

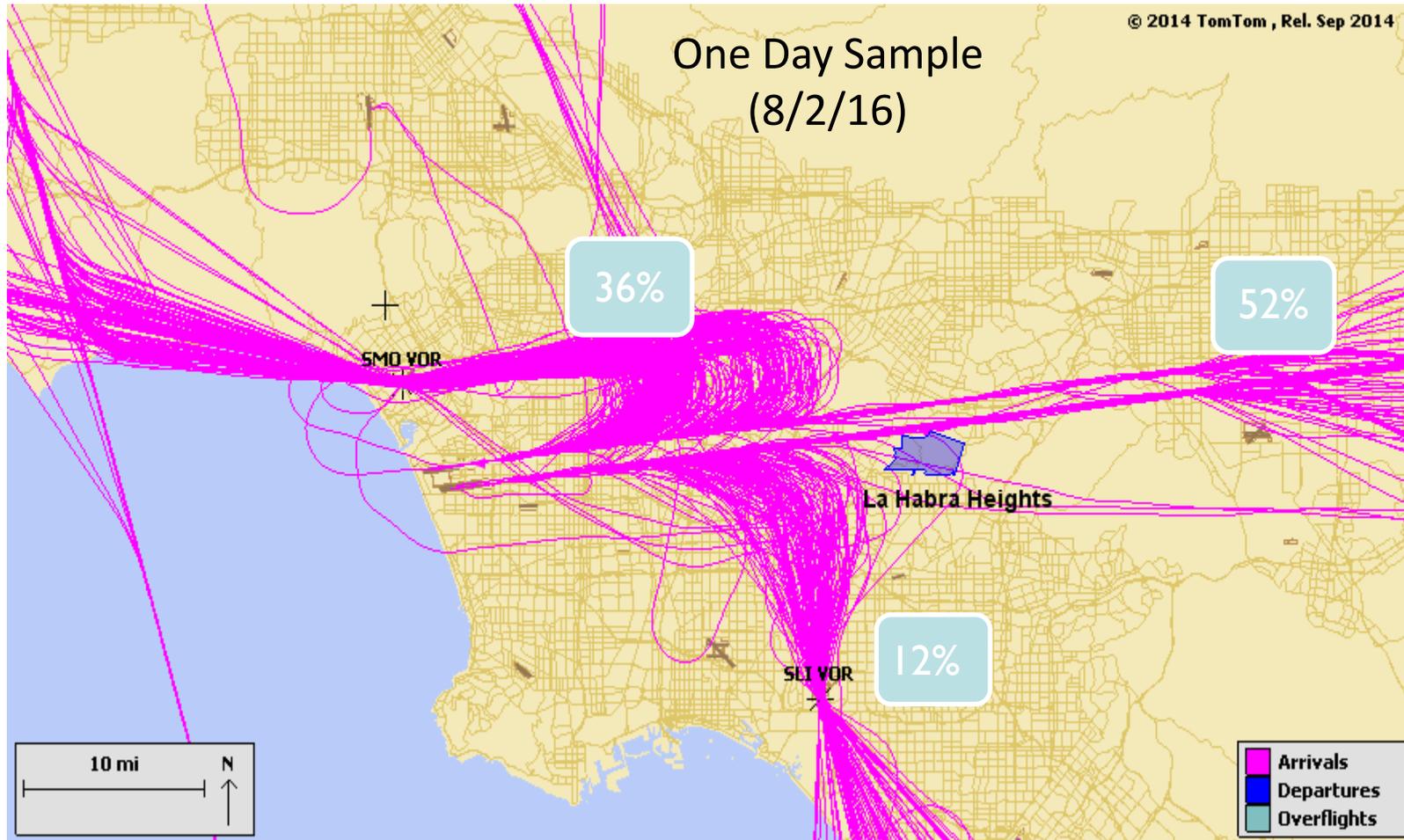
# Analysis of LAX Operations Near La Habra Heights

September 14, 2016  
LAX/Community Noise Roundtable

**Note:** Speaker's notes have been added to the presentation to provide more information.

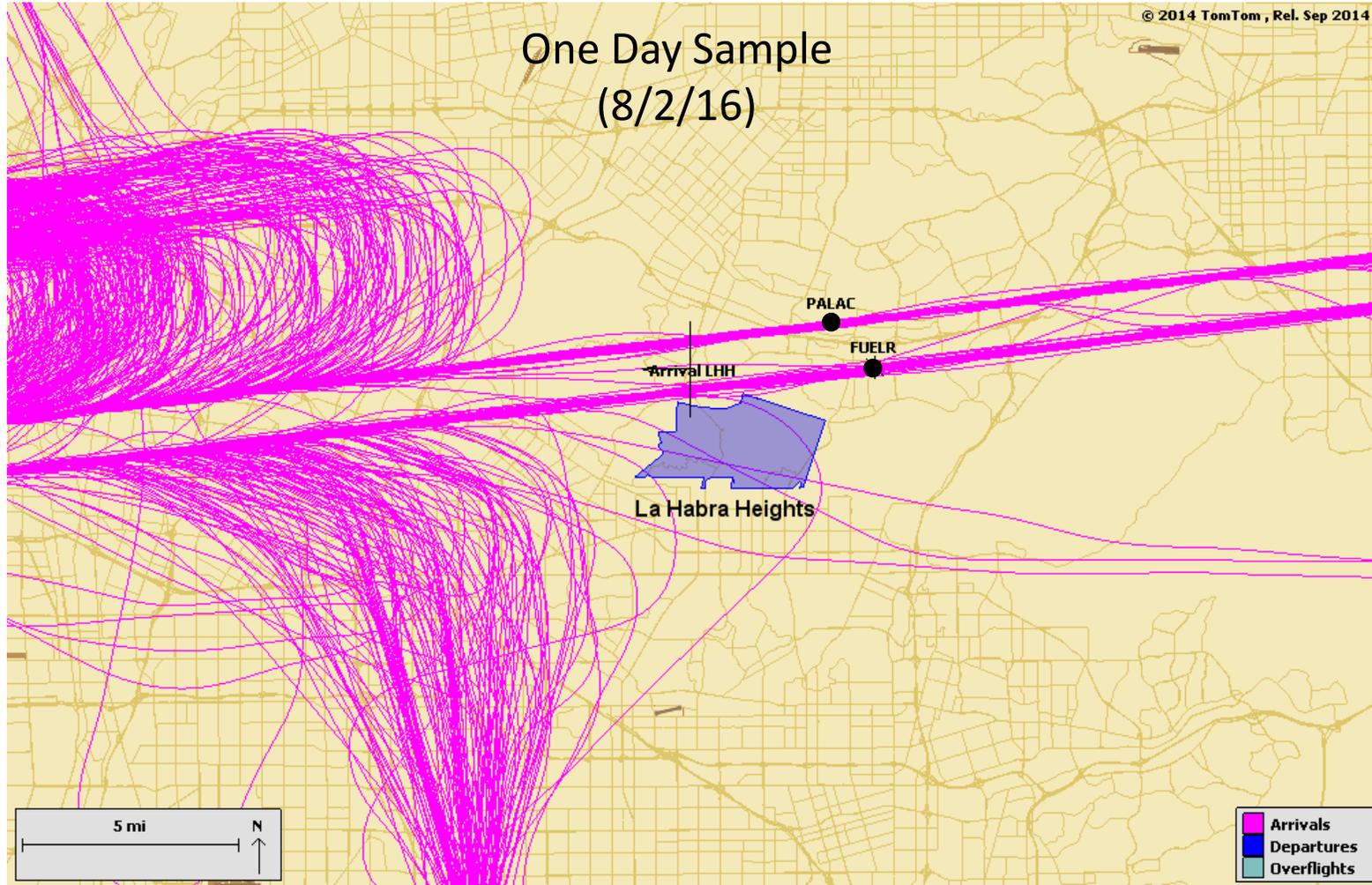
- Identify and review LAX operations that may affect La Habra Heights:
  - Arrivals from the East
  - Arrivals from the South (via SLI VOR)
  - Arrivals during Over-Ocean Operations (0000-0630)
  - Departures
- Analyze those operations to determine any changes
- Summary of Results

# Westerly Operations – Arrivals (6:30 am – 11:59 pm)



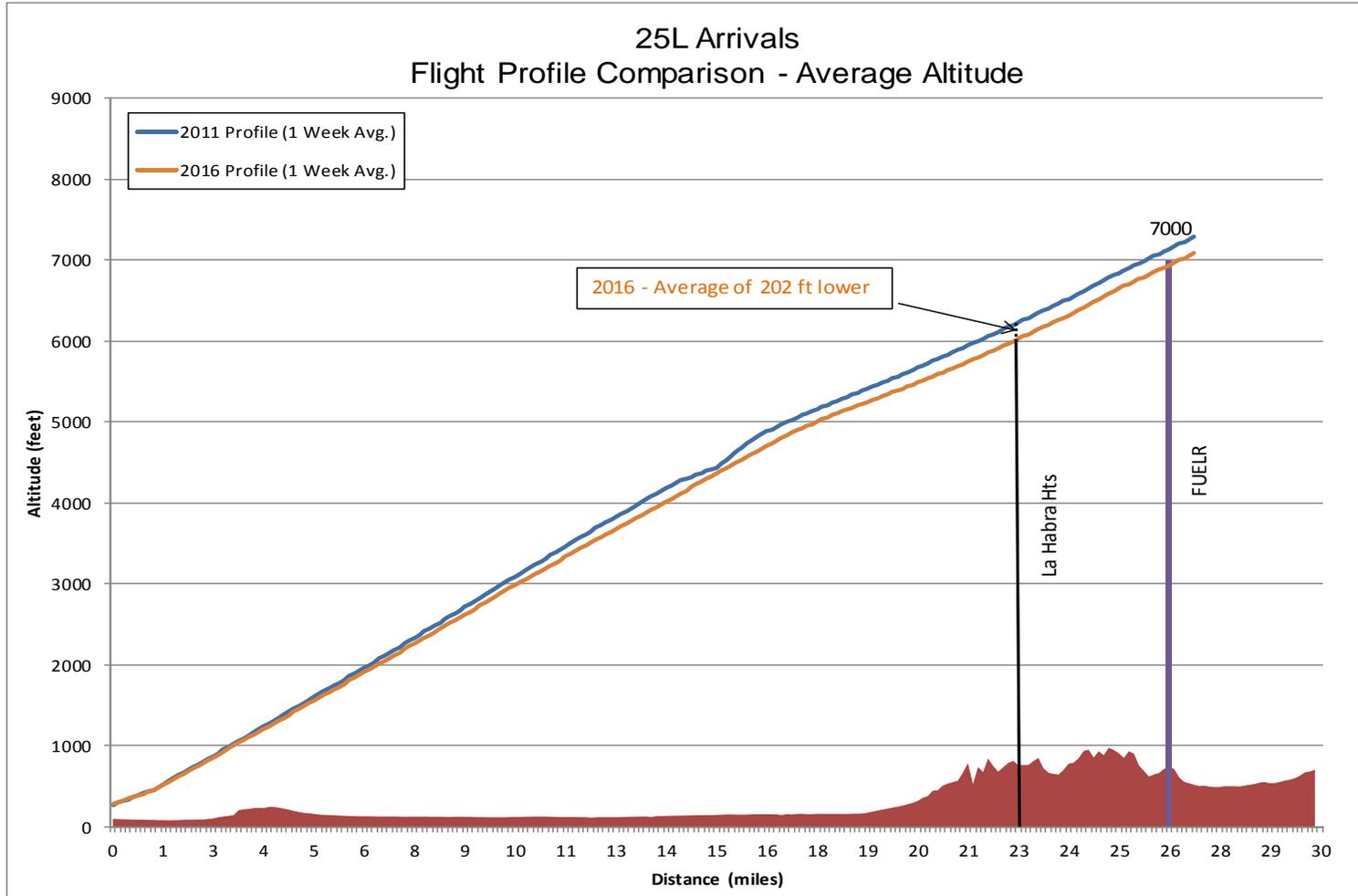
**Speaker's Notes:**  
More than half of the arrivals at LAX arrive straight in from the east in two concentrated, parallel sets of flight tracks that lie just to the north of the La Habra Heights city boundary.

