight information within a 15nm radius of the project location, at all altitudes**



# Analysis Parameters

- **Using the Performance Data Analysis and Reporting System (PDARS)**
- **Traffic information from the Los Angeles Air Route Traffic Control Center (ZLA ARTCC)**
- **May 2014 (complete month)**
- **Examined center-point 33° 41' 42" N, 115°15' 49" W**



# Analysis Limitations

- **No VFR flights are shown**
- **Radar limitations in the area may result in some low altitude flights being missed**
  - This should be a very limited amount
- **24 flights through the region did not contain flight information, such as type, arrival or departure airport. These were general aviation, military or unidentified targets being tracked by Air Traffic Control for various reasons**



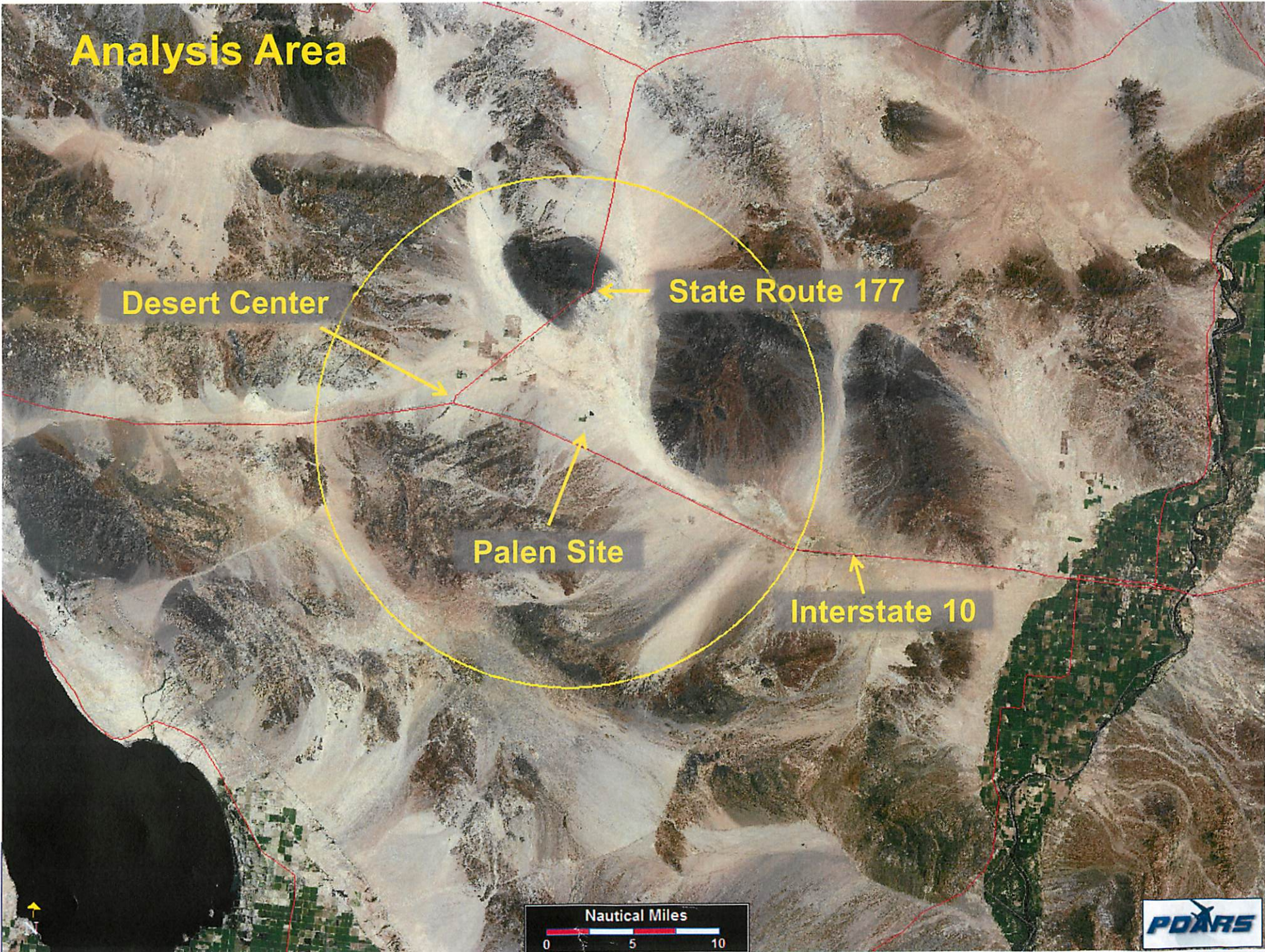
# Analysis Area

Desert Center

State Route 177

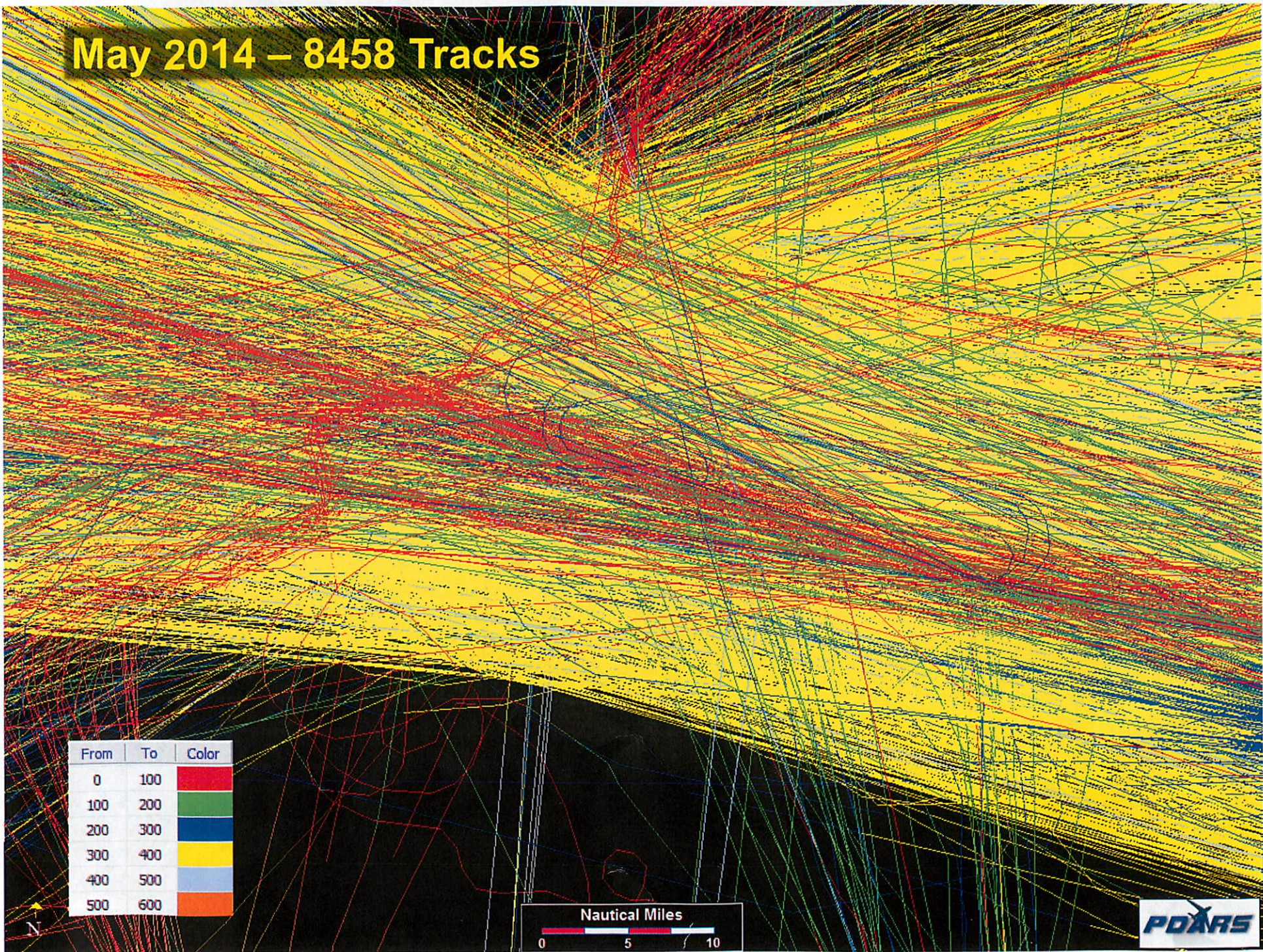
Palen Site

Interstate 10



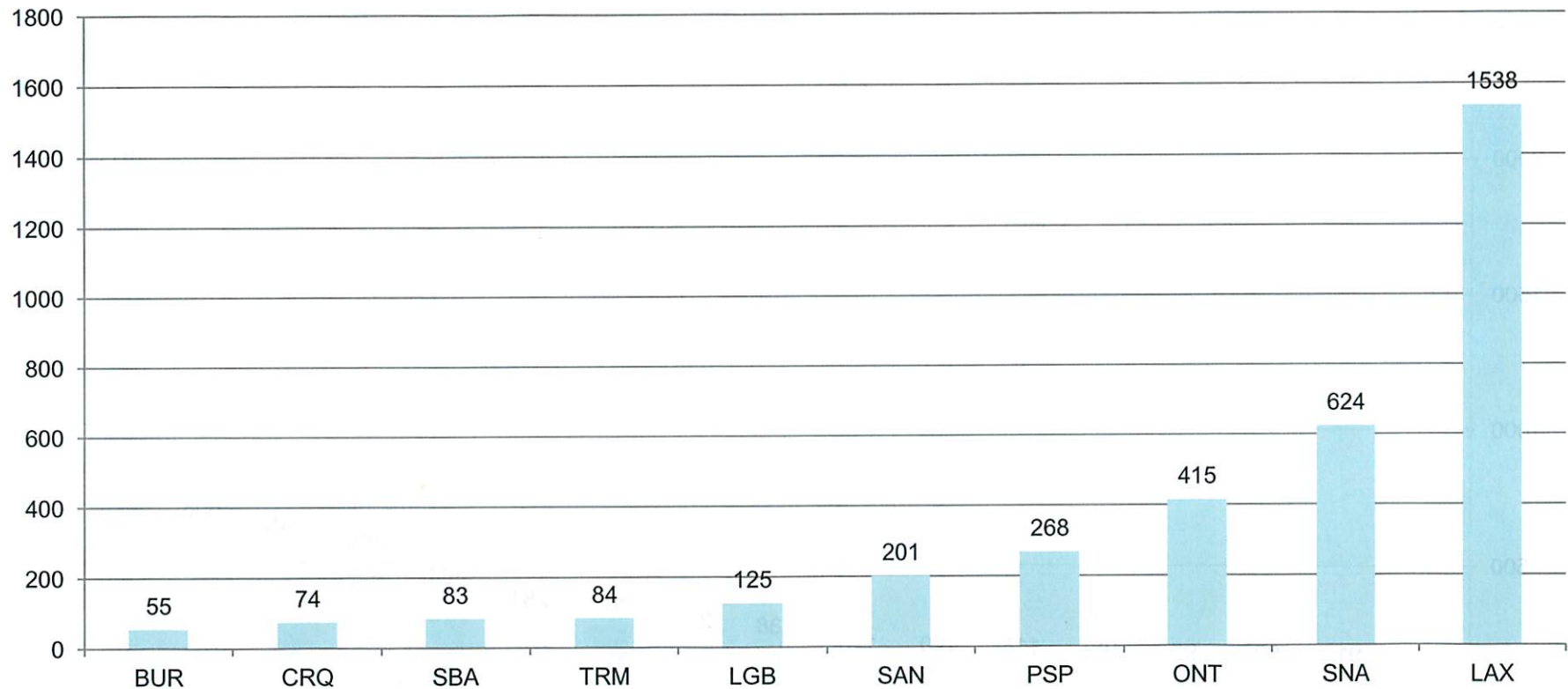


# May 2014 – 8458 Tracks



# List of Departure Airports

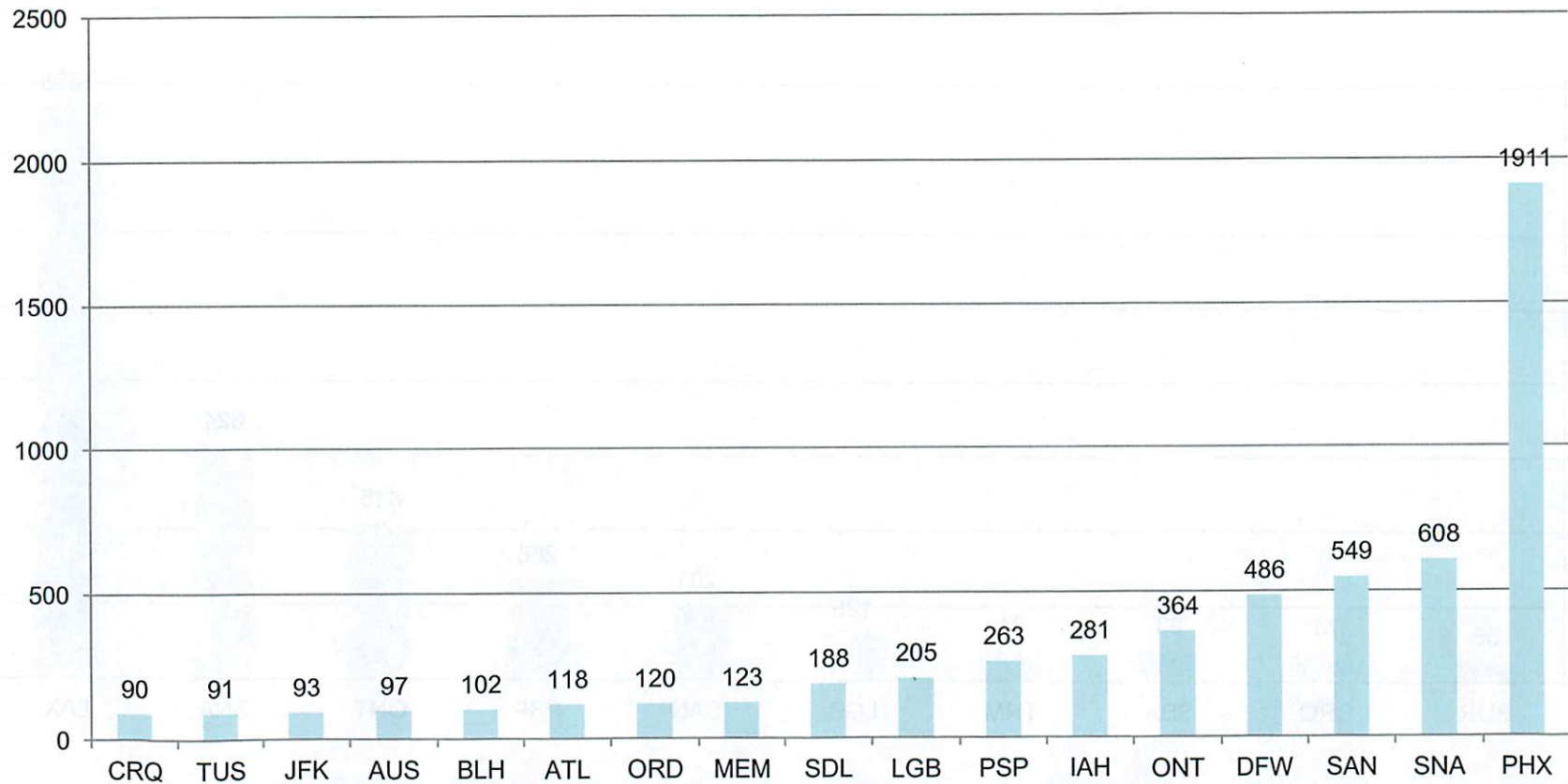