# Analysis of LAX Arrivals from the East



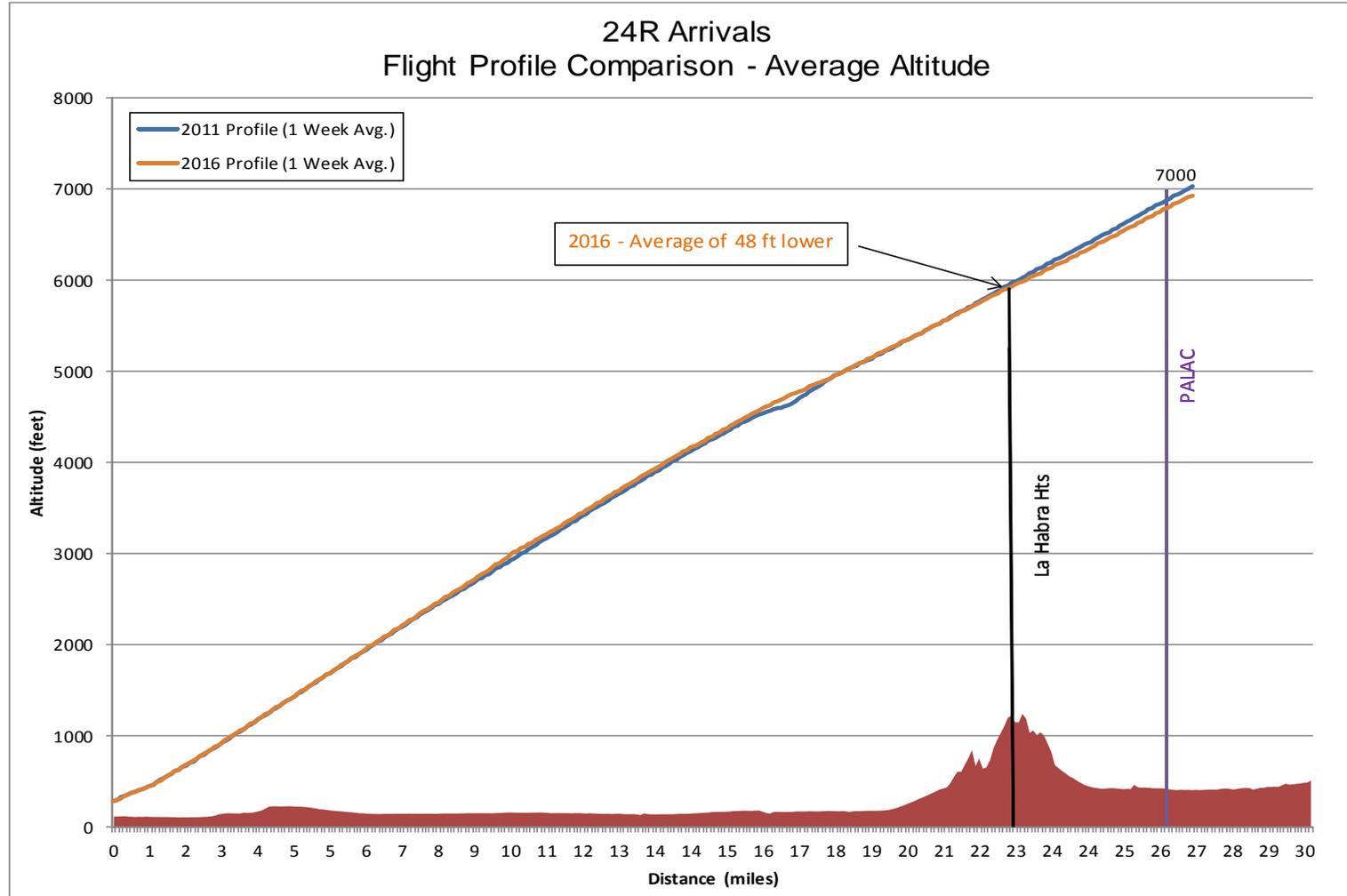
**Speaker's Notes:**  
The FAA indicated that the crossing altitudes at two fixes (PALAC and FUELR) were lowered 1,000 feet in 2005 to allow aircraft to intercept the glide slope from beneath for safety and have not changed since then.

# Analysis of LAX Arrivals from the East



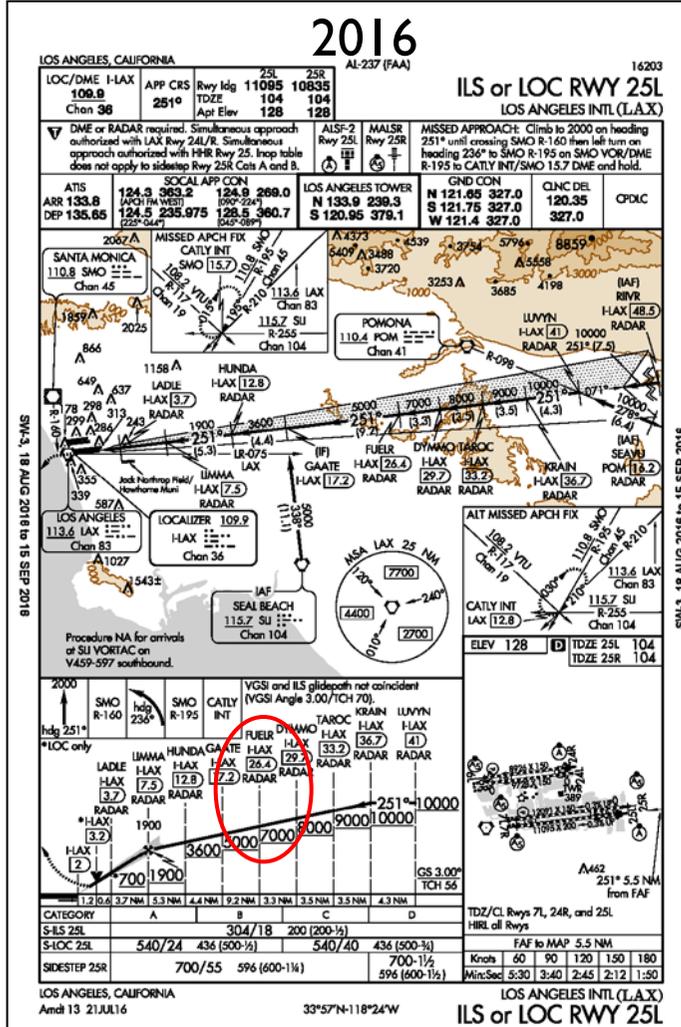
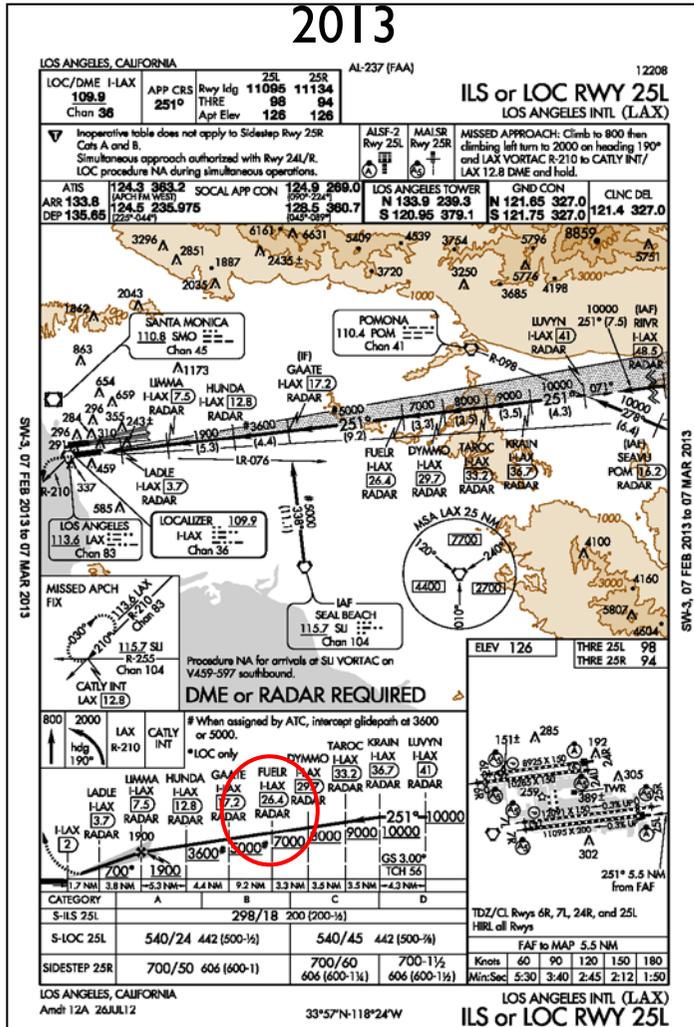
**Speaker's Notes:**  
In comparing one week of flight profile altitude data from 2011 and 2016, Runway 25L arrivals are on average about 200 feet lower in 2016.

# Analysis of LAX Arrivals from the East



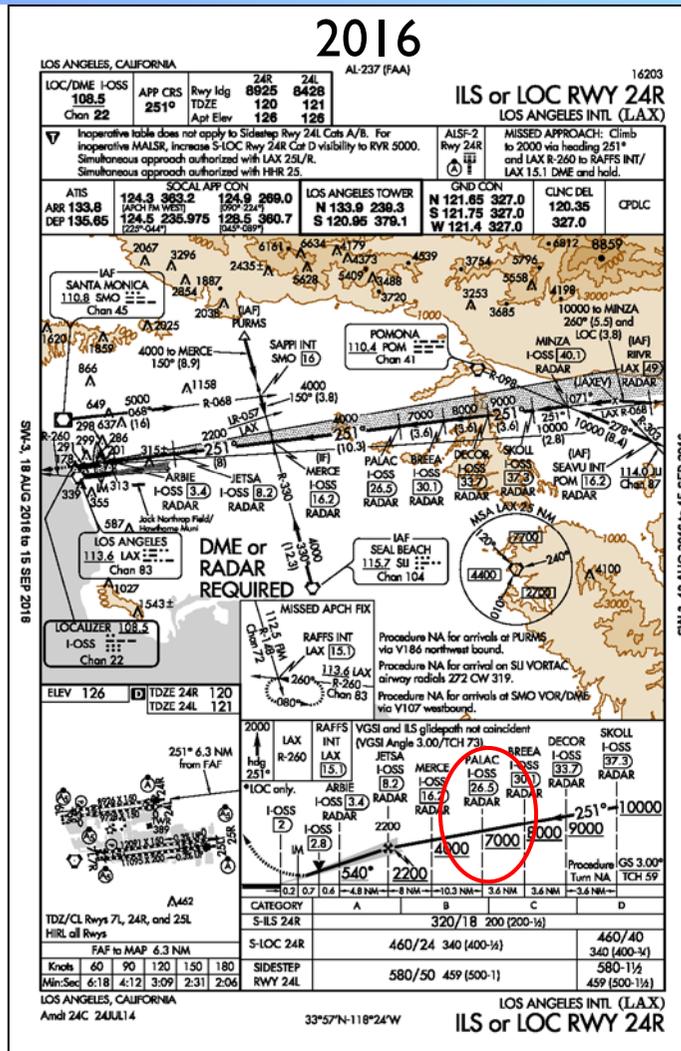
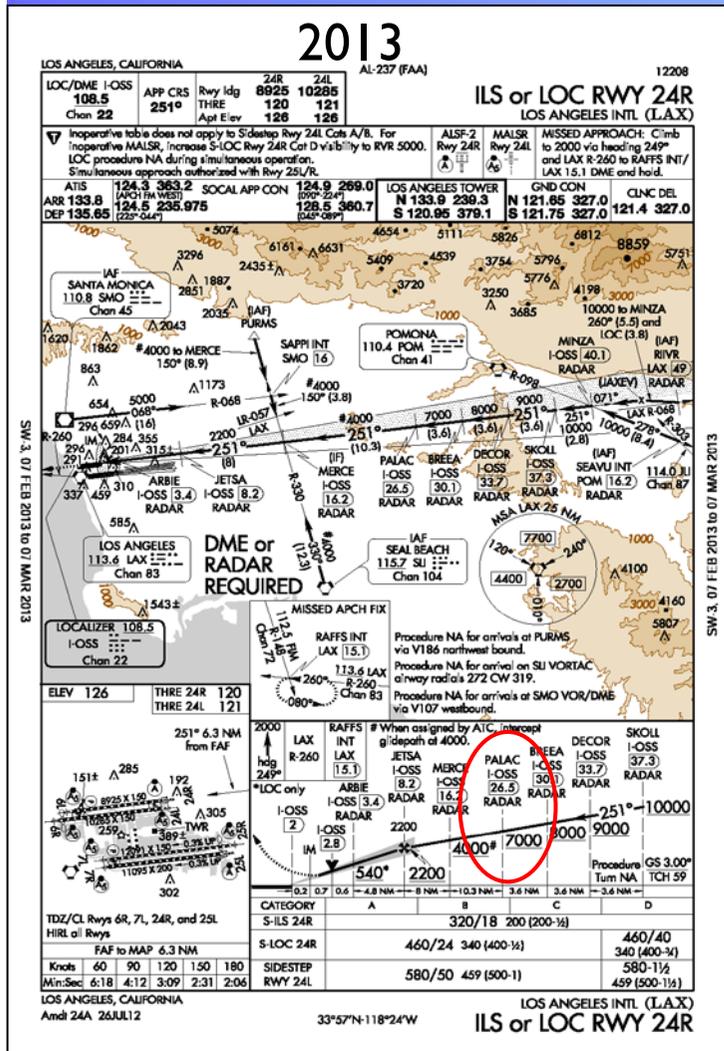
**Speaker's Notes:**  
In comparing one week of flight profile altitude data from 2011 and 2016, Runway 24R arrivals are on average about 48 feet lower in 2016.

# RWY 25L ILS Minimum Crossing Altitudes



Speaker's Notes: The minimum altitude at FUELR has not changed since 2005.

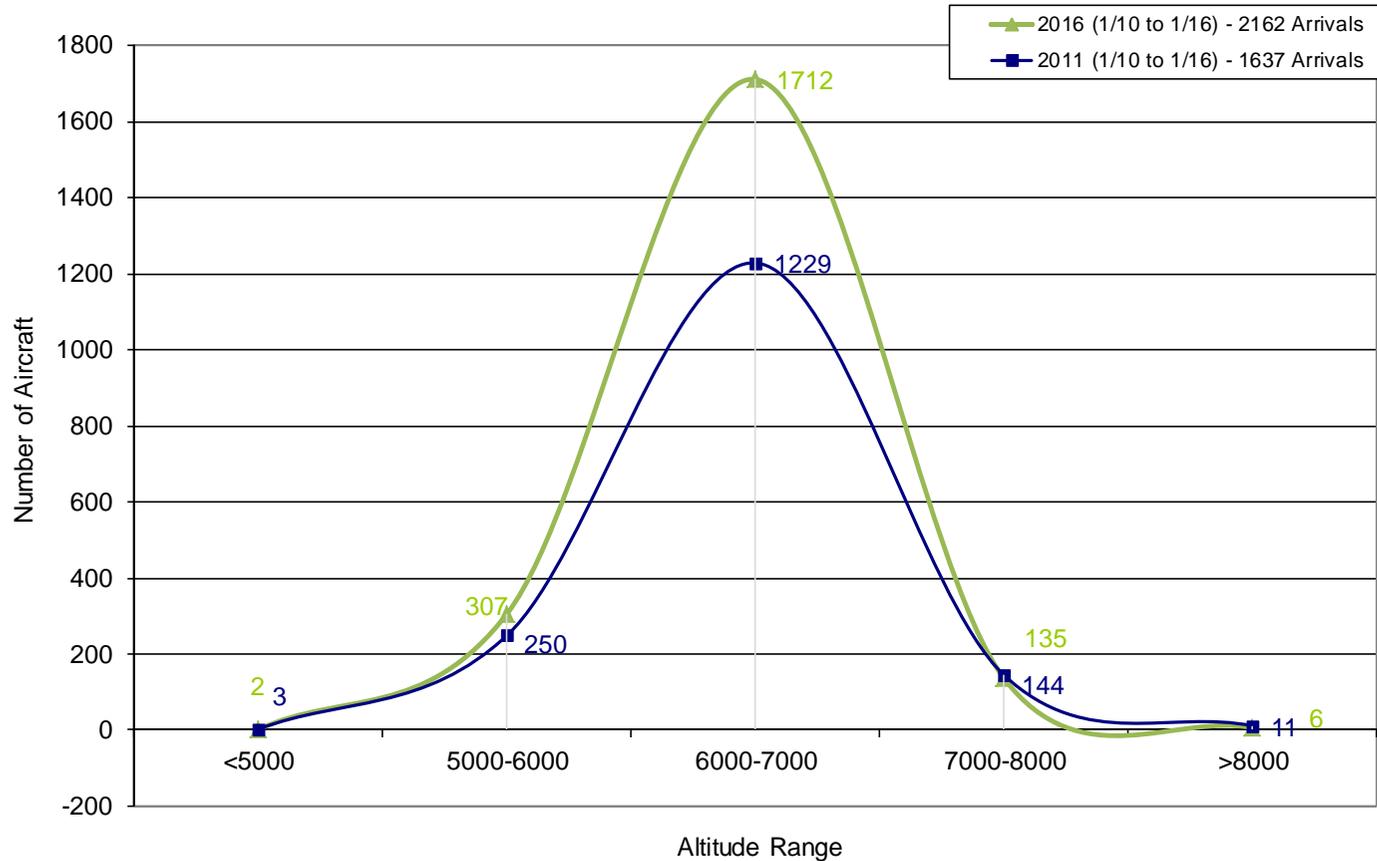
# RWY 24L ILS Minimum Crossing Altitudes



**Speaker's Notes:** The minimum altitude at PALAC has not changed since 2005.

# Analysis of LAX Arrivals from the East

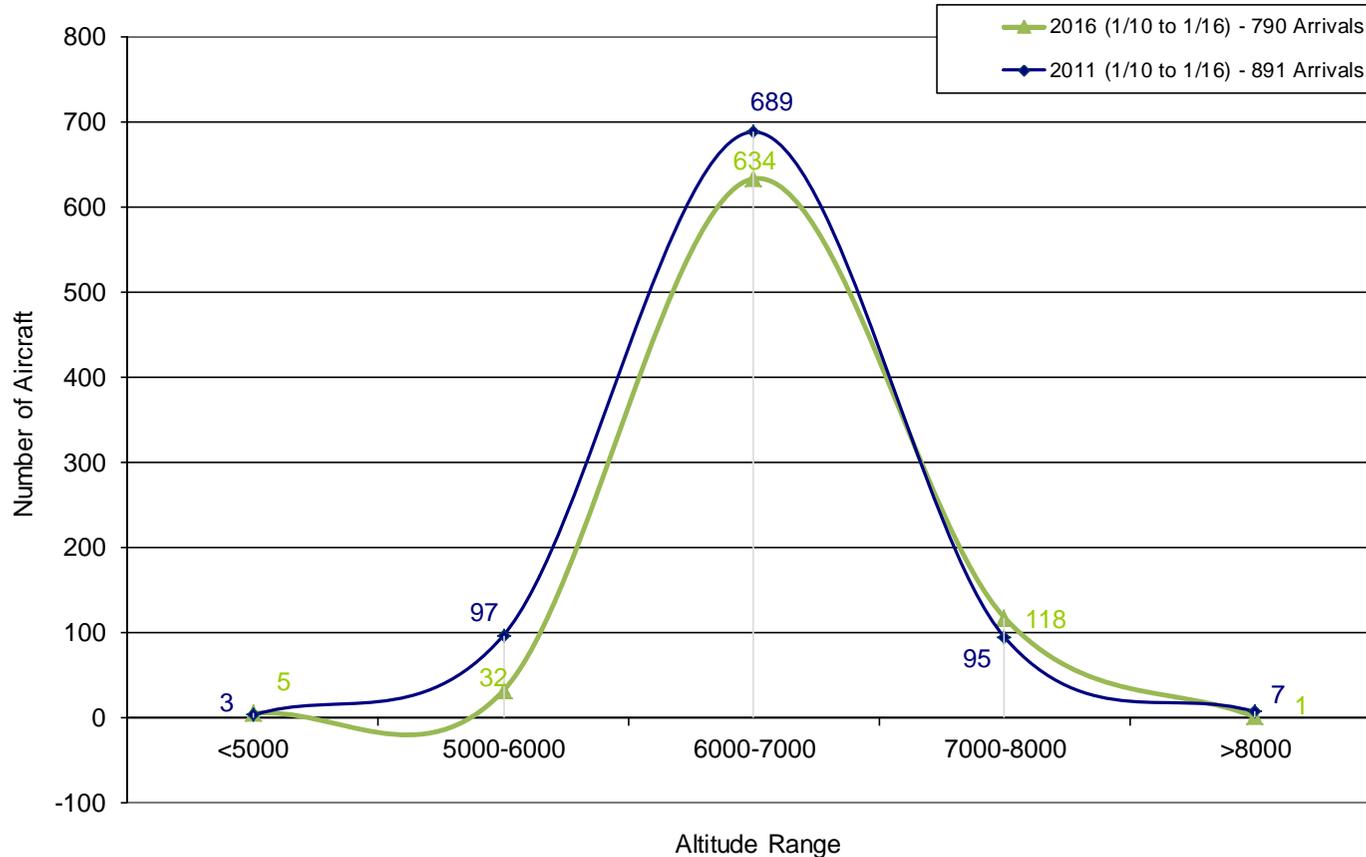
25L Arrivals - Altitude Range Comparison  
One Week



**Speaker's Notes:**  
Most of the aircraft in the vicinity of La Habra Heights remained in the 6,000 to 7,000-foot range during the one-week comparison in 2011 and 2016.