## Total



## Airports with 50 or more departures through the examined area

# List of Arrival Airports

Total

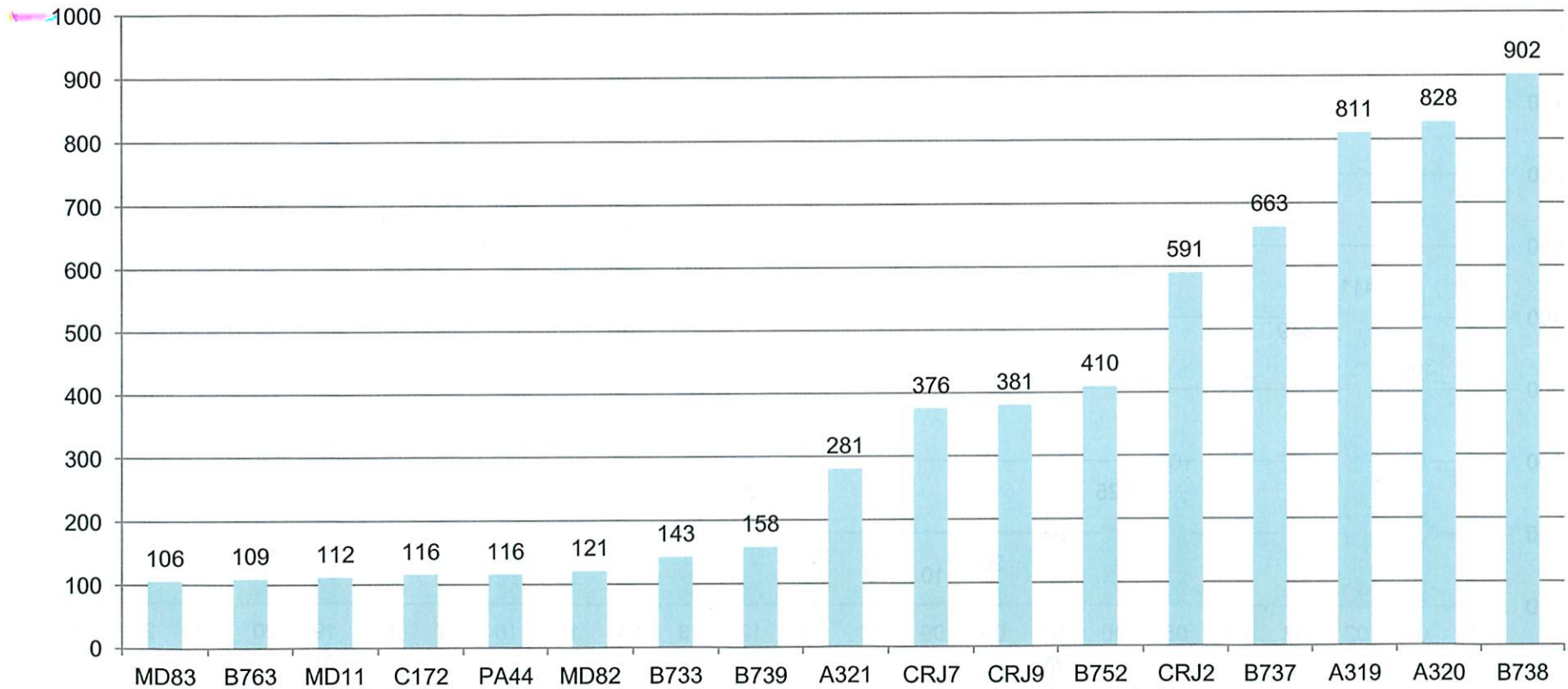


Airports with 90 or more arrivals through the examined area



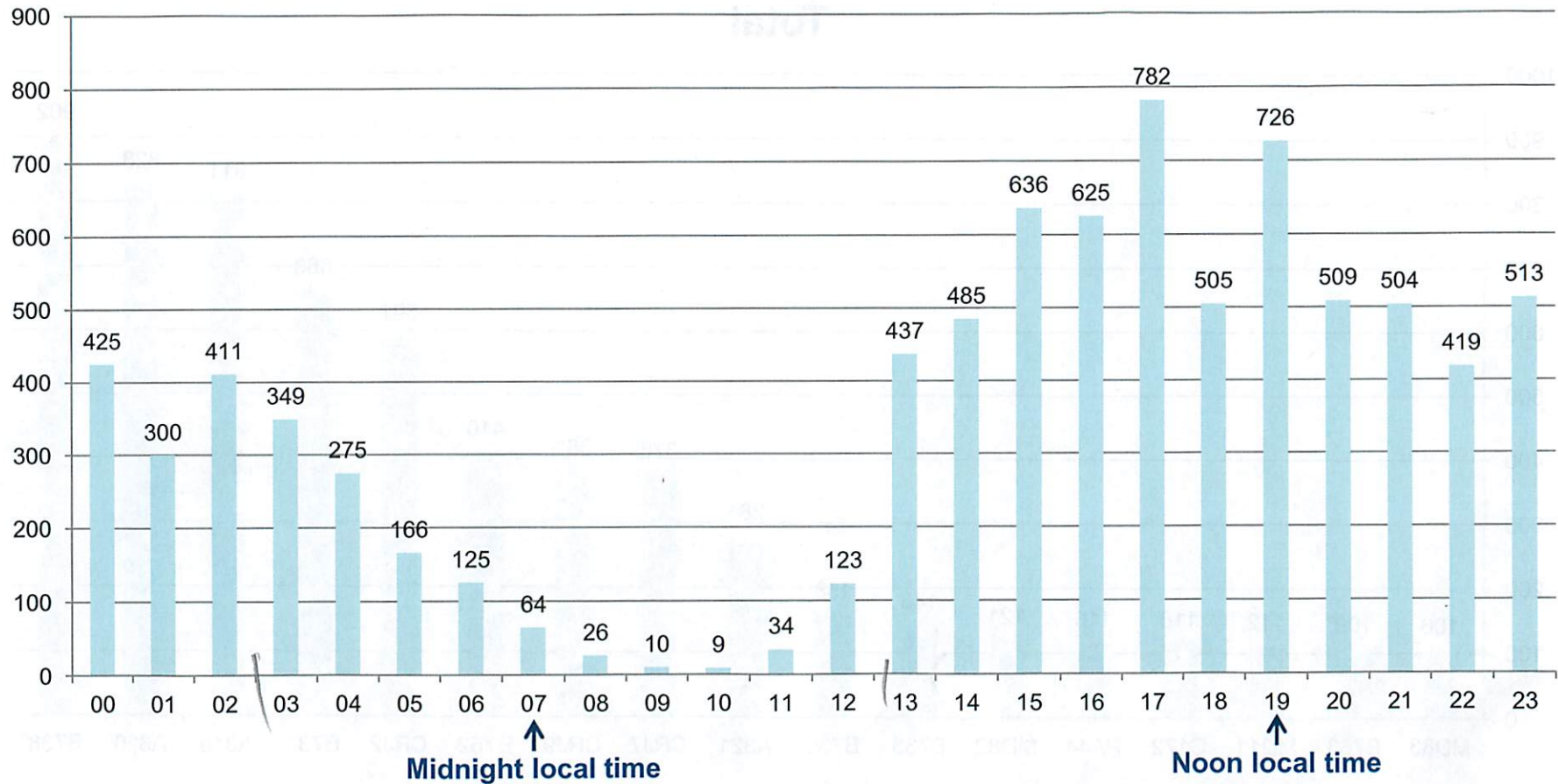