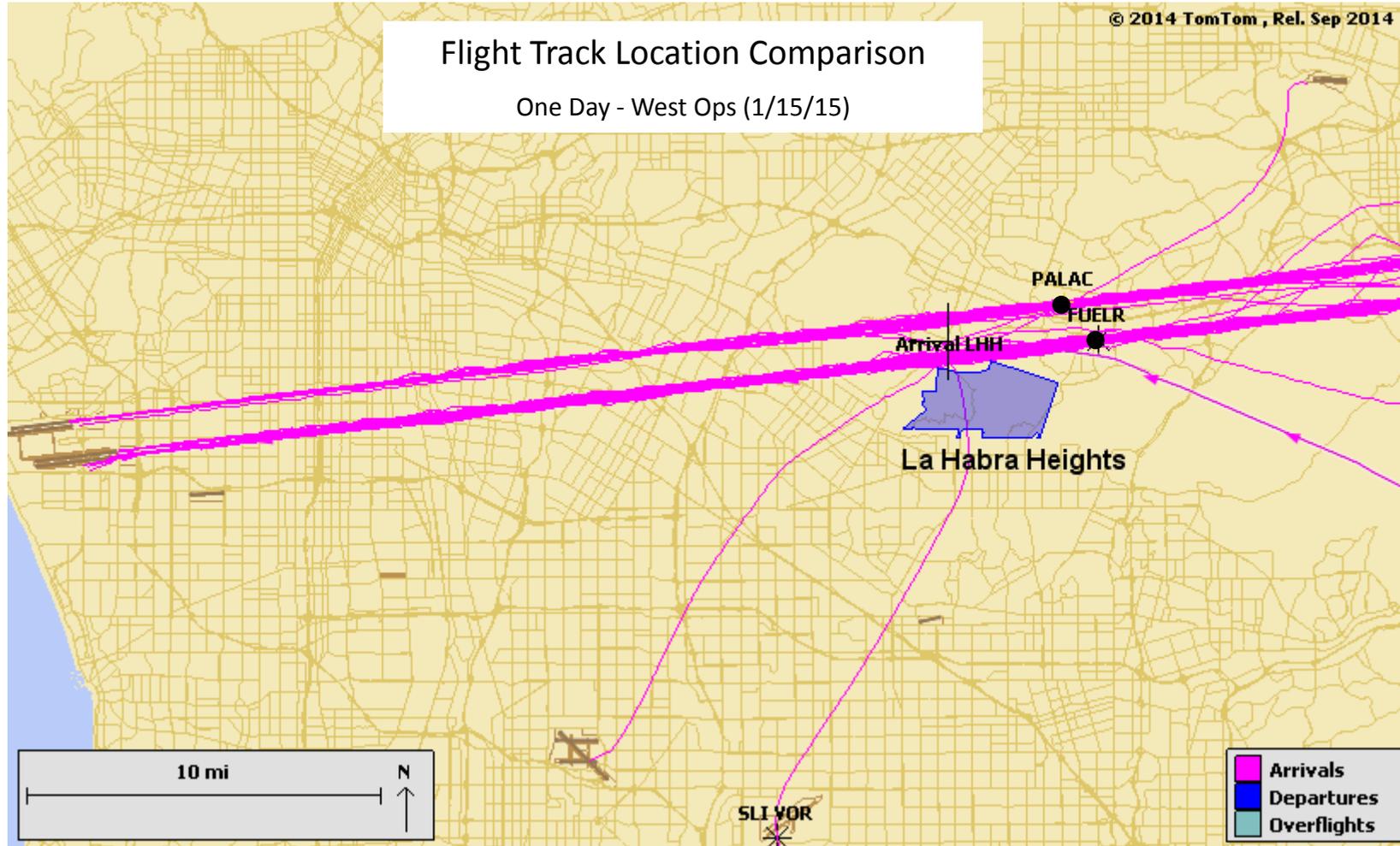
# Analysis of LAX Arrivals from the East

24R Arrivals - Altitude Range Comparison  
One Week



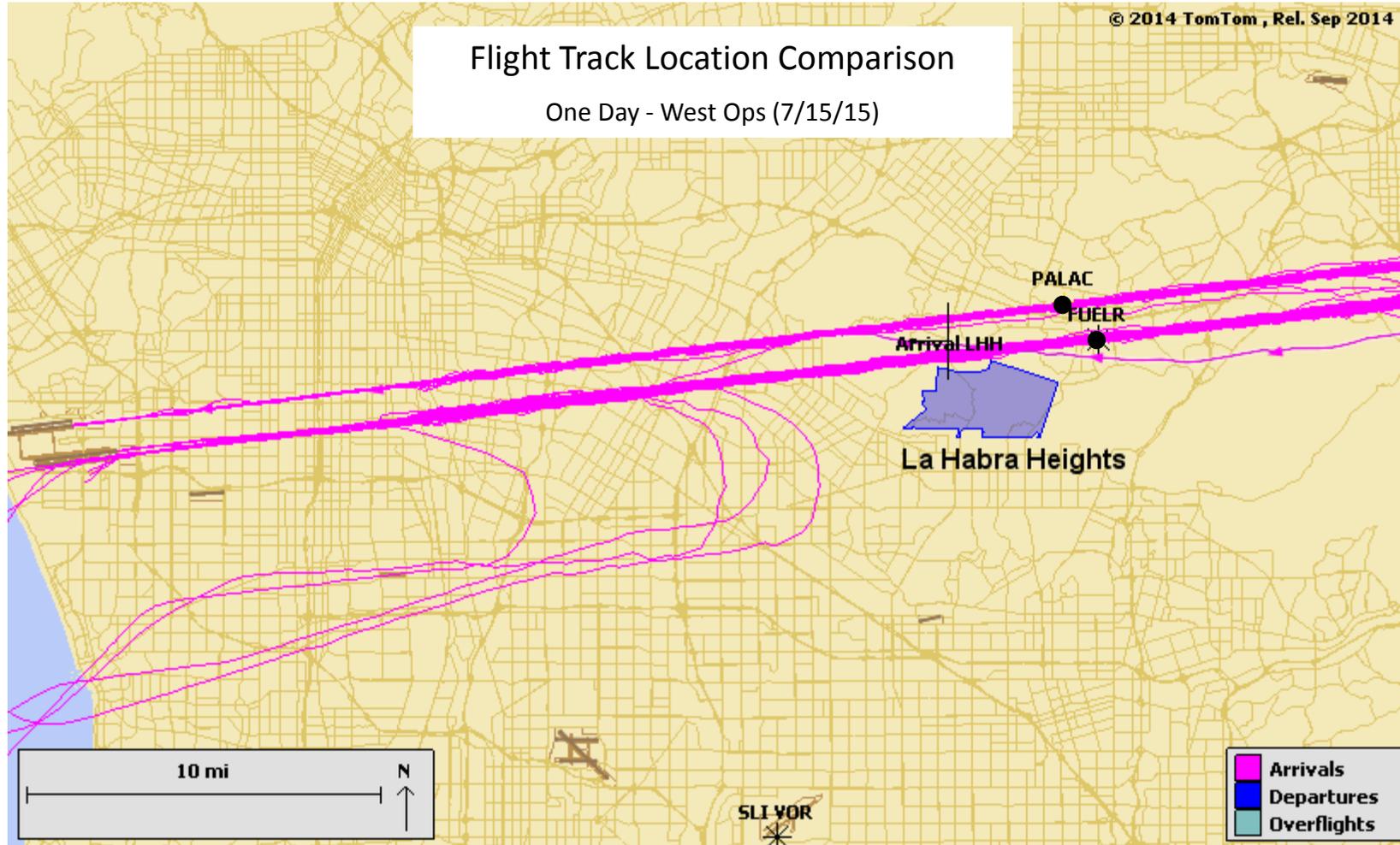
**Speaker's Notes:**  
Most of the aircraft in the vicinity of La Habra Heights remained in the 6,000 to 7,000-foot range during the one-week comparison in 2011 and 2016.

# Analysis of LAX Arrivals from the East

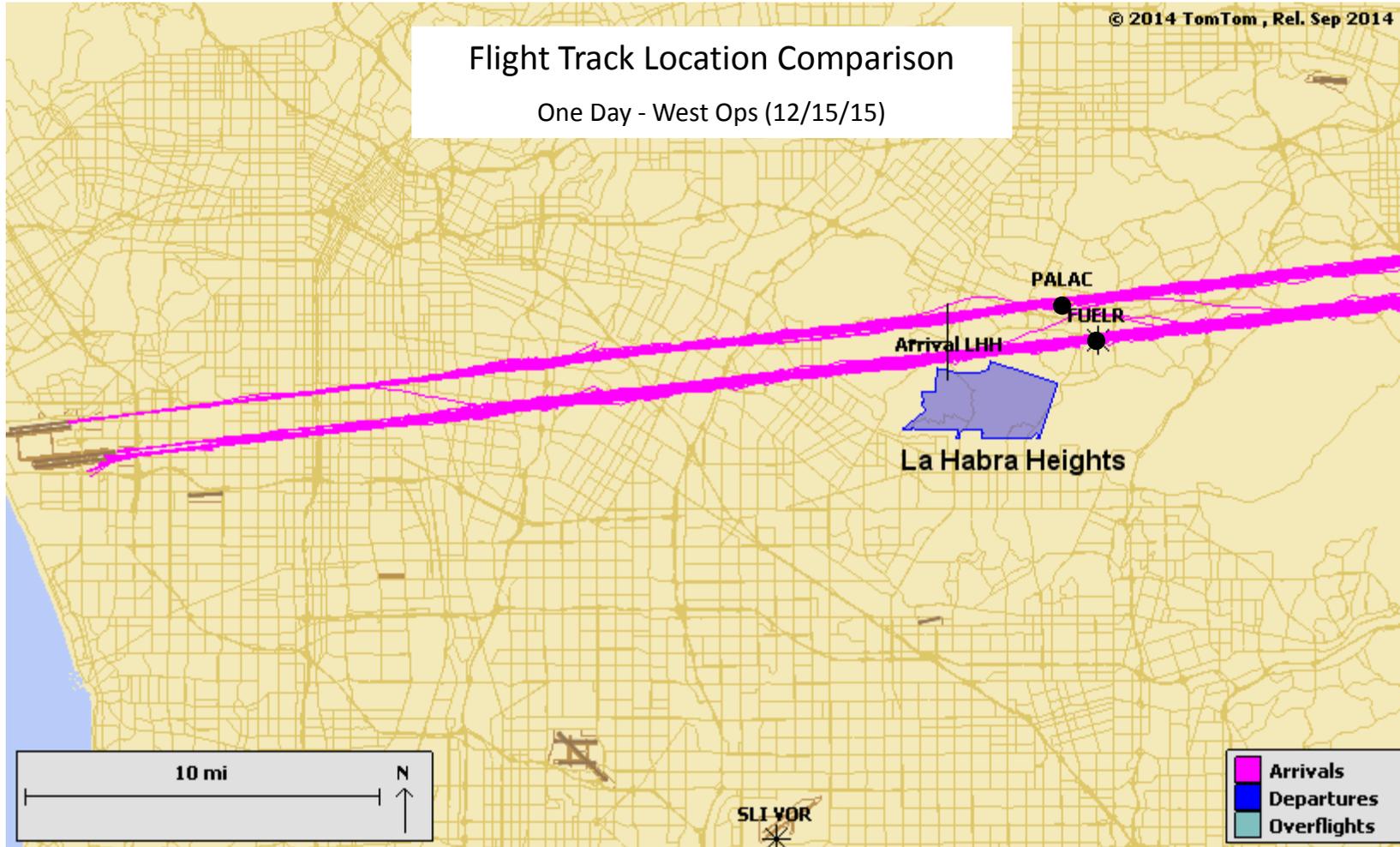


**Speaker's Notes:**  
Slides 11 -14 reviewed the location of the east arrivals flight tracks for one day at four different times during the year to determine whether the two arrival streams have shifted. With the exception of small fluctuations, the location of the flight tracks has remained constant over the past year as aircraft continue to follow the ILS that guides them to the runways for landing.