# Aircraft Types

## Total



## Aircraft with 100 or more types through the examined area

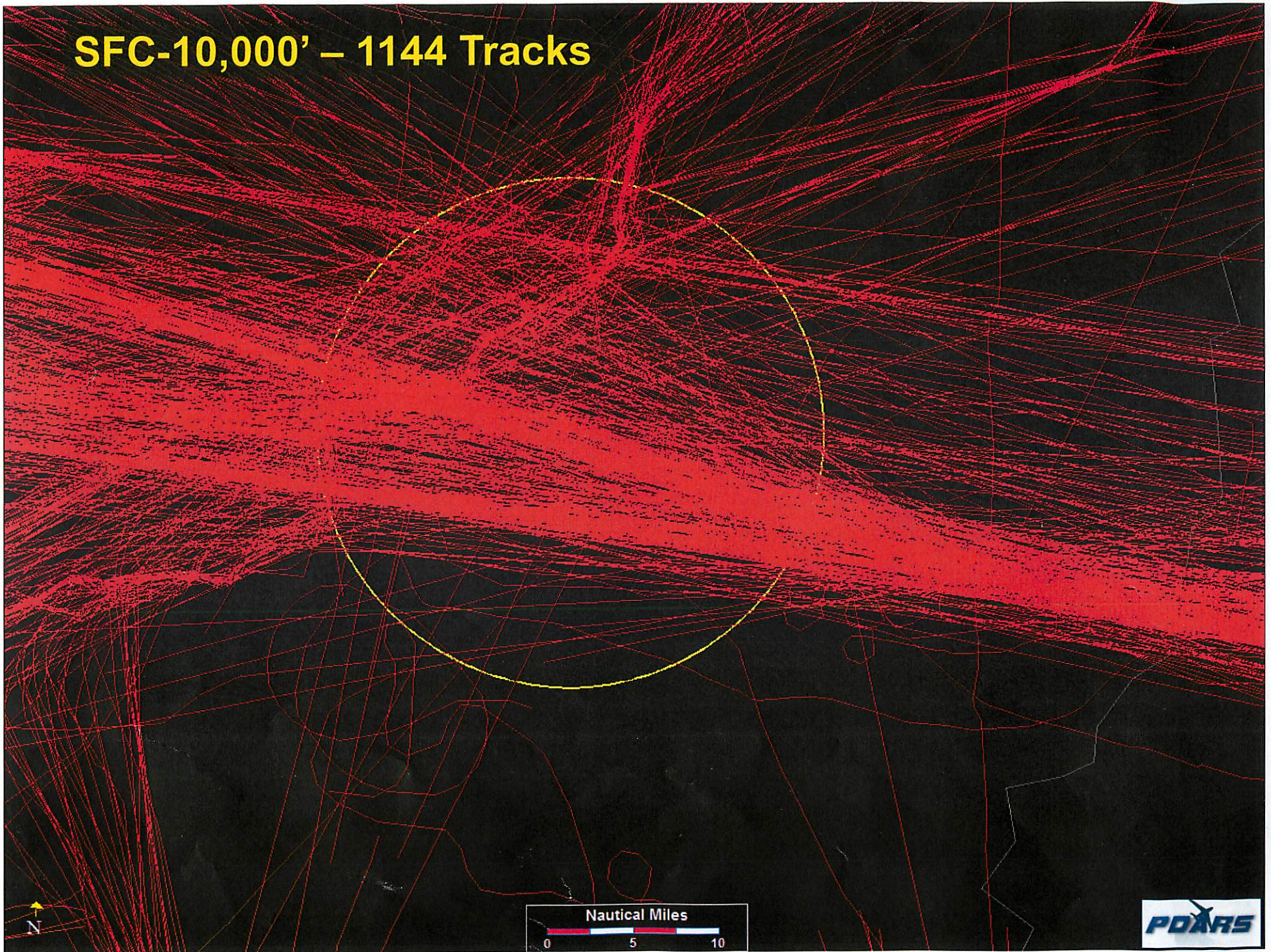
# Time of Day



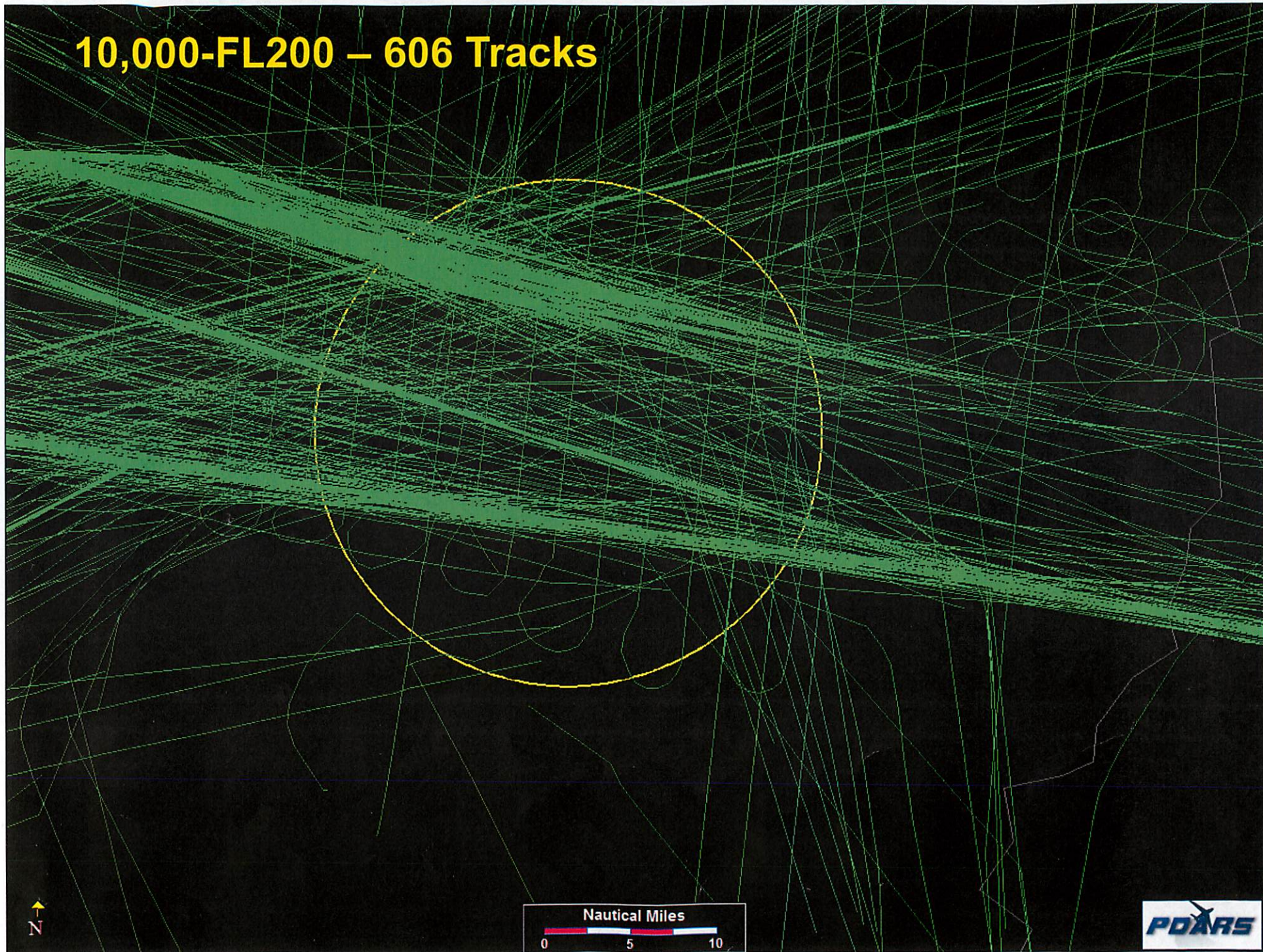
Times are in UTC: 0000 UTC = 1700 Pacific Daylight Time