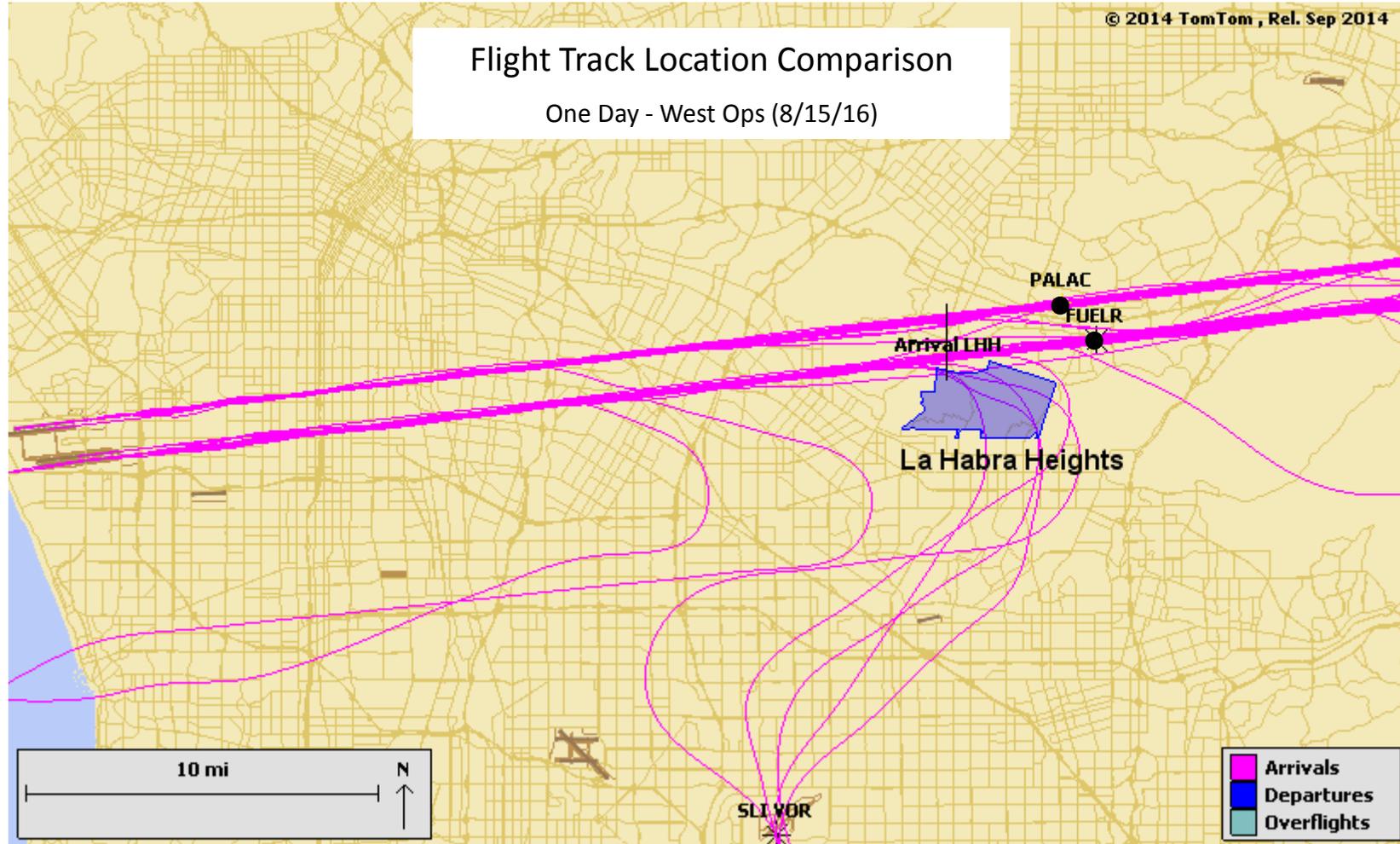
# Analysis of LAX Arrivals from the East



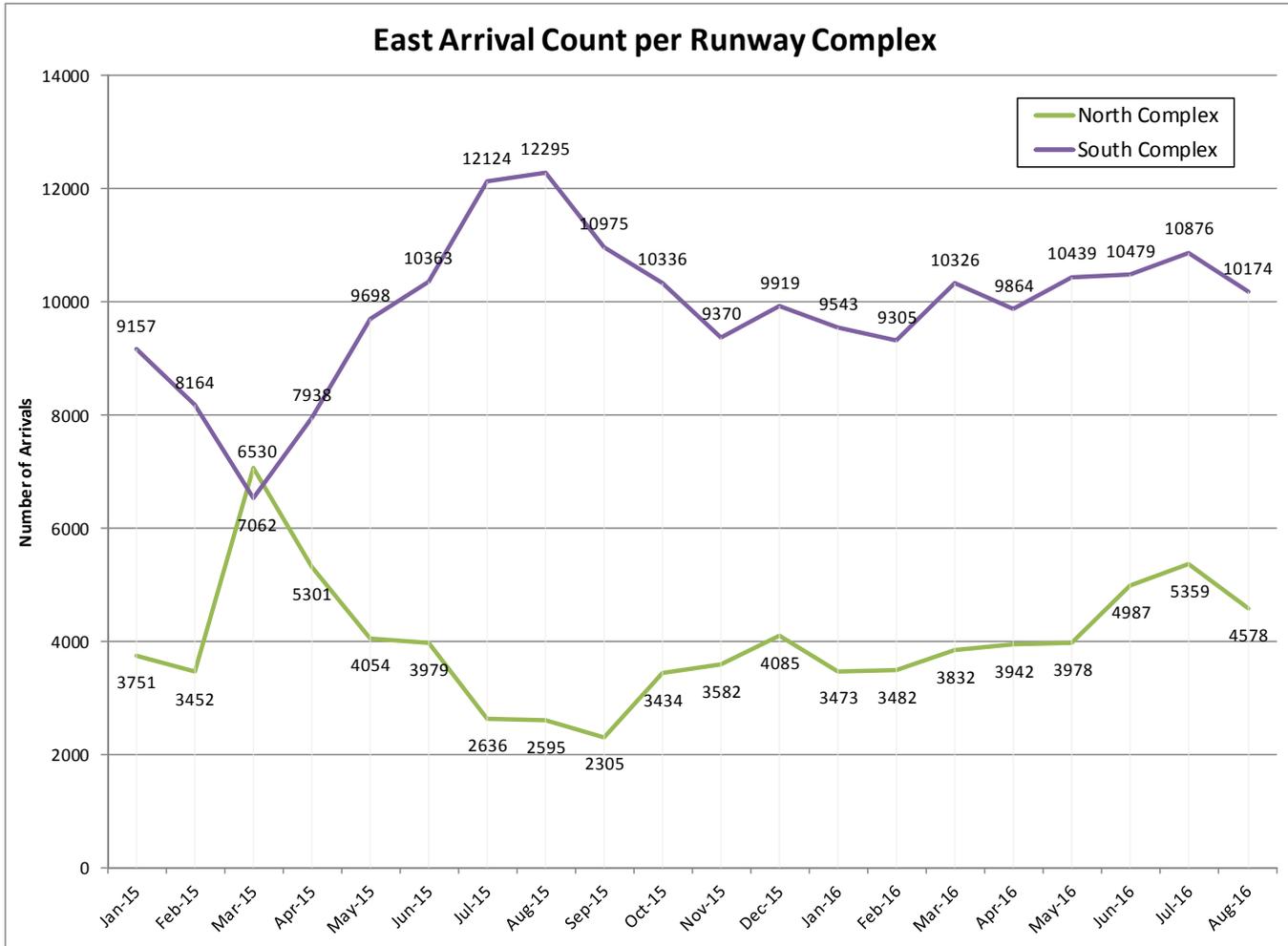
# Analysis of LAX Arrivals from the East



# Analysis of LAX Arrivals from the East



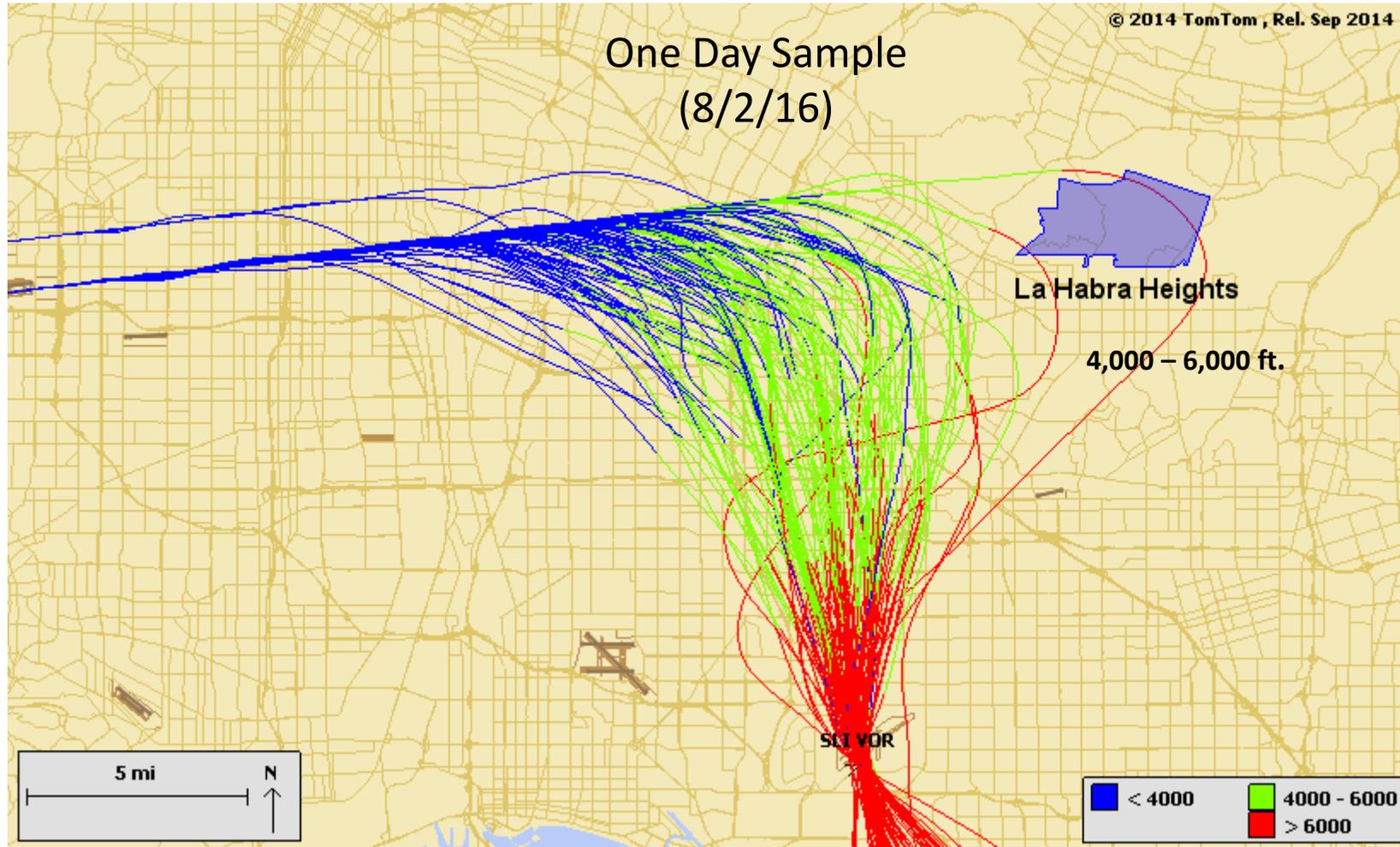
# Analysis of LAX Arrivals from the East



## Speaker's Notes:

Examination of the number of east arrivals that land on the north and south complex showed a peak of arrivals on the south complex during the summer of 2015 due to the Runway Safety Area construction on the north complex that caused more arrivals to occur on the south complex. This increase in arrivals to the south complex may cause residents to notice more flight activities over or near their neighborhoods in La Habra Heights.

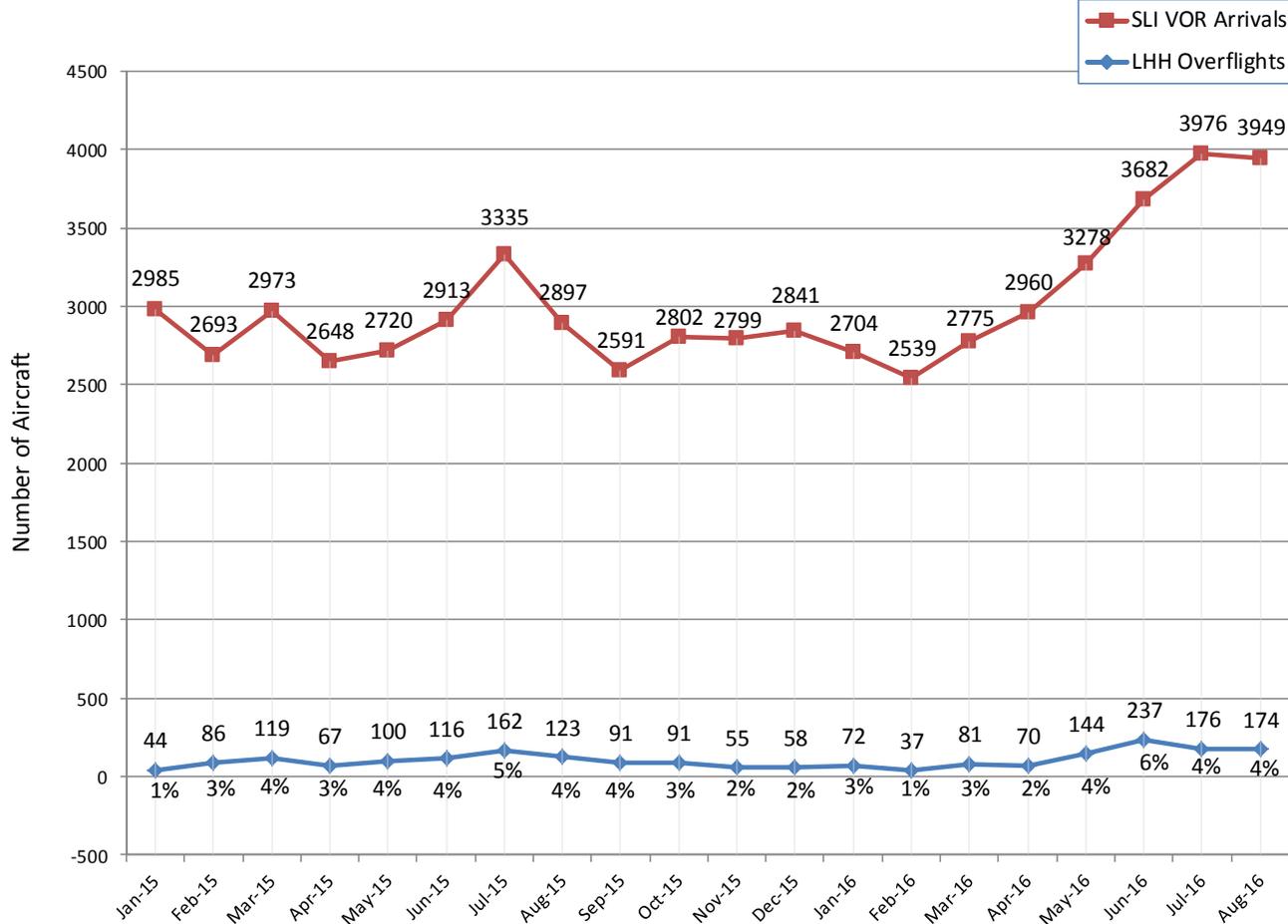
# LAX Arrivals From the South (via SLI VOR)



**Speaker's Notes:**  
The two flight tracks that passed through La Habra Heights shown in the map are aircraft being vectored by FAA Air Traffic Control to allow more space for aircraft separation during period of high traffic volume and/or runway construction activity.

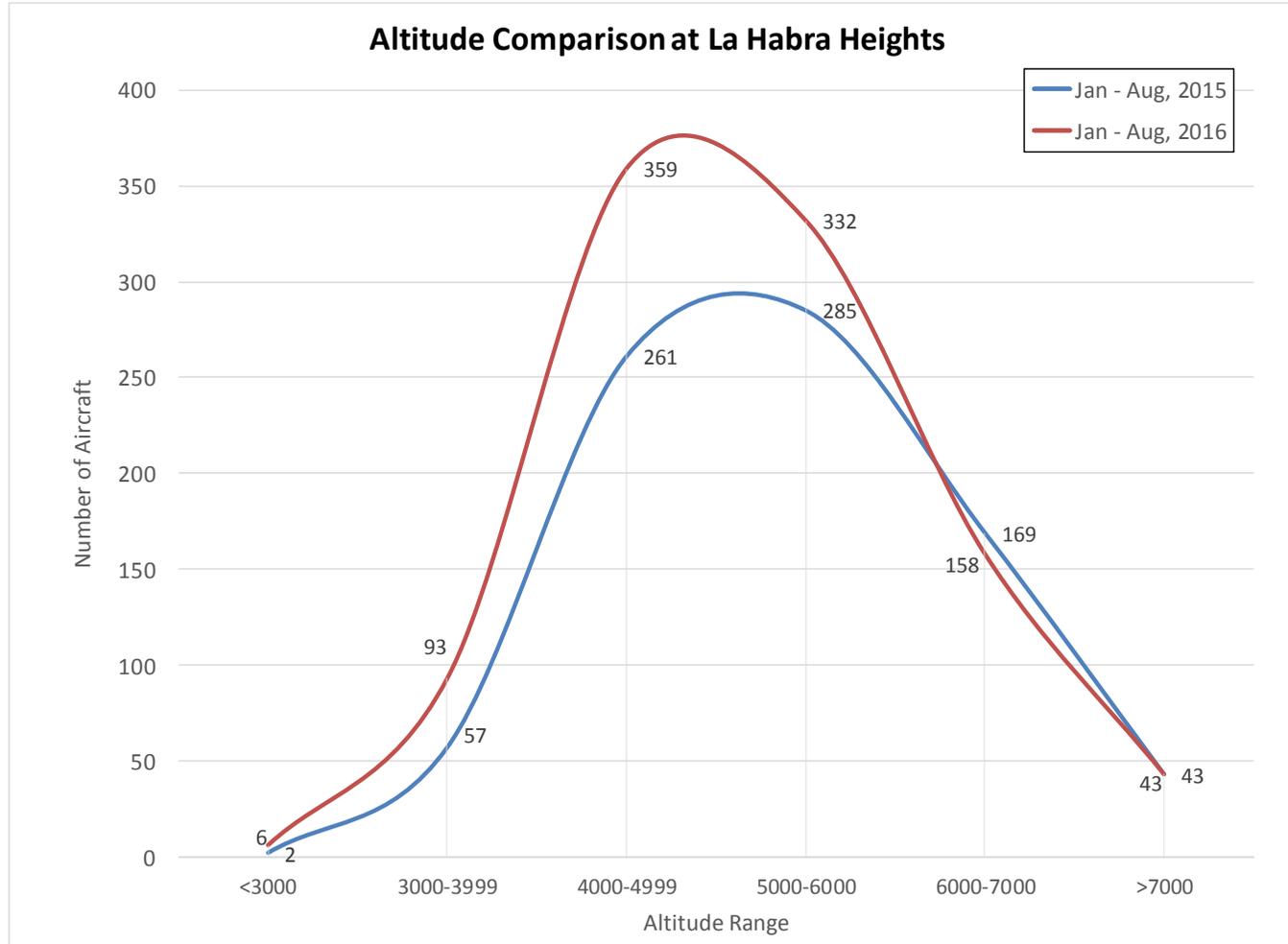
# Analysis of LAX Arrivals via SLI VOR

## La Habra Hts Overflights from SLI VOR Arrivals



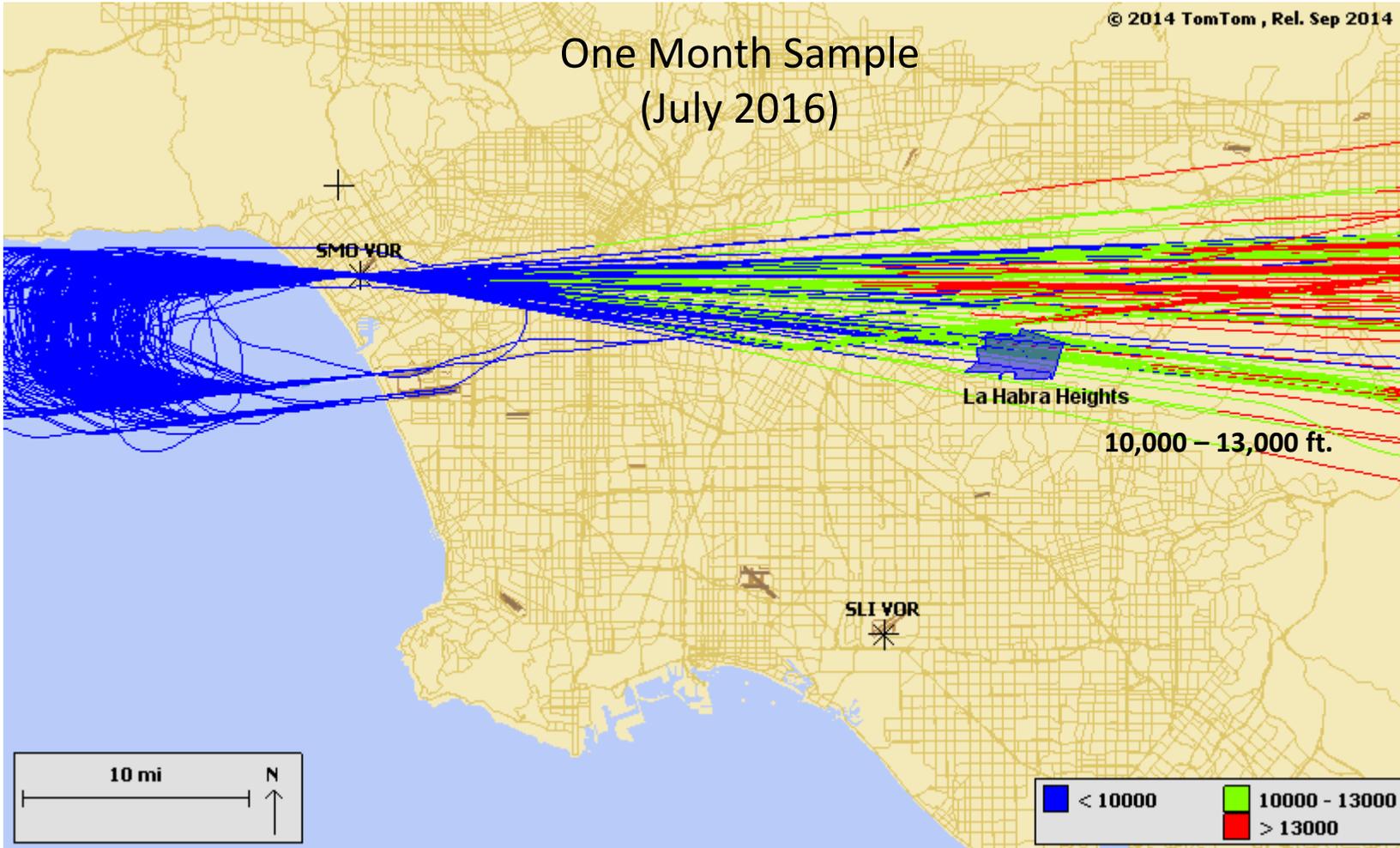
**Speaker's Notes:** Analysis of the arrivals from the south showed that there has been a recent increase in the number of arrivals using the Seal Beach VOR (SLI VOR) as well as an increase in aircraft overflying La Habra Heights from the SLI VOR due to increased traffic and/or runway construction activity.

# Analysis of LAX Arrivals via SLI VOR



**Speaker's Notes:** Aircraft that flew over La Habra Heights from the south via the SLI VOR are in the altitude range of 4000 to 6000 ft. Altitudes have remained same.