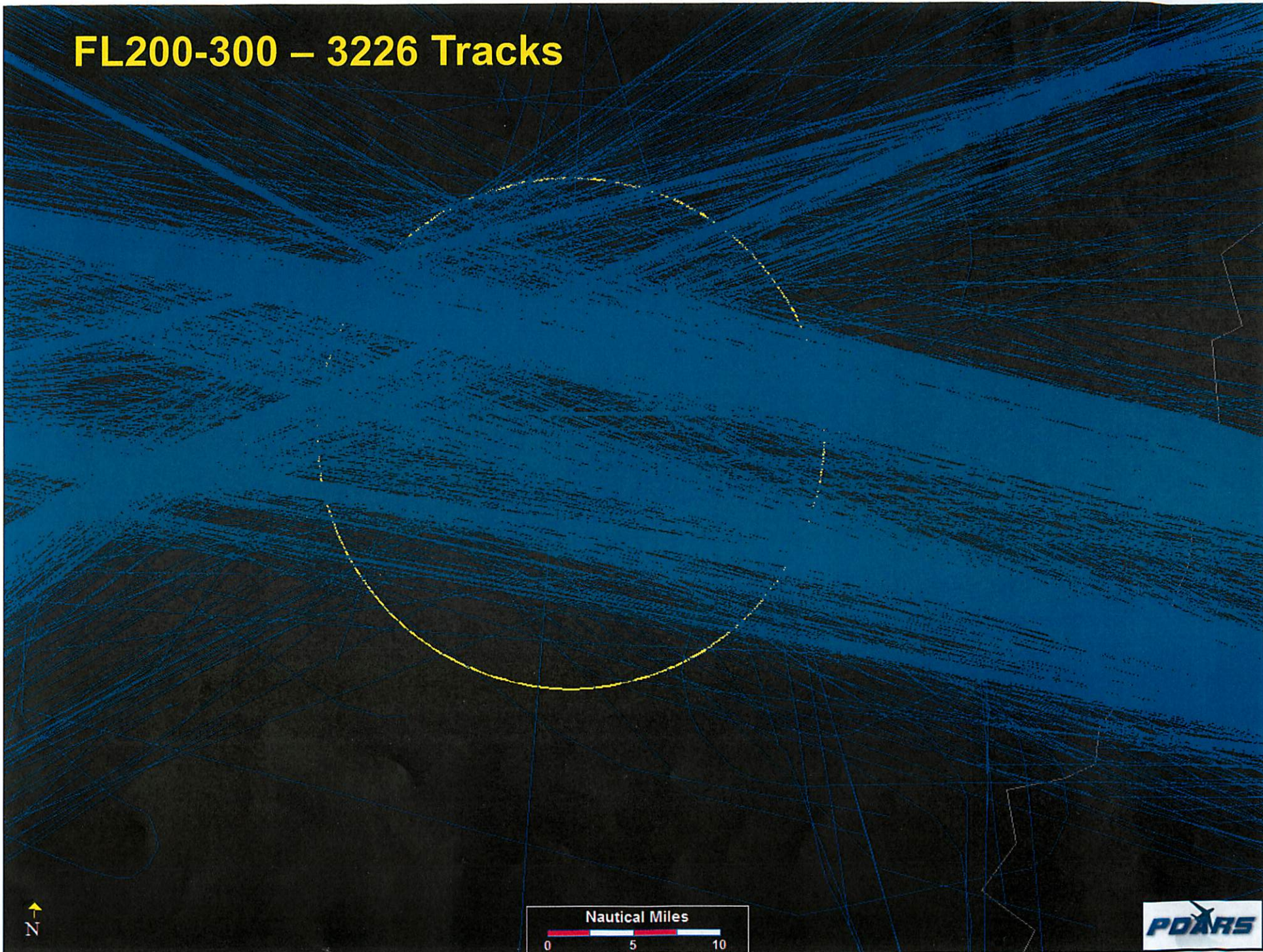
# SFC-10,000' – 1144 Tracks



# 10,000-FL200 – 606 Tracks

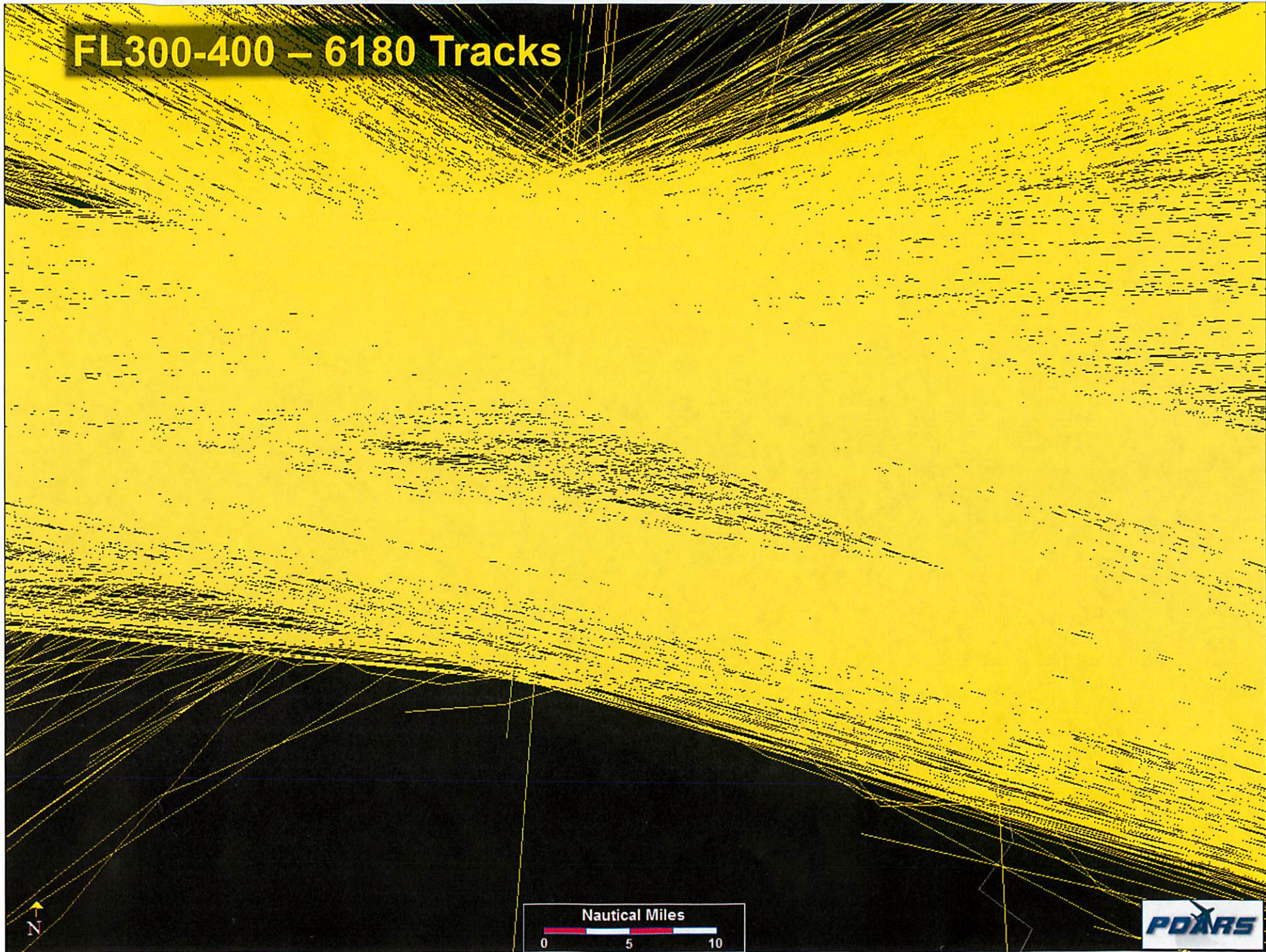


# FL200-300 – 3226 Tracks





# FL300-400 – 6180 Tracks



**FL400-500 – 330 Tracks**



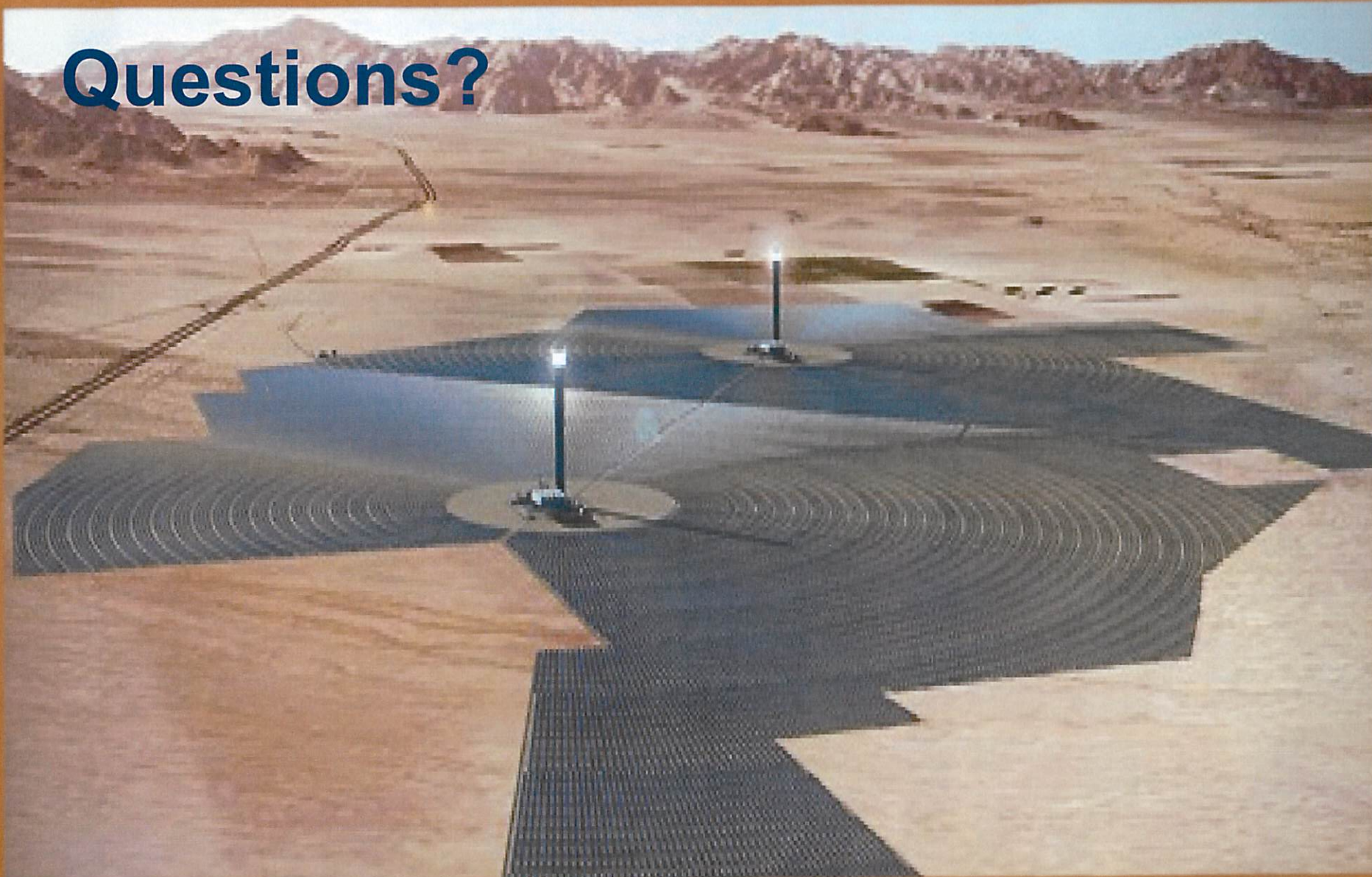
**No flights above FL500**



# Observations

- Highest concentration of flights between FL300-400, with second highest FL200-300
- Heaviest departure airport demand is So California (LAX, SNA, ONT, PSP, SAN)
- Heaviest arrival airport demand is PHX, followed by SNA and SAN
- Majority of flights are commercial jets with 70 passenger seats or more

# Questions?



Palen Solar Project – Aeronautical Study  
June 2014



Federal Aviation  
Administration