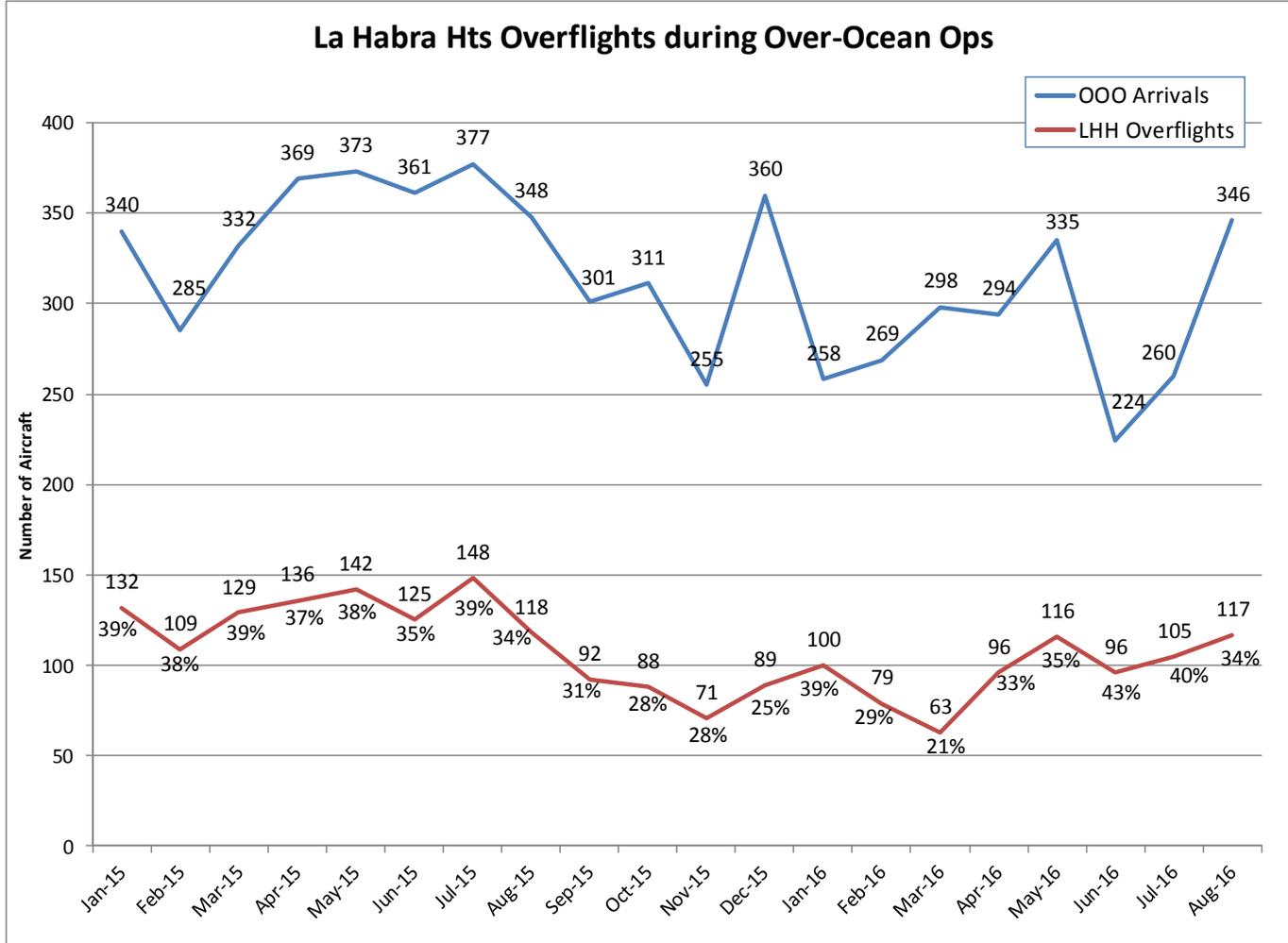
# Over-Ocean Operations - Arrivals (12 am – 6:30 am)



## Speaker's Notes:

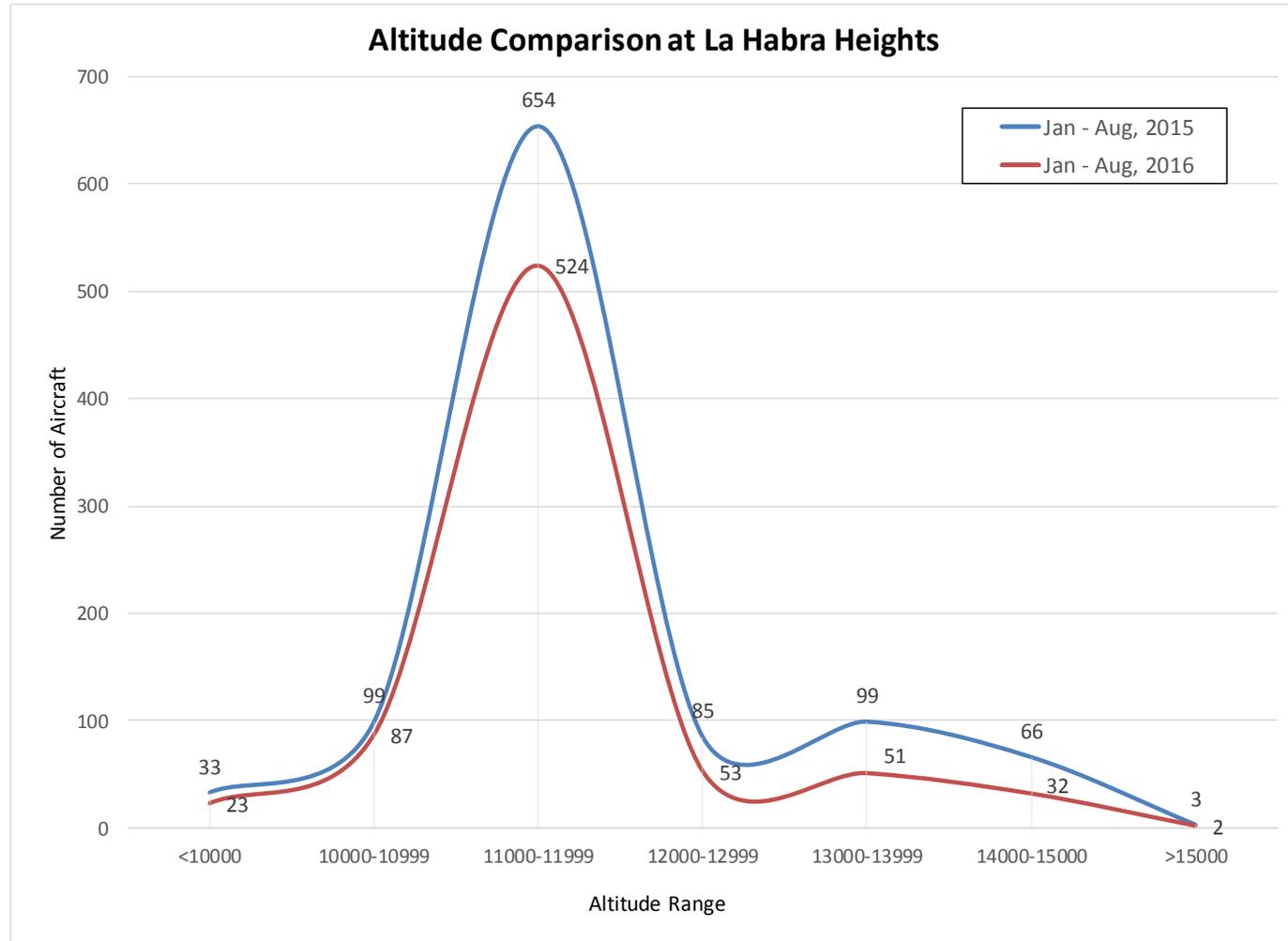
During Over-Ocean Operations, aircraft are directed by the FAA to fly to the SMO VOR and then make a U-turn over the ocean for noise abatement to land at LAX. Aircraft on the Over-Ocean Approach are at higher altitudes in the La Habra Heights area than the straight-in arrivals during usual daytime Westerly Operations.

# Analysis of LAX Arrivals during Over-Ocean Operations



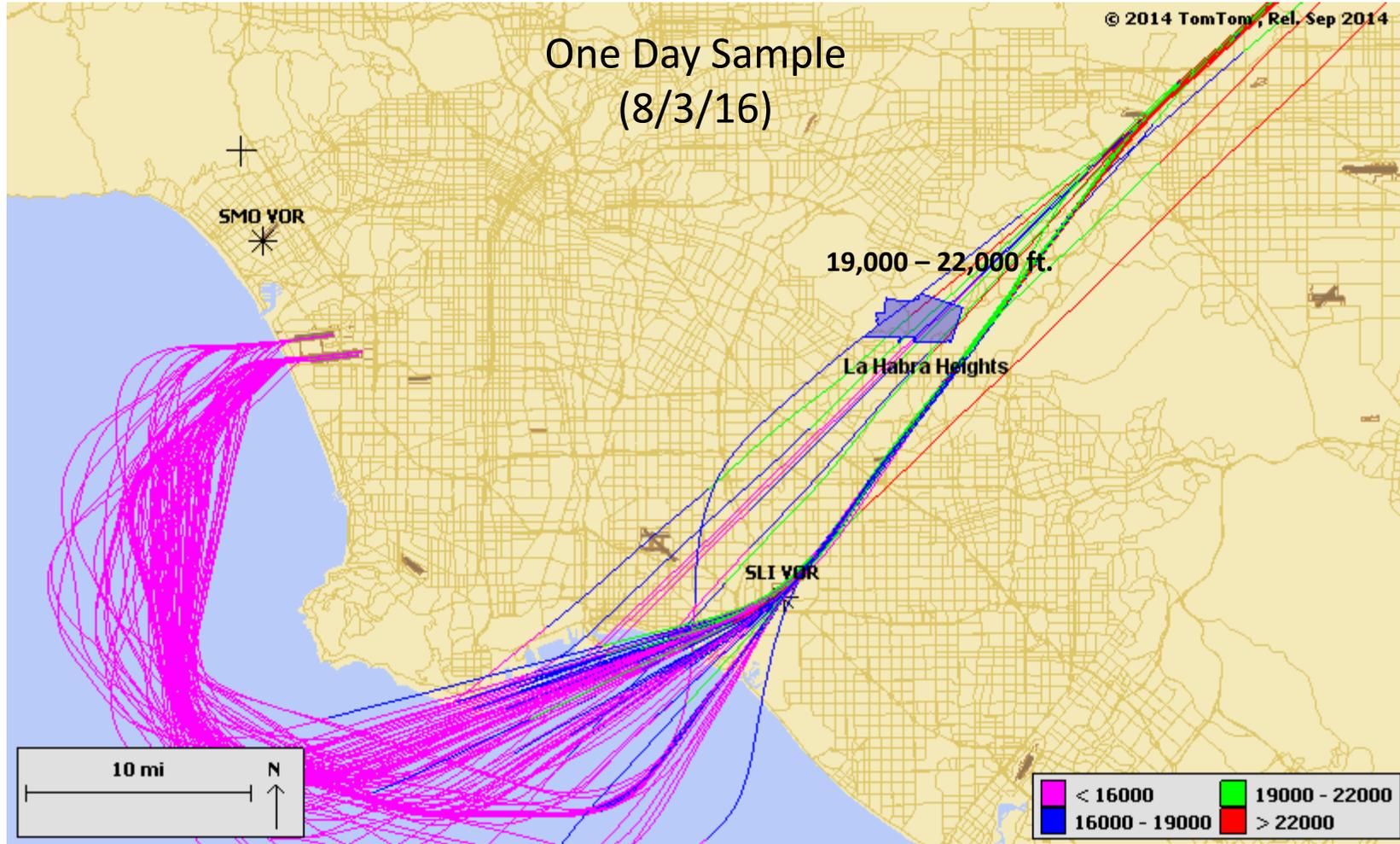
**Speaker's Notes:**  
 Examining the Over-Ocean Arrivals shows that there is fluctuation due to factors such as weather, runway construction, runway closures and other conditions that require the FAA to deviate from this arrival procedure from time to time.

# Analysis of LAX Arrivals during Over-Ocean Operations

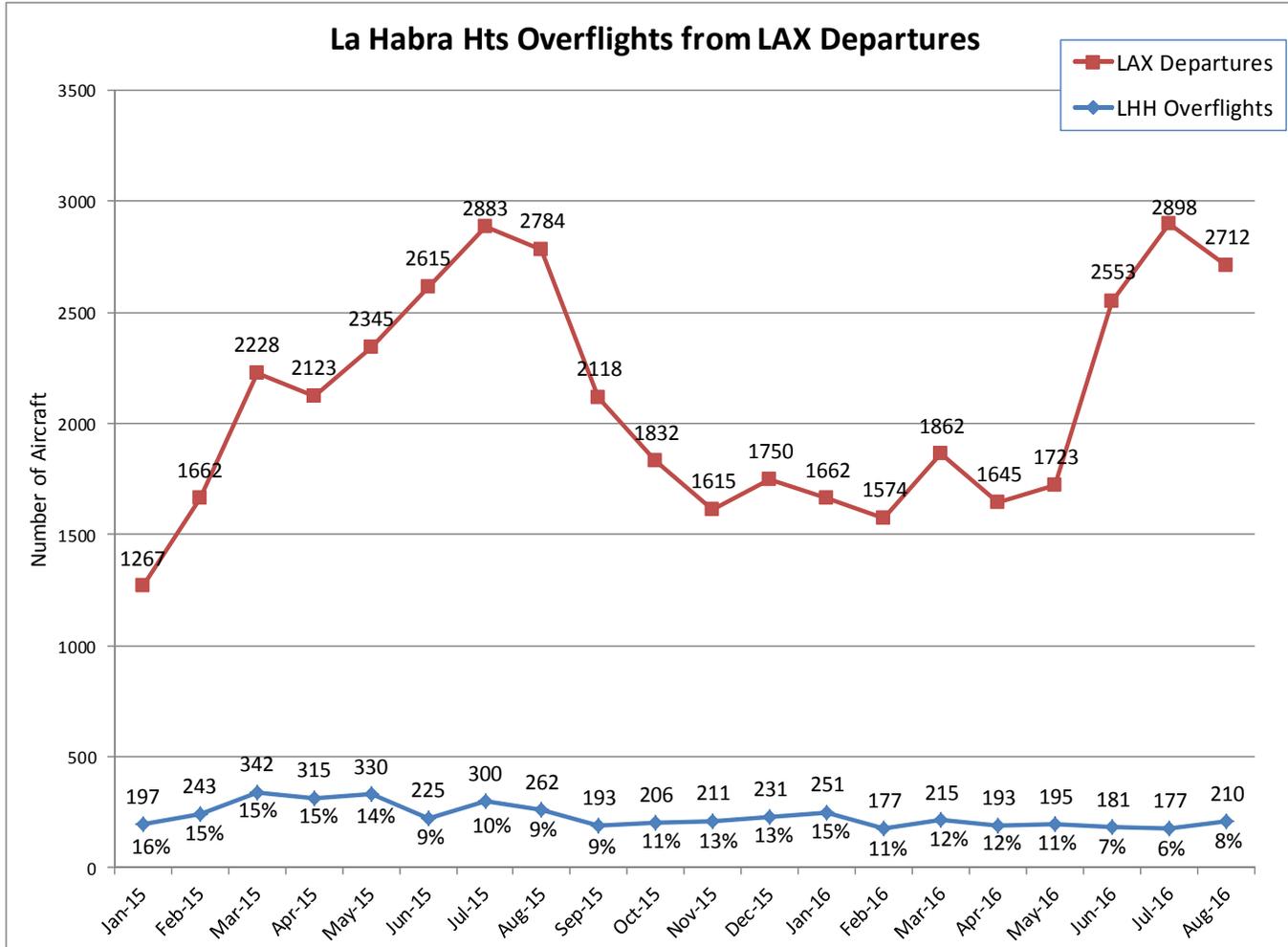


**Speaker's Notes:**  
Aircraft that fly over La Habra Heights during Over-Ocean Operations are in a higher altitude range of 11,000 to 12,000 ft. compared to those during Westerly Operations. Altitudes have remained same.

# LAX Departures Flying over La Habra Heights

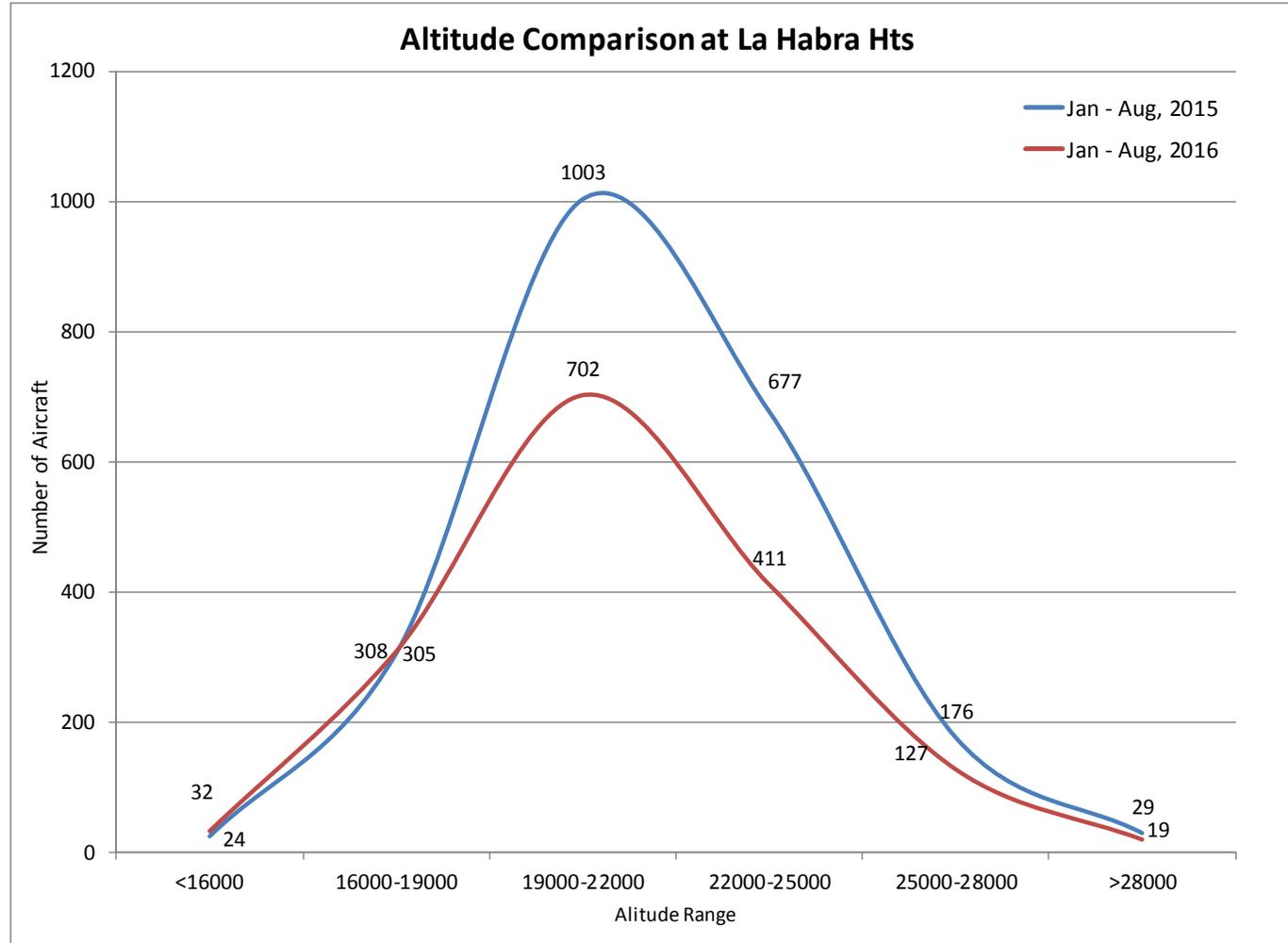


# Analysis of LAX Departures Flying over La Habra Heights



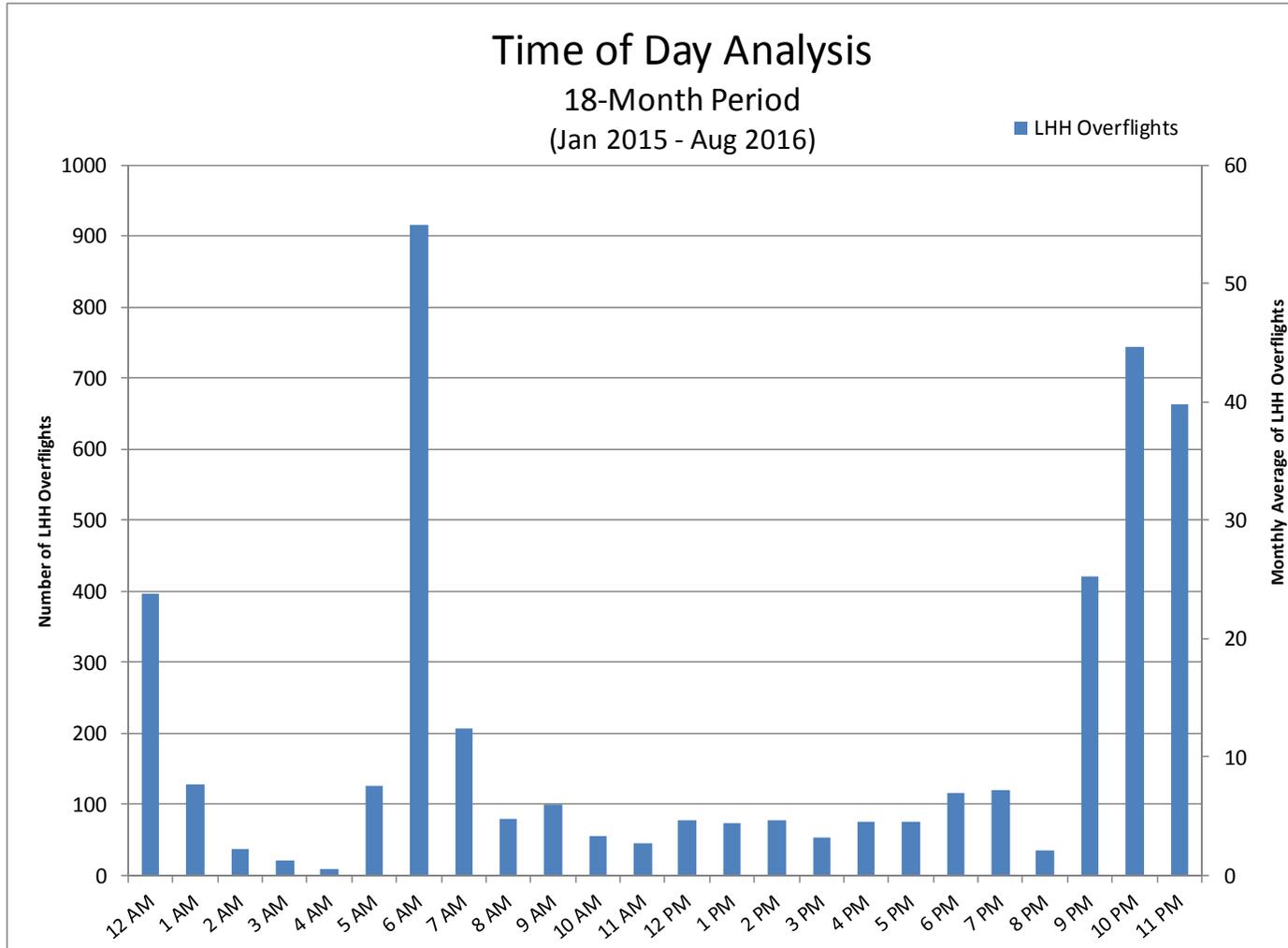
**Speaker's Notes:**  
 Examining the number of overflights from LAX departures indicates that the number remained consistent from month to month.

# Analysis of LAX Departures Flying over La Habra Heights



**Speaker's Notes:** LAX departures that flew over La Habra Heights are in the higher altitude range of 19,000 to 22,000 ft. Altitudes have remained same.

# Analysis of LAX Departures flying over La Habra Heights



**Speaker's Notes:** Time of Day Analysis indicated that of the LAX departures that flew over La Habra Heights, more occurred between 9 pm and 7 am. This is a result of LAX departures having to use procedures that would direct them around the PV Peninsula to the SLI VOR and over La Habra Heights, instead of the LOOP Departure procedure which is not utilized between those hours.

- **LAX Arrivals from the East**
  - Average altitudes on approach to 25L are slightly lower
  - Aircraft are in the same altitude range; most are in the 6,000 – 7,000 ft. range
  - No change in arrival flight track location
  - Runway 24R RSA 3-month closure during Summer 2015 caused more aircraft to use South Runway Complex for arrivals
- **LAX Arrivals from the South**
  - More arrival overflights in recent months
  - Most aircraft are in the 4000 – 6000 ft. range
- **Other LAX Operations**
  - High altitude ranges for aircraft on Departures and Over-Ocean Arrivals
  - Minimal variations in the number of overflights from departures via SLI VOR
  - Noticeable variations with the number of Over-Ocean Arrivals